

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 24-36	Wellbore No.	
Well Name	RWF 24-36	Common Name	RWF 24-36
Project	RU 36-06S-094W	Site	RWF 33-36 Pad
Vertical Section Azimuth	191.93 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	11/27/2012	UWI	RWF 24-36
Active Datum	KB @6,554.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	11/27/2012	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

6563

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 (°)
11/27/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/27/2012	NORMAL	98.0	0.97	154.95	98.00	-0.75	0.35	0.66	0.99	0.99	0.00	154.95
	NORMAL	180.0	3.08	185.98	179.94	-3.57	0.42	3.41	2.81	2.57	37.84	43.56
	NORMAL	272.0	4.57	189.76	271.73	-9.64	-0.46	9.53	1.64	1.62	4.11	11.50
11/28/2012	NORMAL	342.0	6.33	194.20	341.42	-16.13	-1.88	16.17	2.58	2.51	6.34	15.69
	NORMAL	434.0	9.55	195.77	432.52	-28.40	-5.20	28.86	3.51	3.50	1.71	4.63
	NORMAL	524.0	12.49	193.49	520.85	-45.05	-9.50	46.04	3.30	3.27	-2.53	350.45
	NORMAL	616.0	15.56	190.62	610.10	-66.86	-14.10	68.33	3.42	3.34	-3.12	345.84
	NORMAL	707.0	18.27	191.43	697.16	-92.84	-19.18	94.80	2.99	2.98	0.89	5.36
	NORMAL	799.0	19.08	191.24	784.31	-121.72	-24.96	124.25	0.88	0.88	-0.21	355.61
	NORMAL	890.0	20.14	190.79	870.03	-151.70	-30.80	154.79	1.18	1.16	-0.49	351.68
	NORMAL	980.0	21.08	189.71	954.27	-182.87	-36.43	186.45	1.13	1.04	-1.20	337.47
	NORMAL	1,071.0	18.98	191.28	1,039.76	-213.52	-42.08	217.61	2.38	-2.31	1.73	166.37
	NORMAL	1,123.0	19.08	191.50	1,088.92	-230.14	-45.43	234.56	0.24	0.19	0.42	35.76
11/30/2012	NORMAL	1,253.0	18.68	189.38	1,211.93	-271.50	-53.06	276.61	0.61	-0.31	-1.63	238.75
	NORMAL	1,348.0	19.95	191.81	1,301.58	-302.38	-58.86	308.02	1.58	1.34	2.56	33.48
	NORMAL	1,443.0	19.96	190.73	1,390.88	-334.18	-65.19	340.43	0.39	0.01	-1.14	271.05
	NORMAL	1,539.0	19.91	192.78	1,481.13	-366.22	-71.86	373.16	0.73	-0.05	2.14	95.05
	NORMAL	1,634.0	20.01	192.57	1,570.42	-397.86	-78.97	405.59	0.13	0.11	-0.22	324.27
	NORMAL	1,730.0	20.82	191.45	1,660.39	-430.61	-85.94	439.07	0.94	0.84	-1.17	333.73
	NORMAL	1,825.0	19.79	194.66	1,749.49	-462.72	-93.36	472.02	1.60	-1.08	3.38	134.26

