

Bayswater Exploration & Production, LLC

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

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

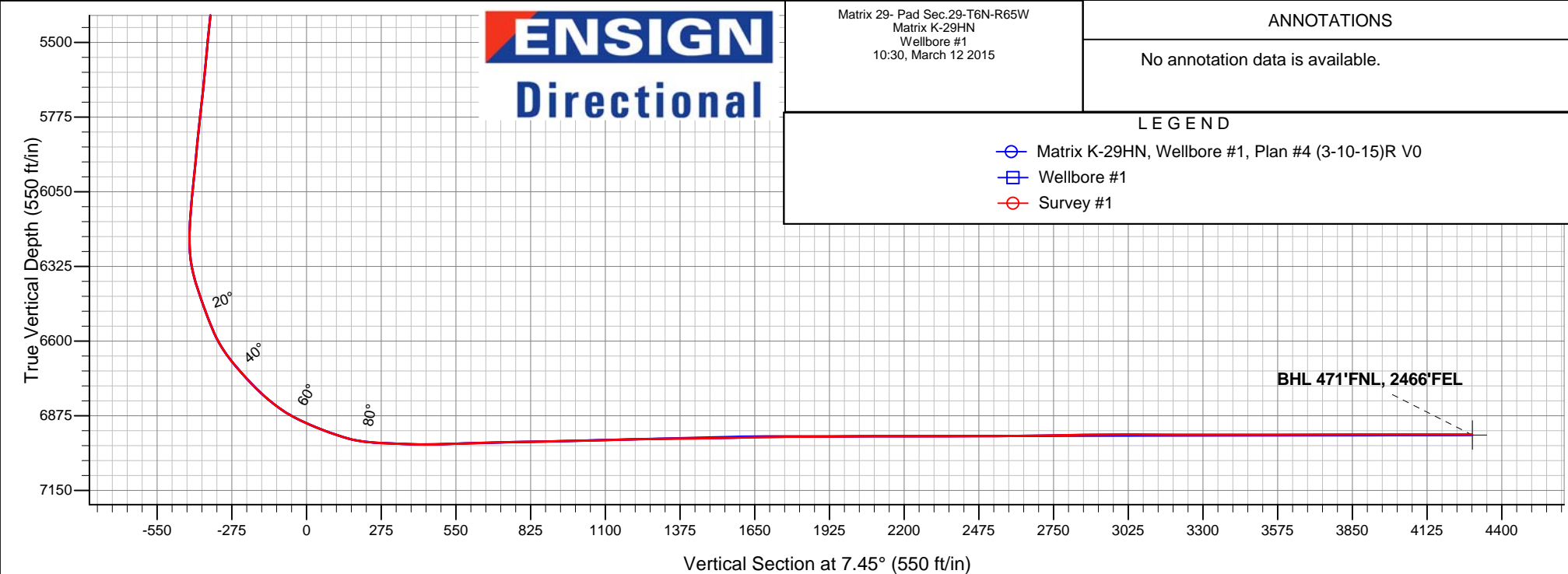
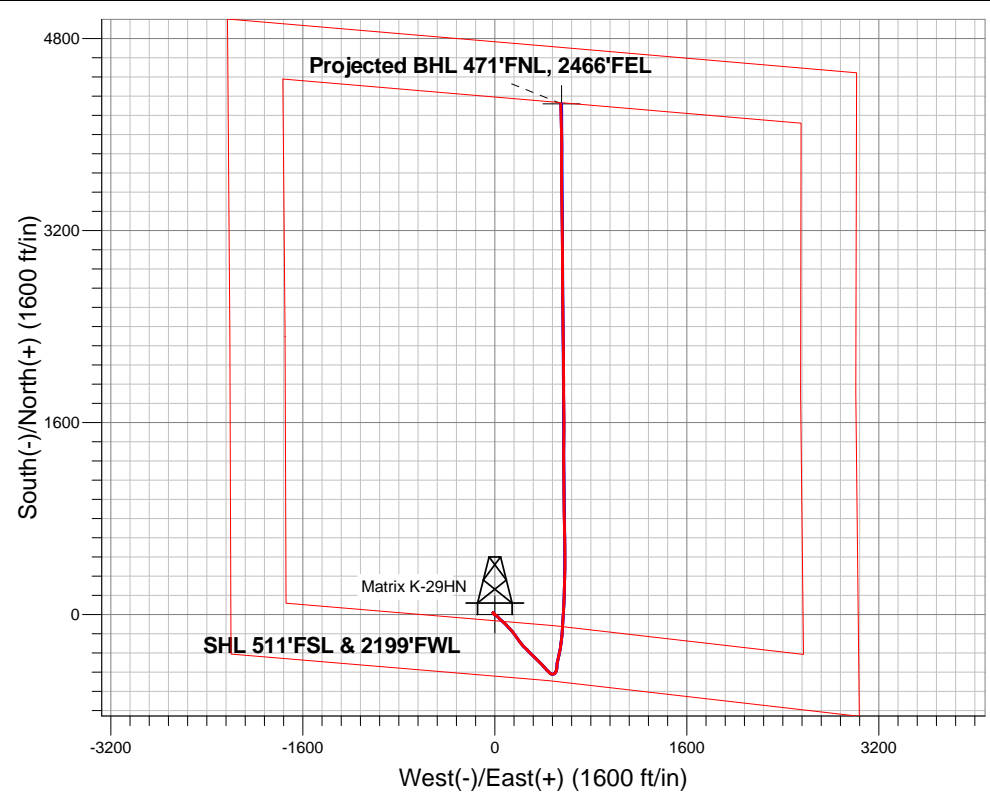
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4708.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1408848.68	3225743.29	40.452857	-104.688818	
RKB - 22.5' WELL @ 4730.5ft (RKB - 22.5')						

