

WORKING FILE
GEOSCIENCES

DIRECTIONAL SURVEY FOR WELL L016-20

RAW DATA

THE CONDUCTOR IS VERTICAL

No.	MEASURED DEPTH	DEVIATION ANGLE	ORIENTATION
52	4530	21.10	S - 24.20 - W
53	4674	21.80	S - 27.70 - W
54	4839	23.60	S - 27.70 - W
55	5025	25.30	S - 27.70 - W
56	5213	28.70	S - 28.40 - W
57	5305	29.90	S - 28.40 - W
58	5393	30.00	S - 27.70 - W
59	5578	28.60	S - 26.30 - W
60	5763	27.90	S - 27.00 - W
61	5949	26.80	S - 28.40 - W
62	6164	30.10	S - 27.70 - W
63	6350	29.50	S - 25.60 - W
64	6494	26.60	S - 29.10 - W
65	6504	26.70	S - 29.80 - W
66	6690	26.10	S - 29.80 - W
67	6875	25.60	S - 28.40 - W
68	7061	24.90	S - 28.39 - W
69	7247	24.30	S - 30.50 - W
70	7433	22.90	S - 33.30 - W
71	7607	23.40	S - 34.00 - W
72	7810	24.80	S - 39.70 - W
73	7994	27.20	S - 43.90 - W
74	8091	28.20	S - 44.60 - W
75	8251	30.20	S - 44.30 - W
76	8344	30.30	S - 47.70 - W
77	8437	29.80	S - 49.30 - W
78	8530	29.40	S - 50.20 - W
79	8623	28.80	S - 50.80 - W
80	8716	27.70	S - 51.60 - W
81	8809	26.80	S - 53.50 - W
82	8866	26.18	S - 54.35 - W

DIRECTIONAL SURVEY FOR WELL L016-20

RAW DATA

THE CONDUCTOR IS VERTICAL

No.	MEASURED DEPTH	DEVIATION ANGLE	ORIENTATION
1	489	0.90	S - 29.20 - W
2	549	1.30	S - 7.60 - E
3	579	1.90	S - 13.60 - W
4	611	2.50	S - 27.00 - W
5	641	3.40	S - 36.70 - W
6	701	5.30	S - 23.90 - W
7	731	6.30	S - 28.90 - W
8	762	7.30	S - 36.30 - W
9	792	8.20	S - 32.70 - W
10	822	9.00	S - 26.10 - W
11	852	9.80	S - 25.60 - W
12	882	10.80	S - 25.00 - W
13	912	11.60	S - 20.40 - W
14	943	12.50	S - 16.50 - W
15	973	13.40	S - 18.60 - W
16	1003	14.30	S - 18.30 - W
17	1033	15.00	S - 15.80 - W
18	1064	15.90	S - 13.60 - W
19	1094	16.80	S - 13.60 - W
20	1126	17.60	S - 13.60 - W
21	1157	19.00	S - 14.40 - W
22	1189	20.30	S - 13.60 - W
23	1220	21.20	S - 12.90 - W
24	1251	21.80	S - 12.50 - W
25	1283	22.10	S - 13.60 - W
26	1314	22.80	S - 15.80 - W
27	1345	23.50	S - 17.20 - W
28	1376	24.10	S - 17.90 - W
29	1404	24.90	S - 17.90 - W
30	1439	25.80	S - 17.20 - W
31	1453	26.00	S - 16.50 - W
32	1519	26.60	S - 15.80 - W
33	1614	27.10	S - 16.50 - W
34	1707	27.10	S - 15.80 - W
35	1831	27.40	S - 15.80 - W
36	2080	27.80	S - 15.80 - W
37	2234	28.70	S - 16.50 - W
38	2361	29.10	S - 15.80 - W
39	2510	29.20	S - 16.50 - W
40	2696	29.10	S - 16.50 - W
41	2885	28.40	S - 15.80 - W
42	3135	27.20	S - 15.80 - W
43	3385	26.60	S - 15.80 - W
44	3695	26.00	S - 15.80 - W
45	4004	25.50	S - 15.10 - W
46	4129	25.10	S - 15.10 - W
47	4223	24.30	S - 15.80 - W
48	4317	23.00	S - 18.60 - W
49	4348	22.70	S - 19.30 - W
50	4379	22.20	S - 19.30 - W
51	4441	21.40	S - 21.40 - W

WORKING FILE
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DIRECTIONAL SURVEY FOR WELL L016-20

10

WELL NO. 22B-21-013-D-L016(L016-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' WD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES				HORIZONTAL DISTANCE	
* 460	460.00	410.00	N	0.00	E	0.00	0.00	*
470	470.00	420.00	S	0.05	W	0.03	0.05	
480	480.00	430.00	S	0.14	W	0.08	0.16	
* 489	489.00	439.00	S	0.27	W	0.15	0.30	*
490	490.00	440.00	S	0.28	W	0.15	0.32	
500	500.00	450.00	S	0.45	W	0.12	0.47	
510	509.99	459.99	S	0.63	W	0.10	0.64	
520	519.99	469.99	S	0.82	W	0.07	0.82	
530	529.99	479.99	S	1.02	W	0.05	1.02	
540	539.99	489.99	S	1.24	W	0.02	1.24	
* 549	548.99	498.99	S	1.44	E	0.01	1.44	*
550	549.99	499.99	S	1.46	E	0.00	1.46	
560	559.98	509.98	S	1.72	W	0.06	1.72	
570	569.98	519.98	S	2.01	W	0.13	2.02	
* 579	578.97	528.97	S	2.30	W	0.20	2.31	*
580	579.97	529.97	S	2.33	W	0.22	2.34	
590	589.97	539.97	S	2.66	W	0.38	2.69	
600	599.96	549.96	S	3.02	W	0.56	3.07	
610	609.95	559.95	S	3.40	W	0.76	3.49	
* 611	610.95	560.95	S	3.44	W	0.78	3.53	*
620	619.94	569.94	S	3.79	W	1.04	3.93	
630	629.92	579.92	S	4.22	W	1.36	4.43	
640	639.91	589.91	S	4.69	W	1.71	4.99	
* 641	640.90	590.90	S	4.74	W	1.75	5.05	*
650	649.88	599.88	S	5.27	W	1.98	5.63	
660	659.86	609.86	S	5.90	W	2.26	6.32	
670	669.83	619.83	S	6.59	W	2.57	7.08	
680	679.80	629.80	S	7.33	W	2.90	7.88	
690	689.76	639.76	S	8.12	W	3.25	8.75	
700	699.72	649.72	S	8.96	W	3.62	9.66	
* 701	700.72	650.72	S	9.05	W	3.66	9.76	*
710	709.67	659.67	S	9.81	W	4.08	10.63	
720	719.62	669.62	S	10.72	W	4.58	11.66	
730	729.56	679.56	S	11.67	W	5.11	12.74	
* 731	730.55	680.55	S	11.77	W	5.16	12.85	*
740	739.49	689.49	S	12.60	W	5.77	13.86	
750	749.42	699.42	S	13.57	W	6.48	15.04	
760	759.34	709.34	S	14.59	W	7.23	16.38	
* 762	761.33	711.33	S	14.79	W	7.38	16.53	*
770	769.26	719.26	S	15.68	W	7.95	17.58	
780	779.16	729.16	S	16.82	W	8.68	18.93	
790	789.06	739.06	S	18.02	W	9.45	20.34	
* 792	791.04	741.04	S	18.26	W	9.60	20.63	*
800	798.96	748.96	S	19.31	W	10.12	21.80	
810	808.84	758.84	S	20.66	W	10.78	23.31	

DIRECTIONAL SURVEY FOR WELL L016-20

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WELL NO. Z28-21-013-D-L016 (L016-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 62

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES			HORIZONTAL DISTANCE
820	818.72	768.72	S	22.06	W 11.47	24.86
* 822	820.69	770.69	S	22.34	W 11.60	25.17
830	828.59	778.59	S	23.49	W 12.16	26.45
840	838.45	788.45	S	24.98	W 12.87	28.10
850	848.31	798.31	S	26.31	W 13.60	29.79
* 852	850.28	800.28	S	26.81	W 13.75	30.13
860	858.16	808.16	S	28.08	W 14.34	31.53
870	867.99	817.99	S	29.72	W 15.10	33.33
880	877.82	827.82	S	31.40	W 15.89	35.20
* 882	879.78	829.78	S	31.74	W 16.05	35.57
890	887.64	837.64	S	33.18	W 16.58	37.09
900	897.44	847.44	S	35.01	W 17.26	39.03
910	907.24	857.24	S	36.89	W 17.96	41.03
* 912	909.20	859.20	S	37.26	W 18.10	41.43
920	917.03	867.03	S	38.84	W 18.56	43.05
930	926.81	876.81	S	40.85	W 19.16	45.12
940	936.57	886.57	S	42.91	W 19.77	47.25
* 943	939.50	889.50	S	43.53	W 19.96	47.89
950	946.33	896.33	S	44.99	W 20.45	49.42
960	956.07	906.07	S	47.13	W 21.17	51.66
970	965.81	915.81	S	49.31	W 21.90	53.95
* 973	968.72	918.72	S	49.97	W 22.12	54.65
980	975.53	925.53	S	51.53	W 22.64	56.28
990	985.23	935.23	S	53.81	W 23.39	58.68
1000	994.93	944.93	S	56.14	W 24.16	61.12
* 1003	997.83	947.83	S	56.85	W 24.40	61.86
1010	1,004.61	954.61	S	58.53	W 24.87	63.60
1020	1,014.29	964.29	S	60.97	W 25.56	66.11
1030	1,023.95	973.95	S	63.45	W 26.26	68.67
* 1033	1,026.85	976.85	S	64.20	W 26.48	69.44
1040	1,033.60	983.60	S	65.98	W 26.91	71.26
1050	1,043.24	993.24	S	68.58	W 27.54	73.90
1060	1,052.86	1,002.86	S	71.22	W 28.19	76.59
* 1064	1,056.71	1,006.71	S	72.29	W 28.43	77.68
1070	1,062.47	1,012.47	S	73.90	W 28.82	79.32
1080	1,072.07	1,022.07	S	76.44	W 29.49	82.12
1090	1,081.65	1,031.65	S	79.43	W 30.16	84.97
* 1094	1,085.48	1,035.48	S	80.56	W 30.43	86.11
1100	1,091.21	1,041.21	S	82.26	W 30.85	87.85
1110	1,100.77	1,050.77	S	85.13	W 31.54	90.79
1120	1,110.31	1,060.31	S	88.05	W 32.25	93.76
* 1126	1,116.03	1,066.03	S	89.81	W 32.67	95.57
1130	1,119.84	1,069.84	S	90.99	W 32.98	96.78
1140	1,129.33	1,079.33	S	94.02	W 33.75	99.90
1150	1,138.81	1,088.81	S	97.12	W 34.55	103.09

