

30-015-40402

Mewbourne Oil Co

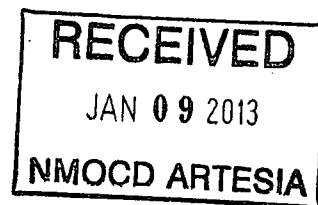
Eddy County, New Mexico

Sec 15-25S-28E

San Lorenzo 15 DM Fee Com #1H

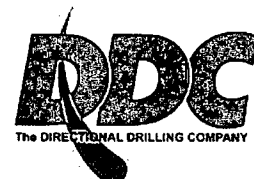
Wellbore #1

Survey: MWD



DDC Survey Report

27 August, 2012



DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well San Lorenzo 15 DM Fee Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2971.0usft (Patterson #46)
Site:	Sec 15-25S-28E	MD Reference:	WELL @ 2971.0usft (Patterson #46)
Well:	San Lorenzo 15 DM Fee Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project		Eddy County, New Mexico	
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Sec 15-25S-28E			
Site Position:		Northing:	413,409.51 usft	Latitude:	32° 8' 10.781 N
From:	Map	Easting:	578,072.26 usft	Longitude:	104° 4' 51.994 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.13 °

Well	San Lorenzo 15 DM Fee Com #1H					
Well Position	+N/-S	0.0 usft	Northing:	413,409.51 usft	Latitude:	32° 8' 10.781 N
	+E/-W	0.0 usft	Easting:	578,072.26 usft	Longitude:	104° 4' 51.994 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,951.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/3/2012	7.67	59.99	48,397

Design		Wellbore #1			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	179.04	

Survey Program		Date	8/27/2012	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	9,789.0	Gyro (Wellbore #1)	Good_gyro	Good Gyro
9,858.0	14,560.0	MWD (Wellbore #1)	MWD default	MWD - Standard

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
TIE IN @ 9789' MD / 9785' TVD										
9,789.0	0.47	270.03	9,785.0	-78.9	-83.8	77.5	0.00	0.00	0.00	
9,858.0	0.90	326.40	9,854.0	-78.5	-84.4	77.1	1.09	0.62	81.70	
9,890.0	0.80	339.10	9,886.0	-78.1	-84.6	76.6	0.66	-0.31	39.69	
9,921.0	0.30	104.90	9,917.0	-77.9	-84.6	76.5	3.24	-1.61	405.81	
9,953.0	2.50	146.60	9,949.0	-78.5	-84.2	77.1	7.14	6.88	130.31	
9,985.0	5.80	154.50	9,980.9	-80.5	-83.1	79.1	10.44	10.31	24.69	
10,017.0	7.70	151.30	10,012.7	-83.9	-81.4	82.5	6.05	5.94	-10.00	
10,048.0	9.10	155.10	10,043.4	-87.9	-79.3	86.6	4.86	4.52	12.26	
10,080.0	12.40	156.30	10,074.8	-93.4	-76.9	92.1	10.34	10.31	3.75	

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Site:	Sec 15-25S-28E	MD Reference:	WELL @ 2971.0usft (Patterson #46)
Well:	San Lorenzo 15 DM Fee Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,112.0	16.00	158.10	10,105.8	-100.6	-73.9	99.3	11.33	11.25	5.63	
10,143.0	19.10	159.60	10,135.4	-109.3	-70.5	108.1	10.11	10.00	4.84	
10,175.0	21.90	160.80	10,165.4	-119.9	-66.7	118.7	8.85	8.75	3.75	
10,207.0	25.00	160.90	10,194.7	-131.9	-62.5	130.8	9.69	9.69	0.31	
10,239.0	28.10	162.10	10,223.3	-145.5	-58.0	144.5	9.83	9.69	3.75	
10,270.0	31.10	163.20	10,250.3	-160.1	-53.5	159.2	9.83	9.68	3.55	
10,301.0	34.20	163.40	10,276.4	-176.1	-48.6	175.2	10.01	10.00	0.65	
10,333.0	37.30	163.00	10,302.4	-194.0	-43.2	193.2	9.71	9.69	-1.25	
10,365.0	40.50	162.20	10,327.3	-213.2	-37.2	212.5	10.12	10.00	-2.50	
10,397.0	43.90	161.90	10,351.0	-233.6	-30.6	233.1	10.64	10.63	-0.94	
10,428.0	47.30	161.20	10,372.6	-254.6	-23.6	254.2	11.09	10.97	-2.26	
10,460.0	51.00	160.90	10,393.6	-277.5	-15.7	277.2	11.58	11.56	-0.94	
10,492.0	54.40	160.90	10,413.0	-301.5	-7.4	301.4	10.63	10.63	0.00	
10,524.0	57.80	162.30	10,430.8	-326.7	1.0	326.7	11.23	10.63	4.38	
CROSSED HARD LINE @ 10528' MD / 10433' TVD										
10,528.0	58.28	162.49	10,432.9	-330.0	2.0	330.0	12.74	12.10	4.71	
10,557.0	61.80	163.80	10,447.4	-354.0	9.3	354.1	12.74	12.12	4.52	
10,577.0	63.90	164.40	10,456.5	-371.1	14.2	371.3	10.83	10.50	3.00	
10,668.0	72.80	167.70	10,490.1	-453.1	34.4	453.7	10.34	9.78	3.63	
10,700.0	75.60	169.80	10,498.8	-483.3	40.4	483.9	10.79	8.75	6.56	
10,731.0	77.60	171.10	10,506.0	-513.1	45.4	513.8	7.63	6.45	4.19	
10,763.0	78.70	173.00	10,512.5	-544.1	49.8	544.8	6.75	3.44	5.94	
10,795.0	80.20	173.00	10,518.4	-575.3	53.6	576.1	4.69	4.69	0.00	
10,827.0	82.70	174.20	10,523.2	-606.8	57.1	607.6	8.65	7.81	3.75	
10,859.0	85.80	175.50	10,526.4	-638.5	60.0	639.4	10.50	9.69	4.06	
10,891.0	88.40	177.30	10,528.0	-670.4	62.0	671.3	9.88	8.13	5.63	
10,922.0	89.50	178.00	10,528.5	-701.3	63.3	702.3	4.21	3.55	2.26	
10,955.0	90.40	177.00	10,528.6	-734.3	64.7	735.3	4.08	2.73	-3.03	
10,986.0	90.70	178.00	10,528.3	-765.3	66.1	766.3	3.37	0.97	3.23	
11,017.0	88.00	177.30	10,528.6	-796.2	67.3	797.2	9.00	-8.71	-2.26	
11,049.0	88.00	177.20	10,529.7	-828.2	68.9	829.2	0.31	0.00	-0.31	
11,081.0	88.80	177.40	10,530.6	-860.1	70.4	861.2	2.58	2.50	0.63	
11,113.0	89.00	177.10	10,531.3	-892.1	71.9	893.2	1.13	0.63	-0.94	
11,176.0	88.00	176.10	10,532.9	-954.9	75.6	956.1	2.24	-1.59	-1.59	
11,240.0	89.20	177.50	10,534.5	-1,018.8	79.2	1,020.0	2.88	1.88	2.19	
11,304.0	90.50	180.10	10,534.6	-1,082.8	80.6	1,084.0	4.54	2.03	4.06	
11,367.0	91.30	180.20	10,533.6	-1,145.8	80.4	1,147.0	1.28	1.27	0.16	
11,431.0	87.70	179.40	10,534.2	-1,209.8	80.6	1,211.0	5.76	-5.63	-1.25	
11,462.0	88.00	180.30	10,535.4	-1,240.8	80.7	1,241.9	3.06	0.97	2.90	
11,494.0	89.40	180.30	10,536.1	-1,272.8	80.5	1,273.9	4.38	4.38	0.00	
11,526.0	89.70	180.20	10,536.3	-1,304.7	80.4	1,305.9	0.99	0.94	-0.31	
11,557.0	89.80	179.60	10,536.5	-1,335.7	80.4	1,336.9	1.96	0.32	-1.94	
11,589.0	91.40	178.80	10,536.1	-1,367.7	80.9	1,368.9	5.59	5.00	-2.50	

