

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	RWF 512-25	Wellbore No.	00
Wellbore Legal Name	RWF 512-25	Common Wellbore Name	RWF 512-25
Project	RU 25-06S-094W	Site	RWF 22-25 Pad
Vertical Section Azimuth	319.15 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	10/19/2013	UWI	RWF 512-25
Active datum	KB @6,062.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	10/19/2013	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 (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft )	Tface (°)
10/19/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/19/2013	NORMAL	81.0	0.35	317.40	81.00	0.18	-0.17	0.25	0.43	0.43	0.00	317.40
	NORMAL	162.0	1.50	305.88	161.99	0.99	-1.19	1.53	1.43	1.42	-14.22	345.02
	NORMAL	252.0	2.82	326.25	251.92	3.52	-3.38	4.87	1.67	1.47	22.63	40.63
	NORMAL	343.0	4.31	328.36	342.74	8.29	-6.42	10.47	1.64	1.64	2.32	6.09
	NORMAL	415.0	5.55	322.68	414.48	13.36	-9.95	16.61	1.85	1.72	-7.89	335.67
	NORMAL	506.0	7.03	314.96	504.93	20.80	-16.56	26.56	1.87	1.63	-8.48	326.38
	NORMAL	596.0	9.18	317.06	594.03	29.95	-25.34	39.23	2.41	2.39	2.33	8.88
10/20/2013	NORMAL	687.0	9.92	316.99	683.76	40.99	-35.64	54.32	0.81	0.81	-0.08	359.07
	NORMAL	778.0	10.35	315.76	773.34	52.58	-46.69	70.31	0.53	0.47	-1.35	332.68
	NORMAL	869.0	10.85	317.76	862.79	64.78	-58.15	87.03	0.68	0.55	2.20	37.33
	NORMAL	960.0	10.57	318.90	952.21	77.41	-69.39	103.94	0.39	-0.31	1.25	143.45
	NORMAL	1,051.0	10.11	318.92	1,041.73	89.72	-80.13	120.27	0.51	-0.51	0.02	179.56
	NORMAL	1,075.0	10.16	319.05	1,065.35	92.90	-82.90	124.50	0.23	0.21	0.54	24.65
10/21/2013	NORMAL	1,153.0	10.48	321.50	1,142.09	103.65	-91.82	138.46	0.70	0.41	3.14	55.11
	NORMAL	1,243.0	10.55	313.82	1,230.59	115.76	-102.86	154.85	1.56	0.08	-8.53	269.08
	NORMAL	1,334.0	10.05	321.12	1,320.12	127.71	-113.86	171.08	1.53	-0.55	8.02	114.53
	NORMAL	1,425.0	9.76	314.69	1,409.77	139.32	-124.33	186.70	1.26	-0.32	-7.07	252.16
	NORMAL	1,515.0	9.41	320.50	1,498.52	150.36	-134.43	201.67	1.14	-0.39	6.46	112.74
	NORMAL	1,606.0	9.03	323.60	1,588.34	161.85	-143.40	216.22	0.69	-0.42	3.41	128.94
	NORMAL	1,697.0	8.62	322.65	1,678.26	173.02	-151.77	230.15	0.48	-0.45	-1.04	199.10

## 2.1.2 Survey Stations (Continued)

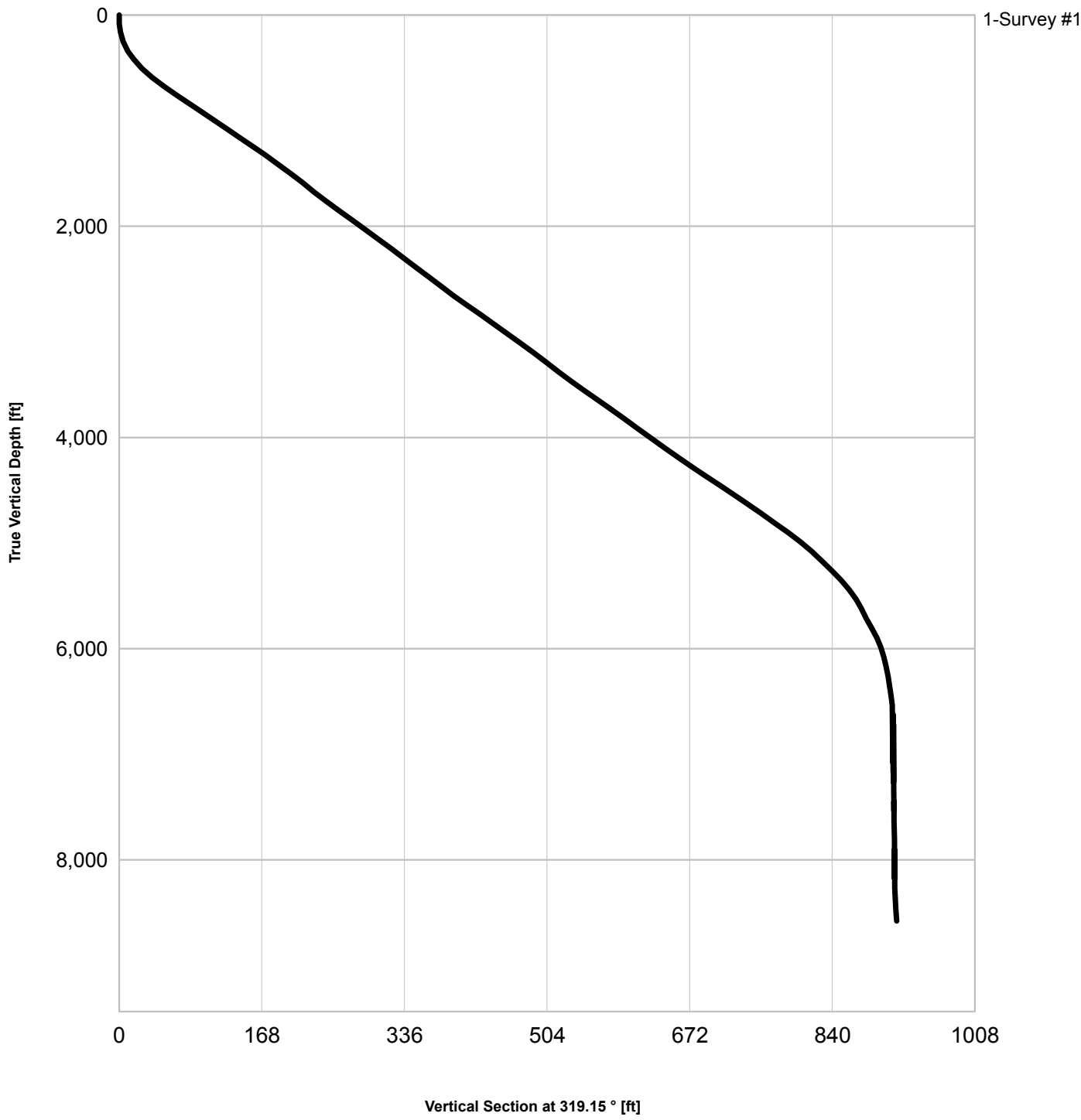
Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft )	Tface (°)
10/21/2013	NORMAL	1,787.0	9.76	314.17	1,767.11	183.70	-161.34	244.48	1.96	1.27	-9.42	305.85
	NORMAL	1,878.0	9.75	321.31	1,856.80	195.09	-171.69	259.87	1.33	-0.01	7.85	93.99
	NORMAL	1,969.0	9.63	314.26	1,946.50	206.41	-181.96	275.15	1.31	-0.13	-7.75	260.76
	NORMAL	2,059.0	9.79	318.82	2,035.22	217.43	-192.39	290.30	0.87	0.18	5.07	80.50
	NORMAL	2,150.0	9.67	319.24	2,124.91	229.04	-202.47	305.68	0.15	-0.13	0.46	149.60
	NORMAL	2,241.0	9.56	320.09	2,214.63	240.62	-212.31	320.88	0.20	-0.12	0.93	128.19
	NORMAL	2,332.0	9.41	319.08	2,304.38	252.04	-222.03	335.88	0.25	-0.16	-1.11	227.48
	NORMAL	2,422.0	9.26	316.74	2,393.19	262.87	-231.81	350.47	0.45	-0.17	-2.60	247.28
	NORMAL	2,513.0	9.38	319.37	2,482.99	273.83	-241.66	365.20	0.49	0.13	2.89	75.57
	NORMAL	2,604.0	9.01	312.29	2,572.83	284.26	-251.76	379.69	1.31	-0.41	-7.78	248.42
	NORMAL	2,694.0	10.08	316.16	2,661.58	294.68	-262.43	394.55	1.39	1.19	4.30	32.87
	NORMAL	2,785.0	10.02	317.25	2,751.18	306.24	-273.32	410.42	0.22	-0.07	1.20	108.04
	NORMAL	2,876.0	10.15	321.98	2,840.78	318.37	-283.63	426.34	0.92	0.14	5.20	83.41
10/22/2013	NORMAL	2,967.0	9.96	320.65	2,930.38	330.77	-293.56	442.21	0.33	-0.21	-1.46	230.06
	NORMAL	3,057.0	9.93	326.40	3,019.03	343.25	-302.79	457.69	1.10	-0.03	6.39	94.56
	NORMAL	3,147.0	9.79	325.47	3,107.70	356.02	-311.42	473.00	0.24	-0.16	-1.03	228.22
	NORMAL	3,238.0	9.50	325.49	3,197.42	368.58	-320.06	488.15	0.32	-0.32	0.02	179.35
	NORMAL	3,329.0	8.96	318.69	3,287.24	380.09	-328.99	502.70	1.34	-0.59	-7.47	240.33
	NORMAL	3,420.0	9.48	317.64	3,377.07	390.95	-338.72	517.28	0.60	0.57	-1.15	341.55
	NORMAL	3,511.0	9.37	316.42	3,466.84	401.86	-348.88	532.17	0.25	-0.12	-1.34	240.56
	NORMAL	3,601.0	10.49	323.33	3,555.49	413.74	-358.82	547.66	1.81	1.24	7.68	50.21
	NORMAL	3,692.0	10.11	315.36	3,645.03	426.07	-369.38	563.89	1.62	-0.42	-8.76	251.17
	NORMAL	3,783.0	9.86	318.72	3,734.65	437.60	-380.13	579.65	0.70	-0.27	3.69	114.87
	NORMAL	3,874.0	9.70	320.01	3,824.33	449.33	-390.20	595.11	0.30	-0.18	1.42	126.77
	NORMAL	3,965.0	9.98	311.67	3,914.00	460.45	-401.02	610.59	1.59	0.31	-9.16	276.99
