



COMPANY: Mewbourne Oil Company
WELL: Red Hills West Unif 008H
COUNTY: Lea County N.M.
DATUM: NAD 1927 (NADCON CONUS)
RIG: Patterson Patterson 220



Grid Correction MWD: To convert a Magnetic Direction to a Grid Direction, Add 6.69°

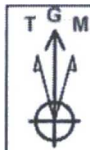
OFFICE: 936.582.7294

GEODETTIC ZONE: New Mexico East 3001
3186 + 27 @ 3213.0usft (Patterson 220)
GROUND ELEVATION: 3186.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	382678.18	696810.00	32° 3' 1.821 N	103° 41' 53.192 W	

PLAN SECTIONS

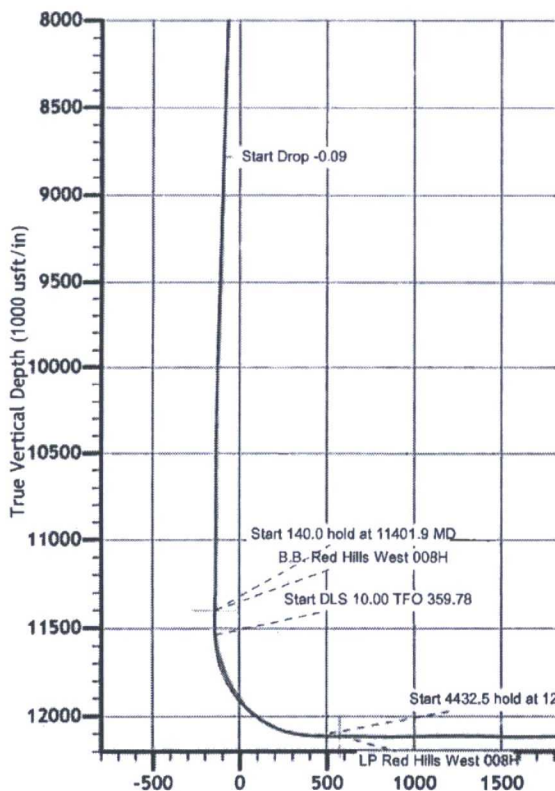
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	6538.0	0.80	155.30	6537.6	-39.9	34.5	0.00	0.00	-40.1	
2	6638.0	0.80	155.30	6637.6	-41.2	35.1	0.00	0.00	-41.3	
3	8785.9	2.29	205.47	8784.7	-93.5	23.0	0.09	69.26	-93.6	
4	11401.9	0.00	0.00	11400.0	-140.6	0.5	0.09	180.00	-140.6	B.B. Red Hills West 008H
5	11541.9	0.00	0.00	11540.0	-140.6	0.5	0.00	0.00	-140.6	
6	12441.9	90.00	359.78	12113.0	432.3	-1.7	10.00	359.78	432.3	
7	16874.4	90.00	359.78	12113.0	4864.8	-19.1	0.00	0.00	4864.8	PBHL Red Hills West 008H



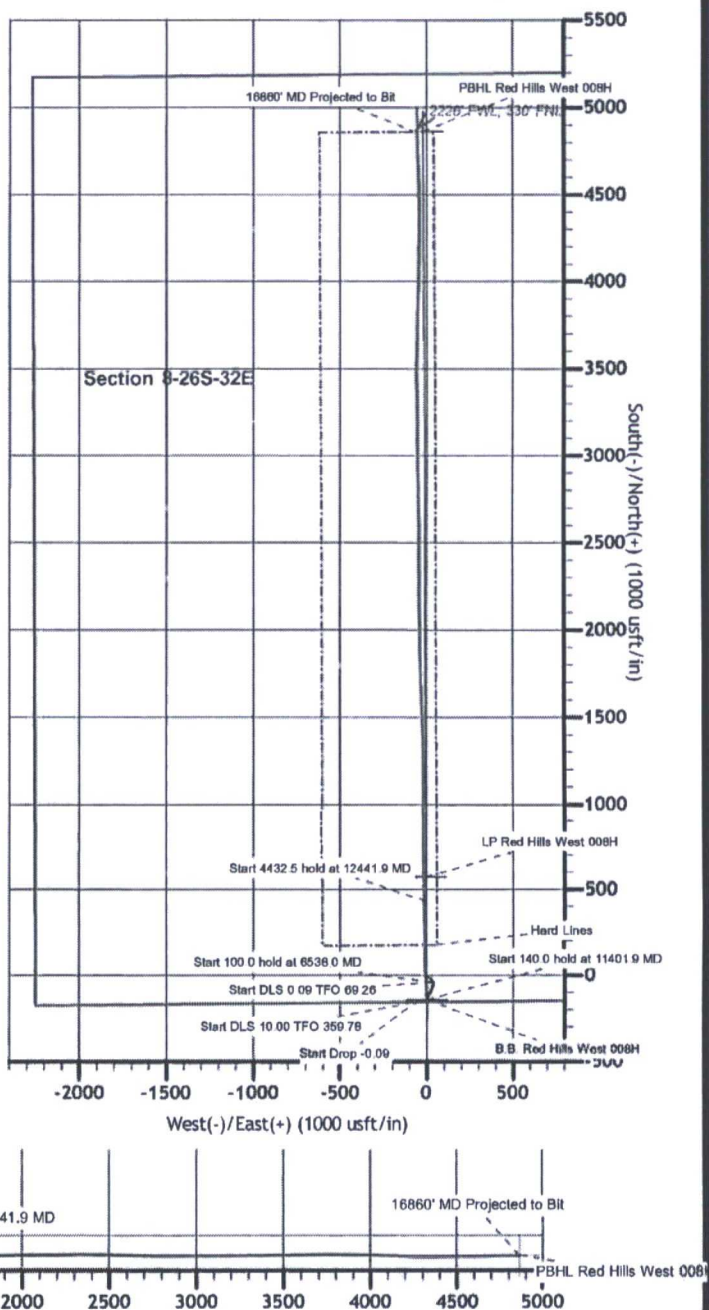
Azimuths to Grid North
True North: -0.34°
Magnetic North: 6.69°

Magnetic Field
Strength: 47845.4snT
Dip Angle: 59.89°
Date: 3/30/2017
Model: IGRF2015

SHL 150 FSL; 2250' FWL
Section 8-26S-32E
PBHL 330' FNL; 2250' FWL
Section 8-26S-32E



Vertical Section at 359.78° (1000 usft/in)





Mewbourne Oil Company

Lea County N.M.

