

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 524-24-198	Wellbore No.	OH
Well Name	FEDERAL RGU 524-24-198	Common Name	RGU 524-24-198
Project	RG 25-01S-098W	Site	RGU 31-25-198 Pad
Vertical Section Azimuth	284.73 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	4/14/2011	UWI	RGU 524-24-198
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	4/14/2011	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 (°)
4/14/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/14/2011	NORMAL	156.0	1.50	273.80	155.98	0.14	-2.04	2.00	0.96	0.96	0.00	273.80
	NORMAL	248.0	3.00	289.10	247.91	1.00	-5.51	5.59	1.74	1.63	16.63	29.59
	NORMAL	341.0	4.60	299.20	340.70	3.62	-11.07	11.63	1.86	1.72	10.86	27.80
	NORMAL	435.0	5.90	296.00	434.31	7.58	-18.70	20.01	1.42	1.38	-3.40	345.71
	NORMAL	525.0	8.10	286.70	523.63	11.43	-28.93	30.89	2.74	2.44	-10.33	328.07
	NORMAL	619.0	9.70	279.90	616.50	14.69	-43.08	45.40	2.03	1.70	-7.23	323.28
	NORMAL	710.0	11.00	281.80	706.02	17.78	-59.13	61.71	1.48	1.43	2.09	15.65
	NORMAL	802.0	12.40	280.60	796.11	21.40	-77.43	80.33	1.54	1.52	-1.30	349.55
	NORMAL	894.0	12.40	276.80	885.96	24.38	-96.95	99.96	0.89	0.00	-4.13	268.14
	NORMAL	988.0	12.60	278.00	977.73	27.01	-117.13	120.14	0.35	0.21	1.28	52.99
	NORMAL	1,083.0	13.40	280.60	1,070.30	30.47	-138.21	141.41	1.04	0.84	2.74	37.44
	NORMAL	1,177.0	13.30	288.60	1,161.77	35.93	-159.16	163.07	1.97	-0.11	8.51	96.99
	NORMAL	1,272.0	14.10	287.40	1,254.06	42.87	-180.56	185.53	0.89	0.84	-1.26	339.86
	NORMAL	1,365.0	14.10	287.00	1,344.26	49.57	-202.21	208.16	0.10	0.00	-0.43	269.81
	NORMAL	1,460.0	14.20	284.70	1,436.38	55.91	-224.54	231.38	0.60	0.11	-2.42	278.97
4/15/2011	NORMAL	1,554.0	14.30	282.50	1,527.49	61.35	-247.03	254.51	0.59	0.11	-2.34	279.39
	NORMAL	1,649.0	14.00	284.50	1,619.60	66.77	-269.61	277.72	0.60	-0.32	2.11	122.50
	NORMAL	1,744.0	14.20	281.30	1,711.74	71.93	-292.16	300.85	0.85	0.21	-3.37	282.83
	NORMAL	1,836.0	14.10	279.70	1,800.95	76.03	-314.27	323.27	0.44	-0.11	-1.74	254.88

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 (°)
4/15/2011	NORMAL	1,930.0	14.50	278.90	1,892.04	79.78	-337.18	346.39	0.47	0.43	-0.85	333.32
