

Case Number

4514

Application
Transcripts.

Small Exhibits

ETC.

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

209 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



1
BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 17, 1971

EXAMINER HEARING

IN THE MATTER OF:

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

Case No. 4514

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

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1 MR. NUTTER: Call Case No. 4514.

2 MR. HATCH: Application of Continental Oil Company
 3 for salt water disposal, Lea County, New Mexico.

4 MR. KELLAHIN: If the Examiner please, Jason
 5 Kellahin, Kellahin and Fox, Santa Fe, appearing for the
 6 Applicant. We have one witness I would like to have sworn.

7 (Witness sworn.)

8 (Whereupon, Applicant's Exhibits 1 through 4 were
 9 marked for identification.)

10 VICTOR T. LYON,

11 having been first duly sworn, testified as follows:

12 DIRECT EXAMINATION

13 BY MR. KELLAHIN:

14 Q Would you state your name, please?

15 A Victor T. Lyon.

16 Q By whom are you employed and in what position, Mr. Lyon?

17 A Continental Oil Company as conservation coordinator in
 18 the Hobbs Division office in Hobbs, New Mexico.

19 Q Have you testified before the Oil Conservation Commission
 20 and made your qualifications a matter of record?

21 A Yes, I have.

22 MR. KELLAHIN: Are the witness' qualifications
 23 acceptable?

24 MR. NUTTER: Yes, they are.

25 Q (By Mr. Kellahin) Mr. Lyon, are you familiar with the

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- 1 application of Continental Oil Company in Case 4514?
- 2 A Yes, sir.
- 3 Q What's proposed by the Applicant in this case?
- 4 A Case 4514 is the application of Continental Oil Company
- 5 for authority to inject produced water into the Seven
- 6 Rivers Formation into its Farney A-5 Well Number 5
- 7 located in Unit "G" of Section 5, Township 23 South,
- 8 Range 36 East, in the Jalmat Pool, Lea County, New Mexico.
- 9 Q Now, that would be for produced water disposal, would
- 10 it not?
- 11 A Yes, sir.
- 12 Q Now, referring to what has been marked as Exhibit No.
- 13 1, would you identify that exhibit?
- 14 A Exhibit No. 1 is a location and ownership plat showing
- 15 the well which is the subject of this hearing, the Farney
- 16 A-5 No. 5 located in Unit "G", at a footage location 1980
- 17 feet from the north and 1980 feet from the east lines of
- 18 Section 5, Township 23 South, Range 36 East.
- 19 There is a faint circle circumscribed around this
- 20 well with a radius of two miles and the wells and leases
- 21 and the ownerships thereof are shown in the usual manner.
- 22 The formations from which the wells produce is indicated
- 23 by a letter symbol, the legend for which appears at the
- 24 bottom of the exhibit.
- 25 Q Now, referring to what has been marked as Exhibit No. 2,

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1 would you identify that exhibit?

2 A Exhibit No. 2 is a copy of the radioactivity log in the
 3 Farney A-5 No. 5. It shows the top of the Seven Rivers
 4 formation occurring at approximately 3660. It shows
 5 by the small arrows in the center portion of the exhibit
 6 of the log sections, the perforations which have been
 7 or which are open and those which are proposed and the
 8 perforations which have been squeezed.

9 The perforations proposed and present are those
 10 which we intend to use for injection of water.

11 Q Now, would you be limited to those particular perforations,
 12 however, Mr. Lyon?

13 A We would like to have authority, if it proves to be
 14 necessary, to perforate additional sections in the Seven
 15 Rivers if the volumes of water and the pressures en-
 16 countered might require additional sections.

17 Q That would not be above the top of the Seven Rivers
 18 formation, would it?

19 A No, it would not.

20 Q It would be below the present perforations?

21 A Yes, sir.

22 Q Now, referring to what has been marked as Exhibit No. 3,
 23 would you identify that exhibit?

24 A Exhibit No. 3 is a copy of the schematic diagram for this
 25 well showing the size, setting depth, the amount of

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1 cement used in setting the surface and production
2 casings; shows the perforated interval, the location of
3 the packer and the length, size of the tubing.

4 Now, the tubing is proposed or is not proposed to
5 be coated and the reason for this is that the collection
6 tank, the line from the collection tank to the well, are
7 all bare steel and rather than try to coat all of this
8 equipment, we have elected to chemically inhibit the
9 water to prevent corrosion.

10 Now, the annular space above the packer will be
11 filled with an inert fluid and we will install either a
12 pressure gauge or a rupture disc at the surface con-
13 nection or leave this connection open so that any leakage
14 across the packer or through the tubing or otherwise will
15 be readily detectible.

16 Q Now, what is the source of the water that will be
17 disposed of in this well?

18 A At the present time and for the foreseeable future, all
19 of the water to be injected into this well will be
20 produced from the Farney A-5 lease.

21 Q Do you have an analysis of that water?

22 A Yes, sir, Exhibit No. 4 is a copy of the chemical
23 analysis of the water showing it to be fairly typical
24 Seven Rivers reef water found in this part of the
25 country.

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1 It's a relatively low chloride and reasonably
 2 inert water.

3 Q Now, do you anticipate that you might dispose of water
 4 for other operators in the area?

5 A This is a possibility. We have not been approached by
 6 anybody, but our experience shows that sometimes you have
 7 an injection well and somebody has a produced water
 8 problem, they will come and ask you to take water from
 9 their wells.

