

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	RWF 424-36	Wellbore No.	
Well Name	RWF 424-36	Common Name	RWF 424-36
Project	RU 36-06S-094W	Site	RWF 33-36 Pad
Vertical Section Azimuth	191.41 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	10/26/2012	UWI	RWF 424-36
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	10/26/2012	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

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 (°)
10/26/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/26/2012	NORMAL	89.0	1.14	205.58	88.99	-0.80	-0.38	0.86	1.28	1.28	0.00	205.58
	NORMAL	179.0	3.70	169.37	178.91	-4.46	-0.23	4.42	3.18	2.84	-40.23	310.19
	NORMAL	271.0	5.98	193.01	270.58	-12.05	-0.76	11.96	3.24	2.48	25.70	53.37
10/27/2012	NORMAL	363.0	8.45	190.99	361.85	-23.36	-3.13	23.51	2.70	2.68	-2.20	353.13
	NORMAL	455.0	11.96	190.99	452.38	-39.35	-6.24	39.81	3.82	3.82	0.00	0.00
	NORMAL	525.0	15.30	191.68	520.40	-55.52	-9.49	56.30	4.78	4.77	0.99	3.12
	NORMAL	617.0	19.43	190.98	608.19	-82.44	-14.87	83.76	4.49	4.49	-0.76	356.77
	NORMAL	708.0	23.74	192.21	692.79	-115.22	-21.63	117.22	4.76	4.74	1.35	6.57
	NORMAL	800.0	25.24	192.21	776.51	-152.50	-29.69	155.36	1.63	1.63	0.00	0.00
	NORMAL	891.0	26.73	190.74	858.31	-191.57	-37.61	195.22	1.78	1.64	-1.62	335.96
	NORMAL	981.0	27.29	191.10	938.49	-231.70	-45.35	236.09	0.65	0.62	0.40	16.44
	NORMAL	1,072.0	27.81	191.17	1,019.17	-273.00	-53.48	278.18	0.57	0.57	0.08	3.59
	NORMAL	1,152.0	28.93	192.30	1,089.56	-310.21	-61.22	316.19	1.55	1.40	1.41	26.11
10/28/2012	NORMAL	1,261.0	27.87	192.45	1,185.44	-360.85	-72.33	368.03	0.97	-0.97	0.14	176.22
	NORMAL	1,356.0	25.03	191.21	1,270.49	-402.25	-81.03	410.33	3.05	-2.99	-1.31	190.45
	NORMAL	1,451.0	24.60	191.84	1,356.72	-441.32	-88.99	450.20	0.53	-0.45	0.66	148.70
	NORMAL	1,547.0	25.44	187.78	1,443.71	-481.31	-95.88	490.77	1.99	0.88	-4.23	294.22
	NORMAL	1,642.0	25.56	187.95	1,529.46	-521.82	-101.48	531.59	0.15	0.13	0.18	31.46
	NORMAL	1,738.0	26.01	185.39	1,615.90	-563.29	-106.32	573.19	1.25	0.47	-2.67	290.85
	NORMAL	1,833.0	26.28	188.59	1,701.19	-604.83	-111.42	614.92	1.51	0.28	3.37	80.60

## 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 (°)
10/28/2012	NORMAL	1,928.0	26.51	189.64	1,786.28	-646.53	-118.11	657.11	0.55	0.24	1.11	64.24
