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ENERGY RESOURCES AND GOVERNMENT

MATERIALS SUBMITTED TO THE SUBCOMMITTEE ON AUTOMATION AND ENERGY RESOURCES BY FEDERAL AND STATE REGULATORY AND DEVELOPMENTAL AGENCIES

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

Printed for the use of the Joint Economic Committee

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LETTERS OF TRANSMITTAL

DECEMBER 1960.

Members of the Joint Economic Committee:

Transmitted herewith for use of the Joint Economic Committee and other Members of the Congress is a collection of papers submitted to the Subcommittee on Automation and Energy Resources by Federal and State regulatory and development agencies concerned with the production, distribution, or development of energy resources. The broad emphasis of this inquiry is on the relationship of governmental policy to energy resources as expressed through the regulatory agencies and represents a second step in the subcommittee's inquiries which began with the hearings held last year.

PAUL H. DOUGLAS,
Chairman, Joint Economic Committee.

NOVEMBER 15, 1960.

Hon. PAUL H. DOUGLAS,
Chairman, Joint Economic Committee,
U.S. Senate, Washington, D.C.

DEAR SENATOR DOUGLAS: In the annual report of the Joint Economic Committee filed with the Congress on February 29, 1960 (S. Rept. 1152), this subcommittee was asked to continue its studies of energy resources with an examination of the relationship of Government to energy resources. The partial regulation of natural gas prices and transmission, interstate and intrastate; the insulation of domestic oil prices from foreign competition through import controls; production controls on oil and gas; the direct and indirect subsidies being given to atomic commercial energy; and the division of regulatory responsibility among a number of agencies have all suggested the desirability of further careful scrutiny to make sure that the Government itself by its policies is not adding unnecessarily to the economic complexities and uncertainties in this important economic area.

In carrying out its assignment, the subcommittee sent a list of questions to the heads of Federal agencies having regulatory or related responsibilities in connection with the distribution or development of energy resources. Inquiry was also sent to selected State agencies based upon a list, prepared by the Library of Congress, of States which are large producers, have large potential reserves of fuel or fuel power sources, and are large consumers of power.

All agencies have been most cooperative in responding to the committee's inquiry which asked for comment on a standard list of questions. It is believed that these materials which were received in reply

will not only give the committee and other Members of Congress an excellent understanding of the relationship of Government to one of the important elements involved in promoting maximum employment, production, and purchasing power, but will also provide the basis for any further studies and will supply to the colleges and other research organizations a readily available book of source materials.

WRIGHT PATMAN,
Chairman, Subcommittee on Automation and Energy Resources.

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ENERGY RESOURCES AND GOVERNMENT

INTRODUCTION

For some years the Joint Economic Committee has been making a continuing inquiry into the impact of technology and automation upon economic stability and growth. In the fall of 1959, the scope of these subcommittee inquiries was broadened to include energy resources and energy technology as well. Whereas the automation inquiries had dealt with an advanced stage of mechanization replacing manpower and human brawn with machine power, the energy inquiries turned to the corollary aspect of driving these machines more and more by the power in fuels, atoms, or falling water, rather than through human or animal energies. In a sense, automation and energy—mechanization and power—may be said to supplement or even substitute for each other.

In expanding the committee's inquiries into the field of energy resources, hearings were held October 12–16, 1959, at which expert witnesses in the fields of conventional or nonconventional forms of fuels and energy, discussed with the committee the prospective demands and supply of energy in connection with our resource base and prospective economic growth. The record of these hearings was published under the title of "Energy Resources and Technology." The subcommittee felt at the conclusion of these hearings that no specific recommendations were required since the evidence presented seemed to allay any immediate concern over the adequacy of our reserve sources. The evidence suggested no threatening deterrent to national growth because of energy limitation, whether viewed collectively or separately, in terms of the stocks available for future exploitation.

Various witnesses appeared before the committee, however, making strong representations for the need for a national fuels policy. It was apparent also that there was already a wide area in which government regulation and intervention at both the State and Federal levels already characterized the energy field. The division and complexity of these regulations suggested the desirability of further scrutiny to make sure that government itself, by its various policies, was not adding unnecessarily to the economic complexities and uncertainties. Any consideration given to the suggested need for a national policy had, it appears, to begin with a study of what present policy actually was and is, since, indeed, a policy of no-policy must have its own impact upon resource use and development.

With this background, the Subcommittee on Automation and Energy Resources, in June 1960, wrote to the heads of Federal agencies and selected State agencies known to be concerned with and having responsibilities in connection with the production, distribution, or development of energy resources.

The selection of State agencies to be queried was based upon a list prepared by the Library of Congress indicating the appropriate agencies in the States which are large producers, have large potential reserves of fuel or power sources, and are large consumers of power. Some effort also was made to assure a geographical balance.

The responses received from the various State agencies are included in the second half of this volume and, although selective and not of uniform pattern, it is believed give some indication of the direction, extent, and variety of State intervention in the field.

The substantive portion of the letter of inquiry which was addressed to the Federal and State agencies is as follows:

JOINT ECONOMIC COMMITTEE,
June —, 1960.

DEAR MR. ———: In keeping with its responsibilities under the Employment Act of 1946, the Joint Economic Committee has been concerned with the long-run adequacy of our energy resources and the development of energy technology, as related to problems of economic stability and growth. In its annual report, filed with the Congress on February 29, 1960, (S. Rept. No. 1152, 86th Cong., p. 28), the committee expressed the intention to pursue further its inquiry into the energy field, focusing attention upon the relationship of government itself to the elements involved in our resource base and its development.

We are writing to you, as well as to a number of other public agencies, because of the concern and responsibility which your office has in connection with the production, distribution, or fostering of energy resources and technology. Such responsibility may be variously expressed through regulation, allocation, controls, research, promotion, conservation, or otherwise.

As pointed out above, the express focus of this inquiry is to uncover and study the variety and extent of the present complex of relationships between owners, producers, distributors, and the several levels and instrumentalities of government. We are asking each agency which has one (or perhaps a number of such programs) under its jurisdiction to identify and fill in the details of the relationships and operations under committee scrutiny.

As a minimum, however, we suggest that your statement with respect to each such program under your jurisdiction ought to deal explicitly with the subjects suggested in the accompanying attachment. This should be supplemented by any other exhibits and materials which you feel appropriate and relevant. We may, of course, wish to ask your cooperation later with respect to more specific questions suggested by the preliminary survey.

* * * * * * *

Attachment.

ITEMS TO BE COVERED BY AGENCIES ENGAGED IN ACTIVITIES AFFECTING ENERGY RESOURCES AND ENERGY TECHNOLOGY

1. Statutory basis for your agency's relationship to energy resources and energy technology, whether regulatory, research-directed, etc.
2. Brief survey of the history and development of that relationship.
3. Objectives of the program or programs as defined by statute and administrative interpretation.
4. Summary or characterization of rules, policy declarations, or directives issued for the guidance of the affected industry.
5. A statement indicating wherein your program impinges upon, meshes with, or is limited by the programs of other agencies in the energy field.
6. The extent of existing coordination or evidence of any unresolved conflicts, if any.
7. Comments upon what seems to be the more challenging or difficult issues or obstacles involved in administration of your program.
8. Recommendations for improving through research, by new or improved regulatory programs, or otherwise, the role of the Federal Government in assuring the energy resources necessary for "maximum production, employment, and purchasing power" called for under the Employment Act of 1946.

Since the title of this collection is necessarily somewhat broad it should be made clear that the emphasis here is primarily on the influence of Government on energy resources as expressed through the regulatory agencies. It does not deal with the problems of the Government in the capacity of a land or site owner, and hence for example, not with the alternative ways of developing sites, or river basins or oil reserves on land or under the marginal sea. Nor does it deal with Government in the exercise of the war power and hence not with wartime price control and rationing of fuels or the development of atomic energy for military purposes. Finally, it does not deal explicitly with tax or treaty matters, since decisions in this field are governed by overriding questions of fiscal and international policy however closely collateral effects may bear upon our resource base.

Another activity affecting energy reserve and energy technology—common to most of the States—involves the setting of standards for mine safety and periodic inspection of mine working places and operations.[1] Treatment of these important activities has been largely passed over in this collection. Admittedly these activities are regulatory and do have a bearing on mine costs and resource exploitation. While individual mineowners and operators may often feel that governmental practices in this area are at times restrictive of output and development, the need for Federal and State safety standards has become so generally recognized and accepted for what they are that they no longer need specific questioning or rejustification. Considerations of human decency and welfare are controlling in this field rather than purely economic considerations, although like many forms of regulation, they may, on occasion have been used to promote ends not directly contemplated.

The subcommittee wishes to express its appreciation for the cooperation from the various Federal and State agencies in the preparation of this compendium of materials.

In thanking the Federal departments and agencies for their cooperation, we particularly want to recognize the assistance of—

Fred G. Aandahl, Assistant Secretary of the Interior, Department of the Interior;
Jerome K. Kuykendall, Chairman, Federal Power Commission;
A. R. Luedecke, General Manager, Atomic Energy Commission;
Herbert D. Vogel, Chairman of the Board of Directors, Tennessee Valley Authority;
John H. Winchell, Chairman, Interstate Commerce Commission;
Ralph J. Foreman, Acting Administrator, Rural Electrification Administration;
R. D. Huntoon, Acting Director, National Bureau of Standards;
Alan T. Waterman, Director, National Science Foundation;
Lawrence E. Walsh, Deputy Attorney General, Department of Justice;
Leo A. Hoegh, Director, Office of Civil and Defense Mobilization; and
William B. McComber, Jr., Assistant Secretary, Department of State.

[1] For an example of a State statute dealing with mine safety and inspection, see the Alabama Coal Mine Safety Law of 1951.

Among those who cooperated at the State level, we particularly want to thank the following officials for their contribution to this collection:

A. J. Harris, assistant attorney general for State Oil and Gas Board of Alabama;
C. C. (Jack) Owen, president, Public Service Commission of Alabama; Everett C. McKeage, president, Public Utilities Commission, California;
Edward F. Dolder, deputy director, Department of Natural Resources, California;
Harvey O. Banks, director, Department of Water Resources, California;
B. H. Schull, director, Department of Mines and Minerals, Illinois;
Ashton J. Mouton, commissioner, Department of Conservation, Louisiana;
A. L. Porter, Jr., secretary-director, Oil Conservation Commission, New Mexico;
Harold G. Wilm, commissioner, Conservation Department, New York;
Alton G. Marshall, secretary, Public Service Commission, New York;
Oliver Townsend, director, Office of Atomic Development, New York;
Thomas F. Moore, Jr., general counsel, Power Authority of the State of New York;
Wilson M. Laird, State geologist, North Dakota Geological Survey, North Dakota;
Herbert B. Eagon, director, Department of Natural Resources, Ohio;
Robert W. Root, chairman, and Donel J. Lane, secretary, State Water Resources Board, Oregon;
Lewis E. Evans, secretary of Mines and Mineral Industries Department, Pennsylvania;
Ernest O. Thompson, chairman, Railroad Commission of Texas;
Paul H. Price, director and State geologist, Geological and Economic Survey, West Virginia; and
Truman P. Price, supervisor, Division of Power Resources, Department of Conservation and Development, Washington.

It is hoped this publication will provide a sound basis for further study of the relationship of Government to the energy elements involved in promoting maximum employment, production, and purchasing power.

STATEMENTS OF FEDERAL AGENCIES

U.S. DEPARTMENT OF THE INTERIOR

The energy program of the Department of the Interior has four parts:

1. Production and marketing of hydroelectric power.
2. Development and conservation of energy resources.
3. Supervision of land use.
4. Regulatory functions regarding petroleum.

The Department also has emergency-related activities that, although they are not describable in relation to the Employment Act of 1946, do, we believe, contain something of interest to the Subcommittee on Automation and Energy Resources.

These several parts are taken up in order below and are treated along the lines indicated by the subcommittee.

PRODUCTION AND SALE OF HYDROELECTRIC POWER

The Department of the Interior operates in this field through the Bureau of Reclamation, the Bonneville Power Administration, the Southeastern Power Administration, and the Southwestern Power Administration. The Bureau of Reclamation engages in the construction and operation of hydroelectric powerplants in the Western States; all engage in the sale of hydroelectric power and together market all power produced from plants federally owned and operated except from those of the Tennessee Valley Authority and one small plant owned and operated by the Corps of Engineers.

Statutory basis

The basic authority to construct works for the conservation of water in the Western States is the Reclamation Act of June 17, 1902 (32 Stat. 388; Public Law 161); the basic authority to construct powerplants in connection with such works is the act of April 16, 1906 (34 Stat. 116; Public Law 103). The scope of hydroelectric power development is expanded and more precisely defined in many subsequent acts, notably the Reclamation Project Act of August 4, 1939 (53 Stat. 1187; Public Law 260).

The act of April 16, 1906, provided for the sale by the Bureau of Reclamation of power produced in excess of the needs of a project. The other agencies market power pursuant to the Bonneville Act of August 20, 1937 (50 Stat. 731; Public Law 331) and to authority delegated by the Secretary of the Interior; the Secretary held his authority variously through the Flood Control Act of 1944 (Public Law 534–78, 16 U.S.C.A. 825s), Executive Order No. 9373 (August 30, 1943), and Reorganization Plan No. 3 of 1950. Section 5 of the Flood Control Act of 1944 orders that electric power and energy generated at reservoir projects under the control of the Corps of Engineers and not required in the operation of the projects shall be marketed by the Secretary of the Interior. Executive Order 9373

transfers to the Secretary of the Interior the functions vested in the Federal Works Administration. Appendix I, a Bonneville Power Administration memorandum of January 26, 1960 "Comparative Statutory Data," described that agency's statutory base in more detail.

History

The Department of the Interior entered the field of hydroelectric power through the construction and operation of works (mainly dams) for the conservation of water and its use for irrigation. When Congress concluded that hydroelectric powerplants were a proper adjunct to such works, it became apparent that an efficient plant would produce more power than needed for the project, and the Bureau of Reclamation was authorized to market the excess power.

The Corps of Engineers also produces more power at its reservoir projects than is needed in the operation of the projects, and Congress instructed that this power too be marketed by the Secretary of the Interior.

For the Bonneville Dam, on the Columbia River in Oregon and Washington, Congress created a specific marketing agency, the Bonneville Power Administration, which now, by secretarial designation, is also the marketing agent for 17 additional Federal hydroelectric plants, existing or under construction, in the Pacific Northwest. Thirteen of these are Corps of Engineers projects, four are Bureau of Reclamation projects.

The Southwestern Power Administration markets power from 14 Corps of Engineers projects existing and under construction. During World War II, it operated and marketed the power from a dam belonging to the State of Oklahoma, the Grand River Dam, having taken it over from the Federal Works Administration, which had previously taken it over from the State under section 16 of the Federal Power Act (public law or United States Code) for support of the war effort. The Grand River Dam was returned to the State of Oklahoma in 1946. The Southeastern Power Administration markets power from 11 hydroelectric projects.

All the power controlled by the Department of the Interior is now integrated with that of private and other public utilities. Interconnecting high voltage transmission grids have been built by power agencies of the Department to assist in this purpose.

Objectives

The Department's activity in the field of hydroelectric power reflects, of course, the Federal power program. Its objective is to make widely available for the greatest national good all power produced at federally owned hydroelectric plants that is not required in the operation of the projects to which the powerplants are adjunct; the energy is to be transmitted and disposed of "in such manner as to encourage the most widespread use thereof at the lowest possible rates consistent with sound business principles" (sec. 5, Public Law 534–78). The legislation specifies that public bodies (municipalities and public power districts) and cooperatives are to have first call.

Within these objectives the Department plans, with other Federal agencies and with non-Federal groups, for continuing development of hydroelectric power-generating resources. The Bonneville Act

instructs the Administrator to "prevent monopolization [of electrical energy] by limited groups."

Rules, policy declarations, or directives

The policy under which the Department of the Interior operates is expressed by the statement of objectives above. The Department has no regulatory functions, but from time to time it issues instructions on how the Department's specific functions are performed. An example is the "Customer Service Policy" of the Bonneville Power Administration, attached as appendix II. It has been necessary to devise a method of using the Federal transmission grid that would keep costs to a minimum, avoid unnecesary duplication, and provide each distributor in the area with access to the grid. The Department has contracts with customers governing the sale of power to them and also with private utilities governing the transmission by them of power to customers of the Government.

Such instructions and contracts and the Department's rate schedules, while not directed at or governing the electric power industry, do influence its operation.

Relation to programs of other agencies

The Department's program in producing hydroelectric power necessarily impinges on other programs related to use of the water or land. Some of this is with other programs of the Department, some with programs of other agencies, e.g., flood control and navigation programs of the Army; flood control, watershed protection, soil conservation, and irrigation programs of the Department of Agriculture; pollution programs of the Department of Health, Education, and Welfare; and industrial and municipal programs.

The power marketing program is directly affected and in some regions wholly limited by the dam-construction program of the Corps of Engineers. The Southeastern Power Administration and the Southwestern Power Administration market power produced at Corps of Engineers multiple-purpose projects.

Coordination

The interests of the several agencies, sometimes mutual, sometimes conflicting, are coordinated through river-basin, interagency committees, of which there are four: Columbia Basin Interagency Committee, Missouri Basin Interagency Committee, Pacific Southwest Interagency Committee, and the Arkansas-White-Red River Basins Interagency Committee. Membership consists of the Governors of the affected States, or their representatives, and representatives of each affected agency. In addition, the Bonneville Act directs "consultation with an advisory board" composed of representatives of "the Secretary of War," Department of the Interior, Federal Power Commission, and Department of Agriculture. The Southwestern Power Administrations coordinates also with the Red and Arkansas Rivers compact commissions, which are concerned with allocation of water to the States fed by these rivers.

Joint studies are made with utility customers, both public and private, on technical matters of mutual concern, such as loads and interconnections. The Bonneville Power Administration has brought together an advisory group known as the Bonneville Regional Advi-

sory Council, composed of about 100 representatives from business, industry, labor, agriculture, professions, education systems, and the Governors of the four Northwestern States. The International Joint Commission has been working on the problem of developing power on the Columbia River system by water stored in Canada. The U.S. group working on this consists of representatives of the Departments of the Interior, State, and Army.

Consultation is continuous between the several marketing agencies and the Corps of Engineers with respect to the marketability of power from proposed projects, power installations, rates, and anticipated revenues for amortizing projects within their allotted period.

The coordination being carried on is a continuing operation in which issues come and go. There are no unresolved conflicts in the sense of continuing major differences.

The rate schedules for electric power marketed under section 5 of the Flood Control Act of 1944 and by Bonneville Power Administration must be confirmed by the Federal Power Commission.

Challenging and difficult issues

Six issues require considerable attention. These are:

1. Reconciling the interests of all parties involved in marketing arrangements, including the matter of rate setting—rates must be low enough for the power to be sold yet high enough to repay the project costs allocated to power.

2. A related problem is devising arrangements for the delivery and reliability of power, through other systems, that will protect the preference provisions of section 5 of the Flood Control Act and the Reclamation Act of 1939.

3. Coordination of resources programs of all agencies in a given area for the optimum development of a region. An example is the watershed-protection and flood-prevention plans of the Department of Agriculture. By law (68 Stat. 666; Public Law 566–83) individual projects are limited to 390 square miles, but the projects in a given watershed area can total up to several tens of thousands of square miles. It is not clear at this date how much water for power production this program might produce.

4. Complete cooperation—in the sense of achievement rather than intent—among the various groups in the electric power industry, i.e., private utilities, public power organizations, and cooperatives, including the Rural Electrification Administration. During the past 2 years the Southwestern Power Administration has instituted a new kind of contract that contributes to this end. Illustrative is the 25-year contract with Tex-La Cooperative, Inc.: The Tex-La Cooperative buys peaking hydroelectric power from the Southwestern Power Administration, sells it to the Southwestern Electric Power Co. of Shreveport, which in turn sells firm power at wholesale rates back to Tex-La Cooperative for Tex-La's Texas and Louisiana members.

5. Marketing substantial blocks of excess seasonal—secondary—power, specifically in the Pacific Northwest.

6. Coordination of hydro and thermal power may soon become a challenging problem in the 1970's, perhaps, in the Pacific Northwest. Ultimately nuclear power will be included.

Recommendations toward implementing the Employment Act of 1946

The Department of the Interior believes that its program toward maximum utilization of electric power is progressing satisfactorily in relation to "maximum production, employment, and purchasing power" in the United States.

DEVELOPMENT AND CONSERVATION OF ENERGY RESOURCES

The Department of the Interior is responsible for the orderly development and conservation of the Nation's water and mineral-fuel resources. It conducts a wide variety of operations, ranging from basic factfinding research in geology, mining, and processing of coal, petroleum, oil shale, and uranium ore, through economic analysis, occasional exploration, and health and safety education and investigations, and on to a number of supervisory and regulatory functions relating to mining on Federal and Indian lands. The results of the research and related activities are made available in the form of various reports and brochures.

Legislative authority

The basic authorities are the organic acts of the Geological Survey (act of March 3, 1879; 20 Stat. 394) and of the Bureau of Mines (act of May 16, 1910, amended; 37 Stat. 681). A number of programs are tailored to specific legislation, as exemplified by the citations below, but still lying within the purview of activity granted by the organic acts.

Coal Mine Inspection Act (Public Law 49–77).

Coal Mine Safety Act (Public Law 552–82).

Coal Research Act (Public Law 599–86).

Strategic and Critical Materials Stock Piling Act (Public Law 520–79).

Anthracite Research Act (Public Law 812–77).

Anthracite Mine Drainage Act (69 Stat. 352; Public Law 162–84).

History

The Geological Survey was an outgrowth of various military, railroad, and other surveys in the middle 1800's. Its organic act directed the Survey to classify the public lands and to examine the geologic structure and mineral resources. As the program developed, various specific programs became necessary in carrying out this general charter, e.g., topographic mapping, preparation of a geologic map of the United States, mineralogic research, water studies, and others.

As long ago as 1865 a bill to create a mining bureau was introduced in Congress, but not until 1910 was the need accepted for an agency devoted exclusively to the mining and metallurgical industries. A number of coal mine disasters around that time sharpened this appreciation. It became—

the province and duty of the Bureau of Mines, subject to the approval of the Secretary of the Interior, to conduct inquiries and scientific and technologic investigations concerning mining and the preparation, treatment, and utilization of mineral substances with a view to improving health conditions, increasing safety, efficiency, economic development, and conserving resources through prevention of waste. * * *

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Because of the disastrous effects of coal-mine fires and explosions, the health and safety program deals mainly with coal mining, but it also covers petroleum, natural gas, uranium, and other nonmetal and metal mining and production. The program was originally advisory and cooperative with the mineral industries; its policing power was developed through the Coal Mine Inspection Act of 1941 and the Coal Mine Safety Act of 1952, whereby the Bureau of Mines eventually was instructed to enforce specified mine-safety provisions designed to prevent major disasters and was empowered to close the mines under certain circumstances. Health and safety work in uranium production remains advisory.

From time to time, as indicated variously above, Congress has indicated its desire for specific programs either by separate legislation or by so indicating in appropriation acts.

Objectives

The objective of the development and conservation programs is an economic supply of energy raw materials sufficient for vigorous national growth and national security; production must be consonant with other necessary uses of the land and with the health and safety of workers. The programs in support of these objectives fall into five broad classes: (1) providing data needed to formulate Federal mineral and water policies; (2) research to aid in improving the supply, including the avoidance of waste; (3) research to expand the utility of energy materials through determining their specific properties; (4) supervision of operations on Federal and Indian lands; and (5) health and safety.

Rules and directives

Of the five classes of activity just listed, only the health-and-safety policing functions and the supervisory responsibilities for operations on Federal and Indian lands require any kind of directives to industry.

Federal mine safety codes for bituminous and anthracite coal mines have been developed by the Department of the Interior to serve as guides to inspectors and to the industry in improving the health and safety of workers. These codes are accepted by the United Mine Workers of America in their contracts with operators under which the operators are required to comply promptly with recommendations by Federal inspectors to correct violations of the code. Under the Coal Mine Safety Act the Secretary of the Interior, acting through the Bureau of Mines, has two kinds of responsibility: (1) to determine the causes of accidents and occupational diseases and to attempt to correct them by revealing them, with remedial recommendations, to the management and to the public, and (2) to inspect mines of certain size to determine the existence of various hazards specified in the act, to notify the management of the findings, and to order the withdrawal of men from the mine if necessary. A detailed discussion of such operations is given in appendix III, Bureau of Mines Information Circular 7974.

The Department also has established performance standards for certain kinds of equipment. The Coal Mine Safety Act requires that these standards be followed in some instances; in other parts of the mineral industries, while acceptance is not mandatory, the standards

are so well recognized as almost to have that effect. Standards are listed in title 30, Code of Federal Regulations, chapter 1.

The regulations governing the development and production of coal, oil and gas, and oil shale on Federal lands cover good practice, health and safety, and adherence to the provisions of leases. licenses, permits, and contracts. Such regulations are contained in 30 CFR, chapter II. Operation on Indian lands are similarly supervised. Reports on inspection of uranium mines are distributed to the agencies that have appropriate regulatory powers, such as the Public Health Service, the Department of Labor, and the Atomic Energy Commission.

Relation to programs of other agencies

The varied research, statistical services, and economic analyses done by the Department are of inestimable use to anyone having energy programs.

In the health and safety work the Department is required by law to cooperate with the States in developing coal-mine safety plans, the Department's responsibilities on coal-mine safety being limited by whether there is or is not a State plan. ["*Administration of the Federal Coal-Mine Safety Act, 1952–59*," Bureau of Mines Information Circular No. 7974, p. 14. U.S. Department of the Interior, 1960. Available in the subcommittee's files.]

To the extent that the Department's programs in development and conservation are influenced by market demand for the various energy resources, these programs are affected by the operations of the Interstate Commerce Commission (regulation of freight rates) and of the Federal Power Commission (natural gas prices and pipeline approvals). The Department's program meshes with the hydroelectric power programs of all agencies, because of the use of fuel power to support hydroelectric developments and in providing data on the availability of water. The cooperation here is through the various river-basin Interagency Committees mentioned in the section of this report dealing with hydroelectric power.

The Department's program meshes with its own helium program; helium is not a source of energy, but it occurs with and is produced with natural gas.

The anthracite-mine drainage program is related to the flood control work of the Corps of Engineers along the Susquehanna River. The Department cooperates also in this program, as directed by legislation, with the State of Pennsylvania. On fire control in idle mines the Department cooperates with State and local authorities and, in some instances, land owners.

The Department cooperates intimately with the Atomic Energy Commission. The AEC sponsors exploration and production of fissionable materials and is responsible for the technology of use, disposal of waste, and protection against radiation, in which fields the Department of the Interior has various degrees of competence.

A considerable part of the programs of topographic mapping, geological surveys, and water resource investigation is in cooperation with State agencies, being cofinanced in many instances.

Field stations are at some places located on university campuses and the work is done in cooperation with the institutions.

Coordination

As is clear from the above paragraphs, some coordination with other agencies is by law, some by the logic of good government. The anthracite-mine drainage program is financed equally by the Federal Government and by the State of Pennsylvania, and this is true also in State cooperatives projects in topographic mapping, geological surveys, and water investigations. The degree of cooperation on health and safety work and on control of mine fires has already been described.

There are no unresolved conflicts. The closest thing to conflict is in the parallel programs of the Department of the Interior and the AEC. On the one hand, uranium and thorium are mineral resources and within the Department's purview; on the other hand, they are sources of fissionable materials. The Department, however, has not attempted to assert any basic right but has assisted the AEC in the conservation and development of these resources through investigations largely either sponsored by the AEC or jointly developed. A well-coordinated reporting system between the two agencies minimizes duplication of effort.

Challenging or difficult issues

The bureaus and offices of the Department report no specific program problems sufficiently outstanding to warrant particular comment or identification. This is not to say, of course, that there are not many challenging scientific and technologic problems, or challenging and difficult problems in the mineral-fuels industries themselves.

One challenging point, not confined to this Department, may be mentioned, namely the matter of developing long-term programs and making wise use of equipment and trained personnel with funds appropriated annually and that sometimes fluctuate sharply.

A second broad challenge is in keeping the Department's research ahead of the rapid advances of applied technology and in step with history. For Federal research to be most in the national interest it should lead, rather than follow, industrial development. A parallel challenge lies in the health-and-safety program; no matter how safe an operation may be, short of perfection it is never safe enough.

Recommendations toward implementing the Employment Act of 1946

The Department has no recommendations, relating to development and conservation of energy resources and that would contribute to the "maximum production, employment, and purchasing power" called for under the Employment Act of 1946, other than for aggressive support of the Department's many-pronged research, including economic research, and in meeting the challenges mentioned above.

SUPERVISION OF LAND USE

The laws under which land may be acquired by the public for development of their energy resources are administered variously among the bureaus of the Department of the Interior.

Federal lands may be acquired for water and power development only if classified by the Department of the Interior as suitable for that purpose, and by the public for mineral development under a

variety of circumstances specified in different statutes. Classification of lands as mineral or nonmineral governs the procedures of transfer.

Statutory basis

Coal, oil, and gas on public lands are covered by the act of February 25, 1920 (41 Stat. 437; Public Law 146–66), which provides for leasing of the land from the Government. Uranium and other fissionable materials are covered by the U.S. mining law of May 10, 1872 (17 Stat. 91), which provides for outright purchasing of the land. Chemical fuels, such as boron and lithium minerals, are covered by both the mining and the leasing laws, according to mode of occurrence. The 1920 leasing provisions were made applicable also to acquired lands by the act of August 7, 1947 (61 Stat. 913; Public Law 382–80). The act of August 7, 1953 (67 Stat. 462; Public Law 212–83) extended the jurisdiction of the United States over the Outer Continental Shelf.

The authority of the Department of the Interior in administering the above statutes is provided within the statutes themselves. When the Department determines that federally owned oil and gas are being drained from lands not subject to, or exempted from, the leasing acts (such as lands set aside for military or naval purposes), the agency having jurisdiction over the affected lands usually transfers to the Department of the Interior the power to take protective measures.

The statutory basis for the development of oil and gas and other minerals on Indian lands resides in (1) the act of March 3, 1909 (35 Stat. 783; Public Law 316–60; 25 U.S.C. 396), which authorizes the leasing for mining purposes of lands allotted to individual Indians, and (2) the act of May 11, 1938 (52 Stat. 347; 25 U.S.C. 396a–g), which authorizes the leasing of tribal lands. The act of August 1, 1956 (70 Stat. 774; Public Law 857–84) authorizes subsurface storage of oil and gas. Some Indian lands are leased under special acts.

The trustee responsibility of the Federal Government is stated in various treaties and statutes. Permits and leases are executed by individual Indians or tribes but subject to the approval and supervision of the Secretary of the Interior.

The responsibility and authority for classifying lands as to their mineral character or water-power and storage potential, and for withdrawing them from other entry, are contained in the Organic Act of the Geological Survey (20 Stat. 394; 43 U.S.C. 31), section 24 of the Federal Water Power Act of 1935 (49 Stat. 838; 16 U.S.C. 791a–825r as amended), and Executive Order No. 10355 dated May 26, 1952 (17 F.R. 4831), which order delegates to the Secretary of the Interior authority to withdraw or restore lands of the public domain.

["History of Land Classification Relating to Waterpower and Storage Sites." Geological Survey Circular No. 400. U.S. Department of the Interior, 1957. Available in the subcommittee files.]

History

Before enactment of the mineral leasing laws, all minerals on public lands, except coal, were subject to mining location and ultimate private ownership. Coal lands were acquired through purchase. Coal, oil, gas, and oil shale (plus additional materials) were removed from private acquisition by the 1920 Mineral Leasing Act,

and oil shale was completely withdrawn in 1930 by Executive Order No. 5237. Leasing on Indian lands has followed a uniform course, outlined above under the heading "Statutory basis."

The Department of the Interior has always had the administrative authority in these matters. Segregation of lands having value for their water resources began with the act of October 2, 1888 (25 Stat. 527), which gave such authority to the Geological Survey. The Federal Power Commisison had authority to vacate withdrawals, but an Executive order of 1943 delegated such authority (to gether with authority to withdraw or reserve lands in the first place) to the Secretary of the Interior, but subject to the approval of the Director of the Bureau of the Budget, the Attorney General, and the head of the agency having jurisdiction over the land. Executive Order No. 10355, cited above, eliminated approval of the Director of the Bureau of the Budget and the Attorney General. See appendix IV, Geological Survey Circular 400, for details of history.

Objectives

The objective of the mining and mineral leasing laws is to provide for the orderly exploration and wise development of natural resources. It is patently important that the location and extent of the Federal mineral energy resources be ascertained. The conservation and development measures provided for in the statutes and in the rules and regulations implementing them insure that these resources will not be extracted without due regard to the requirements of the economy of the Nation and of the national defense.

Regarding Indian lands the objective differs from the above in that it seeks maximum revenue to the Indian landowners. The leasing program follows the practices in leasing privately owned land for mineral development with additional conditions to insure conservation and carrying out trustee responsibilities.

The objectives of setting aside land for waterpower development are part of the objectives of the hydroelectric power program.

Rules and directives

Broad rules regarding mineral location and patenting, leasing on Indian and Federal lands, and powersite reservations and withdrawals are contained in the statutes. The Department issues regulations to make sure that rules and court interpretations are followed and to govern the mechanics of administration, such as specifying how mineral leases are to be advertised and where, and how bids are to be received and handled.

Relation to programs of other agencies

The Department's jurisdiction in making lands available for prospecting and mining, oil and gas recovery, and waterpower development impinge on the operations of other agencies in three directions:

1. In regard to administration of the State mining laws. This relationship is generally simple, for the respective States and the Federal Government each administers its own laws, but dispute and uncertainty still exist with respect to the Outer Continental Shelf in the Gulf of Mexico. While the Supreme Court in its decision of May 31, 1960, confirmed the Government's ownership outside the 3-mile limit of Louisiana, Mississippi, and Alabama, and confirmed the three-league boundary in the gulf off Texas

and Florida, the coastline of Louisiana, from which the 3-mile limit must be measured, is still undetermined. Meanwhile any leasing in the area in dispute requires the approval of Louisiana under the terms of the joint United States and Louisiana agreement of October 12, 1956. Also unresolved is the ownership of submerged lands off the coast of California. All parties concerned, including the oil and gas industries, have zealously cooperated in meeting the requirements of both Federal and State agencies.

2. In the application for rights-of-way for oil and gas pipelines, in which the Federal Power Commission is interested.

3. In the decisions of the Federal Power Commission regarding applications for powerplant permits, the Department of the Interior being both the agency that designates the water and mineral potential of the affected land and the agency preparing any necessary land orders.

Challenging or difficult issues

There are no special problems involved in the handling of Indian lands, or of lands for waterpower development, but over the years several have emerged with respect to public and acquired lands. These are:

1. The delay in processing oil, gas, and mineral leasing applications arising out of the extremely large numbers received. Constant simplification of procedures is sought.

2. Maintaining an adequate check on acreage holdings to determine whether they are within the legal limitations.

3. Determining the ownership of submerged lands off the coasts of Louisiana and California, referred to above, although this Department itself has no responsibility in the matter.

4. Leasing in areas set aside for the Department of Defense.

Recommendations toward implementing the Employment Act of 1946

The Department of the Interior has no current recommendations, regarding the laws governing the availability of land for exploration for, and extraction of, energy resources or for developing waterpower, that would help advance the objectives of the Employment Act of 1946. There are no hard and fast answers to the challenging problems listed above. The Department constantly strives to improve its various procedures and regulations toward the end that they remain workable and fair as conditions change.

REGULATORY FUNCTIONS REGARDING PETROLEUM

Aside from the enforcing terms in leases, permits, licenses, and contracts covering exploration and production on Federal and Indian lands, discussed in a separate section of this report, the Department of the Interior controls the interstate shipment of what is known as hot or contraband oil—i.e., oil produced in violation of State proration laws designed for protection of correlative rights and prevention of waste—and regulates the importation of oil into the United States.

Authority for the control of "hot oil" traffic is the Connally Hot Oil Act (15 U.S.C. 715). Regulation of imports is derived from section 8 of the Trade Agreements Extension Act of 1958 (72 Stat. 678; 19 U.S.C. 1352a), the Department of the Interior being made responsible

by Presidential Proclamation 3279 dated March 10, 1959. The import controls are for the purpose of assuring a domestic industry capable of continued successful exploration to the degree required by national security. [Text of Proclamation 3279, and amendments of April 30, 1959 and December 10, 1959 with accompanying explanatory materials appear herein as appendix III at p. — and following.]

The Department issues necessary reporting and other administrative regulations in both these programs. In the import program, it specifies the imports of crude oil allowed to individual refineries and of finished products to individual established importers.

There is no impingement on the programs of other agencies except to the extent that the national security basis of the oil import program relates it to the work of the Office of Civil and Defense Mobilization. There are no particularly difficult or challenging issues.

EMERGENCY-RELATED ACTIVITIES

The Department of the Interior has the responsibility, in part delegated to it by the Office of Civil and Defense Mobilization, of advising on, and planning for, an assured supply of coal, oil, and gas, and electric power should a war arise. The programs are in two parts: (1) planning for allocation and distribution for survival and for most effective prosecution of the war, and (2) planning for possible expansion of production and transportation. The plans go into effect only as the emergency arises, modified as demanded by the new circumstances.

Cooperation is with all Federal agencies having any relation to the problem, with the States, with industry, and with NATO and similar groups.

APPENDIX I

BONNEVILLE POWER ADMINISTRATION

JANUARY 26, 1960.

COMPARABLE STATUTORY DATA RE COLUMBIA BASIN PROJECTS

From time to time, as a reference document for the convenience of the staff, the office of the regional solicitor prepares a comparative summary of highlight statutory data on projects for which the Bonneville Power Administration is the marketing agent. The latest issue of this material is attached. In addition to its value as reference material, the subject of our statutory framework is timely in view of the fact that Congress has now reconvened.

The Bonneville Power Administration is the marketing agent for 17 Federal hydroelectric powerplants existing or under construction. Thirteen are Corps of Engineer projects and four are Bureau of Reclamation projects. The plants are:

Corps of Engineers	*Bureau of Reclamation*
1. Bonneville	1. Grand Coulee
2. Albeni Falls	2. Hungry Horse
3. } Detroit-Big Cliff	3. Chandler
4. }	4. Roza
5. } Lookout Point-Dexter	
6. }	
7. McNary	
8. Chief Joseph	
9. The Dalles	
10. Ice Harbor	
11. Hills Creek	
12. Cougar	
13. John Day	

Big Cliff is a reregulating reservoir just downstream from the Detroit powerplant and Dexter serves a similar function for Lookout Point. However, both Big Cliff and Dexter have their separate powerplants. Thus, Detroit-Big Cliff and Lookout Point-Dexter represent four powerplants but comprise only two separate projects, one for Detroit-Big Cliff and one for Lookout Point-Dexter.

The power installations at these projects are complete with the following exceptions: As of January 1, 1960, 10 of the 14 main generators at The Dalles were in service, with the remaining 4 generators scheduled throughout the ensuing year. The installations at Hills Creek and Ice Harbor are scheduled to go into service in fiscal year 1932. The Cougar powerplant is scheduled for fiscal year 1963. At John Day the 12 main generators will come into service during fiscal years 1967, 1968, and 1969. It is probable, in addition, that one day additional generators may be installed at some of the completed projects. For example, a third powerplant might be installed in connection with Grand Coulee by diverting water to a powerplant that could be located downstream from the present dam and additional generator units could be installed at McNary, Chief Joseph, etc.

The Bonneville Project Act of August 20, 1937, was passed to provide for the completion of the Bonneville Dam project and to establish a Bonneville Power Administrator in the Department of the Interior to market the power. The organization built by the Bonneville Power Administrator and the Department of the Interior has come to be known as the Bonneville Power Administration, but the act makes no reference to an administration, simply to an administrator.

Executive Order No. 8526 of August 26, 1940, assigned the marketing of power from Grand Coulee to the Bonneville Power Administrator and provided for the coordinated operation of these two projects. Subsequent legislation and administrative actions gave the Administrator responsibility for the marketing of power from additional dams. However, all functions of the Administrator under all authorizations as of May 24, 1950, were transferred to the Secretary of the Interior by Reorganization Plan No. 3 of 1950. The Secretary in turn temporarily delegated these marketing responsibilities back to the Administrator by Departmental Order No. 2653 and has made permanent marketing delegations by Departmental Order No. 2753 which has been amended and revised from time to time to include the additional powerplants being brought into service.

It is clear from the many statutes cited in the tabulation by the Office of the Regional Solicitor that the Bonneville Power Administration is governed by a veritable hodgepodge of legislation. The applicable statutes differ in important respects, but even more significant perhaps is the fact that on many important matters bearing upon power rates and financial operations the statutes are silent or at best rather vague. In the paragraphs which follow, the statutory status is summarized for principal points of interest.

1. *General.*—Broadly speaking, the three principal statutes are the Bonneville Project Act, the Flood Control Act of 1944, and the Reclamation Project Act of 1939. The Bonneville Project Act pertains to Bonneville Dam. McNary Dam and the four lower Snake River projects, and of course to BPA. The Flood Control Act of 1944 is basic with respect to all other Corps of Engineer projects. The Reclamation Project Act of 1939 applies to all four of the reclamation projects.

In addition, of course, to the three basic acts referred to in the preceding paragraph there are many special acts that must be considered. Some of the more important of these acts will be noted in subsequent paragraphs as variants from the general provisions.

2. *Cost allocations.*—The Bonneville Project Act expressly provides that the allocation of costs shall be made by the Federal Power Commission. Hence, the Commission has such responsibility with respect to Bonneville, McNary, and the four lower Snake River dams. For all other Corps of Engineer projects no agency is specified by statute as having responsibility for cost allocations. For all reclamation projects the Secretary of the Interior makes the cost allocations.

On March 12, 1954, the Interior Department, the Corps of Engineers, and the Federal Power Commission reached general agreement on acceptable cost allocation methods and related factors. The Department issued supplemental instructions and in its transmittal letter the Department stated that when one agency builds a project and another agency markets the power both should participate in making the cost allocations. This latter provision is not set forth in the

tripartite agreement of March 12, 1954, and presumably this directive could apply only to the Interior agencies involved, namely, the Bureau of Reclamation and BPA.

As a practical matter in recent years the constructing agency (the Bureau of Reclamation or the Corps of Engineers) has taken the leadership in the preparation of preliminary cost allocation studies, and has submitted these to BPA for review and comment.

3. *Interest.*—Except for the act of June 12, 1948, covering the Chandler plant, none of the applicable statutes specifies that interest shall be paid on the power investment and of course with the same exception none specifies a rate of interest. However, this general statement does require some explanation. Subsection 9(c) of the Reclamation Project Act of 1939 which applies to the reclamation projects does refer to a 3-percent rate of interest, but as interpreted by a former Solicitor of the Department in an opinion issued in 1944 and supplemented in 1945, subsection 9(c) is simply a minimum power rate requirement and not a payout requirement, thereby requiring a 3-percent return on the power investment (gross without regard to amounts of principal paid back to the Treasury) but not the repayment of interest as such. Technically, under the opinion the revenues representing such 3-percent return are available for repayment of principal for both the power allocation and the irrigation subsidy. However, as an administrative matter, true interest at 3 percent is being paid on the Grand Coulee, Hungry Horse, and Roza reclamation projects.

The act of June 12, 1948, does expressly provide for the payment of interest on the power investment in the Kennewick division (Chandler powerplant) of the Yakima project at not less than 2½ percent per annum. The same act also provides that one-fifth of the amount of the power interest may be applied to the repayment of the irrigation subsidy.

Although the basic acts that authorized the various Corps of Engineer projects and govern their rates and payout do not mention interest, the subject has been referred to in an indirect fashion in a few cases. In recent years acts have been passed providing for assistance from the power revenues of the Chief Joseph and the Dalles projects to the repayment of part of irrigation costs of the Foster Creek and other irrigation projects in Washington and the Crooked River project in Oregon. These laws refer to the payment of irrigation costs in excess of the repayment ability of the water users from project power revenues in excess of those required to amortize the power investment and "to return interest on the unamortized balance thereof."

Despite the fact that the statutes are almost completely silent on the subject, an administrative policy has been made to pay true interest on the unamortized balances of the power investment. A rate of 2½ percent has been and still is being used for both cost-accounting and payout purposes for BPA and the Corps of Engineer projects. Except for the Chandler plant which has special legislation, rates and payout of the reclamation projects are based upon a 3-percent rate but the cost accounts [1] use a 2½-percent rate.

4. *Approval of power rates.*—Applicable statutes expressly provide that for all of the Corps of Engineer dams power rates shall be submitted to the Federal Power Commission for review and approval. The Commission has no jurisdiction with respect to power rates for reclamation projects which are fixed by the Secretary of the Interior. As a practical matter, since BPA has a single set of rate schedules, regardless of the source of generation, the Commission does get somewhat involved in our total financial picture, including results for reclamation projects. On the other hand, the Commission would not have any jurisdiction over special irrigation rates such as the rate to be fixed for the Foster Creek division for irrigation pumping power to be supplied from the Chief Joseph powerplant or interconnected plants pursuant to Public Law 540 of the 83d Congress approved July 27, 1954.[2]

5. *Repayment period.*—With one exception the statutes do not specify a specific period of years for repayment of the power investment. For Corps of Engineers projects the two basic statutes simply specify a reasonable period of years. They refer to rates sufficient to recover costs including the amortization of the capital investment in a reasonable period of years. Some years ago the BPA General Counsel and the Bureau of Reclamation General Counsel each

[1] These are "memorandum" accounts (not the "official" Bureau accounts) kept to permit preparation of a combined power system cost statement.

[2] See September 16, 1959, opinion of regional solicitor which rules specifically on this point.

wrote an opinion to the effect that the governing statutes would not preclude the adoption of depreciation service lives and depreciation methodology as a basis for the repayment of the power investment. As a policy matter, however, repayment of the power investment has been geared generally to a period of 50 years.[3]

The one exception referred to in the preceding paragraph is in the case of the Kennewick division of the Yakima project for which the act of June 12, 1948, fixes a repayment period of 66 years (which includes a 10-year developmental period for irrigation) for both power and irrigation payout.

Reclamation laws do not fix a payout period for either the power investment or the return of irrigation costs assigned for repayment from power revenues. The basic 1939 act does specify 40 years for repayment of costs allocated to municipal and industrial water supply and a period of 40 years after a developmental period of not to exceed 10 years for the repayment of the portion of the irrigation costs to be repaid by the water users.

There are many variations in the application of the 50-year basic payout period. At Grand Coulee, for example, the overall period was fixed at 50 years after the last block of land receives water. This resulted in an overall period extending through fiscal year 2022. Within this period (amounting to 70 years after the fiscal year in which the 18th generator went into service) it is simply a matter of arithmetic to compute the annual payment required to cover both the power invstment and the subsidy. Since the power investment is interest bearing, it is paid first and under present schedules it will be paid back by about 1976 or only 24 years after completion of the power installation. In recent years special acts authorizing specific irrigation projects have allowed the water users 50 years rather than 40 years for their payments following the developmental period of not to exceed 10 years.

6. *Act governing payout.*—The Corps of Engineers projects are governed as to payout by either the Bonneville Project Act or by identical language in the Flood Control Act of 1944. Actually the language merely fixes rates and does not lay down payout requirements. Rates are to be fixed "having regard" for the recovery of costs, including the amortization of the capital investment in a reasonable period of years. Hence, a requirement for payout may be inferred.

Neither the Bonneville Propect Act nor the Flood Control Act of 1944 contains any specific provision as to whether or not costs allocated to purposes other than power are reimbursable. The Flood Control Act of 1944 does have a provision in section 8 bearing upon irrigation features which would be reimbursable. Section 8 authorizes the Secretary of the Interior to arrange to utilize any dam and reservoir project of the corps for irrigation purposes and to construct, operate, and maintain under reclamation laws additional works as may be necessary for irrigation. Such additional works would be reimbursable under reclamation law. Section 8 further provides that "within the limits of the water users' repayment ability" a portion of the cost of the joint facilities may be allocated to irrigation. As some of the Corps of Engineers projects in this area, especially those in the Willamette Basin, a portion of the joint costs has been allocated to irrigation. However, very few contracts have been entered into by the Bureau of Reclamation with irrigators for the sale of water from Willamette Basin projects, with the result that an adequate showing of repayment by the water users of the joint costs allocated to irrigation could not be made. This poses an unresolved problem as to how such costs will be reimbursed.

The Bureau of Reclamation and the Corps of Engineers have exchanged considerable correspondence as to the significance and application of section 8 of the 1944 act. Moreover, section 8 was the subject of an opinion (M–36475) dated November 1, 1957, by the Department's Solicitor and an opinion dated December 15, 1958, by the Attorney General of the United States. The Solicitor's opinion found, among other things, that the Secretary of the Interior has responsibility under section 8 for the repayment of allocations to irrigation functions of dam and reservoir projects operated under the direction of the Secretary of the Army. The Attorney General ruled that reclamation laws apply to the disposition of irrigation benefits made available from Corps of Engineers projects pursuant to section 8. While the correspondence and opinions touched on several problems, we are not completely satisfied that they have settled the issue as to whether the allocation of joint costs at these Corps of Engineers projects to irrigation may be in an amount that exceeds the repayment ability of water users. However, it is possible that allocations to irrigation may be made under the

[3] For BPA's transmission investment the period is only 35 years.

terms of other legislation such as the original authorization of a project as having covered irrigation among other purposes.

The Reclamation Project Act of 1939 in subsection 9(a) when read in connection with subsection 9(b) does specifically provide for the return of costs allocated to power, irrigation, and miscellaneous purposes but makes costs allocated to flood control and navigation nonreimbursable. In addition, subsection 9(c), as interpreted by a former Solicitor of the Department, fixes minimum power rates at the level required to repay O. & M. expenses and return 3 percent on the gross power investment, with this return then being available to apply toward the amortization of all construction costs allocated to power or assigned to power for repayment. The Solicitor ruled that if the 3 percent return did not provide enough money to meet such amortization, the return would have to be as much higher as necessary to achieve that result, but in no event could the return be less than 3 percent.

SPECIAL PROVISIONS ON INTEREST FOR PROJECTS IN OTHER AREAS

In a number of cases legislation authorizing projects in other regions has specified the rate of interest to be paid on the power investment or has set forth a formula for computing the rate of interest. The principal instances may be summarized as follows:

1. The Boulder Canyon Project Act of December 21, 1928 (45 Stat. 1057), specified a rate of 4 percent, but this was reduced to 3 percent by the Boulder Canyon Project Adjustment Act of July 19, 1940 (54 Stat. 774). Incidentally, the original act specified a payout period of 50 years from the date of completion of the power facilities.

2. Public Law 628 of the 81st Congress approved July 31, 1950 (64 Stat. 382), fixed 2½ percent as the rate of interest on the unamortized balance of "the full capital investment" in the Eklutna project in Alaska.

3. For the Collbran project in Colorado the act of July 3, 1952 (66 Stat. 325), specifies an interest rate of 3 percent on the power investment but for the costs allocated to municipal, domestic, and industrial water supply it specifies that the interest rate shall be certified by the Secretary of the Treasury and shall be equal to the average rate paid by the United States on its long-term bonds outstanding at the time the repayment contract is negotiated.

4. For the Talent division of the Rogue River Basin project the act of August 20, 1954 (68 Stat. 752), requires repayment of the commercial power investment with interest at the average rate (to be certified by the Secretary of the Treasury) paid by the United States on its marketable long-term securities outstanding on the date of the act. The statute does not define "long term."

5. For the Colorado River storage project the act of April 11, 1956 (70 Stat. 105), requires interest on the unamortized balance of the investment (including interest during construction) in both power and municipal water supply features at a rate determined by the Secretary of the Treasury by calculating the average yield to maturity (on the basis of daily closing market bid quotations during the month of June next preceding the fiscal year in which the first advance is made for initiating construction) on all interest-bearing, marketable U.S. securities having maturities of 15 years or more from the first day of said month. The average yield is to be rounded to the nearest one-eighth of 1 percent. Note that this computation is on the basis of yields rather than upon the interest rate paid by the United States.

6. For the Washoe project the act of August 1, 1956 (70 Stat. 775), requires interest on the power investment at the average rate (to be certified by the Secretary of the Treasury) paid by the United States on its marketable long-term securities outstanding on the date of the act.

7. The Tennessee Valley Authority was not required by statute to pay interest on its investment until the revenue bond financing law was passed last year (Public Law 86–137 approved Aug. 6, 1959). The new legislation authorizes TVA to issue revenue bonds up to a maximum of $750 million outstanding as of any one time. Obviously, these will be interest bearing securities. However, the same legislation requires TVA to pay as a return on the appropriation investment in its power facilities interest equal to the computed average interest rate payable by the United States on its total marketable public obligations as of the beginning of each fiscal year. Note that this calls for the calculation of a new rate for each year and that the calculation is

based upon all marketable public debt obligations and not just the long-term issues.

There certainly is no consistent pattern in these provisions with respect to interest. In some cases the statute fixes the specific percentage rate, but in other cases the statute prescribes a formula for finding the rate. For one project the precise percentage is specified for the power features, but a formula for finding the rate is specified for the municipal, domestic, and industrial water supply function.

In those cases in which a formula is set forth there is considerable variation as to the terms of the formula. Most refer to long-term marketable obligations, but at least one covers all marketable U.S. debt obligations. In some cases the formula refers to the average of rates paid by the United States, but in other cases the average is based upon yields which are determined by market prices.

In most cases it appears that once the rate is determined (either by a provision in the statute setting a specific percentage or by a computation pursuant to the formula in the statute) it remains unchanged for all time except, of course, that a change could be made by further act of Congress. In one case, however, namely, for the TVA appropriation investment, it seems that the rate is to be recomputed each fiscal year.

EARL D. OSTRANDER.

APPENDIX II

BONNEVILLE POWER ADMINISTRATION CUSTOMER SERVICE POLICY

1. GENERAL POLICY STATEMENT

In order to carry out the provisions of the Bonneville Project Act and other pertinent legislation, the Bonneville Power Administration will undertake delivery of power, at its uniform wholesale rates, within economic transmission distances, subject to appropriate contractual provisions, under the following general conditions:

(*a*) The best engineering and economic plan of service will be determined on the basis of load and system studies made jointly by the customer involved and the Administration, considering all transmission and distribution factors involved.

(*b*) Points of delivery of power will be established at or near load centers, defined in section 2, as determined by the joint load and system studies, subject to the applicable limitations defined in this policy.

(*c*) The Administration will provide transmission facilities and such step-down facilities as may be required to transform the power from transmission voltage to lower voltages for delivery to the customers, subject to the applicable limitations defined in this policy and to the exceptions specified in the following subsections, d through h.

(*d*) The Administration will provide additional facilities to serve a customer only if reasonable utilization of the existing facilities installed for service to the customer is assured.

(*e*) The Administration will refrain from constructing transmission lines or substation facilities within city limits or within anticipated future city limits, unless it is economically or technically advantageous for the Government.

(*f*) The Administration will construct additional customer service substations at sufficient distances from its existing customer service substations so as to insure that the proximity of such substations will not result in the Administration's assuming or lessening the responsibilities of its customers for distribution of power to ultimate consumers.

(*g*) The Administration will not provide additional facilities at its expense for service to a single ultimate consumer whose power requirements are supplied or are to be supplied by one of the Administration's customers, unless economic or technical advantages to the Government will result.

(*h*) The Administration requires that each service supplied directly from its system shall provide sufficient estimated revenues over the initial 10-year period of service to cover the estimated annual costs of the specific facilities installed by the Administration for such service. Projects not otherwise feasible may be allowed, however, if customer investments are made, in lieu of investment by the Administration, sufficient to meet feasibility standards.

Each service supplied by transfer shall provide sufficient estimated revenues, over the initial 10-year period of service, to cover the estimated annual costs to the Administration of the service.

2. NEW POINTS OF DELIVERY

The Administration, subject to the general policy statements of section 1, will make delivery of power at or near load centers within economic transmission distances, as determined upon the basis of the joint load and system studies of the customer and the Administration, and subject to the conditions outlined herein. A joint study of future power requirements, alternative plans for serving increased loads, and costs of facilities required for each plan of service, shall be made by the Administration and each customer to determine the best plan of service. All plans of service insofar as the Administration's facilities are concerned must conform to the Administration's engineering standards. The customer and the Administration must agree upon a plan of service before it is recommended.

(*a*) *Standard load centers*

A standard load center is defined as an area for which the joint study indicates that service by means of 115-kilovolt or higher voltage transmission facilities, including appropriate substation facilities, would be the most economical method of providing service on an overall basis. Standard load centers are ordinarily served directly from the Administration's transmission system. (For exception, see transfer policy.)

In case a proposed additional point of delivery is requested, the analyses of annual costs of the alternative plans of service must show that total combined 10-year annual costs for both the Administration and the customer are at least 5 percent less for the additional delivery point than for added service at the existing points of delivery.

When an approved load center is in the immediate vicinity of an existing transmission line of the Administration, the Administration will ordinarily locate the substation on that line, except where it is to the Government's interest to locate it elsewhere. Customers wishing to have a substation located a short distance from the Administration's line will be expected to construct the tapline at their own expense in accordance with the Administration's standards and furnish and install any protective devices considered necessary by the Administration.

(*b*) *Inconclusive load centers*

In case a proposed additional point of delivery is requested and the cost data are in favor of service at 115 kilovolts or higher, but are not conclusive (that is, by a 5 percent margin), the Administration will provide necessary additional capacity at the existing point or points of delivery. The customer may, in lieu of additions by the Administration to existing substation facilities, make the following arrangements with the Administration, provided such arrangements meet the Administration's engineering and operating standards.

(1) If the requested new point of delivery is to be located on an existing transmission line of the Administration, the Administration will provide the required additional facilities at a new substation on such line on the basis that the customer wll make a contribution to the Administration in aid of construction. Such contribution shall be equal to the estimated excess costs of construction and equipment, including installation, incurred by the Administration in providing the additional capacity at the new rather than the existing substation. Customers will not be reimbursed by the Government for contributions in aid of construction. Operation and maintenance costs associated with this separate delivery point will be absorbed by the Administration.

(2) If the requested new delivery point is not adjacent to an existing transmission line of the Administration, the Administration will provide the new substation on the basis that the customer will bear the cost of a 115-kilovolt interconnecting transmission line including terminal facilities at the tap point to be constructed in accordance with the Administration's standards. The customer will also make a contribution to the Administration in aid of construction equal to the estimated excess costs of construction and equipment, including installation, incurred by the Administration in providing the additional capacity at the new substation rather than the existing substation. Customers will not be reimbursed by the Government for contributions in aid of construction. The Administration will operate and maintain at its expense the substation facilities. The customer will retain ownership of the new transmission facilities and will be responsible for their operation and maintenance;

provided, however, if the customer donates the transmission facilities to the Government, the Administration will be responsible for their operation and maintenance.

(*c*) *Service by transfer*

When other electric utilities are willing to serve customers of the Administration for the account of the Government, transfer arrangements will be made when the transfer will provide a reasonable grade of service to the customer at reasonable cost to the Administration.

In each case a study shall be made of the grade of service that can reasonably be expected under the proposed transfer arrangement. The facilities for transfer should assure Government customers a good quality of service and opportunity to develop and serve increasing loads. It is the Administration's policy to continue service by transfer as long as the above qualifications are met.

The Administration will not provide either transmission or transformation facilities between the transferor's system and the point of delivery to the customer, unless they would qualify for construction, by the Administration, under direct service. If the Administration constructs interconnecting transmission or transformation facilities or both between the transferor's system and the point of delivery to the customer, the service contract between the customer and the Administration should provide for reimbursement by the customer to the Administration in the event that the transfer is eliminated.

3. SERVICE TO INDUSTRIES

The Administration will not ordinarily sell power directly to industrial consumers except as required by existing contracts, or renewals or extensions thereof; nor will it ordinarily provide power to distributors for resale to large industrial consumers to the detriment of domestic and rural consumers. A large industrial consumer is here defined as any new industrial load of over 10,000 kilowatts or an expansion of an existing industrial load of over 10,000 kilowatts in any one year.

A non-Federal utility may serve the expansion of an existing industrial customer of the Government from Federal generation provided: (1) firm power is available, (2) the load is under 10,000 kilowatts, or if 10,000 kilowatts or more has the approval of the Administrator, and (3) the distributor installs the necessary facilities or pays the Administration for use of the Administration's facilities.

A non-Federal utility may replace an interruptible load being served by the Administration if it supplies the power from a new non-Federal source or agrees to firm its delivery with a guaranteed source of energy.

4. STATEMENTS RELATING TO DELIVERY

(*a*) *Grade of service*

The Administration will provide a high grade of service consistent with the accepted standards of the electric transmission industry with respect to continuity of service, voltage, and frequency regulation.

(*b*) *Transmission voltage*

The Administration will construct transmission lines operating at 115 kilovolts or higher voltages. The Administration will not provide transmission facilities to operate at lower voltages unless it is to the Government's advantage or required by extraordinary engineering considerations, such as the limitations of underwater cable transmission.

(*c*) *Delivery voltage*

The Administration will deliver power at a voltage to be agreed upon by the Administration and the customer or group of customers to be served. However, the Administration will not provide delivery voltages below 12.5 kilovolts.

(1) *Voltage regulation*

For deliveries at voltages above 25 kilovolts, the Administration will plan and provide its facilities to limit voltage variation to plus or minus 10 percent of the contract voltage. Although the Administration will not plan to normally operate its system with plus or minus 10 percent regulation, this voltage range does provide the operational flexibility necessary to accommodate the load

changes which occur on the system over extended periods of time. For deliveries at voltages of 25 kilovolts and below, facilities will be planned and provided by the Administration to limit voltage variation to plus or minus 5 percent of the contract voltage.

Corrective measures will be applied in the event voltage regulation consistently exceeds the prescribed limits or when an analysis of system conditions indicates that the delivery voltage is expected to vary beyond the permitted voltage variation.

Although the Administration has no control over, and cannot guarantee delivery voltages at transfer points of delivery, it will attempt in all cases to see that adequate service conditions are maintained.

(2) *Customer-owned voltage regulators*

In case a customer wishes to improve voltage regulation on its own system by the installation of a voltage regulator in one of the Administration's substations, the Administration may agree to such an installation in consideration of the benefits derived by the Administration by possible postponement of system additions. The Administration will share in approved installations as described below; provided, however, that the total cost to the Administration may not exceed a maximum of 15 percent of the total installed cost.

The customer will—

(*a*) Build a concrete foundation for the regulator at a location and in such a manner as specified by the Administration;

(*b*) Furnish a voltage regulator, and set the regulator on the above foundation as specified by the Administration and under the supervision of the Administration;

(*c*) Furnish required regulator bypass switches; and

(*d*) Operate and perform maintenance for the regulator at its own expense. (Ownership of regulator and switches will remain with the customer.)

The Administration will—

(*a*) Design the regulator installation;

(*b*) Make necessary additions to buses and structures in the Administration's substation, install regulator bypass switches, make necessary connections between regulator and other facilities, and perform other construction work as required;

(*c*) Furnish material items for the above work with the exception of those items to be supplied by the customer;

(*d*) Furnish the required Administration personnel necessary to supervise the above installation; and

(*e*) If it so elects, provide ordinary maintenance and periodic inspection of the regulator.

(*d*) *Transformation*

The Administration will furnish voltage stepdown equipment to serve the customer at the voltage jointly determined to be the best suited to the needs of the customer or that of several customers if more than one customer is to be served at a point of delivery.

However, it is the policy of the Administration not to provide delivery voltages below 12.5 kilovolts.

For planning purposes, additional transformation will be scheduled for installation when the estimated peakloads are within 10 percent of the forced cooled rating of the existing transformation operating at 95 percent power factor. Additional transformer capacity will be scheduled in sufficient time to permit the new capacity to be in service before the appropriate rating of the existing transformation is reached.

(*e*) *Feeder positions and circuit breakers*

The Administration normally provides one feeder position per point of delivery, properly metered and protected. Additional feeder capacity will be supplied if load growth or the convenience of the Government requires, but additional positions solely for the customer's convenience will be provided only at the customer's expense and are subject to substation space and engineering limitations. When additional feeder capacity is required, the Administration has the option of providing a second position or changing out the original for one of greater capacity. Circuit breakers are considered as part of the feeder position.

When a customer is permitted to tap a line of the Administration, it will be the customer's responsibility to provide any protective devices, including circuit breakers, which the Administration may require.

(f) Revenue metering

All revenue metering will ordinarily be provided by the Administration, and metering equipment will ordinarily be installed at the delivery point. In situations where the Administration finds it convenient for any reason to install the metering equipment at any other point, mutually agreed upon factors will be applied to the actual meter readings to correct the readings to the point of delivery.

In cases where feeder positions are installed for the convenience of a customer under a trust agreement, the customer and not the Administration pays for and owns the metering equipment. The Administration, however, purchases, installs, operates, and maintains the metering under terms of the trust.

Inspection and maintenance of the Government's metering equipment will be done by the Administration.

In cases where special equipment installed for the customer's own use is actuated by the Administration's metering equipment, the Administration is not responsible for the accurate operation of the customer's equipment and is not obligated to maintain its metering accuracy within closer limits than required by normal operating standards.

5. MISCELLANEOUS SERVICE ARRANGEMENTS

(a) Lease of customer-owned facilities

The Administration will not lease facilities from other utilities unless lease arrangements will avoid construction by the Administration of duplicating facilities, and lease costs are reasonable and conform to the feasibility requirements of section 1(h).

(b) Rental of the Administration's equipment

The Administration will lease or rent equipment to customers only at times of emergencies or when it is in the Government's interest, and subject to the following conditions:

(1) The customer must show satisfactory evidence that all commercial channels have been investigated and found unable to provide the necessary equipment when needed.

(2) Lease or rental arrangements can be entered into only when the equipment is excess to the immediate needs of the Administration.

(c) Temporary installations

Facilities will be installed to provide temporary service to a customer only when it is in the Government's interest; for example, to provide construction power for Federal projects. When facilities are installed to provide temporary service to a customer, arrangements will be made to assure the Administration of sufficient revenue to cover not less than the total costs of providing such service, including the costs of installation and removal of the necessary equipment.

(d) Emergency service

The Administration will provide facilities for standby emergency service to a customer if adequate compensation is made to the Administration.

(e) Facilities for nonfirm power

The Administration will install facilities for the delivery of nonfirm power and energy where such deliveries are economically feasible.

JUNE 4, 1958.

* * * * * * *

APPENDIX III

ADJUSTING IMPORTS OF PETROLEUM AND PETROLEUM PRODUCTS INTO THE UNITED STATES

THE WHITE HOUSE,
March 10, 1959.

STATEMENT BY THE PRESIDENT

I have today issued a proclamation adjusting and regulating imports of crude oil and its principal products into the United States.

The voluntary oil import program has demonstrated to me the willingness of the great majority of the industry to cooperate with the Government in restrict-

ing imports to a level that does not threaten to impair security. I commend them, and to me it is indeed a cause for regret that the actions of some in refusing to comply with the request of the Government require me to make our present voluntary system mandatory.

The new program is designed to insure a stable, healthy industry in the United States capable of exploring for the developing new hemisphere reserves to replace those being depleted. The basis of the new program, like that for the voluntary program, is the certified requirements of our national security which make it necessary that we preserve to the greatest extent possible a vigorous, healthy petroleum industry in the United States.

In addition to serving our own direct security interests, the new program will also help prevent severe dislocations in our own country as well as in oil industries elsewhere which also have an important bearing on our own security. Petroleum, wherever it may be produced in the free world, is important to the security, not only of ourselves, but also of the free people of the world everywhere.

During the past few years, a surplus of world producing capacity has tended to disrupt free world markets, and, unquestionably, severe disruption would have occurred in the United States and elsewhere except for cutbacks in U.S. production under the conservation programs of the various state regulatory bodies.

The voluntary controls have been and the mandatory controls will be flexibly administered with the twin aims of sharing our large and growing market on an equitable basis with other producing areas and avoiding disruption of normal patterns of international trade.

The Director of the Office of Civil and Defense Mobilization will keep the entire program under constant surveillance, and will inform the President of any circumstances which in his opinion indicate the need for any further Presidential action. In the event price increases occur while the progam is in effect, the Director is required to determine whether such increases are necessary to accomplish the national security objectives of the proclamation.

The United States recognizes, of course, that within the larger sphere of free world security, we, in common with Canada and with the other American Republics, have a joint interest in hemisphere defense. Informal conversations with Canada and Venezuela looking toward a coordinated approach to the problem of oil as it relates to this matter of common concern have already begun. The United States is hopeful that in the course of future conversations agreement can be reached which will take fully into account the interests of all oil-producing States.

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BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

Whereas pursuant to section 2 of the act of July 1, 1954, as amended (72 Stat. 678, 19 U.S.C. 1352a), the Director of the Office of Civil and Defense Mobilization has made an appropriate investigation to determine the effects on the national security of imports of crude oil and crude oil derivatives and products and, having considered the matters required by him to be considered by the said act of July 1, 1954, as amended, has advised me of his opinion "that crude oil and the principal crude oil derivatives and products are being imported in such quantities and under such circumstances as to threaten to impair the national security"; and

Whereas having considered the matters required by me to be considered by the said act of July 1, 1954, as amended, I agree with the said advice; and

Whereas I find and declare that adjustments must be made in the imports of crude oil, unfinished oils, and finished products, so that such imports will not so threaten to impair the national security; and

Whereas I find and declare that within the continental United States there are two areas, one, east of the Rocky Mountains (Districts I–IV), in which there is substantial oil production capacity in excess of actual production, and the other, west of the Rocky Mountains (District V), in which production is declining and in which, due to the absence of any significant interarea flow of oil, limited imports are necessary to meet demand, and that accordingly, imports into such areas must be treated differently to avoid discouragement of and decrease in domestic oil production, exploration and development to the detriment of the national security; and

Whereas I find and declare that the Commonwealth of Puerto Rico largely depends upon imported crude oil, unfinished oils, and finished products and that any system for the adjustment of imports of such commodities should permit imports into Puerto Rico adequate for the purposes of local consumption, exports to foreign areas, and limited shipment of finished products to the continental United States:

Now, therefore, I, Dwight D. Eisenhower, President of the United States of America, acting under and by virtue of the authority vested in me by section 2 of the act of July 1, 1954, as amended, do hereby proclaim as follows:

SECTION 1. (a) In Districts I–IV, District V, and in Puerto Rico, on and after March 11, 1959, no crude oil or unfinished oils may be entered for consumption or withdrawn from warehouse for consumption, and on and after April 1, 1959, no finished products may be entered for consumption or withdrawn from warehouse for consumption, except (1) by or for the account of a person to whom a license has been issued by the Secretary of the Interior pursuant to an allocation made to such person by the Secretary in accordance with regulations issued by the Secretary, and such entries and withdrawals may be made only in accordance with the terms of such license, or (2) as authorized by the Secretary pursuant to paragraph (b) of this section, or (3) as to finished products, by or for the account of a department, establishment, or agency of the United States, which shall not be required to have such a license but which shall be subject to the provisions of paragraph (c) of this section.

(b) Until the Secretary of the Interior is able to make allocations and issue licenses, he may, subject to such conditions as he may deem appropriate, temporarily authorize such entries and withdrawals without licenses and the quantities so entered or withdrawn shall be deducted from any allocation subsequently made by the Secretary to any person who has made any such entry or withdrawal.

(c) In Districts I–IV, District V, and in Puerto Rico, on and after April 1, 1959, no department, establishment, or agency of the United States shall import finished products in excess of the respective allocations made to them by the Secretary of the Interior. Such allocations shall be within the maximum levels of imports established in section 2 of this proclamation.

SEC. 2. (a)(1) In Districts I–IV the maximum level of imports of crude oil, unfinished oils, and finished products, except residual fuel oil to be used as fuel, shall be approximately 9% of total demand in these districts, as estimated by the Bureau of Mines for periods fixed by the Secretary of the Interior. Within this maximum level, imports of finished products, exclusive of residual fuel oil to be used as fuel, shall not exceed the level of imports of such products into these districts during the calendar year 1957 and imports of unfinished oils shall not exceed 10% of the permissible imports of crude oil and unfinished oils.

(2) In Districts I–IV the imports of residual fuel oil to be used as fuel shall not exceed the level of imports of that product into these districts during the calendar year 1957.

(b) In District V the maximum level of imports of crude oil, unfinished oils, and finished products shall be an amount which, together with domestic production and supply, will approximate total demand in this district as estimated by the Bureau of Mines for periods fixed by the Secretary. Within this maximum level imports of finished products shall not exceed the level of imports of such products into this district during the calendar year 1957 and imports of unfinished oils shall not exceed 10 percent of the permissible imports of crude oil and unfinished oils.

(c) Such additional imports of crude oil may be permitted in addition to the maximum levels established in paragraphs (a) and (b) of this section as are necessary to meet the minimum requirements of refiners, and pipeline companies using crude oil directly as fuel, which are not able to obtain sufficient quantities of domestic crude oil by ordinary and continuous means, such as by barges, pipelines, or tankers.

(d) The maximum level of imports of crude oil, unfinished oils, and finished products into Puerto Rico shall be approximately the level of imports into Puerto Rico during all or part of the calendar year 1958, as determined by the Secretary of the Interior to be consonant with the purposes of this proclamation, or such lower or higher levels as the Secretary may subsequently determine are required to meet increases or decreases in local demand in Puerto Rico or demand for export to foreign areas.

(e) The Secretary of the Interior shall keep under review the imports into Districts I–IV and into District V of residual fuel oil to be used as fuel and the Secretary may make, on a monthly basis if required, such adjustments in the maximum level of such imports as he may determine to be consonant with the objectives of this proclamation.

(f) The levels established, and the total demand referred to, in this section do not include free withdrawals by persons pursuant to section 309 of the Tariff Act of 1930, as amended (19 U.S.C. 1309), or petroleum supplies for vessels or aircraft operated by the United States between points referred to in said section 309 (as to vessels or aircraft, respectively) or between any point in the United States or its possessions and any point in a foreign country.

SEC. 3. (a) The Secretary of the Interior is hereby authorized to issue regulations for the purpose of implementing this proclamation. Such regulations shall be consistent with the levels established in this proclamation for imports of crude oil, unfinished oils, and finished products into Districts I–IV, into District V, and into Puerto Rico, and shall provide for a system of allocation of the authorized imports of such crude oil, unfinished oils and finished products and for the issuance of licenses pursuant to such system, with such restrictions upon the transfer of allocations and licenses as may be deemed appropriate to further the purposes of this proclamation.

(b) (1) With respect to the allocations of imports of crude oil and unfinished oils into Districts I–IV, and into District V, such regulations shall provide, to the extent possible, for a fair and equitable distribution among persons having refinery capacity in these districts in relation to refinery inputs during an appropriate period or periods selected by the Secretary and may provide for distribution in such manner as to avoid drastic reductions below the last allocations under the Voluntary Oil Import Program. Such regulations also shall provide for allocations of crude oil to persons having operating refinery capacity or having pipeline facilities using crude oil directly as fuel who show inability to obtain sufficient quantities of domestic crude oil by ordinary and continuous means, such as barges, pipelines, or tankers.

(2) Such regulations shall provide for the allocation of imports of crude oil and unfinished oils into Puerto Rico among persons having refinery capacity in Puerto Rico in relation to refinery inputs during all or a part of the calendar year 1958 as the Secretary may determine.

(3) Such regulations shall require that imported crude oil and unfinished oils be processed in the licensee's refinery except that exchanges for domestic crude or unfinished oils may be made if otherwise lawful, if effected on a current basis and reported in advance to the Secretary, and if the domestic crude or unfinished oils are processed in the licensee's refinery. However, persons receiving allocations of crude oil on the basis of inability to obtain sufficient domestic crude by ordinary and continuous means shall not be permitted to make exchanges.

(4) With respect to the allocations of imports of finished products into Districts I–IV, District V, and Puerto Rico, such regulations shall, to the extent possible, result in a fair and equitable distribution of such products among persons who have been importers of finished products during the respective base periods specified in section 2 of this proclamation.

(c) Such regulations may provide for the revocation or suspension by the Secretary of any allocation or license on grounds relating to the national security, or the violation of the terms of this proclamation, or of any regulation or license issued pursuant to this proclamation.

SEC. 4. For the purpose of hearing and considering appeals or petitions by persons affected by the regulations issued by the Secretary of the Interior, he is authorized to provide for the establishment and operation of an Appeal Board, comprised of one representative each from the Departments of the Interior, Defense, and Commerce to be designated, respectively, by the heads of such Departments. Such representatives shall be of the rank of Deputy Assistant Secretary or higher. The Appeal Board may be empowered, on grounds of hardship, error, or other relevant special consideration, but within the limits of the maximum levels of imports established in section 2 of this proclamation (1) to modify any allocation made to any person under the regulations issued pursuant to section 3 of this proclamation, (2) to grant allocations of crude oil and unfinished oils in special circumstances to persons with importing histories who do not qualify for allocations under such regulations; and (3) to review the revocation or suspension of any allocation or license.

The Secretary may provide that such decisions by the Appeal Board shall be final.

SEC. 5. Persons who apply for allocations of crude oil, unfinished oils, or finished products and persons to whom such allocations have been made shall furnish to the Secretary of the Interior such information and shall make such reports as he may require, by regulation or otherwise, in the discharge of his responsibilities under this proclamation.

SEC. 6. (a) The Director of the Office of Civil and Defense Mobilization shall maintain a constant surveillance of imports of petroleum and its primary derivatives in respect of the national security and, after consultation with the Secretaries of State, Defense, Treasury, the Interior, Commerce, and Labor, he shall inform the President of any circumstances which, in the Director's opinion might indicate the need for further Presidential action under section 2 of the act of July 1, 1954, as amended. In the event prices of crude oil or its products or derivatives should be increased after the effective date of this proclamation, such surveillance shall include a determination as to whether such increase or increases are necessary to accomplish the national security objectives of the act of July 1, 1954, as amended, and of this proclamation.

(b) The Special Committee to Investigate Crude Oil Imports is hereby discharged of its responsibilities.

SEC. 7. The Secretary of the Interior may delegate, and provide for successive redelegation of, the authority conferred upon him by this proclamation. All departments and agencies of the Executive branch of the Government shall cooperate with and assist the Secretary of the Interior in carrying out the purposes of this proclamation.

SEC. 8. Executive Order 10761 of March 27, 1958, entitled "Government Purchases of Crude Petroleum and Petroleum Products" (23 F.R. 2067) is hereby revoked as of April 1, 1959.

SEC. 9. As used in this proclamation:

(a) "Person" includes an individual, a corporation, firm, or other business organization or legal entity, and an agency of a state, territorial, or local government, but does not include a department, establishment, or agency of the United States;

(b) "Districts I–IV" means the District of Columbia and all of the States of the United States except those States within District V;

(c) "District V" means the States of Arizona, Nevada, California, Oregon, Washington, Alaska, and the Territory of Hawaii;

(d) 'Crude oil" means crude petroleum as it is produced at the wellhead;

(e) "Finished Products" means any one or more of the following petroleum oils, or a mixture or combination of such oils, which are to be used without further processing except blending by mechanical means:

(1) liquefied gases—hydrocarbon gases recovered from natural gas or produced from petroleum refining and kept under pressure to maintain a liquid state at ambient temperatures;

(2) gasoline—a refined petroleum distillate which, by its composition, is suitable for use as a carburant in internal combustion engines;

(3) jet fuel—a refined petroleum distillate used to fuel jet propulsion engines;

(4) naptha—a refined petroleum distillate falling within a distillation range overlapping the higher gasoline and the lower kerosenes;

(5) fuel oil—a liquid or liquefiable petroleum product burned for lighting or for the generation of heat or power and derived directly or indirectly from crude oil, such as kerosene, range oil, distillate fuel oils, gas oil, diesel fuel, topped crude oil, residues;

(6) lubricating oil—a refined petroleum distillate or specially treated petroleum residue used to lessen friction between surfaces;

(7) residual fuel oil—a topped crude oil or viscous residuum which, as obtained in refining or after blending with other fuel oil, meets or is the equivalent of Military Specification Mil–F–859 for Navy Special Fuel Oil and any other more viscous fuel oil, such as No. 5 or Bunker C;

(8) asphalt—a solid or semisolid cementitious material which gradually liquefies when heated, in which the predominating constituents are bitumins, and which is obtained in refining crude oil.

(f) "Unfinished Oils" means one or more of the petroleum oils listed in paragraph (e) of this section, or a mixture or combination of such oils, which are to be further processed other than by blending by mechanical means.

In witness whereof, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

Done at the City of Washington this tenth day of March in the year of our Lord nineteen hundred and fifty-nine, and of the Independence of [SEAL] the United States of America the one hundred and eighty-third.

DWIGHT D. EISENHOWER.

By the President:

CHRISTIAN A. HERTER,
Acting Secretary of State.

REPORT OF SPECIAL COMMITTEE TO INVESTIGATE CRUDE OIL IMPORTS

MARCH 6, 1959.

On December 22, 1958, in its interim report, your Special Committee To Investigate Crude Oil Imports stated that it would present for your consideration certain recommendations for revisions or changes in the voluntary oil import program. Pending submission of these recommendations, and with your approval, importers were advised that no changes would be made through February 28, 1959, in crude oil allocations under the voluntary oil import program and were requested to continue through February 28, 1959, to limit to their present allocations the importation of unfinished gasoline and other unfinished oils.

On January 22, 1959, at the instance of your Special Committee, the Secretary of State and the Deputy Secretary of Defense requested that the Director of the Office of Civil and Defense Mobilization, pursuant to section 8 of the Trade Agreements Act of 1934, as amended, make an appropriate investigation to determine the effects on the national security of imports of crude oil and its derivatives and products.

On February 27, 1959, the Director, Office of Civil and Defense Mobilization, reported to you that crude oil and its principal derivatives were being imported into the United States in amounts which threaten to impair the national security. In the light of that finding, he Special Committee recommends that the voluntary oil import program be replaced by a mandatory program which will limit the imports of crude oil and certain derivatives to such levels as the national security requires and will allocate such imports as are authorized among companies in a fair and equitable manner. The Committee considers that, although the majority of the oil industry has complied with the voluntary program, the following factors compel mandatory action: excessive imports by companies who have not complied with the voluntary program; a threat to the success of the voluntary program because of increased importation of unfinished oils and products; the likelihood of increased noncompliance among companies now having allocations when they are asked to cut back imports voluntarily in order to provide allocations for newcomers to the program; and the impossibility of working out a desirable and legally permissible revision of the voluntary program acceptable to this Committee which will take care of these requirements.

The Committee makes the following recommendations with respect to a mandatory program:

1. In view of the Director's determination that imports of "crude oil and the principal crude oil derivatives and products" threaten to impair the national security, imports of crude oil and the following derivatives, whether unfinished oils or finished products, should be controlled:

Liquefied petroleum gases
Gasoline
Kerosene
Jet fuel
Distillate fuel oil
Lubricating oils
Residual fuel oil
Asphalt

2. No control should be imposed on fuels of foreign origin withdrawn from bond tax free as supplies for vessels or aircraft as provided in the Tariff Act of 1930. (Estimates of total demand used to fix levels of imports would not include demand for such supplies.) This provision is not intended to exempt Government agencies from limitations elsewhere recommended with respect to finished products.

3. In districts I–IV, where there is substantial oil production capacity in excess of actual production, the maximum level of imports of crude oil, unfinished oil, and finished products (except residual fuel oil to be used as fuel) be limited to approximately 9 percent of total demand in such districts. Within this maximum level, imports of finished products (exclusive of residual fuel oil to be used as fuel) should not exceed the level of imports of such products during 1957. In addition, imports of residual fuel oil to be used as fuel also should be confined to the 1957 level.

4. In district V (including Alaska and Hawaii), where production is declining and where, due to the absence of any significant interarea flow of oil, limited imports are necessary to meet demand, the maximum level of imports of crude oil, unfinished oils, and finished products be limited to such amount as, when added to domestic production and supply would approximate the total demand in that district. Within this maximum level, imports of finished products (including residual fuel oil to be used as fuel) should be held to the level of imports of such products during 1957.

5. Such additional imports of crude oil over and above these limits be permitted as are necessary to meet the minimum requirements of refiners, and pipeline companies using crude oil directly as fuel, not able to obtain sufficient quantities of domestic crude oil by ordinary and continuous means, such as by barges, pipelines, or tankers.

6. In districts I–V, the Secretary of the Interior should keep under review the imports of residual fuel oil to be used as fuel and should be authorized to make, on a monthly basis if required, such adjustments in the level of such imports as he may determine to be consonant with the objectives of the program.

7. In order to make the foregoing limitations effective, imports of crude oil, unfinished oils, and finished products into Puerto Rico should be limited to an amount which would not substantially exceed the level of imports during all or part of 1958, as determined by the Secretary of the Interior to be consonant with the purposes of the mandatory program, or such higher or lower levels as the Secretary may subsequently determine are required to meet increases or decreases in local or export demand. The Secretary should be authorized to allocate imports or crude oil and unfinished oils between the two refineries in Puerto Rico and imports of finished products among importers during a base period selected by him.

8. The Secretary of the Interior be delegated the responsibility to allocate imports of crude oil and unfinished oils. under standards which would—

(1) Restrict such allocations to those companies having refinery capacity in the United States;

(2) Provide that refinery inputs would be used as a basis for allocations, except that initially no company having inputs during the base period selected shall receive less than 80 percent of their last allocation under the voluntary oil import program;

(3) Provide for allocations of crude oil (but not unfinished oils) to meet the minimum requirements of refiners and pipeline companies using crude directly as fuel showing inability to obtain sufficient quantities of domestic crude oil by ordinary and continuous means, such as barges. pipelines, or tankers.

9. In districts I–V, the importation of unfinished oils by each company receiving an allocation of crude oil and unfinished oils should be limited to 10 percent of the allocation by volume.

10. The Secretary of the Interior should require that imported crude oil and unfinished oils be processed in the importer's refinery except that exchanges for domestic crude or unfinished oils may be made if otherwise lawful, if effected on a current basis and reported in advance to the Secretary, and if the domestic crude or unfinished oils are processed in the importer's refinery. Refiners and pipeline companies receiving allocations of crude oil on the basis of inability to obtain sufficient domestic crude by ordinary and continuous means should not be permitted to make exchanges.

11. The Secretary of the Interior should be authorized to allocate imports of residual fuel oil to be used as fuel and finished products among companies who imported during 1957, and in the amounts imported by them during such period. Government agencies should be required to obtain allocations for the importation of finished products.

12. Controls on the importation of finished products (including residual fuel oil to be used as fuel) should become effective on April 1, 1959. Controls on the importation of crude oil and unfinished oils should become effective on March 11, 1959. The first allocation period should terminate June 30, 1959, and allocations thereafter should be for periods of 6 months. Refinery inputs and demand should be reviewed by the Secretary of the Interior prior to the beginning of each allocation period. In estimating demand for initial allocations, the Bureau of Mines' estimates of demand for the first half of 1959 should be used.

13. The Director of the Office of Civil and Defense Mobilization should be instructed to maintain a constant surveillance of imports of petroleum and its primary derivatives in respect of the national security and, after consultation with the Secretaries of State, Defense, Treasury, Interior, Commerce, and Labor, to inform the President of any circumstances which, in the Director's opinion, might indicate the need for further Presidential action under section 8 of the Trade Agreements Extension Act of 1958.

14. Provide that Executive Order 10761, dated March 27, 1958, shall be revoked as of April 1, 1959.

15. The Special Committee To Investigate Crude Oil Imports should be discharged of its responsibilities.

16. The Secretary of the Interior should be authorized to provide for the establishment and operation of an appeal board, comprised of one representative each from the Departments of the Interior, Defense, and Commerce, and to empower the Board, on grounds of hardship, error, or other relevant special consideration, but within the limits of the maximum levels of imports established, to modify allocations, to grant allocations of crude oil and unfinished oils in special circumstances to companies with importing histories who do not qualify under the foregoing provisions, and to review the revocation or suspension of any allocation or permit. The Secretary should be authorized to provide that decisions by the Board be final.

Respectfully submitted.

CHRISTIAN A. HERTER,
Acting Secretary of State.
DONALD A. QUARLES,
Secretary of Defense.
ROBERT B. ANDERSON,
Secretary of the Treasury.
FRED A. SEATON,
Secretary of the Interior.
JAMES P. MITCHELL,
Secretary of Labor.
LEWIS L. STRAUSS,
Secretary of Commerce, Chairman.

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF CIVIL AND DEFENSE MOBILIZATION,
OFFICE OF THE DIRECTOR,
Washington, D.C., February 27, 1959.

Memorandum for the President.

In letters of January 22, 1959, the Secretary of State and the Deputy Secretary of Defense requested me to conduct an investigation of imports of crude oil and its derivatives and products in keeping with section 8 of the Trade Agreements Extension Act of 1958 (19 U.S.C. 1352a). As you know, the purpose of such investigations is to determine the effects upon the national security of the imports involved.

On January 28, 1959, I announced that I would undertake the investigation requested and caused notice of it to be published in the Federal Register of that date. I have now completed what I consider to be an appropriate and comprehensive study of the whole question of oil imports and their relationship to the national security.

In the course of this investigation, I have examined the history of the Government's involvement in this matter and have studied the earlier recommendations given you by the Honorable Gordon Gray, former Director of the Office of Defense Mobilization.

I have also reviewed your establishment of the Special Committee To Investigate Crude Oil Imports, and the findings and recommendations of the special committee. This review has included examination of the voluntary oil import limitation program which was set in motion and of developments since its inception.

As section 8 requires, I have also sought current information and advice on the oil import situation from the Departments of State, Defense, Interior, and Commerce. Likewise, I requested and received from the Department of Interior comprehensive data, covering the period of the last 10 years, which the Department believed relevant to the investigation.

Finally, more than 90 formal statements and numerous personal representations have been received from industry sources during this study, offering many points of view and a mass of information, advice and comment.

Upon this broad base of study and review, the following facts emerge:

1. The Government has been concerned with the trend toward increasing oil imports at least since 1954. Through studies, public hearings and statements and through Government action, the national interest in maintaining imports in reasonable balance has been established clearly.

In February 1955 there was issued a "Report on Energy Supplies and Resources Policy." The report was prepared by an Advisory Committee on Energy Supplies and Resources Policy, which you established on July 30, 1954. In part, the report contained the following: "An expanding domestic oil industry, plus a healthy oil industry in friendly countries which help to supply the U.S. market, constitute basically important elements in the kind of industrial strength which contributes most to a strong national defense. Other energy industries, especially coal, must also maintain a level of operation which will make possible rapid expansion in output should that become necessary. In this complex picture both domestic production and imports have important parts to play; neither should be sacrificed to the other * * *. The Committee believes that if the imports of crude oil and residual oil should exceed significantly the respective proportions that these imports of oils bore to the production of domestic crude oil in 1954, the domestic fuels situation could be so impaired as to endanger the orderly industrial growth which assures the military and civilian supplies and reserves that are necessary to the national defense. There would be an inadequate incentive for exploration and the discovery of new sources of supply * * *. In view of the foregoing, the Committee concludes that in the interest of national defense imports should be kept in the balance recommended above."

2. Nevertheless, oil imports continued to rise gradually, interrupted only by the closing of the Suez Canal, the interruption of normal oil transportation, and the consequent requirement that the United States assist in supplying friendly countries with oil which they could not obtain from normal sources.

As a consequence of the increased level of imports scheduled for the last half of 1956, the Independent Petroleum Association of America filed a petition on August 7, 1956, requesting a limitation of imports under section 7 of the Trade Agreements Extension Act of 1955. Public hearings were held on this petition during October 1956. Early in December 1956, however, the Director of the Office of Defense Mobilization (the Honorable Arthur S. Flemming) announced that he was suspending action on the case because of the changed conditions growing out of the Suez crisis. At the same time, he made this statement: "Import programs of the importing companies recently filed with the ODM show that the plans they had formulated for 1957, if carried out, would be contrary to the Committee's recommendations and would constitute a threat to our national security. This situation, without other intervening circumstances (the Suez crisis), would have left no course for me but to make a certification to the President under section 7 of the Trade Agreements Extension Act of 1955."

Meantime on October 17, 1956, the Advisory Committee on Energy Supplies and Resources Policy had reaffirmed its earlier finding.

3. It was in this context and on the basis of his own investigation that Mr. Gray made the following finding in his post-Suez April 23, 1957, certification to you: "Upon the basis of present imports and their trend over the last several years, together with forecasts of their trend in the next few months, I do hereby advise you, pursuant to section 7 of the Trade Agreements Extension Act of 1955, that I have reason to believe that crude oil is being imported into the United States in such quantities as to threaten to impair the national security."

On April 25, 1957, you stated your intention to cause an investigation to be made to determine the facts and shortly established the Special Committee To Investigate Crude Oil Imports.

The Special Committee's findings of July 29, 1957, supported Mr. Gray's certification and indicated that a limitation on imports was required. The Committee recommended a voluntary import limitation plan and it was put into effect. The program has continued to operate up to the present time.

4. Notwithstanding the effectiveness of the voluntary limitation plan, the quantities and circumstances of oil imports have not been stabilized. Particularly as to the principal crude oil derivatives and products, import quantities have increased during the life of the voluntary program and the circumstances of at least a considerable portion of such increased imports suggest circumvention of the intent of the limitation program.

The following figures, supplied me by the Office of Oil and Gas, Department of the Interior, are relevant:

[Thousands of barrels per day]

	1954	1955	1956	1957	1958 [1]	1958 [2]
Production (districts I–V): Crude oil	6,342	6,807	7,151	7,170	6,670	6,707
Imports (districts I–V):						
Crude oil	656	782	934	1,023	942	961
Residual	354	416	445	475	476	488
Unfinished	21	15	7	3	87	88
Other	21	34	49	71	150	148

[1] 11-month figures (Bureau of Mines).
[2] Preliminary full year.

For December 1958 the following import figures have been made available to make possible the preliminary full year figures in the table above. The preliminary January 1959 figures are also supplied below:

[Thousands of barrels per day]

	December 1958 [1]	January 1959 [1]
Crude oil	1,174	844
Residual	620	794

[1] December and January figures (API).

5. As to exploration for and development of new domestic reserves, the Acting Secretary of Commerce states that "It is my considered opinion that the present rate of imports of crude oil and its derivatives and products is a major contributing factor to the decline in drilling operations both for exploration and development in the search for new oil reserves * * *. Continuation of this trend will inevitably result in a lowering of our available reserves."

The Office of Oil and Gas has made the following figures available, specifying that the number of wells completed during the last few years has been depressed somewhat by the growing practice of producing from several formations at different depths from a single "well."

Number of wells drilled during year (districts I–V)

	1954	1955	1956	1957	1958 [1]
Oil	29,773	31,567	31,258	28,164	25,262
Gas	3,437	3,613	4,115	3,902	3,674
Dry	19,168	20,742	21,838	20,701	18,812
Service	1,005	760	1,049	1,061	1,353
Total	53,930	56,682	58,160	53,278	49,111

[1] Preliminary figures.

For January 1959 the following figure has been supplied as to all wells drilled:

Number of wells drilled (district I–V)

January 1959	4,654

Thus, total wells drilled declined in 1958 for the second year.

6. In the light of the foregoing facts, the whole situation has clearly not improved since Mr. Gray's certification to you in April 1957, despite the operations of the voluntary import limitation plan. I am satisfied that if it were not for the voluntary program oil imports in general would have risen drastically.

7. Finally, it is apparent to me that in the current world oversupply situation, excessive quantities of low-priced oils from offshore sources are seeking a U.S. market. In such a situation, without control of production in relation to demand by the countries of origin, it is to be expected that there would be substantial economic incentives to increase imports into the United States.

The consequences would continue to upset a reasonable balance between imports and domestic production, with deleterious effect upon adequate exploration and the development of additional reserves which can only be generated by a healthy domestic production industry.

Accordingly, as a result of my investigation pursuant to section 8 of the Trade Agreements Extension Act of 1958, I advise you of my determination that crude oil and the principal crude oil derivatives and products are being imported in such quantities and under such circumstances as to threaten to impair the national security.

As required by the statute, a report of this investigation will be made and published shortly.

LEO A. HOEGH.

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF CIVIL AND DEFENSE MOBILIZATION,
OFFICE OF THE DIRECTOR,
Washington, D.C., March 4, 1959.

Memorandum for the President.

Supplementing my memorandum to you dated February 27, 1959, with regard to the investigation of imports of crude oil and its derivatives and products, I submit the following considerations and comments:

For the period 1954 to 1958 the domestic demand for petroleum products increased 15.5 percent while domestic crude oil reserves were increasing only 2.8 percent. This deterioration in the reserve-demand ratio threatens an insufficiency in our domestic supply of petroleum for the requirements of an expanding industrial economy and, in turn, for the requirements of national security. There is a direct relationship between this decline and the fall-off in exploratory drilling to which I referred in my earlier memorandum.

Clearly, the decline in exploratory drilling is itself related to the quantities and circumstances of crude and products importation from areas of very much greater proven reserves where production costs are very substantially lower than costs in this country.

These considerations support the opinion which I expressed to you last week that an impairment of our national security is threatened by these imports.

I shall of course be happy to render any assistance in my power in your determination of the action or actions which might serve to relieve this threat. Meanwhile, it is submitted that so long as imports jeopardize a healthy domestic oil industry there exists a threat to national security within the intent of the national security provision of the Trade Agreements Extension Act of 1958.

LEO A. HOEGH.

THE WHITE HOUSE,
April 30, 1959.

The President today amended his Proclamation No. 3279 of March 10, 1959, which imposed restrictions on oil imports. Effective June 1, 1959, today's proclamation exempts from the import restriction crude oil, unfinished oils, and finished products entering the United States by pipeline, motor carrier, or rail from the country of production. This exemption applies to petroleum from sources which would be accessible by overland transportation in the event of an emergency.

In proclaiming mandatory oil controls on March 10, the President pointed out our joint defense interests with Canada and other Western Hemisphere countries within the larger sphere of free world security. In recognition of this fact, conversations will continue with Venezuela and other Western Hemisphere countries looking toward a coordinated approach to the oil problem as it relates to defense and to the interests of all producer countries.

MODIFYING PROCLAMATION NO. 3279 OF MARCH 10, 1959, ADJUSTING IMPORTS OF PETROLEUM AND PETROLEUM PRODUCTS

3290

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

Whereas pursuant to section 2 of the act of July 1, 1954, as amended (72 Stat. 678, 19 U.S.C. 1352a), I found and declared that adjustments must be made in the imports of crude oil, unfinished oils, and finished products so that such imports would not threaten to impair the national security and by Proclamation No. 3279 of March 10, 1959 (24 F.R. 1781), proclaimed such adjustments;

Whereas I find and determine that it is not necessary, in order to prevent imports of crude oil, unfinished oils, and finished products from threatening to impair the national security, to exclude such additional quantities thereof as may be imported pursuant to this proclamation; and

Whereas the adjustments of imports of crude oil, unfinished oils, and finished products provided for in the proclamation of March 10, 1959, as modified by this proclamation, are deemed by me to constitute adjustments of such imports so that they will not threaten to impair the national security:

Now, therefore, I, Dwight D. Eisenhower, President of the United States of America, acting under and by virtue of the authority vested in me by the Constitution and the statutes, including section 2 of the act of July 1, 1954, as amended, do hereby proclaim that:

1. On and after June 1, 1959, Proclamation No. 3279 of March 10, 1959, shall be amended as follows:

(a) Paragraph (a) of section 1 is amended by adding, before the period at the end thereof, the following new clause: ", or (4) crude oil, unfinished oils, or finished products which are transported into the United States by pipeline, rail, or other means of overland transportation from the country where they were produced, which country, in the case of unfinished oils or finished products, is also the country of production of the crude oil from which they were processed or manufactured."

(b) Paragraph (c) of section 2 is amended to read as follows:

"(c) The levels of authorized imports established by paragraphs (a) and (b) of this section shall not include imports of crude oil, unfinished oils, or finished products excepted by clause (4) of paragraph (a) of section 1; and the quantities subject to allocation pursuant to section 3 shall not be reduced by reason of such excepted imports, except that (i) the daily quantities of authorized imports into District V subject to allocation shall, after June 30, 1959, be reduced by the average daily quantities of entries, and withdrawals from warehouse, for consumption in that District which would have been excepted by clause (4) of paragraph (a) of section 1 if that clause had been operative during the period March 11 to April 23, 1959, and (ii) if the President should find, and notify the Secretary of the Interior, that, for any period for which allocations are made, a reduction is necessary in order to prevent total imports into Districts I–IV or into District V from seriously impairing accomplishment of the purposes of this proclamation, the quantities of authorized imports into Districts I–IV or into District V, as the case may be, subject to allocation shall be reduced to the extent found necessary by the President."

(c) Paragraph (b)(1) of section 2 is amended by inserting after the word "inputs" the following phrase: "(excluding inputs of crude oil or unfinished oils imported pursuant to clause (4) of paragraph (a) of section 1)" and by deleting therefrom the second sentence; and paragraph (b)(3) of section 3 is amended by deleting therefrom the second sentence.

2. On and after the date of this proclamation, paragraph (b) of section 1 of Proclamation No. 3279 of March 10, 1959, is amended to read as follows:

"(b) The Secretary of the Interior may, in his discretion, authorize entries without a license of small quantities of crude oil, unfinished oils, or finished products, including samples for testing or analysis, baggage entries, and informal entries."

The amendment made by this paragraph shall have no effect upon actions taken prior to the day on which it becomes effective.

In witnes whereof, I have hereunto set my hand and caused the seal of the United States of America to be affixed.

Done at the city of Washington this 30th day of April in the year of our Lord nineteen hundred and fifty-nine, and of the independence of the [SEAL] United States of America the one hundred and eighty-third.

DWIGHT D. EISENHOWER.

By the President:

C. DOUGLAS DILLON,
Acting Secretary of State.

THE WHITE HOUSE,
December 10, 1959.

The President today issued a proclamation making certain changes in the oil import program established by Proclamation 3279 of March 10, 1959. This program regulates the total permissible imports of crude and unfinished oils, and finished petroleum products into the United States. Today's proclamation becomes effective next January 1st and covers four subjects.

1. Proclamation 3290 of April 30, 1959, had exempted from the control program imports entering the United States by overland means. Today's proclamation provides that such exempted imports will be taken into account in setting the maximum permissible level of other imports into District V (which includes Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii).

2. The original proclamation provided that 10 percent of the permissible imports of crude and unfinished oils into District V could be imported in the form of unfinished oils. The modification issued today authorizes the Secretary of the Interior to vary that percentage as may be necessary to meet the requirements of the program in District V.

3. The March proclamation limited import allocations for finished products to those who imported such products during 1957. Today's proclamation authorizes the Secretary of the Interior to make provision for allocations to others in order to avoid exceptional hardship in particular cases.

4. The proclamation issued today clarifies the authority of the Secretary of the Interior to adjust as necessary the maximum level of imports of residual fuel oil to be used as fuel.

The text of the proclamation is as follows:

FURTHER AMENDMENT OF PROCLAMATION NO. 3279 OF MARCH 10, 1959, ADJUSTING IMPORTS OF PETROLEUM AND PETROLEUM PRODUCTS

3328

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

Whereas, pursuant to section 2 of the act of July 1, 1954, as amended by section 8 of the Trade Agreements Extension Act of 1958 (72 Stat. 678, 19 U.S.C. 1352a), I found and declared that adjustments must be made in the imports of crude oil, unfinished oils, and finished products so that such imports would not threaten to impair the national security and by Proclamation No. 3279 of March 10, 1959 (24 F.R. 1781), I proclaimed such adjustments; and

Whereas I modified such adjustments by Proclamation No. 3290 of April 30, 1959 (24 F.R. 3527); and

Whereas I find and determine that, in order to prevent total imports into District V (as defined in Proclamation No. 3279) from seriously impairing accomplishment of the purposes of Proclamation No. 3279, as amended by Procdamation No. 3290, it is necessary to reduce the quantities of authorized imports into that District subject to allocation, and that, in order to provide more flexible authority to the Secretary of the Interior with respect to imports of

unfinished oils in District V, further adjustments should be made with respect to such imports; and

Whereas I find and determine that it is necessary to authorize the Secretary of the Interior to extend the jurisdiction of the Appeals Board with respect to petitions concerning finished petroleum products:

Now, therefore, I, Dwight D. Eisenhower, President of the United States of America, acting under and by virtue of the authority vested in me by the Constitution and the statutes, including section 2 of the act of July 1, 1954, as amended, do hereby proclaim that, effective January 1, 1960, Proclamation No. 3279 of March 10, 1959, as amended by Proclamation No. 3290 of April 30, 1959, is hereby further amended as follows:

1. Paragraphs (b), (c), and (e) of section 2 are amended to read as follows:

"(b) In district V the maximum level of imports of crude oil and finished products shall be an amount which, together with domestic production and supply and imports excepted by clause (4) of paragraph (a) of section 1 of this proclamation, will approximate total demand in that district as estimated by the Bureau of Mines for periods fixed by the Secretary and, for the purposes of this limitation, imports of unfinished oils shall be considered to be the equivalent of imports of crude oil on the basis of such ratios as the Secretary may establish. Within this maximum level, imports of finished products shall not exceed the level of imports of such products into this district during the calendar year 1957. Imports of unfinished oils as such (without respect to the requirement of equivalence) shall not exceed such per centum of the permissible imports of crude oil as the Secretary may from time to time determine."

"(c) The level of authorized imports established by paragraph (a) of this section shall not include imports of crude oil, unfinished oils, or finished products excepted by clause (4) of paragraph (a) of section 1; and the quantities subject to allocation in districts I–IV pursuant to section 3 shall not be reduced by reason of such excepted imports. However, if the President should find and notify the Secretary of the Interior that, for any period for which allocations are made, a reduction is necessary in order to prevent total imports into districts I–IV from seriously impairing accomplishment of the purposes of this proclamation, the quantities of authorized imports into districts I–IV subject to allocation shall be reduced to the extent found necessary by the President."

"(e) The Secretary of the Interior shall keep under review the imports into districts I–IV and into district V of residual fuel oil to be used as fuel and the Secretary may make, notwithstanding the levels prescribed in paragraphs (a) and (b) of this section and on a monthly basis if required, such adjustments in the maximum levels of such imports as he may determine to be consonant with the objectives of this proclamation."

2. Subparagraph (4) of paragraph (b) of section 3 is amended to read as follows:

"(4) With respect to the allocation of imports of finished products into districts I–IV, district V, and Puerto Rico, such regulations shall, to the extent possible, provide (i) for a fair and equitable distribution of such products among persons who have been importers of finished products during the respective base periods specified in section 2 of this proclamation, and (ii) for the granting and adjustment of allocations of imports of finished products in accordance with procedures established pursuant to section 4 of this proclamation."

3. Section 4 is amended to read as follows:

"SEC. 4. (a) The Secretary of the Interior is authorized to provide for the establishment and operation of an appeals board to consider petitions by persons affected by the regulations issued pursuant to section 3 of this proclamation. The Appeals Board shall be comprised of a representative each from the Departments of the Interior, Defense, and Commerce to be designated, respectively, by the heads of such Departments. Such representatives shall be of the rank of Deputy Assistant Secretary or higher."

"(b) The Appeals Board may be empowered, within the limits of the maximum levels of imports established in section 2 of this proclamation (1) to modify, on the grounds of exceptional hardship or error, any allocation made to any person under such regulations; (2) to grant allocations of crude oil and unfinished oils in special circumstances to persons with importing histories who do not qualify for allocations under such regulations; (3) to grant allocations of finished products on the ground of exceptional hardship to persons who do not qualify for allocations under such regulations; and (4) to review

the revocation or suspension of any allocation or license. The Secretary may provide that the Board may take such action on petitions as it deems appropriate and that the decisions by the Appeals Board shall be final."

4. Paragraph (c) of section 9 is amended by deleting therefrom the words "the Territory of."

In witness whereof, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

[SEAL] Done at the city of Washington this 10th day of December in the year of our Lord nineteen hundred and fifty-nine, and of the independence of the United States of America the one hundred and eighty-fourth.

DWIGHT D. EISENHOWER.

By the President:

CHRISTIAN A. HERTER,
Secretary of State.

THE FEDERAL POWER COMMISSION

1. STATUTORY BASIS FOR AGENCY'S RELATION TO ENERGY RESOURCES AND ENERGY TECHNOLOGY, WHETHER REGULATORY, RESEARCH-DIRECTED, ETC.

The statutory jurisdiction of the Federal Power Commission can be summarized as follows:

The Federal Water Power Act of June 10, 1920 (41 Stat. 1063; 16 U.S.C. 791–823) made the Commission responsible for the licensing of hydroelectric projects on Government lands or on navigable waters of the United States.

Title II of the Public Utility Act of 1935 (49 Stat. 838; 16 U.S.C. 791a–825r) amended and reenacted the Federal Water Power Act of 1920 as part I of the Federal Power Act, and added thereto parts II and III, giving the Commission jurisdiction over the transmission and sale at wholesale of electric energy in interstate commerce, and over public utilities engaged in such commerce.

The Flood Control Act of 1938 (52 Stat. 1215, 1216; 33 U.S.C. 701j) provided for Commission recommendations to the Secretary of the Army concerning penstocks or other similar facilities adapted to possible use in the development of hydroelectric power at flood control dams constructed by the Department of the Army. Flood Control Acts and River and Harbor Acts in subsequent years have contained a similar provision.

The Flood Control Act of 1944 (58 Stat. 887, 890; 16 U.S.C. 825s) provided for confirmation and approval by the Commission of proposed rates for the sale of electric energy from reservoir projects under the control of the Department of the Army.

A number of other statutes have placed responsibilities in the Commission with respect to certain Federal and international hydroelectric projects, particularly for the allocation of costs of such projects and for confirmation and approval of proposed rates for the sale of electric energy generated at the projects.

Pamphlet copies of the Federal Power Act and the Natural Gas Act are enclosed. A compilation of the several miscellaneous jurisdictional statutes of the Commission, mentioned above, is included as an appendix to the publication entitled "Federal Power Act." [Available in subcommittee files.]

2. BRIEF SURVEY OF THE HISTORY AND DEVELOPMENT OF THAT RELATIONSHIP

An ex-officio Federal Power Commission, consisting of the Secretaries of War, Agriculture, and the Interior, was created by the Federal Water Power Act of June 10, 1920. By an act approved June 23, 1930 (46 Stat. 797), the Federal Power Commission was established as an

independent agency, with five commissioners serving 5-year staggered terms.

A brief history of the functions, organization, and staffing of the Commission is contained in the publication entitled: "A Brief History of the Federal Power Commission, 1920–60," copies of which are enclosed. [See exhibit I, p. 55.]

3. Objectives of the Program or Programs as Defined by Statute and Administrative Interpretation

(*a*) Part I of the Federal Power Act empowers the Commission to issue licenses to non-Federal interests authorizing the development and utilization of hydroelectric power resources on navigable streams and lands of the United States. The objective of such licensing jurisdiction is stated in section 10(a) of the Federal Power Act (16 U.S.C. 803(a)) which provides, in part, "that the project adopted, including the maps, plans, and specifications, shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of waterpower development, and for other beneficial public uses, including recreational purposes."

(*b*) The objective of the Commission's regulation of interstate electric utilities under part II of the Federal Power Act is set out in section 201(a) of that act (16 U.S.C. 824(a)) which declares that the business of transmitting and selling electric energy for ultimate distribution to the public is affected with a public interest, and that Federal regulation of matters relating to the generation, transmission, and sale of such energy at wholesale in interstate commerce is necessary in the public interest.

(*c*) The objective of the Commission's regulation of interstate natural gas companies under the Natural Gas Act is set out in section 1(a) of that act (15 U.S.C. 717(a)) which declares that the business of transporting and selling natural gas for ultimate distribution to the public is affected with a public interest, and that Federal regulation of matters relating to the transportation of natural gas and the sale thereof in interstate commerce is necessary in the public interest.

In carrying out these statutory objectives with respect to regulation of the electric power and natural gas industries the Commission engages in many activities, including the following:

It investigates and studies the waterpower resources of the Nation; makes, or participates with other Federal agencies in making, field investigations and studies and comprehensive plans for multiple-purpose river basin development and utilization of water resources. It reviews basin plans prepared by other Federal agencies and furnishes comments to the heads of such agencies, particularly with respect to the power features of the plans.

The Commission studies and evaluates applications, and, when in the public interest, issues preliminary permits for the investigation and planning, and licenses for the construction, operation, and maintenance, of waterpower projects in or affecting navigable waters, on Government lands, or for the use of surplus water from Government dams. Upon the filing of declarations of intention covering the con-

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struction of proposed projects, or upon the Commission's own initiative with respect to the operation of projects constructed without license, the Commission determines and enforces the legal requirement of licenses. It supervises the investigation, planning, construction, operation, and maintenance of licensed hydroelectric projects as necessary to insure compliance with the terms of permits and licenses; assesses and collects from licensees annual charges for administration of part I of the Federal Power Act and for the use of Government land and other property, determines the amount of annual benefits accruing to other projects from the construction and operation of licensed or Federal projects, and assesses payments to be made to the Government or to licensees. It determines effect on power values of proposed entries, locations or selections of public lands reserved for power sites, and acts upon applications for rights-of-way, use permits, and leases affecting such sites; and determines the initial cost and accrued depreciation of licensed projects. It also prescribes and enforces a uniform system of accounts for such projects, and determines the amount of and insures the maintenance of depreciation and amortization reserves.

The Commission conducts investigations and gathers information relating to the generation, transmission, distribution, and sale of electric energy, however produced, throughout the United States and its possessions and analyzes power supply and requirements of the Nation and of regional areas. It publishes factual data on the electric power industry for the information and use of the Congress, the Commission, other agencies of Government, and the public.

The Commission prescribes and enforces a uniform system of accounts for privately owned public utilities engaged in the transmission, or sale at wholesale, of electric energy in interstate commerce; determines the original cost and accrued depreciation of facilities for the generation and transmission of such energy; investigates and regulates the rate, charges, and services for such energy; and passes upon applications of such utilities for authority to issue securities, to dispose of, merge, or consolidate facilities, or interconnect facilities, or to acquire securities of other public utilities. It passes upon applications of persons seeking authority to hold interlocking positions; evaluates applications for and, when in the public interest, issues permits for the construction, operation, maintenance, or connection of facilities at the borders of the United States for the exportation or importation of electric energy; and passes upon applications for authority to export electric energy from the United States.

It participates in field studies and planning of multiple-purpose river development projects proposed for construction by the Departments of the Army and the Interior; reviews definite project reports of such agencies and comments on them to the heads of the agencies, particularly with respect to power features of the plans; and allocates or participates in the allocation of costs of various Federal multiple-purpose river development projects. The Commission reviews and, if satisfactory, confirms and approves rate schedules for the sale of power from various Federal and international projects.

With respect to natural gas, the Commission studies and evaluates applications for and, when required by public convenience and necessity, issues certificates authorizing the construction or extension, acquisition, or operation of facilities for the transportation of natural

gas in interstate commerce or for the sale of natural gas in interstate commerce for resale. It investigates the need for and, when necessary or desirable in the public interest, directs natural gas companies holding certificates of public convenience and necessity to establish physical connections with the facilities of and to sell natural gas to any person or municipality engaged or legally authorized to engage in the local distribution of natural or artificial gas to the public. It also investigates applications for authority to abandon facilities or discontinue services subject to certificates of public convenience and necessity and, when continuance of service is found to be unwarranted, or the present or future public convenience and necessity are found to permit such abandonment, approves the proposed action.

The Commission prescribes and enforces a uniform system of accounts for natural gas companies engaged in the transportation or sale for resale of natural gas in interstate commerce, determines the original cost and accrued depreciation of facilities for the production, transportation, or sale of such gas, and investigates and regulates the rates, charges, and services for such gas.

It evaluates applications for and, when in the public interest, issues permits for the construction, operation, maintenance, or connection of facilities at the borders of the United States for the exportation or importation of natural gas, and passes upon applications for authority to export or import natural gas from or to the United States.

The Commission conducts investigations and gathers, analyzes, and publishes information concerning natural gas companies and their operations in the production, transportation, or sale of natural gas in interstate commerce.

A detailed summary of the administrative functions and activities of the Commission implementing its broad regulatory objectives is enclosed. [See exhibit II, p. 113.]

4. Summary or Characterization of Rules, Policies, Declarations, or Directives Issued for the Guidance of the Affected Industry

The five-man Commission formulates agency objectives and substantive policies within the statutory framework, outlined above, including the making of rules and regulations applicable to the electric power and natural gas industries and to their regulation by the Commission; and, in conformity with adjudicatory procedures established thereby, considers and takes final action on applications, petitions, complaints, and other pleadings pertaining to matters for which the Commission is responsible.

The Commission in adopting rules, policies, and procedures for carrying out its responsibilities with respect to the electric and gas industries considers itself bound to foster and protect the interests of all affected segments of the Nation's economy. In so doing the Commission plays a vital and continuing economic role by determining and fixing just and reasonable rates for the interstate transmission and sale of electric energy and natural gas.

The Commission's rules and regulations are published in title 18 of the Code of Federal Regulations chapter I, and in current issues of the Federal Register.

Detailed information regarding the Commission's rules and regulations are contained in the following FPC publications, copies of which are attached. [Available in subcommittee files.]

FPC Rules of Practice and Procedure (including general policy and interpretations)
FPC Regulations Under the Federal Power Act
FPC Uniform System of Accounts Prescribed for Public Utilities and Licensees
FPC Regulations Under the Natural Gas Act
FPC Uniform System of Accounts Prescribed for Natural Gas Companies

5. A Statement Indicating Wherein Your Program Impinges Upon, Meshes With, or Is Limited by the Programs of Other Agencies in the Energy Field

In covering this item the regulatory and investigatory functions of the Commission in relation to other agencies in the energy field are discussed with reference to the Federal Power Act, Natural Gas Act, and other miscellaneous jurisdictional statutes.

Federal Power Act.—The principal regulatory functions of the Commission under the Federal Power Act are—

(1) The licensing of water-power projects on waters over which the Congress has jurisdiction, on lands of the United States, and for the utilization of surplus waters from Government dams; including the related activity of making surveys and studies for the comprehensive development of river basins for hydroelectric power and other purposes (Federal Power Act, pt. I).

(2) The regulation of the transmission and sale for resale of electric energy in interstate commerce, and of the accounts, rates, certain security issues, dispositions of properties, mergers and consolidations, depreciation practices, and interconnection and coordination of facilities of interstate electric utilities; and related responsibilities for the compilation and publication of statistical and other information concerning the electric utility industry in the United States, and the making of surveys of present and future markets for electric power (Federal Power Act, pts. II and III).

With reference to regulation under part II of electric utilities engaged in interstate commerce, attention is called to section 201(f) of the Power Act which in substance states that the provisions of part II shall not be applicable to the United States or its agencies or instrumentalities.

All potential areas of conflicting jurisdiction between this Commission and the Securities and Exchange Commission over matters subject to regulation under part II of the F.P.A. are believed to have been effectively resolved by section 318 of the Power Act, the text of which is as follows:

Sec. 318. If, with respect to the issue, sale, or guarantee of a security, or assumption of obligation or liability in respect of a security, the method of keeping accounts, the filing of reports, or the acquisition or disposition of any security, capital assets, facilities, or any other subject matter, any person is subject both to a requirement of the Public Utility Holding Company Act of 1935 or of a rule, regulation, or order thereunder and to a requirement of this

act or of a rule, regulation, or order thereunder, the requirement of the Public Utility Holding Company Act of 1935 shall apply to such person, and such person shall not be subject to the requirement of this act, or of any rule, regulation, or order thereunder, with respect to the same subject matter, unless the Securities and Exchange Commission has exempted such person from such requirement of the Public Utility Holding Company Act of 1935, in which case the requirements of this act shall apply to such person.

Section 303 of the Federal Power Act requires all agencies of the United States engaged in the generation and sale of electric energy for ultimate distribution to the public to comply, insofar as practicable with the accounting and depreciation provisions applicable to licensees and public utilities under sections 301 and 302 of the act and rules and regulations of the Commission adopted thereunder.

Under section 311 of the Federal Power Act the Commission is authorized and directed to conduct investigations regarding the generation, transmission, distribution, and sale of electric energy, however produced, throughout the United States, whether or not otherwise subject to the jurisdiction of the Commission, including the generation, transmission, distribution and sale of electric energy by any agency, authority, or instrumentality of the United States, or of any State or municipality or other political subdivision of a State. This section of the act further directs the Commission, so far as practicable, to secure and keep current information regarding the ownership, operation, management, and control of all facilities for such generation, transmission, distribution, and sale; the capacity and output thereof, and the relationship between the two, as well as costs and rates for such operations and their relationship to industry, commerce, and the national defense.

Under Executive Order 10485 of September 3, 1953 (3 CFR Supp., 106), the Federal Power Commission is empowered to issue Presidential permits for the construction, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country. The issuance of such a permit is based upon a finding of public interest, "after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense."

The work of the Commission under part I of the Federal Power Act and related laws pertaining to the development and utilization of waterpower resources involves considerable cooperation and collaboration with other Federal and State agencies.

Under section 24 of the Power Act the Secretary of the Interior may declare public lands which have been reserved or classified as power sites open to location, entry, or selection whenever the Commission shall determine that their power site values will not be impaired or that appropriate restrictions should be placed on such uses.

With respect to timber, land resources, mineral resources, fish and wildlife, sanitation and pollution control, and recreational facilities, the Commission in considering the issuance of a license must find under section 4(e) of the Power Act that the license will not interfere or be inconsistent with the purpose for which such reservation of lands of the United States was created or acquired. In this connection, the Commission requests and has the benefit of the advice and recommendations of the Departments of Interior and Agriculture, the Forest Service, Fish and Wildlife Service, U.S. Geological Survey, and other interested Federal, State, and local agencies.

Section 11 of the Power Act authorizes the Commission to include in licenses certain works of improvement for navigation purposes, such structures to be in accordance with plans and specifications approved by the Chief of Engineers and the Secretary of the Army. Similarly, under section 18 of the act the Commission in issuing licenses is authorized to include conditions requiring the construction, operation, and maintenance of fishways prescribed by the Secretary of the Interior and of aids to navigation as directed by the U.S. Coast Guard.

In considering the issuance of licenses the Commission has the benefit of comments and recommendations of the Chief of Engineers with respect to flood control as well as navigation features.

Section 4(c) of the Federal Power Act authorizes the Commission to cooperate with the executive departments and other agencies of State or National Governments in investigations of river basins with respect to the evaluation and utilization of water resources, particularly power features.

Section 4 of the Flood Control Act of 1938 provides with respect to reservoir projects to be constructed by the Army Corps of Engineers that "penstocks or other similar facilities adapted to possible future use in the development of hydroelectric power shall be installed in any dam herein authorized when approved by the Secretary of the Army upon recommendation of the Chief of Engineers and the Federal Power Commission." Subsequent Flood Control Acts and River and Harbor Acts contain this same proviso.

In 1925, Congress directed the Army Engineers and the Federal Power Commission jointly to prepare and submit an estimate of the cost of making examinations and surveys of those navigable streams and their tributaries "whereon power development appears feasible and practicable" (43 Stat. 1189, 1190). This was directed to be done with a view to formulating "general plans for the most effective improvement of such streams for the purposes of navigation and the prosecution of such improvements in combination with the most efficient development of the potential water power, the control of floods, and the needs of irrigation." The resulting list of streams was submitted to Congress in 1927, and printed in House Document No. 308, 69th Congress, 1st session. The comprehensive reports submitted pursuant to House Document No. 308 are commonly designated and referred to as "308 Survey Reports." These reports have covered about 200 streams and in many cases their tributaries and over 2,200 projects in all parts of the continental United States.

Certain statutes specifically provide that the Commission shall have primary responsibility for making the allocation of costs for Federal projects referred to therein. These projects and the legislation providing this allocation responsibility are as follows:

	Act
Corps of Engineers projects:	
Bonneville project, Washington-Oregon	Bonneville Act (50 Stat. 731).
Fort Peck project, Montana	Fort Peck Act (52 Stat. 403).
McNary project, Washington-Oregon	River and Harbor Act of 1945 (59 Stat. 10), Bonneville Act.
4 projects on lower Snake River, Idaho	River and Harbor Act of 1945, Bonneville Act.
Bureau of Reclamation project:	
Eklutna project, Alaska	Eklutna Project Act (64 Stat. 382).

Under the Bonneville and Fort Peck Acts and section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), the Commission has been given responsibility generally for the approval of rates for the sale of power produced by projects constructed by the Army Corps of Engineers.

The Commission provides a member of the International Joint Commission and representation on various engineering boards created by the IJC, and participates in special international investigations and studies affecting international waters.

Consulting and advising services are provided by the Commission to the Congress, the President, other Federal departments and agencies, and the public concerning the electric utility industry generally and water resources and their comprehensive development by licensees and by the Federal Government in the interest of the national economy and national defense.

Natural Gas Act.—The regulatory functions of the Commission under the Natural Gas Act, briefly stated, are:

> The regulation of the transportation and sale for resale of natural gas in interstate commerce, including the issuance of certificates of public convenience and necessity for the construction and operation of facilities, and the regulation of the accounts, rates, and depreciation practices of natural-gas companies and the compilation and publication of statistical and other information concerning natural-gas companies.

The regulatory actions of the Commission under the Gas Act do not affect the jurisdiction of other departments or agencies of the Federal Government. However, it should be noted that under Executive Order 10485, cited above, the Commission is empowered to issue Presidential permits for the construction, operation, or connection, at the borders of the United States, of facilities for the exportation or importation of natural gas to or from a foreign country, upon finding that the issuance of each such permit is in the public interest, "after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense."

Section 11(b) of the Natural Gas Act (15 U.S.C. 717j(b)) requires the Federal Power Commission "to assemble and keep current pertinent information relative to the effect and operation of any compact between two or more States heretofore or hereafter approved by the Congress, to make such information public, and to report to the Congress, from time to time, the information so obtained, together with such recommendations as may appear to be appropriate or necessary to promote the purposes of such compact. In accordance with this provision of the Gas Act, the Federal Power Commission has maintained a continuing interest in the Interstate Oil Compact Commission. For many years the Power Commission has been represented at the meetings of the Oil Compact Commission, and has thereby been kept informed of the work of that organization. In this connection it should be noted that the Power Commission's annual reports to Congress describe the functioning of the Interstate Oil Compact Commission and our relationship to the work of that body.

The Commission also provides consulting and advising services to the Congress, the President, other Federal departments and agencies, and the public, concerning the transportation and sale of natural gas in interstate commerce.

6. The Extent of Existing Coordination or Evidence of Any Unresolved Conflicts, if Any

In the administration of the licensing provisions of the Federal Power Act the Commission pursuant to provisions of the act and as a matter of cooperation notifies interested Federal agencies, Governors, and State and local agencies of the filing of applications for preliminary permits and licenses for hydroelectric power projects, thus giving them an opportunity to present objections or other comments, and to participate as interested parties in appropriate cases. Similar action is taken by the Commission in regard to an application for the amendment of a license. Copies of license instruments concerning waterpower projects are furnished to various interested Federal and State agencies in accordance with established practice, and before action is taken on an application, the Secretary of the Army, the Secretary of the Interior, and the Secretary of Agriculture are requested to make recommendations with respect to matters in which they have an interest, including navigation, flood control, conservation of land and water resources, and fish and wildlife preservation. The State conservation agencies and the Secretary of the Interior are also consulted under the provisions of the Wildlife Resources Act of 1946 (16 U.S.C. 661–663).

Closely allied with the licensing activities are the Commission's studies and investigations of river basins and its power market surveys. These river basin and power market studies are utilized by the Commission in the issuance of licenses, and also for advising and making formal recommendations to the Federal constructing agencies on power matters. Cooperative arrangements have been established with the Corps of Engineers and with the Bureau of Reclamation for furnishing such advice and assistance on power matters. This cooperation begins in the early planning stages between the staffs of the Commission's regional offices and the field representatives of the constructing agencies.

The Commission as a member agency participates in the work of the Interagency Committee on Water Resources, established in 1954 pursuant to Presidential authority, for the purpose of providing improved facilities, standards, and procedures for the coordination of the policies, programs, and activities of the Departments of the Interior, Agriculture, Commerce, Health, Education, and Welfare, Labor, Department of the Army, and the Federal Power Commission in the investigation, planning, and development of water and related land resources.

The Federal Power Commission also has a representative on the International Joint Commission and actively participates in the work of that agency. (See item 5, above.)

The Federal Power Commission has consistently cooperated with the Interstate Oil Compact Commission, discussed above under item 5. This Interstate Oil Compact Commmission, composed of representa-

tives of the member States, was originally authorized by act of Congress in 1935.

Other cooperative arrangements are provided for in accordance with the Federal Power and Natural Gas Acts, including the following:

1. Section 4 of the Federal Power Act authorizes the Commission to make investigations concerning the utilization of the water resources of the country and by subsection (c) thereof "to cooperate with the executive departments and other agencies of State or National Governments in such investigations."

2. Section 202(a) of the Federal Power Act directs the Commission to divide the country into regional districts for the voluntary interconnection and coordination of facilities for the generation, transmission, and sale of electric energy with the view to the proper utilization and conservation of natural resources. In this connection, the Commission is required to obtain and consider the views and recommendations of the State commissions of the States within such districts.

3. Section 209 of the Federal Power Act and section 17 of the Natural Gas Act, concerning the use of joint boards and cooperation with State commissions, authorizes the Commission to confer with State commissions regarding the rate structures, costs, accounts, charges, practices, classifications, and regulations of electric public utilities and natural-gas companies. It is required also to make available to the State commissions such information and reports as may be of assistance in State regulation of such companies.

4. Sections 301 and 302 of the Federal Power Act and sections 8 and 9 of the Natural Gas Act authorize the commission to regulate the accounting and depreciation practices of licensees, public utilities, and natural-gas companies. To carry out these provisions the Commission has promulgated uniform systems of accounts in cooperation with the National Association of Railroad and Utilities Commissioners, composed of representatives of the several State public service or utility commissions. This authority enables the accounting requirements of the Commission to be coordinated with those of the various State commissions and avoid conflicting requirements.

7. COMMENTS UPON WHAT SEEMS TO BE THE MORE CHALLENGING OR DIFFICULT ISSUES OR OBSTACLES INVOLVED IN ADMINISTRATION OF YOUR PROGRAM

In terms of workload and complexity of problems involved, the regulation of independent producers of natural gas currently is the most difficult and challenging area of the Commission administrative responsibility. This situation stems from the 1954 decision of the Supreme Court in the *Phillips* case (347 U.S. 672) which held that independent producers of natural gas making sales in interstate commerce were natural gas companies subject to regulation under the Natural Gas Act.

More than 5 years of experience in regulating independent producers of natural gas has convinced the Commission that the producing segment of the natural gas industry should not be regulated in accordance

with traditional original cost, prudent investment rate base method of public utility ratemaking. In addition to being an inappropriate and unworkable approach, the rate base method inherently presents the administrative burden of having a full cost rate case for each of the thousands of independent producers. In its recent opinion in the *Phillips Petroleum Company* rate case (FPC Opinion No. 338) issued September 28, 1960, the Commission estimated that even with its present staff tripled it could not reach a current status in its independent producer rate work until 2043 A.D. if it should adhere to the original cost rate base method.

The Commission, at the present time, does not have complete authority to secure information relating to all segments of the natural gas industry, with the result that the Federal Government, the natural gas industry, and the consuming public are devoid alike of any single agency which could be the source of statistical information of the natural gas business such as is now available with respect to the electric power industry.

8. Recommendations for Improving Through Research, by New or Improved Regulatory Programs, or Otherwise, the Role of the Federal Government in Assuring the Energy Resources Necessary for Maximum Production, Employment, and Purchasing Power Called for Under the Employment Act of 1946

With respect to the important subject of independent producer regulation under the Natural Gas Act, the Commission believes that the dual objective should be the protection of consumers in their right to fair prices and the encouragement of initiative and incentive to explore for and develop new sources of supply. To accomplish this objective the Commission during recent years has recommended that the Natural Gas Act be amended to provided for (1) elimination of any requirement for certificates of public convenience and necessity for producers of natural gas; (2) a standard for pricing or evaluating natural gas as a commodity which would not require use of a rate base or traditional utility ratemaking principles, but which would enable the Commission to weigh the interests of the consumer in low prices with the necessity of providing assurance of future gas supplies; (3) elimination of any mandatory requirement for determining and considering costs of or revenues from other products sometimes obtained in conjunction with the production of natural gas including oil and liquid hydrocarbons; (4) the same treatment of independent producers and pipeline producers with respect to pricing or evaluating natural gas; (5) elimination of clauses in independent producers' contracts of sale to interstate gas transmission companies which contain provisions for a change of price to the purchaser by reason of (a) changes in the price received by the purchaser on resale, or (b) the payment or offer of payment of different prices by the purchaser or other purchasers to the seller or to other sellers.

Recognizing that effective regulation of the price of natural gas produced and sold by independent producers must be on some more manageable plan than the rate base method, the Commission on September 28, 1960, issued its Statement of General Policy No. 61–1, providing for area pricing standards. This order, copies of which are

attached, reflects the conviction of the Commission that producer rates should be based upon an established fair price for the gas itself rather than the cost determined ad hoc for each individual producer. [See exhibit III, p. 115.]

The Commission recently has adopted a number of procedural changes which shorten the hearing time and generally expedite the disposition of proceedings before it. Several other improvements along this line requiring legislation have been included among the legislative recommendations which the Commission has made in its recent annual reports to the Congress.

The Commission repeatedly has recommended to the Congress that section 14(a) of the Natural Gas Act be amended to give the Commission broad investigatory powers with respect to the gas industry similar to those now conferred upon it with respect to the electric industry by section 311 of the Federal Power Act, but not so as to impinge upon the existing authority of other Federal agencies in areas under their jurisdiction.

EXHIBIT I

A BRIEF HISTORY

OF THE

FEDERAL POWER COMMISSION

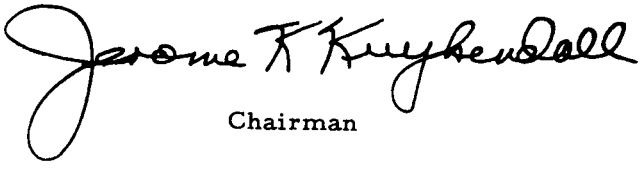
1920 - 1960

FOREWORD

An organization old enough to have a history is always to some extent a product of its past. To understand it fully, one must know the course of its development. As an aid to those who seek to increase their understanding of the Federal Power Commission, there has been need for an up-to-date history of the functions, organization, and staffing of the agency. Such a history has now been prepared, with chapters arranged to highlight significant developments.

The information in this history is taken principally from the Commission's annual reports to the Congress, from Commission Justifications for Appropriations, and from various issues of the United States Organizational Manual. For some periods, however, the data available are quite limited, especially for the years during World War II when the Commission published no annual reports. The history for these years is therefore rather sketchy. But this, from the standpoint of the Commission's peacetime functions, is not a serious defect, because the war years were abnormal years for the Commission with respect both to its functions and its workload.

It should be recognized that this is not a history of regulation by the Commission. Such a history would be concerned not only with the Commission's functions but also with its policies, practices, and actions, all matters outside the scope of this treatise. Nevertheless, the material here presented should be of value to members, employees, and students of the Commission in their quest for comprehensive knowledge of an important instrument of government.



Chairman

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APPENDIX

Chapter 1

Introduction

The principal functions of the Federal Power Commission derive, through the Congress, from the commerce clause of the Constitution of the United States, which vests in the Congress the power to regulate commerce among the several states.

Of all the Commission's functions, however, only those pertaining to power-site lands and to non-federal hydroelectric projects on streams or land subject to Congressional jurisdiction were exercised in any significant degree by the Congress. Pre-Commission history as it relates to Commission functions is therefore confined largely to matters now the subject of Part I of the Federal Power Act.

The first specific Congressional authorization for construction of a private power plant on a navigable stream was enacted in 1884. The development of hydroelectric power on an important scale, however, began some years later. In 1890, through the River and Harbor Act, the Congress prohibited the building of dams on navigable streams without permission of the Secretary of War. In 1901, the Congress authorized the Departments of Agriculture and Interior to issue permits for the development of hydroelectric resources in areas subject to their jurisdiction. In the General Dam Act of 1906, the Congress provided for review and approval by the Secretary of War of plans for hydroelectric projects on navigable streams. The actual grant of authority to construct and operate a project, however, required in each instance a special act of Congress. In an act of 1910, superseding the act of 1906, the Congress fixed general conditions for the granting of permits and provided for the reservation of power sites for power purposes.

Meantime, President Theodore Roosevelt had vetoed some of the Congressional enactments authorizing the construction and operation of specific dams and power facilities on navigable streams, because he felt that the legislation did not protect the public interest in the resources involved. His successor, President William Howard Taft, took similar action during his term.

Throughout this period, the responsibilities of the Executive Branch with respect to sites suitable for the development of hydroelectric power were divided. The Secretary of War was responsible for passing upon plans for the development and utilization of power sites on navigable streams. The Secretary of the Interior was responsible for control on public lands and Indian reservations. The Secretary of Agriculture was responsible for control in National forests. The policies of the three departments were not always consistent. This tended to deter the development of hydroelectric resources. The first annual report of the Commission described the conditions prevailing at this time, as follows:

> The laws previously governing the administration and disposition of water powershad been passed . . . at a time when there was little appreciation of the role which electric power would play in transportation and in industry, or of the safeguards which, in the disposition of this national resource would be required in the interests of the investor as well as of the public. For many years Federal laws had been wholly unsuited to prevailing conditions. The rights granted were so insecure and the liabilities imposed so uncertain that only in occasional instances could a water-power development which required Federal authority be financed; with the result that the development of the inexhaustible water-power resources was largely blocked and recourse was had to steam power with its consequent use of coal.

When the demands for electric power suddenly increased during World War I, the pressure for an orderly means of promoting the development of water power was greatly increased.

On June 10, 1920, after extensive hearings and considerable debate, the Congress enacted a Federal Water Power Act. This act established a Federal Power Commission, consisting of the Secretaries of War, Interior, and Agriculture, whose Commission duties were collateral to their Secretarial duties. The Commission was empowered to issue and administer preliminary permits, authorizing the exploration and investigation

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of power sites, and licenses for periods not exceeding 50 years, authorizing the development and utilization of water power resources at those sites. For all licensees, the Commission was directed to establish a uniform system of accounts. Ancillary to its responsibilities relating to permits and licenses, the Commission was authorized to make investigations and collect data concerning the utilization of available water resources for power purposes.

On June 24, 1920, President Woodrow Wilson designated the Secretary of War, Newton D. Baker, to be Chairman of the Commission.

Chapter 2

1920 - 1930

The Commission met for the first time on July 1, 1920, and appointed an Executive Secretary. When it met again on July 28, it approved a plan for the organization of the staff into four divisions, headed respectively by a Chief Engineer, a Chief Accountant, a Chief Counsel, and a Chief Clerk. (Chart O-1)

Section 2 of the Federal Water Power Act provided that the work of the Commission should be performed by and through the Departments of War, Interior, and Agriculture and their engineering, technical, clerical, and other personnel, except as might otherwise be provided by law. The Comptroller of the Treasury interpreted this to mean that the Commission was without authority to employ any personnel other than its Executive Secretary, and that responsibility for the work of the Commission rested with the three Secretaries forming the Commission, each of whom was authorized to use the personnel and other facilities of his Department to accomplish necessary Commission work. On the basis of this decision, key members of the staff were assigned or detailed from the Departments to the Commission. By June 30, 1921, the close of the first fiscal year of Commission operations, the staff consisted of 9 engineers, 2 draftsmen, 3 attorneys, 2 accountants, 13 clerks and stenographers, and 2 messengers, for a total of 31.

The Commission had no field force. It depended exclusively on the field forces of the three Departments for examination of project sites, preparation of reports to serve as the basis for Commission action, and inspection of construction and operation under license.

Nevertheless, in its first two years the Commission received 321 applications, involving more than 20,000,000 horsepower. The capacity represented in these applications was more than twice the capacity of then existing water power installations in the United States, and more than six times the aggregate of all applications relating to power sites under federal control filed in the preceding 20 years. Nearly one-half of

the proposed new capacity, however, was represented by applications involving sites on the St. Lawrence, Columbia, and Colorado Rivers, and on these for various reasons action was suspended.

In its second annual report, the Commission said:

> By the terms of the Federal Water Power Act the Commission is required to investigate all projects applied for to determine whether the structures are safe and properly designed and whether full utilization will be made of the resources of the stream. It is required to make valuations of all properties licensed under the act and constructed prior to the issuance of license. When declarations are filed of intention to construct dams in streams whose navigable status is doubtful, it must investigate and determine whether the interests of interstate or foreign commerce would be affected. It must investigate and pass upon applications for restoration to entry of lands within power-site reserves. It is required to establish a system of accounting to be applied to the operations of its licensees and by means of which the net investment in the properties may always be known. It must assume ultimate responsibility for seeing that licensed projects are properly maintained and that adequate depreciation reserves are established. It has already had many difficult administrative and legal problems to meet in the interpretation of the act, and it must be prepared to assist in the defense of the act before the courts.
>
> To perform the greatest task with respect to water powers that the Government has ever had, Congress gave the Commission no personnel other than its executive secretary and engineer officer, but obliged it to borrow for its work such personnel as the departments could spare and were willing to loan. It has been operating two years under these unsatisfactory conditions with a detail of 8 engineers, 2 attorneys, 2 accountants, and 18 clerks -- a force utterly inadequate to perform the duties placed upon it by the act. The Commission has no field force of its own, loaned

or otherwise, but must depend for examinations and reports and for the conduct of field hearings upon the field officers of the departments -- men who are primarily responsible for their own departmental duties. It was given originally an appropriation of $100,000. The amount was repeated for 1922. For 1923 it has only the unexpended balance of the first year's appropriation.

Under such circumstances the Commission has been obliged to delay action on many important projects, and it has been forced to omit altogether the performance of important duties required by the act. This is particularly true of valuations, of which cases involving approximately $100,000,000 are now awaiting action. The Commission has been unable to secure the detail of any personnel with adequate experience in valuation work and has therefore been obliged either to suspend issuance of licenses where valuations are involved or to provide for valuations in the future. It has taken the latter course in order that much needed power development might proceed. Such a course, however, is almost certain to result in prolonged litigation and in expenses many times greater than would have been required had the Commission been given in the beginning the means for carrying out this requirement of the law.

In its first annual report the Commission said: "What is seriously needed in the interest of adequate administration of the act is a small organization of trained and experienced men capable of meeting intelligently the important and perplexing engineering and economic problems which are constantly arising and upon the correct solution of which will depend the value of the legislation and, in no small degree, the future of the electric power industry." The experience of the past year merely lends further emphasis to this statement.

Regularly thereafter the Commission pleaded for a change in the law to permit it to employ its own staff personnel, particularly for the investigations necessary to a determination of

the actual legitimate cost of licensed projects. Never, however, during the life of the Federal Water Power Act was the Commission given the authority and the funds to undertake accounting investigations.

In its annual report for fiscal year 1924 the Commission pointed out the need for comprehensive study of the "water resources of the streams of the United States", as a basis for determining whether proposed projects conformed to comprehensive plans of river development. In the following year, the Commission re-emphasized this need, but said:

> Such surveys should be carried on through the medium of the departments represented on the Commission and by personnel employed by them. More efficient use of personnel and equipment and better coordination with similar activities of the departments can be secured in this manner than by employment of personnel of this character directly by the Commission. The Commission needs only sufficient force to conduct those activities which have no counterpart in the departments, and to exercise general supervision over the work performed for it by the departments.

Finally, the Independent Offices Appropriation Act for fiscal year 1928, contained a provision "that the annual estimates for the fiscal year 1929 shall include the salaries of all civilian employees whose service for the Commission has become permanent through detail from any executive department." The Commission submitted estimates for the 29 civilian employees on detail to it. The Appropriation Act for fiscal year 1929 contained funds for the payment of the salaries of these employees by the Commission. On July 1, 1928, the first day of the new fiscal year, the 29 employees were transferred to Commission rolls.

Organization action with respect to the staff alone, however, did not suffice for the program. With the constant increase in the number of projects authorized and the numerous problems arising out of their construction, the demands upon the time of the cabinet members forming the Commission grew beyond that which could properly be spared from their other

responsibilities, and a reorganization of the Commission was recommended by the President in his message to Congress on December 3, 1929, which stated:

> The Federal Power Commission is now comprised of three Cabinet officers, and the duties involved in the competent conduct of the growing responsibilities of this Commission far exceed the time and attention which these officials can properly afford from other important duties. I recommend that authority be given for the appointment of full-time commissioners to replace them.

Several bills were introduced which aimed to accomplish the reorganization suggested and also to place within the scope of the Commission's authority regulatory jurisdiction over certain interstate power transactions. Owing to the complexities of the latter problem, Congress finally restricted the legislation to the reorganization question. On June 23, 1930, ten years and a few days after enactment of the Federal Water Power Act, the President signed an act to reorganize the Federal Power Commission, creating and establishing a five-man independent body and empowering it to appoint a secretary, a chief engineer, a general counsel, a solicitor, a chief accountant, and such other officers and employees as might be necessary in the execution of its functions. (Chart O-2)

In the ten years before the Commission was made an independent agency, costs of administering the Federal Water Power Act averaged about $168,000 a year. In fiscal year 1930, they were $241,000. The size of the Commission's staff, however, was quite constant, at 30 to 33 employees.

Chapter 3

1930 - 1935

The new Commission, consisting of five full-time Commissioners, took office December 22, 1930. By the end of fiscal year 1931, a number of key personnel had been appointed, and personnel of the former Commission's staff had been transferred to the new agency. The Commission, however, did not build up a field force. In a memorandum submitted to the President on April 30, 1931, and subsequently approved by him, a policy of continued reliance on the cooperation of other agencies was stated as follows:

> From the standpoint of economy and efficiency in the conduct of the field activities of the Federal Power Commission, it is obvious that duplication of existing agencies must be avoided where such agencies are adequate for the performance of the Commission's work. Especially advantageous is the continued use of the personnel of the three departments, where the 'officers or experts' are by experience and official station particularly well qualified for expeditious and effective handling of the duties involved. The building of a separate field staff by the Power Commission would seem wholly unwarranted, and additions to its field personnel should be only with the purpose of supplementing rather than supplanting the field services already available.

The Commission, however, was already looking to the question of the need for federal regulation of interstate commerce in electric power. In its Annual Report to Congress for fiscal year 1931, the Commission stated:

> Transmission of electrical energy in wholesale quantities has been declared by the Supreme Court in the Attleboro case to be interstate commerce national in character and therefore beyond the regulatory power of the States, even in the absence of congressional action. It follows that, so far as wholesale

interstate commerce is concerned, inasmuch as Congress has not occupied the field and the States are unable to occupy it, there is at present an area which is wholly uncontrolled. There are different estimates as to the size of this area, but it is clear that from the standpoint of quantity, interstate transmission is of great importance and of wide diversity of importance as related to the several States.

Any attempt to picture the present status of the power industry, much less to forecast its trend, discloses serious deficiencies in the information available for use. Nor is this to be unexpected inasmuch as there is little that is static about this rapidly expanding business. Yet blank spaces must remain in the picture of economic conditions until the missing facts are made accessible. Moreover, at present most of the information available is that compiled and made public by the industry itself, without guidance or review by any governmental agency. This situation of the power industry is in contrast with that of the railway and telephone systems, authoritative data for which are published by the Interstate Commerce Commission and are at hand for economic studies.

On July 3, 1931, the Commission adopted a resolution, "that for the purpose of obtaining the facts needed by the Federal Power Commission in carrying out its functions prescribed by the Federal Water Power Act, a study be authorized of the ownership, control, and affiliations of the public utility operating companies which are licensees of the Federal Power Commission; and that this study should include the collection of all available facts bearing upon the ownership and control, direct or indirect (through stock ownership or control or otherwise), of stock, security, or capital interest of public utilities engaged in developing, transmitting or distributing hydroelectric power for sale or use in the public service where the same enters into interstate business, or where the same, or any part thereof, shall be subject to regulation by the Federal Power Commission under the jurisdiction conferred by the Federal Water Power Act, by holding companies, investment trusts, individuals, partnerships, corporations, associations,

and trusts and the organization, financing, development, management, operation, and control of such holding companies, investment trusts, partnerships, corporations, associations, and trusts."

