

Anglian Oil Company Ltd.
Northern Lights, AA Pad, AA16, Slot 09, Run #4



Job No. AB-CD-12345678
Survey Date: 23 September 2017

True North Directional Services Inc.

Survey Report

17 November 2025

Surface Coordinates (metres): 6,789,330.21 N, 572,493.04 E (61° 14' 00.2426" N, 109° 38' 59.0443" W)
Grid Coordinate System: Universal Transverse Mercator, Zone 12 North

Surface Coordinates relative to AA Pad: 91.21 S, 114.93 E (Grid)

Kelly Bushing Elevation: 2,065.65ft above Mean Sea Level

Kelly Bushing Elevation: 5.25ft above Ground Level

Ground Level: 2,060.40ft above Mean Sea Level

Survey Ref: svy57



True North
Directional Services Inc.

Survey Report for AA Pad, AA16, Run #4

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Sub-Sea Depth (ft)	Northings (ft)	Eastings (ft)	Map Northings (m)	Map Eastings (m)	Geographical Latitude (° ' ")	Geographical Longitude (° ' ")	Vertical Section (ft)	Dogleg Rate (°/100ft)
Run #1												
0.00	0.00	0.00	0.00	-2,065.65	0.00 N	0.00 E	6,789,330.21 N	572,493.04 E	61° 14' 00.2426" N	109° 38' 59.0443" W	0.00	
36.09	0.22	120.07	36.09	-2,029.56	0.03 S	0.06 E	6,789,330.20 N	572,493.06 E	61° 14' 00.2423" N	109° 38' 59.0431" W	0.06	0.610
66.67	0.17	210.70	66.67	-1,998.98	0.10 S	0.09 E	6,789,330.18 N	572,493.07 E	61° 14' 00.2416" N	109° 38' 59.0426" W	0.08	0.919
96.11	0.22	129.57	96.11	-1,969.54	0.18 S	0.11 E	6,789,330.16 N	572,493.07 E	61° 14' 00.2408" N	109° 38' 59.0422" W	0.10	0.880
126.29	0.50	99.70	126.29	-1,939.36	0.24 S	0.28 E	6,789,330.14 N	572,493.13 E	61° 14' 00.2402" N	109° 38' 59.0387" W	0.27	1.073
155.36	0.16	271.07	155.36	-1,910.29	0.26 S	0.37 E	6,789,330.13 N	572,493.15 E	61° 14' 00.2400" N	109° 38' 59.0370" W	0.35	2.255
185.42	0.00	285.70	185.42	-1,880.23	0.26 S	0.32 E	6,789,330.13 N	572,493.14 E	61° 14' 00.2400" N	109° 38' 59.0379" W	0.30	0.518
216.99	0.09	77.62	216.99	-1,848.66	0.25 S	0.35 E	6,789,330.13 N	572,493.15 E	61° 14' 00.2401" N	109° 38' 59.0374" W	0.33	0.289
244.51	0.20	96.45	244.51	-1,821.13	0.25 S	0.41 E	6,789,330.13 N	572,493.17 E	61° 14' 00.2400" N	109° 38' 59.0360" W	0.39	0.423
276.98	0.32	254.18	276.98	-1,788.66	0.28 S	0.38 E	6,789,330.12 N	572,493.16 E	61° 14' 00.2397" N	109° 38' 59.0367" W	0.36	1.562
307.18	0.08	200.31	307.18	-1,758.47	0.33 S	0.29 E	6,789,330.11 N	572,493.13 E	61° 14' 00.2393" N	109° 38' 59.0385" W	0.27	0.935
336.85	0.04	237.93	336.85	-1,728.79	0.35 S	0.27 E	6,789,330.10 N	572,493.12 E	61° 14' 00.2391" N	109° 38' 59.0389" W	0.25	0.170
364.69	0.31	263.01	364.69	-1,700.95	0.36 S	0.19 E	6,789,330.10 N	572,493.10 E	61° 14' 00.2390" N	109° 38' 59.0406" W	0.16	0.992
