

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 311-36	Wellbore No.	
Well Name	RWF 311-36	Common Name	RWF 311-36
Project	RU 36-06S-094W	Site	GV 15-36 Pad
Vertical Section Azimuth	328.77 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	4/2/2012	UWI	RWF 311-36
Active Datum	KB @6,413.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	4/2/2012	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

6873

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 (°)
4/2/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/2/2012	NORMAL	84.0	0.88	322.12	84.00	0.51	-0.40	0.64	1.05	1.05	0.00	322.12
	NORMAL	178.0	1.76	329.85	177.97	2.33	-1.56	2.80	0.95	0.94	8.22	15.32
	NORMAL	269.0	3.17	331.88	268.88	5.75	-3.45	6.71	1.55	1.55	2.23	4.56
	NORMAL	360.0	6.51	332.67	359.55	12.56	-7.01	14.37	3.67	3.67	0.87	1.54
	NORMAL	451.0	9.06	329.33	449.70	23.31	-13.03	26.69	2.84	2.80	-3.67	348.28
	NORMAL	543.0	12.23	327.30	540.11	37.74	-21.99	43.67	3.47	3.45	-2.21	352.25
	NORMAL	614.0	15.04	328.42	609.10	51.92	-30.88	60.41	3.97	3.96	1.58	5.91
	NORMAL	705.0	17.25	329.41	696.50	73.60	-43.93	85.71	2.45	2.43	1.09	7.58
	NORMAL	796.0	18.61	327.22	783.08	97.42	-58.66	113.72	1.67	1.49	-2.41	332.59
	NORMAL	888.0	19.55	326.05	870.03	122.53	-75.21	143.77	1.10	1.02	-1.27	337.31
	NORMAL	980.0	17.67	329.05	957.22	147.28	-90.99	173.11	2.29	-2.04	3.26	154.43
	NORMAL	1,075.0	18.20	328.87	1,047.60	172.34	-106.07	202.36	0.56	0.56	-0.19	353.94
	NORMAL	1,119.0	18.91	328.70	1,089.31	184.32	-113.33	216.36	1.62	1.61	-0.39	355.56
4/4/2012	NORMAL	1,263.0	19.31	329.40	1,225.38	224.75	-137.57	263.51	0.32	0.28	0.49	30.14
	NORMAL	1,359.0	17.36	328.10	1,316.50	250.57	-153.22	293.70	2.08	-2.03	-1.35	191.23
4/5/2012	NORMAL	1,454.0	17.53	328.50	1,407.13	274.80	-168.18	322.18	0.22	0.18	0.42	35.39
	NORMAL	1,549.0	17.16	329.16	1,497.81	299.03	-182.84	350.50	0.44	-0.39	0.69	152.31
	NORMAL	1,645.0	16.88	329.24	1,589.61	323.17	-197.23	378.60	0.29	-0.29	0.08	175.26
	NORMAL	1,741.0	18.53	330.46	1,681.06	348.42	-211.88	407.79	1.76	1.72	1.27	13.25
	NORMAL	1,837.0	18.72	331.52	1,772.03	375.23	-226.75	438.42	0.40	0.20	1.10	61.20

