



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

INEXCO OIL COMPANY
COMPANY

LEA FARMS NO. 3
WELL NAME

14-17-37

LEA COUNTY, NEW MEXICO
LOCATION

JOB NUMBER

430-0525

430-0525

TYPE OF SURVEY

MAGNETIC MULTI SHOT SURVEY

MAGNETIC MULTI SHOT SURVEY

DATE

4-14-87

5-10-87

SURVEY BY
GARY DESPAIN

OFFICE
WEST TEXAS BASE

RECEIVED
JUN 18 1987
OCD
HOBBS OFFICE

EASTMAN CHRISTENSEN

RECORD OF SURVEY

FOR

* * * * *

OPERATOR	:	INEXCO OIL COMPANY
WELL NAME	:	LEA FARMS NO. 3
LOCATION	:	LEA COUNTY, NEW MEXICO
JOB NUMBER	:	
RIG	:	DELTA RIG NO. 98
DECLINATION	:	10.00 E

* * * * *

EC DISTRICT : WEST TEXAS BASE

INEXCO OIL COMPANY
 LEE FARMS NO. 3
 LEE COUNTY, NEW MEXICO

DATE PRINTED : 11-MAY-87
 OUR REF. NO. : S01190.41Z
 DECLINATION : 10.00 JOB NUMBER :

PAGE NO. 2

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	POSSIBLE SEVERITY
460.00	0 0	N 0 0 E	0.00	460.00	0.00 N	0.00 E
504.00	0 30	S 88 0 E	44.00	504.00	0.01 S	0.19 E
597.00	0 30	S 61 0 E	93.00	597.00	0.22 S	0.97 E
690.00	0 15	S 35 0 E	93.00	689.99	0.63 S	1.42 E
783.00	0 30	S 70 0 E	93.00	782.99	0.99 S	1.89 E
876.00	0 30	S 42 0 E	93.00	875.99	1.44 S	2.56 E
970.00	0 15	S 30 0 W	94.00	969.99	2.01 S	2.62 E
1063.00	0 15	N 16 0 E	93.00	1062.99	1.91 S	2.36 E
1156.00	0 15	N 46 0 E	93.00	1155.98	1.56 S	2.57 E
1249.00	0 15	N 1 0 W	93.00	1248.98	1.20 S	2.72 E
1342.00	0 15	S 82 0 E	93.00	1341.98	0.96 S	2.99 E
1436.00	0 15	S 33 0 W	94.00	1435.98	1.27 S	3.13 E
1529.00	0 15	S 67 0 W	93.00	1528.98	1.53 S	2.82 E
1622.00	0 15	N 61 0 W	93.00	1621.98	1.51 S	2.43 E
1715.00	0 15	N 26 0 E	93.00	1714.98	1.16 S	2.32 E
1808.00	0 15	S 83 0 E	93.00	1807.98	0.98 S	2.66 E
1902.00	0 30	S 79 0 E	94.00	1901.98	1.07 S	3.27 E
1995.00	0 45	S 77 0 E	93.00	1994.97	1.29 S	4.26 E
2088.00	0 30	S 55 0 E	93.00	2087.97	1.70 S	5.18 E
2181.00	0 30	S 22 0 E	93.00	2180.96	2.32 S	5.68 E
2275.00	0 15	S 4 0 E	94.00	2274.96	2.92 S	5.82 E
2368.00	0 15	S 16 0 E	93.00	2367.96	3.32 S	5.89 E
2461.00	0 30	S 1 0 E	93.00	2460.96	3.92 S	5.98 E
2554.00	0 15	S 17 0 E	93.00	2553.95	4.52 S	6.07 E
2647.00	0 15	S 31 0 E	93.00	2646.95	4.89 S	6.24 E
2741.00	0 30	S 64 0 E	94.00	2740.95	5.30 S	6.69 E
2834.00	0 30	S 77 0 E	93.00	2833.95	5.57 S	7.45 E
2927.00	0 30	S 64 0 E	93.00	2926.95	5.84 S	8.21 E
3020.00	0 45	S 88 0 E	93.00	3019.94	6.09 S	9.19 E
3113.00	1 0	N 74 0 E	93.00	3112.93	5.92 S	10.60 E

