



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

SHELL WESTERN EXPLORATION AND PRODUCTION INC.
COMPANY

NORTH HOBBS UNIT WELL NO. 30-312
WELL NAME

LEA COUNTY, NEW MEXICO
LOCATION

JOB NUMBER
WT0585-G0261
WT0585-S0277

TYPE OF SURVEY
GYROSCOPIC MULTI-SHOT SURVEY
MAGNETIC MULTI-SHOT SURVEY

DATE
08/MAY/85
20/MAY/85

RECEIVED

MAY 22 1985

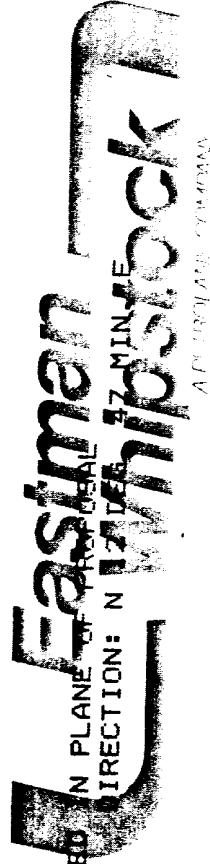
SURVEY BY
GARY DESPAIN, STEVE COVINGTON

O.C.D.
HOBBS OFFICE

OFFICE
WEST TEXAS

SHELL WESTERN EXPLORATION & PRODUCTION INC.
NORTH HOBBS UNIT WELL NO. 30-312
LEA COUNTY, NEW MEXICO BD2-209

EASTMAN WHIPSTOCK, INC
GYROSCOPIC MULTI SHOT SURVEY WT0585-G0261
SURVEYOR: GARY DESPAIN (0-1455')
MAGNETIC MULTIPLE SHOT SURVEY WT0585-S0277
SURVEYOR: STEVE COVINGTON (1455'-4298')



VERTICAL SECTION CALCULATED IN PLANE OF TROPICAL

DIRECTION: N 17° DE

7 MINUTE

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	R E C T A N G U L A R C O R D I N A T E S FEET	DOGLEG SEVERITY DG/100FT
0.	0 0	0	0.	0.00	0.00	0.00	0.00
100.	0 30	S 79 E	100.	100.00	0.01	0.08 S	0.43 E
200.	0 30	N 73 E	100.	199.99	0.25	0.04 S	1.29 E
300.	1 0	S 85 E	100.	299.99	0.67	0.10 N	2.58 E
400.	1 0	S 79 E	100.	399.97	0.81	0.14 S	4.31 E
500.	1 0	S 89 E	100.	499.96	1.02	0.33 S	6.05 E
600.	1 0	S 86 E	100.	599.94	1.33	0.40 S	7.79 E
700.	0 30	S 88 E	100.	699.93	1.55	0.47 S	9.09 E
800.	0 30	S 75 E	100.	799.93	1.62	0.60 S	9.96 E
900.	0 30	S 76 E	100.	899.92	1.59	0.82 S	10.80 E
1000.	0 45	S 31 E	100.	999.91	1.16	1.45 S	11.65 E
1100.	0 30	S 18 E	100.	1099.91	0.30	2.44 S	12.11 E
1200.	0 45	S 24 E	100.	1199.91	0.41	3.46 S	12.50 E
1300.	1 0	S 11 E	100.	1299.91	-1.92	4.91 S	12.95 E
1400.	1 0	S 5 W	100.	1399.91	3.80	6.65 S	13.04 E
1455.	0 45	S 11 W	55.	1454.87	-4.43	7.48 S	12.93 E
1542.	1 0	N 18 E	87.	1541.86	-4.46	7.70 S	13.78 E
1572.	1 0	S 2 E	30.	1571.86	-4.43	7.75 S	14.14 E
1632.	1 30	S 3 W	60.	1631.84	-5.71	9.06 S	14.13 E
1693.	1 0	S 14 W	61.	1692.83	-7.03	10.37 S	13.94 E
1754.	1 15	S 19 W	61.	1753.82	-8.23	11.52 S	13.60 E
1815.	2 45	N 51 W	61.	1814.78	-9.10	12.02 S	11.85 E
1876.	5 15	N 24 W	61.	1875.62	-6.41	8.68 S	9.28 E
1937.	7 0	N 18 W	61.	1936.27	-1.00	2.60 S	6.95 E
1998.	8 30	N 14 W	61.	1996.71	6.21	5.30 N	4.68 E
2059.	10 15	N 11 W	61.	2056.90	15.19	15.00 N	2.53 E
2119.	11 45	N 9 W	60.	2115.79	25.75	26.28 N	0.55 E
2180.	14 0	N 8 W	61.	2175.26	38.41	39.72 N	1.46 W
2241.	15 0	N 8 W	61.	2234.31	52.69	54.84 N	3.59 W
2302.	15 45	N 8 W	61.	2293.13	67.81	70.86 N	5.84 W
							1.23

