

# Noble Energy

CO, Weld County (NAD 83 NZ)  
Sec 10 Twn 2 N Rng 64 W  
Oscar Y10-72-1HC Original Hole  
05-123-37942  
H&P 277



A Schlumberger Company

## Final Survey Report

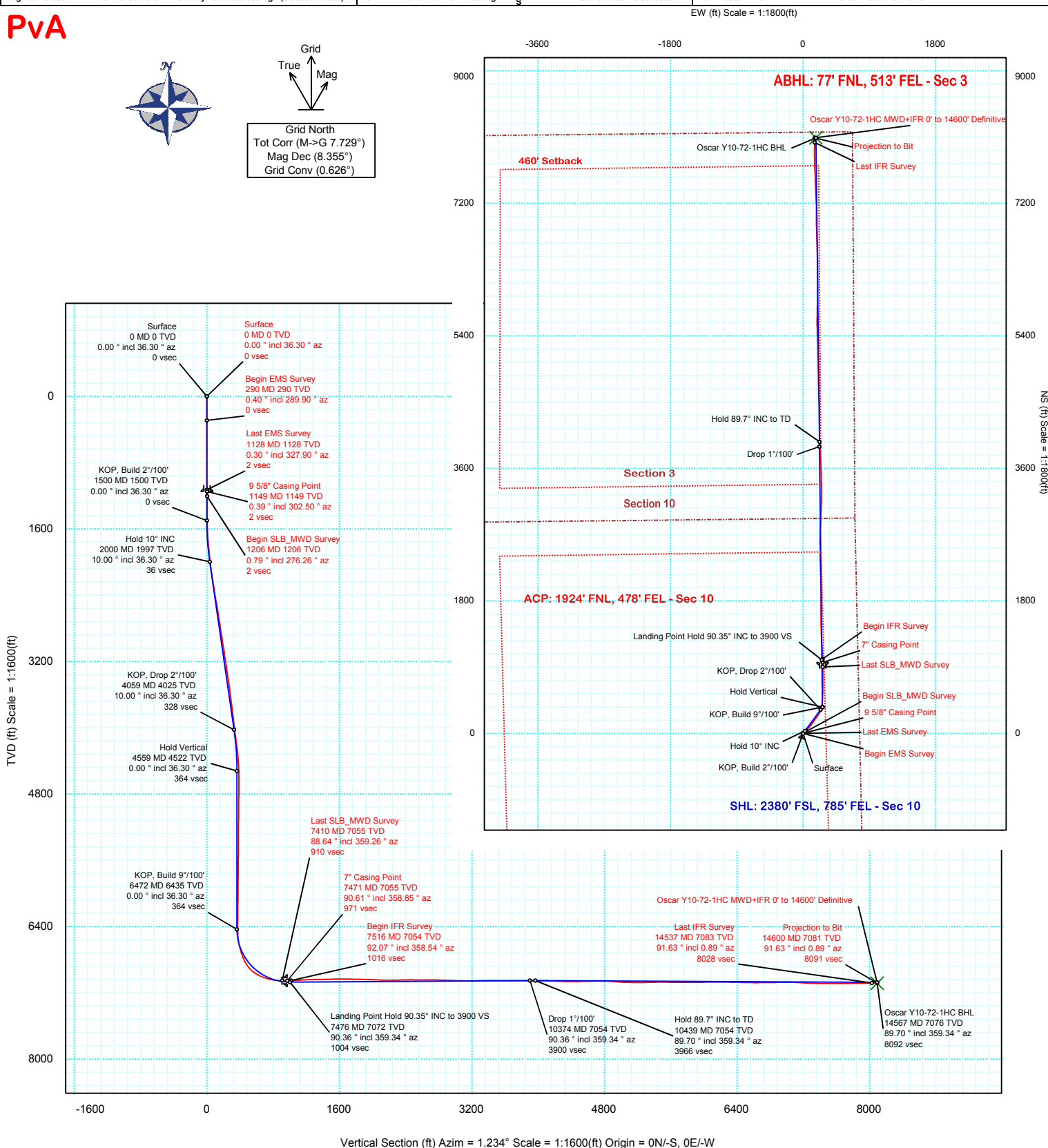
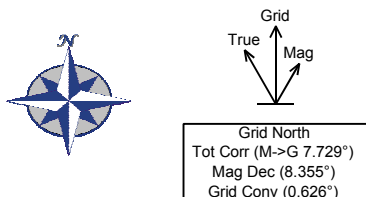
3-Dec-2014

Well Coordinates:	NAD83 CO State Plane, N Zone, US Ft
	N 40° 9' 7.99200"      W 104° 31' 51.27600"
	1299777.27 usFt      3270882.66 usFt
Ground Level:	4928.00 ft MSL
TVD Reference:	KB 24ft @ 4952.00 ft MSL
Local Coordinate Origin:	Oscar Y10-72-1HC well head
Vertical Section Azimuth:	1.234 ° (Grid North)
North Reference:	Grid North

DOX Version: 2.8

<b>Borehole:</b> Original Hole	<b>Well:</b> Oscar Y10-72-1HC	<b>Field:</b> CO, Weld County (NAD 83 NZ)	<b>Structure:</b> 10-2N-64W (Oscar Y10-73HN Pad) - H&P 277
<b>Gravity &amp; Magnetic Parameters</b> Model: BGGM 2014 Dip: 66.763° Date: 17-Nov-2014 MagDec: 8.355° FS: 52552.073nT Gravity FS: 999.008mgm (9.80665 Based)		<b>Surface Location</b> NAD83 Colorado State Plane, Northern Zone, US Feet Lat: N 40 9 7.99 Northing: 1299777.27ftU Grid Conv: 0.6262° Lon: W 104 31 51.28 Easting: 3270882.66ftU Scale Fact: 0.99995832	
		<b>Miscellaneous</b> Slot: Oscar Y10-72-1HC TVD Ref: KB 24ft(4952ft above MSL) Plan: Oscar Y10-72-1HC MWD+IFR 0' to 14600' Definitive	

PvA





# Oscar Y10-72-1HC MWD+IFR 0' to 14600' Definitive Survey Geodetic Report (Def Survey)



**Report Date:** December 03, 2014 - 02:15 PM  
**Client:** Noble Energy  
**Field:** CO, Weld County (NAD 83 NZ)  
**Structure / Slot:** Noble 10-2N-64W (Oscar Y10-73HN Pad) - H&P 277 / Oscar Y10-72-1HC  
**Well:** Oscar Y10-72-1HC  
**Borehole:** Original Hole  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Oscar Y10-72-1HC MWD+IFR 0' to 14600' Definitive  
**Survey Date:** November 17, 2014  
**Tort / AHD / DDI / ERD Ratio:** 236.585 ° / 8234.163 ft / 6.603 / 1.162  
**Coordinate Reference System:** NAD83 Colorado State Plane, Northern Zone, US Feet  
**Location Lat / Long:** N 40° 9' 7.99200", W 104° 31' 51.27600"  
**Location Grid N/E Y/X:** N 1299777.270 ftUS, E 3270882.658 ftUS  
**CRS Grid Convergence Angle:** 0.6262 °  
**Grid Scale Factor:** 0.99995832  
**Version / Patch:** 2.8.572.