

CASE 5583: Appl. of STEVENS OIL  
COMPANY for a pilot waterflood  
project, Chaves County

April to  
Dec 17

CASE NO.

5583

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APPLICATION,  
TRANSCRIPTS,  
SMALL EXHIBITS,

ETC.

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Page 1

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
November 19, 1975

EXAMINER HEARING

IN THE MATTER OF:

Application of Stevens Oil Company for  
a pilot waterflood project, Chaves  
County, New Mexico.

CASE  
5583

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil  
Conservation Commission:

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

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Page 2

1 MR. NUTTER: We will call the next Case, Number 5583.

2 MR. CARR: Case 5583, application of Stevens Oil  
3 Company for a pilot waterflood project, Chaves County,  
4 New Mexico.

5 Mr. Examiner, we have received a call this morning  
6 from Don Stevens requesting that this Case be continued to  
7 the December 3rd, 1975 Examiner Hearing.

8 MR. NUTTER: Case 5583 will be continued to the  
9 Examiner Hearing scheduled to be held at this same place, nine  
10 o'clock A.M. December 3, 1975.

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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a court reporter, do hereby  
 certify that the foregoing and attached Transcript of Hearing  
 before the New Mexico Oil Conservation Commission was reported  
 by me, and the same is a true and correct record of the said  
 proceedings to the best of my knowledge, skill and ability.

*Sidney F. Morrish*  
 Sidney F. Morrish, Court Reporter

I do hereby certify that the foregoing is  
 a complete record of the proceedings in  
 the Examiner hearing of Case No. 5583  
 heard by me on 11/19, 1975

*[Signature]* Examiner  
 New Mexico Oil Conservation Commission

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MEMORANDUM

From: W. L. Brewer, Field Chemist  
Halliburton Services, a Division of Halliburton Company

To: Donald G. Stevens  
Stevens Oil Company

*File Case 5583*

Message:

At your request, I have analyzed the produced water from the San Andres and Devonian formations in the Twin Lakes oil field, Chaves County, New Mexico to determine if the waters are compatible for purposes of injecting Devonian waters into the San Andres formation. On the basis of a 24-hour test, no precipitants were observed and, in my opinion, the waters are compatible. I will continue to observe the waters on a long-term basis and in the event of any changes will so inform you.



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. 5583  
Order No. R-5140

APPLICATION OF STEVENS OIL COMPANY  
FOR A PILOT WATERFLOOD PROJECT, CHAVES  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 17, 1975, at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this 23rd day of December, 1975, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Stevens Oil Company, seeks authority to institute a waterflood project in the Twin Lakes-San Andres Pool by the injection of water into the San Andres formation through its Twinlakes Oil Company Well No. 1 located in Unit D of Section 12, Township 9 South, Range 28 East, NMPM, Chaves County, New Mexico.

(3) That the nature of the proposed project is such that it should more properly be classified as a pressure maintenance project.

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

(5) That there are no known fresh water sands in the area.

(6) That applicant's proposed method of injection through 8 5/8-inch casing, cement on which has been circulated to the surface, and into the open-hole interval from 1969 feet to 2650 feet, will not cause waste nor impair fresh water supplies and should be permitted.



-2-

Case No. 5583  
Order No. R-5140

(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 from injection, production, or plugged and abandoned wells.

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

IT IS THEREFORE ORDERED:

(1) That the applicant, Stevens Oil Company, is hereby authorized to institute a pressure maintenance project in the Twin Lakes-San Andres Pool by the injection of water into the San Andres formation through its Twinlakes Oil Company Well No. 1, located in Unit D of Section 12, Township 9 South, Range 28 East, NMPM, Chaves County, New Mexico.

(2) That injection shall be through the 8 5/8-inch casing into the open-hole interval from 1969 feet to 2650 feet.

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

(4) That the project area shall comprise the defined boundaries of the Twin Lakes-San Andres Pool.

(5) That the subject project is hereby designated the Twin Lakes Pressure Maintenance Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

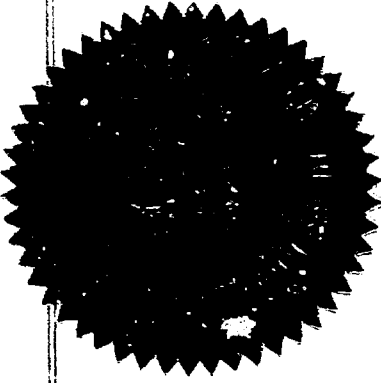
(6) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

-3-  
Case No. 5583  
Order No. R-5140

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
*Phil R. Lucero*  
PHIL R. LUCERO, Chairman

*Emery C. Arnold*  
EMERY C. ARNOLD, Member

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

S E A L

dr/

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Page 1

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
December 17, 1975

EXAMINER HEARING

IN THE MATTER OF:

Application of Stevens Oil Company for  
a pilot waterflood project, Chaves  
County, New Mexico.

CASE  
5583

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil  
Conservation Commission:

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

For the Applicant:

Donald G. Stevens, Esq.  
Attorney at Law  
214 Old Santa Fe Trail  
Santa Fe, New Mexico

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I N D E X

	<u>Page</u>
<u>WILLIAM J. LeMAY</u>	
Direct Examination by Mr. Stevens	4
Cross Examination by Mr. Nutter	11

EXHIBIT INDEX

	<u>Page</u>
Applicant's Exhibit No. One, Structure Map	11
Applicant's Exhibit No. Two, Proposed Injection Well	11
Applicant's Exhibit No. Three, Diagrammatic Sketch	11
Applicant's Exhibit No. Four, Water Analysis	11

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Page 3

1 MR. NUTTER: The Hearing will come to order, please.  
2 We will call the next Case, Number 5583.

3 MR. CARR: Case 5583, application of Stevens Oil  
4 Company for a pilot waterflood project, Chaves County, New  
5 Mexico.

6 MR. STEVENS: Mr. Examiner, I'm Don Stevens, an  
7 attorney in Santa Fe representing the applicant in this Case  
8 and we have one witness to be sworn. This is the same witness  
9 as in the previous Case.

10 MR. NUTTER: The record will show that the witness  
11 is still under oath.

12 MR. STEVENS: Mr. Examiner, I would like to ask  
13 the Commission to take administrative notice of Order Number  
14 3998 which Case set out an exception to the no-pit order  
15 for the Twin Lakes-San Andres and Devonian pools wherein  
16 produced salt water may be disposed of in open pits because  
17 the only fresh water in the area is about ten miles north and  
18 all of the water at the surface is salt water. Now, that will  
19 be pertinent to our application here.