Section 8-26S-32E Red Hills West 008H

Red Hills West Unit 008H

Original Hole

Design: Original Hole

Standard Survey Report

17 May, 2017





Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section 8-26S-32E Red Hills West 008H
Well: Red Hills West Unit 008H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Red Hills West Unit 008H
TVD Reference: 3186 + 27 @ 3213.0usft (Patterson 220)
MD Reference: 3186 + 27 @ 3213.0usft (Patterson 220)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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 8-26S-32E Red Hills West 008H			
Site Position:		Northing:	382,678.18 usft	Latitude: 32° 3' 1.821 N
From:	Map	Easting:	696,810.00 usft	Longitude: 103° 41' 53.192 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.34 °

Well	Red Hills West Unit 008H			
Well Position	+N/-S	0.0 usft	Northing:	382,678.18 usft
	+E/-W	0.0 usft	Easting:	696,810.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level: 3,186.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/30/2017	7.02	59.89	47,845.41571000

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	151.71	

Survey Program	Date 5/17/2017				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	1,100.0	Phoenix Gyro Survey (Original Hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline	
1,100.0	16,860.0	MWD Vertical 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	269.44	100.0	0.0	-0.1	-0.1	0.15	0.15	0.00
	200.0	0.23	306.17	200.0	0.1	-0.4	-0.3	0.14	0.08	36.73
	300.0	0.17	256.63	300.0	0.2	-0.7	-0.5	0.18	-0.06	-49.54
	400.0	0.32	322.82	400.0	0.4	-1.0	-0.8	0.30	0.15	66.19
	500.0	0.25	276.12	500.0	0.6	-1.4	-1.2	0.23	-0.07	-46.70
	600.0	0.18	52.60	600.0	0.8	-1.5	-1.4	0.40	-0.07	136.48
	700.0	0.20	70.24	700.0	0.9	-1.2	-1.4	0.06	0.02	17.64
	800.0	0.31	154.25	800.0	0.7	-1.0	-1.1	0.35	0.11	84.01
	900.0	0.45	194.44	900.0	0.1	-0.9	-0.5	0.29	0.14	40.19



Microsoft
Survey Report



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section 8-26S-32E Red Hills West 008H
Well: Red Hills West Unit 008H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Red Hills West Unit 008H
TVD Reference: 3186 + 27 @ 3213.0usft (Patterson 220)
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
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	0.43	193.34	1,000.0	-0.6	-1.1	0.0	0.02	-0.02	-1.10
1,100.0	0.23	138.00	1,100.0	-1.2	-1.1	0.5	0.35	-0.20	-55.34
1,131.0	0.50	156.60	1,131.0	-1.3	-1.0	0.7	0.94	0.87	60.00
1,258.0	0.50	130.60	1,258.0	-2.2	-0.3	1.8	0.18	0.00	-20.47
1,385.0	0.50	158.70	1,385.0	-3.1	0.3	2.8	0.19	0.00	22.13
1,511.0	0.20	131.80	1,511.0	-3.7	0.7	3.6	0.27	-0.24	-21.35
1,638.0	0.40	158.60	1,638.0	-4.3	1.0	4.2	0.19	0.16	21.10
1,764.0	0.20	213.70	1,764.0	-4.9	1.0	4.8	0.26	-0.16	43.73
1,891.0	0.10	173.80	1,891.0	-5.2	0.9	5.0	0.11	-0.08	-31.42
2,018.0	0.40	121.80	2,018.0	-5.5	1.3	5.5	0.27	0.24	-40.94
2,081.0	0.70	141.90	2,081.0	-5.9	1.7	6.1	0.56	0.48	31.90
2,176.0	0.40	146.30	2,176.0	-6.7	2.3	7.0	0.32	-0.32	4.63
2,271.0	0.40	108.50	2,271.0	-7.1	2.8	7.5	0.27	0.00	-39.79
2,365.0	0.30	183.10	2,365.0	-7.4	3.1	8.0	0.46	-0.11	79.36
2,461.0	0.40	140.50	2,461.0	-7.9	3.3	8.5	0.28	0.10	-44.38
2,555.0	0.30	176.60	2,555.0	-8.4	3.5	9.1	0.25	-0.11	38.40
2,650.0	0.30	123.40	2,650.0	-8.8	3.7	9.5	0.28	0.00	-56.00
2,745.0	0.20	30.00	2,745.0	-8.8	4.0	9.6	0.39	-0.11	-98.32
2,839.0	0.30	117.90	2,839.0	-8.8	4.3	9.8	0.38	0.11	93.51
2,934.0	0.50	119.00	2,934.0	-9.1	4.9	10.3	0.21	0.21	1.16
3,029.0	0.70	123.10	3,028.9	-9.6	5.7	11.2	0.22	0.21	4.32
3,124.0	0.40	137.20	3,123.9	-10.2	6.4	12.0	0.34	-0.32	14.84
3,218.0	0.30	99.80	3,217.9	-10.4	6.9	12.5	0.26	-0.11	-39.79
3,313.0	0.60	62.10	3,312.9	-10.3	7.6	12.6	0.43	0.32	-39.68
3,408.0	0.70	66.50	3,407.9	-9.8	8.6	12.7	0.12	0.11	4.63
3,503.0	0.70	62.20	3,502.9	-9.3	9.6	12.7	0.06	0.00	-4.53
3,598.0	0.60	46.20	3,597.9	-8.7	10.5	12.6	0.22	-0.11	-16.84
3,693.0	0.90	63.90	3,692.9	-8.0	11.5	12.5	0.40	0.32	18.63
3,787.0	0.80	76.80	3,786.9	-7.5	12.8	12.7	0.23	-0.11	13.72
3,882.0	0.70	86.40	3,881.9	-7.3	14.0	13.1	0.17	-0.11	10.11
3,977.0	0.80	130.60	3,976.9	-7.7	15.1	14.0	0.60	0.11	46.53
4,071.0	1.40	141.30	4,070.9	-9.1	16.3	15.7	0.67	0.64	11.38
4,166.0	1.40	136.30	4,165.8	-10.8	17.9	18.0	0.13	0.00	-5.26
4,260.0	1.30	136.90	4,259.8	-12.4	19.4	20.1	0.11	-0.11	0.64
4,290.0	1.00	135.20	4,289.8	-12.8	19.8	20.7	1.01	-1.00	-5.67
4,358.0	0.70	133.90	4,357.8	-13.6	20.5	21.7	0.44	-0.44	-1.91
4,452.0	0.70	142.30	4,451.8	-14.4	21.3	22.8	0.11	0.00	8.94
4,547.0	0.80	157.40	4,546.8	-15.5	21.9	24.0	0.23	0.11	15.89
4,642.0	0.80	143.30	4,641.8	-16.6	22.5	25.3	0.21	0.00	-14.84
4,737.0	0.90	152.00	4,736.8	-17.8	23.3	26.7	0.17	0.11	9.16
4,831.0	0.60	132.80	4,830.8	-18.8	24.0	27.9	0.41	-0.32	-20.43
4,926.0	0.80	131.60	4,925.7	-19.6	24.9	29.0	0.21	0.21	-1.26
5,021.0	0.90	128.10	5,020.7	-20.5	25.9	30.3	0.12	0.11	-3.68



