

OIL CONSERVATION DIVISION  
RECEIVED  
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**REPORT OF**  
***SUB-SURFACE***  
***DIRECTIONAL***  
***SURVEY***

Case ~~10648~~  
10697

**API #**

**PETROLEUM DEVELOPMENT CORPORATION**

**WATTAM FEDERAL NO. 4**

**CHAVES COUNTY, NEW MEXICO**

JOB NUMBER  
430-1612  
430-1612

TYPE OF SURVEY  
Gyroscopic Survey  
Steering Tool

DATE  
May 13, 1993  
May 18, 1993

# PETROLEUM DEVELOPMENT CORPORATION

Structure : SAN ANDRES FIELD

Well : WATFED4

Field : SECTION 6 T8S, R31E CHAVES COUNTY

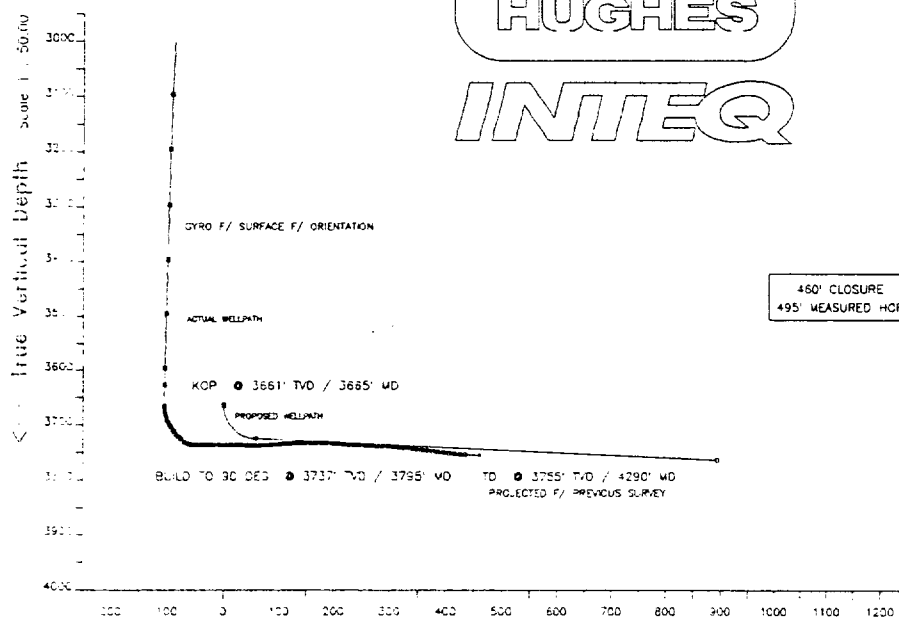
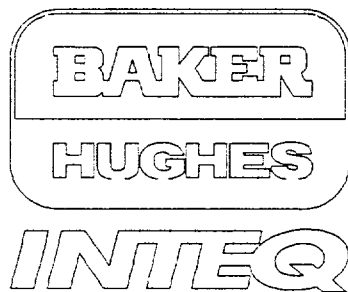
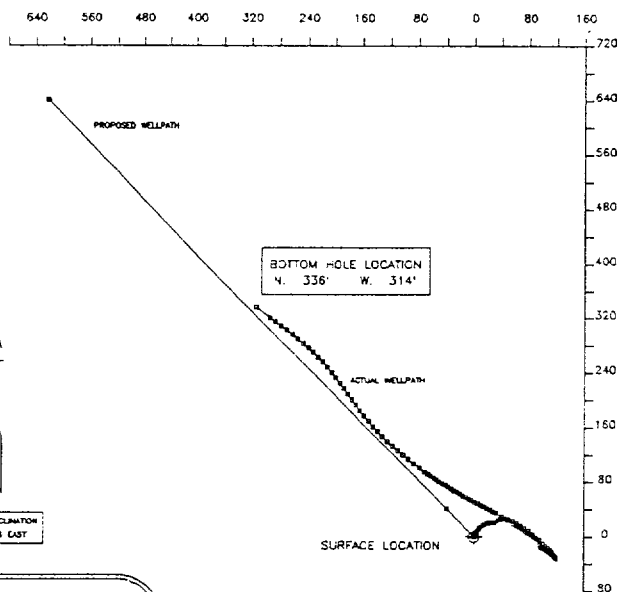
Location : CHAVES COUNTY, NEW MEXICO

