

CASE NO.

6503

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

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. 6503
Order No. R-5977

APPLICATION OF SUNDANCE OIL COMPANY
FOR SALT WATER DISPOSAL, ROOSEVELT
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 28, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 9th day of April, 1979, 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, Sundance Oil Company, is the owner and operator of the Cone Federal Well No. 8, located in Unit P of Section 31, Township 7 South, Range 32 East, NMPM, Tomahawk-San Andres Pool, Roosevelt 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 4207 feet to 4228 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 4107 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 or the annulus be left open in order to determine leakage in the casing, tubing, or packer.

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(5) That the injection well or system should be equipped with a pressure limiting switch or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi.

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

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

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

IT IS THEREFORE ORDERED:

(1) That the applicant, Sundance Oil Company, is hereby authorized to utilize its Cone Federal Well No. 8 located in Unit P of Section 31, Township 7 South, Range 32 East, NMPM, Tomahawk-San Andres Pool, Roosevelt 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 4107 feet, with injection into the perforated interval from approximately 4207 feet to 4228 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 or be left open 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 acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi.

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

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

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

(6) 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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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
28 March 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Sundance Oil Company for) CASE
salt water disposal, Roosevelt County,) 6503
New Mexico.)

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
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MR. STAMETS: Call next Case 6503.

MS. TESCHENDORF: Case 6503. Application of Sundance Oil Company for salt water disposal, Roosevelt County, New Mexico.

MR. STAMETS: Call for appearances in this case.

MR. CARR: May it please the Examiner, I'm William F. Carr, Campbell and Black, P. A., Santa Fe, appearing on behalf of the applicant. I have two witnesses.

MR. STAMETS: I'd like to have both witnesses stand and be sworn at this time.

(Witnesses sworn.)

MR. CARR: I would call Mr. George Scott.

GEORGE SCOTT

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

Mr. Scott, will you state your full name and place of residence?

A. George F. Scott. I live in Roswell; Con-

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1 sulting Geologist. I have an office in the Petroleum
2 Building in Roswell.

3 Q And you are -- have been employed by Sun-
4 dance Oil Company in connection with the case before this
5 Commission?

6 A Yes, that is correct.

7 Q Have you studied the area which is the sub-
8 ject of this application?

9 A Yes, I have. I have been involved with
10 Sundance in this field since at the very inception of the
11 project.

12 Q Have you previously testified before this
13 Commission, had your credentials as a geologist accepted
14 and made a matter of record?

15 A Yes, I have.

16 MR. CARR: Mr. Examiner, are the witness-
17 credentials acceptable?

18 MR. STAMETS: They are.

19 Q (Mr. Carr continuing.) Mr. Scott, will you
20 briefly summarize what Sundance is seeking with this appli-
21 cation?

22 A Okay. Sundance desires to utilize the
23 No. 8 Cone Federal and it's shown on the structure porosity
24 map which you have there. They desire to utilize that well
25 as a salt water injection well, disposal well.

1 Q Mr. Scott, you're referring to what has been
2 marked for identification as Sundance Exhibit Number One,
3 is that correct?

4 A That is correct.

5 Q Would you refer to that exhibit and explain
6 to the Examiner what it is and what it shows?

7 A All right, this particular map here is a
8 structural map, contoured on the top of the P-2 zone of the
9 San Andres formation. The P-2 zone is the principal pay
10 zone in this area, and the solid heavy contours are the
11 structural contours. The dashed contours here represent
12 the net porosity in the area, in the P-2 zone.

13 Now, this is not net pay. It's total poro-
14 sity and in general a porosity cutoff of 5 percent was used.

15 Q And what can you tell us about the porosity
16 in the general area?

17 A Okay. The Isopaching of the porosity and
18 a detailed study of the well logs indicate that the porosity
19 increases in thickness northward and northwestward from
20 the proposed disposal well.

21 Southwest of this well, approximately a
22 quarter of a mile, Yates Petroleum drilled a well approxi-
23 mately a year and a half ago that had quite a bit less
24 permeability and less porosity.

25 Q Is this the poorest porosity that's been

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1 encountered in the area, to your knowledge?

2 A In the Yates well right to the south, yes,
3 and that is shown also on the cross section.

4 Q Mr. Scott, what does the area colored in
5 yellow signify?

6 A That's the acreage, the leases owned by
7 Sundance Oil Company.

8 Q And the injection well is indicated how?

9 A It's outlined in red.

10 Q And then what is the red line across the
11 lease area?

12 A That is the line of cross section.

13 Q Where has the oil/water contact been estab-
14 lished in this area?

15 A There has not been an oil/water -- we have
16 not established an oil/water contact in this field; however,
17 there are segments of the field in which the water percentages
18 are very high. Apparently we're looking at zoned water in
19 places. In places in the field we get abnormal high water
20 cuts, probably because of relative permeability considera-
21 tions. It's very difficult sometimes in these San Andres
22 fields to understand why a segment of the field will be
23 nearly entirely water productive.

24 Q Mr. Scott, I direct your attention to what
25 has been marked for identification as Exhibit Number Two,

1 and ask you to explain to the Examiner what it is and what
2 it shows.

3 A. All right. Exhibit Number Two is a north/
4 south cross section through the Tomahawk Field, and it has
5 displayed there the principal porosity log, the sidewall
6 neutron, well-to-well correlations are shown, the Pi marker
7 at the top, the top correlation, then the P-1, P-2, and P-3
8 zones are displayed on it. Also, the intervals where wells
9 on the line of section are perforated. Also, porosity is
10 shown.

11 Q Now, on the log of the Cone No. 8 Well, does
12 it show the injection zone?

13 A. Yes, it does.

14 Q And how large is the perforated interval
15 in that well?

16 A. Approximately 21 feet.

17 Q And do the zones correlate well as you go
18 well-by-well across this area?

19 A. It does. It does. That interval right
20 there correlates very closely with all of the other wells
21 on the cross section. This is the part of the P-2 zone
22 that is oil productive to the north; however, only water
23 was encountered here in this well.

24 Q Mr. Scott, were Exhibits One and Two pre-
25 pared by you or under your direction and supervision?

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1 A. They were. They were prepared by me.

2 MR. CARR: At this time, Mr. Examiner, we
3 would offer Applicant's Exhibits One and Two.

4 MR. STAMETS: Those exhibits will be ad-
5 mitted.

6
7 CROSS EXAMINATION

8 BY MR. STAMETS:

9 Q Mr. Scott, did you say that -- did you have
10 a reason why the Yates No. 1 East Tomtom was not productive?

11 A Yes. The porosities are very low there
12 compared to the wells to the north.

13 Q Okay, so it's not because it's below the
14 water/oil contact?

15 A Right. Right, that is correct.

16 Q Now you indicated segments of the field are
17 highly water productive. Can you give us the locations of
18 those --

19 A Yes.

20 Q -- on Exhibit One?

21 A I'd be pleased to.

22 In the southeast southeast of Section 30,
23 the No. 1 Chambers has started producing a very high water
24 cut there, and that well is perforated near the top of the
25 P-2 zone in this interval of our main pay there, and it is

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1 not a low well structurally. It appears to be just zone
2 water.

3 Also, the dry hole in Section 29, a comple-
4 tion attempt there gave up water with a very low cut of oil,
5 low percentage of oil cut.

6 Q On Exhibit Number One, Mr. Scott, you've
7 shown a couple of faults in there, one of them just imme-
8 diately east of the proposed injection well.

9 A Yes. That fault is controlled by the No. 7
10 Cone Federal, located in the southeast of the northeast
11 quarter. That well is an abnormally low well. That well
12 is 60 feet -- roughly 60 feet low to all four offsets, a
13 completely anomalous situation.

14 I chose to explain this with a fault. The
15 faults would be, of course, subject to -- faulting would
16 be subject to being interpreted in different ways, as
17 faults usually are.

18 One thing in support of the probability of
19 faulting in this area would be the fact that the No. 1 Cone,
20 right to the north of it, that's the discovery well in the
21 field, that we lost circulation in the pay zone, P-2 zone,
22 while that well was being drilled, and we lost circulation
23 in the north offset, the No. 1 Chambers, while the well was
24 being drilled.

25 In that local area up there, evidently there

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1 is extreme fracturing, and that would indicate a tie-in once
2 again with the fault, something unusual there.

3 Q Is there a possibility that this fault could
4 serve as an avenue of escape for these injected waters out
5 of the P-2 zone?

6 A Well, it appears that the faulting has not
7 affected the permeability to any great degree in the No. 8
8 Cone Federal, nor in that Yates dry hole to the south.

9 MR. STAMETS: I presume you've got another
10 witness --

11 MR. CARR: Yes, we do.

12 MR. STAMETS: -- on pressures and --

13 MR. CARR: That's correct.

14 MR. STAMETS: -- this information?

15 MR. CARR: Yes.

16 Q (Mr. Stamets continuing.) Now, Mr. Scott,
17 did Well No. 8 produce in the San Andres zone?

18 A No. A completion attempt there -- on a
19 completion attempt there we were unable to establish commer-
20 cial cuts of oil.

21 Q So this well is below the local water/oil
22 contact.

23 A Well, at least at that location there. All
24 we can get out of the zone is essentially salt water. It's
25 a very minor percentage of oil.

1 MR. STAMETS: Okay. Any other questions of
2 this witness? He may be excused.

3 MR. CARR: I would call Mr. Chuck Joy.

4 CHUCK JOY

5
6 being called as a witness and having been duly sworn upon his
7 oath, testified as follows, to-wit:

8
9 DIRECT EXAMINATION

10 BY MR. CARR:

11 Q Will you state your name and place of resi-
12 dence?

13 A Charles Joy, and I live in Artesia, New
14 Mexico, and I'm a petroleum consulting engineer.

15 Q You've been employed by Sundance Oil Company
16 to study the area involved in this application?

17 A Yes, I have.

18 Q Have you previously testified before this
19 Commission and had your credentials accepted and made a
20 matter of record?

21 A Yes.

22 MR. CARR: Are the witness' credentials
23 acceptable?

24 MR. STAMETS: They are.

25 Q (Mr. Carr continuing.) Mr. Joy, would you

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1 refer to what has been marked for identification as Applicant's
2 Exhibit Number Three, and explain to the Commission what it
3 is and what it shows?

4 A. All right, this is the OCC C-108, Application
5 to Dispose of Salt Water by Injection into a Porous Formation,
6 and do you think I should go through each item on here, or
7 just go down here, and we found a few errors on this form.

8 One, there is an error in the top of cement.
9 Based on 100 percent fill-up the calculated top is at 2301,
10 and they have 3900 down there. That needs to be changed.

11 MR. STAMETS: Calculated was what?

12 A. 2301.

13 MR. STAMETS: Okay.

14 A. And Sundance is anticipating injecting under
15 vacuum. You notice we put up here "vacuum". However, if
16 the occasion arises where the formation will no longer take
17 water under vacuum, Sundance would like permission to inject
18 under pressures up to 1750 pounds.

19 Now the frac pressure has been established
20 in this area from the treating records on the Cone No. 8 and
21 State No. 1 Wells.

22 Initial shut-in pressures after treating
23 these wells were 2100 and 2300 psig, so we'll be injecting
24 well below frac pressure, if we're granted permission to in-
25 ject up to 1750 pounds.

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Let's see, the rest of it on here is just the next coastal zone was 10,000 feet there to the Mississippi.

You want to go to the next exhibit?

Q Now, Mr. Joy, if you will refer to what has been marked as Exhibit Number Four and explain what it is and what it shows.

A That's just the location map showing where the Cone 8 is located.

Q And now I would direct your attention to Exhibit Number Five and ask you to explain to the Examiner what this shows.

A This is a schematic of the proposed injection well and if you'll take a look here, they'll have a gauge on top. They'll have a 2 inch by 2000 pound gate valve, slip and pack off 2-3/8ths inch tubing; 2 inch by 2000 bull plug; Larkin 2-3/8ths by 4-1/2 inch well head, and operating pressure on that is 2500 pounds, it's not on here; a Larkin 4-1/2 by 8-5/8ths casinghead; 2 inch by 2000 pound bull plug; 2-3/8ths inch tubing lined with bonded PVC plastic liner with rubber seals inserted in tubing collar; and 4-1/2 inch casing was cemented and the top of it is -- I'm repeating here -- was at 2301; and the packer will be set at 4107.

There is a collar -- a casing collar located

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1 4089 and one at 4120, so the packer will not be landed in
2 a collar, and the perforations are from 4207 to 4228.

3 They also will have a positive detection
4 device installed with this 2 inch by 2000 pound ball valve
5 on the casing tubing and annulus, and they'll have a 2 inch
6 by 2000 pound ball valve on the surface casing annulus and
7 the 8-5/8ths inch casing shows there and that cement was
8 circulated 390 sacks on the surface casing.

9 And behind, in the annulus between the casing
10 and tubing will be filled with KCL water treated with one
11 gallon of HAI 50 plus 5 gallons of Anhib inhibitor.

12 And the 4-1/2 inch casing is 10-1/2 pound
13 K-55 casing and the 4-1/2 inch choke collar is at 4326 and
14 the 4-1/2 inch casing was landed at 4368.

15 Q Mr. Joy, in your opinion are all zones other
16 than the injection zone fully protected against any intrusion
17 of these injected waters?

18 A Yes, they are, and my review of the area
19 indicates that cement was well above the P-1 zone.

20 Q Will you refer to what has been marked for
21 identification as Exhibit Number Six and explain this to the
22 Examiner?

23 A This is a treating record on the Cone No. 8.
24 On the original completion it shows perforated from 4207 to
25 4228 with two shots per foot; spotted 6 barrels of acid at

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1 4228; pulled up and set R-4 packer at 4107; acidized with
2 4500 gallons of 20 percent NE acid, using 84 ball sealers,
3 and they had good ball action. The average injection rate
4 was 2.5 barrels per minute. Average treating pressure was
5 2500 pounds. Initial shut-in was 2100 pounds. Final shut-
6 in was 1770 pounds after 13 minutes and swab tested for five
7 days, recovered salt water with only a trace of oil. Shut
8 in pending approval to convert to salt water disposal well.

9 Q Mr. Joy, would you refer to what has been
10 marked for identification as Exhibit Number Seven and sum-
11 marize this.

12 A That is a water analysis of water from the
13 Cone No. 8 Well.

14 Q Is this water from the San Andres?

15 A Yes, it is.

16 Q And what is the source of the water you
17 propose to inject?

18 A It would be all produced San Andres water.

19 Q So it would all be compatible?

20 A Yes, it will be compatible.

21 Q Is it safe to say, then, you're simply re-
22 injecting water into the formation from which it was pro-
23 duced?

24 A That is correct.

25 Q Is the injection system to be a closed system?

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A. Yes, it will be.

Q. Would you refer to what have been marked Exhibits Eight, Nine, and Ten, and explain what they are? And what they show?

A. Well, this shows that all of the wells in the area are completed in the P-2 zone and also four wells are completed in the P-3 zone, and that is the Cone Federal 1, 3, and 4, and the State No. 1 Well.

Q. Now, let's look at what has been marked as Exhibit Number Eleven and explain what that is.

A. That is a schematic of the Yates -- oh, wait a minute. This is wells within 1-1/2 mile radius of the Cone Federal No. 3 Well, and that is Cone Federal No. 4, which is in the northeast southeast of 31, 7 South, 32 East, 660 feet from the east line, 1980 feet from south line, Roosevelt County, New Mexico, and the surface casing is set at 1827 feet and cemented with 600 sacks. The production casing was set at 4398 and cemented with 300 sacks and the calculated top of cement based on 100 percent fill-up would be at 2739 feet, and the producing interval is from 4323 to 4333.

The next well is the Cone Federal No. 7, southeast of the northeast, Section 31, 7 South, 32 East, 1980 feet from north line, 660 feet from east oine, Roosevelt County, New Mexico. Surface casing was set at 1835 feet

1 and cemented with 450 sacks. Producing casing was set at
2 4400 feet and cemented with 300 sacks, and the calculated
3 top of cement there is at 2741 feet. Producing interval is
4 from 4251 to 4278.

5 Then this dry hole of Yates that's been
6 plugged and abandoned, Yates No. 1-E Tomtom, is in the
7 northwest northeast Section 6, 8 South, 32 East, 660 feet
8 from the north line and 1980 feet from the east line, Chaves
9 County, New Mexico, and it was P&A'd 9-26-77, and surface
10 casing was set at 1725 feet with 760 sacks; producing casing
11 was set at 4400 feet with 420 sacks, and the cement top was
12 recorded at 2400 feet, and the producing interval shows 0,
13 P & A'd.

14 Q Now will you refer to Exhibit Number Twelve
15 and summarize this for the Examiner.

16 A All right, well, this is a schematic of the
17 Yates Well and how they went in and plugged it. They run
18 a cast iron bridge plug at 4080 and put 2 bailers of cement
19 on top. They set a 32-sack plug at 2881 to 2780 and top of
20 a 4-1/2 was at 2875; they pulled that much 4-1/2 inch casing
21 from the well. Then they filled the bored area here with
22 heavy drilling mud and they set a 35-sack cement plug from
23 1762 to 1680, and they had to re-cement and set a 50-sack
24 cement plug at 1762 feet. And it has 8-5/8ths inch 24-pound
25 surface casing and a 12-1/4 inch hole set at 1725 feet,

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1 cemented with 760 sacks, and cement was circulated. And
2 then at the surface they have an 8-sack cement plug on top
3 of the surface casing and a dry hole marker inserted in the
4 top of the well.

5 Q Refer to what has been marked as Exhibit
6 Thirteen and summarize this for the Examiner.

7 A This shows the leases held by Sundance Oil
8 Company in the Tomahawk Field.

9 Q Does it also show other wells in the area?

10 A Yes, it does.

11 Q Are there any wells within 2-1/2 miles of
12 the subject disposal well which are not San Andres comple-
13 tions?

14 A Yes, the Holly Energy-Union Federal No. 1
15 is completed in the Pennsylvanian formation.

16 Q Are there any other wells?

17 A No.

18 Q And the yellow line on this merely shows
19 Sundance's --

20 A Outlines the lease, right.

21 Q Please refer to Exhibit Fourteen and explain
22 that to the Examiner.

23 A This is a plat of the proposed injection
24 system. If you look up here at the Langlie Federal, they
25 plan on returning water from the Langlie Federal lease down

1 to the Chambers Federal by gravity and heater-treater pres-
2 sure.

3
4 From there they will pump the water from
5 the Chambers lease and the Langlie lease down to the Cone
6 Federal lease right straight south there.

7 Then the water from the State lease on the
8 east there will be returned by gravity and heater pressure
9 back to the Cone Federal, and all the produced water will be
10 pumped from the Cone Federal down to the proposed injection
11 well where they will install a Gardner-Denver TA-3 Triplex
12 pump, and this system will be closed.

13 Q Will you now refer to Exhibit Fifteen and
14 Sixteen, and identify what they are?

15 A This is just the United States Department
16 of Interior Geological Form 9331, and they've requested to
17 convert the well to salt water disposal.

18 And the second one is the U. S. Form 2920-1
19 and this is temporary use of application and permit.

20 Q Mr. Joy, in your opinion what effect will
21 the injection of this water have on the reservoir?

22 A If application is denied the wells will be
23 prematurely shut in, causing a loss of recoverable oil.

24 Presently two high water-producing wells,
25 the Langlie No. 1 and the Chambers Federal No. 1, are shut-
in. Respective water production is 160 and 340 barrels per

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CERTIFIED SHORTHAND REPORTER
2020 Plaza Blanca (908) 471-3402
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (SOS) 471-2463
Santa Fe, New Mexico 87501

1 day. It costs .43 cents per barrel to truck water from
2 these wells. This high cost has raised economic limits to
3 around 12 barrels of oil per day per well.

4 The above two wells were averaging 11 and
5 14 barrels of oil per day when they were shut-in.

6 Injecting water in the Cone No. 8 Well will
7 increase oil recovery from this reservoir. Present data
8 indicates reservoir has a solution gas drive mechanism. By
9 maintaining a higher reservoir pressure the gas will not
10 break out of solution as easily leaving oil behind. In-
11 jected water will follow path of least resistance; conse-
12 quently, most of the water injected will move northward as
13 the reservoir pressure is being decreased by reservoir
14 withdrawals in this area.

15 Also additional oil recovery will result
16 as injected water will sweep unrecovered oil into the
17 northern producing wells.

18 Q Okay, now Mr. Joy, if we just assume for
19 the moment that the water injected will migrate radially
20 away from the wells, how long would it take, in your opinion,
21 for the injected water to affect any offsetting lease?

22 A Well, according to Mr. Scott's structure
23 map, the Cone No. 8 Well is located on the periphery of the
24 reservoir, and based on this interpretation it is doubtful
25 injected water would move out radially. However, if radial

1 movement occurs, it would take approximately eight years
2 for water to reach a well located 660 from the north line
3 and from the west line of Section 5, Township 8 South,
4 Range 32 East. Above calculations were based on injection
5 rate of 600 barrels of oil per day, 35 feet of pay, and 4
6 percent porosity.

7 Q Mr. Joy, in your opinion, will granting
8 this application prevent waste?

9 A By granting the ---

10 Q Yes.

11 A No, it will not waste.

12 Q Wait a minute.

13 A I didn't hear it.

14 Q In your opinion, will granting the applica-
15 tion prevent waste?

16 A Let's see.

17 Q By granting this application, Mr. Joy,
18 would hydrocarbons be recovered that would otherwise be
19 left in the ground?

20 A Yes, they would be by granting this.

21 Q And would it therefore prevent waste?

22 A Correct.

23 Q Would granting the application protect the
24 correlative rights of Sundance?

25 A Yes, it would.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (505) 471-2443
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (606) 471-2462
Santa Fe, New Mexico 87501

1 Q Were Exhibits Three through Sixteen either
2 prepared by you or have you reviewed them and can you testi-
3 fy as to their accuracy?

4 A I reviewed them.

5 MR. CARR: At this time, Mr. Examiner, I
6 would offer into evidence Exhibits Three through Sixteen.

7 MR. STAMETS: These exhibits will be ad-
8 mitted.

9 MR. CARR: I have nothing further on direct.

10
11 CROSS EXAMINATION

12 BY MR. STAMETS:

13 Q Mr. Joy, have you checked any of the cement
14 tops to see how much actual fill there is? I see you've
15 calculated some tops.

16 A I calculated them 100 percent. I think you
17 can, normally you can get a figure at least 60 percent of
18 fill on most of these areas, which --

19 Q I notice the Yates here shot off their
20 casing about 325 feet below the top of cement. Seems like
21 that would be a little hard to do.

22 A I was looking at that, too. I noticed that.
23 Unless they have --- I don't see how they got their casing
24 loose if they had an excellent cement job up around the
25 pipe there, but I still feel like you got adequate space to

1 protect the pay, even if you figured at 60 percent.

2 I could find no bond logs or any temperature logs
3 run on these wells.

4 Q Okay. And you have one exhibit that shows
5 the 2100 pounds instantaneous shut-in on the well in question
6 and then you mentioned one well had 2300 pounds. Which well
7 is that?

8 A That was the Cone No. --- it's the State No.
9 1 Well. It's directly northeast of the No. 8 there. Of
10 No. 4, rather.

11 Q Those are the only two wells that you have
12 this information on?

13 A Right, that's the only two wells I have the
14 information on.

15 Q And since Mr. Scott testified he had lost
16 circulation in the couple of other wells, that obviously
17 wouldn't carry out throughout the entire formation.

18 Do you find that these pressures pretty well
19 jibe with those that you've seen in other San Andres wells
20 in this general area?

21 A They do, because I know my San Andres wells
22 when I was with the oil company -- from past experience I've
23 found that at shallower depths I was happy to get up to
24 around 1300 pounds to inject at around 2500, 2600 feet into
25 the San Andres in Eddy County.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (995) 471-2462
Santa Fe, New Mexico 87501

1 Q Generally this is a tight formation --
2 A Right.
3 Q -- and has a high frac pressure.
4 A Correct.
5 Q And the annulus on this well will either
6 be left open or a gauge will be on there to make determina-
7 tion of any leakage of either the tubing or the packer?
8 A Right, correct. We got a positive detection
9 device.
10 MR. STAMETS: Any other questions of this
11 witness? He may be excused.
12 Anything further in this case?
13 MR. CARR: Nothing further.
14 MR. STAMETS: Take the case under advisement.
15 (Hearing concluded.)
16
17
18
19
20
21
22
23
24
25

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2030 Plaza Blanca (SOS) 411-2463
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY
 CERTIFY that the foregoing and attached Transcript of
 Hearing before the Oil Conservation Division was reported
 by me; that said transcript is a full, true, and correct
 record of the hearing, prepared by me to the best of my
 ability, knowledge, and skill, from my notes taken at the
 time of the hearing.

Sally W. Boyd, C.S.R.

BEFORE EXAMINER STAMETS	
OIL CONSERVATION DIVISION	
EXHIBIT NO. _____	
CASE NO. _____	
Submitted by _____	
Hearing Date _____	

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Examiner hearing of Case No. _____
 heard by me on _____ 19____

_____, Examiner
 Oil Conservation Division

SALLY WALTON BOYD
 CERTIFIED SHORTHAND REPORTER
 3020 Plaza Blanca (006) 471-2462
 Santa Fe, New Mexico 87501

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ gas ☐ other ☒ Salt Water Disposal

2. NAME OF OPERATOR

SUNDANCE OIL COMPANY

3. ADDRESS OF OPERATOR

Suite 510, 1776 Lincoln St., Denver, CO 80203

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 660' FSL, 660' FEL Unit P

AT TOP PROD. INTERVAL:

AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

CHANGE ZONES ☐

ABANDON* ☐

(other) CONVERT TO SALT WATER DISPOSAL ☒

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Intend to convert well to a water disposal well.

Exhibit 15
Case 6563

Subsurface Safety Valve: Manu. and Type

18. I hereby certify that the foregoing is true and correct

SIGNED

Richard O. Dimit

TITLE VP, Production

DATE 2/26/79

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

5. LEASE NM-15019	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME	8. FARM OR LEASE NAME Cone Federal
9. WELL NO. 8	10. FIELD OR WILDCAT NAME Tomahawk, San Andres
11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA Section 31, T. 7S., R. 32E.	12. COUNTY OR PARISH Roosevelt
13. STATE New Mexico	14. API NO.
15. ELEVATIONS (SHOW DF, KOB, AND WD) 4469' GL	

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

Set @ 2000' Ft.

TEMPORARY USE APPLICATION AND PERMIT
Title I, Sec. 28(2)(e) of the Mineral Leasing Act of 1920, 30 U.S.C. 185, as amended; Secs. 302(b) and 504(a) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732, 1764.

Serial Number

INSTRUCTIONS ON REVERSE

APPLICATION

1. Name (first, middle initial, and last) Address (include zip code)
SUNDANCE OIL COMPANY Suite 510, 1776 Lincoln Street
Denver, CO 80203

2. Give legal description of public lands for which you are applying

TOWNSHIP	RANGE	SECTION	SUBDIVISION
7 South	32 East	31	660' FSL and 660' FEL, Unit P

Meridian	State	County	Acres (number)
	New Mexico	Roosevelt	

3. Proposed date(s) of use: From February, 1979 to February, 1989

4a. Are you 21 years of age or over?
☒ Yes ☐ Nob. Are you a citizen of the United States or have you declared your intention? ☒ Yes ☐ Noc. As applicant, are you a ☐ Partnership ☐ Association ☒ Corporation; ☐ Individual(s); or an agency of ☐ Federal Government ☐ State Government ☐ Political subdivision of any state?d. Are the statements required by Instruction Number 2 attached? ☒ Yes ☐ No ☐ Not applicable5. Are you making this application for your own use and benefit? ☒ Yes ☐ No (If "no," explain)6. Are the lands now improved, occupied, or used? ☒ Yes ☐ No (If "yes," describe improvements and purposes, identify users and occupants)

This well is on Tom Gainor's ranch. He owns the surface & we have the minerals.

