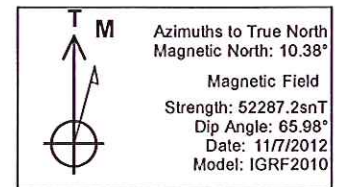
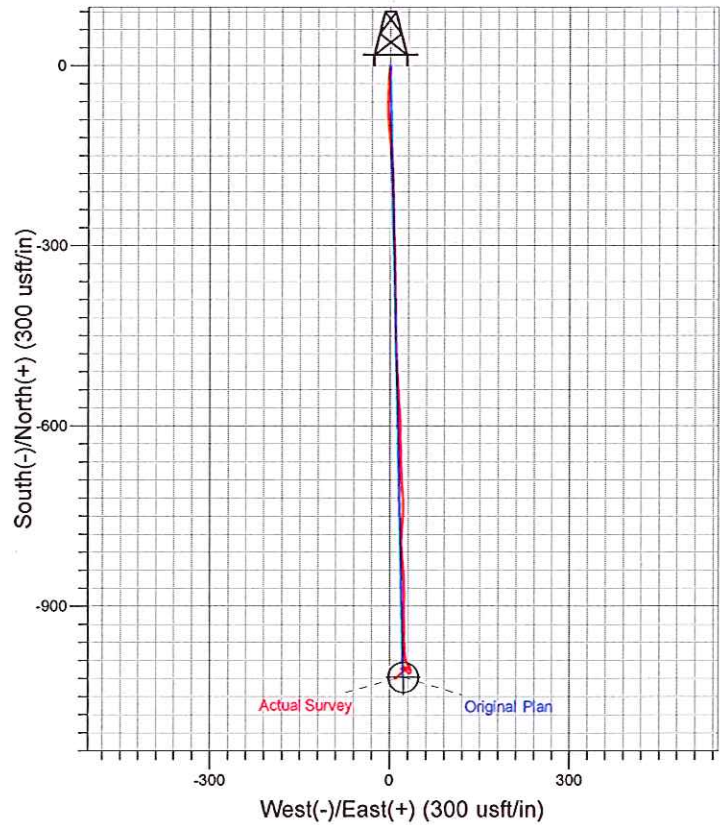
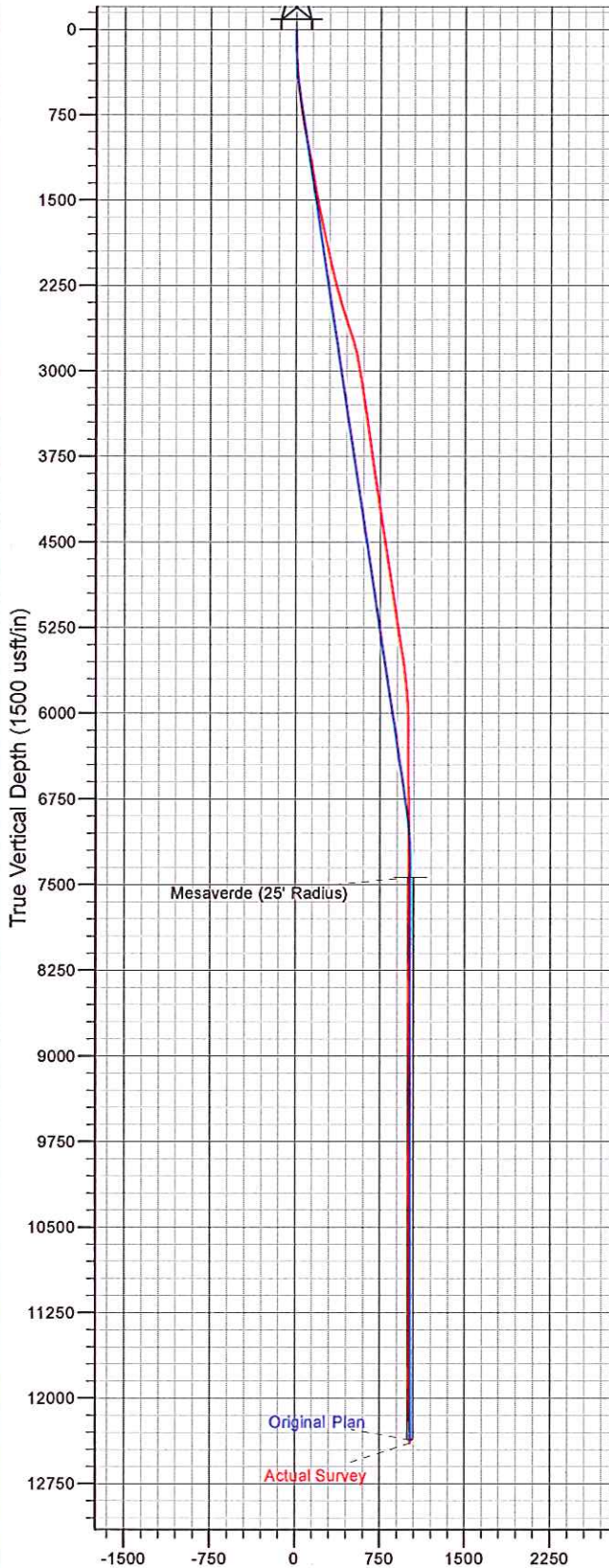




Well Name: RGU 434-36-198  
 Surface Location: RGU 33-36-198 Pad  
 North American Datum 1983 , US State Plane 1983. Colorado Central Zone  
 Ground Elevation: 6574.00  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1771023.40 2203485.00 39.91609 -108.33993 B11  
 WELL @ 6595.00usft (Original Well Elev)



## I 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 434-36-198	Wellbore No.	
Well Name	FEDERAL RGU 434-36-198	Common Name	RGU 434-36-198
Project	RG 36-01S-098W	Site	RGU 33-36-198 Pad
Vertical Section Azimuth	178.72 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	10/31/2012	UWI	RGU 434-36-198
Active Datum	KB @6,595.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	SCIENTIFIC DRILLING
Date Started	10/31/2012	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 (°)
10/31/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/31/2012	NORMAL	340.0	3.61	188.01	339.78	-10.60	-1.49	10.57	1.06	1.06	0.00	188.01
	NORMAL	432.0	4.75	185.72	431.53	-17.26	-2.28	17.21	1.25	1.24	-2.49	350.53
	NORMAL	524.0	6.10	184.65	523.11	-25.92	-3.05	25.85	1.47	1.47	-1.16	355.18
	NORMAL	616.0	7.76	179.90	614.44	-37.01	-3.44	36.92	1.91	1.80	-5.16	338.58
	NORMAL	708.0	9.15	179.95	705.44	-50.53	-3.42	50.45	1.51	1.51	0.05	0.33
	NORMAL	802.0	9.50	178.33	798.20	-65.76	-3.19	65.68	0.47	0.37	-1.72	322.33
11/1/2012	NORMAL	897.0	10.21	176.73	891.79	-82.01	-2.48	81.93	0.80	0.75	-1.68	338.12
	NORMAL	990.0	10.53	177.28	983.27	-98.72	-1.60	98.66	0.36	0.34	0.59	17.46
	NORMAL	1,084.0	10.99	174.74	1,075.62	-116.22	-0.38	116.19	0.70	0.49	-2.70	312.88
