

I General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 414-29	Wellbore No.	OH
Well Name	RWF 414-29	Common Name	RWF 414-29
Project	RU 29-06S-094W	Site	RWF 14-29 Pad
Vertical Section Azimuth	7.89 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	5/25/2013	UWI	RWF 414-29
Active Datum	KB @5,445.2ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	5/25/2013	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

5600

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 (°)
5/25/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/25/2013	NORMAL	100.0	0.70	343.48	100.00	0.59	-0.17	0.56	0.70	0.70	0.00	343.48
	NORMAL	130.0	0.70	9.23	130.00	0.94	-0.20	0.91	1.04	0.00	85.83	102.87
	NORMAL	160.0	0.79	159.99	159.99	0.93	-0.10	0.91	4.81	0.30	502.53	164.48
	NORMAL	190.0	1.14	1.41	189.99	1.03	-0.02	1.02	6.32	1.17	-528.60	192.68
	NORMAL	250.0	1.41	20.57	249.98	2.32	0.26	2.33	0.83	0.45	31.93	67.47
	NORMAL	311.0	2.90	23.55	310.93	4.44	1.14	4.55	2.45	2.44	4.89	5.79
	NORMAL	342.0	3.43	20.30	341.89	6.03	1.77	6.21	1.80	1.71	-10.48	339.67
	NORMAL	443.0	3.96	20.53	442.68	12.13	4.04	12.57	0.52	0.52	0.23	1.72
	NORMAL	503.0	5.68	9.80	502.46	16.99	5.27	17.56	3.22	2.87	-17.88	326.92
	NORMAL	593.0	5.41	1.10	592.04	25.62	6.11	26.22	0.98	-0.30	-9.67	247.90
	NORMAL	685.0	3.55	355.20	683.76	32.80	5.96	33.31	2.08	-2.02	-6.41	190.99
	NORMAL	776.0	3.69	9.89	774.58	38.49	6.23	38.98	1.03	0.15	16.14	88.79
	NORMAL	866.0	4.84	15.22	864.33	45.01	7.72	45.64	1.35	1.28	5.92	21.69
	NORMAL	957.0	2.99	0.49	955.11	51.09	8.75	51.80	2.30	-2.03	-16.19	201.37
	NORMAL	1,052.0	4.92	358.56	1,049.88	57.64	8.67	58.28	2.04	2.03	-2.03	355.09
5/27/2013	NORMAL	1,155.0	4.18	6.29	1,152.56	65.78	8.97	66.39	0.93	-0.72	7.50	144.16
	NORMAL	1,250.0	4.35	12.00	1,247.30	72.75	10.10	73.45	0.48	0.18	6.01	71.05
	NORMAL	1,345.0	4.62	9.63	1,342.01	80.05	11.49	80.86	0.34	0.28	-2.49	324.35
	NORMAL	1,441.0	4.75	14.29	1,437.88	87.71	13.11	88.68	0.42	0.14	4.85	73.47
	NORMAL	1,536.0	4.75	14.75	1,532.36	95.32	15.09	96.49	0.04	0.00	0.48	90.23