DDC Survey Report



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Site:	Sec 15-25S-28E	MD Reference:	WELL @ 2971.0usft (Patterson #46)
Well:	San Lorenzo 15 DM Fee Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,621.0	91.80	178.80	10,535.3	-1,399.7	81.6	1,400.9	1.25	1.25	0.00
11,652.0	91.70	178.60	10,534.3	-1,430.7	82.3	1,431.9	0.72	-0.32	-0.65
11,684.0	91.60	178.60	10,533.4	-1,462.7	83.0	1,463.9	0.31	-0.31	0.00
11,715.0	92.00	179.60	10,532.4	-1,493.7	83.5	1,494.8	3.47	1.29	3.23
11,747.0	91.90	177.70	10,531.3	-1,525.6	84.3	1,526.8	5.94	-0.31	-5.94
11,779.0	91.40	178.00	10,530.4	-1,557.6	85.5	1,558.8	1.82	-1.56	0.94
11,810.0	90.80	177.10	10,529.8	-1,588.6	86.8	1,589.8	3.49	-1.94	-2.90
11,842.0	90.20	177.50	10,529.5	-1,620.5	88.3	1,621.8	2.25	-1.88	1.25
11,873.0	89.70	177.60	10,529.6	-1,651.5	89.6	1,652.8	1.64	-1.61	0.32
11,905.0	88.70	176.30	10,530.0	-1,683.4	91.3	1,684.7	5.13	-3.13	-4.06
11,937.0	90.70	177.40	10,530.2	-1,715.4	93.1	1,716.7	7.13	6.25	3.44
11,968.0	89.90	179.50	10,530.0	-1,746.4	93.9	1,747.7	7.25	-2.58	6.77
12,000.0	90.50	179.80	10,529.9	-1,778.4	94.1	1,779.7	2.10	1.88	0.94
12,032.0	90.20	179.60	10,529.7	-1,810.4	94.3	1,811.7	1.13	-0.94	-0.63
12,062.0	90.40	179.70	10,529.5	-1,840.4	94.5	1,841.7	0.75	0.67	0.33
12,094.0	90.70	178.30	10,529.2	-1,872.4	95.0	1,873.7	4.47	0.94	-4.38
12,125.0	90.90	178.10	10,528.8	-1,903.4	96.0	1,904.7	0.91	0.65	-0.65
12,157.0	90.80	178.60	10,528.3	-1,935.3	96.9	1,936.7	1.59	-0.31	1.56
12,189.0	90.80	177.50	10,527.9	-1,967.3	98.0	1,968.7	3.44	0.00	-3.44
12,221.0	90.60	178.70	10,527.5	-1,999.3	99.1	2,000.7	3.80	-0.63	3.75
12,253.0	90.90	178.10	10,527.1	-2,031.3	100.0	2,032.7	2.10	0.94	-1.88
12,284.0	90.40	178.40	10,526.7	-2,062.3	100.9	2,063.7	1.88	-1.61	0.97
12,316.0	89.80	177.80	10,526.7	-2,094.2	102.0	2,095.7	2.65	-1.88	-1.88
12,348.0	89.40	179.20	10,526.9	-2,126.2	102.8	2,127.7	4.55	-1.25	4.38
12,380.0	89.70	179.20	10,527.1	-2,158.2	103.3	2,159.7	0.94	0.94	0.00
12,444.0	90.40	179.90	10,527.1	-2,222.2	103.8	2,223.6	1.55	1.09	1.09
12,507.0	90.00	179.40	10,526.9	-2,285.2	104.2	2,286.6	1.02	-0.63	-0.79
12,571.0	90.30	178.60	10,526.7	-2,349.2	105.3	2,350.6	1.33	0.47	-1.25
12,634.0	89.80	177.50	10,526.6	-2,412.2	107.4	2,413.6	1.92	-0.79	-1.75
12,698.0	89.20	176.60	10,527.2	-2,476.1	110.7	2,477.6	1.69	-0.94	-1.41
12,762.0	88.60	176.80	10,528.4	-2,540.0	114.4	2,541.5	0.99	-0.94	0.31
12,826.0	89.20	178.70	10,529.7	-2,603.9	116.9	2,605.5	3.11	0.94	2.97
12,889.0	91.30	179.70	10,529.4	-2,666.9	117.8	2,668.5	3.69	3.33	1.59
12,953.0	91.30	178.80	10,527.9	-2,730.9	118.6	2,732.5	1.41	0.00	-1.41
12,985.0	91.70	178.10	10,527.1	-2,762.8	119.5	2,764.5	2.52	1.25	-2.19
13,017.0	90.80	178.30	10,526.4	-2,794.8	120.5	2,796.4	2.88	-2.81	0.63
13,048.0	88.70	178.00	10,526.5	-2,825.8	121.5	2,827.4	6.84	-6.77	-0.97
13,080.0	88.10	178.30	10,527.4	-2,857.8	122.5	2,859.4	2.10	-1.88	0.94
13,112.0	87.50	177.60	10,528.6	-2,889.7	123.7	2,891.4	2.88	-1.88	-2.19
13,144.0	87.30	177.60	10,530.1	-2,921.7	125.0	2,923.4	0.63	-0.63	0.00
13,176.0	87.40	178.60	10,531.6	-2,953.6	126.1	2,955.3	3.14	0.31	3.13
13,208.0	87.90	177.90	10,532.9	-2,985.6	127.1	2,987.3	2.69	1.56	-2.19
13,239.0	87.80	179.30	10,534.1	-3,016.5	127.8	3,018.3	4.52	-0.32	4.52
13,271.0	88.00	179.20	10,535.2	-3,048.5	128.2	3,050.2	0.70	0.63	-0.31