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 1.234 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** KB 24ft  
**TVD Reference Elevation:** 4952.000 ft above MSL  
**Seabed / Ground Elevation:** 4928.000 ft above MSL  
**Magnetic Declination:** 8.355 °  
**Total Gravity Field Strength:** 999.0080mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 52552.073 nT  
**Magnetic Dip Angle:** 66.763 °  
**Declination Date:** November 17, 2014  
**Magnetic Declination Model:** BGGM 2014  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.6262 °  
**Total Corr Mag North->Grid North:** 7.7288 °  
**Local Coord Referenced To:** Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	36.30	0.00	0.00	0.00	0.00	N/A	1299777.27	3270882.66	N 40 9 7.99	W 104 31 51.28
Begin EMS	290.00	0.40	289.90	290.00	0.32	0.34	-0.95	0.14	1299777.61	3270881.71	N 40 9 8.00	W 104 31 51.29
Survey	596.00	0.20	278.70	595.99	0.74	0.79	-2.48	0.07	1299778.06	3270880.17	N 40 9 8.00	W 104 31 51.31
	878.00	0.20	324.50	877.99	1.19	1.26	-3.26	0.06	1299778.53	3270879.40	N 40 9 8.00	W 104 31 51.32
Last EMS	1128.00	0.30	327.90	1127.99	2.09	2.17	-3.86	0.04	1299779.44	3270878.80	N 40 9 8.01	W 104 31 51.33
Survey	1149.00	0.39	302.50	1148.99	2.17	2.26	-3.95	0.83	1299779.53	3270878.71	N 40 9 8.01	W 104 31 51.33
9 5/8" Casing												
Point												
Begin												
SLB_MWD	1206.00	0.79	276.26	1205.99	2.31	2.41	-4.50	0.83	1299779.67	3270878.16	N 40 9 8.02	W 104 31 51.33
Survey												
	1300.00	0.79	297.94	1299.98	2.66	2.78	-5.72	0.32	1299780.05	3270876.94	N 40 9 8.02	W 104 31 51.35
	1394.00	0.53	315.72	1393.97	3.25	3.39	-6.59	0.35	1299780.66	3270876.07	N 40 9 8.03	W 104 31 51.36
	1489.00	2.37	73.82	1488.95	4.15	4.26	-5.01	2.80	1299781.53	3270877.65	N 40 9 8.03	W 104 31 51.34
	1584.00	3.61	54.24	1583.82	6.54	6.55	-0.70	1.67	1299783.82	3270881.96	N 40 9 8.06	W 104 31 51.28
	1678.00	5.19	54.25	1677.54	10.87	10.77	5.15	1.68	1299788.03	3270887.81	N 40 9 8.10	W 104 31 51.21
	1773.00	7.12	46.17	1771.99	17.63	17.35	12.89	2.22	1299794.62	3270895.55	N 40 9 8.16	W 104 31 51.11
	1866.00	8.09	49.15	1864.17	26.09	25.63	22.00	1.13	1299802.89	3270904.65	N 40 9 8.24	W 104 31 50.99
	1961.00	9.50	49.62	1958.05	35.78	35.08	33.02	1.49	1299812.35	3270915.68	N 40 9 8.34	W 104 31 50.85
	2056.00	10.82	48.28	2051.56	47.06	46.09	45.65	1.41	1299823.36	3270928.31	N 40 9 8.44	W 104 31 50.68
