

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 314-36	Wellbore No.	
Well Name	RWF 314-36	Common Name	RWF 314-36
Project	RU 36-06S-094W	Site	RWF 33-36 Pad
Vertical Section Azimuth	206.38 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	10/12/2012	UWI	RWF 314-36
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	10/12/2012	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 (°)
10/12/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/12/2012	NORMAL	97.0	0.53	239.59	97.00	-0.23	-0.39	0.38	0.55	0.55	0.00	239.59
	NORMAL	181.0	4.57	208.83	180.90	-3.36	-2.34	4.05	4.91	4.81	-36.62	325.48
	NORMAL	272.0	7.74	207.86	271.36	-11.95	-6.95	13.80	3.49	3.48	-1.07	357.64
	NORMAL	364.0	10.38	208.48	362.21	-24.72	-13.80	28.27	2.87	2.87	0.67	2.42
10/13/2012	NORMAL	435.0	12.49	207.86	431.79	-37.13	-20.44	42.34	2.98	2.97	-0.87	356.36
	NORMAL	525.0	15.78	205.58	519.06	-56.78	-30.27	64.31	3.71	3.66	-2.53	349.29
	NORMAL	617.0	19.82	206.62	606.64	-82.01	-42.67	92.43	4.40	4.39	1.13	5.00
	NORMAL	708.0	23.48	204.08	691.20	-112.37	-56.98	125.98	4.15	4.02	-2.79	344.45
	NORMAL	800.0	26.91	206.28	774.44	-147.78	-73.68	165.13	3.86	3.73	2.39	16.27
	NORMAL	891.0	27.60	206.80	855.34	-185.06	-92.30	206.80	0.80	0.76	0.57	19.27
	NORMAL	981.0	28.23	206.81	934.86	-222.67	-111.30	248.93	0.70	0.70	0.01	0.43
	NORMAL	1,073.0	29.12	203.94	1,015.58	-262.55	-130.20	293.06	1.78	0.97	-3.12	301.61
	NORMAL	1,166.0	29.39	204.44	1,096.72	-304.01	-148.83	338.48	0.39	0.29	0.54	42.36
	NORMAL	1,262.0	29.56	204.23	1,180.30	-347.05	-168.29	385.68	0.21	0.18	-0.22	328.62
	NORMAL	1,357.0	31.05	206.13	1,262.32	-390.41	-188.70	433.60	1.86	1.57	2.00	33.58
	NORMAL	1,452.0	31.85	207.22	1,343.36	-434.70	-210.96	483.17	1.03	0.84	1.15	35.87
	NORMAL	1,548.0	32.36	208.39	1,424.68	-479.83	-234.76	534.17	0.84	0.53	1.22	51.14
	NORMAL	1,643.0	32.59	207.73	1,504.82	-524.84	-258.75	585.16	0.44	0.24	-0.69	302.71
	NORMAL	1,738.0	31.22	208.92	1,585.47	-569.04	-282.56	635.33	1.59	-1.44	1.25	155.85
	NORMAL	1,834.0	31.50	209.13	1,667.45	-612.72	-306.80	685.24	0.31	0.29	0.22	21.41

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 (°)
10/13/2012	NORMAL	1,929.0	30.95	208.04	1,748.69	-655.96	-330.37	734.45	0.83	-0.58	-1.15	225.31
10/14/2012	NORMAL	2,025.0	29.32	206.58	1,831.71	-698.78	-352.49	782.63	1.86	-1.70	-1.52	203.58
	NORMAL	2,118.0	29.28	206.46	1,912.81	-739.50	-372.81	828.14	0.08	-0.04	-0.13	235.69