DDC Survey Report



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Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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13,301.0	88.70	178.00	10,536.1	-3,078.5	129.0	3,080.2	4.63	2.33	-4.00
13,333.0	89.70	178.60	10,536.5	-3,110.5	129.9	3,112.2	3.64	3.13	1.88
13,365.0	88.80	179.80	10,537.0	-3,142.5	130.4	3,144.2	4.69	-2.81	3.75
13,397.0	88.80	179.50	10,537.6	-3,174.5	130.6	3,176.2	0.94	0.00	-0.94
13,428.0	89.10	180.10	10,538.2	-3,205.5	130.7	3,207.2	2.16	0.97	1.94
13,460.0	90.00	180.80	10,538.4	-3,237.5	130.4	3,239.2	3.56	2.81	2.19
13,492.0	89.90	180.10	10,538.5	-3,269.5	130.2	3,271.2	2.21	-0.31	-2.19
13,524.0	89.90	181.00	10,538.5	-3,301.5	129.8	3,303.2	2.81	0.00	2.81
13,556.0	90.40	180.80	10,538.4	-3,333.4	129.3	3,335.1	1.68	1.56	-0.63
13,587.0	90.70	180.30	10,538.1	-3,364.4	129.0	3,366.1	1.88	0.97	-1.61
13,619.0	89.70	180.30	10,538.0	-3,396.4	128.9	3,398.1	3.13	-3.13	0.00
13,682.0	90.20	181.60	10,538.1	-3,459.4	127.8	3,461.1	2.21	0.79	2.06
13,745.0	90.90	180.60	10,537.5	-3,522.4	126.6	3,524.0	1.94	1.11	-1.59
13,809.0	90.60	179.90	10,536.7	-3,586.4	126.3	3,588.0	1.19	-0.47	-1.09
13,872.0	91.60	182.30	10,535.4	-3,649.4	125.1	3,651.0	4.13	1.59	3.81
13,935.0	91.20	180.30	10,533.9	-3,712.3	123.7	3,713.9	3.24	-0.63	-3.17
13,999.0	88.90	178.10	10,533.8	-3,776.3	124.6	3,777.9	4.97	-3.59	-3.44
14,062.0	89.40	180.20	10,534.8	-3,839.3	125.5	3,840.9	3.43	0.79	3.33
14,126.0	92.90	181.70	10,533.5	-3,903.3	124.5	3,904.8	5.95	5.47	2.34
14,157.0	93.10	180.70	10,531.9	-3,934.2	123.8	3,935.8	3.29	0.65	-3.23
14,189.0	92.00	180.70	10,530.4	-3,966.2	123.4	3,967.7	3.44	-3.44	0.00
14,221.0	91.50	181.10	10,529.5	-3,998.2	122.9	3,999.7	2.00	-1.56	1.25
14,253.0	90.20	179.30	10,529.0	-4,030.2	122.8	4,031.7	6.94	-4.06	-5.63
14,316.0	89.80	180.30	10,529.0	-4,093.2	123.0	4,094.7	1.71	-0.63	1.59
14,379.0	92.50	182.40	10,527.7	-4,156.1	121.6	4,157.6	5.43	4.29	3.33
14,443.0	92.20	180.80	10,525.1	-4,220.0	119.8	4,221.5	2.54	-0.47	-2.50
14,507.0	91.50	179.70	10,523.0	-4,284.0	119.5	4,285.4	2.04	-1.09	-1.72
TD @ 14560' MD / 10522' TVD									
14,560.0	91.50	179.70	10,521.7	-4,337.0	119.8	4,338.4	0.00	0.00	0.00

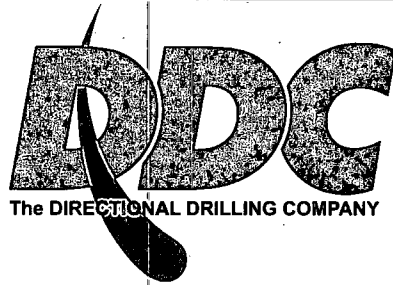
Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
9,789.0	9,785.0	-78.9	-83.8	TIE IN @ 9789' MD / 9785' TVD
10,528.0	10,432.9	-330.0	2.0	CROSSED HARD LINE @ 10528' MD / 10433' TVD
14,560.0	10,521.7	-4,337.0	119.8	TD @ 14560' MD / 10522' TVD

Checked By: _____ Approved By: _____ Date: _____

Mewbourne Oil Company

San Lorenzo 15 DM Fee Com #1H
Eddy County, New Mexico
Q120518 & WT-12568
Design #2

