

Noble Energy

CO, Weld County (NAD 83 NZ)
Sec 10 Twn 2 N Rng 64 W
Oscar Y10-73-1HC Original Hole
05-123-37941
H&P 277



A Schlumberger Company

Final Survey Report

23-Oct-2014

Well Coordinates:	NAD83 CO State Plane, N Zone, US Feet	
	N 40° 9' 7.99200"	W 104° 31' 51.27600"
	1299777.27 usFt	3270882.66 usFt
Ground Level:	4927.00 ft MSL	
TVD Reference:	KB 24ft @ 4951.00 ft MSL	
Local Coordinate Origin:	Oscar Y10-73-1HC well head	
Vertical Section Azimuth:	357.360 ° (Grid North)	
North Reference:	Grid North	

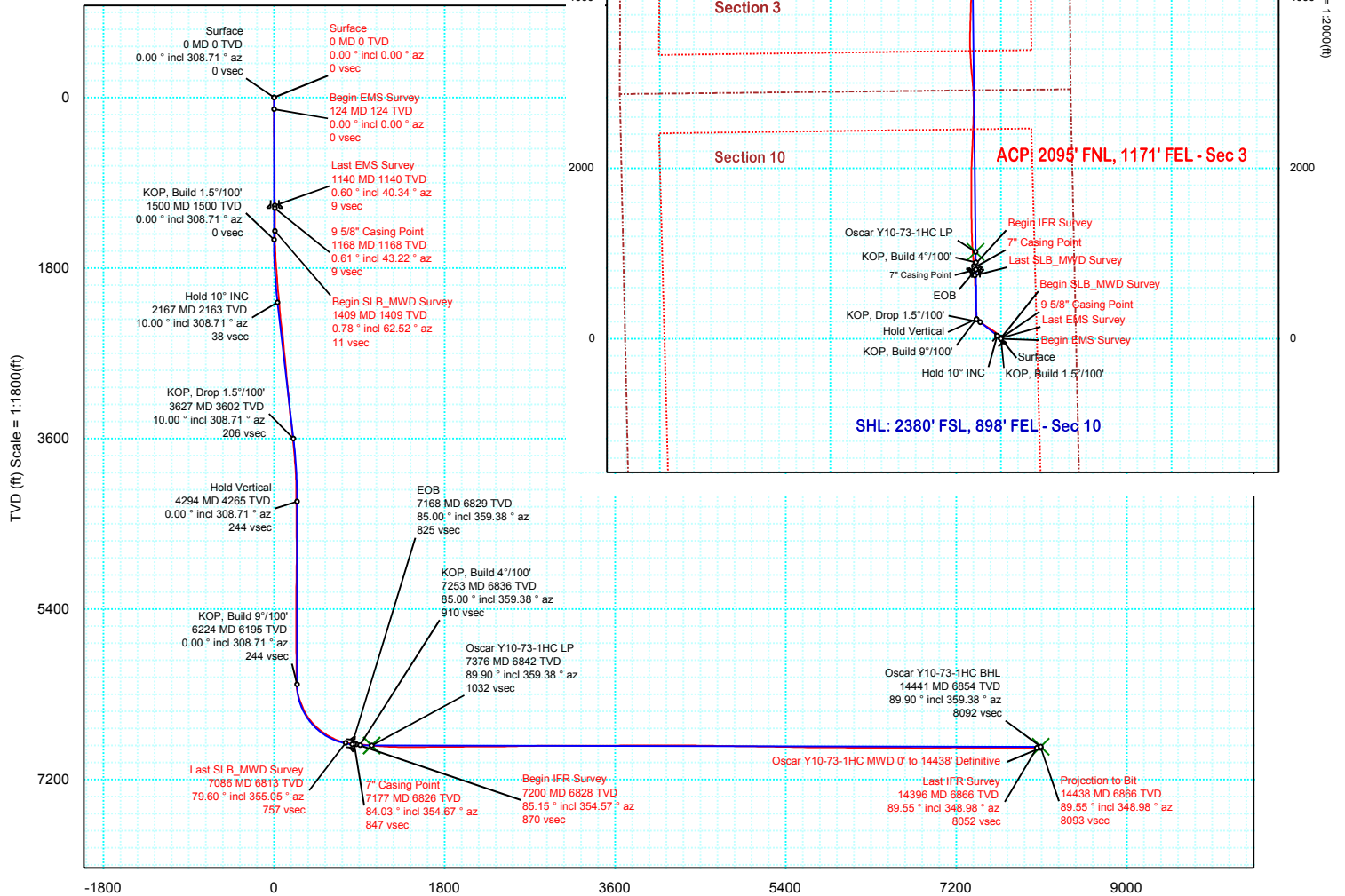
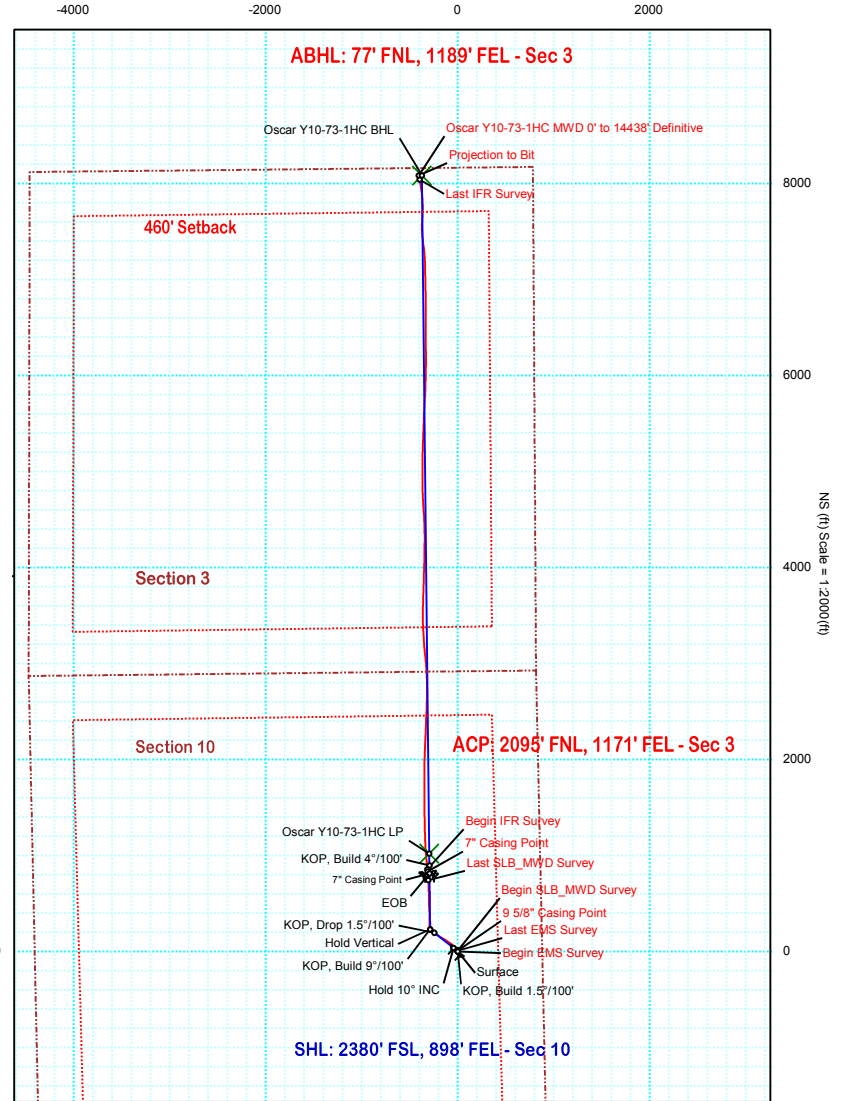
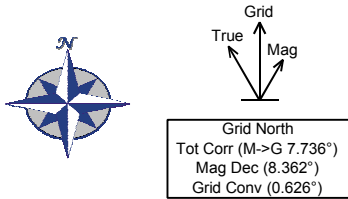
DOX Version: 2.8

