

CASE 2112: Application of POTASH CO.
of America for extension of potash-
oil area - Eddy County, New Mexico

Case No.

2112

Application, Transcript,
Small Exhibits, Etc.

POTASH COMPANY OF AMERICA

*Core
2112*

Following are analyses for Potash Company of America Core Test, No. 171
Located in the NE 1/4, NE 1/4, Sec. 22, T. 20 S., R. 29 E., Eddy Co., New Mex.

No. 1 Bed (N) Carnallite & Sylvite

			<u>% K₂O</u>	<u>% Mg</u>
670'	0" - 670'	7"	1.62	0.78
670'	7" - 671'	2"	1.75	0.83
671'	2" - 672'	1"	1.72	0.96
672'	1" - 672'	9"	8.01	2.29
672'	9" - 673'	3"	7.05	2.93
673'	3" - 673'	9"	20.2	2.70
673'	9" - 674'	1"	25.2	1.17
674'	1" - 674'	6"	32.4	0.49
674'	6" - 675'	0"	35.6	0.13
675'	0" - 675'	4"	36.9	0.13
675'	4" - 675'	10"	29.4	0.24
675'	10" - 676'	2"	3.27	1.09
676'	2" - 676'	6"	1.29	0.23
676'	6" - 677'	0"	1.62	0.49
677'	0" - 677'	4"	Trace	0.16

673'	3" - 675'	10"	31" at 29.73% K ₂ O,	0.84% Mg
672'	1" - 675'	10"	45" at 22.84% K ₂ O,	1.38% Mg
672'	1" - 676'	2"	49" at 21.25% K ₂ O,	1.35% Mg
671'	2" - 676'	2"	60" at 17.67% K ₂ O,	1.28% Mg

Date: Nov. 30, 1959

Floyd W. Neeley
Floyd W. Neeley, Asst. Cf. Chemist

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

September 27, 1961

Miss Ida Rodriguez
Oil Conservation Commission
Santa Fe, New Mexico

Dear Ida:

Thank you so much for the loan of the transcript in Case #2112
which I return herewith.

Sincerely,

RHB:h
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 NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 2112
Order No. R-111-E

APPLICATION OF POTASH COMPANY
OF AMERICA FOR AN AMENDMENT OF
ORDER NO. R-111-A TO INCLUDE
ADDITIONAL ACREAGE IN THE POTASH-
OIL AREA, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 2, 1960, at Santa Fe, New Mexico, before Elvis A. Utz, 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 16th day of November, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Potash Company of America, seeks an amendment of Order No. R-111-A extending the Potash-Oil Area as set forth in said order to include the following-described acreage covered by a Potash Prospecting Permit held by it from the Federal Government:

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM,
EDDY COUNTY, NEW MEXICO

Section 14: S/2 NW/4, SW/4, W/2 SE/4,
NE/4 SE/4, SW/4 NE/4
Section 15: E/2 SE/4
Section 22: NE/4 NE/4
Section 23: NW/4

(3) That the evidence presented indicates that portions of the above-described acreage contains potash in commercial quantities, but there is insufficient evidence at this time to justify extension of the Potash-Oil Area to include all of the above-described acreage.

-2-

CASE No. 2112
Order No. R-111-E

(4) That to promote orderly development of the natural resources in the Potash-Oil Area, Order No. R-111-A should be amended to include the following-described area:

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM

Section 14: SE/4 NW/4, SW/4, W/2 SE/4,
and SW/4 NE/4

Section 15: SE/4 SE/4

Section 22: NE/4 NE/4

Section 23: NW/4

IT IS THEREFORE ORDERED:

That Order No. R-111-A be and the same is hereby amended to include the following-described acreage within the Potash-Oil Area in Lea and Eddy Counties, New Mexico:

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM,
EDDY COUNTY, NEW MEXICO

Section 14: SE/4 NW/4, SW/4, W/2 SE/4,
and SW/4 NE/4

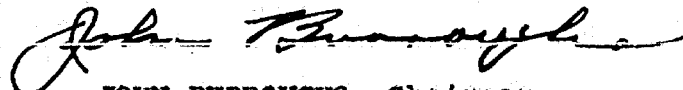
Section 15: SE/4 SE/4

Section 22: NE/4 NE/4

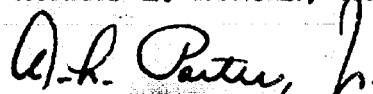
Section 23: NW/4

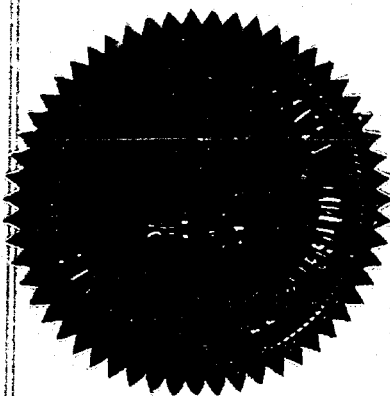
DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


JOHN BURROUGHS, Chairman


MURRAY E. MORGAN, Member


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



ear/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

Q 109112

THE APPLICATION OF POTASH COMPANY
OF AMERICA FOR AN ORDER AMENDING
ORDER NO. R-111-A ISSUED IN CASE
NO. 278, PERTAINING TO THE POTASH-
OIL AREAS OF EDDY AND LEA COUNTIES,
NEW MEXICO

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

APPLICATION

Comes now Potash Company of America, a Colorado corporation,
authorized to do business in the State of New Mexico and states:

A. That Potash Company of America is the owner of United
States government Potash Prospecting Permit No. N.M. 050249.
That said permit covers, among other property, the following
described lands in Township 20 South, Range 29 East, N.M.P.M.
in Eddy County, New Mexico:

- Section 14, S₂ NW₄, SW₄, W₂ SE₄, NE₄ SE₄, SW₄ NE₄
- Section 15, E₂ SE₄
- Section 22, NE₄ NW₄
- Section 23, NW₄

B. That Potash Company of America has conducted exploratory
drilling on the property described above and has discovered the
existence of commercial potash deposits underlying substantial
portions of the property described above.

WHEREFORE, Potash Company of America requests that Exhibit A
to Order No. R-111-A in Case No. 278 be amended to include the property
described above, and

FURTHER requests that a hearing be held upon due notice at the
convenience of the Commission for the purpose of considering this
application.

September 30, 1960

Respectfully submitted,
POTASH COMPANY OF AMERICA
By [Signature]
Resident Counsel

GOVERNOR
JOHN BURROUGHS
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
MURRAY E. MORGAN
MEMBER



STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY DIRECTOR

P. O. BOX 871
SANTA FE

November 16, 1960

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

Re: Case No. 2112
Order No. R-111-E
Applicant:

Potash Company of America

Dear Sir:

Enclosed herewith are two copies of the above-referenced
Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.,
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other Mr. Charles White

POTASH COMPANY OF AMERICA

GENERAL SALES OFFICES - 1625 EYE STREET - N. W. WASHINGTON 6 - D. C.
SOUTHERN SALES OFFICE - 408 S. SANDLER 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
November 8, 1960

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

Attention: Mr. Elvis A. Utz, Examiner

Re: Case No. 2112

Dear Mr. Utz:

Agreeable with our understanding at the hearing in the above case held November 2 in Santa Fe, I am enclosing one copy each of the chemical analyses for Potash Company of America core test holes, No. 171 and No. 173.

If you require any further information or documentation, will you kindly advise.

Very truly yours,

RHB/b
Enc.

Recommendations for Case 2112

Date 11-3-60

Heard 11-2-60

1. Grant P.C.A.'s request for an extension to the designated proven potash area ~~as~~ as designated by Order R-111-A to include the following lands:

20 S - 29 E NMPM

Sec. 14, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$,
SW $\frac{1}{4}$ NE $\frac{1}{4}$.

Sec. 15, E $\frac{1}{2}$ SE $\frac{1}{4}$,

Sec. 22, NE $\frac{1}{4}$ NE $\frac{1}{4}$,

Sec. 23, NW $\frac{1}{4}$.

2. P.C.A. has proven that the drilling of core holes #AN7 & #AN8 that the area may reasonably be underlain by potash body at least 4 ft thick and containing at least 14% P₂O₅.

3. The opposing operator, Deas Co, Inc. was not in the position to show their oil reserves exceeded the value of the potash reserves.

Thos. A. [Signature]

AGENDA: EXAMINER HEARING, WEDNESDAY, NOVEMBER 2, 1960

Oil Conservation Commission - 9 a.m., Library Hall, State Capitol, Santa Fe, New Mexico

The following cases will be heard before Elvis A. Utz, Examiner, or Oliver E. Payne, Attorney, as alternate examiner:

CASE 2111: Application of Gulf Oil Corporation for a waterflood project. Applicant, in the above-styled cause, seeks permission to institute a waterflood project in the Lumont and South Eunice Pools by the injection of water into the Queen formation through six wells located in Sections 27 and 34, Township 21 South, Range 36 East, Lea County, New Mexico.

CASE 2112: Application of Potash Company of America for an extension of the Potash-oil area as set forth in Order No. R-111-A. Applicant, in the above-styled cause, seeks an extension of the potash-oil area to include the following acreage:

Section 14: S/2 NW/4, SW/4, W/2 SE/4, NE/4 SE/4, SW/4 NE/4
Section 15: E/2 SE/4
Section 22: NE/4 NE/4
Section 23: NW/4

all in Township 20 South, Range 29 East, Eddy County, New Mexico.

