CASE 1874: Application of Southern Calif.
Petr. Corp. for exception from shallow-zone
making requirements in potash-oil area, Lea

# Caso Mo.

1274

Application, Transcript,
5 mill Exhibits. Etc.

# BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 1249 Order No. R-999

APPLICATION OF HUDSON AND HUDSON, INCORPORATED FOR AN EXCEPTION TO THE SHALLOW ZONE CASING REQUIREMENTS IN THE POTASH-OIL AREA AS ESTABLISHED BY ORDER R-111-A.

#### ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This cause came on for hearing at 10 o'clock a.m. on April 26, 1957, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 10th day of May, 1957, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

#### FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.
- (2) That the applicant, Hudson & Hudson, Incorporated, proposes to drill an exploratory well with cable tools, said well to be known as the Hover-Federal No. 1 Well, located 1980 feet from the South line and 660 feet from the East line of Section 28, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, which location is in the Potash-Oil Area, as defined by Commission Order R-111-A.
- (3) That the applicant proposes to case the said well as follows rather than in the manner prescribed by Order R-111-A:
  - 13 3/8" casing to a depth of approximately 60 feet;
  - 10 3/4" casing to the top of the Santa Rosa formation at approximately 800 feet;

-2-Case No. 1249 Order No. R-999

- 8 5/8" casing to the shale immediately above the anhydrite at approximately 1250 feet;
- 5 1/2" casing to the top of the Yates formation prior to drilling into said formation;
- (4) That the applicant should be permitted to pull all casing except the 5 1/2-inch production string in the event that commercial oil or gas production is found.
- (5) That the production string should be cemented throughout its entire length in the event commercial oil or gas production is encountered.
- (6) That the aforementioned casing program will confine the water, oil, and gas to the strata in which they naturally occur and will afford adequate protection for the potash deposits in the area, and that the proposed casing program will result in a considerable economic savings to the applicant.
- (7) That in any event, the applicant should make adequate provisions for the protection of pctash deposits in the area.
- (8) That all interested potash operators were notified of the subject application and that no objections have been registered with the Commission.
- (9) That the applicant should be required to comply with all of the provisions of Order R-111-A, not specifically excepted by this order.

#### I' IS THER FORE ORDINED:

- That the applicant, Hudson & Hudson, Incorporated, he and the same is hereby authorized to drill its Hover Federal Well No. 1 with cable tools in the Botash Di Area at a point 1980 feet from the South line and 660 feet from the East line of Section 28, Township 20 South, Range 34 East, NAP Lea County, New Mexico, and to case said well in the following manner:
  - 13 3/8" casing to a depth of approximately 60 feet;

10 3/4" tasing to the top of the Santa Rosa furnation, at approximately 800 feet;

- 8 5/8" casing to the shale immediately above the anhydrite as approximately 1250 feet;
- 5 1/2" casing to the p of the Yates formation prior to drilling into said formation;
- 2. That in the event commercial oil or gas production is found, the 5 1/2-inch production string shall be cemented throughout its entire length in which case the applicant may bull all other strings of casing.

-3-Case No. 1249 Order No. R-999

- 3. That the applicant shall comply strictly with all the provisions of Order R-lll-A not specifically excepted herein.
- 4. That, notwithstanding the foregoing, the applicant shall make adequate previsions for the protection of the potash-bearing strata regardless of the conditions encountered in drilling said well.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

MURRAY E, MORGAN, Member

A. L. PORTER, Jr., Member & Secretary

SEAL

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#### DOCKET: SPECIAL COMMISSION HEARING JUNE 28, 1957

#### Oil Conservation Commission 9 a.m., Mabry Hall, State Capitol, Santa Fe, NM.

CASE 1273:

Application of the Oil Conservation Commission of New Mexico upon its own motion for an order concerning purchaser prorationing by Magnolia Petroleum Company commencing June 12, 1957. Applicant, in the above—styled cause, seeks an order prescribing the manner in which Eagnolia Petroleum Company shall prorate its purchases of oil in the State of New Mexico during the period of purchaser prorationing commencing June 12, 1957. The applicant proposes to require Magnolia Petroleum Company to effect its reduction of oil purchases in substantially the same manner as set forth in Emergency Order No. A-91 (B) dated June 13, 1957.

#### EXAMINER HEARING July 2, 1957

#### Oil Conservation Commission 9:00 a.m., Mabry Hall, State Capitel, Santa Fe

The following case will be heard before Daniel S. Nutter, Examiner:

#### CASE 1274:

Application of Southern California Petroleum Corporation for an exception from the shallow-zone casing requirements in the Potash-Oil Area as established by Order R-111-A. Applicant, in the above-styled cause, seeks an order authorizing the following casing program in lieu of the shallow-zone casing requirements established by Order R-111-A for its proposed well to be drilled at a point 1980 feet from the North and East lines of Section 13, Township 20 South, Range 33 East, in the Teas Pool, Lea County, New Mexico:

- 13 3/8-inch casing in the top of the Red Beds at about 60 feet.
- 8 5/8-inch or 10 3/4-inch casing at approximately 1,000 feet, but in any event below the water.
- $5 \frac{1}{2}$ -inch casing at approximately 3,200 feet in the top of the Yates formation.

In the event production is encountered, applicant proposes to pull all casing except the production string and to cement the production casing to the surface.

#### EXAMINER HEARING July 2, 1957

Oil Conservation Commission 9:00 a.m., Mabry Hall, State Capitol,
Santa Fe

The following case will be heard before Daniel 3. Nutter, Examiner:

CASE 1274:

BOBB "C" No. 1 Application of Southern California Petroleum Corporation for an exception from the shallow-zone casing requirements in the Potash-Oil Area as established by Order R-111-A. Applicant, in the above-styled cause, seeks an order authorizing the following casing program in lieu of the shallow-zone casing requirements established by Order R-111-A for its proposed well to be drilled at a point 1980 Feet from the North and East lines of Section 13, Township 20 South, Range 33 East, in the Teas Pool, Lea County, New Mexico.

13 3/8-inch casing in the top of the Red Beds at about 60 feet.

8- 5/8-inch or 10 3/4-inch casing at approximately 1,000 feet, but in any event below the water.

5 1/2-inch casing at approximately 3,200 feet in the top of the Yates formation.

In the event production is encountered, applicant proposes to pull all casing except the production string and to cement the production casing to the surface.

Examiner Nutter, I am James A. Warren, Division Engineer for Southern California Petroleum Corporation, Midland, Texas, and I represent this company today in Case 1274. I have previously testified before the Commission as an engineering witness for this company. If my qualifications are acceptable to the Examiner, I will proceed with the testimony.

Southern California Petroleum Corporation filed an application on May 20, 1957, for an examiner hearing regarding an exception to the shallow-zone casing requirements in the Potash-Oil Area as established by Order R-111-A dated October 13, 1955. Copies of this application were mailed to the Potash Co. of America, Carlsbad, New Mexico, and the U. S. G. S. offices in Carlsbad and Artesia, New Mexico.

Southern California Petroleum Corporation is the operator of six of the fourteen wells in the Teas Pool and now proposes to drill a new well in the SW<sup>1</sup>/<sub>4</sub> of the NE<sup>1</sup>/<sub>4</sub> of Section 13, T2OS-R33E, (1980 feet from the north and east lines of said Section 13). This location falls in the center of Unit G, being a part of Federal Government Lease "Las Cruces No. 065447". This lease is within the horizontal

limits of the Teas Pool and the Potash-Oil Area as defined by Order R-111-A. A plat of the Teas Pool area was submitted with the abovementioned application, showing the location of our proposed well, and we wish to submit a copy of this plat as Exhibit "A".

In the interest of economy, we plan to drill this well with cable tools in order to set protective casing strings above the Salado formation without cementing them, and thus drill into the Yates oil zone and determine whether or not we have a productive well before cementing the "salt protection" or oil string. This procedure has been followed in drilling our other wells in the Teas Pool. Specifically, we propose to run the following casing strings:

Surface Casing: 13 3/8" at about 60 feet to shut off possible fresh water in surface sands.

Water Shut-off Casing: 10 3/4" at about 1000 feet to shut off caving section and Santa Rosa water. If it should be necessary to set the 10 3/4" casing at 600-700 feet to prevent caving, then 8-5/8" casing will be carried to about 1000 feet, and set below the water.

Production String: The Salado formation will be drilled dry, and hole reduced at the top of the Yates sands at about 3200 feet. The Yates sands will then be penetrated to determine if commercial oil and gas is present. If completion is to be attempted, 5 1/2" casing will be run to the top of the Yates, the upper casing strings will be pulled and the 5 1/2" casing cemented to the surface in accordance with Order R-111-A.

We feel that this casing program will adequately protect the salt section and possible potash deposits if well conditions are as they are expected to exist. If any unexpected conditions should occur, we will immediately take whatever action is necessary to prevent contamination of potash deposits which may be present.

In the event that completion is not attempted, the hole will be plugged with cement throughout the salt section, the upper strings of casing pulled, and all water zones cemented in accordance with Order R-111-A.

If this program be satisfactory, we respectfully request that the U. S. Geological Survey be so notified, in orderthat they may consider our Notice of Intention to Drill for approval.

Respectfully submitted this 2nd day of July, 1957.

SOUTHERN CALIFORNIA PETROLEUM CORP.