Borehole: Original Hole	Well: Oscar Y10-73-1HC	Field: CO, Weld County (NAD 83 NZ)	Structure: 10-2N-64W (Oscar Y10-73HN Pad) - H&P 277
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Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: BGGM 2014 Dip: 66.766° Date: 23-Oct-2014	NAD83 Colorado State Plane, Northern Zone, US Feet 1299776.05ftU	Oscar Y10-73-1HC TVD Ref: KB 24ft(4951ft above MSL)
MagDec: 8.362° FS: 52561.276nT Gravity FS: 999.008mgm (9.80665 Based)	Lat: N 40 9 7.99 Northing: S 3270770.85ftU Grid Conv: 0.6259° Lon: W 104 31 52.72 Easting: S Scale Fact: 0.99995832	Plan: Oscar Y10-73-1HC MWD 0' to 14438' Definitive

PvA

EW (ft) Scale = 1:2000(ft)





Oscar Y10-73-1HC MWD 0' to 14438' Definitive Survey Geodetic Report

(Def Survey)

Report Date: October 23, 2014 - 09:56 AM
Client: Noble Energy
Field: CO, Weld County (NAD 83 NZ)
Structure / Slot: Noble 10-2N-64W (Oscar Y10-73HN Pad) - H&P 277 / Oscar Y10-73-1HC
Well: Oscar Y10-73-1HC
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Oscar Y10-73-1HC MWD 0' to 14438' Definitive
Survey Date: October 23, 2014
Tort / AHD / DDI / ERD Ratio: 222.264 ° / 8267.733 ft / 6.587 / 1.204
Coordinate Reference System: NAD83 Colorado State Plane, Northern Zone, US Feet
Location Lat / Long: N 40° 9' 7.99200", W 104° 31' 52.71600"
Location Grid N/E Y/X: N 1299776.048 ftUS, E 3270770.854 ftUS
CRS Grid Convergence Angle: 0.6259 °
Grid Scale Factor: 0.99995832
Version / Patch: 2.8.572.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 357.360 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB 24ft
TVD Reference Elevation: 4951.000 ft above MSL
Seabed / Ground Elevation: 4927.000 ft above MSL
Magnetic Declination: 8.362 °
Total Gravity Field Strength: 999.0080mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 52561.276 nT
Magnetic Dip Angle: 66.766 °
Declination Date: October 23, 2014
Magnetic Declination Model: BGGM 2014
North Reference: Grid North
Grid Convergence Used: 0.6259 °
Total Corr Mag North->Grid North: 7.7359 °
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	0.00	0.00	0.00	0.00	0.00	N/A	1299776.05	3270770.85	N 40 9 7.99	W 104 31 52.72
Begin EMS Survey	124.00	0.00	0.00	124.00	0.00	0.00	0.00	0.00	1299776.05	3270770.85	N 40 9 7.99	W 104 31 52.72
	310.00	0.70	354.24	310.00	1.13	1.13	-0.11	0.38	1299777.18	3270770.74	N 40 9 8.00	W 104 31 52.72
	604.00	0.80	316.54	603.97	4.48	4.41	-1.71	0.17	1299780.45	3270769.15	N 40 9 8.04	W 104 31 52.74
	888.00	0.40	12.94	887.96	6.94	6.81	-2.85	0.24	1299782.86	3270768.01	N 40 9 8.06	W 104 31 52.75
Last EMS Survey	1140.00	0.60	40.34	1139.95	8.75	8.68	-1.80	0.12	1299784.72	3270769.06	N 40 9 8.08	W 104 31 52.74
9 5/8" Casing Point	1168.00	0.61	43.22	1167.95	8.96	8.90	-1.60	0.12	1299784.94	3270769.25	N 40 9 8.08	W 104 31 52.74
Begin SLB_MWD Survey	1409.00	0.78	62.52	1408.93	10.55	10.60	0.75	0.12	1299786.65	3270771.60	N 40 9 8.10	W 104 31 52.70
	1503.00	0.86	64.57	1502.92	11.10	11.20	1.96	0.09	1299787.25	3270772.81	N 40 9 8.10	W 104 31 52.69
	1597.00	1.85	352.47	1596.90	12.88	13.00	2.39	1.90	1299789.05	3270773.25	N 40 9 8.12	W 104 31 52.68
	1691.00	4.14	333.30	1690.76	17.49	17.54	0.67	2.63	1299793.59	3270771.52	N 40 9 8.17	W 104 31 52.70
