

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 341-36	Wellbore No.	
Well Name	RWF 341-36	Common Name	RWF 341-36
Project	RU 36-06S-094W	Site	RWF 32-36 Pad
Vertical Section Azimuth	59.89 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	12/26/2011	UWI	RWF 341-36
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	12/26/2011	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 (°)
12/26/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/26/2011	NORMAL	85.0	0.53	335.21	85.00	0.36	-0.16	0.04	0.62	0.62	0.00	335.21
	NORMAL	177.0	3.17	57.74	176.95	2.10	1.81	2.62	3.42	2.87	89.71	92.14
	NORMAL	268.0	4.05	60.29	267.77	5.04	6.73	8.35	0.98	0.97	2.80	11.61
	NORMAL	360.0	4.66	61.86	359.50	8.40	12.85	15.33	0.68	0.66	1.82	12.68
	NORMAL	431.0	8.15	62.16	430.05	12.11	19.85	23.24	4.92	4.92	0.28	0.47
12/27/2011	NORMAL	522.0	12.05	61.37	519.62	19.68	33.89	39.19	4.29	4.29	-0.87	357.58
	NORMAL	613.0	15.16	59.54	608.06	30.26	52.49	60.59	3.45	3.42	-2.01	351.23
	NORMAL	705.0	18.05	60.70	696.21	43.34	75.29	86.88	3.16	3.14	1.26	7.10
	NORMAL	796.0	20.37	59.55	782.14	58.27	101.25	116.82	2.58	2.55	-1.26	350.19
	NORMAL	888.0	22.24	59.63	867.85	75.19	130.07	150.24	2.03	2.03	0.09	0.93
	NORMAL	980.0	23.04	59.59	952.76	93.10	160.62	185.65	0.87	0.87	-0.04	358.88
	NORMAL	1,074.0	21.34	59.24	1,039.79	111.16	191.18	221.15	1.81	-1.81	-0.37	184.28
	NORMAL	1,108.0	21.46	59.17	1,071.45	117.51	201.84	233.58	0.36	0.35	-0.21	347.95
12/28/2011	NORMAL	1,198.0	21.90	58.48	1,155.08	134.73	230.29	266.80	0.56	0.49	-0.77	329.59
	NORMAL	1,282.0	22.21	58.06	1,214.40	147.36	250.73	290.82	0.54	0.48	-0.66	332.84
	NORMAL	1,358.0	20.61	59.29	1,303.77	165.59	280.65	325.85	1.73	-1.67	1.28	164.90
	NORMAL	1,453.0	19.85	58.79	1,392.91	182.49	308.82	358.70	0.82	-0.80	-0.53	192.58
	NORMAL	1,549.0	19.66	57.76	1,483.26	199.55	336.42	391.13	0.41	-0.20	-1.07	240.89
	NORMAL	1,644.0	20.30	59.01	1,572.54	216.56	364.07	423.58	0.81	0.67	1.32	34.31
	NORMAL	1,740.0	20.20	57.87	1,662.61	233.95	392.38	456.80	0.42	-0.10	-1.19	255.24

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 (°)
12/28/2011	NORMAL	1,838.0	21.48	56.94	1,752.33	252.35	421.15	490.92	1.38	1.33	-0.97	345.07
	NORMAL	1,929.0	20.94	54.56	1,839.03	271.28	448.96	524.47	1.09	-0.58	-2.56	236.80
	NORMAL	2,025.0	20.31	56.97	1,928.88	290.31	476.90	558.19	1.10	-0.66	2.51	127.70
	NORMAL	2,120.0	19.87	57.93	2,018.10	307.87	504.41	590.79	0.58	-0.46	1.01	143.60
	NORMAL	2,216.0	19.89	61.73	2,108.38	324.27	532.61	623.42	1.35	0.02	3.96	90.90
	NORMAL	2,312.0	20.73	63.05	2,198.41	339.70	562.14	656.70	1.00	0.88	1.38	29.23
	NORMAL	2,408.0	20.14	62.32	2,288.37	355.08	591.92	690.18	0.67	-0.61	-0.76	203.02
	NORMAL	2,502.0	20.71	62.22	2,376.46	370.34	620.96	722.96	0.61	0.61	-0.11	356.45
	NORMAL	2,598.0	20.04	61.41	2,464.58	385.80	649.81	755.67	0.77	-0.71	-0.86	202.45
	NORMAL	2,691.0	20.81	61.35	2,553.60	401.68	678.91	788.81	0.81	0.81	-0.06	358.41
	NORMAL	2,786.0	21.01	61.23	2,642.35	417.97	708.65	822.70	0.22	0.21	-0.13	347.86
