

Case Number

4404

Application
Transcripts.

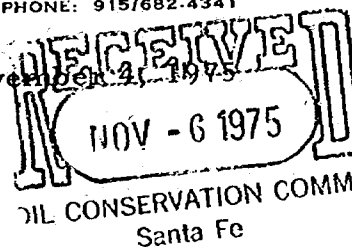
Small Exhibits

ETC.

RESERVE OIL AND GAS COMPANY

FIRST SAVINGS BUILDING, MIDLAND, TEXAS 79701
TELEPHONE: 915/682-4341

November 4, 1975



Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention Mr. Joe D. Ramey

Re: Reserve Oil and Gas Company
Cooper Jal Unit
Lea County, New Mexico
NMOCC Order No. 4020

Case # 4404

Gentlemen:

This is to advise that water injection into the following wells commenced on the dates indicated below:

Jalmat Pool

	<u>Well No.</u>	<u>Unit</u>	<u>Location</u>			<u>Date Injection Commenced</u>
			<u>Section</u>	<u>Township</u>	<u>Range</u>	
Cooper Jal Unit	309	C	19	24S	37E	Nov. 1, 1975
Cooper Jal Unit	312	G	25	24S	36E	Nov. 4, 1975

Very truly yours,

RESERVE OIL AND GAS COMPANY

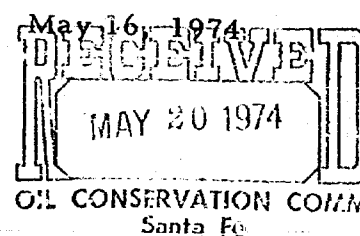

Erd M. Johnson

ck

cc: NMOCC - Hobbs
U.S.G.S. - Hobbs
Mr. Ben Morris

RESERVE OIL AND GAS COMPANY

FIRST SAVINGS BUILDING, MIDLAND, TEXAS 79701
TELEPHONE: 915/682-4341



Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention Mr. A. L. Porter, Jr.

Case #4404

Re: Reserve Oil and Gas Company
Cooper Jal Unit
Lea County, New Mexico
NMOCC Order No. 4020

Gentlemen:

This is to advise that water injection into the following well commenced
May 15, 1974:

Jalmat Pool

	Well No.	Unit	Section	Township	Range
Cooper Jal Unit	313	E	30	24-S	37-E

Very truly yours,

RESERVE OIL AND GAS COMPANY

Erd M. Johnson

Erd M. Johnson

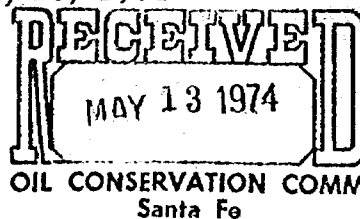
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cc: Mr. Joe Ramey
U. S. G. S. - Hobbs
Mr. Ben Morris

RESERVE OIL AND GAS COMPANY

FIRST SAVINGS BUILDING, MIDLAND, TEXAS 79701
TELEPHONE: 915/682-4341

May 10, 1974



Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Case # 4404

Attention Mr. A. L. Porter, Jr.

Re: Reserve Oil and Gas Company
Cooper Jal Unit
Lea County, New Mexico
NMOCC Order No. 4020

Gentlemen:

This is to advise that water injection in the following well commenced
May 9, 1974:

Jalmat Oil Pool

	<u>Well No.</u>	<u>Unit</u>	<u>Section</u>	<u>Township</u>	<u>Range</u>
Cooper Jal Unit	228	C	30	24-S	37-E

Very truly yours,

RESERVE OIL AND GAS COMPANY


Erd M. Johnson

ck

cc: Mr. Joe Ramey - NMOCC, Hobbs
U.S. G.S. - Hobbs
Mr. Ben Morris

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. 4404
Order No. R-4020

APPLICATION OF RESERVE OIL AND GAS
COMPANY FOR A WATERFLOOD PROJECT,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:30 a.m. on August 19, 1970,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 25th day of August, 1970, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, 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, Reserve Oil and Gas Company, seeks
authority to institute a waterflood project in the Cooper-Jal
Unit Area, Jalmat Pool, by the injection of water into the
Tansill, Yates, and Upper and Middle Seven Rivers formations
through 23 injection wells in Township 24 South, Ranges 36 and 37
East, NMPM, Lea County, New Mexico.

(3) That the wells in the project area are in an advanced
state of depletion and should properly be classified as "stripper"
wells.

(4) That the proposed waterflood project should result in
the recovery of otherwise unrecoverable oil, thereby preventing
waste.

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CASE No. 4404
Order No. R-4020

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Reserve Oil and Gas Company, is hereby authorized to institute a waterflood project in the Cooper-Jal Unit Area, Jalmat Pool, by the injection of water into the Tansill, Yates, and Upper and Middle Seven Rivers formations through the following-described 23 wells in Lea County, New Mexico:

Operator Lease	Well No.	Unit	Section	Township	Range
Amerada Falby	3	K	19	24S	37E
	(a dual completion)				
	4	M	19	24S	37E
Cities Service Jack "A" Federal	1	M	18	24S	37E
	(a dual completion)				
Continental Jack Federal 19	1	E	19	24S	37E
	(a dual completion)				
	4	C	19	24S	37E
Humble Hunter	3	E	24	24S	36E
	4	C	24	24S	36E
	(a dual completion)				
Thomas	1	O	23	24S	36E
	3	M	24	24S	36E
Petroleum Corporation of Texas M. Dunn	1	O	13	24S	36E
	2	I	13	24S	36E
Harrison	2	C	25	24S	36E
	7	E	25	24S	36E

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CASE No. 4404
Order No. R-4020

