

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	PA 441-29	Wellbore No.	OH
Well Name	PA 441-29	Common Name	PA 441-29
Project	PA 28-06S-095W	Site	PA 11-28 Pad
Vertical Section Azimuth	237.54 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	11/3/2011	UWI	PA 441-29
Active Datum	KN @5,991.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	11/3/2011	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 (°)
11/3/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/3/2011	NORMAL	106.0	0.18	329.06	106.00	0.14	-0.09	0.00	0.17	0.17	0.00	329.06
	NORMAL	136.0	0.62	74.27	136.00	0.23	0.05	-0.16	2.30	1.47	350.70	119.80
	NORMAL	167.0	1.23	20.13	167.00	0.59	0.32	-0.59	3.23	1.97	-174.65	275.76
	NORMAL	198.0	1.85	15.29	197.98	1.38	0.57	-1.22	2.04	2.00	-15.61	345.73
	NORMAL	228.0	2.64	20.04	227.96	2.50	0.93	-2.13	2.70	2.63	15.83	15.63
	NORMAL	259.0	2.82	22.68	258.93	3.87	1.47	-3.32	0.71	0.58	8.52	36.26
	NORMAL	289.0	2.73	19.86	288.89	5.22	2.00	-4.49	0.54	-0.30	-9.40	235.20
	NORMAL	319.0	3.08	13.80	318.85	6.68	2.43	-5.64	1.55	1.17	-20.20	315.68
	NORMAL	349.0	2.90	7.91	348.81	8.21	2.73	-6.71	1.19	-0.60	-19.63	236.72
	NORMAL	380.0	1.76	356.66	379.79	9.46	2.81	-7.45	3.95	-3.68	-36.29	196.30
	NORMAL	410.0	1.06	280.28	409.78	9.97	2.51	-7.47	6.09	-2.33	-254.60	214.30
	NORMAL	440.0	2.46	244.95	439.76	9.75	1.65	-6.63	5.70	4.67	-117.77	303.66
	NORMAL	471.0	3.87	233.70	470.72	8.85	0.21	-4.93	4.95	4.55	-36.29	330.54
	NORMAL	502.0	4.66	238.27	501.63	7.57	-1.71	-2.62	2.77	2.55	14.74	25.57
	NORMAL	532.0	5.10	238.45	531.52	6.23	-3.88	-0.07	1.47	1.47	0.60	2.08
	NORMAL	576.0	6.20	237.10	575.31	3.92	-7.54	4.26	2.52	2.50	-3.07	352.44
	NORMAL	607.0	6.90	238.30	606.10	2.03	-10.53	7.80	2.30	2.26	3.87	11.66
	NORMAL	637.0	7.90	237.90	635.85	-0.01	-13.81	11.66	3.34	3.33	-1.33	356.85
	NORMAL	668.0	8.20	237.90	666.55	-2.32	-17.49	16.00	0.97	0.97	0.00	0.00
	NORMAL	698.0	8.70	237.80	696.22	-4.67	-21.22	20.41	1.67	1.67	-0.33	358.27

2.1.2 Survey Stations (Continued)

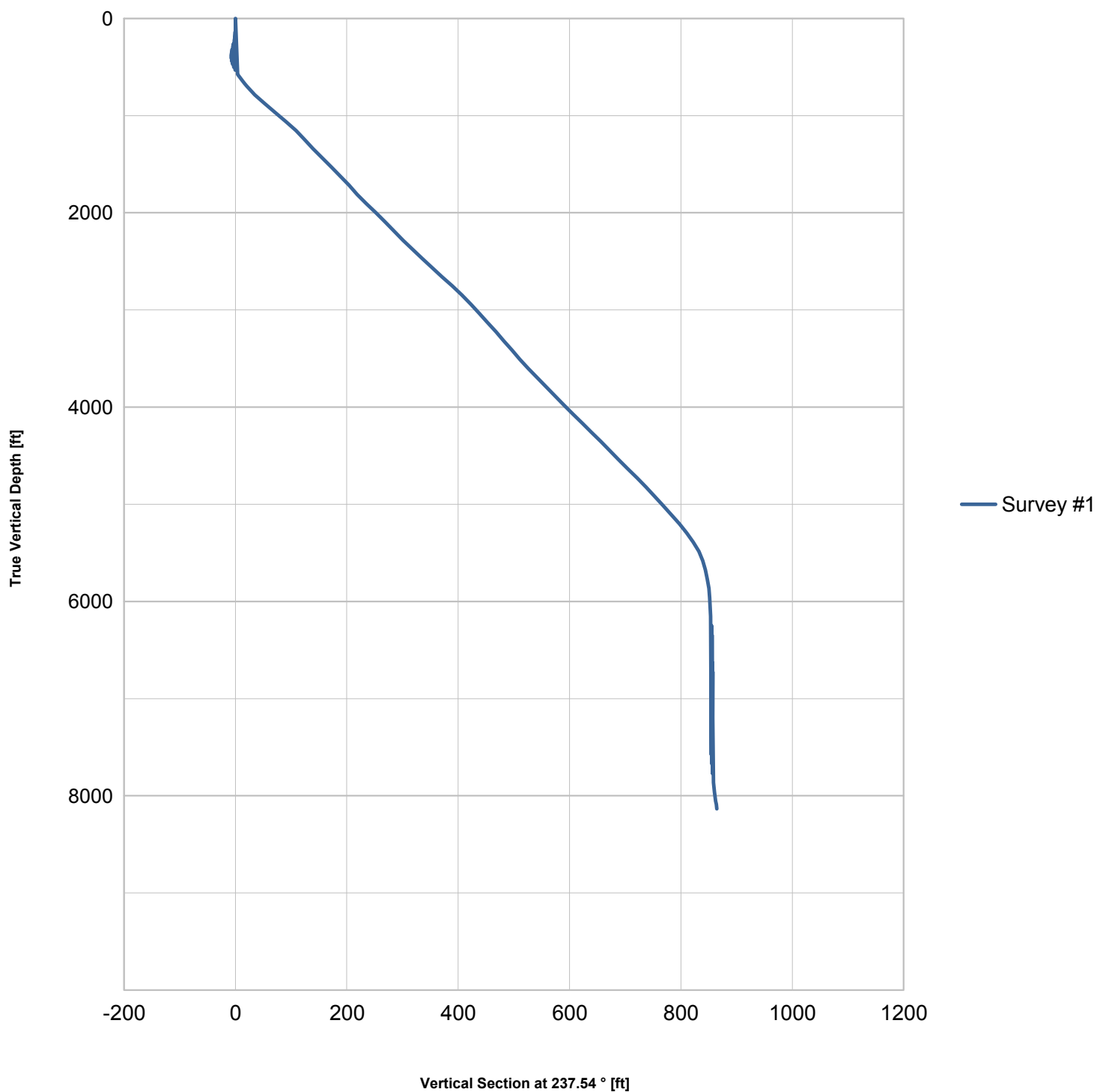
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
11/3/2011	NORMAL	729.0	8.70	236.20	726.87	-7.22	-25.15	25.10	0.78	0.00	-5.16	269.21
	NORMAL	789.0	10.30	236.00	786.04	-12.75	-33.37	35.00	2.67	2.67	-0.33	358.72