	NORMAL	2,022.0	26.43	189.22	1,870.43	-687.86	-124.97	698.99	0.22	-0.09	-0.45	246.67
	NORMAL	2,118.0	26.61	190.25	1,956.33	-730.10	-132.22	741.83	0.51	0.19	1.07	69.09
	NORMAL	2,213.0	27.11	190.57	2,041.08	-772.32	-139.98	784.75	0.55	0.53	0.34	16.27
	NORMAL	2,309.0	27.65	193.26	2,126.33	-815.51	-149.10	828.88	1.41	0.56	2.80	67.62
	NORMAL	2,403.0	27.76	192.28	2,209.55	-858.13	-158.76	872.57	0.50	0.12	-1.04	283.14
	NORMAL	2,499.0	27.55	192.72	2,294.59	-901.63	-168.40	917.12	0.31	-0.22	0.46	135.99
10/29/2012	NORMAL	2,595.0	27.86	192.95	2,379.58	-945.14	-178.32	961.74	0.34	0.32	0.24	19.13
	NORMAL	2,691.0	26.74	193.69	2,464.89	-987.99	-188.46	1,005.75	1.22	-1.17	0.77	163.47
	NORMAL	2,786.0	25.94	193.07	2,550.02	-1,029.00	-198.22	1,047.87	0.89	-0.84	-0.65	198.70
	NORMAL	2,882.0	26.10	191.89	2,636.29	-1,070.11	-207.31	1,089.98	0.56	0.17	-1.23	286.65
	NORMAL	2,978.0	25.82	194.71	2,722.61	-1,111.00	-216.97	1,131.97	1.32	-0.29	2.94	104.05
	NORMAL	3,073.0	25.68	195.55	2,808.18	-1,150.84	-227.75	1,173.15	0.41	-0.15	0.88	111.37
	NORMAL	3,169.0	25.35	195.72	2,894.81	-1,190.66	-238.89	1,214.39	0.35	-0.34	0.18	167.57
	NORMAL	3,264.0	25.22	192.49	2,980.72	-1,230.00	-248.78	1,254.91	1.46	-0.14	-3.40	263.16
	NORMAL	3,360.0	26.69	190.80	3,067.03	-1,271.15	-257.24	1,296.92	1.71	1.53	-1.76	332.53
	NORMAL	3,456.0	26.30	191.14	3,152.95	-1,313.19	-265.39	1,339.74	0.44	-0.41	0.35	158.90
	NORMAL	3,552.0	26.17	189.56	3,239.06	-1,354.94	-273.02	1,382.17	0.74	-0.14	-1.65	258.75
	NORMAL	3,648.0	25.64	189.45	3,325.41	-1,396.30	-279.94	1,424.09	0.55	-0.55	-0.11	185.13
	NORMAL	3,743.0	25.36	190.73	3,411.16	-1,436.57	-287.10	1,464.97	0.65	-0.29	1.35	117.51
	NORMAL	3,837.0	25.08	189.26	3,496.20	-1,476.01	-294.06	1,505.01	0.73	-0.30	-1.56	245.25
	NORMAL	3,933.0	26.29	190.63	3,582.71	-1,516.99	-301.25	1,546.60	1.40	1.26	1.43	26.76
	NORMAL	4,027.0	25.68	189.36	3,667.21	-1,557.54	-308.41	1,587.77	0.88	-0.65	-1.35	221.80
	NORMAL	4,123.0	26.92	189.75	3,753.27	-1,599.49	-315.47	1,630.28	1.30	1.29	0.41	8.11
	NORMAL	4,218.0	26.80	191.62	3,838.03	-1,641.66	-323.43	1,673.20	0.90	-0.13	1.97	98.92
	NORMAL	4,314.0	26.67	191.42	3,923.76	-1,683.98	-332.05	1,716.38	0.16	-0.14	-0.21	214.60
	NORMAL	4,406.0	26.26	190.65	4,006.12	-1,724.22	-339.90	1,757.38	0.58	-0.45	-0.84	219.58
10/30/2012	NORMAL	4,502.0	26.67	194.57	4,092.07	-1,765.94	-349.25	1,800.13	1.87	0.43	4.08	78.55
