

# Bayswater Exploration & Production, LLC

Well Name: **Mojack I-28HN**

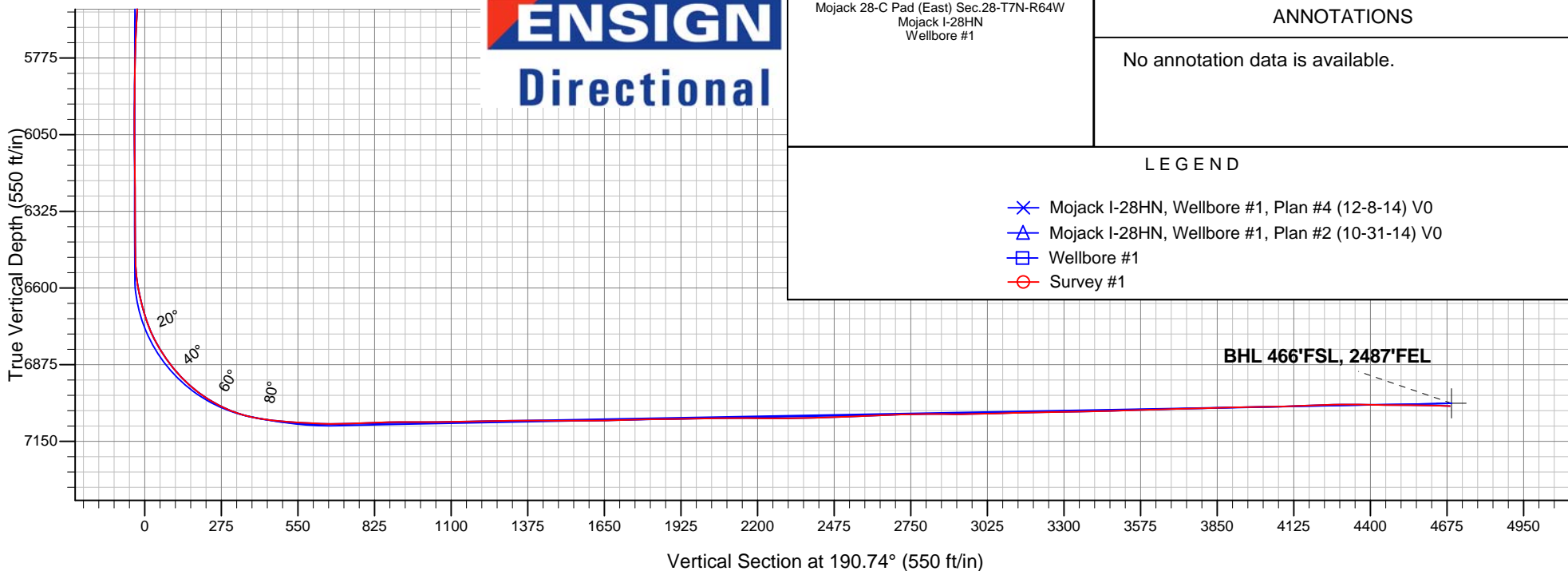
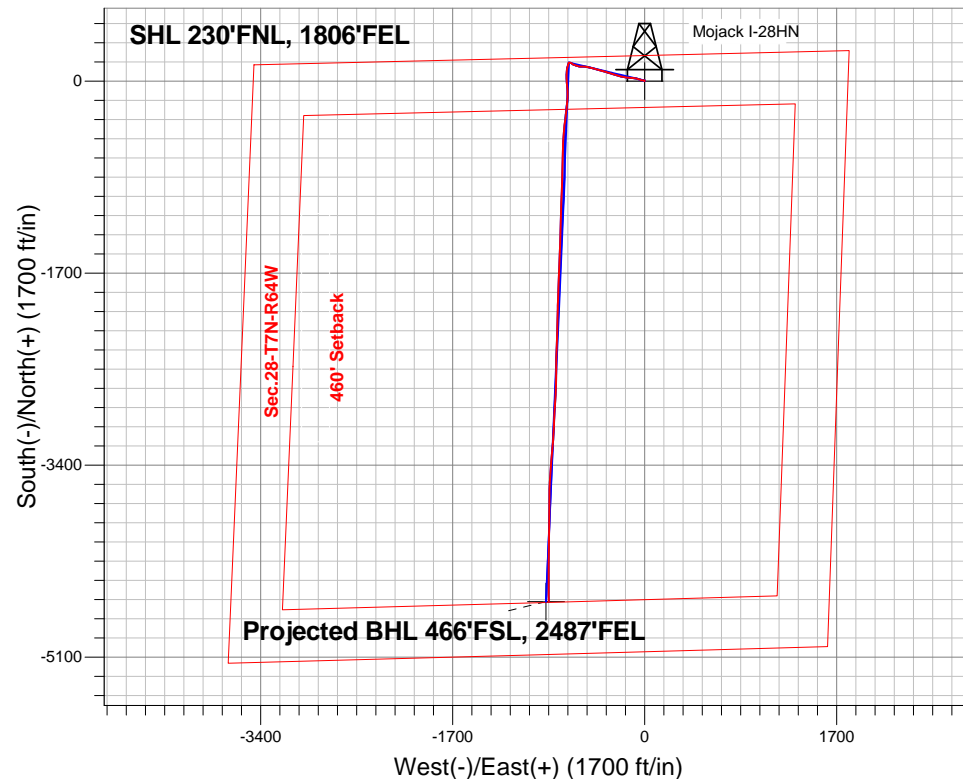
Surface Location: Mojack 28-C Pad (East) Sec.28-T7N-R64W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4899.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1444862.34	3263521.54	40.550679	-104.551692	
RKB -22.5' WELL @ 4921.5ft (RKB -22.5')						

