

CASE 6175: PETROLEUM CORPORATION² *Refers*
/ OF TEXAS FOR SALT WATER DISPOSAL,
EDDY COUNTY, NEW MEXICO

Case NO.

6175

Application

Transcripts

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 8, 1978

EXAMINER HEARING

IN THE MATTER OF:

Application of Petroleum Corporation) CASE
of Texas for salt water disposal, Eddy) 6175
County, New Mexico.)

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

For the New Mexico Oil Conservation Commission: Lynn Teschendorf, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Michael B. Campbell, Esq.
CAMPBELL, BINGAMAN & BLACK
Attorneys at Law
P. O. Box 2208
Santa Fe, New Mexico

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

I N D E X

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1 MR. NUTTER: Call the next case, Case Number 6175.

2 MS. TESCHENDORF: Case 6175, application of
3 Petroleum Corporation of Texas for salt water disposal,
4 Eddy County, New Mexico.

5 MR. NUTTER: Call for appearances in this case?

6 MR. CAMPBELL: Mr. Examiner, my name is Michael
7 Campbell with the law firm of Campbell, Bingaman & Black,
8 appearing on behalf of Petroleum Corporation of Texas and
9 we have one witness to testify in this application.

10 MR. NUTTER: Please stand and be sworn.

11 (THEREUPON, the witness was sworn.)

12

13

ARTHUR BOICE

14 was called as a witness by the applicant, and having been
15 first duly sworn, testified upon his oath as follows, to-wit:

16

17

DIRECT EXAMINATION

18 BY MR. CAMPBELL:

19 Q Would you please state your name and the position
20 you hold with Petroleum Corporation of Texas?

21 A My name is Arthur Boice, Division Superintendent.

22 Q Have you previously testified before this Commission?

23 A Yes, sir.

24 Q In what capacity have you testified?

25 A As an engineer.

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1 MR. CAMPBELL: Mr. Examiner, would you like further
2 qualification of the witness?

3 MR. NUTTER: If he has previously qualified as
4 an expert witness I don't. That's sufficient.

5 Q (Mr. Campbell continuing.) Would you please state
6 what Petroleum Corporation of Texas seeks in Case Number 6175?

7 A We propose to convert the Jenkins "B" Federal No. 1
8 located in Unit E in Section, Township 17 South, Range 30
9 East to the Grayburg Jackson Pool to a salt water disposal well.

10 MR. CAMPBELL: Mr. Examiner, we have a package of
11 exhibits here that we have marked simply as Applicant's
12 Exhibit One, which we will identify in sequence and explain
13 for the Examiner.

14 Q (Mr. Campbell continuing.) Mr. Boice, I hand you
15 what has been marked as Applicant's Exhibit Number One and
16 would you please begin to identify and explain the documents
17 contained in that exhibit?

18 A The application to dispose of salt water by
19 injection into the porous zone.

20 Then, we have the waiver of consent from the offset
21 operators.

22 Q Have you obtained waivers from all offset operators?

23 A Yes.

24 Q And those are included in your Exhibit Number One?

25 A Yes.

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1 Q Would you explain what is the next series of
2 documents in Applicant's Exhibit Number One?

3 A It is a tabular summary of all wells within a
4 half mile of the Jenkins "B" Federal No. 1.

5 I have a well bore sketch of the plugged wells
6 within a half mile are included in there.

7 Q The well bore sketch is marked also as Exhibit A,
8 is that correct?

9 A Yes.

10 Q What is that document, again?

11 A It is a well bore sketch of the plugged wells that
12 are within a half mile radius.

13 MR. NUTTER: There is only one well within that
14 radius that has been plugged?

15 A Yes, sir.

16 MR. NUTTER: And that is this General American
17 Birch A Five?

18 A Yes, sir.

19 MR. NUTTER: Where is it on your plat, which is
20 identified as Exhibit B and you haven't got to yet?

21 A It will be in Unit letter G of Section 19, Township
22 17 South, Range 30 East.

23 MR. NUTTER: On there it is not shown as a plugged
24 well but it has been plugged?

25 A Yes, sir.

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1 Q (Mr. Campbell continuing.) After the plat
2 document what is the next exhibit marked also as Exhibit C?

3 A These are the wells within a two-mile radius; all
4 wells within a two-mile radius of the proposed injection
5 well showing the formations as they do produce or have
6 produced from.

7 Q That would be in compliance with the Oil Conservation
8 Commission's Rule 701 (b) (1), is that correct?

9 A Yes.

10 Q After that summary what is the next document in the
11 series of documents?

12 A Exhibit D is a copy of the Schlumberger log on our
13 Jenkins "B" Federal No. 6. The Well No. 1 is an old well and
14 we do not have a log on it.

15 Q The well log is also marked as Exhibit D, is that
16 correct?

17 A Correct.

18 Q Following the well log what is the next exhibit
19 document in Exhibit Number One?

20 A Exhibit E, it's a diagrammatic sketch of the proposed
21 injection well showing that we are going to run plastic lined
22 tubing and set on a packer and fill the annulus in an inert
23 fluid.

24 Q What is the next document in the series of documents?

25 A Exhibit F, is the summary of the source of the

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1 injection fluid. All of the fluid that we propose to dispose
2 of in this well comes from the Jenkins "B" Federal lease and
3 the same formation.

4 Q The last document in Exhibit Number One is what?

5 A The water analysis of the fluids to be injected.

6 Q Were the documents contained in Applicant's Exhibit
7 One prepared by you or under your supervision?

8 A Yes.

9 MR. CAMPBELL: Mr. Examiner, I would move the
10 admission of Applicant's Exhibit Number One.

11 MR. NUTTER: Applicant's Exhibit Number One with
12 all of the partstherein will be admitted in evidence.

13 Q (Mr. Campbell continuing.) Mr. Boice, in your
14 opinion would the granting of this application by the Commission
15 prevent waste and protect correlative rights?

16 A Yes.

17 MR. CAMPBELL: Mr. Examiner, we have no further
18 questions or testimony as part of the application.

19
20 CROSS EXAMINATION

21 BY MR. NUTTER:

22 Q Mr. Boice, I notice from your Exhibit E, which is
23 the schematic diagram of the subject well, that a twelve
24 inch hole was drilled and ten and three quarter inch casing
25 was set four hundred seventy-nine feet with fifty sacks of

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1 cement and the estimated top is at one fifty-six. I suppose
2 that means that cement wasn't circulated on the surface
3 casing, is that correct?

4 A. No, sir.

5 Q. Are there any fresh water in this area?

6 A. The bottom of the deepest fresh water zone in that
7 area is approximately two hundred to three hundred feet.

8 Q. That's the bottom of it?

9 A. Yes, sir.

10 Q. The top of the cement is at one hundred fifty-six
11 and then you have an intermediate casing string shown on the
12 diagram but there is not statistics or figures on that. Does
13 that string of case exist?

14 A. No, that string of casing doesn't exist. That's
15 just on the sketch that we drew this on.

16 Q. This is a form schematic diagram and this string
17 doesn't even exist, then?

18 A. Correct.

19 Q. Then, we have seven inch casing at three thousand
20 feet with about one hundred sacks of cement with the estimated
21 top at twenty-six sixty-three?

22 A. Yes, sir.

23 Q. And you propose to dispose of water from the open
24 hole interval from three thousand feet down to " " at thirty-
25 two fifty-eight?

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1 A. Yes, sir.

2 Q. Through plastic lined tubing?

3 A. Yes, sir.

4 Q. Set in a packer and the annulus will be loaded with
5 an inert fluid, is that correct?

6 A. Yes, sir.

7 Q. Now, what pressure to you propose to inject with?

8 A. It would be limited to not more than two tenths of
9 a pound per foot of depth which would be approximately
10 fifteen hundred -- excuse me -- six hundred.

11 Q. Let' see, our casing is at three thousand so it
12 would be six hundred pounds?

13 A. Yes, sir.

14 Q. Now, the log that you submitted was for Well No. 6,
15 I believe you stated?

16 A. Yes, sir.

17 Q. Because you don't have a log on the disposal well
18 and where is this Well No. 6 with respect to the disposal
19 well?

20 A. It's northeast.

21 Q. The diagonal offset to the northeast?

22 A. It's the first well in that direction but it would
23 be about two locations -- on the plat there you can see it --

24 Q. Is that the well that is right at the --

25 A. Right at the "O" in Petco.

1 Q So, it is the diagonal offset to the northeast,
2 then?

3 A Yes, I would think that there would be room for one
4 more well below it. It is the first well you come to
5 diagonally.

6 Q Now, how many producing wells are on this lease?
7 Just the five wells that are listed on Exhibit F of Exhibit
8 One?

9 A In addition to this No. 1, which we propose to make
10 a disposal well out of.

11 Q So, you have the No. 2, 3, 4, 5, and 6 on the lease?

12 A Yes, sir.

13 Q How much water are they currently making?

14 A About two hundred barrels.

15 Q A day?

16 A Yes, sir. I am sorry, that volume, it would be
17 about one hundred and twenty-five barrels a day.

18 Q About one hundred and twenty-five barrels a day?

19 A Yes, sir.

20 Q Now, Mr. Boice, referring to your Exhibit A on page
21 five, which is the summary of the casing and cementing program
22 on the wells within a half-mile radius, this General American
23 Birch "A" 17 apparently has thirteen and three eighths casing
24 set at three fifty-one with three hundred twenty-five sacks
25 and top unknown.

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1 Then, it has nine and five at twenty-seven twenty-
2 six with fourteen fifty sacks and the top is unknown.

3 Then, it has seven inch at forty-two oh nine with
4 three hundred sacks and the top of the cement is thirty-one
5 sixty.

6 So, the top of the cement there being at thirty-
7 one sixty leaves an area in which there is no cement up to
8 the casing at twenty-seven twenty-six.

9 Now, that includes the interval that you will be
10 injecting water into. That well is located less than a half
11 mile from your well.

12 Do you think there is any possibility of migration
13 of water from your disposal well into the upper formation
14 into that well since there isn't any cement on the casing
15 string there?