Company Name: Mewbourne Oil Co
San Lorenzo 15 DM Fee Com #1H
Eddy County, New Mexico
Rig: Patterson #46
Created By: DINA CHANCE
Date: 8/30/2012

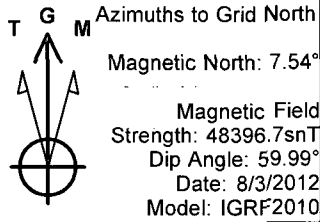


DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
PBHL San Lorenzo 15 DM Fee Com #1H 0631.0 - plan hits target center		-4345.4	72.9	409064.10	578145.20	32° 7' 27.775 N	104° 4' 51.264 W

ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	Vsect	Departure	Annotation
9789.0	0.47	270.03	9786.0	-78.9	-83.8	77.5	221.6	TIE IN @ 9789' MD / 9785' TVD
10528.0	58.28	162.48	10432.9	-330.0	2.0	330.0	490.1	CROSSED HARD LINE @ 10528' MD / 10433' TVD
14560.0	91.60	179.70	10921.7	-4337.0	119.8	4338.4	4904.7	TD @ 14560' MD / 10922' TVD

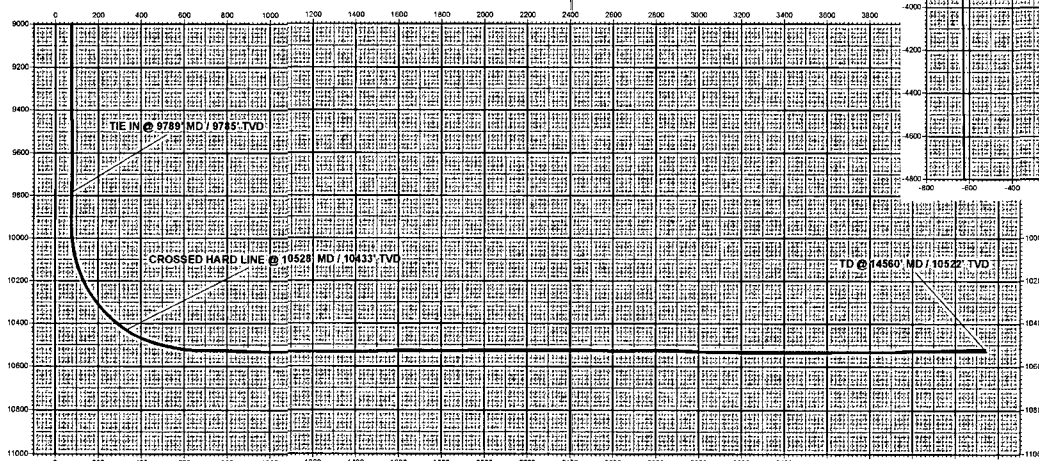


WELL DETAILS: San Lorenzo 15 DM Fee Com #1H

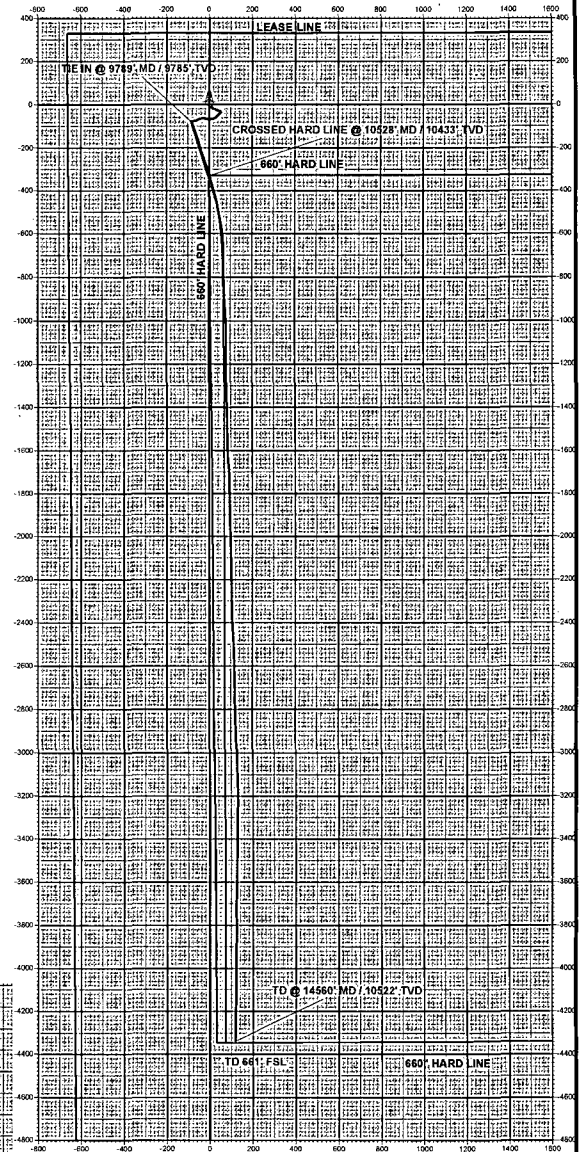
Ground Level:	2951.0
+N-S	+E-W
0.0	0.0
Northing	Easting
413409.51	578072.26
Latitude	Longitude
32° 6' 10.781 N	104° 4' 51.994 W

PROJECT DETAILS: Eddy County, New Mexico

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level



Vertical Section at 179.04° (200 usft/in)



Operating Company Mewbourne
 Well Name & Number San Lorenzo 15 DM FEE # 1H
 Sales Ticket Number
 Date 8/25/2012

Company Rep Lynn Simmons
 Field
 BOT Service Rep Ricky Harper
 District Location Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse		
Casing	7.000	26.00	P-110	6.276	6.151		0.03826	10,630.00	9,960	6,230		
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,136.87	12,410	10,680		
Bott Liner												
TVD		10,523.00		KOP		9,910.00		Open Hole		6.125	Casing Vol. (bbl)	397.7
Carry Fluid Weight (ppg)			8.4				Propant Content (ppa)				Max Drill Out Size	0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ (BBL)
Liner Top	1	JR Setting Sleeve RH Profile	10393.13	4.00	5.750	4.000				

