

CASE 4639: Application of GREAT
WESTERN DRLG. TO DIRECTIONALLY
DRILL, LEA COUNTY, NEW MEXICO.

James
Dodd & Stephens

Case Number
4639

Application

Transcripts

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
January 5, 1972

EXAMINER HEARING

IN THE MATTER OF:

Application of Great Western
Drilling Company to directionally
drill, Lea County, New Mexico.

Case 4639

BEFORE: Daniel S. Nutter,
Alternate Examiner.

TRANSCRIPT OF HEARING

1 MR. NUTTER: Case No. 4639.

2 MR. HATCH: Case 4639: Application of Great Western
3 Drilling Company, seek permission to re-enter the State C Lea
4 No. 1.

5 (Whereupon Applicant's exhibits were marked for identifica-
6 tion.)

7 MR. JENNINGS: I am James T. Jennings, Roswell, New
8 Mexico, appearing for the Applicant, Great Western Drilling
9 Company, and we have one witness, Mr. Russell Comstock.

10 RUSSELL I. COMSTOCK

11 a witness, having been first duly sworn according to law, upon
12 his oath, testified as follows:

13 DIRECT EXAMINATION

14 BY MR. JENNINGS

15 Q State your name and occupation, please, sir.

16 A My name is Russell Comstock.

17 Q Whom are you employed by?

18 A Great Western Drilling Company, chief engineer.

19 Q Mr. Comstock, could you state your educational qualifica-
20 tions in the engineering field?

21 A I received a degree in petroleum engineering from the
22 University of Southern California in 1952. I was subse-
23 quently employed by Phillips Petroleum Company until 1955
24 as a production engineer, and since that time I have been
25 employed by the Great Western Drilling Company.

1 Q In what general capacity with Great Western Drilling
2 Company?

3 A As a drilling engineer from 1955 through 1958, and as a
4 production engineer since that time.

5 Q Are you in charge of Great Western's operations in Lea
6 County, New Mexico?

7 A Yes, sir.

8 Q Mr. Comstock, are you familiar with the Application which
9 has been filed herein?

10 A Yes, I am.

11 Q Just relate generally what you propose to do in this
12 connection with this Application?

13 A We are requesting permission to re-enter the State Lea C,
14 No. 1, clean out the No. 1 well, clean it out to
15 approximately 8,200 feet, and top of five--directly drilled
16 to a depth of approximately 11,900 feet, and test the
17 Marrow Formation.

18 This well is located 330 feet from the north and east
19 lines of Section 17, Township 16, South, Range 35 East, Lea
20 County, New Mexico.

21 The hole will be deviated to the south. It will be no
22 closer to the lease line than the surface location, the
23 bottom of the hole, the angle of deviation will be maintained
24 sufficiently large to prevent re-entry into the old hole
25 below the point of initial new drilling the location of the

1 present well bore at 8,200 feet, with respect to the lease
2 lines, is not known, this will be determined by a
3 directional survey after cleaning out and prior to setting
4 the first whipstock.

5 Q Mr. Comstock, I hand you what has been marked as Exhibit
6 No. 1 and ask you if you will identify that and identify
7 your well as located thereon?

8 A The well is located in the northeast corner of the lease in
9 Section 17.

10 That is bordered in yellow.

11 Q That well was 330 location, was it not?

12 A That is right.

13 Q And who are the offset operators?

14 A Advance Petroleum to the north, Humble to the northeast
15 and to the east--and Skelly is located to the west of our
16 lease, and I believe the southwest quarter is unleased.

17 Q Skarber-Edison lease is in the southwest quarter of Section
18 7?

19 A Correct.

20 Q What pool is that well, the proposed well located in; is it
21 a defined pool?

22 A It is a Townsend-Marrow gas.

23 Q Where are the other offsets, the other gas wells in that
24 pool located?

25 A There is one in Section 8 to the north of us; one in section

1 9, to the northeast; and then one in Section 15,
2 approximately a mile and a half to the east.

3 Q How far are the wells to the north; how far distant are
4 they?

5 A Approximately a half a mile.

6 Q Now, Mr.--excuse me, Mr. Hatch.

7 I am confused with my exhibits. Could you just tell
8 me which is No. 2?

9 MR. NUTTER: We have identified the well history as
10 Exhibit No. 2.

11 The schematic diagram is 3 and the economics are No. 4.

12 Q (By Mr. Jennings) Fine. Mr. Comstock, have you gone into or
13 looked into the record in connection with the well which
14 you propose to re-enter?

15 A Yes, I have.

16 Q Have you prepared a summary reflecting the data concerning
17 this well?

18 A Yes.

19 Q Is that incorporated in Exhibit 2?

20 A Yes.

21 Q Just briefly, what does that reflect as to the casing and
22 depth, etc.?

23 A The total depth of the well is 10,566 feet.

24 It had 11 3/4 in casing set at 367 feet; cemented with
25 850 sacks, and the cement circulated.

1 8 5/8" intermediate casing was set at 4,649 feet;
2 cemented with 2,200 sacks, and the cement circulated to the
3 cellar; 5 1/2" casing was set at 15,565 feet; cemented with
4 375 sacks, and the top of the cement by temperature survey
5 was 8,195.

6 The well was plugged and abandoned on October 20, 1970,
7 and the five and a half inch casing was shot and pulled at
8 8,200 feet.

9 No attempt was made to salvage any of the intermediate
10 casing. That casing string is intact.

11 The cementing record indicates that 25 sack plugs were
12 set at 10,552; 8,200; 6,200; 4,649, and a 10 plug sack set
13 at the surface.

14 Q Have you prepared a schematic sketch of the well bore as
15 you see it?

16 A Yes, I have.

17 Q That is marked as Exhibit A? Exhibit 3, I am sorry.

18 A Yes.

19 Q That briefly shows where the casing sets and the open hole
20 in the area?

21 A That is true, as well as where the cement plugs are located.

22 Q Have you been able to locate any surveys of the hole?

23 A None directional; inclination surveys only.

24 The maximum deviation was to 3 3/4° at a depth of
25 9,712 feet.

1 Q How do you propose to re-enter this, and just what do you,
2 what depth do you propose to deviate?

3 A We propose to drill out the cement plugs at the surface at
4 4,649 feet, and 6,200 feet, and clean out down to the
5 cement plug at 8,200 feet.

6 At that point we would set a whipstock; prior to
7 setting the whipstock we would run a directional survey to
8 locate the position of the hole at 8,200 feet; then set an
9 A-oriented whipstock and continue drilling to approximately
10 11,900 feet.

11 Q Now, your deflection to the southwest will be away from the
12 lease line and toward the center of your lease?

13 A That is correct.

14 Q Are you familiar with the provisions of Commission Rule 111,
15 and you propose to comply with that rule in your operations?

16 A That is right.

17 Q Mr. Comstock, have you made an economic evaluation of the
18 re-entry as proposed to a new well?

19 A Yes, I have.

20 Q Referring to what has been marked as Exhibit 4, would you
21 say that is the evaluation that you made?

22 A Yes.

23 Q Briefly would you state to the Commission what that reflects?

24 A Well, this is a comparative cost estimate to the casing
25 point for an 11,900A foot Marrow test, and it is estimated

1 that to the casing point a new well would cost \$139,023.

2 The cost of re-entry of the old well would be \$64,450
3 a saving of \$74,573.

4 Q In your opinion, Mr. Comstock, will the re-entry of this
5 well be in the interest of conservation and prevent waste,
6 and result in the more efficient recovery of hydro-carbons
7 underlying this tract?

8 A Yes.

9 Q Were Exhibits No. 1 to 4 prepared by you or under your
10 supervision?

11 A Yes, they were.

12 Q We offer Exhibits No. 1 to 4.

13 MR. NUTTER: Great Western Exhibits Nos. 1 to 4 will
14 be admitted in evidence.

15 MR. JENNINGS: We would also offer, like to offer at
16 this time return receipts reflecting that the offset operators
17 were notified, were sent copies of the Application.

