

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	PA 524-4	Wellbore No.	OH
Well Name	PA 524-4	Common Name	PA 524-4
Project	PA 04-07S-095W	Site	GV 80-4 Pad
Vertical Section Azimuth	150.61 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	10/21/2012	UWI	PA 524-4
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	10/21/2012	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

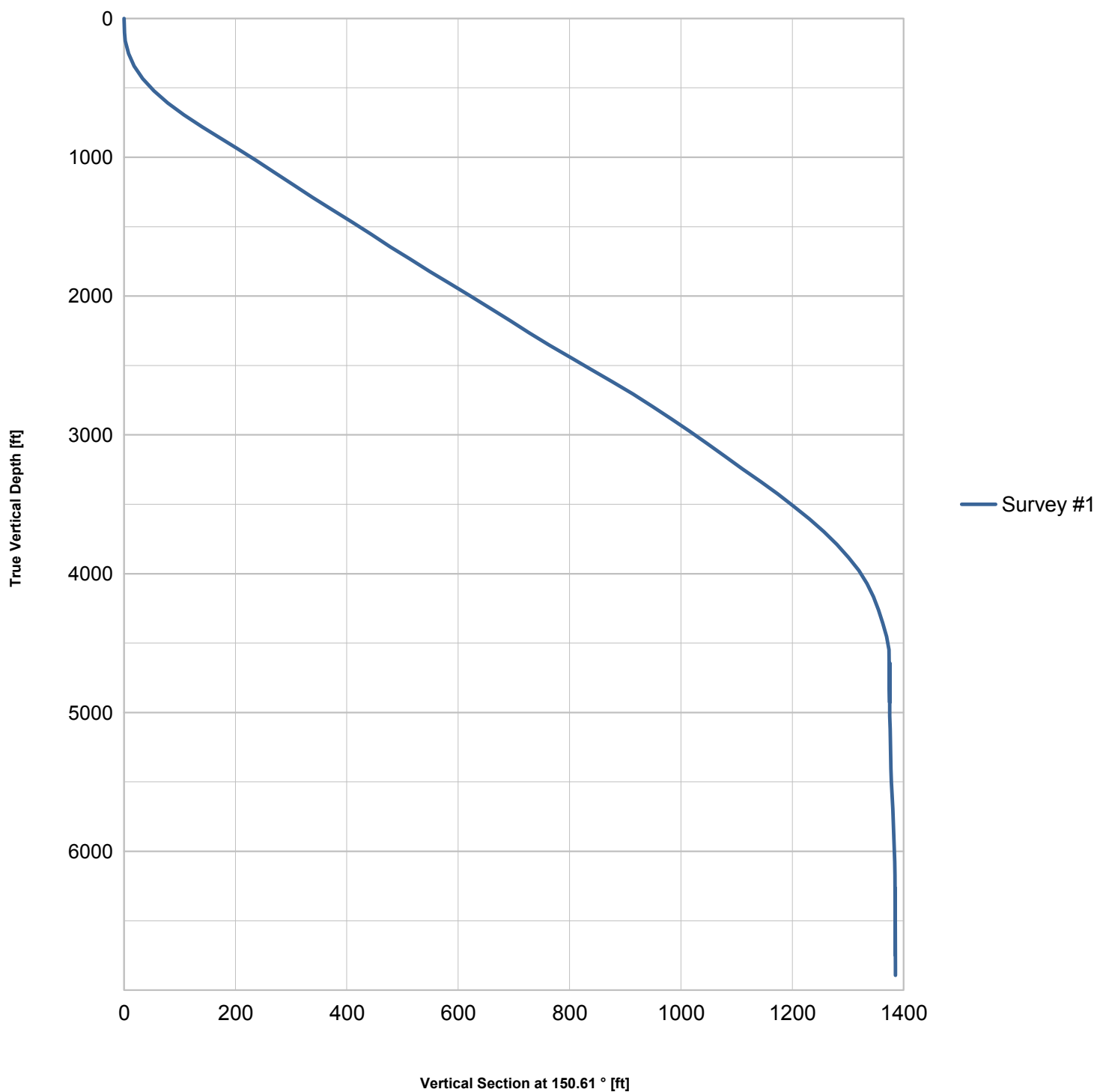
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
10/21/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/21/2012	NORMAL	103.0	0.88	153.11	103.00	-0.71	0.36	0.79	0.85	0.85	0.00	153.11
	NORMAL	163.0	2.20	140.54	162.97	-2.01	1.30	2.38	2.26	2.20	-20.95	339.31
	NORMAL	254.0	5.01	153.02	253.79	-6.90	4.21	8.08	3.19	3.09	13.71	21.89
	NORMAL	344.0	8.01	153.46	343.19	-16.01	8.80	18.27	3.33	3.33	0.49	1.17
	NORMAL	436.0	11.17	151.70	433.90	-29.59	15.89	33.58	3.45	3.43	-1.91	353.83
	NORMAL	527.0	14.69	149.68	522.58	-47.32	25.89	53.94	3.90	3.87	-2.22	351.70
	NORMAL	617.0	17.41	149.56	609.06	-68.78	38.48	78.82	3.02	3.02	-0.13	359.24
	NORMAL	708.0	19.87	150.19	695.28	-93.94	53.07	107.90	2.71	2.70	0.69	4.98
	NORMAL	800.0	21.52	149.20	781.34	-122.01	69.48	140.40	1.83	1.79	-1.08	347.56
10/22/2012	NORMAL	873.0	22.07	149.22	849.12	-145.29	83.35	167.50	0.75	0.75	0.03	0.78
	NORMAL	966.0	22.16	148.34	935.28	-175.23	101.50	202.49	0.37	0.10	-0.95	284.79
	NORMAL	1,060.0	21.02	150.10	1,022.69	-204.94	119.21	237.06	1.39	-1.21	1.87	151.22
	NORMAL	1,155.0	20.84	149.05	1,111.42	-234.20	136.40	270.99	0.44	-0.19	-1.11	243.87
	NORMAL	1,250.0	20.58	149.75	1,200.28	-263.11	153.50	304.58	0.38	-0.27	0.74	136.73
	NORMAL	1,345.0	21.28	151.68	1,289.01	-292.71	170.09	338.51	1.03	0.74	2.03	45.47
	NORMAL	1,441.0	22.16	152.39	1,378.20	-324.09	186.74	374.03	0.96	0.92	0.74	16.95