## WELL PROFILE DATA

Point	MD	Inc	Dir	TVD	North	East
Tie on	3664	0.00	315.82	3664	0	0
KCP	3665	0.00	315.82	3665	0	0
End of Build	3756	87.33	315.82	3725	41	-40
Target	4594	87.33	315.82	3784	841	-823

<--- West

Scale 1 : 40.00



460' CLOSURE --- 565' VERTICAL SECTION  
495' MEASURED HORIZONTAL DISPLACEMENT IN ZONE

Vertical Section on 315.82 azimuth with reference 0.00 N, 0.00 E from structure

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100Ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
100.00	0.28	23.02	100.00	0.22 N	0.10 E	0.28	0.04
200.00	0.85	24.81	199.99	1.12 N	0.50 E	0.57	0.20
300.00	1.09	15.10	299.98	2.71 N	1.06 E	0.29	0.34
400.00	1.50	28.22	399.95	4.79 N	1.93 E	0.50	0.66
500.00	1.43	41.70	499.92	6.87 N	3.38 E	0.35	1.54
600.00	1.61	40.16	599.89	8.88 N	5.11 E	0.18	2.72
700.00	1.79	38.06	699.84	11.18 N	6.98 E	0.19	3.95
800.00	1.93	40.02	799.79	13.70 N	9.03 E	0.15	5.30
900.00	2.24	53.00	899.72	16.16 N	11.67 E	0.56	7.24
1000.00	2.31	66.93	999.65	18.13 N	15.09 E	0.56	10.05
1100.00	2.13	64.74	1099.57	19.71 N	18.62 E	0.20	13.08
1200.00	1.96	89.23	1199.51	20.53 N	22.01 E	0.88	16.15
1300.00	1.88	89.38	1299.45	20.57 N	25.36 E	0.08	19.38
1400.00	2.14	70.59	1399.39	21.21 N	28.76 E	0.70	22.52
1500.00	2.50	44.61	1499.31	23.38 N	32.06 E	1.10	25.16
1600.00	2.65	73.73	1599.22	25.58 N	35.81 E	1.30	28.24
1700.00	2.13	78.03	1699.13	26.61 N	39.84 E	0.55	31.89
1800.00	3.12	98.87	1799.02	26.58 N	44.35 E	1.36	36.26
1900.00	3.54	107.92	1898.86	25.21 N	49.98 E	0.67	42.05
2000.00	3.75	116.07	1998.66	22.82 N	55.85 E	0.56	48.33
2100.00	3.75	122.35	2098.44	19.64 N	61.55 E	0.41	54.65
2200.00	3.97	120.70	2198.21	16.12 N	67.29 E	0.25	61.09
2300.00	4.12	121.78	2297.96	12.46 N	73.32 E	0.17	67.84
2400.00	4.27	125.61	2397.70	8.40 N	79.40 E	0.32	74.75
2500.00	4.35	131.73	2497.42	3.71 N	85.26 E	0.47	81.60
2600.00	4.09	133.38	2597.14	1.26 S	90.68 E	0.29	88.09
2700.00	3.62	131.22	2696.92	5.79 S	95.65 E	0.49	94.04
2800.00	3.26	131.87	2796.74	9.77 S	100.14 E	0.36	99.39
2900.00	3.15	132.65	2896.58	13.53 S	104.28 E	0.12	104.34
3000.00	2.60	133.68	2996.45	16.96 S	107.94 E	0.55	108.74
3100.00	2.14	131.67	3096.37	19.77 S	110.97 E	0.47	112.38
3200.00	1.82	146.36	3196.31	22.33 S	113.25 E	0.60	115.23
3300.00	1.68	148.61	3296.26	24.90 S	114.89 E	0.16	117.46
3400.00	1.23	148.18	3396.23	27.07 S	116.22 E	0.45	119.29
3500.00	1.09	143.64	3496.21	28.74 S	117.35 E	0.17	120.81
3600.00	1.35	139.85	3596.19	30.41 S	118.67 E	0.27	122.51
3630.00	1.14	134.88	3626.18	30.89 S	119.11 E	0.79	123.05 GYRO F/ SURFACE F/ ORIENTATION

