CASE NO. 5396: CONTINENTAL OIL CO. FOR SALT WATER DISPOSAL, LEA COUNTY

CASE No. 5396

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BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico January 8, 1975

EXAMINER HEARING

IN THE MATTER OF:

Application of Continental Oil Company) for salt water disposal, Lea County,)
New Mexico.

Case No. 5396

BEFORE: Richard L. Stamets, Examiner.

TRANSCRIPT OF HEARING

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For the New Mexico Oil Conservation Commission:

William Carr, Esq.
Legal Counsel for the
Commission
State Land Office Bldg.
Santa Fe, New Mexico

For the Applicant:

W. Thomas Kellahin, Esq. KELLAHIN & FOX 500 Don Gaspar Santa Fe, New Mexico

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	Marked	<u>Admitted</u>
Conoco's Exhibits Nos. 1, 2, and 3		9

MR. STAMETS: Call the next case, Case 5396.

MR. CARR: Case 5396. Application of Continental Oil Company for salt water disposal, Lea County, New Mexico.

MR. KELLAHIN: Tom Kellahin of Kellahin and Fox,
Santa Fe, New Mexico, appearing on behalf of the Applicant,
Continental Oil Company, and I have one witness to be
sworn.

MR. STAMETS: The Witness will stand and be sworn, please.

(Witness sworn.)

V.T. LYON

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you please state your name, by whom you are employed and in what capacity?

A I'm Victor T. Lyon, employed by Continental Oil Company as Conservation Coordinator in the Hobbs Division Office located in Hobbs, New Mexico.

Q Have you previously testified before this Commission and had your qualifications as an expert witness

accepted and made a matter of record?

- A Yes, I have.
- Q And have you studied the facts surrounding this particular Application?
 - A Yes, I have.

MR. KELLAHIN: If the Examiner please, are the Witness' qualifications accepted?

MR. STAMETS: They are.

BY MR. KELLAHIN:

Q Mr. Lyon, would you please refer to what has been marked as Applicant's Exhibit No. 1, identify it and state briefly what Continental is seeking?

A Exhibit No. 1 is a plat showing the well which is the subject of this hearing, designated by a red triangle, and the area for a radius of at least two miles surrounding the well. This is the Application of Continental Oil Company for authority to inject water into the Seven Rivers Formation in its Lynn A Well No. 5 which is located 330 feet from the north line and 330 feet from the east line of Section 28, Township 23 South, Range 36 East. The basic lease on which this well is located is shown outlined in red and consists of the Northwest quarter of Section 27, the East half and the East half of

the West half of Section 28. The offsetting properties and the wells' location and ownership are shown to the best of our knowledge and belief. I do not believe that the legend is shown on the plat so I will describe that. Those marked with an "L" are Langlie-Mattix oil wells, those marked with a "Jg" are Jalmat gas wells and those with a "Jo" are Jalmat oil wells. The plat also shows the outline of the Langlie-Lynn Queen Unit by the dashed line immediately to the east of the Lynn A basic lease. This injection well actually is replacing Well No. 1, which is located 660 feet from the north line and 660 feet from the east line of Section 28, which is a twin well to No. 5, and the use of this well will be to take care of any overflow, any surplus water production from that which is injected in the Langlie-Lynn Queen Unit. So, at any time that our injection pumps are down or if there is surplus produced water in excess of the needs of that unit, it will be injected into this well.

- Q You were previously disposing of produced water to this Well No. 1?
 - A Yes.
 - Q And what is the current status of that well?
 - A That well has been abandoned and I'm not certain

whether it has been plugged or is about to be plugged, but if it has not been plugged it will be plugged in the near future.

- Q In essence what you are doing here is seeking a replacement disposal well?
 - A Yes, sir.
- Q The prior well, disposal Well No. 1, was approved by the Commission Order R-3579, is that not correct?
 - A I believe that is correct, yes, sir.
- Q Would you please refer now to what has been marked as Applicant's Exhibit No. 2, identify it and state what it contains?

