

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	RWF 22-25	Wellbore No.	00
Wellbore Legal Name	RWF 22-25	Common Wellbore Name	RWF 22-25
Project	RU 25-06S-094W	Site	RWF 22-25 Pad
Vertical Section Azimuth	50.67 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	9/25/2013	UWI	RWF 22-25
Active datum	KB @6,063.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	9/25/2013	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 (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
9/25/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/25/2013	NORMAL	71.0	0.53	94.75	71.00	-0.03	0.33	0.24	0.75	0.75	0.00	94.75
	NORMAL	131.0	1.58	74.36	130.99	0.17	1.40	1.19	1.83	1.75	-33.98	329.94
	NORMAL	238.0	2.75	51.83	237.91	2.16	4.84	5.11	1.33	1.09	-21.06	312.35
	NORMAL	329.0	4.30	39.83	328.74	6.13	8.74	10.64	1.88	1.70	-13.19	328.47
	NORMAL	420.0	6.77	45.32	419.31	12.52	14.74	19.34	2.77	2.71	6.03	14.84
	NORMAL	511.0	8.88	51.12	509.46	20.70	24.02	31.70	2.47	2.32	6.37	23.41
	NORMAL	602.0	9.61	53.36	599.28	29.64	35.59	46.31	0.89	0.80	2.46	27.35
	NORMAL	692.0	10.70	46.76	687.87	39.85	47.70	62.15	1.77	1.21	-7.33	309.85
	NORMAL	783.0	12.97	48.32	776.93	52.43	61.48	80.79	2.52	2.49	1.71	8.79
	NORMAL	874.0	12.40	52.00	865.71	65.24	76.81	100.76	1.09	-0.63	4.04	126.98
	NORMAL	965.0	12.05	52.09	954.64	77.09	92.00	120.02	0.39	-0.38	0.10	176.93
	NORMAL	1,046.0	12.04	52.02	1,033.86	87.48	105.33	136.92	0.02	-0.01	-0.09	235.57
9/27/2013	NORMAL	1,046.0	12.04	52.02	1,033.86	87.48	105.33	136.92	0.00	0.00	0.00	0.00
	NORMAL	1,152.0	12.41	52.87	1,137.46	101.16	123.13	159.36	0.39	0.35	0.80	26.36
	NORMAL	1,242.0	12.58	52.27	1,225.33	112.99	138.59	178.82	0.24	0.19	-0.67	322.34
	NORMAL	1,333.0	12.76	53.72	1,314.11	125.01	154.53	198.76	0.40	0.20	1.59	61.20
	NORMAL	1,424.0	12.22	51.03	1,402.96	137.01	170.12	218.42	0.87	-0.59	-2.96	225.82
	NORMAL	1,514.0	12.05	50.86	1,490.95	148.93	184.81	237.34	0.19	-0.19	-0.19	191.79
	NORMAL	1,605.0	11.64	49.39	1,580.01	160.90	199.15	256.02	0.56	-0.45	-1.62	215.63
	NORMAL	1,696.0	12.49	49.72	1,669.00	173.24	213.63	275.04	0.94	0.93	0.36	4.80

2.1.2 Survey Stations (Continued)

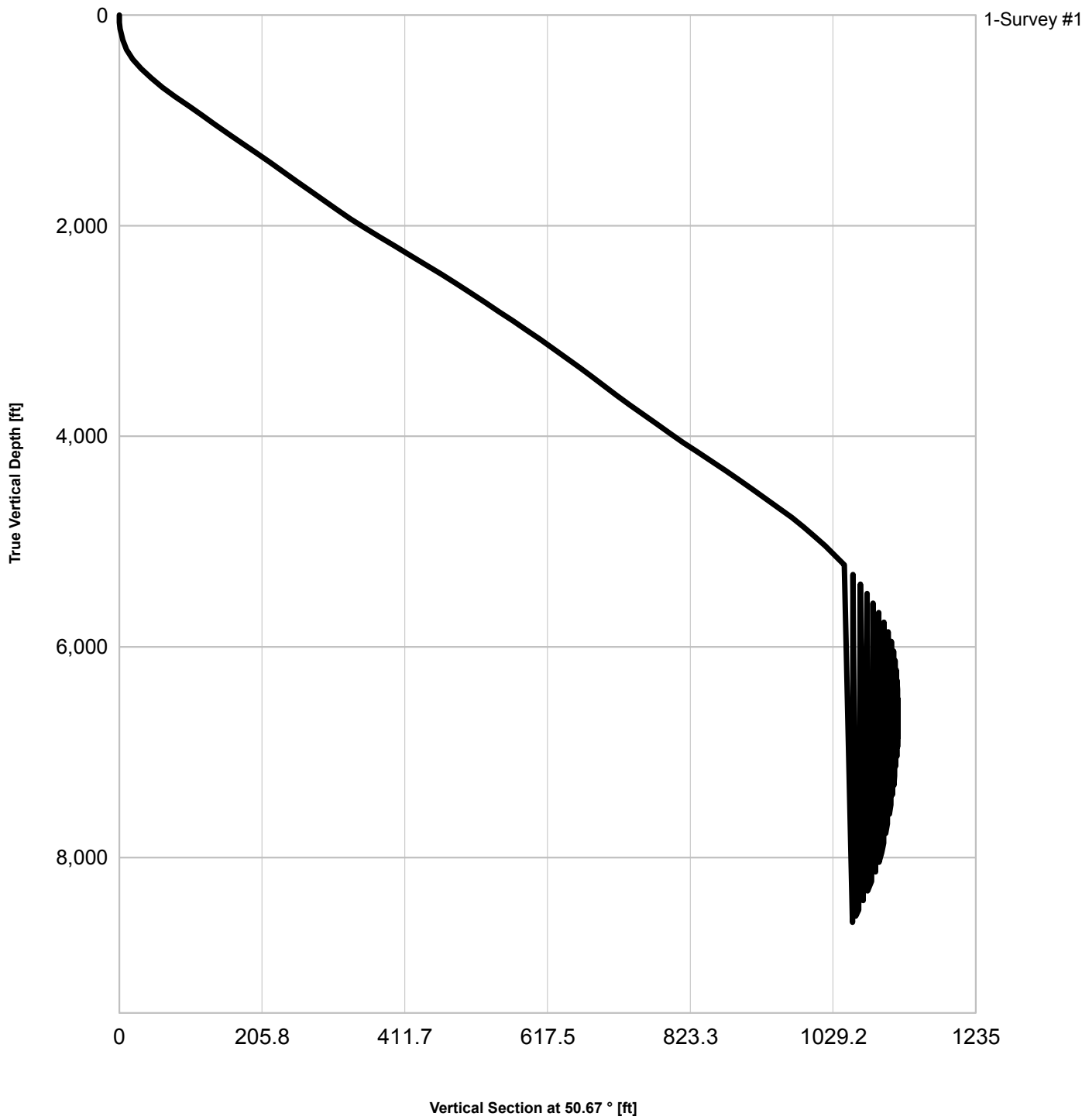
Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
9/27/2013	NORMAL	1,786.0	12.22	50.51	1,756.91	185.59	228.40	294.29	0.35	-0.30	0.88	148.34
	NORMAL	1,877.0	12.15	48.22	1,845.86	198.09	242.97	313.49	0.54	-0.08	-2.52	260.64
	NORMAL	1,968.0	13.15	49.81	1,934.65	211.15	258.02	333.41	1.16	1.10	1.75	19.98
	NORMAL	2,058.0	13.89	49.72	2,022.16	224.75	274.09	354.45	0.82	0.82	-0.10	358.33
	NORMAL	2,149.0	13.98	50.42	2,110.48	238.81	290.89	376.36	0.21	0.10	0.77	62.24
	NORMAL	2,240.0	14.25	49.36	2,198.74	253.11	307.86	398.55	0.41	0.30	-1.16	315.73
	NORMAL	2,331.0	14.12	48.26	2,286.96	267.79	324.64	420.84	0.33	-0.14	-1.21	243.72
	NORMAL	2,421.0	13.99	52.33	2,374.27	281.75	341.45	442.68	1.11	-0.14	4.52	99.46
	NORMAL	2,512.0	14.28	52.94	2,462.51	295.24	359.11	464.89	0.36	0.32	0.67	27.48
	NORMAL	2,603.0	13.16	52.77	2,550.92	308.27	376.31	486.46	1.23	-1.23	-0.19	181.98
	NORMAL	2,693.0	13.13	53.20	2,638.56	320.59	392.66	506.91	0.11	-0.03	0.48	107.26
	NORMAL	2,784.0	12.88	52.82	2,727.22	332.91	409.01	527.37	0.29	-0.27	-0.42	198.70
	NORMAL	2,875.0	12.77	51.92	2,815.95	345.24	425.01	547.56	0.25	-0.12	-0.99	240.72
	NORMAL	2,966.0	12.76	51.61	2,904.71	357.69	440.80	567.66	0.08	-0.01	-0.34	261.54
	NORMAL	3,056.0	12.70	50.66	2,992.49	370.13	456.25	587.49	0.24	-0.07	-1.06	253.54
	NORMAL	3,146.0	12.31	51.21	3,080.36	382.41	471.37	606.98	0.45	-0.43	0.61	163.29
	NORMAL	3,328.0	11.88	51.02	3,258.32	406.35	501.06	645.11	0.24	-0.24	-0.10	185.20
9/28/2013	NORMAL	3,419.0	11.91	50.57	3,347.36	418.21	515.59	663.87	0.11	0.03	-0.49	287.70
	NORMAL	3,510.0	11.42	50.42	3,436.48	429.91	529.79	682.27	0.54	-0.54	-0.16	183.47
	NORMAL	3,600.0	11.28	51.90	3,524.72	441.02	543.59	699.98	0.36	-0.16	1.64	116.40
	NORMAL	3,691.0	11.17	51.73	3,613.98	451.97	557.51	717.69	0.13	-0.12	-0.19	196.66
	NORMAL	3,782.0	12.30	51.07	3,703.08	463.52	571.97	736.20	1.25	1.24	-0.73	352.90
	NORMAL	3,873.0	12.31	50.07	3,791.99	475.84	586.95	755.59	0.23	0.01	-1.10	272.20
	NORMAL	3,964.0	12.13	51.91	3,880.93	487.96	601.91	774.85	0.47	-0.20	2.02	115.70
	NORMAL	4,055.0	11.78	52.09	3,969.96	499.57	616.77	793.69	0.39	-0.38	0.20	174.01
	NORMAL	4,146.0	12.75	47.61	4,058.88	512.05	631.51	813.01	1.49	1.07	-4.92	313.34