	2150.00	10.90	46.41	2143.87	59.34	58.09	58.68	0.38	1299835.36	3270941.33	N 40 9 8.56	W 104 31 50.51
	2243.00	11.87	38.67	2235.05	73.14	71.62	71.02	1.94	1299848.89	3270953.68	N 40 9 8.69	W 104 31 50.35
	2337.00	11.34	39.92	2327.13	88.03	86.26	82.99	0.62	1299863.52	3270965.65	N 40 9 8.84	W 104 31 50.20
	2431.00	11.52	38.84	2419.26	102.68	100.66	94.81	0.30	1299877.92	3270977.46	N 40 9 8.98	W 104 31 50.04
	2524.00	11.70	37.69	2510.36	117.62	115.35	106.40	0.32	1299892.62	3270989.05	N 40 9 9.12	W 104 31 49.89
	2619.00	11.52	37.12	2603.42	133.05	130.54	118.01	0.22	1299907.80	3271000.67	N 40 9 9.27	W 104 31 49.74
	2713.00	10.82	36.81	2695.63	147.83	145.09	128.96	0.75	1299922.35	3271011.62	N 40 9 9.41	W 104 31 49.59
	2808.00	10.46	34.41	2789.00	162.30	159.34	139.18	0.60	1299936.60	3271021.83	N 40 9 9.55	W 104 31 49.46
	2902.00	10.55	34.65	2881.43	176.63	173.46	148.90	0.11	1299950.72	3271031.55	N 40 9 9.69	W 104 31 49.33
	2997.00	10.55	35.31	2974.82	191.09	187.71	158.87	0.13	1299964.97	3271041.52	N 40 9 9.83	W 104 31 49.20
	3092.00	10.55	35.79	3068.21	205.46	201.86	168.98	0.09	1299979.12	3271051.63	N 40 9 9.97	W 104 31 49.07
	3187.00	10.90	35.31	3161.55	220.06	216.25	179.26	0.38	1299993.51	3271061.91	N 40 9 10.11	W 104 31 48.94
	3282.00	9.85	35.15	3255.00	234.24	230.22	189.13	1.11	1300007.48	3271071.78	N 40 9 10.25	W 104 31 48.81
	3376.00	10.11	34.92	3347.58	247.78	243.56	198.48	0.28	1300020.82	3271081.13	N 40 9 10.38	W 104 31 48.69
	3471.00	9.67	32.42	3441.17	261.54	257.13	207.53	0.65	1300034.39	3271090.18	N 40 9 10.51	W 104 31 48.57
	3566.00	8.88	33.06	3534.92	274.60	270.01	215.81	0.84	1300047.27	3271098.46	N 40 9 10.64	W 104 31 48.46
	3660.00	8.71	32.34	3627.82	286.86	282.11	223.57	0.22	1300059.36	3271106.22	N 40 9 10.76	W 104 31 48.36
	3755.00	8.27	32.01	3721.78	298.89	293.98	231.04	0.47	1300071.23	3271113.69	N 40 9 10.87	W 104 31 48.26
	3850.00	8.09	32.03	3815.81	310.50	305.44	238.21	0.19	1300082.69	3271120.86	N 40 9 10.98	W 104 31 48.17
	3945.00	7.56	31.26	3909.92	321.65	316.45	245.00	0.57	1300093.70	3271127.65	N 40 9 11.09	W 104 31 48.08
	4039.00	8.00	31.22	4003.06	332.67	327.33	251.60	0.47	1300104.58	3271134.24	N 40 9 11.20	W 104 31 47.99
	4134.00	8.71	29.16	4097.05	344.75	339.26	258.53	0.81	1300116.52	3271141.18	N 40 9 11.32	W 104 31 47.90
	4229.00	7.83	25.73	4191.06	357.00	351.37	264.84	1.06	1300128.63	3271147.49	N 40 9 11.44	W 104 31 47.82
