

## Hobart 8-67-1-4H MWD+GYRO 0' to 12432' Definitive Surveys

(Def Survey)

**Report Date:** May 13, 2011 - 02:55 PM  
**Client:** Anadarko  
**Field:** CO, Weld County (NAD 83 NZ)  
**Structure / Slot:** Anadarko 01-08N-67W (Hobart 8-67-1-4H) - SST 54  
**Well:** Hobart 8-67-1-4H  
**Borehole:** Original Hole  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Hobart 8-67-1-4H MWD+GYRO 0' to 12432' Definitive  
**Survey Date:** May 11, 2011  
**Tort / AHD / DDI / ERD Ratio:** 242.337 ° / 6127.809 ft / 6.399 / 0.832  
**Coordinate Reference System:** NAD83 Colorado State Plane, Northern Zone, US Feet  
**Location Lat / Long:** N 40° 41' 41.39900", W 104° 50' 47.61200"  
**Location Grid N/E Y/X:** N 1496638.714 ftUS, E 3181196.972 ftUS  
**CRS Grid Convergence Angle:** 0.42221016 °  
**Grid Scale Factor:** 0.99998684

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 123.172 ° (True North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** RKB  
**TVD Reference Elevation:** 5354.000 ft above MSL  
**Seabed / Ground Elevation:** 5329.000 ft above MSL  
**Magnetic Declination:** 8.903 °  
**Total Field Strength:** 53263.883 nT  
**Magnetic Dip Angle:** 67.290 °  
**Declination Date:** May 11, 2011  
**Magnetic Declination Model:** BGGM 2010  
**North Reference:** True North  
**Grid Convergence Used:** 0.000 °  
**Total Corr Mag North->True North:** 8.903 °  
**Local Coord Referenced To:** Well Head

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (7100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	1496638.71	3181196.97	N 40 41 41.40 W 104 50 47.61	
Begin GYRO	125.00	0.08	308.24	125.00	-0.09	0.05	-0.07	0.06	1496638.77	3181196.90	N 40 41 41.40 W 104 50 47.61	
Survey	225.00	0.31	287.42	225.00	-0.42	0.18	-0.38	0.24	1496638.89	3181196.59	N 40 41 41.40 W 104 50 47.62	
	325.00	0.19	228.63	325.00	-0.72	0.15	-0.76	0.27	1496638.86	3181196.21	N 40 41 41.40 W 104 50 47.62	
	425.00	0.31	258.56	425.00	-0.96	-0.01	-1.15	0.17	1496638.69	3181195.82	N 40 41 41.40 W 104 50 47.63	
	525.00	0.19	231.02	525.00	-1.20	-0.17	-1.55	0.17	1496638.53	3181195.43	N 40 41 41.40 W 104 50 47.63	
	625.00	0.08	179.40	625.00	-1.21	-0.35	-1.68	0.15	1496638.36	3181195.30	N 40 41 41.40 W 104 50 47.63	
	725.00	0.06	157.44	725.00	-1.13	-0.46	-1.66	0.03	1496638.24	3181195.32	N 40 41 41.39 W 104 50 47.63	
	825.00	0.24	156.89	825.00	-0.91	-0.70	-1.55	0.18	1496638.00	3181195.42	N 40 41 41.39 W 104 50 47.63	
	925.00	0.33	141.48	924.99	-0.47	-1.12	-1.29	0.12	1496637.58	3181195.69	N 40 41 41.39 W 104 50 47.63	
	1025.00	0.37	125.43	1024.99	0.13	-1.54	-0.85	0.11	1496637.17	3181196.13	N 40 41 41.38 W 104 50 47.62	
	1125.00	0.47	151.87	1124.99	0.81	-2.08	-0.39	0.22	1496636.63	3181196.59	N 40 41 41.38 W 104 50 47.62	
	1225.00	0.45	146.41	1224.99	1.53	-2.77	0.02	0.05	1496635.94	3181197.01	N 40 41 41.37 W 104 50 47.61	
