

# Deviation Summary

PICEANCE VLY

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	GM 422-13	Wellbore No.	00
Wellbore Legal Name	GM 422-13	Common Wellbore Name	GM 422-13
Project	GV 12-07S-096W	Site	GM 24-12 Pad
Vertical Section Azimuth	153.30 (°)	North reference	
Origin N/S		Origin E/W	
Spud date	4/27/2014	UWI	GM 422-13
Active datum	KB @5,165.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	SCIENTIFIC
Date Started	4/27/2014	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 (°)
4/27/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/27/2014	NORMAL	84.0	0.79	115.14	84.00	-0.25	0.52	0.46	0.94	0.94	0.00	115.14
	NORMAL	172.0	3.52	150.64	171.93	-2.86	2.40	3.63	3.31	3.10	40.34	44.55
	NORMAL	263.0	6.60	154.42	262.56	-10.01	6.03	11.65	3.40	3.38	4.15	8.06
	NORMAL	354.0	8.71	149.85	352.75	-20.69	11.75	23.76	2.41	2.32	-5.02	341.63
	NORMAL	445.0	9.68	152.67	442.58	-33.44	18.72	38.29	1.18	1.07	3.10	26.31
	NORMAL	536.0	11.79	156.18	531.98	-48.75	25.99	55.23	2.43	2.32	3.86	18.95
	NORMAL	627.0	15.31	152.58	620.44	-67.92	35.28	76.53	3.98	3.87	-3.96	344.77
	NORMAL	719.0	18.83	150.91	708.37	-91.69	48.09	103.52	3.86	3.83	-1.82	351.27
	NORMAL	809.0	22.35	152.93	792.61	-119.62	62.95	135.15	3.99	3.91	2.24	12.36
	NORMAL	879.0	25.81	154.70	856.51	-145.26	75.52	163.70	5.05	4.94	2.53	12.60
	NORMAL	971.0	30.54	155.87	937.59	-184.72	93.65	207.10	5.18	5.14	1.27	7.18
	NORMAL	1,065.0	35.64	154.60	1,016.31	-231.29	115.17	258.37	5.48	5.43	-1.35	351.72
	NORMAL	1,159.0	38.51	153.61	1,091.31	-282.25	139.93	315.03	3.12	3.05	-1.05	347.86
	NORMAL	1,254.0	40.92	153.53	1,164.38	-336.61	166.95	375.73	2.54	2.54	-0.08	358.75
	NORMAL	1,348.0	44.11	153.25	1,233.66	-393.39	195.40	439.24	3.40	3.39	-0.30	356.50
	NORMAL	1,442.0	46.66	153.70	1,299.67	-453.26	225.28	506.15	2.73	2.71	0.48	7.32
	NORMAL	1,479.0	47.11	154.42	1,324.96	-477.55	237.09	533.16	1.87	1.22	1.95	49.68
4/29/2014	NORMAL	1,531.0	48.57	154.78	1,359.86	-512.37	253.62	571.69	2.85	2.81	0.69	10.48
	NORMAL	1,625.0	47.43	153.36	1,422.76	-575.19	284.16	641.54	1.65	-1.21	-1.51	222.32
	NORMAL	1,719.0	46.97	151.45	1,486.63	-636.31	316.10	710.49	1.57	-0.49	-2.03	251.18

## 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 (")
4/30/2014	NORMAL	1,814.0	46.09	150.12	1,551.99	-696.48	349.75	779.37	1.37	-0.93	-1.40	227.19
	NORMAL	1,908.0	45.11	150.18	1,617.76	-754.73	383.17	846.43	1.04	-1.04	0.06	177.52