	NORMAL	2,214.0	29.63	207.66	1,996.40	-781.54	-394.29	875.35	0.71	0.36	1.25	59.85
	NORMAL	2,310.0	29.49	207.89	2,079.91	-823.44	-416.36	922.69	0.19	-0.15	0.24	141.08
	NORMAL	2,405.0	29.37	208.30	2,162.65	-864.62	-438.34	969.35	0.25	-0.13	0.43	120.96
	NORMAL	2,500.0	29.81	207.51	2,245.26	-906.08	-460.30	1,016.24	0.62	0.46	-0.83	318.10
	NORMAL	2,596.0	30.26	205.39	2,328.37	-949.09	-481.69	1,064.29	1.20	0.47	-2.21	292.06
	NORMAL	2,691.0	30.16	206.37	2,410.47	-992.10	-502.55	1,112.08	0.53	-0.11	1.03	101.89
	NORMAL	2,787.0	29.79	206.54	2,493.63	-1,035.04	-523.92	1,160.05	0.40	-0.39	0.18	167.14
	NORMAL	2,883.0	29.56	206.88	2,577.04	-1,077.50	-545.28	1,207.57	0.30	-0.24	0.35	143.95
	NORMAL	2,978.0	29.54	207.93	2,659.68	-1,119.09	-566.85	1,254.42	0.55	-0.02	1.11	92.67
10/16/2012	NORMAL	3,073.0	30.47	207.43	2,741.95	-1,161.16	-588.91	1,301.91	1.01	0.98	-0.53	344.73
	NORMAL	3,169.0	32.18	205.14	2,823.95	-1,205.91	-610.99	1,351.81	2.17	1.78	-2.39	324.17
	NORMAL	3,264.0	31.39	203.47	2,904.71	-1,251.51	-631.59	1,401.81	1.24	-0.83	-1.76	227.37
	NORMAL	3,360.0	30.95	203.72	2,986.85	-1,297.04	-651.48	1,451.44	0.48	-0.46	0.26	163.72
	NORMAL	3,456.0	30.43	203.47	3,069.40	-1,341.94	-671.09	1,500.38	0.56	-0.54	-0.26	193.68
	NORMAL	3,552.0	30.25	203.82	3,152.26	-1,386.36	-690.54	1,548.82	0.26	-0.19	0.36	135.67
	NORMAL	3,647.0	29.99	203.82	3,234.43	-1,429.97	-709.79	1,596.44	0.27	-0.27	0.00	180.00
	NORMAL	3,743.0	29.72	204.00	3,317.69	-1,473.66	-729.16	1,644.19	0.30	-0.28	0.19	161.72
	NORMAL	3,837.0	29.72	205.14	3,399.32	-1,516.04	-748.54	1,690.76	0.60	0.00	1.21	90.50
	NORMAL	3,933.0	30.43	206.55	3,482.40	-1,559.33	-769.51	1,738.87	1.04	0.74	1.47	45.47
	NORMAL	4,027.0	30.86	205.49	3,563.27	-1,602.39	-790.53	1,786.78	0.73	0.46	-1.13	308.06
	NORMAL	4,123.0	30.51	205.32	3,645.83	-1,646.64	-811.55	1,835.76	0.38	-0.36	-0.18	193.85
	NORMAL	4,218.0	30.60	207.42	3,727.64	-1,689.91	-833.00	1,884.05	1.13	0.09	2.21	86.09
	NORMAL	4,314.0	30.34	207.51	3,810.38	-1,733.10	-855.45	1,932.72	0.27	-0.27	0.09	170.08
10/17/2012	NORMAL	4,406.0	29.81	207.60	3,890.00	-1,773.98	-876.77	1,978.82	0.58	-0.58	0.10	175.17
	NORMAL	4,502.0	29.46	208.13	3,973.44	-1,815.94	-898.96	2,026.27	0.46	-0.36	0.55	143.41
	NORMAL	4,596.0	29.54	207.65	4,055.25	-1,856.85	-920.61	2,072.54	0.27	0.09	-0.51	288.49