Zone Length											
30 129		S - 3 Hyd Set Packer	10397.13	4.65	5.875	3.875					
		4-1/2-13.5 LTC Nipple	10401.78	5.08	5.000	3.920					
		7 Joints of 4-1/2-13.5 LTC Casing	10406.86	289.25	5.000	3.920					
	Zone # 30	3.625 BS Frac Sleeve Zone 30	10696.11	3.90	5.750		3.525	2286	310	398	
		1 Joint of 4-1/2-13.5 LTC Casing	10700.01	43.78	5.000	3.920					
29 125.9		Baker Open Hole Packer # 29	10743.79	3.89	5.820	3.875		2154			
		1 Joint of 4-1/2-13.5 LTC Casing	10747.68	43.81	5.000	3.920					
	Zone # 29	3.500 EX-C Frac Sleeve	10791.49	3.55	5.750		3.448	2375	302	398	
		2 Joints of 4-1/2-13.5 LTC Casing	10795.04	87.66	5.000	3.920					
		Baker Open Hole Packer # 28	10882.70	3.89	5.820	3.875		2154			
28 126.1		1 Joint of 4-1/2-13.5 LTC Casing	10886.59	43.55	5.000	3.920					
	Zone # 28	3.438 EX-C Frac Sleeve	10930.14	3.55	5.750		3.385	2375	291	398	
		2 Joints of 4-1/2-13.5 LTC Casing	10933.69	87.68	5.000	3.920					
		Baker Open Hole Packer # 27	11021.37	3.89	5.820	3.875		2154			
		1 Joint of 4-1/2-13.5 LTC Casing	11025.26	43.78	5.000	3.920					
27 126.2		Zone # 27	3.375 EX_C Frac Sleeve	11069.04	3.55	5.750		3.323	2375	281	398
		2 Joints of 4-1/2-13.5 LTC Casing	11072.59	87.23	5.000	3.920					
		Baker Open Hole Packer # 26	11159.82	3.89	5.820	3.875		2154			
		1 Joint of 4-1/2-13.5 LTC Casing	11163.71	43.53	5.000	3.920					
	Zone # 26	3.313 EX-C Frac Sleeve	11207.24	3.55	5.630		3.260	2375	270	398	
26 161.2		2 Joints of 4-1/2-13.5 LTC Casing	11210.79	87.58	5.000	3.920					
		Baker Open Hole Packer # 25	11298.37	3.89	5.820	3.875		2154			

Operating Company Mewbourne
 Well Name & Number San Lorenzo 15 DM FEE # 1H
 Sales Ticket Number _____
 Date 8/25/2012

Company Rep Lynn Simmons
 Field _____
 BOT Service Rep Ricky Harper
 District Location Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151		0.03826	10,630.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,136.87	12,410	10,680
Bott Liner										

TVD	10,523.00	KOP	9,910.00	Open Hole	6.125	Casing Vol. (bbl)	397.7
Carry Fluid Weight (ppg)	8.4		Propan Content (ppa)			Max Drill Out Size	0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
25 125.7		1 Joint of 4-1/2-13.5 LTC Casing	11302.26	43.78	5.000	3.920				
	Zone # 25	3.250 EX-C Frac Sleeve	11346.04	3.55	5.630		3.198	2375	260	398
		2 Joints of 4-1/2-13.5 LTC Casing	11349.59	86.18	5.000	3.920				
24 164.1		Baker Open Hole Packer # 24	11435.77	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	11439.66	43.76	5.000	3.920				
	Zone # 24	3.188 EX-C Frac Sleeve	11483.42	3.55	5.630		3.135	2375	250	398
23 126.1		2 Joints of 4-1/2-13.5 LTC Casing	11486.97	81.80	5.000	3.920				
		Baker Open Hole Packer # 23	11568.77	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	11572.66	37.70	5.000	3.920				
22 164.6	Zone # 23	3.125 EX-C Frac Sleeve	11610.36	3.55	5.630		3.073	2375	240	398
		2 Joints of 4-1/2-13.5 LTC Casing	11613.91	76.09	5.000	3.920				
		Baker Open Hole Packer # 22	11690.00	3.89	5.820	3.875		2154		
21 125.9		1 Joint of 4-1/2-13.5 LTC Casing	11693.89	38.31	5.000	3.920				
	Zone # 22	3.063 EX-C Frac Sleeve	11732.20	3.55	5.630		3.010	2375	230	398
		2 Joints of 4-1/2-13.5 LTC Casing	11735.75	76.58	5.000	3.920				
20 164.5		Baker Open Hole Packer # 21	11812.33	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	11816.22	38.30	5.000	3.920				
	Zone # 21	3.000 EX-C Frac sleeve	11854.52	3.55	5.630		2.948	2375	221	398
19		2 Joints of 4-1/2-13.5 LTC Casing	11858.07	76.03	5.000	3.920				
		Baker Open Hole Packer # 20	11934.10	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11937.99	76.53	5.000	3.920				
	Zone # 20	2.938 EX-C Frac Sleeve	12014.52	3.55	5.630		2.885	2375	212	398
		2 Joints of 4-1/2-13.5 LTC Casing	12018.07	76.67	5.000	3.920				
		Baker Open Hole Packer # 19	12094.74	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	12098.63	38.39	5.000	3.920				
	Zone # 19	2.875 EX-C Frac Sleeve	12137.02	3.55	5.630		2.823	2375	203	398

Operating Company Mewbourne
 Well Name & Number San Lorenzo 15 DM FEE # 11
 Sales Ticket Number
 Date 8/25/2012