7a. What do you propose to use the lands for?

Damages for surface on this location & roads have been approved & paid for.

b. What improvements, including sanitation facilities, do you intend to make? (Describe improvements and attach drawings, if convenient)

We do not plan to make any changes in location at this time. If we should have to set tanks & pump, they will be on same pad as the well is now on.

c. What is the estimated cost of proposed improvement? \$ 81,000.00

d. What is the proposed source of water for domestic or other uses?
To dispose of water from our other leases adjacent to and on this lease.8. Have you enclosed filing fee of \$10? ☒ Yes ☐ No (See Instruction Number 3)

I CERTIFY That the information given by me in this application is true, complete, and correct to the best of my knowledge and belief and is given in good faith.

2/26/79

(Date)

Richard O. Dimit

(Signature of Applicant) V-P, Production

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

PERMIT

Permission is hereby granted to

of

to use the following-described lands:

TOWNSHIP	RANGE	SECTION	SUBDIVISION
----------	-------	---------	-------------

Meridian	State	County	Acres (number)
----------	-------	--------	----------------

for the purpose of

and subject to the following conditions:

1. This permit is issued for the period specified below. It is revocable at the discretion of the authorized officer of the Bureau of Land Management, at any time upon notice. This permit is subject to valid adverse claims heretofore or hereafter acquired.

2. Permittee shall pay annually, in advance, to the authorized officer the sum of dollars as rental or such other sum as may be required if a rental adjustment is made.

3. Permittee shall observe all Federal, State, and local laws and regulations applicable to the premises and to erection or maintenance of signs or advertising displays including the regulations for the protection of game birds and game animals, and shall keep the premises in a neat, orderly, and sanitary condition.

4. Use or occupancy of land under this permit shall commence within months from date hereof and shall be exercised at least days each year.

5. Permittee shall take all reasonable precautions to prevent and suppress forest, brush, and grass fire and prevent pollution of waters on or in the vicinity of the lands.

15. Special Conditions:

6. Authorized representatives of the Department of the Interior, other Federal agencies, and game wardens shall at all times have the right to enter the premises on official business.

7. Permittee shall not enclose roads or trails commonly in public use.

8. Permittee shall pay the United States for any damage to its property resulting from this use.

9. Permittee shall notify the authorized officer of address change immediately.

10. This permit is subject to all applicable provisions of the regulations (43 CFR 2920) which are made a part hereof.

11. Permittee agrees to have the serial number of this permit marked or painted on each advertising display erected or maintained under the authority of such permit.

12. Permittee shall not cut any timber on the lands without prior permission from the authorized officer.

13. This permit is subject to the provisions of Executive Order No. 11246 of September 24, 1965, as amended, which sets forth the Equal Opportunity clauses. A copy of this order may be obtained from the signing officer.

14. This permit may not be assigned without prior approval of the authorized officer of the Bureau of Land Management.

Permit issued for period

From

(Authorized Officer)

To

(Title)

(Date)

INSTRUCTIONS

1. Submit, in duplicate, to any local office of the Bureau of Land Management having jurisdiction of the lands.

2. An application by a partnership or association must be accompanied by a statement by each member that he is a citizen of the United States or has filed a declaration to become a citizen. An application by a corporation must be accompanied by a statement showing that the corporation is authorized to hold land in the State in which the land is located and that the person making the application is authorized to act for the corporation.

3. If applicant is other than a Federal, State, or local governmental agency, this application must be accompanied by a

nonreturnable filing fee of \$10 made payable to the Bureau of Land Management.

4. If this application is for permission to erect an advertising display or sign, the applicant must: (a) attach an accurate and fully descriptive diagram, sketch, or photograph (at least 3" x 5") of the sign or display to be erected showing the dimensions, type of construction, estimated cost, the advertising material to be included thereon, the plan of illumination, if any, and the manner of attachment to the land; and, (b) a photograph (at least 3" x 5") showing the site on which the sign or display is to be erected.

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR SUNDANCE OIL COMPANY		ADDRESS Suite 510, 1776 Lincoln St., Denver, CO 80203			
LEASE NAME Cone Federal	WELL NO. 8	FIELD Tomahawk, San Andres	COUNTY Roosevelt		
LOCATION UNIT LETTER P ; WELL IS LOCATED 660 FEET FROM THE South LINE AND 660 FEET FROM THE East LINE, SECTION 31 TOWNSHIP 7 South RANGE 32 East NMPM.					
CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
Wt. 24#	8 5/8"	1817'	390 sx	Surface	Circulated 10 sx
INTERMEDIATE					
None					
LONG STRING					
Wt. 10.5#	4 1/2"	4368'	300 sx	3900'	Schlumberger Perf. Depth Control Log
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		
4.70#, J-55	2 3/8"	3960'	Howco R-4, 4107'		
NAME OF PROPOSED INJECTION FORMATION		TOP OF FORMATION		BOTTOM OF FORMATION	
San Andres		3391'		4368'	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?		PERFORATIONS OR OPEN HOLES?		PROPOSED INTERVAL(S) OF INJECTION	
Tubing		4207-4228'		4207-4228'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL?		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?	
No		Oil Well		No	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA	
Approximately 250'		None		Approximately 10,000' (Miss.)	
ANTICIPATED DAILY INJECTION VOLUME (BBL/S.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSIG)
600	200	1500	Closed	Gravity	Vacuum
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF		
Yes			Salt Water		
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)			NATURAL WATER IN DISPOSAL ZONE		
Tom Gainor, P.O. Box 206, Kenna, New Mexico 88122			Same		
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL			ARE WATER ANALYSES ATTACHED?		
Champlin Petroleum Co., 300 Wilco Bldg., Midland, TX 79701			Yes		
Yates Petroleum Corporation, 207 4th St., Artesia, New Mexico 88210					
Exhibit 3					
Case 6503					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	
Yes		Yes		Yes	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)?		PLAT OF AREA		ELECTRICAL LOG	
Yes		Yes		Yes	
				DIAGRAMMATIC SKETCH OF WELL	
				Yes	

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

Richard O. Dimit Vice President, Production 2/26/79
(Signature) Richard O. Dimit (Title) (Date)

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

**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.

Operator SUNDANCE OIL Co.			Lease CONE FEDERAL		Well No. 8
Unit Letter P	Section 31	Township 7 SOUTH	Range 32 EAST	County ROOSEVELT	
Actual Footage Location of Well: 660 feet from the SOUTH line and 660 feet from the EAST line					
Ground Level Elev. 4469.4	Producing Formation San Andres	Pool Tomahawk	Dedicated Acreage: 40 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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: Richard O. Dimit
Position: Vice President, Production
Company: Sundance Oil Company
Date: November 9, 1978

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.

Date Surveyed: OCTOBER 28, 1978
Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No. John W. West 676
Ronald J. Eidson 3239

YATES - #1 E. Tom Tom
 660' FNL E 1980' FEL
 SEC. 6, T8S, R 32E
 CHAVES Co., New Mexico
 P&A - SEPT. 26, 1977

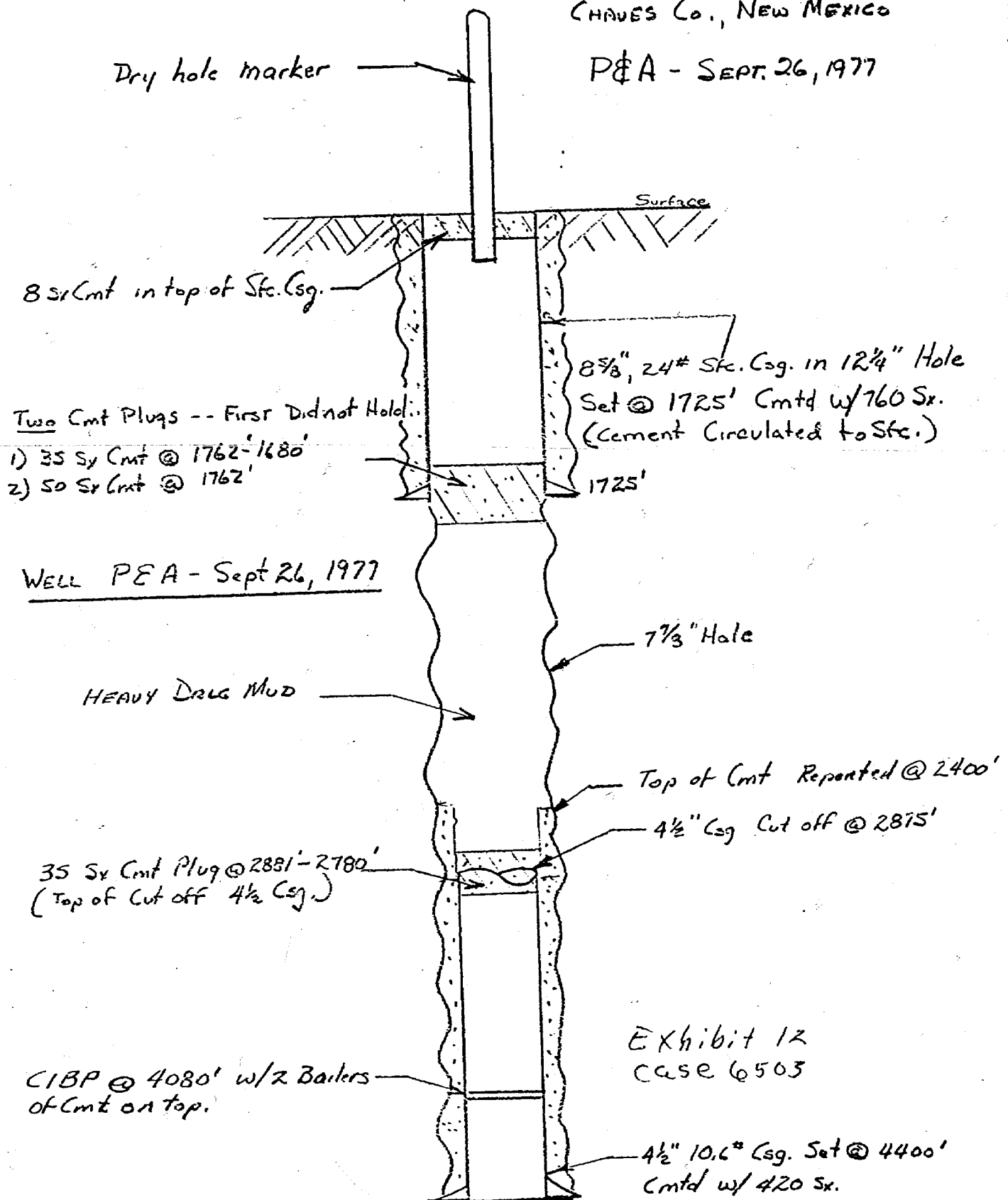


EXHIBIT 12
 CASE 6503

CONE FEDERAL #8

On original completion, perforated 4207' to 4228' with 2 shots per foot. Spotted 6 barrels acid at 4228'. Pulled up and set R-4 packer at 4107'. Acidized with 4500 gallons 20% NE acid using 84 ball sealers. Had good ball action. Average injection rate 2.5 BPM. Average treating pressure 2500#. ISIP 2100#. FSIP 1770# in 13 minutes. Swab tested for five days. Recovered salt water with only a trace of oil.

Shut-in pending approval to convert to salt water disposal well.

Exhibit 6
Case 6503

Diane John

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W79-174

To Sundance Oil Company

Date 2-14-79

Box 115

Roswell, New Mexico

ATTN: Mr. Jim Akins

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by_

Date Rec. **W 2-14-79**

Well No. Cone Federal #8

Depth.

Formation **San Andres**

County.

Field Tomahawk

Source.

Resistivity _____ 0.047 @ 74° F.

Specific Gravity ----- 1.184

pH 6.8

Calcium (Ca) 36,500

*MPL

Magnesium (Mg) ----- 6,300

Chlorides (Cl) 171,000

Sulfates (SO_4) 400

Bicarbonates (HCO_3^-) 290

Soluble Iron (Fe) _____ Nil

Remarks:

*Milligrams per liter

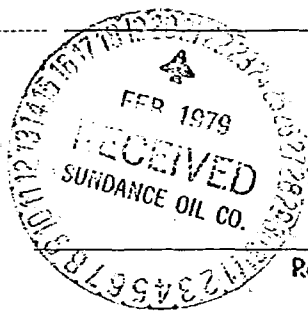


Exhibit 7
Case 6503

Respectfully submitted,

Analyst: Brewer

CC:

HALLIBURTON COMPANY

By

W. L. Brewer
CHEMIST

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Cone Federal #1
Cone Federal #2
Cone Federal #3
Cone Federal #4
Cone Federal #5
Cone Federal #6
Cone Federal #7

Langley Federal #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

Exhibit 8
Case 6503

Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Chambers Federal #1
Chambers Federal #2
Chambers Federal #3

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510, 1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904, 1776 Lincoln Street
Denver, CO 80203

Jerry Chambers
1720 Lincoln Center Building
Denver, CO 80264

Exhibit 7
Case 6503

Lease Status: State

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: State #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

Exhibit 10
Case 6503

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

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.

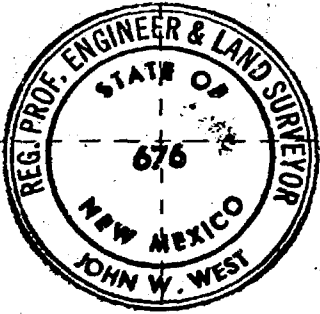

Operator SUNDANCE OIL CO.		Lease GONE FEDERAL		Well No. 8
Unit Letter P	Section 31	Township 7 SOUTH	Range 32 EAST	County ROOSEVELT
Actual Footage Location of Well: 660 feet from the SOUTH line and 660 feet from the EAST line				
Ground Level Elev. 4469.4	Producing Formation San Andres	Pool Tomahawk	Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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 _____

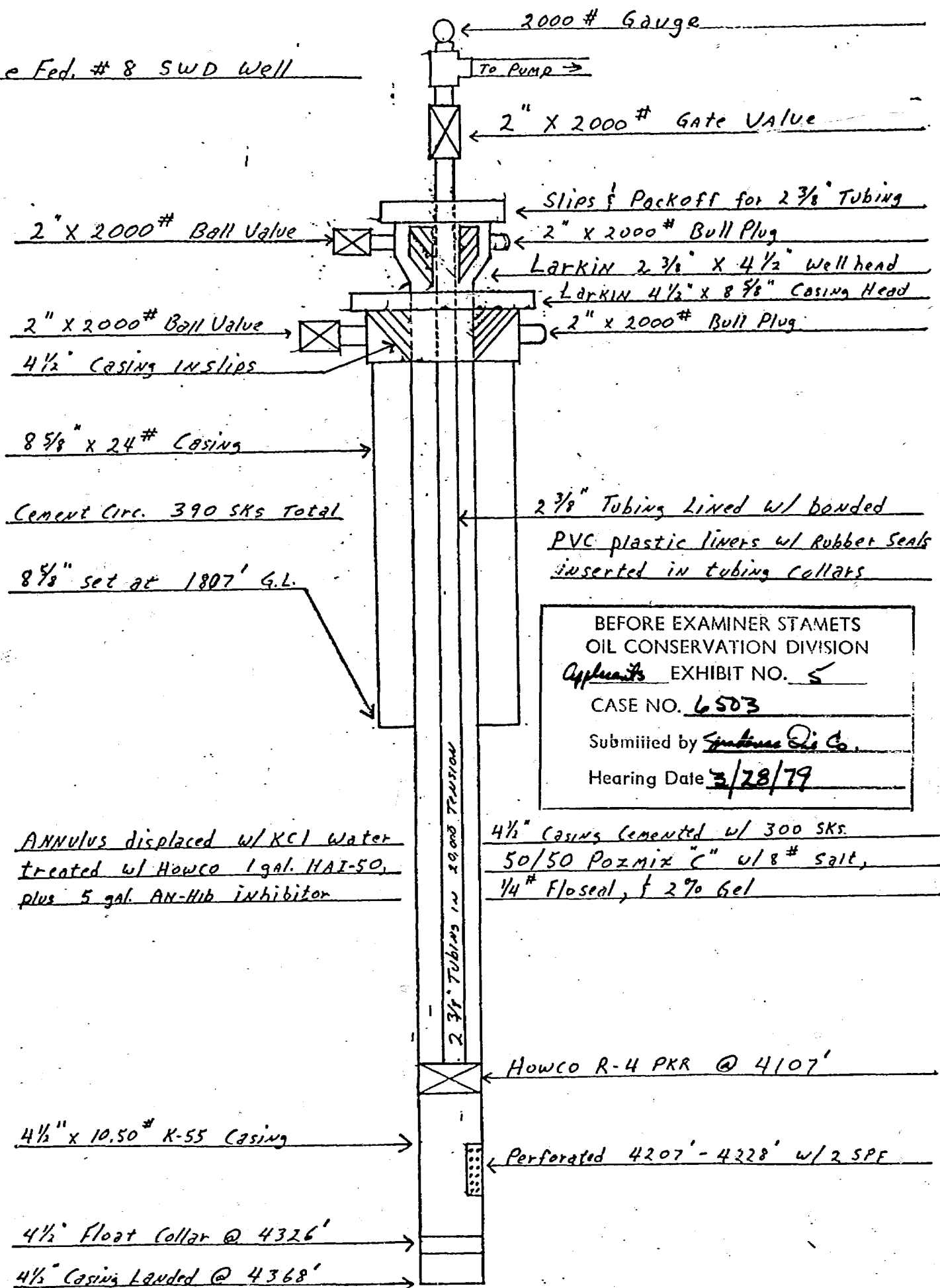
If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

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.

<p>BEFORE EXAMINER STAMETS OIL CONSERVATION DIVISION <i>Applicants</i> EXHIBIT NO. 4 CASE NO. 6503 Submitted by Sundance Oil Co. Hearing Date 3/28/79</p>	
	
	

<p>CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Richard O. Dimit</i> Name Richard O. Dimit Position Vice President, Production Company Sundance Oil Company Date November 9, 1978</p>	
<p>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.</p> <p>Date Surveyed OCTOBER 28, 1978 Registered Professional Engineer and/or Land Surveyor <i>John W. West</i> Certificate No. John W. West 676 Ronald J. Eideon 3239</p>	

Coxe Fed. # 8 SWD Well



BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Applicants EXHIBIT NO. 5
CASE NO. 6503
Submitted by Syntroleum Co.
Hearing Date 3/28/79

ANNULUS displaced w/ KCl Water
treated w/ Howco 1 gal. HAI-50,
plus 5 gal. AN-Hib inhibitor

4 1/2\" Casing Cemented w/ 300 SKS.
50/50 Pozmix "C" w/ 8# Salt,
1/4\" Floseal, & 2% Gel

2 3/4\" Tubing in 2000 Tension

CONE FEDERAL #8

On original completion, perforated 4207' to 4228' with 2 shots per foot. Spotted 6 barrels acid at 4228'. Pulled up and set R-4 packer at 4107'. Acidized with 4500 gallons 20% NE acid using 84 ball sealers. Had good ball action. Average injection rate 2.5 BPM. Average treating pressure 2500#. ISIP 2100#. FSIP 1770# in 13 minutes. Swab tested for five days. Recovered salt water with only a trace of oil.

Shut-in pending approval to convert to salt water disposal well.

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION

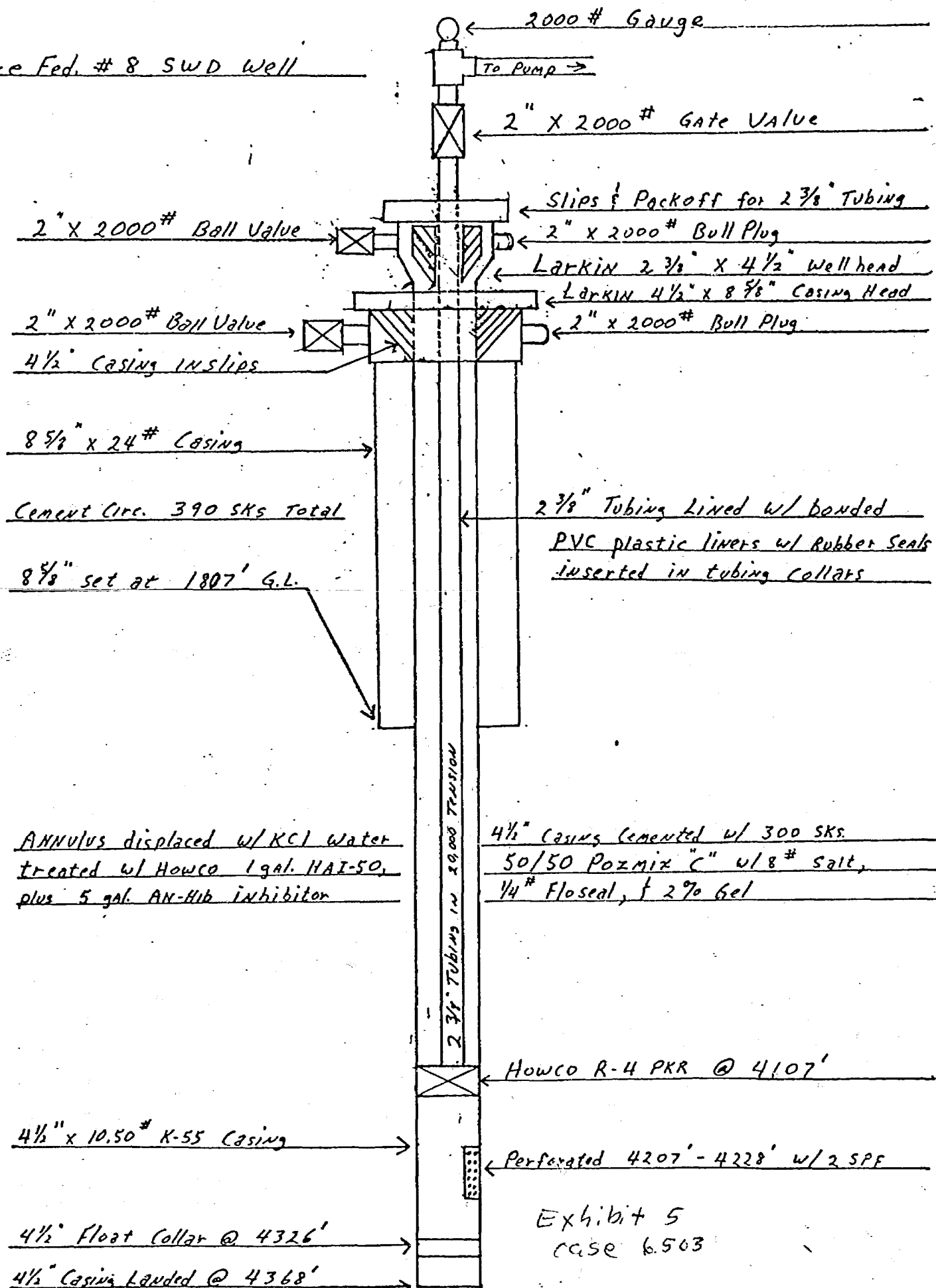
Applicants EXHIBIT NO. 6

CASE NO. 6563

Submitted by Sundance Dr. Co.

Hearing Date 3/28/79

Core Fed. # 8 SWD Well



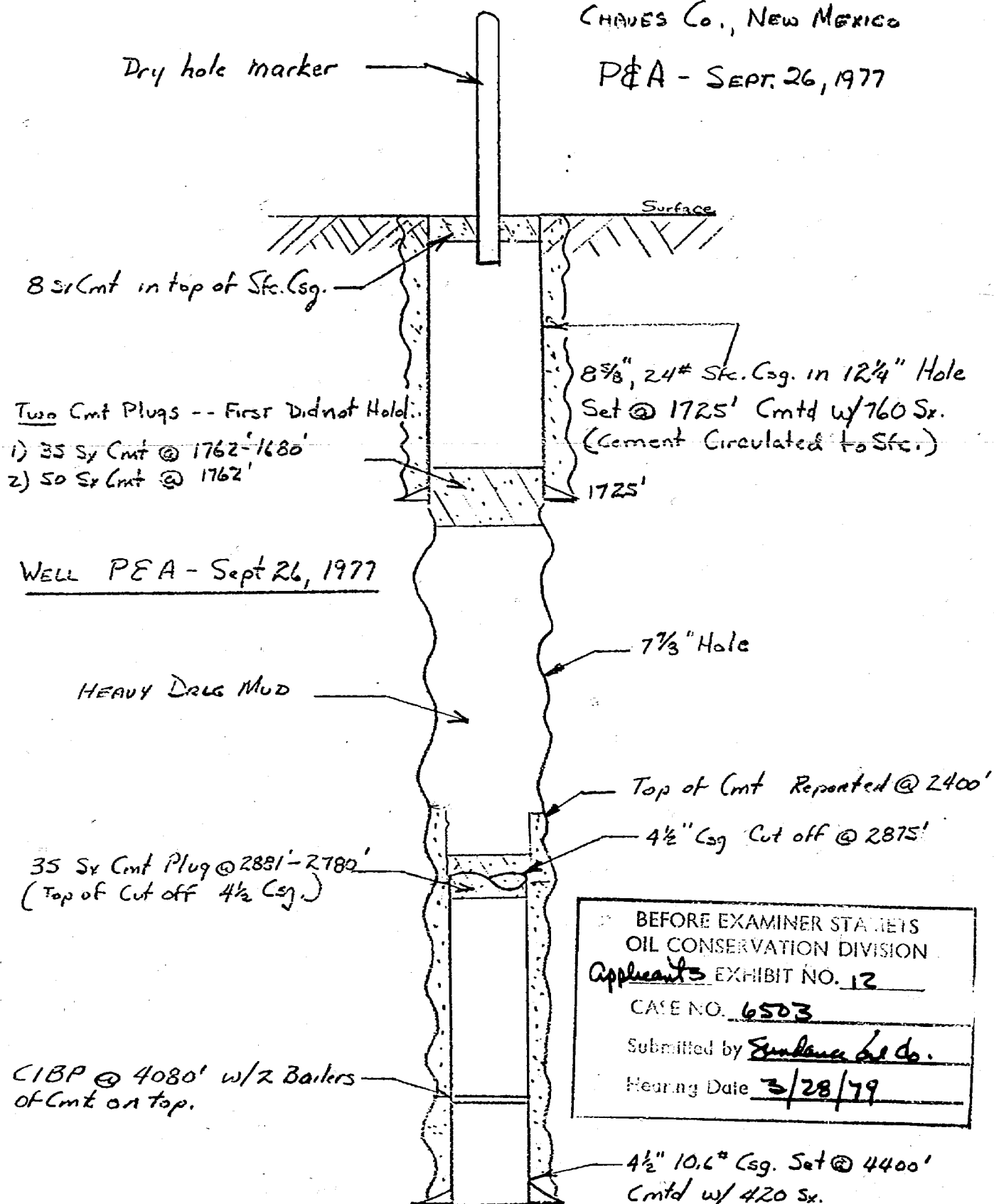
YATES - #1 E. Tom Tom

660' FNL E 1980' FEL

SEC. 6, T8S, R 32E

CHAVES Co., New Mexico

P&A - SEPT. 26, 1977



WELLS WITHIN ONE-HALF MILE OF CONE FEDERAL #8

<u>Well Name</u>	<u>Surface Casing/Sx Cement</u>	<u>Production Casing/Sx Cement</u>	<u>Cement Top</u>	<u>Producing Interval</u>
Cone Federal # 4 NE SE 31-7S-32E 660' FEL, 1980' FSL Roosevelt County, N. M.	1827'/600 sx	4398'/300 sx	* 2739'	4323' to 4333'
Cone Federal # 7 SE NE 31-7S-32E 1980" FNL, 660' FEL Roosevelt County, N. M.	1835'/450 sx	4400'/300 sx	* 2741'	4251' to 4278'
Yates #1 E. Tom Tom NW NE 6-8S-32E 660' FNL, 1980' FEL Chaves County, N. M. (P&A 9/26/77)	1725'/760 sx	4400'/420 sx	2400'	P & A

* Calculated

Exhibit 11
Case 6503

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W79-174

To Sundance Oil Company

Date 2-14-79

Box 115

Roswell, New Mexico

ATTN: Mr. Jim Akins

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by_

Date Rec. W 2-14-79

Well No. Cone Federal #8

Depth.