Ву

James A. Warren

Division Engineer

#### SOUTHERN CALIFORNIA PETROLEUM CORPORATION

SUITE SOS PETROLEUM LIFE BUILDING . . . MIDLAND, TEXAS

May 20, 1957

Pase # 17 711

Oil Conservation Commission P. O. Box 871 Santa Fe, New Mexico

Subject: Application of Southern California Petroleum Corporation for Heading for Exception to Shallow Zone Casing Requirements in the Potash-Oil Area, as established by Order R-111-A

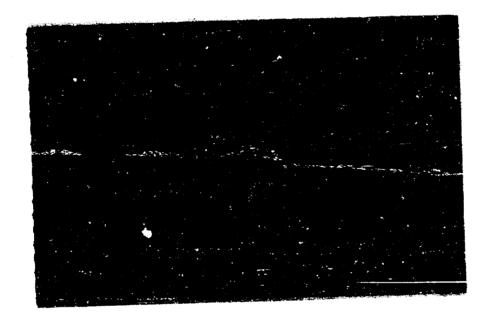
- Southern California Petroleum Corporation proposes to drill an oil well, using cable tools, in the Potash-Oil Area, as defined by Commission Order R-111-A on their Federal-Bobb "C" lease, at a point 1980 feet from the north line and 1980 feet from the east line of Section 13, Township 20 South, Range 33 East, N.M.P.M., Lea County, New Mexico.
- The above location and the proposed completion depth are in the horizontal and vertical limits of the Teas Oil Pool.
- It is proposed to run casing in the above well in the following

Surface Pipe - 13-3/8" casing in the top of Red Beds at about 60'.

Water Shut-off String - 8-5/8" or 10-3/4" casing at approximately 1000' but in any event, below the water.

Production String -  $5\frac{1}{2}$ " casing at approximately 3200' in the top of the Yates formation.

- It is requested that applicant be permitted to pull all casing except the production string and then cement the production casing to the surface of the ground.
- The above casing program will confine the oil, water and gas to the strata in which they naturally occur and will adequately protect the potash deposits.
- Potash deposits will be adequately protected by appropriate methods, regardless of the conditions encountered in drilling.



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Domestic registered mail is subject to surcharge when the declared value exceeds the maximum indemnity covered by the fee paid by \$1,000 or more. Claims must be filed within I year from date of mailing.

Consult postmaster as to fee chargeable on registered parcel post packages addressed to foreign countries.

GPO c9-16-70493-2

Page 2 Oil Conservation Commission May 20, 1957

- The potash operator holding potash leases within a radius of one mile of the proposed location has been furnished, by registered mail, a copy of this application together with a Notice of Intention to Drill, Form 128, and plat of the area. The potash operator and other interested parties receiving copies of this data are as follows:
  - 1 Potash Co. of America, Att: Mr. Don Trotc, Box 31,
  - Carlsbad, New Mexico.

    1 U. S. G. S., Box 829, Carlsbad, New Mexico. Att:
    Mr. R. S. Fulton.

    3 U. S. G. S., Box 187, Artesia, New Mexico.

    3 New Mexico Oil Conservation Commission, Santa Fe,

  - New Mexico.
- 8. It is requested that this application be set for examiner hearing at Hobbs at the earliest convenience of the Commission.

SOUTHERN CALIFORNIA PETROLEUM CORP.

By Neel Jr. Overs

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Approv	el expire	w 12-31-66.

(Feb. 1961)

#### (SUBMIT IN TRIPLICATE)

# Less No. Q67447

# UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

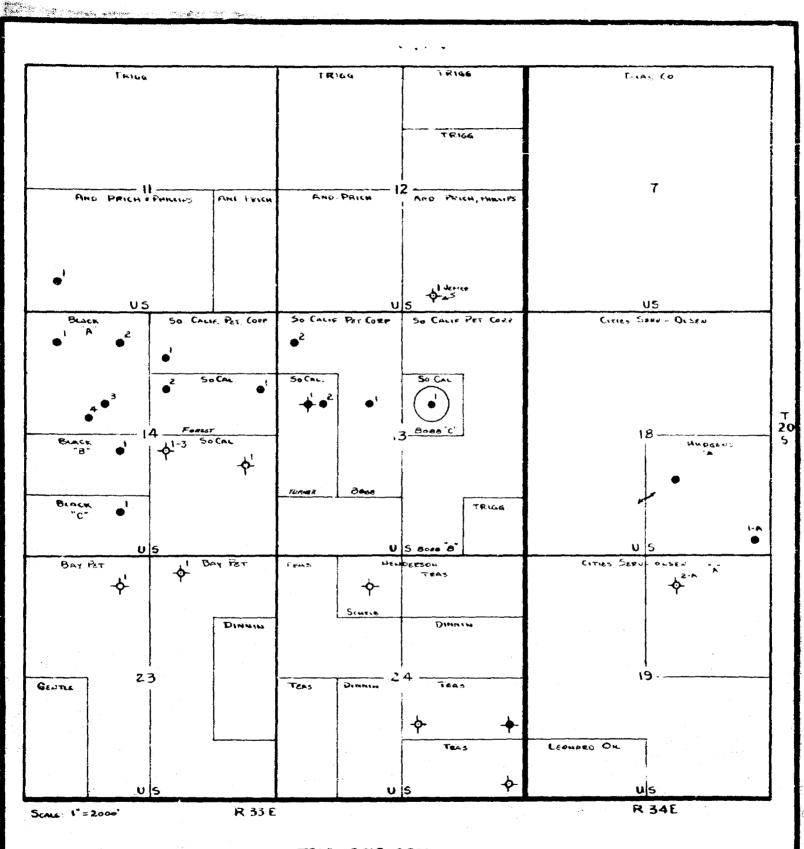
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# NEW MEXICO OIL CONSERVATION COMMISSION

Form C-128

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TEAS FIELD AREA

## BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE NO. 1215 Order No. R-968

APPLICATION OF WILSON OIL COMPANY FOR AN EXCEPTION TO THE SHALLOW ZONE CASING REQUIREMENTS IN THE POTASH-OIL AREA AS ESTABLISHED BY ORDER R-111-A.

#### ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This cause came on for hearing at 10 o'clock a.m. on February 27, 1957, at Hobbs, New Mexico, before Warren W. Mankin, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 22nd day of March, 1957, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Warren W. Mankin, and being fully advised in the premises,

#### FINDS:

- 1. That due notice having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.
- 2. That the applicant, Wilson Oil Company, proposes to drill an exploratory well with cable tools in the Potash-Oil Area, as defined by Commission Order R-111-A, at a point 660 feet from the North line and 660 feet from the East line of Section 21, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico.
- 3. That the applicant proposes to case the said well as follows rather than in the manner prescribed by Order R-111-A:
  - 13 3/8 inch casing in top of the red bed (surface string) to approximately 70 feet;
  - 10 3/4 inch casing (cave string) to about 700 feet;
  - 8 5/8 inch casing (water shut-off string) to about 1300 feet, but in any event below the water;

-2-Case No. 1215 Order No. R-968

7 or 5 1/2 inch casing (production string) to be set and cemented at a point selected by the operator above pay mone.

- 4. That the applicant should be permitted to pull all other casing except the production string in the event that commercial oil or gas production is found.
- 5. That the production string should be cemented throughout its entire length in the event commercial oil or gas production is encountered.
- 6. That the aforementioned casing program will confine the water, oil and gas to the strata in which they naturally occur and will afford adequate protection for the potash deposits in the area.
- 7. That in any event, the applicant should make adequate provisions for the protection of petash deposits in the area.
- 8. That all interested potash operators were notified of the subject application and that no objections have been registered with the Commission.

#### IT IS THEREFORE ORDERED:

- 1. That the applicant, Wilson O'll Company, be and the same is hereby authorized to drill an exploratory well by use of cable tools in the Potash-Oil Area at a point 660 feet from the North line and 660 feet from the East line of Section 21, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, and to case said well in the following manner:
  - 13 3/8 inch casing in top of the red bed (surface string) to approximately 70 feet;
  - 10 3/4 inch casing (cave string) to about 700 feet;
  - 8 5/8 inch casing (water shut-off string) to about 1300 feet, but in any event below the water:
  - 7 or 5 1/2 inch casing (production string) to be set and cemented at a point above the pay zone to be selected by the operator.
- 2. That in the event commercial oil or gas production is found, the applicant may pull all other casing except the production string.
- 3. That the production string be cemented throughout its entirement in the event commercial oil or gas production is encountered.