A Exhibit No. 2 is a copy of the side wall neutron velocity log run in the Lynn A No. 5 and showing the sections which are involved in this Application. The top of the Seven Rivers is shown at a depth of 3312 and the proposed initial injection interval is shown indicated at the depth of 3647 to 3670. As I said, this is the initial interval which we propose to use, and in the event that sometime in the future this interval is inadequate to take the water which needs to be disposed of we expect to perforate additional zones in the Seven Rivers somewhere

in the interval 3470 to 3679, and in order to avoid the necessity of having additional hearings in the future to expand these intervals, we would like to have authority to inject in that overall interval.

Q The advertisement as requested now indicates permission to dispose of produced salt water into the Seven Rivers Formation through perforations in the interval between 3470 and 3679, without specifically designating the number of location of those perforations?

A Right.

Q Would an order encompassed in that language be sufficient enough to satisfy your needs without additional language for an administrative procedure or would you --

A (Interrupting) I should think so. Of course any time that we enter the well to perforate additional zones we would of course file the notice of intent to perform the work and notice -- subsequent notice.

Q Refer to what has been marked as Exhibit No. 3 and identify it?

A Exhibit No. 3 is a schematic diagram of the manner in which the well is equipped for injection. It shows the size, setting depth, the amount of cement used, and the top of cement or the surface and production

strings; it shows the initial perforated intervals as I described from Exhibit 2. The packer is proposed to be set at 3600; it is a Baker AB I tension packer and it will be set on 2-3/8-inch cement-line tubing. The annular space above the packer between tubing and casing will be filled with an inert fluid and the surface connections will be arranged so that any change in pressure will be readily detected. I might mention for the record that the water that we are proposing to inject in this well is virtually identical, if not identical, to the water which has been injected in Well No. 1.

Q In your opinion, Mr. Lyon, will approval of this Application be in the best interests of conservation, the prevention of waste and the protection of correlative rights?

A Yes. I think that this Application will help us to comply with the provisions of Order No. R-3221 and will protect the environment. It will not cause waste and it should not impair correlative rights.

MR. KELLAHIN: If the Examiner please, we move for the introduction of Exhibits 1, 2, and 3.

MR. STAMETS: Exhibits 1,2, and 3 will be admitted into evidence.

(Whereupon, Conoco's Exhibits

Nos. 1, 2, and 3 were admitted into evidence.)

MR. LYON: Oh, I might also mention if I may, that we expect a maximum injection in volume of 4000 barrels per day and maximum injection pressure of 1000 pounds.

CROSS EXAMINATION

BY MR. STAMETS:

- Q Mr. Lyon, have you ever made a survey of the casing in the offsetting wells here to determine the potential for a problem with the injected water going into an offset well and migrating up behind pipe?
 - A To my knowledge we have not made such a survey.
 - Q How long did you inject into the No. 1 Well?
- A Let's see, I don't remember the date of that Order, but it was, I would guess, in the order of 6 years.
- Q And this was done without any problems to your knowledge with water migrating?
 - A None that we are aware of.
 - Q Is there any fresh water in this area?
- A Well, it's down below the cap rock and outside of the Lea County Water Basin. I'm sure there are

windmills around which produce from shallow discontinuous sands.

Q I believe you said you'd have an annulus set up where you could detect a leak. Are you talking about leaving it open or putting a guage on it?

A I'm not sure which their planning to do. We have developed a standard hook-up on our injection wells in compliance with the Commission's directive. We have not -- I think that was supposed to be by September 1st, and because of the back order of the equipment we haven't got all of our wells equipped, but they are being equipped as soon as the equipment is delivered.

- Q What sort of an arrangement is this?
- A I wish you hadn't asked me that.
- Q You can advise us later on that.

A We talked to Joe Ramey about it and it was long enough ago and I have slept enough times since then that I can't give you the details on it.

MR. STAMETS: Are there any other questions of the Witness? He may be excused. Anything further in this Case? We will take the Case under advisement.

STATE OF NEW MEXICO)	
)	SS.
COUNTY OF SANTA FE)	

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

RICHARD L. NYE, Court Reporter

New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 87501

January 22, 1975

I. R. TRUJILLO CHAIRMAN

LAND COMMISSIONER ALEX J. ARMIJO MEMBER

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

Mr. Tom Kellahin Kellahin & Fox Attorneys at Law Post Office Box 1769 Santa Fe, New Mexico Re: CASE NO. 5393, 5396, 5397

ORDER NO. R-4947, R-4948, R-4949

Applicant:

Getty Oil, Continental, Cities Ser.