	NORMAL	1,178.0	11.34	174.12	1,167.84	-134.34	1.39	134.34	0.39	0.37	-0.66	340.76
	NORMAL	1,272.0	9.69	175.55	1,260.26	-151.42	2.95	151.45	1.78	-1.76	1.52	171.77
	NORMAL	1,366.0	9.33	176.83	1,352.97	-166.92	3.99	166.96	0.44	-0.38	1.36	150.20
	NORMAL	1,461.0	9.94	178.25	1,446.63	-182.80	4.66	182.86	0.69	0.64	1.49	21.99
	NORMAL	1,556.0	11.17	178.16	1,540.02	-200.19	5.21	200.26	1.29	1.29	-0.09	359.19
	NORMAL	1,650.0	11.70	179.66	1,632.15	-218.83	5.56	218.90	0.65	0.56	1.60	30.03
	NORMAL	1,744.0	12.66	179.83	1,724.04	-238.66	5.65	238.72	1.02	1.02	0.18	2.22
	NORMAL	1,838.0	11.87	177.90	1,815.89	-258.62	6.03	258.69	0.95	-0.84	-2.05	206.48
	NORMAL	2,026.0	12.57	177.81	1,999.63	-298.38	7.52	298.48	0.37	0.37	-0.05	358.40
	NORMAL	2,216.0	14.42	179.04	2,184.38	-342.70	8.71	342.81	0.99	0.97	0.65	9.42

## 2.1.2 Survey Stations (Continued)

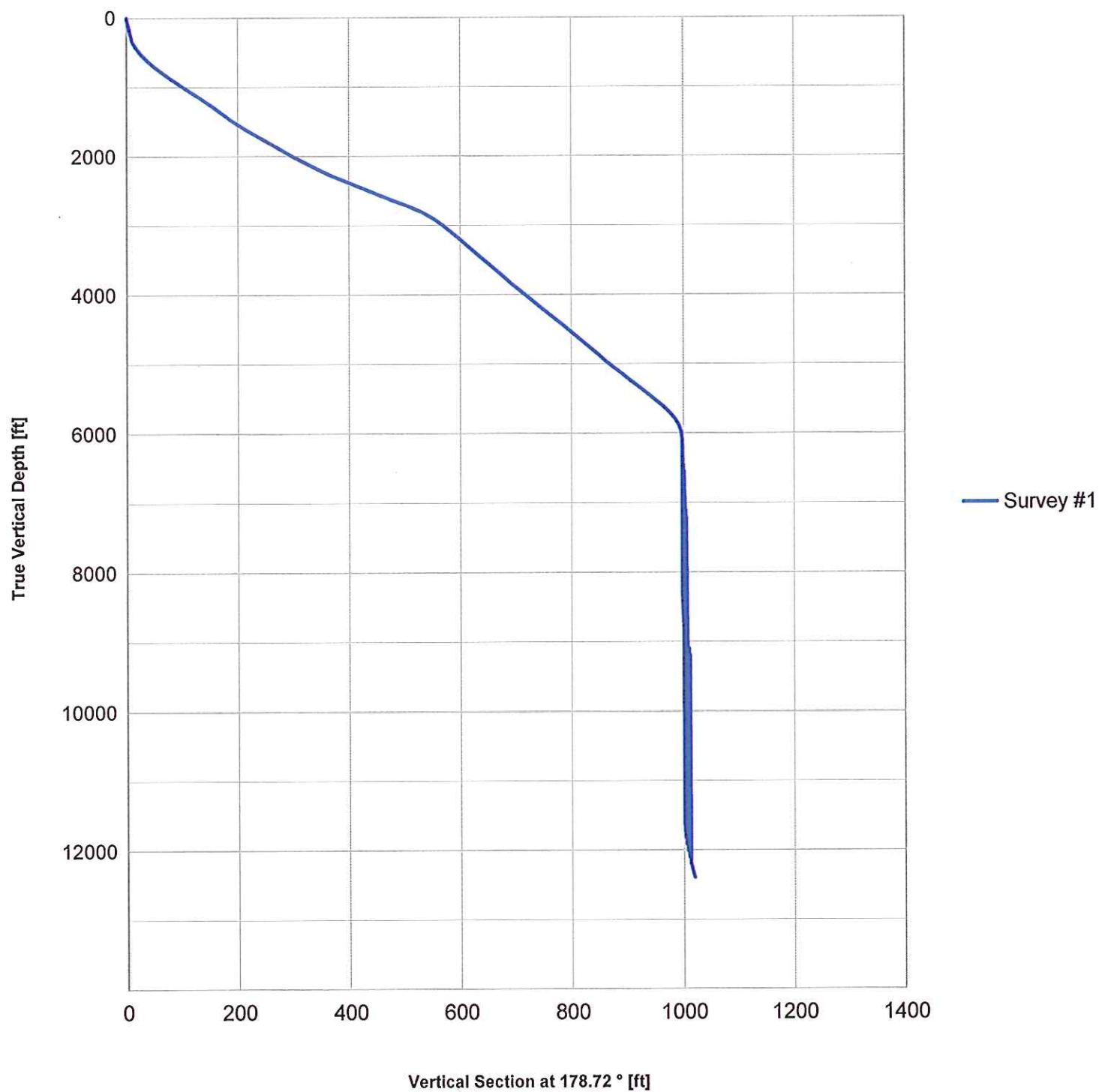
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (%/100ft)	Build Rate (%/100ft)	Turn (%/100ft)	TFace (°)
11/1/2012	NORMAL	2,310.0	15.12	179.57	2,275.27	-366.67	9.00	366.77	0.76	0.74	0.56	11.18
	NORMAL	2,688.0	19.26	178.78	2,636.31	-478.34	10.69	478.46	1.10	1.10	-0.21	356.39
	NORMAL	2,782.0	16.88	177.11	2,725.66	-507.47	11.71	507.61	2.59	-2.53	-1.78	191.49
	NORMAL	2,877.0	14.16	174.82	2,817.19	-532.83	13.46	532.99	2.93	-2.86	-2.41	191.59
	NORMAL	2,971.0	11.13	175.04	2,908.90	-553.32	15.28	553.52	3.22	-3.22	0.23	179.20
	NORMAL	3,065.0	8.79	177.64	3,001.48	-569.54	16.36	569.76	2.53	-2.49	2.77	170.40
11/2/2012	NORMAL	3,157.0	8.53	178.34	3,092.43	-583.38	16.85	583.61	0.30	-0.28	0.76	158.28
	NORMAL	3,251.0	8.71	179.22	3,185.37	-597.47	17.15	597.70	0.24	0.19	0.94	36.67
	NORMAL	3,346.0	8.19	177.95	3,279.34	-611.42	17.49	611.66	0.58	-0.55	-1.34	199.12
