

1 General

1.1 Customer Information

Company	PICEANCE HL
Representative	Eric Kolstad
Address	1515 Arapahoe St., Suite 1000 Denver, CO 80202

1.2 Well Information

Well	RGU 441-25-198	Wellbore No.	OH
Well Name	FEDERAL RGU 441-25-198	Common Name	RGU 441-25-198
Project	RG 25-01S-098W	Site	RGU 31-25-198 Pad
Vertical Section Azimuth	111.16 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	4/27/2011	UWI	RGU 441-25-198
Active Datum	KELLY BUSHING @6,661.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	4/27/2011	Ended	
Tool Name	MWD	Engineer	

2.1.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
0.0	0.00	0.00	0.00	0.00	0.00

2.1.2 Survey Stations

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
4/27/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/27/2011	NORMAL	119.0	0.50	73.60	119.00	0.15	0.50	0.41	0.42	0.42	0.00	73.60
	NORMAL	212.0	2.20	84.70	211.97	0.43	2.66	2.33	1.84	1.83	11.94	14.32
	NORMAL	304.0	3.70	91.20	303.85	0.53	7.39	6.70	1.67	1.63	7.07	15.83
	NORMAL	396.0	5.20	94.60	395.57	0.13	14.52	13.49	1.65	1.63	3.70	11.67
	NORMAL	522.0	7.20	102.30	520.82	-2.01	27.92	26.77	1.72	1.59	6.11	26.44
4/28/2011	NORMAL	615.0	7.70	118.00	613.05	-6.18	39.12	38.71	2.25	0.54	16.88	84.07
	NORMAL	707.0	9.30	121.90	704.04	-13.00	50.87	52.14	1.85	1.74	4.24	21.75
	NORMAL	799.0	11.10	118.20	794.58	-21.11	64.99	68.23	2.08	1.96	-4.02	338.17
	NORMAL	891.0	11.30	118.70	884.83	-29.63	80.70	85.95	0.24	0.22	0.54	26.15
	NORMAL	985.0	11.60	118.00	976.96	-38.49	97.12	104.47	0.35	0.32	-0.74	334.80
	NORMAL	1,080.0	12.20	113.90	1,069.92	-47.04	114.74	123.98	1.09	0.63	-4.32	303.35
	NORMAL	1,174.0	12.90	114.20	1,161.67	-55.36	133.39	144.38	0.75	0.74	0.32	5.47
	NORMAL	1,269.0	13.20	111.00	1,254.22	-63.60	153.19	165.81	0.82	0.32	-3.37	290.98
	NORMAL	1,363.0	13.90	112.10	1,345.60	-71.69	173.67	187.84	0.79	0.74	1.17	20.75
	NORMAL	1,457.0	13.60	108.50	1,436.91	-79.45	194.61	210.17	0.96	-0.32	-3.83	248.94
	NORMAL	1,552.0	13.70	107.50	1,529.22	-86.37	215.93	232.55	0.27	0.11	-1.05	292.48
	NORMAL	1,647.0	13.80	109.00	1,621.50	-93.44	237.37	255.10	0.39	0.11	1.58	75.06
	NORMAL	1,741.0	14.20	108.00	1,712.71	-100.66	258.94	277.81	0.50	0.43	-1.06	328.35
	NORMAL	1,833.0	14.10	107.60	1,801.92	-107.53	280.35	300.27	0.15	-0.11	-0.43	224.16