-3-Case No. 1215 Order No. R-968

4. That, notwithstanding the foregoing, the applicant shall make adequate provisions for the protection of the potash bearing strata regardless of the conditions encountered in drilling said well.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

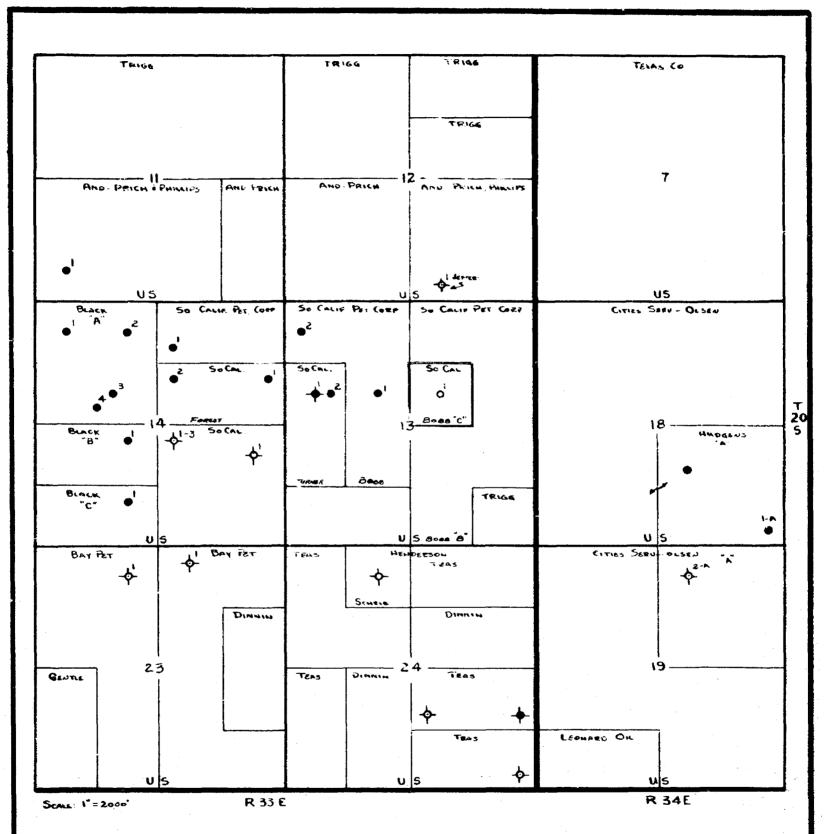
EDWIN L. MECHEM, Chairman

MURRAY E. MORGAN, Member

A. L. PORTER, Jr., Member & Secretary

SEAL

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TEAS FIELD AREA

T-15-57

# OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

		Date 7/10/57
CASE	/274 Hea	ring Date 7/2/57 9:00 am  75NG SE
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	California Petraleum	Corporations
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**TELEGRAM** 

1957 JUL 1201

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LT = Letter Telegram

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W. P. MARSHALL. PRESIDENT

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OIL CONSERVATION COMM

STATE CAPITOL SANTA FE NMEX=

RE CASE 1274 POTASH COMPANY OF AMERICA HAS NO OBJECTION TO THE EXCEPTION FROM R-111-A AS OUTLAINED=

DE PROTZR-111-A=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

DIL CONSERVATION COMMISSION P. D. BOX 871 SANTA FE, NEW MEXICO July 19, 1957 Mr. J. A. Warren Southern California Fetroloum Corp. 985 Pétroloum Life Building Midland, Tempe Bour Stri We enclose a copy of Order R-1681 lewest July 17, 1957, by the tall Constitution Commission in Case 1276, which was Reard on July 2nd Your trally yours, A. L. Porter, Jr. Secretary - Director

# OIL CONSERVATION COMMISSION P. D. BOX 871 SANTA FE, NEW MEXICO

July 19, 1957

Potash Company of America P20. Box 31 Carlebad, New Mexico

Gentlemen:

We enclose a copy of Order R-1021 issued July 17, 1957, by the Oil Conservation Commission in Case 1274, which was heard on July 2nd at Santa Fe.

Very truly yours,

A. L. Porter, Jr. Secretary - Director

bp Encl.

# BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE NO. 278 Order No. R-111-A

THE APPLICATION OF THE OIL CONSERVATION COMMISSION UPON ITS OWN MOTION FOR AN ORDER REVISING ORDER R-111 ISSUED IN CASE 278, PERTAINING TO THE POTASH-OIL AREAS OF EDDY AND LEA COUNTIES, NEW MEXICO.

#### ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 14, 1955, August 17, 1955 and September 15, 1955, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 13th., day of October, 1955, the Commission, a quorum being present, having considered the records and testimony adduced, and being fully advised in the premises;

#### FINDS:

- (1) That due notice of the time and place of hearing and the purpose thereof having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.
- (2) That the delineation of an area including and containing potential oil and gas reserves, within which are commercial potash deposits, and the promulgation of rules and regulations for the orderly development of oil and gas resources in such area known to be productive of potash is within the authority of the Commission for the protection of correlative rights, the promotion of conservation, and the prevention of waste.

#### IT IS THEREFORE ORDERED:

That this order shall be known as The Rules and Regulations Governing the Exploration of Oil and Gas in Certain Areas Herein Defined, which are Known to contain Potash Reserves.

I.

#### OBJECTIVE

The objective of these Rules and Regulations is to prevent waste, protect correlative rights, assure maximum conservation of the oil, gas and potash resources of New Mexico, and permit the economic recovery of oil, gas and potash minerals in the area hereinafter defined.

II.

#### THE POTASH-OIL AREA

- (1) The Potash-Oil Area, as outlined in Exhibit A attached hereto and made a part hereof, represents the area in various part of which potash mining operations are now in progress, or in which core tests indicate commercial potash reserves.
- (2) The Fotash-Oil Area, as outlined herein, may be revised by the Commission after due notice and hearing.

## III. DRILLING IN THE POTASH AREA

- (1) All drilling of oil and gas wells in the Potash Area shall be subject to these Rules and Regulations.
- (2) No wells will be drilled for oil or gas at a location which, in the opinion of the Commission or its duly authorized representative, would result in undue waste of potash deposits or constitute a hazard to or interfere unduly with potash deposits.

No mining operations will be conducted in the Potash Area that would, in the opinion of the Commission or its duly authorized representative, constitute a hazard to oil or gas production, or that would unreasonably interfere with the orderly development and production from any oil or gas pool.

(3) Upon discovery of oil or gas in the Potash Area, the Oil Conservation Commission shall promulgate pool rules for the affected area after due notice and hearing.

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 5,000 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 5,000 feet, whichever is the lesser.

#### (2) Surface Casing String:

- (a) A surface casing string of new or used oil field casing in good condition 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) percent 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 plue 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 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 measures 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 or used oil field casing in good condition shall be set not less than one hundred (100) feet nor more than rix hundred (600) feet below the base of the salt section; provided that such string shall not be set below the top of the highest known oil or gas zone.

- (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 re-cemented 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), (i) below.
  - (ii) For wells drilled to the diep 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; however, where the base of the Delaware Mountain Group is definable the casing rules in (IV) (3b) (i) shall apply even if the depth of the bottom of the Delaware Mountain Group is greater than 5,000 feet. For the purpose of identification, the base of the Delaware Mountain Group is hereby identified as the equivalent of the base of such formation as found at a depth of 7485 feet in the Richardson and Bass No. 1 Rodke well in Section 27, Township 20 South, Range 31 East, NMPM, Lea County, New Mexico, immediately overlying the Bone Springs formation.
- (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 suitable proportions but not less than 1% of calcium chloride by weight of cement.
- (e) 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.
- (f) 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 measures 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.
- (g) The Commission, or its duly authorized representative, may require the use of centralizers on the salt protection string when in their judgment: the use of such centralizers would offer further protection to the salt section.
- (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, the operator shall have the option of running an intermediate string of pipe, unless the Commission requires an intermediate string.
- (b) Cementing procedures and casing tests for the intermediate string shall be the same as provided under sub-sections IV (3), (c), (e) and (f) 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:
  - (i) 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 cut 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 mud shall be camened with a shall be camened with a shall be camened to protect the pay zone and but sone; provided, that if the camened shall be camened (100) are hundred (100) and camened to the surface, the productive measures.

(b) Cementing procedures and casing tests for the production string shall be the same as provided under sub-section IV (3), (c), (e) and (f) for the salt protection string; however if high pressure oil or gas production is discovered in any area, the Commission shall promulgate the necessary rules to prevent the charging of the salt section.

(g) The Compact of the sale protection string when in their judgenent the use of centralizers so the sale protection string when in their judgenent the use of such centralizers would offer the the use of such centralizers would offer the third of the use of such centralizers would offer the third of the

ad lists gairle midd digit while drilling the salt section shall consist of water more which has been added adfiction salts of a character common to the zone genetrated 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 intented to prevent enlarged drill holes.

(a) In the drilling of all analyse exploratory test wells to the deep

# PLUGGING AND ABANDONMENT OF WELLS

shall be plugged in a manner and in accordance with field rules established by the commission that will provide a solid cement plug through the salt section and any water bearing horizon and prevent liquids or gases from entering the hole above or below the salt section.

common to the salt section penetrated and with suitable proportions but not more than three (3) percent of calcium chloride by weight of cement being considered the desired mixture whenever possible and all of being considered the desired and of being considered the desired sold of the considered the desired considered the desired considered the desired considered the c

constitution of the tentes string was

LOCATION FOR WELLS

Before commencing drilling operations for oil or gas on any lands within the Potash Arez, the well operator shall prepare a map or plat showing the location this person of the great showing the location

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of the proposed well, said map or plat to accompany each copy of the Notice of Intention to Drill. In addition to the number of copies required by the Commission, the well operator shall send one copy by registered mail to all potash operators holding potash leases within a radius of one mile of the proposed well, as reflected by the plats submitted under paragraph IX (2).

The well operator shall furnish proof of the fact that said potash operators were notified by registered mail of his intent by attaching return receipt to the copies of the Notice of Intention to Drill and plats furnished the Commission.

The Commission, or its authorized representative, may approve such Notice of Intention to Drill if no objection to the location of the proposed well is made by a potash operator within ten days after receipt. If the location of the proposed well is objected to by the potash operator, the matter shall be referred to the Secretary-Director of the Commission for arbitration. If a satisfactory settlement cannot be reached, the Secretary-Director of the Commission shall refer the matter to a hearing before the Commission after due notice and a decision either approving or denying the operator's plans to drill shall be entered by the Commission.

