

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	SP 534-14	Wellbore No.	
Well Name	SP 534-14	Common Name	SP 534-14
Project	PA 13-07S-095W	Site	SP 13-13 Pad
Vertical Section Azimuth	234.22 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	8/25/2011	UWI	SP 534-14
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	8/26/2011	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 (°)
8/26/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/26/2011	NORMAL	243.0	5.03	244.69	242.69	-4.56	-9.64	10.48	2.07	2.07	0.00	244.69
	NORMAL	335.0	7.52	234.09	334.13	-9.81	-18.16	20.47	2.97	2.71	-11.52	329.71
	NORMAL	425.0	9.58	227.83	423.13	-18.30	-28.48	33.80	2.51	2.29	-6.96	332.57
	NORMAL	516.0	12.31	233.89	512.47	-29.10	-41.93	51.03	3.25	3.00	6.66	25.85
	NORMAL	607.0	17.48	235.46	600.38	-42.57	-61.04	74.41	5.70	5.68	1.73	5.22
	NORMAL	698.0	21.31	234.49	686.20	-59.93	-85.77	104.62	4.22	4.21	-1.07	354.73
	NORMAL	789.0	22.59	233.84	770.60	-79.85	-113.34	138.64	1.43	1.41	-0.71	348.95
	NORMAL	879.0	23.41	233.36	853.45	-100.72	-141.64	173.80	0.93	0.91	-0.53	346.90
	NORMAL	970.0	25.32	235.69	936.34	-122.48	-172.23	211.33	2.35	2.10	2.56	27.78
	NORMAL	1,061.0	26.42	233.18	1,018.22	-145.58	-204.51	251.03	1.71	1.21	-2.76	313.99
	NORMAL	1,155.0	26.05	233.32	1,102.54	-170.45	-237.80	292.58	0.40	-0.39	0.15	170.57
	NORMAL	1,250.0	25.78	233.69	1,187.99	-195.14	-271.18	334.09	0.33	-0.28	0.39	149.25
	NORMAL	1,344.0	26.02	234.40	1,272.55	-219.25	-304.42	375.15	0.42	0.26	0.76	52.58
	NORMAL	1,439.0	24.96	233.95	1,358.30	-243.17	-337.57	416.03	1.13	-1.12	-0.47	190.15
	NORMAL	1,514.0	24.84	233.52	1,426.33	-261.85	-363.03	447.61	0.29	-0.16	-0.57	236.27
8/27/2011	NORMAL	1,629.0	25.35	233.43	1,530.47	-290.88	-402.22	496.38	0.44	0.44	-0.08	355.68
	NORMAL	1,724.0	25.59	231.96	1,616.24	-315.64	-434.71	537.22	0.71	0.25	-1.55	290.12
	NORMAL	1,818.0	25.36	234.05	1,701.10	-339.97	-467.00	577.63	0.99	-0.24	2.22	105.29
	NORMAL	1,913.0	25.30	236.31	1,786.97	-363.17	-500.36	618.26	1.02	-0.06	2.38	94.57