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z2B-21-019-D-LD16 (LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES			HORIZONTAL DISTANCE	
1157	1,145.43	1,095.43	S	99.33	W	35.12	105.36 *
1160	1,148.26	1,098.26	S	100.29	W	35.35	106.33
1170	1,157.68	1,107.68	S	103.54	W	36.13	109.66
1180	1,167.09	1,117.09	S	106.85	W	36.94	113.05
1189	1,175.53	1,125.53	S	109.88	W	37.67	116.16 *
1190	1,176.46	1,126.46	S	110.22	W	37.75	116.51
1200	1,185.82	1,135.82	S	113.66	W	38.53	120.01
1210	1,195.16	1,145.16	S	117.13	W	39.33	123.56
1220	1,204.49	1,154.49	S	120.66	W	40.14	127.16 *
1230	1,213.80	1,163.80	S	124.22	W	40.93	130.79
1240	1,223.10	1,173.10	S	127.81	W	41.72	134.45
1250	1,232.38	1,182.38	S	131.44	W	42.53	138.14
1251	1,233.31	1,183.31	S	131.80	W	42.61	138.51 *
1260	1,241.66	1,191.66	S	135.06	W	43.40	141.86
1270	1,250.94	1,200.94	S	138.70	W	44.28	145.59
1280	1,260.20	1,210.20	S	142.35	W	45.16	149.34
1283	1,262.98	1,212.98	S	143.45	W	45.43	150.47 *
1290	1,269.46	1,219.46	S	146.00	W	46.15	153.12
1300	1,278.70	1,228.70	S	149.68	W	47.19	156.94
1310	1,287.93	1,237.93	S	153.39	W	48.24	160.80
1314	1,291.61	1,241.61	S	154.88	W	48.66	162.35 *
1320	1,297.14	1,247.14	S	157.12	W	49.35	164.68
1330	1,306.33	1,256.33	S	160.87	W	50.52	168.62
1340	1,315.51	1,265.51	S	164.66	W	51.69	172.59
1345	1,320.10	1,270.10	S	166.57	W	52.28	174.58 *
1350	1,324.68	1,274.68	S	168.47	W	52.89	176.58
1360	1,333.83	1,283.83	S	172.31	W	54.13	180.62
1370	1,342.97	1,292.97	S	176.18	W	55.38	184.68
1376	1,348.44	1,298.44	S	178.51	W	56.14	187.13 *
1380	1,352.09	1,302.09	S	180.07	W	56.64	188.77
1390	1,361.19	1,311.19	S	184.02	W	57.92	192.92
1400	1,370.27	1,320.27	S	188.01	W	59.20	197.11
1404	1,373.90	1,323.90	S	189.61	W	59.72	198.79 *
1410	1,379.33	1,329.33	S	192.04	W	60.47	201.33
1420	1,388.37	1,338.37	S	196.12	W	61.74	205.61
1430	1,397.39	1,347.39	S	200.25	W	63.01	209.93
1439	1,405.50	1,355.50	S	203.99	W	64.17	213.84 *
1440	1,406.40	1,356.40	S	204.40	W	64.30	214.28
1450	1,415.39	1,365.39	S	208.60	W	65.54	218.65
1453	1,418.09	1,368.09	S	209.84	W	65.91	219.97 *
1460	1,424.37	1,374.37	S	212.82	W	66.75	223.04
1470	1,433.35	1,383.35	S	217.06	W	67.95	227.45
1480	1,442.32	1,392.32	S	221.32	W	69.15	231.87
1490	1,451.28	1,401.28	S	225.59	W	70.36	236.31
1500	1,460.24	1,410.24	S	229.87	W	71.57	240.75

DIRECTIONAL SURVEY FOR WELL L016-20

10

WELL NO. Z28-21-013-D-L016 (L016-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES			HORIZONTAL DISTANCE
1510	1,469.18	1,419.18	S	234.17	W 72.79	245.22
* 1519	1,477.23	1,427.23	S	238.04	W 73.89	249.25 *
1520	1,478.13	1,428.13	S	238.47	W 74.01	249.69
1530	1,487.06	1,437.06	S	242.77	W 75.29	254.18
1540	1,496.00	1,446.00	S	247.08	W 76.56	258.67
1550	1,504.92	1,454.92	S	251.40	W 77.84	263.18
1560	1,513.85	1,463.85	S	255.73	W 79.12	267.69
1570	1,522.77	1,472.77	S	260.06	W 80.41	272.21
1580	1,531.69	1,481.69	S	264.40	W 81.69	276.73
1590	1,540.60	1,490.60	S	268.75	W 82.98	281.27
1600	1,549.51	1,499.51	S	273.11	W 84.27	285.81
1610	1,558.41	1,508.41	S	277.47	W 85.56	290.36
* 1614	1,561.97	1,511.97	S	279.22	W 86.08	292.19 *
1620	1,567.31	1,517.31	S	281.85	W 86.83	294.92
1630	1,576.21	1,526.21	S	286.23	W 88.07	299.47
1640	1,585.12	1,535.12	S	290.62	W 89.31	304.03
1650	1,594.02	1,544.02	S	295.00	W 90.55	308.58
1660	1,602.92	1,552.92	S	299.38	W 91.79	313.14
1670	1,611.82	1,561.82	S	303.76	W 93.03	317.69
1680	1,620.73	1,570.73	S	308.15	W 94.27	322.24
1690	1,629.63	1,579.63	S	312.53	W 95.51	326.80
1700	1,638.53	1,588.53	S	316.91	W 96.75	331.35
* 1707	1,644.76	1,594.76	S	319.98	W 97.62	334.54 *
1710	1,647.43	1,597.43	S	321.30	W 97.99	335.91
1720	1,656.33	1,606.33	S	325.69	W 99.23	340.47
1730	1,665.23	1,615.23	S	330.08	W 100.47	345.03
1740	1,674.13	1,624.13	S	334.47	W 101.72	349.60
1750	1,683.02	1,633.02	S	338.87	W 102.96	354.17
1760	1,691.91	1,641.91	S	343.27	W 104.21	358.74
1770	1,700.80	1,650.80	S	347.68	W 105.45	363.32
1780	1,709.69	1,659.69	S	352.09	W 106.70	367.90
1790	1,718.58	1,668.58	S	356.50	W 107.95	372.49
1800	1,727.46	1,677.46	S	360.92	W 109.20	377.08
1810	1,736.34	1,686.34	S	365.34	W 110.45	381.67
1820	1,745.22	1,695.22	S	369.76	W 111.70	386.27
1830	1,754.10	1,704.10	S	374.19	W 112.96	390.87
* 1831	1,754.99	1,704.99	S	374.64	W 113.08	391.33 *
1840	1,762.98	1,712.98	S	378.62	W 114.21	395.47
1850	1,771.85	1,721.85	S	383.05	W 115.46	400.08
1860	1,780.73	1,730.73	S	387.49	W 116.72	404.69
1870	1,789.60	1,739.60	S	391.93	W 117.98	409.30
1880	1,798.47	1,748.47	S	396.37	W 119.23	413.91
1890	1,807.34	1,757.34	S	400.81	W 120.49	418.53
1900	1,816.21	1,766.21	S	405.25	W 121.75	423.15
1910	1,825.08	1,775.08	S	409.70	W 123.00	427.77

DIRECTIONAL SURVEY FOR WELL L016-20

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WELL NO. Z28-21-013-D-L016 (L016-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL	CO - ORDINATES	HORIZONTAL DISTANCE
1920	1,833.95	1,783.95	S	414.15 W 124.26	432.39
1930	1,842.81	1,792.81	S	418.60 W 125.52	437.02
1940	1,851.68	1,801.68	S	423.06 W 126.78	441.65
1950	1,860.54	1,810.54	S	427.51 W 128.04	446.28
1960	1,869.40	1,819.40	S	431.97 W 129.31	450.91
1970	1,878.26	1,828.26	S	436.43 W 130.57	455.55
1980	1,887.12	1,837.12	S	440.90 W 131.83	460.18
1990	1,895.98	1,845.98	S	445.36 W 133.10	464.83
2000	1,904.83	1,854.83	S	449.83 W 134.36	469.47
2010	1,913.69	1,863.69	S	454.30 W 135.63	474.11
2020	1,922.54	1,872.54	S	458.78 W 136.89	478.76
2030	1,931.39	1,881.39	S	463.25 W 138.16	483.41
2040	1,940.25	1,890.25	S	467.73 W 139.42	488.07
2050	1,949.10	1,899.10	S	472.21 W 140.69	492.72
2060	1,957.94	1,907.94	S	476.69 W 141.96	497.38
2070	1,966.79	1,916.79	S	481.18 W 143.23	502.04
2080	1,975.64	1,925.64	S	485.67 W 144.50	506.71 *
2090	1,984.48	1,934.48	S	490.15 W 145.83	511.38
2100	1,993.31	1,943.31	S	494.63 W 147.16	516.06
2110	2,002.15	1,952.15	S	499.13 W 148.49	520.75
2120	2,010.97	1,960.97	S	503.64 W 149.82	525.45
2130	2,019.80	1,969.80	S	508.15 W 151.16	530.16
2140	2,028.61	1,978.61	S	512.67 W 152.50	534.88
2150	2,037.43	1,987.43	S	517.21 W 153.84	539.60
2160	2,046.23	1,996.23	S	521.75 W 155.19	544.34
2170	2,055.04	2,005.04	S	526.29 W 156.53	549.08
2180	2,063.84	2,013.84	S	530.85 W 157.88	553.83
2190	2,072.63	2,022.63	S	535.42 W 159.24	558.59
2200	2,081.42	2,031.42	S	539.99 W 160.59	563.36
2210	2,090.20	2,040.20	S	544.57 W 161.95	568.14
2220	2,098.98	2,048.98	S	549.16 W 163.31	572.93
2230	2,107.76	2,057.76	S	553.76 W 164.67	577.73
2236	2,113.02	2,063.02	S	556.53 W 165.49	580.61 *
2240	2,116.53	2,066.53	S	558.38 W 166.01	582.53
2250	2,125.29	2,075.29	S	563.00 W 167.32	587.34
2260	2,134.06	2,084.06	S	567.63 W 168.63	592.15
2270	2,142.82	2,092.82	S	572.27 W 169.94	596.97
2280	2,151.58	2,101.58	S	576.91 W 171.26	601.80
2290	2,160.34	2,110.34	S	581.56 W 172.57	606.62
2300	2,169.09	2,119.09	S	586.21 W 173.89	611.46
2310	2,177.84	2,127.84	S	590.87 W 175.21	616.29
2320	2,186.59	2,136.59	S	595.53 W 176.52	621.14
2330	2,195.34	2,145.34	S	600.19 W 177.84	625.99
2340	2,204.08	2,154.08	S	604.86 W 179.17	630.84
2350	2,212.82	2,162.82	S	609.53 W 180.49	635.70

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z28-21-013-D-LD16 (LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 92