VIII.

#### INSPECTION OF DRILLING AND MINING OPERATIONS

A representative of the potash operator may be present during drilling, cementing, casing, and plugging of all oil or gas wells within a radius of one mile of the well location 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 SURVEYS, MINE SURVEYS AND POTASH DEVELOPMENT PLANS

#### (1) Directional Surveys:

The Commission may require an operator to file a certified directional survey from the surface to a point below the lowest known potash bearing horizon on all wells drilled within the Potash Area. These surveys may be required where, in the Commission's judgment, the exact location of the well-bore must be determined in order to aid mining operations.

#### (2) Mine Surveys:

Within 30 days after the adoption of this order, and thereafter on or before January 31st of each year, each potash operator shall furnish two copies of a

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plat of a survey of the location of his leaseholdings and all of his open mine workings, which plat shall be available for public inspection.

#### (3) Potash Development Plan:

Within 30 days after adoption of this order and thereafter on or before January 31st of each year, each potash operator shall furnish two copies of a projection of development plans in the form of a plat, which plat shall be for the confidential use of the Commission and for inspection by any affected oil or gas operator. The projection shall cover not less than 3 nor more than a 5 year development program.

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 hereighth, are hereby adopted and made applicable to the areas described herein.

#### EXHIBIT "A"

#### POTASH-OIL AREA

#### TOWNSHIP 18 SOUTH, RANGE 30 EAST

Section 13: SW/4

Section 14: S/2, NW/4, W/2 NE/4

Section 15: SE/4

Section 22: E/2, E/2 W/2

Section 23: All

Section 24: NW/4

Section 26: N/2

Section 27: N/2 NE/4

#### TOWNSHIP 19 SOUTH, RANGE 29 EAST

Section 11: SE/4

Section 12: S/2, S/2 NE/4

Section 13: N/2, N/2 S/2, S/2 SW/4

Section 14: E/2, E/2 W/2

Section 23: N/2 NE/4

#### TOWNSHIP 19 SOUTH, RANGE 30 EAST

Section 3: S/2

Section 4: S/2, NW/4, SW/4 NE/4

Section 5: E/2, E/2 W/2, SW/4 SW/4

#### EXHIBIT "A" (Continuell)

```
TOWNSHIP 19 SOUTH, RANGE 30 EAST (continued)
Section 7:
           S/2, S/2 N/2, N/2 NE/4
Section 8:
           All
Section 9:
           All
Section 10: All
Section 11: SW/4, W/2 SE/4
Section 14: W/2, W/2 SE/4
Section 15: All
Section 16: All
Section 17: All
Section 18: E/2, NW/4
Section 19: NE/4
Section 20: N/2, SE/4 SE/4
Section 21: All
Section 22: All
Section 23:
           W/2
Section 26:
           W/2, SE/4
Section 27: All
Section 28: All
Section 29: E/2
Section 32: SE/4, NE/4 NE/4
Section 33: All
Section 34: All
Section 35: All
Section 36: SW/4, S/2 NW/4, S/2 SE/4
TOWNSHIP 19 SOUTH, RANGE 31 EAST
Section 36: SE/4
TOWNSHIP 19 SOUTH, RANGE 32 EAST
Section 31: W/2 SW/4
Section 33: SE/4, E/2 SW/4
Section 34: S/2
Section 35: S/2
Section 36: SW/4, SE/4 SE/4
TOWNSHIP 19 SOUTH, RANGE 33 EAST
Section 22: SE/4 SE/4
Section 23: SW/4
Section 25: SW/4
Section 26: All
Section 27: E/2
Section 31: S/2
Section 32: SW/4
Section 34: NE/4 NE/4
Section 35: All
Section 36: S/2, NW/4 W/2 NE/4
```

#### EXHIBIT "A" (continued)

#### TOWNSHIP 19 SOUTH, RANGE 34 EAST Section 31: SW/4 SW/4

#### TCWNSHIP 20 SOUTH, RANGE 29 EAST Section 13: SW/4 SW/4 Section 14: SE/4 SE/4 Section 22: SE/4, S/2 NE/4 Section 23: S/2, NE/4Section 24: W/2, W/2 SE/4 Section 25: N/2, N/2 S/2Section 26: All Section 27: E/2NE/4, N/2 SE/4 Section 34: Section 35: NW/4

```
TOWNSHIP 20 SOUTH, RANGE 30 EAST
Section 1:
             All
Section 2:
             All
Section 3:
             A11
Section 4:
             All
Section 5:
             S/2, NE/4
             S/2, S/2 NE/4
Section 6:
             NW/4, E/2
Section 7:
Section 8:
             All
Section 9:
             All
Section 10:
            All
Sectionall: All
Section 12:
            A11
Section 13: All
Section 14: All
Section 15:
            All
Section 16: All
Section 17:
             A11
Section 18: E/Z
Section 19: E/2
Section 20:
             All
Section 21:
             All
Section 22:
             All
Section 23:
             All
Section 24:
             All
Section 25:
             All
Section 26:
             All
Section 27:
             All
Section 28:
             All
```

Section 29:

Section 30:

All

#### EXHIBIT "A" (continued)

TOWNSHIP 20 SOUTH, RANGE 30 EAST (continued)

```
Section 31:
                E/2
Section 32:
                A11
Section 33:
                All
Section 34:
                Ali
Section 35:
                All
Section 36:
                All
TOWNSHIP 20 SOUTH, RANGE 31 EAST
                E/2, E/2 W/2
Section 1:
                SW/4, S/2 NW/4, W/2 SE/4
Section 6:
Section 7:
                W/2, SE/4, W/2 NE/4
Section 8:
                S/2, S/2 N/2
Section 9:
                SW/4, S/2 NW/4
                SE/4, E/2 SW/4
Section 11:
                All
Section 12:
Section 13:
                All
Section 14:
                E/2, SW/4, E/2 NW/4
Section 16:
                W/2
                All
Section 17:
Section 18:
                All
                All
Section 19:
                A11
Section 20:
                NW/4, S/2
Section 21:
                $/2, S/2 NE/4
Section 22:
Section 23:
                All
Section 24:
                A11
Section 25:
                All
Section 26:
                All
Section 27:
                A11
Section 28:
                All
Section 29:
                All
                All
Section 30:
Section 31:
                All
Section 32:
                A11
Section 33:
                All
Section 34:
                All
Section 35:
                A11
                All
Section 36:
TOWNSHIP 20 SOUTH, RANGE 32 EAST
```

Section 1: All Section 2: All Section 3: All

Section 4: E/2, SW/4, E/2 NW/4

#### EXHIBIT "A" (continued)

```
TOWNSHIF 20 SOUTH, RANGE 32 EAST, (Continued)
                S/2 SE/4
Section 5:
Section 6:
                W/2, SW/4 SE/4
Section 7:
                All
Section 8:
                All
Section 9.
                All
Section 10:
                A11
Section 11:
                All
Section 12:
                All
Section 13:
                All
Section 14:
                All
Section 15:
                All
Section 16:
                A11
Section 17:
                All
Section 18:
                A11
Section 19:
                All
Section 20:
                All
Section 21:
                All
Section 22:
                All
Section 23:
                All
Section 24:
                A11
Section 25:
                A11
Section 26:
                All
Section 27:
                All
Section 28:
                A11
Section 29:
                A11
Section 30:
                All
Section 31:
                A11
Section 32:
                All
Section 33:
                All
Section 34:
                A11
Section 35:
                All
Section 36:
                All
TOWNSHIP 20 SOUTH, RANGE 33 EAST
Section 1:
                All
Section 2:
                E/2, E/2 W/2
Section 5:
                W/2
                A11
Section 6:
Section 7:
                All
                 W/2, SW/4 NE/4, SE/4
Section 8:
                S/2 S/2, NW/4 SW/4
Section 9:
Section 10:
                S/2
              E/2, E/2 NW/4, SW/4
Section 11:
Section 12:
                All
Section 13:
                 All
```

Section 14:

All

#### EXHIBIT "A" (continued)

```
TOWNSHIP 20 SOUTH, RANGE 33 EAST (continued)
Section 15:
               All
Section 16:
               A11
Section 17:
               All
Section 18:
               All
Section 19:
               All
Section 20:
               All
Section 21:
               W/2 SW/4, NW/4, N/2 NE/4
Section 22:
               N/2 N/2
Section 23:
               N/2 N/2, SE/4 NE/4
Section 24:
               N/2, N/2 SE/4, SE/4 SE/4
Section 29:
               W/2, NE/4, N/2 SE/4, SW/4 SE/4
Section 30:
               All
               N/2, W/2 SW/4
Section 31:
TOWNSHIP 20 SOUTH, RANGE 34 EAST
               W/2, W/2 SE/4
Section 6:
Section 7:
               All
Section 8:
               SW/4
Section 16:
               SW/4, SW/4 NW/4, SW/4 SE/4
Section 17:
               All
Section 18:
               All
Section 19:
               All
Section 20:
               All
Section 21:
               All
Section 22:
               SW/4
Section 27:
               W/2
Section 28:
               All
Section 29:
               N/2, SE/4, NE/4SW/4
Section 30:
               NE/4 NW/4, N/2 NE/4, SE/4 NE/4
               N/2 NE/4, SE/4 NE/4
Section 32:
               N/2, SE/4, N/2 SW/4, SE/4 SW/4
Section 33:
               W/2
Section 34:
TOWNSHIP 21 SOUTH, RANGE 29 EAST
Section 1:
               All
Section 2:
               Lots 1-16, incls., SE/4, NE/4 SW/4
Section 3:
               Lots 1-9, incl.
Section 4:
               Lots 1-8 incl., Lots 10 and 11
Section 11:
               E/2, E/2 SW/4
Section 12:
               All
Section 13:
               All
Section 14:
               E/2, E/2 W/2, SW/4 NW/4, NW/4 SW/4
Section 15:
               SE/4 NE/4, NE/4 SE/4
               N/2 NE/4
Section 23:
```