	4324.00	6.77	19.15	4285.29	368.21	362.49	269.49	1.42	1300139.75	3271152.14	N 40 9 11.54	W 104 31 47.75
	4419.00	5.36	356.59	4379.77	377.97	372.21	271.06	2.89	1300149.47	3271153.71	N 40 9 11.64	W 104 31 47.73
	4513.00	2.55	334.57	4473.54	384.21	378.49	269.90	3.35	1300155.74	3271152.55	N 40 9 11.70	W 104 31 47.75
	4608.00	1.14	38.70	4568.50	386.85	381.13	269.59	2.42	1300158.39	3271152.23	N 40 9 11.73	W 104 31 47.75
	4702.00	0.70	124.84	4662.49	387.28	381.54	270.64	1.38	1300158.79	3271153.29	N 40 9 11.73	W 104 31 47.74
	4797.00	0.53	157.06	4757.49	386.55	380.80	271.29	0.40	1300158.05	3271153.94	N 40 9 11.73	W 104 31 47.73
	4892.00	0.70	194.74	4852.48	385.59	379.83	271.31	0.45	1300157.09	3271153.96	N 40 9 11.72	W 104 31 47.73
	5081.00	0.70	234.41	5041.47	383.77	378.04	270.08	0.25	1300155.30	3271152.73	N 40 9 11.70	W 104 31 47.74
	5270.00	1.06	241.80	5230.44	382.22	376.55	267.60	0.20	1300153.80	3271150.25	N 40 9 11.68	W 104 31 47.78
	5365.00	0.88	254.88	5325.43	381.59	375.94	266.12	0.30	1300153.19	3271148.77	N 40 9 11.68	W 104 31 47.80
	5460.00	0.70	253.81	5420.42	381.21	375.59	264.86	0.19	1300152.84	3271147.51	N 40 9 11.67	W 104 31 47.81
	5554.00	0.70	257.87	5514.42	380.90	375.31	263.75	0.05	1300152.56	3271146.39	N 40 9 11.67	W 104 31 47.83
	5649.00	0.79	228.93	5609.41	380.33	374.76	262.69	0.40	1300152.01	3271145.33	N 40 9 11.67	W 104 31 47.84
	5838.00	0.97	225.51	5798.39	378.31	372.78	260.56	0.10	1300150.03	3271143.21	N 40 9 11.65	W 104 31 47.87
	5933.00	0.97	230.66	5893.37	377.21	371.71	259.37	0.09	1300148.96	3271142.01	N 40 9 11.64	W 104 31 47.88
	6028.00	0.53	218.99	5988.36	376.34	370.85	258.47	0.49	1300148.11	3271141.12	N 40 9 11.63	W 104 31 47.90
	6123.00	0.62	205.25	6083.36	375.52	370.05	257.97	0.17	1300147.30	3271140.62	N 40 9 11.62	W 104 31 47.90
	6217.00	0.70	199.16	6177.35	374.51	369.05	257.57	0.11	1300146.30	3271140.22	N 40 9 11.61	W 104 31 47.91
	6312.00	0.88	204.65	6272.34	373.29	367.83	257.07	0.21	1300145.09	3271139.72	N 40 9 11.60	W 104 31 47.91
	6407.00	0.79	202.40	6367.33	372.01	366.57	256.52	0.10	1300143.82	3271139.17	N 40 9 11.59	W 104 31 47.92
	6502.00	1.49	7.43	6462.32	372.62	367.19	256.43	2.38	1300144.44	3271139.08	N 40 9 11.59	W 104 31 47.92
	6596.00	7.21	356.78	6556.02	379.73	374.29	256.26	6.12	1300151.55	3271138.90	N 40 9 11.66	W 104 31 47.92