FINAL SURVEY

Projected Bottom Hole Location
11476'MD 6944'TVD 4255'N & 549'E of SHL
90.4 degree Incl @ 358 degree AZM





Bayswater Exploration & Production, LLC

SEC.29-T6N-R65W

Matrix 29- Pad Sec.29-T6N-R65W

Matrix K-29HN

Wellbore #1

Survey: Survey #1

Standard Survey Report

12 March, 2015



BAYSWATER
EXPLORATION & PRODUCTION, LLC

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Matrix K-29HN
Project:	SEC.29-T6N-R65W	TVD Reference:	WELL @ 4730.5ft (RKB - 22.5')
Site:	Matrix 29- Pad Sec.29-T6N-R65W	MD Reference:	WELL @ 4730.5ft (RKB - 22.5')
Well:	Matrix K-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
From:	Lat/Long	Easting:	3,225,730.56 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40.452836
		Longitude:	-104.688864
		Grid Convergence:	0.52 °

Well	Matrix K-29HN					
Well Position	+N-S	0.0 ft	Northing:	1,408,848.68 ft	Latitude:	40.452857
	+E-W	0.0 ft	Easting:	3,225,743.29 ft	Longitude:	-104.688818
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	3/10/2015	8.32	66.98	52,774

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	7.45	

Survey Program	Date	3/12/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
128.0	11,476.0	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	0.01	336.70	1.0	0.0	0.0	0.0	0.63	0.63	0.00	
SHL 511'FSL & 2199'FWL										
128.0	0.80	336.70	128.0	0.8	-0.4	0.8	0.63	0.63	0.00	
220.0	0.80	332.30	220.0	2.0	-0.9	1.8	0.07	0.00	-4.78	
312.0	0.60	310.50	312.0	2.9	-1.6	2.6	0.36	-0.22	-23.70	
404.0	0.70	297.90	404.0	3.4	-2.4	3.1	0.19	0.11	-13.70	
496.0	0.50	316.30	496.0	4.0	-3.2	3.5	0.30	-0.22	20.00	
588.0	0.50	316.20	588.0	4.6	-3.8	4.0	0.00	0.00	-0.11	
680.0	0.50	316.00	680.0	5.1	-4.3	4.5	0.00	0.00	-0.22	
705.0	0.60	319.30	705.0	5.3	-4.5	4.7	0.42	0.40	13.20	
828.0	1.10	327.40	827.9	6.8	-5.5	6.0	0.42	0.41	6.59	
923.0	1.00	322.30	922.9	8.2	-6.5	7.3	0.14	-0.11	-5.37	

