

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	PA 44-5	Wellbore No.	OH
Well Name	PA 44-5	Common Name	PA 44-5
Project	PA 04-07S-095W	Site	GV 80-4 Pad
Vertical Section Azimuth	255.76 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	12/3/2012	UWI	PA 44-5
Active Datum	KB @5,612.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	12/3/2012	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 (°)
12/3/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/3/2012	NORMAL	73.0	0.18	58.18	73.00	0.06	0.10	-0.11	0.25	0.25	0.00	58.18
	NORMAL	163.0	0.44	89.47	163.00	0.14	0.56	-0.58	0.33	0.29	34.77	49.38
	NORMAL	254.0	0.26	171.30	254.00	-0.06	0.94	-0.90	0.53	-0.20	89.92	147.44
	NORMAL	344.0	0.70	97.38	343.99	-0.34	1.52	-1.39	0.75	0.49	-82.13	264.39
	NORMAL	436.0	0.44	43.15	435.99	-0.15	2.32	-2.21	0.62	-0.28	-58.95	218.88
	NORMAL	527.0	0.18	26.72	526.99	0.23	2.62	-2.60	0.30	-0.29	-18.05	190.78
	NORMAL	587.0	2.02	269.30	586.98	0.30	1.61	-1.63	3.51	3.07	-195.70	238.24
	NORMAL	692.0	5.76	248.26	691.72	-1.67	-5.14	5.39	3.75	3.56	-20.04	328.39
	NORMAL	783.0	6.68	266.10	782.19	-3.72	-14.66	15.13	2.34	1.01	19.60	73.60
	NORMAL	874.0	10.46	274.27	872.16	-3.47	-28.19	28.17	4.35	4.15	8.98	21.93
12/4/2012	NORMAL	965.0	14.81	264.08	960.95	-4.05	-48.00	47.53	5.35	4.78	-11.20	327.83
	NORMAL	1,060.0	18.37	263.37	1,051.98	-7.03	-74.96	74.39	3.75	3.75	-0.75	356.40
	NORMAL	1,156.0	20.97	259.68	1,142.37	-11.86	-106.89	106.53	3.00	2.71	-3.84	332.72
	NORMAL	1,251.0	23.16	259.51	1,230.41	-18.31	-141.99	142.13	2.31	2.31	-0.18	358.25
	NORMAL	1,346.0	25.32	257.05	1,317.03	-26.26	-180.16	181.09	2.51	2.27	-2.59	333.81
	NORMAL	1,441.0	27.82	255.38	1,401.99	-36.41	-221.42	223.57	2.75	2.63	-1.76	342.61
	NORMAL	1,536.0	30.11	256.25	1,485.11	-47.67	-266.02	269.57	2.45	2.41	0.92	10.81
	NORMAL	1,632.0	32.53	256.78	1,567.11	-59.30	-314.55	319.47	2.54	2.52	0.55	6.72
	NORMAL	1,727.0	35.38	257.75	1,645.90	-70.98	-366.30	372.50	3.05	3.00	1.02	11.17
	NORMAL	1,823.0	37.32	258.45	1,723.22	-82.70	-421.98	429.35	2.07	2.02	0.73	12.35