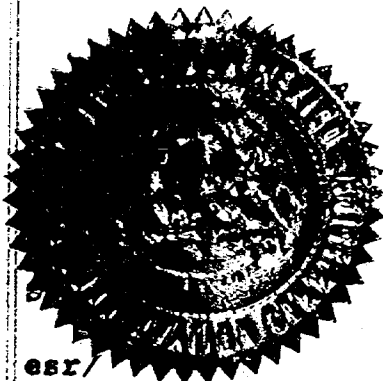
<u>Operator Lease</u>	<u>Well No.</u>	<u>Unit</u>	<u>L o c a t i o n</u> <u>Section Township Range</u>
Phillips	2	I	24 24S 36E
Thomas	1	O	24 24S 36E
	4	K	24 24S 36E
Reserve Oil and Gas Company Van Zandt	2	A	25 24S 36E
	4	G	25 24S 36E
Atlantic Richfield Company Dunn SCP	1	G	24 24S 36E
	3	A	24 24S 36E
Texaco Fristos "B"	1	E	30 24S 37E
	3	C	30 24S 37E
Texas Pacific Myers "B" Federal	1	A	26 24S 36E

(2) That the subject waterflood project is hereby designated the Reserve Cooper Jal Jalmat Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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



STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

David F. Cargo
DAVID F. CARGO, Chairman

Alex J. Armiijo
ALEX J. ARMIJO, Member

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



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87801

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

August 25, 1970

Mr. A. J. Losee
Attorney at Law
Post Office Box 239
Artesia, New Mexico 88210

Dear Sir:

Enclosed herewith are Commission Orders Nos. R-4019 and R-4020, entered in Cases Nos. 4403 and 4404, approving the Reserve Cooper Jal Langmat Waterflood Project and the Reserve Cooper Jal Jalmat Waterflood Project, respectively.

Injection in the Langmat project shall be through the 26 authorized water injection wells, while injection in the Jalmat project shall be through the 23 authorized water injection wells. Injection into single completion injection wells shall be through tubing set in a packer. Injection into dual completion injection wells shall be through tubing set through an upper packer and a lower packer, with injection into each zone controlled by a down-hole regulator. The casing-tubing annulus in each of the aforesaid types of completion shall be loaded with a corrosion-inhibited fluid and equipped with a pressure gauge at the surface. Packers shall be set as near as practicable to the perforation or, in the case of open-hole completions, to the casing-shoe.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which the Langmat project will be eligible to receive under the provisions of Rule 701-E-3 is 2100 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less, while the maximum for the Jalmat project would be 1806 barrels.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

-2-

Mr. A. J. Losee
Attorney at Law
Post Office Box 239
Artesia, New Mexico

August 25, 1970

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

Enclosure
ALP/DSN/ir

cc: Oil Conservation Commission
Hobbs, New Mexico

U. S. Geological Survey
Hobbs, New Mexico

Mr. D. E. Gray
State Engineer Office
Santa Fe, New Mexico

Docket No. 19-70

DOCKET: REGULAR HEARING - WEDNESDAY - AUGUST 19, 1970

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE
BUILDING, SANTA FE, NEW MEXICO

- ALLOWABLE:
- (1) Consideration of the oil allowable for September and October, 1970;
 - (2) Consideration of the allowable production of gas for September, 1970 from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, September, 1970.

THE FOLLOWING CASES WILL BE HEARD BEFORE DANIEL S. NUTTER, EXAMINER, OR ELVIS A. UTZ, ALTERNATE EXAMINER, IN THE OIL CONSERVATION COMMISSION CONFERENCE ROOM ON THE SECOND FLOOR OF SAID BUILDING AT 9:30 a.m.

CASE 4414: Southeastern New Mexico nomenclature case calling for an order for the creation and extension of certain pools in Lea, Chaves, and Eddy Counties, New Mexico:

(a) Create a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the Townsend-Morrow Gas Pool. The discovery well is the Avance Oil & Gas Company State ETA No. 2 located in Unit I of Section 8, Township 16 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
SECTION 8: SE/4

(b) Extend the Allison-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 36 EAST, NMPM
SECTION 12: S/2

(c) Extend the Baum-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 32 EAST, NMPM
SECTION 36: NW/4

(d) Extend the Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM
SECTION 24: E/2 NE/4

(e) Extend the EK Yates-Seven Rivers-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
SECTION 19: SE/4
SECTION 20: SW/4

(f) Extend the Hobbs-Blinebry Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 38 EAST, NMPM
SECTION 19: S/2

(g) Extend the Indian Basin-Upper Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 23 EAST, NMPM
SECTION 21: N/2 and N/2 N/2 N/2 S/2

(h) Extend the Paduca-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 31 EAST, NMPM
SECTION 1: W/2
SECTION 12: W/2

(i) Extend the Springs-Upper Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 25 EAST, NMPM
SECTION 3: Lots 1, 2, 7, 8, 9, 10,
15 and 16

(j) Extend the Sulimar-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
SECTION 26: SW/4 NE/4

(k) Extend the Tres Papalotes-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM
SECTION 33: NW/4

(l) Extend the Northwest Vacuum-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
SECTION 5: SW/4

CASE 4413: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to permit Stanley Leonard Jones dba Francisca Corporation and all other interested parties to appear and show cause why the Francisca Corporation Beeman Well No. 1 located 1980 feet from the South and West lines of Section 2, Township 24 South, Range 28 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 4172: (Reopened)

In the matter of Case No. 4172 being reopened pursuant to the provisions of Order No. R-3816, which order established 80-acre spacing units for the Northeast Lovington-Pennsylvanian Pool, Lea County, New Mexico. All interested parties may appear and show cause why the said pool should not be developed on 40-acre spacing units.

CASE 4399: Application of Pan American Petroleum Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle in the wellbore production from the Blinebry, Tubbs, and Drinkard Oil Pools in its Southland Royalty "A" Well No. 8 located in Unit O of Section 4, Township 21 South, Range 37 East, Lea County, New Mexico.