Formation **San Andres**

County-

Field.

Tomahawk

Source:

Resistivity 0.047 @ 74°F.

Specific Gravity 1.184

pH _____ 6.8

Calcium (Ca) 36,500

*MPL

Magnesium (Mg) 6,300

Chlorides (Cl) 171,000

Sulfates (SO_4) 400

Bicarbonates (HCO_3) 290

Soluble Iron (Fe) _____ Nil

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION

Applicants EXHIBIT NO. 7

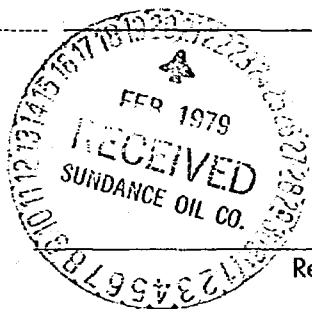
CASE NO. 6503

Submitted by Sundance Oil Co.

Hearing Date 3/28/75

Remarks:

*Milligrams per liter



Respectfully submitted,

Analyst: Brewer

CC:

HALLIBURTON COMPANY

By

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Cone Federal #1
Cone Federal #2
Cone Federal #3
Cone Federal #4
Cone Federal #5
Cone Federal #6
Cone Federal #7

Langley Federal #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

BEFORE EXAMINER STAMETS	
OIL CONSERVATION DIVISION	
<i>Applicants</i>	EXHIBIT NO. <u>8</u>
CASE NO. <u>6503</u>	
Submitted by <u>Sundance Oil Co.</u>	
Hearing Date <u>3/28/79</u>	

Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Chambers Federal #1
Chambers Federal #2
Chambers Federal #3

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510, 1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904, 1776 Lincoln Street
Denver, CO 80203

Jerry Chambers
1720 Lincoln Center Building
Denver, CO 80264

BEFORE EXAMINER STAMETS OIL CONSERVATION DIVISION <i>Appellate</i> EXHIBIT NO. <u>9</u> CASE NO. <u>6503</u> Submitted by <u>Sundance Oil Co</u> Hearing Date <u>3/29/79</u>

Lease Status: State

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: State #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

BEFORE EXAMINER STAMETS	
OIL CONSERVATION DIVISION	
Applicants	EXHIBIT NO. <u>10</u>
CASE NO. <u>6503</u>	
Submitted by <u>Sundance Oil Co.</u>	
Hearing Date <u>3/28/79</u>	

WELLS WITHIN ONE-HALF MILE OF CONE FEDERAL #8

Well Name	Surface Casing/Sx Cement	Production Casing/Sx Cement	Cement Top	Producing Interval
Cone Federal # 4 NE SE 31-7S-32E 660' FEL, 1980' FSL Roosevelt County, N. M.	1827'/600 sx	4398'/300 sx	* 2739'	4323' to 4333'
Cone Federal # 7 SE NE 31-7S-32E 1980" FNL, 660' FEL Roosevelt County, N. M.	1835'/450 sx	4400'/300 sx	* 2741'	4251' to 4278'
Yates #1 E. Tom Tom NW NE 6-8S-32E 660' FNL, 1980' FEL Chaves County, N. M. (P&A 9/26/77)	1725'/760 sx	4407'/420 sx	2400'	P & A

* Calculated

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Applicants EXHIBIT NO. 11
CASE NO. 6503
Submitted by *Smith & Co.*
Hearing Date 3/28/79

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ gas ☐ other ☒ Salt Water Disposal

2. NAME OF OPERATOR

SUNDANCE OIL COMPANY

3. ADDRESS OF OPERATOR

Suite 510, 1776 Lincoln St., Denver, CO 80203

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 660' FSL, 660' FEL Unit P

AT TOP PROD. INTERVAL:

AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

CHANGE ZONES ☐

ABANDON* ☐

(other) CONVERT TO SALT WATER DISPOSAL ☒

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Intend to convert well to a water disposal well.

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION

Applicant's EXHIBIT NO. 15

CASE NO. 6503

Submitted by Sundance Oil Co.

Hearing Date 3/28/79

Subsurface Safety Valve: Manu. and Type

18. I hereby certify that the foregoing is true and correct

SIGNED Richard O. Dimit TITLE VP, Production

DATE 2/26/79

(This space for Federal or State office use)

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

*See Instructions on Reverse Side

5. LEASE

NM-15019

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Cone Federal

9. WELL NO.

8

10. FIELD OR WILDCAT NAME

Tomahawk, San Andres

11. SEC. T., R., M. OR BLK. AND SURVEY OR AREA

Section 31, T. 7S., R. 32E.

12. COUNTY OR PARISH

Roosevelt

13. STATE

New Mexico

14. API NO.

15. ELEVATIONS (SHOW OF, KDB, AND WD)

4469' GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 42-R0996TEMPORARY USE APPLICATION AND PERMIT
Title I, Sec. 28(2)(e) of the Mineral Leasing Act of 1920, 30 U.S.C. 185, as amended; Secs. 302(b) and 504(a) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732, 1764.

Serial Number

INSTRUCTIONS ON REVERSE

APPLICATION

1. Name (first, middle initial, and last) SUNDANCE OIL COMPANY		Address (include zip code) Suite 510, 1776 Lincoln Street Denver, CO 80203	
2. Give legal description of public lands for which you are applying			
TOWNSHIP	RANGE	SECTION	SUBDIVISION
7 South	32 East	36	660' MFS and 660' FEL, Unit P
OIL CONSERVATION DIVISION <i>Applicants</i> EXHIBIT NO. <u>16</u> CASE NO. <u>6503</u> Submitted by <u>Sundance Oil Co.</u> Hearing Date <u>3/28/79</u>			
Meridian	State	County	Acres (number)
	New Mexico	Roosevelt	
3. Proposed date(s) of use: From February, 1979 to February, 1989			
4a. Are you 21 years of age or over? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		b. Are you a citizen of the United States or have you declared your intention? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
c. As applicant, are you a <input type="checkbox"/> Partnership <input type="checkbox"/> Association <input checked="" type="checkbox"/> Corporation; <input type="checkbox"/> Individual(s); or an agency of <input type="checkbox"/> Federal Government <input type="checkbox"/> State Government <input type="checkbox"/> Political subdivision of any state?			
d. Are the statements required by Instruction Number 2 attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable			
5. Are you making this application for your own use and benefit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "no," explain)			
6. Are the lands now improved, occupied, or used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "yes," describe improvements and purposes, identify users and occupants) This well is on Tom Gainor's ranch. He owns the surface & we have the minerals.			
7a. What do you propose to use the lands for? Damages for surface on this location & roads have been approved & paid for.			
b. What improvements, including sanitation facilities, do you intend to make? (Describe improvements and attach drawings, if convenient) We do not plan to make any changes in location at this time. If we should have to set tanks & pump, they will be on same pad as the well is now on.			
What is the estimated cost of proposed improvement? \$ 81,000.00		d. What is the proposed source of water for domestic or other uses? To dispose of water from our other leases adjacent to and on this lease.	
8. Have you enclosed filing fee of \$10? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (See Instruction Number 3)			

I CERTIFY That the information given by me in this application is true, complete, and correct to the best of my knowledge and belief and is given in good faith.

2/26/79

(Date)

Richard O. Dimit

(Signature of Applicant) V-P, Production

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

PERMIT

Permission is hereby granted to

of

to use the following-described lands:

TOWNSHIP	RANGE	SECTION	SUBDIVISION
----------	-------	---------	-------------

Meridian	State	County	Acres (number)
----------	-------	--------	----------------

for the purpose of

and subject to the following conditions:

1. This permit is issued for the period specified below. It is revocable at the discretion of the authorized officer of the Bureau of Land Management, at any time upon notice. This permit is subject to valid adverse claims heretofore or hereafter acquired.

2. Permittee shall pay annually, in advance, to the authorized officer the sum of dollars as rental or such other sum as may be required if a rental adjustment is made.

3. Permittee shall observe all Federal, State, and local laws and regulations applicable to the premises and to erection or maintenance of signs or advertising displays including the regulations for the protection of game birds and game animals, and shall keep the premises in a neat, orderly, and sanitary condition.

4. Use or occupancy of land under this permit shall commence within months from date hereof and shall be exercised at least days each year.

5. Permittee shall take all reasonable precautions to prevent and suppress forest, brush, and grass fire and prevent pollution of waters on or in the vicinity of the lands.

15. Special Conditions:

6. Authorized representatives of the Department of the Interior, other Federal agencies, and game wardens shall at all times have the right to enter the premises on official business.

7. Permittee shall not enclose roads or trails commonly in public use.

8. Permittee shall pay the United States for any damage to its property resulting from this use.

9. Permittee shall notify the authorized officer of address change immediately.

10. This permit is subject to all applicable provisions of the regulations (43 CFR 2920) which are made a part hereof.

11. Permittee agrees to have the serial number of this permit marked or painted on each advertising display erected or maintained under the authority of such permit.

12. Permittee shall not cut any timber on the lands without prior permission from the authorized officer.

13. This permit is subject to the provisions of Executive Order No. 11246 of September 24, 1965, as amended, which sets forth the Equal Opportunity clauses. A copy of this order may be obtained from the signing officer.

14. This permit may not be assigned without prior approval of the authorized officer of the Bureau of Land Management.

Permit issued for period

From

(Authorized Officer)

To

(Title)

(Date)

INSTRUCTIONS

1. Submit, in duplicate, to any local office of the Bureau of Land Management having jurisdiction of the lands.

2. An application by a partnership or association must be accompanied by a statement by each member that he is a citizen of the United States or has filed a declaration to become a citizen. An application by a corporation must be accompanied by a statement showing that the corporation is authorized to hold land in the State in which the land is located and that the person making the application is authorized to act for the corporation.

3. If applicant is other than a Federal, State, or local governmental agency, this application must be accompanied by a

nonreturnable filing fee of \$10 made payable to the Bureau of Land Management.

4. If this application is for permission to erect an advertising display or sign, the applicant must: (a) attach an accurate and fully descriptive diagram, sketch, or photograph (at least 3" x 5") of the sign or display to be erected showing the dimensions, type of construction, estimated cost, the advertising material to be included thereon, the plan of illumination, if any, and the manner of attachment to the land; and, (b) a photograph (at least 3" x 5") showing the site on which the sign or display is to be erected.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
28 March 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Sundance Oil Company for) CASE
salt water disposal, Roosevelt County,) 6503
New Mexico.)

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant:

William F. Carr, Esq.
CAMPBELL & BLACK
P. O. Box 2208
Jefferson Place
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza Blanca (SOS) 471-2463
Santa Fe, New Mexico 87501

I N D E X

GEORGE SCOTT

Direct Examination by Mr. Carr 4

Cross Examination by Mr. Stamets 9

CHUCK JOY

Direct Examination by Mr. Carr 12

Cross Examination by Mr. Stamets 23

E X H I B I T S

Applicant Exhibit One, Map 6

Applicant Exhibit Two, Cross Section 7

Applicant Exhibit Three, C-108 13

Applicant Exhibit Four, Map 14

Applicant Exhibit Five, Schematic 14

Applicant Exhibit Six, Record 15

Applicant Exhibit Seven, Water Analysis 16

Applicant Exhibit Eight, Document 17

Applicant Exhibit Nine, Document 17

Applicant Exhibit Ten, Document 17

Applicant Exhibit Eleven, Chart 17

Applicant Exhibit Twelve, Schematic 18

Applicant Exhibit Thirteen, Plat 19

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (SOS) 471-2462
Santa Fe, New Mexico 87501

E X H I B I T S C O N T ' D

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Applicant Exhibit Fourteen, Plat	19
Applicant Exhibit Fifteen, Form 9331	20
Applicant Exhibit Sixteen, Form 2920-1	20

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (SOS) 411-2462
Santa Fe, New Mexico 87501

1 MR. STAMETS: Call next Case 6503.

2 MS. TESCHENDORF: Case 6503. Application of
3 Sundance Oil Company for salt water disposal, Roosevelt
4 County, New Mexico.

5 MR. STAMETS: Call for appearances in this
6 case.

7 MR. CARR: May it please the Examiner, I'm
8 William F. Carr, Campbell and Black, P. A., Santa Fe, ap-
9 pearing on behalf of the applicant. I have two witnesses.

10 MR. STAMETS: I'd like to have both wit-
11 nesses stand and be sworn at this time.

12
13 (Witnesses sworn.)

14
15 MR. CARR: I would call Mr. George Scott.

16
17 GEORGE SCOTT
18 being called as a witness and having been duly sworn upon
19 his oath, testified as follows, to-wit:

20
21 DIRECT EXAMINATION

22 BY MR. CARR:

23 Mr. Scott, will you state your full name and
24 place of residence?

25 A. George F. Scott. I live in Roswell; Con-

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (606) 471-2482
Santa Fe, New Mexico 87501

1 sulting Geologist. I have an office in the Petroleum
2 Building in Roswell.

3 Q And you are -- have been employed by Sun-
4 dance Oil Company in connection with the case before this
5 Commission?

6 A Yes, that is correct.

7 Q Have you studied the area which is the sub-
8 ject of this application?

9 A Yes, I have. I have been involved with
10 Sundance in this field since at the very inception of the
11 project.

12 Q Have you previously testified before this
13 Commission, had your credentials as a geologist accepted
14 and made a matter of record?

15 A Yes, I have.

16 MR. CARR: Mr. Examiner, are the witness-
17 credentials acceptable?

18 MR. STAMETS: They are.

19 Q (Mr. Carr continuing.) Mr. Scott, will you
20 briefly summarize what Sundance is seeking with this appli-
21 cation?

22 A Okay. Sundance desires to utilize the
23 No. 8 Cone Federal and it's shown on the structure porosity
24 map which you have there. They desire to utilize that well
25 as a salt water injection well, disposal well.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (606) 471-2462
Santa Fe, New Mexico 87501

1 Q Mr. Scott, you're referring to what has been
2 marked for identification as Sundance Exhibit Number One,
3 is that correct?

4 A That is correct.

5 Q Would you refer to that exhibit and explain
6 to the Examiner what it is and what it shows?

7 A All right, this particular map here is a
8 structural map, contoured on the top of the P-2 zone of the
9 San Andres formation. The P-2 zone is the principal pay
10 zone in this area, and the solid heavy contours are the
11 structural contours. The dashed contours here represent
12 the net porosity in the area, in the P-2 zone.

13 Now, this is not net pay. It's total poro-
14 sity and in general a porosity cutoff of 5 percent was used.

15 Q And what can you tell us about the porosity
16 in the general area?

17 A Okay. The Isopaching of the porosity and
18 a detailed study of the well logs indicate that the porosity
19 increases in thickness northward and northwestward from
20 the proposed disposal well.

21 Southwest of this well, approximately a
22 quarter of a mile, Yates Petroleum drilled a well approxi-
23 mately a year and a half ago that had quite a bit less
24 permeability and less porosity.

25 Q Is this the poorest porosity that's been

SALLY WALTON BOYD
 CERTIFIED SHORTHAND REPORTER
 3020 Plaza Blanca (666) 471-2482
 Santa Fe, New Mexico 87501

1 encountered in the area, to your knowledge?

2 A. In the Yates well right to the south, yes,
 3 and that is shown also on the cross section.

4 Q Mr. Scott, what does the area colored in
 5 yellow signify?

6 A. That's the acreage, the leases owned by
 7 Sundance Oil Company.

8 Q And the injection well is indicated how?

9 A. It's outlined in red.

10 Q And then what is the red line across the
 11 lease area?

12 A. That is the line of cross section.

13 Q Where has the oil/water contact been estab-
 14 lished in this area?

15 A. There has not been an oil/water -- we have
 16 not established an oil/water contact in this field; however,
 17 there are segments of the field in which the water percentages
 18 are very high. Apparently we're looking at zoned water in
 19 places. In places in the field we get abnormal high water
 20 cuts, probably because of relative permeability considera-
 21 tions. It's very difficult sometimes in these San Andres
 22 fields to understand why a segment of the field will be
 23 nearly entirely water productive.

24 Q Mr. Scott, I direct your attention to what
 25 has been marked for identification as Exhibit Number Two,

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

1 and ask you to explain to the Examiner what it is and what
2 it shows.

3 A. All right. Exhibit Number Two is a north/
4 south cross section through the Tomahawk Field, and it has
5 displayed there the principal porosity log, the sidewall
6 neutron, well-to-well correlations are shown, the Pi marker
7 at the top, the top correlation, then the P-1, P-2, and P-3
8 zones are displayed on it. Also, the intervals where wells
9 on the line of section are perforated. Also, porosity is
10 shown.

11 Q Now, on the log of the Cone No. 8 Well, does
12 it show the injection zone?

13 A. Yes, it does.

14 Q And how large is the perforated interval
15 in that well?

16 A. Approximately 21 feet.

17 Q And do the zones correlate well as you go
18 well-by-well across this area?

19 A. It does. It does. That interval right
20 there correlates very closely with all of the other wells
21 on the cross section. This is the part of the P-2 zone
22 that is oil productive to the north; however, only water
23 was encountered here in this well.

24 Q Mr. Scott, were Exhibits One and Two pre-
25 pared by you or under your direction and supervision?

1 A. They were. They were prepared by me.

2 MR. CARR: At this time, Mr. Examiner, we
3 would offer Applicant's Exhibits One and Two.

4 MR. STAMETS: These exhibits will be ad-
5 mitted.

6
7 CROSS EXAMINATION

8 BY MR. STAMETS:

9 Q Mr. Scott, did you say that -- did you have
10 a reason why the Yates No. 1 East Tomtom was not productive?

11 A. Yes. The porosities are very low there
12 compared to the wells to the north.

13 Q Okay, so it's not because it's below the
14 water/oil contact?

15 A. Right. Right, that is correct.

16 Q Now you indicated segments of the field are
17 highly water productive. Can you give us the locations of
18 those --

19 A. Yes.

20 Q -- on Exhibit One?

21 A. I'd be pleased to.

22 In the southeast southeast of Section 30,
23 the No. 1 Chambers has started producing a very high water
24 cut there, and that well is perforated near the top of the
25 P-2 zone in this interval of our main pay there, and it is

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1 not a low well structurally. It appears to be just zone
2 water.

3 Also, the dry hole in Section 29, a comple-
4 tion attempt there gave up water with a very low cut of oil,
5 low percentage of oil cut.

6 Q On Exhibit Number One, Mr. Scott, you've
7 shown a couple of faults in there, one of them just imme-
8 diately east of the proposed injection well.

9 A Yes. That fault is controlled by the No. 7
10 Cone Federal, located in the southeast of the northeast
11 quarter. That well is an abnormally low well. That well
12 is 60 feet -- roughly 60 feet low to all four offsets, a
13 completely anomalous situation.

14 I chose to explain this with a fault. The
15 faults would be, of course, subject to -- faulting would
16 be subject to being interpreted in different ways, as
17 faults usually are.

18 One thing in support of the probability of
19 faulting in this area would be the fact that the No. 1 Cone,
20 right to the north of it, that's the discovery well in the
21 field, that we lost circulation in the pay zone, P-2 zone,
22 while that well was being drilled, and we lost circulation
23 in the north offset, the No. 1 Chambers, while the well was
24 being drilled.

25 In that local area up there, evidently there

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1 is extreme fracturing, and that would indicate a tie-in once
2 again with the fault, something unusual there.

3 Q Is there a possibility that this fault could
4 serve as an avenue of escape for these injected waters out
5 of the P-2 zone?

6 A Well, it appears that the faulting has not
7 affected the permeability to any great degree in the No. 8
8 Cone Federal, nor in that Yates dry hole to the south.

9 MR. STAMETS: I presume you've got another
10 witness --

11 MR. CARR: Yes, we do.

12 MR. STAMETS: -- on pressures and --

13 MR. CARR: That's correct.

14 MR. STAMETS: -- this information?

15 MR. CARR: Yes.

16 Q (Mr. Stamets continuing.) Now, Mr. Scott,
17 did Well No. 8 produce in the San Andres zone?

18 A No. A completion attempt there -- on a
19 completion attempt there we were unable to establish commer-
20 cial cuts of oil.

21 Q So this well is below the local water/oil
22 contact.

23 A Well, at least at that location there. All
24 we can get out of the zone is essentially salt water. It's
25 a very minor percentage of oil.

1 MR. STAMETS: Okay. Any other questions of
2 this witness? He may be excused,

3 MR. CARR: I would call Mr. Chuck Joy.

4
5 CHUCK JOY

6 being called as a witness and having been duly sworn upon his
7 oath, testified as follows, to-wit:

8
9 DIRECT EXAMINATION

10 BY MR. CARR:

11 Q Will you state your name and place of resi-
12 dence?

13 A Charles Joy, and I live in Artesia, New
14 Mexico, and I'm a petroleum consulting engineer.

15 Q You've been employed by Sundance Oil Company
16 to study the area involved in this application?

17 A Yes, I have.

18 Q Have you previously testified before this
19 Commission and had your credentials accepted and made a
20 matter of record?

21 A Yes.

22 MR. CARR: Are the witness' credentials
23 acceptable?

24 MR. STAMETS: They are.

25 Q (Mr. Carr continuing.) Mr. Joy, would you

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1 refer to what has been marked for identification as Applicant's
2 Exhibit Number Three, and explain to the Commission what it
3 is and what it shows?

4 A. All right, this is the OCC C-108, Application
5 to Dispose of Salt Water by Injection into a Porous Formation,
6 and do you think I should go through each item on here, or
7 just go down here, and we found a few errors on this form.

8 One, there is an error in the top of cement.
9 Based on 100 percent fill-up the calculated top is at 2301,
10 and they have 3900 down there. That needs to be changed.

11 MR. STAMETS: Calculated was what?

12 A. 2301.

13 MR. STAMETS: Okay.

14 A. And Sundance is anticipating injecting under
15 vacuum. You notice we put up here "vacuum". However, if
16 the occasion arises where the formation will no longer take
17 water under vacuum, Sundance would like permission to inject
18 under pressures up to 1750 pounds.

19 Now the frac pressure has been established
20 in this area from the treating records on the Cone No. 8 and
21 State No. 1 Wells.

22 Initial shut-in pressures after treating
23 these wells were 2100 and 2300 psig, so we'll be injecting
24 well below frac pressure, if we're granted permission to in-
25 ject up to 1750 pounds.

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1 Let's see, the rest of it on here is just
2 the next coastal zone was 10,000 feet there to the Mississ-
3 ippian.

4 You want to go to the next exhibit?

5 Q Now, Mr. Joy, if you will refer to what has
6 been marked as Exhibit Number Four and explain what it is
7 and what it shows.

8 A That's just the location map showing where
9 the Cone 8 is located.

10 Q And now I would direct your attention to
11 Exhibit Number Five and ask you to explain to the Examiner
12 what this shows.

13 A This is a schematic of the proposed in-
14 jection well and if you'll take a look here, they'll have a
15 lgauge on top. They'll have a 2 inch by 2000 pound gate
16 valve, slip and pack off 2-3/8ths inch tubing; 2 inch by
17 2000 bull plug; Larkin 2-3/8ths by 4-1/2 inch well head,
18 and operating pressure on that is 2500 pounds, it's not on
19 here; a Larkin 4-1/2 by 8-5/8ths casinghead; 2 inch by 2000
20 pound bull plug; 2-3/8ths inch tubing lined with bonded PVC
21 plastic liner with rubber seals inserted in tubing collar;
22 and 4-1/2 inch casing was cemented and the top of it is --
23 I'm repeating here -- was at 2301; and the packer will be set
24 at 4107.

25 There is a collar -- a casing collar located

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1 4089 and one at 4120, so the packer will not be landed in
2 a collar, and the perforations are from 4207 to 4228.
3

4 They also will have a positive detection
5 device installed with this 2 inch by 2000 pound ball valve
6 on the casing tubing and annulus, and they'll have a 2 inch
7 by 2000 pound ball valve on the surface casing annulus and
8 the 8-5/8ths inch casing shows there and that cement was
9 circulated 390 sacks on the surface casing.

10 And behind, in the annulus between the casing
11 and tubing will be filled with KCL water treated with one
12 gallon of HAI 50 plus 5 gallons of Anhib inhibitor.

13 And the 4-1/2 inch casing is 10-1/2 pound
14 K-55 casing and the 4-1/2 inch choke collar is at 4326 and
15 the 4-1/2 inch casing was landed at 4368.

16 Q Mr. Joy, in your opinion are all zones other
17 than the injection zone fully protected against any intrusion
18 of these injected waters?

19 A Yes, they are, and my review of the area
20 indicates that cement was well above the P-1 zone.

21 Q Will you refer to what has been marked for
22 identification as Exhibit Number Six and explain this to the
23 Examiner?

24 A This is a treating record on the Cone No. 8.
25 On the original completion it shows perforated from 4207 to
4228 with two shots per foot; spotted 6 barrels of acid at

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1 4228; pulled up and set R-4 packer at 4107; acidized with
2 4500 gallons of 20 percent NE acid, using 84 ball sealers,
3 and they had good ball action. The average injection rate
4 was 2.5 barrels per minute. Average treating pressure was
5 2500 pounds. Initial shut-in was 2100 pounds. Final shut-
6 in was 1770 pounds after 13 minutes and swab tested for five
7 days, recovered salt water with only a trace of oil. Shut
8 in pending approval to convert to salt water disposal well.

9 Q Mr. Joy, would you refer to what has been
10 marked for identification as Exhibit Number Seven and sum-
11 marize this.

12 A That is a water analysis of water from the
13 Cone No. 8 Well.

14 Q Is this water from the San Andres?

15 A Yes, it is.

16 Q And what is the source of the water you
17 propose to inject?

18 A It would be all produced San Andres water.

19 Q So it would all be compatible?

20 A Yes, it will be compatible.

21 Q Is it safe to say, then, you're simply re-
22 injecting water into the formation from which it was pro-
23 duced?

24 A That is correct.

25 Q Is the injection system to be a closed system?

1 A Yes, it will be.

2 Q Would you refer to what have been marked
3 Exhibits Eight, Nine, and Ten, and explain what they are?
4 And what they show?

