

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	GM 321-26	Wellbore No.	
Well Name	GM 321-26	Common Name	GM 321-26
Project	GV 27-06S-096W	Site	MV 23-27 Pad
Vertical Section Azimuth	89.52 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	7/22/2011	UWI	GM 321-26
Active Datum	KB @5,794.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Started	7/22/2011	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)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
7/22/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/22/2011	NORMAL	37.0	0.62	290.13	37.00	0.07	-0.19	-0.19	1.68	1.68	0.00	290.13
	NORMAL	84.0	0.09	11.43	84.00	0.19	-0.42	-0.42	1.30	-1.13	172.98	171.65
	NORMAL	112.0	0.62	92.99	112.00	0.21	-0.26	-0.26	2.19	1.89	291.29	89.91
	NORMAL	143.0	1.58	123.75	142.99	-0.04	0.26	0.26	3.53	3.10	99.23	47.60
	NORMAL	173.0	2.46	112.68	172.97	-0.52	1.20	1.19	3.20	2.93	-36.90	330.49
	NORMAL	204.0	3.17	97.29	203.94	-0.88	2.66	2.65	3.33	2.29	-49.65	305.35
	NORMAL	234.0	4.22	93.87	233.87	-1.06	4.59	4.58	3.57	3.50	-11.40	346.44
	NORMAL	263.0	4.93	99.05	262.78	-1.33	6.88	6.87	2.83	2.45	17.86	32.80
	NORMAL	294.0	6.33	98.17	293.63	-1.78	9.89	9.87	4.52	4.52	-2.84	356.03
	NORMAL	324.0	6.95	99.14	323.43	-2.31	13.32	13.30	2.10	2.07	3.23	10.74
	NORMAL	354.0	7.48	93.78	353.19	-2.72	17.06	17.03	2.85	1.77	-17.87	305.53
	NORMAL	384.0	8.36	100.63	382.91	-3.25	21.15	21.12	4.30	2.93	22.83	50.43
	NORMAL	414.0	8.97	96.15	412.56	-3.91	25.62	25.58	3.03	2.03	-14.93	309.88
	NORMAL	445.0	9.94	99.84	443.14	-4.62	30.66	30.62	3.69	3.13	11.90	33.83
	NORMAL	475.0	10.73	96.68	472.66	-5.39	35.98	35.94	3.24	2.63	-10.53	322.77
	NORMAL	505.0	11.61	96.94	502.09	-6.08	41.75	41.70	2.94	2.93	0.87	3.40
	NORMAL	535.0	12.49	100.72	531.43	-7.05	47.94	47.88	3.94	2.93	12.60	43.74
	NORMAL	566.0	13.55	97.47	561.63	-8.14	54.83	54.76	4.15	3.42	-10.48	323.77
	NORMAL	596.0	14.25	98.26	590.75	-9.13	61.97	61.89	2.42	2.33	2.63	15.55
	NORMAL	626.0	14.78	100.11	619.79	-10.33	69.39	69.30	2.35	1.77	6.17	42.08

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
7/22/2011	NORMAL	656.0	15.84	97.38	648.73	-11.53	77.22	77.12	4.27	3.53	-9.10	324.46
	NORMAL	687.0	16.98	97.65	678.47	-12.68	85.90	85.79	3.69	3.68	0.87	3.96
	NORMAL	717.0	17.86	99.14	707.09	-13.99	94.79	94.67	3.29	2.93	4.97	27.59
	NORMAL	748.0	18.91	97.29	736.51	-15.38	104.46	104.33	3.87	3.39	-5.97	330.06
	NORMAL	792.0	20.14	97.39	777.98	-17.26	119.05	118.90	2.80	2.80	0.23	1.60
