

Deviation Summary

PICEANCE VLY

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	GM 433-28	Wellbore No.	00
Wellbore Legal Name	GM 433-28	Common Wellbore Name	GM 433-28
Project	GV 28-06S-096W	Site	GM 323-28 Pad
Vertical Section Azimuth	72.75 (°)	North reference	
Origin N/S		Origin E/W	
Spud date	12/13/2014	UWI	GM 433-28
Active datum	KB @5,500.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	12/13/2014	Ended	
Tool Name	MWD	Engineer	MARK

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 (°)
12/13/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/13/2014	NORMAL	75.0	0.26	137.81	75.00	-0.13	0.11	0.07	0.35	0.35	0.00	137.81
	NORMAL	105.0	0.35	133.42	105.00	-0.24	0.23	0.15	0.31	0.30	-14.63	343.24
	NORMAL	135.0	1.06	163.48	135.00	-0.57	0.37	0.19	2.59	2.37	100.20	43.10
	NORMAL	165.0	0.79	144.67	164.99	-1.00	0.57	0.25	1.34	-0.90	-62.70	219.21
	NORMAL	196.0	0.88	130.96	195.99	-1.33	0.87	0.44	0.70	0.29	-44.23	287.29
	NORMAL	226.0	1.23	116.02	225.98	-1.63	1.34	0.79	1.47	1.17	-49.80	314.21
	NORMAL	256.0	1.94	98.61	255.97	-1.84	2.13	1.49	2.83	2.37	-58.03	316.94
	NORMAL	286.0	1.94	81.04	285.96	-1.84	3.13	2.45	1.97	0.00	-58.57	261.22
	NORMAL	316.0	2.38	72.42	315.93	-1.57	4.23	3.57	1.82	1.47	-28.73	319.20
	NORMAL	346.0	2.99	63.37	345.90	-1.03	5.52	4.97	2.47	2.03	-30.17	320.62
	NORMAL	376.0	3.87	63.90	375.85	-0.24	7.13	6.74	2.94	2.93	1.77	2.33
	NORMAL	406.0	4.57	60.73	405.77	0.79	9.08	8.91	2.46	2.33	-10.57	339.98
	NORMAL	437.0	5.54	60.56	436.65	2.13	11.46	11.58	3.13	3.13	-0.55	359.03
	NORMAL	467.0	6.16	61.70	466.49	3.61	14.14	14.57	2.10	2.07	3.80	11.18
	NORMAL	498.0	7.39	66.62	497.27	5.19	17.43	18.19	4.38	3.97	15.87	27.72
	NORMAL	528.0	7.83	70.40	527.01	6.64	21.13	22.15	2.22	1.47	12.60	50.57
	NORMAL	558.0	8.89	72.60	556.69	8.02	25.27	26.51	3.69	3.53	7.33	17.88
	NORMAL	588.0	9.50	73.65	586.30	9.41	29.86	31.30	2.11	2.03	3.50	15.90
	NORMAL	618.0	9.68	71.02	615.88	10.92	34.62	36.30	1.58	0.60	-8.77	291.03
12/14/2014	NORMAL	690.0	10.90	70.17	686.73	15.20	46.74	49.15	1.71	1.69	-1.18	352.49

