Results of Directional Survey

API number:	30-025-41135		
OGRID:		Operator:	MEWBOURNE OIL CO
		Property:	RED HILLS WEST 22 BO FEDERAL COM # 1H

surface	ULSTR:	B	22	T	26S	R	32E
				150	FNL	2310	FEL

BH Loc	ULSTR:	O	22	T	26S	R	32E
13960	MD	9439.2	TVD	262	FSL	2271	FEL
				5018	FNL	2271	FEL

Top Perf/OH	ULSTR:	B	22	T	26S	R	32E
9560	MD	9372.2	TVD	625	FNL	2290	FEL

Bot Perf/OH	ULSTR:	O	22	T	26S	R	32E
13875	MD	9437.9	TVD	300	FSL	2274	FEL
				4980	FNL	2274	FEL

	MD	N/S	E/W	VD
	9559	-474.40	20.00	9371.5
TOP PERFS/OH	**9560**	-475.34	19.98	9372.16
	9591	-504.40	19.40	9392.50
	13838	-4745.60	35.40	9437.30
BOT PERFS/OH	**13875**	-4829.99	36.30	9437.87
	13916	-4923.50	37.30	9438.50

NEXT TO LAST	13916	-4823.50	37.30	9438.50
LAST READING	13960	-4867.50	38.60	9439.20
TD	**13960**	-4867.50	38.60	9439.20

Surface Location	150	FN	2310	FE
Projected BHL	5018	FN	2271	FE
Location of				
Top Perfs/OH	625	FN	2290	FE
Bottom Perfs/OH	4980	FN	2274	FE

SUMMARY of Subsurface Locations

Surface Location	B-22-26S-32E	150	FN	2310	FE	Vert. Depth
Top Perfs/OH	B-22-26S-32E	625	FN	2290	FE	9372.16
Bottom Perfs/OH	O-22-26S-32E	4980	FN	2274	FE	9437.87
Projected TD	O-22-26S-32E	5018	FN	2271	FE	9439.20

SEP 26 2014

OPERATOR Mewbourne Oil Company 036-0066
WELL/LEASE Red Hills West 22 BO Fed Com 1H
COUNTY LEA

STATE OF NEW MEXICO
DEVIATION REPORT

291	1.08
632	0.90
655	0.50
914	0.10
1012	0.30
1379	0.30
1566	0.20
1854	0.20
2139	0.20
2390	0.10
2612	0.30
2833	0.30
3247	0.50
3532	0.60
3878	0.90
4147	0.80
4808	0.30
5061	0.40
5314	0.20
5600	0.40
6218	0.50
6505	0.60
6818	1.00
7103	0.50
7309	0.60
7770	1.40
7927	1.20
8400	1.30

BY:

STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on 8/13/14, by Daisy Carrillo on behalf of Patterson-UTI Drilling Company LLC.

Amber Elizabeth Carr
Notary Public for Midland County, Texas
My Commission Expires:

AMBER ELIZABETH CARR
Notary Public, State of Texas
My Commission Expires
September 28, 2016

COMPANY: Mewbourne Oil Company .
WELL: Red Hills West 22 BO Federal Com #1H
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 6.92°

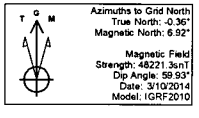
OFFICE: 936.582.7296

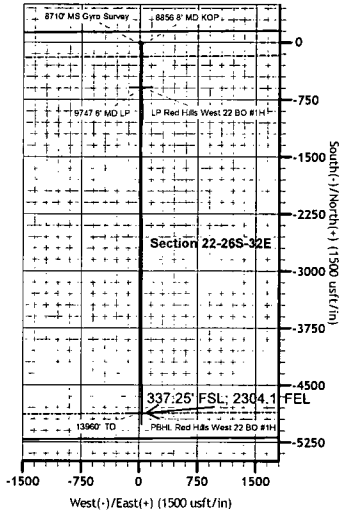
GEODETIC ZONE: New Mexico East 3001
GL 3152 + 20 @ 3172.0usft (Patterson# 36)
GROUND ELEVATION: 3152.0

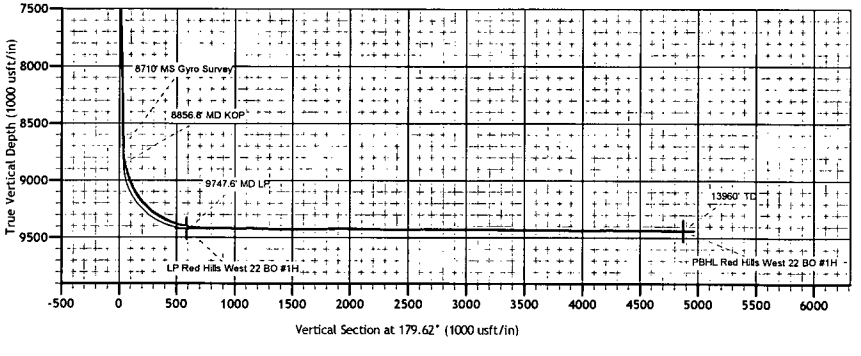
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	377128.25	708266.67	32° 2' 6.211 N	103° 39' 40.249 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	8710.0	0.99	223.01	8709.5	-36.7	18.6	0.00	0.00	36.8	
2	8856.8	0.99	223.01	8856.3	-38.6	16.9	0.00	0.00	38.7	
3	9747.6	89.80	179.73	9422.0	-609.5	12.8	10.00	-43.28	609.6	
4	14011.0	89.80	179.73	9437.0	-4872.9	32.6	0.00	0.00	4873.0	PBHL Red Hills West 22 BO #1H







Mewbourne Oil Company .

