

# 1 General

## 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

## 1.2 Well/Wellbore Information

Well	RWF 13-25	Wellbore No.	00
Wellbore Legal Name	RWF 13-25	Common Wellbore Name	RWF 13-25
Project	RU 25-06S-094W	Site	RWF 23-25 Pad
Vertical Section Azimuth	276.82 (°)	North reference	True
Origin N/S		Origin EW	
Spud date	3/11/2014	UWI	RWF 13-25
Active datum	KB @6,122.0ft (above Mean Sea Level)		

# 2 Survey Name

## 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	3/11/2014	Ended	
Tool Name	MWD	Engineer	

### 2.1.1 Tie On Point

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	EW (ft)
0.0	0.00	0.00	0.00	0.00	0.00

### 2.1.2 Survey Stations

6452

Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	EW (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
3/11/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/11/2014	NORMAL	72.0	0.53	253.39	72.00	-0.10	-0.32	0.31	0.74	0.74	0.00	253.39
	NORMAL	163.0	2.55	276.59	162.96	0.02	-2.73	2.72	2.28	2.22	25.49	28.98
	NORMAL	254.0	4.05	278.61	253.81	0.73	-7.92	7.95	1.65	1.65	2.22	5.44
	NORMAL	345.0	7.74	276.94	344.31	1.95	-17.19	17.30	4.06	4.05	-1.84	356.51
3/12/2014	NORMAL	435.0	10.56	275.36	433.16	3.46	-31.42	31.60	3.15	3.13	-1.76	354.13
	NORMAL	506.0	13.14	280.24	502.64	5.50	-45.84	46.17	3.90	3.63	6.87	23.63
	NORMAL	596.0	15.83	277.37	589.77	8.89	-68.08	68.66	3.09	2.99	-3.19	343.66
	NORMAL	687.0	16.80	277.20	677.11	12.13	-93.44	94.22	1.07	1.07	-0.19	357.10
	NORMAL	777.0	17.94	279.22	763.00	15.98	-120.03	121.08	1.43	1.27	2.24	28.85
	NORMAL	869.0	17.32	277.81	850.68	20.11	-147.58	148.92	0.82	-0.67	-1.53	213.89
	NORMAL	960.0	18.24	278.05	937.33	23.95	-175.10	176.71	1.01	1.01	0.26	4.67
	NORMAL	1,055.0	18.55	277.20	1,027.48	27.93	-204.82	206.68	0.43	0.33	-0.89	318.73
	NORMAL	1,123.0	19.45	277.79	1,091.77	30.82	-226.76	228.82	1.35	1.32	0.87	12.33
3/13/2014	NORMAL	1,266.0	20.66	278.60	1,226.10	37.82	-275.30	277.84	0.87	0.85	0.57	13.31
	NORMAL	1,362.0	19.56	276.14	1,316.25	42.07	-308.02	310.84	1.45	-1.15	-2.56	216.41
	NORMAL	1,458.0	18.15	275.09	1,407.10	45.11	-338.90	341.85	1.51	-1.47	-1.09	193.04
	NORMAL	1,553.0	16.13	274.38	1,497.87	47.43	-366.79	369.83	2.14	-2.13	-0.75	185.58
	NORMAL	1,648.0	15.65	273.15	1,590.20	49.16	-393.02	396.08	0.61	-0.50	-1.28	214.46
	NORMAL	1,744.0	16.97	276.23	1,681.38	51.37	-419.60	422.73	1.66	1.39	3.24	34.72
	NORMAL	1,840.0	17.54	275.00	1,773.06	54.15	-447.94	451.20	0.70	0.59	-1.28	326.79