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

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC R-4949
Aztec OCC

Other

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. 5396 Order No. R-4948

APPLICATION OF CONTINENTAL OIL COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 8, 1975, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 22nd day of January, 1975, 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, Continental Oil Company, is the owner and operator of the Lynn "A" Well No. 5, located in Unit A of Section 28, Township 23 South, Range 36 East, NMPM, Jalmat Pool, Lea County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Seven Rivers formation, with injection into various perforated intervals from approximately 3470 feet to 3679 feet.
- (4) That the injection should be accomplished through 2 3/8-inch internally coated tubing installed in a packer set within 100 feet of the uppermost perforation; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or other approved leak detection device should be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.
- (5) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

-2-CASE NO. 5396 Order No. R-4948

(6) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Continental Oil Company, is hereby authorized to utilize its Lynn "A" Well No. 5, located in Unit A of Section 28, Township 23 South, Range 36 East, NMPM, Jalmat Pool, Lea County, New Mexico, to dispose of produced salt water into the Seven Rivers formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set within 100 feet above the uppermost perforations, with injection into various perforated intervals from approximately 3470 feet to 3679 feet;

PROVIDED HOWEVER; that the tubing shall be internally coated; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the well shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

- (2) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing or packer in said disposal well, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged and abandoned well offsetting said disposal well.
- (3) That the applicant shall submit monthly reports of its disposal operations 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

I. R. TRUJILLO, Chairman

PHIL R. LUCERO, Member

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

SEAL jr/

LYNN "A" NO. 5 330' FN & EL SEC. 28 T23S R36E LEA COUNTY, N. M. ELEV. 3416' GL 411' - 8 5/8" OD CSG SET W/225 SACKS (CIRC) 2 3/8" OD CEMENT LINED TUBING W/RETRIEVABLE TENSION FACKER (BAKER OR GUIBERSON) TO BE SET AT 3600' 3600 36471 PERF AT 3647, 68, 36701 3670¹ PD 3679 TD 3710' 5 1/2" OD 14# CSG SET W/250 SACKS (TOC - 2200')

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BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO.

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Submitted by Covoco Hearing Date of an 8, 197.

1 LYNN "A" NO. 5
330' FN & EL
SEC. 28 123S R36E
LEA COUNTY, N. M.
ELEV. 3416' GL

411' - 8 5/3" OD CSG SET W/225 SACKS (CIRC)

2 3/8" OD CEMENT LINED TUBING W/RETRIEVABLE TENSION
PACKER (BAKER OR GUIBERSON) TO BE SET AT 3600'

3647'
3670'

PD 3679'
TD 3710' 5 1/2" OD 14# CSG SET W/250 SACKS (TOC - 2200')

BEFORE EXAMINER STAMETS OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 5376
Submitted by Conoco
Hearing Date Jan. 8, 1975

CASE 5396:

Application of Continental Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to convert its Lynn A Well No. 5, located in Unit A of Section 28, Township 23 South, Range 37 East, Jalmat and Langlie-Mattix Pools, Lea County, New Mexico, to dispose of produced salt water into the Seven Rivers formation through perforations in the overall interval from 3470 to 3679 feet.

- CASE 5397: Application of Cities Service Oil Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for Wolfcamp production for its Government T Well No. 1 located in Unit C of Section 14, Township 20 South, Range 28 East, Eddy County, New Mexico, and the promulgation of temporary special pool rules therefor, including a provision for 320-acre spacing and proration units.
- CASE 5398: Application of Pennzoil United, Inc., for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Atoka and Morrow production in the well-bore of its Mobil 12 Federal Well No. 1, located in Unit B of Section 12, Township 23 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico.
- CASE 5399: Application of Coastline Petroleum Company, Inc., for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of undesignated Gallup and Basin-Dakota gas production in the wellbore of its Schalk 94 Well No. 1, located in Unit A of Section 26, Township 32 North, Range 8 West, San Juan County, New Mexico.
- CASE 5400: Application of Twinlakes Oil Company for amendment of special pool rules, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks amendment of the special rules and regulations for the Twin Lakes-San Andres Pool, Chaves County, New Mexico, to permit the drilling of oil wells on gas proration units, the simultaneous dedication of acreage to oil and gas wells, and to limit production from such wells.
- CASE 5379: Southeastern New Mexico nomenclature case calling for the creation and extension of certain pools in Lea and Eddy Counties, New Mexico:
 - (a) Create a new pool in Lea County, New Mexico, classified as an oil pool for Paddock production and designated as the Spencer-Paddock Pool. The discovery well is the Aztec Oil & Gas Company State DS Well No. 3 located in Unit J of Section 24, Township 17 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM Section 24: SE/4