	NORMAL	2,007.0	25.39	236.09	1,871.92	-385.56	-533.80	658.48	0.14	0.10	-0.23	313.60

2.1.2 Survey Stations (Continued)

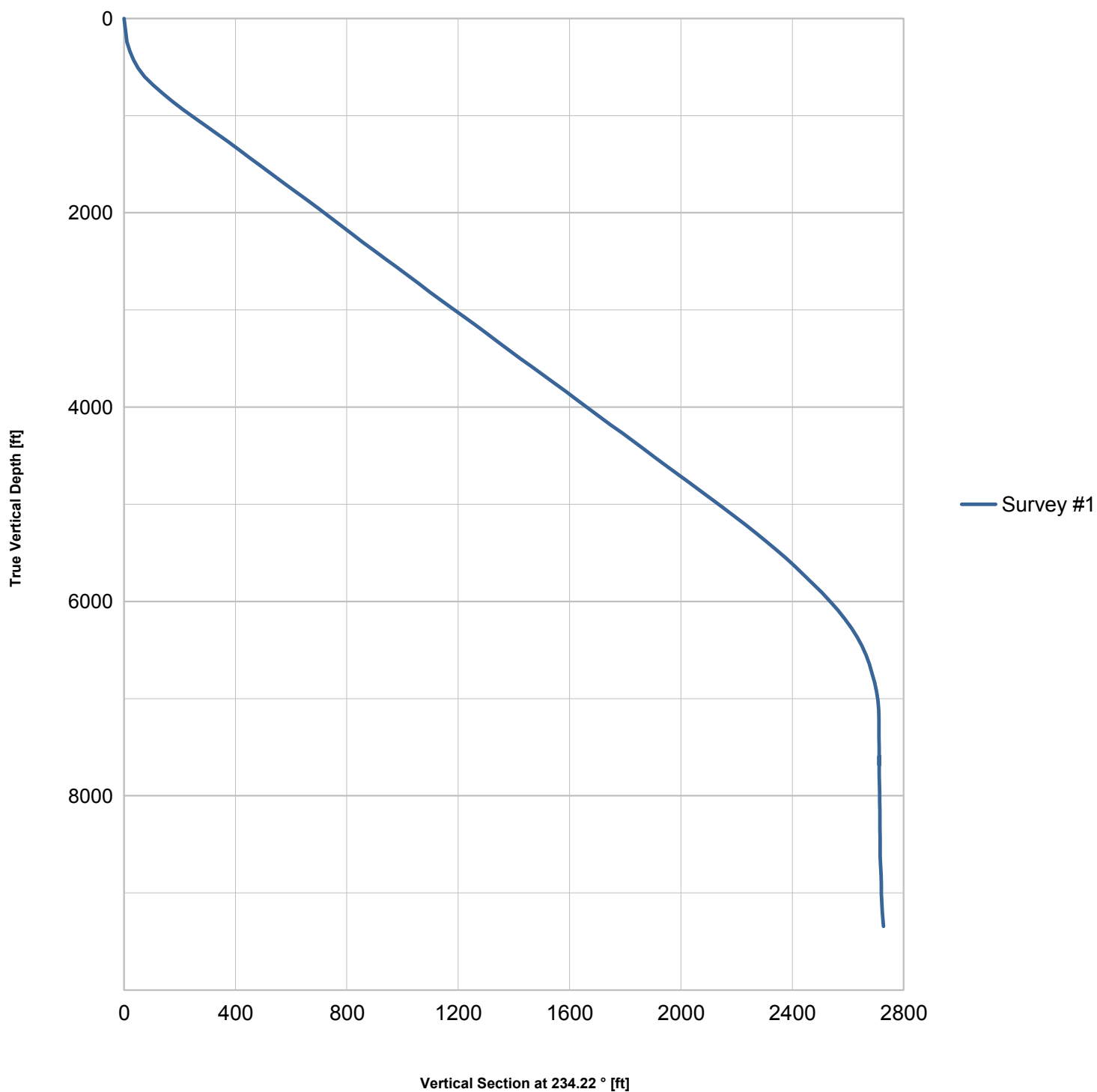
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
8/27/2011	NORMAL	2,102.0	25.21	235.94	1,957.81	-408.25	-567.46	699.06	0.20	-0.19	-0.16	199.53
	NORMAL	2,197.0	24.62	233.87	2,043.97	-431.25	-600.21	739.07	1.11	-0.62	-2.18	234.98
	NORMAL	2,291.0	24.49	234.32	2,129.47	-454.16	-631.85	778.13	0.24	-0.14	0.48	125.01
	NORMAL	2,386.0	24.28	233.66	2,215.99	-477.22	-663.57	817.35	0.36	-0.22	-0.69	232.08
	NORMAL	2,480.0	25.25	234.99	2,301.35	-500.17	-695.56	856.73	1.19	1.03	1.41	30.48
	NORMAL	2,575.0	25.55	233.06	2,387.17	-524.11	-728.53	897.47	0.93	0.32	-2.03	289.05
	NORMAL	2,669.0	25.43	235.20	2,472.02	-547.81	-761.31	937.92	0.99	-0.13	2.28	98.39
	NORMAL	2,764.0	25.07	232.47	2,557.94	-571.71	-794.02	978.43	1.28	-0.38	-2.87	251.59
	NORMAL	2,858.0	25.24	234.07	2,643.03	-595.61	-826.04	1,018.38	0.75	0.18	1.70	76.69
	NORMAL	2,953.0	24.85	233.36	2,729.10	-619.41	-858.46	1,058.59	0.52	-0.41	-0.75	217.30
	NORMAL	3,047.0	24.71	231.55	2,814.44	-643.41	-889.70	1,097.97	0.82	-0.15	-1.93	258.72
	NORMAL	3,142.0	26.03	234.39	2,900.28	-667.90	-922.20	1,138.65	1.89	1.39	2.99	43.96
	NORMAL	3,236.0	25.66	235.06	2,984.88	-691.56	-955.65	1,179.63	0.50	-0.39	0.71	142.01
	NORMAL	3,331.0	25.85	234.07	3,070.44	-715.50	-989.28	1,220.90	0.50	0.20	-1.04	293.38
	NORMAL	3,425.0	25.50	233.81	3,155.16	-739.47	-1,022.20	1,261.63	0.39	-0.37	-0.28	197.72
	NORMAL	3,520.0	24.82	237.10	3,241.15	-762.37	-1,055.45	1,302.00	1.64	-0.72	3.46	117.41
	NORMAL	3,614.0	24.89	236.62	3,326.45	-783.97	-1,088.53	1,341.46	0.23	0.07	-0.51	288.92
	NORMAL	3,709.0	25.68	235.56	3,412.35	-806.62	-1,122.20	1,382.02	0.96	0.83	-1.12	329.70
8/28/2011	NORMAL	3,803.0	25.59	234.60	3,497.09	-829.89	-1,155.55	1,422.68	0.45	-0.10	-1.02	257.34
	NORMAL	3,898.0	25.85	236.97	3,582.68	-853.07	-1,189.64	1,463.88	1.12	0.27	2.49	76.88
