

Deviation Summary

PICEANCE VLY

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	PA 514-2	Wellbore No.	00
Wellbore Legal Name	PA 514-2	Common Wellbore Name	PA 514-2
Project	PA 02-07S-095W	Site	GV 86-2 Pad
Vertical Section Azimuth	206.65 (°)	North reference	
Origin N/S		Origin E/W	
Spud date	4/16/2014	UWI	PA 514-2
Active datum	KB @5,847.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	SDI
Date Started	4/16/2014	Ended	
Tool Name	MWD	Engineer	

2.1.1 Tie On Point

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)
		240.12			

2.1.2 Survey Stations

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 (°)
4/16/2014	NORMAL	70.0	0.26	240.12	70.00	-0.08	-0.14	0.13	0.37	0.37	0.00	240.12
	NORMAL	161.0	1.76	207.07	160.98	-1.43	-0.95	1.70	1.70	1.65	-36.32	321.70
	NORMAL	253.0	5.01	203.82	252.81	-6.36	-3.22	7.13	3.54	3.53	-3.53	355.00
	NORMAL	344.0	9.41	212.78	343.07	-16.26	-8.85	18.50	4.98	4.84	9.85	18.82
	NORMAL	418.0	12.30	210.17	415.74	-28.16	-16.09	32.39	3.96	3.91	-3.53	349.06
	NORMAL	508.0	16.44	204.03	502.91	-48.09	-26.10	54.69	4.90	4.60	-6.82	336.79
	NORMAL	599.0	19.17	206.49	589.55	-73.23	-38.01	82.50	3.11	3.00	2.70	16.58
	NORMAL	689.0	22.25	205.79	673.72	-101.80	-52.02	114.32	3.43	3.42	-0.78	355.08
	NORMAL	780.0	26.12	204.74	756.72	-135.52	-67.90	151.58	4.28	4.25	-1.15	353.18
	NORMAL	870.0	29.11	206.58	836.46	-173.10	-86.00	193.28	3.45	3.32	2.04	16.74
	NORMAL	919.0	29.28	206.96	879.23	-194.44	-96.76	217.18	0.51	0.35	0.78	47.64
4/16/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/17/2014	NORMAL	1,053.0	29.37	204.47	996.07	-253.56	-125.23	282.79	0.91	0.07	-1.86	273.13
	NORMAL	1,148.0	29.19	205.33	1,078.93	-295.70	-144.79	329.23	0.48	-0.19	0.91	113.54
	NORMAL	1,243.0	28.67	205.18	1,162.07	-337.26	-164.40	375.17	0.55	-0.55	-0.16	187.88
	NORMAL	1,340.0	28.09	208.77	1,247.42	-378.34	-185.29	421.26	1.86	-0.60	3.70	110.35
	NORMAL	1,435.0	27.17	209.57	1,331.59	-416.81	-206.76	465.27	1.04	-0.97	0.84	158.39
	NORMAL	1,530.0	27.22	208.15	1,416.09	-454.83	-227.71	508.65	0.69	0.05	-1.49	273.77
	NORMAL	1,625.0	26.56	208.69	1,500.82	-492.62	-248.16	551.60	0.74	-0.69	0.57	159.93
	NORMAL	1,719.0	27.35	209.31	1,584.60	-529.89	-268.82	594.17	0.89	0.84	0.66	19.86
	NORMAL	1,814.0	28.01	208.20	1,668.73	-568.58	-290.04	638.27	0.88	0.69	-1.17	321.51

