

(1) All general statewide rules and regulations governing the development operation and production of oil and gas in the State of New Mexico not inconsistent or in conflict herewith are applicable to the areas described herein.

X.

ADOPTION

The foregoing rules and regulations are hereby adopted by the Oil Conservation Commission and adopted, ratified and confirmed by the Commissioner of Public Lands of the State of New Mexico this _____ day of August, 1951.

OIL CONSERVATION COMMISSION

Commissioner of Public Lands

PROPOSED RULES AND REGULATIONS FOR ISSUANCE

BY THE NEW MEXICO OIL CONSERVATION COMMISSION

CONSERVATION COMMISSION
SANTA FE, NEW MEXICO.

AUG 17 1951

RULES AND REGULATIONS GOVERNING EXPLORATION FOR THE EXTRACTION OF OIL, GAS AND POTASH MINERALS ON NEW MEXICO STATE LANDS AND PRIVATELY OWNED LANDS IN PROVEN AND POTENTIAL POTASH PRODUCTION AREAS, IN EDDY AND LEA COUNTIES, NEW MEXICO.

I OBJECTIVE:

The objective of these rules and regulations is to assure maximum conservation and economic recovery of oil, gas and potash minerals.

II POTASH AREAS:

- (1) These rules and regulations are applicable to the proven and potential potash areas herein defined as Area "A" and Area "B", as follows:

(a) Area "A":

T. 19 S., R. 30 E., Secs. 3, S $\frac{1}{2}$
Secs. 4 and 5, all
Sec. 6, SE $\frac{1}{4}$
Sec. 7, NE $\frac{1}{4}$, S $\frac{1}{2}$
Secs. 8, 9, and 10, all
Sec. 11, W $\frac{1}{2}$
Sec. 14, W $\frac{1}{2}$
Secs. 15 to 18 incl., all
Sec. 20, SE $\frac{1}{4}$
Sec. 21, S $\frac{1}{2}$
Secs. 22 and 23, all
Secs. 25 to 29 incl., all
Secs. 32 to 36 incl., all

T. 20 S., R. 30 E., Secs. 1 to 27 incl., all
Secs. 34, 35 and 36, all

T. 20 S., R. 31 E., Secs. 17 to 20 incl., all
Secs. 29 to 32 incl., all

T. 21 S., R. 29 E., Secs. 1 and 2, all
Sec. 10, E $\frac{1}{2}$
Secs. 11 to 14 incl., all
Sec. 15, E $\frac{1}{2}$
Sec. 24, all
Sec. 35, E $\frac{1}{2}$
Sec. 36, all

Draft - August 15, 1951

2 copies forwarded to Mr. Spurrier
C/O Mayflower Hotel
Washington, D. C.

T. 21 S., R. 30 E., Secs. 4 to 9 incl., all
Secs. 16 to 19 incl., all
Sec. 31, all

T. 22 S., R. 29 E., Secs. 1 and 2, all
Sec. 3, S $\frac{1}{2}$
Secs. 10 to 15 incl., all
Secs. 22, 23 and 24, all

T. 22 S., R. 30 E., Secs. 6 and 7, all
Secs. 18 and 19, all

(b) Area "B"

T. 13 S., R. 30 E., Sec. 12, S $\frac{1}{2}$
Secs. 13 and 14, all
Sec. 15, SE $\frac{1}{4}$
Sec. 21, SE $\frac{1}{4}$
Secs. 22, 23 and 24, all
Sec. 25, W $\frac{1}{2}$
Secs. 26, 27 and 28, all
Sec. 29, SE $\frac{1}{4}$
Sec. 32, NE $\frac{1}{4}$, S $\frac{1}{2}$
Secs. 33 and 34, all
Sec. 35, W $\frac{1}{2}$

T. 18 S., R. 21 E., Sec. 18, W $\frac{1}{2}$

T. 19 S., R. 29 E., Sec. 11, SE $\frac{1}{4}$
Sec. 12, S $\frac{1}{2}$
Secs. 13 and 14, all
Sec. 23, N $\frac{1}{2}$
Sec. 24, N $\frac{1}{2}$

T. 19 S., R. 30 E., Sec. 2, all
Sec. 3, N $\frac{1}{2}$
Sec. 11, E $\frac{1}{2}$
Secs. 12 and 13, all
Sec. 14, E $\frac{1}{2}$
Sec. 19, all
Sec. 20, N $\frac{1}{2}$, SW $\frac{1}{4}$
Sec. 21, N $\frac{1}{2}$
Sec. 24, all
Secs. 29 and 30, all

Area "B" (Cont.)