	NORMAL	3,992.0	25.68	236.27	3,667.34	-875.55	-1,223.76	1,504.71	0.37	-0.18	-0.74	240.49
	NORMAL	4,087.0	25.74	233.75	3,752.94	-899.18	-1,257.51	1,545.91	1.15	0.06	-2.65	272.01
	NORMAL	4,181.0	24.69	233.27	3,837.98	-922.99	-1,289.71	1,585.95	1.14	-1.12	-0.51	190.80
	NORMAL	4,276.0	25.12	232.61	3,924.14	-947.10	-1,321.63	1,625.94	0.54	0.45	-0.69	326.82
	NORMAL	4,370.0	25.18	232.92	4,009.23	-971.27	-1,353.44	1,665.88	0.15	0.06	0.33	65.65
	NORMAL	4,465.0	25.15	233.61	4,095.22	-995.43	-1,385.81	1,706.27	0.31	-0.03	0.73	96.15
	NORMAL	4,560.0	26.01	232.52	4,180.90	-1,020.08	-1,418.59	1,747.28	1.03	0.91	-1.15	330.82
	NORMAL	4,654.0	26.05	234.52	4,265.37	-1,044.61	-1,451.76	1,788.52	0.93	0.04	2.13	88.29
	NORMAL	4,749.0	25.24	232.75	4,351.01	-1,068.97	-1,484.87	1,829.63	1.17	-0.85	-1.86	222.61
8/29/2011	NORMAL	4,843.0	24.72	233.40	4,436.22	-1,092.82	-1,516.60	1,869.32	0.63	-0.55	0.69	152.47
	NORMAL	4,938.0	24.80	233.54	4,522.49	-1,116.51	-1,548.57	1,909.10	0.10	0.08	0.15	36.30
	NORMAL	5,032.0	25.45	234.66	4,607.59	-1,139.91	-1,580.90	1,949.01	0.86	0.69	1.19	36.70
	NORMAL	5,127.0	26.08	233.99	4,693.15	-1,163.99	-1,614.45	1,990.30	0.73	0.66	-0.71	334.89
	NORMAL	5,221.0	25.15	234.60	4,777.91	-1,187.71	-1,647.44	2,030.94	1.03	-0.99	0.65	164.44
	NORMAL	5,316.0	25.15	233.89	4,863.90	-1,211.30	-1,680.21	2,071.31	0.32	0.00	-0.75	269.68
	NORMAL	5,410.0	24.70	233.85	4,949.15	-1,234.66	-1,712.20	2,110.93	0.48	-0.48	-0.04	182.13
	NORMAL	5,505.0	25.41	233.63	5,035.21	-1,258.45	-1,744.64	2,151.16	0.75	0.75	-0.23	352.42
	NORMAL	5,599.0	24.89	234.86	5,120.30	-1,281.80	-1,777.06	2,191.10	0.78	-0.55	1.31	135.41
	NORMAL	5,694.0	23.65	237.32	5,206.90	-1,303.59	-1,809.45	2,230.12	1.68	-1.31	2.59	141.92
	NORMAL	5,788.0	23.81	237.56	5,292.95	-1,323.95	-1,841.33	2,267.89	0.20	0.17	0.26	31.23
8/30/2011	NORMAL	5,883.0	23.39	235.39	5,380.01	-1,344.95	-1,873.03	2,305.89	1.02	-0.44	-2.28	243.21
	NORMAL	5,977.0	22.25	235.12	5,466.65	-1,365.73	-1,902.99	2,342.34	1.22	-1.21	-0.29	185.12
