

HONDO OIL & GAS COMPANY

Case No. 9740

APPLICATION FOR HORIZONTAL DIRECTIONAL DRILLING PILOT PROJECT

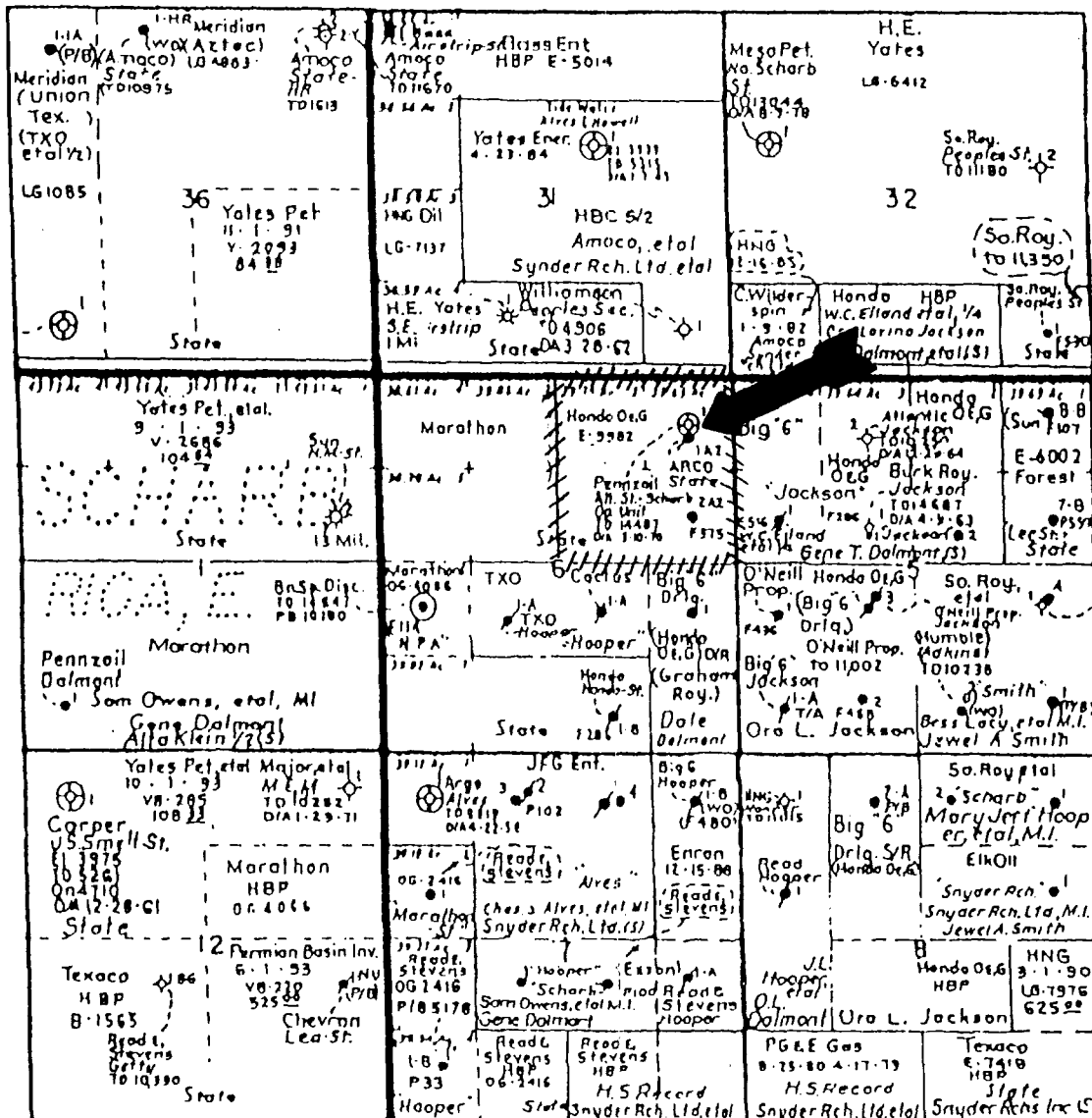
September 6, 1989

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Case No. 9740

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T-19S



HONDO OIL & GAS COMPANY

Exhibit No. 1

Case No. 9740

Land Map
State AZ Lease

Scharb-Bone Springs Pool

Lea County, New Mexico

Top of B.S.
8000'

AIRSTRIP ZONE

2ND BONE SPRINGS SAND

Middle B
Scharb Zone

SCHARB ZONE

HONDO OIL & GAS COMPANY

Exhibit No. 2

Case No. 9740

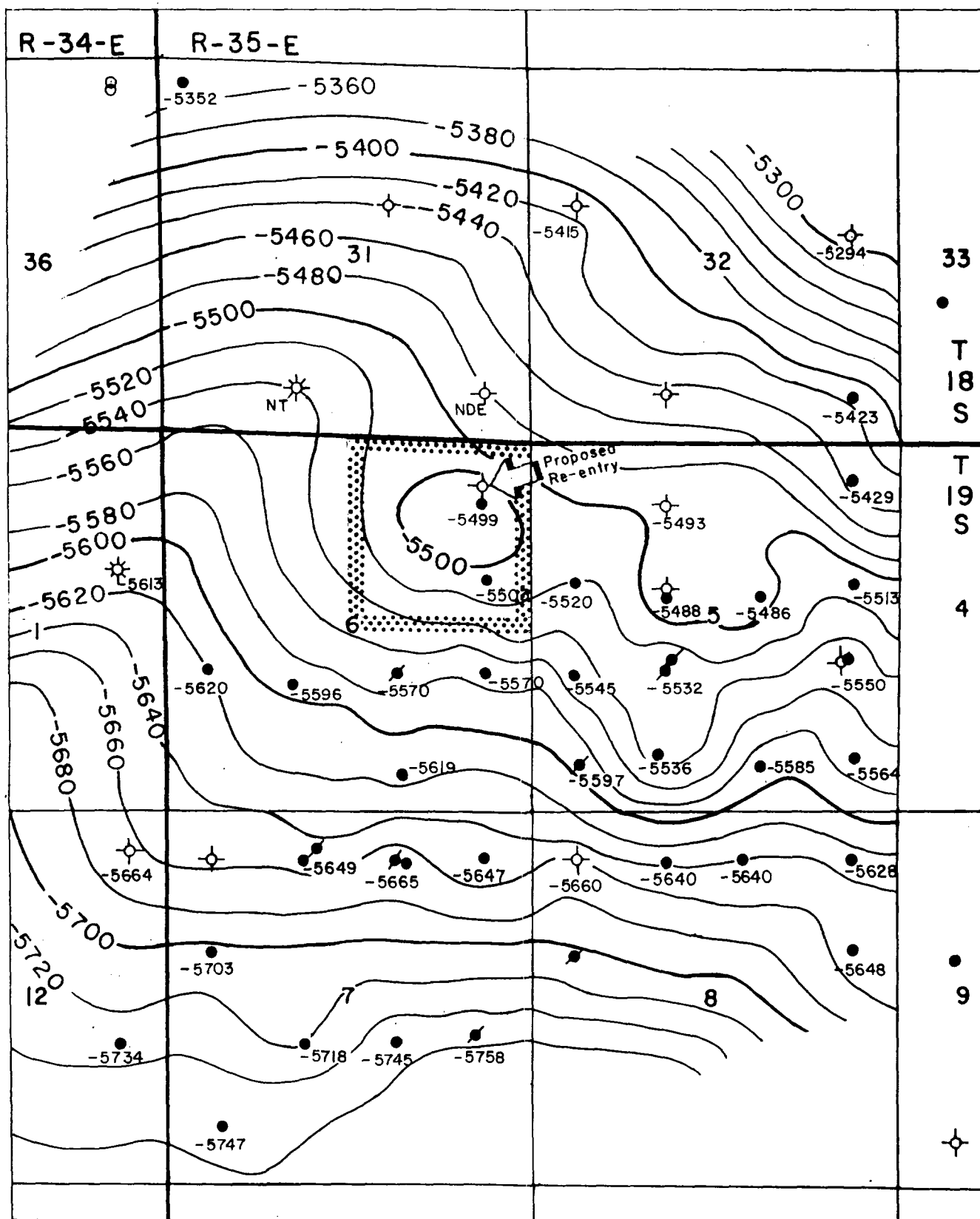
BHC Sonic Log

State AZ No. 3H

Scharb-Bone Springs Pool

Lea County, New Mexico

Base of
~~10,500'~~
10,500'



HONDO OIL & GAS COMPANY

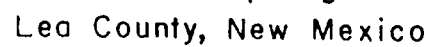
Exhibit No. 3

Case No. 9740

STRUCTURE MAP TOP OF AIRSTRIP BONE SPRINGS ZONE Scharb-Bone Springs Pool

C.I. = 20'

Scale: 1" = 2000'



HONDO OIL & GAS COMPANY

Exhibit No. 5 Case No. 9740

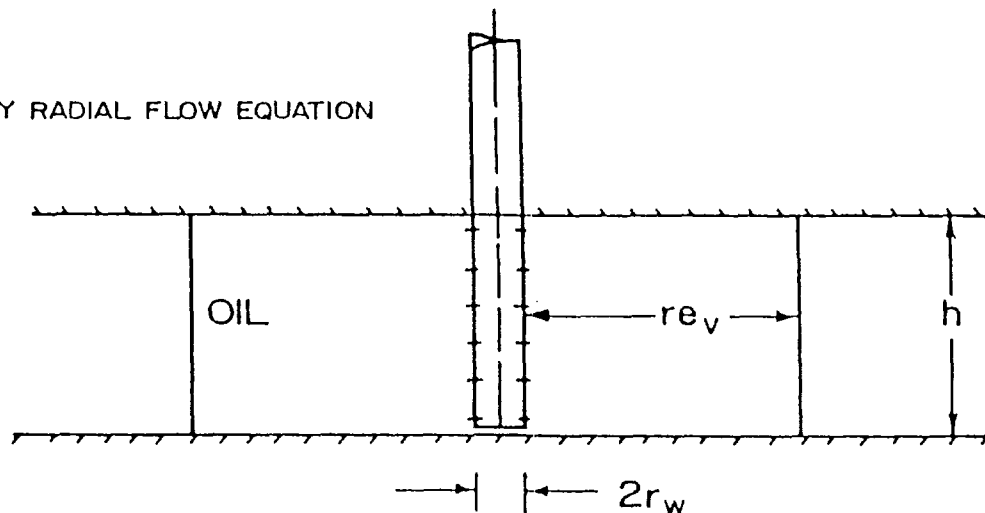
Horizontal Drilling Objectives

Bone Springs Formation

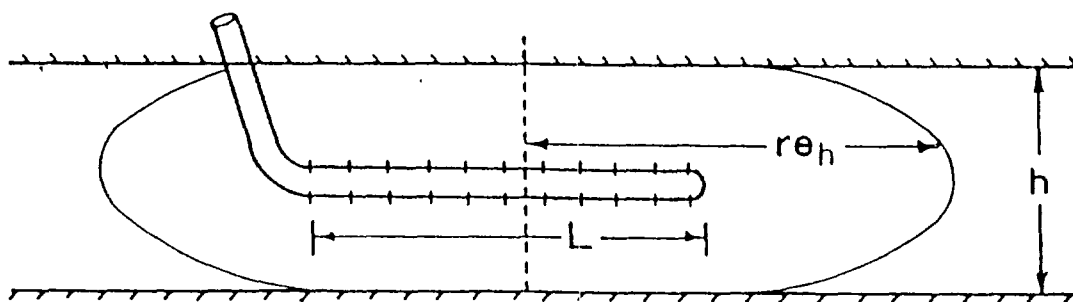
- (1) Increase the effective drainage area and thereby maximize recoverable reserves.
- (2) Increase productivity by intersecting more natural fractures and porosity.
- (3) Improve the economics of a Bone Springs completion.