	NORMAL	1,536.0	21.63	152.21	1,466.34	-355.46	203.21	409.44	0.56	-0.56	-0.19	187.13
	NORMAL	1,631.0	20.66	150.45	1,554.95	-385.53	219.64	443.70	1.22	-1.02	-1.85	212.39
	NORMAL	1,727.0	21.28	151.86	1,644.59	-415.62	236.21	478.05	0.83	0.65	1.47	39.80
	NORMAL	1,823.0	22.07	153.62	1,733.80	-447.14	252.44	513.48	1.07	0.82	1.83	40.27

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 (°)
10/23/2012	NORMAL	1,918.0	21.90	151.33	1,821.89	-478.68	268.87	549.02	0.92	-0.18	-2.41	257.72
	NORMAL	2,014.0	22.34	150.45	1,910.83	-510.26	286.46	585.17	0.57	0.46	-0.92	322.61
	NORMAL	2,109.0	22.51	148.70	1,998.64	-541.50	304.81	621.40	0.73	0.18	-1.84	283.48
	NORMAL	2,205.0	21.81	150.28	2,087.55	-572.69	323.20	657.60	0.96	-0.73	1.65	140.32
	NORMAL	2,300.0	21.28	149.75	2,175.92	-602.91	340.63	692.48	0.59	-0.56	-0.56	199.92
	NORMAL	2,396.0	21.72	150.98	2,265.24	-633.49	358.02	727.66	0.66	0.46	1.28	46.27
	NORMAL	2,492.0	22.95	151.51	2,354.03	-665.48	375.57	764.14	1.30	1.28	0.55	9.54
	NORMAL	2,588.0	23.13	151.86	2,442.37	-698.55	393.39	801.71	0.24	0.19	0.36	37.43
	NORMAL	2,683.0	23.04	150.81	2,529.77	-731.24	411.26	838.95	0.44	-0.09	-1.11	257.19
	NORMAL	2,779.0	23.57	150.45	2,617.94	-764.34	429.89	876.93	0.57	0.55	-0.38	344.79
	NORMAL	2,874.0	22.16	149.22	2,705.47	-796.25	448.42	913.84	1.57	-1.48	-1.29	198.16
	NORMAL	2,969.0	20.66	149.22	2,793.91	-826.05	466.17	948.51	1.58	-1.58	0.00	180.00
	NORMAL	3,065.0	20.75	148.87	2,883.71	-855.15	483.63	982.44	0.16	0.09	-0.36	305.86
	NORMAL	3,161.0	19.61	150.10	2,973.82	-883.68	500.45	1,015.54	1.27	-1.19	1.28	160.16
	NORMAL	3,256.0	19.61	149.58	3,063.31	-911.24	516.47	1,047.42	0.18	0.00	-0.55	269.76
	NORMAL	3,352.0	18.99	148.70	3,153.91	-938.48	532.74	1,079.14	0.71	-0.65	-0.92	204.72