16 A I think the casing at twenty-seven twenty-six would
17 stop it from going up.

18 Q What formation do we have there at twenty-seven
19 twenty-six? Is that in the Queen or the Seven Rivers or what
20 right in there?

21 A I believe that it is still in the San Andres. It's
22 definitely below the Seven Rivers and the Queen.

23 Q Well, now, is the top of the San Andres shown on
24 your log, which is included in your package of exhibits?

25 A Let's see -- it is but I am not a geologist and I

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1 stake it for you.

2 Q I don't think the top of the San Andres is on here.
3 It's probably just immediately above.

4 A Just immediately above that.

5 MR. NUTTER: Are there any further questions of
6 Mr. Boice?

7 If there are no further questions, the witness may
8 be excused.

9 Do you have anything further, Mr. Campbell?

10 MR. CAMPBELL: No, sir.

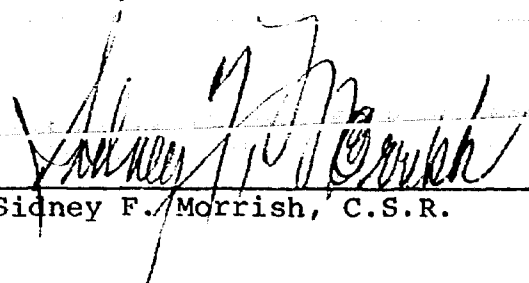
11 MR. NUTTER: Does anyone have anything they wish
12 to offer in Case 6175? We will take the case under advisement.

13 (THEREUPON, the case was concluded.)
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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand 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.


Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6175
heard by me on 3/8, 1978.


Examiner
New Mexico Oil Conservation Commission



DIRECTOR
JOE D. RAMEY

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

LAND COMMISSIONER
PHIL R. LUCERO
March 21, 1978



STATE GEOLOGIST
EMERY C. ARNOLD

Mr. Michael Campbell
Campbell, Bingaman & Black
Attorneys at Law
Post Office Box 2208
Santa Fe, New Mexico 87501

Re: CASE NO. 6175
ORDER NO. R-5671

Applicant:


Petroleum Corporation of Texas

Dear Sir:

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

Although the order is silent on the subject, the Commission feels that the surface casing cement job in the disposal well authorized by this order is inadequate. Ten and 3/4-inch casing is set at 479 feet and cemented with 50 sacks of cement. Top of the cement is estimated to be at 156 feet and also at 267 feet. We feel that either of these is inadequate and that cement should come to the surface on this string of casing. Petroleum Corporation of Texas is therefore hereby directed to recement the surface casing to the surface prior to use of the well for salt water disposal. Please notify the Artesia District Office of the Commission of the date and hour this work is to be commenced so that a Commission representative may be present during the work.

Yours very truly,


JOE D. RAMEY
Director

Copy of order also sent to:

Hobbs OCC
Artesia OCC

CAMPBELL, BINGAMAN AND BLACK, P. A.

LAWYERS

JACK M. CAMPBELL
JEFF BINGAMAN
BRUCE D. BLACK
MICHAEL B. CAMPBELL

POST OFFICE BOX 2208
JEFFERSON PLACE
SANTA FE, NEW MEXICO 87501
TELEPHONE (505) 988-4421

FEB 13 1978

CONSERVATION COMMISSION
SANTA FE

February 13, 1978

Case 6175

Mr. Joe D. Ramey
Oil Conservation Commission
for the State of New Mexico
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: Jenkins "B" Federal LC-054988-B, Well No. 1
Eddy County, New Mexico

Dear Mr. Ramey:

Attached is an application of Petroleum Corporation of Texas to convert the above well to salt water disposal.

Support data includes the following:

Exhibit "A": Tabular summary of all wells, schematic of plugged and abandoned wells, within one-half mile radius of our proposed injection well.

Exhibit "B": Plat showing location of injection well and all other wells within a radius of two miles.

Exhibit "C": Summary of all other wells within a radius of two miles from proposed injection well.

Exhibit "D": Copy of the Schlumberger log on our Well No. 6 on the same lease. We do not have a log on the No. 1 Well.

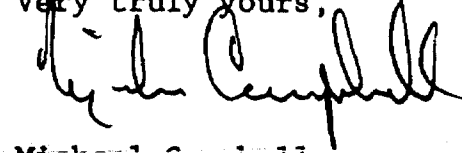
Exhibit "E": Diagrammatic sketch of proposed injection well.

Exhibit "F": Summary of the source of
injection fluid.

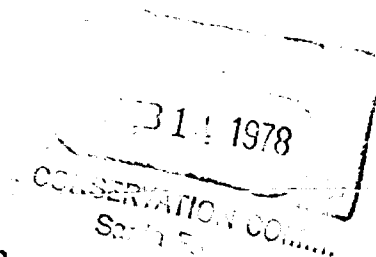
Exhibit "G": Water analysis of fluid
to be injected.

We would appreciate your scheduling the application for
hearing. Thank you for your attention to this matter.

Very truly yours,



Michael Campbell



MC:dc

Enclosures

cc: Arthur Boice

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. 6175
Order No. R-5671

APPLICATION OF PETROLEUM CORPORATION
OF TEXAS FOR SALT WATER DISPOSAL,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 8, 1978, at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this 14th day of March, 1978, 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, Petroleum Corporation of Texas, is the owner and operator of the Jenkins "B" Fed. Well No. 1, located in Unit E of Section 20, Township 17 South, Range 30 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the San Andres formation, with injection into the open-hole interval from approximately 3000 feet to 3258 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 2950 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a pop-off valve or other acceptable device which will limit the wellhead pressure on the injection well to no more than 600 psi.

Case No. 6175
Order No. R-5671

(6) That the operator should notify the supervisor of the Artesia district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(7) 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.

(8) 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, Petroleum Corporation of Texas, is hereby authorized to utilize its Jenkins "B" Fed. Well No. 1, located in Unit E of Section 20, Township 17 South, Range 30 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico, to dispose of produced salt water into the San Andres formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 2950 feet, with injection into the open-hole interval from approximately 3000 feet to 3258 feet;

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 shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pop-off valve or other acceptable device which will limit the wellhead pressure on the injection well to no more than 600 psi.

(3) That the operator shall notify the supervisor of the Artesia district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall immediately notify the supervisor of the Commission's Artesia district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

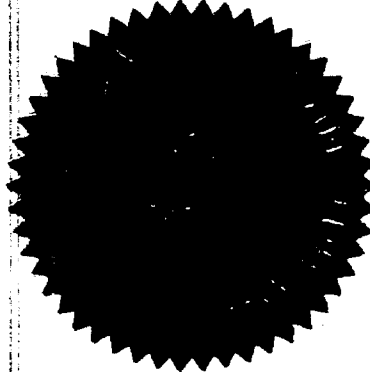
(5) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

-3-

Case No. 6175
Order No. R-5671

(6) 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

PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

jr/

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Petroleum Corporation of Texas		ADDRESS P. O. Box 911, Breckenridge, TX 76024	
LEASE NAME Jenkins "B" Federal(LC-054988-B)	WELL NO. 1	FIELD Grayburg, Jackson	COUNTY Eddie
LOCATION UNIT LETTER E ; WELL IS LOCATED 1650' FEET FROM THE North LINE AND 330' FEET FROM THE West LINE. SECTION 20 TOWNSHIP 17S RANGE 30E NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	40#	10-3/4"	479'
INTERMEDIATE			50 sx
LONG STRING	24#	7"	3000'
TUBING	2-3/8"		100 sx
NAME, MODEL AND DEPTH OF TUBING PACKER		TOP OF CEMENT	
Plastic lined		2663'	
NAME OF PROPOSED INJECTION FORMATION		TOP OF FORMATION	
San Andres		2905'	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?		BOTTOM OF FORMATION	
Tubing		4322'	
PERFORATIONS OR OPEN HOLE?		PROPOSED INTERVAL(S) OF INJECTION	
OH 3000'-3258'		3000' - 3258'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?	
No	Oil producer	No	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA	
200' - 300'		Grayburg 2536'	
ANTICIPATED DAILY INJECTION VOLUME (BBL/S.)		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA	
100		Glorieta 4322'	
MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?
100	150	Open	Pressure
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	NATURAL WATER IN DISPOSAL ZONE
Yes		Produced	Salt water
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)		APPROX. PRESSURE (PSI)	
Bogle Farms (grazing allottee on Federal Land)		600	
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL			
Atlantic Richfield Company P. O. Box 1710 Hobbs, NM 88240			
Holly Energy, Inc. 2001 Bryan Tower Suite 2680 Dallas, TX 75201			
General American Oil Company Meadows Building Dallas, TX 75206			
Kennedy Oil Company, Inc. P. O. Box 151 Artesia, NM 88210			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	
No		Yes	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		ELECTRICAL LOG	
Yes		From Well	
PLAT OF AREA		CASE NO.	
Yes		6175	
DIAGRAMMATIC SKETCH OF WELL		EXHIBIT NO.	
Yes		1	

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

[Signature]
(Signature)

Division Superintendent
(Title)

January 30, 1978
(Date)

NOTE: Should waivers from the State Engineer, 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.

*Applicant's Ex 1 Ct 6175
consists of C-108, 4 waivers
and Exhibits "A" thru G*

PETROLEUM CORPORATION OF TEXAS

P. O. BOX 911

BRECKENRIDGE, TEXAS 76024

February 7, 1978

Kennedy Oil Company, Inc.
P. O. Box 151
Artesia, NM 88210

Jenkins "B" Federal
Well No. 1
Eddie County, New Mexico

Gentlemen:

Petroleum Corporation of Texas has made application to the New Mexico Oil Conservation Commission to convert the Jenkins "B" Federal Well No. 1, (Unit letter E, 1650' FNL & 330' FWL, Section 20, Township 17-S, Range 30-E), to a salt water disposal well. The fluid will be injected into the Grayburg Jackson Zone from 3000' - 3258'. There will be no off lease water injected into this well, and the anticipated daily volume will be approximately 125 barrels. The injection pressure will not exceed .2 lbs. per foot of depth.

If you have no objection to this conversion, please sign and return three copies of this letter in the enclosed envelope.