## FINAL SURVEY

Projected Bottom Hole Location  
11665'MD 7024'TVD 4608'S & 849'W of SHL  
88.6 degree Incl @ 179.0 degree AZM





# **Bayswater Exploration & Production, LLC**

**SEC.28-T7N-R64W**

**Mojack 28-C Pad (East) Sec.28-T7N-R64W**

**Mojack I-28HN**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**11 December, 2014**



**BAYSWATER**  
**EXPLORATION & PRODUCTION, LLC**

<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>Local Co-ordinate Reference:</b>	Well Mojack I-28HN
<b>Project:</b>	SEC.28-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4921.5ft (RKB -22.5')
<b>Site:</b>	Mojack 28-C Pad (East) Sec.28-T7N-R64W	<b>MD Reference:</b>	WELL @ 4921.5ft (RKB -22.5')
<b>Well:</b>	Mojack I-28HN	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.28-T7N-R64W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	Mojack 28-C Pad (East) Sec.28-T7N-R64W		
<b>Site Position:</b>		<b>Northing:</b>	1,444,862.34 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,263,521.54 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40.550679
		<b>Longitude:</b>	-104.551692
		<b>Grid Convergence:</b>	0.61 °

<b>Well</b>	Mojack I-28HN		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b> 1,444,862.34 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b> 3,263,521.54 ft
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40.550679
		<b>Longitude:</b>	-104.551692
		<b>Ground Level:</b>	4,899.0 ft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	IGRF2010	12/8/2014	8.29
			<b>Dip Angle (°)</b> 67.08
			<b>Field Strength (nT)</b> 52,864

<b>Design</b>	Wellbore #1		
<b>Audit Notes:</b>			
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL
		<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>
	0.0	0.0	0.0
			<b>Direction (°)</b> 190.74

<b>Survey Program</b>	<b>Date</b>	12/11/2014		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
128.0	11,666.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1.0	0.00	8.00	1.0	0.0	0.0	0.0	0.39	0.39	0.00	
<b>SHL 230'FNL, 1806'FEL</b>										
128.0	0.50	8.00	128.0	0.6	0.1	-0.6	0.39	0.39	0.00	
220.0	0.40	357.20	220.0	1.3	0.1	-1.3	0.14	-0.11	-11.74	
312.0	0.80	0.00	312.0	2.2	0.1	-2.2	0.44	0.43	3.04	
404.0	0.60	351.80	404.0	3.4	0.0	-3.3	0.24	-0.22	-8.91	
496.0	0.70	352.00	496.0	4.4	-0.1	-4.3	0.11	0.11	0.22	
589.0	1.00	343.90	589.0	5.7	-0.4	-5.6	0.35	0.32	-8.71	
681.0	0.40	2.30	681.0	6.8	-0.6	-6.6	0.69	-0.65	20.00	
742.0	0.40	356.00	742.0	7.2	-0.6	-7.0	0.07	0.00	-10.33	
827.0	0.70	263.40	827.0	7.5	-1.2	-7.1	0.97	0.35	-108.94	
922.0	1.10	245.30	921.9	7.0	-2.6	-6.4	0.51	0.42	-19.05	