CASE 2113: Application of Shell Oil Company for an amendment of Order No. R-1101-A. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1101-A, to include its Linam Lease in the commingling authorization granted in said order. Said Linam Lease consists of the NW/4 NE/4 and NE/4 NW/4 of Section 3, Township 20 South, Range 35 East, Pearl-Queen Pool, Lea County, New Mexico.

CASE 2114: Application of Western Natural Gas Company for a 320-acre non-standard gas proration unit and for an unorthodox gas well location. Applicant, in the above-styled cause, seeks an order establishing a 320-acre non-standard gas proration unit in the Jalmat Gas Pool consisting of the E/2 of Section 24, Township 22 South, Range 36 East, Lea County, New Mexico. Applicant further proposes to dedicate said unit to a well located on an unorthodox location at a point 330 feet from the North line and 330 feet from the East line of said Section 24.

CASE 2115: Application of James G. Brown & Associates for permission to commingle the production from two separate leases. Applicant, in the above-styled cause, seeks an order permitting it to commingle the Saunders-Permo Pennsylvanian Pool production from the following portions of the following State leases:

E-3334, NW/4 SE/4 of Section 9
E-7353, SE/4 SE/4 of Section 9

Township 14 South, Range 33 East, Lea County, New Mexico.

CASE 2116: Application of Westates Petroleum Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Carlson & 26, Well No. 7, located in unit J, Section 26, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from an undersigned Paddock Pool and the production of oil from the Justis-Blinbry Pool through parallel strings of 2 3/8-inch tubing..

DOCKET NO. 32-60

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CASE 2117: Application of Rice Engineering & Operating, Inc., for a salt water disposal well at an unorthodox location. Applicant, in the above-styled cause, seeks an order approving the disposal of produced salt water into the San Andres formation, Monument Pool, Lea County, New Mexico, through a well to be drilled 1485 feet from the South and West lines of Section 33, Township 19 South, Range 37 East.

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
September 30, 1960

Oil Conservation Commission
Santa Fe, New Mexico

Gentlemen:

Enclosed are 3 copies of our application for amendment
of Order No. R-111-A in Case No. 278.

Will you kindly advise us the date set for hearing?

Very truly yours,

A handwritten signature in dark ink, appearing to read 'R. H. Blackman, Jr.'.

RHB/b
Enc.

*Booked
Mailed
10-19-60
[initials]*

NO. 17 SALE
COMPETITIVE

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Office NEW MEXICO
Serial 1049139

LEASE OF OIL AND GAS LANDS UNDER THE ACT OF
FEBRUARY 25, 1920, AS AMENDED

JAN 1 1957

THIS INDENTURE OF LEASE, entered into, as of
by and between the UNITED STATES OF AMERICA, through the Bureau of Land Management, hereinafter called the lessor, and

J. I. T. [Signature] Jr., Attorney-in-Fact

hereinafter called the lessee, under, pursuant, and subject to the terms and provisions of the act of February 25, 1920 (41 Stat. 437, 80 U. S. C. sec. 181 et seq.), as amended, hereinafter referred to as the act, and to all reasonable regulations of the Secretary of the Interior now or hereafter in force when not inconsistent with any express and specific provisions herein, which are made a part hereof,
WITNESSETH:

Section 1. Rights of Lessee.—That the lessor, in consideration of rents and royalties to be paid, and the conditions and covenants to be observed as herein set forth, does hereby grant and lease to the lessee the exclusive right and privilege to drill for, mine, extract, remove, and dispose of all the oil and gas deposits except helium gas in or under the following-described tracts of land situated in the
Getty field:

The provisions in this instrument relate to the reservation of materials to the

T. 20 S., R. 29 E., N. Mex. Prin. Mer.
Section 13: NW
Section 14: NW, NE, SW, SE

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION

EXHIBIT NO. 1

CASE NO. 2112



containing 440 acres, more or less, together with the right to construct and maintain thereupon all works, buildings, plants, waterways, roads, telegraph or telephone lines, pipe lines, reservoirs, tanks, pumping stations, or other structures necessary to the full enjoyment thereof, for a period of 5 years, and so long thereafter as oil or gas is produced in paying quantities; subject to any unit agreement heretofore or hereafter approved by the Secretary of the Interior, the provisions of said agreement to govern the lands subject thereto where inconsistencies with the terms of this lease occur.

SEC. 2. In consideration of the foregoing, the lessee agrees:

(a) **Bonds.**—(1) To maintain any bond furnished by the lessee as a condition for the issuance of this lease.

(2) To furnish prior to beginning of drilling operations and maintain at all times thereafter as required by the lessor a bond in the penal sum of \$5,000 with approved corporate surety, or with deposit of United States bonds as surety therefor, conditioned upon compliance with the terms of this lease, unless a bond in that amount is already being maintained or unless such a bond furnished by an operator of the lease is accepted, or unless a bond has been filed under 48 CFR 192.100 (e) applicable to this lease.

(b) **Cooperative or unit plan.**—Within 30 days of demand, or, if the leased land is committed to an approved unit or cooperative plan and such plan is terminated prior to the expiration of this lease, within 30 days of demand made thereafter, to subscribe to and to operate under such reasonable cooperative or unit plan for the development and operation of the area, field, or pool, or part thereof, embracing the lands included herein as the Secretary of the Interior may then determine to be practicable and necessary or advisable, which plan shall adequately protect the rights of all parties in interest, including the United States.

(c) **Wells.**—(1) To drill and produce all wells necessary to protect the leased land from drainage by wells on lands not the property of the lessor, or lands of the United States leased at a lower royalty rate, or as to which the royalties and rentals are paid into different funds than are those of this lease; or in lieu of any part of such drilling and production, with the consent of the Director of the Geological Survey, to compensate the lessor in full each month for the estimated loss of royalty through drainage in the amount determined by said Director; (2) at the election of the lessee, to drill and produce other wells in conformity with any system of well spacing or production allotments affecting the field or area in which the leased lands are situated, which is authorized and sanctioned by applicable law or by the Secretary of the Interior; and (3) promptly after due notice in writing to drill and produce such other wells as the Secretary of the Interior may reasonably require in order that the leased premises may be properly and timely developed and produced in accordance with good operating practice.

(d) **Rentals and royalties.**—(1) To pay rentals and royalties in amount or value of production removed or sold from the leased lands as set forth in the rental and royalty schedule attached to and made a part hereof.

(2) It is expressly agreed that the Secretary of the Interior may establish reasonable minimum values for purposes of computing royalty on any or all oil, gas, natural gasoline, and other products obtained from gas, due consideration being given to the highest price paid for a part or for a majority of production of like quality in the same field, to the price received by the lessee, to posted prices, and to other relevant matters and, whenever appropriate, after notice and opportunity to be heard.

(3) When paid in value, such royalties on production shall be due and payable monthly on the last day of the calendar month next following the calendar month in which produced. When paid in amount of production, such royalty products shall be delivered in merchantable condition on the premises where produced without cost to lessor, unless otherwise agreed to by the parties hereto, at such

times and in such tanks provided by the lessee as reasonably may be required by the lessor, but in no case shall the lessee be required to hold such royalty oil or other products in storage beyond the last day of the calendar month next following the calendar month in which produced nor be responsible or held liable for the loss or destruction of royalty oil or other products in storage from causes over which he has no control.

(4) Rentals or minimum royalties may be waived, suspended or reduced and royalties on the entire leasehold or any portion thereof segregated for royalty purposes may be reduced if the Secretary of the Interior finds that, for the purpose of encouraging the greatest ultimate recovery of oil or gas and in the interest of conservation of natural resources, it is necessary, in his judgment, to do so in order to promote development, or because the lease cannot be successfully operated under the terms fixed herein.

(e) **Payments.**—Unless otherwise directed by the Secretary of the Interior, to make rental, royalty, or other payments to the lessor, to the order of the Treasurer of the United States; such payments to be tendered to the manager of the land office in the district in which the lands are located or to the Director of the Bureau of Land Management if there is no land office in the State in which the lands are located.

(f) **Contracts for disposal of products.**—To file with the Oil and Gas Supervisor of the Geological Survey not later than 30 days after the effective date thereof any contract, or evidence of other arrangement, for the sale or disposal of oil, gas, natural gasoline, and other products of the leased land; *Provided*, That nothing in any such contract or other arrangement shall be construed as modifying any of the provisions of this lease, including, but not limited to, provisions relating to gas waste, taking royalty in kind, and the method of computing royalties due as based on a minimum valuation and in accordance with the Oil and Gas Operating Regulations.

(g) **Statements, plats and reports.**—At such times and in such form as the lessor may prescribe, to furnish detailed statements showing the amounts and quality of all products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost; a plat showing development work and improvements on the leased lands; and a report with respect to stockholders, investments, depreciation and costs.

(h) **Well records.**—To keep a daily drilling record, a log, and complete information on all well surveys and tests in form acceptable to or prescribed by the lessor of all wells drilled on the leased lands, and an acceptable record of all subsurface investigations affecting said lands, and to furnish them, or copies thereof, to the lessor when required. All information obtained under this paragraph, upon the request of lessee, shall not be open to inspection by the public until the expiration of the lease.