## 2.1.2 Survey Stations (Continued)

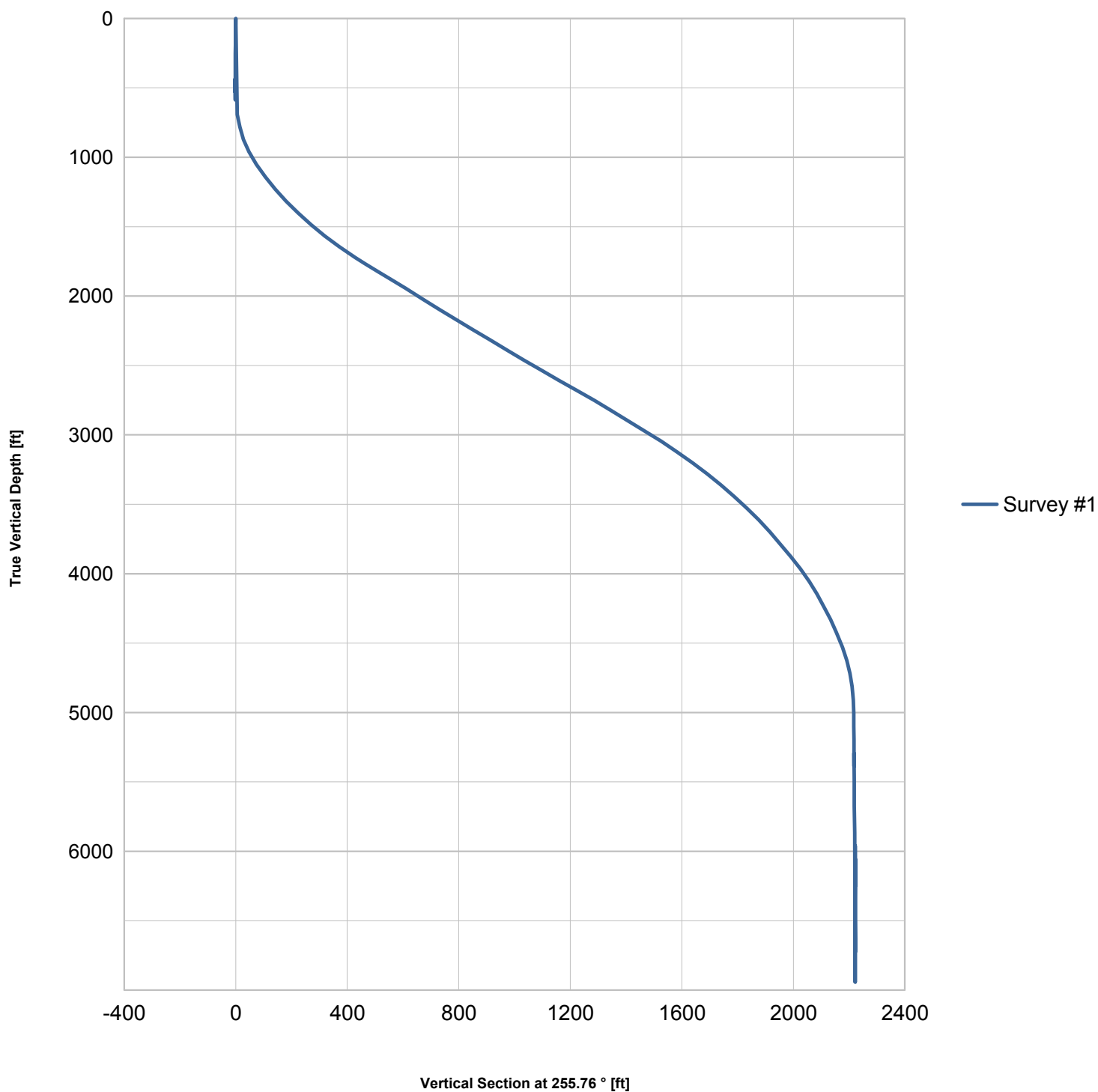
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
12/4/2012	NORMAL	1,880.0	38.77	258.19	1,768.11	-89.82	-456.37	464.45	2.56	2.54	-0.46	353.59
12/5/2012	NORMAL	1,953.0	39.74	257.22	1,824.63	-99.66	-501.51	510.61	1.57	1.33	-1.33	327.30
	NORMAL	2,013.0	39.56	256.61	1,870.83	-108.32	-538.80	548.89	0.71	-0.30	-1.02	244.95
	NORMAL	2,109.0	39.03	254.76	1,945.13	-123.35	-597.70	609.68	1.34	-0.55	-1.93	244.95
	NORMAL	2,205.0	38.02	254.85	2,020.23	-139.02	-655.41	669.46	1.05	-1.05	0.09	176.86
	NORMAL	2,300.0	38.90	255.02	2,094.62	-154.38	-712.46	728.54	0.93	0.93	0.18	6.92
	NORMAL	2,396.0	39.96	253.70	2,168.77	-170.82	-771.17	789.50	1.41	1.10	-1.38	321.15
12/6/2012	NORMAL	2,491.0	40.00	255.73	2,241.57	-186.91	-830.04	850.52	1.37	0.04	2.14	89.02
	NORMAL	2,587.0	39.43	255.55	2,315.41	-202.12	-889.47	911.86	0.61	-0.59	-0.19	191.34
	NORMAL	2,682.0	40.31	254.85	2,388.33	-217.68	-948.35	972.75	1.04	0.93	-0.74	332.71
	NORMAL	2,778.0	39.82	256.69	2,461.80	-232.88	-1,008.23	1,034.54	1.34	-0.51	1.92	113.18
	NORMAL	2,874.0	40.75	256.08	2,535.03	-247.49	-1,068.56	1,096.61	1.05	0.97	-0.64	336.78
	NORMAL	2,969.0	40.75	256.52	2,607.00	-262.18	-1,128.81	1,158.62	0.30	0.00	0.46	90.17
	NORMAL	3,064.0	41.89	254.85	2,678.35	-277.69	-1,189.58	1,221.33	1.67	1.20	-1.76	315.32
	NORMAL	3,160.0	40.97	255.73	2,750.33	-293.83	-1,251.02	1,284.85	1.13	-0.96	0.92	148.00
	NORMAL	3,255.0	39.03	255.90	2,823.10	-308.79	-1,310.22	1,345.92	2.05	-2.04	0.18	176.84
	NORMAL	3,351.0	38.90	255.81	2,897.74	-323.55	-1,368.75	1,406.28	0.15	-0.14	-0.09	203.49
	NORMAL	3,446.0	39.52	255.11	2,971.35	-338.63	-1,426.88	1,466.34	0.80	0.65	-0.74	324.21
	NORMAL	3,542.0	37.58	253.70	3,046.43	-354.69	-1,484.51	1,526.14	2.22	-2.02	-1.47	203.82
	NORMAL	3,637.0	35.96	254.14	3,122.52	-370.45	-1,539.15	1,582.98	1.73	-1.71	0.46	170.94