20 MR. NUTTER: We will take notice of the Commission  
21 Order Number R-3998.

22 WILLIAM J. LeMAY  
23 called as a witness, having been previously sworn, was  
24 examined and testified as follows:  
25

DIRECT EXAMINATION

1  
2 BY MR. STEVENS:

3 Q Mr. LeMay, referring to Exhibit Number One, would  
4 you explain that, please?

5 Well, first, excuse me, Mr. LeMay, would you  
6 briefly state what we are seeking here?

7 A Yes, Stevens Oil Company in partnership with  
8 Harvard Exploration is seeking an order which would allow  
9 Stevens Oil Company as operator to inject water into the  
10 proposed injection well into the P-1 zone of the San Andres  
11 formation as a, quote, pilot waterflood, unquote, water  
12 disposal program for the subject area. The same field as  
13 indicated on previous testimony in a previous Case is present  
14 here. This is the Twin Lakes field. However, now we are  
15 at the Twin Lakes-San Andres formation which is approximately  
16 twenty-six hundred feet from the surface, the pay zone is  
17 approximately twenty-six hundred feet.

18 Q Referring to Exhibit Number One, would you explain  
19 it, please?

20 A Exhibit Number One is a structure map of the  
21 Twin Lakes-San Andres field drawn on top of the P-1 or  
22 Slaughter-age porosity in the field. As you will note, again  
23 we have a structure, but it is a Strawn nose coming in from  
24 the northwest and plunging south-southeastward and is one of  
25 the controlling factors, I feel, in the accumulation of

1 San Andres oil in this field. The San Andres producing  
2 wells are colored blue on Exhibit Number One and the dry  
3 holes are indicated by the normal dry-hole symbol. The proposed  
4 injection well is colored red and is located in the northwest  
5 of the northwest of Section 12, Township 9 South, Range 28  
6 East, Chaves County, New Mexico.

7 Q What is the significance of the wells colored blue?

8 A They are producing or have produced, I should say,  
9 oil from the P-1 zone upper Slaughter porosity in the San Andres  
10 formation. Some of the wells in Sections 2 and 35, I think at  
11 one time produced some oil but they are currently not producing  
12 at the present time, they are completed. They are watered  
13 out really.

14 Q The wells in the west half of the southwest of  
15 Section 1 colored green, what is their significance?

16 A Yes, they are the two Devonian wells currently  
17 producing in the Twin Lakes-Devonian field. The purpose of  
18 application is to allow the Applicant to dispose of this  
19 Devonian water into the San Andres formation in the down dip  
20 well dry hole in Section 12. Although there is an exception  
21 to the no-pit order, we feel that there may be some beneficial  
22 effect for disposing, or at least some type of pressure  
23 maintenance may be beneficial to the San Andres by injecting  
24 fluid into it and this would be a down dip well which would  
25 be the logical well for injection into the San Andres.

1 Q. Mr. LeMay, has the Commission previously granted  
2 the Applicant the right to produce this Devonian salt water  
3 and reinject it into the O'Brien C-3?

4 A. Yes, by a previous order the Commission has allowed  
5 the operator to inject produced Devonian water into the C-3.  
6 There again the volumes of water we're talking about, we would  
7 probably need more than one injection well and I think our  
8 current plans, at least, are to inject water into both the  
9 San Andres and the Twin Lakes O'Brien D-1 which is the well  
10 colored red on Exhibit Number One and into the Devonian in  
11 the C-3. By a previous order this was granted.

12 MR. NUTTER: Now, first I understood you to say  
13 that the previous order authorized the injection of Devonian  
14 water into the C-3, any kind of water, but into the Devonian  
15 formation?

16 A. Yes, I'm not sure how that order reads but we were  
17 going to put Devonian water into the Devonian formation in the  
18 C-3. That would be semi-pressure maintenance in the Devonian  
19 but also a disposal outlet for the volumes of water which we  
20 have in this field now.

21 MR. NUTTER: Does the San Andres make water?

22 A. Yes.

23 MR. NUTTER: So you've got water produced from the  
24 San Andres and the Devonian both?

25 A. Yes.



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Page 7

1 MR. NUTTER: At the present time is the water from  
2 the San Andres and the Devonian both going into the C-3?

3 A. No, as far as I know the San Andres water is being  
4 put in pits. The volumes from the San Andres are pretty small,  
5 Mr. Examiner, really a few pits can handle those rather easily.  
6 When you are talking about the volumes of water we have with  
7 the Devonian it is really a different story. We have authoriza-  
8 tion to put the water in pits for evaporation but we prefer to  
9 have other outlets available to us.

10 MR. NUTTER: Okay.

11 Q. (Mr. Stevens continuing.) Referring to what has  
12 been marked as Exhibit Number Two, would you explain it,  
13 please?

14 A. Exhibit Number Two is a copy of the proposed inject-  
15 ion disposal well, the Twin Lakes Oil Company O'Brien D-1  
16 which is a dry hole which was drilled to the Devonian in  
17 Section 12. It is structurally down dip from both the  
18 Devonian accumulation and the San Andres accumulation.  
19 Mechanically the well has eight-and-five-eighths-inch casing  
20 set at nineteen hundred and fifty-five feet and the cement  
21 has been circulated to the surface. This casing is in the  
22 well right now.

23 Q. Excuse me, is that nineteen, sixty-nine feet?

24 A. I have nineteen hundred and sixty-nine feet, yes,  
25 sir. Yes, the eight and five-eighths is set at nineteen

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1 hundred and sixty-nine feet. I'm sorry, the top of the  
2 San Andres in the well is nineteen hundred and fifty-five  
3 feet. The casing is set at nineteen hundred and sixty-nine  
4 feet with seven hundred and fifty sacks which were circulated  
5 to the surface. The well is tight in the San Andres from the  
6 top down to the top of the P-1 porosity which is encountered  
7 at two thousand five hundred and eighty-eight feet. Our  
8 proposed injection zone is this P-1 zone of the San Andres  
9 which is also the producing zone in the Twin Lakes-San Andres  
10 field.

11 Below that there is a cement plug from twenty-six  
12 hundred and fifty feet to twenty-seven hundred and fifty feet.  
13 Actually there is a hydromite plug above what was the previous  
14 cement plug from twenty-six hundred and fifty feet to fifty-  
15 four feet, but basically there is cement from twenty-six  
16 hundred and fifty feet to twenty-seven hundred and fifty.

17 At one time one of the predecessors to Stevens  
18 Oil, Mr. Sweeney, I think, did acidize this zone on a completion  
19 attempt. He thought there was a possibility of oil recovery  
20 here, he acidized it with three thousand gallons as shown on  
21 Exhibit 2 and swabbed twenty barrels of salt water per hour  
22 with no shows of oil and gas. So the zone has been acidized,  
23 it has been proven to be a porous and permeable zone which  
24 contains salt water.