VERTICAL AND HORIZONTAL WELL DRAINAGE VOLUME SCHEMATIC

DARCY RADIAL FLOW EQUATION



$$q_v = \frac{0.00708 k h (\Delta p)}{u_o B_o \ln \left(\frac{r_e}{r_w} \right)}$$



From
S.D. Joshi
SPE 16868
For vertically
centered well

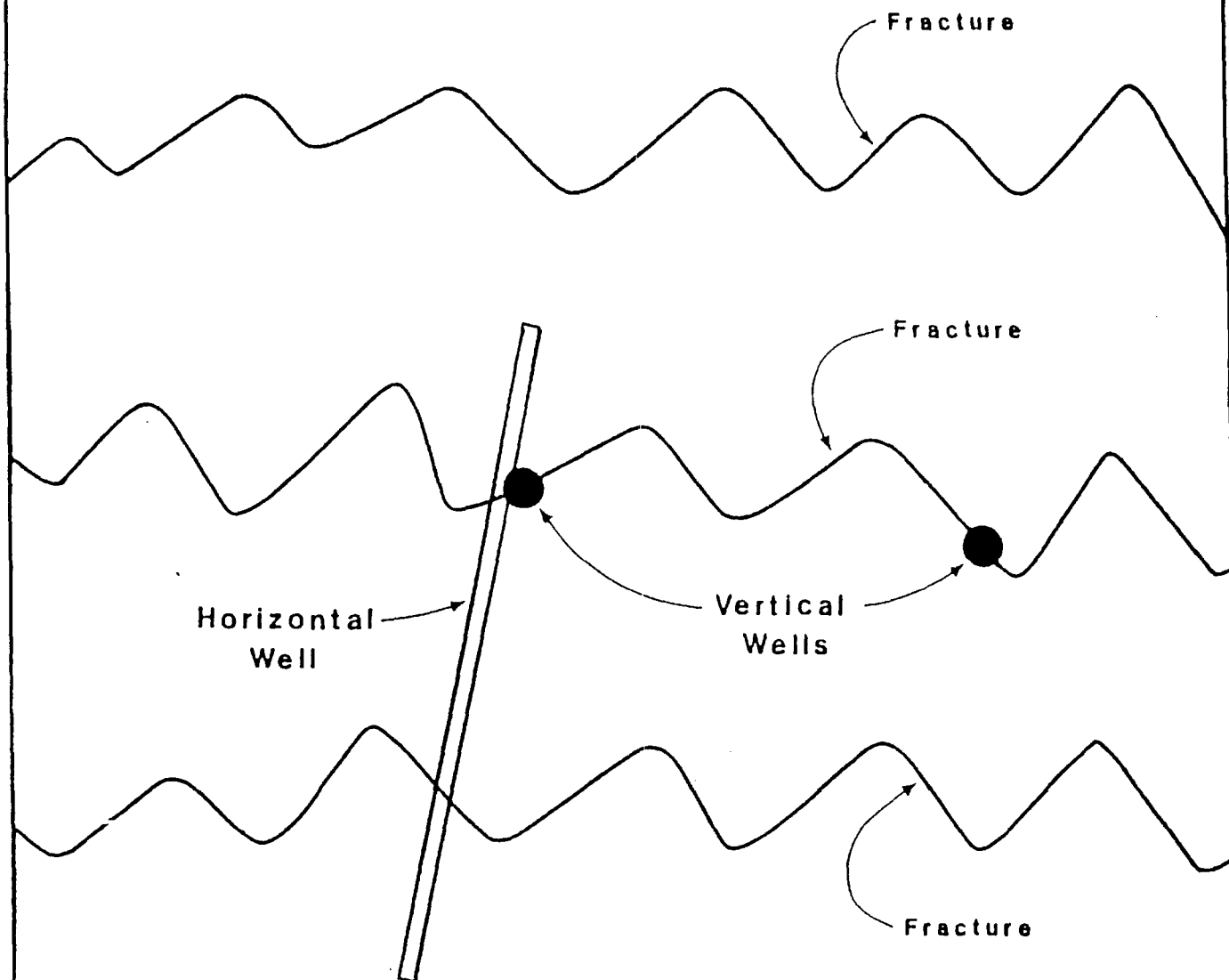
$$q_h = \frac{0.00708 k h \Delta p / \mu B_o}{\ln \left[\frac{a + \sqrt{a^2 - (L/2)^2}}{L/2} \right] + \frac{\beta h}{L} \ln(\beta h / 2r_w)}$$

$$a = 0.5L \left[0.5 + \sqrt{0.25 + (2 r_{e_h} / L)^4} \right]^{0.5}$$

$$\beta = \sqrt{\frac{K_h}{K_v}}$$

HONDO OIL & GAS COMPANY

HORIZONTAL AND VERTICAL WELLS IN A FRACTURE SYSTEM



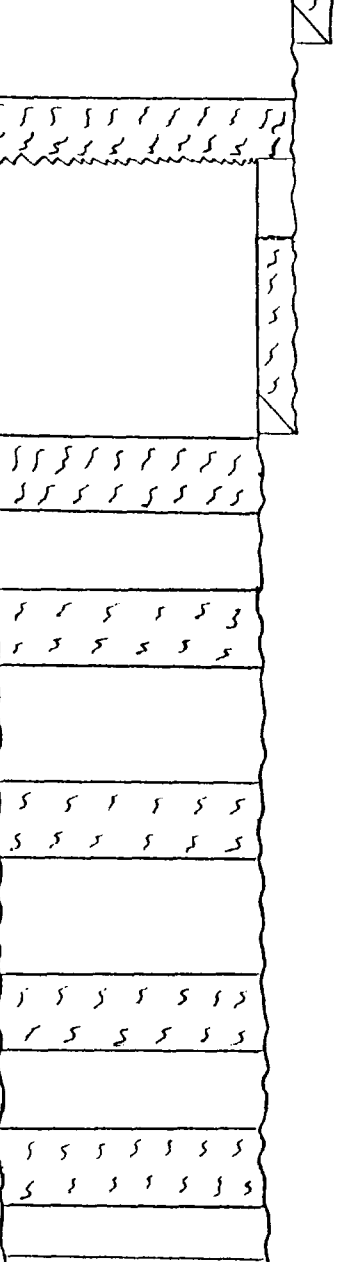
HONDO OIL & GAS COMPANY

Exhibit No. 7

Case No. 9740

Exhibit No. 8 Case No. 9740

Schematic of Present Wellbore



10 sx. cmt. plug @ Surface

13 3/8" 48# csg. set @ 378'
(cmt'd w/350 sx., TOC @ Surf.)

25 sx. cmt. plug @ 1050'
9 5/8" csg. stub @ 1050'

9 5/8" 36# & 40# csg. set @ 3990'
(cmt'd w/800 sx., TOC @ 2570')

25 sx. cmt. plug @ 4000'

25 sx. cmt. plug @ 5202'

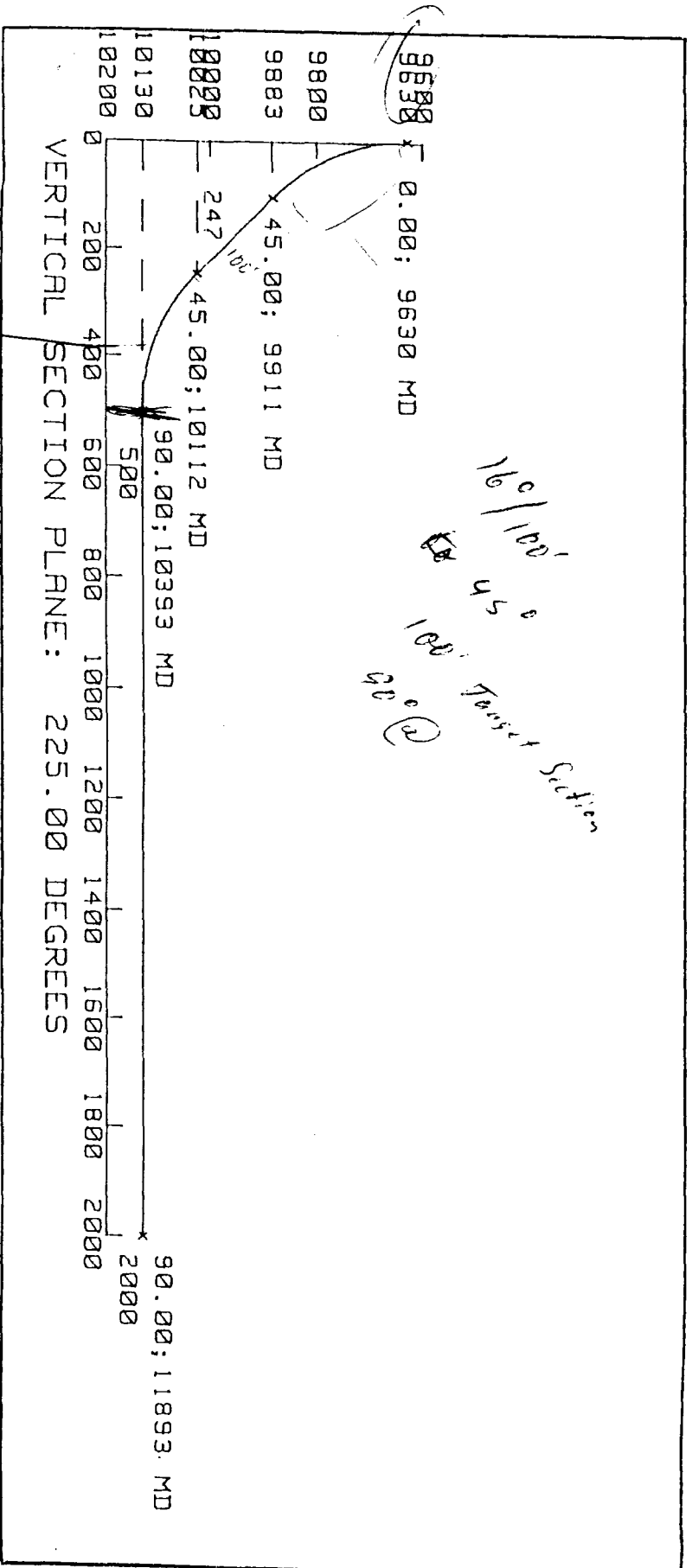
25 sx. cmt. plug @ 7610'

25 sx. cmt. plug @ 10,595'

25 sx. cmt. plug @ 11,804'

40 sx. cmt. plug @ 14,368'

8 3/4" open hole
TD @ 14,487'



HONDO OIL & GAS COMPANY

Exhibit No. 9 Case No. 9740

Approximate Horizontal Drilling Plan

State AZ No. 3H

Scharb-Bone Springs Field

Lea County, New Mexico

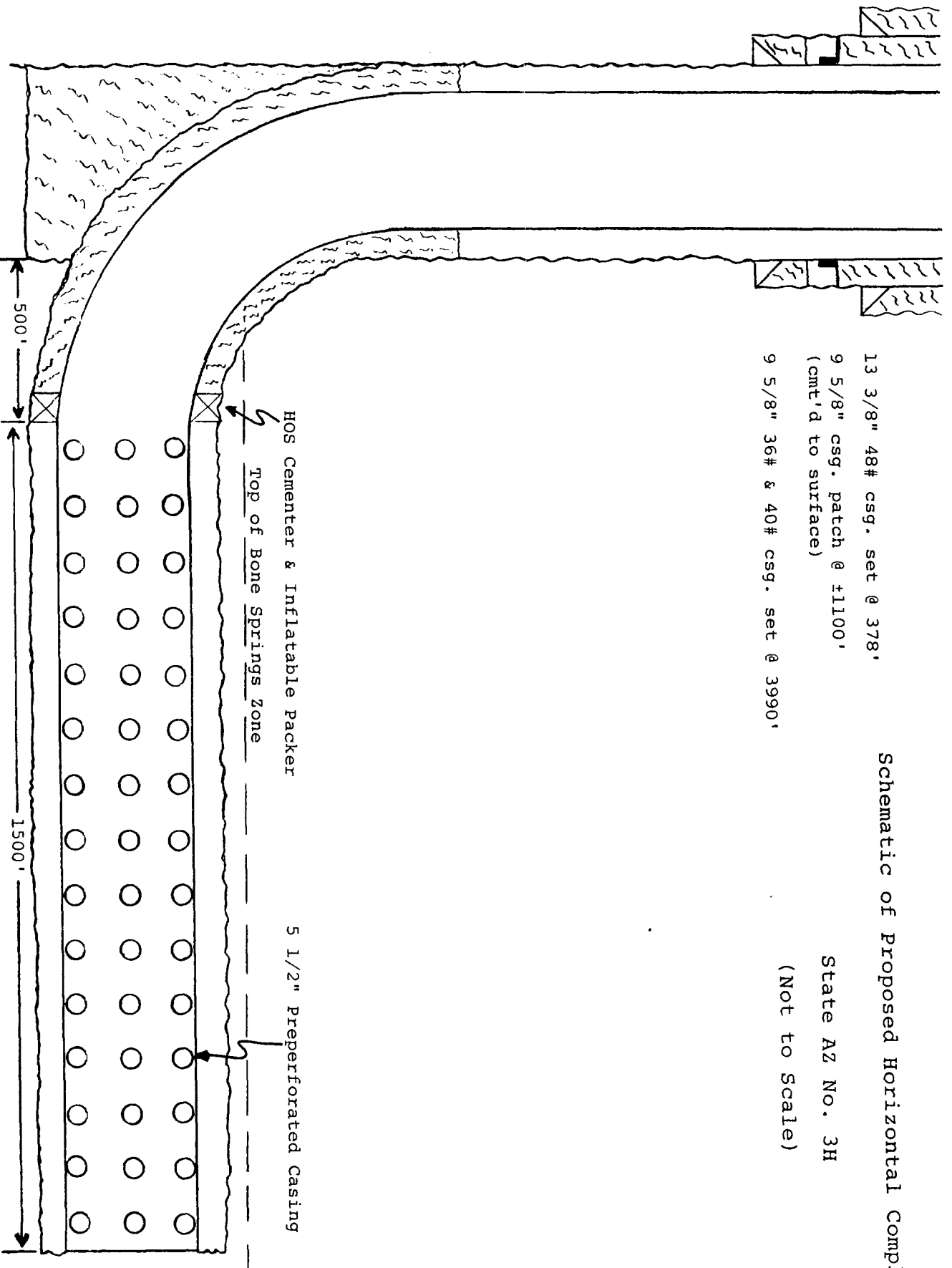
HONDO OIL & GAS COMPANY

Exhibit No. 10 Case No. 9740

Schematic of Proposed Horizontal Completion

13 3/8" 48# csg. set @ 378'
9 5/8" csg. patch @ ±1100'
(cmt'd to surface)
9 5/8" 36# & 40# csg. set @ 3990'

