

Deviation Summary

PICEANCE VLY

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	GM 542-12	Wellbore No.	00
Wellbore Legal Name	GM 542-12	Common Wellbore Name	GM 542-12
Project	GV 12-07S-096W	Site	GM 21-12 Pad
Vertical Section Azimuth	110.08 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	11/7/2014	UWI	GM 542-12
Active datum	KB @5,151.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	11/7/2014	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 (°)
11/7/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/7/2014	NORMAL	105.0	0.26	315.35	105.00	0.17	-0.17	-0.22	0.25	0.25	0.00	315.35
	NORMAL	135.0	0.70	130.96	135.00	0.10	-0.08	-0.11	3.20	1.47	585.37	176.80
	NORMAL	165.0	1.76	141.24	164.99	-0.38	0.35	0.46	3.59	3.53	34.27	16.93
	NORMAL	195.0	2.55	142.29	194.97	-1.27	1.05	1.42	2.64	2.63	3.50	3.39
	NORMAL	225.0	2.99	132.28	224.94	-2.32	2.03	2.71	2.17	1.47	-33.37	307.22
	NORMAL	255.0	3.26	119.36	254.89	-3.27	3.36	4.27	2.51	0.90	-43.07	284.44
	NORMAL	286.0	4.05	104.15	285.83	-3.97	5.19	6.23	4.01	2.55	-49.06	301.42
	NORMAL	316.0	5.10	103.45	315.73	-4.54	7.51	8.61	3.50	3.50	-2.33	356.61
	NORMAL	347.0	5.98	107.23	346.59	-5.34	10.39	11.59	3.07	2.84	12.19	24.41
	NORMAL	437.0	9.15	108.98	435.79	-9.05	21.64	23.43	3.53	3.52	1.94	5.03
	NORMAL	499.0	11.56	109.87	496.78	-12.77	32.15	34.58	3.90	3.89	1.44	4.24
11/8/2014	NORMAL	589.0	14.55	109.61	584.44	-19.63	51.28	54.90	3.32	3.32	-0.29	358.75
	NORMAL	680.0	17.63	111.28	671.87	-28.47	74.89	80.12	3.42	3.38	1.84	9.35
	NORMAL	770.0	20.00	111.01	757.05	-38.93	101.97	109.14	2.64	2.63	-0.30	357.77
	NORMAL	860.0	22.64	110.14	840.89	-50.42	132.60	141.85	2.95	2.93	-0.97	352.76
	NORMAL	950.0	25.01	111.01	923.21	-63.21	166.63	178.20	2.66	2.63	0.97	8.83
	NORMAL	1,045.0	28.04	109.78	1,008.20	-77.97	206.40	220.62	3.24	3.19	-1.29	349.17
	NORMAL	1,139.0	30.81	110.40	1,090.07	-93.84	249.76	266.80	2.96	2.95	0.66	6.55
	NORMAL	1,235.0	32.75	110.40	1,171.67	-111.46	297.15	317.35	2.02	2.02	0.00	0.00
	NORMAL	1,330.0	35.47	111.10	1,250.32	-130.34	346.96	370.62	2.89	2.86	0.74	8.50