Lea County N.M.
Section 22-26S-32E Red Hills West 22 BO Federal
Red Hills West 22 BO Federal Com #1H

Original Hole

Design: Original Hole

Standard Survey Report

15 July, 2014

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West 22 BO Federal Com #1H
Project:	Lea County N.M.	**TVD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Site:	Section 22-26S-32E Red Hills West 22 BO Federal	**MD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Well:	Red Hills West 22 BO Federal Com #1H	**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 Section 22-26S-32E Red Hills West 22 BO Federal

Site Position:		**Northing:**	377,128.25 usft	**Latitude:**	32° 2' 6.211 N
From:	Map	**Easting:**	708,286.66 usft	**Longitude:**	103° 39' 40.249 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.36 °

Well Red Hills West 22 BO Federal Com #1H

Well Position	**+N/-S**	0.0 usft	**Northing:**	377,128.25 usft	**Latitude:**	32° 2' 6.211 N
	+E/-W	0.0 usft	**Easting:**	708,286.66 usft	**Longitude:**	103° 39' 40.249 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,152.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/10/2014	7.28	59.93	48,221

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	179.62

Survey Program **Date** 7/15/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	8,710.0	MS Gyro Survey (Original Hole)	SRG-GYRO-MS	surface readout gyro multishot
8,767.0	13,960.0	Stryker 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	0.15	29.39	100.0	0.1	0.1	-0.1	0.15	0.15	0.00
200.0	0.19	201.06	200.0	0.1	0.1	-0.1	0.34	0.04	171.67
300.0	0.50	282.61	300.0	0.0	-0.4	0.0	0.51	0.31	81.55
400.0	0.63	264.53	400.0	0.1	-1.4	-0.1	0.22	0.13	-18.08
500.0	0.54	208.40	500.0	-0.4	-2.2	0.4	0.56	-0.09	-56.13
600.0	0.58	237.50	600.0	-1.1	-2.8	1.1	0.28	0.04	29.10
700.0	0.27	196.78	700.0	-1.6	-3.3	1.6	0.41	-0.31	-40.72
800.0	0.41	204.23	800.0	-2.1	-3.5	2.1	0.15	0.14	7.45