	NORMAL	2,002.0	44.15	151.32	1,684.85	-812.35	415.44	912.39	1.33	-1.02	1.21	140.57
	NORMAL	2,097.0	44.92	152.78	1,752.37	-871.20	446.67	979.00	1.35	0.81	1.54	53.58
	NORMAL	2,191.0	45.08	153.73	1,818.84	-930.56	476.58	1,045.47	0.73	0.17	1.01	76.94
	NORMAL	2,285.0	46.12	154.57	1,884.61	-991.00	505.85	1,112.62	1.28	1.11	0.89	30.28
	NORMAL	2,380.0	46.87	155.17	1,950.01	-1,053.38	535.11	1,181.50	0.91	0.79	0.63	30.33
	NORMAL	2,474.0	47.34	154.29	2,013.99	-1,115.65	564.51	1,250.34	0.85	0.50	-0.94	305.79
	NORMAL	2,568.0	47.86	154.26	2,077.37	-1,178.19	594.64	1,319.74	0.55	0.55	-0.03	357.55
	NORMAL	2,662.0	46.97	152.89	2,140.98	-1,240.17	625.44	1,388.95	1.43	-0.95	-1.46	228.12
	NORMAL	2,757.0	46.74	153.13	2,205.95	-1,301.93	656.89	1,458.26	0.30	-0.24	0.25	142.80
	NORMAL	2,851.0	47.36	152.66	2,270.00	-1,363.18	688.24	1,527.06	0.75	0.66	-0.50	330.82
	NORMAL	2,945.0	45.87	152.38	2,334.56	-1,423.78	719.76	1,595.37	1.60	-1.59	-0.30	187.68
	NORMAL	3,040.0	46.23	152.54	2,400.50	-1,484.43	751.39	1,663.76	0.40	0.38	0.17	17.80
	NORMAL	3,134.0	44.73	152.03	2,466.40	-1,543.99	782.11	1,730.77	1.62	-1.60	0.37	170.68
	NORMAL	3,228.0	44.30	152.19	2,533.43	-1,602.47	812.50	1,796.67	0.69	-0.46	-0.74	228.53
	NORMAL	3,322.0	44.49	152.22	2,600.60	-1,660.64	843.16	1,862.42	0.20	0.20	0.03	6.31
	NORMAL	3,416.0	42.61	151.26	2,668.72	-1,717.69	873.82	1,927.16	2.12	-2.00	-1.02	199.04
	NORMAL	3,511.0	39.61	151.92	2,740.29	-1,772.62	903.54	1,989.58	3.19	-3.16	0.69	172.02
	NORMAL	3,605.0	37.43	152.01	2,813.83	-1,824.29	931.06	2,048.11	2.32	-2.32	0.10	178.56
	NORMAL	3,699.0	34.49	152.19	2,889.91	-1,873.06	956.89	2,103.29	3.13	-3.13	0.19	178.01
	NORMAL	3,793.0	32.24	152.56	2,968.41	-1,918.86	980.86	2,154.97	2.40	-2.39	0.39	174.99
	NORMAL	3,888.0	30.35	151.75	3,049.59	-1,962.49	1,003.90	2,204.31	2.04	-1.99	-0.85	192.21
	NORMAL	3,982.0	28.31	153.37	3,131.54	-2,003.34	1,025.13	2,250.34	2.33	-2.17	1.72	159.45
	NORMAL	4,076.0	26.11	152.01	3,215.13	-2,041.54	1,044.83	2,293.32	2.43	-2.34	-1.45	195.18
	NORMAL	4,170.0	24.14	153.21	3,300.23	-2,076.97	1,063.21	2,333.22	2.16	-2.10	1.28	166.04
	NORMAL	4,265.0	21.89	153.53	3,387.66	-2,110.16	1,079.86	2,370.36	2.37	-2.37	0.34	176.96
	NORMAL	4,359.0	19.62	152.82	3,475.56	-2,139.89	1,094.88	2,403.67	2.43	-2.41	-0.76	185.99
	NORMAL	4,453.0	17.86	149.69	3,564.57	-2,166.38	1,109.37	2,433.84	2.16	-1.87	-3.33	208.27