10 Q You would anticipate, though, that the water will be
 11 of comparable quality?

12 A Yes.

13 Q What volume do you estimate you will be injecting into
 14 this disposal well?

15 A Well, as was shown on the application form, which
 16 accompanied our application to the Commission, we
 17 expect to inject a maximum of 240 barrels per day. It
 18 will be a closed system and we expect the well to take
 19 the water on gravity.

20 Q In your opinion, is this in the interest of conservation
 21 and the prevention of waste?

22 A Yes, it is.

23 Q Were Exhibits 1 through 4 prepared by you or under your
 24 supervision?

25 A Yes, sir.

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1 MR. KELLAHIN: At this time, I would like to offer
 2 in evidence Exhibits 1 through 4.

3 MR. NUTTER: Applicant's Exhibits 1 through 4 will
 4 be admitted in evidence.

5 MR. KELLAHIN: That completes our presentation, Mr.
 6 Nutter.

7 CROSS EXAMINATION

8 BY MR. NUTTER:

9 Q Mr. Lyon, you indicated that this Exhibit No. 1, by the
 10 symbols, show the formations these offsetting wells are
 11 producing from but I believe it simply shows the pool
 12 that they are producing from.

13 A You are correct.

14 Q What would be the formation that the offsetting wells
 15 here are producing from?

16 A The Jalmat Wells, of course, would be producing from
 17 either the Yates or the Seven Rivers or both and I have
 18 not differentiated these and I can't testify today. I
 19 can investigate this for you.

20 Q Now, where is this water that you are going to be dis-
 21 posing of coming from?

22 A It is being produced from our Farney A-5 No. 2, which
 23 has been recompleted in the oil section of the Jalmat
 24 Pool.

25 Q Is that the well that is shown as a gas well on the

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1 exhibit?

2 A Yes, sir.

3 Q And it is an oil well now?

4 A Yes, sir.

5 Q Is it the only well on that lease that's making water

6 at the present time?

7 A I believe so.

8 Q All the others are abandoned?

9 A All the others are shut-in, except, I believe, No. 3 is

10 still a producing gas well.

11 Q It would be producing higher in the section, then, not

12 from down here in the water, I imagine.

13 A Yes.

14 Q How about up north on your State A lease, Mr. Lyon; what

15 are those wells producing from, if they are producing?

16 A I don't believe that any of the oil wells are producing

17 at the present time.

18 Q Yes.

19 A The gas wells are producing. No. 7 has never produced.

20 It was a dry hole in the South Eunice Pool and --

21 Q No. 5 and 6?

22 A Five and six are abandoned oil wells.

23 Q Now, immediately west of your disposal well on this

24 square lease here, you have one gas well and two oil

25 wells shown there. What's the status of them, please?

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1 A West, in the northwest quarter?

2 Q Yes, sir.

3 A I am not sure. I believe the only production on that
 4 lease is the gas, but I am not certain as to that.

5 Q Well, in the event there's no production there, it would
 6 appear that there isn't any oil production from any
 7 wells other than the one well which is producing water --

8 A To my knowledge, this is true.

9 Q -- your Farney A No. 2?

10 A Yes. Now, I might mention that the State A 32 lease
 11 north of our Farney A-5 is being considered at this time
 12 as a water source for the South Eunice Unit, which is
 13 immediately adjoining that lease to the east.

14 Q From what formation?

15 A From the Seven Rivers.

16 Q Seven Rivers?

17 A Yes.

18 Q In other words, the reef here produces lots of water --

19 A Yes.

20 Q -- and you can use it as a disposal as well as a
 21 producing zone for water, if you need water?

22 A Yes, sir.

23 Q Now, you mention three alternatives in which you could
 24 treat this casing tubing annulus. Could we select one
 25 so we won't have so many alternatives in our order?

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1 A The production superintendent for that area tells me
 2 that he has been using a rupture disc.

3 Q What pressure does that break on?

4 A I believe he sets those at fifty pounds and this is his
 5 preference to use a rupture disc.

6 Q And if you have a leak in your -- well, you said you
 7 would be going in on gravity.

8 A We expect it to be on gravity.

9 Q So, that would never rupture the disc if you are going
 10 in on gravity.

11 A This is probably true, but I am not sure what other
 12 indication we would get, either, if we used the other
 13 alternatives.

14 Q Now, you mention that you would prefer to have an open
 15 ended order as far as the disposal zone itself is
 16 concerned in the event that you would need more than just
 17 these perforations as shown, so you wouldn't go above
 18 the top of the Seven Rivers, you said?

19 A Right.

20 Q Could the order specify that disposal would be into the
 21 Seven Rivers formation between whatever reading we have
 22 here for the top of the Seven Rivers and total depth of
 23 3836 or whatever total depth is?

