

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	PA 413-29	Wellbore No.	OH
Well Name	PA 413-29	Common Name	PA 413-29
Project	PA 29-06S-095W	Site	DOE 3-W-29 Pad
Vertical Section Azimuth	317.80 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	4/6/2012	UWI	PA 413-29
Active Datum	KB @5,702.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	4/6/2012	Ended	4/14/2012
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 (°)
4/6/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/6/2012	NORMAL	72.0	0.62	271.67	72.00	0.01	-0.39	0.27	0.86	0.86	0.00	271.67
	NORMAL	164.0	1.50	283.54	163.98	0.31	-2.06	1.61	0.98	0.96	12.90	19.99
	NORMAL	255.0	3.43	289.95	254.89	1.52	-5.77	5.00	2.14	2.12	7.04	11.34
	NORMAL	346.0	6.86	288.81	345.51	4.20	-13.48	12.16	3.77	3.77	-1.25	357.72
	NORMAL	437.0	10.03	293.03	435.52	9.05	-25.92	24.12	3.55	3.48	4.64	13.16
	NORMAL	528.0	13.55	295.58	524.58	16.76	-42.83	41.19	3.91	3.87	2.80	9.67
	NORMAL	603.0	16.40	302.10	597.03	26.18	-59.73	59.52	4.41	3.80	8.69	33.77
	NORMAL	693.0	17.60	308.60	683.11	41.42	-81.13	85.18	2.50	1.33	7.22	60.87
	NORMAL	784.0	19.30	312.40	769.43	60.15	-102.99	113.74	2.29	1.87	4.18	37.09
	NORMAL	875.0	21.30	310.80	854.77	81.09	-126.61	145.12	2.28	2.20	-1.76	343.74
	NORMAL	967.0	23.40	313.00	939.86	104.47	-152.63	179.91	2.46	2.28	2.39	22.74
	NORMAL	1,062.0	25.90	314.50	1,026.20	131.88	-181.23	219.43	2.71	2.63	1.58	14.73
4/7/2012	NORMAL	1,158.0	28.30	316.30	1,111.65	163.04	-211.91	263.12	2.64	2.50	1.88	19.67
	NORMAL	1,253.0	29.40	316.30	1,194.86	196.18	-243.58	308.94	1.16	1.16	0.00	0.00
	NORMAL	1,348.0	30.60	316.30	1,277.13	230.52	-276.39	356.43	1.26	1.26	0.00	0.00
	NORMAL	1,443.0	31.90	316.50	1,358.35	266.21	-310.38	405.69	1.37	1.37	0.21	4.65
	NORMAL	1,539.0	33.20	317.20	1,439.27	303.89	-345.70	457.34	1.41	1.35	0.73	16.45
	NORMAL	1,635.0	34.30	317.20	1,519.08	343.02	-381.93	510.67	1.15	1.15	0.00	0.00
	NORMAL	1,731.0	34.50	319.80	1,598.30	383.64	-417.86	564.89	1.54	0.21	2.71	83.32
	NORMAL	1,826.0	36.00	320.00	1,675.88	425.58	-453.18	619.68	1.58	1.58	0.21	4.48