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES			HORIZONTAL DISTANCE
2360	2,221.56	2,171.56	S	614.21	W 181.81	640.56
* 2361	2,222.44	2,172.44	S	614.68	W 181.95	641.04 *
2370	2,230.30	2,180.30	S	618.88	W 183.19	645.42
2380	2,239.04	2,189.04	S	623.54	W 184.57	650.29
2390	2,247.77	2,197.77	S	628.21	W 185.95	655.15
2400	2,256.51	2,206.51	S	632.88	W 187.33	660.02
2410	2,265.24	2,215.24	S	637.54	W 188.72	664.89
2420	2,273.98	2,223.98	S	642.21	W 190.10	669.76
2430	2,282.71	2,232.71	S	646.88	W 191.48	674.63
2440	2,291.44	2,241.44	S	651.55	W 192.87	679.50
2450	2,300.18	2,250.18	S	656.23	W 194.25	684.37
2460	2,308.91	2,258.91	S	660.90	W 195.64	689.25
2470	2,317.64	2,267.64	S	665.57	W 197.02	694.12
2480	2,326.37	2,276.37	S	670.25	W 198.40	699.00
2490	2,335.10	2,285.10	S	674.92	W 199.79	703.87
2500	2,343.83	2,293.83	S	679.60	W 201.17	708.75
* 2510	2,352.56	2,302.56	S	684.28	W 202.56	713.63 *
2520	2,361.29	2,311.29	S	688.95	W 203.95	718.51
2530	2,370.02	2,320.02	S	693.63	W 205.33	723.38
2540	2,378.75	2,328.75	S	698.30	W 206.72	728.26
2550	2,387.48	2,337.48	S	702.98	W 208.10	733.13
2560	2,396.21	2,346.21	S	707.65	W 209.48	738.01
2570	2,404.95	2,354.95	S	712.33	W 210.87	742.88
2580	2,413.68	2,363.68	S	717.00	W 212.25	747.75
2590	2,422.41	2,372.41	S	721.67	W 213.64	752.63
2600	2,431.14	2,381.14	S	726.34	W 215.02	757.50
2610	2,439.88	2,389.88	S	731.01	W 216.40	762.37
2620	2,448.61	2,398.61	S	735.68	W 217.79	767.24
2630	2,457.35	2,407.35	S	740.35	W 219.17	772.11
2640	2,466.08	2,416.08	S	745.01	W 220.55	776.97
2650	2,474.82	2,424.82	S	749.68	W 221.93	781.84
2660	2,483.55	2,433.55	S	754.35	W 223.32	786.71
2670	2,492.29	2,442.29	S	759.01	W 224.70	791.57
2680	2,501.03	2,451.03	S	763.68	W 226.08	796.44
2690	2,509.77	2,459.77	S	768.34	W 227.46	801.30
* 2696	2,515.01	2,465.01	S	771.14	W 228.29	804.22 *
2700	2,518.50	2,468.50	S	773.01	W 228.82	806.16
2710	2,527.25	2,477.25	S	777.68	W 230.14	811.02
2720	2,535.99	2,485.99	S	782.35	W 231.46	815.87
2730	2,544.74	2,494.74	S	787.01	W 232.78	820.71
2740	2,553.49	2,503.49	S	791.66	W 234.10	825.55
2750	2,562.25	2,512.25	S	796.31	W 235.41	830.38
2760	2,571.00	2,521.00	S	800.96	W 236.73	835.21
2770	2,579.76	2,529.76	S	805.60	W 238.04	840.03
2780	2,588.53	2,538.53	S	810.23	W 239.35	844.85

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z2B-21-013-D-LD16 (LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 440' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL	CO -	ORDINATES	HORIZONTAL DISTANCE
2790	2,597.30	2,547.30	S	814.86	W 240.66	849.66
2800	2,606.07	2,556.07	S	819.48	W 241.97	854.46
2810	2,614.84	2,564.84	S	824.10	W 243.28	859.26
2820	2,623.62	2,573.62	S	828.71	W 244.58	864.05
2830	2,632.40	2,582.40	S	833.32	W 245.88	868.84
2840	2,641.18	2,591.18	S	837.92	W 247.19	873.62
2850	2,649.96	2,599.96	S	842.52	W 248.49	878.40
2860	2,658.75	2,608.75	S	847.11	W 249.79	883.17
2870	2,667.54	2,617.54	S	851.69	W 251.08	887.93
2880	2,676.34	2,626.34	S	856.27	W 252.38	892.69
* 2885	2,680.74	2,630.74	S	858.56	W 253.03	895.07 *
2890	2,685.14	2,635.14	S	860.84	W 253.67	897.44
2900	2,693.94	2,643.94	S	865.41	W 254.96	902.19
2910	2,702.75	2,652.75	S	869.97	W 256.25	906.92
2920	2,711.56	2,661.56	S	874.52	W 257.54	911.65
2930	2,720.37	2,670.37	S	879.07	W 258.83	916.38
2940	2,729.19	2,679.19	S	883.60	W 260.11	921.09
2950	2,738.01	2,688.01	S	888.13	W 261.39	925.80
2960	2,746.84	2,696.84	S	892.66	W 262.67	930.50
2970	2,755.67	2,705.67	S	897.17	W 263.95	935.19
2980	2,764.50	2,714.50	S	901.68	W 265.23	939.88
2990	2,773.34	2,723.34	S	906.18	W 266.50	944.56
3000	2,782.18	2,732.18	S	910.68	W 267.77	949.23
3010	2,791.03	2,741.03	S	915.17	W 269.04	953.69
3020	2,799.88	2,749.88	S	919.65	W 270.31	958.55
3030	2,808.73	2,758.73	S	924.12	W 271.58	963.20
3040	2,817.59	2,767.59	S	928.59	W 272.84	967.84
3050	2,826.45	2,776.45	S	933.04	W 274.10	972.47
3060	2,835.32	2,785.32	S	937.50	W 275.36	977.10
3070	2,844.18	2,794.18	S	941.94	W 276.62	981.72
3080	2,853.06	2,803.06	S	946.38	W 277.88	986.33
3090	2,861.93	2,811.93	S	950.81	W 279.13	990.93
3100	2,870.82	2,820.82	S	955.23	W 280.38	995.53
3110	2,879.70	2,829.70	S	959.65	W 281.63	1,000.12
3120	2,888.59	2,838.59	S	964.06	W 282.88	1,004.70
3130	2,897.48	2,847.48	S	968.46	W 284.12	1,009.28
* 3135	2,901.93	2,851.93	S	970.66	W 284.75	1,011.56 *
3140	2,906.38	2,856.38	S	972.86	W 285.37	1,013.85
3150	2,915.27	2,865.27	S	977.25	W 286.61	1,018.41
3160	2,924.17	2,874.17	S	981.64	W 287.85	1,022.97
3170	2,933.07	2,883.07	S	986.02	W 289.09	1,027.53
3180	2,941.97	2,891.97	S	990.41	W 290.33	1,032.08
3190	2,950.88	2,900.88	S	994.78	W 291.57	1,036.64
3200	2,959.79	2,909.79	S	999.16	W 292.81	1,041.18
3210	2,968.69	2,918.69	S	1,003.53	W 294.05	1,045.72

DIRECTIONAL SURVEY FOR WELL L016-20

10

WELL NO. Z28-21-013-D-L016 (L016-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES		HORIZONTAL DISTANCE
3220	2,977.60	2,927.60	S 1,007.90	W 295.28	1,050.26
3230	2,986.52	2,936.52	S 1,012.26	W 296.52	1,054.80
3240	2,995.43	2,945.43	S 1,016.62	W 297.75	1,059.33
3250	3,004.35	2,954.35	S 1,020.98	W 298.99	1,063.86
3260	3,013.27	2,963.27	S 1,025.33	W 300.22	1,068.38
3270	3,022.19	2,972.19	S 1,029.68	W 301.45	1,072.90
3280	3,031.11	2,981.11	S 1,034.03	W 302.68	1,077.42
3290	3,040.03	2,990.03	S 1,038.37	W 303.91	1,081.93
3300	3,048.96	2,998.96	S 1,042.71	W 305.14	1,086.44
3310	3,057.88	3,007.88	S 1,047.05	W 306.36	1,090.95
3320	3,066.81	3,016.81	S 1,051.38	W 307.59	1,095.45
3330	3,075.74	3,025.74	S 1,055.71	W 308.81	1,099.95
3340	3,084.68	3,034.68	S 1,060.03	W 310.04	1,104.44
3350	3,093.61	3,043.61	S 1,064.35	W 311.26	1,108.93
3360	3,102.55	3,052.55	S 1,068.67	W 312.48	1,113.42
3370	3,111.49	3,061.49	S 1,072.98	W 313.70	1,117.90
3380	3,120.43	3,070.43	S 1,077.29	W 314.92	1,122.38
* 3385	3,124.90	3,074.90	S 1,079.45	W 315.53	1,124.62 *
3390	3,129.37	3,079.37	S 1,081.60	W 316.14	1,126.86
3400	3,138.31	3,088.31	S 1,085.90	W 317.36	1,131.33
3410	3,147.26	3,097.26	S 1,090.21	W 318.57	1,135.80
3420	3,156.21	3,106.21	S 1,094.50	W 319.79	1,140.27
3430	3,165.16	3,115.16	S 1,098.80	W 321.01	1,144.73
3440	3,174.11	3,124.11	S 1,103.09	W 322.22	1,149.19
3450	3,183.06	3,133.06	S 1,107.38	W 323.43	1,153.65
3460	3,192.01	3,142.01	S 1,111.67	W 324.65	1,158.10
3470	3,200.96	3,150.96	S 1,115.95	W 325.86	1,162.55
3480	3,209.92	3,159.92	S 1,120.23	W 327.07	1,167.00
3490	3,218.88	3,168.88	S 1,124.51	W 328.28	1,171.45
3500	3,227.84	3,177.84	S 1,128.78	W 329.49	1,175.89
3510	3,236.80	3,186.80	S 1,133.06	W 330.70	1,180.33
3520	3,245.76	3,195.76	S 1,137.33	W 331.91	1,184.77
3530	3,254.72	3,204.72	S 1,141.59	W 333.12	1,189.20
3540	3,263.69	3,213.69	S 1,145.86	W 334.32	1,193.63
3550	3,272.65	3,222.65	S 1,150.12	W 335.53	1,198.06
3560	3,281.62	3,231.62	S 1,154.37	W 336.73	1,202.48
3570	3,290.59	3,240.59	S 1,158.63	W 337.94	1,206.90
3580	3,299.56	3,249.56	S 1,162.88	W 339.14	1,211.32
3590	3,308.53	3,258.53	S 1,167.13	W 340.34	1,215.74
3600	3,317.51	3,267.51	S 1,171.37	W 341.54	1,220.15
3610	3,326.48	3,276.48	S 1,175.62	W 342.74	1,224.56
3620	3,335.46	3,285.46	S 1,179.86	W 343.94	1,228.97
3630	3,344.44	3,294.44	S 1,184.09	W 345.14	1,233.37
3640	3,353.42	3,303.42	S 1,188.33	W 346.34	1,237.77
3650	3,362.40	3,312.40	S 1,192.56	W 347.54	1,242.17

DIRECTIONAL SURVEY FOR WELL L016-20

10

WELL NO. Z2B-21-013-D-L016 (L016-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' ND