24 First of all, would you pick the top of the Seven
 25 Rivers here for me and give me a footage description of

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- 1 the top?
- 2 A I find that different people pick the Seven Rivers, you
- 3 know, a little bit differently. That form which we
- 4 submitted showed the Seven Rivers at 3663. My pick of
- 5 the Seven Rivers is at 3660 --
- 6 Q 3660?
- 7 A -- and I wouldn't quibble about it.
- 8 Q Is that where this red line is drawn?
- 9 A Yes, sir.
- 10 Q 3660? What's this down here at the bottom, this bottom
- 11 reading you got here, 3840? I believe total depth is
- 12 right there at the bottom of the exhibit and I can't read
- 13 total depth. Do you have it on yours?
- 14 A It shows here 3840, as best I can see. That T. R. D. is
- 15 total rotary depth, I believe.
- 16 Q And then below that it looks like there's a T. D. there,
- 17 but the number is chopped off on this exhibit.
- 18 A It's chopped off on mine, too.
- 19 Q Well, can we specify that injection would be confined to
- 20 between 3660 and 3840?
- 21 A I believe that that would take care of it. The only
- 22 reason for making my request for an open ended order is
- 23 to avoid coming up here for another hearing.
- 24 Q In the event you had to open some more perforations?
- 25 A Right.

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1 Q If we specify 3660 to 3840 that will cover the Seven
 2 Rivers that's open in this well?
 3 A Yes, sir.
 4 MR. NUTTER: Are there any other questions of Mr.
 5 Lyon? He may be excused.
 6 (Witness excused.)
 7 MR. NUTTER: Do you have anything further, Mr.
 8 Kellahin?
 9 MR. KELLAHIN: That's all, Mr. Nutter.
 10 MR. NUTTER: Does anyone have anything they wish
 11 to offer in Case 4514? We will take the case under advisement.
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I N D E X

WITNESS

PAGE

VICTOR T. LYON

Direct Examination by Mr. Kellahin

2

Cross Examination by Mr. Nutter

7

E X H I B I T S

Applicant's 1 through 4

2

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1 STATE OF NEW MEXICO)
) ss
 2 COUNTY OF BERNALILLO)

3 I, GLENDA BURKS, Court Reporter in and for the County
 4 of Bernalillo, State of New Mexico, do hereby certify that
 5 the foregoing and attached Transcript of Hearing before the
 6 New Mexico Oil Conservation Commission was reported by me;
 7 and that the same is a true and correct record of the said
 8 proceedings to the best of my knowledge, skill and ability.

9
 10 Glenda Burks
 Court Reporter

21
 22 I do hereby certify that the foregoing is
 23 a complete record of the proceedings in
 24 the hearing before the New Mexico Oil Conservation
 25 Commission, Case No. 4514,
 held by said Commission on 3/12/71.
Glenda Burks Reporter
 New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

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

GOVERNOR
BRUCE KING
CHAIRMAN
LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER
STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

March 23, 1971


Mr. Jason W. Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: Case No. 4514
Order No. R-4121
Applicant:
Continental Oil Company

Dear Sir:

Enclosed herewith is a copy of the above-referenced Commission order recently entered in the subject case. Letter pertaining to conditions of approval and maximum allowable to follow.

Very truly yours,

Very truly yours,

 A. L. PORTER, Jr.
 Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
 Artesia OCC _____
 Aztec OCC _____
 State Engineer x

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. 4514
Order No. R-4121

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 March 17, 1971, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 23rd day of March, 1971, 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 hereof.

(2) That the applicant, Continental Oil Company, is the owner and operator of the Farney A-5 Well No. 5, located in Unit G of Section 5, Township 23 South, Range 36 East, NMPM, Jalmat Field, 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 selected perforated intervals between 3660 feet and 3840 feet.

(4) That the injection should be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3650 feet; that the casing-tubing annulus should be filled with an inert fluid; that a rupture disc should be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer; and that the produced salt water shall be continuously treated to inhibit corrosion prior to injection and coupon corrosion tests shall be conducted continuously on said well and the results thereof filed semi-annually with the Commission until further notice from the Secretary-Director of the Commission.

-2-

CASE NO. 4514

Order No. R-4121

(5) 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 Farney A-5 Well No. 5, located in Unit G of Section 5, Township 23 South, Range 36 East, NMPM, Jalmat Field, 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 at approximately 3650 feet, with injection into selected perforated intervals between 3660 feet and 3840 feet;

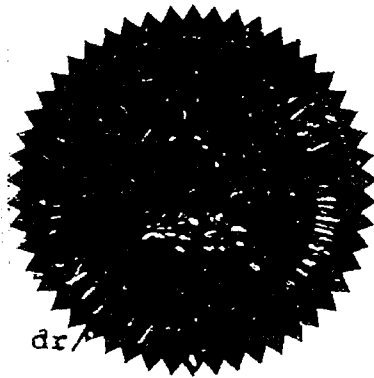
PROVIDED HOWEVER, that the casing-tubing annulus shall be filled with an inert fluid and that a rupture disc shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer;

PROVIDED FURTHER, that the produced salt water shall be continuously treated to inhibit corrosion prior to injection and coupon corrosion tests shall be conducted continuously on said well and the results thereof filed semi-annually with the Commission until further notice from the Secretary-Director of the Commission.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(3) 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

Bruce King
BRUCE KING, Chairman

Alex J. Armijo
ALEX J. ARMILLO, Member

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

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 17, 1971

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

The following cases will be heard before Daniel S. Nutter, Examiner, or
Elvis A. Utz, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for
April, 1971, from fifteen prorated pools in Lea, Eddy,
Roosevelt and Chaves Counties, New Mexico.
- (2) Consideration of the allowable production of gas from
nine prorated pools in San Juan, Rio Arriba and Sandoval
Counties, New Mexico, for April, 1971.