395.92	0.04	187.97	395.92	-1,669.72	0.39 S	0.10 E	6,789,330.09 N	572,493.07 E	61° 14' 00.2388" N	109° 38' 59.0424" W	0.08	0.982
427.42	0.07	34.51	427.41	-1,638.23	0.38 S	0.11 E	6,789,330.09 N	572,493.08 E	61° 14' 00.2388" N	109° 38' 59.0422" W	0.09	0.351
457.20	0.01	172.63	457.20	-1,608.45	0.37 S	0.12 E	6,789,330.10 N	572,493.08 E	61° 14' 00.2390" N	109° 38' 59.0420" W	0.10	0.267
485.85	0.27	203.05	485.85	-1,579.80	0.43 S	0.10 E	6,789,330.08 N	572,493.07 E	61° 14' 00.2383" N	109° 38' 59.0425" W	0.07	0.923
517.80	0.12	55.45	517.80	-1,547.85	0.48 S	0.10 E	6,789,330.06 N	572,493.07 E	61° 14' 00.2378" N	109° 38' 59.0426" W	0.06	1.184
547.52	0.01	1.28	547.52	-1,518.12	0.46 S	0.12 E	6,789,330.07 N	572,493.08 E	61° 14' 00.2380" N	109° 38' 59.0421" W	0.09	0.382
574.87	0.18	196.73	574.87	-1,490.78	0.50 S	0.11 E	6,789,330.06 N	572,493.07 E	61° 14' 00.2376" N	109° 38' 59.0423" W	0.07	0.697
591.40	0.39	141.52	591.40	-1,474.24	0.57 S	0.14 E	6,789,330.04 N	572,493.08 E	61° 14' 00.2370" N	109° 38' 59.0418" W	0.10	1.935
619.50	0.13	279.76	619.50	-1,446.15	0.64 S	0.16 E	6,789,330.02 N	572,493.09 E	61° 14' 00.2363" N	109° 38' 59.0413" W	0.12	1.747
650.05	0.20	145.16	650.05	-1,415.60	0.68 S	0.16 E	6,789,330.00 N	572,493.09 E	61° 14' 00.2359" N	109° 38' 59.0414" W	0.11	0.991
680.86	0.21	266.64	680.86	-1,384.78	0.72 S	0.13 E	6,789,329.99 N	572,493.08 E	61° 14' 00.2355" N	109° 38' 59.0419" W	0.08	1.146
708.54	0.35	227.15	708.54	-1,357.11	0.78 S	0.02 E	6,789,329.97 N	572,493.05 E	61° 14' 00.2349" N	109° 38' 59.0442" W	-0.03	0.835
740.33	0.03	72.73	740.33	-1,325.32	0.85 S	0.04 W	6,789,329.95 N	572,493.03 E	61° 14' 00.2343" N	109° 38' 59.0455" W	-0.10	1.185
769.94	0.28	112.69	769.94	-1,295.71	0.87 S	0.03 E	6,789,329.94 N	572,493.05 E	61° 14' 00.2340" N	109° 38' 59.0440" W	-0.03	0.860
799.40	1.08	92.72	799.40	-1,266.25	0.91 S	0.38 E	6,789,329.93 N	572,493.16 E	61° 14' 00.2335" N	109° 38' 59.0370" W	0.31	2.817
830.49	2.74	116.33	830.46	-1,235.18	1.26 S	1.34 E	6,789,329.83 N	572,493.45 E	61° 14' 00.2299" N	109° 38' 59.0176" W	1.25	5.800
860.59	4.70	105.57	860.50	-1,205.14	1.91 S	3.17 E	6,789,329.63 N	572,494.01 E	61° 14' 00.2232" N	109° 38' 58.9804" W	3.03	6.861
889.35	6.74	105.41	889.12	-1,176.53	2.67 S	5.93 E	6,789,329.40 N	572,494.85 E	61° 14' 00.2151" N	109° 38' 58.9243" W	5.73	7.101
919.42	8.89	105.63	918.91	-1,146.74	3.77 S	9.87 E	6,789,329.06 N	572,496.05 E	61° 14' 00.2035" N	109° 38' 58.8443" W	9.58	7.159
951.24	11.25	107.50	950.24	-1,115.41	5.36 S	15.20 E	6,789,328.58 N	572,497.67 E	61° 14' 00.1867" N	109° 38' 58.7361" W	14.79	7.483