	NORMAL	3,441.0	8.18	179.39	3,373.37	-624.94	17.80	625.18	0.22	-0.01	1.52	93.51
	NORMAL	3,535.0	8.27	178.69	3,466.40	-638.39	18.03	638.63	0.14	0.10	-0.74	311.60
12/22/2012	NORMAL	3,619.0	8.71	179.13	3,549.48	-650.79	18.26	651.03	0.53	0.52	0.52	8.62
	NORMAL	3,725.0	8.62	177.99	3,654.27	-666.75	18.66	667.00	0.18	-0.08	-1.08	241.78
	NORMAL	3,819.0	7.39	177.46	3,747.35	-679.83	19.18	680.09	1.31	-1.31	-0.56	183.17
	NORMAL	3,913.0	8.53	176.58	3,840.45	-692.83	19.86	693.10	1.22	1.21	-0.94	353.46
	NORMAL	4,008.0	9.23	176.00	3,934.31	-707.46	20.81	707.75	0.74	0.74	-0.61	352.42
	NORMAL	4,102.0	8.27	175.79	4,027.21	-721.73	21.83	722.03	1.02	-1.02	-0.22	181.80
	NORMAL	4,196.0	8.79	183.70	4,120.18	-735.64	21.87	735.94	1.36	0.55	8.41	70.04
	NORMAL	4,291.0	8.09	183.00	4,214.15	-749.55	21.05	749.84	0.74	-0.74	-0.74	188.00
	NORMAL	4,385.0	9.58	186.34	4,307.03	-763.93	19.84	764.19	1.68	1.59	3.55	20.65
	NORMAL	4,480.0	9.32	179.48	4,400.74	-779.48	19.04	779.72	1.22	-0.27	-7.22	253.63
	NORMAL	4,574.0	7.91	179.66	4,493.68	-793.56	19.14	793.79	1.50	-1.50	0.19	178.99
	NORMAL	4,669.0	8.88	174.91	4,587.66	-807.41	19.83	807.65	1.25	1.02	-5.00	322.07
	NORMAL	4,762.0	8.44	176.67	4,679.60	-821.37	20.87	821.63	0.55	-0.47	1.89	149.81
	NORMAL	4,856.0	8.99	176.41	4,772.52	-835.58	21.73	835.86	0.59	0.59	-0.28	355.77
	NORMAL	4,951.0	7.30	174.03	4,866.56	-849.00	22.82	849.29	1.81	-1.78	-2.51	190.11
	NORMAL	5,045.0	8.71	177.90	4,959.64	-862.05	23.70	862.36	1.61	1.50	4.12	22.84
	NORMAL	5,138.0	9.06	181.77	5,051.52	-876.41	23.73	876.72	0.74	0.38	4.16	61.57
	NORMAL	5,233.0	9.32	180.18	5,145.30	-891.57	23.48	891.88	0.38	0.27	-1.67	314.88
12/23/2012	NORMAL	5,326.0	8.44	178.08	5,237.19	-905.93	23.68	906.23	1.01	-0.95	-2.26	199.19