All data is in feet unless otherwise stated  
Coordinates from structure and TVD from wellhead.  
Vertical section is from wellhead on azimuth 104.54 degrees.  
Declination is 0.00 degrees, Convergence is 0.00 degrees.  
Calculation uses the minimum curvature method.  
Presented by Baker Hughes INTEQ

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100Ft	Vert Sect	
3630.00	1.14	134.88	3626.18	30.89 S	119.11 E	0.00	-105.16	
3665.00	0.90	129.10	3661.17	31.31 S	119.57 E	0.74	-105.78	KOP W/ 40' SRAB ASSEMBLY.
3670.00	2.90	323.40	3666.17	31.23 S	119.52 E	75.57	-105.70	
3675.00	4.90	323.40	3671.16	30.96 S	119.32 E	40.00	-105.36	
3680.00	7.50	323.40	3676.13	30.52 S	119.00 E	52.00	-104.82	
3685.00	11.40	323.40	3681.06	29.87 S	118.51 E	78.00	-104.01	
3690.00	16.50	320.00	3685.91	28.92 S	117.76 E	103.26	-102.81	
3695.00	20.50	317.00	3690.65	27.74 S	116.70 E	82.21	-101.23	
3700.00	24.30	313.00	3695.28	26.40 S	115.36 E	81.84	-99.32	
3705.00	28.60	303.00	3699.75	25.04 S	113.60 E	123.56	-97.13	
3710.00	32.90	303.30	3704.05	23.64 S	111.46 E	86.05	-94.63	
3715.00	36.30	302.90	3708.16	22.10 S	109.08 E	68.15	-91.86	
3720.00	39.50	302.30	3712.11	20.44 S	106.49 E	64.42	-88.88	
3725.00	43.30	301.40	3715.86	18.70 S	103.68 E	76.92	-85.67	
3730.00	47.50	300.80	3719.37	16.86 S	100.64 E	84.43	-82.22	
3735.00	52.40	300.20	3722.59	14.92 S	97.34 E	98.43	-78.54	
3740.00	57.70	37.75	3725.96	11.77 S	96.84 E	1524.58	-75.94	
3750.00	67.00	299.80	3731.65	4.85 S	95.12 E	841.93	-69.77	
3755.00	71.60	300.00	3733.42	2.52 S	91.06 E	92.08	-65.27	
3760.00	76.60	305.50	3734.78	0.08 N	87.02 E	145.54	-60.59	
3765.00	81.60	304.80	3735.73	2.91 N	83.01 E	100.94	-55.76	
3770.00	86.30	304.30	3736.26	5.72 N	78.92 E	94.52	-50.89	
3775.00	89.00	304.00	3736.46	8.53 N	74.78 E	54.33	-46.00	
3780.00	89.70	303.20	3736.52	11.30 N	70.62 E	21.26	-41.11	
3785.00	89.80	302.30	3736.54	14.00 N	66.41 E	18.11	-36.24	
3790.00	89.60	301.60	3736.57	16.65 N	62.17 E	14.56	-31.39	
3795.00	89.70	301.20	3736.60	19.25 N	57.90 E	8.25	-26.54	
3805.00	90.70	300.80	3736.56	24.40 N	49.33 E	10.77	-16.88	
3815.00	91.50	300.80	3736.37	29.52 N	40.74 E	8.00	-7.22	
3825.00	90.40	299.10	3736.20	34.51 N	32.08 E	20.25	2.40	
3830.00	90.60	299.40	3736.16	36.96 N	27.72 E	7.21	7.19	
3835.00	89.90	298.50	3736.14	39.38 N	23.34 E	22.80	11.97	
3840.00	89.60	298.20	3736.16	41.75 N	18.94 E	8.48	16.74	
3845.00	89.40	297.70	3736.20	44.09 N	14.52 E	10.77	21.50	
3850.00	89.10	297.60	3736.27	46.41 N	10.10 E	6.32	26.25	
3855.00	88.20	297.60	3736.39	48.73 N	5.67 E	18.00	31.00	
3860.00	88.10	297.60	3736.55	51.04 N	1.24 E	2.00	35.74	
3865.00	87.90	297.40	3736.72	53.35 N	3.19 W	5.66	40.49	
3870.00	88.60	298.10	3736.88	55.68 N	7.62 W	19.79	45.24	
3875.00	89.30	298.70	3736.97	58.06 N	12.01 W	18.44	50.01	
3880.00	90.00	299.20	3737.00	60.48 N	16.39 W	17.20	54.79	
3885.00	90.60	299.60	3736.97	62.93 N	20.74 W	14.42	59.59	
3890.00	91.30	300.00	3736.89	65.42 N	25.08 W	16.12	64.40	
3895.00	91.90	300.30	3736.75	67.93 N	29.40 W	13.42	69.21	
3900.00	92.40	300.50	3736.56	70.46 N	33.72 W	10.77	74.02	
3905.00	93.70	301.00	3736.30	73.01 N	38.01 W	27.85	78.84	
3910.00	94.20	301.50	3735.95	75.60 N	42.27 W	14.12	83.67	
3915.00	94.50	302.10	3735.57	78.22 N	46.51 W	13.38	88.51	
3920.00	94.60	302.80	3735.18	80.90 N	50.71 W	14.10	93.36	
3925.00	94.60	303.10	3734.78	83.61 N	54.90 W	5.98	98.22	