Survey Report for AA Pad, AA16, Run #4

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Sub-Sea Depth (ft)	Northings (ft)	Eastings (ft)	Map Northings (m)	Map Eastings (m)	Geographical Latitude (° ' ")	Geographical Longitude (° ' ")	Vertical Section (ft)	Dogleg Rate (°/100ft)
981.26	14.00	112.80	979.53	-1,086.12	7.65 S	21.34 E	6,789,327.88 N	572,499.55 E	61° 14' 00.1629" N	109° 38' 58.6115" W	20.76	9.931
Run #2												
1,007.79	17.10	120.53	1,005.09	-1,060.56	10.88 S	27.66 E	6,789,326.89 N	572,501.47 E	61° 14' 00.1299" N	109° 38' 58.4838" W	26.83	14.023
1,037.57	19.54	125.54	1,033.35	-1,032.29	16.00 S	35.48 E	6,789,325.33 N	572,503.86 E	61° 14' 00.0779" N	109° 38' 58.3261" W	34.28	9.761
1,065.34	22.08	126.37	1,059.31	-1,006.33	21.79 S	43.47 E	6,789,323.57 N	572,506.29 E	61° 14' 00.0191" N	109° 38' 58.1654" W	41.84	9.205
1,096.90	25.14	128.42	1,088.22	-977.42	29.48 S	53.50 E	6,789,321.23 N	572,509.35 E	61° 13' 59.9414" N	109° 38' 57.9637" W	51.31	10.024
1,127.85	27.95	130.62	1,115.91	-949.73	38.29 S	64.16 E	6,789,318.54 N	572,512.60 E	61° 13' 59.8525" N	109° 38' 57.7497" W	61.33	9.612
1,155.46	30.67	131.45	1,139.98	-925.66	47.16 S	74.34 E	6,789,315.83 N	572,515.70 E	61° 13' 59.7630" N	109° 38' 57.5453" W	70.87	9.987
1,186.43	33.27	133.03	1,166.26	-899.39	58.19 S	86.48 E	6,789,312.47 N	572,519.40 E	61° 13' 59.6519" N	109° 38' 57.3021" W	82.21	8.798
1,215.04	35.83	132.94	1,189.82	-875.82	69.25 S	98.35 E	6,789,309.10 N	572,523.02 E	61° 13' 59.5406" N	109° 38' 57.0642" W	93.28	8.972
1,247.99	38.36	132.82	1,216.10	-849.54	82.78 S	112.91 E	6,789,304.98 N	572,527.46 E	61° 13' 59.4044" N	109° 38' 56.7724" W	106.86	7.669
1,276.95	40.91	132.87	1,238.40	-827.24	95.34 S	126.45 E	6,789,301.15 N	572,531.58 E	61° 13' 59.2780" N	109° 38' 56.5011" W	119.49	8.802
1,304.81	43.01	133.13	1,259.12	-806.53	108.04 S	140.07 E	6,789,297.28 N	572,535.73 E	61° 13' 59.1501" N	109° 38' 56.2282" W	132.19	7.566
1,336.66	45.36	133.29	1,281.96	-783.69	123.24 S	156.25 E	6,789,292.65 N	572,540.67 E	61° 13' 58.9972" N	109° 38' 55.9040" W	147.27	7.393
1,365.12	47.88	133.28	1,301.51	-764.14	137.42 S	171.31 E	6,789,288.33 N	572,545.25 E	61° 13' 58.8544" N	109° 38' 55.6024" W	161.30	8.842
1,395.15	50.20	132.95	1,321.19	-744.46	152.91 S	187.86 E	6,789,283.60 N	572,550.30 E	61° 13' 58.6985" N	109° 38' 55.2707" W	176.73	7.785
1,427.45	53.25	132.13	1,341.20	-724.45	170.05 S	206.54 E	6,789,278.38 N	572,556.00 E	61° 13' 58.5259" N	109° 38' 54.8962" W	194.18	9.663
1,455.79	55.59	132.17	1,357.68	-707.97	185.52 S	223.63 E	6,789,273.66 N	572,561.20 E	61° 13' 58.3701" N	109° 38' 54.5537" W	210.14	8.252
1,485.02	57.95	132.55	1,373.70	-691.95	201.99 S	241.70 E	6,789,268.64 N	572,566.71 E	61° 13' 58.2042" N	109° 38' 54.1914" W	227.02	8.146
1,515.86	60.20	132.93	1,389.55	-676.10	219.95 S	261.13 E	6,789,263.17 N	572,572.63 E	61° 13' 58.0234" N	109° 38' 53.8021" W	245.15	7.361
1,546.16	62.83	132.36	1,404.00	-661.65	237.99 S	280.72 E	6,789,257.67 N	572,578.60 E	61° 13' 57.8418" N	109° 38' 53.4094" W	263.43	8.851
1,575.92	65.58	132.78	1,416.94	-648.70	256.11 S	300.45 E	6,789,252.15 N	572,584.62 E	61° 13' 57.6593" N	109° 38' 53.0140" W	281.85	9.329
1,608.06	68.03	132.64	1,429.60	-636.05	276.14 S	322.16 E	6,789,246.04 N	572,591.23 E	61° 13' 57.4575" N	109° 38' 52.5789" W	302.11	7.633
1,638.18	70.05	132.94	1,440.37	-625.27	295.25 S	342.80 E	6,789,240.22 N	572,597.53 E	61° 13' 57.2651" N	109° 38' 52.1653" W	321.37	6.775
1,666.31	73.04	132.82	1,449.27	-616.37	313.40 S	362.34 E	6,789,234.68 N	572,603.48 E	61° 13' 57.0824" N	109° 38' 51.7736" W	339.60	10.634
1,695.92	75.28	132.82	1,457.36	-608.29	332.77 S	383.24 E	6,789,228.78 N	572,609.85 E	61° 13' 56.8875" N	109° 38' 51.3549" W	359.10	7.547
1,725.56	77.25	132.17	1,464.39	-601.25	352.21 S	404.47 E	6,789,222.86 N	572,616.32 E	61° 13' 56.6917" N	109° 38' 50.9295" W	378.91	6.971
1,755.58	80.09	132.69	1,470.29	-595.35	372.07 S	426.19 E	6,789,216.80 N	572,622.95 E	61° 13' 56.4916" N	109° 38' 50.4939" W	399.20	9.620
1,787.19	82.56	132.61	1,475.06	-590.59	393.24 S	449.17 E	6,789,210.35 N	572,629.95 E	61° 13' 56.2785" N	109° 38' 50.0334" W	420.65	7.814
1,816.43	82.28	132.66	1,478.92	-586.73	412.87 S	470.50 E	6,789,204.37 N	572,636.45 E	61° 13' 56.0808" N	109° 38' 49.6060" W	440.55	0.973
1,846.46	82.69	132.40	1,482.84	-582.80	433.00 S	492.44 E	6,789,198.23 N	572,643.14 E	61° 13' 55.8781" N	109° 38' 49.1663" W	461.03	1.620
1,877.47	82.58	132.56	1,486.82	-578.83	453.77 S	515.11 E	6,789,191.90 N	572,650.05 E	61° 13' 55.6690" N	109° 38' 48.7118" W	482.21	0.618

