

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 331-34	Wellbore No.	
Well Name	RWF 331-34	Common Name	RWF 331-34
Project	RU 27-06S-094W	Site	RMV 28-27 Pad
Vertical Section Azimuth	179.98 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	8/24/2012	UWI	RWF 331-34
Active Datum	KB @5,323.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	8/24/2012	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 (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
8/24/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/24/2012	NORMAL	102.0	1.58	171.74	101.99	-1.39	0.20	1.39	1.55	1.55	0.00	171.74
	NORMAL	162.0	2.29	163.92	161.95	-3.36	0.65	3.36	1.26	1.18	-13.03	335.66
	NORMAL	254.0	2.46	172.88	253.87	-7.09	1.41	7.09	0.44	0.18	9.74	69.92
	NORMAL	344.0	3.87	183.43	343.74	-12.04	1.46	12.04	1.69	1.57	11.72	27.77
	NORMAL	435.0	6.69	187.82	434.34	-20.35	0.56	20.35	3.13	3.10	4.82	10.34
	NORMAL	526.0	8.97	184.39	524.49	-32.68	-0.71	32.68	2.56	2.51	-3.77	346.71
8/25/2012	NORMAL	617.0	10.82	182.64	614.13	-48.29	-1.64	48.29	2.06	2.03	-1.92	349.90
	NORMAL	688.0	12.93	180.12	683.61	-62.89	-1.97	62.89	3.06	2.97	-3.55	344.96
	NORMAL	779.0	15.04	179.07	771.90	-84.88	-1.79	84.88	2.34	2.32	-1.15	352.63
	NORMAL	870.0	18.47	179.42	859.03	-111.11	-1.46	111.11	3.77	3.77	0.38	1.85
	NORMAL	961.0	22.34	179.68	944.30	-142.83	-1.21	142.83	4.25	4.25	0.29	1.46
	NORMAL	1,054.0	23.92	180.03	1,029.82	-179.36	-1.13	179.36	1.71	1.70	0.38	5.13
	NORMAL	1,094.0	24.36	178.89	1,066.32	-195.72	-0.97	195.71	1.60	1.10	-2.85	312.82
8/26/2012	NORMAL	1,174.0	24.97	181.62	1,139.03	-229.09	-1.13	229.09	1.62	0.76	3.41	63.08
	NORMAL	1,270.0	25.01	181.44	1,226.04	-269.63	-2.21	269.63	0.09	0.04	-0.19	297.66
	NORMAL	1,365.0	24.00	178.63	1,312.49	-309.03	-2.25	309.02	1.62	-1.06	-2.96	227.82
	NORMAL	1,461.0	23.74	177.04	1,400.27	-347.84	-0.79	347.84	0.72	-0.27	-1.66	247.27
	NORMAL	1,557.0	23.43	177.83	1,488.26	-386.21	0.93	386.21	0.46	-0.32	0.82	134.80
	NORMAL	1,653.0	23.39	183.72	1,576.37	-424.31	0.42	424.31	2.44	-0.04	6.14	93.68
	NORMAL	1,748.0	23.34	182.58	1,663.58	-461.92	-1.65	461.92	0.48	-0.05	-1.20	263.17

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 (°)	
8/26/2012	NORMAL	1,844.0	22.11	181.88	1,752.12	-498.98	-3.10	498.98	1.31	-1.28	-0.73	192.08	
	NORMAL	1,939.0	23.03	178.36	1,839.85	-535.43	-3.16	535.42	1.72	0.97	-3.71	302.62	
	NORMAL	2,034.0	21.41	181.09	1,927.79	-571.34	-2.95	571.34	2.02	-1.71	2.87	148.75	
8/27/2012	NORMAL	2,130.0	21.36	177.48	2,017.19	-606.33	-2.52	606.33	1.37	-0.05	-3.76	266.14	
	NORMAL	2,225.0	21.27	179.77	2,105.69	-640.84	-1.69	640.84	0.88	-0.09	2.41	97.24	