All data is in feet unless otherwise stated  
 Coordinates from structure and TVD from wellhead.  
 Vertical section is from wellhead on azimuth 315.82 degrees.  
 Declination is 0.00 degrees, Convergence is 0.00 degrees.  
 Calculation uses the minimum curvature method.  
 Presented by Baker Hughes INTEQ

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100Ft	Vert Sect
3930.00	94.40	303.90	3734.38	86.36 N	59.05 W	16.44	103.09
3935.00	94.20	304.60	3734.01	89.16 N	63.17 W	14.52	107.97
3940.00	94.10	305.30	3733.65	92.02 N	67.26 W	14.10	112.87
3945.00	93.90	305.90	3733.30	94.92 N	71.32 W	12.62	117.78
3955.00	92.60	306.40	3732.73	100.82 N	79.38 W	13.92	127.62
3965.00	91.10	308.40	3732.41	106.88 N	87.32 W	24.99	137.51
3975.00	89.30	308.90	3732.37	113.13 N	95.13 W	18.68	147.43
3985.00	89.10	310.10	3732.51	119.49 N	102.84 W	12.16	157.36
3995.00	89.20	311.60	3732.66	126.03 N	110.40 W	15.03	167.33
4005.00	88.70	313.00	3732.84	132.76 N	117.80 W	14.86	177.30
4015.00	87.60	314.00	3733.17	139.64 N	125.05 W	14.86	187.29
4025.00	86.60	315.30	3733.67	146.66 N	132.16 W	16.39	197.28
4035.00	85.80	316.80	3734.34	153.84 N	139.08 W	16.97	207.25
4045.00	86.20	319.00	3735.03	161.24 N	145.77 W	22.31	217.22
4055.00	86.70	319.70	3735.65	168.81 N	152.27 W	8.59	227.18
4065.00	87.20	321.00	3736.18	176.50 N	158.64 W	13.91	237.14
4075.00	87.70	322.40	3736.63	184.34 N	164.83 W	14.85	247.08
4085.00	88.10	324.00	3737.00	192.34 N	170.82 W	16.48	256.99
4095.00	87.20	324.40	3737.41	200.45 N	176.66 W	9.85	266.87
4105.00	87.00	324.80	3737.91	208.59 N	182.45 W	4.47	276.74
4115.00	87.00	323.90	3738.44	216.70 N	188.27 W	8.99	286.62
4125.00	86.50	323.40	3739.00	224.74 N	194.19 W	7.06	296.51
4135.00	85.30	322.30	3739.72	232.69 N	200.21 W	16.26	306.41
4145.00	84.70	320.90	3740.59	240.50 N	206.40 W	15.18	316.32
4155.00	84.30	319.50	3741.55	248.15 N	212.77 W	14.50	326.24
4165.00	83.50	317.90	3742.61	255.62 N	219.33 W	17.81	336.17
4175.00	82.90	316.20	3743.79	262.89 N	226.10 W	17.91	346.10
4185.00	82.40	314.90	3745.07	269.97 N	233.04 W	13.83	356.02
4195.00	81.90	313.20	3746.44	276.85 N	240.16 W	17.57	365.92
4205.00	82.20	311.70	3747.82	283.54 N	247.47 W	15.16	375.80
4215.00	82.80	310.40	3749.13	290.05 N	254.94 W	14.22	385.68
4225.00	83.60	309.20	3750.31	296.40 N	262.57 W	14.35	395.56
4235.00	83.90	308.10	3751.40	302.61 N	270.34 W	11.34	405.42
4245.00	84.90	307.40	3752.38	308.71 N	278.21 W	12.19	415.28
4255.00	85.70	307.80	3753.20	314.79 N	286.10 W	8.94	425.14
4265.00	86.60	307.30	3753.87	320.87 N	294.01 W	10.29	435.01
4290.00	88.90	307.20	3754.85	335.99 N	313.90 W	9.21	459.71 PROJECTED F/ PREVIOUS SURVEY

