

Deviation Summary

PICEANCE VLY

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	RWF 424-25	Wellbore No.	00
Wellbore Legal Name	RWF 424-25	Common Wellbore Name	RWF 424-25
Project	RU 25-06S-094W	Site	RWF 23-25 Pad
Vertical Section Azimuth	189.28 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	12/20/2013	UWI	RWF 424-25
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	12/20/2013	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 (°)
12/20/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/2013	NORMAL	147.0	2.11	192.69	146.97	-2.64	-0.59	2.70	1.44	1.44	0.00	192.69
	NORMAL	238.0	4.13	190.75	237.83	-7.49	-1.57	7.65	2.22	2.22	-2.13	356.04
	NORMAL	328.0	8.26	194.00	327.28	-16.96	-3.74	17.34	4.60	4.59	3.61	6.47
	NORMAL	419.0	12.97	190.93	416.70	-33.33	-7.26	34.07	5.21	5.18	-3.37	351.64
	NORMAL	510.0	14.51	188.03	505.10	-54.65	-10.79	55.68	1.85	1.69	-3.19	334.49
	NORMAL	600.0	15.65	187.15	591.99	-77.86	-13.88	79.08	1.29	1.27	-0.98	348.22
	NORMAL	691.0	16.79	188.03	679.37	-103.05	-17.24	104.49	1.28	1.25	0.97	12.59
12/21/2013	NORMAL	781.0	15.82	186.80	765.75	-128.11	-20.51	129.74	1.14	-1.08	-1.37	199.01
	NORMAL	873.0	16.44	187.68	854.13	-153.46	-23.74	155.28	0.72	0.67	0.96	21.94
	NORMAL	964.0	15.25	186.01	941.67	-178.13	-26.71	180.10	1.40	-1.31	-1.84	200.16
	NORMAL	1,059.0	14.86	188.11	1,033.41	-202.61	-29.74	204.76	0.71	-0.41	2.21	126.58
	NORMAL	1,115.0	15.12	188.29	1,087.50	-216.95	-31.80	219.24	0.47	0.46	0.32	10.24
12/22/2013	NORMAL	1,115.0	15.12	188.29	1,087.50	-216.95	-31.80	219.24	0.00	0.00	0.00	0.00
	NORMAL	1,171.0	15.87	187.59	1,141.47	-231.77	-33.87	234.19	1.38	1.34	-1.25	345.66
	NORMAL	1,267.0	16.18	191.54	1,233.74	-257.88	-38.28	260.68	1.18	0.32	4.11	76.03
	NORMAL	1,362.0	16.66	191.19	1,324.87	-284.21	-43.57	287.52	0.52	0.51	-0.37	348.19
	NORMAL	1,458.0	17.27	191.37	1,416.69	-311.68	-49.05	315.51	0.64	0.64	0.19	5.01
	NORMAL	1,553.0	17.93	190.14	1,507.24	-339.90	-54.40	344.22	0.80	0.69	-1.29	330.01
	NORMAL	1,648.0	17.14	189.87	1,597.83	-368.09	-59.38	372.84	0.84	-0.83	-0.28	185.75
	NORMAL	1,744.0	16.13	189.26	1,689.81	-395.19	-63.95	400.33	1.07	-1.05	-0.64	189.52

