COMPANY: Mewbourne Oil Company .
WELL: Red Hills West Unit #011H
COUNTY: Lea County N.M.
DATUM: NAD 1927 (NADCON CONUS)
RIG: Patterson #36
GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.84°

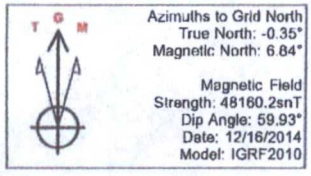
OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico East 3001
3250 + 20 @ 3270.0usft (Patterson #36)
GROUND ELEVATION: 3250.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	387618.90	705407.90	32° 3' 50.202 N	103° 40' 12.942 W	

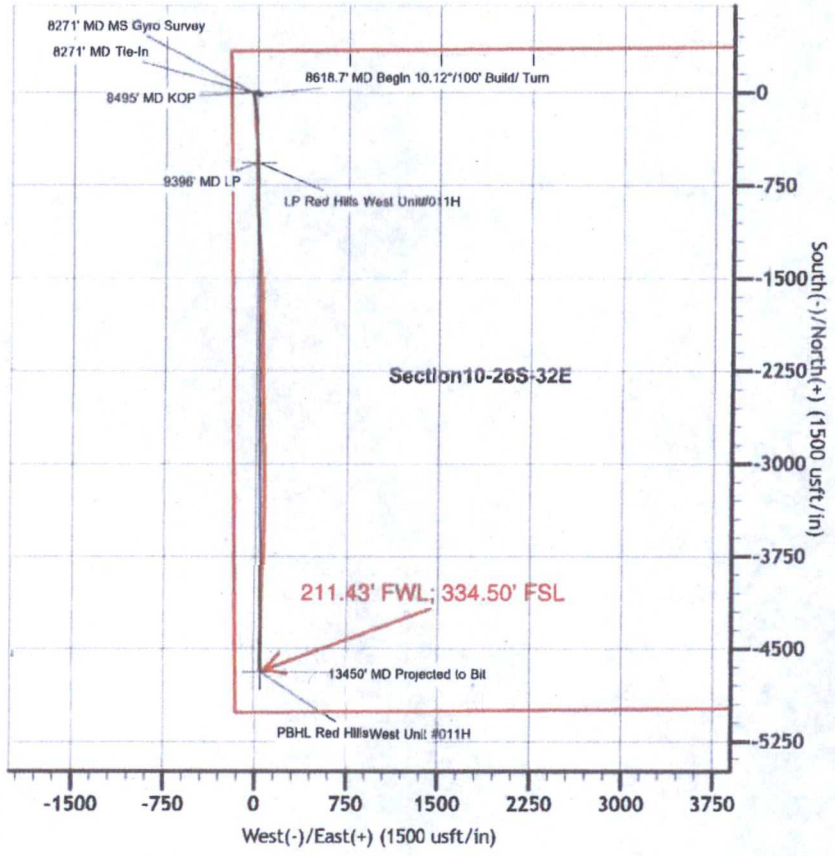
PLAN SECTIONS

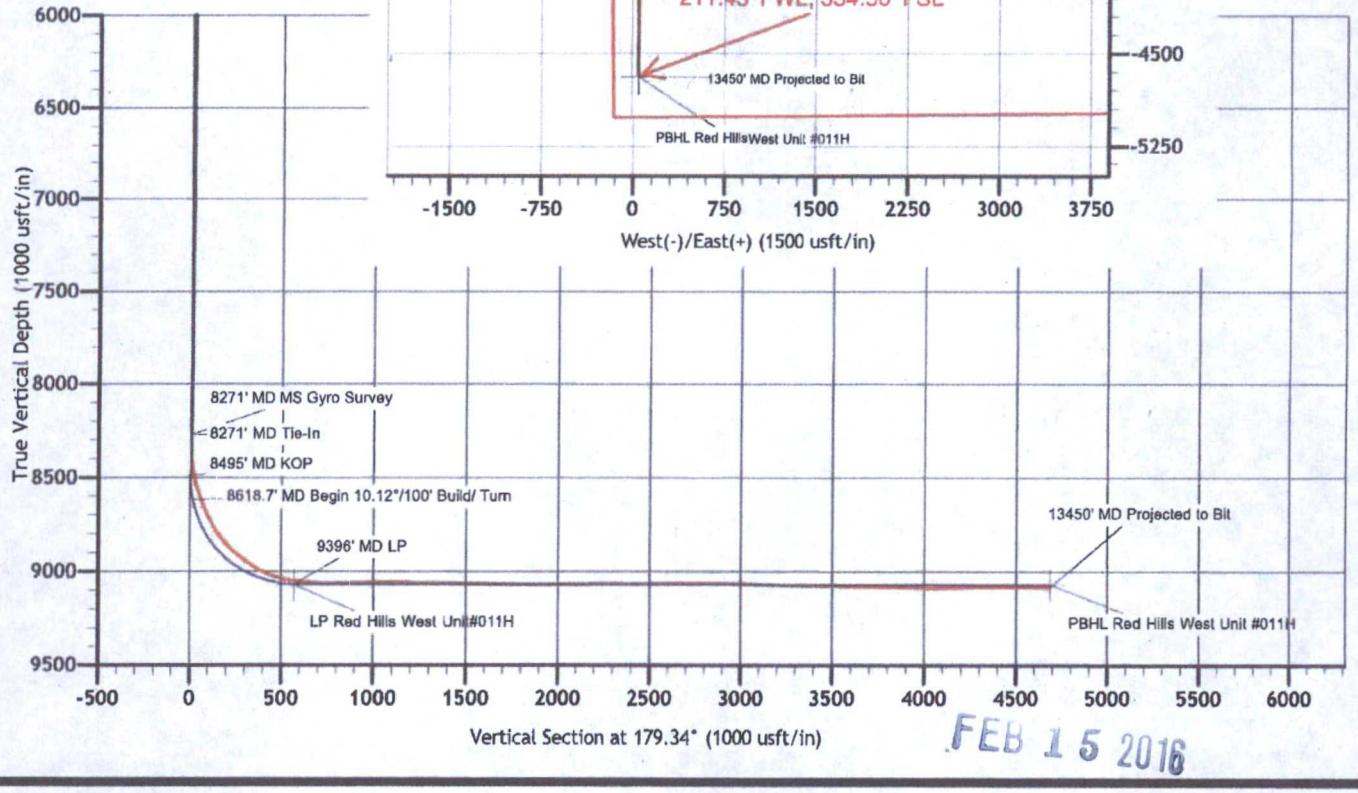
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	8271.0	1.08	262.82	8269.7	-3.4	-35.7	0.00	0.00	2.9	
2	8495.0	1.08	262.82	8493.7	-3.9	-39.9	0.00	0.00	3.4	
3	8618.7	12.20	157.49	8616.5	-16.1	-36.0	10.12	-110.03	15.7	
4	9396.0	90.00	179.34	9070.0	-570.6	6.8	10.12	22.31	570.7	LP Red Hill Unit#011H
5	13512.9	90.00	179.34	9070.0	-4687.3	54.1	0.00	0.00	4687.6	PBHL Red Hill Unit #011H