<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>Local Co-ordinate Reference:</b>	Well Mojack I-28HN
<b>Project:</b>	SEC.28-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4921.5ft (RKB -22.5')
<b>Site:</b>	Mojack 28-C Pad (East) Sec.28-T7N-R64W	<b>MD Reference:</b>	WELL @ 4921.5ft (RKB -22.5')
<b>Well:</b>	Mojack I-28HN	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
1,015.0	1.10	233.00	1,014.9	6.1	-4.1	-5.3	0.25	0.00	-13.23
1,107.0	2.50	262.70	1,106.9	5.3	-6.8	-4.0	1.78	1.52	32.28
1,199.0	4.20	275.80	1,198.7	5.4	-12.1	-3.1	2.01	1.85	14.24
1,291.0	5.80	279.40	1,290.4	6.5	-20.1	-2.7	1.77	1.74	3.91
1,383.0	6.50	289.00	1,381.8	9.0	-29.6	-3.3	1.35	0.76	10.43
1,475.0	9.10	287.10	1,473.0	12.8	-41.5	-4.9	2.84	2.83	-2.07
1,567.0	9.50	287.10	1,563.8	17.2	-55.7	-6.5	0.43	0.43	0.00
1,660.0	9.60	288.50	1,655.5	21.9	-70.4	-8.4	0.27	0.11	1.51
1,752.0	9.80	277.40	1,746.2	25.3	-85.4	-9.0	2.04	0.22	-12.07
1,844.0	9.40	277.30	1,836.9	27.3	-100.6	-8.1	0.44	-0.43	-0.11
1,936.0	8.90	272.90	1,927.7	28.6	-115.2	-6.7	0.93	-0.54	-4.78
2,028.0	9.00	274.80	2,018.6	29.6	-129.5	-4.9	0.34	0.11	2.07
2,120.0	8.10	266.90	2,109.6	29.8	-143.1	-2.7	1.61	-0.98	-8.59
2,213.0	8.80	279.00	2,201.6	30.6	-156.7	-0.9	2.05	0.75	13.01
2,305.0	8.60	287.30	2,292.5	33.7	-170.2	-1.4	1.38	-0.22	9.02
2,400.0	7.40	279.40	2,386.6	36.9	-183.0	-2.1	1.71	-1.26	-8.32
2,495.0	9.00	284.50	2,480.6	39.7	-196.2	-2.5	1.85	1.68	5.37
2,591.0	8.30	281.10	2,575.5	42.9	-210.3	-3.0	0.90	-0.73	-3.54
2,686.0	8.80	276.00	2,669.5	45.0	-224.3	-2.4	0.96	0.53	-5.37
2,781.0	8.90	290.40	2,763.4	48.3	-238.4	-3.1	2.33	0.11	15.16
2,876.0	8.20	287.80	2,857.3	53.0	-251.7	-5.1	0.84	-0.74	-2.74
2,971.0	7.20	286.40	2,951.4	56.7	-263.9	-6.6	1.07	-1.05	-1.47
3,067.0	9.00	288.70	3,046.5	60.8	-276.8	-8.2	1.90	1.88	2.40
3,162.0	8.90	286.40	3,140.3	65.3	-290.9	-9.9	0.39	-0.11	-2.42
