



Case 1539

IN REPLY REFER TO:

U.S. DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
P. O. Box 6721  
Roswell, New Mexico

October 17, 1958

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Oil Conservation Commission  
State Capitol  
Santa Fe, New Mexico

Gentlemen:

Reference is made to Case No. 1539 on the Examiner's Docket for October 22, 1958, application of T. J. Sivley for an exception to the casing requirements delineated in Order No. R-111-A for the Federal Silver well No. 1, to be located in the NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 20 S., R. 34 E., Lea County, New Mexico.

Said well will be drilled on Federal land under lease New Mexico 039256. This lease is subject to a potash stipulation, a copy of which is attached to this letter. It is our understanding that analysis of the cores from well No. 1 Hover Federal in the NESE sec. 28, T. 20 S., R. 34 E., N.M.P.M., which was completed as a dry hole on or about June 28, 1957, revealed the presence of a commercial potash ore body. This well is located approximately  $\frac{1}{4}$  mile east of the proposed Federal Silver No. 1 well.

The casing program proposed in the request for exception from Order R-111-A does not appear adequate to prevent the infiltration of oil, gas or water into formation containing potash deposits and is not regarded by this office as satisfactory compliance with the potash stipulation of the lease.

Accordingly, please consider this letter as our formal protest to the granting of the requested exception to the casing program under consideration in Case No. 1539.

Very truly yours,

EDWIN M. THOMASSON  
Acting Oil and Gas Supervisor

MAIN OFFICE 000

DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

1959 OCT 20 PM 1

Stipulations to be executed and made part of any oil and gas lease involving lands described in the Departmental Notice of October 16, 1951.

The lessee further agrees that:

- (1) ~~No wells will be drilled for oil or gas in formations above the base of the Delaware sand, or above a depth of 5,000 feet, whichever is the lesser, except upon approval of the Director of the Geological Survey, it being understood that drilling for production to these formations will be permitted only in the event that it is satisfactorily established that such drilling will not interfere with the mining and recovery of potash deposits or the interest of the United States would best be subserved thereby.~~
- (2) No wells will be drilled for oil or gas in formations below the base of the Delaware sand, or below a depth of 5,000 feet, whichever is the lesser, except pursuant to a unit plan approved by the Director of the Geological Survey, unless drilling is otherwise required or approved by the Director to protect the lease from drainage.
- (3) No wells will be drilled for oil or gas at a location which, in the opinion of the Oil and Gas Supervisor of the Geological Survey, would result in undue waste of potash deposits or constitute a hazard to or unduly interfere with mining operations being conducted for the extraction of potash deposits.
- (4) The drilling or the abandonment of any well on said lease shall be done in accordance with applicable oil and gas operating regulations including such requirements as the Oil and Gas Supervisor of the Geological Survey may prescribe as necessary to prevent the infiltration of oil, gas, or water into formations containing potash deposits or into mines or workings being utilized in the extraction of such deposits.

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Signature of Offeror or Lessee

**OIL CONSERVATION COMMISSION**

P. O. BOX 871

**SANTA FE, NEW MEXICO**

October 27, 1958

C  
O  
P  
Y

Mr. R. H. Blackman, Jr.  
Potash Company of America  
Box 31  
Carlsbad, New Mexico

Dear Mr. Blackman:

As per your request dated October 24th, enclosed is a copy of a letter dated October 17th from the U. S. Geological Survey regarding Case 1539, an exception to the casing requirements as set out in Order R-111-A.

Very truly yours,

A. L. Porter, Jr.  
Secretary - Director

bp  
Encl.

# POTASH COMPANY OF AMERICA

GENERAL SALES OFFICES · 1625 EYE STREET · N.W. · WASHINGTON 6 · D.C.  
SOUTHERN SALES OFFICE · 408 · 9 · Candler BLDG · ATLANTA · GA.  
MIDWESTERN SALES OFFICE · FIRST NATIONAL BANK BLDG · PEORIA · ILL.