Tie-Into GYRO	1315.00	0.45	149.87	1314.98	2.17	-3.37	0.39	0.03	1496635.34	3181197.39	N 40 41 41.37 W 104 50 47.61	
Surveys	1323.00	0.42	151.65	1322.98	2.23	-3.43	0.42	0.36	1496635.29	3181197.42	N 40 41 41.37 W 104 50 47.61	
9 5/8" Csg												
Begin SLB MWD	1418.00	0.21	204.03	1417.98	2.56	-3.90	0.52	0.36	1496634.82	3181197.52	N 40 41 41.36 W 104 50 47.61	
Surveys	1449.00	0.31	184.34	1448.98	2.61	-4.03	0.49	0.43	1496634.69	3181197.49	N 40 41 41.36 W 104 50 47.61	
	1481.00	0.28	255.68	1480.98	2.60	-4.14	0.41	1.08	1496634.58	3181197.41	N 40 41 41.36 W 104 50 47.61	
	1512.00	1.00	300.70	1511.98	2.28	-4.02	0.10	2.67	1496634.70	3181197.10	N 40 41 41.36 W 104 50 47.61	
	1544.00	1.94	316.17	1543.97	1.47	-3.48	-0.52	3.16	1496635.23	3181196.48	N 40 41 41.36 W 104 50 47.62	
	1575.00	2.94	313.76	1574.94	0.18	-2.56	-1.45	3.24	1496636.15	3181195.54	N 40 41 41.37 W 104 50 47.63	
	1607.00	4.01	311.69	1606.88	-1.73	-1.24	-2.88	3.37	1496637.45	3181194.10	N 40 41 41.39 W 104 50 47.65	
	1638.00	4.97	312.71	1637.79	-4.13	0.39	-4.68	3.11	1496639.07	3181192.29	N 40 41 41.40 W 104 50 47.67	
	1670.00	5.96	314.63	1669.64	-7.12	2.50	-6.88	3.15	1496641.16	3181190.08	N 40 41 41.42 W 104 50 47.70	
	1701.00	6.87	315.94	1700.45	-10.51	4.96	-9.31	2.97	1496643.60	3181187.62	N 40 41 41.45 W 104 50 47.73	
	1798.00	7.97	317.66	1796.63	-22.68	14.10	-17.88	1.16	1496652.68	3181178.99	N 40 41 41.54 W 104 50 47.84	
	1893.00	7.55	317.94	1890.76	-35.09	23.60	-26.49	0.44	1496662.12	3181170.30	N 40 41 41.63 W 104 50 47.96	
	1987.00	7.24	317.09	1983.98	-46.81	32.52	-34.66	0.35	1496670.98	3181162.07	N 40 41 41.72 W 104 50 48.06	
	2082.00	8.05	317.50	2078.13	-59.07	41.81	-43.23	0.85	1496680.21	3181153.43	N 40 41 41.81 W 104 50 48.17	
	2177.00	8.06	317.12	2172.20	-71.97	51.60	-52.26	0.06	1496689.92	3181144.33	N 40 41 41.91 W 104 50 48.29	
	2272.00	7.68	316.16	2266.30	-84.62	61.06	-61.19	0.42	1496699.32	3181135.34	N 40 41 42.00 W 104 50 48.41	
	2366.00	7.10	311.36	2359.52	-96.49	69.43	-69.90	0.90	1496707.62	3181126.56	N 40 41 42.08 W 104 50 48.52	
	2461.00	7.12	301.15	2453.80	-108.19	76.35	-79.34	1.33	1496714.48	3181117.07	N 40 41 42.15 W 104 50 48.64	
	2555.00	7.77	299.97	2547.00	-120.36	82.54	-89.84	0.71	1496720.59	3181106.53	N 40 41 42.21 W 104 50 48.78	
	2650.00	7.52	297.55	2641.16	-132.95	88.62	-100.91	0.43	1496726.59	3181095.41	N 40 41 42.27 W 104 50 48.92	
	2743.00	7.29	295.22	2733.38	-144.85	93.95	-111.64	0.41	1496731.84	3181084.64	N 40 41 42.33 W 104 50 49.06	
	2838.00	8.79	295.42	2827.45	-158.02	99.63	-123.65	1.58	1496737.43	3181072.59	N 40 41 42.38 W 104 50 49.22	
	2933.00	9.46	295.31	2921.24	-172.94	106.09	-137.27	0.71	1496743.79	3181058.93	N 40 41 42.45 W 104 50 49.39	
	3027.00	9.69	295.22	3013.93	-188.43	112.76	-151.41	0.25	1496750.36	3181044.74	N 40 41 42.51 W 104 50 49.58	
