

# Deviation Summary

PICEANCE VLY

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	SG 412-27	Wellbore No.	OH
Wellbore Legal Name	SG 412-27	Common Wellbore Name	SG 412-27
Project	SG 28-07S-096W	Site	SG 43-28 Pad
Vertical Section Azimuth	25.51 (°)	North reference	
Origin N/S		Origin E/W	
Spud date	10/13/2014	UWI	SG 412-27
Active datum	KB @5,143.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	10/13/2014	Ended	
Tool Name	MWD	Engineer	

#### 2.1.1 Tie On Point

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)
		21.74			

#### 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 (°)
10/13/2014	NORMAL	106.0	1.19	21.74	105.99	1.02	0.41	1.10	1.12	1.12	0.00	21.74
	NORMAL	136.0	1.27	18.05	135.99	1.63	0.63	1.74	0.38	0.27	-12.30	313.43
	NORMAL	166.0	1.85	29.30	165.97	2.37	0.97	2.55	2.18	1.93	37.50	33.54
	NORMAL	196.0	2.46	29.82	195.95	3.35	1.52	3.68	2.03	2.03	1.73	2.10
	NORMAL	227.0	3.17	28.86	226.92	4.68	2.27	5.20	2.30	2.29	-3.10	355.72
	NORMAL	256.0	4.26	29.12	255.85	6.32	3.18	7.07	3.76	3.76	0.90	1.02
	NORMAL	286.0	5.41	27.54	285.75	8.55	4.38	9.60	3.86	3.83	-5.27	352.61
	NORMAL	316.0	6.42	31.23	315.59	11.23	5.90	12.68	3.60	3.37	12.30	22.47
	NORMAL	347.0	7.74	28.42	346.35	14.55	7.79	16.49	4.40	4.26	-9.06	343.90
	NORMAL	377.0	9.10	27.80	376.03	18.43	9.86	20.88	4.54	4.53	-2.07	355.87
	NORMAL	408.0	10.15	27.54	406.59	23.02	12.27	26.06	3.39	3.39	-0.84	357.50
	NORMAL	437.0	11.25	28.15	435.08	27.78	14.78	31.44	3.81	3.79	2.10	6.18
	NORMAL	467.0	12.70	26.40	464.43	33.31	17.63	37.66	4.98	4.83	-5.83	345.08
	NORMAL	497.0	13.76	26.22	493.63	39.47	20.67	44.52	3.54	3.53	-0.60	357.69
	NORMAL	588.0	17.14	25.16	581.33	61.32	31.16	68.76	3.73	3.71	-1.16	354.71
	NORMAL	678.0	19.65	24.55	666.73	87.09	43.08	97.16	2.80	2.79	-0.68	355.32
10/13/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/14/2014	NORMAL	769.0	22.64	24.20	751.59	116.99	56.62	129.97	3.29	3.29	-0.38	357.42
	NORMAL	861.0	24.97	24.73	835.76	150.78	72.01	167.10	2.54	2.53	0.58	5.49
	NORMAL	952.0	27.69	25.25	917.31	187.36	89.07	207.45	3.00	2.99	0.57	5.08
	NORMAL	1,047.0	32.70	27.01	999.40	230.22	110.15	255.21	5.35	5.27	1.85	10.79