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
4/28/2011	NORMAL	1,927.0	14.10	106.80	1,893.09	-114.30	302.23	323.11	0.21	0.00	-0.85	269.61
	NORMAL	2,022.0	14.00	108.20	1,985.24	-121.24	324.22	346.12	0.37	-0.11	1.47	107.07
	NORMAL	2,120.0	14.00	111.80	2,080.34	-129.34	346.49	369.82	0.89	0.00	3.67	91.75
	NORMAL	2,210.0	13.90	111.80	2,167.68	-137.40	366.63	391.51	0.11	-0.11	0.00	180.00
	NORMAL	2,303.0	14.10	112.70	2,257.92	-145.92	387.46	414.01	0.32	0.22	0.97	47.87
	NORMAL	2,398.0	14.10	112.40	2,350.06	-154.80	408.83	437.14	0.08	0.00	-0.32	269.85
	NORMAL	2,490.0	13.80	112.20	2,439.34	-163.21	429.35	459.32	0.33	-0.33	-0.22	189.03
	NORMAL	2,585.0	13.70	112.00	2,531.62	-171.71	450.27	481.89	0.12	-0.11	-0.21	205.33
	NORMAL	2,679.0	13.30	110.70	2,623.02	-179.70	470.71	503.84	0.53	-0.43	-1.38	216.56
	NORMAL	2,773.0	13.30	110.30	2,714.50	-187.27	490.96	525.46	0.10	0.00	-0.43	269.81
4/29/2011	NORMAL	2,869.0	13.40	110.00	2,807.91	-194.91	511.77	547.62	0.13	0.10	-0.31	325.14
	NORMAL	2,963.0	12.50	113.60	2,899.52	-202.71	531.33	568.68	1.29	-0.96	3.83	139.87
	NORMAL	3,057.0	12.40	113.00	2,991.31	-210.72	549.94	588.93	0.17	-0.11	-0.64	232.00
	NORMAL	3,150.0	11.90	112.50	3,082.22	-218.29	567.99	608.49	0.55	-0.54	-0.54	191.64
	NORMAL	3,247.0	11.30	110.30	3,177.24	-225.42	586.14	627.99	0.77	-0.62	-2.27	215.33
	NORMAL	3,340.0	10.40	106.40	3,268.58	-230.95	602.74	645.47	1.25	-0.97	-4.19	217.30
	NORMAL	3,434.0	9.60	105.00	3,361.15	-235.37	618.45	661.72	0.89	-0.85	-1.49	196.21
	NORMAL	3,528.0	9.80	103.10	3,453.81	-239.21	633.82	677.43	0.40	0.21	-2.02	301.06
	NORMAL	3,622.0	9.80	106.00	3,546.44	-243.23	649.30	693.32	0.53	0.00	3.09	91.43
	NORMAL	3,717.0	10.80	109.50	3,639.91	-248.43	665.46	710.27	1.24	1.05	3.68	33.77
	NORMAL	3,810.0	12.00	114.50	3,731.07	-255.35	682.47	728.63	1.67	1.29	5.38	41.94
	NORMAL	3,904.0	11.70	116.00	3,823.07	-263.58	699.93	747.88	0.46	-0.32	1.60	134.98
	NORMAL	3,998.0	11.50	114.60	3,915.15	-271.66	717.02	766.74	0.37	-0.21	-1.49	233.92
	NORMAL	4,052.0	11.50	114.80	3,968.06	-276.16	726.80	777.48	0.07	0.00	0.37	90.10
	NORMAL	4,108.0	11.50	114.60	4,022.94	-280.79	736.96	788.62	0.00	0.00	0.00	0.00
5/2/2011	NORMAL	4,164.0	9.40	114.30	4,078.20	-284.61	745.27	798.77	1.88	-1.88	-0.45	182.23
	NORMAL	4,258.0	9.00	115.20	4,170.99	-290.90	758.92	812.76	0.45	-0.43	0.96	160.66
	NORMAL	4,353.0	9.50	112.70	4,264.76	-297.08	772.88	828.01	0.68	0.53	-2.63	319.97