	1786.00	4.14	331.57	1785.52	23.71	23.62	-2.51	0.13	1299799.67	3270768.35	N 40 9 8.23	W 104 31 52.74
	1881.00	6.30	314.32	1880.12	30.61	30.28	-7.87	2.78	1299806.33	3270762.99	N 40 9 8.29	W 104 31 52.81
	1976.00	5.97	313.10	1974.58	37.96	37.30	-15.20	0.37	1299813.34	3270755.65	N 40 9 8.36	W 104 31 52.91
	2070.00	8.26	308.01	2067.85	45.86	44.80	-24.09	2.52	1299820.84	3270746.76	N 40 9 8.44	W 104 31 53.02
	2164.00	8.05	304.67	2160.90	54.25	52.70	-34.82	0.55	1299828.74	3270736.03	N 40 9 8.52	W 104 31 53.16
	2258.00	7.86	303.57	2254.00	62.03	60.00	-45.59	0.26	1299836.04	3270725.26	N 40 9 8.59	W 104 31 53.29
	2353.00	10.35	307.22	2347.79	71.34	68.75	-57.80	2.70	1299844.80	3270713.05	N 40 9 8.68	W 104 31 53.45
	2447.00	10.39	307.30	2440.25	82.20	79.00	-71.28	0.04	1299855.04	3270699.58	N 40 9 8.78	W 104 31 53.62
	2540.00	10.19	306.47	2531.76	92.77	88.97	-84.56	0.27	1299865.02	3270686.29	N 40 9 8.88	W 104 31 53.79
	2635.00	9.87	303.94	2625.31	102.93	98.51	-98.08	0.57	1299874.56	3270672.78	N 40 9 8.98	W 104 31 53.97
	2730.00	9.57	303.36	2718.94	112.42	107.40	-111.43	0.33	1299883.45	3270659.43	N 40 9 9.07	W 104 31 54.14
	2825.00	9.31	302.49	2812.66	121.49	115.87	-124.51	0.31	1299891.92	3270646.35	N 40 9 9.15	W 104 31 54.30
	2919.00	9.29	301.32	2905.42	130.10	123.90	-137.41	0.20	1299899.95	3270633.45	N 40 9 9.23	W 104 31 54.47
	3014.00	9.25	300.09	2999.18	138.51	131.72	-150.56	0.21	1299907.76	3270620.30	N 40 9 9.31	W 104 31 54.64
	3109.00	9.93	303.44	3092.85	147.47	140.06	-164.01	0.33	1299916.10	3270606.85	N 40 9 9.39	W 104 31 54.81
	3204.00	9.71	301.99	3186.46	156.84	148.82	-177.64	0.35	1299924.86	3270593.22	N 40 9 9.48	W 104 31 54.98
	3299.00	9.12	300.73	3280.18	165.54	156.91	-190.91	0.65	1299932.95	3270579.95	N 40 9 9.56	W 104 31 55.15
	3393.00	10.04	314.29	3372.88	175.63	166.45	-203.18	2.58	1299942.49	3270567.68	N 40 9 9.66	W 104 31 55.31
	3488.00	9.45	313.02	3466.51	187.26	177.55	-214.81	0.66	1299953.59	3270556.05	N 40 9 9.77	W 104 31 55.46
	3582.00	8.53	309.31	3559.35	197.44	187.24	-225.85	1.15	1299963.28	3270545.01	N 40 9 9.87	W 104 31 55.60
	3677.00	8.11	304.71	3653.35	206.22	195.52	-236.81	0.83	1299971.56	3270534.05	N 40 9 9.95	W 104 31 55.74
	3772.00	7.45	306.27	3747.48	214.15	202.97	-247.28	0.73	1299979.01	3270523.58	N 40 9 10.02	W 104 31 55.87
	3867.00	6.58	308.02	3841.77	221.56	209.97	-256.53	0.93	1299986.01	3270514.33	N 40 9 10.09	W 104 31 55.99
	3962.00	6.45	307.08	3936.15	228.52	216.54	-265.08	0.18	1299992.58	3270505.78	N 40 9 10.16	W 104 31 56.10
	4056.00	5.14	291.20	4029.68	233.60	221.25	-273.22	2.19	1299997.29	3270497.64	N 40 9 10.21	W 104 31 56.20
	4151.00	1.17	284.99	4124.51	235.61	223.04	-282.13	4.19	1299999.08	3270492.73	N 40 9 10.23	W 104 31 56.27
	4246.00	1.24	287.30	4219.49	236.26	223.60	-280.06	0.09	1299999.64	3270490.81	N 40 9 10.23	W 104 31 56.29
	4341.00	1.38	287.23	4314.47	237.00	224.24	-282.13	0.14	1300000.28	3270488.74	N 40 9 10.24	W 104 31 56.32
	4435.00	1.45	289.65	4408.44	237.83	224.98	-284.32	0.10	1300001.01	3270486.54	N 40 9 10.25	W 104 31 56.35
	4530.00	1.59	281.40	4503.40	238.61	225.64	-286.75	0.27	1300001.68	3270484.11	N 40 9 10.25	W 104 31 56.38