CASE 4490: (Continued from the February 3, 1971 Examiner Hearing)
Application of Texas Pacific Oil Company for an exception to
Order No. R-3221, as amended, Eddy County, New Mexico. Appli-
cant, in the above-styled, 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 the applicant's
Wooley Federal Well No. 3 located in Section 21, Township 17
South, Range 30 East, Loco Hills-Abo Pool, Eddy County, New
Mexico.

CASE 4514: Application of Continental Oil Company for salt water disposal,
Lea County, New Mexico. Applicant, in the above-styled cause,
seeks authority to dispose of produced salt water into the
Seven Rivers formation through perforations in its Farney A-5
Well No. 5 located in Unit G, Section 5, Township 23 South,
Range 36 East, Jalmat Field, Lea County, New Mexico.

CASE 4515: Application of Continental Oil Company for the reinstatement of
cancelled underproduction, Lea County, New Mexico. Applicant,
in the above-styled cause, seeks an exception to the general
rules and regulations for prorated gas pools of Southeastern
New Mexico promulgated by Order No. R-1670, as amended, to
permit the reinstatement of underproduction accumulated by four
of its proration units and cancelled January 1, 1971, the wells
for the proration units being located as follows:

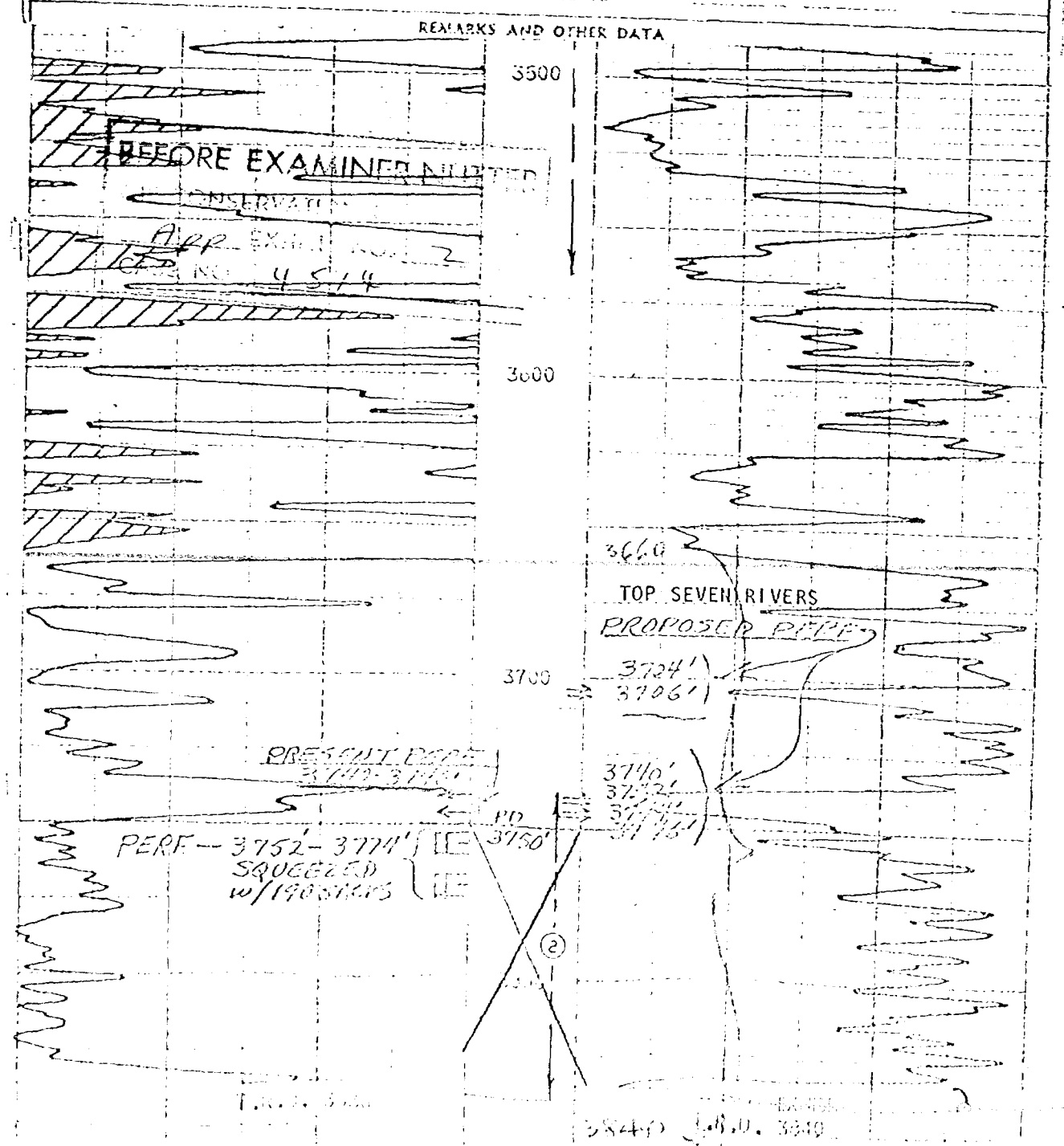
<u>WELL NAME AND NUMBER</u>	<u>LOCATION</u>	<u>POOL</u>
State KN-12 No. 1	12-19S-36E	Eumont
State A-17 No. 5	17-19S-37E	Eumont
Meyer B-23 Nos. 1, 2, and 3	23-22S-36E	Jalmat
State A-32 No. 4	32-22S-36E	Jalmat