Company Rep Lynn Simmons
 Field
 BOT Service Rep Ricky Harper
 District Location Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151		0.03826	10,630.00	9,960	6,230
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,136.87	12,410	10,680
Bott Liner										
TVD	10,523.00		KOP		9,910.00		Open Hole	6.125	Casing Vol. (bbl)	397.7
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size	0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
125.9		2 Joints of 4-1/2-13.5 LTC Casing	12140.57	76.48	5.000	3.920				
		Baker Open Hole Packer # 18	12217.05	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	12220.94	38.36	5.000	3.920				
18	Zone # 18	2.813 EX C Frac Sleeve	12259.30	3.55	5.630		2.760	2375	194	398
126		2 Joints of 4-1/2-13.5 LTC Casing	12262.85	76.55	5.000	3.920				
		Baker Open Hole Packer # 17	12339.40	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	12343.29	76.59	5.000	3.920				
17	Zone # 17	2.750 EX C Frac Sleeve	12419.88	3.55	5.630		2.698	2375	185	398
126.8		2 Joints of 4-1/2-13.5 LTC Casing	12423.43	76.63	5.000	3.920				
		Baker Open Hole Packer # 16	12500.06	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	12503.95	38.28	5.000	3.920				
16	Zone # 16	2.688 EX C Frac Sleeve	12542.23	3.55	5.630		2.635	2375	177	398
126.6		2 Joints of 4-1/2-13.5 LTC Casing	12545.78	74.81	5.000	3.920				
		Baker Open Hole Packer # 15	12620.59	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	12624.48	76.64	5.000	3.920				
15	Zone # 15	2.625 EX C Frac Sleeve	12701.12	3.55	5.630		2.573	2375	168	398
125.2		2 Joints of 4-1/2-13.5 LTC Casing	12704.67	75.74	5.000	3.920				
		Baker Open Hole Packer # 14	12780.41	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	12784.30	76.52	5.000	3.920				
14	Zone # 14	2.563 EX C Frac Sleeve	12860.82	3.55	5.630		2.510	2375	160	398
163.7		2 Joints of 4-1/2-13.5 LTC Casing	12864.37	76.65	5.000	3.920				
		Baker Open Hole Packer # 13	12941.02	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	12944.91	38.31	5.000	3.920				
13	Zone # 13	2.500 EX C Frac Sleeve	12983.22	3.55	5.630		2.448	2375	152	398
124.9		2 Joints of 4-1/2-13.5 LTC Casing	12986.77	76.27	5.000	3.920				
		Baker Open Hole Packer # 12	13063.04	3.89	5.820	3.875		2154		

Operating Company Mewbourne
 Well Name & Number San Lorenzo 15 DM FEE # 11-
 Sales Ticket Number _____
 Date 8/25/2012

Company Rep Lynn Simmons
 Field _____
 BOT Service Rep Ricky Harper
 District Location Odessa, Texas, USA

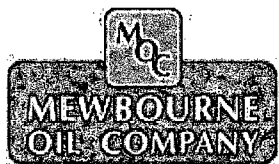


	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	P-110	6.276	6.151		0.03826	10,630.00	9,960	6,230	
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,136.87	12,410	10,680	
Bott Liner											
TVD		10,523.00		KOP		9,910.00		Open Hole	6.125	Casing Vol. (bbl)	397.7
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
12 164.1		2 Joints of 4-1/2-13.5 LTC Casing	13066.93	76.57	5.000	3.920				
	Zone # 12	2.438 EX_C Frac Sleeve	13143.50	3.55	5.630		2.386	2375	145	398
		2 Joints of 4-1/2-13.5 LTC Casing	13147.05	76.56	5.000	3.920				
11 125.7		Baker Open Hole Packer # 11	13223.61	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	13227.50	38.27	5.000	3.920				
	Zone # 11	2.375 EX_C Frac Sleeve	13265.77	3.55	5.630		2.323	2375	137	398
10 164.7		2 Joints of 4-1/2-13.5 LTC Casing	13269.32	76.67	5.000	3.920				
		Baker Open Hole Packer # 10	13345.99	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	13349.88	38.23	5.000	3.920				
9 126.4	Zone # 10	2.313 EX_C Frac Sleeve	13388.11	3.55	5.630		2.261	2375	130	398
		2 Joints of 4-1/2-13.5 LTC Casing	13391.66	76.65	5.000	3.920				
		Baker Open Hole Packer # 9	13468.31	3.89	5.820	3.875		2154		
8 126.6		1 Joint of 4-1/2-13.5 LTC Casing	13472.20	38.24	5.000	3.920				
	Zone # 9	2.250 BS Frac Sleeve	13510.44	3.90	5.630		2.150	2286	115	398
		2 Joints of 4-1/2-13.5 LTC Casing	13514.34	75.97	5.000	3.920				
7 164		Baker Open Hole Packer # 8	13590.31	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	13594.20	38.32	5.000	3.920				
	Zone # 8	2.125 BS Frac Sleeve	13632.52	3.90	5.630		2.025	2286	102	398
6		2 Joints of 4-1/2-13.5 LTC Casing	13636.42	76.70	5.000	3.920				
		Baker Open Hole Packer # 7	13713.12	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	13717.01	37.94	5.000	3.920				
	Zone # 7	2.000 BS Frac Sleeve	13754.95	3.90	5.630		1.900	2286	90	398
		2 Joints of 4-1/2-13.5 LTC Casing	13758.85	76.62	5.000	3.920				
		Baker Open Hole Packer # 6	13835.47	3.89	5.820	3.875		2154		
		1 Joint of 4-1/2-13.5 LTC Casing	13839.36	37.63	5.000	3.920				
	Zone # 6	1.875 BS Frac Sleeve	13876.99	3.90	5.630		1.775	2286	79	398

Company Rep	Lynn Simmons
Field	
BOT Service Rep	Ricky Harper
District Location	Odessa, Texas, USA

[illegible]



Company: Mewbourne Oil Company
Lease/Well: San Lorenzo 15 DM / No. 001H

Rig Name: Patterson 46
State/County: New Mexico / Eddy
Latitude: 32.14

GRID North is 0.13 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 20'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: sanlorenzo15dm1h_run1.ut