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West 22 BO Federal Com #1H
Project:	Lea County N.M.	**TVD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Site:	Section 22-26S-32E Red Hills West 22 BO Federal	**MD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Well:	Red Hills West 22 BO Federal Com #1H	**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)
900.0	0.08	293.10	900.0	-2.4	-3.7	2.4	0.42	-0.33	88.87
1,000.0	0.35	218.40	1,000.0	-2.7	-4.0	2.6	0.34	0.27	-74.70
1,100.0	0.08	296.88	1,100.0	-2.9	-4.2	2.8	0.34	-0.27	78.48
1,200.0	0.18	152.51	1,200.0	-3.0	-4.2	2.9	0.25	0.10	-144.37
1,300.0	0.22	176.98	1,300.0	-3.3	-4.1	3.3	0.09	0.04	24.47
1,400.0	0.12	351.55	1,400.0	-3.4	-4.2	3.4	0.34	-0.10	174.57
1,500.0	0.19	150.63	1,500.0	-3.4	-4.1	3.4	0.31	0.07	159.08
1,600.0	0.25	252.16	1,600.0	-3.6	-4.2	3.6	0.34	0.06	101.53
1,700.0	0.17	116.50	1,700.0	-3.8	-4.3	3.7	0.39	-0.08	-135.66
1,800.0	0.22	262.89	1,800.0	-3.9	-4.3	3.8	0.37	0.05	146.39
1,900.0	0.09	325.25	1,900.0	-3.8	-4.6	3.8	0.20	-0.13	62.36
2,000.0	0.33	203.89	2,000.0	-4.0	-4.7	4.0	0.38	0.24	-121.36
2,100.0	0.29	274.54	2,100.0	-4.3	-5.1	4.2	0.36	-0.04	70.65
2,200.0	0.12	156.03	2,200.0	-4.3	-5.3	4.3	0.36	-0.17	-118.51
2,300.0	0.29	250.60	2,300.0	-4.5	-5.5	4.5	0.32	0.17	94.57
2,400.0	0.25	320.43	2,400.0	-4.4	-5.9	4.4	0.31	-0.04	69.83
2,500.0	0.03	71.07	2,500.0	-4.3	-6.0	4.2	0.26	-0.22	110.64
2,600.0	0.23	200.26	2,600.0	-4.4	-6.1	4.4	0.25	0.20	129.19
2,700.0	0.35	262.68	2,700.0	-4.7	-6.4	4.6	0.32	0.12	62.42
2,800.0	0.26	314.55	2,800.0	-4.5	-6.9	4.5	0.28	-0.09	51.87
2,900.0	0.16	119.03	2,900.0	-4.5	-6.9	4.4	0.42	-0.10	164.48
3,000.0	0.23	354.94	3,000.0	-4.3	-6.8	4.3	0.35	0.07	-124.09
3,100.0	0.38	115.51	3,100.0	-4.3	-6.5	4.2	0.53	0.15	120.57
3,200.0	0.50	120.84	3,200.0	-4.6	-5.9	4.6	0.13	0.12	5.33
3,300.0	0.39	78.54	3,300.0	-4.8	-5.2	4.8	0.34	-0.11	-42.30
3,400.0	0.75	81.06	3,400.0	-4.6	-4.2	4.6	0.36	0.36	2.52
3,500.0	0.47	104.67	3,500.0	-4.6	-3.1	4.6	0.37	-0.28	23.61
3,600.0	0.50	103.26	3,599.9	-4.8	-2.3	4.8	0.03	0.03	-1.41
3,700.0	0.31	155.10	3,699.9	-5.2	-1.8	5.2	0.39	-0.19	51.84
3,800.0	0.23	98.62	3,799.9	-5.4	-1.5	5.4	0.27	-0.08	-56.48
3,900.0	0.74	113.12	3,899.9	-5.7	-0.7	5.7	0.52	0.51	14.50
4,000.0	0.52	141.55	3,999.9	-6.3	0.2	6.3	0.38	-0.22	28.43
4,100.0	0.64	116.45	4,099.9	-6.9	1.0	7.0	0.28	0.12	-25.10
4,200.0	0.96	115.20	4,199.9	-7.6	2.2	7.6	0.32	0.32	-1.25
4,300.0	0.83	141.81	4,299.9	-8.5	3.4	8.5	0.43	-0.13	26.61
4,400.0	0.36	94.80	4,399.9	-9.1	4.2	9.1	0.64	-0.47	-47.01
4,500.0	0.43	29.56	4,499.9	-8.8	4.7	8.8	0.43	0.07	-65.24
4,600.0	0.20	75.49	4,599.9	-8.4	5.1	8.4	0.32	-0.23	45.93
4,700.0	0.33	17.34	4,699.9	-8.1	5.3	8.1	0.28	0.13	-58.15
4,800.0	0.55	72.50	4,799.9	-7.7	5.9	7.7	0.45	0.22	55.16
4,900.0	0.50	73.38	4,899.9	-7.4	6.7	7.4	0.05	-0.05	0.88
5,000.0	0.37	112.54	4,999.9	-7.4	7.5	7.4	0.32	-0.13	39.16