2.1.2 Survey Stations (Continued)

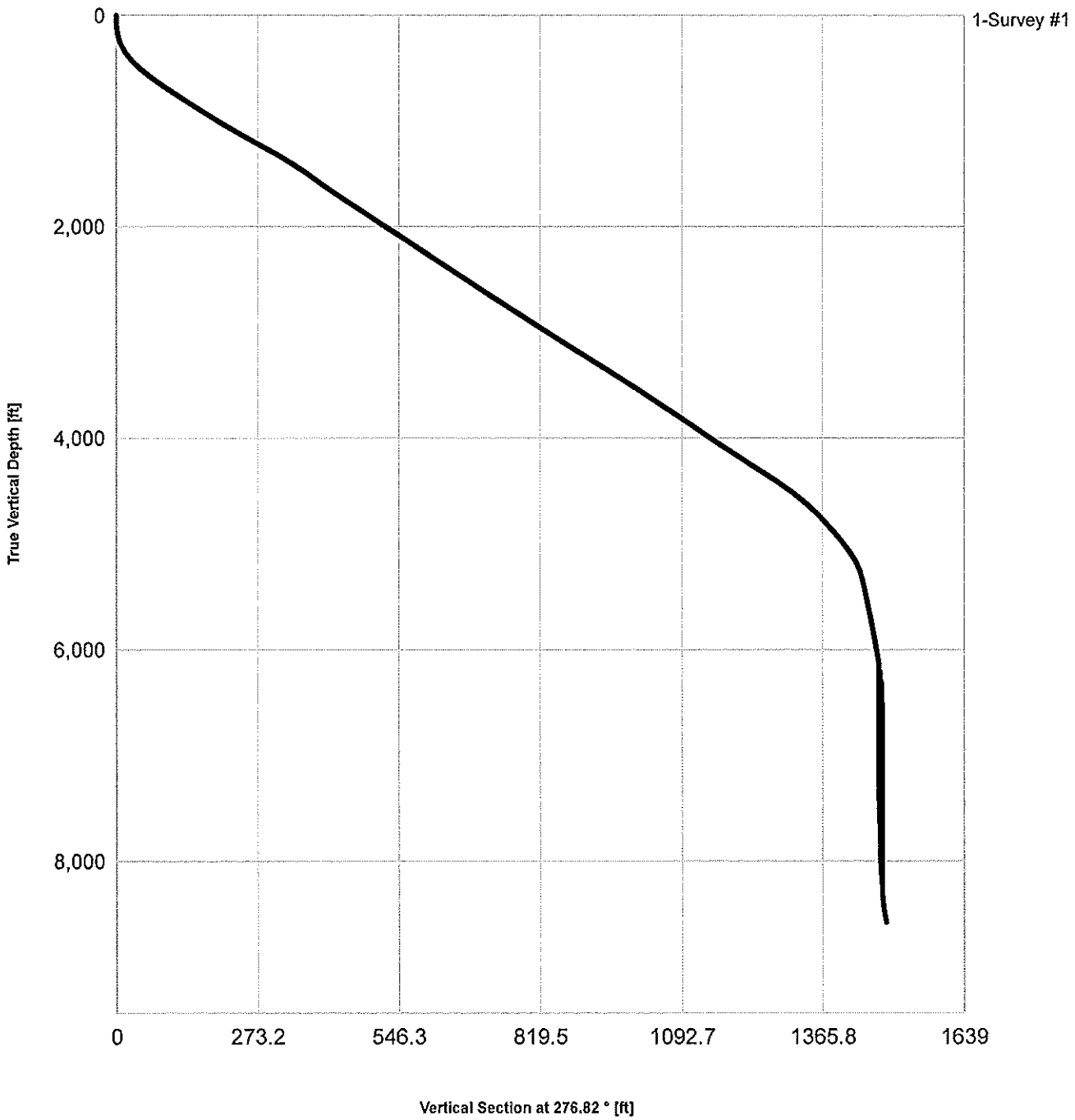
Date	Type	MD (ft)	Inc. (')	Azi. (')	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS ("/100usft)	Build Rate ("/100usft)	Turn ("/100usft )	Tface (')	
3/13/2014	NORMAL	1,935.0	17.27	273.50	1,863.71	56.26	-476.27	479.58	0.55	-0.28	-1.58	238.25	
	NORMAL	2,030.0	17.32	272.98	1,954.41	57.86	-504.47	507.77	0.17	0.05	-0.55	287.67	
	NORMAL	2,126.0	17.54	271.22	2,046.01	58.91	-533.20	536.43	0.60	0.23	-1.83	291.81	
	NORMAL	2,221.0	17.32	273.77	2,136.65	60.14	-561.63	564.79	0.84	-0.23	2.68	107.28	
	NORMAL	2,317.0	16.97	277.46	2,228.38	62.90	-589.78	593.07	1.19	-0.36	3.84	109.59	
	NORMAL	2,412.0	17.19	276.32	2,319.19	66.25	-617.48	620.97	0.42	0.23	-1.20	302.76	
	NORMAL	2,508.0	17.54	275.09	2,410.82	69.09	-645.98	649.62	0.53	0.36	-1.28	313.05	
3/14/2014	NORMAL	2,603.0	17.76	274.73	2,501.35	71.56	-674.68	678.41	0.26	0.23	-0.38	333.44	
	NORMAL	2,698.0	16.84	276.23	2,592.05	74.25	-702.80	706.65	1.08	-0.97	1.58	154.85	
	NORMAL	2,794.0	17.45	275.61	2,683.78	77.16	-730.95	734.94	0.66	0.64	-0.65	343.02	
	NORMAL	2,890.0	18.02	275.97	2,775.22	80.11	-760.05	764.18	0.60	0.59	0.38	11.06	
	NORMAL	2,985.0	17.14	277.37	2,865.78	83.44	-788.54	792.87	1.03	-0.93	1.47	155.00	
	NORMAL	3,080.0	17.63	278.07	2,956.44	87.25	-816.67	821.25	0.56	0.52	0.74	23.45	
	NORMAL	3,176.0	17.93	278.34	3,047.86	91.44	-845.68	850.56	0.32	0.31	0.28	15.50	
	NORMAL	3,272.0	18.11	278.60	3,139.15	95.81	-875.06	880.24	0.21	0.19	0.27	24.20	
	NORMAL	3,367.0	18.11	277.28	3,229.44	99.89	-904.30	909.77	0.43	0.00	-1.39	269.37	
	NORMAL	3,463.0	17.93	276.67	3,320.73	103.50	-933.78	939.46	0.27	-0.19	-0.64	226.06	
	NORMAL	3,558.0	17.93	276.40	3,411.12	106.83	-962.84	968.71	0.09	0.00	-0.28	269.87	
	NORMAL	3,654.0	16.97	277.99	3,502.70	110.42	-991.40	997.49	1.12	-1.00	1.66	154.34	
	NORMAL	3,749.0	17.14	277.63	3,593.52	114.21	-1,019.00	1,025.35	0.21	0.18	-0.38	327.98	
	NORMAL	3,845.0	17.14	277.37	3,685.26	117.90	-1,047.05	1,053.64	0.08	0.00	-0.27	269.88	
	NORMAL	3,940.0	17.06	277.81	3,776.06	121.59	-1,074.74	1,081.57	0.16	-0.08	0.46	121.94	
	NORMAL	4,036.0	16.61	277.02	3,867.94	125.18	-1,102.31	1,109.37	0.53	-0.47	-0.82	206.57	
	NORMAL	4,131.0	16.75	276.23	3,958.95	128.32	-1,129.39	1,136.64	0.28	0.15	-0.83	301.31	
NORMAL	4,227.0	16.97	277.02	4,050.82	131.54	-1,157.05	1,164.48	0.33	0.23	0.82	46.54		
3/15/2014	NORMAL	4,322.0	17.50	275.97	4,141.56	134.72	-1,185.02	1,192.63	0.65	0.56	-1.11	329.09	
	NORMAL	4,417.0	17.45	275.26	4,232.17	137.51	-1,213.41	1,221.15	0.23	-0.05	-0.75	256.46	