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 (°)
4/17/2014	NORMAL	1,909.0	29.80	205.51	1,751.90	-809.55	-310.76	684.18	2.33	1.88	-2.83	322.82
4/18/2014	NORMAL	2,004.0	29.22	205.64	1,834.57	-651.76	-330.96	730.96	0.61	-0.61	0.14	173.76
	NORMAL	2,098.0	28.84	204.91	1,916.76	-693.00	-350.43	776.56	0.55	-0.40	-0.78	222.67
	NORMAL	2,193.0	28.64	205.18	2,000.06	-734.39	-369.77	822.23	0.25	-0.21	0.28	147.13
	NORMAL	2,288.0	28.14	205.38	2,083.64	-775.23	-389.06	867.38	0.54	-0.53	0.21	169.32
	NORMAL	2,383.0	27.89	205.62	2,167.50	-815.51	-408.27	911.99	0.29	-0.26	0.25	155.83
	NORMAL	2,478.0	27.52	205.00	2,251.61	-855.43	-427.15	956.15	0.49	-0.39	-0.65	217.65
	NORMAL	2,573.0	29.18	207.10	2,335.22	-895.95	-446.98	1,001.25	2.04	1.75	2.21	31.92
	NORMAL	2,668.0	28.97	206.13	2,418.25	-937.22	-467.66	1,047.42	0.54	-0.22	-1.02	245.56
	NORMAL	2,763.0	28.33	206.77	2,501.62	-978.00	-487.95	1,092.96	0.75	-0.67	0.67	154.66
	NORMAL	2,858.0	27.41	207.28	2,585.60	-1,017.56	-508.12	1,137.37	1.00	-0.97	0.54	165.70
	NORMAL	2,953.0	26.45	207.48	2,670.29	-1,055.77	-527.91	1,180.39	1.02	-1.01	0.21	174.70
	NORMAL	3,048.0	27.96	206.18	2,754.78	-1,094.52	-547.50	1,223.82	1.71	1.59	-1.37	337.94
	NORMAL	3,142.0	29.59	205.30	2,837.17	-1,135.28	-567.14	1,269.06	1.79	1.73	-0.94	345.05
	NORMAL	3,237.0	28.78	204.52	2,920.11	-1,177.30	-586.65	1,315.36	0.94	-0.85	-0.82	204.81
	NORMAL	3,332.0	27.94	204.75	3,003.71	-1,218.32	-605.46	1,360.46	0.89	-0.88	0.24	172.69
	NORMAL	3,427.0	27.20	205.41	3,087.92	-1,258.14	-624.10	1,404.41	0.84	-0.78	0.69	157.86
	NORMAL	3,522.0	26.47	204.56	3,172.69	-1,297.01	-642.22	1,447.28	0.87	-0.77	-0.89	207.35
	NORMAL	3,617.0	25.76	204.82	3,257.99	-1,335.00	-659.68	1,489.07	0.76	-0.75	0.27	170.96
	NORMAL	3,712.0	25.02	204.99	3,343.82	-1,371.95	-676.83	1,529.78	0.78	-0.78	0.18	174.45
	NORMAL	3,807.0	23.95	204.11	3,430.27	-1,407.76	-693.20	1,569.13	1.19	-1.13	-0.93	198.42
	NORMAL	3,902.0	22.23	206.65	3,517.66	-1,441.42	-709.14	1,606.37	2.09	-1.81	2.67	151.09
	NORMAL	3,997.0	21.61	207.72	3,605.79	-1,472.97	-725.33	1,641.83	0.78	-0.65	1.13	147.70
	NORMAL	4,092.0	19.70	210.89	3,694.69	-1,502.20	-741.69	1,675.29	2.33	-2.01	3.34	151.13
4/19/2014	NORMAL	4,186.0	19.63	210.92	3,783.20	-1,529.34	-757.94	1,706.84	0.08	-0.07	0.03	171.81
	NORMAL	4,281.0	18.02	206.49	3,873.12	-1,556.19	-772.70	1,737.45	2.27	-1.69	-4.66	219.52
	NORMAL	4,376.0	17.75	205.57	3,963.53	-1,582.40	-785.50	1,766.62	0.41	-0.28	-0.97	225.86
	NORMAL	4,471.0	17.94	204.91	4,053.96	-1,608.74	-797.91	1,795.72	0.29	0.20	-0.69	312.90
	NORMAL	4,566.0	16.12	202.28	4,144.79	-1,634.21	-809.08	1,823.50	2.08	-1.92	-2.77	201.69
	NORMAL	4,661.0	14.51	205.00	4,236.42	-1,657.20	-819.11	1,848.55	1.86	-1.69	2.86	157.26
	NORMAL	4,755.0	13.04	205.27	4,327.71	-1,677.47	-828.61	1,870.92	1.57	-1.56	0.29	177.63
	NORMAL	4,850.0	11.30	206.88	4,420.58	-1,695.46	-837.40	1,890.95	1.87	-1.83	1.69	169.75
	NORMAL	4,945.0	9.65	208.72	4,513.99	-1,710.75	-845.43	1,908.21	1.77	-1.74	1.94	169.44
	NORMAL	5,040.0	7.80	203.18	4,607.89	-1,723.66	-851.80	1,922.61	2.14	-1.95	-5.83	201.71
	NORMAL	5,135.0	6.43	203.02	4,702.15	-1,734.48	-856.41	1,934.35	1.44	-1.44	-0.17	180.75
	NORMAL	5,229.0	5.07	203.13	4,795.68	-1,743.14	-860.10	1,943.75	1.45	-1.45	0.12	179.59
	NORMAL	5,324.0	3.47	202.39	4,890.41	-1,749.66	-862.85	1,950.81	1.69	-1.68	-0.78	181.60
	NORMAL	5,419.0	0.24	110.20	4,985.35	-1,752.39	-863.76	1,953.65	3.67	-3.40	-97.04	183.95
	NORMAL	5,514.0	1.37	62.43	5,080.34	-1,751.93	-862.56	1,952.71	1.29	1.19	-50.28	303.87
	NORMAL	5,609.0	0.72	76.27	5,175.33	-1,751.27	-860.98	1,951.40	0.73	-0.68	14.57	165.60
	NORMAL	5,703.0	0.35	112.45	5,269.32	-1,751.24	-860.14	1,951.00	0.51	-0.39	38.49	154.72
	NORMAL	5,798.0	0.62	175.11	5,364.32	-1,751.86	-859.83	1,951.41	0.58	0.28	65.96	96.76
4/20/2014	NORMAL	5,893.0	0.96	95.63	5,459.32	-1,752.45	-858.99	1,951.57	1.10	0.36	-83.66	244.77
	NORMAL	5,988.0	1.14	77.38	5,554.30	-1,752.32	-857.28	1,950.68	0.40	0.19	-19.21	288.96
	NORMAL	6,083.0	0.53	54.00	5,649.29	-1,751.86	-856.00	1,949.69	0.72	-0.64	-24.61	197.84
	NORMAL	6,178.0	0.18	109.99	5,744.29	-1,751.65	-855.50	1,949.29	0.48	-0.37	58.94	160.83
	NORMAL	6,272.0	0.44	236.73	5,838.29	-1,751.90	-855.67	1,949.58	0.60	0.28	134.83	141.49
	NORMAL	6,367.0	0.88	200.69	5,933.28	-1,752.78	-856.23	1,950.62	0.62	0.46	-37.94	297.68
	NORMAL	6,462.0	0.09	104.63	6,028.28	-1,753.48	-856.41	1,951.33	0.94	-0.83	-101.12	185.75
	NORMAL	6,557.0	0.13	294.64	6,123.28	-1,753.46	-856.44	1,951.32	0.23	0.04	-178.94	185.92
	NORMAL	6,652.0	0.79	239.63	6,218.28	-1,753.74	-857.10	1,951.87	0.76	0.69	-57.91	296.52
	NORMAL	6,747.0	1.57	230.47	6,313.25	-1,754.90	-858.67	1,953.61	0.84	0.82	-9.64	341.80
	NORMAL	6,842.0	2.11	232.86	6,408.21	-1,756.79	-861.07	1,956.37	0.57	0.57	2.52	9.28
	NORMAL	6,937.0	2.37	231.50	6,503.13	-1,759.06	-864.00	1,959.72	0.28	0.27	-1.43	347.77
	NORMAL	7,032.0	2.99	243.67	6,598.03	-1,761.39	-867.76	1,963.49	0.88	0.65	12.81	48.73
	NORMAL	7,127.0	2.71	239.61	6,692.91	-1,763.62	-871.92	1,967.35	0.36	-0.29	-4.27	213.77

