

Deviation Summary

PICEANCE VLY

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	GM 323-13	Wellbore No.	00
Wellbore Legal Name	GM 323-13	Common Wellbore Name	GM 323-13
Project	GV 12-07S-096W	Site	GM 24-12 Pad
Vertical Section Azimuth	188.53 (°)	North reference	
Origin N/S		Origin E/W	
Spud date	6/19/2014	UWI	GM 323-13
Active datum	KB @5,165.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	6/19/2014	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 (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
6/19/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/19/2014	NORMAL	103.0	0.97	163.83	103.00	-0.84	0.24	0.79	0.94	0.94	0.00	163.83
	NORMAL	132.0	1.67	189.67	131.99	-1.49	0.24	1.44	3.11	2.41	89.10	53.78
	NORMAL	163.0	2.29	184.13	162.97	-2.55	0.12	2.51	2.09	2.00	-17.87	340.06
	NORMAL	193.0	3.17	193.18	192.93	-3.96	-0.11	3.93	3.26	2.93	30.17	30.66
	NORMAL	223.0	4.75	194.59	222.86	-5.97	-0.61	5.99	5.28	5.27	4.70	4.23
	NORMAL	253.0	6.25	190.99	252.72	-8.77	-1.24	8.86	5.13	5.00	-12.00	345.25
	NORMAL	284.0	7.50	190.20	283.50	-12.42	-1.92	12.57	4.04	4.03	-2.55	355.28
	NORMAL	314.0	9.06	190.99	313.19	-16.67	-2.72	16.89	5.21	5.20	2.63	4.56
	NORMAL	345.0	9.94	190.81	343.76	-21.69	-3.68	22.00	2.84	2.84	-0.58	357.98
	NORMAL	375.0	11.17	188.96	373.25	-27.11	-4.62	27.49	4.25	4.10	-6.17	343.69
	NORMAL	405.0	12.58	186.59	402.61	-33.22	-5.45	33.66	4.97	4.70	-7.90	339.76
	NORMAL	435.0	13.64	187.29	431.83	-39.98	-6.27	40.46	3.57	3.53	2.33	8.86
	NORMAL	466.0	14.60	186.86	461.89	-47.48	-7.20	48.02	3.12	3.10	-1.39	353.56
	NORMAL	496.0	15.57	186.59	490.86	-55.23	-8.12	55.83	3.24	3.23	-0.90	355.73
	NORMAL	526.0	16.98	185.98	519.65	-63.59	-9.04	64.23	4.73	4.70	-2.03	352.79
	NORMAL	557.0	17.77	185.98	549.24	-72.80	-10.00	73.48	2.55	2.55	0.00	0.00
	NORMAL	587.0	18.91	186.24	577.71	-82.18	-11.01	82.91	3.81	3.80	0.87	4.23
	NORMAL	617.0	20.06	186.33	606.00	-92.13	-12.10	92.91	3.83	3.83	0.30	1.54
	NORMAL	648.0	21.55	188.35	634.97	-103.05	-13.51	103.91	5.33	4.81	6.52	26.66
	NORMAL	678.0	22.79	189.05	662.76	-114.24	-15.23	115.23	4.23	4.13	2.33	12.35