	NORMAL	3,448.0	19.34	150.98	3,244.59	-965.73	548.57	1,110.65	0.86	0.36	2.38	66.02
10/24/2012	NORMAL	3,544.0	19.79	151.51	3,335.05	-993.91	564.03	1,142.79	0.50	0.47	0.55	21.77
	NORMAL	3,639.0	17.76	150.81	3,424.99	-1,020.70	578.77	1,173.37	2.15	-2.14	-0.74	186.00
	NORMAL	3,734.0	18.03	151.86	3,515.39	-1,046.31	592.77	1,202.55	0.44	0.28	1.11	50.58
	NORMAL	3,830.0	16.80	147.29	3,606.99	-1,071.09	607.27	1,231.26	1.92	-1.28	-4.76	225.87
	NORMAL	3,924.0	14.95	144.13	3,697.41	-1,092.35	621.72	1,256.87	2.17	-1.97	-3.36	203.53
	NORMAL	4,019.0	13.28	144.65	3,789.54	-1,111.18	635.22	1,279.90	1.76	-1.76	0.55	175.91
	NORMAL	4,115.0	12.22	146.59	3,883.17	-1,128.65	647.19	1,301.00	1.19	-1.10	2.02	158.95
	NORMAL	4,211.0	10.02	147.82	3,977.36	-1,144.20	657.23	1,319.48	2.30	-2.29	1.28	174.45
	NORMAL	4,307.0	7.65	150.45	4,072.21	-1,156.83	664.83	1,334.22	2.50	-2.47	2.74	171.62
	NORMAL	4,402.0	6.24	148.34	4,166.52	-1,166.73	670.66	1,345.70	1.51	-1.48	-2.22	189.21
10/26/2012	NORMAL	4,497.0	4.84	144.48	4,261.07	-1,174.39	675.70	1,354.84	1.52	-1.47	-4.06	192.99
	NORMAL	4,593.0	4.57	151.33	4,356.75	-1,181.04	679.89	1,362.69	0.65	-0.28	7.14	119.05
	NORMAL	4,689.0	3.34	155.55	4,452.52	-1,186.94	682.88	1,369.31	1.32	-1.28	4.40	168.79
	NORMAL	4,784.0	1.94	180.16	4,547.42	-1,191.07	684.02	1,373.46	1.86	-1.47	25.91	152.86
	NORMAL	4,880.0	1.05	234.65	4,643.39	-1,193.20	683.30	1,374.97	1.65	-0.93	56.76	147.27
	NORMAL	4,974.0	1.41	253.11	4,737.37	-1,194.04	681.49	1,374.81	0.56	0.38	19.64	57.22
	NORMAL	5,070.0	0.44	60.81	4,833.36	-1,194.20	680.68	1,374.55	1.92	-1.01	174.69	177.08
	NORMAL	5,165.0	0.97	72.76	4,928.35	-1,193.78	681.77	1,374.72	0.58	0.56	12.58	21.53
	NORMAL	5,261.0	0.88	76.27	5,024.34	-1,193.37	683.26	1,375.09	0.11	-0.09	3.66	149.55