L. P. Thompson
Division Manager
Production Department
Hobbs Division
Western Hemisphere Petroleum Division

Continental Oil Company P.O. Box 460 1001 North Turner Hobbs, New Mexico 88240 (505) 393-4141

101320131

OIL CONSERVATION COMM
Santa Fo

December 10, 1974

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

Attention Mr. A. L. Porter Jr. - Secretary-Director

Gentlemen:

SWD Application - Lynn A No. 5 - A-23-23-37, Lea County, New Mexico

Enclosed in triplicate is our application for hearing for approval of the subject application. The application specifies a limited set of perforations. In order to avoid the necessity of an additional hearing in the event additional perforations are required, it is respectively requested that the advertisement not specify the intervals, but rather cover injection of water into the Seven Rivers Formation. Our testimony will request administrative procedures for including additional perforations.

Please set this matter for hearing on the January 8, 1975 Examiner Docket.

Yours very truly,

VTL:reh

CC + enc

U. S. Geological Survey (2)

P. O. Box 1157

Hobbs, New Mexico 88240

JCC: FOH: JWK

DOCKET MAILED

Date 2-26-14

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF CONTINENTAL OIL COMPANY FOR AUTHORITY TO DISPOSE OF PRODUCED WATER INTO THE SEVEN RIVERS FORMATION THROUGH ITS LYNN A WELL NO. 5, LOCATED IN UNIT A SECTION 28, T-23S, R-36E, LEA COUNTY, NEW MEXICO

APPLICATION

Applicant, Continental Oil Company, hereby requests approval to inject produced water into the Seven Rivers Formation through its Lynn A Well No. 5 located 330' FNL and EL of Section 28, T-23S, R-37E, Lea County, New Mexico, and in support thereof would show:

- 1. Applicant is the operator and co-owner of the Lynn A Lease consisting of, in addition to other lands, the NW/4 Section 27 and NE/4 Section 28, T-23S, R-36E, Lea County, New Mexico.
- 2. Large volumes of water are produced on the basic lease which is shown outlined in red on the plat attached hereto marked Exhibit No. 1.
- 3. Applicant proposes to dispose of said water into the Seven Rivers