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 (°)
12/22/2013	NORMAL	1,839.0	14.81	188.20	1,781.36	-420.23	-67.80	425.66	1.42	-1.39	-1.12	191.58
	NORMAL	1,935.0	15.60	187.24	1,874.00	-445.18	-71.18	450.83	0.86	0.82	-1.00	341.86
	NORMAL	2,030.0	16.70	187.41	1,965.25	-471.39	-74.55	477.24	1.16	1.16	0.18	2.54
	NORMAL	2,126.0	15.91	187.68	2,057.39	-498.11	-78.09	504.18	0.83	-0.82	0.28	174.65
	NORMAL	2,221.0	14.77	187.76	2,149.00	-523.01	-81.46	529.30	1.20	-1.20	0.08	178.98
	NORMAL	2,317.0	14.95	192.16	2,241.80	-547.24	-85.72	553.90	1.19	0.19	4.58	83.07
	NORMAL	2,412.0	15.34	191.45	2,333.50	-571.54	-90.80	578.70	0.45	0.41	-0.75	334.22
	NORMAL	2,507.0	13.85	194.62	2,425.43	-594.86	-96.16	602.58	1.78	-1.57	3.34	153.33
12/23/2013	NORMAL	2,602.0	14.55	193.39	2,517.53	-617.47	-101.80	625.80	0.80	0.74	-1.29	336.08
	NORMAL	2,698.0	15.47	194.53	2,610.25	-641.59	-107.80	650.58	1.01	0.96	1.19	18.34
	NORMAL	2,793.0	14.86	194.88	2,701.94	-665.63	-114.11	675.32	0.65	-0.64	0.37	171.63
	NORMAL	2,888.0	14.33	192.95	2,793.88	-688.86	-119.87	699.18	0.76	-0.56	-2.03	221.61
	NORMAL	2,984.0	14.64	189.35	2,886.83	-712.41	-124.50	723.16	0.99	0.32	-3.75	287.25
	NORMAL	3,079.0	15.21	188.64	2,978.62	-736.58	-128.33	747.63	0.63	0.60	-0.75	341.87
	NORMAL	3,174.0	15.91	188.73	3,070.14	-761.77	-132.18	773.11	0.74	0.74	0.09	2.02
	NORMAL	3,270.0	16.44	188.91	3,162.34	-788.19	-136.28	799.85	0.55	0.55	0.19	5.49
	NORMAL	3,365.0	17.14	189.17	3,253.29	-815.30	-140.59	827.30	0.74	0.74	0.27	6.25
	NORMAL	3,461.0	17.36	190.49	3,344.97	-843.34	-145.45	855.76	0.47	0.23	1.38	61.29
	NORMAL	3,556.0	16.44	189.08	3,435.87	-870.55	-150.15	883.37	1.06	-0.97	-1.48	203.34
	NORMAL	3,652.0	15.12	186.71	3,528.25	-896.40	-153.76	909.47	1.53	-1.38	-2.47	204.89
	NORMAL	3,747.0	15.16	185.74	3,619.95	-921.07	-156.45	934.24	0.27	0.04	-1.02	278.50
	NORMAL	3,842.0	15.43	186.80	3,711.59	-945.98	-159.19	959.27	0.41	0.28	1.12	46.51
	NORMAL	3,938.0	14.86	186.53	3,804.25	-970.89	-162.10	984.32	0.60	-0.59	-0.28	186.92
	NORMAL	4,033.0	15.16	186.71	3,896.01	-995.33	-164.94	1,008.90	0.32	0.32	0.19	8.92
	NORMAL	4,129.0	15.34	187.50	3,988.63	-1,020.39	-168.06	1,034.13	0.29	0.19	0.82	49.48
	NORMAL	4,224.0	15.56	187.68	4,080.20	-1,045.47	-171.41	1,059.43	0.24	0.23	0.19	12.38
12/24/2013	NORMAL	4,320.0	16.40	189.61	4,172.49	-1,071.60	-175.39	1,085.85	1.04	0.88	2.01	33.25
	NORMAL	4,416.0	16.88	189.08	4,264.47	-1,098.72	-179.85	1,113.34	0.52	0.50	-0.55	342.20
	NORMAL	4,511.0	15.60	191.72	4,355.67	-1,124.85	-184.62	1,139.90	1.56	-1.35	2.78	151.29
	NORMAL	4,607.0	14.90	191.02	4,448.29	-1,149.60	-189.60	1,165.13	0.75	-0.73	-0.73	194.40
	NORMAL	4,702.0	13.63	191.28	4,540.36	-1,172.57	-194.13	1,188.53	1.34	-1.34	0.27	177.24
	NORMAL	4,797.0	12.26	192.77	4,632.95	-1,193.39	-198.55	1,209.78	1.48	-1.44	1.57	167.03
	NORMAL	4,893.0	11.82	185.83	4,726.84	-1,213.11	-201.80	1,229.77	1.58	-0.46	-7.23	249.72
	NORMAL	4,988.0	11.52	190.58	4,819.88	-1,232.11	-204.53	1,248.97	1.06	-0.32	5.00	109.66
	NORMAL	5,083.0	9.28	192.07	4,913.31	-1,248.93	-207.87	1,266.11	2.37	-2.36	1.57	173.88
	NORMAL	5,179.0	7.96	194.79	5,008.23	-1,262.93	-211.19	1,280.45	1.44	-1.38	2.83	164.18
12/25/2013	NORMAL	5,275.0	7.17	197.34	5,103.39	-1,275.07	-214.67	1,293.00	0.89	-0.82	2.66	158.24
	NORMAL	5,370.0	6.37	196.46	5,197.73	-1,285.79	-217.93	1,304.10	0.85	-0.84	-0.93	186.95
	NORMAL	5,465.0	5.54	193.65	5,292.21	-1,295.30	-220.51	1,313.90	0.93	-0.87	-2.96	197.96
	NORMAL	5,561.0	3.87	190.40	5,387.89	-1,302.99	-222.19	1,321.76	1.76	-1.74	-3.39	187.45
	NORMAL	5,657.0	2.77	187.15	5,483.72	-1,308.48	-223.06	1,327.32	1.16	-1.15	-3.39	188.09
	NORMAL	5,751.0	2.59	192.77	5,577.62	-1,312.80	-223.81	1,331.71	0.34	-0.19	5.98	127.20
12/26/2013	NORMAL	5,846.0	1.36	183.81	5,672.56	-1,316.02	-224.36	1,334.98	1.33	-1.29	-9.43	189.64
	NORMAL	5,942.0	0.48	220.63	5,768.55	-1,317.46	-224.70	1,336.45	1.06	-0.92	38.35	163.57
	NORMAL	6,037.0	0.92	308.88	5,863.55	-1,317.28	-225.55	1,336.42	1.08	0.46	92.89	116.17
	NORMAL	6,132.0	1.27	320.65	5,958.53	-1,315.99	-226.81	1,335.34	0.44	0.37	12.39	38.70
	NORMAL	6,228.0	1.45	332.52	6,054.50	-1,314.09	-228.05	1,333.67	0.35	0.19	12.36	63.45
	NORMAL	6,323.0	1.32	25.34	6,149.48	-1,312.04	-228.13	1,331.65	1.30	-0.14	55.60	121.80
	NORMAL	6,419.0	1.19	27.98	6,245.45	-1,310.16	-227.19	1,329.65	0.15	-0.14	2.75	157.34
	NORMAL	6,514.0	1.10	43.09	6,340.43	-1,308.62	-226.11	1,327.95	0.33	-0.09	15.91	114.06
	NORMAL	6,609.0	1.05	30.61	6,435.42	-1,307.20	-225.04	1,326.39	0.25	-0.05	-13.14	251.75
12/27/2013	NORMAL	6,704.0	0.97	24.37	6,530.40	-1,305.72	-224.27	1,324.80	0.14	-0.08	-6.57	230.88
	NORMAL	6,803.0	0.79	26.57	6,629.39	-1,304.35	-223.61	1,323.34	0.18	-0.18	2.22	170.47
	NORMAL	6,898.0	0.70	54.17	6,724.38	-1,303.42	-222.85	1,322.30	0.39	-0.09	29.05	117.62
	NORMAL	6,994.0	1.10	41.60	6,820.37	-1,302.39	-221.76	1,321.11	0.46	0.42	-13.09	327.35
	NORMAL	7,089.0	1.27	50.83	6,915.35	-1,301.04	-220.34	1,319.55	0.27	0.18	9.72	52.99