	3122.00	9.33	294.57	3107.63	-203.96	119.37	-165.64	0.40	1496756.86	3181030.46	N 40 41 42.58 W 104 50 49.76	
	3216.00	9.00	293.32	3200.43	-218.74	125.45	-179.32	0.41	1496762.84	3181016.73	N 40 41 42.64 W 104 50 49.94	
	3310.00	8.67	292.63	3293.31	-232.95	131.09	-192.62	0.37	1496768.38	3181003.40	N 40 41 42.69 W 104 50 50.11	
	3405.00	8.05	291.13	3387.30	-246.49	136.24	-205.43	0.69	1496773.43	3180990.55	N 40 41 42.75 W 104 50 50.28	
	3499.00	7.47	287.65	3480.44	-258.82	140.46	-217.39	0.79	1496777.57	3180978.55	N 40 41 42.79 W 104 50 50.43	
	3594.00	6.82	285.57	3574.70	-270.15	143.85	-228.71	0.74	1496780.87	3180967.21	N 40 41 42.82 W 104 50 50.58	
	3688.00	6.83	283.88	3668.04	-280.74	146.69	-239.51	0.21	1496783.63	3180956.39	N 40 41 42.85 W 104 50 50.72	
	3783.00	7.51	290.48	3762.30	-292.13	150.22	-250.81	1.12	1496787.08	3180945.06	N 40 41 42.88 W 104 50 50.87	
	3877.00	8.16	292.50	3855.42	-304.68	154.92	-262.73	0.75	1496791.69	3180933.11	N 40 41 42.93 W 104 50 51.02	
	3972.00	8.86	293.21	3949.37	-318.51	160.38	-275.68	0.75	1496797.06	3180920.12	N 40 41 42.98 W 104 50 51.19	
	4066.00	9.62	295.35	4042.15	-333.42	166.60	-289.44	0.89	1496803.17	3180906.32	N 40 41 43.05 W 104 50 51.37	
	4161.00	10.55	296.73	4135.68	-349.93	173.91	-304.38	1.01	1496810.37	3180891.33	N 40 41 43.12 W 104 50 51.56	
	4255.00	10.28	303.52	4228.14	-366.87	182.41	-319.06	1.34	1496818.77	3180876.59	N 40 41 43.20 W 104 50 51.75	
	4350.00	9.33	304.74	4321.75	-383.04	191.48	-332.45	1.02	1496827.74	3180863.12	N 40 41 43.29 W 104 50 51.93	
	4445.00	6.59	306.16	4415.83	-396.19	199.09	-343.18	2.89	1496835.26	3180852.34	N 40 41 43.37 W 104 50 52.07	
	4539.00	5.94	305.56	4509.26	-406.43	205.10	-351.49	0.69	1496841.21	3180843.98	N 40 41 43.43 W 104 50 52.18	
	4634.00	6.02	302.15	4603.75	-416.32	210.61	-359.71	0.38	1496846.66	3180835.72	N 40 41 43.48 W 104 50 52.28	
	4728.00	6.19	304.18	4697.21	-426.32	216.08	-368.08	0.29	1496852.07	3180827.32	N 40 41 43.53 W 104 50 52.39	
	4823.00	6.18	305.65	4791.66	-436.55	221.94	-376.47	0.17	1496857.87	3180818.88	N 40 41 43.59 W 104 50 52.50	
	4917.00	6.07	305.11	4885.12	-446.57	227.74	-384.65	0.13	1496863.61	3180810.66	N 40 41 43.65 W 104 50 52.61	
	5012.00	5.86	304.26	4979.61	-456.44	233.36	-392.76	0.24	1496869.17	3180802.51	N 40 41 43.70 W 104 50 52.71	
	5107.00	6.89	308.50	5074.02	-466.96	239.64	-401.23	1.19	1496875.39	3180793.99	N 40 41 43.77 W 104 50 52.82	
	5202.00	7.53	309.27	5168.27	-478.83	247.13	-410.51	0.68	1496882.81	3180784.66	N 40 41 43.84 W 104 50 52.94	
	5296.00	6.99	310.03	5261.52	-490.63	254.71	-419.66	0.58	1496890.32	3180775.45	N 40 41 43.92 W 104 50 53.06	
	5391.00	5.69	308.88	5355.93	-501.06	261.38	-427.75	1.37	1496896.93	3180767.31	N 40 41 43.98 W 104 50 53.17	
	5485.00	6.05	307.17	5449.44	-510.63	267.30	-435.33	0.43	1496902.79	3180759.70	N 40 41 44.04 W 104 50 53.26	