	4625.00	0.52	323.10	4598.39	239.28	226.24	-288.30	1.32	1300002.28	3270482.56	N 40 9 10.26	W 104 31 56.40
	4719.00	0.22	308.91	4692.39	239.75	226.70	-288.70	0.33	1300002.73	3270482.17	N 40 9 10.26	W 104 31 56.40
	4814.00	0.12	339.43	4787.39	239.97	226.91	-288.87	0.13	1300002.94	3270481.99	N 40 9 10.27	W 104 31 56.40
	4908.00	0.39	106.48	4881.39	239.96	226.91	-288.60	0.51	1300002.95	3270482.26	N 40 9 10.27	W 104 31 56.40
	5003.00	1.00	135.21	4976.38	239.24	226.23	-287.71	0.72	1300002.27	3270483.16	N 40 9 10.26	W 104 31 56.39
	5098.00	1.14	138.56	5071.36	237.89	224.93	-286.50	0.16	1300000.97	3270484.37	N 40 9 10.25	W 104 31 56.37
	5192.00	1.26	139.08	5165.34	236.34	223.45	-285.20	0.13	1299999.48	3270485.67	N 40 9 10.23	W 104 31 56.36
	5287.00	1.10	142.36	5260.32	234.78	221.93	-283.96	0.19	1299997.97	3270486.91	N 40 9 10.22	W 104 31 56.34
	5382.00	0.74	297.78	5355.32	234.34	221.50	-283.94	1.89	1299997.54	3270486.93	N 40 9 10.21	W 104 31 56.34
	5477.00	0.55	284.65	5450.31	234.79	221.90	-284.92	0.25	1299997.94	3270485.94	N 40 9 10.22	W 104 31 56.35
	5571.00	0.32	294.20	5544.31	235.04	222.12	-285.60	0.26	1299998.16	3270485.27	N 40 9 10.22	W 104 31 56.36
	5761.00	0.51	320.81	5734.30	235.96	222.99	-286.61	0.14	1299999.03	3270484.25	N 40 9 10.23	W 104 31 56.38
	5855.00	0.31	315.84	5828.30	236.48	223.50	-287.06	0.22	1299999.54	3270483.81	N 40 9 10.23	W 104 31 56.38
	5950.00	0.66	282.44	5923.30	236.82	223.80	-287.77	0.46	1299999.84	3270483.09	N 40 9 10.23	W 104 31 56.39
	6045.00	0.84	263.19	6018.29	236.91	223.84	-288.99	0.32	1299999.88	3270481.87	N 40 9 10.24	W 104 31 56.41
	6139.00	0.96	254.58	6112.28	236.69	223.55	-290.44	0.20	1299999.59	3270480.43	N 40 9 10.23	W 104 31 56.42
	6234.00	3.39	328.50	6207.21	238.97	225.73	-292.67	3.42	1300001.77	3270478.19	N 40 9 10.25	W 104 31 56.45
	6329.00	14.56	0.45	6300.94	253.40	240.11	-294.05	12.45	1300016.15	3270476.82	N 40 9 10.40	W 104 31 56.47
	6424.00	22.38	359.66	6390.97	283.45	270.19	-294.06	8.24	1300046.23	3270476.81	N 40 9 10.69	W 104 31 56.46
	6518.00	24.65	0.24	6477.16	320.91	307.69	-294.08	2.42	1300083.73	3270476.79	N 40 9 11.06	W 104 31 56.46
	6613.00	37.03	359.85	6558.57	369.46	356.30	-294.07	13.04	1300132.33	3270476.79	N 40 9 11.54	W 104 31 56.45
	6708.00	45.51	356.27	6629.92	432.04	418.84	-296.36	9.26	1300194.87	3270474.51	N 40 9 12.16	W 104 31 56.47
	6802.00	52.45	357.96	6691.58	502.91	489.62	-299.87	7.52	1300265.65	3270471.00	N 40 9 12.86	W 104 31 56.51
	6897.00	60.94	358.89	6743.69	582.23	568.92	-302.02	8.97	1300344.94	3270468.85	N 40 9 13.65	W 104 31 56.53
	6992.00	66.83	0.12	6785.49	667.43	654.18	-302.74	6.31	1300430.20	3270468.13	N 40 9 14.49	W 104 31 56.52
Last SLB_MWD Survey	7086.00	79.60	355.05	6812.60	757.20	743.87	-306.65	14.52	1300519.88	3270464.21	N 40 9 15.38	W 104 31 56.56
7" Casing Point	7177.00	84.03	354.67	6825.55	847.17	833.56	-314.72	4.89	1300609.57	3270456.14	N 40 9 16.26	W 104 31 56.65
Begin IFR Survey	7200.00	85.15	354.57	6827.72	870.04	856.35	-316.87	4.89	1300632.36	3270454.00	N 40 9 16.49	W 104 31 56.68
	7288.00	85.11	354.36	6835.19	957.61	943.62	-325.33	0.24	1300719.63	3270445.54	N 40 9 17.35	W 104 31 56.77