	NORMAL	4,692.0	29.84	207.24	4,138.65	-1,899.05	-942.53	2,120.08	0.38	0.31	-0.43	325.73
	NORMAL	4,787.0	29.79	207.28	4,221.08	-1,941.04	-964.16	2,167.31	0.06	-0.05	0.04	158.33
	NORMAL	4,883.0	29.20	206.14	4,304.63	-1,983.26	-985.41	2,214.57	0.85	-0.61	-1.19	223.08
	NORMAL	4,979.0	29.15	205.56	4,388.45	-2,025.37	-1,005.81	2,261.37	0.30	-0.05	-0.60	259.72
	NORMAL	5,074.0	28.67	206.00	4,471.62	-2,066.73	-1,025.79	2,307.29	0.55	-0.51	0.46	156.29
	NORMAL	5,169.0	26.91	205.05	4,555.66	-2,106.69	-1,044.88	2,351.58	1.91	-1.85	-1.00	193.71
	NORMAL	5,264.0	26.09	203.61	4,640.67	-2,145.31	-1,062.35	2,393.93	1.10	-0.86	-1.52	217.44
	NORMAL	5,360.0	24.68	205.88	4,727.41	-2,182.68	-1,079.55	2,435.06	1.78	-1.47	2.36	146.41
	NORMAL	5,455.0	22.74	203.41	4,814.39	-2,217.38	-1,095.51	2,473.24	2.29	-2.04	-2.60	205.98
	NORMAL	5,551.0	21.17	204.69	4,903.42	-2,250.16	-1,110.12	2,509.10	1.71	-1.64	1.33	163.64
10/18/2012	NORMAL	5,647.0	19.43	204.17	4,993.45	-2,280.48	-1,123.90	2,542.38	1.82	-1.81	-0.54	185.68
	NORMAL	5,742.0	16.97	205.84	5,083.70	-2,307.38	-1,136.41	2,572.04	2.65	-2.59	1.76	168.82
	NORMAL	5,837.0	16.50	206.26	5,174.67	-2,331.96	-1,148.43	2,599.39	0.51	-0.49	0.44	165.77
	NORMAL	5,933.0	14.59	208.04	5,267.16	-2,354.86	-1,160.14	2,625.11	2.05	-1.99	1.85	166.83
	NORMAL	6,028.0	13.44	206.94	5,359.33	-2,375.26	-1,170.77	2,648.12	1.24	-1.21	-1.16	192.51
	NORMAL	6,124.0	11.82	209.58	5,453.00	-2,393.76	-1,180.68	2,669.09	1.79	-1.69	2.75	161.67
	NORMAL	6,220.0	11.08	209.09	5,547.09	-2,410.37	-1,190.02	2,688.12	0.78	-0.77	-0.51	187.25
	NORMAL	6,316.0	9.18	207.66	5,641.59	-2,425.21	-1,198.06	2,704.99	2.00	-1.98	-1.49	186.84
	NORMAL	6,412.0	8.79	208.04	5,736.41	-2,438.47	-1,205.06	2,719.98	0.41	-0.41	0.40	171.54
	NORMAL	6,507.0	6.42	204.88	5,830.57	-2,449.70	-1,210.71	2,732.55	2.53	-2.49	-3.33	188.44
10/19/2012	NORMAL	6,603.0	5.03	204.46	5,926.09	-2,458.40	-1,214.71	2,742.12	1.45	-1.45	-0.44	181.52
	NORMAL	6,696.0	3.93	208.66	6,018.80	-2,464.91	-1,217.93	2,749.38	1.23	-1.18	4.52	165.48
	NORMAL	6,792.0	2.28	212.35	6,114.66	-2,469.41	-1,220.53	2,754.57	1.73	-1.72	3.84	174.93
	NORMAL	6,888.0	1.76	211.73	6,210.60	-2,472.27	-1,222.32	2,757.93	0.54	-0.54	-0.65	182.10
	NORMAL	6,981.0	0.70	165.41	6,303.58	-2,474.04	-1,222.93	2,759.78	1.48	-1.14	-49.81	201.63
10/20/2012	NORMAL	7,077.0	0.53	108.19	6,399.57	-2,474.74	-1,222.36	2,760.16	0.63	-0.18	-59.60	227.17
