

Bayswater Exploration & Production, LLC

Well Name: **Arellano K-10-9HN**

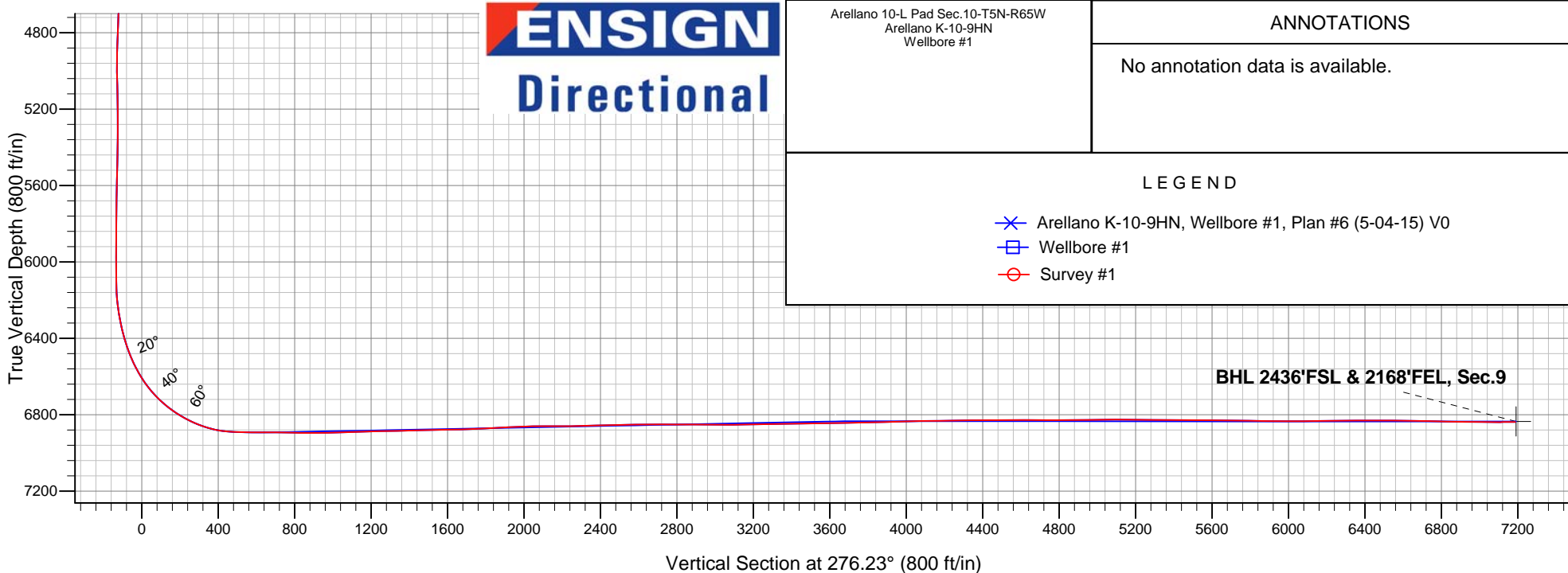
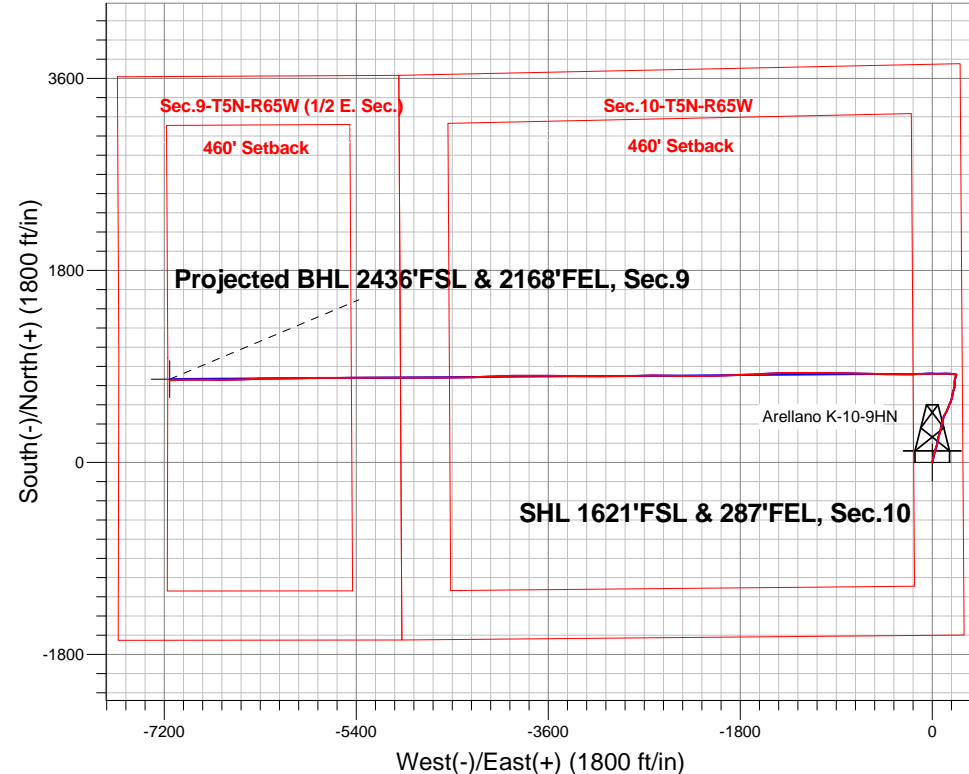
Surface Location: Arellano 10-L Pad Sec.10-T5N-R65W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4616.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1393742.09	3239181.53	40.411044	-104.641058	
RKB - 22.5' WELL @ 4638.5ft (RKB - 22.5')						

