

## 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 24-25-198	Wellbore No.	
Well Name	RGU 24-25-198	Common Name	RGU 24-25-198
Project	RG 25-01S-098W	Site	RGU 24-25-198 Pad
Vertical Section Azimuth	28.43 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	7/20/2012	UWI	RGU 24-25-198
Active Datum	KB @6,706.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	7/20/2012	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 (°)
7/20/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/20/2012	NORMAL	286.0	4.66	40.04	285.68	8.90	7.48	11.39	1.63	1.63	0.00	40.04
	NORMAL	348.0	5.42	30.86	347.45	13.34	10.60	16.78	1.78	1.23	-14.81	308.67
	NORMAL	440.0	7.16	28.22	438.89	22.12	15.54	26.85	1.92	1.89	-2.87	349.25
	NORMAL	532.0	8.85	26.43	529.99	33.51	21.40	39.66	1.86	1.84	-1.95	350.72
	NORMAL	624.0	9.42	25.78	620.82	46.63	27.83	54.25	0.63	0.62	-0.71	349.42
	NORMAL	716.0	9.80	26.85	711.53	60.40	34.64	69.60	0.46	0.41	1.16	25.70
	NORMAL	810.0	9.23	28.09	804.24	74.18	41.80	85.14	0.64	-0.61	1.32	160.83
7/21/2012	NORMAL	905.0	9.49	26.01	897.97	87.94	48.82	100.58	0.45	0.27	-2.19	306.52
	NORMAL	998.0	10.20	26.98	989.60	102.17	55.92	116.47	0.78	0.76	1.04	13.63
	NORMAL	1,092.0	9.88	26.48	1,082.16	116.81	63.29	132.85	0.35	-0.34	-0.53	194.99
	NORMAL	1,186.0	9.57	25.53	1,174.81	131.08	70.26	148.72	0.37	-0.33	-1.01	206.90
	NORMAL	1,282.0	9.85	25.45	1,269.44	145.69	77.22	164.89	0.29	0.29	-0.08	357.20
	NORMAL	1,375.0	8.35	27.65	1,361.26	158.86	83.78	179.58	1.66	-1.61	2.37	168.02
	NORMAL	1,469.0	8.09	29.00	1,454.30	170.69	90.15	193.02	0.34	-0.28	1.44	144.08
	NORMAL	1,564.0	7.74	28.44	1,548.39	182.16	96.44	206.10	0.38	-0.37	-0.59	192.15
	NORMAL	1,659.0	8.07	29.47	1,642.49	193.59	102.76	219.17	0.38	0.35	1.08	23.74
	NORMAL	1,754.0	7.91	30.99	1,736.57	205.00	109.41	232.37	0.28	-0.17	1.60	127.89
	NORMAL	1,848.0	9.23	31.87	1,829.52	216.95	116.72	246.35	1.41	1.40	0.94	6.11
