

Bayswater Exploration & Production, LLC

Well Name: **Matrix M-29HN**

Surface Location: Matrix 29- Pad Sec.29-T6N-R65W

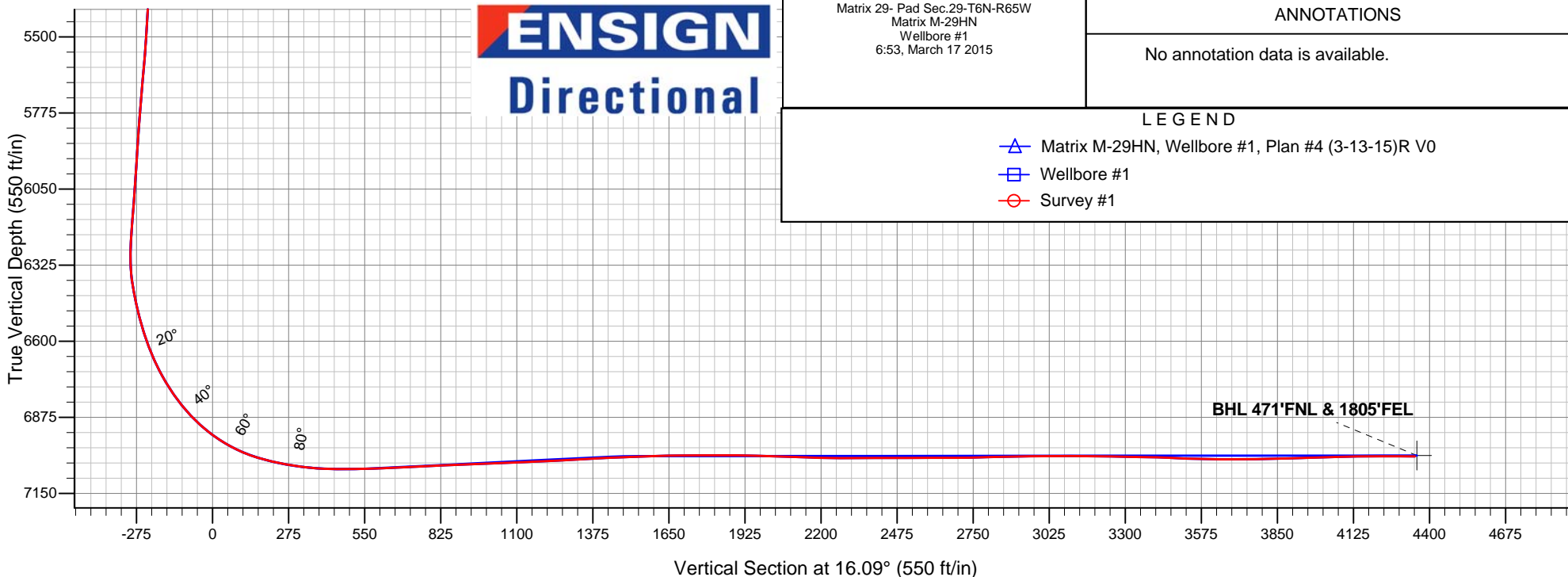
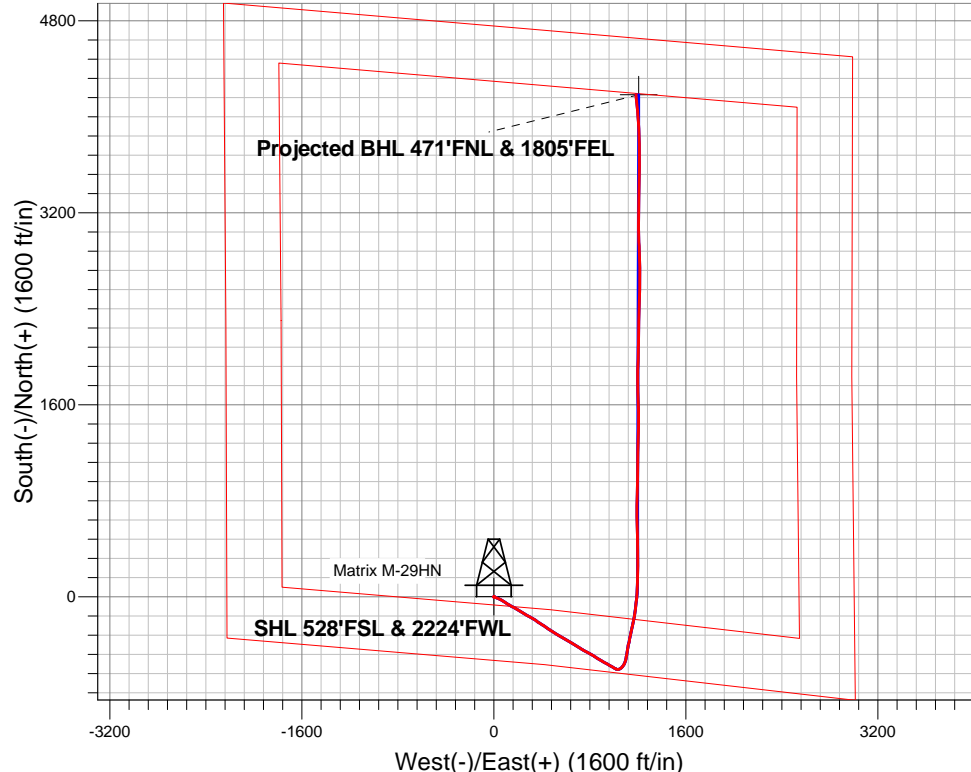
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4708.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1408864.21	3225769.03	40.452899	-104.688725	
Original Well Elev WELL @ 4730.5ft (Original Well Elev)						