FINAL SURVEY

Projected Bottom Hole Location
14037'MD 6839'TVD 772'N & 7145'W of SHL
90.2 degree Incl @ 269.0 degree AZM





Bayswater Exploration & Production, LLC

SEC.10-T5N-R65W

Arellano 10-L Pad Sec.10-T5N-R65W

Arellano K-10-9HN

Wellbore #1

Survey: Survey #1

Standard Survey Report

08 May, 2015



BAYSWATER
EXPLORATION & PRODUCTION, LLC

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Arellano K-10-9HN
Project:	SEC.10-T5N-R65W	TVD Reference:	WELL @ 4638.5ft (RKB - 22.5')
Site:	Arellano 10-L Pad Sec.10-T5N-R65W	MD Reference:	WELL @ 4638.5ft (RKB - 22.5')
Well:	Arellano K-10-9HN	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.10-T5N-R65W, Weld County, CO		
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		

Site	Arellano 10-L Pad Sec.10-T5N-R65W				
Site Position:		Northing:	1,393,742.11 ft	Latitude:	40.411044
From:	Lat/Long	Easting:	3,239,181.53 ft	Longitude:	-104.641058
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.55 °

Well	Arellano K-10-9HN					
Well Position	+N/-S	0.0 ft	Northing:	1,393,742.09 ft	Latitude:	40.411044
	+E/-W	0.0 ft	Easting:	3,239,181.53 ft	Longitude:	-104.641058
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,616.0ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/30/2015	8.28	66.94	52,743

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	276.23	

Survey Program	Date	5/8/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
131.0	14,037.0	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	228.20	1.0	0.0	0.0	0.0	0.31	0.31	0.00	
SHL 1621'FSL & 287'FEL, Sec.10										
131.0	0.40	228.20	131.0	-0.3	-0.3	0.3	0.31	0.31	0.00	
223.0	1.00	7.80	223.0	0.3	-0.5	0.5	1.45	0.65	151.74	
315.0	2.80	18.70	314.9	3.2	0.4	0.0	1.99	1.96	11.85	
407.0	4.70	15.10	406.7	9.0	2.1	-1.1	2.08	2.07	-3.91	
499.0	6.40	12.50	498.3	17.6	4.2	-2.2	1.87	1.85	-2.83	
591.0	7.80	11.10	589.6	28.7	6.5	-3.3	1.53	1.52	-1.52	
683.0	9.10	12.20	680.6	42.0	9.2	-4.6	1.42	1.41	1.20	
745.0	9.70	13.40	741.8	51.9	11.5	-5.8	1.02	0.97	1.94	
829.0	9.90	14.30	824.5	65.7	14.9	-7.7	0.30	0.24	1.07	
925.0	10.20	15.50	919.1	81.9	19.2	-10.2	0.38	0.31	1.25	

