

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	PA 43-5	Wellbore No.	
Well Name	PA 43-5	Common Name	PA 43-5
Project	PA 04-07S-095W	Site	GV 80-4 Pad
Vertical Section Azimuth	293.63 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	1/9/2013	UWI	PA 43-5
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	1/9/2013	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 (°)
1/9/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/9/2013	NORMAL	102.0	1.06	325.02	101.99	0.77	-0.54	0.81	1.04	1.04	0.00	325.02
	NORMAL	162.0	2.99	306.12	161.95	2.15	-2.12	2.81	3.36	3.22	-31.50	331.30
	NORMAL	253.0	6.95	289.34	252.60	5.37	-9.24	10.62	4.59	4.35	-18.44	331.34
	NORMAL	344.0	8.53	287.05	342.77	9.18	-20.89	22.81	1.77	1.74	-2.52	347.82
	NORMAL	434.0	11.70	294.35	431.36	14.90	-35.59	38.57	3.79	3.52	8.11	25.64
	NORMAL	510.0	14.68	295.15	505.35	22.17	-51.33	55.91	3.93	3.92	1.05	3.90
	NORMAL	600.0	17.32	294.71	591.85	32.62	-73.82	80.71	2.94	2.93	-0.49	357.16
	NORMAL	691.0	20.22	295.24	678.00	44.99	-100.36	109.98	3.19	3.19	0.58	3.62
	NORMAL	782.0	23.39	294.10	762.48	59.07	-131.08	143.77	3.51	3.48	-1.25	351.86
1/10/2013	NORMAL	873.0	26.02	293.66	845.15	74.46	-165.86	181.80	2.90	2.89	-0.48	355.80
	NORMAL	965.0	28.53	292.69	926.91	91.04	-204.62	223.95	2.77	2.73	-1.05	349.53
	NORMAL	1,060.0	32.26	292.25	1,008.84	109.40	-249.03	272.00	3.93	3.93	-0.46	356.39
	NORMAL	1,100.0	34.24	292.60	1,042.29	117.76	-269.30	293.92	4.97	4.95	0.88	5.68
1/11/2013	NORMAL	1,172.0	35.74	291.63	1,101.28	133.30	-307.55	335.19	2.22	2.08	-1.35	339.26
	NORMAL	1,267.0	36.35	293.74	1,178.09	154.86	-359.12	391.08	1.46	0.64	2.22	64.69
	NORMAL	1,362.0	36.92	295.41	1,254.33	178.44	-410.66	447.76	1.21	0.60	1.76	60.90
	NORMAL	1,458.0	37.41	293.83	1,330.83	202.60	-463.38	505.74	1.12	0.51	-1.65	296.54
	NORMAL	1,553.0	37.49	293.39	1,406.25	225.73	-516.31	563.50	0.29	0.08	-0.46	286.47
	NORMAL	1,648.0	37.32	292.86	1,481.71	248.40	-569.38	621.21	0.38	-0.18	-0.56	241.95
	NORMAL	1,744.0	36.79	293.04	1,558.33	270.95	-622.65	679.05	0.56	-0.55	0.19	168.51

