

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 331-25-198	Wellbore No.	OH
Well Name	FEDERAL RGU 331-25-198	Common Name	RGU 331-25-198
Project	RG 25-01S-098W	Site	RGU 31-25-198 Pad
Vertical Section Azimuth	172.93 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	10/3/2010	UWI	RGU 331-25-198
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	Directional Plus
Date Started	10/3/2010	Ended	
Tool Name	MWD	Engineer	Trevor

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 (°)
10/3/2010	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/3/2010	NORMAL	149.0	0.70	109.40	149.00	-0.30	0.86	0.41	0.47	0.47	0.00	109.40
	NORMAL	211.0	1.30	145.10	210.99	-1.00	1.62	1.20	1.35	0.97	57.58	64.87
	NORMAL	303.0	1.60	170.30	302.96	-3.13	2.43	3.40	0.76	0.33	27.39	77.76
10/4/2010	NORMAL	395.0	1.50	167.30	394.92	-5.57	2.91	5.88	0.14	-0.11	-3.26	217.57
	NORMAL	488.0	2.10	171.00	487.88	-8.44	3.45	8.80	0.66	0.65	3.98	12.82
	NORMAL	580.0	2.30	165.60	579.81	-11.89	4.17	12.31	0.31	0.22	-5.87	311.25
	NORMAL	672.0	1.90	170.10	671.75	-15.18	4.89	15.67	0.47	-0.43	4.89	159.83
	NORMAL	765.0	2.00	151.00	764.70	-18.12	5.94	18.71	0.70	0.11	-20.54	269.12
	NORMAL	857.0	2.20	161.80	856.63	-21.20	7.27	21.94	0.48	0.22	11.74	68.65
	NORMAL	949.0	2.60	160.90	948.55	-24.85	8.51	25.71	0.44	0.43	-0.98	354.17
	NORMAL	1,043.0	3.10	175.40	1,042.44	-29.40	9.41	30.33	0.93	0.53	15.43	62.64
	NORMAL	1,138.0	3.00	166.70	1,137.30	-34.38	10.19	35.37	0.50	-0.11	-9.16	253.49
	NORMAL	1,232.0	3.70	167.40	1,231.14	-39.73	11.41	40.84	0.75	0.74	0.74	3.69
	NORMAL	1,327.0	3.90	158.60	1,325.93	-45.73	13.26	47.02	0.65	0.21	-9.26	284.50
	NORMAL	1,421.0	4.70	155.00	1,419.67	-52.20	16.06	53.78	0.90	0.85	-3.83	339.55
	NORMAL	1,515.0	3.40	172.10	1,513.44	-58.45	18.07	60.23	1.87	-1.38	18.19	145.42
10/5/2010	NORMAL	1,610.0	3.60	175.00	1,608.26	-64.21	18.71	66.03	0.28	0.21	3.05	42.97
	NORMAL	1,704.0	3.90	179.70	1,702.06	-70.35	18.99	72.15	0.46	0.32	5.00	48.06
	NORMAL	1,799.0	3.80	161.40	1,796.85	-76.56	20.01	78.44	1.29	-0.11	-19.26	256.26

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 (°)
10/5/2010	NORMAL	1,894.0	3.70	168.20	1,891.64	-82.55	21.64	84.58	0.48	-0.11	7.16	106.05
	NORMAL	1,988.0	4.20	172.90	1,985.42	-88.93	22.69	91.05	0.63	0.53	5.00	35.28
	NORMAL	2,082.0	4.80	173.90	2,079.13	-96.26	23.53	98.42	0.64	0.64	1.06	7.95
	NORMAL	2,176.0	6.20	172.50	2,172.70	-105.20	24.61	107.43	1.50	1.49	-1.49	353.83