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 (")
12/14/2014	NORMAL	780.0	13.01	73.59	774.77	20.95	64.47	67.78	2.47	2.34	3.80	20.24
	NORMAL	872.0	14.81	72.54	864.07	27.40	85.62	89.90	1.98	1.96	-1.14	351.51
	NORMAL	962.0	16.66	72.01	950.69	34.84	108.87	114.30	2.06	2.06	-0.59	355.30
	NORMAL	1,058.0	19.03	71.04	1,042.07	44.18	136.76	143.71	2.49	2.47	-1.01	352.39
	NORMAL	1,152.0	20.88	72.98	1,130.42	54.06	167.28	175.78	2.09	1.97	2.06	20.61
	NORMAL	1,246.0	22.68	73.50	1,217.71	64.11	200.67	210.66	1.93	1.91	0.55	6.36
	NORMAL	1,340.0	24.35	73.59	1,303.90	74.73	236.64	248.16	1.78	1.78	0.10	1.27
	NORMAL	1,434.0	25.80	73.15	1,389.04	86.14	274.81	287.99	1.56	1.54	-0.47	352.47
12/15/2014	NORMAL	1,537.0	26.59	72.19	1,481.46	99.69	318.21	333.46	0.87	0.77	-0.93	331.36
	NORMAL	1,631.0	26.29	72.01	1,565.62	112.55	358.04	375.31	0.33	-0.32	-0.19	194.88
	NORMAL	1,725.0	25.54	70.78	1,650.17	125.65	396.97	416.38	0.98	-0.80	-1.31	215.08
	NORMAL	1,819.0	25.19	73.50	1,735.11	138.00	435.29	456.63	1.29	-0.37	2.89	107.95
12/16/2014	NORMAL	1,914.0	25.98	72.54	1,820.80	149.99	474.52	497.66	0.94	0.83	-1.01	331.88
	NORMAL	2,008.0	25.41	69.90	1,905.51	163.10	513.10	538.39	1.36	-0.61	-2.81	242.34
	NORMAL	2,102.0	24.88	66.91	1,990.60	177.78	550.23	578.20	1.46	-0.56	-3.18	246.01
	NORMAL	2,196.0	24.88	70.78	2,075.88	192.05	587.10	617.64	1.73	0.00	4.12	91.76
	NORMAL	2,291.0	25.19	73.86	2,161.96	204.25	625.39	657.83	1.41	0.33	3.24	78.02
	NORMAL	2,385.0	25.41	77.28	2,246.95	214.25	664.28	697.93	1.57	0.23	3.64	82.99
	NORMAL	2,479.0	24.61	76.23	2,332.13	223.35	702.96	737.58	0.97	-0.85	-1.12	208.55
	NORMAL	2,574.0	24.97	76.49	2,418.38	232.74	741.67	777.33	0.40	0.38	0.27	16.97
	NORMAL	2,668.0	25.89	77.20	2,503.27	241.93	780.98	817.59	1.03	0.98	0.76	18.66
	NORMAL	2,761.0	25.63	75.00	2,587.03	251.63	820.21	857.93	1.07	-0.28	-2.37	253.80
	NORMAL	2,855.0	25.27	74.21	2,671.91	262.35	859.15	898.30	0.53	-0.38	-0.84	222.96
	NORMAL	2,949.0	24.88	74.21	2,757.05	273.19	897.48	938.13	0.41	-0.41	0.00	180.00
	NORMAL	3,042.0	23.16	72.19	2,842.00	284.11	933.72	975.98	2.05	-1.85	-2.17	204.63
	NORMAL	3,136.0	22.29	71.57	2,928.70	295.40	968.24	1,012.28	0.96	-0.93	-0.66	195.11
	NORMAL	3,230.0	20.13	71.31	3,016.32	306.22	1,000.48	1,046.28	2.30	-2.30	-0.28	182.37
	NORMAL	3,324.0	19.39	70.25	3,104.79	316.68	1,030.48	1,078.04	0.87	-0.79	-1.13	205.34
	NORMAL	3,418.0	18.81	69.81	3,193.61	327.18	1,059.39	1,108.76	0.64	-0.62	-0.47	193.73
	NORMAL	3,512.0	17.01	72.10	3,283.06	336.64	1,086.70	1,137.65	2.06	-1.91	2.44	159.72
	NORMAL	3,606.0	16.61	71.22	3,373.04	345.19	1,112.51	1,164.83	0.50	-0.43	-0.94	212.05
	NORMAL	3,700.0	15.91	72.45	3,463.28	353.40	1,137.51	1,191.14	0.83	-0.74	1.31	154.39
	NORMAL	3,794.0	14.90	71.57	3,553.90	361.10	1,161.26	1,216.11	1.10	-1.07	-0.94	192.61
	NORMAL	3,888.0	12.92	73.86	3,645.14	367.85	1,182.82	1,238.70	2.19	-2.11	2.44	165.57
	NORMAL	3,982.0	12.35	74.56	3,736.86	373.44	1,202.61	1,259.26	0.63	-0.61	0.74	165.31
	NORMAL	4,076.0	11.12	73.68	3,828.90	378.67	1,221.00	1,278.37	1.32	-1.31	-0.94	187.85
12/17/2014	NORMAL	4,170.0	12.00	73.07	3,920.99	384.06	1,239.05	1,297.20	0.95	0.94	-0.65	351.79
	NORMAL	4,264.0	11.43	73.77	4,013.03	389.51	1,257.34	1,316.29	0.62	-0.61	0.74	166.34
	NORMAL	4,359.0	10.81	74.38	4,106.25	394.54	1,274.96	1,334.61	0.66	-0.65	0.64	169.55
	NORMAL	4,453.0	9.41	67.79	4,198.79	399.82	1,290.56	1,351.07	1.93	-1.49	-7.01	216.35
	NORMAL	4,547.0	7.60	70.87	4,291.75	404.76	1,303.55	1,364.94	1.98	-1.93	3.28	167.39
	NORMAL	4,641.0	6.72	69.46	4,385.02	408.73	1,314.57	1,376.65	0.95	-0.94	-1.50	190.60
	NORMAL	4,735.0	5.85	62.78	4,478.45	412.85	1,323.98	1,386.86	1.21	-0.93	-7.11	216.76
	NORMAL	4,829.0	5.32	62.08	4,572.01	417.08	1,332.09	1,395.86	0.57	-0.56	-0.74	186.98
12/18/2014	NORMAL	4,923.0	5.14	58.83	4,665.62	421.30	1,339.55	1,404.23	0.37	-0.19	-3.46	237.11
	NORMAL	5,017.0	4.35	59.97	4,759.29	425.26	1,346.24	1,411.79	0.85	-0.84	1.21	173.76
	NORMAL	5,111.0	4.31	55.75	4,853.02	429.04	1,352.24	1,418.64	0.34	-0.04	-4.49	260.74
	NORMAL	5,205.0	3.47	54.96	4,946.81	432.66	1,357.49	1,424.73	0.90	-0.89	-0.84	183.26
	NORMAL	5,299.0	3.38	54.26	5,040.64	435.91	1,362.07	1,430.07	0.11	-0.10	-0.74	204.57
	NORMAL	5,393.0	3.12	57.77	5,134.49	438.89	1,366.48	1,435.17	0.35	-0.28	3.73	144.31
	NORMAL	5,487.0	2.68	56.89	5,228.37	441.46	1,370.49	1,439.75	0.47	-0.47	-0.94	185.34
	NORMAL	5,581.0	2.24	59.97	5,322.28	443.58	1,373.92	1,443.66	0.49	-0.47	3.28	164.81
	NORMAL	5,676.0	2.11	60.76	5,417.21	445.36	1,377.05	1,447.18	0.14	-0.14	0.83	167.41
	NORMAL	5,770.0	1.67	59.18	5,511.16	446.91	1,379.74	1,450.20	0.47	-0.47	-1.68	185.97
	NORMAL	5,864.0	1.27	61.46	5,605.13	448.11	1,381.83	1,452.56	0.43	-0.43	2.43	172.82
	NORMAL	5,958.0	0.92	38.26	5,699.11	449.20	1,383.21	1,454.20	0.59	-0.37	-24.68	220.50