	NORMAL	4,448.0	10.10	116.70	4,358.37	-303.85	787.55	844.13	0.95	0.63	4.21	50.59
	NORMAL	4,543.0	9.30	113.80	4,452.01	-310.69	802.02	860.09	0.99	-0.84	-3.05	209.99
	NORMAL	4,637.0	9.00	115.10	4,544.82	-316.88	815.62	875.02	0.39	-0.32	1.38	146.07
	NORMAL	4,731.0	10.00	115.10	4,637.53	-323.46	829.67	890.49	1.06	1.06	0.00	0.00
	NORMAL	4,826.0	9.70	111.00	4,731.13	-329.83	844.61	906.73	0.80	-0.32	-4.32	244.83
	NORMAL	4,920.0	9.30	109.80	4,823.84	-335.24	859.15	922.24	0.47	-0.43	-1.28	205.75
	NORMAL	5,014.0	9.70	108.60	4,916.55	-340.34	873.81	937.74	0.47	0.43	-1.28	333.07
	NORMAL	5,109.0	10.10	108.40	5,010.13	-345.52	889.30	954.06	0.42	0.42	-0.21	354.99
	NORMAL	5,203.0	10.10	109.50	5,102.68	-350.87	904.89	970.53	0.21	0.00	1.17	90.54
	NORMAL	5,297.0	10.60	113.50	5,195.15	-357.07	920.58	987.41	0.93	0.53	4.26	57.15
	NORMAL	5,392.0	10.30	110.80	5,288.57	-363.57	936.54	1,004.63	0.60	-0.32	-2.84	237.19
	NORMAL	5,486.0	11.30	110.50	5,380.91	-369.78	953.02	1,022.24	1.07	1.06	-0.32	356.64
5/3/2011	NORMAL	5,582.0	12.00	109.50	5,474.93	-376.40	971.24	1,041.62	0.76	0.73	-1.04	343.42
	NORMAL	5,676.0	10.80	106.70	5,567.07	-382.20	988.88	1,060.17	1.41	-1.28	-2.98	203.39
	NORMAL	5,770.0	11.40	106.40	5,659.31	-387.35	1,006.23	1,078.21	0.64	0.64	-0.32	354.35
	NORMAL	5,865.0	11.90	107.10	5,752.36	-392.88	1,024.60	1,097.34	0.55	0.53	0.74	16.13
	NORMAL	5,959.0	11.40	105.90	5,844.42	-398.28	1,042.80	1,116.26	0.59	-0.53	-1.28	205.27
	NORMAL	6,054.0	10.90	107.10	5,937.63	-403.49	1,060.41	1,134.56	0.58	-0.53	1.26	155.69
	NORMAL	6,148.0	10.20	109.20	6,030.04	-408.84	1,076.77	1,151.75	0.85	-0.74	2.23	152.25
	NORMAL	6,242.0	10.50	113.90	6,122.51	-415.05	1,092.46	1,168.62	0.95	0.32	5.00	72.76
	NORMAL	6,336.0	9.10	115.50	6,215.14	-421.72	1,107.00	1,184.59	1.52	-1.49	1.70	169.78
	NORMAL	6,431.0	9.50	113.50	6,308.89	-428.08	1,120.97	1,199.91	0.54	0.42	-2.11	320.07
	NORMAL	6,525.0	8.10	112.80	6,401.78	-433.74	1,134.19	1,214.29	1.49	-1.49	-0.74	184.03
	NORMAL	6,620.0	8.10	114.70	6,495.83	-439.13	1,146.44	1,227.66	0.28	0.00	2.00	90.94
	NORMAL	6,715.0	6.70	112.50	6,590.04	-444.05	1,157.64	1,239.88	1.50	-1.47	-2.32	190.35
	NORMAL	6,810.0	7.80	103.50	6,684.28	-447.67	1,169.03	1,251.81	1.66	1.16	-9.47	309.56
	NORMAL	6,905.0	8.20	100.60	6,778.36	-450.42	1,181.96	1,264.86	0.60	0.42	-3.05	313.30
	NORMAL	6,998.0	8.20	104.70	6,870.41	-453.33	1,194.89	1,277.97	0.63	0.00	4.41	92.03
	NORMAL	7,093.0	7.50	105.90	6,964.51	-456.74	1,207.41	1,290.87	0.76	-0.74	1.26	167.42