	NORMAL	2,269.0	6.90	168.40	2,265.09	-115.65	26.39	118.02	0.90	0.75	-4.41	324.20
	NORMAL	2,364.0	5.90	171.40	2,359.50	-126.07	28.27	128.59	1.11	-1.05	3.16	163.00
10/6/2010	NORMAL	2,458.0	5.60	179.40	2,453.02	-135.43	29.04	137.98	0.91	-0.32	8.51	114.47
	NORMAL	2,551.0	5.80	174.70	2,545.56	-144.65	29.52	147.18	0.55	0.22	-5.05	290.84
	NORMAL	2,645.0	6.30	183.10	2,639.04	-154.53	29.68	157.01	1.08	0.53	8.94	64.76
	NORMAL	2,740.0	6.10	183.10	2,733.49	-164.78	29.12	167.11	0.21	-0.21	0.00	180.00
	NORMAL	2,834.0	5.80	177.00	2,826.98	-174.51	29.10	176.76	0.74	-0.32	-6.49	241.61
	NORMAL	2,928.0	5.90	182.30	2,920.49	-184.08	29.16	186.27	0.58	0.11	5.64	82.16
	NORMAL	3,023.0	5.80	182.60	3,015.00	-193.75	28.74	195.82	0.11	-0.11	0.32	163.15
10/7/2010	NORMAL	3,117.0	5.50	176.60	3,108.54	-202.99	28.79	204.99	0.70	-0.32	-6.38	240.11
	NORMAL	3,211.0	5.00	177.50	3,202.15	-211.58	29.24	213.57	0.54	-0.53	0.96	171.10
	NORMAL	3,305.0	4.90	168.80	3,295.80	-219.61	30.20	221.66	0.80	-0.11	-9.26	258.09
	NORMAL	3,400.0	5.20	173.30	3,390.43	-227.87	31.49	230.01	0.52	0.32	4.74	55.12
	NORMAL	3,494.0	4.90	173.30	3,484.06	-236.09	32.45	238.29	0.32	-0.32	0.00	180.00
	NORMAL	3,588.0	4.80	169.80	3,577.73	-243.94	33.62	246.23	0.33	-0.11	-3.72	249.59
	NORMAL	3,682.0			3,671.38	-251.98	34.61	254.33	0.00	0.00	0.00	0.00
10/8/2010	NORMAL	3,682.0	5.10	176.00	3,671.38	-251.98	34.61	254.33	0.65	0.32	6.60	63.83
	NORMAL	3,777.0	4.90	171.20	3,766.26	-255.99	35.23	258.38	5.16	5.16	0.00	171.20
10/10/2010	NORMAL	3,962.0	5.60	169.60	3,950.49	-272.68	38.07	275.29	0.39	0.38	-0.86	347.39
	NORMAL	4,056.0	4.80	166.40	4,044.10	-281.01	39.82	283.78	0.90	-0.85	-3.40	198.34
	NORMAL	4,150.0	4.20	162.80	4,137.81	-288.13	41.76	291.07	0.71	-0.64	-3.83	203.42
	NORMAL	4,245.0	3.00	152.00	4,232.62	-293.64	43.96	296.82	1.45	-1.26	-11.37	204.16
	NORMAL	4,339.0	2.40	151.90	4,326.52	-297.55	46.04	300.96	0.64	-0.64	-0.11	180.40
	NORMAL	4,434.0	1.40	166.90	4,421.46	-300.44	47.24	303.97	1.17	-1.05	15.79	160.92
	NORMAL	4,528.0	1.20	191.40	4,515.44	-302.52	47.30	306.04	0.62	-0.21	26.06	121.76
	NORMAL	4,624.0	0.30	174.20	4,611.43	-303.76	47.13	307.25	0.96	-0.94	-17.92	185.55
	NORMAL	4,718.0	0.60	134.20	4,705.43	-304.34	47.51	307.88	0.44	0.32	-42.55	292.49
	NORMAL	4,812.0	0.40	224.50	4,799.42	-304.92	47.63	308.47	0.77	-0.21	96.06	146.40
	NORMAL	4,906.0	0.40	225.20	4,893.42	-305.39	47.17	308.87	0.01	0.00	0.74	90.35
