

ORDER

NEW MEXICO OIL CONSERVATION COMMISSION  
RECEIVED

DEC 11 AM 9 45

IT IS HEREBY ORDERED that the following specifications shall be followed for the construction of oil, gas, mineral and test wells in artesian basins.

The water protection casing string (also designated as the second or intermediate string) shall be landed into the formation below all known artesian aquifers. Sufficient cement shall be used to obtain circulation to the surface. If surface casing is used, said casing shall not be removed until after cementing of the water protection string has been completed. When circulation to the surface on the water protection string is not obtained, the operator shall run a temperature survey to insure that the cement has circulated to a point well above all artesian aquifer formations. If the temperature survey shows the top of the cement to be in a shallow water zone, the operator, under the direction of a representative of the United States Geological Survey, New Mexico Oil Conservation Commission or the State Engineer, shall place cement to the surface behind the water protection string or circulate cement to the surface on the oil production casing string. Additives of a pozzolanic nature may be used above the casing shoe, but, shall not exceed 50% by volume. The addition of calcium chloride and/or gel may be required, but shall not in any case exceed 2% each by weight. A sufficient amount of cement without additives shall be used to allow neat cement to seal the casing shoe, and rise a minimum of 50 feet above the shoe between the casing and hole. Cement shall be allowed to set a minimum of 48 hours before drilling is resumed. Sealing off of the formations shall be checked by a method approved by the United States Geological Survey, New Mexico Oil Conservation Commission or the State Engineer's Office.

Manual of Rules and Regulations governing the drilling of wells and the appropriation and use of underground waters in declared basins of the State of New Mexico, revised in April 1951, be and hereby is, amended to read as follows:

G. CONSTRUCTION OF ARTESIAN WELLS

The casing for artesian wells shall be inspected by the State Engineer or his representative and shall be of proper weight, of good quality, smooth and without pits. The threads shall be in good condition and if worn or damaged, must be redressed. A casing show of standard make shall be used in all instances. In no case shall the outer or water-carrying casing be perforated.

Casing of various sizes shall meet the following minimum A. P. I. specifications:

Outside Diameter, Inches	Weight, lbs. per ft.		Wall Thickness, Inches	Length Coupling, Inches	Threads Per Inch	Grade of Casing
	Pipe Only	Pipe & Couplings				
5-1/2	12.84	13.12	.228	6 3/4	10 or 8	F-25
6	14.65	15.03	.238	7	10 or 8	F-25
6-5/8	16.69	17.29	.215	7 1/4	10 or 8	F-25
7	19.54	20.01	.272	7 1/4	10 or 8	H-40
7-5/8	23.47	24.26	.300	7 1/2	8	H-40
8-5/8	23.57	24.00	.264	7 3/4	8	J-55
8-5/8	27.02	28.13	.304	7 3/4	8	H-40
9-5/8	31.02	32.25	.312	7 3/4	8	H-40
10-3/4	38.88	40.50	.350	8	8	J-55
11-3/4	45.56	46.94	.375	8	8	J-55
13-3/8	52.74	54.28	.380	8	8	J-55

The following specifications shall be compiled with during the casing, cementing and testing. The casing shoe shall be welded to the casing in order to assure proper position. Casing shall be landed into the confining formation overlying the artesian aquifer formations. Sufficient oil well cement shall be used to obtain circulation to the surface. When circulation to the surface is not obtained, the driller, under the direction of a representative of the State Engineer, shall place cement to the surface behind the casing. Additives of a pozzolanic nature may be used above the casing shoe but shall not exceed 50% by volume. The addition of calcium chloride and/or gel may be required but shall not in any case exceed 2% each by weight. A sufficient amount of cement without additives shall be used to allow neat cement to seal the casing shoe and rise a minimum of 50 feet above the shoe between the casing and hole. Cement shall be allowed to set a minimum of 48 hours before drilling is resumed. Scaling off of the formations shall be checked by a method approved by the State Engineer or his authorized representative.

STATE OF NEW MEXICO       )  
                                  )  
OFFICE OF STATE ENGINEER )

Order # ~~72~~

**73**

ORDER

WHEREAS, on the 11th day of September, A. D., 1956, the State Engineer issued Order #63 outlining the procedure that would be followed for the construction of oil, gas, mineral and test wells in artesian basins, and

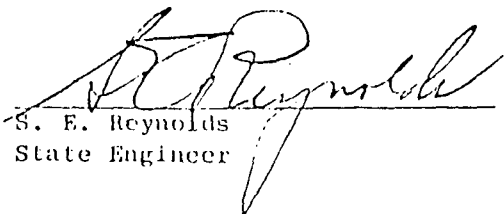
WHEREAS, development of oil reserves in the Roswell Artesian Basin have shown that in certain areas a production zone of oil exists between known artesian water aquifers and that certain deviations from the casing, cementing and testing programs as set forth in State Engineer's Order #63 are necessary,

NOW, THEREFORE, IT IS HEREBY ORDERED that State Engineer Order #63 be amended to include the following appendage:

Any deviations from the above described casing, cementing and testing programs must be approved by the United States Geological Survey and the State Engineer on Federal lands or the New Mexico Oil Conservation Commission and the State Engineer on all other lands.

In all cases the diameter of the drilled hole shall be at least two inches greater than the outside diameter of the casing used through all water producing formations.

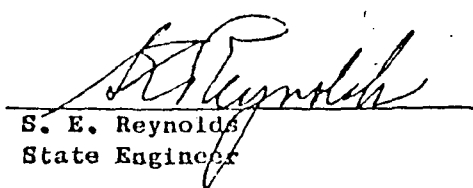
WITNESS my hand and official seal this 20 day of Jan.,  
A. D., 1959.

  
S. E. Reynolds  
State Engineer

The oil production string or strings shall be landed and cemented as specified by the United States Geological Survey (Oil and Gas Branch) or the New Mexico Oil Conservation Commission.

The preceding casing, cementing and testing program shall be witnessed by an authorized representative of the United States Geological Survey, New Mexico Oil Conservation Commission or the State Engineer's Office.

WITNESS my hand and official seal this 11th day of September, A. D., 1956.



S. E. Reynolds  
State Engineer

M E M O R A N D U M

TO: Steve Reynolds, State Engineer  
A. L. Porter, Jr., State Geologist

SUBJECT: Specifications for the drilling and construction of oil, gas, mineral and test wells and artesian wells, with particular reference to wells drilled in the Pecos Valley of New Mexico.