18 MR. NUTTER: Who do you have receipts from?

19 MR. JENNINGS: We have receipts from Skarber-Edison
20 VF Petroleum; Union Oil, Skelly Oil, Humble Oil, and Shell Oil
21 Company, and we have the Xerox copies--

22 MR. NUTTER: Mr. Comstock, who owns the lease
23 immediately north in Section 8?

24 THE WITNESS: The Marrow completion there is Advance
25 Petroleum.

1 MR. NUTTER: Did you have a notification from them?

2 MR. JENNINGS: No. We notified the record owners,
3 Union Oil Company of California.

4 THE WITNESS: For Section 8?

5 MR. JENNINGS: Shell Oil Company, they are the record
6 owners of that, and we notified the Shell Oil Company.

7 That is the south half of Section 8.

8 MR. NUTTER: Okay.

9 CROSS-EXAMINATION

10 BY MR. NUTTER

11 Q Mr. Comstock, you have mentioned that you had set your
12 whipstock and deviated in a southwesterly direction, you
13 said only enough to keep the bottom hole location, that
14 being closer than the surface location of the well, 330,
15 wouldn't that constitute a standard location for gas well?

16 A That is true.

17 Q In effect, what you are seeking is a non-standard location
18 for your bottom hole; is that right?

19 A That would be a part of this Application, yes, sir.

20 Q You didn't give us a bottom hole location to put in the
21 notice.

22 The only thing we advertised was that it would be a
23 bottom hole location in the northeast quarter.

24 I think if it had been stated that it was going to be
25 a non-standard location we would have preferred to have

1 known so we could have put that in the ad.

2 Now, the notice that you gave to these offset
3 operators, did you specify where you bottomed the hole
4 there?

5 MR. JENNINGS: No, sir. They were furnished with
6 copies of the Application, and the Application didn't set forth
7 the location of the bottom hole.

8 MR. NUTTER: Then they may not be aware you are
9 proposing a non-standard bottom hole location; that may be why
10 they are not here today.

11 Is it possible to deviate the well southwesterly sufficient
12 to have a standard location, Mr. Comstock?

13 THE WITNESS: I think that would be very possible.

14 Q (By Mr. Nutter) I presume you are dedicating the east half of
15 Section 17; that is the location you have outlined on
16 Exhibit No. 1?

17 A Yes.

18 Q A standard location for a well to which the east half would
19 be dedicated would be one that would be at least 1,980 feet
20 from the north line of that section; 660 from the east line,
21 or 1,980 feet from the north, and 1,980 from the east; in
22 other words, the approximate center in either unit G or H
23 there?

24 A Could we see that order?

25 Q The well would be bottomed within 330 feet of the center of

1 either of those 240's?

2 A Yes, that would be satisfactory.

3 Q A multi-point directional survey made upon completion of
4 the well to determine the bottom of the perforation, was it
5 made?

6 A Correct.

7 Q Fine.

8 Are there any further questions?

9 MR. JENNINGS: I would like--I didn't get clear as to
10 where it was bottomed?

11 MR. NUTTER: Well, it would specify that the
12 perforations would be located within 330 feet of the center of
13 those 240's, Mr. Jennings, Unit G or Unit H, see, that would be
14 a standard location, because the standard location is specified
15 as being at least 1,980 from the north line or 1,980 from the
16 east line, and 660 from the side line of a unit, but you are
17 allowed a deviation of 330 feet in any direction, so it would be
18 in the center with a 330 feet tolerance in any direction. That
19 would give you a 660 foot circle as your target area, Mr.
20 Comstock.

21 MR. JENNINGS: Does that present problems?

22 THE WITNESS: I don't know at this time.

23 MR. NUTTER: If we enter an order approving the
24 Application, we will specify some target area. If it is not
25 satisfactory, why you have got further recourse.

1 MR. JENNINGS: I think the problem that is there now
2 is to insure where the hole is bottomed out.

3 MR. NUTTER: That well may have deviated down there,
4 and all they have got to do is miss this old pipe.

5 The alternative to that, the Applicant will have to give
6 notice the case be re-advertised as a non-standard location.

7 This would be probably the next alternative, a non-standard
8 location.

9 Are there any further questions of Mr. Comstock? He may
10 be excused.

11 Do you have anything further, Mr. Jennings?

12 MR. JENNINGS: No, sir.

13 MR. KELLAHIN: Jason Kellahin, Kellahin & Fox,
14 appearing for Reid and Stevens, who own an 80 acre tract in the
15 west half of Section 17.

16 We don't need any notice. We are here.

17 Reid and Stevens has no objection if the order contains a
18 provision for the multi-point bottom directional survey as
19 outlined by Mr. Nutter.

20 If it is not going to be at an orthodox well location, we
21 would voice our objection.

22 MR. NUTTER: Thank you, Mr. Kellahin.

23 In Case 4639, we will take the case under advisement.

24 Then we will call Case No. 4640.
25

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS
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PAGE 14

1 STATE OF NEW MEXICO)
2) ss.
3 COUNTY OF BERNALILLO)

4 I, RICHARD STURGES, a Certified Shorthand Reporter, in and
5 for the County of Bernalillo, State of New Mexico, do hereby
6 certify that the foregoing and attached Transcript of Hearing
7 before the New Mexico Oil Conservation Commission was reported
8 by me; and that the same is a true and correct record of the said
9 proceedings to the best of my knowledge, skill and ability.

10 
11 CERTIFIED SHORTHAND REPORTER

22 I do hereby certify that the foregoing is
23 a correct record of the proceedings in
24 the hearing of Case No. 16237
25 heard by me on 1/5 1972.


Examiner
New Mexico Oil Conservation Commission

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I N D E X

WITNESS

PAGE

RUSSELL I. COMSTOCK

Direct Examination by Mr. Jennings

3

Cross-Examination by Mr. Nutter

10

E X H I B I T S

APPLICANT'S

MARKED

OFFERED AND
ADMITTED

Exhibits 1 to 4

9



'Symbol of Service'

REPORT of SUB-SURFACE DIRECTIONAL SURVEY

Great Western Drilling Company
COMPANY

Lowe State Number One
WELL NAME

Lea County, New Mexico
LOCATION

JOB NUMBER

WTG 10172

TYPE OF SURVEY

GYRO.

DATE

February 7, 1972

SURVEY BY
Jerry Scheafer

OFFICE
Odessa, Texas



RECORD OF SURVEY

JOB NO. WTC 10172

DATE February 7, 1972

CHECKED BY

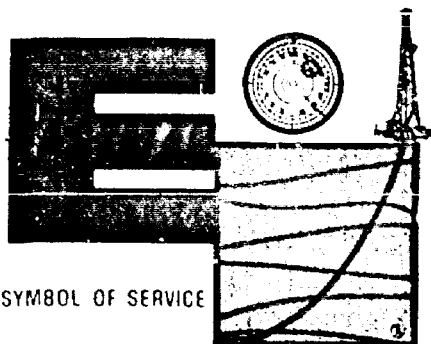
STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
1	100	VERT.	100 00		44	N 72 W	13			41
2	200	15'			87	N 48 W	71			1 06
3	300	30'			44	N 37 W	1 06			1 32
4	400	15'			44	N 48 W	1 35			1 64
5	500	15'	500 00		44	N 33 W	1 72			1 88
6	600	15'			44	N 08 W	2 15			1 94
7	700	15'			44	N 26 W	2 54			2 13
8	800	15'			44		2 54			2 13
9	900	VERT.					2 54			2 13
10	1000	VERT.	1000 00				2 54			2 13
11	1100	VERT.					2 54			2 13
12	1200	VERT.					2 54			2 13
13	1300	VERT.					2 54			2 13
14	1400	15'					2 54			2 13
15	1500	15'			44	N 21 E	2 95			1 97
16	1600	15'	1500 00		44	N 61 E	3 16			1 59
17	1700	15'			44	N 34 E	3 52			1 35
18	1800	15'			44	N 61 E	3 73			1 97
19	1900	VERT.					3 73			97
20	2000	15'	2000 00		44	S 52 E	3 73			97
21	2100	VERT.					3 46			63
22	2200	15'			44	S 35 E	3 46			63
23	2300	15'			44	S 64 E	3 10			38
24	2400	VERT.					2 91		01	
25	2500	15'	2500 00		44	S 16 E	2 91		01	
							2 49		13	



