

## 1 General

### 1.1 Customer Information

Company	PICEANCE HL
Representative	Eric Kolstad
Address	1515 Arapahoe St., Suite 1000 Denver, CO 80202

### 1.2 Well/Wellbore Information

Well	RG 611-14-298	Wellbore No.	00
Wellbore Legal Name	RG 611-14-298	Common Wellbore Name	RG 611-14-298
Project	RG 14-02S-098W	Site	RG 12-14-298 Pad
Vertical Section Azimuth	32.88 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	2/19/2014	UWI	RG 611-14-298
Active datum	KB @6,581.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	2/19/2014	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

74801

Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
2/19/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/19/2014	NORMAL	142.0	0.62	346.82	142.00	0.75	-0.18	0.53	0.44	0.44	0.00	346.82
	NORMAL	236.0	2.11	28.92	235.97	2.76	0.55	2.61	1.81	1.59	44.79	56.23
	NORMAL	326.0	3.78	39.64	325.85	6.49	3.24	7.21	1.95	1.86	11.91	23.66
	NORMAL	399.0	4.49	44.12	398.66	10.40	6.76	12.40	1.07	0.97	6.14	26.71
	NORMAL	491.0	3.85	50.57	490.42	14.94	11.66	18.88	0.86	-0.70	7.01	146.95
	NORMAL	583.0	2.65	43.38	582.27	18.45	15.50	23.91	1.38	-1.30	-7.82	195.20
	NORMAL	675.0	2.31	36.36	674.18	21.49	18.06	27.85	0.49	-0.37	-7.63	218.31
	NORMAL	768.0	3.07	19.37	767.08	25.35	20.00	32.15	1.18	0.82	-18.27	304.93
	NORMAL	860.0	4.25	24.88	858.89	30.77	22.25	37.92	1.34	1.28	5.99	19.36
	NORMAL	952.0	4.71	29.97	950.61	37.13	25.57	45.07	0.66	0.50	5.53	43.39
	NORMAL	1,048.0	4.32	47.35	1,046.32	43.00	30.20	52.50	1.48	-0.41	18.10	114.46
	NORMAL	1,142.0	2.91	42.51	1,140.13	47.15	34.42	58.29	1.53	-1.50	-5.15	189.80
2/20/2014	NORMAL	1,174.0	2.48	41.21	1,172.09	48.27	35.42	59.77	1.36	-1.34	-4.06	187.44
	NORMAL	1,269.0	2.13	20.66	1,267.02	51.47	37.40	63.53	0.94	-0.37	-21.63	237.00
	NORMAL	1,364.0	3.14	17.29	1,361.91	55.61	38.80	67.76	1.08	1.06	-3.55	349.59
	NORMAL	1,458.0	4.76	31.57	1,455.69	61.39	41.60	74.14	2.00	1.72	15.19	38.52
	NORMAL	1,553.0	5.06	38.34	1,550.34	68.03	46.27	82.25	0.69	0.32	7.13	66.03
	NORMAL	1,648.0	5.55	39.48	1,644.94	74.87	51.79	90.99	0.53	0.52	1.20	12.71
	NORMAL	1,743.0	5.48	39.40	1,739.50	81.92	57.59	100.06	0.07	-0.07	-0.08	186.23
	NORMAL	1,838.0	5.36	40.49	1,834.07	88.80	63.35	108.96	0.17	-0.13	1.15	139.91