On September 6, 1956 a meeting was held in the District Office of the State Engineer in Roswell, New Mexico, to discuss specifications for the drilling and construction of oil, gas, mineral and test wells and artesian wells in the Roswell Basin of the Pecos Valley, New Mexico. Those present were as follows:

NAME	OFFICE	LOCATION
Warren Mankin	O. C. C.	Santa Fe
Elvia Utz	O. C. C.	Santa Fe
Jack Gurley	O. C. C.	Santa Fe
Mose Armstrong	O. C. C.	Artesia
Dill Gressett	O. C. C.	Artesia
Jack Frost	U. S. G. S.	Artesia
James A. Knauf	U. S. G. S.	Roswell
Frank E. Irby	S. E. O.	Santa Fe
Joe Yates	S. E. O.	Santa Fe
Fred Hennighausen	S. E. O.	Roswell
James L. Williams	S. E. O.	Roswell
James I. Wright	S. E. O.	Roswell

As a result of the meeting, the following specifications were agreed upon for the construction of oil wells in the Roswell Basin of the Pecos Valley:

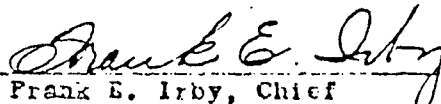
1. The following procedure shall be used for casing, cementing and testing of the water protection casing string (also designated as the second or intermediate string).
  - a. Casing shall be landed into the formation below all known artesian aquifers.
  - b. Sufficient cement shall be used to obtain circulation to the surface.
  - c. If surface casing is used, said casing shall not be removed until after cementing of the water protection string has commenced.
  - d. When circulation to the surface on the water protection string is not obtained, the operator shall run a temperature survey to insure that the cement has circulated to a point well above all artesian aquifer formations.
  - e. If the temperature survey shows the top of the cement to be in a shallow water zone, the operator, under the direction of a representative of the U. S. G. S., New Mexico

Oil Conservation Commission or the State Engineer, shall place cement to the surface behind the water protection string or circulate cement to the surface on the oil production casing string.

- f. Additives of a pozzolanic nature may be used above the casing shoe, but shall not exceed 50% by volume. The addition of calcium chloride and/or gel may be required, but shall not in any case exceed 2% each by weight.
  - g. A sufficient amount of cement without additives shall be used to allow neat cement to seal the casing shoe, and rise a minimum of 50 feet above the shoe between the casing and hole.
  - h. Cement shall be allowed to set a minimum of ~~45~~<sup>18</sup> hours before drilling is resumed. (FT)
  - i. Sealing off of the formations shall be checked by a method approved by the United States Geological Survey, New Mexico Oil Conservation Commission or the State Engineer's Office.
2. The oil production string or strings shall be landed and cemented as specified by the United States Geological Survey (Oil and Gas Branch) or the New Mexico Oil Conservation Commission.
  3. The preceding casing, cementing and testing program shall be witnessed by an authorized representative of the United States Geological Survey, New Mexico Oil Conservation Commission or the State Engineer's Office.

The members of the meeting also agreed that the specifications for the drilling of artesian wells in the Roswell Basin should be revised to require that sufficient cement shall be used to obtain circulation to the surface.

Similar specifications as agreed to above have been in effect in the Roswell Basin for the past three or four months, but are not set forth in the "Manual of Rules and Regulations".

  
Frank E. Irby, Chief  
Water Rights Division

7 September 1958

Supplement to Article 8, Section J, as set forth in the Model of Rules and Regulations Governing the Drilling of Wells in Declared Basins in the State of New Mexico.

The requirements for drilling oil wells in the Artesian Basin in part are as follows:

1. The casing and cementing program must be approved by the State Engineer prior to drilling operations. All Artesian water of a quality suitable for irrigation shall be cased off by the intermediate or water string. Casing shall be inspected and approved by a representative of the State Engineer's Office. A representative of the State Engineer's Office shall be notified prior to the installation of casing and he shall witness the installation of casing and cementing of the well.

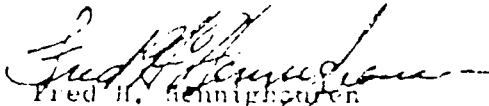
2. The three bottom joints of the intermediate or water string shall be welded. A casing shoe will be required in all cases, and the cement will be circulated to the surface on this string of casing.

3. A minimum of 100 sacks of neat cement shall be circulated around the casing shoe. Calcium Chloride may be added if so desired, but shall not exceed 2 per cent by weight in all cases.

Additives of a pozzolanic nature, such as, Strato-Crete, Pozmix, and etc., may be used above the casing shoe if desired, but shall not exceed 50 per cent by volume. Gel may be used, but shall not exceed 2 per cent by weight. In the event that the cement does not circulate, a temperature survey will be required to determine the top of the cement. If the temperature survey shows the top of the cement to be in a shallow water zone, the operator may either circulate the cement on this string of casing or he may circulate the cement on the oil string.

4. The cement shall be allowed to set for a minimum of <sup>18</sup> hours before the plug is drilled. Shutoff will be checked by an appropriate method in the presence of a representative of the State Engineer, or the Oil Commission.

5. Copies of all logging and temperature surveys shall be furnished the State Engineer's Office, Box 810, Roswell, New Mexico, upon the completion or plugging of the well.

  
Fred H. Hennighausen  
Acting District Supervisor

GENERAL INFORMATION RELATING TO THE DRILLING OF OIL AND  
GAS WELLS IN THE ROSWELL AND CARLSBAD ARTESIAN BASINS

Items requiring inspection by representative of appropriate office,  
Texas OCC or U.S.G.S.

- (a) Casing prior to running in hole; water protection string only.
- (b) Cementing of water; protection string.
- (c) Pressure or bailer test for water, shut off on water; protection string.
- (d) Plugging operations.

II. Casing requirements, water protection string.

- (a) API H grade or better, new or first quality used pipe.
- (b) To be landed below all known Artesian aquifers.
- (c) Cement to be circulated to surface;
  - (1) not more than 50% pozzolanic by volume
  - (2) not more than 2% gel or calcium chloride by weight
  - (3) bottom ~~50 feet~~ of water, protection string must be cemented with neat cement with no additives
  - (4) if operator wishes to use any other cement additive, the Commission or U.S.G.S. must be notified and approve the same prior to running of casing
  - (5) if cement does not circulate, temperature survey must be run to determine the depth to cement. Sufficient cement to circulate may then be placed behind the pipe at the Commission's discretion
  - (6) cement waiting time shall be a minimum of 16 hours
- (d) The drilled hole must be at least two inches larger in diameter than casing to be set through the Artesian zone.

III. Casing and water shut-off tests.

- (a) Casing to be tested in accordance with Rule 107, paragraph (c) (1) or (c) (2) as follows:
  - (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 or 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.
- (b) Water shut off to be determined in the same manner.
  - (1) Water shut off test must be witnessed by the appropriate regulatory body.

IV. Plugging

- (a) The plugging program to be approved prior to commencement of plugging operation.
- (b) The plugging from just below the water protection string to above the



- (5) if cement does not circulate, temperature survey must be run to determine the depth to cement. Sufficient cement to circulate may then be placed behind the pipe at the Commissions discretion
- (6) cement waiting time shall be a minimum of 18 hours
- (d) The drilled hole must be at least two inches larger in diameter than casing to be set through the Artesian zone.

#### I. Casing and water shut-off tests.

- (a) Casing to be tested in accordance with Rule 107, paragraph (c) (1) or (c) (2) as follows:
  - (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.
- (b) Water shut off to be determined in the same manner.
  - (1) Water shut off test must be witnessed by the appropriate regulatory body.

#### IV. Plugging

- (a) The plugging program to be approved prior to commencement of plugging operation.
- (b) The plugging from just below the water protection string to above the Artesian aquifer must be witnessed.
- (c) General plugging requirements include minimum cement plug of 20 to 30 sacks across the base and top of the Artesian zone and between the Artesian zone and surface waters, with 10 pound mud between plugs.