All data is in feet unless otherwise stated  
Coordinates from structure and TVD from wellhead.  
Vertical section is from wellhead on azimuth 315.82 degrees.  
Declination is 0.00 degrees, Convergence is 0.00 degrees.  
Calculation uses the minimum curvature method.  
Presented by Baker Hughes INTEQ



2105 Market Street Midland, Texas 79703  
915-694-9517 Fax 915-694-5648


### SURVEY CERTIFICATION SHEET

STATE OF TEXAS  
COUNTY OF MIDLAND

I, Ralph Rice, in the employ of Baker Hughes INTEQ did on the days of May 13,, 19 93 thru May 13,, 19 93 conduct or supervise the taking of a Gyroscopic survey by the method of magnetic orientation from a depth of 0 feet to 3665 feet, with recordings of inclination and direction being obtained at approximate intervals of 100 feet.

This survey was conducted at the request of Petroleum Development Corporation for their Wattam Federal # 4, Chaves County, State of New Mexico.

The data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Baker Hughes INTEQ and is true and correct to the best of my knowledge.

  
\_\_\_\_\_  
Directional Supervisor/Surveyor



2105 Market Street Midland, Texas 79703  
915-694-9517 Fax 915-694-5648

### SURVEY CERTIFICATION SHEET

STATE OF TEXAS  
COUNTY OF MIDLAND

I, Ron Collins, in the employ of Baker Hughes INTEQ did on the days of May 13,, 1993 thru May 18,, 1993 conduct or supervise the taking of a Steering Tool survey by the method of magnetic orientation from a depth of 3665 feet to 4145 feet, with recordings of inclination and direction being obtained at approximate intervals of 5 feet.

This survey was conducted at the request of Petroleum Development Corporation for their Wattam Federal # 4, Chaves County, State of New Mexico.

The data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Baker Hughes INTEQ and is true and correct to the best of my knowledge.

A handwritten signature in cursive script, reading "Ronald S. Collins".

