

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	RG 22-14-298	Wellbore No.	OH
Well Name	FEDERAL RG 22-14-298	Common Name	RG 22-14-298
Project	RG 14-02S-098W	Site	RG 32-14-298 Pad
Vertical Section Azimuth	268.05 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	12/5/2010	UWI	RG 22-14-298
Active Datum	KELLY BUSHING @6,568.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	12/5/2010	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 (°)
12/5/2010	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/5/2010	NORMAL	182.0	1.80	253.30	181.97	-0.82	-2.74	2.76	0.99	0.99	0.00	253.30
	NORMAL	214.0	2.20	251.60	213.95	-1.16	-3.80	3.84	1.26	1.25	-5.31	350.71
	NORMAL	245.0	2.30	260.60	244.93	-1.45	-4.98	5.03	1.18	0.32	29.03	78.73
	NORMAL	276.0	2.80	260.40	275.90	-1.68	-6.34	6.39	1.61	1.61	-0.65	358.88
	NORMAL	307.0	3.10	274.50	306.86	-1.74	-7.92	7.98	2.52	0.97	45.48	74.68
	NORMAL	338.0	3.10	279.90	337.81	-1.53	-9.58	9.63	0.94	0.00	17.42	92.70
	NORMAL	400.0	3.80	273.70	399.70	-1.11	-13.29	13.32	1.28	1.13	-10.00	328.82
	NORMAL	463.0	4.70	270.00	462.52	-0.97	-17.95	17.97	1.49	1.43	-5.87	341.20
	NORMAL	526.0	5.90	268.00	525.25	-1.09	-23.77	23.79	1.93	1.90	-3.17	350.25
	NORMAL	617.0	7.50	269.90	615.63	-1.26	-34.38	34.40	1.77	1.76	2.09	8.83
	NORMAL	709.0	8.40	266.20	706.74	-1.71	-47.09	47.12	1.12	0.98	-4.02	328.54
	NORMAL	802.0	9.80	267.80	798.57	-2.47	-61.78	61.83	1.53	1.51	1.72	11.04
	NORMAL	897.0	10.90	270.30	892.02	-2.73	-78.84	78.89	1.25	1.16	2.63	23.44
	NORMAL	992.0	11.10	268.90	985.28	-2.86	-96.97	97.01	0.35	0.21	-1.47	306.13
	NORMAL	1,086.0	12.00	264.40	1,077.38	-3.99	-115.74	115.81	1.35	0.96	-4.79	312.75
	NORMAL	1,180.0	12.50	263.60	1,169.24	-6.08	-135.57	135.70	0.56	0.53	-0.85	340.86
12/6/2010	NORMAL	1,276.0	12.20	267.50	1,263.02	-7.68	-156.03	156.20	0.92	-0.31	4.06	111.68
	NORMAL	1,370.0	12.00	266.00	1,354.93	-8.79	-175.70	175.90	0.40	-0.21	-1.60	236.81
	NORMAL	1,465.0	10.90	271.60	1,448.04	-9.23	-194.53	194.74	1.64	-1.16	5.89	137.42

2.1.2 Survey Stations (Continued)

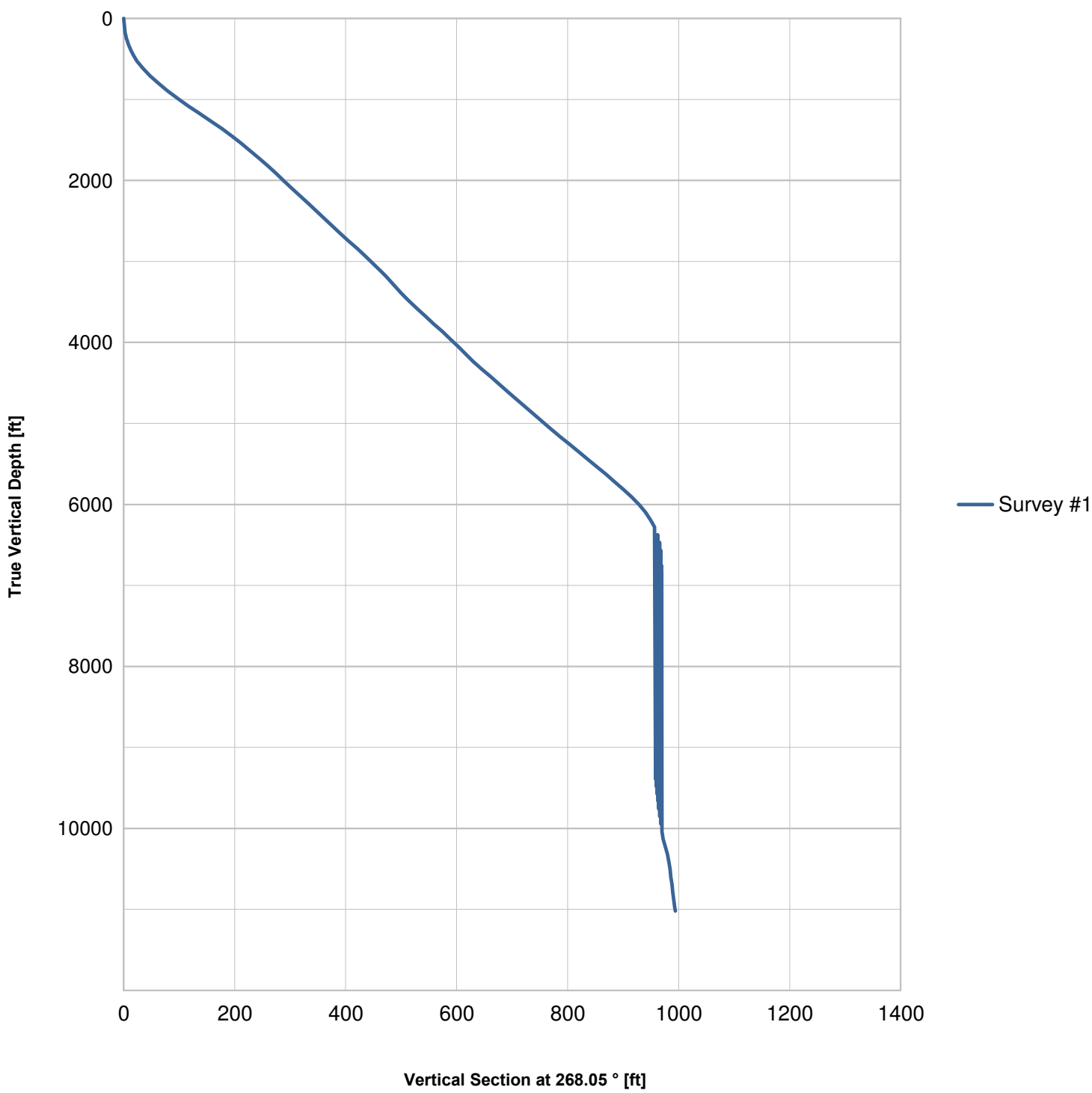
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
12/6/2010	NORMAL	1,560.0	10.00	274.50	1,541.46	-8.33	-211.74	211.90	1.10	-0.95	3.05	151.12