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LEA COUNTY, NEW MEXICO

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MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	DOGLEG SEVERITY
3207.00	1 0	N 62	94.00	3206.91	5.30 S 12.11 E	0.22
3300.00	1 0	N 64	93.00	3299.90	4.56 S 13.56 E	0.04
3393.00	1 0	N 55	93.00	3392.89	3.74 S 14.96 E	0.17
3486.00	1 0	N 36	93.00	3485.87	2.61 S 16.11 E	0.35
3579.00	1 0	N 27	93.00	3578.86	1.23 S 16.96 E	0.17
3673.00	1 0	N 20	94.00	3672.84	0.28 N 17.61 E	0.15
3766.00	1 0	N 8	93.00	3765.83	1.85 N 18.00 E	0.22
3859.00	0 45	N 6	93.00	3858.82	3.26 N 18.17 E	0.27
3952.00	1 0	N 11	93.00	3951.81	4.66 N 18.38 E	0.28
4046.00	1 0	N 12	94.00	4045.79	6.29 N 18.37 E	0.42
4139.00	0 45	N 24	93.00	4138.78	7.64 N 17.93 E	0.33
4232.00	0 45	N 33	93.00	4231.77	8.71 N 17.35 E	0.13
4325.00	1 0	N 32	93.00	4324.76	9.90 N 16.59 E	0.27
4418.00	1 15	N 42	93.00	4417.75	11.36 N 15.49 E	0.34
4512.00	1 0	N 39	94.00	4511.73	12.76 N 14.29 E	0.27
4605.00	1 15	N 45	93.00	4604.71	14.12 N 13.07 E	0.20
4678.00	1 15	N 45	73.00	4677.69	15.25 N 11.94 E	0.00
4752.00	1 0	N 30	74.00	4751.68	16.40 N 11.06 E	0.52
4783.00	1 0	N 44	31.00	4782.67	16.83 N 10.74 E	0.75
4877.00	1 0	N 51	94.00	4876.66	17.93 N 9.53 E	0.15
4971.00	1 30	N 35	94.00	4970.64	19.43 N 8.13 E	0.64
5065.00	1 0	N 31	94.00	5064.61	21.15 N 7.02 E	0.54
5159.00	1 0	N 36	94.00	5158.60	22.52 N 6.11 E	0.09
5253.00	1 15	N 47	94.00	5252.58	23.90 N 4.89 E	0.35
5347.00	1 30	N 44	94.00	5346.55	25.48 N 3.28 E	0.28
5441.00	1 45	N 44	94.00	5440.52	27.40 N 1.43 E	0.27
5535.00	1 15	N 51	94.00	5534.48	29.06 N 0.38 W	0.57
5629.00	1 15	N 51	94.00	5628.46	30.35 N 1.98 W	0.00
5724.00	1 30	N 55	95.00	5723.43	31.72 N 3.79 W	0.28
5818.00	1 0	N 64	94.00	5817.41	32.76 N 5.56 W	0.57

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INEXCO OIL COMPANY
LEA FARMS NO. 3
LEA COUNTY, NEW MEXICO

DATE PRINTED : 11-MAY-87
OUR REF. NO. : 501190.412
DECLINATION : 10.00 JOB NUMBER :

