

I General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 324-29	Wellbore No.	OH
Well Name	RWF 324-29	Common Name	RWF 324-29
Project	RU 29-06S-094W	Site	RWF 14-29 Pad
Vertical Section Azimuth	70.52 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	5/13/2013	UWI	RWF 324-29
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	5/13/2013	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

5802

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 (°)
5/13/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/13/2013	NORMAL	101.0	0.70	95.89	101.00	-0.06	0.61	0.56	0.69	0.69	0.00	95.89
	NORMAL	132.0	1.32	95.80	131.99	-0.12	1.16	1.05	2.00	2.00	-0.29	359.81
	NORMAL	163.0	1.50	89.74	162.98	-0.15	1.92	1.76	0.75	0.58	-19.55	317.3'
	NORMAL	194.0	2.38	79.89	193.97	-0.04	2.96	2.78	3.03	2.84	-31.77	334.28
	NORMAL	224.0	3.34	72.86	223.93	0.33	4.41	4.26	3.40	3.20	-23.43	336.36
	NORMAL	254.0	3.61	64.25	253.87	1.00	6.09	6.08	1.96	0.90	-28.70	293.0'
	NORMAL	285.0	4.40	70.49	284.80	1.82	8.09	8.23	2.91	2.55	20.13	32.02
5/14/2013	NORMAL	316.0	5.81	74.00	315.67	2.65	10.72	10.99	4.66	4.55	11.32	14.24
	NORMAL	347.0	7.21	71.19	346.47	3.71	14.07	14.50	4.63	4.52	-9.06	345.78
	NORMAL	377.0	8.09	68.12	376.21	5.10	17.81	18.49	3.23	2.93	-10.23	333.56
	NORMAL	408.0	8.97	66.88	406.86	6.86	22.06	23.08	2.90	2.84	-4.00	347.58
	NORMAL	439.0	9.41	66.88	437.46	8.81	26.61	28.03	1.42	1.42	0.00	0.00
	NORMAL	470.0	9.41	67.59	468.05	10.77	31.29	33.09	0.37	0.00	2.29	90.35
	NORMAL	500.0	9.77	72.69	497.63	12.46	35.98	38.08	3.07	1.20	17.00	69.57
	NORMAL	531.0	10.65	73.74	528.14	14.05	41.24	43.57	2.90	2.84	3.39	12.46
	NORMAL	561.0	11.61	71.98	557.57	15.76	46.78	49.35	3.39	3.20	-5.87	339.65
	NORMAL	592.0	12.67	69.26	587.88	17.92	52.92	55.87	3.88	3.42	-8.77	330.3'
	NORMAL	622.0	13.99	69.96	617.07	20.33	59.41	62.79	4.43	4.40	2.33	7.3'
	NORMAL	653.0	15.48	69.79	647.05	23.05	66.81	70.67	4.81	4.81	-0.55	358.26
	NORMAL	693.0	16.79	69.07	685.47	26.95	77.22	81.78	3.31	3.28	-1.80	350.97