	6691.00	13.81	1.05	6649.37	397.03	391.60	256.13	6.99	1300168.85	3271138.78	N 40 9 11.83	W 104 31 47.92
	6785.00	19.26	7.04	6739.46	423.69	418.23	258.24	6.07	1300195.48	3271140.88	N 40 9 12.10	W 104 31 47.89
	6880.00	27.52	5.38	6826.58	461.24	455.69	262.22	8.72	1300232.94	3271144.87	N 40 9 12.47	W 104 31 47.84
	6975.00	40.89	1.75	6904.97	514.47	508.87	265.24	14.23	1300286.12	3271147.89	N 40 9 12.99	W 104 31 47.79
	7069.00	57.42	0.09	6966.24	585.32	579.72	266.25	17.63	1300356.97	3271148.90	N 40 9 13.69	W 104 31 47.77
	7164.00	68.24	359.98	7009.56	669.70	664.11	266.30	11.39	1300441.35	3271148.95	N 40 9 14.53	W 104 31 47.75
	7259.00	76.94	359.86	7037.95	760.23	754.67	266.17	9.16	1300531.91	3271148.82	N 40 9 15.42	W 104 31 47.74
	7354.00	86.00	359.95	7052.03	854.06	848.52	266.02	9.54	1300625.76	3271148.66	N 40 9 16.35	W 104 31 47.73
Last SLB_MWD												
Survey	7410.00	88.64	359.26	7054.65	909.97	904						

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Begin IFR Survey	7516.00	92.07	358.54	7053.99	1015.86	1010.42	263.60	3.31	1300787.64	3271146.24	N 40 9 17.95 W 104 31 47.74	
	7611.00	93.65	356.68	7049.25	1110.55	1105.21	259.64	2.57	1300882.43	3271142.29	N 40 9 18.89 W 104 31 47.78	
	7706.00	92.33	356.51	7044.30	1205.10	1199.91	254.01	1.40	1300977.13	3271136.65	N 40 9 19.82 W 104 31 47.84	
	7800.00	91.01	357.42	7041.56	1298.80	1293.74	249.03	1.71	1301070.95	3271131.68	N 40 9 20.75 W 104 31 47.89	
	7895.00	90.92	358.81	7039.96	1393.64	1388.67	245.91	1.47	1301165.88	3271128.55	N 40 9 21.69 W 104 31 47.91	
	7989.00	92.24	359.20	7037.36	1487.54	1482.62	244.28	1.46	1301259.82	3271126.92	N 40 9 22.62 W 104 31 47.92	
	8084.00	90.75	0.05	7034.89	1582.46	1577.58	243.65	1.81	1301354.78	3271126.30	N 40 9 23.55 W 104 31 47.92	
	8178.00	89.16	0.45	7034.96	1676.45	1671.58	244.06	1.74	1301448.77	3271126.71	N 40 9 24.48 W 104 31 47.90	
	8273.00	88.46	359.91	7036.93	1771.41	1766.55	244.36	0.93	1301543.75	3271127.01	N 40 9 25.42 W 104 31 47.88	
	8367.00	89.25	359.58	7038.81	1865.36	1860.53	243.94	0.91	1301637.72	3271126.59	N 40 9 26.35 W 104 31 47.87	
	8461.00	87.32	359.06	7041.62	1959.26	1954.48	242.83	2.13	1301731.66	3271125.48	N 40 9 27.28 W 104 31 47.87	
	8555.00	88.11	358.42	7045.37	2053.09	2048.38	240.76	1.08	1301825.56	3271123.41	N 40 9 28.21 W 104 31 47.89	