Directional Supervisor/Surveyor

## STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASE 10,697, 10,698

## EXAMINER HEARING

IN THE MATTER OF:

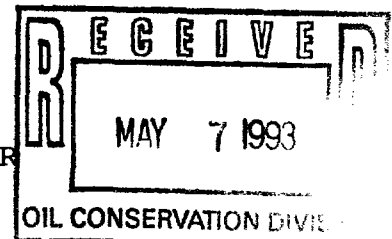
Application of Petroleum Development Corporation  
for a high angle/horizontal directional drilling  
pilot project and for special operating rules  
therefor, Chaves County, New Mexico

Application of Petroleum Development Corporation  
for a high angle/horizontal directional drilling  
pilot project, special operating rules therefor,  
and a nonstandard oil proration unit, Chaves  
County, New Mexico

**ORIGINAL**

## TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER



STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

April 8, 1993



## A P P E A R A N C E S

FOR THE DIVISION:

ROBERT G. STOVALL  
Attorney at Law  
Legal Counsel to the Division  
State Land Office Building  
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

KEGEL LAW FIRM, P.C.  
Attorneys at Law  
By: WALTER KEGEL  
226 Los Alamos Drive, Suite C  
P.O. box 2073  
Española, New Mexico 87532

\* \* \*

## I N D E X

## Page Number

Appearances

2

J.C. JOHNSON

Direct Examination by Mr. Kegel

5

Examination by Mr. Stovall

8

Examination by Examiner Catanach

10

Certificate of Reporter

14

\* \* \*

## E X H I B I T S

## APPLICANT'S EXHIBITS:

Case 10,697

Exhibit 1

6

Exhibit 2

6

Exhibit 3

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Exhibit 4

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Case 10,698

Exhibit 1

6

Exhibit 2

6

Exhibit 3

6

Exhibit 4

6

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1                   WHEREUPON, the following proceedings were had  
2                   at 9:20 a.m.:

3                   EXAMINER CATANACH: At this time we'll call  
4                   Case Number 10,697.

5                   MR. STOVALL: Application of Petroleum  
6                   Development Corporation for a high angle/horizontal  
7                   directional drilling pilot project and for special  
8                   operating rules therefor, Chaves County, New Mexico.

9                   EXAMINER CATANACH: Are there appearances in  
10                  this case?

11                  MR. KEGEL: Walter Kegel, attorney, Espanola,  
12                  for the Applicant.

13                  EXAMINER CATANACH: Okay, any other  
14                  appearances?

15                  MR. KEGEL: Mr. Examiner, I'd like to ask  
16                  that this case be consolidated with the following case,  
17                  Number 10,698, involving the same type of an  
18                  application in the same section.

19                  EXAMINER CATANACH: Okay, at this time we'll  
20                  call Case 10,698.

21                  MR. STOVALL: Also the Application of  
22                  Petroleum Development Corporation for a high  
23                  angle/horizontal directional drilling pilot project,  
24                  special operating rules therefor, and a nonstandard oil  
25                  proration unit, Chaves County, New Mexico.

1 EXAMINER CATANACH: Any additional  
2 appearances?

3 Okay, let the record reflect that the witness  
4 has previously been sworn in, prior case.

5 You may proceed, Mr. Kegel.

6 J.C. JOHNSON,  
7 the witness herein, having been previously duly sworn  
8 upon his oath, was examined and testified as follows:

9 DIRECT EXAMINATION

10 BY MR. KEGEL:

11 Q. For the record, state your name and  
12 residence.

13 A. My name is J.C. Johnson, from Albuquerque,  
14 New Mexico.

15 Q. And your occupation?

16 A. I'm President of Petroleum Development  
17 Corporation.

18 Q. And you have testified before this Commission  
19 as an expert previously?

20 A. Yes, I have.

21 MR. KEGEL: Tender the witness.

22 EXAMINER CATANACH: He is qualified.

23 Q. (By Mr. Kegel) Do you have an exhibit book  
24 that's in these two consolidated matters?

25 A. Yes, I have. On the Case Number 10,697 I

1 have four exhibits and the Application letter with  
2 receipts from all the offset operators that they were  
3 notified by certified mail.

4 Case Number 10,698, I have four exhibits, the  
5 map, offset operators and addresses, horizontal  
6 drilling procedure and a schematic of the procedure.

7 Q. As well as -- Well, are these two  
8 Applications identical in what is proposed?

9 A. Yes, they are.

10 Q. Are there any differences between them?

11 A. Not really, except the depths of the pay  
12 zones and the kickoff points, the perforations, slight  
13 difference because one is on one side of the section  
14 and one is on the other side of this section.