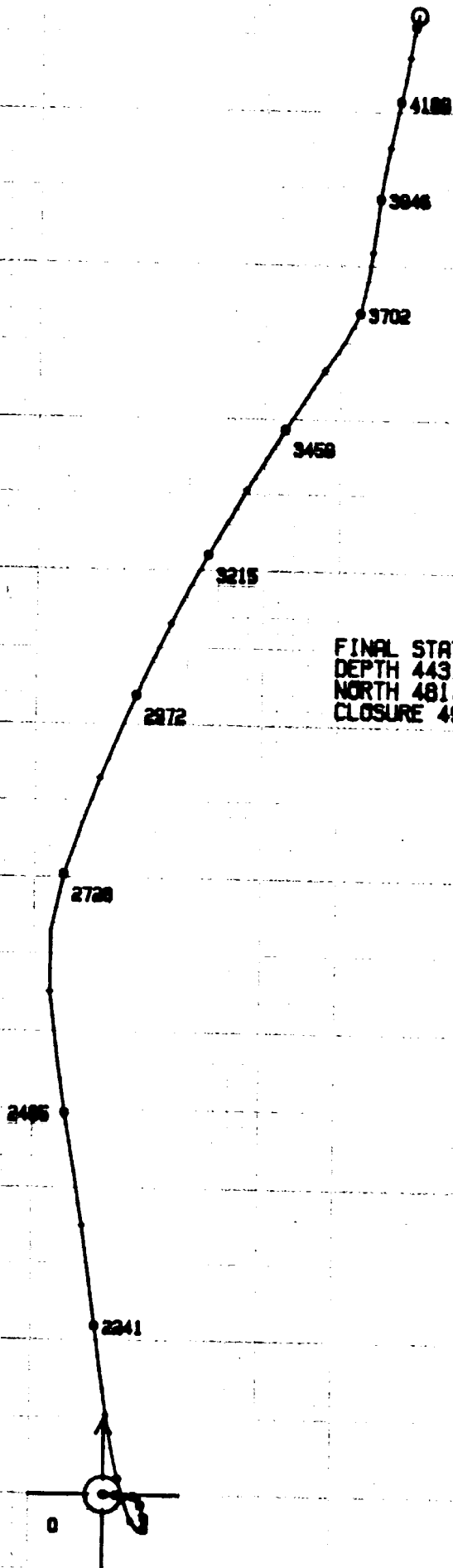
MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	R E C T A N G U L A R C O O R D I N A T E S FEET	DOGLEG SEVERITY DG/100FT
2363.	16 45	N 7 W	61.	2351.69	83.82	87.78 N	8.07 W
2424.	17 45	N 11 W	61.	2409.95	100.61	105.64 N	10.90 W
2485.	18 0	N 9 W	61.	2468.00	117.88	124.08 N	14.15 W
2546.	19 0	N 8 W	61.	2525.85	135.91	143.22 N	17.01 W
2606.	19 45	N 6 W	60.	2582.45	154.64	162.98 N	19.43 W
2667.	18 45	N 7 E	61.	2640.04	174.25	183.05 N	19.26 W
2728.	17 0	N 18 E	61.	2698.09	192.94	201.30 N	15.21 W
2789.	15 45	N 21 E	61.	2756.62	210.02	217.51 N	9.47 W
2850.	15 0	N 22 E	61.	2815.43	226.00	232.55 N	3.54 W
2911.	13 45	N 24 E	61.	2874.52	240.91	246.49 N	2.37 E
2972.	13 15	N 24 E	61.	2933.83	254.88	259.50 N	8.16 E
3033.	12 0	N 26 E	61.	2993.59	267.91	271.58 N	13.80 E
3094.	12 0	N 26 E	61.	3053.33	280.25	282.98 N	19.36 E
3154.	12 15	N 29 E	60.	3113.66	292.44	294.16 N	25.18 E
3215.	11 45	N 31 E	61.	3173.36	304.35	305.14 N	31.52 E
3276.	11 45	N 29 E	61.	3231.08	316.42	315.90 N	37.73 E
3337.	11 30	N 32 E	61.	3290.83	328.13	326.49 N	43.97 E
3398.	11 15	N 32 E	61.	3350.63	339.49	336.69 N	50.34 E
3459.	11 30	N 32 E	61.	3410.43	350.85	346.90 N	56.72 E
3520.	11 15	N 34 E	61.	3470.23	362.14	356.99 N	63.27 E
3581.	10 15	N 34 E	61.	3530.16	372.74	366.42 N	69.63 E
3641.	10 45	N 36 E	60.	3589.16	382.87	375.37 N	75.90 E
3702.	10 15	N 20 E	61.	3649.13	393.56	385.16 N	81.11 E
3763.	9 15	N 7 E	61.	3709.25	403.86	395.18 N	83.51 E
3824.	8 45	N 11 E	61.	3769.50	413.38	404.61 N	85.00 E
3885.	8 15	N 6 E	61.	3829.83	422.37	413.52 N	86.34 E
3946.	7 45	N 8 E	61.	3890.24	430.82	421.95 N	87.37 E
4007.	8 0	N 12 E	61.	3950.66	439.17	430.17 N	88.82 E
4068.	8 0	N 11 E	61.	4011.07	447.65	438.49 N	90.51 E
4128.	7 30	N 13 E	60.	4070.52	455.74	446.41 N	92.20 E