2.1.2 Survey Stations (Continued)

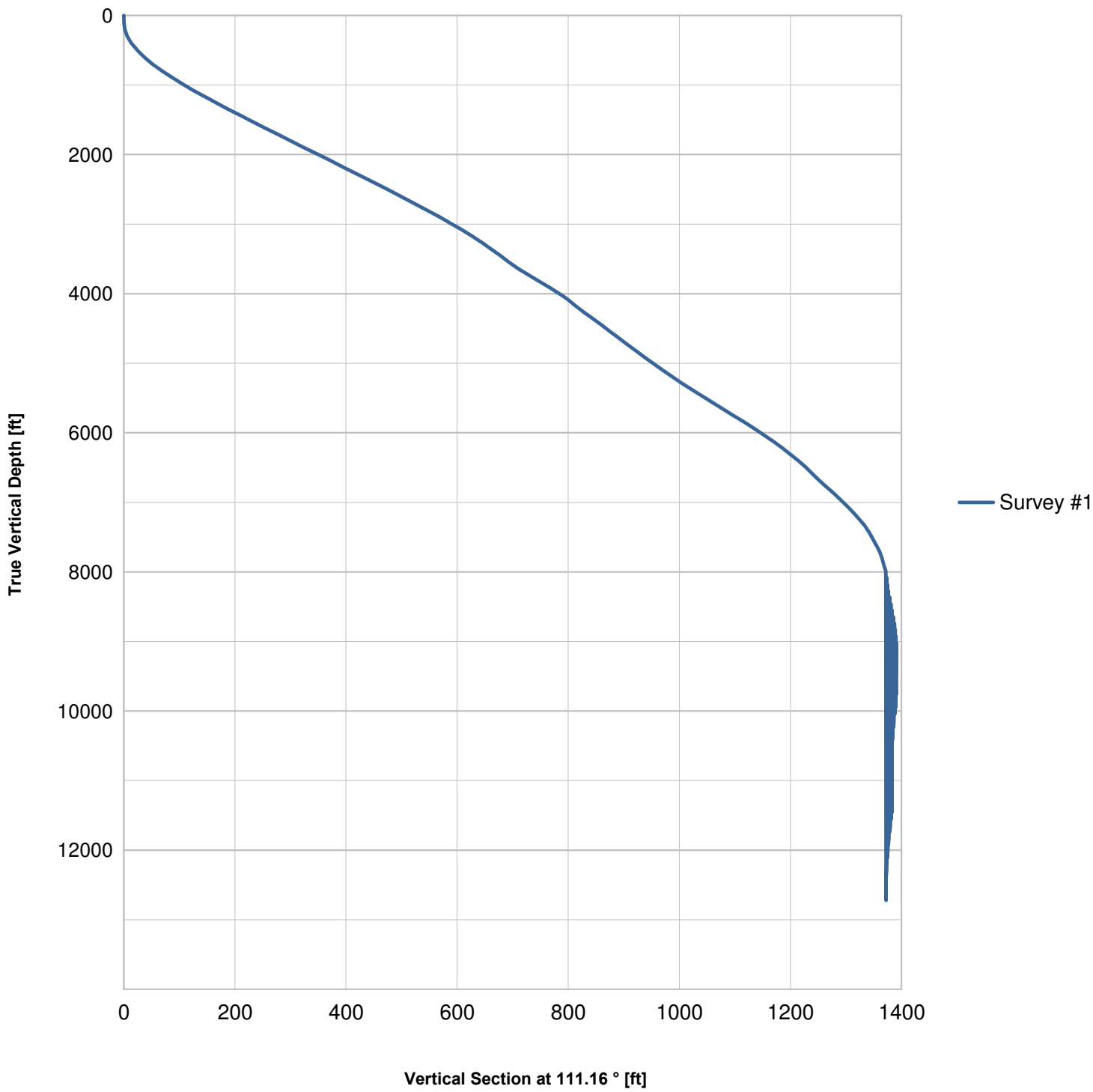
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
5/4/2011	NORMAL	7,188.0	7.10	107.30	7,058.74	-460.19	1,218.98	1,302.90	0.46	-0.42	1.47	156.72
	NORMAL	7,282.0	6.40	115.60	7,152.09	-464.18	1,229.25	1,313.92	1.28	-0.74	8.83	129.73
	NORMAL	7,375.0	6.20	107.40	7,244.53	-467.92	1,238.71	1,324.10	0.99	-0.22	-8.82	253.41
	NORMAL	7,469.0	5.60	111.00	7,338.04	-471.08	1,247.84	1,333.75	0.75	-0.64	3.83	150.12
	NORMAL	7,562.0	3.90	106.90	7,430.71	-473.63	1,255.10	1,341.45	1.86	-1.83	-4.41	189.26
	NORMAL	7,656.0	4.00	109.60	7,524.49	-475.66	1,261.25	1,347.91	0.22	0.11	2.87	63.09
	NORMAL	7,749.0	4.20	103.70	7,617.25	-477.55	1,267.61	1,354.53	0.50	0.22	-6.34	292.40
5/5/2011	NORMAL	7,842.0	3.20	108.60	7,710.06	-479.19	1,273.38	1,360.50	1.13	-1.08	5.27	164.89
	NORMAL	7,935.0	1.80	114.70	7,802.97	-480.63	1,277.17	1,364.55	1.53	-1.51	6.56	172.28
	NORMAL	8,028.0	2.20	110.70	7,895.91	-481.87	1,280.17	1,367.80	0.46	0.43	-4.30	338.76
	NORMAL	8,122.0	2.30	130.10	7,989.84	-483.72	1,283.30	1,371.38	0.81	0.11	20.64	92.28
	NORMAL	8,215.0	0.90	177.70	8,082.80	-485.65	1,284.76	1,373.44	1.96	-1.51	51.18	158.56
	NORMAL	8,309.0	1.00	176.90	8,176.79	-487.21	1,284.83	1,374.07	0.11	0.11	-0.85	352.04
	NORMAL	8,403.0	2.00	145.80	8,270.76	-489.38	1,285.80	1,375.76	1.34	1.06	-33.09	304.60
	NORMAL	8,496.0	1.70	143.10	8,363.71	-491.83	1,287.54	1,378.26	0.34	-0.32	-2.90	194.85
	NORMAL	8,590.0	1.40	138.80	8,457.68	-493.81	1,289.13	1,380.46	0.34	-0.32	-4.57	199.05
	NORMAL	8,683.0	1.50	105.90	8,550.65	-495.00	1,291.05	1,382.68	0.89	0.11	-35.38	260.22
5/6/2011	NORMAL	8,776.0	1.30	94.40	8,643.62	-495.41	1,293.27	1,384.90	0.37	-0.22	-12.37	228.90
	NORMAL	8,870.0	1.10	124.90	8,737.60	-496.01	1,295.07	1,386.80	0.70	-0.21	32.45	122.24
	NORMAL	8,963.0	0.90	120.80	8,830.59	-496.89	1,296.43	1,388.39	0.23	-0.22	-4.41	197.64