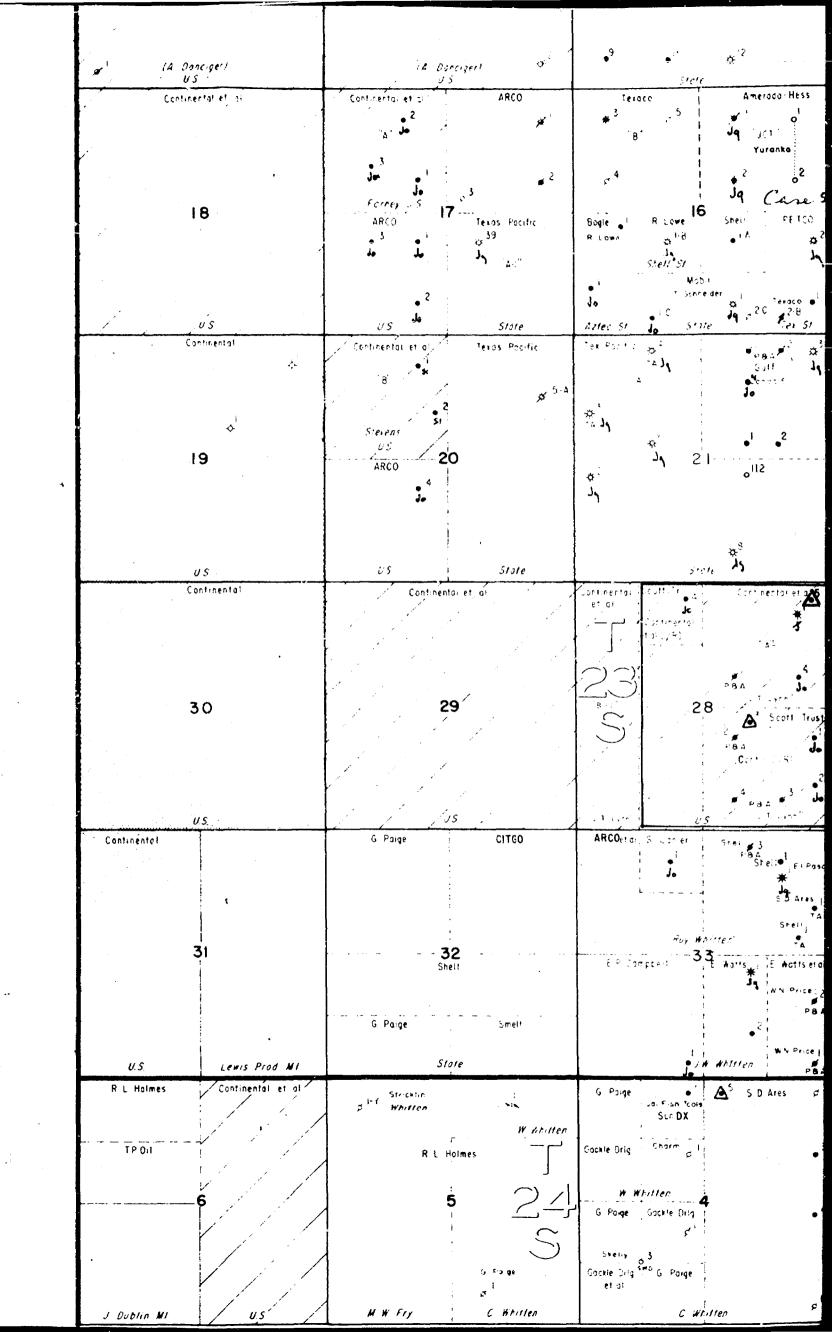
 Formation through perforations between the depths of 3647' and 3670'
 in its Lynn A No. 5, located 330' FN and EL of said Section 28.
- 4. Order No. R-3579 authorized the injection of water into the Seven Rivers Formation into Well No. 1, located in the same quarter quarter section, which well is being plugged and abandoned.
- 5. Granting of this application will enable applicant to conform to the provisions of Order No. R-3221, will protect the environment and will not impair correlative rights.