## 2.1.2 Survey Stations (Continued)

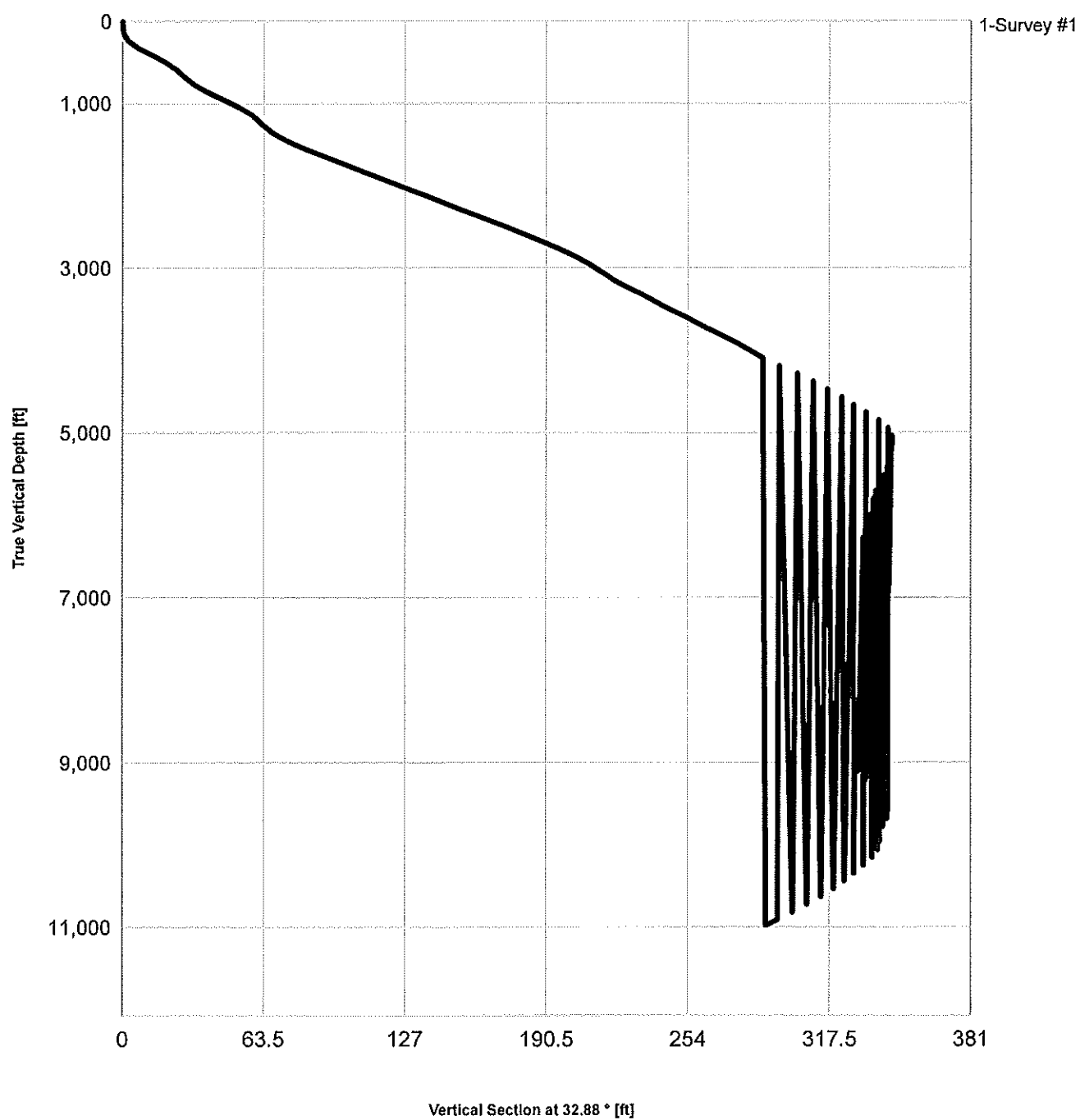
Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
2/20/2014	NORMAL	1,933.0	5.47	32.10	1,928.65	96.01	68.63	117.89	0.84	0.12	-8.83	273.72
	NORMAL	2,028.0	5.62	28.13	2,023.21	103.94	73.23	127.05	0.43	0.16	-4.18	289.37
	NORMAL	2,122.0	5.55	34.89	2,116.76	111.73	78.00	136.18	0.70	-0.07	7.19	99.43
	NORMAL	2,217.0	5.12	31.25	2,211.35	119.12	82.83	145.01	0.58	-0.45	-3.83	216.40
	NORMAL	2,312.0	5.53	33.47	2,305.94	126.57	87.55	153.82	0.48	0.43	2.34	27.79
	NORMAL	2,406.0	5.84	46.87	2,399.48	133.62	93.54	162.99	1.45	0.33	14.26	83.58
	NORMAL	2,501.0	5.31	40.40	2,494.03	140.27	99.92	172.04	0.86	-0.56	-6.81	226.67
	NORMAL	2,596.0	5.43	52.76	2,588.62	146.34	106.35	180.63	1.22	0.13	13.01	90.25
	NORMAL	2,691.0	5.41	49.95	2,683.19	151.94	113.35	189.14	0.28	-0.02	-2.96	264.29
	NORMAL	2,785.0	4.92	49.10	2,776.81	157.43	119.79	197.24	0.53	-0.52	-0.90	188.45
	NORMAL	2,880.0	4.27	48.30	2,871.51	162.45	125.51	204.56	0.69	-0.68	-0.84	185.23
	NORMAL	2,961.0	3.72	41.15	2,952.31	166.43	129.49	210.07	0.91	-0.68	-8.83	218.64
3/18/2014	NORMAL	3,064.0	2.81	42.74	3,055.14	170.80	133.40	215.86	0.89	-0.88	1.54	175.11
	NORMAL	3,158.0	3.69	23.67	3,148.99	175.27	136.18	221.12	1.47	0.94	-20.29	299.36
	NORMAL	3,253.0	4.22	24.72	3,243.77	181.24	138.87	227.60	0.56	0.56	1.11	8.30
	NORMAL	3,348.0	4.66	43.62	3,338.49	187.21	143.00	234.85	1.60	0.46	19.89	82.83
	NORMAL	3,443.0	3.18	37.38	3,433.26	192.10	147.26	241.27	1.62	-1.56	-6.57	192.98
	NORMAL	3,537.0	5.10	48.54	3,527.01	196.94	151.97	247.89	2.21	2.04	11.87	28.40