State AZ No. 3H
(Not to Scale)



HONDO OIL & GAS COMPANY

Exhibit No. 11 Case No. 9740

Copies of Letters Notifying Offsetting Owners

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700



August 10, 1989

HEYCO
Box 1933
Roswell, NM 88201

RE: State AZ No. 3II (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

Gentlemen:

The following application for the above-captioned well has been placed on the September 6, 1989 docket of the Oil Conservation Division:

That a 160 acre proration unit be established in the NE/4 of Section 6, T-19S, R-35E for the purpose of re-entering the Pennzoil United-Atlantic State #1 and drilling approximately 1500' horizontally in the Bone Springs formation. The well will be renamed the State AZ No. 3II.

As required by the Oil Conservation Division Rule 1207, Hondo Oil & Gas Company is hereby notifying offset operators of this hearing.

If you should have any questions, please contact E. L. Buttross, Jr. at 505/625-6732.

Sincerely,

A handwritten signature in cursive script that reads "Lisa Bohannon". The signature is written in dark ink and is positioned above the typed name.

Lisa Bohannon
Engineering Technician

/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505) 625-8700



August 10, 1989

Williamson Petroleum
W. C. Williamson
302 Palomino
Midland, TX 79705

RE: State AZ No. 3H (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

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If you should have any questions, please contact E. L. Buttross, Jr. at 505/625-6732.

Sincerely,



Lisa Bohannon
Engineering Technician

/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700



August 10, 1989

Meridian Oil
21 Desta Drive
Midland, TX 79705

RE: State AZ No. 3H (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

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Sincerely,

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Lisa Bohannon
Engineering Technician

/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700



August 10, 1989

Cactus Drilling
Drawer 2800
Midland, TX 79702

RE: State AZ No. 3H (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

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Lisa Bohannon
Engineering Technician

/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700



August 10, 1989

O'Neill Properties, Ltd.
Box 2840
Midland, TX 79702

RE: State AZ No. 3H (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

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Lisa Bohannon
Engineering Technician

/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505) 625-8700



August 10, 1989

Chevron

Chevron U.S.A.

Box 670

Hobbs, NM 88240

RE: State AZ No. 3H (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

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Sincerely,

Lisa Bohannon

Lisa Bohannon
Engineering Technician

/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700



August 10, 1989

Marathon Oil Co.
Box 552
Midland, TX 79702

RE: State AZ No. 3H (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

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Sincerely,

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Lisa Bohannon
Engineering Technician

/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625 8700



August 10, 1989

Texaco, Inc.
Box 3109
Midland, TX 79701

RE: State AZ No. 3H (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

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Sincerely,

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Lisa Bohannon
Engineering Technician

/Ab

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700



August 10, 1989

TXO Production Corp.
415 W. Wall, Suite 900
Midland, TX 79701-4468

RE: State AZ No. 3II (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

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If you should have any questions, please contact E. L. Buttross, Jr. at 505/625-6732.

Sincerely,

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Lisa Bohannon
Engineering Technician

/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625 8700



August 10, 1989

Big 6 Drilling
7500 San Felipe, Suite 666
Houston, TX 77063

RE: State AZ No. 3H (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

Gentlemen:

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Sincerely,

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Lisa Bohannon
Engineering Technician

/lb

Hondo Oil & Gas Company

Box 2208
Roswell, New Mexico 88202
(505)625-8700



August 15, 1989

Enron Oil and Gas Co.
Box 2267
Midland, TX 79702

RE: State AZ No. 3H (formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

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Lisa Bohannon
Engineering Technician

/lb

● **SENDER:** Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery
†(Extra charge)† †(Extra charge)†

3. Article Addressed to: TXO Production Corp. 415 W. Wall, Suite 900 Midland, TX 79701-4468	4. Article Number P663397679 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid) <i>same</i>
6. Signature — Agent X <i>[Signature]</i>	
7. Date of Delivery 8-11-89	

PS Form 3811, Mar. 1987 ★ U.S.G.P.O. 1987-178-268 DOMESTIC RETURN RECEIPT

● **SENDER:** Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4.
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1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery
†(Extra charge)† †(Extra charge)†

3. Article Addressed to: Texaco, Inc. Box 3109 Midland, TX 79702	4. Article Number F663397680 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid) JAME
6. Signature — Agent X <i>[Signature]</i>	
7. Date of Delivery 8-11-89	

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†(Extra charge)† †(Extra charge)†

3. Article Addressed to: Chevron U.S.A. Box 670 Hobbs, NM 88240	4. Article Number P663397682 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X <i>[Signature]</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X <i>[Signature]</i>	
7. Date of Delivery 8-11-89	

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1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery
↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to: Meridian Oil Co. 21 Desta Drive Midland, TX 79705	4. Article Number P663397685 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery AUG 11 1988	

PS Form 3811, Mar. 1987 * U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

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1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery
↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to: Cactus Drilling Box 2880 Midland, TX 79702	4. Article Number P663397684 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery AUG 11 1989	

PS Form 3811, Mar. 1987 * U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

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1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery
↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to: O'Neill Properties, Ltd. Box 2840 Midland, TX 79702	4. Article Number P663397683 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery AUG 11 1989	

PS Form 3811, Mar. 1987 * U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

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1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery
↑(Extra charge)↑

3. Article Addressed to: Williamson Petroleum %J. C. Williamson 802 Palomino Midland, TX 79705	4. Article Number P663397686 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 8/14	

PS Form 3811, Mar. 1987 * U.S.G.P.O. 1987-178-268 DOMESTIC RETURN REC

SENDER: Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

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3. Article Addressed to: Enron Oil and Gas Co. Box 2267 Midland, TX 79702	4. Article Number P663397689 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
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3. Article Addressed to: Big 6 Drilling 7500 San Felipe, Suite 666 Houston, TX 77063	4. Article Number P663397997 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X <i>[Signature]</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

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3. Article Addressed to: HEYCO Box 1933 Roswell, NM 88201	4. Article Number P663397687 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid) <i>Service not paid for</i>
6. Signature — Agent X <i>[Signature]</i>	
7. Date of Delivery	

PS Form 3811, Mar. 1987 ★ U.S.G.P.O. 1987-178-268 DOMESTIC RETURN RECEIPT

1 STATE OF NEW MEXICO
2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BUILDING
5 SANTA FE, NEW MEXICO

6 6 September 1989

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Hondo Oil and Gas Comp- CASE
10 any for a horizontal directional drill- 9740
11 ing pilot project, special operating
12 rules therefor, simultaneous dedication,
13 and a non-standard oil proration unit,
14 Lea County, New Mexico.

15 BEFORE: Michael E. Stogner, Examiner

16 TRANSCRIPT OF HEARING

17 A P P E A R A N C E S

18 For the Division:

19 For Hondo Oil and Gas
20 Company:

21 William F. Carr
22 Attorney at Law
23 CAMPBELL and BLACK, P. A.
24 P. O. Box 2208
25 Santa Fe, New Mexico 87501

I N D E X

E. L. (ERNIE) BUTTROSS, JR.

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Cross Exzmination by Mr. Stogner 16

E X H I B I T S

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Hondo Exhibit Eight, Schematic 11

Hondo Exhibit Nine, Drilling Plan 12

Hondo Exhibit Ten, Schematic 14

Hondo Exhibit Eleven, Letters and Return Receipts 14

1 MR. STOGNER: Call next Case
2 Number 9740, which is the application of Hondo Oil & Gas
3 Company for a horizontal directional drilling pilot pro-
4 ject, special operating rules thereof -- therefor, simul-
5 taneous dedication and a nonstandard oil proration unit,
6 Lea County, New Mexico.

7 At this time I'll call for
8 appearances.

9 MR. CARR: May it please the
10 Examiner, my name is William F. Carr with the law firm
11 Campbell & Black, P. A., of Santa Fe. We represent Hondo
12 Oil & Gas Company and I have one witness.

13 MR. STOGNER: Are there any
14 other appearances in this matter?

15 Will the witness please stand
16 and be sworn?

17
18 (Witness sworn.)
19

20 MR. STOGNER: Mr. Carr?
21

22 E. L. (ERNIE) BUTROSS, JR.,
23 being called as a witness and being duly sworn upon his
24 oath, testified as follows, to-wit:
25

1 DIRECT EXAMINATION

2 BY MR. CARR:

3 Q Will you state your full name for the
4 record, please?

5 A Ernest L. Buttross, Junior.

6 Q Mr. Buttross, where do you reside?

7 A Roswell, New Mexico.

8 Q By whom are you employed and in what
9 capacity?10 A I work for Hondo Oil & Gas Company as a
11 petroleum engineer.12 Q Have you previously testified before the
13 Oil Conservation Division?

14 A No, I haven't.

15 Q Would you summarize your educational
16 background and then review your work experience for Mr.
17 Stogner?18 A I graduated in 1972 from Mississippi
19 State University with a BS in petroleum engineering.20 After graduating I went to work for
21 Getty Oil Company and worked for them for eight years in
22 various locations over drilling and production engineering.23 Then I went to work for Mesa Petroleum
24 and worked for Mesa for approximately six and a half years
25 over drilling and production in supervisory positions.

And in the last two and a half years
I've worked for Hondo Oil & Gas Company.

Q Does your area of responsibility for Hondo include that portion of southeastern New Mexico which is involved in this case?

A Yes, it does.

Q Are you familiar with the application
filed on behalf of Hondo in this matter?

A Yes, I am.

Q Are you familiar with the proposed well?

A Right.

MR. CARR: Mr. Stogner, at this time we tender Mr. Buttross as an expert witness in petroleum engineering.

MR. STOGNER: Mr. Buttross is
so qualified.

Mr. Buttross, you were with
Getty when?

A I was with Getty from 1972 to '80.

MR. STOGNER: And what locations were you in?

A Well, I was in various locations. I started out in Louisiana, Mississippi, Midland, Texas, and Hobbs, New Mexico. I moved around.

MR. STOGNER: Thank you. Mr.

1 Carr?

2 Q Mr. Buttross, would you briefly state
3 what Hondo seeks with this application?

4 A Hondo Oil & Gas Company requests per-
5 mission for a horizontal directional drilling pilot pro-
6 ject located in the northeast quarter of Section 6, Town-
7 ship 19 South, Range 35 East.

8 We propose to re-enter the Pennzoil
9 United Atlantic State No. 1, a previously P&A'd well, clean
10 out the wellbore, and log to determine the proper direction
11 to drill horizontally in the Bone Spring formation.

12 We request Scharb Bone Spring Pool rules
13 be amended to allow the dedication of 159.4 acres to the
14 well and permit the horizontal well to be drilled in any
15 direction within the proration unit as long as the terminus
16 of the well is no closer than 330 feet to the proration
17 unit boundary.

18 Hondo requests that the current 400
19 barrel of oil per day allowable for an 80-acre proration
20 unit be increased to 800 barrels of oil per day as a re-
21 sult of the additional acreage dedicated.

22 Q Have you prepared certain exhibits for
23 presentation here today?

24 A Yes, I have.

25 Q Would you turn to what has been marked

1 as Hondo Oil & Gas Company Exhibit Number One, the third
2 page in the packet of exhibits, identify this for Mr.
3 Stogner and review the information contained thereon?

4 A Exhibit Number One is a land map. The
5 cross hatched area outlines the acreage to be dedicated to
6 the horizontal well.