	NORMAL	9,057.0	0.50	115.90	8,924.58	-497.45	1,297.44	1,389.53	0.43	-0.43	-5.21	186.07
	NORMAL	9,150.0	0.70	103.60	9,017.57	-497.76	1,298.35	1,390.49	0.25	0.22	-13.23	320.97
	NORMAL	9,243.0			9,110.57	-497.90	1,298.91	1,391.06	0.75	-0.75	0.00	180.00
5/7/2011	NORMAL	9,243.0	0.60	201.60	9,110.57	-498.35	1,298.73	1,391.06	1.06	-0.11	105.38	142.82
	NORMAL	9,337.0	0.80	215.90	9,204.56	-499.34	1,298.16	1,390.88	0.28	0.21	15.21	48.44
	NORMAL	9,430.0	0.30	168.30	9,297.56	-500.10	1,297.83	1,390.85	0.69	-0.54	-51.18	200.34
	NORMAL	9,524.0	0.20	146.60	9,391.56	-500.48	1,297.97	1,391.12	0.14	-0.11	-23.09	212.93
	NORMAL	9,618.0	0.90	357.50	9,485.56	-499.88	1,298.03	1,390.95	1.15	0.74	-158.62	205.43
	NORMAL	9,712.0	0.60	356.00	9,579.55	-498.65	1,297.96	1,390.45	0.32	-0.32	-1.60	182.99
	NORMAL	9,806.0	0.50	347.30	9,673.54	-497.76	1,297.84	1,390.01	0.14	-0.11	-9.26	215.57
	NORMAL	9,899.0	0.30	29.80	9,766.54	-497.15	1,297.87	1,389.82	0.37	-0.22	45.70	143.99
	NORMAL	9,993.0	0.80	330.90	9,860.54	-496.37	1,297.67	1,389.35	0.74	0.53	-62.66	279.39
	NORMAL	10,088.0	0.90	351.90	9,955.53	-495.05	1,297.24	1,388.48	0.34	0.11	22.11	82.89
	NORMAL	10,182.0	1.10	320.10	10,049.51	-493.62	1,296.56	1,387.33	0.62	0.21	-33.83	273.45
	NORMAL	10,276.0	0.60	310.50	10,143.50	-492.61	1,295.61	1,386.07	0.55	-0.53	-10.21	191.13
	NORMAL	10,370.0	0.90	344.30	10,237.49	-491.58	1,295.03	1,385.17	0.56	0.32	35.96	73.54
5/8/2011	NORMAL	10,464.0	1.20	339.10	10,331.48	-489.95	1,294.48	1,384.06	0.33	0.32	-5.53	339.77
	NORMAL	10,557.0	0.40	336.50	10,424.47	-488.74	1,294.01	1,383.18	0.86	-0.86	-2.80	181.30
	NORMAL	10,651.0	1.10	325.20	10,518.46	-487.70	1,293.36	1,382.21	0.76	0.74	-12.02	342.38
	NORMAL	10,745.0	0.70	12.60	10,612.45	-486.40	1,292.97	1,381.37	0.86	-0.43	50.43	140.55
	NORMAL	10,838.0	0.20	350.20	10,705.45	-485.69	1,293.07	1,381.20	0.56	-0.54	-24.09	188.42
	NORMAL	10,931.0	0.20	34.40	10,798.45	-485.39	1,293.13	1,381.16	0.16	0.00	47.53	112.10
