

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	PA 12-29	Wellbore No.	OH
Well Name	PA 12-29	Common Name	PA 12-29
Project	PA 29-06S-095W	Site	DOE 3-W-29 Pad
Vertical Section Azimuth	321.48 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	4/24/2012	UWI	PA 12-29
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	4/24/2012	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 (°)
4/24/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/24/2012	NORMAL	104.0	0.53	92.64	104.00	-0.02	0.48	-0.32	0.51	0.51	0.00	92.64
	NORMAL	165.0	1.94	329.33	164.99	0.85	0.24	0.52	3.73	2.31	-202.15	225.47
	NORMAL	257.0	4.05	314.12	256.86	4.45	-2.89	5.29	2.43	2.29	-16.53	331.65
	NORMAL	346.0	6.60	303.05	345.47	9.43	-9.44	13.26	3.08	2.87	-12.44	332.48
	NORMAL	437.0	10.29	306.74	435.47	17.15	-20.34	26.08	4.10	4.05	4.05	10.18
	NORMAL	528.0	12.84	309.55	524.61	28.45	-34.65	43.84	2.87	2.80	3.09	13.84
4/25/2012	NORMAL	602.0	15.20	312.40	596.40	40.23	-48.15	61.47	3.32	3.19	3.85	17.69
	NORMAL	692.0	18.00	314.20	682.65	57.88	-66.84	86.92	3.16	3.11	2.00	11.27
	NORMAL	784.0	21.40	314.70	769.25	79.61	-88.97	117.69	3.70	3.70	0.54	3.07
	NORMAL	877.0	24.40	315.20	854.91	105.18	-114.57	153.64	3.23	3.23	0.54	3.94
	NORMAL	968.0	26.40	315.60	937.11	132.97	-141.97	192.45	2.21	2.20	0.44	5.08
	NORMAL	1,061.0	28.90	319.40	1,019.49	164.81	-171.07	235.49	3.29	2.69	4.09	36.89
	NORMAL	1,156.0	31.30	321.40	1,101.67	201.54	-201.41	283.12	2.74	2.53	2.11	23.55
	NORMAL	1,251.0	34.00	321.70	1,181.65	241.67	-233.27	334.36	2.85	2.84	0.32	3.56
	NORMAL	1,347.0	37.30	322.10	1,259.65	285.70	-267.79	390.31	3.45	3.44	0.42	4.20
	NORMAL	1,442.0	41.40	322.40	1,333.10	333.33	-304.65	450.52	4.32	4.32	0.32	2.77
	NORMAL	1,538.0	43.60	322.30	1,403.87	384.67	-344.26	515.37	2.29	2.29	-0.10	358.20
	NORMAL	1,634.0	44.00	322.10	1,473.16	437.17	-384.99	581.81	0.44	0.42	-0.21	340.84
	NORMAL	1,729.0	41.40	321.60	1,542.97	487.84	-424.78	646.23	2.76	-2.74	-0.53	187.25
	NORMAL	1,825.0	41.80	321.20	1,614.76	537.65	-464.54	709.96	0.50	0.42	-0.42	326.27

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 (°)	
4/25/2012	NORMAL	1,919.0	43.10	322.80	1,684.12	587.65	-503.59	773.40	1.80	1.38	1.70	40.31	
	NORMAL	2,013.0	42.90	322.60	1,752.87	638.64	-542.44	837.49	0.26	-0.21	-0.21	214.22	
4/26/2012	NORMAL	2,109.0	41.40	321.90	1,824.04	689.58	-581.87	901.91	1.64	-1.56	-0.73	197.13	
	NORMAL	2,202.0	43.40	322.10	1,892.71	739.00	-620.48	964.61	2.16	2.15	0.22	3.93	
	NORMAL	2,297.0	42.10	323.80	1,962.48	790.45	-659.34	1,029.07	1.83	-1.37	1.79	139.03	
	NORMAL	2,393.0	43.00	324.00	2,033.20	842.91	-697.59	1,093.93	0.95	0.94	0.21	8.62	
	NORMAL	2,489.0	42.21	323.32	2,103.86	895.25	-736.09	1,158.87	0.95	-0.82	-0.71	209.98	
	NORMAL	2,584.0	41.50	321.56	2,174.62	945.50	-774.72	1,222.24	1.44	-0.75	-1.85	238.19	
4/28/2012	NORMAL	2,679.0	42.45	319.02	2,245.25	994.36	-815.32	1,285.75	2.05	1.00	-2.67	298.27	