Microsoft Survey Report



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Well: Red Hills West Unit 008H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Red Hills West Unit 008H
TVD Reference: 3186 + 27 @ 3213.0usft (Patterson 220)
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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)
5,115.0	1.00	144.60	5,114.7	-21.6	27.0	31.8	0.31	0.11	17.55
5,210.0	1.00	165.20	5,209.7	-23.1	27.7	33.4	0.38	0.00	21.68
5,305.0	1.00	154.40	5,304.7	-24.6	28.3	35.1	0.20	0.00	-11.37
5,400.0	0.80	157.50	5,399.7	-26.0	28.9	36.6	0.22	-0.21	3.26
5,495.0	1.00	171.40	5,494.7	-27.4	29.2	38.0	0.31	0.21	14.63
5,590.0	0.80	145.00	5,589.7	-28.8	29.8	39.4	0.48	-0.21	-27.79
5,685.0	0.40	227.00	5,684.7	-29.6	29.9	40.2	0.89	-0.42	86.32
5,780.0	1.10	144.10	5,779.7	-30.5	30.2	41.2	1.18	0.74	-87.26
5,874.0	0.90	148.70	5,873.6	-31.9	31.1	42.8	0.23	-0.21	4.89
5,969.0	0.80	145.90	5,968.6	-33.1	31.9	44.2	0.11	-0.11	-2.95
6,064.0	0.90	159.40	6,063.6	-34.3	32.5	45.6	0.23	0.11	14.21
6,159.0	0.70	157.20	6,158.6	-35.6	33.0	46.9	0.21	-0.21	-2.32
6,254.0	0.80	159.70	6,253.6	-36.7	33.4	48.2	0.11	0.11	2.63
6,348.0	0.60	163.50	6,347.6	-37.8	33.8	49.3	0.22	-0.21	4.04
6,443.0	0.70	161.80	6,442.6	-38.8	34.1	50.4	0.11	0.11	-1.79
6,538.0	0.80	155.30	6,537.6	-40.0	34.6	51.6	0.14	0.11	-6.84
6,632.0	0.70	156.90	6,631.6	-41.1	35.1	52.8	0.11	-0.11	1.70
6,727.0	0.70	166.00	6,726.6	-42.2	35.4	54.0	0.12	0.00	9.58
6,821.0	0.70	177.10	6,820.6	-43.3	35.6	55.0	0.14	0.00	11.81
6,916.0	0.70	154.30	6,915.5	-44.4	35.9	56.1	0.29	0.00	-24.00
7,010.0	0.70	140.50	7,009.5	-45.4	36.5	57.3	0.18	0.00	-14.68
7,105.0	0.80	143.90	7,104.5	-46.4	37.3	58.5	0.12	0.11	3.58
7,200.0	1.10	187.20	7,199.5	-47.8	37.5	59.9	0.79	0.32	45.58
7,294.0	1.40	183.20	7,293.5	-49.9	37.4	61.6	0.33	0.32	-4.26
7,389.0	1.60	189.10	7,388.5	-52.3	37.1	63.7	0.27	0.21	6.21
7,483.0	1.30	180.80	7,482.4	-54.7	36.9	65.6	0.39	-0.32	-8.83
7,578.0	1.80	215.60	7,577.4	-57.0	36.0	67.2	1.10	0.53	36.63
7,675.0	1.70	209.40	7,674.4	-59.5	34.4	68.7	0.22	-0.10	-6.39
7,770.0	1.60	210.80	7,769.3	-61.8	33.0	70.1	0.11	-0.11	1.47
7,865.0	1.80	204.40	7,864.3	-64.3	31.7	71.7	0.29	0.21	-6.74
7,959.0	1.70	194.80	7,958.2	-67.0	30.8	73.6	0.33	-0.11	-10.21
8,054.0	2.00	195.70	8,053.2	-70.0	30.0	75.8	0.32	0.32	0.95
8,148.0	2.00	198.40	8,147.1	-73.1	29.0	78.1	0.10	0.00	2.87
8,243.0	2.10	201.40	8,242.1	-76.3	27.8	80.4	0.15	0.11	3.16
8,337.0	2.20	199.00	8,336.0	-79.6	26.6	82.7	0.14	0.11	-2.55
8,432.0	2.00	200.50	8,430.9	-82.9	25.4	85.1	0.22	-0.21	1.58
8,526.0	1.90	207.50	8,524.9	-85.8	24.2	87.0	0.27	-0.11	7.45
8,621.0	1.40	204.10	8,619.8	-88.3	22.9	88.6	0.54	-0.53	-3.58
8,716.0	1.60	185.50	8,714.8	-90.7	22.3	90.4	0.55	0.21	-19.58
8,811.0	1.50	182.70	8,809.8	-93.2	22.2	92.6	0.13	-0.11	-2.95
8,906.0	1.50	172.40	8,904.7	-95.7	22.3	94.8	0.28	0.00	-10.84
9,001.0	1.70	200.40	8,999.7	-98.2	21.9	96.9	0.84	0.21	29.47
9,096.0	2.20	232.60	9,094.7	-100.7	20.0	98.1	1.25	0.53	33.89