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Well:	Matrix K-29HN	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
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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)
1,018.0	1.10	320.00	1,017.9	9.6	-7.6	8.5	0.11	0.11	-2.42
1,113.0	0.90	318.10	1,112.9	10.8	-8.7	9.6	0.21	-0.21	-2.00
1,205.0	0.80	321.90	1,204.9	11.9	-9.6	10.5	0.12	-0.11	4.13
1,297.0	0.80	303.70	1,296.9	12.7	-10.5	11.3	0.28	0.00	-19.78
1,389.0	0.80	324.40	1,388.9	13.6	-11.4	12.0	0.31	0.00	22.50
1,481.0	0.60	304.00	1,480.9	14.4	-12.2	12.7	0.34	-0.22	-22.17
1,574.0	0.50	286.30	1,573.9	14.8	-13.0	13.0	0.21	-0.11	-19.03
1,666.0	0.40	232.50	1,665.9	14.7	-13.6	12.8	0.45	-0.11	-58.48
1,758.0	0.40	149.90	1,757.9	14.2	-13.7	12.3	0.57	0.00	-89.78
1,850.0	0.40	20.30	1,849.9	14.3	-13.5	12.4	0.79	0.00	-140.87
1,942.0	1.50	133.90	1,941.8	13.7	-12.5	12.0	1.85	1.20	123.48
2,034.0	3.10	150.60	2,033.8	10.7	-10.4	9.3	1.87	1.74	18.15
2,126.0	5.00	134.00	2,125.5	5.8	-6.3	4.9	2.41	2.07	-18.04
2,218.0	7.10	127.40	2,217.0	-0.5	1.1	-0.3	2.40	2.28	-7.17
2,310.0	7.70	125.20	2,308.3	-7.5	10.7	-6.0	0.72	0.65	-2.39
2,403.0	8.70	131.70	2,400.3	-15.7	21.0	-12.9	1.46	1.08	6.99
2,495.0	9.50	141.20	2,491.2	-26.3	31.0	-22.0	1.85	0.87	10.33
2,590.0	10.90	133.30	2,584.7	-38.6	42.4	-32.7	2.08	1.47	-8.32
2,685.0	10.50	129.60	2,678.0	-50.2	55.6	-42.6	0.84	-0.42	-3.89
2,781.0	10.60	130.30	2,772.4	-61.5	69.1	-52.0	0.17	0.10	0.73
2,876.0	10.60	136.30	2,865.8	-73.5	81.8	-62.3	1.16	0.00	6.32
2,971.0	9.90	133.50	2,959.2	-85.4	93.8	-72.5	0.90	-0.74	-2.95
3,066.0	10.90	136.80	3,052.7	-97.6	105.8	-83.0	1.22	1.05	3.47
3,161.0	9.80	135.80	3,146.1	-109.9	117.6	-93.8	1.17	-1.16	-1.05
3,257.0	10.00	139.00	3,240.7	-122.1	128.8	-104.3	0.61	0.21	3.33
3,352.0	9.10	135.60	3,334.4	-133.7	139.5	-114.5	1.12	-0.95	-3.58
