

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 332-14-298	Wellbore No.	OH
Well Name	FEDERAL RG 332-14-298	Common Name	RG 332-14-298
Project	RG 14-02S-098W	Site	RG 32-14-298 Pad
Vertical Section Azimuth	71.79 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	11/28/2010	UWI	RG 332-14-298
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	
Started	11/28/2010	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)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
11/28/2010	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/28/2010	NORMAL	54.0	0.30	98.70	54.00	-0.02	0.14	0.13	0.56	0.56	0.00	98.70
	NORMAL	85.0	1.10	38.70	85.00	0.20	0.41	0.45	3.18	2.58	-193.55	284.71
	NORMAL	116.0	1.30	46.70	115.99	0.67	0.85	1.02	0.84	0.65	25.81	44.00
	NORMAL	146.0	2.00	64.10	145.98	1.13	1.57	1.84	2.84	2.33	58.00	44.50
	NORMAL	177.0	1.50	66.80	176.96	1.53	2.43	2.78	1.63	-1.61	8.71	171.98
	NORMAL	208.0	2.50	72.60	207.94	1.89	3.44	3.86	3.29	3.23	18.71	14.35
	NORMAL	240.0	2.20	72.90	239.92	2.28	4.70	5.18	0.94	-0.94	0.94	177.80
	NORMAL	271.0	2.90	76.40	270.89	2.64	6.03	6.55	2.31	2.26	11.29	14.29
	NORMAL	301.0	3.10	77.10	300.85	3.00	7.56	8.12	0.68	0.67	2.33	10.73
	NORMAL	333.0	3.10	73.50	332.80	3.44	9.23	9.84	0.61	0.00	-11.25	268.20
	NORMAL	364.0	3.40	67.20	363.75	4.03	10.88	11.60	1.50	0.97	-20.32	306.86
	NORMAL	395.0	3.50	68.00	394.69	4.74	12.61	13.46	0.36	0.32	2.58	26.11
	NORMAL	465.0	3.50	78.10	464.56	5.99	16.68	17.71	0.88	0.00	14.43	95.04
	NORMAL	496.0	3.80	72.20	495.50	6.49	18.58	19.68	1.55	0.97	-19.03	305.65
	NORMAL	527.0	3.90	78.70	526.43	7.02	20.59	21.75	1.44	0.32	20.97	80.35
	NORMAL	619.0	3.40	69.20	618.24	8.60	26.21	27.59	0.85	-0.54	-10.33	225.74
	NORMAL	712.0	3.30	62.90	711.09	10.80	31.17	32.99	0.41	-0.11	-6.77	251.67
	NORMAL	804.0	3.10	79.90	802.94	12.44	35.98	38.06	1.05	-0.22	18.48	110.30
	NORMAL	899.0	2.50	81.60	897.83	13.19	40.56	42.65	0.64	-0.63	1.79	172.97

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (%/100ft)	Build (%/100ft)	Turn (%/100ft)	TFace (°)
11/28/2010	NORMAL	994.0	2.40	72.10	992.74	14.11	44.50	46.68	0.44	-0.11	-10.00	251.45
	NORMAL	1,089.0	2.80	70.50	1,087.65	15.49	48.58	50.99	0.43	0.42	-1.68	348.92
	NORMAL	1,183.0	3.10	79.10	1,181.52	16.74	53.24	55.80	0.57	0.32	9.15	60.21
	NORMAL	1,276.0	3.20	78.80	1,274.38	17.72	58.26	60.88	0.11	0.11	-0.32	350.49
	NORMAL	1,370.0	3.70	64.60	1,368.21	19.53	63.57	66.49	1.05	0.53	-15.11	293.12
12/2/2010	NORMAL	1,465.0	4.30	60.60	1,462.98	22.59	69.44	73.02	0.70	0.63	-4.21	333.06
	NORMAL	1,560.0	4.30	56.00	1,557.71	26.33	75.50	79.94	0.36	0.00	-4.84	267.71
	NORMAL	1,654.0	3.80	51.50	1,651.48	30.24	80.86	86.26	0.63	-0.53	-4.79	210.21
	NORMAL	1,748.0	4.70	60.50	1,745.22	34.08	86.65	92.96	1.19	0.96	9.57	41.09
	NORMAL	1,843.0	4.90	79.60	1,839.89	36.73	94.02	100.79	1.69	0.21	20.11	92.45