RECORD OF SURVEY

JOB NO. WTG 10172 DATE February 7, 1972 CHECKED BY

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
26	2600	15'			44	S 47 E	2 19		45	
27	2700	15'			44	S 42 E	1 87		74	
28	2800	15'			44	N 20 E	2 28		89	
29	2900	15'			44	N 60 E	2 50		1 27	
30	3000	15'	3000 00		44	N 75 E	2 61		1 69	
31	3100	VERT.					2 61		1 69	
32	3200	VERT.					2 61		1 69	
33	3300	30'			87	S 15 W	1 77		1 46	
34	3400	30'			87	S 32 W	1 03		1 00	
35	3500	15'	3500 00		44	S 42 W	71		71	
36	3600	30'			87	S 79 W	54			
37	3700	45'			1 31	N 75 W	88			15
38	3800	1°			1 75	N 66 W	1 59			1 41
39	3900	1°15'			2 18	N 63 W	2 58			3 00
40	4000	1°30'			2 62	N 61 W	3 85			4 94
41	4100	1°30'	4000 00		2 62	N 53 W	5 43			7 23
42	4200	1°15'			2 18	N 61 W	6 49			9 32
43	4300	1°			1 75	N 59 W	7 39			11 23
44	4400	45'			1 31	N 60 W	8 04			12 73
45	4500	45'	4500 00		1 31	N 62 W	8 65			13 86
46	4600	30'			87	N 61 W	9 07			15 02
47	4640	30'	4640 00		35	N 68 W	9 20			15 78
										16 10



EASTMAN OIL WELL SURVEY COMPANY

P. O. BOX 1112

• ODESSA, TEXAS 79760

Area Code 915 - 337-3515

February 16, 1972

THE STATE OF TEXAS

COUNTY OF ECTOR

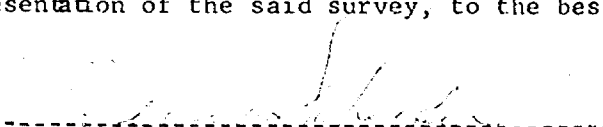
Jerry Scheafer, being duly sworn, deposes and says that: He is employed by the Eastman Oil Well Survey Company, as well bore surveyor, in charge of the following described survey; and that a Gyro Survey was run, from surface to 4640 feet, measured depth.

Said well more particularly described by operator, as follows:

GREAT WESTERN DRILLING COMPANY
LOWE STATE NUMBER ONE (1)
LEA COUNTY, NEW MEXICO

That the attached documents, namely title sheet, computation sheets, and one plan showing the True Vertical Depth of 4640 feet, the well to be 18.5 feet, in a direction of North 60 degrees, 16 minutes West.

This is a full, true and correct representation of the said survey, to the best of his knowledge.


Jerry Scheafer

Subscribed and sworn to, before me

this 28 day of Feb, 1972.


Dorothy Conklin, Notary Public in and for

the County of Ector, State of Texas.



"Symbol of Service"

REPORT of SUB-SURFACE DIRECTIONAL SURVEY

Great Western Drilling Company
COMPANY

Lowe State Number One
WELL NAME

Lea County, New Mexico
LOCATION

JOB NUMBER
WTS 10572

TYPE OF SURVEY
MMS

DATE
February 7, 1972

SURVEY BY
Ray Warner

OFFICE
Odessa, Texas



RECORD OF SURVEY

JOB NO. WTS 10572

DATE February 7, 1972

CHECKED BY _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
1	4640	30'	4639 83			N 68 W	9 20	Gyro Survey		16 10
2	4693	1°			93	N 08 E	10 12			15 97
3	4786	1°			1 63	N 02 E	11 76			15 91
4	4879	1°			1 63	N 30 W	13 16			16 73
5	4972	1°			1 63	N 18 W	14 71			17 23
6	5065	1°	5064 74		1 63	N 28 W	16 15			18 00
7	5158	1°			1 63	N 20 W	17 68			18 56
8	5251	1°			1 63	N 07 W	19 30			18 76
9	5344	1°			1 63	N 15 E	20 87			18 34
10	5437	1°			1 63	NORTH	22 50			18 34
11	5530	1° 15'	5529 64		2 02	N 09 W	24 50			18 66
12	5623	2°			3 25	N 16 W	27 62			19 56
13	5716	2°			3 25	N 17 W	30 75			20 51
14	5809	1° 45'			2 84	N 17 W	33 45			21 34
15	5902	1° 45'			2 84	N 23 W	36 06			22 45
16	5995	1° 45'	5994 37		2 84	N 13 W	38 83			23 09
17	6088	1° 45'			2 84	N 20 W	41 50			24 06
18	6181	1° 30'			2 44	N 17 W	43 83			24 77
19	6274	1° 45'			2 84	N 33 W	46 21			26 32
20	6367	1° 45'			2 84	N 27 W	48 74			27 61



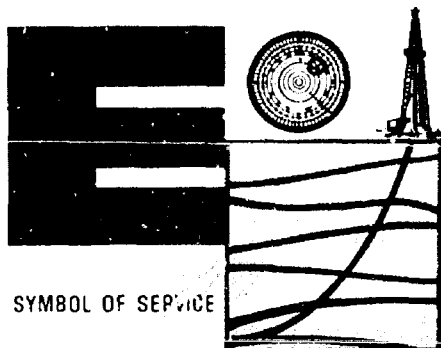
RECORD OF SURVEY

JOB NO. WTS 10572

DATE February 7, 1972

CHECKED BY

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
21	6460	1° 45'	6459	14	2 84	N 20 W	51 41			28 58
22	6553	1° 30'			2 44	N 15 W	53 77			29 21
23	6646	1° 45'			2 84	N 20 W	56 44			30 18
24	6739	2°			3 25	N 11 W	59 63			30 80
25	6832	2°			3 25	N 10 W	62 83			31 36
26	6925	2°	6923	88	3 25	N 08 W	66 05			31 81
27	7018	2°			3 25	N 14 W	69 20			32 60
28	7111	2°			3 25	N 17 W	72 31			33 55
29	7204	2°			3 25	N 16 W	75 43			34 45
30	7297	2°			3 25	N 08 W	78 65			34 90
31	7390	2°	7388	58	3 25	N 05 W	81 89			35 18
32	7483	2°			3 25	N 17 W	85 00			36 13
33	7576	2°			3 25	N 21 W	88 03			37 29
34	7669	2°			3 25	N 20 W	91 08			38 40
35	7762	2°			3 25	N 07 W	94 31			38 80
36	7792	2°	7790	32	1 05	N 07 W	95 35			38 93
Closure 103.03' North 22° 12' West										



EASTMAN OIL WELL SURVEY COMPANY

P. O. DRAWER 1112 2310 E. EIGHTH STREET ODESSA, TEXAS 79760 337-3515 AREA CODE 915
CABLE ADDRESS "EASTCO" HOUSTON

April 13, 1972

THE STATE OF TEXAS

COUNTY OF ECTOR

Ray Warner, being duly sworn, deposes and says that: He is employed by the Eastman Oil Well Survey Company, as a well bore surveyor, in charge of the following described survey; and that a Magnetic Multiple Shot Survey was run from 4640 feet to 7792 feet, measured depth.

Said well more particularly described by operator, as follows:

GREAT WESTERN DRILLING COMPANY
LOWE STATE NUMBER (1) ONE
LEA COUNTY, NEW MEXICO

That the attached documents, namely title sheet, computation sheets, and one plan, showing the True Vertical Depth of 7790.32 feet, the well to be 103.03 feet, in a direction of North 22 degrees, 12 minutes West.

This is a full, true and correct representation of the said survey, to the best of his knowledge.