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	EW (ft)	V. sec. (ft)	DLS (°/100usft)	Buidl Rate (°/100usft)	Turn (°/100usft)	Tface (°)
4/21/2014	NORMAL	7,222.0	3.17	242.09	6,787.79	-1,765.99	-876.17	1,971.37	0.50	0.48	2.61	16.70
	NORMAL	7,317.0	2.71	241.81	6,882.66	-1,768.28	-880.48	1,975.35	0.48	-0.48	-0.29	181.65
	NORMAL	7,411.0	3.25	237.17	6,976.53	-1,770.77	-884.67	1,979.46	0.63	0.57	-4.94	333.60
	NORMAL	7,506.0	3.61	241.74	7,071.36	-1,773.65	-889.57	1,984.23	0.48	0.38	4.81	39.51
	NORMAL	7,601.0	4.13	240.42	7,166.15	-1,776.75	-895.18	1,989.52	0.56	0.55	-1.39	349.62
	NORMAL	7,696.0	4.40	237.26	7,260.89	-1,780.41	-901.22	1,995.50	0.38	0.28	-3.33	317.38
	NORMAL	7,774.0	4.70	237.94	7,338.64	-1,783.73	-906.44	2,000.81	0.39	0.38	0.87	10.53
	NORMAL	7,840.0	4.70	237.94	7,404.42	-1,786.60	-911.03	2,005.43	0.00	0.00	0.00	0.00