3,257.0	7.70	284.80	3,234.3	69.0	-304.1	-11.1	1.29	-1.26	-1.68
3,352.0	8.80	288.30	3,328.3	72.9	-317.1	-12.5	1.27	1.16	3.68
3,448.0	7.90	285.20	3,423.3	76.9	-330.5	-14.0	1.05	-0.94	-3.23
3,543.0	7.80	289.70	3,517.4	80.8	-342.8	-15.5	0.66	-0.11	4.74
3,638.0	8.00	290.10	3,611.5	85.3	-355.1	-17.6	0.22	0.21	0.42
3,733.0	7.80	277.40	3,705.6	88.4	-367.7	-18.3	1.85	-0.21	-13.37
3,829.0	8.10	284.50	3,800.7	90.9	-380.7	-18.4	1.07	0.31	7.40
3,924.0	9.80	286.90	3,894.6	94.9	-394.9	-19.7	1.83	1.79	2.53
4,019.0	10.50	287.50	3,988.1	99.9	-410.9	-21.6	0.75	0.74	0.63
4,114.0	9.20	286.00	4,081.7	104.6	-426.5	-23.3	1.39	-1.37	-1.58
4,209.0	9.90	286.20	4,175.4	108.9	-441.6	-24.8	0.74	0.74	0.21
4,305.0	10.10	284.60	4,269.9	113.4	-457.7	-26.1	0.36	0.21	-1.67
4,400.0	9.10	284.50	4,363.6	117.3	-473.0	-27.2	1.05	-1.05	-0.11
4,495.0	8.60	285.00	4,457.4	121.1	-487.2	-28.2	0.53	-0.53	0.53
4,591.0	8.40	278.10	4,552.4	123.9	-501.0	-28.4	1.08	-0.21	-7.19
4,686.0	8.10	280.20	4,646.4	126.1	-514.5	-28.0	0.45	-0.32	2.21
4,781.0	9.50	279.20	4,740.3	128.5	-528.8	-27.7	1.48	1.47	-1.05
4,876.0	8.50	265.80	4,834.1	129.2	-543.6	-25.7	2.44	-1.05	-14.11
4,971.0	8.40	269.20	4,928.1	128.6	-557.5	-22.5	0.54	-0.11	3.58
5,067.0	7.50	276.40	5,023.2	129.2	-570.7	-20.6	1.40	-0.94	7.50
5,162.0	7.10	281.50	5,117.4	131.1	-582.7	-20.3	0.80	-0.42	5.37
5,257.0	7.00	289.20	5,211.7	134.2	-593.9	-21.2	1.00	-0.11	8.11
5,352.0	8.40	288.20	5,305.8	138.2	-605.9	-22.9	1.48	1.47	-1.05
5,447.0	5.50	285.00	5,400.1	141.6	-616.9	-24.2	3.08	-3.05	-3.37
5,542.0	5.30	286.90	5,494.7	144.0	-625.5	-25.0	0.28	-0.21	2.00
5,638.0	5.10	302.20	5,590.3	147.6	-633.4	-27.0	1.45	-0.21	15.94
5,733.0	6.00	311.70	5,684.9	153.2	-640.7	-31.1	1.35	0.95	10.00
5,828.0	4.80	296.60	5,779.4	158.2	-647.9	-34.8	1.95	-1.26	-15.89
5,923.0	5.10	286.20	5,874.1	161.2	-655.5	-36.3	0.99	0.32	-10.95
6,019.0	3.60	282.00	5,969.8	163.0	-662.6	-36.7	1.60	-1.56	-4.38