	NORMAL	4,596.0	26.52	193.88	4,176.12	-1,806.73	-359.59	1,842.16	0.37	-0.16	-0.73	243.79
	NORMAL	4,692.0	26.85	194.15	4,261.90	-1,848.56	-370.03	1,885.23	0.37	0.34	0.28	20.30
	NORMAL	4,787.0	25.77	194.67	4,347.05	-1,889.34	-380.50	1,927.28	1.16	-1.14	0.55	168.19
	NORMAL	4,883.0	25.09	192.65	4,433.75	-1,929.39	-390.25	1,968.46	1.15	-0.71	-2.10	231.00
	NORMAL	4,979.0	26.56	190.95	4,520.17	-1,970.33	-398.78	2,010.28	1.71	1.53	-1.77	332.49
	NORMAL	5,074.0	27.01	191.73	4,604.97	-2,012.30	-407.20	2,053.09	0.60	0.47	0.82	38.34
	NORMAL	5,169.0	25.75	190.69	4,690.08	-2,053.70	-415.41	2,095.30	1.41	-1.33	-1.09	199.68
	NORMAL	5,264.0	24.90	189.73	4,775.95	-2,093.69	-422.62	2,135.92	0.99	-0.89	-1.01	205.35
	NORMAL	5,360.0	23.75	191.48	4,863.43	-2,132.56	-429.89	2,175.46	1.41	-1.20	1.82	148.71
	NORMAL	5,455.0	21.72	193.53	4,951.04	-2,168.40	-437.81	2,212.16	2.29	-2.14	2.16	159.62
	NORMAL	5,551.0	20.63	192.69	5,040.56	-2,202.17	-445.68	2,246.82	1.18	-1.14	-0.88	195.16
	NORMAL	5,647.0	17.96	190.25	5,131.16	-2,233.24	-452.03	2,278.53	2.90	-2.78	-2.54	195.65
	NORMAL	5,742.0	17.00	191.06	5,221.77	-2,261.29	-457.30	2,307.06	1.04	-1.01	0.85	166.16
10/31/2012	NORMAL	5,837.0	16.97	191.59	5,312.63	-2,288.50	-462.75	2,334.81	0.17	-0.03	0.56	101.22
	NORMAL	5,933.0	14.92	194.03	5,404.93	-2,314.21	-468.56	2,361.17	2.25	-2.14	2.54	163.06
	NORMAL	6,028.0	13.90	191.81	5,496.94	-2,337.25	-473.86	2,384.80	1.22	-1.07	-2.34	207.37
	NORMAL	6,124.0	12.30	190.50	5,590.44	-2,358.59	-478.08	2,406.56	1.70	-1.67	-1.36	189.88
	NORMAL	6,220.0	10.06	188.52	5,684.61	-2,376.94	-481.19	2,425.16	2.37	-2.33	-2.06	188.76
	NORMAL	6,316.0	8.31	189.97	5,779.38	-2,392.07	-483.63	2,440.47	1.84	-1.82	1.51	173.18
	NORMAL	6,412.0	7.35	193.80	5,874.48	-2,404.86	-486.30	2,453.54	1.14	-1.00	3.99	153.36
11/1/2012	NORMAL	6,507.0	6.30	191.54	5,968.81	-2,415.87	-488.79	2,464.82	1.14	-1.11	-2.38	193.23
	NORMAL	6,603.0	4.96	189.06	6,064.34	-2,425.13	-490.50	2,474.24	1.42	-1.40	-2.58	189.06
	NORMAL	6,697.0	3.19	188.23	6,158.10	-2,431.73	-491.51	2,480.91	1.88	-1.88	-0.88	181.49
	NORMAL	6,792.0	2.53	178.76	6,252.98	-2,436.44	-491.85	2,485.59	0.85	-0.69	-9.97	210.93
	NORMAL	6,888.0	1.74	161.12	6,348.92	-2,439.94	-491.33	2,488.92	1.06	-0.82	-18.38	211.17