	NORMAL	11,026.0	0.80	348.80	10,893.44	-484.61	1,293.10	1,380.84	0.71	0.63	-48.00	302.19
	NORMAL	11,119.0	0.90	12.10	10,986.43	-483.25	1,293.12	1,380.38	0.38	0.11	25.05	85.72
	NORMAL	11,213.0	0.90	19.60	11,080.42	-481.84	1,293.53	1,380.24	0.13	0.00	7.98	93.75
	NORMAL	11,307.0	1.10	32.50	11,174.41	-480.38	1,294.26	1,380.40	0.32	0.21	13.72	54.95
	NORMAL	11,401.0	1.00	57.50	11,268.39	-479.18	1,295.43	1,381.06	0.49	-0.11	26.60	114.62
5/9/2011	NORMAL	11,500.0	1.20	56.10	11,367.37	-478.14	1,297.02	1,382.17	0.20	0.20	-1.41	351.65
	NORMAL	11,589.0	0.60	347.50	11,456.36	-477.16	1,297.70	1,382.44	1.27	-0.67	-77.08	209.66
5/10/2011	NORMAL	11,686.0	1.40	257.50	11,553.35	-476.92	1,296.43	1,381.18	1.57	0.82	-92.78	246.81
	NORMAL	11,777.0	0.90	251.60	11,644.33	-477.39	1,294.67	1,379.70	0.56	-0.55	-6.48	190.39
	NORMAL	11,871.0	1.00	257.50	11,738.32	-477.80	1,293.16	1,378.45	0.15	0.11	6.28	47.34
	NORMAL	11,967.0	1.00	246.10	11,834.31	-478.32	1,291.58	1,377.16	0.21	0.00	-11.88	264.30
	NORMAL	12,059.0	1.40	235.00	11,926.29	-479.29	1,289.93	1,375.97	0.50	0.43	-12.07	324.21
	NORMAL	12,153.0	1.40	224.10	12,020.26	-480.77	1,288.19	1,374.88	0.28	0.00	-11.60	264.55
	NORMAL	12,248.0	0.70	254.10	12,115.24	-481.77	1,286.82	1,373.96	0.91	-0.74	31.58	156.21
	NORMAL	12,342.0	1.10	223.10	12,209.23	-482.58	1,285.65	1,373.17	0.66	0.43	-32.98	293.21

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
5/11/2011	NORMAL	12,437.0	1.00	216.00	12,304.21	-483.92	1,284.54	1,372.61	0.17	-0.11	-7.47	228.94
	NORMAL	12,531.0	1.10	218.70	12,398.20	-485.29	1,283.50	1,372.13	0.12	0.11	2.87	27.68
	NORMAL	12,625.0	0.70	182.10	12,492.19	-486.56	1,282.91	1,372.05	0.72	-0.43	-38.94	217.80
	NORMAL	12,719.0	0.80	211.90	12,586.18	-487.70	1,282.54	1,372.11	0.42	0.11	31.70	90.83
	NORMAL	12,854.0	1.00	210.00	12,721.16	-489.52	1,281.46	1,371.76	0.15	0.15	-1.41	350.56

3 Charts

3.1 Vertical Section View



3.2 Plan View