R. H. BLACKMAN, JR.  
RESIDENT COUNSEL

REPLY TO:

EXECUTIVE OFFICES  
MINES AND REFINERY  
CARLSBAD · NEW MEXICO  
October 24, 1958

New Mexico Oil Conservation  
Commission  
Mabry Hall, State Capitol  
Santa Fe, New Mexico

Re: Case #1539 - R-111-A

Gentlemen:

Would you kindly furnish me with one copy of the letter dated between October 15th and October 21st which was written by the Roswell office of the United States Geological Survey to the Oil Conservation Commission in connection with the application of T. J. Sivley for an exception to the R-111-A casing requirements in the case noted above. It is not necessary that the copy be certified.

Please enclose your statement for preparation of the copy with the copy and it will be promptly paid.

Yours very truly,

A handwritten signature in cursive script, appearing to read 'R. H. Blackman, Jr.', is written over a faint, illegible typed name.

RHBjr/dmb

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 Potash-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 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 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 six 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 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; 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 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-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.

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 intended to prevent enlarged drill holes.

VI.

PLUGGING AND ABANDONMENT OF WELLS

(1) All wells heretofore and hereafter drilled within the Potash Area 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.

(2) The fluid used to mix the cement shall be saturated with the salts 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.

VII.

LOCATION FOR WELLS

Before commencing drilling operations for oil or gas on any lands within the Potash Area, the well operator shall prepare a map or plat showing the location 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 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 herewith, 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
- 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

TOWNSHIP 19 SOUTH, RANGE 34 EAST

Section 31: SW/4 SW/4

TOWNSHIP 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/4

Section 24: W/2, W/2 SE/4

Section 25: N/2, N/2 S/2

Section 26: All

Section 27: E/2

Section 34: NE/4, N/2 SE/4

Section 35: NW/4

TOWNSHIP 20 SOUTH, RANGE 30 EAST

Section 1: All

Section 2: All

Section 3: All

Section 4: All

Section 5: S/2, NE/4

Section 6: S/2, S/2 NE/4

Section 7: NW/4, E/2

Section 8: All

Section 9: All

Section 10: All

Section 11: All

Section 12: All

Section 13: All

Section 14: All

Section 15: All

Section 16: All

Section 17: All

Section 18: E/2

Section 19: E/2

EXHIBIT "A" (Continued)

TOWNSHIP 20 SOUTH, RANGE 30 EAST (continued)

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: All  
Section 30: All  
Section 31: E/2  
Section 32: All  
Section 33: All  
Section 34: All  
Section 35: All  
Section 36: All

TOWNSHIP 20 SOUTH, RANGE 31 EAST

Section 1: E/2, E/2 W/2  
Section 6: SW/4, S/2 NW/4, W/2 SE/4  
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  
Section 11: SE/4, E/2 SW/4  
Section 12: All  
Section 13: All  
Section 14: E/2, SW/4, E/2 NW/4  
Section 16: W/2  
Section 17: All  
Section 18: All  
Section 19: All  
Section 20: All  
Section 21: NW/4, S/2  
Section 22: S/2, S/2 NE/4  
Section 23: All  
Section 24: All  
Section 25: All  
Section 26: All  
Section 27: All  
Section 28: All  
Section 29: All  
Section 30: All  
Section 31: All  
Section 32: All  
Section 33: All  
Section 34: All  
Section 35: All  
Section 36: All

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)

TOWNSHIP 20 SOUTH, RANGE 32 EAST, (continued)

Section 5: S/2 SE/4  
Section 6: W/2, SW/4 SE/4  
Section 7: All  
Section 8: All  
Section 9: All  
Section 10: All  
Section 11: All  
Section 12: All  
Section 13: All  
Section 14: All  
Section 15: All  
Section 16: All  
Section 17: All  
Section 18: All  
Section 19: All  
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: All  
Section 30: All  
Section 31: All  
Section 32: All  
Section 33: All  
Section 34: All  
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  
Section 6: All  
Section 7: All  
Section 8: W/2, SW/4 NE/4, SE/4  
Section 9: S/2 S/2, NW/4 SW/4  
Section 10: S/2  
Section 11: E/2, E/2 NW/4, SW/4  
Section 12: All  
Section 13: All  
Section 14: All  
Section 15: All  
Section 16: All  
Section 17: All  
Section 18: All  
Section 19: All  
Section 20: All  
Section 21: W/2 SW/4, NW/4, N/2 NE/4