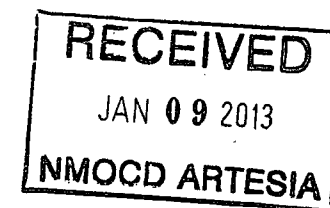
Minimum Curvature Method

Report Date/Time: 8/17/2012 / 10:18

Vaughn Energy Services
Corpus Christi, Texas
800-606-4976

Surveyor: David Miller

San Lorenzo 15 DM No. 001H / API 30-015-40402



Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.10	52.48	100.00	0.05	0.07	0.05	0.09	52.48	0.10
200.00	0.21	104.96	200.00	0.06	0.32	0.06	0.32	78.72	0.17
300.00	0.41	118.30	300.00	-0.15	0.80	-0.15	0.82	100.66	0.21
400.00	0.60	131.65	399.99	-0.67	1.51	-0.67	1.65	113.93	0.23
500.00	0.54	136.34	499.99	-1.36	2.23	-1.36	2.61	121.44	0.08
600.00	0.48	141.04	599.99	-2.03	2.82	-2.03	3.48	125.78	0.07
700.00	0.50	145.94	699.98	-2.72	3.33	-2.72	4.30	129.26	0.04
800.00	0.51	150.84	799.98	-3.47	3.79	-3.47	5.14	132.49	0.05
900.00	0.40	156.46	899.97	-4.19	4.15	-4.19	5.90	135.26	0.12
1000.00	0.29	162.08	999.97	-4.75	4.37	-4.75	6.46	137.40	0.12
1100.00	0.25	169.00	1099.97	-5.21	4.49	-5.21	6.87	139.23	0.05
1200.00	0.21	175.92	1199.97	-5.60	4.54	-5.60	7.21	140.94	0.05
1300.00	0.15	168.10	1299.97	-5.91	4.58	-5.91	7.48	142.19	0.06
1400.00	0.19	163.29	1399.97	-6.20	4.66	-6.20	7.75	143.07	0.05
1500.00	0.24	153.89	1499.97	-6.55	4.80	-6.55	8.12	143.76	0.06
1600.00	0.79	147.50	1599.96	-7.32	5.26	-7.32	9.01	144.28	0.55
1700.00	1.41	141.61	1699.95	-8.86	6.40	-8.86	10.93	144.18	0.64
1800.00	2.04	135.71	1799.90	-11.10	8.41	-11.10	13.93	142.87	0.65

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	2.29	128.92	1899.83	-13.64	11.21	-13.64	17.65	140.58	0.36
2000.00	2.15	122.13	1999.75	-15.89	14.35	-15.89	21.41	137.91	0.30
2100.00	2.52	118.30	2099.67	-17.93	17.88	-17.93	25.32	135.09	0.40
2200.00	2.89	116.46	2199.56	-20.10	22.07	-20.10	29.85	132.32	0.38
2300.00	3.09	114.59	2299.42	-22.34	26.78	-22.34	34.87	129.84	0.22
2400.00	3.29	112.71	2399.27	-24.57	31.88	-24.57	40.25	127.63	0.23
2500.00	2.75	111.54	2499.13	-26.56	36.76	-26.56	45.35	125.85	0.54
2600.00	2.21	109.36	2599.03	-28.08	40.82	-28.08	49.54	124.53	0.55
2700.00	1.74	108.36	2698.97	-29.20	44.08	-29.20	52.87	123.52	0.47
2800.00	1.27	110.36	2798.94	-30.06	46.56	-30.06	55.42	122.85	0.48
2900.00	1.19	112.84	2898.92	-30.85	48.55	-30.85	57.52	122.44	0.09
3000.00	1.11	113.33	2998.90	-31.64	50.40	-31.64	59.51	122.12	0.08
3100.00	0.72	117.94	3098.88	-32.32	51.85	-32.32	61.10	121.94	0.40
3200.00	0.33	120.56	3198.88	-32.77	52.66	-32.77	62.02	121.89	0.39
3300.00	0.30	127.46	3298.88	-33.07	53.12	-33.07	62.57	121.91	0.05
3400.00	0.26	138.37	3398.88	-33.40	53.48	-33.40	63.05	121.99	0.06
3500.00	0.40	144.81	3498.87	-33.86	53.83	-33.86	63.60	122.17	0.14
3600.00	0.54	151.25	3598.87	-34.56	54.26	-34.56	64.33	122.49	0.15
3700.00	0.33	170.36	3698.87	-35.25	54.53	-35.25	64.93	122.88	0.25
3800.00	0.12	189.47	3798.87	-35.63	54.56	-35.63	65.17	123.15	0.22
3900.00	0.14	203.33	3898.87	-35.85	54.50	-35.85	65.23	123.34	0.04
4000.00	0.17	217.19	3998.87	-36.08	54.36	-36.08	65.24	123.58	0.05
4100.00	0.36	225.38	4098.87	-36.42	54.04	-36.42	65.17	123.98	0.19
4200.00	0.55	233.57	4198.86	-36.93	53.43	-36.93	64.95	124.65	0.20
4300.00	0.87	229.42	4298.85	-37.71	52.47	-37.71	64.61	125.71	0.33
4400.00	1.20	225.26	4398.84	-38.94	51.15	-38.94	64.28	127.29	0.33
4500.00	1.06	224.31	4498.82	-40.34	49.75	-40.34	64.05	129.04	0.13
4600.00	0.93	222.36	4598.80	-41.61	48.56	-41.61	63.95	130.59	0.14
4700.00	1.00	223.91	4698.79	-42.84	47.40	-42.84	63.89	132.10	0.07
4800.00	1.07	225.47	4798.77	-44.12	46.13	-44.12	63.84	133.73	0.08
4900.00	0.89	227.38	4898.76	-45.31	44.89	-45.31	63.78	135.26	0.18
5000.00	0.71	229.29	4998.75	-46.24	43.85	-46.24	63.72	136.52	0.18
5100.00	0.64	231.92	5098.74	-46.98	42.94	-46.98	63.65	137.57	0.08
5200.00	0.56	230.55	5198.74	-47.64	42.13	-47.64	63.59	138.51	0.08
5300.00	0.73	231.41	5298.73	-48.35	41.25	-48.35	63.55	139.53	0.17
5400.00	0.89	227.27	5398.72	-49.27	40.18	-49.27	63.58	140.80	0.18
5500.00	0.94	221.78	5498.71	-50.41	39.06	-50.41	63.78	142.23	0.10
5600.00	0.98	219.29	5598.69	-51.68	37.98	-51.68	64.14	143.69	0.06
5700.00	1.08	216.76	5698.68	-53.10	36.87	-53.10	64.65	145.23	0.11