The Commission employed a special assistant for this study, which was completed in May 1932. As a result of this study, the Commission, in its Annual Report for fiscal year 1932, expressed itself as being convinced that "the public interest requires the early vesting of authority in the Federal Government to control, so far as it may be determined to be within its jurisdiction, the regulation both of electricity in interstate commerce and of the holding company in the power industry."

In November 1932, the Commission adopted a regulation asserting its jurisdiction over the securities of companies subject to its authority in those States in which no commission or agency was empowered to regulate the issuance of securities. To perform the staff work in the administration of the regulation, the Commission at that time added a Securities Division to its staff organization, which then consisted of the Secretary and the following divisions: Engineering, Accounting, Securities, Legal, and Administrative (the last, previously called "Operations").

In August 1933, Executive Order No. 6251 directed the Commission to undertake a survey of the water resources of the Nation as they related to the conservation, development, control, and utilization of water power and of the relation of water power to other industries and to interstate and foreign commerce. Funds necessary for the survey were allocated to the Commission from those available under the public works section of the National Industrial Recovery Act. For the first time, the Commission was in a position to undertake investigations of the type prescribed by section 4(a) of the Federal Water Power Act.

The Commission was directed to assist the Federal Emergency Administrator of Public Works by formulating, on the basis of the survey prescribed by the Executive Order, a comprehensive program of public works pertaining to the development of water power and the transmission of electric energy.

The Executive Order provided that "the total expenditures by the Commission with its functions and duties under this order shall not exceed the sum of $400,000."

On April 14, 1934, Public Resolution No. 18, 73rd Congress, authorized and directed the Commission to investigate and compile the rates charged for electric energy and its service to residential, rural, commercial, and industrial consumers throughout the United States by private and municipal corporations and to report such rates, together with an analysis thereof, to the Congress.

For details of functional responsibility involved in the conduct of the surveys, see Chart F-2.

To conduct the National Power Survey and the Electric Rate Survey, the Commission established two organizational units, each under a Director who reported to the Vice Chairman as Commissioner-in-Charge (Chart O-3). By the end of fiscal year 1934, the Commission had 95 "survey" employees out of a total of 136. By the end of fiscal year 1935, the number of survey employees had increased to 186 and total employees to 290.

In this period the Commission also established a Division of Information.

On February 2, 1935, the Commission submitted to the Congress a preliminary report entitled "Electric Rate Survey -- Rate Series No. 1," constitution a compilation of "typical bills" paid by consumers of electric power in communities of various sizes in the United States. Later the Commission compiled and published a series of 48 State reports, showing the domestic and residential rates for electric power in communities of the states.

On March 22, 1935, the Commission submitted to the President its first report based on the National Power Survey, entitled "Interim Report, Power Series No. 1," giving the Commission's tentative conclusions regarding the power resources and power requirements of the United States.

(Later the Commission issued additional reports on both of these surveys.)

Meantime, the Federal Trade Commission, acting under authority of Senate Resolution 83, approved in February 1928, was making monthly reports to the Congress on its investigation of electric power and natural gas public utility corporations. These reports, together with those of the Federal Power Commission based on the National Power and Electric Rate Surveys, the studies of the House Committee on Interstate and Foreign Commerce, and hearings before committees of the House and Senate, provided the background for the legislation which finally was enacted as the Public Utility Holding Company Act of 1935, approved August 26, 1935.

Title II of this act amended the former Federal Water Power Act, made it Part I of a new Federal Power Act, and added Part II, which vested in the Commission responsibility for regulating the interstate transmission and sale at wholesale of electric energy and the public utility companies engaged in such transmission and sale, and Part III, which constituted procedural and administrative provisions for the conduct of functions vested in the Commission by Parts I and II, including provisions relating to accounts, reports, statistics, publications, and legal process.

As originally drafted, the Public Utility Bill had provided for federal regulation of interstate commerce in natural gas as well as electric energy. Before it was enacted, however, the provisions for gas regulation were eliminated. Nevertheless, by this legislation, Commission responsibilities and functions were greatly expanded. For details, see Chart F-3.

Chapter 4

1935 - 1938

After the passage of the Public Utility Act, the Commission added a number of units to its headquarters staff, particularly in the Engineering and Accounting Divisions, where responsibilities for licensing work were differentiated organizationally from responsibilities for public utility work. At this time, also, five regional offices were established to perform the engineering and accounting work of the Commission in the field. The Power Survey and Rate Survey organizations, however, remained essentially intact. (See Chart O-4)

In its Annual Report for fiscal year 1936, the Commission reported to the Congress that "to administer efficiently the various new duties delegated by the Federal Power Act and continue the activities carried on for many years under previous legislation," the Commission's staff had been reorganized. Four bureaus were formed, each with two or more divisions. The regional offices, reporting to the Commission, were continued. The special organizations formed for the National Power Survey and Electric Rate survey were abolished. The new organization structure of the Commission staff is shown in Chart O-5.

Members of the Survey groups were reassigned in March 1936 to the Commission's regular staff, as reorganized. At the end of fiscal year 1936, Commission personnel numbered 338.

On July 1, 1936, the function of gathering and publishing monthly and annual statistics on generating capacity, generation, and fuel use was transferred from the Geological Survey of the Department of the Interior to the Federal Power Commission.

The licensing of hydroelectric projects continued, of course, as a principal Commission responsibility. In addition, the power and rate survey functions were now carried on by the Commission, under Parts I and III, respectively, of the

Federal Power Act. The Commission moved immediately into the functions imposed by its responsibilities under Part II of the Act.

Power regions were established as a means of promoting voluntary interconnection and coordination of generating and transmission facilities.

A Uniform System of Accounts for Public Utilities and Licensees was issued, to be effective January 1, 1937. A Commission order was adopted requiring every electric utility and licensee to file with the Commission by January 1, 1939, statements describing its properties and showing the entries necessary to adjust the electric plant accounts to reflect original cost and a balance sheet showing the accounts and amounts in the company books before and after the proposed adjustments.

In August 1937, the Commission adopted annual report forms for electric utilities.

During these months, the Commission also undertook the regulation of interlocking directorates, the issuance of securities, mergers and consolidations, and property transactions, involving electric utilities.

Before the end of fiscal year 1938, the Commission began to regulate rates and services for electric power transmitted and sold in interstate commerce, and as of the end of the year there were seven major rate cases in process.

In March 1937, the Commission reported to the President the results of a study, undertaken by executive direction, to identify and analyze distribution areas, prospective markets, customers, and other considerations in the determination of rates for electric energy to be generated at Bonneville Dam, a federal project. In August 1937, the Congress enacted legislation making the Commission responsible for the allocation of Bonneville Project costs and for approval of rates proposed by the Bonneville Project Administration for the sale of power generated at the project.

In May 1938, the Fort Peck Act placed in the Commission responsibilities relating to the Fort Peck Project similar to its responsibilities relating to the Bonneville Project.

The Flood Control Act of 1938, greatly extended the range of Commission responsibility with respect to federal navigation and flood control projects, by providing for Commission recommendations concerning the installation of hydroelectric power generating facilities in many projects authorized for construction by the Corps of Engineers, Department of the Army. An important provision of this Act was that $1,500,000 was authorized to be appropriated and expended by the Commission for carrying out any examinations and surveys provided for in the Act or any other Acts of Congress, to be prosecuted by the Commission. Specific provisions were thus made for examinations and surveys, not only under the Flood Control Act, but also under Part I of the Federal Power Act. [Over the years since 1938, provision for Commission recommendations regarding hydroelectric facilities in river projects proposed for construction by the Corps of Engineers has been incorporated in numerous annual Flood Control Acts and River and Harbor Acts, so that the surveys, examinations, and recommendations initially provided for have become part of a continuing major Commission function. Although in 1953 the Commission ceased requesting separate appropriations for this survey work, there has been no reduction or change of emphasis in the work.]

On June 21, 1938, following additional hearings on the natural gas industry, the Congress enacted and the President approved the Natural Gas Act, vesting in the Commission responsibility for regulating the transportation of natural gas in interstate commerce, the sale in interstate commerce of natural gas for resale for ultimate public consumption, and the natural gas companies engaged in such transportation or sale. Thus was brought to legislative fruition the conclusions drawn from the Federal Trade Commission's investigation of natural gas public utility corporations (referred to above) and originally proposed in the Public Utility Bill which finally, with all reference to gas utilities deleted, had become the Public Utility Act of 1935. The Natural Gas Act as enacted in 1938, however, confined the Commission's certificate authority to those

situations in which an applicant proposed to render service in an area already receiving natural gas.

In summary, during the three years following enactment of the legislation making the Commission responsible for the regulation of interstate commerce in electric power, the Commission was assigned two other responsibilities of major program significance -- the review of Corps of Engineers plans for river development projects and the regulation of interstate commerce in natural gas -- and two of lesser program significance (because they do not constitute a continuing workload) -- the allocation of power costs, and the approval of power rates, for Bonneville Project and Fort Peck Project. The Commission's additional functions are shown in Charts F-4a and F-4b.

During fiscal year 1938 average employment in the Commission was 438.

Chapter 5

1938 - 1941

The period between June 1938 and the beginning of World War II in December 1941, was marked by Commission action to give operational effect to the broad range of legislation relating to Commission responsibilities enacted in 1938, and by moves to increase the Commission's activities with respect to national defense.

The Commission itself, in its annual report to the Congress for fiscal year 1939, summarized its activities for that year as follows:

> Among [the Commission's] many activities may be included the licensing and supervision of power projects and water-power development on lands of the United States and streams subject to Federal jurisdiction, together with numerous other duties under the Federal Water Power Act of 1920; regulating interstate commerce in electric energy and companies engaged therein, under the Federal Power Act of 1935; regulating the transportation and sale in interstate commerce of natural gas for ultimate public consumption, under the Natural Gas Act; investigating the power possibilities of flood-control dams and recommending the installation, where practicable and advisable, of facilities for power production, under the Flood Control Act of 1938 and other acts; passing upon proposed rates for power produced at the Bonneville project; performing various duties under the Tennessee Valley Authority Act; investigating power resources and requirements and compiling and publishing the rates for electric energy, statistics of power capacity and production, and other information concerning electric power and natural gas throughout the United States.

Notable among the Commission's pioneering activities and actions during this period were the following:

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- Inauguration of 28 rate proceedings under the Natural Gas Act.

- Issuance of a uniform system of accounts for natural gas companies to be effective January 1, 1940.

- Conduct of intensive surveys to determine a sound basis for voluntary interconnection and coordination of power facilities to assure greater economy of power supply in various areas.

- Publication of the first National Electric Rate Book.

- Investigation and study of the power potential of 116 flood control projects.

- Receipt of original cost statements from 75 electric utilities and licensees and beginning of necessary field investigations of these studies.

- Receipt of six applications for certificates of public convenience and necessity and the issuance of one certificate.

To accommodate the added responsibilities imposed upon the staff by these new activities, the Commission made several alterations in its organization. The Division of Power Resources and Requirements in the Bureau of Engineering was changed to a Division of Gas and Electric Resources. The Division of Rates, Costs, and Valuations was removed from the Bureau of Engineering, and a Division of Original Cost and a Division of Rates and Statistics were added to the Bureau of Finance and Accounts, which was renamed the Bureau of Accounts, Finance and Rates. A new Division of Power-Flood Surveys was established in the Bureau of Engineering. The Division of Information was renamed the Division of Publications, and Hearing Examiners, reporting to the Commission, were added. The revised organization structure is depicted in Chart O-6.

Average employment in the new organization increased in fiscal year 1939 to 574, an increase of 136 over fiscal year 1938.

Commission activities in the following year were oriented increasingly to national defense, although there was as yet no slackening of normal regulatory activities relating to electric power and there was an actual increase in activities relating to natural gas.

In July 1939, the President, by Executive Order, authorized the Commission to "receive all applications for permits for the construction, operation, maintenance, or connection at the borders of the United States of facilities for the transmission of electrical energy between the United States and foreign countries and for the exportation and importation of natural gas to or from foreign countries and after obtaining the recommendations of the Secretary of State and the Secretary of War thereon, to submit each such application to the President with a recommendation as to whether the permit applied for should be granted and, if so, upon what terms and conditions."

The Commission forged ahead with its work relating to the availability, development, and utilization of hydroelectric power resources. It studied 191 proposed flood control projects. It also completed its first headwater benefit study and issued a determination.

In 1939 the Commission issued several new publications, including an analysis of electric utility cost units and relationships, a directory of electric utilities, and a directory of generating plants of over 1,000 kilowatts capacity.

With respect to what it termed "power supply economics", the Commission reported that it had:

- Collected, and was keeping up to date, information covering all details of the installation, cost of operation, loads and load characteristics of all the electric utilities in the United States.

Divided the country into regional power districts and made studies of the capacity installed, the availability of such capacity to carry loads, the loads to be expected, the amount of load existing water power and fuel plants could carry, normally and in an emergency, and the additional capacity which would be required in each area.

- Made interconnection and coordination studies for the several districts, including the possibilities of developing water power, conserving fuel, strengthening existing ties between power systems and making new interconnections, together with estimates of the size and cost of such interconnections and their value in terms of added capacity.

- Made studies of the undeveloped water power of the United States, the capacities that could be added quickly at existing hydro and fuel plants, and the sites available for new steam-electric plants in certain important regions.

- Collected and analyzed information on the basic industries of the country, with special reference to the requirements of the electrochemical, metallurgical, and allied industries, dependent for their continued operation and expansion upon the assurance of large quantities of low-cost energy.

The organization was again adjusted. In the Bureau of Engineering, the Division of Gas and Electric Resources was divided into two new units -- a Division of Electric Resources and a Division of Gas Engineering. In the Bureau of Accounts, Finance and Rates, statistical functions were transferred from the Division of Rates and Statistics, which then became the Division of Rates and Research, to the Division of Finance, which then became the Division of Finance and Statistics. The revised organizational plan is shown in chart O-7.

Toward the end of the year, the Commission's power survey work was greatly increased and broadened, in response to the direction of the President that the Commission, in cooperation with the National Power Policy Committee and the Ad-

visory Commission to the Council of National Defense, undertake to assure an adequate and dependable power supply for the national defense program. Specifically, the President called upon the Commission (a) to translate national-defense orders into demands for power, (b) to keep check on the adequacy of the power supply to meet such demands, (c) to keep currently informed to the needs of the national defense industries, (d) to keep records of the orders being placed with the electrical equipment industry for additional capacity and the ability of the industry to meet such orders, (e) to plan, in cooperation with the utility industry, to meet every power need in the most economical manner, and (f) to work out plans, in cooperation with the utilities and other Government agencies, for the protection of power supply against hostile acts.

To carry out the President's instruction, the Commission immediately set up a National Defense Power Staff within the formal organization to survey defense-power needs and provision for meeting those needs and to cooperate with the National Power Policy Committee and the national defense agencies in assuring an adequate and dependable power supply in case of emergency.

The average employment in fiscal year 1940 increased by 111 over fiscal year 1939 to a total of 785.

At this time, two decades after creation of the original three-man Commission, the organization remained primarily an electric power agency. Evidence of this is that in the Commission's annual report for 1940, six chapters were devoted exclusively to power matters, and only one (seven pages long) was devoted exclusively to gas.

The advent of World War II in December 1941, prevented the issuance of an annual report of Commission activities for fiscal year 1941. It is apparent, however, that in this year the Commission pursued its normal peace-time activities relating to water resources, electric power, and natural gas, while it continued its defense activities.

During the year, the organization was again changed. The Bureau of Engineering was abolished and in its stead a Bureau of Water Power and a Bureau of Electrical Engineering were

established. Regional offices were established at Baltimore and Fort Worth, while the Denver Regional office was abolished. And a Division of Information was established in addition to the already existing Division of Publications. (See Chart O-8)

Average employment during fiscal year 1941 was 774.

Chapter 6

1941 - 1945

All during the war the Commission remained responsible for the functions assigned by law and Executive Order as described in preceding chapters, although, because of the disruption of the normal economy of the nation and the priority accorded by the Commission to its war activities, peace-time activities were appreciably diminished.

That the Commission's regulatory function retained its importance throughout this period is evidenced by two items of legislation enacted in the war years.

First, the Natural Gas Act was amended in February 1942, to make the Commission responsible for the certification of facilities for the transportation, and sale for resale, of natural gas in interstate commerce, without regard to whether or not the facilities were to reach areas already receiving service. This greatly extended the coverage of the Commission's certificate function, although rapid expansion of the pipeline industry had to await the availability of steel after the war.

Second, the Flood Control Act of 1944, approved in December of that year, provided that electric power and energy generated at projects under the Department of the Army and marketed by the Department of the Interior should be transmitted and sold under rate schedules which would become effective upon confirmation and approval of the Federal Power Commission. This vested in the Commission rate review responsibilities relating to many federal projects similar to the rate review responsibilities it had been previously given in relation to Bonneville and Fort Peck Projects.

The Commission's dockets for the three years and nine months of the war period show that 438 proceedings were initiated under the Natural Gas Act (most of them on applications for certificates of public convenience and necessity), 67 proceedings were initiated on the basis of applications for permits

and licenses under Part I of the Federal Power Act (not counting applications for amendment of licenses), and 213 proceedings were initiated under Part II of the Federal Power Act.

With respect to its continuing statutory responsibilities, the Commission took several significant steps during the war years.

In December 1943 the Commission joined with the Chief of Engineers of the War Department, the Commissioner of Reclamation in the Department of the Interior, and the Land Use Coordinator of the Department of Agriculture to form a Federal Inter-Agency River Basin Committee. The parent committee then established subcommittees on which the Commission was represented to study and establish standards relating to benefits and cost of hydroelectric projects, hydrologic data, sedimentation, technical terms, and distribution and coordination of reports. A number of regional river-basin inter-agency committees were also established, with Commission regional office representation.

In September 1944, almost a year before the end of hostilities in the Pacific, the Commission instituted an investigation of matters pertaining to natural gas, including the extent and probable life of the nation's natural gas reserves; the present and probable future utilization of natural gas for domestic, commercial, and industrial purposes; the extent, character, and results of competition of natural gas with other fuels; and such related matters as would be helpful to the Commission in its administration of the Natural Gas Act or in determining what additional legislation, if any, should be recommended to the Congress.

The work of reclassifying the accounts of electric and gas utilities subject to Commission jurisdiction was, however, materially retarded by the war, and licensed project cost determination was practically discontinued.

The Commission's war activities were initially provided for in the Presidential directive issued in June 1940, the provisions of which are given in Chapter 5 of this history. After

the creation of the War Production Board in January 1942, however, some of the activities in which the Commission was engaged became the responsibility of the Board. In April 1942, the Commission and the Board entered into an agreement as to the differentiation and coordination of their respective functions pertaining to electric power.

Under the agreement, the War Production Board had responsibility for: (1) the programming of equipment and materials which could be made available for power supply purposes, (2) the determination of power supply and demand in relation to the war production program and essential civilian activities, (3) the planning, development, and administration of power supply allocation programs for those regions where the available supply proved insufficient; and (4) the mobilization of power to meet specific war production requirements.

The Federal Power Commission retained its full statutory powers. It remained responsible for the collection of information regarding the generation, transmission, distribution, and sale of electric energy and for the publication of monthly reports on power system capacities and loads. It maintained continuing studies of the need for interconnection and coordination of power facilities and, where interconnection was required in the interest of the national war effort and materials were available, ordered the construction and utilization of such interconnections. And it made special studies as required.

A similar division of responsibilities relating to natural gas was adopted by the Board and the Commission (though the agreement giving it effect was not reduced to writing until September 1943).

In May 1942, the President, by Executive Order, directed the Commission to develop and execute a facility security program with respect to gas utilities and, in collaboration with the Department of the Interior, to do likewise with respect to power facilities.

In October 1942 the President directed the Commission to provide for and carry out a program for the determination, in accordance with sound business practice, of problems of federal procurement officers in contracting for power supply for

war industries or establishments requiring Government approval or involving any Government obligations. Over 1,000 large power contracts were subsequently filed with the Commission. These contracts involved estimated annual bills of close to $200 million to be paid by the Government.

In fiscal years 1941 and 1942, average employment in the Commission remained at 774. A year later average employment had been reduced to 695. A good deal of this reduction was occasioned by the transfer of personnel to the War Production Board to assist it in the discharge of its war responsibilities and to coordinate the work of the Commission and the Board. In the years 1942 to 1945, average employment decreased from 774 to 664.

An indication of the build-up of Commission war activities as the war progressed is the fact that in fiscal year 1942 only about 10 percent of the Commission's appropriation was specifically for national defense. In 1943, national defense accounted for 18 percent of the total appropriation. In 1944, the figure rose to 20 percent. In 1945, it was 21 percent.

Chapter 7

1945 - 1954

The approximately nine years extending from V-J day in 1945, to the end of fiscal year 1954, constituted a period of great activity and accomplishment for the Commission.

Work stemming from legislation enacted before the war and necessarily deferred during the war had piled up to form a great backlog. Particularly was this true of licensed project cost determinations and of the reclassification of electric utility and natural gas company plant accounts on the basis of original cost.

In fiscal year 1945, for example -- the last full year of the war -- only one licensed project cost determination was made. Though following the end of fighting in August 1945 the Commission resumed this work at a faster pace and made 12 determinations before the end of the year, there were pending at the beginning of fiscal year 1947, a total of 84 determinations affecting major projects.

A similar situation obtained with respect to original cost studies of electric utilities and natural gas companies. At the end of fiscal year 1946 original cost studies of electric plants had been filed by 302 companies with total claimed original costs of close to $7 billion. Of the 302 companies only 138 had been covered by Commission orders authorizing the disposition of adjustments. At this time, also, 111 natural gas companies had filed original cost studies. None of these had been examined by the Commission staff.

There were, then, at the end of fiscal year 1946, a total of 359 cost determinations to be made.

At this time, also, following the restoration of peace-time conditions, it became apparent that Commission work relating to hydroelectric resources and their development by private and public agencies, the certification of natural gas facilities, and the regulation of rates must be expanded.

An additional responsibility was placed in the Commission by the River and Harbor Act of 1945, which provided for Commission allocation of the costs encurred by the Government in the building of McNary Project on the Columbia River and of the four proposed projects authorized by that Act on the Snake River.

In contemplation of its peace-time program, the Commission in 1945 reorganized its staff, combining the Bureau of Water Power and Bureau of Electrical Engineering into a new Bureau of Power, with the following four divisions: Licensed Projects, Project Cost, Electrical, and River Basins. The regional offices also were placed in the Bureau of Power. A separate organizational unit was set up to carry on the natural gas investigation instituted in 1944. (See Chart O-9)

In May 1946, the Division of Rates and Research in the Bureau of Accounts, Finance, and Rates was renamed the Division of Rates and Certificates, giving evidence of the increasing volume and significance of the Commission's certificate work.

In June 1946, the Administrative Procedure Act was approved by the President. This act gave the Commission no new functions, but it imposed procedural requirements appreciably altering the Commission's mode of operation.

By the end of fiscal year 1946, average employment in the Commission which had declined steadily during the war, had been brought up to 687.

Later in the year, as the Commission adjusted to the requirements of its broad responsibilities in time of peace, it made additional changes in the staff. The Division of Rates and Certificates in the Bureau of Accounts, Finance and Rates was subdivided into a Division of Rates and a Division of Gas Certificates.

The Baltimore Regional office was closed, and the geographic areas served by the various regions were revised.

Responsibilities in the Bureau of Law were divided among four assistant General Counsels, heading Divisions of Hydroelectric Projects, Electric Power, Natural Gas, and Interpretation and Research.

The Publications Division and Information Division were combined to form a Publications and Information Division. (See Chart O-10)

In fiscal year 1947, the number of formal filings increased by more than 60 percent, and the number of orders adopted increased by almost 50 percent, over the numbers for the preceding fiscal year. During this time, activities not based on formal filings during the year were stepped up. Notable among these were the field study and analysis of original cost statements of electric utilities, the conduct of extensive regional power market surveys, and continuation of the natural gas investigation. Average employment also increased, to a total of 786.

In fiscal year 1948, the Commission devoted increased staff effort to matters relating to natural gas pipelines. The natural gas investigation was completed. Certificates were issued authorizing construction and operation of facilities costing $520 million, almost twice the cost of the facilities authorized the preceding year. Staff work went forward on 17 gas rate cases, as compared to 11 the year before. A start was made on the examination of original cost statements filed by natural gas companies.

In this year the Commission changed the title of the Electrical Division in the Bureau of Power to Division of Electric Resources and Requirements and changed the title of the Publications and Information Division to Division of Publications. (See Chart O-11)

In fiscal year 1948 average employment at 785 remained at nearly the same level as in 1947.

In fiscal year 1949, the Commission abolished the Division of Project Cost in the Bureau of Power and the Division of Original Cost in the Bureau of Accounts, Finance and Rates,

transferring the functions of the two divisions to the Division of Accounts in the Bureau of Accounts, Finance and Rates.

Notable changes in the composition of the Commission program at this time included a shift of emphasis from original cost work relating to electrical utilities to similar work relating to natural gas and a concentration on power market surveys, 15 of which were in progress during the year.

As a result of recommendations of the Hoover Commission on Organization of the Executive Branch of the Government, the President, in May 1950, submitted to the Congress a Reorganization Plan vesting in the Chairman responsibility for the executive and administrative functions of the agency, subject to the reservation to the full Commission of certain matters of program significance. When this plan became effective, the Commission issued an order distinguishing between the authority of the Chairman and that of the full Commission. No other changes in organization were made at this time.

In July 1950, the Eklutna Project Act was approved, making the Commission responsible for allocation of the costs of this project, built and operated by the Department of the Interior. The act also provided that the rate schedules for the sale of power from this project should become effective upon confirmation and approval by the Commission.

Fiscal year 1952 brought no new statutory functions to the Commission, but it was marked by a seven-fold increase over the year before in the dollar volume of gas rate increases filed, and this had a pronounced impact on the Commission program.

Also, in July 1951, the Commission entered into an agreement with the Defense Electric Power Administration of the Department of the Interior regarding the collection, analysis, and correlation of electric power information needed by the two agencies. The agreement included the provision that the basic records of the Federal Power Commission, such as those received on established Federal Power Commission forms, would be accepted as sources of information on the industry's power supply and requirements; and that the Federal Power Commission would undertake special investigations and solicitations of

information when requested by Defense Electric Power Administration subject to approval of the Bureau of the Budget. Two solicitations of data on estimated future power requirements and supply were made for the Defense Electric Power Administration during fiscal year 1952. These data, obtained from all principal electric power systems and power pools, included estimates of future power requirements and supply, by months, through the year 1955.

The Commission furnished the Defense Electric Power Administration each month summaries of data on power requirements and supply on all Class I systems in the United States, as reported on Forms 12-E for the current year and for the years 1952 through 1954. Various statistics on the electric power industry were also furnished from time to time, as requested, including up-to-date maps of electric utility generating and transmission facilities.

Special investigations were made of interconnection possibilities in areas where strengthening of existing ties or construction of new interconnections might aid in alleviating power shortages and assuring power supply for defense requirements.

Solicitations of data for Defense Electric Power Administration were continued in the following year.

Average employment decreased in fiscal year 1953 to 662, the lowest number in any fiscal year since 1940.

On June 7, 1954, the Supreme Court ruled that independent producers selling gas for resale in interstate commerce for ultimate public consumption are natural gas companies as defined in the Natural Gas Act and subject to Commission jurisdiction. The impact of this decision upon the Commission's program was the equivalent of legislation vesting a new, major functional responsibility in the Commission.

Chapter 8

1954 - 1959

In July 1954, the Commission issued its initial order prescribing regulations governing the independent natural gas producers, and shortly thereafter the first of many thousands of rate shcedules and certificate applications were filed. By June 1955, the Commission had received from independent producers a total of 10,978 rate filings, and 6,047 applications for certificates. Meantime, the number of licensed project, electric utility, and natural gas pipeline activities continued at a high rate.

The Flood Control Act of 1954 made the Commission and the Chief of Engineers, Department of the Army, jointly responsible for the cost allocations for the Canyon dam and reservoir authorized by that Act on the Guadalupe River, Texas.

In October 1954, following the recommendation of a management consulting firm employed by the Bureau of the Budget to survey Commission practices, the Commission appointed an Executive Director, and the Chairman delegated to him the authority relating to executive and administrative functions vested in the Chairman by Reorganization Plan No. 9 of 1950.

During the latter half of the fiscal year, the Commission staff was substantially reorganized. Only the Bureau of Power, with its regional offices, remained unchanged. (See Chart O-12)

The Bureau of Accounts, Finance and Rates was abolished. Its responsibilities relating to certificates of public convenience and necessity under the Natural Gas Act, and to rates under the Natural Gas Act, the Federal Power Act, the Flood Control Act of 1944, and other statutes governing the approval of federal power rates, were transferred to a new Bureau of Rates and Gas Certificates, set up, under the direction of a chief and three assistant chiefs, without formal organizational subdivision. The responsibilities of the Bureau of Accounts, Finance and Rates relating to accounts, finance, and statistics were transferred to a new Office of the Chief Accountant, set

up, under the direction of the Chief, with a Division of Accounts and a Division of Finance and Statistics. Later, certain accounting functions pertaining to rate investigations were transferred to the Bureau of Rates and Gas Certificates. The Chief Accountant, however, remained responsible for the adequacy of staff accounting practices throughout the agency.

The Bureau of Law was made the Office of the General Counsel, set up, under the direction of the General Counsel and four Assistant General Counsels, without formal organizational subdivision.

The Division of Publications was abolished. Its functions, together with certain information and public records functions removed from the Office of the Secretary, were set up in a new Office of Public Reference, under the direction of a Chief, without organizational subdivision.

The Division of Examiners was renamed the Office of Hearing Examiners.

The functions of the Division of Personnel and Administrative Services and the Division of Budget and Finance, together with functions pertaining to the Commission library and certain functions pertaining to Commission records and dockets, were set up in a new Office of Administration, under a Director, with a Division of Personnel, a Division of Budget and Finance, a Division of General Services, and the Library. Shortly thereafter the Management Analysis function was established in the office of the Director.

Despite its unprecedented workload, occasioned by the thousands of independent producer proceedings in addition to an already heavy workload, the Commission's average employment declined steadily to a low of 641 in fiscal year 1955. Toward the end of the year a small supplemental appropriation provided some relief, but not enough to permit the Commission to hold its own against the flood of matters requiring its attention.

In March 1956, the Commission established an Office of Special Assistants to the Commission, primarily to provide concentrated service to the Commission in the writing of Commission opinions.

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In fiscal year 1957, the Commission made several important changes in key staff positions, although these are not reflected in organization charts. Taking cognizance of the great increase in court litigation to which the Commission was a party -- 75 instituted in 1957 as compared to less than 30 in 1954, before the Phillip's decision -- the Commission reduced the number of Assistant General Counsels from four to three and appointed one of them to the position of Solicitor.

At about the same time, the Commission appointed a Deputy Chief in each of the two bureaus, and a Deputy General Counsel and Deputy Chief Accountant in the operating offices.

For many years the Chief Engineer of the Commission devoted full time to his duties as a member of the International Joint Commission. In 1958, the Chief of the Bureau of Power was designated as Chief Engineer and, following his appointment by the President to the International Joint Commission, assumed the duties of membership on that Commission in addition to his duties as Chief of the Bureau. (See Chart O-13)

At the end of almost four decades following its creation, and almost three decades following its establishment as an independent agency, the Commission could contemplate its growth from an organization with a staff of about 30 persons, having one broad function -- the licensing of non-federal hydroelectric projects -- to an organization maintaining a staff with an average employment of over 800, having four broad functions, each encompassing a series of activities of national scope.

Federal Power Commission

Functional Chart: F-1

1920

LICENSING OF NON-FEDERAL HYDROELECTRIC PROJECTS

1. Investigating applications and issuing preliminary permits and licenses for the construction, operation, and maintenance of hydroelectric projects, where appropriate.

2. Investigating and acting on applications for amendment, transfer, and surrender of license.

3. Investigating and ruling on declarations of intention.

4. Inspecting the construction, operation, and maintenance of licensed projects.

5. Determining and assessing amounts due from licensees for:
   a. Reimbursement for cost of administering the Act
   b. Compensation for the use, occupancy, and enjoyment of public lands
   c. Expropriation of excess profits

6. Coordinating with Secretary of Interior on reservation of public lands

HEADWATER BENEFITS

7. Determining headwater benefits and assessing equitable annual charges payable to benefactors by beneficiary licensees.

ACCOUNTING FOR LICENSED HYDROELECTRIC PROJECTS

8. Establishing and enforcing a uniform system of accounts.

9. Determining:
   a. Original cost
   b. Accrued depreciation
   c. Additions and retirements
   d. Depreciation reserves
   e. Amortization reserves

10. Analyzing financial statements and reports to ensure compliance with Commission regulations.

INVESTIGATIONS AND REPORTS

11. Participating with other federal and state agencies in making investigations of:
   a. Utilization of water resources
   b. Relationship of water power industry to interstate and foreign commerce
   c. Location, capacity, development costs, and relation to markets of power sites
   d. Value and amount of power at Government dams

12. Publishing the results of investigations.

13. Preparing annual reports to Congress.

Federal Power Commission

Functional Chart: F-2

1933-1935

NATIONAL POWER SURVEY	ELECTRIC RATE SURVEY
1. Conducting studies of power plants, power sites, and power resources. 2. Assembling date re existing and proposed power development. 3. Determining economic feasibility of major projects, costs of development and of delivering power to load centers or markets. 4. Securing data on cost of distribution of electricity. 5. Collecting, analyzing, and tabulating data on: a. Water resources and hydroelectric development. b. Previous power surveys-domestic and foreign. c. Existing and undeveloped power, flood control, irrigation, and drainage projects. 6. Producing maps and charts of reservoirs, plants, stations, steam, and hydroelectric development. 7. Surveying all existing and potential markets for electricity. 8. Making recommendations re applications for loans made under title II of the National Industrial Recovery Act for the construction of Public Works Projects involving the development and utilization of electric power. 9. Reporting to the President and Congress.	1. Investigating, compiling data, and reporting on: a. Residential, commercial, industrial, and rural light and power rates. b. Wholesale rates to municipalities and to other utilities. c. Interconnection agreements between utilities. d. Rates for electric street and interurban railways, terminal railroad electrification, and main line steam electrification. 2. Making studies for improvement of rate structures and wider use of electrical resources. 3. Reporting to Congress.

ELECTRIC POWER INDUSTRY

1935

REGULATION	SUPPLY AND REQUIREMENTS	REPORTS AND PUBLICATIONS
RATES 1. Analyzing and acting on initial rate filings. 2. Analyzing and acting on proposed changes. 3. Initiating and conducting investigations of rates in effect. CORPORATE AFFAIRS 4. Investigating and acting on applications for authority to: a. Issue securities b. Merge and consolidate c. Dispose of facilities d. Make temporary interconnections e. Engage in international energy transactions f. Participate in interlocking directorates ACCOUNTING 5. Establishing and maintaining a uniform system of accounts. 6. Making reclassification and original cost studies. 7. Determining depreciation rates and reserves. 8. Reviewing financial statements to ensure compliance with regulations. 9. Cooperating with NARUC and state agencies in establishing uniformity of regulation.	10. Compiling and distributing data on: a. Generating capacity b. Loads c. Transmission facilities d. Power system reserves e. Economic factors 11. Conducting power market surveys. 12. Promoting the interconnections and coordination of electric systems, where feasible: a. Locally b. Regionally	13. Analyzing financial, engineering, and operating reports from electric utilities. 14. Compiling and publishing: a. Statistics on electric utilities b. Maps and charts showing generating stations, and principal transmission facilities 15. Reporting to Congress, other government agencies, and the public

Federal Power Commission Functional Chart F-4-A

1938

FEDERAL PROJECTS

1. Reviewing proposed projects for the construction of flood control or navigation dams by the Army and making recommendations re the installation of penstocks or other such facilities.

2. Allocating costs of Bonneville Project and Fort Peck Project.

3. Reviewing, and if acceptable confirming and approving rate schedules proposed by the Department of the Interior for sale of power from Bonneville and Fort Peck Projects.

Federal Power Commission

Functional Chart: F-4-B

1938

NATURAL GAS INDUSTRY

REGULATION

RATES

1. Analyzing and acting on initial rate filings.
2. Analyzing and acting on proposed changes.
3. Initiating and conducting investigations of rates in effect.

ACCOUNTING

4. Establishing and maintaining a uniform system of accounts.
5. Making reclassification and original cost studies.
6. Determining depreciation, amortization, and depletion rates and reserves.
7. Reviewing financial statements to ensure compliance with Commission regulations.
8. Cooperating with NARUC and state agencies in establishing uniformity of regulations.

CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY

9. Investigating and acting on applications for certificates of public convenience and necessity for:
   a. Construction, acquisition, and operation of facilities
   b. Extension of facilities
   c. Abandonment of service or facilities
10. Investigating and acting on applications for permits for importation and exportation of natural gas.

REPORTS AND PUBLICATIONS

11. Analyzing financial, engineering, and operating reports from natural gas companies.
12. Compiling and publishing:
    a. Statistics on natural gas companies
    b. Maps of natural gas pipelines
    c. Commission reports to Congress, other government agencies, and the public

Federal Power Commission

Functional Chart: F-5

1942

SPECIAL WAR FUNCTIONS

DIRECT	DIRECT (CONTD)
1. Supervising the electric and gas plant security program.	9. Investigate need for electric power for defense.
2. Collecting, compiling, and analyzing war power statistics.	10. Investigating the entire electric power resources of the country - the capacity and output of all facilities for the generation, transmission, and distribution of electricity in relation to industry and the national defense.
3. Determining the cheapest sources of power and minimum rates for plants engaged in war work.	11. Producing charts, maps, and reports for the national defense power staff and other war agencies.
4. Authorizing the construction of new natural gas pipelines to provide adequate power for war plants.	12. Compiling foreign power system data for conbat and military government branches of the service and for the State Department.
5. Issuing orders for emergency interconnections and power delivery to assure maximum and most economical use of power furnished to war plants.	**INDIRECT**
6. Authorizing and supervising water power projects on undertakings approved by the War Production Board.	13. Exercising price control activity in the utility field.
7. Taking over the operation of licensed hydroelectric projects as necessary for war purposes.	14. Investigating interruptions of service and making recommendations for corrective action.
8. Granting permits to persons not subject to the Act to make temporary interconnections with public utilities or to construct temporary facilitied as required in the emergency.	

Federal Power Commission **Functional Chart: F-6**

FEDERAL PROJECTS

1. Participating in interagency water resources investigations and planning. (1943)

2. Reviewing and, if acceptable, confirming and approving rate schedules proposed by the Department of the Interior for sale of power generated at Department of the Army reservoir projects. (1944)

3. Allocating costs of McNary Project. (1945)

4. Allocating costs of four Department of the Army projects authorized for construction on the Snake River. (1954)

5. Allocating costs of Eklutna Project; and reviewing and, if acceptable, confirming and approving rate schedules proposed by the Department of the Interior for sale of power from this project. (1950)

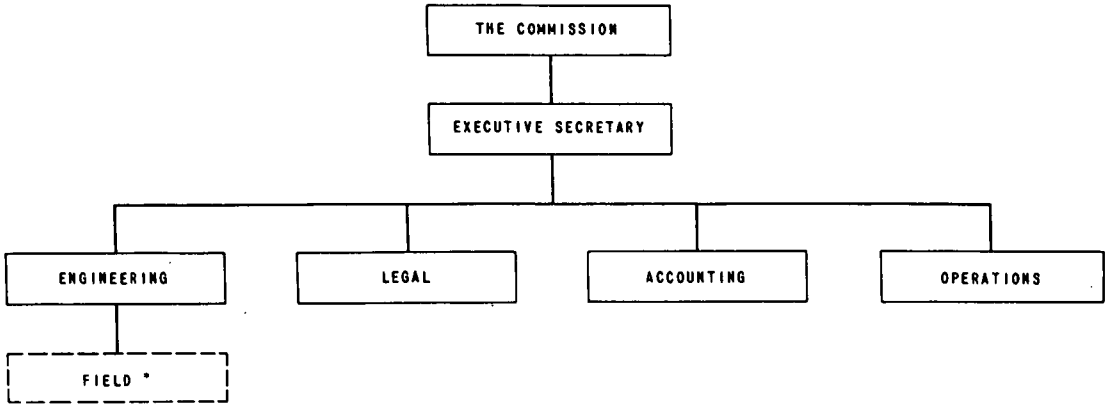
6. Reviewing and, if acceptable, confirming and approving rate schedules proposed by the Department of the Interior for sale of the United States' portion of the power generated at Falcon Dam on the Rio Grande. (1954)

7. Allocating cost of Canyon Dam and Reservoir authorized for construction on Guadalupe River, Texas, in consultation with the Chief of Engineers, Department of the Army. (1954)

FEDERAL POWER COMMISSION

ORGANIZATION CHART: O-1

1920-1929



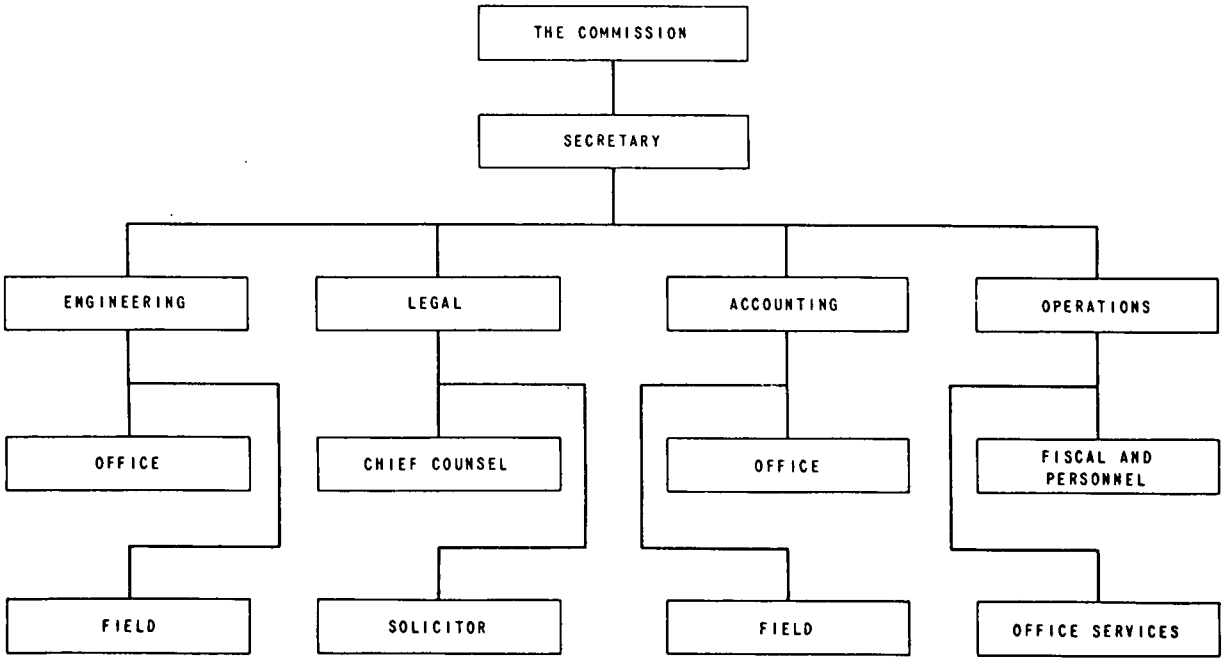
NOTE: From 1920 to 1930 the Commission was composed of the Secretaries of War, Interior, and Agriculture. The Executive Secretary was the only employee on the Commission payroll, the remainder of the staff consisting of personnel from the departments of the three Secretaries.

* The Field Staff was composed of engineers temporarily assigned from the Corps of Engineers, United States Geological Survey, Forest Service, and Bureau of Reclamation.

FEDERAL POWER COMMISSION

ORGANIZATION CHART: O-2

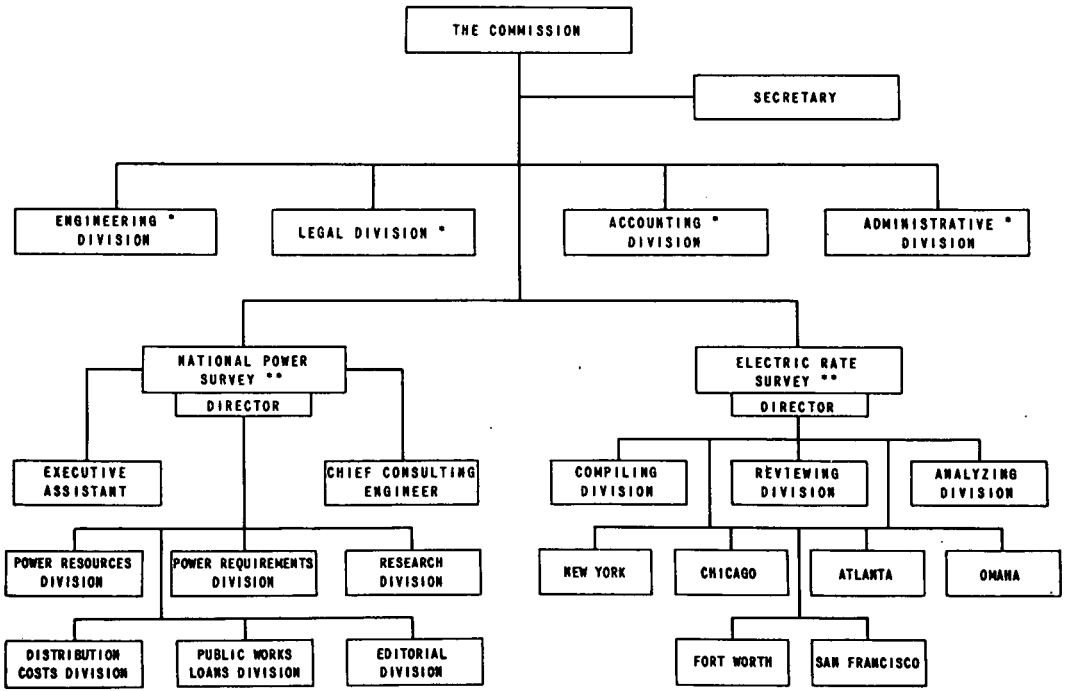
1930



FEDERAL POWER COMMISSION

ORGANIZATION CHART: O-3

1934



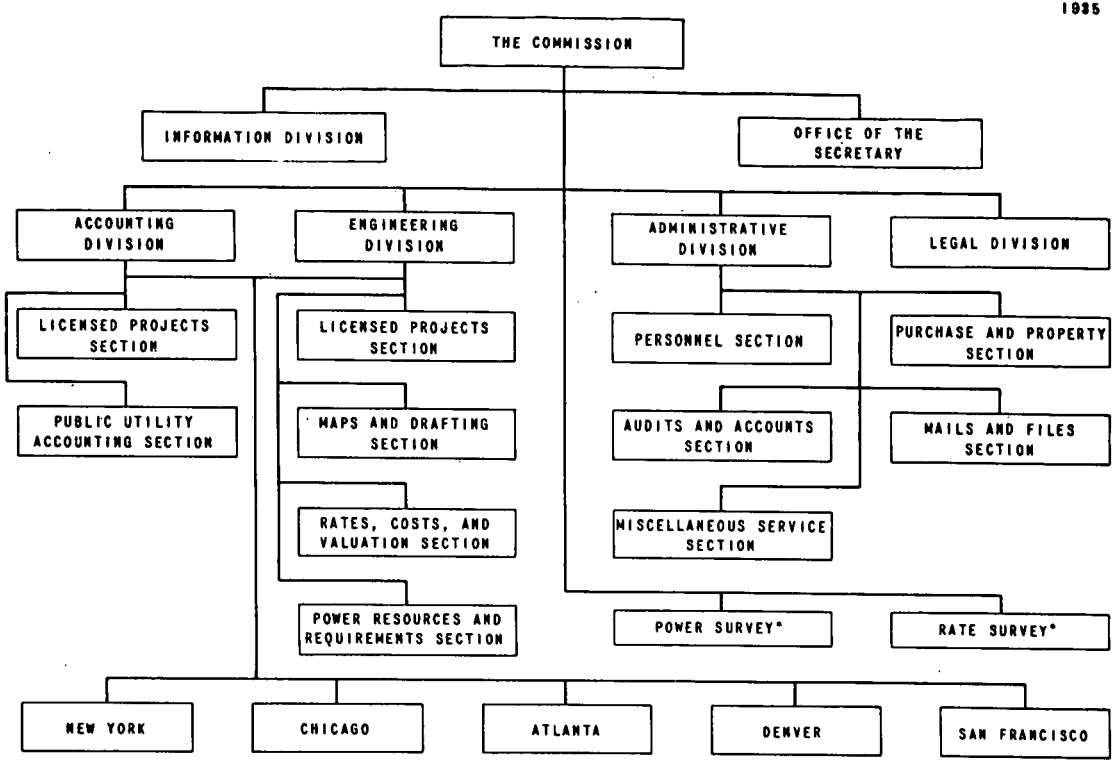
* For Subdivisions, see Chart O-2

** Survey teams were not components of the FPC under the Federal Water Power Act

FEDERAL POWER COMMISSION

ORGANIZATION CHART: O-4

1935

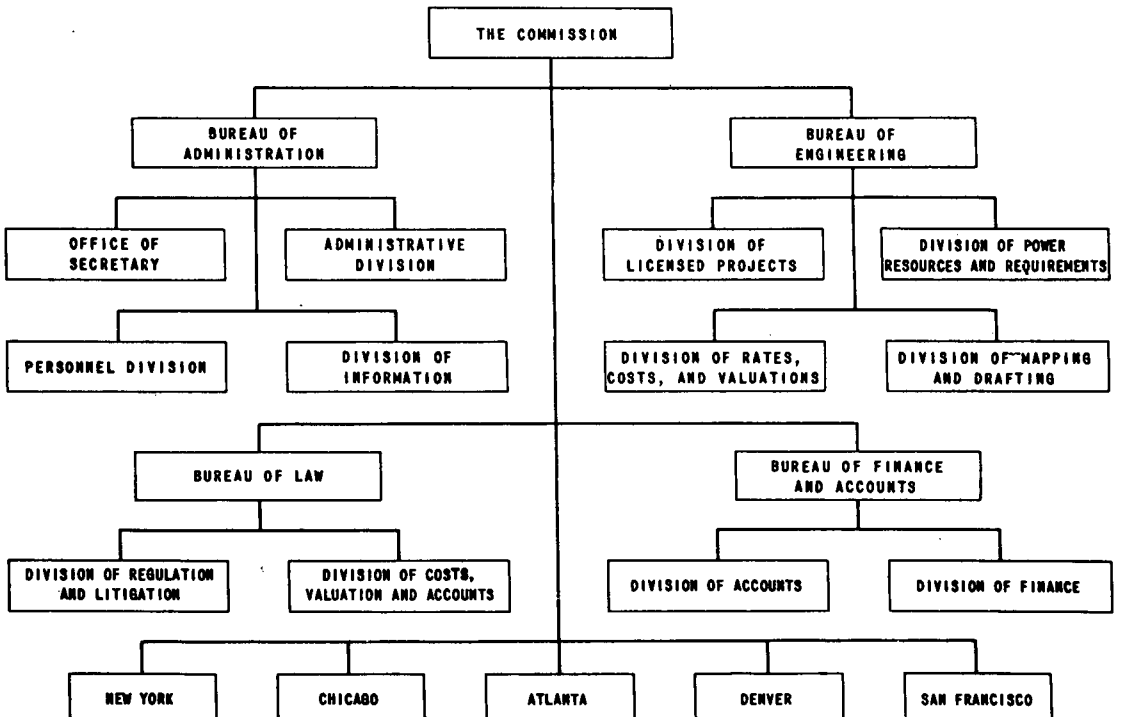


* See Chart O-3

FEDERAL POWER COMMISSION

ORGANIZATION CHART: O-5

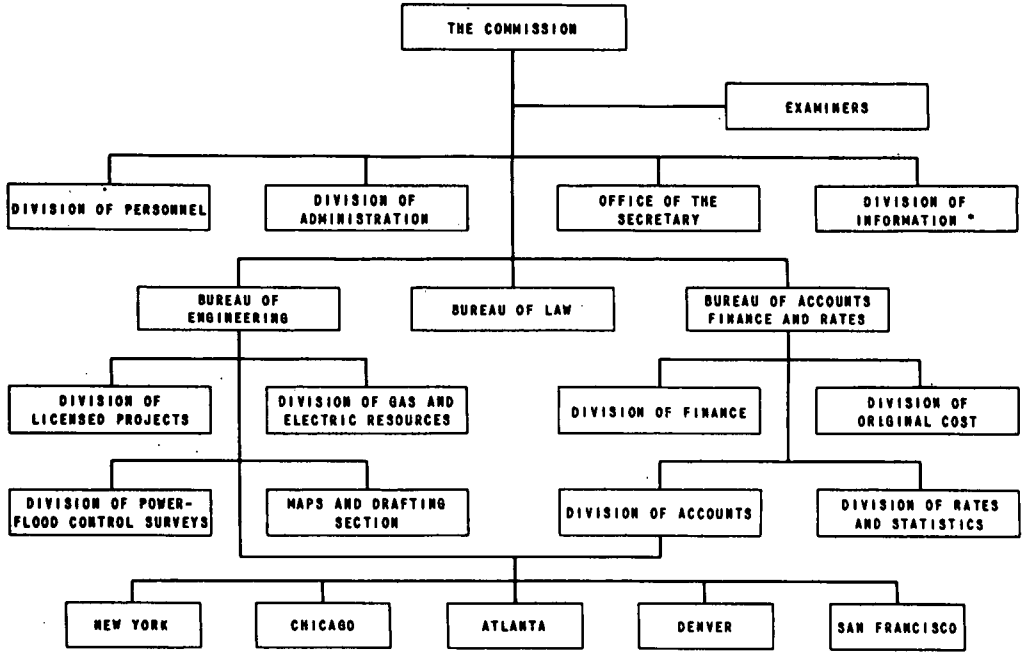
1936



FEDERAL POWER COMMISSION

ORGANIZATION CHART: O-6

1938

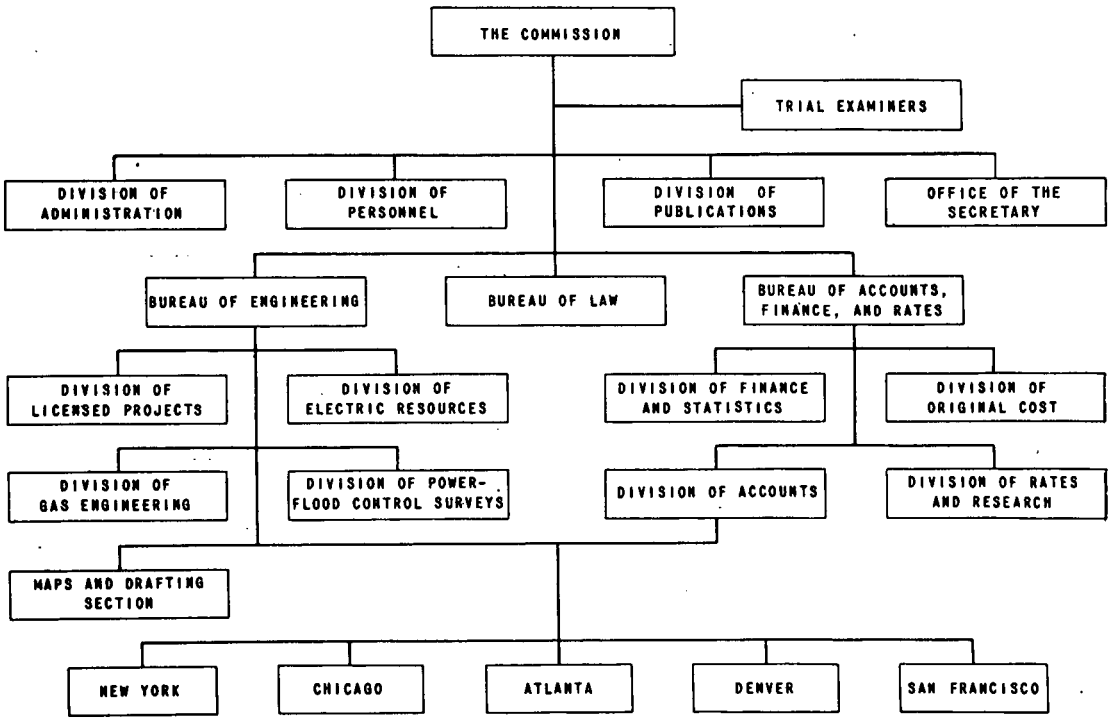


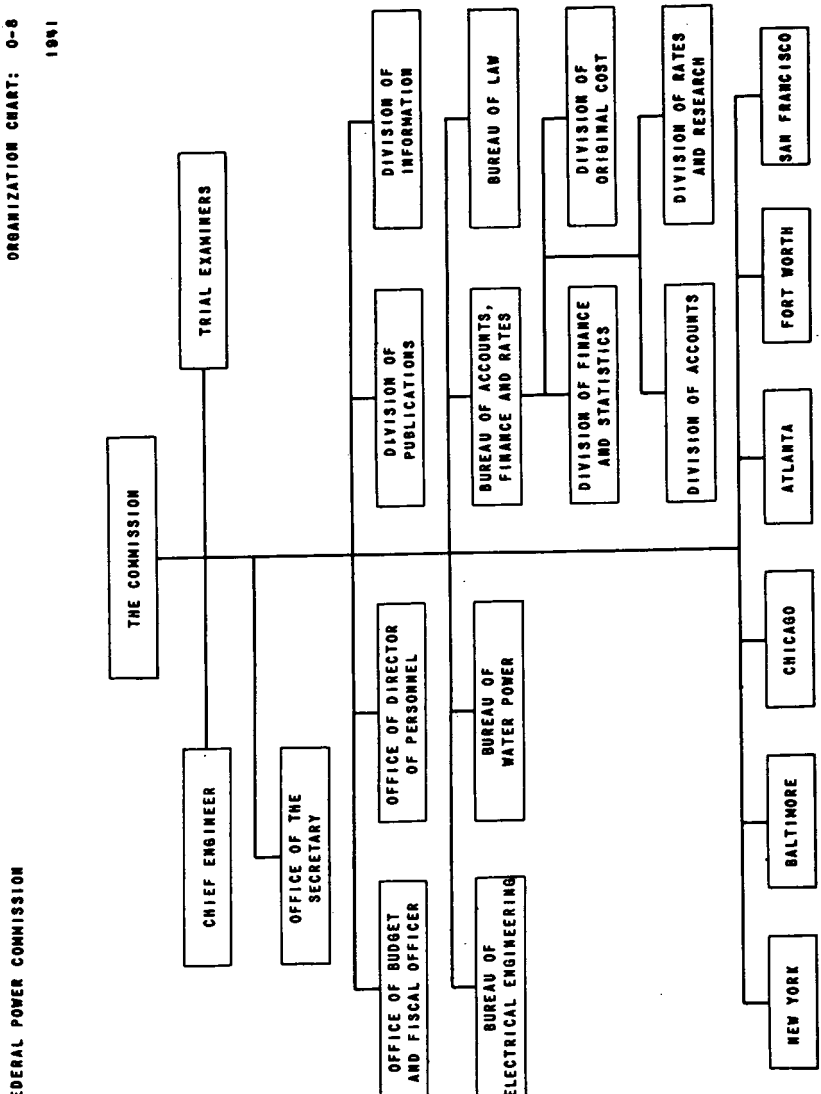
* Changed to Division of Publications in 1939

FEDERAL POWER COMMISSION

ORGANIZATION CHART: 0-7

1940




FEDERAL POWER COMMISSION
ORGANIZATION CHART: 0-8
1961
THE COMMISSION
TRIAL EXAMINERS
CHIEF ENGINEER
OFFICE OF THE SECRETARY
OFFICE OF BUDGET AND FISCAL OFFICER
OFFICE OF DIRECTOR OF PERSONNEL
BUREAU OF ELECTRICAL ENGINEERING
BUREAU OF WATER POWER
DIVISION OF PUBLICATIONS
DIVISION OF INFORMATION
BUREAU OF ACCOUNTS, FINANCE AND RATES
BUREAU OF LAW
DIVISION OF FINANCE AND STATISTICS
DIVISION OF ORIGINAL COST
DIVISION OF ACCOUNTS
DIVISION OF RATES AND RESEARCH
NEW YORK
BALTIMORE
CHICAGO
ATLANTA
FORT WORTH
SAN FRANCISCO

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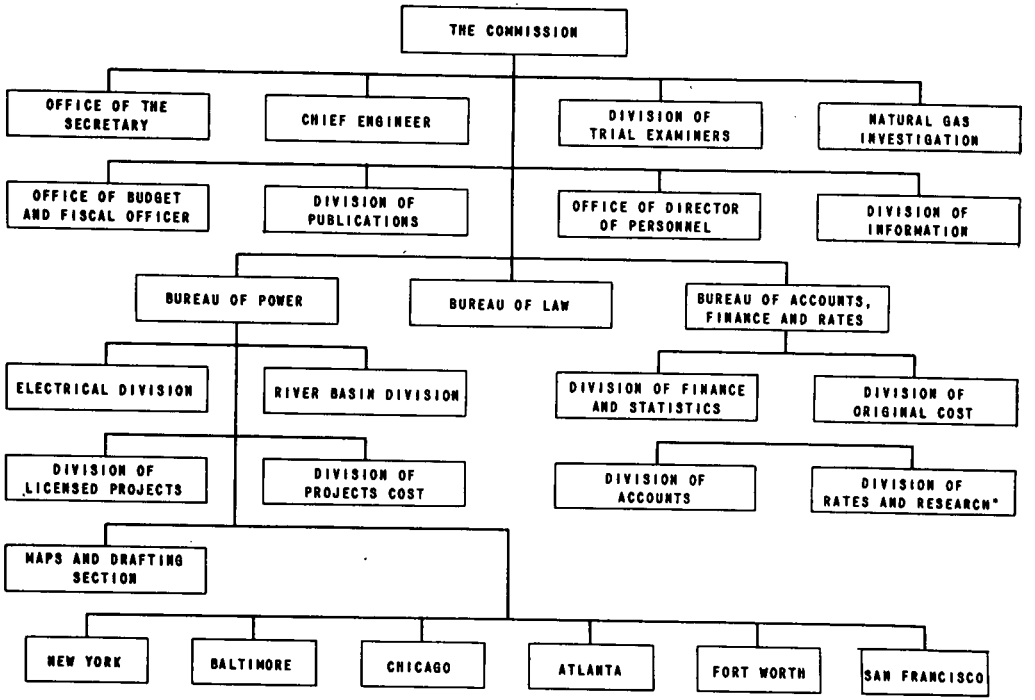
FEDERAL POWER COMMISSION

ORGANIZATION CHART: 0-9

1945

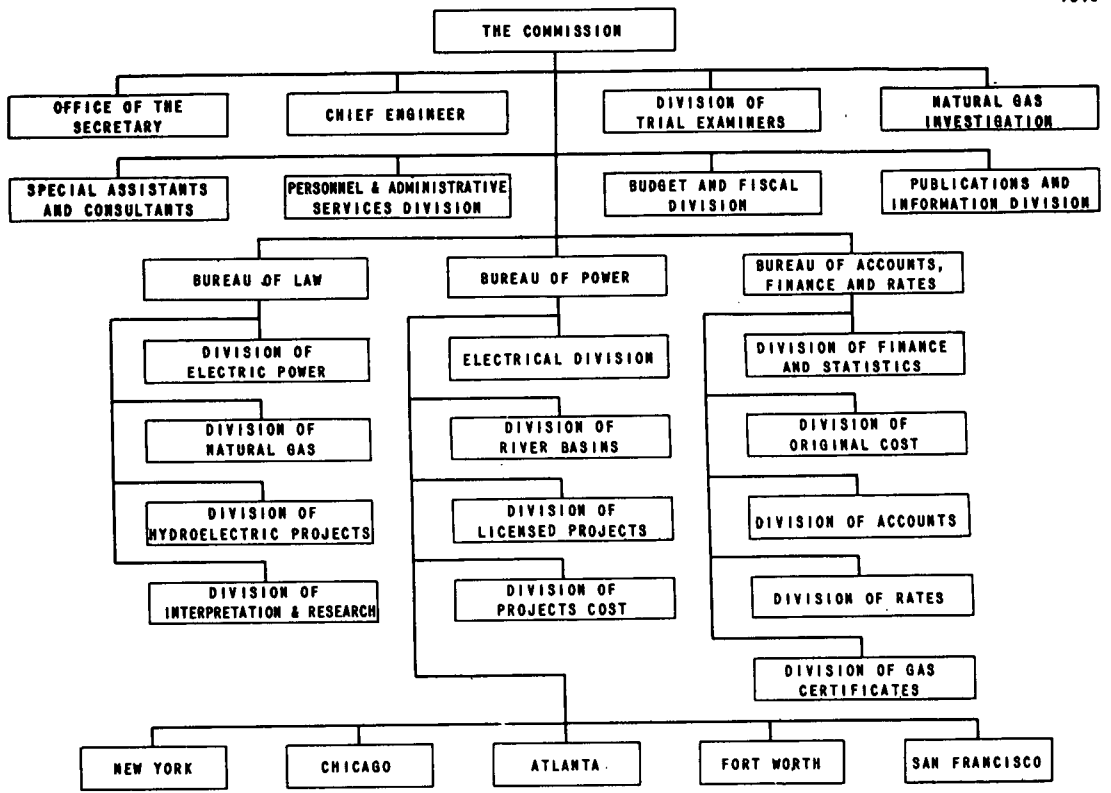


* Changed to Division of Rates and Certificates, effective May 1, 1946

FEDERAL POWER COMMISSION

ORGANIZATION CHART: 0-10

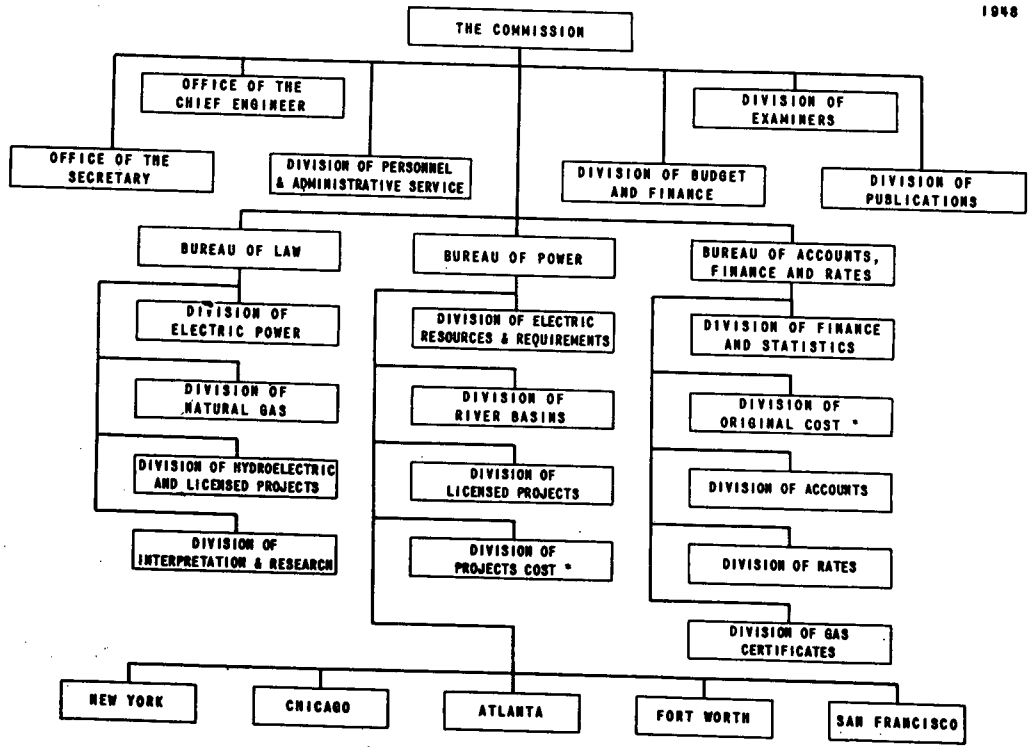
1946



FEDERAL POWER COMMISSION

ORGANIZATION CHART: O-11

1948

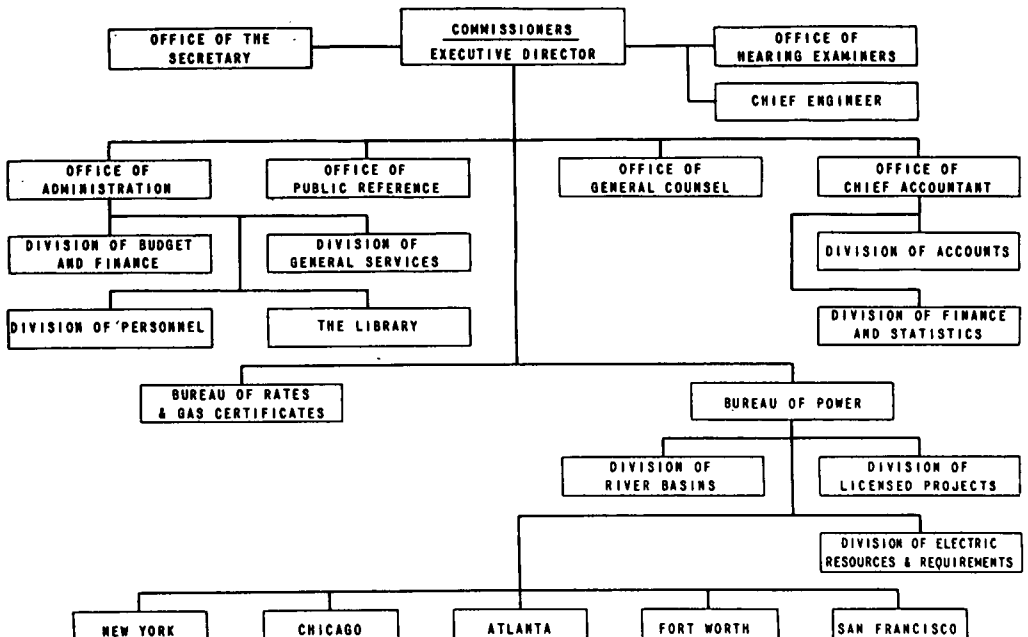


* These Divisions eliminated in 1949

FEDERAL POWER COMMISSION

ORGANIZATION CHART: 0-12

1955

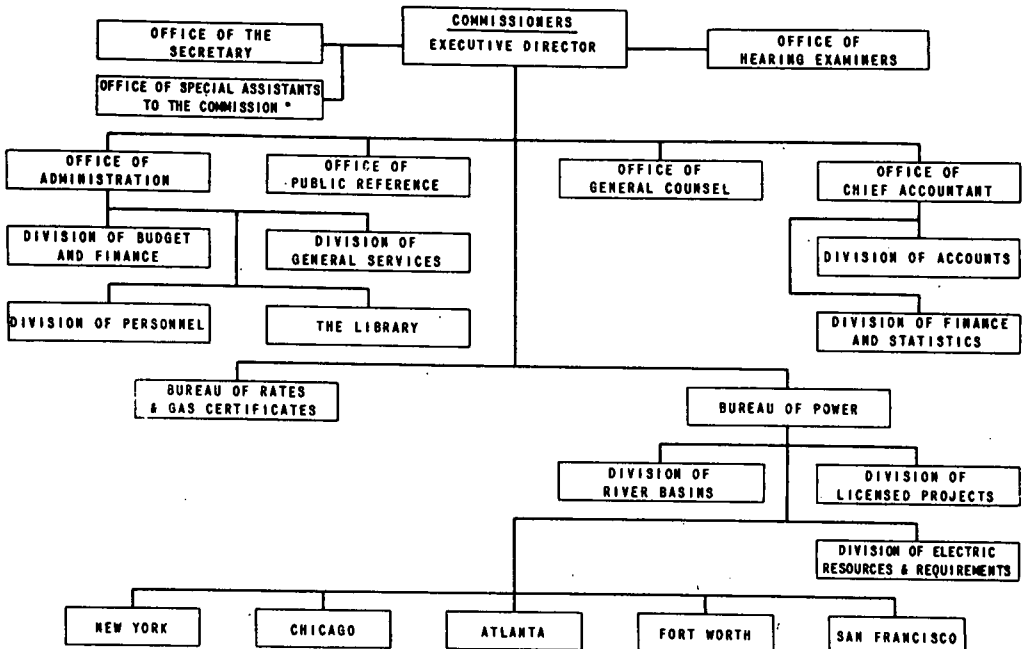


NOTE: Pursuant to the provisions of Reorganization Plan No. 9 of 1950 the Chairman delegated to the Executive Director authority in all operational and administrative matters and responsibility for the most effective and economical operation of the Commission within its established policies.

FEDERAL POWER COMMISSION

ORGANIZATION CHART: 0-13

1959



* Office added in 1956

EXHIBIT II

FUNCTIONS OF THE FEDERAL POWER COMMISSION UNDER THE FEDERAL POWER ACT

PART I—RELATING TO HYDROELECTRIC LICENSES AND OCCUPATION OF WATERS OF THE UNITED STATES

1. Investigate and collect data concerning the existing and possible future utilization of water resources in any region to be developed; and to cooperate in such investigations with the executive departments and other agencies of State and National Governments.
2. Determine the cost and net investment in licensed projects.
3. Publish its reports and investigations for public use.
4. Report to Congress the permits and licenses issued.
5. Issue licenses for the construction, operation, and maintenance of dams and other project works.
6. Issue preliminary permits to applicants.
7. Investigate occupancy, for the purpose of developing electric power, of public lands, reservations, or streams over which Congress has jurisdiction.
8. Investigate proposed waterpower developments undertaken by the United States and report findings and recommendations to Congress.
9. Approve or disapprove the voluntary transfer of licenses.
10. Prescribe rules and regulations for the protection of life, health, and property with respect to licensed projects.
11. Fix annual license charges.
12. Fix charges for the development and utilization of power created by a Government dam.
13. Determine charges for headwater benefits.
14. Report to Congress, with respect to licensed projects, where construction of navigation structures by the United States might be appropriate.
15. Supervise and control the time of construction of project works to meet the reasonable needs of the available market.
16. Request the Attorney General to institute proceedings in equity in district courts of the United States to obtain revocation of a license, the sale of project works, or other appropriate equitable relief where project works not completed within time prescribed.
17. Administer recapture provisions of the act.
    (a) Determine the net investment of the licensee in the project and the amount of severance damages.
    (b) Issue a new license or an annual license if the right of recapture is not exercised.
18. Fix compensation for the use by the United States of project works during periods of national emergency.
19. Require the construction, maintenance, and operation by licensees of such lights and signals as may be directed by the U.S. Coast Guard, and such fishways as may be prescribed by the Secretary of Commerce.
20. Promulgate and administer navigation regulations with respect to licensees' facilities.
21. Control the services rendered by licensees, selling power for use in public service, or that enters into interstate or foreign commerce, and the rates charged and the securities issued in the absence of State regulation.
22. Approve, where required by the public interest, the execution of contracts by licensees for the sale of power extending beyond termination date of license.
23. Investigate the proposed construction of project works upon nonnavigable streams to determine if the interests of interstate or foreign commerce will be affected thereby; and issue licenses with respect to such projects works where appropriate.
24. Control and supervise entry, location, or other disposal of lands of the United States included in a proposed project.
25. Request the Attorney General to institute proceedings in equity in a U.S. district court to revoke any permit or license for violation thereof, or to correct through injunction or other process any violation of the act or regulation, or order, thereunder.
26. Fix charges for use of Indian lands.
27. Enforce the prohibition against combinations to limit the output of electrical energy, to restrain trade or fix prices.
28. Approve the exercise of the right of eminent domain by licensees.

PART II—RELATING TO INTERSTATE ELECTRIC PUBLIC UTILITIES

1. Direct and divide the country into regional districts for the voluntary interconnection and coordination of facilities for the generation, transmission, and sale of electric energy; and promote interconnection and coordination within and between districts.
2. Direct public utilities, after hearings, to physically connect their facilities with those of others and to sell or exchange energy under terms and conditions prescribed by the Commission.
3. Require, during periods of emergency, temporary connections of facilities and generation and transmission of electric energy.
4. Authorize the exportation of electric energy, after hearing.
5. Authorize, upon appropriate terms and conditions, the sale, lease, merger, consolidation, or other disposition by a public utility of its facilities exceeding $50,000 in value, or the acquisition of the securities of another public utility.
6. Authorize the issuance of securities or assumption of liability by utilities upon appropriate terms and conditions.
7. Control the disposition of the proceeds of security issues.
8. Regulate the rates and charges of public utilities.
   (a) Prescribe regulations for the filing of rate schedules.
   (b) Provide for hearings concerning the lawfulness of rates, suspend rates, and provide for the collection of rates subject to refund.
   (c) Determine just and reasonable rates.
   (d) Investigate and determine the cost of production or transmission of electric energy by means of jurisdictional facilities where the Commission has no rate authority.
9. Require furnishing of adequate service, upon complaint of State commission.
10. Investigate and ascertain cost of property of public utility, depreciation therein, and other facts bearing thereon and upon fair value of property.
11. Refer appropriate matters to joint boards composed of State commission members, and cooperate with State commissions through conferences, the holding of hearings, and the supplying of information and witnesses with respect to regulation of public utilities subject to State jurisdiction.
12. Enforce restrictions on officials dealing in securities and interlocking directorates.

PART III—RELATING TO HYDROELECTRIC LICENSES AND INTERSTATE ELECTRIC PUBLIC UTILITIES

1. Prescribe rules and regulations for administration of act.
2. Prescribe systems of accounts for licensees and utilities, and after hearing determine accounts in which outlays and receipts shall be entered, charged, or credited.
3. Inspect and examine all accounts, records, and memorandums of licensees and utilities.
4. Require, after hearing, proper depreciation accounts and fix rates of depreciation.
5. Prescribe filing of annúal and other periodic and special reports.
6. Investigate violations of the act and invoke the aid of the U.S. courts in aid of such investigations.
7. Hold hearings and permit the participation of interested persons.
8. Perform all acts necessary to carry out the provisions of the act.
9. Investigate the generation, transmission, distribution, and sale of electric energy throughout the United States and its possessions, keep current information with respect thereto, and report to Congress the results of such investigation.
10. Publish and sell its reports and decisions.
11. Participate in proceedings involving judicial review of Commission decisions.
12. Bring actions in U.S. courts to enjoin violations of the act and to enforce compliance therewith.

UNDER THE NATURAL GAS ACT

1. Control the exportation and importation of natural gas.
2. Administer rate provisions of act.
   (a) Prescribe regulations for filing of rate schedules.
   (b) Investigate, suspend, require the collection under bond, and after hearing determine the justness and reasonableness of changes in rates.

(c) Investigate and determine after hearing the lawfulness of rates.

(d) Investigate and determine the cost of the nonjurisdictional production or transportation of natural gas by a natural gas company.

3. Ascertain cost and depreciation of property.

4. Direct extension or improvement of transportation facilities.

5. Direct connection of facilities with, and sale of natural gas to, local distribution companies, after hearing.

6. Control abandonment of facilities and service.

7. Certify on a temporary or permanent basis the sale, acquisition, extension, or construction and operation of facilities.

8. Prescribe and administer a system of accounts.

9. Investigate and fix rates of depreciation and amortization.

10. Prescribe annual and other periodic and special reports.

11. Report to Congress on State compacts and recommend legislation in support thereof.

12. Investigate violations of the act.

13. Determine the adequacy of natural gas reserves and the reasonableness of the accounting treatment with respect thereto.

14. Promulgate and administer rules of practice and procedure with respect to hearings and other proceedings under the act.

15. Participate in proceedings for court review of Commission actions.

16. Bring actions in U.S. district courts to enjoin violations of the Act.

EXHIBIT III

UNITED STATES OF AMERICA, FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Frederick Stueck and Arthur Kline.

STATEMENT OF GENERAL POLICY NO. 61-1

Establishment of price standards to be applied in determining the acceptability of initial price proposals and increased rate filings by independent producers of natural gas

(Issued September 28, 1960)

This statement establishing rate standards for independent producers of natural gas is issued on our own motion and is based on our experience gained after six years of regulation of independent producers under the Natural Gas Act. By this statement and the appended area price schedules we will set standards for initial and increased rate filings by producers for the sale of natural gas into interstate commerce. These standards will serve as a guide to us and to interested parties in determining whether proposed initial rates should be certificated without a price condition and whether proposed rate changes should be accepted or suspended.

Since the Supreme Court's 1954 decision in *Phillips Petroleum Company* v. *Wisconsin*, 347 U.S. 674, holding that under the Natural Gas Act the Commission has jurisdiction over the interstate transportation and interstate sale for resale of natural gas by independent producers, and that such producers are "natural-gas companies" under the Act, the Commission's regulatory task has increased enormously in size and difficulty. In contrast to the regulation of less than 200 pipeline companies prior to the *Phillips* case, under this decision Commission regulation extends to several thousand independent producers of natural gas. Although this producer segment of the natural gas industry differs from the pipeline transmission portion in fundamental particulars, its multiplicity of sales and services are now required to be covered by many thousands of rate and certificate filings under the Act.

This ever-growing volume of additional rate and certificate filings has placed an increasing burden not only on this Commission and other regulatory commissions, but on all those—consumers, producers, pipeline companies, and distributing companies as well—whose interests we must consider in administering the Act. It is essential, particularly in the interest of the consumer for whose protection the statute was enacted, that means be found for making the most effective use possible of the Commission's limited facilities in discharging the new and additional duties called for by the regulation of producers of

natural gas. In our opinion, the price standards established by this statement will aid in effectively applying the provisions of the Act to independent producers on a simple, clear, and administratively feasible basis, and in a manner fair to all whose interests are affected by Commission regulation. Our many reasons for establishing these maximum acceptable rates as opposed to establishing rates based on a full cost-rate base hearing for every rate filing made by producers are set forth at considerable length in our opinion No. 338, *Phillips Petroleum Co.*, Docket No. G–1148, et al., pp. 5 thru 12, issued on this date.

Some further explanation is required of certain aspects of these area rate levels. The geographical areas which we have used are convenient and well known. They are not necessarily in complete accord with geographical and economic factors which may be relevant to the establishment of pricing areas. As experience and changing factors may indicate, we will change or alter these areas from time to time in order to eliminate such inequities as may appear to exist because of our use of geographical boundaries.

In arriving at the price levels for the various areas set forth in the appendix to this statement, we have considered all of the relevant facts available to us. Such consideration included cost information from all decided and pending cases, existing and historical price structures, volumes of production, trends in production, price trends in the various areas over a number of years, trends in exploration and development, trends in demands, and the available markets for the gas. Of necessity, we have not set forth the adjustments to these prices which must be made to take into account every possible provision of every contract which may affect the actual price, such as Btu adjustments, conditions of delivery, etc. The relevance of such adjustments to the basic contract price and the appropriate established price standard must be considered as each filing is made. As it becomes apparent that certain adjustments have general applicability in a specific area, the area price standard will be revised and set forth in greater detail with regard to the exact sale conditions to which the rate applies. We should, however, make it clear that these present price standards apply to pipeline quality gas as that term is generally understood in each area and, except for the Louisiana prices, are inclusive of all taxes.

Two price standards are set for each area. Initial prices in new contracts are, and in many cases by virtue of economic factors, must be higher than the prices contained in old contracts. For this reason, we have found it advisable to adopt two schedules of prices, one pertaining to initial prices in new contracts and one pertaining to escalated prices in existing contracts. It is anticipated that these differences in price levels will be reduced and eventually eliminated as subsequent experience brings about revisions in the prices in the various areas.

It will be noted that we have omitted listing an initial price level for sales from Southern Louisiana and Mississippi. The proper initial price level for these areas is currently the subject of two hearings pursuant to Supreme Court decisions. *Atlantic Refining Co.* v. *Public Service Commission*, 360 U.S. 378; *Public Service Commission* v. *F.P.C.*, 361 U.S. 195, F.P.C. Docket Nos. G–11024, *et al.*, and G–13143, *et al.*, respecitvely. Clearly in light of these cases, it would not be proper at this time for us to announce an initial rate level for these areas prior to a final determination of these cases.

These price levels, as announced by Appendix A attached to this statement, are for the purpose of guidance and initial action by the Commission and their use will not deprive any party of substantive rights or fix the ultimate justness and reasonableness of any rate level. As with the areas, the prices will be adjusted from time to time as such facts as may come before us compel such adjustments. For the present, and in the absence of compelling evidence calling for other action by us, proposed initial sales of natural gas by independent producers which include rates higher than those indicated in the appendix attached to this statement shall be denied a certificate or certificated only upon the condition that lower rates be filed, and all rate changes filed under existing contracts which call for a rate exceeding the indicated price level in the attached appendix to this statement shall be suspended.

Where a proposed price exceeds the indicated rate level and is therefore conditioned or suspended we will, in determining whether the higher price is justified, not necessarily consider only the financial requirements of the individual producer proposing the price but will consider all of the above elements relevant to the industry generally in the area concerned. Similar evidence will also be required from purchasers or their customers who object to any of the price levels or any specific price. Our determination will be

in the nature of setting a price for the gas itself from any source questioned and not necessarily a price applicable solely to the party proposing some other price. In this connection we urge that all parties who have any interest in changing an area price join in such a proceeding leading to a determination of a proper revision, if any, in an area price or in the geographical area itself. As there will undoubtedly be numerous parties with an interest in such a proceeding full use should be made of prehearing procedures to reduce the factual issues and consolidate factual presentations to eliminate repetition and duplication of evidence. Because of the impossibility of giving detailed instructions for every proceeding, the precise course of each hearing and the admissibility and relevant weight of each type of evidence must be determined as hearings proceed and we expect to issue additional policy statements from time to time clarifying various aspects of these procedures and principles. The new area rate determinations resulting from such proceedings will represent final determinations of just rates for the areas involved as of the date of the decision and for prior periods.

By the Commission.

JOSEPH H. GUTRIDE, *Secretary.*

APPENDIX A

Area price levels for natural gas sales by independent producers

[All rates at 14.65 p.s.i.a.]

Area	Initial service rates per M c.f.	Increased rates per M c.f.
Texas:		
District No. 1	15.0 cents	14.0 cents.
District No. 2	18.0 cents	14.0 cents.
District No. 3	18.0 cents	14.0 cents.
District No. 4	18.0 cents	14.0 cents.
District No. 5	14.0 cents	14.0 cents.
District No. 6	15.0 cents	14.0 cents.
District No. 7-b	14.0 cents	11.0 cents.
District No. 7-c	16.0 cents	11.0 cents.
District No. 8	16.0 cents	11.0 cents.
District No. 9	14.0 cents	14.0 cents.
District No. 10	17.0 cents	11.0 cents.
Louisiana:		
Southern	Not determined	13.7 cents (14.0 cents at 15.025 p.s.i.a.).
Northern	16.6 cents (17.0 cents at 15.025 p.s.i.a.)	13.7 cents (14.0 cents at 15.025 p.s.i.a.).
Mississippi	Not determined	13.7 cents (14.0 cents at 15.025 p.s.i.a.).
Oklahoma:		
Panhandle area	17.0 cents	11.0 cents.
Other	15.0 cents	11.0 cents.
Carter-Knox	16.8 cents	11.0 cents.
Kansas	16.0 cents	11.0 cents.
New Mexico:		
Permian Basin	16.0 cents	11.0 cents.
San Juan Basin	12.7 cents (13.0 cents at 15.025 p.s.i.a.)	12.7 cents (13.0 cents at 15.025 p.s.i.a.).
Colorado	14.6 cents (15.0 cents at 15.025 p.s.i.a.)	12.7 cents (13.0 cents at 15.025 p.s.i.a.).
Wyoming	15.0 cents	12.7 cents (13.0 cents at 15.025 p.s.i.a.).
West Virginia	26.8 cents (28.0 cents at 15.325 p.s.i.a.)	23.9 cents (25.0 cents at 15.325 p.s.i.a.).

UNITED STATES OF AMERICA FEDERAL POWER COMMISSION

Before Commissioners: Jerome K. Kuykendall, Chairman; Frederick Stueck and Arthur Kline.

FIRST AMENDMENT TO STATEMENT OF GENERAL POLICY NO. 61-1

(Issued October 25, 1960)

In our Statement of General Policy No. 61-1, issued September 28, 1960, we did not announce a price level for initial sales from southern Louisiana and Mississippi for the reason therein given. Subsequent to the issuance of our statement, we have found that the great number of proposed sales from this area involved in certificate proceedings renders it imperative that a price level be announced. The large amounts of gas vitally needed from this area for widespread interstate markets cannot be given consideration and certification consistent with the sales from other areas under our new policy unless all parties including our staff, producers, and purchasers are aware of exactly what initial price level we feel is presently appropriate.

We will, therefore, by this announcement amend the appendix to our Statement of General Policy 61–1 to include a price level of 20.96 cents per M c.f. at 14.65 p.s.i.a. (21.5 cents per M c.f. at 15.025 p.s.i.a.) for initial sales from southern Louisiana and Mississippi This level represents our judgment as to a proper price at this time, based upon current conditions and a full and careful consideration of all of the factors set forth in our original statement. It is intended to operate for sales not previously considered by us in connection with permanent certification. Previously certificated sales from this area, at the same or other price levels, were the result of our judgment of the situations at the time those cases came before us. The present announcement, of course, is neither a repudiation of our previous decisions nor a prejudgment of the cases presently being reconsidered separately by us upon remand from the Supreme Court.

By the Commission. Chairman Kuykendall dissenting.

JOSEPH H. GUTRIDE, *Secretary.*

ATOMIC ENERGY COMMISSION

1. Statutory Basis

The AEC's interest in energy resources and energy technology is based, essentially, on the Atomic Energy Act of 1954, as amended, the principal statute presently governing the AEC's existence, organization, authorities and responsibilities.

2. Brief History and Development

A. BEFORE THE ATOMIC ENERGY ACT OF 1946

Atomic energy was first harnessed during World War II. The Manhattan Engineer District, a War Department organization, ultimately supervised the complex of scientific and technological activities that successfully produced the first manmade atomic explosion.

B. THE ATOMIC ENERGY ACT OF 1946

Shortly after the war, the initial pattern of statutory requirements concerning the development and control of atomic energy was established in the Atomic Energy Act of 1946 (Public Law 585, 79th Cong., 60 Stat. 755–775, 42 U.S.C. 1801–1819), approved August 1, 1946. That act created the Atomic Energy Commission and provided for the conduct of five major programs looking toward the development and utilization of atomic energy subject at all times to the paramount objective of assuring the common defense and security: (1) "a program for assisting and fostering private research and development to encourage maximum scientific progress"; (2) "a program for the control of scientific and technical information * * *; (3) a program of federally conducted research and development to assure the Government of adequate scientific and technical accomplishment"; (4) "a program of Government control of the production, ownership, and use of fissionable material to assure the common defense and security and to insure the broadest possible exploitation of the fields"; and (5) "a program of administration which will be consistent with the foregoing policies * * *." It gave its newly created agency broad and varied responsibilities and authorities with respect to the conduct of research and development activities in atomic energy fields, and in regard to the acquisition, production, utilization, and distribution of "fissionable material," "source material," and "byproduct material."

"Fissionable material" was defined as "plutonium, uranium enriched in the isotope 235, any other material which the Commission determines to be capable of releasing substantial quantities of energy through nuclear chain reaction of the material, or any material artificially enriched by any of the foregoing; but does not include source materials * * *." The act provided for Government ownership of all fission-

able material and, essentially, of all facilities for the production of fissionable material. Equipment and devices "capable of making use of fissionable material or particularly adapted for making use of atomic energy and any important component part especially designed for such equipment or devices, as determined by the Commission" were committed to AEC control. "Source material," defined as "uranium, thorium, or any other material which is determined by the Commission with the approval of the President, to be peculiarly essential to the production of fissionable materials * * *," and "byproduct material," meaning "any radioactive material (except fissionable material) yielded in or made radioactive by exposure to the radiation incident to the processes of producing or utilizing fissionable material," were also placed under the control of the AEC.

Other responsibilities and authorities were conferred on the AEC by this 1946 act, all of them relating to the central purposes of assuring the common defense and security and promoting the advantageous development and utilization of atomic energy—the latter term being defined by the act to mean "all forms of energy released in the course of or as a result of nuclear fission or nuclear transformation."

The Atomic Energy Act of 1946 was amended several times, but its underlying philosophy was not seriously changed until 8 years later. In this 8-year interval much occurred. The production of fissionable material and the production of atomic weapons were intensified by the AEC, with great success in terms of quality and quantity of products and declining costs. Research and development activities expanded and fructified, as the AEC pressed for an expansion of the frontiers of atomic physics and the solution of innumerable technological difficulties. The search for further avenues of development and wider application of atomic energy gained momentum. Specifically, these creditable items of achievement, among many others, were realized by 1954:

(1) Raw material

Uranium was, and remains today, the principal raw material for the production of atomic energy. In January 1947, when the AEC took over, the development and production of atomic energy were largely dependent upon uranium from limited foreign sources, and it was a widely held opinion that the chances were poor for finding important resources in the United States. However, the AEC, in collaboration with the U.S. Geological Survey, undertook an extensive exploration program for the discovery of new uranium deposits which could provide the basis for substantial domestic production and reduce our dependence on oversea supplies. It also established guaranteed prices, bonuses, and other incentives to encourage private participation in exploration for and development of domestic sources of uranium. By 1954, the United States had become one of the world's leading uranium producers. In that year, over 1 million tons of uranium ore were produced from more than 500 mines, new mines were being developed, and many new ore processing facilities were being built. Ore reserves had increased from only about 1 million tons containing about 2,500 tons U_3O_8 in 1948 to about 10 million tons containing more than 25,000 tons U_3O_8 by the end of 1954.

(2) *Feed material*

To produce fissionable material—or special nuclear material, as it is now called in the Atomic Energy Act of 1954, as amended—the material that remains to this day the essential fuel of atomic energy, the isotope separation plants at Oak Ridge and the nuclear reactors at Hanford required large quantities of extremely pure natural uranium. At Oak Ridge the pure uranium was fed into the plants in the form of a gas, while in Hanford the reactors were fed uranium in the form of metal. When the AEC took charge in January 1947, it was faced with the large task of improving and augmenting the available plants and processes for the production of brown oxide (UO_2), green salt of uranium (UF_4), uranium hexafluoride gas (UF_6) and uranium metal, the key product links in the feed material process chain. By 1954, the task was being substantially accomplished.

(3) *Production of* U^{235}

It is difficult to separate U^{235} (the fissionable isotope of uranium) from U^{238}, the common isotope of natural uranium. There is only about one part of U^{235} in 140 parts of U^{238}. Furthermore, these two uranium isotopes are chemically alike. Their difference is a slight variation in mass, or weight. The gaseous diffusion process at Oak Ridge took advantage of this difference in weight to accomplish the separation. The facilities for the production of U^{235} required constant improvements and expansion. Additional gaseous diffusion plants were needed, and their construction was undertaken. In June 1954, the AEC reported to the Congress that one of its two new gaseous diffusion plants being built near Paducah, Ky., was in full operation, and that construction of its new plant at Portsmouth, Ohio, was proceeding satisfactorily.

(4) *Production of plutonium*

The production of plutonium had also proceeded apace. Improvements and new reactors were bringing more and cheaper plutonium into existence.

(5) *The Savannah River plant*

This $1.5 billion plant, with its reactors, heavy water facilities, and separators, was nearing completion in 1954.

(6) *Reactor development*

Nuclear reactors, the machines for putting nuclear energy to work under controlled conditions, vary enormously, depending upon the purposes for which they are intended. Some may operate at temperatures below the boiling point of water, others may generate much heat which must be carried off or put to work. A reactor may be small enough to fit in a living room or too big to be accommodated in, say, a four-story building.

In the fall of 1948, the AEC definitively reviewed the status of work on nuclear reactors and decided upon a long-range developmental program. That program was carried out on a broad front, with related attacks on research problems in nuclear physics, health physics, chemistry, biochemistry, radiobiology, and metallurgy, and on problems of development and operation in the chemical, electrical, mechanical, and civil engineering fields.

By 1954, the AEC built, among others, an experimental breeder reactor at its new National Reactor Testing Station in Idaho, to test the feasibility of transmuting nonfissionable material into fissionable material in a "breeding" process producing more fissionable material than was consumed; a materials testing reactor at the National Reactor Testing Station, to investigate behavior of materials which might be used in future reactor construction; a prototype Navy thermal reactor, to produce large amounts of heat under conditions permitting conversion to power for naval vessels; at Oak Ridge, a pilot model reactor of the homogeneous type, designed to operate on fuel mixed with moderating material in a liquid.

In 1954, the AEC had a particularly noteworthy reactor development project underway. The first full-scale industrial nuclear powerplant was being developed and fabricated for installation in a new electric generating plant to be built and operated by the Duquesne Light Co. of Pittsburgh. Westinghouse was designing and building the nuclear equipment. (As is well known, that plant was successfully completed, and in 1958 began to generate 60,000 kilowatts of electricity for use in homes, stores, and industrial plants in the Pittsburgh area.)

(7) *Radioisotopes*

Artificial radioactive isotopes were first manufactured in cyclotrons. The quantities were minute and the cost considerable. As a result of the development of atomic energy, it was possible for the cost to come down and for the quantities and kinds to multiply. Early in 1948 the AEC stated to the Congress, in regard to radioactive and nonradioactive isotopes:

> The Commission considers it to be of vital importance to make isotopes available to all qualified users in quantities as large as can be profitably used, in variety as great as can be developed, and at the lowest possible cost.

In the fall of the preceding year the President, in a message to the International Cancer Research Congress at St. Louis, had announced a program of foreign distribution of isotopes by the AEC.

By 1954, over 2,500 shipments of AEC-produced radioisotopes had been made to 39 foreign countries and over 45,000 shipments of AEC-produced stable and radioactive isotopes had been made to domestic users. Among the latter, industry was the largest single category; there followed, in the order mentioned, medical institutions and physicians, colleges and universities, Federal and State laboratories, and private research foundations.

There were many other solid achievements during the 8 years between the enactments of the Atomic Energy Act of 1946 and the Atomic Energy Act of 1954. There were also important beginnings of major projects, such as the undertaking on a large scale to control thermonuclear reactions—thus producing energy through the fusion of nuclei of appropriate light elements at the hydrogen end of the table of elements.

Of the many events on the world scene that occurred during these 8 years, at least the following two need be thought of in context of this brief factual account: The United States ceased to be the sole possessor of atomic weapons. Other countries were seeking to develop nuclear power.

C. THE ATOMIC ENERGY ACT OF 1954

Against this background of progress and of marked changes in the conditions which existed at the time of the 1946 act, the need for revisions to the latter act became clear. On February 17, 1954, the President recommended to the Congress significant amendments to the Atomic Energy Act of 1946, calculated to facilitate cooperation with other nations in atomic energy matters, to improve procedures for the dissemination and control of restricted data, and to permit and encourage widespread private development of industrial applications of atomic energy, and to establish a system of regulations respecting the private uses of nuclear materials and facilities. A comprehensive bill, which accepted most of the President's recommendations, was adopted by both Houses of Congress and became law in the summer of 1954. It was called the Atomic Energy Act of 1954.

The Atomic Energy Act of 1954 has helped open the door to international cooperation in atomic matters and has made it possible for private enterprise in this country to participate extensively, at home and abroad, in atomic energy activities.

The 1954 act specifies at the very outset, in section 1: "Atomic energy is capable of application for peaceful as well as military purposes." Among its six stated programs (sec. 3) are the following two:

> d. A program to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public;
>
> e. A program of international cooperation to promote the common defense and security and to make available to cooperating nations the benefits of peaceful applications of atomic energy as widely as expanding technology and considerations of the common defense and security permit; * * *

As in the 1946 act, the AEC is given broad and varied responsibilities and authorities. In some areas the AEC's responsibilities and authorities are quite similar to the AEC Charter under the 1946 act. In other areas, they are not. The following are a few of the important innovations:

(*1*) *Private ownership and operation of production facilities*

The 1954 act permits the private ownership and operation of production facilities under certain conditions and subject to the regulatory control of the AEC. Such ownership and operation may be for commercial purposes or for research and development for nonindustrial purposes. The term "production facility" is defined as "any equipment or device determined by rule of the Commission to be capable of the production of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public * * * or * * * any important component part especially designed for such equipment or device as determined by the Commission." "Special nuclear material" is stated to mean "plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 determines to be special nuclear material, but does not include source material * * * or * * * any material artificially enriched by any of the foregoing, but does not include source material * * *." Section 51 provides that the Commission "may deter-

mine from time to time that other material is special nuclear material in addition to those specified in the definition * * *." Section 51 states that in order to make any such determination "the Commission must find that such material is capable of releasing substantial quantities of atomic energy and must find that the determination that such material is special nuclear material is in the interest of the common defense and security, and the President must have expressly assented in writing to the determination."

(2) Private ownership and operation of utilization facilities

The term "utilization facility" is defined to mean "any equipment or device, except an atomic weapon, determined by rule of the Commission to be capable of making use of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public * * * or * * * any important component part especially designed for such equipment or device as determined by the Commission."

The 1954 act continued to permit the private ownership and operation of utilization facilities, under certain conditions and subject to the AEC's licensing and regulatory control. As in the case of production facilities, such ownership or operation may be for commercial purposes or for research and development unrelated to commerce. Also, the Commission is authorized to issue licenses to persons seeking to use utilization facilities for medical therapy.

(3) Operators' licenses

The act requires the AEC to "prescribe uniform conditions for licensing individuals as operators of any of the various classes of production or utilization facilities licensed in this act," to "issue licenses to such individuals in such form as the Commission may prescribe," and to "suspend such licenses for violations of any provisions of this act or any rule or regulation issued thereunder whenever the Commission deems such action desirable."

(4) International activities

Chapter 11 of the act makes provision for cooperation with other nations, under certain conditions including Presidential approval.

(5) Cooperation with States

Section 274 of the 1954 act establishes an important framework for cooperation between the AEC and the respective States "to recognize the interests of the States in the peaceful uses of atomic energy * * *."

(6) Dissemination of information

A few changes in language, in comparison with the 1946 act, helps make clear the legislative desire for an accelerated outward flow and free interchange of unclassified scientific and technical data in atomic matters.

(7) Indemnification and limitation of liability

By amendments to the 1954 act, provision was made for indemnity by the United States against certain losses due to personal injuries or property damage resulting from the hazardous properties of source, special nuclear, or byproduct material. The details, including the

applicable conditions and qualifications, are set forth in section 170 of the act.

One important proposal by the President was not incorporated in the Atomic Energy Act of 1954. The President had recommended that private ownership of fissionable material—or special nuclear material, as it is called in the 1954 act—be authorized, subject to appropriate safeguards. The 1954 act does not permit private ownership of this material.

The Atomic Energy Act of 1954 did not alter the AEC's paramount objective. That was, and remains, the obligation to make the maximum contribution to the common defense and security.

The AEC began to prepare for the administration of the 1954 act before it became law and proceeded swiftly to implement the act after its passage. Promptly, it continued in force its regulations concerning the sale and use of isotopes, the export of nuclear equipment, and the acquisition of source materials. It set up task forces under the direction of its General Manager to draft many types of regulations and licenses required by the new act. It established schedules of basic charges for AEC materials and services needed by private atomic energy developers; these included charges for natural uranium, thorium and heavy water, and for leased U–235, U–233, and plutonium. It fixed guaranteed, long-term prices for special nuclear material produced by licensees. It took other measures promptly to establish a realistic framework for the proper administration of the new act.

In the 6 years that have elapsed since the AEC began to administer atomic affairs under the Atomic Energy Act of 1954, much progress has been made in many areas. For the purpose of this statement, the following items are selected and discussed very briefly:

(*1*) *Raw material*

Uranium production in the United States continued to increase. Today, this country is in first place among free world uranium producing countries. Current annual domestic ore production is approximately 8 million tons, and the annual rate of production of U_3O_8 in concentrates is about 18,000 tons. Uranium ore reserves have also increased markedly since 1954 and now amount to more than 80 million tons containing about 240,000 tons U_3O_8. The geological information which has been developed during the AEC program indicates favorable prospects for continued discovery of uranium deposits in the United States.

(*2*) *Feed material*

The AEC's feed material facilities at Fernald, Ohio, and in St. Louis, Mo., were expanded to meet its uranium metal requirements. In addition, new facilities were constructed near St. Louis, at a site located on a portion of the Government-owned Weldon Spring Ordnance Works. The AEC's facilities at Paducah were also enlarged for feed material production. In 1956, these additions at Fernald, St. Louis, and Paducah were in operation. The Weldon Spring plant was completed in 1958. In 1959, Allied Chemical & Dye Corp. began operations at its new plant in Metropolis, Ill., in fulfillment of its unit-price contract with the AEC for the processing of uranium oxide (U_3O_8) into uranium hexafluoride (UF_6) at the rate of 5,000 tons of U_3O_8 per year. In all, feed materials production is meeting AEC requirements.

(*3*) *Special nuclear material*

Production rates have met established goals.

(*4*) *Heavy water*

The output at the AEC's Savannah River plant has exceeded requirements to such an extent that production has been significantly reduced.

(*5*) *Some military activities*

Production of nuclear weapons has continued in accordance with Presidential direction.

Much research and development work has been performed to improve and increase the U.S. arsenal of nuclear weapons.

The AEC has cooperated with various Department of Defense agencies in research and development work on missile programs.

(*6*) *Military reactor development*

For the Army, the AEC sought to develop land-based packaged reactor systems that would be suitable for meeting the heat and power requirements of the military services in remote areas. An Army package power reactor (APPR–1, now known as the SM–1) was built at Fort Belvoir. The Argonne low power reactor (ALPR, now known as the SL–1) was built at the AEC's National Reactor Testing Station in Idaho. A facility called the gas-cooled reactor experiment was erected at the National Research Testing Station, to help develop engineering data and provide experience useful in designing and constructing mobile powerplants for the military and small stationary powerplants for civilian use. A portable medium powerplant (PM–1), that will be factory assembled, modular and air transportable, is presently under construction; it is expected that this reactor will be installed at Sundance Air Force Station, Wyo., during the summer of 1961. Other AEC work for Army needs is in progress.

The Navy was interested in reactors for submarines and surface ships. The Navy now has 13 nuclear submarines in operation and 33 others under construction or congressionally authorized. Reactors for larger ships, including the aircraft carrier *Enterprise*, the cruiser *Long Beach*, and the destroyer *Bainbridge*, have been or are being completed. Other AEC work for the Navy is underway.

For the Air Force, the AEC is continuing its considerable efforts toward achieving nuclear powerplants for manned aircraft and nuclear propulsion for unmanned vehicles. In the latter category are its Project Pluto (nuclear ramjet propulsion) and its SNAP project (systems for nuclear auxiliary power).

(*7*) *Maritime reactors*

The first nuclear merchant ship in the world, the NS *Savannah* for which the AEC is supplying the nuclear powerplant, was launched in July 1959, and is scheduled to begin sea trials in the near future. Other projects are in the study phase.

(*8*) *Civilian power*

(*a*) In January 1955, the AEC established the power demonstration reactor program to encourage American industry to develop, fabricate, construct and operate experimental nuclear power reactors,

with some assistance from the Government. It entered into its first contract under this program with Yankee Atomic Electric Co. of Boston, Mass. Subsequently, contracts with two others were signed under this program—Power Reactor Development Co., Inc., of Detroit, Mich., and Consumers Public Power District of Columbus, Nebr. In September 1955, the AES issued its second invitation for proposals, and in January 1957, its third. The second invitation asked for proposals for small-sized nuclear powerplants, and the third placed no limitation on types or sizes. There were other specified differences. To date the following important contracts have been negotiated and executed as a result of the AEC's second and third invitations: (i) with Northern States Power Co. for a boiling water reactor, to be located at Sioux Falls, S. Dak., (ii) with ACF Industries, Inc., and with Rural Cooperative Power Association, for a closed-cycle boiling water reactor to be located at Elk River, Minn., (iii) with Atomics International and with city of Piqua, Ohio, for an organic moderated reactor to be located at Piqua, (iv) with Carolinas-Virginia Power Associates, Inc., for a heavy water-moderated and cooled reactor to be installed at Parr Shoals, S. C., and (v) with East Central Nuclear Group and Florida West Coast Nuclear Group, for a gas-cooled, heavy water-moderated reactor for construction in western Florida. Similar contracts have been executed with Philadelphia Electric Co. and General Dynamics Corp., for a gas-cooled, graphite moderated reactor to be built at Peach Bottom, Pa., and with Puerto Rico Water Resources Authority for a boiling water reactor with nuclear superheat to be located in Puerto Rico.

(*b*) An AEC program related to the power demonstration reactor program, and considered by the AEC to be fundamental for progression toward economic nuclear power, is its experimental power reactor program. This program includes projects concerned with the development, design, construction and operation of pressurized water, boiling water, nuclear superheat, sodium-cooled, organic-cooled, heavy water, gas-cooled and aqueous homogeneous reactors. With the exception of the pressurized water reactor plant at Shippingport, which is in operation as part of the Duquesne Light Co.'s system, the reactor projects in the experimental power reactor program are designed for experimental purposes rather than power production.

(*c*) Power reactors financed entirely with private funds are also in operation, being built, or in the planning stage. These include the Vallecitos boiling water reactor project at Pleasanton, Calif., owned by General Electric and Pacific Gas & Electric Co., and placed in operation in 1958; Consolidated Edison Co. of New York's thorium reactor, the construction of which, at Indian Point, N.Y., is well along toward completion; the Dresden, nuclear power station at Morris, Ill., owned by Commonwealth Edison Co., recently licensed for full-power operation; and Pacific Gas & Electric Co.'s Humbolt Bay project at Humbolt Bay, Calif., now in the design stage.

(*d*) Mention should also be made here of a contract awarded by the AEC in August 1960, for the design, fabrication, and installation of a portable nuclear powerplant at McMurdo Sound, Antarctica. The Martin Co. of Baltimore, Md., the successful low bidder responding to the AEC's invitation for competitive, fixed-price, proposals, is already hard at work to fulfill its obligations under the contract to turn over

to the Government in the Antarctic a turnkey, succesfully test-operated plant ready for full operation for the Government's purposes. The use of the plant at this scientific base will undoubtedly reduce the danger to personnel working on the extremely hazardous transportation conditions under which deliveries of fuel oil are now being made to this South Pole station.

(9) Radioisotopes

The demand for radioisotopes for industrial, medical, and agricultural purposes has continued to climb. The many thousands of shipments from the AEC's facilities have gone to every State and to more than 65 foreign countries. Many kinds of radioactive isotopes have been employed, including the following more widely sought materials: Iodine 131, phosphorus 32, carbon 14, hydrogen 3, strontium 90, cobalt 60, cesium 137, iridium 192, krypton 85, and promethium 147. There were, on June 30, 1960, over 5,700 individuals and organizations in the United States licensed to use radioisotopes; these include medical institutions and physicians, educational and research institutions, industrial firms and Federal and State laboratories.

In agriculture, radioisotopes are contributing to increased production and are an important tool to scientists seeking to unlock the secrets of plant and animal growth and to deal with pests and diseases. In medicine, radioisotopes were soon put to therapeutic use in radiation treatments. This use continues. They are also being employed as tracers to define physiological processes and to improve medical diagnosis. In industry, radioisotopes are being used mainly for tracing and for gaging or testing.

The AEC's current program includes a continuing research and development attempt to uncover new applications of radioisotopes for the benefit of mankind. Radioisotope radiation has helped wipe out the screwworm fly in Florida and Southeastern United States, where ranchers formerly sustained $15 to $25 million losses annually due to this cattle pest. Similar techniques may be successful against the boll weevil, the tsetse fly, and the malaria- and yellow-fever-carrying mosquitos. Radioisotopes may be useful in the discovery, development, and conservation of water resources—a major concern throughout the world—in studying the decomposition of complex organic wastes, in testing food additives, and in many other ways.

(10) Thermonuclear research

Perseveringly, the AEC has been pitting a strong research program against the problems affecting the achievement of controlled thermonuclear power. Progress has been steady. The advances to date include the production of a plasma with an ionic energy of probably 1,000 electron volts or more, the injection of very dense plasmas into a magnetic "bottle" at an energy of a few hundred electron volts, the demonstration by a method called the hard pinch of hydromagnetically stable configurations of plasma and magnetic fields, the development of methods for injecting very energetic ions (600 Kev.) on a steady state basis, this providing trapped ions having energies well above the range needed for effective thermonuclear reaction, and the confinement, in a mirror machine, for a period 100,000 times longer than the time predicted for development of hydromagnetic instabilities, of a plasma with a significant ratio of particle pressure and pressure of the magnetic field.

(11) Project Rover

Nuclear propulsion for space vehicles is a frontier of atomic energy research that is being explored by Project Rover, a project initiated as a joint AEC–USAF program. In October 1958, the Air Force's role, responsibility for the nonnuclear components of the vehicle, was transferred to the National Aeronautics and Space Administration. The AEC is proceeding with its work on nuclear rocket propulsion in close cooperation with NASA.

(12) Project Plowshare

Project Plowshare, initiated in 1957 at the University of California Livermore Radiation Laboratory, is primarily a study program directed toward possible worthwhile, nonmilitary applications of nuclear explosive devices. Under investigation are such peaceful applications of nuclear explosive devices as (i) excavation, (ii) power production, (iii) isotope production, (iv) recovery of oil from oil shales, tar sands and depleted wells, (v) mining, (vi) excavating aquifers for replenishing water tables and for flood control, and (vii) scientific studies in seismology, geology, and special chemical reactions.

Chairman John A. McCone recently had occasion at hearings before the Subcommittee on Research and Development of the Joint Committee on Atomic Energy to quote the following passage from President Eisenhower's last state of the Union message to Congress:

> Today we stand in the vestibule of a vast new technological age, one that despite its capacity for human destruction has a capacity to make poverty and human misery obsolete.

The Chairman stated:

> The President, I am sure, was speaking of the broad spectrum of technology and all that it implies. He was speaking of the great strides and the future potentialities of chemistry and physics, of medicine and surgery, of communications and travel, and of the infinite possibilities of heretofore untouched parts of the universe.
>
> Foremost in his mind was, I believe, the infinite possibilities offered by nuclear science and technology. Believing, as the Commission does, that the enormous potentialities of the atom as a contributor to man's advancement are only now unfolding, we must ever expand our knowledge of nuclear science.

3. Program Objectives

The paramount objective of the AEC has remained essentially unaltered during all the years of its existence. It is to make the maximum contribution to the common defense and security.

The objectives of the programs mentioned in this statement follow:

A. RAW AND FEED MATERIALS

The basic objectives of the AEC's raw and feed materials programs have been to support adequately the military applications and the expanding peaceful uses of atomic energy. In turn, the objective to encourage the production of ores, concentrates, and feed material products, and, then, the objective to proportion production to requirements, were established.

B. SPECIAL NUCLEAR MATERIAL

The principal objectives of the program for the production of special nuclear material have been to meet adequately the military's needs and the requirements for peaceful uses. Under the Atomic Energy Act of 1954, as amended, the quantities of special nuclear material to be produced each year are subject to the determination of the President, who, pursuant to section 41 b. of the act, is required "at least once each year" to make such determination in writing and also to "specify in such determination the quantities of special nuclear material to be available for distribution by the Commission" to domestic licensees and to foreign countries. Accordingly, the objective of the AEC's program for the production of special nuclear material has, in a strict sense, been to meet the quantities set by the President.

C. HEAVY WATER

The initial objective of the program for the production of heavy water was the development of sufficient quantities to meet military needs. An added AEC objective since the 1954 act has been the production of larger quantities to satisfy, also, the demands for peaceful uses.

D. ACTIVITIES FOR MILITARY PURPOSES

The 1954 act, as amended, contains a number of provisions pertaining to the AEC's activities for military ends. The AEC's programs for the fulfillment of its responsibilities and the exercise of its authorities in this regard have as their overall objective, as previously mentioned, the making of the maximum contribution to the common defense and security. Other objectives are: (i) to conduct experiments and perform research and development work for the purpose of improving and increasing the military applications of atomic energy; (ii) "to the extent that the express consent and direction of the President of the United States has been obtained, which consent and direction shall be obtained at least once each year" (sec. 91 a.), to produce atomic weapons or parts; (iii) to deliver quantities of special nuclear material or atomic weapons to the Department of Defense, as the President may direct from time to time; (iv) as the President may direct from time to time, "to authorize the Department of Defense to manufacture, produce, or acquire any atomic weapons or utilization facility for military purposes" (sec. 91 b.); and (v) as the President may authorize, "to cooperate with another nation * * * to transfer by sale, lease, or loan to that nation, in accordance with terms and conditions of a program approved by the President * * * nonnuclear parts of atomic weapons * * *, utilization facilities for military application; * * * source, byproduct, or special nuclear material for * * * utilization facilities for military applications; and * * * source, byproduct, or special nuclear material for * * * atomic weapons * * *" (sec. 91 c.); agreements for cooperation with other nations, referred to in (v), are required to be submitted to the Congress.

E. ACTIVITIES INVOLVING THE MARITIME AND OTHER NONMILITARY GOVERNMENT AGENCIES

The AEC's objectives are to cooperate closely with these Government agencies for the purpose of rendering services and developing and furnishing reactors and other devices and materials which the AEC is empowered by law to supply. With respect to the Maritime reactors program, the AEC's specific objective is to help develop nuclear-powered merchant ships capable of competitive operation in the world commerce.

F. ATOMIC POWER AND COMMERCIAL ACTIVITIES

The objectives of the AEC's program for civilian power are: (i) to reduce the cost of nuclear fuel to levels competitive with power from fossil fuels in high-energy cost areas of this country—by 1968; (ii) to assist friendly nations now having high-energy costs to achieve competitive levels in about 5 years; (iii) to support a continuing long-range program for the further reduction of the cost of nuclear power, in order to increase the economic benefits and to extend these benefits to wider areas; (iv) to maintain the U.S. position of leadership in the technology of nuclear power for civilian use; and (v) to develop breeder-type reactors to make full use of the nuclear energy latent in both uranium and thorium.

Other objectives are to assist in establishing in the United States a self-sufficient atomic energy industry, and, toward that end, to stimulate private participation and investment in the development and use of atomic energy for civilian purposes, to help educational organizations provide an adequate supply of personnel trained in nuclear energy, and to provide unique educational and training opportunities for the atomic energy industry.

G. RADIOISOTOPES

The objectives of the AEC's radioisotope programs are: (i) to develop widespread beneficial applications of radioisotopes; and (ii) to continue to assure that the AEC's development and production are compatible with the needs for this "byproduct material" and that the AEC's prices are established "on such equitable basis as, in the opinion of the Commission (a) will provide reasonable compensation to the Government for such material, (b) will not discourage the use of such material or the development of sources of supply of such material independent of the Commission, and (c) will encourage research and development" (sec. 81).

H. THERMONUCLEAR RESEARCH

The objective of this program is to achieve the full control of thermonuclear reactions—a virtually limitless source of energy. The successive goals are: to heat and confine a plasma at a particle-energy equal or superior to the so-called ignition energy; to study such thermonuclear plasma, and, if it appeared possible, to design and build a pilot plant yielding net power; and to assess, by experience, the possibility of economic generation of power.

I. PROJECT ROVER

The AEC's program for Project Rover has as its central objective the successful achievement of nuclear propulsion systems for rockets.

J. PROJECT PLOWSHARE

The basic objective of this program is to study the possible beneficial, nonmilitary applications of nuclear explosive devices.

4. Summary or Characterization of Rules, Policy Declarations, or Directives for Industry Guidance

A. AS TO CONTRACT POLICY

AEC has well publicized its contract policies and procedures. Of one of its most fundamental policies in the contract area, the AEC reported to the Congress in January 1951 (ninth semiannual report):

> The Atomic Energy Commission took over a large part of the present plant from the Manhattan Engineer District, its wartime operator. Since the transfer in January 1947, the program has been growing. New administrative devices, new methods of directing and controlling the enterprise, still are evolving.
>
> Probably the Commission's most important administrative decision has been to continue MED's practice of contracting with industrial concerns and academic institutions to perform the actual operations. * * * Under contract, industrial organizations, universities, and research institutions run the production plants, operate atomic energy laboratories, carry out research and and development, and do other special tasks.

That fundamental administrative decision has remained essentially unchanged. Recently, the AEC has reviewed and rewritten its detailed contract principles and provisions, and this material is being promulgated as a part of the new Federal Procurement Regulations.

On February 2, 1959, the AEC announced the transfer of the functions of its Advisory Board of Contract Appeals to the AEC's Hearing Examiner. This revision in the system for handling contractually authorized appeals from decisions of the contracting officer under AEC contracts was accomplished by AEC regulations (title 10, Code of Federal Regulations, pt. 3).

B. THE CONDUCT OF PROCEEDINGS BEFORE THE AEC

The conduct of all proceedings before the AEC involving licensing is governed by the AEC's "Rules of Practice" (10 C.F.R. pt. 2).

C. SECURITY

The criteria, procedures, and methods for resolving questions concerning the eligibility of an individual for security clearance pursuant to the Atomic Energy Act of 1954, as amended, are the subject of AEC regulations (10 C.F.R., pt. 4). The AEC's security policies and practices in the area of labor-management relations are also set forth in AEC regulations (10 C.F.R., pt. 6). The requirements for the safe-guarding of "Secret" and "Confidential Restricted Data" are contained in an AEC regulation (10 C.F.R., pt. 95).

D. STANDARDS FOR PROTECTION AGAINST RADIATION

The standards established for protection against radiation hazards arising out of activities under licenses issued by the AEC are stated in AEC regulations (10 C.F.R., pt. 20).

E. ACCESS TO RESTRICTED DATA

The criteria and procedures for permitting persons to have access to "Confidential" or "Secret Restricted Data" relating to civilian uses at atomic energy are set forth in AEC regulations (10 C.F.R., pt. 25).

F. SOURCE AND BYPRODUCT MATERIALS

The control of source material, including its transfer, delivery, possession, ownership, and export, and the licensing of byproduct material, embracing its manufacture, production, transfer, receipt, acquisition, possession, ownership, use, import and export, are covered by AEC regulations (10 C.F.R., pts. 40 and 30, respectively). Also enunciated in AEC regulations (10 C.F.R., pt. 37), are the criteria and procedures for purchasing at a discount radioisotopes to be used in certain research programs.

G. PRODUCTION AND UTILIZATION FACILITIES

There are AEC regulations covering the licensing of production and utilization facilities (10 C.F.R., pt. 50), including their transfer, receipt, manufacture, production, acquisition, possession, use, import and export. The licensing of operators of these facilities is also regulated by the AEC (10 C.F.R., pt. 55).

H. DOMESTIC RAW MATERIAL PROGRAM

The AEC's guaranteed minimum prices for certain ores of the Colorado Plateau area and the other details of this program to stimulate domestic production (are stated in AEC regulations (10 C.F.R. pt. 60). AEC's current domestic uranium concentrate procurement policy was published in the Federal Register on November 24, 1958 (F.R. Doc. 58-9821). Additionally, the AEC has issued many public statements, from time to time, regarding this domestic program.

I. SPECIAL NUCLEAR MATERIAL

The AEC's criteria and procedures for the issuance of licenses to receive, possess, use, and transfer special nuclear material, and other aspects of the AEC's special nuclear material program, are spelled out in AEC's regulations (10 C.F.R. pt. 70). Appropriate precautions in connection with the transportation of special nuclear material, so as to prevent accidental conditions of criticality and other hazards, are also the subject of AEC regulations (10 C.F.R. pt. 71).

J. PATENTS

The rules of procedure to be followed by any person making application to the AEC for the determination of a reasonable royalty fee, just compensation, or the granting of an award, pursuant to certain provisions of the 1954 Atomic Energy Act, as amended, are contained in AEC regulations (10 C.F.R. pt. 80). Also under AEC regulations are the establishment of standard specifications for the issuance of licenses on patents owned by the AEC, patents declared to be affected with the public interest pursuant to section 153a. of the 1954 act, and other patents useful in the production or utilization of special nuclear material or atomic energy pursuant to section 153e. of the 1954 act (10 C.F.R. pt. 81). Certain AEC waivers of its statutory rights with respect to specified inventions or discoveries are the subject of an AEC regulation (10 C.F.R. pt. 83).

K. FOREIGN PROGRAMS

Certain unclassified activities of persons engaging in foreign atomic energy programs are covered by AEC regulations (10 C.F.R. pt. 110).

L. SECTION 170 INDEMNITY

The AEC has issued regulations pertaining to certain key features of the indemnity systems provided by section 170 of the 1954 act, as amended (10 C.F.R. pt. 140).

M. CERTAIN AEC POLICIES IN REGARD TO HEAVY WATER, BERYLLIUM, ZIRCONIUM, HAFNIUM, MAGNESIUM, BORON–10 AND LITHIUM–7

From time to time the AEC has issued public statements respecting the price, availability or need for these materials.

N. AEC POLICIES RESPECTING PRICING FOR ITS MATERIALS AND SERVICES REQUIRED BY PRIVATE ENTERPRISE

The AEC has publicized its policies and has established schedules of basic charges for available materials and services needed by private atomic energy developers and users in the United States.

O. AEC POLICIES RESPECTING PAYMENT TO LICENSEES FOR SPECIAL NUCLEAR MATERIAL PRODUCED BY THEM

The AEC has established "guaranteed fair prices" in accordance with the provisions of section 56 of the 1954 act, as amended, and these have been published.

P. DEVELOPMENT OF INDUSTRIAL USES OF RADIOISOTOPES

By public announcements the AEC has been keeping industry informed of its plans for this development work, the amount of money it has budgeted for the purpose, and how proposals from industry will be evaluated.

Q. CIVILIAN POWER

These AEC programs have been well publicized in a general way. In addition, specific invitations have been issued to the industry which are quite definitive in regard to the proposals solicited, the underlying conditions and qualifications, and the bases for evaluating proposals received.

R. GENERALLY, IN REGARD TO ALL AEC PROJECTS

It is the AEC's policy to make available promptly to industry and to the public all technical information which can be exempted from the controls necessary for the national security. Types of information newly declassified include large areas of production information and data concerning military reactors. The AEC's publication program is a vigorous one. It is also the AEC's policy to make available promptly to industry and to the public all information respecting the policy and administrative aspects of the AEC's program which it believes, based on applicable law and prudent management, appropriate to release.

5 AND 6. OTHER AGENCIES

The AEC's programs mesh, to a significant extent, with the Department of Defense agencies and with National Aeronautics and Space Administration, as previously indicated in this statement. Occasionally AEC's programs correlate with those of organizations of the Department of Agriculture, the Commerce Department, the Department of the Interior and other agencies. An example, at random, is the task recently undertaken by the AEC for the Narcotics Bureau of Internal Revenue to study the possibility of determining the country of origin of illegal opium by means of radioisotope techniques. Another, is the AEC's research and development assistance to the Bureau of Mines, to support, to the point of building a suitable reactor, and perhaps further, the Bureau's own efforts to find new coal gasification techniques to make carbon monoxide and hydrogen for the production of organic chemicals and, also, to serve as a basic raw material for substitutes for natural gas and petroleum products. In the regulatory area, other Government agencies are subject to AEC's licensing requirements, except in regard to facilities and materials acquired by DOD for military purposes. In some areas, the regulatory authority of AEC touches upon the authority of other agencies; e.g., ICC, in the transportation field, and Public Health Service, in the field of radiation protection. Without notable exception, all of these dovetailed tasks have been performed in a favorable climate of cooperation and without unnecessary overlapping of effort or other inefficiencies.

7. CHALLENGING OR DIFFICULT ISSUES OR OBSTACLES

Challenging or difficult issues abound. Many of the important ones are different faces of the same, constantly recurring, fundamental question: How to invest most advantageously available talent and money? The hard choices are not confined to the area of basic research—where the AEC's selection, rejection, or postponement of the

numerous projects for which AEC's support is sought is obviously difficult because these projects can rarely be evaluated in terms of probable resultant products, applications, or other usefulness. Hard choices are also entailed in pursuing, by research and development efforts, definitely envisioned and desired material goals. Sometimes the choice is among different research phases or facets of the total project; sometimes it is between a research phase and the development of a device, each offering some promise toward realization of the ultimate goal. Occasionally, the choice is between the fabrication of a prototype, or even smaller experimental device—to test various features desired in a full-scale piece of equipment—and the developmental erection of the major piece itself.

Today's list of the many challenging scientific and technological problems extant in atomic energy fields would probably beggar compilation. Practically all of the AEC's programs have such problem items. The continuation of vigorous efforts to solve these problems—to make known the unknown, discover the discoverable, and invent the inventable—on a scale and with prudence at least equivalent to that brought to bear between 1947 and yesterday—will, hopefully, lead to the solution of many of these problems—just as impressive numbers of scientific and technological problems were solved by those earlier efforts.

The AEC has been meeting the challenges entailed in the contemporaneous conduct of its two separable but interrelated theaters of operation—the first, and paramount, one pertaining to the objective of making the maximum contribution to the common defense and security, and the second one relating to the other objectives such as increasing the standard of living and strengthening free competition in free enterprise. The AEC has also, since the Atomic Energy Act of 1954, been meeting the challenges of internal conflicts and administrative headaches due to its simultaneous activities as a regulatory body and as an agency responsible for the development of the industry which it regulates.

The AEC is contending with the difficulties involved in the effective dissemination of scientific and technical information for purposes other than the conduct of affairs for the AEC's own account or direct interest. Much of the data generated under the AEC's program is important to the scientific and technical communities, and to others, and should be communicated to the potential recipients as quickly as possible. The AEC has been devoting much time and thought to this matter and has been improving considerably its systems for the dissemination and receipt of scientific and technical data. Even security-classified data may, under the "access permit" system, be made available for private purposes to security-cleared individuals in accordance with published rules (10 C.F.R., pt. 25).

8. Recommendations

Chairman John A. McCone, in his statement on March 22, 1960, to the Subcommittee on Research and Development, of the Joint Committee on Atomic Energy, made some recommendations which also appear to be appropriate in context of the congressional declaration

of policy in the Employment Act of 1946. The following are pertinent portions of these recommendations:

(*a*) Believing, as the Commission does, that the enormous potentialities of the atom as a contributor to man's advancements are only now unfolding, we must ever expand our knowledge of nuclear science.

(*b*) Our experience tells us * * * that few advances in basic knowledge have for long gone wanting for practical application. Realizing this and recognizing the critical importance of its facilities for the conduct of research, the Atomic Energy Commission has completed and issued a study of the long-range outlook of our research laboratories. * * * It indicates that the avenues of research in nuclear science are manifold. Many of these avenues are time consuming. In saying this, I am speaking of years, not months. They are also expensive. Hence, this research cannot be continued on a year-to-year, stop-and-go basis. We must establish our national objectives and pursue them energetically and with constancy. Fluctuating levels of support must not be permitted to undermine the enthusiasm and spirit of conquest in our laboratories.

(*c*) In nuclear science, as in all other fields of research, there are a few rare individuals endowed by God with unusual and uncommon vision of the future, and a capacity and an ability to work toward accomplishment of the good that they foresee. We must be constantly alert for such individuals and encourage them in every necessary way, for they serve as a powerful inspiration and a magnet thus attracting about them other outstanding scientists. I am speaking of the Einsteins, the Fermis, and the Lawrences of another day. Just as their unusual minds opened up the horizons of the past, so the brilliant minds of today and tomorrow will unfold new and useful knowledge in the future. We must seek out such rare men and encourage them and provide them with tools and the materials that they require. * * *

(*d*) High energy physics is one of the most important, active fields in contemporary science. Its pursuit is necessary to an understanding of the role of the elementary particles in the natural scheme of things, and thus to a real understanding of atomic nuclei. It has attracted to it many of the best experimental and theoretical scientists in the world. In this field, the United States leads the world. * * * Therefore, as a mater of national policy, I believe we must establish the level of effort required in this field and provide the support at required levels for a long enough period of time to assure the results that we seek. * * *

(*e*) Another difficult and long-range problem is the harnessing of the atom to produce electric power. We must not be diverted by current indications of an oversupply of oil or coal. The rising demands for energy will place a strain on conventional fuels eventually, and this makes imperative the development of economic nuclear power as an ultimate source of energy supply. For this reason, the Commission has prepared and presented * * * a 10-year program to achieve this goal. This program includes a continuing effort in fundamental research in this field. It is my opinion that we must go further. There must be still longer range plans if we are to solve the hard problems of power from controlled thermonuclear fusion. These problems would appear to be beyond solution in a single decade. The same would appear to be the case in developing reactors which would breed more nuclear fuel than they consume. * * *

(*f*) Somewhat closer at hand, but still in the research and development stage, is the use of nuclear energy for aerodynamic propulsion. I am speaking of nuclear-powered aircraft or the ramjet, or a nuclear rocket engine for space propulsion. It appears to me that the United States and other countries as well, particularly the Soviet Union, have in hand much of the basic technology with respect to both the materials and the reactor concepts required for successful nuclear propulsion of aerodynamic vehicles. We must not permit the pace of these developments to be dependent on firm requirements for specific end items, for this work, too, is of a long-range character, and our national objectives would be better served by pursuing research systematically and steadily.

(*g*) Propulsion of ships by nuclear reactors offers a promising field for the application of nuclear power. The feasibility of this application has been demonstrated dramatically by the performance of the nuclear submarines. However, for commercial vessels operating competitively over the oceans of the world, economy of the operation as well as dependability of performance are essential. To achieve the degree of economy necessary does not, however, involve new concepts and new principles, but, rather, a modification to meet the specific requirements of ocean commerce.

(*h*) Perhaps the most dramatic example of the useful application of the atom not initially foreseen is to be found in the utilization of nuclear explosives for peaceful purposes. * * * The nuclear explosive is a new and inexpensive source of energy which can be put to work to perform herculean feats now beyond man's ability or economic means. Some of the things which preliminary studies indicate may be accomplished with the nuclear explosive are excavation, creation of harbors, canals, and the like, of equal or greater magnitude than the Panama Canal; development of natural resources by aiding in the recovery of minerals and oil; production of power, industrial chemicals, and isotopes; use as a research tool for obtaining valuable scientific data in the fields of chemistry, physics, and seismology. The Atomic Energy Commission's program for developing such uses of the nuclear explosive is called Plowshare. Through this program we hope to obtain the data necessary to convert a nuclear explosive into an energy and research tool so that the atom will then indeed be the servant of man.

TENNESSEE VALLEY AUTHORITY

I. STATUTORY BASIS FOR TVA'S RELATIONSHIP TO ENERGY RESOURCES AND ENERGY TECHNOLOGY

As part of the program for encouragement of the proper use, conservation, and development of the natural resources of the Tennessee River Basin and adjoining territory as provided for in the Tennessee Valley Authority Act of 1933 (48 Stat. 58, as amended; 16 U.S.C. 831–831dd (1958)), TVA was authorized to develop the electric energy resources through the acquisition and construction of dams, powerhouses, steamplants, and transmission lines, the operation of such facilities to generate and transmit electric power, and the marketing of such power.

In an amendment to the TVA Act in 1939 (53 Stat. 1083–1085; 16 U.S.C. 831n–2—831n–3 (1958), Congress authorized TVA to issue bonds, the proceeds of which were to be used for the purchase of private power properties in the Tennessee Valley area, and thus assented to assumption by TVA of responsibility for supplying the electric power needs of such area. In 1959, Congress reaffirmed TVA's responsibility for developing electric energy resources to supply the power requirements of the area by authorizing TVA to issue revenue bonds to finance the power program (73 Stat. 280–285, 338, as amended; 16 U.S.C. 831n–4 (supp. I, 1959)).

II. BRIEF SUMMARY OF THE HISTORY AND DEVELOPMENT OF TVA'S RELATIONSHIP TO ENERGY RESOURCES AND ENERGY TECHNOLOGY

TVA was created in 1933, but the concept of a single Federal agency to help develop all of the natural resources of an area, including its energy resources, did not suddenly spring into being. It was the result of much discussion and legislative consideration which began around the turn of the century concerning the conservation and development of the Nation's resources. The Tennessee River, because of its great navigation and power potential and the prevalence of destructive floods thereon, figured prominently in these discussions and considerations. A bill for private development of the Muscle Shoals powersite on the Tennessee River was vetoed by President Theodore Roosevelt in 1903. Consideration of the problem of developing the Nation's streams, including the Tennessee, ultimately led to the passage of the Federal Water Power Act of 1920 (41 Stat. 1063, as amended; 16 U.S.C. 791–828c (1958)). This act asserted the Federal interest in the streams and set up rules for development in the public interest.

World War I brought about the construction of two large nitrate munitions plants, two steam-power plants, and the hydropower facilities at Wilson Dam. Following the war, the disposition of these facilities was debated for 15 years. The conservation movement as

well as the problem of the disposition of these nitrate plants and the power facilities at Wilson Dam were major factors leading to the establishment of the Tennessee Valley Authority.

TVA's power program got underway promptly after the signing of the TVA Act. Cities voted to buy and distribute TVA power, and rural electric cooperatives were organized by farmers and other citizens for the purpose of distributing power to their members. However, these actions met strong and concerted opposition from the private power companies and it was only after extended litigation unsuccessfully challenging the constitutionality of the TVA Act that TVA around 1939 became the principal power supplier in the Tennessee Valley region.

Shortly thereafter, TVA power became of crucial importance for national defense in World War II, with a resulting slowdown in the development of normal peacetime uses of electricity in the valley. TVA's construction program was accelerated to make abundant power available quickly for the war effort, and, by the middle of 1942, 12 dams and a large steamplant were under construction at the same time. The availability of TVA power helped substantially in the Government's development of atomic energy at Oak Ridge, in the production of aluminum for aircraft, and in meeting numerous other defense needs.

Following World War II, municipal and rural cooperative systems distributing TVA power began aggressively to extend services to consumers particularly in unserved rural areas and to expand the use of electricity. In 5 years, the number of consumers practically doubled and so did average home use of electricity. In the 80,000 square miles served with TVA electricity today, the total generating capacity is 11½ million kilowatts as compared with 800,000 kilowatts in 1933. Total electricity consumption has increased 40 times, from 1½ to 60 billion kilowatt-hours. The number of power consumers has grown from 275,000 to 1,400,000. While only 3 out of 100 farms in the area had electric service 27 years ago, today 97 out of 100 receive it. Average residential use of 600 kilowatt-hours a year in 1933 has now increased to more than 8,800 kilowatt-hours a year. The national average, starting from the same point, has increased less than half this amount.

III. OBJECTIVES OF THE PROGRAM AS DEFINED BY STATUTE AND ADMINISTRATIVE INTERPRETATION

A primary objective of the TVA program is to develop the great energy resources of the Tennessee River which were previously unused and wasted, and through the encouragement of the abundant and widespread use of electricity in the Tennessee Valley region to aid the people of the area in the development of their total resources. The TVA Act provides that electricity shall be sold to rural and domestic consumers at rates as low as are feasible and that preference shall be given in the sale of electricity to States, counties, municipal and cooperative organizations not doing business for profit but primarily for the purpose of supplying electricity to their own citizens or members. TVA has administered its power program to achieve these objectives and has demonstrated how low rates result in expanded use of electricity.

IV. SUMMARY OR CHARACTERIZATION OF RULES, POLICY DECLARATIONS, OR DIRECTIVES ISSUED FOR THE GUIDANCE OF THE AFFECTED INDUSTRY

While this item is apparently intended for agencies performing regulatory functions, some policies of TVA may be relevant. In particular, contracts between TVA and the organizations distributing TVA power require that the power be sold to the ultimate consumers at lowest possible rates. To this end, specific retail rate schedules are included in the contracts. The contracts also provide that revenues in excess of current operating expenses shall be applied to (1) repayment of principal and payment of interest on system indebtedness as due; (2) payment of taxes or tax equivalents comparable to those normally levied; (3) maintenance of reasonable reserves for system replacement, contingencies, and working capital; and (4) advance retirement of debt and a reasonable amount of new construction. Any surplus remaining is expected to be devoted to further reductions in retail rates.

V. EXTENT TO WHICH THE TVA POWER PROGRAM IMPINGES UPON, MESHES WITH, OR IS LIMITED BY OTHER AGENCIES IN THE ENERGY FIELD

TVA is essentially the sole supplier of power in an area of some 80,000 square miles in parts of seven States. This is a responsibility which Congress has entrusted to TVA and for which TVA alone is held accountable. In discharging this responsibility, TVA coordinates its operations with the private electric utilities which are its neighbors through the economical interchange of power over high-capacity interconnections. TVA also coordinates its power operations with the nearby power facilities of the Aluminum Co. of America and the Corps of Engineers. Under unique contractual arrangements TVA directs the release of water at the Aluminum Co. projects located on tributaries of the Tennessee River to achieve maximum joint benefits and purchases from the Southeastern Power Administration the power output of corps dams on the Cumberland River.

TVA supplies large quantities of power—about 30 billion kilowatt-hours annually, half of the generation on the TVA system—to the Atomic Energy Commission's gaseos diffusion plants at Oak Ridge, Tenn., and Paducah, Ky. TVA and AEC recently completed an agreement whereby TVA will operate the experimental gas-cooled power reactor (EGGR) currently being designed and built by AEC at Oak Ridge. The reactor is intended for use both as an experimental facility and as a demonstration of a power reactor using gas—helium—as the heat transfer fluid. TVA will participate in planning, scheduling, and carrying out the preoperational tests of the reactor facility. Subsequently TVA will operate and maintain the plant for AEC. In addition, TVA will plan and recommend research activities related to the facility, conduct approved research work, and carry out programs to train employees of other organizations designated by AEC. This agreement follows a period of several years during which TVA personnel have been actively participating in a wide range of nuclear activity at various AEC installations.

TVA has a program of investigation of coal reserves in the producing fields that supply coal to its steam-electric generating plants.

These investigations are needed by TVA in planning its electric power program and to encourage the orderly development of the area's coal resources. Findings are made available to the public, usually through cooperative arrangements with the geological surveys of the respective States. TVA has been assisted in some of this work by the U.S. Bureau of Mines and the U.S. Geological Survey.

Information on Tennessee coal reserves was collected through a joint effort involving TVA, the U.S. Bureau of Mines, and the Tennessee Division of Geology. The Kentucky Geological Survey and TVA are currently engaged in the early stages of a cooperative study of western Kentucky coal reserves. TVA's work with other agencies has consisted primarily of coordination of research efforts and pooling of information developed. TVA supplies information concerning its use of coal to other Federal agencies interested in production of fuel.

VI. THE EXTENT OF EXISTING COORDINATION OR EVIDENCE OF ANY UNRESOLVED CONFLICTS

TVA's power program is well coordinated with the other Government agencies and, through interchange arrangements, with neighboring utilities, as previously discussed. TVA's activities relating to coal have been coordinated with other public agencies having similar interests to minimize duplication and to share fully the information developed.

It would seem that the recently enacted amendment to the TVA Act authorizing the use of revenue bonds in financing additions to the TVA power system and defining the area which TVA may serve would resolve any conflicts concerning the TVA power program. However, the evidence to date indicates that those who have opposed the policy of Congress with respect to the TVA power program have not completely ceased in their opposition.

VII. COMMENTS ON THE MORE CHALLENGING OR DIFFICULT ISSUES OR OBSTACLES IN THE ADMINISTRATION OF THE TVA POWER PROGRAM

In the past, TVA has depended largely on appropriations from the Congress supplemented by earnings from the power system for funds to provide capacity to meet the rapidly expanding power requirements of the area. Recently the Congress authorized TVA to sell revenue bonds to the public to help finance facilities required to meet its customers' growing power needs. One of the more challenging problems in administering the TVA program in the future will be that of securing adequate financing through the marketing of power revenue bonds at a cost that will enable TVA to continue to demonstrate the beneficial effect of low rates and abundant use of electricity.

In the past, TVA's power program has been primarily concerned with the development of hydroelectric power of the Tennessee River and its tributaries. Although there are some remaining sites for hydroelectric development, for the foreseeable future the bulk of the area's increasing power requirements will probably be served by thermal powerplants which burn coal from the abundant coal reserves of the Tennessee Valley and adjoining areas. Today, TVA is the Nation's largest user of coal, purchasing almost 19 million tons in the

past fiscal year. This amount is expected to increase with the increasing future demands for electricity. The problems in obtaining an adequate fuel supply at reasonable cost from the area's coal resources offer a major challenge to TVA's power operations.

TVA has been able to maintain substantially the same rates for the sale of power the past 25 years, largely because of the increasing efficiency of its power generating facilities and the increasing volume of its sales. Maintaining low rates in the face of increasing costs of money, labor, and materials in order to carry out the basic purpose of TVA's power program is perhaps the greatest challenge facing TVA in the future. However, with the continuation of adequate bond financing authority, TVA feels that it will be able to meet the many challenges which confront its power program.

VIII. RECOMMENDATIONS FOR IMPROVING THE ROLE OF THE FEDERAL GOVERNMENT IN ASSURING THE ENERGY RESOURCES NECESSARY FOR "MAXIMUM PRODUCTION, EMPLOYMENT, AND PURCHASING POWER"

A. There is a need for a thorough appraisal of national energy reserves, long-term projections of national energy requirements, and the development and implementation of plans to assure that those energy forms where supplies are relatively small are reserved for and limited to their most effective use, considered from the national viewpoint. This need for a thorough appraisal of reserves is illustrated in the case of coal by recent studies of Tennessee coal reserves which indicate that there are only about 1 billion tons of recoverable coal, as compared with previous estimates of about 12 billion tons of recoverable coal. Reserve studies should give greater emphasis to qualitative factors (minability, accessibility, etc.). The information is a prerequisite to enlightened action by public agencies concerned with the proper development and conservation of fuel resources and by the industries dependent upon such resources.

B. It is already apparent that efforts should be made to increase utilization of nonexhaustible energy forms. Therefore the Federal Government should further the development of the Nation's hydropower resources and the construction of steamplants where necessary to supplement the hydro; it should also further the development of high-voltage, high-capacity interconnections to integrate its power generating facilities.

C. The Federal Government should promote the adoption of the lowest possible rates and such power sales policies by both public and private power organizations as will encourage the widespread use of electricity.

D. It should proceed more aggressively with the development of nuclear-fueled power generating plants by conducting a vigorous long-range program to develop reactors capable of producing power at low cost in order to help extend the benefits of economic power to all areas as early as possible.

INTERSTATE COMMERCE COMMISSION

In accordance with our understanding of your request, the information provided herewith is confined to the regulatory responsibility of the Commission in the field of energy resources. This includes principally the Commission's regulation of oil pipelines, the only agency under our jurisdiction concerned solely or even chiefly with a major energy resource. The Interstate Commerce Commission has no authority over the transportation of natural gas by pipeline.

It should be pointed out, however, that the Commission regulates other forms of interstate transportation, notably railroads, motor carriers, and domestic water carriers, which are important carriers of one or more of the major classes of fuel, such as bituminous coal or petroleum products, as well as other commodities. In the case of domestic water carriers, much of the movement of fuels is exempt from Commission regulation under the bulk commodity exemption and the exemption dealing with carriage of liquid cargoes in certified tank vessels.

Several agencies participate in compilation of statistics of domestic transportation of fuels, including this Commission respecting pipelines, railroads and motor carriers; the U.S. Army Corps of Engineeers respecting movements on domestic waterways; and the Bureau of Mines respecting distribution of coal and oil by various types of carriers.

The Commission has had regulatory jurisdiction over common carriers of oil by pipeline since 1906. This authority, however, is more limited than in the case of the Commission's regulation of other forms of transportation. This is illustrated by the fact that, with respect to pipeline carriers, the Commission has no jurisdiction over the following: Issuance of securities or assumption of liabilities; interlocking directorates, mergers, purchases, or consolidations; safety, insurance, and accident report filings; and operating authority necessitating a certificate of public convenience and necessity.