Ray Warner

Ray Warner

Subscribed and sworn, to before me

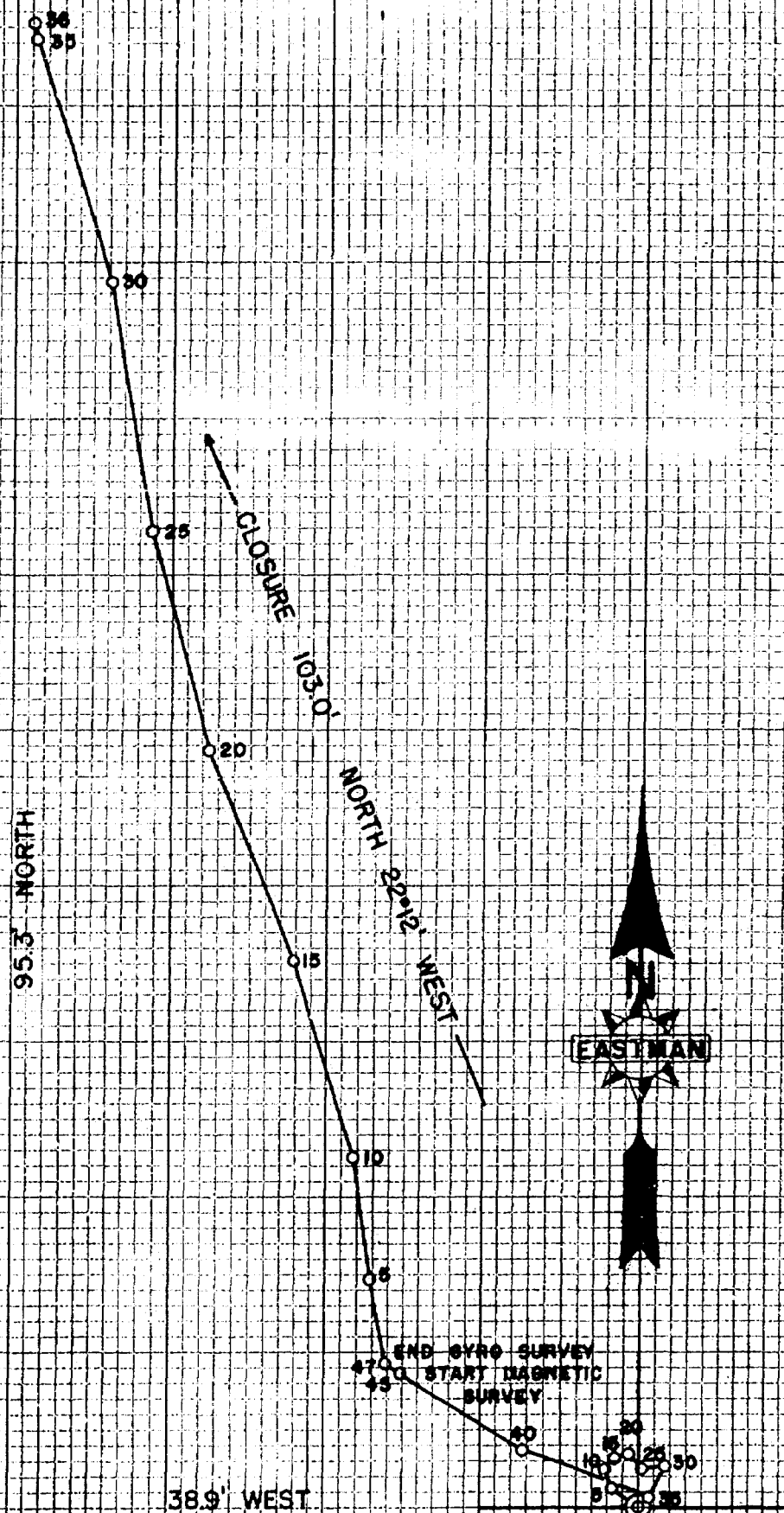
this 13th day of April, 1972.

Dorothy Conklin

Dorothy Conklin, Notary Public in and

for the County of Ector, State of Texas

GREAT WESTERN DRILLING CO.
LOWE STATE NO. 1
LEA CO. NEW MEXICO



SPERRY-SUN

DIRECTIONAL SURVEY REPORT

FOR

GREAT WESTERN DRILLING CO.



TYPE OF SURVEY: Gyroscopic Multishot
SURVEY DEPTH: FROM 7669 FT. TO 12511 FT.
LEASE: Lowe State WELL NO. 1
FIELD: Townsend Marmor
COUNTY/PARISH: Lea STATE New Mexico
DATE OF SURVEY: April 15, 1972 JOB NO. SU3-6231
OFFICE: Odessa, Texas 563-1106

6

STATE OF Texas
COUNTY/~~PARISH~~ OF Ector

I/~~we~~, Gary Benson

_____ in the employ of the Directional Surveying Department of
Sperry-Sun Well Surveying Company, did on the 15th day of April 1972
and the _____ day of _____ 19____
and the _____ day of _____ 19____
and the _____ day of _____ 19____

respectively conduct or supervise the taking of a Multi-shot/~~Single Shot~~ Directional survey by method in-
dicated:

from a depth of 7669 feet to 12511 feet by Gyroscopic/~~Magnetic/Oriented~~ Survey
depth of _____ feet to _____ feet by Gyroscopic/Magnetic/Oriented Survey
depth of _____ feet to _____ feet by Gyroscopic/Magnetic/Oriented Survey
depth of _____ feet to _____ feet by Gyroscopic/Magnetic/Oriented Survey

with records of inclination and direction of inclination being taken at approximately every 100 feet.

This survey was conducted at the request of Great Western Drilling Co.

for their Lowe State Well No. 1

Sec. 17, Township 16S, Range 35E Survey, Loa County/~~Parish~~

State of New Mexico, in the Townsand Marror Field.

I/We certify that this is a true and correct report of such survey and that it affords a true and correct repre-
sentation of our findings as to the nature and conditions of the well at the time the survey was/surveys were
made.

Gary Benson

STATE OF _____
COUNTY/PARISH OF _____

Before me the undersigned authority/authorities, on this day personally appeared _____,
known to me to be the person/persons whose name is/names are subscribed to this instrument, who after being
by me duly sworn on oath, states that he has/they have knowledge of all the facts stated above and that the same
is a true and correct statement of the facts therein recited.

Subscribed and sworn to before me this the _____ day of _____ 19____.

Notary Public in and for _____

GREAT WESTERN
 LOWE STATE WELL NO. 1
 TOWNSEND MARROR FIELD
 LEA COUNTY, NEW MEXICO
 SLIMHOLE GYROSCOPIC MULTISHOT DIRECTIONAL SURVEY

PAGE 1
 DATE OF SURVEY APRIL 15, 1972
 VERTICAL SECTION COMPUTED ALONG CLOSURE
 11 DEG EAST MAGNETIC CORRECTION APPLIED
 SU7-6231

SPERRY-SUN
 RECORD OF SURVEY

MEASURED DEPTH	TRUE VERTICAL DEPTH	INCLINATION		DIRECTION	DOG-LEG SEVERITY DEG/100	VERTICAL SECTION	RECTANGULAR COORDINATES			
		DEG	MIN				DEG	NORTH	SOUTH	EAST
7669.	7667.40			ORIGIN FROM EASTMAN SURVEY			91.08			38.42
7700.	7698.36	3	0	S 20 W	15.20	-71.81	89.56			38.97
7800.	7797.66	6	45	S 17 W	3.76	-60.06	78.32			42.41
7900.	7896.63	8	15	S 1 E	2.77	-46.59	63.97			42.16
8000.	7994.95	10	30	S 17 E	3.42	-31.88	46.54			36.83
8100.	8092.86	11	45	S 18 E	1.26	-15.65	27.17			30.54
8200.	8189.99	13	45	S 15 E	2.11	4.02	4.21			24.39
8300.	8286.70	14	45	S 13 E	1.11	25.58		20.59		18.66
8400.	8382.82	16	0	S 5 E	2.46	50.73		48.05		16.26
8500.	8477.79	18	15	S 8 E	2.42	78.59		79.06		11.90
8600.	8571.76	20	0	S 6 E	1.87	109.55		113.08		8.33
8700.	8664.81	21	30	S 5 E	1.54	142.99		149.59		5.13
8800.	8756.51	23	30	S 5 E	2.00	179.37		189.31		1.66
8900.	8847.14	25	0	S 8 E	1.94	216.97		231.16	4.23	
9000.	8937.02	26	0	S 6 E	1.32	256.65		274.76	8.81	
9100.	9028.20	24	15	S 4 W	4.59	296.30		315.73	5.94	
9200.	9118.08	26	0	S 5 W	1.80	338.80		359.40	2.12	
9300.	9206.78	27	30	S 4 W	1.57	383.37		405.46		1.10
9400.	9294.24	29	0	S 5 W	1.57	430.38		453.76		5.32
9500.	9381.91	28	45	S 6 W	.54	477.21		501.60		10.35
9600.	9469.58	28	45	S 5 W	.48	523.85		549.51		14.54

GREAT WESTERN
 LOWE STATE WELL NO. 1
 TOWNSEND MARROR FIELD
 LEA COUNTY, NEW MEXICO
 SLIMHOLE GYROSCOPIC MULTISHOT DIRECTIONAL SURVEY

PAGE 2
 DATE OF SURVEY APRIL 15, 1972
 VERTICAL SECTION COMPUTED ALONG CLOSURE
 11 DEG EAST MAGNETIC CORRECTION APPLIED
 SU 7-6231