Survey Report for AA Pad, AA16, Run #4

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Sub-Sea Depth (ft)	Northings (ft)	Eastings (ft)	Map Northings (m)	Map Eastings (m)	Geographical Latitude (° ' ")	Geographical Longitude (° ' ")	Vertical Section (ft)	Dogleg Rate (°/100ft)
1,906.22	82.51	132.31	1,490.55	-575.10	473.00 S	536.15 E	6,789,186.04 N	572,656.46 E	61° 13' 55.4753" N	109° 38' 48.2901" W	501.85	0.915
1,937.24	83.24	132.74	1,494.40	-571.25	493.81 S	558.84 E	6,789,179.70 N	572,663.38 E	61° 13' 55.2657" N	109° 38' 47.8353" W	523.03	2.740
1,965.87	82.97	131.27	1,497.84	-567.81	512.83 S	579.96 E	6,789,173.90 N	572,669.81 E	61° 13' 55.0741" N	109° 38' 47.4120" W	542.77	5.209
1,995.82	82.88	131.14	1,501.53	-564.12	532.41 S	602.32 E	6,789,167.93 N	572,676.63 E	61° 13' 54.8768" N	109° 38' 46.9634" W	563.71	0.497
2,027.14	82.68	132.14	1,505.46	-560.18	553.05 S	625.54 E	6,789,161.64 N	572,683.71 E	61° 13' 54.6687" N	109° 38' 46.4977" W	585.44	3.214
2,055.51	83.00	130.83	1,509.00	-556.65	571.70 S	646.63 E	6,789,155.96 N	572,690.13 E	61° 13' 54.4808" N	109° 38' 46.0748" W	605.17	4.723
2,086.77	82.55	131.36	1,512.93	-552.72	592.08 S	670.00 E	6,789,149.74 N	572,697.26 E	61° 13' 54.2753" N	109° 38' 45.6060" W	627.06	2.236
2,118.26	82.64	132.06	1,516.99	-548.66	612.86 S	693.31 E	6,789,143.41 N	572,704.36 E	61° 13' 54.0659" N	109° 38' 45.1385" W	648.87	2.205
2,146.16	82.69	131.00	1,520.55	-545.10	631.21 S	714.03 E	6,789,137.82 N	572,710.68 E	61° 13' 53.8810" N	109° 38' 44.7230" W	668.26	3.759
2,177.90	83.20	130.97	1,524.45	-541.20	651.86 S	737.81 E	6,789,131.52 N	572,717.92 E	61° 13' 53.6727" N	109° 38' 44.2459" W	690.54	1.590
2,206.59	82.36	130.29	1,528.05	-537.59	670.40 S	759.40 E	6,789,125.87 N	572,724.51 E	61° 13' 53.4858" N	109° 38' 43.8125" W	710.79	3.747
2,236.31	83.07	128.10	1,531.82	-533.82	689.03 S	782.26 E	6,789,120.19 N	572,731.47 E	61° 13' 53.2976" N	109° 38' 43.3536" W	732.29	7.686
2,268.40	83.01	125.89	1,535.71	-529.94	708.19 S	807.69 E	6,789,114.35 N	572,739.23 E	61° 13' 53.1037" N	109° 38' 42.8420" W	756.32	6.832
2,297.47	82.93	123.02	1,539.27	-526.38	724.52 S	831.48 E	6,789,109.38 N	572,746.48 E	61° 13' 52.9381" N	109° 38' 42.3629" W	778.92	9.827
2,327.48	83.10	120.55	1,542.92	-522.73	740.20 S	856.80 E	6,789,104.60 N	572,754.19 E	61° 13' 52.7784" N	109° 38' 41.8523" W	803.08	8.184
2,356.85	83.17	119.05	1,546.43	-519.22	754.69 S	882.10 E	6,789,100.18 N	572,761.91 E	61° 13' 52.6306" N	109° 38' 41.3416" W	827.31	5.069
2,385.78	83.76	115.59	1,549.73	-515.92	767.88 S	907.63 E	6,789,096.16 N	572,769.69 E	61° 13' 52.4955" N	109° 38' 40.8255" W	851.86	12.050
2,417.32	84.46	113.29	1,552.96	-512.68	780.86 S	936.19 E	6,789,092.20 N	572,778.39 E	61° 13' 52.3618" N	109° 38' 40.2475" W	879.44	7.578
2,447.78	84.25	110.91	1,555.96	-509.69	792.27 S	964.27 E	6,789,088.73 N	572,786.95 E	61° 13' 52.2438" N	109° 38' 39.6787" W	906.66	7.811
2,478.52	84.46	109.36	1,558.98	-506.66	802.80 S	992.99 E	6,789,085.52 N	572,795.71 E	61° 13' 52.1342" N	109° 38' 39.0964" W	934.57	5.079
2,508.28	85.34	106.12	1,561.63	-504.02	811.83 S	1,021.22 E	6,789,082.76 N	572,804.31 E	61° 13' 52.0395" N	109° 38' 38.5235" W	962.10	11.221

Run #3

2,546.57	83.80	104.31	1,565.25	-500.39	821.83 S	1,058.00 E	6,789,079.72 N	572,815.52 E	61° 13' 51.9335" N	109° 38' 37.7764" W	998.09	6.177
2,577.84	84.23	101.70	1,568.51	-497.13	828.83 S	1,088.30 E	6,789,077.58 N	572,824.76 E	61° 13' 51.8583" N	109° 38' 37.1603" W	1,027.83	8.419
2,606.25	84.50	99.84	1,571.30	-494.34	834.11 S	1,116.08 E	6,789,075.97 N	572,833.22 E	61° 13' 51.8007" N	109° 38' 36.5951" W	1,055.17	6.597
2,637.09	84.61	98.43	1,574.23	-491.42	838.99 S	1,146.39 E	6,789,074.49 N	572,842.46 E	61° 13' 51.7465" N	109° 38' 35.9779" W	1,085.07	4.552
2,666.52	85.25	95.37	1,576.83	-488.81	842.51 S	1,175.48 E	6,789,073.41 N	572,851.33 E	61° 13' 51.7058" N	109° 38' 35.3849" W	1,113.85	10.568
2,696.57	85.06	92.72	1,579.37	-486.27	844.62 S	1,205.35 E	6,789,072.77 N	572,860.43 E	61° 13' 51.6789" N	109° 38' 34.7756" W	1,143.50	8.834
2,726.43	85.84	89.66	1,581.74	-483.91	845.24 S	1,235.10 E	6,789,072.58 N	572,869.50 E	61° 13' 51.6668" N	109° 38' 34.1681" W	1,173.13	10.522
2,756.09	86.50	87.97	1,583.72	-481.93	844.62 S	1,264.69 E	6,789,072.77 N	572,878.52 E	61° 13' 51.6667" N	109° 38' 33.5634" W	1,202.69	6.102
2,786.27	86.39	85.87	1,585.59	-480.05	843.01 S	1,294.77 E	6,789,073.26 N	572,887.69 E	61° 13' 51.6765" N	109° 38' 32.9482" W	1,232.81	6.978
2,815.86	87.09	82.89	1,587.27	-478.37	840.11 S	1,324.17 E	6,789,074.14 N	572,896.65 E	61° 13' 51.6990" N	109° 38' 32.3463" W	1,262.34	10.321