11/4/2011	NORMAL	881.0	11.80	236.40	876.33	-22.55	-48.02	52.62	1.63	1.63	0.43	3.12
	NORMAL	972.0	11.20	238.80	965.51	-32.28	-63.33	70.76	0.84	-0.66	2.64	142.60
	NORMAL	1,068.0	12.20	237.90	1,059.51	-42.50	-79.90	90.23	1.06	1.04	-0.94	349.22
	NORMAL	1,163.0	10.40	240.10	1,152.67	-52.11	-95.84	108.83	1.95	-1.89	2.32	167.61
	NORMAL	1,259.0	8.40	233.40	1,247.37	-60.61	-108.98	124.49	2.37	-2.08	-6.98	205.41
	NORMAL	1,354.0	9.80	231.40	1,341.18	-69.79	-120.87	139.45	1.51	1.47	-2.11	346.28
	NORMAL	1,450.0	10.30	238.30	1,435.71	-79.40	-134.56	156.15	1.36	0.52	7.19	70.87
	NORMAL	1,545.0	9.20	238.80	1,529.33	-87.80	-148.28	172.24	1.16	-1.16	0.53	175.84
	NORMAL	1,641.0	10.30	236.00	1,623.95	-96.57	-161.96	188.49	1.25	1.15	-2.92	335.30
	NORMAL	1,736.0	8.50	238.30	1,717.67	-105.01	-174.98	204.00	1.94	-1.89	2.42	169.34
	NORMAL	1,832.0	9.30	237.40	1,812.51	-112.92	-187.55	218.85	0.85	0.83	-0.94	349.68
	NORMAL	1,928.0	10.90	237.40	1,907.02	-121.99	-201.73	235.69	1.67	1.67	0.00	0.00
	NORMAL	2,023.0	9.50	240.10	2,000.52	-130.74	-216.10	252.50	1.56	-1.47	2.84	162.47
	NORMAL	2,119.0	10.20	239.20	2,095.10	-139.04	-230.27	268.91	0.75	0.73	-0.94	347.15
	NORMAL	2,215.0	9.30	239.50	2,189.71	-147.33	-244.25	285.16	0.94	-0.94	0.31	176.92
	NORMAL	2,310.0	9.90	240.10	2,283.38	-155.29	-257.94	300.99	0.64	0.63	0.63	9.76
	NORMAL	2,406.0	10.90	239.00	2,377.80	-164.08	-272.88	318.31	1.06	1.04	-1.15	348.23
	NORMAL	2,501.0	10.10	239.00	2,471.21	-173.00	-287.72	335.62	0.84	-0.84	0.00	180.00
	NORMAL	2,597.0	11.10	239.20	2,565.57	-182.07	-302.87	353.27	1.04	1.04	0.21	2.21
	NORMAL	2,692.0	10.60	239.30	2,658.87	-191.21	-318.24	371.14	0.53	-0.53	0.11	177.89
11/6/2011	NORMAL	2,787.0	11.30	243.20	2,752.15	-199.87	-334.06	389.14	1.07	0.74	4.11	48.55
	NORMAL	2,883.0	10.00	235.00	2,846.50	-208.89	-349.29	406.83	2.08	-1.35	-8.54	225.39
	NORMAL	2,978.0	9.20	230.70	2,940.17	-218.43	-361.92	422.61	1.13	-0.84	-4.53	219.77
	NORMAL	3,074.0	9.10	237.10	3,034.95	-227.42	-374.23	437.82	1.06	-0.10	6.67	98.77
	NORMAL	3,169.0	9.20	235.80	3,128.74	-235.76	-386.82	452.92	0.24	0.11	-1.37	295.17
	NORMAL	3,265.0	8.70	234.60	3,223.57	-244.28	-399.09	467.85	0.56	-0.52	-1.25	199.88
	NORMAL	3,361.0	8.40	236.70	3,318.50	-252.34	-410.87	482.11	0.45	-0.31	2.19	134.89