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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)
9,190.0	2.30	230.50	9,188.6	-103.0	17.1	98.8	0.14	0.11	-2.23
9,284.0	2.00	216.60	9,282.5	-105.5	14.7	99.8	0.64	-0.32	-14.79
9,379.0	2.00	219.10	9,377.5	-108.1	12.6	101.2	0.09	0.00	2.63
9,474.0	1.90	218.70	9,472.4	-110.6	10.6	102.4	0.11	-0.11	-0.42
9,568.0	2.00	204.50	9,566.3	-113.3	9.0	104.0	0.52	0.11	-15.11
9,662.0	2.00	220.40	9,660.3	-116.1	7.2	105.6	0.59	0.00	16.91
9,756.0	2.50	222.40	9,754.2	-118.8	4.8	106.9	0.54	0.53	2.13
9,850.0	2.20	228.90	9,848.1	-121.5	2.0	108.0	0.43	-0.32	6.91
9,945.0	1.50	179.80	9,943.1	-124.0	0.7	109.5	1.75	-0.74	-51.68
10,040.0	1.70	167.20	10,038.1	-126.6	1.0	111.9	0.42	0.21	-13.26
10,134.0	1.00	184.40	10,132.0	-128.8	1.2	114.0	0.85	-0.74	18.30
10,229.0	1.20	176.90	10,227.0	-130.6	1.2	115.6	0.26	0.21	-7.89
10,324.0	1.20	151.80	10,322.0	-132.5	1.7	117.5	0.55	0.00	-26.42
10,419.0	0.30	151.70	10,417.0	-133.6	2.3	118.7	0.95	-0.95	-0.11
10,513.0	0.40	302.60	10,511.0	-133.6	2.2	118.7	0.72	0.11	160.53
10,609.0	0.80	316.40	10,607.0	-132.9	1.4	117.7	0.44	0.42	14.38
10,704.0	0.40	329.60	10,702.0	-132.2	0.8	116.8	0.44	-0.42	13.89
10,799.0	0.50	126.70	10,797.0	-132.1	1.0	116.8	0.93	0.11	165.37
10,893.0	0.40	164.70	10,891.0	-132.7	1.4	117.5	0.33	-0.11	40.43
10,988.0	0.60	148.20	10,986.0	-133.4	1.7	118.3	0.26	0.21	-17.37
11,082.0	0.30	159.40	11,080.0	-134.1	2.1	119.0	0.33	-0.32	11.91
11,177.0	0.40	174.00	11,175.0	-134.6	2.2	119.6	0.14	0.11	15.37
11,272.0	0.90	198.50	11,270.0	-135.7	2.0	120.4	0.59	0.53	25.79
11,366.0	1.40	184.80	11,363.9	-137.5	1.7	121.9	0.60	0.53	-14.57
11,402.1	1.27	185.32	11,400.1	-138.4	1.6	122.6	0.36	-0.36	1.44
B.B. Red Hills West 008H									
11,450.0	1.10	186.20	11,447.9	-139.3	1.5	123.4	0.36	-0.36	1.84
11,482.0	0.90	194.20	11,479.9	-139.9	1.4	123.8	0.76	-0.63	25.00
11,514.0	1.70	327.20	11,511.9	-139.7	1.1	123.6	7.52	2.50	415.63
11,546.0	6.30	347.50	11,543.8	-137.6	0.4	121.4	14.82	14.38	63.44
11,577.0	9.50	1.10	11,574.5	-133.4	0.1	117.5	11.89	10.32	43.87
11,609.0	12.00	1.00	11,606.0	-127.4	0.2	112.3	7.81	7.81	-0.31
11,640.0	14.20	358.20	11,636.2	-120.4	0.2	106.1	7.38	7.10	-9.03
11,672.0	16.30	357.40	11,667.0	-112.0	-0.2	98.5	6.60	6.56	-2.50
11,703.0	18.50	358.50	11,696.6	-102.7	-0.5	90.2	7.18	7.10	3.55
11,735.0	20.60	358.70	11,726.8	-92.0	-0.7	80.7	6.57	6.56	0.63
11,767.0	21.90	358.20	11,756.6	-80.4	-1.1	70.3	4.10	4.06	-1.56
11,798.0	24.20	357.90	11,785.1	-68.3	-1.5	59.5	7.43	7.42	-0.97
11,830.0	27.40	357.60	11,813.9	-54.4	-2.0	46.9	10.01	10.00	-0.94
11,861.0	31.20	356.10	11,840.9	-39.3	-2.9	33.2	12.48	12.26	-4.84
11,892.0	34.20	355.40	11,867.0	-22.6	-4.1	17.9	9.75	9.68	-2.26
11,924.0	36.50	355.10	11,893.1	-4.1	-5.7	0.9	7.21	7.19	-0.94
11,956.0	39.40	355.30	11,918.4	15.5	-7.3	-17.1	9.07	9.06	0.63
11,987.0	42.40	356.50	11,941.8	35.7	-8.7	-35.6	10.00	9.68	3.87



Microsoft Survey Report



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Well: Red Hills West Unit 008H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Red Hills West Unit 008H
TVD Reference: 3186 + 27 @ 3213.0usft (Patterson 220)
MD Reference: 3186 + 27 @ 3213.0usft (Patterson 220)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
12,019.0	46.00	0.60	11,964.7	58.0	-9.3	-55.5	14.36	11.25	12.81
12,050.0	49.30	0.40	11,985.6	80.9	-9.1	-75.6	10.66	10.65	-0.65
12,082.0	52.50	0.20	12,005.8	105.8	-9.0	-97.4	10.01	10.00	-0.63
12,113.0	57.50	1.40	12,023.6	131.2	-8.6	-119.6	16.44	16.13	3.87
12,145.0	61.10	0.90	12,039.9	158.7	-8.0	-143.5	11.33	11.25	-1.56
12,176.0	64.00	359.70	12,054.2	186.2	-7.9	-167.7	9.97	9.35	-3.87
12,208.0	68.30	359.00	12,067.1	215.4	-8.2	-193.6	13.59	13.44	-2.19
12,220.0	69.80	358.70	12,071.4	226.6	-8.5	-203.6	12.72	12.50	-2.50
12,263.0	74.90	359.00	12,084.4	267.6	-9.3	-240.0	11.88	11.86	0.70
12,295.0	78.00	358.50	12,091.9	298.7	-10.0	-267.7	9.81	9.69	-1.56
12,326.0	80.70	358.30	12,097.7	329.1	-10.8	-294.9	8.73	8.71	-0.65
12,358.0	82.00	358.30	12,102.5	360.7	-11.8	-323.2	4.06	4.06	0.00
12,390.0	83.10	358.60	12,106.6	392.5	-12.6	-351.6	3.56	3.44	0.94
12,421.0	84.90	359.40	12,109.9	423.3	-13.1	-379.0	6.35	5.81	2.58
12,453.0	87.40	359.60	12,112.0	455.2	-13.4	-407.2	7.84	7.81	0.63
12,485.0	90.60	359.80	12,112.6	487.2	-13.6	-435.4	10.02	10.00	0.63
12,570.1	89.60	359.35	12,112.4	572.3	-14.2	-510.7	1.29	-1.17	-0.53
LP Red Hills West 008H									
12,579.0	89.50	359.30	12,112.5	581.2	-14.3	-518.6	1.29	-1.17	-0.53
12,674.0	89.50	359.70	12,113.3	676.2	-15.2	-602.6	0.42	0.00	0.42
12,769.0	89.50	359.70	12,114.2	771.2	-15.7	-686.5	0.00	0.00	0.00
12,864.0	89.40	359.50	12,115.1	866.2	-16.3	-770.4	0.24	-0.11	-0.21
12,958.0	90.80	359.40	12,114.9	960.2	-17.2	-853.6	1.49	1.49	-0.11
13,053.0	92.50	1.10	12,112.2	1,055.1	-16.8	-937.1	2.53	1.79	1.79
13,148.0	91.40	359.80	12,108.9	1,150.1	-16.1	-1,020.3	1.79	-1.16	-1.37
13,243.0	89.50	359.80	12,108.2	1,245.1	-16.4	-1,104.1	2.00	-2.00	0.00
13,338.0	88.90	358.80	12,109.5	1,340.0	-17.6	-1,188.3	1.23	-0.63	-1.05
13,433.0	88.00	357.70	12,112.1	1,435.0	-20.5	-1,273.2	1.50	-0.95	-1.16
13,528.0	88.30	357.80	12,115.2	1,529.8	-24.2	-1,358.5	0.33	0.32	0.11
13,623.0	89.90	357.30	12,116.6	1,624.7	-28.2	-1,444.0	1.76	1.68	-0.53
13,717.0	91.10	358.50	12,115.8	1,718.7	-31.7	-1,528.4	1.81	1.28	1.28
13,813.0	90.00	357.30	12,114.9	1,814.6	-35.2	-1,614.5	1.70	-1.15	-1.25
13,907.0	91.70	0.40	12,113.5	1,908.5	-37.1	-1,698.1	3.76	1.81	3.30
14,002.0	90.60	358.80	12,111.6	2,003.5	-37.8	-1,782.1	2.04	-1.16	-1.68
14,097.0	90.50	358.90	12,110.7	2,098.5	-39.7	-1,866.6	0.15	-0.11	0.11
14,191.0	91.20	359.60	12,109.3	2,192.5	-40.9	-1,950.0	1.05	0.74	0.74
14,287.0	90.50	359.70	12,107.9	2,288.5	-41.5	-2,034.7	0.74	-0.73	0.10
14,382.0	90.40	359.70	12,107.1	2,383.5	-42.0	-2,118.6	0.11	-0.11	0.00
14,476.0	88.30	359.70	12,108.2	2,477.4	-42.5	-2,201.6	2.23	-2.23	0.00
14,570.0	88.10	359.20	12,111.1	2,571.4	-43.4	-2,284.8	0.57	-0.21	-0.53
14,665.0	87.30	358.90	12,115.0	2,666.3	-44.9	-2,369.1	0.90	-0.84	-0.32
14,760.0	89.30	358.50	12,117.8	2,761.2	-47.1	-2,453.7	2.15	2.11	-0.42
14,855.0	89.80	359.00	12,118.5	2,856.2	-49.2	-2,538.3	0.74	0.53	0.53

