

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	SP 43-14	Wellbore No.	
Well Name	SP 43-14	Common Name	SP 43-14
Project	PA 13-07S-095W	Site	SP 13-13 Pad
Vertical Section Azimuth	9.49 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	9/5/2011	UWI	SP 43-14
Active Datum	KB @8,010.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	9/5/2011	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 (°)
9/5/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/5/2011	NORMAL	73.0	0.53	316.14	73.00	0.24	-0.23	0.20	0.73	0.73	0.00	316.14
	NORMAL	165.0	3.08	332.58	164.95	2.74	-1.67	2.43	2.80	2.77	17.87	19.78
	NORMAL	255.0	5.63	315.18	254.68	8.02	-5.89	6.94	3.16	2.83	-19.33	323.75
	NORMAL	347.0	7.65	310.96	346.06	15.24	-13.70	12.77	2.26	2.20	-4.59	344.32
	NORMAL	425.0	8.34	305.92	423.30	21.96	-22.20	18.00	1.26	0.88	-6.46	312.03
	NORMAL	516.0	8.60	301.53	513.31	29.39	-33.35	23.49	0.77	0.29	-4.82	289.72
	NORMAL	607.0	9.29	303.90	603.20	37.05	-45.24	29.08	0.86	0.76	2.60	29.28
	NORMAL	698.0	9.38	302.50	693.00	45.13	-57.59	35.01	0.27	0.10	-1.54	290.93
	NORMAL	789.0	9.67	312.38	782.75	54.26	-69.49	42.06	1.82	0.32	10.86	84.84
	NORMAL	879.0	9.68	312.69	871.47	64.49	-80.64	50.31	0.06	0.01	0.34	79.29
	NORMAL	970.0	10.15	308.86	961.11	74.71	-92.51	58.43	0.89	0.52	-4.21	303.58
	NORMAL	1,061.0	9.98	308.82	1,050.71	84.68	-104.89	66.23	0.19	-0.19	-0.04	182.34
	NORMAL	1,155.0	9.25	304.22	1,143.39	94.04	-117.49	73.38	1.13	-0.78	-4.89	224.21
	NORMAL	1,250.0	9.90	303.43	1,237.07	102.83	-130.62	79.89	0.70	0.68	-0.83	348.18
	NORMAL	1,344.0	8.86	304.14	1,329.81	111.34	-143.35	86.19	1.11	-1.11	0.76	174.00
	NORMAL	1,439.0	9.02	308.72	1,423.66	120.11	-155.22	92.87	0.77	0.17	4.82	79.60
	NORMAL	1,533.0	9.65	309.07	1,516.41	129.68	-167.08	100.36	0.67	0.67	0.37	5.32
	NORMAL	1,595.0	9.65	309.07	1,577.53	136.23	-175.15	105.49	0.00	0.00	0.00	0.00
9/7/2011	NORMAL	1,630.0	10.38	311.59	1,612.00	140.18	-179.79	108.61	2.43	2.09	7.20	32.22
	NORMAL	1,724.0	10.21	311.27	1,704.49	151.29	-192.38	117.50	0.19	-0.18	-0.34	198.44

2.1.2 Survey Stations (Continued)

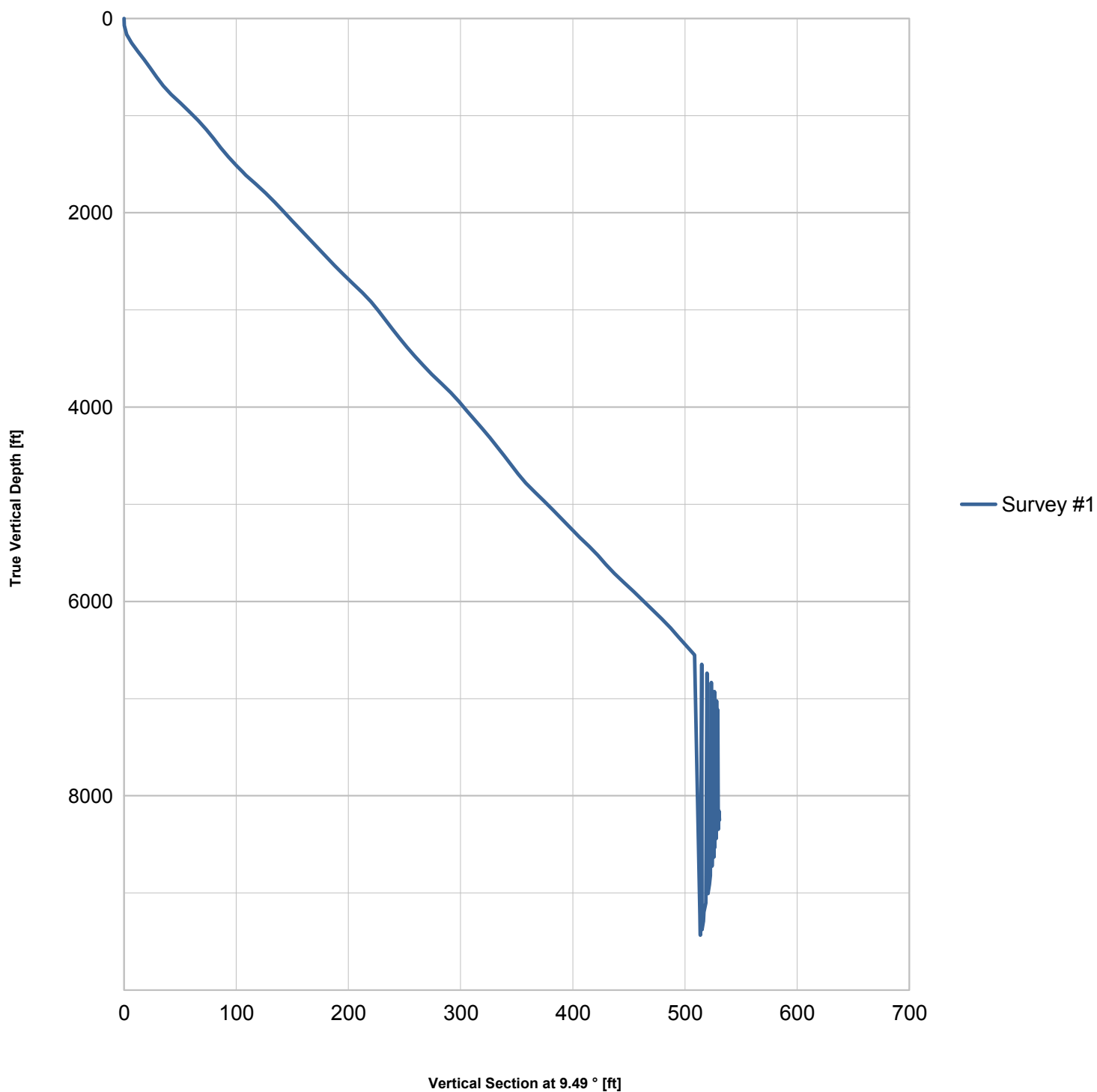
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
9/7/2011	NORMAL	1,819.0	9.85	311.33	1,798.04	162.21	-204.81	126.22	0.38	-0.38	0.06	178.37
	NORMAL	1,913.0	9.73	308.88	1,890.67	172.51	-217.03	134.36	0.46	-0.13	-2.61	252.73