FINAL SURVEY

Projected Bottom Hole Location
11735'MD 7016'TVD 4183'N & 1184'E of SHL
89.5 degree Incl @ 354.3 degree AZM





Bayswater Exploration & Production, LLC

SEC.29-T6N-R65W

Matrix 29- Pad Sec.29-T6N-R65W

Matrix M-29HN

Wellbore #1

Survey: Survey #1

Standard Survey Report

17 March, 2015



BAYSWATER
EXPLORATION & PRODUCTION, LLC

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Matrix M-29HN
Project:	SEC.29-T6N-R65W	TVD Reference:	WELL @ 4730.5ft (Original Well Elev)
Site:	Matrix 29- Pad Sec.29-T6N-R65W	MD Reference:	WELL @ 4730.5ft (Original Well Elev)
Well:	Matrix M-29HN	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.29-T6N-R65W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Matrix 29- Pad Sec.29-T6N-R65W				
Site Position:		Northing:	1,408,840.92 ft	Latitude:	40.452836
From:	Lat/Long	Easting:	3,225,730.56 ft	Longitude:	-104.688864
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.52 °

Well	Matrix M-29HN					
Well Position	+N/-S	0.0 ft	Northing:	1,408,864.21 ft	Latitude:	40.452899
	+E/-W	0.0 ft	Easting:	3,225,769.03 ft	Longitude:	-104.688725
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,708.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/13/2015	8.32	66.98	52,773

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	16.09	

Survey Program	Date	3/17/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
128.0	11,735.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1.0	0.00	172.00	1.0	0.0	0.0	0.0	0.23	0.23	0.00	
SHL 528'FSL & 2224'FWL										
128.0	0.30	172.00	128.0	-0.3	0.0	-0.3	0.23	0.23	0.00	
220.0	0.40	173.60	220.0	-0.9	0.1	-0.8	0.11	0.11	1.74	
312.0	0.50	168.00	312.0	-1.6	0.2	-1.5	0.12	0.11	-6.09	
496.0	0.70	355.50	496.0	-1.3	0.3	-1.1	0.65	0.11	-93.75	
588.0	0.90	10.50	588.0	0.0	0.4	0.1	0.31	0.22	16.30	
680.0	0.30	46.30	680.0	0.9	0.7	1.0	0.74	-0.65	38.91	
705.0	0.30	18.20	705.0	1.0	0.8	1.2	0.58	0.00	-112.40	
827.0	0.20	52.30	827.0	1.4	1.0	1.7	0.14	-0.08	27.95	
923.0	0.10	45.80	923.0	1.6	1.2	1.9	0.11	-0.10	-6.77	
1,018.0	0.10	222.10	1,018.0	1.6	1.2	1.9	0.21	0.00	185.58	