	NORMAL	4,237.0	13.10	47.17	4,147.57	525.83	646.49	833.33	0.40	0.38	-0.48	344.08
	NORMAL	4,328.0	12.84	46.99	4,236.25	539.73	661.45	853.71	0.29	-0.29	-0.20	188.74
	NORMAL	4,420.0	12.70	46.47	4,325.98	553.67	676.26	874.00	0.20	-0.15	-0.57	219.13
	NORMAL	4,511.0	12.40	48.22	4,414.80	567.07	690.79	893.74	0.53	-0.33	1.92	129.12
	NORMAL	4,602.0	12.19	47.99	4,503.72	580.01	705.22	913.10	0.24	-0.23	-0.25	193.02
	NORMAL	4,693.0	11.95	48.30	4,592.70	592.71	719.39	932.11	0.27	-0.26	0.34	165.04
	NORMAL	4,784.0	12.08	42.47	4,681.71	606.00	732.86	950.95	1.34	0.14	-6.41	273.26
	NORMAL	4,876.0	11.54	52.08	4,771.78	618.76	746.62	969.68	2.21	-0.59	10.45	110.02
	NORMAL	4,967.0	10.20	52.82	4,861.14	629.22	760.22	986.83	1.48	-1.47	0.81	174.42
9/29/2013	NORMAL	5,058.0	9.91	53.49	4,950.74	638.75	772.93	1,002.70	0.34	-0.32	0.74	158.36
	NORMAL	5,150.0	9.23	52.73	5,041.46	647.93	785.17	1,017.98	0.75	-0.74	-0.83	190.15
	NORMAL	5,241.0	8.62	52.41	5,131.36	656.51	796.38	1,032.09	0.67	-0.67	-0.35	184.49
	NORMAL	5,332.0	8.27	52.18	5,221.37	664.68	806.95	1,045.45	0.39	-0.38	-0.25	185.40
	NORMAL	5,424.0	7.30	53.50	5,312.53	672.22	816.88	1,057.90	1.07	-1.05	1.43	170.21
	NORMAL	5,515.0	6.33	52.88	5,402.88	678.68	825.52	1,068.69	1.07	-1.07	-0.68	184.03
	NORMAL	5,606.0	5.80	53.32	5,493.37	684.46	833.21	1,078.30	0.58	-0.58	0.48	175.21
	NORMAL	5,697.0	5.31	52.03	5,583.94	689.79	840.22	1,087.10	0.56	-0.54	-1.42	193.66
	NORMAL	5,788.0	5.01	53.06	5,674.58	694.77	846.72	1,095.28	0.35	-0.33	1.13	163.35
	NORMAL	5,879.0	4.21	51.27	5,765.28	699.25	852.50	1,102.59	0.89	-0.88	-1.97	189.30
	NORMAL	5,970.0	3.55	49.10	5,856.07	703.18	857.23	1,108.74	0.74	-0.73	-2.38	191.46
	NORMAL	6,062.0	2.25	55.52	5,947.95	706.07	860.87	1,113.39	1.45	-1.41	6.98	169.16
	NORMAL	6,153.0	1.78	61.05	6,038.90	707.77	863.58	1,116.56	0.56	-0.52	6.08	160.27
	NORMAL	6,244.0	1.20	59.89	6,129.87	708.93	865.64	1,118.89	0.64	-0.64	-1.27	182.40
9/30/2013	NORMAL	6,335.0	0.84	85.98	6,220.85	709.45	867.13	1,120.38	0.64	-0.40	28.67	140.34
	NORMAL	6,426.0	0.67	75.80	6,311.84	709.63	868.32	1,121.40	0.24	-0.19	-11.19	213.26
	NORMAL	6,517.0	0.37	64.16	6,402.84	709.89	869.10	1,122.17	0.35	-0.33	-12.79	193.64
