

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 42-36	Wellbore No.	
Well Name	RWF 42-36	Common Name	RWF 42-36
Project	RU 36-06S-094W	Site	RWF 32-36 Pad
Vertical Section Azimuth	88.48 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	12/5/2011	UWI	RWF 42-36
Active Datum	KB @6,451.4ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	12/5/2011	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 (°)
12/5/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/5/2011	NORMAL	86.0	0.09	140.10	86.00	-0.05	0.04	0.04	0.10	0.10	0.00	140.10
	NORMAL	178.0	1.85	97.82	177.98	-0.31	1.56	1.55	1.94	1.91	-45.96	315.78
	NORMAL	268.0	3.26	92.29	267.89	-0.61	5.56	5.54	1.59	1.57	-6.14	347.31
	NORMAL	339.0	3.81	92.59	338.76	-0.80	9.93	9.91	0.78	0.77	0.42	2.08
	NORMAL	430.0	6.55	83.34	429.38	-0.33	18.11	18.09	3.14	3.01	-10.16	338.41
	NORMAL	521.0	9.90	87.03	519.43	0.68	31.08	31.09	3.72	3.68	4.05	10.79
	NORMAL	613.0	11.89	85.15	609.77	1.89	48.42	48.46	2.20	2.16	-2.04	348.95
	NORMAL	704.0	14.10	89.14	698.43	2.85	68.85	68.90	2.62	2.43	4.38	24.05
	NORMAL	795.0	15.46	87.58	786.42	3.53	92.05	92.11	1.56	1.49	-1.71	342.93
	NORMAL	887.0	17.77	84.47	874.57	5.40	118.28	118.38	2.69	2.51	-3.38	337.45
	NORMAL	979.0	18.76	86.14	961.94	7.75	147.02	147.17	1.22	1.08	1.82	28.66
	NORMAL	1,074.0	18.01	88.23	1,052.09	9.23	176.94	177.12	1.05	-0.79	2.20	139.68
	NORMAL	1,103.0	18.29	88.43	1,079.65	9.49	185.97	186.15	0.99	0.97	0.69	12.64
12/6/2011	NORMAL	1,198.0	18.73	87.47	1,169.73	10.57	216.11	216.31	0.56	0.46	-1.01	324.84
	NORMAL	1,262.0	19.45	87.19	1,230.21	11.55	237.02	237.24	1.13	1.13	-0.44	352.62
	NORMAL	1,358.0	18.41	89.44	1,321.02	12.48	268.14	268.38	1.32	-1.08	2.34	146.00
	NORMAL	1,453.0	18.38	88.88	1,411.17	12.92	298.11	298.35	0.19	-0.03	-0.59	260.10
12/7/2011	NORMAL	1,549.0	18.60	87.81	1,502.21	13.80	328.55	328.80	0.42	0.23	-1.11	302.45
	NORMAL	1,644.0	18.30	89.18	1,592.33	14.59	358.60	358.86	0.55	-0.32	1.44	125.33
	NORMAL	1,740.0	19.26	88.52	1,683.22	15.22	389.50	389.76	1.02	1.00	-0.69	347.21

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 (°)
12/7/2011	NORMAL	1,836.0	17.82	90.31	1,774.23	15.55	420.02	420.28	1.61	-1.50	1.86	159.28
	NORMAL	1,929.0	18.44	89.07	1,862.62	15.71	448.95	449.21	0.79	0.67	-1.33	327.51
	NORMAL	2,025.0	18.07	90.00	1,953.78	15.95	479.02	479.28	0.49	-0.39	0.97	142.23
	NORMAL	2,120.0	18.73	88.96	2,043.93	16.23	509.01	509.26	0.78	0.69	-1.09	333.06
	NORMAL	2,216.0	18.38	87.11	2,134.94	17.27	539.53	539.80	0.71	-0.36	-1.93	238.39
	NORMAL	2,312.0	17.86	86.10	2,226.18	19.04	569.34	569.64	0.63	-0.54	-1.05	210.66
	NORMAL	2,407.0	17.76	85.71	2,316.62	21.11	598.32	598.67	0.16	-0.11	-0.41	229.84
	NORMAL	2,502.0	18.20	87.55	2,406.98	22.83	627.59	627.98	0.76	0.46	1.94	53.11
	NORMAL	2,596.0	17.48	87.35	2,496.46	24.11	656.36	656.77	0.77	-0.77	-0.21	184.77
	NORMAL	2,691.0	17.51	90.55	2,587.07	24.63	684.90	685.32	1.01	0.03	3.37	89.74