	NORMAL	6,981.0	0.77	176.50	6,441.89	-2,441.90	-490.83	2,490.74	1.09	-1.04	16.54	168.43
	NORMAL	7,077.0	0.57	81.37	6,537.89	-2,442.47	-490.32	2,491.20	1.04	-0.21	-99.09	214.67
	NORMAL	7,173.0	0.77	88.52	6,633.88	-2,442.39	-489.21	2,490.90	0.23	0.21	7.45	26.29
	NORMAL	7,269.0	0.59	74.16	6,729.88	-2,442.23	-488.09	2,490.52	0.26	-0.19	-14.96	216.41

## 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 (°)
11/2/2012	NORMAL	7,364.0	0.74	113.83	6,824.87	-2,442.35	-487.05	2,490.43	0.50	0.16	41.76	92.47
	NORMAL	7,457.0	0.60	98.89	6,917.86	-2,442.67	-486.02	2,490.54	0.24	-0.15	-16.06	223.98
	NORMAL	7,553.0	0.54	157.40	7,013.86	-2,443.16	-485.35	2,490.89	0.58	-0.06	60.95	124.62
	NORMAL	7,648.0	0.17	279.27	7,108.86	-2,443.55	-485.32	2,491.27	0.68	-0.39	128.28	167.09
	NORMAL	7,744.0	0.52	270.13	7,204.86	-2,443.53	-485.90	2,491.36	0.37	0.36	-9.52	346.48
	NORMAL	7,839.0	0.78	281.92	7,299.85	-2,443.39	-486.96	2,491.44	0.31	0.27	12.41	33.20
	NORMAL	7,935.0	0.79	308.93	7,395.84	-2,442.84	-488.11	2,491.13	0.38	0.01	28.14	101.98
	NORMAL	8,031.0	0.92	353.76	7,491.83	-2,441.66	-488.71	2,490.09	0.69	0.14	46.70	101.97
	NORMAL	8,126.0	0.79	335.13	7,586.82	-2,440.31	-489.07	2,488.83	0.32	-0.14	-19.61	235.82
	NORMAL	8,222.0	0.62	314.99	7,682.81	-2,439.34	-489.72	2,488.01	0.31	-0.18	-20.98	225.76
	NORMAL	8,317.0	0.73	284.05	7,777.81	-2,438.83	-490.67	2,487.70	0.40	0.12	-32.57	270.94
	NORMAL	8,413.0	0.49	43.62	7,873.81	-2,438.39	-490.98	2,487.32	1.11	-0.25	124.55	156.32
11/3/2012	NORMAL	8,509.0	0.50	59.29	7,969.80	-2,437.87	-490.33	2,486.70	0.14	0.01	16.32	93.64
	NORMAL	8,604.0	0.75	78.51	8,064.80	-2,437.54	-489.37	2,486.18	0.34	0.26	20.23	49.86
	NORMAL	8,700.0	0.47	137.71	8,160.79	-2,437.70	-488.49	2,486.16	0.68	-0.29	61.67	141.60
	NORMAL	8,795.0	0.70	33.04	8,255.79	-2,437.51	-487.91	2,485.86	0.99	0.24	-110.18	226.29
	NORMAL	8,891.0	1.14	36.38	8,351.78	-2,436.25	-487.02	2,484.44	0.46	0.46	3.48	8.62
	NORMAL	8,987.0	1.41	90.34	8,447.76	-2,435.48	-485.28	2,483.35	1.23	0.28	56.21	105.22
	NORMAL	9,082.0	1.28	95.48	8,542.73	-2,435.59	-483.05	2,483.02	0.19	-0.14	5.41	139.69
	NORMAL	9,178.0	1.37	107.99	8,638.70	-2,436.05	-480.89	2,483.04	0.31	0.09	13.03	79.04
	NORMAL	9,211.0	1.06	114.69	8,671.70	-2,436.30	-480.24	2,483.15	1.03	-0.94	20.30	158.70
	NORMAL	9,266.0	1.06	114.69	8,726.69	-2,436.72	-479.31	2,483.39	0.00	0.00	0.00	0.00