- T. 19 S., R. 31 E., Secs. 9 and 10, all
Sec. 11, $W\frac{1}{2}$
Sec. 14, $W\frac{1}{2}$
Secs. 15, 16 and 17, all
Secs. 19 to 22 incl., all
Sec. 23, $W\frac{1}{2}$
Sec. 25, $S\frac{1}{2}$
Secs. 26 to 36 incl., all
- T. 19 S., R. 32 E., Sec. 23, $S\frac{1}{2}$
Secs. 24 to 27 incl., all
Sec. 28, $S\frac{1}{2}$
Sec. 31, $S\frac{1}{2}$
Sec. 32, $S\frac{1}{2}$
Secs. 33 to 36 incl., all
- T. 19 S., R. 33 E., Secs. 19, 30 and 31, all
- T. 20 S., R. 29 E., Sec. 12, $NE\frac{1}{4}SE\frac{1}{4}, S\frac{1}{2}SE\frac{1}{4}$
Sec. 13, $NE\frac{1}{4}, S\frac{1}{2}$
Secs. 22 to 27 incl., all
Secs. 34, 35 and 36, all
- T. 20 S., R. 30 E., Secs. 28 to 33 incl., all
- T. 20 S., R. 31 E., Secs. 1 to 16 incl., all
Secs. 21 to 28 incl., all
Secs. 33 to 36 incl., all
- T. 20 S., R. 32 E., Secs. 1 to 36 incl., all
- T. 20 S., R. 33 E., Secs. 5 to 9 incl., all
Secs. 15 to 23 incl., all
Secs. 25 to 36 incl., all
- T. 20 S., R. 34 E., Sec. 31, all
- T. 21 S., R. 29 E., Sec. 3, $E\frac{1}{2}$
Sec. 23, $N\frac{1}{2}$
Sec. 25, all
- T. 21 S., R. 30 E., Secs. 1, 2 and 3, all
Secs. 10 and 11, all
Sec. 12, $S\frac{1}{2}$
Secs. 13, 14 and 15, all
Secs. 20, 21 and 22, all
Sec. 23, $N\frac{1}{2}$
Sec. 24, $N\frac{1}{2}$
Secs. 27 to 30 incl., all
Secs. 32 to 34 incl., all
Sec. 35, $S\frac{1}{2}$

Area "B" (Cont.)

T. 21 S., R. 31 E., Sec. 1, N $\frac{1}{2}$
Sec. 2, N $\frac{1}{2}$
Sec. 4, W $\frac{1}{2}$
Secs. 5 and 6, all
Sec. 18, S $\frac{1}{2}$
Sec. 19, N $\frac{1}{2}$

T. 21 S., R. 32 E., Secs. 1 to 17 incl., all
Secs. 21 to 27 incl., all
Secs. 35 and 36, all

T. 21 S., R. 33 E., Secs. 4 to 9 incl., all
Secs. 16 to 21 incl., all
Secs. 28 to 33 incl., all

T. 22 S., R. 29 E., Sec. 9, E $\frac{1}{2}$
Sec. 16, all
Sec. 17, E $\frac{1}{2}$
Sec. 20, E $\frac{1}{2}$
Sec. 21, all
Secs. 25 to 28 incl., all
Secs. 33 to 36 incl., all

T. 22 S., R. 30 E., Secs. 1 to 5 incl., all
Secs. 8 to 17 incl., all
Secs. 20 to 24 incl., all
Sec. 25, W $\frac{1}{2}$
Secs. 26 to 35 incl., all
Sec. 36, W $\frac{1}{2}$

T. 22 S., R. 31 E., Secs. 4 to 9 incl., all
Secs. 17 and 18, all
Sec. 19, N $\frac{1}{2}$

T. 22 S., R. 33 E., Secs. 4, 5 and 6, all

T. 23 S., R. 29 E., Secs. 1, 2 and 3, all
Sec. 4, E $\frac{1}{2}$
Sec. 9, E $\frac{1}{2}$
Secs. 10 to 15 incl., all
Secs. 22 to 27 incl., all
Secs. 34 to 36 incl., all

T. 23 S., R. 30 E., Sec. 1, S $\frac{1}{2}$
Secs. 2 to 36 incl., all

Area "B" (Cont.)

T. 23 S., R. 31 E., Sec. 7, all
Sec. 8, S $\frac{1}{2}$
Sec. 16, SW $\frac{1}{4}$
Secs. 17 to 20 incl., all
Sec. 21, W $\frac{1}{2}$
Secs. 28 to 33 incl., all

T. 24 S., R. 30 E., Sec. 1, N $\frac{1}{2}$
Sec. 2, N $\frac{1}{2}$
Sec. 3, N $\frac{1}{2}$

T. 24 S., R. 31 E., Secs. 4, 5 and 6, all

- (2) Areas "A" or "B" may be contracted or expanded from time to time as conditions may warrant by the Oil Conservation Commission after due notice and hearing.

