

CASE NO.

7610

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

April 8, 1983

Stevens Operating Corporation
118 West First Street
P. O. Box 2203
Roswell, New Mexico 88201

Attention: Frank Loop, Engineering Manager

Re: O'Brien "J" #9-A
Salt Water Disposal Well
Sec. 31, T-8-S, R-29-E,
Chaves County, New Mexico

Dear Mr. Loop:

Mr. Quintana from my staff has reviewed your request for an increase in the maximum surface injection pressure for the above referenced well. A review of your step-rate test shows a definite surface formation fracture pressure of 1020 psi. Using a 50 psi safety margin, you are therefore allowed to increase the surface injection pressure to a maximum of 970 psi. Should you have any questions concerning this matter forward them to Mr. Quintana at 827-5807.

Sincerely,

JOE D. RAMEY
Division Director

JDR/jc

cc: Gilbert Quintana
Aztec District Office
Case File 7610 / order R-7014 ✓

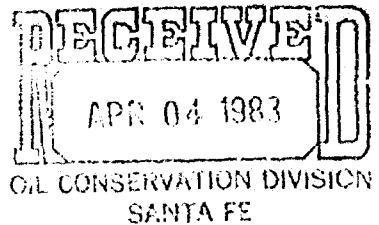
STEVENS OPERATING CORPORATION

118 WEST FIRST STREET

P. O. BOX 2205

ROSWELL, NEW MEXICO 88201

505 /622-7173



March 30, 1983

Mr. Richard L. Stamets
Technical Support Chief
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: O'Brien "J" 9 - A
Salt Water Disposal Well
Sec. 31, T-8-S, R-29-E
Chaves County, New Mexico

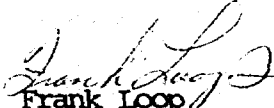
Dear Mr. Stamets:

Please find enclosed, a copy of the Step Rate Test conducted by Davis Services, Inc. on March 24, 1983. These results are being forwarded to you as a follow-up on our correspondence of February 15, 1983.

It is our hope that these results will provide the required information on the above named well. We are hereby requesting the maximum surface injection pressure allowed on this well based on the test results.

If you have any further questions or require additional information, please do not hesitate to contact me.

Very truly yours,


Frank Loop
Engineering Manager

FL/pt

Enclosure

cc: Mike Williams
Oil Conservation Division
Artesia, New Mexico

DAVIS SERVICES, INC.

P. O. Box 2033
Carlsbad Hwy.
Hobbs, New Mexico 88240
(505) 397-3914 393-0119

Clovis Star Rt.
Box 1380
Roswell, New Mexico 88201
(505) 624-2228

STEP RATE TEST
for
STEVENS OPERATING CORPORATION
O'BRIEN J-9
3/24/83

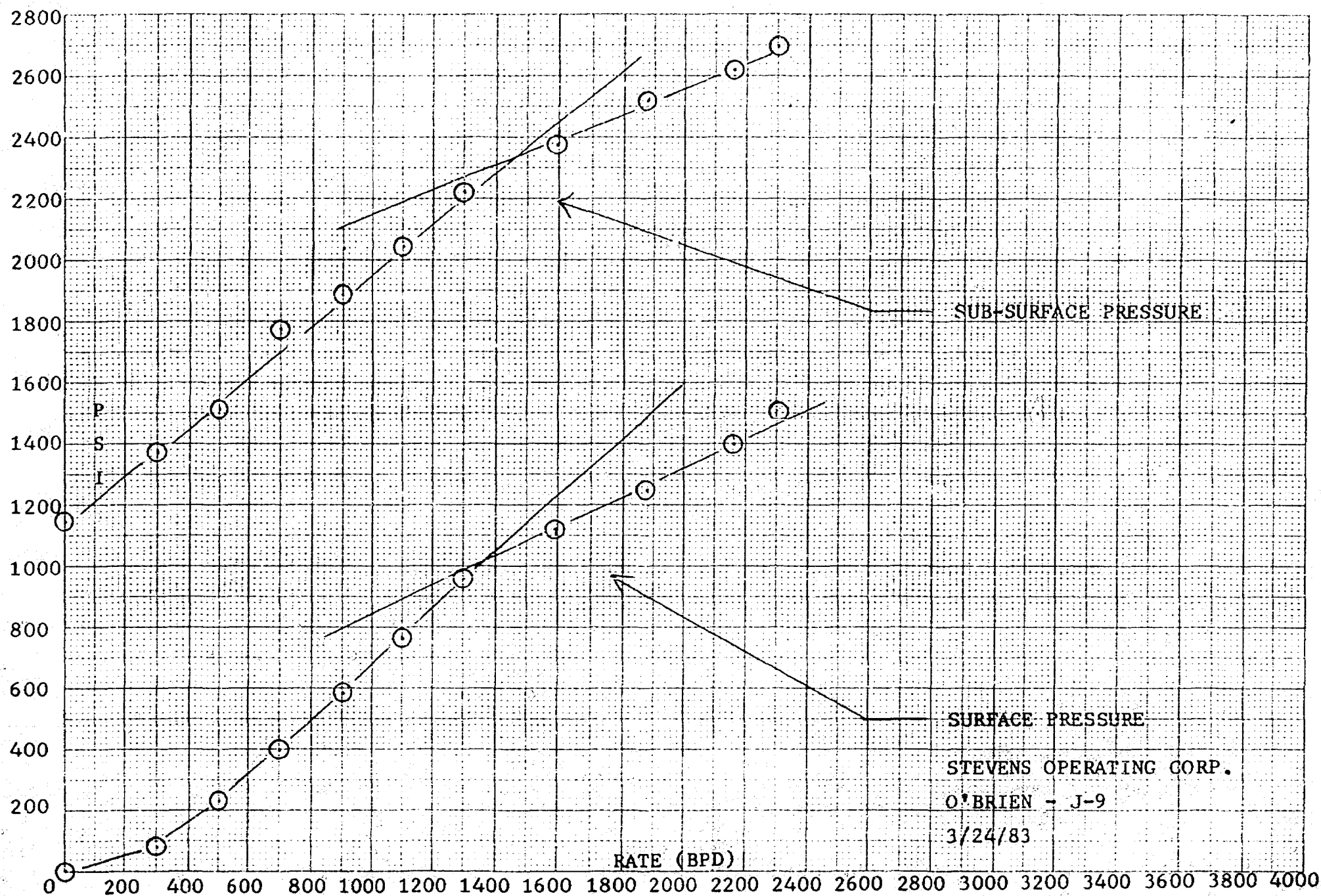
HOBBS,

STEP RATE TEST

NEW MEXICO

Type Test:	<input type="checkbox"/> Initial	<input type="checkbox"/> Annual	<input checked="" type="checkbox"/> Special	Test Date	3/24/83	Lease No. or Serial No.
Company	STEVENS OPERATING CORPORATION					Allottee
Field	Reservoir	Location			Unit	
Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name		
				O'BRIEN		
Sq. Size	41/2 Wt.	d	Set At	Perforations: From	2724 To 2745	Well No. J-9
Tg. Size	23/8 Wt.	d	Set At	Perforations: From	To	Sec. Twp - Blk Rge -
Type Completion (Describe)	SALT WATER DISPOSAL			Packer Set At	2600	County or Parish CHAVEZ
Producing Thru	Reservoir Temp. F	Mean Ground Temp. F	Bore. Press. - P		State	N.M.