25 Q Looking at this log, Mr. LeMay, and comparing the

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Page 9

1 porosity from twenty-five eighty-eight to twenty-six fifty  
2 with the porosity in the remainder of the open hole, in your  
3 opinion if water were injected into this open-hole interval  
4 where would that water go?

5 A. Well, it would go into the P-1 zone from twenty-five  
6 eighty-eight to twenty-six fifty. It is the real only porous  
7 zone or the first porous zone encountered in the San Andres  
8 in this area.

9 Q Referring to Exhibit Number Three, would you explain  
10 that, please?

11 A. Exhibit Three is a diagrammatic sketch of the  
12 proposed injection disposal well, the Twin Lakes O'Brien  
13 Number D-1, showing the string of eight-and-five-eighths-  
14 inch casing set at nineteen hundred and sixty-nine feet with  
15 cement circulated to the surface, the open-hole interval  
16 nineteen hundred and sixty-nine feet from the base of the  
17 eight-and-five-eighths-inch casing to twenty-six hundred and  
18 fifty feet, which is the base of the P-1 porosity and the  
19 proposed system whereby the Devonian salt water would be  
20 injected into this open-hole interval and be disposed of in  
21 the P-1 zone of the San Andres.

22 Q Referring to what has been marked as Exhibit Number  
23 Four, would you explain it, please?

24 A. Exhibit Four is a water analysis of Devonian water  
25 which would be injected into the San Andres if the Commission

1 saw fit to approve the application. The interesting thing  
2 about the Devonian water, it is not corrosive, it has been  
3 used in the past for drilling fluid so with chlorides of  
4 thirty-six thousand, it certainly isn't fresh but it is not  
5 highly corrosive either and it hasn't been a problem chemistry-  
6 wise. We feel that it would be compatible with the San Andres  
7 water and that is the main purpose of the exhibit, to show  
8 the Commission the analysis of the water that would be  
9 injected into the injection disposal well.

10 Q Mr. LeMay, how does this mechanical set up of the  
11 injection differ from most other injection wells that the  
12 Commission has approved in the past?

13 A Well, it is a poor-boy operation which is indicated  
14 by the fact that we do not propose a monitoring system. There  
15 is no fresh water in the area and there is cement circulated  
16 on the eight-and-five-eighths-inch casing for protection. There  
17 are no pays, water zones, anything from the base of the  
18 eight-and-five-eighths-inch casing to the top of the P-1  
19 porosity zone, so there would be no damage done to any fresh  
20 water or other potential reservoirs. There is no production  
21 anywhere around Twin Lakes, it is an isolated situation. It  
22 would be a cheap way to dispose of water and we cannot see  
23 any danger or any harm to anyone by this program.

24 Q Were Exhibits One through Four prepared by you or  
25 under your direction?

1 A. Under my direction, yes, sir.

2 MR. STEVENS: We would like to offer these Exhibits  
3 into evidence, Mr. Examiner.

4 MR. NUTTER: Applicant's Exhibits One through Four  
5 will be admitted into evidence.

6 (THEREUPON, Applicant's Exhibits One  
7 through Four were admitted into evidence.)

8 MR. STEVENS: I have no further questions on direct.

9  
10 CROSS EXAMINATION

11 BY MR. NUTTER:

12 Q Mr. LeMay, you made the statement that there are no  
13 pays or water zones in the open-hole interval from the casing  
14 shoe to the top of the disposal zone which could be damaged,  
15 can you also make that statement regarding the interval from  
16 the depth of the conductor pipe at thirty feet to the depth  
17 of the casing shoe?

18 A. Yes, sir, there are no known pays anywhere in this  
19 area, except the P-1 zone of the San Andres, so I think that  
20 statement certainly applies to that section behind pipe.

21 Q Can you make the statement as far as water-bearing  
22 sands are concerned?

23 A Any sands that would be water bearing have proved  
24 to be highly saline because of the salt that is present both  
25 at the surface and in some of the sands that are developed.

1 There have been no water flows so we are not cognizant of  
2 any reservoirs but the water is pretty bad where they do get  
3 any of it.

4 One of the wells I think was air drilled in the  
5 area and I think it was the well in the southeast of the  
6 southeast of Section 36, so there was a continuous drill stem  
7 test, you might say, down to the P-1 zone of the porosity where  
8 we plan to dispose of it. No fluid was encountered in that  
9 well.

10 Q From the surface down?

11 A From the surface down, yes, sir.

12 Q That was in the southeast of the southeast of 36?

13 A Yes.

14 Q So you could make the statement for this particular  
15 well concerning the interval from the surface of the ground  
16 to the depth of the casing shoe at nineteen, sixty-nine, there  
17 are no fresh-water sands?

18 A That's correct, there are none that have been found  
19 and to the best of my knowledge there are no fresh-water sands  
20 in the area.

21 Q And any water that is behind that pipe is saline  
22 water?

23 A Yes, and there is probably very little of it too, Mr.  
24 Examiner, on the basis of just that one well that we do have a  
25 fluid test going down.

1 Q Okay. Now, the P-1 zone is the zone you will be  
2 disposing into under this application. Is that the zone that  
3 produces from these wells that are colored blue on the Exhibit  
4 Number One?

5 A Yes, sir.

6 Q And the upper section of the San Andres, from the  
7 top of the San Andres at nineteen, fifty-five down to the  
8 P-1 zone in the subject well is not productive, the equivalent  
9 interval is not productive in these other blue wells on here?

10 A No, it's not productive anywhere in the field.

11 Q It's tight in all of the other wells like it is  
12 here?

13 A Yes, sir, it's tight.

14 Q What is the particular reason for running the pipe  
15 to the top of the San Andres rather than down to the pay?

16 A Well, the pipe is in the hole currently and is  
17 cemented in the hole.

18 Q Yes, but is this the practice in all of these  
19 San Andres wells here to put the pipe on the top of the San  
20 Andres rather than down to the pay then?

21 A Well, where you are going deeper like this  
22 particular well was drilled to seventy-six hundred feet.

23 Q That was a Devonian?

24 A It was a Devonian test and it was really the inter-  
25 mediate string of casing. The completion attempt was a plug

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1 back after the Devonian was dry and, of course, that is the  
2 reason for the eight-and-five-eighths-inch casing set where  
3 it is.

4 Q On the rest of the wells that are drilled as San  
5 Andres wells, where is the normal practice to set casing?

6 A Well, normally there will be, I think, a couple  
7 hundred feet of surface pipe and then drilled right down to  
8 the P-1 pay and then the production string cemented.