**STATE OF NEW MEXICO**

**STATE ENGINEER OFFICE**

**SANTA FE**

S. E. REYNOLDS  
STATE ENGINEER

July 10, 1985

BATAAN MEMORIAL BUILDING  
STATE CAPITOL  
SANTA FE, NEW MEXICO 87503

Mr. Dick Stamets  
New Mexico Oil Conservation  
Division  
Box 2088  
Santa Fe, New Mexico 87501

Dear Mr. Stamets:

Pursuant to our conversation of July 9, 1985, I am revising my letter of May 15, 1985 to read as follows:

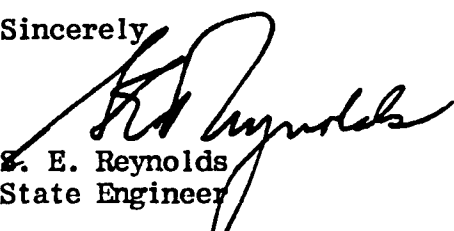
All underground waters in the State of New Mexico containing 10,000 milligrams/liter or less of dissolved solids are hereby designated by the State Engineer pursuant to Section 70-2-12-B.(15) NMSA, 1978; except that this designation shall not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination. This designation supersedes all previous designations pertaining to underground water.

The water in lakes and playas should not be contaminated even though they contain more than 10,000 milligrams/liter of total dissolved solids unless it can be shown that contamination of the lake or playa will not adversely affect ground water hydrologically connected to the lake or playa.

The surface waters of all streams within the State of New Mexico regardless of the quality of the water within any given reach are designated for protection.

The memorandum dated April 10, 1967, and the map mentioned therein which shows the areas and formations in which water of 10,000 parts per million or less commonly occur were furnished you in my May 15, 1985 letter.

Sincerely,

  
S. E. Reynolds  
State Engineer

SER\*pat

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

May 15, 1985

BATAAN MEMORIAL BUILDING  
STATE CAPITOL  
SANTA FE, NEW MEXICO 87503

Dick Stamets  
New Mexico Oil  
Conservation Division  
Box 2088  
Santa Fe, New Mexico 87501

Dear Mr. Stamets:

In response to your letter dated March 15, 1985, this is to advise you that all underground waters in the State of New Mexico containing 10,000 milligrams/liter or less of dissolved solids is hereby designated by the State Engineer pursuant to Section 70-2-12-B. (15) NMSA, 1978. This designation supercedes all previous designations pertaining to underground water. ✓

The water in water table lakes should not be contaminated even though they contain more than 10,000 milligrams/liter of total dissolved solids unless it can be shown that contamination of the lake will not adversely affect the underground water hydrologically connected to the lake.


The surface waters of all streams within the State of New Mexico regardless of the quality of the water within any given reach should be protected.

For your information I am attaching a memorandum dated April 10, 1967, and the map mentioned therein which shows the areas and formations in which water of 10,000 parts per million or less commonly occur. This is the same information which was submitted to your office by Frank Irby on April 13, 1967.

Sincerely,

S. E. Reynolds  
State Engineer

By:

  
M. B. Compton, Chief  
Water Rights Division

MBC:rav



TONEY ANAYA  
GOVERNOR

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

85 MAR 18 P 3:35

STATE ENGINEER OFFICE  
SANTA FE NEW MEXICO

3/18  
POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5800

March 15, 1985

Mr. S. E. Reynolds,  
State Engineer  
101 Bataan Bldg.  
Santa Fe, NM 87503

Dear Steve:

I am writing relative to getting an updated determination from you of the definition of "fresh water supplies" under the provisions of Section 70-2-12 B.(15) NMSA, 1978 compilation (copy enclosed).

I have enclosed a copy of the April 13, 1967, letter from you to Pete Porter on this matter. The letter references an earlier determination as to surface waters but that determination is not in evidence. We are thinking of revising some of our general rules to prohibit contamination of "fresh waters", both surface and subsurface, and it could be useful to have a new determination which clearly defines what must be protected.

Sincerely,

R. L. STAMETS  
Director

RLS/dp

Encs.

March 31, 1985

Tim Wright:  
Brad would like you to  
prepare a draft response  
to Stamets' letter attached

Bob Rogers

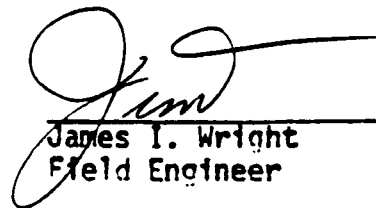
March 29, 1985

M.B. Compton, Chief, Water Rights Division

James I. Wright, Field Engineer

Draft of letter to Oil Conservation Division regarding  
the Protection of Fresh Water.

The statement regarding protection of surface water is my own opinion. I do not know what standard that we gave them originally but Steve probably does. I am not attaching the map or memo referred to in my letter. You can get a copy from Lou. I have reviewed the map and see no reason to revise it. It also might be a good idea to include groundwater discharging into stream systems in the paragraph with water table lakes.



James I. Wright  
Field Engineer

JIW/tmq

April 13, 1967

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
Santa Fe, New Mexico

Dear Mr. Porter:

All underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids is hereby designated by the State Engineer pursuant to Section 65-1-11.(15) N.M.S.A., 1953 Compilation; except that this designation shall not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination. This designation supersedes all previous designations pertaining to underground water.

For your information I am attaching a memorandum dated April 10, 1967 and the map mentioned therein which shows the areas and formations in which water of 10,000 parts per million or less commonly occurs.

The surface water designation previously made remains unchanged.

FEI/ma  
encl.

Yours truly,

S. E. Reynolds  
State Engineer

By:

Frank E. Irby  
Chief  
Water Rights Div.

MEMORANDUM

April 10, 1967

To: Chief, Water Rights Division  
(Through Chief, Technical Division)

From: Chief, Hydrology Section, Technical Division

Subject: Designation of fresh-water supplies to be protected against contamination, as authorized by Section 65-3-11(15), New Mexico Statutes Annotated, 1953 Compilation, 1965 Supplement.

Section 65-3-11(15), New Mexico Statutes Annotated, 1953 Compilation, 1965 Supplement, is concerned with prevention of contamination of fresh-water supplies resulting from disposal of water produced or used in connection with the drilling for or production of oil or gas.

Sections 65-3-11(1) and 65-3-11(2) appear to make adequate provision for the protection of ground waters from hazards incident to wildcat and oil-well drilling and in completion of production wells.

It is believed that the intent of the legislation pertinent here is to provide reasonable protection against deterioration of the chemical quality of water presently usable or being used for domestic, irrigation, or stock-water supplies and water that could be made usable for such purposes by treatment methods now generally employed by municipalities and methods commonly used in treating individual household supplies. Such water is considered to be "fresh" within the meaning of the subject legislation.

Many irrigation water supplies in the Pecos Valley and in the Tularosa area contain more than 3,000 ppm dissolved solids and some water containing as much as 5,000 ppm dissolved solids is used. Water containing more than about 3,000 ppm dissolved solids ordinarily is considered to be too highly mineralized for use as irrigation water but evidently may be used beneficially in favorable environmental situations.

