

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	GM 422-28	Wellbore No.	00
Wellbore Legal Name	GM 422-28	Common Wellbore Name	GM 422-28
Project	GV 28-06S-096W	Site	GM 323-28 Pad
Vertical Section Azimuth	358.92 (°)	North reference	
Origin N/S		Origin E/W	
Spud date	2/10/2015	UWI	GM 422-28
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	2/10/2015	Ended	
Tool Name	MWD	Engineer	MARK FEARON

#### 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 (°)
2/10/2015	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/10/2015	NORMAL	101.0	0.79	327.39	101.00	0.59	-0.38	0.59	0.78	0.78	0.00	327.39
	NORMAL	131.0	0.88	346.29	130.99	0.98	-0.54	0.99	0.96	0.30	63.00	81.51
	NORMAL	162.0	1.41	348.84	161.99	1.59	-0.67	1.60	1.72	1.71	8.23	6.77
	NORMAL	192.0	2.11	357.36	191.97	2.50	-0.77	2.52	2.48	2.33	28.40	24.79
	NORMAL	223.0	2.82	1.23	222.94	3.84	-0.78	3.85	2.35	2.29	12.48	15.13
	NORMAL	253.0	3.52	357.71	252.90	5.49	-0.80	5.51	2.42	2.33	-11.73	342.70
2/11/2015	NORMAL	284.0	4.49	1.93	283.82	7.66	-0.80	7.67	3.27	3.13	13.61	19.01
	NORMAL	314.0	5.37	358.33	313.71	10.23	-0.80	10.25	3.11	2.93	-12.00	338.83
	NORMAL	344.0	6.42	358.59	343.55	13.31	-0.88	13.33	3.50	3.50	0.87	1.59
	NORMAL	374.0	7.48	1.14	373.33	16.94	-0.88	16.96	3.68	3.53	8.50	17.50
	NORMAL	404.0	8.62	0.53	403.04	21.14	-0.82	21.16	3.81	3.80	-2.03	355.41
	NORMAL	434.0	9.68	357.80	432.65	25.91	-0.90	25.93	3.82	3.53	-9.10	336.38
	NORMAL	465.0	11.26	357.98	463.14	31.54	-1.11	31.56	5.10	5.10	0.58	1.27
	NORMAL	495.0	12.32	354.99	492.50	37.66	-1.49	37.68	4.08	3.53	-9.97	328.57
	NORMAL	525.0	13.28	358.86	521.76	44.29	-1.84	44.32	4.29	3.20	12.90	43.67
	NORMAL	555.0	13.64	359.82	550.93	51.27	-1.92	51.30	1.41	1.20	3.20	32.30
	NORMAL	585.0	14.69	0.18	580.02	58.62	-1.92	58.64	3.51	3.50	1.20	4.97
	NORMAL	615.0	15.48	358.59	608.99	66.42	-2.00	66.45	2.97	2.63	-5.30	331.59
	NORMAL	645.0	16.45	358.42	637.83	74.67	-2.22	74.70	3.24	3.23	-0.57	357.16
	NORMAL	676.0	17.95	359.30	667.44	83.84	-2.40	83.87	4.91	4.84	2.84	10.26

## 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	EW (ft)	V. sec. (ft)	DLS (%/100usft)	Build Rate (%/100usft)	Turn (%/100usft)	Tface (°)
2/11/2015	NORMAL	706.0	18.56	359.21	695.93	93.23	-2.52	93.26	2.04	2.03	-0.30	357.31
	NORMAL	736.0	19.62	358.68	724.28	103.04	-2.70	103.07	3.58	3.53	-1.77	350.46
	NORMAL	766.0	20.50	358.51	752.46	113.33	-2.95	113.36	2.94	2.93	-0.57	356.13
	NORMAL	795.0	21.55	357.63	779.53	123.73	-3.31	123.77	3.78	3.62	-3.03	342.85
	NORMAL	866.0	24.34	359.05	844.91	151.39	-4.09	151.44	4.01	3.93	2.00	11.88
	NORMAL	956.0	27.58	359.35	925.82	190.78	-4.63	190.83	3.60	3.60	0.33	2.46
2/12/2015	NORMAL	1,120.0	31.12	358.58	1,068.23	272.04	-5.95	272.11	1.17	1.10	-0.80	339.46
	NORMAL	1,251.0	30.95	358.43	1,180.47	339.56	-7.71	339.64	0.14	-0.13	-0.11	204.40