	NORMAL	4,546.0	15.52	151.98	3,653.65	-2,189.68	1,122.41	2,460.52	2.61	-2.52	2.46	165.40
	NORMAL	4,640.0	13.46	150.35	3,744.66	-2,210.29	1,133.73	2,484.02	2.23	-2.19	-1.73	190.41
	NORMAL	4,734.0	10.68	153.28	3,836.57	-2,227.58	1,143.06	2,503.66	3.03	-2.96	3.12	169.00
5/1/2014	NORMAL	4,829.0	9.27	148.91	3,930.13	-2,242.00	1,150.97	2,520.09	1.68	-1.48	-4.60	206.09
	NORMAL	4,923.0	6.96	150.98	4,023.19	-2,263.46	1,157.64	2,533.33	2.48	-2.46	2.20	173.81
	NORMAL	5,017.0	5.55	150.47	4,116.62	-2,262.40	1,162.65	2,543.56	1.50	-1.50	-0.54	182.00
	NORMAL	5,111.0	4.13	151.34	4,210.29	-2,269.32	1,166.51	2,551.49	1.51	-1.51	0.93	177.47
	NORMAL	5,205.0	1.12	136.34	4,304.18	-2,272.96	1,168.77	2,555.75	3.26	-3.20	-15.96	185.43
	NORMAL	5,300.0	0.58	134.74	4,399.17	-2,273.97	1,169.75	2,557.09	0.57	-0.57	-1.68	181.72
	NORMAL	5,394.0	0.88	184.37	4,493.16	-2,275.02	1,170.04	2,558.16	0.71	0.32	52.80	90.85
	NORMAL	5,488.0	0.94	197.27	4,587.15	-2,276.48	1,169.75	2,559.33	0.23	0.06	13.72	80.19
	NORMAL	5,583.0	1.09	210.96	4,682.13	-2,278.00	1,169.06	2,560.38	0.30	0.16	14.41	65.23
	NORMAL	5,677.0	1.54	211.03	4,776.11	-2,279.85	1,167.94	2,561.53	0.48	0.48	0.07	0.24
	NORMAL	5,771.0	1.43	226.57	4,870.08	-2,281.74	1,166.44	2,562.54	0.44	-0.12	16.53	112.96
	NORMAL	5,865.0	1.78	229.13	4,964.04	-2,283.50	1,164.49	2,563.24	0.38	0.37	2.72	12.86
5/2/2014	NORMAL	5,959.0	1.93	232.83	5,057.99	-2,285.41	1,162.12	2,563.88	0.20	0.16	3.94	40.46
	NORMAL	6,054.0	2.43	226.28	5,152.92	-2,287.77	1,159.39	2,564.76	0.59	0.53	-6.89	330.21
	NORMAL	6,148.0	2.69	232.70	5,246.83	-2,290.48	1,156.20	2,565.75	0.41	0.28	6.83	51.04
	NORMAL	6,242.0	3.07	233.33	5,340.71	-2,293.32	1,152.42	2,566.59	0.41	0.40	0.67	5.08
	NORMAL	6,336.0	2.90	234.48	5,434.58	-2,296.21	1,148.47	2,567.39	0.19	-0.18	1.22	161.17
	NORMAL	6,431.0	3.20	228.26	5,529.45	-2,299.37	1,144.53	2,568.45	0.47	0.32	-6.55	309.06
	NORMAL	6,525.0	4.13	227.72	5,623.25	-2,303.39	1,140.07	2,570.04	0.99	0.99	-0.57	357.60
	NORMAL	6,619.0	4.06	227.58	5,717.01	-2,307.92	1,135.11	2,571.85	0.08	-0.07	-0.15	188.06
	NORMAL	6,713.0	3.86	226.10	5,810.79	-2,312.35	1,130.37	2,573.69	0.24	-0.21	-1.57	206.33
	NORMAL	6,793.0	3.87	226.31	5,890.61	-2,316.09	1,126.48	2,575.27	0.02	0.01	0.26	54.87
	NORMAL	6,852.0	3.87	226.31	5,949.47	-2,318.84	1,123.60	2,576.44	0.00	0.00	0.00	0.00