	NORMAL	3,733.0	34.33	253.70	3,201.02	-385.75	-1,592.25	1,638.21	1.72	-1.70	-0.46	188.65
	NORMAL	3,828.0	32.44	256.69	3,280.34	-399.14	-1,642.76	1,690.47	2.64	-1.99	3.15	140.20
	NORMAL	3,922.0	30.90	256.69	3,360.34	-410.50	-1,690.79	1,739.81	1.64	-1.64	0.00	180.00
	NORMAL	4,018.0	28.84	256.17	3,443.59	-421.71	-1,737.26	1,787.62	2.16	-2.15	-0.54	186.94
	NORMAL	4,113.0	27.87	255.38	3,527.19	-432.79	-1,781.00	1,832.73	1.09	-1.02	-0.83	200.80
	NORMAL	4,209.0	26.02	254.06	3,612.76	-444.24	-1,822.96	1,876.22	2.03	-1.93	-1.38	197.33
	NORMAL	4,305.0	22.99	254.94	3,700.11	-454.89	-1,861.32	1,916.02	3.18	-3.16	0.92	173.53
	NORMAL	4,400.0	23.25	256.96	3,787.48	-463.95	-1,897.50	1,953.32	0.88	0.27	2.13	72.78
	NORMAL	4,495.0	22.29	255.81	3,875.07	-472.59	-1,933.24	1,990.09	1.11	-1.01	-1.21	204.34
12/7/2012	NORMAL	4,591.0	20.84	256.08	3,964.35	-481.16	-1,967.46	2,025.37	1.51	-1.51	0.28	176.21
	NORMAL	4,687.0	17.93	258.72	4,054.90	-488.16	-1,998.54	2,057.21	3.16	-3.03	2.75	164.48
	NORMAL	4,782.0	15.91	259.94	4,145.78	-493.30	-2,025.70	2,084.80	2.16	-2.13	1.28	170.61
	NORMAL	4,877.0	14.59	260.03	4,237.44	-497.65	-2,050.31	2,109.72	1.39	-1.39	0.09	179.02
	NORMAL	4,972.0	14.07	260.38	4,329.48	-501.65	-2,073.48	2,133.17	0.55	-0.55	0.37	170.71
	NORMAL	5,067.0	11.91	261.44	4,422.04	-505.04	-2,094.56	2,154.43	2.29	-2.27	1.12	174.22
	NORMAL	5,177.0	10.90	261.53	4,529.87	-508.26	-2,116.07	2,176.08	0.92	-0.92	0.08	179.03
	NORMAL	5,273.0	8.18	262.76	4,624.53	-510.46	-2,131.83	2,191.89	2.84	-2.83	1.28	176.32
	NORMAL	5,368.0	5.58	258.45	4,718.84	-512.23	-2,143.06	2,203.21	2.79	-2.74	-4.54	189.10
12/8/2012	NORMAL	5,463.0	3.52	236.92	4,813.55	-514.75	-2,150.03	2,210.59	2.78	-2.17	-22.66	209.26
	NORMAL	5,559.0	2.20	268.73	4,909.43	-516.40	-2,154.34	2,215.17	2.10	-1.38	33.14	144.90
	NORMAL	5,654.0	0.75	334.74	5,004.40	-515.88	-2,156.43	2,217.07	2.12	-1.53	69.48	160.12
	NORMAL	5,750.0	0.75	349.15	5,100.39	-514.69	-2,156.82	2,217.15	0.20	0.00	15.01	97.20