	NORMAL	4,056.0	9.79	316.47	4,003.65	471.30	-412.24	626.14	0.93	-0.21	5.27	105.34
	NORMAL	4,147.0	9.86	316.77	4,093.31	482.59	-422.90	641.65	0.10	0.08	0.33	36.33
	NORMAL	4,238.0	10.15	324.26	4,182.93	494.77	-432.92	657.43	1.46	0.32	8.23	81.14
	NORMAL	4,329.0	10.38	315.75	4,272.48	507.16	-443.33	673.60	1.68	0.25	-9.35	274.42
	NORMAL	4,421.0	10.64	320.50	4,362.94	519.65	-454.51	690.36	0.98	0.28	5.16	75.64
	NORMAL	4,512.0	10.95	317.49	4,452.33	532.50	-465.70	707.40	0.71	0.34	-3.31	297.32
	NORMAL	4,603.0	10.51	324.59	4,541.74	545.64	-476.35	724.30	1.53	-0.48	7.80	111.88
	NORMAL	4,694.0	10.30	326.84	4,631.25	559.21	-485.61	740.63	0.50	-0.23	2.47	118.43
	NORMAL	4,785.0	9.85	320.94	4,720.85	572.07	-494.96	756.47	1.24	-0.49	-6.48	243.56
	NORMAL	4,877.0	10.11	325.68	4,811.45	584.85	-504.47	772.36	0.94	0.28	5.15	74.78
	NORMAL	4,968.0	10.00	321.93	4,901.06	597.66	-513.85	788.18	0.73	-0.12	-4.12	258.62
	NORMAL	5,059.0	8.81	318.58	4,990.83	609.11	-523.33	803.04	1.44	-1.31	-3.68	203.06
10/23/2013	NORMAL	5,150.0	7.73	315.21	5,080.89	618.68	-532.25	816.12	1.30	-1.19	-3.70	202.51
	NORMAL	5,241.0	7.37	317.10	5,171.10	627.30	-540.54	828.06	0.48	-0.40	2.08	146.34
10/24/2013	NORMAL	5,332.0	7.25	313.98	5,261.36	635.56	-548.64	839.61	0.46	-0.13	-3.43	251.64
	NORMAL	5,423.0	6.52	310.09	5,351.70	642.87	-556.73	850.43	0.95	-0.80	-4.27	210.65
	NORMAL	5,514.0	5.91	306.76	5,442.17	649.01	-564.43	860.11	0.78	-0.67	-3.66	208.93
	NORMAL	5,604.0	5.24	292.02	5,531.75	653.32	-571.96	868.29	1.75	-0.74	-16.38	237.71
	NORMAL	5,696.0	3.96	286.50	5,623.45	655.80	-578.90	874.71	1.47	-1.39	-6.00	196.34
	NORMAL	5,788.0	3.88	293.44	5,715.23	657.94	-584.80	880.19	0.52	-0.09	7.54	103.02
	NORMAL	5,879.0	4.43	312.38	5,806.00	661.53	-590.22	886.45	1.62	0.60	20.81	77.79
	NORMAL	5,970.0	3.46	328.83	5,896.79	666.25	-594.24	892.65	1.63	-1.07	18.08	138.61
10/25/2013	NORMAL	6,061.0	2.70	346.85	5,987.66	670.69	-596.15	897.25	1.34	-0.84	19.80	136.90
	NORMAL	6,152.0	3.18	10.84	6,078.54	675.25	-596.16	900.71	1.44	0.53	26.36	80.95
	NORMAL	6,243.0	2.56	15.68	6,169.43	679.69	-595.13	903.40	0.73	-0.68	5.32	161.06
	NORMAL	6,334.0	2.49	14.45	6,260.34	683.56	-594.09	905.65	0.10	-0.08	-1.35	217.13
	NORMAL	6,426.0	1.75	18.01	6,352.27	686.83	-593.16	907.51	0.82	-0.80	3.87	171.68
