Schlumberger

B-16 38 Definitive Survey

(Def Survey)

Report Date: December 12, 2013 - 01:13 PM

Client: Field: HMDC Hibernia

Structure / Slot: Well: Hibernia Platform / 45 B-16 38 (OPNN1)

Borehole-821939 / Unknown UWI / API#:
 UWI / APIFI:
 Borehole-821939 / Unknown

 Survey Name:
 B-16 38 Definitive

 Survey Date:
 December 10, 2013

 Tort / AHD / DDI / ERD Ratio:
 239.906 ° / 4427.147 m / 6.736 / 0.991

 Coordinate Reference System:
 NAD83 Universal Transverse Mercator, Zone 22 North, Meters

N 46°45' 1.36990", W 48°46' 53.57049" N 5179815.290 m, E 669440.500 m Location Grid N/E Y/X:

CRS Grid Convergence Angle: 1.6162 ° Grid Scale Factor:

Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: Vertical Section Origin: 125.842 ° (Grid North) 4.570 m, 23.981 m TVD Reference Datum:
TVD Reference Elevation: Rotary Table 76.000 m above MSL 80.000 m below MSL -17.919 ° Seabed / Ground Elevation: Magnetic Declination: 1000.8096 mgn (9.8 based) 50108.607 nT

Total Gravity Field Strength: Total Magnetic Field Strength: 65.767 ° October 15, 2013 Magnetic Dip Angle: Declination Date: Magnetic Declination Model: BGGM 2013 Grid North 1.6162 ° North Reference: Grid Convergence Used: Total Corr Mag North->Grid North:

Local Coord Referenced To: Structure Reference Point



Comments	MD (m)	Incl (°)	Azim Grid	Azim True	TVD (m)	VSEC (m)	NS (m)	EW (m)	DLS (%30m)	Northing (m)	Easting (m)	Latitude (N/S ° ' ")	Longitude (E/W °'")
Tie-In / Slot 45	0.00	0.00	0.00	1.62	0.00	0.00	4.57	23.98	N/A	5179815.29	669440.50	N 46 45 1.37	W 48 46 53.57
Seabed	156.91	0.00	0.00	1.62	156.91	0.00	4.57	23.98	0.00	5179815.29	669440.50	N 46 45 1.37	W 48 46 53.57
30" Csg Gyro	165.00	0.03	324.49	326.11	165.00	0.00	4.57	23.98	0.11	5179815.29	669440.50	N 46 45 1.37	W 48 46 53.57
	170.00	0.14	217.05	218.67	170.00	0.00	4.57	23.98	0.91	5179815.29	669440.49	N 46 45 1.37	W 48 46 53.57
	175.00	0.19	256.89	258.51	175.00	-0.01	4.56	23.96	0.73	5179815.28	669440.48	N 46 45 1.37 N 46 45 1.37	W 48 46 53.57 W 48 46 53.57
	180.00 185.00	0.15 0.19	238.41 212.11	240.03 213.73	180.00 185.00	-0.02 -0.02	4.56 4.55	23.95 23.94	0.40 0.52	5179815.28 5179815.27	669440.47 669440.46	N 46 45 1.37 N 46 45 1.37	W 48 46 53.57 W 48 46 53.57
	190.00	0.26	218.05	219.67	190.00	-0.02	4.53	23.93	0.44	5179815.25	669440.45	N 46 45 1.37	W 48 46 53.57
	195.00	0.24	218.77	220.39	195.00	-0.02	4.51	23.92	0.12	5179815.23	669440.43	N 46 45 1.37	W 48 46 53.57
	200.00	0.26	214.13	215.75	200.00	-0.02	4.50	23.90	0.17	5179815.21	669440.42	N 46 45 1.37	W 48 46 53.57
	205.00	0.21	195.00	196.62	205.00	-0.02	4.48	23.89	0.55	5179815.20	669440.41	N 46 45 1.37	W 48 46 53.57
	210.00	0.24	233.44	235.06	210.00	-0.02	4.46	23.88	0.90	5179815.18	669440.40	N 46 45 1.37	W 48 46 53.58
	215.00 220.00	0.15 0.17	224.58 213.08	226.20 214.70	215.00	-0.02	4.45 4.44	23.87 23.86	0.57 0.23	5179815.17 5179815.16	669440.39 669440.38	N 46 45 1.37 N 46 45 1.37	W 48 46 53.58 W 48 46 53.58
	225.00	0.17	215.55	217.17	220.00 225.00	-0.02 -0.02	4.43	23.85	0.23	5179815.16	669440.37	N 46 45 1.37	W 48 46 53.58
	230.00	0.15	183.16	184.78	230.00	-0.02	4.41	23.85	0.69	5179815.13	669440.36	N 46 45 1.36	W 48 46 53.58
	235.00	0.16	179.01	180.63	235.00	-0.01	4.40	23.85	0.09	5179815.12	669440.36	N 46 45 1.36	W 48 46 53.58
	240.00	0.16	214.82	216.44	240.00	-0.01	4.39	23.84	0.59	5179815.11	669440.36	N 46 45 1.36	W 48 46 53.58
	245.00	0.25	195.09	196.71	245.00	0.00	4.37	23.84	0.68	5179815.09	669440.35	N 46 45 1.36	W 48 46 53.58
	250.00	0.13	213.87	215.49	250.00	0.00	4.35	23.83	0.80	5179815.07	669440.35	N 46 45 1.36	W 48 46 53.58 W 48 46 53.58
	255.00 260.00	0.08	198.29 188.32	199.91 189.94	255.00 260.00	0.00	4.35 4.34	23.82 23.82	0.34 0.32	5179815.07 5179815.06	669440.34 669440.34	N 46 45 1.36 N 46 45 1.36	W 48 46 53.58 W 48 46 53.58
	265.00	0.15	125.30	126.92	265.00	0.02	4.33	23.83	0.88	5179815.05	669440.35	N 46 45 1.36	W 48 46 53.58
	270.00	0.10	179.21	180.83	270.00	0.03	4.32	23.83	0.73	5179815.04	669440.35	N 46 45 1.36	W 48 46 53.58
	275.00	0.09	249.52	251.14	275.00	0.03	4.31	23.83	0.66	5179815.03	669440.35	N 46 45 1.36	W 48 46 53.58
	280.00	0.14	257.55	259.17	280.00	0.02	4.31	23.82	0.31	5179815.03	669440.34	N 46 45 1.36	W 48 46 53.58
	285.00	0.13	227.14	228.76	285.00	0.02	4.31	23.81	0.43	5179815.03	669440.33	N 46 45 1.36	W 48 46 53.58
	290.00	0.11	174.59	176.21	290.00	0.02	4.30	23.81	0.65	5179815.02	669440.32	N 46 45 1.36	W 48 46 53.58
gMWD 1	295.00 311.65	0.08 0.26	153.08 109.03	154.70 110.65	295.00 311.65	0.02 0.07	4.29 4.27	23.81 23.85	0.28 0.38	5179815.01 5179814.99	669440.33 669440.37	N 46 45 1.36 N 46 45 1.36	W 48 46 53.58 W 48 46 53.58
giviviDi	331.67	0.70	89.20	90.82	331.67	0.21	4.25	24.01	0.70	5179814.97	669440.53	N 46 45 1.36	W 48 46 53.57
	366.98	1.49	59.82	61.44	366.97	0.57	4.49	24.63	0.80	5179815.21	669441.15	N 46 45 1.37	W 48 46 53.54
	395.83	2.81	60.52	62.14	395.80	1.02	5.02	25.57	1.37	5179815.74	669442.09	N 46 45 1.38	W 48 46 53.50
	424.27	4.04	61.05	62.67	424.19	1.74	5.85	27.05	1.30	5179816.57	669443.57	N 46 45 1.41	W 48 46 53.42
	453.86	5.98	59.29	60.91	453.67	2.79	7.14	29.29	1.97	5179817.86	669445.81	N 46 45 1.45	W 48 46 53.32
	480.68 493.21	6.77 7.03	59.73	61.35 61.92	480.32	3.99 4.61	8.65 9.41	31.85 33.16	0.89 0.64	5179819.37 5179820.13	669448.37 669449.68	N 46 45 1.49 N 46 45 1.52	W 48 46 53.19
gMWD 2	512.41	6.18	60.30 58.94	60.56	492.76 511.83	5.50	10.52	35.06	1.35	5179820.13	669451.58	N 46 45 1.52 N 46 45 1.55	W 48 46 53.13 W 48 46 53.04
