

I General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 314-29	Wellbore No.	
Well Name	RWF 314-29	Common Name	RWF 314-29
Project	RU 29-06S-094W	Site	RWF 14-29 Pad
Vertical Section Azimuth	7.84 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	4/17/2013	UWI	RWF 314-29
Active Datum	KB @5,445.2ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	4/17/2013	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

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 (°)
4/17/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/17/2013	NORMAL	86.0	0.92	10.08	86.00	0.68	0.12	0.69	1.07	1.07	0.00	10.08
	NORMAL	116.0	1.54	12.19	115.99	1.31	0.25	1.33	2.07	2.07	7.03	5.23
	NORMAL	147.0	1.63	26.78	146.98	2.11	0.53	2.16	1.33	0.29	47.06	84.79
	NORMAL	178.0	1.80	9.38	177.96	2.99	0.81	3.07	1.76	0.55	-56.13	279.25
	NORMAL	208.0	2.42	354.44	207.94	4.08	0.83	4.16	2.75	2.07	-49.80	310.79
	NORMAL	239.0	2.59	353.56	238.91	5.43	0.69	5.47	0.56	0.55	-2.84	346.8'
	NORMAL	269.0	3.03	357.25	268.88	6.89	0.57	6.91	1.59	1.47	12.30	24.20
	NORMAL	300.0	3.56	358.74	299.83	8.67	0.51	8.66	1.73	1.71	4.81	9.92
	NORMAL	331.0	3.87	2.78	330.76	10.68	0.54	10.66	1.31	1.00	13.03	42.2'
	NORMAL	362.0	5.10	5.86	361.67	13.10	0.73	13.07	4.04	3.97	9.94	12.62
	NORMAL	393.0	5.54	7.00	392.53	15.95	1.06	15.95	1.46	1.42	3.68	14.08
	NORMAL	423.0	6.42	12.01	422.37	19.03	1.58	19.07	3.41	2.93	16.70	33.18
	NORMAL	454.0	7.21	12.89	453.15	22.62	2.38	22.74	2.57	2.55	2.84	7.97
	NORMAL	485.0	7.47	11.40	483.90	26.49	3.21	26.68	1.04	0.84	-4.81	323.05
	NORMAL	516.0	8.04	14.12	514.61	30.57	4.14	30.85	2.19	1.84	8.77	34.13
	NORMAL	546.0	8.44	9.02	544.30	34.78	4.99	35.14	2.78	1.33	-17.00	296.15
	NORMAL	576.0	8.84	9.46	573.96	39.23	5.72	39.64	1.35	1.33	1.47	9.60
	NORMAL	606.0	8.92	5.42	603.60	43.82	6.31	44.27	2.10	0.27	-13.47	275.3'
	NORMAL	637.0	9.19	2.96	634.22	48.68	6.67	49.14	1.52	0.87	-7.94	303.67
	NORMAL	698.0	8.84	4.37	694.46	58.22	7.28	58.67	0.68	-0.57	2.31	148.43

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 (°)
4/17/2013	NORMAL	789.0	6.50	359.53	784.64	70.35	7.77	70.75	2.67	-2.57	-5.32	193.04
	NORMAL	881.0	7.60	2.52	875.95	81.63	7.99	81.96	1.26	1.20	3.25	19.94
	NORMAL	973.0	8.04	11.22	967.09	94.02	9.51	94.44	1.37	0.48	9.46	73.96
	NORMAL	1,069.0	9.45	10.87	1,061.98	108.35	12.31	109.01	1.47	1.47	-0.36	357.67
4/19/2013	NORMAL	1,166.0	10.46	11.93	1,157.51	124.78	15.63	125.75	1.06	1.04	1.09	10.81
	NORMAL	1,261.0	9.28	12.89	1,251.11	140.69	19.12	141.98	1.25	-1.24	1.01	172.53
	NORMAL	1,356.0	7.56	5.07	1,345.08	154.38	21.38	155.85	2.17	-1.81	-8.23	209.83
	NORMAL	1,451.0	7.69	4.89	1,439.24	166.94	22.47	168.44	0.14	0.14	-0.19	349.50
	NORMAL	1,547.0	7.96	6.92	1,534.35	179.94	23.82	181.50	0.40	0.28	2.11	46.68
	NORMAL	1,642.0	6.81	4.02	1,628.56	192.08	25.01	193.70	1.27	-1.21	-3.05	196.53
	NORMAL	1,737.0	7.12	358.21	1,722.86	203.59	25.22	205.13	0.81	0.33	-6.12	290.85
	NORMAL	1,832.0	5.93	12.89	1,817.25	214.26	26.13	215.82	2.15	-1.25	15.45	132.65
	NORMAL	1,927.0	6.07	13.33	1,911.73	223.93	28.39	225.71	0.16	0.15	0.46	18.41
	NORMAL	2,023.0	6.02	15.18	2,007.19	233.73	30.87	235.75	0.21	-0.05	1.93	105.31
	NORMAL	2,118.0	6.29	17.90	2,101.65	243.49	33.78	245.82	0.42	0.28	2.86	48.56
	NORMAL	2,214.0	7.21	9.29	2,196.98	254.44	36.37	257.02	1.42	0.96	-8.97	307.94
	NORMAL	2,309.0	7.78	7.79	2,291.17	266.69	38.20	269.41	0.63	0.60	-1.58	340.3
	NORMAL	2,499.0	8.09	3.66	2,479.35	292.77	40.80	295.60	0.34	0.16	-2.17	296.48
	NORMAL	2,595.0	8.44	5.69	2,574.36	306.53	41.93	309.38	0.47	0.36	2.11	40.83
	NORMAL	2,690.0	9.01	2.96	2,668.26	320.89	43.00	323.76	0.74	0.60	-2.87	322.65
	NORMAL	2,785.0	7.96	8.15	2,762.22	334.83	44.32	337.75	1.37	-1.11	5.46	146.44
	NORMAL	2,881.0	6.50	6.92	2,857.45	346.81	45.92	349.83	1.53	-1.52	-1.28	185.44
	NORMAL	2,976.0	6.77	2.70	2,951.82	357.74	46.83	360.78	0.59	0.28	-4.44	296.87
	NORMAL	3,071.0	6.68	4.45	3,046.16	368.84	47.52	371.88	0.24	-0.09	1.84	114.58
	NORMAL	3,166.0	6.11	1.82	3,140.57	379.40	48.11	382.42	0.67	-0.60	-2.77	205.90
	NORMAL	3,261.0	7.12	7.79	3,234.94	390.29	49.07	393.34	1.28	1.06	6.28	37.24
	NORMAL	3,356.0	8.04	16.14	3,329.11	402.51	51.71	405.80	1.51	0.97	8.79	54.32
	NORMAL	3,452.0	8.09	17.02	3,424.16	415.41	55.56	419.11	0.14	0.05	0.92	68.38
	NORMAL	3,547.0	8.04	16.67	3,518.22	428.17	59.42	432.27	0.07	-0.05	-0.37	224.3
	NORMAL	3,643.0	7.78	11.14	3,613.31	440.98	62.60	445.39	0.84	-0.27	-5.76	248.4
	NORMAL	3,738.0	7.96	7.09	3,707.41	453.81	64.65	458.39	0.61	0.19	-4.26	285.97
4/20/2013	NORMAL	3,833.0	8.53	8.32	3,801.43	467.31	66.49	472.01	0.63	0.60	1.29	17.80
	NORMAL	3,929.0	8.26	7.53	3,896.40	481.19	68.42	486.03	0.31	-0.28	-0.82	202.74
	NORMAL	4,024.0	8.79	4.81	3,990.35	495.19	69.92	500.10	0.70	0.56	-2.86	321.38
	NORMAL	4,119.0	7.60	7.44	4,084.38	508.66	71.34	513.63	1.31	-1.25	2.77	163.8
	NORMAL	4,214.0	5.98	7.62	4,178.71	519.79	72.81	524.86	1.71	-1.71	0.19	179.34
	NORMAL	4,309.0	5.71	8.15	4,273.22	529.37	74.14	534.54	0.29	-0.28	0.56	168.96
	NORMAL	4,405.0	6.02	11.22	4,368.72	539.04	75.80	544.34	0.46	0.32	3.20	46.87
	NORMAL	4,500.0	6.68	12.72	4,463.13	549.32	77.98	554.82	0.72	0.69	1.58	14.86
	NORMAL	4,595.0	8.04	8.32	4,557.35	561.28	80.16	566.97	1.55	1.43	-4.63	335.30
	NORMAL	4,690.0	8.57	9.02	4,651.35	574.84	82.23	580.69	0.57	0.56	0.74	11.15
	NORMAL	4,786.0	8.92	7.44	4,746.24	589.29	84.32	595.28	0.44	0.36	-1.65	324.75
	NORMAL	4,881.0	7.56	4.54	4,840.25	602.82	85.77	608.89	1.50	-1.43	-3.05	195.56