7 The arrow shows the well we are pro-
8 posing to re-enter.

9 The offset working interest owners to
10 our proration unit, to the west we have a unit which is
11 operated by Marathon.

12 To the north we have H. E. Yates,
13 Williamson Petroleum Company, Amoco, Enron and Meridian.

14 East offsets are Big Six Drilling Com-
15 pany and O'Neal Properties, L. P. D.

16 And south offsets are Big Six Drilling
17 Company, and O'Neal -- Big Six Drilling Company, Cactus
18 Drilling Company, and TXO.

19 Q Is there currently a Bone Spring well in
20 the northeast quarter of Section 6?

21 A There is. In the southeast of the
22 northeast we -- we have the State AZ No. 2, which is cur-
23 rently a Bone Springs producer.

24 Q And how do -- what do you propose to do
25 with this well? Do you want to simultaneously dedicate it

1 or do you have other plans for it?

2 A No, what our plans are, assuming the
3 horizontal well is successful, we will abandon the AZ No. 2
4 Well.

5 Q What other Bone Spring development is
6 there in the immediate area?

7 A To the south of our proration unit Big
8 Six Drilling Company has a producer and to the southeast O'
9 Neal properties has a producer.

10 Q What is the status of the ownership un-
11 der the proposed project area?

12 A The proration unit is 100 percent owned
13 by Hondo Oil & Gas Company. Minerals are State minerals.

14 Q 100 percent?

15 A 100 percent State, yes.

16 Q Would you go to Exhibit Number Two and
17 review this for the Examiner?

18 A Exhibit Two is a BHC sonic log on the
19 proposed re-entry. What we're showing here is the Bone
20 Spring zones of interest. The upper zone, the Airstrip
21 Zone, at about 9450, is approximately 20 foot thick. It is
22 a highly fractured dolomite with vuggy porosity.

23 The lower zone that we're interested in
24 is the Scharb Zone at approximately 10,100 feet. It's ap-
25 proximately 40-foot thick and is also a fractured dolomite

1 with vuggy porosity.

2 At this time we haven't decided for sure
3 which zone we will drill horizontally in but it looks like
4 the lower zone will be our first choice and the upper zone
5 will be the second choice.

6 Q This exhibit indicates it's a log on the
7 State AZ No. 3-H Well. This well is going to be renamed --

8 A Right.

9 Q -- by Hondo?

10 A Right. This will be the name that we
11 plan to rename the re-entry.

12 Q Would you now refer to Exhibit Number
13 Three and review that for the Examiner?

14 A Exhibit Number Three is a structure map
15 on the top of the Airstrip Bone Spring Zone and, as you can
16 see by the exhibit, the Airstrip Zone dips to the south-
17 west across the acreage of interest.

18 Q Okay, let's go now to Exhibit Number
19 Four.

20 A Exhibit Four is a structure map on the
21 top of the Scharb Bone Spring Zone. The Scharb Zone is
22 relatively flat across our acreage.

23 Q And this is at least initially your
24 primary objective?

25 A That's correct.

1 Q All right. What is Exhibit Number Five?

2 A Exhibit Number Five are what we consi-
3 der to be the horizontal drilling objectives for the Bone
4 Spring formation.

5 First of all we hope to increase the ef-
6 fective drainage area and thereby maximize recoverable re-
7 serves; secondly, to increase productivity by intersecting
8 more natural fractures and porosity; and thirdly, to im-
9 prove the economics of a Bone Spring completion.

10 Q All right, Mr. Buttross, if you'd go to
11 Exhibit Number Six and review both of these.

12 A Exhibit Number Six is an illustration of
13 vertical and horizontal well -- well drainage. The top
14 sketch shows a vertical well and what -- what is used to
15 calculate the productivity of a vertical well, Darcy's
16 equation.

17 The lower sketch shows a horizontal well
18 and the equation below it is one that Joshi (sic) has de-
19 rived to calculate the productivity of a horizontal well.

20 As you can see, the horizontal well
21 would have a much larger drainage area just due to the fact
22 that it's drilled through the reservoir.

23 Q Would you identify Exhibit Number Seven
24 for Mr. Stogner?

25 A Exhibit Number Seven, this is a schema-

As you can see, a vertical well, you're lucky to hit one fracture system and a lot of times you'll miss a fracture system completely.

6 A horizontal well, what you attempt to
7 do is drill perpendicular to your natural fractures, which
8 gives you the possibility of intersection multiple frac-
9 ture systems.

10 Q And the Bone Spring in this area is a
11 fractured reservoir?

12 A That is correct.

13 Q All right, let's go to Exhibit Number
14 Eight and review exactly what you intend to do with this
15 wellbore.

16 A This is a schematic of the well we plan
17 to re-enter, the Pennzoil United Atlantic State No. 1,
18 which is located 660 from the north and 660 from the east
19 lines of Section 6, 19 South, 35 East.

As you can see, the 9-5/8ths casing was cut off at 1050 feet, so what we'd have to do after drilling out the surface plug and cleaning out to the top of the 9-5/8ths, we'd have to tie it back to surface before we drill the remaining plugs below the 9-5/8ths.

25 At that point we'd drill down to the

1 plug at 10,595. We'd run fracture finding type logs, which
2 would identify the fractures and give us the orientation of
3 the natural fractures. We also plan to run some pressure
4 tests to determine the reservoir pressure in one or both of
5 the zones.

6 Q And once you've done that, then you
7 would go ahead and horizontally drill and generally in a
8 southwesterly direction?

9 A Right. The -- after we've determined
10 the exact direction, we're kind of limited as far as the
11 direction we can go, so it's going to have to be south to
12 west, but this would pin it down to the exact azimuth we
13 need to take, and we would set a cement plug and kick off a
14 cement plug and drill our well horizontally.

15 Q And you would request that the rules for
16 this project area, or proration unit, provide that you stay
17 at least 330 feet from the outer boundary of the tract?

18 A That's correct.

19 Q All right, let's go to Exhibit Number
20 Nine and review that.

21 A Exhibit Number Nine is the approximate
22 horizontal drilling plan which we are looking at for the
23 lower zone. I say approximate because these depths are --
24 could change, depending on -- on a lot of things. If we do
25 the upper zone, it would be shallower, but basically, we're

1 looking at a kickoff point at approximately 9630. We would
2 build at 16 degrees per 100 to 45 degrees and at that point
3 we'd have 100-foot tangent section. The tangent section is
4 required in case you need to make a course direction, in
5 case you're building too fast or too slow, or whatever.

6 After the 100-foot tangent section we'd
7 continue our build to 90 degrees, which would make us in-
8 tersect the formation at approximately 10,130 feet true
9 vertical depth. As a result of intersecting the formation
10 at this point we'd have -- this would yield a 500 foot
11 radius and 753 foot arc lane (sic).

12 Once in the Bone Spring we would lock
13 our direction unit 90 degrees and drill horizontally for
14 approximately 1500 feet to a measured depth of approximate-
15 ly 11,893.

16 Q Do you foresee any problem in maintain-
17 ing your position within the structure while drilling?

18 A Well, at this time we don't see any
19 problem. We propose to run MWD equipment and steerable
20 motors to -- so that we -- we can tell exactly where we are
21 and if we need to make a course correction.

22 Q Who is actually going to be doing the
23 drilling for you? Have you selected anyone yet?

24 A We have not selected a drilling contrac-
25 tor, and we haven't selected a directional company at this

1 point, either.

2 Q Now, would you refer to Exhibit Number
3 Ten and review this for Mr. Stogner?

4 A Exhibit Number Ten is a schematic of our
5 proposed horizontal completion. As you can see from the
6 exhibit, we plan to tie the 9-5/8ths casing back to sur-
7 face. We'll set a cement plug, as I stated previously, and
8 kick the well off and drill, drill the well horizontally so
9 that we'll have approximately 1500 feet of horizontal sec-
10 tion.

11 At that point we will run 5-1/2 casing,
12 the bottom 1500 feet preperforated. We'll have a (unclear)
13 cementer and inflatable packer at the top of our zone so
14 that we'll be able to cement above the zone to isolate the
15 horizontal section and that's basically the simplest type
16 completion for a horizontal hole.

17 Q Would you identify Exhibit Number
18 Eleven?

19 A Exhibit Eleven includes copies of
20 letters notifying our offsetting owners.

21 Q And are copies of the return receipts
22 also included with this exhibit?

23 A They are.

24 Q What do you anticipate to be the pro-
25 ducing life of this well?

1 A We anticipate the life of the well would
2 be approximately ten years.

3 Q And are you requesting that the well be
4 allowed to serve both the two 80-acre units that are going
5 to be dedicated to it?

6 A Yes, we are.

7 Q Do you request that the allowable for
8 the well be equal to the allowables that would be set for a
9 combined 80-acre proration unit?

10 A We are.

11 Q In your opinion will granting this ap-
12 plication be in the best interest of conservation, the pre-
13 vention of waste, and the protection of correlative rights?

14 A Yes.

15 Q Were Exhibits One through Eleven either
16 prepared by you or compiled under your direction?

17 A Yes, they were.

18 MR. CARR: At this time, Mr.
19 Stogner, we move the admission of Hondo Oil & Gas Company
20 Exhibits One through Eleven.

21 MR. STOGNER: Exhibits One
22 through Eleven will be admitted into evidence.

23 MR. CARR: That concludes my
24 direct examination of Mr. Buttross.

25

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Buttross, in your notification requirements, did you send anything else besides the letter?

A No, sir, I just sent the letter, no --

Q Anything besides the docket today that you had sent to them referred to that 300-foot -- or 330 foot from the outer boundary? Do you ever refer to that in their notification or in your correspondence with them, or would they have any other way of knowing besides the docket itself?

A No, I didn't. I did not include that in my letter.

Q You're requesting a 1500 foot horizontal so that's approximately 2000 foot displacement from your wellbore, right?

A That's correct.

Q So you're somewhat limited in the directions that you can go from this particular wellbore.

A That's correct. There's a chance we may not be able to go 1500 feet, if we have to go more due west than southwest, but if we can go generally southwest, we would be able to drill 1500 feet horizontal section.

Q At this time have you determined what

1 direction you're going, or roughly?

2 A We --

3 Q You said west or southwest direction?

4 A Right. We won't know the exact direc-
5 tion until we run the fracture orientation log. Like I
6 said, we're fairly limited as far as the general direction
7 is going to have to be either west to south, but it's prob-
8 ably going to be towards, probably, the southwest, but I
9 don't have the exact azimuth of my hole right now.

10 Q What is -- what is this fracture orient-
11 ation tool that you're talking about? What does it do?
12 How does it look at it and is it run in any of the other
13 wells prior to now?

14 A Well, they haven't -- it's a fairly,
15 fairly new technology. Schlumberger has one that consists
16 of several arms with buttons on it and they just scan the
17 hole and actually feel for the fractures.

18 The other companies have acoustic type
19 tools which send out a signal which is -- the way the
20 signal bounces back they can determine or detect the frac-
21 tures and then show the orientation is based on what -- how
22 their laid across the wellbore.

23 But this is the tool that has been used
24 in other areas to help determine fracture orientation, for
25 horizontal holes, also. It's been used in some of this

1 stuff in Texas and up in the Williston Basin.

2 Q When I refer to Exhibit Number Nine, you
3 build your angle at 16 degrees per 100 foot to a 45 degree
4 curvature, and then you drill 100 foot target section, what
5 angle do you build from that 45 to a 90?

6 A That's still -- well, this -- this
7 schematic is still assuming a 16-degree build, assuming
8 that you're on target, you're building the way you plan and
9 you continue 16. Say you were to drill that first section
10 and you built faster than 16 degrees, well, then you'd have
11 to, you know, slow your build rate down on the lower part
12 to keep from missing the target.

13 Q Okay. On your Exhibit Number Two, which
14 is a log, you have the Airstrip Zone, Second Bone Spring
15 Sand, and the Scharb Zone. What is the top of the Bone
16 Spring formation out here?

17 A Oh, the absolute top of the Bone Spring
18 in this area, I believe, is about 8000 feet.

19 Q And the base?

20 A The base of the Bone Spring is approxi-
21 mately 10,500.

22 Q And you are planning to go in the top
23 portion. I assume that would be between the Airstrip Zone
24 and the Second Bone Spring Zone?

25 A Well, our -- well, for our kickoff,

1 right, for the kickoff. Your kickoff for the Scharb Zone,
2 if we decide to drill the horizontal well in the Scharb
3 Zone, the kickoff would be approximately 9630.

4 Q And where would your horizontal portion
5 be, within that Scharb Zone?

6 A Right, it would be in -- about the
7 middle of the Scharb Zone.

8 Q What would you plan for your horizontal
9 portion to be in respect to the Scharb Zone? Toward the
10 top, the middle, or the bottom?