givivo z	527.73	6.27	56.83	58.45	527.06	6.12	11.41	36.47	0.48	5179822.12	669452.99	N 46 45 1.58	W 48 46 52.97
	542.30	6.36	57.01	58.63	541.54	6.70	12.28	37.81	0.19	5179823.00	669454.33	N 46 45 1.61	W 48 46 52.91
	557.44	6.71	57.36	58.98	556.58	7.33	13.21	39.26	0.70	5179823.93	669455.78	N 46 45 1.64	W 48 46 52.84
	572.03	6.96	57.80	59.42	571.07	7.97	14.14	40.73	0.53	5179824.86	669457.25	N 46 45 1.66	W 48 46 52.77
	586.69	6.71 6.27	58.94	60.56	585.63	8.64	15.06	42.21	0.58 0.84	5179825.78	669458.73	N 46 45 1.69 N 46 45 1.72	W 48 46 52.70
	602.46 616.56	6.09	59.20 58.94	60.82 60.56	601.29 615.31	9.34 9.94	15.98 16.76	43.74 45.04	0.84	5179826.70 5179827.48	669460.26 669461.56	N 46 45 1.72 N 46 45 1.75	W 48 46 52.62 W 48 46 52.56
	630.22	6.27	58.59	60.21	628.89	10.51	17.52	46.30	0.40	5179828.24	669462.82	N 46 45 1.77	W 48 46 52.50
	646.85	6.27	58.59	60.21	645.42	11.21	18.47	47.85	0.00	5179829.18	669464.37	N 46 45 1.80	W 48 46 52.43
	663.22	6.53	57.62	59.24	661.69	11.90	19.43	49.40	0.52	5179830.15	669465.92	N 46 45 1.83	W 48 46 52.35
	675.52	6.62	55.60	57.22	673.91	12.40	20.20	50.58	0.61	5179830.92	669467.09	N 46 45 1.85	W 48 46 52.30
	689.20	6.53	56.39	58.01	687.50	12.94	21.08	51.87	0.28	5179831.80	669468.39	N 46 45 1.88	W 48 46 52.23
	704.76 719.50	6.62 6.71	56.66 57.53	58.28 59.15	702.96 717.60	13.57 14.19	22.06 22.99	53.36 54.80	0.18 0.28	5179832.78 5179833.71	669469.88 669471.31	N 46 45 1.91 N 46 45 1.94	W 48 46 52.16 W 48 46 52.09
	733.22	6.53	58.76	60.38	731.23	14.79	23.83	56.14	0.50	5179834.55	669472.66	N 46 45 1.94 N 46 45 1.96	W 48 46 52.03
	748.50	5.74	61.23	62.85	746.42	15.46	24.65	57.55	1.63	5179835.37	669474.07	N 46 45 1.99	W 48 46 51.96
	763.36	5.04	61.58	63.20	761.21	16.06	25.31	58.78	1.41	5179836.03	669475.30	N 46 45 2.01	W 48 46 51.90
	778.28	5.39	61.75	63.37	776.07	16.65	25.96	59.97	0.70	5179836.68	669476.49	N 46 45 2.03	W 48 46 51.85
	792.53	6.36	60.79	62.41	790.25	17.28	26.66	61.25	2.05	5179837.38	669477.77	N 46 45 2.05	W 48 46 51.79
	807.83	7.58	59.82	61.44	805.43	18.04	27.58	62.86	2.40	5179838.30	669479.38	N 46 45 2.08	W 48 46 51.71
	822.48 836.69	8.55 9.33	59.64 60.00	61.26 61.62	819.94 833.98	18.88 19.77	28.62 29.73	64.64 66.55	1.99 1.65	5179839.34 5179840.45	669481.15 669483.06	N 46 45 2.11 N 46 45 2.15	W 48 46 51.62 W 48 46 51.53
	851.81	10.12	60.43	62.05	848.88	20.83	31.00	68.76	1.57	5179840.45	669485.28	N 46 45 2.18	W 48 46 51.33 W 48 46 51.43
	866.96	10.65	61.14	62.76	863.78	21.98	32.33	71.15	1.08	5179843.05	669487.66	N 46 45 2.23	W 48 46 51.31
	880.97	10.73	59.73	61.35	877.55	23.06	33.61	73.41	0.59	5179844.33	669489.92	N 46 45 2.26	W 48 46 51.20
	910.82	11.69	59.91	61.53	906.83	25.42	36.53	78.42	0.97	5179847.25	669494.94	N 46 45 2.35	W 48 46 50.96
	940.33	13.01	64.30	65.92	935.65	28.22	39.47	84.00	1.65	5179850.18	669500.52	N 46 45 2.44	W 48 46 50.70
	969.78	14.16	63.77	65.39	964.28	31.49	42.50	90.22	1.18	5179853.21	669506.74	N 46 45 2.54	W 48 46 50.40 W 48 46 50.07
	999.58	15.64	64.39	66.01	993.08	35.12	45.84	97.11	1.50	5179856.56	669513.63	N 46 45 2.64	
	1028.85 1058.29	16.88 17.76	64.74 66.06	66.36 67.68	1021.18 1049.28	39.06 43.38	49.36 53.01	104.52 112.49	1.27 0.98	5179860.08 5179863.73	669521.03 669529.00	N 46 45 2.75 N 46 45 2.86	W 48 46 49.72 W 48 46 49.34
	1087.69	18.80	68.17	69.79	1077.20	48.17	56.59	120.98	1.26	5179867.31	669537.50	N 46 45 2.97	W 48 46 48.93
	1116.92	19.68	69.75	71.37	1104.79	53.44	60.04	129.97	1.05	5179870.76	669546.49	N 46 45 3.07	W 48 46 48.51
	1146.70	20.47	73.35	74.97	1132.77	59.40	63.27	139.67	1.48	5179873.99	669556.18	N 46 45 3.16	W 48 46 48.04
	1176.01	21.00	73.00	74.62	1160.18	65.70	66.28	149.60	0.56	5179876.99	669566.11	N 46 45 3.25	W 48 46 47.57
	1205.48	23.55	73.62	75.24	1187.45	72.49	69.48	160.30	2.61	5179880.20	669576.81	N 46 45 3.35	W 48 46 47.06
	1235.21	23.46	75.46	77.08	1214.71	79.91	72.64	171.72	0.75	5179883.36	669588.24	N 46 45 3.44	W 48 46 46.52
	1264.67 1294.22	23.11 25.04	76.34 78.10	77.96 79.72	1241.77 1268.75	87.40 95.37	75.48 78.14	183.02 194.77	0.50 2.09	5179886.20 5179888.86	669599.53 669611.29	N 46 45 3.52 N 46 45 3.60	W 48 46 45.99 W 48 46 45.43
	1322.80	25.04	82.23	83.85	1294.39	104.21	78.14 80.28	207.21	3.14	5179888.86	669623.72	N 46 45 3.60 N 46 45 3.65	W 48 46 45.43 W 48 46 44.84