	NORMAL	1,655.0	9.80	278.10	1,635.05	-6.54	-227.96	228.05	0.68	-0.21	3.79	109.67
	NORMAL	1,748.0	9.80	277.30	1,726.69	-4.42	-243.65	243.66	0.15	0.00	-0.86	269.61
	NORMAL	1,843.0	9.50	274.50	1,820.35	-2.78	-259.48	259.43	0.59	-0.32	-2.95	236.04
	NORMAL	1,936.0	8.70	267.70	1,912.18	-2.46	-274.16	274.09	1.44	-0.86	-7.31	230.03
	NORMAL	2,029.0	8.80	268.80	2,004.10	-2.89	-288.30	288.24	0.21	0.11	1.18	59.68
	NORMAL	2,125.0	8.90	267.40	2,098.96	-3.38	-303.06	303.00	0.25	0.10	-1.46	294.21
	NORMAL	2,217.0	9.30	261.50	2,189.80	-4.80	-317.53	317.51	1.10	0.43	-6.41	290.27
	NORMAL	2,310.0	8.90	259.00	2,281.63	-7.29	-332.02	332.08	0.60	-0.43	-2.69	223.44
	NORMAL	2,404.0	8.80	267.50	2,374.51	-8.99	-346.34	346.45	1.39	-0.11	9.04	98.56
	NORMAL	2,499.0	8.90	266.00	2,468.38	-9.82	-360.93	361.06	0.26	0.11	-1.58	292.69
	NORMAL	2,592.0	8.90	267.80	2,560.26	-10.60	-375.30	375.44	0.30	0.00	1.94	90.89
12/7/2010	NORMAL	2,686.0	9.10	272.80	2,653.11	-10.51	-389.99	390.12	0.86	0.21	5.32	78.13
	NORMAL	2,780.0	9.40	272.40	2,745.88	-9.83	-405.08	405.18	0.33	0.32	-0.43	347.71
	NORMAL	2,875.0	9.10	268.40	2,839.65	-9.71	-420.34	420.43	0.75	-0.32	-4.21	243.02
	NORMAL	2,969.0	8.70	262.50	2,932.52	-10.85	-434.82	434.94	1.06	-0.43	-6.28	243.44
	NORMAL	3,064.0	8.70	263.90	3,026.43	-12.55	-449.09	449.26	0.22	0.00	1.47	90.69
	NORMAL	3,158.0	8.40	260.50	3,119.38	-14.44	-462.93	463.16	0.63	-0.32	-3.62	237.64
	NORMAL	3,225.0	8.10	258.20	3,185.69	-16.21	-472.38	472.66	0.67	-0.45	-3.43	226.59
12/9/2010	NORMAL	3,345.0	7.60	252.10	3,304.57	-20.38	-488.21	488.62	0.81	-0.42	-5.08	236.03
	NORMAL	3,439.0	8.10	263.10	3,397.69	-23.09	-500.70	501.19	1.68	0.53	11.70	77.09
	NORMAL	3,533.0	8.40	273.20	3,490.72	-23.50	-514.13	514.63	1.57	0.32	10.74	83.33
	NORMAL	3,629.0	9.00	273.00	3,585.62	-22.71	-528.63	529.09	0.63	0.63	-0.21	357.01
	NORMAL	3,722.0	8.90	265.40	3,677.49	-22.91	-543.06	543.53	1.27	-0.11	-8.17	261.42
	NORMAL	3,816.0	9.40	265.10	3,770.29	-24.15	-557.96	558.46	0.53	0.53	-0.32	354.40
12/10/2010	NORMAL	3,910.0	9.10	265.10	3,863.07	-25.44	-573.01	573.55	0.32	-0.32	0.00	180.00
	NORMAL	4,005.0	8.90	266.80	3,956.90	-26.49	-587.84	588.40	0.35	-0.21	1.79	127.78
