

I General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 322-36	Wellbore No.	
Well Name	RWF 322-36	Common Name	RWF 322-36
Project	RU 36-06S-094W	Site	RWF 33-36 Pad
Vertical Section	296.68 (°)	North Reference	True
Azimuth		Origin E/W	
Origin N/S		UWI	RWF 322-36
Spud Date	2/24/2013		
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	2/24/2013	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 (°)
2/24/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/24/2013	NORMAL	86.0	0.44	290.83	86.00	0.12	-0.31	0.33	0.51	0.51	0.00	290.83
	NORMAL	180.0	1.06	258.31	179.99	0.07	-1.50	1.37	0.77	0.66	-34.60	308.53
	NORMAL	270.0	2.02	293.12	269.96	0.52	-3.77	3.61	1.44	1.07	38.68	62.56
	NORMAL	361.0	2.38	334.69	360.90	2.86	-6.05	6.69	1.75	0.40	45.68	98.60
	NORMAL	430.0	1.76	319.61	429.85	4.96	-7.35	8.80	1.19	-0.90	-21.86	213.93
	NORMAL	520.0	2.11	297.11	519.80	6.77	-9.72	11.73	0.92	0.39	-25.00	283.2
	NORMAL	612.0	2.41	286.52	611.73	8.09	-13.09	15.33	0.56	0.33	-11.51	300.32
	NORMAL	701.0	2.64	287.09	700.64	9.23	-16.84	19.19	0.26	0.26	0.64	6.52
	NORMAL	792.0	2.20	290.08	791.56	10.44	-20.48	22.99	0.50	-0.48	3.29	165.48
	NORMAL	884.0	2.11	287.62	883.50	11.56	-23.76	26.42	0.14	-0.10	-2.67	224.56
	NORMAL	974.0	2.46	299.57	973.43	13.02	-27.01	29.98	0.65	0.39	13.28	59.77
	NORMAL	1,064.0	2.99	299.13	1,063.33	15.11	-30.74	34.26	0.59	0.59	-0.49	357.52
	NORMAL	1,113.0	3.17	302.12	1,112.25	16.46	-33.01	36.88	0.49	0.37	6.10	43.25
2/26/2013	NORMAL	1,256.0	3.25	301.07	1,255.03	20.65	-39.83	44.86	0.07	0.06	-0.73	323.16
	NORMAL	1,351.0	3.17	300.27	1,349.88	23.36	-44.40	50.17	0.10	-0.08	-0.84	208.85
	NORMAL	1,447.0	2.02	315.18	1,445.78	25.90	-47.89	54.42	1.38	-1.20	15.53	156.89
	NORMAL	1,543.0	2.02	276.74	1,541.73	27.30	-50.76	57.62	1.39	0.00	-40.04	250.79
	NORMAL	1,639.0	1.98	290.58	1,637.67	28.08	-54.00	60.86	0.50	-0.04	14.42	101.63
	NORMAL	1,734.0	2.29	286.21	1,732.60	29.19	-57.35	64.35	0.37	0.33	-4.60	330.10
	NORMAL	1,830.0	2.29	285.06	1,828.53	30.22	-61.05	68.12	0.05	0.00	-1.20	269.43

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 (°)
2/26/2013	NORMAL	1,926.0	1.97	275.96	1,924.46	30.89	-64.54	71.54	0.48	-0.33	-9.48	222.10
	NORMAL	2,021.0	2.18	286.48	2,019.40	31.57	-67.90	74.85	0.46	0.22	11.07	66.46
	NORMAL	2,117.0	1.85	289.55	2,115.34	32.61	-71.11	78.18	0.36	-0.34	3.20	163.42
	NORMAL	2,213.0	1.96	288.62	2,211.29	33.65	-74.13	81.34	0.12	0.11	-0.97	343.84
	NORMAL	2,309.0	1.43	309.26	2,307.24	34.94	-76.61	84.14	0.83	-0.55	21.50	140.97
	NORMAL	2,402.0	1.46	288.49	2,400.21	36.05	-78.63	86.44	0.56	0.03	-22.33	262.86
	NORMAL	2,498.0	1.96	299.64	2,496.17	37.25	-81.22	89.29	0.62	0.52	11.61	39.30
	NORMAL	2,593.0	1.57	288.02	2,591.13	38.45	-83.87	92.20	0.56	-0.41	-12.23	216.83