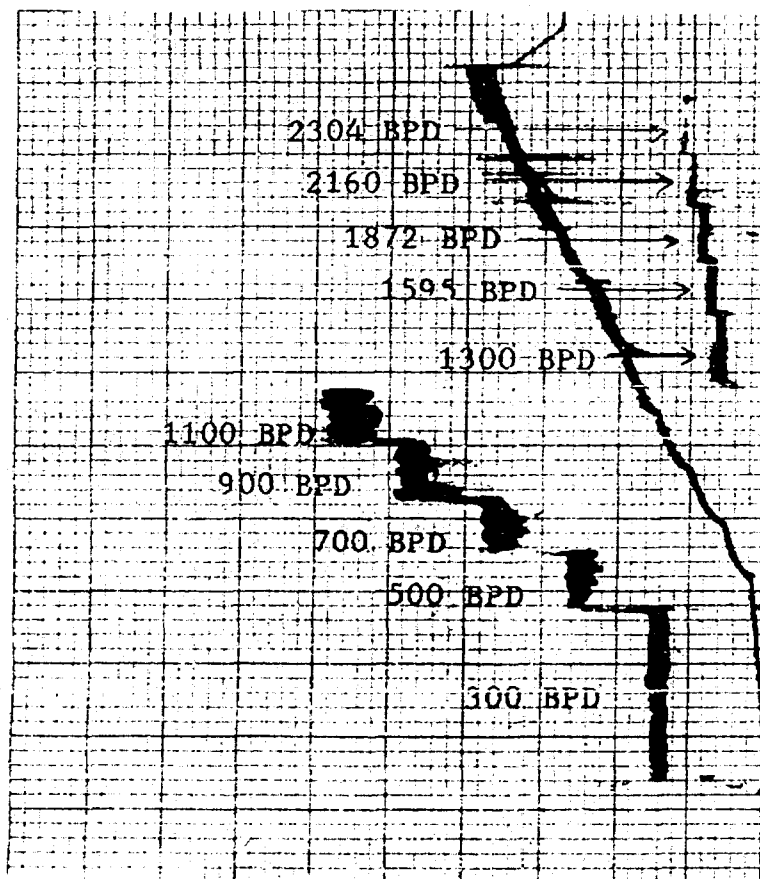
[illegible]



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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
23 June 1982

EXAMINER HEARING

IN THE MATTER OF:

Application of Stevens Oil Company
for salt water disposal, Chaves
County, New Mexico.

CASE
7610

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Ernest L. Padilla, Esq.
P. O. Box 2523
Santa Fe, New Mexico 87501

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I N D E X

WILLIAM J. LeMAY

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1
2 MR. NOTTER: The hearing will come to order,
3 please.

4 The first case this morning will be Case
5 Number 7610.

6 MR. PEARCE: That is the application of
7 Stevens Oil Company for salt water disposal, Chaves County,
8 New Mexico.

9 MR. PADILLA: Mr. Examiner, Ernest L.
10 Padilla on behalf of the applicant in this case.

11 I have one witness to be sworn.

12
13 (Witness sworn.)
14

15 WILLIAM J. LEMAY
16 being called as a witness and being duly sworn upon his oath,
17 testified as follows, to-wit:
18

19 DIRECT EXAMINATION

20 BY MR. PADILLA:

21 Q Mr. LeMay, for the record would you please
22 state your name and where you reside?

23 A William J. LeMay. I'm a consulting
24 geologist in Santa Fe, New Mexico.

25 Q Mr. LeMay, have you previously testified

1
2 before the Oil Conservation Division and had your credentials
3 accepted as a matter of record?

4 A I have.

5 Q What's your connection with the applicant
6 in this case?

7 A I'm an agent for Stevens Oil Company.
8 Stevens Oil Company asked me to do a study of the area for
9 the purpose of examining the feasibility of injecting water
10 into the T-1 zone of the San Andres for water disposal in
11 the Twin Lakes Field.

12 Q So you're familiar with the disposal in-
13 terval, is that correct?

14 A Yes, I am.

15 Q Are you familiar with the entire purpose
16 of the application?

17 A Yes.

18 MR. PADILLA: Mr. Examiner, we tender Mr.
19 LeMay as an expert in this case.

20 MR. NUTTER: Mr. LeMay is qualified.

21 Q Mr. LeMay, referring to what has been
22 marked as Exhibit Number One, would you please state what
23 it is and what it contains?

24 A Exhibit Number One is a land ownership
25 map in the area of the Twin Lakes San Andres Field. On

1
2 that map the proposed disposal well is indicated in red and
3 there is a radius, 1/2 mile radius drawn around that injection
4 well, proposed injection well.

5 If you will note that on Exhibit Number
6 One the acreage ownership showing the oil and gas leases in
7 the area are all owned by Stevens Oil Company within that
8 1/2 mile radius.

9 Q Mr. LeMay, referring to what is marked
10 as Exhibit Number Two, would you please state what that is
11 and what it contains?

12 A Exhibit Number Two is a structure map in
13 the east end of the Twin Lakes San Andres Field. The map
14 is drawn on the top of the P-1 dolomite, which is the pro-
15 ducing zone in the Twin Lakes San Andres Field. Generally
16 the map shows east dip, which is regional in the area. A
17 little further to the west there is a structural nose that
18 has some influence on the production from the P-1 interval
19 in the field. The proposed injection well is circled in
20 red on that map.

21 Q Referring to what has been marked as
22 Exhibit Number Three, Mr. LeMay, would you tell us what
23 that is and what it contains?

24 A Exhibit Number Three is a data tabulation
25 map of wells, showing the data on wells within that 1/2

1
2 mile radius surrounding the proposed injection well.

3 One note might be made referring back to
4 Exhibit Two. There is a well located as the No. 3 O'Brien
5 "N". That well is an abandoned location and therefor, even
6 though it is within the 1/2 mile radius, the well was never
7 drilled, so it does not appear on Exhibit Number Three.

8 Without going into detail on all these --
9 the individual wells within that 1/2 mile radius, I think
10 it's, in summarizing, it's fair to point out that all of the
11 wells are producing wells. They're producing from the P-1
12 interval, which is also the proposed disposal zone. The
13 wells do make some water in all cases. The 4-1/2 inch
14 casing, which is the production casing that has been run on
15 all the wells in the vicinity, were -- they have calculated
16 the top of cement on these wells in all cases, including a
17 20 percent tolerance, the top of the cement is above the top
18 of the San Andres formation, so therefor we feel there is
19 a very strong cement bond, and the entire San Andres forma-
20 tion is protected.

21 Q Mr. LeMay, there are no abandoned oil and
22 gas wells within the 1/2 mile circle, is that correct?

23 A That is correct.

24 Q Going on to what has been marked as Exhibit
25 Number Four, would you please state what that is and what it

1
2 contains?

3 A. Exhibit Number Four is a water analysis
4 of the water from not only the proposed injection well, but
5 from other wells in the vicinity of the injection well, this
6 water being water produced along with the oil in the Twin
7 Lakes San Andres Field.

8 I think it's, summarizing the character-
9 istics of the water, it shows chlorides of approximately
10 137 to 141,000 parts per million. The waters are, I'm cer-
11 tain, fairly uniform in this area of the San Andres Field,
12 in fact throughout the San Andres Field, so that the pro-
13 posed fluids to be injected into this well are certainly
14 compatible. They're the same fluids that were produced on
15 a test of the proposed injection well.