#### EXHIBIT "A" (continued)

```
TOWNSHIP $1 SOUTH, RANGE 29 EAST (continued)
Section 24:
               NE/4, NE/4 SE/4, N/2 NW/4, SE/4 NW/4
Section 35:
               5/2 NE/4, SE/4, E/2 SW/4
Section 36:
               S/2 SW/4, SE/4, S/2 NE/4, NE/4 NE/4
TOWNSHIP 21 SOUTH, RANGE 30 EAST
               All
Section 1:
Section 2:
               All
Section 3:
               All
Section 4:
               All
               All
Section 5:
Section 6:
               All
Section 7:
               All
Section 8:
               A11
Section 9:
               N/2, SW/4
Section 10:
               N/2, SE/4, N/2 SW/4, SE/4 SW/4
Section 11:
               All
Section 12:
               A11
Section 13:
               A11
Section 14:
               All
Section 15:
               NE/4. NE/4 NW/4. N/2 SE/4, SE/4 SE/4
               NW/4 NW/4
Section 16:
Section 17:
               All
Section 18:
               A11
Section 19:
               All
Section 20:
               NW/4, N/2 NE/4
               E/2 E/2-
Section 22:
Section 23:
               All
Section 24:
               All
Section 25:
               N/2, SE/4, N/2 SW/4, SE/4 SW/4
Section 26:
               N/2, N/2 S/2
Section 27:
               NE/4, N/2 SE/4, SE/4 SE/4
Section 29:
               NW/4, N/2SW/4
Section 30:
               E/2, E/2 W/2
Section 31:
               All
Section 32:
               S/2, NW/4, NW/4 NE/4, S/2 NE/4
Section 36:
               E/2
TOWNSHIP 21 SOUTH, RANGE 31 EAST
Section 1:
               All
               All
Section 2:
               All
Section 3:
Section 4:
                All
Section 5:
               All
Section 6:
               All
                All
Section 7:
Section 8:
                All
```

#### EXHIBIT "A" (continued)

```
TOWNSHIP 21 SOUTH, RANGE 31 EAST(continued)
Section 9:
               All
Section 10:
               W/Z
               N/2, SE/4, N/2 SW/4, SE/4 SW/4
Section 12:
               N/2 NE/4
Section 13:
Section 15:
               W/2
               E/2, NW/4, E/2 SW/4
Section 16:
Section 18:
               NW/4, W/2 NE/4, NE/4 NE/4, W/2 SW/4
               NE/4 SW/4
Section 21:
               E/2, NE/4 NW/4
Section 22:
               W/2
Section 27:
               W/2, SW/4 NE/4, W/2 SE/4
Section 28:
Section 30:
               SW/4, W/2 NW/4, SE/4 NW/4
Section 31:
               W/2
Section 33:
               NE/4 NE/4
Section 34:
               NW/4, NW/4 NE/4
TOWNSHIP 21 SOUTH, RANGE 32 EAST
Section 6:
               Lots 1-7 incls., Lots 10-15, incls., SW/4
Section 7:
               W/2
Section 22:
               E/2
Section 23:
               All
Section 24:
               All
TOWNSHIP 21 SOUTH, RANGE 33 EAST
               Lots 1, 2, 3
Section 3:
Section 17:
               S/2 S/2
Section 18:
               SE/4 SE/4
Section 19:
               All
               All
Section 20:
               W/2, SE/4, S/2 NE/4
Section 21:
               S/2, S/2 N/2
Section 22:
               S/2, S/2 N/2, NE/4 NE/4
Section 23:
Section 24:
               All
               NW/4, N/2 NE/4, SW/4 NE/4, N/2 SW/4
Section 25:
               W/2, NE/4, N/2 SE/4, SW/4 SE/4
Section 26:
Section 27:
               All
Section 28:
               All
               N/2, SE/4, NE/4 SW/4
Section 29:
Section 30:
               N/2 NE/4, SE/4 NE/4
Section 33:
               N/2 N/2
Section 34:
               N/2 N/2
```

#### EXHIBIT "A" (continued)

#### TOWNSHIP 21 SOUTH, RANGE 34 EAST Section 19: W/2

```
TOWNSHIP 22 SOUTH, RANGE 129 EAST
               A11
Section 1:
Section 2:
               E/2, E/2 NW/4, SW/4
Section 3:
               S/2 SE/4, NE/4 SE/4
Section 10:
               E/2, E/2 W/2, SW/4 SW/4
Section 11:
               A11
Section 12:
               All
Section 13:
               A11
Section 14:
               All
Section 15:
               All
Section 16:
               SE/4, SE/4 NE/4, SE/4 SW/4
Section 20:
               E/2 E/2
Section 21:
               All
Section 22:
               All
Section 23:
               A11
Section 24:
               All
Section 25:
               A11
Section 26:
               All
Section 27:
               All
Section 28:
               NE/4, N/2 NW/4, SE/4 NW/4, SE/4
Section 33:
               NE/4 NE/4
Section 34:
               NW/4, W/2 E/2, N/2 SW/4, SE/4 SW/4
Section 35:
               E/2, SW/4, SE/4 NW/4
Section 36:
               All
```

#### TOWNSHIP 22 SOUTH, RANGE 30 EAST

Section 1:	E/2
Section 5:	N/2, N/2 S/2, SW/4 SW/4
Section 6:	All
Section 7:	W/2, $W/2 E/2$ , $SE/4 SE/4$
Section 8:	S/2 SW/4
Section 12:	NE/4 NE/4
Section 13:	NW/4, N/2 SW/4, SW/4 SW/4
Section 14:	SE/4, S/2 NE/4, E/2 SW/4, SW/4 SW/4
Section 17:	NW/4
Section 18:	All
Section 19:	A11
Section 20:	<b>All</b>
Section 21:	S/2, SW/4 NW/4
Section 22:	S/2, S/2 N/2, NE/4 NE/4
Section 23:	W/2, $W/2$ NE/4, NE/4 NE/4
Section 26:	W/2 W/2
Section 27:	All