	NORMAL	4,099.0	8.70	276.70	4,049.80	-26.07	-602.16	602.70	1.62	-0.21	10.53	102.40
	NORMAL	4,194.0	7.80	280.00	4,143.82	-24.11	-615.64	616.11	1.07	-0.95	3.47	153.88
	NORMAL	4,287.0	8.90	272.30	4,235.83	-22.73	-629.05	629.46	1.68	1.18	-8.28	310.68
	NORMAL	4,382.0	9.90	270.40	4,329.56	-22.37	-644.56	644.94	1.10	1.05	-2.00	341.82
	NORMAL	4,477.0	9.50	268.60	4,423.20	-22.51	-660.56	660.94	0.53	-0.42	-1.89	216.28
	NORMAL	4,571.0	9.20	268.90	4,515.95	-22.84	-675.83	676.21	0.32	-0.32	0.32	170.92
	NORMAL	4,665.0	9.80	271.00	4,608.66	-22.85	-691.34	691.72	0.74	0.64	2.23	31.05
	NORMAL	4,759.0	9.70	270.70	4,701.30	-22.61	-707.26	707.62	0.12	-0.11	-0.32	206.79
	NORMAL	4,853.0	9.40	266.20	4,794.00	-23.02	-722.83	723.20	0.86	-0.32	-4.79	245.90
	NORMAL	4,946.0	9.80	268.00	4,885.70	-23.80	-738.32	738.71	0.54	0.43	1.94	37.78
	NORMAL	5,041.0	9.40	269.10	4,979.37	-24.21	-754.16	754.55	0.46	-0.42	1.16	155.90
	NORMAL	5,135.0	9.60	269.50	5,072.08	-24.40	-769.67	770.06	0.22	0.21	0.43	18.47
12/11/2010	NORMAL	5,230.0	10.60	270.80	5,165.60	-24.34	-786.33	786.70	1.08	1.05	1.37	13.48
	NORMAL	5,324.0	10.10	270.20	5,258.07	-24.19	-803.22	803.58	0.54	-0.53	-0.64	191.87
	NORMAL	5,423.0	9.80	268.70	5,355.59	-24.35	-820.32	820.68	0.40	-0.30	-1.52	220.09
	NORMAL	5,512.0	10.10	270.00	5,443.25	-24.53	-835.70	836.05	0.42	0.34	1.46	37.47
	NORMAL	5,607.0	10.20	269.40	5,536.76	-24.61	-852.44	852.78	0.15	0.11	-0.63	313.11
	NORMAL	5,701.0	9.70	267.90	5,629.35	-24.99	-868.68	869.02	0.60	-0.53	-1.60	206.66
	NORMAL	5,795.0	9.70	269.80	5,722.00	-25.31	-884.51	884.86	0.34	0.00	2.02	90.94
	NORMAL	5,889.0	9.50	267.70	5,814.69	-25.65	-900.18	900.53	0.43	-0.21	-2.23	239.24
	NORMAL	5,983.0	8.60	268.40	5,907.52	-26.16	-914.96	915.32	0.96	-0.96	0.74	173.37
	NORMAL	6,078.0	7.70	274.30	6,001.56	-25.88	-928.40	928.75	1.29	-0.95	6.21	139.99
	NORMAL	6,171.0	6.00	274.90	6,093.89	-24.99	-939.46	939.77	1.83	-1.83	0.65	177.89
	NORMAL	6,265.0	5.40	279.30	6,187.42	-23.86	-948.72	948.98	0.79	-0.64	4.68	146.11
	NORMAL	6,359.0	3.70	275.10	6,281.13	-22.87	-956.11	956.33	1.84	-1.81	-4.47	189.00
	NORMAL	6,454.0	3.10	279.20	6,375.96	-22.19	-961.69	961.89	0.68	-0.63	4.32	159.98