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 (°)
11/30/2012	NORMAL	1,921.0	19.88	194.67	1,839.79	-494.23	-101.61	504.56	0.09	0.09	0.01	2.16
	NORMAL	2,014.0	19.71	195.16	1,927.30	-524.66	-109.71	536.01	0.26	-0.18	0.53	135.92
	NORMAL	2,110.0	19.45	196.25	2,017.75	-555.63	-118.42	568.11	0.47	-0.27	1.14	125.95
	NORMAL	2,206.0	20.12	193.95	2,108.08	-587.00	-126.87	600.55	1.07	0.70	-2.40	309.63
	NORMAL	2,301.0	20.66	193.89	2,197.13	-619.13	-134.83	633.63	0.57	0.57	-0.06	357.75
	NORMAL	2,396.0	20.77	193.26	2,285.98	-651.79	-142.72	667.22	0.26	0.12	-0.66	295.98
	NORMAL	2,491.0	20.64	193.79	2,374.85	-684.45	-150.57	700.79	0.24	-0.14	0.56	125.00
	NORMAL	2,587.0	20.38	190.72	2,464.77	-717.31	-157.72	734.42	1.15	-0.27	-3.20	254.98
	NORMAL	2,683.0	20.20	190.96	2,554.81	-750.00	-163.98	767.70	0.21	-0.19	0.25	155.30
	NORMAL	2,778.0	20.16	190.97	2,643.98	-782.18	-170.21	800.47	0.04	-0.04	0.01	175.08
	NORMAL	2,874.0	20.02	190.43	2,734.14	-814.58	-176.33	833.44	0.24	-0.15	-0.56	232.70
	NORMAL	2,970.0	19.71	191.17	2,824.42	-846.62	-182.44	866.05	0.42	-0.32	0.77	141.30
	NORMAL	3,066.0	19.44	190.83	2,914.88	-878.19	-188.58	898.21	0.31	-0.28	-0.35	202.71
	NORMAL	3,161.0	19.38	190.04	3,004.48	-909.24	-194.30	929.77	0.28	-0.06	-0.83	256.75
	NORMAL	3,257.0	19.16	189.41	3,095.10	-940.47	-199.65	961.43	0.32	-0.23	-0.66	223.08
	NORMAL	3,353.0	18.87	189.48	3,185.86	-971.32	-204.79	992.68	0.30	-0.30	0.07	175.54
	NORMAL	3,448.0	18.70	189.65	3,275.80	-1,001.49	-209.87	1,023.24	0.19	-0.18	0.18	162.23
	NORMAL	3,544.0	19.30	192.69	3,366.57	-1,032.14	-215.93	1,054.48	1.21	0.63	3.17	60.22
	NORMAL	3,640.0	19.08	192.09	3,457.24	-1,062.96	-222.71	1,086.04	0.31	-0.23	-0.63	221.59
	NORMAL	3,736.0	18.87	191.34	3,548.02	-1,093.52	-229.04	1,117.25	0.34	-0.22	-0.78	228.91
	NORMAL	3,829.0	19.36	193.12	3,635.89	-1,123.28	-235.50	1,147.70	0.82	0.53	1.91	50.79
	NORMAL	3,925.0	19.49	193.56	3,726.43	-1,154.35	-242.87	1,179.62	0.20	0.14	0.46	48.59
	NORMAL	4,020.0	19.64	193.55	3,815.94	-1,185.27	-250.32	1,211.42	0.16	0.16	-0.01	358.72
	NORMAL	4,115.0	19.64	193.81	3,905.42	-1,216.30	-257.88	1,243.33	0.09	0.00	0.27	90.12
	NORMAL	4,211.0	19.36	192.00	3,995.91	-1,247.53	-265.03	1,275.37	0.69	-0.29	-1.89	244.28
12/1/2012	NORMAL	4,306.0	19.72	191.40	4,085.44	-1,278.64	-271.48	1,307.14	0.43	0.38	-0.63	330.58
	NORMAL	4,399.0	19.58	191.32	4,173.02	-1,309.30	-277.64	1,338.42	0.15	-0.15	-0.09	190.84
	NORMAL	4,494.0	19.58	192.06	4,262.53	-1,340.48	-284.09	1,370.25	0.26	0.00	0.78	90.35
	NORMAL	4,589.0	19.63	191.82	4,352.02	-1,371.67	-290.68	1,402.13	0.10	0.05	-0.25	301.72
	NORMAL	4,684.0	19.83	192.09	4,441.45	-1,403.04	-297.33	1,434.20	0.23	0.21	0.28	24.63
	NORMAL	4,780.0	19.73	192.22	4,531.78	-1,434.80	-304.17	1,466.69	0.11	-0.10	0.14	156.31
	NORMAL	4,875.0	19.70	192.30	4,621.21	-1,466.12	-310.97	1,498.73	0.04	-0.03	0.08	138.06
	NORMAL	4,971.0	19.54	191.19	4,711.64	-1,497.68	-317.53	1,530.97	0.42	-0.17	-1.16	246.24
	NORMAL	5,067.0	19.19	192.90	4,802.21	-1,528.80	-324.17	1,562.79	0.69	-0.36	1.78	122.49
	NORMAL	5,161.0	17.64	190.08	4,891.39	-1,557.89	-330.11	1,592.48	1.90	-1.65	-3.00	208.56
	NORMAL	5,257.0	17.28	190.72	4,982.97	-1,586.22	-335.31	1,621.27	0.43	-0.38	0.67	152.23
12/2/2012	NORMAL	5,352.0	16.51	192.33	5,073.87	-1,613.27	-340.82	1,648.88	0.95	-0.81	1.69	149.48
	NORMAL	5,448.0	14.35	190.06	5,166.41	-1,638.31	-345.81	1,674.41	2.34	-2.25	-2.36	194.53
	NORMAL	5,544.0	13.96	190.20	5,259.49	-1,661.42	-349.94	1,697.88	0.41	-0.41	0.15	175.05
	NORMAL	5,639.0	12.56	190.84	5,351.96	-1,682.85	-353.91	1,719.66	1.48	-1.47	0.67	174.33
	NORMAL	5,735.0	11.87	191.50	5,445.78	-1,702.77	-357.84	1,739.97	0.73	-0.72	0.69	168.88
	NORMAL	5,839.0	10.76	187.60	5,547.76	-1,722.88	-361.26	1,760.35	1.30	-1.07	-3.75	212.68
	NORMAL	5,925.0	9.41	191.14	5,632.43	-1,737.74	-363.68	1,775.38	1.73	-1.57	4.12	157.07
	NORMAL	6,021.0	7.24	192.69	5,727.41	-1,751.34	-366.52	1,789.28	2.27	-2.26	1.61	174.86
	NORMAL	6,117.0	6.10	194.02	5,822.76	-1,762.19	-369.09	1,800.42	1.20	-1.19	1.39	172.94
12/3/2012	NORMAL	6,212.0	4.52	194.56	5,917.35	-1,770.71	-371.25	1,809.21	1.66	-1.66	0.57	178.46
	NORMAL	6,308.0	2.08	185.86	6,013.19	-1,776.11	-372.38	1,814.72	2.59	-2.54	-9.06	187.28
	NORMAL	6,404.0	0.88	177.61	6,109.15	-1,778.58	-372.53	1,817.17	1.27	-1.25	-8.59	185.96
	NORMAL	6,500.0	0.80	178.95	6,205.14	-1,779.98	-372.49	1,818.54	0.09	-0.08	1.40	166.87
	NORMAL	6,595.0	0.88	194.58	6,300.13	-1,781.35	-372.66	1,819.91	0.25	0.08	16.45	78.68
	NORMAL	6,689.0	0.64	171.12	6,394.12	-1,782.57	-372.76	1,821.12	0.41	-0.26	-24.96	221.02
	NORMAL	6,785.0	0.60	195.00	6,490.12	-1,783.58	-372.81	1,822.13	0.27	-0.04	24.88	110.61
12/4/2012	NORMAL	6,882.0	0.84	205.79	6,587.11	-1,784.71	-373.25	1,823.32	0.28	0.25	11.12	34.93
	NORMAL	6,978.0	0.78	195.17	6,683.10	-1,785.98	-373.72	1,824.66	0.17	-0.06	-11.06	242.96
	NORMAL	7,074.0	0.54	125.78	6,779.10	-1,786.87	-373.53	1,825.49	0.81	-0.25	-72.28	220.59
	NORMAL	7,169.0	0.70	93.70	6,874.09	-1,787.17	-372.59	1,825.59	0.40	0.17	-33.77	278.13
	NORMAL	7,265.0	0.53	53.19	6,970.09	-1,786.94	-371.65	1,825.17	0.47	-0.18	-42.20	229.21