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 (")
12/27/2013	NORMAL	7,184.0	1.10	41.86	7,010.33	-1,299.70	-218.92	1,317.99	0.26	-0.18	-9.44	223.07
	NORMAL	7,280.0	0.70	51.18	7,106.32	-1,298.65	-217.85	1,316.78	0.44	-0.42	9.71	164.52
	NORMAL	7,376.0	0.70	64.98	7,202.31	-1,298.03	-216.86	1,316.01	0.18	0.00	14.38	96.90
12/28/2013	NORMAL	7,471.0	0.44	74.30	7,297.31	-1,297.69	-215.98	1,315.53	0.29	-0.27	9.81	164.99
	NORMAL	7,567.0	0.57	106.64	7,393.30	-1,297.72	-215.17	1,315.44	0.32	0.14	33.69	82.23
	NORMAL	7,662.0	0.61	130.11	7,488.30	-1,298.18	-214.33	1,315.76	0.26	0.04	24.71	92.47
	NORMAL	7,758.0	0.44	135.03	7,584.30	-1,298.77	-213.68	1,316.23	0.18	-0.18	5.13	167.60
	NORMAL	7,853.0	0.66	176.60	7,679.29	-1,299.58	-213.39	1,316.98	0.46	0.23	43.76	83.00
	NORMAL	7,948.0	0.75	211.76	7,774.28	-1,300.65	-213.68	1,318.09	0.46	0.09	37.01	96.19
	NORMAL	8,043.0	1.27	205.96	7,869.27	-1,302.13	-214.47	1,319.67	0.56	0.55	-6.11	345.97
	NORMAL	8,138.0	1.63	211.67	7,964.24	-1,304.23	-215.64	1,321.93	0.41	0.38	6.01	24.74
	NORMAL	8,233.0	1.93	225.91	8,059.19	-1,306.49	-217.50	1,324.46	0.56	0.32	14.99	63.11
12/29/2013	NORMAL	8,327.0	2.15	223.27	8,153.13	-1,308.87	-219.84	1,327.20	0.25	0.23	-2.81	335.55
	NORMAL	8,423.0	2.24	233.29	8,249.06	-1,311.31	-222.58	1,330.04	0.41	0.09	10.44	81.84
	NORMAL	8,518.0	2.59	240.67	8,343.98	-1,313.47	-225.94	1,332.71	0.49	0.37	7.77	45.35
	NORMAL	8,613.0	2.46	232.85	8,438.89	-1,315.75	-229.44	1,335.53	0.39	-0.14	-8.23	245.45
	NORMAL	8,681.0	2.33	236.10	8,506.83	-1,317.40	-231.75	1,337.53	0.28	-0.19	4.78	135.36
	NORMAL	8,726.0	2.33	236.10	8,551.79	-1,318.42	-233.27	1,338.78	0.00	0.00	0.00	0.00