	NORMAL	4,513.0	18.11	274.73	4,323.59	140.06	-1,242.61	1,250.45	0.71	0.69	-0.55	345.97	
	NORMAL	4,607.0	17.06	276.14	4,413.19	142.74	-1,270.88	1,278.84	1.21	-1.12	1.50	158.59	
	NORMAL	4,703.0	15.39	277.19	4,503.37	145.84	-1,297.52	1,305.66	1.77	-1.74	1.09	170.54	
	NORMAL	4,798.0	13.45	276.40	4,597.37	148.65	-1,321.01	1,329.31	2.05	-2.04	-0.83	185.41	
	NORMAL	4,924.0	11.65	278.69	4,720.35	152.20	-1,348.15	1,356.69	1.48	-1.43	1.82	165.66	
	NORMAL	5,084.0	9.89	279.22	4,877.53	156.85	-1,377.68	1,386.56	1.10	-1.10	0.33	177.04	
	NORMAL	5,178.0	9.49	279.48	4,970.19	159.42	-1,393.30	1,402.37	0.43	-0.43	0.28	173.88	
	NORMAL	5,274.0	8.35	277.72	5,065.02	161.66	-1,408.01	1,417.24	1.22	-1.19	-1.83	192.59	
	NORMAL	5,370.0	6.68	268.49	5,160.20	162.45	-1,420.50	1,429.74	2.14	-1.74	-9.61	211.35	
3/16/2014	NORMAL	5,465.0	3.87	256.19	5,254.79	161.54	-1,429.14	1,438.21	3.17	-2.96	-12.95	195.87	
	NORMAL	5,561.0	3.30	247.14	5,350.60	159.69	-1,434.83	1,443.64	0.83	-0.59	-9.43	220.34	
	NORMAL	5,656.0	2.99	244.94	5,445.46	157.58	-1,439.60	1,448.12	0.35	-0.33	-2.32	200.18	
	NORMAL	5,752.0	2.81	243.09	5,541.34	155.45	-1,443.96	1,452.20	0.21	-0.19	-1.93	206.55	
	NORMAL	5,847.0	2.81	241.42	5,636.22	153.28	-1,448.08	1,456.04	0.09	0.00	-1.76	269.17	
	NORMAL	5,943.0	3.08	241.16	5,732.10	150.91	-1,452.41	1,460.05	0.28	0.28	-0.27	357.04	
	NORMAL	6,039.0	2.86	238.17	5,827.97	148.41	-1,456.70	1,464.02	0.28	-0.23	-3.11	213.67	
	3/17/2014	NORMAL	6,135.0	2.59	234.10	5,923.86	145.87	-1,460.49	1,467.48	0.35	-0.28	-4.24	213.61
		NORMAL	6,230.0	2.68	300.40	6,018.78	145.74	-1,464.15	1,471.10	3.03	0.09	69.79	121.62
		NORMAL	6,326.0	2.50	327.82	6,114.68	148.64	-1,467.20	1,474.47	1.29	-0.19	28.56	111.81
NORMAL		6,421.0	2.20	327.65	6,209.60	151.94	-1,469.28	1,476.93	0.32	-0.32	-0.18	181.25	
NORMAL		6,517.0	1.89	318.07	6,305.54	154.67	-1,471.32	1,479.28	0.48	-0.32	-9.98	223.08	
NORMAL		6,612.0	2.29	4.47	6,400.49	157.73	-1,472.22	1,480.54	1.78	0.42	48.84	100.60	
NORMAL		6,708.0	1.80	5.88	6,496.43	161.14	-1,471.92	1,480.64	0.51	-0.51	1.47	174.84	
NORMAL		6,803.0	1.50	16.25	6,591.39	163.82	-1,471.42	1,480.46	0.44	-0.32	10.92	140.24	
3/18/2014	NORMAL	6,899.0	0.97	16.51	6,687.36	165.81	-1,470.84	1,480.12	0.55	-0.55	0.27	179.52	
	NORMAL	6,994.0	1.80	31.81	6,782.33	167.84	-1,469.82	1,479.35	0.95	0.87	16.11	31.79	
	NORMAL	7,090.0	2.15	28.73	6,878.28	170.71	-1,468.16	1,478.04	0.38	0.36	-3.21	341.59	
	NORMAL	7,185.0	1.36	29.52	6,973.23	173.25	-1,466.75	1,476.94	0.83	-0.83	0.83	178.64	
	NORMAL	7,280.0	0.79	20.20	7,068.22	174.84	-1,465.97	1,476.36	0.63	-0.60	-9.81	192.43	