	NORMAL	2,882.0	21.02	60.62	2,731.96	434.69	738.74	857.12	0.23	0.01	-0.64	272.33
	NORMAL	2,977.0	21.15	59.03	2,820.60	451.87	768.28	891.30	0.62	0.14	-1.67	282.06
	NORMAL	3,071.0	21.76	58.31	2,908.09	469.75	797.64	925.67	0.71	0.65	-0.77	336.31
	NORMAL	3,163.0	21.60	61.36	2,993.58	486.83	827.02	959.65	1.24	-0.17	3.32	99.50
	NORMAL	3,259.0	21.63	60.75	3,082.83	503.94	857.96	995.00	0.24	0.03	-0.64	277.32
	NORMAL	3,354.0	21.63	59.78	3,171.14	521.31	888.37	1,030.02	0.38	0.00	-1.02	269.55
	NORMAL	3,449.0	20.69	61.64	3,259.74	538.10	918.27	1,064.30	1.22	-0.99	1.96	145.33
	NORMAL	3,545.0	21.04	61.88	3,349.44	554.27	948.39	1,098.48	0.38	0.36	0.25	13.84
	NORMAL	3,640.0	21.04	61.53	3,438.11	570.44	978.42	1,132.57	0.13	0.00	-0.37	269.84
	NORMAL	3,736.0	21.53	60.03	3,527.56	587.46	1,008.83	1,167.41	0.76	0.51	-1.56	311.28
	NORMAL	3,831.0	20.14	59.17	3,616.35	604.55	1,037.98	1,201.20	1.50	-1.46	-0.91	192.01
	NORMAL	3,926.0	19.95	58.38	3,705.59	621.43	1,065.82	1,233.75	0.35	-0.20	-0.83	234.57
	NORMAL	4,021.0	20.66	59.60	3,794.69	638.40	1,094.08	1,266.71	0.87	0.75	1.28	31.38
	NORMAL	4,116.0	20.72	59.54	3,883.56	655.40	1,123.02	1,300.28	0.07	0.06	-0.06	340.51
	NORMAL	4,212.0	21.69	58.81	3,973.06	673.20	1,152.84	1,335.00	1.05	1.01	-0.76	344.43
	NORMAL	4,307.0	20.66	59.42	4,061.65	690.82	1,182.28	1,369.31	1.11	-1.08	0.64	168.21
12/29/2011	NORMAL	4,400.0	20.71	59.44	4,148.65	707.53	1,210.57	1,402.16	0.05	0.05	0.02	8.05
	NORMAL	4,496.0	21.51	58.04	4,238.21	725.47	1,240.12	1,436.72	0.98	0.83	-1.46	327.12
	NORMAL	4,590.0	20.72	59.38	4,325.90	743.06	1,269.05	1,470.57	0.98	-0.84	1.43	149.20
	NORMAL	4,686.0	20.80	58.58	4,415.66	760.60	1,298.21	1,504.60	0.31	0.08	-0.83	285.38
	NORMAL	4,782.0	21.28	58.45	4,505.26	778.60	1,327.60	1,539.05	0.50	0.50	-0.14	354.39
	NORMAL	4,877.0	20.31	59.05	4,594.07	796.10	1,356.43	1,572.77	1.05	-1.02	0.63	167.89
	NORMAL	4,973.0	20.23	58.58	4,684.13	813.32	1,384.88	1,606.03	0.19	-0.08	-0.49	243.61
	NORMAL	5,068.0	20.31	57.56	4,773.24	830.72	1,412.82	1,638.92	0.37	0.08	-1.05	282.53
	NORMAL	5,164.0	20.29	56.74	4,863.28	848.79	1,440.80	1,672.19	0.30	-0.02	-0.88	265.68
	NORMAL	5,259.0	19.94	59.85	4,952.49	865.96	1,468.58	1,704.83	1.18	-0.37	3.27	109.58
	NORMAL	5,355.0	19.94	60.97	5,042.74	882.12	1,497.05	1,737.57	0.40	0.00	1.17	90.53
12/30/2011	NORMAL	5,450.0	19.52	60.13	5,132.16	897.89	1,524.98	1,769.64	0.53	-0.44	-0.88	213.63
	NORMAL	5,545.0	18.10	58.85	5,222.08	913.43	1,551.37	1,800.27	1.56	-1.49	-1.35	195.60
	NORMAL	5,641.0	16.92	57.90	5,313.63	928.56	1,575.97	1,829.14	1.26	-1.23	-0.99	193.16
	NORMAL	5,737.0	16.40	58.08	5,405.60	943.15	1,599.31	1,856.65	0.54	-0.54	0.19	174.42
	NORMAL	5,832.0	14.19	60.46	5,497.23	955.99	1,620.82	1,881.70	2.42	-2.33	2.51	165.29
	NORMAL	5,928.0	12.84	62.01	5,590.57	966.79	1,640.48	1,904.12	1.46	-1.41	1.61	165.73
	NORMAL	6,023.0	12.45	61.32	5,683.27	976.66	1,658.79	1,924.91	0.44	-0.41	-0.73	200.84
	NORMAL	6,119.0	11.96	61.89	5,777.10	986.32	1,676.64	1,945.20	0.53	-0.51	0.59	166.46