Yours truly,



Arthur Boice
Division Superintendent

AHB/gw

I have no objection to granting of
a permit to inject salt water into
the above well.

KENNEDY OIL COMPANY, INC.

By: 


Title

Date: 2/9/78



817-559-3355

PETROLEUM CORPORATION OF TEXAS

P. O. BOX 911

BRECKENRIDGE, TEXAS 76024

January 30, 1978

Atlantic Richfield Company
P. O. Box 1710
Hobbs, NM 88240

Jenkins "B" Federal
Well No. 1
Eddie County, New Mexico

Gentlemen:

Petroleum Corporation of Texas has made application to the New Mexico Oil Conservation Commission to convert the Jenkins "B" Federal Well No. 1 (Unit letter E, 1650' FNL & 330' FWL, Section 20, Township 17-S, Range 30-E), to a salt water disposal well. The fluid will be injected into the Grayburg Jackson Zone from 3000' to 3258'. There will be no off lease water injected into this well, and the anticipated daily volume will be approximately 125 barrels. The injection pressure will not exceed .2 lbs.per foot of depth.

If you have no objection to this conversion, please sign and return three copies of this letter in the enclosed envelope.

Yours truly,



Arthur Boice
Division Superintendent

AHB/gw

I have no objection to granting of
a permit to inject water into the
above well.

ATLANTIC RICHFIELD COMPANY

By: J. J. Howard DISTRICT ENGINEER
Title

Date: 2-14-78



817-559-3355

PETROLEUM CORPORATION OF TEXAS

P. O. BOX 911

BRECKENRIDGE, TEXAS 76024

February 7, 1978

Holly Energy, Inc
2001 Bryan Tower
Suite 2680
Dallas, TX 75201

Jenkins "B" Federal
Well No. 1
Eddie County, New Mexico

Gentlemen:

Petroleum Corporation of Texas has made application to the New Mexico Oil Conservation Commission to convert the Jenkins "B" Federal Well No. 1, (Unit letter E, 1650' FNL & 330' FWL, Section 20, Township 17-S, Range 30-E), to a salt water disposal well. The fluid will be injected into the Grayburg Jackson Zone from 3000' - 3258'. There will be no off lease water injected into this well, and the anticipated daily volume will be approximately 125 barrels. The injection pressure will not exceed .2 lbs. per foot of depth.

If you have no objection to this conversion, please sign and return three copies of this letter in the enclosed envelope.

Yours truly,



Arthur Boice
Division Superintendent

AHB/gw

I have no objection to granting of
a permit to inject salt water into
the above well.

HOLLY ENERGY, INC.

By:  Operations Manager
Title

Date: 2-13-78

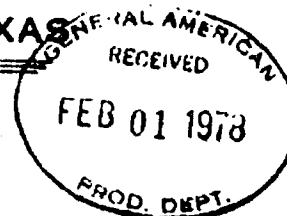


817-559-3355

PETROLEUM CORPORATION OF TEXAS

P.O. BOX 911
BRECKENRIDGE, TEXAS 76024

January 30, 1978



General American Oil Company
Meadows Building
Dallas, TX 75206

Jenkins "B" Federal
Well No. 1
Eddie County, New Mexico

Gentlemen:

Petroleum Corporation of Texas has made application to the New Mexico Oil Conservation Commission to convert the Jenkins "B" Federal Well No. 1, (Unit letter E, 1650' FNL & 330' FWL, Section 20, Township 17-S, Range 30-E), to a salt water disposal well. The fluid will be injected into the Grayburg Jackson Zone from 3000' - 3258'. There will be no off lease water injection into this well, and the anticipated daily volume will be approximately 125 barrels. The injection pressure will not exceed .2 lbs. per foot of depth.

If you have no objection to this conversion, please sign and return three copies of this letter in the enclosed envelope.

Yours truly,

Arthur Boice
Division Superintendent

AHB/gw

I have no objection to granting of
a permit to inject salt water into
the above well.

GENERAL AMERICAN OIL COMPANY

By:

Title

Date: 2/13/78



cc - Landall Hawkins

PETROLEUM CORPORATION OF TEXAS
EXHIBIT "A"

JENKINS "B" FEDERAL (LC-054988-B)
WELL NO. 1
Unit Letter E, Section 20
Township 17-S, Range 30-E
1650' FNL & 330' FWL
Grayburg Jackson Formation
Eddie County, New Mexico

Tabular summary of all wells within one-half mile of the above well,
which penetrates the zone that we are making application to inject
produced water.

SECTION 20, TOWNSHIP 17-S, RANGE 30-E

Holly Energy, Inc. W. D. McIntyre "D" No. 2 (NM-0467932)

2310' FSL & 1650' FWL, Unit Letter K, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
10"	8-5/8" 28#	500'	50	270'
8-1/4"	7" 24#	2900'	100	2130'
Total Depth 3280'				
Producing Interval 2688' - 3280' Grayburg and San Andres				

General American's Dexter "E" No. 2 (LC-029342-E)

1650' FNL & 2310' FEL, Unit Letter G, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
10"	8-1/4" 32#	512'	50	280'
8-1/4"	7" 24#	3000'	100	2230'
Total Depth 3275' PBD 2870'				
Producing Interval 2539' - 2870' Grayburg				

Petroleum Corporation of Texas Jenkins "B" Federal No. 2 (LC-054988-B)

990' FNL & 330' FWL, Unit Letter D, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
10"	8-1/4" 32#	500'	50	262'
8-1/4"	7" 20#	2912'	100	2140'
Total Depth 3265' PBD 3171'				
Producing Interval 2912' - 3171' Grayburg-San Andres				

Petroleum Corporation of Texas Jenkins "B" Federal No. 3 (LC-054988-B)

330' FNL & 2310' FWL, Unit Letter C, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
10"	8-1/4" 32#	505'	50	267'
8-1/4"	7" 24#	2875'	100	2100'
Total Depth 3300'				
Producing Interval 2875' - 3300' Grayburg-San Andres				

Ex A

SECTION 20, TOWNSHIP 17-S, RANGE 30-E

Petroleum Corporation of Texas Jenkins "B" Federal No. 4 (LC-054988-B)
1650' FNL & 1650' FWL, Unit Letter F, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
10"	8-1/4" 32#	506'	50	263'
8-1/4"	7" 20#	2845'	100	2300'
Total Depth 3253'				
Producing Interval 2845' - 3253' San Andres				

Petroleum Corporation of Texas Jenkins "B" Federal No. 5 (LC-054988-B)
330' FNL & 330' FWL, Unit Letter D, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
12-1/4"	8-5/8" 22#	496'	150	Cement Circulated
7-7/8"	5-1/2" 15.5#	3667'	625	780'
Total Depth 3693'				
Producing Interval 2480' - 3620' Grayburg-San Andres				

Petroleum Corporation of Texas Jenkins "B" Federal No. 6 (LC-054988-B)
660' FNL & 1650' FWL, Unit Letter C, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
12-1/4"	8-5/8" 22#	518'	290	Cement Circulated
7-7/8"	4-1/2" 10.5#	3698'	675	1327'
Total Depth 3698'				
Producing Interval 2502' - 3652' Grayburg-San Andres				

Holly Energy, Inc. W. D. McIntyre "A" No. 7 (NM-0467932)
1650' FSL & 1980' FWL, Unit Letter K, Field: Loco Hills, Morrow So. (Gas)

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
17-1/2"	13-5/8" 48#	501'	200	200'
12-1/4"	8-5/8" 32#	3494'	1335	Surface
7-7/8"	5-1/2" 17#	11,371'	795	6780'
Total Depth 11,400' PBD 11,287'				
Producing Interval 11,101' - 11,129' Morrow				

SECTION 19, TOWNSHIP 17-S, RANGE 30-E

General American Burch "A" No. 25 (LC-028793-A)

2615' FSL & 1295' FEL, Unit Letter I, Field: Grayburg Jackson

Hole Size	Casing Size	Setting Depth	Sacks Cement	Estimated Top of Cement
11"	8-5/8" 28#	506'	75	270'
8-1/4"	7" 20#	2976'	100	2206'
6-1/4"	4-1/2" 9.5# Liner	2950'-3540	100	2950'

Total Depth 3540'

Producing Interval (Grayburg) 2536'-2905' (San Andres) 2980'-3540'

General American Burch "A" No. 22 (LC-028793-A)

1345' FNL & 1295' FEL, Unit Letter A, Field: Grayburg Jackson

Hole Size	Casing Size	Setting Depth	Sacks Cement	Estimated Top of Cement
10-3/4"	8-5/8" 24#	493'	50	315'
8-3/4"	7" 20#	2676'	100	2143'
6-1/4"	4-1/2" 9.5# Liner	2640'-3690'	175	2640'

Total Depth 3690'

Producing Interval (Grayburg) 2538-2890 (San Andres) 2950-3690

General American Burch "A" No. 10 (LC-028793-A)

990' FNL & 330' FEL, Unit Letter A, Field: Grayburg Jackson

Hole Size	Casing Size	Setting Depth	Sacks Cement	Estimated Top of Cement
10-3/4"	8-5/8" 32#	487'	50	173'
8-1/4"	7" 20#	2899'	100	2364'
6-1/4"	4-1/2" 9.5# Liner	2868'-3678'	250	2868'

Total Depth 3672'

Producing Interval Grayburg-San Andres 2488'-3613'