9 Q At the top of the P-1?

10 A At the top of the P-1, yes. The P-2 carries water  
11 in this area and normally it is the practice not to penetrate  
12 the P-2 if you can help it because there are strong water  
13 flows from the P-2.

14 Q Would the casing program on this well be similar to  
15 the casing program on the other San Andres wells except that  
16 the casing is set higher than normal?

17 A Yes.

18 MR. NUTTER: Are there any further questions of the  
19 witness?

20 Off the record just a minute.

21 (THEREUPON, a discussion was held  
22 off the record.)

23 Q (Mr. Nutter continuing.) Mr. LeMay, the application  
24 in this particular case was for a pilot waterflood and salt  
25 water disposal case. Now, the injection well or the disposal



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1 well, whatever it might be, is located some distance from  
2 the nearest producing San Andres well. What is going to be  
3 the effect of putting the water into the San Andres in the  
4 P-1 zone in the subject well, will it have an effect of  
5 maintaining pressure in the San Andres formation?

6 A. Yes, Mr. Examiner, it would be more of a pressure-  
7 maintenance operation than a pilot waterflood.

8 Q. I see. Have you made any determination as to  
9 whether the waters that you are proposing to inject into this  
10 reservoir being from the Devonian formation are compatible  
11 with the waters and other substances in the San Andres forma-  
12 tion as of now?

13 A. No, sir, we have not made any tests to that effect.

14 Q. Is it your plan to conduct those tests?

15 A. Yes, sir, we do plan to conduct compatibility tests  
16 and can send the Commission a copy of the results of that  
17 test.

18 Q. Would you do that, please?

19 A. Yes, sir.

20 MR. NUTTER: Are there any further questions of  
21 Mr. LeMay? He may be excused.

22 (THEREUPON, the witness was excused.)

23 MR. NUTTER: Anything further, Mr. Stevens?

24 MR. STEVENS: No, sir.

25 MR. NUTTER: Does anyone have anything to offer

1 in Case Number 5583?


2 We will take the Case under advisement and the  
3 Hearing is adjourned.

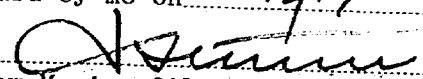
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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a court reporter, do hereby  
 certify that the foregoing and attached Transcript of Hearing  
 before the New Mexico Oil Conservation Commission was reported  
 by me, and the same is a true and correct record of the said  
 proceedings to the best of my knowledge, skill and ability.

  
 Sidney F. Morrish, Court Reporter

I do hereby certify that the foregoing is  
 a complete record of the proceedings in  
 the Examiner hearing of Case No. 5583  
 heard by me on 12/17, 1975.  
  
 Examiner  
 New Mexico Oil Conservation Commission

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dr/

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. 5583

Order No. R-5140

APPLICATION OF STEVENS OIL COMPANY  
PILOT

FOR A WATERFLOOD PROJECT, CHAVES

COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 19  
19 75, at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter

NOW, on this Dec day of November, 1975, the  
Commission, a quorum being present, having considered the  
testimony, the record, and the recommendations of the Examiner,  
and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required  
by law, the Commission has jurisdiction of this cause and the  
subject matter thereof.

(2) That the applicant, Stevens Oil Company,  
seeks authority to institute a waterflood project ~~on its~~  
in the ~~lease~~, Twin Lakes-San Andres

Pool, by the injection of water into the San Andres  
its Twinlakes Oil Company Well No. 1  
formation through / located in Unit D of Section 12

Township 9 South, Range 28 East, NMPM, Chaves  
County, New Mexico.

(3) That the nature of the proposed project is such  
~~that it should more properly be classified as a~~  
~~state of depletion and should properly be classified as~~  
pressure maintenance project.  
~~"stripper" wells.~~

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

(5) That there are no known fresh water sands  
in the area.

(6) That applicant's proposed method of through  
8 5/8-inch casing, cement on which has been circulated into  
to the surface, should and into the open-hole interval  
from 1969 feet to 2650 feet, should will not cause  
waste nor impair fresh water supplies and should  
be permitted.

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

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

IT IS THEREFORE ORDERED:

(1) That the applicant, Stevens Oil Company, is hereby authorized to institute a <sup>pressure maintenance</sup> ~~waterflood~~ project ~~on its~~ in the ~~lease~~ Twin Lakes-San Andres Pool by the injection of water into the San Andres its Twinlakes Oil Company Well No. 1, located in formation through ~~the following described wells in Township~~ Unit D of Section 12, Township 9 South, Range 28 East, NMPM, Chaves County, New Mexico.

*(2) That injection shall be through the 8 1/2-inch casing into the open-hole interval from 1969 feet to 2650 feet*

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

*(4) That the project area shall comprise the defined boundaries of the Twin Lakes-San Andres Pool.*

(5) That the subject ~~waterflood~~ project is hereby designated the Twin Lakes Pressure Maintenance ~~Waterflood~~ Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

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

(7) 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.

Docket No. 31-75

Dockets Nos. 1-76 and 3-76 are tentatively set for hearing on January 7 and January 21, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - DECEMBER 17, 1975

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

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

- ALLOWABLE:
- (1) Consideration of the allowable production of gas from seventeen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico, for January, 1976.
  - (2) Consideration of the allowable production of gas from five prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for January, 1976.

CASE 5598: Application of Skelly Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Langlie-Mattix Pool by the injection of water through its Hughes Federal Well Nos. 1 and 3, located in Units N and P, respectively, of Section 17, Township 23 South, Range 37 East, Lea County, New Mexico. Applicant further seeks an administrative procedure whereby the project area could be changed and expanded and additional wells at standard and non-standard locations put on injection and production.

CASE 5599: Application of Stevens Oil Company for special pool rules, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Twin Lakes-Devonian Pool, including a provision for 80-acre spacing and a special gas-oil ratio limit and depth bracket allowable, Chaves County, New Mexico.

CASE 5583: (Continued from December 3, 1975 Examiner Hearing)

Application of Stevens Oil Company for a pilot waterflood project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project in the Twin Lakes-San Andres Pool by injection of produced water through its Twinlakes Oil Company Well No. 1, located in Unit D of Section 12, Township 9 South, Range 28 East, Chaves County, New Mexico.

STEVENS OIL COMPANY

P. O. BOX 1797  
SANTA FE, NEW MEXICO 87501

Donald G. Stevens  
Owner

505 982-8583

Case 5583

etc

November 18, 1975

Mr. William Carr, Attorney  
New Mexico Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Dear Mr. Carr:

Stevens Oil Company respectfully requests the continuance  
of its Case #5583 scheduled to be heard November 19, 1975 to  
the December 17, 1975 hearing.