SPERRY-SUN
 RECORD OF SURVEY

MEASURED DEPTH	TRUE VERTICAL DEPTH	INCLINATION		DIRECTION		DOG-LEG SEVERITY DEG/100	VERTICAL SECTION	RECTANGULAR COORDINATES			
		DEG	MIN	DEG				NORTH	SOUTH	EAST	WEST
9700.	9557.05	29	0	S 6 W		.54	571.06		597.73		19.61
9800.	9644.51	29	0	S 9 W		1.45	618.78		645.61		27.20
9900.	9731.97	29	0	S 11 W		.97	666.77		693.20		36.45
10000.	9820.06	28	15	S 12 W		.89	713.73		739.50		46.29
10100.	9908.76	27	30	S 13 W		.88	759.64		784.49		56.67
10200.	9998.06	26	45	S 14 W		.88	804.47		828.16		67.56
10300.	10088.50	25	15	S 14 W		1.50	846.96		869.55		77.88
10400.	10179.68	24	15	S 17 W		1.61	888.00		908.83		89.89
10500.	10271.56	23	15	S 19 W		1.28	927.47		946.15		102.74
10600.	10364.28	22	0	S 24 W		2.29	964.80		980.38		117.98
10700.	10457.00	22	0	S 24 W		.00	1002.13		1014.60		133.22
10800.	10549.05	23	0	S 25 W		1.07	1041.00		1050.01		149.73
10900.	10640.73	23	30	S 28 W		1.29	1080.40		1085.22		168.45
11000.	10731.93	24	15	S 28 W		.75	1120.98		1121.48		187.73
11100.	10822.56	25	0	S 27 W		.86	1162.85		1159.14		206.92
11200.	10913.19	25	0	S 30 W		1.27	1204.35		1195.74		228.05
11300.	11003.26	25	45	S 29 W		.86	1247.16		1233.73		249.11
11400.	11094.26	24	30	S 34 W		2.46	1287.25		1268.11		272.30
11500.	11185.25	24	30	S 34 W		.00	1327.33		1302.49		295.49
11600.	11276.43	24	15	S 34 W		.25	1367.03		1336.54		318.46
11700.	11367.78	24	0	S 40 W		2.46	1405.05		1367.70		344.60

GREAT WESTERN
 LOWE STATE WELL NO. 1
 TOWNSEND MARROR FIELD
 LEA COUNTY, NEW MEXICO
 SLIMHOLE GYROSCOPIC MULTISHOT DIRECTIONAL SURVEY

PAGE 3
 DATE OF SURVEY APRIL 15, 1972
 VERTICAL SECTION COMPUTED ALONG CLOSURE
 11 DEG EAST MAGNETIC CORRECTION APPLIED
 SU 3-6231

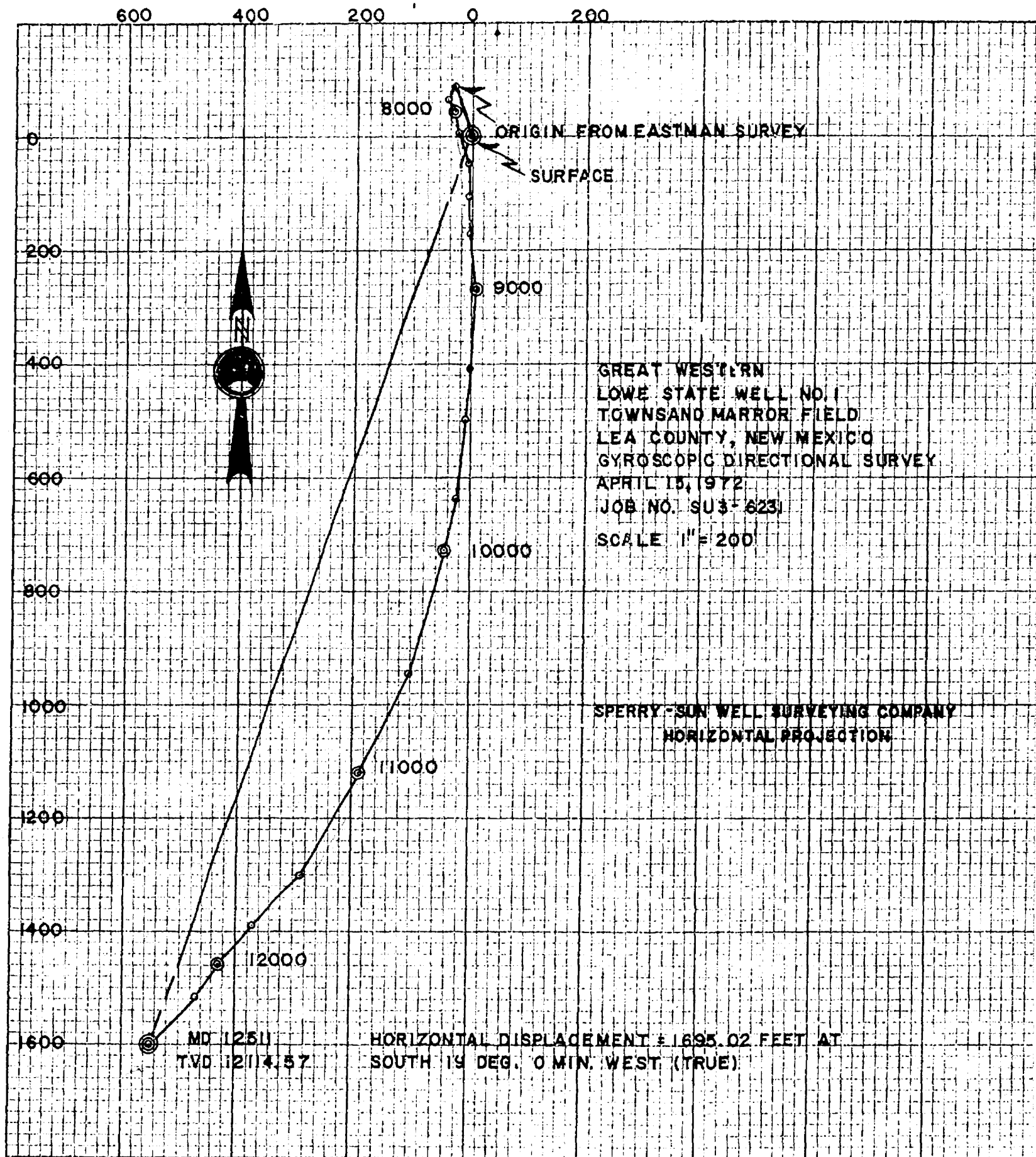
SPERRY-SUN
 RECORD OF SURVEY

MEASURED DEPTH	TRUE VERTICAL DEPTH	INCLINATION		DIRECTION	DOG-LEG SEVERITY DEG/100	VERTICAL SECTION	RECTANGULAR COORDINATES			
		DEG	MIN				NORTH	SOUTH	EAST	WEST
11800.	11459.14	24	0	S 43 W	1.22	1442.25		1397.45		372.34
11900.	11549.77	25	0	S 43 W	1.00	1480.90		1428.36		401.16
12000.	11640.76	24	30	S 40 W	1.35	1519.66		1460.12		427.82
12100.	11732.47	23	30	S 39 W	1.08	1557.17		1491.11		452.91
12200.	11824.52	23	0	S 41 W	.93	1593.43		1520.60		478.55
12300.	11916.91	22	30	S 40 W	.63	1629.20		1549.92		503.15
12400.	12010.27	21	0	S 45 W	2.38	1661.45		1575.26		528.49
12500.	12104.23	20	0	S 47 W	1.22	1691.69		1598.58		553.50
12511.	12114.57	20	0	S 47 W	.00	1695.02		1601.15		556.25

THE CALCULATION PROCEDURES ARE BASED ON THE USE OF THE TANGENTIAL OR CHORD METHOD

HORIZONTAL DISPLACEMENT = 1695.02 FEET AT SOUTH 19 DEG. 0 MIN. WEST (TRUE)

K-E 10 X 10 TO THE INCH 47 0703
 10 X 15 INCHES
 MADE IN U.S.A.
 KEUFFEL & ESSER CO.





OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

**GOVERNOR
BRUCE KING
CHAIRMAN**

**LAND COMMISSIONER
ALEX J. ARMJO
MEMBER**

**STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR**

January 12, 1972

Mr. James T. Jennings
Jennings, Christy & Copple
Attorneys at Law
Post Office Box 1180
Roswell, New Mexico 88201

Re: Case No. 4639
Order No. R-4238
Applicant:
Great Western Drilling Co.

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC X
Artesia OCC
Aztec OCC

Other _____

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4639
Order No. R-4238

APPLICATION OF GREAT WESTERN
DRILLING COMPANY TO DIRECTIONALLY
DRILL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 5, 1972, at Santa Fe, New Mexico, before Examiner Daniel S. Mutter.