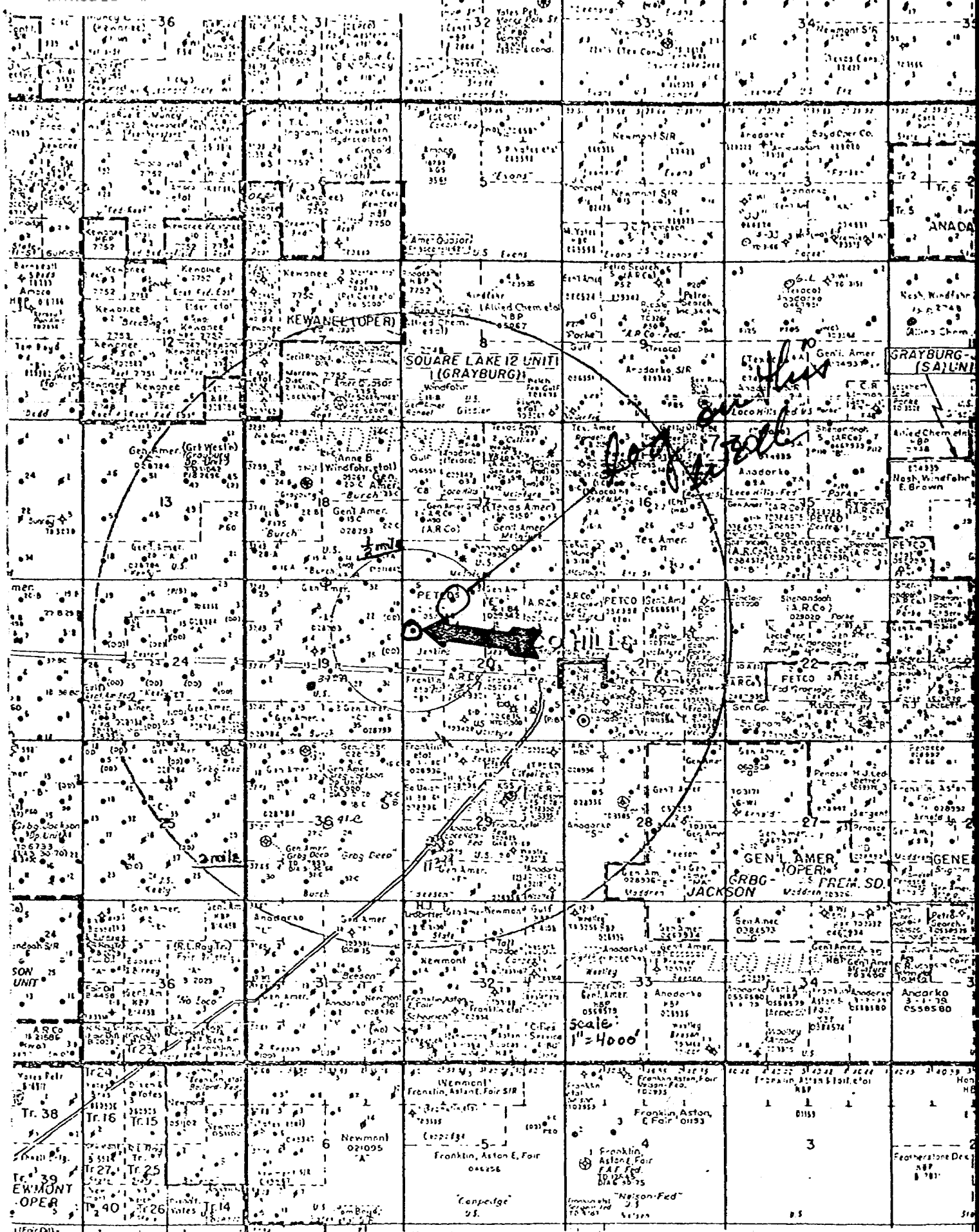
General American Burch "A" No. 6 (LC-028793-A)

990' FNL & 660' FEL, Unit Letter H, Field: Grayburg Jackson

Hole Size	Casing Size	Setting Depth	Sacks Cement	Estimated Top of Cement
11-3/4"	10" 40#	460'	70	190'
8-1/4"	6-5/8" 24#	2900'	40	2600'
6-1/4"	4-1/2" 9.5# Liner	2693'-3702'	160	2693'

Total Depth 3702'

Producing Interval Grayburg-San Andres 2628'-3498'



SECTION 19, TOWNSHIP 17-S, RANGE 30-E

General American Burch "A" No. 7 (LC-028793-A)

660' FNL & 1980' FEL, Unit Letter B, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
10-3/4"	8-5/8" 32#	475'	50	140'
8-1/4"	7" 24#	2715'	100	2183'
Total Depth 3645' PBD 2620'				
Producing Interval Grayburg 2538' - 2620'				

General American Burch "A" No. 11 (LC-028793-A)

2310' FSL & 330' FEL, Unit Letter I, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
10-3/4"	8-5/8" 32#	480'	50	280'
8-1/4"	7" 24#	2908'	100	2370'
Total Depth 2917'				
Producing Interval Grayburg 2532' - 2917'				

General American Burch "A" No. 31 (LC-028793-A)

1650' FSL & 760' FEL, Unit Letter I, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
12-1/4"	8-5/8" 20#	495'	100	250'
7-7/8"	4-1/2" 10.5#	3410'	600	1303'
PBD 3404'				
Producing Interval Grayburg-San Andres 2543' - 3336'				

General American Burch "A" No. 32 (LC-028793-A)

165' FNL & 1155' FEL, Unit Letter A, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
12-1/4"	8-5/8" 24#	496'	100	250'
7-7/8"	5-1/2" 14#	3625'	625	740'
PBD 3619'				
Producing Interval Seven Rivers-Grayburg-San Andres 1613' - 3582'				

SECTION 17, TOWNSHIP 17-S, RANGE 30-E

Kennedy Oil Company McIntyre No. 4 (NM-074936)

660' FSL & 860' FWL, Unit Letter M, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
11"	8-5/8" 24#	514'	225	Cement Circulated
7-7/8"	5-1/2" 15.5#	4276'	500	1970'
Total Depth 4277' PBD 4247'				
Producing Interval Queen, Grayburg & San Andres (2016' - 4247')				

General American Burch "A" No. 17 (LC-028793-A)

660' FSL & 660' FEL, Unit Letter P, Field: Grayburg Jackson

<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Estimated Top of Cement</u>
Unknown	13-3/8" 48#	351'	325	Unknown
Unknown	9-5/8" 36#	2726'	1450	Unknown
8-1/4"	7" 23#	4209'	300	3160' ✓
Total Depth 4220' PBD 3807'				
Producing Interval Grayburg-Paddock, Grayburg & San Andres <u>2471' - 3573'</u>				

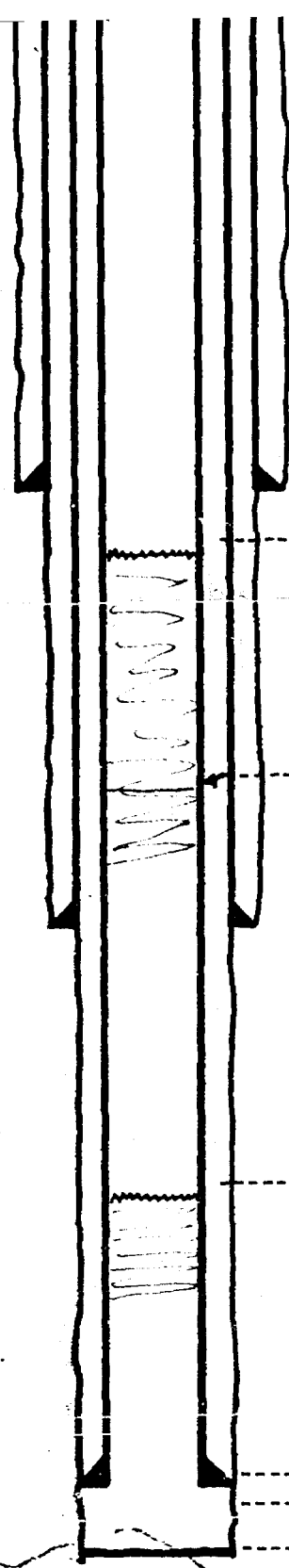
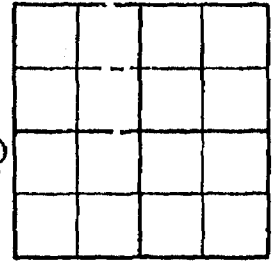
60' Cmt Plug from 60' - 0'

Company General American Oil Company

Well No. 5 Lease Burch "A" (LC-028793-A)

1980' FNL & 1980' FEL, Unit Letter G
Section 19, Township 17-S, Range 30-E

Plugged & Abandoned 2-16-76



-----10-3/4" Set @ 457' Cement to surface

-----Cement plug set from 960' - 460'

-----6-5/8" Csg. stub @ 741'

-----75 sx cement plug from 2795' - 2720'

-----6-5/8" 24# Csg Set @ 2858' Amount Cement Unknown

-----Open Hole completion - Grayburg and San Andres

-----TD 3154'