Numerous stock-water supplies in the State contain between 2,000 and 3,000 ppm dissolved solids and many contain as much as 5,000 ppm dissolved solids. A number of stock wells in southeastern New Mexico are known to produce water containing between 5,000 ppm and 9,260 ppm dissolved solids and one stock well produces water containing 17,200 ppm dissolved solids. Water containing much more than 5,000 ppm dissolved solids probably could not be practically used continuously for stock-watering purposes but water containing more than 10,000 ppm dissolved solids may be used temporarily in special or emergency circumstances (see California Water Quality Control Board Publication No. 3A, "Water Quality Criteria," 1963, pp. 112-113).

It would appear, then, that waters containing 5,000 ppm or less dissolved solids should be afforded definite protection against possible deterioration of chemical quality and it is suggested that provision for protection of supplies containing 10,000 ppm dissolved solids or less be

made in those areas where water of better quality is not available and where such water is usable or is currently being used for livestock watering purposes.

Deterioration of chemical quality of existing water supplies may occur directly or indirectly in several ways as a result of disposal of oil-field wastes:

1) Oil-field wastes placed in unlined pits will seep through the bottoms and sides of the pits and enter shallow fresh-water aquifers (such as occur in the Ogalalla formation and other Cenozoic formations found in widespread areas of New Mexico). The wastes, upon reaching the saturated zone, will tend to move to the lower parts of the aquifer because the density of the wastes is usually greater than that of the water in the aquifer. The wastes may then spread laterally as they move downdip or they may be primarily confined to topographic erosion channels. Obviously the degree of deterioration of fresh waters that will result will depend upon the rate at which wastes are disposed, the length of time the disposal operations are continued, the quality of the disposed wastes, the local geohydrology in each instance and the degree of pumping of fresh water in the vicinity of the pits.

2) Direct injection of wastes into the fresh-water zones of an aquifer by means of disposal wells would have much the same effect as pit disposal operations except that relatively deep as well as near-surface water supplies could be affected and the effects might spread more rapidly than in the case of pit disposal, other things being equivalent.

3) As an example of indirect deterioration of fresh-water supplies as a result of displacement of water of poor quality, consider a formation which contains water of both good and poor chemical quality in different areas or zones. If wastes are introduced into the areas or zones containing the poor quality water, or even into adjacent formations hydraulically connected, the poor quality water will migrate because of displacement into the areas or zones of good quality water. Obviously, as for 1) above, the impairment that would result in the areas or zones of good quality water will depend upon the magnitude of the disposal operation, its time of continuance, and the hydraulic and hydrologic properties of the formation under consideration.

4) Consider next a formation which discharges water of poor quality to a stream through springs or seeps, or indirectly through other formations. Introduction of wastes into such formations, even in areas of poor quality water, will increase the rate of accretion of poor quality water to the stream and could result in serious impairment to the quality of the stream water, particularly during periods of low flow.

All formations, deposits, or rocks younger than Cretaceous in age at most places in the State of New Mexico contain fresh-water supplies (if they contain water at all) which should be afforded protection.



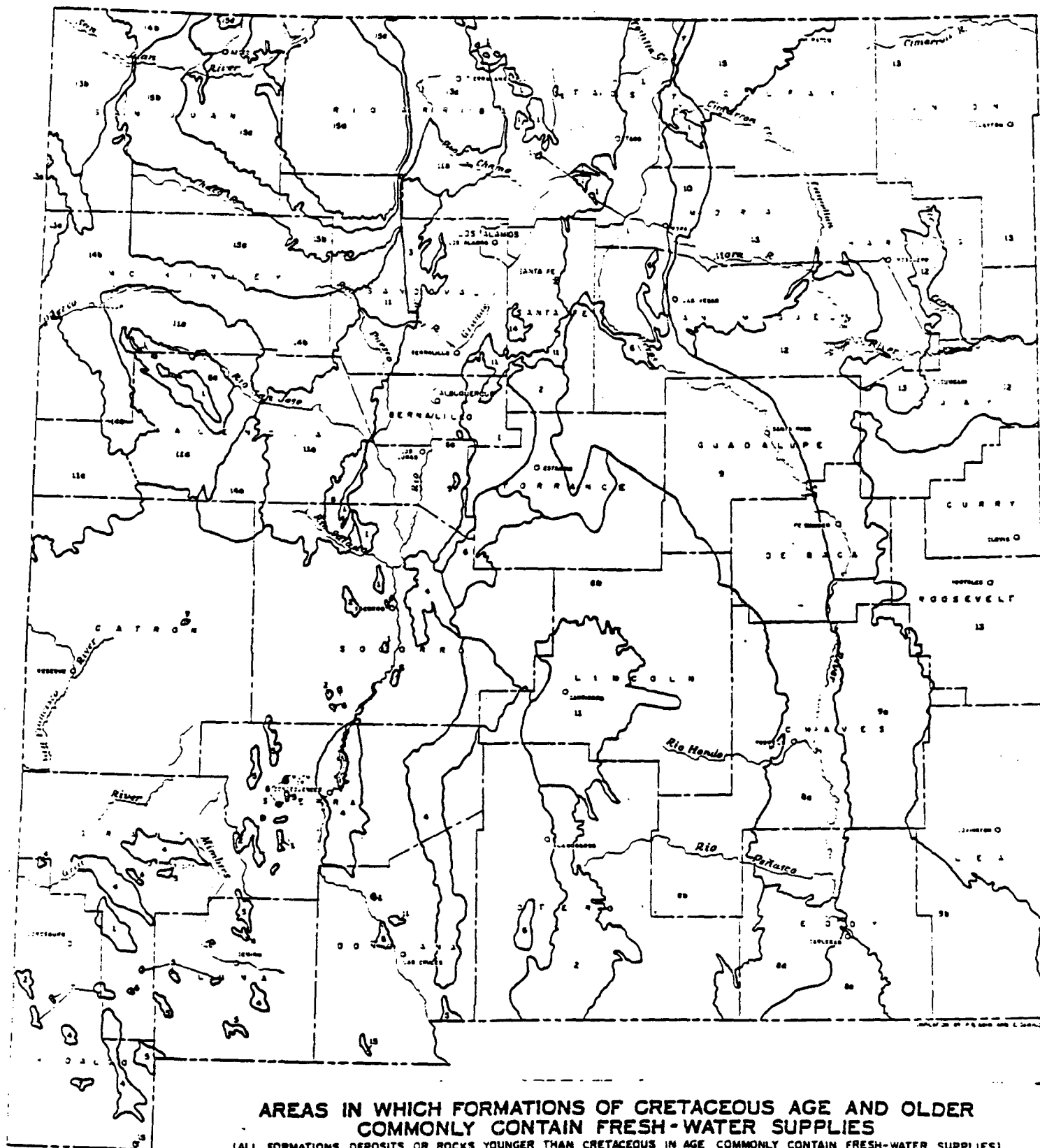
The attached map shows on a broad formation-area basis the areas in which fresh-water supplies commonly are found in formations of Cretaceous age and older in the areas delineated. It must be realized that the facts pertinent to many of the areas shown on the map are incompletely known and that revision from time to time as information is gained will be desirable. In the meantime, however, the map should serve as a guideline to interested persons.