12/12/2010	NORMAL	6,547.0	1.50	285.60	6,468.88	-21.46	-965.35	965.52	1.74	-1.72	6.88	174.07
	NORMAL	6,642.0	0.50	323.70	6,563.86	-20.79	-966.79	966.94	1.21	-1.05	40.11	164.42
	NORMAL	6,737.0	0.70	297.90	6,658.86	-20.19	-967.55	967.68	0.35	0.21	-27.16	293.14
	NORMAL	6,830.0	0.90	280.60	6,751.85	-19.79	-968.77	968.88	0.33	0.22	-18.60	300.76

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 (°)
12/12/2010	NORMAL	6,925.0	0.80	114.90	6,846.85	-19.93	-968.90	969.02	1.78	-0.11	-174.42	186.73
	NORMAL	7,019.0	1.10	126.30	6,940.83	-20.74	-967.58	967.73	0.38	0.32	12.13	38.00
	NORMAL	7,113.0	1.00	104.00	7,034.82	-21.47	-966.06	966.23	0.44	-0.11	-23.72	245.27
	NORMAL	7,208.0	1.10	120.90	7,129.80	-22.14	-964.47	964.67	0.34	0.11	17.79	80.67
	NORMAL	7,301.0	1.10	135.60	7,222.79	-23.24	-963.08	963.31	0.30	0.00	15.81	97.35
	NORMAL	7,395.0	0.10	191.90	7,316.78	-23.96	-962.47	962.72	1.11	-1.06	59.89	175.45
	NORMAL	7,489.0	0.70	227.20	7,410.78	-24.43	-962.90	963.18	0.66	0.64	37.55	40.64
12/13/2010	NORMAL	7,583.0	0.30	242.50	7,504.77	-24.94	-963.54	963.83	0.44	-0.43	16.28	169.09
	NORMAL	7,679.0	0.50	295.30	7,600.77	-24.87	-964.14	964.43	0.41	0.21	55.00	89.67
	NORMAL	7,773.0	0.50	319.00	7,694.77	-24.39	-964.78	965.06	0.22	0.00	25.21	101.85
	NORMAL	7,867.0	0.60	327.80	7,788.76	-23.66	-965.32	965.56	0.14	0.11	9.36	44.64
	NORMAL	7,962.0	1.00	333.70	7,883.75	-22.50	-965.95	966.15	0.43	0.42	6.21	14.60
	NORMAL	8,054.0	1.10	8.40	7,975.74	-20.91	-966.18	966.33	0.69	0.11	37.72	98.68
	NORMAL	8,148.0	1.30	53.30	8,069.72	-19.38	-965.19	965.29	0.99	0.21	47.77	101.04
	NORMAL	8,242.0	0.90	69.20	8,163.70	-18.48	-963.64	963.71	0.53	-0.43	16.91	150.42
	NORMAL	8,336.0	0.60	104.30	8,257.70	-18.34	-962.48	962.54	0.57	-0.32	37.34	139.86
	NORMAL	8,431.0	0.80	161.20	8,352.69	-19.09	-961.78	961.87	0.73	0.21	59.89	103.68
12/14/2010	NORMAL	8,525.0	0.80	155.60	8,446.68	-20.31	-961.30	961.43	0.08	0.00	-5.96	267.20
	NORMAL	8,621.0	0.90	91.80	8,542.67	-20.94	-960.27	960.42	0.94	0.10	-66.46	243.50
	NORMAL	8,714.0	0.40	113.70	8,635.67	-21.09	-959.24	959.40	0.59	-0.54	23.55	164.25
12/16/2010	NORMAL	8,808.0	0.40	172.90	8,729.66	-21.55	-958.90	959.08	0.42	0.00	62.98	119.60