	NORMAL	6,517.0	1.99	12.15	6,443.23	689.70	-592.40	909.18	0.34	0.26	-6.44	318.50
	NORMAL	6,608.0	1.49	13.41	6,534.18	692.39	-591.79	910.82	0.55	-0.55	1.38	176.25
	NORMAL	6,699.0	1.49	25.91	6,625.15	694.61	-591.00	911.98	0.36	0.00	13.74	96.25
	NORMAL	6,790.0	1.58	55.77	6,716.12	696.38	-589.44	912.30	0.87	0.10	32.81	98.65

## 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 (°)
10/25/2013	NORMAL	6,881.0	1.30	72.02	6,807.09	697.40	-587.43	911.76	0.54	-0.31	17.86	132.38
	NORMAL	6,973.0	1.17	46.06	6,899.07	698.38	-585.76	911.40	0.62	-0.14	-28.22	244.16
	NORMAL	7,064.0	0.81	54.41	6,990.06	699.39	-584.56	911.39	0.43	-0.40	9.18	162.30
10/26/2013	NORMAL	7,155.0	1.14	37.05	7,081.05	700.49	-583.50	911.52	0.48	0.36	-19.08	309.27
	NORMAL	7,247.0	1.07	38.46	7,173.03	701.89	-582.41	911.87	0.08	-0.08	1.53	159.48
	NORMAL	7,338.0	0.65	33.40	7,264.02	702.99	-581.60	912.17	0.47	-0.46	-5.56	187.73
	NORMAL	7,429.0	0.95	32.03	7,355.01	704.06	-580.91	912.53	0.33	0.33	-1.51	355.67
10/27/2013	NORMAL	7,520.0	0.62	54.61	7,446.00	704.99	-580.11	912.71	0.49	-0.36	24.81	147.76
	NORMAL	7,611.0	0.62	44.69	7,537.00	705.62	-579.36	912.70	0.12	0.00	-10.90	265.04
	NORMAL	7,702.0	0.18	286.57	7,628.00	706.01	-579.15	912.86	0.79	-0.48	-129.80	192.69
	NORMAL	7,794.0	0.21	306.87	7,720.00	706.15	-579.43	913.15	0.08	0.03	22.07	76.90
	NORMAL	7,885.0	0.57	239.74	7,810.99	706.03	-579.95	913.39	0.58	0.40	-73.77	271.26
	NORMAL	7,976.0	0.51	235.20	7,901.99	705.57	-580.68	913.52	0.08	-0.07	-4.99	213.24
10/28/2013	NORMAL	8,067.0	0.32	217.91	7,992.99	705.14	-581.16	913.51	0.25	-0.21	-19.00	204.95
	NORMAL	8,158.0	0.54	243.85	8,083.99	704.75	-581.71	913.57	0.32	0.24	28.51	54.97
	NORMAL	8,249.0	0.70	209.23	8,174.98	704.07	-582.36	913.49	0.44	0.18	-38.04	275.18
	NORMAL	8,340.0	1.59	245.33	8,265.96	703.06	-583.78	913.65	1.21	0.98	39.67	58.03
	NORMAL	8,432.0	2.22	240.30	8,357.91	701.64	-586.49	914.35	0.71	0.68	-5.47	342.61
	NORMAL	8,523.0	2.41	236.60	8,448.84	699.72	-589.62	914.94	0.27	0.21	-4.07	319.95
	NORMAL	8,595.0	2.55	241.77	8,520.77	698.13	-592.29	915.49	0.37	0.19	7.18	60.56
	NORMAL	8,652.0	2.55	241.77	8,577.71	696.93	-594.53	916.04	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