16 Q Mr. LeMay, referring to Exhibit Number
17 Five, could you tell us what that is and what it contains?

18 A Yes. Exhibit Number Five is data on the
19 proposed operation. Currently there is approximately 573
20 barrels of water per day that is being produced in the Twin
21 Lakes San Andres Field. Stevens Oil Company proposes to
22 inject this produced water, which may increase with time,
23 and their application says that we would like to have up
24 to 1000 barrels of water in the event that water production
25 increases,, that this volume of water will be injected into

1
2 the P-1 zone; that the rates would not exceed three barrels
3 per minute; that the system would be closed; and that injection
4 pressure currently is approximately 450 pounds per square
5 inch, and we'd like to have an order indicating that we could
6 pressure up to 600 pounds for additional water.

7 The water to be disposed of will be entirely
8 produced water from the Twin Lakes San Andres Field and the
9 P-1 zone, which we propose to inject the water into, is the
10 same zone which produces oil in the field itself.

11 Q Mr. LeMay, essentially what you're saying
12 is that we're going to reinject the same water back into the
13 same formation, is that right?

14 A That is correct.

15 Q And the water would be compatible, or the
16 same water, essentially?

17 A Yes.

18 Q Referring to Exhibit Number Six, would you
19 tell us what that is and what it contains?

20 A Exhibit Six is geological data summarized,
21 which is the injection zone, the P-1 zone, in the Twin Lakes
22 San Andres Field.

23 This zone is a dolomite zone in the Slaughter
24 section of the San Andres formation. It's approximately 90
25 to 100 feet thick and consists of fine to medium crystalline

1
2 grade of buff dolomite and anhydritic dolomite. In this
3 zone is approximately a 15-20 foot section of white to pink
4 anhydrite at the base. There is -- it is also sealed at the
5 top by -- by anhydrite. This anhydrite effectively separates
6 P-1 reservoir from both underlying and overlying dolomite
7 and limestone sections.

8 P-1 pay consists of a dolomite with inter-
9 crystalline, pinpoint, vuggy, oolitic, and fracture porosity.
10 When porosity is developed in the P-1, the porosity ranges
11 from approximately 5 to 12 percent.

12 When permeability is present it is usually
13 present because of fracturing. The proposed injection well --
14 in the proposed injection well the P-1 extends from 2795
15 feet to 2897 feet.

16 To my knowledge there are no subsurface
17 sources of drinking water in the subject area. I have exa-
18 mined the available geologic and engineering data and find
19 that there is no evidence of open faults or any other hydraulic
20 or hydrologic connection between the proposed disposal zone
21 and any underground sources of drinking water.

22 Q Mr. LeMay, in connection with the under-
23 ground sources of drinking water, do you have any evidence
24 or can you tell us anything about where the closest fresh
25 water source would be in relation to the disposal well?

1
2 A The closest fresh water source is approx-
3 imately ten miles north, which is across the Railroad
4 Mountain Dike. There have been some reports of Santa Rosa,
5 just spotty sources of Santa Rosa water, not of sufficient
6 volume, and this water is brackish and it's not good enough
7 even for the cattle.

8 The closest windmill in the area is approx-
9 imately eight miles to the east, and it's only water fit
10 for cattle. There's actually a salt water disposal lake
11 between that windmill and the subject area, and that water
12 is at approximately 50 feet and those zones outcrop before
13 they even get to the subject area.

14 On this 60,000 acre ranch there are no
15 fresh water sources and there are no windmills.

16 Q Mr. LeMay, on the basis of the pressures
17 that you intend to inject water at, what is the -- what is
18 your opinion as to any vertical fracturing of the formation?

19 A Well, the fractures that exist in the
20 P-1 dolomite are localized by the anhydrite cap both above
21 and below and the salt that exists within the San Andres
22 formation. These fractures do not extend for any great
23 length.

24 There is no hydrologic connection that I
25 have been able to find at all between P-1 and any underlying

1
2 or overlying reservoirs.

3 Q Mr. LeMay, going on to Exhibit Number Ten,
4 or I should say Exhibit Number Seven, would you please tell
5 us what that is and what it contains?

6 A Well, Exhibit 10 is C-102, the form sub-
7 mitted by Stevens Oil Company to show the location of the
8 proposed injection well. I might point out at this point
9 that this well was originally drilled as a development oil
10 well in the Twin Lakes San Andres Field, and when tested,
11 showed it to contain formation water, and therefor, that is
12 why this is our proposed injection well.

13 Q Go on to Exhibit Number Eight and briefly
14 tell us what that is, Mr. LeMay.

15 A Exhibit Eight is NMOCD Form C-103. It
16 indicates the progress on the proposed injection well. This
17 well was never completed as an oil well because it only
18 tested one barrel of oil per day, and -- but it does show
19 the running of the 8-5/8ths inch surface casing, as well as
20 the 4-1/2 inch production casing, the perforated zone in the
21 P-1, and the treatment with 8000 gallons of 28 percent acid.
22 The calculated top of the cement on this well is 1415 feet,
23 as indicated by the note on the bottom of the form.

24 MR. PADILLA: Mr. Examiner, Exhibits
25 Nine-A and Nine-B that have been marked are logs and we don't

1
2 have a copy of that, but Mr. LeMay will explain what those
3 logs contain if you wish to have this explanation.

4 A Exhibits Nine-A and Nine-B are the electric
5 logs that were run on the proposed injection well. There's
6 only one copy of those logs which are part of the record.
7 We don't have extras. We can supply them if the Commission
8 needs them.

9 On those logs we -- on one of the logs,
10 Nine-A, the tops of the San Andres P-1 and P-2 zones are
11 indicated. The perforated interval is indicated, which is
12 the proposed injection zone.

13 MR. NUTTER: I think in conjunction with
14 this log on Exhibit Nine-A you may want to make some kind of
15 a correction on Exhibit Number Five, Mr. LeMay -- no, not
16 Five, Exhibit Number Six.

17 A Yes, sir.

18 MR. NUTTER: Where you say the top -- the
19 P-1 extends from 2795 to 2897 and you're injecting 2724 to
20 45, so you're injecting up above the top of the formation.

21 A No, there's a typographical mistake there.

22 MR. NUTTER: If that exhibit is correct.

23 A May I see a log, Mr. Examiner?

24 MR. NUTTER: Yeah. I believe it's pro-
25 bably -- just barely 27-something.

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A Exhibit Number Six is wrong.

MR. NUTTER: And what should that 2795
be?

A 2712 is the top of the P-1.

MR. NUTTER: Okay.

A And 2797.

MR. NUTTER: 2712 to 2797?

A Yes, sir, those are typographical errors
that I failed to correct or find. The P-1 interval extends
from 2712 to 27 -- I'm sorry, 95, is the base of it, not
97.

MR. NUTTER: Okay, and disposal would be
from 2724 to 2745.

A That is correct.

MR. NUTTER: Okay. Now you're in the P-1.

A That's the P-1, yes.

Q Mr. LeMay, going on to what has been
marked as Exhibit Ten, would you tell us what that is and
what it contains?

A Exhibit Number Ten is a C-108 form of the
Oil Conservation Division, which indicates the operator, the
address, the general format of the data presented in Exhibits
One through Eleven, with my signature on the bottom that I
have -- I certify that the information submitted with this

1
2 application if true and correct to the best of my knowledge
3 and belief.