	NORMAL	2,024.0	14.10	285.90	1,983.13	84.73	-359.82	369.54	1.89	-0.43	7.45	106.40
	NORMAL	2,118.0	14.30	286.90	2,074.26	91.24	-381.94	392.59	0.34	0.21	1.06	51.29
	NORMAL	2,212.0	14.00	286.70	2,165.41	97.89	-403.94	415.56	0.32	-0.32	-0.21	189.16
	NORMAL	2,306.0	13.40	287.80	2,256.74	104.48	-425.20	437.80	0.70	-0.64	1.17	157.06
	NORMAL	2,400.0	13.10	288.20	2,348.23	111.14	-445.69	459.31	0.33	-0.32	0.43	163.20
	NORMAL	2,587.0	13.20	286.70	2,530.33	123.90	-486.28	501.80	0.19	0.05	-0.80	285.60
	NORMAL	2,682.0	13.30	288.30	2,622.80	130.44	-507.04	523.54	0.40	0.11	1.68	75.53
	NORMAL	2,776.0	11.30	287.80	2,714.64	136.65	-526.08	543.53	2.13	-2.13	-0.53	182.80
	NORMAL	2,871.0	11.10	287.30	2,807.83	142.22	-543.67	561.96	0.23	-0.21	-0.53	205.66
	NORMAL	2,965.0	11.00	286.90	2,900.09	147.52	-560.89	579.96	0.13	-0.11	-0.43	217.28
	NORMAL	3,059.0	11.00	286.40	2,992.36	152.66	-578.07	597.89	0.10	0.00	-0.53	269.75
	NORMAL	3,153.0	10.30	285.40	3,084.74	157.42	-594.78	615.26	0.77	-0.74	-1.06	194.30
	NORMAL	3,248.0	9.70	282.60	3,178.30	161.42	-610.78	631.75	0.81	-0.63	-2.95	217.65
	NORMAL	3,342.0	8.60	279.30	3,271.10	164.28	-625.44	646.66	1.30	-1.17	-3.51	203.88
	NORMAL	3,436.0	8.20	279.20	3,364.09	166.49	-638.99	660.33	0.43	-0.43	-0.11	182.04
	NORMAL	3,531.0	8.00	278.00	3,458.14	168.49	-652.23	673.64	0.28	-0.21	-1.26	219.62
4/16/2011	NORMAL	3,625.0	8.70	275.30	3,551.15	170.06	-665.79	687.15	0.85	0.74	-2.87	329.40
	NORMAL	3,718.0	9.60	279.50	3,642.96	171.99	-680.44	701.81	1.20	0.97	4.52	38.66
	NORMAL	3,813.0	9.50	280.60	3,736.65	174.74	-695.96	717.51	0.22	-0.11	1.16	119.26
	NORMAL	3,907.0	8.60	276.10	3,829.48	176.92	-710.57	732.20	1.22	-0.96	-4.79	215.98
	NORMAL	4,006.0			3,928.11	177.70	-717.94	747.06	8.69	-8.69	0.00	180.00
	NORMAL	4,101.0			4,023.11	177.70	-717.94	762.22	0.00	0.00	0.00	0.00
	NORMAL	4,196.0			4,118.11	177.70	-717.94	776.89	0.00	0.00	0.00	0.00
4/18/2011	NORMAL	4,000.0	9.30	281.40	3,921.35	179.14	-724.85	746.58	1.16	0.75	5.70	52.31
	NORMAL	4,095.0	9.10	282.10	4,015.12	182.23	-739.72	746.58	0.24	-0.21	0.74	151.11
	NORMAL	4,189.0	8.80	282.40	4,107.98	185.33	-754.01	746.27	0.32	-0.32	0.32	171.31