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Survey Calculation Method: Minimum Curvature
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)
14,949.0	90.90	359.30	12,117.9	2,950.2	-50.6	-2,621.7	1.21	1.17	0.32
15,044.0	90.90	359.10	12,116.5	3,045.2	-51.9	-2,706.0	0.21	0.00	-0.21
15,138.0	89.80	358.50	12,115.9	3,139.2	-53.9	-2,789.7	1.33	-1.17	-0.64
15,233.0	91.00	0.30	12,115.2	3,234.1	-54.9	-2,873.8	2.28	1.26	1.89
15,328.0	90.40	359.60	12,114.1	3,329.1	-54.9	-2,957.5	0.97	-0.63	-0.74
15,422.0	90.50	359.10	12,113.3	3,423.1	-56.0	-3,040.7	0.54	0.11	-0.53
15,517.0	91.60	0.60	12,111.6	3,518.1	-56.3	-3,124.5	1.96	1.16	1.58
15,612.0	91.20	0.90	12,109.3	3,613.1	-55.0	-3,207.5	0.53	-0.42	0.32
15,706.0	90.70	1.70	12,107.7	3,707.0	-52.9	-3,289.3	1.00	-0.53	0.85
15,801.0	89.10	1.10	12,107.9	3,802.0	-50.6	-3,371.8	1.80	-1.68	-0.63
15,896.0	89.10	1.10	12,109.4	3,897.0	-48.7	-3,454.5	0.00	0.00	0.00
15,990.0	88.40	1.40	12,111.4	3,990.9	-46.7	-3,536.3	0.81	-0.74	0.32
16,085.0	88.30	1.90	12,114.1	4,085.8	-43.9	-3,618.6	0.54	-0.11	0.53
16,180.0	87.00	1.30	12,118.0	4,180.7	-41.3	-3,700.9	1.51	-1.37	-0.63
16,274.0	88.00	359.70	12,122.1	4,274.6	-40.5	-3,783.2	2.01	1.06	-1.70
16,369.0	90.80	0.00	12,123.1	4,369.6	-40.7	-3,866.9	2.96	2.95	0.32
16,462.0	90.60	359.00	12,122.0	4,462.6	-41.5	-3,949.2	1.10	-0.22	-1.08
16,557.0	92.30	358.60	12,119.6	4,557.5	-43.5	-4,033.7	1.84	1.79	-0.42
16,652.0	90.50	357.70	12,117.3	4,652.5	-46.6	-4,118.8	2.12	-1.89	-0.95
16,746.0	90.70	358.20	12,116.3	4,746.4	-50.0	-4,203.1	0.57	0.21	0.53
16,809.0	90.60	358.60	12,115.6	4,809.4	-51.7	-4,259.4	0.65	-0.16	0.63
16,860.0	90.60	358.60	12,115.0	4,860.3	-53.0	-4,304.8	0.00	0.00	0.00

16860' MD Projected to Bit - PBHL Red Hills West 008H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
+N/-S (usft)	+E/-W (usft)		
16,860.0	12,115.0	4,860.3	-53.0 16860' MD Projected to Bit



May 17, 2017

New Mexico Energy, Minerals and Natural Resources Department
Attn: Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Attn: Jackie Lathan

Re: Mewbourne Oil Company
Red Hills West Unit #008H
WC-025 G-08 S263205N; Upper Wolfcamp
Lea County, New Mexico
API# 30-025-42901

Enclosed please find the original and one (1) copy of the survey performed on the reference well by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C. Other information required by your office is as follows:

<u>Name & Title</u>	<u>Drainhole No.</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
John Bult	Original Hole	1,131ft. to 16,809ft.	04-09-17 to 04-30-17	MWD Survey

A certified plat on which the bottom-hole location is oriented to both surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number


Todd Estes

Enclosures

CC:

Mewbourne Oil Company
Attn: Frosty Lathan
P.O. Box 5720
Hobbs, NM 88241

Mewbourne Oil Company
Attn: Robin Terrell
P.O. Box 5720
Hobbs, NM 88241

NMEMaNRD\Mewbourne Oil Company\Red Hills West Unit #008H\171027

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163



May 17, 2017

Survey Certification Report

STATE OF TEXAS

COUNTY OF Montgomery

I, Todd Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of April 09, 2017, through April 30, 2017 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 1,131 feet to a depth of 16,809 feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of Mewbourne Oil Company, for the Red Hills West Unit #008H well, API # 30-025-42901 in Lea County, New Mexico; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