Yours very truly,

*Donald G. Stevens*  
Donald G. Stevens

NOV 24 1975  
DGS/WILSON COMM.  
SANTA FE

Docket No. 30-75

Docket No. 31-75 is tentatively set for hearing on December 17, 1975. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - DECEMBER 3, 1975

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

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

CASE 5593: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Caffell FD Well No. 1 to be drilled at a point 660 feet from the South line and 1980 feet from the East line of Section 15, Township 17 South, Range 26 East, Kennedy Farms Field, Eddy County, New Mexico, the E/2 of said Section 15 to be dedicated to the well.

CASE 5594: Application of General American Oil Company of Texas for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 330 feet from the South line and 1150 feet from the West line of Section 29, Township 17 South, Range 29 East, Grayburg Gas Field, Eddy County, New Mexico, the W/2 of said Section 29 to be dedicated to the well.

CASE 5595: Application of Harrington Transportation Inc. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Higgins Well No. 1 to be drilled 990 feet from the North and East lines of Section 13, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico, the E/2 of said Section 13 to be dedicated to the well.

CASE 5583: (Continued from November 19, 1975 Examiner Hearing)

Application of Stevens Oil Company for a pilot waterflood project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project in the Twin Lakes-San Andres Pool by injection of produced water through its Twinlakes Oil Company Well No. 1, located in Unit D of Section 12, Township 9 South, Range 28 East, Chaves County, New Mexico.

CASE 5591: (Continued from November 19, 1975 Examiner Hearing)

Application of Amoco Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well at an unorthodox location 1980 feet from the South line and 1241 feet from the West line of Section 33, Township 17 South, Range 29 East, Grayburg-Morrow Gas Pool, Eddy County, New Mexico, the S/2 of said Section 33 to be dedicated to the well.



CASE 5588: (Continued from November 19, 1975 Examiner Hearing)

Application of Amoco Production Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval to commingle Gonzales-Mesaverde and Basin-Dakota gas production in the wellbore of its Jicarilla Contract 146 Well No. 11, located in Unit K of Section 4, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.

CASE 5596: Application of Burk Royalty Company for statutory unitization, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order unitizing, for the purpose of secondary recovery, all mineral interests in the Queen formation underlying the following-described lands, Double L-Queen Pool, Chaves County, New Mexico:

TOWNSHIP 14 SOUTH, RANGE 29 EAST, NMPM

Section 23: E/2 SE/4

Section 24: W/2 SW/4

Section 25: NW/4, SW/4 NE/4, N/2 SW/4, SE/4 SW/4,  
W/2 SE/4, & SE/4 SE/4

Section 36: NE/4 NW/4, NE/4, N/2 SE/4, & SE/4 SE/4

TOWNSHIP 14 SOUTH, RANGE 30 EAST, NMPM

Section 31: W/2, W/2 SE/4, & SE/4 SE/4

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM

Section 1: E/2 E/2

Section 12: NE/4 & E/2 SE/4

Section 13: NE/4 NE/4

Among the matters to be considered at the hearing will be the necessity of unit operations and the feasibility of the proposed secondary recovery program; the designation of a unit operator; the determination of the horizontal and vertical limits of the unit area; the determination of a fair, reasonable, and equitable allocation of production and costs of production, including capital investment, to each of the various tracts in the unit area; the determination of credits and charges to be made among the various owners in the unit area for their investment in wells and equipment; and such other matters as may be necessary and appropriate for carrying on efficient unit operations; including, but not necessarily limited to, unit voting procedures, selection, removal, or substitution of unit operator, and time of commencement and termination of unit operations.

CASE 5597: Southeastern New Mexico nomenclature case calling for an order for the creation and extension of certain pools in Eddy County, New Mexico.

(a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Crow Flats-Morrow Gas Pool. The discovery well is the Samedan Oil Corporation Amoco Federal Well No. 1 located in Unit G of Section 19, Township 16 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 28 EAST, NMPM

Section 19: N/2

(b) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Sitting Bull Falls-Morrow Gas Pool. The discovery well is the American Quasar Petroleum Company of New Mexico Huber State Well No. 1 located in Unit F of Section 36, Township 23 South, Range 22 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 22 EAST, NMPM  
Section 36: W/2

(c) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Little Box Canyon-Morrow Gas Pool. The discovery well is the Cities Service Oil Company Little Box Canyon Unit Well No. 1, located in Unit J of Section 7, Township 21 South, Range 22 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 22 EAST, NMPM  
Section 7: S/2

(d) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the Cottonwood Draw-Strawn Gas Pool. The discovery well is the Robert N. Enfield Cottonwood Draw Unit Well No. 1, located in Unit L of Section 20, Township 25 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 25 SOUTH, RANGE 27 EAST, NMPM  
Section 20: W/2

(e) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Twin Mills-Atoka Gas Pool. The discovery well is the Perry R. Bass Poker Lake Unit Well No. 42 located in Unit G of Section 10, Township 25 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 25 SOUTH, RANGE 30 EAST, NMPM  
Section 10: N/2

(f) EXTEND the Atoka San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 26 EAST, NMPM  
Section 21: N/2 SE/4

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

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM  
Section 29: W/2  
Section 31: N/2  
Section 32: W/2

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

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM

Section 7: E/2

Section 8: W/2

(i) EXTEND the South Empire-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM

Section 1: S/2

(j) EXTEND the South Empire-Wolfcamp Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM

Section 30: S/2 SE/4

Section 31: N/2 NE/4

Section 32: N/2 NW/4

(k) EXTEND the South Sand Dunes Lower Penn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 31 EAST, NMPM

Section 2: W/2

Section 3: N/2

(l) EXTEND the White City-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM

Section 22: All

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Page 1

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
December 3, 1975

EXAMINER HEARING

IN THE MATTER OF:

Application of Stevens Oil Company  
for a pilot water-flood project,  
Chaves County, New Mexico

CASE  
5583

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil  
Conservation Commission:

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

1 MR. STAMETS: The Hearing will please come to order.  
2 Call first Case 5583.

3 MR. CARR: Case 5583, application of Stevens Oil  
4 Company for a pilot waterflood project, Chaves County, New  
5 Mexico.

6 Mr. Examiner, we have received a request from Mr.  
7 Don Stevens that this case be continued to the December 17  
8 Examiner Hearing.

9 MR. STAMETS: Case 5583 will be so continued.  
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General Court Reporting Service  
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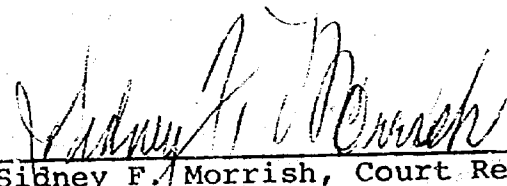
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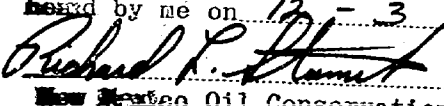
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Page 3

REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a court reporter, do hereby  
certify that the foregoing and attached Transcript of Hearing  
before the New Mexico Oil Conservation Commission was reported  
by me, and the same is a true and correct record of the said  
proceedings to the best of my knowledge, skill and ability.

