

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 342-36	Wellbore No.	
Well Name	RWF 342-36	Common Name	RWF 342-36
Project	RU 36-06S-094W	Site	RWF 32-36 Pad
Vertical Section Azimuth	98.40 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	11/27/2011	UWI	RWF 342-36
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	11/27/2011	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 (°)
11/27/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/27/2011	NORMAL	84.0	0.53	163.21	84.00	-0.37	0.11	0.17	0.63	0.63	0.00	163.21
	NORMAL	178.0	2.02	107.67	177.98	-1.29	1.82	1.99	1.89	1.59	-59.09	290.21
	NORMAL	268.0	2.55	91.76	267.90	-1.83	5.33	5.54	0.91	0.59	-17.68	301.75
	NORMAL	360.0	3.43	99.58	359.78	-2.35	10.09	10.32	1.05	0.96	8.50	28.81
	NORMAL	430.0	5.45	100.75	429.56	-3.32	15.42	15.74	2.89	2.89	1.67	3.15
	NORMAL	521.0	7.54	96.76	519.98	-4.83	25.60	26.03	2.35	2.30	-4.38	345.83
	NORMAL	613.0	10.97	97.46	610.76	-6.68	40.27	40.82	3.73	3.73	0.76	2.23
	NORMAL	704.0	13.57	96.00	699.68	-8.92	59.48	60.14	2.88	2.86	-1.60	352.48
	NORMAL	795.0	15.52	95.31	787.76	-11.16	82.22	82.97	2.15	2.14	-0.76	354.69
	NORMAL	887.0	16.53	95.28	876.18	-13.51	107.51	108.33	1.10	1.10	-0.03	359.52
	NORMAL	979.0	15.43	98.24	964.63	-16.47	132.66	133.64	1.49	-1.20	3.22	144.88
	NORMAL	1,074.0	16.15	99.43	1,056.04	-20.44	158.20	159.49	0.83	0.76	1.25	24.79
	NORMAL	1,113.0	17.06	98.46	1,093.42	-22.17	169.21	170.63	2.44	2.33	-2.49	342.69
11/29/2011	NORMAL	1,262.0	17.68	99.25	1,235.62	-29.02	213.16	215.11	0.45	0.42	0.53	21.20
	NORMAL	1,358.0	18.50	98.00	1,326.87	-33.49	242.63	244.92	0.94	0.85	-1.30	334.07
	NORMAL	1,453.0	16.43	95.91	1,417.49	-36.97	270.92	273.41	2.28	-2.18	-2.20	195.86
	NORMAL	1,549.0	14.96	95.62	1,509.91	-39.58	296.76	299.36	1.53	-1.53	-0.30	182.92
	NORMAL	1,644.0	15.02	94.50	1,601.68	-41.75	321.23	323.89	0.31	0.06	-1.18	281.16
	NORMAL	1,740.0	14.12	96.84	1,694.59	-44.12	345.26	348.00	1.12	-0.94	2.44	147.94
	NORMAL	1,836.0	14.71	95.24	1,787.57	-46.63	369.03	371.88	0.74	0.61	-1.67	325.20

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 (°)
11/29/2011	NORMAL	1,929.0	14.89	99.48	1,877.48	-49.67	392.57	395.61	1.18	0.19	4.56	82.62
	NORMAL	2,025.0	15.20	100.33	1,970.19	-53.96	417.12	420.52	0.40	0.32	0.89	35.85
	NORMAL	2,120.0	14.86	101.69	2,061.94	-58.66	441.30	445.13	0.52	-0.36	1.43	134.61
	NORMAL	2,216.0	15.27	102.59	2,154.64	-63.91	465.69	470.03	0.49	0.43	0.94	30.14
	NORMAL	2,312.0	15.50	101.11	2,247.20	-69.14	490.62	495.45	0.47	0.24	-1.54	299.65
	NORMAL	2,408.0	16.11	99.61	2,339.57	-73.83	516.34	521.58	0.76	0.64	-1.56	325.46
	NORMAL	2,502.0	15.56	100.92	2,430.01	-78.40	541.57	547.22	0.70	-0.59	1.39	147.61
	NORMAL	2,596.0	15.04	101.27	2,520.68	-83.17	565.91	571.99	0.56	-0.55	0.37	170.10
	NORMAL	2,691.0	15.76	102.59	2,612.26	-88.39	590.59	597.17	0.84	0.76	1.39	26.60
	NORMAL	2,786.0	16.55	100.20	2,703.51	-93.60	616.50	623.56	1.09	0.83	-2.52	318.76
	NORMAL	2,882.0	16.88	99.78	2,795.46	-98.39	643.69	651.16	0.37	0.34	-0.44	339.69