Azimuths to Grid North
True North: -0.35°
Magnetic North: 6.84°

Magnetic Field
Strength: 48160.2snT
Dip Angle: 59.93°
Date: 12/16/2014
Model: IGRF2010





FEB 15 2016

Mewbourne Oil Company .

Lea County N.M.
Section10-26S-32E Red Hills West Unit #011H
Red Hills West Unit #011H

Original Hole

Design: Original Hole

Standard Survey Report

02 February, 2015

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West Unit #011H
Project:	Lea County N.M.	**TVD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Site:	Section10-26S-32E Red Hills West Unit #011H	**MD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Well:	Red Hills West Unit #011H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

Project	Lea County N.M.		
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	Section10-26S-32E Red Hills West Unit #011H				
Site Position:		**Northing:**	387,618.90 usft	**Latitude:**	32° 3' 50.202 N
From:	Map	**Easting:**	705,407.90 usft	**Longitude:**	103° 40' 12.942 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.35 °

Well	Red Hills West Unit #011H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	387,618.90 usft	**Latitude:**	32° 3' 50.202 N
	+E/-W	0.0 usft	**Easting:**	705,407.90 usft	**Longitude:**	103° 40' 12.942 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,250.0 usft

Wellbore	Original Hole			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	12/16/2014	7.19	59.93	48,160

Design	Original Hole				
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	179.34

Survey Program **Date** 1/5/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	8,271.0	MS Gyro Survey (Original Hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline
8,332.0	13,450.0	MWD Survey (Original Hole)	MWD	MWD v3:standard declination

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.33	292.99	100.0	0.1	-0.3	-0.1	0.33	0.33	0.00
200.0	0.21	236.51	200.0	0.1	-0.7	-0.1	0.28	-0.12	-56.48
300.0	0.14	302.75	300.0	0.1	-0.9	-0.1	0.20	-0.07	66.24
400.0	0.21	155.21	400.0	0.0	-1.0	0.0	0.34	0.07	-147.54
500.0	1.15	126.68	500.0	-0.8	-0.1	0.8	0.97	0.94	-28.53
600.0	1.48	127.47	600.0	-2.2	1.7	2.2	0.33	0.33	0.79
700.0	2.01	134.82	699.9	-4.2	4.0	4.2	0.57	0.53	7.35
800.0	2.75	136.04	799.8	-7.1	6.9	7.2	0.74	0.74	1.22
900.0	3.23	137.21	899.7	-10.9	10.5	11.1	0.48	0.48	1.17

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West Unit #011H
Project:	Lea County N.M.	**TVD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Site:	Section10-26S-32E Red Hills West Unit #011H	**MD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Well:	Red Hills West Unit #011H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