4 Q Going on to Exhibit Number Eleven, Mr.
5 LeMay, tell us what that is and what it intends to show.

6 A Exhibit Number Eleven is an injection well
7 data sheet, indicating, of course, the operator of the pro-
8 posed project, the lease number, it's the O'Brien "J" Lease,
9 Well NO. 9, it's location, and it shows a schematic of the
10 water injection -- proposed water injection equipment.

11 I indicated previously that -- that this
12 well was originally drilled as a development oil well in
13 the Twin Lakes San Andres Field. The completion attempt,
14 from this perforated interval, the P-1, after 8000 gallons
15 of acid, 28 percent acid, the potential test yielded one
16 barrel of oil and 70 barrels of salt water in 24 hours from
17 the zone that we propose to be the disposal zone. The in-
18 jection equipment will be a closed system including injected
19 water through 2-3/8ths inch plastic-coated tubing, which
20 will be hung on a Baker AD No. 1 Model Tension-type Packer
21 at 2600 feet. This packer is plastic-coated and is a specially
22 made packer for shallow salt water injection wells. It's
23 rated to 5000 pounds of pressure.

24 The annulus will be filled with inert
25 fluid; it will be monitored by pressure gauge at the surface.

1
2 The schematic diagram shows the 8-5/8ths inch casing, 20
3 pound casing, where cement has been circulated to the sur-
4 face. The top of the cement, as indicated previously on
5 the 4-1/2 inch casing is 1450 feet and the zone shows the --
6 or the diagram shows the disposal zone of the perforated
7 interval 2724 to 2745.

8 The rest of the Exhibit Number Eleven in-
9 dicates in Item number five that there was at one time an
10 additional producing formation in the area, which is the --
11 which was the Devonian formation at 7226 feet. This is in
12 the west half west half of Section 1, of course quite a bit
13 deeper than the San Andres and this zone has been abandoned.

14 I might mention, there are probably one or
15 two wells in the field producing approximately 5 to 10 bar-
16 rels a day from the P-2 with water. This is a very marginal
17 occurrence and is not generally present in the field proper.

18 Q Mr. LeMay, would approval of this applica-
19 tion be in the best interests of conservation?

20 A Yes, it would, in my opinion.

21 Q Can you give us any specifics in that re-
22 gard as relates to the economics of the wells in the area?

23 A Well, currently there are approximately
24 17,700 barrels of water being produced per month; at least
25 that was -- the 17,700 barrels produced in the month of May,

1
2 and this well is -- this water is being disposed of at a
3 relatively high cost, 25 cents per barrel, in a salt water
4 lake that was approved for disposal by the Oil Conservation
5 Division. The costs are quite a bit higher by disposing of
6 this water in the lake than it would be in re-injecting it
7 in the ground; also, there could be some side benefits of
8 pressure maintenance within the San Andres formation by the
9 re-injecting produced fluid.

10 The economics indicate this particular
11 well, although it is not the lowest well structurally in the
12 field, it does -- it has produced the most water, which pro-
13 bably needs a little bit of additional explanation.

14 Exhibit, I think it is Exhibit Two, the
15 structure map in the area, shows this well to be a little bit
16 high to surrounding wells. The presence of water in the
17 Twin Lakes San Andres Field is not controlled by a defineable
18 oil/water contact. There are certain hydrodynamic conditions
19 in operation that some geologists and engineers will accept
20 as a controlling factor to where the water is in the field;
21 other geologists and engineers attribute high water cuts in
22 the field to permeability variations within the producing
23 reservoir, so you can get different opinions as to why the
24 water is where it is.

25 I think it's important to note that the

1
2 wells surrounding the proposed injection well all make some
3 water. The well directly west, which is the No. 8 O'Brien
4 "J", is producing over 1000 barrels of water per month from
5 this pay. It's one of the higher water cut wells in the
6 field.

7 The south offset produces approximately
8 75 to 92 barrels of water per day.

9 The southwest offset produced 177 barrels
10 of water per month. These are per month figures, I'm sorry.
11 The 92 to 75. And the wells in Section 32 both produce
12 water, 273 barrels from the well in Unit L, and Unit M, 1188
13 barrels per month.

14 So the water seems to occur in pockets in
15 the field, and certainly in this particular area there is
16 formation water being produced by all wells surrounding the
17 proposed injection well. The injection well, I mentioned
18 previously, tested only one barrel of oil and quite a bit of
19 water, so it's certainly not commercial as an oil well and
20 indicates the presence of a pocket of -- or at least the
21 existence of water in this general area.

22 Q Mr. LeMay, would approval of the applica-
23 tion impair correlative rights in your opinion?

24 A Yes, it would. No, it would -- impair
25 correlative rights?

Q Yes.

A I'm sorry, I didn't understand the question.
The proposed application would not impair correlative rights,
in my opinion.

MR. PADILLA: Mr. Examiner, I have nothing
else, no further questions, and I would offer Exhibits One
through Eleven into evidence.

MR. NUTTER: Exhibits One through Eleven,
including Nine-A and Nine-B, will be admitted in evidence.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. LeMay, there is -- you could almost
categorically state there is no fresh water in this imme-
diate area, is that correct?

A Yes, sir. There have been other hearings
in 1969, that salt water disposal lake application, and I
think numerous experts have testified to the fact that there
is no fresh water in this area.

Q Does Stevane Oil have a camp out in this
area?

A Yes, they do, sir.

Q Do they have to haul the water in for
that camp?

1
2 A Yes, they do. There's no drinking water
3 there in the area.

4 Q Okay. Now, with respect to Exhibit Number
5 Five, and a statement you made in your testimony, Mr. LeMay,
6 you said you would like to have an order that would permit
7 a maximum injection pressure of 600 psi.

8 A That's correct.

9 Q Now, the top of the disposal zone would
10 be 2724 feet.

11 A That's correct.

12 Q And using the Division's rule of thumb
13 maximum pressure, that would be 545 psi allowed --

14 A I understand that, sir.

15 Q -- pressure for a maximum, so I think any
16 order would have to limit it to that amount, pending proof
17 that fracturing won't occur by going to a higher pressure.

18 A Your bottom hole pressure initially in the
19 field was approximately 1000 pounds and they have breakdown
20 pressure on frac jobs of average from 1800 to 2000 pounds.

21 Q This would be the type of proof you'd sub-
22 mit to get an extension of that maximum --

23 A Okay.

24 Q -- that would have to go into the order.

25 Are there any further questions of Mr.

1
2 LeMay? He may be excused.

3 MR. NUTTER: Do you have anything further,
4 Mr. Padilla?

5 MR. PADILLA: Nothing further.

6 MR. NUTTER: Does anyone have anything
7 they wish to offer in Case Number 7610?

8 We'll take the case under advisement.

9
10 (Hearing concluded.)
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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7610 heard by me on June 23 1952.
[Signature], Examiner
 Oil Conservation Division

SALLY W. BOYD, C.S.R.

1 Box 193-B
 Santa Fe, New Mexico 87501
 Phone (505) 455-7409



POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

July 2, 1982

Mr. Ernest L. Padilla
Attorney at Law
P. O. Box 2523
Santa Fe, New Mexico 87502

Re: CASE NO. 7610
ORDER NO. R-7014

Applicant:

Stevens Oil Company

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD	x
Artesia OCD	x
Aztec OCD	

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7610
Order No. R-7014

APPLICATION OF STEVENS OIL COMPANY
FOR SALT WATER DISPOSAL, CHAVES
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on June 23, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 2nd day of July, 1982, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Stevens Oil Company, is the owner and operator of the O'Brien "J" Well No. 9, located in Unit A of Section 31, Township 8 South, Range 29 East, NMPM, Chaves 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 perforated interval from approximately 2724 feet to 2745 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 2600 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 pressure limiting switch or other acceptable device

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Case No. 7610

Order No. R-7014

which will limit the wellhead pressure on the injection well to no more than 545 psi.

