

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	PA 343-5	Wellbore No.	OH
Well Name	PA 343-5	Common Name	PA 343-5
Project	PA 04-07S-095W	Site	GV 80-4 Pad
Vertical Section Azimuth	284.99 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	12/27/2012	UWI	PA 343-5
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	11/26/2012	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 (°)
11/26/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/2012	NORMAL	72.0	0.53	84.38	72.00	0.03	0.33	-0.31	0.74	0.74	0.00	84.38
	NORMAL	162.0	2.38	294.17	161.98	0.84	-0.96	1.14	3.17	2.06	-166.90	204.50
	NORMAL	253.0	6.60	288.19	252.68	3.25	-7.65	8.23	4.66	4.64	-6.57	350.68
	NORMAL	344.0	10.12	281.78	342.70	6.51	-20.45	21.44	4.00	3.87	-7.04	341.98
	NORMAL	435.0	12.67	282.39	431.90	10.29	-38.03	39.40	2.81	2.80	0.67	3.01
	NORMAL	526.0	17.07	285.56	519.83	16.01	-60.66	62.73	4.92	4.84	3.48	12.01
	NORMAL	616.0	19.35	283.45	605.32	23.03	-87.89	90.85	2.64	2.53	-2.34	342.87
	NORMAL	707.0	20.85	283.89	690.77	30.42	-118.27	122.11	1.66	1.65	0.48	5.96
	NORMAL	779.0	23.25	283.99	757.50	36.93	-144.50	149.14	3.33	3.33	0.14	0.94
	NORMAL	869.0	26.36	285.13	839.19	46.44	-181.04	186.89	3.50	3.46	1.27	9.26
	NORMAL	960.0	29.52	284.60	919.57	57.37	-222.24	229.52	3.48	3.47	-0.58	355.27
	NORMAL	1,055.0	32.12	284.45	1,001.15	69.57	-269.36	278.19	2.74	2.74	-0.16	358.24
	NORMAL	1,151.0	35.17	284.06	1,081.06	82.66	-320.90	331.36	3.19	3.18	-0.41	355.78
12/28/2012	NORMAL	1,267.0	36.26	283.50	1,175.24	98.79	-386.67	399.06	0.98	0.94	-0.48	343.08
	NORMAL	1,362.0	35.74	283.15	1,252.10	111.66	-441.01	454.88	0.59	-0.55	-0.37	201.44
	NORMAL	1,458.0	34.15	283.32	1,330.79	124.25	-494.53	509.84	1.66	-1.66	0.18	176.57
	NORMAL	1,553.0	33.85	285.17	1,409.55	137.31	-546.02	562.95	1.13	-0.32	1.95	106.94
	NORMAL	1,648.0	33.67	284.29	1,488.53	150.74	-597.07	615.74	0.55	-0.19	-0.93	249.43