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 (°)
4/5/2012	NORMAL	1,931.0	18.32	331.43	1,861.16	401.47	-241.01	468.25	0.43	-0.43	-0.10	184.05
	NORMAL	2,026.0	18.45	330.18	1,951.31	427.62	-255.62	498.19	0.44	0.14	-1.32	287.66
	NORMAL	2,122.0	18.31	330.18	2,042.41	453.88	-270.68	528.45	0.15	-0.15	0.00	180.00
	NORMAL	2,217.0	18.08	330.42	2,132.66	479.65	-285.37	558.11	0.25	-0.24	0.25	162.07
	NORMAL	2,313.0	17.94	330.11	2,223.96	505.42	-300.10	587.78	0.18	-0.15	-0.32	214.25
	NORMAL	2,409.0	17.82	330.12	2,315.32	530.98	-314.78	617.24	0.13	-0.12	0.01	178.54
	NORMAL	2,503.0	18.73	331.98	2,404.58	556.77	-329.04	646.69	1.15	0.97	1.98	33.54
	NORMAL	2,597.0	18.79	330.16	2,493.59	583.23	-343.66	676.89	0.63	0.06	-1.94	274.99
	NORMAL	2,692.0	18.37	330.89	2,583.64	609.58	-358.56	707.15	0.51	-0.44	0.77	151.37
	NORMAL	2,787.0	18.84	326.94	2,673.68	635.52	-374.21	737.44	1.42	0.49	-4.16	288.57
	NORMAL	2,883.0	18.69	326.26	2,764.57	661.30	-391.21	768.30	0.28	-0.16	-0.71	235.24
	NORMAL	2,978.0	18.37	326.16	2,854.65	686.39	-408.00	798.46	0.34	-0.34	-0.11	185.62
	NORMAL	3,072.0	17.81	326.40	2,944.00	710.67	-424.20	827.62	0.60	-0.60	0.26	172.53
	NORMAL	3,164.0	17.42	326.12	3,031.69	733.82	-439.66	855.44	0.43	-0.42	-0.30	192.12
4/6/2012	NORMAL	3,260.0	17.64	329.34	3,123.23	758.26	-455.09	884.34	1.04	0.23	3.35	78.76
	NORMAL	3,355.0	17.48	329.61	3,213.81	782.95	-469.65	913.00	0.19	-0.17	0.28	153.15
	NORMAL	3,451.0	18.52	329.78	3,305.11	808.56	-484.62	942.66	1.08	1.08	0.18	2.97
	NORMAL	3,546.0	18.52	329.73	3,395.19	834.63	-499.82	972.83	0.02	0.00	-0.05	269.98
	NORMAL	3,642.0	18.19	329.29	3,486.30	860.68	-515.15	1,003.06	0.37	-0.34	-0.46	202.57
	NORMAL	3,737.0	18.00	329.20	3,576.60	886.04	-530.24	1,032.56	0.20	-0.20	-0.09	188.33
	NORMAL	3,833.0	17.55	328.81	3,668.02	911.16	-545.33	1,061.87	0.48	-0.47	-0.41	194.63
	NORMAL	3,927.0	18.68	329.53	3,757.36	936.26	-560.31	1,091.09	1.23	1.20	0.77	11.55
	NORMAL	4,022.0	18.63	328.80	3,847.37	962.35	-575.88	1,121.48	0.25	-0.05	-0.77	257.57
	NORMAL	4,117.0	18.49	327.97	3,937.43	988.10	-591.73	1,151.72	0.31	-0.15	-0.87	241.69
	NORMAL	4,213.0	18.55	329.05	4,028.46	1,014.10	-607.66	1,182.21	0.36	0.06	1.13	80.59
	NORMAL	4,308.0	18.29	328.62	4,118.59	1,039.79	-623.19	1,212.23	0.31	-0.27	-0.45	207.39
	NORMAL	4,402.0	18.14	327.72	4,207.88	1,064.75	-638.69	1,241.61	0.34	-0.16	-0.96	241.51
	NORMAL	4,497.0	18.10	327.98	4,298.17	1,089.77	-654.41	1,271.15	0.09	-0.04	0.27	116.44
4/7/2012	NORMAL	4,591.0	17.72	328.00	4,387.61	1,114.28	-669.73	1,300.05	0.40	-0.40	0.02	179.08
	NORMAL	4,687.0	18.61	329.34	4,478.83	1,139.85	-685.29	1,329.98	1.02	0.93	1.40	25.78
	NORMAL	4,783.0	18.21	330.57	4,569.91	1,166.09	-700.47	1,360.29	0.58	-0.42	1.28	136.42
	NORMAL	4,878.0	17.86	330.23	4,660.25	1,191.66	-715.00	1,389.69	0.38	-0.37	-0.36	196.58
	NORMAL	4,974.0	17.21	329.51	4,751.79	1,216.68	-729.51	1,418.61	0.71	-0.68	-0.75	198.11
	NORMAL	5,069.0	15.82	330.35	4,842.86	1,240.04	-743.05	1,445.60	1.48	-1.46	0.88	170.65
	NORMAL	5,165.0	14.23	331.90	4,935.58	1,261.83	-755.08	1,470.47	1.71	-1.66	1.61	166.56
	NORMAL	5,261.0	14.17	332.32	5,028.65	1,282.64	-766.10	1,493.98	0.12	-0.06	0.44	120.42
	NORMAL	5,356.0	12.46	328.76	5,121.09	1,301.70	-776.81	1,515.83	2.00	-1.80	-3.75	203.89
	NORMAL	5,451.0	11.02	326.82	5,214.10	1,318.06	-787.10	1,535.16	1.57	-1.52	-2.04	194.38
	NORMAL	5,547.0	9.64	325.93	5,308.54	1,332.40	-796.62	1,552.36	1.45	-1.44	-0.93	186.16
	NORMAL	5,642.0	8.69	325.56	5,402.33	1,344.91	-805.14	1,567.47	1.00	-1.00	-0.39	183.37
	NORMAL	5,738.0	7.89	324.11	5,497.33	1,356.23	-813.10	1,581.28	0.86	-0.83	-1.51	193.93
	NORMAL	5,834.0	7.58	322.52	5,592.45	1,366.59	-820.82	1,594.14	0.39	-0.32	-1.66	213.83
4/8/2012	NORMAL	5,929.0	6.06	327.79	5,686.78	1,375.81	-827.30	1,605.38	1.73	-1.60	5.55	160.22
	NORMAL	6,024.0	3.79	319.91	5,781.42	1,382.45	-832.00	1,613.50	2.49	-2.39	-8.29	192.69
	NORMAL	6,120.0	3.26	314.35	5,877.24	1,386.79	-836.00	1,619.28	0.66	-0.55	-5.79	210.07
	NORMAL	6,216.0	2.73	319.56	5,973.11	1,390.44	-839.43	1,624.18	0.62	-0.55	5.43	155.40
	NORMAL	6,311.0	1.95	309.19	6,068.03	1,393.18	-842.15	1,627.93	0.93	-0.82	-10.92	203.38
	NORMAL	6,407.0	1.57	344.75	6,163.99	1,395.48	-843.76	1,630.74	1.18	-0.40	37.04	126.38
	NORMAL	6,503.0	1.55	41.61	6,259.96	1,397.72	-843.25	1,632.38	1.55	-0.02	59.23	119.10
	NORMAL	6,598.0	1.29	53.70	6,354.93	1,399.31	-841.53	1,632.86	0.42	-0.27	12.73	136.89
	NORMAL	6,693.0	0.74	66.90	6,449.91	1,400.19	-840.10	1,632.86	0.63	-0.58	13.89	163.48
	NORMAL	6,787.0	0.64	93.97	6,543.91	1,400.39	-839.02	1,632.48	0.36	-0.11	28.80	120.29
	NORMAL	6,883.0	0.41	85.41	6,639.90	1,400.38	-838.15	1,632.01	0.25	-0.24	-8.92	194.58
	NORMAL	6,978.0	0.57	153.10	6,734.90	1,399.99	-837.59	1,631.39	0.59	0.17	71.25	110.16
	NORMAL	7,073.0	0.21	358.68	6,829.90	1,399.74	-837.38	1,631.07	0.81	-0.38	-162.55	186.81
	NORMAL	7,169.0	0.08	22.28	6,925.90	1,399.98	-837.36	1,631.26	0.15	-0.14	24.58	166.81
	NORMAL	7,264.0	0.35	237.82	7,020.90	1,399.88	-837.58	1,631.30	0.44	0.28	-152.06	209.15