Survey Report for AA Pad, AA16, Run #4

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Sub-Sea Depth (ft)	Northings (ft)	Eastings (ft)	Map Northings (m)	Map Eastings (m)	Geographical Latitude (° ' ")	Geographical Longitude (° ' ")	Vertical Section (ft)	Dogleg Rate (°/100ft)
2,845.19	87.19	81.39	1,588.73	-476.91	836.11 S	1,353.19 E	6,789,075.36 N	572,905.49 E	61° 13' 51.7325" N	109° 38' 31.7518" W	1,291.57	5.097
2,875.80	87.30	77.72	1,590.21	-475.44	830.57 S	1,383.25 E	6,789,077.05 N	572,914.66 E	61° 13' 51.7809" N	109° 38' 31.1353" W	1,321.94	11.986
2,908.25	87.87	74.96	1,591.57	-474.07	822.91 S	1,414.75 E	6,789,079.39 N	572,924.26 E	61° 13' 51.8499" N	109° 38' 30.4885" W	1,353.90	8.675
2,935.25	87.96	73.07	1,592.56	-473.09	815.48 S	1,440.69 E	6,789,081.65 N	572,932.16 E	61° 13' 51.9177" N	109° 38' 29.9554" W	1,380.29	7.029
2,966.35	88.97	69.39	1,593.39	-472.26	805.48 S	1,470.12 E	6,789,084.70 N	572,941.13 E	61° 13' 52.0102" N	109° 38' 29.3499" W	1,410.35	12.274
2,996.28	89.33	67.20	1,593.83	-471.81	794.42 S	1,497.92 E	6,789,088.07 N	572,949.61 E	61° 13' 52.1135" N	109° 38' 28.7773" W	1,438.85	7.386
3,026.72	89.38	64.09	1,594.18	-471.47	781.86 S	1,525.65 E	6,789,091.90 N	572,958.06 E	61° 13' 52.2314" N	109° 38' 28.2054" W	1,467.39	10.216
3,055.66	89.55	64.55	1,594.44	-471.20	769.33 S	1,551.73 E	6,789,095.72 N	572,966.01 E	61° 13' 52.3495" N	109° 38' 27.6673" W	1,494.28	1.686
3,086.70	89.58	65.98	1,594.68	-470.97	756.34 S	1,579.91 E	6,789,099.68 N	572,974.60 E	61° 13' 52.4716" N	109° 38' 27.0859" W	1,523.31	4.609
3,116.03	89.69	65.52	1,594.86	-470.78	744.29 S	1,606.66 E	6,789,103.35 N	572,982.75 E	61° 13' 52.5848" N	109° 38' 26.5345" W	1,550.82	1.623
3,147.26	90.20	65.16	1,594.89	-470.75	731.26 S	1,635.04 E	6,789,107.32 N	572,991.40 E	61° 13' 52.7073" N	109° 38' 25.9490" W	1,580.05	1.989
3,176.98	89.48	65.19	1,594.98	-470.67	718.78 S	1,662.02 E	6,789,111.13 N	572,999.62 E	61° 13' 52.8247" N	109° 38' 25.3926" W	1,607.83	2.412
3,205.76	89.93	64.48	1,595.13	-470.52	706.55 S	1,688.06 E	6,789,114.85 N	573,007.56 E	61° 13' 52.9399" N	109° 38' 24.8554" W	1,634.66	2.921
3,238.34	90.18	64.96	1,595.09	-470.55	692.64 S	1,717.52 E	6,789,119.09 N	573,016.54 E	61° 13' 53.0708" N	109° 38' 24.2476" W	1,665.02	1.669
3,267.40	90.24	65.62	1,594.99	-470.66	680.49 S	1,743.92 E	6,789,122.80 N	573,024.59 E	61° 13' 53.1851" N	109° 38' 23.7029" W	1,692.21	2.283
3,296.96	89.71	65.74	1,595.00	-470.65	668.31 S	1,770.86 E	6,789,126.51 N	573,032.80 E	61° 13' 53.2994" N	109° 38' 23.1474" W	1,719.93	1.838