	NORMAL	2,321.0	21.27	181.53	2,195.15	-675.66	-2.08	675.66	0.67	0.00	1.83	90.82	
	NORMAL	2,417.0	21.54	178.98	2,284.53	-710.69	-2.24	710.69	1.01	0.28	-2.66	284.99	
	NORMAL	2,511.0	21.76	176.96	2,371.90	-745.34	-1.00	745.34	0.83	0.23	-2.15	285.51	
	NORMAL	2,606.0	21.98	181.09	2,460.07	-780.70	-0.41	780.70	1.64	0.23	4.35	83.78	
	NORMAL	2,702.0	22.33	179.42	2,548.98	-816.90	-0.57	816.90	0.75	0.36	-1.74	298.29	
	NORMAL	2,798.0	22.59	182.23	2,637.70	-853.56	-1.10	853.56	1.15	0.27	2.93	77.69	
	NORMAL	2,893.0	22.95	177.22	2,725.31	-890.30	-0.91	890.30	2.08	0.38	-5.27	278.20	
	NORMAL	2,989.0	23.25	175.73	2,813.61	-927.89	1.41	927.89	0.68	0.31	-1.55	296.48	
	NORMAL	3,084.0	23.39	179.59	2,900.86	-965.45	2.94	965.45	1.61	0.15	4.06	86.54	
	NORMAL	3,180.0	23.16	178.71	2,989.04	-1,003.38	3.50	1,003.38	0.43	-0.24	-0.92	236.11	
	NORMAL	3,276.0	23.65	179.68	3,077.15	-1,041.51	4.03	1,041.51	0.65	0.51	1.01	38.63	
	NORMAL	3,371.0	22.68	181.70	3,164.49	-1,078.87	3.60	1,078.87	1.32	-1.02	2.13	141.60	
	NORMAL	3,467.0	22.77	180.47	3,253.04	-1,115.95	2.90	1,115.95	0.50	0.09	-1.28	280.16	
	8/28/2012	NORMAL	3,562.0	23.47	178.63	3,340.41	-1,153.24	3.20	1,153.24	1.06	0.74	-1.94	313.25
		NORMAL	3,658.0	22.99	182.23	3,428.63	-1,191.09	2.92	1,191.09	1.56	-0.50	3.75	110.33
		NORMAL	3,754.0	23.78	177.57	3,516.75	-1,229.16	3.02	1,229.16	2.09	0.82	-4.85	290.98
		NORMAL	3,849.0	22.37	179.59	3,604.15	-1,266.38	3.96	1,266.38	1.70	-1.48	2.13	151.61
		NORMAL	3,944.0	21.06	183.20	3,692.41	-1,301.50	3.13	1,301.50	1.97	-1.38	3.80	136.11
NORMAL		4,040.0	21.80	183.46	3,781.77	-1,336.52	1.09	1,336.52	0.78	0.77	0.27	7.44	
NORMAL		4,136.0	22.42	182.93	3,870.71	-1,372.59	-0.92	1,372.59	0.68	0.65	-0.55	341.92	
NORMAL		4,231.0	20.31	178.63	3,959.18	-1,407.17	-1.45	1,407.17	2.76	-2.22	-4.53	214.60	
NORMAL		4,327.0	18.81	182.41	4,049.64	-1,439.30	-1.70	1,439.30	2.04	-1.56	3.94	141.62	
NORMAL		4,422.0	16.92	180.38	4,140.06	-1,468.43	-2.44	1,468.42	2.09	-1.99	-2.14	197.27	
NORMAL		4,517.0	15.60	178.98	4,231.26	-1,495.02	-2.30	1,495.02	1.45	-1.39	-1.47	195.87	
NORMAL		4,613.0	12.92	176.08	4,324.29	-1,518.64	-1.34	1,518.64	2.89	-2.79	-3.02	193.52	
NORMAL		4,708.0	11.39	177.22	4,417.16	-1,538.61	-0.16	1,538.61	1.63	-1.61	1.20	171.64	
NORMAL		4,803.0	9.63	179.77	4,510.56	-1,555.92	0.33	1,555.92	1.92	-1.85	2.68	166.45	
NORMAL		4,899.0	7.43	180.82	4,605.50	-1,570.16	0.27	1,570.16	2.30	-2.29	1.09	176.47	
NORMAL		4,994.0	5.19	167.64	4,699.92	-1,580.50	1.11	1,580.50	2.79	-2.36	-13.87	206.46	
8/29/2012		NORMAL	5,090.0	2.46	167.38	4,795.70	-1,586.76	2.49	1,586.76	2.84	-2.84	-0.27	180.23