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West 22 BO Federal Com #1H
Project:	Lea County N.M.	**TVD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Site:	Section 22-26S-32E Red Hills West 22 BO Federal	**MD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Well:	Red Hills West 22 BO Federal Com #1H	**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)
5,100.0	0.25	50.36	5,099.9	-7.4	7.9	7.4	0.34	-0.12	-62.18
5,200.0	0.49	89.61	5,199.9	-7.2	8.5	7.3	0.34	0.24	39.25
5,300.0	0.44	117.48	5,299.9	-7.4	9.3	7.5	0.23	-0.05	27.87
5,400.0	0.33	122.16	5,399.9	-7.7	9.9	7.8	0.11	-0.11	4.68
5,500.0	0.21	38.64	5,499.9	-7.8	10.2	7.8	0.37	-0.12	-83.52
5,600.0	0.46	97.47	5,599.9	-7.7	10.7	7.7	0.39	0.25	58.83
5,700.0	0.25	42.51	5,699.9	-7.6	11.3	7.6	0.38	-0.21	-54.96
5,800.0	0.49	50.17	5,799.9	-7.1	11.8	7.2	0.24	0.24	7.66
5,900.0	0.32	94.74	5,899.9	-6.9	12.4	6.9	0.35	-0.17	44.57
6,000.0	0.17	34.63	5,999.9	-6.8	12.7	6.9	0.28	-0.15	-60.11
6,100.0	0.47	37.67	6,099.9	-6.3	13.1	6.4	0.30	0.30	3.04
6,200.0	0.50	76.97	6,199.9	-5.9	13.7	6.0	0.33	0.03	39.30
6,300.0	0.30	110.78	6,299.9	-5.9	14.4	6.0	0.30	-0.20	33.81
6,400.0	0.42	72.61	6,399.9	-5.9	15.0	6.0	0.26	0.12	-38.17
6,500.0	0.58	109.07	6,499.9	-5.9	15.8	6.0	0.35	0.16	36.46
6,600.0	0.48	80.72	6,599.9	-6.0	16.7	6.1	0.28	-0.10	-28.35
6,700.0	0.81	106.00	6,699.8	-6.2	17.8	6.3	0.43	0.33	25.28
6,800.0	0.77	126.04	6,799.8	-6.7	19.0	6.9	0.28	-0.04	20.04
6,900.0	0.62	110.41	6,899.8	-7.3	20.1	7.5	0.24	-0.15	-15.63
7,000.0	0.85	146.71	6,999.8	-8.1	21.0	8.3	0.51	0.23	36.30
7,100.0	0.49	147.72	7,099.8	-9.1	21.6	9.3	0.36	-0.36	1.01
7,200.0	0.87	132.80	7,199.8	-10.0	22.4	10.1	0.42	0.38	-14.92
7,300.0	0.61	167.99	7,299.8	-11.0	23.1	11.2	0.51	-0.26	35.19
7,400.0	0.55	179.57	7,399.8	-12.0	23.2	12.2	0.13	-0.06	11.58
7,500.0	0.66	172.19	7,499.8	-13.1	23.3	13.2	0.13	0.11	-7.38
7,600.0	1.10	171.73	7,599.8	-14.6	23.5	14.8	0.44	0.44	-0.46
7,700.0	1.37	181.28	7,699.8	-16.8	23.6	16.9	0.34	0.27	9.55
7,800.0	1.04	187.19	7,799.7	-18.8	23.5	19.0	0.35	-0.33	5.91
7,900.0	1.35	176.40	7,899.7	-20.9	23.4	21.1	0.38	0.31	-10.79
8,000.0	1.40	182.52	7,999.7	-23.3	23.5	23.5	0.16	0.05	6.12
8,100.0	1.31	185.75	8,099.7	-25.7	23.3	25.8	0.12	-0.09	3.23
8,200.0	1.34	189.17	8,199.6	-28.0	23.0	28.1	0.08	0.03	3.42
8,300.0	1.19	193.23	8,299.6	-30.1	22.6	30.3	0.17	-0.15	4.06
8,400.0	1.22	200.07	8,399.6	-32.1	22.0	32.3	0.15	0.03	6.84
8,500.0	1.05	212.34	8,499.6	-33.9	21.1	34.1	0.30	-0.17	12.27
8,600.0	1.05	225.96	8,599.5	-35.3	20.0	35.5	0.25	0.00	13.62
8,700.0	0.99	223.72	8,699.5	-36.6	18.7	36.7	0.07	-0.06	-2.24
8,710.0	0.99	223.01	8,709.5	-36.7	18.6	36.8	0.12	0.00	-7.10
8710' MS Gyro Survey									
8,767.0	1.80	183.60	8,766.5	-38.0	18.2	38.1	2.12	1.42	-69.14
8,799.0	5.50	174.40	8,798.4	-40.0	18.3	40.1	11.67	11.56	-28.75
8,830.0	9.50	172.30	8,829.2	-44.0	18.8	44.1	12.93	12.90	-6.77
8,862.0	12.50	172.30	8,860.6	-50.1	19.6	50.2	9.38	9.38	0.00