5 A Well, this shows that all of the wells in
6 the area are completed in the P-2 zone and also four wells
7 are completed in the P-3 zone, and that is the Cone Federal
8 1, 3, and 4, and the State No. 1 Well.

9 Q Now, let's look at what has been marked as
10 Exhibit Number Eleven and explain what that is.

11 A That is a schematic of the Yates -- oh, wait
12 a minute. This is wells within 1-1/2 mile radius of the
13 Cone Federal No. 8 Well, and that is Cone Federal No. 4,
14 which is in the northeast southeast of 31, 7 South, 32 East,
15 660 feet from the east line, 1980 feet from south line,
16 Roosevelt County, New Mexico, and the surface casing is set
17 at 1827 feet and cemented with 600 sacks. The production
18 casing was set at 4398 and cemented with 300 sacks and the
19 calculated top of cement based on 100 percent fill-up would
20 be at 2739 feet, and the producing interval is from 4323
21 to 4333.

22 The next well is the Cone Federal No. 7,
23 southeast of the northeast, Section 31, 7 South, 32 East,
24 1980 feet from north line, 660 feet from east line, Roose-
25 velt County, New Mexico. Surface casing was set at 1835 feet

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1 and cemented with 450 sacks. Producing casing was set at
2 4400 feet and cemented with 300 sacks, and the calculated
3 top of cement there is at 2741 feet. Producing interval is
4 from 4251 to 4278.

5 Then this dry hole of Yates that's been
6 plugged and abandoned, Yates No. 1-E Tomtom, is in the
7 northwest northeast Section 6, 8 South, 32 East, 660 feet
8 from the north line and 1980 feet from the east line, Chaves
9 County, New Mexico, and it was P&A'd 9-26-77, and surface
10 casing was set at 1725 feet with 760 sacks; producing casing
11 was set at 4400 feet with 420 sacks, and the cement top was
12 recorded at 2400 feet, and the producing interval shows 0,
13 P & A'd.

14 Q Now will you refer to Exhibit Number Twelve
15 and summarize this for the Examiner.

16 A All right, well, this is a schematic of the
17 Yates Well and how they went in and plugged it. They run
18 a cast iron bridge plug at 4080 and put 2 bailers of cement
19 on top. They set a 32-sack plug at 2881 to 2780 and top of
20 a 4-1/2 was at 2875; they pulled that much 4-1/2 inch casing
21 from the well. Then they filled the bored area here with
22 heavy drilling mud and they set a 35-sack cement plug from
23 1762 to 1680, and they had to re-cement and set a 50-sack
24 cement plug at 1762 feet. And it has 8-5/8ths inch 24-pound
25 surface casing and a 12-1/4 inch hole set at 1725 feet,

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1 cemented with 760 sacks, and cement was circulated. And
2 then at the surface they have an 8-sack cement plug on top
3 of the surface casing and a dry hole marker inserted in the
4 top of the well.

5 Q Refer to what has been marked as Exhibit
6 Thirteen and summarize this for the Examiner.

7 A This shows the leases held by Sundance Oil
8 Company in the Tomahawk Field.

9 Q Does it also show other wells in the area?

10 A Yes, it does.

11 Q Are there any wells within 2-1/2 miles of
12 the subject disposal well which are not San Andres comple-
13 tions?

14 A Yes, the Holly Energy-Union Federal No. 1
15 is completed in the Pennsylvanian formation.

16 Q Are there any other wells?

17 A No.

18 Q And the yellow line on this merely shows
19 Sundance's --

20 A Outlines the lease, right.

21 Q Please refer to Exhibit Fourteen and explain
22 that to the Examiner.

23 A This is a plat of the proposed injection
24 system. If you look up here at the Langlie Federal, they
25 plan on returning water from the Langlie Federal lease down

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1 to the Chambers Federal by gravity and heater-treater pres-
2 sure.

3 From there they will pump the water from
4 the Chambers lease and the Langlie lease down to the Cone
5 Federal lease right straight south there.

6 Then the water from the State lease on the
7 east there will be returned by gravity and heater pressure
8 back to the Cone Federal, and all the produced water will be
9 pumped from the Cone Federal down to the proposed injection
10 well where they will install a Gardner-Denver TA-3 Triplex
11 pump, and this system will be closed.

12 Q Will you now refer to Exhibit Fifteen and
13 Sixteen, and identify what they are?

14 A This is just the United States Department
15 of Interior Geological Form 9331, and they've requested to
16 convert the well to salt water disposal.

17 And the second one is the U. S. Form 2920-1
18 and this is temporary use of application and permit.

19 Q Mr. Joy, in your opinion what effect will
20 the injection of this water have on the reservoir?

21 A If application is denied the wells will be
22 prematurely shut in, causing a loss of recoverable oil.

23 Presently two high water-producing wells,
24 the Langlie No. 1 and the Chambers Federal No. 1, are shut-
25 in. Respective water production is 160 and 340 barrels per

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1 day. It costs .43 cents per barrel to truck water from
2 these wells. This high cost has raised economic limits to
3 around 12 barrels of oil per day per well.

4 The above two wells were averaging 11 and
5 14 barrels of oil per day when they were shut-in.

6 Injecting water in the Cone No. 8 Well will
7 increase oil recovery from this reservoir. Present data
8 indicates reservoir has a solution gas drive mechanism. By
9 maintaining a higher reservoir pressure the gas will not
10 break out of solution as easily leaving oil behind. In-
11 jected water will follow path of least resistance; conse-
12 quently, most of the water injected will move northward as
13 the reservoir pressure is being decreased by reservoir
14 withdrawals in this area.

15 Also additional oil recovery will result
16 as injected water will sweep unrecovered oil into the
17 northern producing wells.

18 Q Okay, now Mr. Joy, if we just assume for
19 the moment that the water injected will migrate radially
20 away from the wells, how long would it take, in your opinion,
21 for the injected water to affect any offsetting lease?

22 A Well, according to Mr. Scott's structure
23 map, the Cone No. 8 Well is located on the periphery of the
24 reservoir, and based on this interpretation it is doubtful
25 injected water would move out radially. However, if radial

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1 movement occurs, it would take approximately eight years
2 for water to reach a well located 660 from the north line
3 and from the west line of Section 5, Township 8 South,
4 Range 32 East. Above calculations were based on injection
5 rate of 600 barrels of oil per day, 35 feet of pay, and 4
6 percent porosity.

7 Q Mr. Joy, in your opinion, will granting
8 this application prevent waste?

9 A By granting the --

10 Q Yes.

11 A No, it will not waste.

12 Q Wait a minute.

13 A I didn't hear it.

14 Q In your opinion, will granting the applica-
15 tion prevent waste?

16 A Let's see.

17 Q By granting this application, Mr. Joy,
18 would hydrocarbons be recovered that would otherwise be
19 left in the ground?

20 A Yes, they would be by granting this.

21 Q And would it therefore prevent waste?

22 A Correct.

23 Q Would granting the application protect the
24 correlative rights of Sundance?

25 A Yes, it would.

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1 Q Were Exhibits Three through Sixteen either
2 prepared by you or have you reviewed them and can you testi-
3 fy as to their accuracy?

4 A I reviewed them.

5 MR. CARR: At this time, Mr. Examiner, I
6 would offer into evidence Exhibits Three through Sixteen.

7 MR. STAMETS: These exhibits will be ad-
8 mitted.

9 MR. CARR: I have nothing further on direct.

10

11 CROSS EXAMINATION

12 BY MR. STAMETS:

13 Q Mr. Joy, have you checked any of the cement
14 tops to see how much actual fill there is? I see you've
15 calculated some tops.

16 A I calculated them 100 percent. I think you
17 can, normally you can get a figure at least 60 percent of
18 fill on most of these areas, which --

19 Q I notice the Yates here shot off their
20 casing about 325 feet below the top of cement. Seems like
21 that would be a little hard to do.

22 A I was looking at that, too. I noticed that.
23 Unless they have -- I don't see how they got their casing
24 loose if they had an excellent cement job up around the
25 pipe there, but I still feel like you got adequate space to

1 protect the pay, even if you figured at 60 percent.

2 I could find no bond logs or any temperature logs
3 run on these wells.

4 Q Okay. And you have one exhibit that shows
5 the 2100 pounds instantaneous shut-in on the well in question
6 and then you mentioned one well had 2300 pounds. Which well
7 is that?

8 A That was the Cone No. -- it's the State No.
9 1 Well. It's directly northeast of the No. 8 there. Of
10 No. 4, rather.

11 Q Those are the only two wells that you have
12 this information on?

13 A Right, that's the only two wells I have the
14 information on.

15 Q And since Mr. Scott testified he had lost
16 circulation in the couple of other wells, that obviously
17 wouldn't carry out throughout the entire formation.

18 Do you find that these pressures pretty well
19 jibe with those that you've seen in other San Andres wells
20 in this general area?

21 A They do, because I know my San Andres wells
22 when I was with the oil company -- from past experience I've
23 found that at shallower depths I was happy to get up to
24 around 1300 pounds to inject at around 2500, 2600 feet into
25 the San Andres in Eddy County.

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Q Generally this is a tight formation --
A Right.

Q -- and has a high frac pressure.
A Correct.

Q And the annulus on this well will either
be left open or a gauge will be on there to make determina-
tion of any leakage of either the tubing or the packer?

A Right, correct. We got a positive detection
device.

MR. STAMETS: Any other questions of this
witness? He may be excused.

Anything further in this case?

MR. CARR: Nothing further.

MR. STAMETS: Take the case under advisement.
(Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd
Sally W. Boyd, C.S.R.

BEFORE EXAMINER STATES
OIL CONSERVATION DIVISION

EXHIBIT NO. _____

CASE NO. _____

Submitted by _____

Hearing Date _____

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6503 heard by me on 3-28 1972.
Richard R. [Signature], Examiner
Oil Conservation Division

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

OPERATOR SUNDANCE OIL COMPANY		ADDRESS Suite 510, 1776 Lincoln St., Denver, CO 80203			
LEASE NAME Cone Federal	WELL NO. 8	FIELD Tomahawk, San Andres	COUNTY Roosevelt		
LOCATION UNIT LETTER P ; WELL IS LOCATED 660 FEET FROM THE South LINE AND 660 FEET FROM THE East LINE, SECTION 31 TOWNSHIP 7 South RANGE 32 East NMPM.					
CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING Wt. 24#	8 5/8"	1817'	390 SX	Surface	Circulated 10 sx
INTERMEDIATE None					
LONG STRING Wt. 10.5#	4 1/2"	4368'	300 SX	3900'	Schlumberger Perf. Depth Control Log
TUBING 4.70#, J-55	2 3/8"	3960'	NAME, MODEL AND DEPTH OF TUBING PACKER Howco R-4, 4107'		
NAME OF PROPOSED INJECTION FORMATION San Andres		TOP OF FORMATION 3391'		BOTTOM OF FORMATION 4368'	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES 4207-4228'		PROPOSED INTERVAL(S) OF INJECTION 4207-4228'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil Well		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA Approximately 250'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA Approximately 10,000' (Miss.)	
ANTICIPATED DAILY INJECTION VOLUME (BBL/S.) 600	MINIMUM 200	MAXIMUM 1500	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Gravity	APPROX. PRESSURE (PSIO) Vacuum
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Yes			WATER TO BE DISPOSED OF Salt Water		
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Tom Gainor, P.O. Box 206, Kenna, New Mexico 88122			NATURAL WATER IN DISPOSAL ZONE Same		
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Champlin Petroleum Co., 300 Wilco Bldg., Midland, TX 79701			ARE WATER ANALYSES ATTACHED? Yes		
Yates Petroleum Corporation, 207 4th St., Artesia, New Mexico 88210					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes					
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) Yes		SURFACE OWNER Yes		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	
		PLAT OF AREA Yes		ELECTRICAL LOG Yes	
				DIAGRAMMATIC SKETCH OF WELL Yes	
I hereby certify that the information above is true and complete to the best of my knowledge and belief.					
(Signature) Richard O. Dimit		(Title) Vice President, Production		(Date) 2/26/79	

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

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.

Operator SUNDANCE OIL CO.			Lease CONE FEDERAL		Well No. 8
Unit Letter P	Section 31	Township 7 SOUTH	Range 32 EAST	County ROOSEVELT	
Actual Footage Location of Well: 660 feet from the SOUTH line and 660 feet from the EAST line					
Ground Level Elev. 4469.4	Producing Formation San Andres		Pool Tomahawk	Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

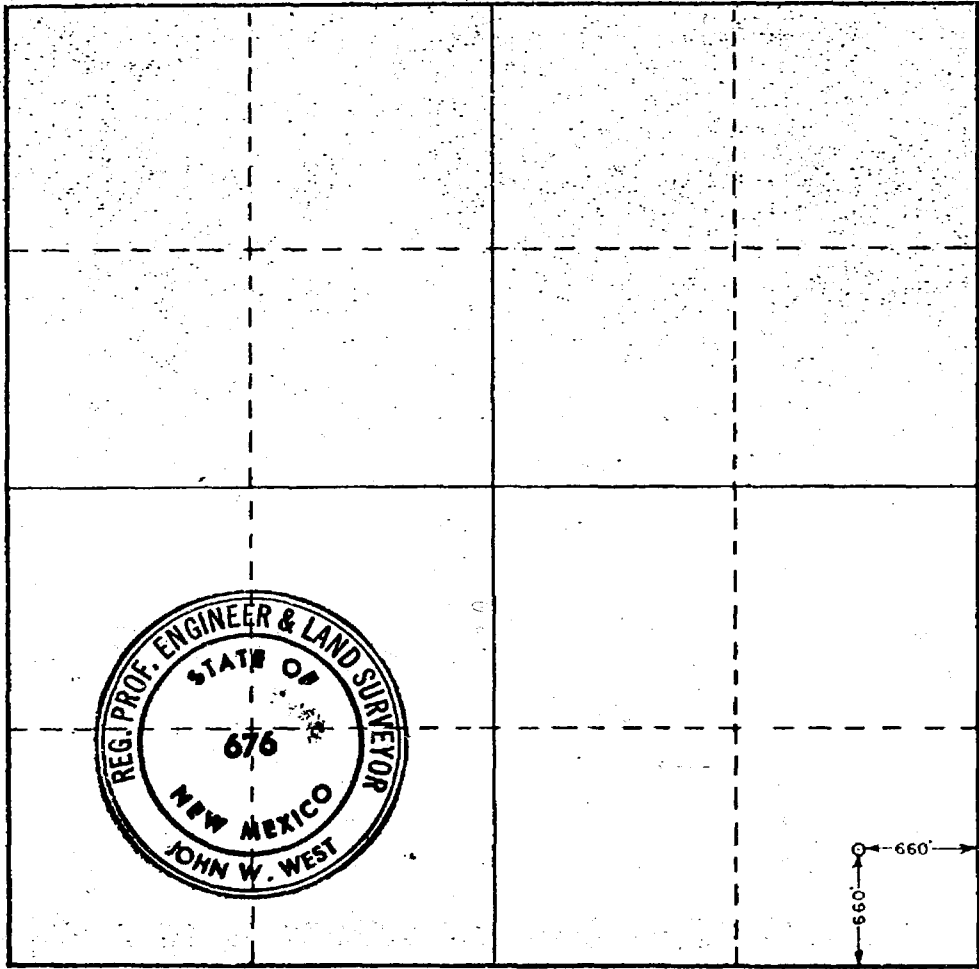
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. 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.

Richard O. Dimit

Name
Richard O. Dimit

Position
Vice President, Production

Company
Sundance Oil Company

Date
November 9, 1978

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.

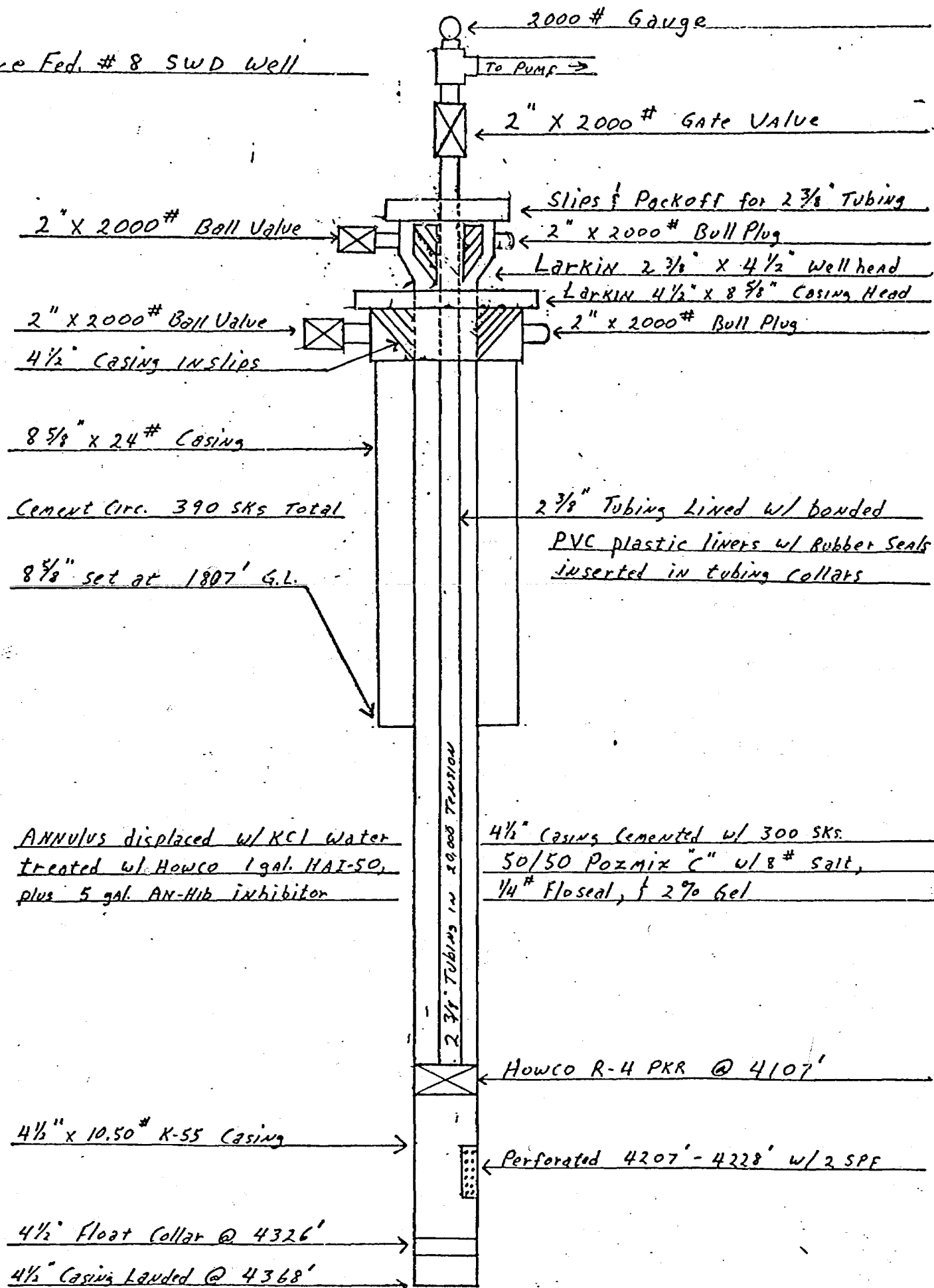
Date Surveyed
OCTOBER 28, 1978

Registered Professional Engineer and/or Land Surveyor

Ronald J. Eidson

Certificate No. **John W. West 676**
Ronald J. Eidson 3239

Cone Fed. # 8 SWD Well



CONE FEDERAL #8

On original completion, perforated 4207' to 4228' with 2 shots per foot. Spotted 6 barrels acid at 4228'. Pulled up and set R-4 packer at 4107'. Acidized with 4500 gallons 20% NE acid using 84 ball sealers. Had good ball action. Average injection rate 2.5 BPM. Average treating pressure 2500#. ISIP 2100#. FSIP 1770# in 13 minutes. Swab tested for five days. Recovered salt water with only a trace of oil.

Shut-in pending approval to convert to salt water disposal well.

66

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W79-174To Sundance Oil CompanyDate 2-14-79Box 115Roswell, New MexicoATTN: Mr. Jim Akins

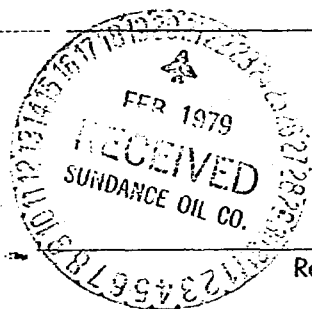
This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 2-14-79Well No. Cone Federal #8 Depth _____ Formation San AndresCounty _____ Field Tomahawk Source _____

Resistivity	<u>0.047 @ 74°F.</u>	
Specific Gravity	<u>1.184</u>	
pH	<u>6.8</u>	
Calcium (Ca)	<u>36,500</u>	*MPL
Magnesium (Mg)	<u>6,300</u>	
Chlorides (Cl)	<u>171,000</u>	
Sulfates (SO ₄)	<u>400</u>	
Bicarbonates (HCO ₃)	<u>290</u>	
Soluble Iron (Fe)	<u>Nil</u>	
_____	_____	_____
_____	_____	_____
_____	_____	_____

Remarks:

*Milligrams per liter



Respectfully submitted,

Analyst: Brewer

cc:

HALLIBURTON COMPANY

By W. L. Brewer
CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Cone Federal #1
Cone Federal #2
Cone Federal #3
Cone Federal #4
Cone Federal #5
Cone Federal #6
Cone Federal #7

Langley Federal #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Chambers Federal #1
Chambers Federal #2
Chambers Federal #3

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510, 1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904, 1776 Lincoln Street
Denver, CO 80203

Jerry Chambers
1720 Lincoln Center Building
Denver, CO 80264

10
Lease Status: State

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: State #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

WELLS WITHIN ONE-HALF MILE OF CONE FEDERAL #8

<u>Well Name</u>	<u>Surface Casing/Sx Cement</u>	<u>Production Casing/Sx Cement</u>	<u>Cement Top</u>	<u>Producing Interval</u>
Cone Federal # 4 NE SE 31-7S-32E 660' FEL, 1980' FSL Roosevelt County, N. M.	1827'/600 sx	4398'/300 sx	* 2739'	4323' to 4333'
Cone Federal # 7 SE NE 31-7S-32E 1980" FNL, 660' FEL Roosevelt County, N. M.	1835'/450 sx	4400'/300 sx	* 2741'	4251' to 4278'
Yates #1 E. Tom Tom NW NE 6-8S-32E 660' FNL, 1980' FEL Chaves County, N. M. (P&A 9/26/77)	1725'/760 sx	4400'/420 sx	2400'	P & A

* Calculated

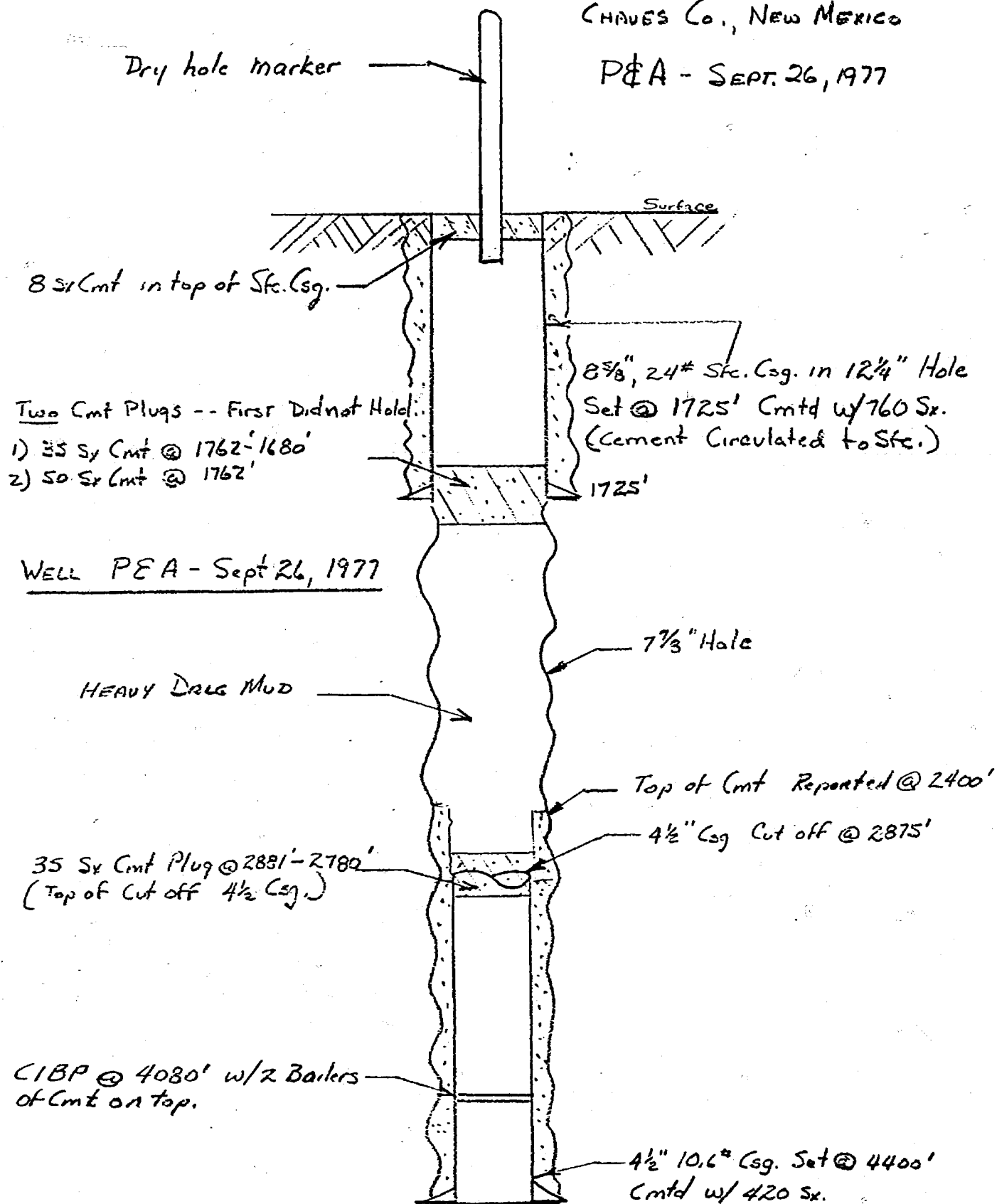
YATES - #1 E. Tom Tom

660' FNL E 1980' FEL

SEC. 6, T8S, R 32E

CHAVES Co., New Mexico

PEA - SEPT. 26, 1977



[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ gas ☐ other ☐ Salt Water Disposal

2. NAME OF OPERATOR

SUNDANCE OIL COMPANY

3. ADDRESS OF OPERATOR

Suite 510, 1776 Lincoln St., Denver, CO 80203

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 660' FSL, 660' FEL Unit P

AT TOP PROD. INTERVAL:

Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLEY ☐

CHANGE ZONES ☐

ABANDON* ☐

(other) ☐ CONVERT TO SALT WATER DISPOSAL

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Intend to convert well to a water disposal well.

