

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 511-36	Wellbore No.	
Well Name	RWF 511-36	Common Name	RWF 511-36
Project	RU 36-06S-094W	Site	GV 15-36 Pad
Vertical Section	305.46 (")	North Reference	True
Azimuth		Origin E/W	
Origin N/S		UWI	RWF 511-36
Spud Date	2/11/2012		
Active Datum	KB @6,413.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	2/11/2012	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 (")
2/11/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/11/2012	NORMAL	83.0	1.32	307.18	82.99	0.58	-0.76	0.98	1.59	1.59	0.00	307.18
	NORMAL	178.0	3.34	292.78	177.91	2.31	-4.19	4.75	2.20	2.13	-15.18	336.53
	NORMAL	269.0	4.57	296.46	268.69	4.95	-9.88	10.92	1.38	1.35	4.07	13.57
	NORMAL	360.0	6.16	292.59	359.29	8.44	-17.63	19.26	1.79	1.75	-4.25	345.25
	NORMAL	430.0	7.53	288.41	428.79	11.33	-25.45	27.30	2.08	1.96	-5.97	337.93
	NORMAL	522.0	8.23	288.01	519.92	15.27	-37.43	39.35	0.76	0.76	-0.43	355.32
	NORMAL	613.0	7.47	288.01	610.07	19.12	-49.25	51.21	0.84	-0.84	0.00	180.00
	NORMAL	705.0	8.15	286.19	701.21	22.78	-61.20	63.07	0.79	0.74	-1.98	339.11
2/12/2012	NORMAL	796.0	7.47	293.02	791.37	26.89	-72.84	74.93	1.26	-0.75	7.51	129.58
	NORMAL	888.0	7.30	292.95	882.61	31.51	-83.73	86.48	0.19	-0.18	-0.08	182.99
	NORMAL	979.0	6.86	289.77	972.91	35.61	-94.17	97.36	0.65	-0.48	-3.49	220.12
	NORMAL	1,075.0	7.56	294.60	1,068.16	40.17	-105.30	109.08	0.96	0.73	5.03	43.31
2/13/2012	NORMAL	1,199.0	8.88	298.21	1,190.88	48.09	-121.15	126.58	1.14	1.06	2.91	23.15
	NORMAL	1,263.0	8.44	293.20	1,254.15	52.28	-129.82	136.07	1.36	-0.69	-7.83	237.29
	NORMAL	1,359.0	6.88	292.49	1,349.31	57.19	-141.46	148.40	1.84	-1.83	-0.74	182.69
	NORMAL	1,454.0	7.37	294.65	1,443.60	61.85	-152.10	159.77	0.78	0.73	2.27	22.02
	NORMAL	1,550.0	7.82	288.22	1,538.76	66.46	-163.90	172.06	1.00	0.47	-6.70	294.69
	NORMAL	1,645.0	7.86	290.99	1,632.87	70.81	-176.12	184.53	0.40	0.06	2.92	82.36
	NORMAL	1,741.0	8.69	294.02	1,727.87	76.12	-188.89	198.01	0.96	0.84	3.16	29.83
	NORMAL	1,837.0	8.74	292.55	1,822.76	81.87	-202.25	212.23	0.24	0.05	-1.53	281.93

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 (°)
2/13/2012	NORMAL	1,930.0	7.42	294.07	1,914.83	87.03	-214.26	225.01	1.44	-1.42	1.63	171.56
	NORMAL	2,026.0	6.68	296.70	2,010.11	92.06	-224.91	236.60	0.84	-0.77	2.74	157.73
	NORMAL	2,121.0	7.32	289.12	2,104.40	98.53	-235.56	247.87	1.18	0.67	-7.98	300.91
	NORMAL	2,217.0	8.51	290.20	2,199.48	100.98	-248.01	260.59	1.25	1.24	1.13	7.66
	NORMAL	2,313.0	7.36	288.85	2,294.56	105.42	-260.49	273.34	1.21	-1.20	-1.41	188.54
	NORMAL	2,408.0	7.13	293.07	2,388.81	109.70	-271.68	284.93	0.61	-0.24	4.44	115.46
	NORMAL	2,503.0	6.05	284.80	2,483.18	113.29	-281.94	295.37	1.51	-1.14	-8.71	217.25
	NORMAL	2,597.0	6.46	288.72	2,576.62	116.25	-291.74	305.07	0.63	0.44	4.17	48.13