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#### EXHIBIT "A" (continued)

```
TOWNSHIP 22 SOUTH, RANGE 30 EAST (continued) Section 28: All
Section 29:
                       K11
Section 30:
                       All
                       All
Section 31:
Section 32:
                       All
Section 33:
                       All
Section 34:
                       All
Section 35:
                       W/2
TOWNSHIP 22 SOUTH, RANGE 31 EAST
Section 6: W/2, W/2 NE/4, NW/4 SE/4
Section 7: N/2 NW/4
TOWNSHIP 23 SOUTH, RANGE 29 EAST
                      All
E/2, NV/h, NE/h SW/h
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DONE at Santa Fe, New Mexico on the day and year hereinabove designated.

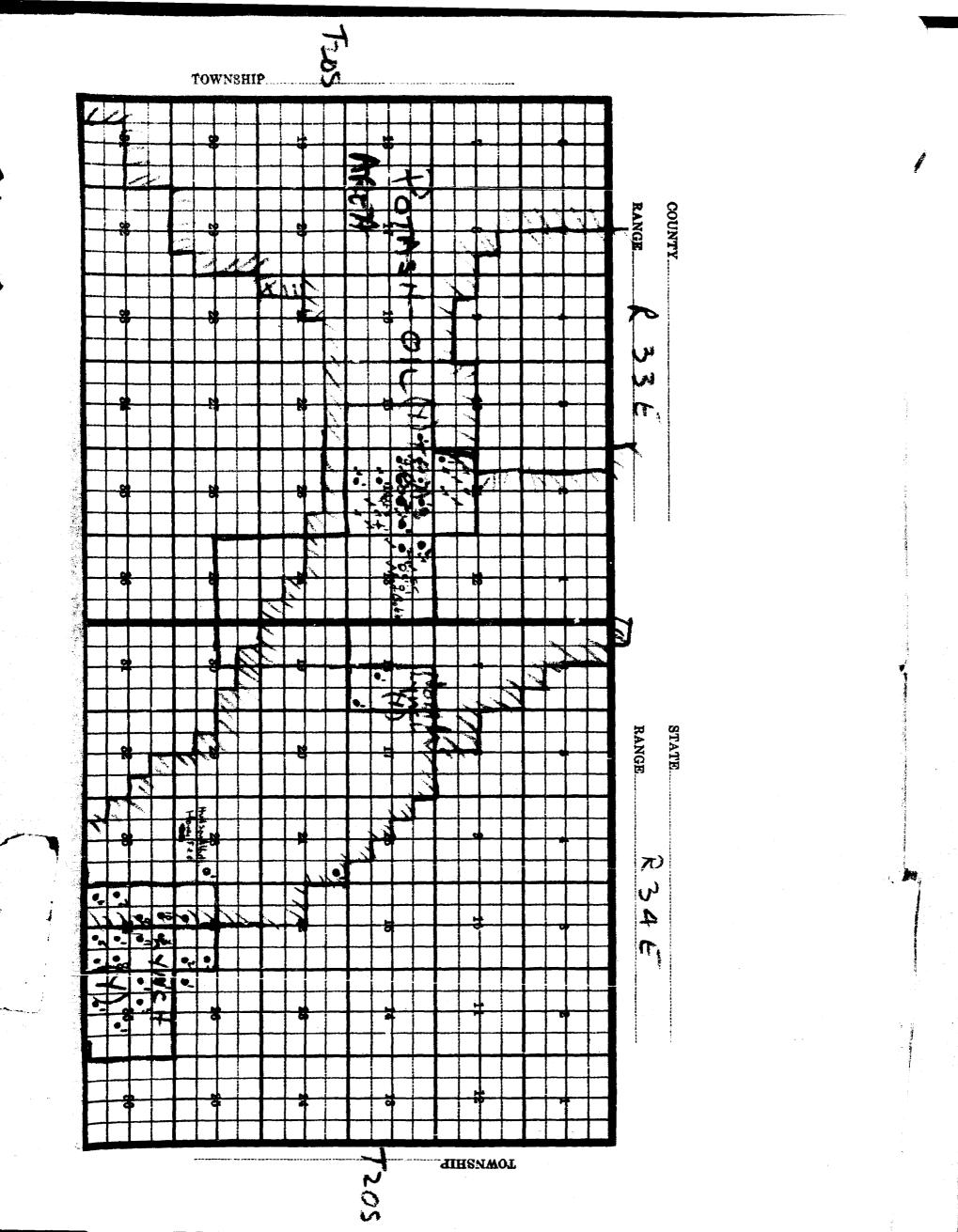
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JOHN F. SIMMS, Chairman

E. S. WALKER, Member

W. B. MACEY, Member & Secretary

SEAL



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## WESTERN UNION

## **TELEGRAM**

W. P. MARSHALL, PRESIDENT

1206 (4-55)

otherwise the message will be sent at the full rate

FULL RATE

LETTER TELEGRAM

SHORE-SHIP

INTERNATIONAL SERVICE

Check the class of service desired

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			AIL CONSERVATION COMMISSION	8:15 a.m.

Send the following message, subject to the terms on back hereof, which are hereby agreed to

U.S. GEOLOGICAL SURVEY AREASIA, NEW MEXICO JULY 11, 1957

CASING AND CHRENTING PROCEAN, SOUTHERN CALIFORNIA'S APPLICATION, CASE 1274, APPROVED BY THE COMMISSION.

Carried 7-19-57

A. L. PORTER, JR. SECRETARY - DIRECTOR OIL CONSERVATION CONMISSION

#### ALL MESSAGES TAKEN BY THIS COMPANY ARE SUBJECT TO THE FOLLOWING TERMS:

- To grand against mistakes or delays, the mader of a message should order peaked, that is, telegraphed back to the originating office for comparison. For this, one-half the unrepeated message and pold for as such, in consideration whereof it is agreed between the scatter of the message and the 'actorized Company as follows:
- I. The Telegraph Company shall not be liable, for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the unrepeated message rule beyond the sum of five hundred dollars; nor for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the repeated message rule beyond the sum of five thousand dollars, unless specially valued; nor in any case for delays arising from unavoidable interruption in the working of its lines.
- 2. In any event the Telegraph Company shall not be 1 for damages for mistakes or delays in the transmission or delivery, or for the non-delivery, of any message, whether caused by the negligence of its necessage is necessage in the necessage is valued, unless a greater have been described in writing by the needer of at the time the message is valued, unless a greater value is stated in writing by the needer of the three of at the time the message is rendered for transmission, and unless the repeated-message rate is paid or agreed to be paid and an additional charge equal to one-time of the amount by which such valuation shall exceed five thousand dollars.
- 3. The Telegraph Company is hereby made the agent of the sender, without liability, to forward this message over the lines of any other company when necessary to reach its destination.
- 4. The applicable tariff charges on a message destined to any point in the continental United States listed in the Telegraph Company's Directory of Stations cover its delivery within the setablished city of community limits of the destination point. Beyond such limits and to points not listed in the Telegraph Company's Directory of Stations, the Telegraph Company doe not undertake to make delivery but will endeave to arrange for delivery by any available means as the agent of the sender, with the understanding that the sender antihorizes the collection of any editional charge from the addresses and across to raw such additional charge from the addresses and across to raw such additional charge from the addresses.
- 5. No responsibility attaches to the Telegraph Company concerning messages until the same are accepted at one of its transmitting offices; and if a message is sent to such office by one of the Telegraph Company sentesseers, he acts for that purpose as the agent of the needs when the Telegraph Company sentesseers is that instance acts as the agent of the Telegraph Company in acceptance, the Telegraph Company assuming responsibility from the time of such acceptance.
- 6. The Telegraph Company will not be liable for damages or statutory penalties when the claim is not presented in writing to the Telegraph Company. (a) within almety days after the ansange is slick with the Telegraph Company for transmission in the case of a message between points within the United States (except in the case of an intrastate message in Texas, and a point in the Child States on the other hand, or between a point in the Child States and a ship at sex or in the air. (b) within 95 days after the cause of action. If any, shall have accrued in the Child States and a ship at sex or in the air. (b) within 95 days after the cause of a close, and a ship at sex or in the air. (b) within 95 days after the cause of a close, and a ship at sex or in the air. (c) within 95 days after the cause of a close, and a ship at sex or in the air. (c) within 95 days after the cause of a close, and a ship at sex or in the same of a close, and a ship at sex or in the same of a close, and a ship at sex or in the control of the company for transmission in the case of a message between a point in the Childed States and a foreign or overseas point other than the points specified above in this paragraph; pro-ided, however, that this condition shall not apply to claims for damages or overtharges within the jurview of Section 415 of the Communications and the control of the Communications are the control of the communication are the control of the control of the communication are the control of the co
- 7. It is agreed that in any action by the Telegraph Company to recover the toils for any message or messages the prompt and correct transmission and delivery thereof shall be prompted, subject to rebuiltal by competent evidence.
- 8. Special terms governing the transmission of messages according to their clauses, as enumerated below, shall apply to messages in each of such respective classes in addition to all the foregoing terms.
  - \$. No exaployee of the Telegraph Company is authorized to vary the foregoing

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#### CLASSES OF SERVICE

#### DOMESTIC SERVICES

#### INTERNATIONAL SERVICES

#### TELEGRAM

The fastest domestic service.

#### DAY LETTER (DL)

& deferred same-day service, at low rates.

#### NIGHT LETTER (NL)

Feonomical overnight service. Accepted up to 2 A. M. for delivery the following morning; at rates lower than the Telegram or Day Letter rates.

#### FULL RATE (FR)

The fastest oversess service. May be written in code, cipher, or in any language expressed in Roman letters.

#### LETTER TELEGRAM (LT)

For overnight plain language messages, at half-rate. Minimum charge for 22 words applies.

#### SHIP RADIOGRAM

For messages to and from ships at sea.

#### NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico

Revised 7/1/57

REQUEST FOR (OIL) - (GAS) ALLOWABLE

New Well Recompletion

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well.

Form C-104 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when new oil is deliv-

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# BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico July 2, 1957

IN THE MATTER OF:

CASE NO. 1274

TRANSCRIPT OF PROCEEDINGS

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#### BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

July 2, 1957

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IN THE MATTER OF:	,
The application of Southern California Petroleum Corporation for an exception from the shallow-zone casing requirements in the Potash-Oil Area	)
as established by Order R-111-A. Applicant, in the above-styled cause, seeks an order authorizing	)
the following casing program in lieu of the shallow- zone casing requirements established by Order R-111-A	)
for its proposed well to be drilled at a point 1980 feet from the North and East lines of Section 13,	)
Township 20 South, Range 33 East, in the Teas Pool, Lea County, New Mexico:	)
13 3/8-inch casing in the top of the Red Beds	)
at about 60 feet.	)
8 5/8-inch or 10 3/4-inch casing at approximately 1,000 feet, but in any event below the water.	CASE NO. 1274
$5\frac{1}{2}$ -inch casing at approximately 3,200 feet in the top of the Yates formation.	)
-	.)
In the event production is encountered, applicant proposes to pull all casing except the production	)
string and to cement the production casing to the surface.	<b>)</b>
	•
BEFORE:	

#### DANIEL S. NUTTER, Examiner

#### TRANSCRIPT OF HEARING

EXAMINER NUTTER: The hearing will be called to order please. First case on the docket this morning will be Case No. 1274.

COOLEY: Case No. 1274, the application of Southern California

Petroleum Corporation for an exception from the shallowzone casing requirements of the Potash-Oil Area as
established by Order R-III-A.

WARREN: I have a prepared statement.

NUTTER: Will you sit down here, Mr. Warren.

MR. J. A. WARREN, HAVING BEEN FIRST DULY SWORN IN, TESTIFIED AS FOLLOWS:

COOLEY: Will you state your name and position please.

WARREN: James A. Warren, Division Engineer for Southern

California Petroleum Corporation in Midland, Texas.

COOLEY: Have you previously testified before this Commission,
Mr. Warren?

WARREN: I have on several occasions.

COOLEY: Were your qualifications accepted as an expert witness?

WARREN: Yes they were.

COOLEY: Les the Examiner accept the qualifications of the witness?

NUTTER: Yes sir, will you proceed, Mr. Warren.

WARREN: Southern California Petroleum Corporation filed an application on May 20, 1957, for an Examiner Hearing regarding exception to the shallow-zone casing requirements in the Potash-Oil Area as established by Order R-111-A dated October 13, 1955. Copies of this application were mailed to the Potash Company of America, Carlsbad, New Mexico, and the U. S. G. S. Offices in Carlsbad and Artesia. Southern California Petroleum Corporation is the operator of six of the fourteen wells in the Teas Pool and now proposes to drill a new well