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 (°)
4/8/2012	NORMAL	7,360.0	0.69	128.12	7,116.89	1,399.37	-837.38	1,630.75	0.91	0.35	-114.27	228.11
4/9/2012	NORMAL	6,407.0	1.57	344.75	6,163.99	1,395.48	-843.76	1,630.74	0.00	0.00	0.00	0.00
	NORMAL	7,454.0	0.66	164.67	7,210.89	1,398.46	-836.85	1,629.70	0.45	-0.03	38.88	112.12
	NORMAL	7,550.0	0.55	343.12	7,306.89	1,398.37	-836.83	1,629.61	1.26	-0.11	185.89	179.30
	NORMAL	7,644.0	0.55	336.61	7,400.88	1,399.21	-837.14	1,630.49	0.07	0.00	-6.93	266.75
	NORMAL	7,740.0	0.53	327.73	7,496.88	1,400.01	-837.56	1,631.40	0.09	-0.02	-9.25	252.15
	NORMAL	7,835.0	0.26	325.71	7,591.88	1,400.56	-837.92	1,632.05	0.28	-0.28	-2.13	181.94
	NORMAL	7,931.0	0.27	239.72	7,687.87	1,400.63	-838.24	1,632.27	0.38	0.01	-89.57	228.16
	NORMAL	8,025.0	0.53	102.82	7,781.87	1,400.42	-838.01	1,631.97	0.80	0.28	-145.64	208.86
	NORMAL	8,120.0	0.26	97.02	7,876.87	1,400.29	-837.36	1,631.53	0.29	-0.28	-6.11	185.53
	NORMAL	8,214.0	0.96	133.82	7,970.87	1,399.72	-836.58	1,630.64	0.82	0.74	39.15	48.50
	NORMAL	8,309.0	0.75	160.06	8,065.86	1,398.59	-835.80	1,629.26	0.46	-0.22	27.62	130.90
4/10/2012	NORMAL	9,010.0	1.62	219.31	8,766.68	1,390.28	-845.28	1,627.07	0.00	0.00	0.00	0.00
4/10/2012	NORMAL	8,405.0	0.62	322.89	8,161.85	1,398.41	-835.90	1,629.16	1.41	-0.14	169.61	172.24
	NORMAL	8,501.0	0.42	284.91	8,257.85	1,398.92	-836.55	1,629.93	0.40	-0.21	-39.56	221.81
	NORMAL	8,596.0	0.88	241.94	8,352.84	1,398.66	-837.53	1,630.22	0.67	0.48	-45.23	290.47
	NORMAL	8,692.0	1.67	219.66	8,448.82	1,397.24	-839.07	1,629.81	0.96	0.82	-23.21	316.42
	NORMAL	8,788.0	1.79	225.53	8,544.78	1,395.11	-841.04	1,629.01	0.22	0.12	6.11	58.85
	NORMAL	8,883.0	1.68	221.18	8,639.73	1,393.02	-843.01	1,628.24	0.18	-0.12	-4.58	227.97
	NORMAL	8,955.0	1.62	219.31	8,711.70	1,391.44	-844.35	1,627.59	0.11	-0.08	-2.60	220.97