EXHIBIT "A" (Continued)

TOWNSHIP 20 SOUTH, RANGE 33 EAST, (Continued)

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  
Section 31: N/2, W/2 SW/4

TOWNSHIP 20 SOUTH, RANGE 34 EAST

Section 6: W/2, W/2 SE/4  
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/4 SW/4  
Section 30: NE/4 NW/4, N/2 NE/4, SE/4 NE/4  
Section 32: N/2 NE/4, SE/4 NE/4  
Section 33: N/2, SE/4, N/2 SW/4, SE/4 SW/4  
Section 34: W/2

TOWNSHIP 21 SOUTH, RANGE 29 EAST

Section 1: All  
Section 2: Lots 1 - 16, incl., 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  
Section 23: N/2 NE/4  
Section 24: NE/4, NE/4 SE/4, N/2 NW/4, SE/4 NW/4  
Section 35: S/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

Section 1: All  
Section 2: All  
Section 3: All  
Section 4: All  
Section 5: All  
Section 6: All  
Section 7: All  
Section 8: All  
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: All  
Section 13: All

EXHIBIT "A" (continued)

TOWNSHIP 21 SOUTH, RANGE 30 EAST (continued)

Section 14: All  
Section 15: NE/4, NE/4 NW/4, N/2 SE/4, SE/4 SE/4  
Section 16: NW/4 NW/4  
Section 17: All  
Section 18: All  
Section 19: All  
Section 20: NW/4, N/2 NE/4  
Section 22: E/2 E/2  
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/2 SW/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  
Section 2: All  
Section 3: All  
Section 4: All  
Section 5: All  
Section 6: All  
Section 7: All  
Section 8: All  
Section 9: All  
Section 10: W/2  
Section 12: N/2, SE/4, N/2 SW/4, SE/4 SW/4  
Section 13: N/2 NE/4  
Section 15: W/2  
Section 16: E/2, NW/4, E/2 SW/4  
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: E/2  
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 incl., Lots 10 - 15, inclus., SW/4  
Section 7: W/2  
Section 22: E/2  
Section 23: All  
Section 24: All

EXHIBIT "A" (continued)

TOWNSHIP 21 SOUTH, RANGE 33 EAST

- Section 3: Lots 1, 2, 3
- Section 17: S/2 S/2
- Section 18: SE/4 SE/4
- Section 19: All
- Section 20: All
- Section 21: W/2, SE/4, S/2 NE/4
- Section 22: S/2, S/2 N/2
- Section 23: S/2, S/2 N/2, NE/4 NE/4
- Section 24: All
- Section 25: NW/4, N/2 NE/4, SW/4 NE/4, N/2 SW/4
- Section 26: W/2, NE/4, N/2 SE/4, SW/4 SE/4
- Section 27: All
- Section 28: All
- Section 29: N/2, SE/4, NE/4 SW/4
- Section 30: N/2 NE/4, SE/4 NE/4
- Section 33: N/2 N/2
- Section 34: N/2 N/2

TOWNSHIP 21 SOUTH, RANGE 34 EAST

- Section 19: W/2

TOWNSHIP 22 SOUTH, RANGE 29 EAST

- Section 1: All
- 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: All
- Section 12: All
- Section 13: All
- 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: All
- Section 24: All
- Section 25: All
- 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

EXHIBIT "A" (continued)

TOWNSHIP 22 SOUTH, RANGE 30 EAST (continued)

Section 20: All  
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  
Section 28: All  
Section 29: All  
Section 30: All  
Section 31: All  
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

Section 1: All  
Section 2: E/2, NW/4, NE/4 SW/4  
Section 11: NE/4 NE/4  
Section 12: N/2 N/2

TOWNSHIP 23 SOUTH, RANGE 30 EAST

Section 2: NW/4  
Section 3: All  
Section 4: All  
Section 5: All  
Section 6: All  
Section 7: NE/4, N/2 NW/4, SE/4 NW/4  
Section 8: N/2 N/2, S/2 NE/4  
Section 9: N/2, NE/4 SW/4, N/2 SE/4  
Section 10: N/2, SW/4

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

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