	NORMAL	5,846.0	1.01	320.33	5,196.38	-513.42	-2,157.47	2,217.48	0.53	0.27	-30.02	285.49
	NORMAL	5,942.0	0.31	366	5,292.37	-512.51	-2,158.00	2,217.76	0.85	-0.73	45.14	164.83
	NORMAL	6,037.0	0.31	358.12	5,387.37	-512.00	-2,157.99	2,217.63	0.03	0.00	-5.83	267.23
	NORMAL	6,133.0	0.75	297.83	5,483.37	-511.45	-2,158.55	2,218.04	0.68	0.46	-62.80	275.41
	NORMAL	6,228.0	0.70	340.28	5,578.36	-510.61	-2,159.30	2,218.55	0.55	-0.05	44.68	116.30
	NORMAL	6,324.0	0.13	191.92	5,674.36	-510.17	-2,159.52	2,218.66	0.85	-0.59	-154.54	184.81
	NORMAL	6,419.0	0.75	218.02	5,769.36	-510.76	-2,159.92	2,219.20	0.67	0.65	27.47	31.26
	NORMAL	6,515.0	0.97	233.75	5,865.35	-511.74	-2,160.97	2,220.45	0.33	0.23	16.39	55.07
	NORMAL	6,610.0	0.66	222.33	5,960.34	-512.62	-2,161.98	2,221.65	0.37	-0.33	-12.02	202.02
	NORMAL	6,706.0	0.61	226.11	6,056.33	-513.38	-2,162.72	2,222.56	0.07	-0.05	3.94	141.92
	NORMAL	6,802.0	0.57	177.77	6,152.33	-514.21	-2,163.07	2,223.10	0.50	-0.04	-50.35	241.51
	NORMAL	6,897.0	0.35	74.67	6,247.32	-514.61	-2,162.78	2,222.91	0.77	-0.23	-108.53	207.70
	NORMAL	6,993.0	0.48	90.40	6,343.32	-514.53	-2,162.09	2,222.22	0.18	0.14	16.39	49.28
12/9/2012	NORMAL	7,089.0	0.75	131.80	6,439.32	-514.95	-2,161.22	2,221.48	0.52	0.28	43.12	80.55
	NORMAL	7,184.0	0.79	173.81	6,534.31	-516.02	-2,160.69	2,221.23	0.58	0.04	44.22	107.13

### 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 (°)
12/9/2012	NORMAL	7,280.0	0.48	207.65	6,630.30	-517.03	-2,160.80	2,221.59	0.49	-0.32	35.25	145.66
	NORMAL	7,376.0	0.44	124.94	6,726.30	-517.60	-2,160.69	2,221.62	0.63	-0.04	-86.16	225.82
	NORMAL	7,472.0	0.44	289.83	6,822.30	-517.69	-2,160.73	2,221.68	0.91	0.00	171.76	172.44
	NORMAL	7,545.0	0.35	168.45	6,895.30	-517.81	-2,160.95	2,221.92	0.95	-0.12	-166.27	205.65
	NORMAL	7,590.0	0.35	168.45	6,940.30	-518.08	-2,160.89	2,221.94	0.00	0.00	0.00	0.00

### 3 Charts

#### 3.1 Vertical Section View



### 3.2 Plan View