(i) **Inspection.**—To keep open at all reasonable times for the inspection of any duly authorized officer of the Department, the leased premises and all wells, improvements, machinery, and fixtures thereon and all books, accounts, maps and records relative to operations and surveys or investigations on the leased lands or under the lease. All information obtained pursuant to any such inspection, upon the request of the lessee, shall not be open to inspection by the public until the expiration of the lease.

3. (j) *Diligence, prevention of waste, health and safety of workmen.*—To exercise reasonable diligence in drilling and producing the wells herein provided for unless consent to suspend operations temporarily is granted by the lessor; to carry on all operations in accordance with approved methods and practice as provided in the Oil and Gas Operating Regulations, having due regard for the prevention of waste of oil or gas or damage to deposits or formations containing oil, gas, or water or to coal measures or other mineral deposits, for conservation of gas energy, for the preservation and conservation of the property for future productive operations, and for the health and safety of workmen and employees; to plug properly and effectively all wells drilled in accordance with the provisions of this lease or of any prior lease or permit upon which the right to this lease was predicated before abandoning the same; to carry out at expense of the lessee all reasonable orders of the lessor relative to the matters in this paragraph, and that on failure of the lessee so to do the lessor shall have the right to enter on the property and to accomplish the purpose of such orders at the lessee's cost: *Provided*, That the lessee shall not be held responsible for delays or casualties occasioned by causes beyond lessee's control.

(k) **Taxes and wages, freedom of purchase.**—To pay when due, all taxes lawfully assessed and levied under the laws of the State or the United States upon improvements, oil and gas produced from the lands hereunder, or other rights, property or assets of the lessee; to accord all workmen and employees complete freedom of purchase, and to pay all wages due workmen and employees at least twice each month in the lawful money of the United States.

(1) **Nondiscrimination.**—Not to discriminate against any employee, or applicant for employment because of race, creed, color, or national origin, and to require an identical provision to be included in all subcontracts.

(m) Assignment of oil and gas lease or interest therein.—As required by applicable law, to file for approval within 90 days from the date of final execution any instrument of transfer made of this lease, or any interest therein, including assignments of record title, working or royalty interests, operating agreements and subleases, such instrument to take effect upon the final approval by the Director, Bureau of Land Management, as of the first day of the lease month following the date of filing in the proper land office.

(n) Pipelines to purchase or convey at reasonable rates and without discrimination.—If owner, or operator, or owner of a controlling interest in any pipeline or of any company operating the same which may be operated accessible to the oil or gas derived from lands under this lease, to accept and convey and, if a purchaser of such products, to purchase at reasonable rates and without discrimination the oil or gas of the Government or of any citizen or company not the owner of any pipeline, operating a lease or purchasing or selling oil, gas, natural gasoline, or other products under the provisions of the act, or under the provisions of the act of August 7, 1947 (61 Stat. 913, 30 U. S. C., sec. 351).

(c) *Lands patented with oil and gas deposits reserved to the United States.*—To comply with all statutory requirements and regulations thereunder, if the lands embraced herein have been or shall hereafter be disposed of under the laws reserving to the United States the deposits of oil and gas therein, subject to such conditions as are or may hereafter be provided by the laws reserving such oil or gas.

(p) *Reserved or segregated lands.*—If any of the land included in this lease is embraced in a reservation or segregated for any particular purpose, to conduct operations thereunder in conformity with such requirements as may be made by the Director, Bureau of Land Management, for the protection and use of the land for the purpose for which it was reserved or segregated, so far as may be consistent with the use of the land for the purpose of this lease, which latter shall be regarded as the dominant use unless otherwise provided herein or separately stipulated.

(g) **Protection of surface, natural resources and improvements.**—To take such reasonable steps as may be needed to prevent operations from unnecessarily: (1) Causing or contributing to soil erosion or damaging any forage and timber growth thereon, (2) polluting the waters of reservoirs, springs, streams or wells, (3) damaging crops, including forage, timber, or improvements of a surface owner, or (4) damaging range improvements whether owned by the United States or by its grazing permittees or lessees; and upon conclusion of operations, so far as can reasonably be done, to restore the surface to its former condition. The lessor may prescribe the steps to be taken and restoration to be made with respect to lands of the United States and improvements thereon.

(r) *Overriding royalties.*—Not to create overriding royalties in excess of five percent except as otherwise authorized by the regulations.

(a) **Delivery premises in cases of forfeiture.**—To deliver up to the lessor in good order and condition the land leased including all improvements which are necessary for the preservation of producing wells.

Sec. 8. The lessor reserves:

(a) *Easements and rights-of-way.*—The right to permit for joint or several use easements or rights-of-way, including easements in tunnels upon, through, or in the lands leased, occupied, or used as may be necessary or appropriate to the working of the same or of other lands containing the deposits described in the act, and the treatment and shipment of products thereof by or under authority of the Government, its lessees or permittees, and for other public purposes.

(b) **Disposition of surface.**—The right to lease, sell, or otherwise dispose of the surface of the leased lands under existing law or laws hereafter enacted, insofar as said surface is not necessary for the use of the lessee in the extraction and removal of the oil and gas therein, or to dispose of any resource in such lands which will not unreasonably interfere with operations under this lease.

(c) *Monopoly and fair prices.*—Full power and authority to promulgate and enforce all orders necessary to insure the sale of the

production of the leased lands to the United States and to the public at reasonable prices, to protect the interests of the United States, to prevent monopoly, and to safeguard the public welfare.

(d) Helium.—Pursuant to section 1 of the act, and section 1 of the act of March 3, 1927 (44 Stat. 1387), as amended, the ownership and the right to extract helium from all gas produced under this lease, subject to such rules and regulations as shall be prescribed by the Secretary of the Interior. In case the lessor elects to take the helium the lessee shall deliver all gas containing same, or portion thereof desired, to the lessor at any point on the leased premises in the manner required by the lessor, for the extraction of the helium in such plant or reduction works for that purpose as the lessor may provide, whereupon the residue shall be returned to the lessee with no substantial delay in the delivery of gas produced from the well to the purchaser thereof. The lessee shall not suffer a diminution of value of the gas from which the helium has been extracted, or loss otherwise, for which he is not reasonably compensated, save for the value of the helium extracted. The lessor further reserves the right to erect, maintain, and operate any and all reduction works and other equipment necessary for the extraction of helium on the premises leased.

(e) *Taking of royalties.*—All rights pursuant to section 36 of the act, to take royalties in amount or in value of production.

(f) **Casing.**—All rights pursuant to section 40 of the act to purchase casing, and lease or operate valuable water wells.

(g) **Fissionable materials.**—Pursuant to the provisions of section 5 (b) (7) of the act of August 1, 1946 (60 Stat. 724, 760; 42 U. S. C. 1801, 1805), all uranium, thorium, and other materials determined to be peculiarly essential to the production of fissionable materials, contained in whatever concentration, together with the right of the United States through its authorized agents or representatives at any time to enter upon the land and prospect for, mine and remove the same, making just compensation for any damage or injury occasioned thereby.

Sec. 4. *Drilling and producing restrictions.*—It is agreed that the rate of prospecting and developing and the quantity and rate of production from the lands covered by this lease shall be subject to control in the public interest by the Secretary of the Interior, and in the exercise of his judgment the Secretary may take into consideration, among other things, Federal laws, State laws, and regulations issued thereunder, or lawful agreements among operators regulating either drilling or production, or both. After unification, the Secretary of the Interior, or any person, committee, or State or Federal officer or agency so authorized in the unit plan, may alter or modify, from time to time, the rate of prospecting and development and the quantity and rate of production from the lands covered by this lease.

SEC. 5. *Surrender and termination of lease.*—The lessee may surrender this lease or any legal subdivision thereof by filing in the proper land office a written relinquishment, in triplicate, which shall be effective as of the date of filing subject to the continued obligation of the lessee and his surety to make payment of all accrued rentals and royalties and to place all wells on the land to be relinquished in condition for suspension or abandonment in accordance with the applicable lease terms and regulations.

SEC. 6. Purchase of materials, etc., on termination of lease.— Upon the expiration of this lease, or the earlier termination thereof pursuant to the last preceding section, the lessee shall have the privilege at any time within a period of 90 days thereafter of removing from the premises all machinery, equipment, tools, and materials other than improvements needed for producing wells. Any materials, tools, appliances, machinery, structures, and equipment subject to removal as above provided, which are allowed to remain on the leased lands shall become the property of the lessor on expiration of the 90-day period or such extension thereof as may be granted because of adverse climatic conditions throughout said period: *Provided*, That the lessee shall remove any or all of such property where so directed by the lessor.

Sec. 7. Proceedings in case of default.—If the lessee shall not comply with any of the provisions of the act or the regulations thereunder or of the lease or make default in the performance or observance of any of the terms hereof and such default shall continue for a period of 30 days after service of written notice thereof by the lessor, this lease may be canceled by the Secretary of the Interior in accordance with section 31 of the act, except that if this lease covers lands known to contain valuable deposits of oil or gas, the lease may be canceled only by judicial proceedings in the manner provided in section 31 of the act; but this provision shall not be construed to prevent the exercise by the lessor of any legal or equitable remedy which the lessor might otherwise have. Upon cancellation of this lease, any casing, material, or equipment determined by the lessor to be necessary for use in plugging or preserving any well drilled on the leased land shall become the property of the lessor. A waiver of any particular cause of forfeiture shall not prevent the cancellation and forfeiture of this lease for any other cause of forfeiture, or for the same cause occurring at any other time.