3,447.0	9.30	142.60	3,428.2	-145.1	149.4	-124.5	1.20	0.21	7.37
3,542.0	10.00	143.50	3,521.8	-157.9	158.9	-135.9	0.75	0.74	0.95
3,637.0	10.60	143.50	3,615.3	-171.5	169.0	-148.1	0.63	0.63	0.00
3,733.0	13.00	144.90	3,709.3	-187.5	180.5	-162.5	2.52	2.50	1.46
3,828.0	13.50	146.50	3,801.7	-205.5	192.8	-178.7	0.65	0.53	1.68
3,923.0	14.50	141.60	3,893.9	-224.0	206.3	-195.4	1.63	1.05	-5.16
4,018.0	15.00	142.50	3,985.8	-243.1	221.1	-212.3	0.58	0.53	0.95
4,113.0	13.10	140.20	4,077.9	-261.1	235.5	-228.4	2.08	-2.00	-2.42
4,209.0	11.40	129.60	4,171.8	-275.5	249.8	-240.8	2.93	-1.77	-11.04
4,304.0	10.20	132.30	4,265.1	-287.2	263.3	-250.6	1.37	-1.26	2.84
4,399.0	9.40	137.90	4,358.7	-298.6	274.7	-260.4	1.31	-0.84	5.89
4,494.0	8.90	138.60	4,452.5	-309.9	284.7	-270.3	0.54	-0.53	0.74
4,589.0	8.30	137.40	4,546.4	-320.4	294.2	-279.5	0.66	-0.63	-1.26
4,684.0	8.70	132.50	4,640.4	-330.3	304.2	-288.1	0.87	0.42	-5.16
4,780.0	9.70	134.00	4,735.1	-340.8	315.4	-297.1	1.07	1.04	1.56
4,875.0	8.40	133.00	4,829.0	-351.1	326.2	-305.9	1.38	-1.37	-1.05
4,970.0	9.30	133.20	4,922.8	-361.1	336.9	-314.4	0.95	0.95	0.21
5,065.0	8.70	131.60	5,016.6	-371.2	347.8	-322.9	0.68	-0.63	-1.68
5,161.0	7.20	134.70	5,111.7	-380.2	357.5	-330.6	1.62	-1.56	3.23
5,256.0	6.90	139.10	5,206.0	-388.7	365.5	-338.0	0.65	-0.32	4.63
5,351.0	7.50	136.30	5,300.3	-397.5	373.5	-345.7	0.73	0.63	-2.95
5,446.0	8.10	138.10	5,394.4	-407.0	382.3	-353.9	0.68	0.63	1.89
5,541.0	8.80	135.80	5,488.3	-417.2	391.8	-362.8	0.82	0.74	-2.42
5,636.0	8.70	136.70	5,582.2	-427.6	401.8	-371.9	0.18	-0.11	0.95
5,731.0	9.20	138.10	5,676.1	-438.5	411.8	-381.3	0.57	0.53	1.47
5,826.0	9.80	137.90	5,769.8	-450.1	422.3	-391.5	0.63	0.63	-0.21
5,922.0	9.40	135.10	5,864.4	-461.7	433.3	-401.6	0.64	-0.42	-2.92
6,017.0	8.60	135.80	5,958.3	-472.3	443.7	-410.8	0.85	-0.84	0.74

