

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 522-32	Wellbore No.	
Well Name	RWF 522-32	Common Name	RWF 522-32
Project	RU 32-06S-094W	Site	RWF 11-32 Pad
Vertical Section Azimuth	163.76 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	1/22/2012	UWI	RWF 522-32
Active Datum	KB @5,561.2ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	SCIENTIFIC
Date Started	1/22/2012	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

5863

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 (°)
1/22/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/22/2012	NORMAL	85.0	1.32	174.81	84.99	-0.98	0.09	0.96	1.55	1.55	0.00	174.81
	NORMAL	176.0	2.11	180.62	175.95	-3.69	0.17	3.59	0.89	0.87	6.38	15.33
1/23/2012	NORMAL	267.0	4.93	168.93	266.77	-9.21	0.90	9.09	3.18	3.10	-12.85	339.84
	NORMAL	338.0	7.00	162.84	337.38	-16.34	2.76	16.46	3.04	2.92	-8.58	339.95
	NORMAL	429.0	8.29	159.11	427.57	-27.76	6.74	28.54	1.52	1.42	-4.10	337.10
	NORMAL	519.0	9.41	159.39	516.50	-40.71	11.64	42.34	1.25	1.24	0.31	2.34
	NORMAL	609.0	10.11	158.34	605.20	-54.94	17.15	57.54	0.80	0.78	-1.17	345.22
	NORMAL	700.0	11.17	160.88	694.63	-70.69	22.98	74.30	1.27	1.16	2.79	25.12
	NORMAL	790.0	11.96	168.71	782.81	-88.08	27.66	92.30	1.95	0.88	8.70	67.16
	NORMAL	881.0	12.66	168.09	871.72	-107.08	31.57	111.63	0.78	0.77	-0.68	349.00
	NORMAL	973.0	13.45	164.84	961.34	-127.27	36.44	132.39	1.17	0.86	-3.53	315.51
	NORMAL	1,066.0	11.96	165.89	1,052.06	-147.06	41.62	152.83	1.62	-1.60	1.13	171.70
1/24/2012	NORMAL	1,154.0	13.01	165.02	1,137.98	-165.47	46.41	171.85	1.21	1.19	-0.99	349.42
	NORMAL	1,248.0	13.19	168.00	1,229.53	-186.18	51.37	193.12	0.74	0.19	3.17	76.53
	NORMAL	1,342.0	13.19	163.78	1,321.06	-206.97	56.60	214.54	1.02	0.00	-4.49	267.95
	NORMAL	1,437.0	13.63	166.25	1,413.47	-228.25	62.28	236.56	0.76	0.46	2.60	53.68
	NORMAL	1,530.0	14.01	163.59	1,503.77	-249.69	68.07	258.77	0.80	0.41	-2.86	299.59
	NORMAL	1,625.0	13.54	163.52	1,596.04	-271.39	74.47	281.39	0.50	-0.49	-0.07	182.00
	NORMAL	1,718.0	13.81	162.73	1,686.41	-292.43	80.86	303.37	0.35	0.29	-0.85	324.94
	NORMAL	1,812.0	14.25	161.06	1,777.60	-314.08	87.94	326.14	0.64	0.47	-1.78	316.57