	NORMAL	1,744.0	33.80	285.87	1,568.36	164.61	-648.55	669.05	0.92	0.14	1.65	82.23
	NORMAL	1,839.0	34.59	287.63	1,646.94	180.00	-699.66	722.41	1.33	0.83	1.85	52.12

2.1.2 Survey Stations (Continued)

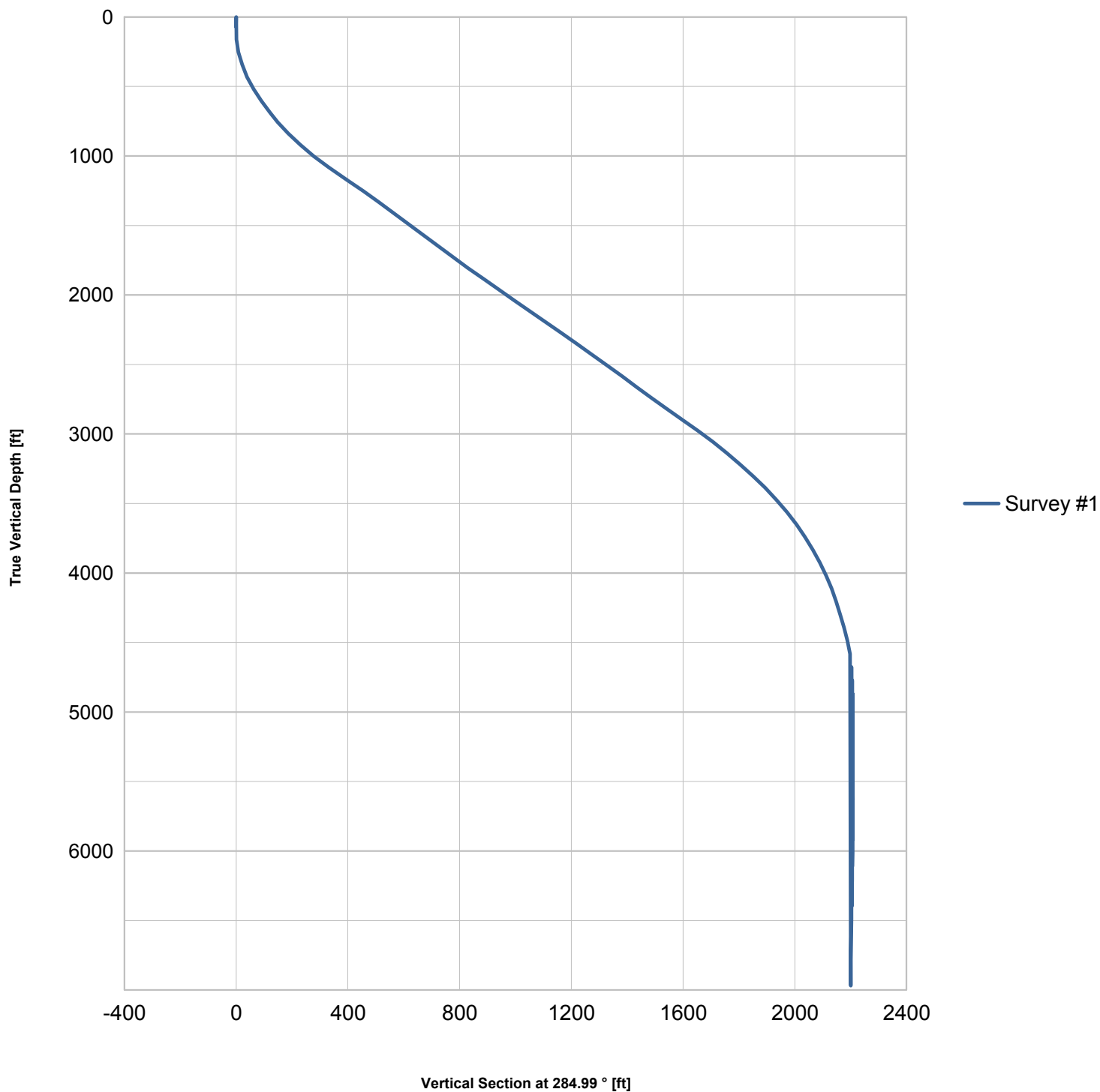
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
12/28/2012	NORMAL	1,935.0	33.45	287.28	1,726.51	196.11	-750.90	776.07	1.20	-1.19	-0.36	189.60
	NORMAL	2,030.0	34.77	289.04	1,805.17	212.73	-801.51	829.26	1.73	1.39	1.85	37.52
	NORMAL	2,126.0	36.04	288.51	1,883.41	230.63	-854.17	884.75	1.36	1.32	-0.55	346.19
	NORMAL	2,221.0	35.38	287.02	1,960.55	247.55	-906.97	940.13	1.15	-0.69	-1.57	232.20
	NORMAL	2,317.0	35.43	284.03	2,038.81	262.43	-960.54	995.74	1.81	0.05	-3.11	270.43
	NORMAL	2,413.0	35.78	282.71	2,116.86	275.35	-1,014.92	1,051.60	0.88	0.36	-1.38	293.95
	NORMAL	2,508.0	35.65	281.57	2,193.99	287.01	-1,069.13	1,106.99	0.71	-0.14	-1.20	258.48
	NORMAL	2,604.0	35.65	282.01	2,272.00	298.45	-1,123.90	1,162.85	0.27	0.00	0.46	90.18
	NORMAL	2,699.0	35.16	283.76	2,349.44	310.71	-1,177.55	1,217.85	1.19	-0.52	1.84	116.51
12/29/2012	NORMAL	2,795.0	35.08	282.53	2,427.96	323.27	-1,231.33	1,273.04	0.74	-0.08	-1.28	263.05
	NORMAL	2,890.0	34.81	281.65	2,505.83	334.67	-1,284.54	1,327.39	0.60	-0.28	-0.93	241.46
	NORMAL	2,986.0	34.15	283.68	2,584.97	346.58	-1,337.56	1,381.68	1.38	-0.69	2.11	120.70
	NORMAL	3,081.0	33.67	285.70	2,663.81	360.01	-1,388.82	1,434.68	1.29	-0.51	2.13	113.91
	NORMAL	3,177.0	34.55	286.22	2,743.30	374.82	-1,440.58	1,488.50	0.97	0.92	0.54	18.55
	NORMAL	3,272.0	35.30	285.35	2,821.19	389.61	-1,492.91	1,542.88	0.95	0.79	-0.92	326.05
	NORMAL	3,368.0	35.74	284.64	2,899.32	404.04	-1,546.79	1,598.66	0.63	0.46	-0.74	316.56
	NORMAL	3,463.0	34.59	285.26	2,976.99	418.15	-1,599.65	1,653.37	1.27	-1.21	0.65	163.00
	NORMAL	3,559.0	32.70	285.35	3,056.90	432.18	-1,650.95	1,706.55	1.97	-1.97	0.09	178.53