Although this memorandum is primarily oriented to a discussion of ground-water supplies, the effect of disposal of oil-field wastes on surface-water supplies used for domestic, stock, municipal, industrial, irrigation and recreation purposes must be considered also. In general, all surface-water supplies of the State can be considered "fresh" under the definition stated above. Some reaches of some streams may have part-time flows wherein the stream waters will contain more than 5,000 ppm dissolved solids but these conditions should not be aggravated.



P. D. Akin

PDA:mmm  
Attachment



E X P L A N A T I O N

1. Procter & Gamble through Procter & Gamble  
2. Procter & Gamble through American  
3. Procter & Gamble through United States  
4. Procter & Gamble through United States  
5. Procter & Gamble through United States  
6. Procter & Gamble through United States  
7. Procter & Gamble through United States
- B. Payments  
80 - Add to - San Antonio Co.  
80 - Paid to - San Antonio Co.  
80 - San Antonio Co. - American Int.  
80 - San Antonio Co. - International  
80 - San Antonio Co. - International Service  
80 - Capital Ex. & Investment - Austin, Tex.

9. Permethrin through Fringing  
3a - Seven River fm. - Fringing  
3b - Austin fm. - Fringing
10. Permethrin through Curlews
11. Permethrin through Cretaceous  
11a - Ford fm. - Mesowater ss.  
11b - Curlew fm. - Mesowater ss.  
11c - Glendon ss. - Mesowater ss.
12. Fringing through Jurassic

3. Trisulca - through Cretaceous  
 3a - Trisulca - Leaves 1a  
 3b - Trisulca - Point Legend 1a  
 3c - Trisulca - Leaves 1a
4. Jurassic - through Cretaceous  
 4a - Jurassic - Point Legend 1a  
 4b - Jurassic - Point Legend 1a
5. Cretaceous  
 5a - Point Legend 1a - Cliff House 1a  
 5b - Cliff House 1a - McGowan 1a  
 5c - Leaves 1a - Cliff House 1a  
 5d - Cliff House 1a

NOTE: THIS MAP IS AN INTEGRAL PART OF A STATE ENGINEER  
OFFICE MEMORANDUM DATED APRIL 10, 1967 FROM CHIEF, HY-  
DROLOGY SECTION, IN RESPONSE TO CHIEF, WATER RIGHTS DIVISION  
(FETRY) REGARDING DESIGNATION OF FRESH-WATER SUPPLIES  
TO BE PROTECTED.

# Oil Conservation Commission; Division; Regulation of Wells

Sec.

- 70-2-1. Short title.
- 70-2-2. Waste prohibited.
- 70-2-3. Waste; definitions.
- 70-2-4. Oil conservation commission; members; term; officers; quorum; power to administer oaths.
- 70-2-5. Oil conservation division; director; state petroleum engineer.
- 70-2-6. Commission's and division's powers and duties.
- 70-2-7. Rules of procedure in hearings; manner of giving notice; record of rules, regulations and orders.
- 70-2-8. Subpoena power; immunity of natural persons required to testify.
- 70-2-9. Failure or refusal to comply with subpoena; refusal to testify; body attachment; contempt.
- 70-2-10. Perjury; punishment.
- 70-2-11. Power of commission and division to prevent waste and protect correlative rights.
- 70-2-12. Enumeration of powers.
- 70-2-13. Additional powers of commission or division; hearings before examiner; hearings de novo.
- 70-2-14. Bonding requirement.
- 70-2-15. Allocation of allowable production among fields when division limits total amount of production.
- 70-2-16. Allocation of allowable production in field or pool.
- 70-2-17. Equitable allocation of allowable production; pooling; spacing.
- 70-2-18. Spacing or proration unit with divided mineral ownership.
- 70-2-19. Common purchasers; discrimination in purchasing prohibited.
- 70-2-20. Penalty for violations.

## 70-2-1. Short title.

Sections 70-2-1 through 70-2-36 NMSA 1978 may be cited as the "Oil and Gas Act."

History: 1953 Comp., § 65-3-1.1, enacted by Laws 1977, ch. 237, § 1.

Law review. — For article, "New Mexican

Sec.

- 70-2-21. Purchase, sale or handling of excess oil, natural gas or products prohibited.
- 70-2-22. Rules and regulations to effectuate prohibitions against purchase or handling of excess oil or natural gas; penalties.
- 70-2-23. Hearings on rules, regulations and orders; notice; emergency rules.
- 70-2-24. Reports of governmental departments or agencies as to market demand to be deemed prima facie correct.
- 70-2-25. Rehearings; appeals.
- 70-2-26. Review of oil conservation commission decision; appeals.
- 70-2-27. Temporary restraining order or injunction; grounds; hearing; bond.
- 70-2-28. Actions for violations.
- 70-2-29. Actions for damages; institution of actions for injunctions by private parties.
- 70-2-30. Violation of court order grounds for appointment of receiver.
- 70-2-31. Penalties for violations; accessories.
- 70-2-32. Seizure and sale of illegal oil or gas or products; procedure.
- 70-2-33. Definitions of words used in act.
- 70-2-34. Regulation, conservation and prevention of waste of carbon dioxide gas.
- 70-2-35. Legal representation before the federal power commission.
- 70-2-36. Removing or altering marks of identification; penalty.
- 70-2-37. Oil and gas reclamation fund created; disposition of fund.
- 70-2-38. Oil and gas reclamation fund administered; plugging wells on federal land; right of indemnification; annual report; contractors selling equipment for salvage.

## 70-2-2. [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.

History: Laws 1935, ch. 72, § 1; 1941 Comp., § 69-202; Laws 1949, ch. 168, § 1; 1953 Comp., § 65-3-2.

Cross-reference. — As to regulation and conservation of carbon dioxide gas, see 70-2-34 NMSA 1978.

Legislative intent. — Primary concern of oil and gas

legislation is eliminating and preventing waste in the pool so far as it can practicably be done, and also the protection of correlative rights of producers from the pool. *El Paso Natural Gas Co. v. Oil Conservation Comm'n*, 76 N.M. 268, 414 P.2d 496 (1966).

Two fundamental powers and duties of commis-

History: Laws 1935, ch. 72, § 4; 1941 Comp., § 69-205; Laws 1949, ch. 168, § 4; 1953 Comp., § 65-3-5; Laws 1965, ch. 58, § 2; 1977, ch. 255, § 41;

1979, ch. 175, § 1.

The 1979 amendment added the second sentence in Subsection B.

## 70-2-12. Enumeration of powers.

A. Included in the power given to the division 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 [this section] 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.