CASE 4400: Application of David C. Collier for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico. Said exception would be for applicant's Southern Federal Lease in Units A, C, E, G, I, K, and M of Section 30, Township 19 South, Range 31 East, North Hackberry Yates-Seven Rivers Pool, Eddy County, New Mexico.

- CASE 4401: Application of Read and Stevens, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Queen, San Andres, Glorieta, and Delaware formations in the open-hole interval between the 8 5/8 inch casing shoe at 3998 feet and the top of the cement at 6109 feet in its Getty State "B.G." Well No. 1 located in Unit K of Section 12, Township 19 South, Range 34 East, Quail-Queen Pool, Lea County, New Mexico.
- CASE 4402: Application of Reserve Oil and Gas Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Cooper-Jal Unit Area comprising 2581 acres, more or less, of Federal and fee lands in Township 24 South, Ranges 36 and 37 East, Lea County, New Mexico.
- CASE 4403: Application of Reserve Oil and Gas Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by water injection through 26 wells into the Lower Seven-Rivers and Queen formations underlying its Cooper-Jal Unit Area, Langlie-Mattix Pool, Lea County, New Mexico.
- CASE 4404: Application of Reserve Oil and Gas Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by water injection through 23 wells into the Tansill, Yates, and Upper and Middle Seven-Rivers formations underlying its Cooper-Jal Unit Area, Jalmat Pool, Lea County, New Mexico.
- CASE 4405: Application of Reserve Oil and Gas Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the South Langlie-Jal Unit Area comprising 1080 acres, more or less, of fee lands in Township 25 South, Range 37 East, Lea County, New Mexico.
- CASE 4406: Application of Reserve Oil and Gas Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by water injection through 13 wells into the Seven Rivers and Queen formations underlying its South Langlie-Jal Unit Area, Langlie-Mattix Oil Pool, Lea County, New Mexico.
- CASE 4407: Application of Tenneco Oil Company for an unorthodox oil well location, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox Dakota oil well location 1980 feet from the South and East lines of Section 13, Township 17 North, Range 9 West, Hospah Field, McKinley County, New Mexico, said location being closer than 330 feet to an inner boundary line.

- CASE 4408: Application of Keohane and Westall for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicants, in the above-styled cause, seek an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico. Said exception would be for applicants' State Well No. 1, located in Unit D of Section 2, Township 19 South, Range 31 East, Shugart Pool, Eddy County, New Mexico.
- CASE 4409: Application of Anadarko Production Company for two waterflood expansions, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the expansion of its Federal Q Waterflood Project by the conversion to water injection of three additional wells in Units J, L, and P of Section 3, Township 17 South, Range 30 East, Square Lake Pool, Eddy County, New Mexico. Applicant further seeks the expansion of the Stallworth Oil and Gas Company Parke Waterflood Project by the conversion to water injection of one additional well in Unit H of said Section 3.
- CASE 4410: Application of Major, Giebel & Forster for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the SE/4 of Section 28, Township 25 South, Range 37 East, Crosby-Devonian Pool, Lea County, New Mexico, said acreage to be dedicated to a well to be drilled in said quarter section. Also, to be considered will be the cost of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.
- CASE 4411: Application of Continental Oil Company for an exception to Rule 104 C I, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 104 C I of the Commission Rules and Regulations to permit the completion within 660 feet of another producing well in the same formation of its State H-35 Well No. 10 located 2030 feet from the North line and 1780 feet from the East line of Section 35, Township 17 South, Range 34 East, Vacuum Pool, Lea County, New Mexico.
- CASE 4412: Application of Continental Oil Company for a pressure maintenance project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project by the injection of water into the Yates and Seven Rivers formations through two wells on its McCallister "A" lease in Section 24, Township 26 South, Range 36 East, Scarborough Yates-Seven Rivers Pool, Lea County, New Mexico.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
RESERVE OIL AND GAS COMPANY FOR A
WATERFLOOD PROJECT, JALMAT OIL POOL
LEA COUNTY, NEW MEXICO

COOPER-JAL UNIT
JALMAT ZONE
LEA COUNTY, NEW MEXICO

GENERAL

Operator: Reserve Oil and Gas Company
Project: Cooper-Jal Unit - Jalmat Zone
Pool: Jalmat Oil

Location of Project:

Township 24 South, Range 36 East, N.M.P.M.

Section 13: S/2
Section 14: SE/4 SE/4
Section 23: S/2 SE/4
Section 24: All
Section 25: N/2
Section 26: NE/4 NE/4

Township 24 South, Range 37 East, N.M.P.M.

Section 18: All
Section 19: W/2
Section 30: NW/4

No. of Wells
in Project:

50

Unit and Pro-
ject Area:

Approximately 2,541 acres

Other Waterflood
Properties in Pool:

The Cone Jalmat Yates Sand Unit and the Gulf
Jalmat Yates Sand Unit are located approximately
12 miles northwest of the proposed unit

GEOLOGICAL AND RESERVOIR DATA

Reservoir:	The Jalmat reservoir in the project area includes the Tansill, Yates and all but 250 feet of the lower Seven Rivers formation productive zones. The Yates is the principal producing formation at a depth of approximately 3000 feet.
Description of Reservoir Rock:	The formations are members of the Whitehorse Group, Guadalupian series of the Permian, and can be described as fine to medium crystalline dolomites and dolomitic limestones interbedded with fine to medium grained sands with the zones of porosity occurring irregularly as intercrystalline and fine vugular in the carbonates and as intergranular in the sand bodies.
Structure:	Regionally, the unit area is located on the western edge of the Central Basin Platform of the Permian Basin, but locally, it is on a structurally low area or syncline. The regional dip in the area is west-southwest toward the Delaware Basin, but it is abruptly interrupted by a structurally high trend produced by the "Cooper-Jal" Reef located to the west of the unit area. The northwest-southeast trending syncline produced by this reversal of dip extends beyond the unit area in both directions and is abnormally low locally to actually form a closed low in which most of the unit is located.
Reservoir Limits:	The Yates formation is progressively higher structurally in all directions such that the oil accumulation in the Yates formation is virtually surrounded by wells producing dry gas.
Average Porosity of Net Pay:	9.8%
Average Permeability of Net Pay:	11.8 mud