Todd Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section 8-26S-32E Red Hills West 008H
Well: Red Hills West Unit 008H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Red Hills West Unit 008H
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
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 8-26S-32E Red Hills West 008H		
Site Position:		Northing:	382,678.18 usft
From:	Map	Easting:	696,810.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 1.821 N
		Longitude:	103° 41' 53.192 W
		Grid Convergence:	0.34 °

Well	Red Hills West Unit 008H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			27.0 usft
			Latitude:
			32° 3' 1.821 N
			Longitude:
			103° 41' 53.192 W
			Ground Level:
			3,186.0 usft

Wellbore	Original Hole					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	IGRF2015	3/30/2017	7.02	59.89	47,845.41571000	

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	151.71	



Microsoft MWD Surveys



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Survey Program Date 5/17/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	1,100.0	Phoenix Gyro Survey (Original Hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline
1,100.0	16,860.0	MWD Vertical Survey (Original Hole)	MWD	MWD v3:standard declination

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
1,100.0	0.23	138.00	1,100.0	-1.2	-1.1	1.6	222.59	Tie-In
1,131.0	0.50	156.60	1,131.0	-1.3	-1.0	1.6	216.13	
1,258.0	0.50	130.60	1,258.0	-2.2	-0.3	2.2	188.56	
1,385.0	0.50	158.70	1,385.0	-3.1	0.3	3.1	174.60	
1,511.0	0.20	131.80	1,511.0	-3.7	0.7	3.8	170.07	
1,638.0	0.40	158.60	1,638.0	-4.3	1.0	4.4	167.13	
1,764.0	0.20	213.70	1,764.0	-4.9	1.0	5.0	168.22	
1,891.0	0.10	173.80	1,891.0	-5.2	0.9	5.3	170.06	
2,018.0	0.40	121.80	2,018.0	-5.5	1.3	5.7	166.79	
2,081.0	0.70	141.90	2,081.0	-5.9	1.7	6.2	163.85	
2,176.0	0.40	146.30	2,176.0	-6.7	2.3	7.1	161.27	
2,271.0	0.40	108.50	2,271.0	-7.1	2.8	7.6	158.63	
2,365.0	0.30	183.10	2,365.0	-7.4	3.1	8.0	157.56	
2,461.0	0.40	140.50	2,461.0	-7.9	3.3	8.6	157.63	
2,555.0	0.30	176.60	2,555.0	-8.4	3.5	9.1	157.52	
2,650.0	0.30	123.40	2,650.0	-8.8	3.7	9.6	157.17	
2,745.0	0.20	30.00	2,745.0	-8.8	4.0	9.7	155.57	
2,839.0	0.30	117.90	2,839.0	-8.8	4.3	9.8	153.90	
2,934.0	0.50	119.00	2,934.0	-9.1	4.9	10.3	151.77	
3,029.0	0.70	123.10	3,028.9	-9.6	5.7	11.2	149.20	
3,124.0	0.40	137.20	3,123.9	-10.2	6.4	12.0	147.65	



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
3,218.0	0.30	99.80	3,217.9	-10.4	6.9	12.5	146.55
3,313.0	0.60	62.10	3,312.9	-10.3	7.6	12.8	143.51
3,408.0	0.70	66.50	3,407.9	-9.8	8.6	13.0	138.84
3,503.0	0.70	62.20	3,502.9	-9.3	9.6	13.4	134.05
3,598.0	0.60	46.20	3,597.9	-8.7	10.5	13.6	129.63
3,693.0	0.90	63.90	3,692.9	-8.0	11.5	14.0	124.82
3,787.0	0.80	76.80	3,786.9	-7.5	12.8	14.9	120.45
3,882.0	0.70	86.40	3,881.9	-7.3	14.0	15.8	117.62
3,977.0	0.80	130.60	3,976.9	-7.7	15.1	17.0	117.10
4,071.0	1.40	141.30	4,070.9	-9.1	16.3	18.7	119.02
4,166.0	1.40	136.30	4,165.8	-10.8	17.9	20.9	121.17
4,260.0	1.30	136.90	4,259.8	-12.4	19.4	23.0	122.64
4,290.0	1.00	135.20	4,289.8	-12.8	19.8	23.6	122.98
4,358.0	0.70	133.90	4,357.8	-13.6	20.5	24.6	123.46
4,452.0	0.70	142.30	4,451.8	-14.4	21.3	25.7	124.10
4,547.0	0.80	157.40	4,546.8	-15.5	21.9	26.8	125.27
4,642.0	0.80	143.30	4,641.8	-16.6	22.5	28.0	126.41
4,737.0	0.90	152.00	4,736.8	-17.8	23.3	29.3	127.41
4,831.0	0.60	132.80	4,830.8	-18.8	24.0	30.5	128.08
4,926.0	0.80	131.60	4,925.7	-19.6	24.9	31.6	128.23
5,021.0	0.90	128.10	5,020.7	-20.5	25.9	33.1	128.29
5,115.0	1.00	144.60	5,114.7	-21.6	27.0	34.6	128.67
5,210.0	1.00	165.20	5,209.7	-23.1	27.7	36.0	129.82
5,305.0	1.00	154.40	5,304.7	-24.6	28.3	37.5	131.08
5,400.0	0.80	157.50	5,399.7	-26.0	28.9	38.8	132.00
5,495.0	1.00	171.40	5,494.7	-27.4	29.2	40.1	133.16
5,590.0	0.80	145.00	5,589.7	-28.8	29.8	41.4	134.05