	NORMAL	1,942.0	9.67	31.69	1,922.24	230.07	124.85	261.76	0.47	0.47	-0.19	356.07

## 2.1.2 Survey Stations (Continued)

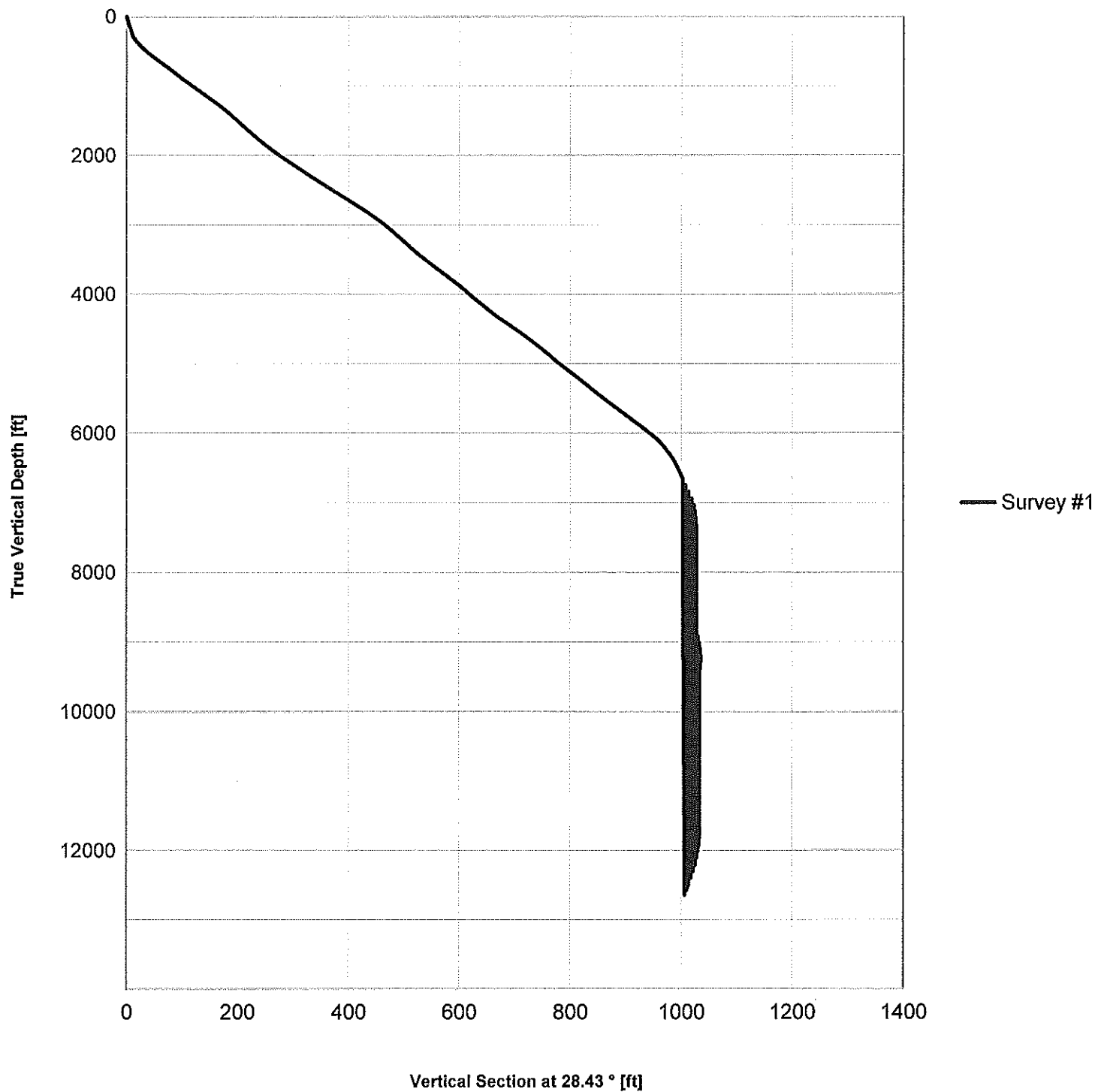
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
7/21/2012	NORMAL	2,035.0	10.11	31.95	2,013.86	243.64	133.27	277.71	0.48	0.47	0.28	5.92
	NORMAL	2,351.0	10.82	27.82	2,324.60	293.41	161.79	335.05	0.33	0.22	-1.31	311.38
	NORMAL	2,603.0	11.78	28.26	2,571.72	336.99	185.01	384.43	0.38	0.38	0.17	5.35
7/22/2012	NORMAL	2,697.0	11.43	28.70	2,663.79	353.61	194.03	403.33	0.38	-0.37	0.47	166.02
	NORMAL	2,823.0	10.55	28.61	2,787.48	374.68	205.55	427.35	0.70	-0.70	-0.07	181.07
	NORMAL	2,886.0	10.77	27.47	2,849.40	384.97	211.02	439.01	0.48	0.35	-1.81	315.65
	NORMAL	2,980.0	9.67	23.96	2,941.90	399.98	218.28	455.66	1.34	-1.17	-3.73	207.80
	NORMAL	3,074.0	8.44	26.33	3,034.73	413.38	224.55	470.43	1.37	-1.31	2.52	164.30
	NORMAL	3,168.0	8.00	26.42	3,127.76	425.42	230.52	483.86	0.47	-0.47	0.10	178.37
	NORMAL	3,260.0	7.39	27.03	3,218.94	436.42	236.05	496.17	0.67	-0.66	0.66	172.68
	NORMAL	3,355.0	7.91	26.86	3,313.09	447.69	241.78	508.81	0.55	0.55	-0.18	357.42
	NORMAL	3,449.0	9.15	29.67	3,406.05	459.96	248.41	522.75	1.39	1.32	2.99	19.97
	NORMAL	3,544.0	9.06	31.16	3,499.85	472.92	256.02	537.77	0.27	-0.09	1.57	111.63
	NORMAL	3,638.0	9.41	24.66	3,592.64	486.24	263.05	552.83	1.17	0.37	-6.91	285.32
	NORMAL	3,733.0	9.41	26.50	3,686.36	500.25	269.76	568.35	0.32	0.00	1.94	90.91
8/30/2012	NORMAL	3,827.0	9.67	26.86	3,779.06	514.17	276.75	583.92	0.28	0.28	0.38	13.10
	NORMAL	3,890.0	9.32	27.56	3,841.19	523.41	281.50	594.31	0.59	-0.56	1.11	162.09
	NORMAL	3,890.0	9.32	27.56	3,841.19	523.41	281.50	594.31	0.00	0.00	0.00	0.00
	NORMAL	3,997.0	8.10	26.71	3,946.96	537.83	288.90	610.51	1.15	-1.14	-0.79	185.60
	NORMAL	4,091.0	8.35	26.33	4,039.99	549.86	294.90	623.95	0.27	0.27	-0.40	347.54
	NORMAL	4,185.0	8.62	29.14	4,132.96	562.13	301.36	637.81	0.53	0.29	2.99	58.32
	NORMAL	4,280.0	8.56	33.59	4,226.90	574.24	308.74	651.97	0.70	-0.06	4.68	97.36