PRIMARY OPERATIONS

Date of First Production:	1947
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PRIMARY OPERATIONS, Continued

No. of Wells in Project:	50; 13 of which are either producing or are shut-in gas wells
Cumulative Oil Production 1-1-70:	3,927,327 barrels
Remaining Primary Reserves 1-1-70:	133,652 barrels
Daily Average Oil Production Per Well 12-69:	3.6 barrels
Original Reservoir Pressure:	Unknown
Oil Gravity:	34° API
Drive Mechanism:	Solution Gas Drive
Stage of Depletion:	Late; the Jalmat Zone in the unit area is estimated to be 96.8% depleted of primary reserves.
Estimated Ultimate Primary Recovery:	4,060,979 barrels

WATERFLOOD OPERATIONS

Proposed Pattern:	Irregular 80-acre five spot
No. of Injection Wells:	23
No. of Producers:	22
Initial Injection Rate:	350 barrels per day per injection well
Estimated Injection Pressure:	1200 psi at the injection wellhead. Injection plant and water distribution system is designed for 1845 psi maximum operating pressure.

WATERFLOOD OPERATIONS, Continued

Plan of Injecting Water:	Injection into the pay zone through internally coated tubing below a packer.
Source of Injection Water:	Water will be purchased from Skelly's water supply system.
Type of Water:	Non-potable
Treatment of Water:	No treatment of the injection water is anticipated; however, should treatment be deemed desirable, treatment will be commenced.
Additional Oil Recovery Anticipated:	The additional oil recovery attributable to the water injection program is estimated to be 3,045,700 barrels which is 75% of the estimated ultimate primary oil recovery.

CONCLUSIONS AND RECOMMENDATIONS

The Jalmat Pool produces by solution gas drive and this portion of the pool is 96.8% depleted of primary oil and the daily oil production averages less than three barrels per day per well.

Engineering and geological studies indicate that the Jalmat (Oil) Pool underlying the proposed unit area can be successfully waterflooded; thereby, increasing the life and the ultimate oil production of wells in this unit. The increased recovery due to waterflooding should be approximately 3,045,700 barrels of oil. Reserve Oil and Gas Company, together with the other working interest owners, have concluded that unitization of the unit area comprising 2,541 acres for the purpose of waterflooding the Yates oil formation is in the best interest of conservation and the prevention of waste.

Amerado Petr. Corp.
Falby No. 1
Sec. 19 T-24-S, R-37-E

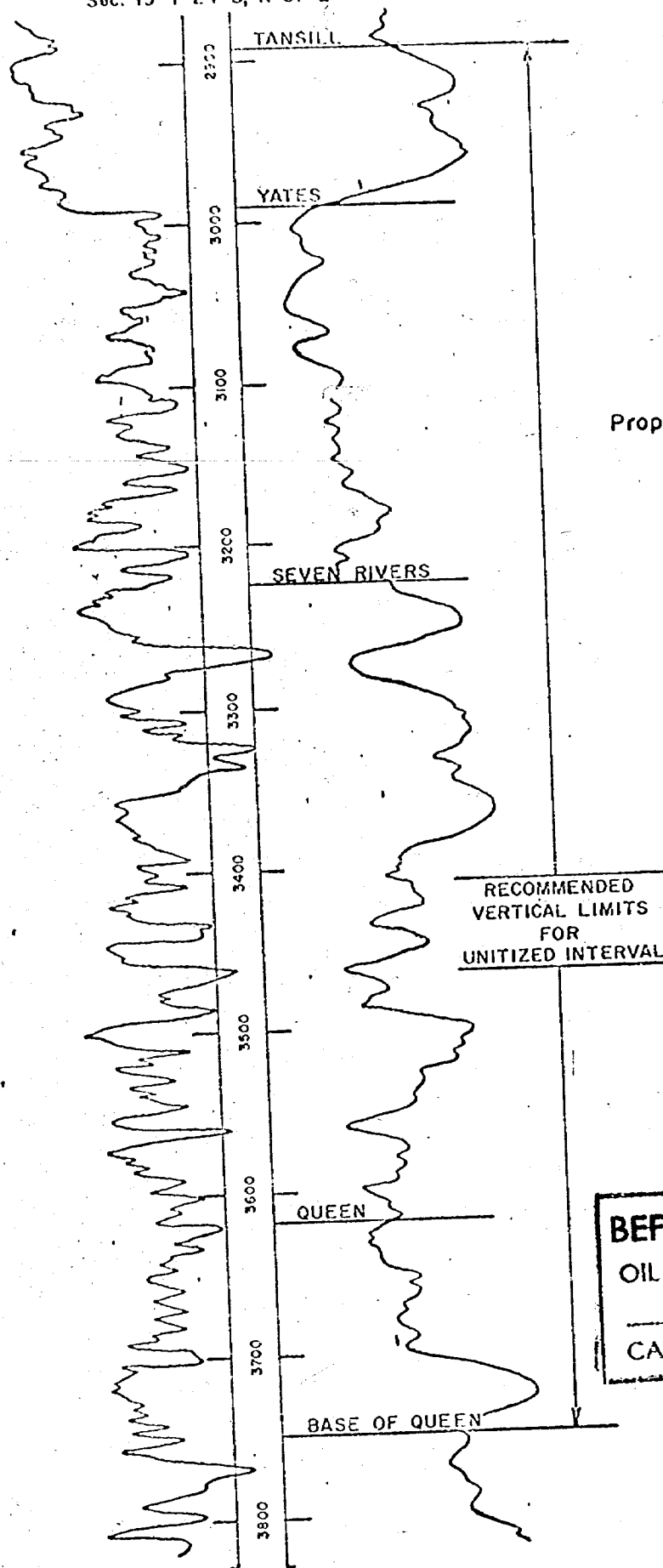


EXHIBIT 2
Proposed Unitized Vertical Limit
Cooper Jol Unit
Lea County, New Mexico