Subsurface Safety Valve: Manu. and Type

18. I hereby certify that the foregoing is true and correct

SIGNED Richard O. Dimit TITLE VP, Production

DATE 2/26/79

Richard O. Dimit

(This space for Federal or State office use)

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

*See Instructions on Reverse Side

Form Approved.
Budget Bureau No. 42-R1424

5. LEASE NM-15019	6. IF INDIAN, ALLOTTEE OR TRIBE NAME	7. UNIT AGREEMENT NAME	8. FARM OR LEASE NAME Cone Federal	9. WELL NO. 8	10. FIELD OR WILDCAT NAME Tomahawk, San Andres	11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA Section 31, T. 7S., R. 32E.	12. COUNTY OR PARISH Roosevelt	13. STATE New Mexico	14. API NO.	15. ELEVATIONS (SHOW DF, KDB, AND WD) 4469' GL
----------------------	--------------------------------------	------------------------	---------------------------------------	------------------	---	--	-----------------------------------	-------------------------	-------------	---

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

TEMPORARY USE APPLICATION AND PERMIT
Title I, Sec. 28(2)(e) of the Mineral Leasing Act of 1920, 30 U.S.C. 185, as amended; Secs. 302(b) and 504(a) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732, 1764.

Serial Number

INSTRUCTIONS ON REVERSE

APPLICATION

1. Name (first, middle initial, and last) Address (include zip code)
SUNDANCE OIL COMPANY Suite 510, 1776 Lincoln Street
Denver, CO 80203

2. Give legal description of public lands for which you are applying

TOWNSHIP	RANGE	SECTION	SUBDIVISION
7 South	32 East	31	660' FSL and 660' FEL, Unit P

Meridian	State	County	Acres (number)
	New Mexico	Roosevelt	

3. Proposed date(s) of use: From February, 1979 to February, 1989

4a. Are you 21 years of age or over? ☒ Yes ☐ No
b. Are you a citizen of the United States or have you declared your intention? ☒ Yes ☐ No

c. As applicant, are you a ☐ Partnership ☐ Association ☒ Corporation; ☐ Individual(s);
or an agency of ☐ Federal Government ☐ State Government ☐ Political subdivision of any state?

d. Are the statements required by Instruction Number 2 attached? ☒ Yes ☐ No ☐ Not applicable5. Are you making this application for your own use and benefit? ☒ Yes ☐ No (If "no," explain)6. Are the lands now improved, occupied, or used? ☒ Yes ☐ No (If "yes," describe improvements and purposes, identify users and occupants)

This well is on Tom Gainor's ranch. He owns the surface & we have the minerals.

7a. What do you propose to use the lands for?

Damages for surface on this location & roads have been approved & paid for.

b. What improvements, including sanitation facilities, do you intend to make? (Describe improvements and attach drawings, if convenient)

We do not plan to make any changes in location at this time. If we should have to set tanks & pump, they will be on same pad as the well is now on.

c. What is the estimated cost of proposed improvement? \$ 81,000.00	d. What is the proposed source of water for domestic or other uses? To dispose of water from our other leases adjacent to and on this lease.
---	---

8. Have you enclosed filing fee of \$10? ☒ Yes ☐ No (See Instruction Number 3)

I CERTIFY That the information given by me in this application is true, complete, and correct to the best of my knowledge and belief and is given in good faith.

2/26/79

(Date)

Richard O. Dimit

(Signature of Applicant) V-P, Production

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

PERMIT

Permission is hereby granted to

of

to use the following-described lands:

TOWNSHIP	RANGE	SECTION	SUBDIVISION
----------	-------	---------	-------------

Meridian	State	County	Acres (number)
----------	-------	--------	----------------

for the purpose of

and subject to the following conditions:

1. This permit is issued for the period specified below. It is revocable at the discretion of the authorized officer of the Bureau of Land Management, at any time upon notice. This permit is subject to valid adverse claims heretofore or hereafter acquired.

2. Permittee shall pay annually, in advance, to the authorized officer the sum of dollars as rental or such other sum as may be required if a rental adjustment is made.

3. Permittee shall observe all Federal, State, and local laws and regulations applicable to the premises and to erection or maintenance of signs or advertising displays including the regulations for the protection of game birds and game animals, and shall keep the premises in a neat, orderly, and sanitary condition.

4. Use or occupancy of land under this permit shall commence within months from date hereof and shall be exercised at least days each year.

5. Permittee shall take all reasonable precautions to prevent and suppress forest, brush, and grass fire and prevent pollution of waters on or in the vicinity of the lands.

15. Special Conditions:

6. Authorized representatives of the Department of the Interior, other Federal agencies, and game wardens shall at all times have the right to enter the premises on official business.

7. Permittee shall not enclose roads or trails commonly in public use.

8. Permittee shall pay the United States for any damage to its property resulting from this use.

9. Permittee shall notify the authorized officer of address change immediately.

10. This permit is subject to all applicable provisions of the regulations (43 CFR 2920) which are made a part hereof.

11. Permittee agrees to have the serial number of this permit marked or painted on each advertising display erected or maintained under the authority of such permit.

12. Permittee shall not cut any timber on the lands without prior permission from the authorized officer.

13. This permit is subject to the provisions of Executive Order No. 11246 of September 24, 1965, as amended, which sets forth the Equal Opportunity clauses. A copy of this order may be obtained from the signing officer.

14. This permit may not be assigned without prior approval of the authorized officer of the Bureau of Land Management.

Permit issued for period

From

(Authorized Officer)

To

(Title)

(Date)

INSTRUCTIONS

1. Submit, in duplicate, to any local office of the Bureau of Land Management having jurisdiction of the lands.

2. An application by a partnership or association must be accompanied by a statement by each member that he is a citizen of the United States or has filed a declaration to become a citizen. An application by a corporation must be accompanied by a statement showing that the corporation is authorized to hold land in the State in which the land is located and that the person making the application is authorized to act for the corporation.

3. If applicant is other than a Federal, State, or local governmental agency, this application must be accompanied by a

nonreturnable filing fee of \$10 made payable to the Bureau of Land Management.

4. If this application is for permission to erect an advertising display or sign, the applicant must: (a) attach an accurate and fully descriptive diagram, sketch, or photograph (at least 3" x 5") of the sign or display to be erected showing the dimensions, type of construction, estimated cost, the advertising material to be included thereon, the plan of illumination, if any, and the manner of attachment to the land; and, (b) a photograph (at least 3" x 5") showing the site on which the sign or display is to be erected.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ gas ☐ other Salt Water Disposal
well well

2. NAME OF OPERATOR

SUNDANCE OIL COMPANY

3. ADDRESS OF OPERATOR

Suite 510, 1776 Lincoln St., Denver, CO 80203

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 660' FSL, 660' FEL Unit P

AT TOP PROD. INTERVAL:

AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

CHANGE ZONES ☐

ABANDON* ☐

(other) CONVERT TO SALT WATER DISPOSAL ☐

5. LEASE
NM-15019

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Cone Federal

9. WELL NO.

8

10. FIELD OR WILDCAT NAME

Tomahawk, San Andres

11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA

Section 31, T.7S., R.32E.

12. COUNTY OR PARISH

Roosevelt

13. STATE

New Mexico

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)

4469' GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Intend to convert well to a water disposal well.

RECEIVED
MAR 05 1979
OIL CONSERVATION DIVISION
SANTA FE

Subsurface Safety Valve: Manu. and Type

18. I hereby certify that the foregoing is true and correct

SIGNED Richard O. Dimit TITLE VP, Production DATE 2/26/79

Richard O. Dimit

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 42-R0996TEMPORARY USE APPLICATION AND PERMIT
Title I, Sec. 28(2)(c) of the Mineral Leasing Act of 1920, 30 U.S.C. 185, as amended; Secs. 302(b) and 504(a) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732, 1764.

Serial Number

INSTRUCTIONS ON REVERSE

APPLICATION

1. Name (first, middle initial, and last) SUNDANCE OIL COMPANY		Address (include zip code) Suite 510, 1776 Lincoln Street Denver, CO 80203	
2. Give legal description of public lands for which you are applying			
TOWNSHIP	RANGE	SECTION	SUBDIVISION
7 South	32 East	31	660' FSL and 660' FEL, Unit P
Meridian		State	County
		New Mexico	Roosevelt
3. Proposed date(s) of use: From February, 1979 to February, 1989			
4a. Are you 21 years of age or over? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		b. Are you a citizen of the United States or have you declared your intention? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
c. As applicant, are you a <input type="checkbox"/> Partnership <input type="checkbox"/> Association <input checked="" type="checkbox"/> Corporation; <input type="checkbox"/> Individual(s); or an agency of <input type="checkbox"/> Federal Government <input type="checkbox"/> State Government <input type="checkbox"/> Political subdivision of any state?			
d. Are the statements required by Instruction Number 2 attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable			
5. Are you making this application for your own use and benefit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "no," explain)			
6. Are the lands now improved, occupied, or used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "yes," describe improvements and purposes, identify users and occupants)			

PERMIT

Permission is hereby granted to

of

to use the following-described lands:

TOWNSHIP	RANGE	SECTION	SUBDIVISION

Meridian	State	County	Acres (number)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 42-R0996TEMPORARY USE APPLICATION AND PERMIT
Title I, Sec. 28(2)(e) of the Mineral Leasing Act of 1920, 30 U.S.C. 185, as amended; Secs. 302(b) and 504(a) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732, 1764.

Serial Number

INSTRUCTIONS ON REVERSE

APPLICATION

1. Name (first, middle initial, and last) SUNDANCE OIL COMPANY		Address (include zip code) Suite 510, 1776 Lincoln Street Denver, CO 80203	
2. Give legal description of public lands for which you are applying			
TOWNSHIP	RANGE	SECTION	SUBDIVISION
7 South	32 East	31	660' FSL and 660' FEL, Unit P
Meridian	State New Mexico	County Roosevelt	Acres (number)
3. Proposed date(s) of use: From February, 1979 to February, 1989			
4a. Are you 21 years of age or over? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		b. Are you a citizen of the United States or have you declared your intention? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
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6. Are the lands now improved, occupied, or used? ☒ Yes ☐ No (If "yes," describe improvements and purposes, identify users and occupants)

This well is on Tom Gainor's ranch. He owns the surface & we have the minerals.

- 7a. What do you propose to use the lands for?

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- b. What improvements, including sanitation facilities, do you intend to make? (Describe improvements and attach drawings, if convenient)

We do not plan to make any changes in location at this time. If we should have to set tanks & pump, they will be on same pad as the well is now on.

c. What is the estimated cost of proposed improvement? \$ 81,000.00	d. What is the proposed source of water for domestic or other uses? To dispose of water from our other leases adjacent to and on this lease.
---	---

8. Have you enclosed filing fee of \$10? ☒ Yes ☐ No (See Instruction Number 3)

I CERTIFY That the information given by me in this application is true, complete, and correct to the best of my knowledge and belief and is given in good faith.

2/26/79

(Date)

Richard O. Dimit

(Signature of Applicant) V-P, Production

PERMIT

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of

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----------	-------	---------	-------------

Meridian	State	County	Acres (number)
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for the purpose of

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15. Special Conditions:

6. Authorized representatives of the Department of the Interior, other Federal agencies, and game wardens shall at all times have the right to enter the premises on official business.

7. Permittee shall not enclose roads or trails commonly in public use.

8. Permittee shall pay the United States for any damage to its property resulting from this use.

9. Permittee shall notify the authorized officer of address change immediately.

10. This permit is subject to all applicable provisions of the regulations (43 CFR 2920) which are made a part hereof.

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Permit issued for period

From

(Authorized Officer)

To

(Title)

(Date)

INSTRUCTIONS

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

STATE OFFICE

P. O. Box 1449

Santa Fe, New Mexico 87501

'75 APR 7 AM 8:46

STATE OFFICE
SANTA FE, NEW MEXICO

March 27, 1975

IN REPLY REFER TO

NM 0558400
Qualifications
File

943b-4

Sundance Oil Company
1430 Denver Club Bldg.
Denver, Colorado 80202

Gentlemen:

Your corporate qualifications have been removed from the case record NM 040080 and are now of record in our General Qualifications File under serial number NM 0558400. You must refer to this new number on all your future oil and gas filings.

If your statements need up-dating or if you have any questions, please let us know.

Sincerely yours,

Raul E. Martinez
Chief, Minerals Section



Save Energy and You Serve America!

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR SUNDANCE OIL COMPANY		ADDRESS Suite 510, 1776 Lincoln St., Denver, CO 80203	
LEASE NAME Cone Federal	WELL NO. 8	FIELD Tomahawk, San Andres	COUNTY Roosevelt
LOCATION UNIT LETTER P ; WELL IS LOCATED 660 FEET FROM THE South LINE AND 660 FEET FROM THE East LINE, SECTION 31 TOWNSHIP 7 South RANGE 32 East NMPM.			
CASING AND TUBING DATA			
NAME OF STRING Wt. 24#	SIZE 8 5/8"	SETTING DEPTH 1817'	SACKS CEMENT 390 sx
TOP OF CEMENT Surface		TOP DETERMINED BY Circulated 10 sx	
INTERMEDIATE None			
NAME OF STRING Wt. 10.5#	SIZE 4 1/2"	SETTING DEPTH 4368'	SACKS CEMENT 300 sx
TOP OF CEMENT 3900'		TOP DETERMINED BY Schlumberger Perf. Depth Control Log	
TUBING 4.70#, J-55 2 3/8" 3960' NAME, MODEL AND DEPTH OF TUBING PACKER Howco R-4, 4107'			
NAME OF PROPOSED INJECTION FORMATION San Andres		TOP OF FORMATION 3391'	BOTTOM OF FORMATION 4368'
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES 4207-4228'	PROPOSED INTERVAL(S) OF INJECTION 4207-4228'
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil Well		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA Approximately 250'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA Approximately 10,000' (Miss.)
ANTICIPATED DAILY INJECTION VOLUME (BBLS.) 600	MINIMUM 200	MAXIMUM 1500	OPEN OR CLOSED TYPE SYSTEM Closed
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Yes		WATER TO BE DISPOSED OF Salt Water	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Gravity
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Tom Gainor, P.O. Box 206, Kenna, New Mexico 88122		NATURAL WATER IN DISPOSAL ZONE Same	APPROX. PRESSURE (PSIG) Vacuum
ARE WATER ANALYSES ATTACHED? Yes			
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL			
Champlin Petroleum Co., 300 Wilco Bldg., Midland, TX 79701			
Yates Petroleum Corporation, 207 4th St., Artesia, New Mexico 88210			
Exhibit 3 Case 6503			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes		SURFACE OWNER Yes	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)? Yes		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	
PLAT OF AREA Yes		ELECTRICAL LOG Yes	
DIAGRAMMATIC SKETCH OF WELL Yes		OIL CONSERVATION DIVISION SANTA FE	
I hereby certify that the information above is true and complete to the best of my knowledge and belief.			
(Signature) Richard O. Dimit		(Title) Vice President, Production	(Date) 2/26/79

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

**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.

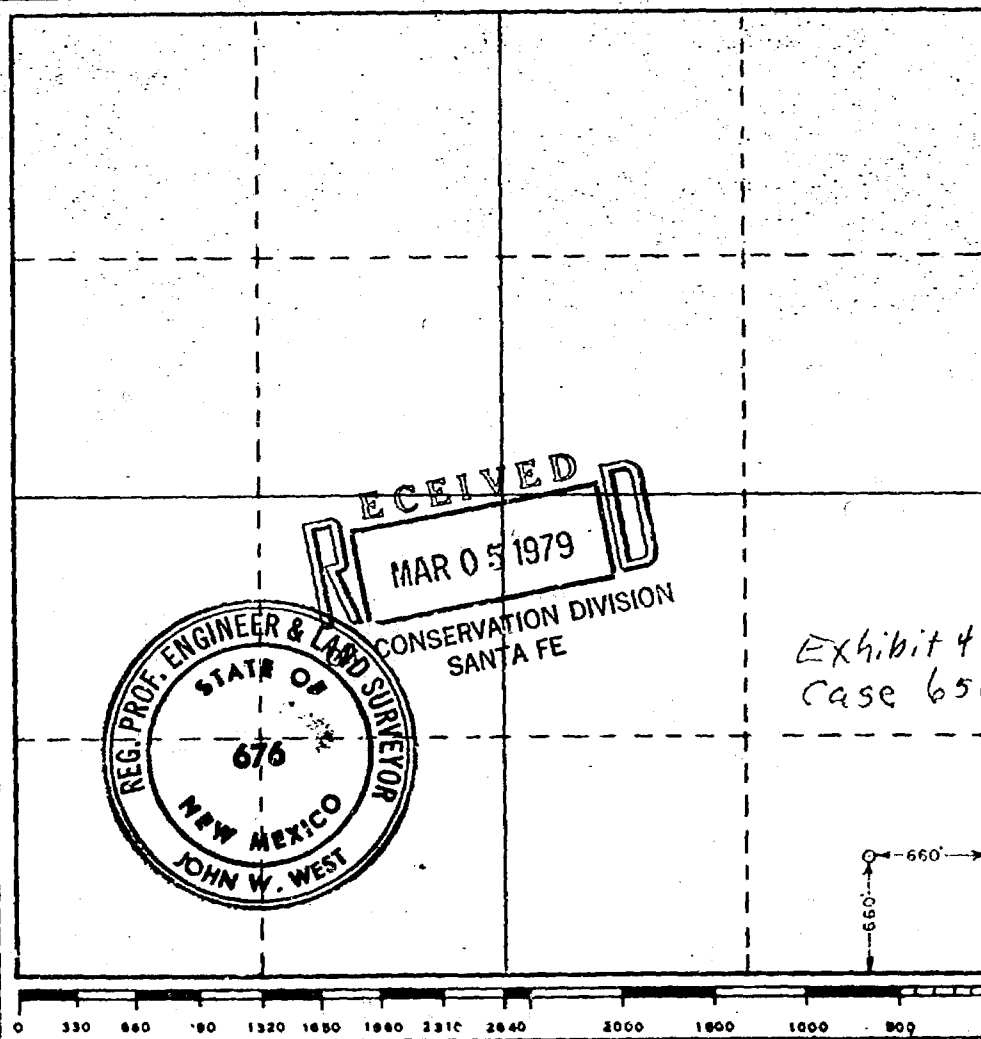
Operator SUNDANCE OIL CO.			Lease CONE FEDERAL		Well No. 8
Unit Letter P	Section 31	Township 7 SOUTH	Range 32 EAST	County ROOSEVELT	
Actual Footage Location of Well: 660 feet from the SOUTH line and 660 feet from the EAST line					
Ground Level Elev. 4469.4	Producing Formation San Andres		Pool Tomahawk	Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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
Richard O. Dimit
Position
Vice President, Production
Company
Sundance Oil Company
Date
November 9, 1978

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.

Date Surveyed
OCTOBER 28, 1978
Registered Professional Engineer and/or Land Surveyor

Certificate No. **John W. West 676**
Ronald J. Eidson 3239

CONE FEDERAL #8

On original completion, perforated 4207' to 4228' with 2 shots per foot. Spotted 6 barrels acid at 4228'. Pulled up and set R-4 packer at 4107'. Acidized with 4500 gallons 20% NE acid using 84 ball sealers. Had good ball action. Average injection rate 2.5 BPM. Average treating pressure 2500#. ISIP 2100#. FSIP 1770# in 13 minutes. Swab tested for five days. Recovered salt water with only a trace of oil.

Shut-in pending approval to convert to salt water disposal well.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W79-174To Sundance Oil CompanyDate 2-14-79Box 115Roswell, New MexicoATTN: Mr. Jim Akins

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____

Date Rec. 2-14-79Well No. Cone Federal #8

Depth _____

Formation San Andres

County _____

Field Tomahawk

Source _____

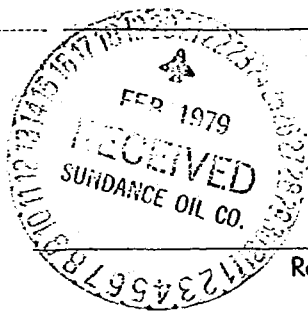
Resistivity _____ 0.047 @ 74°F.Specific Gravity _____ 1.184pH _____ 6.8Calcium (Ca) _____ 36,500

*MPL

Magnesium (Mg) _____ 6,300Chlorides (Cl) _____ 171,000Sulfates (SO₄) _____ 400Bicarbonates (HCO₃) _____ 290Soluble Iron (Fe) _____ Nil

Remarks: _____

*Milligrams per liter



Respectfully submitted,

Analyst: Brewer

cc: _____

HALLIBURTON COMPANY

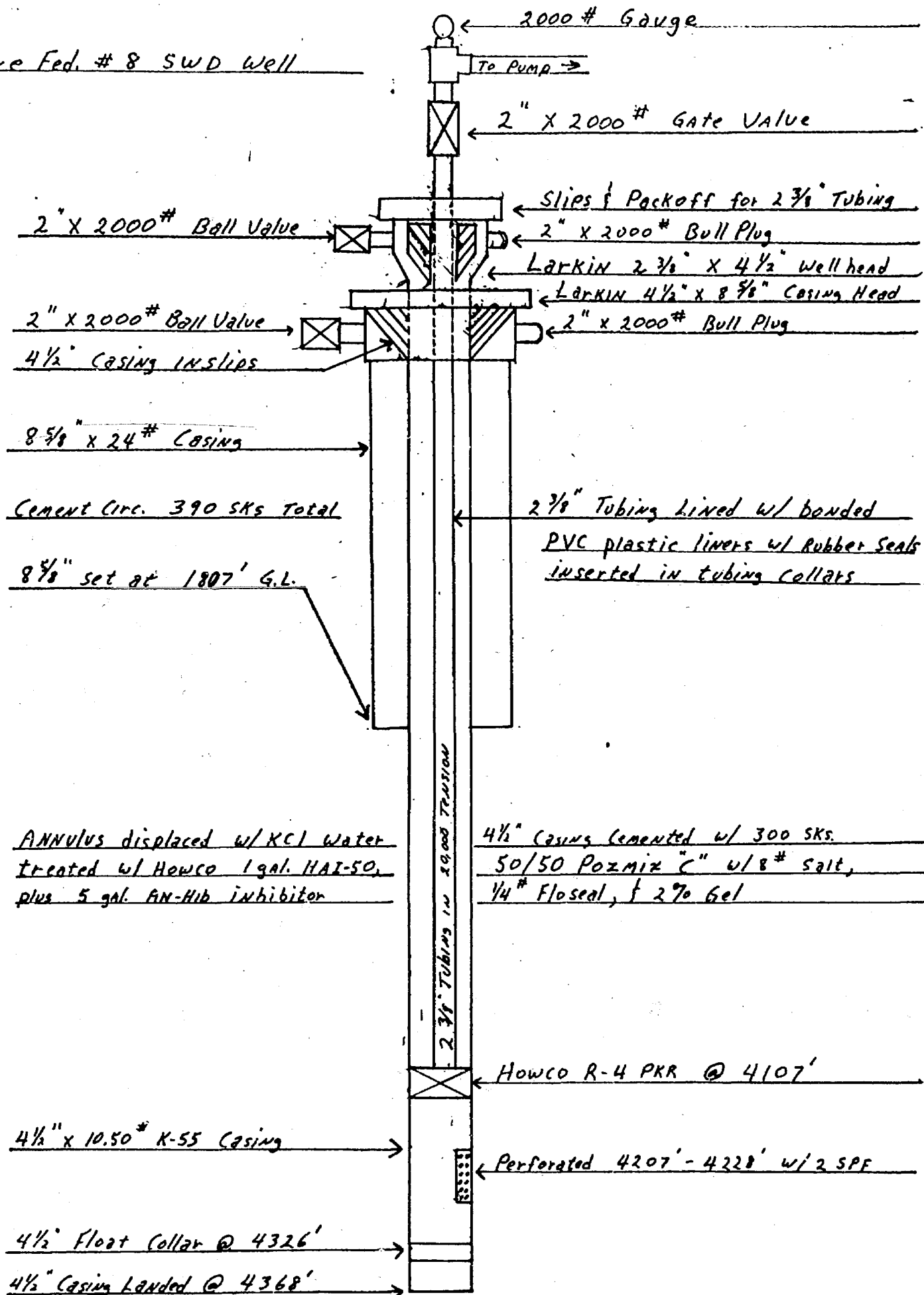
By W. L. Brewer

CHEMIST

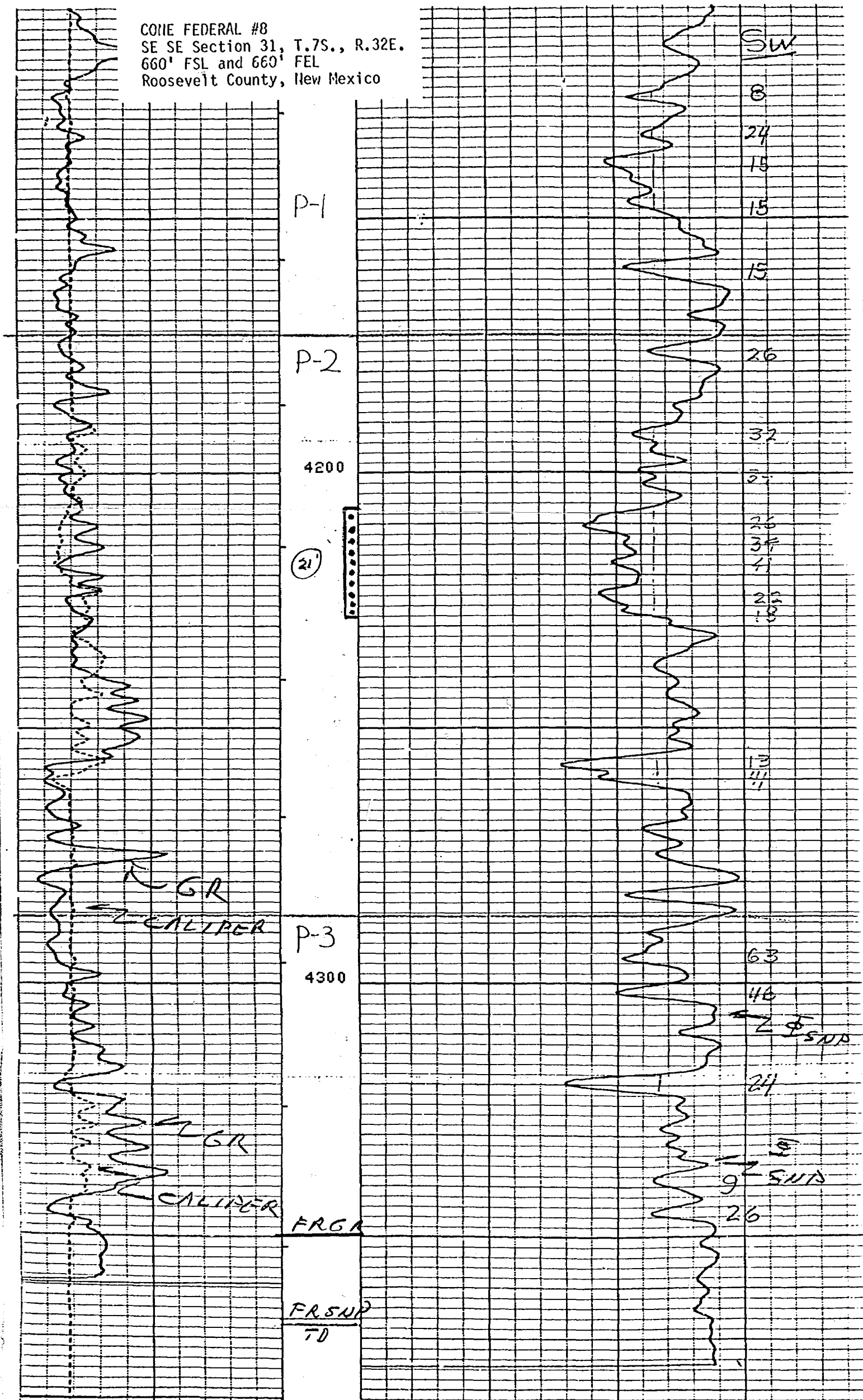
NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