	NORMAL	2,008.0	9.41	307.63	1,984.35	182.29	-229.43	141.97	0.40	-0.34	-1.32	212.39
	NORMAL	2,102.0	9.82	308.13	2,077.02	191.93	-241.83	149.43	0.45	0.44	0.53	11.76
	NORMAL	2,197.0	9.73	307.99	2,170.65	201.87	-254.53	157.15	0.10	-0.09	-0.15	194.73
	NORMAL	2,291.0	9.67	308.69	2,263.30	211.70	-266.95	164.79	0.14	-0.06	0.74	117.31
	NORMAL	2,386.0	9.62	307.77	2,356.96	221.55	-279.45	172.44	0.17	-0.05	-0.97	251.57
	NORMAL	2,480.0	9.69	307.94	2,449.63	231.22	-291.90	179.93	0.08	0.07	0.18	22.25
	NORMAL	2,575.0	9.75	307.85	2,543.26	241.07	-304.55	187.56	0.07	0.06	-0.09	345.74
9/8/2011	NORMAL	2,670.0	10.39	308.92	2,636.80	251.39	-317.57	195.59	0.70	0.67	1.13	16.82
	NORMAL	2,764.0	10.75	308.92	2,729.20	262.22	-330.99	204.06	0.38	0.38	0.00	0.00
	NORMAL	2,859.0	10.39	307.80	2,822.59	273.04	-344.65	212.48	0.44	-0.38	-1.18	209.16
	NORMAL	2,953.0	10.04	305.57	2,915.10	283.00	-358.01	220.10	0.56	-0.37	-2.37	227.40
	NORMAL	3,048.0	8.32	306.42	3,008.88	291.90	-370.28	226.86	1.82	-1.81	0.89	175.91
	NORMAL	3,142.0	8.17	306.96	3,101.91	299.95	-381.09	233.02	0.18	-0.16	0.57	152.96
	NORMAL	3,237.0	7.91	307.01	3,195.98	307.95	-391.70	239.15	0.27	-0.27	0.05	178.48
	NORMAL	3,331.0	8.57	308.58	3,289.01	316.21	-402.34	245.54	0.74	0.70	1.67	19.60
	NORMAL	3,426.0	8.19	308.40	3,382.99	324.83	-413.18	252.26	0.40	-0.40	-0.19	183.86
	NORMAL	3,520.0	9.06	309.93	3,475.93	333.74	-424.10	259.24	0.96	0.93	1.63	15.53
	NORMAL	3,615.0	8.79	309.46	3,569.78	343.15	-435.44	266.66	0.29	-0.28	-0.49	194.88
	NORMAL	3,709.0	10.02	309.48	3,662.51	352.91	-447.30	274.34	1.31	1.31	0.02	0.16
	NORMAL	3,804.0	10.10	310.49	3,756.05	363.58	-460.01	282.76	0.20	0.08	1.06	66.11
	NORMAL	3,898.0	10.10	310.23	3,848.60	374.25	-472.57	291.21	0.05	0.00	-0.28	269.87
	NORMAL	3,993.0	9.55	303.25	3,942.20	383.95	-485.53	298.65	1.38	-0.58	-7.35	241.80
	NORMAL	4,087.0	9.68	305.37	4,034.88	392.80	-498.49	305.24	0.40	0.14	2.26	70.89
	NORMAL	4,182.0	9.82	304.69	4,128.51	402.04	-511.66	312.17	0.19	0.15	-0.72	320.23
	NORMAL	4,276.0	10.22	305.37	4,221.08	411.43	-525.06	319.23	0.44	0.43	0.72	16.81
	NORMAL	4,371.0	9.37	304.33	4,314.69	420.67	-538.31	326.16	0.91	-0.89	-1.09	191.25
	NORMAL	4,465.0	9.28	304.24	4,407.45	429.25	-550.90	332.54	0.10	-0.10	-0.10	189.16