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 (°)
5/27/2013	NORMAL	1,631.0	4.84	19.39	1,627.03	102.91	17.42	104.33	0.42	0.09	4.88	79.25
	NORMAL	1,726.0	4.62	11.30	1,721.70	110.44	19.50	112.07	0.74	-0.23	-8.52	247.75
	NORMAL	1,822.0	3.52	7.87	1,817.46	117.15	20.66	118.88	1.17	-1.15	-3.57	190.77
	NORMAL	1,917.0	3.52	9.89	1,912.28	122.91	21.56	124.71	0.13	0.00	2.13	91.01
	NORMAL	2,012.0	3.43	11.39	2,007.11	128.57	22.62	130.46	0.13	-0.09	1.58	135.46
	NORMAL	2,108.0	3.34	354.87	2,102.94	134.17	22.94	136.05	1.02	-0.09	-17.21	256.52
	NORMAL	2,203.0	3.96	1.28	2,197.75	140.21	22.76	142.01	0.78	0.65	6.75	36.58
	NORMAL	2,298.0	4.04	4.53	2,292.52	146.83	23.10	148.61	0.25	0.08	3.42	72.19
	NORMAL	2,394.0	4.22	2.07	2,388.27	153.73	23.50	155.50	0.26	0.19	-2.56	314.22
	NORMAL	2,489.0	3.91	6.55	2,483.03	160.44	23.99	162.21	0.47	-0.33	4.72	136.53
	NORMAL	2,584.0	3.96	10.42	2,577.81	166.88	24.96	168.73	0.28	0.05	4.07	81.27
	NORMAL	2,680.0	3.91	8.40	2,673.58	173.38	26.03	175.31	0.15	-0.05	-2.10	249.16
	NORMAL	2,775.0	4.18	6.29	2,768.34	180.03	26.89	182.01	0.32	0.28	-2.22	330.08
	NORMAL	2,870.0	4.26	11.48	2,863.09	186.92	27.97	188.99	0.41	0.08	5.46	80.77
	NORMAL	2,965.0	3.43	19.65	2,957.87	193.06	29.62	195.30	1.04	-0.87	8.60	150.60
	NORMAL	3,061.0	3.78	17.72	3,053.68	198.78	31.55	201.23	0.39	0.36	-2.01	339.91
	NORMAL	3,155.0	3.65	16.75	3,147.48	204.59	33.36	207.24	0.15	-0.14	-1.03	205.32
	NORMAL	3,251.0	3.56	16.75	3,243.29	210.37	35.10	213.20	0.09	-0.09	0.00	180.00
	NORMAL	3,346.0	3.78	5.06	3,338.10	216.32	36.22	219.24	0.82	0.23	-12.31	280.50
	NORMAL	3,441.0	3.82	3.65	3,432.89	222.60	36.70	225.53	0.11	0.04	-1.48	292.47
5/28/2013	NORMAL	3,537.0	4.22	4.97	3,528.66	229.31	37.21	232.24	0.43	0.42	1.38	13.68
	NORMAL	3,632.0	4.26	4.71	3,623.40	236.30	37.80	239.26	0.05	0.04	-0.27	334.20
	NORMAL	3,727.0	4.75	2.95	3,718.10	243.75	38.30	246.70	0.54	0.52	-1.85	343.37
	NORMAL	3,823.0	4.84	4.09	3,813.77	251.76	38.79	254.70	0.14	0.09	1.19	47.21
	NORMAL	3,918.0	4.92	1.90	3,908.42	259.83	39.21	262.75	0.21	0.08	-2.31	292.15
	NORMAL	4,014.0	5.01	4.97	4,004.06	268.12	39.71	271.03	0.29	0.09	3.20	72.82
	NORMAL	4,108.0	5.10	1.28	4,097.70	276.38	40.16	279.28	0.36	0.10	-3.93	283.63
	NORMAL	4,204.0	5.05	1.90	4,193.32	284.87	40.40	287.72	0.08	-0.05	0.65	132.66
	NORMAL	4,299.0	5.23	2.42	4,287.94	293.38	40.72	296.19	0.20	0.19	0.55	14.77
	NORMAL	4,394.0	5.41	4.71	4,382.53	302.17	41.27	304.97	0.29	0.19	2.41	50.85
	NORMAL	4,489.0	4.57	8.75	4,477.17	310.37	42.21	313.23	0.96	-0.88	4.25	159.30
	NORMAL	4,585.0	3.82	15.43	4,572.91	317.23	43.64	320.22	0.93	-0.78	6.96	150.22
	NORMAL	4,680.0	2.68	17.19	4,667.76	322.41	45.14	325.55	1.20	-1.20	1.85	175.88
	NORMAL	4,775.0	1.54	14.29	4,762.69	325.77	46.11	329.01	1.20	-1.20	-3.05	183.90
	NORMAL	4,870.0	1.41	47.69	4,857.66	327.79	47.30	331.18	0.90	-0.13	35.16	114.79
	NORMAL	4,966.0	2.46	38.63	4,953.60	330.20	49.46	333.86	1.13	1.09	-9.44	339.12
5/29/2013	NORMAL	5,061.0	0.53	36.00	5,048.57	332.15	50.99	336.00	2.03	-2.03	-2.77	180.72
	NORMAL	5,156.0	0.26	45.93	5,143.57	332.65	51.40	336.56	0.29	-0.28	10.45	170.70
	NORMAL	5,251.0	0.57	83.37	5,238.56	332.86	52.03	336.85	0.42	0.33	39.41	60.94
	NORMAL	5,347.0	0.75	8.49	5,334.56	333.53	52.59	337.60	0.85	0.19	-78.00	242.66
	NORMAL	5,442.0	1.19	19.65	5,429.54	335.08	53.02	339.18	0.50	0.46	11.75	28.88
	NORMAL	5,537.0	0.75	351.88	5,524.53	336.62	53.26	340.75	0.67	-0.46	-29.23	213.58
	NORMAL	5,632.0	0.70	35.21	5,619.52	337.71	53.51	341.86	0.57	-0.05	45.61	116.62
	NORMAL	5,727.0	1.23	356.80	5,714.51	339.20	53.78	343.38	0.85	0.56	-40.43	289.05
	NORMAL	5,822.0	1.32	356.62	5,809.49	341.31	53.66	345.45	0.09	0.09	-0.19	357.36
	NORMAL	5,918.0	1.45	359.96	5,905.46	343.63	53.60	347.74	0.16	0.14	3.48	33.52
5/30/2013	NORMAL	6,013.0	1.76	352.67	6,000.42	346.28	53.41	350.33	0.39	0.33	-7.67	322.95
	NORMAL	6,108.0	1.41	2.07	6,095.39	348.90	53.27	352.91	0.46	-0.37	9.89	148.03
	NORMAL	6,203.0	1.27	353.28	6,190.36	351.11	53.19	355.09	0.26	-0.15	-9.25	231.40
	NORMAL	6,299.0	1.36	331.40	6,286.33	353.17	52.52	357.03	0.53	0.09	-22.79	269.10
	NORMAL	6,394.0	1.27	334.56	6,381.31	355.11	51.52	358.82	0.12	-0.09	3.33	142.71
	NORMAL	6,489.0	1.23	316.28	6,476.29	356.79	50.37	360.33	0.42	-0.04	-19.24	255.18
	NORMAL	6,584.0	1.27	322.17	6,571.27	358.36	49.02	361.70	0.14	0.04	6.20	75.67
	NORMAL	6,680.0	0.66	323.93	6,667.25	359.65	48.04	362.84	0.64	-0.64	1.83	178.10
	NORMAL	6,775.0	0.48	333.86	6,762.25	360.45	47.54	363.56	0.22	-0.19	10.45	156.15
	NORMAL	6,870.0	0.44	301.95	6,857.24	361.00	47.06	364.04	0.27	-0.04	-33.59	245.40
	NORMAL	6,965.0	0.09	178.95	6,952.24	361.12	46.75	364.12	0.52	-0.37	-129.47	188.77