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 (°)
12/4/2012	NORMAL	7,360.0	0.42	25.45	7,065.08	-1,786.37	-371.14	1,824.50	0.26	-0.12	-29.20	231.01
12/5/2012	NORMAL	7,456.0	0.75	41.81	7,161.08	-1,785.58	-370.57	1,823.62	0.38	0.34	17.04	35.18
	NORMAL	7,552.0	0.52	25.88	7,257.07	-1,784.72	-369.96	1,822.65	0.30	-0.24	-16.59	209.72
	NORMAL	7,647.0	0.40	50.04	7,352.07	-1,784.12	-369.52	1,821.97	0.24	-0.13	25.43	133.44
	NORMAL	7,743.0	0.21	123.25	7,448.07	-1,784.00	-369.12	1,821.77	0.41	-0.20	76.26	149.35
	NORMAL	7,838.0	0.40	202.98	7,543.07	-1,784.40	-369.10	1,822.16	0.44	0.20	83.93	109.41
	NORMAL	7,934.0	0.00	10.09	7,639.07	-1,784.71	-369.23	1,822.49	0.42	-0.42	0.00	180.00
	NORMAL	8,030.0	0.17	63.89	7,735.07	-1,784.65	-369.11	1,822.40	0.18	0.18	0.00	63.89
	NORMAL	8,125.0	0.29	353.51	7,830.06	-1,784.35	-369.01	1,822.09	0.30	0.13	-74.08	255.11
	NORMAL	8,221.0	0.26	298.72	7,926.06	-1,784.00	-369.22	1,821.79	0.27	-0.03	-57.07	236.60
	NORMAL	8,317.0	0.74	227.61	8,022.06	-1,784.31	-369.87	1,822.23	0.73	0.50	-74.07	268.33
12/6/2012	NORMAL	8,412.0	0.78	211.95	8,117.05	-1,785.28	-370.67	1,823.34	0.22	0.04	-16.48	273.00
	NORMAL	8,508.0	1.22	211.73	8,213.04	-1,786.70	-371.55	1,824.91	0.46	0.46	-0.23	359.39
	NORMAL	8,603.0	1.65	212.49	8,308.01	-1,788.71	-372.82	1,827.15	0.45	0.45	0.80	2.91
	NORMAL	8,699.0	1.70	216.24	8,403.97	-1,791.03	-374.40	1,829.74	0.13	0.05	3.91	67.36
	NORMAL	8,794.0	1.94	208.44	8,498.92	-1,793.58	-376.00	1,832.56	0.36	0.25	-8.21	310.15
	NORMAL	8,890.0	2.22	211.20	8,594.86	-1,796.60	-377.74	1,835.88	0.31	0.29	2.88	21.07
	NORMAL	8,916.0	2.28	216.47	8,620.84	-1,797.44	-378.31	1,836.82	0.83	0.23	20.27	76.47
12/7/2012	NORMAL	8,973.0	2.28	216.47	8,677.79	-1,799.27	-379.65	1,838.89	0.00	0.00	0.00	0.00