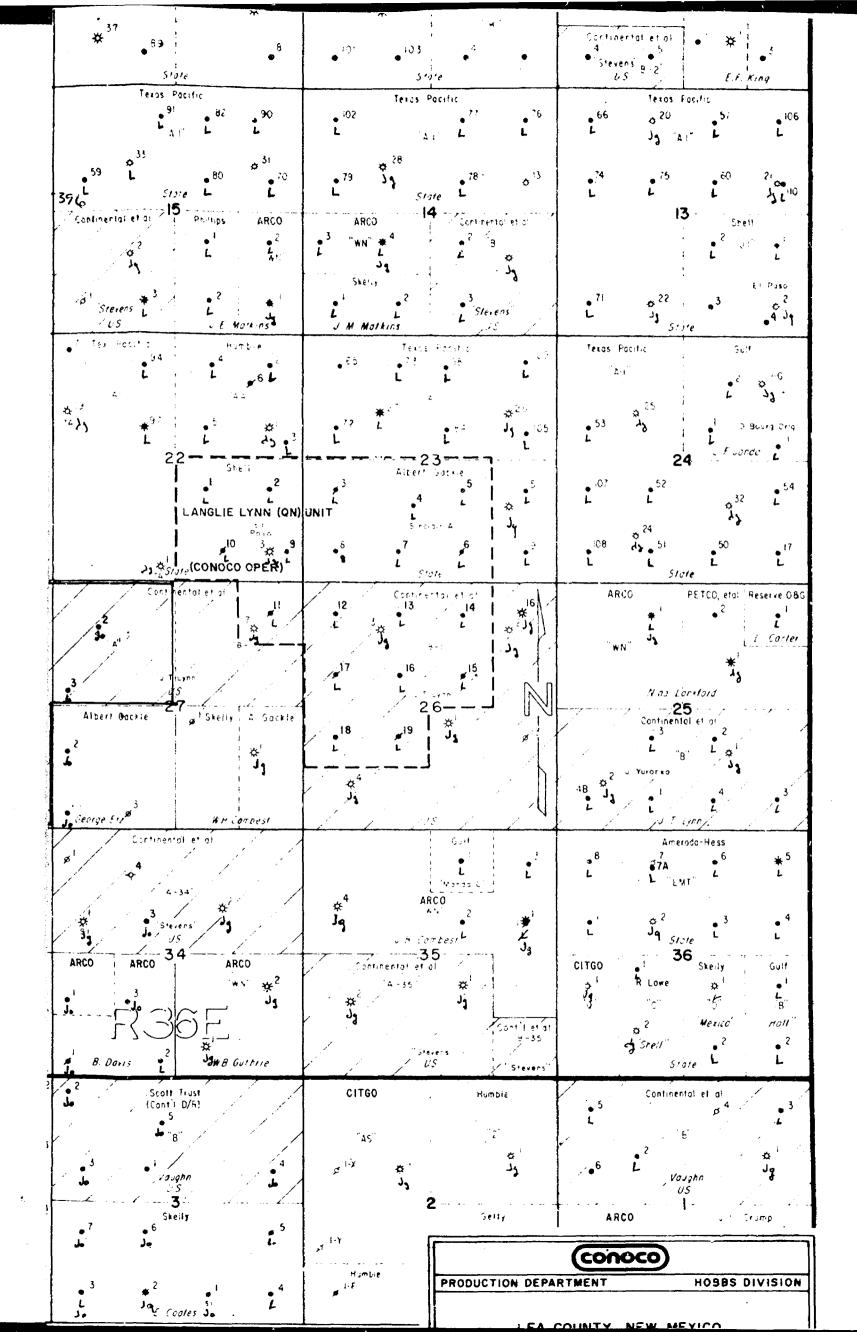
WHEREFORE, Applicant respectfully requests that this matter be set for hearing before the Commission's duly appointed examiner and upon hearing an order be entered authorizing the injection of water as described above.