	NORMAL	5,421.0	9.58	178.08	5,331.01	-920.80	24.18	921.11	1.20	1.20	0.00	0.00
	NORMAL	5,515.0	8.88	179.39	5,423.80	-935.87	24.52	936.18	0.78	-0.74	1.39	163.94
	NORMAL	5,607.0	8.44	181.06	5,514.75	-949.72	24.47	950.03	0.55	-0.48	1.82	151.08
	NORMAL	5,701.0	8.53	177.46	5,607.72	-963.58	24.65	963.89	0.57	0.10	-3.83	277.83
	NORMAL	5,796.0	6.86	177.64	5,701.86	-976.29	25.20	976.61	1.76	-1.76	0.19	179.26
	NORMAL	5,890.0	5.01	168.32	5,795.35	-985.92	26.26	986.26	2.21	-1.97	-9.91	202.93
	NORMAL	5,985.0	3.69	156.45	5,890.08	-992.78	28.32	993.17	1.67	-1.39	-12.49	208.47
	NORMAL	6,079.0	1.93	143.53	5,983.96	-996.83	30.47	997.26	1.98	-1.87	-13.74	193.42
	NORMAL	6,173.0	0.53	111.28	6,077.94	-998.26	31.82	998.72	1.60	-1.49	-34.31	190.81
	NORMAL	6,267.0	0.41	228.84	6,171.94	-998.64	31.97	999.10	0.86	-0.13	125.06	153.20
	NORMAL	6,361.0	0.18	236.52	6,265.94	-998.94	31.59	999.40	0.25	-0.24	8.17	174.07
	NORMAL	6,455.0	0.97	246.54	6,359.93	-999.34	30.74	999.78	0.84	0.84	10.66	12.28
	NORMAL	6,550.0	0.88	210.59	6,454.92	-1,000.29	29.63	1,000.70	0.61	-0.09	-37.84	243.50
	NORMAL	6,644.0	0.35	187.74	6,548.92	-1,001.19	29.23	1,001.60	0.61	-0.56	-24.31	193.70
	NORMAL	6,739.0	0.53	118.84	6,643.91	-1,001.69	29.57	1,002.10	0.55	0.19	-72.53	252.15
	NORMAL	6,833.0	0.81	92.01	6,737.91	-1,001.93	30.62	1,002.36	0.44	0.30	-28.54	297.81
	NORMAL	6,927.0	1.49	94.14	6,831.89	-1,002.04	32.50	1,002.51	0.72	0.72	2.27	4.66
	NORMAL	7,022.0	0.62	121.56	6,926.87	-1,002.40	34.17	1,002.91	1.03	-0.92	28.86	163.10
	NORMAL	7,116.0	0.62	195.04	7,020.87	-1,003.15	34.47	1,003.67	0.79	0.00	78.17	126.74
	NORMAL	7,211.0	1.32	226.85	7,115.85	-1,004.40	33.54	1,004.90	0.90	0.74	33.48	54.20
	NORMAL	7,305.0	1.06	263.77	7,209.83	-1,005.23	31.88	1,005.70	0.84	-0.28	39.28	126.58