	NORMAL	2,688.0	1.50	311.01	2,686.09	39.67	-86.04	94.69	0.65	-0.07	24.20	107.89
	NORMAL	2,784.0	1.44	312.01	2,782.06	41.30	-87.89	97.07	0.07	-0.06	1.04	157.35
	NORMAL	2,879.0	1.62	305.80	2,877.03	42.89	-89.86	99.55	0.26	0.19	-6.54	314.22
	NORMAL	2,971.0	1.41	302.96	2,969.00	44.26	-91.87	101.96	0.24	-0.23	-3.09	198.26
	NORMAL	3,067.0	2.34	312.61	3,064.94	46.23	-94.30	105.02	1.02	0.97	10.05	23.62
	NORMAL	3,162.0	2.75	311.65	3,159.85	49.06	-97.43	109.09	0.43	0.43	-1.01	353.58
	NORMAL	3,257.0	2.47	326.13	3,254.75	52.27	-100.28	113.07	0.75	-0.29	15.24	120.13
	NORMAL	3,353.0	2.12	322.13	3,350.68	55.39	-102.52	116.48	0.40	-0.36	-4.17	202.60
	NORMAL	3,448.0	2.40	324.34	3,445.60	58.40	-104.76	119.82	0.31	0.29	2.33	18.39
	NORMAL	3,544.0	2.01	326.38	3,541.53	61.43	-106.86	123.07	0.41	-0.41	2.13	169.64
	NORMAL	3,640.0	2.11	309.97	3,637.47	63.97	-109.15	126.25	0.62	0.10	-17.09	271.36
	NORMAL	3,734.0	2.05	309.06	3,731.41	66.14	-111.78	129.57	0.07	-0.06	-0.97	208.38
	NORMAL	3,830.0	3.34	319.35	3,827.30	69.34	-114.93	133.83	1.43	1.34	10.72	25.75
2/27/2013	NORMAL	3,925.0	3.82	323.08	3,922.11	73.97	-118.64	139.22	0.56	0.51	3.93	27.75
	NORMAL	4,021.0	3.06	315.60	4,017.94	78.36	-122.35	144.51	0.92	-0.79	-7.79	206.87
	NORMAL	4,117.0	3.34	331.30	4,113.79	82.64	-125.49	149.23	0.95	0.29	16.35	80.22
	NORMAL	4,212.0	3.69	330.31	4,208.61	87.73	-128.33	154.06	0.37	0.37	-1.04	349.67
	NORMAL	4,308.0	2.20	331.60	4,304.48	92.03	-130.74	158.14	1.55	-1.55	1.34	178.10
	NORMAL	4,402.0	2.42	343.80	4,398.41	95.53	-132.15	160.97	0.57	0.23	12.98	72.07
	NORMAL	4,498.0	1.87	338.11	4,494.34	98.93	-133.30	163.52	0.61	-0.57	-5.93	198.34
	NORMAL	4,594.0	2.38	344.69	4,590.27	102.30	-134.41	166.03	0.59	0.53	6.85	28.88
	NORMAL	4,690.0	2.12	330.96	4,686.20	105.78	-135.80	168.83	0.62	-0.27	-14.30	237.50
	NORMAL	4,785.0	1.71	351.69	4,781.15	108.71	-136.85	171.10	0.84	-0.43	21.82	130.70
2/28/2013	NORMAL	4,881.0	0.51	43.67	4,877.13	110.44	-136.77	171.79	1.51	-1.25	54.15	163.94
	NORMAL	4,977.0	0.57	155.71	4,973.13	110.32	-136.28	171.30	0.93	0.06	116.71	143.87
	NORMAL	5,073.0	0.44	210.07	5,069.13	109.56	-136.26	170.95	0.50	-0.14	56.63	131.25
	NORMAL	5,168.0	0.35	229.08	5,164.12	109.06	-136.67	171.08	0.17	-0.09	20.01	133.74
	NORMAL	5,262.0	0.88	187.86	5,258.12	108.15	-136.98	170.96	0.70	0.56	-43.85	298.28
	NORMAL	5,357.0	1.06	198.67	5,353.10	106.60	-137.36	170.60	0.27	0.19	11.38	50.96
	NORMAL	5,453.0	0.17	77.62	5,449.10	105.79	-137.51	170.37	1.21	-0.93	-126.09	187.23
	NORMAL	5,547.0	0.45	232.01	5,543.10	105.59	-137.66	170.42	0.65	0.30	164.24	161.33
	NORMAL	5,643.0	0.31	341.63	5,639.10	105.60	-138.04	170.76	0.65	-0.15	114.19	152.27
	NORMAL	5,738.0	0.37	242.33	5,734.10	105.70	-138.39	171.12	0.55	0.06	-104.53	224.64
3/1/2013	NORMAL	5,834.0	0.66	257.66	5,830.09	105.44	-139.21	171.73	0.33	0.30	15.97	33.27