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Arellano K-10-9HN
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Site:	Arellano 10-L Pad Sec.10-T5N-R65W	MD Reference:	WELL @ 4638.5ft (RKB - 22.5')
Well:	Arellano K-10-9HN	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)
1,020.0	9.90	14.60	1,012.6	97.9	23.5	-12.7	0.36	-0.32	-0.95
1,115.0	10.20	15.50	1,106.1	113.9	27.8	-15.3	0.36	0.32	0.95
1,207.0	9.50	16.20	1,196.8	129.1	32.1	-17.9	0.77	-0.76	0.76
1,300.0	9.40	19.00	1,288.5	143.6	36.7	-20.9	0.51	-0.11	3.01
1,392.0	8.90	20.80	1,379.4	157.4	41.7	-24.4	0.63	-0.54	1.96
1,484.0	9.60	10.20	1,470.2	171.6	45.6	-26.7	2.00	0.76	-11.52
1,576.0	7.80	5.50	1,561.1	185.4	47.5	-27.1	2.10	-1.96	-5.11
1,668.0	8.20	17.90	1,652.2	197.8	50.1	-28.4	1.92	0.43	13.48
1,760.0	9.30	13.60	1,743.1	211.3	53.9	-30.7	1.39	1.20	-4.67
1,852.0	8.70	3.90	1,834.0	225.5	56.1	-31.3	1.77	-0.65	-10.54
1,944.0	9.60	13.40	1,924.9	239.9	58.4	-32.0	1.91	0.98	10.33
2,036.0	8.60	18.80	2,015.7	253.8	62.4	-34.5	1.43	-1.09	5.87
2,128.0	11.00	22.30	2,106.3	268.5	67.9	-38.4	2.69	2.61	3.80
2,220.0	9.90	15.00	2,196.8	284.2	73.3	-42.0	1.87	-1.20	-7.93
2,313.0	11.20	13.00	2,288.3	300.8	77.4	-44.3	1.45	1.40	-2.15
2,405.0	10.90	9.90	2,378.5	318.0	80.9	-45.9	0.72	-0.33	-3.37
2,497.0	9.70	5.80	2,469.1	334.3	83.2	-46.4	1.53	-1.30	-4.46
2,592.0	8.60	17.40	2,562.9	349.1	86.1	-47.7	2.25	-1.16	12.21
2,687.0	8.60	15.30	2,656.8	362.7	90.1	-50.2	0.33	0.00	-2.21
2,782.0	10.10	18.70	2,750.5	377.4	94.7	-53.1	1.68	1.58	3.58
2,877.0	9.80	13.20	2,844.1	393.2	99.2	-55.9	1.05	-0.32	-5.79
2,973.0	9.50	11.40	2,938.7	408.9	102.6	-57.6	0.44	-0.31	-1.88
3,068.0	8.70	17.90	3,032.6	423.4	106.4	-59.8	1.37	-0.84	6.84
3,163.0	6.70	20.90	3,126.7	435.4	110.5	-62.6	2.15	-2.11	3.16
3,258.0	7.40	33.60	3,221.0	445.7	115.9	-66.9	1.79	0.74	13.37
3,353.0	7.50	28.00	3,315.2	456.3	122.2	-72.0	0.77	0.11	-5.89
3,449.0	7.10	30.10	3,410.4	467.0	128.1	-76.7	0.50	-0.42	2.19
3,544.0	7.70	29.00	3,504.6	477.6	134.2	-81.5	0.65	0.63	-1.16
3,639.0	9.80	22.20	3,598.5	490.7	140.3	-86.2	2.46	2.21	-7.16
3,734.0	10.50	21.50	3,692.0	506.2	146.5	-90.7	0.75	0.74	-0.74
3,829.0	10.50	22.50	3,785.4	522.2	153.0	-95.4	0.19	0.00	1.05
3,925.0	10.60	23.90	3,879.8	538.4	159.9	-100.6	0.29	0.10	1.46
4,020.0	10.70	20.60	3,973.2	554.6	166.6	-105.4	0.65	0.11	-3.47
4,115.0	9.10	19.20	4,066.7	570.0	172.2	-109.3	1.70	-1.68	-1.47
4,210.0	9.80	21.50	4,160.5	584.6	177.6	-113.1	0.84	0.74	2.42
4,305.0	9.70	15.30	4,254.1	599.9	182.7	-116.5	1.11	-0.11	-6.53
4,401.0	8.90	8.60	4,348.8	615.0	185.9	-118.1	1.40	-0.83	-6.98
4,496.0	9.30	9.20	4,442.6	629.8	188.2	-118.8	0.43	0.42	0.63
4,591.0	7.90	12.30	4,536.6	643.8	190.8	-119.9	1.55	-1.47	3.26
4,686.0	8.40	11.10	4,630.6	657.0	193.6	-121.1	0.56	0.53	-1.26
4,781.0	10.00	19.20	4,724.4	671.6	197.6	-123.6	2.16	1.68	8.53
4,876.0	9.40	16.40	4,818.0	686.8	202.5	-126.8	0.80	-0.63	-2.95
4,971.0	11.30	15.70	4,911.5	703.2	207.2	-129.7	2.00	2.00	-0.74
5,067.0	11.20	0.40	5,005.6	721.6	209.8	-130.3	3.10	-0.10	-15.94
5,162.0	8.90	354.90	5,099.2	738.2	209.3	-127.9	2.62	-2.42	-5.79
5,257.0	8.40	1.60	5,193.1	752.4	208.8	-125.9	1.18	-0.53	7.05
5,352.0	7.50	6.90	5,287.2	765.5	209.7	-125.4	1.22	-0.95	5.58
5,447.0	7.20	12.90	5,381.4	777.5	211.8	-126.2	0.87	-0.32	6.32
5,542.0	7.60	18.70	5,475.6	789.2	215.2	-128.2	0.89	0.42	6.11
5,637.0	5.10	17.90	5,570.0	799.2	218.5	-130.4	2.63	-2.63	-0.84
5,732.0	3.80	20.20	5,664.7	806.2	220.9	-132.1	1.38	-1.37	2.42
5,827.0	2.90	18.80	5,759.6	811.4	222.7	-133.3	0.95	-0.95	-1.47
5,922.0	2.90	0.70	5,854.5	816.1	223.5	-133.6	0.96	0.00	-19.05
6,017.0	2.90	20.60	5,949.3	820.7	224.4	-134.0	1.05	0.00	20.95