	NORMAL	4,258.0	7.80	284.40	4,176.26	187.63	-763.70	743.75	1.51	-1.45	2.90	164.88
	NORMAL	4,353.0	7.20	281.90	4,270.44	190.46	-775.77	798.70	0.72	-0.63	-2.63	207.30
	NORMAL	4,447.0	7.10	296.10	4,363.72	194.23	-786.75	810.28	1.88	-0.11	15.11	100.27
	NORMAL	4,543.0	7.80	299.90	4,458.91	200.09	-797.73	822.39	0.89	0.73	3.96	37.03
	NORMAL	4,637.0	9.30	290.40	4,551.87	205.92	-810.38	836.10	2.19	1.60	-10.11	311.96
	NORMAL	4,731.0	11.00	288.60	4,644.39	211.43	-826.00	852.61	1.84	1.81	-1.91	348.54
	NORMAL	4,825.0	12.30	289.20	4,736.45	217.58	-843.96	871.54	1.39	1.38	0.64	5.62
	NORMAL	4,920.0	9.50	286.90	4,829.73	223.19	-861.02	889.47	2.98	-2.95	-2.42	187.70
	NORMAL	5,014.0	9.70	284.70	4,922.42	227.45	-876.10	905.14	0.44	0.21	-2.34	297.51
	NORMAL	5,109.0	9.50	288.40	5,016.09	231.96	-891.28	920.97	0.68	-0.21	3.89	109.78
	NORMAL	5,203.0	8.80	285.60	5,108.89	236.34	-905.56	935.90	0.88	-0.74	-2.98	211.08
4/19/2011	NORMAL	5,297.0	10.60	285.80	5,201.54	240.63	-920.81	951.73	1.92	1.91	0.21	1.17
	NORMAL	5,392.0	8.70	288.20	5,295.19	245.25	-936.05	967.64	2.04	-2.00	2.53	169.23
	NORMAL	5,486.0	9.60	286.90	5,388.00	249.75	-950.30	982.57	0.98	0.96	-1.38	346.42
	NORMAL	5,581.0	9.00	283.00	5,481.75	253.73	-965.12	997.91	0.92	-0.63	-4.11	224.50
	NORMAL	5,675.0	8.30	283.20	5,574.68	256.93	-978.89	1,012.04	0.75	-0.74	0.21	177.64
	NORMAL	5,770.0	9.20	288.30	5,668.57	260.88	-992.77	1,026.48	1.25	0.95	5.37	43.30
	NORMAL	5,865.0	8.20	288.70	5,762.48	265.44	-1,006.40	1,040.82	1.05	-1.05	0.42	176.74
	NORMAL	5,959.0	7.40	283.40	5,855.61	268.99	-1,018.64	1,053.56	1.14	-0.85	-5.64	219.35
	NORMAL	6,053.0	8.30	285.60	5,948.73	272.22	-1,031.06	1,066.39	1.01	0.96	2.34	19.55
	NORMAL	6,148.0	9.00	282.70	6,042.65	275.69	-1,044.92	1,080.68	0.87	0.74	-3.05	326.63
	NORMAL	6,242.0	8.80	289.60	6,135.52	279.72	-1,058.86	1,095.19	1.15	-0.21	7.34	104.01
	NORMAL	6,336.0	9.10	289.00	6,228.37	284.55	-1,072.67	1,109.77	0.33	0.32	-0.64	342.42
	NORMAL	6,430.0	10.00	289.80	6,321.07	289.74	-1,087.37	1,125.31	0.97	0.96	0.85	8.78
	NORMAL	6,525.0	6.80	290.40	6,415.04	294.49	-1,100.41	1,139.12	3.37	-3.37	0.63	178.73