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Site:	Matrix 29- Pad Sec.29-T6N-R65W	MD Reference:	WELL @ 4730.5ft (Original Well Elev)
Well:	Matrix M-29HN	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,113.0	0.30	219.80	1,113.0	1.3	1.0	1.6	0.21	0.21	-2.42
1,205.0	0.50	226.00	1,205.0	0.9	0.6	1.0	0.22	0.22	6.74
1,297.0	0.40	209.60	1,297.0	0.3	0.1	0.3	0.18	-0.11	-17.83
1,389.0	0.60	55.30	1,389.0	0.3	0.4	0.4	1.06	0.22	-167.72
1,481.0	0.50	30.00	1,481.0	0.9	1.0	1.2	0.28	-0.11	-27.50
1,573.0	0.50	8.70	1,573.0	1.7	1.2	1.9	0.20	0.00	-23.15
1,665.0	1.10	113.80	1,665.0	1.7	2.1	2.2	1.44	0.65	114.24
1,758.0	2.90	125.90	1,757.9	0.0	4.8	1.3	1.98	1.94	13.01
1,850.0	4.20	122.30	1,849.7	-3.2	9.6	-0.4	1.43	1.41	-3.91
1,942.0	5.70	114.20	1,941.4	-6.9	16.6	-2.0	1.79	1.63	-8.80
2,034.0	7.50	110.30	2,032.8	-10.8	26.4	-3.1	2.02	1.96	-4.24
2,126.0	9.10	113.80	2,123.8	-15.8	38.7	-4.5	1.82	1.74	3.80
2,218.0	10.60	116.80	2,214.4	-22.6	52.9	-7.1	1.72	1.63	3.26
2,310.0	12.10	120.10	2,304.6	-31.3	68.8	-11.0	1.78	1.63	3.59
2,402.0	14.00	124.90	2,394.3	-42.5	86.2	-16.9	2.38	2.07	5.22
2,495.0	16.40	122.40	2,484.0	-55.9	106.6	-24.2	2.67	2.58	-2.69
2,590.0	17.30	120.00	2,574.9	-70.2	130.1	-31.4	1.20	0.95	-2.53
2,685.0	16.40	117.30	2,665.8	-83.4	154.3	-37.4	1.26	-0.95	-2.84
2,780.0	18.70	120.70	2,756.4	-97.3	179.3	-43.8	2.65	2.42	3.58
2,876.0	18.60	121.40	2,847.4	-113.2	205.6	-51.7	0.26	-0.10	0.73
2,971.0	15.90	119.40	2,938.1	-127.4	229.8	-58.7	2.91	-2.84	-2.11
3,066.0	16.70	122.60	3,029.3	-141.2	252.7	-65.6	1.27	0.84	3.37
3,161.0	14.90	120.00	3,120.7	-154.6	274.8	-72.4	2.04	-1.89	-2.74
3,256.0	14.00	117.20	3,212.7	-166.0	295.6	-77.6	1.20	-0.95	-2.95
3,351.0	13.50	120.10	3,305.0	-176.8	315.4	-82.5	0.90	-0.53	3.05
3,447.0	14.20	119.10	3,398.2	-188.2	335.4	-87.8	0.77	0.73	-1.04
3,542.0	14.90	130.00	3,490.1	-201.7	354.9	-95.4	2.97	0.74	11.47
3,637.0	17.10	123.50	3,581.5	-217.2	375.9	-104.5	2.98	2.32	-6.84
3,732.0	16.00	120.80	3,672.5	-231.7	398.8	-112.0	1.41	-1.16	-2.84
3,827.0	18.30	123.30	3,763.3	-246.6	422.5	-119.8	2.54	2.42	2.63
3,923.0	19.30	123.80	3,854.2	-263.7	448.3	-129.1	1.06	1.04	0.52
4,018.0	19.80	124.00	3,943.7	-281.4	474.7	-138.8	0.53	0.53	0.21
4,113.0	19.20	123.50	4,033.2	-299.0	501.1	-148.4	0.66	-0.63	-0.53
4,208.0	17.10	120.80	4,123.5	-314.8	526.1	-156.6	2.38	-2.21	-2.84
4,304.0	15.50	118.40	4,215.7	-328.1	549.5	-163.0	1.81	-1.67	-2.50
4,399.0	14.50	123.00	4,307.4	-340.6	570.6	-169.1	1.64	-1.05	4.84
4,494.0	15.10	119.80	4,399.3	-353.3	591.3	-175.5	1.07	0.63	-3.37
4,589.0	13.60	120.50	4,491.3	-365.1	611.7	-181.2	1.59	-1.58	0.74
4,684.0	14.50	119.10	4,583.5	-376.5	631.7	-186.7	1.01	0.95	-1.47
4,779.0	13.60	119.60	4,675.6	-387.8	651.8	-192.0	0.96	-0.95	0.53
4,875.0	14.10	118.90	4,768.8	-399.1	671.9	-197.2	0.55	0.52	-0.73
4,970.0	13.50	120.70	4,861.1	-410.3	691.5	-202.6	0.78	-0.63	1.89
5,065.0	14.90	125.20	4,953.2	-423.0	711.1	-209.4	1.88	1.47	4.74
5,160.0	15.80	122.10	5,044.8	-436.9	732.0	-216.9	1.28	0.95	-3.26
5,256.0	12.60	118.90	5,137.8	-448.9	752.2	-222.8	3.43	-3.33	-3.33
5,351.0	11.30	118.90	5,230.8	-458.4	769.5	-227.2	1.37	-1.37	0.00
5,446.0	12.30	116.60	5,323.8	-467.5	786.7	-231.1	1.16	1.05	-2.42
5,541.0	12.80	119.40	5,416.5	-477.2	804.9	-235.4	0.83	0.53	2.95
5,636.0	13.80	121.00	5,509.0	-488.2	823.8	-240.7	1.12	1.05	1.68
5,731.0	16.90	123.10	5,600.6	-501.5	845.0	-247.7	3.31	3.26	2.21
5,826.0	18.20	121.70	5,691.1	-516.9	869.2	-255.7	1.44	1.37	-1.47
5,922.0	18.00	119.10	5,782.4	-532.0	894.9	-263.1	0.87	-0.21	-2.71
6,017.0	16.70	119.10	5,873.1	-545.8	919.7	-269.5	1.37	-1.37	0.00
6,112.0	15.30	120.10	5,964.4	-558.7	942.5	-275.6	1.50	-1.47	1.05