Cementing

Special Tools

Acidizing

Chemical Services

TO SERVICE CENTERS

JUST MINUTES AWAY FROM YOUR WELL

Formation Testing

Fracturing



Dump Bailer

Casing Equipment

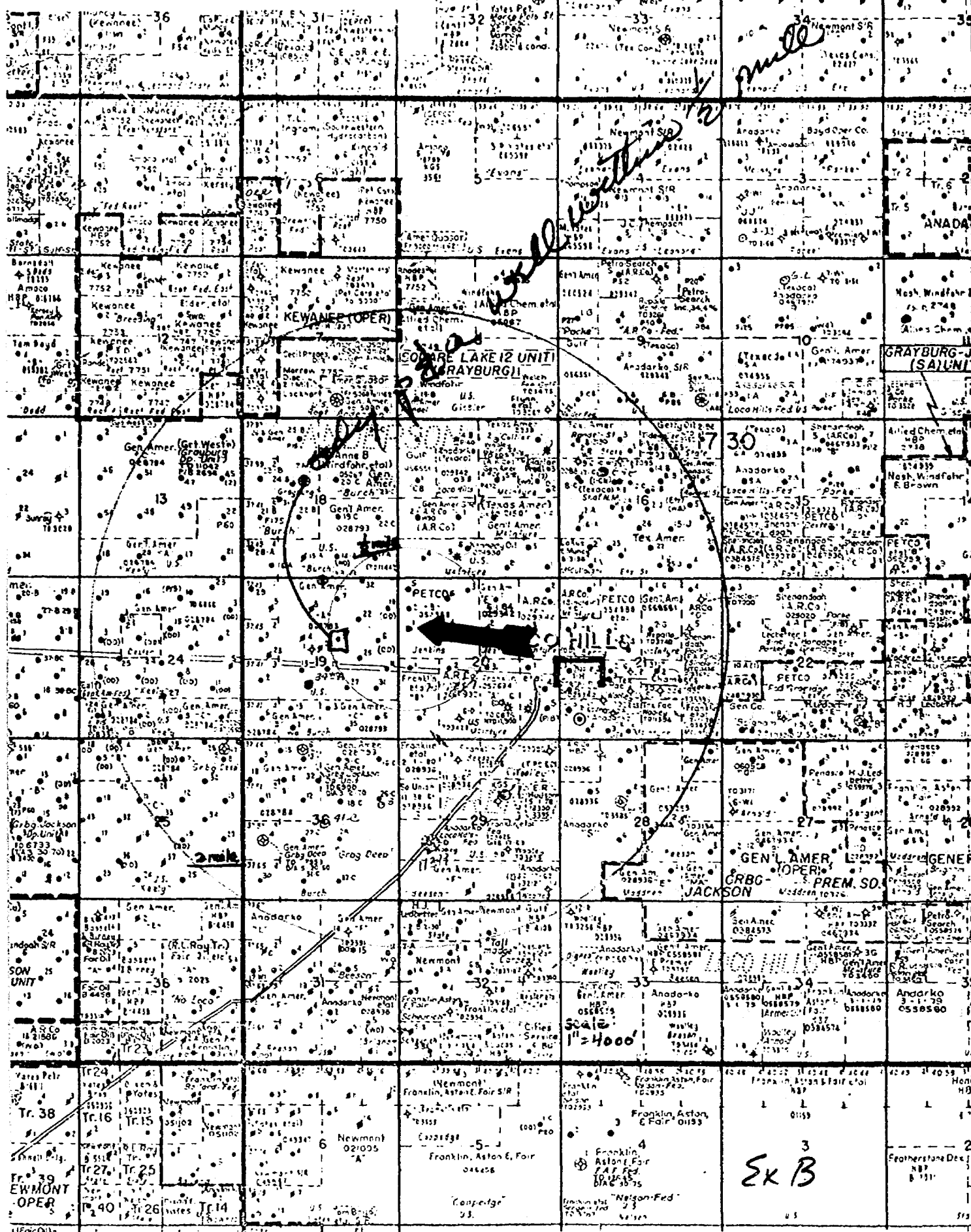


EXHIBIT "C"

Section 7

# Unknown	Root #4 Unit L, 1980' FSL and 660' FWL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
NM-7752	Anderson Federal #1 Unit O, 660' FSL and 1980' FEL, Township 17-S, Range 30-E, Morrow formation, Eddy County, New Mexico.
NM-7752	Randel #1 Unit P, 330' FSL and 330' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
NM-7752	Price #1 Unit unknown, 1980' FSL and 1980' FEL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.

Section 8

NM-2748	Gissler "B" #13 Unit C, 660' FSL and 660' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
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Section 9

LC-056551-A	Holder Federal #3 Unit M, 660' FSL and 660' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-029342-B	Loco Hills "B" Federal #7 Unit N, 660' FSL and 1980' FWL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
LC-056551-A	Federal Gulf #1 Unit unknown, 330' FSL and 330' FEL, Township 17-S, Range 30-E, San Andres formation, Eddy County, New Mexico.

Exc

Section 12

NM-7747 Square Lk. 12 Unit, Tract 1-A #6
Unit O, 660' FSL and 1980' FWL, Township 17-S, Range 30- E,
Grayburg formation, Eddy County, New Mexico.

Section 13

LC-028784-C Keely "C" #52
Unit A, 660' FNL and 660' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028784-C Keely "C" #51
Unit F, 1980' FNL and 1980' FWL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #47
Unit G, 1980' FNL and 1980' FEL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #45
Unit H, 1980' FNL and 735' FEL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-028784-C Keely "A" #22
Unit I, 1980' FSL and 660' FEL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #49
Unit J, 1980' FSL and 1980' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028784-C Keely "C" #48
Unit K, 1980' FSL and 1980' FWL, Township 17-S, Range 30-E,
Queen and San Andres formations, Eddy County, New Mexico.

LC-028784-C Keely "C" #50
Unit L, 1980' FSL and 660' FWL, Township 17-S, Range 30-E,
Queen and Grayburg formations, Eddy County, New Mexico.

LC-028784-A Keely "A" #18
Unit M, 660' FSL and 660' FWL, Township 17-S, Range 30-E,
Queen and San Andres formations, Eddy County, New Mexico.

LC-028784-A Keely "A" #20
Unit N, 660' FSL and 1980' FWL, Township 17-S, Range 30-E,
Queen and San Andres formations, Eddy County, New Mexico.

Section 13 cont'd.

LC-028784-A Keely "A" #17
Unit O, 660' FSL and 1980' FEL, Township 17-S, Range 30-E,
Queen and San Andres formations, Eddy County, New Mexico.

LC-028784-A Keely "A" #21
Unit P, 660' FSL and 660' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

Section 16

B-1565 State "BE" #1
Unit B, 990' FNL and 2310' FEL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

B-2130 Randel State #1
Unit C, 990' FNL and 2310' FWL, Township 17-S, Range 30-E,
Queen formation, Eddy County, New Mexico.

B-2130 Randel State #3
Unit C, 660' FNL and 1980' FWL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

B-2130 Randel State #2
Unit D, 990' FNL and 990' FWL, Township 17-S, Range 30-E,
Queen formation, Eddy County, New Mexico.

B-2130 Randel State #4
Unit D, 660' FNL and 660' FWL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

B-8095 Etz "C" State #8
Unit E, 1980' FNL and 660' FWL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico. WIW

Unknown Etz "C" State #9
Unit E, 1370' FNL and 660' FWL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico. WIW

B-8095 Etz "C" State #27
Unit E, 1850' FNL and 1315' FWL, Township 17-S, Range 30-E,
Queen formation, Eddy County, New Mexico.

B-8095 Etz-State #7
Unit F, 2970' FSL and 1650' FWL, Township 17-S, Range 30-E,
Queen formation, Eddy County, New Mexico.

B-8095 Etz "C" State #10
Unit F, 1370' FNL and 1980' FWL, Township 17-S, Range 30-E,
Seven Rivers formation, Eddy County, New Mexico.

Section 16 cont'd.

B-8095	Etz "C" State #12 Unit F, 1980' FNL and 2310' FWL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico. WIW
B-8095	Etz "C" State #19 Unit F, 1980' FNL and 1980' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
B-8838	Etz "B" State #6 Unit G, 2490' FNL and 2310' FEL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico. WIW
B-8838	Etz "B" State #14 Unit G, 1650' FNL and 2310' FEL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico.
B-8838	Etz "B" State #18 Unit G, 1980' FNL and 1980' FEL, Township 17-S, Range 30-E, Queen, Grayburg and San Andres formations, Eddy County, New Mexico.
# Unknown	State #1 Unit H, 2140' FNL and 990' FEL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico.
B-2130	Randel State #5 Unit H, 1980' FNL and 660' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
B-936	Etz State #5 Unit I, 3630' FNL and 330' FEL, Township 17-S, Range 30-E, San Andres formation, Eddy County, New Mexico.
B-936	Etz State #5 Unit I, 2310' FSL and 990' FEL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
B-936	Etz State #20 Unit I, 1980' FSL and 660' FEL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico.
B-1483	Etz State #2-J Unit J, 2970' FNL and 2310' FEL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico. WIW
B-1483	Etz "J" State #15 Unit J, 1650' FSL and 1650' FEL, Township 17-S, Range 30-E, San Andres formation, Eddy County, New Mexico.

Section 16 cont'd.

B-936	Etz State #1 Unit K, 1650' FSL and 1980' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
B-936	Etz State #11 Unit K, 2310' FSL and 1770' FWL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico.
B-936	Etz State #24 Unit K, 2310' FSL and 2310' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
B-936	Etz State #26 Unit K, 1625' FSL and 2630' FWL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico.
B-2209	Etz "A" State #2 Unit L, 1980' FSL and 660' FWL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico. WIW-SI
B-2209	Etz "A" State #16 Unit L, 1650' FSL and 660' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
B-3138	McCullough State #1 Unit M, 330' FSL and 990' FWL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
B-3138	McCullough State #2 Unit M, 990' FSL and 990' FWL, Township 17-s, Range 30-E, Queen formation, Eddy County, New Mexico.
B-936	Etz State #1 Unit N, 660' FSL and 1980' FWL, Township 17-S, Range 30-E, San Andres formation, Eddy County, New Mexico.
B-936	Etz State #23 Unit N, 990' FSL and 1650' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
B-1483	Etz "J" State #1 Unit O, 330' FSL and 1980' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
B-1483	Etz "J" State #22 Unit O, 990' FSL and 2310' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.

Section 16 cont'd.

B-14837 Etz "J" State #25
Unit O, 330' FSL and 1650' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

B-936 Etz State #4
Unit P, 330' FSL and 990' FEL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico.

B-936 Etz State #21
Unit P, 990' FSL and 330' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

Section 17

NM-2933 Collier Federal #1
Unit A, 660' FNL and 660' FEL, Township 17-S, Range 30-E,
Queen, Grayburg and San Andres formations, Eddy County,
New Mexico.

LC-064123 Gulf Federal #1
Unit A, 990' FNL and 330' FEL, Township 17-S, Range 30-E,
Queen formation, Eddy County, New Mexico.

NM-2933 Collier Federal #2
Unit B, 660' FNL and 1980' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

NM-074936 McIntyre #1
Unit D, 330' FSL and 330' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-056551-A Holder CB Federal #2
Unit D, 660' FNL and 660' FWL, Township 17-S, Range 30-E,
Queen, Grayburg and San Andres formations, Eddy County,
New Mexico.

LC-056551-A Holder CB Federal #1
Unit E, 1980' FNL and 660' FWL, Township 17-S, Range 30-E,
Queen, Grayburg and San Andres formations, Eddy County,
New Mexico.

LC-029372-B Loco Hills "B" Federal #3
Unit F, 1980' FNL and 1980' FWL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

NM-074936 Arco #3
Unit G, 1980' FNL and 1980' FEL, Township 17-s, Range 30-E,
Queen formation, Eddy County, New Mexico.