	NORMAL	6,620.0	6.40	283.90	6,509.41	297.73	-1,110.82	1,150.02	0.89	-0.42	-6.84	238.63
	NORMAL	6,715.0	6.20	286.40	6,603.84	300.45	-1,120.88	1,160.44	0.36	-0.21	2.63	127.33
	NORMAL	6,810.0	6.50	298.40	6,698.26	304.45	-1,130.53	1,170.79	1.43	0.32	12.63	83.27
	NORMAL	6,906.0	6.80	304.90	6,793.61	310.29	-1,139.98	1,181.41	0.84	0.31	6.77	71.52
	NORMAL	6,998.0	6.90	286.90	6,884.97	315.01	-1,149.73	1,192.04	2.33	0.11	-19.57	263.71

2.1.2 Survey Stations (Continued)

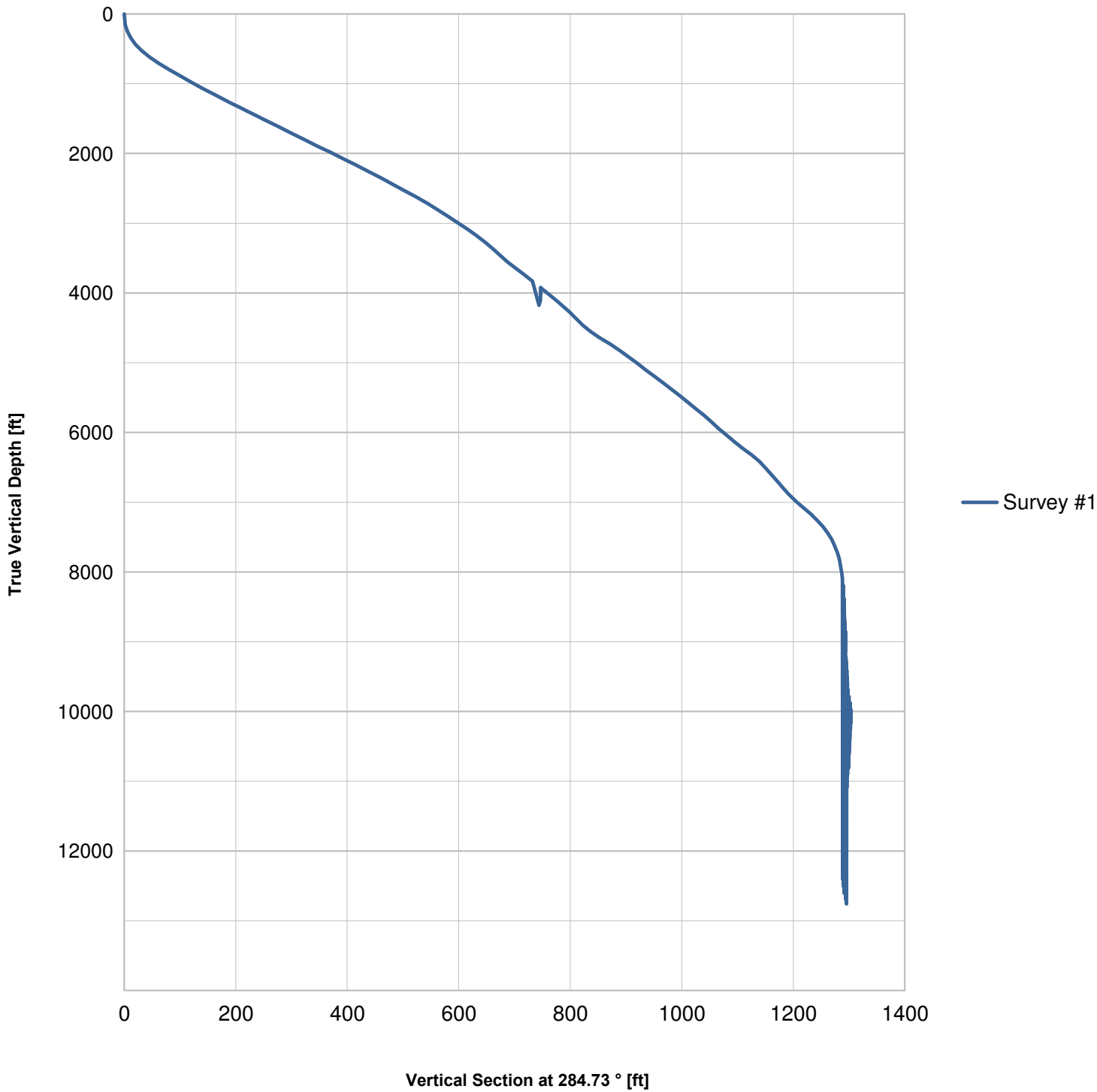
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
4/19/2011	NORMAL	7,095.0	7.60	286.50	6,981.19	318.53	-1,161.46	1,204.28	0.72	0.72	-0.41	355.68
4/20/2011	NORMAL	7,188.0	9.00	272.50	7,073.22	320.59	-1,174.62	1,217.53	2.63	1.51	-15.05	297.65
	NORMAL	7,282.0	7.70	273.00	7,166.23	321.24	-1,188.26	1,230.89	1.39	-1.38	0.53	177.05
	NORMAL	7,375.0	7.00	273.30	7,258.46	321.90	-1,200.14	1,242.54	0.75	-0.75	0.32	177.01
	NORMAL	7,469.0	5.80	279.30	7,351.88	322.99	-1,210.54	1,252.88	1.46	-1.28	6.38	153.83
	NORMAL	7,562.0	5.00	280.60	7,444.46	324.50	-1,219.16	1,261.60	0.87	-0.86	1.40	171.95
	NORMAL	7,655.0	3.70	283.80	7,537.19	325.96	-1,226.06	1,268.65	1.42	-1.40	3.44	171.02
	NORMAL	7,749.0	3.10	291.10	7,631.03	327.60	-1,231.38	1,274.21	0.79	-0.64	7.77	147.79
	NORMAL	7,842.0	2.80	278.50	7,723.90	328.84	-1,235.97	1,278.96	0.77	-0.32	-13.55	238.97
	NORMAL	7,935.0	1.60	321.40	7,816.84	330.19	-1,239.03	1,282.26	2.11	-1.29	46.13	146.21
	NORMAL	8,030.0	1.50	306.50	7,911.81	331.97	-1,240.86	1,284.48	0.44	-0.11	-15.68	248.69
	NORMAL	8,131.0	0.90	297.40	8,012.78	333.12	-1,242.62	1,286.48	0.62	-0.59	-9.01	193.11
	NORMAL	8,215.0	1.00	303.90	8,096.77	333.83	-1,243.82	1,287.82	0.17	0.12	7.74	50.42
	NORMAL	8,309.0	0.90	326.10	8,190.76	334.90	-1,244.91	1,289.15	0.40	-0.11	23.62	116.12
	NORMAL	8,403.0	0.40	346.30	8,284.75	335.83	-1,245.40	1,289.86	0.58	-0.53	21.49	165.25
	NORMAL	8,496.0	1.10	231.50	8,377.75	335.59	-1,246.17	1,290.55	1.42	0.75	-123.44	229.22
4/21/2011	NORMAL	8,589.0	0.80	217.20	8,470.73	334.52	-1,247.27	1,291.33	0.41	-0.32	-15.38	211.32