	NORMAL	1,346.0	31.69	358.51	1,261.63	388.92	-9.03	389.02	0.78	0.78	0.08	3.25
	NORMAL	1,440.0	31.39	357.90	1,341.74	438.07	-10.57	438.19	0.47	-0.32	-0.65	226.51
	NORMAL	1,534.0	31.82	359.13	1,421.80	487.31	-11.85	487.45	0.82	0.46	1.31	56.82
	NORMAL	1,629.0	30.95	358.25	1,502.90	536.77	-12.97	536.92	1.04	-0.92	-0.93	207.40
	NORMAL	1,723.0	31.30	0.36	1,583.37	585.35	-13.56	585.50	1.22	0.37	2.24	73.11
	NORMAL	1,817.0	32.88	359.92	1,663.01	635.29	-13.44	635.43	1.70	1.68	-0.47	351.40
	NORMAL	1,912.0	32.31	358.69	1,743.05	686.46	-14.05	686.60	0.92	-0.60	-1.29	228.78
	NORMAL	2,006.0	32.31	0.10	1,822.49	736.69	-14.59	736.84	0.80	0.00	1.50	90.60
	NORMAL	2,100.0	32.13	358.69	1,902.02	786.81	-15.11	786.95	0.82	-0.19	-1.50	255.94
	NORMAL	2,194.0	32.00	357.81	1,981.68	836.68	-16.64	836.85	0.52	-0.14	-0.94	254.08
	NORMAL	2,288.0	32.04	359.30	2,061.38	886.51	-17.89	886.69	0.84	0.04	1.59	87.73
	NORMAL	2,382.0	32.09	359.22	2,141.04	936.40	-18.54	936.59	0.07	0.05	-0.09	319.62
	NORMAL	2,477.0	29.85	358.25	2,222.49	985.27	-19.60	985.47	2.42	-2.36	-1.02	192.15
2/12/2015	NORMAL	1,051.0	30.36	359.13	1,008.92	236.78	-5.25	236.84	2.93	2.93	-0.23	357.71
2/13/2015	NORMAL	2,571.0	28.61	357.37	2,304.52	1,031.14	-21.35	1,031.36	1.40	-1.32	-0.94	198.73
	NORMAL	2,664.0	26.73	356.84	2,386.88	1,074.27	-23.52	1,074.52	2.04	-2.02	-0.57	187.22
	NORMAL	2,759.0	26.55	357.46	2,471.80	1,116.81	-25.64	1,117.10	0.35	-0.19	0.65	123.20
	NORMAL	2,853.0	25.80	356.67	2,556.16	1,158.22	-27.76	1,158.54	0.88	-0.80	-0.84	204.57
	NORMAL	2,947.0	25.10	356.49	2,641.03	1,198.55	-30.17	1,198.90	0.75	-0.74	-0.19	186.22
	NORMAL	3,041.0	25.14	359.48	2,726.15	1,238.41	-31.57	1,238.79	1.35	0.04	3.18	89.55
	NORMAL	3,136.0	24.88	358.51	2,812.24	1,278.57	-32.28	1,278.95	0.51	-0.27	-1.02	237.19
	NORMAL	3,230.0	24.53	359.22	2,897.64	1,317.85	-33.06	1,318.24	0.49	-0.37	0.76	140.03
	NORMAL	3,324.0	22.50	359.04	2,983.83	1,355.35	-33.62	1,355.74	2.16	-2.16	-0.19	181.94
	NORMAL	3,419.0	21.54	0.54	3,071.89	1,390.96	-33.76	1,391.35	1.17	-1.01	1.58	150.33
	NORMAL	3,513.0	20.79	2.03	3,159.55	1,424.89	-33.01	1,425.26	0.98	-0.80	1.59	145.04
	NORMAL	3,607.0	19.74	0.71	3,247.73	1,457.44	-32.22	1,457.78	1.22	-1.12	-1.40	202.91
	NORMAL	3,702.0	18.86	359.57	3,337.40	1,488.83	-32.14	1,489.17	1.01	-0.93	-1.20	202.64
	NORMAL	3,796.0	18.68	358.69	3,426.40	1,519.07	-32.60	1,519.42	0.36	-0.19	-0.94	237.14
	NORMAL	3,890.0	17.41	359.92	3,515.77	1,548.19	-32.96	1,548.53	1.41	-1.35	1.31	163.88
	NORMAL	3,984.0	16.57	359.22	3,605.67	1,575.65	-33.16	1,576.00	0.92	-0.89	-0.74	193.35
	NORMAL	4,079.0	16.13	358.34	3,696.83	1,602.39	-33.73	1,602.74	0.53	-0.46	-0.93	208.96
	NORMAL	4,172.0	14.55	1.77	3,786.51	1,626.98	-33.74	1,627.33	1.96	-1.70	3.69	151.78
	NORMAL	4,266.0	13.98	1.77	3,877.61	1,650.13	-33.03	1,650.46	0.61	-0.61	0.00	180.00