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)
1,000.0	3.28	136.95	999.5	-15.1	14.4	15.3	0.05	0.05	-0.26
1,100.0	2.61	130.49	1,099.4	-18.7	18.1	18.9	0.75	-0.67	-6.46
1,200.0	0.91	94.91	1,199.4	-20.2	20.6	20.5	1.94	-1.70	-35.58
1,300.0	0.25	274.00	1,299.3	-20.3	21.2	20.5	1.16	-0.66	179.09
1,400.0	0.38	174.50	1,399.3	-20.6	21.0	20.8	0.49	0.13	-99.50
1,500.0	0.16	61.29	1,499.3	-20.8	21.1	21.1	0.47	-0.22	-113.21
1,600.0	0.10	338.45	1,599.3	-20.7	21.2	20.9	0.18	-0.06	-82.84
1,700.0	0.10	359.05	1,699.3	-20.5	21.2	20.8	0.04	0.00	20.60
1,800.0	0.14	200.43	1,799.3	-20.6	21.1	20.8	0.24	0.04	-158.62
1,900.0	0.17	133.07	1,899.3	-20.8	21.2	21.0	0.17	0.03	-67.36
2,000.0	0.09	95.44	1,999.3	-20.9	21.4	21.1	0.11	-0.08	-37.63
2,100.0	0.09	4.83	2,099.3	-20.8	21.5	21.1	0.13	0.00	-90.61
2,200.0	0.12	203.42	2,199.3	-20.8	21.4	21.1	0.21	0.03	-161.41
2,300.0	0.18	135.45	2,299.3	-21.0	21.5	21.3	0.17	0.06	-67.97
2,400.0	0.20	37.73	2,399.3	-21.0	21.7	21.3	0.29	0.02	-97.72
2,500.0	0.12	246.62	2,499.3	-20.9	21.7	21.2	0.31	-0.08	-151.11
2,600.0	0.19	155.41	2,599.3	-21.1	21.7	21.4	0.23	0.07	-91.21
2,700.0	0.14	80.07	2,699.3	-21.2	21.9	21.5	0.21	-0.05	-75.34
2,800.0	0.30	12.15	2,799.3	-21.0	22.1	21.2	0.28	0.16	-67.92
2,900.0	0.64	264.79	2,899.3	-20.8	21.6	21.0	0.78	0.34	-107.36
3,000.0	0.45	112.42	2,999.3	-21.0	21.4	21.2	1.06	-0.19	-152.37
3,100.0	0.79	57.15	3,099.3	-20.7	22.3	21.0	0.65	0.34	-55.27
3,200.0	0.70	14.29	3,199.3	-19.8	23.0	20.0	0.55	-0.09	-42.86
3,300.0	0.39	307.43	3,299.3	-19.0	22.9	19.2	0.65	-0.31	-66.86
3,400.0	0.19	72.03	3,399.3	-18.7	22.8	19.0	0.52	-0.20	124.60
3,500.0	0.14	294.41	3,499.3	-18.6	22.9	18.9	0.31	-0.05	-137.62
3,600.0	0.33	66.87	3,599.3	-18.4	23.0	18.7	0.44	0.19	132.46
3,700.0	0.14	302.62	3,699.3	-18.3	23.2	18.5	0.42	-0.19	-124.25
3,800.0	0.27	66.46	3,799.3	-18.1	23.3	18.4	0.37	0.13	123.84
3,900.0	0.24	14.65	3,899.3	-17.8	23.6	18.1	0.22	-0.03	-51.81
4,000.0	0.04	340.91	3,999.3	-17.6	23.6	17.8	0.21	-0.20	-33.74
4,100.0	0.38	151.46	4,099.3	-17.8	23.7	18.1	0.42	0.34	170.55
4,200.0	0.67	132.88	4,199.3	-18.5	24.3	18.8	0.33	0.29	-18.58
4,300.0	0.44	103.50	4,299.3	-19.0	25.1	19.3	0.36	-0.23	-29.38
4,400.0	0.32	274.25	4,399.3	-19.1	25.2	19.4	0.76	-0.12	170.75
4,500.0	0.51	281.07	4,499.3	-19.0	24.5	19.2	0.20	0.19	6.82
4,600.0	0.52	282.76	4,599.3	-18.8	23.6	19.1	0.02	0.01	1.69
4,700.0	0.56	288.61	4,699.3	-18.5	22.7	18.8	0.07	0.04	5.85
4,800.0	0.52	290.53	4,799.3	-18.2	21.8	18.5	0.04	-0.04	1.92
4,900.0	0.51	268.65	4,899.3	-18.1	21.0	18.3	0.20	-0.01	-21.88
5,000.0	0.60	269.19	4,999.3	-18.1	20.0	18.3	0.09	0.09	0.54
5,100.0	0.69	276.37	5,099.3	-18.0	18.9	18.2	0.12	0.09	7.18
5,200.0	0.69	262.36	5,199.3	-18.0	17.7	18.2	0.17	0.00	-14.01

Stryker Directional

Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West Unit #011H
Project:	Lea County N.M.	**TVD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Site:	Section10-26S-32E Red Hills West Unit #011H	**MD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Well:	Red Hills West Unit #011H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