Coxe Fed. # 8 SWD well



CONE FEDERAL #8
 SE SE Section 31, T.7S., R.32E.
 660' FSL and 660' FEL
 Roosevelt County, New Mexico



Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Cone Federal #1
Cone Federal #2
Cone Federal #3
Cone Federal #4
Cone Federal #5
Cone Federal #6
Cone Federal #7

Langley Federal #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Chambers Federal #1
Chambers Federal #2
Chambers Federal #3

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510, 1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904, 1776 Lincoln Street
Denver, CO 80203

Jerry Chambers
1720 Lincoln Center Building
Denver, CO 80264

Lease Status: State

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: State #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

WELLS WITHIN ONE-HALF MILE OF CONE FEDERAL #8

<u>Well Name</u>	<u>Surface Casing/Sx Cement</u>	<u>Production Casing/Sx Cement</u>	<u>Producing Interval</u>
Cone Federal #4 NE SE 31-7S-32E 660' FEL; 1980' FSL Roosevelt County, New Mexico	1827' / 600 sx	4398' / 300 sx	4323' to 4333'
Cone Federal #7 SE NE 31-7S-32E 1980' FNL, 660' FEL Roosevelt County, New Mexico	1835' / 450 sx	4400' / 300 sx	4251' to 4278'
Yates #1 E, Tom Tom NW NE 6-8S-32E 660' FNL, 1980' FEL Chaves County, New Mexico (P&A 9/26/77)	1725' / 760 sx	4400' / 420 sx	P & A

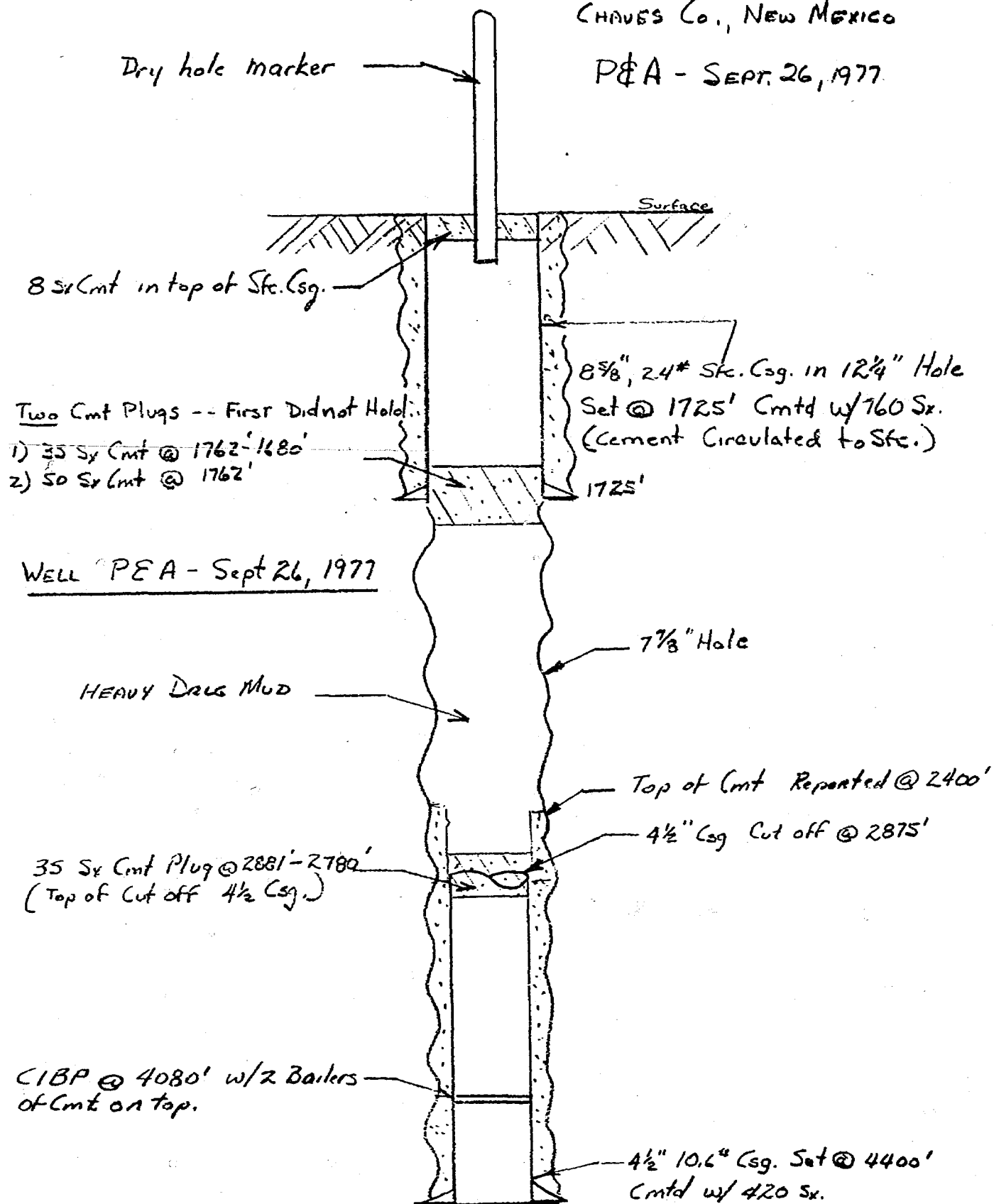
YATES - #1 E. Tom Tom

660' FNL E 1980' FEL

SEC. 6, T8S, R 32E

CHAVES Co., New Mexico

P&A - SEPT. 26, 1977



<p>L.E. Mearns to Barnes, et al.</p> <p>J.P. Southard, et al. L. E. Mearns Est. Southard, et al.</p> <p>L. E. Mearns Est. Southard, et al.</p> <p>L. E. Mearns Est. Southard, et al.</p>	<p>L. E. Mearns Est. Southard, et al.</p> <p>L. E. Mearns Est. Southard, et al.</p> <p>L. E. Mearns Est. Southard, et al.</p> <p>L. E. Mearns Est. Southard, et al.</p>	<p>Sundance Oil 3-1-82 15019</p> <p>Fuel Supply 1-1-82 11144</p> <p>U.S.</p>	<p>Mrs. A.M. Howard, et al. Foy L. Patrick, et al.</p> <p>Yates 12-12-87</p> <p>Mountain Fuel Supply 1-1-81 1844</p> <p>U.S. Min T.E. Tucker (S)</p>	<p>Nearburg Vincennes 0-1-82 0-1-82</p> <p>Cont'l 5-22-79 Homesite Oils 12-1-70 WGS 0558125 U.S.</p> <p>ARCO, et al. T.E. Tucker (S)</p>	<p>Cobalt Carbon Vincennes 0-1-82 0-1-82</p> <p>Exxon 5-8-82</p> <p>U.S.</p>
<p>Linniev Southard, et al. T.R. Southard, et al.</p> <p>F.P. Southard T.R. Southard, et al.</p> <p>F.P. Southard T.R. Southard, et al.</p> <p>F.P. Southard T.R. Southard, et al.</p>	<p>F.P. Southard T.R. Southard, et al.</p> <p>F.P. Southard T.R. Southard, et al.</p> <p>F.P. Southard T.R. Southard, et al.</p> <p>F.P. Southard T.R. Southard, et al.</p>	<p>J.A. Davidson 12-5-82</p> <p>Morillo, et al. 4-10-82</p> <p>U.S.</p>	<p>Yates 12-12-87</p> <p>C.A. Hatch 12-12-87</p> <p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 5-8-82</p> <p>U.S.</p>
<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>
<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>
<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>
<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>
<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>
<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>
<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Flag-Redfern 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>	<p>Exxon 12-1-80 12693</p> <p>U.S.</p>

Dockets Nos. 14-79 and 15-79 are tentatively set for hearing on April 11 and 18, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 28, 1979

9 A.M. - OIL CONSERVATION DIVISION 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 6500: Application of Gulf Oil Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the Division waived existing well-spacing requirements and found that the drilling of additional wells was necessary to effectively and efficiently drain those portions of the proration units in the Central Drinkard Unit located in Sections 28, 29, 32 and 33, Township 21 South, Range 37 East, Lea County, New Mexico, which could not be so drained by the existing wells.
- CASE 6501: Application of Delta Drilling Company for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to re-enter the Williamson State Unit Well No. 1, the surface location of which is 660 feet from the North and West lines of Section 30, Township 16 South, Range 33 East, Lea County, New Mexico, and directionally drill said well in such a manner as to bottom it in the Morrow formation within 100 feet of a point 1980 feet from the North and West lines of said Section 30, the N/2 of the section to be dedicated to the well.
- CASE 6502: Application of Stevens Oil Company for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the SW/4 SW/4 of Section 30, Township 8 South, Range 29 East, Chaves County, New Mexico, 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. 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 6503: Application of Sundance Oil Company for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation through the perforated interval from 4207 feet to 4228 feet in its Cone Federal Well No. 8 located in Unit P of Section 31, Township 7 South, Range 32 East, Tomahawk-San Andres Pool, Roosevelt County, New Mexico.
- CASE 6504: Application of Phoenix Resources Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Buckhorn Canyon Unit Area No. 2, comprising 23,009 acres, more or less, of Federal and State lands in Township 19 South, Ranges 19 and 20 East, Chaves County, New Mexico.
- CASE 6505: Application of Doyle Hartman for vertical pool limit redefinition, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order extending the vertical limits of the Langlie Mattix Pool in Lea County, New Mexico, to include the lowermost 200 feet of the Seven Rivers formation and the concomitant contraction of the vertical limits of the Jalmat Gas Pool underlying the following described lands in Township 23 South, Range 36 East: Section 35: SW/4, S/2 SE/4, and NW/4 SE/4; Section 36: W/2 SW/4; and in Township 24 South, Range 36 East: Section 1: NW/4, S/2 NE/4, and NW/4 NE/4; Section 2: W/2.
- CASE 6506: Application of Bedford, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Ram Well No. 1-A located in Unit C of Section 8, Township 26 North, Range 12 West, WAW-Fruitland Pictured Cliffs Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.
- CASE 6507: Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir or in the alternative a new onshore production well determination for its Hanlad State Well No. 1 located in Unit K of Section 2, Township 18 South, Range 35 East, Queen formation, Lea County, New Mexico.
- CASE 6508: Application of Harvey E. Yates Company for an unorthodox well location and a non-standard proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 62.75-acre non-standard gas proration unit comprising Lots 1 and 2 of Section 19, Township 18 South, Range 29 East, Eddy County, New Mexico, to be dedicated to its Depco Federal Well No. 1 to be located 330 feet from the North line and 660 feet from the West line of said Section 19.

CASE 6509: Application of Harvey E. Yates Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new gas pool in the Yates formation for its Depeco Federal Well No. 1 located in Unit D of Section 19, Township 18 South, Range 29 East, Eddy County, New Mexico, and for promulgation of special pool rules, including provision for 80-acre gas well spacing.

CASE 6480: (Continued from February 28, 1979, Examiner Hearing)

Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir or in the alternative a new onshore production well determination for its State 22 Well No. 1 located in Unit P of Section 22, Township 18 South, Range 35 East, Queen formation, Lea County, New Mexico.

CASE 6482: (Continued from February 28, 1979, Examiner Hearing)

Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir or in the alternative a new onshore production well determination for its Mobil 27 State Well No. 1 located in Unit A of Section 27, Township 18 South, Range 35 East, Queen formation, Lea County, New Mexico.

CASE 6072: (Continued from March 14, 1979, Examiner Hearing)

In the matter of Case 6072 being reopened pursuant to the provisions of Order No. R-5643 which order created the Travis-Upper Pennsylvanian Pool, Eddy County, New Mexico, with provisions for 80-acre spacing. All interested parties may appear and show cause why the Travis-Upper Pennsylvanian Pool should not be developed on 40-acre spacing units.

CASE 6492: (Continued from March 14, 1979, 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 in the San Andres formation underlying the NE/4 NW/4 of Section 13, Township 17 South, Range 25 East, Eddy County, New Mexico, 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. 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 6510: 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 for the Wolfcamp through Mississippian formations of its Rio Pecos Federal "KO" Well No. 1, to be located 660 feet from the North line and 1300 feet from the East line of Section 28, Township 18 South, Range 27 East, Eddy County, New Mexico, the E/2 of said Section 28 to be dedicated to the well.

CASE 6511: Application of Yates Petroleum Corporation for a dual completion and downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Tom Brown "GO" Com. Well No. 1 located in Unit C of Section 22, Township 17 South, Range 26 East, Kennedy Farms Field, Eddy County, New Mexico, to produce gas from the Lower Morrow formation through tubing and to commingle and produce the Strawn and Upper Morrow zones in the annulus of said well.

CASE 6512: 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 Hilliard "BF" Federal Well No. 2, to be located 330 feet from the North line and 2310 feet from the West line of Section 14, Township 21 South, Range 22 East, to test the Wolfcamp through Mississippian formations, Eddy County, New Mexico, the W/2 of said Section 14 to be dedicated to the well.

CASE 6513: Application of Yates Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Atoka and Morrow production in the wellbore of its Stebbins GQ Fed. Well No. 1 located in Unit B of Section 20, Township 20 South, Range 29 East, East Burton Flats Field, Eddy County, New Mexico.

CASE 6514: Application of Yates Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of North Burton Flats-Atoka and East Burton Flats-Morrow production in the wellbore of its Williamson BC Fed. Well No. 4 located in Unit K of Section 7, Township 20 South, Range 29 East, Eddy County, New Mexico.

CASE 6515: Application of Southland Royalty Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the W/2 of Section 31, Township 31 North, Range 11 West, San Juan County, New Mexico, to be dedicated to its Grenier Well No. 23 drilled at a location 1190 feet from the South and West lines of said Section 31. 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 6516: Application of Union Oil Company of California for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Maduro Unit Area, comprising 2,560 acres, more or less, of Federal and State lands in Township 19 South, Range 33 East, Lea County, New Mexico.

CASE 6452: (Continued and Readvertised)

Application of Burleson & Ruff for a non-standard gas proration unit and approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the SW/4 of Section 25, Township 24 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico. Applicant further seeks a finding that the recompletion of its Harrison Well No. 2 located in Unit N or in the alternative, the drilling of its Harrison Well No. 4 in Unit L, of Section 25 is necessary to effectively and efficiently drain that portion of the previously approved 160-acre proration unit which cannot be drained by the old unit well.



WOLFSON OIL COMPANY

OIL PRODUCERS

3206 REPUBLIC NATIONAL BANK TOWER

DALLAS, TEXAS 75201

March 21, 1979

311 C & K PETROLEUM BUILDING
MIDLAND, TEXAS

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

SUBJECT: March 28, 1979 Hearing of Sundance Oil Company
to inject water in Cone-Federal No. 8 well,
Tomahawk Field, Roosevelt County, New Mexico

Gentlemen:

Wolfson Oil Company, the only other operator with producing wells in the Tomahawk Field, urges the Commission to approve the application of Sundance Oil Company to inject salt water in their Cone-Federal No. 8 well.

The injection of water below the oil-water contact in the No. 8 well should assist in the maintenance of bottom-hole pressure and could result in the enhancement of ultimate recovery in the Tomahawk Field.

Wolfson Oil Company plans to similarly dispose of its water in the future and would assist Sundance in obtaining external water to further aid in the pressure maintenance of the Tomahawk Field.

Yours very truly,

WOLFSON OIL COMPANY

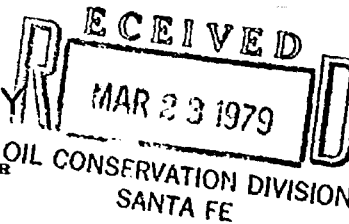
H. G. Freedman
H. G. Freedman

WOLFSON OIL COMPANY

OIL PRODUCERS

3206 REPUBLIC NATIONAL BANK TOWER
DALLAS, TEXAS 75201

March 21, 1979



311 C & K PETROLEUM BUILDING
MIDLAND, TEXAS

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

Case 6503

SUBJECT: March 28, 1979 Hearing of Sundance Oil Company
to inject water in Cone-Federal No. 8 well,
Tomahawk Field, Roosevelt County, New Mexico

Gentlemen:

Wolfson Oil Company, the only other operator with producing wells in the Tomahawk Field, urges the Commission to approve the application of Sundance Oil Company to inject salt water in their Cone-Federal No. 8 well.

The injection of water below the oil-water contact in the No. 8 well should assist in the maintenance of bottom-hole pressure and could result in the enhancement of ultimate recovery in the Tomahawk Field.

Wolfson Oil Company plans to similarly dispose of its water in the future and would assist Sundance in obtaining external water to further aid in the pressure maintenance of the Tomahawk Field.

Yours very truly,

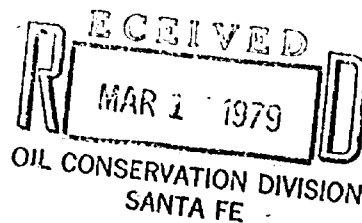
WOLFSON OIL COMPANY

H. G. Freedman
H. G. Freedman

champlin 

March 8, 1979

R. L. Walker
Exploration Superintendent
West Texas District



Case 6503

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

Subject: Application for Salt Water Disposal
Sundance Oil Company No. 8 Cone Federal
660' FS&EL, Sec. 31, T-7-S, R-32-E
Roosevelt County, New Mexico


Gentlemen:

By application dated February 26, 1979, Sundance Oil Company has requested permission to dispose of salt water into the San Andres pay in the subject well.

Champlin Petroleum Company owns a 320 acre lease diagonally offsetting (N/2 Section 5, T-8-S, R-32-E, Roosevelt County, New Mexico) the subject well and believes the injection of salt water in the field pay at this location will cause reservoir damage in this area resulting in a decreased incentive to drill the CPC lease and cause a consequent loss and subsurface waste of oil and gas.

For the reason stated above Champlin Petroleum Company wishes to protest the issuance of a permit to dispose of salt water into the San Andres pay zone in the Sundance Oil Company No. 8 Cone Federal well located in Unit P, 660' FS&EL of Section 31, T-7-S, R-32-E, Roosevelt County, New Mexico.

Yours very truly,


R. L. Walker

RLW:ld

Champlin Petroleum Company
300 Wilco Building
Midland, Texas 79701
915/682-3775



SUNDANCE OIL COMPANY

February 28, 1979

Case 6503

Mr. Dan Nutter
Oil Conservation Commission
Box 2088
State Land Office Building
Santa Fe, NM 87501

RE: Water Injection Application
Cone Federal #8
SW SW Section 31, T.7S., R.32E.
Roosevelt County, New Mexico

Dear Mr. Nutter:

I wish to thank you for your help and advise regarding the above water injection application. I am enclosing a copy of all the material sent to the District Office which, I am hopeful, they will in turn approve and forward to your office for the scheduling of the hearing.

If I have neglected to include additional information that you will need, I would appreciate you calling me collect so that we can expedite this matter as quickly as possible.

I really do thank you for remembering my father. I am looking forward to meeting you shortly.

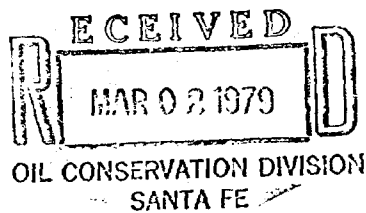
Sincerely,

Richard O. Dimit

Richard O. Dimit
Vice President, Production

RD:ds

Enclosure



1776 Lincoln Street, Suite 510
Denver, Colorado 80203
telephone (303) 861-4694

NEW MEXICO OIL CONSERVATION COMMISSION

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

Case 6503

OPERATOR SUNDANCE OIL COMPANY		ADDRESS Suite 510, 1776 Lincoln St., Denver, CO 80203	
LEASE NAME Cone Federal	WELL NO. 8	FIELD Tomahawk, San Andres	COUNTY Roosevelt
LOCATION UNIT LETTER P ; WELL IS LOCATED 660 FEET FROM THE South LINE AND 660 FEET FROM THE East LINE. SECTION 31 TOWNSHIP 7 South RANGE 32 East NMPM.			

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
Wt. 24#	8 5/8"	1817'	390 sx	Surface	Circulated 10 sx
INTERMEDIATE					
None					
LONG STRING					
Wt. 10.5#	4 1/2"	4368'	300 sx	3900'	Schlumberger Perf. Depth Control Log
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		
4.70#, J-55	2 3/8"	3960'	Howco R-4, 4107'		
NAME OF PROPOSED INJECTION FORMATION		TOP OF FORMATION		BOTTOM OF FORMATION	
San Andres		3391'		4368'	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?		PERFORATIONS OR OPEN HOLES		PROPOSED INTERVAL(S) OF INJECTION	
Tubing		4207-4228'		4207-4228'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?		
No	Oil Well		No		

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA	
Approximately 250'		None		Approximately 10,000' (Miss.)	
ANTICIPATED DAILY INJECTION VOLUME (BBL/S.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSIG)
600	200	1500	Closed	Gravity	Vacuum
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
Yes			Salt Water	Same	Yes

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)	
Tom Gainor, P.O. Box 206, Kenna, New Mexico 88122	
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL	
Champlin Petroleum Co., 300 Wilco Bldg., Midland, TX 79701	
Yates Petroleum Corporation, 207 4th St., Artesia, New Mexico 88210	

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL			
Yes		Yes		Yes			
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)?		PLAT OF AREA		ELECTRICAL LOG		DIAGRAMMATIC SKETCH OF WELL	
Yes		Yes		Yes		Yes	

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

(Signature) Richard O. Dimit	(Title) Vice President, Production	(Date) 2/26/79
-------------------------------------	---	-----------------------

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

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.

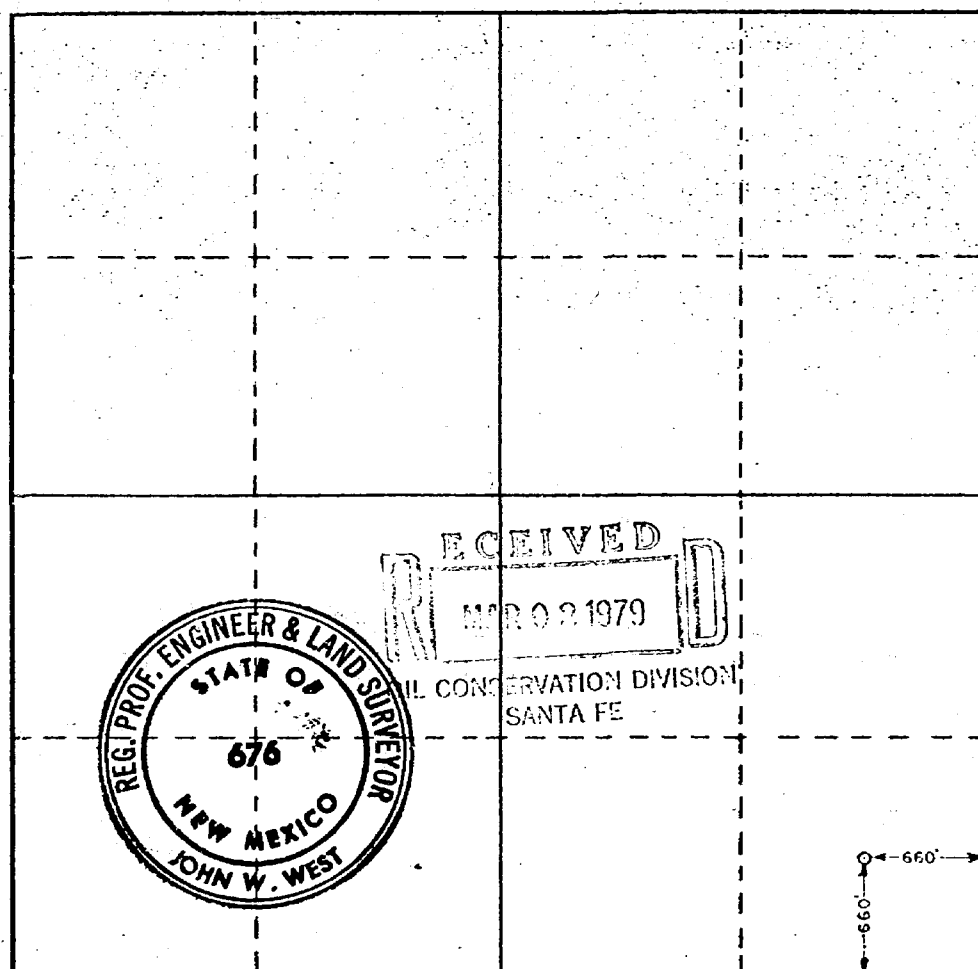
Operator SUNDANCE OIL Co.		Lease CONE FEDERAL		Well No. 8
Unit Letter P	Section 31	Township 7 SOUTH	Range 32 EAST	County ROOSEVELT
Actual Footage Location of Well: 660 feet from the SOUTH line and 660 feet from the EAST line				
Ground Level Elev. 4469.4	Producing Formation San Andres	Pool Tomahawk	Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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
Richard O. Dimit
Position
Vice President, Production
Company
Sundance Oil Company
Date
November 9, 1978

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.

Date Surveyed
OCTOBER 28, 1978
Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No. **John W. West 676**
Ronald J. Eidson 3239

CONE FEDERAL #8

On original completion, perforated 4207' to 4228' with 2 shots per foot. Spotted 6 barrels acid at 4228'. Pulled up and set R-4 packer at 4107'. Acidized with 4500 gallons 20% NE acid using 84 ball sealers. Had good ball action. Average injection rate 2.5 BPM. Average treating pressure 2500#. ISIP 2100#. FSIP 1770# in 13 minutes. Swab tested for five days. Recovered salt water with only a trace of oil.