	NORMAL	8,902.0	0.70	25.40	8,823.66	-21.36	-958.61	958.78	1.13	0.32	-156.91	200.80
	NORMAL	8,997.0	0.40	335.60	8,918.66	-20.53	-958.50	958.64	0.57	-0.32	-52.42	214.66
	NORMAL	9,091.0	1.40	0.70	9,012.65	-19.08	-958.62	958.72	1.12	1.06	26.70	34.38
	NORMAL	9,185.0	0.90	25.70	9,106.63	-17.27	-958.29	958.32	0.74	-0.53	26.60	146.94
	NORMAL	9,278.0	0.40	322.50	9,199.62	-16.36	-958.17	958.17	0.86	-0.54	-67.96	206.39
	NORMAL	9,372.0	0.20	146.90	9,293.62	-16.23	-958.28	958.28	0.64	-0.21	-186.81	181.47
12/17/2010	NORMAL	9,466.0	0.40	295.90	9,387.62	-16.23	-958.48	958.48	0.62	0.21	158.51	159.22
	NORMAL	9,559.0	1.00	230.40	9,480.61	-16.60	-959.40	959.41	0.98	0.65	-70.43	270.93
	NORMAL	9,652.0	1.70	220.00	9,573.59	-18.18	-960.91	960.98	0.79	0.75	-11.18	335.46
	NORMAL	9,746.0	1.70	219.90	9,667.55	-20.31	-962.70	962.84	0.00	0.00	-0.11	269.95
12/19/2010	NORMAL	9,839.0	0.40	247.60	9,760.53	-21.50	-963.89	964.06	1.46	-1.40	29.78	172.13
	NORMAL	9,931.0	2.00	234.80	9,852.51	-22.54	-965.50	965.71	1.75	1.74	-13.91	344.05
	NORMAL	10,024.0	1.80	215.00	9,945.46	-24.68	-967.66	967.94	0.73	-0.22	-21.29	243.32
	NORMAL	10,117.0	1.50	212.40	10,038.42	-26.90	-969.15	969.51	0.33	-0.32	-2.80	192.71
	NORMAL	10,210.0	2.20	242.50	10,131.37	-28.75	-971.39	971.80	1.26	0.75	32.37	69.91
	NORMAL	10,303.0	2.90	247.30	10,224.28	-30.48	-975.14	975.61	0.79	0.75	5.16	19.37
	NORMAL	10,397.0	2.20	242.70	10,318.18	-32.23	-978.94	979.47	0.78	-0.74	-4.89	194.01
	NORMAL	10,490.0	1.70	228.20	10,411.13	-33.97	-981.55	982.14	0.75	-0.54	-15.59	217.53
	NORMAL	10,583.0	1.50	224.80	10,504.09	-35.75	-983.44	984.09	0.24	-0.22	-3.66	203.70
	NORMAL	10,676.0	1.50	226.30	10,597.06	-37.46	-985.18	985.88	0.04	0.00	1.61	90.75
12/20/2010	NORMAL	10,769.0	1.80	223.70	10,690.02	-39.35	-987.07	987.83	0.33	0.32	-2.80	344.69
	NORMAL	10,862.0	1.20	223.70	10,782.99	-41.11	-988.75	989.57	0.65	-0.65	0.00	180.00
	NORMAL	10,956.0	1.80	202.80	10,876.96	-43.18	-990.00	990.90	0.85	0.64	-22.23	306.87
	NORMAL	11,049.0	2.70	215.30	10,969.89	-46.32	-991.83	992.83	1.10	0.97	13.44	34.94
	NORMAL	11,099.0	2.70	215.30	11,019.83	-48.24	-993.19	994.26	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