	NORMAL	5,001.0	0.20	184.30	4,988.42	-305.79	46.92	309.24	0.30	-0.21	-43.05	207.76
	NORMAL	5,095.0	0.70	145.10	5,082.42	-306.42	47.24	309.90	0.60	0.53	-41.70	307.74
10/11/2010	NORMAL	5,190.0	0.40	77.80	5,177.41	-306.83	47.89	310.39	0.69	-0.32	-70.84	214.07
	NORMAL	5,284.0	1.90	44.20	5,271.39	-305.64	49.30	309.38	1.68	1.60	-35.74	318.36
	NORMAL	5,378.0	1.40	31.00	5,365.35	-303.54	50.98	307.50	0.66	-0.53	-14.04	210.77
	NORMAL	5,473.0	0.90	344.50	5,460.34	-301.82	51.38	305.85	1.07	-0.53	-48.95	219.91
	NORMAL	5,567.0	0.60	341.10	5,554.33	-300.65	51.02	304.64	0.32	-0.32	-3.62	186.74
	NORMAL	5,662.0	1.10	307.00	5,649.32	-299.63	50.13	303.52	0.73	0.53	-35.89	296.75
	NORMAL	5,756.0	0.70	294.00	5,743.31	-298.85	48.89	302.60	0.48	-0.43	-13.83	200.64
	NORMAL	5,851.0	0.30	262.70	5,838.30	-298.65	48.11	302.30	0.49	-0.42	-32.95	199.36
	NORMAL	5,945.0	0.40	261.00	5,932.30	-298.73	47.54	302.31	0.11	0.11	-1.81	353.22
	NORMAL	6,040.0	0.70	303.00	6,027.30	-298.46	46.73	301.95	0.51	0.32	44.21	75.61
	NORMAL	6,134.0	1.00	311.20	6,121.29	-297.61	45.63	300.96	0.34	0.32	8.72	26.21
	NORMAL	6,228.0	0.70	306.30	6,215.28	-296.73	44.55	299.96	0.33	-0.32	-5.21	191.18
	NORMAL	6,323.0	0.70	261.50	6,310.27	-296.47	43.51	299.57	0.56	0.00	-47.16	247.60
	NORMAL	6,417.0	0.70	239.20	6,404.26	-296.85	42.45	299.82	0.29	0.00	-23.72	258.85
	NORMAL	6,511.0	1.50	237.90	6,498.24	-297.80	40.91	300.57	0.85	0.85	-1.38	357.56
	NORMAL	6,606.0	0.90	243.30	6,593.22	-298.80	39.19	301.35	0.64	-0.63	5.68	172.02
	NORMAL	6,701.0	1.00	232.80	6,688.21	-299.63	37.86	302.01	0.21	0.11	-11.05	294.56
	NORMAL	6,796.0	0.60	181.50	6,783.20	-300.63	37.19	302.92	0.82	-0.42	-54.00	216.85
	NORMAL	6,891.0	0.50	100.70	6,878.20	-301.21	37.58	303.54	0.75	-0.11	-85.05	223.50
10/12/2010	NORMAL	6,985.0	0.40	349.80	6,972.20	-300.96	37.93	303.34	0.79	-0.11	-117.98	210.18
	NORMAL	7,079.0	1.00	319.20	7,066.19	-300.01	37.33	302.33	0.73	0.64	-32.55	312.15
	NORMAL	7,174.0	0.50	315.60	7,161.18	-299.09	36.50	301.31	0.53	-0.53	-3.79	183.59

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 (°)
10/12/2010	NORMAL	7,268.0	0.90	285.90	7,255.17	-298.60	35.51	300.70	0.56	0.43	-31.60	302.29
	NORMAL	7,363.0	0.80	327.10	7,350.17	-297.83	34.43	299.81	0.64	-0.11	43.37	119.49
	NORMAL	7,457.0	0.80	319.50	7,444.16	-296.78	33.65	298.67	0.11	0.00	-8.09	266.20
	NORMAL	7,551.0	0.70	337.10	7,538.15	-295.76	33.00	297.57	0.27	-0.11	18.72	122.10