	8650.00	88.72	357.90	7048.00	2147.92	2143.29	237.71	0.84	1301920.47	3271120.36	N 40 9 29.15 W 104 31 47.91	
	8744.00	90.84	358.43	7048.36	2241.78	2237.24	234.71	2.32	1302014.41	3271117.35	N 40 9 30.07 W 104 31 47.94	
	8839.00	91.63	358.99	7046.31	2336.66	2332.19	232.57	1.02	1302109.36	3271115.22	N 40 9 31.01 W 104 31 47.95	
	8933.00	90.66	358.87	7044.44	2430.57	2426.16	230.81	1.04	1302203.32	3271113.46	N 40 9 31.94 W 104 31 47.96	
	9027.00	88.99	359.94	7044.72	2524.51	2520.15	229.84	2.11	1302297.31	3271112.48	N 40 9 32.87 W 104 31 47.96	
	9122.00	90.48	359.83	7045.16	2619.48	2615.14	229.64	1.57	1302392.30	3271112.29	N 40 9 33.81 W 104 31 47.95	
	9217.00	89.34	1.88	7045.31	2714.47	2710.13	231.06	2.47	1302487.28	3271113.71	N 40 9 34.75 W 104 31 47.92	
	9310.00	88.46	2.65	7047.10	2807.44	2803.03	234.74	1.26	1302580.18	3271117.39	N 40 9 35.66 W 104 31 47.86	
	9404.00	87.23	2.65	7050.63	2901.34	2896.87	239.08	1.31	1302674.01	3271121.73	N 40 9 36.59 W 104 31 47.79	
	9497.00	87.93	2.16	7054.56	2994.24	2989.70	242.98	0.92	1302766.84	3271125.63	N 40 9 37.51 W 104 31 47.73	
	9591.00	88.64	2.39	7057.37	3088.18	3083.58	246.71	0.79	1302860.72	3271129.36	N 40 9 38.44 W 104 31 47.66	
	9684.00	90.57	0.52	7058.01	3181.17	3176.54	249.07	2.89	1302953.67	3271131.72	N 40 9 39.35 W 104 31 47.62	
	9779.00	91.80	359.97	7056.05	3276.13	3271.52	249.48	1.42	1303048.65	3271132.12	N 40 9 40.29 W 104 31 47.60	
	9874.00	90.22	358.97	7054.37	3371.07	3366.50	248.60	1.97	1303143.62	3271131.24	N 40 9 41.23 W 104 31 47.60	
	9968.00	89.69	359.29	7054.45	3465.01	3460.48	247.17	0.66	1303237.60	3271129.82	N 40 9 42.16 W 104 31 47.61	
	10063.00	88.99	358.16	7055.54	3559.91	3555.45	245.06	1.40	1303332.57	3271127.70	N 40 9 43.10 W 104 31 47.62	
	10157.00	89.25	356.76	7056.98	3653.69	3649.35	240.89	1.51	1303426.46	3271123.54	N 40 9 44.03 W 104 31 47.66	
	10252.00	90.31	356.64	7057.35	3748.39	3744.19	235.42	1.12	1303521.29	3271118.07	N 40 9 44.96 W 104 31 47.72	
	10347.00	91.28	356.71	7056.03	3843.08	3839.02	229.91	1.02	1303616.12	3271112.56	N 40 9 45.90 W 104 31 47.77	
	10441.00	89.60	357.50	7055.31	3936.83	3932.89	225.17	1.97	1303709.99	3271107.81	N 40 9 46.83 W 104 31 47.82	
	10536.00	89.87	359.75	7055.75	4031.72	4027.86	222.89	2.39	1303804.95	3271105.54	N 40 9 47.77 W 104 31 47.84	