	NORMAL	3,654.0	30.90	286.58	3,137.64	445.94	-1,699.08	1,756.60	2.01	-1.89	1.29	160.72
	NORMAL	3,750.0	29.89	285.52	3,220.44	459.37	-1,745.75	1,805.16	1.19	-1.05	-1.10	207.51
	NORMAL	3,845.0	27.91	283.85	3,303.61	471.03	-1,790.15	1,851.07	2.25	-2.08	-1.76	201.45
	NORMAL	3,939.0	25.80	283.94	3,387.47	481.23	-1,831.37	1,893.52	2.25	-2.24	0.10	178.94
	NORMAL	4,035.0	24.44	286.05	3,474.39	491.75	-1,870.74	1,934.27	1.70	-1.42	2.20	147.58
	NORMAL	4,130.0	22.20	285.70	3,561.62	502.04	-1,906.91	1,971.87	2.36	-2.36	-0.37	183.38
	NORMAL	4,226.0	19.52	285.43	3,651.32	511.22	-1,939.83	2,006.05	2.79	-2.79	-0.28	181.93
	NORMAL	4,321.0	17.76	283.85	3,741.33	518.91	-1,969.20	2,036.41	1.93	-1.85	-1.66	195.26
	NORMAL	4,417.0	16.09	285.43	3,833.17	525.96	-1,996.24	2,064.35	1.80	-1.74	1.65	165.36
12/30/2012	NORMAL	4,512.0	14.46	287.02	3,924.82	532.93	-2,020.28	2,089.37	1.77	-1.72	1.67	166.35
	NORMAL	4,608.0	12.84	286.66	4,018.10	539.50	-2,041.96	2,112.01	1.69	-1.69	-0.38	182.83
	NORMAL	4,703.0	10.95	285.43	4,111.06	544.92	-2,060.77	2,131.59	2.01	-1.99	-1.29	187.04
	NORMAL	4,798.0	8.97	283.32	4,204.62	549.03	-2,076.68	2,148.02	2.12	-2.08	-2.22	189.41
	NORMAL	4,894.0	8.66	283.50	4,299.49	552.44	-2,090.99	2,162.72	0.32	-0.32	0.19	175.00
	NORMAL	4,988.0	7.96	286.49	4,392.50	555.94	-2,104.11	2,176.30	0.87	-0.74	3.18	149.78
	NORMAL	5,084.0	6.42	286.66	4,487.74	559.37	-2,115.62	2,188.31	1.60	-1.60	0.18	179.29
	NORMAL	5,179.0	4.62	288.77	4,582.30	562.12	-2,124.34	2,197.44	1.91	-1.89	2.22	174.62
	NORMAL	5,274.0	2.59	300.55	4,677.11	564.45	-2,129.81	2,203.33	2.26	-2.14	12.40	165.77
	NORMAL	5,370.0	0.92	325.60	4,773.06	566.18	-2,132.11	2,206.00	1.87	-1.74	26.09	167.49
	NORMAL	5,465.0	0.40	348.36	4,868.05	567.14	-2,132.61	2,206.73	0.60	-0.55	23.96	164.32
	NORMAL	5,561.0	0.70	357.24	4,964.05	568.05	-2,132.70	2,207.06	0.32	0.31	9.25	20.33
	NORMAL	5,656.0	0.57	5.85	5,059.04	569.10	-2,132.68	2,207.31	0.17	-0.14	9.06	147.97