	NORMAL	822.0	21.10	95.02	806.05	-18.40	129.55	129.39	4.24	3.20	-7.90	317.88
	NORMAL	852.0	21.98	94.76	833.96	-19.34	140.52	140.36	2.95	2.93	-0.87	353.69
	NORMAL	882.0	22.07	94.23	861.77	-20.22	151.74	151.56	0.73	0.30	-1.77	294.12
	NORMAL	912.0	22.86	94.14	889.49	-21.06	163.17	162.99	2.64	2.63	-0.30	357.47
	NORMAL	943.0	23.92	93.09	917.94	-21.83	175.45	175.26	3.67	3.42	-3.39	338.05
	NORMAL	973.0	24.53	92.82	945.30	-22.46	187.75	187.55	2.07	2.03	-0.90	349.58
	NORMAL	1,003.0	25.15	92.73	972.53	-23.07	200.33	200.13	2.07	2.07	-0.30	356.47
	NORMAL	1,033.0	25.76	91.50	999.61	-23.55	213.22	213.01	2.69	2.03	-4.10	318.53
	NORMAL	1,063.0	26.31	91.84	1,026.57	-23.93	226.38	226.17	1.90	1.83	1.13	15.33
	NORMAL	1,158.0	29.46	90.45	1,110.53	-24.79	270.80	270.58	3.39	3.32	-1.46	347.72
	NORMAL	1,252.0	32.18	91.24	1,191.25	-25.52	318.94	318.72	2.93	2.89	0.84	8.80
	NORMAL	1,347.0	35.13	91.20	1,270.32	-26.64	371.57	371.34	3.11	3.11	-0.04	359.55
	NORMAL	1,430.0	36.84	89.66	1,337.48	-26.99	420.34	420.10	2.33	2.06	-1.86	331.49
7/24/2011	NORMAL	1,539.0	38.32	88.83	1,423.86	-26.10	486.80	486.57	1.43	1.36	-0.76	340.79
	NORMAL	1,633.0	39.43	86.33	1,497.04	-23.60	545.74	545.52	2.04	1.18	-2.66	304.30
	NORMAL	1,727.0	40.19	85.00	1,569.25	-19.04	605.74	605.56	1.21	0.81	-1.41	311.24
	NORMAL	1,822.0	39.51	86.40	1,642.19	-14.48	666.44	666.30	1.18	-0.72	1.47	127.70
	NORMAL	1,916.0	39.25	88.10	1,714.85	-11.61	726.01	725.88	1.18	-0.28	1.81	104.21
	NORMAL	2,011.0	39.83	89.13	1,788.11	-10.15	786.47	786.35	0.92	0.61	1.08	48.90
	NORMAL	2,105.0	40.05	89.31	1,860.18	-9.33	846.81	846.70	0.26	0.23	0.19	27.78
	NORMAL	2,200.0	39.56	91.47	1,933.16	-9.74	907.61	907.50	1.54	-0.52	2.27	110.34
	NORMAL	2,294.0	38.67	88.66	2,006.10	-9.82	966.90	966.79	2.11	-0.95	-2.99	242.26
	NORMAL	2,389.0	37.90	89.22	2,080.67	-8.73	1,025.75	1,025.64	0.89	-0.81	0.59	155.96
	NORMAL	2,483.0	37.37	89.75	2,155.11	-8.21	1,083.15	1,083.04	0.66	-0.56	0.56	148.80
	NORMAL	2,577.0	37.46	88.64	2,229.77	-7.41	1,140.25	1,140.15	0.72	0.10	-1.18	277.16
	NORMAL	2,672.0	37.02	89.66	2,305.40	-6.55	1,197.73	1,197.64	0.80	-0.46	1.07	125.89
	NORMAL	2,767.0	37.46	89.22	2,381.03	-5.99	1,255.22	1,255.13	0.54	0.46	-0.46	328.64
	NORMAL	2,861.0	37.92	88.22	2,455.42	-4.70	1,312.68	1,312.59	0.81	0.49	-1.06	306.56
	NORMAL	2,956.0	38.25	89.09	2,530.19	-3.33	1,371.26	1,371.18	0.66	0.35	0.92	58.75