	NORMAL	6,214.0	10.20	63.12	5,870.32	994.76	1,692.82	1,963.43	1.87	-1.85	1.29	172.95
	NORMAL	6,310.0	9.41	60.40	5,964.92	1,002.48	1,707.23	1,979.77	0.95	-0.82	-2.83	209.05
	NORMAL	6,406.0	7.98	60.84	6,059.82	1,009.60	1,719.87	1,994.28	1.49	-1.49	0.46	177.55
12/31/2011	NORMAL	6,501.0	6.73	64.68	6,154.03	1,015.20	1,730.66	2,006.42	1.41	-1.32	4.04	160.43
	NORMAL	6,595.0	5.80	59.96	6,247.47	1,019.93	1,739.76	2,016.66	1.13	-0.99	-5.02	206.65
	NORMAL	6,692.0	5.01	60.57	6,344.04	1,024.46	1,747.69	2,025.80	0.82	-0.81	0.63	176.14
	NORMAL	6,786.0	3.52	68.13	6,437.78	1,027.56	1,753.94	2,032.76	1.69	-1.59	8.04	163.07
	NORMAL	6,882.0	2.35	69.09	6,533.65	1,029.36	1,758.51	2,037.62	1.22	-1.22	1.00	178.07
	NORMAL	6,977.0	1.43	85.35	6,628.60	1,030.15	1,761.52	2,040.61	1.11	-0.97	17.12	157.72
	NORMAL	7,072.0	1.09	59.44	6,723.58	1,030.70	1,763.47	2,042.58	0.69	-0.36	-27.27	226.65
	NORMAL	7,168.0	0.88	70.42	6,819.56	1,031.41	1,764.96	2,044.22	0.29	-0.22	11.44	143.45

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 (°)
12/31/2011	NORMAL	7,262.0	0.73	63.48	6,913.55	1,031.92	1,766.17	2,045.53	0.19	-0.16	-7.38	209.59
	NORMAL	7,358.0	1.10	47.21	7,009.54	1,032.82	1,767.39	2,047.04	0.47	0.39	-16.95	316.61
	NORMAL	7,452.0	1.23	31.13	7,103.52	1,034.30	1,768.58	2,048.80	0.37	0.14	-17.11	283.52
1/1/2012	NORMAL	7,548.0	0.81	42.87	7,199.51	1,035.68	1,769.57	2,050.35	0.49	-0.44	12.23	159.33
	NORMAL	7,643.0	0.35	23.83	7,294.50	1,036.44	1,770.15	2,051.23	0.52	-0.48	-20.04	193.40
	NORMAL	7,739.0	0.66	237.38	7,390.50	1,036.41	1,769.80	2,050.91	1.01	0.32	-152.55	202.06
	NORMAL	7,833.0	0.44	66.02	7,484.50	1,036.26	1,769.67	2,050.73	1.17	-0.23	-182.30	163.45
	NORMAL	7,928.0	0.88	67.87	7,579.49	1,036.68	1,770.68	2,051.82	0.46	0.46	1.95	3.70
	NORMAL	8,022.0	0.44	78.33	7,673.48	1,037.03	1,771.70	2,052.88	0.48	-0.47	11.13	169.87
1/2/2012	NORMAL	8,118.0	0.09	69.10	7,769.48	1,037.13	1,772.14	2,053.30	0.37	-0.36	-9.61	182.35
	NORMAL	8,213.0	0.41	16.90	7,864.48	1,037.48	1,772.30	2,053.62	0.38	0.34	-54.95	296.47
	NORMAL	8,308.0	0.70	22.07	7,959.48	1,038.34	1,772.62	2,054.33	0.31	0.31	5.44	12.39
	NORMAL	8,404.0	1.14	19.09	8,055.46	1,039.79	1,773.15	2,055.51	0.46	0.46	-3.10	352.30
	NORMAL	8,500.0	0.88	23.04	8,151.45	1,041.37	1,773.76	2,056.83	0.28	-0.27	4.11	166.98
	NORMAL	8,595.0	0.07	101.21	8,246.45	1,042.03	1,774.10	2,057.46	0.91	-0.85	82.28	175.47
1/3/2012	NORMAL	8,691.0	0.97	208.58	8,342.44	1,041.31	1,773.77	2,056.80	1.03	0.94	111.84	111.23
	NORMAL	8,787.0	1.41	221.06	8,438.42	1,039.70	1,772.60	2,054.99	0.53	0.46	13.00	36.84
	NORMAL	8,882.0	1.58	219.30	8,533.39	1,037.81	1,771.00	2,052.66	0.19	0.18	-1.85	344.00
	NORMAL	8,978.0	1.41	220.09	8,629.36	1,035.88	1,769.41	2,050.31	0.18	-0.18	0.82	173.48
	NORMAL	9,074.0	1.67	212.36	8,725.32	1,033.79	1,767.90	2,047.96	0.35	0.27	-8.05	317.47
	NORMAL	9,157.0	2.00	206.36	8,808.28	1,031.48	1,766.61	2,045.68	0.46	0.40	-7.23	326.77
	NORMAL	9,214.0	2.00	206.36	8,865.24	1,029.69	1,765.72	2,044.02	0.00	0.00	0.00	0.00