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc. (")	Azi. (")	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS ("/100usft)	Build Rate ("/100usft)	Turn ("/100usft )	Tface (")
3/18/2014	NORMAL	7,375.0	0.83	39.72	7,163.21	175.99	-1,465.30	1,475.83	0.29	0.04	20.55	91.59
	NORMAL	7,471.0	0.53	227.27	7,259.20	176.22	-1,465.18	1,475.74	1.41	-0.31	-179.64	182.94
	NORMAL	7,566.0	0.48	90.78	7,354.20	175.92	-1,465.11	1,475.63	0.99	-0.05	-143.67	200.62
	NORMAL	7,661.0	0.40	156.70	7,449.20	175.61	-1,464.58	1,475.07	0.51	-0.08	69.39	130.94
	NORMAL	7,755.0	0.53	227.27	7,543.20	175.01	-1,464.77	1,475.19	0.58	0.14	75.07	114.11
	NORMAL	7,850.0	0.79	235.71	7,638.19	174.35	-1,465.63	1,475.66	0.29	0.27	8.88	24.76
3/19/2014	NORMAL	7,946.0	1.54	207.60	7,734.17	172.83	-1,466.78	1,476.92	0.96	0.78	-29.28	308.08
	NORMAL	8,041.0	1.93	195.02	7,829.13	170.15	-1,467.78	1,477.60	0.57	0.41	-13.24	309.28
	NORMAL	8,136.0	1.93	186.93	7,924.07	167.02	-1,468.39	1,477.83	0.29	0.00	-8.52	265.96
	NORMAL	8,231.0	2.64	185.52	8,019.00	163.25	-1,468.79	1,477.79	0.75	0.75	-1.48	354.77
	NORMAL	8,327.0	3.43	200.55	8,114.86	158.36	-1,470.01	1,478.42	1.16	0.82	15.66	52.88
3/20/2014	NORMAL	8,422.0	3.91	201.96	8,209.67	152.70	-1,472.22	1,479.94	0.51	0.51	1.48	11.35
	NORMAL	8,517.0	3.17	201.52	8,304.49	147.25	-1,474.40	1,481.45	0.78	-0.78	-0.46	181.88
	NORMAL	8,613.0	3.60	209.87	8,400.32	142.17	-1,476.87	1,483.31	0.68	0.45	8.70	53.12
	NORMAL	8,709.0	4.18	216.29	8,496.10	136.73	-1,480.44	1,486.21	0.75	0.60	6.69	40.14
	NORMAL	8,745.0	4.22	217.78	8,532.00	134.63	-1,482.03	1,487.53	0.32	0.11	4.14	70.61
	NORMAL	8,790.0	4.22	217.78	8,576.88	132.01	-1,484.06	1,489.24	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