(6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the San Andres formation.

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

(8) 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.

(9) 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, Stevens Oil Company, is hereby authorized to utilize its O'Brien "J" Well No. 9, located in Unit A of Section 31, Township 8 South, Range 29 East, NMPM, Chaves 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 2600 feet, with injection into the perforated interval from approximately 2724 feet to 2745 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 pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 545 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result

-3-

Case No. 7610
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in migration of the injected fluid from the San Andres formation.

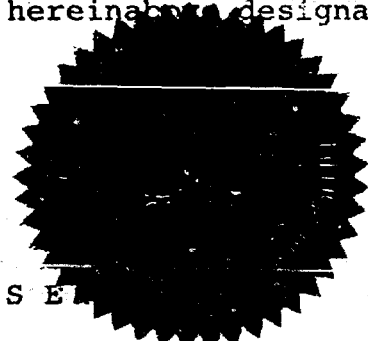
(4) That the operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Division'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.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 702, 703, 704, 705, 706, 708, and 1120 of the Division Rules and Regulations.

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

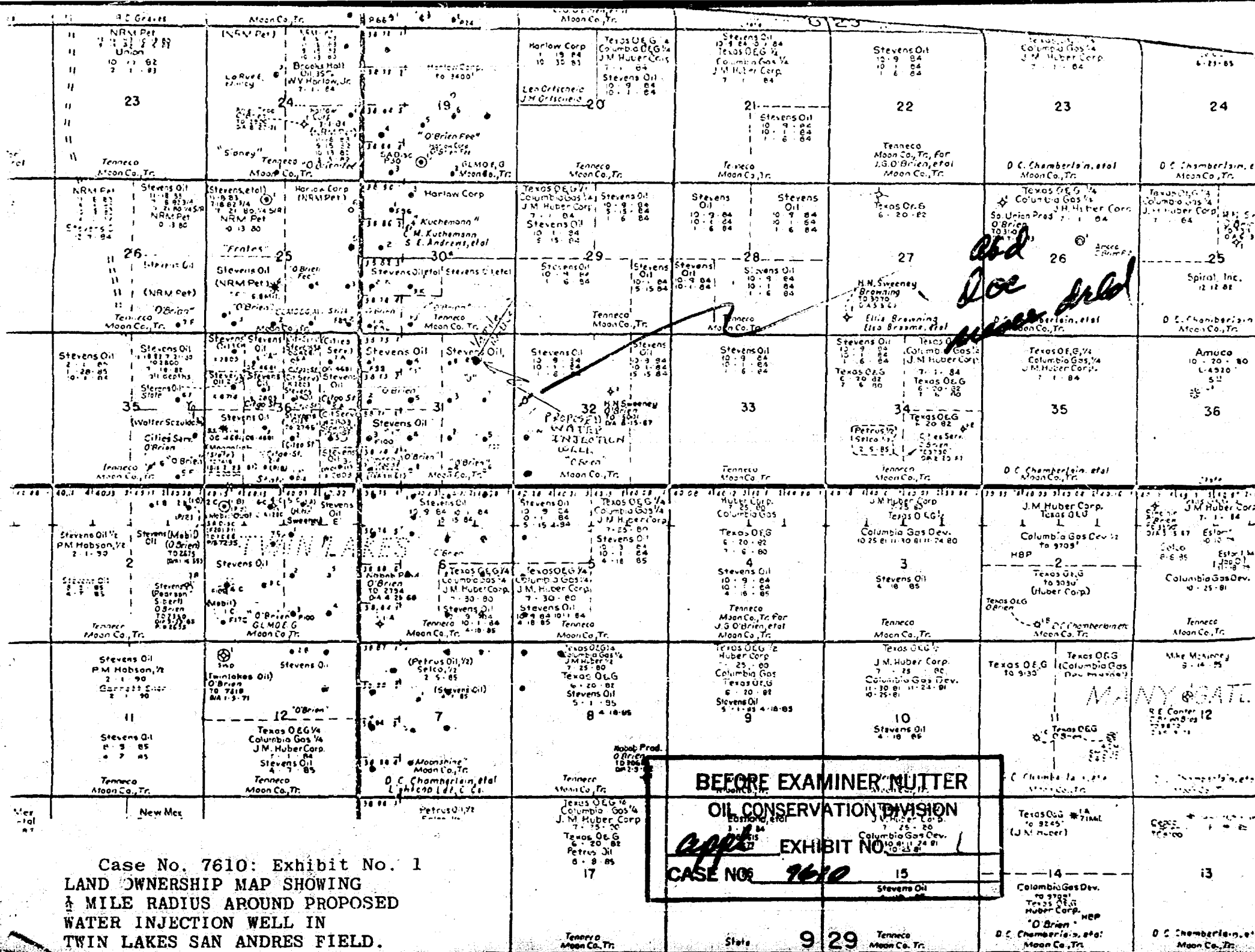
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



S E

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Ramey
JOE D. RAMEY,
Director



DATA TABULATION ON WELLS WITHIN AREA OF REVIEW

Well Name	STEVENS OIL COMPANY NO. 3 O'BRIEN "J"	STEVENS OIL COMPANY NO. 7 O'BRIEN "J"	STEVENS OIL COMPANY NO. 8 O'BRIEN "J"	STEVENS OIL COMPANY NO. 4 O'BRIEN "I"
Legal Location	2310' FNL & EL Sec. 31, T-8-S, R-29-E, Chaves Co., N. M.	2310' FNL & 990' FEL Sec. 31, T-8-S, R-29-E, Chaves Co., N. M.	990' FNL & 2310' FEL Sec. 31, T-8-S, R-29-E, Chaves Co., N. M.	990' FNL & 1650' FNL Sec. 31, T-8-S, R-29-E Chaves Co., N. M.
Field Pool	Twinlakes San Andres	Twinlakes San Andres	Twinlakes San Andres	Twinlakes San Andres
Spud Date	10-17-80	11-20-80	2-27-81	2-16-80
Completion Date	11-11-80	12-11-80	3-23-81	3-11-80
Type Completion	OIL	OIL	OIL	OIL
TD	2861'	2907'	2961'	2907'
PSTD	2846'	2892'	2950'	2895'
Completion (Interval Treatment & Potential)	P/2909.5'-2936.5' A/7,000 gal.-23% acid F 87 BO + 19.9 MCFG + 3 BW/24' (10/64" ch)	P/2747.5'-2778' A/8,000 gal.-28% acid F 101.8 BO + 30.08 MCFG + 2.8 BW/24' (12/64" ch)	P/2708.5-2731.5' A/6,000 gal.-28% acid F 63.5 BO + 34.5 MCFG + 40 BW/24' (3/4" ch)	P/2682-2719 A/6,000 gal.-28% acid P 94.9 BO + 25.1 MCFG + 59.1 BW/24'
Casing Design	8 5/8" @ 80' W/75 sx 4 1/2" @ 2861' W/175 sx	8 5/8" @ 128' W/75 sx 4 1/2" @ 2900' W/175 sx	8 5/8" @ 120' W/75 sx 4 1/2" @ 2961' W/125 sx	8 5/8" @ 120' W/75 sx 4 1/2" @ 2907' W/125 sx
Top of Cement on 4 1/2" csg.	1517' Calculated	1563' Calculated	2001' Calculated	1947' Calculated