  
Sidney F. Morrish, Court Reporter

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 5583,  
heard by me on 12-3, 1975.  
, Examiner  
New Mexico Oil Conservation Commission

Docket No. 29-75

Dockets Nos. 30-75 and 31-75 are tentatively set for hearing on December 3 and December 17, 1975. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 19, 1975

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

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

- ALLOWABLE: (1) Consideration of the allowable production of gas from seventeen prorated pools in Lea, Eddy, Roosevelt, and Chaves Counties, New Mexico, for December, 1975.
- (2) Consideration of the allowable production of gas from five prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for December, 1975.

CASE 5583: Application of Stevens Oil Company for a pilot waterflood project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project in the Twin Lakes-San Andres Pool by injection of produced water through its Twinlakes Oil Company Well No. 1, located in Unit D of Section 12, Township 9 South, Range 28 East, Chaves County, New Mexico.

CASE 5584: Application of Cities Service Oil Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well at an unorthodox location 990 feet from the North line and 660 feet from the West line of Section 29, Township 21 South, Range 27 East, South Carlsbad Field, Eddy County, New Mexico, or, in the alternative, in the NW/4 NW/4 of said Section 29 at some point not closer than 660 feet from either the North or West lines of said Section, the W/2 of said Section 29 to be dedicated to the well.

CASE 5585: Application of W. P. Carr for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pictured Cliffs formation underlying the NE/4 of Section 13, Township 31 North, Range 11 West, Blanco-Pictured Cliffs Pool, San Juan County, New Mexico, to be dedicated to a well to be drilled in Unit G of said Section 13. 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. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 5586: Application of Amerada Hess Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Otero-Gallup oil production and Basin-Dakota gas production in the wellbore of its McKenzie Federal Wells Nos. 1 and 3 located, respectively, in Units M and O of Section 25 and its Harvey State Well No. 1 located in Unit N of Section 36, all in Township 25 North, Range 6 West, Rio Arriba County, New Mexico.

CASE 5587: Application of Pennzoil Company for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval to commingle Morrow and Atoka gas production in the wellbore of its Gulf Federal Well No. 2, located in Unit L of Section 6, Township 23 South, Range 27 East, South Carlsbad Field, Eddy County, New Mexico.

CASE 5588: Application of Amoco Production Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval to commingle Gonzales-Mesaverde and Basin-Dakota gas production in the wellbore of its Jicarilla Contract 146 Well No. 11 located in Unit K of Section 4, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.

CASE 5589: Application of Filon Exploration Corporation for pool creation, assignment of a discovery allowable, and special pool rules, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for the production of oil from the Entrada formation for its Federal 33 Well No. 3 located in Unit N of Section 33, Township 21 North, Range 5 West, Sandoval County, New Mexico, and the assignment of a discovery allowable to said well; applicant further seeks the promulgation of special pool rules for said pool, including a provision for a special depth bracket allowable.

CASE 5590: Northwestern New Mexico nomenclature case calling for an order for the creation, contraction, and extension of certain pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

(a) CREATE a new pool in San Juan County, New Mexico, classified as a gas pool for Pictured Cliffs production and designated as the Nipp Pictured Cliffs Pool and described as:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM

Section 16: SW/4

Section 17: SE/4

Section 20: E/2

Section 21: W/2

Section 28: W/2

Section 33: All

Section 34: SW/4

(b) CONTRACT the Blanco-Pictured Cliffs Pool boundary in Rio Arriba and San Juan Counties, New Mexico, to exclude therefrom:

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM

Section 17: SW/4

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM

Section 35: NW/4



(c) EXTEND the Angels Peak-Gallup Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 10 WEST, NMPM

Section 5: N/2

Section 15: SE/4

TOWNSHIP 26 NORTH, RANGE 10 WEST, NMPM

Section 13: S/2

TOWNSHIP 27 NORTH, RANGE 9 WEST, NMPM

Section 31: All

(d) EXTEND the Aztec-Fruitland Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM

Section 8: NW/4

Section 9: SW/4

Section 20: N/2

(e) EXTEND the Aztec-Pictured Cliffs Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM

Section 17: SW/4

Section 20: NW/4

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM

Section 11: N/2

Section 12: NW/4

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM

Section 27: E/2

Section 35: NW/4

(f) EXTEND the Blanco-Mesaverde Pool boundary in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 30 NORTH, RANGE 5 WEST, NMPM

Section 2: All

Section 3: All

(g) EXTEND the Blanco-Pictured Cliffs Pool boundary in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 8 WEST, NMPM

Section 31: SE/4

Section 32: S/2

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM

Section 28: E/2

TOWNSHIP 30 NORTH, RANGE 8 WEST, NMPM

Section 29: SW/4

Section 32: N/2

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM

Section 3: All

Section 4: E/2

TOWNSHIP 31 NORTH, RANGE 9 WEST, NMPM

Section 31: NE/4

Section 32: NW/4

TOWNSHIP 31 NORTH, RANGE 10 WEST, NMPM

Sections 5 through 8: All

Section 14: W/2

Sections 15 through 17: All

Section 18: N/2 and SE/4

Section 20: N/2 and SE/4

Sections 21 through 23: All

Sections 26 through 28: All

Section 29: NE/4

Sections 33 and 34: All

Section 35: N/2

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM

Section 1: All

Section 2: E/2 and SW/4

Section 15: NW/4

Section 16: N/2

Section 26: NE/4

TOWNSHIP 32 NORTH, RANGE 11 WEST, NMPM

Section 16: S/2

Section 17: SE/4

(h) EXTEND the Bloomfield-Chacra Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM

Section 8: SE/4

Section 17: N/2 and SW/4

(i) EXTEND the Campo-Gallup Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 4 WEST, NMPM

Section 12: NW/4

(j) EXTEND the Escrito-Gallup Oil Pool boundary in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 7 WEST, NMPM

Section 33: E/2

TOWNSHIP 24 NORTH, RANGE 8 WEST, NMPM

Section 13: W/2 NE/4, E/2 NW/4 and E/2 SE/4

(k) EXTEND the Fulcher Kutz-Pictured Cliffs Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 11 WEST, NMPM  
Section 23: NW/4 and SE/4

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM  
Section 7: NE/4  
Section 8: NW/4

(1) EXTEND the Harris Mesa-Chacra Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 27 NORTH, RANGE 9 WEST, NMPM  
Section 2: N/2 and SE/4  
Section 11: NE/4  
Section 12: NW/4