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Site:	Arellano 10-L Pad Sec.10-T5N-R65W	MD Reference:	WELL @ 4638.5ft (RKB - 22.5')
Well:	Arellano K-10-9HN	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	0.60	273.50	6,044.3	823.0	224.7	-134.1	3.29	-2.42	-112.74
6,208.0	1.30	279.00	6,140.3	823.2	223.2	-132.5	0.73	0.73	5.73
6,256.0	4.70	280.70	6,188.2	823.6	220.7	-130.0	7.08	7.08	3.54
6,303.0	7.40	281.40	6,235.0	824.6	215.8	-125.1	5.75	5.74	1.49
6,351.0	9.80	278.30	6,282.4	825.8	208.8	-117.9	5.09	5.00	-6.46
6,398.0	11.80	278.80	6,328.6	827.1	200.1	-109.1	4.26	4.26	1.06
6,493.0	17.20	275.10	6,420.5	829.9	176.4	-85.3	5.76	5.68	-3.89
6,588.0	23.70	270.90	6,509.5	831.4	143.3	-52.3	7.01	6.84	-4.42
6,683.0	31.00	269.30	6,593.8	831.4	99.7	-8.9	7.72	7.68	-1.68
6,779.0	39.20	270.50	6,672.3	831.4	44.6	45.9	8.57	8.54	1.25
6,874.0	49.70	270.20	6,740.0	831.8	-21.9	112.0	11.05	11.05	-0.32
6,970.0	57.50	267.00	6,796.9	829.8	-99.0	188.5	8.55	8.13	-3.33
7,065.0	66.30	268.40	6,841.6	826.4	-182.7	271.3	9.35	9.26	1.47
7,160.0	74.80	271.20	6,873.3	826.2	-272.2	360.2	9.37	8.95	2.95
7,208.0	81.20	270.70	6,883.2	827.0	-319.1	407.0	13.37	13.33	-1.04
7,252.0	85.20	269.80	6,888.4	827.2	-362.8	450.4	9.31	9.09	-2.05
7,311.0	88.50	269.80	6,891.7	827.0	-421.7	508.9	5.59	5.59	0.00
7,405.0	90.00	272.00	6,892.9	828.4	-515.6	602.5	2.83	1.60	2.34
7,499.0	89.40	271.20	6,893.4	831.1	-609.6	696.2	1.06	-0.64	-0.85
7,593.0	88.80	271.20	6,894.9	833.0	-703.6	789.8	0.64	-0.64	0.00
7,685.0	90.70	271.10	6,895.3	834.9	-795.6	881.5	2.07	2.07	-0.11
7,777.0	89.70	270.50	6,895.0	836.2	-887.5	973.0	1.27	-1.09	-0.65
7,869.0	93.10	271.10	6,892.7	837.4	-979.5	1,064.6	3.75	3.70	0.65
7,960.0	91.30	270.20	6,889.2	838.5	-1,070.4	1,155.1	2.21	-1.98	-0.99
8,052.0	91.50	270.00	6,887.0	838.6	-1,162.4	1,246.5	0.31	0.22	-0.22
8,144.0	91.10	270.20	6,884.9	838.8	-1,254.4	1,338.0	0.49	-0.43	0.22