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)	Bulld Rate (°/100ft)	Turn (°/100ft)	TFace (°)
1/25/2012	NORMAL	1,905.0	13.03	160.70	1,867.98	-334.80	95.12	348.05	1.31	-1.31	-0.39	183.81
	NORMAL	1,999.0	13.37	161.50	1,959.49	-355.11	102.07	369.49	0.41	0.36	0.85	28.64
	NORMAL	2,094.0	13.28	161.24	2,051.94	-375.86	109.07	391.37	0.11	-0.09	-0.27	213.53
	NORMAL	2,187.0	12.38	161.38	2,142.61	-395.42	115.69	412.00	0.97	-0.97	0.15	178.09
	NORMAL	2,281.0	12.31	160.53	2,234.44	-414.42	122.24	432.07	0.21	-0.07	-0.90	248.52
	NORMAL	2,374.0	12.31	160.53	2,325.30	-433.11	128.85	451.87	0.00	0.00	0.00	0.00
	NORMAL	2,468.0	11.61	161.24	2,417.26	-451.52	135.23	471.32	0.76	-0.74	0.76	168.48
	NORMAL	2,562.0	11.43	162.11	2,509.37	-469.34	141.14	490.08	0.27	-0.19	0.93	136.44
	NORMAL	2,656.0	11.71	171.85	2,601.46	-487.64	145.35	508.84	2.10	0.30	10.36	86.63
	NORMAL	2,750.0	11.82	159.01	2,693.51	-506.08	150.15	527.88	2.78	0.12	-13.66	266.11
	NORMAL	2,846.0	11.44	166.65	2,787.54	-524.52	155.87	547.19	1.65	-0.40	7.96	107.58
	NORMAL	2,939.0	11.21	164.06	2,878.73	-542.19	160.49	565.44	0.60	-0.25	-2.78	244.40
	NORMAL	3,034.0	10.64	164.66	2,972.01	-559.53	165.34	583.44	0.61	-0.60	0.63	169.01
	NORMAL	3,126.0	11.08	162.73	3,062.36	-576.16	170.21	600.77	0.62	0.48	-2.10	319.48
	NORMAL	3,220.0	12.75	162.20	3,154.33	-594.66	176.07	620.17	1.78	1.78	-0.56	355.99
	NORMAL	3,315.0	12.84	161.41	3,246.97	-614.65	182.64	641.20	0.21	0.09	-0.83	296.84
	NORMAL	3,410.0	12.49	160.71	3,339.66	-634.35	189.39	662.00	0.40	-0.37	-0.74	203.34
	NORMAL	3,504.0	13.10	160.36	3,431.33	-653.98	196.33	682.79	0.65	0.65	-0.37	352.59
	NORMAL	3,598.0	13.28	157.37	3,522.85	-673.97	204.07	704.15	0.75	0.19	-3.18	283.32
	NORMAL	3,691.0	13.19	157.46	3,613.38	-693.63	212.25	725.31	0.10	-0.10	0.10	167.15
	NORMAL	3,785.0	13.10	156.84	3,704.92	-713.33	220.55	746.55	0.18	-0.10	-0.66	237.15
	NORMAL	3,879.0	11.96	163.52	3,796.68	-732.47	227.50	766.87	1.96	-1.21	7.11	131.42
	NORMAL	3,974.0	11.96	163.87	3,889.62	-751.36	233.03	786.55	0.08	0.00	0.37	90.17
	NORMAL	4,067.0	12.49	168.18	3,980.51	-770.46	237.76	806.21	1.13	0.57	4.63	61.97
1/26/2012	NORMAL	4,160.0	12.57	166.16	4,071.30	-790.13	242.24	826.35	0.48	0.09	-2.17	279.36
	NORMAL	4,254.0	11.23	167.42	4,163.27	-809.00	246.68	845.71	1.45	-1.43	1.34	169.64
	NORMAL	4,348.0	10.82	165.89	4,255.54	-826.49	250.83	863.66	0.54	-0.44	-1.63	214.76
	NORMAL	4,442.0	10.73	163.61	4,347.88	-843.44	255.45	881.23	0.46	-0.10	-2.43	256.96
	NORMAL	4,536.0	10.15	169.14	4,440.33	-859.97	259.48	898.22	1.23	-0.62	5.88	122.76
	NORMAL	4,629.0	9.94	166.42	4,531.90	-875.82	262.91	914.40	0.56	-0.23	-2.92	244.79
	NORMAL	4,723.0	9.40	167.28	4,624.57	-891.20	266.50	930.17	0.59	-0.57	0.91	165.45
	NORMAL	4,818.0	9.58	164.84	4,718.27	-906.39	270.28	945.81	0.46	0.19	-2.57	292.90
	NORMAL	4,912.0	9.23	165.37	4,811.00	-921.24	274.23	961.17	0.38	-0.37	0.56	166.36
	NORMAL	5,007.0	7.56	164.49	4,904.98	-934.63	277.82	975.04	1.76	-1.76	-0.93	183.96
	NORMAL	5,101.0	5.54	162.73	4,998.36	-944.92	280.82	985.76	2.16	-2.15	-1.87	184.80
	NORMAL	5,195.0	4.75	179.69	5,091.99	-953.15	282.19	994.04	1.81	-0.84	18.04	125.72
1/27/2012	NORMAL	5,289.0	3.78	182.51	5,185.73	-960.14	282.08	1,000.71	1.06	-1.03	3.00	169.20
	NORMAL	5,381.0	2.02	181.28	5,277.61	-964.79	281.91	1,005.13	1.91	-1.91	-1.34	181.41
	NORMAL	5,475.0	2.02	184.97	5,371.55	-968.10	281.73	1,008.26	0.14	0.00	3.93	91.84
	NORMAL	5,569.0	0.88	136.89	5,465.52	-970.27	282.08	1,010.44	1.68	-1.21	-51.15	204.57
	NORMAL	5,662.0	1.14	95.93	5,558.51	-970.89	283.49	1,011.43	0.80	0.28	-44.04	268.54
	NORMAL	5,756.0	0.62	86.79	5,652.50	-970.96	284.92	1,011.90	0.57	-0.55	-9.72	190.57
	NORMAL	5,850.0	0.26	28.43	5,746.49	-970.74	285.53	1,011.86	0.57	-0.38	-62.09	204.59
	NORMAL	5,944.0	0.44	49.88	5,840.49	-970.32	285.91	1,011.56	0.23	0.19	22.82	47.10
1/28/2012	NORMAL	6,039.0	0.62	40.30	5,935.49	-969.69	286.52	1,011.13	0.21	0.19	-10.08	328.95
	NORMAL	6,133.0	0.70	52.25	6,029.48	-968.96	287.31	1,010.64	0.17	0.09	12.71	65.90
	NORMAL	6,226.0	0.53	78.36	6,122.48	-968.52	288.18	1,010.47	0.35	-0.18	28.08	133.85
	NORMAL	6,321.0	0.70	88.46	6,217.47	-968.42	289.19	1,010.65	0.21	0.18	10.63	37.64
	NORMAL	6,415.0	0.97	99.10	6,311.46	-968.53	290.55	1,011.14	0.33	0.29	11.32	35.26
	NORMAL	6,509.0	0.09	92.51	6,405.45	-968.66	291.41	1,011.50	0.94	-0.94	-7.01	180.67
	NORMAL	6,603.0	0.97	314.72	6,499.45	-968.10	290.91	1,010.83	1.10	0.94	-146.59	218.87
	NORMAL	6,697.0	1.76	326.21	6,593.42	-966.34	289.55	1,008.76	0.89	0.84	12.22	24.91
	NORMAL	6,789.0	1.23	327.61	6,685.39	-964.33	288.23	1,006.46	0.58	-0.58	1.52	176.76
	NORMAL	6,882.0	0.88	321.72	6,778.38	-962.93	287.25	1,004.84	0.39	-0.38	-6.33	194.29
1/29/2012	NORMAL	6,977.0	0.88	332.89	6,873.36	-961.71	286.47	1,003.45	0.18	0.00	11.76	95.58
	NORMAL	7,071.0	0.97	328.84	6,967.35	-960.38	285.73	1,001.97	0.12	0.10	-4.31	321.97
	NORMAL	7,165.0	0.44	353.45	7,061.35	-959.34	285.28	1,000.85	0.64	-0.56	26.18	162.18