2.1.2 Survey Stations (Continued)

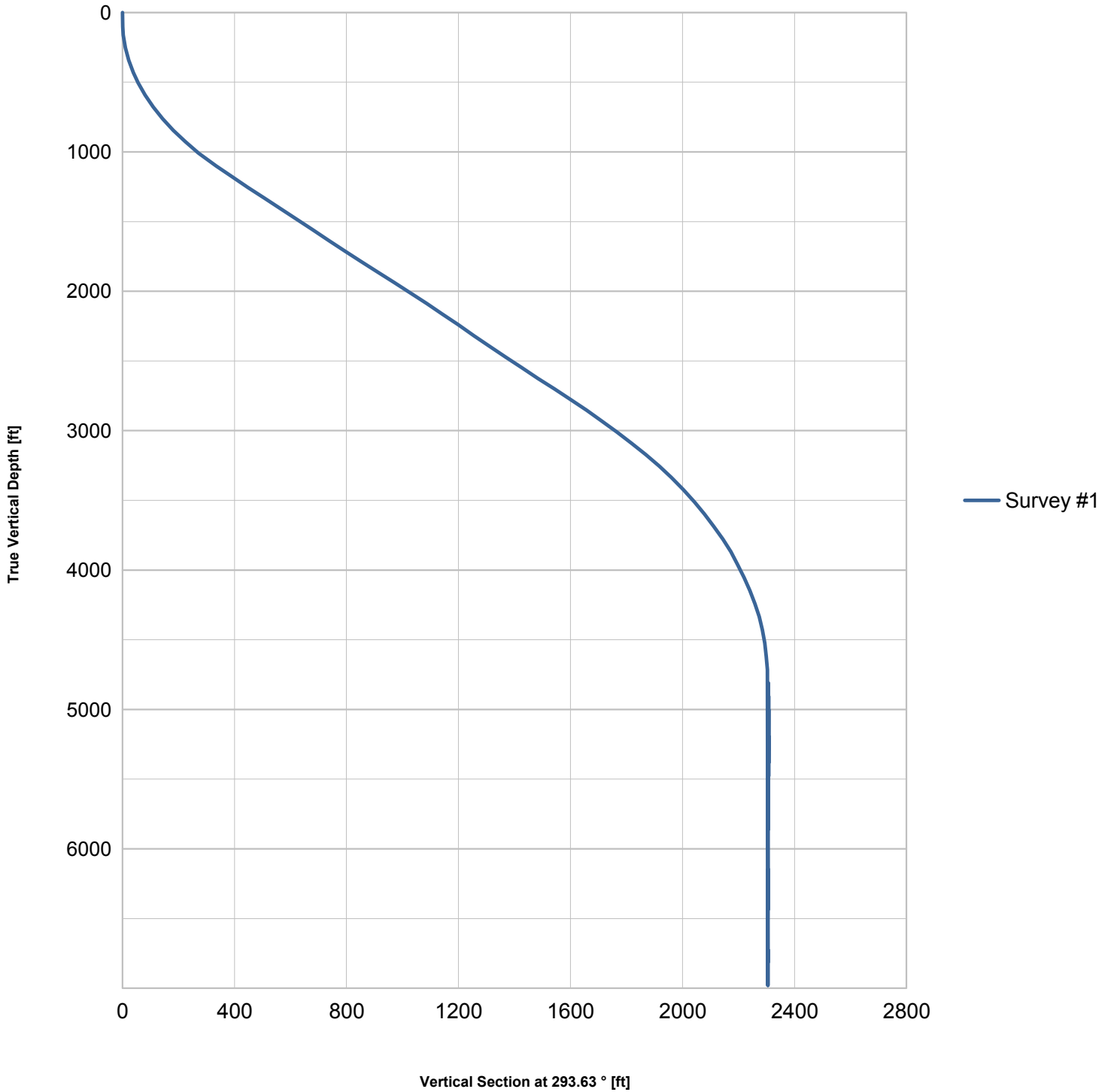
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
1/11/2013	NORMAL	1,839.0	36.84	294.62	1,634.38	293.95	-674.72	735.97	1.00	0.05	1.66	87.61
	NORMAL	1,935.0	37.41	293.83	1,710.93	317.72	-727.56	793.91	0.77	0.59	-0.82	319.77
	NORMAL	2,030.0	37.63	293.57	1,786.27	340.98	-780.54	851.77	0.29	0.23	-0.27	324.15
	NORMAL	2,126.0	38.64	294.27	1,861.78	365.02	-834.73	911.05	1.14	1.05	0.73	23.45
	NORMAL	2,221.0	37.36	292.69	1,936.64	388.33	-888.36	969.53	1.69	-1.35	-1.66	216.61
	NORMAL	2,317.0	38.29	292.34	2,012.47	410.87	-942.75	1,028.39	0.99	0.97	-0.36	346.87
	NORMAL	2,412.0	36.62	291.99	2,087.88	432.67	-996.25	1,086.14	1.77	-1.76	-0.37	187.12
	NORMAL	2,508.0	36.84	293.13	2,164.82	454.70	-1,049.27	1,143.54	0.75	0.23	1.19	72.57
1/12/2013	NORMAL	2,603.0	35.96	294.53	2,241.29	477.46	-1,100.83	1,199.91	1.27	-0.93	1.47	137.21
	NORMAL	2,699.0	35.60	294.01	2,319.17	500.54	-1,152.00	1,256.04	0.49	-0.38	-0.54	219.97
	NORMAL	2,794.0	36.09	294.36	2,396.18	523.33	-1,202.75	1,311.67	0.56	0.52	0.37	22.84
	NORMAL	2,890.0	37.10	294.53	2,473.25	547.01	-1,254.85	1,368.89	1.06	1.05	0.18	5.80
	NORMAL	2,985.0	37.10	295.06	2,549.02	571.04	-1,306.87	1,426.18	0.34	0.00	0.56	90.21
	NORMAL	3,081.0	37.63	294.18	2,625.32	595.31	-1,359.83	1,484.44	0.78	0.55	-0.92	314.43
	NORMAL	3,176.0	37.58	293.57	2,700.59	618.78	-1,412.84	1,542.40	0.40	-0.05	-0.64	262.11
	NORMAL	3,272.0	37.41	293.92	2,776.75	642.31	-1,466.33	1,600.84	0.28	-0.18	0.36	128.73
	NORMAL	3,368.0	35.60	291.63	2,853.92	664.43	-1,518.97	1,657.93	2.36	-1.89	-2.39	216.05
	NORMAL	3,463.0	34.68	291.99	2,931.61	684.74	-1,569.73	1,712.58	0.99	-0.97	0.38	167.45
	NORMAL	3,558.0	33.54	292.25	3,010.26	704.80	-1,619.09	1,765.84	1.21	-1.20	0.27	172.82
	NORMAL	3,654.0	32.62	291.19	3,090.70	724.20	-1,667.76	1,818.20	1.13	-0.96	-1.10	211.72