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	1.18	216.23	5798.66	-54.69	35.69	-54.69	65.31	146.87	0.10
5900.00	1.07	217.75	5898.64	-56.27	34.51	-56.27	66.01	148.48	0.11
6000.00	0.97	218.27	5998.62	-57.67	33.41	-57.67	66.65	149.91	0.11
6100.00	1.14	222.21	6098.60	-59.07	32.22	-59.07	67.29	151.39	0.19
6200.00	1.31	228.15	6198.58	-60.57	30.70	-60.57	67.90	153.12	0.21
6300.00	1.77	233.97	6298.55	-62.24	28.60	-62.24	68.50	155.32	0.48
6400.00	2.23	241.78	6398.48	-64.07	25.64	-64.07	69.01	158.19	0.53
6500.00	3.30	251.76	6498.37	-65.89	21.19	-65.89	69.21	162.17	1.17
6600.00	4.36	261.73	6598.14	-67.34	14.69	-67.34	68.92	167.69	1.25
6700.00	3.44	265.65	6697.91	-68.11	7.93	-68.11	68.57	173.36	0.96
6800.00	2.92	269.57	6797.76	-68.36	2.39	-68.36	68.40	178.00	0.56
6900.00	2.75	273.19	6897.63	-68.25	-2.55	-68.25	68.29	182.14	0.25
7000.00	2.98	276.82	6997.51	-67.80	-7.53	-67.80	68.22	186.34	0.29
7100.00	3.34	278.64	7097.36	-67.06	-12.99	-67.06	68.30	190.96	0.38
7200.00	3.71	282.46	7197.17	-65.92	-19.03	-65.92	68.61	196.10	0.43
7300.00	3.15	279.01	7296.99	-64.79	-24.90	-64.79	69.41	201.02	0.59
7400.00	2.59	275.56	7396.86	-64.15	-29.86	-64.15	70.76	204.96	0.58
7500.00	2.33	265.08	7496.77	-64.10	-34.14	-64.10	72.62	208.04	0.52
7600.00	2.07	254.59	7596.70	-64.75	-37.90	-64.75	75.03	210.34	0.48
7700.00	1.87	250.68	7696.64	-65.77	-41.18	-65.77	77.60	212.05	0.24
7800.00	1.68	246.77	7796.59	-66.89	-44.06	-66.89	80.10	213.37	0.23
7900.00	1.90	242.98	7896.54	-68.22	-46.88	-68.22	82.78	214.50	0.25
8000.00	2.12	239.18	7996.48	-69.92	-49.95	-69.92	85.93	215.54	0.26
8100.00	2.11	244.27	8096.41	-71.66	-53.19	-71.66	89.25	216.58	0.19
8200.00	2.09	247.36	8196.34	-73.16	-56.53	-73.16	92.46	217.69	0.11
8300.00	2.08	250.66	8296.28	-74.47	-59.92	-74.47	95.58	218.82	0.12
8400.00	1.96	253.95	8396.22	-75.54	-63.28	-75.54	98.54	219.95	0.16
8500.00	1.43	259.18	8496.17	-76.25	-66.15	-76.25	100.94	220.94	0.55
8600.00	0.80	264.40	8596.15	-76.55	-68.06	-76.55	102.43	221.64	0.64
8700.00	0.69	263.10	8696.14	-76.69	-69.35	-76.69	103.40	222.12	0.11
8800.00	0.71	261.80	8796.14	-76.85	-70.56	-76.85	104.33	222.56	0.02
8900.00	0.74	260.89	8896.13	-77.04	-71.81	-77.04	105.32	222.99	0.03
9000.00	0.89	259.98	8996.12	-77.28	-73.21	-77.28	106.45	223.45	0.15
9100.00	0.85	256.55	9096.11	-77.59	-74.70	-77.59	107.70	223.91	0.06
9200.00	0.83	255.13	9196.10	-77.95	-76.12	-77.95	108.95	224.32	0.03
9300.00	0.79	257.27	9296.09	-78.28	-77.49	-78.28	110.15	224.71	0.05
9400.00	0.81	261.41	9396.08	-78.54	-78.86	-78.54	111.29	225.12	0.06
9500.00	0.81	262.95	9496.07	-78.73	-80.26	-78.73	112.43	225.55	0.02
9600.00	0.89	264.49	9596.06	-78.89	-81.74	-78.89	113.60	226.01	0.08

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
9700.00	0.56	269.03	9696.05	-78.98	-83.00	-78.98	114.57	226.42	0.34
9789.00	0.47	270.03	9785.04	-78.98	-83.80	-78.98	115.16	226.70	0.10

OPERATOR
WELL/LEASE
COUNTY

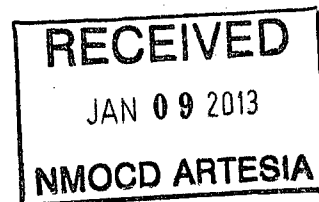
MEWBOURNE OIL COMPANY
SAN LORENZO 15 DM # 1H
EDDY

046-0080

STATE OF NEW MEXICO
DEVIATION REPORT

200	0.33
614	0.75
1,026	0.41
1,343	0.32
1,628	0.90
1,787	0.52
1,946	2.64
2,073	3.23
2,231	2.00
2,430	3.51
2,681	1.99
2,932	1.13
3,186	0.99
3,598	0.55
3,979	0.33
4,296	0.92
4,708	1.29
5,120	0.75
5,533	1.00
5,913	1.24
6,261	1.05
6,736	4.00
6,831	3.04
6,927	2.30
7,054	3.00
7,275	3.85
7,402	2.60
7,529	2.68
7,782	1.73
7,910	1.94
8,036	2.67
8,164	2.53
8,291	1.78
8,418	2.09
8,545	1.77
8,672	0.66

8,798	0.34
9,083	1.00
9,433	1.23



STATE OF TEXAS

COUNTY OF MIDLAND

BY: Kyle Hollingsworth

The foregoing instrument was acknowledged before me on 9/14/12, by
Kyle Hollingsworth on behalf of Patterson-UTI Drilling Company LLC.

Shawna K. Sims
Notary Public for Midland County, Texas
My Commission Expires:

