

I General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 532-36	Wellbore No.	
Well Name	RWF 532-36	Common Name	RWF 532-36
Project	RU 36-06S-094W	Site	RWF 33-36 Pad
Vertical Section Azimuth	52.98 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	3/12/2013	UWI	RWF 532-36
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	3/12/2013	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

6292

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 (°)
3/12/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/12/2013	NORMAL	159.0	2.96	57.86	158.93	2.18	3.48	4.09	1.86	1.86	0.00	57.86
	NORMAL	250.0	4.21	50.31	249.75	5.57	8.04	9.77	1.47	1.37	-8.30	335.51
	NORMAL	340.0	5.46	51.10	339.43	10.37	13.91	17.35	1.39	1.39	0.88	3.44
3/13/2013	NORMAL	431.0	6.48	50.90	429.93	16.32	21.27	26.81	1.12	1.12	-0.22	358.73
	NORMAL	522.0	7.47	49.51	520.26	23.40	29.75	37.84	1.10	1.09	-1.53	349.63
	NORMAL	612.0	6.24	58.22	609.62	29.78	38.36	48.56	1.79	-1.37	9.68	144.06
	NORMAL	703.0	6.57	59.79	700.05	35.00	47.06	58.65	0.41	0.36	1.73	28.74
	NORMAL	794.0	7.21	50.92	790.39	41.22	55.99	69.53	1.36	0.70	-9.75	296.57
	NORMAL	884.0	8.22	47.85	879.58	49.10	65.15	81.58	1.21	1.12	-3.41	336.28
	NORMAL	975.0	6.78	49.60	969.80	56.95	74.06	93.42	1.60	-1.58	1.92	171.85
	NORMAL	1,066.0	7.03	50.48	1,060.14	63.97	82.45	104.35	0.30	0.27	0.97	23.37
	NORMAL	1,123.0	7.67	50.15	1,116.67	68.63	88.06	111.63	1.13	1.12	-0.58	356.06
3/26/2013	NORMAL	1,255.0	7.74	50.30	1,247.47	79.95	101.66	129.31	0.06	0.05	0.11	16.10
	NORMAL	1,351.0	7.99	50.98	1,342.57	88.28	111.82	142.43	0.28	0.26	0.71	20.75
	NORMAL	1,446.0	7.47	51.71	1,436.71	96.27	121.79	155.20	0.56	-0.55	0.77	169.67
	NORMAL	1,542.0	6.92	55.53	1,531.95	103.41	131.46	167.22	0.76	-0.57	3.98	140.86
	NORMAL	1,638.0	6.77	55.84	1,627.27	109.86	140.91	178.65	0.16	-0.16	0.32	166.32
	NORMAL	1,733.0	6.39	54.75	1,721.64	116.05	149.86	189.53	0.42	-0.40	-1.15	197.65
	NORMAL	1,829.0	6.24	54.00	1,817.06	122.20	158.44	200.08	0.18	-0.16	-0.78	208.44
	NORMAL	1,922.0	5.98	50.66	1,909.53	128.24	166.28	209.98	0.47	-0.28	-3.59	232.17

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 (°)
3/26/2013	NORMAL	2,017.0	5.96	52.30	2,004.01	134.40	174.01	219.85	0.18	-0.02	1.73	97.50
	NORMAL	2,113.0	5.68	50.94	2,099.52	140.44	181.64	229.58	0.33	-0.29	-1.42	205.55
	NORMAL	2,207.0	6.61	54.72	2,192.98	146.49	189.67	239.64	1.08	0.99	4.02	25.40
	NORMAL	2,303.0	6.80	54.44	2,288.32	152.99	198.81	250.85	0.20	0.20	-0.29	350.10
	NORMAL	2,398.0	6.33	52.84	2,382.70	159.42	207.55	261.70	0.53	-0.49	-1.68	200.47
	NORMAL	2,494.0	6.36	52.35	2,478.11	165.87	215.98	272.31	0.06	0.03	-0.51	298.74
	NORMAL	2,589.0	5.98	54.36	2,572.56	171.97	224.17	282.52	0.46	-0.40	2.12	151.38
3/27/2013	NORMAL	2,685.0	5.84	53.12	2,668.05	177.81	232.14	292.41	0.20	-0.15	-1.29	221.75
	NORMAL	2,777.0	6.85	59.11	2,759.48	183.44	240.59	302.54	1.31	1.10	6.51	36.24
	NORMAL	2,871.0	7.34	58.38	2,852.76	189.46	250.52	314.09	0.53	0.52	-0.78	349.21
	NORMAL	2,967.0	7.08	59.09	2,948.00	195.72	260.81	326.08	0.29	-0.27	0.74	161.43
	NORMAL	3,062.0	7.45	46.13	3,042.25	202.99	270.28	338.02	1.76	0.39	-13.64	276.24
	NORMAL	3,158.0	7.49	48.36	3,137.43	211.46	279.44	350.43	0.30	0.04	2.32	83.25
	NORMAL	3,252.0	7.27	47.00	3,230.65	219.59	288.37	362.46	0.30	-0.23	-1.45	217.78
	NORMAL	3,348.0	7.14	46.48	3,325.90	227.84	297.14	374.43	0.15	-0.14	-0.54	206.38
	NORMAL	3,444.0	7.03	46.93	3,421.16	235.96	305.76	386.19	0.13	-0.11	0.47	153.45
	NORMAL	3,540.0	6.64	46.39	3,516.48	243.80	314.07	397.55	0.41	-0.41	-0.56	189.09
	NORMAL	3,635.0	7.23	53.74	3,610.79	251.13	322.86	408.98	1.12	0.62	7.74	60.07
	NORMAL	3,731.0	7.00	53.75	3,706.05	258.16	332.45	420.87	0.24	-0.24	0.01	179.70
	NORMAL	3,826.0	6.92	51.90	3,800.35	265.11	341.62	432.38	0.25	-0.08	-1.95	249.44
	NORMAL	3,922.0	6.74	52.30	3,895.67	272.13	350.63	443.80	0.19	-0.19	0.42	165.40
	NORMAL	4,017.0	6.22	53.31	3,990.06	278.61	359.17	454.52	0.56	-0.55	1.06	168.14
	NORMAL	4,113.0	6.09	53.28	4,085.50	284.76	367.42	464.81	0.14	-0.14	-0.03	181.40
	NORMAL	4,209.0	5.83	53.44	4,180.99	290.71	375.42	474.78	0.27	-0.27	0.17	176.42
	NORMAL	4,305.0	6.34	56.86	4,276.44	296.51	383.78	484.94	0.65	0.53	3.56	37.12
	NORMAL	4,400.0	6.44	59.08	4,370.85	302.12	392.74	495.48	0.28	0.11	2.34	69.07
	NORMAL	4,496.0	5.83	59.11	4,466.30	307.39	401.54	505.68	0.64	-0.64	0.03	179.71
	NORMAL	4,591.0	6.33	56.90	4,560.77	312.73	410.07	515.70	0.58	0.53	-2.33	333.81
	NORMAL	4,685.0	6.40	55.17	4,654.19	318.55	418.71	526.10	0.22	0.07	-1.84	289.19
3/28/2013	NORMAL	4,780.0	6.95	54.61	4,748.54	324.90	427.74	537.14	0.58	0.58	-0.59	352.97
	NORMAL	4,876.0	6.96	53.84	4,843.84	331.70	437.17	548.76	0.10	0.01	-0.80	275.74
	NORMAL	4,972.0	6.60	55.23	4,939.17	338.27	446.40	560.09	0.41	-0.38	1.45	156.18
	NORMAL	5,068.0	5.87	56.51	5,034.60	344.13	455.03	570.50	0.77	-0.76	1.33	169.85
	NORMAL	5,163.0	7.16	55.68	5,128.98	350.15	463.97	581.27	1.36	1.36	-0.87	355.41
	NORMAL	5,259.0	6.74	57.46	5,224.28	356.55	473.66	592.86	0.49	-0.44	1.85	153.73
	NORMAL	5,355.0	6.47	51.24	5,319.64	362.97	482.63	603.88	0.80	-0.28	-6.48	246.25
3/29/2013	NORMAL	5,449.0	5.85	50.65	5,413.10	369.32	490.46	613.96	0.66	-0.66	-0.63	185.54
	NORMAL	5,545.0	5.24	52.24	5,508.65	375.11	497.71	623.23	0.66	-0.64	1.66	166.65
	NORMAL	5,640.0	5.94	51.79	5,603.19	380.80	505.00	632.49	0.74	0.74	-0.47	356.19
	NORMAL	5,734.0	6.46	51.68	5,696.64	387.09	512.97	642.64	0.55	0.55	-0.12	358.64
	NORMAL	5,830.0	6.19	51.63	5,792.06	393.65	521.27	653.21	0.28	-0.28	-0.05	181.14
	NORMAL	5,923.0	5.36	50.39	5,884.59	399.54	528.54	662.56	0.90	-0.89	-1.33	187.93
	NORMAL	6,018.0	5.00	51.32	5,979.20	404.95	535.19	671.13	0.39	-0.38	0.98	167.33
	NORMAL	6,113.0	4.88	50.12	6,073.85	410.13	541.53	679.31	0.17	-0.13	-1.26	220.14
	NORMAL	6,208.0	4.01	53.71	6,168.56	414.69	547.30	686.66	0.96	-0.92	3.78	164.05
	NORMAL	6,304.0	2.33	49.09	6,264.41	417.95	551.49	691.97	1.77	-1.75	-4.81	186.35
	NORMAL	6,399.0	2.28	47.51	6,359.33	420.49	554.34	695.77	0.09	-0.05	-1.66	231.02
	NORMAL	6,495.0	1.58	42.42	6,455.28	422.76	556.64	698.98	0.75	-0.73	-5.30	191.23
	NORMAL	6,590.0	0.83	31.15	6,550.25	424.32	557.88	700.90	0.82	-0.79	-11.86	191.96
	NORMAL	6,684.0	0.62	33.54	6,644.25	425.32	558.51	702.01	0.23	-0.22	2.54	173.00
3/30/2013	NORMAL	6,779.0	0.38	69.83	6,739.24	425.86	559.09	702.80	0.41	-0.25	38.20	144.36
	NORMAL	6,875.0	0.18	92.49	6,835.24	425.96	559.54	703.22	0.23	-0.21	23.60	162.04
	NORMAL	6,969.0	0.51	317.38	6,929.24	426.26	559.41	703.29	0.69	0.35	-143.73	213.62
	NORMAL	7,065.0	0.53	313.01	7,025.24	426.88	558.79	703.18	0.05	0.02	-4.55	294.56
	NORMAL	7,161.0	0.74	276.44	7,121.23	427.25	557.85	702.65	0.46	0.22	-38.09	278.30
	NORMAL	7,254.0	0.52	255.98	7,214.22	427.22	556.84	701.82	0.33	-0.24	-22.00	215.72
	NORMAL	7,350.0	0.70	238.57	7,310.22	426.81	555.92	700.84	0.27	0.19	-18.14	305.23

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 (°)
3/30/2013	NORMAL	7,446.0	0.94	41.85	7,406.22	427.09	555.95	701.03	1.69	0.25	170.08	170.41
	NORMAL	7,541.0	0.74	61.20	7,501.21	427.96	557.00	702.40	0.36	-0.21	20.37	134.60
	NORMAL	7,636.0	1.02	46.70	7,596.19	428.84	558.16	703.85	0.37	0.29	-15.26	314.10
	NORMAL	7,732.0	0.94	28.10	7,692.18	430.12	559.15	705.41	0.34	-0.08	-19.38	246.70
	NORMAL	7,828.0	0.54	26.27	7,788.17	431.22	559.72	706.53	0.42	-0.42	-1.91	182.47
	NORMAL	7,923.0	0.72	37.86	7,883.17	432.09	560.29	707.51	0.23	0.19	12.20	41.18
	NORMAL	8,019.0	0.38	69.23	7,979.16	432.68	560.95	708.39	0.46	-0.35	32.68	153.43
	NORMAL	8,115.0	0.51	222.79	8,075.16	432.48	560.96	708.28	0.90	0.14	159.96	164.81
3/31/2013	NORMAL	8,211.0	0.97	225.03	8,171.15	431.59	560.10	707.05	0.48	0.48	2.33	4.72
	NORMAL	8,306.0	1.93	225.03	8,266.12	429.89	558.39	704.67	1.01	1.01	0.00	0.00
	NORMAL	8,401.0	2.20	237.95	8,361.06	427.80	555.72	701.27	0.56	0.28	13.60	66.45
	NORMAL	8,494.0	2.46	239.09	8,453.98	425.82	552.49	697.51	0.28	0.28	1.23	10.68
	NORMAL	8,589.0	3.25	239.88	8,548.86	423.43	548.41	692.81	0.83	0.83	0.83	3.25
	NORMAL	8,685.0	3.96	244.89	8,644.67	420.65	543.06	686.86	0.81	0.74	5.22	26.44
	NORMAL	8,781.0	3.91	237.16	8,740.45	417.47	537.31	680.36	0.55	-0.05	-8.05	260.77
	NORMAL	8,941.0	3.69	239.71	8,900.11	411.92	528.28	669.80	0.17	-0.14	1.59	143.74