

Deviation Summary

PICEANCE VLY

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	GM 332-12	Wellbore No.	00
Wellbore Legal Name	GM 332-12	Common Wellbore Name	GM 332-12
Project	GV 12-07S-096W	Site	GM 21-12 Pad
Vertical Section Azimuth	135.90 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	12/1/2014	UWI	GM 332-12
Active datum	KB @5,151.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	12/1/2014	Ended	
Tool Name	MWD	Engineer	RON

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 (°)
12/1/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/1/2014	NORMAL	105.0	1.14	111.97	104.99	-0.39	0.97	0.95	1.09	1.09	0.00	111.97
	NORMAL	135.0	1.67	122.43	134.98	-0.74	1.61	1.65	1.96	1.77	34.87	31.11
	NORMAL	165.0	2.02	117.51	164.97	-1.22	2.45	2.58	1.28	1.17	-16.40	333.18
	NORMAL	196.0	2.38	124.72	195.95	-1.83	3.47	3.73	1.46	1.16	23.26	41.19
	NORMAL	225.0	2.99	127.79	224.91	-2.64	4.56	5.07	2.16	2.10	10.59	14.80
	NORMAL	256.0	3.70	132.89	255.86	-3.82	5.93	6.87	2.48	2.29	16.45	25.30
	NORMAL	286.0	4.84	141.77	285.78	-5.47	7.42	9.09	4.38	3.80	29.60	34.59
	NORMAL	316.0	5.45	143.70	315.66	-7.61	9.05	11.76	2.11	2.03	6.43	16.80
	NORMAL	347.0	6.25	146.95	346.50	-10.21	10.84	14.88	2.79	2.58	10.48	24.12
	NORMAL	377.0	7.57	144.05	376.28	-13.18	12.89	18.44	4.55	4.40	-9.67	343.75
	NORMAL	407.0	8.18	140.45	405.99	-16.43	15.41	22.52	2.61	2.03	-12.00	319.25
	NORMAL	437.0	9.06	137.99	435.66	-19.83	18.35	27.01	3.18	2.93	-8.20	336.05
	NORMAL	499.0	11.12	134.56	496.69	-27.65	25.88	37.87	3.46	3.32	-5.53	342.04
	NORMAL	589.0	13.93	135.70	584.54	-41.50	39.63	57.38	3.13	3.12	1.27	5.59
	NORMAL	680.0	17.27	134.29	672.18	-58.77	56.96	81.84	3.69	3.67	-1.55	352.84
	NORMAL	770.0	20.22	136.32	757.40	-79.36	77.26	110.76	3.36	3.28	2.26	13.43
	NORMAL	860.0	22.50	134.74	841.21	-102.73	100.24	143.53	2.61	2.53	-1.76	345.10
	NORMAL	951.0	25.36	135.70	924.38	-128.94	126.23	180.44	3.17	3.14	1.05	8.19
12/1/2014	NORMAL	1,046.0	28.35	137.02	1,009.13	-160.01	155.82	223.34	3.21	3.15	1.39	11.87
12/2/2014	NORMAL	1,139.0	30.86	135.61	1,089.98	-193.21	187.56	269.28	2.80	2.70	-1.52	343.87