	NORMAL	3,749.0	31.21	292.60	3,171.34	742.91	-1,714.36	1,868.40	1.68	-1.48	1.48	152.73
	NORMAL	3,845.0	29.23	293.83	3,254.29	761.94	-1,758.77	1,916.71	2.16	-2.06	1.28	163.17
	NORMAL	3,939.0	27.08	293.74	3,337.16	779.83	-1,799.35	1,961.06	2.29	-2.29	-0.10	181.09
	NORMAL	4,034.0	24.88	293.30	3,422.56	796.44	-1,837.51	2,002.68	2.32	-2.32	-0.46	184.81
	NORMAL	4,130.0	23.52	292.34	3,510.12	811.71	-1,873.77	2,042.02	1.47	-1.42	-1.00	195.70
	NORMAL	4,225.0	21.14	294.89	3,597.99	826.13	-1,906.85	2,078.11	2.70	-2.51	2.68	159.02
1/13/2013	NORMAL	4,321.0	20.31	295.24	3,687.78	840.52	-1,937.63	2,112.07	0.87	-0.86	0.36	171.68
	NORMAL	4,417.0	19.34	294.01	3,778.09	854.10	-1,967.22	2,144.62	1.10	-1.01	-1.28	202.69
	NORMAL	4,512.0	15.16	297.87	3,868.80	866.31	-1,992.58	2,172.75	4.56	-4.40	4.06	166.52
	NORMAL	4,607.0	14.46	298.58	3,960.64	877.79	-2,013.98	2,196.96	0.76	-0.74	0.75	165.81
	NORMAL	4,703.0	13.19	298.49	4,053.86	888.75	-2,034.13	2,219.81	1.32	-1.32	-0.09	180.93
	NORMAL	4,798.0	11.60	296.20	4,146.64	898.14	-2,052.23	2,240.15	1.75	-1.67	-2.41	196.06
	NORMAL	4,894.0	10.59	290.58	4,240.85	905.50	-2,069.15	2,258.61	1.54	-1.05	-5.85	224.22
	NORMAL	4,988.0	8.09	288.03	4,333.59	910.58	-2,083.53	2,273.82	2.70	-2.66	-2.71	188.14
	NORMAL	5,084.0	6.24	286.45	4,428.84	914.15	-2,094.95	2,285.72	1.94	-1.93	-1.65	185.30
	NORMAL	5,179.0	4.00	280.82	4,523.45	916.24	-2,103.16	2,294.07	2.41	-2.36	-5.93	189.85
1/14/2013	NORMAL	5,274.0	2.59	280.47	4,618.30	917.25	-2,108.53	2,299.39	1.48	-1.48	-0.37	180.64
	NORMAL	5,370.0	1.98	275.90	4,714.22	917.81	-2,112.31	2,303.08	0.66	-0.64	-4.76	194.36
	NORMAL	5,465.0	1.50	294.36	4,809.18	918.49	-2,115.07	2,305.89	0.77	-0.51	19.43	139.55
	NORMAL	5,560.0	1.27	16.10	4,904.16	920.02	-2,115.92	2,307.27	1.92	-0.24	86.04	136.34
	NORMAL	5,656.0	1.67	22.07	5,000.12	922.34	-2,115.09	2,307.45	0.45	0.42	6.22	23.95
	NORMAL	5,752.0	1.32	16.89	5,096.09	924.69	-2,114.25	2,307.62	0.39	-0.36	-5.40	198.54