	NORMAL	3,632.0	3.87	42.48	3,621.72	202.10	157.30	255.12	1.39	-1.29	-6.38	198.07
	NORMAL	3,726.0	3.98	43.40	3,715.50	206.81	161.69	261.45	0.13	0.12	0.98	30.25
	NORMAL	3,821.0	4.86	41.20	3,810.22	212.23	166.60	268.68	0.94	0.93	-2.32	348.00
	NORMAL	3,916.0	3.69	38.26	3,904.95	217.66	171.15	275.70	1.25	-1.23	-3.09	189.15
	NORMAL	4,011.0	3.52	33.84	3,999.77	222.48	174.66	281.66	0.34	-0.18	-4.65	236.35
	NORMAL	4,106.0	3.78	31.84	4,094.57	227.56	177.94	287.71	0.30	0.27	-2.11	332.91
	NORMAL	4,200.0	5.28	27.37	4,188.28	234.04	181.56	295.11	1.64	1.60	-4.76	344.52
3/19/2014	NORMAL	4,294.0	4.69	28.46	4,281.92	241.26	185.38	303.25	0.64	-0.63	1.16	171.42
	NORMAL	4,389.0	3.87	30.08	4,376.66	247.44	188.84	310.32	0.87	-0.86	1.71	172.42
	NORMAL	4,484.0	4.13	20.50	4,471.43	253.42	191.64	316.87	0.75	0.27	-10.08	286.44
	NORMAL	4,579.0	3.69	21.56	4,566.21	259.47	193.97	323.21	0.47	-0.46	1.12	171.20
	NORMAL	4,674.0	2.81	16.46	4,661.05	264.55	195.75	328.44	0.97	-0.93	-5.37	195.65
	NORMAL	4,769.0	4.04	22.09	4,755.88	269.88	197.67	333.96	1.34	1.29	5.93	18.12
	NORMAL	4,863.0	3.25	16.02	4,849.69	275.51	199.65	339.76	0.93	-0.84	-6.46	203.03
	NORMAL	4,958.0	2.11	2.13	4,944.59	279.85	200.46	343.84	1.37	-1.20	-14.62	202.85
	NORMAL	5,053.0	1.23	318.45	5,039.55	282.36	199.85	345.62	1.57	-0.93	-45.98	214.84
	NORMAL	5,148.0	1.32	298.85	5,134.53	283.65	198.21	345.82	0.47	0.09	-20.63	271.75
	NORMAL	5,242.0	1.32	270.20	5,228.50	284.18	196.18	345.16	0.69	0.00	-30.48	255.68
	NORMAL	5,337.0	0.35	204.37	5,323.49	283.91	194.97	344.28	1.28	-1.02	-69.29	195.18