Microsoft MWD Surveys



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Well: Red Hills West Unit 008H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Red Hills West Unit 008H
TVD Reference: 3186 + 27 @ 3213.0usft (Patterson 220)
MD Reference: 3186 + 27 @ 3213.0usft (Patterson 220)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
5,685.0	0.40	227.00	5,684.7	-29.6	29.9	42.0	134.68
5,780.0	1.10	144.10	5,779.7	-30.5	30.2	42.9	135.32
5,874.0	0.90	148.70	5,873.6	-31.9	31.1	44.5	135.72
5,969.0	0.80	145.90	5,968.6	-33.1	31.9	45.9	136.07
6,064.0	0.90	159.40	6,063.6	-34.3	32.5	47.3	136.57
6,159.0	0.70	157.20	6,158.6	-35.6	33.0	48.5	137.15
6,254.0	0.80	159.70	6,253.6	-36.7	33.4	49.6	137.67
6,348.0	0.60	163.50	6,347.6	-37.8	33.8	50.7	138.19
6,443.0	0.70	161.80	6,442.6	-38.8	34.1	51.7	138.69
6,538.0	0.80	155.30	6,537.6	-40.0	34.6	52.9	139.14
6,632.0	0.70	156.90	6,631.6	-41.1	35.1	54.0	139.52
6,727.0	0.70	166.00	6,726.6	-42.2	35.4	55.1	139.97
6,821.0	0.70	177.10	6,820.6	-43.3	35.6	56.1	140.58
6,916.0	0.70	154.30	6,915.5	-44.4	35.9	57.1	141.06
7,010.0	0.70	140.50	7,009.5	-45.4	36.5	58.3	141.19
7,105.0	0.80	143.90	7,104.5	-46.4	37.3	59.5	141.21
7,200.0	1.10	187.20	7,199.5	-47.6	37.5	60.8	141.86
7,294.0	1.40	183.20	7,293.5	-49.9	37.4	62.3	143.15
7,389.0	1.60	189.10	7,388.5	-52.3	37.1	64.1	144.67
7,483.0	1.30	180.80	7,482.4	-54.7	36.9	66.0	146.01
7,578.0	1.80	215.60	7,577.4	-57.0	36.0	67.4	147.72
7,675.0	1.70	209.40	7,674.4	-59.5	34.4	68.7	149.96
7,770.0	1.60	210.80	7,769.3	-61.8	33.0	70.1	151.89
7,865.0	1.80	204.40	7,864.3	-64.3	31.7	71.7	153.75
7,959.0	1.70	194.80	7,958.2	-67.0	30.8	73.8	155.35
8,054.0	2.00	195.70	8,053.2	-70.0	30.0	76.1	156.83
8,148.0	2.00	198.40	8,147.1	-73.1	29.0	78.7	158.37



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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
8,243.0	2.10	201.40	8,242.1	-76.3	27.8	81.2	159.96
8,337.0	2.20	199.00	8,336.0	-79.6	26.6	84.0	161.51
8,432.0	2.00	200.50	8,430.9	-82.9	25.4	86.7	162.94
8,526.0	1.90	207.50	8,524.9	-85.8	24.2	89.2	164.28
8,621.0	1.40	204.10	8,619.8	-88.3	22.9	91.2	165.43
8,716.0	1.60	185.50	8,714.8	-90.7	22.3	93.4	166.15
8,811.0	1.50	182.70	8,809.8	-93.2	22.2	95.8	166.63
8,906.0	1.50	172.40	8,904.7	-95.7	22.3	98.2	166.90
9,001.0	1.70	200.40	8,999.7	-98.2	21.9	100.7	167.41
9,096.0	2.20	232.60	9,094.7	-100.7	20.0	102.6	168.76
9,190.0	2.30	230.50	9,188.6	-103.0	17.1	104.4	170.56
9,284.0	2.00	216.60	9,282.5	-105.5	14.7	106.5	172.08
9,379.0	2.00	219.10	9,377.5	-108.1	12.6	108.8	173.33
9,474.0	1.90	218.70	9,472.4	-110.6	10.6	111.1	174.52
9,568.0	2.00	204.50	9,566.4	-113.3	9.0	113.7	175.48
9,662.0	2.00	220.40	9,660.3	-116.1	7.2	116.3	176.44
9,756.0	2.50	222.40	9,754.2	-118.8	4.8	118.9	177.70
9,850.0	2.20	228.90	9,848.1	-121.5	2.0	121.5	179.04
9,945.0	1.50	179.80	9,943.1	-124.0	0.7	124.0	179.69
10,040.0	1.70	167.20	10,038.1	-126.6	1.0	126.6	179.56
10,134.0	1.00	184.40	10,132.0	-128.8	1.2	128.8	179.46
10,229.0	1.20	176.90	10,227.0	-130.6	1.2	130.6	179.47
10,324.0	1.20	151.80	10,322.0	-132.5	1.7	132.5	179.25
10,419.0	0.30	151.70	10,417.0	-133.6	2.3	133.6	179.00
10,513.0	0.40	302.60	10,511.0	-133.6	2.2	133.6	179.07
10,609.0	0.80	316.40	10,607.0	-132.9	1.4	132.9	179.39
10,704.0	0.40	329.80	10,702.0	-132.2	0.8	132.2	179.65



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10,799.0	0.50	126.70	10,797.0	-132.1	1.0	132.1	179.58
10,893.0	0.40	164.70	10,891.0	-132.7	1.4	132.7	179.41
10,988.0	0.60	148.20	10,986.0	-133.4	1.7	133.4	179.26
11,082.0	0.30	159.40	11,080.0	-134.1	2.1	134.1	179.11
11,177.0	0.40	174.00	11,175.0	-134.6	2.2	134.7	179.07
11,272.0	0.90	198.50	11,270.0	-135.7	2.0	135.7	179.16
11,366.0	1.40	184.80	11,363.9	-137.5	1.7	137.5	179.31
11,402.1	1.27	185.32	11,400.1	-138.4	1.6	138.4	179.34
B.B. Red Hills West 008H							
11,450.0	1.10	186.20	11,447.9	-139.3	1.5	139.4	179.39
11,482.0	0.90	194.20	11,479.9	-139.9	1.4	139.9	179.43
11,514.0	1.70	327.20	11,511.9	-139.7	1.1	139.7	179.56
11,546.0	6.30	347.50	11,543.8	-137.6	0.4	137.6	179.82
11,577.0	9.50	1.10	11,574.5	-133.4	0.1	133.4	179.95
11,609.0	12.00	1.00	11,606.0	-127.4	0.2	127.4	179.90
11,640.0	14.20	358.20	11,636.2	-120.4	0.2	120.4	179.92
11,672.0	16.30	357.40	11,667.0	-112.0	-0.2	112.0	180.08
11,703.0	18.50	358.50	11,696.6	-102.7	-0.5	102.7	180.27
11,735.0	20.60	358.70	11,726.8	-92.0	-0.7	92.0	180.47
11,767.0	21.90	358.20	11,756.6	-80.4	-1.1	80.5	180.76
11,798.0	24.20	357.90	11,785.1	-68.3	-1.5	68.3	181.24
11,830.0	27.40	357.60	11,813.9	-54.4	-2.0	54.4	182.14
11,861.0	31.20	356.10	11,840.9	-39.3	-2.9	39.4	184.19
11,892.0	34.20	355.40	11,867.0	-22.6	-4.1	22.9	190.35
11,924.0	36.50	355.10	11,893.1	-4.1	-5.7	7.0	233.99
11,956.0	39.40	355.30	11,918.4	15.5	-7.3	17.1	334.79
11,987.0	42.40	356.50	11,941.8	35.7	-8.7	36.8	346.25