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 ° ' ")
	7382.00	85.01	355.96	6843.29	1051.19	1036.94	-333.23	1.70	1300812.94	3270437.64	N 40 9 18.27 W	104 31 56.86
	7477.00	86.21	357.39	6850.56	1145.90	1131.50	-338.72	1.96	1300907.49	3270432.15	N 40 9 19.21 W	104 31 56.92
	7571.00	88.04	358.33	6855.27	1239.77	1225.31	-342.23	2.19	1301001.30	3270428.64	N 40 9 20.14 W	104 31 56.95
	7666.00	89.59	358.93	6857.24	1334.72	1320.26	-344.50	1.75	1301096.25	3270426.37	N 40 9 21.08 W	104 31 56.97
	7761.00	90.21	359.12	6857.40	1429.68	1415.24	-346.11	0.68	1301191.23	3270424.75	N 40 9 22.01 W	104 31 56.97
	7855.00	90.17	359.12	6857.09	1523.64	1509.23	-347.56	0.04	1301285.21	3270423.31	N 40 9 22.94 W	104 31 56.98
	7950.00	90.03	0.19	6856.93	1618.56	1604.23	-348.13	1.14	1301380.21	3270422.74	N 40 9 23.88 W	104 31 56.97
	8045.00	90.38	0.55	6856.59	1713.43	1699.22	-347.52	0.53	1301475.20	3270423.35	N 40 9 24.82 W	104 31 56.95
	8140.00	90.17	0.21	6856.13	1808.29	1794.22	-346.89	0.42	1301570.19	3270423.98	N 40 9 25.76 W	104 31 56.93
	8234.00	90.83	359.76	6855.31	1902.19	1888.22	-346.91	0.85	1301664.18	3270423.96	N 40 9 26.69 W	104 31 56.92
	8328.00	90.58	0.65	6854.15	1996.07	1982.21	-346.58	0.98	1301758.17	3270424.29	N 40 9 27.62 W	104 31 56.90
	8423.00	90.31	2.66	6853.41	2090.79	2077.16	-343.83	2.13	1301853.12	3270427.04	N 40 9 28.55 W	104 31 56.85
	8611.00	90.38	2.25	6852.28	2278.05	2264.98	-335.78	0.22	1302040.93	3270435.09	N 40 9 30.41 W	104 31 56.72
	8705.00	90.41	2.44	6851.63	2371.69	2358.90	-331.93	0.20	1302134.85	3270438.94	N 40 9 31.34 W	104 31 56.66
	8800.00	91.07	2.00	6850.41	2466.34	2453.82	-328.25	0.83	1302229.76	3270442.61	N 40 9 32.27 W	104 31 56.60
	8895.00	91.65	2.38	6848.15	2560.97	2548.73	-324.62	0.73	1302324.66	3270446.24	N 40 9 33.21 W	104 31 56.54
	8990.00	90.65	1.44	6846.25	2655.65	2643.65	-321.46	1.44	1302419.58	3270449.41	N 40 9 34.15 W	104 31 56.48
	9178.00	91.17	358.06	6843.26	2843.44	2831.60	-322.28	1.82	1302607.52	3270448.59	N 40 9 36.01 W	104 31 56.47
	9272.00	90.21	356.27	6842.13	2937.43	2925.47	-326.93	2.16	1302701.39	3270443.94	N 40 9 36.94 W	104 31 56.51
	9367.00	89.86	354.60	6842.07	3032.37	3020.17	-334.49	1.80	1302796.08	3270436.38	N 40 9 37.87 W	104 31 56.60
	9555.00	89.24	355.31	6843.55	3220.20	3207.43	-351.02	0.50	1302983.34	3270419.85	N 40 9 39.72 W	104 31 56.79
	9649.00	89.72	356.35	6844.40	3314.16	3301.18	-357.85	1.22	1303077.08	3270413.02	N 40 9 40.65 W	104 31 56.86
	9744.00	90.52	357.90	6844.20	3409.15	3396.05	-362.62	1.84	1303171.95	3270408.25	N 40 9 41.59 W	104 31 56.91
	9838.00	90.45	359.88	6843.40	3503.11	3490.03	-364.44	2.11	1303265.92	3270406.43	N 40 9 42.52 W	104 31 56.92
	9933.00	90.69	1.44	6842.46	3597.94	3585.01	-363.35	1.66	1303360.90	3270407.52	N 40 9 43.46 W	104 31 56.89