CASE NO. 7610

EXHIBIT NO. 3

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION

EXHIBIT NO. 3

CASE NO. 7610

209 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

COMPANY Stevens Oil Company LEASE As listed
FIELD OR POOL Twin Lakes
SECTION BLOCK SURVEY COUNTY Chaves STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Produced water - taken from O'Brien "J" #9. 9-11-81
NO. 2 Produced water - taken from O'Brien "K" #1. 9-11-81
NO. 3 Produced water - taken from O'Brien "K" #2. 9-11-81
NO. 4 Produced water - taken from O'Brien "K" #3. 9-11-81

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1491	1.1521	1.1506	1.0506
pH When Sampled				
pH When Received	6.44	6.96	6.82	6.78
Bicarbonate as HCO ₃	1,110	1,000	952	872
Supersaturation as CaCO ₃	230	280	225	155
Undersaturation as CaCO ₃	--	--	--	--
Total Hardness as CaCO ₃	14,400	8,500	8,400	8,200
Calcium as Ca	3,600	2,160	2,240	2,280
Magnesium as Mg	1,312	753	680	608
Sodium and/or Potassium	84,491	89,807	87,371	89,573
Sulfate as SO ₄	3,250	4,463	4,125	3,788
Chloride as Cl	137,067	140,618	137,067	140,618
Iron as Fe	0.37	23.3	13.5	51.8
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	231,330	238,801	232,435	237,739
Temperature °F.				
Carbon Dioxide, Calculated	733	160	248	227
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	57.5	68.8	40.0	35.0
Resistivity, ohms/m at 77° F.	0.053	0.052	0.053	0.052
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Calcium Carbonate Scaling Tendency	MODERATE	SEVERE	MODERATE	MILD
Calcium Sulfate Scaling Tendency	MODERATE	MARGINAL	NONE	NONE

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks

INJECTION WELL

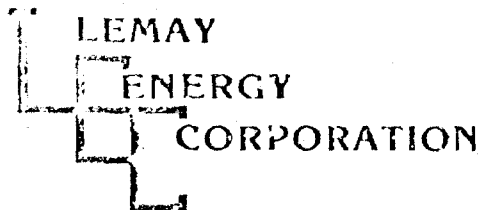
BEFORE EXAMINER NUTTER

OIL CONSERVATION DIVISION

Form No. 3

Case No. 7610
Exhibit No. 4

EXHIBIT NO. 4 By April
CASE NO. 7610



PETROLEUM BUILDING, SUITE 211
207 SHELFY
SANTA FE, NEW MEXICO 87501
505 988 8820

CASE NO. 7610 Exhibit No. 5

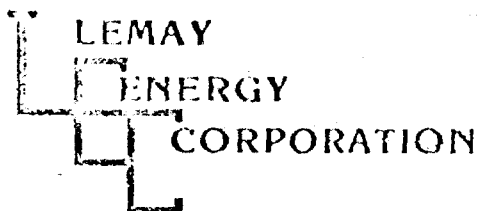
DATA ON PROPOSED OPERATION

1. Stevens Oil Company proposes to inject an average volume of 573 barrels of water per day with a maximum volume of 1,000 barrels of water per day. The injection rate should not exceed 3 barrels per minute.
2. The system will be closed.
3. The water will be injected at an average pressure of 450 P.S.I. with a maximum injection pressure of 600 P.S.I.
4. The water to be disposed of will be entirely San Andres formation water which is being produced in conjunction with the oil in the Twinlakes San Andres field.
5. The injection zone, P₁ zone of the San Andres formation, is the same zone which produces oil in the Twinlakes San Andres field.

Disposal from
2724-2745

2724
.2
5448
545 per
month

BEFORE EXAMINER NUTTER	
OIL CONSERVATION DIVISION	
<i>Appl</i>	EXHIBIT NO. <i>5</i>
CASE NO. <i>7610</i>	



PETROLEUM BUILDING, SUITE 211
207 SHILBY
SANTA FE, NEW MEXICO 87501
505 988 8820

CASE NO. 7610 Exhibit No. 6

GEOLOGICAL DATA

The injection zone is the P_1 dolomite zone of the Slaughter section of the San Andres formation. This zone is approximately 90 to 100 feet thick and consists of fine to medium crystalline, grey to buff dolomite and anhydritic dolomite. There is a 15 to 20 foot section of white to pink anhydrite at the base of the P_1 which effectively separates the P_1 from the P_2 dolomite zone immediately below.

The P_1 porosity in the Twinlakes field consists of a combination of intercrystalline, pin point, small vugs, oolitic and fracture. When developed, porosity values ranges from 5% to 12%. Permeability is usually present where the P_1 is fractured. In the proposed injection well the P_1 extends from ~~2745~~ to ~~2807~~ feet.

2712 2775

To my knowledge there are no subsurface sources of drinking water in the area.

I have examined the available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

A handwritten signature in dark ink, appearing to read 'William J. LeMay', with a long horizontal flourish extending to the right.

William J. LeMay

*Closest
winchmill gun to
the east. disposal
hole between the
proposed inj well
and the forward
winchmill.*

BEFORE EXAMINER NUTTER	
OIL CONSERVATION DIVISION	
<i>appl</i>	EXHIBIT NO. <i>6</i>
CASE NO. <i>7610</i>	

Case No. 7610
Exhibit No. 7

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

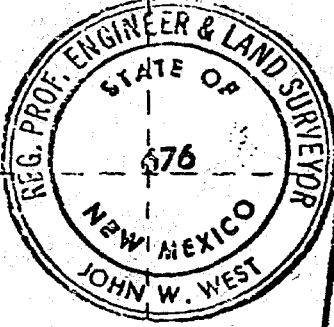
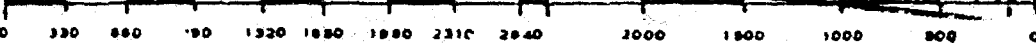
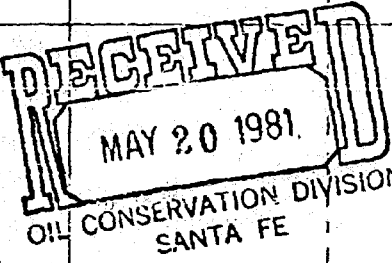
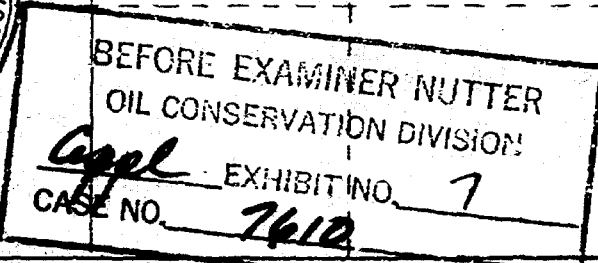
Petitioner Stevens Oil Co.		Lessee O'Brien J.		Well No. 9	
Initials	Section 31	Township 8 South	Range 29 East	County Chaves Co., N.M.	
Location of Well					
990 feet from the East line and		990 feet from the North line		Age	
Ground Elev. 3968.7	Producing Formation San Andres		Pool Twin Lakes-San Andres Assoc.		Conservation Act No. 40