B. Apart from any authority, express or implied, elsewhere given to or existing in the division by virtue of this act [this section] or the statutes of this state, the division 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 a 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 division shall require a corporate surety bond in a sum not to exceed fifty thousand dollars (\$50,000) 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, pipelines, 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 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 thereof including subsurface storage;
- (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, secondary or any other enhanced recovery operation;
- (15) to regulate the disposition of water produced or used in connection with the drilling for or producing of oil or gas, or both, and to direct surface or subsurface disposal of such water in a manner that will afford reasonable protection against contamination of fresh water supplies designated by the state engineer;

(16) to determine the limits of any area containing commercial potash deposits and from time to time redetermine such limits;

(17) to regulate and where necessary prohibit drilling or producing operations for oil or gas within any area containing commercial deposits of potash where such operations would have the effect unduly to reduce the total quantity of such commercial deposits of potash which may reasonably be recovered in commercial quantities or where such operations would interfere unduly with the orderly commercial development of such potash deposits; or

(18) to spend the oil and gas reclamation fund and do all acts necessary and proper to plug dry and abandoned oil and gas wells in accordance with the provisions of the Oil and Gas Act [70-2-1 to 70-2-36 NMSA 1978] and the Public Purchases Act [13-1-1 to 13-1-27 NMSA 1978] including disposing of salvageable equipment and material removed from oil and gas wells being plugged by the state.

History: 1953 Comp., § 65-3-11, enacted by Laws 1978, ch. 71, § 1.

Repeals and reenactments. — Laws 1978, ch. 71, § 1, repeals 65-3-11, 1953 Comp. (former 70-2-12 NMSA 1978), relating to enumeration of powers, and enacts the above section.

Effective dates. — Laws 1978, ch. 71, § 2, makes the act effective on March 31, 1978.

Emergency clauses. — Laws 1978, ch. 71, § 3, makes the act effective immediately. Approved February 24, 1978.

### **70-2-13. Additional powers of commission or division; hearings before examiner; hearings de novo.**

In addition to the powers and authority, either express or implied, granted to the oil conservation commission or division by virtue of the statutes of the state of New Mexico, the division is hereby authorized and empowered in prescribing its rules of order or procedure in connection with hearings or other proceedings before the division to provide for the appointment of one or more examiners to be members of the staff of the division to conduct hearings with respect to matters properly coming before the division and to make reports and recommendations to the director of the division with respect thereto. Any member of the commission or the director of the division or his authorized representative may serve as an examiner as provided herein. The division 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 division 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 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 the same to the director of the division for consideration together with the report of the examiner and his recommendations in connection therewith. The director of the division shall base the 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 proceeding, and such decision shall have the same force and effect as if the hearing had been conducted before the director of the division. When any matter or proceeding is referred to an examiner and a decision is rendered thereon, any party of record adversely affected shall have the right to have the matter heard de novo before the commission upon application filed with the division within thirty days from the time any such decision is rendered.

History: 1953 Comp., § 65-3-11.1, enacted by Laws 1955, ch. 235, § 1; 1961, ch. 62, § 1; 1977, ch. 255, § 48; 1981, ch. 63, § 1.

The 1981 amendment substituted "of" for "or" preceding "order" near the middle of the first sen-

tence, substituted "the" for "said" preceding "hearing" near the end of the fifth sentence and preceding "matter" near the middle of the last sentence and inserted "of record" following "party" near the middle of the last sentence.

reasonably necessary to carry out the purpose of this act, whether or not indicated or specified in any section hereof.

B. The commission shall have concurrent jurisdiction and authority with the division to the extent necessary for the commission to perform its duties as required by law.

**History:** Laws 1935, ch. 72, § 9; 1941 Comp., § 69-210; Laws 1949, ch. 168, § 9; 1953 Comp., § 65-3-10; Laws 1977, ch. 255, § 46.

**Meaning of "this act".** — See same catchline in notes to 70-2-3 NMSA 1978.

**Authority based on power of prevention of waste.** — The statutory authority of the commission to pool property or to modify existing agreements relating to production within a pool under either 70-2-17C or 70-2-17E NMSA 1978 must be predicated on prevention of waste. *Sims v. Mechem*, 72 N.M. 186, 382 P.2d 183 (1963).

Commission has jurisdiction over matters related to conservation of oil and gas in New Mexico, but the basis of its powers is founded on the duty to prevent waste and to protect correlative rights, as set forth in this section. *Continental Oil Co. v. Oil Conservation Comm'n*, 70 N.M. 310, 373 P.2d 809 (1962).

**Powers of proration and creation of spacing units remain intact.** — The standards of preventing waste and protecting correlative rights, as laid out in this section, are sufficient to allow commission's power to prorate and create standard or nonstandard spacing units to remain intact, and 70-2-18 NMSA 1978 is not an unlawful delegation of legislative power. *Rutter & Wilbanks Corp. v. Oil Conservation Comm'n*, 87 N.M. 286, 532 P.2d 582 (1975).

**Prevention of waste by pooling.** — Commission's finding that most efficient and orderly development of the subject acreage could be accomplished by force pooling is not equivalent to a finding that this pooling will prevent waste. *Sims v. Mechem*, 72 N.M. 186, 382 P.2d 183 (1963).

**Former act to prohibit waste.** — There was no delegation to the commission of power to make law or

determine what it shall be in the former Oil Conservation Act, but act was, in effect, a prohibition against waste. 1951-52 Op. Att'y Gen. 5397.

**Protection of correlative rights.** — The prevention of waste is of paramount interest to the legislature and protection of correlative rights is interrelated and inseparable from it. The very definition of "correlative rights" emphasizes the term "without waste." However, protection of correlative rights is a necessary adjunct to the prevention of waste. *Continental Oil Co. v. Oil Conservation Comm'n*, 70 N.M. 310, 373 P.2d 809 (1962).

Although subservient to prevention of waste and perhaps to practicalities of the situation, protection of correlative rights must depend upon the commission's findings as to extent and limitations of right. This the commission is required to do under legislative mandate. *Continental Oil Co. v. Oil Conservation Comm'n*, 70 N.M. 310, 373 P.2d 809 (1962).

**Property rights of natural gas owners.** — The legislature has stated definitively the elements contained in property right of natural gas owners. Such right is not absolute or unconditional. It consists of merely (1) an opportunity to produce, (2) only insofar as it is practicable to do so, (3) without waste, (4) a proportion, (5) insofar as it can be practically determined and obtained without waste, (6) of gas in the pool. *Continental Oil Co. v. Oil Conservation Comm'n*, 70 N.M. 310, 373 P.2d 809 (1962).

**Law reviews.** — For comment on *Continental Oil Co. v. Oil Conservation Comm'n*, 70 N.M. 310, 373 P.2d 809 (1962), see 3 Nat. Resources J. 178 (1963).

**Am. Jur. 2d, A.L.R. and C.J.S. references.** — 38 Am. Jur. 2d Gas and Oil §§ 145 to 148, 157. 58 C.J.S. Mines and Minerals §§ 229, 234.

## 70-2-12. Enumeration of powers.

A. Included in the power given to the oil conservation division 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, 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 of the records and reports; to limit and prorate production of crude petroleum oil or natural gas or both as provided in the Oil and Gas Act [70-2-1 to 70-2-36 NMSA 1978]; 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 of either or both oil and products or both natural gas and products.