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Site:	Matrix 29- Pad Sec.29-T6N-R65W	MD Reference:	WELL @ 4730.5ft (Original Well Elev)
Well:	Matrix M-29HN	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,207.0	15.70	120.50	6,055.9	-571.5	964.4	-281.8	0.44	0.42	0.42
6,302.0	16.20	121.90	6,147.3	-585.0	986.7	-288.6	0.66	0.53	1.47
6,397.0	15.60	118.20	6,238.6	-598.1	1,009.2	-294.9	1.24	-0.63	-3.89
6,444.0	13.40	112.90	6,284.1	-603.2	1,019.8	-296.9	5.46	-4.68	-11.28
6,493.0	13.30	93.40	6,331.8	-605.7	1,030.7	-296.3	9.15	-0.20	-39.80
6,540.0	14.20	73.00	6,377.5	-604.3	1,041.6	-292.0	10.44	1.91	-43.40
6,588.0	14.90	58.80	6,424.0	-599.4	1,052.5	-284.2	7.55	1.46	-29.58
6,635.0	14.60	49.10	6,469.5	-592.4	1,062.2	-274.8	5.29	-0.64	-20.64
6,683.0	16.20	40.00	6,515.7	-583.3	1,071.0	-263.6	6.03	3.33	-18.96
6,730.0	17.80	32.60	6,560.7	-572.2	1,079.1	-250.7	5.72	3.40	-15.74
6,778.0	20.20	26.60	6,606.1	-558.6	1,086.8	-235.5	6.44	5.00	-12.50
6,825.0	23.00	19.40	6,649.8	-542.7	1,093.5	-218.4	8.19	5.96	-15.32
6,873.0	26.20	13.10	6,693.4	-523.6	1,099.0	-198.4	8.61	6.67	-13.13
6,920.0	29.90	10.80	6,734.9	-501.9	1,103.5	-176.4	8.20	7.87	-4.89
6,968.0	33.20	9.40	6,775.8	-477.2	1,107.9	-151.4	7.04	6.88	-2.92
7,015.0	37.50	8.70	6,814.1	-450.4	1,112.2	-124.5	9.19	9.15	-1.49
7,064.0	41.10	9.60	6,852.0	-419.7	1,117.1	-93.6	7.44	7.35	1.84
7,111.0	45.80	11.00	6,886.1	-387.9	1,122.9	-61.5	10.21	10.00	2.98
7,159.0	50.50	11.70	6,918.2	-352.9	1,130.0	-25.9	9.85	9.79	1.46
7,206.0	55.20	12.60	6,946.5	-316.3	1,137.9	11.5	10.12	10.00	1.91
7,254.0	59.80	12.90	6,972.3	-276.8	1,146.8	51.9	9.60	9.58	0.63
7,301.0	65.20	12.40	6,994.0	-236.1	1,155.9	93.5	11.53	11.49	-1.06
7,349.0	70.40	10.60	7,012.1	-192.6	1,164.8	137.8	11.38	10.83	-3.75
7,396.0	75.00	8.90	7,026.1	-148.4	1,172.4	182.4	10.38	9.79	-3.62
7,444.0	78.00	7.80	7,037.3	-102.2	1,179.1	228.6	6.64	6.25	-2.29