	NORMAL	2,977.0	17.04	97.96	2,886.33	-102.66	671.07	678.87	0.58	0.17	-1.92	285.90
	NORMAL	3,071.0	15.92	95.12	2,976.46	-105.72	697.55	705.51	1.47	-1.19	-3.02	214.37
	NORMAL	3,163.0	15.70	96.10	3,064.98	-108.17	722.50	730.55	0.38	-0.24	1.07	129.96
	NORMAL	3,259.0	15.15	96.56	3,157.53	-110.98	747.88	756.07	0.59	-0.57	0.48	167.68
	NORMAL	3,354.0	15.65	98.02	3,249.11	-114.19	772.90	781.29	0.67	0.53	1.54	38.50
	NORMAL	3,449.0	14.63	98.76	3,340.82	-117.80	797.44	806.10	1.09	-1.07	0.78	169.63
	NORMAL	3,545.0	15.39	99.33	3,433.54	-121.71	822.00	830.96	0.81	0.79	0.59	11.27
	NORMAL	3,640.0	15.30	98.81	3,525.15	-125.68	846.82	856.10	0.17	-0.09	-0.55	236.56
	NORMAL	3,736.0	16.00	98.55	3,617.59	-129.58	872.42	881.99	0.73	0.73	-0.27	354.15
	NORMAL	3,831.0	16.32	95.50	3,708.84	-132.81	898.66	908.42	0.95	0.34	-3.21	289.19
	NORMAL	3,926.0	15.93	96.96	3,800.10	-135.67	924.88	934.78	0.59	-0.41	1.54	134.58
	NORMAL	4,021.0	15.03	95.56	3,891.66	-138.44	950.08	960.12	1.03	-0.95	-1.47	201.87
	NORMAL	4,116.0	15.56	96.23	3,983.29	-141.02	975.01	985.15	0.59	0.56	0.71	18.77
	NORMAL	4,212.0	16.23	97.91	4,075.62	-144.26	1,001.10	1,011.43	0.85	0.70	1.75	35.29
	NORMAL	4,307.0	15.84	97.02	4,166.93	-147.67	1,027.12	1,037.67	0.49	-0.41	-0.94	211.80
	NORMAL	4,400.0	15.39	98.33	4,256.49	-151.01	1,051.93	1,062.70	0.61	-0.48	1.41	142.55
	NORMAL	4,496.0	15.65	98.55	4,348.99	-154.78	1,077.33	1,088.39	0.28	0.27	0.23	12.86
	NORMAL	4,590.0	15.57	99.37	4,439.53	-158.72	1,102.32	1,113.68	0.25	-0.09	0.87	110.32
	NORMAL	4,686.0	15.18	99.73	4,532.09	-162.94	1,127.42	1,139.13	0.42	-0.41	0.38	166.42
	NORMAL	4,782.0	16.09	100.57	4,624.54	-167.51	1,152.89	1,164.99	0.98	0.95	0.88	14.38
11/30/2011	NORMAL	4,886.0	15.18	99.73	4,532.09	-162.94	1,127.42	1,139.13	0.00	0.00	0.00	0.00
	NORMAL	4,782.0	16.09	100.57	4,624.54	-167.51	1,152.89	1,164.99	0.00	0.00	0.00	0.00
	NORMAL	4,877.0	15.65	99.96	4,715.92	-172.14	1,178.45	1,190.95	0.50	-0.46	-0.64	200.47
	NORMAL	4,973.0	15.83	98.55	4,808.32	-176.33	1,204.15	1,216.99	0.44	0.19	-1.47	294.52
	NORMAL	5,068.0	15.56	97.93	4,899.77	-180.01	1,229.58	1,242.69	0.33	-0.28	-0.65	211.55
	NORMAL	5,164.0	14.77	95.91	4,992.43	-183.05	1,254.51	1,267.79	0.99	-0.82	-2.10	212.81
	NORMAL	5,259.0	15.39	96.13	5,084.16	-185.64	1,279.09	1,292.48	0.66	0.65	0.23	5.38
	NORMAL	5,355.0	15.64	96.87	5,176.66	-188.55	1,304.60	1,318.15	0.33	0.26	0.77	38.73
	NORMAL	5,450.0	15.01	98.87	5,268.28	-191.98	1,329.47	1,343.25	0.87	-0.66	2.11	140.96
	NORMAL	5,545.0	14.25	98.90	5,360.20	-195.68	1,353.18	1,367.24	0.80	-0.80	0.03	179.44
	NORMAL	5,641.0	12.50	95.85	5,453.60	-198.57	1,375.19	1,389.44	1.96	-1.82	-3.18	200.48
12/1/2011	NORMAL	5,737.0	10.05	95.17	5,547.74	-200.38	1,393.87	1,408.19	2.56	-2.55	-0.71	182.77
	NORMAL	5,832.0	9.41	94.77	5,641.37	-201.78	1,409.86	1,424.21	0.68	-0.67	-0.42	185.83
	NORMAL	5,928.0	8.83	98.23	5,736.16	-203.48	1,424.97	1,439.41	0.83	-0.60	3.60	138.30
	NORMAL	6,023.0	7.40	96.37	5,830.20	-205.21	1,438.27	1,452.82	1.53	-1.51	-1.98	189.48