GRS 1	1341.15	27.77	81.13	82.75	1310.65	110.30	81.51	215.62	1.02	5179892.22	669632.13	N 46 45 3.69	W 48 46 44.44
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Comments	MD (m)	Incl (°)	Azim Grid	Azim True	TVD (m)	VSEC (m)	NS (m)	EW (m)	DLS (%30m)	Northing (m)	Easting (m)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	1356.11 1385.55	28.32	81.79	83.41 85.40	1323.85 1349.67	115.33 125.67	82.55 84.32	222.58	1.27 1.30	5179893.27 5179895.04	669639.09	N 46 45 3.71 N 46 45 3.76	W 48 46 44.11 W 48 46 43.45
	1414.90	29.16 29.80	83.78 85.84	87.46	1375.22	136.57	85.63	236.62 251.00	1.23	5179896.34	669653.13 669667.51	N 46 45 3.79	W 48 46 42.77
	1444.48	30.35	88.01	89.63	1400.82	148.10	86.42	265.80	1.24	5179897.14	669682.31	N 46 45 3.80	W 48 46 42.07
	1474.03 1503.56	30.99 31.86	90.29 92.44	91.91 94.06	1426.23 1451.43	160.19 172.88	86.64 86.27	280.87 296.26	1.35 1.44	5179897.36 5179896.99	669697.38 669712.77	N 46 45 3.79 N 46 45 3.77	W 48 46 41.36 W 48 46 40.64
	1532.86	33.49	94.84	96.46	1476.10	186.27	85.26	312.04	2.13	5179895.98	669728.55	N 46 45 3.72	W 48 46 39.90
	1562.27 1591.80	34.87 36.53	97.35 99.73	98.97 101.35	1500.43 1524.41	200.61 215.92	83.50 80.93	328.47 345.51	2.01 2.20	5179894.22 5179891.65	669744.97 669762.01	N 46 45 3.65 N 46 45 3.55	W 48 46 39.13 W 48 46 38.33
	1650.45	37.45	101.27	102.89	1571.26	247.82	74.50	380.20	0.67	5179885.22	669796.70	N 46 45 3.31	W 48 46 36.70
	1680.47 1709.87	38.15 39.86	101.69 103.22	103.31 104.84	1594.98 1617.82	264.58 281.56	70.84 66.84	398.23 416.30	0.75 2.00	5179881.55 5179877.56	669814.73 669832.80	N 46 45 3.17 N 46 45 3.03	W 48 46 35.86 W 48 46 35.01
	1739.11	41.57	104.62	106.24	1639.98	299.25	62.25	434.81	1.99	5179872.97	669851.31	N 46 45 2.86	W 48 46 34.15
	1768.38 1798.43	43.13 44.72	106.91 109.29	108.53 110.91	1661.62 1683.26	317.77 337.63	56.89 50.41	453.78 473.59	2.25 2.29	5179867.61 5179861.12	669870.28 669890.08	N 46 45 2.67 N 46 45 2.44	W 48 46 33.26 W 48 46 32.33
	1827.06	46.23	111.33	112.95	1703.34	357.29	43.32	492.73	2.20	5179854.04	669909.22	N 46 45 2.20	W 48 46 31.44
	1856.46 1886.23	47.84 49.48	113.40 115.59	115.02 117.21	1723.38 1743.04	378.21 400.12	35.13 25.86	512.62 532.95	2.26 2.34	5179845.85 5179836.58	669929.11 669949.45	N 46 45 1.91 N 46 45 1.59	W 48 46 30.52 W 48 46 29.57
	1915.79	51.16	117.86	119.48	1761.92	422.58	15.62	553.27	2.46	5179826.34	669969.76	N 46 45 1.24	W 48 46 28.63
	1945.09 1974.59	52.59 54.91	120.08 121.75	121.70 123.37	1780.01 1797.45	445.46 469.16	4.46 -7.77	573.43 593.83	2.31 2.73	5179815.18 5179802.95	669989.92 670010.32	N 46 45 0.86 N 46 45 0.45	W 48 46 27.69 W 48 46 26.75
	2004.00	56.58	123.67	125.29	1814.00	493.43	-20.91	614.28	2.35	5179789.82	670030.77	N 46 45 0.01	W 48 46 25.80
	2033.13 2062.29	58.67 60.43	126.07 128.20	127.69 129.82	1829.60 1844.38	518.03 543.16	-34.97 -50.15	634.46 654.49	3.00 2.62	5179775.75 5179760.57	670050.95 670070.98	N 46 44 59.53 N 46 44 59.02	W 48 46 24.87 W 48 46 23.95
	2092.33	61.80	129.94	131.56	1858.89	569.42	-66.73	674.91	2.05	5179743.99	670091.40	N 46 44 58.47	W 48 46 23.01
	2121.17 2150.32	63.75 66.08	131.79 133.08	133.41 134.70	1872.09 1884.44	594.96 621.18	-83.51 -101.32	694.30 713.78	2.65 2.68	5179727.21 5179709.40	670110.79 670130.27	N 46 44 57.91 N 46 44 57.31	W 48 46 22.12 W 48 46 21.23
	2179.83	68.26	134.42	136.04	1895.89	648.12	-120.13	733.42	2.55	5179709.40	670130.27	N 46 44 56.68	W 48 46 20.33
	2209.10	70.74	135.22	136.84	1906.14	675.20	-139.46	752.87	2.66	5179671.27	670169.35	N 46 44 56.04 N 46 44 55.38	W 48 46 19.44 W 48 46 18.53
	2238.68 2266.87	71.59 71.70	135.41 135.58	137.03 137.20	1915.69 1924.57	702.81 729.19	-159.36 -178.44	772.56 791.31	0.88 0.21	5179651.37 5179632.29	670189.04 670207.79	N 46 44 55.38 N 46 44 54.74	W 48 46 18.53 W 48 46 17.68
	2296.61	71.65	136.28	137.90	1933.92	756.98	-198.73	810.95	0.67	5179612.00	670227.43	N 46 44 54.07	W 48 46 16.78
	2326.09 2355.72	71.73 71.70	136.95 137.69	138.57 139.31	1943.18 1952.48	784.48 812.05	-219.07 -239.75	830.17 849.24	0.65 0.71	5179591.66 5179570.98	670246.65 670265.72	N 46 44 53.39 N 46 44 52.71	W 48 46 15.90 W 48 46 15.03