	NORMAL	8,682.0	0.90	187.50	8,563.72	333.28	-1,247.75	1,291.49	0.48	0.11	-31.94	267.66
	NORMAL	8,776.0	0.60	261.70	8,657.72	332.47	-1,248.34	1,291.85	1.00	-0.32	78.94	141.91
	NORMAL	8,869.0	1.20	215.20	8,750.71	331.61	-1,249.38	1,292.63	0.97	0.65	-50.00	284.56
	NORMAL	8,963.0	0.90	237.30	8,844.69	330.40	-1,250.57	1,293.48	0.53	-0.32	23.51	137.24
	NORMAL	9,056.0	1.30	172.40	8,937.68	328.96	-1,251.04	1,293.57	1.32	0.43	-69.78	253.51
	NORMAL	9,150.0	0.20	271.90	9,031.67	327.91	-1,251.07	1,293.33	1.43	-1.17	105.85	171.58
	NORMAL	9,243.0	0.10	294.70	9,124.67	327.95	-1,251.30	1,293.56	0.12	-0.11	24.52	160.23
	NORMAL	9,336.0	0.70	275.80	9,217.67	328.04	-1,251.94	1,294.21	0.65	0.65	-20.32	338.04
	NORMAL	9,430.0	0.90	250.50	9,311.66	327.85	-1,253.21	1,295.38	0.43	0.21	-26.91	286.47
	NORMAL	9,524.0	1.00	180.80	9,405.65	326.79	-1,253.92	1,295.80	1.16	0.11	-74.15	239.48
	NORMAL	9,618.0	1.00	223.50	9,499.63	325.37	-1,254.49	1,295.99	0.77	0.00	45.43	111.35
	NORMAL	9,711.0	1.10	254.10	9,592.62	324.54	-1,255.91	1,297.15	0.60	0.11	32.90	95.42
	NORMAL	9,805.0	0.60	233.60	9,686.61	324.00	-1,257.17	1,298.24	0.61	-0.53	-21.81	201.33
4/22/2011	NORMAL	9,899.0	1.80	247.60	9,780.59	323.15	-1,258.93	1,299.72	1.30	1.28	14.89	20.80
	NORMAL	9,993.0	1.30	262.90	9,874.55	322.45	-1,261.36	1,301.89	0.69	-0.53	16.28	147.86
	NORMAL	10,088.0	1.00	205.90	9,969.54	321.57	-1,262.79	1,303.05	1.19	-0.32	-60.00	228.00
	NORMAL	10,182.0	0.40	266.20	10,063.53	320.81	-1,263.47	1,303.52	0.93	-0.64	64.15	156.57
	NORMAL	10,276.0	0.60	115.90	10,157.53	320.58	-1,263.36	1,303.35	1.03	0.21	-159.89	197.89
	NORMAL	10,369.0	0.90	162.90	10,250.52	319.67	-1,262.71	1,302.49	0.71	0.32	50.54	88.80
	NORMAL	10,463.0	0.50	74.80	10,344.52	319.07	-1,262.09	1,301.74	1.08	-0.43	-93.72	209.50
	NORMAL	10,557.0	0.60	129.70	10,438.51	318.86	-1,261.32	1,300.94	0.55	0.11	58.40	107.52
	NORMAL	10,651.0	0.40	195.30	10,532.51	318.23	-1,261.03	1,300.50	0.60	-0.21	69.79	140.04
	NORMAL	10,744.0	0.80	117.50	10,625.50	317.62	-1,260.54	1,299.87	0.88	0.43	-83.66	253.55
4/23/2011	NORMAL	10,838.0	0.30	224.80	10,719.50	317.14	-1,260.13	1,299.35	0.99	-0.53	114.15	162.14