3,326.59	90.40	64.24	1,594.97	-470.68	655.79 S	1,797.71 E	6,789,130.33 N	573,040.98 E	61° 13' 53.4173" N	109° 38' 22.5936" W	1,747.58	5.572
3,355.69	90.18	65.14	1,594.82	-470.83	643.35 S	1,824.02 E	6,789,134.12 N	573,049.00 E	61° 13' 53.5344" N	109° 38' 22.0509" W	1,774.69	3.175
3,387.91	90.12	64.85	1,594.73	-470.91	629.73 S	1,853.21 E	6,789,138.27 N	573,057.90 E	61° 13' 53.6625" N	109° 38' 21.4486" W	1,804.77	0.921
3,416.88	90.30	64.12	1,594.62	-471.02	617.25 S	1,879.36 E	6,789,142.07 N	573,065.87 E	61° 13' 53.7801" N	109° 38' 20.9091" W	1,831.72	2.593
3,447.85	90.29	64.91	1,594.46	-471.18	603.92 S	1,907.31 E	6,789,146.13 N	573,074.39 E	61° 13' 53.9056" N	109° 38' 20.3323" W	1,860.54	2.540
3,477.38	89.81	65.42	1,594.44	-471.21	591.52 S	1,934.11 E	6,789,149.92 N	573,082.56 E	61° 13' 54.0222" N	109° 38' 19.7796" W	1,888.14	2.366
3,508.15	89.53	64.98	1,594.61	-471.03	578.61 S	1,962.04 E	6,789,153.85 N	573,091.07 E	61° 13' 54.1436" N	109° 38' 19.2034" W	1,916.90	1.699
3,535.51	90.40	64.80	1,594.63	-471.02	567.00 S	1,986.82 E	6,789,157.39 N	573,098.62 E	61° 13' 54.2529" N	109° 38' 18.6923" W	1,942.43	3.232
3,566.16	90.20	65.90	1,594.47	-471.18	554.22 S	2,014.67 E	6,789,161.28 N	573,107.11 E	61° 13' 54.3730" N	109° 38' 18.1178" W	1,971.10	3.644
3,595.72	90.07	66.03	1,594.40	-471.25	542.18 S	2,041.67 E	6,789,164.95 N	573,115.34 E	61° 13' 54.4860" N	109° 38' 17.5611" W	1,998.87	0.611
3,625.87	89.85	65.24	1,594.42	-471.23	529.74 S	2,069.13 E	6,789,168.74 N	573,123.71 E	61° 13' 54.6029" N	109° 38' 16.9947" W	2,027.14	2.735
3,656.61	89.40	65.14	1,594.62	-471.02	516.84 S	2,097.04 E	6,789,172.68 N	573,132.22 E	61° 13' 54.7242" N	109° 38' 16.4191" W	2,055.88	1.488
3,685.97	89.64	65.23	1,594.87	-470.78	504.52 S	2,123.69 E	6,789,176.43 N	573,140.34 E	61° 13' 54.8401" N	109° 38' 15.8694" W	2,083.32	0.876
3,715.57	89.57	64.18	1,595.07	-470.58	491.87 S	2,150.44 E	6,789,180.29 N	573,148.50 E	61° 13' 54.9591" N	109° 38' 15.3174" W	2,110.89	3.564
3,747.36	89.90	64.41	1,595.22	-470.43	478.08 S	2,179.09 E	6,789,184.49 N	573,157.23 E	61° 13' 55.0890" N	109° 38' 14.7263" W	2,140.43	1.257
3,777.77	89.76	64.59	1,595.31	-470.33	464.99 S	2,206.54 E	6,789,188.48 N	573,165.59 E	61° 13' 55.2123" N	109° 38' 14.1599" W	2,168.73	0.756
3,807.40	89.49	63.96	1,595.50	-470.14	452.13 S	2,233.23 E	6,789,192.40 N	573,173.73 E	61° 13' 55.3335" N	109° 38' 13.6092" W	2,196.25	2.311
3,838.37	89.67	64.33	1,595.73	-469.91	438.62 S	2,261.10 E	6,789,196.52 N	573,182.22 E	61° 13' 55.4608" N	109° 38' 13.0341" W	2,224.99	1.304
3,865.93	89.97	64.83	1,595.82	-469.83	426.79 S	2,285.99 E	6,789,200.12 N	573,189.81 E	61° 13' 55.5722" N	109° 38' 12.5205" W	2,250.65	2.145