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West 22 BO Federal Com #1H
Project:	Lea County N.M.	**TVD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Site:	Section 22-26S-32E Red Hills West 22 BO Federal	**MD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Well:	Red Hills West 22 BO Federal Com #1H	**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)
8,894.0	14.50	175.60	8,891.7	-57.5	20.4	57.6	6.70	6.25	10.31
8,926.0	16.70	177.00	8,922.5	-66.1	20.9	66.2	6.97	6.88	4.38
8,957.0	19.30	178.00	8,952.0	-75.6	21.3	75.8	8.45	8.39	3.23
8,989.0	20.70	176.90	8,982.1	-86.6	21.8	86.7	4.53	4.38	-3.44
9,021.0	22.50	176.90	9,011.8	-98.3	22.5	98.5	5.63	5.63	0.00
9,053.0	24.40	177.90	9,041.2	-111.1	23.0	111.2	6.07	5.94	3.13
9,084.0	26.80	177.80	9,069.1	-124.4	23.5	124.6	7.74	7.74	-0.32
9,116.0	29.60	178.80	9,097.3	-139.6	24.0	139.7	8.87	8.75	3.13
9,147.0	32.00	179.80	9,123.9	-155.4	24.2	155.6	7.92	7.74	3.23
9,179.0	34.50	179.40	9,150.7	-173.0	24.3	173.1	7.84	7.81	-1.25
9,211.0	37.60	178.80	9,176.6	-191.8	24.6	192.0	9.75	9.69	-1.88
9,243.0	41.10	178.80	9,201.3	-212.1	25.0	212.2	10.94	10.94	0.00
9,274.0	44.20	179.00	9,224.1	-233.1	25.4	233.2	10.01	10.00	0.65
9,306.0	47.90	180.90	9,246.3	-256.1	25.4	256.3	12.33	11.56	5.94
9,338.0	51.80	181.60	9,267.0	-280.6	24.9	280.7	12.30	12.19	2.19
9,369.0	56.00	181.40	9,285.2	-305.6	24.2	305.7	13.56	13.55	-0.65
9,401.0	59.50	181.50	9,302.3	-332.6	23.6	332.8	10.94	10.94	0.31
9,432.0	60.20	181.80	9,317.9	-359.4	22.8	359.6	2.41	2.26	0.97
9,464.0	62.60	181.60	9,333.2	-387.5	22.0	387.7	7.52	7.50	-0.63
9,496.0	65.20	181.20	9,347.3	-416.2	21.3	416.4	8.20	8.13	-1.25
9,527.0	67.50	181.30	9,359.7	-444.6	20.6	444.8	7.43	7.42	0.32
9,559.0	69.20	181.20	9,371.5	-474.4	20.0	474.5	5.32	5.31	-0.31
9,591.0	70.50	180.90	9,382.5	-504.4	19.4	504.5	4.16	4.06	-0.94
9,623.0	73.20	180.20	9,392.5	-534.8	19.1	534.9	8.69	8.44	-2.19
9,654.0	75.70	179.50	9,400.8	-564.7	19.2	564.8	8.35	8.06	-2.26
9,686.0	77.70	179.00	9,408.2	-595.8	19.6	595.9	6.43	6.25	-1.56
9,717.0	80.80	178.90	9,413.9	-626.3	20.2	626.4	10.01	10.00	-0.32
9,749.0	84.90	178.80	9,417.9	-658.0	20.8	658.1	12.82	12.81	-0.31
9,781.0	86.90	178.50	9,420.2	-689.9	21.6	690.0	6.32	6.25	-0.94
9,812.0	88.60	177.40	9,421.4	-720.9	22.7	721.0	6.53	5.48	-3.55
9,843.0	90.70	177.40	9,421.6	-751.8	24.1	752.0	6.77	6.77	0.00
9,874.0	91.00	177.40	9,421.2	-782.8	25.5	782.9	0.97	0.97	0.00
9,906.0	91.40	177.30	9,420.5	-814.7	27.0	814.9	1.29	1.25	-0.31
9,938.0	90.80	178.70	9,419.9	-846.7	28.1	846.9	4.76	-1.88	4.38
9,970.0	89.80	180.20	9,419.7	-878.7	28.4	878.9	5.63	-3.13	4.69
10,001.0	89.60	180.40	9,419.9	-909.7	28.2	909.9	0.91	-0.65	0.65
10,033.0	90.20	180.80	9,419.9	-941.7	27.9	941.9	2.25	1.88	1.25
10,097.0	89.40	181.60	9,420.1	-1,005.7	26.6	1,005.9	1.77	-1.25	1.25
10,160.0	90.80	182.90	9,420.0	-1,068.6	24.1	1,068.8	3.03	2.22	2.06
10,223.0	90.50	183.50	9,419.3	-1,131.5	20.6	1,131.7	1.06	-0.48	0.95
10,286.0	87.50	182.60	9,420.4	-1,194.4	17.2	1,194.5	4.97	-4.76	-1.43
10,349.0	87.20	182.30	9,423.3	-1,257.3	14.5	1,257.4	0.67	-0.48	-0.48