	2385.17	71.60	138.12	139.74	1961.75	839.38	-260.49	867.98	0.43	5179550.24	670284.46	N 46 44 52.02	W 48 46 14.18
	2414.81 2443.23	71.47 71.44	138.29 137.72	139.91 139.34	1971.14 1980.18	866.85 893.18	-281.45 -301.48	886.72 904.75	0.21 0.57	5179529.28 5179509.26	670303.20 670321.22	N 46 44 51.32 N 46 44 50.66	W 48 46 13.32 W 48 46 12.50
GRS 2	2463.52	71.31	137.73	139.35	1986.66	912.00	-315.70	917.68	0.19	5179495.03	670334.16	N 46 44 50.18	W 48 46 11.91
	2492.09 2520.54	71.10 71.17	137.04 136.37	138.66 137.99	1995.86 2005.06	938.50 964.94	-335.61 -355.20	935.99 954.45	0.72 0.67	5179475.13 5179455.54	670352.47 670370.93	N 46 44 49.52 N 46 44 48.87	W 48 46 11.07 W 48 46 10.23
	2549.28	70.96	135.24	136.86	2014.39	991.71	-374.69	973.40	1.14	5179436.05	670389.88	N 46 44 48.22	W 48 46 9.36
	2577.77 2606.46	70.70 70.41	134.10 133.58	135.72 135.20	2023.74 2033.29	1018.30 1045.09	-393.61 -412.35	992.54 1012.05	1.17 0.60	5179417.13 5179398.39	670409.01 670428.53	N 46 44 47.59 N 46 44 46.97	W 48 46 8.49 W 48 46 7.59
	2634.50	70.30	134.17	135.79	2042.72	1071.24	-430.65	1031.09	0.61	5179380.09	670447.56	N 46 44 46.36	W 48 46 6.72
	2663.66 2692.10	69.71 69.52	134.27 134.44	135.89 136.06	2052.69 2062.60	1098.35 1124.72	-449.76 -468.40	1050.73 1069.79	0.61 0.26	5179360.98 5179342.34	670467.20 670486.26	N 46 44 45.72 N 46 44 45.10	W 48 46 5.82 W 48 46 4.95
	2720.11	69.42	134.48	136.10	2072.42	1150.65	-486.77	1088.51	0.11	5179323.97	670504.98	N 46 44 44.49	W 48 46 4.09
	2749.26 2776.98	69.78 69.78	134.06 133.92	135.68 135.54	2082.58 2092.16	1177.68 1203.43	-505.84 -523.91	1108.08 1126.79	0.55 0.14	5179304.90 5179286.84	670524.54 670543.26	N 46 44 43.85 N 46 44 43.25	W 48 46 3.20 W 48 46 2.34
	2805.28	69.75	133.46	135.08	2101.95	1229.73	-542.25	1145.99	0.14	5179268.49	670562.46	N 46 44 43.25 N 46 44 42.64	W 48 46 1.46
	2834.29	69.71 69.84	133.28	134.90	2112.00	1256.71	-560.94	1165.77	0.18 0.45	5179249.81	670582.24	N 46 44 42.02 N 46 44 41.40	W 48 46 0.55 W 48 45 59.67
	2862.77 2891.38	69.84	133.71 133.76	135.33 135.38	2121.85 2131.74	1283.20 1309.79	-579.33 -597.89	1185.16 1204.56	0.45	5179231.41 5179212.86	670601.62 670621.02	N 46 44 41.40 N 46 44 40.79	W 48 45 59.67 W 48 45 58.78
	2920.04	69.75	134.30	135.92	2141.67	1336.40	-616.58	1223.89	0.53	5179194.17	670640.35	N 46 44 40.16	W 48 45 57.89
	2948.57 2977.13	69.75 69.75	135.56 135.67	137.18 137.29	2151.54 2161.43	1362.83 1389.24	-635.48 -654.63	1242.84 1261.58	1.24 0.11	5179175.27 5179156.12	670659.30 670678.04	N 46 44 39.53 N 46 44 38.90	W 48 45 57.02 W 48 45 56.17
	3005.69	69.58	136.08	137.70	2171.35	1415.61	-673.85	1280.22	0.44	5179136.90	670696.68	N 46 44 38.26	W 48 45 55.32
	3034.19 3062.81	69.62 69.68	135.87 135.90	137.49 137.52	2181.29 2191.24	1441.90 1468.32	-693.06 -712.33	1298.79 1317.47	0.21 0.07	5179117.69 5179098.43	670715.25 670733.92	N 46 44 37.62 N 46 44 36.98	W 48 45 54.47 W 48 45 53.61
	3091.46	69.78	136.06	137.68	2201.16	1494.78	-731.65	1336.14	0.19	5179079.10	670752.60	N 46 44 36.33	W 48 45 52.76
	3120.31 3148.62	69.84 69.84	136.26 135.89	137.88 137.51	2211.12 2220.88	1521.42 1547.57	-751.18 -770.32	1354.90 1373.33	0.20 0.37	5179059.57 5179040.43	670771.35 670789.79	N 46 44 35.69 N 46 44 35.05	W 48 45 51.90 W 48 45 51.06
	3177.50	69.82	135.65	137.27	2230.84	1574.28	-789.75	1392.24	0.23	5179021.01	670808.70	N 46 44 34.40	W 48 45 50.20
	3205.78 3234.18	70.11 70.43	135.77 135.44	137.39 137.06	2240.53 2250.11	1600.45 1626.80	-808.77 -827.87	1410.80 1429.50	0.33 0.47	5179001.99 5178982.89	670827.25 670845.95	N 46 44 33.77 N 46 44 33.13	W 48 45 49.35 W 48 45 48.49
	3263.05	69.95	134.84	136.46	2259.90	1653.60	-847.12	1448.66	0.77	5178963.64	670865.11	N 46 44 32.49	W 48 45 47.62
	3291.51 3320.33	69.97 69.73	134.40 133.63	136.02 135.25	2269.65 2279.58	1680.02 1706.81	-865.90 -884.70	1467.69 1487.14	0.44 0.79	5178944.86 5178926.06	670884.14 670903.59	N 46 44 31.87 N 46 44 31.24	W 48 45 46.74 W 48 45 45.85
	3348.78	69.87	133.20	134.82	2289.40	1733.27	-903.05	1506.54	0.45	5178907.71	670922.99	N 46 44 30.63	W 48 45 44.97
	3376.75 3405.21	69.90 69.72	132.67 132.26	134.29 133.88	2299.02 2308.84	1759.34 1785.87	-920.94 -938.97	1525.77 1545.47	0.53 0.45	5178889.82 5178871.79	670942.22 670961.92	N 46 44 30.03 N 46 44 29.43	W 48 45 44.08 W 48 45 43.18