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
12,019.0	46.00	0.60	11,964.7	58.0	-9.3	58.8	350.91
12,050.0	49.30	0.40	11,985.6	80.9	-9.1	81.4	353.60
12,082.0	52.50	0.20	12,005.8	105.8	-9.0	106.1	355.16
12,113.0	57.50	1.40	12,023.6	131.2	-8.6	131.4	356.25
12,145.0	61.10	0.90	12,039.9	158.7	-8.0	158.9	357.10
12,176.0	64.00	359.70	12,054.2	186.2	-7.9	186.3	357.57
12,208.0	68.30	359.00	12,067.1	215.4	-8.2	215.6	357.81
12,220.0	69.80	358.70	12,071.4	226.6	-8.5	226.8	357.86
12,263.0	74.90	359.00	12,084.4	267.6	-9.3	267.7	358.01
12,295.0	78.00	358.50	12,091.9	298.7	-10.0	298.8	358.09
12,326.0	80.70	358.30	12,097.7	329.1	-10.8	329.3	358.12
12,358.0	82.00	358.30	12,102.5	360.7	-11.8	360.9	358.13
12,390.0	83.10	358.60	12,106.6	392.5	-12.6	392.7	358.16
12,421.0	84.90	359.40	12,109.9	423.3	-13.1	423.5	358.22
12,453.0	87.40	359.60	12,112.0	455.2	-13.4	455.4	358.31
12,485.0	90.60	359.80	12,112.6	487.2	-13.6	487.4	358.40
12,570.1	89.60	359.35	12,112.4	572.3	-14.2	572.5	358.58
LP Red Hills West 008H							
12,579.0	89.50	359.30	12,112.5	581.2	-14.3	581.4	358.59
12,674.0	89.50	359.70	12,113.3	676.2	-15.2	676.4	358.72
12,769.0	89.50	359.70	12,114.2	771.2	-15.7	771.3	358.84
12,864.0	89.40	359.50	12,115.1	866.2	-16.3	866.3	358.92
12,958.0	90.80	359.40	12,114.9	960.2	-17.2	960.3	358.97
13,053.0	92.50	1.10	12,112.2	1,055.1	-16.8	1,055.3	359.09
13,148.0	91.40	359.80	12,108.9	1,150.1	-16.1	1,150.2	359.20
13,243.0	89.50	359.80	12,108.2	1,245.1	-16.4	1,245.2	359.25
13,338.0	88.90	358.80	12,109.5	1,340.0	-17.6	1,340.2	359.25



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
13,433.0	88.00	357.70	12,112.1	1,435.0	-20.5	1,435.1	359.18
13,528.0	88.30	357.80	12,115.2	1,529.8	-24.2	1,530.0	359.09
13,623.0	89.90	357.30	12,116.6	1,624.7	-28.2	1,625.0	359.00
13,717.0	91.10	358.50	12,115.8	1,718.7	-31.7	1,719.0	358.94
13,813.0	90.00	357.30	12,114.9	1,814.6	-35.2	1,814.9	358.89
13,907.0	91.70	0.40	12,113.5	1,908.5	-37.1	1,908.9	358.89
14,002.0	90.60	358.80	12,111.6	2,003.5	-37.8	2,003.9	358.92
14,097.0	90.50	358.90	12,110.7	2,098.5	-39.7	2,098.9	358.92
14,191.0	91.20	359.60	12,109.3	2,192.5	-40.9	2,192.9	358.93
14,287.0	90.50	359.70	12,107.9	2,288.5	-41.5	2,288.8	358.96
14,382.0	90.40	359.70	12,107.1	2,383.5	-42.0	2,383.8	358.99
14,476.0	88.30	359.70	12,108.2	2,477.4	-42.5	2,477.8	359.02
14,570.0	88.10	359.20	12,111.1	2,571.4	-43.4	2,571.8	359.03
14,665.0	87.30	358.90	12,115.0	2,666.3	-44.9	2,666.7	359.03
14,760.0	89.30	358.50	12,117.8	2,761.2	-47.1	2,761.6	359.02
14,855.0	89.80	359.00	12,118.5	2,856.2	-49.2	2,856.6	359.01
14,949.0	90.90	359.30	12,117.9	2,950.2	-50.6	2,950.6	359.02
15,044.0	90.90	359.10	12,116.5	3,045.2	-51.9	3,045.6	359.02
15,138.0	89.80	358.50	12,115.9	3,139.2	-53.9	3,139.6	359.02
15,233.0	91.00	0.30	12,115.2	3,234.1	-54.9	3,234.6	359.03
15,328.0	90.40	359.60	12,114.1	3,329.1	-54.9	3,329.6	359.05
15,422.0	90.50	359.10	12,113.3	3,423.1	-56.0	3,423.6	359.06
15,517.0	91.60	0.60	12,111.6	3,518.1	-56.3	3,518.5	359.08
15,612.0	91.20	0.90	12,109.3	3,613.1	-55.0	3,613.5	359.13
15,706.0	90.70	1.70	12,107.7	3,707.0	-52.9	3,707.4	359.18
15,801.0	89.10	1.10	12,107.9	3,802.0	-50.6	3,802.3	359.24
15,896.0	89.10	1.10	12,109.4	3,897.0	-48.7	3,897.3	359.28



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15,990.0	88.40	1.40	12,111.4	3,990.9	-46.7	3,991.2	359.33
16,085.0	88.30	1.90	12,114.1	4,085.8	-43.9	4,086.1	359.38
16,180.0	87.00	1.30	12,118.0	4,180.7	-41.3	4,180.9	359.43
16,274.0	88.00	359.70	12,122.1	4,274.6	-40.5	4,274.8	359.46
16,369.0	90.80	0.00	12,123.1	4,369.6	-40.7	4,369.8	359.47
16,462.0	90.60	359.00	12,122.0	4,462.6	-41.5	4,462.8	359.47
16,557.0	92.30	358.60	12,119.6	4,557.5	-43.5	4,557.7	359.45
16,652.0	90.50	357.70	12,117.3	4,652.5	-46.6	4,652.7	359.43
16,746.0	90.70	358.20	12,116.3	4,746.4	-50.0	4,746.7	359.40
16,809.0	90.60	358.60	12,115.6	4,809.4	-51.7	4,809.6	359.38
16,860.0	90.60	358.60	12,115.0	4,860.3	-53.0	4,860.6	359.38

16860' MD Projected to Bit - PBHL Red Hills West 008H

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
16,860.0	12,115.0	4,860.4	-53.0	16860' MD Projected to Bit

Checked By: _____

Approved By: _____

Date: _____