	10027.00	90.14	1.43	6841.78	3691.70	3678.98	-360.99	0.59	1303454.87	3270409.88	N 40 9 44.38 W	104 31 56.85
	10122.00	90.31	2.08	6841.41	3786.42	3773.94	-358.08	0.71	1303549.82	3270412.79	N 40 9 45.32 W	104 31 56.80
	10217.00	90.65	1.71	6840.69	3881.12	3868.88	-354.94	0.46	1303644.76	3270415.93	N 40 9 46.26 W	104 31 56.74
	10311.00	90.93	2.16	6839.48	3974.82	3962.82	-351.77	0.63	1303738.69	3270419.10	N 40 9 47.19 W	104 31 56.69
	10406.00	89.52	1.25	6839.11	4069.54	4057.77	-348.94	1.77	1303833.64	3270421.93	N 40 9 48.13 W	104 31 56.64
	10501.00	89.62	0.32	6839.82	4164.36	4152.76	-347.64	0.98	1303928.63	3270423.23	N 40 9 49.06 W	104 31 56.61
	10595.00	90.10	1.29	6840.05	4258.19	4246.75	-346.32	1.15	1304022.61	3270424.55	N 40 9 49.99 W	104 31 56.58
	10690.00	89.52	359.33	6840.36	4353.06	4341.74	-345.80	2.15	1304117.60	3270425.06	N 40 9 50.93 W	104 31 56.56
	10784.00	89.04	357.92	6841.54	4447.03	4435.70	-348.06	1.58	1304211.56	3270422.81	N 40 9 51.86 W	104 31 56.57
	10879.00	88.94	356.55	6843.22	4542.01	4530.58	-352.64	1.45	1304306.43	3270418.23	N 40 9 52.80 W	104 31 56.62
	10973.00	89.28	356.85	6844.68	4635.99	4624.41	-358.05	0.48	1304400.26	3270412.82	N 40 9 53.73 W	104 31 56.68
	11068.00	88.59	356.87	6846.44	4730.97	4719.25	-363.26	0.73	1304495.09	3270407.61	N 40 9 54.66 W	104 31 56.73
	11163.00	89.79	358.21	6847.79	4825.96	4814.15	-367.33	1.89	1304589.99	3270403.54	N 40 9 55.60 W	104 31 56.77
	11257.00	89.31	359.56	6848.53	4919.92	4908.13	-369.16	1.52	1304683.96	3270401.71	N 40 9 56.53 W	104 31 56.78
	11352.00	89.04	0.53	6849.89	5014.81	5003.12	-369.09	1.06	1304778.94	3270401.78	N 40 9 57.47 W	104 31 56.77
	11446.00	89.21	1.06	6851.33	5108.63	5097.09	-367.78	0.59	1304872.92	3270403.09	N 40 9 58.40 W	104 31 56.74
	11541.00	89.21	0.72	6852.64	5203.44	5192.07	-366.31	0.36	1304967.90	3270404.56	N 40 9 59.34 W	104 31 56.70
	11636.00	88.97	2.19	6854.15	5298.18	5287.03	-363.90	1.57	1305062.85	3270406.97	N 40 10 0.27 W	104 31 56.66
	11731.00	88.97	2.03	6855.86	5392.84	5381.95	-360.40	0.17	1305157.76	3270410.47	N 40 10 0.21 W	104 31 56.60
	11825.00	89.00	2.26	6857.52	5486.49	5475.87	-356.88	0.25	1305251.68	3270413.99	N 40 10 0.14 W	104 31 56.54
	12015.00	89.04	2.93	6860.77	5575.67	5565.64	-348.28	0.35	1305441.45	3270422.59	N 40 10 0.01 W	104 31 56.40
	12110.00	89.69	2.74	6861.82	5670.23	5760.52	-343.58	0.71	1305536.32	3270427.29	N 40 10 0.01 W	104 31 56.33
	12204.00	89.72	2.73	6862.31	5764.82	5854.41	-339.10	0.03	1305630.21	3270431.77	N 40 10 0.01 W	104 31 56.26
	12299.00	89.93	1.21	6862.60	5859.51	5949.35	-335.83	1.62	1305725.14	3270435.04	N 40 10 0.01 W	104 31 56.20
	12393.00	89.66	1.59	6862.93	5954.27	6043.33	-333.53	0.50	1305819.11	3270437.34	N 40 10 0.01 W	104 31 56.16