	3433.19	69.49	132.82	134.44	2318.59	1811.92	-956.71	1564.80	0.61	5178854.06	670981.24	N 46 44 28.84	W 48 45 42.29
	3461.85 3490.22	69.63 69.52	133.48 133.84	135.10 135.46	2328.60 2338.50	1838.55 1864.89	-975.07 -993.43	1584.39 1603.62	0.66 0.38	5178835.69 5178817.34	671000.83 671020.07	N 46 44 28.23 N 46 44 27.61	W 48 45 41.40 W 48 45 40.51
	3518.57	69.74	134.13	135.75	2348.37	1891.20	-1011.88	1622.75	0.37	5178798.88	671039.19	N 46 44 27.00	W 48 45 39.64
	3547.39 3575.82	69.81 69.76	134.01 133.85	135.63 135.47	2358.33 2368.16	1917.97 1944.38	-1030.69 -1049.20	1642.18 1661.39	0.14 0.17	5178780.08 5178761.57	671058.62 671077.83	N 46 44 26.37 N 46 44 25.76	W 48 45 38.75 W 48 45 37.87
	3604.33	69.93	133.65	135.27	2377.98	1970.89	-1067.71	1680.72	0.27	5178743.06	671097.16	N 46 44 25.14	W 48 45 36.98
	3633.05 3661.43	69.60 69.93	133.30 134.01	134.92 135.63	2387.92 2397.73	1997.60 2023.98	-1086.25 -1104.63	1700.28 1719.54	0.49 0.79	5178724.52 5178706.14	671116.72 671135.98	N 46 44 24.52 N 46 44 23.91	W 48 45 36.09 W 48 45 35.21
	3689.65	69.83	133.74	135.36	2407.44	2050.22	-1123.00	1738.64	0.29	5178687.77	671155.08	N 46 44 23.30	W 48 45 34.33
	3718.63 3747.07	69.75 69.64	133.99 135.02	135.61 136.64	2417.45 2427.32	2077.15 2103.51	-1141.84 -1160.54	1758.25 1777.27	0.26 1.03	5178668.93 5178650.23	671174.69 671193.71	N 46 44 22.67 N 46 44 22.04	W 48 45 33.43 W 48 45 32.56
	3747.07	69.82	135.67	137.29	2427.32	2130.07	-1179.69	1777.27	0.66	5178631.08	671212.63	N 46 44 21.41	W 48 45 31.70
	3804.36	69.43	135.67	137.29	2447.22	2156.47	-1198.86	1814.92	0.41	5178611.91	671231.36	N 46 44 20.77	W 48 45 30.84
	3832.88 3861.54	69.48 69.51	135.90 136.43	137.52 138.05	2457.23 2467.26	2182.78 2209.19	-1218.00 -1237.37	1833.55 1852.14	0.23 0.52	5178592.77 5178573.41	671249.98 671268.57	N 46 44 20.13 N 46 44 19.49	W 48 45 29.99 W 48 45 29.14
	3889.95	69.49	136.58	138.20	2477.21	2235.34	-1256.67	1870.46	0.15	5178554.11	671286.89	N 46 44 18.85	W 48 45 28.30
	3918.65 3946.67	69.72 69.55	136.91 136.63	138.53 138.25	2487.22 2496.97	2261.75 2287.55	-1276.26 -1295.40	1888.89 1906.88	0.40 0.33	5178534.52 5178515.38	671305.32 671323.31	N 46 44 18.20 N 46 44 17.56	W 48 45 27.46 W 48 45 26.64
	3975.06	69.75	136.46	138.08	2506.84	2313.70	-1314.73	1925.19	0.27	5178496.06	671341.62	N 46 44 16.92	W 48 45 25.80
	4003.95 4032.16	69.61 69.81	135.80 135.39	137.42 137.01	2516.87 2526.65	2340.36 2366.44	-1334.26 -1353.16	1943.96 1962.48	0.66 0.46	5178476.53 5178457.62	671360.39 671378.91	N 46 44 16.27 N 46 44 15.64	W 48 45 24.95 W 48 45 24.10
	4060.40	69.94	135.42	137.04	2536.37	2392.58	-1372.04	1981.10	0.14	5178438.74	671397.52	N 46 44 15.01	W 48 45 23.25
	4089.03 4117.95	69.80 69.82	135.20 134.67	136.82 136.29	2546.22 2556.21	2419.10 2445.90	-1391.15 -1410.32	2000.00 2019.21	0.26 0.52	5178419.63 5178400.46	671416.43 671435.64	N 46 44 14.37 N 46 44 13.74	W 48 45 22.39 W 48 45 21.51
	4146.47	69.64	134.20	135.82	2566.09	2472.35	-1429.05	2038.32	0.50	5178381.73	671454.74	N 46 44 13.11	W 48 45 20.63
	4174.69 4203.23	69.72 69.72	134.11 133.98	135.73 135.60	2575.89 2585.78	2498.54 2525.04	-1447.49 -1466.10	2057.30 2076.55	0.12 0.13	5178363.30 5178344.69	671473.73 671492.97	N 46 44 12.50 N 46 44 11.88	W 48 45 19.76 W 48 45 18.88
	4231.92	69.60	133.86	135.48	2595.75	2551.67	-1484.76	2095.92	0.17	5178326.03	671512.35	N 46 44 11.26	W 48 45 17.99
	4260.48 4288.45	69.46 69.72	133.62 133.78	135.24 135.40	2605.74 2615.49	2578.17 2604.14	-1503.26 -1521.37	2115.26 2134.21	0.28 0.32	5178307.53 5178289.42	671531.68 671550.63	N 46 44 10.64 N 46 44 10.03	W 48 45 17.11 W 48 45 16.24
	4317.51	69.72	133.78	135.54	2625.57	2631.13	-1540.25	2153.87	0.14	5178270.54	671570.28	N 46 44 9.41	W 48 45 15.34
	4345.95 4374.57	69.52 69.69	133.90 133.83	135.52 135.45	2635.47 2645.44	2657.53 2684.09	-1558.74 -1577.33	2173.07 2192.41	0.21 0.19	5178252.05 5178233.46	671589.49 671608.83	N 46 44 8.79 N 46 44 8.17	W 48 45 14.46 W 48 45 13.58
	4403.16	69.64	134.10	135.72	2655.38	2710.63	-1595.94	2211.71	0.19	5178214.85	671628.12	N 46 44 7.55	W 48 45 12.69
	4431.36	69.84	134.21	135.83	2665.14	2736.81	-1614.37	2230.69	0.24	5178196.42	671647.10	N 46 44 6.94	W 48 45 11.82