	NORMAL	5,356.0	0.97	89.46	5,119.33	-1,193.19	684.77	1,375.68	0.24	0.09	13.88	73.77
	NORMAL	5,451.0	0.79	73.46	5,214.31	-1,192.99	686.21	1,376.21	0.32	-0.19	-16.84	225.96
	NORMAL	5,547.0	1.14	65.90	5,310.30	-1,192.41	687.71	1,376.45	0.39	0.36	-7.88	336.20
	NORMAL	5,642.0	0.53	128.66	5,405.29	-1,192.30	688.92	1,376.94	1.07	-0.64	66.06	152.29
	NORMAL	5,739.0	0.88	161.18	5,502.28	-1,193.29	689.51	1,378.09	0.53	0.36	33.53	65.86
	NORMAL	5,834.0	0.62	158.01	5,597.28	-1,194.45	689.94	1,379.32	0.28	-0.27	-3.34	187.48
	NORMAL	5,930.0	0.62	131.47	5,693.27	-1,195.28	690.52	1,380.32	0.30	0.00	-27.65	256.73
10/29/2012	NORMAL	6,025.0	0.88	119.52	5,788.26	-1,195.98	691.54	1,381.43	0.32	0.27	-12.58	322.90
	NORMAL	6,121.0	0.70	203.01	5,884.26	-1,196.88	691.95	1,382.42	1.10	-0.19	86.97	139.02
	NORMAL	6,217.0	1.05	211.63	5,980.24	-1,198.17	691.26	1,383.20	0.39	0.36	8.98	24.96
	NORMAL	6,312.0	0.70	202.13	6,075.23	-1,199.45	690.59	1,383.99	0.40	-0.37	-10.00	197.81
	NORMAL	6,408.0	0.53	235.18	6,171.23	-1,200.25	690.00	1,384.39	0.40	-0.18	34.43	131.50
	NORMAL	6,503.0	0.53	189.13	6,266.22	-1,200.93	689.57	1,384.78	0.44	0.00	-48.47	246.98
	NORMAL	6,599.0	0.31	276.00	6,362.22	-1,201.34	689.24	1,384.98	0.62	-0.23	90.49	148.90
	NORMAL	6,694.0	0.26	358.23	6,457.22	-1,201.10	688.98	1,384.64	0.40	-0.05	86.56	136.85
	NORMAL	6,790.0	0.35	88.75	6,553.22	-1,200.88	689.27	1,384.58	0.46	0.09	94.29	126.94
	NORMAL	6,886.0	0.26	47.45	6,649.22	-1,200.72	689.72	1,384.67	0.24	-0.09	-43.02	227.97
	NORMAL	6,981.0	0.49	98.02	6,744.22	-1,200.63	690.28	1,384.87	0.40	0.24	53.23	82.29
	NORMAL	7,077.0	0.38	70.85	6,840.22	-1,200.59	690.99	1,385.17	0.24	-0.11	-28.30	228.80
	NORMAL	7,130.0	0.38	70.85	6,893.21	-1,200.47	691.32	1,385.24	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