15 The procedure of what we're going to be doing  
16 is, we're going to be doing the same thing, we're going  
17 to be drilling the horizontal wells, maintaining a  
18 distance of 100 feet from the out-of-boundaries of the  
19 40-acre tract in each well.

20 Q. And do you have adequate controls to see that  
21 you don't intrude upon the 100-acre -- 100-foot  
22 boundary?

23 A. Yes, we do.

24 Q. Is the procedure which will be used the same  
25 or similar to the procedure about which you have

1 testified in Case 10,696?

2 A. Yes, it is.

3 Q. Is it identical or are there any significant  
4 differences?

5 A. The only difference is the distance that we  
6 will be going from the vertical wellbore.

7 In these cases we will be limited -- by going  
8 one certain direction -- If the bottom of the wellbore  
9 is the same as the surface we would be able to go out  
10 about 890 feet, there's a possibility.

11 On the other well we would be able to go out  
12 about 790 feet, is our maximum distance, where in the  
13 other case, 10,696, we're going to try to get out as  
14 far as we can because we're crossing another 40-acre  
15 boundary.

16 MR. KEGEL: Is it possible, Mr. Examiner, to  
17 take notice of the testimony in the prior case in this  
18 one so we don't have to go through it in detail?

19 EXAMINER CATANACH: Yes, I think we can do  
20 that.

21 Q. (By Mr. Kegel) In both of these cases, do  
22 you feel that the Applications are in the interests of  
23 conservation and prevention of waste?

24 A. Yes, I do. Again, we're in a situation where  
25 we're trying recover reserves that have not been

1 recovered by primary production from a vertical-drilled  
2 well.

3 All indications from log calculations, there  
4 are a tremendous amount of reserves still available to  
5 be recovered. And the offset operators will have the  
6 opportunity of this works to do the same thing to their  
7 wells if the economics are there to do it.

8 Q. And the fractionalization that you talked  
9 about in the prior case is present, you believe, in  
10 these two situations also?

11 A. Yes, I do.

12 Q. And the offset operators will get the benefit  
13 of the experience gained by your expenditures?

14 A. That is correct.

15 MR. KEGEL: I have no further questions.

16 EXAMINATION

17 BY MR. STOVALL:

18 Q. Mr. Johnson, just to make sure that we've got  
19 the record together, the exhibits appear to be the same  
20 in terms of content for each of the three cases, both  
21 the previous one which we're incorporated in here and  
22 then these two; is that correct?

23 A. That's correct.

24 Q. And the difference, as it appears to me, is  
25 that what's really significantly different is that you

1 are at different depths --

2 A. Right.

3 Q. -- in what you're doing?

4 A. That is correct. It is the same pay zone.

5 Q. Okay. So in other words, if we look at each  
6 exhibit, we could just -- If we wanted to substitute  
7 the testimony, we could just plug in the numbers from  
8 the exhibits into the testimony as a description of  
9 what you intend to do and how you intend to get there?

10 A. That is correct.

11 Q. One other -- The case did include an  
12 advertisement for a nonstandard proration unit. It  
13 appears to me your Application actually didn't  
14 reference that. I think that was identified when the  
15 case was -- the advertisement was prepared by the  
16 Division.

17 A. Yes.

18 Q. Am I correct in -- It appears that that is  
19 because of an irregular survey and not because you're  
20 omitting or adding any portion of a quarter section --  
21 or a quarter quarter section or a line; is that  
22 correct?

23 In other words, the quarter quarter that  
24 you're in is actually a 44-acre quarter quarter rather  
25 than a 40-acre; is that --



1           A.    That's right, but I believe the Application  
2   for --

3           Q.    It's 10,698, is the one that we're referring  
4   to, and according to the advertisement, and if I -- Let  
5   me make sure I'm looking at the right map. It appears  
6   that that may be a 44.3-acre lot rather than a standard  
7   40-acre tract. Do you have any reason to believe  
8   that's not true?