	NORMAL	5,752.0	0.57	20.27	5,155.04	570.02	-2,132.47	2,207.34	0.15	0.00	15.02	97.21
	NORMAL	5,848.0	0.40	29.06	5,251.03	570.77	-2,132.14	2,207.22	0.19	-0.18	9.16	160.72
12/31/2012	NORMAL	5,943.0	0.13	18.60	5,346.03	571.16	-2,131.95	2,207.13	0.29	-0.28	-11.01	184.96
	NORMAL	6,039.0	0.35	240.26	5,442.03	571.11	-2,132.17	2,207.33	0.47	0.23	-144.10	210.72
	NORMAL	6,135.0	0.18	219.08	5,538.03	570.85	-2,132.52	2,207.60	0.20	-0.18	-22.06	199.65
	NORMAL	6,230.0	0.13	213.72	5,633.03	570.65	-2,132.67	2,207.70	0.05	-0.05	-5.64	193.50
	NORMAL	6,326.0	0.26	137.87	5,729.03	570.39	-2,132.58	2,207.55	0.27	0.14	-79.01	255.24
	NORMAL	6,421.0	0.40	157.73	5,824.03	569.93	-2,132.31	2,207.17	0.19	0.15	20.91	49.46
	NORMAL	6,517.0	0.44	178.21	5,920.03	569.25	-2,132.18	2,206.86	0.16	0.04	21.33	85.47
	NORMAL	6,612.0	0.66	163.26	6,015.02	568.36	-2,132.01	2,206.46	0.27	0.23	-15.74	319.26
	NORMAL	6,708.0	0.61	175.57	6,111.02	567.32	-2,131.81	2,206.00	0.15	-0.05	12.82	116.21
	NORMAL	6,803.0	0.92	185.24	6,206.01	566.06	-2,131.84	2,205.71	0.35	0.33	10.18	27.49
	NORMAL	6,899.0	0.92	158.61	6,301.99	564.57	-2,131.63	2,205.12	0.44	0.00	-27.74	256.69
	NORMAL	6,995.0	0.61	131.89	6,397.99	563.51	-2,130.97	2,204.21	0.48	-0.32	-27.83	216.17
	NORMAL	7,091.0	0.75	95.85	6,493.98	563.11	-2,129.96	2,203.13	0.46	0.15	-37.54	269.54
	NORMAL	7,186.0	0.66	97.17	6,588.97	562.98	-2,128.80	2,201.97	0.10	-0.09	1.39	170.43
	NORMAL	7,282.0	0.44	113.08	6,684.97	562.76	-2,127.91	2,201.06	0.28	-0.23	16.57	153.01

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 (°)
1/1/2013	NORMAL	7,378.0	0.79	191.48	6,780.96	561.97	-2,127.70	2,200.65	0.86	0.36	81.67	109.96
	NORMAL	7,473.0	1.05	192.18	6,875.95	560.48	-2,128.02	2,200.57	0.27	0.27	0.74	2.83
	NORMAL	7,565.0	1.05	192.18	6,967.94	558.83	-2,128.37	2,200.49	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