Shut-in pending approval to convert to salt water disposal well.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W79-174To Sundance Oil CompanyDate 2-14-79Box 115Roswell, New MexicoATTN: Mr. Jim Akins

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____

Date Rec. 2-14-79Well No. Cone Federal #8

Depth _____

Formation San Andres

County _____

Field Tomahawk

Source _____

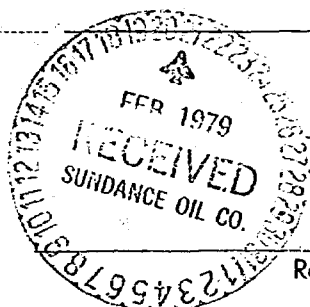
Resistivity 0.047 @ 74°F.Specific Gravity 1.184pH 6.8Calcium (Ca) 36,500

*MPL

Magnesium (Mg) 6,300Chlorides (Cl) 171,000Sulfates (SO₄) 400Bicarbonates (HCO₃) 290Soluble Iron (Fe) Nil

Remarks: _____

*Milligrams per liter



Respectfully submitted, _____

Analyst: Brewer

cc: _____

HALLIBURTON COMPANY

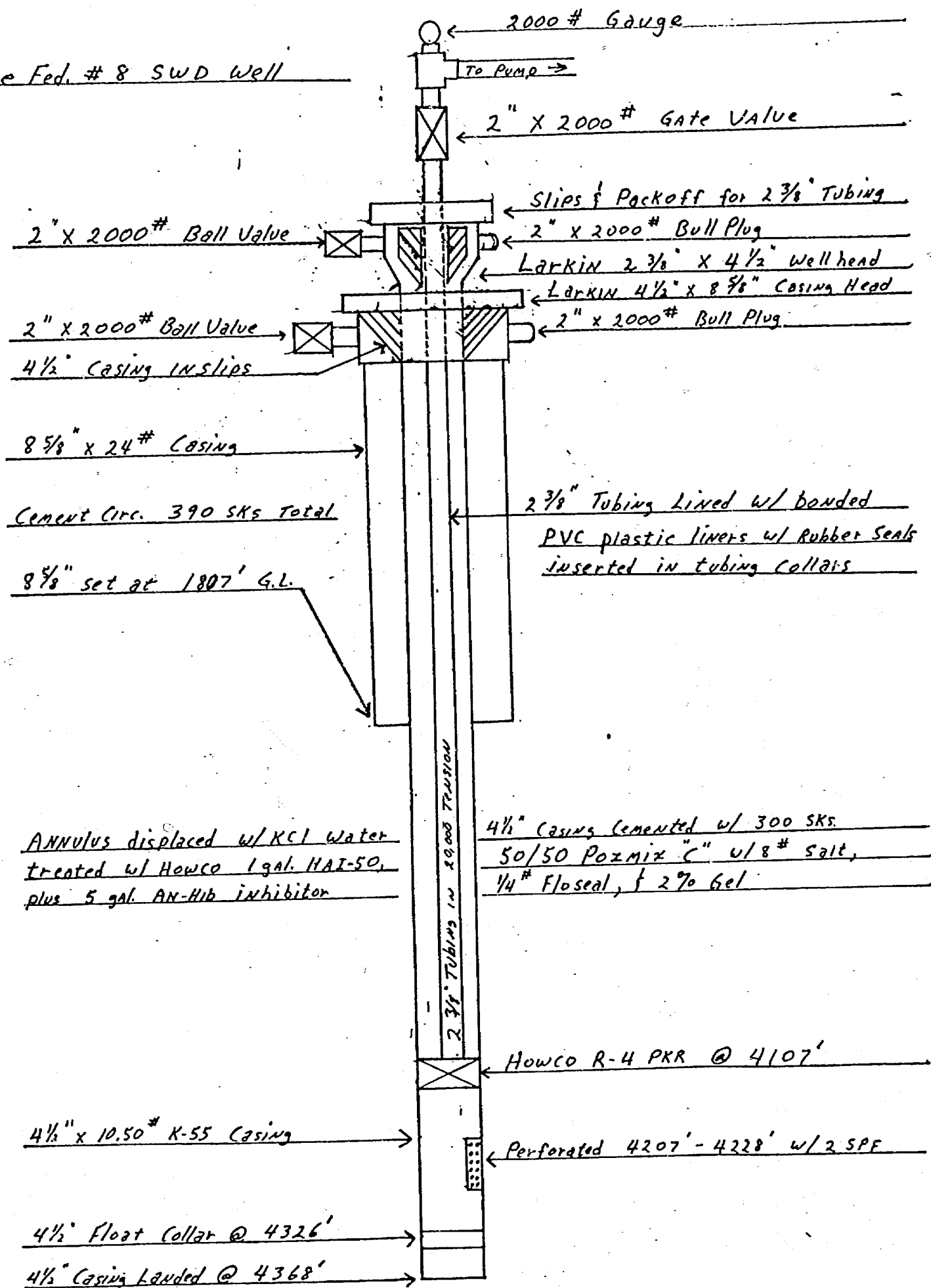
By W. L. Brewer

CHEMIST

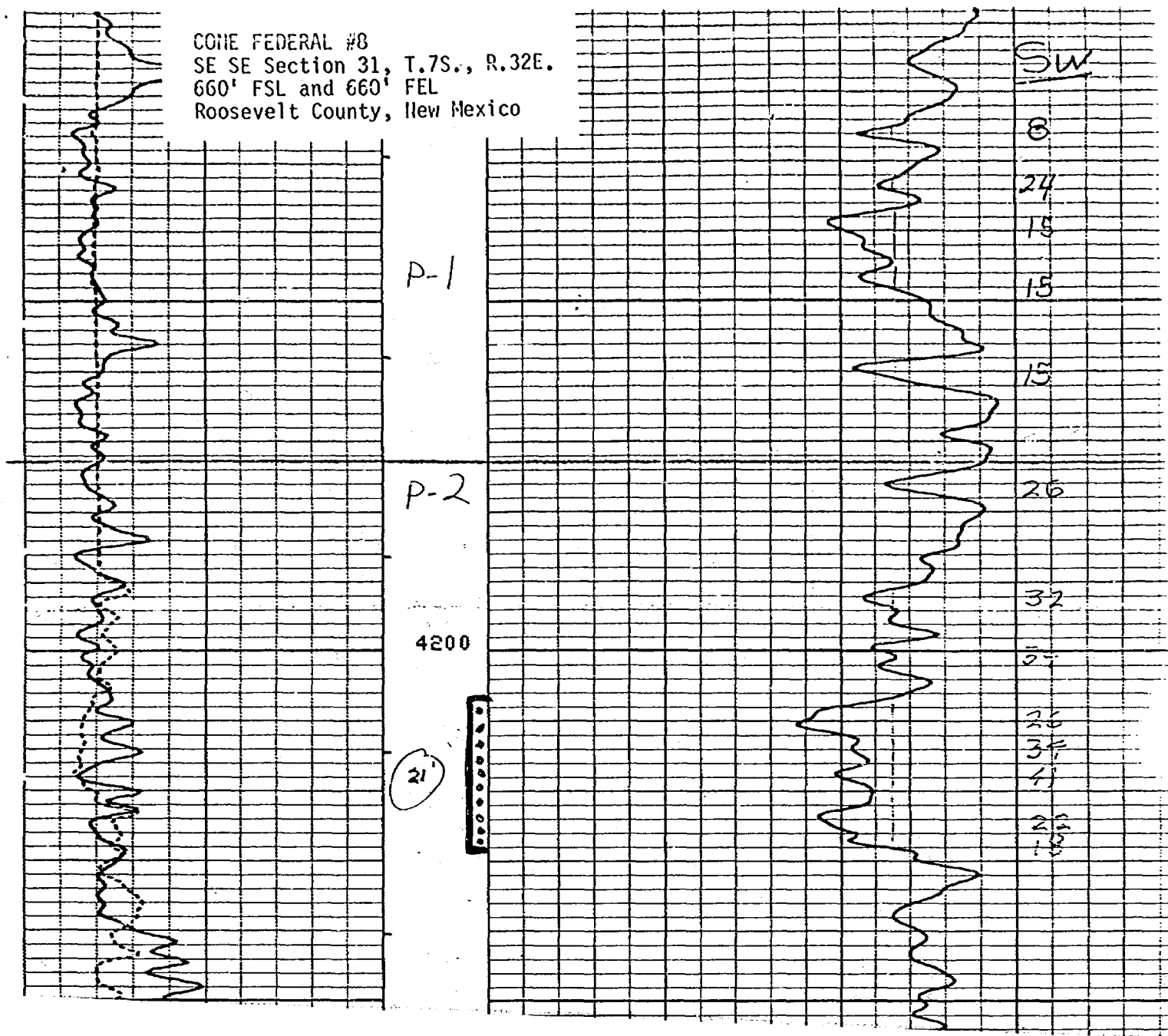
NOTICE

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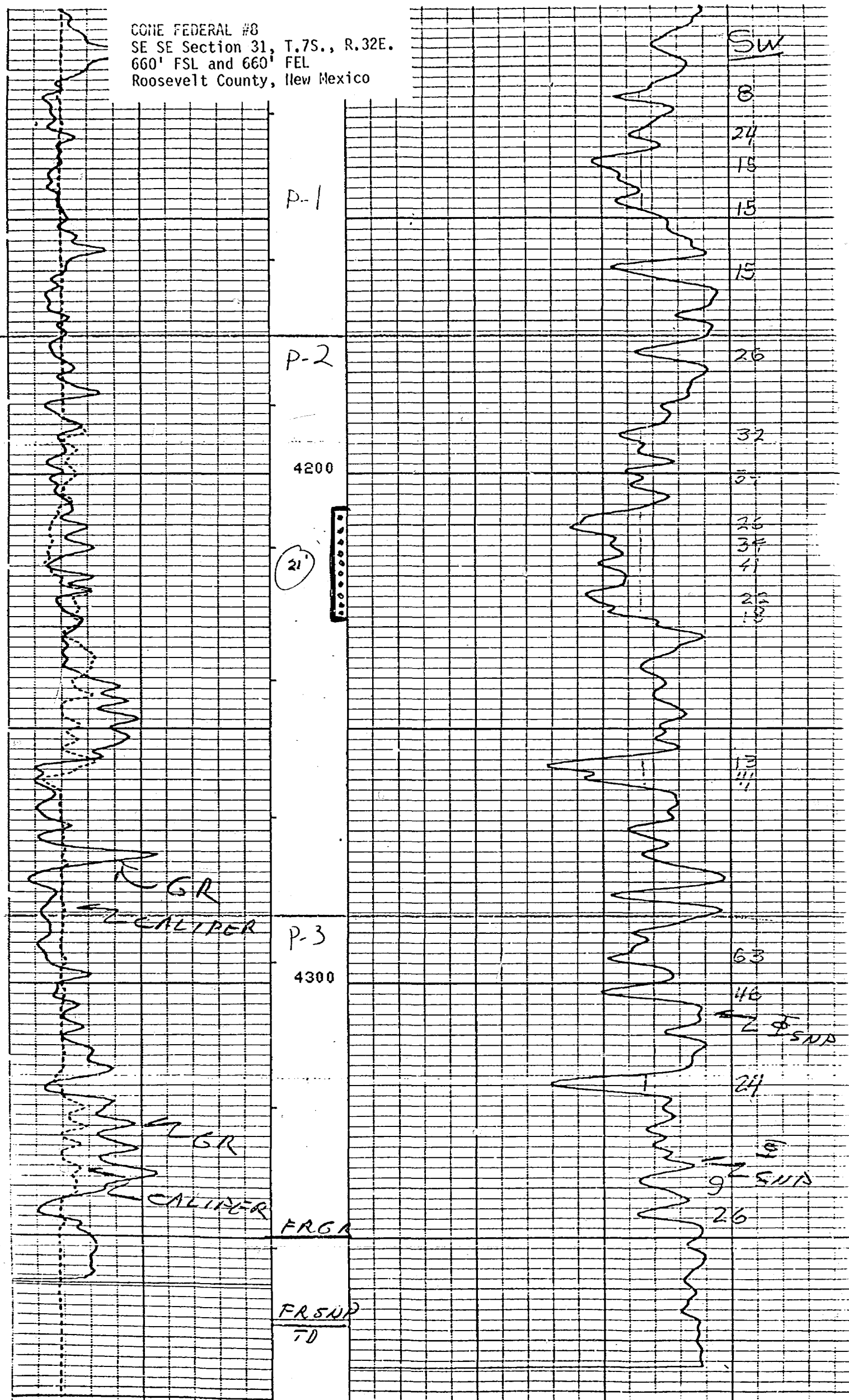
Cone Fed. # 8 SWD Well



CONE FEDERAL #8
SE SE Section 31, T.7S., R.32E.
660' FSL and 660' FEL
Roosevelt County, New Mexico



CONE FEDERAL #8
 SE SE Section 31, T.7S., R.32E.
 660' FSL and 660' FEL
 Roosevelt County, New Mexico



Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Cone Federal #1
Cone Federal #2
Cone Federal #3
Cone Federal #4
Cone Federal #5
Cone Federal #6
Cone Federal #7

Langley Federal #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Chambers Federal #1
Chambers Federal #2
Chambers Federal #3

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510, 1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904, 1776 Lincoln Street
Denver, CO 80203

Jerry Chambers
1720 Lincoln Center Building
Denver, CO 80264

Lease Status: State

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: State #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

WELLS WITHIN ONE-HALF MILE OF CONE FEDERAL #8

<u>Well Name</u>	<u>Surface Casing/Sx Cement</u>	<u>Production Casing/Sx Cement</u>	<u>Producing Interval</u>
Cone Federal #4 NE SE 31-7S-32E 660' FEL, 1980' FSL Roosevelt County, New Mexico	1827' / 600 sx	4398' / 300 sx	4323' to 4333'
Cone Federal #7 SE NE 31-7S-32E 1980' FNL, 660' FEL Roosevelt County, New Mexico	1835' / 450 sx	4400' / 300 sx	4251' to 4278'
Yates #1 E. Tom Tom NW NE 6-8S-32E 660' FNL, 1980' FEL Chaves County, New Mexico (P&A 9/26/77)	1725' / 760 sx	4400' / 420 sx	P & A

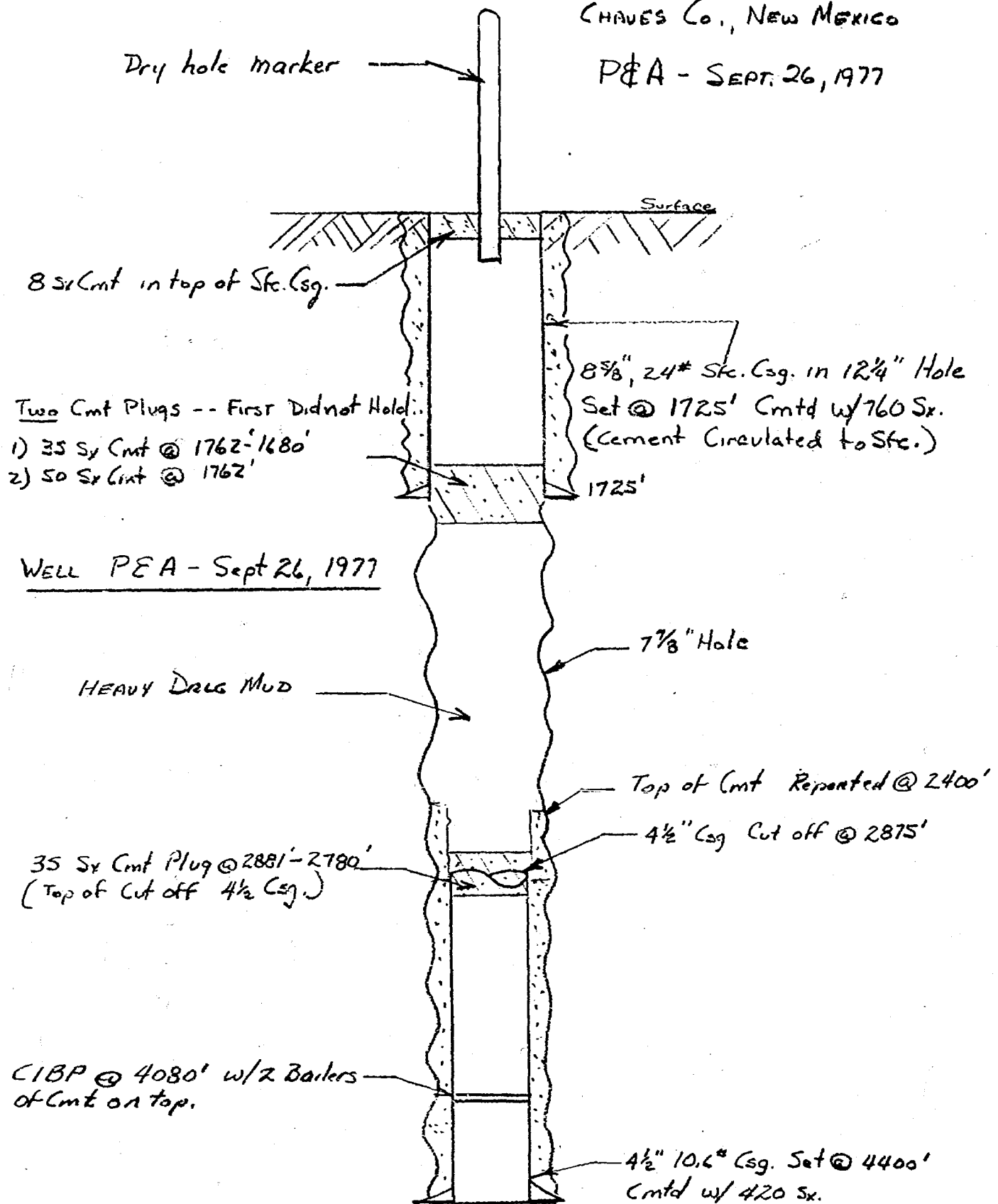
YATES - #1 E. Tom Tom

660' FNL E 1980' FEL

SEC. 6, T8S, R 32E

CHAVES Co., New Mexico

P&A - SEPT. 26, 1977



[illegible]

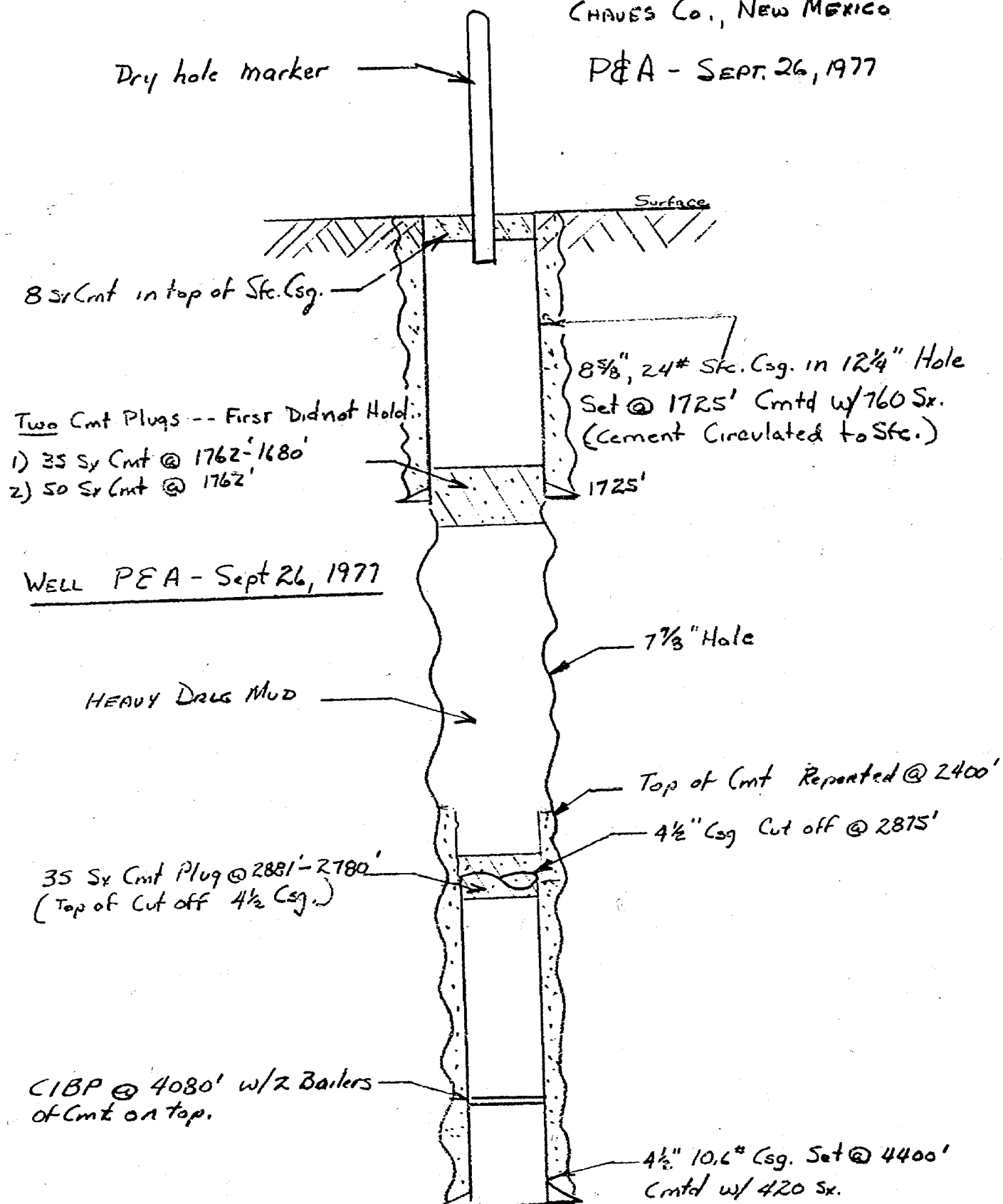
YATES - #1 E. Tom Tom

660' FNL E 1980' FEL

SEC. 6, T8S, R 32E

CHAVES Co., New Mexico

PEA - SEPT. 26, 1977



[illegible]

WELLS WITHIN ONE-HALF MILE OF CONE FEDERAL #8

<u>Well Name</u>	<u>Surface Casing/Sx Cement</u>	<u>Production Casing/Sx Cement</u>	<u>Producing Interval</u>
Cone Federal #4 NE SE 31-7S-32E 660' FEL, 1980' FSL Roosevelt County, New Mexico	1827' / 600 SX	4398' / 300 SX	4323' to 4333'
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Yates #1 E. Tom Tom NW NE 6-8S-32E 660' FNL, 1980' FEL Chaves County, New Mexico (P&A 9/26/77)	1725' / 760 SX	4400' / 420 SX	P & A

OIL CONSERVATION COMMISSION
Hobbs DISTRICT

Case 6503

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE March 6, 1979

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD X _____
Proposed WFX _____
Proposed PMX _____

RECEIVED
MAR 06 1979
OIL CONSERVATION COMMISSION
SANTA FE

Gentlemen:

I have examined the application dated _____
for the Sundance Oil Co. Cone Federal #8-P 31-7-32
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Will take hearing--J.S.

Yours very truly,

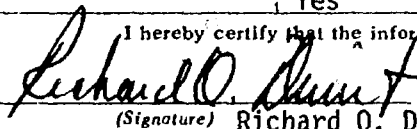
Jerry Sifton

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR SUNDANCE OIL COMPANY		ADDRESS Suite 510, 1776 Lincoln St., Denver, CO 80203			
LEASE NAME Cone Federal	WELL NO. 8	FIELD Tomahawk, San Andres	COUNTY Roosevelt		
LOCATION UNIT LETTER P ; WELL IS LOCATED 660 FEET FROM THE South LINE AND 660 FEET FROM THE East LINE, SECTION 31 TOWNSHIP 7 South RANGE 32 East NMPM.					
CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
Wt. 24#	8 5/8"	1817'	390 sx	Surface	Circulated 10 sx
INTERMEDIATE					
None					
LONG STRING					
Wt. 10.5#	4 1/2"	4368'	300 sx	3900'	Schlumberger Perf. Depth Control Log
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		
4.70#, J-55	2 3/8"	3960'	Howco R-4, 4107'		
NAME OF PROPOSED INJECTION FORMATION		TOP OF FORMATION		BOTTOM OF FORMATION	
San Andres		3391'		4368'	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?		PERFORATIONS OR OPEN HOLES?		PROPOSED INTERVAL(S) OF INJECTION	
Tubing		4207-4228'		4207-4228'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL?		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?	
No		Oil Well		No	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA	
Approximately 250'		None		Approximately 10,000' (Miss.)	
ANTICIPATED DAILY INJECTION VOLUME (BBL/S.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSIG)
600	200	1500	Closed	Gravity	Vacuum
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF		
Yes			Salt Water		
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)			NATURAL WATER IN DISPOSAL ZONE		
Tom Gainor, P.O. Box 206, Kenna, New Mexico 88122			Same		
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL					
Champlin Petroleum Co., 300 Wilco Bldg., Midland, TX 79701					
Yates Petroleum Corporation, 207 4th St., Artesia, New Mexico 88210					
RECEIVED MAR 05 1979 OIL CONSERVATION DIVISION SANTA FE					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	
Yes		Yes		Yes	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		PLAN OF AREA		ELECTRICAL LOG	
Yes		Yes		Yes	
				DIAGRAMMATIC SKETCH OF WELL	
				Yes	

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



(Signature)

Richard O. Dimit

Vice President, Production

(Title)

2/26/79

(Date)

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

**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.

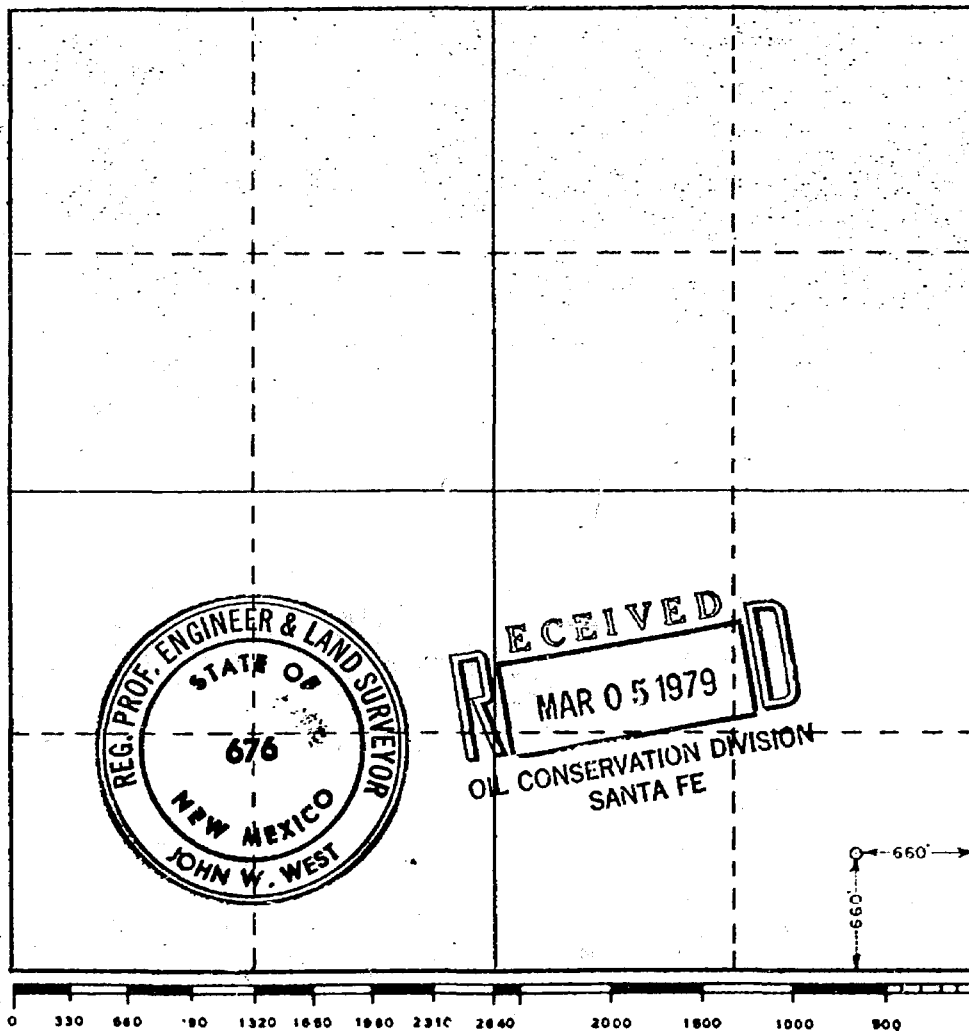
Operator SUNDANCE OIL CO.			Lease CONE FEDERAL		Well No. 8
Unit Letter P	Section 31	Township 7 SOUTH	Range 32 EAST	County ROOSEVELT	
Actual Footage Location of Well: 660 feet from the SOUTH line and 660 feet from the EAST line					
Ground Level Elev. 4469.4	Producing Formation San Andres		Pool Tomahawk	Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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 well 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: Richard O. Dimit
Position: Vice President, Production
Company: Sundance Oil Company
Date: November 9, 1978

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.