Regulation of oil pipelines by the Commission is concerned primarily with rates, valuation, accounting, and reporting. In regard to rate regulation, the Commission is authorized to determine and prescribe charges and reasonable individual or joint rates when conditions warrant such action. The Interstate Commerce Act, among other things, prohibits pipeline carriers from granting special rates or rebates, granting preferences with respect to interchange of traffic or use of terminal facilities, or entering into any contract or agreement with other common carriers for pooling or division of traffic or of service except upon specific approval of the Commission. The act also provides that carriers are required to file with the Commission and keep open to public inspection schedules of tariffs of all rates and charges for transportation.

The Commission has had very few proceedings involving rates for pipelines. The infrequency of complaints concerning tariff rates in this field may be attributed in large measure to the fact that, normally, the larger oil companies are, in substance and effect, both shippers and beneficial owners of common carrier pipelines. This relationship is well known; and in commenting thereon the Commission has pointed out that Congress has assigned to it the duty of dealing with common carriers, as such, and not as integral parts of an industrial plant engaged in a wide field of operation.

Whatever the relationship between pipeline common carriers and oil companies which beneficially own them, Congress requires all rates tendered to the public by these common carriers to be just and reasonable and no more, and the Commission has clearly indicated recognition of its statutory function and duty in this respect. The Commission has made it clear that the way remains open for independent refineries to challenge any particular situation which they may regard as unlawful.

Pipeline carriers submit annual valuation reports to the Commission which reflect all property changes, including quantities and costs. These reports of property changes are reviewed and a new valuation is then determined by the Commission. The following elements of value are considered in determination of each carrier's valuation for ratemaking purposes: original cost; cost of reproduction; cost of reproduction less depreciation; present value of lands and rights; and working capital.

The Commission utilizes the services of the Oil Pipeline Advisory Committee on Valuation which is comprised of engineers and accountants that work in the oil pipeline industry. This Committee advises the Commission with respect to matters relating to annual prices and price trends, which is useful to the Commission in preparing annual guide prices and period multipliers for use in determining reproduction costs.

With respect to accounting, the Commission prescribes a uniform system of accounts for pipeline carriers and periodically Commission field examiners inspect carrier records and accounts for compliance with Commission regulations.

The carriers are required to file annual reports with the Commission which contain mileage, financial, and traffic statistics, and information concerning ownership of pipelines. Quarterly reports showing revenue and traffic statistics are also filed by pipeline companies having annual operating revenues of more than $500,000.

RURAL ELECTRIFICATION ADMINISTRATION, U.S. DEPARTMENT OF AGRICULTURE

The Rural Electrification Act of 1936, as amended (7 U.S.C. 901–924), is the statutory basis for REA's activities in the energy resource and technology field. The agency makes self-liquidating, interest-bearing loans to eligible borrowers to finance the construction and operation of generating plants, electric transmission and distribution lines to serve persons in rural areas who are not receiving central station service. The Administrator is also empowered to make, or cause to be made studies, investigations, and reports concerning the condition and progress of the electrification of rural areas. The objective of the program is to provide central station electric service to unserved persons in rural areas. To accomplish this objective, REA makes loans as indicated above; REA does not own or operate any electric facilities.

From inception of the program to June 30, 1960, REA has made rural electrification loans to 1,087 borrowers in the total amount of $4,153,325,751 to finance the construction of 1,449,094 miles of distribution and transmission lines and 2,419,530 kilowatts of generation capacity. Dollarwise, 93 percent of these loans were made to 986 locally owned and managed cooperative borrowers. A total of $3,580,884,081 has been advanced to the borrowers. Payments by borrowers on their obligations to the Government consist of $714,290,202 on principal, $422,019,026 in interest, and $160,396,014 in advance of due date. Payments of principal and interest overdue more than 30 days amounted to $94,577 at June 30, 1960.

REA estimates that almost 97 percent of the farms in the United States are electrified as compared with 10.9 percent at inception of the program. Slightly over half of the farms electrified are served by REA borrowers. These rural electric systems reported that they were serving 4,721,576 farm and other rural consumers on December 31, 1959.

The Rural Electrification Act of 1936, as amended, authorizes the Administrator—

(1) To make loans for the purpose of financing the construction and operation of generating plants, electric transmission and distibution lines or systems for the furnishing of electrical energy to persons in rural areas who are not receiving central station service;

(2) To give preference to States, territories, and subdivisions and agencies thereof, municipalities, peoples' utility districts, and cooperative, nonprofit, or limited-dividend associations.

The act requires that—

(1) All loans shall be self-liquidating within a period of not to exceed 35 years, and shall bear interest at the rate of 2 percent per annum;

(2) Loans shall not be made unless the Administrator finds and certifies that in his judgment the security therefor is reasonably adequate and such loan will be repaid within the time agreed;

(3) That no loan for the construction, operation, or enlargement of any generating plant shall be made unless the consent of the State authority having jurisdiction in the premises is first obtained.

In addition to activities directly associated with the lending operations, REA performs certain loan security activities. These activities have as their purpose the efficient development and operation of the rural electric systems, to the end that they will provide dependable, low-cost electric service to rural consumers and at the same time produce sufficient revenues to pay operating expenses and meet debt payments.

Loan contracts provide that borrowers shall make diligent effort to extend electric service to all unserved persons within their service areas who desire such service and who meet all reasonable requirements established as a condition of such service. Consistent with overall feasibility requirements, REA loans generally are made to provide adequate electric service throughout borrowers' service areas. This is the "area coverage" principle practiced by REA since its creation.

REA program policies, procedures, and technical information for the use of borrowers are included in the agency's administrative issuance series, REA bulletins. Pertinent REA policies set forth in the bulletins are summarized below.

BASIC REA POLICY AND PROCEDURE

Basic REA policy concerning its relationship with borrowers is stated as follows:

In carrying out the loan programs and in protecting loan security, REA's activities in its relations with borrowers are limited to the requirements of each particular case and are based on the following considerations:

That each borrower is an entirely independent corporate body, locally owned and controlled, subject to applicable State laws and responsible for the management of its own affairs, including proper and successful construction and operation of its system and the repayment of the REA loan.

That the relationship between REA and an REA borrower is basically that of lender and borrower.

That the underlying objective shall be to move as far and as fast as is feasible toward a situation in which every borrower possesses the internal strength and soundness to guarantee its permanent success as an independent local enterprise.

That REA activities shall be carried on in such a way as to promote the ability of borrowers to handle their own affairs effectively.

That, as borrowers gain in experience and maturity, thus becoming better able to meet their obligations to the Government and to rural people, REA's activities for protection of loan security shall progressively diminish.

In addition to the requirements of the Rural Electrification Act, the principal elements of REA administrative policy on loans are:

(1) Borrowers are requested to assure themselves that they are applying for only the amount of borrowed capital needed in their business.

(2) REA recommends that borrowers provide service on an area coverage basis to the maximum practicable extent.

(3) Generally, the amount of the loan for electric distribution facilities to provide service to additional consumers and for system improvements to meet load growth requirements is limited to the borrowers' 2-year future cash requirements for borrowed capital.

(4) REA makes transmission loans where such facilities result in the most practical and economical means of providing adequate service to new or existing load centers.

(5) REA makes initial loans for generation facilities where no adequate and dependable source of power is available to meet consumers' needs, or where the rates offered by existing power sources would result in a higher cost of power to the consumers than the cost from facilities financed by REA. Supplemental loans for generating facilities are made where the additional facilities constitute the most effective and economical arrangement for meeting the increasing power requirements of the consumers.

(6) REA makes loans to finance the cost of purchasing, rehabilitating, and integrating existing electric facilities where the acquisition of such facilities is an incidental and necessary means of providing electric service to persons in rural areas who are not receiving central station service.

(7) The excess of the total cost of replacements of like units of electric plant over the original cost of the units being replaced may also be included in a loan.

(8) REA also makes loans to borrowers under section 5 of the act, the proceeds of which can be reloaned to individual consumers for the purchase of appliances, or for financing wiring and plumbing installations on the consumer's premises.

(9) Interest on loans is due and payable quarterly as it accrues and principal payments generally begin 3 years from the date of the note.

(10) REA normally requires a first lien on the borrower's total system, and this is generally in the form of a mortgage or deed of trust.

In representing the Government as mortgagee, REA has a special responsibility to assure itself that physical properties financed with REA funds are designed adequately to serve the purposes for which they are to be constructed and to operate efficiently as a utility system. Therefore, REA passes on the acceptability of the specifications, materials, and equipment for REA financing.

Before funds made available by a loan are advanced to a borrower for construction, REA requires that certain documents and other information be submitted for approval. These include:

(1) Evidence of adequate insurance and fidelity coverage to provide liability and property damage insurance and protection from any dishonest acts by employees.

(2) The method of construction.

(3) The selection of an engineer and engineering service contracts.

(4) Plans and specifications for distribution and transmission facilities.

(5) Construction contracts.

In addition, REA requires periodic inspection by competent engineers during construction and final inspection of completed facilities.

To assure continued loan security, borrowers are required to submit periodic reports and information on their operations as follows:

(1) Periodic financial and statistical reports (generally quarterly).

(2) An annual audit by a certified public accountant.

(3) Evidence of continuous insurance and bond coverage annually.

(4) Property proposed to be sold.

(5) Requests for certain uses of general or operating funds.

(6) Agreements for the joint use of a borrower's facilities by another utility system.

(7) Action concerning payment of dividends or other cash distribution.

(8) Electric wholesale, wheeling, and interchange contracts.

RELATIONSHIP OF REA PROGRAM TO PROGRAMS OF OTHER AGENCIES IN THE ENERGY FIELD

Continued availability of an abundant supply of wholesale energy at reasonable cost is a matter of considerable importance to the rural electric systems. Their wholesale energy bills account for one-third of the operating expenses of the REA borrowers. The energy input of the REA borrowers is doubling each 5 or 6 years.

During fiscal year 1959, the total energy input purchased and generated by REA borrowers amounted to over 26.2 billion kilowatt-hours. Of this sum, approximately 22 billion was purchased from power companies and Federal and other public agencies; the remaining approximately 4 billion kilowatt-hours was generated in REA-financed plants. Approximately 10 billion kilowatt-hours were purchased from power companies. Most of the power purchased by REA borrowers from Federal and other public agencies came from TVA, Bonneville Power Administration and the Bureau of Reclamation, and is marketed by the Government under a preference clause in the Federal law, which gives the REA borrowers who are nonprofit organizations preference in the purchase of Federal power. REA borrowers are directly affected by any change in the availability or costs of power from these agencies.

REA-financed generating plants in operation as of June 30, 1960, consisted of 1,644,000 kilowatts, of which 1,276,000 kilowatts was steam, 321,000 kilowatts internal combustion, and 47,000 kilowatts hydro. Approximately 57 percent of the energy generated utilized coal; 35 percent natural gas; 4 percent oil; and 4 percent was hydro generated. In the last 10 years, the trend of REA financing of generating plants has been an increasing percentage in steam turbine plants, in most cases designed to utilize coal and natural gas. Several of the REA-financed plants are in locations where the cost of these two fuels is competitive.

At the present time, REA is cooperating with AEC in the financing of a 22,000 kilowatt electric reactor powerplant on the system of the Rural Cooperative Power Association, Elk River, Minn. The AEC will finance, construct, and own the reactor plant while the Rural Cooperative Power Association will finance (with a loan from REA),

construct and own the conventional portion of the powerplant. The Rural Cooperative Power Association will operate the entire generating plant under contract with AEC for a period of 5 years at the expiration of which time the cooperative will have the option of purchasing the reactor plant.

TERRITORIAL PROBLEMS AFFECTING REA BORROWERS

The term "rural areas" is defined in section 13 of the Rural Electrification Act to mean "any area of the United States not included within the boundaries of any city, village, or borough having a population in excess of 1,500 inhabitants, and such terms shall be deemed to include both the farm and nonfarm population thereof." There are certain circumstances in which REA borrowers' facilities are used to provide service to persons in nonrural areas in a manner consistent with the act.

In a number of cases, loans have been made to borrowers to construct facilities in an area which was at the time of the loan a rural area, as defined in the act. Subsequently, after the borrower constructed facilities and provided service in the area for some time, the population increased so that it exceeded 1,500. It is clear that so far as the act is concerned, such a borrower may continue to provide service and REA may continue to make loans for system improvements or connections to the system, since the character of the area for purposes of the rural area definition is determined as of the time the initial loan for a system is made.

There are also instances in which an REA loan has been made to a borrower for facilities to serve persons in an area which was rural at the time of the loan but which, after the facilities had been in operation, was annexed by a municipality the population of which was in excess of 1,500. In this situation, REA continues to regard the system as one for which REA loan funds may be provided, since the character of the area for purposes of the rural area definition of the act is determined as of the time the initial loan for the system is made.

In some cases, unserved persons in rural areas obtain service as a result of a loan which includes funds for the purchase by the borrower of existing facilities already serving persons in nonrural areas. The inclusion in the loan of funds for such purchase must be justified by the fact that the purchase is an incidental and necessary means of providing service to the unserved persons in rural areas (Comptroller General's Opinion No. B–29463, Dec. 1, 1942).

Increases in population and municipal annexation as described above have given rise to situations in which there are questions of a complex legal nature relative to the right to serve consumers in the affected areas.

State laws vary greatly in their application to this problem. Continued population growth, with the accompanying spread of suburban developments into rural territory, will intensify this problem in future years.

NATIONAL BUREAU OF STANDARDS, U.S. DEPARTMENT OF COMMERCE

Though the National Bureau of Standards has no direct responsibility for the production, distribution, or fostering of energy resources, many of its activities contribute indirectly to the broad field of energy technology. The Bureau's Organic Act of March 3, 1901 (31 Stat. 1449), as amended, places no greater emphasis on energy technology than on other areas of technology stemming from the physical sciences. However, there probably is no area of technology which is more dependent for advancement upon physical measurements than that concerned with the development and utilization of energy.

The National Bureau of Standards has interpreted the functions and authorizations conveyed in its basic legislation as a charge to provide national leadership in the development and use of accurate and uniform techniques of physical measurement. This goal requires a variety of activities which are broadly outlined below with a few examples of their relevance to energy technology.

STANDARDS OF MEASUREMENT

The Bureau provides the central basis for the national system of physical measurements and coordinates that system with the measurement systems of other nations. This includes the development and maintenance of the national standards for physical measurement, fundamental studies to improve or create new standards, research on the interaction of basic measuring processes on the properties of matter and physical and chemical processes, and determination of important physical constants which may serve as reference standards.

Many of these activities have important bearing on energy technology. For example, adequate temperature standards and measurement techniques are essential for the design and operation of most modern power plants. The Bureau presently is accelerating its work in this area to provide the basis for accurate measurement of the rapidly increasing temperatures associated with rocket motors and nuclear powerplants. At the other end of the scale, NBS competence to measure extremely low temperatures is basic to the production and utilization of cryogenic fluids such as liquid hydrogen now widely used as a rocket fuel. Similarly, NBS standards for heat of combustion measurements are essential for many present and proposed power generators, and its basic studies in radiation physics and radiation protection produce measurement standards essential for orderly progress toward the utilization of nuclear energy. There are innumerable ways in which measurement competence is vital to energy development and utilization, ranging from the metering of electricity in vast distribution networks to the determination that lubricants of proper

viscosity are available for the generators. The National Bureau of Standards must provide the central basis for all of these measurements.

MEASUREMENT SERVICES

The Bureau provides essential services to science, industry, and commerce to promote accuracy and uniformity of physical measurements. This includes calibration of measuring instruments in terms of national standards, general research and development on measuring processes and instrumentation, development and dissemination of material samples of certified composition, and cooperation with other organizations in the development of standards of practice. Through these services, the Bureau extends its measurement competence to industry and commerce. Perhaps one example will indicate their significance.

The calibration services of the Bureau based on its primary electrical standards are used by the manufacturers of electricity meters, the electric power producers and distributors, and the utility regulatory commissions of the various States. The Bureau checks the accuracy and uniformity of the instruments which they use as reference standards. Comparisons with these reference standards and others calibrated from them provide links in the chain of measurements whereby most of the 57 million electricity meters in use in the United States are related to the national standards. It should be noted that the Bureau has no regulatory responsibility and that use of its calibration services is on a purely voluntary basis. However, the net result of these services is to keep the metering of electrical energy with an annual value of about $10.5 billion on a uniform basis throughout the country. Similarly, the Bureau provides calibration services for many other types of measuring instruments which are vital in the production, distribution, and utilization of energy from various sources and in the research associated with the development of new sources.

PROPERTIES OF MATERIALS

One statutory function of the Bureau is to provide data on the properties of matter and materials which are important to science, industry, and commerce, and which are not available of sufficient accuracy elsewhere. This demands a systematic program of surveying what data are available or becoming available elsewhere, what data and measurement problems are important, and a coordinated effort including vigorous experimental and theoretical research at the Bureau to fill the gaps.

Through the years, much work has been done at the Bureau on the thermodynamic properties and the chemical and physical behavior of materials important in the production of fuels. Of particular concern at present are materials used in the production of high energy fuels for rockets and jets. The Bureau also has programs concerned with the basic properties of metals, ceramics, semiconductors, plastics, and other materials important in the construction of devices for the production and utilization of power. This includes some studies of materials important in reactor design, and a relatively new program directed toward better basic understanding of the materials which will

be of importance in the production of power from controlled fusion if such becomes possible.

ASSISTANCE TO OTHER AGENCIES OF GOVERNMENT

The Bureau provides consultative and advisory services in its fields of special competence to other agencies of Government. On occasions it also undertakes the development of special devices or provides unusual services for other agencies when NBS has some unique competence for the work. Thus, to meet the emergencies of World War I and for a number of years thereafter, the Bureau had rather extensive programs for studying the performance of aircraft and automotive engines. These studies were discontinued when it became apparent that private industry and other Government laboratories had developed capabilities to handle the work.

The Bureau's work on batteries is another example of such an activity concerned with energy sources. Since batteries are closely related to the electrochemical standard cell, it is understandable that the Bureau was called upon in 1917 to prepare specifications for dry cells which previously had been obtained from foreign sources. From this beginning, there evolved a long history of NBS participation in the development of specifications and test methods, and the testing of various batteries in behalf of Government users. In addition, the Bureau has undertaken research and devolpment on some special purpose batteries to meet unusual needs of military agencies. Recent studies in this same section of the Bureau are concerned with the behavior of electrodes and electrolytes in the molten state which are of great potential importance in proposed high-temperature energy conversion systems.

In the early 1950's the Bureau was called upon by the Atomic Energy Commission to provide a facility for the production of then unheard of quantities of liquid hydrogen needed for thermonuclear weapons developments. The talents and experience of the staff which accomplished that task in record time subsequently have been used to great advantage in developing cryogenic engineering data useful to designers of rocket and missile propulsion systems.

Efforts are made to coordinate the work of the Bureau with the most important needs of science and industry through participation of NBS staff members in the activities of numerous organizations of professional scientists and engineers, through an extensive system of advisory committees, and through participation in the work of numerous interdepartment committees and boards within Government. In general, the Bureau has little difficulty in coordinating its efforts with those of the other agencies of Government.

From the foregoing it appears that our connection with the development and utilization of our national energy sources is an indirect but vitally important one. Around each of the major sources of energy waterpower, fossil fuels, solar energy, and nuclear energy there have developed or are developing appropriate fields of scientific activity related to the discovery of sources, proving of the resources availability, direct utilization, indirect utilization, and studies for new uses and for conversion of one form of energy to another. Each of these scientific fields is founded upon physical measurement and if it is to

productive the possibility of making measurements of adequate precision must exist or be devolped. Also, the measurements must be consistent with those in the other related fields if there is to be satisfactory interchange between the scientific fields involved. Thus it becomes clear that the interaction of NBS activities with the development and utilization of energy sources are so numerous, so varied, and so indirect as to prevent detailed explanation. Yet the whole rests upon a system of measurement which must be present in adequate form if progress is to be what it should be.

NATIONAL SCIENCE FOUNDATION

Under its fundamental legislation, the National Science Foundation supports basic scientific research and programs to strengthen scientific research potential in the various sciences. The research which we sponsor is directed toward increase of knowledge rather than toward the solution of any specified practical problems. The new knowledge thus gained inevitably contributes to the solution of technological problems, however, and in some cases may lay the groundwork for entire new technologies.

Thus, although the Foundation has no specific mission assignment in the field of energy resources, we believe that from our basic research programs may come answers to some of the most perplexing problems facing our technology in this field. The most significant advances in science can never be accurately predicted, and we must push forward on the basis of faith that future scientific results will be as productive of practical applications as have past achievements.

Examples of some of the basic research supported by the Foundation which is indirectly related to energy resources and energy technology include the following:

(1) Incidence, collection, and conversion of solar radiation.
(2) High-temperature gas dynamics.
(3) Research on magnetohydrodynamics and ionized plasmas.
(4) Photosynthesis research.
(5) Combustion and reaction kinetics research.

The National Science Foundation has no regulatory or control function in the energy resources field. Nor is the Foundation involved in the "present complex of relationships between owners, producers, distributors, and the several levels and instrumentalities of government." The results of the research which we sponsor are published and made freely available to all to utilize in any way that may further their particular area of technology.

The most difficult issue that we face today in the field of basic research in all fields is the fact that adequate funds are not available to support all of the good work which our scientists are ready and able to carry out.

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U.S. DEPARTMENT OF JUSTICE

The Department of Justice generally has no direct administrative responsibility for fostering or regulating energy production or development. Accordingly, the specific items of information requested are not applicable to the Department's operations. However, our Antitrust Division has certain enforcement and advisory functions which have some relation to the area involved. A memorandum prepared in that Division discusses these functions.

MEMORANDUM—CERTAIN ANTITRUST ASPECTS RELATING TO ENERGY RESOURCES INDUSTRIES

The antitrust laws, beginning with the Sherman Act, are aimed at maintaining competitive conditions in industry generally, not solely or especially in the energy-supplying industries. Nevertheless, from the beginning, antitrust enforcement action has included suits directed at restraints of trade or monopolization in commerce in petroleum, coal, gas, and electricity.

Basic to present organization of the petroleum industry is the old *Standard Oil* case, *Standard Oil Co. of N.J.* v. *U.S.* 221 U.S. 1 (1911), brought under the Sherman Act, which dissolved the Standard Oil combination into constituent companies. Subsequent important litigation under that act involving commerce in petroleum has included *United States* v. *Socony-Vacuum Oil Co., Inc., et al.*, 310 U.S. 150 (1940) (gasoline price fixing in wholesale markets); *United States* v. *Ethyl Gasoline Corp.*, 309 U.S. 436 (1939) (opening use of tetraethyl lead gasoline additive by independent jobbers and distributors); *United States* v. *Standard Oil Co. of California*, 337 U.S. 293 (1949), and *United States* v. *Richfield Oil Co.*, 343 U.S. 922 (1952) (exclusive dealing contracts for sale of petroleum products). Current petroleum cases include the *West Coast* case, *United States* v. *Standard Oil of California, et al.*, civil No. 11584–C (S.D. Calif., May 12, 1950), charging restraints in petroleum production, transport, and marketing on the west coast; the *Cartel* case, *United States* v. *Standard Oil Co. (N.J.)*, civil No. 86–27 (S.D.N.Y., June 8, 1953), charging the principal U.S. companies engaged in foreign production and marketing with agreements restraining this country's foreign petroleum commerce; and *U.S.* v. *Standard Oil Co. (N.J.) et al.*, civil No. 3722 (W.D. Ky., Dec. 2, 1958), charging antitrust violation in agreement to divide marketing territories.

Since the 1950 amendment of Clayton Act section 7 (Dec. 29, 1950, 64 Stat. 1125; 15 U.S.C. 18), oil company mergers have been the subject of antitrust investigation, although in many cases indication that suit would be filed has resulted in abandonment of proposed mergers. Illustrative is the 1959 agreement between Texaco, Inc., one of the largest integrated oil companies, and the largest nonintegrated oil producer, Superior Oil Co. The January 1960 complaint in the proposed merger of Leonard Oil Co., a Michigan independent, and Standard Oil Co. (Ohio) led to termination of the merger agreement before trial.

Related to antitrust policy but involving other statutes was a 1941 complaint against the major oil company pipelines, *U.S.* v. *Atlantic Refining Company, et al.*, civil No. 14060 (D.D.C., Dec. 23, 1941). It charged that the pipeline owners carrying their own oil and receiving dividends from pipeline operations violated the Elkins Act (49 U.S.C. 41), prohibiting discrimination in tariff rates, by receiving benefit of substantially lower shipping costs than nonowners shipping over the pipeline. The case was settled by consent decree.

Coal producers and marketers also have been subject to antitrust prosecution. In fact, the first petition filed under the Sherman Act involved conspiracy between coal producers and dealers in Kentucky and Tennessee. *United States* v. *Jellico Mountain Coal Co.*, 46 Fed. 432 (N.D. Tenn., 1891). Other cases concerning coal and coke include *U.S.* v. *Coal Dealers Assn. of Calif.*, 85 Fed.

252 (N.D. Calif., 1898); *U.S.* v. *Chesapeake and Ohio Fuel Co.*, 105 Fed. 93 S.D. Ohio, 1900); *United States* v. *Reading Co.*, 253 U.S. 26 (1920); and *United States* v. *Appalachian Coals, Inc.*, 288 U.S. 344 (1933).

Interstate commerce in natural gas led to a Sherman Act and Clayton Act petition against Columbia Gas & Electric Corp., equity No. 1099 (D. Del., Mar. 6, 1935), involving that company's acquisition of Panhandle Eastern Pipeline Co. A consent decree was entered in 1936. Enactment of the Natural Gas Act of 1938 provided for Federal Power Commission regulation of the industry, including normal jurisdiction over acquisitions and mergers. However, the acquisition of Pacific Northwest Pipeline Co. by El Paso Natural Gas Co. led to institution of the pending suit under the Clayton Act, civil No. 143–57 (D. Utah, July 22, 1957). Also pending is *U.S.* v. *American Natural Gas Company, et al.*, criminal No. 58 C.R. 58 (E.D. Wis., Apr. 30, 1958), involving criminal charges of antitrust violation in connection with natural gas service to the upper Midwest.

In the field of electrical energy many cases involving antitrust restraints in commerce of products utilizing electrical energy have been brought. See, for example, *U.S.* v. *General Electric Co.*, 82 F. Supp. 753 (D.C.N.J. 1949), involving a conspiracy to restrain and monopolize interstate and foreign commerce in incandescent electric lamps and other electrical equipment. However, the current continuing Philadelphia grand jury investigation of the electrical industry, which has resulted in a number of antitrust indictments and civil complaints, has involved machinery for production of electrical energy as well as products utilizing it.

Beyond its enforcement functions the Department also has advisory duties. The Attorney General has a general statutory duty to provide requested legal advice to the heads of Government departments and agencies on any pending matter. From time to time such advice may involve fields of governmental operation affecting energy resources. Illustrative of such general advisory duty in this area is consultation with the Navy Department on the legality, adequacy, and other aspects, including possible anticompetitive implications, of contracts for the sale, lease, operation, or development of the various naval petroleum reserves.

Three other advisory functions relating to this inquiry are enjoined by specific statutes. Section 105 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2135(c)), requires consultation between Atomic Energy Commission and the Department of Justice as to antitrust policy in licensing certain commercial atomic energy operations.

The joint resolution of July 22, 1955, approving the interstate compact to conserve oil and gas for a 4-year period, and that enacted August 7, 1959, for an additional 4 years, have required the Attorney General to file annual reports on compact operations affecting competition in the petroleum industry. Four such reports have been filed, and contain this Department's views and recommendations.

Finally, section 708 of the Defense Production Act permits industry use of voluntary agreements and programs to achieve the act's objectives with immunity from antitrust laws where the action is properly approved by the Attorney General or the President. One of such agreements and programs is the voluntary agreement for foreign petroleum supply. Quarterly reports made by the Attorney General of the status of all such agreements, required under the statute since 1955, fully discuss the details of this agreement.

OFFICE OF CIVIL AND DEFENSE MOBILIZATION, EXECUTIVE OFFICE OF THE PRESIDENT

The primary function of the Office of Civil and Defense Mobilization is to coordinate and provide policy guidance for the activities of the agencies of Government engaged in planning and preparedness activities for civil defense and the mobilization of resources in time of emergency. Subject to our policy guidance and coordination the agencies having normal functions related to the various types of resources essential to mobilization readiness carry on detailed planning and develop preparedness measures designed to make possible a prompt application of all of our resources to civil defense and defense mobilization purposes under varying conditions of national emergency. The several forms of energy represent, of course, only one segment of the essential resources of the Nation to which this program is directed and the Department of the Interior is the agency most directly concerned with the requisite planning and preparedness activities in that field. Since it is likely that in compliance with your request the Department of the Interior and other agencies will furnish detailed descriptions of their energy programs, including those subject to our policy guidance, this letter will merely outline the principal statutes under which we operate and describe the nature of our participation under them in the programs conducted by other agencies in the energy field.

The statutes under which this agency has responsibility directly related to the subject of the commitee's inquiry are: Section 103 of the National Security Act of 1947, as amended (50 U.S.C. 404), the Federal Civil Defense Act of 1950, as amended (50 U.S.C. App. 2251–2297), the Defense Production Act of 1950, as amended (50 U.S.C. App. 2061–2166), and the Trade Agreements Extension Act of 1953, as amended (19 U.S.C. 1352a). Each of these statutes deals in some degree with the national defense posture of the Nation generally and none has special applicability to energy resources. The National Security Act and the Federal Civil Defense Act deal with mobilization readiness and do not presently support any programs which affect in any substantial degree the present activities of the several energy industries, although in time of emergency their activities would be affected seriously by implementation of the emergency programs developed under the statutes. Responsibility under these statutes to advise the President on matters affecting the national security does require that this agency be aware of the mobilization readiness position in the various resource areas and to make provision for such studies as are necessary to determine whether additional Government action is necessary or desirable in order to achieve defense objectives. With respect to energy matters such studies are conducted with the assistance and advice of the Department of the Interior and other Federal agencies as appropriate. The Defense Production Act con-

tains authorities which are presently available for programs affecting the energy industries, but since the termination of Korean hostilities have been used only sparingly in those areas.

Section 8 of the Trade Agreements Extension Act of 1958 requires the Director of the Office of Civil and Defense Mobilization to advise the President if he is of the opinion that the level of imports of any article threaten to impair the national security. If the President agrees with that opinion, he is authorized to take action necessary to adjust the level of imports. In the case of petroleum he has taken action under that authority by proclamation which set the level of oil imports and placed administration of the program in the Secretary of the Interior. Our function is to keep the program under constant surveillance with respect to the national security and to recommend such further action as may appear to be necessary in those interests. Studies under this assignment are in progress with respect to such matters as the transportation of foreign oil by U.S.-flag tankers, a proposed exemption of asphaltic content from import controls and the supply-price relationship of residual fuel oil on the east coast.

Since World War II changes in world conditions have resulted in increasing emphasis on the several aspects of civil defense and defense mobilization and changes in the organizations required to conduct them. The National Security Resources Board, organized in 1947 pursuant to statute, was charged with the responsibility for advising the President on all aspects of military, industrial, and civilian mobilization. When the Federal Civil Defense Administration was created by executive order soon thereafter, it, too, devoted its time to preparedness planning in that particular area of national mobilization. The Korean invasion in 1950, however, required active programs for the mobilization of resources and resulted in additional statutory authorities for the conduct of those programs and the creation of several emergency agencies designed to carry them out. In the field of energy resources these programs included priority authority over deliveries of the various forms of energy, the allocation of production and distribution facilities for national defense purposes and making available various forms of financial assistance to encourage the expansion of those facilities. Tax amortization privileges, loans, and loan guarantees were among the expansion incentives available to the various segments of the energy industry upon recommendation by the Department of the Interior.

Soon after cessation of hostilities in Korea the use of controls and financial incentives decreased sharply and at present none of the directive or financial incentive authorities available under the Defense Production Act are being exercised in relation to the energy producing and distributing industries. The Office of Defense Mobilization, which was created by Executive order in the early days of the Korean emergency, became a statutory agency in 1953 with the authorities of the National Security Act and the Defense Production Act, as well as other related statutes. It was by Reorganization Plan No. 1 of 1958 merged with the Federal Civil Defense Administration.

Since termination of controls applicable during the Korean period this office has issued no rules and regulations directed to the energy industries. We have made planning assignments to the Department

of the Interior covering the various industries, have issued statements of policy dealing with the maintenance of the mobilization base and have released the national plan for civil defense and defense mobilization which includes an annex dealing with planned emergency use of energy resources. These, of course, may indirectly affect the energy industries but are not rules and regulations which presently control operations in those industries. We have also issued administrative procedures for the handling of petitions alleging threats to the national security arising from imports, but these are not regulatory. It is believed that the foregoing statements generally cover the first four points included in the list of items transmitted with your letter. Because of the nature of our responsibilities a direct answer to items five through eight would either be uninformative or subject to misinterpretation. Generally speaking, we believe that resource planning in the energy field is well coordinated and that any interagency problems which may arise can be resolved. Ultimate success of the programs in an emergency depends, of course, upon careful and detailed planning at all levels of government, Federal, State, and local, as well as in the various industries, and we believe that much progress has been made in this direction. We believe, too, that adequate preparation for civil defense and defense mobilization in each of the energy resource areas will contribute substantially to the soundness of our defense posture and may also contribute incidentally in some degree to economic stability and growth of the various segments of the energy industries.

DEPARTMENT OF STATE

The role of the State Department in relation to domestic sources of energy is very limited. It has no statutory responsibility in this field. Generally, our interests in domestic sources of energy are based on their relationship to energy resources in foreign countries and their movement in international trade.

Mr. Moore, a member of your subcommittee's staff, indicated in a telephone conversation in which we acknowledged the receipt of your letter, that he would appreciate some general comment regarding the activities of American petroleum companies operating in foreign countries and whether there were specific treaties or diplomatic agreements pertaining to such operations.

Today, there are approximately 200 American companies engaged in exploration for, and the development of, oil overseas. The various types of arrangements which the companies have made to conduct such exploration and development have been negotiated by them directly with the governments concerned. The U.S. Government does not, of course, participate in these arrangements, though it has, in accordance with its usual functions, endeavored to facilitate the operations of these American companies abroad. In most cases the companies have obtained the necessary leases under the appropriate laws of the particular country or, if no pertinent legislation existed, the companies negotiated concessional arrangements with the governments concerned.

The U.S. Government has no treaties or other arrangements with foreign governments specifically in regard to oil. In the case of oil companies operating in countries with which we have negotiated our standard commercial treaties, those treaties do, of course, as a general matter, facilitate the establishment, operation, and protection of these oil companies as well as of other American companies operating in such countries.

STATEMENTS OF STATE BOARDS, COMMISSIONS, AND DEPARTMENTS

(Alphabetically by States)

STATE OF ALABAMA, STATE OIL AND GAS BOARD

Oil and Gas Conservation Activities, 1959

1. LEGISLATION

The Legislature of Alabama, while meeting in regular session for the year 1959, considered a number of bills which directly affected the State oil and gas board. Some of the bills were enacted into law, while others died when the session adjourned sine die on November 12, 1959.

One of the bills sponsored by the oil and gas board was introduced as senate bill No. 67. It provided for an appropriation from the oil and gas fund to the State building commission for the purpose of constructing and equipping a building to house and quarter the records, offices, and facilities of the State oil and gas board. The appropriation was in the sum of $600,000 and the law provided that the building shall be located on property owned by the University of Alabama. The bill was enacted into law without opposition. The architects are now formulating plans and the actual construction of the building should begin during the spring or early summer of 1960.

A second bill, also sponsored by the oil and gas board, received favorable consideration and was ultimately enacted into law. It was introduced as senate bill No. 238 and contained three main provisions:

(1) One-half of the tax levied on the producer of crude petroleum oil or natural gas produced for sale, transport, storage, profit, or for use from any well in the State of Alabama shall be paid into the State treasury and there be kept separate and apart from other State funds in a fund to be known as the oil and gas fund.

(2) The remaining one-half of the tax levied, as specified in (1) above, shall be deposited in the State treasury to the credit of the general fund.

(3) Of the surplus remaining in the State treasury to the credit of the oil and gas fund on September 30, 1959, after payment of all appropriations from said fund as provided for by law, there shall be transferred the sum of $100,000 to the general fund in the State treasury.

Under the above law the oil and gas fund and the State general fund in the future will divide equally the 2 percent which is levied on the producer of crude petroleum or natural gas.

The only other bill which was enacted into law during the 1959 regular session which directly affected the petroleum industry was introduced as senate bill No. 39. This bill established a legislative committee to make an investigation to determine if any persons, firms, or corporations engaged in the gasoline and oil business in Alabama have made an agreement with any other persons, firms, or corporations in restraint of trade or have entered into, directly or indirectly, any

combination, pool, trust, or confederation to regulate or fix the price of any article or commodity to be sold within this State or have become a party to any pool, agreement, combination, or confederation to fix or limit the quantity of any article or commodity to be produced, manufactured, or sold in this State, or have otherwise violated any of the trust or monopoly laws of this State. The committee consists of two senators appointed by the president of the senate and three representatives appointed by the speaker of the house. The total expenses allowed the committee for counsel, investigators, clerical and stenographic personnel shall not exceed $7,500. The committee is to make a report of its findings to the legislature on or before the 15th day of its next regular session and shall recommend such legislation as may be found necessary.

2. ADMINISTRATION

The State Oil and Gas Board of Alabama is comprised of three members. By virtue of the law which created the board, the members are appointed by the Governor. The State geologist is ex officio the supervisor of the board and acts in the capacity of its secretary. In September 1959 one of the members resigned and was recently replaced by appointment. He is Hon. Hugh L. Briton, whose address is 3006 Summerville Road, Phenix City, Ala. The other two members of the board and their addresses are:

Hon. Lindsey C. Boney, chairman, Gilbertown, Ala.
Hon. Rankin Fite, Hamilton, Ala.

The supervisor of the State oil and gas board is Hon. Walter B. Jones, State geologist, University, Ala.

3. STATE OIL AND GAS BUILDING

With respect to senate bill No. 67, which has been explained above, it may be interesting to note the progress which is being made in fulfillment of this legislation.

The State highway department, in cooperation with the State building commission, is in the process of making corings at the building site for the purpose of testing the soil for the foundation. The architectural plans call for a building that is four stories tall and will consist of 36,000 square feet. It will be of brick and limestone construction and will house the administrative offices of the oil and gas board as well as the geological library. The building will contain completely equipped petroleum and geological laboratories with ample space on the ground floor for the storage of cores and cuttings; an adequate assembly room will be provided for meetings of the board. Actual construction should begin about May 1 of this year and the building should be ready for occupancy within 8 to 12 months. The building will be located on the campus of the University of Alabama.

4. GENERAL INFORMATION

As of December 31, 1959, there were 344 producing oil wells in Alabama, of which 70 wells were brought in during 1959.

Of the wells drilled during 1959 75.3 percent were producers.

There were 23 dry holes drilled in Alabama during 1959, which represents 24.7 percent of the number of wells drilled.

The total footage drilled in Alabama during the year 1959 was 947,308 feet; and the average depth per well was 9,972 feet.

The average daily production per well in Alabama during 1959 was 55 barrels.

Five percent of production during 1959 was from strippers.

The total proved recoverable reserves in Alabama is 183,781,000 barrels. The new reserves proved during 1959 was 130,754,000 barrels.

The oil production in Alabama for 1959 was 5,524,000 barrels.

No new oil or gas fields were discovered in Alabama during 1959.

The oil and gas board scheduled 12 meetings during the year.

STATE OF ALABAMA, OIL AND GAS LAWS ENACTED BY THE LEGISLATURE THROUGH THE 1957 SESSION

CONTENTS

Declaration of legislative policy.—In recognition of past, present, and imminent evils occurring in the production and use of oil and gas, as a result of waste in the production and use thereof and as a result of waste in the absence of co-equal or correlative rights of owners of crude oil or natural gas in a common source of supply to produce and use the same, this law is enacted for protection against such evils by prohibiting waste and compelling ratable porduction (1945, p. 1, Sec. 1, appvd. May 22, 1945).

Definitions.—Unless the context otherwise requires, the words defined in this section shall have the following meaning when found in this article: A. "Board" shall mean the state oil and gas board created by this Article B. "Persons" shall mean any natural person, firm, corporation, association, partnership, joint venture, receiver, trustee, guardian, executor, administrator, fiduciary, representative of any kind, or any other group acting as a unit, and the plural as well as the singular number. C. "Oil" shall mean crude petroleum oil and other hydrocarbons, regardless of gravity, which are produced at the well in liquid form by ordinary production methods and which are not the result of condensation of gas after it leaves the well. D. "Gas" shall mean all natural gas, including casinghead gas, and all other hydrocarbons not defined as oil in subsection C above. E. "Pool" shall mean an underground reservoir containing a common accumulation of crude petroleum oil or natural gas, or both. Each zone of a general structure which is completely separated from any other zone in the structure is covered by the term "pool" as used herein. F. "Field" shall mean the general area which is underlaid or appears to be underlaid by at least one pool; and "field" shall include the the underground reservoir or reservoirs containing crude petroleum oil or natural gas, or both. The words "field" and "pool" mean the same thing when only one underground reservoir is involved; however "field", unlike "pool" may relate to two or more pools. G. "Owner" shall mean the person who has the right to drill into and to produce from any pool, and to appropriate the production either for himself or for himself and another, or others. H. "Producer" shall mean the owner of a well or wells capable of producing oil or gas, or both; provided, however, the word "producer" as used in section 179(49) (tax to defray expenses of administration and enforcement) hereof shall also include any person receiving money or other valuable consideration as royalty or rental for oil or gas produced or because of oil or gas produced, whether produced by him or by some other person on his behalf, either by lease, contract, or otherwise, and whether the royalty consists of a portion of the oil or gas produced being run to his account or a payment in money or other valuable consideration. I. "Waste," in addition to its ordinary meaning, shall mean "physical waste" as that term is generally understood in the oil and gas industry. It shall include: (1) The inefficient, excessive, or improper use or dissipation of reservoir energy; and the locating, spacing, drilling, equipping, operating, or producing of any oil or gas well or wells in a manner which results, or tends to result, in reducing the quantity of oil or gas ultimately to be recovered from any pool in this state. (2) The inefficient storing of oil; and the locating, spacing, drilling, equipping, operating, or producing of any oil or gas well or wells in a manner causing, or tending to cause, unnecessary or excessive surface loss or destruction of oil or gas. (3) Abuse of the correlative rights and opportunities of each owner of oil and gas in a common reservoir due to non-uniform, disproportionate, and unratable withdrawals causing undue drainage between tracts of land. (4) Producing oil or gas in such manner as to cause unnecessary water channeling or coning. (5) The operation of any oil well or wells with an inefficient gas-oil ratio. (6) The drowning with water of any stratum or part thereof capable of producing oil or gas. (7) Underground waste however caused and whether or not defined. (8) The creation of unnecessary fire hazards. (9) The escape into the open air, from a well producing both oil and gas, of gas in excess of the amount which is necessary in the efficient drilling or operation of the well. (10) The use of gas, except sour gas, for the manufacture of carbon black. (11) Permitting gas produced from a gas well to escape into the air. (12) Production of oil and gas in excess of reasonable market demand. J. "Product" means any commodity made from oil or gas and shall include refined crude oil, crude tops, topped crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, treated crude oil, residuum, gas oil, casinghead gasoline, natural gas gasoline, naphtha, distillate, gasoline, kerosene, benzine, wash oil, waste oil, blended gasoline, lubricating oil, blends or mixtures of oil with one or more liquid products or by-products derived from oil or gas,

and blends or mixtures of two or more liquid products or by-products derived from oil or gas, whether hereinabove enumerated or not. K. "Illegal oil" shall mean oil which has been produced within the state of Alabama from any well, or wells, in excess of the amount allowed by any rule, regulation, or order of the board, as distinguished from oil produced within the state of Alabama not in excess of the amount so allowed, which is "legal oil." L. "Illegal gas" shall mean gas which has been produced within the state of Alabama from any well, or wells, in excess of the amount allowed by any rule, regulation, or order of the board, as distinguished from gas produced within the state of Alabama not in excess of the amount so allowed, which is "legal gas." M. "Illegal product" shall mean any product of oil or gas, any part of which was processed or derived, in whole or in part, from illegal oil or illegal gas or from any product thereof, as distinguished from "legal product," which is a product processed or derived to no extent from illegal oil or illegal gas. N. "Tender" shall mean a permit or certificate of clearance, approved and issued or registered under the authority of the board, for the transportation of oil, gas, or products. O. "Drainage unit" shall mean the area in a pool which may be drained efficiently and economically by one well. P. "Developed area" or "developed unit" means a drainage unit having a well completed thereon which is capable of producing oil or gas in paying quantities; however, in the event it be shown, and the board finds that a part of any unit is nonproductive, then the developed part of the unit shall include only that part found to be productive. O. "Reasonable market demand," as to oil, means the amount of oil reasonably needed for current consumption and use, together with a reasonable amount of oil for storage and working stock; and, as to gas, the term means the amount of gas of any type reasonably needed to supply the current consumption and use of such type of gas (1945, p. 1, Sec. 2, appvd. May 22, 1945).

Oil and gas board created; members and terms of office; meetings; compensation and expenses.—There is hereby created and established a board, to be known as the state oil and gas board, to be composed of three members to be appointed by the governor immediately after this article takes effect for terms of the following duration: One member for a term of two years; one member for a term of four years; and one member for a term of six years. At the expiration of the term for which each of these original appointments is made, each successor member shall be appointed for a term of six years; and, in the event of a vacancy, the governor shall by appointment fill such unexpired term. Each member shall be eligible for reappointment at the discretion of the governor. Each member of the board shall be a resident of the state of Alabama and shall be a qualified voter therein. Each member shall qualify by taking an oath of office and shall hold office until his successor is appointed and qualified. The board shall elect from its number a chairman. The board shall meet or hold hearings at such times and places as may be found by the board to be necessary to carry out its duties. Each member shall receive as compensation for his services the sum of $10.00 for each day he attends a meeting or hearing, but not exceeding $1,200.00 per annum; and, in addition thereto, each member shall be entitled to his reasonable expenses for each meeting or hearing attended. Compensation and reimbursement for necessary expenses as above set forth shall be paid from the oil and gas fund (1945, p. 3, Sec. 3, appvd. May 22, 1945).

State oil and gas supervisor.—The state geologist shall be, ex officio, the state oil and gas supervisor, and shall perform all of the duties of, and is hereby vested with all the powers imposed upon and vested in the state oil and gas supervisor under and by the terms and provisions of this article. The state oil and gas supervisor shall be charged with the duty of enforcing this article and all rules, regulations, and orders promulgated by the board. The state oil and gas supervisor shall be, ex officio, secretary of the board and shall keep all minutes and records of the board. He shall, as secretary, give bond in such sum as the board may direct with corporate surety to be approved by the board, conditioned that he will well and truly account for any funds coming into his hands. The state geologist shall receive nine hundred dollars ($900) per annum, payable out of the oil and gas fund, for the performance of his duties under this article (1945, p. 4, Sec. 4, appvd. May 22, 1945; 1949, p. 1033, appvd. Sept. 19, 1949).

NOTE.—The 1949 Amendment added the last sentence.

Employment of personnel subject to merit system.—The oil and gas supervisor, with the concurrence of the board, shall have the authority, and it shall be his duty, to employ all personnel necessary to carry out the provisions of this article. Such personnel shall be employed under, and shall be subject to, the provisions of the Merit System Act (1945, p. 4, Sec. 5, appvd. May 22, 1945).

Quorum.—Two members of the board shall constitute a quorum, but two affirmative votes shall be necessary for the adoption or promulgation of any rule, regulation, or order of the board (1945, p. 4, Sec. 6, appvd. May 22, 1945).

Attorney general; solicitors; administration of oaths.—The attorney general shall be attorney for the board; provided, that in cases of emergency, the board may call upon the solicitor of the circuit where the action is to be brought or defended to represent the board until such time as the attorney general may take charge of the litigation. Any member of the board, or the secretary thereof, shall have power to administer oaths to any witness in any hearing, investigation, or proceeding contemplated by this article, or by any other law of this state relating to the conservation of oil and gas (1945, p. 4, Sec. 7, appvd. May 22, 1945).

Waste prohibited.—Waste of oil or gas as defined in this article is hereby prohibited (1945, p. 4, Sec. 8, appvd. May 22, 1945).

Powers and duties of board.—A. The board shall have jurisdiction and authority over all persons and property necessary to administer and enforce effectively the provisions of this article and all other articles relating to the conservation of oil and gas. B. The board shall have the authority and it shall be its duty to make such inquiries as it may think proper to determine whether or not waste, over which it has jurisdiction, exists or is imminent. In the exercise of such power the board shall have the authority to collect data; to make investigation and inspection; to examine properties, leases, papers, books, and records, including drilling records and logs; to examine, check, test and gauge oil and gas wells, tanks, refineries, and modes of transportation; to hold hearings; to require the keeping of records and making of reports; and to take such action as may be reasonably necessary to enforce this article. C. The board shall have the authority to make, after hearing and notice as hereinafter provided, such reasonable rules, regulations, and orders as may be necessary from time to time in the proper administration and enforcement of this article, including rules, regulations, and orders for the following purposes: (1) To require the drilling, casing, and plugging of wells to be done in such a manner as to prevent the escape of oil or gas out of one stratum to another; to prevent the intrusion of water into an oil or gas stratum from a separate stratum; and to prevent the pollution of fresh water supplies by oil, gas, or salt water. (2) To require the making of reports showing the location of oil and gas wells and to require the filing of logs, including electrical logs, and drilling records, and the lodgment in the office of the state oil and gas supervisor of typical drill cuttings or cores, if cores are taken, within six months from the time of the completion of any well. (3) To require reasonable bond, with good and sufficient surety, conditioned for the performance of the duties outlined in subsections (1) and (2) above, including the duty to plug each dry or abandoned well. (4) To prevent wells from being drilled, operated, or produced in such a manner as to cause injury to neighboring leases or property. (5) To prevent the drowning by water of any stratum or part thereof capable of producing oil or gas in paying quantities and to prevent the premature and irregular encroachment of water which reduces, or tends to reduce, the total ultimate recovery of oil and gas from any pool. (6) To require the operation of wells with efficient gas-oil ratios and to fix such ratios. (7) To prevent "blow outs," "caving," and "seepage" in the sense that conditions indicated by such terms are generally understood in the oil and gas business. (8) To prevent fires. (9) To identify the ownership of all oil and gas wells, producing leases, refineries, tanks, plants, structures, and storage and transportation equipment and facilities. (10) To regulate the "shooting," perforating, and chemical treatment of wells. (11) To regulate secondary recovery methods, including the introduction of gas, air, water, or other substance into producing formations. (12) To regulate the spacing of wells and to establish drilling units. (13) To limit and prorate the production of oil or gas, or both, from any pool or field for the prevention of waste as herein defined. (14) To require, either generally or in or from particular areas, certificates of clearance or tenders in connection with the transportation of oil, gas or any product. (15) To prevent, so far as is practical, reasonably avoidable drainage from each developed unit which is not equalized by counterdrainage. (16) To require the placing of meters of a type approved by the board wherever the board may designate on all pipe

lines, gathering systems, barge terminals, loading racks, refineries, or other places deemed necessary or proper to prevent waste and the transportation of illegally produced oil or gas. Such meters at all times shall be under the supervision and control of the board; and it shall be a violation of this article, subject to the penalties provided herein, for any person to refuse to attach or install such meter when ordered to do so by the board, or in any way to tamper with such meter so as to produce a false or inaccurate reading, or to have any by-pass at such a place where the oil or gas can be passed around such meter, unless expressly authorized by written permit of the board (1945, p. 4, Sec. 9, appvd. May 22, 1945).

Board to prescribe rules and regulations; public hearings.—A. The board shall prescribe its rules of order or procedure in hearings or other proceedings before it under this article. B. No rule, regulation, or order, including any change, renewal, or extension thereof, shall, in the absence of an emergency, be made by the board under the provisions of this article except after a public hearing upon at least ten days' notice, given in the manner and form as may be prescribed by the board. Such public hearing shall be held at such time and place, and in such manner as may be prescribed by the board, and any person having any interest in the subject matter of the hearing shall be entitled to be heard. C. In the event an emergency is found to exist by the board which in its judgment requires the making, changing, renewal, or extension of a rule, regulation, or order without first having a hearing, such emergency rule, regulation, or order shall have the same validity as if a hearing with respect to the same had been held after due notice. The emergency rule, regulation, or order permitted by this subsection shall remain in force no longer than fifteen days from its effective date, and, in any event, it shall expire when the rule, regulation, or order made after due notice and hearing with respect to the subject matter of such emergency rule, regulation, or order becomes effective. D. Should the board elect to give notice by personal service, such service may be made by any officer authorized to serve process or by any agent of the board in the same manner as is provided by law for the service of summons in civil actions in the circuit courts of this State. Proof of the service by such agent shall be by the affidavit of the person making personal service. E. All rules, regulations, and orders made by the board shall be in writing and shall be entered in full by the secretary of the board in a book to be kept for such purpose by the board, which shall be a public record and open to inspection at all times during reasonable office hours. A copy of any rule, regulation, or order, certified by the secretary of the board, shall be received in evidence in all courts of this State with the same effect as the original. F. Any interested person shall have the right to have the board call a hearing for the purpose of taking action in respect to any matter within the jurisdiction of the board by making a request therefor in writing. Upon the receipt of any such request, the board promptly shall call a hearing thereon, and, after such hearing, and with all convenient speed, and in any event within thirty (30) days after the conclusion of such hearing, shall take such action with regard to the subject matter thereof as it may deem appropriate (1945, p. 6, Sec. 10, appvd. May 22, 1945).

Requiring attendance of witness and production of records.—A. The board or any member thereof, is hereby empowered to issue subpoenas for witnesses, to require their attendance and the giving of testimony before it, and to require the production of such books, papers, and records in any proceeding before the board as may be material upon questions lawfully before the board. Such subpoenas shall be served by the sheriff or any other officer authorized by law to serve process in this State. No person shall be excused from attending and testifying, or from producing book, papers, and records before the board or a court, or from obedience to the subpoena of the board or a court on the ground or for the reason that the testimony or evidence, documentary or otherwise, required of him may tend to incriminate him or subject him to a penalty or forfeiture; provided, that nothing herein contained shall be construed as requiring any person to produce any books, papers, or records, or to testify in response to any inquiry, not pertinent to some question lawfully before such board or court for determination. No natural person shall be subjected to criminal prosecution or to any penalty or forfeiture for or on account of any transaction, matter, or thing concerning which he may be required to testify or produce evidence, documentary or otherwise, before the board or court, or in obedience to its subpoena; provided, that no person testifying shall be exempt from prosecution and punishment for perjury committed in so testifying. B. In case of fail-

ure or refusal on the part of any person to comply with any subpoena issued by the board, or any member thereof, or in case of the refusal of any witness to testify or answer to any matter regarding which he may be lawfully interrogated, any circuit court in this State, on application of the board, may, in term time or vacation, issue an attachment for such person and compel him to comply with such subpoena and to attend before the board and produce such documents, and give his testimony upon such matters, as may be lawfully required; and such court shall have the power to punish for contempt as in case of disobedience of like subpoenas issued by or from such court, or for a refusal to testify therein (1945, p. 7, Sec. 11, appvd. May 22, 1945).

Protecting pool owners, drilling units in pools; location of wells; shares in pools.—(A) Whether or not the total production from a pool be limited or prorated, no rule, regulation, or order of the board shall be such in terms or effect (1) that it shall be necessary at any time for the producer from, or the owner of, a tract of land in the pool, in order that he may obtain such tract's just and equitable share of the production of such pool, as such share is set forth in this section, to drill and operate any well or wells on such tract in addition to such well or wells as can without waste produce such share, or (2) as to occasion net drainage from a tract unless there be drilled and operated upon such tract a well or wells in addition to such well or wells thereon as can without waste produce such tract's just and equitable share, as set forth in this section, of the production of such pool.

(B) For the prevention of waste, to protect and enforce the correlative rights of the owners and producers in a pool, and to avoid the augmenting and accumulation of risks arising from the drilling of an excessive number of wells, the board shall, after a hearing, establish a drilling unit or units for each pool. A drilling unit, as contemplated herein, means the maximum area which may be efficiently and economically drained by one well, and such unit shall constitute a developed unit as long as a well is located thereon which is capable of producing oil or gas in paying quantities. It is provided, however, that the board shall have no authority to fix a drilling unit in excess of forty (40) acres for any pool producing oil on the effective date of this amendment, nor shall the board have authority to fix a drilling unit for any pool capable of producing oil in excess of one hundred sixty (160) acres. The phrase "pool producing oil on the effective date of this amendment" as used in this subsection shall not include acreage lying more than five (5) miles from a well producing oil in commercial quantities on said effective date and the limitation on the board's authority imposed by the preceding sentence with reference to any pool producing oil on the effective date of this amendment shall not apply to acreage lying more than five (5) miles from any well producing oil in commercial quantities in the same pool on said effective date. Notwithstanding the provisions of this section, all persons entitled to share in the oil produced from a tract or tracts of land may voluntarily agree to the creation or establishment of a drilling unit, or may authorize one or more of the persons entitled to share in such production to create or establish a drilling unit, containing as much or more acreage than drilling units established by the board for the same pool, but not in excess of 160 acres; a drilling unit so created or established shall, subject to the approval of the board be valid and binding for all purposes even though such drilling unit contains more acreage than the board has included, or is authorized by this section to include, in a drilling unit established by it for the same pool.

And provided further, that no drilling unit in excess of forty acres shall be established by the board or by agreement for a well less than nine thousand nine hundred and ninety feet in depth.

(C) Each well permitted to be drilled upon any drilling unit to a pool in a field with respect to which the board has promulgated special rules shall be drilled at a location on the unit authorized by such special rules, and each well permitted to be drilled upon any drilling unit where the location thereof is not prescribed by special rules shall be drilled at a location on the unit authorized by rules of state-wide application promulgated by the board, with such exceptions as may be reasonably necessary, where it is shown, after notice and hearing, and the board finds, that the unit is partly outside the pool, or, for some other reason, that a well located in accordance with applicable rules would be nonproductive, or where topographical conditions are such as to make the drilling at an authorized location on the unit unduly burdensome, or where an exception is necessary to prevent the confiscation of property. Whenever an exception is granted, the board shall take such action as will offset any advantage which the person securing the exception may have over other producers by rea-

son of the drilling of the well as an exception, and so that drainage from developed units to the tract with respect to which the exception is granted will be prevented or minimized and the producer of the well drilled as an exception will be allowed to produce no more than his just and equitable share of the oil and gas in the pool, as such share is set forth in this section.

(D) Subject to the reasonable requirements for prevention of waste and to the reasonable adjustment because of structural position, a producer's just and equitable share of the oil and gas in the pool (also sometimes referred to as a tract's just and equitable share) is that part of the authorized production for the pool (whether it be the total which could be produced without any restriction on the amount of production, or whether it be an amount less than that which the pool could produce if no restriction on amount were imposed) which is substantially in the proportion that the quantity of recoverable oil and gas in the developed area of his tract or tracts in the pool bears to the recoverable oil and gas in the total developed area of the pool, insofar as these amounts can be practically ascertained; and to that end, the rules, regulations, permits, and orders of the board shall be such as will prevent or minimize reasonably avoidable net drainage from each developed unit (that is, drainage which is not equalized by counterdrainage), and will give to each producer the opportunity to use his just and equitable share of the reservoir energy. In determining each producer's just and equitable share of the authorized production for the pool, the board is authorized to give due consideration to the productivity of the well or wells located thereon, as determined by flow tests, bottom hole pressure tests, or any other practical method of testing wells and producing structures, and to consider such other factors and geological or engineering tests and data as may be determined by the supervisor to be pertinent or relevant to ascertaining each producer's just and equitable share of the production and reservoir energy of the field or pool (1945, p. 8, Sec. 12, appvd. May 22, 1945; 1956, 2nd Ex. Sess., No. 83, appvd. April 12, 1956).

NOTE.—The 1956 amendment rewrote subsections (B) and (C).

Development of lands as drilling unit by agreement or order of board.—A. When two or more separately owned tracts of land are embraced within an established drilling unit, the owners thereof may validly agree to integrate their interests and to develop their lands as a drilling unit. Where, however, such owners have not agreed to integrate their interests, the board shall, for the prevention of waste or to avoid the drilling of unnecessary wells, require such owners to do so and to develop their lands as a drilling unit. B. The board, in order to prevent waste and avoid the drilling of unnecessary wells, may permit or require the cycling of gas in any pool or portion thereof and is also authorized to permit or require the introduction of gas or other substance into an oil or gas reservoir for the purpose of repressuring such reservoir, maintaining pressure, or carrying on secondary recovery operations. The board may require pooling or integration of tracts when reasonably necessary in connection with cycling operations. C. All orders requiring integration, pooling, cycling, repressuring, pressure maintenance, or secondary recovery operations shall be made after notice and hearing and shall be upon terms and conditions that are just and reasonable and which will afford to the owner of each tract the opportunity to recover or receive his just and equitable share of the oil and gas in the pool without unnecessary expense and will prevent or minimize reasonably avoidable drainage from each unit which is not equalized by counter-drainage. The portion of the production allocated to the owner of each tract included in an integrated or pooled unit formed by an integration or pooling order shall, when produced, be considered as if it had been produced from such tract by a well drilled thereon. In the event such integration or pooling is required, the operator designated by the board to develop and operate the integrated or pooled unit shall have the right to charge against the interest of each other owner in the production from the wells drilled by such designated operator the actual expenditures required for such purpose, not in excess of what are reasonable, including a reasonable charge for supervision; and the operator shall have the right to receive the first production from such wells drilled by him thereon which otherwise would be delivered or paid to the other parties jointly interested in the drilling of the well so that the amount due by each of them for his share of the expense of drilling, equipping, and operating the well may be paid to the operator of the well out of production, with the value of production calculated at the market price in the field at the time such production is received by the operator or placed to his credit. In the event of any dispute relative to such costs, the board shall deter-

mine the proper cost. D. Should the owners of separate tracts embraced with a drilling unit fail to agree upon the integration of the tracts and the drilling of a well on the unit, and should it be established that the board is without authority to require integration as provided for in this section, then, subject to all other applicable provisions of this article, the owner of each tract embraced within the drilling unit may drill on his tract; but the allowable production from such tract shall be such proportion of the allowable production for the full drilling unit as the area of such separately owned tract bears to the full drilling unit. E. Agreements made in the interest of conservation of oil or gas, or both, or for the prevention of waste, between and among owners or operators, or both, owning separate holdings in the same oil or gas pool, or in any area that appears from geological or other data to be underlaid by a common accumulation of oil or gas, or both and agreements between and among such owners or operators, or both, and royalty owners therein, of the pool or area, or any part thereof, as a unit for establishing and carrying out a plan for the cooperative development and operation thereof, when such agreements are approved by the board, are hereby authorized and shall not be held or construed to violate any of the statutes of this state relating to trusts, monopolies, or contracts and combinations in restraint of trade (1945, p. 9, Sec. 13, appvd. May 22, 1945).

Limitations on production; allocation of allowable production.—A. Whenever the board limits the total amount of oil or gas which may be produced in this state, the limit so fixed shall not be less than the aggregate of the allowables fixed for each separate pool in this state for the prevention of waste in accordance with the foregoing definition of waste, plus the production from unrestricted pools, and it shall allocate or distribute the allowable so fixed among the separate pools. Such allocation or distribution among the pools of the state shall be made on a reasonable basis, giving to each pool with small wells of settled production an allowable production which will not accelerate or encourage a general premature abandonment of the wells in the pool. B. Whenever the board limits the total amount of oil or gas which may be produced in any pool in this state to an amount less than that amount which the pool could produce if no restriction were imposed (which limitation may be imposed either incidentally to or without a limitation of the total amount of oil or gas which may be produced in the state), the board shall prorate or distribute the allowable production among the producers in the pool on a reasonable basis so as to prevent or minimize reasonably avoidable drainage from each developed unit which is not eqalized by counter-drainage, and so that each producer will have the opportunity to produce or receive his just and equitable share, as above set forth, subject to the reasonable requirements for the prevention of waste. C. After the effective date of any rule, regulation, or order of the board fixing the allowable production of oil or gas, or both, for any pool, no person shall produce from any well, lease, or property more than the allowable production which is applicable; nor shall such amount be produced in a different manner than that which may be authorized (1945, p. 11, Sec. 14, appvd. May 22, 1945).

Suits against board; scope of review.—Any interested person aggrieved by any rule, regulation or order made or promulgated by the board hereunder, and who may be dissatisfied therewith, shall within ninety days from the date said order, rule or regulation was promulgated, have the right, regardless of the amount involved, to file a suit in the circuit court in equity of the county in which all or part of the aggrieved person's property affected by any such rule, regulation or order is situated, to test the validity of said rule, regulation or order promulgated by the board. Such suit shall be advanced for trial and be determined as expeditiously as feasible, and no postponement or continuance thereof shall be granted except for reasons deemed imperative by the court. In such trials the validity of any rule, regulation or order made or promulgated hereunder shall be deemed prima facie valid, and the court shall be limited in its consideration to a review of the record of the proceedings before the board, and no new or additional evidence shall be received.

The reviewing court shall limit its consideration to the following:

A. Whether the rule, regulation or order is constitutional.

B. Whether the rule, regulation or order was without or in excess of jurisdiction.

C. Whether the rule, regulation or order was procured by fraud.

D. Whether the rule, regulation or order is reasonable.

E. Whether the rule, regulation or order is unsupported by the evidence.

(1945, p. 11, Sec. 15, appvd. May 22, 1945; 1957, No. 575, appvd. Sept. 18, 1957.)

NOTE.—The 1957 amendment rewrote this section.

Injunctions against board.—A. No temporary restraining order or injunction of any kind shall be granted against the board or the members thereof, or against the attorney general, or any circuit solicitor, or against any agent, employee, or representative of the board, restraining the board, or any of its members, or any of its agents, employees, or representatives, or the attorney general, or any circuit solicitor, from enforcing any of the provisions of this article, or any rule, regulation, or order made hereunder, except after due notice to the members of the board, and to all other defendants, and after a hearing at which it shall be clearly shown to the court that the act done or threatened is without sanction of law and, if enforced against the complaining party, will cause an irreparable injury. The order or decree of the court granting temporary injunctive relief shall state the nature and extent of the probable invalidity of any provision of this article, or of any rule, regulation, or order made hereunder, involved in such suit, and shall also contain a clear statement of the probable damage relied upon by the court as justifying the temporary relief. B. No temporary injunction of any kind, including a temporary restraining order, against the board or the members thereof, or its agents, employees, or representatives, or the attorney general, or any circuit solicitor shall become effective until the plaintiff shall execute a bond to the state with sufficient surety in an amount to be fixed by the court, reasonably sufficient to indemnify all persons who may suffer damage by reason of the violation pendente lite by the complaining party, of the provisions of this article, or of any rule, regulation, or order complained of. Such bond shall be approved by the judge of the court in which the suit is pending, and the court may, from time to time, on motion and with notice to the parties, increase or decrease the amount of the bond and may require new or additional sureties as the facts may warrant. Such bond shall be for the use and benefit of all persons who may suffer damage by reason of the violation pendente lite of this article, or provision, rule, regulation or order complained of in such suit, and any person so suffering damage may bring suit on such bond before the expiration of six months after any provision of this article, or any rule, regulation, or order complained of shall be finally held to be valid, in whole or in part, or such suit against the board or the members thereof, shall be finally disposed of (1945, p. 12, Sec. 16, appvd. May 22, 1945).

Injunctions obtained by board.—Whenever it shall appear that any person is violating or threatening to violate any provision of this article, or any rule, regulation, or order made hereunder, and unless the board, without litigation, can effectively prevent further violation or threat of violation, then the board, through the attorney general, who may call to his assistance the circuit solicitor of the circuit in which suit is instituted, shall bring in the name of the state of Alabama against such person in the circuit court in the county of the residence of the defendant, or, if there be more than one defendant, in the circuit court of the county of the residence of any of them, or in the circuit court of the county in which such violation is alleged to have occurred, to restrain such person from continuing such violation or from carrying out the threat of violation. In such suit the board, in the name of the state of Alabama, may obtain such injunctions, prohibitory and mandatory, including temporary restraining orders and temporary injunctions, as the facts may warrant, including, when appropriate, an injunction restraining any person from moving or disposing of illegal oil, illegal gas, or illegal product, and any or all such commodities may be ordered to be impounded or placed under the control of an agent appointed by the court if, in the judgment of the court, such action is advisable (1945, p. 12, Sec. 17, appvd. May 22, 1945).

Appeals.—In any suit where the board, in the name of the state, seeks enforcement of this article, or of any rule, regulation, or order issued thereunder, as provided in this article, or in any suit where an interested party seeks to test the validity of, or enjoin the enforcement of this article, or any rule, regulation, or order issued hereunder, as provided in this article, either party shall have the right of an immediate appeal to the supreme court from any judgment or order therein granting or refusing an injunction, whether temporary restraining order, temporary injunction, permanent injunction, or other character of injunctive relief, or from any order granting or overruling a motion to dissolve such injunction. The manner of presenting any appeal as herein provided shall be governed by the provisions of the laws of the state of Alabama regulating appeals in injunction proceedings (1945, p. 13, Sec. 18, appvd. May 22, 1945).

Actions by persons damaged by violation of article or regulation or order.—Nothing in this article contained or authorized, and no suit by or against the board, and no penalties imposed or claimed against any person for violating any provision of this article, or any rule, regulation, or order issued hereunder, and no forfeiture shall impair or abridge or delay any cause of action for damage which any person may have or assert against any person violating any provision of this article, or any rule, regulation, or order issued hereunder. Any person so damaged by the violation may sue for and recover such damages as he may show that he is entitled to receive. In the event the board should fail to bring suit to enjoin any actual or threatened violation of any provision of this article, or of any rule, regulation, or order made hereunder, then any person or party in interest adversely affected by such violation, or threat hereof, and who has requested the board to sue in the name of the state, may, to prevent any or further violation, bring suit for that purpose in any court in which the board could have brought suit. If, in such suit, the court holds that injunctive relief should be granted, then the state shall be made a party and shall be substituted by order of the court for the person who brought the suit and the injunction shall be issued as if the state had at all times been the complaining party (1945, p. 13, Sec. 19, appvd. May 22, 1945).

Penalty for false swearing, etc.—Any person of whom an oath or affirmation shall be required under the provisions of this article, or by any rule, regulation, or order of the board, who shall wilfully swear or affirm falsely in regard to any matter or thing respecting which such oath or affirmation is required; or any person who, for the purpose of evading any rule, regulation, or order made thereunder, shall intentionally make or cause to be made any false entry or statement of fact in any report required to be made by this article or by any rule, regulation, or order made hereunder; or who, for such purpose, shall make or cause to be made any false entry in any account, record, or memorandum kept by any person in connection with the provisions of this article, or any rule, regulation, or order made thereunder, or who, for such purpose shall omit to make or cause to be omitted, full, true, and correct entries on such accounts, records, or memoranda, of all facts and transactions pertaining to the interest or activities in the oil and gas industry of such person as may be required by the board under authority given in this article, or by any rule, regulation, or order made hereunder, or who, for such purpose, shall remove out of the jurisdiction of the state, or mutilate, alter, or by any other means falsify any book, record, or other paper, pertaining to the transactions regulated by this article, or by any rule, regulation, or order made hereunder, shall be deemed guilty of a misdemeanor and shall be subject, upon conviction in any court of competent jurisdiction, to a fine of not more than five hundred dollars ($500.00), or imprisonment in the county jail for a term of not more than six (6) months, or to both such fine and imprisonment (1945, p. 14, Sec. 20, appvd. May 22, 1945).

Penalty for violation of article or regulation or order.—Any person who knowingly and wilfully violates any provision of this article, or any rule, regulation, or order of the board made hereunder, shall, in the event a penalty for such violation is not otherwise provided for herein, be subject to a penalty of not to exceed one thousand dollars ($1,000.00) a day for each and every day of such violation and for each and every act of violation, such penalty to be recovered in a suit in the circuit court of the county where the defendant resides, or in the county of the residence of any defendant if there be more than one defendant, or in the circuit court of the county where the violation took place. The place of suit shall be selected by the board, and such suit, by direction of the board, shall be instituted and conducted in the name of the board by the attorney for the board, or by the attorney general, or under his direction by the prosecuting attorney of the county where the suit is instituted. The payment of any penalty as provided for herein shall not have the effect of changing illegal oil into legal oil, illegal gas into legal gas, or illegal product into legal product; nor shall such payment have the effect of authorizing the sale, purchase, or acquisition, or the transportation, refining, processing, or handling in any other way of such illegal oil, illegal gas, or illegal product, but to the contrary, penalty shall be imposed for each prohibited transaction relating to such illegal oil, illegal gas, or illegal product. Any person knowingly and wilfully aiding or abetting any other person in the violation of any statute of this state relating to the conservation of oil or gas, or the violation of any provision of this article, or any rule, regulation, or order made therunder, shall be subject to the same penalties as are prescribed herein for the violation by

such other person. The payment of any penalty shall not impair or abridge any cause of action which any person may have against the person violating a rule, regulation, or order by reason of an injury resulting form such violation (1945, p. 14, Sec. 21, appvd. May 22, 1945).

Sale, purchase or handling of illegal oil, gas or product.—A. The sale, purchase, or acquisition, or the transportation, refining, processing, or handling in any other way of illegal oil, illegal gas, or illegal product is hereby prohibited. B. Unless and until the board provides for certificates of clearance or tenders, or some other method, so that any person may have an opportunity to determine whether any contemplated transaction of sale, purchase, or acquisition, or of transportation, refining, processing, or handling in any other way, involves illegal oil, illegal gas, or illegal product, no penalty shall be imposed for the sale, purchase, or acquisition, or the transportation, refining, processing, or handling in any other way, of illegal oil, illegal gas, or illegal product, except under circumstances hereinafter stated. Penalties shall be imposed by the board for each transaction prohibited in this section when the person committing the same knows that illegal oil, illegal gas, or illegal product is involved in such transaction or when such person could have known or determined such fact by the exercise of reasonable diligence or from facts within his knowledge. However, regardless of lack of actual notice or knowledge, penalties as provided in this article shall apply to any sale, purchase, or acquisition, and to the transportation, refining, processing, or handling in any other way, of illegal oil, illegal gas, or illegal product, where administrative provision is made for identifying the character of the commodity as to its legality. It shall likewise be a violation for which penalties shall be imposed for any person to sell, purchase, or acquire, or to transport, refine, process, or handle in any other way any oil, gas, or any product without complying with any rule, regulation, or order of the board relating thereto (1945, p. 15, Sec. 22, appvd. May 22, 1945).

Seizure and sale of illegal gas, oil or product.—Apart from, and in addition to, any other remedy or procedure which may be available to the board, or any penalty which may be sought against or imposed upon any person with respect to violations relating to illegal oil, illegal gas, or illegal product, all illegal oil, illegal gas, and illegal products shall, except under such circumstances as are stated herein, be contraband, forfeited to the state of Alabama, and shall be seized and sold, and the proceeds applied as herein provided. When any such seizure shall have been made, it shall be the duty of the attorney general of the state to institute at once condemnation proceedings in the circuit court of the county in which such property is seized by petition in equity in the name of the state against the property seized, describing the same, or against the person or persons in possession of such illegal property, if known, to obtain a decree enforcing the forfeiture. No replevin or detinue writ shall be employed to retake possession of such seized property pending the forfeiture of the suit, but any party claiming a superior right may intervene by petitioning said suit and having his claim adjudicated. The judge presiding in said circuit court may superintend and make all proper orders as to the method and manner of notice to be given to any party claiming any right in the property so seized to come in and assert their right thereto. The said court shall have authority to frame all orders of procedure so as to regulate the proceedings whereby persons may have an opportunity to come in and propound their claim to the seized property sought to be condemned. The proceeds of the sale of any such property forfeited to the state shall, after paying all expenses of seizing, holding, and selling such property, including the costs of court, be paid into the oil and gas fund. The property sold shall be treated as legal oil, legal gas, or legal product, as the case may be, in the hands of the purchaser, but the purchaser and the commodity shall be subject to all applicable laws, rules, regulations, and orders with respect to further sale or purchase or acquisition, and with respect to the transportation, refining, processing, or handling in any other way, of the commodity purchaser. Nothing in this section shall deny or abridge any cause of action which a royalty owner, or a lien holder, of any other claimant may have, because of the forfeiture of the illegal oil, illegal gas, or illegal product, against the persons whose act resulted in such forfeiture (1945, p. 16, Sec. 23, appvd. May 22, 1945).

Wells to be kept under control.—In order to protect further the natural gas fields and oil fields in this State, it is hereby declared to be unlawful for any owner to allow a well to go wild or to get out of control. The owner of any such well shall, after twenty-four (24) hours' written notice by the board given to him or to the person in possession of such well, make reasonable effort to control

such well. In the event of the failure of the owner of such well within twenty-four (24) hours after service of the notice above provided for, to control the same, if such can be done within the period, or to begin in good faith upon service of such notice, operations to control such well, or upon failure to prosecute diligently such operations, then the board shall have the right to take charge of the work of controlling such well, and it shall have the right to proceed, through its own agents or by contract with a responsible contractor, to control the well or otherwise to prevent the escape or loss of gas or oil from such well, all at the reasonable expense of the owner of the well. In order to secure to the board in the payment the reasonable cost and expense of controlling or plugging such well, the board shall retain the possession of the same and shall be entitled to receive and retain the rents, revenues, and incomes therefrom until the costs and expenses incurred by the board shall be repaid. When all such costs and expenses have been repaid, the board shall restore possession of such well to the owner; provided, that in the event the income received by the board shall not be sufficient to reimburse the board as provided for in this section, the board shall have a lien or privilege upon all of the property of the owner of such well, except such as is exempt by law, and the board shall proceed to enforce such lien or privilege by suit brought in any court of competent jurisdiction, the same as any other like civil action, and the judgment so obtained shall be executed in the same manner now provided by law for execution of judgments. Any excess over the amount due the board which the property seized and sold may bring, after payment of court costs, shall be paid over to the owner of such well (1945, p. 16, Sec. 24, appvd. May 22, 1945).

Notice and payment of fee required before drilling well.—Any person desiring or proposing to drill any well in search of oil or gas, before commencing the drilling of any such well, shall notify the state oil and gas supervisor upon such form as the state oil and gas supervisor may prescribe and shall pay to the state treasurer a fee of twenty-five dollars ($25.00) for each such well. The drilling of any well is hereby prohibited until such notice is given and such fee has been paid as herein provided. The state oil and gas supervisor shall have the power and authority to prescribe that the said form indicates the exact location of such well, the name and address of the owner, operator, contractor, driller, and any other person responsible for the conduct of drilling operations, the proposed depth of the well, the elevation of the well above sea level, and such other relevant information as the state oil and gas supervisor may deem necessary or convenient to effectuate the purposes of this article. All funds paid to the state treasurer pursuant to the provisions of this section shall be disbursed by the state treasurer upon warrants drawn by the state oil and gas supervisor for the purpose of defraying expenses incurred by the state oil and gas supervisor in the performance of his duties under this article (1945, p. 17, Sec. 25, appvd. May 22, 1945).

Tax to defray expenses of administration and enforcement.—For the purpose of defraying the expenses connected with the administration and enforcement of this article, including the expense of the inspections, tests, analyses, and all other expenses connected with the supervision and protection of crude petroleum oil and natural gas in the state of Alabama, there is hereby levied on the producer a tax equal in amount to two per cent (2%) of the gross value, at the point of production, of the crude petroleum oil or natural gas produced for sale, transport, storage, profit, or for use from any well or wells in the state of Alabama. The tax shall be paid to the department of revenue directly by the purchaser when authorized in writing by the producer, and when so paid, the producer or person in charge of production shall be relieved of any further liability (1945, p. 18, Sec. 26, appvd. May 22, 1945; 1953, p. 558, appvd. Aug. 31, 1953).

Note.—The 1953 amendment substituted the present last sentence for a former sentence requiring the tax to be paid by the person in charge of the production operations.

Records and returns required of producers; remittance of taxes.—It shall be the duty of every person producing, or in charge of production of, crude petroleum or natural gas from any well or wells in the state of Alabama for sale, transport, storage, profit, or for use to keep and preserve such records, of the amount of all such crude petroleum oil or natural gas produced for sale, transport, storage, profit, or for use, as may be necessary to determine the amount of the change for which he is liable under the provisions of this article. It shall be the further duty of every such person to file with the depart-

ment of revenue, not later than the fifteenth day of each month, a return, verified by oath, showing the amount of crude petroleum oil or natural gas produced for sale, transport, storage, profit, or for use during the preceding month, to compute on the return the amount of tax charged against him in accordance with the provisions of this article, and to transmit to the department of revenue with such return a remittance covering the tax chargeable against him. The return shall contain such other information and shall be in such form as the department of revenue shall designate. The department of revenue is authorized to determine the gross value at the point of production in accordance with customary practice (1945, p. 18, Sec. 27, appvd. May 22, 1945).

Recovery of charges improperly collected.—In the event that any collection of charges is improperly made in an effort to enforce the provisions of this article, either as a result of a mistake of law or fact, the amount so paid may be recovered in the same manner as is provided by law for the recovery of other taxes erroneously paid directly to the department of revenue (1945, p. 18, Sec. 28, appvd. May 22, 1945).

Penalty for failure to pay charges.—Any person who fails to pay the charges herein levied within the time required by this article shall pay, in addition to such charge, a penalty of ten per cent (10%) of the amount of the charge due, together with interest thereon at the rate of one-half of one per cent (½ of 1%) per month, or fraction thereof, from the date at which the charge herein levied became due and payable, such penalty and interest to be assessed and collected as a part of the charge itself (1945, p. 19, Sec. 29, appvd. May 22, 1945).

Failure to make returns; notice; penalty.—Any person who fails to make the returns herein required shall be given written notice by the department of revenue, by registered mail, to make such returns forthwith; and, if such person fails or refuses to make such return or returns within thirty days from the date of such notice, then the department of revenue shall make the return for such person upon such information as it may reasonably obtain, shall assess the charges due thereon, and shall add a penalty, for failure to make such return and payment, of twenty-five per cent (25%) of the charge due as assessed by the department of revenue and interest at the rate of one-half of one per cent (½ of 1%) per month, or fraction thereof, from the date such charges were due. The department of revenue, however, if a good and sufficient reason is shown for such delinquency, may waive or remit the twenty-five per cent (25%) penalty, or a portion thereof (1945, p. 19, Sec. 30, appvd. May 22, 1945).

Lien for charges, interest and penalties.—The charge herein imposed, together with all interest and penalties imposed by this article, shall be a lien upon the property of any person subject to the provisions of this article, and the provisions of the revenue laws of the state of Alabama applying to liens for license taxes shall apply fully to the charges herein imposed. Such charges, together with interest and penalties, shall constitute a debt due the state of Alabama and may be collected by civil suit, in addition to the methods herein provided (1945, p. 19, Sec. 31, appvd, May 22, 1945).

Oil and gas fund.—All moneys collected under the provisions of this article shall be paid into the state treasury and there kept separate from other state funds in a fund to be known as the "oil and gas fund." Such "oil and gas fund" shall be expended by the oil and gas supervisor, with the approval of the governor, only for effectuating the purposes of this article. (1945, p. 19, Sec. 32, appvd. May 22, 1945).

The balance remaining in the "oil and gas fund" at the end of the fiscal year does not revert to the general fund of the state. Rep. Atty. Gen., Apr.-June, 1944, p. 98.

UNIT OPERATIONS

Meeting of board to consider need for unit operation.—The state oil and gas board of Alabama upon its own motion, may or upon the application of any interested person shall, hold a hearing to consider the need for the operation as a unit of an entire field, or of any pool or pools, or of any portion or portions or combinations thereof, within a field, for the production of oil or gas, or both, in order to increase ultimate recovery thereof by secondary recovery methods, to prevent waste or to avoid the drilling of unnecessary wells (1957, No. 352, Sec. 1, appvd. Aug. 23, 1957).

When board to issue order requiring unit operation.—The board shall issue an order requiring such unit operation, if it finds that:

(a) Unit operation of the field, or of any pool or pools, or of any portion or portions or combinations thereof, within the field, is reasonably necessary to prevent waste, to increase the recovery of oil or gas, and to protect the correlative rights of interested parties; and

(b) The estimated additional cost incident to conduction of such operation will not exceed the value of the estimated additional recovery of oil or gas (1957, No. 352, Sec. 2, appvd. Aug. 23, 1957).

Contents of order.—The order shall be fair and reasonable under all the circumstances, shall protect the rights of interested parties and shall include:

(a) A description of the area embraced, termed the unit area; and a description of the pool or pools, or portions thereof, affected and lying within the unit area, termed the unit pool.

(b) A statement of the nature of the operations contemplated.

(c) An allocation among the separately owned tracts in the unit area of all the oil or gas, or both, produced from the unit pool within the unit area, and not required in the conduct of such operation or unavoidably lost, such allocation to be based on the relative contribution which each such tract is expected to make, during the course of such operation, to the total production of oil or gas, or both, so allocated.

(d) A provision for adjustment among the owners of the unit area (not including royalty owners) of their respective investment in wells, tanks, pumps, machinery, materials, equipment, and other things and services of value attributable to the unit operations. The amount to be charged unit operations for any such item shall be determined by the owners of the unit area (not including royalty owners); provided, however, if said owners of the unit area are unable to agree upon the amount of such charges, or to agree upon the correctness thereof, the board shall determine them after due notice and hearing thereon, upon the application of any interested party. The net amount charged against the owner of a separately owned tract shall be considered expense of unit operation chargeable against such tract. The adjustments provided for herein may be treated separately and handled by agreements separate from the unitization agreement.

(e) A provision that the costs and expenses of unit operation, including investment, past and prospective, be charged to the separately owned tracts in the same proportions that such tracts share in unit production, as provided above in paragraph (c) of this section. The expenses chargeable to a tract shall be paid by the person or persons not entitled to share in production free of operating costs, and who, in the absence of unit operation, would be responsible for the expense of developing and operating such tract, and such person or persons' interest in the separately owned tract shall be primarily responsible therefor.

(f) The designation of, or a provision for the selection of, a unit operator. The conduct of all unit operations by the unit operator, and the selection of a successor to the unit operator designated by the board, shall be governed by the terms and provisions of the unitization agreement.

(g) A provision that when the full amount of any charge made against a separately owned tract is not paid when due by the person or persons primarily responsible therefor, as provided in paragraph (e) of this section, then seven-eighths (⅞ths) of oil and gas production allocated to such separately owned tract may be appropriated by the unit operator and marketed and sold for the payment of such charge, together with interest at the rate of five per cent (5%) per annum thereon. A one-eighth (⅛th) part of the unit production allocated to each separately owned tract shall in all events be regarded as royalty to be distributed to and among or the proceeds thereof paid to the royalty owners, free and clear of all unit expense and free and clear of any lien therefor. The owner of any overriding royalty, oil and gas payment, royalty in excess of one-eighth (⅛th) of production, or other interest, who is not primarily responsible therefor shall, to the extent of such payment or deduction from his share, be subrogated to all the rights of the unit operator with respect to the interest or interests primarily responsible for such payment. Any surplus received by the operator from any such sale of production shall be credited to the person or persons from whom it was deducted in the proportion of their respective interest.

(h) The time the unit operation shall become effective, and the manner in which, and the circumstances under which, the unit operation shall terminate (1957, No. 352, Sec. 3, appvd. Aug. 23, 1957).

When order to become effective or be automatically revoked.—An order requiring unit operation shall not become effective unless and until agreements incorporating the provisions of section 179(72) (contents of order) hereof have been signed or in writing ratified or approved by the owners of at least seventy-five percentum (75%) in interest as costs are shared under the terms of the order and by seventy-five percentum (75%) in interest of the royalty owners in the unit area and the board has made a finding to that effect either in the order or in a supplemental order. In the event the required percentage interests have not signed, ratified or approved the order or said agreements within six (6) months from and after the date of such order it shall be automatically revoked (1957, No. 352, Sec. 4, appvd. Aug. 23, 1957).

New or amending orders.—(a) The board, by entry of new or amending orders, may from time to time add to unit operations portions of pools not theretofore included, and may add to unit operations new pools or portions thereof, and may extend the unit area as required. Any such order, in providing for allocation of production from the unit pool of the unit area, shall first allocate to each pool or portion thereof so added a portion of the total production of oil or gas, or both, from all pools affected within the unit area, as enlarged, (and not required in the conduct of unit operations or unavoidably lost), such allocation to be based on the relative contribution which such added pool or portion thereof is expected to make, during the remaining course of unit operations, to the total production of oil or gas, or both, so allocated. The production so allocated to each added pool or portion thereof shall be allocated to the separately owned tracts which participate in such production on the basis of the relative contribution of each such tract, as provided in paragraph (c) of section 179(72) (contents of order) herein. The remaining portion of unit production shall be allocated among the separately owned tracts within the previously established unit area in the same proportions as those specified in the previous order. Orders promulgated under this paragraph shall become operative at seven o'clock (7:00) A.M. on the first day of the month next following the day on which the order becomes effective under the provisions of paragraph (b) of this section.

(b) An order promulgated by the board under paragraph (a) of this section shall not become effective unless and until (1) all of the terms and provisions of the unitization agreement relating to the extension or enlargement of the unit area or to the addition of pools or portions thereof to unit operations have been fulfilled and satisfied and evidence thereof has been submitted to the board, and (2) the extension or addition effected by such order has been agreed to in writing by the owners of at least seventy-five percentum (75%) in interest as costs are shared of the area or pools or portions thereof to be added to the unit operation by such order and by seventy-five percentum (75%) in interest of the royalty owners in the area or pools or portions thereof to be added to the unit operations by such order, and evidence thereof has been submitted to the board. In the event both of the above requirements are not fulfilled within six (6) months from and after the date of such order it shall be automatically revoked.

(c) After the operative date of an order promulgated under this section, costs and expenses of operation of the unit, as enlarged, shall be governed by paragraph (e) of section 179(72) (contents of order) herein. Adjustment among the owners of the unit area, as enlarged (not including royalty owners) of their respective investments, in wells, tanks, pumps, machinery, materials, equipment, and other things and services of value attributable to the operation of the unit, as enlarged, shall be governed by paragraph (d) of section 179(72) (contents of order) herein (1957, No. 352, Sec. 5, appvd. Aug. 23, 1957).

Alteration of contribution of separately owned tract.—When the contribution of a separately owned tract with respect to any unit pool has been established pursuant to paragraph (c) of section 179(72) (contents of order) of this article, such contribution shall not be subsequently altered, unless the board shall find, after notice and hearing, that such contribution was erroneous because shown to be erroneous by subsequently discovered data, or by subsequently discovered errors in the data upon which the original contribution was established. No change or correction of the contribution of any separately owned tract shall be given retroactive effect provided that appropriate adjustment shall be made for the investment charges as provided for in paragraph (d) of section 179(72) (contents of order) herein (1957, No. 352, Sec. 6, appvd. Aug. 23. 1957).

Production and operations deemed to be those of separately owned tracts.—The portion of unit production allocated to a separately owned tract within the unit area shall be deemed, for all purposes, to have been actually produced from such tract, and operations with respect to any unit pool within the unit area shall be deemed, for all purposes, to be the conduct of operations for the production of oil or gas, or both, from each separately owned tract in the unit area (1957, No. 352, Sec. 7, appvd. Aug. 23, 1957).

Article applies only to field or pool units.—This article shall apply only to field or pool units, and shall not apply to the unitization of interests within a drilling unit as may be authorized and governed under the provisions of Act No. 1, General Acts of Alabama, 1945 [sections 179(24) (declaration of legislative policy)—179(55), (Oil and Gas Fund) of this article] (1957, No. 352, Sec. 8, appvd. Aug. 23, 1957).

"Secondary recovery methods" defined.—The phrase "secondary recovery methods" as used herein shall include, but shall not be limited to, the maintenance or partial maintenance of reservoir pressures by any method recognized by the industry and approved by the board, recycling, flooding a pool or pools, or parts thereof, with air, gas, water, liquid hydrocarbons or any other substance, or any combination or combination thereof, or any other secondary method of producing hydrocarbons recognized by the industry and approved by the board (1957, No. 352, Sec. 9, appvd. Aug. 23, 1957).

EXEMPTION OF NONPRODUCING OIL AND GAS LEASES, ETC.; DOCUMENTARY TAX THEREON

Definitions.—Whenever in this chapter the term "oil, gas and other minerals" is used the same shall only mean oil, gas, petroleum, hydrocarbons, distillate, condensate, casinghead gas, other petroleum derivatives, and all other similar minerals of commercial value which are usually produced by the drilling, boring or sinking of wells.

The term "mineral acre" and "royalty acre" are each defined as the number of acres obtained by multiplying the aggregate acreage described in the instrument involved by the fractional interest leased or conveyed hereby.

The term "primary term" when used herein in connection with any instrument affected by this chapter shall mean the period of time that the estate created by such instrument shall endure under the terms thereof in the absence of production of oil, gas or other minerals in paying quantities, the carrying on of drilling or reworking operations for the production of such oil, gas, or other minerals, force majeure or laws, rules or regulations (federal or state) preventing such drilling operations (1957, No. 261, Sec. 1, effective Oct. 12, 1957).

Mineral documentary tax levied.—There is hereby levied and shall be paid and collected as herein set forth a documentary or transfer tax (to be known as the mineral documentary tax) upon the filing and recording of every lease and other writing hereafter executed whereby there is created a leasehold interest in and to any nonproducing oil, gas or other minerals in, on or under or that may be produced from any lands situated within the state of Alabama, or whereby any such interest is assigned or is extended beyond the primary term fixed by the original instrument, and upon every deed, instrument, transfer, evidence of sale of other writing whereby there is hereafter conveyed to a grantee or purchaser, or excepted or reserved to a grantor separately and apart from the surface any interest in or right to receive royalty from any nonproducing oil, gas or other minerals, in, on, or under, or that may be produced from any lands within the state of Alabama, provided the tax shall not apply to any mortgage or instrument creating a lien upon such interest, nor to the sale under the foreclosure thereof (1957, No. 261, Sec. 2, effective Oct. 12, 1957).

Tax to be a lien; amount of tax.—Such tax shall be a lien upon the interest leased, assigned, conveyed, reserved, excepted or transferred and the amount to be paid shall be determined as follows (provided that the minimum tax shall be one dollar), to wit:

(a) Upon the filing and recording of each instrument creating, assigning, or transferring a leasehold (or interest therein or any portion thereof) or conveying, transferring, excepting or reserving a mineral or royalty interest as above described, the primary term of which shall expire ten years or less from the date of execution of the instrument, the tax shall be a sum equal to five cents per mineral or royalty acre conveyed, leased, assigned, excepted, reserved or transferred therein.

(b) Such tax shall be ten cents per mineral or royalty acre if the primary term of such interest shall expire more than ten years and not exceeding twenty years from the date of the execution of such instrument.

(c) Such tax shall be fifteen cents per mineral or royalty acre if the primary term of such interest may or shall extend more than twenty years from the date of the execution of such instrument (1957, No. 261, Sec. 3, effective Oct. 12, 1957).

When and by whom tax payable; effect of nonpayment.—Such tax shall be payable by the grantee or grantees named or the beneficiary or real party in interest under such lease, deed, conveyance, transfer, assignment or other writing except that as to any exception or reservation creating any such interest the same shall be payable by the grantor or grantors in such instrument. Said tax shall be due and payable upon the filing of such instrument for record, by the purchase and affixing of documentary tax stamps as hereinbefore provided. Any probate judge who accepts or records such an instrument upon which the tax is not paid to him in the amount required herein shall be liable to the county for the amount of tax shown to have been due upon the instrument. The amount shall likewise constitute a lien upon the interest so conveyed, reserved, or accepted by such instrument, collectible as are other delinquent taxes due the county. If an insufficient amount is paid by such tax, the filing and recording of the instrument shall nevertheless be good and valid for all purposes as now provided by statute and shall be valid exemption from ad valorem taxes.

If stamps are temporarily unavailable to the probate judge, he shall nevertheless collect the said tax, shall duly record the instrument and make the hereinafter required notation of tax payment on the record, and shall obtain such stamps as soon as available and affix them to such instrument (1957, No. 261, Sec. 4, effective Oct. 12, 1957).

Tax payable by purchase of stamps, to be canceled and affixed by probate judge.—Such tax shall be paid by the purchase of documentary tax stamps from the probate judge of the county in which the land affected by the sale, lease or reservation or other instrument of such oil, gas or other minerals is situated, and the said judge shall cancel such stamps by stamping or writing the name of the county on the face thereof and affix same to the instrument when filed for recording and shall show upon the face or margin of the record thereof the amount of the said stamps so affixed by him (1957, No. 261, Sec. 5, effective Oct. 12, 1957).

Tax to be in lieu of ad valorem taxes; exemption of nonproducing leasehold and other interests from ad valorem taxes.—The mineral documentary tax levied above shall be in lieu of all ad valorem taxes and all nonproducing leasehold interests upon all oil, gas and other minerals in, on or under lands lying within the state of Alabama, created or assigned after the effective date of this chapter, and also all nonproducing interests in such oil, gas and other minerals (including royalty interests therein) hereafter conveyed to a grantee or purchaser or excepted or reserved to a grantor separately and apart from the surface shall be exempt from all ad valorem taxes levied on or after October 1, 1957, by the state of Alabama, or any county, municipality, school district, or other taxing district, within the state or becoming a lien on or after said date. Any sale for taxes of the surface or of the remainder of the fee shall not in any manner whatsoever affect the interest or interests hereby exempted.

For the same purpose and with like effect there is hereby likewise exempted from such ad valorem taxation all such interests created prior to the effective date of this chapter which are owned separately and apart from the surface, provided that as a condition precedent to obtaining such exemption upon existing interests the then owner or owners thereof shall make application for exemption of the interest then owned by him or them as hereinafter provided and pay, by the purchase of documentary tax stamps, a sum equivalent to the tax herein levied by section 16(11) (mineral documentary tax levied), et seq., on instruments hereafter executed creating, transferring, or reserving corresponding or similar interests. As to any existing interests, if any such sum is paid after October 1, 1957, then such exemption shall apply only to taxes becoming a lien after such sum is thus paid. The number of years remaining before the expiration of the primary term of such previously created mineral interest shall be considered as the primary term of such interest for the purpose of determining the amount of such tax (1957, No. 261, Sec. 6, effective Oct. 12, 1957).

How exemption obtained upon existing interests.—Application for such exemption upon existing interests shall be made to the probate judge of the county wherein the land lies in which such interest is owned, by filing application in

duplicate with the said judge, which shall contain the following information: 1. Name of applicant; 2. Address of applicant; 3. Complete description of land affected (including aggregate acreage); 4. Fractional interest for which exemption is applied and nature of such interest; 5. Recording data concerning the instrument creating the interest including grantor or lessor, grantee or lessee, date of instrument, book and page of record and date of filing; 6. Length of primary term; 7. Recording data on instruments divesting original party of any interest including subsequent assignments thereof in a portion of original interest therein conveyed; 8. Number of mineral, royalty or lease acres on which exemption sought; 9. Amount tendered therewith.

Upon receipt of such application, accompanied by the sum shown therein, the probate judge shall give it a serial number, mark it filed, showing the date received and shall affix and cancel the required amount of mineral documentary tax stamps to the original application. The judge shall make a notation on the face of the record of the instrument described in the application showing the date of payment, amount of stamps purchased and affixed to the application and the serial number of the application. After such notation is made, the original application, with cancelled stamps affixed, shall be returned to the applicant by mailing to the address shown on the application (or delivered otherwise to the applicant) the duplicate application shall be retained by the judge as his permanent record.

If it later be ascertained that an insufficient amount was paid with the application for the exemption provided herein, such exemption shall not be thereby rendered void, but the additional amount which should have been paid, together with a penalty of twenty-five per cent and one per cent interest per month thereon from the date of the application until paid, shall be a lien on the interest exempted and a personal debt of the applicant collectible by suit for appropriate personal judgment and to enforce the lien, which may be maintained by the county to which sum should have been paid (1957, No. 261, Sec. 7, effective Oct. 12, 1957).

Fees of probate judge; disposition of remainder of tax.—From the taxes levied and collected under this chapter, there shall be paid into the county general fund, or to the judge of probate if he be on a fee basis, five per cent as a cost of collection thereof. The remainder shall be distributed as follows: thirty-five per cent to the county general fund, thirty-five per cent to the county public school fund and thirty per cent to the state general fund. Such payment shall be made on or before the fifteenth day of the month next succeeding that in which collection may be made (1957, No. 261, Sec. 8, effective Oct. 12, 1957).

Preparation and distribution of stamps.—The commissioner of revenue of the state of Alabama shall cause to be prepared and distributed to the various probate judges in said state, for use as prescribed herein, suitable stamps denoted as documentary stamps which shall be furnished to the probate judges at actual cost, such cost to be borne by the several counties, and a record kept of all stamps furnished. Said judges shall be accountable for all such stamps received by them or the face amount of such stamps disposed of as provided herein or otherwise not in their possession (1957, No. 261, Sec. 9, effective Oct. 12, 1957).

PRIVILEGE TAX ON OIL OR GAS PRODUCTION

Definitions.—(a) The word "department" means the state department of revenue. (b) The word "annual" means the calendar year, or the taxpayer's fiscal year, when permission is obtained from the department to use a fiscal year as a tax period in lieu of a calendar year. (c) The word "value" means the sale price or market value at the mouth of the well. If the oil or gas is exchanged for something other than cash, or if there is no sale at the time of severance, or if the relation between the buyer and the seller is such that the consideration paid, if any, is not indicative of the true value or market price, then the department shall determine the value of the oil or gas subject to the tax hereinafter provided for, considering the sale price for cash of oil or gas of like quality. (d) The word "oil" means crude petroleum oil and other hydrocarbons regardless of gravity, which are produced at the well in liquid form by ordinary production methods and which are not the result of condensation of gas after it leaves the well. (e) The word "gas" means all natural gas, including casinghead gas, and all other hydrocarbons not defined as oil in subsection (d) above. (f) The word "severed" means the extraction or withdrawing from the soil or water or from below the surface of the soil or water of any

oil or gas, whether such extraction or withdrawal shall be by natural flow, mechanically enforced flow, pumping, or any other means employed to get the oil or gas from the soil or water or from below the surface of the soil or water. (g) The word "person" means any natural person, firm, copartnership, joint venture, association, corporation, estate, trust, any other group or combination acting as a unit, and the plural as well as the singular number. (h) The word "producer" means any person engaging or continuing in the business of oil or gas production, which, for the purpose of this chapter, includes the owning, controlling, managing, or leasing, of any oil or gas property or oil or gas well, and producing in any manner any oil or gas by taking it from the soil or waters, or from beneath the soil or waters, of the state of Alabama, and further includes receiving money or other valuable consideration as royalty or rental for oil or gas produced or because of oil or gas produced, whether produced by him or by some other person on his behalf, either by lease, contract, or otherwise, and whether the royalty consists of a portion of the oil or gas produced being run to his account or a payment in money or other valuable consideration (1945, p. 20, Sec. 1, effective Oct. 1, 1945).

Levy of tax upon business of producing or severing oil or gas from soil, etc.; measure of tax; time of accrual.—(a) There is hereby levied, to be collected hereafter, as herein provided, annual privilege taxes upon every person engaging or continuing to engage within the state of Alabama in the business of producing or severing oil or gas as defined herein, from the soil or the waters, or from beneath the soil or the waters, of the state for sale, transport, storage, profit, or for the use. The amount of such tax shall be measured at the rate of four per centum (4%) of the gross value of said oil or gas at the point of production. (b) The tax is hereby levied upon the basis of the entire production in this state, including what is known as the royalty interest, on which production the amount of such tax shall be a lien, regardless of the place of sale or to whom sold, or by whom used, or the fact that the delivery may be made to points outside the state, and the tax shall accrue at the time such oil or gas is severed from the soil or the waters, or from beneath the soil or the waters, and in its natural, unrefined, or unmanufactured condition (1945, p. 21, Sec. 2, effective Oct. 1, 1945).

Tax levied upon producers in proportion to ownership at time of severance; by whom tax paid; lien, etc.—(a) The privilege tax hereby imposed is levied upon the producers of such oil or gas in the proportion of their ownership at the time of severance, but, except as otherwise herein provided, the tax shall be paid by the person in charge of the production operations, who is hereby authorized, empowered, and required to deduct from any amount due to producers of such production at the time of severance, the proportionate amount of the tax herein levied before making payments to such producers. The tax shall become due and payable as provided by this chapter; and such tax shall constitute a first lien upon any of the oil or gas so produced when in the possession of the original producer or any purchaser of such oil or gas in its unmanufactured state or condition. In the event the person in charge of production operations or the purchaser fails to pay the tax, then the department shall proceed against the producer or the purchaser to collect the tax in the manner hereinafter provided by this chapter. (b) When any person in charge of production operations shall sell the oil or gas produced by him, the purchaser shall account for the tax. (c) When any person in charge of production operations shall use or dispose of the oil or gas for fuel or any other purpose, he shall withhold the tax imposed by this chapter; and, if he is required to pay other interest holders, he is hereby authorized, empowered, and required to deduct from any amounts due them the amount of tax levied and due under the provisions of this chapter before making payment to them. (d) Every person in charge of production operations by which oil or gas is severed from the soil or waters, or from beneath the soil or waters of the state of Alabama who fails to deduct and withhold, as required herein, the amount of tax from sale or purchase price, when such oil or gas is sold or purchased under contract or agreement, or on the open market, or otherwise, shall be liable to the state for the full amount of taxes, interest, and penalties due the state; and the department shall proceed to collect the tax from the person in charge of production operations, under the provisions of this chapter, as if he were the producer of the oil or gas (1945, p. 21, Sec. 3, effective Oct. 1, 1945; 1953, p. 559, appvd. Aug. 31, 1953).

The 1953 amendment rewrote subdivision (b) and (c), the principal change being to impose the tax on purchasers in all cases where the oil or gas is sold.

Department authorized to enforce provisions of chapter and collect taxes; statements to be filed and records kept; inspection of records; hearings and compelling attendance of witnesses.—(a) The department is hereby authorized and directed to administer and enforce the provisions of this chapter and to collect all of the taxes levied under the provisions hereof. Every person producing or in charge of production of oil and gas shall file monthly with the department a statement under oath, on forms the department prescribes, showing the location of each producing property operated or controlled by such producer during the last preceding monthly period; the number and kind of wells thereon; the kind of oil or gas produced; the gross quantity thereof produced; the actual cash value thereof at the time and place of production, including any and all premiums received from the sale thereof; the amount of tax due on the total gross production; the portion of gross production payable as royalty; and such other information as the department may require. (b) All persons engaged in the business of severing oil or gas are hereby required to keep full and complete records showing the nature, character, and volume of all such oil or gas severed, the value of such oil or gas at the point of production, the manner in which such oil or gas was disposed of, the prices or the consideration received for the sale thereof, and the quantity or volume of such oil or gas stored anywhere within or without the state of Alabama; and such records shall at all reasonable times be open for inspection by representatives or agents of the department. (c) The department or its duly authorized representative or agent shall have the power and authority to inspect all records required to be kept under the provisions of this chapter, to conduct hearings, and to compel the attendance of witnesses, for the purpose of determining the amount of taxes due under the terms and provisions of this chapter (1945, p. 22, Sec. 4, effective Oct. 1, 1945).

Reports to be filed monthly; penalty for failure to file; payments to accompany reports.—All reports required under the provisions of this chapter shall be filed with the department on or before the 15th day of the calendar month and shall cover the preceding calendar month. If any person engaged in severing the natural resources herein defined shall fail or refuse to file a monthly report containing the information required under the provisions of this chapter within the time prescribed, the department is hereby authorized and directed to assess a penalty of ten per cent (10%) of the amount of the taxes determined to be due. Such penalty may be waived for good and sufficient cause shown. All producers are hereby required to pay to the department all taxes accruing under the provisions of this chapter for the period of time covered by the report herein required, and such payment shall accompany the required report (1945, p. 23, Sec. 5, effective Oct. 1, 1945).

Department to assess taxes; notice of assessment and hearing thereon.—The department is hereby authorized and required to assess any taxes determined to be due and payable under the provisions of this chapter against all producers, based upon reports received or information acquired from any source. The department is hereby authorized and directed to make assessment against any producer for any additional taxes which may be determined to be due as shown by any audit or any information coming into the possession of the department. When such assessment is made, the department shall give notice thereof by registered mail with demand for return receipt, and shall set the date for a hearing on such assessment, not less than ten (10) days from the date the notice is mailed, and at said hearing the department shall determine from all the evidence produced the amount of tax or additional tax any producer owes to the state of Alabama under the provisions of this chapter. When a final assessment is made against any producer, notice thereof shall be given in like manner to such producer or his attorney of record (1945, p. 23, Sec. 6, effective Oct. 1, 1945).

Deduction of appropriation for expenses of department.—Such amount of money as shall be appropriated for each fiscal year by the legislature to the department of revenue with which to pay the salaries, the cost of operation and the management of the said department shall be deducted, as a first charge thereon, from the taxes collected under and pursuant to this chapter, provided, however, that the expenditure of said sum so appropriated shall be budgeted and allotted pursuant to Title 55, article 3, chapter 4 of the Code of Alabama of 1940, and limited to the amount appropriated to defray the expenses of operating said

department for each fiscal year. The net remainder shall remain in the state treasury for distribution as hereinafter provided (1945, p. 24, Sec. 7, effective Oct. 1, 1945; 1951, p. 1469, effective Oct. 1, 1951).

NOTE.—The 1951 amendment rewrote this section, which formerly required the department to deduct the cost of collection of taxes and certify the remainder into the state treasury.

Allocation and distribution of net taxes collected.—The net amount of all taxes herein levied and collected by the department, after the same has been certified into the state treasury, shall be allocated and distributed by the comptroller to the credit of the general fund of the state and to the county in which the oil or gas was produced and to the municipalities therein in the proposition set out in the following schedule: (a) Fifty percent (50%) of the first one hundred and fifty thousand dollars ($150,000.00), or any part thereof, collected per year under the provisions of this chapter to the state, forty-two and one-half per cent (42½%) to the county, and seven and one-half per cent (7½%) to municipalities therein on a population basis; (b) eighty-four per centum (84%) of all additional sums collected per year under the provisions of this chapter to the state, fourteen per centum (14%) to the county, and two per centum (2%) to municipalities therein on a population basis. All funds received under the provisions of this chapter, as herein provided, shall be disbursed by the comptroller on or before the 25th day of the month during which it is paid into the treasury (1945, p. 24, Sec. 8, effective Oct. 1, 1945).

Reports to be made on blanks furnished by department; certificate and verification required.—All reports required to be filed under the provisions of this chapter shall be made on blanks, furnished by the department, which shall contain the following certificate: "I hereby certify under oath that I am duly authorized to make this tax return; that the information herein contained is true and correct and same is shown by the records of the identified producer; and that the amount of taxes accompanying this return is the true and correct amount of taxes due the state of Alabama by this producer." And same must be duly verified (1945, p. 24, Sec. 9, effective Oct. 1, 1945).

False tax return as perjury.—Any party making or participating in a false tax return made under the provisions of this chapter shall be guilty of perjury and, upon conviction, shall be punished in the manner prescribed by law (1945, p. 24, Sec. 10, effective Oct. 1, 1945).

Enjoining violation of chapter.—If it is brought to the attention of the department that any producer is guilty of violating any of the provisions of this chapter, the department is hereby authorized and required through lawfully authorized counsel, to proceed in the courts of the state to obtain a writ of injunction, which writ shall be granted by the court when applied for in the manner prescribed by law. The department, however, is hereby relieved of the requirement to furnish bond of any character (1945, p. 24, Sec. 11, effective Oct. 1, 1945).

Exemption from ad valorem taxes.—(a) All oil or gas produced, all leases in production, including mineral rights in producing properties, and all oil or gas under the ground on producing properties within the state of Alabama shall be exempt from all ad valorem taxes now levied or hereinafter levied by the state of Alabama or by any county or municipality. No additional assessment shall be added to the surface value of such lands by the presence of oil or gas thereunder or its production therefrom. (b) For the purpose of this chapter, the area of a lease or leases, including oil and gas rights considered to be in production, or the area of any other producing property considered to be in production, shall include an oil or gas drilling unit as established by the state oil and gas board of Alabama, [and] shall be exempt from ad valorem taxation because of production from any one well (1945, p. 25, Sec. 12, effective Oct. 1, 1945; 1957, No. 600, appvd. Sept. 18, 1957). The 1957 amendment rewrote subsection (b).

Collection and disbursement of additional taxes.—If the department is authorized by any other law to collect any further or additional taxes from producers as herein defined, such taxes shall be collected in the same manner as the taxes herein provided and the return of such taxes shall be included in the report for the taxes herein levied and provided. Such further or additional taxes shall be disbursed as authorized by such other law (1945, p. 25, Sec. 13, effective Oct. 1, 1945).

LEASES BY STATE

Director may lease lands under jurisdiction of department.—The director of conservation, on behalf of the state, is hereby authorized to lease any lands or interest therein under the jurisdiction of the department of conservation for the

exploration, development and production of oil, gas and other minerals, or any one or more of them, on, in and under such lands (1956, 1st Ex. Sess., No. 158, Sec. 1, appvd. Feb. 24, 1956).

Director may lease other state owned lands on request of agency head.—The director of conservation, on behalf of the state, is hereby authorized, upon the written request of the head of any state department, institution or agency, to lease any land or interest therein owned by such department, institution or agency or in which such department, institution or agency has the beneficial interest for the exploration, development and production of oil, gas and other minerals, or any one or more of them, on, in and under such lands (1956, 1st Ex. Sess., No. 158, Sec. 2, appvd. Feb. 24, 1956).

Pooling or unitization to be authorized.—Any lease executed under the provisions of this subdivision may authorize the lessee to pool or unitize the lease, the lands or minerals covered thereby, or any part thereof, with other lands, leases or mineral estates or parts thereof upon such terms as the director of conservation may approve (1956, 1st Ex. Sess., No. 158, Sec. 3, appvd. Feb. 24, 1956).

Lease of lands under navigable waters, etc.—The director of conservation, on behalf of the state, is thereby authorized to lease, upon such terms as he may approve, any lands or any right or any interest therein under any navigable streams or navigable waters, bays, estuaries, lagoons, bayous or lakes, and the shores along any navigable waters to high tide mark, and submerged lands in the Gulf of Mexico within the historic seaward boundary of this state, which is hereby declared to extend seaward six leagues from the land bordering the Gulf, for the exploration, development and production of oil, gas and other minerals, or any one or more of them, on, in and under such lands; and such lands or interests therein for such purposes shall be supervised and managed by the department of conservation (1956, 1st Ex. Sess., No. 158, Sec. 4, appvd. Feb. 24, 1956).

Director may approve pooling or unitization or amend leases to authorize same.—The director of conservation is hereby authorized to execute upon such terms as he may approve (a) pooling or unitization agreements affecting oil, gas and other minerals, or any one or more of them, on, in or under lands within the jurisdiction or management of the department of conservation so as to pool or unitize such interest in oil, gas and other minerals, or any one of them, with similar interest in other lands; and (b) agreements amending existing leases so as to authorize lessees to pool or unitize the leases, the lands or minerals covered thereby, or any part thereof, with other leases, lands or mineral estates or parts thereof. All pooling or unitization agreements, or agreements amending existing leases, or any part thereof, executed under the provision of this subdivision by the director of conservation must be approved, in writing, by the governor (1956, 1st Ex. Sess., No. 158, Sec. 5, appvd. Feb. 24, 1956).

Leases to be upon basis of competitive bids.—All lands proposed to be leased under the provisions of this subdivision shall be leased only upon the basis of competitive bids. The director of conservation shall obtain written, sealed, competitive bids on every proposed lease of each tract of such land. Invitations for bids shall be published in a newspaper of general circulation in the state of Alabama, and in a newspaper of general circulation within the county or counties where the tract of land proposed to be leased is located, at least twenty-five (25) days before the final date for submitting bids. Invitations for bids shall contain a statement as to the final date for submitting bids; the time and place at which the bids will be opened; and a legal description, the location, and the approximate acreage of the tract of land proposed to be leased. Provided, that no tract of land containing more than five thousand two hundred (5,200) acres shall be leased or advertised for lease under the provisions of this subdivision. Bids shall be opened publicly in the office of the director of conservation at the time stated in the invitations for bids. The lease of any tract of land shall be awarded to the highest responsible bidder making the most advantageous offer to the state and the director of conservation must either accept the most advantageous offer or reject all bids within five (5) days from the date said bids were opened. The director of conservation may reject all bids on any tract of land when, in his opinion, the public interest will be served thereby, but such tract of land shall not thereafter be leased except in accordance with the provisions of this subdivision (1956, 1st Ex. Sess., No. 158, Sec. 6, appvd. Feb. 24, 1956; 1957, No. 611, appvd. Sept. 18, 1957).

NOTE.—The 1957 amendment substituted "twenty-five (25) days" for "sixty (60) days" in the third sentence, and added in the next to last sentence the requirement that the director accept the most advantageous offer or reject all bids within five days from the time said bids were opened.

Disposition of revenues from leases.—The revenues that shall accrue under the provisions of this subdivision, from rentals, royalties and all other sources, and subject to the cost of administration, shall be the property of the department or institution to which said lands belong or in which said department or institution shall own the beneficial interest. All revenue accruing from the lease of the bed of any navigable streams, waterways, bays, estuaries, lagoons, bayous, lakes, and any submerged lands in the Gulf of Mexico within the historic seaward boundary of this state, under the provisions of this subdivision, subject to cost of administration, shall be paid by the director of conservation to the state treasurer to become a part of the general funds of the state of Alabama. The department of conservation shall be entitled to five per cent of all revenues derived under the provisions of this subdivision as cost of administration. Such cost of administration shall be covered into the state treasury by the director of conservation to the credit of either the state lands fund, the forestry fund or the state parks fund, as the director deems appropriate and for the best interest of the department (1956, 1st Ex. Sess., No. 158, Sec. 7, appvd. Feb. 24, 1956).

Revenues not to be expended until appropriated.—No such revenues shall be expended from such funds unless and to the extent appropriated by law (1956, 1st Ex. Sess., No. 158, Sec. 8, appvd. Feb. 24, 1956).

CANCELLATION OF OPTIONAL LEASES

When lessees required to cancel optional leases on the records; penalty for failure.—Whenever by reason of the termination of the full period within which an optional gas and oil lease which is of record may be kept alive by the payments of rentals, or at the termination of any of the options in such lease by reason of failure on the part of the lessee to comply with the condition therein for the prevention of forfeiture, such lease shall lapse, the lessee must, on request in writing by the lessor, mark same cancelled on the records or must furnish the lessor with an instrument, duly acknowledged, directing the cancellation of such lease on the records.

Any lessee failing or refusing to supply the lessor with such an instrument, or failing or refusing to cancel any lease on the records within thirty days after receiving written demand as above, shall be liable to such lessor for a reasonable attorney's fee incurred by the lessor in bringing suit to have such forfeiture and cancellation adjudged, and in addition thereto shall be liable to the lessor for all damages suffered by the lessor by reason of his inability to make any lease on account of the first lease not having been cancelled (1945, p. 26, appvd. May 19, 1945).

STATE OF ALABAMA, ALABAMA PUBLIC SERVICE COMMISSION

1. The statutory basis for the relationship of the public service commission to the energy resources and energy technology is regulatory in character. Generally the statutory power is that usually assumed by a State over the rates and charges, as well as rules and regulations affecting the relationship between utility and consumer, and also contemplates general powers over financial structures and methods of accounting.

2. The present jurisdiction of the State of Alabama to regulate utilities is vested in the public service commission. Originally that commission was known as the railroad commission and was established by an act of the legislature approved February 26, 1881. The power given this commission was at that time limited to general supervision over transportation companies, which included telephone and telegraph companies. The jurisdiction of the commission at that time was only advisory and it had no authority to compel obedience to its orders. In 1915 the name of the railroad commission was changed to the public service commission and the legislature conferred upon that commission all the power and jurisdiction formerly vested in the railroad commission. This was the first law in Alabama providing for State regulation of street railway companies, telephone and telegraph companies, electric companies, gas companies, water companies, hydroelectric and heating companies. The powers of the public service commission were further enlarged in 1920 and the commission was given general supervision and regulatory powers never before contemplated by legislative enactment. The present authority is contained in title 48 of the Code of Alabama 1958, as amended.

3. The overall objective of the regulatory program as defined by statute and administrative interpretation may be characterized as improvement in service, fair, reasonable, nondiscriminatory and nonpreferential rates and charges, and otherwise to accomplish a fair and reasonable relationship between public utilities and their customers.

4. The rules, policy declarations, directives, and orders issued for the guidance of the public utilities generally are designed to accomplish the objectives set forth in paragraph 3 above and to provide uniform systems of accounts and other records in such manner as will afford better understanding and better methods of ascertaining costs and investment.

5. Of course, the jurisdiction of this commission is limited in such a manner as to not impinge upon other agencies where jurisdictions approach the overlapping point and, of course, this limit to the State's jurisdiction is more or less determined by the decisions of the courts of higher jurisdiction. There is authority in the State statute empowering the commission to sit with and cooperate with Federal agencies and others where there is some semblance of a common interest and

this is an effort to bring about a joint determination of issues in the borderline or gray area cases.

6. Cooperation is effectively maintained with the Federal Power Commission in the licensing and regulation of hydroelectric projects, as defined by the Federal Power Act, where such licensees of the Federal agency also fall under the jurisdiction of this commission, as in the case of the Alabama Power Co.

7. As stated in our letter of September 16, the instability of prices prevailing for natural gas, for whatever reason, coupled with the availability in our State of an adequate supply of coal transported by water, has, in some instances, already resulted in curtailment of natural gas consumption on the industrial level. The subsequently pyramiding cost of service on the remaining consumers, if not halted, may herald the decline of natural gas distribution in Alabama.

8. A proposed bill to amend section 4(a), 4(e), 7(e), and 15 of the Natural Gas Act is now under study by a special committee of the National Association of Railroad and Utilities Commissioners for recommendation at its national convention in Las Vegas, Nev., on November 28, 1960. We believe that the enactment of such a bill will aid in a more effective regulation of the natural gas industry.

STATE OF CALIFORNIA, PUBLIC UTILITIES COMMISSION

This commission has regulatory jurisdiction over all privately owned public utilities operating within the State of California. Such public utilities now serve some 3,900,000 electric customers and 4,300,000 gas customers in California. Gross operating plant of these electric public utilities amounts to approximately $3,740 million, and of these gas public utilities, $1,450 million.

Enclosed with this letter is a memorandum prepared by the staff of this commission relating to various aspects of energy resources. This memorandum will answer a number of your inquiries.

Specifically answering the inquiries contained in the attachment to your letter, you are informed as follows:

(1) The statutory basis for the existence and jurisdiction of the Public Utilities Commission of the State of California is article XII of the California constitution and the Public Utilities Code of California and cognate statutes. The commission exercises exclusive jurisdiction over all public utility matters, and is both a court and a regulatory tribunal.

(2) The public utilities commission has existed since 1911 in substantially its present status. Over the years, considerable additional jurisdiction has been conferred upon the commission. The regulatory statute under which the commission operates is the supreme State law, and whenever a provision of the State constitution or another State statute should conflict with said regulatory law, the latter controls.

(3) The prime objective of the function of the commission is to secure to the people of California reasonable public utility service at reasonable rates, without discrimination.

(4) A large number of general orders and other directives have been issued by the commission to the regulated industry, and such rules and regulations are being issued from time to time. These directives of the commission implement the regulatory statutes under which the commission operates.

(5) As stated above, the regulatory statute under which the commission operates is the supreme State law and, therefore, the commission does not experience conflicts with other agencies which are calculated to disrupt its program.

(6) (See (5) above.)

(7) While the execution of the program delegated to the commission requires continuous exertion and attention to duty, there are no phases of the undertaking which are unusually difficult over and above the usual and conventional difficulties which are encountered in executing any major governmental program in a large political subdivision.

(8) We have no present recommendations concerning the subject matter of this item 8, but do offer the thought that the Federal Gov-

ernment should keep prominently in mind the rights of the several States when it undertakes programs of the character here envisioned, and see to it that an absolute irreducible minimum of interference is occasioned to local authority.

Memorandum Regarding Energy Resources and Requirements in California

There are set forth below under appropriate marginal headings some brief notes regarding energy resources present and prospective in California relating to public utility service of gas and electric utliities.

NUCLEAR ENERGY

Atomic Energy Commission powerplant license No. 1 was granted in 1957 for the operation of Vallecitos plant on the Pacific Gas & Electric Co. system. This plant is rated at 5 megawatts and has been operated to produce as high as 7 megawatts. A second plant on the P.G. & E. system is now authorized for installation near Eureka, Calif., with a nominal rating of 60 megawatts, to be ready in 1962. An experimental plant located at Santa Susana, Calif., has been operated under AEC auspices by North American Aviation Co. to deliver power to the Southern California Edison system. Both P.G. & E. and Southern California Edison Co., which incidentally are two of the Nation's largest electric utilities, have now announced plans looking toward the introduction of plants in excess of 300 megawatts by 1965. It has been suggested that after 1970 new steam generating stations to be installed in California will all be nuclear powered.

CONVENTIONAL STEAM ELECTRIC GENERATION

Prior to World War II steam electric plants furnished approximately one third of California's electric energy. The rapid growth in population and industry coupled with substantial increased use per customer of electricity has resulted in California's doubling its electric consumption in each of the last two decades. Forecast for the next decade gives assurance of a like increase in energy requirements. This growth has brought about increased dependence on steam electric generation. Now more than 60 percent of California's electricity is being obtained from steam. Residual fuel oil and natural gas comprise the two primary fuels used in steam generation. Consumption of these two fuels by California's privately owned public utilities was approximately 18,366,000 barrels of fuel oil and 227,544,000,000 cubic feet of gas in 1959. At recent new steam electric generating stations units of 30 megawatt size have been or are being installed. There has been a definite trend upward in the sizes of units.

HYDROELECTRIC ENERGY

Hydroelectric power has always been an important source of California's electric energy generation. Costs of energy from this source, as to new plants, have risen in recent years not only incident to general price increases but also due to declining availability of favorable hydroelectric sites. Hydroelectric output by California privately owned utilities in 1959 amounted to 11,926 megawatt-hours. Additional capacity under construction or now programed for completion within the near future will add 232 megawatts of capacity.

GEOTHERMAL ENERGY

It is of interest to note that electric energy has been obtained abroad from underground steam geyser sources for a number of years. Recently, a small plant utilizing natural steam from geysers was installed by P.G. & E. near Geyserville, Calif. This source of energy may, of course, be limited in its application.

ELECTRIC POWER AS AN ADJUNCT OF WATER SUPPLY

Aside from the growth in electric service to the home and industry mentioned above, California will have increasing needs for electric power to provide pumping for its vast water supply projects. The proposed State plan for damming the Feather River and transporting water 400 miles to southern California will be power deficient and will increase California's power needs.

Also, experimental work is now being undertaken by the Southern California Edison Co., not to mention considerable research in universities and elsewhere looking toward methods of converting seawater to potable water. Most of these methods, which offer prospects of becoming economical, require substantial outlays of electric power.

GAS CONSUMPTION

Private regulated utilities in California served 4,300,000 gas customers during 1949. These customers consumed 921 billion cubic feet of gas. Forecasts indicate that total gas requirements for California's domestic and industrial customers will approximate 2 trillion cubic feet for the year 1970. Thus, the gas requirements are expected to double during the decade of the 1960's. Present average daily requirements in California of 3.3 billion cubic feet per day will, by 1970, approximate 5.5 billion cubic feet per day. In connection with these requirements it is to be noted that gas is currently used by 90 percent of the California customers for space heating and in the residential field the percentage is even higher. Small gas heaters with minimum piping offer the most economic installation and are most widely used by California homebuilders.

SOURCES OF GAS

Manufactured gas service commenced in California shortly after the gold rush more than a century ago. With minor exceptions, manufactured gas was served until after World War I. By 1930 the dominant service was natural gas from California sources, both oilfield and dry-gas field. Commencing in 1947 gas distributing utilities started to purchase gas, via interstate pipelines from the El Paso Natural Gas Co. Today, El Paso's deliveries average 2.2 billion cubic feet per day. Commencing in August 1960 an additional out-of-State supplier is furnishing gas to southern California and present out-of-State procurements fill 75 percent of the State's needs. There has been some recent increase in gas exploration in California but the availability of California source of natural gas has continued to decline in importance for a number of years. Two additional interstate pipeline proposals, one a joint project of a number of companies affiliated with the Pacific Gas & Electric Co. which will bring gas from Alberta, Canada, to California; another, a joint proposal of the El Paso Natural Gas Co. and the Colorado Interstate Gas Co., which would supply southern California with gas from Panhandle, Rocky Mountain, and New Mexico sources are under consideration. This latter is designated the "Rock Springs project." Each of these proposed projects is awaiting final approval from the regulatory commissions involved. Another proposed project which has not reached the definitive stage as yet, but for which basic agreements have been reached between the parties is a joint proposal of Tennessee Gas Transmission Co. and Petroleos Mexicanos to supply gas from U.S. gulf coast and Mexican sources via a pipeline across northern Mexico to southern California.

OTHER ITEMS RELATING TO CALIFORNIA ENERGY SOURCES

It is to be noted that at the present time coal is not used commercially in California. Some prospects for supply of soft coal from Utah sources have appeared at times but to date have not proven economical.

The energy picture in California would not be complete without recognition of governmental actions in connection with air pollution control. Under State authorization several counties of California have established air pollution control boards. The board for Los Angeles County, one of the first to be established, has promulgated in the interests of air pollution, rules requiring the burning of either gas or low sulfur content fuel oil on days when atomspheric conditions indicate the possibility of irritable air pollution. The specific requirement of this board limits the fuel used during the months of May to October. Most of the larger fuel users by voluntary agreement, have accepted the restriction on "small alert" days during other parts of the year.

This commission is actively interested in being assured that California's regulated private utilities are taking adequate steps to provide necessary energy supplies for California's growing requirements. Electric load and resource data is reviewed regularly by our staff and currently the commission has before it an order of investigation on which public hearings are in progress inquiring into the adequacy of the State's gas supply and the extent of the gas requirements.

STATE OF CALIFORNIA, DEPARTMENT OF NATURAL RESOURCES

Two agencies of this department, the division of mines and the division of oil and gas, are considered to be engaged in activities affecting energy resources and energy technology, although each in a somewhat indirect sense.

DIVISION OF MINES

The division of mines, primarily a technical information agency, is—or has been—active in mapping the geologic occurrence of petroleum, uranium, thorium, and coal deposits. Oil and gas have long been produced on a major scale in California, whereas only two or three of the State's uranium and thorium occurrences have proven to be commercially important, and no coal has been mined in California for use as a fuel for many years.

Point-by-point comment on the applicable items to be covered by agencies engaged in activities affecting energy resources follows:

(1) The division of mines is the State information bureau on California's mineral resources and furnishes and publishes information on geology, mineral deposits, mineral commodities, and mining operations. The responsibility of the division of mines in respect to these things is established in the State's public resources code.

(2) The division of mines has discharged its functions practically unchanged from its inception in 1880 to the present.

(3) The objective of the program of the division of mines is to assist the mineral industry and aid in development of the mineral resources of the State of California.

(4) The division of mines has no guidance or regulatory functions that relate to energy resources industries.

(5) The U.S. Geological Survey also performs geologic mapping and mineral deposits studies, and the U.S. Bureau of Mines also performs research and statistical studies in California, both dealing in part with energy resources. The California Division of Oil and Gas also prepares reports on the geology of oil field areas.

(6) The division of mines has cooperative programs with both the Bureau of Mines and the U.S. Geological Survey.

(7) No comment.

(8) No comment.

DIVISION OF OIL AND GAS

The division of oil and gas has no function relating directly to the development of energy resources or energy technology, but does have regulatory and to some degree a research function relative to the drilling for and the producing of oil and gas.

Point-by-point comment on applicable items follows:

(1) The division of oil and gas operates under division 3 of the Public Resources Code of California (sec. 3000 to 3608.1, inclusive).

(2) The work of the division commenced on August 9, 1915, and has been expanded several times, notably in 1929 when gas waste laws were added, in 1931 when spacing and fresh water protection laws were passed, and in 1958 when subsidence law was enacted.

(3) The objectives are to supervise the drilling, operation, maintenance, and abandonment of wells so as to prevent damage to underground oil and gas deposits, loss of oil, gas, or reservoir energy, and damage to underground and surface waters suitable for irrigation or domestic purposes.

(4) Summary of laws and procedure pamphlet is attached.

(5) The division of oil and gas program neither overlaps, meshes, nor conflicts with programs of other agencies in the energy field.

(6) Close cooperation with the division of mines and water pollution control boards of California is maintained.

(7) No comment.

(8) No comment.

DEPARTMENT OF NATURAL RESOURCES, DIVISION OF OIL AND GAS—SUMMARY OF CALIFORNIA OIL AND GAS CONSERVATION LAWS, MARCH 1960

(Based on Division 3, Oil and Gas, of the Public Resources Code, comprising secs. 3000 to 3608, inclusive)

DRILLING AND PRODUCTION REQUIREMENTS

1. Notice of intention to drill on the division's form 105 and drilling bond must be filed prior to commencement of drilling. Notice must be completely filled out, including a legal description of the mineral estate property on which drilling is proposed. If mineral estate differs from surface estate a description of both is required. In most cases a map or plat will be required. Name and number of well is subject to approval of the State oil and gas supervisor.

(*a*). *General requirements:* Protection for surface and all subsurface fresh waters by means of casing and cement; blowout prevention equipment, inspections of cement plugs, and demonstrations of water shutoff. These are specified in replies to proposals.

(*b*) *Core holes or structure wells:* Wells drilled for geological or structural information must be covered by a notice and a bond as any other well. Also, a notice to abandon must be filed giving data regarding any fresh water, gas, or oil encountered and the proposed plugging. Complete records are required for all wells either onshore or offshore.

(*c*) *Prospect wells:* Any operator may request this status for a wildcat well. A longer period for filing records is then allowed (6 months).

(*d*) *Water disposal or water flood wells:* Notice must be filed and approval obtained for each project. Proposal must be filed for each well whether old or new. Full details of proposed program must be submitted. Further notices are required to cover proposed alterations or abandonments.

2. A $5,000 drilling bond for a single well or a $25,000 bond for unlimited wells must accompany the notice to drill. The name of the operator and the principal in the bond must be identical. The well designation must be identical in the bond and notice. The exact well location need not be shown on the bond, merely section, township, and range.

3. The operator must designate a legal agent, who resides within the State, on a form which will be sent to him. *An individual operator may appoint himself as agent.* More than one agent may be appointed, each for a designated area, if the operator desires.

4. The operator must file a supplementary notice if drilling plans are changed; also a notice to plug, alter casing, redrill, deepen, or abandon must be filed as the circumstances occur. Forms are provided for filing notices covering each type of work.

5. The division must be notified to witness all operations specified in its reply to any notice.

6. Log, history, core record, electric log, or any other type made, must be filed in duplicate on forms provided as soon as possible after 30 days' production, the cessation of operations, or before abandonment. A longer time may be granted by the supervisor, upon a showing of hardship.

7. Monthly production reports of oil, gas, water, and water injected on the division's form 110 or 110B must be filed in duplicate from the commencement of production or injection until the well is abandoned. At the end of each calendar year, a statement showing the total amount of oil and gas produced during the calendar year must be filed with the department of natural resources at Sacramento. A special form is sent to each producer for this purpose. This figure should agree with the total of the monthly reports filed with the division for the same period.

8. Drilling bonds will be released upon request after satisfactory completion of the well and the filing of all records, or they will be automatically released at the end of the premium year if the wells are satisfactorily completed or upon satisfactory abandonment. The bond cannot be released so long as the well is uncompleted and not abandoned unless another valid bond is substituted therefor.

9. Unreasonable waste of gas is unlawful. The blowing to air of either wet or dry gas is prima facie evidence of unreasonable waste. Excessive gas-oil ratio is also unreasonable waste. Sale or use of produced gas is no excuse for unreasonable gas-oil ratio.

10. (*a*) The owner or operator of any well must report its sale or transfer, within 5 days, giving the name and address of the new owner, date of transfer, location and name of well or wells, description of land involved.

(*b*) The buyer of property, including any well, must give the same information within 5 days, giving the name and address of the seller.

11. The name designation of a well is subject to approval and must not be changed without the written approval of the division.

SPACING RULES

1. *Oil fields.*—Any field producing on August 14, 1931, has no spacing regulations. The term means "an area on the earth's surface on which are located one or more wells producing oil or gas from the same subsurface structural unit or common reservoir beyond the limits of which lateral drainage does not take place." This area may be expanded from its size in 1931 as the same pool is expanded by development.

2. *New fields.*—Any structurally distinct producing fields discovered since August 14, 1931, are covered by the following general regulations:

(*a*) Wells must be located 100 feet from outer property boundaries or any public road (streets opened after the start of drilling are excluded) or 150 feet from any other well producing or capable of producing oil or gas from the same zone or pool, except as in (*e*) and (*f*) below. The effect of these restrictions is to require roughly a minimum area of 1 acre per well. The 150-foot restriction does not apply to wells producing from different zones, provided well density on property does not exceed one well per acre.

(*b*) Contiguous parcels under separate ownership but operated as a single lease are classed as a single unit. Outer boundary then means the outer perimeter of all parcels. Roads or alleys do not stop contiguity. Lots or parcels must touch at more than a point on the surface to be contiguous.

(*c*) Area of parcels includes to centerline of adjacent streets unless entire area under street is known as a matter of fact to belong to opposite side of street or to a separate owner.

(*d*) An alley is not a public road.

(*e*) Where a parcel of land contains 1 acre or more but is less than 250 feet in width, one well to each acre may be drilled if wells are placed on the surface as far from lateral boundary lines as practical, considering surface configuration and existing improvements (sec. 3602). Special provisions are made for very heavy or viscous oils in section 3602.1.

(*f*) Where a parcel has 1 acre or more and all or substantially all of the surface is unavailable for use because of improvements, steep hills, water, restrictive laws, etc., the owner may drill 1 well per acre from a surface location either on the property or on a detached location provided:

(1) There are no derricks within 150 feet of another derrick owned by the same operator (supervisor may grant exceptions upon application).

(2) The surface location is not within 25 feet of a street or outer property boundary.

(3) The producing interval is not less than 75 feet from the boundary of the parcel from which production is obtained. If the parcel is less than 150 feet in width, the well must be completed as far from the lateral boundary lines as is practicable.

(4) A directional survey is filed.

(5) Proper application is made to drill under section 3606.

(*g*) Section 3608 of the Public Resources Code provides a means for the inclusion of surrounded parcels of less than 1 acre into the surrounding lease. Consult the local office for details.

(*h*) Where the supervisor has determined that more than one zone or pool underlies a property and that it is not practical to produce from all of such zones or pools from a single well per acre and that such other zones or pools are being drained by offset wells, a maximum density of two wells per acre may be approved.

SUBSIDENCE ACT

Article 5.5, containing sections 3315 to 3347, was added to the oil and gas laws in 1958. This law was effective on July 23, 1958.

The act provides a means for repressuring oil or gas pools to arrest or ameliorate subsidence in areas over or near oil or gas producing wells, provided there is a threat of inundation by the sea. Means for compulsory unitization are provided if voluntary unitization of 65 percent is achieved. Also provides for eminent domain proceedings by cities or counties if 75 percent of production in pool is signed voluntarily.

The act encourages voluntary pooling and unitization; legalizes cooperative development contracts; sets up procedures for filing of plans of operations and hearings. For further information the reader should consult a copy of the law. Copies of oil and gas laws are available upon request at no charge.

MISCELLANEOUS INFORMATION

1. *Bulletins.*—The division issues a semiannual bulletin, "Summary of Operations," giving production and other statistics and containing one or more articles on oilfields or related subjects. Monthly reports of production of oilfields are issued. Both the "Summary" and "Monthly Production Report" will be sent regularly upon written request, free of charge.

2. *Complaints.*—Any written complaint regarding manner of drilling or producing wells will be investigated immediately and a written report rendered. Complaints as to unreasonable gas waste may also be filed.

3. *Fees.*—There are no fees to be paid for anything. The division is supported by an assessment on oil and gas produced. This assessment is levied annually on producers.

4. *Inquiries.*—All inquiries are answered to the best of our ability. Those relating to possible productivity of any land, however, cannot be answered except to give locations of the nearest producing wells and a reference to known publications covering the area.

5. *Maps.*—Oilfield and wildcat area maps are for sale at all district offices. Maps covering producing areas are priced at $1.50 each, including tax. Wildcat maps are priced at $2.50 each.

6. *Records.*—Records are not open for public use or inspection except upon the presentation of written authority from the operator who filed the records. Where the operator is out of business or existence, the records of abandoned or deserted wells are available for public use. Records of completed or producing wells that are transferred or sold are available to the new owner. No copies are furnished in any event. Persons must do their own copying or hire it done for them. Arrangements can be made for reproduction by commercial copiers.

ASSESSMENTS

(*a*) *Petroleum and gas fund.*—An assessment is levied each year on the amount of oil and gas produced during the previous calendar year as shown on the annual statement. The current tax rate is about 2 mills per barrel of oil produced or 10 Mcf. of gas produced other than that used for recycling, oil-producing operations, or injected gas withdrawn from storage. This means an assessment of $2 on each 1,000 barrels of oil or on each 10,000 Mcf. of gas.

(*b*) *Subsidence abatement fund.*—An assessment is also levied on oil and gas production taken from a subsidence area. (This is in addition to the petroleum and gas fund assessment.) At present, Wilmington field is the only area so designated. (A small area at the extreme northwest end of the field is excluded.) The initial assesment in 1959 on 1958 production was at the rate of about ¾ cent per barrel of oil or 10 Mcf. of gas. This rate will probably be smaller after the initial $250,000 advance from the State investment fund is repaid.

STATE OF ILLINOIS, DEPARTMENT OF MINES AND MINERALS

The Illinois Department of Mines and Minerals is a regulatory body having jurisdiction over the minerals of the State of Illinois. In view of your request I would like to make some brief comments concerning the development and the relationship of our Illinois Oil and Gas Division to the energy resources and technology. This office came into being in 1941 and has enjoyed excellent and most beneficial working relationship between the oil and gas division and the industry in Illinois. It appears to me that this is a healthy situation and is very effective in carrying out conservation programs on the State level. We are a member of the Interstate Oil Compact Commission and believe that this commission has a great deal of influence on the oil and gas industry.

It has come to my attention that many of the uninformed critics of the oil industry charge that market demand statutes are in reality price-fixing devices although such statutes actually prohibit waste and promote conservation by limiting it to actual demand. There is a general feeling here in Illinois that there is a grave need for congressional action in amending the present Federal Natural Gas Act to free gas producers from utility-type controls. While we do not have a great deal of natural gas production in Illinois, I am sure all of us will agree that present controls imposed by the Federal Power Commission, as a result of the Supreme Court decision in the *Phillips* case, are so burdensome and cumbersome that they threaten to stifle the natural gas industry without serving any useful purpose.

We believe that the Federal imports control program is serving a very useful purpose, but there is no need of further regulation of the oil and gas industry and that there is no necessity for any type of end-use control for American people and American industry.

STATE OF LOUISIANA, DEPARTMENT OF CONSERVATION

In response to your inquiry of June 7, 1960, we have listed below, chronologically with respect to the attachment accompanying your letter, our authority and general policy with respect to programs under our jurisdiction.

1. Reference is made to the enclosure entitled "Title 30", which defines and explains the statutory basis of this department's relationship to energy resources and technology from an intended regulatory standpoint.

2. Reference is made to the enclosure entitled "Oil and Gas Conservation and Regulations in Louisiana", which is a copy of a speech delivered by the Honorable Ashton J. Mouton, commissioner of conservation, before the Interstate Oil Compact Commission.

3. Reference is made to the enclosure referred to in No. 1 above.

4. Reference is made to the enclosure referred to in No. 2 above.

5. The Department of Conservation is totally independent of other State agencies as well as the programs coincident with other State agencies in the energy field. The only departmental contact with other agencies lies solely in the distribution of data collected from the producers of oil and gas where units of production and revenue per unit directed to the State is the prime concern.

6. The tidelands ownership dispute is the only unresolved conflict of any consequence or concern to the department of conservation. Lack of cooperation between the Federal agency supervising offshore regulations and enforcement and the operating offshore interests could confuse and distort the simplest administrative procedures which have proved to be workable, reliable, and equitable.

7. The promulgation of adequate production schedules in an attempt to maintain production at a suitable level to encourage development as well as conservation of energy resources is the more challenging issue involved in the administration of the Department's program. If any one element can undermine and render useless the entire oil and gas industry and the energy resources bonded thereto it is necessarily economics. The casual indifference to economics as related to an "oil man" has long since lost any resemblance to comic reaction, and if allowed to continue, economics will surely be referred to as the destructive cancer of America's most robust industry. At the State level of governmental administration, proration is one of our few weapons.

8. Veritable volumes have been written and spoken in the deliberations over imports, new markets acquisition, dwindling domestic allowable and depletion allowance. It would not behoove or benefit this department to expound further as the aforementioned subjects are uppermost in our minds, and the solution of the problems coupled directly therewith are of grave concern to us. We feel that we as a

State regulatory agency are powerless to effect any limitation on the importation of crude oil and hydrocarbon products. It is therefore necessary that we urge, through our national representatives, import curtailment or limitation so that imports will be maintained at a level to supplement our domestic needs rather than to supplant some of our historical domestic market. To maintain a healthy domestic oil industry it is necessary to have a stable domestic market. This cannot be if the imports are not maintained within reasonable bounds.

Oil and Gas Conservation and Regulations in Louisiana

Hon. Ashton J. Mouton, commissioner, Louisiana Department of Conservation

Many flowery speeches can be made on this subject but, I believe, you gentlement would be more interested in the tools that the Louisiana commissioner of conservation has to work with and in learning how he puts these tools to work. As in each of your States we, in Louisiana, have had quite a full history of conservation trials and errors leading up to our present conception of conservation.

The first comprehensive statute in this State was enacted in 1940 with the passage of act 157. Prior to that time several legislative acts had been passed which only dealt with certain limited phases of conservation and which gave to the administrator of such acts very limited jurisdiction and authority.

The immense waste incident to the production of oil and/or gas in the State of Louisiana, prior to 1940, in spite of numerous recorded efforts to effect a program of conservation, caused the legislature to recognize that a sound program of conservation could only be accomplished through the enactment of legislation that would be flexible enough to permit the proper consideration of the factual data, available from engineering and geological appreciations, characterizing each separate reservoir in the State. With the enactment of act 157 came the necessary mechanics to put into effect a real conservation program which would require the introduction of sound engineering and geological principles into the task of conservation. Since the enactment of act 157, great strides have been made in the direction of true conservation of Louisiana's oil and gas resources. It is in the best interest of all that the maximum recovery of Louisiana's oil and gas resources be attained. It is to this end that the authors of the act directed their intent. This act has upheld all attacks through the courts as to its legality and constitutionality and has been a model statute for many of the newer and more recent oil productive States. It has, in the past 19 years, proved to be a workable tool and to a large degree, I believe, been responsible for the tremendous growth of the oil and gas industry in this State.

Heading up the department of conservation is the commissioner, with his staff consisting of engineers, geologists, and legal counsel. In order to cope with the numerous problems arising from the operation in the more than 850 fields, the State is divided into six districts with a district manager in charge of each. These offices are located in Houma, Lafayette, Lake Charles, New Orleans, Monroe, and Shreveport. The main office is located in Baton Rouge and the efforts of the six district offices are coordinated through this main office. The district offices are staffed with petroleum engineers and petroleum inspectors whose direct responsibility it is to carry out and enforce the provisions of the Conservation Act. From the time the application for permit to drill is approved in the district office until the well is either completed as a producer or plugged and abandoned as a dry hole, it is their duty to maintain proper records and police the drilling and completion in accordance with the field rules and regulations which may be applicable. Their duties constitute a very important part of the department's activities. The orders that are promulgated by the commissioner are enforced through this medium.