7,491.0	80.00	6.80	7,046.3	-56.5	1,185.0	274.2	4.74	4.26	-2.13
7,540.0	82.90	5.90	7,053.6	-8.3	1,190.3	321.9	6.19	5.92	-1.84
7,601.0	86.20	2.20	7,059.4	52.2	1,194.6	381.3	8.11	5.41	-6.07
7,649.0	89.20	1.50	7,061.3	100.2	1,196.2	427.8	6.42	6.25	-1.46
7,743.0	90.70	0.40	7,061.4	194.2	1,197.7	518.5	1.98	1.60	-1.17
7,837.0	92.20	0.80	7,059.0	288.1	1,198.7	609.1	1.65	1.60	0.43
7,931.0	92.30	359.50	7,055.3	382.0	1,199.0	699.4	1.39	0.11	-1.38
8,025.0	92.50	358.50	7,051.4	475.9	1,197.3	789.2	1.08	0.21	-1.06
8,119.0	93.00	357.90	7,046.9	569.8	1,194.4	878.5	0.83	0.53	-0.64
8,213.0	92.00	359.70	7,042.8	663.7	1,192.4	968.2	2.19	-1.06	1.91
8,308.0	91.80	0.80	7,039.6	758.6	1,192.8	1,059.5	1.18	-0.21	1.16
8,402.0	92.50	0.90	7,036.1	852.5	1,194.2	1,150.1	0.75	0.74	0.11
8,496.0	93.10	1.60	7,031.5	946.4	1,196.3	1,240.9	0.98	0.64	0.74
8,590.0	92.90	0.80	7,026.6	1,040.3	1,198.2	1,331.6	0.88	-0.21	-0.85
8,684.0	92.80	0.80	7,021.9	1,134.1	1,199.5	1,422.2	0.11	-0.11	0.00
8,779.0	92.30	0.90	7,017.7	1,229.0	1,200.9	1,513.7	0.54	-0.53	0.11
8,812.1	92.05	1.04	7,016.4	1,262.1	1,201.5	1,545.7	0.86	-0.74	0.43
WP #1 (Matrix M-29HN)									
8,873.0	91.60	1.30	7,014.5	1,323.0	1,202.8	1,604.5	0.86	-0.74	0.43
8,967.0	90.60	1.50	7,012.7	1,416.9	1,205.0	1,695.4	1.08	-1.06	0.21
9,061.0	89.60	359.00	7,012.5	1,510.9	1,205.5	1,785.8	2.86	-1.06	-2.66
9,155.0	90.50	358.50	7,012.4	1,604.9	1,203.4	1,875.5	1.10	0.96	-0.53
9,250.0	87.90	358.30	7,013.7	1,699.8	1,200.8	1,966.0	2.74	-2.74	-0.21
9,343.0	88.50	359.50	7,016.7	1,792.8	1,199.0	2,054.8	1.44	0.65	1.29
9,437.0	87.80	1.10	7,019.7	1,886.7	1,199.5	2,145.2	1.86	-0.74	1.70
9,531.0	89.30	1.50	7,022.1	1,980.6	1,201.6	2,236.1	1.65	1.60	0.43
9,625.0	90.70	1.50	7,022.1	2,074.6	1,204.1	2,327.1	1.49	1.49	0.00
9,719.0	89.60	0.10	7,021.8	2,168.6	1,205.4	2,417.7	1.89	-1.17	-1.49
9,813.0	90.70	2.20	7,021.6	2,262.6	1,207.3	2,508.5	2.52	1.17	2.23