	NORMAL	1,936.0	5.10	75.00	1,932.54	38.51	101.92	108.85	0.48	0.22	-4.95	294.21
	NORMAL	2,029.0	4.50	82.50	2,025.21	40.06	109.53	116.57	0.93	-0.65	8.06	137.41
	NORMAL	2,123.0	4.00	64.30	2,118.96	41.96	116.14	123.44	1.52	-0.53	-19.36	240.74
	NORMAL	2,217.0	3.90	65.70	2,212.74	44.70	122.01	129.87	0.15	-0.11	1.49	136.74
	NORMAL	2,310.0	3.60	63.00	2,305.54	47.33	127.50	135.90	0.37	-0.32	-2.90	209.14
12/3/2010	NORMAL	2,414.0	3.20	66.90	2,409.35	49.95	133.08	142.02	0.44	-0.38	3.75	151.90
	NORMAL	2,499.0	3.80	87.50	2,494.20	51.00	138.07	147.10	1.63	0.71	24.24	75.02
	NORMAL	2,593.0	3.80	72.80	2,587.99	52.06	144.16	153.21	1.03	0.00	-15.64	262.67
	NORMAL	2,686.0	3.60	69.20	2,680.80	54.01	149.83	159.21	0.33	-0.22	-3.87	227.49
	NORMAL	2,780.0	4.00	74.20	2,774.59	55.95	155.75	165.43	0.55	0.43	5.32	42.15
	NORMAL	2,875.0	4.20	85.90	2,869.35	57.10	162.40	172.11	0.90	0.21	12.32	82.43
	NORMAL	2,969.0	3.10	83.10	2,963.16	57.65	168.36	177.95	1.19	-1.17	-2.98	187.81
	NORMAL	3,064.0	2.50	78.90	3,058.05	58.36	172.95	182.52	0.67	-0.63	-4.42	196.79
	NORMAL	3,158.0	2.30	62.70	3,151.96	59.62	176.63	186.42	0.75	-0.21	-17.23	245.58
	NORMAL	3,235.0	2.10	57.70	3,228.91	61.08	179.20	189.31	0.36	-0.26	-6.49	221.34
12/23/2010	NORMAL	3,250.0	1.80	55.80	3,243.90	61.36	179.63	189.80	2.05	-2.00	-12.67	191.21
	NORMAL	3,345.0	2.00	63.70	3,338.85	62.93	182.35	192.88	0.35	0.21	8.32	56.63
	NORMAL	3,439.0	2.40	114.30	3,432.79	62.85	185.61	195.95	2.04	0.43	53.83	104.40
	NORMAL	3,533.0	1.50	128.00	3,526.73	61.28	188.37	198.09	1.07	-0.96	14.57	159.35
	NORMAL	3,628.0	1.90	104.30	3,621.69	60.13	190.88	200.11	0.84	0.42	-24.95	287.44
	NORMAL	3,722.0	2.30	96.30	3,715.63	59.53	194.26	203.14	0.53	0.43	-8.51	319.72
	NORMAL	3,817.0	2.40	92.60	3,810.55	59.24	198.15	206.73	0.19	0.11	-3.89	301.53
	NORMAL	3,910.0	1.70	71.30	3,903.49	59.59	201.40	209.93	1.10	-0.75	-22.90	217.11
	NORMAL	4,005.0	0.60	109.40	3,998.47	59.88	203.20	211.74	1.35	-1.16	40.11	163.22
	NORMAL	4,099.0	1.30	80.90	4,092.46	59.88	204.72	213.18	0.88	0.74	-30.32	311.17
	NORMAL	4,194.0	1.20	37.40	4,187.44	60.84	206.39	215.06	0.98	-0.11	-45.79	242.53
	NORMAL	4,287.0	2.30	72.20	4,280.39	62.19	208.76	217.73	1.59	1.18	37.42	62.31
	NORMAL	4,382.0	3.30	63.50	4,375.28	63.99	213.02	222.35	1.14	1.05	-9.16	332.59
	NORMAL	4,477.0	3.50	58.10	4,470.11	66.74	217.93	227.87	0.40	0.21	-5.68	299.27
	NORMAL	4,571.0	3.90	49.30	4,563.92	70.34	222.79	233.61	0.74	0.43	-9.36	300.72
	NORMAL	4,665.0	4.30	65.30	4,657.68	73.90	228.41	240.07	1.28	0.43	17.02	78.82
	NORMAL	4,759.0	3.00	74.50	4,751.49	76.03	233.98	246.02	1.51	-1.38	9.79	160.29
	NORMAL	4,853.0	3.70	57.70	4,845.33	78.31	238.92	251.42	1.28	0.74	-17.87	296.91
	NORMAL	4,964.0	4.00	58.20	4,956.08	82.26	245.24	258.66	0.27	0.27	0.45	6.63