LOCATION 1980' FLL 1980' FLL SEC. 5 TWP. 23-S RGE. 36-E LOG NO. 3989	COMPANY CONTINENTAL OIL COMPANY WELL FARLEY A-5 # 5 FIELD COOPER JAL COUNTY LEA STATE NEW MEXICO SECTION 5 TOWNSHIP 23 - S RANGE 36 - E SURVEY BL & M	FILE NUMBER COMPANY CONTINENTAL OIL CO. WELL FARLEY A-5 # 5 FIELD COOPER JAL COUNTY LEA STATE N.M. SEC. 5, TWP. 23 - S, RGE. 36 - E SURVEY BL & M
LOG MEASURED FROM 8.20' ABOVE CASING FLANGE TOP OF ROTARY TABLE ELEVATION 349.3		DRILLING MEASURED FROM SAME ELEVATION
PERMANENT DATUM TOP OF CASING FLANGE ELEVATION		

	GAMMA RAY	BRONS NEUTRON
TYPE OF LOG	ONE	ONE
RUN NUMBER	9-11-52	9-11-52
DATE	3839	3839
TOTAL DEPTH - DRILLER	3841	3841
EFFECTIVE DEPTH P. G. A. C.	2500	2500
TOP OF LOGGED INTERVAL	3836	3840
BOTTOM OF LOGGED INTERVAL	MUD	MUD
TYPE FLUID IN HOLE	FULL	FULL
FLUID LEVEL		
MAXIMUM RECORDED TEMP		
O. D. OF INSTRUMENT - INCHES	3 5/8	3 5/8
TIME CONSTANT - SECONDS	5	5
LOGGING SPEED - FEET/MINUTE	15-60	15-60
STATISTICAL VARIATION - INCHES		

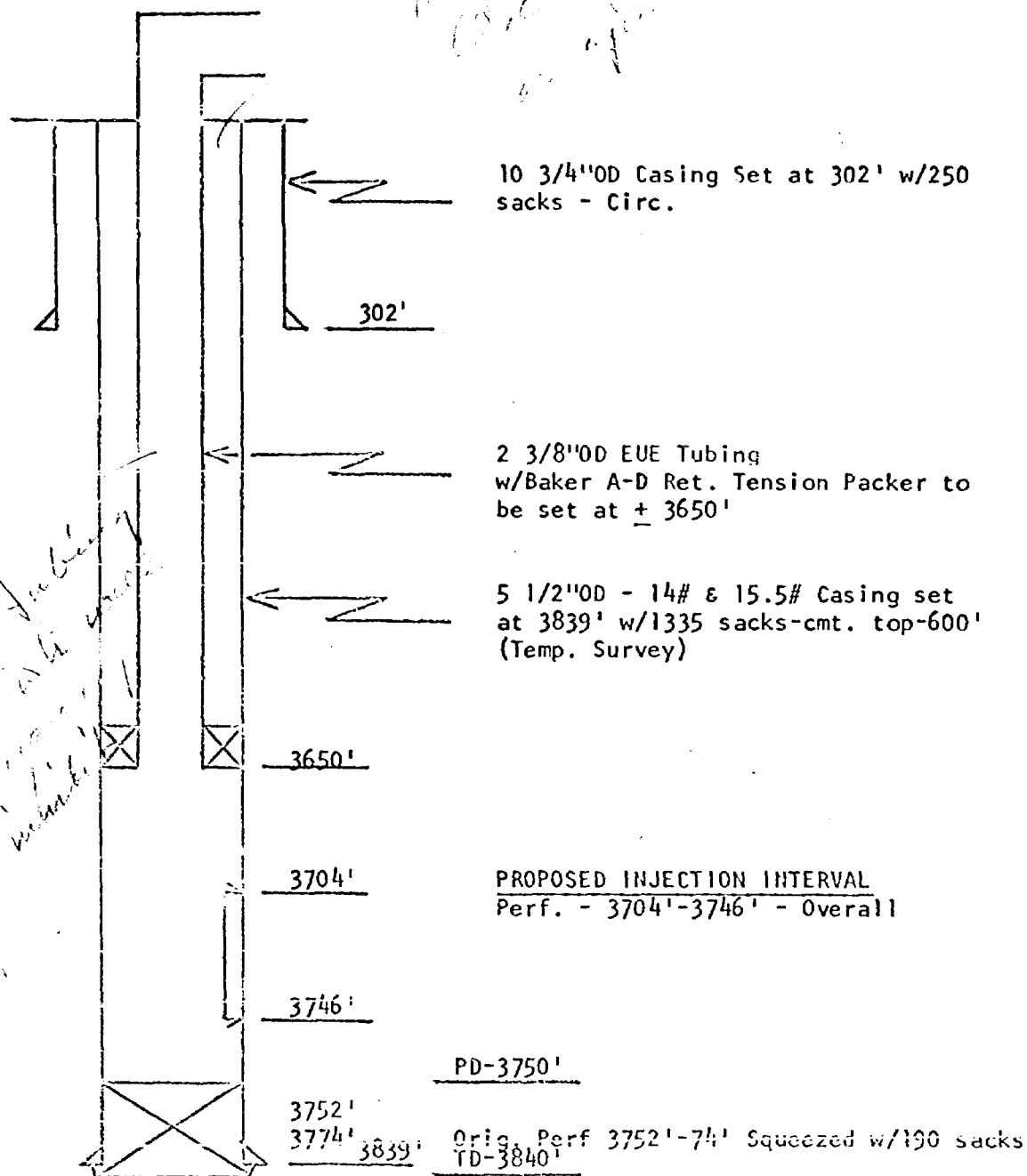
RECORDED BY YOUNG CURTIS	WITNESSED BY YOUNG CURTIS
---------------------------------	----------------------------------