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West 22 BO Federal Com #1H
Project:	Lea County N.M.	**TVD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Site:	Section 22-26S-32E Red Hills West 22 BO Federal	**MD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Well:	Red Hills West 22 BO Federal Com #1H	**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)
10,412.0	87.90	180.90	9,426.0	-1,320.2	12.8	1,320.3	2.48	1.11	-2.22
10,475.0	88.80	179.50	9,427.8	-1,383.2	12.6	1,383.3	2.64	1.43	-2.22
10,539.0	89.30	178.90	9,428.9	-1,447.2	13.5	1,447.2	1.22	0.78	-0.94
10,603.0	90.80	178.40	9,428.8	-1,511.2	15.0	1,511.2	2.47	2.34	-0.78
10,666.0	91.50	178.20	9,427.6	-1,574.1	16.8	1,574.2	1.16	1.11	-0.32
10,729.0	90.00	179.00	9,426.8	-1,637.1	18.4	1,637.2	2.70	-2.38	1.27
10,793.0	90.00	179.00	9,426.8	-1,701.1	19.5	1,701.2	0.00	0.00	0.00
10,856.0	91.70	179.60	9,425.8	-1,764.1	20.3	1,764.2	2.86	2.70	0.95
10,920.0	90.60	180.00	9,424.5	-1,828.1	20.5	1,828.2	1.83	-1.72	0.63
10,984.0	90.60	179.50	9,423.9	-1,892.1	20.8	1,892.1	0.78	0.00	-0.78
11,047.0	91.40	179.40	9,422.8	-1,955.0	21.4	1,955.1	1.28	1.27	-0.16
11,110.0	88.70	179.40	9,422.7	-2,018.0	22.0	2,018.1	4.29	-4.29	0.00
11,174.0	88.30	179.20	9,424.4	-2,082.0	22.8	2,082.1	0.70	-0.63	-0.31
11,237.0	88.60	179.20	9,426.1	-2,145.0	23.7	2,145.1	0.48	0.48	0.00
11,300.0	88.70	178.90	9,427.6	-2,207.9	24.7	2,208.1	0.50	0.16	-0.48
11,364.0	89.00	178.80	9,428.9	-2,271.9	26.0	2,272.0	0.49	0.47	-0.16
11,427.0	89.50	179.00	9,429.7	-2,334.9	27.2	2,335.0	0.85	0.79	0.32
11,491.0	90.40	179.20	9,429.7	-2,398.9	28.2	2,399.0	1.44	1.41	0.31
11,554.0	91.60	178.70	9,428.6	-2,461.9	29.4	2,462.0	2.06	1.90	-0.79
11,617.0	90.20	180.10	9,427.6	-2,524.9	30.0	2,525.0	3.14	-2.22	2.22
11,681.0	90.20	180.10	9,427.4	-2,588.9	29.9	2,589.0	0.00	0.00	0.00
11,744.0	89.40	180.80	9,427.6	-2,651.9	29.4	2,652.0	1.69	-1.27	1.11
11,808.0	89.30	180.50	9,428.4	-2,715.8	28.7	2,716.0	0.49	-0.16	-0.47
11,871.0	90.80	180.90	9,428.3	-2,778.8	27.9	2,779.0	2.46	2.38	0.63
11,934.0	89.10	180.70	9,428.4	-2,841.8	27.1	2,841.9	2.72	-2.70	-0.32
11,998.0	89.20	180.60	9,429.3	-2,905.8	26.3	2,905.9	0.22	0.16	-0.16
12,061.0	89.90	180.90	9,429.8	-2,968.8	25.5	2,968.9	1.21	1.11	0.48
12,125.0	90.90	180.60	9,429.4	-3,032.8	24.7	3,032.9	1.63	1.56	-0.47
12,188.0	89.60	180.60	9,429.1	-3,095.8	24.0	3,095.9	2.06	-2.06	0.00
12,252.0	89.30	180.70	9,429.7	-3,159.8	23.3	3,159.9	0.49	-0.47	0.16
12,315.0	89.10	180.30	9,430.6	-3,222.8	22.7	3,222.9	0.71	-0.32	-0.63
12,379.0	89.70	180.00	9,431.3	-3,286.8	22.6	3,286.9	1.05	0.94	-0.47
12,443.0	89.40	180.00	9,431.8	-3,350.8	22.6	3,350.9	0.47	-0.47	0.00
12,506.0	89.60	180.00	9,432.3	-3,413.8	22.6	3,413.9	0.32	0.32	0.00
12,569.0	90.10	179.80	9,432.5	-3,476.8	22.7	3,476.8	0.85	0.79	-0.32
12,633.0	90.50	179.40	9,432.1	-3,540.8	23.1	3,540.8	0.88	0.63	-0.63
12,696.0	89.20	179.40	9,432.3	-3,603.8	23.8	3,603.8	2.06	-2.06	0.00
12,760.0	90.20	179.30	9,432.6	-3,667.8	24.5	3,667.8	1.57	1.56	-0.16
12,823.0	90.50	180.50	9,432.3	-3,730.8	24.6	3,730.8	1.96	0.48	1.90
12,886.0	88.40	179.70	9,432.9	-3,793.8	24.5	3,793.8	3.57	-3.33	-1.27
12,949.0	88.40	179.40	9,434.6	-3,856.7	25.0	3,856.8	0.48	0.00	-0.48
13,013.0	88.90	179.80	9,436.1	-3,920.7	25.5	3,920.8	1.00	0.78	0.63
13,076.0	89.70	179.80	9,436.9	-3,983.7	25.7	3,983.8	1.27	1.27	0.00

Stryker Directional
Survey Report

Company:	Mewbourne Oil Company .	**Local Co-ordinate Reference:**	Well Red Hills West 22 BO Federal Com #1H
Project:	Lea County N.M.	**TVD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Site:	Section 22-26S-32E Red Hills West 22 BO Federal	**MD Reference:**	GL 3152 + 20 @ 3172.0usft (Patterson# 36)
Well:	Red Hills West 22 BO Federal Com #1H	**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)
13,140.0	90.20	179.50	9,437.0	-4,047.7	26.1	4,047.8	0.91	0.78	-0.47
13,203.0	90.20	179.00	9,436.7	-4,110.7	26.9	4,110.8	0.79	0.00	-0.79
13,267.0	92.00	179.60	9,435.5	-4,174.7	27.7	4,174.8	2.96	2.81	0.94
13,331.0	90.70	179.40	9,434.0	-4,238.7	28.2	4,238.7	2.06	-2.03	-0.31
13,394.0	89.10	179.40	9,434.1	-4,301.6	28.9	4,301.7	2.54	-2.54	0.00
13,457.0	89.40	179.30	9,434.9	-4,364.6	29.6	4,364.7	0.50	0.48	-0.16
13,521.0	89.60	179.10	9,435.5	-4,428.6	30.5	4,428.7	0.44	0.31	-0.31
13,584.0	90.00	179.30	9,435.7	-4,491.6	31.4	4,491.7	0.71	0.63	0.32
13,648.0	90.70	179.10	9,435.3	-4,555.6	32.3	4,555.7	1.14	1.09	-0.31
13,711.0	89.30	179.20	9,435.3	-4,618.6	33.2	4,618.7	2.23	-2.22	0.16
13,775.0	89.00	178.90	9,436.3	-4,682.6	34.3	4,682.7	0.66	-0.47	-0.47
13,838.0	89.10	179.00	9,437.3	-4,745.6	35.4	4,745.7	0.22	0.16	0.16
13,916.0	89.10	178.30	9,438.5	-4,823.5	37.3	4,823.7	0.90	0.00	-0.90
13,960.0	89.10	178.30	9,439.2	-4,867.5	38.6	4,867.7	0.00	0.00	0.00
13960' TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,710.0	8,709.5	-36.7	18.6	8710' MS Gyro Survey
13,960.0	9,439.2	-4,867.5	38.6	13960' TD

MS Energy Services.