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 (°)
12/2/2014	NORMAL	1,235.0	33.63	135.53	1,171.17	-229.78	223.42	320.49	2.89	2.89	-0.08	359.08
	NORMAL	1,330.0	36.00	137.37	1,249.16	-269.10	260.76	374.72	2.73	2.49	1.94	24.66
	NORMAL	1,426.0	37.93	137.90	1,325.86	-311.76	299.65	432.42	2.04	2.01	0.55	9.59
	NORMAL	1,521.0	38.59	137.90	1,400.45	-355.41	339.09	491.21	0.69	0.69	0.00	0.00
12/3/2014	NORMAL	1,620.0	35.96	136.40	1,479.23	-399.37	379.85	551.14	2.81	-2.66	-1.52	198.46
	NORMAL	1,713.0	36.22	135.70	1,554.38	-438.81	417.87	605.92	0.52	0.28	-0.75	301.95
	NORMAL	1,809.0	36.48	135.26	1,631.70	-479.38	457.76	662.82	0.38	0.27	-0.46	314.74
	NORMAL	1,904.0	36.22	133.77	1,708.21	-518.86	497.91	719.11	0.97	-0.27	-1.57	253.00
	NORMAL	1,999.0	35.38	131.57	1,785.27	-556.53	538.76	774.58	1.62	-0.88	-2.32	235.98
	NORMAL	2,095.0	35.21	130.25	1,863.62	-592.85	580.67	829.84	0.81	-0.18	-1.38	256.90
	NORMAL	2,191.0	36.18	131.31	1,941.59	-629.44	623.08	885.63	1.20	1.01	1.10	32.95
	NORMAL	2,286.0	36.92	133.42	2,017.91	-667.56	664.87	942.09	1.53	0.78	2.22	60.36
	NORMAL	2,381.0	37.85	136.82	2,093.40	-708.43	705.55	999.74	2.38	0.98	3.58	67.11
	NORMAL	2,477.0	38.20	137.37	2,169.02	-751.75	745.80	1,058.87	0.51	0.36	0.57	44.29
	NORMAL	2,572.0	38.33	136.67	2,243.61	-794.79	785.91	1,117.69	0.48	0.14	-0.74	286.42
	NORMAL	2,667.0	37.14	138.25	2,318.75	-837.62	825.23	1,175.80	1.61	-1.25	1.66	141.53
	NORMAL	2,762.0	35.60	138.51	2,395.24	-879.73	862.64	1,232.08	1.63	-1.62	0.27	174.39
	NORMAL	2,857.0	33.71	136.76	2,473.38	-919.65	899.03	1,286.07	2.25	-1.99	-1.84	207.05
	NORMAL	2,952.0	31.52	135.61	2,553.40	-956.61	934.46	1,337.27	2.40	-2.31	-1.21	195.32
	NORMAL	3,047.0	30.99	135.61	2,634.61	-991.83	968.94	1,386.56	0.56	-0.56	0.00	180.00
12/4/2014	NORMAL	3,143.0	29.14	134.74	2,717.69	-1,025.95	1,002.84	1,434.65	1.98	-1.93	-0.91	192.88
	NORMAL	3,238.0	27.65	135.88	2,801.26	-1,058.05	1,034.61	1,479.82	1.67	-1.57	1.20	160.51
	NORMAL	3,333.0	25.32	137.02	2,886.28	-1,088.74	1,063.81	1,522.18	2.51	-2.45	1.20	168.20
	NORMAL	3,428.0	24.18	137.11	2,972.56	-1,117.86	1,090.91	1,561.94	1.20	-1.20	0.09	178.15
	NORMAL	3,524.0	22.15	136.05	3,060.81	-1,145.30	1,116.85	1,599.70	2.16	-2.11	-1.10	191.12
	NORMAL	3,619.0	20.40	136.58	3,149.34	-1,170.22	1,140.66	1,634.17	1.85	-1.84	0.56	173.98
	NORMAL	3,715.0	18.77	134.82	3,239.78	-1,193.26	1,163.12	1,666.34	1.81	-1.70	-1.83	199.07
	NORMAL	3,810.0	17.36	135.79	3,330.09	-1,214.20	1,183.84	1,695.80	1.52	-1.48	1.02	168.42
	NORMAL	3,905.0	15.69	136.23	3,421.17	-1,233.63	1,202.61	1,722.82	1.76	-1.76	0.46	175.92
	NORMAL	4,001.0	14.51	133.77	3,513.85	-1,251.33	1,220.28	1,747.82	1.40	-1.23	-2.56	207.32