SHELL WESTERN EXPLORATION
NORTH HOBBS UNIT WELL NO. 30-312
LEA COUNTY, NEW MEXICO
PRODUCTION I
BD2-209

HORIZONTAL PROJECTION

SCALE 1 IN. = 50 FEET
DEPTH INDICATOR: MD

EASTMAN WHIPSTOCK, INC.





(915) 563-0511

P.O. Box 6341/Terminal Station/Midland, TX 79711-0341

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, Gary DeSpain, in the employ of Eastman Whipstock, Inc., did on the days of May 7, 19 85 thru May 8, 19 85 conduct or supervise the taking of a Gyroscopic Multi Shot survey by the method of magnetic orientation from a depth of 0 feet to 1455 feet, with recordings of inclination and direction being obtained at approximate intervals of 100 feet.

This survey was conducted at the request of Shell Western Expl. & Prod. Inc. for their North Hobbs Unit # 30-312, Lea County, State of New Mexico, in the field.

This data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Eastman Whipstock, Inc. and is true and correct to the best of my knowledge.

Gary DeSpain
Directional Supervisor/ Surveyor

The data for this survey has been examined by me and conforms to principles and procedures set forth by Eastman Whipstock, Inc.

[Signature]

Before me, the undersigned authority, on this day personally appeared Gary DeSpain, known to me to be the person whose name is subscribed to this instrument, who after being by me duly sworn on oath, states that he has knowledge of all the facts stated above and that this instrument is a true statement of facts therein recited.

Subscribed and sworn to before me on this 20TH day of MAY, 19 85

Garyt Steink
Notary Public in and for the
County of Midland, Texas
My commission expires 7/9/85





(915) 563-0511
P.O. Box 6341/Terminal Station/Midland, TX 79711-0341

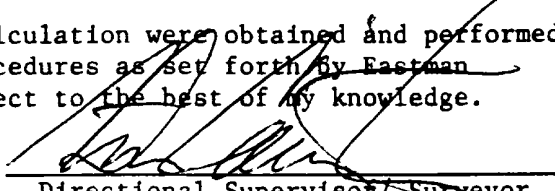
SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

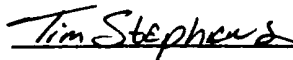
I, STEVE COVINGTON, in the employ of Eastman Whipstock, Inc., did on the days of MAY 19, 19 85 thru MAY 20, 19 85 conduct or supervise the taking of a MAGNETIC MULTI-SHOT survey by the method of magnetic orientation from a depth of 1455 feet to 4398 feet, with recordings of inclination and direction being obtained at approximate intervals of 60.88 feet.

This survey was conducted at the request of SHELL WESTERN EXP. & PROD. INC. for their NORTH HOBBS UNIT 30-312, LEA County, State of NEW MEXICO, in the field.

This data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Eastman Whipstock, Inc. and is true and correct to the best of my knowledge.


Directional Supervisor/ Surveyor

The data for this survey has been examined by me and conforms to principles and procedures set forth by Eastman Whipstock, Inc.


Tim Stephens

Before me, the undersigned authority, on this day personally appeared STEVE COVINGTON, known to me to be the person whose name is subscribed to this instrument, who after being by me duly sworn on oath, states that he has knowledge of all the facts stated above and that this instrument is a true statement of facts therein recited.

Subscribed and sworn to before me on this 20TH day of MAY, 19 85


Notary Public in and for the
County of Midland, Texas
My commission expires 7/9/85