11 A It would probably be in the middle be-
12 cause it's due to the fact that your productivity is gen-
13 erally better if you can stay towards the middle of the
14 zone, assuming you've got adequate vertical permeability.
15 We think we do here. There's no -- there's no water con-
16 tact.

17 Q Okay.

18 A We don't have to worry about water.

19 Q Is the Scharb fluid sensitive as far as
20 drilling fluids go?

21 A As far as I know it's not. You can
22 damage any zone, but it's not -- not sensitive like a sand-
23 stone might be with clays, or something like that in it.

24 Q Will you be using a mud or a water?
25 What -- what actually is your drilling fluid in the hori-

1 zontal portion?

2 A These are a polymer mud.

3 Q Polymer mud.

4 A It will be essentially fresh water with
5 polymer and we're going to try to keep it as light as we
6 can.

7 Q What type of a cleanout after you --
8 before you complete, do you anticipate using?

9 A We'll just -- we'll just go in there and
10 drill out the DV tool and go on through the horizontal sec-
11 tion and displace the mud out with clear water.

12 Q Okay, and any kind of stimulation --

13 A We're not --

14 Q -- at all?

15 A Well, we're not anticipating any right
16 now. These -- these zones, if you hit the natural frac-
17 tures, they'll come on.

18 Q Okay. Oh, you mentioned in your testi-
19 mony that if this well was successful, that you would shut
20 in the State AZ Well No. 2?

21 A That's correct.

22 Q Why?

23 A Well, it only makes 3 barrels a day and
24 we'd like to use the production equipment off of it on --
25 on this well.

1 Q Okay. Now, you are -- the Atlantic
2 State Well No. 1 is offset to the south by an old plugged
3 and abandoned ARCO well that was in the Scharb Bone Spring
4 Pool, is that correct?

5 A That's correct. The AZ No. 1, which was
6 junked and lost. At the time it was -- the well was lost,
7 it was still producing 20 barrels a day, so that indicates,
8 you know, there's still some reserves up there.

9 Q And that was in '84 that it was junked?

10 A I believe it was '84 when that -- that
11 well was junked.

12 Q And it was spud or when did it first
13 start producing?

14 A It -- well, that particular well was
15 completed, I believe, in 19 -- I believe it was '64.

16 Q Okay. So that was somewhat of a proli-
17 fic producer.

18 A It was a pretty good well. It -- it was
19 produced -- it produced mainly in the Air Strip Zone, the
20 upper zone.

21 MR. STOGNER: I have no fur-
22 ther questions of this witness.

23 Are there any other questions
24 of Mr. Buttross?

25 MR. CARR: I have nothing fur-

1 ther.

2 MR. STOGNER: If not, he may
3 be excused.

4 Does anybody else have any-
5 thing further in Case Number 9740?

6 This case will be taken under
7 advisement.

8

9 (Hearing concluded.)

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C E R T I F I C A T E

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

Sally W. Boyd CSR

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 9740,
heard by me on 6 September 19 54.
Marion E. Stynes, Examiner
Oil Conservation Division

Hondo Oil & Gas Company



August 10, 1989

New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504-2088

ATTN: Mike Stogner

RE: State AZ No. 3H (Formerly Pennzoil
United-Atlantic State No. 1)
660' FNL & 660' FEL
Section 6, T-19S, R-35E
Lea County, New Mexico
Scharb Field

RECEIVED

AUG 11 1989
OIL CONSERVATION DIV.
SANTA FE

Case 9740

Gentlemen:

Hondo Oil & Gas Company respectfully requests that the following application for the above referenced well be placed on the docket for your September 6, 1989 meeting:

That a 160 acre proration unit be established in the NE/4 of Section 6, T-19S, R-35E for the purpose of re-entering the Pennzoil United-Atlantic State No. 1 and drilling approximately 1500' horizontally in the Bone Springs formation. The direction of the lateral hole will be determined after logs are run on the vertical hole. The well will be renamed the State AZ No. 3H.

If additional information is needed, please advise.

Very truly yours,

E. L. Buttross Jr.

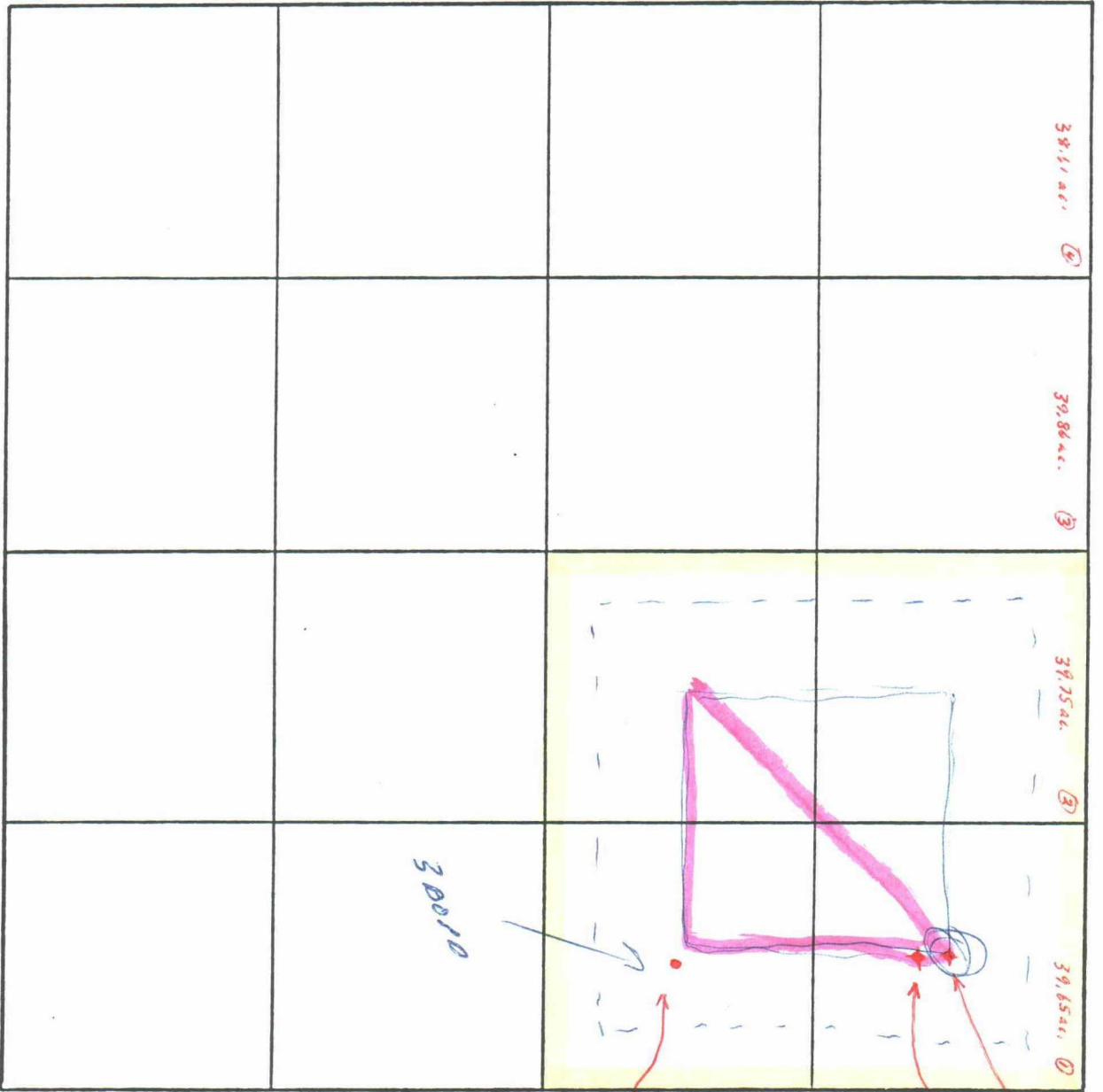
E. L. Buttross, Jr.
Petroleum Engineer

ELB/lb

SECTION 6

TOWNSHIP 19 SOUTH

RANGE 35 EAST



Pennzoil United, Inc.
Atlantic State well No. 1
660' FUEL Spud: 12/16/69
Drilled: March 1970
T.O.D.: 14,497'
Derrick Top

ARCO Oil & Gas Co.
State "A2" well No. 1
860' FUEL - 660' FUEL
Spud: 7/11/64
Produced: 12/5/64
Sealed Bone Springs Completion
Cumulative Production

Gas -
Oil -
ARCO Oil & Gas Co.
State "A2" well No. 2
1980' FUEL - 660' FUEL
Spud: 11/11/63
Sealed Bone Springs Completion
Cumulative Production as of
12/31/68

Gas -
Oil -
(Elizabethtown Production)

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LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

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MAR 20 1970

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. E 9982
7. Unit Agreement Name
8. Farm or Lease Name Atlantic State
9. Well No. 1
10. Field and Pool, or Wildcat Wildcat
12. County Lea

SUNDRY NOTICES AND REPORTS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG A WELL OR TO ALTER A WELL OR TO CHANGE THE RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL ☐ GAS WELL ☐ OTHER- Dry Hole

2. Name of Operator
Pennzoil United, Inc.

3. Address of Operator
P. O. Drawer 1828 - Midland, Texas 79701

4. Location of Well
UNIT LETTER A 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE, SECTION 6 TOWNSHIP 19-S RANGE 35-E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
3911 GL

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐
OTHER ☐

PLUG AND ABANDON ☐
CHANGE PLANS ☐
OTHER ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐
COMMENCE DRILLING OPNS. ☐
CASING TEST AND CEMENT JOB ☐
OTHER ☐
ALTERING CASING ☐
PLUG AND ABANDONMENT ☒

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

3-10-70 Set plugs as follows:

Plug #1 40 sx @ 14,368'
Plug #2 25 sx @ 11,804'
Plug #3 25 sx @ 10,595'
Plug #4 25 sx @ 7,610'
Plug #5 25 sx @ 5,202'
Plug #6 25 sx @ 4,000'
Plug #7 25 sx @ 1,050' (Top of 9 5/8" casing stub)
Plug #8 10 sx @ Surface

Job complete @ 7:30 A.M. 3-10-70

Dry hole marker placed.

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

SIGNED John W. Runyan TITLE Drilling Superintendent DATE 3-11-70
APPROVED BY John W. Runyan TITLE Geologist DATE JUL 15 1970
CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. BOX 1980

HOBBS, NEW MEXICO

March 23, 1970

TO:

Pennzoil United, Inc.

Drawer 1328

Midland, Texas 79701

Re: Filing of radio-activity and
electrical logs

Gentlemen:

Rule 1108 of the Commission Rules and Regulations as revised by Commission Order No. R-722 requires that Form C-105 be accompanied by one copy of all electrical and radio-activity logs run. Reduced scale logs are desirable.

As of this date we have not received this information on the following wells:

Atlantic State #1-A 6-19-35

Yours very truly,

OIL CONSERVATION COMMISSION

Proration Manager

If no logs were run, please make a statement to that effect in the space below. Or if they have been run, and will be supplied later, please so indicate.

Operator

By

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NEW MEXICO OIL CONSERVATION COMMISSION

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OIL CONSERVATION COMM.
HOBBS, N. M.

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. 69982
7. Unit Agreement Name
8. Farm or Lease Name Atlantic State
9. Well No. 1
10. Field and Pool, or Wildcat Wildcat
12. County Lea

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 "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Dry Hole
2. Name of Operator Pennzoil United, Inc.
3. Address of Operator P. O. Drawer 1828 - Midland, Texas 79701
4. Location of Well UNIT LETTER A, 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE, SECTION 6 TOWNSHIP 19-S RANGE 35-E NMPM.
15. Elevation (Show whether DF, RT, GR, etc.) 3911 GL

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input checked="" type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	OTHER <input type="checkbox"/>

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

3-7-70 Drilled to 14,487' in Devonian. Ran logs. No commercial production found.
Will P&A as follows:

Plug #1 40 sx @ 14,365'
Plug #2 25 sx @ 11,800'
Plug #3 25 sx @ 10,600'
Plug #4 25 sx @ 7,600'
Plug #5 25 sx @ 5,200'
Plug #6 25 sx @ 3,990'
Plug #7 25 sx Across casing cut off stub
Plug #8 10 sx Surface

Permission to plug given by Mr. Joe Ramey on 3-8-70

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

SIGNED [Signature] TITLE Drilling Superintendent DATE 3-11-70
APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT 1 DATE MAR 23 1970
CONDITIONS OF APPROVAL, IF ANY:

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LAND OFFICE	
OPERATOR	

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NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG
MAR 20 1970

OIL CONSERVATION COMM.
HOBBS, N. M.