	NORMAL	4,096.0	12.44	132.80	3,606.23	-1,266.51	1,236.38	1,769.93	2.19	-2.18	-1.02	185.76
	NORMAL	4,191.0	10.77	134.38	3,699.29	-1,279.67	1,250.24	1,789.02	1.79	-1.76	1.66	170.00
	NORMAL	4,287.0	9.85	131.66	3,793.74	-1,291.41	1,262.78	1,806.18	1.08	-0.96	-2.83	206.55
	NORMAL	4,382.0	8.31	131.04	3,887.54	-1,301.32	1,274.03	1,821.12	1.62	-1.62	-0.65	183.33
	NORMAL	4,478.0	6.33	133.15	3,982.76	-1,309.49	1,283.13	1,833.32	2.08	-2.06	2.20	173.31
12/5/2014	NORMAL	4,573.0	4.97	129.64	4,077.29	-1,315.70	1,290.12	1,842.65	1.48	-1.43	-3.69	192.51
	NORMAL	4,668.0	3.30	123.84	4,172.04	-1,319.85	1,295.56	1,849.41	1.81	-1.76	-6.11	191.18
	NORMAL	4,764.0	1.63	123.75	4,267.95	-1,322.14	1,298.99	1,853.45	1.74	-1.74	-0.09	180.09
	NORMAL	4,860.0	1.10	109.69	4,363.93	-1,323.21	1,300.99	1,855.61	0.65	-0.55	-14.65	205.39
	NORMAL	4,955.0	0.53	68.29	4,458.92	-1,323.36	1,302.26	1,856.59	0.83	-0.60	-43.58	206.52
	NORMAL	5,050.0	0.22	53.26	4,553.91	-1,323.09	1,302.81	1,856.79	0.34	-0.33	-15.82	190.19
	NORMAL	5,145.0	1.05	29.18	4,648.91	-1,322.22	1,303.38	1,856.56	0.90	0.87	-25.35	329.89
	NORMAL	5,240.0	1.27	31.11	4,743.89	-1,320.56	1,304.35	1,856.04	0.24	0.23	2.03	11.04
	NORMAL	5,334.0	1.10	28.30	4,837.87	-1,318.87	1,305.32	1,855.50	0.19	-0.18	-2.99	197.47
	NORMAL	5,429.0	0.97	356.39	4,932.85	-1,317.26	1,305.70	1,854.61	0.61	-0.14	-33.59	241.66
	NORMAL	5,525.0	0.66	306.12	5,028.85	-1,316.13	1,305.20	1,853.45	0.78	-0.32	-52.36	222.80
	NORMAL	5,619.0	0.97	282.92	5,122.84	-1,315.63	1,303.99	1,852.25	0.48	0.33	-24.68	301.22
	NORMAL	5,715.0	1.19	262.18	5,218.82	-1,315.58	1,302.21	1,850.98	0.46	0.23	-21.60	288.73
	NORMAL	5,809.0	1.19	246.18	5,312.80	-1,316.11	1,300.35	1,850.06	0.35	0.00	-17.02	262.00
	NORMAL	5,905.0	1.63	246.62	5,408.77	-1,317.06	1,298.18	1,849.23	0.46	0.46	0.46	1.63
12/6/2014	NORMAL	6,000.0	1.98	243.10	5,503.72	-1,318.33	1,295.48	1,848.27	0.39	0.37	-3.71	340.66
	NORMAL	6,096.0	1.71	236.69	5,599.67	-1,319.87	1,292.80	1,847.51	0.35	-0.28	-6.68	214.22
	NORMAL	6,191.0	1.76	230.18	5,694.63	-1,321.58	1,290.50	1,847.14	0.21	0.05	-6.85	280.97
	NORMAL	6,285.0	1.54	231.85	5,788.59	-1,323.29	1,288.39	1,846.90	0.24	-0.23	1.78	168.50
	NORMAL	6,380.0	1.85	236.78	5,883.55	-1,324.92	1,286.11	1,846.48	0.36	0.33	5.19	27.67
	NORMAL	6,475.0	1.89	229.57	5,978.50	-1,326.77	1,283.63	1,846.09	0.25	0.04	-7.59	276.03

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 (°)
12/6/2014	NORMAL	6,570.0	2.15	219.29	6,073.44	-1,329.17	1,281.31	1,846.19	0.47	0.27	-10.82	300.45
	NORMAL	6,666.0	2.02	214.98	6,169.38	-1,331.95	1,279.20	1,846.72	0.21	-0.14	-4.49	228.20
	NORMAL	6,740.0	2.02	214.98	6,243.33	-1,334.09	1,277.71	1,847.21	0.00	0.00	0.00	0.00