	NORMAL	4,374.0	10.02	31.69	4,319.66	587.02	316.91	667.10	1.59	1.55	-2.02	347.20
	NORMAL	4,469.0	10.46	30.63	4,413.15	601.48	325.64	683.97	0.50	0.46	-1.12	336.29
	NORMAL	4,564.0	10.02	28.70	4,506.64	616.15	334.01	700.85	0.59	-0.46	-2.03	217.00
	NORMAL	4,658.0	10.55	31.87	4,599.13	630.63	342.48	717.62	0.82	0.56	3.37	48.45
	NORMAL	4,753.0	8.88	32.30	4,692.76	644.21	350.99	733.62	1.76	-1.76	0.45	177.72
	NORMAL	4,847.0	8.88	31.95	4,785.63	656.50	358.70	748.10	0.06	0.00	-0.37	269.83
	NORMAL	4,941.0	8.27	28.61	4,878.58	668.59	365.78	762.10	0.84	-0.65	-3.55	217.59
	NORMAL	5,035.0	9.15	28.79	4,971.50	681.08	372.62	776.34	0.94	0.94	0.19	1.86
	NORMAL	5,130.0	9.06	28.09	5,065.30	694.30	379.78	791.37	0.15	-0.09	-0.74	230.56
	NORMAL	5,224.0	8.94	28.45	5,158.14	707.25	386.74	806.07	0.14	-0.13	0.38	155.04
	NORMAL	5,319.0	8.64	33.13	5,252.03	719.71	394.16	820.57	0.82	-0.32	4.93	115.06
	NORMAL	5,413.0	8.62	29.49	5,344.97	731.76	401.48	834.65	0.58	-0.02	-3.87	266.10
	NORMAL	5,507.0	9.15	29.93	5,437.84	744.37	408.68	849.16	0.57	0.56	0.47	7.52
8/31/2012	NORMAL	5,602.0	9.58	28.61	5,531.57	757.85	416.23	864.62	0.51	0.45	-1.39	332.80
	NORMAL	5,696.0	9.58	31.07	5,624.26	771.42	424.02	880.25	0.44	0.00	2.62	91.21
	NORMAL	5,790.0	9.32	29.76	5,716.99	784.73	431.83	895.68	0.36	-0.28	-1.39	218.95
	NORMAL	5,884.0	9.85	31.60	5,809.67	798.18	439.82	911.31	0.65	0.56	1.96	30.94
	NORMAL	5,978.0	9.63	33.54	5,902.32	811.58	448.38	927.17	0.42	-0.23	2.06	124.79
	NORMAL	6,072.0	8.88	28.26	5,995.10	824.53	456.16	942.26	1.20	-0.80	-5.62	225.96
	NORMAL	6,167.0	7.56	28.88	6,089.12	836.46	462.65	955.84	1.39	-1.39	0.65	176.46
	NORMAL	6,261.0	6.24	27.65	6,182.43	846.40	468.01	967.13	1.41	-1.40	-1.31	185.78
	NORMAL	6,356.0	5.58	27.10	6,276.93	855.08	472.51	976.91	0.70	-0.69	-0.58	184.63
	NORMAL	6,450.0	4.40	29.84	6,370.57	862.28	476.38	985.09	1.28	-1.26	2.91	169.94