CASING RECORD				OPEN HOLE RECORD	
RUN NO.	SIZE, IN.	WEIGHT, LB.	INTERVAL	BIT SIZE, IN.	INTERVAL
ONE	10 3/4		SURFACE TO 302	7 5/8	302 TO 3841



FARNEY A-5 NO. 5
 UNIT G - 1980' FHL & 1980' FEL - SEC. 5 - T23S - R36E
 LEA COUNTY, NEW MEXICO

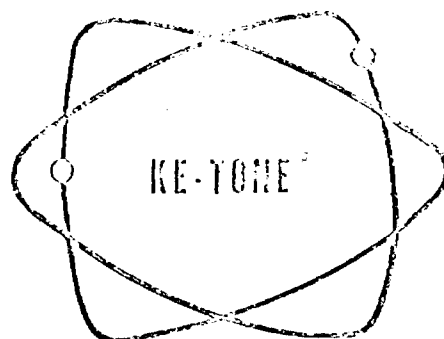
Handwritten notes:
 40' net
 prop.
 100' of tubing
 at 3650' w/1335 sacks
 to 3746' w/190 sacks
 to 3839' w/1335 sacks



BEFORE EXAMINER NED

App. NO. 3

4514



UNITED CHEMICAL CORPORATION

OF NEW MEXICO

601 NORTH LEECH

P. O. BOX 1499

HOBBS, NEW MEXICO 88240

Company Continental Oil Company

Field 7. Rivers

Lease Farney A-5 #2 Sampling Date 3-9-71

Type of Sample _____

WATER ANALYSIS

IONIC FORM	me/l *	mg/l *
Calcium (Ca++)	45.71	916
Magnesium (Mg++)	47.37	576
Sodium (Na+) <u>Calculated</u>	207.15	4,762
Bicarbonate (HCO ₃ -)	22.40	1,366
Carbonate (CO ₃ -)	NOT	FOUND
Hydroxide (OH-)	NOT	FOUND
Sulphate (SO ₄ -)	29.67	1,425
Chloride (Cl-)	248.16	8,800
<u>7.1 pH c 68 °F</u>		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as Ca CO ₃	93.08	4,654
Carbonate Hardness as CaCO ₃ (temporary)	22.40	1,120
Non-Carbonate Hardness as CaCO ₃ (permanent)	70.68	3,534
Alkalinity as CaCO ₃	22.40	1,120
Specific Gravity c 68° F	1.014	