	NORMAL	10,931.0	1.30	149.60	10,812.49	316.06	-1,259.77	1,298.72	1.35	1.08	-80.86	271.46
	NORMAL	11,025.0	1.30	165.00	10,906.47	314.11	-1,258.95	1,297.44	0.37	0.00	16.38	97.70
	NORMAL	11,213.0	0.60	162.40	11,094.44	311.11	-1,258.10	1,295.86	0.37	-0.37	-1.38	182.22
	NORMAL	11,308.0	2.10	82.70	11,189.42	310.86	-1,256.22	1,293.98	2.19	1.58	-83.89	263.81
	NORMAL	11,401.0	0.80	96.10	11,282.39	311.00	-1,253.89	1,291.76	1.44	-1.40	14.41	172.02
4/24/2011	NORMAL	11,498.0	1.20	28.50	11,379.37	311.82	-1,252.73	1,290.84	1.20	0.41	-69.69	252.84
	NORMAL	11,589.0	0.60	9.10	11,470.36	313.13	-1,252.20	1,290.66	0.73	-0.66	-21.32	197.45
	NORMAL	11,683.0	0.30	168.50	11,564.36	313.38	-1,252.07	1,290.60	0.94	-0.32	169.57	173.17
	NORMAL	11,777.0	0.40	1.20	11,658.36	313.46	-1,252.02	1,290.57	0.74	0.11	-177.98	187.26
	NORMAL	11,871.0	0.60	179.30	11,752.36	313.30	-1,252.00	1,290.52	1.06	0.21	189.47	178.86
	NORMAL	11,965.0			11,846.36	312.81	-1,252.00	1,290.15	0.64	-0.64	0.00	180.00
	NORMAL	12,059.0			11,940.36	312.81	-1,252.00	1,289.76	0.00	0.00	0.00	0.00
4/25/2011	NORMAL	11,965.0	0.30	122.90	11,846.36	312.67	-1,251.79	1,290.15	0.53	-0.32	-60.00	209.93
	NORMAL	12,059.0	0.90	182.30	11,940.35	311.80	-1,251.61	1,290.23	0.84	0.64	63.19	78.46
	NORMAL	12,153.0	0.60	104.90	12,034.35	310.94	-1,251.17	1,289.89	1.03	-0.32	-82.34	217.29
	NORMAL	12,248.0	0.30	143.40	12,129.34	310.61	-1,250.54	1,288.42	0.43	-0.32	40.53	152.92

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 (°)
4/25/2011	NORMAL	12,342.0	0.70	12.40	12,223.34	310.97	-1,250.27	1,288.25	0.98	0.43	-139.36	214.83
	NORMAL	12,436.0	0.90	29.80	12,317.33	312.17	-1,249.78	1,288.08	0.33	0.21	18.51	59.45
	NORMAL	12,531.0	0.70	270.20	12,412.33	312.82	-1,249.99	1,288.45	1.46	-0.21	-125.89	206.04
	NORMAL	12,625.0	1.40	313.90	12,506.31	313.62	-1,251.39	1,290.01	1.08	0.74	46.49	72.11
4/26/2011	NORMAL	12,719.0	1.00	283.20	12,600.29	314.61	-1,253.02	1,291.83	0.79	-0.43	-32.66	223.39
	NORMAL	12,819.0	1.80	254.40	12,700.26	314.38	-1,255.38	1,294.06	1.04	0.80	-28.80	303.66
	NORMAL	12,879.0	1.80	254.40	12,760.23	313.88	-1,257.19	1,295.68	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