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)
5,300.0	0.75	271.29	5,299.3	-18.1	16.4	18.3	0.13	0.06	8.93
5,400.0	0.58	283.17	5,399.3	-18.0	15.3	18.1	0.22	-0.17	11.88
5,500.0	0.58	270.69	5,499.3	-17.8	14.3	18.0	0.13	0.00	-12.48
5,600.0	0.77	271.35	5,599.2	-17.8	13.1	18.0	0.19	0.19	0.66
5,700.0	0.93	278.97	5,699.2	-17.7	11.6	17.8	0.20	0.16	7.62
5,800.0	0.92	286.06	5,799.2	-17.3	10.1	17.4	0.11	-0.01	7.09
5,900.0	0.78	290.99	5,899.2	-16.9	8.7	17.0	0.16	-0.14	4.93
6,000.0	0.87	291.16	5,999.2	-16.4	7.3	16.4	0.09	0.09	0.17
6,100.0	0.90	291.06	6,099.2	-15.8	5.9	15.9	0.03	0.03	-0.10
6,200.0	0.87	286.76	6,199.2	-15.3	4.4	15.3	0.07	-0.03	-4.30
6,300.0	0.86	285.84	6,299.2	-14.9	3.0	14.9	0.02	-0.01	-0.92
6,400.0	0.93	277.11	6,399.2	-14.6	1.4	14.6	0.15	0.07	-8.73
6,500.0	1.21	289.67	6,499.1	-14.1	-0.4	14.1	0.36	0.28	12.56
6,600.0	1.20	299.61	6,599.1	-13.2	-2.3	13.2	0.21	-0.01	9.94
6,700.0	1.15	289.28	6,699.1	-12.4	-4.1	12.3	0.22	-0.05	-10.33
6,800.0	1.27	297.25	6,799.1	-11.5	-6.1	11.5	0.21	0.12	7.97
6,900.0	1.07	294.88	6,899.0	-10.6	-7.9	10.6	0.21	-0.20	-2.37
7,000.0	1.42	295.88	6,999.0	-9.7	-9.9	9.6	0.35	0.35	1.00
7,100.0	1.11	298.92	7,099.0	-8.7	-11.8	8.6	0.32	-0.31	3.04
7,200.0	1.12	299.68	7,199.0	-7.8	-13.5	7.6	0.02	0.01	0.76
7,300.0	1.14	290.87	7,299.0	-6.9	-15.3	6.7	0.17	0.02	-8.81
7,400.0	1.19	282.03	7,398.9	-6.3	-17.2	6.1	0.19	0.05	-8.84
7,500.0	1.43	281.18	7,498.9	-5.9	-19.5	5.7	0.24	0.24	-0.85
7,600.0	1.39	284.92	7,598.9	-5.3	-21.9	5.1	0.10	-0.04	3.74
7,700.0	1.20	284.57	7,698.9	-4.8	-24.1	4.5	0.19	-0.19	-0.35
7,800.0	1.19	276.46	7,798.8	-4.4	-26.1	4.1	0.17	-0.01	-8.11
7,900.0	1.28	274.77	7,898.8	-4.2	-28.2	3.8	0.10	0.09	-1.69
8,000.0	1.28	281.65	7,998.8	-3.8	-30.5	3.5	0.15	0.00	6.88
8,100.0	1.06	281.33	8,098.8	-3.4	-32.5	3.1	0.22	-0.22	-0.32
8,200.0	1.12	269.58	8,198.7	-3.3	-34.3	2.9	0.23	0.06	-11.75
8,271.0	1.08	262.82	8,269.7	-3.4	-35.7	2.9	0.19	-0.06	-9.52
8271' MD MS Gyro Survey									
8,332.0	0.90	269.10	8,330.7	-3.4	-36.7	3.0	0.34	-0.30	10.30
8,364.0	1.00	245.10	8,362.7	-3.6	-37.2	3.1	1.27	0.31	-75.00
8,395.0	3.30	175.70	8,393.7	-4.6	-37.4	4.1	9.98	7.42	-223.87
8,427.0	6.90	167.20	8,425.6	-7.4	-36.9	6.9	11.46	11.25	-26.56
8,459.0	11.60	165.70	8,457.1	-12.3	-35.7	11.9	14.71	14.69	-4.69
8,491.0	14.60	167.60	8,488.3	-19.4	-34.0	19.0	9.47	9.38	5.94
8,522.0	16.40	168.60	8,518.2	-27.5	-32.3	27.1	5.87	5.81	3.23
8,554.0	18.70	169.70	8,548.7	-37.0	-30.5	36.6	7.26	7.19	3.44
8,585.0	20.20	171.10	8,577.9	-47.2	-28.8	46.8	5.07	4.84	4.52
8,617.0	20.30	170.60	8,607.9	-58.1	-27.1	57.8	0.62	0.31	-1.56
8,649.0	21.60	172.70	8,637.8	-69.4	-25.4	69.1	4.69	4.06	6.56

Stryker Directional

Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West Unit #011H
Project:	Lea County N.M.	**TVD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Site:	Section10-26S-32E Red Hills West Unit #011H	**MD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Well:	Red Hills West Unit #011H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