NOW, on this 12th day of January, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Great Western Drilling Company, has acquired and is the owner and operator of the Pure State No. 1, a plugged and abandoned well located 330 feet from the North line and 330 feet from the East line of Section 17, Township 16 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) That the subject well was originally drilled to a total depth of 10,566 feet into the Eidson-Pennsylvanian Pool.

(4) That the applicant now seeks authority to re-enter and clean-out the subject well to the 5½-inch casing stub at approximately 8,200 feet and to set a whipstock at said depth and directionally drill to a depth of approximately 11,900 feet to bottom said well in the Townsend-Morrow Gas Pool at a

-2-

CASE NO. 4639

Order No. R-4238

standard gas well location in Unit H of said Section 17, with the E/2 of the Section to be dedicated to the well.

(5) That the applicant proposes to determine the sub-surface location of the 5 $\frac{1}{4}$ -inch casing stub by means of a continuous multi-shot directional survey conducted prior to said directional drilling.

(6) That approval of the subject application will prevent the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Great Western Drilling Company, is hereby authorized to re-enter and clean-out to approximately 8,200 feet its Pure State No. 1, located 330 feet from the North line and 330 feet from the East line of Section 17, Township 16 South, Range 35 East, NMPM, Lea County, New Mexico, set a whipstock at said depth and to directionally drill in a south-southwesterly direction to bottom said well in the Townsend-Morrow Gas Pool at a depth of approximately 11,900 feet at a standard gas well location in Unit H of said Section 17.

PROVIDED HOWEVER, that prior to commencing the aforesaid directional drilling, a continuous multi-shot directional survey shall be made of the well bore with shot points not more than 100 feet apart in order to determine the sub-surface location of the whipstock point; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe office of the Commission, Box 2088, Santa Fe, New Mexico; and that the operator shall notify the Commission's Hobbs District Office of the date and time survey is to be commenced.

(2) That subsequent to the above-described directional drilling, a continuous multi-shot directional survey shall be made of the well bore from total depth to the whipstock point with shot points not more than 100 feet apart; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe Office of the Commission, Box 2088, Santa Fe, New Mexico, and that the operator shall notify the Commission's Hobbs District Office of the date and time said survey is to be commenced.

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CASE NO. 4639

Order No. R-4238

(3) That Form C-105 shall be filed in accordance with Commission Rule 1108 and the operator shall indicate thereon true vertical depths in addition to measured depths.

(4) That the E/2 of said Section 17 shall be dedicated to the subject well.

(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.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



Bruce King
BRUCE KING, Chairman

Alex J. Armiijo
ALEX J. ARMIJO, Member

A. L. Porter, Jr.
A. L. PORTER, Jr., Member & Secretary

S E A L

dr/

Docket No. 1-72

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 5, 1972

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

The following cases will be heard before Daniel S. Nutter, Examiner,
or Elvis A. Utz, Alternate Examiner:

CASE 4621: (Continued from the November 10, 1971 Examiner Hearing)

Application of Jack L. McClellan for a dual completion, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of his Bar-J Federal Well No. 1 located in Unit E of Section 15, Township 6 South, Range 27 East, Chaves County, New Mexico, in such a manner as to produce oil from an undesignated Siluro-Devonian pool through tubing and gas from the Haystack-Cisco Gas Pool through the casing-tubing annulus.

CASE 4609: (Continued from the November 17, 1971 Examiner Hearing)

Application of Jack L. McClellan for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Sulimar-Queen Unit Area comprising 1520 acres, more or less, of Federal lands in Sections 13, 23, 24, 25, and 26 of Township 15 South, Range 29 East, and Sections 18 and 19 of Township 15 South, Range 30 East, Chaves County, New Mexico.

CASE 4482: (Reopened):

In the matter of Case 4482 being reopened pursuant to the provisions of Order No. R-4093, which order established 160-acre spacing units and established a maximum gas-oil ratio limitation of 3,000 cubic feet of gas for each barrel of oil produced for the Parkway-Strawn Pool, Eddy County, New Mexico. All interested parties may appear and show cause why said pool should not be developed on 40-acre or 80-acre spacing units and why the limiting gas-oil ratio should not revert to the statewide limit of 2,000 to one.

CASE 3709 (Reopened):

In the matter of Case 3709 being reopened pursuant to the provisions of Order No. R-3366-B, which order continued 80-acre spacing for the Akah Nez-Devonian Oil Pool, San Juan County, New Mexico, for an additional one-year period. All interested persons may appear and show cause why said pool should not be developed on 40-acre spacing units.

CASE 4638: Application of Holder Petroleum Corporation for downhole

(Case 4638 continued)

and surface commingling, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Todd Lower-San Andres Pool and the Todd Upper-San Andres Gas Pool in the well-bores of its BA Wells Nos. 1 and 2, located respectively, in Units A and H of Section 34, Township 7 South, Range 35 East, Roosevelt County, New Mexico. Applicant further seeks authority to commingle, on the surface, production from said wells prior to measurement.

- CASE 4639: Application of Great Western Drilling Company to directionally drill, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill out its State Well No. 1, having a surface location 330 feet from the North and East lines of Section 17, Township 16 South, Range 35 East, Townsend-Morrow Gas Pool, Lea County, New Mexico, to a depth of approximately 8,000 feet and whipstock the well in a southwesterly direction to a bottom-hole location within the NE/4 of said Section 17 at a depth of approximately 11,800 feet.
- CASE 4640: Application of Amoco Production Company for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special rules for the East Gem-Yates Pool, Lea County, New Mexico, including a provision for 80-acre spacing and proration units.
- CASE 4641: Application of Reserve Oil and Gas Company for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its South Langlie Jal Unit Jalmat Waterflood Project, Jalmat Oil Pool, by the conversion of water injection of its Unit Well No. 23, located 2310 feet from the South and West lines of Section 17, Township 25 South, Range 37 East, Lea County, New Mexico.
- CASE 4642: Application of Fluid Power Pump Company for special pool rules and a pressure maintenance project, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special rules for the Media-Entrada Pool, including a provision for 160-acre spacing and proration units. Applicant further seeks authority to institute a pressure maintenance project in said pool by the injection of water into the Entrada formation through various wells located in Sections 10, 11, 22, and 23 of Township 19 North, Range 3 West, Sandoval County, New Mexico, and promulgation of rules for said project including a procedure whereby additional injection or production wells at orthodox or un-orthodox locations may be approved administratively.

CASE 4643: Application of Cities Service Oil Company for compulsory pooling and unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying the N/2 of Section 19, Township 22 South, Range 27 East, South Carlsbad-Morrow Gas Pool, Eddy County, New Mexico, to form a standard 320-acre proration unit for the production of gas from the Morrow formation with said unit to be dedicated to a well to be drilled at an unorthodox location 2173 feet from the North line and 1200 feet from the East line of said Section 19.

CASE 4644: Application of Continental Oil Company for four non-standard gas proration units and rededication of acreage, Lea County New Mexico. Applicant, in the above-styled cause, seeks the rededication of acreage and the establishment of the following-described non-standard gas proration units for wells on its Meyer A-29 Lease in Section 29, Township 22 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico.

1. A 240-acre unit comprising the SE/4 and E/2 SW/4 to be dedicated to Well No. 3 in Unit N;
2. An 80-acre unit comprising the W/2 SW/4 to be dedicated to Well No. 4 in Unit L;
3. An 80-acre unit comprising the E/2 NE/4 to be dedicated to Well No. 5 in Unit A;
4. A 240-acre unit comprising the NW/4 and W/2 NE/4 to be dedicated to Well No. 9 in Unit E.