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (7100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	5580.00	6.70	302.41	5543.85	-521.17	273.29	-443.99	0.88	1496908.72	3180750.98	N 40 41 44.10 W 104 50 53.38	
	5674.00	5.51	299.67	5637.32	-531.16	278.47	-452.54	1.30	1496913.83	3180742.39	N 40 41 44.15 W 104 50 53.49	
	5769.00	5.75	303.88	5731.86	-540.47	283.38	-460.46	0.50	1496918.69	3180734.44	N 40 41 44.20 W 104 50 53.59	
	5863.00	6.65	297.50	5825.31	-550.59	288.51	-469.20	1.20	1496923.76	3180725.67	N 40 41 44.25 W 104 50 53.70	
	5958.00	7.12	302.67	5919.63	-561.95	294.23	-479.03	0.82	1496929.40	3180715.79	N 40 41 44.31 W 104 50 53.83	
	6052.00	8.04	304.24	6012.80	-574.35	301.08	-489.37	1.00	1496936.17	3180705.40	N 40 41 44.37 W 104 50 53.97	
	6147.00	6.76	305.09	6107.01	-586.58	308.03	-499.44	1.35	1496943.05	3180695.29	N 40 41 44.44 W 104 50 54.10	
	6242.00	6.99	309.45	6201.33	-597.92	314.92	-508.48	0.60	1496949.87	3180686.20	N 40 41 44.51 W 104 50 54.21	
	6336.00	7.62	305.43	6294.57	-609.83	322.16	-517.97	0.86	1496957.05	3180676.65	N 40 41 44.58 W 104 50 54.34	
	6413.00	6.20	305.10	6371.00	-619.09	327.51	-525.53	1.84	1496962.34	3180669.05	N 40 41 44.64 W 104 50 54.43	
	6432.00	5.97	304.98	6389.90	-621.10	328.67	-527.18	1.21	1496963.49	3180667.39	N 40 41 44.65 W 104 50 54.46	
	6466.00	5.63	305.73	6423.72	-624.53	330.66	-529.98	1.02	1496965.45	3180664.57	N 40 41 44.67 W 104 50 54.49	
	6498.00	3.52	308.48	6455.62	-627.08	332.19	-532.03	6.63	1496966.97	3180662.52	N 40 41 44.68 W 104 50 54.52	
	6527.00	0.14	340.16	6484.60	-628.00	332.77	-532.74	11.73	1496967.55	3180661.80	N 40 41 44.69 W 104 50 54.53	
	6559.00	4.09	122.63	6516.57	-626.89	332.19	-531.79	13.13	1496966.98	3180662.76	N 40 41 44.68 W 104 50 54.52	
	6591.00	7.99	125.11	6548.39	-623.52	330.30	-529.01	12.21	1496965.10	3180665.55	N 40 41 44.66 W 104 50 54.48	
	6621.00	9.85	124.55	6578.03	-618.87	327.64	-525.19	6.21	1496962.47	3180669.39	N 40 41 44.64 W 104 50 54.43	
	6654.00	15.50	123.66	6610.21	-611.63	323.60	-519.19	17.13	1496958.47	3180675.42	N 40 41 44.60 W 104 50 54.35	
	6686.00	19.13	123.36	6640.75	-602.11	318.34	-511.25	11.35	1496953.28	3180683.40	N 40 41 44.54 W 104 50 54.25	
	6715.00	22.48	123.73	6667.86	-591.81	312.65	-502.66	11.56	1496947.65	3180692.02	N 40 41 44.49 W 104 50 54.14	
	6749.00	26.54	125.12	6698.79	-577.72	304.67	-491.04	12.06	1496939.75	3180703.71	N 40 41 44.41 W 104 50 53.99	
	6780.00	30.38	125.82	6726.04	-562.96	296.09	-479.02	12.43	1496931.26	3180715.79	N 40 41 44.32 W 104 50 53.83	
	6810.00	33.83	126.25	6751.45	-547.04	286.71	-466.13	11.53	1496921.98	3180728.75	N 40 41 44.23 W 104 50 53.66	
	6840.00	37.86	126.05	6775.76	-529.50	276.35	-451.94	13.44	1496911.72	3180743.01	N 40 41 44.13 W 104 50 53.48	