	NORMAL	7,173.0	0.69	113.29	6,495.57	-2,475.11	-1,221.41	2,760.07	0.18	0.17	5.31	21.31
	NORMAL	7,268.0	0.35	137.06	6,590.56	-2,475.55	-1,220.69	2,760.14	0.42	-0.36	25.02	159.11

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 (°)
10/20/2012	NORMAL	7,364.0	0.82	346.26	6,686.56	-2,475.10	-1,220.65	2,759.72	1.19	0.49	-157.08	200.57
	NORMAL	7,457.0	0.90	340.00	6,779.55	-2,473.76	-1,221.06	2,758.71	0.13	0.09	-6.73	307.25
	NORMAL	7,553.0	0.94	332.25	6,875.54	-2,472.36	-1,221.68	2,757.72	0.14	0.04	-8.07	283.92
	NORMAL	7,648.0	0.84	323.49	6,970.53	-2,471.11	-1,222.46	2,756.95	0.18	-0.11	-9.22	229.36
	NORMAL	7,743.0	0.88	307.53	7,065.52	-2,470.10	-1,223.45	2,756.49	0.25	0.04	-16.80	271.44
	NORMAL	7,839.0	0.70	292.15	7,161.51	-2,469.43	-1,224.58	2,756.39	0.29	-0.19	-16.02	222.16
	NORMAL	7,935.0	0.44	168.66	7,257.51	-2,469.57	-1,225.05	2,756.73	1.05	-0.27	-128.64	201.27
	NORMAL	8,031.0	0.69	180.25	7,353.50	-2,470.51	-1,224.98	2,757.54	0.29	0.26	12.07	30.44
10/21/2012	NORMAL	8,126.0	0.41	213.22	7,448.50	-2,471.37	-1,225.17	2,758.39	0.43	-0.29	34.71	147.19
	NORMAL	8,221.0	0.35	142.91	7,543.49	-2,471.89	-1,225.18	2,758.86	0.46	-0.06	-74.01	228.45
	NORMAL	8,317.0	0.15	223.74	7,639.49	-2,472.21	-1,225.09	2,759.11	0.37	-0.21	84.20	155.58
	NORMAL	8,412.0	0.14	284.59	7,734.49	-2,472.27	-1,225.29	2,759.25	0.15	-0.01	64.05	123.79
	NORMAL	8,509.0	0.27	226.60	7,831.49	-2,472.40	-1,225.57	2,759.49	0.24	0.13	-59.78	270.78
	NORMAL	8,604.0	0.97	41.90	7,926.49	-2,471.95	-1,225.19	2,758.92	1.30	0.74	184.53	176.32
10/22/2012	NORMAL	8,699.0	0.88	27.78	8,021.48	-2,470.71	-1,224.32	2,757.42	0.26	-0.09	-14.86	241.49
	NORMAL	8,795.0	0.53	10.81	8,117.47	-2,469.62	-1,223.89	2,756.25	0.42	-0.36	-17.68	202.52
	NORMAL	8,891.0	0.35	24.88	8,213.47	-2,468.92	-1,223.68	2,755.53	0.22	-0.19	14.66	155.93
	NORMAL	8,986.0	0.32	285.54	8,308.47	-2,468.59	-1,223.82	2,755.29	0.54	-0.03	-104.57	218.15
	NORMAL	9,082.0	0.51	285.11	8,404.46	-2,468.40	-1,224.49	2,755.43	0.20	0.20	-0.45	358.85
	NORMAL	9,178.0	0.74	300.15	8,500.46	-2,467.98	-1,225.44	2,755.47	0.29	0.24	15.67	43.18
	NORMAL	9,273.0	0.97	285.93	8,595.45	-2,467.45	-1,226.74	2,755.58	0.33	0.24	-14.97	310.05
	NORMAL	9,369.0	0.79	268.16	8,691.44	-2,467.25	-1,228.18	2,756.04	0.34	-0.19	-18.51	227.92
10/23/2012	NORMAL	9,454.0	0.79	268.16	8,776.43	-2,467.29	-1,229.36	2,756.59	0.00	0.00	0.00	0.00