TOWNSHIP 28 NORTH, RANGE 9 WEST, NMPM  
Section 26: N/2 and SE/4  
Section 34: NW/4  
Section 35: All

(m) EXTEND the Largo-Chacra Pool boundary in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 27 NORTH, RANGE 7 WEST, NMPM  
Section 6: SW/4  
Section 7: W/2  
Section 15: SW/4  
Section 22: W/2  
Section 27: NW/4  
Section 28: NE/4  
Section 29: S/2

TOWNSHIP 27 NORTH, RANGE 8 WEST, NMPM  
Section 1: SE/4  
Section 12: All

(n) EXTEND the South Lindrith Gallup-Dakota Oil Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 23 NORTH, RANGE 4 WEST, NMPM  
Section 3: NW/4  
Section 4: N/2  
Section 5: NE/4

TOWNSHIP 24 NORTH, RANGE 4 WEST, NMPM  
Section 33: SW/4

(o) EXTEND the West Lindrith Gallup-Dakota Oil Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 4 WEST, NMPM  
Section 1: NW/4 SW/4 and E/2 SW/4  
Section 2: N/2  
Section 11: NW/4 NE/4 and S/2 NE/4

(p) EXTEND the Ojo-Pictured Cliffs Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 15 WEST, NMPM  
Section 26: NE/4

(q) EXTEND the Otero-Chacra Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM  
Section 21: NE/4

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM  
Section 11: S/2  
Section 13: SW/4  
Section 14: N/2  
Section 24: NW/4

(r) EXTEND the Rusty-Menefee Oil Pool boundary in Sandoval County, New Mexico, to include therein:

TOWNSHIP 22 NORTH, RANGE 7 WEST, NMPM  
Section 13: NW/4  
Section 14: NE/4

(s) EXTEND the Tapacito-Pictured Cliffs Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 27 NORTH, RANGE 4 WEST, NMPM  
Section 16: SW/4  
Section 21: N/2

(t) EXTEND the Waw-Pictured Cliffs Pool boundary in San Juan County, New Mexico, to include therein:

TOWNSHIP 27 NORTH, RANGE 13 WEST, NMPM  
Section 29: E/2 and SW/4  
Section 30: SE/4  
Section 31: NE/4  
Section 32: N/2

(u) EXTEND the Wild Horse-Gallup Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM  
Section 14: N/2  
Section 24: NE/4

CASE 5591: Application of Amoco Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well at an unorthodox location 1980 feet from the South line and 1241 feet from the West line of Section 33, Township 17 South, Range 29 East, Grayburg-Morrow Gas Pool, Eddy County, New Mexico; the S/2 of said Section 33 to be dedicated to the well.

CASE 5592: Application of Agua, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced water by injection into the San Andres formation through the open-hole interval from approximately 4000 to 5000 feet in its Blinbry-Drinkard SWD System Well No. A-22 located 817 feet from the North line and 965 feet from the East line of Section 22, Township 22 South, Range 37 East, Lea County, New Mexico.

CASE 5403: (Reopened)

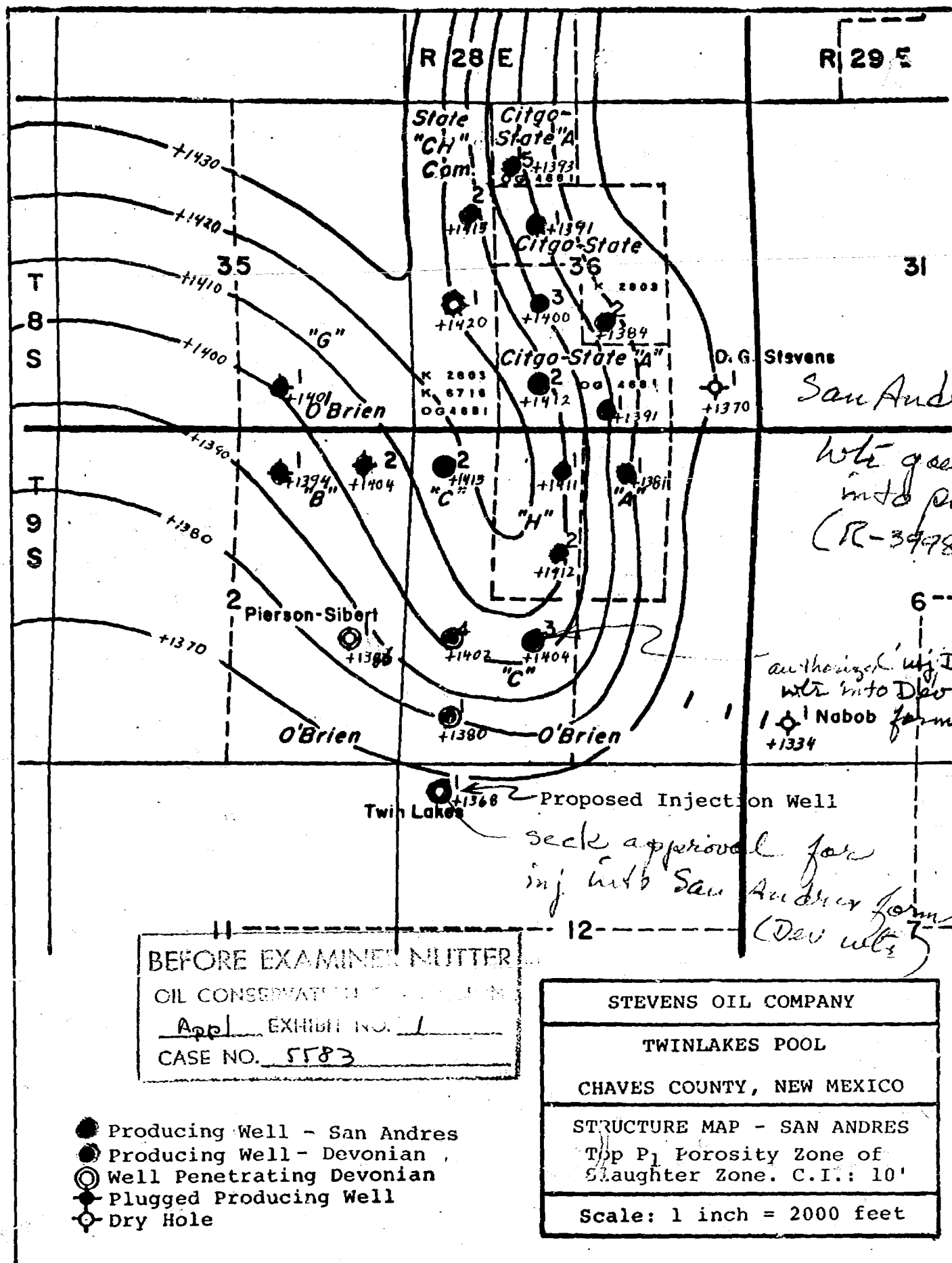
In the matter of the hearing called by the Oil Conservation Commission on its own motion to further consider the subject matter of Case No. 5377, namely to permit all interested parties to appear and show cause why the continued injection of water for secondary recovery or disposal purposes into any formation from the surface of the ground down to and including the Drinkard formation should be permitted in the following described area in Lea County, New Mexico:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM  
Sections 13 through 36: All