Date Surveyed: OCTOBER 28, 1978
Registered Professional Engineer and/or Land Surveyor: John W. West
Certificate No. 676
Ronald J. Eidson 3239

CONE FEDERAL #8

On original completion, perforated 4207' to 4228' with 2 shots per foot. Spotted 6 barrels acid at 4228'. Pulled up and set R-4 packer at 4107'. Acidized with 4500 gallons 20% NE acid using 84 ball sealers. Had good ball action. Average injection rate 2.5 BPM. Average treating pressure 2500#. ISIP 2100#. FSIP 1770# in 13 minutes. Swab tested for five days. Recovered salt water with only a trace of oil.

Shut-in pending approval to convert to salt water disposal well.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W79-174To Sundance Oil CompanyDate 2-14-79Box 115Roswell, New MexicoATTN: Mr. Jim Akins

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____

Date Rec. 2-14-79Well No. Cone Federal #8

Depth _____

Formation San Andres

County _____

Field Tomahawk

Source _____

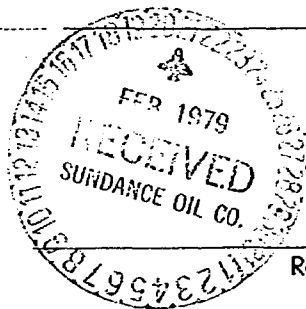
Resistivity _____ 0.047 @ 74°F.Specific Gravity _____ 1.184pH _____ 6.8Calcium (Ca) _____ 36,500

*MPL

Magnesium (Mg) _____ 6,300Chlorides (Cl) _____ 171,000Sulfates (SO₄) _____ 400Bicarbonates (HCO₃) _____ 290Soluble Iron (Fe) _____ Nil

Remarks:

*Milligrams per liter



Respectfully submitted,

Analyst: Brewer

cc:

HALLIBURTON COMPANY

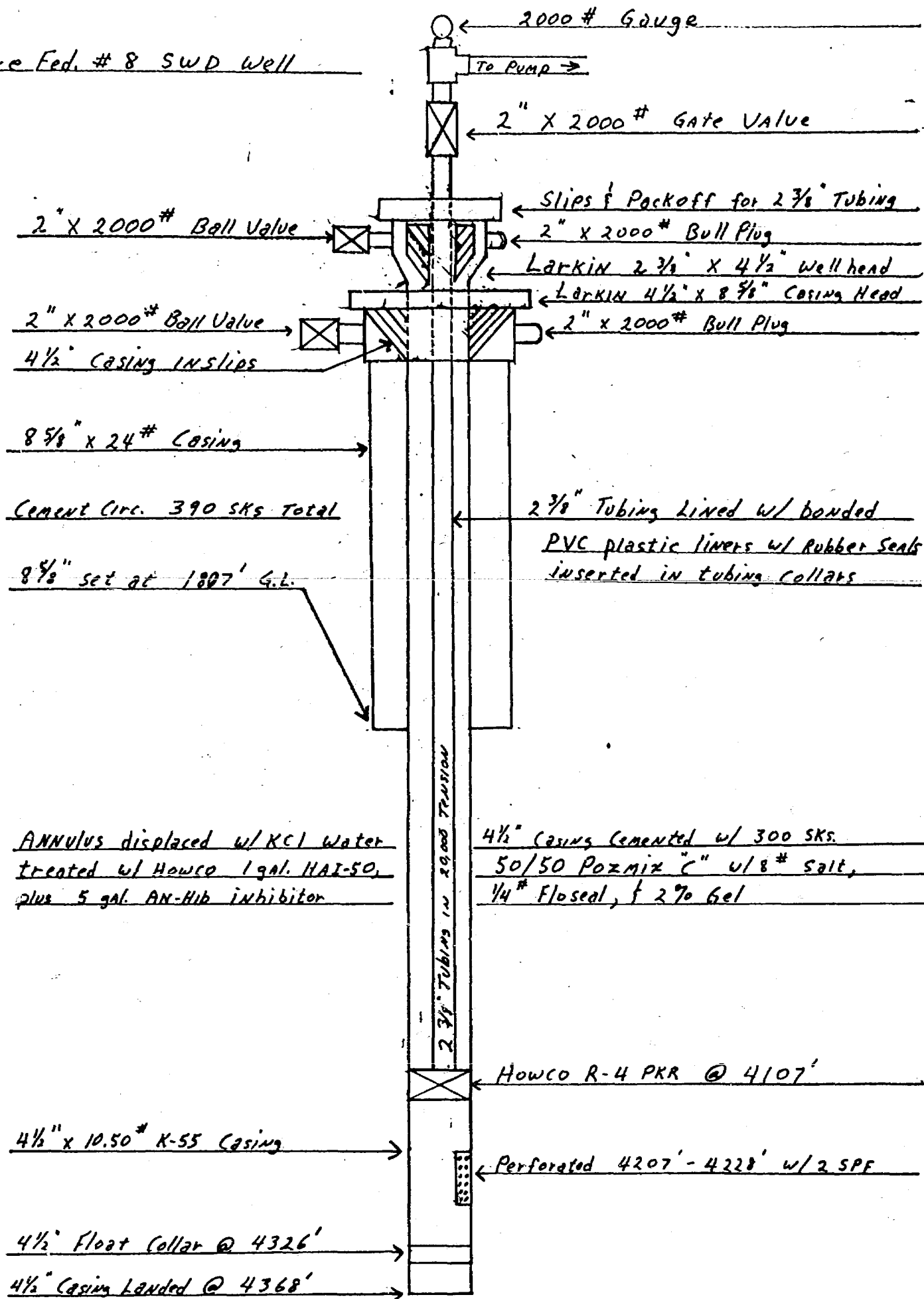
By W. L. Brewer

CHEMIST

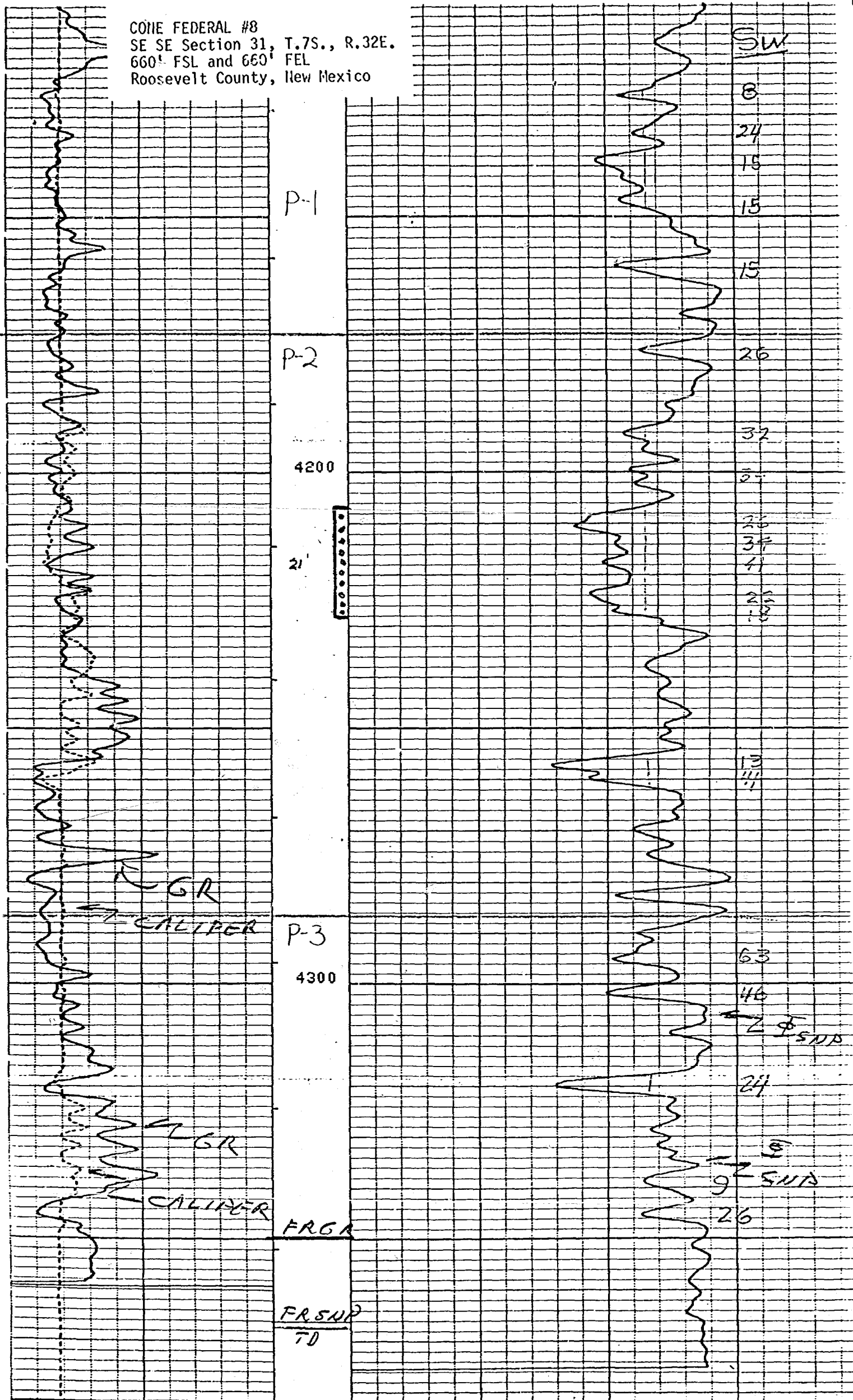
NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

Coxe Fed. # 8 SWD Well



CONE FEDERAL #8
 SE SE Section 31, T.7S., R.32E.
 660' FSL and 660' FEL
 Roosevelt County, New Mexico



Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Cone Federal #1
Cone Federal #2
Cone Federal #3
Cone Federal #4
Cone Federal #5
Cone Federal #6
Cone Federal #7

Langley Federal #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

Lease Status: Federal

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: Chambers Federal #1
Chambers Federal #2
Chambers Federal #3

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510, 1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904, 1776 Lincoln Street
Denver, CO 80203

Jerry Chambers
1720 Lincoln Center Building
Denver, CO 80264

Lease Status: State

Well Status: Producing

Formation: San Andres, P-2 zone

Wells: State #1

Lessor's of Mineral Rights:

Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Pegasus 1976-1 Oil Exploration Partnership
Mr. Jonathan Butcher
P.O. Box 957
Philadelphia, PA 19105

Schulein 1976-1 Oil Exploration Partnership
Mr. Robert Schulein
Suite 904
1776 Lincoln Street
Denver, CO 80203

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ well ☐ gas ☐ well ☐ other ☒ Salt Water Disposal

2. NAME OF OPERATOR

SUNDANCE OIL COMPANY

3. ADDRESS OF OPERATOR

Suite 510, 1776 Lincoln St., Denver, CO 80203

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 660' FSL, 660' FEL Unit P

AT TOP PROD. INTERVAL:

AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

CHANGE ZONES ☐

ABANDON* ☐

(other) CONVERT TO SALT WATER DISPOSAL

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Intend to convert well to a water disposal well.

Subsurface Safety Valve: Manu. and Type _____

18. I hereby certify that the foregoing is true and correct

SIGNED

Richard O. Dimit
Richard O. Dimit

TITLE VP, Production

DATE 2/26/79

(This space for Federal or State office use)

APPROVED BY _____

TITLE _____

DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

5. LEASE
NM-15019

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Cone Federal

9. WELL NO.

8

10. FIELD OR WILDCAT NAME

Tomahawk, San Andres

11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA

Section 31, T.7S., R.32E.

12. COUNTY OR PARISH

Roosevelt

13. STATE

New Mexico

14. API NO.

15. ELEVATIONS (SHOW DE KDB AND WD)

4469' GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 42-R0996

TEMPORARY USE APPLICATION AND PERMIT
Title 1, Sec. 28(2)(c) of the Mineral Leasing Act of 1920, 30 U.S.C. 185, as amended; Secs. 302(b) and 504(a) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732, 1764.

Serial Number

INSTRUCTIONS ON REVERSE

APPLICATION

1. Name (first, middle initial, and last) Address (include zip code)
SUNDANCE OIL COMPANY Suite 510, 1776 Lincoln Street
Denver, CO 80203

2. Give legal description of public lands for which you are applying

TOWNSHIP	RANGE	SECTION	SUBDIVISION
7 South	32 East	31	660' FSL and 660' FEL, Unit P

Meridian	State	County	Acres (number)
	New Mexico	Roosevelt	

3. Proposed date(s) of use: From February, 1979 to February, 1989

4a. Are you 21 years of age or over? ☒ Yes ☐ No
b. Are you a citizen of the United States or have you declared your intention? ☒ Yes ☐ No

c. As applicant, are you a ☐ Partnership ☐ Association ☒ Corporation; ☐ Individual(s);
or an agency of ☐ Federal Government ☐ State Government ☐ Political subdivision of any state?

d. Are the statements required by Instruction Number 2 attached? ☒ Yes ☐ No ☐ Not applicable

5. Are you making this application for your own use and benefit? ☒ Yes ☐ No (If "no," explain)

6. Are the lands now improved, occupied, or used? ☒ Yes ☐ No (If "yes," describe improvements and purposes, identify users and occupants)

This well is on Tom Gainor's ranch. He owns the surface & we have the minerals.

7a. What do you propose to use the lands for?

Damages for surface on this location & roads have been approved & paid for.

b. What improvements, including sanitation facilities, do you intend to make? (Describe improvements and attach drawings, if convenient)

We do not plan to make any changes in location at this time. If we should have to set tanks & pump, they will be on same pad as the well is now on.

c. What is the estimated cost of proposed improvement? \$ 81,000.00

d. What is the proposed source of water for domestic or other uses?
To dispose of water from our other leases adjacent to and on this lease.

8. Have you enclosed filing fee of \$10? ☒ Yes ☐ No (See Instruction Number 3)

I CERTIFY That the information given by me in this application is true, complete, and correct to the best of my knowledge and belief and is given in good faith.

2/26/79

(Date)

Richard O. Dimit

(Signature of Applicant) V-P, Production

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

PERMIT

Permission is hereby granted to

of

to use the following-described lands:

TOWNSHIP	RANGE	SECTION	SUBDIVISION
----------	-------	---------	-------------

Meridian	State	County	Acres (number)
----------	-------	--------	----------------

for the purpose of

and subject to the following conditions:

1. This permit is issued for the period specified below. It is revocable at the discretion of the authorized officer of the Bureau of Land Management, at any time upon notice. This permit is subject to valid adverse claims heretofore or hereafter acquired.

2. Permittee shall pay annually, in advance, to the authorized officer the sum of dollars as rental or such other sum as may be required if a rental adjustment is made.

3. Permittee shall observe all Federal, State, and local laws and regulations applicable to the premises and to erection or maintenance of signs or advertising displays including the regulations for the protection of game birds and game animals, and shall keep the premises in a neat, orderly, and sanitary condition.

4. Use or occupancy of land under this permit shall commence within months from date hereof and shall be exercised at least days each year.

5. Permittee shall take all reasonable precautions to prevent and suppress forest, brush, and grass fire and prevent pollution of waters on or in the vicinity of the lands.

15. Special Conditions:

6. Authorized representatives of the Department of the Interior, other Federal agencies, and game wardens shall at all times have the right to enter the premises on official business.

7. Permittee shall not enclose roads or trails commonly in public use.

8. Permittee shall pay the United States for any damage to its property resulting from this use.

9. Permittee shall notify the authorized officer of address change immediately.

10. This permit is subject to all applicable provisions of the regulations (43 CFR 2920) which are made a part hereof.

11. Permittee agrees to have the serial number of this permit marked or painted on each advertising display erected or maintained under the authority of such permit.

12. Permittee shall not cut any timber on the lands without prior permission from the authorized officer.

13. This permit is subject to the provisions of Executive Order No. 11246 of September 24, 1965, as amended, which sets forth the Equal Opportunity clauses. A copy of this order may be obtained from the signing officer.

14. This permit may not be assigned without prior approval of the authorized officer of the Bureau of Land Management.

Permit issued for period

From

(Authorized Officer)

To

(Title)

(Date)

INSTRUCTIONS

1. Submit, in duplicate, to any local office of the Bureau of Land Management having jurisdiction of the lands.

2. An application by a partnership or association must be accompanied by a statement by each member that he is a citizen of the United States or has filed a declaration to become a citizen. An application by a corporation must be accompanied by a statement showing that the corporation is authorized to hold land in the State in which the land is located and that the person making the application is authorized to act for the corporation.

3. If applicant is other than a Federal, State, or local governmental agency, this application must be accompanied by a

nonreturnable filing fee of \$10 made payable to the Bureau of Land Management.

4. If this application is for permission to erect an advertising display or sign, the applicant must: (a) attach an accurate and fully descriptive diagram, sketch, or photograph (at least 3" x 5") of the sign or display to be erected showing the dimensions, type of construction, estimated cost, the advertising material to be included thereon, the plan of illumination, if any, and the manner of attachment to the land; and, (b) a photograph (at least 3" x 5") showing the site on which the sign or display is to be erected.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

STATE OFFICE

'75 APR 7 AM 8:46 P. O. Box 1449
Santa Fe, New Mexico 87501

STATE OFFICE
SANTA FE, NEW MEXICO

March 27, 1975

IN REPLY REFER TO

NM 0558400
Qualifications
File

943b-4

Sundance Oil Company
1430 Denver Club Bldg.
Denver, Colorado 80202

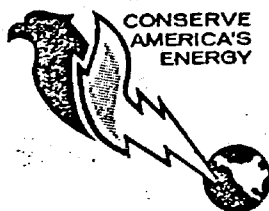
Gentlemen:

Your corporate qualifications have been removed from the case record NM 040080 and are now of record in our General Qualifications File under serial number NM 0558400. You must refer to this new number on all your future oil and gas filings.

If your statements need up-dating or if you have any questions, please let us know.

Sincerely yours,

Raul E. Martinez
Raul E. Martinez
Chief, Minerals Section



Save Energy and You Serve America!

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ well gas ☐ well other ☐ Salt Water Disposal
2. NAME OF OPERATOR
SUNDANCE OIL COMPANY
3. ADDRESS OF OPERATOR
Suite 510, 1776 Lincoln St., Denver, CO 80203
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 660' FSL, 660' FEL Unit P
AT TOP PROD. INTERVAL: Same
AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐

SUBSEQUENT REPORT OF:

(other) CONVERT TO SALT WATER DISPOSAL

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Intend to convert well to a water disposal well.

RECEIVED
MAR 05 1979

OIL CONSERVATION DIVISION
SANTA FE

Subsurface Safety Valve: Manu. and Type _____

18. I hereby certify that the foregoing is true and correct

SIGNED Richard O. Dimit TITLE VP, Production DATE 2/26/79

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

*See Instructions on Reverse Side

5. LEASE
NM-15019
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME
Cone Federal
9. WELL NO.
8
10. FIELD OR WILDCAT NAME
Tomahawk, San Andres
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 31, T.7S., R.32E.
12. COUNTY OR PARISH
Roosevelt
13. STATE
New Mexico
14. API NO.
15. ELEVATIONS (SHOW DF, KDB, AND WD)
4469' GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

Set @ _____ FL.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 42-R0996TEMPORARY USE APPLICATION AND PERMIT
Title 1, Sec. 28(2)(c) of the Mineral Leasing Act of 1920, 30 U.S.C. 185, as amended; Secs. 302(b) and 504(a) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732, 1764.

Serial Number

INSTRUCTIONS ON REVERSE

APPLICATION

1. Name (first, middle initial, and last) SUNDANCE OIL COMPANY
Address (include zip code)
Suite 510, 1776 Lincoln Street
Denver, CO 80203

2. Give legal description of public lands for which you are applying

TOWNSHIP	RANGE	SECTION	SUBDIVISION
7 South	32 East	31	660' FSL and 660' FEL, Unit P

Meridian	State	County	Acres (number)
	New Mexico	Roosevelt	

3. Proposed date(s) of use: From February, 1979 to February, 1989

4a. Are you 21 years of age or over? ☒ Yes ☐ No
b. Are you a citizen of the United States or have you declared your intention? ☒ Yes ☐ No

c. As applicant, are you a ☐ Partnership ☐ Association ☒ Corporation; ☐ Individual(s); or an agency of ☐ Federal Government ☐ State Government ☐ Political subdivision of any state?d. Are the statements required by Instruction Number 2 attached? ☒ Yes ☐ No ☐ Not applicable5. Are you making this application for your own use and benefit? ☒ Yes ☐ No (If "no," explain)6. Are the lands now improved, occupied, or used? ☒ Yes ☐ No (If "yes," describe improvements and purposes, identify users and occupants)

This well is on Tom Gainor's ranch. He owns the surface & we have the minerals.

7a. What do you propose to use the lands for?

RECEIVED
MAR 05 1979
OIL CONSERVATION DIVISION
SANTA FE

Surface on this location & roads have been approved & paid for.

OIL CONSERVATION DIVISION
SANTA FE

b. What improvements, including sanitation facilities, do you intend to make? (Describe improvements and attach drawings, if convenient)

We do not plan to make any changes in location at this time. If we should have to set tanks & pump, they will be on same pad as the well is now on.

c. What is the estimated cost of proposed improvement? \$ 81,000.00	d. What is the proposed source of water for domestic or other uses? To dispose of water from our other leases adjacent to and on this lease.
---	---

8. Have you enclosed filing fee of \$10? ☒ Yes ☐ No (See Instruction Number 3)

I CERTIFY That the information given by me in this application is true, complete, and correct to the best of my knowledge and belief and is given in good faith.

2/26/79

(Date)

Richard O. Dimit

(Signature of Applicant) V-P, Production

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

PERMIT

Permission is hereby granted to

of

to use the following-described lands:

TOWNSHIP	RANGE	SECTION	SUBDIVISION
----------	-------	---------	-------------

Meridian	State	County	Acres (number)
----------	-------	--------	----------------

for the purpose of

and subject to the following conditions:

1. This permit is issued for the period specified below. It is revocable at the discretion of the authorized officer of the Bureau of Land Management, at any time upon notice. This permit is subject to valid adverse claims heretofore or hereafter acquired.

2. Permittee shall pay annually, in advance, to the authorized officer the sum of dollars as rental or such other sum as may be required if a rental adjustment is made.

3. Permittee shall observe all Federal, State, and local laws and regulations applicable to the premises and to erection or maintenance of signs or advertising displays including the regulations for the protection of game birds and game animals, and shall keep the premises in a neat, orderly, and sanitary condition.

4. Use or occupancy of land under this permit shall commence within months from date hereof and shall be exercised at least days each year.

5. Permittee shall take all reasonable precautions to prevent and suppress forest, brush, and grass fire and prevent pollution of waters on or in the vicinity of the lands.

15. Special Conditions:

6. Authorized representatives of the Department of the Interior, other Federal agencies, and game wardens shall at all times have the right to enter the premises on official business.

7. Permittee shall not enclose roads or trails commonly in public use.

8. Permittee shall pay the United States for any damage to its property resulting from this use.

9. Permittee shall notify the authorized officer of address change immediately.

10. This permit is subject to all applicable provisions of the regulations (43 CFR 2920) which are made a part hereof.

11. Permittee agrees to have the serial number of this permit marked or painted on each advertising display erected or maintained under the authority of such permit.

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14. This permit may not be assigned without prior approval of the authorized officer of the Bureau of Land Management.

Permit issued for period

From

(Authorized Officer)

To

(Title)

(Date)

INSTRUCTIONS

1. Submit, in duplicate, to any local office of the Bureau of Land Management having jurisdiction of the lands.

2. An application by a partnership or association must be accompanied by a statement by each member that he is a citizen of the United States or has filed a declaration to become a citizen. An application by a corporation must be accompanied by a statement showing that the corporation is authorized to hold land in the State in which the land is located and that the person making the application is authorized to act for the corporation.

3. If applicant is other than a Federal, State, or local governmental agency, this application must be accompanied by a

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

STATE OFFICE

P. O. Box 1449
Santa Fe, New Mexico 87501

IN REPLY REFER TO

NM 0558400
Qualifications
File

943b-4

'75 APR 7 AM 8:46

STATE OFFICE
SANTA FE, NEW MEXICO

March 27, 1975

Sundance Oil Company
1430 Denver Club Bldg.
Denver, Colorado 80202

Gentlemen:

Your corporate qualifications have been removed from the case record NM 040080 and are now of record in our General Qualifications File under serial number NM 0558400. You must refer to this new number on all your future oil and gas filings.

If your statements need up-dating or if you have any questions, please let us know.

Sincerely yours,

Raul E. Martinez
Chief, Minerals Section



RECEIVED
MAR 05 1979
OIL CONSERVATION DIVISION
SANTA FE



Save Energy and You Serve America!

ROUGH

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

dr/

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

CASH NO. 6503

Order No. R- 5977

APPLICATION OF SUNDANCE OIL COMPANY
FOR SALT WATER DISPOSAL, ROOSEVELT
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 28
19 79, at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this day of 19 79, 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, Sundance Oil Company,
is the owner and operator of the Cone Federal Well No. 8,
located in Unit P of Section 31, Township 7 South,
Range 32 East, NMPM, Tomahawk-San Andres Pool,
Roosevelt 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 4207 feet to 4228 feet.

(4) That the injection should be accomplished through 2 3/8
-inch plastic lined tubing installed in a packer set at approxi-
mately 4107 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

or the annulus be left open

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

(5) That the injection well or system should be equipped with a ~~pop-off valve~~ ^{pressure limiting switch} or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi.

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

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

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

IT IS THEREFORE ORDERED:

(1) That the applicant, Sundance Oil Company, is hereby authorized to utilize its Cone Federal Well No. 8 located in Unit P of Section 31, Township 7 South, Range 32 East, NMPM, Tomahawk-San Andres Pool, Roosevelt 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 4107 feet, with injection into the perforated interval from approximately 4207 feet to 4228 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

~~OP~~

or the annulus shall be equipped with an approved leak detection device ^{or be left open} 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} ~~pop-off valve~~ or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi.

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

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

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

(6) 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.

Dan Nutter

Salt Water Disposal
Sundance Oil Co
Suite 510
1776 Lincoln St.
Denver Colo 80203

Cone Fed No. 8
P-31-75-32E Roosevelt Co.
San Andres form
perf. int 4207-4228
Tomahawk San Andres Pool

Dick Dinit