Section 17 cont'd.

NM-074936	McIntyre "D" #1 Unit H, 1980' FNL and 660' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
NM30-015-21177	McIntyre "D" #2 Unit H, 2310' FNL and 330' FEL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico.
LC-060527	McIntyre "F" #1 Unit I, 1980' FSL and 660' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-060527	McIntyre "F" #2 Unit J, 1980' FSL and 1980' FEL, Township 17-S, Range 30-E, Seven Rivers and Queen formations, Eddy County, New Mexico.
NM-074936	Arco #1 Unit K, 1980' FSL and 1980' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
NM-074936	Arco #2 Unit L, 1980' FSL and 660' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
NM30-015-21178	McIntyre "D" #3 Unit N, 1650' FNL and 330' FEL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico.
NM-074936	McIntyre #6 Unit N, 990' FSL and 2310' FWL, Township 17-S, Range 30-E, San Andres formation, Eddy County, New Mexico.
NM-074936	McIntyre #2 Unit O, 330' FSL and 1650' FEL, Township 17-S, Range 30-E, Queen and Grayburg formations, Eddy County, New Mexico.
NM-074936	McIntyre #3 Unit P, 660' FSL and 1980' FWL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
NM-074936	McIntyre #5 Unit P, 990' FSL and 990' Fel, Township 17-S, Range 30-E, Grayburg and San Andres formation, Eddy County, New Mexico.

Section 18

LC-028793-C	Burch "C" #24 Unit A, 660' FNL and 660' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028793-C	Burch "C" #21 Unit B, 660' FNL and 1980' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #25 Unit C, 660' FNL and 1893' FWL, Township 17-S, Range 30-E, San Andres formation, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #26 Unit D, 660' FNL and 617' FWL, Township 17-s, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #23 Unit E, 1980' FNL and 617' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
14-08-001-1602	Grayburg Deep Unit #1 Unit F, 1980' FNL and 1894' FWL, Township 17-S, Range 30-E, Morrow formation, Eddy County, New Mexico,
LC-028784-93-B	Burch "B" #24 Unit F, 2120' FNL and 1676' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
30-015-21658	Burch "B" #31 Unit F, 2615' FSL and 3985' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028793-C	Burch "C" #20 Unit G, 1980' FNL and 1980' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028793-C	Burch "C" #23 Unit H, 1980' FNL and 660' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028793-C	Burch "C" # 22 Unit I, 1980' FSL and 660' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.

Section 18 cont'd.

LC-028793-C Burch "C" #19
Unit J, 1980' FSL and 1980' FEL, Township 17-S, Range 30-E,
Queen, Grayburg and San Andres formations, Eddy County,
New Mexico.

LC-028784-93-B Burch "B" #22
Unit K, 1980' FSL and 1894' FWL, Township 17-S, Range 30-E,
Queen, Grayburg and San Andres formations, Eddy County,
New Mexico.

LC-028784-93-B Burch "B" #21
Unit L, 1980' FSL and 617' FWL, Township 17-S, Range 30-E,
Queen and San Andres formations, Eddy County, New Mexico.

LC-028793-A Burch "A" #16
Unit M, 330' FSL and 905' FWL, Township 17-S, Range 30-E,
San Andres formations, Eddy County, New Mexico.

LC-028793-A Burch "A" #28
Unit M, 990' FSL and 330' FWL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028793-A Burch "A" #15
Unit N, 660' FSL and 1895' FWL, Township 17-S, Range 30-E,
Queen and Grayburg formations, Eddy County, New Mexico.

LC-028793-A Burch "A" #14
Unit O, 660' FSL and 1980' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

Section 19

LC-028793-A Burch "A" #33
Unit B, 25' FNL and 2615' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028793-A Burch "A" #8
Unit C, 990' FNL and 2310' FWL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028793-A Burch "A" #9
Unit D, 990' FNL and 990' FWL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico,

Section 19 cont'd.

LC-028793-A	Burch "A" #29 Unit D, 330' FNL and 330' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028793-A	Burch "A" #3 Unit E, 1980' FNL and 600' FWL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
LC-028793-A	Burch "A" #23 Unit E, 2565' FNL and 955' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028793-A	Burch "A" #4 Unit F, 1980' FNL and 1980' FWL, Township 17-S, Range 30-E, San Andres formation, Eddy County, New Mexico.
LC-028793-A	Burch "A" #12 Unit J, 2310' FSL and 2310' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028793-A	Burch "A" #27 Unit J, 1650' FSL and 1650' FEL, Township 17-S, Range 30-E, Seven Rivers formation, Eddy County, New Mexico.
LC-028793-A	Burch "A" #13 Unit K, 2310' FSL and 1650' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
30-015-22092	Burch "A" #34 Unit K, 1650' FSL and 2970' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028793-A	Burch "A" #2 Unit L, 1980' FSL and 660' FWL, Township 17-S, Range 30-E, San Andres formation, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #6 Unit M, 660' FSL and 660' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #1 Unit N, 330' FSL and 1650' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #13 Unit N, 990' FSL and 1650' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.

Section 19 cont'd.

LC-028793-C Burch "C" #35
Unit O, 330' FSL and 1650' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028793-C Burch "C" #5
Unit P, 660' FSL and 660' FEL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-028793-C Burch "C" #3
Unit P, 990' FSL and 2310' FEL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico.

Section 20

LC-029342-C McIntyre "C" #2
Unit A, 330' FNL and 330' FEL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-029342-B Dexter "B" #1
Unit B, 660' FNL and 1980' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-029342-C McIntyre "C" #3
Unit H, 1650' FNL and 990' FEL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-054280 McIntyre "A" #1
Unit I, 2430' FSL and 990' FEL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico.

LC-054280 McIntyre "A" #4
Unit I, 1650' FSL and 410' FEL, Township 17-S, Range 30-E,
Abo formation, Eddy County, New Mexico.

LC-057634 McIntyre "A" #3
Unit J, 2365' FSL and 2310' FEL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico.

LC-060999 McIntyre "B" #1
Unit L, 2310' FSL and 330' FWL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-060999 McIntyre "B" #2
Unit M, 660' FSL and 660' FWL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

Section 20 cont'd.

LC-029342-J McIntyre "J" #6
Unit N, 660' FSL and 1980' FWL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico. DRY HOLE

LC-057634 McIntyre "A" #6
Unit O, 990' FSL and 1650' FEL, Township 17-S, Range 30-E,
Morrow formation, Eddy County, New Mexico.

LC-054280 McIntyre "A" #2
Unit P, 990' FSL and 990' FEL, Township 17-S, Range 30-E,
Yates formation, Eddy County, New Mexico.

LC-054280 McIntyre "A" #5
Unit P, 990' FSL and 410' FEL, Township 17-S, Range 30-E,
San Andres and Abo formations, Eddy County, New Mexico.

Unknown McIntyre "C" #1
SE of Sec. 20, Township 17-S, Range 30-E, formation un-
known, Eddy County, New Mexico.

Section 21

NM-074936 McIntyre "D" #11
Unit A, 660' FSL and 660' FEL, Township 17-S, Range 30-E,
Yates thru Abo formations, Eddy County, New Mexico. DRY HOLE

NM-0467932 McIntyre "E" #4
Unit A, 330' FNL and 990' FEL, Township 17-S, Range 30-E,
Queen, Grayburg and San Andres formations, Eddy County,
New Mexico.

LC-060528 McIntyre "G" #1
Unit B, 330' FNL and 2310' FEL, Township 17-S, Range 30-E
Grayburg formation, Eddy County, New Mexico.

LC-029342-C McIntyre "C" #1
Unit D, 330' FNL and 990' FWL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-029342-D McIntyre "D" #5
Unit H, 1650' FNL and 990' FEL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-029342-A Federal X #6
Unit I, 2310' FSL and 2310' FWL, Township 17-S, Range 30-E,
Yates formation, Eddy County, New Mexico.

NM-074936 Sinclair Federal #2
Unit J, 2230' FSL and 2100' FEL, Township 17-S, Range 30-E,
Abo formation, Eddy County, New Mexico.

Section 21 cont'd.

NM-074936	McIntyre "D" #10 Unit J, 1650' FSL and 1980' FWL, Township 17-S, Range 30-E, Yates thru Abo formations, Eddy County, New Mexico. DRY HOLE
# Unknown	Federal X #1 NE/4 SW/4 of Sec., Township 17-S, Range 30-E, Unit K, Seven Rivers formation, Eddy County, New Mexico.
LC-029392-A	McIntyre #2-A Unit K, 3210' FSL and 1650' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-029342-A	McIntyre "A" # 4A-X Unit K, 1600' FSL and 2310' FWL, Township 17-S, Range 30-E, Queen formation, Eddy County, New Mexico. DRY HOLE
# Unknown	Woolley Federal #3 Unit K, 1980' FSL and 1650' FWL, Township 17-S, Range 30-E, Abo formation, Eddy County, New Mexico.
LC-029342	Brigham "H" #1 Unit L, 2340' FSL and 330' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-029342	Brigham "H" #2 Unit L, 1650' FSL and 330' FWL, Township 17-S, Range 30-E, Abo formation, Eddy County, New Mexico.
LC-029342-A	Woolley Federal #1 Unit M, 660' FSL and 660' FWL, Township 17-S, Range 30-E, Abo formation, Eddy County, New Mexico. SWD
LC-029342-A	Federal X #4 Unit M, 330' FSL and 990' FWL, Township 17-S, Range 30-E, Yates formation, Eddy County, New Mexico.
LC-029342-A	Federal X #7 Unit M, 990' FSL and 330' FWL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
LC-029342-A	Federal X #5 Unit N, 330' FSL and 2310' FWL, Township 17-S, Range 30-E, Seven Rivers formation, Eddy County, New Mexico.
LC-029342-A	Woolley #2 Unit N, 1750' FWL and 890' FSL, Township 17-S, Range 30-E, Morrow formation, Eddy County, New Mexico.