Exhibit 2

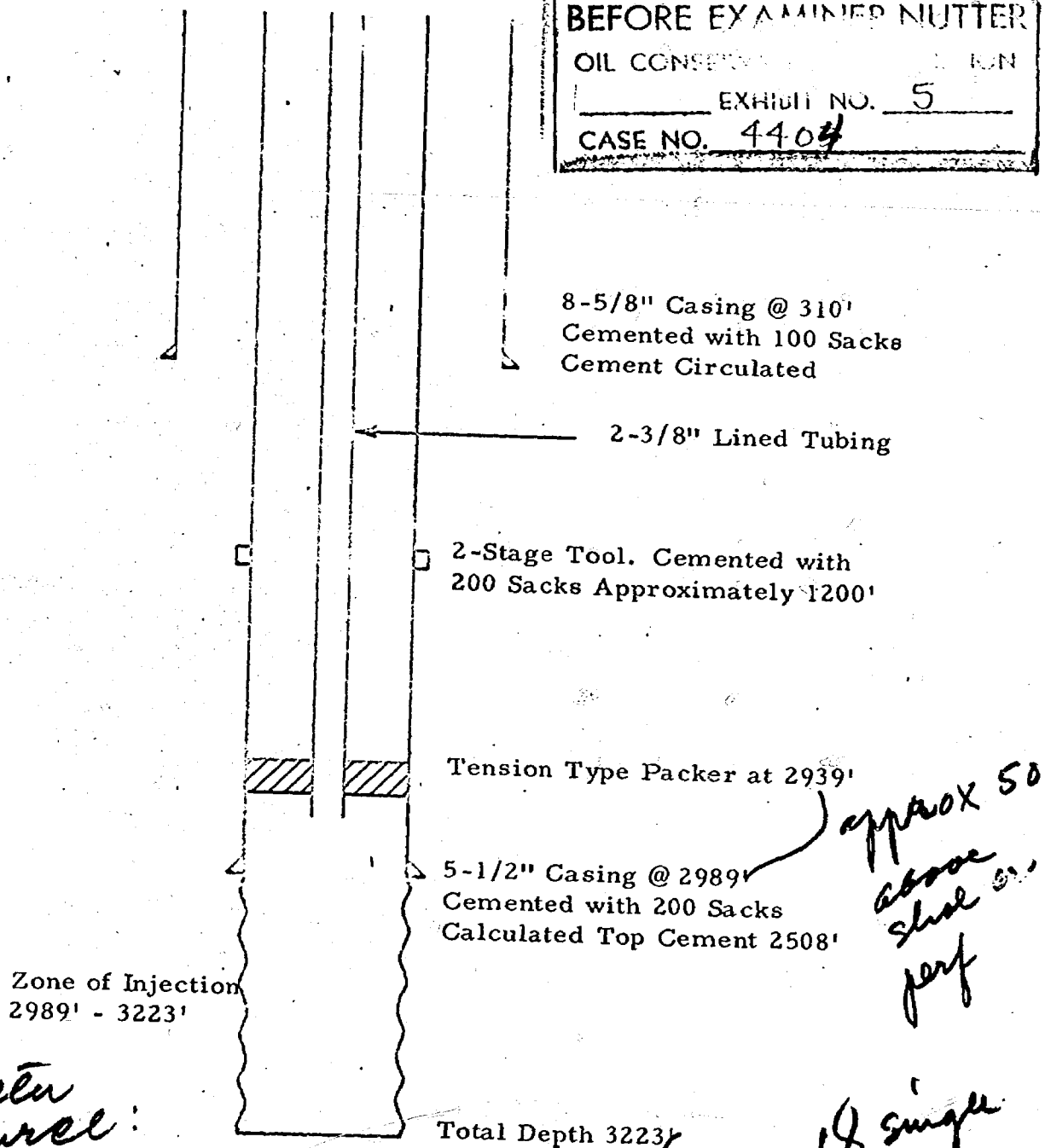
BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 4404