	NORMAL	6,119.0	6.97	98.40	5,925.45	-206.74	1,450.18	1,464.82	0.52	-0.45	2.11	150.44
	NORMAL	6,214.0	6.53	96.34	6,019.79	-208.18	1,461.25	1,475.98	0.53	-0.46	-2.17	207.80
	NORMAL	6,310.0	4.85	92.24	6,115.31	-208.94	1,470.73	1,485.48	1.80	-1.75	-4.27	191.57
	NORMAL	6,406.0	3.34	90.02	6,211.07	-209.10	1,477.58	1,492.28	1.58	-1.57	-2.31	184.89
	NORMAL	6,501.0	2.84	91.93	6,305.93	-209.18	1,482.70	1,497.35	0.54	-0.53	2.01	169.32
	NORMAL	6,596.0	2.42	96.76	6,400.83	-209.50	1,487.05	1,501.70	0.50	-0.44	5.08	154.58
	NORMAL	6,692.0	2.08	105.75	6,496.75	-210.21	1,490.73	1,505.45	0.51	-0.35	9.36	138.36
	NORMAL	6,786.0	1.72	110.24	6,590.70	-211.16	1,493.70	1,508.52	0.41	-0.38	4.78	159.77
	NORMAL	6,882.0	1.59	122.00	6,686.66	-212.36	1,496.18	1,511.15	0.38	-0.14	12.25	116.75
12/2/2011	NORMAL	6,977.0	1.68	129.25	6,781.62	-213.94	1,498.38	1,513.56	0.24	0.09	7.63	70.14
	NORMAL	7,072.0	1.85	140.74	6,876.58	-216.01	1,500.43	1,515.89	0.41	0.18	12.09	70.16

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 (°)
12/2/2011	NORMAL	7,168.0	1.49	146.45	6,972.54	-218.25	1,502.10	1,517.87	0.41	-0.38	5.95	158.03
	NORMAL	7,262.0	0.18	31.68	7,066.53	-219.15	1,502.85	1,518.74	1.67	-1.39	-122.10	185.96
	NORMAL	7,358.0	0.35	279.69	7,162.53	-218.97	1,502.64	1,518.51	0.47	0.18	-116.66	226.22
	NORMAL	7,452.0	1.14	193.12	7,256.52	-219.83	1,502.14	1,518.14	1.25	0.84	-92.10	256.09
	NORMAL	7,548.0	1.06	170.44	7,352.50	-221.64	1,502.08	1,518.34	0.46	-0.08	-23.63	248.38
	NORMAL	7,643.0	0.38	142.75	7,447.50	-222.75	1,502.41	1,518.83	0.78	-0.72	-29.15	193.72
	NORMAL	7,739.0	1.15	50.67	7,543.49	-222.40	1,503.35	1,519.71	1.28	0.80	-95.92	249.85
	NORMAL	7,833.0	1.09	77.50	7,637.47	-221.60	1,504.95	1,521.18	0.56	-0.06	28.54	109.82
	NORMAL	7,928.0	0.29	102.90	7,732.46	-221.46	1,506.07	1,522.26	0.88	-0.84	26.74	171.46
	NORMAL	8,022.0	0.35	108.39	7,826.46	-221.61	1,506.57	1,522.78	0.07	0.06	5.84	29.83
	NORMAL	8,118.0	0.54	18.96	7,922.46	-221.27	1,507.00	1,523.16	0.67	0.20	-93.16	237.45
12/3/2011	NORMAL	8,118.0	0.54	18.96	7,922.46	-221.27	1,507.00	1,523.16	0.00	0.00	0.00	0.00
	NORMAL	8,213.0	1.06	4.77	8,017.45	-219.97	1,507.22	1,523.18	0.58	0.55	-14.94	331.95
	NORMAL	8,308.0	1.66	9.79	8,112.42	-217.74	1,507.52	1,523.16	0.64	0.63	5.28	13.75
	NORMAL	8,404.0	1.13	337.72	8,208.40	-215.49	1,507.40	1,522.71	0.96	-0.55	-33.41	220.50
	NORMAL	8,500.0	1.04	303.92	8,304.38	-214.13	1,506.32	1,521.44	0.66	-0.09	-35.21	245.33
	NORMAL	8,595.0	1.41	280.31	8,399.36	-213.44	1,504.45	1,519.50	0.65	0.39	-24.85	294.05
	NORMAL	8,691.0	1.67	241.37	8,495.33	-213.90	1,502.06	1,517.20	1.10	0.27	-40.56	263.97
	NORMAL	8,787.0	2.43	236.05	8,591.26	-215.71	1,499.15	1,514.58	0.82	0.79	-5.54	343.27
	NORMAL	8,882.0	3.17	228.96	8,686.15	-218.56	1,495.50	1,511.38	0.86	0.78	-7.46	331.35
	NORMAL	8,946.0	3.43	229.42	8,750.04	-220.96	1,492.71	1,508.97	0.41	0.41	0.72	6.04
	NORMAL	9,003.0	3.43	229.42	8,806.94	-223.18	1,490.12	1,506.74	0.00	0.00	0.00	0.00