	NORMAL	6,072.0	21.54	235.92	5,554.80	-1,385.78	-1,932.19	2,377.76	0.81	-0.75	0.84	157.58
	NORMAL	6,166.0	19.70	233.88	5,642.77	-1,404.79	-1,959.28	2,410.85	2.10	-1.96	-2.17	200.38
	NORMAL	6,261.0	19.81	234.16	5,732.18	-1,423.66	-1,985.27	2,442.96	0.15	0.12	0.29	40.84
	NORMAL	6,355.0	19.90	232.11	5,820.60	-1,442.81	-2,010.81	2,474.88	0.75	0.10	-2.18	276.40
	NORMAL	6,450.0	18.99	237.41	5,910.18	-1,461.07	-2,036.59	2,506.47	2.09	-0.96	5.58	119.77
8/31/2011	NORMAL	6,545.0	17.86	234.84	6,000.31	-1,477.78	-2,061.52	2,536.47	1.46	-1.19	-2.71	214.50
	NORMAL	6,639.0	16.26	233.42	6,090.17	-1,493.93	-2,083.88	2,564.04	1.76	-1.70	-1.51	193.92
	NORMAL	6,734.0	14.68	233.63	6,181.73	-1,508.99	-2,104.25	2,589.38	1.66	-1.66	0.22	178.07
	NORMAL	6,828.0	13.36	232.68	6,272.93	-1,522.64	-2,122.48	2,612.15	1.43	-1.40	-1.01	189.43
	NORMAL	6,923.0	11.82	234.28	6,365.64	-1,534.98	-2,139.11	2,632.85	1.66	-1.62	1.68	168.02
	NORMAL	7,017.0	9.52	231.36	6,458.01	-1,545.45	-2,153.00	2,650.25	2.51	-2.45	-3.11	191.80
	NORMAL	7,112.0	7.97	231.63	6,551.90	-1,554.45	-2,164.30	2,664.67	1.63	-1.63	0.28	178.62
9/1/2011	NORMAL	7,206.0	6.68	233.10	6,645.13	-1,561.77	-2,173.78	2,676.65	1.39	-1.37	1.56	172.46
	NORMAL	7,301.0	5.54	238.29	6,739.59	-1,567.50	-2,182.10	2,686.75	1.33	-1.20	5.46	156.71
	NORMAL	7,396.0	4.86	235.29	6,834.20	-1,572.20	-2,189.31	2,695.35	0.77	-0.72	-3.16	200.30

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 (°)
9/1/2011	NORMAL	7,490.0	3.65	237.93	6,927.94	-1,576.06	-2,195.12	2,702.31	1.30	-1.29	2.81	172.12
	NORMAL	7,585.0	2.79	228.80	7,022.79	-1,579.19	-2,199.42	2,707.63	1.05	-0.91	-9.61	206.30
	NORMAL	7,679.0	0.72	231.00	7,116.74	-1,581.07	-2,201.60	2,710.50	2.20	-2.20	2.34	179.24
	NORMAL	7,774.0	0.07	74.28	7,211.74	-1,581.43	-2,202.01	2,711.04	0.83	-0.68	-164.97	182.02
	NORMAL	7,868.0	0.12	198.70	7,305.74	-1,581.51	-2,201.99	2,711.07	0.18	0.05	132.36	144.31