Form O-105
Revised 1-1-65

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. E 9982

1a. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input checked="" type="checkbox"/> OTHER _____						7. Unit Agreement Name	
b. TYPE OF COMPLETION NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER P&A						8. Farm or Lease Name Atlantic State	
2. Name of Operator Pennzoil United, Inc.						9. Well No. 1	
3. Address of Operator P. O. Drawer 1828 - Midland, Texas 79701						10. Field and Pool, or Wildcat Wildcat	
4. Location of Well UNIT LETTER A LOCATED 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE OF SEC. 6 TWP. 19-S RGE. 35-E NMPM						12. County Lea	
15. Date Spudded 12-16-69		16. Date T.D. Reached 3-6-70		17. Date Compl. (Ready to Prod.) -		18. Elevations (DF, RKB, RT, GR, etc.)	
20. Total Depth 14,487'		21. Plug Back T.D. P&A		22. If Multiple Comp., How Many -		23. Intervals Drilled By Rotary Tools 0 - 14,487'	
24. Producing Interval(s), of this completion - Top, Bottom, Name None						25. Was Directional Survey Made No	
26. Type Electric and Other Logs Run GR-S, IES, ML						27. Was Well Cored No	
28. CASING RECORD (Report all strings set in well)							
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED		
13 3/8"	48	378	17 1/2"	350 sx	1050		
9 5/8"	36 & 40	3,990	12 1/4"	800 sx			
29. LINER RECORD							
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	30. TUBING RECORD		
None					SIZE	DEPTH SET	PACKER SET
31. Perforation Record (Interval, size and number) None				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
				DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED	
33. PRODUCTION							
Date First Production None		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
Date of Test None	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	
34. Disposition of Gas (Sold, used for fuel, vented, etc.)						Test Witnessed By	
35. List of Attachments							
36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.							
SIGNED [Signature]			TITLE Drilling Superintendent			DATE 3-13-70	

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1185.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy <u>1844</u>	T. Canyon _____	T. Ojo Alamo _____	T. Penn. "B" _____
T. Salt _____	T. Strawn <u>11,888</u>	T. Kirtland-Fruitland _____	T. Penn. "C" _____
B. Salt _____	T. Atoka <u>12,292</u>	T. Pictured Cliffs _____	T. Penn. "D" _____
T. Yates _____	T. Miss <u>13,162</u>	T. Cliff House _____	T. Leadville _____
T. 7 Rivers <u>3830</u>	T. Devonian <u>14,365</u>	T. Menefee _____	T. Madison _____
T. Queen <u>4607</u>	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres <u>5200</u>	T. Simpson _____	T. Gallup _____	T. Ignacio Qtzite _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Blinbry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todilto _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo _____	T. Bone Springs <u>7600</u>	T. Wingate _____	T. _____
T. Wolfcamp <u>10,620</u>	T. _____	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	1844	1844	Redbeds				
1844	3480	1636	Anhydrite & salt				
3480	7600	4120	Anhydrite, Dolo, Sd & Sh				
7600	10620	3020	Lime, Sd, Shale & Dolo				
10620	11888	1268	Lime & Shale				
11888	12292	404	Lime				
12292	13162	870	Gray shale, ls & sand				
13162	14365	1203	Ls & brown shale				
14365	14481	116	Ls				

PENNZOIL UNITED, INC.

ATLANTIC STATE NO. 1
SEC. 6, T-19-S, R-35-E
LEA COUNTY, NEW MEXICO

RECEIVED

MAR 20 1970

OIL CONSERVATION COMM.
HOBBS, N. M.

DRILL STEM DATA:

DST #1 10,386-10,465': 15" pre-flow, fair blow; 90" ISIP; 2 hr FF, fair blow, decreased to weak blow; 2 hr FSIP; rec. 720' SO&GCØM; Sample chamber contained: 175# pressure, 2200cc oil & GCØM & 0.9 CFG; HPI & HPO 4771# - IF 51#; FF 347#; ISIP 2350#; FSIP 4045#; BHT 146°

DST #2 10,628-10,650': 15" pre-flow, weak to fair blow; 90" ISIP; 2 hr FF, good blow decreased to fair; 2 hr FSIP; rec. 10' drlg. mud in drill pipe; Sample chamber contained: 0# pressure & no fluid; IF 173#; FF 0#; ISIP 400#; FSIP 911#; HPI & HPO 4957#; BHT 145°

DST #3 10,754-10,793': 15" pre-flow, weak blow increased to fair; 90" ISIP; 2 hr FF, weak blow decreased throughout test; 2 hr FSIP; rec. 270' drilling mud; Sample chamber contained: 100# pressure, 0.5 CFG & 50cc SO&GCØM; HPI 4902# - HPO 4947#; IF 67#; FF 127#; ISIP 474#; FSIP 444#; BHT 147°

DST #4 11,950-12,027': 20" pre-flow, weak blow; 90" ISIP; 1 hr FF, weak blow decreased to very weak blow; 90" FSIP; rec. 20' ØM; HPI & HPO 5695#; IF & FF 37#; ISIP 90#; FSIP 50#; BHT 162°

DST #5 12,826-12,940': (Morrow Sand) used 2,000' WB; 15" pre-flow, weak blow; 90" ISIP; 2 hr FF, no blow; 2 hr FSIP; rec. 2,000' WB + 170' ØM; Sample chamber contained: 400# pressure, .8CFG & 100cc ØM; HPI & HPO 6518#; 15" IF 1001#; 2 hr FF 1001#; 90" ISIP 1462#; 2 hr FSIP 1101#; BHT 164°

DST #6 13,016-13,115': used 2,000' WC; 20" pre-flow, weak blow increased to fair; 90" ISIP; 2 1/2 hr FF, fair blow decreased slightly; GTS 2 hr 15 min. - TSTM, decreased to very weak blow; 2 1/2 hr FSIP; rec. 2,000' WC, 540' GCØM & 5525' XW; (chl. 30,000 ppm) Res. 0.22 @ 68° - Sample chamber contained: 1800# pressure, 2.9 CFG, 2120 cc XW; HPI 6528# - HPO 6409#; IF 1522-1637#; FF 1625-3522#; ISIP 6498#; FSIP 6229#; BHT 177°

DST #7 14,380-14,437': 2500' WB; 15" pre-flow, very weak blow; 90" ISIP; 3 hr 2nd flow, no blow; 3 hr 2nd SIP; 2 hr FF, no blow; 2 hr & 5 min FSIP; rec. 2500' GCWB, 180' salty drilling mud & 270' XW; Sample chamber cont: 0# pressure, 0.1 CFG, 1960cc XW, (11,000 ppm) Res. was 0.5 @ 56°) HPI 7169#; HPO 7076#; 15" IF 1195#; 3 hr 2nd flow 1269#; 2 hr FF 1380#; 90" ISIP 5860#; 3 hr 2nd SIP 5528#; 2 hr & 5 min FSIP failed; BHT 208°

Big West Drilling Company

1714 COMMERCE BUILDING
FORT WORTH, TEXAS 76102

March 17, 1970

RECEIVED

MAR 20 1970

OIL CONSERVATION

TO: PENNZOIL UNITED, INC.
Post Office Drawer 1838
Midland, Texas 79701

WELL NAME AND LOCATION: N. M.
Atlantic State Well #1,
660' FNL & 660' FEL, Sec. 6,
T-16-S, R-35-E, Lea County,
New Mexico (Wildcat)

EASTMAN DEVIATION RECORD

Date 1969	Depth	Degree of Deviation	Date 1970	Depth	Degree of Deviation
12-16	160	1/4	1-2	6300	1
12-17	370	1/4		6760	1 1/4
12-18	850	1/4	1-4	7200	1 1/4
12-19	1300	3/4		7440	1 1/2
	1640	3/4	1-6	7900	1 1/2
12-20	2000	1/2	1-7	8300	1 1/2
	2500	3/4		8520	1 1/2
12-21	3280	1 1/4	1-9	9000	1 1/4
12-23	3700	1 1/2	1-10	9220	1 1/4
12-24	3970	1	1-12	9700	1
12-28	4450	1		9890	3/4
12-29	4900	1 1/4	1-15	10,360	3/4
12-30	5350	1	1-19	10,650	1/2
12-31	5800	1	1-25	11,300	0
			1-30	12,027	1
			2-5	12,497	1
			2-18	13,250	2
			2-25	13,820	1 3/4
			3-5	14,430	1 1/4
			3-6	14,487 T.D.	1

BIG WEST DRILLING COMPANY

By:

J. O. LeBlanc, Jr.

Vice President

STATE OF TEXAS)

ss.:

COUNTY OF TARRANT)

Before me personally appeared J. O. LeBlanc, Jr., Vice President of BIG WEST DRILLING COMPANY, known to me to be the person whose name is subscribed hereto, and does hereby certify that he has personal knowledge of the data and facts placed on this form, and that such information given above is true and complete.

Sworn and Subscribed to before me this 17th day of March, 1970.

Notary Public in and for
Tarrant County, Texas

MAR 3 1970

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

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OPERATOR	

5a. Indicate Type of Lease	
State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.	
E 9982	
7. Unit Agreement Name	
8. Farm or Lease Name	
Atlantic State	
9. Well No.	
1	
10. Field and Pool, or Wildcat	
Wildcat	
12. County	
Lea	

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 "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	2. Name of Operator
	Pennzoil United, Inc.
3. Address of Operator	
	P. O. Drawer 1828 - Midland, Texas 79701
4. Location of Well	
UNIT LETTER <u>A</u> , <u>660</u> FEET FROM THE <u>North</u> LINE AND <u>660</u> FEET FROM	
THE <u>East</u> LINE, SECTION <u>6</u> TOWNSHIP <u>19-S</u> RANGE <u>35-E</u> NMPM.	
15. Elevation (Show whether DF, RT, GR, etc.)	
3911 GL	

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐

PLUG AND ABANDON ☐
CHANGE PLANS ☒

REMEDIAL WORK ☐
COMMENCE DRILLING OPNS. ☐
CASING TEST AND CEMENT JOBS ☐

ALTERING CASING ☐
PLUG AND ABANDONMENT ☐

OTHER Drill deeper ☒

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

Original application filed for 14,000' Devonian. The Devonian is now expected at a depth of 14,400' and a total depth of 14,800'.

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

SIGNED J. P. [Signature] TITLE Drilling Superintendent DATE 3-1-70

APPROVED BY [Signature] TITLE Drilling Superintendent DATE 3-1-70

CONDITIONS OF APPROVAL, IF ANY:

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OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

JAN 12 1970

JAN 5 2 37 PM '70

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. E 9982
7. Unit Agreement Name
8. Farm or Lease Name Atlantic State
9. Well No. 1
10. Field and Pool, or Wildcat Wildcat
12. County Lea

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 "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>
2. Name of Operator Pennzoil United, Inc.
3. Address of Operator P. O. Drawer 1828 - Midland, Texas 79701
4. Location of Well UNIT LETTER <u>A</u> <u>660</u> FEET FROM THE <u>North</u> LINE AND <u>660</u> FEET FROM THE <u>East</u> LINE, SECTION <u>6</u> TOWNSHIP <u>19-S</u> RANGE <u>35-E</u> NMPM.
15. Elevation (Show whether DF, RT, GR, etc.) 3911' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input checked="" type="checkbox"/>
OTHER <input type="checkbox"/>	OTHER <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>

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

- 12-16-69 Spudded 17 1/2" hole @ 6:30 P.M.
- 12-17-69 Drilled to 390'. - Ran 13 3/8" OD, 48# casing to 378'. Cemented w/200 sx Class "H" 6% gel plus 150 sx Class "H" 2% CaCl. Plug down @ 7:00 A.M.
- 12-18-69 After 26 hrs WOC, tested casing w/1,000# for 30 min - O.K.
- 12-24-69 Drilled 12 1/4" hole to 3990'. Ran 9 5/8" OD, 36# & 40# casing to 3990'. Cemented w/650 sx Class "H" 50/50 posmix 6% gel w/10# salt & 1/4# flocele per sk plus 150 sx Class "C" w/3# salt & 1/4# flocele per sk. Plug down @ 6:00 P.M.
- 12-26-69 Ran temperature survey. Top cement 2570'. Nippled up BOP & after 36 hrs tested casing w/2,000# for 30 min - O.K. Prep to drill ahead.