## 2.1.2 Survey Stations (Continued)

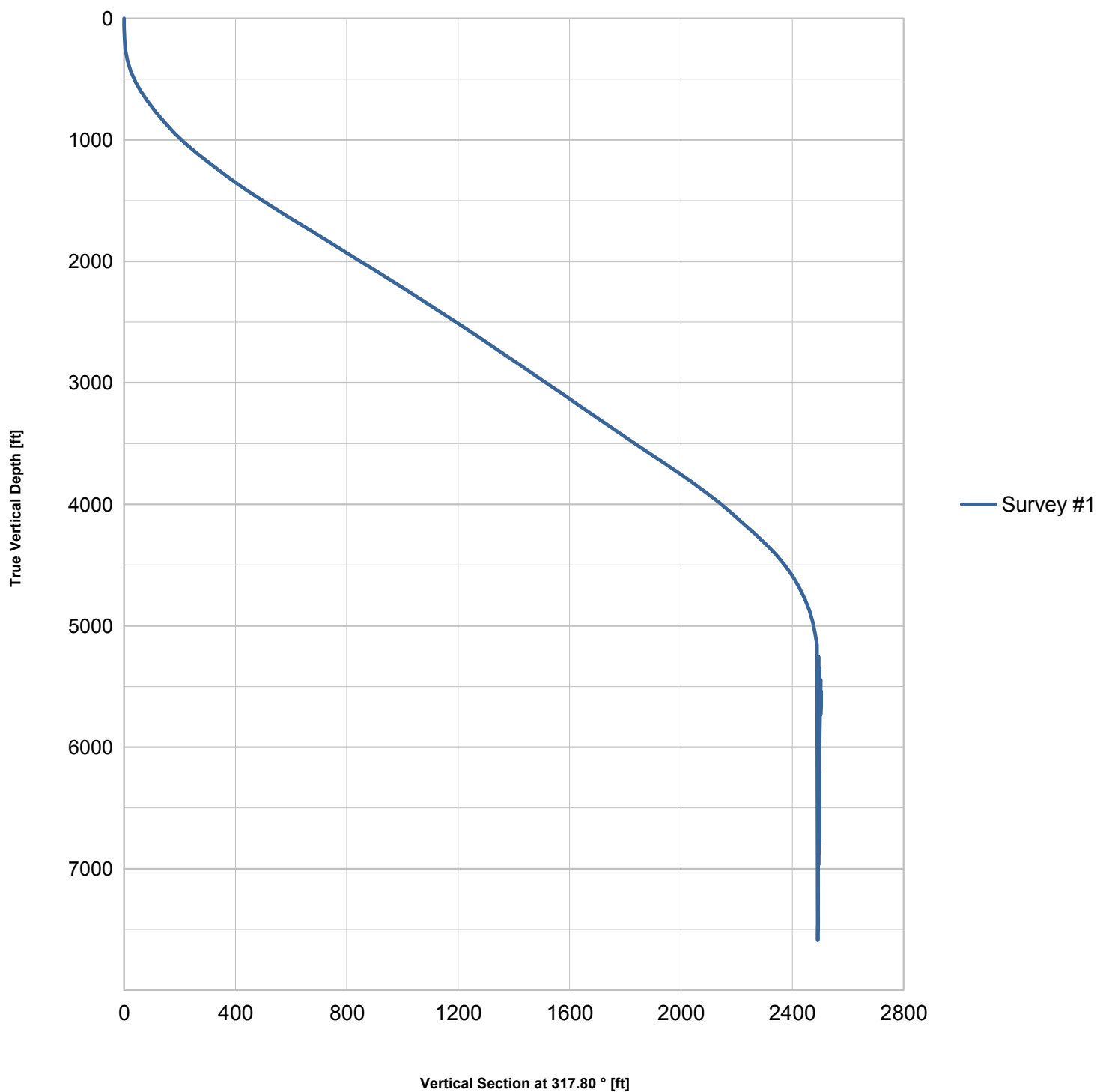
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
4/7/2012	NORMAL	1,920.0	36.10	318.90	1,751.88	467.61	-489.14	674.97	0.70	0.11	-1.17	278.34
	NORMAL	2,014.0	34.50	320.00	1,828.59	508.87	-524.46	729.26	1.83	-1.70	1.17	158.78
	NORMAL	2,110.0	34.80	319.30	1,907.57	550.47	-559.80	783.82	0.52	0.31	-0.73	306.72
	NORMAL	2,203.0	35.30	320.50	1,983.70	591.32	-594.19	837.19	0.92	0.54	1.29	54.53
	NORMAL	2,299.0	36.00	321.20	2,061.71	634.71	-629.52	893.06	0.84	0.73	0.73	30.52
	NORMAL	2,394.0	34.30	319.30	2,139.39	676.77	-664.47	947.69	2.13	-1.79	-2.00	211.99
4/9/2012	NORMAL	2,430.0	34.70	319.30	2,169.06	692.23	-677.77	968.08	1.11	1.11	0.00	0.00
	NORMAL	2,490.0	35.20	320.43	2,218.24	718.51	-699.92	1,002.43	1.36	0.83	1.88	52.78
	NORMAL	2,585.0	33.40	318.84	2,296.71	759.30	-734.58	1,055.93	2.12	-1.89	-1.67	205.81
	NORMAL	2,681.0	33.93	316.56	2,376.62	798.65	-770.39	1,109.13	1.43	0.55	-2.38	291.80
	NORMAL	2,776.0	34.06	317.00	2,455.38	837.36	-806.76	1,162.24	0.29	0.14	0.46	62.33
	NORMAL	2,872.0	34.63	315.50	2,534.64	876.48	-844.22	1,216.38	1.06	0.59	-1.56	303.34
	NORMAL	2,967.0	32.30	316.65	2,613.89	914.19	-880.57	1,268.73	2.54	-2.45	1.21	165.25
	NORMAL	3,063.0	32.56	315.33	2,694.92	951.22	-916.33	1,320.19	0.79	0.27	-1.38	289.61
	NORMAL	3,158.0	32.87	315.86	2,774.85	987.90	-952.26	1,371.49	0.44	0.33	0.56	42.96
	NORMAL	3,254.0	33.05	315.06	2,855.40	1,025.12	-988.89	1,423.68	0.49	0.19	-0.83	292.13
	NORMAL	3,349.0	32.30	316.56	2,935.37	1,061.89	-1,024.65	1,474.93	1.16	-0.79	1.58	133.43
	NORMAL	3,445.0	32.65	315.06	3,016.36	1,098.85	-1,060.58	1,526.44	0.91	0.36	-1.56	292.85
	NORMAL	3,540.0	32.21	319.37	3,096.55	1,136.21	-1,095.17	1,577.35	2.48	-0.46	4.54	102.59
	NORMAL	3,636.0	32.30	318.76	3,177.74	1,174.91	-1,128.74	1,628.58	0.35	0.09	-0.64	285.20
	NORMAL	3,731.0	32.52	320.34	3,257.94	1,213.66	-1,161.77	1,679.46	0.92	0.23	1.66	76.10
4/10/2012	NORMAL	3,826.0	32.78	318.49	3,337.93	1,252.57	-1,195.11	1,730.69	1.09	0.27	-1.95	283.82
	NORMAL	3,921.0	32.48	316.30	3,417.94	1,290.27	-1,229.78	1,781.91	1.28	-0.32	-2.31	254.83
	NORMAL	4,017.0	32.87	315.86	3,498.75	1,327.61	-1,265.73	1,833.71	0.48	0.41	-0.46	328.47
	NORMAL	4,112.0	33.57	316.47	3,578.22	1,365.15	-1,301.77	1,885.74	0.82	0.74	0.64	25.78
	NORMAL	4,208.0	32.87	319.28	3,658.54	1,404.14	-1,337.05	1,938.32	1.76	-0.73	2.93	115.62
	NORMAL	4,302.0	32.96	320.07	3,737.45	1,443.08	-1,370.10	1,989.37	0.47	0.10	0.84	78.49
	NORMAL	4,397.0	31.33	318.84	3,817.88	1,481.50	-1,402.95	2,039.89	1.85	-1.72	-1.29	201.36