PAGE NO. 4

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	LOGGED SEVERITY
5912.00	1 15	N 59	94.00	5911.39	33.64 N 7.18 W	0.29
6006.00	1 15	N 72	94.00	6005.37	34.49 N 9.04 W	0.30
6100.00	1 30	N 72	94.00	6099.34	35.18 N 11.19 W	0.27
6194.00	1 0	N 77	94.00	6193.32	35.73 N 13.16 W	0.54
6288.00	1 0	N 68	94.00	6287.31	36.22 N 14.73 W	0.17
6382.00	1 0	N 73	94.00	6381.29	36.70 N 16.29 W	0.19
6476.00	1 0	N 70	94.00	6475.28	37.16 N 17.87 W	0.15
6570.00	1 15	S 81	94.00	6569.26	37.33 N 19.69 W	0.65
6664.00	1 30	S 38	94.00	6663.23	36.21 N 21.59 W	1.10
6758.00	1 0	S 61	94.00	6757.21	34.89 N 23.13 W	0.74
6852.00	0 45	S 81	94.00	6851.20	34.43 N 24.48 W	0.42
6946.00	0 45	S 82	94.00	6945.19	34.24 N 25.70 W	0.01
7040.00	1 0	S 73	94.00	7039.18	33.93 N 27.10 W	0.00
7134.00	1 0	S 79	94.00	7133.17	33.54 N 28.69 W	0.11
7228.00	1 0	S 65	94.00	7227.15	32.30 N 28.84 W	2.02
7322.00	1 0	N 83	94.00	7321.14	32.05 N 27.24 W	0.59
7416.00	1 0	S 68	94.00	7415.12	30.96 N 26.96 W	2.11
7510.00	1 15	S 89	94.00	7509.10	30.59 N 28.76 W	0.51
7605.00	0 45	S 87	95.00	7604.09	30.53 N 30.42 W	0.90
7699.00	1 0	S 88	94.00	7698.08	30.47 N 31.85 W	0.20
7793.00	1 0	S 75	94.00	7792.06	30.23 N 33.47 W	0.24
7887.00	1 0	N 90	94.00	7886.05	30.02 N 35.09 W	0.28
7981.00	1 0	S 70	94.00	7980.04	29.73 N 36.70 W	0.37
8075.00	1 0	S 72	94.00	8074.02	29.20 N 38.25 W	0.04
8169.00	1 0	N 56	94.00	8168.01	29.42 N 39.82 W	0.93
8263.00	1 0	N 59	94.00	8261.99	30.30 N 41.20 W	0.06
8357.00	1 0	N 32	94.00	8355.98	31.44 N 42.36 W	0.50
8451.00	1 30	N 37	94.00	8449.96	33.13 N 43.52 W	0.54
8545.00	1 30	N 11	94.00	8543.92	35.36 N 44.51 W	0.72
8639.00	1 45	N 19	94.00	8637.89	37.93 N 45.20 W	0.36