	NORMAL	5,432.0	0.79	211.49	5,418.49	283.09	194.50	343.34	0.47	0.46	7.49	12.72
	NORMAL	5,527.0	0.88	197.43	5,513.48	281.84	193.94	341.98	0.23	0.09	-14.80	286.58
	NORMAL	5,621.0	1.13	216.28	5,607.46	280.40	193.18	340.36	0.44	0.27	20.05	62.58
	NORMAL	5,716.0	1.30	218.75	5,702.44	278.81	191.95	338.35	0.19	0.18	2.60	18.36
	NORMAL	5,811.0	0.18	144.43	5,797.43	277.84	191.36	337.22	1.33	-1.18	-78.23	187.89
	NORMAL	5,905.0	0.35	145.31	5,891.43	277.49	191.61	337.06	0.18	0.18	0.94	1.81
	NORMAL	6,000.0	0.62	206.66	5,986.43	276.79	191.55	336.44	0.58	0.28	64.58	95.54
	NORMAL	6,095.0	0.79	187.94	6,081.42	275.68	191.22	335.33	0.30	0.18	-19.71	296.83
	NORMAL	6,189.0	1.23	208.85	6,175.41	274.16	190.65	333.74	0.60	0.47	22.24	50.72
3/20/2014	NORMAL	6,284.0	0.35	100.05	6,270.40	273.21	190.44	332.83	1.46	-0.93	-114.53	193.86
	NORMAL	6,378.0	0.79	64.80	6,364.40	273.44	191.31	333.50	0.58	0.47	-37.50	302.92
	NORMAL	6,473.0	2.29	33.16	6,459.36	275.31	192.94	335.95	1.76	1.58	-33.31	314.00
	NORMAL	6,568.0	1.85	24.81	6,554.30	278.29	194.62	339.37	0.56	-0.46	-8.79	210.30
	NORMAL	6,662.0	1.23	24.28	6,648.27	280.58	195.68	341.87	0.66	-0.66	-0.56	181.05
	NORMAL	6,757.0	0.79	17.34	6,743.25	282.14	196.29	343.50	0.48	-0.46	-7.31	192.09
	NORMAL	6,852.0	0.70	319.42	6,838.24	283.20	196.11	344.30	0.76	-0.09	-60.97	234.81
	NORMAL	6,946.0	0.97	273.10	6,932.24	283.68	194.94	344.07	0.75	0.29	-49.28	267.55
	NORMAL	7,041.0	0.53	324.17	7,027.23	284.08	193.88	343.83	0.80	-0.46	53.76	147.08
	NORMAL	7,136.0	0.79	272.84	7,122.22	284.47	192.97	343.66	0.65	0.27	-54.03	266.63