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
6/19/2014	NORMAL	709.0	23.75	188.61	691.23	-126.34	-17.11	127.48	3.15	3.10	-1.42	349.53
	NORMAL	739.0	25.25	189.23	718.53	-138.63	-19.04	139.92	5.07	5.00	2.07	10.01
	NORMAL	770.0	26.13	188.61	746.47	-151.91	-21.12	153.36	2.97	2.84	-2.00	342.74
	NORMAL	800.0	27.10	188.61	773.29	-165.19	-23.13	166.80	3.23	3.23	0.00	0.00
	NORMAL	870.0	29.56	189.62	834.90	-197.99	-28.41	200.01	3.58	3.51	1.44	11.47
	NORMAL	961.0	33.35	189.80	912.51	-244.78	-36.42	247.48	4.17	4.16	0.20	1.50
	NORMAL	1,056.0	37.07	190.29	990.12	-298.71	-45.98	302.22	3.93	3.92	0.52	4.54
	NORMAL	1,150.0	39.81	189.72	1,063.74	-356.25	-56.12	360.64	2.94	2.91	-0.61	352.41
	NORMAL	1,244.0	41.61	189.24	1,134.99	-416.72	-66.22	421.94	1.94	1.91	-0.51	349.95
	NORMAL	1,338.0	42.09	187.89	1,205.01	-478.74	-75.55	484.65	1.09	0.51	-1.44	297.55
	NORMAL	1,355.0	42.20	187.27	1,217.62	-490.04	-77.06	496.05	2.53	0.65	-3.65	284.58
6/20/2014	NORMAL	1,452.0	43.56	186.12	1,288.69	-555.60	-84.74	562.02	1.62	1.40	-1.19	329.66
	NORMAL	1,546.0	44.00	184.45	1,356.57	-620.35	-90.73	626.95	1.32	0.47	-1.78	290.24
	NORMAL	1,640.0	41.63	184.80	1,425.51	-684.03	-95.88	690.68	2.53	-2.52	0.37	174.40
6/21/2014	NORMAL	1,735.0	41.49	187.09	1,496.60	-746.70	-102.40	753.63	1.61	-0.15	2.41	96.12
	NORMAL	1,829.0	40.13	188.85	1,567.75	-807.54	-110.91	815.06	1.89	-1.45	1.87	140.44
	NORMAL	1,923.0	40.44	186.91	1,639.46	-867.74	-119.23	875.82	1.37	0.33	-2.06	283.14
	NORMAL	2,018.0	38.68	188.06	1,712.70	-927.72	-127.10	936.31	2.01	-1.85	1.21	157.85
	NORMAL	2,112.0	38.77	189.64	1,786.04	-985.82	-136.15	995.11	1.06	0.10	1.68	85.41
	NORMAL	2,206.0	39.16	188.50	1,859.12	-1,044.19	-145.47	1,054.22	0.87	0.41	-1.21	298.10
	NORMAL	2,300.0	38.29	190.61	1,932.46	-1,102.18	-155.22	1,113.01	1.68	-0.93	2.24	124.21
	NORMAL	2,394.0	38.95	189.90	2,005.90	-1,159.91	-165.66	1,171.65	0.85	0.70	-0.76	325.84
	NORMAL	2,488.0	39.60	189.29	2,078.67	-1,218.58	-175.58	1,231.15	0.80	0.69	-0.65	329.05
	NORMAL	2,583.0	40.62	188.06	2,151.33	-1,279.08	-184.80	1,292.35	1.36	1.07	-1.29	321.68
	NORMAL	2,677.0	38.95	189.55	2,223.56	-1,338.52	-193.99	1,352.49	2.05	-1.78	1.59	150.85
	NORMAL	2,771.0	39.38	189.11	2,296.44	-1,397.10	-203.62	1,411.85	0.54	0.46	-0.47	326.96
	NORMAL	2,866.0	40.22	187.88	2,369.43	-1,457.24	-212.59	1,472.66	1.21	0.88	-1.29	316.38
	NORMAL	2,960.0	38.68	189.29	2,442.01	-1,516.30	-221.50	1,532.38	1.90	-1.64	1.50	150.35
	NORMAL	3,054.0	37.10	188.50	2,516.20	-1,573.33	-230.43	1,590.11	1.76	-1.68	-0.84	196.76
	NORMAL	3,148.0	35.68	188.14	2,591.86	-1,628.51	-238.50	1,645.87	1.53	-1.51	-0.38	188.41
	NORMAL	3,242.0	33.49	188.41	2,669.25	-1,681.31	-246.18	1,699.23	2.34	-2.33	0.29	176.11
	NORMAL	3,336.0	31.56	187.35	2,748.50	-1,731.37	-253.12	1,749.76	2.14	-2.05	-1.13	196.01
	NORMAL	3,431.0	29.63	188.94	2,830.27	-1,779.23	-259.95	1,798.10	2.20	-2.03	1.67	157.93
	NORMAL	3,525.0	27.43	188.23	2,912.85	-1,823.62	-266.66	1,843.00	2.37	-2.34	-0.76	188.45
	NORMAL	3,619.0	25.32	186.74	2,997.07	-1,865.01	-272.12	1,884.74	2.35	-2.24	-1.59	196.75
	NORMAL	3,713.0	23.21	185.86	3,082.76	-1,903.40	-276.37	1,923.34	2.28	-2.24	-0.94	189.33
	NORMAL	3,808.0	21.23	187.62	3,170.70	-1,939.08	-280.56	1,959.24	2.20	-2.08	1.85	162.23
	NORMAL	3,902.0	19.16	188.32	3,258.92	-1,971.21	-285.05	1,991.69	2.22	-2.20	0.74	173.67
	NORMAL	3,996.0	18.24	189.46	3,347.95	-2,000.99	-289.70	2,021.83	1.05	-0.98	1.21	158.87
	NORMAL	4,091.0	16.66	186.21	3,438.58	-2,029.19	-293.62	2,050.30	1.95	-1.66	-3.42	210.12
	NORMAL	4,185.0	14.46	185.24	3,529.13	-2,054.28	-296.15	2,075.48	2.36	-2.34	-1.03	186.28
	NORMAL	4,279.0	12.84	186.21	3,620.47	-2,076.35	-298.35	2,097.84	1.74	-1.72	1.03	172.43
6/22/2014	NORMAL	4,373.0	10.99	184.10	3,712.44	-2,095.67	-300.12	2,117.01	2.02	-1.97	-2.24	192.22
	NORMAL	4,466.0	8.44	185.77	3,804.10	-2,111.31	-301.44	2,132.67	2.76	-2.74	1.80	174.52
	NORMAL	4,561.0	6.15	185.16	3,898.33	-2,123.32	-302.60	2,144.71	2.41	-2.41	-0.64	181.63
	NORMAL	4,655.0	4.00	187.71	3,991.95	-2,131.58	-303.49	2,153.02	2.30	-2.29	2.71	175.28
	NORMAL	4,749.0	4.00	188.67	4,085.72	-2,138.07	-304.43	2,159.57	0.07	0.00	1.02	90.48
	NORMAL	4,843.0	2.81	176.10	4,179.56	-2,143.61	-304.76	2,165.10	1.49	-1.27	-13.37	205.93
	NORMAL	4,937.0	0.35	195.09	4,273.51	-2,146.19	-304.68	2,167.64	2.64	-2.62	20.20	177.37
	NORMAL	5,031.0	0.57	75.91	4,367.51	-2,146.35	-304.30	2,167.74	0.85	0.23	-126.79	218.40
	NORMAL	5,126.0	0.66	78.81	4,462.51	-2,146.13	-303.31	2,167.38	0.10	0.09	3.05	20.53
	NORMAL	5,220.0	0.18	205.37	4,556.51	-2,146.16	-302.84	2,167.34	0.83	-0.51	134.64	169.33
	NORMAL	5,314.0	0.66	218.99	4,650.50	-2,146.71	-303.24	2,167.94	0.52	0.51	14.49	18.61
	NORMAL	5,408.0	0.57	355.40	4,744.50	-2,146.67	-303.62	2,167.96	1.22	-0.10	145.12	159.88
	NORMAL	5,502.0	0.35	307.06	4,838.50	-2,146.03	-303.89	2,167.36	0.45	-0.23	-51.43	217.78
	NORMAL	5,596.0	0.83	238.59	4,932.49	-2,146.21	-304.70	2,167.66	0.82	0.51	-72.84	266.64