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 (°)
1/29/2012	NORMAL	7,259.0	0.53	7.08	7,155.34	-958.55	285.29	1,000.09	0.16	0.10	14.50	58.99
	NORMAL	7,351.0	0.44	356.09	7,247.34	-957.78	285.32	999.35	0.14	-0.10	-11.95	220.54
1/30/2012	NORMAL	7,445.0	0.08	209.31	7,341.34	-957.48	285.26	999.05	0.54	-0.38	-156.15	184.94
	NORMAL	7,539.0	0.26	184.97	7,435.34	-957.75	285.21	999.29	0.20	0.19	-25.89	325.67
	NORMAL	7,632.0	0.09	230.67	7,528.34	-958.00	285.14	999.52	0.22	-0.18	49.14	161.91
	NORMAL	7,727.0	0.35	3.47	7,623.34	-957.76	285.09	999.27	0.44	0.27	139.79	141.92
	NORMAL	7,820.0	0.53	353.01	7,716.33	-957.05	285.06	998.58	0.21	0.19	-11.25	330.66
	NORMAL	7,914.0	0.18	93.06	7,810.33	-956.63	285.15	998.20	0.63	-0.37	106.44	162.48
	NORMAL	7,945.0	0.35	170.73	7,841.33	-956.72	285.22	998.31	1.15	0.55	250.55	107.11
	NORMAL	8,002.0	0.35	170.73	7,898.33	-957.07	285.27	998.66	0.00	0.00	0.00	0.00