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 (°)
12/19/2014	NORMAL	6,052.0	1.05	32.20	5,793.10	450.52	1,384.14	1,455.48	0.18	0.14	-6.45	318.24
	NORMAL	6,147.0	0.79	10.84	5,888.09	451.90	1,384.72	1,456.45	0.45	-0.27	-22.48	222.48
	NORMAL	6,241.0	0.83	11.02	5,982.08	453.20	1,384.98	1,457.07	0.04	0.04	0.19	3.73
	NORMAL	6,335.0	0.75	4.69	6,076.07	454.48	1,385.16	1,457.63	0.13	-0.09	-6.73	224.35
	NORMAL	6,429.0	0.48	336.65	6,170.06	455.46	1,385.05	1,457.81	0.42	-0.29	-29.83	214.66
	NORMAL	6,524.0	0.31	220.55	6,265.06	455.63	1,384.73	1,457.55	0.71	-0.18	-122.21	204.31
	NORMAL	6,618.0	0.57	204.99	6,359.06	455.01	1,384.36	1,457.02	0.30	0.28	-16.55	327.40
	NORMAL	6,712.0	1.27	204.20	6,453.05	453.64	1,383.74	1,456.02	0.74	0.74	-0.84	358.57
12/20/2014	NORMAL	6,806.0	1.41	215.62	6,547.02	451.75	1,382.64	1,454.41	0.32	0.15	12.15	68.12
	NORMAL	6,901.0	1.27	231.53	6,642.00	450.14	1,381.13	1,452.50	0.42	-0.15	16.75	118.45
	NORMAL	6,984.0	1.32	232.68	6,724.97	448.99	1,379.65	1,450.74	0.07	0.06	1.39	28.04
	NORMAL	7,039.0	1.32	232.68	6,779.96	448.22	1,378.65	1,449.55	0.00	0.00	0.00	0.00