EXHIBIT 5
COOPER JAL UNIT
JALMAT ZONE

TYPICAL SINGLY COMPLETED INJECTION WELL
ROG VAN ZANDT NO. 2

*estimated
3,000,000
add bbls.*

BEFORE EXAMINED NUTTER
OIL CONSERVATION
EXHIBIT NO. 5
CASE NO. 4404



*water
source:*

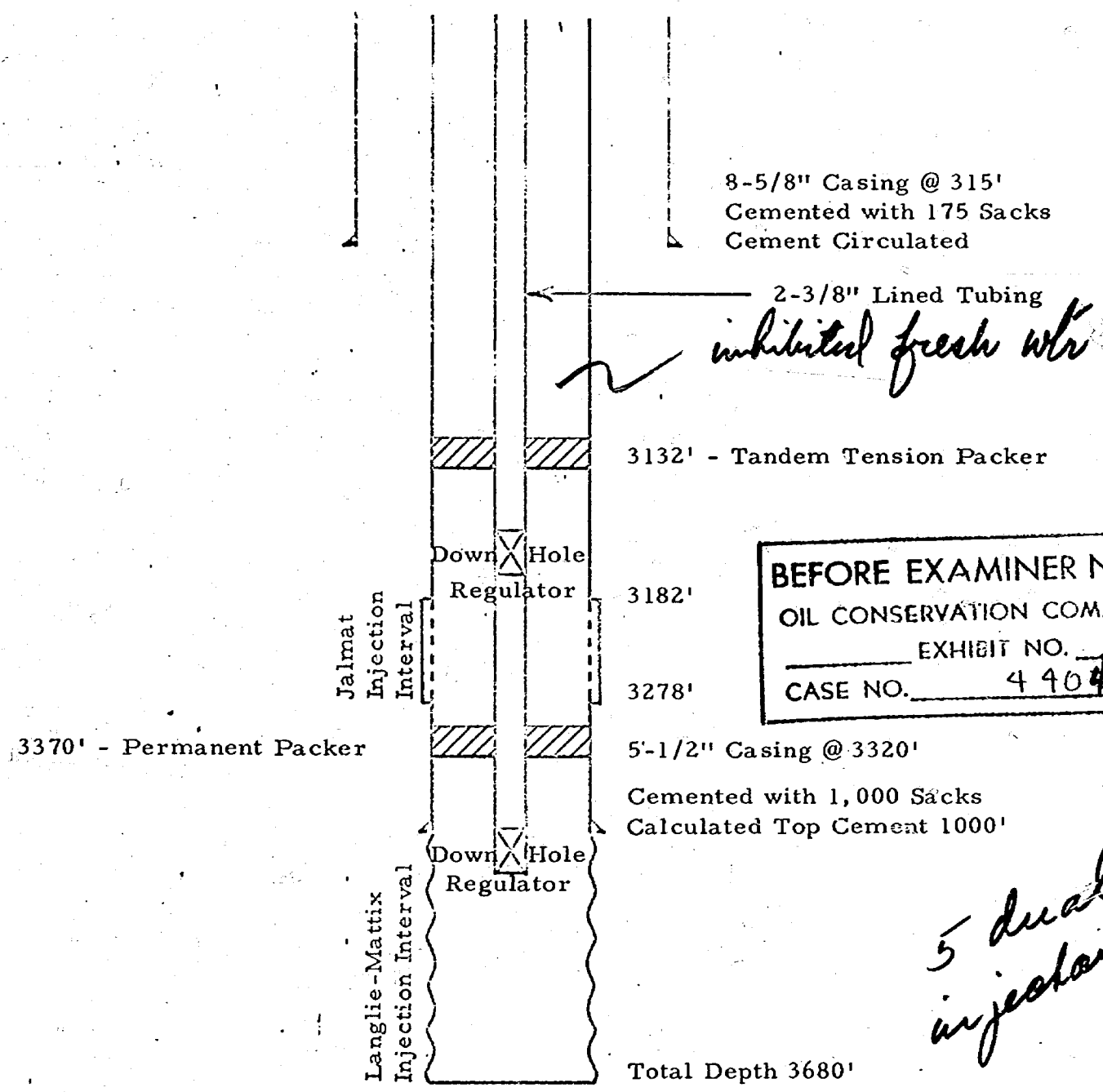
*water will be purchased
from Skelly (7R & Capitaneer) injectors
also prod water will be re-inj*