III EXPLORATION OF AREAS:

(1) Area "A"

- (a) Drilling of oil and gas exploratory test wells shall not be permitted in Area "A" except upon leases outstanding as of the effective date of these regulations, provided, that oil and gas exploratory test wells shall not be drilled through any open potash mines or within 500 feet thereof unless agreed to in writing by the potash lessee involved.
- (b) Any oil or gas leases hereafter issued for lands within Area "A" shall be subject to these regulations and no drilling shall be permitted thereon unless the expressed permission of the Oil Conservation Commission is first had and obtained after due notice and hearing.
- (c) All future drilling of oil and gas exploratory test wells in Area "A" shall be further subject to these rules and regulations.
- (d) Where oil and gas wells are in production in Area "A", no potash mine opening shall be driven to within less than 100 feet of such wells so that protection of both can be afforded.

(2) Area "B"

- (a) Oil and gas exploratory test wells may be drilled in Area "B" in accordance with these rules and regulations.

- (3) Upon the discovery hereafter of oil and gas in Areas "A" or "B", the Oil Conservation Commission shall promulgate field or pool rules for the affected area after due notice and hearing.
- (4) Nothing herein shall be construed to prevent unitization agreements involving lands in Areas "A" or "B".

IV DRILLING AND CASING PROGRAM:

- (1) For the purpose of the regulations and the drilling of oil and gas exploratory test wells, shallow and deep zones are defined as follows:
 - (a) The shallow zone shall include all formations above the base of the Delaware sand or above a depth of 5000 feet, whichever is the lesser.
 - (b) The deep zone shall include all formations below the base of the Delaware sand or below a depth of 5000 feet, whichever is the lesser.
- (2) Surface Casing String:
 - (a) A surface casing string of new, second-hand or reconditioned pipe shall be set in the "Red Bed" section of the basal Rustler formation immediately above the salt section, or in the anhydrite at the top of the salt section, as determined necessary by the regulatory representative approving the drilling operations, and shall be cemented with not less than one hundred and fifty percent (150%) of calculated volume necessary to circulate cement to the ground surface.
 - (b) Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.
 - (c) Casing and water shut-off tests shall be made both before and after drilling the plug and below the casing seat, as follows:
 - (1) If rotary tools are used, the mud shall be displaced with water and a hydraulic pressure of six hundred (600) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within thirty (30) minutes, corrective measure shall be applied.

(ii) If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.

(d) The above requirements for the surface casing string shall be applicable to both the shallow and deep zones.

(3) Salt Protection String;

(a) A salt protection string of new, second-hand or reconditioned pipe shall be set not less than one hundred (100) feet nor more than two hundred (200) feet below the base of the salt section.

(b) The salt protection string shall be cemented as follows:

(i) For wells drilled to the shallow zone, the string may be cemented with a nominal volume of cement for testing purposes only. If the exploratory test well is completed as a productive well, the string shall be recemented with sufficient cement to fill the annular space back of the pipe from the top of the first cementing to the surface or to the bottom of the cellar, or may be cut and pulled if the production string is cemented to the surface as provided in sub-section IV (5), (a), (1) below.

(ii) For wells drilled to the deep zone, the string must be cemented with sufficient cement to fill the annular space back of the pipe from the casing seat to the surface or to the bottom of the cellar.

(c) If the cement fails to reach the surface or the bottom of the cellar, where required, the top of the cement shall be located by a temperature or gamma ray survey and additional cementing shall be done until the cement is brought to the point required.

(d) The fluid used to mix with the cement shall be saturated with the salts common to the zones penetrated and with three percent (3%) of calcium Chloride by weight of cement.

- (e) Centralizers shall be spaced on at least every one hundred fifty (150) feet of the salt protection string below the surface casing string.
 - (f) Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.
 - (g) Casing tests shall be made both before and after drilling the plug and below the casing seat, as follows:
 - (i) If rotary tools are used, the mud shall be displaced with water and a hydraulic pressure of one thousand (1000) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within thirty (30) minutes, corrective measure shall be applied.
 - (ii) If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.
 - (h) The above requirements for the salt protection string shall be applicable to both the shallow and deep zones except for sub-section IV (3), (b), (i) and (ii) above.
- (4) Intermediate String:
- (a) In the drilling of oil and gas exploratory test wells to the deep zone an intermediate string shall be set at sufficient depth to case-off all formations in the shallow zone and shall be cemented with sufficient cement to fill the annular space back of the pipe from the casing seat to the surface or to the bottom of the cellar.
 - (b) Cementing procedures and casing tests for the intermediate string shall be the same as provided under sub-sections IV (3) (e), (f), and (g) for the salt protection string.
- (5) Production String:
- (a) A production string shall be set on top or

through the oil or gas pay zone and shall be cemented as follows:

- (1) For wells drilled to the shallow zone the production string shall be cemented to the surface if the salt protection string was cemented only with a nominal volume for testing purposes, in which case the salt protection string can be out and pulled before the production string is cemented; provided, that if the salt protection string was cemented to the surface, the production string shall be cemented with a volume adequate to protect the pay zone and the casing above such zone.
- (ii) For wells drilled to the deep zone the production string shall be cemented with a volume adequate to protect the pay zone and the casing above such zone; provided that if no intermediate string shall have been run and cemented to the surface, the production string shall be cemented to the surface.
- (b) Cementing procedures and casing tests for the production string shall be the same as provided under sub-sections IV (3) (c), (f), and (g) for the salt protection string.

V DRILLING FLUID FOR SALT SECTION

The fluid used while drilling the salt section shall consist of water to which has been added sufficient salts of a character common to the zone penetrated to completely saturate the mixture. Other admixtures may be added to the fluid by the operator in overcoming any specific problem. This requirement is specifically to prevent enlarged drill holes.

VI PLUGGING AND ABANDONMENT OF WELLS:

All wells heretofore and hereafter drilled within Areas "A" and "B" shall be plugged in a manner that will provide a solid cement plug through the salt section and prevent liquids or gases from entering the hole above or below the salt section.

VII LOCATIONS FOR TEST WELLS:

Before drilling for oil or gas on lands in Areas "A" or "B", a map or plat showing the location of the proposed well shall be prepared by the well operator and copy sent to the potash lessee involved, if any. If no objection to the location of the proposed well is made by the potash lessee within ten days, a drilling permit may be issued and the work may proceed. If, however, the location of the proposed well is objected to by the potash lessee on the grounds that the location of the well is not in accordance with the foregoing regulations, the potash lessee may file a written objection for consideration and decision by the Oil Conservation Commission.

VIII INSPECTION OF DRILLING AND MINING OPERATIONS:

A representative of the potash lessee may be present during drilling, cementing, casing and plugging of all oil or gas wells on his lease to observe conformance with these regulations. Likewise, a representative of the oil and gas lessee may inspect mine workings on his lease to observe conformance with these regulations.

IX FILING OF WELL AND MINE SURVEYS:

Each oil and gas lessee shall furnish not later than January 31st of each year to the Oil Conservation Commission and to the potash lessees involved, certified directional surveys from the surface to a point below the lowest known potash-bearing horizon for each oil or gas well drilled in Area "A" during the preceding calendar year. Each potash lessee shall furnish not later than January 31st of each year to the Oil Conservation Commission and to each oil and gas lessee involved, certified plat of survey of the location of open mine workings underlying outstanding oil and gas leases.

X APPLICABILITY OF STATEWIDE RULES AND REGULATIONS:

All general statewide rules and regulations of the Oil Conservation Commission governing the development, operation and production of oil and gas in the State of New Mexico not inconsistent or in conflict herewith, are hereby adopted and made applicable to the areas described herein.

June 26, 1951

TO ALL MEMBERS OF THE NEW MEXICO OIL AND GAS ENGINEERING COMMITTEE:

Gentlemen:

Case No. 278 which relates to the drilling for oil in the vicinity of the potash mines in Eddy County, New Mexico, has been continued by the New Mexico Oil Conservation Commission from June 21 to July 10 at 10 o'clock A. M. A meeting of all members of this committee who plan on attending the above hearing will meet at the La Fonda Hotel, 4 o'clock P. M., July 9, 1951.

Glenn Staley

N. M. Oil and Gas Engineering Committee
Hobbs, New Mexico
June 26, 1951



File

PHILLIPS PETROLEUM COMPANY

Box 791
Midland, Texas
August 13, 1951

Mr. R. R. Spurrier
New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Case No. 278

Dear Sir:

We acknowledge receipt of photocopies of two plats indicating outline of the two defined areas as requested in our letter of July 26, 1951. Thank you greatly for this courtesy.