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

CERTIFICATION

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

Name *Donald J. Nutter*
Position

Owner

Company
Stevens Oil Company

Date
5-13-81

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

11-7-80

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No. **JOHN W. WEST 676**
PATRICK A. ROMERO 6563
Ronald J. Egan 3239

ENERGY AND MINERALS DEPARTMENT

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	<input checked="" type="checkbox"/>
FILE	
U.S.O.S.	
LAND OFFICE	
OPERATION	

OIL CONSERVATION DIVISION
P. O. BOX 2008
SANTA FE, NEW MEXICO 87501

RECEIVED

JUN 01 1981

O. C. D.

APRESIA, OFFICE

Case No. 7610
Exhibit No. 5

Form C-103
Revised 10-1-77

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG CEA IN A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL ☒GAS WELL ☐OTHER ☐

Name of Operator

Stevens Oil Company ✓

Address of Operator

P. O. Box 2203, Roswell, New Mexico 88201

Location of Well

UNIT LETTER A 990 FEET FROM THE North LINE AND 990 FEET FROM

THE East LINE, SECTION 31 TOWNSHIP 8-S RANGE 29-E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)

3968.7 GR, 3973.7 KB

5a. Indicate Type of Lease

State ☐Free ☒

5. State Oil & Gas Lease No.

7. Unit Agreement Name

8. Farm or Lease Name

O'Brien "J"

9. Well No.

9

10. Field and Pool, or Wildcat

Twin Lakes-San Andres Assoc.

12. County

Chaves

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐PLUG AND ABANDON ☐REMEDIAL WORK ☐ALTERING CASING ☐TEMPORARILY ABANDON ☐COMMENCE DRILLING OPNS. ☒PLUG AND ABANDONMENT ☐PULL OR ALTER CASING ☐CHANGE PLANS ☐CASING TEST AND CEMENT JOB ☒OTHER Perforations & Treatment ☐OTHER ☐

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

5-18-81 Spud. Ran 3 joints of 8 5/8" 20# surface casing, set in cement at 120' with 75 sacks Class "C" and 2% calcium chloride. WOC 24 hrs. Pressured up to 1000# for 30 min., held.

5-26-81 TD 2950'. Ran 73 joints of 4 1/2" 9.5# casing, cement at 2943' with 200 sacks self stress, 2% calcium chloride. WOC 24hrs. Pressured up to 1000# for 30 min., held.

5-28-81 Perforated at 2724.5, 25, 25.5, 29.5, 30, 30.5, 40.5, 41, 41.5, 43.5, 44, 44.5. Acidized with 8000 gals 28% acid and 16 balls.

BEFORE EXAMINER NUTTER

OIL CONSERVATION DIVISION

EXHIBIT NO. 5

JUN 04 1981

CASE NO. 7610

SANTA FE

412 csc.

Total = 1415'

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

SIGNED

TITLE

Owner

DATE

5-28-81

APPROVED BY

TITLE

SUPERVISOR, DISTRICT II

DATE

JUN 02 1981

CONDITIONS OF APPROVAL, IF ANY:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

POST OFFICE BOX 2008
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

Case No. 7610 Exhibit No. 10
FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: Stevens Oil Company
Address: P. O. Box 2203, Roswell, New Mexico 88201
Contact party: William J. LeMay, agent Phone: 505/ 988-3820
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: William J. LeMay Title: Agent, Stevens Oil Company
Signature: [Signature] Date: June 16, 1982
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

BEFORE EXAMINER MUTTER	
OIL CONSERVATION DIVISION	
App'l	EXHIBIT NO. 10
CASE NO.	7610

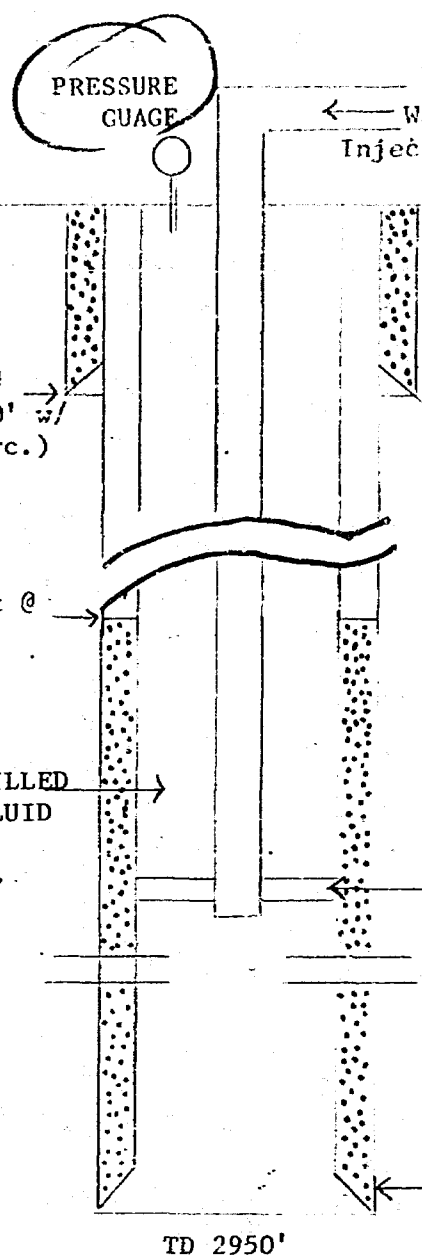
INJECTION WELL DATA SHEET

Case No. 7610
Exhibit No. 11

OPERATOR	CLASS	WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Stevens Oil Company	O'Brien "J"	9	990' FNL & 990' FEL	31	8-S	29-E

Schematic of Water Injection Equipment

Tabular Data



Surface Casing

Size 8 5/8" @ 120' Cemented with 75 sx.Water TOC Surface (Circ.) feet determined by observation
Injection Hole size 12 1/2"

Intermediate Casing

Size _____ Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4 1/2" @ 2943' Cemented with 200 sx.TOC 1415 feet determined by CalculationHole size 7 7/8"Total depth 2950'

Injection interval

2724 feet to 2745 feet
(perforated or open-hole, indicate which)Baker AD-1 Tension
Packer @ 2600'} Disposal Zone
Perforations 2724'-2745'4 1/2" 9.5# csg.
@ 2943' w/200 sx

TD 2950'

This well was originally drilled as a development oil well in the Twinlakes San Andres field. A completion attempt from the perforated interval of the P₁ San Andres zone after acidizing with 8,000 gal, 28% acid was:
P 1B0 + 70 B&W/24 hrs

2724
5448
545 psi
max.

Tubing size 2 3/8" lined with Plastic coating set in a
(material)
Baker model AD-1 Tension packer at 2600 feet.
(brand and model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation San Andres (P₁ zone)
- Name of field or Pool (if applicable) Twinlakes San Andres
- Is this a new well drilled for injection? ☐ Yes ☒ No
If no, for what purpose was the well originally drilled? Development well for P₁ oil production in Twinlakes San Andres field
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) NO
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. DEVONIAN @ 7226' in W/2 W/2 Section 1, T-9-S, R-28-E (abandoned)

BEFORE EXAMINER NUTTER	
OIL CONSERVATION DIVISION	
<i>Cyph</i>	EXHIBIT NO. <i>11</i>
CASE NO.	<i>7410</i>

Dockets Nos. 21-82 and 22-82 are tentatively set for July 7 and 21, 1982. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - JUNE 22, 1982

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

The following cases were continued from the June 2, 1982, Commission hearing:

CASE 7522: (DE NOVO)

Application of Santa Fe Exploration Co. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the North and West lines of Section 14, Township 20 South, Range 25 East, Permian-Penn, Strawn, Atoka and Morrow formations, the N/2 of said Section 14 to be dedicated to the well.