	6873.00	40.40	125.64	6801.36	-508.69	264.16	-435.06	7.74	1496899.65	3180759.98	N 40 41 44.01 W 104 50 53.26	
	6904.00	41.54	126.61	6824.76	-488.40	252.17	-418.64	4.21	1496887.79	3180776.49	N 40 41 43.89 W 104 50 53.05	
	6936.00	41.68	127.10	6848.69	-467.19	239.43	-401.64	1.11	1496875.17	3180793.58	N 40 41 43.76 W 104 50 52.83	
	6968.00	41.47	126.57	6872.63	-446.00	226.70	-384.65	1.28	1496862.57	3180810.67	N 40 41 43.64 W 104 50 52.61	
	6999.00	41.26	126.86	6895.89	-425.55	214.45	-368.22	0.92	1496850.44	3180827.18	N 40 41 43.52 W 104 50 52.39	
	7030.00	41.25	126.47	6919.20	-405.15	202.24	-351.83	0.83	1496838.36	3180843.67	N 40 41 43.40 W 104 50 52.18	
	7062.00	41.02	126.65	6943.30	-384.13	189.70	-334.92	0.81	1496825.94	3180860.67	N 40 41 43.27 W 104 50 51.96	
	7093.00	40.96	125.71	6966.70	-363.83	177.70	-318.51	2.00	1496814.06	3180877.17	N 40 41 43.15 W 104 50 51.75	
	7125.00	41.42	127.07	6990.78	-342.79	165.20	-301.54	3.15	1496801.68	3180894.22	N 40 41 43.03 W 104 50 51.53	
	7157.00	43.22	127.76	7014.44	-321.31	152.11	-284.43	5.81	1496788.72	3180911.43	N 40 41 42.90 W 104 50 51.30	
	7188.00	43.84	126.77	7036.92	-300.01	139.18	-267.44	2.97	1496775.92	3180928.52	N 40 41 42.77 W 104 50 51.08	
	7220.00	43.63	126.17	7060.04	-277.92	126.03	-249.65	1.45	1496762.90	3180946.40	N 40 41 42.64 W 104 50 50.85	
	7251.00	44.81	125.74	7082.25	-256.33	113.34	-232.15	3.93	1496750.34	3180964.00	N 40 41 42.52 W 104 50 50.63	
	7283.00	46.55	124.53	7104.61	-233.45	100.17	-213.43	6.07	1496737.30	3180982.82	N 40 41 42.39 W 104 50 50.38	
	7314.00	49.40	124.07	7125.36	-210.43	87.19	-194.40	9.26	1496724.47	3181001.93	N 40 41 42.26 W 104 50 50.14	
	7346.00	51.96	123.58	7145.64	-185.68	73.41	-173.84	8.09	1496710.84	3181022.60	N 40 41 42.12 W 104 50 49.87	
	7377.00	54.40	123.59	7164.21	-160.86	59.69	-153.17	7.87	1496697.27	3181043.37	N 40 41 41.99 W 104 50 49.60	
	7409.00	56.27	124.20	7182.41	-134.55	45.01	-131.32	6.05	1496682.75	3181065.32	N 40 41 41.84 W 104 50 49.32	
	7440.00	58.10	124.50	7199.21	-108.50	30.31	-109.81	5.96	1496668.21	3181086.94	N 40 41 41.70 W 104 50 49.04	
	7472.00	60.10	125.01	7215.65	-81.06	14.66	-87.26	6.40	1496652.73	3181109.61	N 40 41 41.54 W 104 50 48.74	
	7503.00	62.37	124.63	7230.56	-53.89	-0.86	-64.95	7.40	1496637.38	3181132.03	N 40 41 41.39 W 104 50 48.46	
	7535.00	64.22	124.09	7244.94	-25.31	-16.99	-41.35	5.97	1496621.42	3181155.75	N 40 41 41.23 W 104 50 48.15	
	7566.00	65.89	123.73	7258.02	2.79	-32.67	-18.02	5.49	1496605.91	3181179.19	N 40 41 41.08 W 104 50 47.85	
	7598.00	67.95	122.74	7270.56	32.23	-48.80	6.60	7.04	1496589.96	3181203.93	N 40 41 40.92 W 104 50 47.53	
	7629.00	69.67	122.59	7281.77	61.13	-64.40	30.93	5.57	1496574.54	3181228.38	N 40 41 40.76 W 104 50 47.21	
	7661.00	71.87	121.98	7292.30	91.34	-80.54	56.47	7.11	1496558.59	3181254.04	N 40 41 40.60 W 104 50 46.88	