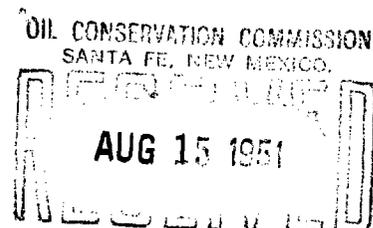
Yours very truly,

John Parker
LAND DEPARTMENT



By: R. F. Rood

RFR:mr



7/27

Case 278

PROPOSED

RULES AND REGULATIONS GOVERNING EXPLORATION FOR THE EXTRACTION OF OIL, GAS AND POTASH MINERALS ON NEW MEXICO STATE LANDS INCLUDED IN PROVEN OR POTENTIAL POTASH PRODUCTION AREAS.

The objective of these rules and regulations is to assure maximum conservation and economic recovery of oil, gas and potash minerals.

I. These regulations are applicable to the potash areas as herein defined as: "Area "A" and Area "B".

Area "A" is hereby defined as follows:

19S-30E - Sections S 1/2 3, all 4, 5, E 1/2 and S 1/2 SW 1/4 6, all 7, 8, 9, 10, W 1/2 and W 1/2 E 1/2 11, W 1/2 and W 1/2 E 1/2 14, all 15 to 18 incl. SE 1/4 20, S 1/2 21, all 22, 23, all 25 to 29 incl. all 32 to 36 incl.

20S-29E - Sections E 1/2 SE 1/4 12,

20S-30E Sections - all Sec. 1 to 27 incl., all 34, 35, 36

20S-31E Sections all 19, 20, 29, 30, 31, 32.

21S-29E Sections All 1, 2, E 1/2 10, all 11, 12, 13, 14 E 1/2 15, all 24 E 1/2 35, all 36.

21S-30E - Sections all 4 to 9 incl. all 16 to 19 incl., all 31

22S-29E - Sections all 1, 2, S 1/2 3, all 10 to 15 incl., all 22, 23, 24.

22S-30E - Sections all 6, 7, 18 19

Area "B" is hereby defined as follows:

- 18S-30E Sections S 1/2 12, all 13, 14, SE 1/4 15, SE 1/4 21, all 22, 23, 24, W 1/2 25, all 26, 27, 28, E 1/2 29, S 1/2 and NE 1/4 32, all 33, 34, W 1/2 35.
- 18S-31E Sections W 1/2 18.
- 19S-29E Sections SE 1/4 11, S 1/2 12, all 13, 14, N 1/2 23, N 1/2 24.
- 19S-30E Sections all 2, N 1/2 3, E 1/2 NE 1/4 and E 1/2 SE 1/4 11, all 12, 13, E 1/2 NE 1/4 and E 1/2 SE 1/4 14, all 24.
- 19S-31E Sections all 9, 10, W 1/2 11, W 1/2 14, all 15, 16, 17, all 19, 20, 21, 22, W 1/2 23, S 1/2 25, all 26 to 36 incl.
- 19S-32E Sections S 1/2 23, all 24 to 27 incl., S 1/2 of 28, S 1/2 31, S 1/2 32, all 33 to 36 incl.
- 19S-33E Sections all 19, 30, 31
- 20S-29E Sections NE 1/4 and S 1/2 13, all 22 to 27 incl., all 34, 35, 36.
- 20S-30E Sections all 28 to 33 Incl.
- 20S-31E Sections all 1 to 18 incl., all 21 to 28 incl., all 33 to 36 incl.
- 20S-32E Sections all 1 to 36 incl.
- 20S-33E Sections all 5 to 9 incl., all 15 to 23 incl. all 25 to 36 incl.
- 20S-34E Sections all 31.
- 21S-29E Sections E 1/2 3, all 25.
- 21S-30E Sections all 1, 2, 3, all 10, 11, S 1/2 12, all 13, 14, 15, all 20, 21, 22, N 1/2 23, N 1/2 24, all 27 to 30 incl., 32 to 34 incl., S 1/2 35.
- 21S-31E Sections N 1/2 1, N 1/2 2, N 1/2 3, NE 1/4 and W 1/2 4, all 5, 6, 18.

- 21S-32E Sections all 1 to 17 incl., all 21 to 27 incl., all 35, 36.
- 21S-33E Sections all 4 to 9 incl., all 16 to 21 incl., all 28 to 33 incl.,.
- 22S-29E Sections E 1/2 9, all 16, E 1/2 17, E 1/2 20, all 21, all 25 to 28 incl.,
all 33 to 36 incl.
- 22S-30E Sections all 1 to 5 incl., all 8 to 17 incl., all 20 to 24 incl.,
W 1/2 25, all 26 to 35 incl., W 1/2 36.
- 22S-31E Sections all 4 to 9 incl., all 17, 18, N 1/2 19.
- 22S-33E Sections all 4, 5, 6.
- 23S-29E Sections all 1 to 3 incl., E 1/2 4, E 1/2 9, all 10 to 15 incl.,
all 22 to 27 incl., all 34 to 36 incl.,
- 23S-30E Sections S 1/2 1, all 2 to 36 incl.
- 23S-31E Sections all 7, S 1/2 8, SW 1/4 16, all 17 to 20 incl., W 1/2 21,
all 28 to 33 incl.
- 24S-30E Sections N 1/2 1, N 1/2 2, N 1/2 3.
- 24S-31E Sections all 4, 5, 6.