	NORMAL	6,544.0	3.34	26.33	6,464.36	867.86	479.39	991.43	1.15	-1.13	-3.73	190.85
	NORMAL	6,639.0	3.52	25.36	6,559.19	872.98	481.87	997.11	0.20	0.19	-1.02	341.65
	NORMAL	6,732.0	3.40	30.58	6,652.02	877.93	484.49	1,002.71	0.36	-0.13	5.61	113.44
	NORMAL	6,825.0	2.90	36.70	6,744.88	882.19	487.30	1,007.80	0.65	-0.54	6.58	149.11
	NORMAL	6,920.0	3.84	43.16	6,839.71	886.44	490.92	1,013.25	1.07	0.99	6.80	25.24
	NORMAL	7,014.0	3.25	44.87	6,933.53	890.63	494.95	1,018.85	0.64	-0.63	1.82	170.69
	NORMAL	7,109.0	1.85	59.99	7,028.44	893.30	498.18	1,022.74	1.62	-1.47	15.92	161.76
	NORMAL	7,204.0	1.32	65.00	7,123.40	894.53	500.50	1,024.93	0.58	-0.56	5.27	167.84
	NORMAL	7,299.0	0.97	67.02	7,218.38	895.31	502.23	1,026.44	0.37	-0.37	2.13	174.43
	NORMAL	7,393.0	0.26	90.05	7,312.37	895.62	503.17	1,027.16	0.78	-0.76	24.50	172.08
	NORMAL	7,487.0	0.35	129.16	7,406.37	895.44	503.61	1,027.21	0.24	0.10	41.61	87.00
	NORMAL	7,581.0	0.26	185.15	7,500.37	895.04	503.81	1,026.96	0.32	-0.10	59.56	133.51

## 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 (°)
9/1/2012	NORMAL	7,676.0	0.51	193.25	7,595.37	894.42	503.70	1,026.35	0.27	0.26	8.53	16.35
	NORMAL	7,770.0	0.61	212.80	7,689.36	893.59	503.33	1,025.45	0.23	0.11	20.80	72.38
	NORMAL	7,864.0	0.53	219.34	7,783.36	892.83	502.78	1,024.52	0.11	-0.09	6.96	144.12
	NORMAL	7,958.0	0.55	230.52	7,877.36	892.21	502.16	1,023.68	0.11	0.02	11.89	84.88
	NORMAL	8,053.0	0.88	226.72	7,972.35	891.42	501.28	1,022.56	0.35	0.35	-4.00	349.92
	NORMAL	8,147.0	0.62	256.69	8,066.34	890.81	500.26	1,021.54	0.49	-0.28	31.88	137.91
	NORMAL	8,242.0	0.41	21.61	8,161.34	891.00	499.88	1,021.53	0.97	-0.22	131.49	158.53
9/2/2012	NORMAL	8,331.0	0.88	39.69	8,250.33	891.83	500.44	1,022.52	0.57	0.53	20.31	32.63
	NORMAL	8,426.0	0.35	25.89	8,345.33	892.65	501.03	1,023.53	0.58	-0.56	-14.53	188.79
	NORMAL	8,520.0	0.62	357.94	8,439.32	893.41	501.13	1,024.25	0.37	0.29	-29.73	304.23
	NORMAL	8,614.0	0.35	305.56	8,533.32	894.09	500.88	1,024.72	0.52	-0.29	-55.72	214.30