The commissioner and his staff have various functions which are not found at the district level. All of these functions and responsibilities are enumerated in the Conservation Act, and I will only deal with some of those functions; that is, those which I feel are of major interest. The Conservation Act requires the commissioner, among other things, to establish drilling units for each pool productive of oil and gas in the State, to define a drilling unit and provides for the conducting of public hearings to establish rules and regulations including the establishment of these drilling units. Much of the commissioner and staff's time and efforts are expended in discharging this duty. If the hearing rate continues,

we will see approximately 500 hearings held this year. The rate of increase in this work has been very marked in the past few years as evidenced by the 379 hearings held last year.

One of the reasons for the increase in the number of hearings has been the requirement contained in a recently issued statewide spacing order. This order among other things requires minimum distance from lease lines and a minimum distance between wells drilled to and completed in the same stand and further provides that "When the pools covered by this order have had 4 wells drilled to and completed therein or after one (1) year has elapsed from the completion of the first well in the field, whichever occurs first, the operator or operators of wells in the field shall petition the commissioner of conservation for a public hearing for the purposes of establishing field rules and regulations and the creation of drilling units for the pools in the field." We feel that this order is a very substantial milestone in conservation in Louisiana and has resulted in more orderly development, early rules and regulations and a general improvement in the operations of the department. With this order we can now do a much better job and come closer to discharging the responsibilities contained in the Conservation Act. The oil and gas industry has evidenced their concurrence in this spacing order by accepting it and by their acceptance made our administration of that order an easy one.

Another important function of the commissioner and his staff is determining the market demand for oil and gas produced in the State, and in allocating that market demand to the fields and wells throughout the State. This is accomplished by conducting public hearings wherein the purchasers of crude oil and natural gas actually file notarized requests—or as we call them, nominations—for the amount of crude oil and natural gas they wish to purchase. In crude oil we use these nominations along with our knowledge of the general above ground storage of crude oil information available to us and fix the amount of crude oil that we feel represents the market requirement for Louisiana. This we call market demand. This demand is allocated to the various fields and wells in the State by a depth bracket formula which recognizes the increased costs of drilling to deeper depths and allows for allowables according to the depth from which the well is producing. In order to satisfy a shrinking market demand these allowables by depths are lowered and in order to satisfy an expanding market, they are raised. Since September 1958, we have maintained the same depth bracket allowable formula, which is incidentally 34 percent of that in effect for March 1953, which was a time at which we were producing at a maximum depth bracket allowable and which was also before the trying times, as you gentlemen know, have occurred since.

After receiving the nominations for natural gas from the gas purchasers in this State, which incidentally are filed on a reservoir basis, we determine the market demand for each gas-producing reservoir and allocate that market demand to the wells completed in that reservoir. We, therefore, do not actually need to determine a market demand for the entire State since gas markets cannot be lumped together and each pipeline in effect constitutes a separate market.

In connection with all of these hearings the commissioner of conservation requires the applicant in each case to furnish along with the application the names and addresses of all known interested parties to the application. The applicant is also required to furnish a plat or description of the unit or units requested. The commissioner mails a copy of the notice of hearing to each such interested party and advises him that the complete application and plat associated therewith is available for his inspection in the offices of the department of conservation both in Baton Rouge and the appropriate district office. This gives to an interested party the notice of the hearing, place, and date as well as some information as to the purpose and recommendations to be made at the hearing. We also try to accommodate those interested by taking the hearing as close to the area of interest as is practicable considering the large number of hearings held. We hold hearings affecting north Louisiana in that part of the State and hearings affecting south Louisiana are held in that general area. The commissioner and his staff, of course, have to travel to these proceedings, but their inconvenience in so doing is minimized by the apparent interest that is evidenced by the large number of royalty and land owners who appear at these hearings. The location of the six district offices, as previously mentioned, wherein are all of the records pertaining to that district, gives a source of information and is a convenience to an interested land and royalty owner as well as members of the industry.

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After the commissioner has established the allowable production for each well in the State and after the operators have produced that production during the period the allowable is in effect, he is required to furnish detailed reports showing the production and disposition from each lease operated by him in the State. Each party receiving and disposing of crude oil or natural gas in the State is required to submit reports reflecting his operations. These reports are self-auditing, in that, the disposition of oil or gas on one report represents a receipt of oil or gas on another report. To accomplish proper auditing and maintenance of records in connection with these various reports, we have a trained group of production auditors, who maintain a very complete up-to-date and thorough set of records.

Not as yet mentioned is the geological assistance which the commissioner of conservation has through the Geological Survey, located on the grounds of the Louisiana State University. The geological assistance necessary to solve the many problems associated with his duties are referred to this group for recommendations. They maintain complete files on all wells drilled and completed in the State and in many instances, when opposing geological views are presented to the commissioner, he is required to use the interpretation of his own geological experts.

Having viewed some of the offshore installations in the Gulf of Mexico you probably have a clearer conception of some of the problems that are inherent with conducting operations at locations so far removed from shore bases. The department of conservation personnel are required to visit these installations and witness certain operations and perform certain tests on these wells. The offshore activities have created an additional burden upon the department's personnel. The latest activity report published by the department of conservation shows 53 rigs operating in the gulf. Rigs operating in Louisiana total 374 at that same time. You can, therefore, see that the offshore activity constitutes a substantial part of the overall activity in the State.

Louisiana Conservation Act gives to the commissioner authority to regulate secondary recovery methods or as we prefer to call them, pressure maintenance operations. We have some 106 reservoirs in 55 fields in which this type of operations including cycling operations are being conducted in the State. We are in the process of completing a very comprehensive report which is designed to show the results of such operations. We feel that these programs constitute real conservation and have increased the recoveries in a very substantial manner which in turn have increased revenues to the State as well as interested land, royalty and working interest owners. It is one of our purposes to encourage operations of this sort and the Conservation Act requires the commissioner to order the cycling of gas in any pool or portion of a pool productive of gas from which condensate or distillate may be separated or natural gas extracted and further requires the commissioner to unitize the separate ownerships within a unit created for that purpose.

No agency can operate without proper finances. The financing of the activity of the department of conservation is through legislative appropriations of moneys from the general funds of the State.

In summation, I can say that the tools with which the legislature has seen fit to place at the disposal of the conservation commissioner to accomplish thorough conservation in Louisiana are adequate. The mere fact that this act is 19 years old and that it has remained intact with only few and minor alterations proves to me, without a shadow of a doubt, that it was properly conceived and the drafters did a remarkable job since the act is as modern and up-to-date now as when first enacted.

A C T N O. 66

HOUSE BILL NO. 180

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AN ACT

To amend and re-enact Sections 204 and 205 of Chapter 3, Title 30 of the Louisiana Revised Statutes of 1950, relative to drilling permits and fees and charges to be collected by the Commissioner of Conservation; and to add and enact as an additional Section, Section 21 to Chapter 1, Title 30 of the Louisiana Revised Statutes of 1950, relative to fees and charges to be collected by the Commissioner of Conservation.

Be it enacted by the Legislature of Louisiana:

Section 1. Section 204 of Title 30 of Title 30 of the Louisiana Revised Statutes of 1950 is hereby amended and re-enacted to read as follows:

Section 204. Drilling permits; issuance; fees

A. No well or test well may be drilled in search of minerals without first obtaining from the Commissioner of Conservation a permit. The Commissioner of Conservation shall collect for each well or test well drilled in search of minerals, a drilling fee permit of $100.00. A permit shall be valid for ninety days from date of issuance and if not used within that period shall be renewable for a fee of $25.00. If the well is not drilled in ninety days after the renewal permits is issued, it shall be void and a new permit must be obtained upon the payment of an additional $100.00 permit fee. For each drilling permit that must be altered, amended, or changed after its initial issuance, an additional fee of $25.00 shall be due for each such alteration, amendment, or change, except for unit well nomenclature."

B. The issuance of the permit by the Commissioner of Conservation shall be sufficient authorization to the holder of the permit to enter upon the property covered by the permit and to drill in search of minerals thereon. No other agency or political subdivision of the state shall have the authority, and they are hereby expressly forbidden, to prohibit or in any way interfere with the drilling of a well or test in search of minerals by the holder of such a permit.

Section 2. Section 205 of Title 30 of the Louisiana Revised Statutes of 1950 is hereby amended and re-enacted to read as follows:

Section 205. Fund from drilling permit fees, disposition of.

Act No. 66

All revenues collected under R. S. 30:204 are dedicated without further appropriation, to the Department of Conservation, for the purposes of fostering, encouraging and promoting the development, production and utilization of natural resources in the state in such manner as will prevent waste, provide for the operation and development of natural resources in such a manner that a greater ultimate recovery of these resources may be assured and for the purpose of completing a geological survey of the entire State of Louisiana.'

Section 3. Chapter 1 of Title 30 of the Louisiana Revised Statutes of 1950 is hereby amended and re-enacted by adding thereto a new section to be designated R.S. 30:21 reading as follows:

"Section 21. Fees and charges of the Commissioner.

The Commissioner of Conservation shall collect the following fees in connection with his responsibilities and duties as set forth in this part.

(1) A fee of $100.00 for each separate application for public hearings; an application for hearing which contains a request for rules and regulations for more than one sand shall be considered a separate application for each sand.

(2) A fee of $25.00 for the handling and processing of each application for dual or multiple completion of wells.

(3) A fee of $25.00 for each application to commingle production from various leases and to collect and allocate the production to the appropriate owners.

(4) A fee of $25.00 for the handling and processing of each application for the approval of automatic custody transfer of oil from a lease.

All revenues collected under this section are dedicated without further appropriation to the Department of Conservation for the express purpose of defraying the cost and administration expenses incurred by the Commissioner of Conservation, his staff and the Louisiana Geological Survey in conducting the requisite hearings and processing necessitated by the aforementioned applications."

Section 4. All laws or parts of law in conflict herewith are hereby repealed.

Section 5. If any provision of this act, or the application thereof is held invalid, such invalidity shall not affect other provisions of this act.

Approved by the Acting Governor, June 10, 1959.

A true copy:

WADE O. MARTIN, JR.
Secretary of State

STATE OF LOUISIANA
DEPARTMENT OF CONSERVATION

June 18, 1959

INSTRUCTIONS AND PROCEDURES REGARDING THE COMPLETION AND FILING OF THE FOLLOWING APPLICATIONS:

1. Permits, Renewals and Amendments
2. Public Hearings
3. Dual or Multiple Completions
4. Commingling Production
5. Automatic Custody Transfer

The following instructions, in reference to the above recited applications, are relative to and in accordance with the provisions of Title 30 of Louisiana Revised Statutes of 1950 and in particular with Section 204 of Chapter 3, and Section 21 of Chapter 1 as amended and enacted by Act 66 of 1959, which becomes effective at 12:00 o'clock noon on Monday, June 29, 1959.

New and revised Application Forms entitled "Application for Permit to Drill (or Renew) for Minerals," Form MD-10-R and "Application to Amend Permit to Drill for Minerals' Form MD-10-R-A are available at the Main Office of the Department of Conservation and the various District Offices throughout the State.

1. PERMITS

A "Permit to Drill for Minerals" must be secured from the Department of Conservation before a well can be drilled in search of, or for the purpose of obtaining oil, gas, sulphur, salt or other mineral in the State of Louisiana. An application entitled "Application for Permit to Drill (or Renew) for Minerals", Form MD-10-R, must be completed - typewritten only - and filed, in duplicate, with the District Office of the Department of Conservation in which the well is located. There is a fee of $100.00 for the Permit to Drill and the $100.00 fee must accompany the application, together with 3 certified copies of the location plat, preferably drawn to a scale of 500' to the inch. The District Manager shall check all applications and approve and forward to the Baton Rouge Office for final approval, only those applications that are properly completed. If all blanks pertaining to the proposed well are not filled in, the District Manager shall return the application to the applicant for proper completion. In the line which reads 'Application for _____ well' insert which mineral the well is being drilled for. Insert the name of the zone or reservoir in which the operator proposes to complete the well for the purpose of obtaining production, in the blank following 'Zone or Reservoir of Proposed Completion'. If there are Special Orders issued by the Department of Conservation covering said Zone or Reservoir, use the Zone or Reservoir nomenclature as stipulated in the Special Orders. In the blank following 'Applicable Department of Conservation Order' insert the number of the applicable Special Order that covers the zone or reservoir of the proposed completion. If there are no Special Orders issued by the Department of Conservation applicable to said zone or reservoir, then the well being applied for falls within the jurisdiction of Statewide Orders Nos. 29-B and 29-E, and such should be inserted as the applicable Orders.

Unless actual drilling operations are begun within 90 days from the date of issuance of the 'Permit to Drill for Minerals', the permit will expire and a 'Renewal of Permit to Drill for Minerals', must be obtained. To obtain this renewal, it is necessary to complete the application entitled "Application for Permit to Drill (or Renew) for Minerals", Form MD-10-R, in the same manner as when applying for the original permit. The same procedure shall be followed with the exception that it will not be necessary to submit the location plats. There is a fee of $25.00 for said renewal permit, and the $25.00 fee must accompany the application, which must be submitted - typewritten only - in duplicate, to the District Office. The renewal shall be valid for a period of 90 days from the date of expiration or the original permit. In no instance will more than one renewal permit be allowed. If actual drilling operations are not begun within the 90 day period covered by the renewal permit, the permit will become void and a new permit must be obtained with the payment of an additional $100.00 permit fee.

For each drilling permit that must be altered, amended, or changed after its initial issuance, an additional fee of $25.00 shall be due for each such alteration, amendment, or change, except for unit well nomenclature. An application entitled "Application to Amend Permit to Drill for Minerals", Form MD-10-R-A, must be completed - typewritten only- and filed in duplicate, with the District Office of the Department of Conservation in which the well is located. The $25.00 fee must accompany the application, together with 3 certified copies of the new location plat,

preferably drawn to a scale of 500' to the inch, unless the application is to amend something other than the well location. In the event the location is unchanged, and the application is to amend the operator, the well name, the well number or any combination thereof, it will not be necessary to submit the certified location plats.

2. PUBLIC HEARINGS -

A fee of $100.00 for each separate application for public hearing must accompany each such application. The applicant shall receive a receipt, Form DC-R, immediately upon the assignment of a Docket Number to the application, and the Docket Number shall be shown thereon.

An application for public hearing which contains a request for rules and regulations for more than one sand shall be considered a separate application for each sand, and a fee of $100.00 for each sand must accompany the application.

3. DUAL OR MULTIPLE COMPLETIONS -

A fee of $25.00 for each application for dual or multiple completion of a well must accompany each such application. All requirements relative to such applications contained in Statewide Order No. 29-C, and any amendments thereto, remain in full force and effect.

If application is made to triply complete a well that is presently completed in one reservoir only, in addition to the regular permit fees, a $25.00 fee will be required for the handling and processing of the application.

Example 1 - If an operator has a singly completed well and makes application to dually complete that well after the effective date indicated herein, he must accompany his application with the regular $100.00 permit fee together with the additional $25.00 fee for handling and processing. If at some later date, should the operator elect to triply complete or quadruply complete that same well, no additional fee will be required in addition to the regular permit fee. It is the intent of this department to collect only one $25.00 processing fee with reference to a multiply completed well.

Example 2 - If an operator has a dually completed well which was so completed prior to the effective date indicated herein, and desires to triply complete or quadruply complete that same well after the effective date indicated herein, a processing fee of $25.00 must accompany his application together with the regular permit fee. Subsequent recompletions of this well, after the $25.00 processing fee has once be collected, may be done upon proper application without the $25.00 processing fee. Receipt of the $25.00 fee will be indicated on the Permit to drill.

4. COMMINGLING PRODUCTION -

A fee of $25.00 for each application to commingle production from various leases and to collect and allocate the production to the appropriate owners, must accompany each such application. All requirements relative to such applications contained in Statewide Order No. 29-D and any amendments thereto shall remain in full force and effect.

5. AUTOMATIC CUSTODY TRANSFER -

A fee of $25.00 for each application for the approval of automatic custody transfer of oil from a lease must accompany each such application. All other procedures in effect relative to such application shall remain in full force and effect.

THE ABOVE SCHEDULE OF FEES BECOMES EFFECTIVE AT 12:00 O'CLOCK NOON ON MONDAY, JUNE 29, 1959. ALL APPLICATIONS POSTMARKED LATER THAN THAT DATE MUST BE ACCOMPANIED BY THE NECESSARY FEE.

TITLE 30

MINERALS, OIL, AND GAS

CHAPTER 1. COMMISSIONER OF CONSERVATION

PART I. DEPARTMENT OF CONSERVATION

PART II. CLOSING OF WASTEFUL WELLS

Sec.

PART I. DEPARTMENT OF CONSERVATION

§ 1. Department established; commissioner; jurisdiction

There is established the State Department of Conservation, hereinafter referred to as the department, which is directed and controlled by a commissioner of conservation, whose salary shall be $10,000 per annum.

All natural resources of the state not within the jurisdiction of other state departments or agencies are within the jurisdiction of the department.

(Source: Const. of 1921, Art. 6, § 1(C); Acts 1948, No. 85, § 1.)

§ 2. Waste of oil or gas prohibited

Waste of oil or gas as defined in this chapter is prohibited.

(Source: Acts 1940, No. 157, § 1.)

§ 3. Definitions

Unless the context otherwise requires, the words defined in this Section have the following meaning when found in this chapter:

(1) "Waste," in addition to its ordinary meaning, means "physical waste" as that term is generally understood in the oil and gas industry. It includes:

(a) the inefficient, excessive, or improper use or dissipation of reservoir energy; and the location, spacing, drilling, equipping, operating, or producing of an oil or gas well in a manner which results, or tends to result, in reducing the quantity of oil or gas ultimately recoverable from a pool; and

(b) the inefficient storing of oil; the producing of oil or gas from a pool in excess of transportation or marketing facilities or of reasonable market demand; and the locating, spacing, drilling, equipping, operating, or producing of an oil or gas well in a manner causing, or tending to cause, unnecessary or excessive surface loss or destruction of oil or gas.

(2) "Commissioner" means the Commissioner of Conservation of the State of Louisiana.

(3) "Person" means any natural person, corporation, association, partnership, receiver, tutor, curator, executor, administrator, fiduciary, or representative of any kind.

(4) "Oil" means crude petroleum oil, and other hydrocarbons, regardless of gravity, which are produced at the well head in liquid form by ordinary production methods.

(5) "Gas" means all natural gas, including casinghead gas, and all other hydrocarbons not defined as oil in paragraph (4) above.

(6) "Pool" means an underground reservoir containing a common accumulation of crude petroleum oil or natural gas or both. Each zone of a general structure which is completely separated from any other zone in the structure is covered by the term "pool" as used in this Chapter.

(7) "Field" means the general area which is underlaid or appears to be underlaid by at least one pool. It includes the underground reservoir or reservoirs containing crude petroleum oil or natural gas or both. The words "field" and "pool" mean the same thing when only one underground reservoir is involved; however, "field" unlike "pool", may relate to two or more pools.

(8) "Owner" means the person who has the right to drill into and to produce from a pool and to appropriate the production either for himself or for others.

(9) "Producer" means the owner of a well capable of producing oil or gas or both.

(10) "Product" means any commodity made from oil or gas. It includes refined crude oil, crude tops, topped crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, treated crude oil, residuum, gas oil, casinghead gasoline, natural gas gasoline, naphtha, distillate, gasoline, kerosene, benzine, wash oil, waste oil, blended gasoline, lubricating oil, blends or mixtures of oil with one or more liquid products or by-products derived

from oil or gas, and blends or mixtures of two or more liquid products or by-products derived from oil or gas, whether hereinabove enumerated or not.

(11) "Illegal oil" means oil which has been produced within the state from any well in excess of the amount allowed by any rule, regulation, or order of the commissioner, as distinguished from oil produced within the state not in excess of the amount so allowed by any rule, regulation, or order, which is "legal oil."

(12) "Illegal gas" means gas which has been produced within the state from any well in excess of the amount allowed by any rule, regulation, or order of the commissioner, as distinguished from gas produced within the state not in excess of the amount so allowed by any rule, regulation, or order, which is "legal gas."

(13) "Illegal product" means any product of oil or gas, any part of which was processed or derived, in whole or in part, from illegal oil or illegal gas or from any product thereof, as distinguished from "legal product," which is a product processed or derived to no extent from illegal oil or illegal gas.

(14) "Tender" means a permit or certificate of clearance for the transportation of oil, gas, or products, approved and issued or registered under the authority of the commissioner.

(Source: Acts 1940, No. 157, § 2.)

§ 4. Jurisdiction and powers of commissioner; rules and regulations

A. The commissioner has jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas.

B. The commissioner shall make such inquiries as he thinks proper to determine whether or not waste, over which he has jurisdiction, exists or is imminent. In the exercise of this power the commissioner has the authority: to collect data; to make investigations and inspections; to examine properties, leases, papers, books, and records; to examine, survey, check, test, and gauge oil and gas wells, tanks, refineries, and modes of transportation; to hold hearings; to provide for the keeping of records and the making of reports; and to take any action as reasonably appears to him to be necessary to enforce this Chapter.

C. The commissioner has authority to make after notice and hearing as provided in this Chapter, any reasonable rules, regulations, and orders that are necessary from time to time in the proper administration and enforcement of this Chapter, including rules, regulations, or orders for the following purposes:

(1) To require the drilling, casing, and plugging of wells to be done in such a manner as to prevent the escape of oil or gas out of one

stratum to another; to prevent the intrusion of water into oil or gas strata; to prevent the pollution of fresh water supplies by oil, gas, or salt water; and to require reasonable bond with security for the performance of the duty to plug each dry or abandoned well.

(2) To require the making of reports showing the location of all oil and gas wells, and the filing of logs, electrical surveys, and other drilling records.

(3) To prevent wells from being drilled, operated, and produced in a manner to cause injury to neighboring leases or property.

(4) To prevent the drowning by water of any stratum or part thereof capable of producing oil or gas in paying quantities, and to prevent the premature and irregular encroachment of water which reduces, or tends to reduce, the total ultimate recovery of oil or gas from any pool.

(5) To require the operation of wells with efficient gas-oil ratios, and fix these ratios.

(6) To prevent blow outs, caving and seepage in the sense that conditions indicated by these terms are generally understood in the oil and gas business.

(7) To prevent fires.

(8) To identify the ownership of all oil or gas wells, producing leases, refineries, tanks, plants, structures, and all storage and transportation equipment and facilities.

(9) To regulate the shooting and chemical treatment of wells.

(10) To regulate secondary recovery methods, including the introduction of gas, air, water, or other substance into producing formations.

(11) To limit and prorate the production of oil or gas or both from any pool or field for the prevention of waste.

(12) To require, either generally or in or from particular areas, certificates of clearance or tenders in connection with the transportation of oil, gas, or any product.

(13) To regulate the spacing of wells and to establish drilling units, including temporary or tentative spacing rules and drilling units in new fields.

(14) To require interested persons to place uniform meters of a type approved by the commissioner wherever the commissioner designates on all pipelines, gathering systems, barge terminals, loading racks, refineries, or other places necessary or proper to prevent waste and the transportation of illegally produced oil or gas. These meters shall be under the supervision and control of the Department of Conservation. It shall be a violation of this Chapter, subject to the penalties provided in R.S. 30:18, for any person to refuse to attach or

install a meter when ordered to do so by the commissioner, or in any way to tamper with the meter so as to produce a false or inaccurate reading, or to have any device through which the oil or gas can be passed around the meter, unless expressly authorized by written permit of the commissioner.

(15) To require that the product of all wells shall be separated into so many million cubic feet of gaseous hydrocarbons and barrels of liquid hydrocarbons, either or both, and accurately measured wherever separation takes place. Gaseous hydrocarbon measurement shall be corrected to ten ounces above atmospheric pressure. Liquid hydrocarbons shall be measured into barrels of forty-two gallons each. Both measurements shall be corrected to sixty degrees fahrenheit.

(Source: Acts 1940, No. 157, § 3.)

§ 5. Permission to convert gas into carbon black; re-cycling gas

A. In order to prevent waste of natural gas, the commissioner may grant to bona fide applicants permits for the building and operation of plants and to burn natural gas into carbon black for the period of time fixed by the commissioner in the permit, not to exceed twenty-five years and subject to the provisions of the laws of the state and the rules and regulations of the Department. It shall be a violation of this Chapter for any person to build or operate a new plant, for these purposes without the permit required by this Section.

B. In order to prevent waste and to avoid the drilling of unnecessary wells, the commissioner shall, after notice and upon hearing, and his determination of feasibility, require the re-cycling of gas in any pool or portion of a pool productive of gas from which condensate or distillate may be separated or natural gasoline extracted, and promulgate rules to unitize separate ownership and to regulate production of the gas and reintroduction of the gas into productive formations after separation of condensate or distillate, or extraction of natural gasoline, from the gas.

(Source: Acts 1940, No. 157, § 4.)

§ 6. Hearings; notice; rules of procedure; emergencies; service of process; recordation and inspection; requests for hearings

A. The commissioner shall prescribe the rules of order or procedure in hearings or other proceedings before him under this Chapter.

B. No rules, regulation, order, or change, renewal, or extension thereof, shall, in the absence of an emergency, be made by the commissioner under the provisions of this Chapter except after a public hearing upon at least ten days' notice given in the manner and form prescribed by the commissioner. This hearing shall be held at a time and place and in the manner prescribed by the commission-

er. Any person having an interest in the subject matter of the hearing shall be entitled to be heard.

C. If the commissioner finds an existing emergency which in his judgment requires the making, changing, renewal, or extension of a rule, regulation, or order without first having a hearing, the emergency rule, regulation, or order shall have the same validity as if a hearing had been held after due notice. The emergency rule, regulation, or order shall remain in force no longer than fifteen days from its effective date. In any event, it shall expire when the rule, regulation, or order made after notice and hearing with respect to the same subject matter becomes effective.

D. Should the commissioner elect to give notice by personal service, it may be made by any officer authorized to serve process or any agent of the commissioner in the same manner as is provided by law for the service of citation in civil actions in the district courts. Proof of the service by an agent shall be by the affidavit of the person making it.

E. All rules, regulations, and orders made by the commissioner shall be in writing and shall be entered in full by him in a book kept for that purpose. This book shall be a public record and shall be open for inspection at all times during reasonable office hours. A copy of a rule, regulation, or order, certified by the commissioner, shall be received in evidence in all courts of this state with the same effect as the original.

F. Any interested person has the right to have the commissioner call a hearing for the purpose of taking action in respect to a matter within the jurisdiction of the commissioner by making a request therefor in writing. Upon receiving the request the commissioner shall promptly call a hearing. After the hearing, and with all convenient speed and in any event within thirty days after the conclusion of the hearing the commissioner shall take whatever action he deems appropriate with regard to the subject matter. In the event of the failure or refusal of the commissioner to issue an order within the period of thirty days, he may be compelled to do so by mandamus at the suit of any interested person.

(Source: Acts 1940, No. 157, § 5.)

§ 7. Orders fixing allowable productions; hearing to determine initial schedules; old fields, hearing unnecessary, summary hearing

A. An order fixing allowable production of oil or gas or making changes therein for any month or other period shall be issued by the commissioner on or before the twenty-third day of the month preceding the month for which the order is to be effective and it shall be promulgated by immediate publication in the official journal of the state.

B. (1) In the case of old fields or pools for which schedules of allowables had been previously issued, it shall not be necessary for the commissioner to have a hearing prior to the issuance of any subsequent order fixing or changing the schedule of allowables unless there is a written request for a hearing by an interested person. This provision permitting the issuance of a schedule of allowables for old fields without a hearing is an exception to the general rule requiring notice and hearing prior to the issuance of an order by the commissioner.

(2) In the event a schedule of allowables is promulgated without previous notice and hearing, an aggrieved producer of oil or gas may file with the commissioner at his office within seventy-two hours from the publication of the order, a sworn written statement, giving in detail the grounds of his complaint. Thereupon, the commissioner shall hold a hearing within forty-eight hours. At this hearing, oral or documentary evidence may be received by the commissioner in favor of and against the complaint. After the hearing, the commissioner shall summarily render a decision. If his decision is not made on or before the effective date of the order complained of, that order shall be suspended until a decision is rendered. During this period, the former order shall remain in force. This provision permitting a summary hearing shall be restricted to cases involving a complaint made against a schedule of allowables under the circumstances set forth in this Sub-section B(2).

(Source: Acts 1940, No. 157, § 6.)

§ 8. Subpoenas, and production of records; service; excuses for disobedience; enforcement of subpoenas

A. The commissioner may subpoena witnesses and require their attendance and the giving of testimony before him. He may require the production of any books, papers, or records material to the questions lawfully before him.

(1) Subpoenas shall be served by any agent of the Department of Conservation, by the sheriff, or by any other officer authorized by law to serve process in this state.

(2) No person shall be excused from attending and testifying or producing books, papers, or records, or from obeying the subpoena of the commissioner or of a court of record on the ground that the testimony or evidence required of him may tend to incriminate him or subject him to penalty or forfeiture.

(3) Nothing contained in this Sub-section shall be construed as requiring any person to produce books, papers, or records, or to testify in response to any inquiry not pertinent to some question lawfully before the commissioner or court for determination.

(4) No natural person shall be subjected to criminal prosecution or to any penalty or forfeiture on account of anything concerning

which he may be required to testify or produce evidence before the commissioner or a court.

(5) No person testifying shall be exempt from prosecution and punishment for perjury.

B. In the case of failure or refusal of a person to comply with a subpoena issued by the commissioner, or in the case of the refusal of a witness to testify or answer as to a matter regarding which he may be lawfully interrogated, any district court on the application of the commissioner may, in term time or in vacation, issue an attachment for the person to compel him to comply with the subpoena and to attend before the commissioner with the desired documents and to give his testimony upon whatever matters are lawfully required.

The court may punish for contempt those disobeying its orders as in the case of disobedience of a subpoena issued by the court or refusal to testify therein.

(Source: Acts 1940, No. 157, § 7.)

§ 9. Production from pool; drilling units; equitable share; rules and regulations

A. Whether or not the total production from a pool be limited or prorated, no rule, regulation, or order of the commissioner shall in terms or effect:

(1) Make it necessary for the producer from, or the owner of, a tract of land in the pool, in order that he may obtain the tract's just and equitable share of the production of the pool, as that share is set forth in this section, to drill and operate any well or wells on the tract in addition to the well or wells that can without waste produce this share, or

(2) Occasion net drainage from a tract unless there be drilled and operated upon the tract a well or wells in addition to the well or wells thereon that can without waste produce the tract's just and equitable share of the production of the pool.

B. For the prevention of waste and to avoid the drilling of unnecessary wells, the commissioner shall establish a drilling unit or units for each pool, except for those pools which, prior to July 31, 1940, had been developed to an extent and where conditions exist making it impracticable or unreasonable to use a drilling unit at the present stage of development. A drilling unit, as contemplated herein, means the maximum area which may be efficiently and economically drained by one well. This unit shall constitute a developed area as long as a well is located thereon which is capable of producing oil or gas in paying quantities.

C. Each well permitted to be drilled upon a drilling unit shall be drilled approximately in the center thereof, with such exception as may be reasonably necessary where it is shown, after notice and upon

hearing and the commissioner finds, that the unit is partly outside the pool or, for some other reason, a well approximately in the center of the unit would be non-productive, or where topographical conditions exist that make the drilling in the center of the unit unduly burdensome. Whenever an exception is granted, the commissioner shall take action that will offset any advantage that the person securing the exception may obtain over other producers by reason of the drilling of the well as an exception, and so that drainage from developed areas to the tract with respect to which the exception is granted will be prevented or minimized and the producer of the well drilled as an exception will be allowed to produce no more than his just and equitable share of the oil and gas in the pool, as this share is set forth in this Section.

D. Subject to the reasonable necessities for the prevention of waste, and to reasonable adjustment because of structural position, a producer's just and equitable share of the oil and gas in the pool, also referred to as a tract's just and equitable share, is that part of the authorized production of the pool, whether it be the total which could be produced without any restriction on the amount of production, or whether it be an amount less than that which the pool could produce if no restriction on amount were imposed, which is substantially in the proportion that the quantity of recoverable oil and gas in the developed area of his tract or tracts in the pool bears to the recoverable oil and gas in the total developed area of the pool, in so far as these amounts can be practically ascertained. To that end, the rules, regulations, and orders of the commissioner shall be such as will prevent or minimize reasonably avoidable net drainage from each developed area, that is, drainage not equalized by counter drainage, and will give to each producer the opportunity to use his just and equitable share of the reservoir energy. In determining each producer's just and equitable share of the production authorized for the pool, the commissioner is authorized to give due consideration to the productivity of the well or wells located thereon, as determined by flow tests, bottom hole pressure tests, or any other practical method of testing wells and producing structures, and to consider other factors and geological and engineering tests and data as may be determined by the commissioner to be pertinent or relevant to ascertaining each producer's just and equitable share of the production and reservoir energy of the field or pool.

(Source: Acts 1940, No. 157, § 8.)

§ 10. Agreements for drilling units; pooling interests; terms and conditions; expenses

A. When two or more separately owned tracts of land are embraced within a drilling unit which has been established by the commissioner as provided in R.S. 30:9B, the owners may validly agree to pool their interests and to develop their lands as a drilling unit.

(1) Where the owners have not agreed to pool their interests, the commissioner shall require them to do so and to develop their lands as a drilling unit, if he finds it to be necessary to prevent waste or to avoid drilling unnecessary wells.

(a) All orders requiring pooling shall be made after notice and hearing. They shall be upon terms and conditions that are just and reasonable and that will afford the owner of each tract the opportunity to recover or receive his just and equitable share of the oil and gas in the pool without unnecessary expense. They shall prevent or minimize reasonable avoidable drainage from each developed tract which is not equallized by counter drainage.

(b) The portion of the production allocated to the owner of each tract included in a drilling unit formed by a pooling order shall, when produced be considered as if it had been produced from his tract by a well drilled thereon.

(c) In the event pooling is required, the cost of development and operation of the pooled unit chargeable by the operator to the other interested owners shall be limited to the actual reasonable expenditures required for that purpose, including a charge for supervision. In the event of a dispute relative to these costs, the commissioner shall determine the proper costs, after notice to all interested persons and a hearing.

B. Should the owners of separate tracts embraced within a drilling unit fail to agree upon the pooling of the tracts and the drilling of a well on the unit, and should it be established by final and unappealable judgment of court that the commissioner is without authority to require pooling as provided for in Sub-section A, then, subject to all other applicable provisions of this Chapter, the owner of each tract embraced within the drilling unit may drill thereon. The allowable production therefrom shall be such proportion of the allowable for the full unit as the area of the separately owned tract bears to the full drilling unit.

(Source: Acts 1940, No. 157, § 0.)

§ 11. Allocation of allowable production

A. Whenever the commissioner limits the total amount of oil or gas which may be produced, he shall allocate the allowable production among the fields. This allocation shall be made on a reasonable basis, giving, to each field with small wells of settled production, an amount which will prevent a general premature abandonment of the wells in the field.

B. The commissioner may limit the production of a pool to an amount less than that which the pool could produce if no restriction were imposed. This limitation may be imposed either as an incident to or without a limitation of the total amount of oil or gas which may

be produced in this state. The commissioner shall prorate the allowable production among the producers in the pool on a reasonable basis so as to prevent or minimize avoidable drainage from each developed area which is not equalized by counter drainage, and so that each producer will have the opportunity to produce or receive his just and equitable share, subject to the reasonable necessities for the prevention of waste.

C. After the effective date of a rule, regulation, or order of the commissioner fixing the allowable production of oil or gas, or both, for a pool, no person shall produce from a well, lease, or property more than the allowable production which is applicable, nor shall the amount be produced in a different manner than that authorized.

(Source: Acts 1940, No. 157, § 10.)

§ 12. Court review and injunction; venue; procedure; burden of proof

An interested person adversely affected by any law of this state with respect to conservation of oil or gas, or both, or by a provision of this Chapter, or by a rule, regulation, or order made by the commissioner hereunder, or by an act done or threatened thereunder, and who has exhausted his administrative remedy, may obtain court review and seek relief by a suit for an injunction against the commissioner as defendant. Suit shall be instituted in the district court of the parish in which the principal office of the commissioner is located and shall be tried summarily. The attorney representing the commissioner may have a case set for trial at any time after ten days' notice to the plaintiff or his attorney of record. The burden of proof shall be upon the plaintiff and all pertinent evidence with respect to the validity and reasonableness of the order of the commissioner complained of shall be admissible. The law, the provision of this Chapter, or the rule, regulation, or order complained of, shall be taken as prima facie valid. This presumption shall not be overcome in connection with any application for injunctive relief, including a temporary restraining order, by verified petition or affidavit of or in behalf of the applicant. The right of review accorded by this Section shall be inclusive of all other remedies, but the right of appeal shall lie as hereinafter set forth in this Chapter.

(Source: Acts 1940, No. 157, § 11.)

§ 13. Temporary restraining order or injunction; notice and hearing; bond

A. No temporary restraining order or injunction shall be granted against the commissioner of conservation, the attorney general, or any agent, employee, or representative of the commissioner restraining the commissioner, or any of his agents, employees, or representatives, or the attorney general, from enforcing a statute of this state

relating to conservation of oil and gas, or any of the provisions of this Chapter, or any rule, regulation, or order made hereunder, except after due notice to the commissioner, and to all other defendants, and after a hearing. It shall be clearly shown to the court that the act done or threatened is without sanction of law, or that the provisions of this Chapter, or the rule, regulation, or order complained of, is invalid, and that, if enforced against the complaining party, will cause an irreparable injury. The nature and extent of the probable invalidity of the law, or provision of this Chapter, or of any rule, regulation, or order thereunder involved in the suit, shall be recited in the order or decree granting the temporary relief, as well as a clear statement of the probable damage relied upon by the court as justifying temporary injunctive relief.

B. No temporary injunction against the commissioner, or the department of conservation, or its agents, employees, or representatives, or the attorney general, shall become effective until the plaintiff shall execute a bond in an amount and upon such conditions as the court directs.

(Source: Acts 1940, No. 157, § 12.)

§ 14. Suit by commissioner for violation of law; venue; relief obtainable

Whenever it appears that a person is violating or is threatening to violate a law of this state with respect to the conservation of oil or gas, or both, or a provision of this Chapter, or a rule, regulation, or order made thereunder, the commissioner shall bring suit to restrain that person from continuing the violation or from carrying out the threat.

Venue shall be in the district court in the parish of the residence of any one of the defendants or in the parish where the violation is alleged to have occurred or is threatened.

In this suit, the commissioner may obtain injunctions, prohibitory and mandatory, including temporary restraining orders and preliminary injunctions, as the facts warrant, including, when appropriate, injunctions restraining a person from moving or disposing of illegal oil, illegal gas, or an illegal product. Any or all of these illegal commodities may, in the court's discretion, be ordered impounded or placed under the control of an agent appointed by the court.

(Source: Acts 1940, No. 157, § 13.)

§ 15. Appeal

In proceedings brought under authority of, or for the purpose of contesting the validity of, a provision of this Chapter, or of an oil or gas conservation law of this state, or of a rule, regulation, or order issued thereunder, appeals may be taken in accordance with the general laws relating to appeals. In appeals from judgments or decrees in suits to contest the validity of a provision of this Chapter, or a rule

or regulation of the commissioner hereunder, the appeals when docketed in the proper appellate court shall be placed on the preference docket of the court and may be advanced as the court directs.

(Source: Acts 1940, No. 157, § 14.)

§ 16. Suit by party in interest upon commissioner's failure to sue

If the commissioner fails to bring suit within ten days to restrain a violation as provided in R.S. 30:14, any person in interest adversely affected by the violation who has notified the commissioner in writing of the violation or threat thereof and has requested the commissioner to sue, may bring suit to prevent any or further violations, in the district court of any parish in which the commissioner could have brought suit. If the court holds that injunctive relief should be granted, the commissioner shall be made a party and shall be substituted for the person who brought the suit and the injunction shall be issued as if the commissioner had at all times been the complaining party.

(Source: Acts 1940, No. 157, § 15.)

§ 17. False reports or entries; penalty

No person shall for the purpose of evading this Chapter, or any rule, regulation or order made thereunder:

(1) Make or cause to be made any false entry or statement of fact in any report required to be made by this Chapter or by any rule, regulation or order made hereunder, or

(2) Make or cause to be made any false entry in an account, record, or memorandum kept by any person in connection with the provisions of this Chapter or of any rule, regulation, or order made thereunder, or

(3) Omit or cause to be omitted full, true, and correct entries in these accounts, records, or memoranda, of all facts and transactions pertaining to the interest or activities in the petroleum industry of a person, as may be required by the commissioner under authority given in this Chapter or by any rule, regulation or order made thereunder or,

(4) Remove out of the jurisdiction of the state, or destroy or mutilate, alter, or by any other means falsify any book, record, or other paper, pertaining to the transactions regulated by this Chapter or by any rule, regulation or order made thereunder.

Whoever violates this section shall be fined not more than five thousand dollars, or imprisoned not more than six months, or both.

(Source: Acts 1940, No. 157, § 16.)

§ 18. Penalties for violation of chapter; venue

A. Whoever knowingly and willfully violates a provision of this Chapter, or a rule, regulation or order of the commissioner made

hereunder, shall be subject to a civil penalty of not more than one thousand dollars a day for each day of violation and for each act of violation, if a penalty for the violation is not otherwise provided in this Chapter.

(1) The place of suit to recover this penalty shall be selected by the commissioner in the district court of the parish of the residence of any one of the defendants, or in the district court of the parish where the violation took place.

(2) Suit shall be at the direction of the commissioner and shall be instituted and conducted in his name by the attorney general or by the district attorney of the district under the direction of the Attorney General.

(3) The payment of any penalty shall not have the effect of changing illegal oil into legal oil, illegal gas into legal gas, or an illegal product into a legal product, nor shall payment have the effect of authorizing the sale, or acquisition, or the transportation, refining, processing, or handling in any other way, of the illegal oil, illegal gas, or illegal product, but, to the contrary, the penalty shall be imposed for each prohibited transaction relating to the illegal oil, illegal gas, or illegal product.

B. Whoever knowingly and wilfully aids or abets a person in the violation of a law of this state relating to the conservation of oil or gas, or the violation of a provision of this Chapter, or any rule, regulation, or order made thereunder, shall be subject to the same penalties provided herein for the principal violator.

(Source: Acts 1940, No. 157, § 17.)

§ 19. Sale, etc. of illegal products prohibited

A. The sale, or acquisition, or the transportation, refining, processing, or handling in any other way, of illegal oil, illegal gas, or an illegal product is unlawful.

B. Unless and until the commissioner provides a method, by which a person may have an opportunity to determine whether a contemplated transaction or sale, or acquisition, or transportation, refining, processing, or handling in any other way, involves illegal oil, illegal gas, or illegal product, no penalty shall be imposed except under certain circumstances hereinafter stated. Penalties shall be imposed for the commission of each transaction prohibited in this Section when the transactor knows that illegal oil, illegal gas, or illegal product is involved or when he could have known by the exercise of reasonable diligence or from facts within his knowledge. However, regardless of lack of actual notice or knowledge, penalties as provided in this Chapter shall apply to any sale, or acquisition, and to the transportation, refining, processing, or handling in any other way, of illegal oil, illegal gas, or illegal product, where administrative pro-

vision is made for identifying the character of the commodity as to its legality. It likewise shall be a violation for which penalties shall be imposed for any person to sell, or acquire or to transport, refine, process, or handle in any other way, any oil, gas, or product without complying with all applicable rules, regulations, or orders of the commissioner relating thereto.

(Source: Acts 1940, No. 157, § 18.)

§ 20. Illegal gas, etc., contraband; seizure and sale; procedure; disposition of proceeds

A. In addition to other remedies and penalties, all illegal oil, illegal gas, or illegal products, shall, except under the circumstances stated herein, be contraband and shall be seized and sold, and the proceeds applied as herein provided. The sale shall not take place unless the court shall find, in the proceeding provided for in this Subsection, that the commodity is contraband. Whenever the commissioner believes that illegal oil, illegal gas, or illegal product is subject to seizure and sale, he shall, through the attorney general, bring a civil action in rem in the district court of the parish where the commodity is found. Or the action may be maintained in connection with any suit or reconventional demand for injunction or for penalty relating to any prohibited transaction involving the illegal oil, illegal gas, or illegal product. Any person in interest who shows himself to be adversely affected by the seizure and sale shall have the right to intervene in the suit to protect his rights.

B. The action referred to in Sub-section A shall be strictly in rem and shall proceed in the name of the state as plaintiff against the illegal oil, illegal gas, or illegal product described in the petition, as defendant, and no bond shall be required of the plaintiff in connection therewith. Upon the filing of the petition, the clerk of the court shall issue a citation with a copy of the petition attached directed to the sheriff of the parish, or to any other officer or person the court authorizes to serve process. He shall cite all persons, without undertaking to name them, who may be interested to appear and answer within fifteen days after the issuance and service of the petition and citation. Service shall be made by posting a copy of the petition and citation upon the courthouse door of the parish where the commodity involved is alleged to be located and by posting another copy near the place where the commodity is alleged to be located. The posting of the petition and citation shall constitute constructive possession of the commodity by the state. Proof of service of citation, and the manner thereof, shall be made as is required by law.

C. Where it appears by a verified pleading on the part of the plaintiff, by affidavit, or by oral testimony, that grounds for the seizure and sale exist, the court shall issue an order of seizure. This order shall specifically describe the alleged contraband so that it

may be identified with reasonable certainty. The order shall direct the sheriff to whom it is addressed to take into his custody, actual or constructive, the commodity described and to hold it subject to the orders of the court. The sheriff shall be responsible upon his official bond for proper execution of the order.

D. The court may direct the sheriff to deliver the custody of any contraband seized by him to a sequestrator who shall act as the agent of the court and shall give bond with surety as the court directs conditioned that he will faithfully conserve the contraband which comes into his custody and possession in accordance with the orders of the court. The court may appoint an agent of the commissioner as sequestrator.

E. Any person testing the validity of a seizure or sequestration, may obtain the release of oil, gas or other products upon furnishing bond issued by a corporate surety company qualified to do business in the state in an amount exceeding by one-half the current market value of the oil, gas, or other product under seizure or sequestration. The bond shall be in favor of the sheriff and shall be conditioned upon and shall remain in full force and effect until final determination of the validity of the seizure or sequestration.

F. Sales of contraband seized under the authority of this Chapter, and notices of these sales, shall be in accordance with the laws of this state relating to the sale and disposition of property seized under a writ of fieri facias.

G. The court may order that the commodity be sold in specified lots or portions, and at stated intervals, instead of being sold at one time. Title to the amount sold shall pass as of the date of that act which is found by the court to make the commodity contraband. The amount sold shall be treated as legal oil, legal gas, or legal product in the hands of the purchaser, but the purchaser and the commodity shall be subject to all applicable laws, rules, regulations, and orders with respect to the transportation, refining, processing, or handling in any other way, of the commodity purchased.

H. The proceeds of the sale of contraband shall be applied first to the payment of the cost of the action and the expenses incident to the sale after these expenses have been approved and allowed by the court. All funds then remaining shall be paid to the department of conservation for the purpose of carrying out the provisions of this Chapter.

(Source: Acts 1940, No. 157, § 10.)

PART II. CLOSING OF WASTEFUL WELLS

§ 31. Permitting gas well to go wild or burn prohibited; capping or plugging; notice

No person shall negligently permit a natural gas well to become uncontrollable, or to wastefully burn. The owner, or person in possession of such a well shall prevent waste by escape or burning by securely closing the well by cap or plug or in any other fashion after five days written notice to do so. This notice may be given by any person with an interest in stopping the waste or, by a constable or justice of the peace of the parish wherein the well is located.

(Source: Acts 1906, No. 71, § 1; Acts 1910, No. 283, § 1.)

§ 32. Failure of owner, etc., to comply with notice; closing by department of public works; expenses

A. When an owner, or person in possession of an uncontrollable, or wastefully burning well receives the notice provided in R.S. 30:31, he shall within five days thereafter commence in good faith to close the well so as to prevent the waste of natural gas. If he fails to do so, the governor, on the written complaint of any person having an interest, shall order the State Department of Public Works to take charge of the work and close the well.

B. To secure to the state the expense incurred by the department of public works, the well and sufficient ground adjacent thereto belonging to the owner or proprietor with all rents and revenues therefrom shall be retained by the state. When the owner pays in full this expense to the state less any rents or revenues received by the state from its possession of the well, the property shall be returned to him.

C. In the event the rents and revenues are insufficient to reimburse the state for the expense of closing the well, this expense shall operate as a privilege on all property of the owner of the well. The state shall proceed to enforce this privilege by suit as in other civil actions and judgment shall be executed in the manner provided by law. If the property seized and sold brings an excess over the expense of closing the well, this excess shall be paid to the owner.

(Source: Acts 1906, No. 71, § 2; Acts 1910, No. 286, § 2.)

§ 33. Setting fire to well or permitting well to catch fire, prohibited; penalty

No person shall wilfully and intentionally set fire to a natural gas well, or negligently permit a natural gas well owned by him, or under his management, or in his possession to catch fire, or become uncontrollable, nor shall he negligently permit gas to wastefully escape or burn.

Whoever violates this Section shall be fined not less than five hundred dollars or imprisoned not less than three months or both.

(Source: Acts 1906, No. 71, § 3.)

§ 34. Abandoning gas well without closing prohibited; penalty

No person shall abandon a well in or adjacent to a natural gas field or an apparent natural gas field, without first placing a properly made plug both above and below the gas-producing sand, or otherwise sufficiently securing the well against the admission of water into the gas-producing sand.

Whoever violates this Section shall be fined not less than one hundred dollars nor more than one thousand dollars or imprisoned not less than thirty days nor more than four months, or both.

(Source: Acts 1906, No. 71, § 5.)

PART III. COMMON PURCHASER LAW

§ 41. Production of gas in excess of market demands, proportionate production

In order to conserve the natural gas in the state, whenever the full production from any common source of supply of natural gas is in excess of the market demand, then any person having the right to produce gas from the common source of supply, may take therefrom only such proportion of the natural gas that may be marketed without waste, as the natural flow of the well or wells owned or controlled by the person bears to the total natural flow of the common source of supply having due regard to the acreage drained by each well, so as to prevent the person from securing an unfair proportion of the gas therefrom. The commissioner of conservation of Louisiana may by proper order, permit the taking of a greater amount whenever he deems it reasonable or equitable.

(Source: Acts 1918, No. 270, § 1.)

§ 42. Right to purchase gas

Every person, engaged in the business of purchasing and selling natural gas in this state, shall be a common purchaser thereof, and shall purchase all of the natural gas which may be offered for sale which may be brought in pipes and connecting lines by the owner or proposed seller to its trunk lines, at the sellers' expense, or to its gathering lines, without discrimination in favor of one producer as against another, or in favor of any one source of supply as against another save as authorized by the commissioner of conservation after due notice and hearing. If a person is unable to purchase all the gas offered, then he shall purchase natural gas from each producer ratably, and each common purchaser of gas shall have the same right to purchase the production of a gas well that is not being utilized un-

der the conditions of this Section. In the event the owner of the well refuses to sell, the common purchaser shall have the same rights of action against the owner as the seller has against the common purchaser who refuses to buy, and the seller refusing to sell shall be subject to the same penalties as are provided against the common purchaser who refuses to buy. This Section shall not affect in any way a municipal corporation engaged in buying and selling natural gas.

(Source: Acts 1918, No. 270, § 2; Acts 1934, No. 118, § 2.)

§ 43. Discrimination by purchaser

No common purchaser shall discriminate between like grades and pressures of natural gas, or in favor of its own production or of production in which he may be directly or indirectly interested, either in whole or in part, but for the purpose of pro-rating the natural gas to be marketed, this production shall be treated in like manner as that of any other producer or person, and shall be taken only in the ratable proportion this production bears to the total production available for marketing.

(Source: Acts 1918, No. 270, § 3.)

§ 44. Gas to be measured by meter

All gas produced from the deposits of this state when sold shall be measured by meter and the commissioner of conservation shall, upon notice and hearing, relieve any common purchaser from purchasing gas of an inferior quality or grade, and the commissioner shall from time to time make such regulations for delivery, metering and equitable purchase and taking as conditions may necessitate.

(Source: Acts 1918, No. 270, § 4.)

§ 45. Commissioner of conservation to enforce part

The commissioner of conservation shall see that the provisions of this Part are fully and properly complied with and the district attorney in whose district a violation takes place shall, on application, bring suit if necessary to enforce the provisions of this Part. Any injunction which may be necessary shall be furnished without bond.

(Source: Acts 1918, No. 270, § 5.)

§ 46. Penalty

Whoever violates the provisions of this Part shall be fined not less than fifty dollars or more than five hundred dollars or imprisoned for not more than thirty days, or both.

(Source: Acts 1918, No. 270, § 6.)

PART IV. PRESCRIPTION OF PENALTIES

§ 51. Prescription of penalties

Any suit by an official or agency responsible for the enforcement of a law, order, or regulation governing the production, transportation and marketing of oil and gas, or products thereof, to enforce in civil proceedings a penalty by means of a money judgment or a forfeiture of property, shall be instituted within three years after the violation shall have been made known to the attorney general. This Part shall not affect a suit heretofore filed or any violation occurring prior to its effective date.

(Source: Acts 1944, No. 273, § 1.)

PART V. EXPLOITATION OF NATURAL RESOURCES

§ 61. Exploitation of natural resources by commissioner or employees prohibited

Neither the commissioner of conservation nor any salaried officer or employee of the department shall be or become:

(1) actively interested in the exploiting for personal gain of any natural resources in the state;

(2) employed by any person engaged in exploiting any natural resources of the state;

(3) an officer of or a member of the board of directors of any corporation engaging in the exploitation of natural resources of the state.

Violation of this Section shall constitute grounds for removal from office or dismissal from employment.

(Source: Acts 1942, No. 301, § 1.)

§ 62. Forfeiture of all rights acquired in violation of R.S. 30:61

Any violation of the provisions of R.S. 30:61 ipso facto operates as an immediate forfeiture to the state of all rights, property, money, or things of value acquired by the violation, from, upon, under or out of property privately owned or leased from any municipality or public board, body, commission, or agency of the state. The rights of the state respecting these forfeitures are imprescriptible.

(Source: Acts 1942, No. 301, § 3.)

§ 63. Transfer of rights acquired in violation of R.S. 30:61 null

Any sale, lease, exchange, transfer, or assignment by any of the persons mentioned in R.S. 30:61 of any rights, property, or things of value acquired in violation of that Section is null and void ab initio.

(Source: Acts 1942, No. 301, §§ 2, 4.)

CHAPTER 2. LEASES AND CONTRACTS

PART I. LEASES IN GENERAL

Sec.

PART II. LEASES BY STATE OR POLITICAL SUBDIVISIONS

SUB-PART A. STATE MINERAL BOARD

SUB-PART B. LEASES BY STATE AGENCIES

PART I. LEASES IN GENERAL

§ 101. Cancellation of right on accrual of prescription; required; liability for failure to cancel

Whenever, by reason of the accrual of prescription, any mineral rights expire, the owner or claimant thereof shall within thirty days after written demand by the land owner furnish him with an acknowledged instrument, directing the cancellation of these mineral rights on the records. Thereafter, if the owner or claimant shall fail or refuse to comply within thirty days, he shall be liable to the land owner for a reasonable attorney's fee incurred in bringing suit to have the cancellation adjudged. He shall also be liable to the land owner for all damages suffered by him by reason of his inability to contract in regard to the mineral rights because of the noncancellation. The owner or claimant shall not be liable for damages or attorney's fee if a bona fide dispute exists as to whether or not prescription has accrued against his interest.

(Source: Acts 1948, No. 209, §§ 1, 2.)

§ 102. Cancellation of lease at termination of option required; liability for failure to cancel

Whenever an optional oil or gas lease shall lapse because of the termination of the full period within which it may be kept alive by the payment of rentals, or because of failure on the part of the lessee to comply with the condition for the prevention of forfeiture, the lessee shall within ten days after written demand on the part of the lessor furnish the lessor with an acknowledged instrument, directing the cancellation of the lease on the records.

If a lessee, having been given written notice demanding cancellation of the lease, fails or refuses to comply within ten days, he shall be liable to the lessor for a reasonable attorney's fee incurred by the lessor in bringing suit to have the cancellation adjudged. He shall

also be liable to the lessor for all damages suffered by him by reason of his inability to make a lease because of the non-cancellation.

(Source: Acts 1920, No. 168, §§ 1, 2.)

§ 103. Operators to report to owners amount of oil or gas produced

Operators taking or producing oil or gas from lands who do not market through a pipe line company, shall report monthly to each owner of an oil or gas interest in the lands. These monthly reports shall show the amount of oil or gas produced from the lands during the previous calendar month, the amount disposed of, and the amount which has not been disposed of. Reports shall be sent by registered mail to each owner of a royalty, oil or gas interest, who has furnished his name and address to the operator.

(Source: Acts 1940, No. 245, § 1.)

§ 104. Failure to report punishable; fine

Whoever fails to make the reports, required of him by R.S. 30:103 shall be fined not less than twenty-five dollars, nor more than one hundred dollars for each failure to report to any individual royalty or mineral owner.

(Source: Acts 1940, No. 245, § 2.)

§ 105. Withholding payment of rentals or royalties, when unlawful

It shall be unlawful for a person acquiring mineral rights from, or mineral rights under a lease by, the last record owner and holding under an instrument sufficient in terms to transfer title or for a person purchasing mineral products to withhold payment of any rentals, royalties or other sums due to a party holding an interest in the minerals, or under the lease.

(Source: Acts 1934, No. 64, § 1.)

§ 106. Right to revenues pending test of title; effect of recorded lease

A. A person producing minerals under a lease granted by the last record owner and holding under an instrument sufficient in terms to transfer title to the land or mineral rights, shall be presumed to have derived his right from the true owner. The lessor, royalty owner, lessee or producer or persons holding from them shall be entitled to all minerals produced or to their proceeds, unless and until a suit testing title of the land or mineral rights embraced in the lease is filed in the district court of the parish in which the property is located.

B. A purchaser of minerals produced from a recorded lease granted under these conditions shall be fully protected in making payment to any party in interest under the lease unless and until the above mentioned suit should be filed and the purchaser receives notification of it by the usual postal registry receipt card. The purchaser shall

not be entitled to this protection unless he has recorded in the conveyance records of the parish in which the land is located, notice that the minerals have been and will be bought by him.

(Source: Acts 1934, No. 64, § 2.)

§ 107. Mandamus to compel payment

A writ of mandamus to compel payment of whatever may be due to a party in interest under the circumstances set out in R.S. 30:105–30:106, or under any division order, may be issued by a court of competent jurisdiction against a person liable for the payment claimed. These proceedings shall be tried by preference.

(Source: Acts 1934, No. 64, § 4.)

§ 108. R.S. 30:105–30:106 not applicable to state lands

R.S. 30:105–30:106 shall not apply to minerals produced from lands belonging to the state.

(Source: Acts 1934, No. 64, § 6; Acts 1935, Ex.Sess., No. 24, § 2.)

§ 109. Mortgage of leases and contracts lawful

Owners of mineral contracts may mortgage these contracts together with all improvements placed on the lands by them. They may issue bonds secured by these mortgages in amounts, at interest rates, and for a time which they may determine. However, no bond shall exceed the term of the contract mortgaged.

(Source: Acts 1910, No. 232, § 1.)

§ 110. Lessor's or grantee's privilege for rent, etc., not affected

Nothing in R.S. 30:109 shall affect the lessor or grantor in enforcing his privilege upon the improvements for the payment of rent or enforcement of other stipulations in the contract.

(Source: Acts 1910, No. 232, § 3.)

PART II. LEASES BY STATE OR POLITICAL SUBDIVISIONS

SUB-PART A. STATE MINERAL BOARD

§ 121. State Mineral Board created; composition and powers

The State Mineral Board shall be composed of the governor and ten members to be appointed by him. The governor shall be ex-officio chairman. The board shall be a body corporate, with its domicile at the State Capitol, may sue and be sued, and shall possess in addition to the powers herein granted, all the usual powers incident to corporations. Six members shall constitute a quorum. In case of a tie on any vote, the vote of the governor shall determine the issue.

(Source: Acts 1936, No. 93, § 1; Acts 1948, No. 58, § 1.)

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§ 122. Compensation

The appointed members shall receive no salaries, but shall receive ten dollars for each day or part thereof of actual sessions and their necessary expenses in going to, attending and returning from sessions.

(Source: Acts 1936, No. 93, § 2.)

§ 123. Meetings

The board shall meet at the call of the governor and may meet at places other than its domicile.

(Source: Acts 1936, No. 93, § 3.)

§ 124. Board may lease public lands

The State Mineral Board has authority to lease for the development and production of minerals, oil, and gas, any lands belonging to the state, or the title to which is in the public, including road beds, water bottoms, and lands adjudicated to the state at tax sale.

(Source: Act 1936, No. 93, § 4; Acts 1938, No. 80, § 2.)

§ 125. Application for lease; deposit

When a person desires to lease state lands, he shall make application to the board in writing, giving the description of the land and enclosing a certified check for fifty dollars as evidence of good faith. This sum shall be returned to the applicant if he should bid for and fail to secure the lease.

(Source: Acts 1936, No. 93, § 5; Acts 1938, No. 80, § 3.)

§ 126. Inspection; quantity of land; advertisements for bids

Upon receipt of an application accompanied by deposit, the board may cause an inspection of the land to be made, including geophysical and geological surveys. After receiving the report of the inspection, the board may offer for lease all or part of the lands described in the application. However, no lease shall contain more than five thousand acres. The board may require the Register of the State Land Office to publish in the official journal of the state, in the official journal of the parish where the lands are located, and in one daily newspaper published in New Orleans, an advertisement for a period of not less than fifteen days. This advertisement shall contain a description of the land proposed to be leased, the time when bids will be received, any other information that the board may consider necessary, and the royalty to be demanded should the board deem it to the interest of the state to call for bids on the basis of a royalty fixed by it. If the lands are situated in two or more parishes, advertisement shall appear in the official journals of all the parishes where the lands may be partly located. These advertisements need not appear oftener than once a week. The board may also cause notices to be sent to those whom it thinks would be interested in submitting

bids. The board may on its own motion and without application require the Register of the State Land Office to advertise for bids for a lease in the same manner as if an application had been made.

(Source: Acts 1936, No. 93, § 6; Acts 1940, No. 92, § 1.)

§ 127. Opening bids; minimum royalties; terms of lease

Bids may be for the whole or any particularly described portion of the land advertised. At the time mentioned in the advertisement for the consideration of bids, they shall be publicly opened. Bids received by the mineral board shall be opened at the state capitol. The mineral board has authority to accept the bid most advantageous to the state, and may lease upon whatever terms it considers proper. However, the minimum royalties to be stipulated in any lease shall be:

(1) One eighth of all oil and gas produced and saved.

(2) Seventy five cents per long ton of sulphur produced and saved.

(3) Ten cents per ton of potash produced and saved.

(4) One eighth of all other minerals produced and saved.

The board may reject any and all bids, or may lease a lesser quantity of property than advertised and withdraw the rest. However, no lease of a lesser quantity than advertised shall be granted for any less proportionate bonus and delay rental than the lesser quantity bears to the total area advertised or embraced in the most favorable bid submitted.

If all written bids are rejected, the board may immediately offer for competitive bidding a lease upon all or any designated part of the land advertised, upon terms appearing most advantageous to the state. This offering shall be subject to the board's right to reject any and all bids. No lease shall be for more than five thousand acres and none shall be for less bonus or delay rental than was offered in the most favorable written bid for the same property. Where a lease provides for delay rental, the annual rental shall not be for less than one half the cash bonus. All lands shall be accurately described in a lease.

(Source: Acts 1936, No. 93, § 7; Acts 1938, No. 80, § 4; Acts 1940, No. 92, § 2; Acts 1946, No. 370, § 1; Acts 1948, No. 244, § 1.)

§ 128. Transfers, approval by board

No transfer or assignment in relation to any lease shall be valid unless approved by the State Mineral Board.

(Source: Acts 1936, No. 93, § 8.)

§ 129. Powers and duties of board; pooling agreements; operating units

The board shall have full supervision of all mineral leases granted by the state, in order that it may determine that the terms of these

leases are fully complied with, and it has general authority to take any action for the protection of the interests of the state. It may institute actions to annul a lease upon any legal ground. The board has authority to enter into agreements or to amend a lease. However, the board shall not extend the primary term or, except as to unitization and pooling agreements as hereinafter provided, amend a lease by reducing the amount of bonus, rental, royalty, or other consideration stipulated in the lease. It may join in pooling and unitization agreements covering a lease, the mineral and royalty rights thereunder, and any other lease, mineral or royalty rights in and under any other property, so as to create, by the combination of these leases, or royalty and mineral rights, one or more operating units, as hereinafter defined. The board may agree in the event of production of minerals from any unit so created, that the lessor shall receive and accept on account of production, whether or not production is from any part of the property covered by the lease, a royalty proportionate to that part of the production or proceeds which the lessor is fairly entitled to receive. In determining this proportionate part the board may consider the surface acreage, the estimated original reserves in place, the estimated ultimate recovery, sand thickness, porosity, permeability, as determined by approved engineering practices, and any other relevant factors. This portion of the royalty shall be paid in the same manner, and subject to the same conditions, as other royalties agreed to be paid under the lease, but shall be in lieu of all other royalties which would accrue under the lease on account of production from any part of the property covered by the lease included in the unit. "Operating unit," as herein used means that number of surface acres of land which, under regular or special rules of the Commissioner of Conservation or other authority having control in the premises, or by agreement of the lessors, lessees and mineral and royalty owners, may be pooled and unitized for development and operation as a unit. An agreement creating an operating unit may provide for cycling, recycling or pressure maintenance or repressuring in fields productive of oil, gas, and gas from which condensate, distillate or other product may be separated or extracted. The commencement of operations for the drilling of a well, or production of minerals on any portion of a unit in which all or any part of the property covered by the lease is embraced shall have the same effect, under the terms of the lease as if it had occurred on the lands embraced by the lease.

(Source: Acts 1936, No. 93, § 9; Acts 1940, No. 71, § 1; Acts 1942, No. 153, § 1; Acts 1944, No. 134, § 1.)

§ 130. Register of State Land Office, powers and duties

The Register of the State Land Office shall keep the records, including all bids, proposals, assignments or transfers, pertaining to leases

and shall furnish the board such data, information, reports, descriptions, records, certified copies, and the like as the board may require.

The Register of the State Land Office is authorized to sign for the state or any agency whose lands are leased by the mineral board under Sub-part B of this Chapter, all division orders or other documents which are necessary or customary, with respect to the production and sale of oil by lessors and royalty owners after these documents have been inspected and approved by the State Mineral Board or by anyone invested with authority by the board.

(Source: Acts 1936, No. 93, § 10; Acts 1940, No. 71, § 2.)

§ 131. Surveys, reports and investigations

The Department of Public Works, parish surveyors, State Highway Engineers, Louisiana State University and Agricultural and Mechanical College and any board, department or institution of the state and the governing authorities of political subdivisions shall make such surveys, reports, and investigations, and furnish such records and information as may be required by the State Mineral Board for the purpose of determining boundaries, character, title, location and other matters relating to lands.

(Source: Acts 1936, No. 93, § 11.)

§ 132. Attorney for board

The Attorney General shall be the attorney for the board, but the board shall have the authority to employ additional counsel in special matters.

(Source: Acts 1936, No. 93, § 12.)

§ 133. Excess over minimum royalties, dedication of

Any excess above the minimum royalties set forth in R.S. 30:127 is dedicated as follows:

(1) To Louisiana State University and Agricultural and Mechanical College and to the payment of old age assistance, other social security benefits, and the State Hospital Board, to be apportioned by the governor, not exceeding two million dollars per annum.

(2) Any sum after payment of the two million dollars herein provided, shall be used in the servicing and retirement of the state debt.

(Source: Acts 1936, No. 93, § 13.)

§ 134. Roads, etc.; payment to parishes; compromise of claims

The provisions of this Sub-part shall extend to the public roads, canals, and similar properties, the title to which is in either the state or the parishes. Where road beds belonging to the parishes are leased by the board, the leases shall provide for the payment of a royalty to the parish in which production occurs of at least one-sixteenth of the minerals produced, to be used by the police jury for public purposes.

The governor, the Attorney General and the executive counsel or any two of them, may settle and compromise with the parishes or other claimants, all matters relating to lands or rights referred to in this Section, upon terms and conditions any two of them decide. In connection with agreements these officers, or any two of them, may stipulate for the reconveyance of lands to the state and for payment of royalties and rentals and the division thereof between the state and the parishes or other claimants.

(Source: Acts 1936, No. 93, § 14.)

§ 135. Secretary; salary

The board shall appoint a secretary at a salary of three thousand six hundred dollars per annum, and necessary clerical and field forces.

(Source: Acts 1936, No. 93, § 17.)

§ 136. Funds, disposition of

A. All funds belonging to the state under the terms of valid existing mineral leases entered into under this Sub-part shall be collected by and paid to the Register of the State Land Office and shall be deposited by that officer in the state treasury to the credit of the general fund. However, ten per cent of the minimum royalties received from the proceeds of leases on state owned lands shall be placed by the State Treasurer in a special fund to the credit of the parish in which production occurred. This fund shall be referred to as the "Road Fund."

The money in this road fund shall be subject to withdrawal by the State Department of Highways and shall be used exclusively by it for the construction of black top, concrete, or other hard-surface roads in the parish where production occurs, and for the operation and maintenance of automobile ferries in that parish.

B. The Register of the State Land Office may receive and receipt for all sums accruing to a state agency under a lease of its lands by the State Mineral Board under Sub-part B of this Chapter. The Register of the State Land Office shall deposit these funds in the state treasury to the credit of and subject to the order of the lessor agency. However, in case of a lease of sixteenth section or school indemnity lands, funds must be received and disposed of as provided in Subsection C of R.S. 30:154.

(Source: Acts 1936, No. 93, § 20; Acts 1938, No. 80, § 5; Acts 1940, No. 71, § 3; Acts 1940, No. 162, § 4; Acts 1948, No. 244, § 1.)

SUB-PART B. LEASES BY STATE AGENCIES

§ 151. "Agency" defined

In this Sub-part the term "agency" means a levee district, drainage district, road district, school district, school board, or other board, commission, parish, municipality, state university, state college, state penal or charitable institution or agency, unit or institution of the state or subdivision thereof.

(Source: Acts 1940, No. 162, § 1.)

§ 152. An agency may lease lands; school boards may lease sixteenth section lands

Every agency is authorized to lease its land for the development and production of minerals. School boards are authorized to lease sixteenth section and school indemnity lands for the development and production of minerals.

(Source: Acts 1940, No. 162, § 2.)

§ 153. Agencies may lease through State Mineral Board

Any agency may by resolution direct the State Mineral Board to lease its land in the manner provided in Sub-part A of this Part.

(Source: Acts 1940, No. 162, § 3.)

§ 154. Signing of papers and disposition of funds when agency leases its own lands

A. When an agency chooses not to avail itself of the provisions of R.S. 30:153 but leases its own lands, the agency shall sign all necessary or customary division orders or other documents incident to the production and sale of products under the lease.

B. When an agency leases its own lands it shall receive and receipt for all sums accruing to it and shall deposit these funds to its account.

C. In all cases where sixteenth section or school indemnity lands are leased, either by the State Mineral Board or the school board, all funds realized from these leases shall be paid to the school board of the parish where the lands are situated and credited to the current school fund of that parish.

D. In all cases where title to land exclusive of sixteenth section or school indemnity lands has been acquired by a school board for the benefit of a particular school or school district, funds realized from a lease of such lands either by the school board or the mineral board, shall be paid to the school board. The school board shall

credit these funds to a special account and apply them to the uses of the particular school for whose benefit the grant was made.

If the particular school specified in the grant no longer exists, the funds shall be placed in the general fund of the school board.

(Source: Acts 1940, No. 162, § 4; Acts 1946, No. 338, § 1.)

§ 155. Alternative procedures

If any agency determines not to avail itself of the provisions of R.S. 30:153, it shall lease no lands for mineral purposes unless a written application is made, and the lands are advertised and let in the manner provided by this Sub-part.

(Source: Acts 1940, No. 162, § 5.)

§ 156. Procedure when agency leases its own land

A person desiring to lease from a state agency shall make application with deposit to the agency in the same manner as is set forth in R.S. 30:125 for application with deposit to the mineral board. The agency shall itself advertise, receive bids at its domicile, and lease in the same manner and subject to the same restrictions applicable to leases by the State Mineral Board under R.S. 30:126 and 30:127. The agency has the same powers over leases granted by it as are granted the State Mineral Board in R.S. 30:129.

(Source: Acts 1940, No. 162, §§ 6–8, 13; Acts 1944, No. 135, § 2.)

§ 157. Execution of lease

The lease shall be executed either at the meeting when bids are received or at a regular or special meeting of the agency, and at no other time. A certified copy of the minutes of the agency granting the lease, reciting the time and manner of actual execution of the lease, shall be conclusive evidence of the facts recited in these minutes as regards third parties purchasing production.

(Source: Acts 1940, No. 162, § 9; Acts 1944, No. 133, § 1.)

§ 158. Approval of lease by board

No lease executed under the authority of this Sub-part shall be valid unless the agency obtains its approval by the State Mineral Board. A lease made under the provisions of this Sub-part which is not approved by the State Mineral Board and countersigned by the duly authorized officer of that body is null and void.

(Source: Acts 1940, No. 162, § 10; Acts 1944, No. 133, § 1.)

§ 159. State banks in liquidation, leases subject to approval, how

All mineral leases entered into by state banks in liquidation shall be subject to the approval of the State Mineral Board and of the district court having jurisdiction of the liquidations.

(Source: Acts 1940, No. 73, § 1.)

SUB-PART C. LEASES BY STATE AGENCIES; GENERAL PROVISIONS

§ 171. State departments and agencies; permits to lessees for directional drilling; permits to erect structures, etc.

Any department or agency of the state may grant on lands of which it has title, custody, or possession:

(1) A permit, lease, or servitude to engage in directional drilling in search of minerals underlying adjacent water bodies. Directional drilling is drilling deviating from the vertical plane.

(2) A permit, lease, or servitude to erect structures and enjoy all privileges on the lands necessary or convenient in the development and transporting of minerals underlying adjacent water bodies.

The five year limitation of R.S. 41:1217 shall not apply to these grants.

No grantee shall exercise any rights without first obtaining a valid mineral lease of the adjacent water bottoms.

(Source: Acts 1942, No. 77, §§ 1–3.)

§ 172. Lessees may construct breakwaters, etc.

Any person acquiring a lease from the state for the development and production of minerals from lands including water bottoms belonging to the state, shall be authorized, in the conduct of the operations under the lease to build and exclusively control, upon the shores, banks or water bottoms covered by the lease, breakwaters, platforms, fills, islands, through excavation, pumping process or otherwise, and other constructions that he may find necessary or convenient for the exploitation, production, storing, treating, refining, conveying and transporting of minerals. Should any island or fill be made within navigable waters, a permit shall first be secured from the Register of the State Land Office and approved by the commissioner of conservation.

(Source: Acts 1928, No. 218, § 1.)

§ 173. Private rights not to be affected; United States government, permission of

Existing private rights shall not be affected in any way by the rights granted in R.S. 30:171. Permission must be obtained from the United States government to construct works in navigable waters.

(Source: Acts 1928, No. 218, § 2.)

CHAPTER 3. EXPLORATION AND PROSPECTING

Sec.

§ 201. Commissioner of conservation may make state-wide geological survey

The commissioner of conservation shall complete a geological survey of the entire state in cooperation with the school of geology and the graduate school of the Louisiana State University, or otherwise at his discretion.

(Source: Acts 1934, No. 131, § 1.)

§ 202. Topographical quadrangles with contours

The commissioner of conservation shall assist in making topographical quadrangles, with contours, of the state in cooperation with the State Department of Public Works and the United States Geological Survey.

(Source: Acts 1934, No. 131, § 2.)

§ 203. State geologist and assistants; qualifications

The commissioner of conservation shall, in order to carry out the provisions of R.S. 30:202 appoint a state geologist and such technical assistants and clerks or other employees as may be necessary.

Both the state geologist and the first assistant state geologist shall be persons qualified in their profession, and possessing a degree of master of science, or its equivalent, in geology. Technical assistants shall possess a bachelor's degree from an accredited university.

(Source: Acts 1934, No. 131, § 3.)

§ 204. Drilling permit fees

The commissioner of conservation shall collect for each well or test well drilled in search of minerals, a drilling permit fee of fifty dollars. A permit shall be valid for ninety days from date of issuance, and if not used within that period shall be renewable for a fee of five dollars. If the well is not drilled in ninety days after the renewal permit is issued, it is cancelled and a new permit must be obtained with a fifty dollar fee.

(Source: Acts 1934, No. 131, § 4; Acts 1936, No. 78, § 2.)

§ 205. Fund from drilling permit fees, disposition of

All revenues collected under R.S. 30:204 are dedicated, without further appropriation, for the purposes of R.S. 30:201 through 30:207. The commissioner of conservation shall expend this fund annually as follows: fifty per cent, or as much thereof as may be necessary, shall be allotted to carry out R.S. 30:201; twenty-five per cent, or as much thereof as may be necessary, shall be allotted to carry out R.S. 30:202; the balance shall be expended by the commissioner of conservation for general scientific research in relation to the mineral resources of Louisiana.

(Source: Acts 1934, No. 131, § 5.)

§ 206. Bulletin of survey; time for completion of surveys

The results of the geological survey provided for in R.S. 30:201 shall be published in bulletin form by the Department of Conservation and the school of geology of the Louisiana State University. As nearly as possible, surveys of two parishes shall be completed within the first twelve months from the date of inauguration of the survey, and surveys of four parishes shall be completed and published annually thereafter.

(Source: Acts 1934, No. 131, § 6.)

§ 207. Office space to be furnished

The president of the Louisiana State University and the director of the school of geology shall furnish the State Department of Conservation with adequate office space to carry out the survey under R.S. 30:206.

(Source: Acts 1934, No. 131, § 7.)

§ 208. Exploration of public lands

The State Mineral Board may explore and develop the mineral resources of lands belonging to the state which it might lease under Subpart A of Part II of Chapter 2 of this Title.

(Source: Acts 1940, No. 311, § 1.)

§ 209. State mineral board, authority of

In order to carry out the provisions of R.S. 30:208, the State Mineral Board may conduct geological and geophysical surveys, may equip, drill and operate wells or mines for the production of minerals; may construct, operate and maintain necessary or convenient facilities for saving, transporting and marketing mineral production, and may do all other things which may appear to be necessary or desirable. The State Mineral Board may contract to have any of these things done.

(Source: Acts 1940, No. 311, §§ 2, 3.)

§ 210. Permits to prospect on lands over which state has mere servitude prohibited

No board, commission or department of the state shall issue a permit to any person to prospect, by means of torsion balance, seismograph explosions, mechanical device, or otherwise, for minerals, or for any other purpose, on lands which the issuer does not own in fee simple, but over which it has a servitude or right of way, without the consent of the owner of the abutting property.

(Source: Acts 1942, No. 283, § 1.)

§ 211. Geophysical and geological survey, and public lands defined

A. "Public lands" means lands belonging to the state or its agencies and which may be leased under Chapter 3 of this Title.

B. "Geophysical and geological survey" means magnetometer surveys, gravitymeter surveys, torsion balance surveys, seismograph surveys, using either the reflection or the refraction method, soil analysis surveys which tend to show the presence or absence of hydrocarbons, electrical surveys, using either the Eltran or some similar method and any method utilizing short wave radio.

(Source: Acts 1940, No. 77, § 1.)

§ 212. Permits for surveys on public lands

The commissioner of conservation has exclusive authority to grant permits to conduct geophysical and geological surveys on public lands. No person shall conduct a geophysical or geological survey on public lands without obtaining a permit. These permits shall be granted pursuant to rules promulgated by the State Mineral Board and shall be approved by the State Mineral Board. No permit shall be granted

covering lands over which the state has a mere servitude without consent of the owner of the abutting property.

(Source: Acts 1940, No. 77, § 2; Acts 1942, No. 283, § 1.)

§ 213. Furnishing state information obtained under permits

The commissioner of conservation, the State Mineral Board or any other agency of the state shall not require the holder of a permit to furnish information secured under his permit prior to obtaining from the state a mineral lease affecting the property surveyed. If the permittee becomes a mineral lessee of the state (upon the request of the commissioner of conservation or the State Mineral Board,) he shall file maps showing the location of all shot points and detector or geophone set-ups located on the property and the dates on which they were used, together with the sub-surface contours obtained as a result of the use of the points. This information shall not extend to lands beyond the boundaries of the public property surveyed. This information shall be furnished the commissioner of conservation or the State Mineral Board within ninety days after the request is made provided that ninety days have elapsed since the completion of the survey.

(Source: Acts 1940, No. 77, § 3; Acts 1942, No. 152, § 1.)

§ 214. Permit for survey entailing use of public waters or bottoms

Any person who makes or causes to be made a geophysical survey entailing the use of shot points in any lake, river, or stream bed or other bottoms, the title to which is in the public, shall obtain from the State Department of Conservation and the State Mineral Board a special permit therefor. This permit shall be granted under the rules and regulations which may from time to time be promulgated by the Department of Wildlife and Fisheries for the protection of oysters, fish, and wild life.

(Source: Acts 1940, No. 77, § 4; Acts 1942, No. 152, § 2.)

§ 215. Confidential nature of surveys and data

All surveys and data of every kind filed under R.S. 30:213 shall be confidential, and available only to the commissioner of conservation and State Mineral Board for their use in the proper administration and development of publicly owned lands.

(Source: Acts 1940, No. 77, § 5; Acts 1942, No. 152, § 3.)

§ 216. Penalty

Whoever knowingly and wilfully violates R.S. 30:211 through 30:215 or any rule or order of the State Mineral Board made thereunder shall be fined not less than one hundred dollars nor more than one thousand dollars or imprisoned for not more than six months, or both.

(Source: Acts 1940, No. 77, § 6; Acts 1942, No. 152, § 4.)

§ 217. Unauthorized prospecting on private lands; penalty

No person shall prospect for oil, gas, or other minerals by means of torsion balance, seismograph explosions, mechanical device, or any other method whatsoever, on private lands without the consent of the owner.

Whoever violates this section shall be fined not less than five hundred dollars nor more than one thousand dollars, or imprisoned not less than thirty days nor more than six months or both.

(Source: Acts 1934, No. 212, §§ 1, 2.)

§ 218. Injunction not to lie in suits to restrain exploitation for oil, etc., on state lands

No injunction shall issue against lessees of the state or state employees to restrain exploration for minerals on state lands. In all cases plaintiff's remedy shall be judicial sequestration of the product of the exploration or its proceeds until the rights of all claimants are determined.

(Source: Acts 1915, Ex.Sess., No. 20, § 1.)

§ 219. Release from sequestration

The defendant may obtain release of the sequestered product or proceeds by giving bond. This bond shall be payable to the clerk of court and in an amount fixed by the judge as being the value of the product at the time of its release, with legal interest from final judgment.

(Source: Acts 1915, Ex.Sess., No. 20, § 2.)

§ 220. Interlocutory decree for sale of sequestered oil

Prior to the release on bond, the judge may on application by either party after hearing, issue an interlocutory decree ordering the sheriff to sell the minerals at the highest market price then obtainable and to deposit the proceeds in a separate account in a bank to be designated by the court. The bank paying the highest rate of interest pending the litigation shall be selected by the judge.

(Source: Acts 1915, Ex.Sess., No. 20, § 3.)

§ 221. Aerial photographs or mosaics; filing; copies; penalty

Any person who takes photographs from the air in this state for the purpose of making aerial maps or mosaics must file a list of these photographs or mosaics within thirty days after their completion with the State Department of Conservation. On request of the department a copy shall be furnished on the same scale as it is offered for sale to the public. The cost of these copies shall be borne by the department.

This Section does not apply to any federal agency or to any person making aerial photographs or mosaics for any federal agency.

Whoever violates this Section shall be fined not less than five hundred dollars nor more than one thousand dollars, or imprisoned for not less than thirty days nor more than six months, or both.

(Source: Acts 1936, No. 211, §§ 1–5; Acts 1938, No. 133, § 1.)

TITLE 30
MINERALS, OIL, AND GAS
CHAPER 1. COMMISSIONER OF CONSERVATION
PART I. DEPARTMENT OF CONSERVATION

Sec.
11.1 Filing and recording of orders creating drilling or production units [New].

PART I. DEPARTMENT OF CONSERVATION

§ 6. Hearings, notice; rules of procedure; emergencies; service of process; recordation and inspection; request for hearings

A. The commissioner shall prescribe the rules of order or procedure in hearings or other proceedings before him under this Chapter.

B. No rules, regulation, order or change, renewal, or extension thereof, shall, in the absence of an emergency, be made by the commissioner under the provisions of this Chapter except after a public hearing upon at least ten days' notice given in the manner and form prescribed by the commissioner. This hearing shall be held at a time and place and in the manner prescribed by the commissioner. The commissioner, in his discretion, may designate a member of his staff, either an attorney, engineer or geologist, to conduct public hearings on his behalf. Any person having an interest in the subject matter of the hearing shall be entitled to be heard. Provided, however, that whenever any application shall be made to the commissioner of conservation for creation, revision or modification of any unit or units for production of oil or gas, or for adoption of any plan for spacing of wells or for cycling of gas, pressure maintenance or restoration, or other plan of secondary recovery, the applicant shall be required to file with the application two copies of a map of such unit or units or well spacing pattern or two explanations of such plan of cycling, pressure maintenance or restoration, or other secondary recovery program and at least thirty (30) days notice shall be given of the hearing to be held thereon, in the manner prescribed by the commissioner of conservation, and a copy of such plat or explanation of program shall remain on file in the office of the commissioner in Baton Rouge and in the office of the district manager of the conservation district in which the property is located, and be open for public inspection, at least thirty (30) days prior to such hearing.

C. If the commissioner finds an existing emergency which in his judgment requires the making, changing, renewal, or extension of a rule, regulation, or order without first having a hearing, the emergency rule, regulation, or order shall have the same validity as if a hearing had been held after due notice. The emergency rule, regulation, or order shall remain in force no longer than fifteen days from its effective date. In any event, it shall expire when the rule, regulation, or order made after notice and hearing with respect to the same subject matter becomes effective.

D. Should the commissioner elect to give notice by personal service, it may be made by any officer authorized to serve process or any agent of the commissioner in the same manner as is provided by law for the service of citation in civil actions in the district courts. Proof of the service by an agent shall be by the affidavit of the person making it.

E. All rules, regulations, and orders made by the commissioner shall be in writing and shall be entered in full by him in a book kept for that purpose. This book shall be a public record and shall be open for inspection at all times during reasonable office hours. A copy of a rule, regulation, or order, certified by the commissioner, shall be received in evidence in all courts of this state with the same effect as the original.

F. Any interested person has the right to have the commissioner call a hearing for the purpose of taking action in respect to a matter within the jurisdiction of the commissioner by making a request therefor in writing. Upon receiving the request the commissioner shall promptly call a hearing. After the hearing, and with all convenient speed and in any event within thirty days after the conclusion of the hearing the commissioner shall take whatever action he deems ap-

propriate with regard to the subject matter. In the event of failure or refusal of the commissioner to issue an order within the period of thirty days, he may be compelled to do so by mandamus at the suit of any interested person. As amended Acts 1954, No. 174, § 1; Acts 1954, No. 489, § 1.

R.S. 30:6 was amended by Acts 1954, No. 174, § 1, and Acts 1954, No. 489, § 1. These two amendments have been integrated and consolidated herein on the authority of R.S. 24:253.

Acts 1954, No. 489, § 1, amended R.S. 30:6 in its entirety but did not change original text of Sub-section B. It added, however, the proviso contained in Sub-section B as shown in the text above. Acts 1954, No. 174, § 1, amended only Sub-section B of this Section to permit the appointment of a member of the commissioner's staff to conduct the public hearings authorized thereunder.

§ 11.1 Filing and recording of orders creating drilling or production units

Within thirty days after the issuance thereof the commissioner of conservation of the state of Louisiana shall cause to be filed and recorded in the conveyance records of the parish or parishes in which the immovable property affected thereby is situated all orders and amendments thereof creating drilling or production units. Acts 1952, No. 516, § 1.

PART III. COMMON PURCHASER LAW

§ 46. Penalty

Whoever violates the provisions of this Part shall be fined not less than fifty dollars nor more than five hundred dollars, or imprisoned for not more than thirty days, or both. Each day the violation continues shall constitute a separate offense. As amended Acts 1952, No. 132, § 1.

CHAPTER 2. LEASES AND CONTRACTS

PART I. LEASES IN GENERAL

PART II. LEASES BY STATE OR POLITICAL SUBDIVISIONS

SUB-PART C. LEASES BY STATE AGENCIES; GENERAL PROVISIONS

PART III. LEASES ON LAND OWNED IN INDIVISION BY FIVE HUNDRED OR MORE PERSONS [NEW]

PART I. LEASES IN GENERAL

§ 103.1 Operators and producers to report to owners of unleased oil and gas interests

Whenever there is included within a drilling unit, as authorized by the commissioner of conservation, lands producing oil or gas, or both, upon which the operator or producer has no

valid oil, gas or mineral lease, said operator or producer shall report to the owners of said interests, by a sworn, detailed, itemized statement, the costs of the drilling operations of said unit within ninety calendar days from the completion of the well. Reports shall be sent by registered mail to each owner of an unleased oil or gas interest who has requested such report and furnished his name and address to the operator or producer. Added Acts 1950 No. 387, § 1.

§ 103.2 Failure to report; penalty

Whenever the operator or producer permits (1) ninety calendar days to elapse from completion of the well and (2) fifteen additional calendar days to elapse from date of receipt of written notice by registered mail from the owner or owners of unleased oil and gas interests calling attention to failure to comply with the provisions of R.S. 30:103.1, such operator or producer shall forfeit his right to demand contribution from the owner or owners of the unleased oil and gas interests for the costs of the drilling operations of the well. Added Acts 1950, No. 387, § 2.

§ 111. Payment for materials furnished or used in drilling well; market price

Owners of unleased mineral interests and lessees in any drilling unit authorized by the department of conservation of this state, shall not be liable or obligated to pay to the operator or producer for materials furnished or used in the drilling, completion, and production of any oil, gas, or mineral well drilled on said unit a sum in excess of the prevailing market price of such materials. Acts 1950, No. 526, § 1.

PART II. LEASES BY STATE OR POLITICAL SUBDIVISIONS

SUB-PART A. STATE MINERAL BOARD

§ 121. State mineral board created; composition and powers

The state mineral board shall be composed of the governor and fifteen members to be appointed by him. The governor shall be ex-officio chairman The board shall be a body corporate, with its domicile at the state capital, may sue and be sued, and shall possess in addition to the powers herein granted, all the usual powers incident to corporations. Eight members shall constitute a quorum. In case of a tie on any vote, the vote of the governor shall determine the issue. As amended Acts 1950, No. 59, § 1; Acts 1956, No. 43, § 1.

§ 122. Compensation

The appointed members shall receive no salaries, but attending members shall receive twenty-five dollars for each day or part thereof while attending regular or called board meetings, committee meetings, or attending to official business of the board, plus actual expenses. As amended Acts 1950, No. 59, § 1; Acts 1955, No. 115, § 1.

§ 125. Application for lease; deposit

When a person desires to lease state lands, he shall make application to the board in writing, giving the description of the land and enclosing a certified check for one hundred dollars as evidence of good faith. This sum shall be returned if he should bid for the lease. As amended Acts 1954, No. 671, § 1.

§ 126. Inspection; quantity of land; advertisements for bids

Upon receipt of an application accompanied by deposit, the board may cause an inspection of the land to be made, including geophysical and geological surveys. After receiving the report of the inspection, the board may offer for lease all or part of the lands described in the application. However, no lease shall contain more than five thousand acres. The board shall require the register of the state land office to publish in the official journal of the state, and in the official journal of the parish where the lands are located, an advertisement for a period of not less than fifteen days. This advertisement shall contain a description of the land proposed to be leased, the time when bids will be received, any other information that the board may consider necessary, and the royalty to be demanded should the board deem it to the interest of the state to call for bids on the basis of a royalty fixed by it. If the lands are situated in two or more parishes, advertisement shall appear in the official journals of all the parishes where the lands may be partly located. These advertisements

need not appear oftener than once a week.

The board may also cause notices to be sent to those whom it thinks would be interested in submitting bids. The board may on its own motion and without application require the Register of the state land office to advertise for bids for a lease in the same manner as if an application had been made. As amended Acts 1950, No. 388, § 1.

§ 129. Powers and duties of board; pooling agreements; operating units

The board shall have full supervision of all mineral leases granted by the state, in order that it may determine that the terms of these leases are fully complied with, and it has general authority to take any action for the protection of the interests of the state. It may institute actions to annul a lease upon any legal ground. The board has authority to enter into agreements or to amend a lease. However, the board shall not extend the primary term of any lease except as hereinafter provided. In the event the board should determine in its discretion that any lease granted prior to the effective date hereof covers and affects in whole or in part lands lying in offshore areas, then the board may in its further discretion extend the primary term of such lease for a period not to exceed two years, with rentals for the extended term to be paid at the rate specified in such lease. Further, the board shall not, except as to unitization and pooling agreements, amend a lease by reducing the amount of bonus, rental, royalty, or other consideration stipulated in the lease. It may join in pooling and unitization covering a lease, the mineral and royalty rights thereunder and any other lease, mineral or royalty rights in and under any other property, so as to create, by the combination of these leases, or royalty and mineral rights, one or more operating units, as hereinafter defined. The board may agree in the event of production of minerals from any unit so created, that the lessor shall receive and accept on account of production, whether or not production is from any part of the property covered by the lease, a royalty proportionate to that part of the production or proceeds which the lessor is fairly entitled to receive. In determining this proportionate part the board may consider the surface acreage, the estimated original reserves in place, the estimated ultimate recovery, sand thickness, porosity, permeability, as determined by approved engineering practices, and any other relevant factors. This portion of the royalty shall be paid in the same manner, and subject to the same conditions, as other royalties agreed to be paid under the lease, but shall be in lieu of all other royalties which would accrue under the lease on account of production from any part of the property covered by the lease included in the unit. "Operating unit," as herein used means that number of surface acres of land which, under regular or special rules of the commissioner of conservation or other authority having control in the premises, or by agreement of the lessors, lessees and mineral and royalty owners, may be pooled and utilized for development and operation as a unit. An agreement creating an operating unit may provide for cycling, recycling or pressure maintenance or repressuring in fields productive of oil, gas and gas from which condensate, distillate or other product may be separated or extracted. The commencement of operations for the drilling of a well, or production of minerals on any portion of a unit in which all or any part of the property covered by the lease is embraced shall have the same effect, under the terms of the lease as if it had occurred on the lands embraced by the lease. As amended Acts 1950, No. 46, § 1.

§ 130. Register of state land office, powers and duties

The Register of the state land office shall keep the records, including all bids, proposals, assignments or transfers, pertaining to leases and shall furnish the board such data, information, reports, descriptions, records, certified copies, and the like as the board may require.

The Register of the state land office is authorized to sign for the state, all division orders or other documents which are necessary or customary, with respect to the production and sale of oil by lessors and royalty owners after these documents have been inspected and approved by the state mineral board or by anyone invested with authority by the board. As amended Acts 1950, No. 290, § 1.

§ 132. Attorney for board

The Attorney General shall be the attorney for the board, but the board shall have authority to employ additional counsel and fix and pay the

compensation for such counsel, subject, however, to the authority of the Attorney General to approve such counsel and his authority to issue, under his power of appointment of assistants, a commission to such counsel as assistant attorney general. As amended Acts 1952, No. 384, § 1.

§ 133. Repealed. Acts 1952, No. 491, § 1

Section 1 of Acts 1952, No. 491, repealed this section as "being in conflict with Section 2(a) of Article IV of the Constitution, added by Act 364 of 1942."

§ 135. Secretary and other employees

The board shall employ a secretary and necessary clerical and field forces. As amended Acts 1950, No. 291, § 1.

§ 136. Funds, disposition of

All funds belonging to the state under the terms of valid existing mineral leases entered into under this Sub-part shall be collected by and paid to the Register of the State Land Office and shall be deposited by that officer in the state treasury to the credit of the general fund. The Register of the State Land Office is empowered and authorized to deduct the sum of ten thousand dollars from the first lease bonuses or rentals received after the effective date of this section and thereafter to deduct such amounts from lease bonuses or rentals as will maintain the said fund at ten thousand dollars. The Register of the State Land Office is authorized and empowered to use this fund to pay any expenses incurred under R.S. 30:126 for advertising any state-owned lands. However, ten per cent of the minimum royalties received from the proceeds of leases on state-owned lands shall be placed by the State Treasurer in a special fund to the credit of the parish in which production occurred. This fund shall be referred to as the "Road Fund". The money in this road fund shall be subject to withdrawal by the State Department of Highways and shall be used exclusively by it for the construction of blacktop, concrete, or other hard-surface roads in the parish where production occurs, and for the operation and maintenance of automobile ferries in that parish. As amended Acts 1950, No. 290, § 2; Acts 1954, No. 17, § 1.

SUB-PART B. LEASES BY STATE AGENCIES

§ 153. Agencies may lease through state mineral board

Any agency may by resolution direct the state mineral board to lease its land in the manner provided in Sub-part A of this Part. The bonus money, if any, received for the lease shall be transmitted by the state mineral board to the agency. After execution of the original lease, all rights and authority in connection therewith shall be vested in the agency to the same extent as if the agency had itself leased the land. As amended Acts 1950, No. 290, § 3.

§ 154. Signing of papers and disposition of funds when agency leases its own lands

* * * *

C. In all cases where sixteenth section or school indemnity lands are leased, either by the State Mineral Board or the school board, all funds realized from these leases shall be paid to the school board of the parish where the lands are situated and credited to the current school fund of that parish, except that in the case of school indemnity lands, the lease shall be made by the State Mineral Board only and the funds credited to the parish school board entitled thereto. As amended Acts 1952, No. 353, § 1.

§ 157. Repealed. Acts 1950, No. 292, § 1

SUB-PART C. LEASES BY STATE AGENCIES; GENERAL PROVISIONS

§ 172. Lessees may construct breakwaters, etc.

Any person holding or acquiring a lease from the state for the development and production of minerals from lands including water bottoms belonging to the state, shall be authorized, in the conduct of the operations under the lease, to build, install and exclusively control, upon the shores, banks or water bottoms covered by the lease, breakwaters, platforms, fills, islands, (through excavation, pumping process or otherwise) and other constructions and facilities that he may find necessary or convenient for the exploitation production, storing, treating, processing, refining, conveying, transport-

ing and marketing of minerals produced under such lease and under leases covering other lands in the vicinity. Should any island or fill be made within navigable waters, a permit shall first be secured from the Register of the state land office and approved by the commissioner of conservation. As amended Acts 1950, No. 74, § 1.

§ 174. Controversies between state and federal government as to ownership of submerged lands; mineral leases; agreements

In the event of a controversy between the United States and the state of Louisiana as to whether any portion of any submerged land is owned and controlled by the state of Louisiana under the provisions of the Submerged Lands Act[1] (Public Law 31, 83d Congress; 67 Stat. 29), or whether such lands are owned and controlled by the United States under the provisions of the Outer Continental Shelf Lands Act[2] (Public Law 212, 83d Congress, 67 Stat. 462), or any amendment or revision thereof, the state mineral board is authorized, with the concurrence of the attorney general of Louisiana to negiotiate and enter into agreements for and on behalf of the state of Louisiana, with any lessee or future lessee of the state of Louisiana, or to negotiate and enter into agreements or stipulations with the United States, or any present or future grantee or lessee of the United States, respecting operations under any mineral lease on such lands, or the deposit in escrow or impounding in whole or in part of bonuses, rents, royalties, and other sums payable thereunder pending the settlement or adjudication of the controversy. Payments or deposits made pursuant to any such agreement shall be considered as being in compliance with the terms of the applicable lease. Upon the final settlement or adjudication of such controversy, all sums so impounded shall be paid to the parties entitled thereto. Any sums finally determined to be payable to the state of Louisiana shall be deposited with the proper state agency in accordance with the constitution and laws of the state. Acts 1956, No. 38, § 1.

[1] 43 U.S.C.A. § 1301 et seq.
[2] 43 U.S.C.A. § 1331 et seq.

Preamble:

Acts 1956, No. 38 contained the following preamble:

"Whereas the Supreme Court of the United States has issued an order enjoining the United States and the State of Louisiana from further leasing or drilling on the submerged lands in dispute except by agreement between the federal government and the State, and there is no law of this State which authorizes any officer or agency of the State to enter into such an agreement, and

"Whereas a controversy exists between the United States and the State of Louisiana concerning the extent of Louisiana's boundaries seaward into the Gulf of Mexico, and concerning the ownership of submerged lands on the continental shelf within the boundaries of the State, and

"Whereas an immediate cessation of drilling operations on lands already leased by the State and by the United States, respectively, on such lands would create unemployment, the cancellation of drilling contracts and related operations to the great loss of the contracting parties, and would furthermore jeopardize the continuance of existing lease agreements to the great detriment and injury of the State of Louisiana, to the oil and gas industry, laborers, contractors, and others dependent upon the continued development of said submerged lands:"

§ 175. Payment of bonuses, rentals and royalties after settlement

No agreement provided for in R.S. 30:174 shall be construed or considered as a ratification by the state of Louisiana of any mineral lease covered by such agreement unless the lessee shall within ninety days after final settlement or adjudication of any such controversy pay to the state of Louisiana in addition to the funds deposited in escrow, any and all bonuses, rentals, royalties and other considerations due and payable under the terms of the said lease agreement and not theretofore paid to the state of Louisiana. The state of Louisiana, through the same authorities hereinabove set forth, shall on receipt of such payments enter into a ratification agreement with the said lessee, or at its option execute a new lease agreement in favor of the lessee on the state form then currently in use, but containing the same expiration date, rental and royalty provisions and drilling obligations as those contained in the original lease contract; provided that the terms and conditions of the lease and of the escrow agreement referred to in R.S. 30:174 have been fully complied with. Nothing herein contained shall prejudice the rights of the state in the event that the lessee shall fail to make payment of the bonuses, rentals, royalties and other considerations which may be due and payable to the state of Louisiana as provided in this Section. Acts 1956, No. 38, § 2.

§ 176. Historic boundaries unaffected

Nothing contained in R.S. 30:174-30:177 shall be construed or considered to authorize any agreement or compromise which may affect the state's

claim to its historic boundaries as redefined in R.S. 49:1, or the claim of the state of Louisiana to property and mineral rights within its said historic boundaries, and no provision hereof shall be construed to affect or modify the existing injunction against the leasing or drilling of said lands by the United States or its lessees except to the extent provided for in any agreement entered into pursuant to R.S. 30:174-30:177. Acts 1956, No. 38, § 3.

§ 177. Special authority

Sections 30:174 - 30:177 constitute special authority as herein specifically set forth and in no way derogate from the authority of the state mineral board otherwise granted by law. To the extent that the provisions of these sections may in any way be contrary to or broader than any existing law, the provisions of these sections shall prevail. Acts 1956, No. 38, § 4.

PART III. LEASES ON LAND OWNED IN INDIVISION BY FIVE HUNDRED OR MORE PERSONS [NEW]

§ 181. Request that land be leased

Where any land lying within the state of Louisiana is owned in indivision by five hundred or more persons, and the said land is not, and has not for a period of at least one year been subject to a recorded oil, gas or mineral lease, granted by all of the owners of said land, any fifty co-owners of said land shall have the right to request in writing the state mineral board to lease said land for the benefit of all of the owners thereof. Acts 1952, No. 513, § 1.

§ 182. Notice for bids

Upon receiving such a request the state mineral board shall cause notice to be inserted in the official publication of the parish in which said land is located and of the parish of East Baton Rouge, requesting bids for an oil, gas and mineral lease on the said land, provided however, the state mineral board may require a deposit sufficient to cover the estimated cost of publication. Acts 1952, No. 513, § 2.

§ 183. Procedure

In publishing the said notices and in receiving the said bids, the state mineral board shall follow the same procedure that it follows, from time to time, in the leasing of state lands for oil, gas and other mineral development as set forth in Title 30 of the Revised Statutes of 1950. Acts 1952, No. 513, § 3.

§ 184. Successful bidder; form of lease; royalty; binding effect of lease

The state mineral board is hereby authorized to execute an oil, gas and other mineral lease to the bidder who, in the discretion of the state mineral board, has submitted the most favorable bid; provided that the lease shall be in the regular form then in use by the state mineral board in leasing state lands and shall not provide any less than a ⅛ royalty for the owners of the said land; and upon the said lease being signed by the state mineral board, it shall be binding upon all of the co-owners of the said land, and their heirs, executors, administrators and assigns. Acts 1952, No. 513, § 4.

§ 185. List of co-owners

Simultaneously with the filing of the request referred to in R.S. 30:181, there shall be filed with the state mineral board a list showing the names and addresses, if known, of all of the co-owners of the said land and the undivided interest of each. The information contained in said list shall be sworn to by not less than two persons other than co-owners. If the name or address of any co-owners are unknown, the fact shall be stated. Acts 1952, No. 513, § 5.

§ 186. Distribution of funds

Any funds received under or on account of any such oil, gas or other mineral lease as rental, bonus, royalty or otherwise, shall be distributed quarterly by the state mineral board in accordance with the said list, except that if the state mineral board receives a written notice in which the right of any person whose name appears on the said list is questioned, the state mineral board shall withhold payment of said amount until the right shall be settled either by judicial determination or compromise. Acts 1952, No. 513, § 6.

§ 187. Concursus

With respect to (a) any funds the right to which is in dispute, or (b) any funds payable to an unknown owner, the state mineral board shall have the right, respectively (a) to provoke a concursus in accordance with the pre-

vailing law of this state; and (b) to deliver such amount to the public administrator of the parish of East Baton Rouge, La. Acts 1952, No. 513, § 7.

§ 188. Costs and expenses

The state mineral board shall be and it is hereby authorized to deduct from any funds received by it under any such leases executed hereunder an amount equal to ten percent of any and all funds received by it, the same to defray the costs and expenses in connection with the duties placed upon the state mineral board hereunder. Acts 1952, No. 513, § 8.

CHAPTER 3. EXPLORATION AND PROSPECTING

§ 211. Geophysical and geological survey, and public lands defined

A. "Public lands" means lands belonging to the state or its agencies and which may be leased under Chapter 2 of this Title. As amended Acts 1950, No. 316, § 18.

* * * *

§ 212. Permits for surveys on public lands

The State Mineral Board shall have exclusive authority to grant permits to conduct geophysical and geological surveys on state owned lands and water bottoms. No person shall conduct a geophysical or geological survey on state owned lands and water bottoms without obtaining a permit. These permits shall be granted pursuant to rules promulgated by the State Mineral Board. No permit shall be granted covering lands over which the state has a mere servitude without consent of the owner of the abutting property. As amended Acts 1954, No. 175, § 1.

§ 214. Permit for survey entailing use of public waters or bottoms

Any person who makes or causes to be made a geophysical survey entailing the use of shot points in any lake, river, or stream bed or other bottoms, the title to which is in the public, shall obtain from the State Mineral Board a special permit therefor. This permit shall be granted under the rules and regulations which may from time to time be promulgated by the Department of Wildlife and Fisheries for the protection of oysters, fish, and wild life. As amended Acts 1954, No. 175, § 2.

STATE OF NEW MEXICO, OIL CONSERVATION COMMISSION

In reply to your letter of June 7, 1960, I am listing the items in the same order as set out on the sheet attached to your letter:

1. Statutory basis for your agency's relationship to energy resources and energy technology, whether regulatory, research directed, etc.

See copy of our statutes which is enclosed.

2. Brief survey of the history and development of that relationship.

The New Mexico Oil Conservation Commission was created by a legislative act of 1935. Its primary purposes as set forth in the act are to prevent waste and protect correlative rights. This it has done by exercising control over the location, spacing, drilling, production, and the plugging of oil and gas wells.

3. Objectives of the program or programs as defined by statute and administrative interpretation.

To prevent the waste of oil and gas and to protect correlative rights.

4. Summary or characterization of rules, policy declarations, or directives issued for the guidance of the affected industry.

See copy of rules and regulations enclosed.

5. A statement indicating wherein your program impinges upon, meshes with, or is limited by the programs of other agencies in the energy field.

Our program meshes to some extent with the U.S. Geological Survey in that that agency exercises jurisdiction over the leasing of Federal lands and approves the applications to drill and plug wells. Wells on Federal lands, however, are spaced and prorated under our regulations.

6. The extent of existing coordination or evidence of any unresolved conflicts, if any.

The work of the two agencies is well coordinated and there are no unresolved conflicts.

7. Comments upon what seems to be the more challenging or difficult issues or obstacles involved in administration of your program.

There are no court decisions interpreting our laws, some of which are interpreted differently by different attorneys.

8. Recommendations for improving through research, by new or improved regulatory programs, or otherwise, the role of the Federal Government in assuring the energy resources necessary for "maximum production, employment, and purchasing power" called for under the Employment Act of 1946.

It is felt by our agency that it would be in the interest of conservation if some means could be found to speed up action by the Federal Power Commission upon applications for the sale and purchase of natural gas.

NEW MEXICO OIL CONSERVATION COMMISSION RULES AND REGULATIONS, REVISED DECEMBER 1, 1959

CONTENTS

A-DEFINITIONS

1. ADJUSTABLE ALLOWABLE shall mean the allowable production a well or proration unit receives after all adjustments are made.

2. ALLOCATED POOL is one in which the total oil or natural gas production is restricted and allocated to various wells therein in accordance with proration schedules.

3. ALLOWABLE PRODUCTION shall mean that number of barrels of oil or standard cubic feet of natural gas authorized by the Commission to be produced from an allocated pool.

4. BACK ALLOWABLE shall mean the authorization for production of any shortage or underproduction resulting from pipeline prorationing.

5. BARREL shall mean 42 United States Gallons measured at 60 degrees Fahrenheit and atmospheric pressure at the sea level.

6. BARREL OF OIL shall mean 42 United States Gallons of oil, after deductions for the full amount of basic sediment, water, and other impurities present, ascertained by centrifugal or other recognized and customary test.

7. BOTTOM HOLE OR SUBSURFACE PRESSURE shall mean the gauge pressure in pounds per square inch under conditions existing at or near the producing horizon.

8. BRADENHEAD GAS WELL shall mean any well producing gas through wellhead connections from a gas reservoir which has been successfully cased off from an underlying oil or gas reservoir.

9. CARBON DIOXIDE GAS shall mean noncombustible gas composed chiefly of carbon dioxide occurring naturally in underground rocks.

10. CASINGHEAD GAS shall mean any gas or vapor or both gas and vapor indigenous to and produced from a pool classified as an oil pool by the Commission. This also includes gas-cap gas produced from such an oil pool.

11. COMMISSION shall mean the Oil Conservation Commission created by Section 3, Chapter 168, Session Laws 1949.

12. COMMON PURCHASER FOR NATURAL GAS shall mean any person now or hereafter engaged in purchasing from one or more producers gas produced from gas wells within each common source of supply from which it purchases (See: Sec. 14 (d), Chap. 168, Session Laws 1949).

13. COMMON PURCHASER FOR OIL shall mean every person now engaged or hereafter engaging in the business of purchasing oil to be transported through pipe lines (See Sec. 14 (a), Session Laws 1949).

14. COMMON SOURCE OF SUPPLY see Pool.

15. CONDENSATE shall mean the liquid recovered at the surface that results from condensation due to reduced pressure or temperature of petroleum hydrocarbons existing in a gaseous phase in the reservoir.

16. CONTIGUOUS shall mean acreage joined by more than one common point, that is, the common boundary must be at least one side of a governmental quarter-quarter section.

17. CORRELATIVE RIGHTS shall mean the opportunity afforded, so far as it is practicable to do so, to the owner of each property in a pool to produce without waste his just and equitable share of the oil or gas, or both, in the pool, being an amount, so far as can be practically determined, and so far as can be practicably obtained without waste, substantially in the proportion that the quantity of recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for such purpose to use his just and equitable share of the reservoir energy (See: Sec. 26 (h), Chap. 168, 1949 Session Laws).

18. CUBIC FOOT OF GAS OR STANDARD CUBIC FOOT OF GAS, for the purposes of these rules, shall mean that volume of gas contained in one cubic foot of space and computed at a base pressure of 10 ounces per square inch above the average barometric pressure of 14.4 pounds per square inch (15.025 psia), at a standard base temperature of 60 degrees Fahrenheit.

19. DEEP POOL shall mean a common source of supply which is situated 5000 ft. or more below the surface.

20. FIELD means the general area which is underlaid or appears to be underlaid by at least one pool; and field also includes the underground reservoir or reservoirs containing such crude petroleum oil or natural gas, or both. The words field and pool mean the same thing when only one underground reservoir is involved; however, field unlike pool may relate to two or more pools (See: Sec. 26, Chap. 168, 1949 Session Laws).

21. GAS LIFT shall mean any method of lifting liquid to the surface by injecting gas into a well from which oil production is obtained.

22. GAS-OIL RATIO shall mean the ratio of the casinghead gas produced in standard cubic feet to the number of barrels of oil concurrently produced during any stated period.

23. GAS-OIL RATIO ADJUSTMENT shall mean the reduction in allowable of a high gas-oil ratio unit to conform with the production permitted by the limiting gas-oil ratio for that particular pool during a particular proration period.

24. GAS TRANSPORTATION FACILITY shall mean a pipe line in operation serving gas wells for the transportation of natural gas, or some other device or equipment in like operation whereby natural gas produced from gas

wells connected therewith can be transported or used for consumption (See: Sec. 26 (g), Chap. 168, 1949 Session Laws).

25. GAS WELL shall mean a well producing gas or natural gas from a common source of gas supply as determined by the Commission.

26. HIGH GAS-OIL RATIO PRORATION UNIT shall mean a unit with at least one producing oil well with a gas-oil ratio in excess of the limiting gas-oil ratio for the pool in which the unit is located.

27. ILLEGAL GAS shall mean natural gas produced from a gas well in excess of the allowable determined by the Commission (See: Sec. 15 (a), Chap. 168, 1949 Session Laws).

28. ILLEGAL OIL shall mean crude petroleum oil produced in excess of the allowable as fixed by the Commission (See: Sec. 15 (a), Chap. 168, 1949 Session Laws).

29. ILLEGAL PRODUCT shall mean any product of illegal gas or illegal oil (See: Sec. 15 (b), Chap. 168, 1949 Session Laws).

30. INJECTION OR INPUT WELL shall mean any well used for the injection of air, gas, water, or other fluids into any underground stratum.

31. LIMITING GAS-OIL RATIO shall mean the gas-oil ratio assigned by the Commission to a particular oil pool to limit the volumes of casinghead gas which may be produced from the various oil producing units within that particular pool.

32. LOAD OIL is any oil or liquid hydrocarbon which has been used in any remedial operation in an oil or gas well.

33. LOG OR WELL LOG shall mean a systematic detailed and correct record of formations encountered in the drilling of a well.

34. MARGINAL UNIT shall mean a proration unit that will not produce at a rate equal to the top unit allowable for the proration period for the pool.

35. MINIMUM ALLOWABLE shall mean the minimum amount of production from an oil and gas well which may be advisable from time to time to the end that production will repay reasonable lifting cost and thus prevent premature abandonment and resulting waste.

36. DUAL COMPLETION shall mean the completion of any well so as to permit the production from two common sources of supply with the production from each common source of supply completely segregated.

37. NATURAL GAS OR GAS shall mean any combustible vapor composed chiefly of hydrocarbons occurring naturally in a pool classified by the Commission as a gas pool.

38. NON-MARGINAL UNIT shall mean a proration unit that will produce at a rate equal to the top unit allowable for the proration period for the pool.

39. OFFICIAL GAS-OIL RATIO TEST shall mean the periodic gas-oil ratio test made by order of the Commission and by such method and means and in such manner as prescribed by the Commission.

40. OIL, CRUDE OIL, OR CRUDE PETROLEUM OIL shall mean any petroleum hydrocarbon produced from a well in the liquid phase and which existed in a liquid phase in the reservoir.

41. OIL WELL shall mean any well capable of producing oil and which is not a gas well as defined herein.

42. OPERATOR shall mean any person or persons who, duly authorized, is in charge of the development of a lease or the operation of a producing property.

43. OVERAGE OR OVER PRODUCTION shall mean the amount of oil or the amount of natural gas during a proration period in excess of the amount authorized on the proration schedule. (Amended by Order No. R-96-A).

44. OWNER means the person who has the right to drill into and to produce from any pool, and to appropriate the production either for himself or for himself and another (See Sec. 26 (e), Chap. 168, 1949 Session Laws).

45. PERSON means any natural person, corporation, association, partnership, receiver, trustee, guardian, executor, administrator and fiduciary of any kind (See: Sec. 26 (a), Chap. 168, 1949 Session Laws).

46. POOL means any underground reservoir containing a common accumulation of crude petroleum oil or natural gas or both. Each zone of a general structure, which zone is completely separated from any other zone in the structure, is covered by the word "pool" as used herein. "Pool" is synonymous with "common source of supply" and with "common reservoir" (See: Sec. 26 (b), Chap. 168, 1949 Session Laws).

47. POTENTIAL shall mean the properly determined capacity of a well to produce oil, or gas, or both, under conditions prescribed by the Commission.

48. PRESSURE MAINTENANCE shall mean the injection of gas or other fluid into a reservoir, either to maintain the existing pressure in such reservoir or to retard the natural decline in the reservoir pressure.

49. PRODUCER shall mean the owner of well or wells capable of producing oil or natural gas or both in paying quantities.

50. PRODUCT means any commodity or thing made or manufactured from crude petroleum oil or natural gas, and all derivatives of crude petroleum oil or natural gas, including refined crude oil, crude tops, topped crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, treated crude oil, fuel oil, residuum, gas oil, naphtha, distillate, gasoline, kerosene, benzine, wash oil, waste oil, lubricating oil, and blends or mixtures of crude petroleum oil or natural gas or any derivative thereof (See: Sec. 26 (d), Chap. 168, 1949 Session Laws).

51. PRORATION DAY shall consist of 24 consecutive hours which shall begin at 7 a.m. and end at 7 a.m. on the following day.

52. PRORATION MONTH shall mean the calendar month which shall begin at 7 a.m. on the first day of such month and end at 7 a.m. on the first day of the next succeeding month.

53. PRORATION PERIOD shall mean for oil the proration month and for gas six consecutive calendar months which shall begin at 7 a.m. on the first day of a calendar month and end at 7 a.m. on the first day of the seventh succeeding month.

54. PRORATION SCHEDULE shall mean the periodic order of the Commission authorizing the production, purchase and transportation of oil or of natural gas from the various units of oil or of natural gas proration in allocated pools.

55. RECOMPLETE shall mean the subsequent completion of a well in a different pool from the pool in which it was originally completed.

56. SECONDARY RECOVERY shall mean a method of recovering quantities of oil or gas from a reservoir which quantities would not be recoverable by ordinary primary depletion methods.

57. SHALLOW POOL shall mean a pool which has a depth range from 0 to 5000 feet.

58. SHORTAGE OR UNDER PRODUCTION shall mean the amount of oil or the amount of natural gas during a proration period by which a given proration unit failed to produce an amount equal to that authorized on the proration schedule.

59. SHUT-IN PRESSURE shall mean the gauge pressure noted at the wellhead when the well is completely shut-in. Not to be confused with bottom hole pressure.

60. TANK BOTTOMS shall mean that accumulation of hydrocarbon material and other substances which settle naturally below crude oil in tanks and receptables that are used in handling and storing of crude oil, and which accumulations contains in excess of two (2%)percent of basic sediment and water;

provided, however, that with respect to lease production and for lease storage tanks, a tank bottom shall be limited to that volume of the tank in which it is contained that lies below the bottom of the pipeline outlet thereto.

61. TOP UNIT ALLOWABLE FOR GAS shall mean the maximum number of cubic feet of natural gas, for the proration period, allocated to a gas producing unit in an allocated gas pool.

62. TOP UNIT ALLOWABLE FOR OIL shall mean the maximum number of barrels of oil daily for each calendar month allocated on a proration unit basis in a pool to non-marginal units.

63. TREATING PLANT shall mean any plant constructed for the purpose of wholly or partially or being used wholly or partially for reclaiming, treating, processing, or in any manner making tank bottoms or any other waste oils marketable.

64. UNIT OF PRORATION FOR GAS shall consist of such multiples of 40 acres as may be prescribed by special pool rules issued by the Commission.

65. UNIT OF PRORATION FOR OIL shall consist of tracts of land each containing approximately forty acres in the form of a square in accordance with the legal subdivision of the U. S. Public Land Surveys and each predominantly situated within the confines of a pool.

66. UNORTHODOX WELL LOCATION shall mean a location which does not conform to the spacing requirements established by the rules and regulations of the Commission.

67. WASTE, in addition to its ordinary meaning, shall include:

(a) Underground Waste as those words are generally understood in the oil and gas business, and in any event to embrace the inefficient, excessive, or improper use or dissipation of the reservoir energy, including gas energy and water drive, of any pool, and the locating, spacing, drilling, equipping, operating or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recovered from any pool, and the use of inefficient underground storage of natural gas.

(b) Surface Waste as those words are generally understood in the oil and gas business, and in any event to embrace the unnecessary or excessive surface loss or destruction without beneficial use, however cause, of natural gas of any type or in any form or crude petroleum oil, or any product thereof, and including the loss or destruction, without beneficial use, resulting from evaporation, seepage, leakage, or fire, especially such loss or destruction incident to or resulting from the manner of spacing, equipping, operating or producing, well or wells, or incident to or resulting from the use of inefficient storage or from the production of crude petroleum oil or natural gas, in excess of the reasonable market demand.

(c) The production of crude petroleum oil in this state in excess of the reasonable market demand for such crude petroleum oil. Such excess production causes or results in waste which is prohibited by Chapter 168, 1949 Session Laws. The words "reasonable market demand" as used herein with respect to crude petroleum oil, shall be construed to mean the demand for such crude petroleum oil for reasonable current requirements for current consumption and use within or outside of the state, together with the demand for such amounts as are reasonably necessary for building up or maintaining reasonable storage reserves of crude petroleum oil or the products thereof, or both such crude petroleum oil and products.

(d) The non-ratable purchase or taking of crude petroleum oil in this state. Such non-ratable taking and purchasing causes or results in waste, as defined in the subsections (a), (b), (c) of this section and causes waste by violating Section 12 (a), Chapter 168, 1949 Session Laws.

(e) The production in this state of natural gas from any gas well or wells, or from any gas pool, in excess of the reasonable market demand from such source for natural gas of the type produced or in excess of the capacity of gas transportation facilities for such type of natural gas. The words "reasonable market demand," as used herein with respect to natural gas, shall be construed to mean the demand for natural gas for reasonable current requirements, for current consumption and for use within or outside the state, together with the demand for such amounts as are necessary for building up or maintaining reasonable storage reserves of natural gas or products thereof, or both such natural gas and products.

B-MISCELLANEOUS RULES

RULE 1. SCOPE OF RULES AND REGULATIONS

(a) The following General Rules of statewide application have been adopted by the Oil Conservation Commission to conserve the natural resources of the State of New Mexico, to prevent waste, and to protect correlative rights of all owners of crude oil and natural gas. Special rules, regulations and orders have been and will be issued when required and shall prevail as against General Rules, Regulations and Orders if in conflict therewith. However, whenever these General Rules do not conflict with special rules heretofore or hereafter adopted, these General Rules will apply in each case.

(b) The Commission may grant exceptions to these rules after notice and hearing, when the granting of such exceptions will not result in waste but will protect correlative rights or prevent undue hardship.

RULE 2. ENFORCEMENT OF LAWS, RULES AND REGULATIONS DEALING WITH CONSERVATION OF OIL AND GAS

The Commission, its agents, representatives and employees are charged with the duty and obligation of enforcing all rules and statutes of the State of New Mexico relating to the conservation of oil and gas. However, it shall be the responsibility of all the owners or operators to obtain information pertaining to the regulation of oil and gas before operations have begun.

RULE 3. WASTE PROHIBITED

(a) The production or handling of crude petroleum oil or natural gas of any type or in any form, or the handling of products thereof, in such a manner or under such conditions or in such amount as to constitute or result in waste is hereby prohibited.

(b) All operators, contractors, drillers, carriers, gas distributors, service companies, pipe pulling and salvaging contractors, or other persons shall at all times conduct their operations in the drilling, equipping, operating, producing, plugging and abandonment of oil and gas wells in a manner that will prevent waste of oil and gas, and shall not wastefully utilize oil or gas, or allow either to leak or escape from a natural reservoir, or from wells, tanks, containers, pipe or other storage, conduit or operating equipment.

RULE 4. UNITED STATES GOVERNMENT LEASES

The Commission recognizes that all persons drilling on United States Government land shall comply with the United States government regulations. Such persons shall also comply with all applicable State rules and regulations which are not in conflict therewith. Copies of the "Sundry Notices and Reports on Wells" and the "Well Log" of the wells on U. S. Government land shall be furnished the Commission.

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RULE 5. CLASSIFYING AND DEFINING POOLS

The Commission will determine whether a particular well or pool is a gas or oil well, or a gas or oil pool, as the case may be, and from time to time classify and re-classify wells and name pools accordingly, and will determine the limits of any pool or pools producing crude petroleum oil or natural gas and from time to time re-determine such limits.

RULE 6. FORMS UPON REQUEST

Forms for written notices, requests and reports required by the Commission will be furnished upon request.

RULE 7. AUTHORITY TO COOPERATE WITH OTHER AGENCIES

The Commission may from time to time enter into arrangements with State and Federal governmental agencies, industry committees and individuals, with respect to special projects, services and studies relating to conservation of oil and gas.

C - DRILLING

RULE 101. PLUGGING BOND

(a) Any person who has drilled or is drilling or proposes to drill for oil or gas shall submit to the Commission and obtain its approval of a bond, in a form approved by the Commission, conditioned to plug such well, if dry or when abandoned, in such way as to confine the oil, gas or water in the respective strata in which they are found. The bond shall be in an amount determined by the Commission after taking into consideration the depth of the well and local conditions, but in no case shall the amount of the bond* applicable to one well only, be more than $10,000.00. Each such bond shall be executed by a responsible surety company, authorized to transact business in the State of New Mexico. In cases where the principal on the bond is drilling or operating a number of wells within the State or proposes to do so, such principal may, with the approval of the Commission, submit a blanket bond* in the amount of $10,000.00 conditioned as above provided, covering all wells which such person may at any time before such bond is released, drill or operate within this state.

(b) For the purposes of the Commission the bond required is a plugging bond, not a drilling bond, and is to endure up to and including approved plugging when the well is dry or abandoned, even though the well be a producer. Transfer of property does not release the bond. In case of transfer of property and the principal desires to be released from the bond, he should proceed as follows:

(1) The principal on the bond should notify the Commission in writing that the well, or wells describing each well by 40-acre tract, Section, Township and Range, has or have been transferred to a certain transferee, for the purpose of ownership or operation.

(2) On the same instrument the transferee should recite that he accepts such transfer and accepts the responsibility of such well or wells under his bond tendered therewith or under his blanket bond on file with the Commission.

(c) When the Commission has approved the transfer, the transferror is immediately released of the plugging responsibility of the well or wells as the case may be, and if such well or wells include all the wells within the responsibility of the transferror's bond, such bond will be released upon written notice by the Commission to that effect.

(d) The transferee of any oil or gas well or of the operation of any such well shall be responsible for the plugging of any such well and for that purpose shall submit a new plugging bond or produce the written consent of the surety of the prior plugging bond that the latter's responsibility shall continue.

(e) When the well or wells involved, or any such wells, are located on a state oil and gas lease, and the surface of the land involved was sold by the state prior to such oil and gas lease, such bond may, at the election of the principal, be

* Both forms - for one-well bond and blanket bond form-distributed from Commission office at Santa Fe.

conditioned not only for the plugging of such well or wells as above provided, but also to secure the payment of such damages to the livestock, range, water, crops or tangible improvements on such land as may be suffered by such purchaser or his successors in interest by reason of the development, use and occupation of the land resulting from such oil and gas leases. Any bond so conditioned must be approved, not only by the Commission, but by the Commissioner of Public Lands, in his capacity as such.

(f) Bonds conditioned to protect surface owners as aforesaid shall cover liability incurred during the entire period of oil and gas operations by the principal on the lands involved.

(g) The Commission will in writing advise the principal and sureties on any bond as to whether the plugging is approved, in order that, if the plugging is approved, liability under such bond may be formally terminated.

(h) The Secretary of the Commission is vested with power to act for the Commission as to all matters within this rule.

RULE 102. NOTICE OF INTENTION TO DRILL

Prior to the commencement of operations, notice shall be delivered to the Commission of intention to drill any well for oil or gas and approval obtained on Form C-101.

RULE 103. SIGN ON WELLS

Every drilling and producible well shall be identified by a sign, posted on the derrick or not more than 20 feet from such well, and such signs shall be of durable construction and the lettering thereon shall be kept in a legible condition and shall be large enough to be legible under normal conditions at a distance of 50 feet. The wells on each lease or property shall be numbered in non-repetitive, logical and distinctive sequence. Each sign shall show the number of the well, the name of the lease (which shall be different or distinctive for each lease), the name of the lessee, owner or operator, and the location by quarter section, township and range.

RULE 104. WELL SPACING: ACREAGE REQUIREMENTS FOR DRILLING TRACTS

(a) Any well which is to be drilled a distance of one mile or more from another well which has produced oil or gas from the formation to which the proposed well is projected, or one mile or more from the outer boundary of any defined pool which has produced oil or gas from the formation to which the proposed well is projected, shall be classified as a wildcat well. Any well which is to be drilled less than one mile from the outer boundary of a defined oil or gas pool which has produced oil or gas from the formation to which the proposed well is projected shall be spaced, drilled, operated, and prorated in accordance with the regulations in effect in the nearest such pool, provided that the well is completed in the formation to which it was projected. Provided further, that any well completed in a formation other than the one to which it was originally projected shall be operated and prorated in accordance with the rules and regulations in effect in the nearest pool within one mile which is producing from the formation in which said well is completed. If there

is no designated pool for the aforesaid formation within one mile, the well shall be classified as a wildcat well.

(b) (1) Any well classified as a wildcat shall be located on a tract consisting of approximately 40 surface contiguous acres substantially in the form of a square which is a quarter-quarter section or lot, being a legal subdivision of the U. S. Public Land Surveys and shall be located not closer than 330 feet to any boundary line of such tract, except as noted in paragraph (2) below.

(2) In San Juan, Rio Arriba, and Sandoval Counties, a wildcat well which is projected to a known gas producing horizon shall be located on a designated drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section being a legal subdivision of the U. S. Public Land Surveys, and shall be located 990 feet from the outer boundaries of the tract, provided however, that a tolerance of plus or minus 200 feet is permissible. Provided further, that no well shall be drilled closer than 130 feet to any quarter-quarter section or subdivision inner boundary. Provided further, that the district supervisor of the Commission shall have authority to grant approval for the spacing of any wildcat well in accordance with paragraph (b), subsection (1) above when such wildcat well is projected to an oil-producing horizon as recognized by the Commission. In the event gas production is encountered in a well which was projected to an oil-producing horizon and which is located according to paragraph (b), subsection (1) above but does not conform to the above-described gas well location rule, it shall be necessary for the operator to bring the matter to a hearing before approval for the production of gas can be given. In the event oil production is encountered in a well which was projected to a gas-producing horizon and which is located according to the above-described gas well location rule but does not conform to paragraph (b), sub-section (1) above, it shall be necessary for the operator to bring the matter to a hearing before approval for the production of oil can be given.

(c) Each well drilled within a defined oil pool shall be located on a tract consisting of approximately 40 surface contiguous acres substantially in the form of a square which is a legal sub-division of the United States Public Land Surveys or on a governmental quarter-quarter section or lot and shall not be drilled closer than 330 feet to any boundary line of such tract or closer than 660 feet to the nearest well drilling to or capable or producing from the same pool.

(d) (1) Each well drilled within a defined gas pool shall be located on a designated drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section being a legal subdivision of the U. S. Public Land Surveys and shall not be drilled closer than 660 feet to any outer boundary line of the tract nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary nor closer than 1320 feet to a well drilling to or capable of producing from the same pool, except as noted in paragraph (2) below.

(2) In San Juan, Rio Arriba, and Sandoval Counties, a well drilled within a defined gas pool shall be located on a designated drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section being a legal subdivision of the U. S. Public Land Surveys and shall be located 990 feet from the outer boundaries of the tract, provided however,

that a tolerance of plus or minus 200 feet is permissible. Provided further, that no well shall be drilled closer than 130 feet to any quarter-quarter section or subdivision inner boundary.

(e) Notice of Intention to Drill (C-101) for any well shall designate the exact legal subdivision allotted to the well and no C-101 will be approved by the Commission or any of its agents without proper designation of acreage.

(f) The Secretary of the Commission shall have authority to grant an exception to the well location requirements of (b), (c), and (d) above without notice and hearing where application has been filed in due form and

1. The necessity for the unorthodox location is based on topographical conditions, and

2. (a) The ownership of all oil and gas leases within a radius of 660 feet of the proposed location is common with the ownership of the oil and gas leases under the proposed location, except in San Juan, Rio Arriba, and Sandoval Counties, where the radius shall be 790 feet from the proposed location, or

(b) All owners of oil and gas leases within such radius consent in writing to the proposed location.

(c) In lieu of paragraph 2 (b) of this rule the applicant may furnish proof of the fact that said offset operators were notified by registered mail of his intent to drill an unorthodox location. The Secretary-Director of the Commission may approve the application if, after a period of twenty days following the mailing of said notice, no operator has made objection to the drilling of the unorthodox location.

(g) Whenever an exception is granted, the Commission may take such action as will offset any advantage which the person securing the exception may obtain over other producers by reason of the unorthodox location.

(h) If the drilling tract is within an allocated oil pool or is placed within such allocated pool at any time after completion of the well and the drilling tract consists of less than 39 1/2 acres or more than 40 1/2 acres, the top unit allowable for such well shall be increased or decreased in the proportion that the number of acres in the drilling tract bears to 40.

(i) If the drilling tract is within an allocated gas pool or is placed within such allocated pool at any time after completion of the well and the drilling tract consists of less than 158 acres or more than 162 acres, the top unit allowable for such well shall be increased or decreased in the proportion that the number of acres in the drilling tract bears to 160.

(j) In computing acreage under (h) and (i) above, minor fractions of an acre shall not be counted but 1/2 acre or more shall count as 1 acre.

(k) The provisions of (h) and (i) above shall apply only to wells completed after January 1, 1950. Nothing herein contained shall affect in any manner any well completed prior to the effective date of this rule and no adjustments shall be made in the allowable production for any such wells by reason of these rules.

(l) In order to prevent waste the Commission may, after notice and hearing, fix different spacing requirements and require greater acreage for drilling tracts in any defined oil pool or in any defined gas pool notwithstanding the provisions of (b) and (c) above.

(m) The Commission may approve the pooling for communitization of fractional lots of 20.49 acres or less with another oil proration unit when:

1. The units involved are contiguous;

2. Part of the same basic lease, carrying the same royalty interest; and

3. The ownership of the units involved is common.

Application to the Commission for pooling shall be accompanied by three (3) copies of a certified plat showing the dimensions and acreage involved in the pooling, the ownership of all leases and royalty interests involved, and the location of any proposed wells.

Applicants shall furnish all operators who directly offset the units involved with a copy of the application to the Commission, and applicant shall include with his application a written stipulation that all offset operators have been properly notified. In this instance, offset operators shall include only those operators who have offset properties within the State of New Mexico. The Commission shall wait at least ten (10) days before approving any such pooling, and shall approve such pooling only in the absence of objection from any offset operator. In the event that an operator objects to the pooling, the Commission shall consider the matter only after proper notice and hearing.

The Commission may waiver the ten-day waiting period requirement if the applicant furnishes the Commission with the written consent to the pooling by all offset operators involved.

The Commission may consider that the requirements of sub-paragraphs 2 and 3 of Paragraph (m) of this rule have been fulfilled if the applicant furnishes with each copy of each application to the Commission a copy of an executed pooling agreement communitizing the units involved.

Each well drilled on any communitized tract shall be located in the approximate geographical center of the combined units with a tolerance of 150 feet for topographical conditions, but in any event shall not be located closer than 330 feet to the outer boundaries of the proposed proration unit or communitized tract.

RULE 105. PIT FOR CLAY, SHALE AND DRILL CUTTINGS

In order to assure a supply of proper material for mud-laden fluid to confine oil, gas, or water to their native strata during the drilling of any well, operators shall provide before drilling is commenced an adequate pit for the accumulation of drill cuttings.

RULE 106. SEALING OFF STRATA

(a) During the drilling of any oil or natural gas well, all oil, gas, and water strata above the producing horizon shall be sealed or separated in order to prevent their contents from passing into other strata.

(b) All fresh waters and waters of present or probable value for domestic, commercial or stock purposes shall be confined to their respective strata and shall be adequately protected by methods approved by the Commission. Special precautions by methods satisfactory to the Commission shall be taken in drilling and abandoning wells to guard against any loss of artesian water from the strata in which it occurs, and the contamination of artesian water by objectionable water, oil or gas.

(c) All water shall be shut off and excluded from the various oil and gas bearing strata which are penetrated. Water shut-offs shall ordinarily be made by cementing casing.

RULE 107. CASING AND TUBING REQUIREMENTS

(a) All wells drilled for oil or natural gas shall be completed with a string of casing which shall be properly cemented at a sufficient depth to protect adequately the oil or natural gas bearing strata to be produced. In addition thereto, such other casing and cement shall be used as necessary in order to seal off all oil, gas, and water strata which may be encountered in the well, except the interval(s) to be produced.

Sufficient cement shall be used on surface casing to fill the annular space back of the casing to the top of the hole, provided however, that authorized field personnel of the Commission may, at their discretion, allow deviations from the foregoing requirement when known conditions in a given area render the same impracticable.

All cementing shall be by pump and plug method unless some other method is expressly authorized by the Commission.

All casing strings shall be tested and proved satisfactory as provided in paragraph (c) below.

(b) After cementing, but before commencing tests required in paragraph (c) below, all casing strings shall stand cemented in accordance with Option 1 or Option 2 below. Regardless of which option is taken, the casing shall remain stationary and under pressure for at least eight hours after the cement has been placed. Casing shall be considered to be "under pressure" if some acceptable means of holding pressure is used or if one or more float valves are employed

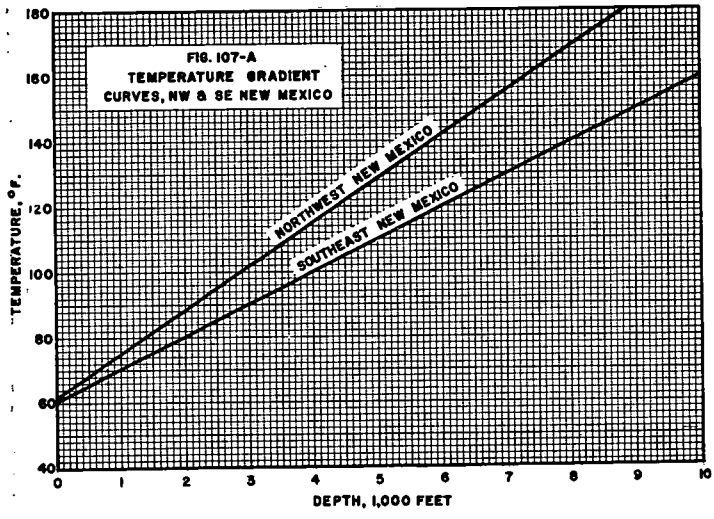
FIG. 107-A
TEMPERATURE GRADIENT
CURVES, NW & SE NEW MEXICO
NORTHWEST NEW MEXICO
SOUTHEAST NEW MEXICO
TEMPERATURE, °F.
180
160
140
120
100
80
60
40
0
1
2
3
4
5
6
7
8
9
10
DEPTH, 1,000 FEET

Operators using the compressive strength criterion (Option 2) shall report the following information on Form C-103:

(1) Volume of cement slurry (cubic feet).
(2) Brand name of cement and additives, percent additives used, and sequence of placement if more than one type cement slurry is used.
(3) Approximate temperature of cement slurry when mixed.
(4) Estimated minimum formation temperature in zone of interest.
(5) Estimate of cement strength at time of testing.
(6) Actual time cement in place prior to starting casing test.

(c) All casing strings except conductor pipe shall be tested after cementing and before commencing any other operations on the well. Form C-103 shall be filed for each casing string reporting the grade and weight of pipe used. In the case of combination strings utilizing pipe of varied grades or weights, the footage of each grade and weight used shall be reported. The results of the casing test, including actual pressure held on pipe and the pressure drop observed shall also be reported on the same Form C-103.

(1) Casing strings in wells drilled with rotary tools shall be pressure tested. Minimum casing test pressure shall be approximately one-third of the manufacturer's rated internal yield pressure except that the test pressure shall not be less than 600 pounds per square inch and need not be greater than 1500 pounds per square inch. In cases where combination strings are involved, the above test pressures shall apply to the lowest pressure rated casing used. Test pressures shall be applied for a period of 30 minutes. If a drop of more than 10 percent of the test pressure should occur, the casing shall be considered defective and corrective measures shall be applied.

(2) Casing strings in wells drilled with cable tools may be tested as outlined in sub-paragraph (c) (1) above, or by bailing the well dry in which case the hole must remain satisfactorily dry for a period of at least one (1) hour before commencing any further operations on the well.

(d) (1) All flowing oil wells equipped with casing larger in size than 2-7/8 inch OD shall be tubed.

(2) All gas wells equipped with casing larger in size than 2-7/8 inch OD shall be tubed.

(3) Tubing shall be set as near the bottom as practical and tubing perforations shall not be more than 250 feet above the top of the pay.

(4) The Secretary-Director of the Commission may, upon proper application, grant administrative exceptions to the provisions of sub-paragraphs (2)

and (3) above, without notice and hearing, provided waste will not be caused thereby.

(e) The Commission's District Supervisors or their representatives shall have authority to approve "slim-hole" completions without the necessity for administrative approval or notice and hearing when the following conditions exist:

(1) The well is to be completed with a total depth of 5,000 feet or less,

(2) The well is not a wildcat (It is not more than one mile from an existing well producing from the same common source of supply to which it is projected),

(3) No known corrosive or pressure problems exist which might make the "slim-hole" method of completion undesirable,

(4) The well will not be a dual completion,

(5) The tubing used as a substitute for casing will be either 2-3/8 inch OD or 2-7/8 inch OD.

RULE 108. DEFECTIVE CASING OR CEMENTING

In any well that appears to have a defective casing program, faulty cemented or corroded casing which will permit or may create underground waste, the operator shall proceed with diligence to use the appropriate method and means to eliminate such hazard of underground waste. If such hazard of waste cannot be eliminated, the well shall be properly plugged and abandoned.

RULE 109. BLOW-OUT PREVENTION

In drilling in areas where high pressures are likely to exist, all proper and usual precautions shall be taken for keeping the well under control, including the use of blow-out preventers and high pressure fittings attached to properly cemented casing strings.

RULE 110. PULLING OUTSIDE STRINGS OF CASING

In pulling outside strings of casing from any oil or gas well, the space outside the casing left in the hole shall be kept and left full of mud-laden fluid or cement of adequate specific gravity to seal off all fresh and salt water strata and any strata bearing oil or gas not producing.

RULE 111. DEVIATION TESTS

(a) When any well is drilled or deepened with rotary tools, tests to determine the deviation from the vertical shall be taken. When the deviation from the vertical in any 500 foot interval average more than 5 degrees, a directional survey shall be filed with the Commission before any oil or gas from the well is sold so as to determine that the bottom of the hole is on the lease where the well is drilled.

(b) A deviational and directional survey shall be made and filed with the Commission on any well utilizing a whipstock or any method of deviating the well-bore in a predetermined direction except to sidetrack junk in the hole, straighten a crooked hole or to control a blow-out. Special permits may be obtained to directionally drill in a predetermined direction as limited above, only after a hearing before the Commission.

RULE 112-A MULTIPLE COMPLETIONS

I. The multiple completion of any well may be permitted only by order of the Commission after notice and hearing, except as hereinafter provided. Multiple completion of any well without prior approval by the Commission shall be solely at the operator's risk and shall in no way commit the Commission to subsequent approval thereof.

II. The Secretary-Director of the Commission shall have the authority to grant an exception to the requirements of Rule 112-A (I) and approve the dual completion of a well without notice and hearing where application has been filed in due form; and

(a) The well is to be dually completed within the limits of two defined pools or within one mile thereof, and the Commission has previously authorized the dual completion of a well in the same zones as proposed, after notice and hearing; or the well is to be dually completed outside the limits of a defined pool and there is a dual completion in the same zones within one mile of the proposed dual completion which has previously been authorized by the Commission after notice and hearing, provided however that in Rio Arriba, San Juan, and Sandoval Counties, a proposed gas-gas dual completion may be approved even though it is not within defined pools nor within one mile of a previously authorized dual completion of similar nature, if both the upper zone and the lower zone of the proposed dual completion have been recognized by the Commission as being gas producing zones suitable for dual completion; and

(b) The applicant proposes to utilize one of the mechanical installations described below:

1. The well is to be completed as a gas-gas dual completion and the hydrocarbons from each of the two zones can be safely and efficiently produced through parallel strings of tubing or through a single string of tubing and the tubing-casing annulus.

2. The well is to be completed as a gas over oil dual completion and the hydrocarbons from each of the two zones can be safely and efficiently produced through parallel strings of tubing or through the tubing-casing annulus and a single string of tubing respectively.

3. The well is to be completed as an oil over gas dual completion and the hydrocarbons from each of the two zones can be safely and efficiently produced through parallel strings of tubing or through a single string of tubing and the tubing-casing annulus respectively by means of a crossover flow assembly.

4. The well is to be completed as an oil-oil dual completion and the hydrocarbons from each of the two zones can be safely and efficiently produced through parallel strings of tubing; and

(c) All strings of tubing used for the production of oil in the proposed dual completion will have a nominal inside diameter of not less than 1.750 inches nor greater than 2.50 inches; and

(d) The packer used to segregate the separate zones of the dual completion shall be a production-type packer and shall effectively prevent communication between all producing zones.

III. Application for administrative approval of a dual completion shall be made in quadruplicate, with two copies of the application to be mailed to the Commission's Santa Fe office, and two copies to the District office for the area in which the well is located. Application shall be made on the Commission Form entitled, "Application for Dual Completion, " and shall be accompanied by the following:

(a) Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location of packers, side door chokes, and such other information as may be pertinent.

(b) Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.

(c) Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.

(d) Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as hereinafter provided.)

The Secretary-Director may approve the dual completion, if after a period of 20 days following the filing of the application no operator has filed objection to the proposed dual completion.

IV. Application for public hearing to authorize a multiple completion shall be made in triplicate to the Commission's Santa Fe Office. Application shall be made on the Commission Form entitled "Application for Dual Completion," and shall set forth all material facts relative to the common sources of supply involved and the manner and method of completion proposed. Application shall be accompanied by an exhibit showing the location of all wells on applicant's lease and all offset wells on offset leases.

V. All dual completions, whether approved after hearing or by administrative procedure, shall be subject to the following rules:

(a) Prior to actual dual completion of a well, operator shall make adequate pressure tests of the casing to determine that no casing leaks exist. Results of casing tests shall be reported to the Commission on Form C-103.

(b) The well shall be completed and thereafter produced in such a manner that there will be no commingling of hydrocarbons from the separate strata.

(c) The operator shall commence a segregation test and packer leakage test not later than seven days after actual dual completion of the well. Segregation tests and packer leakage tests shall also be made any time the packer is disturbed and at such other intervals as the Commission may prescribe. The operator shall also make all other tests and determinations deemed necessary by the Commission. Offset operators as well as the Commission shall be notified of the time such tests are to be

commenced. Tests may be witnessed by representatives of offset operators and of the Commission at their election. Results of such tests shall be filed with the Commission within 15 days after the completion of tests; provided however, that in the event a segregation test or packer leakage test indicates that there is communication between the separate strata, the operator shall immediately notify the Commission and commence remedial action on the well.