	NORMAL	5,929.0	0.52	302.95	5,925.09	105.56	-140.10	172.58	0.50	-0.15	47.67	128.52
	NORMAL	6,022.0	0.53	258.79	6,018.08	105.71	-140.88	173.34	0.42	0.01	-47.48	249.27
	NORMAL	6,118.0	1.05	275.96	6,114.08	105.71	-142.19	174.52	0.59	0.54	17.89	33.23
	NORMAL	6,214.0	0.88	299.13	6,210.06	106.16	-143.71	176.08	0.44	-0.18	24.14	124.84
	NORMAL	6,309.0	0.79	285.42	6,305.05	106.69	-144.98	177.45	0.23	-0.09	-14.43	239.00
	NORMAL	6,405.0	0.62	320.05	6,401.04	107.26	-145.95	178.57	0.47	-0.18	36.07	128.46
	NORMAL	6,500.0	0.70	294.39	6,496.04	107.90	-146.81	179.62	0.32	0.08	-27.01	272.07
	NORMAL	6,596.0	0.78	357.19	6,592.03	108.79	-147.37	180.53	0.81	0.08	65.42	116.34
	NORMAL	6,691.0	0.44	295.27	6,687.03	109.59	-147.74	181.22	0.73	-0.36	-65.18	214.12
3/2/2013	NORMAL	6,787.0	0.68	294.48	6,783.02	109.99	-148.59	182.15	0.25	0.25	-0.82	357.76
	NORMAL	6,882.0	0.79	317.33	6,878.02	110.70	-149.54	183.33	0.33	0.12	24.05	81.10
	NORMAL	6,978.0	0.88	322.31	6,974.01	111.77	-150.44	184.61	0.12	0.09	5.19	41.39
	NORMAL	7,074.0	0.68	262.90	7,070.00	112.29	-151.46	185.75	0.83	-0.21	-61.89	227.63
	NORMAL	7,169.0	0.17	288.34	7,164.99	112.26	-152.15	186.36	0.56	-0.54	26.78	172.10
	NORMAL	7,265.0	1.03	260.96	7,260.99	112.17	-153.14	187.20	0.92	0.90	-28.52	327.54

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 (°)
3/2/2013	NORMAL	7,360.0	0.67	216.11	7,355.98	111.59	-154.31	187.98	0.77	-0.38	-47.21	220.41
	NORMAL	7,456.0	0.44	124.64	7,451.98	110.92	-154.34	187.71	0.84	-0.24	-95.28	212.85
	NORMAL	7,552.0	0.67	53.55	7,547.97	111.05	-153.58	187.09	0.70	0.24	-74.05	250.63
	NORMAL	7,648.0	0.35	136.14	7,643.97	111.17	-152.93	186.56	0.74	-0.33	86.03	150.95
	NORMAL	7,743.0	0.29	53.52	7,738.97	111.10	-152.54	186.18	0.45	-0.06	-86.97	222.60
	NORMAL	7,838.0	0.52	209.48	7,833.97	110.87	-152.55	186.09	0.84	0.24	164.17	164.52
	NORMAL	7,934.0	0.53	167.38	7,929.96	110.06	-152.67	185.83	0.39	0.01	-43.85	250.37
	NORMAL	8,030.0	0.50	236.69	8,025.96	109.40	-152.92	185.76	0.61	-0.03	72.20	127.07
3/3/2013	NORMAL	8,126.0	0.97	213.88	8,121.95	108.49	-153.73	186.07	0.57	0.49	-23.76	316.35
	NORMAL	8,221.0	0.97	230.58	8,216.94	107.31	-154.80	186.50	0.30	0.00	17.58	98.35
	NORMAL	8,317.0	1.63	222.49	8,312.91	105.79	-156.35	187.20	0.71	0.69	-8.43	340.39
	NORMAL	8,412.0	1.49	236.82	8,407.88	104.12	-158.29	188.19	0.43	-0.15	15.08	116.81
	NORMAL	8,508.0	1.11	228.98	8,503.85	102.82	-160.04	189.17	0.44	-0.40	-8.17	201.20
3/4/2013	NORMAL	8,603.0	1.23	238.98	8,598.83	101.70	-161.61	190.06	0.25	0.13	10.53	64.62
	NORMAL	8,699.0	1.58	218.92	8,694.81	100.13	-163.32	190.89	0.62	0.36	-20.90	295.13
	NORMAL	8,794.0	2.11	238.40	8,789.76	98.20	-165.63	192.09	0.86	0.56	20.51	59.81
	NORMAL	8,861.0	2.11	238.40	8,856.71	96.91	-167.74	193.39	0.00	0.00	0.00	0.00