	NORMAL	8,709.0	0.70	232.52	8,628.32	893.91	500.19	1,024.23	0.72	0.37	-76.88	257.72
	NORMAL	8,803.0	1.06	64.56	8,722.31	893.93	500.52	1,024.41	1.86	0.38	-178.68	187.26
	NORMAL	8,898.0	1.93	10.16	8,817.28	895.88	501.59	1,026.64	1.65	0.92	-57.26	272.33
	NORMAL	8,993.0	1.85	6.64	8,912.23	898.98	502.05	1,029.58	0.15	-0.08	-3.71	233.68
	NORMAL	9,087.0	1.49	3.56	9,006.19	901.71	502.30	1,032.10	0.39	-0.38	-3.28	192.46
	NORMAL	9,181.0	1.23	343.09	9,100.17	903.89	502.08	1,033.92	0.58	-0.28	-21.78	231.87
	NORMAL	9,275.0	0.97	324.01	9,194.15	905.50	501.32	1,034.97	0.47	-0.28	-20.30	225.34
	NORMAL	9,369.0	1.06	308.98	9,288.13	906.69	500.18	1,035.47	0.30	0.10	-15.99	281.06
9/3/2012	NORMAL	9,464.0	1.67	243.33	9,383.11	906.62	498.26	1,034.50	1.65	0.64	-69.11	256.29
	NORMAL	9,559.0	1.67	263.28	9,478.07	905.84	495.65	1,032.57	0.61	0.00	21.00	99.97
	NORMAL	9,653.0	0.79	146.39	9,572.06	905.14	494.65	1,031.47	2.28	-0.94	-124.35	199.17
	NORMAL	9,748.0	1.32	148.58	9,667.04	903.66	495.58	1,030.62	0.56	0.56	2.31	5.45
	NORMAL	9,843.0	0.88	126.88	9,762.03	902.29	496.73	1,029.96	0.63	-0.46	-22.84	212.93
	NORMAL	9,937.0	1.06	138.56	9,856.01	901.20	497.89	1,029.55	0.28	0.19	12.43	53.63
	NORMAL	10,032.0	1.32	129.51	9,950.99	899.85	499.31	1,029.04	0.34	0.27	-9.53	319.56
	NORMAL	10,126.0	1.14	178.20	10,044.97	898.22	500.18	1,028.03	1.09	-0.19	51.80	123.53
	NORMAL	10,220.0	1.41	199.91	10,138.95	896.20	499.81	1,026.07	0.58	0.29	23.10	71.94
	NORMAL	10,315.0	0.62	274.09	10,233.94	895.14	498.90	1,024.71	1.45	-0.83	78.08	154.32
	NORMAL	10,409.0	0.97	296.50	10,327.93	895.53	497.68	1,024.47	0.49	0.37	23.84	53.19
	NORMAL	10,503.0	0.97	222.41	10,421.92	895.30	496.43	1,023.67	1.24	0.00	-78.82	232.96
	NORMAL	10,597.0	0.79	220.30	10,515.91	894.22	495.48	1,022.26	0.19	-0.19	-2.24	189.15
	NORMAL	10,692.0	0.53	26.06	10,610.90	894.11	495.25	1,022.06	1.38	-0.27	174.48	174.29