(d) A packer setting affidavit shall accompany the report of the initial segregation test and packer leakage test.

(e) The well shall be so equipped that reservoir pressures may be determined for each of the separate strata and further, be so equipped that meters may be installed and the gas, oil and gas, and oil produced from each of the separate strata may be accurately measured, and the gas-oil ratio or the gas-liquid ratio thereof determined.

(f) Within 15 days after the completion of the well, the operator shall furnish the Commission with a diagrammatic sketch of the mechanical installation which was actually used in completing the well together with a report of the gravity, gas-oil ratio or gas-liquid ratio, and reservoir pressure for each of the separate zones, and the log of the well if the same has not been previously submitted.

RULE 112-B. BRADENHEAD GAS WELLS

(a) The production of gas from a Bradenhead gas well may be permitted only by order of the Commission upon hearing, except as noted by the provisions of Paragraph (c) of this rule.

(b) The application for such hearings shall be submitted in triplicate and shall include an exhibit showing the location of all wells on applicant's lease and all offset wells on offset leases, together with a diagrammatic sketch showing the casing program, formation tops, estimated top of cement on each casing string run and any other pertinent data, including drill stem tests.

(c) The Secretary of the Commission shall have authority to grant an exception to the requirements of Paragraph (a) above without notice and hearing where application has been filed in due form, and when the lowermost producing zone involved in the completion is an oil or gas producing zone within the defined limits of an oil or gas pool and the producing zone to be produced through the Bradenhead connection is a gas producing zone within the defined limits of a gas pool.

Applicants shall furnish all operators who offset the lease upon which the subject well is located a copy of the application to the Commission, and applicant shall include with his application a written stipulation that all offset operators have

been properly notified. The Secretary of the Commission shall wait at least 10 days before approving the production of gas from the Bradenhead gas well, and shall approve such production only in the absence of objection from any offset operator. In the event an operator objects to the completion the Commission shall consider the matter only after proper notice and hearing.

The Commission may waive the 10-day waiting period requirement if the applicant furnishes the Commission with the written consent to the production of gas from the Bradenhead connection by all offset operators involved.

This rule shall apply only to wells hereinafter completed as Bradenhead gas wells.

RULE 113. SHOOTING AND CHEMICAL TREATMENT OF WELLS

If injury results to the producing formation, casing or casing seat from shooting or treating a well, the operator shall proceed with diligence to use the appropriate method and means for rectifying such damage. If shooting or chemical treating results in irreparable injury to the well the Commission may require the operator to properly plug and abandon the well.

RULE 114. SAFETY REGULATIONS

(a) All oil wells shall be cleaned into a pit or tank, not less than 40 feet from the derrick floor and 150 feet from any fire hazard. All flowing oil wells must be produced through an oil and gas separator of ample capacity and in good working order. No boiler or portable electric lighting generator shall be placed or remain nearer than 150 feet to any producing well or oil tank. Any rubbish or debris that might constitute a fire hazard shall be removed to a distance of at least 150 feet from the vicinity of wells and tanks. All waste shall be burned or disposed of in such manner as to avoid creating a fire hazard.

(b) When coming out of the hole with drill pipe, drilling fluid shall be circulated until equalized and subsequently drilling fluid level shall be maintained at a height sufficient to control subsurface pressures. During course of drilling blowout preventers shall be tested at least once each 8 hour period.

RULE 115. WELL AND LEASE EQUIPMENT

"Christmas tree fittings or wellhead connections shall be installed and maintained in first class condition so that all necessary pressure tests may easily be made on flowing wells. On oil wells the Christmas tree fittings shall have a test pressure rating at least equivalent to the calculated or known pressure in the reservoir from which production is expected. On gas wells the Christmas tree fittings shall have a test pressure equivalent to at least 150 per cent of the calculated or known pressure in the reservoir from which production is expected.

Valves shall be installed and maintained in good working order to permit pressures to be obtained on both casing and tubing. Each flowing well

shall be equipped to control properly the flowing of each well, and in the case of an oil well, shall be produced into an oil and gas separator of a type generally used in the industry."

RULE 116. NOTIFICATION OF FIRE, BREAKS, LEAKS OR BLOW-OUTS

All persons controlling or operating any oil or gas well or pipe line, or receiving tank, storage tank, or receiving and storage receptacle into which crude oil is produced, received or stored, or through which oil is piped or transported, shall immediately notify the Commission by letter giving full details concerning all fires which occur at such oil or gas well or tank or receptacle on their property, and all such persons shall immediately report all tanks or receptacles struck by lightning and any other fire which destroys oil or gas, and shall immediately report any breaks or leaks in or from tanks or receptacles and pipe lines from which oil or gas is escaping or has escaped. In all such reports of fires, breaks, leaks or escapes, or other accidents of this nature, the location of the well, tank, receptacle, or line break shall be given by Section, Township, Range and property, so that the exact location thereof can be readily located on the ground. Such report shall likewise specify what steps have been taken or are in progress to remedy the situation reported, and shall detail the quantity of oil or gas lost, destroyed or permitted to escape. In case any tank or receptacle is permitted to run over, the amount running over shall be reported as in the case of a leak. The report hereby required as to oil losses shall be necessary only in case such losses exceed 100 barrels in the aggregate during any proration period.

RULE 117. WELL LOG, COMPLETION AND WORKOVER REPORTS

Within 20 days after the completion of a well drilled for oil or gas, or the recompletion of a well into a different common source of supply, a completion report shall be filed with the Commission on Form C-105. For the purpose of this rule, any hole drilled or cored below fresh water or which penetrates oil or gas-bearing formations or which is drilled by an "owner" as defined herein shall be presumed to be a well drilled for oil or gas.

D - ABANDONMENT AND PLUGGING OF WELLS

RULE 201. NOTICE

Notice of intention to plug must be filed with the Commission by the owner or his agent prior to the commencement of plugging operations, on Form C-102, which notice shall state the name and location of the well and name of the operator, and contain an affidavit that the owner or his agent has notified all offset lessees, giving the names of such lessees and the location of their leases. In case of a newly completed dry hole, the operator may commence plugging by securing the approval of the Commission as to the time plugging operations are to begin. He shall, however, file the regular notification form.

RULE 202. METHOD OF PLUGGING

(a) Before any well is abandoned, it shall be plugged in a manner which will confine permanently all oil, gas, and water in the separate strata originally containing them. This operation shall be accomplished by the use of mud-laden fluid, cement and plugs, used singly or in combination as may be approved by the Commission. The exact location of abandoned wells shall be shown by a steel marker at least four inches in diameter set in concrete, and extending at least four feet above mean ground level. Siesmic, core or other exploratory holes drilled to or below sands containing fresh water shall be plugged and abandoned in accordance with the applicable provisions recited above. Permanent markers are not required on seismic holes.

(b) If a well is to be abandoned temporarily and no casing pulled, then a plug shall be placed at the top and bottom of the casing in such manner as to prevent the intrusion of any foreign matter into the well.

(c) When drilling operations have been suspended for 60 days, the well shall be plugged and abandoned unless a permit for temporary abandonment shall be obtained from the Commission.

RULE 203. WELLS TO BE USED FOR FRESH WATER

When the well to be plugged may safely be used as a fresh water well and such utilization is desired by the landowner, the well need not be filled above a sealing plug set below the fresh water formation: provided that written agreement for such use shall be secured from the landowner and filed with the Commission.

RULE 204. LIABILITY

The owner of any well drilled for oil or gas, or any seismic, core or other exploratory holes, whether cased or uncased, shall be responsible for the plugging thereof.

E - OIL PRODUCTION OPERATING PRACTICES

RULE 301. GAS-OIL RATIO TEST

(a) Each operator shall take a gas-oil ratio test not sooner than 30 days nor later than 60 days, following the completion or recompletion of an oil well, provided that (1) the well is a wildcat, or (2) the well is located within a pool not exempted from the requirements of this rule. (Wells located within one mile of the outer boundaries of a defined oil pool shall be governed by the provisions of this rule which are applicable to the nearest pool producing from the same formation.) The results of such test shall be reported on Form C-116. The gas-oil ratio thus reported shall become effective for proration purposes on the first day of the calendar month following the date they are reported.

Each operator shall also take an annual gas-oil ratio test of each producing oil well, located within a pool not exempted from the requirements of this rule, during a period prescribed by the Commission. A gas-oil ratio survey schedule shall be established by the Commission setting forth the period in which gas-oil ratio tests are to be taken for each pool wherein a test is required. The gas-oil ratio test applicable shall be such test designated by the Commission, made by such method and means, and in such amnner as the Commission in its discretion may prescribe from time to time.

(b) "The results of gas-oil ratio tests taken during regular survey periods shall be filed with the Commission on Form C-116 not later than the 10th of the month following the close of the survey period for the pool in which the well is located. The gas-oil ratios thus reported shall become effective for proration purposes on the first day of the second month following the close of the survey period. Unless Form C-116 is filed within the required time limit, no further allowable will be assigned the affected well until Form C-116 is filed."

(c) In the case of special tests taken between regular gas-oil ratio surveys, the gas-oil ratio shall become effective for proration purposes upon the date Form C-116, reporting the results of such test, is received by the Proration Department. A special test does not exempt any well from the regular survey.

(d) During gas-oil ratio test, each well shall not be produced at a rate exceeding top unit allowable for the pool in which it is located by more than 25 per cent. No well shall be assigned an allowable greater than the amount of oil produced on official tests during a 24 hour period.

RULE 302. SUBSURFACE PRESSURE TESTS ON NEW POOLS

The operator shall make a subsurface pressure test on the discovery well of any new pool hereafter discovered, and shall report the results thereof to the Commission within 30 days after the completion of such discovery well. On or before December 1st of each calendar year the Commission shall designate the months in which subsurface pressure tests shall be taken in designated pools. Included in the designated list shall be listed the required Shut-in Pressure time and datum of tests to be taken in each pool. In the event a newly discovered pool is not included in the Commission's list the Commission shall issue a supplementary Bottom Hole Pressure Schedule. Tests as designated by the Commission shall only apply to flowing wells in each pool. This test shall be made by a person qualified by both training and experience to make such test, and with an approved subsurface pressure instrument which shall have been calibrated both prior and subsequent to such test against an approved dead-weight tester. Provided the prior and subsequent calibrations agree within on percent, the accuracy of the instrument and shall be considered acceptable. Unless otherwise designated by the Commission all wells shall remain completely shut-in for at least 24 hours prior to the test. In the event a definite datum is not established by the Commission the subsurface determination shall be obtained as close as possible to the mid-point of the productive sand of the reservoir. The report shall be on Form C-124 and shall state the name of the pool, the pool datum (if established), the name of the operator and lease, the well number, the wellhead elevation above sea level, the date of the test, the total time the well was shut-in prior to the test, the sub-surface temperature in degrees Fahrenheit at the test depth, the depth in feet at which the subsurface pressure test was made, the observed pressure in pounds per square inch gauge (corrected for calibration and temperature), the corrected pressure computed from applying to the observed pressure the appropriate correction for difference in test depth and reservoir datum plane and any other information as required by Form C-124

RULE 303. COMMINGLING OF OIL FROM POOLS

Each pool shall be produced as a single common reservoir and the wells therein shall be completed, cased, maintained and operated as the producing media for that specific pool, and the production of oil therefrom shall at all times be actually segregated into separate, identified tanks, and the commingling or confusion of such production, before marketing, with fluid hydrocarbons produced from other and distinct pools or fields in any tank or tanks is strictly prohibited.

RULE 304. CONTROL OF MULTIPLE COMPLETED WELLS

Multiple completed wells which have been authorized by the Commission shall at all times be operated, produced and maintained in a manner to insure the

complete segregation of the various common sources of supply. The Commission may require such tests as it deems necessary to determine the effectiveness of the segregation of the different common sources of supply.

RULE 305. METERED CASINGHEAD GAS

The owner of a lease shall not be required to measure the exact amount of casinghead gas produced and used by him for fuel purposes in the development and normal operation of the lease. All casinghead gas produced and sold or transported away from a least, except small amounts of flare gas, shall be metered and reported in standard cubic feet monthly to the Commission. The amount of casinghead gas sold in small quantities for use in the field may be calculated upon a basis generally acceptable in the industry, or upon a basis approved by the Commission in lieu of meter measurements.

RULE 306. VENTED CASINGHEAD GAS

Pending arrangement for disposition for some useful purpose, all vented casinghead gas shall be burned, and the estimated volume reported on Form C-115.

RULE 307. USE OF VACUUM PUMPS

Vacuum pumps or other devices shall not be used for the purpose of creating a partial vacuum in any stratum containing oil or gas.

RULE 308. SALT OR SULPHUR WATER

Operators shall report monthly on Form C-115, the amount or percentage of salt or sulphur water produced with the oil by each well making 2% or more water.

RULE 309. CENTRAL TANK BATTERIES

(a) Oil shall not be transported from a lease until it has been received and measured in tanks located on the lease. Common tankage may be used to receive the production from as many as sixteen proration units on the same basic lease, provided adequate tankage and other equipment is installed so that the production from each unit can be accurately determined at reasonable intervals.

(b) The Secretary-Director of the Commission shall have authority to grant exceptions to Rule 309 (a) to permit the commingling of production from two or more separate State, Federal, Indian, or patented oil and gas leases in a common tank battery, without notice and hearing, provided application has been filed in due form and provided further that:

1. The leases are contiguous.

2. All production is from the same common source of supply.

3. No more than sixteen units will be produced into a common tank battery and adequate facilities will be provided for accurately determining production from each well at reasonable intervals.

4. The ownership of the leases is common throughout.

5. All persons owning an interest in the leases (including royalty owners) have consented in writing to the commingling of production from the separate leases. Consent must also be obtained from the State Land Commissioner in the case of State lands and from the Regional Supervisor of the U. S. Geological Survey in the case of Federal or Indian lands.

6. All owners of adjoining oil and gas leases have consented in writing to the commingling of production from the separate leases.

7. In lieu of paragraph 6 of this rule, the applicant may furnish proof of the fact that said offset operators were notified by registered mail of his intent to commingle production from the separate leases. The Secretary-Director of the Commission may approve the application if, after a period of 20 days following the mailing of said notice, no operator has made objection to the application.

RULE 310. OIL TANK AND FIRE WALLS

Oil shall not be stored or retained in earthen reservoirs, or in open receptacles. Dikes or fire walls shall not be required except such fire walls must be erected and kept around all permanent oil tanks, or battery of tanks that are within the corporate limits of any city, town, or village, or where such tanks are closer than 150 feet to any producing oil or gas well or 500 feet to any highway or inhabited dwelling or closer than 1000 feet to any school or church; or where such tanks are so located as to be deemed an objectionable hazard within the discretion of the Commission. Where fire walls are required, fire walls shall form a reservoir having a capacity one-third larger than the capacity of the enclosed tank or tanks.

RULE 311. SEDIMENT OIL

(a) "Sediment oil" is defined as tank bottoms and any other accumulations of liquid hydrocarbons on an oil and gas lease, which hydrocarbons are not merchantable through normal channels.

(b) No sediment oil shall be burned or otherwise destroyed unless and until the Commission has approved an application to destroy the same on Form C-117-A. No permit shall be required, however, when sediment oil is put to

beneficial use on the originating lease for purposes of oiling lease roads, fire walls, tank grades, or other similar purposes.

(c) When sediment oil is to be removed from a lease for reclamation, the person removing such sediment oil shall obtain a permit (Form C-117-B) from the appropriate District Office of the Commission prior to removal of the oil from the lease. Any merchantable oil recovered from sediment oil shall be charged against the allowable for the wells on the originating lease. All such recovered oil shall be reported by the operator of the lease on Form C-115 (Operator's Monthly Report). Nothing contained in paragraph (c) of this Rule shall apply to reclaiming of pipeline break oil or the treating of tank bottoms occurring at a pipeline station, crude oil storage terminal, or refinery, to the treating by a gasoline plant operator of oil and other catchings collected in traps and drips in the gas gathering lines connected to gasoline plants and in scrubbers at such plants, nor to the treating or reclamation of oil and other catchings collected in community salt water disposal systems.

RULE 312. TREATING PLANTS

No treating plant shall operate except in conformity with the following provisions:

(a) Prior to the construction of a treating plant, a written application shall be filed for a treating plant permit stating in detail the location and type and capacity of the plant contemplated. The Commission, in not less than 30 days, will set such application for hearing to determine whether the proposed plant and method of processing will efficiently process, treat, and reclaim sediment oil. Before beginning actual operations, the permittee shall file with the Commission a performance bond in the amount of $10,000.00, conditioned upon substantial compliance with applicable statutes of the State of New Mexico and all rules, regulations, and orders of the Oil Conservation Commission of New Mexico.

(b) Such permit shall entitle the treating plant operator to an approved Certificate of Compliance and Authorization to Transport Oil, Commission Form C-110, for the total amount of products secured from sediment oils processed by the operator. All permits shall be revocable, after notice and hearing, upon showing of good cause.

(c) All treating plant operators shall, on or before the 25th day of each calendar month, file at the appropriate District Office, a monthly report on Commission Form C-118, which report shall support the Commission Form C-110 for the net oil recovered and sold during the preceding month.

The operator of each lease from which sediment oil is removed for reclamation shall be promptly notified by the treating plant operator of the amount of pipeline oil recovered therefrom. In the event sediment oil from two or more separate leases is to be commingled prior to treating, the treating plant operator shall determine the amount of pipeline oil attributable to each lease by testing a representative sample of the sediment oil from said lease in accordance with the standard centrifugal test prescribed by the API Code for Measuring, Sampling, and Testing Crude Oil, Number 25, Section 5.

RULE 313. EMULSION, BASIC SEDIMENTS, AND TANK BOTTOMS

Wells producing oil shall be operated in such a manner as will reduce as much as practicable the formation of emulsion and B. S. These substances and tank bottoms shall not be allowed to pollute streams or cause surface damage. If tank bottoms are removed to surface pits, the pits shall be fenced and the fence shall be kept in good repair.

RULE 314. GATHERING, TRANSPORTING AND SALE OF DRIP

(a) "Drip" is defined as any liquid hydrocarbon incidentally accumulating in a gas gathering or transportation system.

(b) The waste of drip is hereby prohibited when it is economically feasible to salvage the same.

(c) The movement and sale of drip is hereby authorized, provided the provisions of this Rule are complied with.

(d) No drip shall be transported nor sold until the gas transporter has filed Commission Form C-110 designating the drip transporter authorized to remove the drip from its gas gathering or transportation system.

(e) Every person transporting drip within the State of New Mexico shall file Commission Form C-112 each month, showing the amount, source, and disposition of all drip handled during the reporting period, and such other reports as may hereafter be required by the Commission.

(f) Prior to commencement of operations, every person transporting drip directly from a gas gathering or transportation system shall file with the Commission plats drawn to scale, locating and identifying each drip trap which he is authorized to service.

(g) Every person transporting drip directly from a gas gathering or transportation system shall keep a record of daily acquisitions from each drip trap which he is authorized to service, which records shall be made available at all reasonable times for inspection by the Commission or its authorized representatives.

(h) Every gas transporter in the State of New Mexico shall, on or before the first day of November of each year, file with the Commission maps of its entire gas gathering and transportation systems within the State of New Mexico, locating and identifying thereon each drip trap in said systems, said maps to be accompanied by a report, on a form prescribed by the Commission, showing the disposition being made of the drip from each of said drip traps.

F-NATURAL GAS PRODUCTION OPERATING PRACTICE

RULE 401. METHOD OF DETERMINING NATURAL GAS WELL POTENTIAL

All operators shall make tests annually to determine the daily open flow potential volumes of all natural gas wells from which gas is being used or marketed. Such tests shall be reported on forms furnished by the Commission. To establish comparable open flow capacity, wells shall be tested by the back pressure method, using 4 back pressure flows taken in sequence from low to high flow. In the event the Commission approves an alternate method of testing, all wells producing from a common source of supply shall be tested in a uniform and comparable manner. In a like manner all natural gas wells hereafter completed shall be tested and the potential test reported. Where it has been determined that a natural gas well in any pool has a potential of 400,000 cubic feet per day or less, further potential tests shall not be required provided the operator periodically reports the shut-in pressure of the well.

RULE 402. METHOD AND TIME OF SHUT-IN PRESSURE TESTS

(a) Shut-in pressures shall be taken by the operator of all gas wells during the months of April and October of each year, unless the taking of such pressures is covered by a special pool order.

(b) Shut-in pressures shall be taken with dead weight gauge after a minimum shut-in period of twenty-four hours. When the shut-in period exceeds twenty-four hours such shut-in period shall be reported to the Commission. All shut-in pressures shall be reported to the Commission on Form C-125.

RULE 403. NATURAL GAS FROM GAS WELLS TO BE MEASURED

All natural gas produced shall be accounted for by metering or other method approved by the Commission and reported to the Commission by common purchaser of the gas. Gas produced from a gas well and delivered to a gas transportation facility shall be reported by the owner or operator of the gas transportation facility. Gas produced from a gas well, and required to be reported under this rule, which is not delivered to and reported by a gas transportation facility, shall be reported by the operator of the well.

RULE 404. NATURAL GAS UTILIZATION

(a) After the completion of a natural gas well, no gas from such well shall be (1) permitted to escape to the air, (2) used expansively in engines or pumps and then vented, or (3) used to gas-lift oil wells unless all gas produced is processed in a gasoline plant, used in the manufacture of carbon black, or beneficially used thereafter without waste.

(b) Carbon black plants may utilize natural gas only in those instances in which all casinghead gas and residue gas produced in the vicinity of or which may reasonably be reached from the carbon black plant, is being used beneficially.

(c) Any carbon black plant hereinafter constructed, or any existing carbon black plant which enlarges or expands its facilities for the manufacture of carbon black, may utilize natural gas in the manufacture of carbon black only after permission of the Commission is obtained upon due notice and hearing.

RULE 405. STORAGE GAS

With the exception of the requirement to meter and report monthly the amount of gas injected and the amount of gas withdrawn from storage, in the absence of waste these rules and regulations shall not apply to gas being injected into or removed from storage.

RULE 406. CARBON DIOXIDE

(a) Insofar as is applicable, the statewide regulations relating to gas, natural gas, gas wells, gas reservoirs, shall also apply to carbon dioxide, carbon dioxide wells, and carbon dioxide reservoirs.

(b) Copies of rules and regulations particularly affecting carbon dioxide gas fields, insofar as they may vary from these general rules and regulations for oil and natural gas may be obtained from the Commission office in Santa Fe.

G-OIL PRORATION AND ALLOCATION

RULE 501. REGULATION OF OIL POOLS

(a) To prevent waste, the Commission shall prorate and distribute the allowable production among the producers in a pool upon a reasonable basis and recognizing correlative rights.

(b) After notice and hearing, the Commission, in order to prevent waste and protect correlative rights, may promulgate special rules, regulations or orders pertaining to any pool.

RULE 502. RATE OF PRODUCING WELLS

I. Daily Tolerance

(a) It is recognized that oil wells located on units capable of producing their allowables may overproduce one day and underproduce another. No unit capable of producing its allowable, except for the purpose of testing, in the process of completing or recompleting a well, or for tests made for the purpose of obtaining scientific data, shall produce any day more than 125% of the daily top unit allowable for the pool in which the same is located. (Subject to the foregoing, any underproduction may be made up by production from the same unit within the same month, and in like manner any overproduction shall be adjusted or balanced by underproduction from the same unit, within the same proration period.)

(b) It is also recognized that certain wells must, as a matter of practicality, be produced at daily rates in excess of of 125% of the daily top unit allowable for the pool in which such wells are located. The Secretary of the Commission is hereby given authority to grant exceptions to the provisions of paragraph (a) above, without formal hearing, where application is filed in due form setting out the reasons for such requested exception; applicants for such exceptions shall, at the time of filing, also furnish each operator in the pool in which the subject well is located, a copy of such application. Included in any application for exception or attached thereto, filed under authority hereof, shall be a formal written statement by the applicant that every operator in the pool in which the subject well is located has been served with a copy of such application. The Secretary of the Commission shall wait at least ten (10) days after receipt, before approving any such application, and shall approve the same only in absence of objection from any operator, interested party, or in his discretion. In event the Secretary, for any reason fails to approve such application, the Commission, after notice will hear and determine the matter.

II. MONTHLY TOLERANCE: No unit shall produce during any one proration period more than the allowable production of such unit for the proration period plus a tolerance of not to exceed five (5) days allowable production. This permissive tolerance of overproduction from a unit shall be subject to all other provisions of Rule 502 and particularly to the provisions of Paragraph IV.

This permissive tolerance of overproduction from a unit shall be adjusted or balanced by subsequent corresponding underproduction from the same unit. Overproduction within the permitted tolerance shall be considered as oil produced against the allowable production assigned to the unit for the proration period during which such overproduction is adjusted or balanced by underproduction.

III. Production in Excess of Monthly Allowable, Plus Tolerance.

Oil produced from any unit in excess of the assigned monthly allowable plus the permissive proration period tolerance shall be "illegal oil" as defined in the Oil Conservation Law, unless (a) such excess oil be produced as a result of mistake or error; (b) mechanical failure beyond the immediate control of the operator, or, (c) resulting from essential tests of the unit within the purview of Oil Conservation Commission Rules. Whenever production from any unit for a proration period is in excess of the assigned allowable, plus the permitted tolerance authorized herein and the cause of such excess reasonably falls within (a), (b) or (c) of this paragraph, the producer or operator shall briefly set forth the cause of such excess production together with a proposed plan of adjustment thereof, upon all copies of the operators monthly report (Form C-115) for the month in which such excess production occurs. Such excess production shall be considered as oil produced against the allowable assigned to the unit for the following proration period, and it may be transported from the lease tanks only as and when the unit accrues daily allowable to offset such excess production.

IV. General.

The tolerance permitted on a daily or monthly basis as provided hereinabove shall not be construed to increase the allowable of a producing unit or to grant authority to any operator to market or to any transporter to transport any quantity of oil in excess of the unit's allowable.

The possession of a quantity of oil in lease storage at the end of any proration in excess of five days allowable plus any unrun allowable oil shall be construed as a violation of this Rule, unless reported in the manner and within the time provided for filing C-115's provided by Section III above.

V. Storage Records.

All producers and all transporters of oil are required to maintain adequate records showing unrun allowable oil in storage at the end of each proration period. Such storage oil shall be the amount of oil in tanks from which oil is measured and delivered to the transporter.

RULE 503. AUTHORIZATION FOR PRODUCTION OF OIL

(a) The Commission shall meet between the 13th and 20th day of each month at open hearing for the purpose of determining the amount of oil to be produced from all oil pools for the following calendar month.

(b) Within ten (10) days after the effective date of this order, the Commission shall establish the exact date, time and place of such meetings for the remainder of the calendar year, and give notice thereof by publication. The Commission shall likewise establish the exact date, time and place of all other such meetings and give notice thereof by publication on or before the 10th day of January of each year.

(c) The Commission will consider all evidence of market demand of oil and determine the amount of oil to be produced from all oil pools during the following month. The amounts so determined will be allocated among the various pools in accordance with existing regulations and among the various units in each pool in accordance with regulations governing each pool. In allocated pools, effective the first day of each proration period, the Commission will issue a proration schedule which will authorize the production of oil from the various units in strict accordance with the schedule. Any well completed on or after the first day of the proration period is authorized to produce such amount of oil as said well may be capable of producing without waste up to top unit allowable determined in accordance with Rule 504. The allowable production for such well shall be effective at 7:00 a.m. on the date of completion, provided Form C-104 is approved during the proration period in which the well is completed; otherwise, the allowable will become effective at 7:00 a.m. on the first day of the proration period in which Form C-104 is approved; and provided further, a supplementary proration schedule is issued by the Commission establishing the effective date, and the daily rate of production permitted the remainder of the proration period.

(d) A marginal unit shall be permitted to produce any amount of oil which it is capable of producing without waste up to and including the top unit allowable for the pool in which such unit is located subject to the provisions of Rule 301 and Rule 506; provided the owner of such unit shall file with the Commission written application setting forth the daily amount of oil such unit is capable of producing; and provided further a supplementary proration schedule is issued by the Commission setting forth the daily allowable rate of production for such unit and the effective date thereof, which shall be the date on which said application is received in the office of the Commission.

(e) A tabulation of supplementary proration schedules issued during any proration period will be listed in the next proration schedule.

(f) In the event it becomes necessary for any transporter of crude petroleum to resort to pipeline proration in New Mexico, such transporter shall, as soon as possible and not later than 24 hours after the effective date thereof, notify the Commission of its decision to so prorate; upon receipt of such notice from such transporter, the Commission may take such emergency action, as may be deemed proper, and/or upon its own motion, after notice, hold a hearing for the purpose of considering any action within its authority, to preserve and protect correlative rights.

In case of pipeline proration any operator affected thereby has the right to make application to the Commission for authorization to have any shortage or underproduction resulting therefrom included in subsequent proration schedules. Such applications shall be made upon a form hereby authorized to be prescribed by the Commission and filed therewith within thirty days after the close of the first proration period in which such pipeline proration shortage occured, and such authorization shall be limited in any event to wells capable of producing the daily top unit allowable for such period.

In approving any such application the Commission shall determine the period of time during which such shortage shall be made up without injury to the well or pool, and shall include the same in the regularly approved proration schedules following the conclusion of pipeline proration.

RULE 504. AUTHORIZATION FOR PRODUCTION OF OIL WHILE COMPLETING, RECOMPLETION, OR TESTING AN OIL WELL

(a) In the event an operator does not have sufficient lease storage to hold oil produced from a well during the process of its drilling, completing, recompleting, or testing, the operator of said well shall be permitted to produce from said well an amount of oil as may be necessary to drill, complete, recomplete, or test said well; provided, however, that the operator of said well shall file with the Commission a written application stating the circumstances at said well and setting forth therein the estimated amount of oil to be produced during the aforementioned process of operations, and provided further that said application is approved by the Commission. Oil produced during the process of drilling, completion, or recompletion, or testing a well shall be charged against the allowable production of said well.

(b) No well shall be placed on the proration schedule until Form C-104 and C-110 have been filed with the Commission.

RULE 505. OIL PRORATION

(a) In allocated pools, the allocation between pools is in accordance with the top of the producing depth of the pool and the corresponding proportional factor set out below.. The depth to the casing shoe or the top perforation in the casing, whichever is the higher, in the first well completed in a pool determines the depth classification for the pool. Top unit allowables shall be calculated for each of the several ranges of depth in the following proportions.

(b)

POOL DEPTH RANGE	40-acre Proportional Factor	80-acre Proportional Factor
0 to 5,000 feet	1.00	
5,000 to 6,000 feet	1.33	2.33
6,000 to 7,000 feet	1.77	2.77
7,000 to 8,000 feet	2.33	3.33

POOL DEPTH RANGE	40-acre Proportional Factor	80-acre Proportional Factor
8,000 to 9,000 Feet	3.00	4.00
9,000 to 10,000 Feet	3.77	4.77
10,000 to 11,000 Feet	4.67	5.67
11,000 to 12,000 Feet	5.67	6.67
12,000 to 13,000 Feet	6.75	7.75
13,000 to 14.000 Feet	8.00	9.00

(c) The 40-acre proportional factor shall be applied to pools developed on the normal statewide 40-acre spacing pattern.

(d) The above 80-acre proportional factor shall hereafter be applied to all pools developed on an 80-acre spacing pattern, which the Commission hereafter authorizes as an exception to the normal statewide 40-acre spacing pattern.

(e) Normal unit allowable shall be set by the Commission.

(f) Top unit allowables for each range of depth shall then be determined by multiplying the normal unit allowable by the proportional factor for each depth range as set out in the table hereinabove; any fraction of a barrel shall be regarded as a full barrel for both normal and top unit allowables.

(g) The top unit allowables hereinabove determined shall be assigned to the respective pools in accordance with each pool's depth range.

Allowables to marginal wells, other than those affected by gas-oil ratios, will be assigned on the basis of nominations submitted by the operator on Form C-127. Such nominations must be based upon the ability of the well to produce without waste; otherwise the allowable will be assigned on the basis of the latest available production figures. The sum of the allocation to all marginal units plus the sum of the allocation to all non-marginal units in each pool shall constitute the allocation for each pool.

(h) The allocation to each pool shall in turn be prorated or distributed to the respective units in each pool in accordance with the proration plan of the particular pool, whereby any such plan exists. Where no proration plan exists, then the pool allocation shall be distributed or prorated to the respective marginal and non-marginal units therein as determined hereinabove.

(i) Each calendar month the distribution or proration to the respective units in each pool shall be changed in order to take into account all new wells which have been completed and were not in the proration schedule during the previous calendar month; with the exception that any newly completed or recompleted well on which Form C-104, is approved on or after the 20th of the month is authorized to

produce that quantity of oil which said well is capable of producing without waste up to the top unit allowable for the pool in which said well is located, and a supplementary proration schedule will be issued setting forth the daily rate of production for said well and the effective date thereof.

(j) The provision of Rule 104 (h) et seq. shall be adhered to where applicable in fixing top unit allowables.

RULE 506. GAS-OIL RATIO LIMITATION

(a) In allocated pools containing a well or wells producing from a reservoir which contains both oil and gas, each proration unit shall be permitted to produce only that volume of gas equivalent to the applicable limiting gas-oil ratio multiplied by the top unit oil allowable for the pool. In the event the Commission has not set a gas-oil ratio limit for a particular oil pool, the limiting gas-oil ratio shall be 2,000 cubic feet of gas for each barrel of oil produced. In allocated oil pools all producing wells, whether oil or casinghead gas, shall be placed on the oil proration schedule.

(b) Unless heretofore or hereafter specifically exempted by order of the Commission issued after hearing a gas-oil ratio limitation shall be placed on all allocated oil pools, and all proration units having a gas-oil ratio exceeding the limit for the pool shall be penalized in accordance with the following formula:

(1) Any proration unit which, on the basis of the latest official gas-oil ratio test, has a gas-oil ratio in excess of the limiting gas-oil ratio for the pool in which it is located shall be permitted to produce daily that number of barrels of oil which shall be determined by multiplying the current top unit allowable by a fraction, the numerator of which shall be the limiting gas-oil ratio for the pool and the denominator of which shall be the official gas-oil ratio test of the well.

(2) Any unit containing a well or wells producing from a reservoir which contains both oil and gas shall be permitted to produce only that volume of gas equivalent to the applicable limiting gas-oil ratio multiplied by the top unit allowable currently assigned to the pool.

(3) A marginal unit shall be permitted to produce the same volume of gas which it would be permitted to produce if it were a non-marginal unit.

(4) All gas produced with the current oil allowable determined in accordance with this rule shall be deemed to have been lawfully produced.

(c) All proration units to which gas-oil ratio adjustments are applied shall be so indicated in the proration schedule with adjusted allowables stated.

(d) Limiting gas-oil ratios for allocated pools. In cases of new pools, the limit shall be 2,000 cubic feet per barrel until such time as changed by order of the Commission issued after a hearing. Upon petition, notice and hearing according to law, the Commission will determine or re-determine the specific gas-oil

ratio limit which is applicable to a particular allocated oil pool.

RULE 507. UNITIZED AREAS

After petition, notice and hearing, the Commission may grant approval for the combining of contiguous developed proration units into a unitized area.

RULE 508. RECOVERED LOAD OIL

Recovered load oil may be run from the lease on which it is recovered, provided Commission approval is obtained by means of Form C-126. Form C-126 must be filed in quadruplicate with the Proration Manager. Upon approval, one copy will be returned to the operator and one copy will be sent to the designated transporter as authority to transport the oil.

This rule applies only to oil which has been obtained from a source other than the lease on which it is used.

Recovered load oil as used herein is any oil or liquid hydrocarbon which has been used in any operation in an oil or gas well, and which has been recovered as a merchantable product.

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H-GAS PRORATION AND ALLOCATION

RULE 601. ALLOCATION OF GAS PRODUCTION

When the Commission determines that allocation of gas production in a designated gas pool is necessary to prevent waste, the Commission, after notice and hearing, shall consider the nominations of purchasers from that gas pool and other relevant data, and shall fix the allowable production of that pool, and shall allocate production among the gas wells in the pool delivering to a gas transportation facility upon a reasonable basis and recognizing correlative rights. The Commission shall include in the proration schedule of such pool any gas well which it finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well.

RULE 602. PRORATION PERIOD

The proration period shall be at least six months and the pool allowable and allocations thereof shall be made at least 30 days prior to each proration period.

RULE 603. ADJUSTMENT OF ALLOWABLES

When the actual market demand from any allocated gas pool during a proration period is more than or less than the allowable set by the Commission for the pool for the period, the Commission shall adjust the gas proration unit allowables for the pool for the next proration period so that each gas proration unit shall have a reasonable opportunity to produce its fair share of the gas production from the pool and so that correlative rights shall be protected.

RULE 604. GAS PRORATION UNITS

Before issuing a proration schedule for an allocated gas pool, the Commission, after notice and hearing, shall fix the gas proration unit for that pool.

I - SECONDARY RECOVERY, PRESSURE MAINTENANCE, AND SALT WATER DISPOSAL

RULE 701. INJECTION OF FLUIDS INTO RESERVOIRS

A. Permit for Injection Required

The injection of gas, liquefied petroleum gas, air, water, or any other medium into any reservoir for the purpose of maintaining reservoir pressure or for the purpose of secondary recovery or the injection of water into any formation for the purpose of water disposal shall be permitted only by order of the Commission after notice and hearing, unless otherwise provided herein.

B. Method of Making Application

Application for hearing to obtain authority for the injection of gas, liquefied petroleum gas, air, water, or any other medium into any formation for any reason shall include the following:

1. A plat showing the location of the proposed injection well or wells and the location of all other wells within a radius of two miles from said proposed injection well or wells, and the formation from which said wells are producing or have produced. The plat shall also indicate the lessees, if any there be, within said two-mile radius.

2. The log of the proposed injection well or wells if same is available.

3. A description of the proposed injection well or wells' casing program.

4. Other pertinent information including the name and depth of the zone or formation into which injection will be made, the kind of fluid to be injected, the anticipated amounts to be injected, and the source of said injection fluid.

C. Salt Water Disposal Wells

The Secretary-Director of the Oil Conservation Commission shall have authority to grant an exception to the requirements of Rule 701 (A) for water disposal wells only, without notice and hearing, when the waters to be disposed of are mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use, and when said waters are to be disposed of into a formation of greater than Triassic age (Lea County only) which is non-productive of oil and/or gas within a radius of two miles from the proposed injection well, providing that any water occurring naturally within said disposal formation is mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use.

To obtain such administrative approval, operator shall submit in triplicate to the Commission at Santa Fe, Commission form entitled, "Application to Dispose of Salt Water by Injection Into a Porous Formation Not Productive of Oil or Gas," together with evidence that a copy of said application was sent to the State Engineer Office, Box 1079 Santa Fe, as well as to all offset operators and the surface owner of the land upon which the well is located.

If no objection is received within 15 days from the date of receipt of the application, and the Secretary-Director is satisfied that all of the above requirements have been complied with, and that the well is to be cased and cemented in such a manner that there will be no danger to oil, gas, or fresh water reservoirs, an administrative order approving the disposal well may be issued. In the event that the application is not granted administratively, it shall be set for public hearing, if the operator so requests.

The Commission may dispense with the 15-day waiting period if waivers of objection are received from all offset operators and the surface owner, and no objection is made by the State Engineer Office.

D. Pressure Maintenance Projects

1. Pressure maintenance projects are defined as those projects in which fluids are injected into the producing horizon in an effort to build up and/or maintain the reservoir pressure in an area which has not reached the advanced or "stripper" state of depletion.

2. The project area and the allowable formula for any pressure maintenance project shall be fixed by the Commission on an individual basis after notice and hearing.

E. Water Flood Projects

1. Water Flood projects are defined as those projects in which water is injected into a producing horizon in sufficient quantities and under sufficient pressure to stimulate the production of oil from other wells in the area, and shall be limited to those areas in which the wells have reached an advanced state of depletion and are regarded as what is commonly referred to as "stripper" wells.

2. The project area of a water flood project shall comprise the proration units upon which injection wells are located plus all proration units which directly or diagonally offset the injection tracts and have producing wells completed on them in the same formation; provided however, that additional proration units not

directly nor diagonally offsetting an injection tract may be included in the project area if, after notice and hearing, it has been established that such additional units have wells completed thereon which have experienced a substantial response to water injection.

3. The maximum allowable assigned to any water flood project area shall be determined by multiplying the number of proration units in the project area times the basic Area Allowable Factor (as determined in sub-paragraph 4 below) times the appropriate proportional (depth) factor for the pool as set forth in Rule 505 (b). The allowable assigned to any water flood project area in which there are proration units containing more than one well shall be increased by an amount of oil equal to 0.333 times the basic Area Allowable Factor times the proportional (depth) factor for the pool for each such additional well on the proration unit; provided however, that the additional allowable for any such proration unit shall not exceed the basic Area Allowable Factor times the proportional (depth) factor for the pool.

The project area allowable may be produced from any well or wells in the project area in any proportion.

The production from a water flood project area shall be identified as such on the monthly Commission Form C-115.

Nothing herein contained shall be construed as prohibiting the assignment of special allowables to wells in buffer zones after notice and hearing. Special allowables may also be assigned in the limited instances where it is established at a hearing that it is imperative for the protection of correlative rights to do so.

4. The basic 40-acre Area Allowable Factor for the counties of Lea, Eddy, Chaves, and Roosevelt shall be 42. The basic 40-acre Area Allowable Factor for the counties of San Juan, Rio Arriba, Sandoval, and McKinley shall be 52.

5. Water flood projects shall be expanded and additional wells placed on injection only upon authority from the Commission after notice and hearing or by administrative procedure in accordance with the following:

In order for a well in a water flood project to be eligible for administrative approval for conversion to water injection, it must be established to the satisfaction of the Secretary-Director of the Commission that the proposed water injection well has experienced

a substantial response to water injection or is directly offset by a producing well which has experienced such response, and that the proposed injection well is located on a water injection pattern which will result in a thorough and efficient sweep of oil by the water flood.

To obtain administrative approval for the conversion of any well to water injection, applicant shall submit to the Commission in triplicate a request for such administrative approval, setting forth therein all the facts pertinent to the need for conversion of additional wells to water injection, and attaching thereto Commission Form C-116, showing production tests of the affected well or wells both before and after stimulation by water flood. Applicant shall also attach plats of the water flood project area and immediate surrounding area, indicating thereon the owner of each lease and the location of all water injection wells and producing wells, and shall submit evidence that a copy of the application to convert additional wells to water injection has been sent to each operator offsetting the proposed injection well and to the State Engineer.

The Secretary-Director may, if in his opinion there is need for conversion of additional wells to water injection, authorize such conversion without notice and hearing, provided that no offset operator nor the State Engineer objects to the proposed conversion within fifteen (15) days. The Secretary-Director may grant immediate approval of the proposed conversion upon receipt of waivers of objection from all operators offsetting the proposed injection well and from the State Engineer.

RULE 702. CASING AND CEMENTING OF INJECTION WELLS

Wells used for injection of gas, air, or water into the producing formation shall be cased with safe and adequate casing, or tubing so as to prevent leakage and such casing or tubing shall be so set or cemented that damage will not be caused to oil, gas or fresh water resources.

RULE 703. NOTICE OF COMMENCEMENT AND DISCONTINUANCE OF INJECTION OPERATIONS

The following provisions shall apply to all injection projects:

(a) Immediately upon the commencement of injection operations, the operator shall notify the Commission of the injection date.

(b) Within 10 days after the discontinuance of injection operations the operator shall notify the Commission of the date of such discontinuance and the reasons thereof.

(c) Before any intake well shall be plugged, notice shall be served on the Commission by the owner of said well, and the same procedure shall be followed in the plugging of such well as provided for the plugging of oil and gas wells.

RULE 704. RECORDS AND REPORTS

The operator of an injection project shall keep accurate records and report monthly to the Commission the amount of oil produced, the volumes of fluid injected and the injection pressures on Form C-120.

RULE 705. LPG STORAGE WELLS

Application to drill storage wells for the purpose of storing liquefied petroleum gases shall be submitted to the Director of the Commission for approval. In addition to Form C-101 (Notice of Intention to Drill), the operator shall submit the following information:

1. Certified plat of area within 1/2 mile of proposed well showing thereon the location of the proposed well and the location of any oil or gas wells and dry holes, and lease ownership.

2. Upon completion of the proposed well, operator shall submit Form C-105, Well Log, plus a diagrammatic sketch of the finished installation, together with an estimate of the storage capacity of the cavity.

Applicants shall furnish all operators within a half-mile radius of the proposed well with a copy of the application to the Commission, and applicant shall include with his application a written stipulation that all operators within a half-mile radius of the proposed well have been properly notified. The Secretary of the Commission shall wait at least ten (10) days before approving any such application, and shall approve any such application, only in the absence of objection from any notified operator. In the event that an operator objects to the application the Commission shall consider the matter only after proper notice and hearing.

J - OIL PURCHASING AND TRANSPORTING

RULE 801. ILLEGAL SALE PROHIBITED

The sale or purchase or acquisition, or the transporting, refining, processing, or handling in any other way, of crude petroleum oil or of any product of crude petroleum produced in excess of the amount allowed by any statute of this state, or by any rule, regulation, or order of the Commission made thereunder, is prohibited.

RULE 802. RATABLE TAKE: COMMON PURCHASER

(a) Every person now engaged or hereafter engaging in the business of purchasing oil to be transported through pipe lines shall be a common purchaser thereof, and shall without discrimination in favor of one producer as against another in the same field, purchase all oil tendered to it which has been lawfully produced in the vicinity of, or which may be reasonably reached by pipelines through which it is transporting oil, or the gathering branches thereof, or which may be delivered to the pipeline or gathering branches thereof by truck or otherwise, and shall fully perform all the duties of a common purchaser. If any common purchaser shall not have need for all such oil lawfully produced within a field, or if for any reason it shall be unable to purchase all such oil, then it shall purchase from each producer in a field ratably, taking and purchasing the same quantity of oil from each well to the extent that each well is capable of producing its ratable portions; provided, however, nothing herein contained shall be construed to require more than one pipe line connection for each producing well. In the event any such common purchaser of oil is likewise a producer or is affiliated with a producer, directly or indirectly, it is hereby expressly prohibited from discriminating in favor of its own production or in favor of the production of an affiliated producer as against that of others and the oil produced by such common purchaser or by the affiliate of such common purchaser shall be treated as that of any other producer, for the purposes of ratable taking.

(b) It shall be unlawful for any common purchaser to unjustly or unreasonably discriminate as to the relative quantities of oil purchased by it in various fields of the state; the question of the justice or reasonableness to be determined by the Commission, taking into consideration the production and age of the wells in the respective fields and all other factors. It is the intent of this rule that all fields shall be allowed to produce and market a just and equitable share of the oil produced and marketed in the state, insofar as the same can be effected economically and without waste.

(c) In order to preclude premature abandonment, the common purchaser within its purchasing area is authorized and directed to make 100 percent purchases from units of settled production producing ten (10) barrels or less daily of crude petroleum in lieu of ratable purchases or takings. Provided, however, where such purchaser's takings are curtailed below ten (10) barrels per unit of crude petroleum daily, then such purchaser is authorized and directed to purchase

equally from all such units within its purchasing area, regardless of their producing ability insofar as they are capable of producing.

RULE 803. PRODUCTION OF LIQUID HYDROCARBONS FROM GAS WELLS

All liquid hydrocarbons produced incidental to the authorized production of gas from a well classified by the Commission as a gas well shall, for all purposes, be legal production.

For purposes of this rule, all gas produced from a gas well shall be considered to be authorized production with the following exceptions:

(1) When the well is being produced without an approved Form C-110, designating the gas transporter and the oil or condensate transporter for said well.

(2) When the well has been directed to be shut-in by the Commission.

In the event a gas well is directed to be shut-in by the Commission, both the gas transporter and the oil transporter named on the well's Form C-110 shall be immediately notified of such fact.

K-GAS PURCHASING AND TRANSPORTING

Rule 901. ILLEGAL SALE PROHIBITED

The sale, purchase or acquisition, or the transporting, refining, processing or handling in any other way, of natural gas in whole or in part (or of any product of natural gas so produced) produced in excess of the amount allowed by any statute of this state, or by any rule, regulation or order of the Commission made thereunder, is prohibited.

RULE 902. RATABLE TAKE

(a) Any person now or hereafter engaged in purchasing from one or more producers gas produced from gas wells shall be a common purchaser thereof within each common source of supply from which it purchases, and as such it shall purchase gas lawfully produced from gas wells with which its gas transportation facilities are connected in the pool and other gas lawfully produced within the pool and tendered to a point on its gas transportation facilities. Such purchases shall be made without unreasonable discrimination in favor of one producer against another in the price paid, the quantities purchased, the bases of measurement or the gas transportation facilities afforded for gas of like quantity, quality and pressure available from such wells. In the event any such person is likewise a producer, he is prohibited to the same extent from discriminating in favor of himself on production from gas wells in which he has an interest, direct or indirect, as against other production from gas wells in the same pool. For the purposes of this rule reasonable differences in prices paid or facilities afforded, or both, shall not constitute unreasonable discrimination if such differences bear a fair relationship to differences in quality, quantity or pressure of the gas available or to the relative lengths of time during which such gas will be available to the purchaser. The provisions of this subsection shall not apply (1) to any wells or pools used for storage and withdrawal from storage of natural gas originally produced not in violation of this act or of the rules, regulations or orders of the Commission, (2) to purchases of casinghead gas from oil wells, and (3) to persons purchasing gas principally for use in the recovery or production of oil or gas.

(b) Any common purchaser taking gas produced from gas wells from a common source of supply shall take ratably under such rules, regulations and orders, concerning quantity, as may be promulgated by the Commission consistent with this rule. The Commission, in promulgating such rules, regulations and orders may consider the quality and the deliverability of the gas, the pressure of the gas at the point of delivery, acreage attributable to the well, market requirements in the case of unprorated pools, and other pertinent factors.

(c) Nothing in this rule shall be construed or applied to require, directly or indirectly, any person to purchase gas of a quality or under a pressure or under any other condition by reason of which such gas cannot be economically and satisfactorily used by such purchaser by means of his gas transportation facilities then in service.

L-REFINING

RULE 1001. REFINERY REPORTS

Each refiner of oil within the State of New Mexico shall furnish for each calendar month a "Refiner's Monthly Report," Form C-113, containing the information and data indicated by such form, respecting oil and products involved in such refiner's operations during each month. Such report for each month shall be prepared and filed according to instructions on the form, on or before the 15th day of the next succeeding month.

RULE 1002. GASOLINE PLANT REPORTS

Each operator of a gasoline plant, cycling plant or any other plant at which gasoline, butane, propane, condensate, kerosene, oil or other liquid products are extracted from natural gas within the State of New Mexico, shall furnish for each calendar month a "Monthly Gasoline or Other Extraction Plant Monthly Report," Form C-114, containing the information indicated by such form respecting natural gas and products involved in the operation of each plant during each month.

Such reports for each month shall be prepared and filed according to instructions on the form on or before the 15th day of the next succeeding month.

M - REPORTS

RULE 1100. All reports and forms as required by the following rules shall be filed with the appropriate District Office of the Commission as provided for in Rule 1302 of the Statewide Rules and Regulations unless otherwise specifically provided for in one of the following rules.

Mailing addresses of the District Offices of the Commission are as follows:

P. O. Box 2045, Hobbs, New Mexico
207 Carper Bldg., Artesia, New Mexico
1000 Rio Brazos Rd., Aztec, New Mexico
P. O. Box 871, Santa Fe, New Mexico

RULE 1101. ADDITIONAL INFORMATION MAY BE REQUIRED

These rules shall not be taken or construed to limit or restrict the authority of the Oil Conservation Commission to require the furnishing of such additional reports, data or other information relative to production, transportation, storing, refining, processing, or handling of crude petroleum oil, natural gas or products in the State of New Mexico as may appear to it to be necessary or desirable, either generally or specifically, for the prevention of waste and the conservation of natural resources of the State of New Mexico.

RULE 1102. BOOKS AND RECORDS TO BE KEPT TO SUBSTANTIATE REPORTS

All producers, transporters, storers, refiners, gasoline or extraction plant operators and initial purchasers of natural gas within the State of New Mexico shall make and keep appropriate books and records for a period not less than five years, covering their operations in New Mexico, from which they may be able to make and substantiate the reports required by this order.

RULE 1103. WRITTEN NOTICES, REQUESTS, PERMITS AND REPORTS

The forms hereinafter mentioned and attached to these rules in the Appendix are hereby adopted and made a part of these rules for all purposes and the same shall be used for the purposes shown on each of the several forms and in accordance with the Rules requiring the use of said forms and the instructions printed thereon, which instructions are a part of this rule. They are:

Form C-101	Notice of Intention to Drill
Form C-102	Miscellaneous Notices
Form C-103	Miscellaneous Reports on Wells

Form C-104	Request for (oil) - (gas) allowable
Form C-105	Well Record
Form C-110	Certificate of Compliance and Authorization to Transport Oil and Natural Gas
Form C-111	Monthly Gas Report
Form C-112	Transporter's and Storer's Monthly Report
Form C-113	Refiner's Monthly Report
Form C-114	Gasoline or Other Extraction Plant Monthly Report
Form C-115	Operator's Monthly Report (oil, condensate and gas)
Form C-116	Gas-Oil Ratio Reports
Form C-117-A	Sediment Oil Disposition Permit
Form C-117-B	Sediment Oil Recovery Permit
Form C-118	Treating Plant Report
Form C-119	Carbon Black Plant Monthly Report
Form C-120	Monthly Injection Report
Form C-121	Crude Oil Purchaser's Nomination
Form C-121-A	Gas Purchaser's Preliminary Nomination
Form C-122	Multi-point Back Pressure Test for Gas Wells
Form C-122-A	Gas Well Test Data Sheet - San Juan Basin
Form C-122-B	Initial Potential Test - Data Sheet
Form C-122-C	One-Point Back Pressure Test for Gas Wells - Data Sheet (Deliverability)
Form C-123	Request for the Extension of an Existing Pool or the Creation of a New Pool
Form C-124	Bottom Hole Pressures
Form C-125	Shut-in Pressures on Gas Wells
Form C-126	Permit for Transporting Recovered Load Oil
Form C-127	Oil Producers Nomination
Form C-128	Well Location and Acreage Dedication Plat

RULE 1104. NOTICE OF INTENTION TO DRILL (Form C-101)

Before beginning drilling operations, the owner or operator of the well shall give notice thereof by filing with the Commission in QUINTUPLICATE, Form C-101. A copy of the notice will be returned by the Commission to the applicant, on which will be noted the Commission's approval with any modifications considered advisable, or the rejection of the plan submitted. Drilling operations shall not begin until this approval is obtained and until a bond has been submitted and approved as required by Rule 101 (Note: on State Land, the State Land Office requires 1 copy of Form C-101, therefore in that case submit 6 copies).

The information required on Form C-101 shall include the name and number of the well, exact location, status of land (whether federal, state or privately owned), type drilling equipment to be used, drilling contractor, formation to be completed in and approximate depth, casing program, and any other pertinent information. The Form C-101 must be accompanied by three copies of Form C-128, Well Location and Acreage Dedication Plat, showing (a) the exact location of the well with respect to the outer boundaries of the section plotted and certified by a registered professional engineer and/or land surveyor, registered in the State of New Mexico, or a surveyor approved by the Commission, (b) the acreage to be dedicated to the well outlined by the operator on the plat, and (c) all information required in Section "A" of Form C-128 certified by the operator.

RULE 1105. MISCELLANEOUS NOTICES (Form C-102)

Form C 102, 'Miscellaneous Notices', shall be filed by the operator in TRIPLICATE and approval obtained from the District Office of the Commission before starting operations leading to:

1. A change in drilling plans
2. Plugging a well
3. Temporary abandonment of a well, or
4. Remedial work; such as, acidizing, squeezing operations, formation fracturing, setting a liner, gun perforating or other similar operations not specifically covered herein.
5. Plugging back or drilling deeper

Form C-102 shall not be required to cover the operations described in Item 4 above for new wells in the process of completion, however, work done and results obtained should be reported on Form C 103.

In case of well-plugging operations, the notice shall give a detailed statement of the proposed work, including length and depth of plugs, plans for mudding, cementing, shooting, testing and removing casing; and the date of the proposed plugging operations. Before plugging any well, that has had commercial production, the owner shall give notice to all adjoining lessees, and representatives of such adjoining lessees may be present to witness the plugging, if they so desire. Failure to file notice before plugging shall constitute grounds for delaying the release of the bond. If not previously filed, a complete log of the well on Form C-105 shall accompany the notice of intention to plug the well, and the bond will not be released until this is complied with.

RULE 1106. MISCELLANEOUS REPORTS ON WELLS (Form C-103)

Form C-103, 'Miscellaneous Reports on Wells', shall be submitted for approval to the appropriate District Office of the New Mexico Oil Conservation Commission within the time specified in the section of this rule applying to the particular operation to be reported.

The report submitted on Form C 103 shall cover the work outlined previously on Form C 102, 'Miscellaneous Notices', and shall include a detailed account of the work done, the manner in which the work was performed and other pertinent information.

Form C-103 is to be used in reporting various operations such as:

(a) Commencement of Drilling Operations (spudding date)

(b) Plugging Operations

(c) Results of Test of Casing Shut-off

(d) Remedial Work

(e) Change of ownership of Drilling Well

(f) Plugging back or drilling deeper

or any similar operations which affect the original status of the well and which are not specifically covered herein.

Information to be entered on Form C-103 for a particular operation is as follows:

(a) Report on Commencement of Drilling Operations:

Within ten days following the commencement of drilling operations, the owner of the well shall file with the Commission a report on Form C-103 in TRIPLICATE. Such report shall indicate the date well is spudded and any other pertinent data not previously submitted on Forms C-101 or C-102, whichever is applicable.

(b) Report on Plugging of Well:

Within thirty days following the completion of plugging operations on any well, a record of the work done shall be filed with the Commission in TRIPLICATE, on Form C-103. Such report shall be filed by the owner of the well and shall include the date the plugging operations were begun along with the date the work was completed; a detailed account of the manner in which the work was performed; the depths and lengths of the various plugs set; the nature and quantities of materials employed in plugging operations; the amount, size and depth of all casing left in the hole and the weight of mud employed in plugging the well and any other pertinent information. No plugging report submitted on Form C-103 shall be approved by the Commission unless such report specifically states that pits have

been filled and the location levelled, and cleared of junk. The filing of Form C-105, 'Well Record is also necessary to obtain Commission approval of a plugging report.

It shall be the responsibility of the owner of the plugged well to contact the appropriate District Office of the Commission to arrange for an inspection of the plugged well and the location by a Commission representative.

(c) Report on Results of Test of Casing Shut-off

A report on a test of casing shut-off shall be filled with the Commission on Form C-103, in TRIPLICATE, within ten days following the completion of the test. Such report shall be filed by the owner of the well and shall indicate any changes in the casing program previously outlined and approved on Form C-101 or C-102, whichever is applicable. The report shall also present a detailed description of the test method employed and the results obtained by such test, and any other pertinent information.

(d) Report on Remedial Work

Within thirty days following the completion of remedial work on a well, a report on the operation shall be filed with the Commission on Form C-103, submitted in QUADRUPLICATE. Such report shall be filed by the operator of the well and shall present a detailed account of the work done and the manner in which such work was performed; the daily production of oil, gas and water both prior to and after the remedial operation; the size and depth of shots; the quantity of sand crude, chemical or other materials employed in the operation, and any other pertinent information. Remedial work to be reported on Form C-103 is as follows:

1. Report on shooting, fluid fracturing or chemical treatment of a previously completed well.

2. Report on squeeze job.

3. Report on setting of a liner, packer or pump.

4. Report on installation of gas lift facilities,

or any similar operations which affect the original status of the well and which are not specifically covered herein.

(e) Report on Change in Owership of Drilling Well

Within ten days following the official change in ownership of a drilling well, such change in ownership will be re - ported to the Commission on Form C-103, submitted in TRIPLICATE. Such report shall be filed by the new owner of the well, and shall include the name and address of the previous owner, the effective date of the change in the ownership, and any other pertinent information. No change in the ownership of a drilling well will be approved by the Commission until a $5,000.00 one-well plugging bond or a $10,000.00 blanket plugging bond has been filed with and approved by the Commission in the name of the new owner.

(f) Report on Plugging Back or Drilling Deeper Operations

Within thirty days following the completion of plugging back or deepening operations, a report of such work must be filed with the Commission on Form C-103, submitted in QUADRUPLICATE. Such report shall be filed by the operator of the well and shall present a detailed account of the work done and the manner in which such work was performed.

(g) Other Report on Wells

Reports on operations not specifically covered herein shall be submitted to the Commission on Form C-103, in TRIP-LICATE, by the operator of the subject well within ten days following the completion of the work specified.

RULE 1107. REQUEST FOR (OIL-GAS) ALLOWABLE (Form C-104)

It is necessary that this form be submitted by the operator before an initial allowable will be assigned to any completed oil or gas well. Form C-104 is to be submitted in QUADRUPLICATE to the Commission District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 a.m. on the date of completion, provided completion report is filed during month of completion. The completion date shall be that date, in the case of an oil well, when oil is delivered into the stock tanks. Provided, however, that a well will not be assigned an allowable unless Form C-128, Well location and Acreage Dedication Plat, has been filed with the Commission showing the location of the well and the amount and status of the acreage dedicated thereto.

Form C-110, Certificate of Compliance and Authorization to Transport oil or Natural Gas, shall accompany Form C-104.

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RULE 1108. WELL RECORD (Form C-105)

Within 20 days after the completion of any well, the owner shall file in QUINTUPLICATE Form C-105 with ONE COPY of all electrical and radio-activity logs run on the well. The well record with the attached electrical and radio activity logs shall not be kept confidential by the Commission unless so requested in writing by the owner of the well. Upon such request the Commission will keep the report and log confidential for 90 days from date of completion of the well; provided, however, that the report, log or data therein when pertinent may be introduced in any public hearing before the Commission or any court regardless of the request that the report be kept confidential. If the Form C-105 with attached log or logs is not received by the Commission in the specified 20 days, the allowable for the well will be withheld until this provision is complied with.

In the case of well-plugging operations, a complete record of the well on Form C-105 with the log or logs run on the well shall accompany the notice of intention to plug the well, if not previously filed.

(Note: On State Land submit one additional copy of Form C-105)

RULE 1109. CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS (Form C-110)

(a) Each producer of crude petroleum oil, casinghead gas, liquid hydrocarbons, and natural gas shall execute, in QUINTUPLICATE, and file Form C-110 with the Commission, setting forth fully therein the data and information indicated by such form covering each well from which crude petroleum oil, casinghead gas, natural gas and liquid hydrocarbons are produced.

(b) Whenever there shall occur a change in the operating ownership of any producing well, or whenever there shall occur a change of transporter from any producing well, or whenever there shall occur a change of well numbers or lease designation, Form C-110 shall be executed and filed in accordance with appropriate instructions; except that in the case of a temporary change in transporter when oil is moved from any lease by anyone other than the transporter authorized by the Form C-110, the operator shall notify the appropriate District Office of the Commission in writing 3 days after the oil is moved, furnishing the information as instructed by the District Office. In a temporary change, one copy will be sent to the regular transporter, one copy to the temporary transporter, and one copy will be returned to the operator.

RULE 1110. MONTHLY GAS REPORT (Form C-111)

All gas produced from natural gas wells and all casinghead gas produced which is taken into a fuel system or other system (except gas taken into a gasoline or other extraction plant gathering system which is required to be reported on Form C-114), shall be reported monthly on Form C-111. Where such natural or casinghead gas is taken by the producer, then the producer shall make such report. In case said gas is taken at the well by any person other than the producer, then such person taking said gas shall make the report. Form C-111 shall be postmarked on or before the 15th of the month for all of said gas taken during the preceding month, and shall be submitted in DUPLICATE, except when report concerns District 3 where it will be submitted in TRIPLICATE. One copy shall be sent to the Commission at Santa Fe, one copy to the Commission office at Hobbs and one copy to the Commission office at Aztec, when report concerns District 3 of the Commission.

RULE 1111. TRANSPORTER'S AND STORER'S MONTHLY REPORT (Form C-112)

Each transporter and/or storer of crude petroleum oil and liquid hydrocarbons within the State of New Mexico shall file for each calendar month a Transporter's and Storer's Monthly Report, Form C 112, containing complete information and data indicated by such form respecting stocks of crude petroleum oil and liquid hydrocarbons on hand and receipts and deliveries of crude petroleum oil and liquid hydrocarbons by pipeline and trucks within the State of New Mexico, and receipts and deliveries from leases to storers or refiners; between transporters within the State; between storers and refiners within the State. Form C-112 shall be filed in DUPLICATE and postmarked on or before the 15th day of the next succeeding month.

RULE 1112. REFINER'S MONTHLY REPORT (Form C-113)

Every refiner or crude petroleum oil within the State of New Mexico shall furnish for each calendar month a Refiner's Monthly Report, Form C-113, containing the information and data indicated by such form respecting crude petroleum oil and products involved in such refiner's operations during each month. Such report for each month shall be filed in DUPLICATE and be postmarked on or before the 15th day of the next succeeding month.

RULE 1113. GASOLINE OR OTHER EXTRACTION PLANT MONTHLY REPORT (Form C-114)

Each operator of a gasoline plant, cycling plant or any other plant at which gasoline, butane, propane, kerosene, oil, or other liquid products are extracted from gas within the State of New Mexico shall furnish for each calendar month a Gasoline or Other Extraction Plant Monthly Report, Form C-114, containing the information indicated by such form respecting gas and products involved in the operation of each such plant during each month. Such report for each month shall be filed in DUPLICATE and postmarked on or before the 15th day of the next succeeding month, except when report concerns District 3 where it will be submitted in TRIPLICATE. One copy shall be sent to the Commission at Santa Fe, one copy to the Commission at Hobbs, and one copy to the Commission at Aztec, when report concerns District 3 of the Commission.

RULE 1114. OPERATOR'S MONTHLY REPORT (FORM C-115)

Operator's Monthly Report, Form C-115, shall be filed on each producing lease within the State of New Mexico for each calendar month, setting forth complete information and data indicated on said form. Oil production from wells which are producing into common storage shall be estimated as accurately as possible on the basis of periodic tests.

The reports on this form shall be filed by the producer as follows:

> Original to the Oil Conservation Commission at Santa Fe; one copy to the Oil Conservation Commission District Office at Hobbs; one copy to the District Office in which district the lease is located; and one copy to each transporter involved. Each report for each month shall be postmarked not later than the 24th day of the next succeeding month. Repeated failure of an operator to file this report in accordance with the provisions of this rule may result in cancellation of Form C-110 for the affected well or wells.

RULE 1115. GAS-OIL RATIO TEST (FORM C-116)

A gas-oil ratio test shall be made and reported on Form C-116 as prescribed in Rule 301, Gas-Oil Ratio Test. This form shall be submitted in DUPLICATE.

RULE 1116. SEDIMENT OIL DISPOSITION PERMITS (FORM C-117-A AND C-117-B

(a) Form C-117-A, Sediment Oil Destruction Permit, shall be submitted in TRIPLICATE in accordance with Rule 311, and shall contain the following information:

(1) Name of operator
(2) Name of location of lease
(3) Type of sediment oil (tank bottom, emulsion, etc.)
(4) Estimated amount (in barrels).

(b) Form C-117-B, Sediment Oil Recovery Permit, shall be submitted in QUADRUPLICATE in accordance with Rule 311, and shall contain the following information:

(1) Name of Transporter
(2) Name of operator
(3) Name and location of lease
(4) Type of Sediment oil (tank bottom, emulsion, etc.)
(5) Estimated amount (in barrels)
(6) Disposition

RULE 1117. TREATING PLANT OPERATOR'S MONTHLY REPORT (FORM C-118).

Form C-118 shall be submitted in DUPLICATE in accordance with Rule 312, and shall contain the following information:

(1) Name of treating plant operator
(2) Location of plant or plants
(3) Source of each individual acquisition
(4) Number of permit authorizing acquisition
(5) Gross volume of sediment oil acquired from each source.
(6) Net amount of pipeline oil recovered from each acquisition.

RULE 1118. CARBON BLACK PLANT MONTHLY REPORT (FORM C-119)

Each operator of a carbon black plant within the State of New Mexico shall file for each calendar month, the monthly volume of gas received by him from a gasoline extraction plant or plants, and a monthly volume or volumes of gas received by him from each lease operator delivering natural gas directly to such plant, together with the opening and closing stocks, the production and deliveries by grades of carbon black or other products produced. Such reports containing information as required by the form shall be filed in DUPLICATE on Form C-119, Carbon Black Monthly Report, and be postmarked on or before the 15th day of the next succeeding month.

RULE 1119. MONTHLY INJECTION REPORT (FORM C-120)

Form C-120 shall be submitted in TRIPLICATE and shall be used for reports required under Rule 704. This report shall be postmarked not later than the 15th of the next succeeding month.

RULE 1120. PURCHASER'S NOMINATION FORM (FORM C-121 AND C-121-A)

One copy of Form C-121, crude oil purchaser's nomination, and Form C-121-A, gas purchasers preliminary nomination, shall be submitted to the Commission not later than 5 days prior to said Commission's statewide proration hearing on nominations for the succeeding month. Form C-121 and Form C-121-A shall be mailed to the Oil Conservation Commission, P. O. Box 871, Santa Fe, New Mexico.

RULE 1121. MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS (Form C-122)
GAS WELL TEST DATA (C-122-A)
INITIAL POTENTIAL TEST DATA SHEET (C-122-B)
ONE-POINT BACK PRESSURE TEST FOR GAS WELLS (C-122-C)

Form C-122 shall be submitted in TRIPLICATE to the Oil Conservation Commission at Santa Fe, New Mexico, and shall be used to show back pressure data

as required under the provisions of Rule 401 and any applicable special pool rules and proration orders. Form's C-122-A, C-122-B and C-122-C shall be submitted according to applicable special pool rules and proration orders.

RULE 1122. REQUEST FOR THE EXTENSION OF AN EXISTING POOL OR THE CREATION OF A NEW POOL (Form C-123)

The owner or operator of a well which requires the creation or extension of a pool shall be given written instructions by the appropriate District Office in regard to the filing of Form C-123 in DUPLICATE.

RULE 1123. BOTTOM HOLE PRESSURES (Form C-124)

Form C-124 shall be submitted in TRIPLICATE and shall be used to report bottom hole pressures as required under the provisions of Rule 302 and any applicable special pool rules.

RULE 1124. SHUT-IN PRESSURES ON GAS WELLS (Form C-125)

Form C-125 shall be submitted in TRIPLICATE and shall be used to report shut-in pressure tests on gas wells as required under the provisions of Rule 402.

RULE 1125. PERMIT FOR TRANSPORTING RECOVERED LOAD OIL (Form C-126)

Form C-126 shall be submitted in QUADRUPLICATE to the Oil Conservation Commission District Office at Hobbs, (Box 2045) or Aztec, (1000 Rio Brazos Rd.) which ever is appropriate and shall be used in conformance with Rule 508 and Rule 1109 (b).

RULE 1126. OIL PRODUCERS ALLOWABLE CHANGE (Form C-127)

One copy of Form C-127 shall be filed by the oil producer with the Oil Conservation Commission, Box 2045, Hobbs, or Aztec, 1000 Rio Brazos Rd., whichever is appropriate, not later than the 15th day of the month preceding the month for which oil allowable changes are requested.

RULE 1127. WELL LOCATION AND ACREAGE DEDICATION PLAT (Form C-128)

This is a dual purpose form used to show the exact location of the well and the acreage dedicated thereto. The form is also used to show the ownership and status of the dedicated acreage.

Form C-128 shall be submitted in TRIPLICATE with Form C-101 in accordance with Rule 1104.

An amended Form C-128 shall be submitted in the event that there is a change in any of the information required thereon. The well location need not be certified when filing an amended Form C-128.

RULE 1128. FORMS REQUIRED ON WELLS LOCATED ON FEDERAL LAND

Federal forms in lieu of State Forms will be used on Federal Lands in New Mexico when filing NOTICE OF INTENTION TO DRILL, MISCELLANEOUS NOTICES, MISCELLANEOUS REPORTS ON WELLS, OR WELL RECORDS. However, it shall be the duty of each operator in the State of New Mexico that drills on Federal Land to submit two extra copies of each of such forms to the USGS, who will approve same and transmit them to the Commission on those forms provided by the USGS. The following USGS forms will be accepted in lieu of the regular Commission forms from operators of wells on federal land:

USGS FORM	TITLE OF FORM	SIMILAR OCC FORM
9-331a	Sundry Notices and Reports on Wells	C-101
9-331a	Sundry Notices and Reports on Wells	C-102 Plugback or Drill deeper (only)
9331a	Sundry Notices and Reports on Wells	C-103 Plugback or Drill Deeper (only)
9-330	Log of Oil or Gas Well	C-105

The above forms as may be revised, are the only forms that may be submitted in the place of the regular Commission forms.

After a well is completed and ready for pipe line connection, Oil Conservation Commission Forms C-104 and C-110 shall be filed with the Commission on any and all wells drilled in the State, regardless of land status. Further, all reports and forms as required under the preceding rules of this section of the Rules and Regulations that pertain to production must be filed on the proper Oil Conservation Commission form as set out in said Rule - no other forms will be accepted.

Failure to comply with the provisions of this Rule will result in the cancellation of Form C-110 for the affected well or wells.

N-RULES ON PROCEDURE

RULE 1201. NECESSITY FOR HEARING

Except as provided in some general rule herein, before any rule, regulation or order, including revocation, changes, renewal or extension thereof shall be made by the Commission, a public hearing before the Commission or a legally appointed Examiner shall be held at such time and place as may be prescribed by the Commission.

RULE 1202. EMERGENCY ORDERS

Notwithstanding any other provision of these rules, in case an emergency is found to exist by the Commission, which, in its judgment, requires the making of a rule, regulation or order without a hearing having first been had or concluded, such emergency rule, regulation or order when made by the Commission shall have the same validity as if a hearing with respect to the same had been held before the Commission after due notice. Such emergency rule, regulation or order shall remain in force no longer than 15 days from its effective date, and in any event, it shall expire when the rule, regulation or order made after due notice and hearing with respect to the subject matter of such emergency rule, regulation or order becomes effective.

RULE 1203. METHOD OF INITIATING A HEARING

The Commission upon its own motion, the Attorney General on behalf of the State and any operator, producer or any other person having a property interest may institute proceedings for a hearing. If the hearing is sought by the Commission it shall be on motion of the Commission and if by any other person it shall be by application. The application in TRIPLICATE shall state (1) the name or general description of the common source or sources of supply affected by the order sought, unless the same is intended to apply to and affect the entire state, in which event the application shall so state, (2) briefly the general nature of the order, rule or regulation sought, (3) any other matter required by a particular rule or rules, and (4) whether applicant desires a hearing before the Commission or an Examiner, and, if hearing before an Examiner is desired, the time and place applicant prefers the hearing to be held may be stated in the application, and such application shall state a list of the names and addresses of all interested parties known to applicant.

An application shall be signed by the person seeking the hearing or by his attorney. Unless required by specific rule, an application need not be verified.

RULE 1204. METHOD OF GIVING LEGAL NOTICE FOR HEARING

Notice of each hearing before the Commission, except hearings continued by an Examiner as provided in Rule 1209, and notice of each hearing before an Examiner shall be given by personal service on the person affected or

by publication once in a newspaper of general circulation published at Santa Fe, New Mexico, and once in a newspaper of general circulation published in the county or each of the counties, if there be more than one, in which any land, oil or gas or other property which may be affected shall be situated.

RULE 1205. CONTENTS OF NOTICE OF HEARING

Such notice shall be issued in the name of "The State of New Mexico" and shall be signed by two members of the Commission or by the Secretary of the Commission, and the seal of the Commission shall be impressed thereon.

The notice shall specify whether the case is set for hearing before the Commission or before an Examiner and shall state the number and style of the case and the time and place of hearing and shall briefly state the general nature of the order or orders, rule or rules, regulation or regulations to be promulgated or effected. The notice shall also state the name of the petitioner or applicant, if any, and unless the contemplated order, rule or regulation is intended to apply to and affect the entire State it shall specify or generally describe the common source or sources of supply which may be affected by such order, rule or regulations.

RULE 1206. PERSONAL SERVICE OF NOTICE

Personal service of the notice of hearing may be made by any agent of the Commission or by any person over the age of 18 years in the same manner as is provided by law for the service of summons in civil actions in the district courts of this State. Such service shall be complete at the time of such personal service or on the date of publication, as the case may be. Proof of service shall be by the affidavit of the person making personal service or of the publisher of the newspaper in which publication is had. Service of the notice shall be made at least 10 days before the hearing.

RULE 1207. PREPARATION OF NOTICES

After a motion or application is filed with the Commission the notice or notices required shall be prepared by the Commission and, service and publication thereof shall be taken care of by the Commission without cost to the applicant.

RULE 1208. FILING PLEADINGS; COPY DELIVERED TO ADVERSE PARTY OR PARTIES

When any party to a hearing files any pleading, plea or motion of any character (other than application for hearing) which is not by law or by these rules required to be served upon the adverse party or parties, he shall at the same time either deliver or mail to the adverse party or parties who have entered their appearance therein, or their respective attorneys of record, a copy of such pleading, plea or motion. For the purposes of these rules, an appearance of any interested party shall be made either by letter addressed to the Commission, or in person at any

proceeding before the Commission, or before an Examiner, with notice of such appearance to the parties from whom such pleadings, pleas, or motions are desired.

RULE 1209. CONTINUANCE OF HEARING WITHOUT NEW SERVICE.

Any hearing before the Commission or an Examiner held after due notice may be continued by the person presiding at such hearing to a specified time and place without the necessity of notice of the same being again served or published. In the event of any continuance, a statement thereof shall be made in the record of the hearing which is continued.

Any matter or proceeding set for hearing before an Examiner shall be continued by the examiner to the next regular hearing of the Commission following the date set for the hearing before the Examiner if any person who may be affected by any order entered by the Commission in connection with such hearing shall have filed with the Commission, at least three days prior to the date set for such hearing, a written objection to such hearing being held before an Examiner. In such event the matter or proceeding shall be placed on the regular docket of the Commission for hearing.

RULE 1210. CONDUCT OF HEARINGS

Hearings before the Commission or any Examiner shall be conducted without rigid formality. A transcript of testimony shall be taken and preserved as a part of the permanent record of the Commission. Any person testifying in response to a subpoena issued by the Commission and any person seeking to testify in support of an application or motion or in opposition thereto shall be required to do so under oath. However, relevant unsworn comments and observations by any interested party will be designated as such and included in the record. Comments and observations by representatives of operators' committees, the United States Geological Survey, the United States Bureau of Mines, the New Mexico Bureau of Mines and other competent persons are welcomed. Any Examiner legally appointed by the Commission may conduct such hearings as may be referred to such Examiner by the Commission or the Secretary thereof.

RULE 1211. POWER OF COMMISSION TO REQUIRE ATTENDANCE OF WITNESSES AND PRODUCTION OF EVIDENCE

The Commission or any member thereof has statutory power to subpoena witnesses and to require the production of books, papers and records in any proceeding before the Commission. A subpoena will be issued by the Commission for attendance at a hearing upon the written request of any person interested in the subject matter of the hearing. In case of the failure of a person to comply with the subpoena issued by the Commission, an attachment of the person may be issued by the district court of any district in the State, and such court has powers to punish for contempt. Any person found guilty of swearing falsely at any hearing

may be punished for contempt.

RULE 1212. RULES OF EVIDENCE

Full opportunity shall be afforded all interested parties at a hearing to present evidence and to cross-examine witnesses. In general, the rules of evidence applicable in a trial before a court without a jury shall be applicable, provided that such rules may be relaxed, where, by so doing, the ends of justice will be better served. No order shall be made which is not supported by competent legal evidence.

RULE 1213. EXAMINERS' QUALIFICATIONS AND APPOINTMENT

The Commission shall by ex parte order, designate and appoint not more than four individuals to be examiners. Each Examiner so appointed shall be a member of the staff of the Commission, but no Examiner need be a full time employee of the Commission. The Commission may by ex parte order, designate and appoint a successor to any person whose status as an Examiner is terminated for any reason. Each individual designated and appointed as an Examiner must have at least six years practical experience as a geologist, petroleum engineer or licensed lawyer, or at least two years of such experience and a college degree in geology, engineering, or law; provided however, that nothing herein contained shall prevent any member of the Commission from being designated as, or serving as, an Examiner.

RULE 1214. REFERRAL OF CASES TO EXAMINERS

Either the Commission or the Secretary thereof may refer any matter or proceeding to any legally designated and appointed Examiner for hearing in accordance with these rules. The Examiner appointed to hear any specific case shall be designated by name.

RULE 1215. EXAMINER'S POWER AND AUTHORITY

The Commission may, by ex parte order, limit the powers and duties of the Examiner in any particular case to such issues or to the performance of such acts as the Commission deems expedient; however; subject only to such limitations as may be ordered by the Commission, the Examiner to whom any matter or proceeding is referred under these rules shall have full authority to hold hearings on such matter or proceeding in accordance with and pursuant to these rules. The Examiner shall have the power to regulate all proceedings before him and to perform all acts and take all measures necessary or proper for the efficient and orderly conduct of such hearing, including the swearing of witnesses, receiving of testimony and exhibits offered in evidence, subject to such objections as may be imposed, and shall cause a complete record of the proceeding to be made and transcribed and shall certify same to the Commission as hereinafter provided.

RULE 1216. HEARINGS WHICH MUST BE HELD BEFORE COMMISSION

Notwithstanding any other provision of these rules, the hearing on any matter or proceeding shall be held before the Commission (1) if the Commission in its discretion desires to hear the matter, or (2) if the application or motion so requests, or (3) if the matter is initiated on motion of the Commission for the enforcement of any rule, regulation, order, or statutory provision, or (4) if any party who may be affected by the matter or proceeding files with the Commission more than three days prior to the date set for the hearing on the matter or proceeding a written objection to such matter or proceeding being heard before an Examiner, or (5) if the matter or proceeding is for the purpose of amending, removing or adding a statewide rule.

RULE 1217. EXAMINER'S MANNER OF CONDUCTING HEARING

An Examiner conducting a hearing under these rules shall conduct himself as a disinterested umpire.

RULE 1218. REPORT AND RECOMMENDATIONS RE EXAMINER'S HEARINGS

Upon the conclusion of any hearing before an Examiner, the Examiner shall promptly consider the proceedings in such hearing, and based upon the record of such hearing the Examiner shall prepare his written report and recommendations for the disposition of the matter or proceeding by the Commission. Such report and recommendations shall either be accompanied by a proposed order or shall be in the form of a proposed order, and shall be submitted to the Commission with the certified record of the hearing.

RULE 1219. DISPOSITION OF CASES HEARD BY EXAMINERS

After receipt of the report and recommendations of the Examiner, the Commission shall either enter its order disposing of the matter or proceeding, or refer such matter or proceeding to the Examiner for further hearing.

RULE 1220. DE NOVO HEARING BEFORE COMMISSION

When any order has been entered by the Commission pursuant to any hearing held by an Examiner, any party adversely affected by such order shall have the right to have such matter or proceeding heard de novo before the Commission, provided that within 30 days from the date such order is rendered such party files with the Commission a written application for such hearing before the Commission. If such application is filed, the matter or proceeding shall be set for hearing before the Commission at the next regular hearing date following the expiration of fifteen days from the date such application is filed with the Commission. Any person affected by the order or decision rendered by the Commission after hearing before the Commission may apply for rehearing pursuant to and in accordance with the provisions of Rule 1222, and said Rule 1222 together with the law applicable to rehearings and appeals in matters and proceedings before the Commission shall thereafter apply to such matter or proceeding.

RULE 1221. NOTICE OF COMMISSION'S ORDERS

Within ten days after any order, including any order granting or refusing rehearing, or order following rehearing, has been rendered by the Commission, a copy of such order shall be mailed by the Commission to each person or his attorney of record who has entered his appearance of record in the matter of proceeding pursuant to which such order is rendered.

RULE 1222. REHEARINGS

Within 20 days after entry of any order or decision of the Commission any person affected thereby may file with the Commission an application for rehearing in respect of any matter determined by such order or decision, setting forth the respect in which such order or decision is believed to be erroneous. The Commission shall grant or refuse any such application in whole or in part within 10 days after the same is filed and failure to act thereon within such period shall be deemed a refusal thereof and a final disposition of such application. In the event the rehearing is granted, the Commission may enter such new order or decision after rehearing as may be required under the circumstances.

RULE 1223. CHANGES IN FORMS AND REPORTS

Any changes in the forms and reports or rules relating to such forms and reports shall be made only by order of the Commission issued after due notice and hearing.

O-RULES ON ADMINISTRATION

RULE 1301. DISTRICT OFFICES

To expedite administration of the work of the Commission and enforcement of its rules and regulations, the State shall be divided into four districts as follows:

District 1	Lea, Roosevelt, Curry, and that portion of Chaves County, lying East of the North-South line dividing Ranges 29 and 30 East, NMPM, with office at Hobbs
District 2	Eddy, Otero, Dona Ana, Lincoln, De Baca and that portion of Chaves County, lying West of the North-South line dividing Ranges 29 and 30 East, NMPM, with office at Artesia
District 3	San Juan, Rio Arriba, McKinley and Sandoval Counties, with office at Aztec
District 4	Balance of state, office of the Oil Conservation Commission, Santa Fe

Each district office shall be under the charge of an oil and gas inspector, a deputy oil and gas inspector or a member of the Commission. Unless otherwise specifically required, all matters pertaining to the Commission shall be taken care of through the district office of the district in which the land that is affected lies.

RULE 1302. WHERE TO FILE REPORTS AND FORMS

All reports and forms required by the rules to be filed with the Commission shall be filed in the number and at the time specified on each such printed report or form. However, all copies of reports and forms required to be filed with the Commission shall, except as hereinafter stated, be filed at the district office of the district in which the land that is the subject matter of the report lies. All plugging bonds shall be filed directly in the Commission Office at Santa Fe. A list of all plugging bonds in force and approved shall be kept in each district office.

RULE 1303. DUTIES AND AUTHORITY OF FIELD PERSONNEL

Oil and gas inspectors, deputy oil and gas inspectors, scouts, engineers and geologists duly appointed by the Commission have the authority and duty to enforce the rules and regulations of the Commission. Only oil and gas inspectors and their deputies shall have discretion to allow minor deviations from requirements of the rules as to field practices where, by so doing, waste will be prevented or burdensome delay or expenses on the part of the operator will be avoided.

RULE 1304. NUMBERING OF COMMISSION ORDERS

All orders of the Commission made after 1 January 1950 pertaining to allocation of the production of oil or gas shall be prefixed with the letter "A" and shall be numbered consecutively, commencing with No. 1-i.e., the first allocation order issued after 1 January 1950 shall be No. A-1, and the next shall be No. A-2

All other orders of the Commission made after 1 January 1950 shall be prefixed with the letter "R" and shall be consecutively numbered, commencing with the number 1-i.e., the first such order issued after 1 January 1950 shall be No. R-1, and the next shall be No. R-2.

NEW MEXICO STATUTES ANNOTATED

1953 COMPILATION

CHAPTER 65

ARTICLE 3

REGULATION OF OIL AND GAS WELLS

Section

65-3-1. STATE GEOLOGIST -APPOINTMENT - ASSISTANTS - DUTIES - SALARIES.

The governor of the State of New Mexico is hereby authorized to appoint a state geologist who in turn is hereby authorized to appoint with the approval of the commissioner of public lands, such inspectors, clerks and additional assistants as he may deem necessary to properly carry out the provisions of this act. Such geologist shall be at all times under the direction and supervision of the commissioner of public lands and shall collect and compile information relative to oil and gas development and production within the state which may affect state lands, and prepare maps and reports necessary and expedient for the proper supervision and leasing of lands belonging to the state for oil and gas purposes. The salary of the geologist shall be not more than three thousand six hundred dollars ($3,600.00) per annum, and the salaries of the other employees of the geologist's office shall be as the state land commissioner approves in each instance, which salaries and expenses shall be paid out of the state land office maintenance fund.

65-3-2. WASTE PROHIBITED.

The production or handling of crude petroleum oil or natural gas of any type or in any form, or the handling of products thereof, in such manner or under such conditions or in such amounts as to constitute or result in waste is each hereby prohibited.

65-3-3. WASTE - DEFINITIONS.

As used in this act, the term "waste," in addition to its ordinary meaning, shall include:

(a) "Underground waste" as those words are generally understood in the oil and gas business, and in any event to embrace the inefficient, excessive, or improper, use or dissipation of the reservoir energy, including gas

energy and water drive, of any pool, and the locating, spacing, drilling, equipping, operating, or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recovered from any pool, and the use of inefficient underground storage of natural gas.

(b) "Surface Waste" as those words are generally understood in the oil and gas business, and in any event to embrace the unnecessary or excessive surface loss or destruction without beneficial use, however caused, of natural gas of any type or in any form or crude petroleum oil, or any product thereof, but including the loss or destruction, without beneficial use, resulting from evaporation, seepage, leakage or fire, especially such loss or destruction incident to or resulting from the manner of spacing, equipping, operating, or producing, well or wells, or incident to or resulting from the use of inefficient storage or from the production of crude petroleum oil or natural gas in excess of the reasonable market demand.

(c) The production of crude petroleum oil in this state in excess of the reasonable market demand for such crude petroleum oil. Such excess production causes or results in waste which is prohibited by this Act. The words "reasonable market demand," as used herein with respect to crude petroleum oil, shall be construed to mean the demand for such crude petroleum oil for reasonable current requirements for current consumption and use within or outside the State, together with the demand for such amounts as are reasonably necessary for building up or maintaining reasonable storage reserves of crude petroleum oil or the products thereof, or both such crude petroleum oil and products.

(d) The non-ratable purchase or taking of crude petroleum oil in this State, such non-ratable taking and purchasing causes or results in waste, as defined in the subsections (a), (b), (c) of this section and causes waste by violating Section 12 (a) of this act. (65-3-13)

(e) The production in this State of natural gas from any gas well or wells, or from any gas pool in excess of the reasonable market demand from such source for natural gas of the type produced or in excess of the capacity of gas transportation facilities for such type of natural gas. The words "reasonable market demand", as used herein with respect to natural gas, shall be construed to mean the demand for natural gas for reasonable current requirements, for current consumption and for use within or outside the State, together with the demand for such amounts as are necessary for building up or maintaining reasonable storage reserves of natural gas or products thereof, or both such natural gas and products.

65-3-4. OIL CONSERVATION COMMISSION - MEMBERS - TERM-EXPENSES - OFFICERS - QUORUM - POWER TO ADMINISTER OATHS.

There is hereby created an Oil Conservation Commission, hereinafter in this Act called the "Commission," to be composed of the Governor of this State, the Commissioner of Public Lands and the State Geologist; provided that the Governor may appoint some practical oil man, a resident of this State, to serve

in the place and stead of the Governor as a member of said Commission. No salary or compensation shall be paid any member of the Commission for his services as a member thereof, but the actual and necessary expenses of the members of said Commission, incurred or expended in the performance of the duties imposed on said Commission, shall be paid out of the Oil Conservation Fund hereinafter created, provided that if the State Geologist shall hold any other State office his salary may be adjusted by the Governor, and such Geologist paid part of his salry out of the Oil Conservation Fund. The term of office of each member of the Commission shall be concurrent with the other office held by him except that if the Governor shall appoint a practical oil man to serve in his place and stead, the term of office of the person so appointed shall expire with the term of the Governor by whom he shall have been appointed. The Commission shall organize by electing a chairman from its membership, and shall appoint a Secretary. Two members of the Commission shall constitute a quorum for all purposes. The Commission shall adopt a seal and such seal affixed to any paper signed by the Secretary of the Commission shall be prima facie evidence of the due execution thereof. The Attorney General shall be the attorney for the Commission. Any member of the Commission, or the secretary thereof, or any employee of the Commission, shall have power to administer oaths to any witness in any hearing, investigation or proceeding contemplated by this Act or by any other law of this State relating to the conservation of oil or gas.

65-3-5. COMMISSION'S POWERS AND DUTIES

The Commission shall have, and it is hereby given, jurisdiction and authority over all matters relating to the conservation of oil and gas in this State, and of the enforcement of all the provisions of this Act and of any other law of this State relating to the conservation of oil or gas. It shall have jurisdiction and control of and over all persons or things necessary or proper to enforce effectively the provisions of this Act or of any other law of this State relating to the conservation of oil or gas.

65-3-6. RULES OF PROCEDURE IN HEARINGS - MANNER OF GIVING NOTICE - RECORD OF RULES, REGULATIONS AND ORDERS.

The Commission shall prescribe its rules of order or procedure in hearing or other proceedings before it under this Act. Any notice required to be given under this Act or under any rule, regulation or order prescribed by the Commission shall be by personal service on the person affected, or by publication once in a newspaper of general circulation published at Santa Fe, New Mexico, and once in a newspaper of general circulation published in the county, or each of the counties if there by more than one, in which any land, oil or gas or other property which may be affected shall be situated. Such notice shall issue in the name of "the State of New Mexico" and shall be signed by at least a majority of the members of the Commission or by the Secretary of the Commission, and the seal of the Commission shall be impressed thereon, and it shall specify the number and style of the case, and the time and place of hearing, shall briefly state the general nature of the order or orders, rule or rules, or regulation or regulations contemplated by the Commission on its own motion or sought in a proceeding brought

before the Commission, the name of the petitioner, or applicant, and, unless the order, rule or regulation is intended to apply to and affect the entire State, it shall specify or generally describe the common source or sources of supply that may be affected by such order, rule or regulation. Personal service thereof may be made by any agent of the Commission or by any person over the age of eighteen years, in the same manner as is provided by law for the service of summons in civil actions in the district courts of this State. Such service shall be complete at the time of such personal service or on the date of such publication, as the case may be. Proof of service shall be the affidavit of the person making personal service, or of the publisher of the newspaper in which publication is had, as the case may be. All rules, regulations and orders made by the Commission shall be entered in full by the Secretary thereof in a book to be kept for such purpose by the Commission, which shall be a public record and open to inspection at all times during reasonable office hours. A copy of any such rule, regulation or order, certified by the Secretary of the Commission under the seal of the Commission, shall be received in evidence in all courts of the State with the same effect as the original.

65-3-7. SUBPOENA POWER - IMMUNITY OF NATURAL PERSONS REQUIRED TO TESTIFY.

The Commission, or any member thereof, is hereby empowered to subpoena witnesses, to require their attendance and giving of testimony before it, and to require the production of books, papers, and records in any proceeding before the Commission. No person shall be excused from attending and testifying or from producing books, papers and records before the Commission, or from obedience to the subpoena of the said Commission, whether such subpoena be signed or issued by one or more of the members of the said Commission, in any hearing, investigation or proceeding held by or before the said Commission or in any cause or proceeding in any court by or against the said Commission, relative to matters within the jurisdiction of said Commission, on the ground or for the reason that the testimony or evidence, documentary or otherwise, required of him may tend to incriminate him or subject him to a penalty or forfeiture; provided that nothing herein contained shall be construed as requiring any person to produce any books, papers or records, or to testify in response to any inquiry not pertinent to some question lawfully before such Commission or court for determination. No natural person shall be subjected to criminal prosecution, or to any penalty or forfeiture for or on account of any transaction, matter or thing concerning which he may be required to testify, or produce evidence, documentary or otherwise, before said Commission, or in obedience to its subpoena, or in any cause or proceeding, provided, that no person testifying shall be extempted from prosecution and punishment for perjury committed in so testifying.

65-3-8. FAILURE OR REFUSAL TO COMPLY WITH SUBPOENA - REFUSAL TO TESTIFY - BODY ATTACHMENT - CONTEMPT.

In case of failure or refusal on the part of any person to comply with any subpoena issued by said Commission or any member thereof, or on the refusal of any witness to testify or answer as to any matters regarding

which he may be lawfully interrogated, any district court in this State, or any judge thereof, on application of said Commission, may issue an attachment for such person and compel him to comply with such subpoena and to attend before the Commission and produce such documents, and give his testimony upon such matters as may be lawfully required, and such court or judge shall have the power to punish for contempt as in case of disobedience of a like subpoena issued by or from such court, or a refusal to testify therein.

65-3-9. PERJURY - PUNISHMENT.

If any person of whom an oath shall be required under the provisions of this act, or by any rule, regulation or order of the Commission, shall wilfully swear falsely in regard to any matter or thing respecting which such oath is required, or shall wilfully make any false report or affidavit required or authorized by the provisions of this act, or by any rule, regulation or order of the Commission, such person shall be deemed guilty of perjury and shall be punished by imprisonment in the State penitentiary for not more than five years nor less than six months.

65-3-10. POWER OF COMMISSION TO PREVENT WASTE AND PROTECT CORRELATIVE RIGHTS.

The Commission is hereby empowered, and it is its duty, to prevent the waste prohibited by this Act and to protect correlative rights, as in this Act provided. To that end, the Commission is empowered to make and enforce rules, regulations and orders, and to do whatever may be reasonably necessary to carry out the purposes of this Act, whether or not indicated or specified in any section hereof.

65-3-11. ENUMERATION OF POWERS. Included in the power given to the Commission is the authority to collect data; to make investigations and inspections; to examine properties, leases, papers, books and records; to examine, check, test and gauge oil and gas wells, and tanks, plants, refineries, and all means and modes of transportation and equipment; to hold hearings; to provide for the keeping of records and the making of reports and for the checking of the accuracy thereof; to limit and prorate production of crude petroleum oil or natural gas, or both, as in this act provided; to require either generally or in particular areas certificates of clearance or tenders in connection with the transportation of crude petroleum oil or natural gas or any products thereof, or both such oil and products, or both such natural gas and products.

Apart from any authority, express or implied, elsewhere given to or existing in the Commission by virtue of this act or the statutes of this State, the Commission is hereby authorized to make rules, regulations and orders for the purposes and with respect to the subject matter stated herein, viz:

1. To require dry or abandoned wells to be plugged in such way as to confine the crude petroleum oil, natural gas, or water in the strata in

which they are found, and to prevent them from escaping into other strata; the Commission may require a bond of not to exceed Ten Thousand ($10,000.00) dollars conditioned for the performance of such regulations.

(2) To prevent crude petroleum oil, natural gas, or water from escaping from strata in which they are found into another stratum or other strata;

(3) To require reports showing locations of all oil or gas wells and for the filing of logs and drilling records or reports;

(4) To prevent the drowning by water of any stratum or part thereof capable of producing oil or gas, or both oil and gas, in paying quantities, and to prevent the premature and irregular encroachment of water, or any other kind of water encroachment which reduces or tends to reduce the total ultimate recovery of crude petroleum oil or gas, or both such oil and gas, from any pool;

(5) To prevent fires;

(6) To prevent "blow-outs" and "caving" in the sense that the conditions indicated by such terms are generally understood in the oil and gas business;

(7) To require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties;

(8) To identify the ownership of oil or gas producing leases, properties, wells, tanks, refineries, pipe lines, plants, structures, and all transportation equipment and facilities;

(9) To require the operation of wells with efficient gas-oil ratios and to fix such ratios;

(10) To fix the spacing of wells;

(11) To determine whether a particular well or pool is a gas or oil well, or a gas or oil pool, as the case may be, and from time to time to classify and reclassify wells and pools accordingly;

(12) To determine the limits of any pool or pools producing crude petroleum oil or natural gas or both, and from time to time to redetermine such limits;

(13) To regulate the methods and devices employed for storage in this State of oil or natural gas or of any product, including the sub-surface storage of natural gas; or

(14) To permit the injection of natural gas or of any other substance into any pool in this state for the purpose of repressuring, cycling, pressure maintenance or secondary recovery operations.

65-3-11.1. ADDITIONAL POWERS OF COMMISSION - HEARINGS BEFORE EXAMINER-HEARINGS DE NOVO.

In addition to the powers and authority, either express or implied, granted to the Oil Conservation Commission by virtue of the statutes of the State of New Mexico, the Commission is hereby authorized and empowered in prescribing its rules of order or procedure in connection with hearings or other proceedings before the Commission to provide for the appointment of one (1) or more examiners to be members of the staff of the commission to conduct hearings with respect to matters properly coming before the Commission and to make reports and recommendations to the Commission with respect thereto. Any member of the Commission may serve as an examiner as provided herein. The Commission shall promulgate rules and regulations with regard to hearings to be conducted before examiners and the powers and duties of the examiners in any particular case may be limited by order of the Commission to particular issues or to the performance of particular acts. In the absence of any limiting order, an examiner appointed to hear any particular case shall have the power to regulate all proceedings before him and to perform all acts and take all measures necessary or proper for the efficient and orderly conduct of such hearings, including the swearing of witnesses, receiving of testimony and exhibits offered in evidence subject to such objections as may be imposed and shall cause a complete record of the proceeding to be made and transcribed and shall certify the same to the Commission for consideration together with the report of the examiner and his recommendations in connection therewith. The Commission shall base its decision rendered in any matter or proceeding heard by an examiner, upon the transcript of testimony and record made by or under the supervision of the examiner in connection with such proceedings, and such decision shall have the same force and effect as if said hearing had been conducted before the members of said Commission; provided, however, no matter or proceeding referred to an examiner shall be heard by such examiner where any party who may be affected by any order entered by the Commission in connection therewith, shall object thereto within three (3) days prior to the time set for hearing, in which case such matter shall be heard at the next regular hearing of the Commission. When any matter or proceeding is referred to an examiner and a decision is rendered thereon, any party adversely affected shall have the right to have said matter heard de novo before the Commission upon application filed with the Commission within 30 days from the time any such decision is rendered.

65-3-12. ALLOCATION OF ALLOWABLE PRODUCTION AMONG FIELDS WHEN COMMISSION LIMITS TOTAL AMOUNT OF PRODUCTION.

Whenever, to prevent waste, the Commission limits the total amount of crude petroleum oil to be produced in this State, it shall allocate or distribute the allowable productions among the fields of the State. Such allocation or distribution among the fields of the State shall be made on a reasonable basis, giving, if reasonable under all the circumstances, to each pool with small wells

of settled production an allowable production which will prevent a general premature abandonment of the wells in the field.

65-3-13. ALLOCATION OF ALLOWABLE PRODUCTION IN FIELD OR POOL.

(a) Whenever, to prevent waste, the total allowable production of crude petroleum oil for any field or pool in the state is fixed by the Commission is an amount less than that which the field or pool could produce if no restriction were imposed, the Commission shall prorate or distribute the allowable production among the producers in the field or pool, upon a reasonable basis and recognizing correlative rights.

(b) Crude petroleum oil produced within the allowable as fixed by the Commission shall herein be referred to as "legal oil" and crude petroleum oil produced in excess of such allowable shall be "illegal oil."

(c) Whenever, to prevent waste, the total allowable natural gas production from gas wells producing from any pool in this state is fixed by the Commission in an amount less than that which the pool could produce if no restrictions were imposed, the Commission shall allocate the allowable production among the gas wells in the pool delivering to a gas transportation facility upon a reasonable basis and recognizing correlative rights, and shall include in the proration schedule of such pool any well which it finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well. In protecting correlative rights the Commission may give equitable consideration to acreage, pressure, open flow, porosity, permeability, deliverability and quality of the gas and to such other pertinent factors as may from time to time exist, and in so far as is practicable, shall prevent drainage between producing tracts in a pool which is not equalized by counter-drainage. In allocating production pursuant to the provisions of Section 12 (c) the Commission shall fix proration periods of not less than six months. It shall determine reasonable market demand and make allocations of production during each such period, upon notice and hearing, at least 30 days prior to the beginning of each proration period. In so far as is feasible and practicable, gas wells having an allowable in a pool shall be regularly produced in proportion to their allowables in effect for the current proration period. Without approval of the Commission or one of its duly authorized agents, no natural gas well or pool shall be allowed to produce natural gas in excess of the allowable assigned to such source during any proration period; Provided, that during an emergency affecting a gas transportation facility a gas well or pool having high deliverability into such facility under prevailing conditions may produce and deliver in excess of its allowable for the period of emergency, not exceeding ten days, without penalty. The Commission may order subsequent changes in allowables for wells and pools to make fair and reasonable adjustment for overage resulting from the emergency. The provisions of this subsection shall not apply to any wells or pools used for storage and withdrawal from storage of natural gas originally produced not in violation of this Act or of the rules, regulations or orders of the Commission.

(d) In fixing the allowable of a pool under Section 12 (c) herein, the Commission shall consider nominations of purchasers but shall not be bound thereby and shall so fix pool allowables as to prevent unreasonable discrimination between pools served by the same gas transportation facility by a purchaser purchasing in more than one pool.

(e) Natural gas produced from gas wells within the allowable as determined as provided in Section 12 (c) above shall herein be referred to as "legal gas," and natural gas produced in excess of such allowable shall be "illegal gas."

65-3-14. EQUITABLE ALLOCATION OF ALLOWABLE PRODUCTION-POOLING - SPACING.

(a) The rules, regulations or orders of the Commission shall, so far as it is practicable to do so, afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas or both in the pool, and for this purpose to use his just and equitable share of the reservoir energy.

(b) The Commission may establish a proration unit for each pool, such being the area that can be efficiently and economically drained and developed by one well, and in so doing the Commission shall consider the economic loss caused by the drilling of unnecessary wells, the protection of correlative rights, including those of royalty owners, the prevention of waste, the avoidance of the augmentation of risks arising from the drilling of an excessive number of wells, and the prevention of reduced recovery which might result from the drilling of too few wells.

(c) The pooling of properties or parts thereof shall be permitted, and, if not agreed upon, may be required in any case when and to the extent that the smallness or shape of a separately owned tract would, under the enforcement of a uniform spacing plan or proration unit, otherwise deprive or tend to deprive the owner of such tract of the opportunity to recover his just and equitable share of the crude petroleum or natural gas, or both, in the pool; provided, that the owner of any tract that is smaller than the drilling unit established for the field, shall not be deprived of the right to drill on and produce from such tract, if same can be done without waste; but in such case, the allowable production from such tract, as compared with the allowable production therefrom if such tract were a full unit, shall be in ratio of the area of such tract to the area of a full unit. All orders requiring such pooling shall be upon terms and conditions that are just and reasonable, and will afford to the owner of each tract in the pool the opportunity to recover or receive his just and equitable share of the oil or gas, or both, in the pool as above provided, so far as may be practicably recovered without waste. In the event such pooling is required the costs of development and operation of the pooled unit shall

be limited to the lowest actual expenditures required for such purpose including a reasonable charge for supervision;and in case of any dispute as to such costs, the Commission shall determine the proper costs.

(d) Minimum allowable for some wells may be advisable from time to time, especially with respect to wells already drilled when this act takes effect, to the end that the production will repay reasonable lifting cost and thus prevent premature abandonment and resulting waste.

(e) Whenever it appears that the owners in any pool have agreed upon a plan for the spacing of wells, or upon a plan or method of distribution of any allowable fixed by the Commission for the pool, or upon any other plan for the development or operation of such pool, which plan, in the judgment of the Commission, has the effect of preventing waste as prohibited by this act and is fair to the royalty owners in such pool, then such plan shall be adopted by the Commission with respect to such pool; however, the Commission, upon hearing and after notice, may subsequently modify any such plan to the extent necessary to prevent waste as prohibited by this act.

(f) After the effective date of any rule, regulation or order fixing the allowable production, no person shall produce more than the allowable production applicable to him, his wells, leases or properties determined as in this act provided, and the allowable production shall be produced in accordance with the applicable rules, regulations or orders.

65-3-15. COMMON PURCHASERS - DISCRIMINATION IN PURCHASING PROHIBITED.

(a) Every person now engaged or hereafter engaging in the business of purchasing oil to be transported through pipe lines, shall be a common purchaser thereof, and shall, without discrimination in favor of one producer as against another in the same field, purchase all oil tendered to it which has been lawfully produced in the vicinity of, or which may be reasonably reached by pipe lines through which it is transporting oil, or the gathering branches thereof, or which may be delivered to the pipe line or gathering branches thereof by truck or otherwise, and shall fully perform all the duties of a common purchaser. If any common purchaser shall not have need for all such oil lawfully produced within a field, or if for any reason it shall be unable to purchase all such oil, then it shall purchase from each producer in a field ratably, taking and purchasing the same quantity of oil from each well to the extent that each well is capable of producing its ratable portions; provided however, nothing herein contained shall be construed to require more than one pipe line connection for each producing well. In the event any such common purchaser of oil is likewise a producer or is affiliated with a producer, directly or indirectly, it is hereby expressly prohibited from discriminating in favor of its own production or in favor of the production of an affiliated producer as against that of others and the oil produced by such common purchaser or by the affiliate of such common purchaser shall be treated as that of any other producer for the purposes of ratable taking.

(b) It shall be unlawful for any common purchaser to unjustly or unreasonably discriminate as to the relative quantities of oil purchased by it in the various fields of the state; the question of the justice or reasonableness to be determined by the Commission, taking into consideration the production and age of wells in the respective fields and all other factors. It is the intent of this act that all fields shall be allowed to produce and market a just and equitable share of the oil produced and marketed in the state, insofar as the same can be effected economically and without waste.

(c) It shall be the duty of the Commission to enforce the provisions of this act, and it shall have the power, after notice and hearing as provided in Section 15 of Chapter 72 of the Session Laws of New Mexico, 1935, to make rules, regulations and orders defining the distance that extension of the pipe line system shall be made to all wells not served; Provided that no such authorization or order shall be made unless the Commission finds as to such extension that it is reasonably required and economically justified, or as to such extension of facilities that the expenditures involved therein, and the expense incident thereto, is justified in relation to the volume of oil available for transportation through said extension; and such other rules, regulations and orders as may be necessary to carry out the provisions of this act, and in making such rules, regulations and orders, the Commission shall give due consideration to the economic factors involved. The Commission shall have authority to relieve such common purchaser, after due notice and hearing as herein provided, from the duty of purchasing crude petroleum oil of inferior quality or grade or that is not reasonably suitable for the requirements of such common purchaser.

(d) Any person now or hereafter engaged in purchasing from one or more producers gas produced from gas wells shall be a common purchaser thereof within each common source of supply from which it purchases, and as such it shall purchase gas lawfully produced from gas wells with which its gas transportation facilities are connected in the pool and other gas lawfully produced within the pool and tendered to a point on its gas transportation facilities. Such purchase shall be made without unreasonable discrimination in favor of one producer against another in the price paid, the quantities purchased, the bases of measurement or the gas transportation facilities afforded for gas of like quantity, quality and pressure available from such wells. In the event any such person is likewise a producer, he is prohibited to the same extent from discriminating in favor of himself on production from gas wells in which he has an interest, direct or indirect, as against other production from gas wells in the same pool. For the purposes of this act reasonable differences in prices paid or facilities afforded, or both, shall not constitute unreasonable discrimination if such differences bear a fair relationship to differences in quality, quantity or pressure of the gas available or to the relative lengths of time during which such gas will be available to the purchaser. The provisions of this subsection shall not apply (1) To any wells or pools used for storage and withdrawal from storage of natural gas originally produced not in violation of this act or of the rules, regulations or orders of the Commission, (2) to purchases of casinghead gas from oil wells, and (3) to persons purchasing gas principally for use in the recovery of production of oil or gas.

(e) Any common purchaser taking gas produced from gas wells from a common source of supply shall take ratably under such rules, regulations and orders, concerning quantity, as may be promulgated by the Commission consistent with this act. The Commission, in promulgating such rules, regulations and orders may consider the quality and the deliverability of the gas, the pressure of the gas at the point of delivery, acreage attributable to the well, market requirements in the case of unprorated pools, and other pertinent factors.

(f) Nothing in this act shall be construed or applied to require, directly or indirectly, any person to purchase gas of a quality or under a pressure or under any other condition by reason of which such gas cannot be economically and satisfactorily used by such purchaser by means of his gas transportation facilities then in service.

65-3-18. PURCHASE, SALE OR HANDLING OF EXCESS OIL, NATURAL GAS OR PRODUCTS PROHIBITED.

(a) The sale or purchase or acquisition, or the transportation, refining, processing, or handling in any other way, of crude petroleum oil or natural gas in whole or in part produced in excess of the amount allowed by any statute of this State, or by any provision of this act, or by any rule, regulation or order of the Commission made thereunder, is hereby prohibited, and such oil or commodity is hereby referred to as "illegal oil" or "illegal gas," as the case may be.

(b) The sale or purchase or acquisition, or the transportation, refining, processing or the handling in any other way, of any product of crude petroleum or any product of natural gas, which product is derived in whole or in part from crude petroleum oil or natural gas produced in whole or in part in excess of the amount allowed by any statute of this state, or by any provisions of this act, or by any rule, regulation or order of the Commission made thereunder, is hereby prohibited, and each such commodity or product is herein referred to as "illegal oil product" to distinguish it from "legal oil product," or "illegal gas product" to distinguish it from "legal gas product."

65-3-19. RULES AND REGULATIONS TO EFFECTUATE PROHIBITIONS AGAINST PURCHASE OR HANDLING OF EXCESS OIL OR NATURAL GAS - PENALTIES.

(a) The Commission is specifically authorized and directed to make such rules, regulations and orders, and may provide for such certificates of clearance or tenders, as may be necessary to make effective the prohibitions contained in Section 15. (65-3-18)

(b) Unless and until the Commission provides for certificates of clearance or tenders, or some other method, so that any person may have an opportunity to determine whether any contemplated transaction of sale or purchase or acquisition, or of transportation, refining, processing, or handling in any other way, invloves illegal oil or illegal oil product, or illegal gas or illegal gas product, no penalty shall be imposed for the sale or purchase or acquisition, or the transportation, refining, processing, or handling in any other way, of illegal oil or

illegal oil product, or illegal gas or illegal gas product, except under circumstances stated in the succeeding provisions of this paragraph. Penalties shall be imposed for the Commission of each transaction prohibited in Section 15 when the person committing the same knows that illegal oil or illegal oil product, or illegal gas or illegal gas product, is involved in such transaction, or when such person could have known or determined such fact by the exercise of reasonable diligence or from facts within his knowledge. However, regardless of lack of actual notice or knowledge, penalties as provided in this act shall apply to any sale or purchase or acquisition, and to the transportation, refining, processing, or handling in any other way, of illegal oil or illegal oil product, or illegal gas or illegal gas product where administrative provision is made for identifying the character of the commodity as to its legality. It shall likewise be a violation for which penalties shall be imposed for any person to sell or purchase or acquire, or to transport, refine, process, or handle in any way crude petroleum oil or natural gas or any product thereof without complying with the rule, regulation or order of the Commission relating thereto.

65-3-20. HEARINGS ON RULES, REGULATIONS AND ORDERS - NOTICE - EMERGENCY RULES.

Except as provided for herein, before any rule, regulation or order, including revocation, change, renewal or extension thereof, shall be made under the provisions of this act, a public hearing shall be held at such time, place and manner as may be prescribed by the Commission. The Commission shall first give reasonable notice of such hearing (in no case less than ten days, except in an emergency) and at any such hearing any person having an interest in the subject matter of the hearing shall be entitled to be heard. In case an emergency is found to exist by the Commission which in its judgment requires the making of a rule, regulation or order without first having a hearing, such emergency rule, regulation or order shall have the same validity as if a hearing with respect to the same had been held after due notice. The emergency rule, regulation or order permitted by this section shall remain in force no longer than fifteen days from its effective date, and, in any event, it shall expire when the rule, regulation or order made after due notice and hearing with respect to the subject matter of such emergency rule, regulation or order becomes effective.

65-3-21. REPORTS OF GOVERNMENTAL DEPARTMENTS OR AGENCIES AS TO MARKET DEMAND TO BE DEEMED PRIMA FACIE CORRECT.

The reports, estimates, findings of fact, or similar documents or findings of the United States Bureau of Mines, or of any other department or agency of the United States Government, or of any bureau of agency under an interstate compact to which the State of New Mexico is a party made with respect to the reasonable market demand for crude petroleum oil, may be considered by the Commission or by any court and taken as being prima facie correct.

65-3-22. REHEARINGS - APPEALS.

(a) Within twenty (20) days after entry of any order or decision of the Commission, any person affected thereby may file with the Commission an application for rehearing in respect to any matter determined by such order or

decision, setting forth the respect in which such order or decision is believed to be errornous. The Commission shall grant or refuse any such application in whole or in part within ten (10) days after the same is filed and failure to act thereon within such period shall be deemed a refusal thereof and a final disposition of such application. In the event the rehearing is granted, the Commission may enter such new order or decision after rehearing as may be required under the circumstances.

(b) Any party to such rehearing proceeding, dissatisfied with the disposition of the application for rehearing, may appeal therefrom to the District Court of the county wherein is located any property of such party affected by the decision, by filing a petition for the review of the action of the Commission within twenty (20) days after the entry of the order following rehearing or after the refusal or rehearing as the case may be. Such petition shall state briefly the nature of the proceeding before the Commission and shall set forth the order or decision of the Commission complained of and the grounds of invalidity thereof upon which the applicant will rely; provided, however, that the questions reviewed on appeal shall be only questions presented to the Commission by the application for rehearing. Notice of such appeal shall be served upon the adverse party or parties and the Commission in the manner provided for the service of summons in civil proceedings. The trial upon appeal shall be de novo, without a jury, and the transcript of proceedings before the Commission, including the evidence taken in hearings by the Commission, shall be received in evidence by the court in whole or in part upon offer by either party, subject to legal objections to evidence, in the same manner as if such evidence was originally offered in the District Court. The Commission action complained of shall be prima facie valid and the burden shall be upon the party or parties seeking review to establish the invalidity of such action of the Commission. The Court shall determine the issues of fact and of law and shall, upon a preponderance of the evidence introduced before the Court, which may include evidence in addition to the transcript of proceedings before the Commission, and the law applicable thereto, enter its order either affirming, modifying, or vacating the order of the Commission. In the event the Court shall modify or vacate the order or decision of the Commission, it shall enter such order in lieu thereof as it may determine to be proper. Appeals may be taken from the judgment or decision of the District Court to the Supreme Court in the same manner as provided for appeals from any other final judgment entered by a District Court in this State. The trial of such application for relief from action of the Commission and the hearing of any appeal to the Supreme Court from the action of the District Court shall be expedited to the fullest possible extent.

(c) The pendency of proceedings to review shall not of itself stay or suspend operation of the order or decision being reviewed, but during the pendency of such proceedings, the District Court in its discretion may, upon its own motion or upon proper application of any party thereto, stay or suspend, in whole or in part, operation of said order or decision pending review thereof, on such terms as the court deems just and proper and in accordance with the practice of courts exercising equity jurisdiction; provided, that the court, as a condition to any such staying or suspension of operation of any order or decision, may require that one

or more parties secure, in such form and amount as the court may deem just and proper, one or more other parties against loss or damage due to the staying or suspension of the Commission's order or decision, in the event that the action of the Commission shall be affirmed.

(d) The applicable rules of practice and procedure in civil cases for the courts of this state shall govern the proceedings for review, and any appeal therefrom to the Supreme Court of this state, to the extent such rules are consistent with provisions of this act.

65-3-23. TEMPORARY RESTRAINING ORDER OR INJUNCTION - GROUNDS - HEARING - BOND.

(a) No temporary restraining order or injunction of any kind shall be granted against the Commission or the members thereof, or against the Attorney General, or against any agent, employee or representative of the Commission restraining the Commission, or any of its members, or any of its agents, employees or representatives, or the Attorney General, from enforcing any statute of this state relating to conservation of oil or gas, or any of the provisions of this act, or any rule, regulation or order made thereunder, except after due notice to the members of the Commission, and to all other defendants, and after a hearing at which it shall be clearly shown to the court that the act done or threatened is without sanction of law, or that the provision of this act, or the rule, regulation or order complained of, is invalid, and that if enforced against the complaining party, will cause an irreparable injury. With respect to an order or decree granting temporary injunctive relief, the nature and extent of the probable invalidity of the statute, or of any provision of this Act, or of any rule, regulation or order thereunder involved in such suit, must be recited in the order or decree granting the temporary relief, as well as a clear statement of the probable damage relied upon by the court as justifying temporary injunctive relief.

(b) No temporary injunction of any kind, including a temporary restraining order against the Commission or the members thereof, or its agents, employees or representatives, or the Attorney General, shall become effective until the plaintiff shall execute a bond to the State with sufficient surety in an amount to be fixed by the court reasonably sufficient to indemnify all persons who may suffer damage by reason of the violation pendente lite by the complaining party of the statute or the provisions of this act or of any rule, regulation or order complained of. Any person so suffering damage may bring suit thereon before the expiration of six months after the statute, provision, rule, regulation or order complained of shall be finally held to be valid, in whole or in part, or such suit against the Commission, or the members thereof, shall be finally dismissed. Such bond shall be approved by the judge of the court in which the suit is pending, and shall be for the use and benefit of all persons who may suffer damage by reason of the violation pendente lite of the statute, provision, rule, regulation or order complained of in such suit, and who may bring suit within the time prescribed by this section; and such bond shall be so conditioned. From time to time, on motion and with notice to the parties, the court may increase or decrease the amount of the bond and may require new or additional sureties, as the facts may warrant.

65-3-24. ACTIONS FOR VIOLATIONS.

Whenever it shall appear that any person is violating, or threatening to violate, any statute of this State with respect to the conservation of oil, or gas, or both, or any provision of this act, or any rule, regulation or order made thereunder, the Commission, through the Attorney General, shall bring suit against such person in the county of the residence of the defendant, or in the county of the residence of any defendant if there be more than one defendant, or in the county where the violation is alleged to have occurred, for penalties, if any are applicable, and to restrain such person from continuing such violation or from carrying out the threat of violation. In such suit the Commission may obtain injunctions, prohibitory and mandatory, including temporary restraining orders and temporary injunctions, as the facts may warrant, including when appropriate, an injunction restraining any person from moving or disposing of illegal oil or illegal oil product, or illegal gas or illegal gas product, and any or all such commodities, or funds derived from the sale thereof, may be ordered to be impounded or placed under the control of an agent appointed by the court if, in the judgment of the court, such action is advisable.

65-3-25. ACTIONS FOR DAMAGES - INSTITUTION OF ACTIONS FOR INJUNCTIONS BY PRIVATE PARTIES.

Nothing in this act contained or authorized, and no suit by or against the Commission, and no penalties imposed or claimed against any person for violating any statute of this state with respect to conservation of oil and gas, or any provision of this act, or any rule, regulation or order issued thereunder, shall impair or abridge or delay any cause of action for damages which any person may have or assert against any person violating any statute of this state with respect to conservation of oil and gas, or any provision of this act, or any rule, regulation or order issued thereunder. Any person so damaged by the violation may sue for and recover such damages as he may be entitled to receive. In the event the Commission should fail to bring suit to enjoin any actual or threatened violation of any statute of this state with respect to the conservation of oil and gas, or of any provision of this act or of any rule, regulation or order made thereunder, then any person or party in interest adversely affected by such violation, and who has notified the Commission in writing of such violation or threat thereof and has requested the Commission to sue, may, to prevent any or further violation, bring suit for that purpose in the District Court of any county in which the Commission could have brought suit. If in such suit, the court holds that injunctive relief should be granted, then the Commission shall be made a part and shall be substituted for the person who brought the suit, and the injunction shall be issued as if the Commission had at all times been the complaining party.

65-3-26. VIOLATION OF COURT ORDER GROUNDS FOR APPOINTMENT OF RECEIVER.

The violation by any person of an order of the court relating to the operation of a well or wells, or of a pipe line or other transportation, equipment

or facility, or of a refinery, or of a plant of any kind, shall be sufficient ground for the appointment of a receiver with power to conduct operations in accordance with the order of the court.

65-3-27. PENALTIES FOR VIOLATIONS - ACCESSORIES.

Any person who, for the purpose of evading this act, or of evading any rule, regulation or order made hereunder, shall knowingly and wilfully make or cause to be made any false entry or statement of fact in any report required to be made by this act or by any rule, regulation or order made hereunder or who, for such purpose, shall make or cause to be made any false entry in any account record or memorandum kept by any person in connection with the provisions of this act or of any rule, regulation or order made thereunder; or who, for such purpose, shall omit to make, or cause to be omitted, full, true and correct entries in such accounts, records or memoranda, of all facts and transactions pertaining to the interest or activities in the petroleum industry of such person as may be required by the Commission under authority given in this act or by any rule, regulation or order made hereunder; or who, for such purpose, shall remove out of the jurisdiction of the state, or who shall mutilate, alter, or by any other means falsify, any book, record, or other paper pertaining to the transactions regulated by this act or by any rule, regulation or order made hereunder; - shall be deemed guilty of a felony and shall be subject upon conviction in any court of competent jurisdiction, to a fine of not more than one Thousand ($1,000.00) Dollars, or imprisonment for a term of not more than three years, or to both such fine and imprisonment.

(b) Any person who knowingly and wilfully violates any provision of this act or any rule, regulation or order of the Commission made hereunder, shall, in the event a penalty for such violation is not otherwise provided for herein, be subject to a penalty of not to exceed One Thousand ($1,000.00) Dollars a day for each and every day of such violation, and for each and every act of violation, such penalty to be recovered in a suit in the District Court of the county where the defendant resides, or in the county of the residence of any defendant if there be more than one defendant, or in the District Court of the County where the violation took place. The place of suit shall be selected by the Commission, and such suit, by direction of the Commission, shall be instituted and conducted in the name of the Commission by the Attorney General or under his direction by the district attorney of the county where the suit is instituted. The payment of any penalty as provided for herein shall not have the effect of changing illegal oil or illegal gas into legal oil or legal gas, or illegal oil or illegal gas product into legal oil or legal gas product, nor shall such payment have the effect of authorizing the sale or purchase or acquisition, or the transportation, refining, processing, or handling in any other way, of such illegal oil or illegal gas, or illegal oil or illegal gas product, but to the contrary penalty shall be imposed for each prohibited transaction relating to such illegal oil or illegal gas or illegal oil or illegal gas product.

(c) Any person knowningly and wilfully aiding or abetting any other person in the violation of any statute of this State relating to the conservation of oil and gas, or the violation of any provision of this act, or any rule, regulation or order made thereunder, shall be subject to the same penalties as are prescribed herein for the violation by such other person.

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65-3-28. SEIZURE AND SALE OF ILLEGAL OIL OR GAS OR PRODUCTS - PROCEDURE.

(a) Apart from, and in addition to, any other remedy or procedure which may be available to the Commission, or any penalty which may be sought against or imposed upon any person, with respect to violations relating to illegal oil or illegal gas or illegal oil or illegal gas product shall, except under such circumstances as are stated herein, be contraband and shall be seized and sold, and the proceeds applied as herein provided. Such sale shall not take place unless the court shall find in the proceeding provided in this paragraph, that the owner of such illegal oil or illegal gas or illegal oil or illegal gas product is liable or in some proceeding authorized by this act, such owner has already been held to be liable, for penalty for having produced such illegal oil or illegal gas, or for having purchased or acquired such illegal oil or illegal gas or illegal oil or illegal gas product. Whenever the Commission believes that illegal oil or illegal gas or illegal oil or illegal gas product is subject to seizure and sale, as provided herein, it shall, through the Attorney General, bring a civil action in rem for that purpose in the District Court of the county where the commodity is found, or the action may be maintained in connection with any suit or crossaction for injunction or for penalty relating to any prohibited transaction involving such illegal oil or illegal gas or illegal oil or illegal gas product. Notice of the action in rem shall be given in conformity with the law or rule applicable to such proceeding. Any person or party in interest who may show himself to be adversely affected by any such seizure and sale shall have the right to intervene in said suit to protect his rights.

(b) Whenever the pleading with respect to the forfeiture of illegal oil or illegal gas or illegal oil or illegal gas product shows ground for seizure and sale, and such pleading is verified or is supported by affidavit or affidavits, or by testimony under oath, the court shall order such commodity to be impounded or placed under the control, actual or constructive, of the court through an agent appointed by the court.

(c) The judgment effecting the forfeiture shall provide that the commodity be seized, if not already under the control of the court and that a sale be had in similar manner and with similar notice as provided by law or rule with respect to the sale of personal property under execution; provided, however, the court may order that the commodity be sold in specified lots or portions, and at specified intervals, instead of being sold at one time. Title to the amount sold shall pass as of the date of the seizure. The judgment shall provide for payment of the proceeds of the sale into the Common School Fund, after first deducting the costs in connection with the proceedings and the sale. The amount sold shall be treated as legal oil or legal gas or legal oil or legal gas product, as the case may be, in the hands of the purchaser, but the purchaser and the commodity shall be subject to all applicable laws and rules, regulations and orders with respect to further sale or purchase or acquisition, and with respect to the transportation, refining processing, or handling in any other way, of the commodity purchased.

(d) Nothing in this section shall deny or abridge any cause of action a royalty owner, or any lien holder, or any other claimant, may have, because of the forfeiture of the illegal oil or illegal gas or illegal oil or illegal gas product, against the person whose act resulted in such forfeiture.

65-3-29. DEFINITIONS OF WORDS USED IN ACT.

Unless the context otherwise requires, the words defined in this section shall have the following meaning when found in this act, to-wit:

(a) "Person" means any natural person, corporation, association, partnership, receiver, trustee, guardian, executor, administrator and a fiduciary of any kind.

(b) "Pool" means an underground reservoir containing a common accumulation of crude petroleum oil or natural gas or both. Each zone of a general structure, which zone is completely separated from any other zone in the structure, is covered by the word "pool" as used herein. "Pool" is synomymous with "common source of supply" and with "Common Reservoir."

(c) "Field" means the general area which is underlaid or appears to be underlaid by at least one pool; and "field" also includes the underground reservoir or reservoirs containing such crude petroleum oil or natural gas, or both. The words "field" and "pool" means the same thing when only one underground reservoir is involved; however, "field" unlike "pool" may relate to two or more pools.

(d) "Product" means any commodity or thing made or manufactured from crude petroleum oil or natural gas, and all derivatives of crude petroleum oil or natural gas, including refined crude oil, crude tops, topped crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, treated crude oil, fuel oil, residuum, gas oil, naptha, distillate, gasoline, kerosene, benzine, wash oil, waste oil, lubricating oil, and blends or mixtures of crude petroleum oil or natural gas or any derivative thereof.

(e) "Owner" means the person who has the right to drill into and to produce from any pool, and to appropriate the production either for himself or for himself and another.

(f) "Producer" means the owner of well or wells capable of producing oil or natural gas or both in paying quantities.

(g) "Gas transportation facility" means a pipe line in operation serving gas wells for the transportation of natural gas, or some other device or equipment in like operation whereby natural gas produced from gas wells connected therewith can be transported or used for consumption.

(h) "Correlative rights" means the opportunity afforded, so far as it is practicable to do so, to the owner of each property in a pool to produce without waste his just and equitable share of the oil or gas, or both, in the pool, being an amount, so far as can be practically determined, and so far as can be practicably obtained without waste, substantially in the proportion that the quantity of recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool, and for such purpose to use his just and equitable share of the reservoir energy.

65-3-30. TAX ON OIL AND GAS PRODUCTION - COLLECTION - DISPOSITION - USE

There is hereby levied a tax of fourteen-hundredths of one percent on the proceeds of all oil and gas produced in this state, except royalties payable to the United States or to this state. Such tax shall be reported and collected at the same time and in the same manner as the emergency school tax now, or hereafter provided by law, is returned and collected. Such tax when collected shall be paid to the state treasurer and by him covered into a fund designated as the oil conservation fund. Such fund, or so much thereof as may be necessary, is hereby appropriated to the Oil Conservation Commission to be by it expended in the enforcement of this act. The Commission is hereby authorized, within the limits of the fund available, to employ a secretary and such other employees and agents as may be necessary to enforce the provisions of this act.

65-3-30. 1 TAX RETURNABLE - EFFECTIVE DATES.

The tax of fourteen-one hundreth of one per cent provided for in Section 1 (65-3-30) hereof shall be levied on the proceeds of all oil and gas produced and returnable for the month of July, 1955, and thereafter. The tax on the proceeds of such products returnable for the month of June, 1955, shall be one-eighth of one per cent.

65-3-31. REGULATION, CONSERVATION AND PREVENTION OF WASTE OF CARBON DIOXIDE GAS.

The Oil Conservation Commission is hereby vested with the authority and duty of regulation and conserving the production of and preventing waste of carbon dioxide gas within this state in the same manner, insofar as is practicable as it regulates, conserves and prevents waste of natural or hydrocarbon gas. The provisions of this act relating to gas or natural gas shall also apply to carbon dioxide gas insofar as the same are applicable. "Carbon dioxide gas" as used herein shall mean non-combustible gas composed chiefly of carbon dioxide occurring naturally in underground rocks.

If any part or parts of this act be held to be unconstitutional, such unconstitutionality shall not affect the validity of the remaining portions of this act. The legislature hereby declares that it would have passed the remaining parts of this act if it had known that such part or parts thereof would be declared unconstitutional.

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STATE OF NEW YORK, CONSERVATION DEPARTMENT

The division of water resources in the conservation department, headed by the water resources commission of which I [Harold G. Wilm] am a member and chairman, has certain powers and duties in waterpower matters under the provisions of part VII, article V, of the conservation law. The statute covering the various functions of that division, including those with respect to waterpower, is contained in chapter 7, Laws of 1960, a recodification of the former water resources provisions of the conservation law. A copy of that chapter is enclosed herewith for your information.

The existing statute with respect to waterpower is the end product of studies of the water resources of the State initiated by the State water supply commission under the so-called Fuller Act of 1907 (ch. 569, Laws of 1907) and the investigations, reports, and recommendations made by the various succeeding commissions thereunder and in continuation thereof. It was a further development of article VI, "Hydraulic Development," enacted by the Laws of 1911, chapter 647 (conservation law).

The following laws furnish some background for the existing waterpower provisions:

Administrative agency	*Act*
Water Supply Commission (Fuller Act).	Laws 1907, chapter 569.
Conservation Commission (three-headed).	Laws 1911, chapter 647.
Conservation Commission (single-headed).	Laws 1915, chapter 318: This act (Laws of 1915, ch. 318) provided for a special commission, unnamed, composed of the conservation commissioner, the attorney general, and the State engineer and surveyor.
Water Power Commission (three-headed).	Laws 1921, chapter 379.
Water Power and Control Commission (three-headed).	Laws 1926, chapter 619.
Water Power and Control Commission (five-headed).	Laws 1959, chapter 843.
Water Resources Commission (five-headed).	Laws 1960, chapter 7.

The objective under the provisions of the statute is the reservation to the State of control in the waters over which it has the proprietary ownership of the flow and to the use of which it has the right, paramount and exclusive, or concurrently, with any other jurisdiction. Such waters shall remain subject to the power and control of the State for the purposes of regulating, licensing, controlling, or terminating the use and disposition of the same, as well as for the purpose of enacting any rentals or charges therefor.

The commission has adopted rules for the guidance of potential applicants for licenses and preliminary permits under the waterpower provisions of the conservation law. A copy of such rules also is enclosed herewith. The relationship between the existing law and the former law to which reference is made in the rules can be noted on pages 124 and 125 of the aforementioned copy of chapter 7.

The jurisdiction of the water resources commission is limited in the St. Lawrence and Niagara Rivers by the powers and duties of the New York State Power Authority, 10 Columbus Circle, New York, N.Y., and in the forest preserve areas of the State by the provisions of the State constitution.

The control over rates and the use and distribution of power developed from waters licensed by the water resources commission is fixed in the Public Service Commission, 55 Elk Street, Albany, N.Y.

LAWS OF NEW YORK.—By Authority

CHAPTER 7

AN ACT to amend the conservation law, in relation to consolidation, clarification and rearrangement of provisions relating to water resources, to change the titles of the division of water power and control and the water power and control commission, and to the procedure in certain matters in the jurisdiction of such division and commission

Became a law February 8, 1960, with the approval of the Governor. Passed, by a majority vote, three-fifths being present

PART VII

WATER POWER

* So in original. [Does not conform to section heading in text of law.]

§ 500. *Reservation of state control.*

Where any person takes, diverts, appropriates, or otherwise uses, whether by virtue of the provisions of Part VII of this article or otherwise, the waters of the state over which the state has the proprietary ownership of the flow and to the use of which the state has the right paramount and exclusive, or concurrently with any other jurisdiction, such waters shall remain subject to the power and control of the state for the purposes of regulating, licensing, controlling, or terminating the use and disposition of the same by such person, as well as for the purpose of exacting any rentals or charges therefor.

§ 501. *Definitions.*

When used in this part of Article V unless otherwise expressly stated or unless the context or subject matter otherwise requires:

(1) "Licensee" means a person or public corporation holding a license issued pursuant to this part of Article V, his successor in interest or assign;

(2) "Stream" means a river or other stream and its tributaries;

(3) "Water power site" means the real property including rights appurtenant thereto or which may become appurtenant thereto which, when a water power is developed, is necessary or useful for the construction, maintenance and operation of a plant for the use of a fall of water for the generation of power;

(4) "Developed water power site" is a "water power site" where the development is used or usable in its present condition for the generation of power or where the works of such development are being constructed or are in course of repair;

(5) "Surplus canal waters" means such waters flowing in canal feeders, artificial canals or the canalized streams of the state, as in the judgment of the Superintendent of Public Works, are not necessary for any canal uses or purposes;

(6) "Project" means a complete unit of improvements or development, consisting of a power plant, all water conduits, or dams and appurtenant works and structures which are a part of such unit and all storage, diverting or forebay reservoirs connected therewith, the primary line or lines transmitting power therefrom to the point of junction with the distribution system, all miscellaneous structures used and useful in connection with such unit or part thereof, and all water rights, rights of ways, ditches, dams, reservoirs, lands or interest in lands, the use and occupancy of which are necessary or appropriate in the maintenance and operation of such unit;

(7) "Project works" means physical structures of a "project;"

(8) "Reconstruction cost" of a project or of any part thereof means the actual and reasonable original cost to the licensee of the lands or interests in the lands of such project or such part, less depreciation, if any, plus the cost of reproducing the ways, means and works thereon less the depreciation of such ways, means or works, including in such costs a reasonable allowance for organization and development expenses, but excluding therefrom any

allowance for the value of the license or any contract, lease or franchise, or value as a going concern, or future profits in pending or existing contracts or prospective profits, revenues, dividends or any other intangible element;

(9) "Real property", without words of limitation, includes all uplands, lands under water, waters of any lake, pond or stream, all water and riparian rights or privileges, all dams, races, sluiceways, and machinery connected therewith, and all land, water and rights necessary to carry out any project or development provided for by Part VII of this article, including the right to divert running water of any stream or streams, and lands necessary for such diversion, and all easements and incorporeal hereditaments, and every estate, interest and right, legal or equitable in land and water, including terms for years and liens on real property as above defined and all real property as above defined, acquired and used for railroad, highway and other public purposes in any county containing a part of the forest preserve as now constituted.

(10) For other definitions, generally applicable, see Section 403.

§ 502. Licenses; approval by the Governor.

(1) The Commission, subject to the provisions of Part VII of this article, may upon application issue to any person or public corporation heretofore or hereafter authorized to develop, use, furnish or sell power in this state or to a municipality of the state having such authority, a license authorizing the diversion and use for power or other purposes of any of the waters of the state in which the state has a proprietary right or interest, or the bed of which, or the real property required for use of such waters or the right to develop water power, is vested in the state; or of boundary waters of the state where the state has jurisdiction over the diversion or interference with the flow of the same solely or concurrently with any other jurisdiction or owner of a proprietary right; or to any such applicant when the owner of any water power site or sites which it uses or proposes to use for the production, sale and distribution of heat, light or power to the public; and subject to the property right of others including riparian rights, authorizing the construction, maintenance and operation in, across or along any of such lands and waters of such dams, reservoirs, diverting canals or races, water conduits, power houses, transmission lines and other project works as are deemed necessary or convenient for the development, transmission and utilization of the developable power and authorizing in connection therewith the use of dams or other structures or contiguous or adjacent lands belonging to the state. When any water power site or property necessary to the full development of such a site is owned by the state, or water, the use of which is dependent upon the consent of the state, is not, in the opinion of the Commission suitable or necessary for the development of power for public use, a license may be issued to a person or public corporation for private use under like conditions and with the same restrictions.

(2) Whenever the use of water or the erection of structures under a license may affect the navigable waters over which the United States shall have lawfully assumed jurisdiction for purposes of navigation, such license shall not be issued until the plans for such use and structures have been submitted to and approved by the federal authorities as required by law and any licenses shall be at all times subject to the lawful exercise of such jurisdiction over the waters affected by the license for the purposes of navigation.

(3) Whenever canal lands, structures or surplus canal or canal feeder waters are covered by the license, the license shall not issue unless the Superintendent of Public Works certifies to the Commission in writing that the same are not necessary for the navigation or operation of the canals and shall not become effective until endorsed with his approval. Any licensee in the use of such license, structures or waters shall be at all times subject to such reasonable rules and regulations as the Superintendent of Public Works shall from time to time prescribe so that the use thereof by the licensee shall not impair the efficiency of the canals and such use shall at all times be subordinate to the needs of the canals.

(4) Notwithstanding any provision of Part VII of this article, no license issued by the Commission pursuant to the provisions of Part VII of this article shall be effective unless and until it is approved in writing by the Governor and such approval is signed by him and affixed thereto; and notwithstanding any provision of Part VII of this article a modification of such license shall not be effective until approved by the Governor in like manner.

§ 503. Procedure on application for license.

(1) Each applicant for a license shall submit to the Commission a written verified application in such form as the Commission may prescribe and containing such data or information of the applicant's project as the Commission may require. It shall be accompanied by proposed plans and specifications showing the nature and extent of the applicant's proposed development and estimates of cost as may be required for a full understanding of the proposed project. Such maps, plans and specifications when approved by the Commission shall be made a part of the license; and thereafter no changes shall be made in such maps, plans or specifications until such changes shall have been approved and made a part of such license by the Commission. Applications shall be filed with the Commission in the order of their receipt.

(2) Each license covering water power sites or lands, the title to which is vested in the state, shall require the payment by the licensee of an annual charge measured by a fair rental value thereof; in other cases, except where the state has no proprietary interest, an equitable annual charge may be made, in determining which the Commission shall give consideration to the cost of producing power by others in competition with the licensee; and every license shall require the payment by the licensee of an annual charge for the purpose of reimbursing the state for the cost of administration of the provisions of Part VII of this article. The

Commission, by resolution, shall fix and determine such annual charge, and the time or stage of development from which rentals are to be computed, whereupon if one or more applicants signifies his readiness, and establishes to the satisfaction of the Commission his ability, to construct and maintain the proposed project, to pay the charge or rental fixed by the Commission, and otherwise to comply with the provisions of Part VII of this article in the use of such water and property, it shall give notice of such determination and of a time, not less than fifteen days from the date of the first publication of the notice, and of the place of a meeting of the Commission to take action on such application or applications.

(3) A copy of such determination and notice shall be served upon each applicant for the license not less than fifteen days previous to the date set for the hearing. If the application applies to or may affect any canal or canal feeder waters, a like notice shall be given to the Superintendent of Public Works. The Commission shall also cause such notice to be published as provided in subdivision one of Section 431.

(4) At the time and place designated in such notice, or at a time and place to which the meeting may be adjourned, the Commission shall determine whether the plan or plans set forth in the application or applications on file with the Commission, or any such plan, is or may be consistent with the proper development, conservation and utilization in the public interest of power resources of the water shed, stream or localities to be affected by the determination. If it shall determine that any of the plans is consistent with such development, conservation and utilization and that there is no reason why the water power involved should at the time be withheld in the public interest from development by private interests, it may grant the application. If there be two or more such applications it shall decide which of the plans is most suitable for the proper development, conservation and utilization in the public interest of the water power resources of the water shed, stream or locality affected.

(5) The Commission in granting the license shall accord a preference to the applicant whose plans, being approved under the preceding subdivision, are best adapted to properly develop the water power site or sites covered by the application, provided that it is satisfied that such applicant is reliable and responsible and capable of consummating the project; and provided further that as between two or more plans equally well adapted to such purpose, a preference may be given to the application of a municipal corporation, if an order shall have been previously made by the Public Service Commission approving the installation of a municipal power plant which it proposes to install under the license, or in default of such an application to a riparian owner, and, otherwise, to the application first filed with the Commission; and provided further that the Commission may impose as a condition of granting the license that the plan be modified to improve the development or otherwise conserve the public interest or protect private rights.

(6) The Commission from time to time, either before or after a license is granted, may permit minor changes and corrections to be made in any map, plans or specifications filed by an applicant for the purpose of improving the same. It may also permit changes to be made therein for the purpose of better adapting the same to the development, conservation and utilization in the public interest of the water power resources of the water shed, stream or locality affected. No correction or change shall be made under this subdivision until the same has been authorized by a resolution adopted by the Commission.

§ 504. Preliminary permits.

(1) The Commission may issue preliminary permits for the purpose of enabling applicants for a license hereunder to secure the data and to perform the acts required by Section 503, provided, however, that upon the filing of any application for a preliminary permit by any person or public corporation, the Commission before granting such application shall at once give notice of such application in writing to any municipality which, in its judgment, is likely to be interested in or affected by such application. Each such permit shall be for the sole purpose of maintaining priority of application for a license under the terms of Part VII of this article for such period or periods, not exceeding a total of three years, as in the discretion of the Commission may be necessary for making examinations and surveys, preparing maps, plans, specifications and estimates, and making financial arrangements.

(2) The permit shall set forth the conditions under which priority shall be maintained and the license issued, and may prescribe any condition of issuing the license for the protection of the interests of the state. Only one preliminary permit at a time shall be issued and outstanding for the same project. The same preference shall be accorded by the Commission in considering applications for a preliminary permit as is accorded in considering applications for a license. Each preliminary permit shall require the permittee to proceed diligently and immediately to secure the data and to perform the acts required by Section 503.

(3) All investigation work in connection with any operations carried on under the preliminary permit shall be subject to the inspection of the Commission, its agents and employees, and, from time to time upon the request of the Commission, the permittee shall make full reports to the Commission of the progress of the work carried on under the preliminary permit, but such reports shall be confidential until final application is made for the license, unless the Commission takes proceedings to revoke the preliminary permit.

(4) Permits shall not be transferable and may be cancelled by resolution of the Commission upon failure of the permittee to comply with the conditions thereof.

§ 505. Provisions and conditions of licenses.

(1) The term of the license shall not exceed fifty years from its date.

(2) The licensee shall agree to accept and abide by the terms and provisions of Part VII of this article, and to pay to the state the charge or rental, if any, fixed by the Commission and reserved in the license, or as the same may be readjusted pursuant to law.

(3) The license shall by reference to maps, plans and specifications or otherwise clearly identify and define the improvement or development to be affected under the license.

(4) If the license affects any canal or canal feeder waters, it shall contain a provision, in substance, reserving to the Superintendent of Public Works the right at any and all times to enter upon the property covered by the license, and to do and perform such acts or things, including the temporary drawing off of the water from the dam or forebay from which the licensee is drawing water and such interruption in the supply of water to the licensee, as may be deemed necessary for the repair, reconstruction or improvement of the canal or any canal works or structures and that the licensee shall be at all times subject to such reasonable rules and regulations for the management and maintenance of the canals and navigation thereof as the Superintendent of Public Works shall from time to time prescribe; also a provision in substance reserving to the Commission the right, on ninety days' written notice to the licensee, to retake, recapture and resume wholly or in part the use of the water and other property covered by the license, including all structures erected upon and improvements to such property, and to control and limit the manner and extent of use of such water or other property, whenever in the opinion of the Superintendent of Public Works or the Legislature, the necessary supply of water for the use of the canals of the state, or any future alterations or improvements of the canals, or the safety of the works connected therewith, may render such resumption, control or limitation necessary; also a provision in substance reserving to the state the right wholly to abandon or destroy the canal, dam or works by the erection or construction of which the surplus water covered by the license is rendered available. In either of which events, the licensee, if he promptly complies with any and all lawful directions of the Commission with respect to the cessation of the use of water and removal from the premises may recover from the state in the Court of Claims the damages resulting to him therefrom, but the damages for improvements on state lands shall not exceed the reconstruction cost. The damages for which the state shall be liable may be specified in the license. The state shall not be liable for any temporary interruption for the repair of or in the operation of the canal, and in case of a substantial change in the right or privilege granted, the Commission, by agreement, may readjust the charge or rental with the licensee.

(5) The license shall contain a provision in substance that if there be a partial resumption of the use of the water or of the land which is covered by the license, the licensee, at his option, may continue for the remainder of the term specified in the license to use the residue of the water and land covered by the license, under the terms and conditions of the license, or such modified terms as may be agreed upon, upon the payment to the state of a revised and read-

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justed charge or rental, and that if the licensee refuses to accept or continue the use of the remaining water and land at the revised and readjusted rental, the license shall terminate and the licensee shall have his claim for damages as provided by the preceding subdivision.

(6) Except as otherwise provided by law, the terms and provisions of a license may be altered only by mutual agreement between the Commission and the licensee, approved by resolution of the Commission adopted at a regular meeting thereof after publication as provided in subdivision one of Section 431 of a notice setting forth the time and place of the meeting at which the proposal to alter the terms and provisions of the license will be considered. If by any such agreement the amount of water available for use by the licensee is curtailed or the privileges and rights under the license are materially changed, the Commission may revise and readjust the rental to be paid.

(7) It may contain a provision to the effect that the licensee shall furnish to the state, free of charge or upon terms to be fixed as therein provided, the hydraulic or hydro-electric power required for the operation or lighting of certain defined state structures, works or property.

(8) The license may also contain a provision in substance, that the licensee shall obtain the fee simple absolute of, or any lesser interest in, all property other than that of the state used by him in the construction of the project.

(9) In issuing licenses for a minor part only of a complete project, or for a complete project of not more than one hundred horsepower capacity, the Commission may in its discretion waive such conditions, provisions and requirements of Part VII of this article, except the license period of fifty years, as it may deem to be to the public interest to waive under the circumstances.

§ 506. Protection of navigation.

Before granting any license, the Commission shall inquire and determine to its own satisfaction that the exercise of the privilege conferred will not impair or interfere with navigation on the waters covered by the license and, whenever, the public interest requires, shall impose such conditions in granting the license as may be required to protect and safeguard navigation.

§ 507. Rent reserved; revision of rent.

(1) The annual charge or rental fixed by the Commission shall continue for the period of the license, unless the license provides for a readjustment of the charge or rental at a specified time or times, in which case the charge or rental, as fixed by the license, may be revised and readjusted by the Commission according to the terms of the license. Payments on account of any such charge or rental shall be treated as a part of the operating expense.

(2) The licensee shall be given ten days' notice of the time and place of the meeting of the Commission at which the question of the revision and readjustment of such charge or rental will be considered. The revision and readjustment shall be in the form of a resolution adopted by the Commission, and thereafter, the revised

and readjusted rental or charge, unless reviewed and reversed or modified as herein provided, shall apply to and govern the license.

(3) Any such decision may be reviewed by the licensee pursuant to the provisions of Section 432.

(4) Pending the final determination of the review proceedings, the licensee shall pay to the state the revised and readjusted rental or charge as fixed by the Commission; and if it shall be determined that the rental or charge shall be revised, the licensee shall be credited on later payments with any excess he may pay over the rental as finally fixed, with interest. If the credits be insufficient to satisfy such excess, the licensee may recover the balance in the Court of Claims.

§ 508. *Reservation in the license; state control of rates and use and distribution of power.*

(1) Every license issued pursuant to Part VII of this article for a project shall contain a provision expressly reserving to the state the right to regulate and control the use and distribution of the power generated by any licensee, and to fix reasonable rates to be charged by the licensee under all circumstances for furnishing heat, light or power generated wholly or partly by the use of property covered by the license, and to regulate the service, capitalization and secured debt of the licensee and licensed project.

(2) Jurisdiction is hereby conferred upon, and it shall be the duty of, the Public Service Commission to regulate and control the use and distribution of all power generated by any licensee under Part VII of this article, or generated by any person or public corporation, by the use and diversion for power purposes of any waters of the state in which the state has a proprietary right or interest, and to fix reasonable rates to be charged by such licensee, or such person or public corporation, for furnishing heat, light or power generated wholly or partly by the use of water in which the state has a proprietary right or interest. In the exercise of such jurisdiction the Public Service Commission shall give preference to municipalities in the use and distribution of power generated by such licensee or by such person or public corporation. To carry out the provisions of this section, and until otherwise provided by law, complaints, inspections, investigations, hearings, rules, regulations, orders and determinations may be made or had, and rules, regulations and orders enforced, in the manner, so far as applicable, provided in the Public Service Commission Law in respect of electrical corporations and of the manufacture, sale and distribution of electricity.

(3) Every license issued pursuant to this article shall contain a condition that the development of power thereunder shall be subject to the control and authority of the Public Service Commission to the extent conferred upon such Commission by this section.

§ 509. *Equitable rental for Niagara River water; payment of moneys into the state treasury.*

(1) The Commission shall have the power to fix and determine, after a hearing held upon notice to the parties interested, the amount

of an equitable rental, which is hereby charged pursuant to the reservations made in Chapter 597 of the Laws of 1918 for the diversion, as specified in such chapter, of water from the Niagara River in excess of a daily diversion at the rate of 15,100 cubic feet per second, and also, from July 1, 1943, the amount of an equitable rental, which is hereby charged, for the diversion of water from the Niagara River to the extent of a daily diversion at the rate of 15,100 cubic feet per second and not otherwise subject to the imposition of an equitable rental as specified in such chapter. Such rental shall be fixed in like manner as if application were made for a license under the provisions of Part VII of this article before the water was used, and the people of the state may sue for and collect in behalf of the state such rentals as so fixed and determined.

(2) The Commission shall pay into the state treasury the moneys received by it in the course of administering the provisions of Part VII of this article in the manner provided by Section 37 of the State Finance Law.

§ 510. Prosecution of project works.

(1) The licensee shall commence the construction of the project works within the time fixed therefor in the license. He shall thereafter in good faith and with due diligence continue the construction thereof, and within the time fixed in the license complete and put into operation the whole of such development work or such part or parts thereof as the license prescribes; except that when not incompatible with the public interest, the Commission may, from time to time, for good cause, by resolution extend the time either for the commencement of construction or for the completion thereof.

(2) The licensee shall, when required by the Commission, and as often as once in every six months during the course of the construction, file with the Commission a detailed statement of the cost of the project during the period covered by the statement. Within six months after the licensee has filed its final statement after the completion of the project, the Commission shall file a statement of the total cost of the investment.

(3) The Commission at such time or times as it deems proper may examine any statement of the licensee, whether partial or complete, and hold a hearing to determine whether the same correctly states the cost of the project or part thereof, as therein set forth, and shall have power to determine whether any part of the expenditure has been made wastefully, or in disregard of the terms of the license, or in bad faith, and to deduct such items improperly included as may be necessary to make such statement or statements conform to the fair and actual cost of the project or part thereof. Subject to review as provided in Section 432, the determination of the Commission shall be conclusive for all purposes as to the amount of such investment as shown by any such statement.

§ 511. Maintenance of project works.

(1) The licensee shall at all times maintain the project works in good repair and in efficient working order; shall promptly make all necessary renewals and replacements, including such necessary

renewals or replacements as may, after a hearing, be directed by the Commission for this purpose, and shall establish and maintain adequate reserves therefor.

(2) The Commission may at any time institute an investigation or hold a hearing, or both, with respect to the compliance by the licensee with the requirements of this section and the adequacy of the reserves maintained by it for the purposes herein specified. After such investigation or hearing, the Commission may issue such order or orders, not inconsistent with Part VII of this article, as in its judgment will insure compliance by the licensee with the provisions of Part VII of this article, in respect to all matters so investigated.

(3) The licensee shall promptly conform to and comply with such directions, orders, rules or regulations as the Commission may make from time to time in the interests of navigation, or for the protection of life, health or property or other lawful purposes. He shall likewise promptly conform to and comply with such lawful rules and regulations as may from time to time be prescribed by the federal government, its duly authorized officers or agents relating to the navigation of the waters covered by the license.

§ *512. Eminent domain.*

Real property may be acquired pursuant to Part VII of this article under an exercise of the right of eminent domain in the following cases:

(1) Real property which is necessary to the full development and utilization of any water power site of which the state is the owner, in whole or in part.

(2) Real property which is necessary to the full development of water power sites where such water power sites on a stream, or in a given locality cannot be developed separately as efficiently and economically for the generation of power as under a plan for their development together and the owner or owners of the right to the use of the greater part of the head and volume of usable flow for power at such sites transfer the same to a corporation organized for the production, sale and distribution of heat, light and power to the public as herein provided, or such right is owned by such a corporation and the Commission determines by resolution that such power sites can be more efficiently and economically developed for the production of power under such a plan than singly, and the heat, light or power is necessary for public use.

(3) Real property, on the application of a corporation organized for the production of heat, light or power, after a determination by the Public Service Commission that such property is necessary to the full development and utilization of a single undeveloped water power site, a major part of the head and volume of the usable flow for power at which site is owned by such corporation, for the production of heat, light or power for sale or distribution to the public and that such heat, light or power is necessary for public use. In any county containing a part of the forest preserve as now constituted, for the purpose of establishing the right to exercise the

power of eminent domain under this subdivision the ownership of wild or unoccupied land shall be presumed to be in an applicant showing a record title under which the applicant or his grantors has claimed for a period of twenty years and it appears that the state and county taxes thereon have been paid by or on behalf of such applicant or his grantors for a period of five years before the proceeding in which the application is made was begun; ownership in other lands wherever located shall be presumed on showing record title in the applicant for a period of twenty years and possession thereunder for a like period.

(4) Such right of eminent domain shall be exercised under the Condemnation Law subject to the following restrictions and limitations:

(a) The acquisition of real property for the state shall be on the application of the Commission, and payment therefor shall be made in the manner provided for the payment of lands appropriated by the state in the Adirondack and Catskill parks under subdivisions (6), (7), and (8) of Section 52 of the Conservation Law.

(b) If a water power site be taken under subdivision (2) of this section, the owner of any such power site shall have the option to receive and own such a proportion of the power resulting from the common development as the head and volume of the usable flow of the water at the site bears to the product of the total head and volume of the usable flow of the waters of the common development, provided he pays a like proportion of the cost of development, maintenance and operation, and consents that his pro rata share of such power shall be pledged to secure such payment, and assents to such reasonable and equitable provisions and regulations in relation to the development and operation thereof for the common benefit and to payment therefor as the Commission shall prescribe. In case of the exercise of such option by the owner of a developed water power site, such owner shall also be allowed the loss, if any, resulting to him from the excess in value, if any, of the water power owned by him before such common development over the water power right owned by him after such development, after deducting from the value of such power right his proportion of the cost of such development. Such difference in value shall be deemed a part of the damages in the condemnation proceeding, and the payment thereof shall be secured as directed by the court.

(c) Before any real property is taken under the provisions of subdivision (2) of this section, the owner or owners of the right to the use of the greater part of the head and volume of usable flow for power at the sites to be developed in common shall, unless such a corporation be already organized and be the owner of such rights, organize a corporation for the production, distribution and sale of heat, light and power to the public, and shall transfer to such corporation such sites. Such corporation shall file with the Public Service Commission a certified copy of its certificate of incorporation and shall also file with such Commission a map of the water power sites, and property connected therewith, of which it is the owner, with satisfactory proof that it is the owner thereof, and a

map of the water power sites and property which it seeks to acquire for the purpose of making a common development. It shall also file with such Commission a plan of its proposed development of water power on the property which it owns and which it seeks to acquire. Such corporation shall file copies of such maps and plan certified by the president and engineer of the corporation, or a majority of the directors, in the office of the clerk of the county in which such development is to be made, or if it be in more than one county, in the office of the clerk of each county; and shall give written notice to all actual occupants of lands of which it is not the owner on which such development is to be made, of the time and place such maps and plan were filed, and that such development is to be made on the lands of such occupants. The Public Service Commission shall give an opportunity to persons interested to be heard, investigate and determine whether it is in the public interest that such development be made and whether the power to be produced is necessary for the supply of the public with heat, light or power. If it shall so determine, it may issue to such corporation a certificate that public convenience and necessity require that such development be made, but in granting the certificate the Commission may expressly except from its certificate any part of the property proposed to be developed as unnecessary to the plan. Such certificate when issued shall be conclusive evidence as to the matters lawfully certified therein in any proceeding under the Condemnation Law to acquire the property, or any part thereof, set forth in such certificate.

(5) Real property, on the application of a corporation authorized to do business in this state and engaged in the production, sale and distribution of heat, light or power to the public, which is necessary to perfect or improve water power already developed, provided that property taken does not impair or injure any developed water power or developed water power site. The corporation may apply for and in a proper case receive from the Public Service Commission a certificate of convenience and necessity for taking the property so to be acquired in the manner and with like effect as provided in paragraph (c) of subdivision (4) of this section. Any such corporation may also exercise the right of eminent domain to acquire real property in accordance with the provisions of subdivisions (2), (3) and (4) of this section.

(6) If it appears that there is a defect of title or any outstanding interest in any of the real property occupied or to be occupied by the project when completed, the corporation making, or having the right to make, the development of the water power may exercise the right of eminent domain for the purpose of acquiring any such outstanding interest or any real property with respect to which the title appears to be or is defective.

(7) In any county containing a part of the forest preserve as now constituted, real property, on the application of a corporation organized for the production of heat, light or power, necessary for the development of a water power site or sites, developed or about to be developed, and occupied by a railroad and real prop-

erty necessary to and for the relocation of such railroad, upon application to and on order of the Public Service Commission authorizing the same and upon thirty days' notice to the railroad corporation. The Public Service Commission shall grant the order if in its judgment the public interest will be promoted thereby. The relocation of the railroad shall be at the expense of the applicant and in accordance with plans and specifications to be approved by such Public Service Commission. The applicant shall not take possession of any real property of the railroad necessary for its operation until such relocation of the railroad shall have been completed. The Public Service Commission upon the assent of the railroad may order the abandonment of such part of the railroad as is necessary to be taken instead of ordering a relocation thereof.

(8) Real property, on the application of a corporation organized for the production of heat, light or power, which is necessary for the full development of a water power site or sites, developed or about to be developed, and is used or occupied as burial place or cemetery, and real property necessary to locate and reinter any human remains removed therefrom. Proceedings shall be had for the taking of such real property and removal of such remains in the manner provided by Section 588, in so far as the provisions thereof are applicable thereto, but such exercise of the right of eminent domain shall be subject to the sound discretion of the court.

§ 513. Use of lands occupied by a public highway.

(1) Whenever, in order to complete any project as provided by Part VII of this article, it becomes necessary to use lands occupied by a public highway the licensee shall apply to the Superintendent of Public Works for permission to relocate such highway, the entire expense of such relocation to be borne entirely by the licensee including any damages to persons or property which may be caused by or result from such relocation. The new location shall be determined by the Superintendent of Public Works and the application of the licensee shall be accompanied by funds in an amount sufficient to provide for the cost of a survey, preliminary plans and all other expenses of the Superintendent of Public Works in determining a suitable relocation.

(2) The licensee shall provide the necessary land for such relocated highway in accordance with land taking-maps prepared by the Superintendent of Public Works. If such relocation is on state land the fee to the land covered by the right of way shall remain in the state. If the licensee acquires private property for right of way in the relocation of a state or a county highway the fee in such right of way shall be deeded to the state or to the county in which the same is situated as the case may be. If the licensee acquires private property for right of way in the relocation of a town highway the fee in such right of way shall be deeded to the town or towns in which the same is situated.

(3) Any such relocation shall be made by the licensee according to plans and specifications approved by the Superintendent of Public Works.

(4) Upon the completion and acceptance of such relocated highway the original highway for which it is substituted shall be deemed abandoned as a public highway and the relocated highway shall thereafter be maintained in the same manner as was the original highway for which it was substituted.

(5) The highway law shall apply to the relocation of highways as provided in this section so far as applicable thereto and not inconsistent with Part VII of this article.

§ 514. Eminent domain; transmission lines.

Any corporation authorized to do business in this state and engaged in the production, sale and distribution of heat, light or power to the public may exercise the right of eminent domain under the Condemnation Law to acquire property necessary for the construction of transmission lines for such heat, light and power, when necessary for such sale and distribution to the public. If the corporation be a licensee under Part VII of this article it may apply to, and in a proper case receive from, the Public Service Commission a certificate of convenience and necessity for any property so required in the manner and with like effect as provided in paragraph (c) of subdivision (4) of Section 512. The court in such proceedings of condemnation may prescribe any reasonable limitations, restrictions or regulations for the construction and operation of such lines so as to protect life and prevent unnecessary injury to property.

§ 515. Contribution to the cost of headwater improvement.

Licensees and persons exercising rights conferred by Part VII of this article shall be liable for any payments or charges resulting from the improvement of headwaters under the provisions of Part IX of this article, according to their respective interests in the property benefited.

§ 516. Contracts extending beyond license period.

(1) Whenever the public interest requires or justifies the execution by a licensee whose license covers any state property, or who uses water that cannot be lawfully used without the consent of the state, of a contract for the sale and delivery of power for a period extending beyond the terms of the license, such a contract may be entered into with the approval of the Commission and the Public Service Commission, in which event the duty to perform such contract after the expiration of the license period shall devolve upon the person or corporation to whom or which a new license covering the property of the former licensee is issued, and such new license shall so provide.

(2) A licensee making such a contract shall not be liable thereon after the expiration of his license, if it cover any state property or the use of water subject to state control, unless the new license is issued to him. No such licensee without the written approval of the Commission, shall enter into any contract for the sale or

delivery of power for a term or period extending beyond the time fixed for the revision of the charge or rental payable under his license.

§ 517. Transfer of license restricted.

No voluntary sale, assignment, or transfer of any license or of the rights thereby granted shall be made without the written approval of the Commission; nor become effective until the instrument of transfer be filed and recorded in the office of the clerk of each county in which property covered by the license is located. Notice thereof must be given to the Commission before possession is given under such transfer, and if there be a transfer by operation of law, the transferee must give notice thereof to the Commission before taking possession.

§ 518. Revocation of license.

(1) The Commission may by resolution terminate and revoke any license, issued pursuant to the provisions of Part VII of this article, on the following:

(a) For failure of the licensee to commence, advance or complete construction of the project works within the time fixed therefor, unless the time be extended by the Commission; or

(b) For failure of the licensee to pay, at the time or times provided in the license, the charge or rental provided for in the license or fixed pursuant to law; or

(c) For failure of the licensee promptly to comply with any of the terms, conditions or provisions of Part VII of this article or of the license, or with any direction, order, rule or regulation given or made by the Commission or otherwise, pursuant to the license or provisions of law.

(2) No action terminating or revoking a license shall be taken until the licensee is afforded an opportunity to appear before the Commission and be heard with respect thereto. Ten days' notice of the time and place of the meeting of the Commission at which the action will be considered shall be given to the licensee.

(3) In case the Commission revokes a license as herein provided because of the failure of the licensee in good faith to commence actual construction of the project works or any specified part thereof within the required time, the licensee shall not recover any damages or compensation from the state because of such revocation.

(4) If the license is terminated or revoked, the state may elect to take any and all interest of the licensee in and to state property covered by the license including all works and structures thereon.

(5) In such event the Commission may, subject to the making of adequate appropriation therefor, provide by written agreement for the payment to the licensee of the amount of the enhancement in value, if any, of the state property which is covered by the license resulting from any improvements of the same made or effected by the licensee, not exceeding, however, the reconstruction cost, which recovery in the case of termination and revocation pursuant to

paragraph (a) of subdivision one of this section shall not include or be affected by any organization or other expenditures preliminary to actual construction work, and in the case of termination and revocation pursuant to paragraphs (b) and (c) of subdivision one of this section shall be less a deduction equal to that portion, if any, of the aggregate income from the project over and above actual and reasonable expenses of operation, including repairs, which shall exceed an amount equal to eight per centum per annum, to the time that the state property is taken over by the state, of the actual and reasonable cost to the licensee of the lands and interests in lands, the actual and reasonable cost to the licensee of the ways, means and works and the allowance made for organization and development expenses. If the amount involved does not exceed the indebtedness which may be lawfully incurred for such purpose without an appropriation, such agreement may provide for the payment thereof before an appropriation is made.

(6) In the event that the licensee and the Commission are unable to agree upon the amount of damages payable to the licensee as above provided, and the same does not exceed the indebtedness which may be lawfully incurred, for such purpose without an appropriation being made therefor, the licensee may recover of the state in the Court of Claims the amount of enhanced value, if any, of the licensed property owned by the state, resulting from any and all existing improvements of the same made or effected by the licensee, not exceeding, however, the reconstruction cost, less depreciation thereof as limited above to proceedings pursuant to the provisions of paragraph (a) of subdivision one, or less deduction as stated above for proceedings pursuant to paragraphs (b) and (c) of subdivision one. If the amount of damages shall exceed the amount of such lawful indebtedness, the revocation shall not take effect until an adequate appropriation has been made therefor and in such case damages may be in like manner recovered in the Court of Claims.

(7) The Attorney General at the request of the Commission may institute appropriate actions or proceedings in the Supreme Court in any judicial district of the state or in any court of competent jurisdiction to carry into effect the resolution of the Commission revoking any license and to remove from state property covered by the license, any licensee whose license has been revoked.

§ 519. Re-entry at expiration of the license period.

(1) Upon the expiration of the original license period any and all interest of the licensee in and to state property which is covered by the license, together with any and all works and structures thereon, shall vest in and become the property of the state free and clear of any and all liens and encumbrances, provided, however, that the Commission may at the time the license is granted, or at any later time during its continuance, enter into an agreement with the licensee that an allowance will be made to the licensee for and on account of improvements to property of the state, or improvements the value of which is dependent on the use of state property, for

which in view of the rent paid the licensee shall not have been compensated by the privilege of the license, but such agreement must be made before the improvement for which such allowance is to be made, is undertaken. If the amount of such allowance exceeds the amount of indebtedness, which may be lawfully incurred for such purposes without an appropriation, the time when such property is vested in the state shall be postponed until an adequate appropriation is made therefor. The allowance so made or to be made may be by way of an extension of the license pursuant to an agreement between the Commission and the licensee.

(2) Any agreement with the licensee for an allowance on account of improvements to property of the state or improvements the value of which is dependent on the use of state property, shall not provide for an allowance in excess of the reconstruction cost, less a deduction equal to that portion, if any, of the aggregate income from the project, over and above actual and reasonable expenses of operation, including repairs, which shall exceed an amount equal to eight per centum per annum, to the time that the state property is taken over by the state, of the actual and reasonable cost to the licensee of the lands and interests in lands, the actual and reasonable cost to the licensee of the ways, means and works and the allowances made for organization and development expenses.

§ *520. Renewal and extension of licenses.*

The Commission may renew a license at the period of expiration to the same licensee on the same or different terms, or may renew the privilege from year to year under such terms as may be agreed upon.

§ *521. Prohibited diversions.*

(1) Any person or public corporation who, after being notified by the Commission to desist therefrom, shall wilfully take, divert, draw or make use of, for power/or other commercial or manufacturing purposes, waters in which the state has a proprietary right or interest, or in the bed of which, or other real property required for the use of such waters, the state has such a proprietary right or interest, or if boundary waters of the state, the state has jurisdiction over the diversion or interference with the flow of the same for power purposes solely or concurrently with any other jurisdiction or owner of a proprietary right, without obtaining a license authorizing the same as herein provided, or unless the diversion of such waters is subject to the charging or imposition of an equitable rental pursuant to the provisions of Part VII of this article, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding five thousand dollars.*

(2) In addition, the Commission may, in an action instituted by it in any court of competent jurisdiction, recover of any such person or public corporation the sum of fifty dollars per day for each day that such person or public corporation continues to take, draw, divert or make use of any part or portion of such waters.

* So in original. [Evidently should read "and/or".]

(3) The use of such water, except when the right to the use thereof has been acquired by means of a written license issued pursuant to the provisions of Part VII of this article, or when the diversion of such water is subject to the charging or imposition of an equitable rental pursuant to the provisions of subdivision one of Section 509 of this article, shall be prima facie evidence of the wilfulness of the taking, drawing, diversion or use thereof and of the guilt of the person taking, diverting or making use thereof.

(4) The Commission may bring actions through the Attorney General to enjoin violations of this section.

§ 522. False entries, statements or reports.

Any person who, for the purpose of deceiving, makes or causes to be made any false entry in the books of accounts of a licensee, and any person who, for the purpose of deceiving, makes or causes to be made any false statement or report in response to a request or order or direction from the Commission for statements or reports under Part VII of this article shall, upon conviction, be punishable by a fine of not more than two thousand dollars or by imprisonment for not more than five years or both.

§ 523. Previous grantees not to divert waters without license.

A person or corporation, other than a municipal corporation, claiming or purporting to have, or to have had, by general or special act or other grant from the state, the right to divert water from Lake Erie, Niagara River or the boundary waters of the state, or to divert any waters in which the state has a proprietary interest, or the successor in interest of such a corporation, whether or not there has been or is now an actual diversion of waters or development of power therewith pursuant to such act or grant, may apply for a license under Part VII of this article to divert such waters and shall not divert such waters without having obtained such license, unless the diversion of such waters is subject to the charging or imposition of an equitable rental pursuant to the provisions of Part VII of this article, and shall otherwise be subject to the provisions of Part VII of this article.

§ 524. Right to amend and repeal reserved.

The right to alter, amend or repeal Part VII of this article is expressly reserved, but substantial rights acquired pursuant to Part VII of this article shall not be lost or impaired by such repeal or amendment.

STATE OF NEW YORK, RULES GOVERNING FILING OF APPLICATIONS FOR LICENSES AND PRELIMINARY PERMITS UNDER THE WATER POWER ACT (ARTICLE XIV, CONSERVATION LAW); NAME OF COMMISSION CHANGED TO WATER RESOURCES COMMISSION EFFECTIVE FEBRUARY 8, 1960, ADOPTED JUNE 1, 1921—REVISED JUNE 1, 1928

RULES OF WATER POWER AND CONTROL COMMISSION GOVERNING THE FILING OF APPLICATIONS FOR LICENSES AND PRELIMINARY PERMITS UNDER THE WATER POWER ACT (ARTICLE XIV CONSERVATION LAW)

GENERAL RULES

I. Applications shall be made in writing to the Water Power and Control Commission. One original and three copies shall be filed with the Commission, by delivering the same to the Conservation Commissioner as chairman of the Commission or to the Secretary of the Commission. They must be verified by the applicant, the affidavit of verification to be substantially in the form provided by the Civil Practice Act for the verification of a pleading. One member of an association may verify the same on behalf of the association. Whenever an affidavit of verification is taken without the State of New York, the authority, and the authenticity of the signature of the notary public or other officer taking the affidavit must be established in the manner provided by sections 311 and 312 of the Real Property Law.

II. They shall be plainly and legibly written or printed in black ink upon durable paper of good material and of a uniform size, but not more than eight and one-half inches in width by fourteen inches in length. The maps, plans and drawings constituting a part of the original application shall be on cloth blue prints or original drawings on tracing cloth, except that lithographed official maps issued by Federal or State agencies may be used for general maps but when so used the copy constituting a part of the original application must be mounted on cloth.

III. They shall be filed by the Commission in order of their receipt. The date of the receipt of the last communication from an applicant, containing any data or information required by these rules shall be deemed to be the date of the receipt of such application for a license, except that where the Commission issues to an applicant for a license a preliminary permit for the purpose of enabling him to secure the data or information required by Rules V, VI, VII or VIII to be set forth in an application for a license, the date of receipt of the last communication from the applicant, containing any data or information required by these rules for the issuance of such preliminary permit, shall be deemed to be the date upon which the priority of such application for a license shall be maintained, subject to the conditions of the permit.

APPLICATIONS FOR LICENSES

IV. Applications for licenses shall set forth, among other things, the following:

(a) If the applicant is an individual, his full name and place of residence (street and number); that he is a citizen of the United States, and his business address or address to which communications, notices, orders or directions from the Commission may be addressed.

(b) If the applicant is an association, the full names and places of residence (street and number) of each member thereof; that each member thereof is a citizen of the United States, and the business address of the association to which communications, notices, orders or directions from the Commission may be addressed. It shall point out the statute law, if any, under which the association was organized. If the association is a copartnership, a copy of the articles of copartnership shall be attached; if a joint stock association or similar association, a copy of the articles of association shall be attached, together with a certified copy of the minutes of the meeting of the association authorizing the making of said application.

(c) If the applicant is a corporation, the full names and places of residence (street and number) of its officers and directors; its principal office and place of business within the State of New York to which communications, notices, orders or directions from the Commission may be addressed, and a statement revealing when and under the laws of what state is was incorporated. If it is not incorporated under the laws of the State of New York, the application shall point out the specific statutory provisions under or pursuant to which it was

incorporated and set forth facts establishing its compliance with the provisions of section 15 of the General Corporation Law. All such applications shall set forth facts evidencing that the organization of the corporation has been fully completed, and point out the provisions of law and of its charter authorizing it to engage in the business of developing, using, furnishing or selling hydraulic or hydro-electric power within the State. A copy of the charter or certificate of incorporation of the applicant, duly certified by the Secretary of State of the state where it was organized or other officer having legal custody of the records of incorporation must be attached to the application; also a certified copy of the minutes of the meeting of the directors of such corporation authorizing the making of said application, and if a foreign corporation, a certificate executed by the Secretary of State, pursuant to the provisions of section 15 of the General Corporation Law, to the effect that such corporation has complied with all requirements of law to authorize it to do business in this State.

(d) If the applicant is a municipal corporation, it shall set forth the names and places of residence (street and number) of the chief executive officer and the clerk thereof. It shall state whether an order has been made by the Public Service Commission approving the installation of the municipal power plant which it proposes to install under the license if granted to it by the Commission, and point out the statute or statutes constituting its charter and particularly the provisions thereof which it is claimed authorize it to develop, use, furnish or sell hydraulic or hydro-electric power and to make the application and become a licensee under the provisions of the aforesaid Art. XIV of Conservation Law as amended. All such applications shall be accompanied by a certified copy of the minutes of the municipal legislative body authorizing the making of said application, and also a copy of the order of the Public Service Commission approving the installation of the municipal power plant referred to in such application, if such an order has been granted.

V. They shall set forth a clear and comprehensive description of the applicant's project, for which purpose detailed maps, plans or drawings, drawn to scale, and specifications of the "project," as that term is defined by section 613 of the Conservation Law, in sufficient detail to enable the Commission to fully comprehend the nature and extent thereof, including the extent of the land proposed to be flooded by such project works, and the location and boundaries of the project area with respect to the boundaries of all cities, counties, towns and villages which lie in whole or in part within the same, shall accompany the application. The "project area" is considered to be the land area, the possession or ownership of which will be required for the construction, maintenance or operation of the project.

VI. They shall also include as a part thereof detailed estimates of the cost of consummating the project and a statement as to the time within which, after the granting of the license, the licensee will begin construction work, and the time within which he will put into operation the project works or each defined part or portion thereof.

VII. They shall set forth the applicant's information or estimate with respect to the flow, from time to time, of the stream which he proposes to develop, together with his information or estimate with respect to the flow thereof which will or may be utilized from time to time in his project plant for the development of power, and his information or estimate with respect to the head under which the flow of the stream can, from time to time, be utilized for power purposes in his project plant. The stream flow and elevation records, or other data from which such estimates of usable flow and head are deduced, should, if available, accompany the application. It is permissible, however, to reefer to published gaging records kept by the State or Federal governments, without providing copies of the same. If the stream flow or head at the power site is derived from data other than published stream gaging and water surface elevation records, or from modifications of such records, then the data methods and factors used in making up such estimates of stream yield and head shall accompany the application.

They shall also set forth the working head under which it will operate and the rated capacity of the hydraulic and electrical apparatus to be installed in the project plant.

They shall also disclose the effect, if any, of the construction and operation of the project works upon any waters, whether within or without the State, which are susceptible of use for navigation purposes and also upon any canal or canal feeder lands, waters or structures.

VIII. They shall set forth by reference to a map, drawn to scale, to accompany the application, the location and boundaries of the lands, the ownership or use of which is deemed necessary to the consummation of the project, and, so far as known, the names of the owners of the several parcels of land comprising the said area; also, so far as known, the names of the owners, other than the State and the applicant, of water rights and privileges, title to which must be acquired in order to enable the applicant, if he becomes a licensee of the State under the Conservation Law, to consummate his project, and a statement of the nature and extent of their several rights; also a statement of what part or portion of such lands, and water rights, and structures, are possessed by the State and the applicant respectively.

IX. They shall also set forth the location, rated capacity, and actual power output of all power plants owned or operated by the applicant, whatever the motive power thereof may be; the location of all water power sites, whether developed or undeveloped, owned or operated by the applicant, and the power, or additional power, which may be obtained by a proper and economical development effected at each such developed or only partially developed site; what developments, extensions or enlargements, if any, of said sites or plants are planned or under consideration by the applicant; the markets supplied by existing plants; the relationship, if any, of the applicant's existing plants to the project in connection with which a license is sought from the Commission, and the relationship, if any, of the project plant to any other hydroelectric plants.

X. They shall set forth how the applicant proposes to utilize the power output of the project works, that is, whether for public or private use; if for private use, by whom it is proposed to be used and for what purpose, and if for public use, the market wherein the applicant proposes or expects to dispose of the same.

XI. They shall set forth, in general terms, the nature and extent of the experience of the applicant in the business of developing generating, transmitting, distributing, using or selling hydraulic or hydro-electric power, together with the facts relied upon to satisfy the Commission, as required by subdivision 5 of section 616 of the act above referred to, that, financially and otherwise he is reliable and responsible and capable of consummating the project for which he seeks a license.

XII. They may set forth such other information as the applicant considers material as bearing upon the merits of his application.

XIII. The Commission may require applicants to furnish such additional maps, plans, drawings or data as in its judgment are necessary or desirable for a full understanding of the applicant's project.

XIV. In cases where an applicant for a license accompanies his application therefor with an application for a preliminary permit under section 617 of the Conservation Law and it is made to appear that he is not possessed of sufficient data or information to enable him to comply with the foregoing rules "V," "VI," "VII" or "VIII," and that he desires a preliminary permit to enable him to secure and furnish to the Commission the data required by said rules to be furnished, compliance by him with the requirements of the said rules will, in the event that a preliminary permit is granted by the Commission, be deferred until the expiration of the term of the preliminary permit, unless otherwise directed by the Commission.

XV. The application should be in substantial conformity with the form hereto attached as appendix A.

APPLICATION FOR PRELIMINARY PERMITS

XVI. An application for a preliminary permit will not be received except in connection with a formal application for a license.

XVII. Applicants for preliminary permits shall set forth, among other things, the following:

(a) A map of the project, so far as it has been worked out, showing generally the lands and waters, for the use of which the applicant desires a license, and as full and comprehensive a description of the development which the applicant has in mind as the circumstances will permit.

(b) What data pertaining to the project the applicant proposes to secure, which renders the issuance of a preliminary permit necessary or proper.

(c) What cities, villages or towns are situated within twenty-five miles of the site of the project works.

(d) The period of time for which a permit is desired.

(e) Such other information as the applicant considers material as bearing on the merits of his application.

XVIII. The Commission may require applicants to furnish such additional maps, plans, drawings or data as in its judgment are necessary or desirable for a full understanding of the applicant's project.

XIX. The application should be in substantial conformity with the form hereto attached as appendix B.

XX. The Commission reserves the right to alter, amend, suspend or revoke any or all of the foregoing rules at any time.

APPENDIX A

FORM OF APPLICATION FOR A LICENSE

To the Water Power and Control Commission:

The application of the undersigned for a license under the provisions of Article XIV of the Conservation Law (Chapter 579, Laws of 1921 as amended) shows:

1. (Here set forth the information required by Rule IV).

2. That the applicant seeks a license from the Commission authorizing the construction, maintenance and operation for the development of power of the following project, to wit: (here set forth a clear and comprehensive description of the project as required by Rule V, giving to each map, plan, drawing, specification, etc., which accompanies the application an exhibit number).

3. That hereto attached marked Exhibit ——— is applicant's detailed estimate of the cost of consummating the aforesaid project.

4. That, if this application be granted, the undersigned will commence construction work on the project within —— days from the issuance of the license, and within —— days therefrom will complete the same and put it in operation, in the following manner: (Here set forth the information required by Rule VI).

5. (Here set forth information called for by Rule VII with respect to the stream flow, available head, project plant capacity, etc.).

6. (Here set forth information with respect to the ownership of the lands and water rights necessary to the consummation of the project as required by Rule VIII).

7. (Here set forth full information with respect to the location, etc. of power plants owned or operated by the applicant as required by Rule IX).

8. That the proposed use or market for the power to be developed is as follows: (See Rule X).

9. (Here set forth the facts with respect to the experience of the applicant required by Rule XI).

10. (Here set forth such other information as is considered material as bearing upon the merits of the application).

Wherefore, the undersigned prays that a license be issued to him (them, it) under and pursuant to the provisions of Article XIV of the Conservation Law, as amended, authorizing him (them, it) to construct at the location and in the manner above set forth, and for the period of —— years from the date of the license, to maintain and operate the project and project works above described for the diversion and use for power purposes of the waters above referred to and the use in connection therewith of the lands, waters and water rights to the State belonging, above referred to.

Dated, ———, 192–.

——— ———, *Applicant.*

(The application must be verified as required by Rule I.)

APPENDIX B

FORM OF APPLICATION FOR A PRELIMINARY PERMIT

To the Water Power and Control Commission:

The application of the undersigned for a preliminary permit under the provisions of Article XIV of the Conservation Law (Chap. 579, Laws of 1921 as amended) shows:

1. That the applicant has filed or is about to file with the Commission pursuant to the provisions of the above mentioned act, a formal application for a license covering the project herein referred to, to which application reference is hereby made for information concerning the qualifications of the applicant and with

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respect to the power site involved, the nature and extent of the applicant's project, the proposed use of the power to be developed at the same, etc.

2. That the applicant seeks a license authorizing the construction, maintenance and operation for the development of power, of the project described or referred to in paragraph "2" of his aforesaid application for a license; but that it is necessary to secure further data and information to enable him (them, it) to furnish the Commission with a definite, clear and comprehensive description of this project and to furnish the information required by Rules V, VI, VII or VIII (as the case may be) of the Commission.

(Here set forth a general description and map of the project, so far as it has been worked out, as required by Rule XVII and such information required by Rules V to VIII inclusive as is possessed by the applicant.)

3. That the applicant seeks a preliminary permit for the period of —— weeks (months) to enable him (them, it) to secure and furnish to the Commission material data and information of the following characters: (Here set forth information required by Rule XVII, subd. b).

4. That the following cities, towns and villages are situated within twenty-five miles of the site of applicant's project works.

5. (Here set forth such other information as is considered material as bearing upon the merits of the application.)

Wherefore, the undersigned prays that a preliminary permit covering the project above described be issued to him (them, it) under and pursuant to the provisions of Article XIV of the Conservation Law for the term of —— months from the date thereof.

Dated, ———, 192–.

——— ———, *Applicant.*

(The application must be verified as required by Rule I.)

STATE OF NEW YORK, PUBLIC SERVICE COMMISSION

ITEMS TO BE COVERED BY AGENCIES ENGAGED IN ACTIVITIES AFFECTING ENERGY RESOURCES AND ENERGY TECHNOLOGY

1. Statutory basis for your agency's relationship to energy resources and energy technology, whether regulatory, research-directed, etc.

Answer. Regulatory—See New York State public service law.

2. Brief survey of the history and development of that relationship.

Answer. Regulation of the production and distribution of electricity in the manner presently conducted by this Commission commenced in this State in 1907. Regulation of the distribution of gas for public consumption commenced in the same year. In 1913 steam distribution for public consumption was first subjected to regulatory control; in 1931 water distribution companies were also subjected to regulation.

3. Objectives of the program or programs as defined by statute and administrative interpretation.

Answer. Adequate service to the public under just and reasonable rates.

4. Summary or characterization of rules, policy declarations, or directives issued for the guidance of the affected industry.

Answer. By and large the promulgated rules, etc., pertain to the accounting control and ratemaking functions of the Commission rather than the production or conservation of the energy sources.

5. A statement indicating wherein your program impinges upon, meshes with, or is limited by the programs of other agencies in the energy field.

Answer (*a*) *Electricity.*—The electrical production of the Power Authority of the State of New York and the distribution (including rates) of that production is the exclusive prerogative of that agency.

(*b*) *Gas.*—The large portion of natural gas consumed in this State arrives via interstate pipelines at the end of the scope of the jurisdiction of the Federal Power Commission over the distribution and transportation thereof.

(*c*) *Water.*—The utilization of the sources of supply for purposes of public consumption is subject to the supervision of the State Water Power Resources Commission and the Department of Health.

(*d*) *Steam.*—None.

6. The extent of existing coordination or evidence of any unresolved conflicts, if any.

Answer. Little or no "coordination" except informally; few "unresolved conflicts" with the exception of those inherent in 5(a) supra.

7. Comments upon what seems to be the more challenging or difficult issues or obstacles involved in administration of your program.

Answer. The maintenance of safe and adequate service under just and reasonable rates in an inflationary economy.

8. Recommendations for improving through research, by new or improved regulatory programs, or otherwise, the role of the Federal Government in assuring the energy resources necessary for "maximum production, employment, and purchasing power" called for under the Employment Act of 1946.

Answer. Expansion of the scope of the prerogatives of the Federal Power Commission in respect to the husbanding and conservation of natural gas for domestic consumption and improvement in the discharge of the presently prescribed regulatory responsibilities of that agency. See *Transcontinental Gas Pipeline Co., et al.*, v. *F.P.C.*, 271 F. 2d, 942 USCA 3d, 1959, cert. pending, Sup. Ct., Oct. Term 1960, No. 45 and *Atlantic Refining Co.* v. *P.S.C.*, 360 U.S. 378 (1960).

STATE OF NEW YORK, EXECUTIVE DEPARTMENT, OFFICE OF ATOMIC DEVELOPMENT

On December 1, 1959, this office submitted to Governor Nelson A. Rockefeller a report entitled "An Atomic Development Plan for the State of New York." Enclosed is a copy of that report, which contains much information of the type you have requested. [Available in subcommittee files. An excerpt from app. III summarizing the role of the States in atomic development is incorporated herein at p. —.]

As you know, atomic energy is used importantly, in addition to producing power, in medicine, agriculture, industry, and scientific research in many fields. However, Mr. William H. Moore, staff economist for your subcommittee, has advised us that your subcommittee at this time is primarily interested in sources of energy used to produce power. Accordingly, we have discussed only briefly a few of this office's activities relating to other uses of atomic energy.

1. *Statutory basis for this office's relationship to energy resources and energy technology, whether regulatory, research-directed, etc.*—The New York State Office of Atomic Development was created in 1959 within the executive department of the State government by the State atomic energy law (ch. 41, Laws of New York, 1959 as amended by ch. 314, Laws of New York, 1960). Enclosed is a copy of that law, to sections 453–455 to which your attention in this regard is particularly invited.

2. *Brief survey of the history and development of that relationship.*—The New York State government first became specifically interested in atomic energy in 1955, when the State department of health (with statewide jurisdiction, except for the city of New York, over the control of the public health and safety aspects of the release of radioactivity in the environment, and of the health and safety aspects of the use of radiation in medical, nonindustrial research and similar installations) and the State department of labor (with statewide jurisdiction over the control of the health and safety aspects of the use of radiation in industrial facilities) adopted radiation protection codes.

Also in 1955, the Governor established by executive action a council on the use of nuclear materials, consisting of the State commissioners of commerce (the chairman) and health, the State industrial commissioner (who heads the State department of labor), a State public service commissioner, and an executive secretary. The council's functions, as described in the statement of its establishment were—

> to coordinate safety activities related to atomic energy in New York State, to promote the use of atomic energy in New York State by advising industry on the use of new technological tools for the control of atomic radiation [and], to coordinate liaison relationships with the Atomic Energy Commission.

On August 7, 1955, the Governor created, also by executive action, an atomic energy advisory committee, consisting of 21 members from science, industry, labor, education, and the Federal Government. The committee's functions, as described in the announcement of its establishment, were to—

> assist the Governor and his council on the uses of nuclear materials in expanding industrial applications of atomic energy and maintaining the health and safety of workers in plants using nuclear materials—

and also to produce "specific recommendations for * * * necessary legislation." The committee recommended legislation which in 1958 the Governor proposed to, but which was not passed by, the legislature. Instead, the legislature passed a different bill which granted less authority to the executive department, and was vetoed.

Also in 1958, the New York City department of Health (with jurisdiction in New York City similar to that of the State department of health outside of New York City) adopted a radiation protection code. In so doing, each of the three principal regulatory agencies within the State thereupon had (and still have) such a code.

In early 1959, the Governor proposed to the legislature the State atomic energy law, which the legislature passed in February 1959, and became law on March 9, 1959. In December 1959, the Governor proposed to the legislature amendments to this law, which the legislature passed in March 1960, and became law on March 29, 1960. The State atomic energy law grants more authority to a State atomic energy agency than would have been granted by any law previously proposed in New York State by either the Governor or the legislature, or any law adopted by any other State.

For its first year (1959–60), this office was appropriated $100,000 for general operating expenses, and $1 million used on a matching basis in establishing, under contract with the University of Buffalo, a western New York nuclear research center in Buffalo (ch. 515, Laws of New York, 1959 (copy enclosed)).

For its second (the current) year, this office was appropriated $142,800 for general operating expenses, and $147,000 to be used to locate within the State, with due regard for the health and safety of the public, one or more sites or facilities suitable for certain recommended atomic energy activities. Your attention in this regard is invited particularly to the new subdivisions 9 and 10 inserted under section 454 of the State atomic energy law by section 1 of chapter 314, Laws of New York, 1960.

The office of atomic development, a coordinating council, and a general advisory committee (discussed hereinafter) are all authorized under the State atomic energy law, and have all been established and functioning for over a year. The contract with the University of Buffalo for the establishment of the Western New York Nuclear Research Center has been signed, and work under it is well underway. Assisted by a contractor, this office has preliminarily located within the State sites at which radioactive byproducts could be concentrated and stored and which could accommodate an adjacent uranium fuel reprocessing facility; this office is now engaged with the assistance of a contractor in locating within the State one or more port facilities capable of handling the fueling and servicing of atomic propelled vessels and the shipping of used uranium fuel; and, assisted by a con-

sultant, this office has commenced its efforts to locate within the State one or more sites at which an atomic test reactor could be constructed and operated.

3. *Objectives of the program or programs as defined by statute and administrative interpretation.*—The State legislature declared and found in section 451 of the State atomic energy law that:

1. The development and use of atomic energy for peaceful purposes is a matter of important concern to the economic growth, and the health and safety of the people, of the state. It is, therefore, declared to be the policy of the state to encourage such development and use within the state as fully as possible, consistent with the health and safety of workers and the public as well as with the powers and responsibilities of the federal government and the government of other states.

2. The development of atomic energy and of the industries producing or utilizing such energy is certain to create new opportunities for affirmative state action in the public interest and to result in new conditions calling for changes in state laws, regulations and procedures. Hence, it is declared to be the further policy of the state—

(a) to initiate continuing studies of the ways in which atomic energy activities may more fruitfully be developed and coordinated, and private atomic energy enterprises more effectively encouraged;

(b) to adapt its laws, regulations and procedures from time to time to meet the new opportunities and conditions in ways that will encourage the development of atomic energy and of the private enterprises producing or utilizing such energy, while fully protecting the interest, health and safety of the public; and

(c) to assure the coordination of the studies and actions thus undertaken with other atomic energy development activities, public and private, throughout the United States.

4. *Summary or characterization of rules, policy declarations, or directives issued for the guidance of the affected industry.*—Although this office has not issued rules or directives, section 455.3 of the State tomic energy law provides in effect that the relevant rules, regulations, and ordinances issued or promulgated by other governmental bodies within the State cannot become effective until 90 days after submission thereof to the director of this office, unless the Governor or director waives this 90-day waiting period. Section 455.3 reads:

No rule, regulation or ordinance or amendment thereto or appeal thereof, primarily and directly relating to atomic energy or the use of atomic energy, which any department, division, office, commission or other agency of the state or of any political subdivision thereof may propose to issue or promulgate, shall become effective until ninety days after it has been submitted to the director, unless either the governor or the director by order waives all or any part of such ninety day period.

The above statutory provision has facilitated, and undoubetdly will continue to facilitate, this office's review of proposed radiation protection rules and regulations promulgated by governmental bodies within the State involved in regulating the use of atomic energy.

This office's policy declarations are summarized in "A 12-Point Program" and "Specific Recommendations" to implement the program, set forth in the enclosed report (pp. 19–20) as follows:

A 12-POINT PROGRAM

Based on the foregoing discussions, we propose the following as objectives to be achieved within the State at the earliest practicable date:

1. Expansion of the State's atomic power capacity, including particularly the construction at the earliest practicable date of either an economically competitive full-scale atomic powerplant or a prototype leading directly toward the construction of an economically competitive full-scale plant.

We propose this because we believe that there is no single event that would do more to establish the peaceful atomic industry on a permanent, flourishing basis in the State of New York than the achievement of economically competitive atomic power in this area.

2. Construction of a uranium fuel recovery and reprocessing plant.

We propose this because the fuel reprocessing industry is not yet committed to a geographical area and because we believe New York is uniquely well situated from the standpoint of both the potential market and the State's resources to become the site of such an industry.

3. Establishment of a site where radioactive byproduct and waste materials may be stored without hazard to the public health and safety.

We propose this because we believe such a site to be necessary from the standpoint of the health and safety of the people of the State, and also because the existence of such a site would serve to encourage the growth of the atomic industry within the State.

4. Construction of a high-powered nuclear test reactor.

We propose this because no such reactor exists in the northeast, because most of the potential users of such a reactor are located in the northeast, and because such a reactor would tend to stimulate atomic industrial development in the State.

5. Establishment of at least one shipyard as a center for the construction of nuclear ships.

We propose this because nuclear shipbuilding is a large, growing industry, and because New York, although a leading maritime State, is at present not engaged in this type of activity.

6. Establishment of a port facility capable of handling used fuel from nuclear ships and foreign and domestic reactors entering the State by sea.

We propose this both in the interest of the public health and safety and because such a facility would be a necessary adjunct to any fuel reprocessing industry that might be established within the State.

7. Expansion of the State's volume of fuel fabrication work, including particularly the entry of the State's industry into the business of fabricating nuclear fuel for ship propulsion.

We propose this because New York is well situated with regard to the nuclear fuel market, and because the State is at present not engaged, outside of federally owned laboratories, in the fabrication of nuclear fuel for ship propulsion.

8. Construction of a process heat reactor for industrial utilization.

We propose this because demonstration of the feasibility of producing usable industrial heat from atomic energy would stimulate atomic development within the State and at the same time benefit such other of the State's major activities as the chemical and paper industries.

9. Execution of an agreement with the Atomic Energy Commission providing for the assumption by the State of regulatory authority over radioisotopes and such other nuclear materials as may be possible under Federal law.

We propose this because a law authorizing such an agreement was enacted in the last session of Congress, and because we believe that both the public health and safety and the atomic industry will benefit if States play an increasingly larger role in the regulation of atomic activities.

10. Strengthening, on a statewide basis, of the atomic research and training facilities of the State's higher educational system.

We propose this because maintenance of a scientific educational environment of high quality is necessary to the growth of an atomic industry within the State.

11. Expansion of the industrial use of radioactive materials and of research directed toward discovering new productive uses for such materials.

We propose this because we believe that more industries within the State could productively employ radioactive materials than are currently doing so, and because such materials have an enormous potential for industrial utilization that has not as yet been realized, to the detriment of the economics of the entire atomic industry.

12. Establishment of training programs and identification of personnel and equipment useful in handling accidents believed to involve radioactive materials.

We propose this in the interest of the public health and safety and also because we believe that the hazards of radioactivity may not be so great in themselves as the possibility that they may be misinterpreted and consequently not handled in the most effective possible way.

SPECIFIC RECOMMENDATIONS

Meaningful progress toward some of the above objectives can be made by the office of atomic development and other State agencies as part of their regular program of activities. The other goals, however, are of such magnitude or nature that they can be achieved only by means of special action. With this fact in mind, the following recommendations for specific implementing action in 1960 are respectfully submitted:

1. That the State government contribute to the costs of research and development leading directly and specifically toward the construction within the State of (*a*) preferably a full-scale atomic powerplant which will give reasonable promise of being economically competitive, except for research and development costs, on an averaged annual basis over its useful life with conventionally fueled powerplants in the same geographical area, or (*b*) a prototype atomic powerplant which would lead directly toward the construction of an economically competitive full-scale atomic powerplant of the same type. The powerplant, whether full-scale or prototype, would be of a type selected by its sponsoring utility or utilities. It would be either part of an anticipated new national program, or deemed by the State and sponsoring utility or utilities to be more suitable for New York State than any project in the national program, or deemed by the State and sponsoring utilities to be suitable for New York State in the absence of a national program. The costs contributed by the State would be at least matched by the sponsoring utility or utilities, some of which might be located outside of the State, and not paid until completion of the plant. When completed, the plant would be available to the higher educational institutions in the State to the maximum extent possible for training purposes, and all information produced by research and development work carried on with State funds would be readily available to the people, including the industries and educational institutions, in the State.

2. That the State government locate within the State one or more sites at which radioactive byproducts and wastes produced by industrial, medical, agricultural, and scientific organizations could be concentrated and stored in a manner consistent with the public health and safety. It would be understood that such a site, if found, would be acquired by either the Federal or State Government and that it would be located in as close proximity as possible to a suitable site for a uranium fuel recovery and reprocessing plant.

3. That the State government locate within the State one or more sites at which a high-powered nuclear materials test reactor could be constructed and operated in a manner consistent with the public health and safety. It would be understood that, if the construction of such a project were not undertaken by private industry, the State would acquire such a site and make it available to the Federal Government provided that the cost of the site is not excessive, that the Federal Government agrees to utilize the site for the purpose intended, and that the Federal Government fails to acquire the site itself.

4. That the State government locate within the State one or more port facilities capable of handling the fueling and servicing of atomic-propelled vessels and the shipping of used uranium fuel in a manner consistent with the public health and safety.

5. That the State in the next few years enter into one or more arrangements with educational institutions under which the State would provide a total of up to $1 million of assistance not otherwise available on no more than a matching basis in the establishment of one or more nuclear facilities, designed primarily for training purposes, in an area outside of the area served for training purposes by the Western New York Nuclear Research Center in Buffalo or the Brookhaven National Laboratory at Upton, Long Island.

6. That the Governor be expressly authorized by statute to enter into an agreement or agreements on behalf of the State with the Atomic Energy Commission whereby the Federal Government will discontinue, and the State would assume, regulatory authority with respect to atomic energy activities relating to byproduct materials, source materials, and special nuclear materials in quantities not sufficient to form a critical mass within the State now or hereafter regulated by the Federal Government.

7. That the State department of health be expressly authorized by statute to license the use of atomic energy materials covered by any agreement entered into between the Governor of the State and the Atomic Energy Commission.

8. That the office of atomic development be expressly authorized by statute to prepare, maintain currently, and distribute within the State for use in the event of an accident, fire, or disaster believed to involve radioactive materials, a roster of qualified radiation experts and a list of the type and location of useful instruments and other specialized equipment within the State, and to cooperate with the Federal Government and State civil defense commission in establishing training programs relating to handling such accidents, fires, or disasters.

5. *Wherein this office's program impinges upon, meshes with, or is limited by the programs of other agencies in the energy field.*—Your attention in this regard is invited particularly to section 454 of the State atomic energy law, as amended, setting forth this office's general functions, powers, and duties.

As to regulation, this office does not itself directly perform regulatory functions. However, in coordinating the atomic energy regulatory activities of other governmental bodies within the State, this office's program meshes with theirs.

As to promotion, this office has primary responsibility for encouraging the development and use of atomic energy for peaceful purposes within the State as fully as possible, consistent with the health and safety of workers and the public as well as with the powers and responsibilities of the Federal Government and the governments of other States. In discharging that responsibility, this office where appropriate avails itself of the services of the State department of commerce, and confers with all governmental bodies with regulatory responsibility over the activities to be promoted, or with a particular competence in the field.

Of course, all regulatory and promotional programs within the State to some extent must mesh with, and are limited by, that of the Federal Government, and particularly of the U.S. Atomic Energy Commission.

6. *The extent of existing coordination or evidence of any unresolved conflicts, if any.*—Section 458 of the State atomic law reads:

Coordinating Council: The governor shall designate a coordinating council, under the chairmanship of the director, to advise, assist and make recommendations to the director with respect to coordination of the atomic energy activities of the departments, divisions, offices, commissions and other agencies of the state and the political subdivisions of the state. The coordinating council shall consist of such representatives of state departments and agencies importantly concerned with atomic energy and such other persons as the governor may from time to time designate.

Pursuant to the above statutory provision, the Governor in 1959 designated to the coordinating council six members: The State commissioners of commerce, education, and health, the State industrial commissioner, the chairman of the State public service commission, and the New York City Commissioner of Health. The director of this office chairs the council.

Section 459 of the State atomic energy law reads in part:

Advisory Committee: 1. There shall be within the office a general advisory committee consisting of not more than fifteen members appointed by the governor who shall broadly reflect the varied interests in and aspects of atomic energy within the state, one of whom shall be designated as chairman by the governor and who shall serve as chairman at the pleasure of the governor. The advisory committee shall meet from time to time at the call of the chairman or the director, shall advise the director on atomic energy matters and, if so requested by the director, may make particular atomic energy studies.

Pursuant to the above statutory provision, the Governor in 1959 appointed to the general advisory committee 15 members: representatives of industry, education, science, medicine, and labor within the State.

All members of the coordinating council are representatives of governmental bodies, and all members of the general advisory committee are representatives of nongovernmental bodies. A high degree of coordination of all atomic energy activities within the State is achieved through the council and committee. It does not appear that any unresolved jurisdictional conflicts exist among the departments within the State, or between those departments and the Federal Government.

7. *Comments upon what seem to be the more challenging or difficult issues or obstacles involved in administration of your program.*

8. *Recommendations for improving through research, by new or improved regulatory programs, or otherwise, the role of the Federal Government in assuring the energy resources necessary for "maximum production, employment, and purchasing power" called for under the Employment Act of 1946.*

With regard to points 7 and 8 above, we would prefer to submit any comments and recommendations we may have at a later date. We are submitting information on the first six points in this outline because we appreciate your desire to maintain the schedule described in your initial letter to us. However, we would appreciate having additional time to respond to the final two points in the thoughtful manner they deserve.

LAWS OF NEW YORK.—By Authority

CHAPTER 41

AN ACT to amend the executive law, in relation to the creation of an office of atomic development within the executive department, and making an appropriation for such office and its expenses

Became a law March 9, 1959, with the approval of the Governor. Passed on message of necessity pursuant to article VII, section 5 of the constitution by a majority vote, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The executive law is hereby amended by inserting therein a new article, to be article nineteen-d, to read as follows:

ARTICLE 19-D

ATOMIC ENERGY LAW

§ 450. Short title. This article shall be known, and may be cited, as the "state atomic energy law."

§ 451. Legislative findings and declaration of policy. The legislature hereby finds and declares that:

1. The development and use of atomic energy for peaceful purposes is a matter of important concern to the economic growth, and the health and safety of the people, of the state. It is, therefore, declared to be the policy of the state to encourage such development and use within the state as fully as possible, consistent with the health and safety of workers and the public as well as with the powers and responsibilities of the federal government and the governments of other states.

2. The development of atomic energy and of the industries producing or utilizing such energy is certain to create new opportunities for affirmative state action in the public interest and to result in new conditions calling for changes in state laws, regulations and procedures. Hence, it is declared to be the further policy of the state

EXPLANATION — Matter in *italics* is new; matter in brackets [ ] is old law to be omitted.

(a) to initiate continuing studies of the ways in which atomic energy activities may more fruitfully be developed and coordinated, and private atomic energy enterprises more effectively encouraged;

(b) to adapt its laws, regulations and procedures from time to time to meet the new opportunities and conditions in ways that will encourage the development of atomic energy and of the private enterprises producing or utilizing such energy, while fully protecting the interest, health and safety of the public; and

(c) to assure the coordination of the studies and actions thus undertaken with other atomic energy development activities, public and private, throughout the United States.

§ 452. Definitions. When used in this article:

1. The term "atomic energy" means all forms of energy released in the course of nuclear fission or nuclear fusion or other nuclear transformation.

2. The term "director" means the director of the office of atomic development.

3. The term "office" means the office of atomic development.

4. The term "person" means any natural person, firm, association, public or private corporation, organization, partnership, trust, estate, or joint stock company, or any political subdivision of the state, or any officer or agent thereof.

§ 453. Office of atomic development; director; employees. There is hereby created within the executive department an office of atomic development. The head of such office shall be a director, who shall be appointed by the governor, by and with the advice and consent of the senate, and shall hold office during the pleasure of the governor. He shall receive an annual salary to be fixed by the governor within the amount available therefor by appropriation. He shall also be entitled to receive reimbursement for expenses actually and necessarily incurred by him in the performance of his duties. The director may appoint such officers, employees, agents, consultants and special committees as he may deem necessary, prescribe their duties, fix their compensation and provide for reimbursement of their expenses within the amounts available therefor by appropriation.

§ 454. General functions, powers and duties of office. The office of atomic development, by and through the director or his duly authorized officer or employee, shall, subject to the supervision and direction of the governor, have the following functions, powers and duties:

1. To advise the governor and the legislature with regard to the status of atomic energy research, development, education and regulation, and to make recommendations to the governor and the legislature designed to assure increasing progress in this field within the state.

2. To advise and assist the governor and the legislature in developing and promoting a state policy for atomic energy research, development, education and regulation.

3. To coordinate the atomic energy activities of the departments, agencies, offices, commissions and other agencies of the state and the political subdivisions of the state.

4. To cooperate with business enterprise and other persons concerned with atomic energy, the federal government and the governments of other states, and to correlate the atomic energy activities of the state and its political subdivisions with the atomic energy activities of the foregoing.

5. To sponsor or conduct studies, collect and disseminate information and issue periodic reports with regard to atomic energy research, development, education and regulation and proposals for further progress in the field of atomic energy.

6. To accept, without regard to the limitations of section eleven of the state finance law relating to unconditional gifts but with the concurrence of the director of the budget, and to administer loans, grants, or other contributions from the federal government or other sources, public or private, for carrying out the policies or purposes of this article.

7. To foster and support research and education relating to atomic energy through contracts or other appropriate means of assistance, including acquisition of land and construction of facilities, on such terms and conditions as the director may deem necessary or appropriate in the public interest and within the amounts available therefor by appropriation.

8. To keep the public informed with respect to atomic energy development within the state and the activities of the state and its political subdivisions relating thereto.

9. To do all things necessary or convenient to carry out the functions, powers and duties set forth in this article.

§ 455. Assistance of other departments, agencies and political subdivisions; review of regulations. 1. All departments, divisions, offices, commissions and other agencies of the state and all political subdivisions thereof are directed to keep the director fully and currently informed as to their activities relating to atomic energy or ionizing radiation.

2. The director may request from any department, division, office, commission or other agency of the state or any political subdivision thereof, and the same are authorized to provide, such assistance, services and data as may be required by the office in carrying out the purposes of this article.

3. No rule, regulation or ordinance or amendment thereto or repeal thereof, primarily and directly relating to atomic energy or the use of atomic energy, which any department, division, office, commission or other agency of the state or of any political subdivision thereof may propose to issue or promulgate, shall become effective until ninety days after it has been submitted to the director, unless either the governor or the director by order waives all or any part of such ninety day period.

§ 456. Contracts for atomic energy facilities. In making contracts or providing other appropriate assistance to foster and support atomic energy research or education, the director shall require that any state funds provided through the office for the acquisition of land or the construction of facilities affixed thereto be matched by funds or other contributions from other sources of at least equal amount or value, and that any such land and facilities be available

for research and training, for such period of time and on such terms as may be approved by the director, to the departments, divisions, offices, commissions and other agencies of the state and of the political subdivisions thereof, to educational and non-profit institutions in the state and to other persons, consistent with the purposes of this law.

§ 457. Atomic energy special fund. 1. There is hereby established in the custody of the state comptroller a special fund, to be known as the "atomic energy special fund."

2. All moneys received from grants or other contributions accepted pursuant to subdivision six of section four hundred fifty-four of this article shall be deposited directly in the atomic energy special fund.

3. The moneys of the atomic energy special fund, subject to the terms and conditions of such grants or contributions and to segregation by the director of the budget, shall be available for payment of any and all costs and expenditures, including contracts and grants under section four hundred fifty-six of this article, required in carrying out the purposes of this article, and costs and expenditures incidental and appurtenant thereto. All payments from such fund shall be made on the audit and warrant of the state comptroller on vouchers approved by the director.

§ 458. Coordinating council. The governor shall designate a coordinating council, under the chairmanship of the director, to advise, assist and make recommendations to the director with respect to coordination of the atomic energy activities of the departments, divisions, offices, commissions and other agencies of the state and the political subdivisions of the state. The coordinating council shall consist of such representatives of state departments and agencies importantly concerned with atomic energy and such other persons as the governor may from time to time designate.

§ 459. Advisory committee. 1. There shall be within the office a general advisory committee consisting of not more than fifteen members appointed by the governor who shall broadly reflect the varied interests in and aspects of atomic energy within the state, one of whom shall be designated as chairman by the governor and who shall serve as chairman at the pleasure of the governor. The advisory committee shall meet from time to time at the call of the chairman or the director, shall advise the director on atomic energy matters and, if so requested by the director, may make particular atomic energy studies.

2. The members of the advisory committee shall serve without compensation but shall be allowed their actual and necessary expenses incurred in the performance of their duties hereunder.

3. All members of the advisory committee shall be appointed for terms of three years, such terms to commence on April first and expire on March thirty-first; provided, however, that of the members first appointed one-third shall be appointed for one-year terms expiring on March thirty-first, nineteen hundred sixty, and one-third shall be appointed for two-year terms expiring on March thirty-first, nineteen hundred sixty-one. Any member chosen to fill a vacancy created otherwise than by expiration of term shall be

appointed for the unexpired term of the member whom he is to succeed.

§ 460. No disqualification. No member of the coordinating council or the advisory committee shall be disqualified from holding any other public office or employment, nor shall he forfeit any such office or employment by reason of his appointment hereunder, notwithstanding the provisions of any general, special or local law, ordinance or city charter.

§ 2. Sections four hundred fifty, four hundred fifty-one, four hundred fifty-two and four hundred fifty-three of such law are hereby renumbered sections five hundred fifty, five hundred fifty-one, five hundred fifty-two and five hundred fifty-three, respectively.

§ 3. The sum of ten thousand dollars ($10,000), or so much thereof as may be necessary, is hereby appropriated out of any moneys in the state treasury in the general fund to the credit of the state purposes fund, not otherwise appropriated, and made immediately available, for the expenses of the office of atomic development, including personal service, maintenance, operation and travel in and outside the state, in carrying out the provisions of article nineteen-d of the executive law as added by this act and for the other purposes of said article nineteen-d, for the balance of the fiscal year of the state ending March thirty-first, nineteen hundred fifty-nine. Such moneys shall be payable on the audit and warrant of the comptroller on vouchers certified or approved in the manner prescribed by law.

§ 4. This act shall take effect immediately.

STATE OF NEW YORK,
Department of State. } *ss:*

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom and of the whole of said original law.

CAROLINE K. SIMON,
Secretary of State

[Excerpt from app. III of the December 1, 1959, report to the Governor by the Office of Atomic Development, Albany, entitled, "An Atomic Development Plan for the State of New York." Available in subcommittee files]

ROLE OF THE STATES PRIOR TO 1954

Prior to 1954, State governments were almost completely inactive in atomic energy, except for some State universities which performed work under contract to the AEC or used radioisotopes in their own laboratories under AEC license.

It is not surprising that State governments were so inactive, considering that their activity, except for taxation, falls generally into one of the following three categories: regulation; ownership-operation; promotion. They could not regulate, own fissionable material or own or operate major facilities producing fissionable material, all of which were owned exclusively by the AEC and not subject to State regulation. Nor could they engage in promotional activities, because no person could engage in major atomic activities except as an AEC contractor.

In the less federally dominated field of utilizing radioactive byproduct materials, ownership of which was not vested exclusively in the AEC, State governments could have been more active than they were. They could, for example, have engaged as AEC licensees in the promotion of the use of radioisotopes in research or development, medical therapy, and industry. Conceivably, they also could have challenged the exclusive right of the Federal Government to regulate byproduct materials, because the intrastate aspects of public health and safety have been traditionally a State, rather than a Federal responsibility.

The States, however, did not do these things, probably partly because they did not possess the necessary knowledge and skilled personnel, and probably partly also because, no matter what they may have attempted to do, they would in any event have been dominated by the overriding authority concentrated in the AEC by virtue of its exclusive right to own and operate all fissionable material and major facilities producing fissionable material.

ROLE OF THE STATES AFTER 1954

With the 1954 change in Federal law and its consequent opening of the field of atomic energy to non-Federal ownership-operation under AEC license, the potential role of the State governments was greatly increased. For example, it became possible for them for the first time to engage in promotional activities—a traditionally highly valued and universally practiced State function—in regard to major atomic facilities. It also became possible for State governments and their political subdivisions themselves to own and operate such facilities, either directly or through universities, utility systems, authorities or some type of public body.

The 1954 change in Federal law also had an important impact on the regulatory activities of State governments and their political subdivisions, particularly in regard to public and industrial health and safety codes, building codes, zoning, public utility operations, conservation, insurance, labor relations, and transportation. Whereas the AEC, the previous exclusive owner of major atomic facilities, was essentially immune from this type of State and local control, the private persons who in 1954 became eligible to own and operate such facilities were traditionally subject to it.

This extremely important regulatory impact of the 1954 change in Federal law was in at least one respect somewhat uncertain. This uncertainty, which stemmed from the continuation of the AEC as a regulatory authority over atomic energy activities, was particularly troublesome in the field of public health and safety. Although this field was historically a vital concern of States and localities, it remained under the Atomic Energy Act of 1954 a principal declared continuing interest of the Federal Government in the control of atomic energy.

In recognition of this uncertainty, one of the first stated purposes of the new 1959 amendment to the act is "to clarify the respective responsibilities under this act of the States and the Commission with respect to the regulation of byproduct, source, and special nuclear materials" in quantities not sufficient to form a critical mass. The amendment accomplishes this by providing a mechanism (agreement between individual States and the AEC) through which exclusive regulatory authority over these materials within a State may be transferred by the Federal Government to the State government. With regard to major atomic energy facilities, however, Federal law specifically precludes the AEC from relinquishing to the States its regulatory authority over public health and safety.

The new amendment also recognizes that States have a valid interest in the health and safety aspects of major atomic facilities, and provides that State representatives may participate in Federal licensing proceedings to the extent that they may "offer evidence, interrogate witnesses, and advise the Commission as to the application without requiring such representatives to take a position for or against the granting of the application." Notwithstanding the amendment, however, there still remains unresolved the constitutional question of whether State or Federal authority would be supreme in this area in the event of a jurisdictional conflict.

STATE GOVERNMENT ACTIVITY TO DATE

Following the 1954 revision in Federal law, the interest and activity of State governments in atomic energy markedly increased. And, as national and international governmental entities that had dealt with the question had done before them, they tended to consider atomic energy as not readily assimilable into an existing governmental structure.

The legislatures of 17 States since 1954 have adopted legislation providing specifically for the creation of some kind of special governmental commission, committee, or official with the functions of advising the Governor about, and coordinating activities with respect to, the regulation and development of atomic energy within the State. Two of these States, California and New York, have full-time officials responsible to the Governor; several other States have full-time staff members responsible to part-time commissions.

The legislatures of 13 other States have specifically authorized by legislation or resolution the creation of a committee or commission, with advisory or study functions, but without coordinating functions.

In 10 additional States, the Governor or some administrative agency or official has appointed a committee or commission with advisory or study functions, but without coordinating functions.

In the regulatory field, seven States have adopted by administrative actions of their departments of health or labor, comprehensive radiation protection codes or regulations. (The applicability of such State regulation to AEC licensed activities, which include all major atomic energy activities, has not been the subject of adjudication. It is clear, however, that State regulation may extend over certain radiation sources which are not covered by the Atomic Energy Act of 1954 and which neither the AEC nor any other Federal agency has regulated. Included in such radiation sources are natural radiation emitting elements such as radium; X-ray and gamma ray machines; and radioisotopes produced in high-energy machines such as particle accelerators.)

One State (Minnesota), acting through its State board of health, has promulgated regulations prohibiting the commencement of construction of a nuclear reactor or facility without the approval of the board of health, and prohibiting the operation of a reactor without such approval. (The applicability of these regulations to AEC licensed activities, about which there is some controversy between the AEC and the State of Minnesota, has not been the subject of adjudication.)

Twenty-four States have provided for registration of radiation sources within the State.

Although there has been considerable interstate cooperation particularly in New England and the South, in atomic energy studies, conferences, and seminars, no interstate compact has been entered into expressly referring to atomic energy. However, the Southern Regional Advisory Council on Nuclear Energy has drafted and forwarded a draft Southern Interstate Nuclear Compact to its 16 member States (Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia). This compact provides for interstate cooperation for promotion and development, but not the regulation, of atomic energy.

The current status of significant State administration in the field of atomic energy and radiation control is summarized below. Except where otherwise indicated, the bodies referred to are appointed by and responsible directly to the Governor.

Alabama.—Nonstatutory advisory committee under State planning and industrial board to examine the State's needs in the nuclear field.

Alaska.—Statutory part-time coordinator. Registration of radiation sources.

Arizona.—No significant action reported to date.

Arkansas.—Statutory part-time coordinator, and nonstatutory nuclear energy advisory committee. Registration of radiation sources.

California.—Statutory full-time coordinator, plus statutory atomic energy advisory council and the departmental coordinating committee. Radiation protection code applicable to workers. Registration of radiation sources.

Colorado.—Nonstatutory radiation protection advisory committee under State department of health. Registration of radiation sources.

Connecticut.—Statutory part-time coordinator, plus nonstatutory atomic energy advisory committee. Comprehensive radiation code. Registration of radiation sources.

Delaware.—Nonstatutory atomic-energy-in-industry advisory committee. Registration of radiation sources.

Florida.—Statutory part-time coordinating commission employing full-time executive director.

Georgia.—Nuclear energy advisory commission established by legislative resolution.

Hawaii.—No significant action reported to date.

Idaho.—No significant action reported to date.

Illinois.—Statutory atomic energy study commission, plus statutory radiation protection advisory council under State department of public health. Registration of radiation sources.

Indiana.—Statutory radiation protection advisory commission under State board of health. Registration of radiation sources.

Iowa.—Nonstatutory advisory committee on general problem of power, including possible uses of atomic power.

Kansas.—Statutory part-time coordinator, plus statutory atomic advisory council and radiation protection advisory council. Registration of radiation sources.

Kentucky.—Statutory part-time coordinating committee, plus statutory full-time director of nuclear information within State department of economic development.

Louisiana.—Nonstatutory atomic energy advisory committee.

Maine.—Statutory part-time coordinator. Registration of radiation sources.

Maryland.—Nonstatutory atomic energy advisory committee.

Massachusetts.—Statutory part-time coordinator, plus statutory atomic energy advisory commission. Comprehensive radiation protection code. Registration of radiation sources.

Minnesota.—Nonstatutory atomic energy advisory committee. Comprehensive radiation protection code, requiring approval of board of health before commencement of construction of nuclear reactor or facility or operation of nuclear reactor. Registration of radiation sources.

Mississippi.—Nonstatutory atomic energy advisory committee.

Missouri.—Statutory atomic energy advisory commission.

Montana.—No significant action reported to date.

Nebraska.—Statutory part-time coordinator.

Nevada.—No significant action reported to date.

New Hampshire.—Statutory part-time coordinator.

New Jersey.—Atomic energy advisory commission established by legislative resolution, plus statutory part-time radiation protection commission within State department of health. Registration of radiation sources.

New Mexico.—Statutory radiation protection advisory council within State department of health. Registration of radiation sources.

New York.—Statutory full-time coordinator, plus statutory atomic energy advisory committee and departmental coordinating council. Registration of radiation sources.

North Carolina.—Statutory part-time coordinating committee. Registration of radiation sources.

North Dakota.—Registration of radiation sources.

Ohio.—Statutory full-time coordinator within State department of industrial and economic development, plus statutory radiation protection advisory council under State department of health and statutory atomic energy advisory board. Registration of radiation sources.

Oklahoma.—Statutory radiation protection advisory committee under State board of health.

Oregon.—Statutory radiation protection advisory committee under State board of health.

Pennsylvania.—Comprehensive radiation protection code. Registration of radiation sources.

Rhode Island.—Statutory part-time coordinating commission.

South Carolina.—Statutory atomic energy advisory committee.

South Dakota.—Registration of radiation sources.

Tennessee.—Statutory part-time coordinator. Registration of radiation sources.

Texas.—Atomic energy study committee established by legislative resolution. Comprehensive radiation protection code. Registration of radiation sources.

Utah.—No significant action reported to date.

Vermont.—No significant action reported to date.

Virginia.—Atomic energy advisory council established by legislative resolution.

Washington.—Statutory full-time coordinator, plus statutory atomic energy advisory council.

West Virginia.—No significant action reported to date.

Wisconsin.—Nonstatutory atomic energy advisory committee.

Wyoming.—Registration of radiation sources.

ACTIVITIES OF NEW YORK STATE TO DATE

The Government of the State of New York first became specifically interested in atomic energy in 1955 when both the State departments of health (which regulates public and medical health matters outside of the city of New York) and of labor (which regulates industrial health and safety matters throughout the State) adopted radiation safety codes.

Also in 1955 the Governor established by executive action a council on the use of nuclear materials, consisting of the State commissioners of commerce and health, the State industrial commissioner (who heads the State labor department), and a State public service commissioner, and an executive secretary, with the commerce commissioner as chairman. The functions of the council, as described in the statement of its establishment, were "to coordinate safety activities related to atomic energy in New York State, to promote the use of atomic energy in New York State by advising industry on the use of new technological tools for the control of atomic radiation, [and] to coordinate liaison relationships with the Atomic Energy Commission."

On August 7, 1956, the Governor, also by executive action, created an atomic energy advisory committee, consisting of 21 members from science, industry, labor, education, and the Federal Government. The functions of the committee, as described in the announcement of its establishment, were to "assist the Governor and his council on the uses of nuclear materials in expanding industrial applications of atomic energy and maintaining the health and safety of workers in plants using nuclear materials," and also to produce "specific recommendations for * * * necessary legislation."

This advisory committee recommended legislation which was proposed to the legislature by the Governor in 1958 but which failed to pass. The legislature instead, in 1958, passed a bill granting less authority to the executive department, which was vetoed.

Also in 1958, when the Health Department of the City of New York adopted a radiation safety code, each principal State regulatory agency within the State was provided such a code.

The first atomic energy law to be adopted by New York State was proposed to the legislature by the Governor in early 1959, was passed in February, and was signed into law on March 9, 1959. This law in its grant of authority to a State atomic energy agency goes well beyond anything previously proposed in New York State by either the Governor or the legislature, and beyond any law adopted to date by any other State. In essence, the New York State atomic energy law of 1959 provides for the following:

1. That there be established within the executive department of the State government an office of atomic development to be headed by a director responsible to the Governor and appointed by him with the advice and consent of the State senate.

2. That the office of atomic development have the authority to advise and assist the Governor and the legislature on atomic energy research, development, educational, and regulatory matters; to coordinate the developmental and regu-

latory activities of the agencies of the State and its political subdivisions, and to cooperate with private industry, the Federal Government and the governments of other States, including the correlation of State atomic energy activities with the similar activities of the foregoing.

3. That the office of atomic development have the authority to sponsor and conduct studies and disseminate information on atomic energy matters, and otherwise to foster and support research and education through contracts and other means of assistance, including the acquisition of land and the construction of facilities, provided that in these latter two instances all State funds be matched by funds from other sources.

4. That no rule or regulation or amendment thereto, primarily and directly related to atomic energy, that any agency of the State or its political subdivisions might propose to issue can take effect until 90 days after it has been submitted to the director of the office of atomic development, unless this waiting period is waived by either the Governor or the director.

5. That there be established an atomic energy coordinating council to consist of the director of the office of atomic development as chairman and such other persons, including primarily representatives of State departments and agencies, as the Governor might appoint.

6. That there be established a primarily nongovernmental general advisory committee on atomic energy, to be appointed by the Governor, which would "broadly reflect the varied interests in and aspects of atomic energy within the State," and which would advise the director of the office of atomic development on all of the atomic energy matters with which he is concerned.

To provide for its operation during its first year, the office of atomic development had appropriated to it the sum of $100,000. It also had appropriated to it the sum of $1 million for use on a matching basis in establishing, under contract with the University of Buffalo, a western New York nuclear research center in Buffalo.

In implementation of the New York State atomic energy law, the office of atomic development, the coordinating council and the general advisory committee have all been established and are now functioning. The contract with the University of Buffalo has also been negotiated and signed and work on the nuclear research center provided by it is well underway.

POWER AUTHORITY OF THE STATE OF NEW YORK

NOVEMBER 9, 1960.

The power authority is an instrumentality of the State organized to develop the hydroelectric potential of the St. Lawrence and Niagara Rivers in New York State, to construct power projects to utilize such potential and to market the electric power produced. It consists of five trustees appointed for 5-year terms by the Governor. The chairman is Robert Moses.

In cooperation with the Hydro Electric Power Commission of Ontario the authority has already built the United States half of a 1,880,000-kilowatt power project in the International Rapids section of the St. Lawrence River and is now engaged in the construction of a 2,190,000-kilowatt project on the Niagara River. The first power from the Niagara projcet will be produced February 10, 1961.

The St. Lawrence project is the first large hydroelectric development in the International Rapids section of the St. Lawrence River.

The authority's Niagara project will replace the Adams and Schoellkopf plants of Niagara Mohawk Power Corp., built in 1890 and 1918. These old plants had a total capacity of 465,000 kilowatts, which was reduced to 170,000 kilowatts by a rock slide which destroyed a large part of the Schoellkopf plant in 1956. On completion of the authority's Niagara project, Niagara Mohawk will surrender the Federal Power Commission license under which it operates these plants which would otherwise continue in effect until 1971.

The cost of the United States half of the St. Lawrence project and the Niagara project will be approximately $1 billion. Funds to construct them are obtained through the sale of revenue bonds. The authority has no state or governmental credit of any kind and no power to raise money by levying taxes.

The authority was created by chapter 772 of the New York Laws of 1931, now title I, article 5 of the New York Public Authorities Law (Power Authority Act). As originally enacted the Power Authority Act directed the authority to develop the International Rapids section of the St. Lawrence River. In 1949 the act was amended to provide also for the development of the Niagara River (ch. 612, Laws of 1949). The act provides that the authority's project shall aid and improve commerce and navigation in the St. Lawrence and Niagara Rivers and that the power produced shall be considered primarily for the benefit of the people of the State as a whole and particularly for domestic and rural consumers to whom it can economically be made available. The act also provides for sales to industry in order to make low rates to domestic and rural consumers possible. As shown in the enclosed brochure entitled "Power Marketing" [Available in subcommittee files] such sales also benefit the people of the State as a whole by creating new jobs and maintaining existing employment. (While the predictions contained in this brochure have been affected

by the 1958–59 slump in the aluminum industry, the general conclusions stated have turned out to be correct).

100,000 kilowatts of St. Lawrence power was sold to the State of Vermont. The remainder of the power from both projects will be sold initially in the economic market area in New York State which the authority has determined to be the area within approximately 150 miles of either project.

Public Law 85–159 under which the Niagara project was licensed by the Federal Power Commission provides that 180,000 kilowatts of Niagara power must be made available in neighboring States within economic transmission distance of the project. Proposed contracts with utility companies in New York State provide that Niagara power may be withdrawn from them for the purpose.

About 400,000 kilowatts of St. Lawrence power was sold to industry. At Niagara about 700,000 kilowatts (including the 445,000 kilowatts specifically provided for in Public Law 85–159) is expected to be sold to utility companies for the particular benefit of industry; 250,000 kilowatts of this is power allocated by authority to industries near the project for use in the expansion of their operations.

Initially about 200,000 kilowatts of power from the two projects will be sold to municipal systems and rural electric cooperatives. Power may be withdrawn from utility companies to meet the foreseeable future needs of these municipalities and cooperatives for 25 years. Savings already realized by municipalities and cooperatives from the sale of 75,000 kilowatts of St. Lawrence power amount to about $800,000 of which about $570,000 has been passed on to consumers through rate reductions and the remainder used to improve facilities and establish reserves.

The remaining power from both projects will be sold to utility companies for the benefit of their rural and domestic customers to whom they will pass on any savings resulting from the purchase. To date two companies purchasing 135,000 kilowatts of St. Lawrence power have passed on to their consumers more than $3,500,000 in savings.

Power is sold without profit at rates sufficient to retire in accordance with their terms the bonds issued to construct the projects and to provide for operating and maintenance expenses and necessary reserves. The present rate for firm power, which is expected to be reduced as bonds are paid off, is $1 per kilowatt plus 2.67 mills per kilowatt-hour (i.e., a total of a little over 4 mills per kilowatt-hour at very high load factors).

The rates, services, and practices relating to the generation, transmission, distribution, and sale of power generated by the authority's projects are not subject to the New York public service law nor to the jurisdiction of the New York Public Service Commission. The Power Authority Act provides that these matters shall be regulated and determined by contracts for the sale of power entered into by the authority and its customers. However, since the utility companies which are customers of the authority obtain only part of their requirements from the authority they remain subject to the jurisdiction of the commission. The rates at which they sell power—from which the savings passed on to their customers are deducted—are approved by the public service commission.

Since both the St. Lawrence and Niagara Rivers are navigable waters and boundary streams, hydroelectric projects located on them must be licensed by the Federal Power Commission under the Federal Power Act. The Power Authority Act provides specifically that authority may apply for licenses under the Federal Power Commission and accept the terms and conditions of such licenses. The Federal Power Commission issued a license for the St. Lawrence project in 1953 (project 2000) and for the Niagara project in 1958 (project 2216). [Orders available in subcommittee files.]

The Commission was specifically directed to issue a license to the authority for the Niagara project by Public Law 85–159 (act of Aug. 21, 1957). Public Law 85–159 provided that conditions be included in the authority's Niagara license requiring among other things that half the output of the project be marketed primarily for the benefit of domestic and rural consumers, that in the sale of such power preference be given to public bodies and nonprofit cooperatives, that 20 percent of such power be made available in neighboring States within economic transmission distance, and that 445,000 kilowatts of the output be sold to Niagara Mohawk Power Corp. in return for that company's surrender of its Niagara license (project 16) and its agreement to waive compensation for riparian rights or other rights related to the use or diversion of the Niagara River.

Regulation of boundary waters between the United States and Canada including the St. Lawrence and Niagara is governed by the 1909 Boundary Waters Treaty between the United States and Great Britain and by the 1950 treaty between the United States and Canada concerning uses of the Niagara River. In the case of the St. Lawrence the International Joint Commission established by the 1909 treaty (and the Board of Control created by that Commission) regulate the amount of water which can be released at the power dam and thus control flows in the river and levels of Lake Ontario. As provided in the treaty such regulation is carried on primarily for the benefit of navigation and shoreline property owners. Some of the problems which have resulted from the prerogatives of the Federal Power Commission and the International Joint Commission are discussed in the enclosed brochure entitled "Water Flow Regulation."

In the case of Niagara the 1950 treaty specifically provides that all water except that needed for navigation and sanitary purposes and stated amounts required to flow over the falls for scenic purposes may be used for power. It also provides for the appointment of a representative by each country to see that the treaty is complied with.

In response to your request for recommendations we suggest that the procedures of the Federal Power Commission should be simplified wherever possible. It has been our experience—undoubtedly shared by other licensees—that the delay in obtaining licenses from the Federal Power Commission under present procedures not only postpones the availability of badly needed power but increases substantially the cost of projects and of the power which they produce.

STATE OF NORTH DAKOTA OIL AND GAS DIVISION STATE INDUSTRIAL COMMISSION

DEAR REPRESENTATIVE PATMAN: I have your letter of June 8, in which you mention the various items you would like to have covered by agencies in activities affecting energy resources and energy technology. I am sending herewith a copy of our general rules and regulations for the conservation of crude oil and natural gas, which have been authorized by the Industrial Commission of North Dakota. Also included in this small booklet is a copy of the law under which we operate. In addition, I am sending you a copy of our Bulletin No. 33 entitled, "Conservation of Oil and Gas in North Dakota, A Legal History, 1948–58," which was written by Dean Robert E. Sullivan of the School of Law at Montana State University. I am also sending standard operating procedure bulletins, which accompany our general rules and regulations, for further delineation of some of our particular acts. In addition, I could say that we have published many field orders which supersede in those immediate areas the general rules and regulations, but I would assume that your committee would not be interested in this much detail at the present time.

In answering the questions asked in the sheet accompanying your letter, I will take them in the order in which they were mentioned.

The statutory basis for our agency's relationship to energy resources and energy technology deals primarily and solely with the conservation and control of oil and gas resources. The act states that it is declared to be in the public interest to foster, to encourage, and promote the development, production, and utilization of natural resources of oil and gas in the State in such a manner as will prevent waste; and to authorize and to provide for the operation and the development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas be had, and that correlative rights of all owners be fully protected. It goes on to state that we wish to encourage cycling, recycling, pressure maintenance, secondary recovery projects, and so forth. In any event, to the end that the landowners, the royalty owners, the producers, and the general public realize and enjoy the greatest possible good from these vital natural resources.

As far as a brief survey of the history and development of our oil and gas act in North Dakota is concerned, I am referring you to our Bulletin No. 33, which is enclosed.

The objectives of our program, I believe, are defined pretty well in the declaration of policy which was set forth in our North Dakota Revised Code, section 38–0801, which I have quoted extensively under paragraph 3.

As to a summary or characterization of rules, policies, declarations, or directives, these rather largely are technical rules and regulations

dealing with the operation of oil and gas wells, for the prevention of waste and the protection of correlative rights.

In my opinion, our program does not impinge upon, mesh with, or is limited by the programs of any other agencies in the energy field in the State of North Dakota. As far as I can see, we have no unresolved conflicts, and we attempt to coordinate wherever such coordination is necessary.

As far as our most challenging or difficult issues or obstacles involved in the administration of our program, I would say that at the present time our main difficulty, that requires more work, is the problem of market. This is something which we cannot resolve, but we are making every effort that we can to see that we get our fair share of the market for North Dakota crude oil. One of the main problems we have as far as that is concerned is the competition we have with Canadian oil imports, which are not restricted and come into our area in large amounts.

I do not have, at this time, any recommendations for improving through research, by new or improved regulatory programs, or otherwise, the role of the Federal Government. As a matter of fact, I would be most happy if the Federal Government stayed entirely out of the regulation of oil and gas. It seems to me that this is a problem which is entirely within the realms of the State to set forth in the constitution, and I see no need now, nor do I visualize such a need in the future, whereby the Federal Government must intervene. In my opinion, there has been too much Federal regulation already in this and other fields, and, therefore, I would not want to see any more Federal control than we now have. In fact, I would like to see less. I refer specifically in the latter statement to the role of the Federal Power Commission in the natural gas regulation, which I think is most ill advised and difficult of administration from the Federal standpoint. Furthermore, I see real danger here of conflict between Federal and State authorities where both oil and gas occur in the same reservoir. Sooner or later, we are bound to come into conflict at this point.

If I can be of any further service to you, please do not hesitate to call upon me.

Very truly yours,

WILSON M. LAIRD, *State Geologist.*

Hon. WRIGHT PATMAN,
Chairman, Subcommittee on Automation and Energy Resources,
U.S. House of Representatives, Joint Economic Committee,
Washington, D.C.

General Rules and Regulations

for the

Conservation of Crude Oil and Natural Gas

THE INDUSTRIAL COMMISSION

of

NORTH DAKOTA

ADOPTED DECEMBER 1, 1953

(Revised November 1, 1956)
(Reprinted February 20, 1958)
(Reprinted May 8, 1959)

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BEFORE THE STATE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

CASE NO. 1
ORDER NO. 1

IN THE MATTER OF THE HEARING CALLED BY THE INDUSTRIAL COMMISSION OF THE STATE OF NORTH DAKOTA FOR THE PURPOSE OF CONSIDERING:

MOTION OF THE COMMISSION TO ADOPT RULES AND REGULATIONS FOR THE CONSERVATION OF OIL AND GAS IN THE STATE OF NORTH DAKOTA PURSUANT TO CHAPTER 227 OF THE LAWS PASSED AT THE 33rd SESSION OF THE LEGISLATIVE ASSEMBLY OF THE STATE OF NORTH DAKOTA.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:30 a.m., on November 2, 3, 16, 23 and December 1, 1953, at Bismarck North Dakota, before the Industrial Commission of North Dakota, hereinafter referred to as the "Commission."

Now, on the first day of December 1953, the Commission, a quorum being present, and being fully advised in the premises.

FINDS:

1. That it is in the public interest to foster, to encourage, and to promote the development, production, and utilization of natural resources of oil and gas in the State in such a manner as will prevent waste.

2. That it is in the public interest to provide for the operation and development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas will be had, and that the correlative rights of all owners be fully protected.

3. That it is in the public interest to encourage, and to authorize cycling, re-cycling, pressure maintenance, and secondary recovery operations in order that the greatest possible economic recovery of oil and gas be obtained within the state to the end that the landowners, the royalty owners, the producers, and the general public realize and enjoy the greatest possible good from these vital natural resources.

4. That the Commission has jurisdiction and authority over all persons and property, public and private, necessary to enforce the provisions of Chapter 227 of the 33rd Legislative Assembly of the State of North Dakota.

IT IS THEREFORE ORDERED:

1. That the rules and regulations for the development, production and utilization of material resources of oil and gas in the State of North Dakota as hereinafter set forth be and the same are hereby adopted.

2. That this order adopting said rules and regulations shall be effective on this the first day of December 1953.

THE NORTH DAKOTA
STATE INDUSTRIAL COMMISSION

C. Norman Brunsdale, Governor
Math Dahl, Commission of Agriculture & Labor
E. T. Christianson, Attorney General

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BEFORE THE STATE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

CASE NO. 114

ORDER NO. 127

IN THE MATTER OF THE HEARING CALLED BY THE INDUSTRIAL COMMISSION FOR THE STATE OF NORTH DAKOTA FOR THE PURPOSE OF CONSIDERING THE APPLICATIONS OF THE NORTH DAKOTA OIL AND GAS ASSOCIATION AND THE STATE GEOLOGIST FOR CERTAIN CHANGES AND AMENDMENTS, AND THE ADDITION OF A NEW RULE, TO EXISTING "RULES AND REGULATIONS FOR THE CONSERVATION OF CRUDE OIL AND NATURAL GAS" IN THE STATE OF NORTH DAKOTA DAKOTA AS ADOPTED BY THE COMMISSION ON DECEMBER 1, 1953.

ORDER OF THE COMMISSION

BY THE COMMISSION:

Pursuant to notice, this cause came on for hearing at 9:30 a. m. on September 18th, 1956, at Bismarck, North Dakota, before the State Industrial Commission, hereinafter referred to as the "Commission".

NOW, on this 28th day of September, 1956, the Commission, a quorum being present, having considered the testimony adduced, and the exhibits received, at said hearing, and being fully advised in the premises,

FINDS:

1. That due public notice having been given, as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

2. That experience has shown that certain changes, additions, and amendments to existing "Rules and Regulations for the Conservation of Crude Oil and Natural Gas" in North Dakota, are necessary.

3. That the proposed changes, additions, and amendments, will serve to achieve more completely, the objectives set forth in the findings of the Commission's Order No. 1, dated December 1, 1953.

IT IS THEREFORE ORDERED:

1. That the changes, additions, and amendments, to the "Rules and Regulations for the Conservation of Crude Oil and Natural Gas" in the state of North Dakota, as shown in the appendix to this order, be, and the same are, hereby adopted.

2. That existing rules not specifically changed, altered or amended by this order, shall remain in full force and effect.

3. This order shall be effective at 7:00 a. m. on November 1, 1956 and shall remain in full force and effect until further order of the Commission.

DONE at Bismarck, North Dakota, this 28th day of September, 1956.

THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION

Norman Brunsdale, Governor
Math Dahl, Commissioner of Agriculture & Labor
Leslie R. Burgum, Attorney General

CHAPTER 38-08
CONTROL OF GAS AND OIL RESOURCES

Section
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~~38-0801~~ DECLARATION OF POLICY.) It is hereby declared to be in the public interest to foster, to encourage, and to promote the development, production, and utilization of natural resources of oil and gas in the state in such a manner as will prevent waste; to authorize and to provide for the operation and development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas be had and that the correlative rights of all owners be fully protected; and to encourage and to authorize cycling, re-cycling, pressure maintenance, and secondary recovery operations in or-

der that the greatest possible economic recovery of oil and gas be obtained within the state to the end that the land owners, the royalty owners, the producers, and the general public realize and enjoy the greatest possible good from these vital natural resources.

Source: NDRC.

38-0802 DEFINITIONS.) As used in this Act, (chapter) unless the context otherwise requires:

1. "Waste" means and includes
   a. Physical waste, as that term is generally understood in the oil and gas industry,
   b. The inefficient, excessive, or improper use of, or the unnecessary dissipation of reservoir energy.
   c. The locating, spacing, drilling, equipping, operating, or producing of any oil or gas well or wells in a manner which causes, or tends to cause, reduction in the quantity of oil or gas ultimately recoverable from a pool under prudent and proper operations, or which causes or tends to cause unnecessary or excessive surface loss or destruction of oil or gas,
   d. The inefficient storing of oil, and
   e. The production of oil or gas in excess of transportation or marketing facilities or in excess of reasonable market demand.
2. "Commission" means the industrial commission.
3. "Person" means and includes any natural person, corporation, association, partnership, receiver, trustee, executor, administrator, guardian, fiduciary, or other representative of any kind, and includes any department, agency, or instrumentality of the state or of any governmental subdivision thereof; the masculine gender, in referring to a person, includes the feminine and the neuter genders.
4. "Oil" means and includes crude petroleum oil and other hydrocarbons regardless of gravity which are produced at the wellhead in liquid form and the liquid hydrocarbons known as distillate or condensate recovered or

extracted from gas, other than gas produced in association with oil and commonly known as casinghead gas.

5. "Gas means and includes all natural gas and all other fluid hydrocarbons not hereinabove defined as oil.
6. "Pool" means an underground reservoir containing a common accumulation of oil or gas or both; each zone of a structure which is completely separated from any other zone in the same structure is a pool, as that term is used in this Act.
7. "Field" means the general area underlaid by one or more pools.
8. "Owner" means the person who has the right to drill into and produce from a pool and to appropriate the oil or gas he produces therefrom either for himself or others or for himself and others.
9. "Producer" means the owner of a well or wells capable of producing oil or gas or both.
10. "Product" means any commodity made from oil or gas and includes refined crude oil, crude tops, topped crude, processed crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, treated crude oil, residuum, gas oil, casinghead gasoline, natural-gas gasoline, kerosene, benzine, wash oil, waste oil, blended gasoline, lubricating oil, blends or mixtures of oil with one or more liquid products or by-products derived from oil or gas, and blends or mixtures of two or more liquid products or by-products derived from oil or gas, whether hereinabove enumerated or not.
11. "Reasonable market demand" means the demand for oil or gas for reasonable current requirements for consumption and use within and without the state, together with such quantities as are reasonably necessary for building up or maintaining reasonable working stocks and reasonable reserves of oil or gas or product.
12. "Illegal oil" means oil which has been produced from

any well within the state in excess of the quantity permitted by any rule, regulation, or order of the commission.

13. "Illegal gas" means gas which has been produced from any well within this state in excess of the quantity permitted by any rule, regulation, or order of the commission.
14. "Illegal product" means any product derived in whole or in part from illegal oil or illegal gas.
15. "Certificate of clearance" means a permit prescribed by the commission for the transportation or the delivery of oil or gas or product and issued or registered in accordance with the rule, regulation, or order requiring such permit.
16. The word "and" includes the word "or" and the use of the word "or" includes the word "and". The use of the plural includes the singular and the use of the singular includes the plural. Source: NDRC.

38-0803 WASTE PROHIBITED.) Waste of oil and gas is prohibited. Source: NDRC.

38-0804 JURISDICTION OF COMMISSION.) The commission has jurisdiction and authority over all persons and property, public and private, necessary to enforce effectively the provisions of this Act. The state geologist shall act as a supervisor charged with the duty of enforcing the regulations and orders of the commission applicable to the crude petroleum oil and natural gas resources of this state and the provisions of this chapter. The commission has authority, and it is its duty, to make such investigations as it deems proper to ~~determine whether waste exists~~ or is imminent or whether other facts exist which justify action by the commission. The commission acting through the office of the state geologist has the authority:

1. To require:
   a. identification of ownership of oil or gas wells, producing leases, tanks, plants, structures, and facilities for the transportation or refining of oil and gas;
   b. the making and filing of all mechanical well logs and the filing of directional surveys if taken, and the filing of reports on well location, drilling and

production, and the filing free of charge of samples and core chips and of complete cores when requested in the office of the state geologist within six months after the completion or abandonment of the well.

c. the drilling, casing, operation, and plugging of wells in such manner as to prevent the escape of oil or of water into oil or gas stratum, the pollution of fresh water supplies by oil, gas, or salt water, and to prevent blow-outs, cavings, seepages, and fires:

d. the furnishing of a reasonable bond with good and sufficient surety, conditioned upon the full compliance with the provisions of Chapter 38-08 of the North Dakota Revised Code of 1943 and amendments thereto, and the rules and regulations of the Industrial Commission of the State of North Dakota prescribed to govern the production of oil and gas on state and private lands within the State of North Dakota.

e. that the production from wells be separated into gaseous and liquid hydrocarbons, and that each be accurately measured by such means and upon such standards as may be prescribed by the commission;

f. the operation of wells with efficient gas-oil and water-oil ratios, and to fix these ratios;

g. certificates of clearance in connection with the transportation or delivery of oil, gas, or any product;

h. metering or other measuring of oil, gas, or product in pipe lines, gathering systems, barge terminals, loading racks, refineries, or other places; and

i. that every person who produces, sells, purchases, acquires, stores, transports, refines, or processes oil or gas in this state shall keep and maintain within this state complete and accurate records of the quantities thereof, which records shall be available for examination by the commission or its agents at all reasonable times, and that every such person file with the commission such reports as it may

prescribe with respect to such oil or gas or the products thereof.

2. To regulate:
   a. the drilling, producing, and plugging of wells,, and all other operations for the production of oil or gas;
   b. the shooting and chemical treatment of wells;
   c. the spacing of wells;
   d. operations to increase ultimate recovery such as cycling of gas, the maintenance of pressure, and the introduction of gas, water, or other substances into producing formations; and
   e. disposal of salt water and oil field wastes.
3. To limit and to allocate the production of oil and gas from any field, pool, or area.
4. To classify wells as oil or gas wells for purposes material to the interpretation or enforcement of this Act.
5. To promulgate and to enforce rules, regulations, and orders to effectuate the purposes and the intent of this Act.

Source: NDRC.

38-0805 DRILLING PERMIT REQUIRED.) It shall be unlawful to commence operations for the drilling of a well for oil or gas without first giving to the state geologist notice of intention to drill, or without first obtaining a permit from the state geologist, under such rules and regulations as may be prescribed by the commission and paying to the commission a fee of twenty-five dollars for each such well.

Source: NDRC.

38-0806 COMMISSION SHALL DETERMINE MARKET DEMAND AND REGULATE THE AMOUNT OF PRODUCTION.) The commission shall determine market demand and regulate the amount of production as follows:

1. The commission shall limit the production of oil and gas to that amount which can be produced without waste, and which does not exceed the reasonable market demand.

2. Whenever the commission limits the total amount of oil or gas which may be produced in the state, the commission shall allocate or distribute the allowable production among the pools therein on a reasonable basis, giving, where reasonable under the circumstances to each pool with small wells of settled production, an allowable production which prevents the general premature abandonment of the wells in the pool.
3. Whenever the commission limits the total amount of oil or gas which may be produced in any pool in this state to an amount less than that amount which the pool could produce if no restriction was imposed, which limitation is imposed either incidental to, or without, a limitation of the total amount of oil or gas produced in the state, the commission shall allocate or distribute the allowable production among the several wells or producing properties in the pool on a reasonable basis, preventing or minimizing reasonable avoidable drainage, so that each property will have the opportunity to produce or to receive its just and equitable share, subject to the reasonable necessities for the prevention of waste.
4. In allocating the market demand for gas as between pools, the commission shall give due regard to the fact that gas produced from oil pools is to be regulated in a manner as will protect the reasonable use of its energy for oil production.
5. The commission shall not be required to determine the reasonable market demand applicable to any single pool, except in relation to all other pools, and in relation to the demand applicable to the state. In allocating allowables to pools, the commission may consider, but shall not be bound by, nominations of purchasers to purchase from particular fields, pools, or portions thereof. The commission shall allocate the allowable for the state in such manner as prevents undue discrimination between fields, pools, or portions

thereof resulting from selective buying or nomination by purchasers.

Source: NDRC.

38-0807 COMMISSION SHALL SET SPACING UNITS.) The commission shall set spacing units as follows:

1. When necessary to prevent waste, to avoid the drilling of unnecessary wells, or to protect correlative rights, the commission shall establish spacing units for a pool. Spacing units when established shall be of uniform size and shape for the entire pool, except that when found to be necessary for any of the purposes above mentioned, the commission is authorized to divide any pool into zones and establish spacing units for each zone, which units may differ in size and shape from those established in any other zone.
2. The size and shape of spacing units are to be such as will result in the efficient and economical development of the pool as a whole.
3. An order establishing spacing units for a pool shall specify the size and shape of each unit and the location of the permitted well thereon in accordance with a reasonably uniform spacing plan. Upon application, if the state geologist finds that a well drilled at the prescribed location would not produce in paying quantities, or that surface conditions would substantially add to the burden or hazard of drilling such well, the state geologist is authorized to enter an order permitting the well to be drilled at a location other than that prescribed by such spacing order; however, the state geologist shall include in the order suitable provisions to prevent the production from the spacing unit of more than its just and equitable share of the oil and gas in the pool. Any such order of the state geologist allowing exceptions to the established spacing pattern may be appealed within a reasonable time to the commission by filing such an appeal with the commission. Upon the filing of such an appeal and

after a due hearing, the commission may affirm or repeal the order of the state geologist.

4. An order establishing units for a pool shall cover all lands determined or believed to be underlaid by such pool, and may be modified by the commission from time to time to include additional areas determined to be underlaid by such pool. When found necessary for the prevention of waste, or to avoid the drilling of unnecessary wells, or to protect correlative rights, an order establishing spacing units in a pool may be modified by the commission to increase the size of spacing units in the pool or any zone thereof, or to permit the drilling of additional wells on a reasonably uniform plan in the pool, or any zone thereof.

Source: NDRC.

38-0808 INTEGRATION OF FRACTIONAL TRACTS)

1. When two or more separately owned tracts are embraced within a spacing unit, or when there are separately owned interests in all or a part of the spacing unit, then the owners and royalty owners thereof may pool their interests for the development and operation of the spacing units. In the absence of voluntary pooling the commission upon the application of any interested person, shall enter an order pooling all interests in the spacing units for the development and operations thereof. Each such pooling order shall be made after notice and hearing, and shall be upon terms and conditions that are just and reasonable, and that afford to the owner of each tract or interest in the spacing unit the opportunity to recover or receive, without unnecessary expense, his just and equitable share. Operations incident to the drilling of a well upon any portion of a spacing unit covered by a pooling order shall be deemed, for all purposes, the conduct of such operations upon each separately owned tract in the drilling unit by the several owners thereof. That portion of the production allocated to each tract included in a spacing unit covered by a pooling order shall,

when produced, be deemed for all purposes to have been produced from such tract by a well drilled thereon.

2. Each such pooling order shall make provision for the drilling and operation of a well on the spacing unit, and for the payment of the reasonable actual cost thereof by the owners of interests in the spacing unit, plus a reasonable charge for supervision. In the event of any dispute as to such costs the commission shall determine the proper costs. If one or more of the owners shall drill and operate, or pay the expenses of drilling and operating the well for the benefit of others then, the owner or owners so drilling or operating shall upon complying with the terms of section eleven, (38-0810) have a lien on the share of production from the spacing unit accruing to the interest of each of the other owners for the payment of his proportionate share of such expenses. All the oil and gas subject to the lien shall be marketed and sold and the proceeds applied in payment of the expenses secured by such lien as provided for in section eleven.

Source: NDRC.

38-0809 VOLUNTARY AGREEMENTS FOR UNIT OPERATION VALID.) An agreement for the unit or cooperative development and operation of a field or pool, in connection with the conduct of re-pressuring or pressure maintenance operations, cycling or re-cycling operations, including the extraction and separation of liquid hydrocarbons from natural gas in connection therewith, or any other method of operation, including water floods, is authorized and may be performed and shall not be held or construed to violate any of the statutes of this state relating to trusts, monopolies, or contracts and combinations in restraint of trade, if the agreement is approved by the commission as being in the public interest, protective of correlative rights, and reasonably necessary to increase ultimate recovery or to prevent waste of oil or gas. Such agreements bind only the persons who execute them, and their heirs, successors, assigns, and legal representatives.

Source: NDRC.

38-0810 DEVELOPMENT AND OPERATING COSTS OF INTEGRATED FRACTIONAL TRACTS.) A person to whom another is indebted for expenses incurred in drilling and operating a well on a drilling unit required to be formed as provided for in section nine, (38-0808) may, in order to secure payment of the amount due, fix a lien upon the interest of the debtor in the production from the drilling unit or the unit area, as the case may be, by filing for record, with the register of deeds of the county where the property involved, or any part thereof, is located, an affidavit setting forth the amount due and the interest of the debtor in such production. The person to whom the amount is payable may, at the expense of the debtor, store all or any part of the production upon which the lien exists until the total amount due, including reasonable storage charges, is paid or the commodity is sold at foreclosure sale and delivery is made to the purchaser. The lien may be foreclosed as provided for with respect to foreclosure of a lien on chattels.

Source: NDRC.

38-0811 RULES COVERING PRACTICE BEFORE COMMISSION.)

1. The commission shall prescribe rules and regulations governing the practice and procedure before the commission.
2. No rule, regulation, or order, or amendment thereof, except in an emergency, shall be made by the commission without a public hearing upon at least ten days notice. The public hearing shall be held at such time and place as may be prescribed by the commission, and any interested person shall be entitled to be heard.
3. When an emergency requiring immediate action is found to exist, the commission is authorized to issue an emergency order without notice or hearing, which shall be effective upon promulgation. No emergency order shall remain effective for more than fifteen days.
4. Any notice required by this Act shall be given at the election of the commission either by personal service or by one publication in a newspaper of general circulation in the state capitol and in a newspaper of general circulation in the county where the land affected,

or some part thereof, is situated. The notice shall issue in the name of the state, shall be signed by the chairman or secretary of the commission, and shall specify the style and number of the proceeding, the time and place of the hearing, and shall briefly state the purpose of the proceeding. Should the commission elect to give notice by personal service, such service may be made by any officer authorized to serve process, or by any agent of the commission, in the same manner as is provided by law for the service of summons in civil actions in the courts of the state. Proof of the service by such agent shall be by the affidavit of the person making personal service.

5. All rules, regulations, and orders issued by the commission shall be in writing, shall be entered in full and indexed in books to be kept by the commission for the purpose, and shall be public records open for inspection at all times during reasonable office hours. A copy of any rule, regulation or order certified by any member of the commission, or its secretary, under its seal, shall be received in evidence in all courts of this state with the same effect as the original.
6. The commission may act upon its own motion, or upon the petition of any interested person. On the filing of a petition concerning any matter within the jurisdiction of the commission, the commission shall promptly fix a date for a hearing thereon, and shall cause notice of the hearing to be given. The hearing shall be held without undue delay after the filing of the petition. The commission shall enter its order within thirty days after the hearing.

Source: NDRC.

38-0812 COMMISSION SHALL HAVE POWER TO SUMMON WITNESSES, ADMINISTER OATHS, AND TO REQUIRE PRODUCTION OF RECORDS.)

1. The commission shall have the power to summon witnesses, to administer oaths, and require the production of records, books, and documents for examination at any hearing or investigation conducted by it. No

person shall be excused from attending and testifying, or from producing books, papers, and records before the commission or a court, or from obedience to the subpoena of the commission or a court, on the ground or for the reason that the testimony or evidence, documentary or otherwise, required of him may tend to incriminate him or subject him to a penalty or forfeiture provided, that nothing herein contained shall be construed as requiring any person to produce any books, papers, or records, or to testify in response to any inquiry not pertinent to some question lawfully before such commission or court for determination. No natural person shall be subjected to criminal prosecution or to any penalty or forfeiture for or on account of any transaction, matter, or thing concerning which, in spite of his objection, he may be required to testify or produce evidence, documentary or otherwise, before the commission or court, or in obedience to its subpoena; provided, that no person testifying shall be exempted from prosecution and punishment for perjury committed in so testifying.

2. In case of failure or refusal on the part of any person to comply with the subpoena issued by the commission, or in case of the refusal of any witness to testify as to any matter regarding which he may be interrogated, any court in the state, upon the application of the commission, may in term time or vacation issue an attachment for such person and compel him to comply with such subpoena, and to attend before the commission and produce such records, books, and documents for examination, and to give his testimony. Such court shall have the power to punish for contempt as in the case of disobedience to a like subpoena issued by the court, or for refusal to testify therein.

Source: NDRC.

38-0813 PERSON ADVERSELY AFFECTED MAY APPLY FOR REHEARING.) Any person adversely affected by any rule regulation or order of the commission may within thirty days after its effective date apply to the commission in writing for a re-

hearing. The application for rehearing shall be acted upon within fifteen days after its filing, and if granted, the rehearing shall be held without undue delay.

Source: NDRC

38-0814 PERSON ADVERSELY AFFECTED MAY APPEAL TO DISTRICT COURT; PROCEDURE OF APPEAL.)

1. Any person adversely affected by an order entered by the commission may appeal from such order to the district court of Burleigh County. Notice of appeal must be filed by such person with the commission within thirty days after the entry of the order complained of by the appellant, or within thirty days, following the order over-ruling the motion for rehearing or sustaining the original order in the event a motion for rehearing has been filed. The notice of appeal must identify the order and the grounds of appeal, and reasonably specify that portion of the record which the appellant desires included in the transcript upon appeal. Immediately upon the filing of the notice of appeal the commission shall certify to the appellant the estimated cost of preparing the transcript of appeal of the proceedings upon which the order complained of was entered. The amount of the estimated cost must be deposited with the commission within ten days after the mailing of the certification of the costs to the appellant. Upon the deposit of the costs the commission shall prepare and certify under its seal the transcript. The transcript shall be delivered to the appellant, or his designated attorney, within sixty days after the filing of the notice of appeal.
2. Within ninety days after the filing of the notice of appeal, the appellant must file in the district court the transcript of the proceedings before the commission, together with a petition for review which states briefly the grounds for the appeal. An appeal shall be perfected by filing the notice of appeal within the specified thirty day period. The appeal may be dismissed by the district court for failure of the appellant to make the required cost deposit or to file the trans-

cript and petition for review within the time specified, unless for good cause shown the time is extended by order of the district court. If the district court deems the transcript insufficient, the court may dismiss the appeal or return the transcript to the appellant for proper additions, and thereafter assess such further costs against the appellant as the court in its discretion deems sufficient.

3. At the time of filing of the notice of appeal, if an application for the suspension of the order is filed the commission shall enter an order fixing the amount of the supersedeas bond. Within ten days after the entry of an order by the commission which fixes the amount of the bond, the appellant must file with the commission a supersedeas bond in the required amount and with proper surety; upon approval of the bond, the commission shall suspend the order complained of until its final disposition upon appeal. The bond shall run in favor of the commission for the use and benefit of any person, who may suffer damage by reason of the suspension of the order in the event the same is affirmed by the district court. If the order of the commission is not superseded, it shall continue in force and effect as if no appeal was pending.
4. The district court shall, insofar as is practicable, give precedence to appeals from orders of the commission. Upon the appeal of such an order the district court shall review the proceedings before the commission as disclosed by the transcript upon appeal, and thereafter enter its judgment affirming or reversing the order appealed. Orders of the commission shall be sustained if the commission has regularly pursued its authority and its findings and conclusions are sustained by the law and by substantial and credible evidence.
5. No court other than the district court, or in the supreme court upon appeal from the final judgment or order entered in the district court, shall have jurisdiction to review the rules, regulations, or orders of the

commission, or to enjoin or otherwise interfere with the commission in the exercise of the authority conferred upon it by this Act.

Source: NDRC.

38-0815 ACQUISITION AND HANDLING ILLEGAL OIL AND GAS PROHIBITED; SEIZURE OF ILLEGAL OIL AND GAS AND SALE THEREOF.)

1. The sale, purchase, acquisition, transportation, refining, processing, or handling of illegal oil, illegal gas, or illegal product is hereby prohibited. However, no penalty by way of fine shall be imposed upon a person who sells, purchases, acquires, transports, refines, processes, or handles illegal oil, illegal gas, or illegal product unless
   a. Such person knows, or is put on notice, of facts indictating that illegal oil, illegal gas, or illegal product is involved, or
   b. Such person fails to obtain a certificate of clearance with respect to such oil, gas, or product where prescribed by order of the commission, or fails to follow any other method prescribed by an order of the commission for the identification of such oil, gas or product.
2. Illegal oil, illegal gas, and illegal product are declared to be contraband and are subject to seizure and sale as herein provided; seizure and sale to be in addition to any and all other remedies and penalties provided in this Act for violations relating to illegal oil, illegal gas, or illegal product. Whenever the commission believes that any oil, gas or product is illegal, the commission acting by the attorney general, shall bring a civil action in rem in the district court of the county where such oil, gas, or product is found, to seize and sell the same, or the commission may include such an action in rem for the seizure and sale of illegal oil, illegal gas, or illegal product in any suit brought for an injuction or penalty involving illegal oil, illegal gas, or illegal product. Any person claiming an interest in oil, gas, or product affected by any such ac-

tion in rem shall have the right to intervene as an interested party in such action.

3. Actions for the seizure and sale of illegal oil, illegal gas, or illegal product shall be strictly in rem, and shall proceed in the name of the state as plaintiff against the illegal oil, illegal gas, or illegal products as defendant. No bond or similar undertaking shall be required of the plaintiff. Upon the filing of the petition for seizure and sale, the attorney general shall issue a summons, with a copy of the complaint attached thereto, which shall be served in the manner provided for service in civil actions, upon any and all persons having or claiming any interest in the illegal oil, illegal gas, or illegal product described in the petition. Service shall be completed by the filing of an affidavit by the person making the service, stating the time and manner of making such service. Any person who fails to appear and answer within the period of thirty days shall be forever barred by the judgment based on such service. The posting of copies of the summons and petition as above provided shall operate to place the State in constructive possession of the oil, gas, or product described in the petition. In addition, if the court, on a properly verified petition, or affidavits, or oral testimony finds that grounds for seizure and for sale exist, the court shall issue an immediate order of seizure, describing the oil, gas, or product to be seized and directing the sheriff of the county to take such oil, gas, or product into his custody, actual or constructive, and to hold the same subject to the further order of the court. The court, in such order of seizure, may direct the sheriff to deliver the oil, gas, or product seized by him under the order to an agent appointed by the court, as the agent of the court; such agent to give bond in an amount and with such surety as the court may direct, conditioned upon his compliance with the orders of the court concerning the custody and disposition of such oil, gas, or product.

4. Any person having an interest in oil, gas, or product described in an order of seizure and contesting the right of the state to the seizure and sale thereof may, prior to the sale thereof as herein provided, obtain the release thereof, upon furnishing bond to the sheriff approved by the court, in an amount equal to one hundred fifty per cent of the market value of the oil, gas, or product to be released, and conditioned as the court may direct upon redelivery to the sheriff of such product released or upon payment to the sheriff of the market value thereof as the court may direct, if and when ordered by the court, and upon full compliance with the further orders of the court.
5. If the court, after a hearing upon petition for the seizure and sale of oil, gas, or product, finds that such oil, gas, or product is contraband, the court shall order the sale thereof by the sheriff in the same manner and upon the same notice of sale as provided by law for the sale of personal property on execution of judgment entered in a civil action, except that the court may order that the illegal oil, illegal gas, or illegal product be sold in specified lots or portions and at specified intervals. Upon such sale, title to the oil, gas, or product sold shall vest in the purchaser free of the claims of any and all persons having any title thereto or interest therein at or prior to the seizure thereof, and the same shall be legal oil, legal gas, or legal product, as the case may be, in the hands of the purchaser.
6. All proceeds derived from the sale of illegal oil, illegal gas, or illegal product, as above provided, after payment of costs of suit and expenses incident to the sale and all amounts paid as penalties provided for by this Act shall be paid to the state treasurer and credited to the general fund.

Source: NDRC

38-0816 PENALTY.)

1. Any person who violates any provision of this Act, or any rule, regulation, or order of the commission shall be subject to a penalty of not more than one thousand

dollars for each act of violation and for each day that such violation continues, unless the penalty for such violation is otherwise specifically provided for and made exclusive in this Act.

2. If any person, for the purpose of evading this Act, or any rule, regulation, or order of the commission, shall make or cause to be made any false entry or statement in a report required by this Act or by any such rule, regulation, or order, or shall make or cause to be made any false entry in any record, account, or memorandum required by this Act, or by any such rule, regulation, or order, or shall omit, or cause to be omitted, from any such record, account, or memorandum, full, true, and correct entries as required by this Act, or by any such rule, regulation, or order, or shall remove from this state or destroy, multilate, alter or falsify any such record, account, or memorandum, such person shall be guilty of a misdemeanor and, upon conviction, shall be subject to a fine of not more than five thousand dollars or imprisonment for a term not exceeding six months, or to both such fine and imprisonment.
3. Any person knowingly aiding or abetting any other person in the violation of any provision of this Act, or any rule, regulation, or order of the commission shall be subject to the same penalty as that prescribed by this Act for the violation by such other person.
4. The penalties provided in this section shall be recoverable by suit filed by the attorney general in the name and on behalf of the commission, in the district court of the county in which the defendant resides, or in which any defendant resides, if there be more than one defendant, or in the district court of any county in which the violation occurred. The payment of any such penalty shall not operate to legalize any illegal oil, illegal gas, or illegal product involved in the violation for which the penalty is imposed, or to relieve a person on whom the penalty is imposed from liabili-

ty to any other person for damages arising out of such violation.

Source: NDRC

38-0817 ACTION TO RESTRAIN VIOLATION OR THREATENED VIOLATION)

1. Whenever it appears that any person is violating or threatening to violate any provision of this Act, or any rule, regulation, or order of the commission, the commission shall bring suit against such person in the district court of any county where the violation occurs or is threatened, to restrain such person from continuing such violation or from carrying out the threat of violation. In any such suit, the court shall have jurisdiction to grant to the commission, without bond or other undertaking, such prohibitory and mandatory injunctions as the facts may warrant, including temporary restraining orders, preliminary injunctions, temporary, preliminary, or final orders restraining the movement or disposition of any illegal oil, illegal gas, or illegal product, any of which the court may order to be impounded or placed in the custody of an agent appointed by the court.
2. If the commission shall fail to bring suit to enjoin a violation or threatened violation of any provision of this Act, or any rule, regulation, or order of the commission, within ten days after receipt of written request to do so by any person who is or will be adversely affected by such violation, the person making such request may bring suit in his own behalf to restrain such violation or threatened violation in any court in which the commission might have brought suit. The commission shall be made a party defendant in such suit in addition to the person violating or threatening to violate a provision of this Act, or a rule, regulation, or order of the commission, and the action shall proceed and injunction relief may be granted to the commission without bond in the same manner as if suit had been brought by the commission.

Source: NDRC

38-0818 EXISTING REGULATIONS STILL IN FORCE. All rules, regulations or orders, made pursuant to chapter 38-08 prior to its repeal in this Act, as may be in force at the effective date of this Act shall continue in full force and effect until modified, amended or repealed by the commission.

Source: NDRC

(N.D.R.C. 1943, c. 38-08, Control of Gas and Oil Resources, was repealed by S. L. 1953, c. 227, s. 1 but the remainder of the Act in affect amended and reenacted the provisions of the repealed chapter and has been inserted in lieu of the original Code chapter.)

PREAMBLE

The rules and regulations of the Commission, and all amendments thereto, are designated and adopted for the conservation of oil and gas, and to prevent or tend to prevent waste.

All rules and regulations heretofore adopted by the Commission are hereby repealed, except field rules affecting the Beaver Lodge-Madison Pool; provided, however, that said repeal of such rules and regulations shall not be construed to prevent the prosecution for violation of such rules and regulations prior to said repeal.

A—DEFINITIONS

Adjusted Allowable shall mean the allowable production a proration unit receives after all adjustments are applied.

Allocated Pool is one in which the total oil or natural gas production is restricted and allocated to various proration units and fractional proration units therein in accordance with proration schedules.

Allowable Production shall mean that number of barrels of oil or cubic feet of natural gas authorized to be produced from the respective proration units and fractional proration units in an allocated pool.

Back Allowable shall mean the authorized accumulative underage or shortage for a given proration unit or fractional proration unit.

Barrel shall mean 42 United States gallons measured at 60 degrees Fahrenheit and atmospheric pressure at sea level.

Barrel of Oil shall mean 42 United States gallons of oil after deductions for the full amount of basic sediment, water, and other impurities present, ascertained by centrifugal or other recognized and customary test.

Bottom Hole or Subsurface Pressure shall mean the pressure in pounds per square inch gage under conditions existing at or near the producing horizon.

Bradenhead Gas Well shall mean any well capable of producing gas through wellhead connections from a gas reser-

voir which has been successfully cased off from an underlying oil or gas reservoir.

Casinghead Gas shall mean any gas or vapor, or both gas and vapor, indigenous to and produced from a pool classified as an oil pool by the Commission.

Certificate of Clearance means a permit prescribed by the Commission for the transportation or the delivery of oil or gas or product and issued or registered in accordance with the rule, regulation, or order requiring such permit.

Commission means the Industrial Commission.

Common Purchaser for Natural Gas shall mean any person now or hereafter engaged in purchasing, from one or more producers, gas produced from gas wells within each common source of supply from which it purchases, for processing or resale.

Common Purchaser for Oil shall mean every person now engaged or hereafter engaging in the business of purchasing oil in this state.

Common Source of Supply synonomous with pool.

Completion—An oil well shall be considered completed when the first oil is produced through wellhead equipment into lease tanks from the ultimate producing interval after casing has been run. A gas well shall be considered complete when the well is capable of producing gas through wellhead equipment from the ultimate producing zone after casing has been run. A dry hole shall be considered complete when all provisions of plugging are complied with as set out in these rules.

Condensate shall mean the liquid hydrocarbons recovered at the surface that result from condensation due to reduced pressure or temperature of petroleum hydrocarbons existing in a gaseous phase in the reservoir.

Cubic Foot of Gas for the purposes of these rules, shall mean that volume of gas contained in one cubic foot of space and computed at a pressure of 14.65 pounds per square inch absolute at a base temperature of 60 degrees Fahrenheit.

Deep Pool shall mean a common source of supply situated more than 5000 feet below the surface.

Field means the general area underlaid by one or more pools. For the purpose of interpreting this definition, **field** also includes the underground reservoir or reservoirs containing such crude petroleum oil or natural gas, or both. The words field and pool mean the same thing when only one underground reservoir is involved; however, **field** unlike **pool** may relate to two or more pools.

Fractional Proration Unit for Oil shall mean a tract of land containing more or less than 40 acres predominantly situated within the confines of a pool.

Gas Lift shall mean any method of lifting liquid to the surface by injecting gas into a well from which oil production is obtained.

Gas-Oil Ratio shall mean the ratio of the gas produced in cubic feet to the number of barrels of oil concurrently produced during any stated period.

Gas-Oil Ratio Adjustment shall mean the reduction in allowable of a high gas-oil ratio proration unit to conform with the production permitted by the limiting gas-oil ratio for the particular pool during a particular proration period.

Gas Transportation Facility shall mean a pipe line in operation serving one or more gas wells for the transportation of natural gas, or some other device or equipment in like operation whereby natural gas produced from gas wells connected therewith can be transported.

Gas Well shall mean a well producing gas or natural gas from a common source of gas supply as determined by the Commission.

High Gas-Oil Ratio Proration Unit shall mean a proration unit with a producing oil well with a gas-oil ratio in excess of the limiting gas-oil ratio for the pool.

Illegal Gas means gas which has been produced from any well within this state in excess of the quantity permitted by any rule, regulation, or order of the Commission.

Illegal Oil means oil which has been produced from any

well within the state in excess of the quantity permitted by any rule, regulation, or order of the Commission.

Illegal Product means any product derived in whole or in part from illegal oil or illegal gas.

Injection or Input Well shall mean any well used for the injection of air, gas, water or other fluids into any underground stratum.

Limiting Gas-Oil Ratio shall mean the gas-oil ratio assigned by the Commission to a particular oil pool to limit the volumes of casinghead gas which may be produced from the various oil producing units within that particular pool.

Log or Well Log shall mean a systematic detailed and correct record of formations encountered in the drilling of a well, including commercial electric logs and similar records.

Marginal Unit shall mean a proration unit or fractional proration unit that cannot produce at a rate equal to the top unit allowable for the proration period for the pool.

Minimum Allowable shall mean the minimum amount of production from an oil or gas well which will encourage the continued operation of such well and below which the well might be threatened with premature abandonment and resulting waste.

Multiple Completion shall mean the completion of any well so as to permit the production from more than one common source of supply.

Natural Gas or Gas means and includes all natural gas and all other fluid hydrocarbons not herein defined as oil.

Non-Marginal Unit shall mean a proration unit or a fractional proration unit that can produce at a rate equal to the top unit allowable for the proration period for the pool.

Normal Unit Allowable shall mean the amount of allowable production allocated to proration units which are producing from a depth of 5000 feet or above.

Official Gas-Oil Ratio Test shall mean the periodic gas-oil ratio test made by order of the Commission and by such method and means and in such manner as prescribed by the Commission.

Oil, Crude Oil, or Crude Petroleum Oil means and includes crude petroleum oil and other hydrocarbons regardless of gravity which are produced at the wellhead in liquid form and the liquid hydrocarbons known as distillate or condensate recovered or extracted from gas, other than gas produced in association with oil and commonly known as casinghead gas.

Oil Well shall mean any well capable of producing oil and which is not a gas well as defined herein.

Operator shall mean any person or persons who, duly authorized, is in charge of the development of a lease or the operation of a producing property.

Overage or Over Production shall mean the amount of oil or the amount of natural gas produced during a proration period in excess of the amount authorized on the proration schedule.

Owner means the person who has the right to drill into and produce from a pool and to appropriate the oil or gas he produces therefrom either for himself or others or for himself and others.

Person means and includes any natural person, corporation, association, partnership, receiver, trustee, executor, administrator, guardian, fiduciary, or other representative of any kind, and includes any department, agency, or instrumentality of the state or of any governmental subdivision thereof; the masculine gender, in referring to a person, includes the feminine and the neuter genders.

Pool means an underground reservoir containing a common accumulation of oil or gas or both; each zone of a structure which is completely separated from any other zone in the same structure is a pool.

Potential shall mean the properly determined capacity of a well to produce oil, or gas, or both, under conditions prescribed by the Commission.

Pressure Maintenance shall mean the injection of gas or other fluid into a reservoir, either to increase or maintain the existing pressure in such reservoir or to retard the natural decline in the reservoir pressure.

Producer means the owner of a well or wells capable of producing oil or gas or both.

Product means any commodity made from oil or gas and includes refined crude oil, crude tops, topped crude, processed crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, treated crude oil, residuum, gas oil, casinghead gasoline, natural-gas gasoline, kerosene, benzine, wash oil, waste oil, blended gasoline, lubricating oil, blends or mixtures of oil with one or more liquid products or by-products derived from oil or gas, and blends or mixtures of two or more liquid products or by-products derived from oil or gas, whether hereinabove enumerated or not.

Proration Day shall consist of 24 consecutive hours which shall begin at 7 A. M. and end at 7 A.M. on the following day.

Proration Month shall mean the calendar month which shall begin at 7 A.M. on the first day of such month and end at 7 A.M. on the first day of the next succeeding month.

Proration Period shall mean for oil the proration month and for gas six consecutive calendar months which shall begin at 7 A.M. on the first day of a calendar month and end at 7 A.M. on the first day of the seventh succeeding month.

Proration Schedule shall mean the periodic order of the Commission authorizing the production, purchase and transportation of oil or of natural gas from the various units of oil or of natural gas proration in allocated pools.

Reasonable Market Demand means the demand for oil or gas for reasonable current requirements for consumption and use within and without the state, together with such quantities as are reasonably necessary for building up or maintaining reasonable working stocks and reasonable reserves of oil or gas or product.

Recomplete shall mean the subsequent completion of a well in a different pool from the pool in which it was originally completed.

Reservoir shall mean pool or common source of supply.

Secondary Recovery shall mean a method of recovering

quantities of oil or gas from a reservoir which quantities would not be recoverable by ordinary primary depletion methods.

Shallow Pool shall mean a pool which has a depth range from 0 to 5000 feet.

Shut-in Pressure shall mean the pressure noted at the well head when the well is completely shut in. Not to be confused with bottom hole pressure.

Spacing Unit is the minimum area in each pool within which a well may be drilled.

Stratigraphic Test Well shall mean any well or hole, except a seismograph shot hole, drilled for the purpose of gathering information in connection with the oil and gas industry, which hole shall not exceed five inches in diameter under surface casing.

Tank Bottoms shall mean that accumulation of hydrocarbon material and other substances which settle naturally below crude oil in tanks and receptacles that are used in handling and storing of crude oil, and which accumulation contains in excess of two (2) percent of basic sediment and water; provided, however, that with respect to lease production and for lease storage tanks, a tank bottom shall be limited to that volume of the tank in which it is contained that lies below the bottom of the pipe line outlet thereto.

Top Unit Allowable for Gas shall mean the maximum number of cubic feet of natural gas, for the proration period, allocated to a proration unit for gas in an allocated gas pool.

Top Unit Allowable for Oil shall mean the maximum number of barrels of oil daily for each calendar month allocated to a proration unit for oil in a pool to non-marginal units.

Treating Plant shall mean any plant constructed for the purpose of wholly or partially or being used wholly or partially for reclaiming, treating, processing, or in any manner making tank bottoms or any other waste oils marketable.

Underage shall mean the amount of oil or the amount of natural gas during a proration period by which a given proration unit failed to produce in an amount equal to that authorized on the proration schedule.

Proration Unit for Gas shall consist of such geographical area as may be prescribed by special pool rules issued by the Commission.

Proration Unit for Oil shall consist of a tract of land containing forty (40) acres predominantly situated within the confines of a pool.

Unorthodox Well Location shall mean a location which does not conform to the spacing requirements established by the rules and regulations of the Commission.

Waste means and includes: a. Physical Waste, as that term is generally understood in the oil and gas industry, b. The inefficient, excessive, or improper use of, or the unnecessary dissipation of reservoir energy, c. The locating, spacing, drilling, equipping, operating, or producing of any oil or gas well or wells in a manner which causes, or tends to cause, reduction in the quantity of oil or gas ultimately recoverable from a pool under prudent and proper operations, or which causes or tends to cause unnecessary or excessive surface loss or destruction of oil or gas, d. The inefficient storing of oil, and e. The production of oil or gas in excess of transportation or marketing facilities or in excess of reasonable market demand.

B—MISCELLANEOUS RULES

RULE 1. SCOPE OF RULES AND REGULATIONS

The following General Rules of state-wide application have been adopted by the Industrial Commission to conserve the natural resources of the State of North Dakota to prevent waste and to provide for operation in a manner as to protect correlative rights of all owners of crude oil and natural gas. Special rules, pool rules, field rules, and regulations and orders have been and will be issued when required and shall prevail as against General Rules, Regulations and Orders if in conflict therewith. However, wherever these General Rules do not conflict with special rules heretofore or hereafter adopted, these General Rules will apply in each case. The Commission may grant exceptions to these rules, after due notice and hearing, when such ex-

ceptions will result in the prevention of waste and operation in a manner to protect correlative rights.

RULE 2. PROMULGATION OF RULES, REGULATIONS OR ORDERS

No Rule, Regulation or Order, including change, renewal or exception thereof, shall, in the absence of an emergency, be made by the Commission, except after a public hearing on at least ten days notice given in the manner and form as may be prescribed by law. Such public hearing shall be held at such time, place and in such manner as may be prescribed by the commission, and any person having any interest in the subject matter of the hearing shall be entitled to be heard.

RULE 3. EMERGENCY RULE, REGULATION OR ORDER

In the event an emergency is found to exist by the Commission which in its judgment requires the making, revoking, changing, amending, modifying, altering enlarging, renewal or extension of a rule, regulation or order without first having a hearing, such emergency rule, regulation or order shall have the same validity as if a hearing with respect to the same had been held after due notice. The emergency rule, regulation or order permitted by this section shall remain in force no longer than fifteen days from its effective date, and in any event, it shall expire when the rule, regulation or order made after due notice and hearing with respect to the subject matter of such emergency rule, regulation or order becomes effective.

RULE 4. ENFORCEMENT OF LAWS, RULES AND REGULATIONS DEALING WITH CONSERVATION OF OIL AND GAS

The Commission, its agents, representatives and employees are charged with the duty and obligation of enforcing all rules and statutes of the State of North Dakota relating to the conservation of oil and gas. However, it shall be the responsibility of all the owners or operators to obtain information pertaining to the regulation of oil and gas before operations have begun.

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RULE 5. WASTE PROHIBITED

The production or handling of crude petroleum oil or natural gas of any type or in any form, or the handling of products thereof, in such a manner or under such conditions or in such amount as to constitute or result in waste is hereby prohibited.

All operators, contractors, drillers, carriers, gas distributors, service companies, pipe pulling and salvaging contractors, or other persons shall at all times conduct their operations in the drilling ,equipping, operating, producing, plugging and abandonment of oil and gas wells in a manner that will prevent waste of oil and gas, and shall not allow either oil or gas to leak or escape from a natural reservoir, or from wells, tanks, containers, pipe or other storage, conduit or operating equipment.

RULE 6. UNITED STATES GOVERNMENT LEASES

The Commission recognizes that all persons drilling on United States government land shall comply with the United States government regulations. Such persons shall also comply with all applicable State rules and regulations which are not in conflict therewith, except that no fee shall be required for a permit to drill. Copies of the "Sundry Notices and Reports on Wells" and the "Well Log" of the wells on U. S. Government land shall be furnished to the State Geologist at no expense to him.

RULE 7. CLASSIFYING AND DEFINING POOLS

The Commission will determine after notice and hearing whether a particular well or pool is a gas or oil well, or a gas or oil pool, as the case may be, and from time to time classify and re-classify wells, and will determine the limits of any pool or pools producing crude petroleum oil or natural gas and from time to time re-determine such limits.

RULE 8. FORMS UPON REQUEST

Forms for written notices, requests and reports required by the Commission will be furnished upon request. These forms shall be of such nature as prescribed by the Commis-

sion to cover proposed work and to report the results of completed work.

RULE 9. AUTHORITY TO COOPERATE WITH OTHER AGENCIES

The Commission may from time to time enter into arrangements with State and Federal government agencies, industry committees and individuals, with respect to special projects, services and studies relating to conservation of oil and gas.

RULE 10 ORGANIZATION REPORTS

Every person acting as principal or agent for another or independently engaged in the drilling of oil or gas wells, or in the production, storage, transportation, refining, reclaiming, treating, marketing or processing of crude oil or natural gas in the State of North Dakota shall immediately file with the State Geologist: the name under which such business is being conducted or operated; and name and post-office address of such person, the business or businesses in which he is engaged; the plan of organization and, in case of a corporation, the law under which it is chartered; and the names and post-office addresses of any person acting as trustee, together with the names of the manager, agent or executive thereof, and the names and post-office addresses of any officials thereof. In each case where such business is conducted under an assumed name, such report shall show the names and post-office addresses of all owners in addition to the other information required. A new report shall be filed annually thereafter on the first day of each and every year.

RULE 11. RESERVOIR SURVEYS

By special order of the Commission, periodic surveys may be made of the reservoirs in this state containing oil and gas. These surveys will be thorough and complete and shall be made under the supervision of the State Geologist, or his agent, representing the Commission. The condition of the reservoirs containing oil and gas and the practices and methods employed by the operators shall be investi-

gated. The produced volume and source of crude oil and natural gas, the reservoir pressure of the reservoir as an average; the areas of regional or differential pressure, stabilized gas-oil ratios, and the producing characteristics of the field as a whole and the individual wells within the field shall be specifically included.

All operators of oil wells are required to permit and assist the agents of the Commision and the State Geologist in making any and all special tests that may be required by the Commission or State Geologist on any or all wells.

RULE 12. RECORD OF WELLS

The State Geologist shall maintain a record of official well names, to be known as the Well-Name Register, in which shall be entered:

(a) the name and location of each well;
(b) the well permit number;
(c) the name of the operator, or his agent;
(d) any subsequent name or names assigned to the well and approved by the State Geologist.

The last name assigned to a well in the Well-Name Register shall be the official name of the well, and the one by which it shall be known and referred to.

The State Geologist may, at his discretion, grant or refuse an application to change the official name. Such applications shall be accompanied by a fee of $25.00, which fee is established to cover the expense of recording the change. If the application is refused, the fee shall be refunded.

In any event the number assigned to the well, and shown in the Well-Name Register, shall not be changed, and this number shall be shown on all records, forms, reports, notices, and correspondence regarding the well.

C—DRILLING

RULE 101. PLUGGING BOND

Any person who is drilling or proposes to drill for oil or gas shall submit to the Commission and obtain its approval of a bond, in a form approved by the Commission, conditioned as provided by law. The bond shall be in an

amount of $2000.00 when applicable to one well only. Each such bond shall be executed by a responsible surety company, authorized to transact business in the State of North Dakota. In cases where the principal on the bond is drilling or operating a number of wells within the State or proposes to do so, such principal may submit a blanket bond conditioned as above provided, covering all wells which such person may at any time before such bond is released, drill or operate within this State. The amount of any such blanket bond shall be $10,000.00.

For the purposes of the Commission the bond required is a plugging bond, as well as a drilling bond, and is to endure up to and including approved plugging when the well is dry or abandoned, even though the well may have been a producer. Transfer of property does not release the bond. In case of transfer of property or other interest in the well and the principal desires to be released from the bond covering a well or wells, such as producers, not ready for plugging, the principal should proceed as follows:

The holder of the approved permit to drill, usually the principal on the bond, shall notify the Commission in writing on a form to be provided by the Commission reciting that a certain well, if it be only one well, or all wells, if there are several wells, describing each well by its location within the Section, Township and Range, has or have been transferred to a certain transferee, naming such transferee, for the purpose of ownership or operation. Such tranfer must be dated and signed by a party duly authorized so to sign.

Beneath said transfer the transferee should recite that such transferee has read the foregoing statement and does accept such transfer and does accept the responsibilty of such well under his one-well bond tendered with corporate surety or such wells as the case may be, under his blanket bond being tendered to or on file with the Commission. Such acceptance must likewise be signed by a party authorized so to sign.

When the Commission has passed upon the transfer and acceptance and accepted it under the transferee's bond the

transferor is immediately released of the plugging responsibility of the well or wells as the case may be, and if such well or wells include all the wells within the responsibility of the transferor's bond, such bond will be released upon written notice by the Commission to that effect.

The transferee of any oil or gas well or of the operation of any such well shall be responsible for the plugging of any such well and for that purpose shall submit a new bond or produce the written consent of the surety of the original or prior plugging bond that the latter's responsibility shall continue. Non-compliance with the provisions hereof shall be grounds for closing down any such well and stopping production therefrom. This rule shall apply to transfers of any such wells made prior to the effective date of this rule as well as thereafter. The original or prior bond shall not be released as to the plugging responsibility of any such transferor until the transferee shall submit to the commission an acceptable bond to cover such well. All liability on bonds shall continue until the plugging of such well or wells is completed and approved.

The Commission will in writing advise the principal and sureties on any bond as to whether the plugging is approved, in order that, if the plugging is approved, liability under such bond may be formally terminated.

The State Geologist is vested with the power to act for the Commission as to all matters within this rule.

RULE 102. NOTICE OF INTENTION TO DRILL OR RECOMPLETE

Prior to the commencement of operations, notice shall be delivered to the State Geologist of intention to drill any well for oil or gas on a form prescribed by the Commission accompanied by a fee of $25.00, which sum is fixed as the fee for granting of a permit to drill. Prior to the commencement of recompletion operations notice shall likewise be delivered to the State Geolgist of intention to develop by deepening or plugging back to any source of supply other than the existing production horizon. Such notice of recompletion shall include the name and permit number and exact location of the well, the approximate date opera-

tions will begin, the estimated completed total depth, the casing program to be followed, and in the case of recompletion, the original total depth and the total depth at which the well is to be recompleted. It shall also specify the type of drilling equipment, whether cable tool or rotary, to be used, and indicate the name and address of the owner of same.

The State Geologist shall deny an application for permit to drill if a well drilled in the location applied for would cause, or tend to cause, waste or violate correlative rights. The applicant may appeal the decision of the State Geologist to the Commission.

RULE 103. SIGN ON WELLS

Every drilling and producible well shall be identified by a sign, posted on the derrick or not more than twenty feet from such well, and such signs shall be of durable construction and the lettering thereon shall be kept in a legible condition and shall be large enough to be legible under normal conditions at a distance of fifty feet. The wells on each lease or property shall be numbered in non-repetitive, logical and distinctive sequence, unless some other system of numbering was adopted by the owner prior to the adoption of these rules and regulations. Each sign shall show the number of the well, the name of the lease (which shall be different or distinctive for each lease), the name of the lessee, owner or operator, permit number and the location by Quarter, Section, Township and Range.

RULE 104. WELL SPACING

In the absence of an order by the Commission setting spacing units for a pool:

A. No well drilled for oil shall be drilled upon any tract of land other than a governmental quarter-quarter section or governmental lot corresponding thereto nor shall it be located closer than 500 feet to any boundary line of a governmental quarter-quarter section or governmental lot corresponding thereto, nor closer than 1000 feet to the nearest well drilling to or capable of producing from the same pool. No more than one well shall be drilled to the same pool on any such quarter-quarter section or governmental

lot corresponding thereto, except by order of the Commission, nor shall any well be drilled on any such quarter-quarter section or governmental lot corresponding thereto containing less than 36 acres except by such order.

No well shall be drilled upon any such governmental quarter-quarter section or governmental lot corresponding thereto when the same shall embrace two or more separately owned tracts or where there are separately owned interests in all or part thereof unless and until the said separately owned tracts or interests shall have been pooled either voluntarily or in accordance with the laws of the State of North Dakota.

B. No well shall be drilled for gas on a tract of land consisting of less than 160 surface contiguous acres and which is not substantially in the form of a square, in accordance with legal subdivisions of the U. S. Public Land Surveys or on a governmental quarter section containing less than 145 acres and no well shall be drilled closer than 1000 feet to any boundary line of the tract or closer than 1500 feet to the nearest well drilling to or capable of producing from the same pool. Provided, that in presently producing gas pools accessible to established gas transportation facilities and not controlled by orders heretofore or hereafter made, no well shall be drilled for gas on a tract consisting of less than 160 surface contiguous acres and which is not substantially in the form of a square in accordance with the legal subdivisions of the U. S. Public Land Surveys or a square equivalent to a tract of 160 acres and no well shall be drilled closer than 1000 feet to any boundary line of the tract or closer than 1500 feet to a well drilling to or capable of producing from the same pool.

No gas well shall be drilled upon any governmental quarter section when the same shall embrace two or more separately owned tracts or where there are separately owned interests in all or a part thereof unless and until the said separately owned tracts or interests shall have been pooled either voluntarily or in accordance with the laws of the State of North Dakota.