	NORMAL	4,976.0	5.50	359.18	4,934.63	613.60	86.20	619.63	2.26	-2.17	-5.64	193.83
	NORMAL	5,072.0	2.99	349.60	5,030.36	620.67	85.68	626.55	2.71	-2.61	-9.98	191.03
	NORMAL	5,167.0	1.32	356.19	5,125.29	624.20	85.16	629.98	1.77	-1.76	6.94	174.84
	NORMAL	5,262.0	1.27	17.02	5,220.27	626.30	85.39	632.09	0.50	-0.05	21.93	106.4
4/21/2013	NORMAL	5,357.0	1.41	2.17	5,315.24	628.47	85.75	634.29	0.39	0.15	-15.63	284.42
	NORMAL	5,452.0	1.01	0.41	5,410.22	630.48	85.80	636.29	0.42	-0.42	-1.85	184.43
	NORMAL	5,547.0	1.14	14.39	5,505.21	632.23	86.04	638.06	0.31	0.14	14.72	70.74
	NORMAL	5,643.0	0.97	1.38	5,601.19	633.97	86.29	639.81	0.30	-0.18	-13.55	228.25
	NORMAL	5,738.0	1.36	348.11	5,696.17	635.87	86.08	641.67	0.50	0.41	-13.97	318.57
	NORMAL	5,833.0	1.50	345.82	5,791.14	638.18	85.54	643.89	0.16	0.15	-2.41	336.65
	NORMAL	5,928.0	1.36	340.81	5,886.11	640.45	84.87	646.04	0.20	-0.15	-5.27	219.28
	NORMAL	6,024.0	1.54	339.06	5,982.08	642.73	84.03	648.19	0.19	0.19	-1.82	345.30
	NORMAL	6,119.0	1.93	0.68	6,077.04	645.52	83.60	650.89	0.79	0.41	22.76	70.32
	NORMAL	6,214.0	2.07	25.81	6,171.98	648.67	84.36	654.11	0.93	0.15	26.45	93.63

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 (°)
4/22/2013	NORMAL	6,309.0	1.76	64.05	6,266.93	650.85	86.42	656.56	1.36	-0.33	40.25	122.25
	NORMAL	6,404.0	1.58	127.77	6,361.90	650.69	88.77	656.71	1.86	-0.19	67.07	126.81
	NORMAL	6,499.0	1.58	178.22	6,456.87	648.58	89.84	654.77	1.42	0.00	53.11	115.22
	NORMAL	6,595.0	1.63	180.68	6,552.83	645.89	89.87	652.11	0.09	0.05	2.56	55.27
	NORMAL	6,690.0	1.23	181.03	6,647.80	643.52	89.83	649.76	0.42	-0.42	0.37	178.92
	NORMAL	6,785.0	0.92	181.56	6,742.78	641.74	89.80	647.99	0.33	-0.33	0.56	178.43
	NORMAL	6,880.0	0.79	179.09	6,837.77	640.32	89.78	646.58	0.14	-0.14	-2.60	194.60
	NORMAL	6,976.0	0.79	170.74	6,933.76	639.00	89.90	645.29	0.12	0.00	-8.70	265.83
	NORMAL	7,071.0	0.79	151.14	7,028.75	637.78	90.32	644.14	0.28	0.00	-20.63	260.20
	NORMAL	7,166.0	0.88	171.54	7,123.74	636.49	90.75	642.92	0.32	0.09	21.47	83.52
	NORMAL	7,261.0	0.92	141.04	7,218.73	635.17	91.33	641.70	0.50	0.04	-32.11	259.41
	NORMAL	7,357.0	1.27	169.95	7,314.72	633.53	92.00	640.16	0.67	0.36	30.11	72.65
	NORMAL	7,452.0	1.50	177.34	7,409.69	631.25	92.25	637.93	0.31	0.24	7.78	41.57
4/23/2013	NORMAL	7,547.0	1.27	173.38	7,504.66	628.96	92.42	635.69	0.26	-0.24	-4.17	200.62
	NORMAL	7,643.0	1.36	188.41	7,600.64	626.78	92.38	633.52	0.37	0.09	15.66	82.97
	NORMAL	7,738.0	1.54	174.52	7,695.61	624.39	92.34	631.15	0.41	0.19	-14.62	290.06
	NORMAL	7,833.0	1.23	152.55	7,790.58	622.22	92.93	629.08	0.64	-0.33	-23.13	229.05
	NORMAL	7,915.0	1.41	153.08	7,872.56	620.54	93.79	627.53	0.22	0.22	0.65	4.15
	NORMAL	7,960.0	1.41	153.08	7,917.54	619.55	94.29	626.62	0.00	0.00	0.00	0.00
	NORMAL											