	NORMAL	3,456.0	8.80	235.30	3,412.43	-260.29	-422.64	496.31	0.48	0.42	-1.47	331.68
	NORMAL	3,552.0	8.40	234.60	3,507.35	-268.53	-434.39	510.65	0.43	-0.42	-0.73	194.32
	NORMAL	3,648.0	9.80	240.60	3,602.15	-276.60	-447.23	525.81	1.76	1.46	6.25	37.12
	NORMAL	3,744.0	9.60	239.20	3,696.77	-284.71	-461.22	541.97	0.32	-0.21	-1.46	229.02
	NORMAL	3,840.0	9.70	238.30	3,791.41	-293.06	-474.98	558.06	0.19	0.10	-0.94	303.09
11/7/2011	NORMAL	3,935.0	9.30	237.80	3,885.11	-301.36	-488.28	573.74	0.43	-0.42	-0.53	191.41
	NORMAL	4,030.0	10.10	239.70	3,978.75	-309.65	-501.97	589.74	0.91	0.84	2.00	22.75
	NORMAL	4,126.0	9.90	239.00	4,073.29	-318.15	-516.31	606.40	0.24	-0.21	-0.73	210.95
	NORMAL	4,222.0	10.10	237.40	4,167.84	-326.93	-530.48	623.07	0.36	0.21	-1.67	304.96
	NORMAL	4,317.0	10.00	236.90	4,261.38	-335.92	-544.41	639.65	0.14	-0.11	-0.53	220.86
	NORMAL	4,412.0	10.00	236.50	4,354.94	-344.98	-558.19	656.14	0.07	0.00	-0.42	269.80
	NORMAL	4,507.0	9.80	236.20	4,448.52	-354.03	-571.79	672.47	0.22	-0.21	-0.32	194.31
	NORMAL	4,603.0	9.50	234.80	4,543.16	-363.14	-585.05	688.55	0.40	-0.31	-1.46	217.35
	NORMAL	4,698.0	10.30	238.70	4,636.75	-372.08	-598.72	704.87	1.10	0.84	4.11	41.90
	NORMAL	4,793.0	9.80	238.10	4,730.29	-380.76	-612.84	721.45	0.54	-0.53	-0.63	191.53
	NORMAL	4,888.0	9.40	236.70	4,823.96	-389.29	-626.19	737.29	0.49	-0.42	-1.47	209.58
	NORMAL	4,984.0	9.20	236.20	4,918.70	-397.87	-639.12	752.80	0.22	-0.21	-0.52	201.75
	NORMAL	5,078.0	9.20	243.90	5,011.49	-405.35	-652.11	767.78	1.31	0.00	8.19	93.80
	NORMAL	5,173.0	8.90	243.40	5,105.31	-411.98	-665.50	782.64	0.33	-0.32	-0.53	194.44
	NORMAL	5,269.0	8.70	241.10	5,200.18	-418.82	-678.50	797.28	0.42	-0.21	-2.40	239.25
	NORMAL	5,364.0	7.20	246.60	5,294.27	-424.65	-690.25	810.33	1.77	-1.58	5.79	155.81
	NORMAL	5,459.0	6.90	245.50	5,388.55	-429.39	-700.91	821.86	0.35	-0.32	-1.16	203.68
	NORMAL	5,555.0	5.40	239.00	5,483.99	-434.10	-710.03	832.08	1.72	-1.56	-6.77	201.70
	NORMAL	5,651.0	3.30	242.70	5,579.71	-437.70	-716.35	839.35	2.21	-2.19	3.85	174.23
	NORMAL	5,745.0	2.10	229.00	5,673.61	-440.07	-720.06	843.75	1.44	-1.28	-14.57	201.54
	NORMAL	5,841.0	2.20	245.70	5,769.54	-441.98	-723.07	847.31	0.66	0.10	17.40	89.34
	NORMAL	5,937.0	1.60	217.00	5,865.49	-443.81	-725.55	850.39	1.15	-0.63	-29.90	223.97