	NORMAL	7,644.0	0.40	323.70	7,631.14	-294.97	32.58	296.74	0.35	-0.32	-14.41	196.60
	NORMAL	7,737.0	0.70	346.20	7,724.14	-294.16	32.26	295.89	0.39	0.32	24.19	47.35
	NORMAL	7,831.0	0.50	36.10	7,818.13	-293.27	32.36	295.02	0.57	-0.21	53.09	134.66
	NORMAL	7,924.0	0.20	234.50	7,911.13	-293.04	32.47	294.80	0.74	-0.32	-173.76	185.23
	NORMAL	8,017.0	0.60	176.90	8,004.13	-293.62	32.36	295.37	0.56	0.43	-61.94	283.49
	NORMAL	8,110.0	1.10	168.40	8,097.12	-294.98	32.57	296.74	0.55	0.54	-9.14	341.57
10/13/2010	NORMAL	8,204.0	0.70	186.40	8,191.11	-296.43	32.68	298.20	0.52	-0.43	19.15	153.52
	NORMAL	8,295.0	1.00	239.60	8,282.10	-297.39	31.94	299.06	0.89	0.33	58.46	97.18
	NORMAL	8,388.0	1.30	265.00	8,375.08	-297.89	30.19	299.34	0.63	0.32	27.31	72.63
10/14/2010	NORMAL	8,482.0	0.80	3.00	8,469.07	-297.33	29.16	298.65	1.72	-0.53	104.26	150.69
	NORMAL	8,576.0	0.60	17.70	8,563.07	-296.20	29.34	297.56	0.28	-0.21	15.64	145.27
	NORMAL	8,669.0	0.80	36.00	8,656.06	-295.21	29.87	296.64	0.32	0.22	19.68	57.58
	NORMAL	8,763.0	0.70	59.20	8,750.05	-294.39	30.75	295.93	0.34	-0.11	24.68	119.59
	NORMAL	8,856.0	0.70	94.80	8,843.04	-294.14	31.81	295.82	0.46	0.00	38.28	107.80
	NORMAL	8,949.0	0.20	129.30	8,936.04	-294.29	32.50	296.06	0.59	-0.54	37.10	168.05
	NORMAL	9,043.0	0.10	207.40	9,030.04	-294.47	32.59	296.24	0.22	-0.11	83.09	151.39
	NORMAL	9,136.0	0.40	156.10	9,123.04	-294.84	32.68	296.62	0.37	0.32	-55.16	295.68
	NORMAL	9,230.0	0.20	162.60	9,217.04	-295.30	32.86	297.10	0.22	-0.21	6.91	173.58
	NORMAL	9,323.0	0.40	106.40	9,310.04	-295.54	33.22	297.39	0.36	0.22	-60.43	273.88
	NORMAL	9,417.0	0.50	80.00	9,404.03	-295.56	33.94	297.49	0.24	0.11	-28.09	282.15
	NORMAL	9,510.0	2.20	87.40	9,497.01	-295.41	36.12	297.61	1.83	1.83	7.96	9.56
	NORMAL	9,603.0	1.80	92.70	9,589.95	-295.40	39.37	298.00	0.47	-0.43	5.70	157.82
10/15/2010	NORMAL	9,697.0	1.60	180.00	9,683.92	-296.78	40.84	299.55	2.50	-0.21	92.87	137.17
	NORMAL	9,791.0	1.60	198.60	9,777.88	-299.34	40.42	302.04	0.55	0.00	19.79	99.30
	NORMAL	9,885.0	1.70	209.00	9,871.85	-301.80	39.33	304.35	0.34	0.11	11.06	76.78
	NORMAL	9,979.0	1.50	213.10	9,965.81	-304.05	37.98	306.42	0.25	-0.21	4.36	152.25
10/16/2010	NORMAL	10,073.0	1.00	226.40	10,059.79	-305.65	36.71	307.84	0.61	-0.53	14.15	156.41
	NORMAL	10,167.0	0.80	261.50	10,153.78	-306.31	35.47	308.35	0.61	-0.21	37.34	126.91
	NORMAL	10,261.0	1.30	332.33	10,247.76	-305.46	34.33	307.37	1.37	0.53	75.35	106.90