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 (°)
5/14/2013	NORMAL	785.0	18.55	68.55	773.13	37.05	103.25	109.69	1.92	1.91	-0.57	354.63
	NORMAL	877.0	20.14	68.34	859.93	48.25	131.59	140.15	1.73	1.73	-0.23	357.40
	NORMAL	969.0	18.55	70.01	946.74	59.10	160.07	170.61	1.83	-1.73	1.82	161.60
	NORMAL	1,064.0	19.43	70.28	1,036.57	69.60	189.14	201.52	0.93	0.93	0.28	5.83
5/15/2013	NORMAL	1,110.0	19.79	69.56	1,079.90	74.90	203.64	216.96	0.94	0.78	-1.57	325.79
	NORMAL	1,155.0	20.61	67.20	1,122.13	80.63	218.08	232.49	2.57	1.82	-5.24	314.07
	NORMAL	1,250.0	21.45	68.60	1,210.80	93.45	249.67	266.54	1.03	0.88	1.47	31.54
	NORMAL	1,345.0	20.35	74.23	1,299.56	104.28	281.74	300.39	2.41	-1.16	5.93	121.32
	NORMAL	1,440.0	18.77	74.41	1,389.07	112.87	312.36	332.12	1.66	-1.66	0.19	177.90
	NORMAL	1,536.0	18.90	74.58	1,479.93	121.16	342.23	363.04	0.15	0.14	0.18	22.97
	NORMAL	1,631.0	18.77	75.11	1,569.85	129.18	371.83	393.62	0.23	-0.14	0.56	127.48
	NORMAL	1,726.0	18.77	71.42	1,659.80	137.97	401.09	424.14	1.25	0.00	-3.88	268.25
	NORMAL	1,821.0	18.90	70.10	1,749.71	148.08	430.04	454.81	0.47	0.14	-1.39	286.34
	NORMAL	1,917.0	19.87	71.24	1,840.27	158.62	460.11	486.67	1.08	1.01	1.19	21.85
	NORMAL	2,012.0	19.82	70.80	1,929.63	169.11	490.61	518.92	0.17	-0.05	-0.46	251.28
	NORMAL	2,107.0	18.73	68.78	2,019.30	179.93	520.04	550.27	1.34	-1.15	-2.13	210.5'
	NORMAL	2,203.0	20.40	68.52	2,109.75	191.63	549.98	582.40	1.74	1.74	-0.27	356.88
	NORMAL	2,298.0	21.27	71.59	2,198.54	203.14	581.74	616.18	1.47	0.92	3.23	52.90
	NORMAL	2,393.0	20.70	70.36	2,287.24	214.22	613.90	650.20	0.76	-0.60	-1.29	217.12
	NORMAL	2,488.0	21.23	73.44	2,375.96	224.77	646.20	684.17	1.29	0.56	3.24	65.76
	NORMAL	2,584.0	20.75	71.68	2,465.59	235.07	679.01	718.53	0.83	-0.50	-1.83	231.90
	NORMAL	2,679.0	20.57	68.96	2,554.48	246.35	710.56	752.04	1.03	-0.19	-2.86	258.1'
	NORMAL	2,774.0	19.60	70.36	2,643.70	257.70	741.14	784.66	1.14	-1.02	1.47	154.29
5/16/2013	NORMAL	2,870.0	18.24	68.69	2,734.51	268.57	770.31	815.78	1.52	-1.42	-1.74	200.92
	NORMAL	2,965.0	18.37	71.24	2,824.71	278.79	798.33	845.60	0.85	0.14	2.68	81.98
	NORMAL	3,060.0	18.29	70.54	2,914.89	288.57	826.56	875.48	0.25	-0.08	-0.74	249.70
	NORMAL	3,155.0	19.12	70.19	3,004.87	298.81	855.26	905.95	0.88	0.87	-0.37	352.13
	NORMAL	3,250.0	19.52	70.19	3,094.52	309.46	884.83	937.38	0.42	0.42	0.00	0.00
	NORMAL	3,345.0	19.74	72.74	3,184.00	319.60	915.08	969.28	0.93	0.23	2.68	76.80
	NORMAL	3,441.0	20.44	73.00	3,274.16	329.31	946.59	1,002.23	0.74	0.73	0.27	7.38
	NORMAL	3,536.0	20.61	72.38	3,363.13	339.22	978.39	1,035.51	0.29	0.18	-0.65	307.74
5/17/2013	NORMAL	3,632.0	19.34	72.03	3,453.35	349.24	1,009.62	1,068.29	1.33	-1.32	-0.36	185.2'
	NORMAL	3,727.0	19.08	71.51	3,543.06	359.02	1,039.31	1,099.54	0.33	-0.27	-0.55	213.10
	NORMAL	3,822.0	18.95	72.65	3,632.88	368.54	1,068.76	1,130.48	0.41	-0.14	1.20	109.83
	NORMAL	3,918.0	19.30	71.24	3,723.58	378.29	1,098.66	1,161.92	0.60	0.36	-1.47	306.48
	NORMAL	4,013.0	19.12	71.51	3,813.29	388.28	1,128.28	1,193.17	0.21	-0.19	0.28	153.86
	NORMAL	4,108.0	17.14	75.28	3,903.57	396.77	1,156.58	1,222.68	2.42	-2.08	3.97	151.14
	NORMAL	4,203.0	16.44	74.76	3,994.52	403.86	1,183.09	1,250.04	0.75	-0.74	-0.55	191.86
	NORMAL	4,298.0	14.55	75.90	4,086.06	410.30	1,207.63	1,275.33	2.02	-1.99	1.20	171.38
	NORMAL	4,394.0	13.01	72.21	4,179.30	416.54	1,229.62	1,298.14	1.85	-1.60	-3.84	207.93
	NORMAL	4,489.0	11.56	68.34	4,272.12	423.32	1,248.65	1,318.34	1.75	-1.53	-4.07	207.7'
	NORMAL	4,584.0	11.21	69.13	4,365.25	430.13	1,266.12	1,337.08	0.40	-0.37	0.83	156.37
	NORMAL	4,679.0	11.65	71.94	4,458.37	436.39	1,283.87	1,355.91	0.75	0.46	2.96	53.07
	NORMAL	4,775.0	9.41	74.14	4,552.75	441.54	1,300.64	1,373.43	2.37	-2.33	2.29	170.90
	NORMAL	4,870.0	7.87	66.32	4,646.67	446.27	1,314.07	1,387.67	2.04	-1.62	-8.23	213.52
	NORMAL	4,965.0	7.17	62.80	4,740.85	451.60	1,325.30	1,400.03	0.88	-0.74	-3.71	211.6'
	NORMAL	5,061.0	7.17	65.18	4,836.10	456.85	1,336.06	1,411.93	0.31	0.00	2.48	91.18
	NORMAL	5,156.0	5.76	66.14	4,930.50	461.27	1,345.80	1,422.59	1.49	-1.48	1.01	176.09
	NORMAL	5,251.0	3.87	71.72	5,025.16	464.20	1,353.21	1,430.55	2.05	-1.99	5.87	168.86
	NORMAL	5,346.0	2.90	78.80	5,119.99	465.67	1,358.61	1,436.13	1.11	-1.02	7.46	160.18
	NORMAL	5,441.0	1.14	89.08	5,214.93	466.16	1,361.91	1,439.41	1.88	-1.85	10.82	173.47
5/18/2013	NORMAL	5,537.0	1.01	78.63	5,310.91	466.34	1,363.70	1,441.15	0.24	-0.14	-10.89	231.30
	NORMAL	5,632.0	1.23	95.50	5,405.89	466.41	1,365.53	1,442.90	0.41	0.23	17.76	64.92
	NORMAL	5,727.0	1.05	68.17	5,500.88	466.63	1,367.35	1,444.70	0.60	-0.19	-28.77	238.35
	NORMAL	5,822.0	0.83	84.25	5,595.86	467.02	1,368.85	1,446.23	0.36	-0.23	16.93	137.68
	NORMAL	5,917.0	0.92	69.92	5,690.85	467.35	1,370.25	1,447.66	0.25	0.09	-15.08	285.09
	NORMAL	6,013.0	1.71	37.40	5,786.83	468.76	1,371.84	1,449.64	1.10	0.82	-33.87	299.58