	NORMAL	6,608.0	0.17	41.06	6,493.84	710.12	869.45	1,122.59	0.25	-0.22	-25.38	197.34
	NORMAL	6,699.0	0.30	176.55	6,584.84	709.98	869.55	1,122.58	0.48	0.14	148.89	151.29
	NORMAL	6,791.0	0.60	335.64	6,676.84	710.18	869.37	1,122.57	0.96	0.33	172.92	166.02
	NORMAL	6,882.0	0.60	320.58	6,767.83	710.98	868.87	1,122.69	0.17	0.00	-16.55	262.47

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 (°)
10/1/2013	NORMAL	6,973.0	0.66	310.33	6,858.83	711.69	868.17	1,122.59	0.14	0.07	-11.26	292.84
	NORMAL	7,064.0	0.62	281.48	6,949.82	712.13	867.28	1,122.19	0.35	-0.04	-31.70	248.65
	NORMAL	7,156.0	1.06	266.89	7,041.81	712.18	865.95	1,121.19	0.53	0.48	-15.86	326.66
	NORMAL	7,247.0	1.32	249.49	7,132.79	711.77	864.12	1,119.52	0.49	0.29	-19.12	296.83
	NORMAL	7,338.0	0.79	275.86	7,223.78	711.47	862.52	1,118.08	0.78	-0.58	28.98	150.18
	NORMAL	7,429.0	1.06	247.73	7,314.77	711.21	861.12	1,116.84	0.57	0.30	-30.91	286.16
	NORMAL	7,520.0	1.48	233.41	7,405.75	710.19	859.39	1,114.86	0.58	0.46	-15.74	315.62
	NORMAL	7,612.0	1.30	245.80	7,497.72	709.06	857.49	1,112.66	0.38	-0.20	13.47	127.01
	NORMAL	7,703.0	1.60	244.61	7,588.69	708.09	855.40	1,110.43	0.33	0.33	-1.31	353.67
	NORMAL	7,794.0	1.87	239.20	7,679.65	706.78	852.97	1,107.73	0.35	0.30	-5.95	326.03
10/2/2013	NORMAL	7,885.0	1.57	239.44	7,770.61	705.39	850.63	1,105.03	0.33	-0.33	0.26	178.74
	NORMAL	7,976.0	1.85	235.25	7,861.57	703.92	848.35	1,102.34	0.34	0.31	-4.60	333.83
	NORMAL	8,068.0	1.98	222.17	7,953.52	701.89	846.06	1,099.28	0.49	0.14	-14.22	279.96
	NORMAL	8,159.0	2.95	217.12	8,044.43	698.86	843.59	1,095.45	1.09	1.07	-5.55	344.85
	NORMAL	8,250.0	3.55	214.08	8,135.28	694.66	840.60	1,090.48	0.69	0.66	-3.34	342.45
10/3/2013	NORMAL	8,341.0	3.77	221.20	8,226.10	690.08	837.05	1,084.82	0.55	0.24	7.82	67.75
	NORMAL	8,432.0	3.82	219.27	8,316.90	685.48	833.16	1,078.90	0.15	0.05	-2.12	290.41
	NORMAL	8,523.0	4.08	227.05	8,407.68	680.93	828.87	1,072.70	0.65	0.29	8.55	68.04
	NORMAL	8,614.0	4.17	221.66	8,498.45	676.25	824.30	1,066.20	0.44	0.10	-5.92	280.37
	NORMAL	8,673.0	4.49	227.59	8,557.28	673.09	821.17	1,061.78	0.93	0.54	10.05	57.43
	NORMAL	8,730.0	4.49	227.59	8,614.11	670.08	817.88	1,057.32	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