11/8/2011	NORMAL	6,033.0	0.30	181.30	5,961.47	-445.13	-726.36	851.79	1.42	-1.35	-37.19	187.35

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 (°)
11/8/2011	NORMAL	6,129.0	0.60	214.60	6,057.47	-445.80	-726.66	852.39	0.40	0.31	34.69	58.55
	NORMAL	6,225.0	0.90	201.00	6,153.46	-446.91	-727.21	853.46	0.36	0.31	-14.17	322.40
	NORMAL	6,320.0	1.20	222.50	6,248.45	-448.34	-728.15	855.02	0.52	0.32	22.63	63.79
	NORMAL	6,415.0	0.40	0.30	6,343.44	-448.75	-728.82	855.80	1.60	-0.84	145.05	169.82
	NORMAL	6,510.0	0.30	342.50	6,438.44	-448.18	-728.89	855.56	0.15	-0.11	-18.74	218.73
	NORMAL	6,605.0	0.20	255.20	6,533.44	-447.98	-729.13	855.65	0.37	-0.11	-91.89	214.51
	NORMAL	6,700.0	1.10	208.20	6,628.43	-448.83	-729.72	856.60	1.03	0.95	-49.47	304.37
	NORMAL	6,795.0	0.40	97.70	6,723.43	-449.68	-729.82	857.15	1.36	-0.74	-116.32	196.81
	NORMAL	6,888.0	0.60	122.60	6,816.42	-449.98	-729.09	856.69	0.31	0.22	26.77	60.28
	NORMAL	6,983.0	0.60	334.10	6,911.42	-449.80	-728.89	856.43	1.22	0.00	-156.32	195.75
	NORMAL	7,078.0	0.30	313.70	7,006.42	-449.18	-729.29	856.43	0.35	-0.32	-21.47	198.16
	NORMAL	7,173.0	0.40	248.30	7,101.42	-449.13	-729.77	856.81	0.41	0.11	-68.84	249.85
	NORMAL	7,268.0	0.30	227.60	7,196.41	-449.42	-730.27	857.38	0.17	-0.11	-21.79	221.62
11/9/2011	NORMAL	7,363.0	0.80	72.20	7,291.41	-449.39	-729.82	856.99	1.14	0.53	-163.58	197.96
	NORMAL	7,458.0	0.90	84.30	7,386.40	-449.11	-728.44	855.68	0.22	0.11	12.74	67.02
	NORMAL	7,553.0	0.90	124.60	7,481.39	-449.46	-727.09	854.72	0.65	0.00	42.42	110.15
	NORMAL	7,649.0	0.80	165.20	7,577.38	-450.54	-726.30	854.63	0.62	-0.10	42.29	119.33
	NORMAL	7,744.0	1.20	189.80	7,672.37	-452.16	-726.30	855.50	0.61	0.42	25.89	59.77
	NORMAL	7,840.0	1.30	192.20	7,768.34	-454.21	-726.70	856.94	0.12	0.10	2.50	28.84
	NORMAL	7,936.0	1.40	180.80	7,864.32	-456.45	-726.94	858.35	0.30	0.10	-11.88	284.66
	NORMAL	8,032.0	1.90	194.20	7,960.28	-459.17	-727.35	860.15	0.65	0.52	13.96	44.48
	NORMAL	8,126.0	2.00	198.40	8,054.22	-462.23	-728.25	862.56	0.19	0.11	4.47	57.13
	NORMAL	8,160.0	2.00	196.50	8,088.20	-463.37	-728.61	863.47	0.20	0.00	-5.59	269.05
	NORMAL	8,205.0	2.00	196.50	8,133.17	-464.87	-729.05	864.65	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