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 (")
11/8/2014	NORMAL	1,426.0	39.25	110.14	1,326.62	-150.84	401.48	428.86	3.98	3.94	-1.00	350.86
	NORMAL	1,521.0	42.07	110.49	1,398.67	-172.33	459.52	490.75	2.98	2.97	0.37	4.76
	NORMAL	1,617.0	44.92	110.05	1,468.31	-195.21	521.50	556.82	2.99	2.97	-0.46	353.77
11/9/2014	NORMAL	1,712.0	46.02	109.43	1,534.93	-218.08	585.24	624.54	1.25	1.16	-0.65	337.89
	NORMAL	1,808.0	46.73	108.90	1,601.16	-240.89	650.88	694.02	0.84	0.74	-0.55	331.43
	NORMAL	1,903.0	46.95	108.29	1,666.15	-262.99	716.56	763.30	0.52	0.23	-0.64	296.10
	NORMAL	1,998.0	47.60	106.97	1,730.60	-284.12	783.07	833.02	1.23	0.68	-1.39	303.39
	NORMAL	2,094.0	46.99	106.79	1,795.71	-304.61	850.58	903.45	0.65	-0.64	-0.19	192.17
	NORMAL	2,190.0	47.43	107.24	1,860.93	-325.22	917.94	973.80	0.57	0.46	0.47	37.04
	NORMAL	2,285.0	47.60	108.38	1,925.09	-346.65	984.64	1,043.80	0.90	0.18	1.20	78.95
	NORMAL	2,380.0	46.95	110.31	1,989.55	-369.76	1,050.48	1,113.58	1.64	-0.68	2.03	115.28
11/10/2014	NORMAL	2,476.0	46.11	112.16	2,055.60	-394.98	1,115.42	1,183.23	1.65	-0.88	1.93	122.67
	NORMAL	2,571.0	46.46	111.63	2,121.25	-420.59	1,179.13	1,251.86	0.55	0.37	-0.56	312.23
	NORMAL	2,666.0	46.99	110.84	2,186.37	-445.64	1,243.60	1,321.01	0.82	0.56	-0.83	312.39
	NORMAL	2,761.0	47.74	110.05	2,250.72	-470.05	1,309.09	1,390.90	1.00	0.79	-0.83	321.96
	NORMAL	2,856.0	47.16	111.01	2,314.96	-494.59	1,374.63	1,460.88	0.96	-0.61	1.01	129.68
	NORMAL	2,951.0	48.09	111.63	2,378.99	-520.11	1,440.01	1,531.04	1.09	0.98	0.65	26.43
	NORMAL	3,046.0	49.32	111.54	2,441.68	-546.36	1,506.37	1,602.39	1.30	1.29	-0.09	356.82
	NORMAL	3,142.0	48.13	110.75	2,505.01	-572.39	1,573.66	1,674.53	1.39	-1.24	-0.82	206.26
	NORMAL	3,237.0	46.95	110.57	2,569.14	-597.12	1,639.24	1,744.61	1.25	-1.24	-0.19	186.36
	NORMAL	3,332.0	44.75	110.49	2,635.31	-621.03	1,703.07	1,812.77	2.32	-2.32	-0.08	181.47
	NORMAL	3,427.0	45.14	111.19	2,702.55	-644.90	1,765.79	1,879.87	0.66	0.41	0.74	51.99
	NORMAL	3,523.0	44.13	110.05	2,770.86	-668.66	1,828.91	1,947.31	1.34	-1.05	-1.19	218.01
	NORMAL	3,618.0	42.11	110.14	2,840.20	-690.97	1,889.89	2,012.24	2.13	-2.13	0.09	178.29
	NORMAL	3,714.0	40.84	108.99	2,912.13	-712.27	1,949.79	2,075.82	1.54	-1.32	-1.20	210.52
	NORMAL	3,809.0	39.34	108.99	2,984.81	-732.17	2,007.64	2,136.99	1.58	-1.58	0.00	180.00
	NORMAL	3,904.0	36.92	108.82	3,059.53	-751.18	2,063.13	2,195.63	2.55	-2.55	-0.18	182.42
	NORMAL	4,000.0	34.37	107.24	3,137.54	-768.52	2,116.31	2,251.53	2.82	-2.66	-1.65	199.21
	NORMAL	4,095.0	32.04	107.06	3,217.02	-783.86	2,166.02	2,303.48	2.45	-2.45	-0.19	182.35
	NORMAL	4,190.0	30.55	107.76	3,298.20	-798.62	2,213.11	2,352.77	1.61	-1.57	0.74	166.58
	NORMAL	4,286.0	28.35	108.55	3,381.79	-813.31	2,257.96	2,399.94	2.33	-2.29	0.82	170.33
	NORMAL	4,381.0	27.16	108.73	3,465.86	-827.45	2,299.88	2,444.17	1.26	-1.25	0.19	176.05