	NORMAL	7,963.0	0.35	203.22	7,400.74	-1,581.87	-2,202.13	2,711.40	0.24	0.24	4.76	6.87
9/2/2011	NORMAL	8,057.0	0.22	190.86	7,494.74	-1,582.31	-2,202.28	2,711.77	0.15	-0.14	-13.15	199.22
	NORMAL	8,152.0	0.26	152.82	7,589.74	-1,582.68	-2,202.22	2,711.94	0.17	0.04	-40.04	264.57
	NORMAL	8,246.0	0.35	128.51	7,683.74	-1,583.05	-2,201.89	2,711.89	0.17	0.10	-25.86	292.26
	NORMAL	8,341.0	0.53	201.99	7,778.73	-1,583.63	-2,201.83	2,712.19	0.57	0.19	77.35	111.42
	NORMAL	8,435.0	0.76	212.59	7,872.73	-1,584.56	-2,202.33	2,713.13	0.27	0.24	11.28	32.79
	NORMAL	8,530.0	0.35	226.73	7,967.72	-1,585.29	-2,202.88	2,714.01	0.45	-0.43	14.88	168.51
	NORMAL	8,624.0	0.18	125.52	8,061.72	-1,585.58	-2,202.97	2,714.24	0.45	-0.18	-107.67	204.64
	NORMAL	8,719.0	0.26	246.46	8,156.72	-1,585.75	-2,203.05	2,714.41	0.41	0.08	127.31	144.59
	NORMAL	8,813.0	0.29	304.50	8,250.72	-1,585.70	-2,203.44	2,714.70	0.29	0.03	61.74	113.40
	NORMAL	8,908.0	0.57	326.84	8,345.72	-1,585.17	-2,203.89	2,714.76	0.34	0.29	23.52	42.41
	NORMAL	9,002.0	0.88	292.08	8,439.71	-1,584.50	-2,204.82	2,715.12	0.56	0.33	-36.98	286.96
	NORMAL	9,097.0	0.18	125.61	8,534.71	-1,584.32	-2,205.37	2,715.46	1.11	-0.74	-175.23	182.29
	NORMAL	9,191.0	0.70	178.27	8,628.70	-1,584.98	-2,205.24	2,715.73	0.65	0.55	56.02	66.28
	NORMAL	9,286.0	1.26	200.41	8,723.69	-1,586.54	-2,205.58	2,716.93	0.70	0.59	23.31	45.47
	NORMAL	9,380.0	1.14	216.32	8,817.67	-1,588.26	-2,206.50	2,718.67	0.38	-0.13	16.93	117.64
	NORMAL	9,475.0	0.26	271.86	8,912.66	-1,589.01	-2,207.27	2,719.74	1.07	-0.93	58.46	167.82
	NORMAL	9,569.0	0.97	298.05	9,006.66	-1,588.63	-2,208.19	2,720.26	0.79	0.76	27.86	35.04
	NORMAL	9,664.0	1.49	304.03	9,101.63	-1,587.56	-2,209.92	2,721.05	0.56	0.55	6.29	16.87
	NORMAL	9,759.0	2.90	290.14	9,196.56	-1,586.04	-2,213.20	2,722.82	1.58	1.48	-14.62	332.29
	NORMAL	9,850.0	3.52	288.47	9,287.42	-1,584.37	-2,218.01	2,725.74	0.69	0.68	-1.84	350.59
	NORMAL	9,905.0	3.52	288.47	9,342.32	-1,583.30	-2,221.22	2,727.71	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