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)
8,681.0	22.80	177.80	8,667.5	-81.5	-24.4	81.2	7.09	3.75	15.94
8,712.0	24.40	180.80	8,695.9	-93.9	-24.3	93.6	6.45	5.16	9.68
8,744.0	26.20	179.80	8,724.8	-107.5	-24.3	107.3	5.78	5.63	-3.13
8,776.0	29.30	177.30	8,753.1	-122.4	-23.9	122.1	10.35	9.69	-7.81
8,808.0	33.70	175.90	8,780.4	-139.1	-22.9	138.8	13.94	13.75	-4.38
8,839.0	38.10	175.80	8,805.5	-157.2	-21.6	157.0	14.19	14.19	-0.32
8,871.0	41.00	175.50	8,830.2	-177.6	-20.1	177.3	9.08	9.06	-0.94
8,903.0	42.70	176.10	8,854.0	-198.8	-18.5	198.6	5.46	5.31	1.88
8,935.0	45.10	176.70	8,877.1	-221.0	-17.1	220.8	7.61	7.50	1.88
8,966.0	47.00	177.20	8,898.6	-243.3	-15.9	243.1	6.24	6.13	1.61
8,998.0	52.90	176.20	8,919.2	-267.7	-14.5	267.5	18.59	18.44	-3.13
9,030.0	52.90	176.20	8,938.5	-293.2	-12.8	293.0	0.00	0.00	0.00
9,062.0	56.10	175.90	8,957.0	-319.2	-11.0	319.0	10.03	10.00	-0.94
9,098.0	57.90	176.30	8,976.6	-349.3	-9.0	349.2	5.09	5.00	1.11
9,125.0	61.30	176.50	8,990.3	-372.5	-7.5	372.4	12.61	12.59	0.74
9,152.0	64.30	176.80	9,002.6	-396.5	-6.1	396.4	11.15	11.11	1.11
9,189.0	66.30	178.10	9,018.1	-430.1	-4.6	430.0	6.28	5.41	3.51
9,221.0	70.00	179.00	9,030.0	-459.8	-3.9	459.7	11.85	11.56	2.81
9,253.0	75.30	180.20	9,039.6	-490.3	-3.7	490.2	16.94	16.56	3.75
9,284.0	78.60	180.70	9,046.6	-520.5	-3.9	520.4	10.76	10.65	1.61
9,316.0	80.70	180.80	9,052.3	-552.0	-4.3	551.9	6.57	6.56	0.31
9,347.0	82.80	180.10	9,056.7	-582.6	-4.6	582.6	7.13	6.77	-2.26
9,381.0	84.30	178.60	9,060.6	-616.4	-4.2	616.3	6.22	4.41	-4.41
9,413.0	85.80	177.60	9,063.3	-648.3	-3.1	648.2	5.63	4.69	-3.13
9,444.0	87.20	178.20	9,065.2	-679.2	-2.0	679.1	4.91	4.52	1.94
9,476.0	88.60	178.30	9,066.4	-711.2	-1.0	711.1	4.39	4.38	0.31
9,507.0	89.10	178.10	9,067.0	-742.1	0.0	742.1	1.74	1.61	-0.65
9,539.0	89.80	178.60	9,067.3	-774.1	0.9	774.1	2.69	2.19	1.56
9,603.0	91.50	179.30	9,066.6	-838.1	2.1	838.1	2.87	2.66	1.09
9,666.0	91.30	178.20	9,065.1	-901.1	3.4	901.1	1.77	-0.32	-1.75
9,730.0	91.10	177.80	9,063.7	-965.0	5.7	965.0	0.70	-0.31	-0.63
9,793.0	90.50	176.60	9,062.8	-1,027.9	8.7	1,028.0	2.13	-0.95	-1.90
9,857.0	89.90	176.90	9,062.6	-1,091.8	12.4	1,091.9	1.05	-0.94	0.47
9,920.0	89.10	176.60	9,063.2	-1,154.7	15.9	1,154.8	1.36	-1.27	-0.48
9,984.0	90.00	176.70	9,063.7	-1,218.6	19.7	1,218.8	1.41	1.41	0.16
10,047.0	89.00	176.60	9,064.2	-1,281.5	23.4	1,281.7	1.60	-1.59	-0.16
10,111.0	88.80	176.80	9,065.4	-1,345.4	27.0	1,345.6	0.44	-0.31	0.31
10,174.0	88.90	177.30	9,066.7	-1,408.3	30.3	1,408.6	0.81	0.16	0.79
10,238.0	89.30	175.90	9,067.7	-1,472.2	34.1	1,472.5	2.27	0.63	-2.19
10,302.0	88.50	175.80	9,068.9	-1,536.0	38.7	1,536.3	1.26	-1.25	-0.16
10,365.0	89.70	177.10	9,069.9	-1,598.9	42.6	1,599.3	2.81	1.90	2.06
10,429.0	89.00	180.20	9,070.7	-1,662.8	44.1	1,663.2	4.97	-1.09	4.84
10,492.0	89.00	180.20	9,071.8	-1,725.8	43.9	1,726.2	0.00	0.00	0.00
10,555.0	89.80	179.90	9,072.4	-1,788.8	43.8	1,789.2	1.36	1.27	-0.48

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West Unit #011H
Project:	Lea County N.M.	**TVD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Site:	Section10-26S-32E Red Hills West Unit #011H	**MD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Well:	Red Hills West Unit #011H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