C. Within fifteen days after the discovery of oil or gas

in a pool not then covered by an order of the Commission, a hearing shall be held and the Commission shall issue an order prescribing a temporary spacing pattern for the development of the pool. This order shall continue in force for a period of not more than eighteen months at the expiration of which time a hearing shall be held at which the Commission may require the presentation of such evidence as will enable the Commission to determine the proper spacing for the pool.

During the interim period between the discovery and the issuance of the temporary order no permits shall be issued for the drilling of direct offsets to the discovery well.

D. If upon application, the State Geologist shall find that a well drilled at the location prescribed by any applicable rule of the Commission would not produce in paying quantities or that surface conditions would substantially add to the burden or hazard of such well, he may enter an order permitting the well to be drilled at a location other than that prescribed and shall include in such order suitable provisions to prevent the production from that well of more than its just and equitable share of the oil and gas in the pool. Application for an exception shall set forth the names of the lessees of adjoining properties and shall be accompanied by a plat or sketch drawn to the scale of not smaller than one (1) inch equalling 660 feet, accurately showing to scale the property for which the exception is sought and accurately showing to scale all other completed and drilling wells on this property and accurately showing to scale all adjoining surrounding properties and wells. The application shall be verified by some person acquainted with the facts, stating that all facts therein stated are within the knowledge of the affiant true and that the accompanying plat is accurately drawn to scale and correctly reflects pertinent and required data. Upon the filing of such application, the State Geologist shall give notice of such filing by registered mail to all lessees of lands adjacent to such tract for which the exception is sought. The State Geologist shall issue no order on such application for at least ten (10) days after its filing.

E. In filing a Notice of Intention to Drill, the surface distance must be shown between the proposed location and other wells within a radius of 1000 feet for oil tests, and 1500 feet for gas tests.

RULE 105. PIT FOR CLAY, SHALE AND DRILL CUTTINGS

In order to assure a supply of proper material or mud-laden fluid to confine oil, gas or water to their native strata during the drilling of any well, each operator shall provide, before drilling is commenced, an adequate pit for the accumulation of drill cuttings.

RULE 106. SEALING OFF STRATA

During the drilling of any oil or natural gas well, all oil, gas and water strata above the producing horizon shall be sealed or separated where necessary in order to prevent their contents from passing into other strata.

All fresh waters and waters of present or probable value for domestic, commercial or stock purposes shall be confined to their respective strata and shall be adequately protected by methods approved by the Commission. Special precautions by methods satisfactory to the Commission shall be taken in drilling and abandoning wells to guard against any loss of artesian water from the strata in which it occurs, and the contamination of artesian water by objectionable water, oil or gas.

All water shall be shut off and excluded from the various oil and gas-bearing strata which are penetrated. Water shut-offs shall ordinarily be made by cementing casing or landing casing with or without the use of mud-laden fluid.

RULE 107. CASING AND TUBING REQUIREMENTS

All wells drilled for oil or natural gas shall be completed with strings of casing which shall be properly cemented at sufficient depths adequately to protect the water, and oil or natural gas-bearing strata to be produced.

Sufficient cement shall be used on surface casing to fill the annular space back of the casing to the bottom of the cellar or to the surface of the ground. Surface casing shall stand cemented for at least 12 hours before drilling plug or initiating tests. All other strings of casing shall stand

cemented for at least 24 hours before drilling plug or initiating test. Cementing shall be by the pump and plug method, or other method approved by the Commission.

All flowing wells shall be tubed, the tubing shall be set as near the bottom as practicable, but tubing perforations shall not be above the top of pay, unless authorized by the State Geologist.

RULE 108. DEFECTIVE CASING OR CEMENTING

In any well that appears to have defective casing, faultily cemented or corroded casing which will permit or may create underground waste, the operator shall proceed with diligence to use the appropriate method and means to eliminate such hazard of underground waste. If such hazard of waste cannot be eliminated, the well shall be properly plugged and abandoned.

RULE 109. BLOW OUT PREVENTION

In all drilling operations proper and necessary precautions shall be taken for keeping the well under control, including the use of a blow-out preventer and high pressure fittings attached to properly cemented casing strings.

RULE 110. PULLING OUTSIDE STRING OF CASING

In pulling outside strings of casing from any oil or gas well, the space outside the casing left in the hole shall be kept and left full of mud-laden fluid or cement of adequate specific gravity to seal off all fresh and salt water strata and any strata bearing oil or gas not producing. No casing shall be removed without the prior approval of the State Geologist or his agent.

RULE 111. DEVIATION TESTS

When any well is drilled or deepened, tests to determine the deviation from the vertical shall be taken. When the deviation from the vertical averages more than 4 degrees the State Geologist may require that the hole be straightened. Directional surveys may be required by the Commission, whenever, in its judgment, the location of the bottom of the well is in doubt.

A deviational and directional survey shall be made and filed with the State Geologist on any well utilizing a whip-

stock or any method of deviating the well bore in a predetermined direction except to sidetrack junk in the hole, straighten a crooked hole or to control a blow-out. Special permits may be obtained to drill directionally in a predetermined direction as provided above, only after a hearing before the Commission.

RULE 112. MULTIPLE ZONE COMPLETIONS

Multiple zone completions in any pool may be permitted only by order of the Commission upon hearing.

The application for such hearing shall be accompanied by an exhibit showing the location of all wells on applicant's lease and all offset wells on offset leases, and shall set forth all material facts on the common sources of supply involved, and the manner and method of completion proposed.

RULE 113. SHOOTING AND CHEMICAL TREATMENT OF WELLS

If injury results to casing or casing seat from shooting or treating a well, the operator shall proceed with diligence to use the appropriate method and means for rectifying such damage. If shooting or chemical treating results in irreparable injury to the well the Commission may require the operator to plug and abandon the well properly.

RULE 114. SAFETY REGULATION

All oil wells shall be cleaned into a pit or tank, not less than forty (40) feet from the derrick floor and one hundred fifty (150) feet from any fire hazard. All flowing oil wells must be produced through an approved oil and gas separator or emulsion treater of ample capacity and in good working order. No boiler or portable electric lighting generator shall be placed or remain nearer than one hundred fifty (150) feet to any producing well or oil tank. Any rubbish or debris that might constitute a fire hazard shall be removed to a distance of at least one hundred fifty (150) feet from the vicinity of wells and tanks. All waste shall be burned or disposed of in such manner as to avoid creating a fire hazard.

When coming out of the hole with drill pipe, drilling

fluid shall be circulated until equalized and subsequently drilling fluid level shall be maintained at a height sufficient to control subsurface pressures. During course of drilling, blow-out preventors shall be tested at least once each twenty four (24) hour period, and test noted in driller's record.

RULE 115. WELL AND LEASE EQUPMENT

Christmas tree fittings or well-head connections with a working pressure at least equivalent to the calculated or known pressure to which the equipment will be subjected shall be installed and maintained in first class condition so that, on flowing wells, gas-oil ratio, and static bottom hole or other pressure tests may be made easily. Valves shall be installed and maintained in good working order to permit pressure readings to be obtained on both casing and tubing.

RULE 116. NOTIFICATION OF FIRE, BREAKS, LEAKS, OR BLOW-OUTS

All persons controlling or operating any oil or gas well or pipe line, or receiving tank, storage tank, or receiving and storage receptacle into which crude oil is produced, received or stored, or through which oil is piped or transported, shall immediately notify the State Geologist by letter giving full details concerning all fires which occur at such oil or gas well or tank or receptacle on their property, and all such persons shall immediately report all tanks or receptacles struck by lightning and any other fire which destroys oil or gas, and shall immediately report any leaks or breaks in or from tanks or receptacles and pipe lines from which oil or gas is escaping or has escaped. In all such reports of fires, breaks, leaks, or escapes, or other accidents of this nature, the location of the well, tank, receptacle, or line break shall be given by Section, Township, Range and property, so that the exact location thereof can be readily located on the ground. Such report shall likewise specify what steps have been taken or are in progress to remedy the situation reported; and shall detail the quantity of oil or gas lost, destroyed or permitted to escape. In case any tank or receptacle is permitted to run over, the amount running over shall be reported as in the case of a leak. The report hereby re-

quired as to oil leaks shall be necessary only in case such oil loss exceeds one hundred (100) barrels in the aggregate, or when such gas loss exceeds 3,000,000 cubic feet in the aggregate.

RULE 117. WELL LOG, COMPLETION AND WORKOVER REPORTS

Within thirty (30) days after the completion of a well drilled for oil or gas, or the recompletion of a well into a different source of supply, a completion report shall be filed with the State Geologist, on a form prescribed by the Commission. The logs on such wells shall be forwarded to the State Geologist, without cost to him, and shall be confidential for a period of 6 months when so requested by the operator in writing.

RULE 118. STRATIGRAPHIC TEST WELLS

No fee or permit shall be required for the drilling of Stratigraphic Test Wells but Notice of Intention to drill shall be filed with the State Geologist and such wells shall be plugged in accordance with Rule 202. The notice of intention shall include the operator's designation of the well, the location of the well in feet from the boundary lines of the section, the size of hole to be drilled, the amount of surface casing to be set, and the name and address of the contractor who will do the work.

D—ABANDONMENT AND PLUGGING OF WELLS

RULE 201. NOTICE

Notice of intention to plug must be filed with the State Geologist by the owner or his agent prior to the commencement of plugging operations, on a form prescribed by the Commission, which notice shall state the name and location of the well and name of the operator. In case of abandonment of any well, the operator may commence plugging by giving reasonable notice to, and securing the approval of the State Geologist or his agent as to the time plugging operations are to begin. He shall, however, file the regular notification form.

RULE 202. METHOD OF PLUGGING

Before any well is abandoned, it shall be plugged in a manner which will confine permanently all oil, gas and water in the separate strata originally containing them. This operation shall be accomplished by the use of mud-laden fluid, cement and plugs, used singly or in combination as may be approved by the Commission. Casing shall be cut off below plow depth. Seismic, core, or other exploratory holes drilled to or below sands containing fresh water shall be plugged and abandoned in accordance with the applicable provisions recited above.

If a well is to be abandoned temporarily and no casing pulled, then a plug shall be placed at the top of the casing in such manner as to prevent the intrusion of any foreign matter into the well.

When drilling operations have been suspended for six (6) months wells shall be plugged and abandoned in accordance with regulations of the Commission or a permit for temporary abandonment shall be obtained from the State Geologist.

RULE 203. WELLS TO BE USED FOR FRESH WATER

When the well to be plugged may safely be used as a fresh water well and such utilization is desired by the landowner, the well need not be filled above a sealing plug set below the fresh water formation; provided, that if written authority and assumption of liability for such use and plugging shall be secured from the landowner and filed with the State Geologist the operator shall be relieved of his responsibility under these regulations.

RULE 204. LIABILITY

The owner of any well drilled for oil or gas, or any seismic, core or other exploratory holes, whether cased or uncased, shall be liable and responsible for the plugging thereof in accordance with the rules and regulations of the Commission.

RULE 205. SLUSH PITS

All unnecessary pits at oil, gas, or abandoned wells must

be filled within a reasonable time after the completion of the well.

RULE 206. PRESERVATION OF CORES AND SAMPLES

Sample cuttings of formations, taken at regular intervals, in all wells drilled for oil or gas in the State of North Dakota, shall be carefully identified as to operator, well name and location, and depth of sample, and shall be shipped free of cost to the State Geologist.

The operator of any well drilled for oil or gas in the State of North Dakota shall, during the drilling of, or immediately following the completion of, any given well advise the State Geologist, or his representative, of all intervals that are to be cored, or have been cored, and such cores as are taken shall be preserved and forwarded to the State Geologist, free of cost, when such are requested by him. In the event the State Geologist does not desire the core, the operator shall advise him of the final disposition of the core.

This rule shall not be construed as prohibiting the operator from taking such samples of the core as he may desire for identification and testing. In the event that it is necessary for the operator to utilize all or any portion of the core to the extent that representative samples, sufficiently large to analyze, are not available for the State, the operator shall furnish the State Geologist with the results of identification or testing procedures.

E—OIL PRODUCTION OPERATING PRACTICES

RULE 301. GAS-OIL RATIO TEST

Each operator shall take a gas-oil ratio test within thirty (30) days following the completion or recompletion of an oil well, whose gas-oil ratio exceeds 100 cubic feet per barrel. Each test shall be conducted under the method and conditions as prescribed by the State Geologist and reported to him. After the discovery of a new pool, each operator shall make additional gas-oil ratio tests as directed by the State Geologist or provided for in field rules. During tests, each well shall be produced at a rate equal to or not exceeding its allowable by more than 25 percent. No well shall

be given an allowable greater than the amount of oil produced on official test during a 24-hour period. The Commission will drop from the proration schedule any proration unit for failure to make such test as herein above described until such time as a satisfactory test has been made, or satisfactory explanation given.

RULE 302. SUBSURFACE PRESSURE TESTS ON NEW POOLS

The operator shall make a subsurface pressure test on the discovery well of any new pool hereafter discovered, and shall report the results thereof to the State Geologist within thirty (30) days after the completion of such discovery well. At such times as the State Geologist may direct, all operators within the same pool shall make a subsurface pressure test on designated wells in the pool. This test shall be made by a person qualified by both training and experience to make such test, and with an approved subsurface pressure instrument which shall have been calibrated both prior and subsequent to each pressure survey against an approved dead weight tester. Provided the prior and subsequent calibrations agree within one percent, the accuracy of the instrument shall be considered acceptable. All wells shall remain completely shut-in for at least twenty-four (24) hours prior to the test. The subsurface determination shall be obtained as close as possible to the midpoint of the productive interval of the reservoir. The report of the subsurface pressure test shall state the name of the pool, the name of the operator and lease, the well number, the permit number, the sub-sea depth in feet of the reservoir datum plane, and wellhead elevation above sea level, the depth in feet to the top of the producing formation or top of perforations ,whichever is the lower, the date of the tests, the total number of hours the well was shut in prior to the test, the subsurface temperature in degrees Fahrenheit at the test depth, the depth in feet at which the subsurface pressure test was made, the observed pressure in pounds per square inch gage at the test depth, and the corrected pressure computed from applying to the observed pressure the appropriate corrections for calibration, temp-

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erature, and difference in depth between test depth and reservoir datum plane.

RULE 303. COMMINGLING OF OIL FROM POOLS

Except as directed by the Commission after hearing, each pool shall be produced as a single common reservoir and the wells therein shall be completed, cased, maintained and operated as the producing media for that specific pool, and the production of oil therefrom shall be actually segregated into separate, identified tanks, and the commingling or confusion of such production, before measuring, with fluid hydrocarbons produced from other and distinct pools in any tank or tanks is strictly prohibited.

RULE 304. CONTROL OF MULTIPLY COMPLETED WELLS

Multiply completed wells which have been authorized by the State Geologist shall at all times be operated, produced and maintained in a manner to insure the complete segregation of the various common sources of supply. The State Geologist may require such tests as he deems necessary to determine the effectiveness of the segregation of the different sources of supply.

RULE 305. METERED CASINGHEAD GAS

The owner of a lease shall not be required to measure the exact amount of casinghead gas produced and used by him for fuel purposes in the development and normal operation of the lease. All casinghead gas produced and sold or transported away from a lease, except small amounts of flare gas, shall be metered and reported in cubic feet monthly to the State Geologist. The amount of casinghead gas sold in small quantities for use in the field may be calculated upon a basis generally acceptable in the industry, or upon a basis approved by the State Geologist in lieu of meter measurements.

RULE 306. VENTED CASINGHEAD GAS

Pending arrangements for disposition for some useful purpose, all vented casinghead gas shall be burned, and the estimated volume reported to the State Geologist.

RULE 307. USE OF VACUUM PUMPS

Vacuum pumps or other devices shall not be used for the purpose of creating a partial vacuum in any stratum containing oil or gas.

RULE 308. PRODUCED WATER

Operators shall report monthly the amount or percentage of water produced by each well making two percent (2) or more water.

RULE 309. CENTRAL TANK BATTERIES

Oil shall not be transported from a tank battery until it has been measured in the tanks. Upon application of the operator, and approval by the State Geologist, a central tank battery may be used provided adequate tankage, meters, or other equipment is installed so that the production from each well can be accurately determined at reasonable intervals.

Application to install meters shall include the name of the manufacturer of the meter, type and size of meter, a scale drawing of the proposed installation, and the reason for the request. After such meters have been installed they shall be checked against actual tank gauges at monthly intervals and the results of the tests reported to the State Geologist on Form 4.

If the State Geologist shall determine that the volumes reported by the meter are not within industry acceptance of accuracy, he shall require the operator to repair and recalibrate said meter and repair it to record within accepted limits before further use.

RULE 310. OIL TANKS AND FIRE WALLS

Oil shall not be stored or retained in earthen reservoirs, or in open receptacles. Dikes or fire walls must be erected and kept around all oil tanks, or battery of tanks when deemed necessary by the Commission.

RULE 311. TANK CLEANING PERMIT

No tank bottom shall be removed from any tank used for the storage of crude petroleum oil unless and until ap-

plication for tank cleaning permit is approved by the State Geologist. To obtain approval, owner shall submit a report showing an accurate gauge of the contents of the tank and the amount of merchantable oil determinable from a representative sample of the tank bottom by the standard centrifugal test as prescribed by the American Petroleum Institute's code, Number 25, Section 5, for measuring, sampling, and testing crude oil. The amount of merchantable oil shall be shown as a separate item on the report, and shall be charged against the allowable of the unit or units producing into such tank or pit where such merchantable oil accumulated. Nothing contained in this rule shall apply to the use of tank bottoms on the originating lease where owner retains custody and control of the tank bottom or to the treating of tank bottoms by operator where the merchantable oil recovered is disposed of through a duly authorized transporter and is reported to the State Geologist. Nothing contained in this Rule shall apply to reclaiming of pipe line, break oil or the treating of tank bottoms at a pipe line station, crude oil storage terminal or refinery or to the treating by a gasoline plant operator of oil and other catchings collected in traps and drips in the gas gathering lines connected to gasoline plants and in scrubbers at such plants.

RULE 312. TREATING PLANT

No treating plant shall operate except in conformity with the following provisions:

Before construction of a treating plant and upon written application for treating plant permit stating in detail the location, type, and capacity of the plant contemplated and method of processing proposed, the Commission in not less than twenty (20) days will set such application for hearing to determine whether the proposed plant and method of processing will actually and efficiently process, treat and reclaim tank bottom emulsion and other waste oils, and whether there is need for such a plant at the proposed location thereof. Before actual operations are begun, the permitee shall file with the Commission a surety bond of performance satisfactory to the Commission and payable in the

amount of $25,000.00 to the Industrial Commission of the State of North Dakota.

RULE 313, REPORT OF PRODUCTION

The producer and operator of each and every well and/or proration unit in all pools shall, on or before the 15th day of each month, succeeding the month in which the purchasing or taking occurs, file with the State Geologist a sworn statement showing the amount of production made by each such well and by each such proration unit upon forms furnished therefor. Wells for which reports of production are not received by the close of business on the 15th day of the month, shall not be included in the allocation or distribution of the market demand for the following month. Newly completed wells will be given allowables as provided in Rule 504.

RULE 314. POLLUTION BY SALT WATER

All salt water liquids or brines produced with oil and natural gas shall be disposed of without pollution of fresh water supplies. Disposal shall be in accordance with an order of the Commission, after hearing, as prescribed in Rule 701.

Pending the order of the Commission, salt water liquids or brines may be impounded in excavated earthen pits provided that the level of the liquid in the pits shall at no time be permitted to rise above the lowest point of the ground surface level. All pits shall have a continuous embankment surrounding them sufficiently above the level of the surface to prevent surface water from running into the pit. Such embankments shall not be used to impound salt water or brine.

At no time shall salt water liquids or brines be allowed to flow over the surface of the land or into streams.

The Commission shall have the authority to condemn any pit which does not properly impound such water.

F—NATURAL GAS PRODUCTION OPERATING PRACTICE

RULE 401. METHOD OF DETERMINING NATURAL GAS WELL POTENTIAL

All operators shall make tests annually to determine the daily open flow potential volumes of all natural gas wells from which gas is being used or marketed. Such tests shall be reported on forms furnished by the Commission. To establish comparable open flow capacity, wells shall be tested by the back pressure method, using four (4) back pressure flows taken in sequence from low to high flow. In the event the Commission approves an alternate method of testing, all wells producing from a common source of supply shall be tested in a uniform and comparable manner. In a like manner all natural gas wells hereafter completed shall be tested and the potential test reported. Where it has been determined that a natural gas well in any pool has a potential of 400,000 cubic feet per day or less, further potential tests shall not be required provided the operator periodically reports the shut-in pressure of the well.

RULE 402. METHOD AND TIME OF SHUT-IN PRESSURE TESTS

Shut-in pressure shall be taken by the operator on all natural gas wells during the months of April and October of each year, unless the taking of such pressures is covered by special pool order.

Shut-in pressures shall be taken with a calibrated gauge after a minimum shut-in period of twenty-four (24) hours. When the shut-in period exceeds 24 hours, such shut-in period shall be reported to the Commission. All shut-in pressures shall be reported to the Commission.

RULE 403. NATURAL GAS FROM GAS WELLS TO BE MEASURED

All natural gas produced shall be accounted for by metering, or other methods approved by the Commission and reported to the State Geologist by common purchaser of the gas. Gas produced from a gas well and delivered to a gas

transportation facility shall be reported by the owner or operator of the gas transportation facility. Gas produced from a gas well, and required to be reported under this rule, which is not delivered to and reported by a gas transportation facility, shall be reported by the operator of the well.

RULE 404. NATURAL GAS UTILIZATION

After the completion of a natural gas well, no gas from such well shall be (1) permitted to escape to the air except as necessary for cleaning or testing, (2) used expansively in engines or pumps and then vented, (3) used to gas lift oil wells unless all gas produced is processed in a gasoline plant, or beneficially used thereafter without waste, or (4) used for the manufacture of carbon black.

RULE 405. STORAGE GAS

With the exception of the requirement to meter and report monthly the amount of gas injected and the amount of gas withdrawn from storage, in the absence of waste these rules and regulations shall not apply to gas being injected into or removed from storage.

RULE 406. CARBON DIOXIDE

Insofar as is applicable, the state-wide regulations relating to gas, natural gas, gas wells, gas reservoirs, shall also apply to carbon dioxide, carbon dioxide wells, and carbon dioxide reservoirs.

G—OIL PRORATION AND ALLOCATION

RULE 501. REGULATION OF POOLS

To prevent waste, the Commission shall prorate or distribute the allowable production among the proration units and fractional proration units in a pool upon a reasonable basis and recognizing correlative rights.

After notice and hearing, the Commission, in order to prevent waste and protect correlative rights may promulgate rules, regulations or orders pertaining to any pool.

RULE 502. RATE OF PRODUCING WELLS

In allocated oil and gas pools the owner or operator of

any producing unit shall not produce from any proration unit during any proration period more oil and gas than the allowable production from such units as shown by the proration schedule, provided, however, that such owners or operators shall be permitted to maintain a uniform rate of production for each unit during the proration period. In order to maintain a uniform rate of production from the pool during any proration period, any operator may produce a total volume of oil and gas equal to that shown on the applicable proration schedule plus or minus five days top unit allowable, and any such over production shall be deducted from the total allowable for the well in the second month following; and any such under production shall be added to the total allowable on the well for the second month following, provided, that if the under production shall exceed five days top unit allowable for the unit, none of the under production shall be added to the allowable for the second month following, except as provided in Rule 503.

A fractional proration unit shall be allowed to produce only in the proportion that the acreage content thereof bears to 40 acres.

Where the Commission has adopted special rules in any pool, wells drilled in accordance with those special rules shall be allowed to produce an amount of oil daily equal to the top unit allowable as set by the Commission multiplied by a factor, the numerator of which shall be the number of acres assigned to a spacing unit in the pool and the denominator of which shall be 40.

RULE 503. AUTHORIZATION FOR PRODUCTION, PURCHASE AND TRANSPORTATION

The Commission or its representatives shall meet between the 15th and 25th of each month for the purpose of holding a hearing to set the normal unit allowable for the State for the following calendar month.

The exact date, time and place of such meetings, for the purpose of holding such hearings, shall be established in January of each year and notice given of such hearings by publication made on or before January 10 of each year.

The Commission will consider all evidence of market

demand for oil, including sworn statements of individual demand as submitted by each purchaser or buyer of crude petroleum oil in the state, and determine the amount of oil to be produced from all oil pools during the following month. The amount so determined will be allocated among the various pools in accordance with existing regulations and in each pool in accordance with regulations governing each pool. In allocated pools, effective the first day of each proration period, the Commission will issue a proration schedule which will authorize the production of oil from the various units in strict accordance with the schedule, and the purchase and transportation of the oil so produced. Allowable for wells completed after the first day of the proration period will become effective from the date of well completion. A supplementary order will be issued by the Commission to the operator of a newly completed or recompleted well, and to the purchaser or transporter of the oil or of the natural gas from a newly completed or recompleted well, establishing the effective date of completion, the amount of production permitted during the remainder of the proration period, and the authority to purchase and transport same from said proration units and fractional proration units.

When it appears that a single normal unit allowable will not supply the amounts of oil required by the markets available, the Commission may designate separate marketing districts within the state and prescribe separate normal unit allowables for each district.

A marginal unit shall be permitted to produce any amount of oil which it is capable of producing up to and including the top unit allowable for that particular pool for the particular proration period; provided the operator of such unit shall file with the Commission for a supplemental order covering the difference between the amount shown on the proration schedule and the top unit allowable for the pool. The Commission shall issue such supplemental order setting forth the daily amount of oil which such unit shall be permitted to produce for the particular proration period and shall furnish such supplemental order to the operator of the

unit and a copy thereof to the transporter authorized to transport oil from the unit.

Underages may be made up or unavoidable and lawful overages compensated for during the second proration period next following the proration period in which such underages or overages occurred.

All back allowable authorized for purchase will be published in the monthly proration schedule. No back allowable, except as provided in Rule 502, will be placed on the proration schedule unless requested by the producer. In requesting back allowable, the producer shall indicate the reason for the underage and the State Geologist may, at his discretion, approve any portion of the request which he may consider justified. The usual grounds for back allowable which may be considered are (1) failure of purchaser to transport assigned allowable, (2) mechanical failure or repairs to well equipment during the proration period, and (3) testing or gathering engineering data.

In order to preclude premature abandonment, a common purchaser within its purchasing area is authorized and directed to make 100 percent purchases from units of settled production producing ten (10) barrels or less daily of oil in lieu of ratable purchases or takings. Provided, however, where such purchaser's takings are curtailed below ten barrels per unit of oil daily, then such purchaser is authorized and directed to purchase equally from all such units within its purchasing area regardless of their producing ability insofar as they are capable of producing.

RULE 504. APPLICATION FOR ALLOWABLE ON NEW WELLS

No well shall be placed on the proration schedule until notice of completion has been executed and filed with the State Geologist.

The first four wells in any field or pool hereafter discovered shall be allowed to produce any amount of oil it is capable of producing but in no case to exceed a maximum of two hundred barrels of oil per day if the same can be done without waste and provided further, that a market can be obtained for such oil produced.

The allowable production provided for above shall continue in effect for a period of not more than eighteen months from the date of completion of the first well in the field or pool, or until the completion of the fifth well in the pool, whichever shall occur first, and shall produce thereafter, only pursuant to the General Rules and Regulations of the State Industrial Commission.

The producer or operator of any well claiming a discovery allowable under this rule shall report to the State Geologist, not later than the 10th of each month, the results of a potential test, made on or about the first day of the month, in accordance with the provisions of Rule 301.

RULE 505. OIL PRORATION

The allocation between pools shall be in accordance with the top of the producing depth of the pool and the corresponding proportional factor set out below. The depth to the casing shoe or the top perforation in the casing, whichever is the higher, in the first well completed in a pool determines the depth classification for the pool. Top unit allowables shall be calculated for each of the several ranges of depth in the following proportions:

Pool Depth Range	Proportional Factor
From 0 to 5,000 feet	1.00
Below 5,000 to 6,000 "	1.33
6,000 to 7,000 "	1.77
7,000 to 8,000 "	2.33
8,000 to 9,000 "	3.00
9,000 to 10,000 "	3.77
10,000 to 11,000 "	4.67
11,000 to 12,000 "	5.67
12,000 to 13,000 "	6.75

The normal unit allowable shall be set by the Commission and shall be uniform for all proration units within all pools producing from 5,000 feet or above.

Top unit allowables for each range of depth shall then be determined by multiplying the normal unit allowable by the proportional factor for each depth range as set out in the table hereinabove; any fraction of a barrel shall be re-

garded as a full barrel for both normal and top unit allowables.

At the beginning of each calendar month, the distribution or proration to the respective units in each pool shall be changed in order to take into account all new wells which have been completed and were not in the proration schedule during the previous calendar month. Where any well is completed between the first and last day of the calendar month, its proration unit shall be assigned an allowable in accordance with whether such unit is marginal or non-marginal, beginning at 7 a. m., on the date of completion and for the remainder of that calendar month.

RULE 506. GAS-OIL RATIO LIMITATION

In allocated pools containing a well or wells producing from a reservoir which contains both oil and gas each proration unit shall be permitted to produce only that volume of gas equivalent to the applicable limiting gas-oil ratio multiplied by the top unit oil allowable for the depth of the pool and currently assigned to the pool. In the event the Commission has not set a gas-oil ratio limit for a particular oil pool the limiting gas-oil ratio shall be two thousand cubic feet of gas for each barrel of oil produced.

A gas-oil ratio limit shall be placed on all allocated oil pools, and all proration units or fractional proration units having a gas-oil ratio exceeding the limit for the pool shall be adjusted, unless previously exempted by the Commission after hearing, in accordance with the following formulae:

(a) Any proration unit which, on the basis of the latest official gas-oil ratio test has a gas-oil ratio in excess of the limiting gas-oil ratio for the pool in which it is located shall be permitted to produce daily that number of barrels of oil which shall be determined by multiplying the current top unit allowable by the fraction, the numerator of which shall be the limiting gas-oil ratio for the pool and the denominator of which shall be the official gas-oil ratio test of the well.

(b) Any unit containing a well or wells producing from a reservoir which contains both oil and gas shall be permitted to produce only that volume of gas equivalent to the

applicable limiting gas-oil ratio multiplied by the top unit allowable currently assigned to the pool.

(c) A marginal unit shall be permitted to produce the same total volume of gas which it would be permitted to produce if it were a non-marginal unit.

(d) All gas produced with the current oil allowable determined in accordance with this rule shall be deemed to have been lawfully produced.

All proration units to which gas-oil ratio adjustments are applied shall be so indicated in the proration schedule with adjusted allowables stated. The adjustment shall be made effective on the first day of the month following that in which the gas-oil ratio tests were reported for the pool, as set forth in the special field rules applicable to the pool.

In cases of new pools the limiting gas-oil ratio shall be 2,000 cubic feet per barrel until such time as changed by the Commission after a hearing. Upon petition, notice and hearing according to law, the Commission will determine or re-determine, the specific gas-oil ratio limit which is applicable to a particular allocated oil pool.

H—GAS PRORATION AND ALLOCATION

RULE 601. ALLOCATION OF GAS PRODUCTION

When the Commission determines that allocation of gas production in a designated gas pool is necessary to prevent waste, and to protect correlative rights the Commission after notice and hearing, shall consider the nominations of purchasers from that gas pool and other relevant data, and shall fix the allowable production of that pool, and shall allocate production among the proration units and fractional proration units in the pool delivering to a gas transportation facility upon a reasonable basis and recognizing correlative rights. The Commission shall include in the proration schedule of such pool any proration unit or fractional proration unit which it finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas producible from such proration unit or fractional proration unit.

RULE 602. PRORATION PERIOD

The proration period shall be six months and the pool allowable and allocations thereof shall be made at least 30 days prior to each proration period.

RULE 603. ADJUSTMENT OF ALLOWABLES

When the actual market demand from any allocated gas pool during a proration period is more than or less than the allowable set by the Commission for the pool for the period, the Commission shall adjust the gas proration unit allowables for the pool for the next proration period so that each gas proration unit shall have a reasonable opportunity to produce its fair share of the gas production from the pool and so that correlative rights shall be protected.

RULE 604. GAS PRORATION UNITS

Before issuing a proration schedule for an allocated gas pool, the Commission, after notice and hearing, shall fix the gas proration unit for that pool.

I—SECONARY RECOVERY AND PRESSURE MAINTENANCE

RULE 701. PERMIT FOR INJECTION OF GAS, AIR OR WATER

Where correlative rights of all operators are protected and waste will not occur:

(a) The injection of gas or air or water into any reservoir for the purpose of maintaining reservoir pressure, for secondary recovery operations or for water disposal, shall be permitted only by order of the Commission after notice and hearing. Orders approving the application will not be made within 15 days of the filing of the application unless the written consent of all persons entitled to notice is filed with the Commission within such time.

(b) The application for all permits to inject gas, or air, or water into any reservoir shall contain the following:

1. Plat showing the location of the input well or wells, and the location of all oil and gas wells, including abandoned and drilling wells and dry holes, and the

names of operators and owners within one-half mile of the input well or wells; and each offset operator.

2. The formations from which wells are producing or have produced.
3. The name, description, and depth of the formations to be affected by injection.
4. The log of the input well or wells or such information as is available.
5. Description of the input well's casing, or the proposed casing program, and proposed method for testing casing before use of the input wells.
6. Statement as to whether gas, air or water is to be used for injection, its source, and the estimated amounts to be injected daily.
7. The names and addresses of the operators of the project.

(c) Such applications shall be approved, or not objected to, by all operators who are to participate in a proposed cooperative plan, or by the designated operator of a unitized project.

(d) In addition to the notice to the Commission required by law, notice of such application shall be given by the applicant by mailing or delivering a copy of the application to each operator in the pool. Such notice shall be mailed or delivered on or before the date the application is filed with the Commission. An affidavit shall be attached to the application, showing the parties on whom the notice has been served and their addresses.

RULE 702. CASING AND CEMENTING OF INJECTION WELLS

Wells used for injection of gas, air, or water into the producing formation shall be cased with safe and adequate casing, or tubing so as to prevent leakage and such casing or tubing shall be so set or cemented that damage will not be caused to oil, gas or fresh water resources, in any case to conform to Rule 107.

RULE 703. NOTICE OF COMMENCEMENT AND DISCONTINUANCE OF INJECTION OPERATIONS

The following provisions shall apply to all injection projects:

(a) Immediately upon the commencement of injection, the operator shall notify the Commission of the injection date.

(b) Within ten (10) days after the discontinuance of injection operations the operator shall notify the Commission of the date of such discontinuance and the reason therefor.

(c) Before any input well shall be plugged, notice shall be served on the Commission by the owner of said well, and the same procedure shall be followed in the plugging of such well as provided for the plugging of oil and gas wells.

RULE 704. RECORDS

The operator of an injection project shall keep accurate records and report monthly to the State Geologist the amount of fluid produced, the volumes of fluid injected and the injection pressures.

J—OIL PURCHASING AND TRANSPORTING

RULE 801. ILLEGAL SALE PROHIBITED

The sale or purchase or acquisition, or the transporting, refining, processing, or handling in any other way, of crude petroleum oil or of any product of crude petroleum produced in excess of the amount allowed by any statute of this State, or by any rule, regulation or order of the Commission made thereunder, is prohibited.

RULE 802. PURCHASE OF LIQUIDS FROM GAS WELLS

Provided that a supplemental order is issued authorizing such production on the monthly proration schedule, any common purchaser is authorized to purchase 100 percent of the amount of associated crude oil or condensate produced and recovered from a natural gas proration unit.

K—REFINING

RULE 901. REFINERY REPORTS

Each refiner of oil within the state of North Dakota shall

furnish for each calendar month a report containing information and data respecting crude oil and products involved in such refiner's operations during each month. Such report for each month shall be prepared and filed, on or before the 15th of the next succeeding month, with the State Geologist.

RULE 902. GASOLINE PLANT REPORTS

Each operator of a gasoline plant, cycling plant or any other plant at which gasoline, butane, propane, condensate, kerosene, oil or other liquid products are extracted from natural gas within the State of North Dakota shall furnish to the State Geologist for each quarter a copy of the same report furnished to the State Tax Commissioner.

L—REPORTS

RULE 1001. ADDITIONAL INFORMATION MAY BE REQUIRED

These rules shall not be taken or construed to limit or restrict the authority of the Industrial Commission to require the furnishing of such additional reports, data or other information relative to production, transportation, storing, refining, processing, or handling of crude petroleum oil, natural gas or products in the State of North Dakota as may appear to be necessary or desirable, either generally or specifically, for the prevention of waste and the conservation of natural resources of the State of North Dakota.

RULE 1002. BOOKS AND RECORDS TO BE KEPT TO SUBSTANTIATE REPORTS

All producers, transporters, storers, refiners, gasoline or extraction plant operators and initial purchasers of natural gas within the State of North Dakota shall make and keep appropriate books and records for a period not less than 5 years, covering their operations in North Dakota from which they may be able to make and substantiate the reports required by this Order.

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M— SPECIAL RULES OF ORDER ON PROCEDURE IN PROMULGATION OF RULES AND REGULATIONS GOVERNING THE CONSERVATION OF OIL AND GAS

RULE 1101

Except as provided for herein and in Rule 104 before any rule, regulation or order, including revocation, change, renewal or extension therof, a public hearing shall be held at such time, place and manner as may be prescribed by the Commission.

RULE 1102

The Commission, upon its own motion and the Attorney General, on behalf of the State, and any operator, producer, taker or other person interested in any common source of supply of oil and gas, may institute proceedings; and the Commission shall have jurisdiction to make any and all orders, rules and regulations authorized by the laws of this State.

RULE 1103

In any proceeding instituted upon motion of the Commission the application shall be signed by at least two members of the Commission, one of which shall be the governor; and any other application shall be signed by the person filing same or by his attorney. An application shall state (a) the name and general description of the common source or sources of supply affected by the order, rule or regulation sought, unless same is intended to apply to and effect the entire state, in which event the application shall so state, and such statement shall constitute sufficient description; and (b) briefly the general nature of the order, rule or regulation sought in the proceedings.

RULE 1104

When an application is filed, the same shall be set for hearing before the Commission at such time as will permit ten (10) days notice thereof to be given, as hereinafter provided.

RULE 1105

Upon the institution of a proceedings by application, the Commission shall give at least ten (10) days (except in emergency) notice of the time and place of hearing thereon by one publication of such notice in newspapers of general circulation published at Bismarck, North Dakota, and in the county where the land affected or some part thereof is situated, unless in some particular proceeding a longer period of time or a different method of publication is required by law, in which event such period of time and method of publication shall prevail. Said notice shall issue in the name of the state and shall be signed by the chairman or secretary of the Commission, and shall conform to the other requirements provided by law. In case an emergency is found to exist by the Commission which in its judgment requires the making of a rule, regulation, or order without first having a hearing, such emergency rule, regulation or order shall have the same validity as if a hearing with respect to the same had been held after due notice. The emergency rule, regulation or order permitted by this section shall remain in force no longer than fifteen days from its effective date, and, in any event, it shall expire when the rule, regulation or order made after due notice and hearing with respect to the subject matter of such emergency rule, regulation or order becomes effective.

RULE 1106

Within thirty (30) days after the entry of any order or decision of the Commission or the State Geologist, any person affected thereby may file with the Commission an application for rehearing in respect of any matter determined by such order or decision, setting forth the respect in which such order or decision is believed to be erroneous. The Commission shall grant or refuse any such application in whole or in part within fifteen (15) days after the same is filed. In the event the rehearing is granted, the Commission may enter such new order or decision after rehearing as may be required under the circumstances.

RULE 1107

In any proceeding instituted before the Commission which requires a hearing the burden of proof shall be upon the one having the affirmative in such proceeding.

NORTH DAKOTA STATE INDUSTRIAL COMMISSION - OIL AND GAS CONSERVATION DIVISION

North Dakota Geological Survey
Standard Operating Procedure Bulletin #1

Because a number of new operators have come into the state recently, certain standard operating procedures are outlined herein to insure more efficient administration of the oil and gas conservation statute. The numbers at the beginning of each paragraph conform to the rules contained in the latest edition of the Commission's rules and regulations.

4. The responsibility for enforcement of the Commission's rules, regulations, and orders shall rest with the State Geologist.

   All communications, reports, or requests for information should be addressed to

   State Geologist
   North Dakota Geological Survey
   University Station
   Grand Forks, North Dakota

   Telephone No: 4-6211, extension 273 or 280

6. No fee is required for a permit to drill on federally owned land. However, a permit must be obtained from the State Geologist. It shall be the responsibility of the applicant to determine whether or not the land involved is federally controlled. As a matter of policy the Commission will collect the $25.00 fee if such fee is not required by the USGS. Since the laws of North Dakota do not provide for a refunding procedure, the Commission will not be able to return fees paid in error.

   The applicant shall comply with all rules and regulations of the Commission.

7. In the interest of uniformity, wells shall be classified as follows, based upon the date the well is spudded.

   A wildcat well shall be any well drilled morethana mile and a half from a producing well or an established field boundary.

   An outpost well shall be any well drilled less than a mile and a half but more than one location from a producing well or an established field boundary..

   An extension well shall be any well drilled as an offset to a producing well or an established field boundary.

   In the designation of pools, the name of the producing formation will be used in conjunction with some geographic name (i.e. Lignite-Madison pool).

   In the naming of fields reference to companies or individuals will be avoided insofar as possible and recognized geographical names will be used. Field names are proposed to the Commission by the Field Nomenclature Committee, composed of the State Geologist and Representatives of the North Dakota Geological Society and the North Dakota Scout Check.

8. Forms may be obtained from the office of the State Geologist or any of the branch offices of the State Geological Survey.

10. The organization report must be on file in the office of the State Geologist in Grand Forks before any permits will be issued to the organization.

Approval of this form does not infer approval of the organizational structure but merely indicates that the organization is eligible to obtain drilling permits and other clearances.

12. The information shown on the application to drill will be used in entering the well in the well name register and the same nomenclature will appear in all records and reports of the Commission. The applicant should be certain that the desired well designation is clearly indicated on the application.

101. Under an opinion of the Attorney General the State Geologist cannot accept a drilling bond on any form other than that provided by the Commission.

The term 'plugging' shall be interpreted to include all operations coincident to the abandonment of the well site including reasonable restoration of the site but shall not be deemed to include settlement of claims for damages or liens on property.

Upon request for termination of liability, agents of the Commission will inspect the site or sites covered by the bond and advise the surety as to the acceptability of the site.

102. No operations for the drilling of a well shall be commenced until a permit to drill has been obtained from the State Geologist.

A well shall not be spudded until notice of intention to drill has been filed with the office of the State Geologist and an approved copy received by the operator. This notice must show the amount, size, and weight of all casing to be used, as well as the other information called for in the rule. This notice must be on the Commission's Form 4. The office of the State Geologist will phone or wire (collect) when form is approved if operator so desires. If the form is not complete, it will be returned.

Outpost and extension wells must conform to spacing pattern in effect in the field.

103. The system of numbering must clearly indicate the sequence of the wells drilled on a lease.

104. Wells shall be drilled in the center of a quarter quarter section or lot unless approval is obtained from the State Geologist for an alternate location. Before such approval is granted the State Geologist must be advised of the reason for locating at a point other than the center and he shall not approve any alternate location which is more than 160 feet from the center except as provided in section D of the rule.

No well shall be considered a discovery until a completion report is received in the office of the State Geologist.

107. The State Geologist shall prescribe the amount of surface casing which, in his judgment, will meet the requirements of this rule.

109. A blow out preventer must be installed on every well before drilling out from under surface casing.

114. Field inspectors and agents of the State Geologist shall inspect the drillers record when visiting the site of a drilling operation. If the record does not indicate a test of the blow out preventer within twenty four hours the driller shall be required to make such test without further delay. Refusal to make such test at the direction of the inspector shall be sufficient grounds for ordering drilling operations suspended. Verbal approval of the State Geologist must be obtained before drilling is resumed.

115. All well control valves shall be readily accessible without use of extra equipment such as ladders, etc.

116. All fires and blow outs shall be reported to the State Geologist by telephone at the earliest moment. Written report as required by the rule may follow at a later date not to exceed ten days after the occurrence.

117. See definition of completion on Page 23 of rule book.

Immediately upon completion of a well a twenty four test shall be taken and reported on the completion report (Form 6). If the well does not produce during this period the report should so state.

Upon receipt of the completion report the well will be given an allowable.

Oil produced during test shall be charged against the well's allowable and shall be reported as production in the month in which it is produced. But such oil shall not be taken from the lease until approval to transport oil (Form 8) is received.

No well will be considered confidential until a written request for such status is received by the State Geologist. Inspectors and agents of the State Geologist shall not be denied information on the grounds of such status.

Mechanical Logs must be run on all wells drilled for oil and/or gas.

201. Verbal permission to plug a well may be obtained from the State Geologist or his representatives but written notice of intention to abandon must also be filed as soon as possible.

202. Drilling operations shall be deemed to be suspended when the total depth of the well is not increased during any thirty consecutive calendar days.

205. 'A reasonable time' for the filling of unnecessary pits is regarded as one year after completion of the well.

301. All wells regardless of the amount of gas must file this report. A report must be submitted on wells producing less than 100 cubic feet per barrel of oil, indicating this fact.

Where field rules specify dates for taking of gas-oil ratio tests, wells for which report of such test is not received, as specified in such field rules, shall be shut in during the following month.

303. The first report of production on a newly completed well shall include all oil recovered from said well but any load oil recovered shall be indicated in a footnote with information as to the origin of the load oil.

If oil is recovered during well tests and the well should be determined to be non-commercial and subsequently plugged and abandoned, a completion report shall be filed together with a report of oil production and a plugging record.

The report of oil production must be correct. Although some corrections may be necessary at times, the continued practice of submitting an estimate followed by a corrected report will not be tolerated. Your attention is called to the affidavit on the report (Form 5).

313. Production must be reported for the month although the completion report has not been filed. Reported production will be deducted from well's allowable when granted and oil must not be removed from the lease until allowable is granted and an approved copy of Form 8 is received from the office of the State Geologist.

503. Nominations for the purchase of crude oil should be as nearly accurate as possible and duplications should be avoided. If the purchaser desires to purchase all crude available in a certain field or pool, or a particular well, the nomination should so state and the office of the State Geologist will then estimate the amount of crude to be included in the reasonable market demand.

The amount of crude oil to be allocated to a marginal well will be determined from the latest production data or GOR test. If the well improves in productivity during any month the operator may file a sundry notice (Form 4) showing the more recent information and receive a new allowable not to exceed the top unit allowable for the pool.

504. Wells eligible for discovery allowable must be tested monthly as prescribed in the rule. Failure to submit the prescribed test shall be grounds for placing the well in non-discovery status.

505. The adjusted top unit allowable shall be computed as follows:

1. Multiply unit allowable by depth factor for pool and round off at next highest full barrel.
2. Multiply this figure by acreage factor, and if last GOR exceeds 2000 to 1
3. Multiply this figure by fraction 2000/latest GOR.

Outline of Procedure for Drilling Wells in North Dakota

1. File an organization report (Form 2) and submit new report each year on 1 January.

2. Submit application to drill (Form 1) with

   a. Certified plat.
   b. Bond (Form 3 or 3A)
   c. 25 dollars.

3. Submit notice of intention to drill.

THE ABOVE STEPS MUST BE COMPLETED BEFORE THE WELL IS SPUDDED.

4. Submit weekly report, by letter, card, or sundry notice (Form 4), of progress.

5. Report all of the following operations on sundry notice (Form 4) showing date of operation and results obtained.

   a. Setting of casing.
   b. Setting pump, well head, and tanks (show total volume of tankage).

6. Submit completion report (Form 6), or plugging record (Form 7).

Procedure for Producing Oil in North Dakota

1. Submit "autnorization to transport oil" (Form 8) on first well completed on lease. This must be approved before any oil can be removed from lease.

2. Report all oil recovered on tests, in month recovered, using Form 5. Unless this report is received in the office of the State Geologist at Grand Forks, North Dakota, before the close of business on the 15th day of the following month, the well will not be granted an allowable. Oil produced before completion will be deducted from the well's allowable when granted. If any of the oil is considered to be recovered load oil this should be explained by a footnote on the report. (See 117).

3. In pools for which a spacing of more than 40 acres per well is in effect, the communitized acreage must be designated before the well can be given increased allowable.

4. Requests for back allowable must be received by the office of the State Geologist in Grand Forks, North Dakota, before the close of business on the 15th day of the month following that in which underage occurred. Request must state reason for underage and must be submitted if underage exceeds 5 days allowable. Underages of less than 5 days allowable will be carried forward automatically.

5. On wells claiming discovery allowable a 24 potential test is required each month (See rule 504).

6. Oil taken from lease for use in drilling or completion of other wells must be shown as a "run from lease" on Form 5. Destination of oil must be indicated.

7. Water production must be shown as barrels and not in percent (See Form 5). Show all volumes to the nearest full barrel.

8. Wells that are not capable of producing the full, top unit, allowable will be given an allowable equal to the average production per day as reflected on last production report on file, or potential as indicated by last GOR test. If the well performance improves the operator may obtain an increased allowable by submitting results of a later potential test on Form 4.

9. Marginal wells showing excessive gas-oil ratios will be further restricted to that volume of oil which is obtained while producing a volume of gas equal to the top unit allowable for the pool times 2000 cubic feet.

10. Individual reports must be submitted for each pool but all wells in a single pool may be included in one report.

Procedure for Transporting Oil in North Dakota

1. The transporter must not remove oil from any lease for which he does not hold an approved copy of Form 8.

2. Each transporter must file monthly the report of deliveries and receipts (Forms 10A and 10B).

Procedure for Abandonment of Wells

1. The operator must file notice of intention to abandon well (Form 4).

2. Verbal permission to proceed with plugging may be obtained from the State Geologist or his agents but Form 4 must be filed as confirmation.

3. Plugs must be placed as prescribed by the State Geologist or his representative.

4. The plugging record (Form 7) must be filed as soon as plugging is completed.

5. If the operator desires the information be kept confidential he must so indicate to the State Geologist, in writing, and the six months period will begin on receipt of the request.

6. Logs, samples, and cores as requested, must be forwarded to the State Geologist immediately upon completion or abandonment of the well.

7. Permission to abandon a well, temporarily, for a period of six months may be obtained from the State Geologist upon written request clearly stating the reason therefore.

Procedure for Termination of Liability Under Drilling Bond

1. Request for termination must be made to the State Geologist

2. An agent of the State Geologist's office will visit the well site and inspect it for compliance with the Commission's rules.

3. The inspector's decision will determine subsequent action.

4. If site is approved the surety will be notified of effective date of termination of liability.

5. If the land owner desires to utilize the well, or pits, the operator should secure a release from the land owner and forward a copy of the same to the State Geologist. The release should carry an affidavit indicating the land owner assumes responsibility for the well.

Miscellaneous

For your convenience the State Geologist maintains offices as follows:

1. Headquarters for the North Dakota Geological Survey are located in the Geology Building on the Campus of the University of North Dakota at Grand Forks. The mailing address is University Station and the phone number is 46211, extension 273 or 280.

Personnel dealing with oil and gas matters (with after-hours phone numbers) include:

State Geologist - Wilson M. Laird - 46007
Chief Petroleum Engineer - Clarence B. Folsom, Jr. - 21824
Chief Statistician - Louis I. Larson - 47510

This office contains all records, files, logs, samples, and cores, on all wells drilled in the State as well as information on production, etc.

2. Williston office - This office is located at the Hapip Building. The mailing address is Box 802 and the phone number is 33261.

Personnel (with after-hours phone numbers) includes:

Inspector - Floyd E. Wilborn - 33437
Inspector - Kent A. Madenwald - 35342

This office has a duplicate set of well files available.

3. Bismarck office - This office is located on the 1-th floor of the State Capitol Building and the phone number is Capitol 3-8000.

Personnel (with after-hours phone number) includes:

Inspector - Robert S. George - Capitol 3-6636.

This office has a duplicate set of well files. Files containing evidence submitted to the Commission are maintained in the office of the Governor.

	Before rigging up.	January 1st.	Before spudding.	Before starting the operation.	After operation completed.	10th of Month	15th of Month	30 days after completion or abandonment		
Form 1	X									
Form 2		X								
Form 3 or 3A	X									
4 (1)			X							
(2)				X						
(3)				X						
(4)				X						
(5)					X					
(6)					X					
(7)					X					
(9)					X					
(10)					X	X				
Form 5 and 5B							X			
Form 6					X					
Form 7					X					
Form 8				X						
Form 9 and 9A							X			
Form 10A and 10B							X			
Back Allowable Request							X			
Nomination to purchase oil/or gas.						X				
Refinery and Gasoline Plant Reports							X			

FORM 1

Oil and Gas Division

North Dakota State Industrial Commission

APPLICATION TO DRILL

SEE INSTRUCTIONS OTHER SIDE

FILE THIS APPLICATION WITH THE STATE GEOLOGIST, UNIVERSITY OF NORTH DAKOTA, GRAND FORKS, N. D.

DATE_____, 19____

NAME_____
(Operator) (Driller)

SEND PERMIT TO: STREET_____ CITY_____ STATE_____

DESCRIPTION OF LEASE

NAME OF LEASE OWNER_____

NAME OF FEE OWNER_____ ACRES IN LEASE_____ WELL NO._____

SEC._____ TWP._____ RANGE_____ COUNTY_____ FIELD_____

Distance from proposed location to (N) (S) Section Line_____ feet and distance from (E) (W) section line_____ feet.

Nearest distance from proposed location to drilling unit line_____ feet. Distance from proposed location to nearest drilling, completed permitted or applied for well_____ feet. Depth to which propose to drill_____ feet.

Acres in drilling unit_____ Elevation of (ground) (KB) (DF) above sea level_____ feet.

REMARKS_____

DATED THIS_____ DAY OF_____, 19____ BY_____

(Office)

OPERATOR

STATE OF_____ }
COUNTY OF_____ } ss

I, _____, being first duly sworn on oath, state that I am the_____ of _____ and have knowledge of the facts and matter herein set forth and that the same are true and correct.

NAME_____ TITLE_____

SUBSCRIBED AND SWORN TO BEFORE ME THIS_____ DAY OF_____, 19____

PERMIT NO._____

APPROVED _____

DENIED _____

BY_____
(State Geologist)

NOTARY PUBLIC, COUNTY OF_____

STATE OF_____

My Commission Expires_____

INSTRUCTIONS

The office of the State Geologist will retain three copies of this completed form. In submitting the form for approval prepare a sufficient number of copies to provide the amount your organization requires. BE SURE THE FORM IS COMPLETE.

The **signature** of the person preparing the form is required **two** places; on the line marked 'BY', and again on the line in the acknowledgement marked 'NAME'. The acknowledgement must be notarized.

On the line marked 'NAME OF LEASE OWNER' should be inserted the name of the person or company which holds the lease on the land and/or the minerals included in the drilling unit.

On the line marked 'NAME OF FEE OWNER' should be stated the name of the person or organization holding the principle royalty interest. Unless otherwise stated this is the name under which the well will be carried in the files of the Industrial Commission. If some other designation is desired by the operator this should be noted under remarks on the line so designated. After the permit has been issued a fee of 25 dollars is required before a change in the well name can be made. (See Rule No. 12).

If the drill site includes more than one forty acre tract, as in the case of fields being developed on wider spacing than 40 acres, the tracts designated as the spacing unit should be described on the line marked 'REMARKS'.

Unless the form is complete it will be returned without approval. NO OPERATIONS FOR THE DRILLING OF THE WELL SHALL BE COMMENCED UNTIL THE APPROVED APPLICATION IS RECEIVED.

This form must be accompanied by the $25 permit fee and a plat of the location prepared by a registered surveyor.

BE SURE YOU HAVE READ, AND THOROUGHLY UNDERSTAND, THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION.

FORM 2

North Dakota State Industrial Commission
Oil and Gas Division

ORGANIZATION REPORT

SEE INSTRUCTIONS OTHER SIDE

THIS REPORT IS TO BE FILED IN DUPLICATE WITH STATE GEOLOGIST, UNIVERSITY OF NORTH DAKOTA, GRAND FORKS, NORTH DAKOTA, IN CONJUNCTION WITH FORM 1.

1. Full name of company, organization, or individual_____

2. Postoffice address_____ (Street or Box) (City) (State)

3. Form and purpose of the organization_____

State whether corporation, a joint stock association, firm or partnership_____ also state the purpose of the organization, whether producer, pipe line, refiner, etc._____

If foreign corporation, give (1) state where incorporated; (2) Name and postoffice address of North Dakota agent, (3) Date of permit to do business in NORTH DAKOTA_____

Postoffice address_____

4. OFFICERS NAME POSTOFFICE ADDRESS

TRUSTEE_____

TRUSTEE_____

PRESIDENT_____

VICE PRESIDENT_____

SECRETARY_____

TREASURER_____

5. DIRECTORS NAME POSTOFFICE ADDRESS

6. Is this a re-organization?_____ If so, what was the previous organization?_____

DATED THIS_____ DAY OF_____, 19____

EXECUTED THIS_____ DAY OF_____, 19____

STATE OF_____ } ss
COUNTY OF_____ }

_____ (Company or Operator)

_____ (Signature) (Title)

Before me the undersigned authority, on this day personally appeared_____ known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the_____ day of_____ 19____

My commission expires_____

Notary Public in and for_____

Approved_____ 19____

By_____

INSTRUCTIONS

The office of the State Geologist will retain two copies of the completed form. If you wish approved copies for your files these should be submitted in addition to the two copies to be retained.

This form must be approved before any drilling permits will be issued to your organization. After the initial filing, additional reports must be submitted on the first day of each calendar year showing the current status of the organization.

FORM 3

North Dakota State Industrial Commission
Oil and Gas Division

DRILLING BOND

SEE INSTRUCTIONS OTHER SIDE

KNOW ALL MEN BY THESE PRESENTS. that _____

a _____ of _____ in the state of _____

as principal and _____ a corporation of _____

a corporate surety company authorized to do business in the State of North Dakota, as surety, for and in consideration of the granting of a permit to drill pursuant to Chap. 38-08 NDRC and amendments thereto, and the rules and regulations adopted by the Industrial Commission of the State of North Dakota, under the authority of the said law, are held and firmly bound unto the State of North Dakota in the sum of two thousand ($2,000.00) lawful money of the United States, to be paid to the State of North Dakota, for which payment, well and truly to be made, we bind ourselves and each of us, and each of our successors and assigns, jointly and severally, by these presents.

The condition of the foregoing obligation is such that, whereas the said principal is desirous of drilling an oil and/or gas well upon Section _____, Township _____, North, Range _____, West of the Fifth Principal Meridian, in _____, County, North Dakota, and has made application for permit so to do.

NOW THEREFORE, if said principal, in its operations after the execution of permit by the State Geologist of the State of North Dakota shall fully comply with said Chap. 38-08 NDRC and amendments thereto, and the Rules and Regulations of the Industrial commission of the State of North Dakota prescribed to govern the production of oil and gas on State and Private lands within the State of North Dakota, then and in that event the above obligation shall be void, otherwise to remain in full force and effect.

WITNESSES:

_____ _____

_____ By _____

ITS _____ PRINCIPAL

COUNTERSIGNED: By _____

_____ ITS _____ SURETY.

_____

STATE OF _____ }
COUNTY OF _____ } ss

On this _____ day of _____, before me, the undersigned, a Notary Public, within and for the County and State aforesaid, personally appeared _____ known to me to be the _____ of the _____ and acknowledged to me that he executed the within and foregoing instrument on behalf of said corporation.

NOTARY PUBLIC _____

_____

My Commission expires _____

(Attached acknowledgment of surety)

INSTRUCTIONS

BE SURE THAT THE BOND IS COMPLETE IN ALL RE-PECTS.

The term 'plugging' as used herein is intended to include the filling of pits and the reasonable restoration of the site. Before the bond will be terminated the agents of the Industrial Commission will inspect the site. Only after the site has been approved by the inspector, and all records concerning the operation have been filed, will the surety be given permission to terminate it's liability.

BE SURE YOU HAVE READ AND THOROUGHLY UNDERSTAND THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION.

FORM 3A

North Dakota State Industrial Commission

Oil and Gas Division

DRILLING BOND

KNOW ALL MEN BY THESE PRESENTS. that_____

a_____ of_____ in the state of_____

as principal and_____ a corporation of_____

a corporate surety company authorized to do business in the State of North Dakota, as surety, for and in consideration of the granting of a permit to drill pursuant to Chap. 227, Laws 33rd Leg. Ass. of N.D., and the rules and regulations adopted by the Industrial Commission of the State of North Dakota, under the authority of the said law, are held and firmly bound unto the State of North Dakota in the sum of ten thousand ($10,000.00) lawful money of the United States, to be paid to the State of North Dakota, for which payment, well and truly to be made, we bind ourselves and each of us, and each of our successors and assigns, jointly and severally, by these presents.

The condition of the foregoing obligation is such that, whereas the said principal is desirous of drilling oil and/or gas wells within the State of North Dakota, and has made application for permit so to do.

NOW THEREFORE, if said principal, in its operations after the execution of permit by the State Geologist of the State of North Dakota shall fully comply with said Chap. 227, Laws 33rd Leg. Ass. of N.D., and the Rules and Regulations of the Industrial Commission of the State of North Dakota prescribed to govern the production of oil and gas on State and Private lands within the State of North Dakota, then and in that event the above obligation shall be void, otherwise to remain in full force and effect.

WITNESSES:

_____ _____

_____ By_____

ITS_____ PRINCIPAL

COUNTERSIGNED: By_____

_____ ITS_____ SURETY.

_____

STATE OF_____ }
COUNTY OF_____ } ss

On this_____ day of_____, before me, the undersigned, a Notary Public, within and for the County and State aforesaid, personally appeared_____ known to me to be the _____ of the _____ and acknowledged to me that he executed the within and foregoing instrument on behalf of said corporation.

NOTARY PUBLIC_____

_____

My Commission expires_____

(Attached acknowledgment of surety)

INSTRUCTIONS

BE SURE THAT THE BOND IS COMPLETE IN ALL RESPECTS.

The term 'plugging' as used herein is intended to include the filling of pits and the reasonable restoration of the site.

Before the bond will be terminated the agents of the Industrial Commission will inspect the site. Only after the site has been approved by the inspector, and all records concerning the operation have been filed, will the surety be given permission to terminate it's liability.

BE SURE YOU HAVE READ AND THOROUGHLY UNDERSTAND THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION.

(SUBMIT IN TRIPLICATE)

Industrial Commission of the State of North Dakota

SEE INSTRUCTIONS ON OTHER SIDE

FORM 4

Refer to Permit No. _____

SUNDRY NOTICES AND REPORTS ON WELLS

1. Notice of Intention to Drill or Redrill		7. Report of Casing	
2. Notice of Intention to Change Plans		8. Report of Redrilling or Repair	
3. Notice of Intention to Pull Casing		9. Supplementary History	
4. Notice of Intention to Abandon Well		10. Well Potential Test	
5. Report of Water Shut-Off		11.	
6. Report of Shooting or Acidizing		12.	

(Indicate nature of notice by proper check mark in space above)

NAME OF LEASE _____ Date _____ 19____

WELL NO. _____ is located _____ ft. from (N) (S) line and _____ ft. from the (E) (W) line of Section _____ Township _____ Range _____ in _____ County _____ Field _____ Pool. The elevation of the _____ is _____ feet above sea level.

Name and Address of Contractor, or Company which will do work is:

_____

(DETAILS OF WORK)

(State names of, and expected depth of objective sands; show sizes, weight, and lengths of proposed casing, indicate mud weights, cementing points, and all other details of work).

Company _____

Address _____

By _____

Title _____

Do not write in this space

Approved _____ 19____

By _____

Title _____

INSTRUCTIONS

/

The office of the State Geologist will retain three copies of the approved form. If you desire additional copies for your files be sure to supply sufficient copies of the notice.

Be sure that the form is complete. Unsigned forms will be returned.

In the space headed 'Details of Work' should be included all pertinent information. The proposed work will not be approved if there is any doubt as to the compliance with the applicable rules.

BE SURE YOU HAVE READ AND THOROUGHLY UNDERSTAND THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION.

EMERGENCY PROCEDURE: The rules of the Industrial Commission require that this notice be filed and approval given before the proposed operation is started. If a situation exists where this procedure would constitute an undue hardship verbal permission may be obtained to proceed but, in any case, the form must be filed. Such verbal permission to proceed may be obtained from the Field Inspector in the District or from the office of the State Geologist if unable to contact the Field Inspector.

After the proposed operation is completed a report of the results of the operation must be filed where required by the applicable rules.

FORM 5 PAGE 1

North Dakota State Industrial Commission
Oil and Gas Division

REPORT OF OIL PRODUCTION

SEE INSTRUCTIONS ON OTHER SIDE

FIELD_____ POOL_____ COUNTY_____

PRODUCER_____

Lease Name	Well No.	Stored on lease first of month	Bbls. clean oil	Days Prod.	Max. Bbls. /day	Lease use Bbls.	Runs this month	Stored on lease end of month	water Bbls.

I, _____, certify that the above is a true and correct report of the production of oil by this organization, from this pool, for the month of_____, 19_____. This report consists of _____ pages.

By_____

Title_____

STATE OF_____ }
COUNTY OF_____ } ss

Before me, the undersigned authority, on this day personally appeared _____ known to me to be the person whose name is subscribed to the above instrument, who being duly sworn states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct. Subscribed and sworn to before me this_____ day of_____ 19_____

_____

My Commission expires_____ Notary Public in and for_____

INSTRUCTIONS

The office of the State Geologist requires three copies of this report.

BE SURE THAT YOU HAVE READ AND THOROUGHLY UNDERSTAND THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION.

The report must be notarized and must be received in the office of the State Geologist prior to the close of business on the fifteenth day of the succeeding month. WELLS FOR WHICH THIS REPORT IS NOT RECEIVED WILL NOT BE INCLUDED IN THE ALLOCATION FOR THE FOLLOWING MONTH AS SET FORTH IN THE PRORATION SCHEDULE WHICH ACCOMPANIES THE COMMISSION'S ORDER.

Wells should be clearly identified by lease name and well number, in alphabetical order, by pools. The well name should coincide with that on file in the office of the State Geologist.

Under the heading 'Bbls. clean oil' indicate, for each well, its production for the entire month. SINCE THE REPORT MUST BE NOTARIZED, BE SURE THAT THE PRODUCTION SHOWN FOR THE INDIVIDUAL WELL IS THE TRUE AMOUNT PRODUCED BY THAT WELL.

Under column headed, 'Lease Use Bbls.' indicate those amounts of oil utilized in operations on the lease. Oil used on other leases should be indicated in Column headed 'Runs This Month'.

Under column headed 'Runs This Month' indicate the amount of oil removed from the lease. If a portion of the oil was taken from the lease by anyone other than the parties listed on Form 8, a proper notation should be made at the bottom of the page.

All volumes should be shown to the nearest full barrel.

A separate report is required for each different Field, Pool, County, or Producer. If additional space is needed Form 5A may be used and the proper notation made in the certificate at the bottom of this form.

INFORMATION ON THIS FORM SHOULD BE CLEARLY PRINTED OR TYPED. THE INFORMATION PROVIDED BY THIS FORM IS USED IN COMPUTING ALLOWABLES AND MUST BE ACCURATE AND COMPLETE.

FORM 5B

North Dakota State Industrial Commission
Oil and Gas Division

REPORT OF GAS PRODUCTION

SEE INSTRUCTIONS OTHER SIDE

FIELD_____ POOL_____ COUNTY_____

The following is a correct report of gas production for the month of_____ 19_____

Company_____

I, _____, certify that the following is a true and correct report of the production of oil from this lease for the month of_____ 19_____.

Date_____ 19_____.

By_____

Title_____

Lease Name & Well No.	Sec. & ¼ of ¼	Twp.	Rge.	Days Produced	Well Head Press. psia	Cubic ft. of gas (in thousands)	Gallons of gasoline recovered	Bbls. of Water	Sulfur %

This form is required as a regular monthly report, regardless of the status of operations, and must be filed with the State Geologist by the 15th of the succeeding month.

EXECUTED THIS_____ DAY OF_____ 19_____ _____
(Company or Operator)

STATE OF_____ }
COUNTY OF_____ } ss

_____
(Signature) (Title)

Before me the undersigned authority, on this day personally appeared_____ known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the_____ day of_____ 19_____

_____

My Commission expires_____ Notary Public in and for_____

INSTRUCTIONS

The office of the State Geologist requires three copies of this form. BE SURE THAT YOU HAVE READ AND THOROUGHLY UNDERSTAND THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION. The information shown on this form must be accurate and complete. If any amounts shown are the result of estimates they should be so indicated. The completed form must be notarized.

FORM 6

North Dakota State Industrial Commission
Oil and Gas Division

WELL COMPLETION REPORT

SEE INSTRUCTIONS OTHER SIDE

OPERATOR_____ FIELD_____

STREET_____ POOL_____

CITY_____ STATE_____ COUNTY_____

LEASE NAME_____ WELL NO._____ ACRES IN UNIT_____

LOCATION_____ SEC._____ TWP._____ RGE._____ ELEVATION_____ (DF, or, KB.)
¼ of ¼ Section

PERMIT NO._____ ELECTRIC OR OTHER LOGS RUN?_____ 19_____

NUMBER OF CRUDE OIL PRODUCING WELLS ON THIS LEASE, INCLUDING THIS WELL_____

DATA ON TEST

DATE TEST COMMENCED_____ 19___ HOUR___ M. DATE TEST COMPLETED_____ 19___ HOUR___ M.

LENGTH OF TEST_____ HOURS _____ MINUTES.

FOR FLOWING WELL:

FLOWING PRESSURE ON CSG._____ LBS./SQ. IN.

FLOWING PRESSURE ON TBG._____ LBS./SQ. IN.

SIZE TBG._____ IN.

SIZE CHOKE_____ IN. TYPE CHOKE_____ (POS.ADJ.)

FOR PUMPING WELL:

LENGTH OF STROKE_____ INCHES

NUMBER OF STROKES PER MINUTE_____

WORKING BARRELS_____ (SIZE IN.)

SHUT IN PRESSURE_____ SIZE TBG._____ IN. NO. FT. RUN_____

WAS THIS WELL FLOWED FOR THE ENTIRE DURATION OF THIS TEST WITHOUT THE USE OF SWAB OR OTHER ARTIFICIAL DEVICE?_____

RESULT OF THIS TEST (BBLS. NET OIL PER 24 HRS.) _____

GAS-OIL RATIO OF THIS WELL IS_____ (CU. FT. OF GAS PER BBL., OF OIL)

PERCENT WATER PRODUCED DURING THIS TEST _____

GRAVITY OF OIL PRODUCED DURING THIS TEST (CORRECTED TO 60° A.P.I.)_____

NAME OF PIPE LINE OR OTHER CARRIER_____

IF SHOT: DATE_____ NO. QTS. USED_____

IF PERFORATED: NO. HOLES PER FT._____ IF ACIDIZED: NO. GALS. USED_____

GEOLOGICAL FORMATION SHOT, PERFORATED OR TREATED_____ FROM_____ FT. TO_____ FT.

SHOOTING, PERFORATING OR TREATING COMPANY_____

DATE WELL COMPLETED_____ 19___ HOUR WELL COMPLETED_____ M.

TOP OF PAY_____ FT.

TOTAL DEPTH OF WELL_____ FT.

PLUG BACK DEPTH_____ FT.

WAS THIS WELL CORED?_____ WHAT INTERVALS?_____

GIVE DRILL STEM TEST DATA ON REVERSE SIDE OF THIS FORM.

CASING RECORD

Size	Put in Well Ft.	Put in Well In.	Left in Well Ft.	Left in Well In.	No. Sacks Cement	Size	Put in Well Ft.	Put in Well In.	Left in Well Ft.	Left in Well In.	No. Sacks Cement

EXECUTED THIS_____ DAY OF_____ 19____

_____
(Company or Operator)

STATE OF_____ }
COUNTY OF_____ } ss

_____
(Signature) (Title)

Before me the undersigned authority, on this day personally appeared_____ known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the_____ day of_____ 19_____

_____

My Commission expires_____ Notary Public in and for_____

INSTRUCTIONS

The office of the State Geologist will retain three copies of this form. Be sure the form is complete and properly notarized.

BE SURE THAT YOU HAVE READ AND THOROUGHLY UNDERSTAND THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION.

DRILL STEM TEST DATA

FORM 7 REFER TO PERMIT #_____

North Dakota State Industrial Commission
Oil and Gas Division

PLUGGING RECORD

(Within 30 days after the plugging of any well has been accomplished, the owner or operator thereof shall file this form with the State Geologist, setting forth in detail the method used in plugging the well.)

OPERATOR_____FIELD_____

LEASE NAME_____WELL NO._____SEC._____TWP._____RGE._____

PERMIT NO._____POOL _____

ELEVATION_____(D.F., G.R., K.B.) COUNTY_____

ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:_____

STREET_____ CITY_____ STATE_____

DATE WELL WAS PLUGGED_____19____

TOTAL DEPTH_____

ELECTRIC OR OTHER LOGS RUN?_____

WAS THIS WELL CORED?_____IF SO, GIVE INTERVALS_____

WAS THE WELL FILLED WITH MUD LADEN FLUID, ACCORDING TO REGULATIONS OF THE STATE INDUSTRIAL COMMISSION?_____HOW WAS MUD APPLIED?_____WERE PLUGS USED?_____

IF SO SHOW ALL SHOULDERS LEFT FOR CASING, SIZES AND LENGTHS OF CASING, SIZE AND KIND OF PLUGS USED, AND DEPTHS PLACED. ALSO AMOUNT OF CEMENT AND ROCK_____

WAS NOTICE GIVEN BEFORE PLUGGING, TO ALL AVAILABLE ADJOINING LEASE AND LAND OWNERS?_____

GIVE DRILL STEM DATA ON REVERSE SIDE OF THIS FORM.

EXECUTED THIS_____DAY OF_____19____. _____
(Company or Operator)

STATE OF_____ }
COUNTY OF_____ } ss

_____
(Signature) (Title)

Before me the undersigned authority, on this day personally appeared_____known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me his the_____day of_____19____

_____

My Commission expires_____Notary Public in and for_____

INSTRUCTIONS

The office of the State Geologist will retain three copies of this form. Be sure the form is complete and properly notarized.

BE SURE THAT YOU HAVE READ AND THOROUGHLY UNDERSTAND THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION.

DRILL STEM TEST DATA

FORM 8

North Dakota State Industrial Commission
Oil and Gas Division

PRODUCERS CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL FROM LEASE

SEE INSTRUCTIONS OTHER SIDE

LEASE_____ (SEC.)_____(TWP.)_____ (RGE.)_____ COUNTY_____

PRODUCER_____ORGANIZATION NO_____FIELD_____

ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO_____

STREET_____ CITY_____ STATE_____

THE ABOVE NAMED PRODUCER HEREBY AUTHORIZES_____
(Name of Transporter)

WHOSE PRINCIPAL PLACE OF BUSINESS IS_____
(Street) (City) (State)

AND WHOSE FIELD ADDRESS IS_____

TO TRANSPORT_____% OF THE OIL PRODUCED FROM THE LEASE DESIGNATED ABOVE UNTIL FURTHER NOTICE

OTHER TRANSPORTERS TRANSPORTING OIL FROM THIS LEASE ARE:

_____% _____%
(Name of Transporter) (Name of Transporter)

REMARKS:

The undersigned certifies that the rules and regulations of the State Industrial Commission have been complied with except as noted above and that the transporter is authorized to transport the above percentage of oil produced from the above described property and that this authorization will be valid until further notice to the transporter named herein or until canceled by the_____

EXECUTED THIS_____DAY OF_____19____ _____
(Company or Operator)

STATE OF_____ }
COUNTY OF_____ } ss _____
(Affiant) (Title)

Before me the undersigned authority, on this day personally appeared_____known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the_____day of_____19____

_____

My Commission expires_____Notary Public in and for_____

APPROVED_____19____

BY_____

INSTRUCTIONS

The office of the State Geologist will retain three copies of the completed form. If additional copies are desired for your files they should be submitted with the three copies to be retained.

FORM 9

North Dakota State Industrial Commission
Oil and Gas Division

GAS-OIL RATIO REPORT

SEE INSTRUCTIONS OTHER SIDE

OPERATOR_____ FIELD_____ POOL_____

ADDRESS_____ MONTH OF_____

REQUIRED TEST?_____ SPECIAL TEST?_____

EQUIPMENT USED_____

Lease Name	Well No.	Date of Test	Prod. Method	Choke Size	Test Hours	Daily Allow Bbls	Produced During Test			GOR
							Water %	Oil Bbls.	Gas MCF	

Name of Person or Persons making above tests_____

EXECUTED THIS_____ DAY OF_____ 19____ _____
(Company or Operator)

STATE OF_____ }
COUNTY OF_____ } ss

_____
(Signature) (Title)

Before me the undersigned authority, on this day personally appeared_____ known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the_____ day of_____ 19____

_____

My Commission expires_____ Notary Public in and for_____

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INSTRUCTIONS

The office of the State Geologist will retain three copies of the completed form. BE SURE YOU HAVE READ AND THOROUGHLY UNDERSTAND THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION. This form must be notarized.

The information shown on this form will be used in computing allowables for the wells and should be complete and accurate.

FORM 9A

North Dakota State Industrial Commission
Oil and Gas Division

RESERVOIR PRESSURE TEST

SEE INSTRUCTIONS OTHER SIDE

OPERATOR_____ FIELD_____ POOL_____

ADDRESS_____ MONTH OF_____

REQUIRED TEST?_____ SPECIAL TEST?_____

EQUIPMENT USED_____ DATUM_____ FEET BELOW S.L.

Lease Name	Well No.	Date of Test	Depth of Test	Fluid Gradient Opposite Reservoir	Tubing Pressure	Reservoir Pressure	Reservoir Temperature

% variation in calibration of instrument before and after test_____

Name of Person or Persons making above tests_____

EXECUTED THIS_____ DAY OF_____ 19____ _____
(Company or Operator)

STATE OF_____ }
COUNTY OF_____ } ss

_____
(Signature) (Title)

Before me the undersigned authority, on this day personally appeared_____ known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the_____ day of_____ 19____

_____

My Commission expires_____ Notary Public in and for_____

INSTRUCTIONS

The office of the State Geologist will retain three copies of the completed form. BE SURE YOU HAVE READ AND THOROUGHLY UNDERSTAND THE RULES AND REGULATIONS OF THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION. This form **must** be notarized.

FORM 10A

North Dakota State Industrial Commission
Oil and Gas Division

TRANSPORTERS AND STORERS MONTHLY REPORT

REPORT OF_____ FOR THE MONTH OF_____

ADDRESS_____
(Street) City (State)

FIELD_____ POOL_____

RECEIPTS

NAME OF PRODUCER	NAME OF LEASE AND WELL NUMBERS	LEASE TOTAL

AFFIDAVIT

STATE OF_____ }
COUNTY OF_____ } ss

Before me, the undersigned authority, on this day personally appeared_____ known to me to be the person whose name is subscribed on this report, who after being by me duly sworn on oath or affirmation states that he is authorized to make and execute this report, that this report is a true and correct reflection of the record of the operations reported herein, and that no pertinent matter required in this report has been omitted therefrom.

_____
(Name of Transporter or Storer)

_____
(Signature) (Title)

Sworn to and subscribed before me this_____ day of_____ 19_____

_____

Notary Public in and for_____

INSTRUCTIONS

The office of the State Geologist will require two copies of this form. THIS FORM MUST BE NOTARIZED. Be sure the information is complete and accurate.

If amounts shown are subject to correction at a later date be sure that the corrected amounts are clearly indicated.

Included on this form should be listed, separately, all amounts of crude oil or other liquid hydrocarbons. The amounts shown will be checked against the runs from leases reported by the producer.

All amounts are to be shown as barrels of 42 gallons each, corrected for temperature. All volumes should be shown to the nearest full barrel.

FORM 10B

North Dakota State Industrial Commission
Oil and Gas Division

TRANSPORTERS AND STORERS MONTHLY REPORT

SEE INSTRUCTIONS OTHER SIDE

REPORT OF_____ FOR THE MONTH OF_____

ADDRESS_____
(Street) City (State)

FIELD_____ POOL_____

DELIVERIES

CONSIGNEE	DESTINATION	QUANTITY IN BARRELS

AFFIDAVIT

STATE OF_____ }
COUNTY OF_____ } ss

Before me, the undersigned authority, on this day personally appeared_____ known to me to be the person whose name is subscribed on this report, who after being by me duly sworn on oath or affirmation states that he is authorized to make and execute this report, that this report is a true and correct reflection of the record of the operations reported herein, and that no pertinent matter required in this report has been omitted therefrom.

_____
(Name of Transporter or Storer)

_____
(Signature) (Title)

Sworn to and subscribe before me this_____ day of_____ 19_____

_____

Notary Public in and for_____

INSTRUCTIONS

The office of the State Geologist will require two copies of the completed form. THIS FORM MUST BE NOTARIZED. Be sure the information is complete and accurate.

Included on this form should be listed, separately, all amounts of crude oil or liquid hydrocarbons. The amounts shown will be checked against the amount reported on Form 10A.

All amounts are to be shown as barrels of 42 gallons each, corrected for temperature. All volumes should be shown to the nearest full barrel.

FORM 11

Nominations for the Purchase of Crude Oil
Industrial Commission
Bismarck, North Dakota

SEE INSTRUCTIONS OTHER SIDE

PURCHASER _____

ADDRESS _____

In compliance with the Rules and Regulations of the Industrial Commission of the State of North Dakota we hereby submit nominations as to our daily demand for crude oil for the month of _____, 195__

FIELD	COUNTY	BARRELS DAILY

TOTAL _____

Dated this _____ day of _____, 195__.

SIGNED BY: _____
Representative of Purchaser

Subscribed and sworn to before me this _____ day of _____, 195__

_____
Notary Public

INSTRUCTIONS

The office of the State Geologist will require three copies of this form, THIS FORM MUST BE NOTARIZED.

The completed form MUST be received in the office of the State Geologist by the close of business on the tenth day of the month preceeding that in which the purchases are contemplated. Show the amount, in barrels/day, that you wish to purchase from each field or pool.

STATE OF OHIO, DEPARTMENT OF NATURAL RESOURCES

We are pleased to send you the information requested in your letter of June 8, 1960. The following answers are in the numbered order of the eight items of your request.

(1) Enclosed find excerpts of the statutes of the Ohio Revised Code pertaining to the department of natural resources and its relationship to energy resources. As you will note our division of geological survey is the principal agency concerned with the energy resources field and its function to a large extent is in the nature of collection and distribution of data. Our other interest in the energy field is the division of reclamation which is basically a regulatory agency whose prime duty is to enforce the law that requires reclamation treatment of strip mine land in the coal-bearing counties of Ohio.

(2) The first geological survey of Ohio was established by the general assembly in 1837 and functioned through 1838. A second survey, established in 1869, operated for 6 years, and a third survey created in 1899 was in existence only 1 year. The fourth and present geological survey has been in continuous operation since 1900. Throughout its history the survey has devoted a large portion of its efforts to the study of the energy resources of the State. As a result we have on file hundreds of records showing stratigraphic relationships of the coalbeds, their thickness, extent, physical, chemical, and thermal properties and thousands of oil and gas well records showing depth, producing horizons, and production. Many reports and maps have been published and distributed to industry, other governmental agencies, educational institutions and the public in general.

In 1948 the law dealing with the reclamation of strip-mined lands was put into effect as a function of the department of agriculture. In 1959 the division of reclamation, which administers the law, was transferred to the department of natural resources.

(3) The statutes set forth quite clearly the objectives and duties of both the division of geological survey and the division of reclamation. We operate directly as the laws are written. (See enclosure.)

(4) The division of geological survey does not issue particular rules and regulations in the energy field. It offers data and advice to industry and in turn receives basic data that is integrated with existing information and knowledge.

(5) The division of geological survey cooperates closely with the division of labor statistics and the division of mines in the Ohio Department of Industrial Relations. The functions of both involve the energy resources field. The division of labor statistics is concerned mainly with production data while the division of mines is mainly a regulatory agency dealing with mine safety and the enforcement of the oil and gas laws. The geological survey acts in an advisory capacity to both agencies.

The division of reclamation is charged with the responsibility of enforcing the coal strip mine reclamation law. The division of geological survey furnishes data and acts in an advisory capacity to this division.

The division of geological survey works closely with the Ohio State University Engineering Experiment Station in respect to fuels research. This research, which deals with the basic nature of Ohio's coals and how they will respond to beneficiation, has been mutually beneficial to both organizations. The survey has performed the geologic field work necessary, while the experimental station has done the laboratory analyses.

As we see it here there is no particular conflict with other agency programs.

(6) The principal area in which closer coordination is desired is in the collection of production data. The division of labor statistics does not cooperate with the U.S. Bureau of Mines, as is the practice in many other States, and as a result there are often wide discrepancies in the published data. Uniformity in questionnaires and in method of reporting should be accomplished.

(7) The program of the division of geological survey is well coordinated within the departmental structure. There is every indication that the program and functions are meeting most of the immediate requirements of industry; however, the requests for service work by industry has dominated the activities in the energy field, resulting in neglect of the long range basic research effort.

(8) In Ohio we recently completed a coal reserve study which demonstrated a recoverable reserve of over 20 billion tons of coal occurring at depths from 0 to about 600 feet. The deeper occurrences of coal are unknown and we feel that probing deeper possibilities with a series of test holes in southeastern Ohio would be beneficial in evaluating the ultimate energy potential of the State.

Some basic research has been accomplished in determining the physical constituents of Ohio coal. This type of research should be accelerated because the data derived therefrom will be significant in future beneficiation processes and therefore in the ultimate utilization of coal.

In the past, interest in the development of oil and gas in Ohio has waxed and waned. Today we are in a period of renewed interest. Lacking are physical and hydraulic data, such as porosity, permeability and oil-gas-water ratios, which are basic to the analyses of reservoir conditions.

Ohio has no well-spacing regulations. It is imperative that well-spacing legislation be enacted if we are to develop our reservoirs on sound engineering principles.

EXCERPT STATUTES OF OHIO REVISED CODE

CHAPTER 1513. RECLAMATION OF STRIP-MINED LAND

1513.01 (898-227). Definitions.

As used in sections 1513.01 to 1513.18, inclusive, and sections 1513.20 to 1513.26, inclusive, of the Revised Code:

(A) "Strip mining" means all or any part of the process followed in the production of coal from a natural coal deposit whereby the coal may be extracted after removing the overburden therefrom.

(B) "Overburden" means all of the earth and other materials which lie above a natural deposit of coal; and also means such earth and other materials after removal from their natural state in the process of strip mining.

(C) "Spoil bank" means a deposit of removed overburden.

(D) "Area of land affected" means the area of land from which overburden has been removed, or upon which a spoil bank exists, or both.

(E) "Operation" means all of the premises, facilities, and equipment used in the process of producing coal from a designated strip mine.

(F) "Operator" means any person, partnership, or corporation engaged in strip mining who removes or intends to remove more than two hundred fifty tons of coal from the earth by strip mining within twelve succesive calendar months from any one operation.

(G) "Person" means person, partnership, or corporation. (128 v H 1049. Eff. 11-2-59.)

On the facts, a township zoning ordinance prohibiting strip mining in an agricultural district was unconstitutional. *East Fairfield Coal Co.* v. *Booth*, 166 OS 379, 143 NE (2d) 309.

Where land has been strip mined so as to be "affected" within the meaning of 1513.01, subsequent operations by the same operator involving the deposit of spoil banks thereon does not "affect" the land or change its status. 1954 OAG 4625.

1513.02. Division of reclamation.

There is hereby created in the department of natural resources the division of reclamation, which shall be administered by the chief of the division of reclamation who shall be appointed by the director of natural resources, with the approval of the natural resources commission, provided that the incumbent chief shall continue to hold his office for the full term for which he was appointed.

Such chief shall not hold any other public office, nor shall he engage in any occupation or business which might interfere with or be inconsistent with his duties as such chief.

Before entering upon the duties of his office, the chief shall take an oath of office as required by sections 3.22 and 3.23 of the Revised Code, and shall file in the office of the secretary of state a bond signed by him and by surety approved by the governor, for the sum of fifty thousand dollars payable to the state, conditioned upon the faithful performance of his duties.

The chief shall administer the provisions of sections 1513.01 to 1513.26, inclusive, of the Revised Code, and shall conduct a continuing survey to determine

the lands within the state that, because of strip mining, as defined in sections 1513.01 and 1513.19 of the Revised Code, completed prior to January 1, 1948, strip mine banks remaining unreclaimed as the result of substitutions authorized by section 1513.16 of the Revised Code, erosion, or other cause, should be reclaimed in order to preserve and increase the natural resources of the state. (128 v H 1049. Eff. 11-2-59. 126 v 895.)

1513.02 former GC 898-224.
Filling vacancy in appointive state office, 3.03.
Where the United States has acquired, under USC Title 16, § 516, for federal forest purposes, an interest in particular lands, which is so limited that the federal government is without power to regulate and control the operations of third parties in the extraction of minerals, the regulation and control of such operations by a state in the exercise of its police power does not constitute an interference with any power delegated to the federal government; and Ohio Coal Strip Mine and Reclamation Act may be enforced with respect to such operations. 1951 OAG 790.

1513.03. Division office; employees

The division of reclamation shall have an office in Columbus, and the chief of the division of reclamation shall maintain such office and keep it open for the transaction of business at all times during which the principal office of the department of natural resources is kept open for such purpose.

The chief shall appoint field assistants and such other employees of the division as are necessary for the performance of work prescribed by sections 1513.01 to 1513.26, inclusive, of the Revised Code, and for the performance of the other work of said division, prescribe their duties, and fix their compensation in accordance with such schedules as are provided by law for the compensation of state employees.

All employees of the division, unless specifically exempted by law, shall be employed subject to the classified civil service laws in force at the time of employment. The transfer of this division shall not adversely affect the civil service status of any employee. (128 v H 1049. Eff. 11-2-59. 126 v 895.)

1513.03 former GC 898-225.

1513.04 (898-226). Regulations.

The chief of the division of reclamation shall adopt and promulgate regulations governing administrative procedures to be followed in the administration of sections 1513.01 to 1513.26, inclusive, of the Revised Code, governing said division, which regulations shall be of general application in all matters and to all persons affected by such sections.

No regulation adopted by said chief shall be effective until the tenth day after it has been promulgated by the filing of a certified copy thereof in the office of the secretary of state.

All regulations filed in the office of the secretary of state pursuant to this section shall be recorded by the secretary of state under a heading entitled, "regulations of the division of reclamation," and shall be numbered consecutively under such heading and shall bear the date of filing. Such regulations shall be public records open to public inspection.

No regulation filed in the office of the secretary of state pursuant to this section shall be amended except by a regulation which contains the entire regulation as amended and which repeals the regulation amended. Each regulation which amends a regulation shall bear the same consecutive regulation number as the number of the regulation which it amends, and it shall bear the date of filing.

No regulation filed in the office of the secretary of state pursuant to this section shall be repealed except by a regulation. Each regulation which repeals a regulation shall bear the same consecutive regulation number as the number of the regulation which it repeals, and it shall bear the date of filing.

The authority and the duty of the chief to adopt and promulgate regulations as provided in this section shall not be governed by, or be subject to, sections 119.01 to 119.13, inclusive, of the Revised Code.

The chief shall have available at all times copies of all regulations of said division on file in the office of the secretary of state pursuant to this section, and shall furnish same free of charge to any person requesting same. (128 v H 1049. Eff. 11-2-59.)

1513.05. Reclamation board of review.

There is hereby created a reclamation board of review consisting of five members appointed by the governor with the advice and consent of the senate for terms of five years, except that the terms of the first five members of said board shall be for one, two, three, four, and five years, respectively, as desig-

nated by the governor at the time of the appointment, except that any vacancy in the office of member of said board shall be filled by appointment by the governor for the unexpired term of the member whose office shall be vacant. Each vacancy occurring on said board shall be filled by appointment within sixty days after such vacancy occurs. One of the appointees to such board shall be a person who, by reason of his previous vocation, employment, or affiliations, can be classed as a representative of coal strip mine operators. One of the appointees to such board shall be a person who, by reason of his previous vocation, employment, or affiliations, can be classed as a representative of the public. One of the appointees to such board shall be a person who, by reason of his previous training and experience, can be classed as one learned and experienced in modern forestry practices. One of the appointees to such board shall be a person who, by reason of his previous training and experience, can be classed as one learned and experienced in agronomy. One of the appointees to such board shall be a person who, by reason of his previous training and experience, can be classed as one capable and experienced in earth-grading problems. Not more than three members shall be members of the same political party.

The board may appoint a secretary to hold office at its pleasure. Such secretary shall perform such duties as the board prescribes, and shall receive such compensation as the board fixes in accordance with such schedules as are provided by law for the compensation of state employees.

Three members constitute a quorum and no action of the board shall be valid unless it has the concurrence of at least three members. The board shall keep a record of its proceedings.

Each member shall be paid as compensation for his work as such member twenty dollars per day when actually engaged in the performance of his work as a member and when engaged in travel necessary in connection with such work. In addition to such compensation each member shall be reimbursed for all traveling, hotel, and other expenses necessarily incurred in the performance of his work as a member.

Annually one member shall be elected as chairman and another member shall be elected as vice-chairman. Such officers shall serve for terms of one year.

The governor may remove any member of the board from office for inefficiency, neglect of duty, malfeasance, misfeasance, or nonfeasance, after delivering to such member the charges against him in writing together with at least ten days' written notice of the time and place at which the governor will publicly hear such member, either in person or by counsel, in defense of the charges against him. If such member is removed from office, the governor shall file in the office of the secretary of state a complete statement of the charges made against such member and a complete report of the proceedings thereon. In such case the action of the governor removing such member from office is final. (126 v 895. Eff. 10–13–55.)

1513.05 former GC 898–233.
Filling vacancy in appointive state office, 3.03.

1513.06 (898–234). Regulations of board.

The reclamation board of review shall adopt and promulgate regulations governing administrative procedure to be followed in the administration of sections 1513.01 to 1513.18, inclusive, of the Revised Code, governing said board, which regulations shall be of general application in all matters and to all persons affected by such sections.

No regulation adopted by said board shall be effective until the tenth day after it has been promulgated by the filing of a certified copy thereof in the office of the secretary of state.

All regulations filed in the office of the secretary of state pursuant to this section shall be recorded by the secretary of state under a heading entitled, "regulations of the reclamation board of review," and shall be numbered consecutively under such heading and shall bear the date of filing. Such regulations shall be public records open to public inspection.

No regulation filed in the office of the secretary of state pursuant to this section shall be amended except by a regulation which contains the entire regulation as amended and which renea's the regulation amended. Each regulation which amends a regulation shall bear the same consecutive regulation number as the number of the regulation which it amends, and it shall bear the date of filing.

No regulation filed in the office of the secretary of state pursuant to this section shall be repealed except by a regulation. Each regulation which repeals a regulation shall bear the same consecutive regulation number as the number of the regulation which it repeals, and it shall bear the date of filing.

The authority and the duty of the board to adopt and promulgate regulations as provided in this section shall not be governed by, or be subject to, sections 119.01 to 119.13, inclusive, of the Revised Code.

The board shall have available at all times copies of all regulations of said board which it has filed in the office of the secretary of state pursuant to this section, and shall furnish them free of charge to any person requesting same.

1513.07. Strip mining license.

(A) No operator shall engage in strip mining without having a license to do so issued by the chief of the division of reclamation as provided in this section. Said chief shall issue such license upon the filing with him of an application therefor and the payment to him of a license fee in an amount equal to the sum of fifty dollars plus an amount equal to the amount of ten dollars multiplied by that number which is stated in the application as the estimate of the number of acres which will comprise the area of land affected within the license year by the strip mining operation for which the license is requested, and the deposit with him of a surety bond or other security as prescribed by division (A) of section 1513.08 of the Revised Code; provided, however, that the chief shall refuse to issue such license if he finds that the applicant has failed, and continues to fail, to comply with sections 1513.01 to 1513.19, inclusive, of the Revised Code.

An application for a license shall be upon such form as said chief prescribes and provides, and shall contain the following information:

(1) The name and address of the applicant;

(2) A description of the land upon which the applicant proposes to engage in a strip mining operation, which description shall set forth: the name of the county, township, and municipal corporation, if any, in which such land is located; the location of its boundaries; and shall otherwise describe the land with sufficient certainty so that it may be located and distinguished from other lands;

(3) An estimate of the number of acres of land which will comprise the area of land affected within the year for which the license is requested by the operation in which the applicant proposes to engage upon the land described in such application.

Such license shall authorize the licensee to engage as the operator of a strip mining operation upon the land described in said application during the license year for which the license is issued.

If an operator, who is engaged in a duly licensed strip mining operation and desires to continue such operation without interruption after the end of his existing license year, files with the chief, at least ten days before the end of his existing license year, an application for a license for such operation for the year immediately following the end of his existing license year, such operator may continue such operation without interruption after the end of his existing license year even though a license for which he so applied has not been issued to him by the chief, and such operator shall not be deemed or held to be in violation of section 1513.07 or section 1513.17 of the Revised Code, if such operator's failure to have such license results merely from the chief's failure to act upon the application therefor.

(B) If, at any time within a year during which an operator is licensed to engage in a strip mining operation upon land described in his application for such license, such operator desires to engage in a strip mining operation on land not described in his said application, he may file with the chief an amendment of his said application, which shall describe such land. Upon the filing by such operator of such amendment of his application the land upon which such operator shall be authorized to engage in strip mining during the license year for which such license was issued, shall be the land described in his said application for such license plus the land described in such amendment of said application.

(C) If at any time within a license year the number of acres of land in the area of land affected by the operation for which a license is issued, exceeds by more than ten per cent the number of acres stated in the application for such license or in any amendment of such application, as the applicant's estimate of the number of acres of land which will comprise the area of land affected by

such operation within such license year, the operator of such operation shall file with the chief an amendment of said application stating a revised estimate of the number of acres of land which will comprise the area of land affected by such operation within such license year. At the time of filing such an amendment the operator shall pay to said chief a license fee in such amount as is equal to the amount of ten dollars multiplied by that number which is equal to the difference between the number of acres of land which will comprise the area of land affected by such operation within such license year, as stated in such revised estimate, and the number of acres of land on account of which a license fee has theretofore been paid to such chief by such operator for the license for such operation for such license year, and such operator shall also deposit with said chief a surety bond or other security as prescribed by division (B) of section 1513.08 of the Revised Code.

(D) Whoever fails to file an amendment of his application for a license authorizing him to engage in a strip mining operation, or fails to pay license fees to, or to deposit a surety bond or other security with, the chief, as required by the provisions of division (C) of this section, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than three hundred nor more than one thousand dollars. (126 v 895. Eff. 10-13-55.)

1513.07 former GC 898-228.
Fees and moneys paid weekly into state treasury, 131.01.
The removal of coal by the strip mining method is subject to regulation, control, and under some circumstances prohibition as a proper exercise of the police power. *East Fairfield Coal Co.* v. *Miller,* 71 Abs 490.
State regulation of strip-mining does not pre-empt the field and prevent local zoning authorities from prohibiting it. *East Fairfield Coal Co.* v. *Miller,* 71 Abs 490.
The State of Ohio has no authority to require either a license or payment of a license fee by strip mining operators who carry on their operations solely on forest lands owned by the United States. 1951 OAG 152.

1513.08. Operator's surety bond.

(A) The surety bond referred to in division (A) of section 1513.07 of the Revised Code shall be upon such form as the chief of the division of reclamation prescribes and provides, and shall be signed by the operator as principal, and by a surety company authorized to transact business in the state as surety. Such bond shall be payable to the state and shall be conditioned upon the faithful performance by the operator of all things to be done and performed by him as provided in section 1513.16 of the Revised Code. The bond shall be for the payment of that amount of money which is equal to two hundred twenty dollars multiplied by that number which is stated in the application for the license as an estimate of the number of acres of land which will comprise the area of land affected within the year for which the license is requested, by the operation in which the applicant proposes to engage upon the land described in such application. No such surety bond shall be for the payment of an amount of money less than one thousand dollars. The operator may deposit with said chief in lieu of such surety bond, cash in an amount equal to the amount of the surety bond as prescribed in this division of this section, or United States government securities having a par value equal to or greater than the amount of the surety bond as prescribed in this division of this section. Cash or securities so deposited shall be deposited upon the same terms as the terms upon which surety bonds may be deposited.

Immediately upon a deposit of cash or securities with the chief, he shall deliver the same to the treasurer of state who shall hold it in trust for the purposes for which the same has been deposited with said chief. The treasurer of state shall be responsible for the safekeeping of such deposits. An operator making a deposit of cash or United States government securities as provided in this division of this section may withdraw and receive from said treasurer of state, on the written order of said chief, all or any portion of the cash or securities in the possession of said treasurer of state, upon depositing with said treasurer of state cash or other United States government securities equal in par value to the par value of the cash or securities withdrawn. An operator may demand and receive from said treasurer of state all interest or other income from any such securities as the same become due. If securities so deposited with and in the possession of said treasurer of state mature or are called for payment by the issuer thereof, said treasurer of state, at the request of the operator who deposited same, shall convert the proceeds of the redemption or payment of such securities into such other United States government securities or cash as may be designated by the operator.

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(B) The surety bond referred to in division (C) of section 1513.07 of the Revised Code shall be upon such form as the chief of the division of reclamation prescribes and provides, and shall be signed by the operator as principal and by a surety company authorized to transact business in the state as surety. Such bond shall be payable to the state and shall be conditioned upon the faithful performance by the operator of all things to be done and performed by him as provided in section 1513.16 of the Revised Code. The bond shall be for the payment of that amount of money which is equal to two hundred twenty dollars multiplied by that number which is equal to the difference between the number of acres of land which will comprise the area of land affected within the year for which the license was issued, as stated in a revised estimate as provided for in division (C) of section 1513.07 of the Revised Code, and the number of acres of land on account of which a surety bond or other security has theretofore been deposited in connection with such license as required by divisions (A) and (C) of this section.

The operator may deposit with said chief in lieu of such surety bond, cash in an amount equal to the amount of the surety bond as prescribed in this division of this section, or United States government securities having a par value equal to or greater than the amount of such surety bond. Cash or securities so deposited shall be deposited upon the same terms as the terms upon which such surety bonds may be deposited. Cash or securities so deposited with the chief shall be delivered by him to the treasurer of state, and the treasurer of state shall hold such cash and securities and make disposition thereof in accordance with the provisions contained in division (A) of this section pertaining to cash or securities delivered to the treasurer of state as therein provided. (126 v 895. Eff. 10-13-55.)

1513.08 former GC898-229.

1513.09. Operator's report.

Within sixty days after the end of a year during which an operator was licensed to engage as the operator of a strip mining operation, or prior to that time if the operation for which a license was issued has been completed or abandoned before the end of such license year, the operator shall file with the chief of the division of reclamation a report of the operation so licensed, on a form to be prescribed and furnished by said chief, which report shall:

(A) Identify the operation;

(B) State the county, township, and municipal corporation, if any, in which it is located and its location with reference to the nearest public highway;

(C) Describe the area of land affected by the operation within the period of time covered by such report with sufficient certainty so that it may be located and distinguished from other lands.

Such report shall have attached to it a map certified by a surveyor registered under the laws of this state, showing the boundary lines of the area of land affected by the operation within the period of time covered by such report, and the number of acres comprising such area, and the access to such area from the nearest public highway.

In the event such report shows that the number of acres of land comprising the area of land affected is larger than the number of acres for which the operator has theretofore deposited with the chief a surety bond or cash or United States government securities to ensure their reclamation as required by section 1513.16 of the Revised Code, such report shall be accompanied by an additional surety bond or cash or United States government securities in such amount as is equal to the amount of two hundred twenty dollars multiplied by that number which is equal to the difference between the number of acres in the area of land affected as shown by such report and the number of acres of land for which the operator has theretofore deposited with the chief a surety bond or cash or United States government securities to ensure their reclamation as required by section 1513.16 of the Revised Code; and in such event such report shall also be accompanied by an additional license fee in such amount as is equal to the amount of ten dollars multiplied by that number which is equal to the difference between the number of acres in the area of land affected as shown by such report and the number of acres of land for which the operator has theretofore paid to the chief a license fee in connection with the license authorizing the operation covered by such report. The deposit of such additional surety bond or cash or securities shall be upon the same terms as the terms of the deposit of the surety bond or cash or securities which were deposited by the operator at the time of

the issuance of the license authorizing the operation covered by said report. The chief shall immediately deliver such additional cash or other securities to the treasurer of state, to be held by him upon the same terms as the terms under which he holds cash or other securities under section 1513.08 of the Revised Code. (126 v 895. Eff. 10-13-55.)

1513.09 former GC 898-230.

Where land has been strip mined so as to be "affected" within the meaning of 1513.01, subsequent operations by the same operator involving the deposit of spoil banks thereon does not "affect" the land or change its status. 1954 OAG 4625.

1513.10. Charge against bonds; rotary fund; refund.

Upon receipt of the operator's report as required by section 1513.09 of the Revised Code, the chief of the division of reclamation shall charge against the surety bonds or other securities on deposit in connection with the operation covered by such report the sum of two hundred twenty dollars for each acre of land in the area of land affected by such operation within the time covered by such report. Thereupon said chief shall issue to the operator and his surety a release of any portions of the surety bonds or other security on deposit in connection with such operation against which no charge has been made. Upon issuing to an operator any release which provides for the release of cash or United States government securities in the possession of the treasurer of state, said chief shall also promptly transmit a certified copy of such release to said treasurer of state. Upon presentation of any such release to said treasurer of state by the operator to whom it was issued, or by such operator's authorized agent, said treasurer of state shall deliver to the operator or his authorized agent such an amount of cash or such United States governemnt securities as specified in such release.

In the event such report shows that the number of acres of land comprising the area of land affected is smaller than the number of acres of land for which the operator has theretofore paid to the chief a license fee at the rate of ten dollars per acre in connection with the license authorizing the operation covered by such report, the operator shall be entitled to a refund of a portion of the license fees so theretofore paid by him. Such refund shall be in such amount as is equal to the amount of ten dollars multiplied by that number which is equal to the difference between the number of acres in the area of land affected as shown by such report, and the number of acres of land for which license fees were so theretofore paid by such operator. Such refund shall be paid by the treasurer of state out of a special fund hereby created to be known as the reclamation fee rotary fund. The treasurer of state shall place ten thousand dollars from the fees collected pursuant to section 1513.07 of the Revised Code in such fund, and as required by the depletion thereof, place to the credit of such rotary fund an amount sufficient to make the total in such fund at the time of each such credit ten thousand dollars. The balance of the fees collected pursuant to section 1513.07 of the Revised Code shall be paid into the state treasury to the credit of the general revenue fund. (128 v H 1049. Eff. 11-2-59. 126 v 895.)

1513.10 former GC 898-231.

1513.11 (898-235). Order shall be in writing.

Every adjudication, determination, or finding by the chief of the division of reclamation affecting the rights, duties, or privileges of an operator or his surety or of an applicant for a license shall be made by written order and shall contain a written finding of fact by the chief of the facts upon which the adjudication, determination, or finding is based. Notice of the making of such order shall be given to the person whose rights, duties, or privileges are affected thereby, by mailing a certified copy thereof to such person by registered mail.

Adjudications, determinations, findings, and orders made by the chief shall not be governed by, or be subject to, sections 119.01 to 119.13, inclusive, of the Revised Code.

1513.12 (898-236). Appeal to chief of division.

Any person claiming to be aggrieved or adversely affected by any regulation adopted and promulgated by the chief of the division of reclamation as provided for in section 1513.04 of the Revised Code may at any time appeal to the chief to repeal or amend such regulation. Such appeal shall be in writing and shall set forth the regulation complained of and the grounds upon which the appeal is based.

Upon the filing of such appeal the chief shall fix the time and place at which a hearing on the appeal will be held, and shall give appellant at least ten days' written notice thereof by mail. The chief may postpone or continue any hearing upon his own motion or upon application of appellant.

For the purpose of such hearings the chief may require the attendance of witnesses and the production of books, records, and papers, and he may, and at the request of appellant he shall, issue a subpoena for any witness or a subpoena duces tecum to compel the production of any books, records, or papers, directed to the sheriff of the county where such witness is found, which subpoena shall be served and returned in the same manner as a subpoena in a criminal case is served and returned. The fees and mileage of the sheriff and witnesses shall be the same as those allowed by the court of common pleas in criminal cases. Such fee and mileage expenses incurred at the request of appellant shall be paid in advance by appellant, and the remainder of such expenses shall be paid out of funds appropriated for the expenses of the division of reclamation.

In case of disobedience or neglect of any subpoena served on any person, or the refusal of any witness to testify to any matter regarding which he may be lawfully interrogated, the court of common pleas of the county in which such disobedience, neglect, or refusal occurs, or any judge thereof, on application of the chief, shall compel obedience by attachment proceedings for contempt as in the case of disobedience of the requirements of a subpoena issued from such court or for a refusal to testify therein. Witnesses at such hearings shall testify under oath, and the chief and his field assistants may administer oaths or affirmations to persons who so testify.

Upon completion of the hearing the chief shall by written order either deny the appeal or repeal or amend the regulation complained of. Notice of the making of such order shall be given to the appellant by mailing a certified copy thereof to such appellant by registered mail.

At all hearings provided for in this section, appellants may present their appeal in person or by legal counsel.

The filing of such appeal shall not automatically operate to suspend the operation of the regulation of which appellant complains, but the chief may, upon application by appellant, suspend the operation of such regulation generally or specially pending determination of the appeal, upon such terms as he deems proper.

1513.13 (898-237). Appeal to board.

Any person claiming to be aggrieved or adversely affected by an order by the chief of the division of reclamation may appeal to the reclamation board of review for an order vacating or modifying such order.

The person so appealing to the board shall be known as appellant and the chief shall be known as appellee. Appellant and appellee shall be deemed to be parties to the appeal.

Such appeal shall be in writing and shall set forth the order complained of and the grounds upon which the appeal is based. Such appeal shall be filed with the board within thirty days after the date upon which appellant received notice by registered mail of the making of the order complained of, as required by section 1513.11 of the Revised Code. Notice of the filing of such appeal shall be filed with the chief within three days after the appeal is filed with the board.

Within seven days after receipt of such notice of appeal the chief shall prepare and certify to the board at the expense of appellant a complete transcript of the proceedings out of which the appeal arises, including a transcript of the testimony submitted to the chief.

Upon the filing of such appeal the board shall fix the time and place at which the hearing on the appeal will be held, and shall give appellant and the chief at least ten days' written notice thereof by mail. The board may postpone or continue any hearing upon its own motion or upon application of appellant or of the chief.

The filing of an appeal provided for in this section does not automatically suspend or stay execution of the order appealed from, but upon application by the appellant the board may suspend or stay such execution pending determination of the appeal upon such terms as it deems proper.

The board shall hear the appeal de novo, and either party to the appeal may submit such evidence as the board deems admissible.

For the purpose of conducting a hearing on an appeal, the board may require the attendance of witnesses and the production of books, records, and papers, and it may, and at the request of any party it shall, issue subpoenas for witnesses or subpoenas duces tecum to compel the production of any books, records, or papers, directed to the sheriff of the counties where such witnesses are found, which subpoenas shall be served and returned in the same manner as subpoenas in criminal cases are served and returned. The fees and mileage of sheriffs and witnesses shall be the same as those allowed by the court of common pleas in criminal cases. Such fee and mileage expenses incurred at the request of appellant shall be paid in advance by appellant, and the remainder of such expenses shall be paid out of funds appropriated for the expenses of the division of reclamation.

In case of disobedience or neglect of any subpoena served on any person, or the refusal of any witness to testify to any matter regarding which he may be lawfully interrogated, the court of common pleas of the county in which such disobedience, neglect, or refusal occurs, or any judge thereof, on application of the board or any member thereof, shall compel obedience by attachment proceedings for contempt as in the case of disobedience of the requirements of a subpoena issued from such court or a refusal to testify therein. Witnesses at such hearings shall testify under oath, and any member of the board may administer oaths or affirmations to persons who so testify.

At the request of any party to the appeal, a stenographic record of the testimony and other evidence submitted shall be taken by an official court shorthand reporter at the expense of the party making the request therefor. Such record shall include all of the testimony and other evidence and the rulings on the admissibility thereof presented at the hearing. The board shall pass upon the admissibility of evidence, but any party may at the time object to the admission of any evidence and except to the rulings of the board thereon, and if the board refuses to admit evidence the party offering same may make a proffer thereof, and such proffer shall be made a part of the record of such hearing.

If upon completion of the hearing the board finds that the order appealed from was lawful and reasonable, it shall make a written order affirming the order appealed from; if the board finds that such order was unreasonable or unlawful, it shall make a written order vacating the order appealed from and making the order which it finds the chief should have made. Every order made by the board shall contain a written finding by the board of the facts upon which the order is based. Notice of the making of such order shall be given forthwith to each party to the appeal by mailing a certified copy thereof to each such party by registered mail.

The order of the board is final unless vacated by the court of common pleas of Franklin county in an appeal as provided for in section 1513.14 of the Revised Code. Sections 1513.01 to 1513.18, inclusive, of the Revised Code, providing for appeals relating to orders by the chief or by the board, or relating to regulations adopted and promulgated by the chief, do not constitute the exclusive procedure which any person who deems his rights to be unlawfully affected by such sections or any official action taken thereunder must pursue in order to protect and preserve such rights, nor do such sections constitute procedure which such person must pursue before he may lawfully appeal to the courts to protect and preserve such rights.

1513.14 (898–238). Appeal to court.

Any party adversely affected by an order of the reclamation board of review may appeal to the court of common pleas of Franklin county. Any party desiring to so appeal shall file with the board a notice of appeal designating the order appealed from and stating whether the appeal is taken on questions of law or questions of law and fact. A copy of such notice shall also be filed by appellant with the court and shall be mailed or otherwise delivered to appellee. Such notices shall be filed and mailed or otherwise delivered within thirty days after the date upon which appellant received notice from the board by registered mail of the making of the order appealed from. No appeal bond shall be required to make either an appeal on questions of law or an appeal on questions of law and fact effective.

The filing of a notice of appeal shall not automatically operate as a suspension of the order of the board. If it appears to the court that an unjust hardship to the appellant will result from the execution of the board's order pending determination of the appeal, the court may grant a suspension of such order and fix its terms.

Within fifteen days after receipt of the notice of appeal the board shall prepare and file in the court the complete record of proceedings out of which the appeal arises, including a transcript of the testimony and other evidence which has been submitted before the board. The expense of preparing and transcribing such record shall be taxed as a part of the costs of the appeal. Appellant shall provide security for costs satisfactory to the court. Upon demand by a party the board shall furnish at the cost of the party requesting the same a copy of such record. In the event such complete record is not filed in the court within the time provided for in this section either party may apply to the court to have the case docketed, and the court shall order such record filed.

Appeals taken on questions of law shall be heard upon assignments of error filed in the cause or set out in the briefs of the appellant before the hearing. Errors not argued by brief may be disregarded, but the court may consider and decide errors which are not assigned or argued. Failure to file such briefs and assignments of error within the time prescribed by the court's rules shall be a cause for dismissal of such appeal.

In appeals taken on questions of law and fact, the hearing in the court shall be a hearing de novo of the appeal heard by the board in which the order appealed from was made. In such hearings any party may offer as evidence any part of the record of the proceedings out of which the appeal arises, certified to the court as provided for in this section, and any other evidence which the court deems admissible.

If the court finds that the order of the board appealed from was lawful and reasonable, it shall affirm such order. If the court finds that such order was unreasonable or unlawful, it shall vacate such order and make the order which it finds the board should have made. The judgment of the court is final unless reversed, vacated, or modified on appeal.

1513.15 (898-239). Notice of violation.

Whenever the chief of the division of reclamation finds that an operator has violated sections 1513.01 to 1513.18, inclusive, of the Revised Code, he shall notify such operator to that effect in writing and shall specify in such notice the respects in which and the operation at which such sections have been violated. The chief shall also fix and set forth in such notice a reasonable time within which such operator may cease violating, or may comply with, such sections. If upon the expiration of such time the chief finds that such operator continues to violate such sections as specified in said notice, he shall make an order canceling such operator's license.

1513.16. Reclamation by operator.

Prior to the expiration of two years after filing with the chief of the division of reclamation a report as required by section 1513.09 of the Revised Code, showing the area of land affected by the operation covered by such report, the operator filing such report shall reclaim such area of land. This duty to reclaim shall require the operator to:

(A) Grade the surface of all spoil banks in such area of land so as to reduce the peaks thereof and reduce the depressions between the peaks of such spoil banks to a surface which will be a gently rolling topography, which grading shall be done in such a way as will minimize erosion due to rainfall and will also eliminate steep grades between peaks and make the surface more suitable for grazing cattle or tree cutting or logging operations, and in any such areas in which any spoil bank contains isolated peaks, such peaks shall be graded to an approximately level surface having a width of not less than twenty feet;

(B) Provide access roads and fire lanes in such area of land for the purpose of aiding in the prevention and suppression of fires;

(C) Grade the loose coal, mine refuse and other debris on the bottom of the last cut of an operation in such area of land so as to reduce the piles of such materials for the purpose of promoting their possible submergence by water or for the purpose of reducing the depressions in the bottom of such last cut and creating a more uniform topography in the bottom of such last cut;

(D) Construct earth dams in the last cut of an operation in such area of land to aid in creating lakes and ponds for the purpose of increasing the supply of available water, flood control, erosion control, or water pollution control, where such dams will not seriously interfere with existing mining operations, nor preclude the practical operation of the business of mining in the future;

(E) Plant trees, shrubs, legumes, or grasses upon the parts of such area where revegetation is possible.

Before an operator commences to reclaim the area of land affected by the operation covered by the report filed by such operator as required by section 1513.09 of the Revised Code, he may file with the chief an application for an order authorizing him to reclaim, in lieu of reclaiming such area of land, a different area of land affected by strip mining, the total acreage of which shall not be less than the acreage of the area of land affected by the operation covered by such report. Such different area of land shall contain that number of acres of spoil banks which shall not be less than the number of acres of spoil banks contained in the area of land affected by the operation covered by such report. Such application shall describe such different area of land with sufficient certainty so that it may be located and distinguished from other lands, and shall have attached to it a map certified by a surveyor registered under the laws of this state, showing the boundary lines of such area of land and the access to such area from the nearest public highway. Such application shall be accompanied by the written consent to the reclamation, as provided for in section 1513.16 of the Revised Code, of the land described in said application, by the owners of said land, and by the written consent to the release of such operator from his duty and liability to reclaim the area of land affected by the operation covered by such report, by the owners of said area of affected land. Upon issuance of an order approving such application the operator shall reclaim the area of land in said application described, and he shall be relieved of all duty and liability to reclaim the area of land affected by the operation covered by such report.

At any time in the period of time allowed an operator, by sections 1513.01 to 1513.19, inclusive, of the Revised Code, to reclaim an area of land which has been affected by strip mining, such operator may notify the chief in writing that he has completed the work of reclaiming such area other than planting, and request the chief to approve the work so completed. Thereupon the chief shall promptly issue an order approving or disapproving such request. If the chief approves such request he shall issue to the operator and to his surety a release of his surety bonds or other securities, held in deposit by the state to ensure the reclamation of such area of land, in an amount equal to the amount of one hundred seventy dollars multiplied by the number of acres in such area. If the chief fails to issue an order approving or disapproving such request within sixty days after the date of the delivery of such request to the office of the chief, request such will be deemed to be approved by the chief, and the chief shall thereupon issue to the operator and to his surety a release of his surety bonds or other securities such as he is required to issue upon approving an operator's request as hereinbefore in this section provided.

Before commencing to plant an area of land, the operator shall file with the chief his plan for such planting and his request for approval thereof. Such plan shall be accompanied by a description of the total area of land affected by strip mining which is included in the plan, and a statement of the acreage within such total area. Thereupon the chief shall determine whether all of the work required to be done by this section by the operator in the area of land affected and included in said plan, other than planting, has been completed, and whether the operator's plan for planting such area is likely to be successful.

If the chief finds that such work other than planting has been completed, and that the planting plan is likely to be successful, he shall approve such work and the planting plan. Thereupon the chief shall issue to the operator and to his surety a release of his surety bonds or other securities held on deposit, in an amount equal to the amount of one hundred seventy dollars multiplied by the number of acres in such area.

If the chief finds that such work other than planting has been completed, and that the planting plan is not likely to be successful, he shall approve such work other than planting, and shall suggest to the operator an alternative planting plan, provided, that no such alternative planting plan shall require planting which would cost the operator more than fifty dollars per acre. Thereupon the chief shall issue to the operator and to his surety a release of his surety bonds or other securities held on deposit in an amount equal to the amount of one hundred seventy dollars multiplied by the number of acres in such area.

If the chief suggests to the operator an alternative planting plan the operator may elect to plant in accordance with it or in accordance with his own plan. Upon making such election the operator shall notify the chief thereof. If the operator elects to plant in accordance with the alternative planting plan suggested by the chief, the operator shall notify the chief when he has completed

such planting, and shall request the chief's approval thereof. If the chief finds that the planting has been completed in accordance with such plan he shall approve same, and shall thereupon issue to the operator and his surety a release of his surety bonds or other securities held on deposit, in an amount equal to the amount of fifty dolars multiplied by the number of acres in such area.

If the operator elects to plant in accordance with his own planting plan which has not been approved by said chief, he shall notify the chief when he has completed such planting, and shall request the chief's approval of such plan. In such case the chief shall approve or disapprove such plan within five years after completion of the planting. In the event the chief approves such plan and finds that the planting was completed in accordance therewith, he shall thereupon issue to the operator and his surety a release of his surety bonds or other securities held on deposit, in an amount equal to the amount of fifty dollars multiplied by the number of acres in such area.

If the operator plants in accordance with his own plan which has been approved by said chief, he shall notify the chief when he has completed such planting, and shall request the chief's approval thereof. If the chief finds that the planting has been completed in accordance with such plan he shall approve same, and shall thereupon issue to the operator and his surety a release of his surety bonds or other securities held on deposit, in an amount equal to the amount of fifty dolars multiplied by the number of acres in such area.

If the chief finds that the work other than planting required to be done by this section by the operator in the area of land affected and included in the planting plan filed with the chief, has not been completed, he shall make a finding as to the respects in which such work has not been completed. If thereafter the chief finds that such work other than planting has been completed within the period of time allowed an operator by sections 1513.01 to 1513.19, inclusive, of the Revised Code, to reclaim such area of land, he shall approve such work and shall thereupon issue to the operator and his surety a release of his surety bonds or other securities held on deposit, in an amount equal to the amount of one hundred seventy dollars multiplied by the number of acres in such area.

Thereupon the operator may resubmit his original plan for planting such area or a new plan for such planning to the chief and request his approval thereof.

If the chief finds that such planting plan is likely to be successful, he shall approve same. If the operator plants in accordance with such plan which has been approved by said chief, he shall notify the chief when he has completed such planting, and shall request the chief's approval thereof. If the chief finds that the planting has been completed in accordance with such plan, he shall approve same, and shall thereupon issue to the operator and his surety a release of his surety bonds or other securities held on deposit, in an amount equal to the amount of fifty dollars multiplied by the number of acres in such area.

If the chief finds that such planting plan is not likely to be successful he shall suggest to the operator an alternative planting plan, provided that no such alternative planting plan shall require planting which would cost the operator more than fifty dollars per acre. If the chief suggests to the operator such an alternative planting plan the operator may elect to plant in accordance with it or in accordance with his own planting plan. Upon making such election the operator shall notify the chief thereof.

If the operator elects to plant in accordance with such alternative planting plan he shall notify the chief when he has completed such planting, and shall request the chief's approval thereof. If the chief finds that the planting has been completed in accordance with such plan he shall approve same, and shall thereupon issue to the operator and his surety a release of his surety bonds or other securities held on deposit, in an amount equal to the amount of fifty dollars multiplied by the number of acres in such area.

If the operator elects to plant in accordance with his own planting plan which has not been approved by said chief, he shall notify the chief when he has completed such planting, and shall request the chief's approval of such plan. In such case the chief shall approve or disapprove such plan within five years after completion of the planting. In the event the chief approves such plan and finds that the planting was completed in accordance therewith, he shall thereupon issue to the operator and his surety a release of his surety bonds or other securities held on deposit, in an amount equal to the amount of fifty dollars multiplied by the number of acres in such area.

If at any time the chief finds that an operator has failed to reclaim in the manner required by section 1513.16 of the Revised Code, land affected by strip mining operations, which such operator was required by such section to reclaim prior to such time, the chief shall make a finding as to the number of acres of land which such operator has so failed to reclaim. For each of such acres or part thereof as to which the chief finds the operator failed to do the work specified in divisions (A), (B), (C) and (D of this section, the chief shall declare the surety bonds or other securities of such operator on deposit with the treasurer of state to ensure the reclamation of such acres of land, forfeited in the amount of one hundred seventy dollars; and for each of such acres as to which the chief finds the operator failed to do the work specified in division (D) of this section, the chief shall declare such surety bonds or other securities of such operator on deposit with the treasurer of state forfeited in the amount of fifty dollars. The chief shall thereupon certify the total forfeiture to the attorney general who shall proceed to collect the amount thereof.

Upon written application therefor by an operator, the chief may order that such operator need not comply with one or more of the provisions of this section if such chief finds that such compliance is impractical or impracticable or that the public interest does not require such compliance. In considering any such application pertaining to the planting requirements contained in this section, said chief shall take into consideration the kinds of vegetation that grow naturally or by cultivation on adjacent lands, and the character and nature of the overburden which has been moved and deposited in the strip mining operation.

Upon written application therefor by an operator, the chief shall make an order fixing a reasonable extension of the time hereinbefore in this section prescribed within which such operator shall complete any part or all of the reclamation work which such operator is required to do on a designated area of land, if: the practical or economical execution of such operator's mining operation would be impaired by completion of the reclamation work which such operator is required to do on such area of land within the time hereinbefore in this section prescribed; or if definitely planned future mining operations will re-affect such area of land after completion of the reclamation work which such operator is required to do on such area of land within the time hereinbefore in this section prescribed; or if doing the reclamation work which such operator is required to do on such area of land within the time hereinbefore in this section prescribed will interfere with existing mining operations or definitely planned future mining operations; or if reasons beyond the control of such operator justly entitle him to such extension of time. (127 v 851. Eff. 9–16–57. 126 v 895.)

1513.16 former GC 898–232.
1513.16 imposes reclamation duties on strip mine operators which have a direct effect on water pollution. 1958 OAG 3221.

1513.17 (898–240). Prohibition.

No person shall mine coal, or cause coal to be mined, by strip mining without having a license to do so as required by section 1513.07 of the Revised Code. Each day on which coal is so mined is a separate offense. An operator, who at least ten days prior to the expiration of an existing license has filed with the chief of the division of reclamation an application for a license which would authorize him to continue without interruption the operation authorized by such existing license, does not violate this section if he continues such operation after the expiration of his existing license without having a license to do so as applied for, if his failure to have such license is the result only of the chief's failure to act on such operator's application for such license. Fines imposed by section 1513.99 of the Revised Code for violation of this section shall be payable to the county in which the offense occurs.

Penalty, 1513.99(A).

1513.18. Reclamation fund; expenditures.

All funds collected on account of forfeitures of bonds or other securities deposited by operators in accordance with sections 1513.01 to 1513.18, inclusive, of the Revised Code, shall be held by the treasurer of state in a fund hereby created and designated as the "strip mining reclamation fund." Such fund shall be expended by the chief of the division of reclamation only upon appropriation by the general assembly for the purpose of reclaiming areas of land affected by strip mining.

Expenditures made by the chief of moneys appropriated from the strip mining reclamation fund for the purpose of reclaiming areas of land affected by strip mining, shall only be made pursuant to contracts entered into by the chief with persons who agree therein to furnish all of the materials, equipment, work, and labor, as specified and provided in such contracts for the prices stipulated therein. Each such contract shall be awarded by the chief to the lowest and best bidder after sealed bids therefor are received, opened and published at the time and place fixed by the chief, and notice of such time and place at which such sealed bids will be received, opened and published, has been published by the chief at least once at least ten days before the date of the opening of such bids, in a newspaper of general circulation in the county in which the area of land to be reclaimed under such contract is located; provided, however, that if, after so advertising for bids for such contract, no bids therefor are received by the chief at the time and place fixed for receiving them, the chief may advertise again for such bids, but he shall not be required to do so, and he may, if he deems the public interest will be best served thereby, enter into a contract for the reclamation of such area of land without further advertisement for bids therefor. The chief may reject any or all bids received, and fix and publish again notice of the time and place at which bids for such contracts will be received, opened, and published.

Each such contract entered into by the chief shall provide only for the reclamation of land affected by the strip mining operation or operations of one operator and not reclaimed by such operator as required by section 1513.16 of the Revised Code. If there is money in the strip mining reclamation fund by reason of the forfeiture of the surety bond or bonds or other securities deposited with the chief by one operator to ensure the reclamation of two or more areas of land affected by the strip mining operation or operations of one operator and not reclaimed by him as required by section 1513.16 of the Revised Code, the chief may advertise for bids for and award a single contract for the reclamation of all of such areas of land if he deems such procedure to be in the public interest. The cost of the reclamation work done on each area of land under the provisions of this section, shall be paid out of the money in the strip mining reclamation fund by reason of the fortfeiture of the surety bond or bonds or other securities which were deposited with the chief to ensure the reclamation of such area of land, and in no event shall the cost of such work exceed the amount of such money. In the event such amount of money is not sufficient to pay the cost of doing all of the reclamation work on such area of land which the operator should have done but failed to do, the contract entered into by the chief for the reclamation of such area of land shall provide for doing reclamation work throughout the whole of such area to the extent that such amount of money permits.

In the event any part of the money in the strip mining reclamation fund which has been appropriated for the reclamation of an area of land in accordance with the provisions of this section, remains in said fund after the chief has caused such area of land to be reclaimed and has paid all costs and expenses of such work of reclaiming as in this section provided, the chief shall certify the amount of such money which so remains in the strip mining reclamation fund to the auditor of state, who shall thereupon transfer such amount of money to the general revenue fund of the state. (128 v H 1049. Eff. 11-3-59. 126 v 895.)

1513.18 former GC 398-241.

1513.19. Definitions; license required to engage in strip mining.

The term "strip mining" as used in this section, means the mining of coal by the auger method, or any similar method, which penetrates a coal seam and removes coal therefrom directly through a series of openings made by such machine which enters such coal seam from a surface excavation. The term "strip mining" shall not include the mining of coal by machines which operate underground in an underground mine where the openings made by such machines emerge into underground workings rather than into surface excavations.

The term "overburden" as used in this section, means all of the earth and other materials removed or excavated for the purpose of exposing a coal seam as may be necessary in order to mine coal by the auger method or a similar method; and said term "overburden" also means such earth and other materials after such removal.

The term "spoil bank" as used in this section, means a deposit of removed overburden.

The term "area of land affected" as used in this section, means the area of land from which overburden is removed, or upon which a spoil bank exists, or both.

The term "operation" as used in this section, means all of the premises, facilities, and equipment used by an operator in the mining of coal by strip mining.

The term "operator" as used in this section, means a person engaged in strip mining who removes or intends to remove more than two hundred fifty tons of coal from the earth by strip mining within twelve successive calendar months from any one operation.

The term "person" means an individual, partnership, or corporation.

No operator shall engage in strip mining without having a license to do so issued by the chief of the division of reclamation. Any person desiring such a license shall apply therefor to the chief. Such an application and the issuance of such a license shall be governed by the provision of sections 1513.01 to 1513.18, inclusive, and section 1513.99, of the Revised Code. Each person to whom such a license is issued shall have all of the powers, rights and privileges, and shall be charged with all of the duties and obligations, and shall be subject to all of the forfeitures and penalties, as an operator licensed to strip mine under this section, which he would have, and be charged with, and be subject to, if he were an operator licensed to engage in strip mining as the terms "operator" and "strip mining" are defined and used in sections 1513.01 to 1513.18, inclusive, and section 1513.99, of the Revised Code. Such operator shall grade the loose coal, mine refuse and other debris on the bottom of the surface excavation used in mining by the auger method or any similar method so as to reduce the piles of such materials for the purpose of promoting their possible submergence by water or for the purpose of reducing the depressions in the bottom of such surface excavation and creating a more uniform topography in the bottom of such surface excavation. Where such operator has released impounded water by disturbing dams created in accordance with the provisions of section 1513.16 of the Revised Code, for the purpose of impounding such water, such operator shall replace such dams. In the administration of this section in conjunction with the administration of sections 1513.01 to 1513.18, inclusive, and section 1513.99, of the Revised Code, the terms "strip mining," "overburden," "spoil bank," "area of land affected," "operation," "operator," and "person," when used in sections 1513.01 to 1513.18, inclusive, and section 1513.99, of the Revised Code, shall have the meanings assigned to them in this section, and, as so modified, all of the provisions of sections 1513.01 to 1513.18, inclusive, and section 1513.99, of the Revised Code, except those of such provisions which are clearly inapplicable, shall be applicable to strip mining as in this section defined. (128 v H 1049. Eff. 11-2-59. 126 v 895.)

1513.20. Acquisition of land.

The chief of the division of reclamation, with the approval of the director of natural resources, may purchase or acquire by gift, donation, or contribution any eroded land, including land affected by coal strip mining, mined prior to January 1, 1948, and land affected by coal strip mining that is or may become unreclaimed as the result of substitutions authorized by section 1513.16 of the Revised Code. All lands so purchased or acquired shall be deeded to the state, but no deed shall be accepted or the purchase price paid until the title thereof has been approved by the attorney general. (128 v H 1049. Eff. 11-2-59.)

1513.21. Reclamation of land; use of reclaimed land.

From moneys appropriated for this purpose, the chief of the division of reclamation shall reclaim any land or tract of land acquired pursuant to section 1513.20 of the Revised Code in such manner that, after reclamation, such land or tract shall be suitable for agriculture, forests, recreation, wildlife, water conservation, or such other use as the chief may deem proper for such land, or tract of land, in the light of the character of the soil, the topography of the land or tract to be reclaimed and of the surrounding lands, the proximity thereof to urban centers, and the requirements of any applicable conservation program. (128 v H 1049. Eff. 11-2-59.)

1513.22. Plans and estimates of cost.

Before proceeding to reclaim any land or tract of land acquired pursuant to section 1513.20 of the Revised Code, the chief of the division of reclamation shall determine the purpose or purposes for which such land or tract should be

devoted after reclamation and shall develop a plan of reclamation for such land or tract reasonably designed to accomplish such purpose or purposes and an estimate of the cost thereof. When completed such plan shall be submitted to the director of natural resources who may approve or disapprove the same. (128 v H 1049. Eff. 11-2-59.)

1513.23. Surveys; maps; assistance by state engineers.

In determining the purpose or purposes for which any land or tract of land should be devoted after reclamation and in preparing a plan of reclamation, the chief of the division of reclamation may call to his assistance, temporarily, any engineers or other employees in any state department or in the Ohio state university, or other educational institutions financed wholly or in part by the state, for the purpose of making studies, surveys, and maps and for the purpose of devising the most effective and economical plan of reclamation.

Such engineers and employees shall not receive any additional compensation other than that which they receive from the departments by which they are employed, but they shall be reimbursed for their actual and necessary expenses incurred while working under the direction of the chief of the division of reclamation. (128 v H 1049. Eff. 11-2-59.)

1513.24. Contracts; notice; bids.

After a plan of reclamation is approved by the director of natural resources, the chief of the division of reclamation, from any moneys appropriated for the reclamation of strip mined lands, shall proceed to carry out such plan.

With the approval of the director of natural resources, the chief may carry out any such plan or any part of such plan with the employees and equipment of any division of the department of natural resources or he may carry out any such plan, or any part of such plan by contracting therefor; provided, that the chief shall not enter into any contract, agreement, or understanding unless the same is approved by the director of natural resources.

Any such contract shall be entered into by the chief with persons who agree therein to furnish all of the materials, equipment, work, and labor, as specified and provided in such contract for the prices stipulated therein. Each such contract shall be awarded by the chief to the lowest and best bidder after sealed bids therefor are received, opened, and published at the time and place fixed by the chief, and notice of such time and place at which such sealed bids will be received, opened, and published, has been published by the chief at least once at least ten days before the opening of such bids, in a newspaper of general circulation in the county in which the area of land to be reclaimed under such contract is located; provided, that if, after so advertising for bids for such contract, no bids therefore are received by the chief at the time and place fixed for receiving them, the chief may advertise again for such bids, but he shall not be required to do so, and he may, if he deems the public interest will be best served thereby, enter into a contract for the reclamation of such land or tract without further advertisement for bids. The chief may reject any or all bids received and fix and publish again notice of the time and place at which bids for such contracts will be received, opened, and published. (128 v H 1049. Eff. 11-2-59.)

1513.25. Transfer or sale of reclaimed lands.

After completion of the reclamation of a tract of land acquired pursuant to section 1513.20 of the Revised Code, the chief of the division of reclamation may, if such land is suitable to the uses of any other department, division, office, or institution of the state, transfer such land or tract to such other department, division, office, or institution of the state, subject to the approval of the director of the department of natural resources.

With the approval of the attorney general and the director of the department of natural resources, the chief may sell any such land or tract, after completion of the plan of reclamation, when such sale is advantageous to the state.

With the approval of the attorney general and the director of the department of natural resources, the chief may grant easements and leases on such land or tract under such terms as are advantageous to the state, and may grant mineral rights on a royalty basis.

All moneys received from the sale of reclaimed lands, or in payment for easements, leases, or royalties shall be paid to the general revenue fund. (128 v H 1049. Eff. 11-2-59.)

1513.26. Prior regulations; succession to duties; transfer of funds.

All regulations adopted by the chief of the division of reclamation in the department of agriculture prior to and in effect on the effective date of this act shall be valid regulations of the division of reclamation in the department of natural resources until such time as said regulations may be amended or repealed as provided in section 1513.04 of the Revised Code.

All strip mine licenses outstanding as of the effective date of this act shall continue in full force for the remainder of the period for which such licenses were issued, subject to revocation in accordance with law.

On the effective date of this act the chief of the division of reclamation in the department of natural resources shall succeed to all rights and duties of the chief of the division of reclamation in the department of agriculture, including, without limitation, supervision of surety bonds, cash and securities held in lieu of surety bonds, the obligation of which are not changed by this act, charges against said bonds, cash and securities, the supervision of proposed and approved plans of reclamation, actions with respect to violations, supervision of contracts for reclamation, including the letting of contracts pursuant to bids accepted by the chief of the division of reclamation in the department of agriculture, and all other rights and duties necessary to the continuing operation of sections 1513.01 to 1513.19, inclusive, of the Revised Code.

On the effective date of this act, all moneys appropriated to the division of reclamation in the department of agriculture shall be transferred to the division of reclamation in the department of natural resources, to the extent of the then unexpended balances. (128 v H 1049. Eff. 11-2-59.)

1513.99. Penalty.

(A) Whoever violates section 1513.17 of the Revised Code shall be fined not less than three hundred dollars nor more than one thousand dollars. (126 v 895. Eff. 10-13-55.)

STATE OF OREGON, WATER RESOURCES BOARD

1. STATUTORY BASIS FOR ENERGY RESOURCE ACTIVITIES

The activities of the State Water Resources Board of Oregon in the field of energy resources are based on statutory powers granting planning and programing functions relating to power development and quasi-judicial functions related to the determination of "public interest" in conflicts over the use of water.

The first function, planning, is stipulated in the Oregon Revised Statutes (ORS) 536.300, which states:

Formulation of State water resources policy.—(1) The board shall proceed as rapidly as possible to study existing water resources of this State; means and methods of conserving and augmenting such water resources; existing and contemplated needs and uses of water for domestic, municipal, irrigation, power development, industrial, mining, recreation, wildlife and fish life uses, and for pollution abatement, all of which are declared to be beneficial uses and all other related subjects, including drainage and reclamation.

(2) Based upon said studies and after an opportunity to be heard has been given to all other State agencies which may be concerned, the board shall progressively formulate an integrated, coordinated program for the use and control of all water resources of this State and issue statements thereof.

In arriving at a coordinated, integrated program of water use and control, with power as one of the 10 beneficial uses included, the board is guided by the purposes and declarations of ORS 536.310, which states:

Purposes and policies to be considered in formulating State water resources policy.—In formulating the water resources program under subsection (2) of ORS 536.300, the board shall take into consideration the purposes and declarations enumerated in ORS 536.220 and also the following additional declarations of policy:

(1) Existing rights, established duties of water, and relative priorities concerning the use of the waters of this State and the laws governing the same are to be protected and preserved subject to the principle that all of the waters within this State belong to the public for use by the people for beneficial purposes without waste;

(2) It is in the public interest that integration and coordination of uses of water and augmentation of existing supplies for all beneficial purposes be achieved for the maximum economic development thereof for the benefit of the State as a whole;

(3) That adequate and safe supplies be preserved and protected for human consumption, while conserving maximum supplies for other beneficial uses;

(4) Multiple-purpose impoundment structures are to be preferred over single-purpose structures; upstream impoundments are to be preferred over downstream impoundments. The fishery resource of this State is an important economic and recreational asset. In the planning and construction of impoundment structures and milldams and other artificial obstructions, due regard shall be given to means and methods for its protection;

(5) Competitive exploitation of water resources of this State for single-purpose uses is to be discouraged when other feasible uses are in the general public interest;

(6) In considering the benefits to be derived from drainage, consideration shall also be given to possible harmful effects upon ground water supplies and protection of wildlife;

(7) The maintenance of minimum perennial streamflows sufficient to support aquatic life and to minimize pollution shall be fostered and encouraged if existing rights and priorities under existing laws will permit;

(8) Watershed development policies shall be favored, whenever possible, for the preservation of balanced multiple uses, and project construction and planning with those ends in view shall be encouraged;

(9) Due regard shall be given to the planning and developing of water recreation facilities to safeguard against pollution;

(10) It is of paramount importance in all cooperative programs that the principle of the sovereignty of this State over all the waters within the State be protected and preserved, and such cooperation by the board shall be designed so as to reinforce and strengthen State control;

(11) Local development of watershed conservation, when consistent with sound engineering and economic principles, is to be promoted and encouraged; and

(12) When proposed uses of water are in mutually exclusive conflict or when available supplies of water are insufficient for all who desire to use them, preference shall be given to human consumption purposes over all other uses and for livestock consumption, over any other use, and thereafter other beneficial purposes in such order as may be in the public interest consistent with the principles of this act under the existing circumstances."

These two statutes are the primary base for the development of programs designed to work toward the "maximum beneficial use" of the State's water resources.

The quasi-judicial functions of the board are exercised in the case of preliminary permits or applications for license of hydroelectric projects referred for determination of "public interest" by the Hydroelectric Commission of Oregon. The referral is accomplished under the authority and standards of ORS 543.225, which states:

Proposed project adversely affecting public interest; reference to water resources board; hearing; policy

(1) The commission shall refer an application for a preliminary permit or for a license to the State water resources board for consideration if—

(a) The commission, prior to the granting of the application, is of the opinion that the proposed project may prejudicially affect the public interest; or

(b) The board is of the opinion that the proposed project may prejudicially affect the public interest, and, prior to the granting of the application, requests the commission to so refer the application; or

(c) There is filed with the commission, prior to the granting of the application, by any person, State agency, city, county, or district organized for public purposes of this State, or agency of the Federal Government, a protest requesting the commission to so refer the application on the ground that the proposed project will prejudicially affect the public interest.

(2) The State water resources board shall hold a public hearing on an application referred to it under subsection (1) of this section, on proper notice to the applicant and to each protestant, if any. If, after the hearing, the board determines that the proposed project would impair or be detrimental to the public interest so far as the coordinated, integrated State water resources policy is concerned, it shall enter an order rejecting the application or require its modification to conform to such public interest, to the end that the highest public benefit may result from the proposed project.

(3) In determining whether the proposed project would impair or be detrimental to such public interest, the State water resources board shall have due regard for—

(a) Conserving the highest use of the water for all purposes, including irrigation, domestic use, municipal water supply, power development, public recreation, protection of commercial and game fishing and wildlife, fire protection, mining, industrial purposes, navigation, scenic attraction, or any other beneficial use to which the water may be applied for which it may have a special value to the public;

(b) The maximum economic development of the waters involved;

(c) The control of the waters of this State for all beneficial purposes, including drainage, sanitation, and flood control;

(d) The amount of waters available for appropriation for beneficial use;

(e) The prevention of wasteful, uneconomic, impracticable or unreasonable use of the waters involved;

(f) All vested and inchoate rights to the waters of this State or to the use thereof, and the means necessary to protect such rights;

(g) The State water resources policy formulated under ORS 536.300 to 536.350.

(4) After the entry of the order specified in subsection (2) of this section, the application for a preliminary permit or for a license shall be referred to the commission for such further proceedings as are not inconsistent therewith.

The judicial responsibility is also called upon when applications for the use of water are referred to the board at the judgment of the State engineer as permitted under ORS 537.170 which states:

Proposed use adversely affecting public interest; reference to water resources board; hearing; policy

(1) If, in the judgment of the State Engineer, the proposed use may prejudicially affect the public interest, he shall refer the application to the State Water Resources Board for consideration. The board shall hold a public hearing on the application on proper notice to the applicant and to anyone objecting thereto. If, after the hearing, the board determines that the proposed use of the water sought to be appropriated would impair or be detrimental to the public interest, it shall enter an order rejecting the application or require its modification to conform to the public interest, to the end that the highest public benefit may result from the use to which the water is applied * * *.

The determination is subject to the same standards of consideration outlined in paragraphs 3a through 3g of ORS 543.225.

The legal status of statements of the board relating to programs is set forth in ORS 536.360 which declares:

State agencies and public corporations to conform to statement of State water resources policy.—In the exercise of any power, duty or privilege affecting the water resources of this State, every State agency or public corporation of this State shall give due regard to the statements of the board and shall conform thereto. No exercise of any such power, duty or privilege by any such State agency or public corporation which would tend to derogate from or interfere with the State water resources policy shall be lawful.

Of significance in the use of water resources for energy production is the board's authority to withdraw water as granted in ORS 536.410 which says:

Withdrawal of unappropriated waters from appropriation by board order.—(1) When the board determines that it is necessary to insure compliance with the State water resources policy or that it is otherwise necessary in the public interest to conserve the water resources of this State for the maximum beneficial use and control thereof that any unappropriated waters of this State, including unappropriated waters released from storage or impoundment into the natural flow of a stream for specified purposes, be withdrawn from appropriation for all or any uses, the board, on behalf of the State, may issue an order of withdrawal.

(2) Prior to the issuance of the order of withdrawal the board shall hold a public hearing on the necessity for the withdrawal. Notice of the hearing shall be published in at least one issue each week for at least 2 consecutive weeks prior to the hearing in a newspaper of general circulation published in each county in which are located the waters proposed to be withdrawn.

(3) The order of withdrawal shall specify with particularity the waters withdrawn from appropriation, the uses for which the waters are withdrawn, the reason for the withdrawal and the duration of the withdrawal. The board may modify or revoke the order at any time.

(4) Copies of the order of withdrawal and notices of any modification or revocation thereof shall be filed with the State Engineer and the Hydroelectric Commission.

(5) While the order of withdrawal is in effect, no application for a permit to appropriate the waters withdrawn for the uses specified in the order shall be received for filing by the State Engineer, and no application for a preliminary permit involving appropriation of such waters shall be received for filing by the Hydroelectric Commission.

At the State level this means control of energy production dependent upon the use of unappropriated water.

2. HISTORY AND DEVELOPMENT OF BOARD'S RELATIONSHIP TO WATER USE AND CONTROL

The history and development of the water resources board's relationship to energy resource activities is a parallel identity to its relationship to water and therefore is the history of water use and control legislation in Oregon.

The chronology of Oregon's development of water law and legal or legislative problems relating thereto, dates back to its admission to the Union as a State in 1859. At this time Oregon was admitted to the Union providing that "all *navigable* waters of said State shall be common highways and forever free * * * to all citizens of the United States."

In 1891, 28 sections of water law were passed providing for the appropriation of water for irrigation and domestic purposes by corporation.

