

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	PA 332-7	Wellbore No.	OH
Well Name	PA 332-7	Common Name	PA 332-7
Project	PA 07-07S-095W	Site	PA 21-7 Pad
Vertical Section Azimuth		103.87 (°)	North Reference True
Origin N/S			Origin E/W
Spud Date	8/9/2011		UWI
Active Datum	KB @5,109.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Started	8/9/2011	Ended	
Tool Name	MWD	Engineer	

### 2.1.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TV/D (ft)	N/S (ft)	D/Leg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	T/Face (°)	E/W (ft)
0.0		0.00		0.00					0.00

### 2.1.2 Survey Stations

Date	Type	MD (ft)	Inc (°)	Azi (°)	TV/D (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	D/Leg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	T/Face (°)
8/9/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/9/2011	NORMAL	105.0	0.26	175.34	105.00	-0.24	0.02	0.08	0.25	0.25	0.00	175.34
	NORMAL	136.0	0.97	120.76	136.00	-0.44	0.25	0.35	2.73	2.29	-176.06	290.92
	NORMAL	166.0	1.58	114.79	165.99	-0.75	0.84	1.00	2.08	2.03	-19.90	344.72
	NORMAL	197.0	1.58	127.53	196.98	-1.18	1.57	1.81	1.13	0.00	41.10	96.37
	NORMAL	227.0	1.85	107.84	226.97	-1.58	2.36	2.67	2.15	0.90	-65.63	284.56
	NORMAL	257.0	2.55	106.44	256.94	-1.92	3.46	3.82	2.34	2.33	-4.67	354.91
	NORMAL	287.0	3.08	94.22	286.91	-2.17	4.91	5.28	2.66	1.77	-40.73	305.24
	NORMAL	317.0	3.87	98.70	316.85	-2.38	6.71	7.09	2.78	2.63	14.93	21.21
	NORMAL	347.0	5.28	103.97	346.76	-2.87	9.05	9.47	4.90	4.70	17.57	19.24
	NORMAL	378.0	6.42	104.59	377.59	-3.65	12.11	12.63	3.68	3.68	2.00	3.48
	NORMAL	408.0	7.04	99.93	407.39	-4.39	15.55	16.14	2.75	2.07	-15.53	316.30
	NORMAL	439.0	7.39	93.60	438.14	-4.84	19.41	20.00	2.80	1.13	-20.42	290.60
	NORMAL	469.0	7.39	91.23	467.89	-5.00	23.26	23.78	1.02	0.00	-7.90	268.82
	NORMAL	499.0	7.92	91.58	497.63	-5.10	27.26	27.68	1.77	1.77	1.17	5.20
	NORMAL	529.0	8.53	98.35	527.32	-5.48	31.52	31.92	3.81	2.03	22.57	61.18
	NORMAL	560.0	8.71	99.32	557.97	-6.20	36.11	36.55	0.75	0.58	3.13	39.41
	NORMAL	590.0	9.24	101.60	587.60	-7.05	40.72	41.22	2.13	1.77	7.60	35.00
	NORMAL	620.0	9.68	107.23	617.19	-8.28	45.48	46.14	3.41	1.47	18.77	67.36
	NORMAL	650.0	10.73	107.84	646.72	-9.88	50.55	51.45	3.52	3.50	2.03	6.18
	NORMAL	680.0	11.35	107.23	676.16	-11.61	56.03	57.18	2.10	2.07	-2.03	349.03

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
8/9/2011	NORMAL	711.0	11.96	108.63	706.52	-13.54	61.99	63.43	2.17	1.97	4.52	25.56
	NORMAL	748.0	12.50	107.20	742.68	-15.95	69.44	71.24	1.67	1.46	-3.86	330.01