9           A.    No, I don't. Walter, let me see -- I missed  
10   it somewhere or another -- what you're talking about.

11          Q.    I believe when Mr. Stogner prepared the --

12          A.    Okay.

13          Q.    -- Application, he reviewed the land surveys  
14   for this area and determined that.

15          A.    Yes, 44.3. Yes, okay.

16                               EXAMINATION

17   BY EXAMINER CATANACH:

18          Q.    Mr. Johnson, the direction of the laterals in  
19   the two wells that we've been discussing has not been  
20   determined?

21          A.    That is correct.

22          Q.    So you're requesting authorization to drill  
23   in any direction you choose --

24          A.    That is correct.

25          Q.    -- as long as you stay further than 100 feet

1 from the outer boundary of the 40-acre unit?

2 A. That is correct. One reason, the main reason  
3 for this request too, we may -- When we do one lateral,  
4 we may find some information that says, Hey, it may be  
5 better to change this direction in the next well.

6 MR. STOVALL: And the tracts are wholly owned  
7 by PDC?

8 THE WITNESS: That is correct.

9 MR. STOVALL: Federal tracts again?

10 THE WITNESS: They are federal tracts.

11 MR. STOVALL: And I assume the feds are once  
12 again enthusiastic?

13 THE WITNESS: They are enthusiastic about it.

14 Q. (By Examiner Catanach) Mr. Johnson, given  
15 the fact that these wellbores may be within 100 feet of  
16 the outer boundary of the lease line, do you see any  
17 adverse effect on the offset operators as a result of  
18 that?

19 A. At the present time, you mean?

20 Q. If you do in fact drill a lateral to within  
21 100 feet of the outer boundary of the proration unit,  
22 you're really at a nonstandard location. Do you see  
23 that as affecting the offset operators adversely?

24 A. I do not myself, based on data and articles  
25 I've read and so forth. A well drill -- The amount of

1 oil that's been recovered in these oils -- I doubt if  
2 it's been recovered 20 foot from the wellbore.

3 But the thing that happens, if a well was  
4 drilled vertically 100 foot from the well, then you  
5 have the whole area, say these pay thicknesses 40-foot  
6 thick where the 7-7/8-inch bore may do it.

7 But with the lateral boring out there to a --  
8 a drainage factor -- a lot of people think it doesn't  
9 drain 20 foot from that point of the lateral.

10 So the drainage is not as great. The  
11 drainage will be along that lateral as it goes out.

12 Q. Unless you hit a fracture, and then wouldn't  
13 the drainage area be extended?

14 A. It all depends on how far that fracture  
15 extends, that is correct.

16 Q. But you've had no objection or no concern  
17 from any offset operators on any of these proposals?

18 A. I've had no objections.

19 Q. The well number 4 is currently plugged and  
20 abandoned?

21 A. That is correct.

22 Q. Okay. And number 7 is currently still -- Is  
23 that still producing?

24 A. It's temporarily abandoned.

25 Q. Okay.

1           A.    The number 4 well was drilled, attempt to  
2   complete was made. The well has produced, I think, 575  
3   barrels of oil. Log calculations show there's 460,000  
4   barrels of oil in place, based on a 40-acre spacing  
5   unit.

6           EXAMINER CATANACH: Okay, I don't have  
7   anything further.

8           MR. KEGEL: Nothing further.

9           EXAMINER CATANACH: Okay, there being nothing  
10   further, Case 10,697 and 10,698 will be taken under  
11   advisement.

12           (Thereupon, these proceedings were concluded  
13   at 9:33 a.m.)

14                           \* \* \*

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CERTIFICATE OF REPORTER

STATE OF NEW MEXICO )  
 ) ss.  
 COUNTY OF SANTA FE )

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL April 14th, 1993.

*Steven T. Brenner*  
 STEVEN T. BRENNER  
 CCR No. 7

My commission expires: October 14, 1994

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10697, 10698 heard by me on April 8 1993.

*David R. Cote*  
 \_\_\_\_\_, Examiner  
 Oil Conservation Division