8,236.0	91.80	268.80	6,882.6	838.0	-1,346.3	1,429.3	1.70	0.76	-1.52
8,327.0	91.00	267.90	6,880.3	835.4	-1,437.3	1,519.4	1.32	-0.88	-0.99
8,417.0	90.80	267.60	6,878.9	831.8	-1,527.2	1,608.4	0.40	-0.22	-0.33
8,508.0	92.20	267.60	6,876.5	828.0	-1,618.1	1,698.4	1.54	1.54	0.00
8,600.0	92.40	267.00	6,872.8	823.7	-1,709.9	1,789.2	0.69	0.22	-0.65
8,692.0	93.80	267.20	6,867.9	819.0	-1,801.6	1,879.9	1.54	1.52	0.22
8,784.0	91.50	268.40	6,863.6	815.5	-1,893.5	1,970.8	2.82	-2.50	1.30
8,876.0	91.20	268.10	6,861.5	812.7	-1,985.4	2,061.9	0.46	-0.33	-0.33
8,967.0	90.20	269.30	6,860.3	810.6	-2,076.4	2,152.1	1.72	-1.10	1.32
9,058.0	90.20	269.10	6,860.0	809.4	-2,167.3	2,242.4	0.22	0.00	-0.22
9,150.0	91.40	269.70	6,858.7	808.4	-2,259.3	2,333.7	1.46	1.30	0.65
9,241.0	92.90	271.20	6,855.3	809.1	-2,350.3	2,424.2	2.33	1.65	1.65
9,333.0	90.10	271.40	6,852.9	811.2	-2,442.2	2,515.8	3.05	-3.04	0.22
9,425.0	90.80	270.90	6,852.2	813.1	-2,534.2	2,607.4	0.94	0.76	-0.54
9,516.0	90.20	270.00	6,851.4	813.8	-2,625.2	2,698.0	1.19	-0.66	-0.99
9,609.0	89.60	269.00	6,851.6	813.0	-2,718.2	2,790.3	1.25	-0.65	-1.08
9,700.0	89.90	269.00	6,852.0	811.4	-2,809.1	2,880.6	0.33	0.33	0.00
9,792.0	89.40	268.60	6,852.5	809.4	-2,901.1	2,971.8	0.70	-0.54	-0.43
9,884.0	89.60	269.70	6,853.3	808.1	-2,993.1	3,063.1	1.22	0.22	1.20
9,977.0	92.40	270.00	6,851.7	807.8	-3,086.1	3,155.5	3.03	3.01	0.32
10,069.0	90.70	269.70	6,849.2	807.6	-3,178.0	3,246.9	1.88	-1.85	-0.33
10,161.0	90.00	270.00	6,848.6	807.4	-3,270.0	3,338.3	0.83	-0.76	0.33
10,253.0	90.90	270.90	6,847.9	808.1	-3,362.0	3,429.9	1.38	0.98	0.98
10,345.0	90.60	270.70	6,846.7	809.4	-3,454.0	3,521.5	0.39	-0.33	-0.22
10,439.0	91.00	270.90	6,845.4	810.7	-3,548.0	3,615.0	0.48	0.43	0.21
10,453.7	91.14	270.87	6,845.1	810.9	-3,562.7	3,629.6	0.98	0.96	-0.21
WP #1 (K-10-9HN)									
10,533.0	91.90	270.70	6,843.0	812.0	-3,642.0	3,708.6	0.98	0.96	-0.21