	7692.00	73.59	122.42	7301.51	120.93	-96.31	81.52	5.71	1496543.00	3181279.20	N 40 41 40.45 W 104 50 46.55	
	7724.00	76.08	122.60	7309.88	151.82	-112.91	107.56	7.80	1496526.60	3181305.36	N 40 41 40.28 W 104 50 46.22	
	7755.00	78.86	122.15	7316.60	182.07	-129.11	133.12	9.08	1496510.59	3181331.04	N 40 41 40.12 W 104 50 45.88	
	7787.00	81.29	122.94	7322.12	213.59	-146.07	159.69	7.91	1496493.83	3181357.73	N 40 41 39.96 W 104 50 45.54	
	7818.00	83.37	122.81	7326.26	244.31	-162.75	185.49	6.85	1496477.34	3181383.65	N 40 41 39.79 W 104 50 45.20	
	7850.00	85.77	123.00	7329.28	276.16	-180.05	212.23	7.46	1496460.23	3181410.52	N 40 41 39.62 W 104 50 44.86	
	7872.00	87.39	122.58	7330.60	298.12	-191.94	230.69	7.61	1496448.48	3181429.07	N 40 41 39.50 W 104 50 44.62	
	7921.00	89.20	122.30	7332.05	347.09	-218.21	272.03	3.74	1496422.51	3181470.60	N 40 41 39.24 W 104 50 44.08	
	7989.00	91.72	121.91	7331.50	415.07	-254.35	329.62	3.74	1496386.80	3181528.45	N 40 41 38.89 W 104 50 43.33	
	8084.00	90.58	122.20	7329.60	510.04	-304.76	410.12	1.24	1496336.99	3181609.32	N 40 41 38.39 W 104 50 42.29	
	8178.00	91.00	120.21	7328.30	603.97	-353.45	490.51	2.16	1496288.89	3181690.07	N 40 41 37.91 W 104 50 41.24	
	8272.00	88.87	122.08	7328.41	697.90	-402.07	570.95	3.02	1496240.87	3181770.86	N 40 41 37.43 W 104 50 40.20	
	8367.00	89.55	119.81	7329.72	792.81	-450.91	652.42	2.49	1496192.63	3181852.68	N 40 41 36.94 W 104 50 39.14	
	8462.00	91.27	119.33	7329.04	887.62	-497.79	735.04	1.88	1496146.37	3181935.65	N 40 41 36.48 W 104 50 38.07	
	8556.00	90.65	119.74	7327.46	981.41	-544.12	816.81	0.79	1496100.64	3182017.76	N 40 41 36.02 W 104 50 37.01	
	8651.00	89.52	120.66	7327.32	1076.28	-591.90	898.91	1.53	1496053.46	3182100.21	N 40 41 35.55 W 104 50 35.94	
	8745.00	87.73	122.59	7329.58	1170.21	-641.17	978.93	2.80	1496004.78	3182180.58	N 40 41 35.06 W 104 50 34.90	
	8840.00	88.83	122.65	7332.43	1265.16	-692.36	1058.90	1.16	1495954.19	3182260.93	N 40 41 34.56 W 104 50 33.87	
	8935.00	91.58	121.30	7332.09	1360.13	-742.66	1139.48	3.22	1495904.48	3182341.88	N 40 41 34.06 W 104 50 32.82	
	9029.00	92.23	121.55	7328.96	1454.04	-791.64	1219.65	0.74	1495856.09	3182422.40	N 40 41 33.58 W 104 50 31.78	
	9124.00	93.41	123.68	7324.29	1548.91	-842.78	1299.56	2.56	1495805.54	3182502.69	N 40 41 33.07 W 104 50 30.74	
	9219.00	91.86	125.55	7319.92	1643.77	-896.69	1377.66	2.56	1495752.22	3182581.18	N 40 41 32.54 W 104 50 29.73	
	9313.00	91.27	128.56	7317.35	1737.51	-953.30	1452.64	3.26	1495696.16	3182656.57	N 40 41 31.98 W 104 50 28.75	
	9408.00	89.42	128.70	7316.78	1832.07	-1012.61	1526.85	1.95	1495637.40	3182731.22	N 40 41 31.39 W 104 50 27.79	
	9502.00	87.59	127.22	7319.24	1925.71	-1070.40	1600.93	2.50	1495580.15	3182805.72	N 40 41 30.82 W 104 50 26.83	
	9597.00	85.25	124.82	7325.17	2020.39	-1126.15	1677.61	3.52	1495524.97	3182882.80	N 40 41 30.27 W 104 50 25	