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Well:	Matrix K-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)
6,112.0	9.50	136.10	6,052.1	-483.1	454.1	-420.1	0.95	0.95	0.32
6,207.0	9.40	122.10	6,145.8	-492.8	466.1	-428.2	2.42	-0.11	-14.74
6,255.0	7.90	115.80	6,193.3	-496.4	472.4	-430.9	3.69	-3.13	-13.13
6,303.0	9.60	86.60	6,240.7	-497.6	479.4	-431.2	9.78	3.54	-60.83
6,351.0	12.70	70.40	6,287.8	-495.6	488.4	-428.0	9.12	6.46	-33.75
6,398.0	15.50	51.40	6,333.4	-489.9	498.1	-421.1	11.43	5.96	-40.43
6,446.0	18.10	32.40	6,379.4	-479.6	507.2	-409.7	12.58	5.42	-39.58
6,493.0	18.50	15.00	6,424.1	-466.2	513.0	-395.7	11.61	0.85	-37.02
6,541.0	20.10	5.00	6,469.4	-450.6	515.7	-379.9	7.64	3.33	-20.83
6,588.0	21.10	4.10	6,513.4	-434.2	517.0	-363.4	2.23	2.13	-1.91
6,636.0	22.70	6.10	6,557.9	-416.3	518.6	-345.5	3.68	3.33	4.17
6,683.0	28.00	11.50	6,600.4	-396.5	521.8	-325.4	12.29	11.28	11.49
6,731.0	35.30	12.90	6,641.2	-371.9	527.1	-300.4	15.28	15.21	2.92
6,778.0	39.10	12.40	6,678.6	-344.2	533.3	-272.1	8.11	8.09	-1.06
6,826.0	41.90	11.00	6,715.1	-313.6	539.7	-241.0	6.13	5.83	-2.92
6,873.0	43.00	10.30	6,749.8	-282.5	545.5	-209.3	2.55	2.34	-1.49
6,921.0	46.50	9.20	6,783.9	-249.2	551.2	-175.5	7.47	7.29	-2.29
6,969.0	49.90	6.90	6,815.9	-213.7	556.2	-139.8	7.93	7.08	-4.79
7,017.0	54.00	4.50	6,845.5	-176.1	559.9	-102.0	9.40	8.54	-5.00
7,064.0	59.80	3.80	6,871.1	-136.9	562.8	-62.7	12.40	12.34	-1.49
7,112.0	64.70	3.10	6,893.5	-94.5	565.3	-20.4	10.29	10.21	-1.46
7,159.0	68.10	3.30	6,912.3	-51.5	567.7	22.6	7.24	7.23	0.43
7,207.0	69.30	3.30	6,929.7	-6.9	570.3	67.2	2.50	2.50	0.00
7,254.0	70.70	3.60	6,945.8	37.2	573.0	111.2	3.04	2.98	0.64
7,302.0	75.00	3.30	6,959.9	83.0	575.7	157.0	8.98	8.96	-0.63
7,349.0	82.80	1.80	6,969.0	129.0	577.8	202.9	16.89	16.60	-3.19
7,397.0	86.20	1.50	6,973.6	176.8	579.1	250.4	7.11	7.08	-0.63
7,430.0	87.10	1.30	6,975.5	209.7	580.0	283.2	2.79	2.73	-0.61
7,507.0	87.50	1.80	6,979.1	286.6	582.0	359.7	0.83	0.52	0.65
7,554.0	88.60	2.00	6,980.7	333.6	583.6	406.4	2.38	2.34	0.43
7,648.0	92.60	0.30	6,979.8	427.5	585.5	499.9	4.62	4.26	-1.81
7,742.0	92.00	359.20	6,976.0	521.4	585.1	592.9	1.33	-0.64	-1.17
7,836.0	91.40	359.20	6,973.2	615.4	583.8	685.9	0.64	-0.64	0.00
7,930.0	91.00	358.90	6,971.2	709.3	582.2	778.9	0.53	-0.43	-0.32
8,024.0	90.80	358.30	6,969.7	803.3	579.9	871.7	0.67	-0.21	-0.64
8,119.0	91.50	358.70	6,967.8	898.3	577.4	965.6	0.85	0.74	0.42
8,212.0	91.40	359.20	6,965.5	991.2	575.7	1,057.5	0.55	-0.11	0.54
8,307.0	91.70	359.40	6,962.9	1,086.2	574.5	1,151.5	0.38	0.32	0.21
8,401.0	90.90	359.90	6,960.8	1,180.1	574.0	1,244.6	1.00	-0.85	0.53
8,495.0	90.40	0.80	6,959.7	1,274.1	574.5	1,337.9	1.10	-0.53	0.96
8,589.0	91.10	0.10	6,958.5	1,368.1	575.3	1,431.2	1.05	0.74	-0.74
8,683.0	90.70	0.40	6,957.0	1,462.1	575.7	1,524.4	0.53	-0.43	0.32
8,778.0	91.80	0.10	6,954.9	1,557.1	576.1	1,618.7	1.20	1.16	-0.32
8,820.6	91.39	0.01	6,953.8	1,599.7	576.2	1,660.9	0.98	-0.96	-0.21
WP #1 (K-29HN)									
8,872.0	90.90	359.90	6,952.7	1,651.1	576.1	1,711.8	0.98	-0.96	-0.21
8,966.0	89.90	359.00	6,952.1	1,745.0	575.2	1,804.9	1.43	-1.06	-0.96
9,060.0	90.70	359.20	6,951.6	1,839.0	573.7	1,897.9	0.88	0.85	0.21
9,154.0	90.00	359.90	6,951.0	1,933.0	573.0	1,991.0	1.05	-0.74	0.74
9,249.0	90.20	359.60	6,950.8	2,028.0	572.6	2,085.2	0.38	0.21	-0.32
9,342.0	89.90	359.70	6,950.8	2,121.0	572.0	2,177.3	0.34	-0.32	0.11
9,436.0	89.90	359.40	6,950.9	2,215.0	571.3	2,270.4	0.32	0.00	-0.32
9,530.0	90.50	358.90	6,950.6	2,309.0	569.9	2,363.4	0.83	0.64	-0.53
9,624.0	90.20	359.70	6,950.0	2,403.0	568.7	2,456.5	0.91	-0.32	0.85