## 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
3/20/2014	NORMAL	7,231.0	0.62	88.97	7,217.22	284.51	192.83	343.62	1.48	-0.18	185.40	178.30
	NORMAL	7,326.0	0.62	134.41	7,312.22	284.46	193.71	343.80	0.50	0.00	47.83	112.72
	NORMAL	7,420.0	1.23	190.84	7,406.20	282.82	193.88	342.77	1.09	0.65	60.03	86.64
	NORMAL	7,515.0	1.93	208.77	7,501.17	280.41	192.92	340.23	0.89	0.74	18.87	44.42
	NORMAL	7,610.0	1.23	208.77	7,596.13	278.12	191.66	337.61	0.74	-0.74	0.00	180.00
	NORMAL	7,705.0	0.18	50.83	7,691.13	277.32	191.28	336.74	1.47	-1.11	-166.25	182.77
	NORMAL	7,799.0	0.09	54.87	7,785.13	277.45	191.46	336.95	0.10	-0.10	4.30	175.98
3/21/2014	NORMAL	7,894.0	1.06	98.47	7,880.12	277.37	192.39	337.38	1.05	1.02	45.89	47.17
	NORMAL	7,989.0	0.62	101.28	7,975.11	277.14	193.76	337.93	0.47	-0.46	2.96	176.06
	NORMAL	8,083.0	0.70	45.82	8,069.11	277.44	194.67	338.68	0.66	0.09	-59.00	248.85
	NORMAL	8,178.0	0.62	20.68	8,164.10	278.32	195.27	339.75	0.31	-0.08	-26.46	242.22
	NORMAL	8,273.0	0.62	259.48	8,259.10	278.71	194.95	339.90	1.14	0.00	-127.58	209.40
	NORMAL	8,368.0	1.06	249.55	8,354.09	278.31	193.62	338.84	0.49	0.46	-10.45	336.69
	NORMAL	8,462.0	0.44	187.58	8,448.08	277.65	192.76	337.81	1.00	-0.66	-65.93	204.48
	NORMAL	8,557.0	1.14	212.19	8,543.07	276.49	192.20	336.54	0.80	0.74	25.91	38.52
	NORMAL	8,651.0	0.97	239.09	8,637.05	275.29	191.02	334.89	0.55	-0.18	28.62	122.07
	NORMAL	8,746.0	0.62	326.28	8,732.05	275.30	190.05	334.37	1.18	-0.37	91.78	146.61
	NORMAL	8,841.0	1.85	234.17	8,827.03	274.83	188.52	333.15	2.08	1.29	-96.96	249.59
3/22/2014	NORMAL	8,936.0	2.01	225.92	8,921.98	272.77	186.08	330.10	0.34	0.17	-8.68	295.77
	NORMAL	9,030.0	0.54	343.21	9,015.96	272.05	184.77	328.78	2.46	-1.56	124.78	168.00
	NORMAL	9,125.0	1.45	35.37	9,110.95	273.46	185.33	330.27	1.26	0.96	54.91	73.02
	NORMAL	9,220.0	2.98	48.41	9,205.87	276.08	187.88	333.85	1.69	1.61	13.73	24.82
	NORMAL	9,315.0	1.84	50.75	9,300.79	278.68	190.90	337.68	1.20	-1.20	2.46	176.24
	NORMAL	9,409.0	1.31	60.40	9,394.75	280.17	193.01	340.07	0.63	-0.56	10.27	158.18
	NORMAL	9,504.0	1.47	47.93	9,489.72	281.52	194.86	342.21	0.36	0.17	-13.13	291.55
	NORMAL	9,599.0	0.32	38.97	9,584.71	282.54	195.93	343.65	1.22	-1.21	-9.43	182.47
	NORMAL	9,693.0	0.77	247.98	9,678.71	282.51	195.51	343.39	1.13	0.48	-160.63	200.60
	NORMAL	9,788.0	1.67	225.82	9,773.69	281.31	193.92	341.52	1.05	0.95	-23.33	320.96
	NORMAL	9,883.0	0.26	271.88	9,868.67	280.35	192.71	340.06	1.58	-1.48	48.48	172.84
	NORMAL	9,977.0	0.05	177.15	9,962.67	280.32	192.50	339.92	0.29	-0.22	-100.78	190.68
	NORMAL	10,072.0	1.26	258.85	10,057.66	280.07	191.48	339.16	1.32	1.27	86.00	83.96
	NORMAL	10,166.0	2.25	233.98	10,151.62	278.79	188.97	336.72	1.31	1.05	-26.46	309.56
	NORMAL	10,261.0	2.77	236.14	10,246.53	276.41	185.56	332.87	0.56	0.55	2.27	11.39
	NORMAL	10,356.0	2.72	229.95	10,341.42	273.68	181.93	328.61	0.32	-0.05	-6.51	257.33
3/23/2014	NORMAL	10,450.0	2.77	228.73	10,435.31	270.75	178.51	324.29	0.08	0.05	-1.31	309.71
	NORMAL	10,545.0	3.31	226.23	10,530.18	267.34	174.81	319.41	0.59	0.57	-2.63	344.95
	NORMAL	10,640.0	3.68	229.58	10,625.00	263.46	170.51	313.82	0.44	0.39	3.53	30.58
3/24/2014	NORMAL	10,735.0	4.18	228.76	10,719.78	259.21	165.58	307.57	0.53	0.53	-0.86	353.18
	NORMAL	10,830.0	4.24	235.86	10,814.52	254.95	160.07	301.01	0.55	0.06	7.47	86.98
	NORMAL	10,924.0	4.60	232.24	10,908.24	250.69	154.21	294.25	0.48	0.38	-3.85	320.41
	NORMAL	10,991.0	4.60	232.24	10,975.03	247.40	149.97	289.19	0.00	0.00	0.00	0.00

### 3 Charts

#### 3.1 Vertical Section View



## 3.2 Plan View