	10631.00	87.58	359.99	7057.86	4126.67	4122.83	222.67	2.42	1303899.91	3271105.32	N 40 9 48.71 W 104 31 47.83	
	10726.00	88.29	359.72	7061.29	4221.58	4217.76	222.43	0.80	1303994.85	3271105.08	N 40 9 49.65 W 104 31 47.82	
	10820.00	89.08	359.92	7063.44	4315.52	4311.74	222.14	0.87	1304088.82	3271104.78	N 40 9 50.57 W 104 31 47.81	
	10914.00	90.31	359.50	7063.94	4409.48	4405.73	221.66	1.38	1304182.81	3271104.31	N 40 9 51.50 W 104 31 47.80	
	11009.00	90.57	357.49	7063.21	4504.37	4500.69	219.16	2.13	1304277.76	3271101.81	N 40 9 52.44 W 104 31 47.82	
	11104.00	91.36	356.95	7061.61	4599.12	4595.57	214.56	1.01	1304372.63	3271097.21	N 40 9 53.38 W 104 31 47.87	
	11198.00	90.66	357.64	7059.96	4692.88	4689.44	210.12	1.05	1304466.51	3271092.77	N 40 9 54.31 W 104 31 47.91	
	11293.00	90.40	359.02	7059.08	4787.75	4784.40	207.35	1.48	1304561.46	3271090.00	N 40 9 55.25 W 104 31 47.93	
	11387.00	85.65	359.53	7062.32	4881.62	4878.31	206.17	5.08	1304655.36	3271088.81	N 40 9 56.17 W 104 31 47.93	
	11482.00	84.77	359.02	7070.25	4976.23	4972.97	204.97	1.07	1304750.02	3271087.62	N 40 9 57.11 W 104 31 47.94	
	11577.00	88.81	358.81	7075.57	5070.98	5067.78	203.17	4.26	1304844.83	3271085.82	N 40 9 58.05 W 104 31 47.95	
	11672.00	89.69	358.51	7076.81	5165.88	5162.75	200.95	0.98	1304939.79	3271083.60	N 40 9 58.99 W 104 31 47.96	
	11766.00	90.40	358.23	7076.74	5259.76	5256.71	198.28	0.81	1305033.75	3271080.93	N 40 9 59.91 W 104 31 47.98	
	11861.00	91.54	358.30	7075.13	5354.62	5351.65	195.40	1.20	1305128.68	3271078.05	N 40 10 0.85 W 104 31 48.01	
	11955.00	90.48	358.60	7073.47	5448.49	5445.60	192.86	1.17	1305222.63	3271075.51	N 40 10 1.78 W 104 31 48.03	
	12050.00	89.60	358.81	7073.41	5543.39	5540.57	190.71	0.95	1305317.60	3271073.36	N 40 10 2.72 W 104 31 48.04	
	12144.00	89.16	1.13	7074.42	5637.36	5634.56	190.66	2.51	1305411.58	3271073.31	N 40 10 3.65 W 104 31 48.03	
	12239.00	89.52	1.10	7075.52	5732.35	5729.54	192.51	0.38	1305506.56	3271075.16	N 40 10 4.59 W 104 31 47.99	
	12334.00	90.04	0.74	7075.88	5827.35	5824.52	194.04	0.67	1305601.54	3271076.69	N 40 10 5.53 W 104 31 47.96	
	12429.00	91.10	1.15	7074.94	5922.34	5919.50	195.60	1.20	1305696.51	3271078.25	N 40 10 6.46 W 104 31 47.92	
	12524.00	90.57	0.53	7073.55	6017.33	6014.48	197.00	0.86	1305791.49	3271079.65	N 40 10 7.40 W 104 31 47.89	