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9,718.0	90.60	359.40	6,949.4	2,497.0	568.0	2,549.6	0.53	0.43	-0.32
9,812.0	90.30	359.60	6,948.6	2,591.0	567.2	2,642.7	0.38	-0.32	0.21
9,907.0	90.80	358.90	6,947.7	2,686.0	565.9	2,736.7	0.91	0.53	-0.74
10,001.0	91.40	359.70	6,945.9	2,779.9	564.8	2,829.7	1.06	0.64	0.85
10,095.0	90.50	359.20	6,944.3	2,873.9	563.9	2,922.8	1.10	-0.96	-0.53
10,189.0	89.70	0.30	6,944.2	2,967.9	563.5	3,015.9	1.45	-0.85	1.17
10,284.0	89.60	0.10	6,944.8	3,062.9	563.8	3,110.2	0.24	-0.11	-0.21
10,378.0	89.90	359.20	6,945.2	3,156.9	563.2	3,203.3	1.01	0.32	-0.96
10,473.0	90.00	358.20	6,945.3	3,251.9	561.1	3,297.2	1.06	0.11	-1.05
10,567.0	90.00	359.20	6,945.3	3,345.9	558.9	3,390.1	1.06	0.00	1.06
10,661.0	90.30	359.00	6,945.0	3,439.9	557.5	3,483.1	0.38	0.32	-0.21
10,756.0	89.60	359.90	6,945.1	3,534.8	556.6	3,577.2	1.20	-0.74	0.95
10,850.0	90.70	0.10	6,944.8	3,628.8	556.6	3,670.4	1.19	1.17	0.21
10,944.0	90.00	0.60	6,944.3	3,722.8	557.1	3,763.7	0.92	-0.74	0.53
11,038.0	90.00	359.90	6,944.3	3,816.8	557.5	3,856.9	0.74	0.00	-0.74
11,133.0	90.10	359.90	6,944.2	3,911.8	557.4	3,951.1	0.11	0.11	0.00
11,227.0	90.00	358.90	6,944.1	4,005.8	556.4	4,044.2	1.07	-0.11	-1.06
11,321.0	89.70	358.50	6,944.4	4,099.8	554.3	4,137.1	0.53	-0.32	-0.43
11,421.0	90.40	358.00	6,944.3	4,199.8	551.2	4,235.8	0.86	0.70	-0.50
11,476.0	90.40	358.00	6,943.9	4,254.7	549.3	4,290.0	0.00	0.00	0.00
BHL 470'FNL, 2458'FEL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
SHL 511'FSL & 2199'I	0.00	0.00	1.0	0.0	0.0	1,408,848.68	3,225,743.29	40.452857	-104.688818
- hit/miss target									
- Shape									
- survey hits target center									
- Point									
BHL 470'FNL, 2458'FI	0.00	0.00	6,946.0	4,255.6	556.8	1,413,109.01	3,226,261.11	40.464538	-104.686817
- survey misses target center by 7.9ft at 11476.0ft MD (6943.9 TVD, 4254.7 N, 549.3 E)									
- Point									

Checked By: _____	Approved By: _____	Date: _____
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