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)
10,619.0	90.20	179.20	9,072.4	-1,852.8	44.3	1,853.2	1.26	0.63	-1.09
10,682.0	91.00	178.80	9,071.8	-1,915.8	45.4	1,916.2	1.42	1.27	-0.63
10,746.0	90.60	178.80	9,070.9	-1,979.8	46.8	1,980.2	0.63	-0.63	0.00
10,809.0	91.10	179.10	9,069.9	-2,042.8	47.9	2,043.2	0.93	0.79	0.48
10,873.0	90.00	180.10	9,069.3	-2,106.8	48.4	2,107.2	2.32	-1.72	1.56
10,936.0	90.60	179.80	9,069.0	-2,169.8	48.4	2,170.2	1.06	0.95	-0.48
10,999.0	91.00	178.70	9,068.1	-2,232.7	49.3	2,233.2	1.86	0.63	-1.75
11,063.0	89.90	178.20	9,067.6	-2,296.7	51.0	2,297.2	1.89	-1.72	-0.78
11,125.0	89.90	178.40	9,067.7	-2,358.7	52.8	2,359.1	0.32	0.00	0.32
11,188.0	90.40	177.90	9,067.5	-2,421.7	54.9	2,422.1	1.12	0.79	-0.79
11,252.0	89.80	178.10	9,067.4	-2,485.6	57.1	2,486.1	0.99	-0.94	0.31
11,315.0	90.30	178.30	9,067.4	-2,548.6	59.1	2,549.1	0.85	0.79	0.32
11,379.0	89.60	179.10	9,067.4	-2,612.6	60.5	2,613.1	1.66	-1.09	1.25
11,442.0	90.30	179.00	9,067.5	-2,675.6	61.6	2,676.1	1.12	1.11	-0.16
11,506.0	91.30	179.00	9,066.6	-2,739.5	62.7	2,740.1	1.56	1.56	0.00
11,569.0	90.60	178.80	9,065.6	-2,802.5	63.9	2,803.1	1.16	-1.11	-0.32
11,633.0	89.70	178.30	9,065.4	-2,866.5	65.5	2,867.1	1.61	-1.41	-0.78
11,694.0	88.30	178.40	9,066.5	-2,927.5	67.3	2,928.0	2.30	-2.30	0.16
11,758.0	88.40	177.90	9,068.3	-2,991.4	69.3	2,992.0	0.80	0.16	-0.78
11,821.0	88.50	179.30	9,070.0	-3,054.4	70.9	3,055.0	2.23	0.16	2.22
11,884.0	88.70	178.80	9,071.5	-3,117.3	71.9	3,118.0	0.85	0.32	-0.79
11,947.0	88.10	179.80	9,073.3	-3,180.3	72.7	3,180.9	1.85	-0.95	1.59
12,011.0	87.60	179.50	9,075.7	-3,244.3	73.1	3,244.9	0.91	-0.78	-0.47
12,074.0	89.10	180.70	9,077.5	-3,307.2	73.0	3,307.9	3.05	2.38	1.90
12,138.0	88.50	180.20	9,078.9	-3,371.2	72.5	3,371.8	1.22	-0.94	-0.78
12,202.0	89.20	181.00	9,080.1	-3,435.2	71.8	3,435.8	1.66	1.09	1.25
12,265.0	89.90	181.50	9,080.6	-3,498.2	70.4	3,498.8	1.37	1.11	0.79
12,328.0	88.70	181.40	9,081.4	-3,561.2	68.8	3,561.7	1.91	-1.90	-0.16
12,392.0	89.10	181.40	9,082.6	-3,625.1	67.3	3,625.7	0.63	0.63	0.00
12,455.0	89.60	181.30	9,083.3	-3,688.1	65.8	3,688.6	0.81	0.79	-0.16
12,519.0	89.80	180.70	9,083.7	-3,752.1	64.7	3,752.6	0.99	0.31	-0.94
12,582.0	88.70	181.00	9,084.5	-3,815.1	63.7	3,815.6	1.81	-1.75	0.48
12,646.0	88.10	180.60	9,086.3	-3,879.0	62.8	3,879.5	1.13	-0.94	-0.63
12,709.0	89.20	180.50	9,087.8	-3,942.0	62.2	3,942.5	1.75	1.75	-0.16
12,772.0	89.30	180.70	9,088.6	-4,005.0	61.6	4,005.5	0.35	0.16	0.32
12,836.0	89.50	180.70	9,089.3	-4,069.0	60.8	4,069.4	0.31	0.31	0.00
12,900.0	90.80	181.50	9,089.1	-4,133.0	59.6	4,133.4	2.39	2.03	1.25
12,963.0	92.40	181.40	9,087.3	-4,195.9	58.0	4,196.3	2.54	2.54	-0.16
13,027.0	90.60	181.40	9,085.7	-4,259.9	56.4	4,260.3	2.81	-2.81	0.00
13,090.0	90.70	181.10	9,085.0	-4,322.9	55.0	4,323.2	0.50	0.16	-0.48
13,154.0	90.00	180.80	9,084.6	-4,386.9	54.0	4,387.2	1.19	-1.09	-0.47
13,217.0	89.50	180.90	9,084.8	-4,449.9	53.0	4,450.2	0.81	-0.79	0.16
13,281.0	90.00	180.40	9,085.1	-4,513.9	52.3	4,514.2	1.10	0.78	-0.78

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West Unit #011H
Project:	Lea County N.M.	**TVD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Site:	Section10-26S-32E Red Hills West Unit #011H	**MD Reference:**	3250 + 20 @ 3270.0usft (Patterson #36)
Well:	Red Hills West Unit #011H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Original Hole	**Database:**	Stryker_EDM