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

SIGNED <u>H. P. Goodrich, Jr.</u>	TITLE <u>Drilling Superintendent</u>	DATE <u>1-6-70</u>
APPROVED BY <u>[Signature]</u>	TITLE <u>SUPERVISOR</u>	DATE <u>JAN 8 1970</u>
CONDITIONS OF APPROVAL, IF ANY		

DEC 18 1969

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U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

30-0135-23401

5A. Indicate Type of Lease	
STATE <input checked="" type="checkbox"/>	FEE <input type="checkbox"/>
5. State Oil & Gas Lease No.	
E E-9982	
7. Unit Agreement Name	
8. Farm or Lease Name	
Atlantic State	
9. Well No.	
1	
10. Field and Pool, or Wildcat	
Wildcat	
12. County	
Lea	
19. Proposed Depth	19A. Formation
14,000	Devonian
20. Rotary or C.T.	
Rotary	
21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond
	Blanket
21B. Drilling Contractor	22. Approx. Date Work will start
	On approval

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work	
b. Type of Well	
DRILL <input checked="" type="checkbox"/>	DEEPEN <input type="checkbox"/>
OIL WELL <input checked="" type="checkbox"/>	GAS WELL <input type="checkbox"/>
OTHER <input type="checkbox"/>	
2. Name of Operator	
Pennzoil United, Inc.	
3. Address of Operator	
P. O. Drawer 1828 - Midland, Texas 79701	
4. Location of Well	
UNIT LETTER A	LOCATED 660 FEET FROM THE North LINE
AND 660 FEET FROM THE East	LINE OF SEC. 6 TWP. 19-S RGE. 35-E NMPM
12. County	
Lea	
19. Proposed Depth	
14,000	
19A. Formation	
Devonian	
20. Rotary or C.T.	
Rotary	
21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond
	Blanket
21B. Drilling Contractor	22. Approx. Date Work will start
	On approval

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2"	13 3/8"	48#	350	350	Circulate
12 1/4"	9 5/8"	36# & 40#	4,000	750	2,000
8 3/4"	5 1/2"	17# & 20#	14,000	800	10,000

Blowout preventers will be installed on each string below the surface string.

12" 3,000# preventers will be installed while drilling the intermediate hole and 10" 5,000# preventers will be used below the intermediate.

APPROVAL VALID
FOR 90 DAYS UNLESS
DRILLING COMMENCED

EXPIRES 3-15-70

THE COMPANY SHALL MAINTAIN THE FOLLOWING
24 HOURS PRIOR TO CLOSING 13 3/4
CASING.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed J. P. Padgett Title Drilling Superintendent Date 12-12-69

(This space for State Use)

APPROVED BY Joe V. Hines TITLE SUPERVISOR DISTRICT DATE DEC 15 1969

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT **DEC 18 1969**

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

All distances must be from the outer boundaries of the Section.

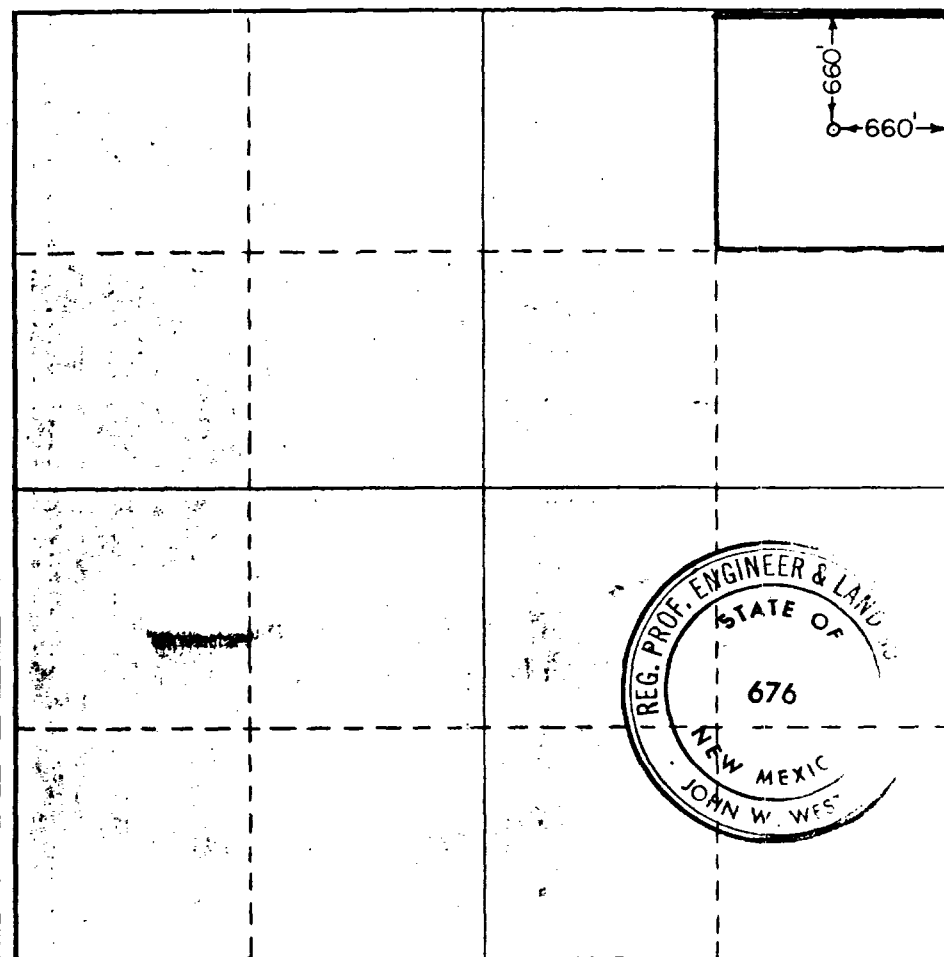
Operator PENNZOIL UNITED, INC.			Lease DEC 15 ATLANTIC STATE		Well No. 1
Unit Letter A	Section 6	Township 19 SOUTH	Range 35 EAST	County LEA	
Actual Footage Location of Well: 660 feet from the NORTH line and 660 feet from the EAST line					
Ground Level Elev.	Producing Formation Devonian	Pool Wildcat	Dedicated Acreage: NE/4 NE/4 40 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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

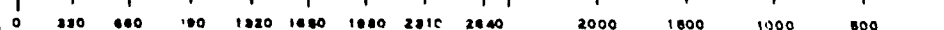
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name *H. P. Gornier, Jr.*
 Position **Drilling Superintendent**
 Company **Pennzoil United, Inc.**
 Date **December 12, 1969**

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 **DECEMBER 6, 1969**
 Registered Professional Engineer and/or Land Surveyor

John W. West
 Certificate No. **676**



COUNTY LEA

FIELD Wildcat

OPR PENNZOIL UNITED, INC.

STATE NM 30-025-23401

1 Atlantic State

MAP

Sec 6, T-19-S, R-35-E

660' FNL, 660' FEL of Sec.

CO-ORD

Spd 12-16-69

Cmp 3-10-70

CLASS

CSG & SX TUBING
13 3/8" at 378' w/350.8x
9 5/8" at 3990' w/800.8x

FORMATION	DATUM	FORMATION	DATUM
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LOGS EL GR RA IND HC A

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PLUGGED & ABANDONED

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CONT. Big West

DATE

PROP DEPTH 14,000' TYPE

F.R. 12-16-69; Opr's Elev. 33931' KB

PD 14,000' (Devonian) 33931' KB

Contractor - Big West 33931' KB

Drig. 3491' 33931' KB

Drig. 7666' 1m 33931' KB

Drig. 9813' 1m 33931' KB

Drig. 10,605' 1m 33931' KB

DST 10,386-4651' open 2 hrs 15 min, Rec 720'

s11 O&GCM, 1 hr 30 mins ISIP 2350#, FP 51-347#

2 hrs FSIP 4045# 1 hr 30 mins ISIP 2350#, FP 51-347#

Drig. 11,329' 1m 33931' KB

DST 10,628-6508' open 2 hrs 15 min, Rec 10'

mud, 1 hr 30 mins ISIP 400# FP 173-0#

2 hrs FSIP 911# 1 hr 30 mins ISIP 400# FP 173-0#

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12-22-69

1-5-70

1-12-70

1-19-70

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1-26-70

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1-26-70 Continued
DST 10,754-793', open 2 hrs 15 min, Rec 220'
DM, 1 hr 30 min ISIP 474#, FP 67-127#,
2 hr FSIP 444#
2-2-70 Drlg. 12,145' sd & sh
DST 11,950-12,027', open 1 hr 20 min, Rec 20'
DM, 1 hr 30 min ISIP 90#, FP 37-37#,
1 hr 30 min FSIP 50#
2-9-70 Drlg. 12,823' sd & sh
2-16-70 Drlg. 13,169'
DST 12,826-940', open 2 hrs 15 min, Rec 2000' WB + 170'
DM, 1 hr 30 min ISIP 1462#,
FP 1001-1001#, 2 hr FSIP 1001#
DST 13,016-115', open 2 hrs 10 min, Rec 2000' WB
+ 5525' salt wtr + 540' GCM, 1 hr 30 min ISIP 649'

2-16-70 Continued
FP 1639-3522#, 2 hr 30 min FSIP 6229#
2-23-70 Drlg. 13,669'
3-2-70 Drlg. 14,160'
3-9-70 TD 14,487'; Prep. P&A
DST 14,380-437', open 5 hrs 15 min (2500' WB),
Rec 2500' GCWB + 180' salty DM + 270' salt wtr,
1 hr 30 min ISIP 5860#, FP 1195-1380#, 2 hr
5 min FSIP Failed
3-16-70 TD 14,487'; P&A (Holding for Tops)
3-23-70 TD 14,487'; PLUGGED & ABANDONED
LOG TOPS: Rustler 1844', Seven Rivers 3830',
Queen 4607', San Andres 5200', Bone Spring
7598', Scharb 10,102', Wolfcamp 10,620',
Strawn 11,888', Atoka 12,192', Morrow Lime
12,470', Chester 13,162', Lower Mississippian

LEA

PENNZOIL UNITED, INC.

Wildcat

NM

Sec 6, T19S, R35E

1 Atlantic - State

Page #3

3-23-70

Continued

Lime 13,513', Woodford 14,190', Devonian

14,365'

3-26-70

COMPLETION REPORTED

County Lea Pool Scharb-Bone Spring

TOWNSHIP 18 South Range 35 East NMPM

6	5	4	3	2	1	
7	8	9	10	11	12	
18	17	16	15	14	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	

Ext: SE 1/4 Sec. 33, SW 1/4 Sec. 34 (R-7556, 12-8-83)

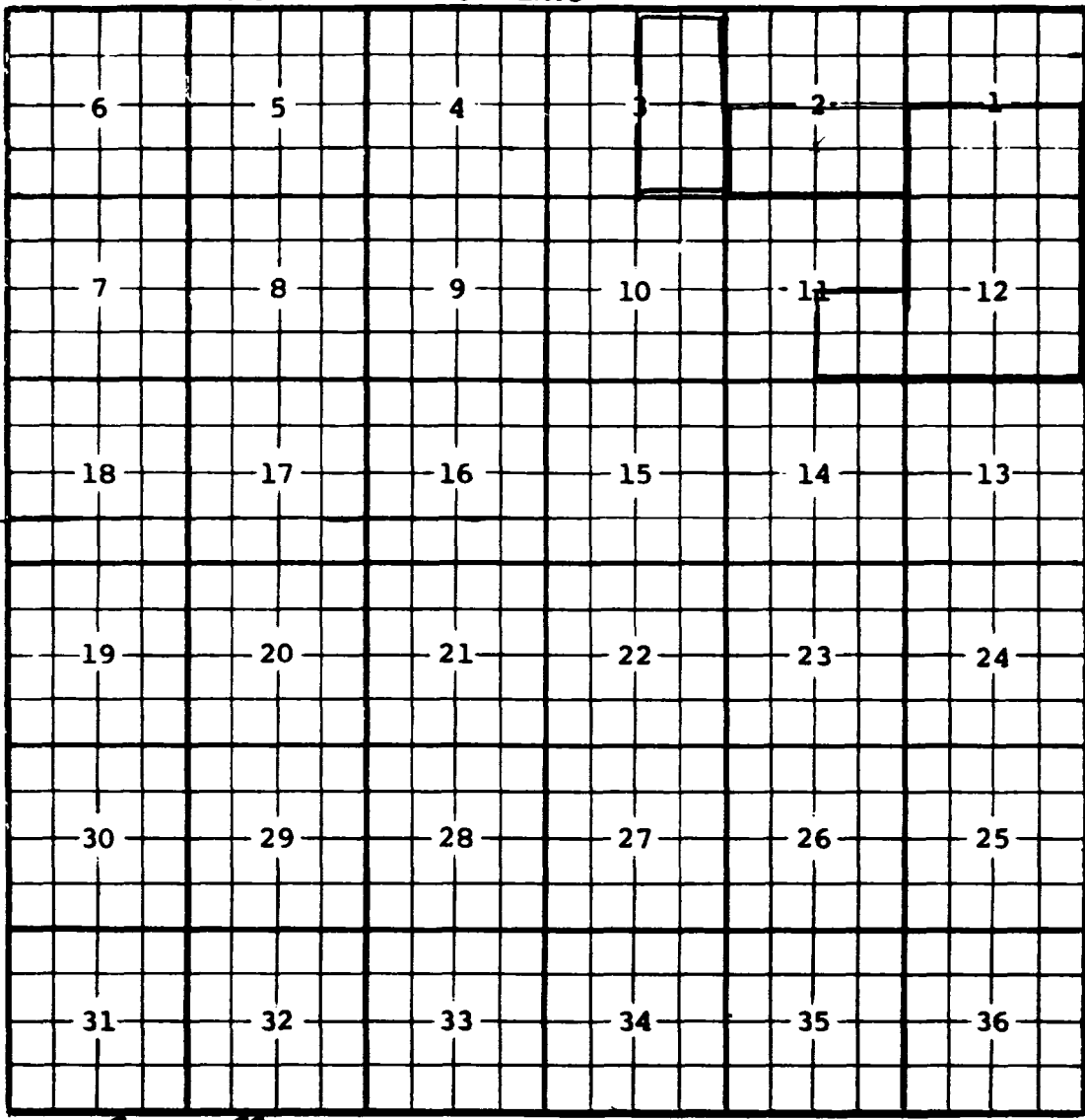
COUNTY Lea

POOL Scharb - Bone Springs

TOWNSHIP 19 South

RANGE 34 East

NMPM



Ext: $\frac{5}{8}$ Sec. 1; $\frac{5}{8}$ Sec. 11; All Sec. 12 (R-3441, 6-1-68)