	NORMAL	5,041.0	3.40	72.60	5,032.92	84.36	249.70	263.55	1.43	-0.78	18.70	129.90
	NORMAL	5,135.0	3.00	87.70	5,126.77	85.29	254.82	268.71	0.99	-0.43	16.06	122.80
	NORMAL	5,230.0	4.30	85.10	5,221.58	85.70	260.85	274.56	1.38	1.37	-2.74	351.45
	NORMAL	5,324.0	3.80	92.90	5,315.34	85.84	267.47	280.90	0.79	-0.53	8.30	136.07
	NORMAL	5,418.0	5.00	96.10	5,409.07	85.25	274.65	287.54	1.30	1.28	3.40	13.16
	NORMAL	5,512.0	5.00	83.10	5,502.71	85.30	282.79	295.29	1.20	0.00	-13.83	263.52
	NORMAL	5,607.0	5.20	71.60	5,597.34	87.16	290.99	303.65	1.09	0.21	-12.11	275.31
	NORMAL	5,701.0	4.70	67.10	5,690.99	90.00	298.58	311.75	0.67	-0.53	-4.79	215.60
	NORMAL	5,795.0	4.30	70.40	5,784.70	92.68	305.45	319.11	0.51	-0.43	3.51	148.72
	NORMAL	5,889.0	4.40	61.70	5,878.43	95.57	311.94	326.19	0.71	0.11	-9.26	274.26
	NORMAL	5,984.0	3.90	63.30	5,973.18	98.75	318.04	332.97	0.54	-0.53	1.68	167.76
12/24/2010	NORMAL	6,078.0	4.30	60.40	6,066.94	101.93	323.96	339.59	0.48	0.43	-3.09	331.15
	NORMAL	6,171.0	3.30	66.90	6,159.73	104.70	329.45	345.67	1.17	-1.08	6.99	159.91

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (%/100ft)	Bulld (%/100ft)	Turn (%/100ft)	TFace (°)
12/24/2010	NORMAL	6,265.0	3.60	65.00	6,253.56	107.01	334.61	351.30	0.34	0.32	-2.02	338.19
	NORMAL	6,359.0	3.30	67.90	6,347.39	109.28	339.79	356.93	0.37	-0.32	3.09	151.25
	NORMAL	6,454.0	2.90	74.10	6,442.25	110.96	344.64	362.06	0.55	-0.42	6.53	143.10
	NORMAL	6,547.0	3.10	49.00	6,535.13	113.26	348.80	366.72	1.42	0.22	-26.99	265.99
	NORMAL	6,642.0	3.20	66.60	6,629.99	116.00	353.17	371.73	1.02	0.11	18.53	92.93
	NORMAL	6,736.0	2.50	70.30	6,723.87	117.73	357.51	376.40	0.77	-0.74	3.94	167.12
	NORMAL	6,830.0	1.90	73.90	6,817.80	118.85	360.94	380.00	0.65	-0.64	3.83	168.82
	NORMAL	6,925.0	1.70	70.60	6,912.75	119.76	363.78	382.99	0.24	-0.21	-3.47	205.75
	NORMAL	7,019.0	1.30	77.60	7,006.72	120.45	366.14	385.44	0.47	-0.43	7.45	158.86
	NORMAL	7,113.0	0.70	94.70	7,100.71	120.63	367.75	387.03	0.71	-0.64	18.19	161.93
	NORMAL	7,208.0	0.40	123.40	7,195.70	120.40	368.61	387.77	0.42	-0.32	30.21	151.18
	NORMAL	7,301.0	0.50	191.20	7,288.70	119.83	368.80	387.77	0.55	0.11	72.90	114.51
	NORMAL	7,395.0	0.80	218.40	7,382.69	118.91	368.31	387.02	0.45	0.32	28.94	59.95
	NORMAL	7,489.0	1.00	213.20	7,476.68	117.71	367.45	385.83	0.23	0.21	-5.53	335.17
	NORMAL	7,583.0	0.40	228.70	7,570.68	116.81	366.76	384.89	0.66	-0.64	16.49	170.13
12/25/2010	NORMAL	7,679.0	0.20	44.00	7,666.67	116.70	366.62	384.73	0.62	-0.21	182.60	178.43
	NORMAL	7,773.0	0.00	280.60	7,760.67	116.82	366.74	384.88	0.21	-0.21	0.00	180.00
	NORMAL	7,867.0	0.50	257.30	7,854.67	116.73	366.34	384.47	0.53	0.53	0.00	257.30
	NORMAL	7,961.0	1.30	256.40	7,948.66	116.39	364.90	383.00	0.85	0.85	-0.96	358.54
	NORMAL	8,054.0	0.70	280.60	8,041.65	116.25	363.32	381.45	0.78	-0.65	26.02	156.55