	NORMAL	2,775.0	42.28	319.89	2,316.18	1,043.52	-857.37	1,350.40	0.64	-0.18	0.91	106.49	
	NORMAL	2,870.0	41.53	319.54	2,386.88	1,091.92	-898.40	1,413.82	0.83	-0.79	-0.37	197.18	
	NORMAL	2,966.0	41.53	320.07	2,458.75	1,140.54	-939.48	1,477.44	0.37	0.00	0.55	90.20	
	NORMAL	3,061.0	41.13	321.48	2,530.09	1,189.14	-979.15	1,540.17	1.07	-0.42	1.48	113.78	
	NORMAL	3,157.0	41.84	322.62	2,602.01	1,239.28	-1,018.25	1,603.76	1.08	0.74	1.19	47.19	
	NORMAL	3,252.0	41.62	323.68	2,672.90	1,289.88	-1,056.17	1,666.96	0.78	-0.23	1.12	107.71	
	NORMAL	3,348.0	42.45	322.27	2,744.21	1,341.19	-1,094.88	1,731.22	1.31	0.86	-1.47	310.79	
	NORMAL	3,443.0	41.92	321.04	2,814.60	1,391.23	-1,134.46	1,795.01	1.03	-0.56	-1.29	236.86	
	NORMAL	3,539.0	42.36	322.71	2,885.79	1,441.89	-1,174.22	1,859.41	1.25	0.46	1.74	69.18	
	NORMAL	3,634.0	43.55	324.73	2,955.32	1,494.08	-1,212.51	1,924.09	1.92	1.25	2.13	49.90	
	NORMAL	3,729.0	43.81	323.41	3,024.03	1,547.20	-1,251.01	1,989.63	1.00	0.27	-1.39	285.44	
	NORMAL	3,825.0	44.30	322.36	3,093.02	1,600.43	-1,291.29	2,056.36	0.92	0.51	-1.09	303.49	
	NORMAL	3,920.0	42.32	323.15	3,162.14	1,652.30	-1,330.73	2,121.51	2.16	-2.08	0.83	164.98	
	NORMAL	4,015.0	41.92	321.48	3,232.61	1,702.72	-1,369.68	2,185.21	1.25	-0.42	-1.76	249.73	
	NORMAL	4,111.0	42.01	323.33	3,304.00	1,753.58	-1,408.83	2,249.39	1.29	0.09	1.93	86.53	
	NORMAL	4,206.0	41.70	322.71	3,374.76	1,804.22	-1,446.96	2,312.75	0.54	-0.33	-0.65	232.92	
	NORMAL	4,301.0	41.62	321.83	3,445.73	1,854.16	-1,485.60	2,375.89	0.62	-0.08	-0.93	261.88	
	NORMAL	4,396.0	40.65	322.71	3,517.28	1,903.58	-1,523.85	2,438.38	1.19	-1.02	0.93	149.50	
	NORMAL	4,491.0	38.63	322.80	3,590.43	1,951.82	-1,560.53	2,498.97	2.13	-2.13	0.09	178.41	
	NORMAL	4,586.0	38.06	321.66	3,664.94	1,998.41	-1,596.62	2,557.90	0.96	-0.60	-1.20	230.69	
	NORMAL	4,682.0	35.51	321.57	3,741.82	2,043.47	-1,632.32	2,615.38	2.66	-2.66	-0.09	181.17	
	NORMAL	4,777.0	32.39	321.39	3,820.62	2,084.98	-1,665.35	2,668.43	3.29	-3.28	-0.19	181.77	
	4/29/2012	NORMAL	4,873.0	30.76	322.97	3,902.40	2,124.67	-1,696.18	2,718.68	1.90	-1.70	1.65	153.76
		NORMAL	4,969.0	30.28	322.01	3,985.10	2,163.34	-1,725.86	2,767.43	0.71	-0.50	-1.00	225.03
		NORMAL	5,064.0	27.91	321.13	4,068.11	2,199.54	-1,754.56	2,813.62	2.54	-2.49	-0.93	189.85
		NORMAL	5,159.0	25.66	323.24	4,152.91	2,233.33	-1,780.83	2,856.42	2.57	-2.37	2.22	158.03
NORMAL		5,255.0	24.35	321.13	4,239.91	2,265.39	-1,805.69	2,896.99	1.65	-1.36	-2.20	213.30	
NORMAL		5,349.0	22.59	321.57	4,326.13	2,294.63	-1,829.08	2,934.42	1.88	-1.87	0.47	174.52	
NORMAL		5,445.0	20.08	322.62	4,415.55	2,322.17	-1,850.55	2,969.34	2.64	-2.61	1.09	171.83	
NORMAL		5,540.0	17.67	321.48	4,505.43	2,346.41	-1,869.43	3,000.07	2.57	-2.54	-1.20	188.16	
NORMAL		5,636.0	17.14	320.51	4,597.04	2,368.73	-1,887.50	3,028.78	0.63	-0.55	-1.01	208.24	
NORMAL		5,731.0	16.74	320.34	4,687.92	2,390.07	-1,905.13	3,056.46	0.42	-0.42	-0.18	186.98	