	12619.00	91.01	0.40	7072.24	6112.31	6109.47	197.77	0.48	1305886.47	3271080.42	N 40 10 8.34 W 104 31 47.87	
	12713.00	89.16	0.35	7072.10	6206.30	6203.46	198.38	1.97	1305980.46	3271081.03	N 40 10 9.27 W 104 31 47.85	
	12808.00	88.90	0.34	7073.71	6301.27	6298.45	198.95	0.27	1306075.44	3271081.60	N 40 10 10.21 W 104 31 47.83	
	12903.00	88.72	358.82	7075.69	6396.21	6393.42	198.26	1.61	1306170.41	3271080.91	N 40 10 11.15 W 104 31 47.82	
	12997.00	88.81	358.02	7077.71	6490.07	6487.36	195.67	0.86	1306264.35	3271078.32	N 40 10 12.08 W 104 31 47.84	
	13092.00	89.60	357.92	7079.03	6584.91	6582.29	192.30	0.84	1306359.28	3271074.95	N 40 10 13.01 W 104 31 47.87	
	13187.00	90.57	357.89	7078.89	6679.75	6677.23	188.83	1.02	1306454.21	3271071.48	N 40 10 13.95 W 104 31 47.90	
	13281.00	90.57	357.79	7077.95	6773.58	6771.16	185.29	0.11	1306548.13	3271067.94	N 40 10 14.88 W 104 31 47.94	
	13376.00	91.19	358.45	7076.49	6868.43	6866.09	182.17	0.95	1306643.06	3271064.82	N 40 10 15.82 W 104 31 47.96	
	13471.00	90.66	359.75	7074.96	6963.35	6961.07	180.68	1.48	1306738.03	3271063.33	N 40 10 16.76 W 104 31 47.97	
	13565.00	89.25	0.56	7075.03	7057.33	7055.06	180.93	1.73	1306832.03	3271063.58	N 40 10 17.69 W 104 31 47.95	
	13660.00	87.05	358.34	7078.10	7152.22	7150.00	180.02	3.29	1306926.96	3271062.67	N 40 10 18.62 W 104 31 47.95	
	13755.00	87.14	357.07	7082.92	7246.91	7244.80	176.22	1.34	1307021.75	3271058.87	N 40 10 19.56 W 104 31 47.99	
	13850.00	88.64	357.56	7086.41	7341.62	7339.63	171.78	1.66	1307116.58	3271054.43	N 40 10 20.50 W 104 31 48.03	
	13945.00	89.60	358.23	7087.87	7436.45	7434.55	168.29	1.23	1307211.50	3271050.94	N 40 10 21.44 W 104 31 48.06	
	14039.00	89.96	357.83	7088.23	7530.30	7528.49	165.06	0.57	1307305.43	3271047.71	N 40 10 22.37 W 104 31 48.09	
	14134.00	90.40	357.05	7087.94	7625.09	7623.40	160.81	0.94	1307400.33	3271043.46	N 40 10 23.30 W 104 31 48.13	
	14229.00	90.22	358.74	7087.42	7719.93	7718.33	157.32	1.79	1307495.26	3271039.97	N 40 10 24.24 W 104 31 48.16	
	14323.00	91.01	358.19	7086.41	7813.81	7812.29	154.80	1.02	1307589.22	3271037.46	N 40 10 25.17 W 104 31 48.18	
	14418.00	90.57	0.84	7085.10	7908.75	7907.27	154.00	2.83	1307684.19	3271036.65	N 40 10 26.11 W 104 31 48.18	
	14513.00	91.45	0.89	7083.43	8003.73	8002.24	155.43	0.93	1307779.16	3271038.09	N 40 10 27.05 W 104 31 48.15	
	14537.00	9										