12/24/2012	NORMAL	7,211.0	1.32	226.85	7,115.85	-1,004.40	33.54	1,004.90	0.90	0.74	33.48	54.20
12/24/2012	NORMAL	7,400.0	1.06	9.94	7,304.83	-1,004.46	31.16	1,004.91	1.78	0.00	111.76	143.08
	NORMAL	7,494.0	1.41	32.79	7,398.80	-1,002.64	31.94	1,003.10	0.64	0.37	24.31	66.38
	NORMAL	7,588.0	0.88	312.99	7,492.79	-1,001.17	32.04	1,001.64	1.62	-0.56	-84.89	214.63
	NORMAL	7,683.0	1.14	248.39	7,587.78	-1,001.02	30.62	1,001.46	1.16	0.27	-68.00	249.21
	NORMAL	7,777.0	1.65	244.90	7,681.75	-1,001.94	28.53	1,002.33	0.55	0.54	-3.71	348.79

## 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 (°)
12/24/2012	NORMAL	7,871.0	0.88	210.24	7,775.73	-1,003.14	26.94	1,003.49	1.12	-0.82	-36.87	208.39
	NORMAL	7,966.0	0.62	8.53	7,870.72	-1,003.26	26.65	1,003.60	1.55	-0.27	166.62	171.05
12/25/2012	NORMAL	8,060.0	0.18	340.67	7,964.72	-1,002.62	26.68	1,002.96	0.50	-0.47	-29.64	190.34
	NORMAL	8,154.0	2.02	49.32	8,058.70	-1,001.40	27.88	1,001.77	2.09	1.96	73.03	73.55
	NORMAL	8,249.0	1.06	56.52	8,153.67	-999.82	29.89	1,000.24	1.03	-1.01	7.58	172.19
	NORMAL	8,343.0	0.79	50.19	8,247.65	-998.93	31.11	999.37	0.31	-0.29	-6.73	197.59
	NORMAL	8,438.0	0.09	62.41	8,342.65	-998.47	31.68	998.93	0.74	-0.74	12.86	178.45
	NORMAL	8,533.0	0.44	166.65	8,437.65	-998.79	31.83	999.26	0.50	0.37	109.73	114.93
	NORMAL	8,627.0	1.14	107.85	8,531.64	-999.43	32.80	999.91	1.05	0.74	-62.55	278.78
12/26/2012	NORMAL	8,722.0	0.40	119.54	8,626.63	-999.88	33.99	1,000.39	0.79	-0.78	12.31	173.82
	NORMAL	8,816.0	0.70	175.17	8,720.63	-1,000.62	34.32	1,001.14	0.61	0.32	59.18	90.48
	NORMAL	8,910.0	1.49	161.20	8,814.61	-1,002.35	34.77	1,002.87	0.88	0.84	-14.86	334.26
	NORMAL	9,004.0	1.39	176.31	8,908.58	-1,004.64	35.23	1,005.18	0.42	-0.11	16.07	112.22