	NORMAL	778.0	13.30	105.50	771.93	-17.83	75.87	77.93	2.95	2.67	-5.67	333.79
	NORMAL	809.0	13.60	103.70	802.08	-19.65	82.85	85.14	1.66	0.97	-5.81	304.75
	NORMAL	839.0	14.40	102.80	831.18	-21.31	89.91	92.40	2.76	2.67	-3.00	344.34
	NORMAL	869.0	15.10	100.90	860.20	-22.88	97.39	100.03	2.84	2.33	-6.33	324.43
	NORMAL	900.0	15.10	98.90	890.13	-24.27	105.34	108.09	1.68	0.00	-6.45	269.03
	NORMAL	930.0	15.40	99.70	919.07	-25.54	113.13	115.95	1.22	1.00	2.67	35.43
	NORMAL	960.0	14.90	103.30	948.03	-27.10	120.81	123.78	3.55	-1.67	12.00	119.72
	NORMAL	991.0	14.90	105.50	977.98	-29.08	128.53	131.75	1.82	0.00	7.10	91.06
	NORMAL	1,023.0	15.80	107.00	1,008.84	-31.46	136.66	140.22	3.07	2.81	4.69	24.53
	NORMAL	1,055.0	17.10	105.80	1,039.53	-34.01	145.35	149.27	4.20	4.06	-3.75	344.77
	NORMAL	1,087.0	18.60	106.00	1,069.99	-36.70	154.79	159.07	4.69	4.69	0.63	2.44
	NORMAL	1,118.0	19.80	106.20	1,099.27	-39.53	164.58	169.26	3.88	3.87	0.65	3.23
	NORMAL	1,150.0	21.30	104.90	1,129.23	-42.53	175.40	180.48	4.90	4.69	-4.06	342.47
	NORMAL	1,182.0	22.60	104.90	1,158.91	-45.61	186.96	192.44	4.06	4.06	0.00	0.00
	NORMAL	1,214.0	23.40	103.90	1,188.37	-48.72	199.07	204.95	2.78	2.50	-3.13	333.51
	NORMAL	1,246.0	23.80	103.50	1,217.69	-51.75	211.52	217.76	1.35	1.25	-1.25	338.00
	NORMAL	1,278.0	24.20	104.90	1,246.92	-54.94	224.14	230.77	2.17	1.25	4.38	56.55
	NORMAL	1,308.0	24.70	104.00	1,274.23	-58.04	236.16	243.19	2.08	1.67	-3.00	322.90
	NORMAL	1,340.0	25.60	104.20	1,303.20	-61.35	249.35	256.79	2.83	2.81	0.63	5.49
	NORMAL	1,371.0	26.10	103.30	1,331.10	-64.57	262.48	270.30	2.05	1.61	-2.90	321.47
	NORMAL	1,403.0	27.00	103.20	1,359.72	-67.84	276.40	284.61	2.82	2.81	-0.31	357.11
	NORMAL	1,435.0	27.30	102.60	1,388.20	-71.10	290.63	299.21	1.27	0.94	-1.88	317.35
8/10/2011	NORMAL	1,467.0	28.20	102.30	1,416.52	-74.32	305.18	314.10	2.85	2.81	-0.94	351.04
	NORMAL	1,499.0	28.70	102.10	1,444.65	-77.54	320.08	329.34	1.59	1.56	-0.63	349.12
	NORMAL	1,531.0	29.50	102.30	1,472.61	-80.83	335.30	344.89	2.52	2.50	0.63	7.02
	NORMAL	1,563.0	29.90	103.00	1,500.41	-84.30	350.76	360.74	1.65	1.25	2.19	41.23
	NORMAL	1,594.0	30.00	105.30	1,527.27	-88.08	365.77	376.22	3.72	0.32	7.42	86.02
	NORMAL	1,626.0	30.00	105.80	1,554.98	-92.37	381.18	392.21	0.78	0.00	1.56	90.22
	NORMAL	1,658.0	30.10	105.60	1,582.68	-96.71	396.61	408.23	0.44	0.31	-0.63	314.87
	NORMAL	1,690.0	30.70	106.00	1,610.28	-101.12	412.19	424.41	1.98	1.88	1.25	18.81
	NORMAL	1,722.0	31.50	105.80	1,637.68	-105.64	428.09	440.93	2.52	2.50	-0.63	352.56