	NORMAL	10,356.0	1.10	329.20	10,342.74	-303.73	33.36	305.52	0.22	-0.21	-3.29	196.59
	NORMAL	10,450.0	0.90	298.70	10,436.73	-302.60	32.25	304.27	0.60	-0.21	-32.45	234.61
	NORMAL	10,543.0	0.70	298.70	10,529.72	-301.97	31.11	303.51	0.22	-0.22	0.00	180.00
10/17/2010	NORMAL	10,637.0	0.70	274.60	10,623.71	-301.65	30.03	303.05	0.31	0.00	-25.64	257.95
	NORMAL	10,731.0	0.80	280.70	10,717.70	-301.48	28.82	302.74	0.14	0.11	6.49	41.68
	NORMAL	10,824.0	0.80	332.10	10,810.70	-300.79	27.88	301.93	0.75	0.00	55.27	115.70
	NORMAL	10,918.0	1.10	295.90	10,904.68	-299.82	26.76	300.83	0.70	0.32	-38.51	277.69
	NORMAL	11,011.0	1.20	313.90	10,997.67	-298.75	25.25	299.59	0.40	0.11	19.35	83.65
	NORMAL	11,105.0	1.40	334.20	11,091.64	-297.03	24.04	297.73	0.53	0.21	21.60	76.89
	NORMAL	11,199.0	1.70	305.40	11,185.61	-295.19	22.41	295.71	0.88	0.32	-30.64	276.26
	NORMAL	11,292.0	0.90	295.50	11,278.58	-294.08	20.62	294.38	0.89	-0.86	-10.65	190.77
10/18/2010	NORMAL	11,385.0	0.30	300.90	11,371.58	-293.64	19.76	293.84	0.65	-0.65	5.81	177.31
	NORMAL	11,480.0	0.30	158.90	11,466.58	-293.74	19.63	293.93	0.60	0.00	-149.47	199.00
	NORMAL	11,574.0	0.40	185.80	11,560.58	-294.30	19.69	294.49	0.20	0.11	28.62	72.60
	NORMAL	11,668.0	0.50	176.30	11,654.57	-295.04	19.68	295.21	0.13	0.11	-10.11	318.46
	NORMAL	11,762.0	1.00	78.80	11,748.57	-295.29	20.51	295.56	1.25	0.53	-103.72	237.55
10/21/2010	NORMAL	11,857.0	1.10	88.40	11,843.55	-295.10	22.24	295.59	0.21	0.11	10.11	65.24
	NORMAL	11,950.0	1.00	70.90	11,936.54	-294.81	23.90	295.51	0.36	-0.11	-18.82	244.06
	NORMAL	12,045.0	0.70	66.50	12,031.53	-294.31	25.21	295.17	0.32	-0.32	-4.63	190.08
	NORMAL	12,138.0	0.80	57.10	12,124.52	-293.73	26.28	294.73	0.17	0.11	-10.11	304.34
	NORMAL	12,233.0	0.70	53.50	12,219.51	-293.02	27.30	294.15	0.12	-0.11	-3.79	203.44
	NORMAL	12,327.0	0.70	21.00	12,313.50	-292.14	27.97	293.36	0.42	0.00	-34.57	253.75
10/22/2010	NORMAL	12,421.0	1.10	14.50	12,407.49	-290.73	28.40	292.02	0.44	0.43	-6.91	342.42
	NORMAL	12,516.0	0.60	326.00	12,502.48	-289.44	28.35	290.73	0.88	-0.53	-51.05	212.61

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 (°)
10/22/2010	NORMAL	12,610.0	0.70	14.80	12,596.48	-288.48	28.22	289.76	0.58	0.11	51.91	104.77
	NORMAL	12,704.0	0.60	35.40	12,690.47	-287.52	28.65	288.86	0.27	-0.11	21.91	123.24
	NORMAL	12,762.0	0.80	58.30	12,748.47	-287.06	29.17	288.47	0.59	0.34	39.48	66.25
	NORMAL	12,812.0	0.80	58.30	12,798.46	-286.69	29.77	288.18	0.00	0.00	0.00	0.00