	NORMAL	9,098.0	1.85	178.51	9,002.54	-1,007.30	35.35	1,007.84	0.49	0.49	2.34	8.80
	NORMAL	9,193.0	1.76	214.29	9,097.50	-1,010.04	34.56	1,010.56	1.17	-0.09	37.66	112.30
	NORMAL	9,287.0	1.14	243.37	9,191.47	-1,011.65	32.92	1,012.13	1.00	-0.66	30.94	144.04
	NORMAL	9,381.0	1.38	316.43	9,285.45	-1,011.25	31.30	1,011.69	1.61	0.26	77.72	119.20
	NORMAL	9,476.0	1.14	312.72	9,380.43	-1,009.78	29.82	1,010.19	0.27	-0.25	-3.91	196.93
	NORMAL	9,570.0	1.81	344.69	9,474.40	-1,007.71	28.74	1,008.10	1.10	0.71	34.01	67.57
	NORMAL	9,664.0	1.49	334.34	9,568.36	-1,005.18	27.82	1,005.55	0.46	-0.34	-11.01	217.87
	NORMAL	9,758.0	1.41	338.74	9,662.33	-1,003.00	26.87	1,003.35	0.15	-0.09	4.68	127.88
	NORMAL	9,852.0	0.61	317.21	9,756.31	-1,001.55	26.11	1,001.89	0.93	-0.85	-22.90	194.88
	NORMAL	9,947.0	0.79	267.37	9,851.31	-1,001.21	25.11	1,001.52	0.64	0.19	-52.46	260.55
12/27/2012	NORMAL	10,041.0	0.70	265.88	9,945.30	-1,001.28	23.89	1,001.57	0.10	-0.10	-1.59	191.40
	NORMAL	10,136.0	0.97	233.53	10,040.29	-1,001.80	22.67	1,002.06	0.56	0.28	-34.05	282.96
	NORMAL	10,230.0	1.31	230.13	10,134.27	-1,002.96	21.20	1,003.19	0.37	0.36	-3.62	347.04
	NORMAL	10,324.0	1.06	277.04	10,228.25	-1,003.55	19.51	1,003.73	1.03	-0.27	49.90	127.12
	NORMAL	10,418.0	0.24	179.15	10,322.25	-1,003.64	18.65	1,003.80	1.19	-0.87	-104.14	192.27
	NORMAL	10,512.0	1.32	79.64	10,416.24	-1,003.64	19.72	1,003.83	1.47	1.15	-105.86	250.62
12/28/2012	NORMAL	10,607.0	2.20	84.91	10,511.19	-1,003.28	22.61	1,003.53	0.94	0.93	5.55	13.06
	NORMAL	10,701.0	1.44	91.56	10,605.15	-1,003.15	25.59	1,003.47	0.84	-0.81	7.07	167.78
	NORMAL	10,795.0	2.13	89.17	10,699.10	-1,003.16	28.52	1,003.55	0.74	0.73	-2.54	352.65