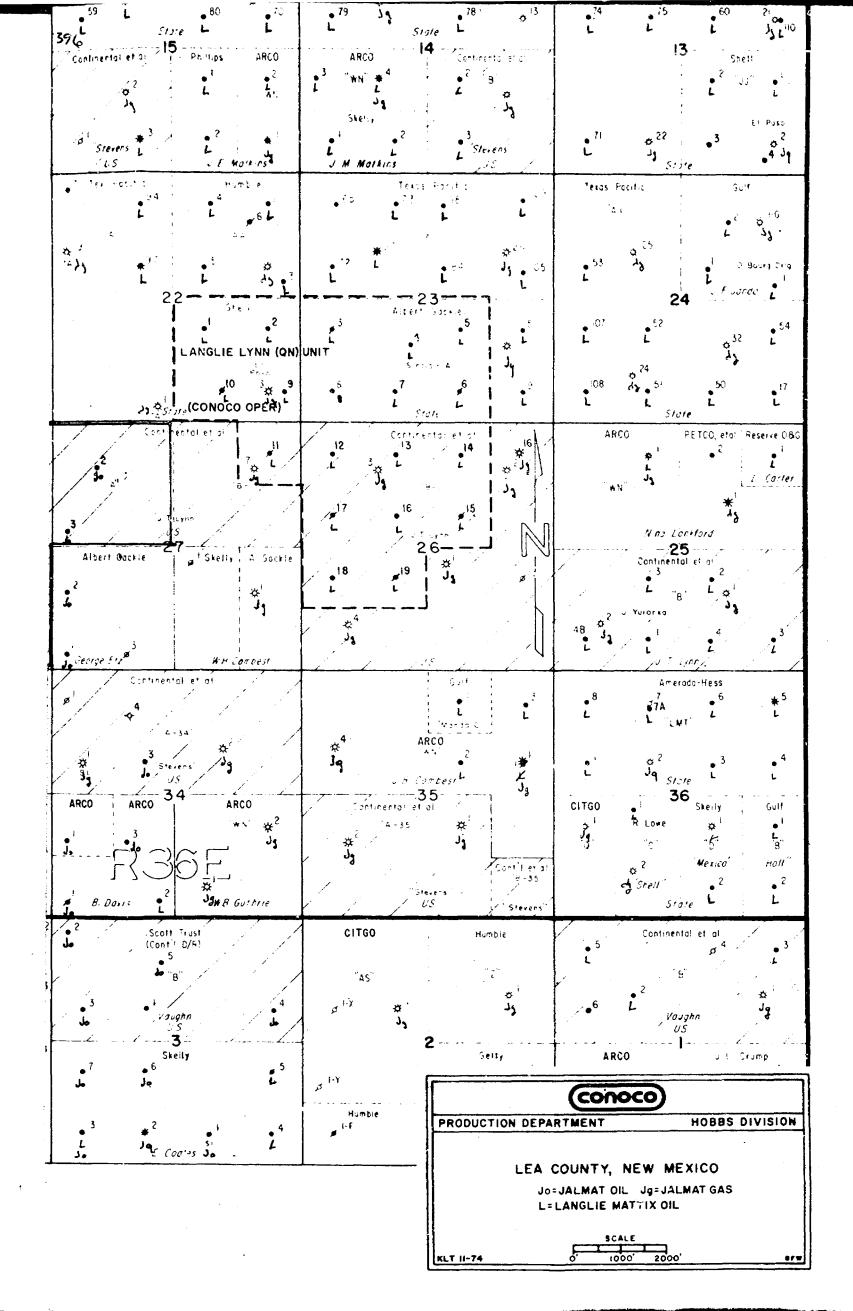
Respectfully submitted,

CONTINENTAL OIL COMPANY

reh







LYNN "A" NO. 5 330' FN & EL SEC. 28 T23S R36E LEA COUNTY, N. M. ELEV. 3416 GL 411' - 8 5/8" OD CSG SET W/225 SACKS (CIRC) 2 3/8" OD CEMENT LINED TUBING W/RETRIEVABLE TENSION PACKER (BAKER OR GUIBERSON) TO BE SET AT 3600' 3600° 3647 PERF AT 3647, 68, 36701 36701 PD 3679' TD 3710' 5 1/2" OD 14# CSG SET W/250 SACKS (TOC - 2200')

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Reportured by Electrical Log Service

REFERENCE W 6125F



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33/2 TOP-SEVEN RIVERS ASV.

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:

Application of Continuntal Oillonpuny for Salt Water Disposal,

Order No. R-4948

CASE No. 3376

Lea County, New Mexico

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on famous 8, 1975, at Santa Fe, New Mexico, before Examiner RL5

NOW, on this day of fem, 1975, 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, Continenta Oil Company, is the owner and operator of the Lynn H Well No. 5, located in Unit H of Section 28, Township 23 South Range Jalmat Pool, Lea,

County, New Mexico.

- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Seven Rivers formation, with injection into Karious performed intervals from approximately 3470 feet to 3679 feet.
- (4) That the injection should be accomplished through

 internally contextubing

 238 -inch plastic-lided tubing installed in a packer set a

 within 100 feet of the upper most perforation;

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approximately feet that the casing-tubing annulus should or other opposed hak be filled with an inert fluid; and that a pressure gauge #should be attached to the annulus or the annulus teft open at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

IT IS THEREFORE ORDERED: (1) That the applicant, Continental Oil Company, is hereby authorized to utilize its Lynn 7" Well No. 5, located in Unit 1 of Section 28, Township 23 5.14, Range 3) East, NMPM, Jalmat Pool . Lea County, New Mexico, to dispose of produced salt water into the Seven Rivers formation, injection to be accomplished through -inch tubing installed in a packer set at approximately 100 feet above the approximately 100 feet above feet with injection into the various perhanted intervals from approximately 3470 feet to 3679 feet; PROVIDED HOWEVER, that the tubing shall be plastic lined; internelly cooked; that the casing-tubing annulus shall be filled with an inert

fluid; and that a pressure gauge shall be attached to the annulus

New // shell be equipped with an approved held defiction device

or the annulus left open at the surface in order to determine

leakage in the casing, tubing, or packer.

(2) That the operator shall immediately notify the supervisor of the Commission's Artistia district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

entry of such further orders as the Commission may deem necessary.

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