7/25/2011	NORMAL	3,050.0	36.59	90.10	2,604.85	-2.92	1,428.37	1,428.30	1.88	-1.77	1.07	160.11
	NORMAL	3,145.0	36.45	89.65	2,681.19	-2.79	1,484.91	1,484.83	0.32	-0.15	-0.47	242.22
	NORMAL	3,239.0	36.49	88.51	2,756.79	-1.90	1,540.77	1,540.70	0.72	0.04	-1.21	272.92
	NORMAL	3,334.0	36.76	90.40	2,833.03	-1.36	1,597.44	1,597.37	1.22	0.28	1.99	77.29
	NORMAL	3,428.0	38.21	88.99	2,907.62	-1.05	1,654.63	1,654.57	1.79	1.54	-1.50	328.82
	NORMAL	3,522.0	37.90	87.37	2,981.64	0.79	1,712.54	1,712.49	1.11	-0.33	-1.72	252.12
	NORMAL	3,617.0	38.19	87.66	3,056.46	3.33	1,771.04	1,771.00	0.36	0.31	0.31	31.76
	NORMAL	3,711.0	38.89	87.49	3,129.98	5.81	1,829.55	1,829.53	0.75	0.74	-0.18	351.33
	NORMAL	3,806.0	39.41	87.51	3,203.65	8.43	1,889.47	1,889.48	0.55	0.55	0.02	1.40
	NORMAL	3,900.0	39.75	89.04	3,276.10	10.22	1,949.33	1,949.35	1.10	0.36	1.63	71.36
	NORMAL	3,995.0	39.96	88.18	3,349.03	11.70	2,010.19	2,010.22	0.62	0.22	-0.91	290.53
	NORMAL	4,089.0	38.12	90.48	3,422.04	12.42	2,069.39	2,069.42	2.49	-1.96	2.45	142.67
	NORMAL	4,184.0	37.82	90.95	3,496.93	11.69	2,127.83	2,127.85	0.44	-0.32	0.49	136.24
	NORMAL	4,278.0	36.30	89.32	3,571.95	11.54	2,184.47	2,184.49	1.93	-1.62	-1.73	212.23
	NORMAL	4,373.0	34.97	90.01	3,649.16	11.87	2,239.82	2,239.84	1.46	-1.40	0.73	163.46
7/26/2011	NORMAL	4,467.0	32.98	87.90	3,727.11	12.80	2,292.33	2,292.36	2.46	-2.12	-2.24	209.78
	NORMAL	4,562.0	30.25	87.46	3,808.00	14.81	2,342.08	2,342.13	2.88	-2.87	-0.46	184.64
	NORMAL	4,656.0	28.58	86.58	3,889.88	17.20	2,388.19	2,388.25	1.84	-1.78	-0.94	194.13
	NORMAL	4,751.0	26.55	85.69	3,974.09	20.15	2,432.05	2,432.13	2.18	-2.14	-0.94	191.07
	NORMAL	4,845.0	23.74	88.08	4,059.18	22.37	2,471.91	2,472.01	3.18	-2.99	2.54	161.21
	NORMAL	4,940.0	23.34	86.31	4,146.27	24.22	2,509.81	2,509.92	0.85	-0.42	-1.86	239.69
	NORMAL	5,034.0	22.17	87.93	4,232.96	26.06	2,546.11	2,546.24	1.41	-1.24	1.72	152.57
	NORMAL	5,129.0	20.04	87.31	4,321.58	27.47	2,580.29	2,580.43	2.25	-2.24	-0.65	185.69

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
7/26/2011	NORMAL	5,223.0	18.32	88.45	4,410.36	28.63	2,611.15	2,611.30	1.87	-1.83	1.21	168.25
7/27/2011	NORMAL	5,318.0	15.30	90.27	4,501.29	28.97	2,638.61	2,638.76	3.23	-3.18	1.92	170.98
	NORMAL	5,412.0	15.30	88.25	4,591.96	29.29	2,663.41	2,663.56	0.57	0.00	-2.15	269.03
	NORMAL	5,507.0	13.89	88.43	4,683.89	29.99	2,687.34	2,687.50	1.48	-1.48	0.19	178.24
	NORMAL	5,601.0	11.96	88.60	4,775.50	30.53	2,708.36	2,708.52	2.05	-2.05	0.18	178.95