*approx 50
above
shale
perf*

Exhibit 5

EXHIBIT 6
COOPER JAL UNIT
JALMAT AND LANGLIE-MATTIX ZONES

TYPICAL DUAL INJECTION WELL
AMERADA FALBY NO. 3



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 6
CASE NO. 4404

5 dual injectors

Case 4404

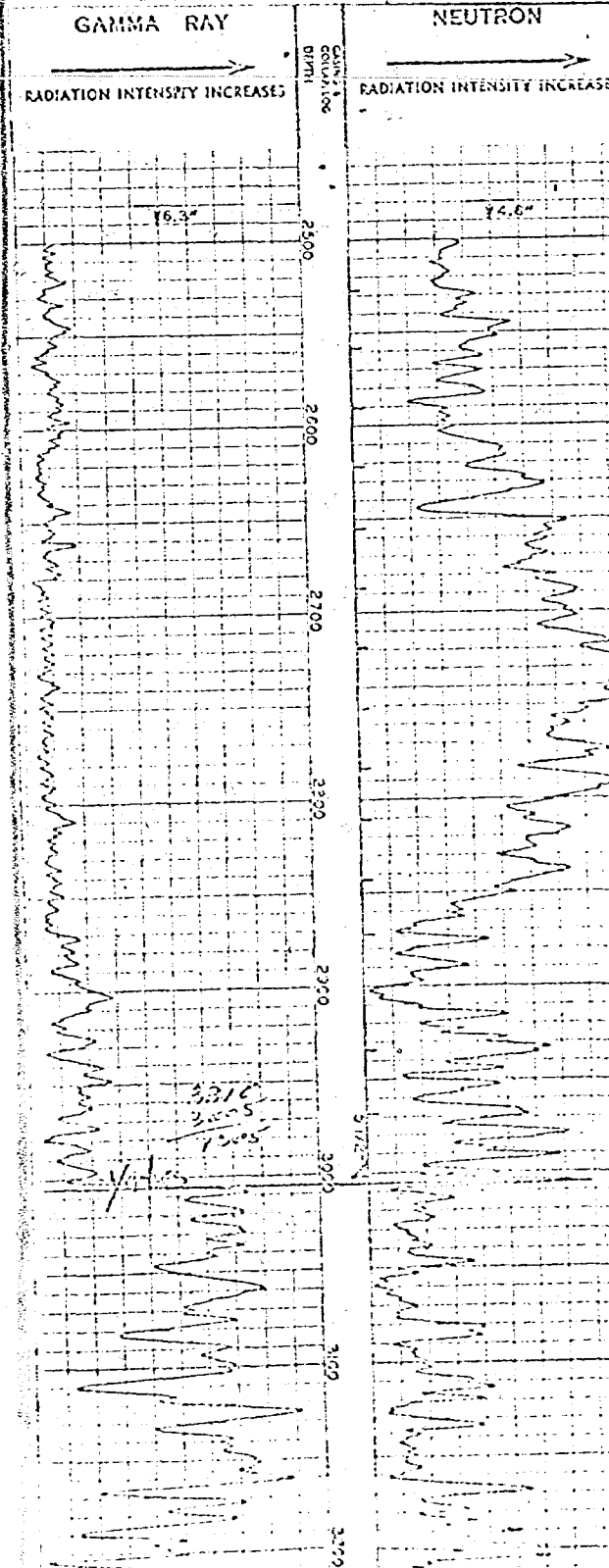
LANE RADIOACTIVITY LOGS WELLS COMPANY

Location of Well	COMPANY: CHURCH & DWIGHT, INC.
WELL: PHILLIPS NO. 2	
FIELD: COOPER JAL	
COUNTY: ISA	STATE: N.M.
LOCATION: 660' FSL 1320' FSL	
OF 220. 24-245-303	

LOG MEAS. FROM	ROTARY TAP	ELEVATION: 810.0'
ORIG. MEAS. FROM	ROTARY TAP	ELEVATION: 810.5'
DATE: 8/2/54	TIME: 11:41	ELEVATION: 810.5'

TYPE OF LOG	0.2	0.4
RUN NO.	1	2
DATE	8-17-50	8-17-50
TOTAL DEPTH (ROTARY) FEET	2100	2100
EFFECTIVE DEPTH (ROTARY) FEET	2100	2100
TOP OF LOGGED INTERVAL	2100	2100
BOTTOM OF LOGGED INTERVAL	2100	2100
TYPE OF FLUID IN HOLE	2100	2100
FLUID LEVEL	2100	2100
MAXIMUM RECORDED TEMP.	2100	2100
NEUTRON SOURCE STRENGTH & TYPE	2100	2100
SOURCE SPACING—IN.	2100	2100
LENGTH OF MEASURING DEVICE—IN.	36	36
OD OF INSTRUMENT—IN.	3 5/8	3 5/8
TIME CONSTANT—SECONDS	10	10
LOGGING SPEED FT. MIN.	23	23
STATISTICAL VARIATION—IN.	274	275
SENSITIVITY REFERENCE	274	275
RECORDED BY	274	275
WITHHELD BY	274	275

CASING RECORD		OPEN (BORE) HOLE RECORD	
RUN NO.	SIZE—IN. WT.—LB.	RUN NO.	SIZE—IN. WT.—LB.
1	5 1/2 SURFACE TO 2000'	1	7 7/8 510' TO 2000'
	TO	2	4 3/4 2000' TO 2100'
	TO		TO
	TO		TO
	TO		TO



JUL 20 AM 9 02

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
RESERVE OIL AND GAS COMPANY FOR A
WATERFLOOD PROJECT, JALMAT OIL POOL,
LEA COUNTY, NEW MEXICO.

Case 4404

APPLICATION

COMES RESERVE OIL AND GAS COMPANY, by its attorney,
A. J. Losee, and states:

1. Applicant, pursuant to the terms of the Cooper-Jal Unit Agreement and Unit Operating Agreement, is designated as Operator of, among other zones, the Tansill, Yates and all of Seven Rivers except the lower 250 feet, comprising the Jalmat Oil Pool underlying the following lands in Lea County, New Mexico, which comprise the project area covered by this application, to-wit:

Township 24 South, Range 36 East, N.M.P.M.

Section 13: S/2
Section 14: SE/4 SE/4
Section 23: S/2 SE/4
Section 24: All
Section 25: N/2
Section 26: NE/4 NE/4

Township 24 South, Range 37 East, N.M.P.M.

Section 18: All
Section 19: W/2
Section 30: NW/4

containing 2,541 acres, more or less.

2. There is attached hereto and by reference made a part hereof, a plat showing the location of the proposed injection wells and the location of all other wells and lessees adjoining the proposed project area.

DOCKET MAILED

Date 8-6-70

3. The applicant proposes to inject water into the Tansill, Yates and all of Seven Rivers formation except the lower 250 feet, through 23 injection wells in Lea County, New Mexico, and described as follows:

Township 24 South, Range 36 East, N.M.P.M.

Unit Tract No. 14 - Well No. 1 - Unit O - Section 13
Unit Tract No. 14 - Well No. 2 - Unit I - Section 13
(a dual water injection well)
Unit Tract No. 16 - Well No. 3 - Unit A - Section 24
Unit Tract No. 16 - Well No. 1 - Unit G - Section 24
Unit Tract No. 20 - Well No. 4 - Unit C - Section 24
(a dual water injection well)
Unit Tract No. 20 - Well No. 3 - Unit E - Section 24
Unit Tract No. 4 - Well No. 2 - Unit I - Section 24
Unit Tract No. 25 - Well No. 1 - Unit O - Section 24
Unit Tract No. 25 - Well No. 4 - Unit K - Section 24
Unit Tract No. 24 - Well No. 3 - Unit M - Section 24
Unit Tract No. 24 - Well No. 1 - Unit O - Section 23
Unit Tract No. 3 - Well No. 1 - Unit A - Section 26
Unit Tract No. 19 - Well No. 1 - Unit C - Section 25
Unit Tract No. 19 - Well No. 7 - Unit E - Section 25
Unit Tract No. 26 - Well No. 2 - Unit A - Section 25
Unit Tract No. 26 - Well No. 4 - Unit G - Section 25

Township 24 South, Range 37 East, N.M.P.M.