	NORMAL	5,848.0	1.05	14.78	5,192.07	926.60	-2,113.70	2,307.88	0.28	-0.28	-2.20	188.13
	NORMAL	5,943.0	0.88	32.44	5,287.06	928.06	-2,113.09	2,307.90	0.36	-0.18	18.59	128.38
	NORMAL	6,039.0	0.70	34.11	5,383.05	929.17	-2,112.36	2,307.69	0.19	-0.19	1.74	173.54
	NORMAL	6,134.0	0.40	64.44	5,478.04	929.79	-2,111.74	2,307.36	0.43	-0.32	31.93	150.34
1/15/2013	NORMAL	6,230.0	0.40	70.15	5,574.04	930.05	-2,111.12	2,306.90	0.04	0.00	5.95	92.85
	NORMAL	6,326.0	0.35	77.88	5,670.04	930.22	-2,110.52	2,306.42	0.07	-0.05	8.05	138.48
1/17/2013	NORMAL	6,421.0	0.18	83.07	5,765.04	930.30	-2,110.09	2,306.06	0.18	-0.18	5.46	174.55
	NORMAL	6,516.0	0.04	111.90	5,860.04	930.31	-2,109.91	2,305.89	0.15	-0.15	30.35	172.42
	NORMAL	6,612.0	0.13	170.90	5,956.04	930.19	-2,109.86	2,305.80	0.12	0.09	61.46	76.40
	NORMAL	6,707.0	0.04	90.80	6,051.04	930.08	-2,109.81	2,305.71	0.14	-0.09	-84.32	197.75
	NORMAL	6,803.0	0.26	182.74	6,147.04	929.86	-2,109.79	2,305.60	0.28	0.23	95.77	100.64
	NORMAL	6,899.0	0.18	242.41	6,243.04	929.57	-2,109.93	2,305.62	0.24	-0.08	62.16	137.42
	NORMAL	6,995.0	0.26	198.38	6,339.04	929.30	-2,110.13	2,305.70	0.19	0.08	-45.86	272.20
	NORMAL	7,090.0	0.70	199.35	6,434.03	928.55	-2,110.39	2,305.63	0.46	0.46	1.02	1.54
	NORMAL	7,186.0	0.61	176.94	6,530.03	927.48	-2,110.56	2,305.36	0.28	-0.09	-23.34	239.67

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 (°)
1/17/2013	NORMAL	7,282.0	0.79	188.27	6,626.02	926.32	-2,110.63	2,304.95	0.24	0.19	11.80	43.32
	NORMAL	7,378.0	0.61	193.64	6,722.01	925.17	-2,110.85	2,304.69	0.20	-0.19	5.59	162.65
	NORMAL	7,473.0	0.40	218.16	6,817.01	924.41	-2,111.17	2,304.69	0.31	-0.22	25.81	146.00
	NORMAL	7,567.0	0.40	212.09	6,911.01	923.88	-2,111.55	2,304.82	0.05	0.00	-6.46	266.97
	NORMAL	7,635.0	0.40	207.70	6,979.00	923.47	-2,111.78	2,304.87	0.05	0.00	-6.46	267.81

3 Charts

3.1 Vertical Section View



3.2 Plan View