	NORMAL	2,692.0	5.81	284.49	2,671.07	119.17	-301.46	314.68	0.83	-0.68	-4.45	212.73
	NORMAL	2,787.0	6.56	294.30	2,765.52	122.61	-311.06	324.49	1.36	0.79	10.33	59.58
	NORMAL	2,883.0	6.16	303.48	2,860.94	127.71	-320.35	335.02	1.14	-0.42	9.56	115.99
	NORMAL	2,978.0	6.55	314.50	2,955.35	134.32	-328.47	345.46	1.35	0.41	11.60	77.80
	NORMAL	3,072.0	6.83	317.14	3,048.71	142.17	-336.09	356.23	0.44	0.30	2.81	49.00
	NORMAL	3,164.0	8.00	321.50	3,139.94	151.19	-343.80	367.74	1.41	1.27	4.74	27.86
	NORMAL	3,260.0	8.44	323.34	3,234.96	162.07	-352.17	380.87	0.53	0.46	1.92	31.79
	NORMAL	3,355.0	8.22	322.43	3,328.96	173.05	-360.47	394.00	0.27	-0.23	-0.96	210.48
2/14/2012	NORMAL	3,450.0	7.21	316.75	3,423.10	182.77	-368.69	406.34	1.33	-1.06	-5.98	214.26
	NORMAL	3,546.0	7.03	319.83	3,518.36	191.65	-376.61	417.94	0.44	-0.19	3.21	116.77
	NORMAL	3,641.0	7.12	322.73	3,612.63	200.78	-383.93	429.19	0.39	0.09	3.05	77.30
	NORMAL	3,737.0	7.37	322.52	3,707.87	210.40	-391.28	440.76	0.26	0.26	-0.22	353.85
	NORMAL	3,832.0	7.63	321.57	3,802.05	220.17	-398.90	452.65	0.30	0.27	-1.00	334.03
	NORMAL	3,927.0	7.83	319.57	3,896.19	230.04	-407.02	464.98	0.35	0.21	-2.11	305.64
	NORMAL	4,022.0	6.73	313.16	3,990.43	238.77	-415.28	476.77	1.44	-1.16	-6.75	213.29
	NORMAL	4,117.0	7.53	308.81	4,084.69	246.48	-424.19	488.50	1.02	0.84	-4.58	323.81
	NORMAL	4,213.0	7.56	317.37	4,179.86	255.07	-433.37	500.96	1.17	0.03	8.92	92.72
	NORMAL	4,308.0	7.14	314.78	4,274.08	263.83	-441.79	512.90	0.56	-0.44	-2.73	216.99
	NORMAL	4,401.0	7.69	318.12	4,366.30	272.53	-450.05	524.68	0.75	0.59	3.59	39.75
	NORMAL	4,496.0	8.49	313.70	4,460.36	282.11	-459.36	537.82	1.07	0.84	-4.65	319.93
	NORMAL	4,591.0	9.45	314.26	4,554.20	292.40	-470.02	552.47	1.01	1.01	0.59	5.47
	NORMAL	4,687.0	9.06	312.71	4,648.95	303.02	-481.22	567.76	0.48	-0.41	-1.61	211.82
	NORMAL	4,782.0	8.27	318.30	4,742.86	313.20	-491.26	581.84	1.21	-0.83	5.88	135.91
	NORMAL	4,878.0	8.31	318.58	4,837.86	323.56	-500.44	595.33	0.06	0.04	0.29	45.40
2/15/2012	NORMAL	4,973.0	7.83	317.63	4,931.92	333.49	-509.34	608.34	0.52	-0.51	-1.00	195.06
	NORMAL	5,069.0	7.39	317.28	5,027.07	342.85	-517.94	620.77	0.46	-0.46	-0.36	185.84
	NORMAL	5,165.0	6.68	321.59	5,122.35	351.76	-525.60	632.18	0.92	-0.74	4.49	145.50
	NORMAL	5,260.0	6.49	320.70	5,216.72	360.25	-532.43	642.67	0.23	-0.20	-0.94	207.80
	NORMAL	5,355.0	6.53	314.45	5,311.11	368.19	-539.69	653.18	0.75	0.04	-6.58	270.12
	NORMAL	5,451.0	5.93	315.70	5,406.54	375.56	-547.05	663.45	0.64	-0.63	1.30	167.88
	NORMAL	5,546.0	4.41	308.94	5,501.16	381.37	-553.31	671.93	1.72	-1.60	-7.12	198.50
	NORMAL	5,642.0	4.43	307.57	5,596.87	385.95	-559.12	679.32	0.11	0.02	-1.43	280.04
	NORMAL	5,738.0	3.96	305.77	5,692.61	390.14	-564.75	686.34	0.51	-0.49	-1.88	194.75