Upon application of Chama Petroleum Company, this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 7521: (DE NOVO)

Application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the South and West lines of Section 35, Township 19 South, Range 25 East, Permian-Penn, Strawn, Atoka and Morrow formations, the S/2 of said Section 35 to be dedicated to the well.

Upon application of Chama Petroleum Company and William B. Barnhill, this case will be heard De Novo pursuant to the provisions of Rule 1220.

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 23, 1982

9 A.M., MORGAN HALL, STATE LAND OFFICE BUILDING,
SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 7610: Application of Stevens Oil Company for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 2724 feet to 2745 feet in its O'Brien "J" Well No. 9 located in Unit A, Section 31, Township 8 South, Range 29 East, Twinlakes-San Andres Pool.

CASE 7611: Application of Texaco Inc. for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks special pool rules for the Skaggs-Drinkard Pool, including provision for a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil.

CASE 7612: Application of B & E, Inc. for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to install and operate a commercial facility for the disposal of salt water into the Southeast end of Laguna Tres in Section 12, Township 23 South, Range 29 East and/or into the Northeast side of Laguna Cuatro in Section 6, Township 23 South, Range 30 East.

CASE 7613: Application of Tenneco Oil Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Pennsylvanian test well to be located 660 feet from the South and West lines of Section 28, Township 16 South, Range 34 East, the W/2 of said Section 28 to be dedicated to the well.

CASE 7548: (Continued from June 9, 1982, Examiner Hearing)

Application of Tahoe Oil & Cattle Co. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 4902 feet to 4992 feet in its Schwelbe Well No. 1, located in Unit P of Section 21, Township 9 South, Range 37 East, West Sawyer-San Andres Pool.

CASES 7614 AND 7615: Application of Inexco Oil Company for compulsory pooling, Lea County, New Mexico. Applicant, in each of the following cases seeks an order pooling all mineral interests from the surface through the Strawn formation underlying the lands specified in each case, to form a standard 80-acre oil proration unit in the South Humble City-Strawn Pool to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells and a charge for risk involved in drilling said wells:

CASE 7614: W/2 NE/4 Section 23, Township 17 South, Range 37 East

CASE 7615: E/2 NE/4 Section 23, Township 17 South, Range 37 East

CASES 7616 AND 7617: Application of Southland Royalty Company for compulsory pooling, Eddy County, New Mexico. Applicant, in each of the following cases seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the lands specified in each case, to form a standard 320-acre gas spacing and proration unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells and a charge for risk involved in drilling said wells:

CASE 7616: N/2 Section 21, Township 18 South, Range 29 East

CASE 7617: S/2 Section 21, Township 18 South, Range 29 East

CASE 7618: Application of Doyle Hartman for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a gas well to be drilled 1450 feet from the South line and 1980 feet from the East line of Section 20, Township 20 South, Range 37 East, Eumont Gas Pool, the SE/4 of said Section 20 to be dedicated to the well.

CASE 7605: (Continued from June 9, 1982, Examiner Hearing)

Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the top of the Wolfcamp formation through the uppermost 100 feet of the Mississippian Chester Limestone underlying the W/2 of Section 35, Township 19 South, Range 24 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7458: (Continued from April 28, 1982, Examiner Hearing)

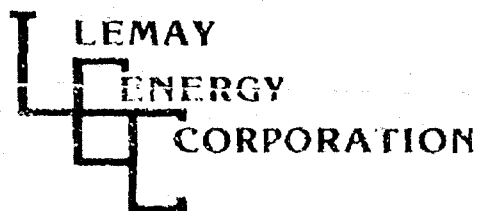
Application of Marks & Garner Production Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of salt water into the Bough C formation in the perforated interval from 9596 feet to 9616 feet in its Betenbough Well No. 2, located in Unit M of Section 12, Township 9 South, Range 35 East.

CASE 7598: (This case was heard on May 26, 1982. However, due to an error in originally advertising the case in the Torrance County newspaper, it has been readvertised in Torrance County only and will be reopened June 23, 1982, with respect to Torrance County only.)

Application of ANR Production Company and Yates Petroleum Corporation for designation of a tight formation in San Miguel, Torrance, Guadalupe, De Baca, Lincoln and Chaves Counties, New Mexico. Pursuant to Section 107 of the Natural Gas Policy Act of 1978 and 18 CFR Section 271.701-705, applicants, in the above-styled cause, seeks the designation as a tight formation of the Abo formation underlying the following described lands in the above-named counties.

All of:

Townships 1 thru 4 North, Ranges 14 thru 27 East;
Townships 5 thru 11 North, Ranges 14 thru 26 East;
Township 1 South, Ranges 14 thru 27 East;
Townships 2 thru 5 South, Ranges 14 thru 21 East;
Townships 6 thru 11 South, Ranges 15 thru 21 East;
Township 12 South, Ranges 17 thru 21 1/2 East; and
Townships 13 and 14 South, Ranges 17 thru 21 East;
containing 5,168,563 acres, more or less, but excluding the not yet defined Capitan Wilderness Area.



PETROLEUM BUILDING, SUITE 211
207 STREET BY
SANTA FE, NEW MEXICO 87501
505 988-8820

June 3, 1982

State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico

JUN 04 1982

Case 7610

Gentlemen:

In accordance with Commission Rules, application is hereby made on behalf of Stevens Oil Company for an Examiner Hearing before the Oil Conservation Division for the purpose of presenting evidence to obtain Oil Conservation Division approval to dispose of produced oil field brine by injection into the San Andres formation.

Said injection to be made into the Stevens Oil Company O'Brien "J" No. 9 located 990 feet from the North line and 990 feet from the East line of Section 31, Township 8 South, Range 29 East, Twinlakes - San Andres Pool, Chaves County, New Mexico; injection to be made through 2 3/8" tubing below Baker Model "N" packer set at approximately 2700 feet into perforations 2724 to 2745 feet.

Water to be so disposed will be produced from the Twinlakes San Andres field.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'William J. LeMay', is written over the typed name and title.

William J. LeMay
Agent, Stevens Oil Company

WJL/csl

ORDERS

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7610

Order No. R- 7014

APPLICATION OF STEVENS OIL COMPANY
FOR SALT WATER DISPOSAL, CHAVES
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on June 23, 1982,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of July, 1982, the Division
Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Stevens Oil Company, is the owner and operator of the O'Brien "J" Well No. 9, located in Unit A of Section 31, Township 8 South, Range 29 East, NMPM, Chaves 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 perforated interval from approximately 2724 feet to 2745 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 2600 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 pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 545 psi.

(6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the San Andres formation.

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

(8) 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.

(9) 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, Stevens Oil Company, is hereby authorized to utilize its O'Brien "J" Well No. 9, located in Unit A of Section 31, Township 8 South, Range 29 East, NMPM, Chaves 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 2600 feet, with injection into the perforated interval from approximately 2724 feet to 2745 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 pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 545 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the San Andres formation.

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

(5) That the operator shall immediately notify the supervisor of the Division'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.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 702, 703, 704, 705, 706, 708, and 1120 of the Division Rules and Regulations.

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

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

STATE OF NEW MEXICO

OIL CONSERVATION DIVISION

JOE D. RAMEY,

Director

S E A L

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DOCKET MAILED

~~DATE~~ 6/11/82