SEC. 8. *Heirs and successors in interest.*—It is further agreed that each obligation hereunder shall extend to and be binding upon, and every benefit hereof shall inure to, the heirs, executors, administrators, successors, or assigns of the respective parties hereto.

SEC. 9. *Unlawful interest.*—It is also further agreed that no Member of, or Delegate to, Congress, or Resident Commissioner, after his election or appointment, or either before or after he has qualified and during his continuance in office, and that no officer, agent, or employee of the Department of the Interior, except as provided in 43 CFR 7.4 (a) (1), shall be admitted to any share or part in this lease or derive any benefit that may arise therefrom; and the provisions of Sec. 3741 of the Revised Statutes of the United States, as amended (41 U. S. C. Sec. 22) and Secs. 481, 482, and 483, Title 18 U. S. Code, relating to contracts, entering into and form a part of this lease so far as the same may be applicable.

IN WITNESS WHEREOF:

THE UNITED STATES OF AMERICA

By

.....

Young & Rubicam

(Title)

THE TEXAS COMPANY

44759

DEC 19 1966

WITNESSES

mm?

WITNESSES
H. M. Faulkner Jr.

136-241214

.....

NOTICE

This lease is subject to Public Law 555 enacted on July 29, 1954, which amends section 31 of the 1920 Mineral Leasing Act (41 Stat. 447; 30 U.S.C. sec. 189) to provide that

"... upon the failure of lessee to pay the lease rental on or before the anniversary date of the lease, for any lease on which there is no well capable of producing oil and gas in paying quantities, the lease shall automatically terminate by operation of law; Provided, however, That when the time for payment falls upon any day in which the proper office for payment is not open, payment may be received the next official working day and shall be considered as timely made."

Royalty on production. - To pay the lessor the following royalty on

production removed or sold from the leased lands:

(1) When the average production for the calendar month in barrels per well per day is

not over	50	the royalty shall be 12.5 per cent;
over	50 but not over 60	" " " 13 " "
"	60 " " " 70	" " " 14 " "
"	70 " " " 80	" " " 15 " "
"	80 " " " 90	" " " 16 " "
"	90 " " " 110	" " " 17 " "
"	110 " " " 130	" " " 18 " "
"	130 " " " 150	" " " 19 " "
"	150 " " " 200	" " " 20 " "
"	200 " " " 250	" " " 21 " "
"	250 " " " 300	" " " 22 " "
"	300 " " " 350	" " " 23 " "
"	350 " " " 400	" " " 24 " "
"	400	" " " 25 " "

(2) On gas, including inflammable gas, helium, carbon dioxide and all other natural gases and mixtures thereof, and on natural or casinghead gasoline and other liquid products obtained from gas: when the average production of gas per well per day for the calendar month does not exceed 5,000,000 cubic feet, 12½ per cent; and when said production of gas exceeds 5,000,000 cubic feet, 16-2/3 per cent of the amount or value of the gas and liquid products produced, said amount or value of such liquid products to be net after an allowance for the cost of manufacture.

The average production per well per day for oil and for gas shall be determined pursuant to 30 C.F.R., Part 221, Oil and Gas Operating Regulations.

In determining the amount or value of gas and liquid products produced, the amount or value shall be net after an allowance for the cost of manufacture. The allowance for cost of manufacture may exceed two-thirds of the amount or value of any product only on approval by the Secretary of the Interior.

Interior--Duplicating Section, Washington, D. C.

79339

STATE OF NEW MEXICO County of Eddy, ss. I hereby certify that this instrument was filed for record on the _____ day of _____, A. D. 1957 at _____ o'clock _____ M., and duly recorded in Book _____, Page _____ of the Records of _____ of said county.
By _____ Deputy _____ County Clerk

NOTICE

This lease is subject to Public Law 555 enacted on July 29, 1954,
which amends section 31 of the 1920 Mineral Leasing Act (41 Stat. 447; 30 U.S.C.
sec. 188) to provide that

"... upon the failure of lessee to pay the lease rental
on or before the anniversary date of the lease, for any
lease on which there is no well capable of producing oil
and gas in paying quantities, the lease shall automatically
terminate by operation of law; Provided, however, That when
the time for payment falls upon any day in which the proper
office for payment is not open, payment may be received the
next official working day and shall be considered as timely
made."

SCHEDULE "B"
RENTALS AND ROYALTIES

Rentals. - To pay the lessor in advance on the first day of the month in which the lease issued and for each lease year thereafter prior to a discovery of oil or gas on the leased lands, a rental of \$1.00 per acre.

Minimum royalty. - To pay the lessor in lieu of rental at the expiration of each lease year after discovery a minimum royalty of \$1.00 per acre or, if there is production, the difference between the actual royalty paid during the year and the prescribed minimum royalty of \$1.00 per acre, provided that on unitized leases, the minimum royalty shall be payable only on the participating acreage.

Royalty on production. - To pay the lessor the following royalty on production removed or sold from the leased lands:

(1) When the average production for the calendar month in barrels per well per day is

not over	50	the royalty shall be 12.5 per cent;
over	50 but not over 60	" " " " 13 " "
"	60 " " " 70	" " " " 14 " "
"	70 " " " 80	" " " " 15 " "
"	80 " " " 90	" " " " 16 " "
"	90 " " " 110	" " " " 17 " "
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"	200 " " " 250	" " " " 21 " "
"	250 " " " 300	" " " " 22 " "
"	300 " " " 350	" " " " 23 " "
"	350 " " " 400	" " " " 24 " "
"	400	" " " " 25 " "

(2) On gas, including inflammable gas, helium, carbon dioxide and all other natural gases and mixtures thereof, and on natural or casinghead gasoline and other liquid products obtained from gas: when the average production of gas per well per day for the calendar month does not exceed 5,000,000 cubic feet, 12½ per cent; and when said production of gas exceeds 5,000,000 cubic feet, 16-2/3 per cent of the amount or value of the gas and liquid products produced, said amount or value of such liquid products to be net after an allowance for the cost of manufacture.

The average production per well per day for oil and for gas shall be determined pursuant to 30 C.F.R., Part 221, Oil and Gas Operating Regulations.

In determining the amount or value of gas and liquid products produced, the amount or value shall be net after an allowance for the cost of manufacture. The allowance for cost of manufacture may exceed two-thirds of the amount or value of any product only on approval by the Secretary of the Interior.

Interior--Duplicating Section, Washington, D. C.

79399

STATE OF NEW MEXICO County of Eddy, ss. I hereby certify that this instrument was filed for record on the 7 day of May, A. D. 1957 at 1:30 o'clock P. M., and duly recorded in Book 11, Page 427 of the Records of Eddy County of said county.

By [Signature] Deputy
County Clerk

DRAFT

RSM/esr
November 4

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 2112
Order No. R- 111-E

APPLICATION OF POTASH COMPANY
OF AMERICA FOR AN AMENDMENT OF
ORDER NO. R-111-A TO INCLUDE
ADDITIONAL ACREAGE IN THE POTASH-
OIL AREA, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 2, 1960, at Santa Fe, New Mexico, before Elvis A. Utz, 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 _____ day of November, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Potash Company of America, seeks an amendment of Order No. R-111-A extending the Potash-Oil Area as set forth in said order to include the following-described acreage covered by a Potash Prospecting Permit held by it from the Federal Government:

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM,
EDDY COUNTY, NEW MEXICO

Section 14: S/2 NW/4, SW/4, W/2 SE/4,
NE/4 SE/4, SW/4 NE/4.

Section 15: E/2 SE/4.

Section 22: NE/4 NE/4.

Section 23: NW/4.

(3) That the evidence presented indicates that the above-described acreage contains potash in commercial quantities, but that there is insufficient evidence at this time to justify extension of the Potash-Oil Area to include all of the above-described acreage.

-2-
CASE No. 2112
Order No. R-111-E

(4) That to promote orderly development of the natural resources in the Potash-Oil Area, Order No. R-111-A should be amended to include the ~~above-described acreage.~~

IT IS THEREFORE ORDERED:

That Order No. R-111-A be and the same is hereby amended to include the following-described acreage within the Potash-Oil Area in Lea and Eddy Counties, New Mexico:

SE/4 NW/4
TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM,
EDDY COUNTY, NEW MEXICO
Section 14: ~~S/4 NE/4~~, SW/4, W/2 SE/4, and
~~SW/4 NE/4~~, SW/4 NE/4.
Section 15: ~~S/4 SE/4~~. *SE/4 SE/4*
Section 22: NE/4 NE/4.
Section 23: NW/4.

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

following described area:

Township 20 South, Range 29 East, NMPM

Section 14: SE/4 NW/4, SW/4, W/2 SE/4, and SW/4 NE/4

Section 15: SE/4 SE/4

Section 22: NE/4 NE/4

Section 23: NW/4

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PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 2, 1960
Examiner Hearing
Case No. 2112

IN THE MATTER OF:

Application of Potash Company of
America for an extension of the potash-
oil area as set forth in Order No. R-111-A.
Applicant, in the above-styled cause, seeks
an extension of the potash-oil area to
include the following acreage:

Section 14: S/2 NW/4, SW/4, W/2 SE/4,
NE/4 SE/4, SW/4 NE/4
Section 15: E/2 SE/4
Section 22: NE/4 NE/4
Section 23: NW/4

all in Township 20 South, Range 29
East, Eddy County, New Mexico

BEFORE:

Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 2112.