Survey Report for AA Pad, AA16, Run #4

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Sub-Sea Depth (ft)	Northings (ft)	Eastings (ft)	Map Northings (m)	Map Eastings (m)	Geographical Latitude (° ' ")	Geographical Longitude (° ' ")	Vertical Section (ft)	Dogleg Rate (°/100ft)
3,896.31	90.22	65.07	1,595.77	-469.88	413.93 S	2,313.51 E	6,789,204.04 N	573,198.20 E	61° 13' 55.6932" N	109° 38' 11.9527" W	2,279.00	1.139
3,926.69	89.90	65.12	1,595.73	-469.91	401.14 S	2,341.06 E	6,789,207.94 N	573,206.60 E	61° 13' 55.8135" N	109° 38' 11.3843" W	2,307.38	1.078
Run #4												
3,964.40	90.31	64.06	1,595.66	-469.98	384.96 S	2,375.13 E	6,789,212.87 N	573,216.98 E	61° 13' 55.9659" N	109° 38' 10.6813" W	2,342.49	3.014
3,993.73	89.80	64.76	1,595.63	-470.01	372.29 S	2,401.59 E	6,789,216.74 N	573,225.05 E	61° 13' 56.0852" N	109° 38' 10.1355" W	2,369.77	2.941
4,025.56	89.68	64.07	1,595.78	-469.87	358.55 S	2,430.29 E	6,789,220.92 N	573,233.79 E	61° 13' 56.2146" N	109° 38' 09.5432" W	2,399.36	2.203
4,056.33	90.22	64.64	1,595.80	-469.84	345.23 S	2,458.03 E	6,789,224.98 N	573,242.25 E	61° 13' 56.3401" N	109° 38' 08.9707" W	2,427.96	2.553
4,085.04	89.60	65.23	1,595.85	-469.80	333.07 S	2,484.04 E	6,789,228.69 N	573,250.18 E	61° 13' 56.4545" N	109° 38' 08.4342" W	2,454.75	2.969
4,113.62	89.78	65.04	1,596.00	-469.65	321.05 S	2,509.96 E	6,789,232.35 N	573,258.08 E	61° 13' 56.5675" N	109° 38' 07.8994" W	2,481.45	0.912
4,145.83	89.61	65.20	1,596.17	-469.48	307.50 S	2,539.19 E	6,789,236.48 N	573,266.99 E	61° 13' 56.6949" N	109° 38' 07.2965" W	2,511.56	0.729
4,174.67	90.33	64.73	1,596.18	-469.46	295.30 S	2,565.32 E	6,789,240.20 N	573,274.95 E	61° 13' 56.8097" N	109° 38' 06.7574" W	2,538.47	2.991
4,204.89	90.00	65.82	1,596.10	-469.55	282.66 S	2,592.77 E	6,789,244.06 N	573,283.32 E	61° 13' 56.9286" N	109° 38' 06.1913" W	2,566.73	3.799
4,235.01	89.80	65.46	1,596.15	-469.50	270.24 S	2,620.20 E	6,789,247.84 N	573,291.68 E	61° 13' 57.0453" N	109° 38' 05.6255" W	2,594.97	1.395
4,264.11	89.77	65.16	1,596.26	-469.39	258.08 S	2,646.64 E	6,789,251.55 N	573,299.74 E	61° 13' 57.1595" N	109° 38' 05.0801" W	2,622.19	1.010
4,294.52	90.35	64.87	1,596.23	-469.42	245.23 S	2,674.21 E	6,789,255.46 N	573,308.14 E	61° 13' 57.2804" N	109° 38' 04.5114" W	2,650.59	2.121
4,323.79	90.00	65.45	1,596.14	-469.51	232.94 S	2,700.77 E	6,789,259.21 N	573,316.24 E	61° 13' 57.3960" N	109° 38' 03.9635" W	2,677.94	2.322
4,355.41	90.34	64.30	1,596.04	-469.60	219.51 S	2,729.40 E	6,789,263.30 N	573,324.96 E	61° 13' 57.5223" N	109° 38' 03.3728" W	2,707.44	3.800
4,384.05	89.87	64.13	1,595.99	-469.65	207.05 S	2,755.19 E	6,789,267.10 N	573,332.82 E	61° 13' 57.6397" N	109° 38' 02.8406" W	2,734.04	1.765
4,416.57	89.69	64.52	1,596.12	-469.53	192.97 S	2,784.49 E	6,789,271.39 N	573,341.76 E	61° 13' 57.7724" N	109° 38' 02.2359" W	2,764.25	1.300
4,443.86	90.26	65.48	1,596.13	-469.52	181.43 S	2,809.23 E	6,789,274.91 N	573,349.30 E	61° 13' 57.8809" N	109° 38' 01.7255" W	2,789.73	4.109
4,475.00	89.69	65.95	1,596.14	-469.50	168.63 S	2,837.61 E	6,789,278.81 N	573,357.95 E	61° 13' 58.0012" N	109° 38' 01.1402" W	2,818.94	2.354
4,504.46	89.66	64.65	1,596.31	-469.34	156.32 S	2,864.38 E	6,789,282.57 N	573,366.10 E	61° 13' 58.1169" N	109° 38' 00.5881" W	2,846.50	4.398
4,536.45	89.57	65.39	1,596.52	-469.12	142.81 S	2,893.37 E	6,789,286.68 N	573,374.94 E	61° 13' 58.2439" N	109° 37' 59.9899" W	2,876.36	2.330
4,566.08	89.72	65.65	1,596.70	-468.94	130.53 S	2,920.34 E	6,789,290.42 N	573,383.16 E	61° 13' 58.3592" N	109° 37' 59.4338" W	2,904.12	0.998
4,594.52	89.40	64.06	1,596.92	-468.72	118.45 S	2,946.08 E	6,789,294.11 N	573,391.01 E	61° 13' 58.4730" N	109° 37' 58.9026" W	2,930.64	5.708
4,625.85	90.09	65.58	1,597.06	-468.59	105.12 S	2,974.44 E	6,789,298.17 N	573,399.65 E	61° 13' 58.5984" N	109° 37' 58.3176" W	2,959.86	5.354
4,654.53	90.18	65.00	1,596.99	-468.66	93.13 S	3,000.49 E	6,789,301.82 N	573,407.59 E	61° 13' 58.7111" N	109° 37' 57.7803" W	2,986.68	2.046
4,683.99	89.72	64.44	1,597.02	-468.63	80.55 S	3,027.13 E	6,789,305.66 N	573,415.71 E	61° 13' 58.8295" N	109° 37' 57.2306" W	3,014.13	2.469
4,713.81	90.11	65.17	1,597.06	-468.59	67.86 S	3,054.11 E	6,789,309.53 N	573,423.94 E	61° 13' 58.9489" N	109° 37' 56.6738" W	3,041.94	2.770
4,744.78	89.76	65.85	1,597.10	-468.55	55.02 S	3,082.30 E	6,789,313.44 N	573,432.53 E	61° 13' 59.0695" N	109° 37' 56.0925" W	3,070.95	2.466
4,776.34	90.20	65.92	1,597.11	-468.54	42.12 S	3,111.10 E	6,789,317.37 N	573,441.31 E	61° 13' 59.1906" N	109° 37' 55.4984" W	3,100.59	1.420
4,804.76	90.15	65.27	1,597.02	-468.62	30.38 S	3,136.98 E	6,789,320.95 N	573,449.19 E	61° 13' 59.3009" N	109° 37' 54.9648" W	3,127.22	2.287
4,834.58	89.76	64.01	1,597.05	-468.60	17.61 S	3,163.93 E	6,789,324.84 N	573,457.41 E	61° 13' 59.4211" N	109° 37' 54.4087" W	3,154.99	4.412