	NORMAL	10,890.0	1.23	116.64	10,794.06	-1,003.59	31.20	1,004.04	1.25	-0.95	28.92	151.35
	NORMAL	10,983.0	0.09	316.33	10,887.05	-1,003.98	32.04	1,004.45	1.41	-1.23	-172.38	181.32
	NORMAL	11,076.0	0.97	236.43	10,980.05	-1,004.37	31.33	1,004.82	1.03	0.95	-85.91	274.80
	NORMAL	11,170.0	0.79	260.60	11,074.04	-1,004.91	30.03	1,005.33	0.43	-0.19	25.71	127.62
	NORMAL	11,264.0	0.79	323.01	11,168.03	-1,004.50	29.00	1,004.90	0.87	0.00	66.39	121.20
	NORMAL	11,359.0	0.79	341.38	11,263.02	-1,003.36	28.40	1,003.74	0.27	0.00	19.34	99.18
	NORMAL	11,453.0	0.87	301.36	11,357.01	-1,002.37	27.58	1,002.74	0.61	0.09	-42.57	257.53
	NORMAL	11,547.0	1.49	286.44	11,450.99	-1,001.65	25.80	1,001.98	0.73	0.66	-15.87	326.05
	NORMAL	11,642.0	0.34	236.54	11,545.98	-1,001.46	24.38	1,001.76	1.37	-1.21	-52.53	191.57
	NORMAL	11,736.0	0.88	100.38	11,639.98	-1,001.74	24.86	1,002.05	1.22	0.57	-144.85	212.02
	NORMAL	11,830.0	0.70	142.48	11,733.97	-1,002.33	25.92	1,002.66	0.63	-0.19	44.79	127.54
12/29/2012	NORMAL	11,923.0	0.95	195.29	11,826.96	-1,003.52	26.06	1,003.86	0.82	0.27	56.78	99.43
	NORMAL	12,017.0	1.76	221.76	11,920.93	-1,005.35	24.89	1,005.66	1.07	0.86	28.16	51.43
	NORMAL	12,110.0	2.37	228.44	12,013.87	-1,007.69	22.50	1,007.94	0.70	0.66	7.18	24.86
	NORMAL	12,204.0	2.64	227.65	12,107.78	-1,010.44	19.45	1,010.62	0.29	0.29	-0.84	352.32
	NORMAL	12,297.0	2.55	222.55	12,200.69	-1,013.41	16.47	1,013.52	0.27	-0.10	-5.48	246.17
	NORMAL	12,390.0	2.73	227.65	12,293.59	-1,016.42	13.43	1,016.47	0.32	0.19	5.48	55.10
	NORMAL	12,441.0	3.08	225.36	12,344.52	-1,018.21	11.56	1,018.21	0.72	0.69	-4.49	340.57
	NORMAL	12,490.0	3.08	225.36	12,393.45	-1,020.06	9.68	1,020.02	0.00	0.00	0.00	0.00

### 3 Charts

#### 3.1 Vertical Section View





3.2 Plan View