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 (°)
5/18/2013	NORMAL	6,108.0	1.36	357.33	5,881.80	471.01	1,372.65	1,451.15	1.16	-0.37	-42.18	232.61
	NORMAL	6,203.0	0.66	324.37	5,976.78	472.58	1,372.28	1,451.32	0.93	-0.74	-34.69	204.01
	NORMAL	6,298.0	1.63	12.44	6,071.76	474.34	1,372.25	1,451.88	1.35	1.02	50.60	70.50
	NORMAL	6,394.0	1.41	20.35	6,167.73	476.79	1,372.96	1,453.36	0.32	-0.23	8.24	140.26
	NORMAL	6,489.0	0.97	20.53	6,262.71	478.63	1,373.64	1,454.63	0.46	-0.46	0.19	179.60
5/20/2013	NORMAL	6,584.0	0.83	16.22	6,357.70	480.05	1,374.12	1,455.55	0.16	-0.15	-4.54	203.66
	NORMAL	6,679.0	0.57	37.05	6,452.69	481.09	1,374.60	1,456.34	0.38	-0.27	21.93	145.71
5/22/2013	NORMAL	6,779.0	0.57	37.05	6,552.68	481.88	1,375.20	1,457.17	0.00	0.00	0.00	0.00
	NORMAL	6,870.0	1.36	14.55	6,643.67	483.29	1,375.74	1,458.15	0.95	0.87	-24.73	322.83
	NORMAL	6,965.0	1.10	25.89	6,738.65	485.20	1,376.42	1,459.43	0.37	-0.27	11.94	142.46
	NORMAL	7,060.0	0.88	9.10	6,833.63	486.74	1,376.93	1,460.43	0.38	-0.23	-17.67	224.63
	NORMAL	7,156.0	1.05	36.79	6,929.62	488.17	1,377.58	1,461.52	0.51	0.18	28.84	84.18
	NORMAL	7,251.0	1.36	16.84	7,024.60	489.95	1,378.43	1,462.91	0.54	0.33	-21.00	296.21
	NORMAL	7,346.0	1.67	11.39	7,119.57	492.38	1,379.03	1,464.29	0.36	0.33	-5.74	332.33
	NORMAL	7,442.0	1.41	27.12	7,215.53	494.81	1,379.84	1,465.86	0.51	-0.27	16.39	129.29
	NORMAL	7,537.0	1.01	54.28	7,310.51	496.33	1,381.05	1,467.52	0.72	-0.42	28.59	137.96
	NORMAL	7,632.0	1.05	78.19	7,405.50	497.00	1,382.58	1,469.18	0.45	0.04	25.17	96.71
	NORMAL	7,727.0	1.05	78.01	7,500.48	497.36	1,384.29	1,470.91	0.00	0.00	-0.19	269.91
	NORMAL	7,823.0	1.05	78.63	7,596.47	497.72	1,386.01	1,472.65	0.01	0.00	0.65	90.31
	NORMAL	7,918.0	1.14	97.26	7,691.45	497.77	1,387.80	1,474.36	0.38	0.09	19.61	85.25
	NORMAL	8,013.0	1.32	87.85	7,786.43	497.69	1,389.83	1,476.24	0.28	0.19	-9.91	306.94
	NORMAL	8,055.0	1.71	90.75	7,828.41	497.70	1,390.94	1,477.29	0.95	0.93	6.90	12.57
	NORMAL	8,100.0	1.71	90.75	7,873.39	497.68	1,392.29	1,478.55	0.00	0.00	0.00	0.00