NORMAL		5,826.0	14.50	319.72	4,779.40	2,409.67	-1,921.56	3,082.03	2.36	-2.36	-0.65	183.96	
NORMAL		5,921.0	11.95	323.06	4,871.88	2,426.61	-1,935.16	3,103.75	2.80	-2.68	3.52	164.94	
NORMAL		6,016.0	10.28	324.12	4,965.09	2,441.34	-1,946.04	3,122.05	1.77	-1.76	1.12	173.54	
4/30/2012		NORMAL	6,112.0	7.91	331.85	5,059.88	2,454.11	-1,954.18	3,137.11	2.77	-2.47	8.05	156.51
		NORMAL	6,207.0	5.63	328.07	5,154.21	2,463.83	-1,959.73	3,148.17	2.44	-2.40	-3.98	189.19
	NORMAL	6,303.0	3.43	330.71	5,249.91	2,470.33	-1,963.62	3,155.68	2.30	-2.29	2.75	175.90	
	NORMAL	6,398.0	1.93	354.70	5,344.80	2,474.40	-1,965.16	3,159.83	1.94	-1.58	25.25	154.79	
	NORMAL	6,494.0	2.55	17.73	5,440.73	2,478.05	-1,964.66	3,162.37	1.13	0.65	23.99	67.31	
	NORMAL	6,589.0	3.12	23.53	5,535.61	2,482.43	-1,962.98	3,164.75	0.67	0.60	6.11	29.63	
	NORMAL	6,684.0	2.33	31.44	5,630.51	2,486.45	-1,960.94	3,166.63	0.92	-0.83	8.33	158.46	
	NORMAL	6,780.0	1.98	23.88	5,726.44	2,489.63	-1,959.25	3,168.06	0.47	-0.36	-7.88	215.35	
	NORMAL	6,875.0	0.70	145.35	5,821.42	2,490.65	-1,958.26	3,168.24	2.55	-1.35	127.86	165.71	
	5/1/2012	NORMAL	6,970.0	1.63	162.05	5,916.40	2,488.89	-1,957.51	3,166.40	1.03	0.98	17.58	28.54
		NORMAL	7,066.0	1.27	273.05	6,012.38	2,487.65	-1,958.16	3,165.83	2.50	-0.38	115.63	150.37
		NORMAL	7,162.0	1.10	328.42	6,108.37	2,488.49	-1,959.70	3,167.45	1.16	-0.18	57.68	125.47
NORMAL		7,257.0	1.05	320.07	6,203.35	2,489.93	-1,960.74	3,169.22	0.17	-0.05	-8.79	248.15	

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 (°)
5/1/2012	NORMAL	7,352.0	0.92	305.31	6,298.33	2,491.04	-1,961.92	3,170.83	0.30	-0.14	-15.54	235.62
	NORMAL	7,448.0	0.62	294.59	6,394.33	2,491.70	-1,963.02	3,172.03	0.35	-0.31	-11.17	200.36
	NORMAL	7,543.0	1.01	333.96	6,489.32	2,492.67	-1,963.85	3,173.31	0.70	0.41	41.44	75.91
	NORMAL	7,638.0	1.67	28.98	6,584.29	2,494.63	-1,963.55	3,174.65	1.44	0.69	57.92	92.19
	NORMAL	7,734.0	1.58	21.86	6,680.26	2,497.08	-1,962.38	3,175.84	0.23	-0.09	-7.42	242.44
5/2/2012	NORMAL	7,830.0	3.03	225.94	6,776.22	2,496.55	-1,963.71	3,176.25	4.71	1.51	-162.42	195.89
	NORMAL	7,925.0	4.48	236.40	6,871.01	2,492.75	-1,968.61	3,176.33	1.68	1.53	11.01	30.57
	NORMAL	8,020.0	2.11	223.22	6,965.85	2,489.42	-1,972.89	3,176.39	2.60	-2.49	-13.87	191.22
	NORMAL	8,116.0	1.01	226.73	7,061.81	2,487.55	-1,974.72	3,176.07	1.15	-1.15	3.66	176.79
	NORMAL	8,212.0	1.19	212.85	7,157.80	2,486.14	-1,975.88	3,175.68	0.33	0.19	-14.46	296.97
	NORMAL	8,307.0	0.79	171.98	7,252.78	2,484.66	-1,976.32	3,174.80	0.83	-0.42	-43.02	221.10
	NORMAL	8,403.0	1.10	179.36	7,348.77	2,483.08	-1,976.22	3,173.51	0.35	0.32	7.69	25.15
	NORMAL	8,499.0	1.23	204.06	7,444.75	2,481.22	-1,976.63	3,172.30	0.54	0.14	25.73	88.05
	NORMAL	8,594.0	1.05	195.97	7,539.73	2,479.45	-1,977.28	3,171.33	0.25	-0.19	-8.52	217.81
	NORMAL	8,670.0	1.76	198.43	7,615.71	2,477.67	-1,977.84	3,170.29	0.94	0.93	3.24	6.09
	NORMAL	8,715.0	1.76	198.43	7,660.69	2,476.36	-1,978.28	3,169.53	0.00	0.00	0.00	0.00