Each of the above described areas may be contracted or expanded by the Oil Conservation Commission after due notice and hearing.

II. Exploration of Areas : - 'Area "A" - Drilling of oil and gas test wells shall not be permitted in Area "A" except upon leases outstanding as of the effective date of these regulations. Any oil or gas leases hereafter issued for lands within area "A" shall be subject to these regulations and no drilling shall be permitted thereon unless the expressed permission of the Oil Conservation Commission is first had and obtained after due notice and hearing.

All future drilling in area "A" shall be further subject to the Rules and Regulations pertaining to deep wells contained in paragraphs as hereinafter set forth. Where oil and gas wells are in production within this area no mine opening shall be driven to within less than 100' of such wells so that protection can be afforded.

Area "B". Area "B" is herein defined as the area in which oil and gas test wells may be drilled in accordance with the Rules and Regulations as hereinafter set forth. Nothing herein shall be construed to prevent unitization agreements.

Upon the discovery of oil or gas the Oil Conservation Commission shall, after due notice and hearing promulgate field or pool rules for the affected areas.

III. Drilling, Casing and Cementing Program For Potash Areas "A" and "B":
1. For Shallow Zone Oil and Gas Exploratory Test Wells:

(a) Surface Casing String: The shallow zone shall be defined as less than 5000 feet from the surface of the ground. In order to prevent the intrusion of water, the surface casing string shall be set in the "Red Bed" section of the basal Russler formation immediately above the top of the salt section and shall be cemented back to the ground surface or to the bottom of the cellar.

The surface string may consist of new, second-hand or re-conditioned pipe. New pipe shall have received a mill test of not less than 600 pounds per square inch; second-hand and re-conditioned pipe shall be re-tested to 600 pounds per square inch before being run.

Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

Tests of casing shall vary with drilling method. If rotary is used, the mud shall be displaced with water or with the proposed saturated water solution and a hydraulic pressure of six hundred (600) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within 30 minutes, corrective measures shall be applied. If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.

(b) Salt Protection String: A salt protection string shall be set at least one hundred (100) feet and not more than two hundred (200) feet below the base of the salt section. This string may consist of new, second-hand or re-conditioned pipe capable of meeting the manufacturer's test specifications.

The string may be cemented with a nominal cement volume for testing purposes only, and if commercially productive, the string must be recemented with not less than 150% of calculated volume necessary to circulate cement to surface. The fluid used to mix with the cement shall be saturated with the salts common to the zones penetrated and with proper amounts of calcium chloride.

Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests. If the cement fails to reach the top of the salt, the salt protection casing shall be perforated just above the top of the cement and additional cement jobs done until cement is brought to that point. One or more temperature

or gamma ray surveys supporting complete cementation shall be filed with the Oil Conservation Commission.

Test of casing shall vary with the drilling method. If rotary is used, the mud shall be displaced with water and a hydraulic pressure of 1000 pounds per square inch shall be applied. If a drop of 100 pounds per square inch or more should occur within 30 minutes, corrective measures shall be applied. If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour corrective measures shall be applied.

(c) Oil or Production String: This string may be set on top or through the pay zone and cemented with a volume adequate to protect the pay zone and the casing above such zone, provided however, if no salt protection casing shall have been run and commercial production obtained, that string shall be cemented to the surface as provided by above or as provided by for drilling wells to the deep zone.

2. For the purpose of these regulations the deep zones shall be defined as more or less 5000' from the surface of the ground. The fluid used to mix with the cement shall be saturated with the salts common to the zones penetrated and to which has been added proper amounts of calcium chloride (3% by weight).

(a) Oil or Production String: This string may be set on top or through the pay zone and cemented with a volume adequate to protect the pay zone and the casing above such zone, provided however, if no salt protection casing shall have been run and commercial production obtained, that string shall be cemented to the surface as provided by above or as provided by for drilling wells to the deep zone.

(b) Surface Casing String: In order to prevent the intrusion of water, the surface casing string shall be set in the "Red Bed" beneath the surface of the ground section of the basal Russler formation immediately above the top of the salt section and shall be cemented back to the ground surface or to the bottom of the cellar.