	NORMAL	4,492.0	30.06	315.33	3,899.58	1,517.02	-1,435.94	2,088.36	2.31	-1.34	-3.69	233.17
	NORMAL	4,588.0	28.78	318.49	3,983.20	1,551.42	-1,468.16	2,135.49	2.10	-1.33	3.29	130.88
	NORMAL	4,683.0	26.24	318.05	4,067.45	1,584.17	-1,497.36	2,179.37	2.68	-2.67	-0.46	184.38
	NORMAL	4,779.0	26.50	317.61	4,153.46	1,615.78	-1,525.98	2,222.01	0.34	0.27	-0.46	322.87
	NORMAL	4,874.0	25.53	315.24	4,238.84	1,645.97	-1,554.69	2,263.66	1.50	-1.02	-2.49	225.92
	NORMAL	4,970.0	24.52	318.49	4,325.83	1,675.58	-1,582.46	2,304.25	1.78	-1.05	3.39	127.77
	NORMAL	5,065.0	21.58	318.49	4,413.24	1,703.43	-1,607.11	2,341.43	3.09	-3.09	0.00	180.00
	NORMAL	5,160.0	18.33	318.49	4,502.52	1,727.70	-1,628.59	2,373.85	3.42	-3.42	0.00	180.00
4/11/2012	NORMAL	5,256.0	15.47	319.11	4,594.37	1,748.69	-1,646.98	2,401.75	2.99	-2.98	0.65	176.69
	NORMAL	5,351.0	13.23	316.82	4,686.40	1,766.20	-1,662.72	2,425.29	2.43	-2.36	-2.41	193.11
	NORMAL	5,446.0	10.90	316.30	4,779.29	1,780.62	-1,676.36	2,445.14	2.46	-2.45	-0.55	182.42
	NORMAL	5,542.0	8.26	311.99	4,873.95	1,791.80	-1,687.76	2,461.08	2.85	-2.75	-4.49	193.08
	NORMAL	5,637.0	6.24	316.47	4,968.18	1,800.11	-1,696.39	2,473.03	2.21	-2.13	4.72	166.58
	NORMAL	5,732.0	4.75	320.95	5,062.74	1,806.90	-1,702.43	2,482.12	1.63	-1.57	4.72	166.16
	NORMAL	5,827.0	3.21	325.00	5,157.51	1,812.14	-1,706.43	2,488.68	1.65	-1.62	4.26	171.67
	NORMAL	5,923.0	2.86	330.62	5,253.38	1,816.43	-1,709.15	2,493.69	0.48	-0.36	5.85	142.41
	NORMAL	6,018.0	3.60	8.06	5,348.23	1,821.45	-1,709.89	2,497.91	2.30	0.78	39.41	90.01
	NORMAL	6,113.0	3.43	14.48	5,443.06	1,827.15	-1,708.76	2,501.37	0.45	-0.18	6.76	116.54
	NORMAL	6,209.0	2.29	20.10	5,538.94	1,831.73	-1,707.39	2,503.84	1.22	-1.19	5.85	168.98
	NORMAL	6,304.0	1.41	99.12	5,633.90	1,833.33	-1,705.58	2,503.81	2.58	-0.93	83.18	145.59
	NORMAL	6,400.0	1.76	105.45	5,729.86	1,832.75	-1,702.99	2,501.64	0.41	0.36	6.59	29.76
	NORMAL	6,495.0	1.41	175.32	5,824.83	1,831.20	-1,701.49	2,499.48	1.93	-0.37	73.55	133.91
	NORMAL	6,590.0	1.05	200.63	5,919.81	1,829.22	-1,701.70	2,498.16	0.68	-0.38	26.64	135.75
4/13/2012	NORMAL	6,686.0	0.13	69.59	6,015.81	1,828.43	-1,701.91	2,497.72	1.19	-0.96	-136.50	184.94
	NORMAL	6,781.0	0.79	93.05	6,110.80	1,828.43	-1,701.15	2,497.21	0.71	0.69	24.69	27.87
	NORMAL	6,877.0	0.57	125.48	6,206.80	1,828.12	-1,700.10	2,496.28	0.45	-0.23	33.78	135.30
	NORMAL	6,972.0	0.79	171.72	6,301.79	1,827.20	-1,699.63	2,495.27	0.60	0.23	48.67	92.37
	NORMAL	7,068.0	0.75	249.94	6,397.78	1,826.33	-1,700.12	2,494.96	1.01	-0.04	81.48	130.94
	NORMAL	7,163.0	0.97	267.60	6,492.77	1,826.08	-1,701.51	2,495.71	0.36	0.23	18.59	59.36