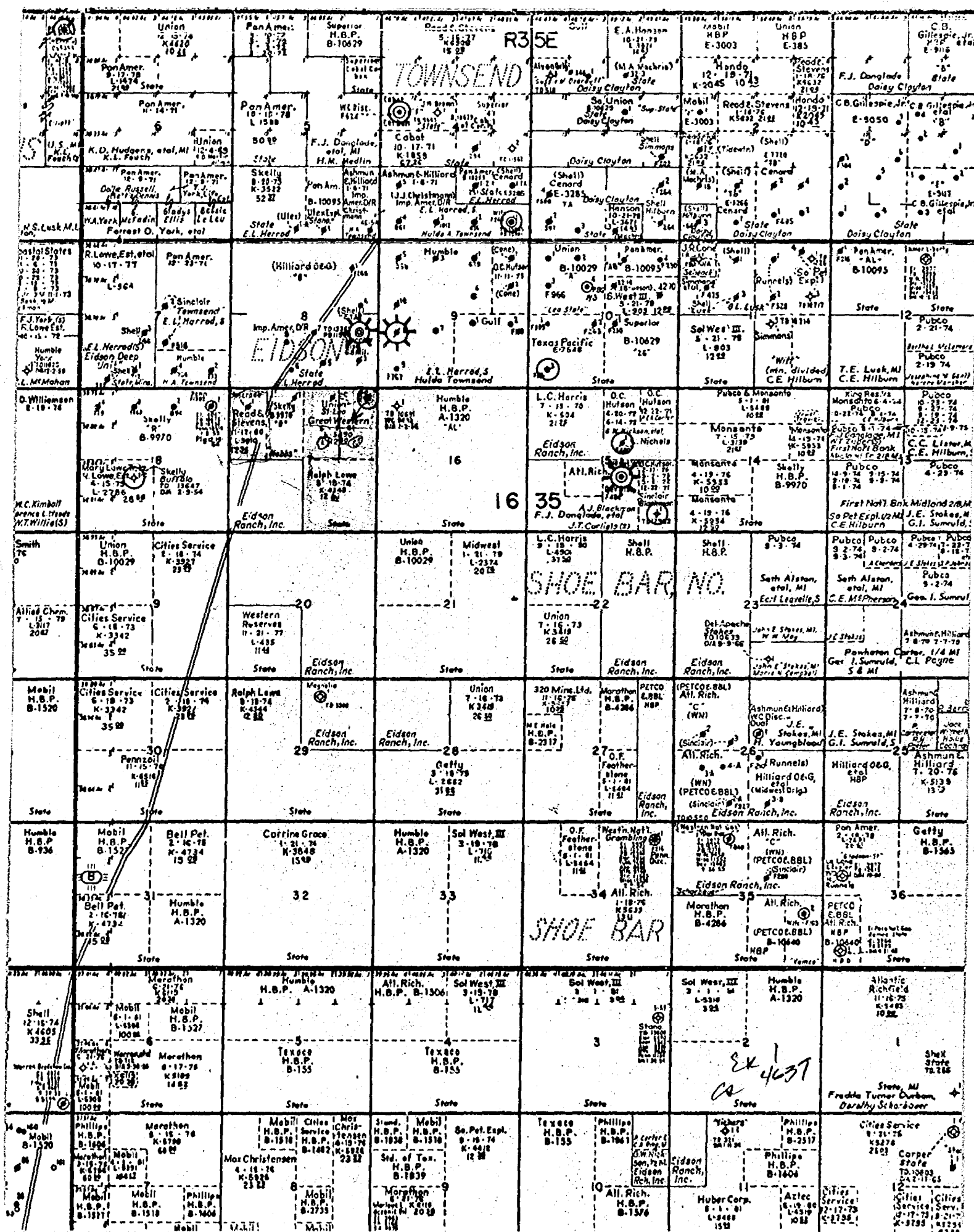
CASE 4563: (Continued from the December 1, 1971, Examiner Hearing) Application of Corrinne Grace for special gas-oil ratio limitation and pressure maintenance project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to produce her State Well No. 1 located in Unit A of Section 1, Township 15 South, Range 29 East, Double L-Queen Pool, Chaves County, New Mexico, with no gas-oil ratio limitation, strip the liquids, and institute a pressure maintenance project by the injection of all said gas back into the producing formation through her State Well No. 2 located in Unit B of said Section 1. Applicant further seeks to transfer an oil allowable from said Well No. 2 to said Well No. 1.

CASE 4619: (Continued from the December 1, 1971, Examiner Hearing)

Application of Corinne Grace for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface of the ground down to and including the Morrow formation underlying the N/2 of Section 25, Township 22 South, Range 26 East, which acreage is within one mile of the South Carlsbad-Morrow Gas Pool, Eddy County, New Mexico. Said acreage to be dedicated to a well to be drilled to the Morrow formation at a location 1980 feet from the North and East lines of said Section 25. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges of supervision of said well.

CASE 4620: (Continued from the December 1, 1971, Examiner Hearing)

Application of Corinne Grace for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface of the ground down to and including the Morrow formation underlying the N/2 of Section 24, Township 22 South, Range 26 East, which acreage is in the vicinity of the South Carlsbad-Morrow Gas Pool, Eddy County, New Mexico. Said acreage to be dedicated to a well to be drilled to the Morrow formation at a location 1980 feet from the North and East lines of said Section 24. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Op. EXHIBIT NO. 1
CASE NO. 4639

GREAT WESTERN DRILLING COMPANY

Well History Lea C State No. 1

Previous Operator: Pure Oil Company
Well Name: Lea C State No. 1
Location: 330' FN&EL, Sec. 17, T-16-S, R-35-E
Lea County
Field: Eldson Penn
Elevation: 4033 DF
Completion Date: 7-23-55
Total Depth: 10,566'
Perforations: 10,508' to 10,544'
Casing & Cementing Record:

Hole Size	Casing	Depth	Cement	Comments
17-1/4"	11-3/4" 42# New	367'	850 sx	Circulated
11"	8-5/8" 32# & 24# New	4,649'	2,200 sx	Circulated to cellar
7-7/8"	5-1/2" 20# & 17# New	10,565'	375 sx	T/Cmt. @ 8195'

Plugging Record:

Plugged and abandoned 10-20-70

5-1/2" casing shot and pulled at 8200'

Cement Plugs: 25 sx at 10,552
25 sx at 8,200' (5-1/2" casing stub)
25 sx at 6,200' (Glorieta)
25 sx at 4,649' (8-5/8" casing shoe)
10 sx at surface

There is a possibility of junk in the hole (tubing and packer) below 10,290'.

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
<i>aff.</i>	EXHIBIT NO. <u>2</u>
<i>4639</i>	

GREAT WESTERN DRILLING COMPANY

State C Lea No. 1

*only free
fairly straight
hole
on
Total survey
near deviation
was 2° at
9712*

10 sx plug

367'

11-3/4" 42# casing
Cmtd/850 sx
Cement circulated

8-5/8" 32# & 24# casing
Cmtd/2,200 sx
Circulated to cellar

25 sx plug

4649'

*perme-
directional
survey*

25 sx plug

6200'

*will be run
will clean out
to top of 5 1/2" string
@ 8200, set whipstock
deviate SW to
Depth of 11900
to test marrow*

25 sx plug

8200'

5-1/2" casing shot & pulled
@ 8200'

25 sx plug

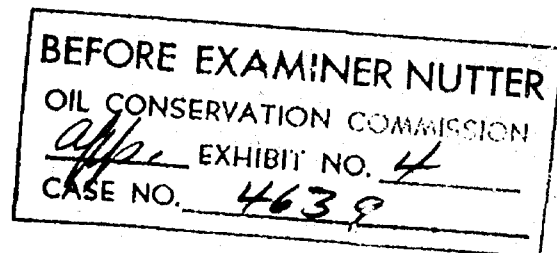
10,565'

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
app EXHIBIT NO. 3
CASE NO. 4639

GREAT WESTERN DRILLING COMPANY
 State Lease
 E/2 Sec. 17, T-16-S, R-35-E
 Lea County, New Mexico

Comparative Cost Estimate to Casing Point
 New Well Vs. Re-entry
 11,900' Morrow Test

	<u>New Well</u>	<u>Re-entry</u>
Stake Location	\$ 125	\$ 0
Road, pad & damages	1,200	450
Move rig in & out	0	11,000
Drilling bits		4,000
Day Work	5,300	39,000
Mud & water	7,000	5,000
Surface casing & cementing	3,690	0
Intermediate casing & cementing	26,508	0
Directional whipstocks & surveys	0	5,000
Footage drilling contract	<u>95,200</u>	<u>0</u>
	\$139,023	\$64,450
Estimated Savings		\$74,573



INSTRUCTIONS TO DELIVERING EMPLOYEE

☐ Show to whom and address where delivered ☐ Deliver ONLY to addressee
(Additional charges required for these services)

RECEIPT

Received the numbered article described below.