TOWNSHIP 23 SOUTH, RANGE 37 EAST, NMPM  
Sections 1 through 12: All

CASE 5571: (Continued from October 8, 1975 Examiner Hearing)

Application of Robert G. Cox for amendment of Order No. R-4561, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks amendment of Order No. R-4561, which order permitted the directional drilling of applicant's Federal "EA" Well No. 1, located 330 feet from the North and West lines of Section 12, Township 18 South, Range 27 East, Empire-Abo Pool, Eddy County, New Mexico, in such a manner as to be bottomed within 100 feet of the surface location. Applicant seeks the amendment of said order to permit bottoming of the subject well approximately 58 feet from the North line and 8 feet from the West line of said Section 12 and to permit verification of said downhole location by single-shot directional surveys made concurrently with the drilling of said well.



## EXHIBIT 3

### Pressure gauge

13 3/8" csg @ 30'  
cement circulated

8 5/8" csg @ 1969'  
w/750 sx - circulated

San Andres  
"light" from  
top @ 1955' to  
top of P<sub>1</sub> zone  
@ 2588 feet

## Salt water injection

no known rays  
or fresh water zones  
behind pipe  
any water that is there  
is saline. And  
what water there is is  
Top San Andres 1955

very small amt,  
no pays or w/zones  
in open hole met  
Open hole 1969-2650  
which could be  
damaged.

Disposal Zone 2590-2650  
P<sub>1</sub> San Andres A/3000 gals 15%  
Swabbed 20 BSWPH, no shows.

PBTD 2650'  
Hydromite Plug 2650-54  
50 sx Class C Cement  
2654-2750

**BEFORE EXAMINER MUTTER**  
CIVIL SERVICE COMMISSION  
April. EXHIBIT NO. 3  
CASE NO. 5583

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

# WATER ANALYSIS REPORT

TO: TWIN LAKES OIL COMPANY

ROSWELL, NEW MEXICO 88201

LABORATORY NO.: H605  
DATE: 7-19-72

WELL NAME + NO.:	O'BRIEN C 1	DEPTH:	0 FT
FIELD:	NA	FORMATION:	NA
COUNTY:	CHAVES	STATE:	NEW MEXICO
SAMPLE PT.:	NA	SAMPLE ID:	NA

## DISSOLVED SOLIDS

## OTHER PROPERTIES

CATIONS	MG/L	MEQ/L		
SODIUM, NA	21955	952	PH =	7.05
CALCIUM, CA	2400	119	SP GR =	1.041
MAGNESIUM, MG	973	80	RESISTIVITY=	.0000

## ANIONS

CHLORIDES, CL	36166	1019
SULFATES, SO4	6000	124
BICARBONATES, HCO3	488	7

THE CALCIUM CARBONATE STABILITY INDEX= 2.14524

THE CALCIUM SULFATE STABILITY INDEX IS 28.24

A NEGATIVE NUMBER INDICATES THE SCALE IN SOLUTION DOES NOT EXCEED THE SATURATION VALUE AND SHOULD NOT PRECIPITATE.

## REMARKS AND RECOMMENDATIONS:

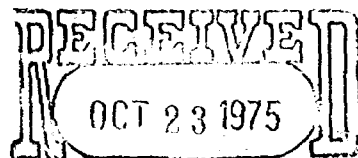
Don, If there is any way we can help - give us a call.

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
App. EXHIBIT NO. 4  
CASE NO. 5583

JACK SARFF

ANALYSIS BASED ON API RECOMMENDED PROCEDURE





OIL CONSERVATION COMM.  
Santa Fe

BEFORE THE OIL AND GAS CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF :

STEVENS OIL COMPANY FOR A PILOT :

WATERFLOOD AND SALT WATER DISPOSAL, :

CHAVES COUNTY, NEW MEXICO. :

No. 5583

APPLICATION

COMES NOW the Applicant, STEVENS OIL COMPANY, a sole proprietorship, and states:

1. Applicant hereby applies for an order granting authority to inject produced salt water in the San Andres formation in the open hole interval from 1945' to 2650' in the Twinlakes Oil Company #1 - D well located in Unit D of Section 12, Township 9 South, Range 28 East, Chaves County, New Mexico as a pilot waterflood project for the Twin Lakes San Andres Pool and a salt water disposal system for the Twin Lakes Devonian Pool.

2. Applicant produces salt water from the Devonian formation in its well in the Twin Lakes Devonian Pool and produces oil from the Twin Lakes San Andres Pool in Section 1, Township 9 South, Range 28 East and Section 36, Township 8 South, Range 28 East, Chaves County, New Mexico.

3. The granting of this Application will effect economies in the disposal of produced Devonian salt water and ultimately enable Applicant to determine the feasibility of a full-scale waterflood project in the Twin Lakes San Andres Pool.

4. Applicant requests establishment of administrative procedure whereby additional wells may be converted into injection wells in accordance with Commission Rule 701.

5. Applicant desires a hearing before the Oil Conservation Commission concerning this matter.

WHEREFORE, APPLICANT PRAYS:

1. That the Commission set this matter down for hearing before it at the earliest possible convenience.

2. That notice be given as required by law.

3. That upon hearing, an order be issued granting the Application as set forth herein.

DONALD G. STEVENS

*Donald G. Stevens*

Attorney for Stevens Oil Company  
P.O. Box 1797  
Santa Fe, New Mexico 87501

DOCKET MAILED

Date 11/10/75

DOCKET MAILED

Date 11/24/75

12/5/75

Application by Hewitt Oil Company  
for a Pilot Waterflood Pro-  
ject, Chaves County, New Mexico.

Applicant, in the above-captioned cause,  
seeks authority to institute a pilot water-  
flood project in the Twin Lakes - San Andres  
Pool by injection of produced water through  
its Twin Lakes Oil Company Well No. 1,  
located in Unit D of Section 12, Township  
9 South, Range 28 East, Chaves County,  
New Mexico. Applicant further seeks an  
~~administrative~~ procedure whereby addi-  
tional wells may be converted to in-  
jection.