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL	CO - ORDINATES	HORIZONTAL DISTANCE
3660	3,371.38	3,321.38	S 1,196.79	W 348.73	1,246.56
3670	3,380.37	3,330.37	S 1,201.01	W 349.93	1,250.95
3680	3,389.35	3,339.35	S 1,205.23	W 351.12	1,255.34
3690	3,398.34	3,348.34	S 1,209.45	W 352.32	1,259.73
3695	3,402.83	3,352.83	S 1,211.56	W 352.91	1,261.92 *
3700	3,407.33	3,357.33	S 1,213.68	W 353.49	1,264.11
3710	3,416.32	3,366.32	S 1,217.91	W 354.63	1,268.49
3720	3,425.31	3,375.31	S 1,222.13	W 355.77	1,272.86
3730	3,434.30	3,384.30	S 1,226.36	W 356.91	1,277.24
3740	3,443.29	3,393.29	S 1,230.58	W 358.05	1,281.61
3750	3,452.29	3,402.29	S 1,234.80	W 359.18	1,285.98
3760	3,461.28	3,411.28	S 1,239.01	W 360.32	1,290.34
3770	3,470.28	3,420.28	S 1,243.23	W 361.46	1,294.71
3780	3,479.28	3,429.28	S 1,247.44	W 362.59	1,299.07
3790	3,488.28	3,438.28	S 1,251.65	W 363.73	1,303.43
3800	3,497.28	3,447.28	S 1,255.85	W 364.87	1,307.78
3810	3,506.28	3,456.28	S 1,260.06	W 366.00	1,312.14
3820	3,515.29	3,465.29	S 1,264.26	W 367.13	1,316.49
3830	3,524.29	3,474.29	S 1,268.46	W 368.27	1,320.84
3840	3,533.30	3,483.30	S 1,272.66	W 369.40	1,325.18
3850	3,542.30	3,492.30	S 1,276.85	W 370.53	1,329.53
3860	3,551.31	3,501.31	S 1,281.04	W 371.66	1,333.87
3870	3,560.32	3,510.32	S 1,285.23	W 372.79	1,338.21
3880	3,569.33	3,519.33	S 1,289.42	W 373.92	1,342.54
3890	3,578.35	3,528.35	S 1,293.60	W 375.05	1,346.87
3900	3,587.36	3,537.36	S 1,297.78	W 376.18	1,351.21
3910	3,596.37	3,546.37	S 1,301.96	W 377.31	1,355.53
3920	3,605.39	3,555.39	S 1,306.14	W 378.43	1,359.86
3930	3,614.41	3,564.41	S 1,310.32	W 379.56	1,364.18
3940	3,623.42	3,573.42	S 1,314.49	W 380.69	1,368.50
3950	3,632.44	3,582.44	S 1,318.66	W 381.81	1,372.82
3960	3,641.46	3,591.46	S 1,322.83	W 382.93	1,377.14
3970	3,650.48	3,600.48	S 1,326.99	W 384.06	1,381.45
3980	3,659.51	3,609.51	S 1,331.15	W 385.18	1,385.76
3990	3,668.53	3,618.53	S 1,335.31	W 386.30	1,390.07
4000	3,677.56	3,627.56	S 1,339.47	W 387.43	1,394.37
4004	3,681.17	3,631.17	S 1,341.13	W 387.87	1,396.10 *
4010	3,686.58	3,636.58	S 1,343.62	W 388.55	1,398.68
4020	3,695.61	3,645.61	S 1,347.77	W 389.67	1,402.97
4030	3,704.65	3,654.65	S 1,351.92	W 390.78	1,407.26
4040	3,713.68	3,663.68	S 1,356.06	W 391.90	1,411.55
4050	3,722.72	3,672.72	S 1,360.19	W 393.02	1,415.83
4060	3,731.76	3,681.76	S 1,364.32	W 394.13	1,420.11
4070	3,740.80	3,690.80	S 1,368.44	W 395.24	1,424.38
4080	3,749.84	3,699.84	S 1,372.56	W 396.35	1,428.64

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z2B-21-013-D-LD16 (LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES		HORIZONTAL DISTANCE
4090	3,758.89	3,708.89	S 1,376.68	W 397.46	1,432.91
4100	3,767.94	3,717.94	S 1,380.79	W 398.57	1,437.16
4110	3,776.99	3,726.99	S 1,384.89	W 399.68	1,441.41
4120	3,786.04	3,736.04	S 1,388.99	W 400.79	1,445.66
* 4129	3,794.19	3,744.19	S 1,392.68	W 401.78	1,449.47 *
4130	3,795.10	3,745.10	S 1,393.08	W 401.90	1,449.90
4140	3,804.16	3,754.16	S 1,397.15	W 403.05	1,454.13
4150	3,813.23	3,763.23	S 1,401.21	W 404.20	1,458.34
4160	3,822.31	3,772.31	S 1,405.25	W 405.34	1,462.54
4170	3,831.39	3,781.39	S 1,409.28	W 406.48	1,466.73
4180	3,840.47	3,790.47	S 1,413.29	W 407.62	1,470.90
4190	3,849.57	3,799.57	S 1,417.29	W 408.75	1,475.06
4200	3,858.67	3,808.67	S 1,421.28	W 409.88	1,479.21
4210	3,867.77	3,817.77	S 1,425.26	W 411.00	1,483.34
4220	3,876.89	3,826.89	S 1,429.22	W 412.12	1,487.46
* 4223	3,879.62	3,829.62	S 1,430.41	W 412.46	1,488.69 *
4230	3,886.01	3,836.01	S 1,433.13	W 413.38	1,491.56
4240	3,895.14	3,845.14	S 1,437.00	W 414.68	1,495.63
4250	3,904.28	3,854.28	S 1,440.84	W 415.97	1,499.69
4260	3,913.43	3,863.43	S 1,444.66	W 417.26	1,503.71
4270	3,922.59	3,872.59	S 1,448.47	W 418.54	1,507.72
4280	3,931.76	3,881.76	S 1,452.25	W 419.81	1,511.71
4290	3,940.94	3,890.94	S 1,456.01	W 421.07	1,515.67
4300	3,950.13	3,900.13	S 1,459.75	W 422.33	1,519.61
4310	3,959.32	3,909.32	S 1,463.46	W 423.58	1,523.53
* 4317	3,965.77	3,915.77	S 1,466.06	W 424.45	1,526.26 *
4320	3,968.53	3,918.53	S 1,467.16	W 424.84	1,527.43
4330	3,977.74	3,927.74	S 1,470.83	W 426.13	1,531.31
4340	3,986.96	3,936.96	S 1,474.48	W 427.41	1,535.18
* 4348	3,994.34	3,944.34	S 1,477.40	W 428.43	1,538.26 *
4350	3,996.19	3,946.19	S 1,478.12	W 428.68	1,539.03
4360	4,005.43	3,955.43	S 1,481.74	W 429.95	1,542.85
4370	4,014.68	3,964.68	S 1,485.32	W 431.20	1,546.65
* 4379	4,023.01	3,973.01	S 1,488.53	W 432.33	1,550.05 *
4380	4,023.94	3,973.94	S 1,488.89	W 432.46	1,550.42
4390	4,033.20	3,983.20	S 1,492.38	W 433.83	1,554.16
4400	4,042.48	3,992.48	S 1,495.86	W 435.20	1,557.98
4410	4,051.77	4,001.77	S 1,499.32	W 436.55	1,561.58
4420	4,061.06	4,011.06	S 1,502.75	W 437.90	1,565.26
4430	4,070.36	4,020.36	S 1,506.17	W 439.24	1,568.91
4440	4,079.67	4,029.67	S 1,509.57	W 440.57	1,572.55
* 4441	4,080.60	4,030.60	S 1,509.91	W 440.70	1,572.91 *
4450	4,088.98	4,038.98	S 1,512.90	W 442.05	1,576.16
4460	4,098.30	4,048.30	S 1,516.22	W 443.54	1,579.77
4470	4,107.61	4,057.61	S 1,519.54	W 445.03	1,583.36

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z28-21-013-D-LD16 (LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL	CD -	ORDINATES	HORIZONTAL DISTANCE
4480	4,116.93	4,066.93	S 1,522.84	W	446.52	1,586.96
4490	4,126.25	4,076.25	S 1,526.15	W	448.00	1,590.54
4500	4,135.58	4,085.58	S 1,529.45	W	449.48	1,594.13
4510	4,144.90	4,094.90	S 1,532.74	W	450.96	1,597.70
4520	4,154.23	4,104.23	S 1,536.03	W	452.44	1,601.28
* 4530	4,163.56	4,113.56	S 1,539.31	W	453.92	1,604.84 *
4540	4,172.89	4,122.89	S 1,542.51	W	455.59	1,608.38
4550	4,182.21	4,132.21	S 1,545.71	W	457.27	1,611.93
4560	4,191.53	4,141.53	S 1,548.92	W	458.96	1,615.48
4570	4,200.85	4,150.85	S 1,552.13	W	460.65	1,619.05
4580	4,210.16	4,160.16	S 1,555.35	W	462.34	1,622.62
4590	4,219.47	4,169.47	S 1,558.58	W	464.03	1,626.20
4600	4,228.78	4,178.78	S 1,561.82	W	465.73	1,629.78
4610	4,238.08	4,188.08	S 1,565.06	W	467.44	1,633.38
4620	4,247.39	4,197.39	S 1,568.31	W	469.14	1,636.98
4630	4,256.69	4,206.69	S 1,571.57	W	470.85	1,640.59
4640	4,265.98	4,215.98	S 1,574.84	W	472.57	1,644.21
4650	4,275.27	4,225.27	S 1,578.11	W	474.28	1,647.84
4660	4,284.56	4,234.56	S 1,581.38	W	476.01	1,651.47
4670	4,293.85	4,243.85	S 1,584.67	W	477.73	1,655.11
* 4674	4,297.56	4,247.56	S 1,588.99	W	478.42	1,658.57 *
4680	4,303.13	4,253.13	S 1,587.96	W	479.46	1,658.77
4690	4,312.40	4,262.40	S 1,591.28	W	481.20	1,662.44
4700	4,321.67	4,271.67	S 1,594.61	W	482.95	1,666.13
4710	4,330.93	4,280.93	S 1,597.95	W	484.70	1,669.84
4720	4,340.18	4,290.18	S 1,601.31	W	486.47	1,673.57
4730	4,349.43	4,299.43	S 1,604.68	W	488.24	1,677.32
4740	4,358.66	4,308.66	S 1,608.08	W	490.02	1,681.08
4750	4,367.89	4,317.89	S 1,611.48	W	491.81	1,684.86
4760	4,377.12	4,327.12	S 1,614.90	W	493.60	1,688.66
4770	4,386.33	4,336.33	S 1,618.34	W	495.41	1,692.47
4780	4,395.54	4,345.54	S 1,621.80	W	497.22	1,696.31
4790	4,404.74	4,354.74	S 1,625.26	W	499.04	1,700.16
4800	4,413.93	4,363.93	S 1,628.75	W	500.87	1,704.02
4810	4,423.12	4,373.12	S 1,632.25	W	502.71	1,707.91
4820	4,432.30	4,382.30	S 1,635.76	W	504.55	1,711.81
4830	4,441.47	4,391.47	S 1,639.29	W	506.41	1,715.73
* 4839	4,449.72	4,399.72	S 1,642.48	W	508.08	1,719.27 *
4840	4,450.63	4,400.63	S 1,642.84	W	508.27	1,719.67
4850	4,459.79	4,409.79	S 1,646.40	W	510.14	1,723.62
4860	4,468.94	4,418.94	S 1,649.97	W	512.01	1,727.59
4870	4,478.08	4,428.08	S 1,653.55	W	513.89	1,731.57
4880	4,487.22	4,437.22	S 1,657.15	W	515.78	1,735.57
4890	4,496.35	4,446.35	S 1,660.76	W	517.68	1,739.58
4900	4,505.47	4,455.47	S 1,664.39	W	519.58	1,743.60