B. Apart from any authority, express or implied, elsewhere given to or existing in the oil conservation division by virtue of the Oil and Gas Act or the statutes of this state, the division is authorized to make rules, regulations and orders for the purposes and with respect to the subject matter stated in this subsection:

(1) to require dry or abandoned wells to be plugged in a way to confine the crude petroleum oil, natural gas or water in the strata in which it is found and to prevent it from escaping into other strata; the division shall require a cash or surety bond in a sum not to exceed fifty thousand dollars (\$50,000) conditioned for the performance of such regulations;

(2) to prevent crude petroleum oil, natural gas or water from escaping from strata in which it is found into 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 oil and gas from any pool;
- (5) to prevent fires;
- (6) to prevent "blow-ups" 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, pipelines, 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 producing crude petroleum oil or natural gas or both and from time to time redetermine the limits;
- (13) to regulate the methods and devices employed for storage in this state of oil or natural gas or any product of either, including subsurface storage;
- (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, secondary or any other enhanced recovery operations;
- (15) to regulate the disposition of water produced or used in connection with the drilling for or producing of oil or gas or both and to direct surface or subsurface disposal of the water in a manner that will afford reasonable protection against contamination of fresh water supplies designated by the state engineer;
- (16) to determine the limits of any area containing commercial potash deposits and from time to time redetermine the limits;
- (17) to regulate and, where necessary, prohibit drilling or producing operations for oil or gas within any area containing commercial deposits of potash where the operations would have the effect unduly to reduce the total quantity of the commercial deposits of potash which may reasonably be recovered in commercial quantities or where the operations would interfere unduly with the orderly commercial development of the potash deposits;
- (18) to spend the oil and gas reclamation fund and do all acts necessary and proper to plug dry and abandoned oil and gas wells in accordance with the provisions of the Oil and Gas Act and the Procurement Code [13-1-28 to 13-1-199 NMSA 1978], including disposing of salvageable equipment and material removed from oil and gas wells being plugged by the state;
- (19) to make well price category determinations pursuant to the provisions of the Natural Gas Policy Act of 1978 or any successor act and, by regulation, to adopt fees for such determinations, which fees shall not exceed twenty-five dollars (\$25.00) per filing. Such fees shall be credited to the account of the oil conservation division by the state treasurer and may be expended as authorized by the legislature; and
- (20) to regulate the construction and operation of oil treating plants and to require the posting of bonds for the reclamation of treating plant sites after cessation of operations.

**History:** 1953 Comp., § 65-3-11, enacted by Laws 1978, ch. 71, § 1; 1986, ch. 76, § 1; 1987, ch. 234, § 61.

**Cross-references.** — For filing rules and regula-

tions, see 14-4-1 NMSA 1978. As to public utilities commission's lack of power to regulate sale price at well head, see 62-6-4 NMSA 1978.

**Repeals and reenactments.** — Laws 1978, ch. 71,

§ 1, repealed 65-3-11, 1953 Comp. (former 70-2-12 NMSA 1978), relating to enumeration of powers, and enacted a new 70-2-12 NMSA 1978.

The 1986 amendment substituted "oil conservation division" for "division" in Subsection A and in the introductory paragraph of Subsection B; substituted "provided in the Oil and Gas Act" for "in this act provided" in Subsection A; substituted "the Oil and Gas Act" for "this act" in the introductory paragraph of Subsection B; substituted "cash or surety bond" for "corporate surety bond" in Subsection B(1); added Subsection B(19), and made minor stylistic changes throughout the section.

The 1987 amendment, effective July 1, 1987, in Subsection B(18), substituted "Procurement Code" for "Public Purchases Act"; added Subsection B(20); and made minor changes in language and punctuation throughout the section.

Effective dates. — Laws 1986, ch. 76 contains no

effective date provision, but, pursuant to N.M. Const., art. IV, § 23, is effective on May 21, 1986.

**Natural Gas Policy Act of 1978.** — The federal Natural Gas Policy Act of 1978, referred to in Subsection B(19), appears as 15 U.S.C. § 3301 et seq.

**Powers pertaining to oil well fires.** — The lawmakers intended commission not only to seek fire prevention to conserve oil, but also to conserve other property and lives of persons peculiarly subject to hazard of oil well fires. *Continental Oil Co. v. Brack*, 381 F.2d 682 (10th Cir. 1967).

The terms "spacing unit" and "proration unit" are not synonymous and commission has power to fix spacing units without first creating proration units. *Rutter & Wilbanks Corp. v. Oil Conservation Comm'n*, 87 N.M. 286, 532 P.2d 582 (1975).

**Am. Jur. 2d, A.L.R. and C.J.S. references.** — 38 Am. Jur. 2d Gas and Oil §§ 145 to 163.

58 C.J.S. Mines and Minerals §§ 229 to 243.

### **70-2-13. Additional powers of commission or division; hearings before examiner; hearings de novo.**

In addition to the powers and authority, either express or implied, granted to the oil conservation commission or division by virtue of the statutes of the state of New Mexico, the division is hereby authorized and empowered in prescribing its rules of order or procedure in connection with hearings or other proceedings before the division to provide for the appointment of one or more examiners to be members of the staff of the division to conduct hearings with respect to matters properly coming before the division and to make reports and recommendations to the director of the division with respect thereto. Any member of the commission or the director of the division or his authorized representative may serve as an examiner as provided herein. The division 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 division 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 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 the same to the director of the division for consideration together with the report of the examiner and his recommendations in connection therewith. The director of the division shall base the 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 proceeding, and such decision shall have the same force and effect as if the hearing had been conducted before the director of the division. When any matter or proceeding is referred to an examiner and a decision is rendered thereon, any party of record adversely affected shall have the right to have the matter heard de novo before the commission upon application filed with the division within thirty days from the time any such decision is rendered.

**History:** 1953 Comp., § 65-3-11.1, enacted by Laws 1955, ch. 235, § 1; 1961, ch. 62, § 1; 1977, ch. 255, § 48; 1981, ch. 63, § 1.





STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

September 14, 1956

ADDRESS CORRESPONDENCE TO:  
P. O. BOX 1079  
SANTA FE, N. M.

Supreme Court Library  
Santa Fe, N. M.

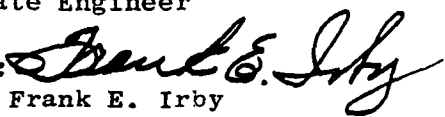
Attn. Mr. Harrison McDonald

Dear Sir:

Enclosed are three signed copies of Order No. 63 for your  
files. Please sign the enclosed copy of letter and return  
to this office.

Very truly yours,

S. E. Reynolds  
State Engineer

By:   
Frank E. Irby  
Chief  
Water Rights Division

ma  
encl.

Received 3 copies of Order #63, Specifications for the  
construction of oil, gas, mineral and test wells in  
artesian basins.

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Librarian

*Am. Bureau*

NEW MEXICO  
OIL CONSERVATION COMMISSION  
P. O. BOX 871  
Santa Fe, New Mexico

Memo. No. 32-56

To: All Operators in Chaves and Eddy Counties.