	NORMAL	5,833.0	3.69	312.53	5,787.40	394.13	-569.67	692.65	0.55	-0.28	7.12	124.25
	NORMAL	5,929.0	2.90	323.21	5,883.24	398.16	-573.40	698.03	1.04	-0.82	11.13	147.40
	NORMAL	6,024.0	2.26	353.54	5,978.15	401.95	-575.05	701.57	1.56	-0.67	31.93	129.75
	NORMAL	6,120.0	2.18	24.01	6,074.08	405.60	-574.52	703.20	1.22	-0.08	31.74	109.01
	NORMAL	6,215.0	2.17	17.95	6,169.01	408.86	-573.23	704.10	0.24	-0.01	-6.38	264.48
	NORMAL	6,311.0	1.35	16.32	6,264.97	411.67	-572.35	705.02	0.86	-0.85	-1.70	182.68
	NORMAL	6,407.0	1.35	19.44	6,360.94	413.82	-571.66	705.70	0.08	0.00	3.25	91.56
2/17/2012	NORMAL	6,502.0	1.14	14.58	6,455.92	415.79	-571.05	706.35	0.25	-0.22	-5.12	204.28
	NORMAL	6,597.0	1.23	16.25	6,550.90	417.69	-570.52	707.02	0.10	0.09	1.76	21.83
	NORMAL	6,693.0	0.67	344.68	6,646.89	419.22	-570.38	707.79	0.78	-0.58	-32.89	208.02
	NORMAL	6,787.0	0.47	1.05	6,740.88	420.13	-570.52	708.44	0.27	-0.21	17.41	148.84
	NORMAL	6,882.0	0.70	264.90	6,835.88	420.47	-571.09	709.10	0.93	0.24	-101.21	231.94
	NORMAL	6,978.0	0.97	267.53	6,931.87	420.38	-572.49	710.18	0.28	0.28	2.74	9.40
	NORMAL	7,073.0	0.33	254.20	7,026.86	420.28	-573.55	710.99	0.69	-0.67	-14.03	186.69
	NORMAL	7,169.0	0.42	259.82	7,122.86	420.14	-574.17	711.41	0.10	0.09	5.85	25.06
	NORMAL	7,263.0	0.66	197.30	7,216.86	419.56	-574.67	711.48	0.63	0.26	-66.51	258.85

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 (°)
2/18/2012	NORMAL	7,359.0	0.42	154.48	7,312.85	418.71	-574.68	711.00	0.47	-0.25	-44.60	219.05
	NORMAL	7,453.0	0.24	68.28	7,406.85	418.48	-574.35	710.59	0.50	-0.19	-91.72	210.65
	NORMAL	7,548.0	0.51	130.62	7,501.85	418.28	-573.84	710.06	0.48	0.28	65.64	90.43
	NORMAL	7,644.0	0.71	187.59	7,597.84	417.41	-573.60	709.36	0.63	0.21	59.34	101.67
2/19/2012	NORMAL	7,740.0	0.89	151.95	7,693.83	416.16	-573.32	708.41	0.54	0.19	-37.13	271.47
	NORMAL	7,833.0	0.72	100.52	7,786.83	415.42	-572.41	707.24	0.77	-0.18	-55.30	231.92
	NORMAL	7,929.0	1.06	50.62	7,882.82	415.87	-571.13	706.46	0.85	0.35	-51.98	267.37
	NORMAL	8,023.0	0.70	25.13	7,976.81	416.94	-570.22	706.33	0.56	-0.38	-27.12	215.13
2/20/2012	NORMAL	8,756.0	3.52	214.45	8,709.21	402.96	-589.61	714.02	0.00	0.00	0.00	0.00
2/20/2012	NORMAL	8,119.0	0.69	307.17	8,072.80	417.82	-570.43	707.02	0.91	-0.01	-81.21	230.51
	NORMAL	8,214.0	1.01	261.20	8,167.79	418.04	-571.71	708.19	0.76	0.34	-48.39	270.95
	NORMAL	8,309.0	1.64	246.10	8,262.77	417.36	-573.78	709.48	0.75	0.66	-15.89	323.31
	NORMAL	8,405.0	2.78	246.54	8,358.69	415.88	-577.17	711.38	1.19	1.19	0.46	1.07
	NORMAL	8,501.0	2.55	232.64	8,454.59	413.65	-581.01	713.22	0.71	-0.24	-14.48	243.56
	NORMAL	8,596.0	2.89	219.07	8,549.48	410.51	-584.19	713.99	0.76	0.36	-14.28	290.94
	NORMAL	8,692.0	3.52	214.45	8,645.33	406.20	-587.39	714.09	0.71	0.66	-4.81	335.39