Section 24

LC-028784-A	Keely "A" #3 Unit A, 990' FNL and 330' FEL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #23 Unit A, 330' FNL and 990' FEL, Township 17-S, Range 29-E, Queen formation, Eddy County, New Mexico.
LC-028784-A	Keely "A" #10 Unit B, 660' FNL and 1980' FEL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #16 Unit C, 660' FNL and 1980' FWL, Township 17-S, Range 29-E, San Andres formation, Eddy County, New Mexico.
LC-028784-A	Keely "A" #19 Unit D, 660' FNL and 660' FWL, Township 17-S, Range 29-E, Grayburg formation, Eddy County, New Mexico.
LC-028784-A	Keely "A" #9 Unit E, 1980' FNL and 660' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-054406	Dexter #1 Unit F, 1980' FNL and 1980' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-054406	Dexter #2 Unit F, 1345' FNL and 1345' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #4 Unit G, 2310' FNL and 1650' FEL, Township 17-S, Range 29-E, formation unknown, Eddy County, New Mexico.
LC-028784-A	Keely "A" #15 Unit G, 1650' FNL and 2310' FEL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #2 Unit H, 1980' FNL and 660' FEL, Township 17-S, Range 29-E, formation unknown, Eddy County, New Mexico.
LC-028784-A	Keely "A" #5 Unit I, 2310' FSL and 330' FEL, Township 17-S, Range 29-E, Queen and San Andres formations, Eddy County, New Mexico.

Section 24 cont'd.

LC-028784-A	Keely "A" #11 Unit I, 1650' FSL and 990' FEL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #8 Unit J, 1980' FSL and 1980' FEL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #27 Unit J, 1345' FSL and 2615' FEL, Township 17-S, Range 29-E, Seven Rivers, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #7 Unit K, 1980' FSL and 1980' FWL, Township 17-S, Range 29-E, San Andres formation, Eddy County, New Mexico.
LC-028784-A	Keely "A" #24 Unit K, 2535' FSL and 2615' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #6 Unit L, 1980' FSL and 660' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #25 Unit L, 2615' FSL and 1295' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-A	Keely "A" #26 Unit L, 2615' FSL and 25' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-B	Keely "B" #3 Unit M, 660' FSL and 660' FWL, Township 17-S, Range 29-E, formation unknown, Eddy County, New Mexico.
LC-028784-93-B	Keely "B" #24 Unit M, 660' FSL and 560' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-93-B	Keely "B" #2 Unit N, 660' FSL and 1980' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-93-B	Keely "B" #26 Unit N, 1295' FSL and 1345' FWL, Township 17-S, Range 29-E, Grayburg and San Andres formations, Eddy County, New Mexico.

Section 24 cont'd.

LC-028784-C Keely "C" #5
Unit O, 660' FSL and 1980' FEL, Township 17-S, Range 29-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028784-C Keely "C" #4
Unit P, 660' FSL and 660' FEL, Township 17-S, Range 29-E,
Grayburg formation, Eddy County, New Mexico.

Section 25

LC-028784-C Grayburg Deep Unit #5
Unit A, 330' FNL and 660' FEL, Township 17-S, Range 29-E,
Abo formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #8
Unit A, 660' FNL and 660' FEL, Township 17-S, Range 29-E,
Grayburg formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #40
Unit A, 25' FNL and 25' FEL, Township 17-S, Range 29-E,
San Andres formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #7
Unit B, 660' FNL and 1980' FEL, Township 17-S, Range 29-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028784-C Keely "C" #39
Unit B, 25' FNL and 2615' FEL, Township 17-S, Range 29-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028784-93-B Keely "B" #6
Unit C, 660' FNL and 1980' FWL, Township 17-S, Range 29-E,
San Andres formation, Eddy County, New Mexico. WIW

LC-028784-93-B Keely "B" #14
Unit C, 25' FNL and 1345' FWL, Township 17-S, Range 29-E,
San Andres formation, Eddy County, New Mexico.

LC-028784-93-B Keely "B" #20
Unit C, 1295' FNL and 2615' FWL, Township 17-S, Range 29-E,
San Andres formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #11
Unit F, 1980' FNL and 1980' FWL, Township 17-S, Range 29-E,
formation unknown, Eddy County, New Mexico.

Section 25 cont'd.

LC-028784-C Keely "C" #12
Unit G, 1980' FNL and 1980' FEL, Township 17-S, Range 29-E,
San Andres formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #13
Unit H, 1980' FNL and 660' FEL, Township 17-S, Range 29-E,
San Andres formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #30
Unit H, 1345' FNL and 1295' FEL, Township 17-S, Range 29-E,
San Andres formation, Eddy County, New Mexico.

LC-028784-C Keely "C" #20
Unit I, 1980' FSL and 660' FEL, Township 17-S, Range 29-E,
Grayburg and San Andres formations, Eddy County, New Mexico.
WIW

LC-028784-C Keely "C" #34
Unit I, 2615' FSL and 1295' FEL, Township 17-S, Range 29-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028784-C Keely "C" #33
Unit J, 2615' FSL and 2615' FEL, Township 17-S, Range 29-E,
San Andres formation, Eddy County, New Mexico.

Section 28

LC-028936-C Federal S #1
Unit C, 660' FNL and 1980' FWL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-028936-C Federal S #3
Unit C, 330' FNL and 2310' FWL, Township 17-S, Range 30-E,
Seven Rivers formation, Eddy County, New Mexico.

LC-028936-C Federal S #4
Unit F, 1650' FNL and 2310' FWL, Township 17-S, Range 30-E,
Seven Rivers formation, Eddy County, New Mexico.

30-015-21692 Grayburg-Jackson Premier Sand Unit #3
Unit J, 2310' FSL and 2310' FEL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

LC-028936-C Federal S #6
Unit K, 1980' FSL and 1980' FWL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

Section 29

LC-028936-D	U.S.A. Woolley "C" #1 Unit A, 330' FNL and 330' FEL, Township 17-S, Range 30-E, Abo formation, Eddy County, New Mexico.
NM-18300	Federal EX #1 Unit G, 1980' FNL and 1980' FEL, Township 17-S, Range 30-E, Seven Rivers and San Andres formations, Eddy County, New Mexico. DRY HOLE
NM-18300	Hudson Federal #1 Unit G, 1990' FNL and 1970' FEL, Township 17-S, Range 30-E, Seven Rivers and Queen formations, Eddy County, New Mexico.
LC-028936-D	Arnold #9-B Unit I, 1650' FSL and 1650' FEL, Township 17-S, Range 30-E, Yates, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028936-D	Loco Hill Fed. Comm. #1 Unit L, 1980' FSL and 990' FWL, Township 17-S, Range 30-E, Morrow formation, Eddy County, New Mexico.
LC-028936-D	Woolley #7-D Unit L, 1650' FSL and 990' FWL, Township 17-S, Range 30-E, Queen Formation, Eddy County, New Mexico,
LC-060529	Beeson "F" #9 Unit N, 330' FSL and 2310' FWL, Township 17-S, Range 30-E, Yates, Queen and Grayburg formations, Eddy County, New Mexico.
LC-060529	Beeson "F" #8 Unit O, 1650' FEL and 330' FSL, Township 17-S, Range 30-E, Seven Rivers, Queen and Grayburg formations, Eddy County, New Mexico.
LC-028936-J	Federal "T" #1 Unit P, 330' FSL and 330' FEL, Township 17-S, Range 30-E, San Andres formations, Eddy County, New Mexico.

Section 30

LC_028793-C	Burch "C" #16 Unit A, 660' FNL and 660' FEL, Township 17-S, Range 30-E, San Andres formation, Eddy County, New Mexico.
LC-028793-C	Burch "C" #9 Unit B, 660' FNL and 1980' FEL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #10 Unit C, 660' FNL and 1980' FWL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #15 Unit C, 330' FNL and 1260' FWL, Township 17-S, Range 30-E, formation unknown, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #32 Unit C, 1295' FNL and 2665' FEL, Township 17-S, Range 30-E, Seven Rivers, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028784-93-B	Grayburg Deep Unit #6 Unit C, 330' FNL and 1980' FWL, Township 17-S, Range 30-E, no producing formation, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #9 Unit D, 660' FNL and 660' FWL, Township 17-S, Range 30-E, formation unknown, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #11 Unit E, 1980' FNL and 660' FWL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #12 Unit F, 1980' FNL and 1980' FWL, Township 17-S, Range 30-E, Grayburg formation, Eddy County, New Mexico.
LC-028784-93-B	Burch "B" #16 Unit F, 1345' FNL and 1260' FWL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.
LC-028793-C	Burch "C" #18 Unit G, 1980' FNL and 1980' FEL, Township 17-S, Range 30-E, Grayburg and San Andres formations, Eddy County, New Mexico.

Section 30 cont'd.

LC-028793-C Burch "C" #26
Unit H, 1980' FNL and 660' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028793-C Burch "C" #28
Unit J, 1980' FSL and 1980' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028793-C Burch "C" #41
Unit J, 2615' FSL and 2615' FEL, Township 17-S, Range 30-E,
Seven Rivers, Grayburg and San Andres formations, Eddy County,
New Mexico.

LC-028793-C Burch "C" #27
Unit K, 1980' FSL and 1980' FWL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028793-C Grayburg Deep Unit #4
Unit L, 1946' FSL and 662' FWL, Township 17-S, Range 30-E,
Abo formation, Eddy County, New Mexico.

LC-028793-C Burch "C" #30
Unit M, 660' FSL and 622' FWL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028793-C Burch "C" #31
Unit N, 660' FSL and 1980' FWL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-028793-C Burch "C" #32
Unit O, 660' FSL and 1980' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

Section 31

LC-060529 Beeson "F" #7
Unit A, 990' FNL and 330' FEL, Township 17-S, Range 30-E,
Queen and Grayburg formations, Eddy County, New Mexico.

LC-060529 Beeson "F" #15
Unit G, 1660' FNL and 480' FEL, Township 17-S, Range 30-E,
Grayburg and San Andres formations, Eddy County, New Mexico.

LC-060529 Beeson "F" #11
Unit H, 1650' FNL and 330' FEL, Township 17-S, Range 30-E,
Grayburg formation, Eddy County, New Mexico.

Section 31 cont'd.