	NORMAL	10,786.0	0.53	304.24	10,704.90	894.75	495.08	1,022.54	0.74	0.00	-87.04	229.09
	NORMAL	10,880.0	0.44	83.28	10,798.90	895.03	495.08	1,022.79	0.97	-0.10	147.91	161.50
9/4/2012	NORMAL	10,974.0	0.70	55.51	10,892.90	895.40	495.91	1,023.51	0.40	0.28	-29.54	298.81
	NORMAL	11,068.0	0.26	326.47	10,986.89	895.91	496.27	1,024.12	0.79	-0.47	-94.72	200.49
	NORMAL	11,163.0	1.23	341.33	11,081.88	897.05	495.82	1,024.92	1.03	1.02	15.64	18.76
	NORMAL	11,257.0	0.44	56.91	11,175.87	898.20	495.80	1,025.92	1.28	-0.84	80.40	159.17
	NORMAL	11,351.0	1.32	103.94	11,269.86	898.14	497.15	1,026.51	1.14	0.94	50.03	64.54
	NORMAL	11,445.0	0.97	127.49	11,363.85	897.39	498.83	1,026.66	0.62	-0.37	25.05	138.02
	NORMAL	11,540.0	0.09	218.37	11,458.84	896.85	499.43	1,026.46	1.03	-0.93	95.66	174.71
	NORMAL	11,634.0	1.76	35.21	11,552.83	897.97	500.21	1,027.82	1.97	1.78	188.13	176.99
	NORMAL	11,728.0	1.32	25.80	11,646.79	900.12	501.52	1,030.33	0.54	-0.47	-10.01	205.24
	NORMAL	11,822.0	0.88	332.71	11,740.78	901.74	501.66	1,031.82	1.13	-0.47	-56.48	221.64
	NORMAL	11,916.0	1.32	297.82	11,834.76	902.89	500.37	1,032.22	0.83	0.47	-37.12	285.03
	NORMAL	12,011.0	1.06	224.70	11,929.74	902.77	498.78	1,031.36	1.51	-0.27	-76.97	225.07
	NORMAL	12,105.0	1.06	205.01	12,023.73	901.37	497.80	1,029.66	0.39	0.00	-20.95	260.16
	NORMAL	12,199.0	1.41	223.20	12,117.71	899.74	496.64	1,027.67	0.55	0.37	19.35	57.58
9/5/2012	NORMAL	12,293.0	1.85	209.14	12,211.67	897.57	495.11	1,025.04	0.63	0.47	-14.96	310.56
	NORMAL	12,387.0	2.55	217.05	12,305.60	894.57	493.11	1,021.45	0.81	0.74	8.41	27.44
	NORMAL	12,482.0	2.73	232.87	12,400.50	891.52	490.04	1,017.30	0.79	0.19	16.65	84.11
	NORMAL	12,576.0	2.90	229.44	12,494.39	888.62	486.45	1,013.04	0.25	0.18	-3.65	313.54
	NORMAL	12,664.0	2.73	228.04	12,582.28	885.77	483.20	1,008.99	0.21	-0.19	-1.59	201.32
	NORMAL	12,726.0	2.73	228.04	12,644.21	883.80	481.00	1,006.21	0.00	0.00	0.00	0.00

### 3 Charts

#### 3.1 Vertical Section View



### 3.2 Plan View