	NORMAL	4,560.0	9.02	304.56	4,501.24	437.78	-563.36	338.90	0.28	-0.27	0.34	169.08
9/9/2011	NORMAL	4,654.0	8.89	305.21	4,594.10	446.15	-575.37	345.18	0.18	-0.14	0.69	142.43
	NORMAL	4,749.0	8.63	304.03	4,687.99	454.37	-587.27	351.33	0.33	-0.27	-1.24	214.07
	NORMAL	4,843.0	9.60	309.37	4,780.80	463.29	-599.18	358.16	1.37	1.03	5.68	43.75
	NORMAL	4,938.0	9.76	310.27	4,874.45	473.52	-611.44	366.23	0.23	0.17	0.95	43.85
	NORMAL	5,033.0	9.95	309.26	4,968.05	483.92	-623.94	374.42	0.27	0.20	-1.06	317.20
	NORMAL	5,127.0	10.27	308.48	5,060.59	494.27	-636.79	382.52	0.37	0.34	-0.83	336.45
	NORMAL	5,222.0	9.76	307.55	5,154.14	504.45	-649.80	390.41	0.56	-0.54	-0.98	197.14
	NORMAL	5,316.0	9.25	311.89	5,246.85	514.35	-661.75	398.20	0.94	-0.54	4.62	127.56
	NORMAL	5,411.0	9.15	311.81	5,340.63	524.48	-673.06	406.33	0.11	-0.11	-0.08	187.25
	NORMAL	5,505.0	9.58	311.50	5,433.38	534.65	-684.49	414.48	0.46	0.46	-0.33	353.16
	NORMAL	5,600.0	9.67	307.63	5,527.04	544.76	-696.73	422.43	0.69	0.09	-4.07	276.01
	NORMAL	5,694.0	9.50	305.61	5,619.73	554.10	-709.29	429.57	0.40	-0.18	-2.15	242.19
9/10/2011	NORMAL	5,789.0	9.93	309.97	5,713.37	563.92	-721.94	437.17	0.90	0.45	4.59	61.86
	NORMAL	5,883.0	10.37	310.22	5,805.89	574.59	-734.61	445.61	0.47	0.47	0.27	5.84
	NORMAL	5,978.0	10.55	309.66	5,899.32	585.66	-747.83	454.35	0.22	0.19	-0.59	330.27
	NORMAL	6,072.0	10.52	306.88	5,991.73	596.31	-761.32	462.62	0.54	-0.03	-2.96	265.26
	NORMAL	6,167.0	9.58	310.80	6,085.27	606.68	-774.24	470.72	1.22	-0.99	4.13	145.87
	NORMAL	6,261.0	9.80	312.65	6,177.93	617.21	-786.05	479.16	0.41	0.23	1.97	55.67
9/11/2011	NORMAL	6,356.0	8.53	309.39	6,271.72	627.16	-797.44	487.09	1.44	-1.34	-3.43	200.63
	NORMAL	6,450.0	8.79	307.90	6,364.65	635.99	-808.50	493.99	0.37	0.28	-1.59	318.47
	NORMAL	6,545.0	9.08	309.75	6,458.49	645.24	-819.99	501.22	0.43	0.31	1.95	45.65
	NORMAL	6,639.0	8.48	311.08	6,551.39	654.54	-830.92	508.59	0.67	-0.64	1.41	161.96
	NORMAL	6,734.0	6.69	308.16	6,645.56	662.56	-840.55	514.91	1.93	-1.88	-3.07	190.71
	NORMAL	6,828.0	4.82	311.77	6,739.08	668.58	-847.80	519.65	2.03	-1.99	3.84	170.84
9/12/2011	NORMAL	6,923.0	3.61	316.01	6,833.82	673.39	-852.85	523.56	1.31	-1.27	4.46	167.67
	NORMAL	7,017.0	2.40	309.80	6,927.69	676.78	-856.42	526.31	1.33	-1.29	-6.61	191.97
	NORMAL	7,112.0	2.01	312.87	7,022.62	679.18	-859.17	528.23	0.43	-0.41	3.23	164.68