	NORMAL	2,786.0	17.55	92.03	2,677.66	23.99	713.51	713.89	0.47	0.04	1.56	85.58
	NORMAL	2,882.0	18.11	90.89	2,769.05	23.25	742.89	743.25	0.69	0.58	-1.19	327.52
	NORMAL	2,977.0	17.18	92.24	2,859.58	22.47	771.68	772.00	1.07	-0.98	1.42	156.89
	NORMAL	3,071.0	17.62	91.81	2,949.28	21.48	799.77	800.06	0.49	0.47	-0.46	343.50
	NORMAL	3,163.0	18.06	91.28	3,036.85	20.72	827.94	828.20	0.51	0.48	-0.58	339.49
	NORMAL	3,259.0	17.41	90.62	3,128.29	20.23	857.18	857.42	0.71	-0.68	-0.69	196.87
	NORMAL	3,354.0	17.77	88.38	3,218.85	20.49	885.88	886.12	0.81	0.38	-2.36	296.93
	NORMAL	3,449.0	17.76	87.27	3,309.32	21.59	914.85	915.10	0.36	-0.01	-1.17	267.78
	NORMAL	3,545.0	17.59	87.84	3,400.79	22.83	943.97	944.24	0.25	-0.18	0.59	134.76
	NORMAL	3,640.0	17.51	88.59	3,491.37	23.72	972.60	972.89	0.25	-0.08	0.79	109.84
	NORMAL	3,736.0	17.72	87.74	3,582.87	24.65	1,001.64	1,001.94	0.35	0.22	-0.89	308.82
	NORMAL	3,831.0	17.17	88.18	3,673.50	25.67	1,030.10	1,030.42	0.60	-0.58	0.46	166.72
	NORMAL	3,925.0	17.89	87.13	3,763.13	26.83	1,058.38	1,058.72	0.84	0.77	-1.12	335.78
	NORMAL	4,021.0	18.73	85.87	3,854.27	28.68	1,088.49	1,088.86	0.97	0.88	-1.31	334.17
	NORMAL	4,116.0	18.89	84.69	3,944.20	31.20	1,119.01	1,119.44	0.43	0.17	-1.24	292.25
12/8/2011	NORMAL	4,212.0	19.15	84.83	4,034.95	34.06	1,150.17	1,150.66	0.27	0.27	0.15	10.02
	NORMAL	4,307.0	18.04	87.58	4,125.00	36.09	1,180.38	1,180.92	1.49	-1.17	2.89	142.99
	NORMAL	4,400.0	17.67	87.99	4,213.52	37.19	1,208.88	1,209.44	0.42	-0.40	0.44	161.43
	NORMAL	4,495.0	18.03	87.03	4,303.94	38.46	1,237.97	1,238.55	0.49	0.38	-1.01	320.28
	NORMAL	4,590.0	17.34	89.29	4,394.45	39.39	1,266.81	1,267.41	1.02	-0.73	2.38	136.22
	NORMAL	4,686.0	18.20	90.45	4,485.87	39.45	1,296.10	1,296.69	0.97	0.90	1.21	22.93
	NORMAL	4,781.0	18.11	92.39	4,576.15	38.72	1,325.69	1,326.25	0.64	-0.09	2.04	99.39
	NORMAL	4,877.0	18.01	93.54	4,667.42	37.18	1,355.41	1,355.92	0.39	-0.10	1.20	106.21
	NORMAL	4,972.0	17.32	89.40	4,757.94	36.42	1,384.21	1,384.69	1.51	-0.73	-4.36	239.26
	NORMAL	5,068.0	17.39	87.10	4,849.57	37.30	1,412.83	1,413.32	0.72	0.07	-2.40	274.73
	NORMAL	5,163.0	16.88	87.03	4,940.35	38.73	1,440.78	1,441.30	0.54	-0.54	-0.07	182.28
	NORMAL	5,259.0	17.09	86.56	5,032.17	40.30	1,468.78	1,469.33	0.26	0.22	-0.49	326.60
	NORMAL	5,354.0	16.44	87.05	5,123.13	41.83	1,496.14	1,496.72	0.70	-0.68	0.52	167.97
	NORMAL	5,450.0	16.14	89.05	5,215.27	42.75	1,523.05	1,523.65	0.66	-0.31	2.08	119.09
	NORMAL	5,545.0	15.16	87.65	5,306.75	43.48	1,548.66	1,549.27	1.11	-1.03	-1.47	200.40
	NORMAL	5,641.0	13.89	87.61	5,399.68	44.47	1,572.72	1,573.35	1.32	-1.32	-0.04	180.43
12/9/2011	NORMAL	5,737.0	13.28	84.57	5,493.00	46.00	1,595.21	1,595.87	0.98	-0.64	-3.17	228.02
	NORMAL	5,832.0	11.55	84.14	5,585.77	48.00	1,615.53	1,616.24	1.82	-1.82	-0.45	182.85
	NORMAL	5,928.0	11.21	84.71	5,679.88	49.84	1,634.39	1,635.13	0.37	-0.35	0.59	161.98