The Surface string may consist of new, second-hand or re-conditioned pipe. New pipe shall have received a mill test of not less than 600 pounds per square inch; second-hand and re-conditioned pipe shall be re-tested to 600 pounds per square inch before being run.

Sufficient cement shall be used to fill the annular space back of the pipe from the casing point to the surface of the ground or to the bottom of the cellar. Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

This casing string shall be tested with a hydraulic pressure of six hundred (600) pounds per square inch. If a drop of one hundred (100) pounds per square inch or more should occur within 30 minutes, corrective measures shall be applied.

(c) Salt Protection String: A salt protection string shall be set at least one hundred (100) feet and not more than two hundred (200) feet below the base of the salt section. This string may consist of new, second-hand or re-conditioned pipe. New pipe shall have received a mill test of not less than 1000 pounds per square inch; second-hand and re-conditioned pipe shall be re-tested to 1000 pounds per square inch before being run.

Centralizers shall be used on at least every 150 feet of casing below surface casing.

Sufficient cement shall be used to fill the annular space back of the pipe from the casing point to the surface of the ground or to the bottom of the cellar. The fluid used to mix with the cement shall be saturated with the salts common to the zones penetrated and to which has been added proper amounts of calcium chloride (3% by weight). Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests. If the cement fails to reach the surface, the top of the cement shall be located by a temperature or gamma ray survey, and additional cement jobs done until cement is brought to the surface.

This casing string shall be tested with a hydraulic pressure of 1000 pounds per square inch. If a drop of 100 pounds per square inch or more should occur within 30 minutes, corrective measures shall be applied.

(d) When a drilling protection string is used the casing shall be cemented with a sufficient volume of cement to amply protect the casing and all shallow pay zones above the casing shoe, and in every instance the string shall be cemented from a point one thousand (1000) feet below the salt string back to the surface.

Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four hours before drilling the plugs or initiating tests. Casing shall be tested with a hydraulic pressure of 1000 pounds per square inch. If a drop of one hundred (100) pounds per square inch or more should occur within 30 minutes corrective measures shall be applied.

CASING AND CEMENTING
PROGRAM FOR SHALLOW
OIL AND GAS TEST WELLS
IN KNOWN POTASH AREAS

EXHIBIT B
CASE 277

The following is a suggested casing program for wells above 5,000 feet and is, of necessity, only general rules for the whole designated potash area, whether designated as Area A, Area B or otherwise. Geological sections change so rapidly in this large, scattered area that individual portions of the area will present individual problems. It is therefore suggested as follows:

A. That the Oil Conservation Commission retain authority to vary this general casing and cementing program to meet a specific condition, without an open hearing before the Commission.

B. That the casing and cementing program herein suggested apply only to the areas embraced in proven commercial deposits of potash, the remainder of the designated potash area to be drilled in accordance with standard, existing practices.

C. The suggested casing and cementing program is as follows:

1. Surface Casing String

In order to protect the fresh water supply, if present, the surface casing string shall be set through the fresh water bearing horizons and cemented with a volume adequate to protect the fresh water and keep it from entering the salt formation.

The surface string may consist of new, second-hand or re-conditioned pipe capable of meeting the manufacturers test specifications.

Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four(24) hours before drilling the plug or initiating tests.

Tests of casing shall vary with drilling method. If rotary is used, the mud shall be displaced with water or with the proposed saturated water solution and a hydraulic pressure of six hundred (600) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within 30 minutes, corrective measures shall be applied. If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.

2. Salt Protection String

The salt protection string may be set at least one hundred (100) feet and not more than two hundred (200) feet below the base of the salt section. This string may consist of new, second-hand or re-conditioned pipe capable of meeting the manufacturers test specifications.

The string may be cemented with a nominal cement volume for testing purposes only, and if commercially productive, the string must be re-cemented with not less than 150% of calculated volume necessary to circulate cement to surface.

Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests. If the cement fails to reach the top of the salt, the salt protection casing shall be perforated just above the top of the cement and additional cement jobs done until cement is brought to that point. One or more temperature or gamma ray surveys supporting complete cementation shall be filed with the Oil Conservation Commission.

Test of casing shall vary with the drilling method. If rotary is used, the mud shall be displaced with water and a hydraulic pressure of 1000 pounds per square inch shall be applied. If a drop of 100 pounds per square inch or more should occur within 30 minutes, corrective measures shall be applied. If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.

3. Oil or Production String

This string may be set on top or through the pay zone and cemented with a volume adequate to protect the pay zone and the casing above such zone, provided however, if no salt protection casing shall have been run and commercial production obtained, that string shall be cemented to the surface as provided by 2 above or as provided by 3a in Deep Well program.

D. The undersigned operators, of Eddy County, New Mexico, approve the above and foregoing proposals and recommend its adoption by the Commission.