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Well:	Matrix M-29HN	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
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9,908.0	89.80	0.60	7,021.2	2,357.5	1,209.6	2,600.4	1.93	-0.95	-1.68
10,002.0	90.30	1.50	7,021.1	2,451.5	1,211.3	2,691.2	1.10	0.53	0.96
10,096.0	91.50	2.30	7,019.6	2,545.5	1,214.4	2,782.3	1.53	1.28	0.85
10,190.0	91.50	0.10	7,017.2	2,639.4	1,216.4	2,873.1	2.34	0.00	-2.34
10,285.0	90.70	359.20	7,015.3	2,734.4	1,215.8	2,964.2	1.27	-0.84	-0.95
10,379.0	90.10	358.10	7,014.7	2,828.3	1,213.6	3,053.9	1.33	-0.64	-1.17
10,473.0	89.50	357.20	7,015.0	2,922.3	1,209.7	3,143.1	1.15	-0.64	-0.96
10,568.0	88.90	359.20	7,016.3	3,017.2	1,206.7	3,233.5	2.20	-0.63	2.11
10,662.0	89.30	0.10	7,017.8	3,111.2	1,206.2	3,323.6	1.05	0.43	0.96
10,757.0	88.60	0.60	7,019.5	3,206.2	1,206.8	3,415.0	0.91	-0.74	0.53
10,851.0	87.30	0.40	7,022.9	3,300.1	1,207.6	3,505.5	1.40	-1.38	-0.21
10,946.0	88.80	1.30	7,026.1	3,395.0	1,209.0	3,597.1	1.84	1.58	0.95
11,040.0	90.30	1.50	7,026.9	3,489.0	1,211.3	3,688.0	1.61	1.60	0.21
11,135.0	91.20	0.40	7,025.6	3,584.0	1,212.9	3,779.7	1.50	0.95	-1.16
11,229.0	91.20	0.20	7,023.7	3,678.0	1,213.3	3,870.2	0.21	0.00	-0.21
11,323.0	92.10	358.50	7,021.0	3,771.9	1,212.3	3,960.1	2.05	0.96	-1.81
11,417.0	91.30	357.10	7,018.2	3,865.8	1,208.7	4,049.3	1.71	-0.85	-1.49
11,512.0	90.80	356.50	7,016.4	3,960.6	1,203.4	4,139.0	0.82	-0.53	-0.63
11,605.0	90.30	355.10	7,015.5	4,053.4	1,196.6	4,226.2	1.60	-0.54	-1.51
11,677.0	89.50	354.30	7,015.7	4,125.1	1,189.9	4,293.3	1.57	-1.11	-1.11
11,733.4	89.50	354.30	7,016.2	4,181.2	1,184.3	4,345.6	0.00	0.00	0.00
BHL 470'FNL & 1782'FEL									
11,735.0	89.50	354.30	7,016.2	4,182.8	1,184.2	4,347.1	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
SHL 528'FSL & 2224'I	0.00	0.00	1.0	0.0	0.0	1,408,864.22	3,225,769.03	40.452899	-104.688725
- hit/miss target									
- survey hits target center									
- Point									
BHL 470'FNL & 1782'	0.00	0.00	7,013.0	4,183.5	1,206.8	1,413,058.39	3,226,937.46	40.464382	-104.684388
- survey misses target center by 22.8ft at 11733.4ft MD (7016.2 TVD, 4181.2 N, 1184.3 E)									
- Point									

Checked By: _____	Approved By: _____	Date: _____
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