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z2B-21-013-D-LD16 (LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 52

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL	CO - ORDINATES	HORIZONTAL DISTANCE
4910	4,514.59	4,464.59	S 1,666.02	W 521.49	1,747.64
4920	4,523.70	4,473.70	S 1,671.67	W 523.41	1,751.70
4930	4,532.81	4,482.81	S 1,675.33	W 525.33	1,755.77
4940	4,541.91	4,491.91	S 1,679.01	W 527.26	1,759.85
4950	4,551.00	4,501.00	S 1,682.70	W 529.19	1,763.95
4960	4,560.08	4,510.08	S 1,686.40	W 531.14	1,768.06
4970	4,569.16	4,519.16	S 1,690.11	W 533.09	1,772.19
4980	4,578.23	4,528.23	S 1,693.84	W 535.04	1,776.33
4990	4,587.30	4,537.30	S 1,697.58	W 537.01	1,780.49
5000	4,596.35	4,546.35	S 1,701.33	W 538.98	1,784.66
5010	4,605.40	4,555.40	S 1,705.09	W 540.95	1,788.85
5020	4,614.45	4,564.45	S 1,708.87	W 542.93	1,793.05
* 5025	4,618.97	4,568.97	S 1,710.76	W 543.93	1,795.15 *
5030	4,623.49	4,573.49	S 1,712.65	W 544.95	1,797.26
5040	4,632.51	4,582.51	S 1,716.44	W 547.00	1,801.50
5050	4,641.51	4,591.51	S 1,720.27	W 549.07	1,805.77
5060	4,650.51	4,600.51	S 1,724.11	W 551.15	1,810.06
5070	4,659.49	4,609.49	S 1,727.98	W 553.24	1,814.39
5080	4,668.45	4,618.45	S 1,731.88	W 555.35	1,818.74
5090	4,677.40	4,627.40	S 1,735.80	W 557.47	1,823.12
5100	4,686.34	4,636.34	S 1,739.75	W 559.60	1,827.53
5110	4,695.26	4,645.26	S 1,743.72	W 561.75	1,831.97
5120	4,704.17	4,654.17	S 1,747.72	W 563.91	1,836.44
5130	4,713.07	4,663.07	S 1,751.74	W 566.08	1,840.93
5140	4,721.95	4,671.95	S 1,755.78	W 568.27	1,845.45
5150	4,730.81	4,680.81	S 1,759.85	W 570.47	1,850.00
5160	4,739.66	4,689.66	S 1,763.95	W 572.68	1,854.58
5170	4,748.50	4,698.50	S 1,768.07	W 574.91	1,859.19
5180	4,757.32	4,707.32	S 1,772.21	W 577.15	1,863.82
5190	4,766.12	4,716.12	S 1,776.38	W 579.41	1,868.48
5200	4,774.92	4,724.92	S 1,780.57	W 581.67	1,873.17
5210	4,783.69	4,733.69	S 1,784.79	W 583.95	1,877.89
* 5215	4,786.32	4,736.32	S 1,786.05	W 584.64	1,879.31 *
5220	4,792.46	4,742.46	S 1,789.02	W 586.24	1,882.62
5230	4,801.21	4,751.21	S 1,793.27	W 588.54	1,887.38
5240	4,809.95	4,759.95	S 1,797.55	W 590.85	1,892.16
5250	4,818.68	4,768.68	S 1,801.83	W 593.17	1,896.96
5260	4,827.40	4,777.40	S 1,806.14	W 595.50	1,901.78
5270	4,836.11	4,786.11	S 1,810.47	W 597.84	1,906.62
5280	4,844.81	4,794.81	S 1,814.81	W 600.18	1,911.48
5290	4,853.49	4,803.49	S 1,819.17	W 602.54	1,916.36
5300	4,862.17	4,812.17	S 1,823.54	W 604.91	1,921.25
* 5305	4,866.50	4,816.50	S 1,825.73	W 606.09	1,923.71 *
5310	4,870.84	4,820.84	S 1,827.94	W 607.25	1,926.17
5320	4,879.51	4,829.51	S 1,832.36	W 609.57	1,931.09

DIRECTIONAL SURVEY FOR WELL L016-20

10

WELL NO. Z28-21-013-D-L016 (L016-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL	CO -	ORDINATES	HORIZONTAL DISTANCE
5330	4,888.17	4,888.17	S 1,836.77	W	611.89	1,936.01
5340	4,896.84	4,846.84	S 1,841.19	W	614.21	1,940.94
5350	4,905.50	4,855.50	S 1,845.61	W	616.53	1,945.87
5360	4,914.17	4,864.17	S 1,850.04	W	618.85	1,950.80
5370	4,922.83	4,872.83	S 1,854.46	W	621.17	1,955.73
5380	4,931.49	4,881.49	S 1,858.88	W	623.50	1,960.66
5390	4,940.15	4,890.15	S 1,863.31	W	625.82	1,965.60
* 5393	4,942.75	4,892.75	S 1,864.64	W	626.52	1,967.08 *
5400	4,948.81	4,898.81	S 1,867.77	W	628.07	1,970.54
5410	4,957.49	4,907.49	S 1,872.24	W	630.27	1,975.48
5420	4,966.16	4,916.16	S 1,876.69	W	632.47	1,980.40
5430	4,974.85	4,924.85	S 1,881.14	W	634.67	1,985.32
5440	4,983.54	4,933.54	S 1,885.57	W	636.86	1,990.22
5450	4,992.24	4,942.24	S 1,889.99	W	639.05	1,995.11
5460	5,000.94	4,950.94	S 1,894.41	W	641.23	1,999.99
5470	5,009.65	4,959.65	S 1,898.81	W	643.41	2,004.86
5480	5,018.37	4,968.37	S 1,903.20	W	645.58	2,009.71
5490	5,027.09	4,977.09	S 1,907.59	W	647.74	2,014.56
5500	5,035.82	4,985.82	S 1,911.96	W	649.90	2,019.39
5510	5,044.56	4,994.56	S 1,916.32	W	652.06	2,024.22
5520	5,053.30	5,003.30	S 1,920.67	W	654.21	2,029.03
5530	5,062.05	5,012.05	S 1,925.01	W	656.36	2,033.83
5540	5,070.81	5,020.81	S 1,929.34	W	658.50	2,038.62
5550	5,079.57	5,029.57	S 1,933.66	W	660.63	2,043.40
5560	5,088.34	5,038.34	S 1,937.97	W	662.76	2,048.17
5570	5,097.11	5,047.11	S 1,942.27	W	664.89	2,052.92
* 5578	5,104.14	5,054.14	S 1,945.71	W	666.58	2,056.72 *
5580	5,105.89	5,055.89	S 1,946.56	W	667.02	2,057.67
5590	5,114.68	5,064.68	S 1,950.82	W	669.19	2,062.40
5600	5,123.46	5,073.46	S 1,955.07	W	671.35	2,067.13
5610	5,132.25	5,082.25	S 1,959.32	W	673.52	2,071.85
5620	5,141.05	5,091.05	S 1,963.56	W	675.68	2,076.57
5630	5,149.84	5,099.84	S 1,967.80	W	677.84	2,081.28
5640	5,158.64	5,108.64	S 1,972.03	W	680.00	2,085.98
5650	5,167.45	5,117.45	S 1,976.26	W	682.15	2,090.68
5660	5,176.25	5,126.25	S 1,980.49	W	684.30	2,095.37
5670	5,185.06	5,135.06	S 1,984.70	W	686.45	2,100.06
5680	5,193.87	5,143.87	S 1,988.92	W	688.60	2,104.74
5690	5,202.69	5,152.69	S 1,993.12	W	690.74	2,109.42
5700	5,211.51	5,161.51	S 1,997.32	W	692.88	2,114.09
5710	5,220.33	5,170.33	S 2,001.52	W	695.02	2,118.76
5720	5,229.15	5,179.15	S 2,005.71	W	697.16	2,123.42
5730	5,237.98	5,187.98	S 2,009.90	W	699.29	2,128.07
5740	5,246.81	5,196.81	S 2,014.08	W	701.42	2,132.72
5750	5,255.64	5,205.64	S 2,018.26	W	703.55	2,137.37