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)
13,344.0	89.50	179.80	9,085.4	-4,576.9	52.2	4,577.2	1.24	-0.79	-0.95
13,405.0	88.90	181.20	9,086.2	-4,637.8	51.7	4,638.1	2.50	-0.98	2.30
13,450.0	88.90	181.20	9,087.1	-4,682.8	50.7	4,683.1	0.00	0.00	0.00
13450' MD Projected to Bit									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,271.0	8,269.7	-3.4	-35.7	8271' MD MS Gyro Survey
13,450.0	9,087.1	-4,682.8	50.7	13450' MD Projected to Bit

MS Energy Services

Job Number: SVMO-140732
Company: Mewbourne Oil & Gas
Lease/Well: Red Hills West Unit 011H
Location: Lea County, NM
Rig Name: Patterson #36
RKB: 20'
G.L. or M.S.L.: GL

State/Country: New Mexico/USA
Declination: 6.87°
Grid: East To Grid North
File name: S:\2014SU~1\MEWBOU~1\MO\REDHIL~1\UNIT\011H.SVY
Date/Time: 29-Dec-14 / 14:23
Curve Name: Surface - 8271' M.D. (Rate Gyro)

MS Survey

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane .00
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from Surface MD to 8271 MD is, to the best of our knowledge a true and accurate account of the well bore.

Shawn Cooper 12/29/14
MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.33	292.99	100.00	.11	-.27	.11	.29	292.99	.33
200.00	.21	236.51	200.00	.12	-.68	.12	.69	280.28	.28
300.00	.14	302.75	300.00	.09	-.94	.09	.94	275.41	.20
400.00	.21	155.21	400.00	-.01	-.96	-.01	.96	269.32	.34
500.00	1.15	126.68	499.99	-.78	-.08	-.78	.78	186.09	.97
600.00	1.48	127.47	599.96	-2.16	1.75	-2.16	2.78	141.07	.33
700.00	2.01	134.82	699.92	-4.18	4.02	-4.18	5.80	136.18	.57
800.00	2.75	136.04	799.83	-7.15	6.92	-7.15	9.95	135.90	.74
900.00	3.23	137.21	899.69	-10.94	10.50	-10.94	15.17	136.17	.48
1000.00	3.28	136.95	999.53	-15.10	14.37	-15.10	20.84	136.42	.05
1100.00	2.61	130.49	1099.40	-18.67	18.06	-18.67	25.97	135.96	.75
1200.00	.91	94.91	1199.35	-20.21	20.58	-20.21	28.85	134.49	1.94

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
1300.00	.25	274.00	1299.35	-20.27	21.15	-20.27	29.29	133.78	1.16
1400.00	.38	174.50	1399.35	-20.58	20.97	-20.58	29.38	134.47	.49
1500.00	.16	61.29	1499.35	-20.85	21.12	-20.85	29.67	134.62	.47
1600.00	.10	338.45	1599.35	-20.70	21.21	-20.70	29.64	134.30	.18
1700.00	.10	359.05	1699.35	-20.53	21.18	-20.53	29.49	134.11	.04
1800.00	.14	200.43	1799.35	-20.56	21.13	-20.56	29.48	134.21	.24
1900.00	.17	133.07	1899.35	-20.77	21.20	-20.77	29.68	134.42	.17
2000.00	.09	95.44	1999.35	-20.88	21.39	-20.88	29.89	134.32	.11
2100.00	.09	4.83	2099.35	-20.81	21.47	-20.81	29.90	134.11	.13
2200.00	.12	203.42	2199.34	-20.83	21.43	-20.83	29.89	134.18	.21
2300.00	.18	135.45	2299.34	-21.04	21.50	-21.04	30.08	134.37	.17
2400.00	.20	37.73	2399.34	-21.01	21.72	-21.01	30.22	134.05	.29
2500.00	.12	246.62	2499.34	-20.91	21.73	-20.91	30.16	133.90	.31
2600.00	.19	155.41	2599.34	-21.11	21.70	-21.11	30.27	134.20	.23
2700.00	.14	80.07	2699.34	-21.24	21.89	-21.24	30.50	134.13	.21
2800.00	.30	12.15	2799.34	-20.96	22.07	-20.96	30.43	133.52	.28
2900.00	.64	264.79	2899.34	-20.75	21.57	-20.75	29.93	133.90	.78
3000.00	.45	112.42	2999.34	-20.95	21.37	-20.95	29.93	134.43	1.06
3100.00	.79	57.15	3099.33	-20.73	22.32	-20.73	30.46	132.89	.65
3200.00	.70	14.29	3199.33	-19.76	23.05	-19.76	30.36	130.61	.55
3300.00	.39	307.43	3299.32	-18.96	22.93	-18.96	29.75	129.60	.65
3400.00	.19	72.03	3399.32	-18.71	22.81	-18.71	29.50	129.35	.52
3500.00	.14	294.41	3499.32	-18.60	22.86	-18.60	29.47	129.14	.31
3600.00	.33	66.87	3599.32	-18.44	23.01	-18.44	29.49	128.70	.44
3700.00	.14	302.62	3699.32	-18.26	23.18	-18.26	29.51	128.24	.42
3800.00	.27	66.46	3799.32	-18.10	23.29	-18.10	29.50	127.86	.37
3900.00	.24	14.65	3899.32	-17.81	23.56	-17.81	29.53	127.08	.22
4000.00	.04	340.91	3999.32	-17.57	23.60	-17.57	29.42	126.67	.21
4100.00	.38	151.46	4099.32	-17.83	23.75	-17.83	29.69	126.90	.42
4200.00	.67	132.88	4199.31	-18.52	24.33	-18.52	30.58	127.27	.33
4300.00	.44	103.50	4299.31	-19.00	25.14	-19.00	31.51	127.09	.36
4400.00	.32	274.25	4399.31	-19.07	25.23	-19.07	31.63	127.09	.76
4500.00	.51	281.07	4499.31	-18.97	24.52	-18.97	31.00	127.73	.20
4600.00	.52	282.76	4599.30	-18.78	23.64	-18.78	30.19	128.47	.02