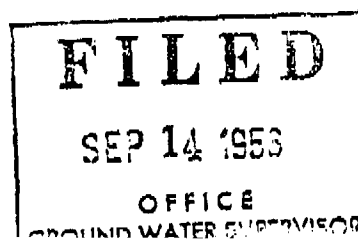
From: A. L. Porter, Jr., Secretary-Director

Subject: Oil Well Drilling in the Roswell-Artesian Basin of Chaves and Eddy Counties.

Effective immediately, Mr. Mose Armstrong, District Supervisor at Artesia of the New Mexico Oil Conservation Commission District, will coordinate all field inspection of oil well drilling operations in the Roswell-Artesian Basin of Chaves and Eddy Counties. The New Mexico Oil Conservation Commission and the New Mexico State Engineer have agreed on this procedure. U. S. Geological Survey personnel at Artesia and Roswell have likewise agreed to join in this coordinated inspection program.

An order from the State Engineer's Office revising the Rules and Regulations for drilling oil wells in the Roswell-Artesian Basin is enclosed for your immediate guidance.

September 13, 1956



C  
O  
P  
Y

January 22, 1958

File: I-Q-13

Mr. A. L. Porter, Jr.  
Secretary & Director  
New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Dear Mr. Porter:

In accordance with our conversation yesterday, this office would like to request that in the future when applications are made for water flood projects in connection with secondary oil recovery, the applicant state the source of his water supply, i. e., the geographical location of the supply by legal subdivision and the name of the formation and the depth from which the water will be produced. We would also like to have the analysis, of the water to be used, submitted with the application if the sample is available at that time and if the sample is not available at that time, we would want the analysis of the water as soon as the well has been drilled.

This office would sincerely appreciate the favorable consideration of this request by your Commission.

Yours truly,

S. E. Reynolds  
State Engineer

By:

FEI/ma  
cc-F. H. Hennighausen

Frank E. Irby  
Chief  
Water Rights Division

Blind copies to:

S. E. Reynolds  
J. C. Yates thru C. B. Thompson

Filed January 24, 1958  
Office Ground Water Supervisor

No. 5-58

**NEW MEXICO OIL CONSERVATION COMMISSION**

**BOX 871**

**SANTA FE, NEW MEXICO**

**MEMORANDUM:**

**TO: All Operators**  
**FROM: A. L. Porter, Jr., Secretary-Director**  
**SUBJECT: Applications for Water Flood Projects.**

The Oil Conservation Commission has been advised by the State Engineer that his office will require the following information with regard to all applications to the Commission for permission to institute water flood projects in the State of New Mexico, to-wit:

1. Copy of the Application.
2. Geographical location of water source.
3. Name and depth of formation from which water is to be obtained.
4. Analysis of water as soon as sample is available.

Hereafter, the Commission will not consider an application for permission to institute a water flood project unless there is a statement in the application to the effect that the information outlined above has been submitted to the office of the State Engineer.

(The State Engineer's mailing address is P. O. Box 1079, Santa Fe, New Mexico.)

**Filed February 7, 1968**

January 17, 1985

M.B. Compton, Chief, Water Rights Division

James I. Wright, Field Engineer

Oral Agreement with the Oil Conservation Division  
Regarding Oil Wells

As I recall a new law was passed around the year 1961. Prior to this time we were involved in the supervision of oil well drilling in the artesian water areas and we were attending most of the Oil Conservation Division hearings to make sure that the fresh water zones were being protected.

I think that in 1962 or 1963, Frank Irby and myself had a meeting with Pete Porter and some of his staff. As a result of this meeting the Oil Conservation Division would take on all the supervision of oil wells drilled through artesian aquifers and we would designate other areas of fresh water that should be protected and they would be the regulatory agency responsible for enforcement.

We took the position that surface disposal of oil field brines could not continue to be put in unlined surface disposal pits and any water produced as a by product of oil production was their responsibility.

If the dates are important I would suggest that you talk to Steve and Frank and find out what they recall.

As far as I know, it is still Mr. Reynolds' opinion that any well drilled for the production of water still falls under his jurisdiction regardless of the depth of the water bearing formation.

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James I. Wright  
Field Engineer

JIW/tmg

STATE OF NEW MEXICO  
OFFICE OF STATE ENGINEER

Order #63

ORDER

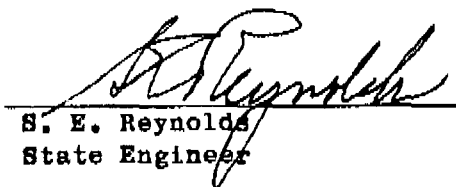
IT IS HEREBY ORDERED that the following specifications shall be followed for the construction of oil, gas, mineral and test wells in artesian basins.

The water protection casing string (also designated as the second or intermediate string) shall be landed into the formation below all known artesian aquifers. Sufficient cement shall be used to obtain circulation to the surface. If surface casing is used, said casing shall not be removed until after cementing of the water protection string has been completed. When circulation to the surface on the water protection string is not obtained, the operator shall run a temperature survey to insure that the cement has circulated to a point well above all artesian aquifer formations. If the temperature survey shows the top of the cement to be in a shallow water zone, the operator, under the direction of a representative of the United States Geological Survey, New Mexico Oil Conservation Commission or the State Engineer, shall place cement to the surface behind the water protection string or circulate cement to the surface on the oil production casing string. Additives of a pozzolanic nature may be used above the casing shoe, but, shall not exceed 50% by volume. The addition of calcium chloride and/or gel may be required, but shall not in any case exceed 2% each by weight. A sufficient amount of cement without additives shall be used to allow neat cement to seal the casing shoe, and rise a minimum of 50 feet above the shoe between the casing and hole. Cement shall be allowed to set a minimum of 48 hours before drilling is resumed. Sealing off of the formations shall be checked by a method approved by the United States Geological Survey, New Mexico Oil Conservation Commission or the State Engineer's Office.

The oil production string or strings shall be landed and cemented as specified by the United States Geological Survey (Oil and Gas Branch) or the New Mexico Oil Conservation Commission.

The preceding casing, cementing and testing program shall be witnessed by an authorized representative of the United States Geological Survey, New Mexico Oil Conservation Commission or the State Engineer's Office.

WITNESS my hand and official seal this 11th day of September, A. D.,  
1956.

  
S. E. Reynolds  
State Engineer

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January 22, 1958

File: I-Q-13

Mr. A. L. Porter, Jr.  
Secretary & Director  
New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Dear Mr. Porter:

In accordance with our conversation yesterday, this office would like to request that in the future when applications are made for water flood projects in connection with secondary oil recovery, the applicant state the source of his water supply, i. e., the geographical location of the supply by legal subdivision and the name of the formation and the depth from which the water will be produced. We would also like to have the analysis, of the water to be used, submitted with the application if the sample is available at that time and if the sample is not available at that time, we would want the analysis of the water as soon as the well has been drilled.

This office would sincerely appreciate the favorable consideration of this request by your Commission.

Yours truly,

S. E. Reynolds  
State Engineer

By:

Frank E. Irby  
Chief  
Water Rights Division

FEI/ma  
cc-F. H. Hennighausen

Blind copies to:

S. E. Reynolds  
J. C. Yates thru C. B. Thompson

Filed January 24, 1958  
Office Ground Water Supervisor  
Roswell, New Mexico