	NORMAL	4,477.0	24.35	107.94	3,552.31	-840.59	2,339.47	2,485.86	2.95	-2.93	-0.82	186.61
	NORMAL	4,572.0	22.86	108.46	3,639.36	-852.46	2,375.60	2,523.88	1.58	-1.57	0.55	172.28
	NORMAL	4,667.0	21.58	109.43	3,727.31	-864.12	2,409.58	2,559.79	1.40	-1.35	1.02	164.46
11/11/2014	NORMAL	4,763.0	19.74	109.26	3,817.13	-875.34	2,441.54	2,593.66	1.92	-1.92	-0.18	181.79
	NORMAL	4,859.0	18.59	110.31	3,907.81	-886.00	2,471.20	2,625.17	1.25	-1.20	1.09	163.81
	NORMAL	4,954.0	19.34	112.33	3,997.65	-897.23	2,499.95	2,656.04	1.05	0.79	2.13	42.15
	NORMAL	5,049.0	19.47	111.98	4,087.25	-909.13	2,529.18	2,687.58	0.18	0.14	-0.37	318.02
	NORMAL	5,144.0	18.59	110.75	4,177.06	-920.42	2,558.03	2,718.54	1.02	-0.93	-1.29	203.92
	NORMAL	5,239.0	16.61	111.19	4,267.61	-930.70	2,584.85	2,747.26	2.09	-2.08	0.46	176.37
	NORMAL	5,333.0	14.86	109.43	4,358.08	-939.56	2,608.74	2,772.75	1.93	-1.86	-1.87	194.41
	NORMAL	5,428.0	12.53	108.38	4,450.38	-946.87	2,630.02	2,795.24	2.47	-2.45	-1.11	185.58
	NORMAL	5,524.0	8.79	110.14	4,544.70	-952.68	2,646.79	2,812.99	3.91	-3.90	1.83	175.89
	NORMAL	5,618.0	5.19	107.50	4,637.99	-956.43	2,657.59	2,824.42	3.84	-3.83	-2.81	183.79
11/12/2014	NORMAL	5,714.0	1.98	104.33	4,733.79	-958.15	2,663.34	2,830.41	3.35	-3.34	-3.30	181.95
	NORMAL	5,808.0	1.67	54.24	4,827.75	-957.75	2,666.03	2,832.80	1.67	-0.33	-53.29	234.66
	NORMAL	5,904.0	1.89	40.00	4,923.70	-955.72	2,668.18	2,834.12	0.51	0.23	-14.83	289.21
	NORMAL	5,999.0	1.89	25.50	5,018.65	-953.11	2,669.86	2,834.80	0.50	0.00	-15.26	262.75
	NORMAL	6,095.0	2.15	22.60	5,114.59	-950.01	2,671.23	2,835.03	0.29	0.27	-3.02	337.08
	NORMAL	6,190.0	1.80	3.52	5,209.54	-946.88	2,672.01	2,834.68	0.78	-0.37	-20.08	232.66
	NORMAL	6,284.0	1.54	353.42	5,303.50	-944.15	2,671.96	2,833.70	0.42	-0.28	-10.74	223.57
	NORMAL	6,379.0	1.41	354.47	5,398.47	-941.72	2,671.70	2,832.62	0.14	-0.14	1.11	168.78
	NORMAL	6,474.0	1.19	1.33	5,493.44	-939.57	2,671.61	2,831.80	0.28	-0.23	7.22	148.12
	NORMAL	6,569.0	1.05	359.22	5,588.42	-937.71	2,671.62	2,831.17	0.15	-0.15	-2.22	195.36
	NORMAL	6,665.0	0.88	350.17	5,684.41	-936.11	2,671.48	2,830.49	0.24	-0.18	-9.43	217.41

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 (°)
11/13/2014	NORMAL	6,761.0	0.44	358.51	5,780.40	-935.01	2,671.35	2,829.98	0.47	-0.46	8.69	171.83
	NORMAL	6,856.0	0.00	166.82	5,875.40	-934.65	2,671.34	2,829.85	0.46	-0.46	0.00	180.00
	NORMAL	6,951.0	0.04	161.73	5,970.40	-934.68	2,671.35	2,829.87	0.04	0.04	0.00	161.73
	NORMAL	7,046.0	0.13	281.63	6,065.40	-934.69	2,671.25	2,829.79	0.16	0.09	126.21	132.92
	NORMAL	7,141.0	0.31	246.01	6,160.40	-934.77	2,670.91	2,829.49	0.23	0.19	-37.49	304.05
	NORMAL	7,211.0	0.53	267.02	6,230.40	-934.87	2,670.41	2,829.06	0.38	0.31	30.01	45.80
	NORMAL	7,266.0	0.53	267.02	6,285.40	-934.89	2,669.91	2,828.59	0.00	0.00	0.00	0.00