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z2B-21-013-D-LD16(LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES		HORIZONTAL DISTANCE
5760	5,264.48	5,214.48	S 2,022.43	W 705.67	2,142.00
* 5763	5,267.13	5,217.13	S 2,023.68	W 706.31	2,143.40 *
5770	5,273.32	5,223.32	S 2,026.55	W 707.87	2,146.63
5780	5,282.17	5,232.17	S 2,030.66	W 710.08	2,151.23
5790	5,291.02	5,241.02	S 2,034.75	W 712.30	2,155.83
5800	5,299.87	5,249.87	S 2,038.84	W 714.51	2,160.41
5810	5,308.73	5,258.73	S 2,042.92	W 716.71	2,164.99
5820	5,317.60	5,267.60	S 2,046.99	W 718.91	2,169.56
5830	5,326.47	5,276.47	S 2,051.05	W 721.11	2,174.12
5840	5,335.34	5,285.34	S 2,055.10	W 723.30	2,178.67
5850	5,344.22	5,294.22	S 2,059.15	W 725.49	2,183.22
5860	5,353.10	5,303.10	S 2,063.19	W 727.67	2,187.75
5870	5,361.99	5,311.99	S 2,067.22	W 729.85	2,192.28
5880	5,370.89	5,320.89	S 2,071.24	W 732.03	2,196.79
5890	5,379.79	5,329.79	S 2,075.25	W 734.20	2,201.30
5900	5,388.69	5,338.69	S 2,079.26	W 736.36	2,205.80
5910	5,397.60	5,347.60	S 2,083.26	W 738.52	2,210.29
5920	5,406.51	5,356.51	S 2,087.25	W 740.68	2,214.77
5930	5,415.43	5,365.43	S 2,091.23	W 742.83	2,219.24
5940	5,424.35	5,374.35	S 2,095.20	W 744.98	2,223.71
* 5949	5,432.38	5,382.38	S 2,098.77	W 746.91	2,227.72 *
5950	5,433.27	5,383.27	S 2,099.17	W 747.12	2,228.16
5960	5,442.19	5,392.19	S 2,103.19	W 749.23	2,232.65
5970	5,451.09	5,401.09	S 2,107.22	W 751.35	2,237.17
5980	5,459.97	5,409.97	S 2,111.28	W 753.48	2,241.70
5990	5,468.85	5,418.85	S 2,115.36	W 755.62	2,246.26
6000	5,477.71	5,427.71	S 2,119.46	W 757.77	2,250.85
6010	5,486.56	5,436.56	S 2,123.58	W 759.94	2,255.46
6020	5,495.40	5,445.40	S 2,127.72	W 762.11	2,260.09
6030	5,504.23	5,454.23	S 2,131.88	W 764.30	2,264.75
6040	5,513.04	5,463.04	S 2,136.07	W 766.49	2,269.42
6050	5,521.84	5,471.84	S 2,140.27	W 768.70	2,274.13
6060	5,530.63	5,480.63	S 2,144.50	W 770.92	2,278.85
6070	5,539.41	5,489.41	S 2,148.74	W 773.15	2,283.60
6080	5,548.17	5,498.17	S 2,153.01	W 775.39	2,288.38
6090	5,556.92	5,506.92	S 2,157.30	W 777.64	2,293.17
6100	5,565.65	5,515.65	S 2,161.60	W 779.90	2,297.99
6110	5,574.38	5,524.38	S 2,165.93	W 782.17	2,302.84
6120	5,583.09	5,533.09	S 2,170.28	W 784.46	2,307.70
6130	5,591.78	5,541.78	S 2,174.65	W 786.75	2,312.59
6140	5,600.47	5,550.47	S 2,179.04	W 789.06	2,317.51
6150	5,609.14	5,559.14	S 2,183.46	W 791.37	2,322.44
6160	5,617.79	5,567.79	S 2,187.89	W 793.70	2,327.40
* 6164	5,621.26	5,571.26	S 2,189.66	W 794.63	2,329.39 *
6170	5,626.45	5,576.45	S 2,192.38	W 795.93	2,332.38

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z28-21-013-D-LD16 (LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL -

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL	CO -	ORDINATES	HORIZONTAL DISTANCE
6180	5,635.10	5,585.10	S 2,196.89	W	798.09	2,337.37
6190	5,643.76	5,593.76	S 2,201.40	W	800.26	2,342.35
6200	5,652.42	5,602.42	S 2,205.91	W	802.41	2,347.32
6210	5,661.09	5,611.09	S 2,210.41	W	804.57	2,352.29
6220	5,669.76	5,619.76	S 2,214.91	W	806.73	2,357.25
6230	5,678.43	5,628.43	S 2,219.40	W	808.88	2,362.21
6240	5,687.10	5,637.10	S 2,223.89	W	811.03	2,367.17
6250	5,695.77	5,645.77	S 2,228.38	W	813.18	2,372.11
6260	5,704.45	5,654.45	S 2,232.86	W	815.33	2,377.06
6270	5,713.13	5,663.13	S 2,237.33	W	817.47	2,382.00
6280	5,721.82	5,671.82	S 2,241.81	W	819.61	2,386.94
6290	5,730.51	5,680.51	S 2,246.27	W	821.75	2,391.87
6300	5,739.20	5,689.20	S 2,250.74	W	823.89	2,396.79
6310	5,747.89	5,697.89	S 2,255.19	W	826.03	2,401.71
6320	5,756.58	5,706.58	S 2,259.65	W	828.16	2,406.63
6330	5,765.28	5,715.28	S 2,264.10	W	830.29	2,411.54
6340	5,773.98	5,723.98	S 2,268.54	W	832.42	2,416.45
* 6350	5,782.69	5,732.69	S 2,272.98	W	834.55	2,421.35 *
6360	5,791.41	5,741.41	S 2,277.26	W	836.93	2,426.18
6370	5,800.14	5,750.14	S 2,281.51	W	839.30	2,430.99
6380	5,808.90	5,758.90	S 2,285.73	W	841.65	2,435.76
6390	5,817.67	5,767.67	S 2,289.93	W	843.98	2,440.51
6400	5,826.46	5,776.46	S 2,294.10	W	846.30	2,445.22
6410	5,835.27	5,785.27	S 2,298.24	W	848.61	2,449.90
6420	5,844.09	5,794.09	S 2,302.35	W	850.90	2,454.56
6430	5,852.93	5,802.93	S 2,306.44	W	853.17	2,459.18
6440	5,861.78	5,811.78	S 2,310.50	W	855.43	2,463.77
6450	5,870.65	5,820.65	S 2,314.53	W	857.67	2,468.33
6460	5,879.54	5,829.54	S 2,318.54	W	859.90	2,472.86
6470	5,888.44	5,838.44	S 2,322.51	W	862.12	2,477.36
6480	5,897.36	5,847.36	S 2,326.46	W	864.32	2,481.83
6490	5,906.30	5,856.30	S 2,330.39	W	866.50	2,486.27
* 6494	5,909.87	5,859.87	S 2,331.95	W	867.37	2,488.04 *
6500	5,915.24	5,865.24	S 2,334.29	W	868.71	2,490.70
* 6504	5,918.81	5,868.81	S 2,335.85	W	869.60	2,492.47 *
6510	5,924.17	5,874.17	S 2,338.19	W	870.94	2,495.13
6520	5,933.11	5,883.11	S 2,342.08	W	873.17	2,499.55
6530	5,942.05	5,892.05	S 2,345.97	W	875.40	2,503.97
6540	5,950.99	5,900.99	S 2,349.85	W	877.62	2,508.39
6550	5,959.94	5,909.94	S 2,353.73	W	879.84	2,512.80
6560	5,968.89	5,918.89	S 2,357.60	W	882.06	2,517.21
6570	5,977.84	5,927.84	S 2,361.47	W	884.28	2,521.61
6580	5,986.79	5,936.79	S 2,365.34	W	886.49	2,526.00
6590	5,995.74	5,945.74	S 2,369.20	W	888.70	2,530.40
6600	6,004.70	5,954.70	S 2,373.06	W	890.91	2,534.78

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z2B-21-013-D-LD16(LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CD - ORDINATES		HORIZONTAL DISTANCE
6610	6,013.66	5,963.66	S 2,376.91	W 893.12	2,539.17
6620	6,022.63	5,972.63	S 2,380.76	W 895.32	2,543.54
6630	6,031.59	5,981.59	S 2,384.60	W 897.52	2,547.92
6640	6,040.56	5,990.56	S 2,388.44	W 899.72	2,552.28
6650	6,049.53	5,999.53	S 2,392.28	W 901.92	2,556.65
6660	6,058.50	6,008.50	S 2,396.11	W 904.11	2,561.01
6670	6,067.48	6,017.48	S 2,399.93	W 906.30	2,565.36
6680	6,076.46	6,026.46	S 2,403.76	W 908.49	2,569.71
* 6690	6,085.44	6,035.44	S 2,407.57	W 910.68	2,574.05 *
6700	6,094.42	6,044.42	S 2,411.44	W 912.77	2,578.41
6710	6,103.40	6,053.40	S 2,415.30	W 914.86	2,582.76
6720	6,112.39	6,062.39	S 2,419.16	W 916.94	2,587.11
6730	6,121.38	6,071.38	S 2,423.02	W 919.03	2,591.45
6740	6,130.37	6,080.37	S 2,426.87	W 921.11	2,595.79
6750	6,139.36	6,089.36	S 2,430.71	W 923.19	2,600.13
6760	6,148.36	6,098.36	S 2,434.56	W 925.27	2,604.46
6770	6,157.35	6,107.35	S 2,438.40	W 927.35	2,608.78
6780	6,166.35	6,116.35	S 2,442.23	W 929.42	2,613.11
6790	6,175.35	6,125.35	S 2,446.07	W 931.49	2,617.43
6800	6,184.36	6,134.36	S 2,449.90	W 933.56	2,621.74
6810	6,193.36	6,143.36	S 2,453.72	W 935.63	2,626.05
6820	6,202.37	6,152.37	S 2,457.54	W 937.70	2,630.36
6830	6,211.38	6,161.38	S 2,461.36	W 939.76	2,634.66
6840	6,220.39	6,170.39	S 2,465.17	W 941.82	2,638.96
6850	6,229.40	6,179.40	S 2,468.98	W 943.88	2,643.26
6860	6,238.42	6,188.42	S 2,472.79	W 945.94	2,647.55
6870	6,247.43	6,197.43	S 2,476.59	W 948.00	2,651.83
* 6875	6,251.94	6,201.94	S 2,478.49	W 949.03	2,653.97 *
6880	6,256.45	6,206.45	S 2,480.39	W 950.05	2,656.12
6890	6,265.48	6,215.48	S 2,484.19	W 952.10	2,660.39
6900	6,274.50	6,224.50	S 2,487.97	W 954.15	2,664.66
6910	6,283.53	6,233.53	S 2,491.76	W 956.19	2,668.93
6920	6,292.56	6,242.56	S 2,495.53	W 958.24	2,673.18
6930	6,301.59	6,251.59	S 2,499.31	W 960.27	2,677.44
6940	6,310.63	6,260.63	S 2,503.07	W 962.31	2,681.68
6950	6,319.67	6,269.67	S 2,506.84	W 964.34	2,685.92
6960	6,328.71	6,278.71	S 2,510.59	W 966.37	2,690.16
6970	6,337.76	6,287.76	S 2,514.34	W 968.40	2,694.39
6980	6,346.81	6,296.81	S 2,518.09	W 970.43	2,698.61
6990	6,355.86	6,305.86	S 2,521.83	W 972.45	2,702.83
7000	6,364.91	6,314.91	S 2,525.57	W 974.47	2,707.04
7010	6,373.97	6,323.97	S 2,529.30	W 976.48	2,711.25
7020	6,383.03	6,333.03	S 2,533.02	W 978.50	2,715.45
7030	6,392.09	6,342.09	S 2,536.74	W 980.51	2,719.65
7040	6,401.15	6,351.15	S 2,540.46	W 982.52	2,723.83