	NORMAL	6,023.0	10.67	85.36	5,773.16	51.41	1,652.35	1,653.13	0.58	-0.57	0.68	167.45
	NORMAL	6,119.0	9.10	86.90	5,867.73	52.53	1,668.79	1,669.59	1.66	-1.64	1.60	171.20
	NORMAL	6,214.0	7.84	84.38	5,961.69	53.58	1,682.74	1,683.57	1.38	-1.33	-2.65	195.17
12/10/2011	NORMAL	6,310.0	7.43	86.58	6,056.84	54.59	1,695.45	1,696.30	0.52	-0.43	2.29	145.60
	NORMAL	6,405.0	6.24	89.66	6,151.16	54.98	1,706.74	1,707.60	1.31	-1.25	3.24	164.40
	NORMAL	6,501.0	5.19	94.23	6,246.69	54.69	1,716.29	1,717.14	1.19	-1.09	4.76	158.83
	NORMAL	6,596.0	3.96	94.15	6,341.38	54.14	1,723.85	1,724.68	1.29	-1.29	-0.08	180.26
	NORMAL	6,692.0	2.81	96.43	6,437.21	53.64	1,729.49	1,730.31	1.21	-1.20	2.38	174.46
	NORMAL	6,786.0	1.43	107.29	6,531.15	53.03	1,732.90	1,733.70	1.52	-1.47	11.55	169.15
	NORMAL	6,881.0	1.14	137.12	6,626.12	51.99	1,734.68	1,735.45	0.76	-0.31	31.40	127.87
	NORMAL	6,977.0	0.73	174.64	6,722.11	50.68	1,735.38	1,736.12	0.75	-0.43	39.08	141.60
	NORMAL	7,072.0	1.55	207.77	6,817.09	48.94	1,734.84	1,735.53	1.07	0.86	34.87	56.15
12/11/2011	NORMAL	7,168.0	1.58	204.01	6,913.06	46.58	1,733.70	1,734.32	0.11	0.03	-3.92	284.40

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 (°)
12/11/2011	NORMAL	7,262.0	0.81	193.76	7,007.03	44.75	1,733.01	1,733.59	0.85	-0.82	-10.90	190.43
	NORMAL	7,358.0	1.29	22.17	7,103.03	45.09	1,733.26	1,733.85	2.18	0.50	-178.74	185.17
	NORMAL	7,452.0	1.13	8.48	7,197.01	46.99	1,733.80	1,734.43	0.35	-0.17	-14.56	234.31
	NORMAL	7,547.0	0.64	1.04	7,292.00	48.45	1,733.94	1,734.62	0.53	-0.52	-7.83	189.50
	NORMAL	7,643.0	1.28	17.13	7,387.98	50.01	1,734.27	1,734.99	0.72	0.67	16.76	31.02
	NORMAL	7,739.0	1.21	10.70	7,483.96	52.03	1,734.77	1,735.54	0.16	-0.07	-6.70	240.20
12/12/2011	NORMAL	7,832.0	0.50	354.94	7,576.95	53.40	1,734.92	1,735.73	0.80	-0.76	-16.95	190.56
	NORMAL	7,928.0	1.23	36.49	7,672.94	54.64	1,735.50	1,736.33	0.96	0.76	43.28	62.73
	NORMAL	8,022.0	1.24	40.89	7,766.92	56.22	1,736.76	1,737.64	0.10	0.01	4.68	86.18
	NORMAL	8,118.0	0.79	42.38	7,862.90	57.50	1,737.89	1,738.80	0.47	-0.47	1.55	177.39
	NORMAL	8,213.0	0.57	135.71	7,957.90	57.64	1,738.66	1,739.58	1.05	-0.23	98.24	145.34
	NORMAL	8,308.0	0.70	136.16	8,052.89	56.88	1,739.39	1,740.29	0.14	0.14	0.47	2.42
12/13/2011	NORMAL	8,404.0	0.88	131.67	8,148.88	55.97	1,740.35	1,741.22	0.20	0.19	-4.68	338.77
12/14/2011	NORMAL	8,500.0	0.97	163.14	8,244.87	54.70	1,741.13	1,741.97	0.53	0.09	32.78	95.94
	NORMAL	8,595.0	1.49	177.03	8,339.85	52.70	1,741.43	1,742.22	0.63	0.55	14.62	36.89
	NORMAL	8,691.0	1.85	188.63	8,435.81	49.92	1,741.26	1,741.98	0.51	0.38	12.08	49.10
	NORMAL	8,786.0	2.02	194.17	8,530.75	46.78	1,740.62	1,741.25	0.27	0.18	5.83	50.53
	NORMAL	8,882.0	2.64	197.86	8,626.67	43.04	1,739.53	1,740.06	0.66	0.65	3.84	15.45
	NORMAL	8,953.0	2.81	203.04	8,697.59	39.88	1,738.35	1,738.80	0.42	0.24	7.30	57.99
	PROJECTION	9,010.0	2.95	207.20								