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (7100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	10922.00	90.24	124.90	7339.98	3341.60	-1815.06	2805.73	1.77	1494844.40	3184015.96	N 40 41 23.46	W 104 50 11.19
	11016.00	91.27	124.30	7338.74	3435.56	-1868.43	2883.10	1.27	1494791.60	3184093.71	N 40 41 22.94	W 104 50 10.19
	11111.00	93.16	122.69	7335.07	3530.49	-1920.82	2962.25	2.61	1494739.81	3184173.25	N 40 41 22.42	W 104 50 9.16
	11205.00	92.03	124.52	7330.81	3624.38	-1972.79	3040.46	2.29	1494688.41	3184251.84	N 40 41 21.90	W 104 50 8.14
	11300.00	90.79	126.61	7328.47	3719.26	-2028.02	3117.71	2.56	1494633.75	3184329.49	N 40 41 21.36	W 104 50 7.14
	11394.00	90.21	128.51	7327.65	3812.98	-2085.32	3192.22	2.11	1494577.01	3184404.42	N 40 41 20.79	W 104 50 6.17
	11488.00	88.18	127.17	7328.97	3906.65	-2142.97	3266.44	2.59	1494519.90	3184479.06	N 40 41 20.22	W 104 50 5.21
	11583.00	88.66	127.66	7331.59	4001.35	-2200.67	3341.86	0.72	1494462.76	3184554.91	N 40 41 19.65	W 104 50 4.23
	11678.00	87.77	124.55	7334.55	4096.17	-2256.62	3418.57	3.40	1494407.38	3184632.02	N 40 41 19.10	W 104 50 3.24
	11772.00	88.42	123.54	7337.68	4190.11	-2309.21	3496.41	1.28	1494355.36	3184710.25	N 40 41 18.58	W 104 50 2.23
	11867.00	89.76	123.15	7339.18	4285.09	-2361.43	3575.76	1.47	1494303.74	3184789.98	N 40 41 18.06	W 104 50 1.20
	11961.00	88.73	121.88	7340.42	4379.07	-2411.95	3655.02	1.74	1494253.80	3184869.61	N 40 41 17.56	W 104 50 0.17
	12056.00	87.97	123.52	7343.16	4474.03	-2463.25	3734.93	1.90	1494203.09	3184949.89	N 40 41 17.06	W 104 49 59.13
	12150.00	87.08	123.76	7347.22	4567.93	-2515.27	3813.11	0.98	1494151.65	3185028.45	N 40 41 16.54	W 104 49 58.11
	12245.00	87.87	122.44	7351.40	4662.84	-2567.10	3892.61	1.62	1494100.41	3185108.34	N 40 41 16.03	W 104 49 57.08
	12340.00	89.90	121.01	7353.25	4757.78	-2617.04	3973.40	2.61	1494051.07	3185189.49	N 40 41 15.54	W 104 49 56.03
Last SLB MWD Survey	12371.00	90.24	121.32	7353.21	4788.76	-2633.08	3999.92	1.48	1494035.22	3185216.13	N 40 41 15.38	W 104 49 55.69
Projection to TD	12432.00	90.24	121.32	7352.96	4849.73	-2664.79	4052.03	0.00	1494003.90	3185268.47	N 40 41 15.06	W 104 49 55.01

Survey Type: Def Survey

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

Survey Program:

MD From (ft)	MD To (ft)	EOU Freq (ft)	Survey Tool Type	Borehole / Survey
0.000	25.000	Act Stns	SLB_NSG+MSHOT-Depth Only	Original Hole / Hobart 8-67-1-4H MWD+GYRO 0' to 12432' Definitive
25.000	1315.000	Act Stns	SLB_NSG+MSHOT	Original Hole / Hobart 8-67-1-4H MWD+GYRO 0' to 12432' Definitive
1315.000	12371.000	Act Stns	SLB_MWD-STD	Original Hole / Hobart 8-67-1-4H MWD+GYRO 0' to 12432' Definitive
12371.000	12432.000	Act Stns	SLB_BLIND+TREND	Original Hole / Hobart 8-67-1-4H MWD+GYRO 0' to 12432' Definitive