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
6/23/2014	NORMAL	5,691.0	1.89	242.46	5,027.47	-2,147.29	-306.68	2,169.03	1.12	1.12	4.07	6.89
	NORMAL	5,785.0	1.23	284.03	5,121.43	-2,147.76	-309.03	2,169.84	1.35	-0.70	44.22	139.91
	NORMAL	5,879.0	1.41	278.41	5,215.41	-2,147.35	-311.15	2,169.75	0.24	0.19	-5.98	321.44
	NORMAL	5,974.0	1.89	275.42	5,310.37	-2,147.03	-313.87	2,169.84	0.51	0.51	-3.15	348.33
	NORMAL	6,068.0	2.77	261.71	5,404.29	-2,147.21	-317.66	2,170.58	1.10	0.94	-14.59	320.68
	NORMAL	6,162.0	3.87	250.02	5,498.13	-2,148.62	-322.89	2,172.75	1.37	1.17	-12.44	322.46
	NORMAL	6,256.0	4.31	242.72	5,591.89	-2,151.33	-329.01	2,176.33	0.72	0.47	-7.77	306.52
	NORMAL	6,351.0	4.79	242.20	5,686.59	-2,154.81	-335.69	2,180.77	0.51	0.51	-0.55	354.83
	NORMAL	6,445.0	5.28	238.86	5,780.23	-2,158.88	-342.88	2,185.86	0.61	0.52	-3.55	327.44
	NORMAL	6,539.0	5.80	239.21	5,873.79	-2,163.55	-350.65	2,191.63	0.55	0.55	0.37	3.89
	NORMAL	6,565.0	5.80	240.26	5,899.66	-2,164.87	-352.91	2,193.27	0.41	0.00	4.04	90.52
	NORMAL	6,615.0	5.80	240.26	5,949.40	-2,167.38	-357.30	2,196.40	0.00	0.00	0.00	0.00