DIRECTIONAL SURVEY FOR WELL L016-20

10

WELL NO. Z2B-21-013-D-L016 (L016-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES		HORIZONTAL DISTANCE
7050	6,410.22	6,360.22	S 2,544.17	W 984.52	2,728.02
7060	6,419.29	6,369.29	S 2,547.87	W 986.52	2,732.19
* 7061	6,420.20	6,370.20	S 2,548.24	W 986.72	2,732.61 *
7070	6,428.36	6,378.36	S 2,551.51	W 988.64	2,736.35
7080	6,437.44	6,387.44	S 2,553.13	W 990.78	2,740.49
7090	6,446.51	6,396.51	S 2,558.74	W 992.90	2,744.63
7100	6,455.59	6,405.59	S 2,562.35	W 995.03	2,748.77
7110	6,464.68	6,414.68	S 2,565.96	W 997.16	2,752.90
7120	6,473.76	6,423.76	S 2,569.56	W 999.28	2,757.02
7130	6,482.85	6,432.85	S 2,573.16	W 1,001.40	2,761.15
7140	6,491.94	6,441.94	S 2,576.75	W 1,003.51	2,765.26
7150	6,501.03	6,451.03	S 2,580.34	W 1,005.63	2,769.37
7160	6,510.12	6,460.12	S 2,583.92	W 1,007.74	2,773.48
7170	6,519.22	6,469.22	S 2,587.50	W 1,009.85	2,777.58
7180	6,528.32	6,478.32	S 2,591.08	W 1,011.95	2,781.68
7190	6,537.42	6,487.42	S 2,594.65	W 1,014.06	2,785.77
7200	6,546.52	6,496.52	S 2,598.21	W 1,016.16	2,789.85
7210	6,555.63	6,505.63	S 2,601.78	W 1,018.25	2,793.94
7220	6,564.73	6,514.73	S 2,605.33	W 1,020.33	2,798.01
7230	6,573.84	6,523.84	S 2,608.89	W 1,022.44	2,802.08
7240	6,582.96	6,532.96	S 2,612.44	W 1,024.53	2,806.15
* 7247	6,589.34	6,539.34	S 2,614.92	W 1,026.00	2,809.00 *
7250	6,592.07	6,542.07	S 2,615.95	W 1,026.67	2,810.20
7260	6,601.19	6,551.19	S 2,619.38	W 1,028.92	2,814.22
7270	6,610.32	6,560.32	S 2,622.79	W 1,031.17	2,818.22
7280	6,619.45	6,569.45	S 2,626.20	W 1,033.40	2,822.21
7290	6,628.59	6,578.59	S 2,629.59	W 1,035.64	2,826.18
7300	6,637.73	6,587.73	S 2,632.98	W 1,037.86	2,830.15
7310	6,646.88	6,596.88	S 2,636.36	W 1,040.08	2,834.10
7320	6,656.03	6,606.03	S 2,639.72	W 1,042.29	2,838.05
7330	6,665.19	6,615.19	S 2,643.08	W 1,044.49	2,841.98
7340	6,674.35	6,624.35	S 2,646.43	W 1,046.69	2,845.90
7350	6,683.52	6,633.52	S 2,649.76	W 1,048.88	2,849.81
7360	6,692.70	6,642.70	S 2,653.09	W 1,051.07	2,853.70
7370	6,701.88	6,651.88	S 2,656.40	W 1,053.25	2,857.59
7380	6,711.06	6,661.06	S 2,659.71	W 1,055.42	2,861.46
7390	6,720.25	6,670.25	S 2,663.00	W 1,057.58	2,865.32
7400	6,729.44	6,679.44	S 2,666.29	W 1,059.74	2,869.17
7410	6,738.65	6,688.65	S 2,669.57	W 1,061.89	2,873.01
7420	6,747.85	6,697.85	S 2,672.83	W 1,064.04	2,876.84
7430	6,757.06	6,707.06	S 2,676.09	W 1,066.17	2,880.65
* 7433	6,759.82	6,709.82	S 2,677.06	W 1,066.82	2,881.80 *
7440	6,766.27	6,716.27	S 2,679.32	W 1,068.34	2,884.46
7450	6,775.48	6,725.48	S 2,682.55	W 1,070.52	2,888.27
7460	6,784.69	6,734.69	S 2,685.79	W 1,072.70	2,892.09

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z2B-21-013-D-LD16 (LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 62

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES		HORIZONTAL DISTANCE
7470	6,793.89	6,743.89	S 2,689.03	W 1,074.89	2,895.91
7480	6,803.09	6,753.09	S 2,692.28	W 1,077.08	2,899.73
7490	6,812.29	6,762.29	S 2,695.52	W 1,079.27	2,903.56
7500	6,821.49	6,771.49	S 2,698.77	W 1,081.46	2,907.39
7510	6,830.69	6,780.69	S 2,702.03	W 1,083.66	2,911.23
7520	6,839.88	6,789.88	S 2,705.29	W 1,085.85	2,915.08
7530	6,849.08	6,799.08	S 2,708.55	W 1,088.06	2,918.92
7540	6,858.27	6,808.27	S 2,711.82	W 1,090.26	2,922.78
7550	6,867.46	6,817.46	S 2,715.09	W 1,092.47	2,926.64
7560	6,876.64	6,826.64	S 2,718.36	W 1,094.67	2,930.50
7570	6,885.83	6,835.83	S 2,721.64	W 1,096.89	2,934.36
7580	6,895.01	6,845.01	S 2,724.93	W 1,099.10	2,938.24
7590	6,904.19	6,854.19	S 2,728.21	W 1,101.32	2,942.11
7600	6,913.37	6,863.37	S 2,731.50	W 1,103.53	2,945.99
* 7607	6,919.80	6,869.80	S 2,733.81	W 1,105.09	2,948.71 *
7610	6,922.55	6,872.55	S 2,734.72	W 1,105.85	2,949.85
7620	6,931.72	6,881.72	S 2,737.79	W 1,108.40	2,953.65
7630	6,940.89	6,890.89	S 2,740.86	W 1,110.95	2,957.46
7640	6,950.05	6,900.05	S 2,743.95	W 1,113.51	2,961.28
7650	6,959.21	6,909.21	S 2,747.04	W 1,116.08	2,965.11
7660	6,968.36	6,918.36	S 2,750.14	W 1,118.65	2,968.95
7670	6,977.51	6,927.51	S 2,753.25	W 1,121.23	2,972.80
7680	6,986.65	6,936.65	S 2,756.37	W 1,123.82	2,976.67
7690	6,995.78	6,945.78	S 2,759.49	W 1,126.42	2,980.54
7700	7,004.92	6,954.92	S 2,762.63	W 1,129.02	2,984.43
7710	7,014.04	6,964.04	S 2,765.77	W 1,131.63	2,988.32
7720	7,023.17	6,973.17	S 2,768.92	W 1,134.24	2,992.23
7730	7,032.28	6,982.28	S 2,772.08	W 1,136.87	2,996.15
7740	7,041.40	6,991.40	S 2,775.25	W 1,139.50	3,000.08
7750	7,050.51	7,000.51	S 2,778.43	W 1,142.13	3,004.02
7760	7,059.61	7,009.61	S 2,781.61	W 1,144.78	3,007.97
7770	7,068.71	7,018.71	S 2,784.81	W 1,147.43	3,011.93
7780	7,077.80	7,027.80	S 2,788.01	W 1,150.09	3,015.91
7790	7,086.89	7,036.89	S 2,791.22	W 1,152.75	3,019.89
7800	7,095.97	7,045.97	S 2,794.44	W 1,155.43	3,023.89
* 7810	7,105.05	7,055.05	S 2,797.66	W 1,158.10	3,027.89 *
7820	7,114.12	7,064.12	S 2,800.70	W 1,161.03	3,031.82
7830	7,123.17	7,073.17	S 2,803.75	W 1,163.96	3,035.76
7840	7,132.22	7,082.22	S 2,806.82	W 1,166.92	3,039.73
7850	7,141.26	7,091.26	S 2,809.90	W 1,169.88	3,043.71
7860	7,150.29	7,100.29	S 2,813.00	W 1,172.86	3,047.72
7870	7,159.31	7,109.31	S 2,816.11	W 1,175.86	3,051.74
7880	7,168.32	7,118.32	S 2,819.24	W 1,178.86	3,055.78
7890	7,177.32	7,127.32	S 2,822.38	W 1,181.89	3,059.85
7900	7,186.31	7,136.31	S 2,825.53	W 1,184.92	3,063.93

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z2B-21-013-D-LD16(LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 62

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES		HORIZONTAL DISTANCE
7910	7,195.29	7,145.29	S 2,828.70	W 1,187.97	3,068.04
7920	7,204.26	7,154.26	S 2,831.89	W 1,191.04	3,072.16
7930	7,213.22	7,163.22	S 2,835.09	W 1,194.12	3,076.30
7940	7,222.17	7,172.17	S 2,838.30	W 1,197.21	3,080.47
7950	7,231.11	7,181.11	S 2,841.53	W 1,200.32	3,084.65
7960	7,240.04	7,190.04	S 2,844.78	W 1,203.44	3,088.85
7970	7,248.96	7,198.96	S 2,848.04	W 1,206.58	3,093.08
7980	7,257.87	7,207.87	S 2,851.31	W 1,209.73	3,097.32
7990	7,266.76	7,216.76	S 2,854.60	W 1,212.89	3,101.58
* 7994	7,270.32	7,220.32	S 2,855.91	W 1,214.16	3,103.29 *
8000	7,275.66	7,225.66	S 2,857.87	W 1,216.09	3,105.85
8010	7,284.54	7,234.54	S 2,861.14	W 1,219.31	3,110.12
8020	7,293.41	7,243.41	S 2,864.43	W 1,222.55	3,114.42
8030	7,302.27	7,252.27	S 2,867.72	W 1,225.80	3,118.72
8040	7,311.13	7,261.13	S 2,871.03	W 1,229.06	3,123.05
8050	7,319.98	7,269.98	S 2,874.35	W 1,232.34	3,127.38
8060	7,328.82	7,278.82	S 2,877.68	W 1,235.62	3,131.74
8070	7,337.65	7,287.65	S 2,881.02	W 1,238.91	3,136.11
8080	7,346.47	7,296.47	S 2,884.37	W 1,242.22	3,140.49
8090	7,355.28	7,305.28	S 2,887.73	W 1,245.54	3,144.90
* 8091	7,356.17	7,306.17	S 2,888.07	W 1,245.87	3,145.34 *
8100	7,364.09	7,314.09	S 2,891.13	W 1,248.85	3,149.32
8110	7,372.88	7,322.88	S 2,894.53	W 1,252.18	3,153.77
8120	7,381.67	7,331.67	S 2,897.96	W 1,255.51	3,158.24
8130	7,390.44	7,340.44	S 2,901.39	W 1,258.87	3,162.72
8140	7,399.20	7,349.20	S 2,904.84	W 1,262.23	3,167.23
8150	7,407.95	7,357.95	S 2,908.30	W 1,265.61	3,171.75
8160	7,416.69	7,366.69	S 2,911.78	W 1,269.00	3,176.29
8170	7,425.42	7,375.42	S 2,915.27	W 1,272.41	3,180.85
8180	7,434.14	7,384.14	S 2,918.77	W 1,275.83	3,185.43
8190	7,442.85	7,392.85	S 2,922.29	W 1,279.26	3,190.03
8200	7,451.55	7,401.55	S 2,925.82	W 1,282.71	3,194.65
8210	7,460.24	7,410.24	S 2,929.37	W 1,286.17	3,199.28
8220	7,468.91	7,418.91	S 2,932.93	W 1,289.64	3,203.94
8230	7,477.58	7,427.58	S 2,936.50	W 1,293.12	3,208.61
8240	7,486.23	7,436.23	S 2,940.08	W 1,296.62	3,213.30
8250	7,494.88	7,444.88	S 2,943.68	W 1,300.13	3,218.01
* 8251	7,495.74	7,445.74	S 2,944.04	W 1,300.49	3,218.48 *
8260	7,503.52	7,453.52	S 2,947.09	W 1,303.84	3,222.63
8270	7,512.16	7,462.16	S 2,950.48	W 1,307.54	3,227.23
8280	7,520.80	7,470.80	S 2,953.87	W 1,311.28	3,231.84
8290	7,529.44	7,479.44	S 2,957.26	W 1,315.01	3,236.45
8300	7,538.08	7,488.08	S 2,960.65	W 1,318.73	3,241.06
8310	7,546.72	7,496.72	S 2,964.04	W 1,322.46	3,245.68
8320	7,555.35	7,505.35	S 2,967.43	W 1,326.19	3,250.30

DIRECTIONAL SURVEY FOR WELL L016-20

10.