	NORMAL	1,754.0	31.40	104.60	1,664.98	-110.02	444.20	457.62	1.98	-0.31	-3.75	260.41
	NORMAL	1,786.0	32.20	104.90	1,692.18	-114.32	460.50	474.48	2.55	2.50	0.94	11.31
	NORMAL	1,818.0	33.40	103.70	1,719.07	-118.59	477.30	491.81	4.26	3.75	-3.75	331.05
	NORMAL	1,850.0	34.10	103.70	1,745.68	-122.80	494.57	509.59	2.19	2.19	0.00	0.00
	NORMAL	1,882.0	35.00	103.70	1,772.04	-127.10	512.21	527.74	2.81	2.81	0.00	0.00
	NORMAL	1,913.0	36.00	104.60	1,797.27	-131.50	529.66	545.74	3.64	3.23	2.90	27.96
	NORMAL	1,945.0	36.20	103.30	1,823.13	-136.05	547.96	564.59	2.47	0.63	-4.06	284.11
	NORMAL	2,010.0	36.70	103.00	1,875.41	-144.83	585.56	603.21	0.82	0.77	-0.46	340.26
8/12/2011	NORMAL	2,105.0	36.50	103.20	1,951.68	-157.67	640.73	659.85	0.25	-0.21	0.21	149.28
	NORMAL	2,201.0	35.70	102.80	2,029.25	-170.40	695.84	716.40	0.87	-0.83	-0.42	196.25
	NORMAL	2,297.0	35.60	102.70	2,107.26	-182.75	750.41	772.34	0.12	-0.10	-0.10	210.19
	NORMAL	2,392.0	35.40	102.50	2,184.60	-194.78	804.25	827.50	0.24	-0.21	-0.21	210.06
	NORMAL	2,488.0	35.20	104.00	2,262.95	-207.49	858.25	882.96	0.93	-0.21	1.56	103.60
	NORMAL	2,584.0	35.60	104.20	2,341.20	-221.04	912.18	938.57	0.43	0.42	0.21	16.23
	NORMAL	2,679.0	33.70	104.00	2,419.35	-234.20	964.57	992.58	2.00	-2.00	-0.21	183.34
	NORMAL	2,775.0	31.10	103.70	2,500.40	-246.52	1,014.50	1,044.02	2.71	-2.71	-0.31	183.41
	NORMAL	2,871.0	31.00	104.00	2,582.64	-258.37	1,062.58	1,093.53	0.19	-0.10	0.31	123.00
	NORMAL	2,966.0	28.80	101.80	2,665.00	-268.97	1,108.72	1,140.87	2.59	-2.32	-2.32	205.55
	NORMAL	3,062.0	26.50	104.90	2,750.03	-279.21	1,152.06	1,185.40	2.83	-2.40	3.23	149.34
	NORMAL	3,157.0	24.20	104.00	2,835.88	-289.37	1,191.44	1,226.07	2.45	-2.42	-0.95	189.10
	NORMAL	3,253.0	21.70	102.60	2,924.27	-298.00	1,227.86	1,263.50	2.67	-2.60	-1.46	191.67
	NORMAL	3,348.0	20.80	101.60	3,012.81	-305.23	1,261.53	1,297.91	1.02	-0.95	-1.05	201.47
	NORMAL	3,445.0	20.10	103.90	3,103.70	-312.69	1,294.58	1,331.79	1.10	-0.72	2.37	132.13
	NORMAL	3,540.0	17.90	100.00	3,193.52	-319.15	1,324.81	1,362.68	2.67	-2.32	-4.11	208.16

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
8/12/2011	NORMAL	3,636.0	17.10	99.80	3,285.08	-324.12	1,353.24	1,391.48	0.84	-0.83	-0.21	184.20
	NORMAL	3,732.0	15.90	104.40	3,377.13	-329.79	1,379.89	1,418.71	1.85	-1.25	4.79	134.76
	NORMAL	3,827.0	13.20	104.20	3,469.07	-335.69	1,403.01	1,442.58	2.84	-2.84	-0.21	180.97
	NORMAL	3,923.0	12.70	104.00	3,562.63	-340.93	1,423.88	1,464.09	0.52	-0.52	-0.21	185.02
	NORMAL	4,019.0	10.70	103.50	3,656.63	-345.56	1,442.79	1,483.56	2.09	-2.08	-0.52	182.66