in the SW/4 of the NE/4 of Section 13, Township 20 South, Range 33 East. That's 1980 feet from the North and East lines of said Section 13. This location falls in center of Unit "G" being a part of government lease Las Cruces No. 065447. This lease is within the horizontal limits of the Teas Pool and the Potash-Oil Area as defined by Order R-111-A. A plat of the Teas Pool area was submitted with the above-mentioned application during location of our proposed well and we wish to submit a copy of this plat as Exhibit "A". In the interest of economy we plan to drill this well with cable tolls in order to set protective casing strings above the Salada formation without cementing them and thus drill into the Yates oil zone and determine whether or not we have a productive well before cementing the salt protection or oil strings. This procedure has been followed in drilling our other wells in the Teas Pool. Specifically we propose to run the following casing strings: surface casing: 13-3/8 at about 60 feet to shut off possible fresh water in surface sands. Water shut off casing: 10 3/4" at about 1,000 feet to shut off caving section and Santa Rosa water. If it should be necessary to set the 10 3/4" casing at 600 to 700 feet to prevent caving, then 8 5/8 casing will be carried to about a thousand feet and set below the water. Production string: the Salada formation will be drilled dry and hole reduced at the top of the Yates sands at about 3200

feet. The Yates sands will then be penetrated to determine if commercial oil and gas is present. If completion is to be attempted, 5 1/2" casing will be run to the top of the Yates, the upper casing strings will be pulled and 5 1/2" casing cemented to the surface in accordance with Order R-111-A. We feel that this casing program will adequately protect the salt section and possible potash deposits if well conditions are as they are expected to exist. If any unexpected conditions should occur we will immediately take whatever action is necessary to prevent contamination of potash deposits which may be present. In the event that completion is not attempted, the hole will be plugged with cement throughout the salt section, the upper strings of casing pulled, and all water zones cemented in accordance with Order R-111-A. If this program be satisfactory we respectfully request that the U.S. Geological Survey be so notified in order that they may consider our Notice of Intention to Drill for approval. Respectfully submitted this 2nd day of July, 1957, Southern California Petroleum Corporation.

NUTTER: Do you have anything further, Mr. Warren?

WARREN: No, that is the proposal that we wanted to make, but

I do want to have some discussions if there is any
feeling that there might be some objection to this

drilling into the Yates without setting the 5 1/2, because we don't want to have our application turned down because of the way it is presented in this prepared statement. We want to drill the well but we want to satisfy whatever requirements are necessary.

NUTTER: Does anyone have any questions of the witness. Mr.

Mankin-

MANKIN: Mr. Warren I notice from your casing program that you anticipate water down only to about 1,000 feet. Has your experience been in this particular pool in the prior drilling that you obtained no water below a 1,000 feet; there is nothing to, say 1300 - 1400 feet, no water?

WARREN: Yes, sir, that's in the four wells that I have been familiar with in that field and that we have drilled,
I don't believe we had any water below about 900 - 850 to 900.

MANKIN: So you feel that that would be adequate protection down to what you found in the past around a 1,000 feet?

WARREN: Yes, in other words, we of course would be watching for the water and would go far enough to where the hole dried up, before we hoped that it would be below any water that is present before we start the 5 5/8.

MANKIN: In an area slightly to the East of this where the anticipated water down to 1300 feet if you found that condition of course you would further land the 10 3/4 or 8 5/8 casing on through all water zones to protect

the salt and water - and salt and potash deposits.

WARREN: Yes, that's right, if the unexpected should occur that some water would come in at 1200 feet of course that would expose the salt section to that water and we would lower the pipe.

MANKIN: How did you anticipate setting each of these strings of casing such as 13 3/8, 10 3/4 or 8 5/8, do you anticipate a casing seat, or mudded up or packed or what?

WARREN: No, of course we plan to set them on a shoulder and mud them in with heavy mud in the usual cable tool fashion.

MANKIN: Mudding them in rather than anything, tacking them in.

WARREN: Yes because it is our hope to be able to pull all the upper strings of pipe, of course is each one is set we will bail the hole dry for an adequate water shut-off test.

MANKIN: I notice in these wells in the Teas Pool have varied in practice, some have left the intermediate string, - intermediate and surface string in by mudding up, others have tacked it and others have pulled it - your procedure of course is to attempt to mud it up and pull it later....

WARREN: Yes that's right at least in each of our two Bob wells and two Forth wells all the upper strings of pipe were pulled.

MANKIN: And your application of course indicated that the Salada formation will be drilled dry if the offset

Potash company producers would make such a suggestion you would be possibly agreeable to drilling with some solution and using brine solution if that was necessary?

WARREN: Yes sir, if it was necessary to carry any fluid in the hole, if the contractor felt it necessary to carry any fluid, we would be willing to have a saturated brine solution.

MANKIN: Mr. Warren, this particular well location is within the presently defined horizontal limits - horizontal and vertical limits of the Teas Pool, is that correct?

WARREN: That's right.

MANKIN: Which is the Yates formation -

WARREN: Yes sir.

MANKIN: It is also within the defined limits of the Oil-Potash Area as defined in Order R-III-A - is that correct?

WARREN: Yes.

MANKIN: Your application indicated if you got production, that you would set casing on top of the Yates. What has been the experience of Southern California as far as setting the casing prior to the actual drilling into the formation, would you anticipate - could you tell whether you could drill into the - - set the casing first, production casing and then drill in or would you feel that it would be too much of a gamble to do it that way.....you would have to actually find if you had the production there before you set the casing.

WARREN: No, we have just done it that way in the past because that program has been approved of having our water string.....lower string of pipe set up at around 1,000 feet, I believe, is the lowest that any of those were set at and then drilling the rest of the hole without pipe and reducing the hole diameter at or near the top of the Yates and proceeding to drill into the productive interval and then by a few hours bailing and checking hole fill-ups we decide whether we have a well or not then immediately run pipe and run in the oil string, and cement.

MANKIN: So you would not. . . . . would it be your best plan not to set the casing until after you determine whether you have commercial production and then at that time set it at the top of the Yates.

WARREN: Yes because that's what we have done before and it has been successful. The only problem about running your string of 5 1/2 is of course that you have the expense of getting it up there and running it and possibly a small cement job on it; if that can be avoided, its less expensive. Of course if that would be the point that would prevent us from getting approval to drill this well this way why we will run the pipe before drilling the Yates if that becomes necessary.

MANKIN: Of course there would be an additional cost of actually running the casing even though it wouldn't be cemented if you did not find production if that method was followed of setting prior to drilling the formation.

WARREN: Yes, in fact the last well we drilled in that field...

or what we thought was in the field was the Forth No.

1-3 which turned out to be a dry hole, and it was such
a sure shot that we went ahead and ran the casing as

soon as we got an oil show in the Yates, we did pack
it however, and we had to pull it then.

MANKIN: You were able to recover it?

WARREN: Yes, not all of it.

NUTTER: Mr. Warren you stated that in previous operations you have frequently run your 5 1/2" pipe without tacking it....or I beg your parden...you run your 5 1/2" pipe after obtaining production. You would drill into the Yates, obtain production and then run 5 1/2" pipe.

WARREN: Yes, obtain an indication of production.

NUTTER: At least you have tested the Yates prior to running the pipe?

WARREN: Yes, that's simply by....whatever the hole will....

by how much oil will come into the hole by natural

fill-up which by the way I don't think that any of

them have been more than 3 to 4 hundred feet of natural

fill-up.

NUTTER: Well now Sir, in those cases where you waited until you had tested the Yates prior to running the pipe, had you set pipe.....these upper strings of pipe already.

WARREN: Yes.

NUTTER: Had you cemented those strings of pipe?

WARREN: No, they had been mudded in and bail tested for a water shut-off so that we knew the hole was dry below a thousand or 1200 feet before we started drilling the salt section.

NUTTER: Even your surface pipe was merely landed?

WARREN: Yes.

NUTTER: When did you cement your surface pipe then?

WARREN: We didn't, after the 5 1/2 oil string was landed on the bottom and then probably put the first stage of cement into the shoe then we would pull the 8 5/8 from approximately a 1,000, the 10 3/4 from 600, 13 3/8 from 60, pull it out of the hole then do a second stage cement job through a stage collar at approximately 1300-1400 feet, that's the way all four of our producing wells ....as far as the wells we've drilled are completed.

NUTTER: Was that in exception to Order R-111-A or was that prior to the effective date of the order?

WARREN: Yes, all of those were drilled prior to Order R-111-A.

NUTTER: Before the Potash-Oil Area rules were established then?

WARREN: Yes.

NUTTER: In the event that the Commission finds that it would be necessary to run 5 1/2 inch pipe and tack it in the hole prior to drilling into the Yates formation - that

would be satisfactory with Southern California?

WARREN: Yes it would. I would like to ask that if you do
want to make that stipulation wouldn't it be satisfactory
to use the Texas pattern shoe, and set that on the
shoulder and mud it in the same manner as the upper
string?

NUTTER: Could you cement through the shoe?

WARREN: Yes - after we determine to complete the well why it simply could be picked up and of course since we plan to cement the oil-string all the way from bottom to top anyway, it will be no problem at all, the cement job could still be performed.

NUTTER: I think you anticipate the top of the Yates at approximately 3200 feet.

WARREN: Yes sir.

NUTTER: Can that be cemented in one stage with this Texas pattern shoe?