Unit Tract No. 7 - Well No. 1 - Unit M - Section 18
(a dual water injection well)
Unit Tract No. 5 - Well No. 4 - Unit C - Section 19
Unit Tract No. 5 - Well No. 1 - Unit E - Section 19
(a dual water injection well)
Unit Tract No. 2 - Well No. 3 - Unit K - Section 19
(a dual water injection well)
Unit Tract No. 2 - Well No. 4 - Unit M - Section 19
Unit Tract No. 1 - Well No. 3 - Unit C - Section 30
Unit Tract No. 1 - Well No. 1 - Unit E - Section 30

4. That all of the wells in the project area are in an advanced state of depletion and should be classified as "stripper" wells.

5. There is attached hereto and by reference made a part hereof, a diagrammatic sketch of a typical singly completed injection well and a diagrammatic sketch of a typical dually completed injection well.

6. There is attached hereto and by reference made a part hereof, a typical well log of a proposed injection well in the project area.

7. Injection of water purchased from Skelly Oil Company water system is proposed to be made at the rate of approximately 350 barrels per day per injection well at a pressure of approximately 1200 psi.

8. Applicant proposes to conduct this waterflood project under the allowable provisions of Rule 701 of the Commission.

9. The proposed waterflood project will prevent waste in that it will result in the recovery of oil that would not otherwise be recovered in the project area.

WHEREFORE, applicant prays:

A. That this matter be set for hearing before an examiner duly appointed by the Commission, and that due public notice be given as required by law.

B. That an order be entered authorizing the institution of the aforesaid waterflood project in the Jalmat Oil Pool, and for such other relief as may be just in the premises.

DATED this July 17, 1970.

RESERVE OIL AND GAS COMPANY

By: 

A. J. Losee
Attorney at Law
P. O. Drawer 239
Artesia, New Mexico 88210

DRAFT

GMH/esr

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. 4404

Order No. R-4020

APPLICATION OF RESERVE OIL AND GAS COMPANY
FOR A WATERFLOOD PROJECT, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

9:30

This cause came on for hearing at 9 a.m. on August 19, 1970,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of August, 1970, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, 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, Reserve Oil and Gas Company,
seeks authority to institute a waterflood project in the
Cooper-Jal Unit Area, Jalmat Pool,
by the injection of water into the Middle Seven Rivers formations
through 23 injection wells in Section
Township 24 ~~XXXXX~~ South, Ranges 36 and 37 ~~XXXXX~~ East,
NMPM, Lea County, New Mexico.

(3) That the wells in the project area are in an advanced
state of depletion and should properly be classified as "stripper"
wells.

(4) That the proposed waterflood project should result in
the recovery of otherwise unrecoverable oil, thereby preventing
waste.

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Reserve Oil and Gas Company, is hereby authorized to institute a waterflood project in the Cooper-Jal Unit Area, Jalmat Pool, Tansill, Yates, and Upper and by the injection of water into the Middle Seven Rivers formations 23 through the following-described/wells in Township North, South, Range West, East, NMPM, Lea County, New Mexico:

Operator Lease	Well No.	LOCATION			
		Distance	Unit	Section	Township Range
Amerada Falby	3	(a dual completion) 1580 FNL & 1917 FWL	K	19	24S 37E
	4	660 FNL & 1917 FWL	M	19	24S 37E
Cities Service Jack "A" Federal	1	(a dual completion) 660 FNL & 1917 FWL	M	18	24S 37E
	1	(a dual completion) 2310 FNL & 1917 FWL	E	19	24S 37E
Continental Oil Jack Federal 19	4	1587 FNL & 1917 FNL	C	19	24S 37E
	3	1980 FNL & 1917 FNL	E	24	24S 36E
Humble Hunfor	4	(a dual completion) 660 FNL & 1917 FNL	C	24	24S 36E
	1	660 FNL & 1917 FNL	O	23	24S 36E
Thomas	3	4620 FNL & 1917 FNL	M	24	24S 36E
	1	1710 FNL & 1917 FNL	O	13	24S 36E
Petroroleum Corporation of Texas M. Dunn	2	(a dual completion) 1050 FNL & 1917 FNL	I	13	24S 36E
	1	330 FNL & 1917 FNL	C	25	24S 36E
Harrison	7	330 FNL & 1917 FNL	E	25	24S 36E
	2	660 FNL & 1917 FNL	I	24	24S 36E
Phillips	1	330 FNL & 1917 FNL	O	24	24S 36E
	4	1980 FNL & 1917 FNL	K	24	24S 36E
Reserve Oil and Gas Company Van Zandt	2	930 FNL & 1917 FNL	A	25	24S 36E
	4	1650 FNL & 1917 FNL	G	26	24S 36E
Atlantic Richfield Company Dunn SCP	1	1980 FNL & 1917 FNL	G	24	24S 36E
	3	660 FNL & 1917 FNL	A	24	24S 36E
Texaco Fristoe "B"	1	1980 FNL & 1917 FNL	E	30	24S 37E
	3	660 FNL & 1917 FNL	C	30	24S 37E
Texas Pacific Myers "B" Federal	1	330 FNL & 1917 FNL	A	26	24S 36E

hereby designated

Project and shall

and 703 of the

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ly deem necessary.

1 year hereinabove

(under)

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Reserve Oil and Gas Company, is hereby authorized to institute a waterflood project in the Cooper-Jal Unit Area, Jalmat Pool, Tansill, Yates, and Upper and by the injection of water into the Middle Seven Rivers formations 23 through the following-described/wells in Township North-South-Range West-East-NMPM Lea County

(2) That the subject waterflood project is hereby designated the Reserve Cooper Jal Jalmat Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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