### 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 (°)
4/13/2012	NORMAL	7,258.0	0.79	9.38	6,587.77	1,826.69	-1,702.20	2,496.63	1.44	-0.19	107.14	145.64
	NORMAL	7,354.0	0.09	12.46	6,683.76	1,827.42	-1,702.08	2,497.08	0.73	-0.73	3.21	179.60
	NORMAL	7,449.0	0.88	212.58	6,778.76	1,826.88	-1,702.46	2,496.94	1.02	0.83	-168.29	198.28
	NORMAL	7,544.0	1.36	179.45	6,873.74	1,825.14	-1,702.84	2,495.90	0.83	0.51	-34.87	289.21
	NORMAL	7,639.0	2.07	176.37	6,968.70	1,822.30	-1,702.72	2,493.72	0.75	0.75	-3.24	351.06
	NORMAL	7,735.0	0.79	225.33	7,064.67	1,820.10	-1,703.08	2,492.33	1.73	-1.33	51.00	158.99
	NORMAL	7,831.0	0.44	214.78	7,160.66	1,819.33	-1,703.76	2,492.22	0.38	-0.36	-10.99	192.70
	NORMAL	7,926.0	0.66	228.23	7,255.66	1,818.67	-1,704.38	2,492.14	0.27	0.23	14.16	37.25
	NORMAL	8,022.0	0.79	226.12	7,351.65	1,817.84	-1,705.27	2,492.13	0.14	0.14	-2.20	347.34
	NORMAL	8,117.0	1.01	210.74	7,446.64	1,816.67	-1,706.17	2,491.86	0.34	0.23	-16.19	304.46
	NORMAL	8,213.0	1.36	212.50	7,542.62	1,814.98	-1,707.21	2,491.32	0.37	0.36	1.83	6.82
4/14/2012	NORMAL	8,260.0	1.36	212.50	7,589.61	1,814.04	-1,707.81	2,491.02	0.00	0.00	0.00	0.00

### 3 Charts

#### 3.1 Vertical Section View



### 3.2 Plan View