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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)
6,114.0	2.60	277.60	6,064.7	163.9	-667.6	-36.7	1.08	-1.05	-4.63
6,209.0	0.90	237.90	6,159.6	163.8	-670.4	-36.0	2.10	-1.79	-41.79
6,304.0	0.40	228.90	6,254.6	163.2	-671.3	-35.3	0.54	-0.53	-9.47
6,399.0	0.40	245.80	6,349.6	162.8	-671.8	-34.8	0.12	0.00	17.79
6,495.0	0.40	195.50	6,445.6	162.4	-672.2	-34.3	0.35	0.00	-52.40
6,540.0	1.10	190.80	6,490.6	161.8	-672.3	-33.7	1.56	1.56	-10.44
6,590.0	4.40	198.90	6,540.5	159.5	-673.1	-31.3	6.63	6.60	16.20
6,637.0	9.40	197.10	6,587.2	154.1	-674.8	-25.7	10.65	10.64	-3.83
6,685.0	13.20	195.20	6,634.2	145.1	-677.4	-16.4	7.95	7.92	-3.96
6,732.0	15.30	196.90	6,679.8	134.0	-680.6	-4.9	4.56	4.47	3.62
6,780.0	19.70	193.60	6,725.6	120.1	-684.3	9.5	9.39	9.17	-6.88
6,827.0	25.30	187.80	6,769.0	102.4	-687.5	27.5	12.80	11.91	-12.34
6,876.0	30.20	184.30	6,812.3	79.7	-689.9	50.2	10.53	10.00	-7.14
6,923.0	35.70	182.50	6,851.8	54.2	-691.4	75.5	11.88	11.70	-3.83
6,971.0	40.40	177.60	6,889.6	24.7	-691.3	104.6	11.63	9.79	-10.21
7,018.0	45.10	175.80	6,924.1	-7.2	-689.5	135.5	10.33	10.00	-3.83
7,066.0	50.40	174.80	6,956.3	-42.6	-686.6	169.7	11.15	11.04	-2.08
7,113.0	55.90	177.20	6,984.5	-80.1	-684.0	206.1	12.39	11.70	5.11
7,161.0	60.90	180.40	7,009.7	-120.9	-683.1	246.1	11.86	10.42	6.67
7,208.0	65.30	183.20	7,030.9	-162.8	-684.5	287.5	10.76	9.36	5.96
7,256.0	71.00	185.50	7,048.8	-207.2	-687.9	331.7	12.68	11.88	4.79
7,290.0	75.80	186.20	7,058.5	-239.6	-691.2	364.2	14.25	14.12	2.06
7,372.0	83.40	187.20	7,073.3	-319.7	-700.6	444.6	9.35	9.27	1.22
7,467.0	86.20	185.80	7,081.9	-413.6	-711.3	538.9	3.29	2.95	-1.47
7,561.0	87.90	184.60	7,086.7	-507.1	-719.8	632.4	2.21	1.81	-1.28
7,583.2	88.87	183.99	7,087.3	-529.3	-721.5	654.4	5.16	4.36	-2.77
<b>Landing Pt. (I-28HN)</b>									
7,655.0	92.00	182.00	7,086.8	-600.9	-725.2	725.5	5.16	4.36	-2.77
7,750.0	92.30	180.40	7,083.2	-695.9	-727.2	819.2	1.71	0.32	-1.68
7,844.0	90.40	180.60	7,081.0	-789.8	-728.0	911.6	2.03	-2.02	0.21
7,939.0	89.80	182.10	7,080.9	-884.8	-730.3	1,005.4	1.70	-0.63	1.58
8,033.0	90.90	182.30	7,080.3	-978.7	-733.9	1,098.3	1.19	1.17	0.21
8,127.0	91.50	182.00	7,078.3	-1,072.6	-737.4	1,191.2	0.71	0.64	-0.32
8,222.0	90.70	183.20	7,076.5	-1,167.5	-741.7	1,285.3	1.52	-0.84	1.26
8,316.0	89.70	179.70	7,076.2	-1,261.5	-744.1	1,378.0	3.87	-1.06	-3.72
8,411.0	90.20	182.50	7,076.2	-1,356.4	-745.9	1,471.7	2.99	0.53	2.95
8,505.0	89.90	181.40	7,076.2	-1,450.4	-749.1	1,564.6	1.21	-0.32	-1.17
8,599.0	91.00	182.50	7,075.4	-1,544.3	-752.3	1,657.4	1.65	1.17	1.17
8,694.0	92.10	182.50	7,072.9	-1,639.2	-756.5	1,751.4	1.16	1.16	0.00
8,789.0	90.50	181.40	7,070.7	-1,734.1	-759.7	1,845.3	2.04	-1.68	-1.16
8,883.0	91.30	182.50	7,069.2	-1,828.0	-762.9	1,938.2	1.45	0.85	1.17
8,977.0	90.90	182.80	7,067.4	-1,921.9	-767.2	2,031.2	0.53	-0.43	0.32
9,072.0	89.30	181.10	7,067.3	-2,016.9	-770.5	2,125.1	2.46	-1.68	-1.79
9,166.0	89.90	180.90	7,067.9	-2,110.9	-772.1	2,217.7	0.67	0.64	-0.21
9,260.0	90.60	181.80	7,067.5	-2,204.8	-774.3	2,310.5	1.21	0.74	0.96
9,355.0	91.40	182.00	7,065.8	-2,299.8	-777.5	2,404.3	0.87	0.84	0.21
9,449.0	92.30	182.00	7,062.8	-2,393.6	-780.7	2,497.2	0.96	0.96	0.00
9,543.0	92.70	180.40	7,058.7	-2,487.5	-782.7	2,589.8	1.75	0.43	-1.70
9,638.0	91.90	181.10	7,054.9	-2,582.4	-784.0	2,683.3	1.12	-0.84	0.74
9,732.0	90.90	180.90	7,052.6	-2,676.4	-785.6	2,775.9	1.08	-1.06	-0.21
9,827.0	89.30	182.70	7,052.4	-2,771.4	-788.6	2,869.7	2.54	-1.68	1.89
9,921.0	90.90	184.10	7,052.3	-2,865.2	-794.1	2,963.0	2.26	1.70	1.49
10,015.0	92.00	183.20	7,049.9	-2,959.0	-800.1	3,056.2	1.51	1.17	-0.96
10,108.0	91.50	182.00	7,047.1	-3,051.8	-804.3	3,148.2	1.40	-0.54	-1.29