	NORMAL	5,696.0	10.71	90.74	4,868.65	30.66	2,727.03	2,727.19	1.39	-1.32	2.25	162.45
	NORMAL	5,791.0	9.15	87.11	4,962.22	30.93	2,743.40	2,743.56	1.77	-1.64	-3.82	200.08
	NORMAL	5,885.0	8.63	91.21	5,055.10	31.15	2,757.91	2,758.08	0.87	-0.55	4.36	131.39
	NORMAL	5,979.0	7.21	85.79	5,148.20	31.44	2,770.85	2,771.01	1.71	-1.51	-5.77	205.08
	NORMAL	6,074.0	5.98	87.37	5,242.57	32.10	2,781.74	2,781.91	1.31	-1.29	1.66	172.39
	NORMAL	6,169.0	4.98	86.41	5,337.13	32.59	2,790.80	2,790.97	1.06	-1.05	-1.01	184.76
	NORMAL	6,263.0	3.17	86.58	5,430.89	33.00	2,797.46	2,797.64	1.93	-1.93	0.18	179.70
	NORMAL	6,357.0	1.34	89.91	5,524.81	33.16	2,801.16	2,801.34	1.95	-1.95	3.54	177.57
	NORMAL	6,452.0	0.38	249.31	5,619.81	33.05	2,801.97	2,802.15	1.79	-1.01	167.79	175.49
7/28/2011	NORMAL	6,546.0	0.36	298.27	5,713.80	33.08	2,801.42	2,801.60	0.33	-0.02	52.09	117.88
	NORMAL	6,641.0	0.79	255.42	5,808.80	33.05	2,800.52	2,800.70	0.61	0.45	-45.11	292.19
	NORMAL	6,735.0	0.93	261.69	5,902.79	32.78	2,799.14	2,799.32	0.18	0.15	6.67	37.07
	NORMAL	6,829.0	0.53	86.41	5,996.79	32.70	2,798.82	2,799.00	1.55	-0.43	-186.47	181.71
	NORMAL	6,924.0	0.91	101.19	6,091.78	32.58	2,800.00	2,800.17	0.44	0.40	15.56	33.56
	NORMAL	7,018.0	1.15	95.15	6,185.76	32.35	2,801.67	2,801.84	0.28	0.26	-6.43	332.62
	NORMAL	7,113.0	0.84	120.99	6,280.75	31.90	2,803.22	2,803.39	0.57	-0.33	27.20	137.10
	NORMAL	7,207.0	0.71	161.83	6,374.74	31.00	2,803.99	2,804.15	0.59	-0.14	43.45	123.11
	NORMAL	7,302.0	0.53	148.81	6,469.74	30.06	2,804.40	2,804.55	0.24	-0.19	-13.71	211.66
	NORMAL	7,396.0	0.81	204.13	6,563.73	29.08	2,804.35	2,804.50	0.71	0.30	58.85	95.92
	NORMAL	7,491.0	1.38	197.33	6,658.71	27.38	2,803.74	2,803.87	0.61	0.60	-7.16	343.74
	NORMAL	7,585.0	1.32	227.56	6,752.69	25.57	2,802.60	2,802.72	0.75	-0.06	32.16	109.81
	NORMAL	7,679.0	1.49	224.04	6,846.66	23.96	2,800.95	2,801.06	0.20	0.18	-3.74	331.32
	NORMAL	7,774.0	1.76	233.16	6,941.62	22.19	2,798.93	2,799.02	0.39	0.28	9.60	48.39
7/29/2011	NORMAL	7,868.0	2.35	232.18	7,035.56	20.15	2,796.25	2,796.32	0.63	0.63	-1.04	356.10
	NORMAL	7,963.0	2.42	213.24	7,130.48	17.28	2,793.61	2,793.66	0.83	0.07	-19.94	265.57
	NORMAL	8,058.0	2.55	216.04	7,225.39	13.89	2,791.27	2,791.29	0.19	0.14	2.95	44.45
	NORMAL	8,117.0	2.55	207.61	7,284.33	11.67	2,789.89	2,789.89	0.64	0.00	-14.29	265.79
	NORMAL	8,176.0	2.55	207.61	7,343.27	9.34	2,788.67	2,788.65	0.00	0.00	0.00	0.00