Job Number: SVMO-140914
Company: Mewbourne Oil & Gas
Lease/Well: Red Hills West 22 BO FED COM 1H
Location: Lea County, NM
Rig Name: Patterson #36
RKB: 22'
G.L. or M.S.L.: GL

State/Country: New Mexico/USA
Declination: 6.92°
Grid: East To Grid North
File name: Y:\WINSER~1\2014SU~1\MEWBOU~1\MO\REDHIL~3\1H.SVY
Date/Time: 08-Jul-14 / 14:40
Curve Name: Surface - 8710' M.D. (Rate Gyro)

MS Survey

We hereby certify that our survey data from Surface MD to 8710 MD is, to the best of our knowledge a true and accurate account of the well bore.

Daniel West 7/8/14
MS Energy Services Date

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 179.62
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

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	.15	29.39	100.00	.11	.06	-.11	.13	29.39	.15
200.00	.19	201.06	200.00	.07	.07	-.07	.10	43.20	.34
300.00	.50	282.61	300.00	.01	-.42	-.02	.42	271.91	.51
400.00	.63	264.53	399.99	.06	-1.39	-.07	1.39	272.34	.22
500.00	.54	208.40	499.99	-.41	-2.16	.40	2.20	259.25	.56
600.00	.58	237.50	599.98	-1.10	-2.81	1.08	3.02	248.69	.28
700.00	.27	196.78	699.98	-1.59	-3.31	1.57	3.67	244.26	.41
800.00	.41	204.23	799.98	-2.15	-3.52	2.12	4.12	238.64	.15
900.00	.08	293.10	899.98	-2.44	-3.73	2.42	4.46	236.78	.42

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
1000.00	.35	218.40	999.98	-2.66	-3.99	2.63	4.79	236.32	.34
1100.00	.08	296.88	1099.98	-2.86	-4.24	2.84	5.12	235.95	.34
1200.00	.18	152.51	1199.98	-2.97	-4.23	2.94	5.17	234.89	.25
1300.00	.22	176.98	1299.98	-3.30	-4.15	3.28	5.30	231.45	.09
1400.00	.12	351.55	1399.98	-3.39	-4.15	3.36	5.36	230.75	.34
1500.00	.19	150.63	1499.98	-3.43	-4.09	3.41	5.34	229.96	.31
1600.00	.25	252.16	1599.98	-3.64	-4.21	3.62	5.57	229.13	.34
1700.00	.17	116.50	1699.98	-3.78	-4.29	3.75	5.71	228.62	.39
1800.00	.22	262.89	1799.98	-3.87	-4.34	3.84	5.82	228.33	.37
1900.00	.09	325.25	1899.98	-3.83	-4.58	3.80	5.97	230.12	.20
2000.00	.33	203.89	1999.97	-4.02	-4.74	3.99	6.22	229.67	.38
2100.00	.29	274.54	2099.97	-4.27	-5.11	4.23	6.66	230.13	.36
2200.00	.12	156.03	2199.97	-4.34	-5.32	4.31	6.87	230.77	.36
2300.00	.29	250.60	2299.97	-4.52	-5.52	4.49	7.13	230.64	.32
2400.00	.25	320.43	2399.97	-4.44	-5.89	4.40	7.38	233.01	.31
2500.00	.03	71.07	2499.97	-4.26	-6.01	4.22	7.37	234.64	.26
2600.00	.23	200.26	2599.97	-4.44	-6.05	4.40	7.51	233.72	.25
2700.00	.35	262.68	2699.97	-4.67	-6.42	4.63	7.94	233.99	.32
2800.00	.26	314.55	2799.97	-4.55	-6.89	4.50	8.26	236.56	.28
2900.00	.16	119.03	2899.97	-4.46	-6.93	4.41	8.24	237.24	.42
3000.00	.23	354.94	2999.97	-4.33	-6.82	4.28	8.08	237.63	.35
3100.00	.38	115.51	3099.97	-4.27	-6.54	4.23	7.81	236.88	.53
3200.00	.50	120.84	3199.96	-4.64	-5.87	4.60	7.48	231.70	.13
3300.00	.39	78.54	3299.96	-4.79	-5.16	4.76	7.04	227.13	.34
3400.00	.75	81.06	3399.96	-4.62	-4.18	4.59	6.23	222.13	.36
3500.00	.47	104.67	3499.95	-4.62	-3.14	4.60	5.59	214.16	.37
3600.00	.50	103.26	3599.95	-4.83	-2.32	4.81	5.35	205.63	.03
3700.00	.31	155.10	3699.95	-5.17	-1.78	5.16	5.47	198.96	.39
3800.00	.23	98.62	3799.94	-5.45	-1.47	5.44	5.64	195.05	.27