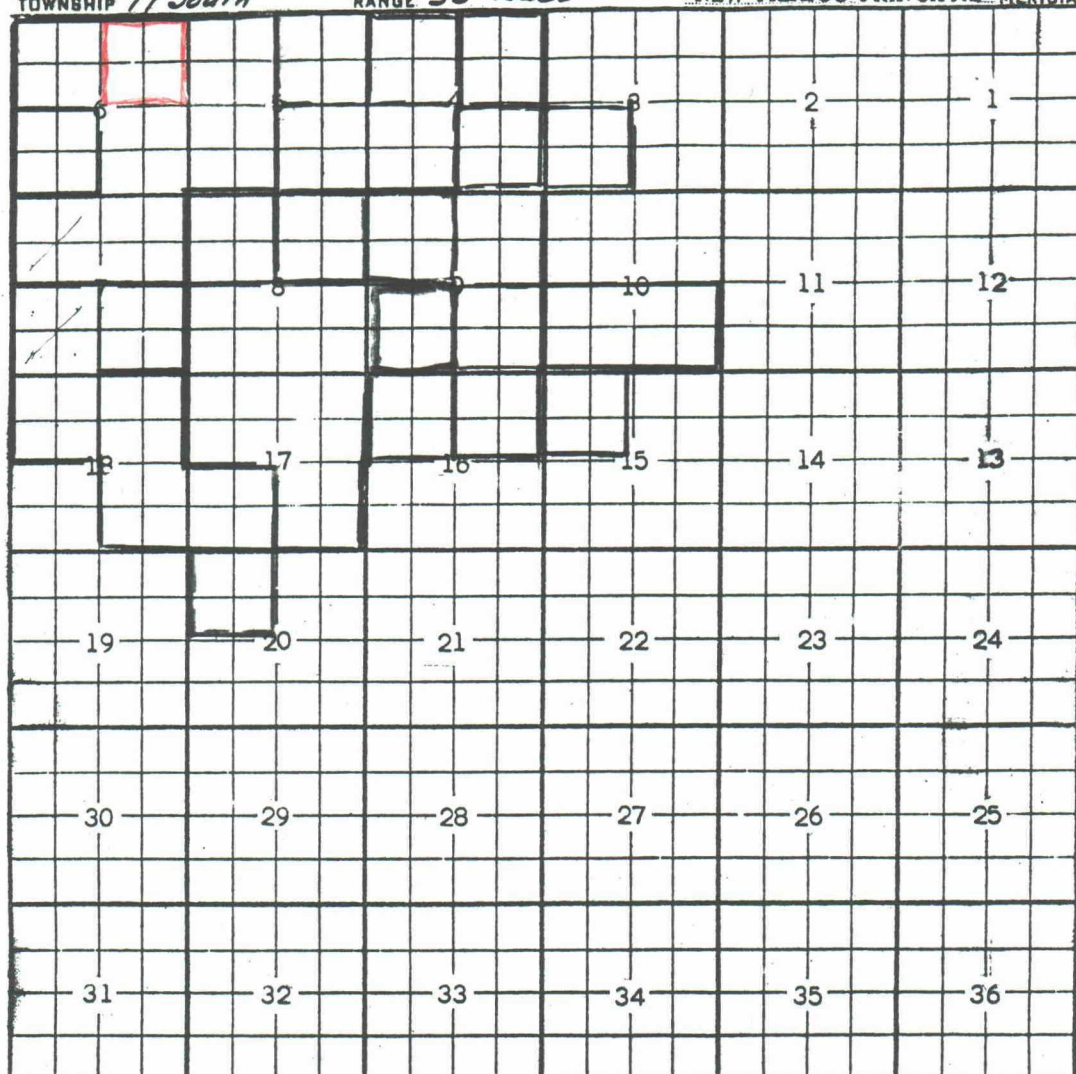
Ext: $\frac{5}{2}$ Sec. 2 (R-4734, 3-1-74) EXT: $\frac{9}{2}$ SEC 3 (R-8696, 7/22/88)

Handwritten notes and signature lines.

Pool Scharb-Bone Springs

RANGE 35 East

NEW MEXICO PRINCIPAL MERIDIAN



Ext: NW 1/4 Sec. 5; All Sec. 6; NW 1/4 Sec. 7 (R. 2589, 10-30-63) - SW 1/4 Sec. 7;
NW 1/4 Sec. 8; NW 1/4 Sec. 18 (R. 2692, 5-1-64) - SE 1/4 Sec. 7 (R. 3780, 7-1-69)

Exr. SW 1/4 Sec. 4 SE 1/4 Sec. 5 (R-6536 12-1-80) Ext. NW 1/4 sec 9

(R-6890, 1-2-82) Ext: ^{NE}4 Sec. 8 (A-6838, 11-8-81)

Ext: Sec: 9-⁵⁴/₄ (R-7030 7-21-82)

Ext: ^{SE}/₄ Sec. 4, ^{SE}/₄ Sec. 9 (A-7193; 1-26-83)

Ext. ~~NE~~ 4 Sec. 9 (R-7302, 6-14-83) Ext. ~~NE~~ 4 Sec. 4, ~~NE~~ 4 Sec. 16 (R-7322, 8-1-83)

Ext: ~~NY~~ Sec. 4 (A-7351, 9-19-83) Ext: ~~NY~~ Sec. 10 (A-7372, 10-20-83)

Ext: $\frac{5}{2}$ Sec. 10, $\frac{5W}{4}$ Sec. 17, $\frac{E}{2}$ Sec. 18 (A-7396, 12-8-83)

Ext: SW/4 Sec. 3, NE/4 Sec. 5 (A-7502, 4-20-84)

Ext: $\frac{1}{2}$ Sec. 8, $\frac{1}{2}$ and $\frac{3}{4}$ Sec. 17 (R-7607, 7-27-84) Ext: $\frac{NW}{4}$ Sec. 15 (R-7714, 11-7-84)

EXT: NW/4 SEC 20 (R-8667 6/10/88)

SCHARB-BONE SPRINGS POOL
Las County, New Mexico

SECTION II

R. W. Byram & Co., May, 1983

Order No. R-2589, Adopting Temporary Operating Rules for the Scharb-Bone Springs Pool, Las County, New Mexico, October 30, 1983, as Amended by Order No. R-2589-C, April 13, 1983.

Order No. R-2589-B, November 24, 1984, makes permanent the rules adopted in Order No. R-2589.

Application of Big (6) Drilling Company for Special Rules, Las County, New Mexico.

CASE NO. 2910
Order No. R-2589

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on October 18, 1983, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 30th day of October, 1983, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

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

(2) That the applicant, Big (6) Drilling Company, seeks a quorum of the Scharb-Bone Springs Oil Pool to permit the N/2 of Section 7, Township 19 South, Range 35 East, NMPM, Las County, New Mexico.

IT IS FURTHER ORDERED:

(3) That the applicant also seeks the promulgation of special rules and regulations governing said pool, including provisions for 80-acre spacing units comprising any two contiguous 40-acre tracts, and for fluid well locations.

(4) That in order to prevent the economic loss caused by the drilling of unnecessary wells to avoid the augmentation of rate caused from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of unnecessary wells, temporary special rules and regulations providing for 80-acre spacing units should be promulgated for the Scharb-Bone Springs Oil Pool.

(5) That in order to encourage the orderly development of the subject pool, the temporary special rules and regulations should provide for 80-acre spacing units comprising the N/2, S/2, E/2, or W/2 of a single governmental quarter section; that due to the configuration of leases, the diversity of ownership, and the locations of wells previously drilled in the SW/4 and W/2SE/4 of Section 7, Township 19 South, Range 35 East, NMPM, Las County, New Mexico, the operators in said area should be permitted to dedicate to wells within said area any two quarter sections contiguous by a common bordering side and lying wholly within said area.

(6) That the temporary special rules and regulations should provide for limited well locations in order to encourage orderly development of the pool and protect correlative rights.

(7) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather necessary information to develop a plan that can be efficiently and economically drilled and developed by one well.

(8) That this case should be reopened at an examiner hearing in October, 1984, at which time the operators in the subject pool should appear and show cause why the Scharb-Bone Springs Oil Pool should not be developed on 40-acre spacing units.

IT IS THEREFORE ORDERED:
(1) That the horizontal limits of the Scharb-Bone Springs Oil Pool in Las County, New Mexico, are hereby extended to include the following-described area:

TOWNSHIP 19 SOUTH, RANGE 35 EAST, NMPM
Section 5, W/2
Section 6, All
Section 7, N/2

R. W. Byram & Co., May, 1983

SECTION II

New Mexico Page 347

(SCHARB-BONE SPRINGS POOL - Cont'd.)

(2) That Special Rules and Regulations for the Scharb-Bone Springs Oil Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
SCHARB-BONE SPRINGS OIL POOL

RULE 1. Each well completed or recompled in the Scharb-Bone Springs Oil Pool shall be located on a standard unit or within the limits of another designated Bone Springs oil pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompled in the Scharb-Bone Springs Oil Pool shall be located on a standard unit containing approximately 80 acres comprising the N/2, S/2, E/2, or W/2 of a single governmental quarter section, provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. The Secretary-Director may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit comprising a single quarter-quarter section or lot. All operators operating the proposed non-standard unit shall not apply for an exception until such time as the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. (As Amended by Order No. R-2589-C, April 13, 1983.) Wells may be located in either quarter-quarter section in the provision unit provided that any such well shall be located within 200 feet of the center of the quarter-quarter section.

RULE 5. The Secretary-Director may grant an exception to the foregoing requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompled of a well previously drilled to another horizon, provided the well will be located no nearer than 330 feet to the outer boundary of the unit. All operators operating the proposed unorthodox location shall be required to file a written application with the Secretary-Director. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the unorthodox

location within 20 days after the Secretary-Director has received the application.

RULE 6. A standard provision unit (79 through 81 acres) in the Scharb-Bone Springs Oil Pool shall be assigned an 80-acre proportional factor of 5.67 for allowable purposes, and in the event there is more than one well on an 80-acre provision unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard provision unit shall bear the same ratio to a standard allowable in the Scharb-Bone Springs Oil Pool as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

(1) That an exception is hereby granted to the Special Rules and Regulations for the Scharb-Bone Springs Oil Pool to permit the operators in the SW/4 and W/2SE/4 of Section 6, Township 19 South, Range 35 East, NMPM, Las County, New Mexico, to operate a well completed or recompled within said area any two quarter-quarter sections contiguous by a common bordering side and lying wholly within said area.

(2) That any well drilling to or completed in the Bone Springs formation within the Scharb-Bone Springs Oil Pool or within one mile of the Scharb-Bone Springs Oil Pool shall be completed on or before November 15, 1983, that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of said rule. The operator of any such well shall notify the Holbe District Office of the Commission in writing of the name and location of the well on or before November 15, 1983.

(3) That any operator desiring to dedicate 80 acres to a well presently drilling to or completed in the Scharb-Bone Springs Oil Pool shall file a new Form C-128 with the Commission on or before November 15, 1983.

(4) That this case shall be reopened at an examiner hearing in October, 1984, at which time the operators in the subject pool may appear and show cause why the Scharb-Bone Springs Oil Pool should not be developed on 40-acre spacing units.

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

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