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MEASURED DEPTH	DRIPT ANGLE D M	DRIPT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	LOGS SEVERITY
8733.00	1 45	N 22 O W	94.00	8731.84	40.62 N 46.21 W	0.10
8827.00	1 45	N 13 O W	94.00	8825.80	43.35 N 47.07 W	0.29
8921.00	2 0	N 13 O W	94.00	8919.75	46.35 N 47.76 W	0.27
9015.00	1 30	N 13 O W	94.00	9013.70	49.15 N 48.41 W	0.53
9109.00	1 30	N 4 O W	94.00	9107.67	51.58 N 48.77 W	0.25
9203.00	1 30	N 1 O W	94.00	9201.64	54.04 N 48.88 W	0.0
9297.00	2 0	N 6 O W	94.00	9295.60	56.90 N 49.05 W	0.56
9391.00	1 45	N 18 O W	94.00	9389.54	59.90 N 49.69 W	0.49
9485.00	1 45	N 17 O W	94.00	9483.50	62.64 N 50.56 W	0.03
9580.00	1 30	N 24 O W	95.00	9578.46	65.16 N 51.50 W	0.34
9674.00	1 30	N 13 O W	94.00	9672.43	67.49 N 52.28 W	0.31
9768.00	1 30	N 21 O W	94.00	9766.40	69.84 N 53.00 W	0.22
9862.00	1 0	N 24 O W	94.00	9860.38	71.74 N 53.78 W	0.54
9956.00	1 0	N 22 O W	94.00	9954.36	73.25 N 54.42 W	0.04
10050.00	1 0	N 20 O W	94.00	10048.35	74.78 N 55.01 W	0.04
10144.00	1 0	N 29 O W	94.00	10142.33	76.27 N 55.69 W	0.17
10238.00	1 0	N 15 O W	94.00	10236.32	77.79 N 56.30 W	0.26
10332.00	1 0	N 12 O W	94.00	10330.30	79.38 N 56.69 W	0.06
10426.00	0 45	N 17 O W	94.00	10424.29	80.77 N 57.04 W	0.28
10520.00	0 30	N 9 O E	94.00	10518.29	81.79 N 57.12 W	0.4
10614.00	0 45	N 35 O W	94.00	10612.28	82.76 N 57.34 W	0.56
10708.00	0 15	N 78 O W	94.00	10706.28	83.21 N 58.01 W	0.63
10740.00	0 15	N 80 O W	32.00	10738.28	83.23 N 58.15 W	0.03
10834.00	0 0	N 0 O E	94.00	10832.28	83.27 N 58.35 W	0.27
10928.00	0 0	N 0 O E	94.00	10926.28	83.27 N 58.35 W	0.00
11022.00	0 15	S 4 O E	94.00	11020.28	83.07 N 58.33 W	0.27
11116.00	0 30	S 39 O E	94.00	11114.27	82.50 N 58.11 W	0.35
11210.00	1 0	S 66 O E	94.00	11208.27	81.76 N 57.14 W	0.64
11304.00	0 45	S 87 O E	94.00	11302.25	81.43 N 55.76 W	0.43
11398.00	1 0	S 90 O E	94.00	11396.24	81.39 N 54.32 W	0.27

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INEXCO OIL COMPANY
LEA FARMS NO. 3
LEA COUNTY, NEW MEXICO

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PAGE NO. 6

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	LOGLEG SEVERITY
11492.00	1 0	S 71 0 E	94.00	11490.23	81.12 N 52.71 W	0.35
11586.00	1 0	S 54 0 E	94.00	11584.21	80.86 N 51.26 W	0.31
11680.00	1 30	S 72 0 E	94.00	11678.19	79.44 N 49.44 W	0.67
11696.00	1 45	S 70 0 E	16.00	11694.19	79.29 N 49.01 W	1.60

CLOSURE - DISTANCE : 93.22
DIRECTION : N 31 43 W

REPORT UNITS : Feet
SURVEY CALCULATION METHOD : Radius of curvature

SURVEY RUN INFORMATION

=====

MAGNETIC MULTI SHOT SURVEY	430-0525
SURVEYOR: GARY DESPAIN	(460'-4678')
MAGNETIC MULTI SHOT SURVEY	430-0525
SURVEYOR: GARY DESPAIN	(4678'-11,696')

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P. O. Box 6341, Midland, Texas 79711-0341, Phone: (915) 563-0511

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, Gary DeSpain, in the employ of Eastman Christensen, Inc. did on the days of May 10, 19 87 thru May 11, 19 87 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 4678 feet to 11,696 feet, with recordings of inclination and direction being obtained at approximate intervals of 94 feet.

This survey was conducted at the request of Inexco Oil Company for their Lea Farms No. 3, 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 Christensen, 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 Christensen, Inc.

J. D. McLawrence

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 _____ day of _____, 19____

Notary Public in and for the
County of Midland, Texas
My commission expires _____



EASTMAN CHRISTENSEN

2103 Market, Midland, Texas 79703, Phone: (915) 694-9517, (915) 563-0511
SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, Gary DeSpain, in the employ of Eastman Whipstock, Inc., did on the days of April 14, 1987 thru April 15, 1987 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 460 feet to 4678 feet, with recordings of inclination and direction being obtained at approximate intervals of 93 feet.

This survey was conducted at the request of INEXCO Oil Company for their Lea Farms No. 3, 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.

J.D. McLaughlin

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 _____ day of _____, 19____

Notary Public in and for the
County of Midland, Texas
My commission expires _____

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