<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>Local Co-ordinate Reference:</b>	Well Mojack I-28HN
<b>Project:</b>	SEC.28-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4921.5ft (RKB -22.5')
<b>Site:</b>	Mojack 28-C Pad (East) Sec.28-T7N-R64W	<b>MD Reference:</b>	WELL @ 4921.5ft (RKB -22.5')
<b>Well:</b>	Mojack I-28HN	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
10,202.0	90.40	183.20	7,045.5	-3,145.7	-808.6	3,241.3	1.73	-1.17	1.28
10,296.0	91.40	185.30	7,044.0	-3,239.4	-815.6	3,334.7	2.47	1.06	2.23
10,390.0	91.40	184.80	7,041.7	-3,333.0	-823.8	3,428.2	0.53	0.00	-0.53
10,485.0	91.80	185.00	7,039.1	-3,427.6	-832.0	3,522.6	0.47	0.42	0.21
10,578.0	91.70	183.40	7,036.2	-3,520.4	-838.8	3,615.0	1.72	-0.11	-1.72
10,672.0	91.50	181.10	7,033.6	-3,614.2	-842.5	3,707.9	2.46	-0.21	-2.45
10,767.0	91.50	180.90	7,031.1	-3,709.2	-844.1	3,801.5	0.21	0.00	-0.21
10,862.0	91.20	180.20	7,028.9	-3,804.2	-845.0	3,895.0	0.80	-0.32	-0.74
10,956.0	90.80	180.40	7,027.2	-3,898.1	-845.5	3,987.4	0.48	-0.43	0.21
11,050.0	91.60	181.40	7,025.3	-3,992.1	-847.0	4,080.0	1.36	0.85	1.06
11,145.0	92.40	180.40	7,022.0	-4,087.0	-848.5	4,173.6	1.35	0.84	-1.05
11,239.0	91.50	180.40	7,018.8	-4,181.0	-849.1	4,266.0	0.96	-0.96	0.00
11,334.0	88.90	180.40	7,018.4	-4,276.0	-849.8	4,359.4	2.74	-2.74	0.00
11,428.0	89.50	180.20	7,019.7	-4,370.0	-850.3	4,451.9	0.67	0.64	-0.21
11,522.0	89.40	180.00	7,020.6	-4,464.0	-850.5	4,544.2	0.24	-0.11	-0.21
11,611.0	88.60	179.00	7,022.2	-4,552.9	-849.7	4,631.5	1.44	-0.90	-1.12
11,666.0	88.60	179.00	7,023.5	-4,607.9	-848.7	4,685.4	0.00	0.00	0.00
BHL 465'FSL, 2512'FEL									

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_