	NORMAL	8,148.0	1.20	253.60	8,135.63	116.08	361.81	379.96	0.70	0.53	-28.72	304.13
	NORMAL	8,242.0	1.50	258.40	8,229.61	115.55	359.66	377.75	0.34	0.32	5.11	23.06
	NORMAL	8,336.0	1.20	256.70	8,323.58	115.08	357.49	375.55	0.32	-0.32	-1.81	186.76
	NORMAL	8,431.0	1.60	259.20	8,418.55	114.60	355.22	373.25	0.43	0.42	2.63	9.93
	NORMAL	8,525.0	0.70	139.70	8,512.54	113.92	354.31	372.16	2.17	-0.96	-127.13	197.40
	NORMAL	8,621.0	0.70	145.40	8,608.53	112.99	355.02	372.55	0.07	0.00	5.94	92.85
	NORMAL	8,714.0	1.60	86.70	8,701.52	112.59	356.64	373.96	1.48	0.97	-63.12	275.49
	NORMAL	8,808.0	1.30	101.80	8,795.49	112.45	358.99	376.15	0.51	-0.32	16.06	135.52
12/26/2010	NORMAL	8,902.0	1.00	120.90	8,889.47	111.81	360.74	377.61	0.51	-0.32	20.32	137.34
	NORMAL	8,997.0	1.10	154.50	8,984.45	110.56	361.84	378.27	0.65	0.11	35.37	97.83
	NORMAL	9,091.0	0.40	223.10	9,078.45	109.51	362.01	378.10	1.09	-0.74	72.98	158.68
	NORMAL	9,187.0	0.40	320.10	9,174.44	109.52	361.56	377.68	0.62	0.00	101.04	138.50
	NORMAL	9,278.0	1.00	316.90	9,265.44	110.34	360.82	377.23	0.66	0.66	-3.52	354.67
12/27/2010	NORMAL	9,368.0	1.10	299.30	9,355.42	111.34	359.53	376.31	0.37	0.11	-19.56	278.30
	NORMAL	9,462.0	2.10	308.60	9,449.38	112.86	357.39	374.76	1.10	1.06	9.89	19.24
	NORMAL	9,556.0	2.40	303.00	9,543.31	115.00	354.40	372.59	0.40	0.32	-5.96	320.94
	NORMAL	9,649.0	1.80	325.80	9,636.25	117.27	351.94	370.96	1.09	-0.65	24.52	136.72
	NORMAL	9,742.0	3.10	318.90	9,729.16	120.37	349.47	369.58	1.43	1.40	-7.42	343.75
	NORMAL	9,835.0	3.10	315.40	9,822.03	124.06	346.05	367.49	0.20	0.00	-3.76	268.25
	NORMAL	9,928.0	1.40	324.30	9,914.95	126.77	343.62	366.03	1.86	-1.83	9.57	172.81
	NORMAL	10,021.0	1.10	49.10	10,007.94	128.28	343.63	366.51	1.83	-0.32	91.18	139.88
	NORMAL	10,114.0	0.90	345.80	10,100.93	129.57	344.13	367.39	1.14	-0.22	-68.06	229.14
12/28/2010	NORMAL	10,207.0	1.90	299.30	10,193.90	131.04	342.60	366.40	1.55	1.08	-50.00	286.49
	NORMAL	10,300.0	1.50	292.00	10,286.86	132.25	340.13	364.42	0.49	-0.43	-7.85	204.82
	NORMAL	10,394.0	0.10	206.50	10,380.85	132.63	338.95	363.43	1.59	-1.49	-90.96	183.82
	NORMAL	10,487.0	0.40	330.80	10,473.85	132.84	338.76	363.31	0.50	0.32	133.66	134.56
	NORMAL	10,580.0	1.90	53.70	10,566.83	134.04	339.84	364.71	2.04	1.61	89.14	95.00
	NORMAL	10,673.0	1.10	41.70	10,659.80	135.62	341.68	366.95	0.92	-0.86	-12.90	195.51
	NORMAL	10,766.0	1.10	71.70	10,752.78	136.57	343.12	368.61	0.61	0.00	32.26	105.00
	NORMAL	10,859.0	0.40	354.60	10,845.77	137.17	343.94	369.58	1.16	-0.75	-82.90	201.10
	NORMAL	10,952.0	0.40	292.10	10,938.77	137.62	343.61	369.40	0.45	0.00	-67.20	238.75
	NORMAL	11,056.0	1.30	240.70	11,042.76	137.17	342.24	367.97	1.05	0.87	-49.42	292.03
12/29/2010	NORMAL	11,123.0	1.50	240.70	11,109.74	136.37	340.81	366.36	0.30	0.30	0.00	0.00