	NORMAL	4,114.0	9.80	102.80	3,750.11	-349.41	1,459.25	1,500.46	0.96	-0.95	-0.74	187.54
	NORMAL	4,210.0	8.90	100.90	3,844.84	-352.63	1,474.51	1,516.04	0.99	-0.94	-1.98	198.00
	NORMAL	4,305.0	8.30	100.50	3,938.77	-355.27	1,488.46	1,530.23	0.63	-0.63	-0.42	185.50
	NORMAL	4,401.0	6.40	105.30	4,033.98	-357.94	1,500.44	1,542.50	2.08	-1.98	5.00	164.46
	NORMAL	4,496.0	5.50	106.20	4,128.46	-360.61	1,509.92	1,552.34	0.95	-0.95	0.95	174.53
	NORMAL	4,592.0	3.20	98.80	4,224.18	-362.30	1,516.99	1,559.60	2.46	-2.40	-7.71	190.04
	NORMAL	4,687.0	0.90	49.50	4,319.12	-362.22	1,520.17	1,562.68	2.84	-2.42	-51.89	194.64
	NORMAL	4,782.0	1.20	52.90	4,414.10	-361.14	1,521.53	1,563.74	0.32	0.32	3.58	13.44
8/13/2011	NORMAL	4,878.0	0.90	49.40	4,510.09	-360.04	1,522.91	1,564.81	0.32	-0.31	-3.65	190.32
	NORMAL	4,974.0	0.70	36.00	4,606.08	-359.08	1,523.83	1,565.47	0.28	-0.21	-13.96	216.52
	NORMAL	5,068.0	0.80	26.40	4,700.07	-358.02	1,524.46	1,565.83	0.17	0.11	-10.21	303.65
	NORMAL	5,162.0	0.60	154.70	4,794.07	-357.88	1,524.96	1,566.28	1.34	-0.21	136.49	188.11
	NORMAL	5,258.0	0.40	85.20	4,890.06	-358.31	1,525.51	1,566.92	0.62	-0.21	-72.40	219.17
	NORMAL	5,354.0	0.30	97.40	4,986.06	-358.31	1,526.09	1,567.49	0.13	-0.10	12.71	149.30
	NORMAL	5,449.0	0.60	79.30	5,081.06	-358.25	1,526.82	1,568.19	0.35	0.32	-19.05	325.41
	NORMAL	5,545.0	0.50	93.80	5,177.05	-358.19	1,527.74	1,569.06	0.18	-0.10	15.10	132.80
	NORMAL	5,640.0	0.60	130.10	5,272.05	-358.53	1,528.53	1,569.91	0.37	0.11	38.21	92.65
	NORMAL	5,735.0	1.00	171.40	5,367.04	-359.67	1,529.04	1,570.67	0.71	0.42	43.47	77.09
8/14/2011	NORMAL	5,829.0	1.40	183.70	5,461.02	-361.63	1,529.08	1,571.19	0.50	0.43	13.09	39.03
	NORMAL	5,925.0	1.40	197.70	5,556.99	-363.92	1,528.65	1,571.32	0.36	0.00	14.58	97.00
	NORMAL	6,020.0	1.30	202.70	5,651.97	-366.02	1,527.88	1,571.07	0.16	-0.11	5.26	132.81
	NORMAL	6,116.0	1.30	212.70	5,747.94	-367.94	1,526.87	1,570.56	0.24	0.00	10.42	95.00
	NORMAL	6,212.0	1.00	220.40	5,843.92	-369.49	1,525.74	1,569.83	0.35	-0.31	8.02	156.56
	NORMAL	6,306.0	1.20	211.80	5,937.91	-370.95	1,524.69	1,569.16	0.28	0.21	-9.15	316.11
	NORMAL	6,401.0	0.60	225.20	6,032.89	-372.15	1,523.82	1,568.60	0.67	-0.63	14.11	167.29
	NORMAL	6,497.0	0.60	199.50	6,128.89	-372.98	1,523.29	1,568.29	0.28	0.00	-26.77	257.15
	NORMAL	6,593.0	0.60	187.50	6,224.88	-373.95	1,523.06	1,568.29	0.13	0.00	-12.50	264.00
	NORMAL	6,650.0	0.70	205.70	6,281.88	-374.56	1,522.87	1,568.25	0.40	0.18	31.93	73.45
	NORMAL	6,700.0	0.70	205.70	6,331.88	-375.11	1,522.60	1,568.13	0.00	0.00	0.00	0.00