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 (°)
5/30/2013	NORMAL	7,061.0	0.35	173.81	7,048.24	360.75	46.78	363.76	0.27	0.27	-5.35	353.09
	NORMAL	7,156.0	0.88	166.16	7,143.24	359.75	46.99	362.80	0.56	0.56	-8.05	347.36
5/31/2013	NORMAL	7,251.0	0.97	168.19	7,238.22	358.26	47.33	361.36	0.10	0.09	2.14	21.02
	NORMAL	7,347.0	0.88	146.83	7,334.21	356.85	47.90	360.04	0.37	-0.09	-22.25	244.86
	NORMAL	7,442.0	0.92	165.46	7,429.20	355.50	48.49	358.79	0.31	0.04	19.61	91.60
	NORMAL	7,537.0	1.23	196.66	7,524.18	353.78	48.39	357.08	0.68	0.33	32.84	78.28
	NORMAL	7,633.0	1.54	199.21	7,620.16	351.58	47.67	354.79	0.33	0.32	2.66	12.52
	NORMAL	7,728.0	1.19	181.46	7,715.13	349.39	47.22	352.56	0.57	-0.37	-18.68	221.74
	NORMAL	7,823.0	1.36	164.58	7,810.11	347.31	47.49	350.54	0.43	0.18	-17.77	285.76
	NORMAL	7,875.0	1.27	159.04	7,862.09	346.18	47.87	349.47	0.30	-0.17	-10.65	231.96
	NORMAL	7,920.0	1.27	159.04	7,907.08	345.25	48.22	348.60	0.00	0.00	0.00	0.00