Surface - 8271' M.D. (Rate Gyro) File: S:\2014SU~1\MEWBOU~1\MO\REDHIL~1\UNIT\011H.SVY

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
4700.00	.56	288.61	4699.30	-18.53	22.73	-18.53	29.32	129.18	.07
4800.00	.52	290.53	4799.29	-18.21	21.84	-18.21	28.44	129.82	.04
4900.00	.51	268.65	4899.29	-18.06	20.97	-18.06	27.68	130.74	.20
5000.00	.60	269.19	4999.28	-18.08	20.00	-18.08	26.96	132.11	.09
5100.00	.69	276.37	5099.28	-18.02	18.88	-18.02	26.10	133.66	.12
5200.00	.69	262.36	5199.27	-18.03	17.69	-18.03	25.26	135.56	.17
5300.00	.75	271.29	5299.26	-18.10	16.44	-18.10	24.45	137.76	.13
5400.00	.58	283.17	5399.26	-17.97	15.29	-17.97	23.59	139.61	.22
5500.00	.58	270.69	5499.25	-17.85	14.29	-17.85	22.86	141.32	.13
5600.00	.77	271.35	5599.24	-17.83	13.11	-17.83	22.13	143.66	.19
5700.00	.93	278.97	5699.23	-17.68	11.64	-17.68	21.17	146.65	.20
5800.00	.92	286.06	5799.22	-17.33	10.07	-17.33	20.05	149.86	.11
5900.00	.78	290.99	5899.21	-16.87	8.66	-16.87	18.96	152.83	.16
6000.00	.87	291.16	5999.20	-16.35	7.32	-16.35	17.91	155.90	.09
6100.00	.90	291.06	6099.19	-15.79	5.87	-15.79	16.85	159.60	.03
6200.00	.87	286.76	6199.17	-15.29	4.41	-15.29	15.92	163.90	.07
6300.00	.86	285.84	6299.16	-14.87	2.97	-14.87	15.16	168.72	.02
6400.00	.93	277.11	6399.15	-14.56	1.44	-14.56	14.64	174.36	.15
6500.00	1.21	289.67	6499.13	-14.11	-.36	-14.11	14.11	181.47	.36
6600.00	1.20	299.61	6599.11	-13.24	-2.27	-13.24	13.43	189.72	.21
6700.00	1.15	289.28	6699.09	-12.39	-4.12	-12.39	13.06	198.41	.22
6800.00	1.27	297.25	6799.07	-11.55	-6.06	-11.55	13.04	207.67	.21
6900.00	1.07	294.88	6899.05	-10.65	-7.89	-10.65	13.25	216.53	.21
7000.00	1.42	295.88	6999.02	-9.71	-9.85	-9.71	13.83	225.40	.35
7100.00	1.11	298.92	7099.00	-8.71	-11.81	-8.71	14.67	233.61	.32
7200.00	1.12	299.68	7198.98	-7.75	-13.51	-7.75	15.58	240.15	.02
7300.00	1.14	290.87	7298.96	-6.91	-15.29	-6.91	16.78	245.66	.17
7400.00	1.19	282.03	7398.94	-6.34	-17.23	-6.34	18.36	249.79	.19
7500.00	1.43	281.18	7498.91	-5.89	-19.47	-5.89	20.34	253.18	.24
7600.00	1.39	284.92	7598.88	-5.33	-21.87	-5.33	22.51	256.30	.10
7700.00	1.20	284.57	7698.86	-4.76	-24.05	-4.76	24.52	258.82	.19
7800.00	1.19	276.46	7798.84	-4.38	-26.10	-4.38	26.46	260.48	.17
7900.00	1.28	274.77	7898.81	-4.17	-28.24	-4.17	28.55	261.61	.10
8000.00	1.28	281.65	7998.79	-3.85	-30.45	-3.85	30.69	262.80	.15

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
8100.00	1.06	281.33	8098.77	-3.44	-32.45	-3.44	32.63	263.95	.22
8200.00	1.12	269.58	8198.75	-3.27	-34.34	-3.27	34.49	264.57	.23
Last Survey Depth Recorded									
8271.00	1.08	262.82	8269.74	-3.35	-35.69	-3.35	35.85	264.63	.19