MR. PAYNE: Application of Potash Company of America
for an extension of the potash-oil area.

MR. BLACKMAN: If the Examiner please, my name is R. H.
Blackman, Carlsbad, representing the Petitioner in this case.
We will have one witness -- Mr. Everett Jourdan, and one Exhibit.

MR. PAYNE: Mr. Blackman, you are resident counsel for



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the Potash Company of America, is that correct?

MR. BLACKMAN: That is correct.

(Witness sworn.)

MR. UTZ: Are there other appearances in this case?

MR. WHITE: If the Examiner please, Charles White, appearing on behalf of Texaco, Inc.

MR. UTZ: Other appearances? You may proceed.

EVERETT C. JOURDAN

called as a witness, having been previously duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. BLACKMAN:

Q Will you please state your name, your employer and your occupation?

A Everett C. Jourdan, employed by Potash Company of America as Mining Engineer.

Q How long have you been so employed, Mr. Jourdan?

A Since 1946.

Q Have you ever appeared before the Oil Conservation Commission as an expert witness and given testimony in cases similar to this one?

A I have.

MR. BLACKMAN: Do you care to go into his qualifications any further?

MR. UTZ: No, sir, his qualifications are acceptable.



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Q (By Mr. Blackman) Mr. Jourdan, I refer you to applicant's Exhibit A, which is a map of an area in Eddy County, New Mexico, showing, generally, a portion of Township 20 South, Range 29 East, and ask you if you will kindly identify the curved line which appears in red.

A (Witness indicates line on map.)

Q The curved line which appears in red.

A Pardon me. I am slightly color blind. This line, outlined here, is a four feet at 14% K₂O line as established by Oil Conservation Order R-111-A in 1955. That line was projected by the United States Geological Survey from drill hole in formation and agrees with their information.

Q Mr. Jourdan, there is a line appears also, on Exhibit A which is identified in green which is also identified on the Exhibit as the present R-111-A line.

A That is this.

Q Would you state what that line is?

A That is the limit of Oil Conservation Commission R-111-A Order in the oil-potash area as it presently exists.

Q Now, the area which is in the present Order R-111-A appears, generally, to the south and to the east of that green line, is that correct?

A Yes, sir.

Q Now, Mr. Jourdan, since Order R-111-A was entered by the Oil Conservation Commission in approximately 1955, has Potash



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Company of America drilled any additional exploration wells to the potash producing zone in this area? If so, will you identify those as shown on the Exhibit?

A Drilled three -- core tests shown here as PCA 174, PCA 171, PCA 173.

Q Mr. Jourdan, as the result of the drilling of those wells and the information secured thereby, would you please give your opinion as to the present boundary of commercial ore in that area on the basis of a cut-off point at four feet of 14% K₂O?

A That is delineated by this line which I am pointing to here.

Q The line which you are pointing to there, being a curved line which curves, generally, upward into -- commencing in the -- approximately the north-south center line of Section 22 at a point approximately a quarter of a mile west of the east boundary, proceeding then north to the north boundary of Section 22, proceeding through the southeast quarter of the southeast quarter of Section 15, and in a generally northeasterly direction, that's proceeding into Section 14, still in Township 20 South, Range 29 East, to a point north of the well designated as PCA 173, thence proceeding in a southwesterly direction into the southwest quarter of the southwest quarter of Section 13 in 20 South, 29 East, where it joins the line projected originally by the U. S. G. S., to which you have previously testified, is that correct?

A That is correct.



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Q Mr. Jourdan, would you kindly explain how this boundary is determined?

A We assume that the deposit is a tapering -- in other words, this hole here, PCA 174, was a hole which did not encounter the oil bed. This hole here was slightly in excess of the four feet at 14%, so we interpolate that line and come out with a point here, and the same is true of this here and then we use this and a hole right out here, which is Federal hole, to interpolate the line.

Q Mr. Jourdan, do you have with you the analysis of the cores obtained by Potash Company of America --

A Yes, sir.

Q -- on those three holes? Will you kindly read those into the record, identifying them as to hole?

A PCA 171 is 79 inches at 21% K_2O , PCA 172 is 21.3% at K_2O , PCA 173 is 48 inches at 18.9% K_2O ; the outside limits -- hole outside is what we call a salt hole, missing in that particular hole.

Q Now, based upon your particular experience in potash mining, would you state that the projected line which you have caused to be projected, as I previously delineated, is a fair average of the cut-off point of the approximate boundary of the ore zone?

A It is. We are mining this type of ore right now in this area.



MR. BLACKMAN: I believe that is all of the direct examination.

MR. UTZ: Any questions of the witness?

MR. PAYNE: No, sir.

MR. WHITE: I have a few questions.

MR. UTZ: Proceed, Mr. White.

CROSS-EXAMINATION

BY MR. WHITE:

Q Mr. Jourdan, there are a few questions I want to ask which were not brought out on direct, but, mainly for my own education, so bear with me, please. When was this potash lease acquired by you?

A I can't answer that question right offhand, Mr. White. We have got so many leases that I can't remember. It was very recently, I can tell you that -- I am not sure about the smaller area, but I think part of it was rather recent.

Q Now, are these leases for five-year terms with right of renewal, do you know?

A I don't know what the terms are. Our leasing department handles the leasing, so I can't personally answer that question.

MR. BLACKMAN: Twenty years --

MR. WHITE: Twenty years?

MR. BLACKMAN: Yes, generally these leases are for a period of twenty years with right of renewal. Part of this is held under a potash permit, but since the ore was discovered, the

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company has a preferential right to acquire a lease. That lease has been applied for and, in due course, will be issued.

Q (By Mr. White) Is it customary in the potash industry for one potash company to acquire lease holes adjoining another potash company's operations?

A Yes, very common. We have leases right within a mile or two of International, for example.

Q Within a mile or two?

A Yes, right adjoining. In fact, they have recently taken over one section we had down there. I don't recall right offhand, but they are mining that and the property is held by us.

Q Now, will Potash Company of America object to the drilling of an oil well in this area, providing the oil operator carries out the casing program as prescribed by Order R-111-A?

A I can't answer that question until I know the specific location. I would say, offhand, that if it was in this area right in the center of the high ore, I believe we would object to the drilling of that well.

Q Well, let's assume the well might be drilled in the southwest quarter of the southeast quarter of Section 14.

A Southwest quarter of the -- wait a minute, southwest quarter of the southeast quarter? Yes, I believe we would object to that. Actually, within this R-111-A line, if we started secondary mining a well, that area might be in danger of being damaged, assuming we recovered pillars.



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Q What are the reasons for your objections, please?

A The loss of the potash within the hundred-foot barrier, which, I believe, is worth around fifty thousand dollars, but in that one hundred-foot barrier that we would have to leave around the well, in addition to that it would preclude any secondary mining or pillar extraction within an area of, I believe that is about seven hundred feet out there to the potash bed -- I am not quite certain of it -- but within seven hundred feet of that well, we would not be able to take any pillars because of the subsidence.

Q Now, where are your mining operations at the present time within that area?

A At the present time, this area has not been developed. Our mining operations are back approximately ten thousand feet, and we have plans on the board now for an eight thousand-foot tunnel through the salt to this ore body out in here where we will be, I would say, within five years, or less.

Q Then within the approximate period of five years, you will still be conducting your mining operations within the presently defined potash area?

A Yes.

Q And then how many years will it be before you will be mining within the southwest quarter of the southeast quarter of Section 14?

A That, again, depends upon production, sales. It is pretty hard to plan the potash business more than three or four



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years ahead. We assume that we will actually produce at a high rate, and if that is true, I would say we would be out here within very close to five or, possibly, six years.

Q At the very earliest?

A Well, yes. I would say that is -- to the best of my knowledge that is right.

Q Now, before you would conduct any mining operations in the new proposed area, I assume that you would take and make additional core tests, would you not?

A Yes, we would. We would probably delineate this a little more clearly, actually, for mining information only.

Q Approximately how many core tests would you make?

A It would depend upon what the individual core test showed. We would plan one from the results of the other.

Q And that exploration program would take approximately how long?

A Not very long. These holes here were drilled in a period of about three months, or less.

Q But before you undertook any mining operations, you would conduct additional core tests and make certain that there was commercial ore?

A We know there is commercial ore there. We would probably drill the holes to outline it more clearly so we could draw our mine plans and our main haulage-ways more accurately.

Q Then it is true that the only purpose for acquiring of



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ALBUQUERQUE, NEW MEXICO
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the proposed Order extending this area is merely to prevent any oil operator from drilling an oil well in that area?

A Not necessarily. I think we would probably be reasonable, perhaps, if it was up in the corner here -- if they followed the casing program we would not object to the well, but we certainly would object to it in commercial ore, because potash reserves are not what they once were ten years ago.

Q Well, let's reframe it, then. The only purpose is to prevent any oil operator from possibly drilling within the southwest quarter of the southeast quarter of Section 14?

A Specifically, yes.

Q Regardless of what his correlative rights might be?

A We would object, yes.

Q Now, the reason for your objection is the economic loss of leaving the pillars, or the hundred-foot barriers in place, is that correct?