WELL NO. Z28-21-013-D-L016 (L016-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 82

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES		HORIZONTAL DISTANCE
8330	7,563.99	7,513.99	S 2,970.82	W 1,329.92	3,254.92
8340	7,572.62	7,522.62	S 2,974.22	W 1,333.65	3,259.54
* 8344	7,576.08	7,526.08	S 2,975.58	W 1,335.14	3,261.39 *
8350	7,581.26	7,531.26	S 2,977.55	W 1,337.44	3,264.13
8360	7,589.90	7,539.90	S 2,980.83	W 1,341.25	3,268.69
8370	7,598.55	7,548.55	S 2,984.11	W 1,345.06	3,273.24
8380	7,607.20	7,557.20	S 2,987.38	W 1,348.86	3,277.78
8390	7,615.85	7,565.85	S 2,990.64	W 1,352.66	3,282.32
8400	7,624.51	7,574.51	S 2,993.90	W 1,356.45	3,286.86
8410	7,633.18	7,583.18	S 2,997.16	W 1,360.23	3,291.38
8420	7,641.85	7,591.85	S 3,000.41	W 1,364.01	3,295.90
8430	7,650.52	7,600.52	S 3,003.65	W 1,367.78	3,300.42
* 8437	7,656.60	7,606.60	S 3,005.92	W 1,370.42	3,303.58 *
8440	7,659.20	7,609.20	S 3,006.88	W 1,371.57	3,304.92
8450	7,667.88	7,617.88	S 3,010.05	W 1,375.38	3,309.39
8460	7,676.57	7,626.57	S 3,013.22	W 1,379.18	3,313.86
8470	7,685.26	7,635.26	S 3,016.39	W 1,382.99	3,318.32
8480	7,693.95	7,643.95	S 3,019.55	W 1,386.78	3,322.78
8490	7,702.65	7,652.65	S 3,022.71	W 1,390.57	3,327.24
8500	7,711.35	7,661.35	S 3,025.87	W 1,394.36	3,331.68
8510	7,720.05	7,670.05	S 3,029.02	W 1,398.14	3,336.13
8520	7,728.76	7,678.76	S 3,032.17	W 1,401.92	3,340.57
* 8530	7,737.48	7,687.48	S 3,035.31	W 1,405.69	3,345.01 *
8540	7,746.19	7,696.19	S 3,038.40	W 1,409.49	3,349.41
8550	7,754.92	7,704.92	S 3,041.50	W 1,413.28	3,353.81
8560	7,763.65	7,713.65	S 3,044.58	W 1,417.06	3,358.20
8570	7,772.38	7,722.38	S 3,047.66	W 1,420.83	3,362.58
8580	7,781.12	7,731.12	S 3,050.73	W 1,424.60	3,366.96
8590	7,789.86	7,739.86	S 3,053.79	W 1,428.35	3,371.33
8600	7,798.61	7,748.61	S 3,056.85	W 1,432.11	3,375.69
8610	7,807.37	7,757.37	S 3,059.91	W 1,435.85	3,380.04
8620	7,816.13	7,766.13	S 3,062.95	W 1,439.58	3,384.39
* 8623	7,818.76	7,768.76	S 3,063.87	W 1,440.70	3,385.69 *
8630	7,824.90	7,774.90	S 3,065.96	W 1,443.34	3,388.70
8640	7,833.68	7,783.68	S 3,068.93	W 1,447.09	3,392.99
8650	7,842.47	7,792.47	S 3,071.89	W 1,450.83	3,397.27
8660	7,851.27	7,801.27	S 3,074.84	W 1,454.55	3,401.52
8670	7,860.08	7,810.08	S 3,077.78	W 1,458.26	3,405.77
8680	7,868.90	7,818.90	S 3,080.71	W 1,461.95	3,410.00
8690	7,877.73	7,827.73	S 3,083.63	W 1,465.63	3,414.21
8700	7,886.57	7,836.57	S 3,086.53	W 1,469.30	3,418.41
8710	7,895.41	7,845.41	S 3,089.43	W 1,472.95	3,422.59
* 8716	7,900.73	7,850.73	S 3,091.16	W 1,475.14	3,425.10 *
8720	7,904.27	7,854.27	S 3,092.26	W 1,476.63	3,426.74
8730	7,913.13	7,863.13	S 3,095.01	W 1,480.35	3,430.82

DIRECTIONAL SURVEY FOR WELL LD16-20

10

WELL NO. Z2B-21-013-D-LD16 (LD16-20) ELEVATION: 50 FEET NUMBER OF DATA POINTS: 62

CONDUCTOR IS VERTICAL

CONDUCTOR DATA: 460' MD

MEASURED DEPTH	VERTICAL DEPTH	TRUE SUB-SEA	TOTAL CO - ORDINATES		HORIZONTAL DISTANCE
8740	7,922.01	7,872.01	S 3,097.76	W 1,484.06	3,434.90
8750	7,930.89	7,880.89	S 3,100.49	W 1,487.75	3,438.96
8760	7,939.78	7,889.78	S 3,103.22	W 1,491.44	3,443.01
8770	7,948.67	7,898.67	S 3,105.94	W 1,495.11	3,447.05
8780	7,957.55	7,907.55	S 3,108.64	W 1,498.77	3,451.08
8790	7,966.49	7,916.49	S 3,111.34	W 1,502.41	3,455.10
8800	7,975.41	7,925.41	S 3,114.03	W 1,506.05	3,459.10
* 8809	7,983.44	7,933.44	S 3,116.45	W 1,509.31	3,462.70 *
8810	7,984.33	7,934.33	S 3,116.71	W 1,509.68	3,463.09
8820	7,993.27	7,943.27	S 3,119.33	W 1,513.33	3,467.04
8830	8,002.21	7,952.21	S 3,121.93	W 1,516.96	3,470.97
8840	8,011.16	7,961.16	S 3,124.53	W 1,520.58	3,474.89
8850	8,020.12	7,970.12	S 3,127.12	W 1,524.19	3,478.80
8860	8,029.09	7,979.09	S 3,129.70	W 1,527.78	3,482.69
* 8866	8,034.48	7,984.48	S 3,131.24	W 1,529.93	3,485.02 *

DIRECTIONAL SURVEY FOR WELL LD16-20
RAW DATA

THE CONDUCTOR IS VERTICAL

No.	MEASURED DEPTH	DEVIATION ANGLE	ORIENTATION
1	489	0.90	S - 29.20 - W
2	549	1.30	S - 7.60 - E
3	579	1.90	S - 13.60 - W
4	611	2.50	S - 27.00 - W
5	641	3.40	S - 36.70 - W
6	701	5.30	S - 23.90 - W
7	731	6.30	S - 28.90 - W
8	762	7.30	S - 36.30 - W
9	792	8.20	S - 32.70 - W
10	822	9.00	S - 26.10 - W
11	852	9.80	S - 25.60 - W
12	882	10.80	S - 25.00 - W
13	912	11.60	S - 20.40 - W
14	943	12.50	S - 16.50 - W
15	973	13.40	S - 18.60 - W
16	1003	14.30	S - 18.30 - W
17	1033	15.00	S - 15.80 - W
18	1064	15.90	S - 13.60 - W
19	1094	16.80	S - 13.60 - W
20	1126	17.60	S - 13.60 - W
21	1157	19.00	S - 14.40 - W
22	1189	20.30	S - 13.60 - W
23	1220	21.20	S - 12.90 - W
24	1251	21.80	S - 12.50 - W
25	1283	22.10	S - 13.60 - W
26	1314	22.80	S - 15.80 - W
27	1345	23.50	S - 17.20 - W
28	1376	24.10	S - 17.90 - W
29	1404	24.90	S - 17.90 - W
30	1439	25.80	S - 17.20 - W
31	1453	26.00	S - 16.50 - W
32	1519	26.60	S - 15.80 - W
33	1614	27.10	S - 16.50 - W
34	1707	27.10	S - 15.80 - W
35	1831	27.40	S - 15.80 - W
36	2080	27.80	S - 15.80 - W
37	2236	28.70	S - 16.50 - W
38	2361	29.10	S - 15.80 - W
39	2510	29.20	S - 16.50 - W
40	2696	29.10	S - 16.50 - W
41	2885	28.40	S - 15.80 - W
42	3135	27.20	S - 15.80 - W
43	3385	26.60	S - 15.80 - W
44	3695	26.00	S - 15.80 - W
45	4004	25.50	S - 15.10 - W
46	4129	25.10	S - 15.10 - W
47	4223	24.30	S - 15.80 - W
48	4317	23.00	S - 18.60 - W
49	4348	22.70	S - 19.30 - W
50	4379	22.20	S - 19.30 - W
51	4441	21.40	S - 21.40 - W

DIRECTIONAL SURVEY FOR WELL LD16-20 RAW DATA

THE CONDUCTOR IS VERTICAL

No.	MEASURED DEPTH	DEVIATION ANGLE	ORIENTATION
52	4530	21.10	S - 24.20 - W
53	4674	21.80	S - 27.70 - W
54	4839	23.60	S - 27.70 - W
55	5025	25.30	S - 27.70 - W
56	5213	28.70	S - 28.40 - W
57	5305	29.90	S - 28.40 - W
58	5393	30.00	S - 27.70 - W
59	5578	28.60	S - 26.30 - W
60	5763	27.90	S - 27.00 - W
61	5949	26.80	S - 28.40 - W
62	6164	30.10	S - 27.70 - W
63	6350	29.50	S - 25.60 - W
64	6494	26.60	S - 29.10 - W
65	6504	26.70	S - 29.80 - W
66	6690	26.10	S - 29.80 - W
67	6875	25.60	S - 28.40 - W
68	7061	24.90	S - 28.39 - W
69	7247	24.30	S - 30.50 - W
70	7433	22.90	S - 33.20 - W
71	7607	23.40	S - 34.00 - W
72	7810	24.80	S - 39.70 - W
73	7994	27.20	S - 43.90 - W
74	8091	28.20	S - 44.60 - W
75	8251	30.20	S - 44.30 - W
76	8344	30.30	S - 47.70 - W
77	8437	29.80	S - 49.30 - W
78	8530	29.40	S - 50.20 - W
79	8623	28.80	S - 50.80 - W
80	8716	27.70	S - 51.60 - W
81	8809	26.80	S - 53.50 - W
82	8866	26.18	S - 54.35 - W