## 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 (°)
10/14/2014	NORMAL	1,141.0	35.96	27.19	1,077.01	277.40	134.30	308.19	3.47	3.47	0.19	1.86
	NORMAL	1,235.0	38.90	25.78	1,151.65	328.54	159.75	365.31	3.26	3.13	-1.50	343.19
	NORMAL	1,305.0	41.54	26.13	1,205.09	369.17	179.54	410.50	3.79	3.77	0.50	5.03
10/15/2014	NORMAL	1,438.0	41.71	25.43	1,304.51	448.73	217.96	498.85	0.37	0.13	-0.53	289.82
	NORMAL	1,532.0	41.63	25.08	1,374.73	505.25	244.62	561.34	0.26	-0.09	-0.37	250.90
	NORMAL	1,626.0	41.80	24.37	1,444.90	562.06	270.78	623.88	0.53	0.18	-0.76	289.52
	NORMAL	1,721.0	40.44	22.79	1,516.47	619.31	295.78	686.32	1.80	-1.43	-1.66	216.79
	NORMAL	1,815.0	38.99	22.88	1,588.77	674.67	319.09	746.32	1.54	-1.54	0.10	177.76
	NORMAL	1,909.0	39.30	23.85	1,661.67	729.14	342.63	805.61	0.73	0.33	1.03	63.53
	NORMAL	2,003.0	38.42	25.61	1,734.87	782.71	367.29	864.58	1.50	-0.94	1.87	129.23
	NORMAL	2,098.0	38.68	24.55	1,809.17	836.33	392.38	923.78	0.75	0.27	-1.12	291.07
	NORMAL	2,192.0	38.29	26.57	1,882.75	889.09	417.61	982.27	1.40	-0.41	2.15	108.03
	NORMAL	2,286.0	38.86	25.52	1,956.24	941.75	443.35	1,040.88	0.92	0.61	-1.12	310.63
	NORMAL	2,380.0	37.98	26.66	2,029.89	994.22	469.03	1,099.29	1.20	-0.94	1.21	141.61
	NORMAL	2,475.0	36.26	26.22	2,105.64	1,045.55	494.56	1,156.61	1.83	-1.81	-0.46	188.60
	NORMAL	2,568.0	34.24	26.13	2,181.58	1,093.71	518.23	1,210.27	2.17	-2.17	-0.10	181.44
	NORMAL	2,663.0	32.26	25.43	2,261.02	1,140.61	540.89	1,262.36	2.12	-2.08	-0.74	190.68
	NORMAL	2,757.0	30.20	25.69	2,341.40	1,184.58	561.92	1,311.09	2.20	-2.19	0.28	176.37
	NORMAL	2,851.0	28.48	26.31	2,423.34	1,225.97	582.10	1,357.15	1.86	-1.83	0.66	170.25
	NORMAL	2,945.0	26.50	25.43	2,506.72	1,265.01	601.04	1,400.53	2.15	-2.11	-0.94	191.20
	NORMAL	3,040.0	24.40	24.64	2,592.50	1,301.99	618.33	1,441.35	2.24	-2.21	-0.83	188.83
	NORMAL	3,134.0	22.50	26.92	2,678.73	1,335.68	634.57	1,478.75	2.24	-2.02	2.43	155.52
	NORMAL	3,228.0	20.97	26.75	2,766.04	1,366.74	650.28	1,513.55	1.63	-1.63	-0.18	182.28
	NORMAL	3,322.0	18.77	24.55	2,854.44	1,395.52	664.14	1,545.49	2.47	-2.34	-2.34	197.74
10/16/2014	NORMAL	3,417.0	17.10	24.90	2,944.82	1,422.09	676.37	1,574.74	1.76	-1.76	0.37	176.47
	NORMAL	3,511.0	15.65	26.04	3,035.01	1,446.02	687.76	1,601.24	1.58	-1.54	1.21	168.05
	NORMAL	3,605.0	13.58	25.35	3,125.96	1,467.39	698.05	1,624.96	2.21	-2.20	-0.73	184.47
	NORMAL	3,700.0	11.08	24.64	3,218.76	1,485.77	706.63	1,645.24	2.64	-2.63	-0.75	183.12
	NORMAL	3,793.0	9.19	25.08	3,310.31	1,500.62	713.50	1,661.60	2.03	-2.03	0.47	177.87
	NORMAL	3,888.0	7.38	24.37	3,404.31	1,513.05	719.24	1,675.29	1.91	-1.91	-0.75	182.88
	NORMAL	3,982.0	5.76	23.32	3,497.69	1,522.88	723.60	1,686.04	1.73	-1.72	-1.12	183.72
	NORMAL	4,075.0	5.45	22.35	3,590.25	1,531.25	727.12	1,695.12	0.35	-0.33	-1.04	196.51
	NORMAL	4,169.0	5.28	21.21	3,683.84	1,539.41	730.39	1,703.89	0.21	-0.18	-1.21	211.52
	NORMAL	4,263.0	3.12	17.17	3,777.58	1,545.88	732.71	1,710.73	2.32	-2.30	-4.30	185.79
	NORMAL	4,357.0	2.86	21.03	3,871.45	1,550.52	734.30	1,715.60	0.35	-0.28	4.11	144.16
	NORMAL	4,452.0	2.59	25.61	3,966.34	1,554.67	736.08	1,720.11	0.36	-0.28	4.82	143.39
	NORMAL	4,546.0	2.37	24.29	4,060.26	1,558.35	737.80	1,724.18	0.24	-0.23	-1.40	193.90
10/17/2014	NORMAL	4,640.0	2.02	29.38	4,154.19	1,561.57	739.41	1,727.77	0.43	-0.37	5.41	153.41
	NORMAL	4,735.0	1.98	30.26	4,249.13	1,564.44	741.06	1,731.08	0.05	-0.04	0.93	142.92
	NORMAL	4,829.0	1.58	28.51	4,343.08	1,566.99	742.50	1,733.99	0.43	-0.43	-1.86	186.86
	NORMAL	4,923.0	1.05	33.34	4,437.06	1,568.84	743.59	1,736.14	0.58	-0.56	5.14	170.59
	NORMAL	5,017.0	0.61	45.64	4,531.05	1,569.91	744.42	1,737.46	0.50	-0.47	13.09	164.03
	NORMAL	5,111.0	0.31	65.42	4,625.05	1,570.37	745.01	1,738.13	0.36	-0.32	21.04	161.76
	NORMAL	5,205.0	0.40	121.49	4,719.04	1,570.30	745.52	1,738.29	0.36	0.10	59.65	104.64
	NORMAL	5,299.0	0.26	151.64	4,813.04	1,569.94	745.90	1,738.13	0.23	-0.15	32.07	143.30
	NORMAL	5,394.0	0.75	202.00	4,908.04	1,569.18	745.77	1,737.38	0.65	0.52	53.01	69.28
	NORMAL	5,488.0	1.19	220.55	5,002.03	1,567.87	744.90	1,735.82	0.57	0.47	19.73	45.03
	NORMAL	5,575.0	1.36	221.78	5,089.00	1,566.41	743.63	1,733.96	0.20	0.20	1.41	9.76
	NORMAL	5,635.0	1.36	221.78	5,148.99	1,565.35	742.68	1,732.59	0.00	0.00	0.00	0.00