The law of 1899, comprising 22 sections, provides for the appropriation of water by persons, companies, and corporations for mining and electric power purposes.

Until 1905 the right of an individual to appropriate water for irrigation purposes was not recognized by law.

In 1905 the Legislature of Oregon created the position of State engineer. Among the responsibilities of this official were the State highway system and the investigation and development of water resources within the State. In December 1907 Governor Chamberlain requested Mr. John H. Lewis, the State engineer, to prepare a report showing the need for State water legislation. Within 14 days Mr. Lewis introduced a special 15-page report in answer to this request. Data previously obtained and reviewed in this report indicated that there were 177 sections of Oregon law relating to water use. Many of these sections were contradictory, confusing, or ineffectual. Appropriations for mining, power, domestic, and irrigation uses were recorded in the county courts. Some of the recorded claims totaled more than four times the highest recorded floodflows on the streams for which they were entered. Under existing law, only the courts settled disputes and the testimony of living witnesses to early appropriations became less available with the passage of time, with the consequent increase in cost and difficulty in arriving at equitable decisions in cases involving conflict over the ownership or use of water.

As a result of Mr. Lewis' report and active support by informed people, the State in 1909 enacted the Water Code of Oregon which was established to administer and regulate the use of surface waters in the State.

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The code states that all waters within the State belong to the public and, subject to existing rights, all waters within the State may be appropriated for beneficial use by means of permits issued by the State engineer. Relative priorities among parties to any court decree rendered in cases determined prior to February 24, 1909, were protected. The code provided for an orderly procedure for application and permit issuance, methods of abandonment of rights, adjudication of rights relative to beneficial use initiated prior to the establishment of the code, certification, and for actions relating to proposed uses in conflict with the public interest. Following a proving period by the holder of a permit, the code provided that the State engineer could issue a certificate granting the appropriator the right to use the water in perpetuity subject to the principle of beneficial use. Because of the conflicts arising over the use of ground water in the semiarid and arid areas of Oregon, east of the Cascade Mountains, a Ground Water Code was passed by the Oregon Legislature in 1927.

In the years following the establishment of the Surface Water Code in 1909, numerous boards, commissions or other agencies of government were created or assigned some authority or responsibility in the field of water use or control. The functions of these various agencies covered investigations, planning, design, regulation, licensing, and allied responsibilities. Some of these bodies continue to exist at this time while others have long since become defunct or inactive. Among the creations of the legislature were the State engineer's office, the fish commission, the game commission, hydroelectric commission, irrigation board, reclamation commission, Rogue River Coordination Board, public utilities commission, board of health, Columbia River Gorge Commission, as well as groups like the natural resources advisory committee which had a strictly academic or advisory interest in the study of water as related to the needs and economy of the State.

In general, the functions and responsibilities of these agencies were single purpose in nature and the inherent conflict resulting from the various legislative mandates can be left to one's imagination. As conflicts between agencies and interests developed with the growth pattern of the State, each conflict of interest was "tossed back" to the legislature for resolution. Legislators in the State of Oregon serve on a basis that requires substantial monetary sacrifice. Being humans and having restricted time available for the study of the water resource problems of the State, the legislature was frequently required to pass legislation and create statutes without the benefit of full study and integration or evaluation. Through no basic fault of the legislators, decisions were often based on the pressure of special interest groups, largely because of the lack of concentrated and informed opposition to these interests. The statutes so created materially added to the confusion of the water resource development picture in Oregon.

As the legal aspects relating to water became more complex by virtue of the random nature of the State's system, needs for and use of water continued to grow at an ever-increasing rate further complicating the problem.

From 1909 to 1953 the State engineer received 29,600 applications for the use of water and issued 24,800 permits. Of the latter, only 11,100 qualified for water use certificates. From the end of the Second World War, the yearly application rate doubled. Permits were issued

for more water than the minimum flows in numerous streams. Total applications for the appropriation of water reached the figure 34,098 as of May 12, 1958. Of that total, 25,403 applications had reached the permit stage and 23,936 had reached the certificate stage as of March 25, 1958.

The 1953 Legislature of Oregon created a water resources committee to investigate the water resources situation and report to the 1955 legislature their findings, recommendations, and proposals for legislative action. This committee, composed of seven eminent Oregonians, in its excellent report, summarized its findings in part:

> History has shown that as the needs for water become more acute and the available water scarcer, there arose requests for an enactment of a series of unrelated, uncoordinated legislative policy statements, each applying to a particular use of the State's water resources. Oregon is fortunate in that the 47th legislative assembly recognized the approaching problem and enacted legislation for a study leading to a coordinated system of water resources development, while there are still adequate supplies that could be made available for use. The time has now come when in order to achieve this goal a water policy should be established by the legislature and a method evolved to execute that policy, if Oregon is going to achieve full coordinated use of its water resources.

These and other factors contained in the report led the committee to the conclusion that the most immediate needs in order to achieve a coordinated system of water resource development are:

1. A central agency authorized to execute a single State water policy and resolve conflicts with regard to water use.
2. An adequate ground water code applicable to the entire State and correcting the deficiencies of the present act.

On May 26, 1955, chapter 707 of the Oregon Laws was signed by Gov. Paul Patterson creating and prescribing the functions of the State water resources board, abolishing the Willamette and Uppen Columbia River Basin Commissions, the State reclamation commission, and the State irrigation board; also amending several minor laws and appropriating money. The Underground Water Code was also amended and passed as chapter 708, Oregon Laws.

3. OBJECTIVE OF PROGRAM OR PROGRAMS

The basic objective of the board's planning and programing functions is to formulate an integrated, coordinated program for the use and control of the water resources of the State for beneficial use.

The objective of board orders for modification, denial, or granting of applications for water or preliminary permits and license is to insure that specific projects, which are the subject of referral, are consistent with the integrated coordinated water resources program and in the public interest.

4. CHARACTER OF DIRECTIVES AND ORDERS

The program statements are general in character seeking to direct the approach to project formulation whereas referral orders are specific in character and deal with the functional aspect of individual projects.

To date program statements consist of a statement of the general status of beneficial uses and their potential for future benefit; conclusions as to usage of water that would appear to represent maximum

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beneficial use of the water of appropriate sections of the stream system; and an order specifying the uses for which rights, under State law, can be issued. This type of order, which does not deal with specific projects, is typified by the attached program for a portion of the Deschutes Basin.

The order resulting from a referral deals with project specifics of a functional nature such as minimum flows downstream, reservoir levels, fish passage, recreation, pollution abatement, and flood control needs and any functional requirements related to beneficial use or control need. A typical referral order is that relating to the application of Portland General Electric Co. for preliminary permit, Round Butte project, Deschutes River. A copy is attached. These programs are not served upon individual industries or operating entities but on State agencies granting the appropriate permit, license, or right and appropriate stipulations are included in the permit or license.

5. PROGRAM RELATIONSHIPS

Insofar as State agencies are concerned, impingement or limitation of program does not exist for the board in its sphere of control, unappropriated water; for State agencies are subject to board statements. Decisions by the board can and do impinge on other State agencies' or public corporations' desired programs where a judgment of maximum economic use or public interest between competing uses of water requires the restriction or exclusion of one or more uses to the advantage of another use or uses.

An illustration of this is the recent denial by the board of a preliminary permit for Consumers Power, Inc., to build a hydroelectric project on the North Fork of the Santiam River, Oreg. The order, a copy of which is attached, denied the permit because of the adverse effects of the project on other uses of water, particularly municipal, industrial, pollution abatement, and fish life.

It is most difficult to discuss briefly the problems of impingement, meshing, and limitations between the board and Federal agencies. In general, problems have not yet been severe but great potential for difficulty exists because of the problem of State versus Federal rights in water. Most problems at the local level of responsibility can be effectively dealt with but as Federal decision levels trend to Washington, D.C., resolution becomes hard to achieve.

The most potent source of potential difficulty lies in the licensing powers of the Federal Power Commission. Federal Power Commission decisions now pending, for example—High Mountain Sheep, Snake River; and Round Butte, Deschutes River, will identify some of the problems as programs pertaining to these projects have been adopted by the State water resources board. The board is participating in the appropriate hearings as an intervener.

In January of 1959, the Federal Power Commission incorporated the previously adopted program of the board for the upper McKenzie River into the license provisions for the Carmen-Smith project. Such action is evidence of the potential for cooperative action.

The State water resources board is the agency designated to review and comment on programs and reports submitted to the affected States by the Corps of Engineers and the Bureau of Reclamation. To date

there have not been any major areas of restriction or limitation between programs of these agencies and those adopted by the board. Potential for interference still exists, however, due to the differing statutory powers under which the State and Federal groups operate. The State of Oregon's welfare is the primary concern of the board while the Bureau or corps may favor a regional or national welfare in a given instance. For example, the board may support the principle of conservation of water and thus favor the control of floods by storage whereas the corps might support channel and levee work as the most economic method of solving the flood problem. With these differing bases of analysis, the program of the State and Federal agencies could be limiting on each other. Then the question of jurisdiction would have to be decided. Such a case may develop out of a current study for development of a program.

Experience is not yet sufficient to state the degree of impingement, meshing, or limitation that might develop with programs of others.

6. COORDINATION AND CONFLICTS

A substantial and encouraging level of coordination is maintained with other power resource agencies. Close cooperation is maintained with State agencies such as the State engineer, the hydroelectric commission, and the public utilities commission.

The board represents the State of Oregon on the power planning subcommittee of the Columbia Basin Interagency Committee. Through this group, contact is maintained at the working level with the power planning personnel of the Corps of Engineers, Bureau of Reclamation, Federal Power Commission, Bonneville Power Administration, and other Columbia Basin States.

Through the power planning subcommittee much cooperation is accomplished through exchange of basic information, prosecution of joint studies, exchange of ideas, discussion of working policy, and not least, the development of excellent interagency working relationships.

Typical of the subcommittee's areas of interest are the following basic study assignments:

1. The economics of combining fuel-electric and hydroelectric generation.
2. Changes in reservoir operation necessary to effect the greatest contribution to system power supply, with varying system hydro-steam ratio.
3. The effect of project location upon the size of powerplant installations.
4. The possibilities and implications of atomic energy for electric power generation.
5. Any other significant factors affecting power supply economics.

In making a basin investigation, the board draws heavily on work done by other State agencies and the Federal agencies. All studies and programs of these agencies relating to water uses and control, that are available, are the subject of review for assumptions, criteria, and methodology. Every effort is made to resolve differences before actual programs are formulated. In cases of conflict, cooperative studies may be initiated to develop the best possible basis for decision making.

An example would be the current study in the Rogue River Basin involving cooperative effort between the Corps of Engineers, Bureau of Sports Fisheries—U.S. Fish and Wildlife Service, U.S. Geological

Survey, Oregon Fish and Game Commissions, local bodies, and the water resources board. This study of river flow-temperature storage relationships will, it is hoped, provide a factual basis for the resolution of a conflict between the development of the river's energy resources and the maintenance of existing resources, mainly the anadromous fishery. It is the intent of all parties to develop programs for the Rogue Basin that are mutually acceptable. Many conflicts exist and many in the light of present knowledge are unresolved. Physical conflicts are so numerous that they defy listing—power versus fish, power versus recreation, power versus navigation, power versus pollution abatement, etc. There are instances wherein a compromise is accomplished between resource uses but almost always at a cost to each of the conflicting needs. For example, dam turbines cannot be bypassed to maintain fishway flows without taking its toll of energy production.

Inadvertent conflicts exist because of inadequate and single-purpose statutes which limit or prevent a comprehensive approval to water development and control.

7. OBSTACLES IN PROGRAM ADMINISTRATION

The outstanding obstacle in the administration of the board program is the lack of information. This lack falls into several basic categories; first, the lack of basic engineering and economic data—i.e., rainfall, runoff relationships, land classifications, future needs, economic potentials, water control and augmentation possibilities.

In many cases the basic criteria and factors involved in resources development are inadequately known. This is particularly true where such development involves social rather than economic values. This also is true where varied biological factors are prevalent. Until the basic criteria have been established, no methodology for analyses can be formulated.

Adequate methods do not exist for the comparative evaluation of competing uses of water. It is almost impossible to compare power values which can readily be expressed in monetary terms to the value of recreation, wildlife, fish life, or pollution abatement uses. Decisions involving choices between items with identifiable monetary values and those of social values involve too great a degree of subjective evaluation.

8. RECOMMENDATIONS

(*a*) Expansion of basic data program—i.e., stream gaging, precipitation data, topographical mapping.

(*b*) Expansion of research pertaining to conflict in uses of water—i.e., effective methods of passage of fish over high dams—upstream and downstream, duty of water required for consumptive uses.

(*c*) Development of economic criteria for associated water uses—i.e., recreation, pollution abatement, downstream flow maintenance.

Before the State Water Resources Board of the State of Oregon

IN THE MATTER OF FORMULATING AN INTEGRATED, COORDINATED PROGRAM FOR THE USE AND CONTROL OF THE WATER RESOURCES OF THE LOWER MAIN STEM DESCHUTES RIVER, LOWER METOLIUS, AND LOWER CROOKED RIVERS

LOWER DESCHUTES BASIN, NOVEMBER 25, 1959

Whereas the State water resources board under the authority of ORS 536.300 has undertaken a study of that portion of the Deschutes River including the main stem of the Deschutes River from its confluence with the Columbia River to river mile 120.0 as shown in U.S.G.S. Water Supply Paper 344; the main stem of the Crooked River from its confluence with the Deschutes River to river mile 6.5 as shown on U.S.G.S. Plans and Profiles, 1926; and the main stem of the Metolius River from its confluence with the Deschutes River to river mile 13.0 as shown in U.S.G.S. Water Supply Paper 344;

Whereas in this study consideration was given to means and methods of augmenting such water resources, existing and contemplated needs and uses of water for domestic, municipal, irrigation, power development, industrial, mining, recreation, wildlife and fish life uses, and for pollution abatement as well as other related subjects including drainage, reclamation, and flood control; and

Whereas as a result of said study the following findings have been reached by this board:

1. Recreation uses represent and will continue to bring substantial benefits to the State.
2. Fish and wildlife uses represent and will continue to bring substantial benefits to the State.
3. Hydroelectric power production utilizing the waters of the Deschutes River and its tributaries between river mile 100.0 and river mile 120.0 will bring substantial benefits to the State.
4. Domestic use does not represent a significant quantity either for existing or presently contemplated needs.
5. Mining use does not represent a significant quantity either for existing or presently contemplated needs.
6. Municipal use is not a significant factor for either existing or presently contemplated needs.
7. Pollution abatement is not a significant factor for either existing or presently contemplated needs.
8. Industrial use is not a significant factor for either existing or presently contemplated needs.
9. Irrigation use is not a significant factor for either existing or presently contemplated needs.
10. Drainage and reclamation of drained lands are not existing or presently contemplated factors in water use.

Conclusion

1. The maximum beneficial use of that portion of the main stem of the Deschutes River from its confluence with the Columbia River to and including river mile 100.0 is for recreation, fish and wildlife purposes and no appropriations of water in this area shall be permitted except for domestic, livestock, recreation, fish and wildlife uses.
2. The hydroelectric potential from river mile 100.0, main stem Deschutes River, to river mile 120.0, main stem Deschutes River, should be utilized. Such utilization is hereby encouraged for any properly State and Federal licensed hydroelectric projects commensurate with multiple-purpose use for recreation, fish and wildlife, and constructed and operated in accordance with plans approved by the State water resources board. Projects constructed for hydroelectric power purposes must include regulation facilities as needed to minimize river flow fluctuations resulting from such project operation in order to protect downstream recreation, fish and wildlife values and must be so operated as to provide minimum pool fluctuations during the recreation season while maintaining minimum perennial flows downstream.
3. The waters of the Crooked River from its confluence with the Deschutes

River to river mile 6.5 may be utilized for hydroelectric purposes commensurate with multiple-purpose use for recreation, fish and wildlife.

4. The waters of the Metolius River from its confluence with the Deschutes River to river mile 13.0 may be utilized for hydroelectric purposes commensurate with multiple-purpose use for recreation, fish and wildlife.

5. Projects to utilize the aforementioned waters must be approved by the State water resources board.

6. Water rights acquired for hydroelectric projects constructed for the purpose of utilizing the waters of the Deschutes, Metolius, and Crooked Rivers must be subordinate in priority to all existing and future upstream beneficial uses of water except for hydroelectric power.

Now, therefore, be it resolved, That this board hereby adopts the following program in accordance with the provisions of ORS 536.300 (2) relating to the waters of the lower main stem Deschutes River, lower Metolius, and lower Crooked Rivers:

A. The maximum beneficial use of that portion of the main stem of the Deschutes River from its confluence with the Columbia River to and including river mile 100 is for recreation, fish and wildlife purposes and no appropriations of water in this area shall be permitted except for domestic, livestock, recreation, fish and wildlife uses.

B. The maximum economic development of the State and the attainment of the highest and best use of the waters of the lower main stem Deschutes River from river mile 100 to river mile 120 and the attainment of an integrated and balanced program for the benefit of the State as a whole will be achieved through utilization of the aforementioned waters for domestic, livestock, hydroelectric power, fish, wildlife, and recreation purposes and the aforementioned waters of the main stem Deschutes River are hereby so classified.

C. The maximum economic development of this State and the attainment of the highest and best use of the waters of the lower main stem Crooked River from its confluence with the Deschutes River to river mile 6.5 and the waters of the main stem of the lower Metolius River from its confluence with the Deschutes River to river mile 13 will be attained through utilization of such waters for domestic, livestock, hydroelectric power, fish, wildlife, and recreation purposes and the aforementioned waters of the lower main stem, Crooked River, and lower main stem, Metolius River, are hereby so classified.

D. Applications for the use of such water shall not be accepted by any State agency for any other purpose and applications for such other purposes are declared to be prejudicial to the public interest and the granting of applications for such other uses would be contrary to the integrated, coordinated program for the use and control of the water resources of the State.

E. Water rights acquired for structures or works for the utilization of the waters for hydroelectric purposes shall be subordinate to all present and future upstream beneficial uses of water except for hydroelectric power. Structures or works for the utilization of the waters in accordance with the aforementioned classifications are also declared to be prejudicial to the public interest unless planned, constructed, and operated in conformity with the applicable provisions of ORS 536.310 and any such structures or works are further declared to be prejudicial to the public interest which do not give proper cognizance to the multiple-purpose concept.

Done and dated this 25th day of November 1959.

STATE WATER RESOURCES BOARD,
By DONEL J. LANE, *Secretary.*

IN THE MATTER OF THE APPLICATION OF PORTLAND GENERAL ELECTRIC CO. FOR PRELIMINARY PERMIT, ROUND BUTTE PROJECT, DESCHUTES RIVER

Portland General Electric Co., an Oregon corporation, has submitted an application for a preliminary permit to the hydroelectric commission.

This application has been referred to the State water resources board by the hydroelectric commission as a result of protests filed under the authority of ORS 543.225.

The State water resources board has held a public hearing after notice to the applicant and protestants.

As a result of this hearing the State water resources board finds:

1. The Deschutes River below river mile 120 represents an important area for spawning and habitat of resident trout and anadromous fish.

2. Maintenance of minimum perennial streamflows in the amount of 3,000

cubic feet per second at river mile 100 for fish spawning, habitat, and passage would be in the public interest. This flow would be increased by tributary and other inflow by approximately 2,000 cubic feet per second at the mouth of the Deschutes River during the maximum month of the critical water year and approximately 400 cubic feet per second during the minimum month of the critical year.

3. Anadromous and resident fish also spawn above river mile 120, Deschutes River, and river mile 13, Metolius River.

4. The main stem, Deschutes River, is an important sports fishing area.

5. The Oregon State Highway Commission owns or leases lands comprising the Cove Palisades State Park, and operates said park, an important recreation asset of the State.

6. Construction and operation of Round Butte project would inundate and destroy the area within Cove Palisades State Park which contains maximum scenic and recreation values.

7. Cove Palisades State Park is a valuable streamside recreational area. Areas of similar character exist on Forest Service lands in the vicinity of river mile 13, Metolius River.

8. There will be available poolside sites that could be utilized for recreation facilities if Round Butte is constructed.

9. There will be additional future upstream beneficial uses of water.

10. Opal Springs is a source of water supply for domestic, municipal, and irrigation use.

11. The State water resources board has adopted a program under the authority of ORS 536.300 to 536.310 applicable to that portion of the Deschutes, Metolius, and Crooked Rivers utilized or affected by the proposed project.

12. There is potential for development of hydroelectric power in the Deschutes River between river mile 100 and 120, in the Metolius River between river mile 0 and 13, and in the Crooked River between river mile 0 and 6.5.

Conclusion

It is in the public interest that the power potential, Deschutes River, between river mile 100 and 120; Metolius River, between river mile 0 and 13; and Crooked River, between river mile 0 and 6.5, be developed providing that adequate safeguards are provided for maintenance of minimum perennial streamflows and enhancement of recreation and fish life.

Order

The proposed Round Butte project is in the public interest and it is hereby ordered that any State license issued by the hydroelectric commission for the proposed project shall be subject to the following provisions:

1. Water rights acquired for structures or works for the utilization of the waters of the Deschutes River from river mile 100 to 120 shall be subordinate to the use of water for all present and future upstream beneficial uses of water except for hydroelectric power.

2. Lands shall be furnished and recreation facilities provided by the licensee similar and at least equal to in quality and character lands and facilities damaged or destroyed by the project. The lands and facilities shall be deeded or easements, leases, permits, or agreements provided to the State of Oregon for administration and operation by the State highway commission. Licensee shall provide and insure suitable public access, including roads, to the recreation and reservoir area. Recreation facilities, lands, and public access provisions shall be acceptable to and approved by the State highway commission or shall conform to such regulations as may be prescribed by the State water resources board upon its own motion. In the event of the inability of the licensee and the State highway commission to reach agreement, the matter shall be referred to the State water resources board whose decision shall be final and binding upon all parties.

3. The licensee shall provide for the construction, maintenance, and operation of such fish ladders, fish traps, or other fish handling facilities or fish protective devices; or provide fish hatchery facilities for the purpose of conserving fishery resources and comply with such modifications of the project structures and operations and measures for the control of trash fish, in the interest of fish life as may be prescribed hereafter by the State Fish and Game Commissions of Oregon. In the event of inability of the licensee and the State fish and game commissions to reach agreement, the matter shall be referred to the State water resources board whose decision shall be final and binding on all parties.

4. The licensee's project shall not be permitted to attain a pool elevation which would inundate or cause detrimental effects to Opal Springs.

5. The licensee shall maintain a minimum flow, main stem Deschutes River, at river mile 100, of not less than 3,000 cubic feet per second for protection and utilization of fish spawning areas.

6. The licensee shall maintain a daily, weekly, monthly, or seasonal pool fluctuation not to exceed 1 foot from June 15 to September 15 of each year.

Done and dated this 25th day of November 1959.

STATE WATER RESOURCES BOARD,
By ROBERT W. ROOT, *Chairman.*
LASELLE E. COLES, *Vice Chairman.*
GEORGE H. COREY.
JOHN D. DAVIS.
L. H. FOOTE.
BEN R. LITTLE.
KARL W. ONTHANK.

Before the State Water Resources Board of Oregon

IN THE MATTER OF THE APPLICATION OF CONSUMERS POWER, INC., FOR A PRELIMINARY PERMIT TO CONSTRUCT A NORTH SANTIAM POWER PROJECT

FINDINGS OF FACT, CONCLUSIONS, AND ORDER

The above-entitled matter came on regularly for a hearing before the State Water Resources Board of the State of Oregon commencing at 1:30 p.m. on the 4th day of March 1960 in room 6, State Capitol Building, in the city of Salem, county of Marion, State of Oregon.

Appearances:

Mr. Robert Mix, Corvallis, Oreg., attorney for the applicant.

Mr. Louis H. Bonney, assistant attorney general, attorney for the board.

Mr. Roy C. Atchison, assistant attorney general, attorney for the State Fish and Game Commissions of the State of Oregon.

Findings

1. The applicant has filed application for a preliminary permit to appropriate a maximum of 2,500 cubic feet per second of the waters of the North Santiam River to develop 102,273 theoretical horsepower.

2. A concrete diversion dam, 65 feet in height, length on top 650 feet, would be constructed about 2½ miles below the existing Big Cliff powerhouse of the U.S. Army Corps of Engineers. Pool level would be maintained at about elevation 1,090.

3. Streamflows would be diverted through an intake structure located at the dam on the right bank into a 15-foot-diameter lined pressured tunnel extending under the highway and along the right bank for a distance of about 1.6 miles. The water would then be conducted about 8.5 miles in a lined canal and concrete bench flume to a forebay located about 2 miles west of Mill City, Oreg. The maximum capacity of the conduit would be 2,500 cubic feet per second.

4. A steel penstock, 13 feet in diameter, would extend to a powerhouse located on the North Santiam River about 2 miles west of Mill City and containing two 31,500-kilowatt-generating units. The gross head would be 360 feet; the net head would be about 342 feet; and the average annual generation would be 388 million kilowatt-hours. Transmission lines would connect to the Santiam substation of the Bonneville Power Administration.

5. All of the energy requirements of Consumers Power, Inc., are now received from the Bonneville Power Administration (witness Hunnicutt, p. 16). Applicant's customers have grown from 662 in 1941 to slightly over 5,000 in 1959. Applicant estimates that by the year 1988, total customer count will be over 12,000. Of this amount it is expected that 11,300 will be residential customers: approximately 700 commercial customers; and by 1988 industrial customers are estimated at 44 (witness Hunnicutt, p. 17). The applicant estimates that its 12,000 consumers in 1988 will use approximately 438 million kilowatt-hours annually (witness Hunnicutt, p. 19).

6. The applicant proposes to coordinate the project with the Northwest Power Pool (witness Hunnicutt, p. 19).

7. Applicant's peak demand in 1941 was 260 kilowatts; in 1959 this has increased to slightly over 21,000 kilowatts and applicant anticipates by 1988 the demand will reach 136,840 kilowatts. On a demand basis, the applicant estimates the project would supply its total system demand to approximately 1973–74 (witness Hunnicutt, p. 21).

8. Applicant states that this project would probably not be economically feasible if it had to operate as an independent project but it is proposed to operate the same as Big Cliff and benefit from storage regulation at Detroit Dam (witness Cotton, pp. 27 and 28).

9. Applicant proposes to fence the entire conduit with cyclone fence where necessary and have numerous crossovers for animals and people (witness Cotton, p. 29).

10. Based upon production and sale of 388 million kilowatt-hours and not making deductions for loss of power due to loss of water for fish life, the kilowatt-hour cost of the power produced would be 5 mills (witness Cotton, p. 31).

11. Project would require 1 year to complete preliminary studies and 4 years for construction (witness Cotton, p. 22).

12. There would be no pool fluctuations (witness Cotton, p. 34).

13. Applicant is a preference customer under the terms of the Bonneville Power Administration Act and his firm contracts with Bonneville Power Administration (witness Hunnicutt, p. 90). Applicant's current cost of energy from Bonneville is slightly under 4 mills per kilowatt-hour (witness Hunnicutt, p. 90). The applicant proposes to continue existing contracts with Bonneville Power Administration (witness Hunnicutt, p. 90). Applicant has not received official notification of termination of its supply from Bonneville Power Administration (witness Hunnicutt, p. 93).

14. The applicant proposes a cost item of $750,000 for miscellaneous items including fish facilities (witness Cotton, p. 101). No fish passage facilities are planned in the dam structure itself but it would be possible to construct them out of the $750,000 allocated for miscellaneous items including fish facilities (witness Cotton, p. 102).

15. If release schedules, referred to in House Document 531, 81st Congress, 2d session, providing for 1,000 cubic feet per second February through June and 750 cubic feet per second during the balance of the year, were maintained, the project would not be economically feasible (witness Cotton, p. 105).

16. There would be no regulation in the proposed project (witness Cotton, p. 110).

17. Production of 388 million kilowatt-hours is based on the assumption there would be no water left in the river immediately below the diversion dam when the releases at Big Cliff were under 2,500 cubic feet per second (witness Cotton, p. 30).

18. Assuming interest rate of 4½ percent, amortization 50 years, bond issue of $28 million, annual cost of $1,985,000, the proposed project would not be economically feasible if flows in excess of 160 cubic feet per second were required to remain in the river (witness Cotton, exhibit 32–C).

19. Assuming 2 mills per kilowatt-hour value for May, June, and July energy, and assuming a 6.2 mills per kilowatt-hour value for the balance of the annual energy, with a further assumption of a Rural Electrification Administration loan at 2 percent interest, 35-year amortization, annual cost of $1,643,000; the project would not be feasible if flows in excess of 625 cubic feet per second were required to remain in the river (witness Cotton, supplement to exhibit 32–C—submitted in accordance with request, p. 229).

20. The above figures do not include the cost of transmission or payment for benefits to the Army Engineers accruing from upstream storage (witness Cotton, p. 214).

21. The applicant has submitted no definite proposals for utilization of energy produced during May, June, and July but suggested that it could be utilized with the development of Upper Columbia-Canadian storage; through construction of an intertie between California and the Northwest; or through exchange agreements on a 2-for-1 or 3-for-1 basis (witness Cotton, pp. 217–218).

22. If a 500-cubic-foot-per-second flow were maintained below the applicant's proposed dam, there would be a reduction of approximately 78 million kilowatt-hours annually below the estimated maximum average water available and if reduced to the flow figures specified in House Document 531, 81st Congress, 2d session, there would be a reduction of approximately 136 million kilowatt-hours annually, approximately 58 and 116 million kilowatt-hours below the 388 million figure (witness Watson, p. 135).

23. The project, as proposed by the applicant, would produce most of its energy during two periods of the year—one period being December, January, and February; and a second being May, June, and July (witness Watson, pp. 135–136).

24. There is substantial energy generation that would fall outside of the 9-months-storage drawdown period, August through April. The energy outside that storage drawdown period, on the basis of utilizing up to 2,500 cubic feet per second, would approximate 100,045,651 kilowatt-hours; for a maintained flow of 500 cubic feet per second over 77,493,759 kilowatt-hours; and for the Detroit operational schedule as specified in House Document 531, 81st Congress, 2d session, approximately 56,959,309 kilowatt-hours annually (exhibit 28).

25. Assuming construction of the major water plan proposed by the Corps of Engineers, the load of 1985 and an estimated thermal installation of 900 megawatts; on the basis of average annual energy, the energy spilled in hydro would be in the order of 1,263,000 kilowatts (witness Watson, p. 139).

26. Protests were entered by the State fish and game commissions. These commissions stated that the North Santiam power project would be detrimental to the fish and game resources of the North Santiam River (witness Rulifson, p. 44).

27. At the time Detroit and Big Cliff Dams were built, the Corps of Engineers constructed the Marion Forks hatchery and facilities at Minto to partially compensate for loss of spawning and rearing on the North Santiam River which was blocked by these projects. Cost of construction of these structures was about $500,000. They were operated by the fish commission and financed primarily with Federal funds. It is estimated by these commissions that an average of over 2,100 spring Chinook will be affected by the project area upstream from the powerhouse. This includes 1,400 fish handled by the fish collection facilities at Minto and 700 spawning naturally. In addition, an average of 1,052 steelhead have been handled at Minto (witness Rulifson, pp. 40–41).

28. Flows in excess of the amount required by this project would come during winter months which would be of little value to anadromous or resident species of fish for spawning and transportation. Adult steelhead migrate into the North Santiam during March and early April and spawn in April, May, and June. Spring Chinook arrive in late April and May and hold in pools until spawning time in September or October (witness Rulifson, p. 41).

29. Tailrace flows at the power project would create an objectionable artificial attraction for adult salmon and steelhead. The proposed reservoir would inundate 2.5 miles of excellent stream fishing area. An additional 10 miles of fishing downstream from the dam in the area would be reduced in value or destroyed as a result of flow depletions (witness Rulifson, pp. 40–44).

30. The city of Salem expressed interest in the matter because the source of city water supply is in the North Santiam River. The city is interested in maintaining water quality for domestic and industrial use including food packing (witness Kowitz, pp. 45–46).

31. The Oregon Division, Izaak Walton League, opposed the project on the grounds that it would detrimentally affect the valuable fish and recreational sources presently in the North Santiam River (witness Withrow, pp. 49–54).

32. Salem Division, Izaak Walton League, opposed the project on the grounds that it would be detrimental to recreational and fish utilization of the stream (witness Withrow, pp. 55–58).

33. The Silverton Chapter, Izaak Walton League, expressed concern for protecting Niagara Park maintained by the Silverton chapter and expressed concern about the reduction of flow and its effect on recreational use of the stream (witness Gribble, pp. 65–67).

34. The North Santiam Chamber of Commerce, Mill City; and Gates Chamber of Commerce appeared in favor of the proposed project providing existing water rights are protected and that there would be sufficient streamflow in order not to interfere with the parks (witness Moffatt, p. 70).

35. Marion County Farmers Union appeared in favor of the project (witness Tate, pp. 73–74).

36. Marion County Court protested against diversion or appropriation of waters in the North Santiam River which would destroy or adversely affect its use as a recreational park, picnicking, swimming, or fishing purposes or destroy the scenic, esthetic beauty of the North Santiam River (witness Schnick, p. 94).

37. Diversion of water of the North Santiam River would reduce the recreational value of Marion County park projects and of the stream for fishing, swimming, and picnicking facilities and would destroy or adversely affect the scenic values of these areas (witness Schnick, p. 86).

38. Fisheries agencies were unable to give a figure for the optimum streamflow for fishery resources in the stretch of the river that would be affected by the project (witness Rulifson, p. 115).

39. Any reduction of flow below the present 750 second-feet would cause a detrimental effect to natural spawning of the area (witness Rulifson, p. 116).

40. There is a possibility that artificial spawning channels could be utilized for propagation of fish (witness Rulifson, p. 119).

41. There are at present no water quality problems with respect to fisheries that exist in that portion of the stream that would be affected by the proposed project (witness Rulifson, p. 120).

42. Flows for transportation, spawning, rearing, and holding of fish are needed in various volumes which may occur at different times of the year (witness Rulifson, p. 148).

43. Adequate flows for resting pools should provide an average velocity of 0.5 feet per second in the lowest possible water temperature. Higher temperatures increase the incidence of disease in the fish and increase the chance for transmission of disease (witness Rulifson, p. 150).

44. Actual flow releases in certain parts of the year have been considerably higher than minimum figures listed in House Document 531, 81st Congress, 2d session (witness Rulifson, p. 151).

45. The Corps of Engineers have provided additional flows upon request during late summer to attract fish into holding ponds (witness Rulifson, pp. 152–153).

46. An estimated 1,200 cubic feet per second is necessary to attract fish to the holding ponds at Minto (witness Rulifson, p. 153).

47. Fishery agencies were unable to determine the amount of spawning gravel that would meet required criteria that would be affected by reduction of flows (witness Rulifson, p. 160).

48. Fish hold in the deep holes where they find shelter from predators and areas that have optimum water velocities (witness Rulifson, p. 184). The main holding areas are at present located about the first mile below Minto dam (witness Rulifson, p. 185).

49. There does not appear to be adequate area to hold the number of fish involved below the proposed powerhouse (witness—Rulifson, 186).

50. Flows of 1,000 second-feet in the spring period and 750 second-feet in the fall were the minimum that fisheries agencies can accept (witness—Perry, p. 194).

51. Flows of 1,000 second-feet in the spring and 750 second-feet in the late summer are not adequate for fish life (witness—Perry, p. 199).

52. The section of the Santiam River affected by Detroit, Big Cliff, and the proposed project is estimated to have a potential of 20,000 chinook salmon and 20,000 spring chinook salmon. In the area above Detroit Dam, there is a potential of 10,000; that below Mehama, another 10,000 (witness—Perry, p. 195).

53. Any condition that might cause a raise in water temperature in the North Santiam River would likewise bring about an increase in the severity of columnaris disease in that stream (witness—Wood, p. 209).

54. The cities of Gates, Mill City, Stayton, and Salem use the North Santiam River as a source of public water supply. The quality of the water at the present time is such that the only necessary treatment is chlorination for bactericidal purposes. The removal of substantial quantities of water from the river could only result in the impairment of the remaining waters for present and future use as domestic water supply. Increases in temperatures in this stretch of the river during the summer months could result in increased algae production with a subsequent increase in taste and odors of the water that could be controlled only by additional water treatment facilities. Any impairment of the quality of the water for municipal supply could result in serious economic loss. There is need to maintain the quality of these waters for future municipal and industrial use. Until further studies show the lower flows can be tolerated, it is the recommendation of the State sanitary authority that the minimum releases at Detroit Reservoir, prescribed in House Document 531, 81st Congress, 2d session, be maintained (witness—Everts, pp. 239–241).

55. With the reduction of flows, it may be expected that temperatures of the water in that stretch of the river affected by the diversion, would increase causing increased algae production and creating serious taste and odor problems (witness—Everts, p. 244).

56. The only way that taste and odors resulting from the presence of algae in the water can be controlled is by the installation of additional treatment facilities (witness—Everts, p. 244).

57. There is need to maintain as high quality as can be maintained in order to maintain the fruit and vegetable processing industry in Salem (witness—Everts, p. 246).

Conclusions

1. The State water resources board is charged with conserving the highest use of water for all purposes, maximum economic development of the waters involved, to give proper and adequate consideration to the multiple use aspects of water, and other standards including a determination as to whether the proposed project would impair or be detrimental to the public interest.

2. The proposed project would impair the public interest as follows:

(*a*) Approval of the application of Consumers Power, Inc., for North Santiam project would result in a single purpose use of water to the detriment of other beneficial uses.

(*b*) Flows of at least 1,000 cubic feet per second, February through June, and 750 cubic feet per second, July through November of each year from Big Cliff Dam to a point downstream 12.5 miles, are necessary to maintain quality of water for domestic, municipal, and industrial uses; and for the protection of commercial and game fish.

(*c*) Flows of at least 1,000 cubic feet per second, February through June, and 750 cubic feet per second, July through November of each year from Big Cliff Dam to a point downstream 12.5 miles, are necessary to provide attraction water, habitat, and spawning areas for fish.

(*d*) The diversion of water of the North Santiam River would reduce the recreational value of park projects and of the stream for fishing, swimming, and other recreational uses and would destroy or adversely affect the scenic values of these areas.

(*e*) Maintenance of minimum flows of the North Santiam River from Big Cliff Dam to a point downstream 12.5 miles of at least 1,000 cubic feet per second, February through June, and 750 cubic feet per second, July through November of each year, appear to preclude the development of an economically sound power project as proposed by the applicant.

Order

It is hereby ordered that the application for a preliminary permit be rejected.

Done and dated this 8th day of August 1960.

STATE WATER RESOURCES BOARD,
By ROBERT W. ROOT, *Chairman.*
LASELLE E. COLES, *Vice Chairman.*
GEORGE H. COREY.
JOHN D. DAVIS.
LOUIS H. FOOTE.
RUTH HAGENSTEIN.
KARL W. ONTHANK.

COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF MINES AND MINERAL INDUSTRIES

The Department of Mines and Mineral Industries of Pennsylvania is charged with enforcing State laws relative to the anthracite and bituminous coal mines in the Commonwealth. The primary direction of these laws is to provide for the health and safety of persons employed in and about the coal mines of Pennsylvania and for the protection and preservation of property connected therewith. In this basic function our program meshes with that of the Health and Safety Activity Division of the U.S. Bureau of Mines. This is the only phase of our program which impinges upon, meshes with, or is limited by that of other agencies. For your information, I am attaching a copy of a brief résumé concerning our department.

In addition to the above general explanation, there are only two program items which appear to be in line with your inquiry. These are (1) the anthracite committee which administers the production control plan for the anthracite industry and is within the province of the Pennsylvania Department of Commerce and (2) the Coal Research Board of the Pennsylvania Department of Mines and Mineral Industries.

The anthracite committee is constituted and organized in accordance with provisions of the commerce law, approved May 10, 1939, as amended. Copies of that law and its amendments, which were approved July 7, 1941, and May 5, 1945, are attached for your information. Also attached is a copy of the Anthracite Standards Law, approved May 31, 1947, which confers certain powers on the anthracite committee and its agents.

The coal research board of the department of mines and mineral industries was created by Act No. 651, approved May 31, 1956. A copy of that act, which is self-explanatory, is attached for your information together with a copy of a résumé dated July 15, 1960, relative to the activities of the board.

The major problem facing the coal industries in Pennsylvania today concerns the maintaining of a sufficient demand for the coals of the Commonwealth to keep these industries in a sound economic condition. Present indications are that research programs together with regulatory programs as and when necessary offer the best hope of resolving this problem.

This letter and its attachments are submitted as a summary reply to your request for information. In the event more details are desired, I will be pleased to forward them to you upon receipt of your request.

COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF MINES AND MINERAL INDUSTRIES

The department of mines and mineral industries was established as a separate department by the act of April 14, 1903. Prior to that time it had been the bureau of mines in the department of internal affairs.

THE SECRETARY

The head of this department is the secretary of mines and mineral industries, who is appointed by the Governor, by and with the advice and consent of the senate, to serve for 4 years and until his successor shall have been appointed and qualified. The department is charged with the supervision of the execution of the mining laws of the Commonwealth and the care and publication of the annual reports of the mine inspectors and to transmit a synopsis of them, together with such other statistical data compiled therefrom, and other work of the department, as may be of public interest, properly addressed to the Governor.

The organization of the department, under the secretary, consists of 4 deputy secretaries, 56 mine inspectors, 6 oil and gas inspectors, 5 electrical inspectors, 6 first-aid and mine rescue instructors and 9 mining engineers together with the office organization and the miscellaneous personnel required to fulfill the duties placed upon the department. The mine inspectors are appointees selected from a list of persons certified to the Governor by boards of examiners provided for by statute.

It is the duty of the secretary to see that the mining laws of the Commonwealth are faithfully executed. He is to give such aid and instruction to the mine inspectors from time to time as he may deem best calculated to protect the health and promote the safety of all persons employed in and about the mines. He is authorized to make such examinations and investigations as may enable him to report on the various systems of coal mining and all other mining practices in the Commonwealth, methods of mine ventilation, the circumstances and responsibilities of mine accidents, and such other matters as may pertain to the general welfare of coal miners and others connected with mining, and the interests of mine owners and operators.

MINE INSPECTION

The mine inspectors are required, under the law, to give their whole time and attention to the duties of their office. They must see that every necessary precaution is taken to secure the safety of the workmen and that the mining laws are obeyed; give special attention to mines generating explosive gas and to other mines where unusual dangers may be suspected to exist; to keep in their offices a record of all examinations of mines; to keep a record of all fatal and serious accidents, showing the nature and cause thereof; and to make an annual report to the secretary of mines and mineral industries.

Each anthracite mine inspector is a member of the mine foreman's examining board appointed for his district. The board is required to examine applicants for mine foreman and assistant mine foreman certificates. Bituminous inspectors are appointed members of the mine foreman's examining board, which board examines applicants for mine foreman, assistant foreman, fire boss and electrician certificates. Bituminous inspectors, under the direction of the secretary of mines and mineral industries, are also required to examine applicants for shot-firer and mining machine runner certificates.

The department has three well-equipped mine rescue and first-aid trucks located at strategic points in the coal regions. These trucks travel throughout the coal regions instructing mineworkers in mine rescue and first-aid practices, and are used in case of emergency or catastrophe when they are rushed to the scene of the disaster.

RESTORATION, SEALING AND WASTE DISPOSAL

The Bituminous Coal Open Pit Mining Conservation Act and the anthracite strip mining law, which require strip mine operators operating in the State of Pennsylvania to file bonds calculated at the rate of $300 for each acre to be affected, are administered by the department of mines and mineral industries. The bonds are filed to guarantee that the area will be restored as required by the law after the operation has been abondoned or the bonds forfeited and the restoration work done by the department of mines and mineral industries. Filing fees at the rate of $25 per acre are paid by the anthracite operators and placed in a fund which is used to administer the anthracite strip mining law. Filing fees of $100 annually are paid by the bituminous operators. These latter fees are placed in a fund and are used for the purpose of leveling and planting areas in the bituminous region which were affected prior to the passage of the act.

An appropriation is granted the department of mines and mineral industries known as abandoned coal mine services. This fund is used for the purpose of sealing and flushing of and extinguishment of mine fires in abandoned coal mines throughout the Commonwealth.

The 1955 session of the general assembly included over 850 bituminous coal mines employing fewer than 5 persons under the provisions of the General Safety Act applicable to bituminous coal mines. These mines had theretofore been exempt from said provisions. This change added greatly to the requirements on the department.

The same assembly passed an act regulating the disposal of waste on the surface in those areas of the Commonwealth where anthracite or bituminous coal is or has been mined. The purpose of this act is to minimize the danger of coal mine fires originating from ignition of waste disposal piles on the surface. The duty of enforcing this law is placed upon the department of mines and mineral industries.

During 1955 the State and Federal Governments established a jointly financed program for the control and drainage of water in anthracite coal formations to conserve natural resources and promote national security. This program is carried out by equally matching financial contributions but the full responsibility for installing, operating, and maintaining projects is placed upon the department of mines and mineral industries acting on behalf of the Commonwealth.

OIL AND GAS DIVISION

The 1955 session of the general assembly enacted the Gas Operations, Well-Drilling, Petroleum, and Coal Mining Act. This law regulates the underground storage of gas under workable coal seams and prescribes the rights and duties of oil and gas well operators and of owners and operators of coal mines within certain boundaries. It created an oil and gas division in the department of mines and mineral industries and gave said division the power and authority to execute and carry out its provisions. One of the deputy secretaries and the six oil and gas inspectors, included in the personnel listed hereinbefore, are employed in this division. A companion act to the Gas Operations, Well-Drilling, Petroleum, and Coal Mining Act changed the name of the department from the department of mines to the department of mines and mineral industries.

COAL RESEARCH

During the 1955 legislative session, a bill was introduced requesting an appropriation of $500,000 for the purpose of conducting comprehensive research studies and programs in the technology, economics, and marketing of bituminous and anthracite coal, and their byproducts, for the purpose of developing new uses and increased markets for coal mined in this Commonwealth. This bill was passed, and required the appointing of two anthracite operators, two bituminous coal operators, one representative of the labor collective bargaining agency from the anthracite and a similar person from the bituminous region, with the secretary of mines and mineral industries as chairman, to act as a board and administer the research program. Grants were made from this appropriation to the Anthracite Institute in Wilkes-Barre covering research work on anthracite only, Pennsylvania State University, for anthracite and bituminous research, the Bituminous Coal Research, Inc., in Pittsburgh on bituminous, and the Carnegie Institute of Technology in Pittsburgh on bituminous. During the 1957 legislative session an appropriation of $25,000 was received and allocated for research work. These institutions are proceeding with these technical and complicated studies. The 1959 session of the general assembly approved of an appropriation of $375,000 to be used for this purpose. Another appropriation of $150,000 has been approved to be used in conducting research on the use of coal in roadbuilding materials. This is the first step made by the Commonwealth relative to research for its coal industries.

JULY 15, 1960.

RÉSUMÉ RELATIVE TO THE COAL RESEARCH BOARD OF THE PENNSYLVANIA DEPARTMENT OF MINES AND MINERAL INDUSTRIES

Act No. 651 of the 1955 session of the General Assembly of Pennsylvania, which was approved May 31, 1956, created a coal research board in the department of mines and mineral industries. This board is composed of seven members, namely: the secretary of the department of mines and mineral industries, who is the designated chairman of the board; two anthracite operators; two bituminous coal operators; one representative of the labor collective-bargaining agency of the anthracite industry and one representative of the labor collective-bargaining agency of the bituminous coal industry. All members, other than the secretary of the department of mines and mineral industries, are appointed by the Governor for 3-year terms.

The board is authorized to conduct, or cause to be conducted, thorough and comprehensive research studies and research programs in the technology, the economics, and the marketing of bituminous and anthracite coal and their by-products, for the purpose of developing new uses and increased markets for such coal. It is further authorized, with the approval of the Governor, to enter into mutually satisfactory contracts or agreements with any person, firm, institution, or corporation as well as any State or Federal agency which the board deems wise, necessary, and expedient in carrying out its objectives.

Appropriations granted to the board to this time have been as follows: 1955–57 biennium, $500,000; 1957–59 biennium, $25,000; 1959–61 biennium, $375,000. These appropriations represent a total of $900,000 which has been made available to the board for its prescribed functions to this time. In addition, the 1959 session of the general assembly granted a special appropriation of $150,000 to the board for the specific purpose of research and development of a process for the use of coal for roadbuilding material. This special appropriation was intended to be applied to conducting studies in Pennsylvania of a roadbuilding material made from bituminous coal and its byproducts which was developed by the Curtiss-Wright Corp. Recent changes in the management of Curtiss-Wright make it questionable whether or not this intended program will be carried out.

The sum of $870,500 out of the funds made available to the board for its regular functions had been utilized by the board as of July 15, 1960, for research projects through contracts with properly qualified research agencies. The board determined to divide funds available to it to this time equally between research for anthracite and for bituminous coal. Contracts have been made with 4 different research agencies to conduct 28 separate projects. The pertinent research agencies are the Pennsylvania State University, Carnegie Institute of Technology, Bituminous Coal Research, Inc., and the Anthracite Institute.

Projects conducted for the board were selected by it from proposals submitted by qualified research agencies. Project proposals received by the board demonstrated a need for conducting basic or fundamental research concerning various factors related to coal and showed a lack of ideas for research in applied uses for coal. The result was that the board had little choice other than to assign the bulk of its available funds to projects involving basic or fundamental research. This type of research is slow, tedious, highly technical, and expensive. Results from it often require extensions of project programing and, generally, call for subsequent applied research before benefits of practical value are obtained from any discoveries.

The board contracted for several research projects which proposed to provide additional facts concerning coal through identifying its constituents by physical description, or the petrographic method. It selected others which would show the identification of the constituents of coal by the chemical fraction method. Both of these types of study have the objective of increasing the utilization of coal through the use of its components as identifiable from these studies.

Other projects have been concerned with the potentials of making new products from coal, and increased markets through such products, by treatment of coal with chemicals or radiation.

Certain projects had to do with details of the combustion characteristics of coal with the objective of increasing the desirability of coal for energy-producing purposes in competition with other sources of energy.

Projects were conducted to add to the knowledge of the use of coal for metallurgical purposes with the objective of increasing the market for various grades of coal in this field.

One project concerned the export market for anthracite. This project originated at a time when anthracite export shipments were very encouraging and its intended purpose was to determine what could be done to retain and increase this market which had always existed on an extremely variable scale.

Another project concerned the study of the caking characteristics of the bituminous coals of Pennsylvania when used in stokers under conditions which require variations of draft. On and off draft causes certain coals to develop layers of caked material in the stoker fuel bed when the draft is cut off. This occurrence is very objectionable in stoker operation when draft is resumed.

As of this time no final report can be given to you with respect to any of the projects that have been conducted through the coal research board. A tremendous quantity of useful and valuable facts, data, and information has been recorded. I am hopeful that my next report on this subject will include final findings from some of the projects and that I may be able to demonstrate increased uses and markets for coal as a result thereof.

It must be remembered that the continuous-mining machines which have done so much to preserve the economy of the bitminous coal-mining industry were developed only through slow and tedious research. The coal transportation pipeline which carries bituminous coal from mines in Pennsylvania to an electrical utility plant located some 110 miles from these mines is also an example of the results of research which tend to continue the use of coal in competition with other sources of energy.

It is my sincere hope that the program of Pennsylvania's Coal Research Board will produce results of importance equal to the two examples I have cited. This will require a continuation of funds appropriated for the program which will necessitate the assistance of all interested parties. These parties include coal mine operators, mineworkers, residents of mining areas, and State legislators. It must be remembered that the scope allowed to the board by present law is restricted to the purpose of developing new uses and increased markets for coal. Research relative to mining, preparation, and transportation of coal does not fall within the present province of the board.

62135 O—60——37

No. 51

AN ACT

Relating to, and providing for, the promotion and development of business, industry and commerce in the Commonwealth; conferring powers and duties upon the Department of Commerce and other agencies of the Commonwealth; abolishing the Pennsylvania State Publicity Commission, terminating the terms of its members and conferring its powers upon, and transferring and appropriating the balance of its current appropriation to, the Department of Commerce; and repealing certain laws.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

"Commerce Law."

Section 1. This act shall be known and may be cited as the "Commerce Law."

Department of Commerce created.

Section 2. For several years an acute economic emergency has existed in this Commonwealth, threatening the health, public safety, welfare and future prosperity of the people. Thousands of our citizens are without employment through no fault of their own, and appropriations required for their assistance are a heavy burden on the Commonwealth and her people. Such economic conditions demand the adoption of a public policy and an administrative program to alleviate these conditions and prevent their recurrence, which can be remedied only as business, industry, and commerce are encouraged, rehabilitated, developed, and expanded. Since no department of the State government is now devoted to the solution of these conditions, it is necessary that a department be empowered to effectuate such a program. Accordingly, the powers and duties hereinafter enumerated in this act are vested in the Department of Commerce.

Powers and duties of Department of Commerce.

Section 3. The Department of Commerce shall have the power, and its duty shall be:

(1) To investigate, study and undertake ways and means of promoting and encouraging the prosperous development and protecting the legitimate interests and welfare of Pennsylvania business, industry and commerce, within and without the Commonwealth.

(2) To investigate, study and undertake ways and means of expanding markets and promoting and developing new markets for Pennsylvania products.

(3) To promote and encourage the location and development of new business, industries and commerce within the Commonwealth.

(4) To investigate and study conditions affecting Pennsylvania business, industry and commerce, and to collect and disseminate information, and engage in technical studies, scientific investigations and statistical research, and educational activities necessary or useful for the proper execution of its duties in promoting and de-

veloping Pennsylvania business, industry and commerce within and without the Commonwealth.

(5) To cooperate with and assist persons, firms, associations, corporations, cooperative associations and other organizations, and the political subdivisions of the Commonwealth, in the execution of its duties and functions under this act.

(6) To make to the General Assembly, from time to time, recommendations for the remedy or improvement of any conditions, and the elimination of any restrictions and burdens imposed by law, or otherwise existing, which adversely affect or retard the development and expansion of business, industry or commerce.

(7) To initiate, promote and conduct, or cause to be conducted, research designed to further new and more extensive uses and consumption of natural and other resources and their by-products; and, for such purposes, to enter into contracts and agreements with research laboratories maintained by educational or endowed institutions in this Commonwealth, and to expend appropriations made to the department for such purposes.

(8) To investigate and study conditions of unemployment, and to recommend specific remedies for the alleviation of such conditions, and aid in restoring employment in communities affected thereby, in order that the burden of public relief may be lessened.

(9) To aid and promote the elimination of unfair competition and trade practices tending to impair price stability and which are harmful to the financial soundness of business, industry and commerce, and to the wages and working conditions of employes.

(10) To encourage and develop commerce with other states and foreign countries, and to devise ways and means of removing trade barriers hampering the free flow of commerce between this and other states.

(11) To cooperate with interstate commissions engaged in formulating and promoting the adoption of interstate compacts and agreements helpful to business, industry and commerce.

Section 4. The Department of Commerce, in order to promote and develop business, industry and commerce in the Commonwealth, shall have the power, and its duty shall be, to plan and conduct a program of information, advertising and publicity relating to the business, industrial, commercial, agricultural, educational, recreational, scenic, historic, highway and residential facilities, advantages and attractions of the Commonwealth, including any political subdivisions thereof, which may include newspaper, magazine, outdoor and radio advertising, both within and without the limits of the Commonwealth. The department shall en-

Advertisement of facilities and advantages.

courage and, so far as it is practicable to do so, coordinate the activities of persons, firms, associations, corporations and other organizations engaged in publicizing and promoting such facilities, advantages and attractions of the Commonwealth, or any political subdivision thereof.

Section 5. The Department of Commerce, in order to promote and develop business, industry and commerce, shall have the power, either acting alone or in cooperation with other administrative departments, boards and commissions of the Commonwealth, to advertise the facilities, advantages and attractions of the Commonwealth, referred to in the preceding section, at fairs, expositions and other celebrations within and without the Commonwealth, and, for such purposes, shall have power to obtain space, land or buildings, by lease or otherwise, including the erection and construction of booths, exhibits and buildings, through the Department of Property and Supplies.

Department of Property and Supplies to assist.

Section 6. Except as otherwise provided in this act, the provisions of this act shall not be deemed to repeal or impair any law now in effect, and shall not curtail the powers and functions of any administrative department, board or commission of the Commonwealth. The several administrative departments, boards and commissions, in conjunction with the Department of Commerce, shall devise a practical and working basis for cooperation and coordination of their powers and duties, to the extent that such powers and duties have any bearing on the powers and duties of the Department of Commerce, in order that there will be no duplicating and overlapping of such powers and duties. It shall be the duty of every administrative department, board or commission to cooperate with the Department of Commerce to the extent that the work of the Department of Commerce may require such cooperation.

Cooperation with other departments.

Section 7. (a) The Pennsylvania State Publicity Commission is hereby abolished, as of the effective date of this act, and the terms of the members of such commission now holding office, and the employment of all officers and employes of the commission, shall expire and terminate upon that date.

Pennsylvania State Publicity Commission abolished.

(b) All books, papers, maps, charts, plans, literature and other records, and all equipment in the possession of the Pennsylvania State Publicity Commission upon the effective date of this act, or of any member of the commission or any officer or employe of the commission, shall be delivered or turned over to the Department of Commerce.

Records and equipment transferred.

(c) All existing contracts and obligations of the Pennsylvania State Publicity Commission shall remain

Contracts to be fulfilled.

in full force and effect and shall be performed by the Department of Commerce.

Balance of appropriation transferred.

(d) The unexpended balance existing on the effective date of this act in any appropriation made to the Pennsylvania State Publicity Commission is hereby transferred and appropriated to the Department of Commerce, for the biennial period ending the thirty-first day of May, one thousand nine hundred thirty-nine, for the purpose of carrying out the powers and duties of the Pennsylvania State Publicity Commission transferred to the Department of Commerce by this act, and for the payment of any bills or encumbrances incurred by the Pennsylvania State Publicity Commission prior to, and remaining unpaid on, the effective date of this act.

Repeals.

Section 8. The act, approved the nineteenth day of July, one thousand nine hundred thirty-five (Pamphlet Laws, one thousand three hundred forty-eight), entitled "An act creating a commision to compile, edit, publish, and distribute pamphlets descriptive of scenic and historic interest; and making an appropriation," and the act amendatory thereto, approved the twentieth day of May, one thousand nine hundred thirty-seven (Pamphlet Laws, seven hundred thirty-seven), are hereby repealed.

When effective.

Section 9. This act shall become effective immediately upon its final enactment.

APPROVED—The 10th day of May, A. D. 1939.

ARTHUR H. JAMES

The foregoing is a true and correct copy of Act of the General Assembly No. 51.

Secretary of the Commonwealth.

No. 125

AN ACT

To amend section three of the act, approved the tenth day of May, one thousand nine hundred and thirty-nine (Pamphlet Laws, one hundred eleven), entitled, "An act relating to, and providing for, the promotion and development of business, industry and commerce in the Commonwealth; conferring powers and duties upon the Department of Commerce and other agencies of the Commonwealth; abolishing the Pennsylvania State Publicity Commission, terminating the terms of its members and conferring its powers upon, and transferring and appropriating the balance of its current appropriation to, the Department of Commerce; and repealing certain laws", providing for the promulgation or adoption and administration by the Department of Commerce of voluntary plans to control the output of mineral resource industries located preponderantly within the Commonwealth.

Mineral resource industries.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Commerce Law.

Act of May 10, 1939, P. L. 111, section 3, amended.

Section 1. Section three of the act, approved the tenth day of May, one thousand nine hundred thirty-nine (Pamphlet Laws, one hundred eleven), entitled, "An act relating to, and providing for, the promotion and development of business, industry and commerce in the Commonwealth; conferring powers and duties upon the Department of Commerce and other agencies of the Commonwealth; abolishing the Pennsylvania State Publicity Commission, terminating the terms of its members and conferring its powers upon, and transferring and appropriating the balance of its current appropriation to, the Department of Commerce; and repealing certain laws", is hereby amended to read as follows:

Section 3. The Department of Commerce shall have the power, and its duty shall be:

(1) To investigate, study and undertake ways and means of promoting and encouraging the prosperous development and protecting the legitimate interests and welfare of Pennsylvania business, industry and commerce, within and without the Commonwealth.

(2) To investigate, study and undertake ways and means of expanding markets and promoting and developing new markets for Pennsylvania products.

(3) To promote and encourage the location and development of new business, industries and commerce within the Commonwealth.

(4) To investigate and study conditions affecting Pennsylvania business, industry and commerce, and to collect and disseminate information, and engage in technical studies, scientific investigations and statistical research, and educational activities necessary or useful for the proper execution of its duties in promoting and developing Pennsylvania business, industry and commerce within and without the Commonwealth.

(5) To cooperate with and assist persons, firms, associations, corporations, cooperative associations and other organizations, and the political subdivisions of the Commonwealth, in the execution of its duties and functions under this act.

(6) To make to the General Assembly, from time to time, recommendations for the remedy or improvement of any conditions, and the elimination of any restrictions and burdens imposed by law, or otherwise existing, which adversely affect or retard the development and expansion of business, industry or commerce.

(7) To initiate, promote and conduct, or cause to be conducted, research designed to further new and more extensive uses and consumption of natural and other resources and their by-products; and, for such purposes, to enter into contracts and agreements with research laboratories maintained by educational or endowed institutions in this Commonwealth, and to expend appropriations made to the department for such purposes.

(8) To investigate and study conditions of unemployment, and to recommend specific remedies for the alleviation of such conditions, and aid in restoring employment in communities affected thereby, in order that the burden of public relief may be lessened.

(9) To aid and promote the elimination of unfair competition and trade practices tending to impair price stability and which are harmful to the financial soundness of business, industry and commerce, and to the wages and working conditions of employes.

(10) To encourage and develop commerce with other states and foreign countries, and to devise ways and means of removing trade barriers hampering the free flow of commerce between this and other states.

(11) To cooperate with interstate commissions engaged in formulating and promoting the adoption of interstate compacts and agreements helpful to business, industry and commerce.

Additional powers and duties of Department of Commerce.

Administration of production control plans.

Procedure for inauguration of control plan.

*(12) (a) To promulgate a "Production Control" plan or plans, or amendments thereof, upon written petition, and with the approval of Pennsylvania producers of seventy-five per centum of the Pennsylvania output of any United States mineral resource industry located preponderantly within the Commonwealth, or to adopt and promulgate any such plan or plans in operation at the time of the enactment of this act with the sanction of Pennsylvania producers of seventy-five per centum of the Pennsylvania output of such industry, and to administer or secure the cooperation of others, including State officers, producers' representatives or employes' representatives in any industry where there are general collective bargaining arrangements, in administering such plan or plans or amendments thereof upon a voluntary basis: *Provided, however, That no production control*

*The proviso not italicized in original.

plan or rules or regulations relating thereto shall apply to producers who are not petitioning producers or who do not otherwise assent to the production control plan promulgated and adopted.

"Production Control", defined.

(b) A "Production Control" within the meaning of this act is any system of regulated production in any industry as above defined which currently controls the daily, weekly or monthly volume of allowable production of said industry in Pennsylvania for the purpose of adequately supplying market demand, avoiding waste of mineral resources or the exploitation thereof without adequate return to the Commonwealth, her political subdivisions and people, protecting capital invested therein from unwise depletion and dissipation, promoting employment and security for the payment of wages and benefits to those employed in such industry and achieving other express purposes of the Commerce Law (1) by allocating or apportioning to each producer in the industry a fair and equitable distributive portion of the total allowable production; (2) by providing for the adjustment of inequities in assigned distributive portions and for fair and equitable adjustments of distributive portions whenever transfers of mineral properties or facilities take place between or among producers based upon the position in the industry fairly and equitably attributable to such properties or facilities; (3) by providing for the admission under such plan of new operations and for the assignment of a fair and equitable distributive portion of the total allowable production to such operations; (4) by providing, where applicable, for the establishment of fair and equitable standards of preparation to ensure purity and proper sizing and grading of the product, (5) and also by establishing and providing for reasonable rules and regulations to effectuate such control plan.*

Scope of operation of production control plan.

Section 2. This act shall become effective immediately upon final enactment.

Act effective immediately.

APPROVED—The 7th day of July, A. D. 1941.

ARTHUR H. JAMES

The foregoing is a true and correct copy of Act of the General Assembly No. 125.

Secretary of the Commonwealth

*"*distributve*" in original.

No. 176

AN ACT

To amend clause twelve of section three of the act, approved the tenth day of May, one thousand nine hundred thirty-nine (Pamphlet Laws, one hundred eleven), entitled "An act relating to, and providing for, the promotion and development of business, industry and commerce in the Commonwealth; conferring powers and duties upon the Department of Commerce and other agencies of the Commonwealth; abolishing the Pennsylvania State Publicity Commission, terminating the terms of its members and conferring its powers upon, and transferring and appropriating the balance of its current appropriation to, the Department of Commerce; and repealing certain laws," providing for the inspection of mineral production, the gathering and compilation of composite statistics for reports to the General Assembly by agencies administering production control plans, and for the termination of such plans under certain circumstances.

Mineral resource industries.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Commerce Law.

Section 1. Clause twelve of section three of the act, approved the tenth day of May, one thousand nine hundred thirty-nine (Pamphlet Laws, one hundred eleven), entitled "An act relating to, and providing for, the promotion and development of business, industry and commerce in the Commonwealth; conferring powers and duties upon the Department of Commerce and other agencies of the Commonwealth; abolishing the Pennsylvania State Publicity Commission, terminating the terms of its members and conferring its powers upon, and transferring and appropriating the balance of its current appropriation to, the Department of Commerce; and repealing certain laws," as added by the act, approved the seventh day of July, one thousand nine hundred forty-one (Pamphlet Laws, two hundred seventy-five), is hereby amended to read as follows:

Clause 12, section 3, act of May 10, 1939, P. L. 111, as added by act of July 7, 1941, P. L. 275, amended.

Section 3. The Department of Commerce shall have the power, and its duty shall be:

Duties of Department of Commerce.

* * * * *

(12) (a) To promulgate a "Production Control" plan or plans, or amendments thereof, upon written petition, and with the approval of Pennsylvania producers of seventy-five per centum of the Pennsylvania output of any United States mineral resource industry located preponderantly within the Commonwealth, or to adopt and promulgate any such plan or plans in operation at the time of the enactment of this act with the sanction of Pennsylvania producers of seventy-five per centum of the Pennsylvania output of such industry, and to administer or secure the cooperation of others, including State officers, producers' representatives or employes' representatives in any industry where there are

Additional powers and duties of Department of Commerce.

Administration of production control plans.

Procedure for inauguration of control plan.

general collective bargaining arrangements, in administering such plan or plans or amendments thereof upon a voluntary basis: Provided, however, That no production control plan or rules or regulations relating thereto shall apply to producers who are not petitioning producers or who do not otherwise assent to the production control plan promulgated and adopted.

"Production Control" defined.

(b) A "Production Control" within the meaning of this act is any system of regulated production in any industry as above defined which currently controls the daily, weekly or monthly volume of allowable production of said industry in Pennsylvania for the purpose of adequately supplying market demand, avoiding waste of mineral resources or the exploitation thereof without adequate return to the Commonwealth, her political subdivisions and people, protecting capital invested therein from unwise depletion and dissipation, promoting employment and security for the payment of wages and benefits to those employed in such industry and achieving other express purposes of the Commerce Law (1) by allocating or apportioning to each producer in the industry a fair and equitable distributive portion of the total allowable production; (2) by providing for the adjustment of inequities in assigned distributive portions and for fair and equitable adjustments of distributive portions whenever transfers of mineral properties or facilities take place between or among producers based upon the position in the industry fairly and equitably attributable to such properties or facilities; (3) by providing for the admission under such plan of new operations and for the assignment of a fair and equitable distributive portion of the total allowable production to such operations; (4) by providing, where applicable, for the establishment of fair and equitable standards of preparation to ensure purity and proper sizing and grading of the product *in order to protect consumers and to prevent unfair trade practices;* (5) and also by establishing and providing for reasonable rules and regulations to effectuate such control plan.

Scope of operation of production control plan.

Inspection.

(c) The department or any other agency administering any production control plan may inspect the production of any producer under such plan, and of such other producers as may desire such inspection, to determine whether any standards of purity, sizing and grading established under any plan are being complied with.

Statistics compiled by Department of Commerce.

(d) The department on its own initiative, or at the request of any agency administering a production control plan, and in such case at the expense of such agency, may, through its own staff, or through a recognized accounting agency, gather and compile composite statistics of volume, value and geographical

distribution of sales, both within and outside the Commonwealth; realization on sales, production costs, employment and wages relating to any industry functioning under a production control plan, and such other statistics as may be deemed appropriate by any such administering agency. Such statistics shall be available for inspection only in composite form. Any other department of the Commonwealth collecting any of such statistics shall make them available to the department.

Report to General Assembly.

(e) The department or agency administering any such production control plan, including the Production Control Plan for the Anthracite Industry heretofore promulgated and now functioning under the provisions of this act, shall make a report to each regular session of the General Assembly, showing, inter alia, the percentage of the output of the industry under such plan and the experience of the industry thereunder, and shall include therein any recommendations such agency may have with respect to further legislation which will be helpful in carrying out the purposes of this act.

Production Control Plan to be discontinued at instance of Governor.

(f) No production control plan promulgated by the department under the authority of this act shall be continued, whenever the department, if it administers the plan, or the officers of the State, or a majority of such officers administering or assisting in the administration of any such plan, shall report to the Governor, and the Governor shall find that such plan no longer accomplishes the purposes of this act or no longer is in the public interest.

Act effective immediately.

Section 2. This act shall become effective immediately upon final enactment.

APPROVED—The 5th day of May, A. D. 1945.

EDWARD MARTIN

The foregoing is a true and correct copy of Act of the General Assembly No. 176.

Cullom Ison

Secretary of the Commonwealth.

No. 168

AN ACT

To protect consumers in the purchase for fuel purposes of the hard coal known as anthracite; providing for and regulating the sale, offering for sale, resale, delivery and shipment of anthracite according to a standard provided for in this act; requiring producers and dealers and persons engaged in the sale and resale of anthracite, from storage yards or otherwise to consumers, to keep certain records; conferring powers on the Anthracite Committee and its agents, and providing penalties.

"Anthracite Standards Law."

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Legislative Purpose; Short Title.—This act is enacted by the General Assembly in the exercise of the police power of the Commonwealth for the protection of consumers and purchasers for resale, wherever located, in the purchase for fuel purposes of the hard coal known as anthracite. This act shall be known and may be cited as the Anthracite Standards Law.

Section 2. Definitions.—The following words and phrases as used in this act shall be construed to mean:

(a) "Anthracite" the hard coal mined in the Commonwealth of Pennsylvania;

(b) "Anthracite Committee" the Anthracite Committee of the Department of Commerce of the Commonwealth of Pennsylvania, constituted and organized in accordance with the provisions of the Commerce Law, approved May 10, 1939 (Pamphlet Laws 111), as amended, May 5, 1945 (Pamphlet Laws 432), to administer the Production Control Plan for the Anthracite Industry;

(c) "Producer" a person, association, partnership or corporation or his or its legal representative engaged in operating a preparation plant and in the sale, delivery or shipment to market therefrom of anthracite for fuel purposes;

(d) "Dealer" a person, association, partnership or corporation or his or its legal representative purchasing anthracite for resale to consumers for fuel purposes and who maintains a place for the storage of anthracite;

(e) "Preparation Plant" a breaker, washery or other plant where run-of-mine anthracite from mines and strippings, or anthracite from refuse banks is processed by crushing, washing, screening and the removal of impurities to make the same suitable as a fuel;

(f) "Sizes" include the sizes of anthracite commonly known as broken, egg, stove, nut, pea, buckwheat and rice, the sizings for which are set forth in the definition of "Standard Anthracite." "Sizes" does not include,

and this act shall not be construed to apply to, anthracite of smaller sizes than those herein enumerated;

(g) "Standard Anthracite" anthracite which does not exceed the following specifications as to undersize and ash or slate and bone content:

Size of Anthracite	Test Mesh Round		Undersize Maximum	Ash Content Maximum	Maximum Slate	Percentage Bone
	Through	Over				
Broken	4⅜"	3¼"-3"	15%	11% or 1½%		2%
Egg	3¼"-3"	2 7/16"	15%	11% or 1½%		2%
Stove	2 7/16"	1⅝"	15%	11% or 2%		3%
Nut	1⅝"	13/16"	15%	11% or 3%		4%
Pea	13/16"	9/16"	15%	12% or 4%		5%
Buckwheat	9/16"	5/16"	15%	13%		
Rice	5/16"	3/16"	17%	13%		

As to the maximum percentage of undersize and the maximum percentage of ash content a tolerance of 1% shall be allowed. When slate content, in the sizes from broken to nut inclusive, is less than above standards, bone content may be increased by one and one-half times the decrease in the slate content under the allowable limits, but slate content, specified above, shall not be exceeded in any event. The maximum percentage of undersize shall be applicable only to anthracite as it is produced at the preparation plant. Anthracite which conforms to the sizing herein fixed, and conforms also to either the specification for ash content or the specification for slate and bone content, shall be deemed to be "Standard Anthracite";

(h) "Ash Content" the percentage which the weight of the ash from anthracite, resulting from burning, bears to the weight of the anthracite before burning after the anthracite has been dried for one hour at 105 *degrees centigrade;

(i) "Slate" any material which has less than 40% of fixed carbon;

(j) "Bone" any material which has 40% or more, but less than 75% of fixed carbon.

Section 3. Statements by Producers as to Quality of Anthracite.—Every producer may issue with each sale and delivery at, or railroad car or motor vehicle shipment of anthracite from his preparation plant to the operator of the vehicle, or to the dealer or person to whom delivery is made or to be made, a written or printed statement attesting that the anthracite so sold

* "degress," in original.

delivered or shipped is "Standard Anthracite" if such anthracite conforms to the standard provided for in this act. Such statement may be shown on the weighmaster's certificate, if the certificate issues at the preparation plant, otherwise a separate statement may issue.

In the case of anthracite hauled from a preparation plant directly to the consumer, if a statement is issued by the producer that the anthracite sold and delivered is standard anthracite, it shall be the duty of the operator of the motor vehicle to deliver such producer's statement to the consumer at the time the anthracite is delivered to him. In all other cases it shall be delivered to the dealer or person to whom delivery or shipment of the anthracite is made.

It shall be unlawful for an operator of a motor vehicle to fail to deliver any such producer's statement to the consumer or to deliver any substituted or forged statement to a consumer.

Section 4. Statements by Dealers and Others As to Quality of Anthracite; Unlawful Acts.—Any dealer operating a place of storage or person hauling anthracite direct from a railroad car to a consumer, who has had issued to him by a producer a statement attesting that anthracite purchased by him is standard anthracite, may in the resale of such anthracite so purchased issue on the weighmaster's certificate a written or printed statement, and deliver the same to the consumer attesting that the anthracite so sold is standard anthracite in so far as concerns the ash or slate and bone content thereof.

It is unlawful for any dealer or his or its agent or employee to mix for sale or resale purposes in or at his place of storage or elsewhere anthracite attested by the producer by written or printed statement to be standard anthracite with another anthracite of the same or different size, as to which no such producer's statement has been issued, or to issue any statement attesting that anthracite as to which no such producer's statement was issued is standard anthracite.

A dealer or a person engaged in hauling anthracite from a railroad car direct to the consumer, who has preserved his records as required by this act, and who has not been guilty of making mixtures prohibited by this act, shall be entitled to rely upon the statement issued to him by a producer and shall not be subject to prosecution under this act for issuing a statement in accordance with the statement issued to him by the producer for the particular anthracite purchased by him under such statement.

Section 5. Contents of Statements. — Statements issued by producers, dealers and persons hauling anthracite from a railroad car direct to the consumer attesting

that anthracite being sold, resold, delivered, shipped or marketed is standard anthracite shall set forth in ink or indelible pencil the date of the sale, resale or shipment of the anthracite, to whom sold, delivered or shipped and the size of the anthracite. Each statement shall have thereon the signature of the producer, dealer or other person which may be a facsimile signature.

Section 6. Preservation of Records.—It shall be the duty of every producer to keep a record of all sales, deliveries and shipments of anthracite as to which statements were issued, attesting such anthracite to be standard anthracite, showing the name of the person to whom sold or delivered, the date thereof, the weight and the point of delivery.

It shall be the duty of every dealer and of every person engaged in hauling anthracite from a railroad car direct to a consumer, to keep a record of all statements issued to him by producers of anthracite, attesting that the anthracite sold, shipped or marketed was standard anthracite; and also a duplicate record of the weighmaster's certificate issued by the dealer or other person for anthracite sold or resold and delivered to consumers attesting the same to be standard anthracite.

All such records shall be preserved for a period of two years and shall be open to inspection by the agents of the Commonwealth and of the Anthracite Committee during business hours.

Section 7. Powers of Agents of Anthracite Committee.—Any agent of the Anthracite Committee shall have full access to every preparation plant and premises of a producer, and the storage yard and premises of every dealer, and to any railroad car or motor vehicle transporting anthracite wherever the same may be, and shall have the legal right to take samples of anthracite thereat or therefrom for the purpose of testing the same upon paying, or tendering where demanded, the value of the sample so taken. They shall have the right to inspect the books and records of every producer and dealer relating to the sale, resale, shipment and delivery of anthracite as standard anthracite. Such agents shall make report of all inspections to the Anthracite Committee which shall be open to public inspection.

Section 8. Penalty.—Any producer, dealer or other person who shall issue any written or printed statement attesting that anthracite sold, resold, shipped, delivered or marketed by him is standard anthracite, when the same does not conform to the standard fixed by this act, or who shall sell, resell, ship, deliver or market anthracite as grade A, or preminum anthracite, or use any other similar designation leading or tending to lead the public to believe that the anthracite being sold, resold,

shipped, delivered or marketed is standard anthracite, or who shall otherwise violate any of the provisions of this act, shall upon conviction thereof in a summary proceeding, be sentenced for a first offense to pay a fine of not more than $300, and in default of the payment of such fine and costs of prosecution shall be imprisoned for not less than 10 days or more than 20 days.

Any producer, dealer or other person guilty of a second or subsequent violation of this act shall be guilty of a misdemeanor and upon conviction thereof the producer, dealer, person or the member or officer of any association, partnership or corporation responsible for such violation shall upon conviction thereof be sentenced to pay a fine of not more than $1000 or suffer imprisonment for not more than 6 months or both in the discretion of the court.

APPROVED—The 31st day of May, A. D. 1947.

JAMES H. DUFF

The foregoing is a true and correct copy of Act of the General Assembly No. 168.

Curry Simonson

Secretary of the Commonwealth.

62135 O—60——38

No. 651

AN ACT

To further amend the act, approved the ninth day of April, one thousand nine hundred twenty-nine (Pamphlet Laws 177), entitled "An act providing for and reorganizing the conduct of the executive and administrative work of the Commonwealth by the Executive Department thereof and the administrative departments, boards, commissions, and officers thereof, including the boards of trustees of State Normal Schools or Teachers Colleges; abolishing, creating, reorganizing or authorizing the reorganization of certain administrative departments, boards, and commissions; defining the powers and duties of the Governor and other executive and administrative officers, and of the several administrative departments, boards, commissions, and officers; fixing the salaries of the Governor, Lieutenant Governor, and certain other executive and administrative officers; providing for the appointment of certain administrative officers, and of all deputies and other assistants and employes in certain departments, boards, and commissions; and prescribing the manner in which the number and compensation of the deputies and all other assistants and employes of certain departments, boards and commissions shall be determined," by creating as a departmental administrative advisory board, in the Department of Mines, prescribing its organization, powers and duties, and making an appropriation.

The Administrative Code of 1929.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 203, act of April 9, 1929, P. L. 177, last amended July 28, 1953, P. L. 656, further amended.

Section 1. Section two hundred three of the act, approved the ninth day of April, one thousand nine hundred twenty-nine (Pamphlet Laws 177), entitled "An act providing for and reorganizing the conduct of the executive and administrative work of the Commonwealth by the Executive Department thereof and the administrative departments, boards, commissions, and officers thereof, including the boards of trustees of State Normal Schools, or Teachers Colleges; abolishing, creating, reorganizing or authorizing the reorganization of certain administrative departments, boards, and commissions; defining the powers and duties of the Governor and other executive and administrative officers, and of the several administrative departments, boards, commissions, and officers; fixing the salaries of the Governor, Lieutenant Governor, and certain other executive and administrative officers; providing for the appointment of certain administrative officers, and of all deputies and other assistants and employes in certain departments, boards, and commissions; and prescribing the manner in which the number and compensation of the deputies and all other assistants and employes of certain departments, boards and commissions shall be determined," as last amended by the act, approved the

twenty-eighth day of July, one thousand nine hundred fifty-three (Pamphlet Laws 656), is hereby further amended to read as follows:

Section 203. Advisory Boards and Commissions.—The following advisory boards and commissions are placed in and made parts of the respective administrative departments, as follows:

In the Department of Military Affairs,
State Military Reservation Commission,
State Veterans' Commission;
In the Department of Forests and Waters,
State Forest Commission,
Flood Control Commission;
In the Department of Health,
Advisory Health Board;
In the Department of Labor and Industry,
Industrial Board,
Advisory Council on Affairs of the Handicapped;
In the Department of Welfare,
State Welfare Commission;
In the Department of Property and Supplies,
General Galusha-Pennypacker Monument Commission;
In the Department of Mines,
Coal Research Board.

Act of April 9, 1929, P. L. 177, amended by adding a new section 466.

Section 2. Said act is hereby further amended by adding, after section four hundred *sixty-five thereof, a new section to read as follows:

*Section **466. Coal Research Board.—The Coal Research Board shall consist of six citizens of the Commonwealth, appointed by the Governor and the Secretary of Mines, who shall be the chairman of the board.*

The appointed members of the board, two of whom shall be anthracite operators, two bituminous coal operators, one a representative of the labor collective bargaining agency of the anthracite industry and one a representative of the labor collective bargaining agency of the bituminous coal industry, shall be familiar with the technology or economics of the anthracite or bituminous coal industry and shall be appointed for three year terms.

Act of April 9, 1929, P. L. 177, amended by adding a new section 1906.

Section 3. Said act is hereby further amended by adding, after section one thousand nine hundred five thereof, a new section to read as follows:

Section 1906. Coal Research Board.—The Coal Research Board is authorized to conduct, or cause to be

* "sixty-three" in original.
** "464" in original.

conducted, thorough and comprehensive research studies and research programs in the technology, the economics, and the marketing of bituminous and anthracite coal and their by-products, for the purpose of developing new uses and increased markets for such coal.

With the approval of the Governor, the board is authorized to enter into mutually satisfactory contracts or agreements with any person, firm, institution or corporation as well as any State or Federal agency which the board deems wise, necessary and expedient in carrying out its objectives, but the board, in so far as it is practicable, shall make such contracts or agreements with persons, associations and institutions located within the Commonwealth of Pennsylvania. The board may, subject to the approval of the Governor, make grants to public and private scientific schools, institutions and associations which have the necessary existing research laboratory facilities for the accomplishment of its powers and, to this end, it may use any matching or donated funds available from the Federal government, private or philanthropic concerns, associations and institutions.

Appropriation.

Section 4. The sum of five hundred thousand dollars ($500,000) is hereby appropriated to the Department of Mines for the use of the Coal Research Board in the administration of this act.

Act effective immediately.

Section 5. This act shall become effective immediately upon final enactment.

APPROVED—The 31st day of May, A. D. 1956.

GEORGE M. LEADER

The foregoing is a true and correct copy of Act of the General Assembly No. 651.

/ Henry E. Harner

Secretary of the Commonwealth.

STATE OF TEXAS, RAILROAD COMMISSION OF TEXAS

Your Subcommittee on Automation and Energy Resources asked this State regulatory body to recommend ways the Federal Government can assure the Nation of energy resources necessary for "maximum production, employment, and purchasing power" called for under the Employment Act of 1946.

Congressional action to free natural gas producers from utility-type controls is foremost among the recommendations of the Texas Railroad Commission. The need for such legislation has long been recognized by the oil and gas industry, by the administration, and—on two occasions—by a majority of the Congress.

When the Natural Gas Act was passed in 1938, it was the intent of Congress that this act should fill the gap between State regulation where the gas was produced and State regulation of public utility and distribution systems where the gas was consumed. It was intended that the Federal Power Commission would have jurisdiction only over permits of convenience and necessity for interstate transmission of natural gas and would regulate rates only for interstate gas actually moving across State lines. This intent recognized our dual form of government—one that gives the Federal Government those powers that properly belong to it under the commerce clause of our Constitution, but which retains for the States all conservation powers and local distribution regulations.

Such congressional intent was altered by the Supreme Court in the *Phillips* case, and it is necessary that the Congress again declare its clear desire that the Federal Power Commission have authority only over gas as it moves in interstate commerce.

It is unjust and unworkable for thousands of natural gas producers to be classed as a public utility. The risk is so great in the search for oil and gas that a public utility rate of return does not justify their continuing in the business. Utility-type regulation places an arbitrary ceiling on a producer's gas prices; but it does not assure him a return on his investment. This not only tends to discourage our future gas exploration and development, but also causes producers to seek intrastate markets in lieu of interstate sales.

Also, cost-of-service regulation is unsound and impracticable when applied to a risky competitive business such as natural gas production. There is no relation between the cost of finding and producing gas and the value of it. Instead, its value is determined by such factors as the B.t.u. content, the sulfur content, and the location of such gas with respect to existing markets.

Another serious complication arises from the fact that oil and gas are joint products. In most cases, they are produced together, and any attempt to determine the production cost for just one of them requires an arbitrary formula of cost allocation. But beyond this problem of cost allocation lies an even greater threat to the petroleum industry. Federal control of gas at the wellhead means Federal control of oil—

and this is true no matter how strongly anyone may contend that such was not intentional. When oil and gas are produced together, as is true of casinghead gas, it is inconceivable how we can have Federal control of gas at the wellhead and not, at the same time, have Federal control of oil; which is produced simultaneously and as an integral part with the gas.

Of course, multiple ownership of gas-producing properties further complicates the problems created by a cost-of-service method of regulation. If each owner receives a price based on his costs, and each owner has different costs, quite logically there should be as many different prices as there are working-interest owners in the gasfield.

Oil and gas in Texas and the Nation also face other problems that provide equal cause for concern from a long-range view. One of these is the growing attack on market demand laws, without which conservation of our petroleum resources would be seriously impaired. Another problem arises from concerted efforts by the coal industry to secure end-use control of fuels, an action that ultimately would bring about governmental control of fuel production and pricing.

It is in these times of surplus production that the most severe attacks are made against the market demand laws. The critics do not realize that this law, which permits a regulatory agency such as the Texas Railroad Commission to restrict oil production to current market demand, is the very backbone of our conservation practices. Without the market demand law, we might have very cheap oil now, but we would also have great physical waste and the price would soar in future years. Each producer, operating under our traditional rule of capture, would be forced to withdraw oil from his well as rapidly as possible—before his neighbor drained it from under his land—and the result would be aboveground and belowground waste of this irreplaceable natural resource.

Critics who call the market demand law a price-fixing gimmick are, in effect, also calling conservation a price-fixing gimmick—for they go hand in hand. Such critics fail to realize the consequences that would come with the depletion of this Nation's oil and gas reserves. We would be at the mercy of foreign powers and would be paying prices for oil that were set by those foreign powers. America's national defense and economic progress would be impeded, for we are far away from having any abundant and inexpensive substitutes for the energy and many products now derived from oil and gas.

The best place to store oil until we need it is in God's reservoir, and it is the market demand law and wise administration of conservation practices that let us keep the oil there safely until we need it.

Texas' market demand law is not a price-fixing statute, and those who contend that it is need only to examine the ex-tax price of petroleum products and natural gas, and compare their price trends through the years with the trends for other commodities in our economy. The stability of prices in the oil and gas industry is as striking as the stability of the industry itself, and both are essential to the welfare of this Nation.

The market demand statute adopted by the State of Texas, for example, was construed by its courts as being a proper exercise of legislative authority, and any effort on the national level to abrogate such a law not only would be an infringement upon State sovereignty

but would nullify much that has been accomplished in the area of conservation. Furthermore, there already exists on the Federal level a very satisfactory implement for coordination of State conservation efforts.

The Interstate Oil Compact Commission plays an essential and valuable role in the conservation of this Nation's hydrocarbon resources. The several oil States have widely differing conservation philosophies and dissimilar methods of administration, but all have the common interest of obtaining full utilization of their oil and gas reserves. The interstate compact, which serves only as a forum for the interchange of ideas and information among State conservation officials, has worked exceptionally well since its formation 25 years ago. Serving without either direct allocation powers or control of State activities, the compact affords oil States the opportunity to exchange information and encourage conservation efforts while at the same time maintaining their sovereignty for individual action.

The conservation system of this Nation has been described by the U.S. Attorney General as a "mechanism * * * that operates as smoothly and effectively as the finest watch," and all of this was accomplished without any overriding control of the Federal Government.

Only one area of petroleum operation has revealed the need for Federal activity. The level of oil imports into the United States falls rightfully within the constitutionality designated jurisdiction of the Federal Government, and the amount of imports has an important effect upon domestic production requirements. However, while the Federal imports control program is serving a useful purpose, no need is seen for additional Federal regulation of oil and gas in this country.

In particular, there appears to be no necessity for the type of end-use control that is implicit in recent efforts of the coal industry to secure a joint congressional committee study of the need for a national fuels policy. Our Nation already has a national policy toward the development of its fuels, and a policy of the type sought by the coal interests ultimately would lead to governmental control of both production and pricing of all fuels.

Neither Federal nor State regulation has ever denied the citizens a freedom of choice from among the various fuels. The continuation of this consumer sovereignty is essential in our American economy. It is clear that the coal industry's real objective is not an impartial study but the establishment of a Federal agency designed to limit competition from oil and gas with coal in industrial uses. The fact that there is intense competition for fuel customers is entirely consistent with our American private enterprise philosophy, and equally as consistent with our principles of conservation.

The regulation of fuels by a Federal agency is unnecessary and undesirable for two reasons: First, just as Secretary of the Interior Fred A. Seaton said recently, "it is not a proper role of our Government to carve out or 'freeze' a portion of the total energy market for each competing fuel;" second, America already has an effective national fuels policy that has provided sufficient supplies for both national security and economic progress. Under these policies, orderly development of domestic energy resources are encouraged by reasonable tax provisions, Federal regulation is limited to circumstances connected with na-

tional security or protection of the public interest, and conservation is properly administered on the State level.

Thus, it seems to this State oil and gas regulatory body that the wisest way for the Federal Government to assure future energy resources necessary for maximum production, employment, and purchasing power is for it to minimize its jurisdiction over the Nation's oil and gas production. The proven forces of the free, competitive marketplace and the time-tested conservation practices of the sovereign States, together with the coordinating operations of the Interstate Oil Compact Commission, will afford this Nation ample supplies of hydrocarbon resources in the future.

STATE OF WASHINGTON DEPARTMENT OF CONSERVATION AND DEVELOPMENT

The biennial report of the division of power resources provides information on the statutory scope of our agency and our current and projected activities in the fields of hydroelectric and thermal electric generation.

You requested a statement indicating wherein our program might be limited by programs of other agencies in the energy field. I believe that the greatest limitation results from a provincialism on the part of State, as well as Federal, agencies which view our problems upon a State and regional basis rather than upon an interregional or national basis. I would like to specifically point to our experiences in relation to a proposed Pacific Northwest-California electrical intertie. Although this tieline has been studied since 1950 it has never materialized because of opposition by the private power companies and the narrow, provincial view of many of our local and Federal agencies. Recently the Bonneville Power Administration and the Bureau of Reclamation released a report on the subject which was very inadequate. The States of Oregon, Washington, and California recognizing the inadequacies of the Federal report supported studies by the State of California Department of Water Resources. The resulting report by H. Zinder & Associates cover the tremendous benefits that might accrue to both regions as a result of a large and dependable interconnection. The benefits range from conservation of nonreplenishable fossil fields (up to the equivalent of 20 million barrels of oil annually) to alleviation of atmospheric pollution from fuel-burning generating plants.

I firmly believe we need similar studies directed toward other interregional problems such as water diversion and long-range conservation of gas and coal resources. I think it is deplorable that up to 25 billion kilowatt-hours of secondary hydroelectric energy are wasted annually in the Pacific Northwest because of a lack of market, while most of this energy could be absorbed in regions adjacent to the Pacific Northwest as fuel displacement energy. I realize that considerable education and study are needed to effect interregional programs, but I believe that through proper direction from a national administration, responsive to the long-term needs of the country, programs can be formulated and interregional differences resolved.

In the field of research affecting our energy potentials, I would recommend that State and Federal agencies undertake energetic programs in the field of weather modification. I would particularly recommend such research in areas with a maritime climate which is most conducive to effective seeding. Although token research is underway in this field, none has been conducted in the Pacific Northwest which has the most ideal cloud seeding conditions in the country.

The field of energy is so broad that it is impossible for me to cover its many facets in this brief letter. If you wish information on specific areas I have not covered, please feel free to contact us.

DIVISION OF POWER RESOURCES

Biennial Report

June 30, 1958

Truman P. Price, Supervisor

I. CREATION AND RESPONSIBILITIES

The Division of Power Resources was created by the 1957 Legislature (Chapter 284, Laws of 1957), primarily to fill the vacuum in power matters created by abolishment of the Washington State Power Commission (Chapter 295, Laws of 1957). The legislation transferred certain powers of the abolished State Power Commission to the division and established a power advisory committee.

The principal responsibilities of the division are to represent the state in power matters through the Director of Conservation and to aid and assist the power utilities to the end that the state's power resources shall be properly developed in the public interest.

II. POWER ADVISORY COMMITTEE

The Power Advisory Committee consists of five members appointed by the governor and serving at his pleasure. The responsibility of the committee is to consult with and advise the Director of Conservation on matters pertaining to the division of power resources.

Three members have experience in the field of utility operations and two members have experience in resource development. Victor McMullan, chairman of the committee, is a Wenatchee orchardist and has experience in power consumer problems as well as power resource development. Dean Barline is Director of Public Utilities, City of Tacoma; George Brunzell is Vice President of the Washington Water Power Company; Shirley Marsh is Chief Counsel of the Cowlitz County Public Utility District; and S. Ernie Miller is a Cle Elum businessman who has experience in the field of coal and power resource development.

The Power Advisory Committee has provided the division of power resources valuable assistance in formulating power policy and especially in carrying out its thermal-electric power development program.

III. GENERAL PROGRAM

The division has adopted a general program consisting of three parts which reflect the responsibilities placed upon it by the legislature.

First, the division has adopted a program to encourage and assist construction of new hydroelectric plants by non-federal as well as federal agencies;

Second, the division has adopted a program to develop or assist in the development of the thermal-electric power resources of the state; and

Third, the division has adopted a program to encourage coordinated power resource development on a regional basis.

IV. HYDROELECTRIC POWER DEVELOPMENT

Abundant, low-cost hydroelectric power has been deemed the key to Washington's accelerated industrial and economic growth since 1940. Such power has brought to the state electro-chemical industries, electro-metallurgical industries and many associated fabricating and manufacturing plants. It has also provided Washington's residents an electrical mode of living unsurpassed by any area of the nation.

Probably the most important program undertaken by the division of power resources is the one which assists and encourages the construction of hydroelectric power facilities to keep pace with the state's expanding economy. Testimony was prepared for congressional committee hearings urging increased appropriations to maintain realistic construction schedules for federal projects.

Also, testimony was prepared supporting the need for starting construction of authorized federal projects and the advisability of authorizing additional projects. The resulting appropriations for power projects in Washington were gratifying considering the strong opposition of the national administration to new project starts and realistic construction schedules. The 85th congress appropriated funds to commence construction of the large 1,200,000 kw John Day project on the Columbia River; advance planning funds were obtained for the Lower Monumental project on the Snake River; and construction funds were obtained for the Ice Harbor, Chief Joseph, and The Dalles multipurpose projects.

The division has also assisted and encouraged construction of power projects by non-federal agencies and power utilities.

A detailed inventory of potential power projects has been started. The inventory, together with the compilation of basic engineering data, will be of great value to utilities planning long-range power supply programs and should materially help the state develop its water power resources in an orderly manner. Drawing PP–1 shows the major proposed hydroelectric projects in the state as well as existing plants. The list of proposed projects will be materially expanded as the inventory progresses.

V. THERMAL ELECTRIC POWER DEVELOPMENT

Thermal electric power development will become increasingly important as the state approaches the period when hydroelectric plants will not be able to supply load increases. In the meanwhile, steam plants are an essential adjunct of hydro development, as they can provide power during periods of hydro-power shortage and can firm up secondary hydro power now going to waste.

The 1957 legislature recognized the desirability of developing the state's thermal power resources and passed an act providing for feasibility studies and construction of steam electric power plants (Chapter 275, Laws of 1957). Although the legislation provides that the state could use the appropriated funds to undertake development of a steam electric project, the administration decided that the state should not enter the power generating field at this time. Instead, the administration felt the state should use the funds to assist an operating utility or group of utilities in a program of thermal power developmen. Accordingly, on January 22, 1958, upon the advice of the Power Advisory Committee, the state entered into an agreement with Public Utility District No. 1 of Kittitas County, which provided for the completion of the feasibility studies of the proposed Cle Elum steam plant project. The agreement provides that all funds advanced to the PUD are to be reimbursed to the state's general fund when the proposed plant is financed for construction.

The Division of Power Resources and the Power Advisory Committee have worked closely with the Kittitas County PUD in formulating study procedures and employing technical assistance. On March 19, 1958, the PUD employed H. Zinder and Associates as principal engineers, Resources Research, Inc. as coal consultants, and Burns and Roe, Inc. as design engineers.

Engineering progress on the proposed plant has been very satisfactory and the preliminary marketing survey has been encouraging considering the depressed economic condition of the state. The final feasibility report which will contain sub reports on the feasibility of Cle Elum Coal for Power Production, the Characteristics and Costs of Steam Power Plant, and the Definition of the Market for Power Generated by the Proposed Steam Power Plant is scheduled for release in October.

The cheapest and most abundant fuel available in Washington for thermal power production is coal. The state has approximately 60 billion tons of coal which could potentially supply the present power requirements of the northwest for 2,000 years. In spite of such large reserves, coal is not at present used in the state for power generation. This is largely due to insufficient geological data available on the various coal fields, which is necessary to determine the availbility and extent of the reserves.

The Division of Power Resources recognized the critical need for basic geological data and has furnished funds to the Division of Mines and Geology to start a cooperative investigation of the coal resources of the state with the U.S. Geological Survey. The investigation is under way and a preliminary report is due to be released in December, 1958. The report will be a synthesis and summary of existing information on several coal fields of the state. A final report of this type covering all of the state's coal fields is scheduled for release in 1960.

VI. REGIONAL POWER DEVELOPMENT

The division recognizes the need for orderly power resource development on a regional basis. To meet this need it has adopted a program to encourage coordinated development and cooperation among the various generating utilities and agencies. The division promotes the program by participating in three groups concerned with regional resource problems—the Power Planning Subcommittee of the Columbia Basin Inter-Agency Committee, the Bonneville Regional Advisory Council, and the Advisory Committee of the Columbia River Review Study, Corps of Engineers.

The Power Planning Subcommittee of the Columbia Basin Inter-Agency Committee consists of power representatives from five northwest states and five federal agencies. The Subcommittee studies technical problems related to planning of Pacific Northwest power systems and is currently working on the 1985 and 2010 operations of a proposed system representing maximum storage development. Results of this study have been enlightening and will be used in the 308 Report now under review by the Corps of Engineers. Also under study are ultimate installed capacities of proposed and existing Columbia Basin hydroelectric plants.

The Bonneville Regional Advisory Council provides a close working contact between BPA and the people of its service area. Members of the Power Advisory Committee and the Supervisor of power resources serve on the Council and participation will become increasingly important as BPA deliberates on possible rate increases scheduled for 1960.

The Advisory Committee of the Columbia River Review Study counsels the Corps of Engineers on the review studies of H.D. 531 commonly known as the 308 Report. The last review of this report was made in 1948 and established a broad plan of development for the Columbia Basin. Although the 1948 plan established a minimum flood control goal and recommended construction of projects to attain the goal, the plan has been greatly impaired by the loss of such key storage projects as Hells Canyon. It is essential, therefore, that the current review reflects the need of a positive development program that can protect remaining sites against single-purpose exploitation. The State of Washington through the Director of Conservation has taken a strong position on the matter and has repeatedly emphasized that multi-purpose projects should have priority over single-purpose projects and that maximum upstream storage is desirable and urgently needed.

VII. ADVANCE PROGRAM

The division of power resources expects to continue the general program intitiated during the current biennium. The primary phrases of study and activity are outlined as follows:

Hydro development

1. Inventory hydroelectric power sites.
2. Inventory existing and abandoned power projects.
3. Obtain stream gauging and flow correlations for hydrolectric development.
4. Obtain topographic maps of streams with hydroelectric potential which are not now mapped.
5. Obtain topographic maps and preliminary geological reports on demand reservoir sites.

Thermal development

1. Complete the feasibility report of the Cle Elum steam plant.
2. Participate in engineering, legal and financial studies necessary to carry the Cle Elum project through to financing if it is determined feasible.
3. Encourage programs which will obtain basic geologic data on the coal reserves of state.
4. Keep abreast of technical developments in the field of nuclear power generation.

Regional development

1. Press for comprehensive resource development on a coordinated basis.
2. Actively participate in regional planning and engineering study groups.
3. Work toward maintaining an integrated regional transmission grid.

STATE OF WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY

Following your letter of September 30, 1960, I am furnishing, briefly, answers to the points listed in the attached sheet to the above letter:

1 and 2. The West Virginia Geological and Economic Survey was established as a State agency by an act of the State legislature of 1897. It has been in continuous operation for over 63 years. Significantly, the administrative board of State officials, as originally provided in the founding act, has remained unaltered in all these years.

3. Among the objectives provided by the original act is the following:

An examination of the geological formations of the State with especial reference to their economic products; namely, building stones and other constructive materials and resources; clays, ores, and other mineral substances and fuels; the prevention of their waste and the utilization of byproducts.

4. There are no rules or directives issued for the guidance of industry as this is a research agency for the collection and dissemination of technical information and it is not a regulatory body.

5. Ours is a cooperative agency and we do not "impinge" on other agencies. Correspondingly we are not limited by the programs of other agencies.

6. There are no unresolved conflicts.

7. Through research we are constantly adding to the reservoir of material affecting technological questions in order that this work may contribute effectively to economic growth. This takes money, and sufficient funds, therefore, is perhaps the most difficult obstacle to overcome.

8. I have no recommendations for the role of the Federal Government in regulatory programs other than, in general, the less the better.

STATE OF WEST VIRGINIA, DEPARTMENT OF MINES

EXCERPT FROM CHAPTER 22, OFFICIAL CODE OF WEST VIRGINIA, AS AMENDED BY THE ACTS OF THE LEGISLATURE OF WEST VIRGINIA, REGULAR SESSION, 1959

OIL AND GAS WELLS

Chapter 22, Article 4, Sections 1–17.

TRANSPORTATION OF OILS

Chapter 22, Article 5, Sections 1–13.

Article 4. Oil and Gas Wells.

Sec.

1. Definitions.
2. When well operator to file plat as prerequisite to drilling; contents; notice.
3. Drilling permit; agreed location of well; location fixed by department of mines; exceptions thereto; docket of proceedings.
4. Appeal by coal operator or well operator from location fixed or approved by department of mines; procedure.
5. Protective devices when well penetrates workable coal bed.
6. Protective devices when gas is found beneath or between workable coal beds.
7. Continuance of such protective devices during life of well.
8. Protective devices when well is drilled through horizon of coal bed from which coal has been removed.

TRANSPORTATION OF OILS—Continued

Article 4. Oil and Gas Wells—Continued

§ 1. *Definitions.*—The term "well," when used in this article, means a bore hole drilled or proposed to be drilled for the purpose of producing natural gas or petroleum, or through which natural gas or petroleum is being produced; the term "owner," when used with reference to any such well, shall include any person or persons, firm, partnership, partnership association or corporation that owns, manages, operators, controls or possesses such well as principal, or as lessee or contractor employee or agent of such principal; the term "well operator" shall include any person or persons, firm, partnership, partnership association or corporation that proposes to or does locate, drill, operate or abandon any well as herein defined; the term "coal operator" shall include any person or persons, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine; the term "department" or "department of mines" includes the duly constituted authorities under the laws of this state having jurisdiction over coal mining operations; the term "plat" means a map, drawing or print showing the location of a well or wells as herein defined; the term "casing" means a string or strings of pipe commonly placed in wells drilled for natural gas and petroleum; the terms "oil" and "gas" are synonymous for petroleum and natural gas respectively; the term "cement" means hydraulic cement properly mixed with water only; the term "workable coal bed" means a coal bed in fact being operated commercially, or which, in the judgment of the department of mines, can, and that it is reasonable to be expected will, be so operated, and which, when operated, will require protection if wells are drilled through it.

§2. *When Well Operator to File Plat as Prerequisite to Drilling; Contents; Notice.*—Before drilling for oil or gas on any tract of land known to be underlaid with one or more workable beds of coal, the well operators shall have a plat prepared by a competent engineer showing the district and county in which the tract of land is located, the name and acreage of the same, the names of the owners of adjacent tracts, the proposed location of the well determined by survey, the courses and distances of such location from two permanent points or landmarks on said tract and the number to be given the well, and shall forward by registered mail a copy of the plat to the department of mines and copies to each and every coal operator, if any, operating said beds of coal beneath said tract of land, or within five hundred feet of the boundaries of the same, who has mapped the same and filed his maps as required by law. With each of such plats there shall be enclosed a notice (form for which shall be furnished on request by the department of mines) addressed to the department of mines and to each such coal operator at their respective addresses, informing them that such plat and notice are being mailed to them respectively by registered mail, pursuant to the requirements of this article. If no objections are made to such proposed location within ten days from receipt of such plat and notice by the department of mines, and the same shall be filed and become a permanent record of such location, subject to inspection at any time by any interested person. The notice above provided for may be given to the coal operator by delivering or mailing it as to any agent or superintendent in actual charge of mines.

§ 3. *Drilling Permit; Agreed Location of Wells; Location Fixed by Department of Mines; Exceptions Thereto; Docket of Proceedings.*—In case any such location is made above or in close proximity to any mine opening or shaft, entry, travel, air, haulage, drainage or other passage-way, or to any proposed extension thereof, in any operated or abandoned or operating coal mine, or coal mine

already surveyed and platted, but not yet being operated, so that the well or the pillar of coal about the well necessary to the protection of the mine and of the well itself when drilled will interfere with or endanger the use of such mine opening, entries or ways, then the coal operator or operators affected may, and shall, if the drilling of a well at such proposed location will cause a dangerous condition in their mine or mines, within ten days from receipt of such plat or notice by the department of mines, file objections in writing (forms for which will be furnished by the department on request) to such proposed location with the department of mines, setting out therein as definitely as is reasonably possible the ground or grounds on which such objections are based and indicating the direction and distance from the location shown the proposed well should be drilled to overcome such objections. If no such objections be filed, or be found, by the department of mines, within said period of ten days, to such proposed location, the department shall forthwith issue to the well operator a drilling permit reciting the filing of such plat, that no objections have been made by the coal operators to the location, or found thereto by the department, and that the same is approved and the well operator authorized to proceed to drill at such location.

If any objection or objections are so filed by any coal operator or are made by the department of mines, the department shall notify the well operator of the character of the objections and by whom made and fix a time and place, not less than ten days from the end of said ten day period, at which such objections will be considered, of which time and place the well operator and all coal operators to whom a copy of such plat was mailed, whether objecting or not objecting to the proposed location, shall be given at least five days written notice by the department, by registered mail, and summoned to appear, bringing with them their maps and plans showing their mines and mine workings and prepared to approve or to except to such location or locations as the department may, after hearing, approve or itself fix in case no agreement is reached. At the time and place so fixed the well operator and the coal operators, or such of them as are present or represented, shall proceed to consider the objections and to agree upon either the location as made or so move as to satisfy all objections and meet the approval of the department, and any change in the original location so agreed upon and approved by the department shall be indicated on said plat on file with the department, and the distance and direction of the new location from the original location shall be shown, and, as so altered, the plat shall be filed and become a permanent record. Whereupon the department shall forthwith issue to the well operator a drilling permit reciting the filing of said plat, that at a hearing duly held a location as shown thereon was agreed upon and approved, and that the well operator is authorized to drill at such location.

In case the well operator and the coal operator or such of the coal operators as are present or represented at such hearing are unable to agree upon a location, or upon a location that meets the approval of the department of mines, then the department shall fix a location on such tract of land as near to the original location as possible in a pillar of suitable size, through which the well can be drilled safely, taking into consideration the dangers from creep, squeeze, or other disturbance, due to the extraction of coal. Should no such pillar exist, however, the well may be located and drilled through open workings where, in the judgment of the department of mines, it is practicable and safe to do so, taking into consideration the dangers from creeps, squeezes or other disturbances. Such new location shall be indicated on the plat on file with the department as provided in the next preceding paragraph of this section, and the department shall forthwith tender to the well operator a permit to drill at such location, which permit the well operator may accept or refuse to accept, and if it accepts such drilling permit, the coal operator or operators having filed objections and appearing or being represented at such hearing, may except to such location and to the issue of such drilling permit; and the well operators accepting the same may require the record of the hearing to show that it accepts such drilling permit at the location made by the department as a new or additional location and not in lieu of its original location, and that it reserves the right to appeal to the circuit court of the county in which its original location lies for relief, and that it excepts to the refusal of the department to approve such original location substantially as made.

The department of mines shall number and keep an index of and docket each plat and notice mailed to it as provided in section two of this article, entering in such docket the name of the well operator, names of the coal operators notified and their addresses, the date of receipt of any such plat and of all

objections filed, dates of hearings and all actions taken by the department, permits issued or refused, which docket shall be open to inspection by the public, and, together with the papers filed, shall constitute the record of each such proceeding before the department.

§ 4. *Appeal by Coal Operator or Well Operator From Location Fixed or Approved by Department of Mines; Procedure.*—Any coal operator excepting to any location fixed or approved by the department of mines or to the issuance of any drilling permit, and any well operator excepting to the refusal of the department to grant a drilling permit at the location shown in the plat mailed to the department as provided in section two of this article, or such location so shifted as to be still substantially the same or the equivalent thereof, may at any time within ten days of the taking of such action by the department of mines appeal to the circuit court of the county in which the location involved lies. The procedure shall be by petition and answer, duly verified, and naming the department as one of the respondents. There shall be attached to the petition or filed therewith a transcript of the record before the department and copies of all papers filed, and the petition shall briefly set forth the matter in controversy, the ruling of the department and the relief sought. The respondents shall be required to answer under oath within ten days after service of copies of the petition upon them, and the procedure shall be expedited, as far as is reasonably possible, having regard to possible drainage or loss of title by the well operator through its failure to complete a well within the period fixed by the terms of the lease under which it holds. The court may, by preliminary order, upon proper proof of the necessity therefor and the giving of proper security, stay the drilling of any well until a final decision on the appeal, and after a final hearing, at which any competent and relevant evidence may be introduced, may set aside any action or order of the department and enter such final order and decree as in its judgment is just and right and will best carry out the provisions of this article. From such final orders and decrees of the circuit court an appeal may be taken to the supreme court of appeals as now provided by law in proceedings in equity. During vacation periods or when for any reason the circuit court is not in session, such proceedings shall be before the judge of such court in vacation, or, in his absence, before the judge of an adjoining circuit, who may act until the return of the regular judge to his circuit, whereupon all further proceedings shall be had before the regular judge or circuit court having initial jurisdiction therein, and all proceedings in vacation shall be of like force and effect as if before the court in session.

§ 5. *Protective Devices When Well Penetrates Workable Coal Bed.*—A well penetrating one or more workable coal beds shall be drilled to such depths, and of such size, as will permit the placing of casing and packers in the hole at such points and in such manner as will exclude all oil, gas or gas pressure from the coal bed, except such as may be found in the coal bed itself. Each string of casing run in the hole shall be provided with a steel casing shoe or collar firmly fixed on the bottom of the string of casing. Each string of casing run through a workable bed of coal shall be seated, at least thirty feet below such coal bed, in twenty feet of cement, mud, clay or such other nonporous material as will make an effective seal. And after any such string of casing has been so seated, drilling may proceed forthwith to any required depth.

§ 6. *Protective Devices When Gas is Found Beneath or Between Workable Coal Beds.*—In the event that gas is found beneath a workable coal bed before the hole has been reduced from the size it had at the coal bed, a packer shall be placed below the coal bed, and above the gas horizon, and the gas by this means diverted to the inside of the adjacent string of casing through perforations made in such casing, and through it passed to the surface without contact with the coal bed. Should gas be found between two workable beds of coal, in a hole of the same diameter from bed to bed, two packers shall be placed, with perforations in the casing between them, permitting the gas to pass to the surface inside the adjacent casing. In either of the cases here specified, the strings of casing shall extend from their seats to the top of the well.

§ 7. *Continuance of Such Protective Devices During Life of Well.*—In the event that a well becomes productive of natural gas or petroleum all coal-protecting strings of casing shall remain in place during the life of the well. During the life of the well the annular spaces between the various strings of casing adjacent to workable beds of coal shall be kept open, and the top ends of all such strings shall be provided with casing heads, or such other suitable devices as will permit the free passage of gas and prevent filling of such annular spaces with dirt or debris.

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§ 8. *Protective Devices When Well is Drilled Through Horizon of Coal Bed From Which Coal Has Been Removed.*—When a well is drilled through the horizon of a coal bed from which the coal has been removed, the hole shall be drilled at least thirty feet below the coal bed, of a size sufficient to permit the placing of a liner which shall start not less than twenty feet beneath the horizon of the coal bed and extend not less than twenty feet above it. Within this liner, which may be welded to the casing to be used, shall be centrally placed the largest sized casing to be used in the well, and the space between the liner and casing shall be filled with cement as they are lowered into the hole. Cement shall be placed in the bottom of the hole to a depth of twenty feet to form a sealed seat for both liner and casing. Following the setting of the liner, drilling shall proceed in the manner provided above. Should it be found necessary to drill through the horizon of two or more workable coal beds from which the coal has been removed, such liner shall be started not less than twenty feet below the lowest such horizon penetrated and shall extend to a point not less than twenty feet above the highest such horizon.

§ 9. *Plugging and Abandonment of Well; Notice of Intention; Affidavit Showing Time and Manner.*—Prior to the abandonment of any well, the well operator shall notify, by registered mail, the coal operator or operators to whom notices are required to be given by section two of this article, and the department of mines, of its intention to plug and abandon any such well (using such form of notice as the department may provide), giving the number of the well and its location and fixing the time at which the work of plugging and filling will be commenced, which time shall not be less than five days after the day on which such notice so mailed is received or in due course should be received by the department of mines, in order that a representative or representatives of the coal operator and of the department, or of both, may be present at the plugging and filling of the well. Whether such representatives appear or do not appear, the well operator may proceed at the time fixed to plug and fill the well in the manner hereinafter described. When such plugging and filling have been completed, an affidavit, in triplicate, shall be made (on a form to be furnished by the department) by two experienced men who participated in the work, in which affidavit shall be set forth the time and manner in which the well was plugged and filled. One copy of this affidavit shall be retained by the well operator, another (or true copies of same) shall be mailed to the coal operator or operators, and the third to the department of mines.

§ 10. *Methods of Plugging Well.*—Upon the abandonment or cessation of the operation of any well drilled for natural gas or petroleum, the well operator, at the time of such abandonment, or cessation, shall fill and plug the well in the following manner:

(a) Where the well does not penetrate workable coal beds, it shall either be filled with mud, clay or other nonporous material from the bottom of the well to a point twenty feet above the top of its lowest oil, gas or water-bearing stratum; or a permanent bridge shall be anchored thirty feet below its lowest oil, gas or water-bearing stratum, and from such bridge it shall be filled with mud, clay or other nonporous material to a point twenty feet above such stratum; at this point there shall be placed a plug of cement or other suitable material which will completely seal the hole. Between this sealing plug and a point twenty feet above the next higher oil, gas or water-bearing stratum, the hole shall either be filled, or bridged and filled, in the manner just described; and at such point there shall be placed another plug of cement or other suitable material which will completely seal the hole. In like manner the hole shall be filled and plugged, or bridged, filled and plugged with reference to each of its oil, gas or water-bearing strata. However, whenever such strata are not widely separated and are free from water, they may be grouped and treated as a single sand, gas or petroleum horizon, and the aforesaid filling and plugging be performed as though there were but one horizon. After the plugging of all oil, gas or water-bearing strata, as aforesaid, a final plug shall be anchored approximately ten feet below the bottom of the largest casing in the well; from this point to the surface the well shall be filled with mud, clay or other nonporous material. In case any of the oil or gas-bearing strata in a well shall have been shot, thereby creating cavities which cannot readily be filled in the manner above described, the well operator shall follow either of the following methods:

(1) Should the stratum which has been shot be the lowest one in the well, there shall be placed at the nearest suitable point, but not less than twenty feet above the stratum, a plug of cement or other suitable material which will completely seal the hole. In the event, however, that the shooting has

been done above one or more oil or gas-bearing strata in the well, plugging in the manner specified shall be done at the nearest suitable points, but not less than twenty feet below and above the stratum shot. Or (2), when such cavity shall be in the lowest oil or gas-bearing stratum in the well, a liner shall be placed which shall extend from below the stratum to a suitable point, but not less than twenty feet above the stratum in which shooting has been done. In the event, however, that the shooting has been done above one or more oil or gas-bearing strata in the well, the liner shall be so placed that it will extend not less than twenty feet above, nor less than twenty feet below, the stratum in which the shooting has been done. Following the placing of the liner in the manner here specified, it shall be compactly filled with cement, mud, clay or other nonporous sealing material;

(b) Where the well has penetrated one or more workable coal beds, it shall be filled and securely plugged in the manner aforesaid, to a point forty feet below the lowest workable coal bed. If, in the judgment of the well operator, the coal operator and the department of mines, a permanent outlet to the surface is required, such outlet shall be provided in the following manner: A plug of cement, or other suitable material, shall be placed in the well at a suitable point, not less than thirty feet below the lowest workable coal bed. In this plug and passing through the center of it shall be securely fastened an open pipe not less than two inches in diameter, which shall extend to the surface. At or above the surface the pipe shall be provided with a device which will permit the free passage of gas, and prevent obstruction of the same. Following the setting of the cement plug and outlet pipe as aforesaid, the hole shall be filled with cement to a point twenty feet above the lowest workable coal bed. From this point the hole shall be filled with mud, clay or other nonporous material to a point thirty feet beneath the next over-lying workable coal bed, if such there be, and the next succeeding fifty feet of the hole filled with cement, and similarly, in case there are more over-lying workable coal beds. If, in the judgment of the well operator, the coal operator and the department of mines, no outlet to the surface is considered necessary, the plugging, filling and cementing shall be as last above described.

§ 10–a. *Introducing Pressure Into Producing Strata to Recover Oil Contained Therein.*—The owner or operator of any well or wells which produce oil or gas may allow such well or wells to remain open for the purpose of introducing water or other liquid pressure into and upon the producing strata for the purpose of recovering the oil contained therein, and may drill additional wells for like purposes, provided that the introduction of such water or other liquid pressure shall be controlled as to volume and pressure and shall be through casing or tubing which shall be so anchored and packed that no other oil, or gas-bearing sand or producing stratum, above or below the producing strata into and upon which such pressure is introduced, shall be affected thereby.

§ 11. *When Coal Operator to File Maps and Plans As Prerequisite to Extension of Coal Operations; Petition for Leave to Conduct Operations Within Two Hundred Feet of Well; Proceedings Thereon.*—Hereafter before removing any coal or other material, or driving any entry or passageway within less than five hundred feet of any well, and also before hereafter extending the workings in any coal mine beneath any tract of land on which wells are already drilled, or within five hundred feet of any well, or under any tract of land in visible possession by a well operator for the purpose of drilling for oil or gas, the coal operator shall forward, by registered mail, to, or file a copy of the parts of its maps and plans which it is required by law to prepare and file and bring to date, from time to time, showing its mine workings and projected mine workings beneath such tract of land and within five hundred feet of the outer boundaries thereof, simultaneously, with the well operator and the department of mines, accompanying each of said copies with a notice (form of which shall be furnished on request by the department of mines), addressed to the well operator and to the department of mines at their respective addresses, informing them that such plans or maps and notice are being mailed by registered mail to them, or are being filed and served upon them, respectively, pursuant to the requirements of section eleven (this section) of this article. Following the filing of such parts of said plans or maps as aforesaid, the coal operator may proceed with its mining operations in the manner and as projected on such plans or maps, but shall not remove any coal or other material or cut any passageway nearer than two hundred feet of any completed well, or well that is being drilled, or for the purpose of drilling which, a derrick is being constructed,

without the consent of the department of mines, and the coal operator shall, at least every six months, bring such plans or maps so filed with the department to date, or file new plans and maps complete to date.

Application may be made at any time to the department of mines by the coal operator for leave to mine or remove coal or conduct its mining operations within two hundred feet of any well, by petition, duly verified, showing the location of the well, the workings adjacent to the well and any other material facts, and what further mining operations within two hundred feet of the well are contemplated, and praying the approval of the same by the department, and naming the well operator as a respondent. The coal operator shall file such petition with, or mail the same by registered mail to, the department and shall at the same time serve upon or mail by registered mail a true copy to the well operator. The department of mines shall, forthwith upon receipt of such copy, notify the well operator that it may answer the petition within five days, and that in default of an answer the department may approve the proposed operations as requested, if it be shown by the petitioner or otherwise to the satisfaction of the department that such operations are in accordance with law and with the provisions of this article. At the expiration of such five-day period, the department, whether an answer be filed or not filed, shall fix a time and place of hearing within ten days of which it shall give the coal operator and the well operator five days' written notice by registered mail, and after a full hearing, at which the well operator and coal operator, as well as the department of mines, shall be permitted to offer any competent and relevant evidence, the department shall grant the request of the coal operator or refuse to grant the same or make such other decision with respect to such proposed further operations in the vicinity of any such well as in its judgment is just and reasonable under all the circumstances and in accordance with law and the provisions of this article. The department of mines shall docket and keep a record of all such proceedings substantially as required in the last paragraph of section three of this article, and from any such final decision or order of the department of mines, either the well operator or coal operator, or both, may, within ten days, appeal to the circuit court of the county in which the well about which approval of such further operations is involved is located. The procedure in the circuit court shall be substantially as provided in section four, the department being named as a respondent. From any final order or decree of the circuit court, an appeal may be taken to the supreme court of appeals as heretofore provided.

§ 12. *Supervision by Department of Mines Over Drilling and Mining Operations; Complaints; Hearings; Appeals.*—The department shall exercise supervision over the drilling, casing, plugging and filling of all wells and of all mining operations in close proximity to any well and shall have such access to the plans, maps and other records and to the properties of the well operators and coal operators as may be necessary or proper for this purpose, and, either as the result of its own investigations or pursuant to charges made by any well operator or coal operator, the department may itself enter, or shall permit any aggrieved person to file before it, a formal complaint charging any well operator with not drilling or casing, or not plugging or filling, any well in accordance with the provisions of this article, or charging any coal operator with conducting mining operations in proximity to any well contrary to the provisions of this article, or to the order of the department. True copies of any such complaints shall be served upon or mailed by registered mail to any person so charged, with notice of the time and place of hearing, of which the operator or operators so charged shall be given at least five days' notice. At the time and place fixed for hearing, full opportunity shall be given any person so charged or complained to be heard and to offer such evidence as desired, and after a full hearing, at which the department may offer in evidence the results of such investigations as it may have made, the department shall make its findings of fact and enter such order as in its judgment is just and right and necessary to secure the proper administration of this article, and, if it deems necessary, restraining the well operator from continuing to drill or case any well, or from further plugging or filling the same except under such conditions as the department may impose in order to insure a strict compliance with the provisions of this article relating to such matters, or restraining further mining operations in proximity to any well, except under such conditions as the department may impose. From any such order an appeal, naming the department as a respondent, may be taken by the operator or operators so restrained, within ten days of notice of entry of the same, to the circuit court of the county in which the well involved is located, and the department

or complainant or complainants, or both, may, in case such order is disobeyed, apply at any time to such circuit court for a decree enforcing the same.

§ 13. *Rules and Regulations; Hearings Before Department of Mines; Appeals.*—The department shall prescribe rules of procedure and for offering evidence in all matters brought before it, and shall prepare and, on request, furnish to applicants copies of forms of notices and of other forms that the department may require to be used, and prescribed the manner of serving the same. The department may also promulgate such other rules and regulations as it may deem necessary or helpful in securing uniformity of procedure in the administration of this article. Any matter in controversy before the department shall, after hearing or hearings, of which all persons interested have had due notice and at which they have been given an opportunity to appear and be heard and to offer evidence and to make argument by counsel if desired, be decided by the department as may seem to it to be just and reasonable and necessary or desirable for the proper enforcement of the provisions of this article.

Whether or not it be so expressly stated, an appeal from any final decision or action by the department in administering the provisions of this article may be taken by any aggrieved persons within ten days of notice of such action or decision, to the circuit court of the county in which the subject matter of such decision or action is located, and in all cases of appeals to the circuit court, the court shall certify its decisions to the department of mines, and from all such final decisions an appeal shall lie to the supreme court of appeals as now provided by law in cases in equity. Any party feeling aggrieved by the final order of the circuit court affecting him or it, may present his or its petition in writing to the supreme court of appeals, or to a judge thereof in vacation, within twenty days after the entry of such order, praying for the suspension or modification of such final order. The applicant shall deliver a copy of such petition to the department of mines and to all other parties of record, before presenting the same to the court or judge. The court or judge shall fix a time for the hearing on the application but such hearing shall not be held sooner than seven days, unless by agreement of the parties, after its presentation, and notice of the time and place of such hearing shall be forthwith given to the department of mines and to all other parties of record. If the court or judge, after such hearing, be of opinion that such final order should be suspended or modified, the court or the judge may require bond, upon such conditions and in such penalty, and impose such terms and conditions upon the petitioner as are just and reasonable. For such hearing the entire record before the circuit court, or a certified copy thereof, shall be filed in the supreme court, and that court, upon such papers, shall promptly decide the matter in controversy as may seem to it to be just and right, and may award costs in each case as to it may seem just and equitable.

§ 14. *Preventing Waste of Gas.*—Natural gas shall not be permitted to waste or escape from any well or pipe line, when it is reasonably possible to prevent such waste, after the owner or operator of such gas, or well, or pipe line, has had a reasonable length of time to shut in such gas in the well, or make the necessary repairs to such well or pipe line to prevent such waste: *Provided, however,* That (a) if in the process of drilling a well for oil or gas, or both, gas is found in such well, and the owner or operator thereof desires to continue to search for oil or gas, or both, by drilling deeper in search of lower oil or gas-bearing strata, or (b) if it becomes necessary to make repairs to any well producing gas, commonly known as "cleaning out," and if in either event it is necessary for the gas in such well to escape therefrom during the process of drilling or making repairs, as the case may be, then the owner or operator of such well shall prosecute such drilling or repairs with reasonable diligence, so that the waste of gas from the well shall not continue longer than reasonable necessary, and if, during the progress of such deeper drilling or repairs, any temporary suspension thereof becomes necessary, the owner or operator of such well shall use all reasonable means to shut in the gas and prevent its waste during such temporary suspension: *Provided further,* That in all cases where both oil and gas are found and produced from the same oil and gas-bearing stratum, and where it is necessary for the gas therefrom to waste in the process of producing the oil, the owner or operator shall use all reasonable diligence to conserve and save from waste so much of such gas as it is reasonably possible to save.

§ 15. *Right of Adjacent Owner or Operator to Prevent Such Waste; Recovery of Cost.*—If the owner or operator of any such well shall neglect or refuse to drill, case and equip, or plug and abandon, or shut in and conserve from waste the gas produced therefrom as required to be done and performed by the preced-

ing sections of this article, for a period of twenty days after a written notice so to do, which notice may be served personally upon the owner or operator, or may be posted in a conspicuous place at or near the well, it shall be lawful for the owner or operator of any adjacent or neighboring lands to enter upon the premises where such well is situated and properly case and equip such well, or, in case the well is to be abandoned, to properly plug and abandon it, or in case the well is wasting gas, to properly shut it in and make such needed repairs to the well to prevent the waste of gas, in the manner required to be done by the preceding sections of this article; and the reasonable cost and expense incurred by an owner or operator in so doing shall be paid by the owner or operator of such well and may be recovered as debts of like amount are by law recoverable.

§ 16. *Restraining Waste.*—Aside from and in addition to the imposition of any penalties under this article, it shall be the duty of any circuit court in the exercise of its equitable jurisdiction to hear and determine any bill or bills in equity which may be filed to restrain the waste of natural gas in violation of this article, and to grant relief by injunction or by other decrees or orders, in accordance with the principles and practice in equity. The plaintiff in such bill shall have sufficient standing to maintain the same if he shall aver and prove that he is interested in the lands situated within the distance of one mile from such well, either as an owner of such land, or of the oil or gas, or both, thereunder, in fee simple, or as an owner of leases thereof or of rights therein for the production of oil and gas or either of them.

§ 17. *Offenses; Penalties.*—Any person or persons, firm, partnership, partnership association or corporation willfully violating any of the provisions of this article which prescribes the manner of drilling and casing or plugging and filling any well, or which prescribe the methods of conserving gas from waste, or which fix the distance from wells within which mining operations shall not be conducted without the approval of the department, or violating the terms of any order of the department allowing mining operations within a lesser distance of any well than that prescribed by the article shall be guilty of a misdemeanor, and, on conviction thereof, shall be punished by a fine not exceeding two thousand dollars, or imprisoned in jail for not exceeding twelve months, or both, in the discretion of the court, and prosecutions under this section may be brought in the name of the state of West Virginia in the court exercising criminal jurisdiction in the county in which the violation of such provisions of the article or terms of such order was committed, and at the instance and upon the relation of any citizen of this State.

Article 5. Transportation of Oils.

1. Scope of article.
2. Duty of pipe line companies to transport oil.
3. Oil of 35 degree Baume; inspection, grading and measurement.
4. Oil over 35 degree Baume; inspection and measurement; loss.
5. Lien for charges.
6. Orders and certificates; negotiability.
7. Further provisions concerning such orders and certificates.
8. Dealing with oil without consent of owner.
9. Monthly statements.
10. Statements of amount of oil.
11. Penalties for violation of article.
12. Dealing in oil in tanks or pipes without consent of owner; penalty.
13. Failure to make report or statement; penalty.

§ 1. *Scope of Article.*—Every person, corporation or company now engaged, or which shall hereafter engage, in the business of transporting or storing petroleum, by means of pipe line or lines or storage by tanks, shall be subject to the provisions of this article and shall conduct such business in conformity herewith: Provided, That the provisions of this article shall be subject to all federal laws regulating interstate commerce on the same subject.

§ 2. *Duty of Pipe Line Companies to Transport Oil.*—Any company heretofore or hereafter organized for the purpose of transporting petroleum or other oils or liquids by means of pipe line or lines shall be required to accept all petroleum offered to it in merchantable order in quantities of not less than two thousand gallons at the wells where the same is produced, making at its own expense all necessary connections with the tanks or receptacles containing such petroleum, and to transport and deliver the same at any delivery station, within or without the State, on the route of its line of pipes, which may be designated by the owners of the petroleum so offered.

§ 3. *Oil of 35 Degree Baume; Inspection, Grading and Measurement.*—All petroleum of a gravity of thirty-five degree Baume or under, at a temperature of sixty degrees Fahrenheit, offered for transportation by means of pipe line or lines,

shall, before the same is transported, as provided by section two of this article, be inspected, graded and measured at the expense of the pipe line company, and the company accepting the same for transportation shall give to the owner thereof a receipt stating therein the number of barrels or gallons so received, and the grade, gravity and measurement thereof, and within a reasonable time thereafter, upon demand of the owner or his assigns, shall deliver to him at the point of delivery a like quantity and grade or gravity of petroleum in merchantable condition as specified in such receipt; except that the company may deduct for waste one per cent of the amount of petroleum specified in such receipt.

§ 4. *Oil Over 35 Degree Baume; Inspection and Measurement; Loss.*—All petroleum of a gravity exceeding thirty-five degrees Baume, at a temperature of sixty degrees Fahrenheit, offered for transportation by means of pipe line or lines, shall be inspected and measured at the expense of the company transporting the same, before the same is transported. The company accepting the same for transportation shall give to the owner thereof, or to the person in charge of the well or wells from which such petroleum has been produced and run, a ticket signed by its gauger, stating the number of feet and inches of petroleum which were in the tank or receptacle containing the same before the company began to run the contents from such tank, and the number of feet and inches of petroleum which remained in the tank after such run was completed. All deductions made for water, sediment or the like shall be made at the time such petroleum is measured. Within a reasonable time thereafter the company shall, upon demand, deliver from the petroleum in its custody to the owner thereof, or to his assignee, at such delivery station on the route of its line of pipes as he may elect, a quantity of merchantable petroleum, equal to the quantity of petroleum run from such tank, or receptacle, which shall be ascertained by computation; except that the company transporting such petroleum may deduct for evaporation and waste two per cent of the amount of petroleum so run, as shown by such run ticket, and except that in case of loss of any petroleum while in the custody of the company caused by fire, lightning, storm or other like unavoidable cause, such loss shall be borne pro rata by all the owners of such petroleum at the time thereof. But the company shall be liable for all petroleum that is lost while in its custody by the bursting of pipes or tanks, or by leakage from pipes or tanks; and it shall also be liable for all petroleum lost from tanks at the wells produced before the same has been received for transportation, if such loss be due to faulty connections made to such tanks; and the company shall be liable for all petroleum lost by the overflow of any tanks with which pipe line connections have been made, if such overflow be due to the negligence of such company, and for all the petroleum lost by the overflow of any tanks with which pipe line connections should have been made under the provisions of this article, but were not so made be reason of negligence or delay on the part of the company.

§ 5. *Lien for Charges.*—Any company engaged in transporting or storing petroleum shall have a lien upon such petroleum until all charges for transporting and storing the same are paid.

§ 6. *Orders and Certificates; Negotiability.*—Accepted orders and certificates for petroleum, issued by any company engaged in the business of transporting and storing petroleum in this State by means of pipe line or lines and tanks, shall be negotiable, and may be transferred by indorsement either in blank or to the order of another, and any person to whom such accepted orders and certificates shall be so transferred shall be deemed and taken to be the owner of the petroleum therein specified.

§ 7. *Further Provisions Concerning Such Orders and Certificates.*—No receipt, certificate, accepted order or other voucher shall be issued or put in circulation, nor shall any order be accepted or liability incurred for the delivery of any petroleum, crude or refined, unless the amount of such petroleum represented in or by such receipt, certificate, accepted order, or other voucher or liability, shall have been actually received by and shall then be in the tanks and lines, custody and control of the company issuing or putting in circulation such receipt, certificate, accepted order or voucher, or written evidence of liability. No duplicate receipt, certificate, accepted order or other voucher shall be issued or put in circulation, or any liability incurred for any petroleum, crude or refined, while any former liability remains in force, or any former receipt, certificate, accepted order or other voucher shall be outstanding and uncanceled, except such original papers shall have been lost, in which case a duplicate, plainly marked "duplicate" upon the face, and dated and numbered as the lost original was dated and numbered, may be issued. No receipt, voucher, accepted order.

certificate or written evidence of liability of such company on which petroleum, crude or refined, has been delivered, shall be reissued, used or put in circulation. No petroleum, crude or refined, for which a receipt, voucher, accepted order, certificate or liability incurred, shall have been issued or put in circulation, shall be delivered, except upon the surrender of the receipt, voucher, order or liability representing such petroleum, except upon affidavit of loss of such instrument made by the former holder thereof. No duplicate receipt, certificate, voucher, accepted order or other evidence of liability, shall be made, issued or put in circulation until after notice of the loss of the original, and of the intention to apply for a duplicate thereof, shall have been given by advertisement over the signature of the owner thereof in at least four successive issues of a daily or weekly newspaper published in the county where such duplicate is to be issued. Every receipt, voucher, accepted order, certificate or evidence of liability, when surrendered, or the petroleum represented thereby delivered, shall be immediately canceled by stamping and punching the same across the face in large and legible letters with the word "canceled," and giving the date of such cancellation; and it shall then be filed and preserved in the principal office of such company for a period of six years.

§ 8. *Dealing With Oil Without Consent of Owner.*—No company, its officers or agents, or any person or persons engaged in the transportation or storage of petroleum, crude or refined, shall sell or encumber, ship, transfer, or in any manner remove or procure, or permit to be sold, encumbered, shipped, transferred, or in any manner removed from the tanks or pipes of such company engaged in the business aforesaid, any petroleum, crude or refined, without the written order of the owner or owners thereof.

§ 9. *Monthly Statements.*—Every company now or hereafter engaged in the business of transporting by pipe lines or storing crude or refined petroleum in this State shall, on or before the tenth day of each month, make or caused to be made and posted in its principal business office in this State, in an accessible and convenient place for the examination thereof by any person desiring such examination, and shall keep so posted continuously until the next succeeding statement is so posted, a statement plainly written or printed, signed by the officer, agent, person or persons having charge of the pipes and tanks of such company, and also by the officer or officers, person or persons, having charge of the books and accounts thereof, which statement shall show in legible and intelligent form the following details of the business: (a) How much petroleum, crude or refined, was in the actual and immediate custody of such company at the beginning and close of the previous month, and where the same was located or held; describing in detail the location and designation of each tank or place of deposit, and the name of its owner; (b) how much petroleum, crude or refined, was received by such company during the previous month; (c) how much petroleum, crude or refined, was delivered by such company during the previous month; (d) for how much petroleum, crude or refined, such company was liable for the delivery or custody of to other corporations, companies or persons at the close of the month; (e) how much of such liability was represented by outstanding receipts or certificates, accepted orders or other vouchers, and how much was represented by credit balances; (f) that all the provisions of this article have been faithfully observed and obeyed during the previous month. The statement so required to be made shall also be sworn to by such officer, agent, person or persons before some officer authorized by law to administer oaths, which shall be in writing, and shall assert the familiarity and acquaintance of the deponent with the business and condition of such company, and with the facts sworn to, and that the statements made in such report are true.

§ 10. *Statements of Amount of Oil.*—All amounts in the statements required by this article, when the petroleum is handled in bulk, shall be given in barrels and hundredths of barrels, reckoning forty-two gallons to each barrel, and when such petroleum is handled in barrels or packages, the number of such barrels or packages shall be given, and such statements shall distinguish between crude and refined petroleum, and give the amount of each. Every company engaged in the business aforesaid shall at all times have in their pipes and tanks an amount of merchantable oil equal to the aggregate of outstanding receipts, certificates, accepted orders, vouchers, acknowledgments, evidence of liability, and credit balances, on the books thereof.

§ 11. *Penalties for Violations of Article.*—Any company, its officers or agents, who shall make or cause to be made, sign or cause to be signed, issue or cause to be issued, put in circulation or cause to be put in circulation, any receipt, accepted order, certificate, voucher or evidence of liability, or shall sell, transfer

or alter the same, or cause such sale, transfer or alteration, contrary to the provisions of this article, or shall do or cause to be done any of the acts prohibited by section seven of this article, or omit to do any of the acts by said section directed, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined not exceeding one thousand dollars, and, if the offender be a natural person, imprisoned not less than ten days nor exceeding one year.

§ 12. *Dealing in Oil in Tanks or Pipes Without Consent of Owner; Penalty.*—Any company, its officers, or agents, who shall sell, encumber, transfer, or remove, or cause or procure to be sold, transferred or removed from the tanks or pipes of such company, any petroleum, crude or refined, without the written consent of the owner or owners thereof, shall be guilty of a misdemeanor, and, on conviction thereof, shall be fined one thousand dollars and, if the offender be a natural person, imprisoned not less than ninety days nor exceeding one year.

§ 13. *Failure To Make Reports or Statement; Penalty.*—Any company engaged in the business of transporting by pipe lines or storing petroleum, crude or refined, and each and every officer or agent of such company, who shall neglect or refuse to make the report and statement required by section nine of this article, within the time and the manner directed by said section, shall forfeit and pay the sum of one thousand dollars, and in addition thereto the sum of five hundred dollars for each day after the tenth day of the month that the report and statement required by said section nine shall remain unposted as therein directed.

STATE OF CALIFORNIA, DEPARTMENT OF WATER RESOURCES

California shares the committee's concern with respect to the "* * * longrun adequacies of our energy resources and the development of energy technology * * *," as expressed in your letter. California's historically rapid expanding population, with no foreseeable letup, combined with increased standards of living, forecasts tremendous future energy requirements. Already petroleum is imported from overseas to supplement local supplies. Natural gas is imported from Texas, Colorado, and New Mexico and soon will be imported from Canada. Electrical energy, mainly hydrogenerated, is being considered for import from the Pacific Northwest and Canada.

The department of water resources is responsible by statute for comprehensive statewide planning for the development and beneficial use of the State's water resources, the coordination of water resources development by Federal, local, and private agencies, and the construction and operation of State water projects.

The overall planning and development of water resources in California, of course, involves the development of hydroelectric energy, the use of energy for project pumping, and the appraisal of the feasibility of sea-water conversion—and associated energy requirements—as a possible source of water supply. These aspects, all of which are water project oriented, establish and limit our role with respect to energy resources and technology. In effect, the department does not have a primary relationship to energy resources and technology per se. It does have secondary and limited relationships. These are defined below.

In carrying out its basic responsibilities, the department has developed, and the legislature has adopted, the California water plan. This is a comprehensive statewide plan for water development in California for all beneficial uses in all sections of the State. The plan was developed by the department of water resources through extensive studies during a 10-year period after World War II. The formulation of the California water plan involved comprehensive studies of the State's water resources, ultimate water requirements, and project plans for meeting those ultimate requirements. In developing plans to meet ultimate water requirements, the development of hydroelectric energy in connection with potential water projects was an important objective although water conservation must be considered the primary function of water projects in California.

Thus, the plan does provide for maximum and comprehensive development of the hydroelectric power potential in the State as a secondary objective of multipurpose water projects.

The department of water resources is now embarking on the construction of the $2 billion State water resources development system as the first major step in implementing the California water plan, so

far as State-constructed projects are concerned. This system, which will be constructed over the next 20 years, will produce hydroelectric energy, but that production will be exceeded by the energy requirements for project pumping along the 500-mile aqueduct from northern to southern California. Net annual generation in the system in 1990 will be about 4.3 billion kilowatt-hours compared to annual pumping energy requirements of more than 10 billion kilowatt-hours. Because of these large requirements for project pumping, the department, under legislative authorization, is investigating the feasibility of using nuclear energy to provide power for pumping in lieu of the purchase of electric energy from the utility systems of the State, with the objective of providing the lowest cost of water.

In view of the increasing cost of developing new water supplies, the department also maintains a program of continuing appraisal of the feasibility of saline water conversion and sources and types of energy that may be used for that purpose. In this connection, the department is participating with the Federal Office of Saline Water and Atomic Energy Commission in the construction of a demonstration sea-water conversion plant near San Diego. The State is contributing half the cost, up to $1½ million, for the design and construction of the plant. This is being carried out under an agreement with the Office of Saline Water, which provides also for participation by the department in site selection, review of designs and specifications, and participation in the construction supervision of the project.

Finally, the department, in response to a resolution of the State legislature, is currently studying the feasibility of a power interconnection between the California and the Pacific Northwest power systems. While this study goes beyond the aspect of water development, which is the basic consideration in all of our other activities, it still contains a fundamental element in that regard, because such an interconnection could provide substantial blocks of electric energy for project pumping in the State water resources development system.

The overall purpose of the interconnection study is to assess the possible benefits, both to California and the Pacific Northwest, that might accrue from a high capacity electric intertie between the two areas. A preliminary report by consultants (copy available in subcommittee files) indicates that both areas would benefit from an interconnection. These benefits result from the inherent diversity between the electric power loads of the two areas and their hydroelectric resources. Basically, the Pacific Northwest area has a substantial temporary supply of secondary hydroelectric energy which is surplus to its needs. This energy could be used in lieu of steam-electric generation in California, and at the same time could provide considerable financial revenues to the Pacific Northwest area. For your information, we are enclosing herewith a copy of the progress report prepared by our consultants last September.

Also in connection with the department's activities with respect to sources and types of energy for project pumping and saline water conversion, the department is giving some attention to other types of energy such as solar, wind, tidal, geothermal, and waste industrial heat.

Because the department has no primary program or function in the energy resources and technology field per se, the following discussion of the specific subjects mentioned in your letter covers all of the foregoing activities.

1. The broad statutory basis for the functions of the department is set forth in the California Water Code. Also, the legislature from time to time assigns specific functions by resolutions, by individual laws not a part of the code, and through the annual State budget act.

The department's current activities with respect to studies of the application of nuclear energy to project pumping in State water projects and with respect to participation with the Federal Government in the sea-water conversion plant near San Diego are established and funded through the budget procedure. The current studies of an electric power interconnection between California and the Pacific Northwest resulted from enactment of chapter 1698, California statutes of 1959. All other activities of the department mentioned herein find their statutory basis in the water code.

2. Studies by the department in the 1920's resulted in the State water plan of 1931, adopted by the legislature in 1941. Further studies subsequent to World War II resulted in the much more comprehensive California water plan, adopted by the legislature in 1959. Also in 1959, the legislature created the California water fund and enacted the California Water Resources Development Bond Act to provide $1.75 billion in bonds to finance State construction of the State water resources development system. The Bond Act was approved by the electorate on November 8, 1960.

3. The overall objective of the department's program is to bring about the comprehensive and coordinated conservation, production, control, development, and utilization of the State's water resources for all beneficial uses in all areas of the State, including hydroelectric power generation.

4. Since the department has no direct function or responsibility in the energy resources field, it does not issue rules, directives, or policies in that area. The department will, however, oppose any hydroelectric development that is not substantially in conformance with the California water plan or which would unduly interfere with the use of water for other beneficial purposes providing greater long-range benefits.

5. The department's program for planning water resources development closely parallels the comprehensive river basin planning carried on by Federal agencies. The department as well as the Bureau of Reclamation and the Corps of Engineers place major emphasis on the conservation of water and flood control, and power generation is considered secondary to these purposes. In some instances, it has appeared that the Federal Power Commission, however, has tended to resolve conflicting demands for water use in favor of the early execution of hydroelectric power development. Federal water projects containing hydroelectric features are not required to be coordinated with

similar developments planned by non-Federal agencies. In some instances, this has resulted in smaller development of hydroelectric power resources than otherwise could have been realized.

6. The department maintains continuous liaison with the Federal agencies in the planning and the coordinating of water projects including hydroelectric development. This is accomplished by exchange of information and data, review of and comment on Federal reports, and by frequent conferences. In this regard, the department and the Bureau of Reclamation, on May 16, 1960, entered into an unprecedented agreement for coordinated operation of the State water resources development system and the Federal Central Valley project. Closely coordinated operation of the two projects will make possible greater water conservation and hydroelectric production than could be attained under independent and uncoordinated operation of the two projects.

7. The most challenging and difficult aspect of the department's overall program, including its functions in the field of hydroelectric development, is the achievement of a high degree of coordination of projects constructed by State, Federal, and local agencies and private entities in the interest of comprehensive development on behalf of the general public.

8. Within the limits of the department's activities in the energy field as set forth previously, the department would recommend that the Federal Government establish methods and requirements through which the development of hydroelectric energy by the various agencies and private entities would be coordinated to the maximum extent practicable considering not only hydroelectric development in itself, but also the use of development of water resources for all other beneficial uses. This might be accomplished by requiring coordination of Federal and non-Federal hydroelectric developments by the Federal Power Commission through continuing administration by the Commission, or through a recommendation by the Commission to the Congress as a condition precedent to the authorization of Federal water projects.

Since the nature of the activities of the department of water resources with respect to energy resources and technology appears to be somewhat outside the primary scope of your committee's objective, this reply has not covered our activities in detail.

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