Respectfully Submitted,

<u>American Republics Corp</u>	by <u>William B. Macey</u>
<u>East Plains Drilling Co.</u>	by <u>Tom Boyd</u>
<u>Buffalo Oil Co</u>	by <u>Ralph L Gray</u>
<u>Harry Stevenson</u>	<u>Summers Oil Co by E. J. ...</u>
<u>Frank Wright</u>	<u>Malco Refineries Co. by Donald B. Allen</u>
<u>Edw Brock</u>	<u>Bassett & Briney by Morty Yates</u>
<u>Henry Stout</u>	<u>Dixon & Yates by Morty Yates</u>
<u>W. H. ...</u>	<u>S. P. Yates</u>
<u>Robert ...</u>	by <u>A. R. ...</u>
<u>W. Collier</u>	<u>Yates Bros. ...</u>
<u>W. H. ...</u>	<u>Becker Oil Co. by H. P. Yates</u>
<u>Geo Sears</u>	<u>J. R. Lund for Robert C. McKee</u>
<u>Joe ...</u>	
<u>A. P. Bedinfield</u>	

RRS

Following is the "Defined Area" as submitted by the Potash Companies to the State Land Office.

T.18S, R.30E	All of Secs. 13,23,24. W/2 Sec. 25 All Secs. 26,27,33,34 W/2 Sec. 35
T.18S, R.31E	W/2 Sec. 18
T.19S, R.29E	S/2 Sec. 12 SE/4 Sec. 11 All Sec. 13 E/2 Sec. 14 NE/4 Sec. 23 N/2 Sec. 24
T.19S, R.30E	All of Twp. except all secs. 1 & 6 and N/2 Sec. 7
T.19S, R.31E	All Secs. 9 & 10 W/2 Sec. 11 W/2 Sec. 14 All Secs. 15,16,17,19,20,21,22 W/2 Sec. 23 S/2 Sec. 25 All Secs. 26 thru 36
T.19S, R.32E	S/2 Sec. 23 All Secs. 24,25,26 & 27 S/2 Sec. 28 S/2 Sec. 31 S/2 Sec. 32 All Secs. 33 thru 36
T.19S, R.33E	All Secs. 19,30 & 31
T.20S, R.29E	All Secs 22 thru 27 All Secs. 34,35 & 36
T.20S, R.30E	Entire township
T.20S, R.31E	Entire township
T.20S, R.32E	Entire township
T.20S, R.33E	All Secs. 5 thru 9 All Secs. 15 thru 23 All Secs. 25 thru 36
T.20S, R.34E	All Sec. 31
T.21S, R.30E	All Sec. 1 thru 11 N/2 Sec. 12 All Sec. 13 thru 22 N/2 Sec. 23 N/2 Sec. 24 All Secs. 27 thru 34 S/2 Sec. 35



"Defined Area" Cont'd.

T.21S, R.29E	All Sec. 1 & 2 E/2 Sec. 3 E/2 Sec. 10 All Sec. 11 thru 14 E/2 Sec. 15 N/2 Sec. 23 All Sec. 24 & 25 E/2 Sec. 35 All Sec. 36
T.21S, R.31E	N/2 Sec. 1 (Lots 1 thru 16) N/2 Sec. 2 (Lots 1 thru 16) W/2 Sec. 4 All Sec. 5 & 6 S/2 Sec. 18 N/2 Sec. 19
T.21S, R.32E	All Secs 1 thru 17 All Secs 21 thru 27 All Secs. 35 & 36
T.21S, R.33E	W/2 of the township
T.22S, R.29E	All Sec. 1 & 2 S/2 Sec. 3 E/2 Sec. 9 All Secs. 10 thru 16 E/2 Sec. 17 E/2 Sec. 20 All Secs. 21 thru 28 All Secs. 33 thru 36
T.22S, R.30E	All of township except E/2 Sec. 25 and E/2 Sec. 36
T.22S, R.31E	All Secs. 4 thru 9 All Secs. 17 & 18 N/2 Sec. 19
T.22S, R.33E	All Secs. 4, 5 & 6
T.23S, R.29E	E/2 of township E/2 of Sec. 4 E/2 Sec. 9
T.23S, R.30E	All of township except N/2 Sec. 1
T.23S, R.31E	All Sec. 7 S/2 Sec. 8 SW/4 Sec. 16 All Secs. 17 thru 20 W/2 Sec. 21 All Secs. 28 thru 33
T.24S, R.30E	N/2 Sec. 1 N/2 Sec. 2 N/2 Sec. 3
T.24S, R.31E	All Secs. 4 thru 6