Comments	MD (m)	Incl	Azim Grid	Azim True	TVD	VSEC	NS (m)	EW	DLS	Northing	Easting	Latitude (N/S °' ")	Longitude
	(m) 4459.93	(°) 69.55	134.39	136.01	(m) 2675.06	(m) 2763.31	-1633.09	(m) 2249.87	(%30m) 0.35	(m) 5178177.71	(m) 671666.28	N 46 44 6.31	(E/W °'") W 48 45 10.95
	4488.36	69.63	134.52	136.14	2684.97	2789.66	-1651.75	2268.88	0.15	5178159.05	671685.30	N 46 44 5.69	W 48 45 10.08
	4516.59	69.56	134.66	136.28	2694.81	2815.81	-1670.32	2287.73	0.16	5178140.48	671704.14	N 46 44 5.07	W 48 45 9.21
	4545.43	69.59	134.97	136.59	2704.88	2842.50	-1689.37	2306.90	0.30	5178121.43	671723.31	N 46 44 4.44	W 48 45 8.34
	4574.07	69.81	135.34	136.96	2714.82	2869.01	-1708.42	2325.84	0.43	5178102.39	671742.25	N 46 44 3.80	W 48 45 7.47
	4602.76	69.65	135.58	137.20	2724.76	2895.55	-1727.60	2344.72	0.29	5178083.20	671761.13	N 46 44 3.16	W 48 45 6.61
	4630.96	69.52	135.38	137.00	2734.59	2921.60	-1746.44	2363.25	0.24	5178064.36	671779.66	N 46 44 2.54 N 46 44 1.90	W 48 45 5.76
	4659.50 4688.05	69.90 69.80	135.48 135.35	137.10 136.97	2744.49 2754.32	2948.00 2974.43	-1765.51 -1784.60	2382.04 2400.85	0.41 0.17	5178045.29 5178026.20	671798.44 671817.26	N 46 44 1.90 N 46 44 1.27	W 48 45 4.90 W 48 45 4.04
	4716.88	69.75	134.98	136.60	2764.29	3001.12	-1803.78	2419.92	0.37	5178007.02	671836.33	N 46 44 0.63	W 48 45 3.17
	4745.09	69.65	134.38	136.00	2774.08	3027.26	-1822.39	2438.74	0.61	5177988.42	671855.14	N 46 44 0.01	W 48 45 2.31
	4773.91	69.66	134.27	135.89	2784.10	3053.99	-1841.27	2458.07	0.11	5177969.54	671874.47	N 46 43 59.38	W 48 45 1.42
	4802.19	69.60	133.67	135.29	2793.94	3080.24	-1859.68	2477.15	0.60	5177951.13	671893.55	N 46 43 58.77	W 48 45 0.55
	4831.02 4859.58	69.39 69.84	133.89 134.47	135.51 136.09	2804.04 2813.99	3106.98 3133.47	-1878.36 -1897.02	2496.64 2515.84	0.31 0.74	5177932.45 5177913.79	671913.05 671932.24	N 46 43 58.14 N 46 43 57.52	W 48 44 59.66 W 48 44 58.78
	4888.11	69.83	133.94	135.56	2823.82	3159.96	-1915.69	2535.04	0.74	5177895.12	671951.44	N 46 43 56.90	W 48 44 57.90
	4916.43	69.96	133.70	135.32	2833.56	3186.30	-1934.10	2554.23	0.28	5177876.71	671970.63	N 46 43 56.29	W 48 44 57.02
	4944.90	69.80	133.17	134.79	2843.35	3212.80	-1952.48	2573.64	0.55	5177858.33	671990.04	N 46 43 55.67	W 48 44 56.13
	4973.52	69.79	133.67	135.29	2853.24	3239.42	-1970.94	2593.15	0.49	5177839.87	672009.55	N 46 43 55.06	W 48 44 55.24
	5002.35	70.02	133.69	135.31	2863.14	3266.25	-1989.64	2612.73	0.24	5177821.17	672029.13	N 46 43 54.43	W 48 44 54.34
	5030.85 5059.18	69.09 69.42	132.79 133.85	134.41 135.47	2873.10 2883.13	3292.73 3318.99	-2007.94 -2026.11	2632.18 2651.46	1.32 1.11	5177802.88 5177784.70	672048.58 672067.85	N 46 43 53.82 N 46 43 53.22	W 48 44 53.45 W 48 44 52.57
	5087.91	69.60	134.32	135.94	2893.19	3345.63	-2044.84	2670.79	0.50	5177765.98	672087.18	N 46 43 52.59	W 48 44 51.68
	5116.33	68.29	133.05	134.67	2903.40	3371.90	-2063.16	2689.97	1.86	5177747.66	672106.36	N 46 43 51.98	W 48 44 50.81
	5144.66	66.25	132.40	134.02	2914.35	3397.84	-2080.88	2709.16	2.25	5177729.93	672125.55	N 46 43 51.39	W 48 44 49.93
	5173.30	63.17	131.52	133.14	2926.58	3423.59	-2098.20	2728.41	3.33	5177712.62	672144.80	N 46 43 50.81	W 48 44 49.04
	5201.93	60.37	131.74	133.36	2940.12	3448.68	-2114.95	2747.26	2.94	5177695.87	672163.66	N 46 43 50.25	W 48 44 48.18
	5229.90 5258.64	59.13	131.73	133.35 134.27	2954.21	3472.71	-2131.04	2765.29 2783.57	1.33	5177679.78	672181.68 672199.96	N 46 43 49.72 N 46 43 49.16	W 48 44 47.35 W 48 44 46.51
	5258.64 5287.41	59.09 56.66	132.65 133.16	134.27 134.78	2968.97 2984.26	3497.22 3521.40	-2147.60 -2164.18	2/83.57	0.83 2.57	5177663.22 5177646.64	672199.96	N 46 43 49.16 N 46 43 48.61	W 48 44 46.51 W 48 44 45.70
	5315.87	54.49	133.11	134.73	3000.35	3544.69	-2180.23	2818.54	2.29	5177630.59	672234.93	N 46 43 48.07	W 48 44 44.91
	5344.60	53.39	132.45	134.07	3017.26	3567.74	-2196.01	2835.59	1.28	5177614.82	672251.98	N 46 43 47.55	W 48 44 44.13
	5372.68	52.36	132.37	133.99	3034.21	3589.98	-2211.11	2852.12	1.10	5177599.72	672268.51	N 46 43 47.04	W 48 44 43.37
	5401.34	50.78	131.32	132.94	3052.02	3612.31	-2226.09	2868.84	1.86	5177584.74	672285.23	N 46 43 46.54	W 48 44 42.60
	5429.61 5458.32	48.07 46.51	129.18 129.89	130.80 131.51	3070.41 3089.88	3633.71 3654.77	-2239.96 -2253.39	2885.22 2901.49	3.35 1.72	5177570.86 5177557.44	672301.61 672317.88	N 46 43 46.08 N 46 43 45.63	W 48 44 41.85 W 48 44 41.10
	5486.82	44.67	130.53	132.15	3109.83	3675.06	-2266.53	2917.04	2.00	5177544.29	672333.42	N 46 43 45.19	W 48 44 40.39
	5515.20	42.73	130.27	131.89	3130.34	3694.61	-2279.24	2931.97	2.06	5177531.59	672348.35	N 46 43 44.76	W 48 44 39.70
	5543.89	41.05	130.10	131.72	3151.70	3713.71	-2291.60	2946.61	1.76	5177519.23	672362.99	N 46 43 44.35	W 48 44 39.03
	5572.12	38.57	130.29	131.91	3173.39	3731.73	-2303.26	2960.41	2.64	5177507.56	672376.79	N 46 43 43.96	W 48 44 38.40
	5600.48 5629.65	35.86 34.21	130.44 130.03	132.06 131.65	3195.97 3219.85	3748.83 3765.52	-2314.37 -2325.19	2973.48 2986.26	2.87 1.71	5177496.46 5177485.64	672389.86 672402.64	N 46 43 43.59 N 46 43 43.23	W 48 44 37.80 W 48 44 37.21
	5657.32	33.79	129.12	130.74	3242.79	3780.96	-2335.05	2998.19	0.72	5177475.78	672414.57	N 46 43 42.90	W 48 44 36.66
	5686.40	32.59	126.78	128.40	3267.13	3796.87	-2344.84	3010.73	1.81	5177465.99	672427.11	N 46 43 42.57	W 48 44 36.08