Surface - 8710' M.D. (Rate Gyro) File: Y:\WINSER~1\2014SU~1\MEWBOU~1\MO\REDHIL~3\1H.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
3900.00	.74	113.12	3899.94	-5.73	-.67	5.73	5.77	186.69	.52
4000.00	.52	141.55	3999.93	-6.34	.20	6.34	6.34	178.16	.38
4100.00	.64	116.45	4099.93	-6.95	.99	6.95	7.02	171.92	.28
4200.00	.96	115.20	4199.92	-7.55	2.24	7.57	7.88	163.45	.32
4300.00	.83	141.81	4299.91	-8.48	3.45	8.50	9.15	157.86	.43
4400.00	.36	94.80	4399.90	-9.07	4.21	9.10	10.00	155.11	.64
4500.00	.43	29.56	4499.90	-8.77	4.71	8.80	9.96	151.78	.43
4600.00	.20	75.49	4599.90	-8.40	5.06	8.44	9.81	148.93	.32
4700.00	.33	17.34	4699.90	-8.08	5.32	8.12	9.68	146.66	.28
4800.00	.55	72.50	4799.90	-7.66	5.86	7.70	9.65	142.60	.45
4900.00	.50	73.38	4899.89	-7.40	6.74	7.44	10.00	137.67	.05
5000.00	.37	112.54	4999.89	-7.39	7.45	7.44	10.50	134.77	.32
5100.00	.25	50.36	5099.89	-7.38	7.92	7.43	10.82	132.98	.34
5200.00	.49	89.61	5199.89	-7.24	8.51	7.29	11.17	130.36	.34
5300.00	.44	117.48	5299.88	-7.41	9.28	7.47	11.88	128.60	.23
5400.00	.33	122.16	5399.88	-7.74	9.87	7.81	12.54	128.12	.11
5500.00	.21	38.64	5499.88	-7.75	10.23	7.82	12.83	127.17	.37
5600.00	.46	97.47	5599.88	-7.66	10.74	7.73	13.19	125.51	.39
5700.00	.25	42.51	5699.88	-7.55	11.28	7.63	13.58	123.80	.38
5800.00	.49	50.17	5799.87	-7.12	11.76	7.20	13.75	121.19	.24
5900.00	.32	94.74	5899.87	-6.87	12.37	6.95	14.14	119.04	.35
6000.00	.17	34.63	5999.87	-6.77	12.73	6.85	14.42	118.00	.28
6100.00	.47	37.67	6099.87	-6.32	13.06	6.41	14.51	115.82	.30
6200.00	.50	76.97	6199.87	-5.90	13.74	5.99	14.95	113.23	.33
6300.00	.30	110.78	6299.86	-5.89	14.41	5.99	15.57	112.24	.30
6400.00	.42	72.61	6399.86	-5.88	15.00	5.98	16.11	111.39	.26
6500.00	.58	109.07	6499.86	-5.93	15.83	6.04	16.91	110.54	.35
6600.00	.48	80.72	6599.85	-6.03	16.72	6.14	17.78	109.83	.28
6700.00	.81	106.00	6699.85	-6.16	17.82	6.27	18.85	109.06	.43

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
6800.00	.77	126.04	6799.84	-6.75	19.04	6.87	20.20	109.51	.28
6900.00	.62	110.41	6899.83	-7.33	20.09	7.46	21.39	110.05	.24
7000.00	.85	146.71	6999.82	-8.14	21.00	8.28	22.53	111.18	.51
7100.00	.49	147.72	7099.82	-9.12	21.64	9.26	23.48	112.86	.36
7200.00	.87	132.80	7199.81	-10.00	22.42	10.15	24.55	114.03	.42
7300.00	.61	167.99	7299.80	-11.04	23.09	11.19	25.59	115.54	.51
7400.00	.55	179.57	7399.80	-12.04	23.21	12.19	26.14	117.41	.13
7500.00	.66	172.19	7499.79	-13.09	23.29	13.24	26.71	119.33	.13
7600.00	1.10	171.73	7599.78	-14.61	23.51	14.76	27.67	121.86	.44
7700.00	1.37	181.28	7699.76	-16.75	23.62	16.91	28.95	125.35	.34
7800.00	1.04	187.19	7799.73	-18.85	23.48	19.00	30.11	128.76	.35
7900.00	1.35	176.40	7899.71	-20.92	23.44	21.08	31.42	131.76	.38
8000.00	1.40	182.52	7999.68	-23.32	23.46	23.47	33.08	134.83	.16
8100.00	1.31	185.75	8099.65	-25.68	23.29	25.83	34.67	137.79	.12
8200.00	1.34	189.17	8199.63	-27.97	22.99	28.12	36.20	140.58	.08
8300.00	1.19	193.23	8299.60	-30.13	22.56	30.28	37.65	143.17	.17
8400.00	1.22	200.07	8399.58	-32.14	21.96	32.29	38.93	145.66	.15
8500.00	1.05	212.34	8499.56	-33.92	21.11	34.06	39.95	148.11	.30
8600.00	1.05	225.96	8599.55	-35.33	19.96	35.46	40.58	150.54	.25
8700.00	.99	223.72	8699.53	-36.59	18.70	36.71	41.09	152.93	.07
Last Survey Depth Recorded									
8710.00	.99	223.01	8709.53	-36.72	18.58	36.84	41.15	153.16	.12