A Plus the possible damage to the formation by the drilling of the well. That is a very -- as a matter of fact, these holes cause us considerable trouble because of quicksand and voids in the formation above the salt, and there is a lot of placings in the area. We have oil wells already over in this area -- they are already there.

Q Well, the same would exist as to where you say you would permit the drilling of a well outside --

A I didn't say, we would; I said, we might. It would be



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taken under consideration. Of course, if we actually found that sometimes this line here, when you have a more -- closer drilling pattern, we might drill a hole here and find that this line curves down, then we would try to be reasonable. If it is on the outside edge far enough away from the ore so we felt there would be no damage, we wouldn't object as long as the casing program was followed.

Q Mr. Jourdan, how long do you figure -- how many years do you figure it would take to actually mine the proposed area, that is, the time it would take you to mine before you started retreating and pulling out?

A That is a factor of the mining plans in the other portion of the mine at the time. If we had, for example, three mining machines in that area, or one, or five -- we actually have twelve mining machines now -- if we put twelve of them in there we could probably mine it out in a year.

Q Now, do you anticipate you will be using twelve?

A No -- that I can't answer, because, as I point out, it depends upon the production demands at the time, the grade of the ore in other parts of the mine. In other words, we try to maintain an even grade by blending. We would probably not use twelve. Whether we would four, or three, or five, I can't answer that question, because that would be dependent on our mining operations in the other areas at the time.

Q In other words, it might be several years before you



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start your retreating operations?

A It could be.

Q And until you started your retreating operations, would there be any loss as to the hundred-foot barrier?

A That is hard to say. I don't believe that there would be, no, but I don't think we would take that barrier out. Our present plans for pillar recovery, we are a little bit worried about a well in taking that barrier. We are going to leave, in the existing oil areas -- we are not even coming within fifteen hundred feet of the existing wells in the area, and we are in a quandary at the present time as to what to do about the abandoned wells, whether to plug them or abandon the potash, or go ahead and take it and hope for the best.

Q Now, what is the value of this ore per ton?

A About sixteen -- let's see, it would be sixteen dollars per ton; muriated, it would be about six dollars.

Q Six dollars?

A Wait a minute.

MR. BLACKMAN: Well, let me correct the witness here, Mr. White, if you don't mind. The field price of potash per unit is 17.65 cents; a unit of case roll is 20 lbs., so if you multiply the percentage of K_2O by 17.65, you will arrive at the value of a ton of ore which will, in this area, probably be in the area of three dollars -- say from three dollars to four dollars a ton.

Q (By Mr. White) Let's assume it is four dollars a ton.



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Now, Mr. Jourdan, how many cubic feet does it take to make a ton of ore at six dollars per ton?

A Tonnage would be your cubic feet divided by 15.3. I see somebody has a slide rule.

Q Be what?

A Divide your cubic feet by 15.3.

Q What do you figure the economic loss would be to the company by reason of their leaving this one hundred-foot barrier -- in dollars and cents?

A Oh, I would roughly say -- it is pretty hard to figure it -- I would have to know the exact depth and on a 90% recovery, it would be a considerable amount.

MR. BLACKMAN: If the Examiner please, I haven't objected to any of this line of questioning in this case, because I felt Mr. White should be allowed great latitude, but it seems to me that the question involved at this stage of the proceedings is whether or not a commercial ore body exists in this area, not whether a well should be drilled in this area. Now, we didn't come prepared to enlighten the Commission on the economic factors that are involved in whether or not a well should be drilled. We have done that previously in the case of Velma Oil Corporation-Potash Company of America -- I can get the number for it, I don't have it with me immediately. All of this information is set forth in great detail. We are perfectly willing to furnish it, we have no objection to furnishing it. There is nothing secret about it, but



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it does seem to me that it is quite a good distance outside the direct examination when this witness did not come prepared to give these immediate figures.

MR. PAYNE: Your position is that at such time as an operator proposed to drill a well in the proposed extension that at that time you would be prepared to come forth, either object to the program, whatever the case might be?

MR. BLACKMAN: Yes, sir. At this time it seems to me we are concerned with whether this piece of land should be included in R-111-A. If it is included in R-111-A, then that requires certain notice be given to Potash Company of America in the event an operator wants to drill a well, and at that time the Commission will decide whether an oil well is proper. At that time, we would be willing and perfectly prepared to deliver any information you cared to have.

If I had had any notion, if I had considered it relevant, I certainly would have brought it today, but I considered it irrelevant.

MR. UTZ: Objection sustained.

MR. WHITE: May I have the privilege of stating our reasons for asking these questions?

MR. UTZ: You may state your case.

MR. WHITE: Mr. Blackman says he was wholly unaware I was going to ask these questions, but I think the record will show, and it is true enough that if an oil operator wants to drill an oil



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well in a potash area, we have a right to have a hearing and, as he said, at that time he will be in a position to put forth all the testimony. But the record will show that once any lease hold is dedicated to the potash area, or brought within the potash area, there has never been one instance where an oil operator has been granted permission to drill a well within the potash area over the objection of the potash operators, and once it is thrown in, why, you might as well give up your oil leases; and the record I think the Commission can take administrative knowledge of their own records -- and he said he would object to the drilling of a well in that particular area because of the economics. He claims this hundred-foot barrier is worth around fifty thousand dollars, and according to our calculations, it only comes to three thousand two hundred-eighty dollars.

THE WITNESS: You are talking about the hundred-foot barrier, I am talking about the mining area around which we would have to leave, because you can't extract pillars, if that is seven hundred fifty feet deep out there, within a radius of seven hundred fifty feet we would not be able to remove any pillars.

Q (By Mr. White) What size are those pillars?

A We have, in our mining plan at the present time, we have -- the centers are seventy-five feet, room centers, and we leave -- the rooms are thirty feet wide; therefore, we leave a square pillar which is seventy-five minus the thirty, or forty-five feet square.



Q And then is it not true that of this forty-five by forty-five pillar that you can remove approximately thirty percent of that when you retreat?

A We would probably take thirty to forty percent, depending upon our type of mining method and the success we have with our second mining operation.

Q Assuming that were successful, then that would decrease your fifty thousand dollars by thirty percent, would it not?

A No. I am just giving a rough figure. As Mr. Blackman pointed out, I didn't come prepared with dollars and cents figures. I could sit down and figure it out, I am sure, but at the present time I am not prepared for dollars and cents over the large area.

Now, you are speaking of one well, Mr. White. If you put one well down there and you hit oil, would you be content with one well, or would you want to put an offset to it?

Q Well, in answer to your question, we would be content with one well.

A You are sure that there is oil there, as sure that we are that the potash is there?

MR. WHITE: We will put our --

MR. UTZ: What is the lease hold effect in this area? Is that just forty acres?

MR. ROBINSON: Texaco holds the east half of Section 14, with the exception of the southeast of the southeast, and then we also have a hundred sixty acre lease up in the northwest quarter



of -- I believe that is Section 13.

THE WITNESS: Thirteen, over here?

MR. ROBINSON: We have thirteen hundred forty acres there altogether.

Q (By Mr. White) Mr. Jourdan, what percentage of the present holdings of the Potash Company of America, within the potash area, have been mined or explored?

MR. BLACKMAN: I object to that question as being irrelevant. This particular information now is information which we consider to be secret. The information has been given, insofar as it is available, to the Oil Conservation Commission and is available on the basis where we believe the lines to be, and the confidential maps submitted in accordance with our previous understanding.

MR. WHITE: If the Examiner please, I believe it is wholly relevant. If, for example, they have only explored, say, one percent, or mined only one percent of the present holdings within the present area, why, there might be some question in the Commission's mind as to whether or not they want to give them additional area. And as far as being confidential, the potash companies are supposed to file copies of their lease hold interests and their mining interests, which the rules say are open to the public.

MR. UTZ: What was your question again?

MR. WHITE: Asked them what percentage of their present

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mine, or lease hold, within the present area, has been mined.

MR. BLACKMAN: Still object as being irrelevant.

MR. WHITE: If they are not going to get to this for some years to come, all they are trying to do is keep some oil operator out.

MR. UTZ: Mr. Blackman, the Examiner will overrule your objection, and if the witness can answer the question within the realm of reason, I ask him to do so.

THE WITNESS: I would say that it is around seventy-five percent. seventy to seventy-five percent, probably, has been mined -- as much as I hate to give that information. That is first mining. That may be slightly high, it may be a little less, but, as I say, I would have to look at the actual maps and measure it.

MR. UTZ: That wouldn't include any secondary mining?

THE WITNESS: No. Our company has not started secondary mining at the present time, although we anticipate starting within the next year or two.

Q (By Mr. White) Have the mine operations of the Potash Company of America in New Mexico been as extensive in 1959 as in 1958?

A We have had one of the highest production years, or will have. We set a production record the other day, and our warehouses are low, so I assume we will go at a high rate. Barring unforeseen circumstances, I anticipate we will mine three million tons a year from now until the life of the mine.



Q And how long do you figure the life of the mine might be in the present potash area?

A I prefer not to answer that question. I would say that -- I think our annual report said that we will -- are setting well for the next ten years. I can answer it that way, which is, of course, common knowledge of the stockholders, and anyone who wants to read the report.

MR. BLACKMAN: Again I object to this line of questioning as being in the area of pretty much pure conjecture. It is well-known that in mining operations the amount of reserves is a very relative thing. It depends upon market conditions and competitive conditions to tell just what the reserves are.

Q (By Mr. White) Mr. Jourdan, you stated that you leave a

MR. UTZ: Wait a minute, we have got another objection to rule on.

Mr. Blackman, the Examiner will take note of whatever the testimony happens to be and will use it in this case for whatever relevancy it may have; therefore, your objection is overruled.

MR. BLACKMAN: Well, I don't particularly care about the information, but I do want the Commission to understand that we did not come in here prepared to give this kind of testimony and, consequently, it is given as a matter of conjecture rather than being based upon any figures on that.

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MR. UTZ: Well, if the witness cannot answer the question from knowledge, well, he doesn't have to answer it.

MR. BLACKMAN: Because this is all set forth in great detail in the Velma case.

MR. WHITE: The Velma case is no part of this record.

Q (By Mr. White) Mr. Jourdan, you stated that you left pillars forty-five-foot square. Now, what would be the approximate area of the excavated area?

A Well, your rooms would be thirty feet wide. In other words -- if I had a blackboard here I could probably show you a little easier -- your mining machine comes through and takes a thirty-foot wide tunnel, or entry, as we call it, and then from the center of that entry to the center of the next one is seventy-five feet, and they are square, so the pillar that we leave on first mining, which is approximately sixty-eight percent that is taken out on first mining --

Q Then do you cross-hatch at right angles?

A Yes. We leave, actually, squares. It is just a series of squares.

Q And how wide?

A Thirty feet apart.

Q Then after you, as I understand it -- you say you have an area of potash --

A We need a blackboard.

Q Then you go in and you tunnel, say, from north to south



and you run your tunnels through?

A That is right.

Q And then you go back in these tunnels and cross-hatch at right angles?

A Well, we do that as we advance. The machine -- pardon me for talking with my hands -- the machine advances and then it turns at seventy-five feet centers, from each room it turns both ways and, therefore, you have a checkerboard, in effect, with the mined-out area and the square pillars that we leave on first mining. What we have planned for second mining, we will come back with a second machine and we will split those pillars, taking from twenty-four to thirty feet straight through the center, depending on our experience in the type of ground we are in. It is a hard thing to say that we will do this specifically, because our company has had no experience, and I think that opinion differs very considerably between -- from mine to mine in the potash areas as to what you can and can't do, so we are going to have to find out the hard way.

Q Then after you have done that secondary mining, as I understand it, you go back again and retreat and pull out the pillars and let the earth drop down?

A We would not take a hundred percent of the pillars, no. We would leave, probably, ten or twelve percent in as we move out to hold the ground up as it sags down.

Q And that would be what you might call a third operation.



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or abandonment, would that be right?

A Yes. Certainly after it caved in we couldn't come back in and mine again.

Q That operation would be many years in the future, possibly, would it not?

A No, I don't think so.

Q Approximately how long?

A In what area?

Q In this particular area.

A Well, there, again, we are talking about production and figures. I would say six or seven years.

Q And when you retreated, when you got around -- say there were a well drilled in this area, this hundred-foot barrier, you could take about what percent of that in your retreating operation?

A We would not touch it; in fact, I think we have not yet decided what to do about pillar recovery in the vicinity of an oil well. That is a problem for our top management, because there is a possibility that the mine may be endangered.

Q Is it not true that some potash operators take as high as thirty or forty percent?

A Thirty or forty percent of the --

Q -- of the barrier?

A Of the oil well barrier?

Q Yes.

A I don't know of anyone who has recovered pillars in an



oil well area. Mr. Herbert is here from Southwest Potash Company and maybe he will answer that question for you.

MR. WHITE: I believe that is all the questions we have.

MR. UTZ: Are there any other questions of the witness?

MR. PAYNE: Yes.

CROSS-EXAMINATION

BY MR. PAYNE:

Q Mr. Jourdan, in view of where you have drawn your line as to what you believe are the productive limits in the proposed extended area, what is your reason for asking that the northeast quarter of the southeast quarter of Section 14 and the southwest quarter of the northwest quarter of Section 14 --

A Let's see, you are referring to this particular area?

Q Yes, sir.

A And here.

Q Why do you feel that those should be included?

A Actually, this line is proven, in our experience, to be conservative. Now, in addition to that, if this is eight hundred feet, or seven hundred feet, we will have subsidence which will, actually, come out seven hundred feet from that line and any well drilled within that area would certainly be damaged and we would not -- that would preclude second mining in there where we would touch that well, which would allow the water from the Rustler formation to come into the mine.

Q Your answer is the same, then, as to the northeast

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quarter and southeast quarter of Section 15?

A Yes, it is. Again I will point out that this line is probably conservative. We have found it in every case in our mining operations that this line -- actually, we have mined out beyond that -- that cut-off line. As I say, we are basing it on two drill holes here which are a half a mile apart, plus some information down in this area here, and we have been reasonable in projecting this line and we feel that, actually, if we come into here, why, that we might get out into the center of that section and then if we, or when we recover pillars here, we would cave, and the subsidence would be 45 degrees, so any well in the center of that area would, in all probability, be in danger.

Q Now, when you say your lines have generally been proven to be conservative, are you talking about lines drawn on the basis of two core tests, or after more fully --

A After it is more fully drilled out, yes. As has been pointed out, before we would mine this, we would definitely try to establish the -- actually these lines are not -- the actual ore is not deposited in a very straight curve like that. It may come out here similar to this, more like this line here. Actually, we had more information here which showed this nose in here.

Q So at this time we don't really know whether this line is conservative or not, do we?

A I would say that, from our experience and knowledge, I would say that the line is probably conservative. That is kind of



hedging the question a bit, but I would say that we are sure that there is ore in this area, that this line is right.

MR. PAYNE: Thank you.

MR. UTZ: Are there any other questions?

MR. PORTER: Mr. Jourdan, did you testify as to what constitutes consideration for cut-off of potash ore?

A Four feet at 14% is the present cut-off that the U. S. Geological Survey uses as commercial potash ore. Actually, there is one mine in the basin that is mining ore in the neighborhood of about four feet at eleven or twelve percent, and I dare say within the next year that that will probably go even lower, the grade and the mining height.

MR. PORTER: Thank you.

MR. UTZ: Mr. Jourdan, you do have copies of your core analysis on your 171 and 173 core holes, do you not?

THE WITNESS: I have copies. I have actually written it down here. I can state that, for the record, that that is correct, that we have a chemical analysis of these holes which we would be glad to furnish the Commission, if we can send them to you, if that is all right with you. We have our laboratory analysis of these holes.

MR. UTZ: Would you send us photocopies of the originals, please?

MR. BLACKMAN: What, exactly, is it that you wanted, Mr. Utz?

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MR. UTZ: The core analysis of the two holes here.

MR. BLACKMAN: The laboratory analysis?

MR. UTZ: Yes. Are there any other questions? The witness may be excused.

Are there statements in this case? Is there other testimony in this case?

MR. WHITE: Yes.

MR. UTZ: We will take a ten-minute recess.

(After recess.)

J. E. ROBINSON, JR.

called as a witness, having been previously duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Will you state your name, please?

A J. E. Robinson, Jr.

Q Mr. Robinson, by whom are you employed and in what capacity?

A I am employed by Texaco, Inc. as Pro-ration Engineer out of their Midland Division.

Q Does that cover the State of New Mexico?

A Yes, sir, it does.

Q Does Texaco have any Federal lease, oil-gas lease within the subject area in discussion today?

A Yes, sir. We have a four hundred forty acre Federal



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lease which --

Q Will you draw the location of the lease on the Exhibit?

MR. WHITE: -- if it is permissible with the Examiner.

MR. UTZ: Yes, sir.

THE WITNESS: It covers the east half of Section 14, with the exception of the southeast-southeast of the -- southeast of the southeast quarter, and it also includes the northwest quarter of Section 13.

Q (By Mr. White) Will you cross-hatch the area?

A (Witness marks on Exhibit.)

Q When was this lease acquired, Mr. Robinson?

A It was acquired January 1, 1957.

Q Have any geological studies been made on this lease?

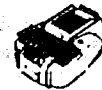
A Yes, they have.

Q And from these studies, is it the opinion of Texaco that this lease is commercially productive?

A Yes, sir. It is on a known geological structure and we have prospects for the Bone Springs, Wolfcamp, Atoka and Devonian.

Q Does Texaco intend to drill upon this lease within the next twelve months?

A We have not completed their final geological study. We are going to conduct additional surveys in the area and if these additional surveys are as attractive as our present studies, we will certainly drill a well within the next month. The land covered by this lease is on a known geological structure and the



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lease cannot be extended beyond the expiration date unless production is obtained.

Q And when is the expiration date?

A The expiration date is December 31, 1961.

Q What effect, if any, will the granting of this application have upon the correlative rights of Texaco?

A Well, it will be an encroachment upon the correlative rights of Texaco, Inc., in that they will be prohibited from drilling their lease and developing it in an orderly manner.

Q Has any well been drilled upon the lease in the past?

A Yes, sir. A well was drilled to a TD of 1381 to evaluate the Yates, and it was completed on July 18, 1960.

Q Was it productive, or non-productive?

A No, sir, it was a non-productive well. It was plugged and abandoned.

Q Does this have any significance, in your opinion?

A No. While the well did prove that the Yates was unproductive, it does not destroy our confidence in the prospects for the deeper zones.

Q How many acres are embraced in this lease?