		NORMAL	5,185.0	0.88	168.34	4,890.65	-1,589.46	3.08	1,589.46	1.66	-1.66	1.01	179.47
		NORMAL	5,280.0	0.53	161.14	4,985.64	-1,590.59	3.37	1,590.59	0.38	-0.37	-7.58	190.62
		NORMAL	5,376.0	0.40	161.84	5,081.64	-1,591.33	3.62	1,591.33	0.14	-0.14	0.73	177.85
	NORMAL	5,472.0	0.44	136.18	5,177.64	-1,591.91	3.98	1,591.91	0.20	0.04	-26.73	268.98	
	NORMAL	5,567.0	0.53	142.68	5,272.64	-1,592.53	4.49	1,592.53	0.11	0.09	6.84	34.72	
	NORMAL	5,663.0	0.61	141.45	5,368.63	-1,593.28	5.08	1,593.28	0.08	0.08	-1.28	350.69	
	8/30/2012	NORMAL	5,759.0	0.61	148.74	5,464.63	-1,594.12	5.67	1,594.12	0.08	0.00	7.59	93.64
		NORMAL	5,854.0	0.61	148.74	5,559.62	-1,594.98	6.19	1,594.98	0.00	0.00	0.00	0.00
		NORMAL	5,950.0	0.70	127.65	5,655.61	-1,595.77	6.92	1,595.78	0.27	0.09	-21.97	279.71
	NORMAL	6,045.0	0.79	103.66	5,750.61	-1,596.28	8.02	1,596.29	0.34	0.09	-25.25	273.88	
	NORMAL	6,141.0	0.83	98.29	5,846.60	-1,596.54	9.35	1,596.54	0.09	0.04	-5.59	295.08	
	NORMAL	6,236.0	0.92	104.36	5,941.59	-1,596.83	10.77	1,596.83	0.14	0.09	6.39	48.91	
	NORMAL	6,332.0	0.83	131.69	6,037.57	-1,597.48	12.03	1,597.49	0.44	-0.09	28.47	115.61	
	NORMAL	6,428.0	0.75	153.40	6,133.57	-1,598.51	12.83	1,598.51	0.32	-0.08	22.61	115.65	
	NORMAL	6,523.0	0.83	158.41	6,228.56	-1,599.70	13.37	1,599.71	0.11	0.08	5.27	43.33	
	NORMAL	6,619.0	1.14	185.31	6,324.54	-1,601.30	13.53	1,601.30	0.57	0.32	28.02	70.10	
	NORMAL	6,714.0	1.01	280.05	6,419.53	-1,602.09	12.62	1,602.10	1.67	-0.14	99.73	140.55	
	NORMAL	6,809.0	1.23	288.40	6,514.51	-1,601.63	10.83	1,601.63	0.29	0.23	8.79	40.79	
	NORMAL	6,905.0	0.44	268.89	6,610.50	-1,601.31	9.48	1,601.31	0.86	-0.82	-20.32	190.22	
	8/31/2012	NORMAL	7,001.0	0.61	270.82	6,706.50	-1,601.31	8.60	1,601.31	0.18	0.18	2.01	6.90
		NORMAL	7,096.0	0.44	146.11	6,801.50	-1,601.60	8.30	1,601.61	0.98	-0.18	-131.27	202.80
NORMAL		7,192.0	0.66	169.93	6,897.49	-1,602.45	8.60	1,602.46	0.33	0.23	24.81	58.43	

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
8/31/2012	NORMAL	7,287.0	1.23	177.83	6,992.48	-1,604.01	8.74	1,604.01	0.61	0.60	8.32	16.84
	NORMAL	7,383.0	0.92	179.15	7,088.46	-1,605.81	8.79	1,605.82	0.32	-0.32	1.38	176.09
	NORMAL	7,478.0	1.50	176.34	7,183.44	-1,607.82	8.88	1,607.82	0.61	0.61	-2.96	352.75
	NORMAL	7,574.0	2.07	185.92	7,279.39	-1,610.79	8.78	1,610.80	0.67	0.59	9.98	32.48
	NORMAL	7,669.0	2.42	191.55	7,374.32	-1,614.47	8.20	1,614.47	0.44	0.37	5.93	35.05
	NORMAL	7,763.0	2.42	195.33	7,468.24	-1,618.32	7.28	1,618.33	0.17	0.00	4.02	91.89
	NORMAL	7,810.0	2.73	192.51	7,515.19	-1,620.37	6.77	1,620.38	0.71	0.66	-6.00	336.36
	NORMAL	7,855.0	2.73	192.51	7,560.14	-1,622.47	6.31	1,622.47	0.00	0.00	0.00	0.00