WARREN: Yes, I believe so.

NUTTER: All the way to the surface?

WARREN: Yes sir.

NUTTER: Now, as regards the drilling of the salt section, do you anticipate drilling through the salt section with a dry hole or with brine in the hole?

WARREN: I had assumed that it would be drilled dry, but due to the discussion I have heard it may be necessary to put

a small amount of fluid in, but if the contractor does feel that it is necessary to have a small amount of fluid in the hole, we would be willing to - we would be glad to do that...have a saturated brine solution before it was put in the hole.

NUTTER: In other words, if you use a solution to drill through the salt, it will be a saturated solution?

WARREN: Yes sir.

NOTTER: Does anyone have any further questions of the witness?

(Off the record discussion, Nutter and Cooley)

Mr. Warren, it appears after discussion, that there is
a possibility that the Potash Company of America is of
the understanding that a saturated solution will be used
in drilling through the salt. The Commission can determine
that, whether the Potash Company feels that a saturated
solution is necessary. Now in the event that the Potash
Company feels that a saturated solution is necessary to
drill through the salt and the Commission establishes
that as a fact, would you be agreeable to drilling with
a saturated solution?

WARREN: Yes, certainly. I presume it would be a reasonable amount, that they wouldn't want the contractor to carry a half a hole full of water to drill that......in normal cable tool drilling, you know, they do carry on a low fluid level.

NUTTER: Yes, sir, a reasonable amount of fluid will be used, if that is the understanding that the Potash Company?

WARREN: Certainly.

NUTTER: Incidentally I have a telegram that I would like to read into the record. It is addressed to the Oil Conservation Commission, State Capitol, Santa Fe, New Mexico, dated July 1, 1957: "Re: Case 1274. Potash Company of America has no objection to the exception from R-Ill-A as outlined. Signed D. E. Protz." In the event that it is established that the Potash Company of America's waiver to any objection to this program is on the understanding that a saturaged solution will be used to drill through the salt, that is agreeable with Southern California?

WARREN: Yes sir.

**NUTTER:** Ok.

NUTTER: Mr. Mankin.

MANKIN: Warren, how much salt section do you rermally ripa in this area, or in other words the extent of the Salada, at what top and what bottom do you find it in this area?

WARREN: I believe, to the best of my recollection it is approximately 1300 feet down to 2300 or 2400 the top of the anhydrite is about 2300 or 2400.

MANKIN: So you would some 1,000 or 1100 feet of Salad section in this particular area?

WARREN: Yes.

WANKIN: Which under your plan you feel would give adequate protection to the salt section which likewise contains potash deposits?

WARREN: Yes, providing of course it should be protected because if we have all the water shut-off above it then the only fluid that is necessary to come in contact with the Salada formation would be the drilling fluid or if it could be dry there will be no fluid and likewise if we were allowed to drill into the Yates zone before setting any oil string the expected fluid levels, the fluid levels we have encountered in the past have not been high enough to come within four or five hundred feet of getting up into the salt so we propose that as our first choice as being the least expensive way to drill the well, and still feeling that we could protect the salt and potash interval. We would have 5 1/2 inch casing on the location so that in case something unforeseen occurred, it could be run in quickly.

MANKIN: I have one further question, Mr. Warren. The primary reason for this request for an exception to Order R-111-A is that you feel that the program that you have outlined will protect the Potash deposits equally as well in this particular area alone than would the true adherence to Order R-111-A, is that correct?

WARREN: Yes, I think they would be protected as well and....

MANKIN: Of course there would be considerable savings to Southern California Petroleum Company to - in having this program which you have proposed as compared to the more expensive program that might be required under Order R-111-A, is that correct?

WARREN: Yes.

MANKIN: That's all.

NUITER: Does anyone else have any question of the witness?

Mr. Cooley.

COOLEY: Mr. Warren, if it develops in drilling this well that the proposed casing program is not adequate will any corrective measures be taken that are necessary?

WARREN: Yes sir, as stated in my testimony that we would take immediate steps to remedy whatever unforeseen developments should come up. And I say again, we could - if we were - if this application were approved as stated we would further have our 5 1/2" casing on the location so that it could be run immediately in case there were unforeseen developments, which would mean fluid coming in from above or fluid from below.

COOLEY: If the well proves productive there would be no difference in cost, in whether you set the 5 1/2 before or after you drill the Yates, is that correct?

WARREN: No, that's right.

COOLEY: And if it's not productive then you would have lost the time necessary to put the casing in the hole and transporting it out there to the site and everything.

WARREN: Yes.

COOLEY: Would you care to estimate what that cost would be if it proved non-productive?

WARREN: Do you mean.....

COOLEY: The differential between setting....assume the well proves non-productive, and what would the additional cost be if you were required to place the 5 1/2" casing in the hole prior to drilling the Yates.

WARREN: In the hole and cemented or mudding it?

COULEY: Mudding it.

WARREN: Oh, just off hand I'd say about a \$1,000, I don't believe it would be any more than that.

COOLEY: And what is the total estimated cost of drilling the well?

WARREN: \$32,000, drilling and completing.

COOLEY: I believe that's all. Thank you.

NUTTER: Any one else have any question, if not the witness may be excused. Does anyone have anything they wish to offer in this case, if not we take the case under advisement, and the hearing is adjourned.

STATE OF NEW MEXICO )
() ss.
(COUNTY OF SANTA FE )

I, Ida Rodriguez, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission Examiner at Santa Fe, New Mexico, is a true and correct record, to the best of my knowledge, skill and ability.

DATED at Santa Fe, New Mexico this 12th day of July, 1957.

Ida Rodrigdez

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1274. heard by me on 1957.

New Nextee Oil Conservation Commission

### REPORE THE CIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL COMBREVATION COMMISSION OF THE STATE OF NEW MEXICO FOR THE PURPOSE OF COMBIDERING:

> CASE NO. 1274 Order No. R-1021

APPLICATION OF SOUTHERN CALIFORNIA PRINCIPUM CORPORATION FOR AN EXCEPTION TO THE SHALLOW-BONE CASING REQUIREMENTS IN THE POTASE-OIL AREA AS ESTABLISHED BY ORDER R-111-A.

#### ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This cause came on for bearing at 9 o'clock a.m. on July 2, 1957, at Santa Fe, New Mexico, before Daniel S. Mutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission", in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 17th day of July, 1957, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

#### finds:

- (1) That due notice of the time and place of hearing and the purpose thereof having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.
- (2) That the applicant, Southern California Petroleum Corporation, proposes to drill an oil well with cable tools, said well to be drilled at a point 1980 feet from the North line and 1980 feet from the East line of Section 13, Township 20 South, Range 33 East, NEPM, Tess Pool, Lea County, New Mexico, which location is in the Potash-Cil Area, as defined by Commission Order R-111-A.
- (3) That the applicant proposes to case the aforementioned well as follows rather than in the manner prescribed by Order R-111-A:
  - 13 3/8" casing to a depth of approximately 60 fest;
  - 10 3/4" and/or 8 5/8" casing to skut-off water down to approximately 1000 feet;
  - 5 1/2" casing to the top of the Tates formation prior to drilling into said formation;

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- (4) That the applicant should be permitted to pull all casing except the 5½-inch production string in the event that commercial oil or gas production is found.
- (5) That the production string should be cemented throughout its entire length in the event commercial oil or gas production is encountered.
- (6) That the aforementioned casing program will confine the water, oil, and gas to the strata in which they naturally occur and will afford adequate protection for the potash deposits in the area, and that the proposed casing program will result in a considerable economic savings to the applicant.
- (7) That in any event, the applicant should make adequate provisions for the protection of potash deposits in the area.
- (8) That all interested potash operators were notified of the subject application and that no objections have been registered with the Commission.
- (9) That the applicant should be required to comply with all of the previsions of Order R-III-A, not specifically excepted by this order.

#### IT IS THEREFORE ORDERED:

- 1. That the applicant, Southern California Petroleum Corporation, be and the same is hereby authorized to drill an oil well with cable tools in the Potash-Oil Area at a point 1980 feet from the North line and 1980 feet from the East line of Section 13, Township 20 South, Range 33 East, NMPM, Teas Pool, Lea County, New Mexico, and to case said well in the following manner:
  - 13 3/8" casing to a depth of approximately 60 feet;
  - 16 3/4" and/or 8 5/8" casing to shut-off water down to approximately 1000 feet;
  - 5½" casing to the top of the Yates formation prior to drilling into said formation;
- 2. That in the event commercial oil or gas production is found, the 5%-inch production string shall be comented throughout its entire length in which case the applicant may pull all other strings of easing.
- 3. That the applicant shall comply strictly with all the provisions of Order R-111-A not specifically excepted herein.

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4. That, notwithstanding the foregoing, the applicant shall make adequate provisions for the protection of the potash-bearing strata regardless of the conditions encountered in drilling said well.

DOME at Santa Fe, New Mexico, on the day and year hereinabove designated.

> STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

EDWIN L. MECERN, Chairman

MURRAY E. MORGAN, Momber

A. L. PORTER, Jr., Member & Secretary