	5714.93	31.49	123.83	125.45	3291.31	3812.00	-2353.59	3023.08	2.01	5177457.24	672439.46	N 46 43 42.27	W 48 44 35.52
	5743.30	29.86	121.61	123.23	3315.71	3826.45	-2361.42	3035.25	2.10	5177449.42	672451.63	N 46 43 42.01 N 46 43 41.77	W 48 44 34.95
	5771.82 5800.17	28.29 26.27	120.14 117.96	121.76 119.58	3340.64 3365.84	3840.25 3853.16	-2368.53 -2374.85	3047.14 3058.50	1.81 2.38	5177442.30 5177435.99	672463.52 672474.87	N 46 43 41.77 N 46 43 41.55	W 48 44 34.40 W 48 44 33.88
	5828.72	24.31	115.54	117.16	3391.65	3865.20	-2380.34	3069.38	2.33	5177430.49	672485.76	N 46 43 41.36	W 48 44 33.37
	5857.40	21.81	111.75	113.37	3418.04	3876.17	-2384.86	3079.66	3.04	5177425.97	672496.03	N 46 43 41.21	W 48 44 32.89
	5879.56	19.53	111.70	113.32	3438.77	3883.76	-2387.76	3086.92	3.09	5177423.07	672503.30	N 46 43 41.11	W 48 44 32.56
GRS 3	5902.67	17.03	107.86	109.48	3460.71	3890.73	-2390.23	3093.73	3.60	5177420.61	672510.11	N 46 43 41.02	W 48 44 32.24
	5959.81 5988.30	18.87 19.11	113.39 114.71	115.01 116.33	3515.07 3542.01	3907.71 3916.79	-2396.46 -2400.24	3110.18 3118.65	1.32 0.52	5177414.37 5177410.59	672526.56 672535.02	N 46 43 40.80 N 46 43 40.67	W 48 44 31.47 W 48 44 31.08
	6018.50	19.08	117.40	119.02	3570.55	3926.52	-2404.58	3127.52	0.87	5177410.39	672543.89	N 46 43 40.52	W 48 44 30.67
	6045.20	19.22	121.84	123.46	3595.77	3935.22	-2408.90	3135.13	1.64	5177401.93	672551.50	N 46 43 40.38	W 48 44 30.32
	6074.47	19.76	120.49	122.11	3623.37	3944.95	-2413.96	3143.49	0.72	5177396.88	672559.86	N 46 43 40.21	W 48 44 29.93
	6102.57	19.75	116.79	118.41	3649.81	3954.37	-2418.51	3151.82	1.33	5177392.33	672568.19	N 46 43 40.05	W 48 44 29.54
	6131.61	19.80	111.14	112.76	3677.14	3963.97	-2422.49	3160.79	1.97	5177388.34 5177384.88	672577.16	N 46 43 39.91 N 46 43 39.79	W 48 44 29.13 W 48 44 28.72
	6159.62 6188.22	19.70 19.70	111.74 112.28	113.36 113.90	3703.51 3730.43	3973.14 3982.50	-2425.95 -2429.56	3169.60 3178.53	0.24 0.19	5177384.88	672585.97 672594.90	N 46 43 39.79 N 46 43 39.67	W 48 44 28.30
	6216.98	19.56	111.29	112.91	3757.52	3991.87	-2433.15	3187.50	0.38	5177377.68	672603.87	N 46 43 39.54	W 48 44 27.88
	6244.94	19.53	111.45	113.07	3783.87	4000.93	-2436.56	3196.22	0.07	5177374.28	672612.59	N 46 43 39.43	W 48 44 27.48
	6273.49	19.62	112.70	114.32	3810.77	4010.22	-2440.15	3205.08	0.45	5177370.68	672621.45	N 46 43 39.30	W 48 44 27.06
	6302.11	19.78	117.24	118.86	3837.72	4019.69	-2444.23	3213.82	1.61	5177366.61	672630.19	N 46 43 39.16	W 48 44 26.66
	6330.71	20.09	117.82	119.44	3864.60	4029.34	-2448.73	3222.47	0.39	5177362.10 5177353.29	672638.83	N 46 43 39.01 N 46 43 38.71	W 48 44 26.26 W 48 44 25.43
	6387.49 6416.42	20.80 20.02	114.98 110.36	116.60 111.98	3917.81 3944.92	4048.90 4058.71	-2457.54 -2461.43	3240.23 3249.53	0.64 1.86	5177333.29	672656.60 672665.90	N 46 43 38.57	W 48 44 25.43 W 48 44 25.00
	6446.30	20.07	103.86	105.48	3973.00	4068.40	-2464.44	3259.30	2.24	5177346.39	672675.67	N 46 43 38.46	W 48 44 24.55
	6473.36	19.92	106.08	107.70	3998.43	4077.04	-2466.83	3268.24	0.86	5177344.01	672684.61	N 46 43 38.38	W 48 44 24.13
	6501.69	20.00	110.91	112.53	4025.06	4086.27	-2469.90	3277.40	1.75	5177340.94	672693.77	N 46 43 38.27	W 48 44 23.70
	6530.37	20.51	114.02	115.64	4051.96	4095.92	-2473.69	3286.57	1.25	5177337.14	672702.94	N 46 43 38.14	W 48 44 23.27
	6558.74 6587.20	20.25 19.96	113.15 107.90	114.77 109.52	4078.56 4105.28	4105.58 4115.01	-2477.65 -2481.08	3295.63 3304.78	0.42 1.93	5177333.19 5177329.76	672711.99 672721.14	N 46 43 38.00 N 46 43 37.88	W 48 44 22.85 W 48 44 22.43
	6616.01	20.24	101.39	103.01	4132.34	4124.22	-2483.57	3314.35	2.35	5177327.27	672730.71	N 46 43 37.79	W 48 44 21.98
	6643.95	19.87	95.24	96.86	4158.59	4132.71	-2484.96	3323.81	2.30	5177325.88	672740.18	N 46 43 37.74	W 48 44 21.54
	6672.89	19.86	88.67	90.29	4185.81	4140.86	-2485.29	3333.63	2.31	5177325.54	672749.99	N 46 43 37.72	W 48 44 21.07
	6701.51	20.08	82.59	84.21	4212.72	4148.31	-2484.55	3343.36	2.19	5177326.29	672759.72	N 46 43 37.73	W 48 44 20.62
	6729.75 6757.96	20.01 20.35	80.41 78.72	82.03 80.34	4239.25 4265.72	4155.23 4161.96	-2483.12 -2481.35	3352.93 3362.50	0.80 0.72	5177327.72 5177329.48	672769.29 672778.86	N 46 43 37.77 N 46 43 37.82	W 48 44 20.16 W 48 44 19.71
	6786.34	20.35	78.37	79.99	4292.33	4168.66	-2479.39	3372.19	0.72	5177329.48	672788.55	N 46 43 37.82 N 46 43 37.88	W 48 44 19.71 W 48 44 19.25
	6815.07	19.88	78.49	80.11	4319.30	4175.35	-2477.41	3381.88	0.54	5177333.43	672798.24	N 46 43 37.93	W 48 44 18.79
	6843.58	20.03	74.38	76.00	4346.10	4181.68	-2475.13	3391.33	1.48	5177335.71	672807.69	N 46 43 38.00	W 48 44 18.34
	6872.24	20.32	75.85	77.47	4373.00	4187.94	-2472.59	3400.88	0.61	5177338.25	672817.24	N 46 43 38.07	W 48 44 17.89
	6900.79 6929.17	20.32 20.51	75.86 72.83	77.48 74.45	4399.78 4426.37	4194.31 4200.47	-2470.17 -2467.49	3410.50 3420.02	0.00 1.14	5177340.67 5177343.34	672826.85 672836.38	N 46 43 38.14 N 46 43 38.22	W 48 44 17.44 W 48 44 16.98
	6947.51	20.03	64.69	66.31	4443.58	4203.92	-2465.20	3425.93	4.68	5177345.63	672842.29	N 46 43 38.28	W 48 44 16.70
Proj to TD	6971.00	20.00	63.90	65.52	4465.65	4207.75	-2461.71	3433.18	0.35	5177349.12	672849.54	N 46 43 38.39	W 48 44 16.36

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma Survey Program:

| Description | MD From (m) | MD To (m) | EOU Freq (m) | Hole Size (mm) | Casing Diameter (mm) | Cum (m) | Survey Tool Type | Borehole / Survey Tool Type |