LC-060529 Beeson "F" #10
Unit unknown, 990' FNL and 1650' FEL, Township 17-S,
Range 30-E, Grayburg formation, Eddy County, New Mexico.

Section 32

B-4108 Carper-Miles-Talmadge State #3-A
Unit B, 330' FNL and 330' FEL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico.

B-4108 State B-4108 #1
Unit C, 660' FNL and 1980' FWL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico.

unknown State #1-D
Unit D, 990' FNL and 990' FEL, Township 17-S, Range 30-E,
Queen formation, Eddy County, New Mexico.

Unknown State #1-DD
Unit D, 990' FNL and 330' FWL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico.

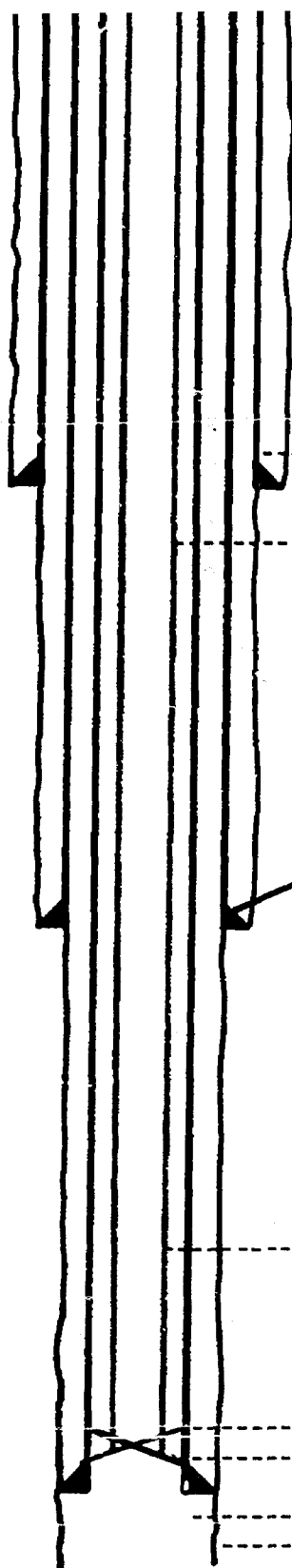
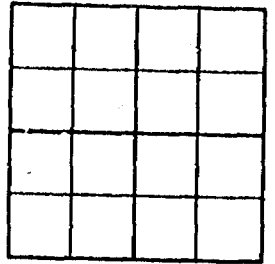
B-4108 Scheurich #7-B
1650' FNL and 4950' FEL, Township 17-S, Range 30-E, Unit E,
San Andres formation, Eddy County, New Mexico.

Unknown Scheurich #8-B
Unit F, 1650' FNL and 1650' FWL, Township 17-S, Range 30-E,
San Andres formation, Eddy County, New Mexico. WIW

PLAN - O - G R A M

EXHIBIT "E"

Company Petroleum Corporation of Texas
(LC-054988-B)
Well No. 1 Lease Jenkins "B" Federal
Unit Letter E, 1650' FNL & 330' FWL
Section 20, Township 17-S, Range 30-E



-----12" Hole

-----10-3/4" Csg. 40# Set @ 479' w/50 sx cmt. Estimated top 156'

-----Casing tbg. annulus will be filled with an inert fluid.

*This string
does not
exist*

NOTE: The well will be equipped with a pressure gauge attached to the annulus to detect leakage, and a pop-off valve that will limit injection pressure to no more than .2 lbs. PSI per foot of depth.

*See form
C-108
(cont top @ 257')*

2

-----2-3/8" Plastic lined tubing will be set @ 2948'.

-----2 x 7 Baker ADI Tension Packer will be set @ 2950'

-----7" Csg. 24# Set @ 3000' w/100 sx cement. Estimated top 2663'.

-----Open hole completion 3000'-3258' (San Andres).

-----TD 3258' - 9-5/8" Cable tool hole.

Cementing

Special Tools

Acidizing

Chemical Services

Formation Testing

Fracturing

Dump Bailer

Casing Equipment



EX E

PETROLEUM CORPORATION OF TEXAS
EXHIBIT "F"

JENKINS "B" FEDERAL (LC-054988-B)
WELL NO. 1
Unit Letter E, 1650' FNL & 330' FWL
Section 20, Township 17-S, Range 30-E
Eddie County, New Mexico

Source of injection fluid into the above well will be from the following wells on the same lease:

<u>WELL NO.</u>	<u>UNIT LETTER</u>	<u>LOCATION</u>	<u>FORMATION</u>
2	D	990' FNL & 330' FWL	Grayburg - San Andres
3	C	330' FNL & 2310' FWL	Grayburg - San Andres
4	F	1650' FNL & 1650' FWL	Grayburg - San Andres
5	D	330' FNL & 330' FWL	Grayburg - San Andres
6	C	660' FNL & 1650' FWL	Grayburg - San Andres

*these wells
make about 125 BWPD*

Ex F



Cochran Chemical Company, Inc.

DE-EMULSIFIERS • WATERFLOOD CHEMICALS • PARAFFIN SOLVENTS • SCALE REMOVER & INHIBITORS

P. O. DRAWER 1341

PHONE 257-2825

CCC, INC.

P. O. Box 5421

MIDLAND, TEXAS 79701

682-7860

WEWOKA, OKLAHOMA

74884

PETROLEUM CORPORATION OF TEXAS

EXHIBIT "G"

May 24, 1977

PETROLEUM CORPORATION OF TEXAS
Jenkins "B" Lease
Loco Hills, New Mexico

INTRODUCTION:

A sample of water has been analyzed in our laboratory and we are pleased to submit a water analysis which includes total dissolved solids, pH, and the concentrations of Chlorides and Sulfates.

WATER ANALYSIS:

Total Solids-----	20,600 Mg/L
Total Chlorides-----	9,620 "
pH-----	7.15-----
Sulfate-----	1,010 Mg/L

Dr. William B. Hughes
Chemist

Ex G

CASE 6175: Application of Petroleum Corporation of Texas for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation through the open-hole interval from 3000 feet to 3258 feet in its Jenkins "B" Fed. Well No. 1 located in Unit A of Section 20, Township 17 South, Range 30 East, Grayburg-Jackson Pool, Eddy County, New Mexico.

CASE 6176: Application of Read & Stevens, Inc., for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Scharb Com Well No. 1 located in the center of Unit J of Section 7, Township 19 South, Range 35 East, Scharb-Bone Spring Pool, Lea County, New Mexico.

CASE 6156: (Readvertised)

Application of Southland Royalty Company for an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its East Well No. 5A to be located 1120 feet from the North line and 1790 feet from the West line of Section 24, Township 31 North, Range 12 West, Blanco-Mesaverde Pool, San Juan County, New Mexico.

CASE 6177: Application of Texas International Petroleum Corporation for directional drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the directional drilling of a proposed gas well, the surface location of which would be 1650 feet from the South line and 1800 feet from the East line of Section 29, Township 20 South, Range 30 East, Golden Lane Field, Eddy County, New Mexico, in such a manner as to bottom said well in the Morrow formation within 100 feet of a point 1980 feet from the North line and 1985 feet from the West line of said Section 29, the N/2 of the Section to be dedicated to the well.

CASE 6178: In the matter of the application of the Oil Conservation Commission of New Mexico upon its own motion for an order creating and extending certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico, and the assignment of a discovery allowable in Eddy County, New Mexico.

(a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Alacran Hills-Atoka Gas Pool. The discovery well is the Read and Stevens, Inc. WR State Com Well No. 1 located in Unit X of Section 6, Township 21 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 6: Lots 9, 10, 15, 16 & SE/4

(b) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the West Malaga-Atoka Gas Pool. The discovery well is the HNG Oil Company Valdez 5 Com Well No. 1 located in H of Section 5, Township 24 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 28 EAST, NMPM
Section 5: E/2

(c) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Palmillo-Wolfcamp Pool, and assign 43,300 barrels of discovery allowable to the discovery well, Southland Royalty Company Palmillo State Well No. 1 located in Unit G of Section 32, Township 18 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 32: NE/4

(d) CREATE a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production and designated as the Railroad Mountain-San Andres Pool. The discovery well is the Harlow Corporation Graves Well No. 1 located in Unit F of Section 11, Township 8 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM
Section 11: NW/4

(e) EXTEND the Angell Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM
Section 31: All

(f) EXTEND the Avalon-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 31: S/2
Section 32: S/2

DRAFT

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. 6175

Order No. R- 5671

APPLICATION OF PETROLEUM CORPORATION OF TEXAS
FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 8, 1978
at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this day of March, 1978, 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, Petroleum Corporation of Texas,
is the owner and operator of the Jenkins "B" Fed. Well No. 1,
located in Unit E of Section 20, Township 17 South,
Range 30 East, NMPM, Grayburg-Jackson Pool,
Eddy County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the San Andres
formation, with injection into the open-hole interval
from approximately 3000 feet to 3258 feet.

(4) That the injection should be accomplished through
2 3/8-inch plastic lined tubing installed in a packer
set at approximately 2950 feet; that the casing-tubing annulus
should be filled with an inert fluid; and that a pressure gauge
or approved leak detection device should be attached to the

CASE NO. _____

annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a pop-off valve or ^{other} acceptable ^{device} ~~substitute~~ which will limit the wellhead pressure on the injection well to no more than 600 psi.

(6) That the operator should notify the supervisor of the Artesia district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(7) 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.

(8) 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, Petroleum Corporation of Texas, is hereby authorized to utilize its Jenkins "B" Fed. Well No. 1, located in Unit E of Section 20, Township 17 South, Range 30 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico, to dispose of produced salt water into the San Andres formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 2950 feet, with injection into the open-hole interval from approximately 3000 feet to 3258 feet;

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 shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

CASE NO. _____

(2) That the injection well or system shall be equipped with a pop-off valve or ^{other} acceptable ^{device} ~~substitute~~ which will limit the wellhead pressure on the injection well to no more than **600** psi.

(3) That the operator shall notify the supervisor of the Artesia district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall immediately notify the supervisor of the Commission's Artesia district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

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

(6) 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.