A There are four hundred forty acres of Federal lease here.

Q And how many of those acres would be included in the potash area if this application were granted?

A One hundred sixty acres.

Q Do you believe that the remaining two hundred eighty



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acres is of the same geological structure?

A Our interpretation right now is that the remaining acreage is not as good acreage as the hundred sixty acres in that our present interpretation gives our structure "high" on this hundred sixty acres and any prudent operator, in attempting to locate his well, attempts to locate it on the known geological high part of the structure.

Q Again, referring to your Federal lease, do you have a copy of that lease?

A Yes, sir, I have a photostatic copy of this lease. It was acquired January 1, 1957, for a total consideration of \$13,346.10.

MR. UTZ: What was the ten cents for?

THE WITNESS: I really don't know. Oh, I think I could find it if you would like.

MR. WHITE: We offer the subject lease as Contestant's Exhibit No. 1 in evidence.

MR. BLACKMAN: May I have a copy of that, Mr. White, please? Thank you.

MR. WHITE: That is all I have at this time.

MR. UTZ: Any questions of the witness?

MR. PAYNE: Yes, sir.

MR. BLACKMAN: I don't think so.

CROSS-EXAMINATION

BY MR. PAYNE:



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Q Mr. Robinson, why did you abandon and plug the well after testing the Yates rather than taking that well deeper at the time to test the other horizon?

A This was a farmed-out well to Curtis and Nix and it was farmed out for a total depth of fifty feet below the Yates.

Q Now, Mr. Robinson, to the best of your knowledge, the United States Geological Survey has not changed its policy and does not renew leases until such time as the potash has been mined, is that correct?

A Mr. Payne, at the present time, we have two leases where we paid approximately ninety thousand dollars and they are in a potash area where we are prohibited from drilling in this area, and we have asked that the U. S. G. S. hold these leases in suspense for us until the time that the potash is mined; however, we do not have any assurance at all. We think that the leases will terminate.

Q Even though the fact that you couldn't drill a well during the primary term was because the U. S. G. S. wouldn't let you?

A Yes, sir, that is right.

Q Now, the Secretary of the Interior does have the power to renew these leases, doesn't he?

A Yes, sir, he does.

MR. PAYNE: That is all.

Q (By Mr. Utz) Mr. Robinson, I believe you said that this was a known structure, is that correct?



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A Yes, sir.

Q Is that the same structure as the Getty Oil Pool, or what pool is it?

A This is in the area of the Getty, I believe.

Q Separate structure, however?

A I don't know if it is a separate structure from these. It is on a trend with other structures in the area, and if it is a separate structure, I don't know.

Q You said you have good prospects in the Bone Springs, Wolfcamp and Devonian. How near is any of that production?

A Some of the deeper production is producing approximately four to four and a half miles to the north of this location.

MR. UTZ: Are there any other questions?

MR. BLACKMAN: Yes.

CROSS-EXAMINATION

BY MR. BLACKMAN:

Q You said, if I understood you correctly, that this lease was going to expire as of December the 31st, 1961?

A Yes, sir.

Q That is at the end of the first five-year term, is it -- is that what you mean, or is this --

A This is a five-year lease.

Q This is a five-year lease which is not subject to renewal, no preferential rights?

A No, sir.



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Q I have made a quick look at it and I do not find the potash clause in here which you testified was in a different one, am I correct?

A No, sir, this lease does not have a potash stipulation in it. We have acquired other leases that have the potash stipulation in it, and when we acquire those leases, we do that solely upon the risk involved, but this lease does not have a potash stipulation in it.

MR. BLACKMAN: That is all.

MR. UTZ: Any other questions? The witness may be excused.

Do you wish to enter your Exhibit?

MR. WHITE: Yes, sir, at this time.

MR. UTZ: Without objection, it will be received into the record.

MR. BLACKMAN: I would like, also, to offer the Applicant's Exhibit A into evidence in this case.

MR. WHITE: No objection.

MR. UTZ: It may be entered into the record.

Is there any other testimony in this case? Statements?

MR. FULTON: I am R. S. Fulton, Regional Mining Supervisor, U. S. G. S., Carlsbad. The proposed ore cut-off line, four feet and fourteen percent, the acreage sought corresponds very closely with the information we have to this date. It is the Survey's opinion, and my opinion, that it is entirely justified.



MR. UTZ: Any other statements? The case will be taken under advisement.

MR. BLACKMAN: If the Examiner please, I would like to make a short statement.

MR. UTZ: You may proceed.

MR. BLACKMAN: I think that the question in this case is not the question Mr. White has been talking about; the question in this case is whether there is commercial potash in this area. We think that we have found it, we know there is commercial potash there. That has been completely proved and, therefore, the area of R-111-A, the past rules of the Commission, should be extended to include this area.

Now, the evidence showed the reasons why we had picked the particular forty-acre tracts. The reason we put it in forty-acre tracts is because this is the practice followed by the Commission in taking legal subdivisions in rather than curving it around on any particular line.

Mr. Jourdan testified that the area of subsidence danger is approximately the area from the location of a well projected to a distance equivalent to the depth of the potash zone, in other words, that is the area of average proximate damage from the subsidence due to pillar removal in potash mines.

If the Commission decides to put this land in our R-111-A they have not made any determination as to whether or not an oil well should be drilled. I should like to remind the Commission of



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its prerogative to protect both the potash measures and the oil measures, and this particular case does not have anywhere near enough evidence in it that the Commission could make any decision on that basis.

R-111-A simply says that some additional notice will be given, and that a particular casing program will be followed, unless that is amended by the Commission, and the Commission has the right, and in some cases has changed the rules of R-111-A on the application of an oil producer. I still say this is irrelevant, but I will make a statement on it because it was raised, the value of the potash measure. In several cases, this has been up, including the Velma case. There have been four or five cases in which the value of potash measure has been testified to by several experts, and that testimony all shows that one acre of four feet of fourteen percent potash has a value in the neighborhood of between forty and forty-five thousand dollars.

Thank you.

MR. WHITE: May I make a short response to Mr. Blackman's statement?

MR. UTZ: Yes.

MR. WHITE: I see what the issues are before the Examiner, but in extending these potash areas, certain equities should be considered as between an oil operator who has gone in and obtained a Federal oil and gas lease which contains no potash stipulations, which I assume, in this instance, was prior to the potash company's



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obtaining the lease, apparently they haven't even obtained a lease on this yet. And they have testified that 1959 was their biggest production year in history, they established a record; further testified that it would be ten years before they could deplete their present holdings within the present potash area, and they showed no economic necessity for having this expansion at the present time, and we submit that, in view of the fact that they say they are going to have to go ahead and made additional core drillings before they even go in there, they are premature in asking that this area be included in the potash area, and the only purpose is to prevent an oil operator who had acquired a lease prior to the potash company from drilling an oil well in there.

They have already testified that they would object to the drilling of any well where we have mentioned that we would like to drill, and the Commission and Commissioner can take administrative notice of the records of prior cases. In no instance has the Commission ever permitted the drilling of an oil well in a potash area where any potash operator has objected, and they have already stated that they would so object, and, in view of that, why, we believe that their application is premature until they definitely determine there is potash in that area by additional core drilling. And the equities are wholly in favor of Texaco in this instance.

MR. UTZ: Any other statements?

The case will be taken under advisement.



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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, LAWRENCE HOLMES, JR., Certified Shorthand Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF, I have affixed my hand this 22nd day of NOVEMBER, 1960.

Lawrence Holmes, Jr.
CERTIFIED SHORTHAND REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2112 heard by me on Nov. 2 1960.
Mustafa Examiner
New Mexico Oil Conservation Commission



I N D E XWITNESSPAGE

EVERETT C. JOURDAN

Direct Examination by Mr. Blackman

2

Cross-Examination by Mr. White

6

Cross-Examination by Mr. Payne

23

J. E. ROBINSON, JR.

Direct Examination by Mr. White

26

Cross-Examination by Mr. Payne

29

Cross-Examination by Mr. Blackman

31

E X H I B I T SNUMBEROFFEREDENTERED

Applicant's Exhibit A

(3)

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Contestant's Exhibit 1

29

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ALBUQUERQUE, NEW MEXICO

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POTASH COMPANY OF AMERICA

*Core
2112*

Following are analyses for Potash Company of America Core Test, No. 173
Located in the center of Sec. 14, T. 20 S., R. 29 E., Eddy Co., New Mex.

No. 1 Bed (N)

			<u>% K₂O</u>	<u>% Mg</u>
548'	0	" - 548' 8 "	Trace	0.19
548'	8	" - 549' 6 1/2"	Trace	0.08
549'	6 1/2"	- 550' 1 "	3.59	0.02
550'	1	" - 550' 10 "	27.64	0.03
550'	10	" - 551' 4 1/2"	41.28	0.02
551'	4 1/2"	- 551' 9 1/2"	46.15	0.04
551'	9 1/2"	- 552' 0 1/2"	42.78	0.05
552'	0 1/2"	- 552' 4 "	1.78	0.08
552'	4	" - 552' 11 "	Trace	0.20
552'	11	" - 553' 3 "	Trace	0.17

549' 6 1/2" - 552' 4" = 33.5" at 27.04% K₂O
48" at 18.87% K₂O

or

Date: Aug. 4, 1960

Floyd W. Neeley
Floyd W. Neeley, Asst. Cf. Chemist