	NORMAL	4,360.0	12.70	3.88	3,969.08	1,671.79	-31.98	1,672.10	1.46	-1.36	2.24	160.20
	NORMAL	4,454.0	11.96	3.26	4,060.91	1,691.82	-30.72	1,692.10	0.80	-0.79	-0.66	189.84
	NORMAL	4,548.0	11.16	2.12	4,153.00	1,710.64	-29.83	1,710.90	0.89	-0.85	-1.21	195.38
	NORMAL	4,643.0	10.77	1.68	4,246.26	1,728.70	-29.23	1,728.94	0.42	-0.41	-0.46	191.90
	NORMAL	4,737.0	9.28	3.79	4,338.83	1,745.04	-28.47	1,745.27	1.63	-1.59	2.24	167.19
2/14/2015	NORMAL	4,831.0	8.66	3.96	4,431.68	1,759.66	-27.49	1,759.87	0.66	-0.66	0.18	177.64
	NORMAL	4,926.0	7.78	3.35	4,525.70	1,773.22	-26.62	1,773.41	0.93	-0.93	-0.64	185.36
	NORMAL	5,020.0	7.30	1.77	4,618.89	1,785.54	-26.06	1,785.71	0.56	-0.51	-1.68	202.58
	NORMAL	5,114.0	6.77	0.10	4,712.18	1,797.05	-25.87	1,797.22	0.60	-0.56	-1.78	200.27
	NORMAL	5,209.0	6.42	359.30	4,806.55	1,807.96	-25.92	1,808.13	0.38	-0.37	-0.84	194.31
	NORMAL	5,303.0	6.11	0.27	4,899.99	1,818.22	-25.96	1,818.38	0.35	-0.33	1.03	161.63
	NORMAL	5,397.0	5.54	359.39	4,993.50	1,827.76	-25.99	1,827.92	0.61	-0.61	-0.94	188.47
	NORMAL	5,491.0	4.88	356.05	5,087.11	1,836.28	-26.31	1,836.45	0.77	-0.70	-3.55	203.02
	NORMAL	5,586.0	4.31	357.64	5,181.81	1,843.88	-26.73	1,844.06	0.61	-0.60	1.67	168.19
	NORMAL	5,680.0	3.87	357.64	5,275.57	1,850.58	-27.01	1,850.76	0.47	-0.47	0.00	180.00

## 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)	Trace (°)
2/14/2015	NORMAL	5,774.0	3.47	358.16	5,369.38	1,856.59	-27.23	1,856.78	0.43	-0.43	0.55	175.50
	NORMAL	5,868.0	3.21	359.30	5,463.22	1,862.07	-27.36	1,862.25	0.29	-0.28	1.21	166.24
2/15/2015	NORMAL	5,963.0	2.81	356.49	5,558.09	1,867.05	-27.53	1,867.24	0.45	-0.42	-2.96	198.85
	NORMAL	6,057.0	2.64	4.05	5,651.98	1,871.51	-27.52	1,871.70	0.42	-0.18	8.04	119.06
	NORMAL	6,151.0	2.24	3.00	5,745.89	1,875.50	-27.27	1,875.69	0.43	-0.43	-1.12	185.85
	NORMAL	6,245.0	1.76	7.39	5,839.84	1,878.77	-26.99	1,878.95	0.54	-0.51	4.67	164.48
2/16/2015	NORMAL	6,337.0	0.83	4.75	5,931.81	1,880.84	-26.75	1,881.01	1.01	-1.01	-2.87	182.35
	NORMAL	6,431.0	0.66	355.35	6,025.80	1,882.05	-26.74	1,882.22	0.22	-0.18	-10.00	211.08
	NORMAL	6,525.0	0.53	349.73	6,119.80	1,883.02	-26.86	1,883.19	0.15	-0.14	-5.98	201.38
	NORMAL	6,619.0	0.40	345.42	6,213.80	1,883.77	-27.02	1,883.94	0.14	-0.14	-4.59	192.91
	NORMAL	6,714.0	0.13	277.83	6,308.80	1,884.10	-27.21	1,884.28	0.39	-0.28	-71.15	198.93
	NORMAL	6,808.0	0.22	241.36	6,402.79	1,884.03	-27.47	1,884.21	0.15	0.10	-40.24	287.97
	NORMAL	6,901.0	0.61	242.85	6,495.79	1,883.71	-28.07	1,883.91	0.42	0.42	3.06	4.46
	NORMAL	6,996.0	0.97	242.59	6,590.78	1,883.11	-29.23	1,883.33	0.38	0.38	-0.27	359.30
	NORMAL	7,090.0	1.36	246.54	6,684.76	1,882.30	-30.96	1,882.55	0.42	0.41	4.20	13.62
	NORMAL	7,190.0	1.50	244.26	6,784.73	1,881.26	-33.23	1,881.55	0.15	0.14	-2.28	336.74
	NORMAL	7,245.0	1.50	244.26	6,839.71	1,880.63	-34.53	1,880.95	0.00	0.00	0.00	0.00