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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)
10,627.0	91.20	270.50	6,840.5	813.0	-3,735.9	3,802.1	0.77	-0.74	-0.21
10,722.0	91.70	269.00	6,838.1	812.6	-3,830.9	3,896.4	1.66	0.53	-1.58
10,816.0	91.60	268.80	6,835.4	810.8	-3,924.8	3,989.6	0.24	-0.11	-0.21
10,910.0	90.80	268.60	6,833.4	808.6	-4,018.8	4,082.8	0.88	-0.85	-0.21
11,005.0	90.10	268.10	6,832.7	805.9	-4,113.7	4,176.9	0.91	-0.74	-0.53
11,099.0	91.30	267.90	6,831.5	802.6	-4,207.7	4,269.9	1.29	1.28	-0.21
11,193.0	91.20	267.90	6,829.5	799.2	-4,301.6	4,362.9	0.11	-0.11	0.00
11,221.0	91.30	267.70	6,828.9	798.1	-4,329.6	4,390.6	0.80	0.36	-0.71
11,316.0	90.00	268.60	6,827.8	795.0	-4,424.5	4,484.7	1.66	-1.37	0.95
11,410.0	89.40	270.50	6,828.3	794.3	-4,518.5	4,578.0	2.12	-0.64	2.02
11,504.0	89.30	270.50	6,829.3	795.1	-4,612.5	4,671.5	0.11	-0.11	0.00
11,598.0	90.40	269.80	6,829.6	795.3	-4,706.5	4,765.0	1.39	1.17	-0.74
11,693.0	90.60	268.60	6,828.8	794.0	-4,801.5	4,859.3	1.28	0.21	-1.26
11,787.0	90.60	270.20	6,827.8	793.0	-4,895.5	4,952.6	1.70	0.00	1.70
11,880.0	90.90	269.80	6,826.5	793.0	-4,988.4	5,045.0	0.54	0.32	-0.43
11,975.0	89.70	270.20	6,826.1	793.0	-5,083.4	5,139.5	1.33	-1.26	0.42
12,069.0	89.40	270.40	6,826.8	793.5	-5,177.4	5,233.0	0.38	-0.32	0.21
12,163.0	89.10	270.20	6,828.0	794.0	-5,271.4	5,326.5	0.38	-0.32	-0.21
12,258.0	89.70	269.50	6,829.0	793.8	-5,366.4	5,420.9	0.97	0.63	-0.74
12,352.0	90.30	269.00	6,829.0	792.5	-5,460.4	5,514.2	0.83	0.64	-0.53
12,446.0	89.10	270.00	6,829.5	791.7	-5,554.4	5,607.5	1.66	-1.28	1.06
12,541.0	89.30	269.80	6,830.8	791.6	-5,649.4	5,701.9	0.30	0.21	-0.21
12,636.0	88.90	269.70	6,832.3	791.1	-5,744.4	5,796.3	0.43	-0.42	-0.11
12,730.0	89.30	269.50	6,833.8	790.5	-5,838.4	5,889.7	0.48	0.43	-0.21
12,824.0	89.30	269.00	6,835.0	789.3	-5,932.4	5,983.0	0.53	0.00	-0.53
12,918.0	90.70	269.30	6,835.0	787.9	-6,026.3	6,076.3	1.52	1.49	0.32
13,013.0	91.70	269.00	6,833.0	786.5	-6,121.3	6,170.5	1.10	1.05	-0.32
13,107.0	90.00	269.10	6,831.6	784.9	-6,215.3	6,263.8	1.81	-1.81	0.11
13,202.0	90.10	269.10	6,831.5	783.4	-6,310.3	6,358.0	0.11	0.11	0.00
13,297.0	90.70	268.10	6,830.8	781.1	-6,405.2	6,452.2	1.23	0.63	-1.05
13,391.0	89.20	267.40	6,830.9	777.4	-6,499.2	6,545.1	1.76	-1.60	-0.74
13,486.0	88.60	268.60	6,832.7	774.1	-6,594.1	6,639.1	1.41	-0.63	1.26
13,580.0	88.70	270.70	6,834.9	773.5	-6,688.1	6,732.5	2.24	0.11	2.23
13,674.0	89.20	270.20	6,836.7	774.2	-6,782.0	6,826.0	0.75	0.53	-0.53
13,768.0	89.50	270.00	6,837.7	774.4	-6,876.0	6,919.5	0.38	0.32	-0.21
13,862.0	89.40	269.70	6,838.6	774.2	-6,970.0	7,012.9	0.34	-0.11	-0.32
13,956.0	89.90	269.00	6,839.2	773.1	-7,064.0	7,106.2	0.92	0.53	-0.74
13,972.0	90.20	269.00	6,839.2	772.8	-7,080.0	7,122.1	1.88	1.88	0.00
14,037.0	90.20	269.00	6,839.0	771.7	-7,145.0	7,186.5	0.00	0.00	0.00
BHL 2445'FSL & 2170'FEL, Sec.9									

Checked By: _____ Approved By: _____ Date: _____