	12488.00	89.69	0.51	6863.47	6048.07	6142.07	-331.79	1.14	1305914.09	3270439.08	N 40 10 0.01 W	104 31 56.13
	12583.00	89.48	358.69	6864.16	6142.00	6233.30	-332.46	1.93	1306009.07	3270438.41	N 40 10 0.01 W	104 31 56.12
	12773.00	90.17	359.54	6864.74	6236.90	6323.27	-335.39	0.58	1306104.03	3270435.48	N 40 10 0.01 W	104 31 56.13
	12867.00	89.48	0.51	6865.03	6326.80	6417.27	-335.35	1.27	1306200.03	3270435.52	N 40 10 0.01 W	104 31 56.12
	12962.00	89.83	0.41	6865.60	6417.27	6506.66	-334.59	0.38	1306300.03	3270436.28	N 40 10 0.01 W	104 31 56.10
	13057.00	89.83	0.05	6865.88	6506.66	6601.26	-334.21	0.38	1306400.03	3270436.66	N 40 10 0.01 W	104 31 56.08
	13151.00	89.59	359.33	6866.36	6601.26	6696.46	-334.71	0.81	1306500.03	3270436.15	N 40 10 0.01 W	104 31 56.07
	13246.00	90.48	358.77	6866.30	6701.26	6801.26	-336.29	1.11	1306600.03	3270434.58	N 40 10 0.01 W	104 31 56.08
	13340.00	90.79	358.87	6865.26	6801.26	6901.26	-338.22	0.35	1306700.03	3270432.64	N 40 10 0.01 W	104 31 56.09
	13435.00	91.17	358.97	6863.63	6901.26	7001.26	-340.01	0.41	1306800.03	3270430.85	N 40 10 0.01 W	104 31 56.10
	13530.00	89.73	357.87	6862.89	7001.26	7101.26	-342.63	1.91	1306900.03	3270428.23	N 40 10 0.01 W	104 31 56.12
	13624.00	89.69	354.29	6863.36	7101.26	7201.26	-346.06	3.81	1307000.03	3270421.81	N 40 10 0.01 W	104 31 56.19
	13719.00	90.00	353.16	6863.62	7201.26	7301.26	-350.44	1.23	1307100.03	3270414.43	N 40 10 0.01 W	104 31 56.31
	13814.00	89.42	354.55	6864.10	7301.26	7401.26	-359.61	1.59	1307200.03	3270411.26	N 40 10 0.01 W	104 31 56.43
	13909.00	90.28	0.92	6864.35	7401.26	7501.26	-373.36	6.77	1307300.03	3270397.51	N 40 10 0.01 W	104 31 56.46
	14004.00	90.00	4.10	6864.12	7501.26	7601.26	-369.20	3.36	1307400.03	3270401.67	N 40 10 0.01 W	104 31 56.39
	14098.00	89.90	0.51	6864.20	7601.26	7701.26	-365.42	3.82	1307500.03	3270405.45	N 40 10 0.01 W	104 31 56.33
	14193.00	89.55	355.36	6864.66	7701.26	7801.26	-368.85	5.43	1307600.03	3270402.02	N 40 10 0.01 W	104 31 56.36
	14288.00	89.73	350.91	6865.25	7801.26	7901.26	-380.20	4.69	1307700.03	3270390.67	N 40 10 0.01 W	104 31 56.50
Last IFR Survey	14396.00	89.55	348.98	6865.93	8051.85	8042.00	-399.05	1.79	1307817.70	3270371.82	N 40 10 27.50 W	104 31 56.72
Projection to Bit	14438.00	89.55	348.98	6866.26	8093.40	8083.23	-407.08	0.00	1307858.92	3270363.79	N 40 10 27.91 W	104 31 56.82

Survey Type: Def Survey

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
Surface	1	0.000	24.000	1/98.425	13.750	9.625	SLB_EMS-STD-Depth Only	Original Hole / Oscar Y10-73-1HC MWD 0' to 14438' Definitive
Surface	1	24.000	1140.000	Act Stns	13.750	9.625	SLB_EMS-STD	Original Hole / Oscar Y10-73-1HC MWD 0' to 14438' Definitive
Intermediate	1	1140.000	7177.000	Act Stns	8.750	7.000	SLB_MWD-STD	Original Hole / Oscar Y10-73-1HC MWD 0' to 14438' Definitive
* Lateral	1	7177.000	1					