Survey Report for AA Pad, AA16, Run #4

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Sub-Sea Depth (ft)	Northings (ft)	Eastings (ft)	Map Northings (m)	Map Eastings (m)	Geographical Latitude (° ' ")	Geographical Longitude (° ' ")	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,865.39	89.55	64.81	1,597.24	-468.41	4.31 S	3,191.71 E	6,789,328.90 N	573,465.88 E	61° 13' 59.5464" N	109° 37' 53.8354" W	3,183.64	2.675
4,894.65	89.77	65.37	1,597.41	-468.24	8.02 N	3,218.25 E	6,789,332.65 N	573,473.97 E	61° 13' 59.6623" N	109° 37' 53.2878" W	3,210.97	2.040
4,924.97	89.68	63.53	1,597.55	-468.09	21.09 N	3,245.60 E	6,789,336.64 N	573,482.30 E	61° 13' 59.7854" N	109° 37' 52.7235" W	3,239.17	6.063
4,954.00	90.11	65.36	1,597.61	-468.04	33.62 N	3,271.80 E	6,789,340.46 N	573,490.29 E	61° 13' 59.9033" N	109° 37' 52.1829" W	3,266.17	6.485
4,985.46	89.75	63.64	1,597.65	-468.00	47.16 N	3,300.19 E	6,789,344.58 N	573,498.94 E	61° 14' 00.0309" N	109° 37' 51.5969" W	3,295.44	5.606
5,014.60	90.15	64.14	1,597.68	-467.97	59.98 N	3,326.35 E	6,789,348.49 N	573,506.92 E	61° 14' 00.1517" N	109° 37' 51.0570" W	3,322.43	2.225
5,046.75	89.57	64.69	1,597.75	-467.89	73.86 N	3,355.35 E	6,789,352.72 N	573,515.75 E	61° 14' 00.2825" N	109° 37' 50.4585" W	3,352.33	2.490
5,075.88	89.99	65.15	1,597.87	-467.78	86.21 N	3,381.74 E	6,789,356.49 N	573,523.80 E	61° 14' 00.3986" N	109° 37' 49.9141" W	3,379.52	2.112
5,106.43	90.38	63.57	1,597.77	-467.88	99.43 N	3,409.28 E	6,789,360.52 N	573,532.19 E	61° 14' 00.5231" N	109° 37' 49.3459" W	3,407.91	5.323
5,137.04	89.63	63.56	1,597.77	-467.88	113.06 N	3,436.68 E	6,789,364.67 N	573,540.54 E	61° 14' 00.6517" N	109° 37' 48.7800" W	3,436.20	2.429
5,165.09	90.26	64.59	1,597.79	-467.85	125.33 N	3,461.91 E	6,789,368.41 N	573,548.23 E	61° 14' 00.7673" N	109° 37' 48.2593" W	3,462.22	4.321
5,195.80	89.50	64.08	1,597.86	-467.79	138.62 N	3,489.59 E	6,789,372.46 N	573,556.67 E	61° 14' 00.8925" N	109° 37' 47.6881" W	3,490.76	2.983
5,224.31	90.44	64.33	1,597.87	-467.78	151.03 N	3,515.26 E	6,789,376.24 N	573,564.49 E	61° 14' 01.0094" N	109° 37' 47.1583" W	3,517.23	3.402
5,256.13	89.98	64.47	1,597.76	-467.89	164.78 N	3,543.96 E	6,789,380.44 N	573,573.24 E	61° 14' 01.1389" N	109° 37' 46.5661" W	3,546.82	1.522
5,285.43	89.96	65.02	1,597.77	-467.88	177.28 N	3,570.46 E	6,789,384.25 N	573,581.32 E	61° 14' 01.2565" N	109° 37' 46.0194" W	3,574.13	1.868
5,317.26	90.34	64.40	1,597.68	-467.96	190.88 N	3,599.23 E	6,789,388.39 N	573,590.09 E	61° 14' 01.3844" N	109° 37' 45.4256" W	3,603.78	2.272
5,344.49	90.01	64.10	1,597.60	-468.04	202.71 N	3,623.76 E	6,789,392.00 N	573,597.56 E	61° 14' 01.4959" N	109° 37' 44.9195" W	3,629.07	1.681
5,371.72	89.62	63.62	1,597.69	-467.96	214.70 N	3,648.20 E	6,789,395.65 N	573,605.01 E	61° 14' 01.6090" N	109° 37' 44.4149" W	3,654.29	2.247

All data is in Feet (US Survey) unless otherwise stated. Directions and coordinates are relative to Grid North.
 Vertical depths are relative to RKB. Northings and Eastings are relative to Well AA16.

The dogleg severity is in Degrees per 100 feet (US Survey).
 Vertical Section is from Well AA16 calculated along an azimuth of 86.00° (Grid).

Based upon minimum curvature calculations, at a measured depth of 5,371.72ft, the bottom hole displacement is 3,654.51ft, in the direction of 86.63° (Grid).

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