* mg/l = milligrams per Liter

* me/l = milliequivalents per Liter

BEFORE EXAMINER SIGNATURE

DATE OF ANALYSIS

APR 1 1971 NO. 4

1000 KELLY

Exhibit No. 4

~~~~~ Water Works ~~~~~



# CONTINENTAL OIL COMPANY

P. O. Box 460  
HOBBS, NEW MEXICO 88240

PRODUCTION DEPARTMENT  
HOBBS DIVISION  
L. P. THOMPSON  
Division Manager  
G. C. JAMIESON  
Assistant Division Manager

February 23, 1971

1001 NORTH TURNER  
TELEPHONE 393-4141

*Page 45-14*

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

Attention Mr. A. L. Porter, Jr.,  
Secretary Directory

Gentlemen:

Subject: Application for Salt Water Disposal - Farney A-5 No. 5

Enclosed, in triplicate is our application for authority to dispose of salt water into the Seven Rivers formation in our Farney A-5 No. 5 located in Unit G, Section 5, Township 23S, Range 36E, Lea County, New Mexico. The application describes a proposed injection interval but subsequent events could require that this interval be changed to include other intervals of the Seven Rivers formation. For this reason we should like the advertisement to refer to the Seven Rivers formation rather than the specific interval.

The application form has been answered in the affirmative concerning the attachment of several exhibits. We have attached the schematic diagram of the well but the other exhibits will be introduced at the hearing and are not attached to the application at this time.

Please set this matter for hearing on the March 17, 1971, Examiner Docket.

Yours very truly,

VTL-RW  
Enc  
CC: RLA, JJB, JWK

DOCKETED

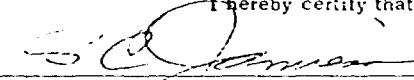
Date 3/3/71

NEW MEXICO OIL CONSERVATION COMMISSION  
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

|                                                                                                                                                                                                     |               |                                                   |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------|---------------|
| OPERATOR<br>Continental Oil Company                                                                                                                                                                 |               | ADDRESS<br>P. O. Box 460, Hobbs, New Mexico 88240 |               |
| LEASE NAME<br>Farney A-5                                                                                                                                                                            | WELL NO.<br>5 | FIELD<br>Jalpat                                   | COUNTY<br>Lea |
| LOCATION<br>UNIT LETTER <u>G</u> ; WELL IS LOCATED <u>1980</u> FEET FROM THE <u>N</u> LINE AND <u>1980</u> FEET FROM THE <u>E</u> LINE, SECTION <u>5</u> TOWNSHIP <u>23S</u> RANGE <u>36E</u> NMPM. |               |                                                   |               |

| CASING AND TUBING DATA                                                                                                                                                                                        |                |                                                                       |                                                                              |                                                                                       |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------|
| NAME OF STRING                                                                                                                                                                                                | SIZE           | SETTING DEPTH                                                         | SACKS CEMENT                                                                 | TOP OF CEMENT                                                                         | TOP DETERMINED BY                   |
| SURFACE CASING                                                                                                                                                                                                | 10 3/4"OD      | 302'                                                                  | 250                                                                          | Surface                                                                               | Circulated                          |
| INTERMEDIATE                                                                                                                                                                                                  |                |                                                                       |                                                                              |                                                                                       |                                     |
| LONG STRING                                                                                                                                                                                                   | 5 1/2"OD       | 3839'                                                                 | 1335                                                                         | 600                                                                                   | Temp. Survey                        |
| TUBING                                                                                                                                                                                                        | 2 3/8"OD       | + 3650'                                                               | NAME, MODEL AND DEPTH OF TUBING PACKER<br>Baker A-D Tension Packer - + 3650' |                                                                                       |                                     |
| NAME OF PROPOSED INJECTION FORMATION<br>Seven Rivers                                                                                                                                                          |                |                                                                       | TOP OF FORMATION<br>3663'                                                    |                                                                                       | BOTTOM OF FORMATION<br>4090' (est.) |
| IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?<br>Tubing                                                                                                                                                    |                | PERFORATIONS OR OPEN HOLE?<br>Perf.                                   |                                                                              | PROPOSED INTERVAL(S) OF INJECTION<br>3704'-3746' (Overall)                            |                                     |
| IS THIS A NEW WELL DRILLED FOR DISPOSAL?<br>No                                                                                                                                                                |                | IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?<br>Oil |                                                                              | HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes |                                     |
| LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH<br>3752'-60' & 3766'-74' - Squeezed W/190 sacks                                                                       |                |                                                                       |                                                                              |                                                                                       |                                     |
| DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA<br>200+                                                                                                                                              |                | DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA<br>None   |                                                                              | DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA<br>4090                       |                                     |
| ANTICIPATED DAILY INJECTION VOLUME (BBL/S.)                                                                                                                                                                   | MINIMUM<br>160 | MAXIMUM<br>240                                                        | OPEN OR CLOSED TYPE SYSTEM<br>Closed                                         | IS INJECTION TO BE BY GRAVITY OR PRESSURE?<br>Gravity                                 | APPROX. PRESSURE (PSI)<br>0         |
| ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -                                                         |                |                                                                       | WATER TO BE DISPOSED OF<br>Yes                                               | NATURAL WATER IN DISPOSAL ZONE<br>Yes                                                 | ARE WATER ANALYSES ATTACHED?<br>Yes |
| NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)<br>USA J. E. Matkins (Lessee) 1505 Jefferson Drive, Carlsbad, New Mexico                                                              |                |                                                                       |                                                                              |                                                                                       |                                     |
| LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL<br>Texas Pacific Oil Company, Box 1069, Hobbs, New Mexico<br>Reading & Bates, 810 East County Road, Odessa, Texas |                |                                                                       |                                                                              |                                                                                       |                                     |
| HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?                                                                                                                                           |                | SURFACE OWNER<br>No                                                   |                                                                              | EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL<br>No                                 |                                     |
| ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)                                                                                                                                         |                | PLAY OF AREA<br>Yes                                                   |                                                                              | ELECTRICAL LOG<br>Yes                                                                 |                                     |
|                                                                                                                                                                                                               |                |                                                                       |                                                                              | DIAGRAMMATIC SKETCH OF WELL<br>Yes                                                    |                                     |

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

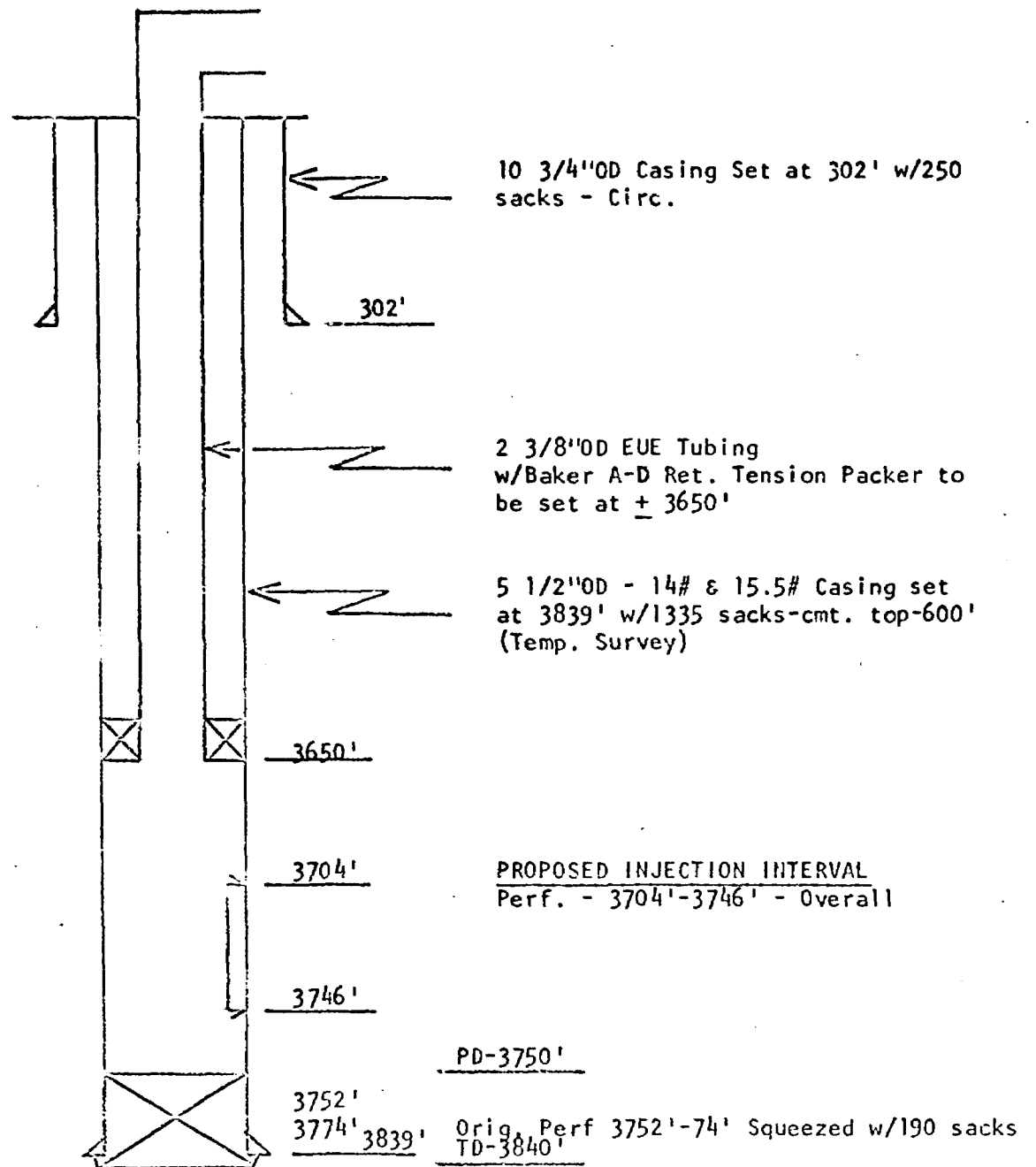
 Assistant Division Manager February 23, 1971  
(Signature) (Title) (Date)

NOTE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.



Case 4514

FARNEY A-5 NO. 5  
UNIT G - 1980' FNL & 1930' FEL - SEC. 5 - T23S - R36E  
LEA COUNTY, NEW MEXICO



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. 4514

Order No. R- 4121

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 March 17, 1971,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this \_\_\_\_\_ day of March, 1971, 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 Farney A-5 Well No. 5,  
located in Unit G of Section 5, Township 23 South, Range  
36 East, NMPM, Jalmat Field, 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 the perforated intervals  
~~from approximately 3640~~ feet to 3840 feet.

(4) That the injection should be accomplished through  
2 1/8-inch plastic-lined tubing installed in a packer set at

approximately 3650 feet; that the casing-tubing annulus should be filled with an inert fluid; ~~and that a pressure gauge~~ <sup>rupture disc</sup> should be attached to the annulus ~~or the annulus left open~~ at the surface in order to determine leakage in the casing, tubing, or packer; ~~and that the produced salt water shall be continuously treated prior to injection and coupon corrosion tests shall be conducted continuously in said well and the results thereof~~ <sup>to inhibit corrosion</sup> (5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights. <sup>filed semi-annually with the Commission until further notice from the Secretary, Director of the Commission.</sup>

IT IS THEREFORE ORDERED:

(1) That the applicant, Continental Oil Company, is hereby authorized to utilize its Farney A-5 Well No. 5 located in Unit G of Section 5, Township 23 South, Range 36 East, NMPM, Jalmat Field, 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 at approximately 3650 feet, with injection into the ~~the~~ <sup>selected</sup> perforated intervals ~~from approximately 3660 feet to 3840 feet;~~ <sup>and</sup>

PROVIDED HOWEVER, that ~~the tubing shall be plastic-lined,~~ that the casing-tubing annulus shall be filled with an inert fluid, ~~and that a pressure gauge~~ <sup>rupture disc</sup> shall be attached to the annulus ~~or the annulus left open~~ at the surface in order to determine leakage in the casing, tubing, or packer; ~~and that the produced salt water shall be continuously treated prior to injection and coupon corrosion tests shall be conducted continuously in said well and the results thereof~~ <sup>to inhibit corrosion</sup> ~~filed semi-annually with the Commission until further notice from the Secretary, Director of the Commission.~~ (2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(3) 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.

CASE 4515: Appli. of CONTINENTAL  
FOR REINSTATEMENT OF CANCELLED  
UNDERPRODUCTION, LEA COUNTY.