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 (°)
9/12/2011	NORMAL	7,206.0	0.30	319.86	7,116.60	680.49	-860.54	529.30	1.82	-1.82	7.44	178.78
	NORMAL	7,301.0	0.24	211.57	7,211.60	680.52	-860.80	529.28	0.46	-0.06	-113.99	211.26
	NORMAL	7,395.0	0.50	260.29	7,305.60	680.28	-861.31	528.96	0.41	0.28	51.83	76.55
	NORMAL	7,490.0	0.45	170.42	7,400.59	679.84	-861.65	528.47	0.71	-0.05	-94.60	222.05
	NORMAL	7,584.0	0.58	166.92	7,494.59	679.01	-861.49	527.68	0.14	0.14	-3.72	344.64
9/13/2011	NORMAL	7,679.0	0.48	154.00	7,589.59	678.19	-861.20	526.91	0.16	-0.11	-13.60	223.74
	NORMAL	7,773.0	0.71	176.33	7,683.58	677.25	-860.99	526.03	0.34	0.24	23.76	56.76
	NORMAL	7,868.0	0.20	297.12	7,778.58	676.74	-861.10	525.50	0.87	-0.54	127.15	168.06
	NORMAL	7,962.0	0.88	334.70	7,872.57	677.47	-861.56	526.15	0.78	0.72	39.98	47.17
9/14/2011	NORMAL	8,057.0	1.59	323.68	7,967.55	679.19	-862.65	527.66	0.78	0.75	-11.60	335.94
	NORMAL	8,151.0	0.72	325.32	8,061.53	680.73	-863.76	529.00	0.93	-0.93	1.74	178.64
	NORMAL	8,246.0	1.14	334.75	8,156.52	682.07	-864.50	530.20	0.47	0.44	9.93	24.78
	NORMAL	8,340.0	0.67	119.52	8,250.51	682.65	-864.42	530.78	1.84	-0.50	154.01	167.10
	NORMAL	8,435.0	1.48	144.05	8,345.50	681.38	-863.22	529.73	0.96	0.85	25.82	42.25
	NORMAL	8,530.0	1.37	192.36	8,440.47	679.28	-862.74	527.74	1.23	-0.12	50.85	119.07
	NORMAL	8,624.0	0.56	261.37	8,534.46	678.11	-863.44	526.47	1.36	-0.86	73.41	155.91
	NORMAL	8,719.0	0.73	210.23	8,629.45	677.52	-864.20	525.76	0.61	0.18	-53.83	259.83
	NORMAL	8,813.0	1.45	193.35	8,723.44	675.84	-864.78	524.01	0.83	0.77	-17.96	327.37
	NORMAL	8,908.0	0.47	231.21	8,818.42	674.43	-865.36	522.52	1.18	-1.03	39.85	165.03
	NORMAL	9,002.0	0.71	231.62	8,912.42	673.83	-866.11	521.80	0.26	0.26	0.44	1.21
9/15/2011	NORMAL	9,097.0	1.39	229.94	9,007.40	672.72	-867.46	520.49	0.72	0.72	-1.77	356.57
	NORMAL	9,191.0	1.71	223.76	9,101.37	670.97	-869.30	518.46	0.38	0.34	-6.57	329.31
	NORMAL	9,286.0	1.49	263.40	9,196.33	669.81	-871.51	516.95	1.16	-0.23	41.73	120.61
	NORMAL	9,380.0	1.56	268.48	9,290.30	669.63	-874.00	516.37	0.16	0.07	5.40	65.18
	NORMAL	9,468.0	2.37	242.68	9,378.25	668.77	-876.81	515.05	1.34	0.92	-29.32	299.10
	NORMAL	9,523.0	2.37	242.68	9,433.20	667.72	-878.83	513.69	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