REGISTERED NO. 589058
CERTIFIED NO. 589058
INSURED NO. 589058
SIGNATURE OF ADDRESSSEE (Must always be filed in)
SIGNATURE OF ADDRESSSEE'S AGENT, IF ANY

DATE DELIVERED 11/30/71
SHOW WHERE DELIVERED (only if requested)

CS-16-7145-8 GPO

043 8-2111-01-00

DATE DELIVERED 11/30/71
SHOW WHERE DELIVERED (only if requested)
SIGNATURE OF ADDRESSSEE'S AGENT, IF ANY

SIGNATURE OF ADDRESSSEE (Must always be filed in)
REGISTERED NO. 908869
CERTIFIED NO. 908869
INSURED NO. 908869

RECEIPT

Received the numbered article described below.

INSTRUCTIONS TO DELIVERING EMPLOYEE
☐ Show to whom and address where delivered ☐ Deliver ONLY to addressee
(Additional charges required for these services)

INSTRUCTIONS TO DELIVERING EMPLOYEE

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DATE DELIVERED 11/29/71
SHOW WHERE DELIVERED (only if requested)

CS-16-7145-8 GPO

INSTRUCTIONS TO DELIVERING EMPLOYEE

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CS-16-7145-8 GPO

INSTRUCTIONS TO DELIVERING EMPLOYEE

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CERTIFIED NO. 692210
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SIGNATURE OF ADDRESSSEE (Must always be filed in)
SIGNATURE OF ADDRESSSEE'S AGENT, IF ANY

DATE DELIVERED 11/29/71
SHOW WHERE DELIVERED (only if requested)

CS-16-7145-8 GPO

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DATE DELIVERED 11/29/71
SHOW WHERE DELIVERED (only if requested)
SIGNATURE OF ADDRESSSEE'S AGENT, IF ANY

SIGNATURE OF ADDRESSSEE (Must always be filed in)
REGISTERED NO. 692210
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Page 4639

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NOV 29 1971

LAW OFFICES OF
JENNINGS, CHRISTY & COPPLE
1012 SECURITY NATIONAL BANK BUILDING
P. O. BOX 1180
ROSWELL, NEW MEXICO 88201

TELEPHONE 682-8432
AREA CODE 505

JAMES T. JENNINGS
SIM B. CHRISTY IV
ROGER L. COPPLE
BRIAN W. COPPLE

November 24, 1971

Case 4639

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

Attention: Mr. A. L. Porter, Jr.

Dear Sir:

We enclose herewith in triplicate Application of Great Western Drilling Company for consent to directionally drill per Rule 111(b).

We would appreciate it if this matter could be put on the January 5, 1972 examiner docket.

Respectfully,

JENNINGS, CHRISTY & COPPLE

S. B. Christy IV
S. B. Christy IV

SBC/le

cc: Great Western Drilling Co.
(Mr. Hampton)

DOCKET BOARD

Date 12-21-71
0100

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
GREAT WESTERN DRILLING COMPANY FOR
AUTHORITY TO DIRECTIONALLY DRILL ITS
STATE NO. 1 WELL LOCATED IN THE TOWN-
SEND-MORROW GAS POOL, LEA COUNTY,
NEW MEXICO.

CASE NO. 4039

APPLICATION

COMES NOW Great Western Drilling Company (Operator) and
states:

1. Operator is the working interest owner and operator of
oil and gas lease(s) covering the NE $\frac{1}{4}$ Section 17, Township 16
South, Range 35 East, N.M.P.M., Lea County, New Mexico.

2. On the above lands there is situated an abandoned well
known as the Pure No. 1-C State Lease located 330 feet from the
North line and 330 feet from the East line of said Section 17,
which well is owned by Operator.

3. Operator wishes to re-enter said well, to be known as
its State No. 1 Well and drill out the well to approximately
8,000 feet and then directionally drill the well to approximately
11,800 feet to test the Morrow formation. Directional drilling
will be in a southwesterly direction and will at all times stay
upon the oil and gas lease(s) owned by Operator.

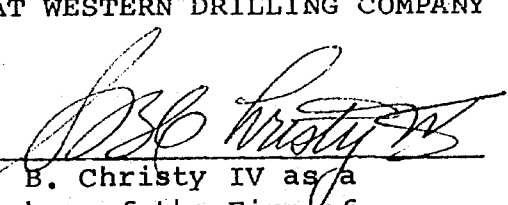
4. Consent to the foregoing directional drilling, after notice and hearing, is requested by Operator pursuant to Rule 111(b) of the New Mexico Oil Conservation rules.

5. All offsetting operators are hereby notified of this Application by certified mail.

Respectfully,

GREAT WESTERN DRILLING COMPANY

By


S. B. Christy IV as a
Member of the Firm of
Jennings, Christy & Copple
P. O. Box 1180
Roswell, New Mexico 88201
Attorneys for Operator

cc per Certified Mail:
All Offset Operators
cc: Great Western Drilling Company

DRAFT

GMH/dr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

GMH
IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4639

Order No. R- 4238

APPLICATION OF GREAT WESTERN
DRILLING COMPANY TO DIRECTIONALLY
DRILL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 5, 19 72,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of January, 19 72, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

acquired and is the owner and operator of the well
~~That the applicant, Great Western Drilling Company, is the~~
~~owner and operator of the well located 330 feet~~
from the North line and 330 feet from the East line of Section 17,
Township 16 South, Range 35 East, NMPM, Lea County, New Mexico.

2439
(2) That the applicant, Great Western Drilling Company,
has acquired and is the owner and operator of
the Pire Stage No. 1, a plugged and abandoned
well located 330 feet

CASE NO. 4639
Order No. R-

(3) That the subject well was originally drilled to a total depth of 10,566 feet into the Edison-Consolidation Pool formation where, due to mechanical difficulties, the well has produced an excessive amount of water.

(4) That the applicant now seeks ^{approval to re-enter and} ~~approval~~ for the plugging ~~cleanout~~ ^{of said well back to approximately} ~~of said well back to approximately~~ ^{at 5 1/2 inch casing stub} ~~approximately 8200 feet and to set a~~ ^{feet, setting a} whipstock at said depth and directionally drilling ~~to a true~~ ^{vertical} depth of approximately 11,900 feet to bottom said well in the Township 16 South, Range 35 East, NMPM, Lea County formation at a standard gas well location in unit 11 of said Section 17, with point approximately feet east of the present ~~the E 1/2 of the Section to be dedicated to the well.~~ ^{bottom hole location.}

(5) That the applicant proposes to determine the ^{sub surface} ~~present~~ ^{5 1/2 inch casing stub} ~~bottom hole~~ location of the ~~subject well~~ by means of a continuous multi-shot directional survey conducted prior to said directional drilling.

(6) That approval of the subject application will prevent the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Great Western Drilling Company, is hereby authorized to ^{re-enter and cleanout to approximately 8200 feet} ~~plug back~~ its ^{pure} State Well No. 1, located 330 feet from the North line and 330 feet from the East line of Section 17, Township 16 South, Range 35 East, NMPM, Lea County, New Mexico, to approximately feet, set a whipstock

at said depth and to directionally drill in a ^{south-} southwesterly direction to bottom said well in the ~~Townsend~~ ^{Harrow} ~~Marathon~~ ^{Marathon} ~~formation~~ ^{formation}

at a ~~depth~~ ^{11,900} depth of approximately ~~11,900~~ ^{11,900} feet at a ~~point within a radius of 50 feet of a point~~ ^{standard for well location in unit # of said} ~~Section 17.~~ ^{Section 17.} feet east of the present bottom hole location.

~~directional drilling~~ ^{directional drilling} operations, a continuous multi-shot directional survey shall be made of the well bore with shot points not more than 100 feet apart in order to determine the ~~present bottom hole location~~ ^{sub-surface} ~~of the hole off-point; whipstock point;~~ that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe office of the Commission, Box 2088, Santa Fe, New Mexico; and that the operator shall notify the Commission's Hobbs District Office of the date and time said survey is to be commenced.

(2) That subsequent to the above-described directional drilling, a continuous multi-shot directional survey shall be made of the well bore from total depth to the whipstock point with shot points not more than 100 feet apart; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe office of the Commission, Box 2088, Santa Fe, New Mexico, and that the operator shall notify the Commission's Hobbs District Office of the date and time said survey is to be commenced.

(3) That Form C-105 shall be filed in accordance with Commission Rule 1108 and the operator shall indicate thereon true vertical depths in addition to measured depths.

-4-

CASE NO. 4639

Order No. R-

(4) That ^{the E/2} ~~Unit~~ of said Section 17 shall be dedicated to the subject well ~~if the well bottoms in Unit~~ _____.

~~(5) That Unit _____ of said Section 17 shall be dedicated to the subject well if the well bottoms in Unit _____.~~

(5) ~~(4)~~ 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.