

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	PA 523-29	Wellbore No.	OH
Well Name	PA 523-29	Common Name	PA 523-29
Project	PA 29-06S-095W	Site	DOE 3-W-29 Pad
Vertical Section Azimuth	357.92 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	1/24/2012	UWI	PA 523-29
Active Datum	KB @5,702.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	SCIENTIFIC
Date Started	1/24/2012	Ended	
Tool Name	MWD	Engineer	NICOLE FOSTER

#### 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 (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
1/24/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/24/2012	NORMAL	83.0	0.35	73.04	83.00	0.07	0.24	0.07	0.42	0.42	0.00	73.04
	NORMAL	175.0	2.99	15.21	174.95	2.47	1.14	2.43	3.06	2.87	-62.86	296.14
	NORMAL	266.0	6.60	10.46	265.62	9.91	2.71	9.80	3.99	3.97	-5.22	351.35
	NORMAL	357.0	10.21	355.69	355.64	23.10	3.06	22.97	4.59	3.97	-16.23	321.66
	NORMAL	430.0	13.52	355.51	427.07	38.06	1.90	37.97	4.53	4.53	-0.25	359.27
	NORMAL	521.0	16.93	359.34	514.86	61.92	0.92	61.85	3.90	3.75	4.21	18.29
	NORMAL	612.0	20.12	359.18	601.14	90.83	0.54	90.75	3.51	3.51	-0.18	359.01
1/25/2012	NORMAL	702.0	23.75	356.80	684.61	124.41	-0.69	124.36	4.15	4.03	-2.64	345.13
	NORMAL	793.0	23.03	356.10	768.13	160.47	-2.93	160.47	0.85	-0.79	-0.77	200.78
	NORMAL	884.0	23.59	355.54	851.70	196.38	-5.55	196.45	0.66	0.62	-0.62	338.15
	NORMAL	976.0	23.48	355.61	936.05	233.01	-8.39	233.16	0.12	-0.12	0.08	165.77
	NORMAL	1,071.0	22.54	355.21	1,023.49	270.02	-11.36	270.26	1.00	-0.99	-0.42	189.26
	NORMAL	1,167.0	21.01	355.55	1,112.64	305.52	-14.23	305.83	1.60	-1.59	0.35	175.45
	NORMAL	1,262.0	21.07	358.73	1,201.31	339.57	-15.93	339.93	1.20	0.06	3.35	88.48
	NORMAL	1,357.0	22.28	359.57	1,289.59	374.65	-16.44	375.00	1.31	1.27	0.88	14.77
	NORMAL	1,452.0	23.72	359.45	1,377.04	411.77	-16.76	412.11	1.52	1.52	-0.13	358.08
	NORMAL	1,547.0	24.78	359.94	1,463.65	450.79	-16.97	451.11	1.14	1.12	0.52	10.97
	NORMAL	1,642.0	23.91	358.71	1,550.21	489.94	-17.42	490.25	1.06	-0.92	-1.29	209.67
	NORMAL	1,738.0	22.72	357.99	1,638.36	527.92	-18.51	528.25	1.27	-1.24	-0.75	193.14
	NORMAL	1,833.0	23.37	359.13	1,725.78	565.10	-19.44	565.43	0.83	0.68	1.20	35.00

## 2.1.2 Survey Stations (Continued)

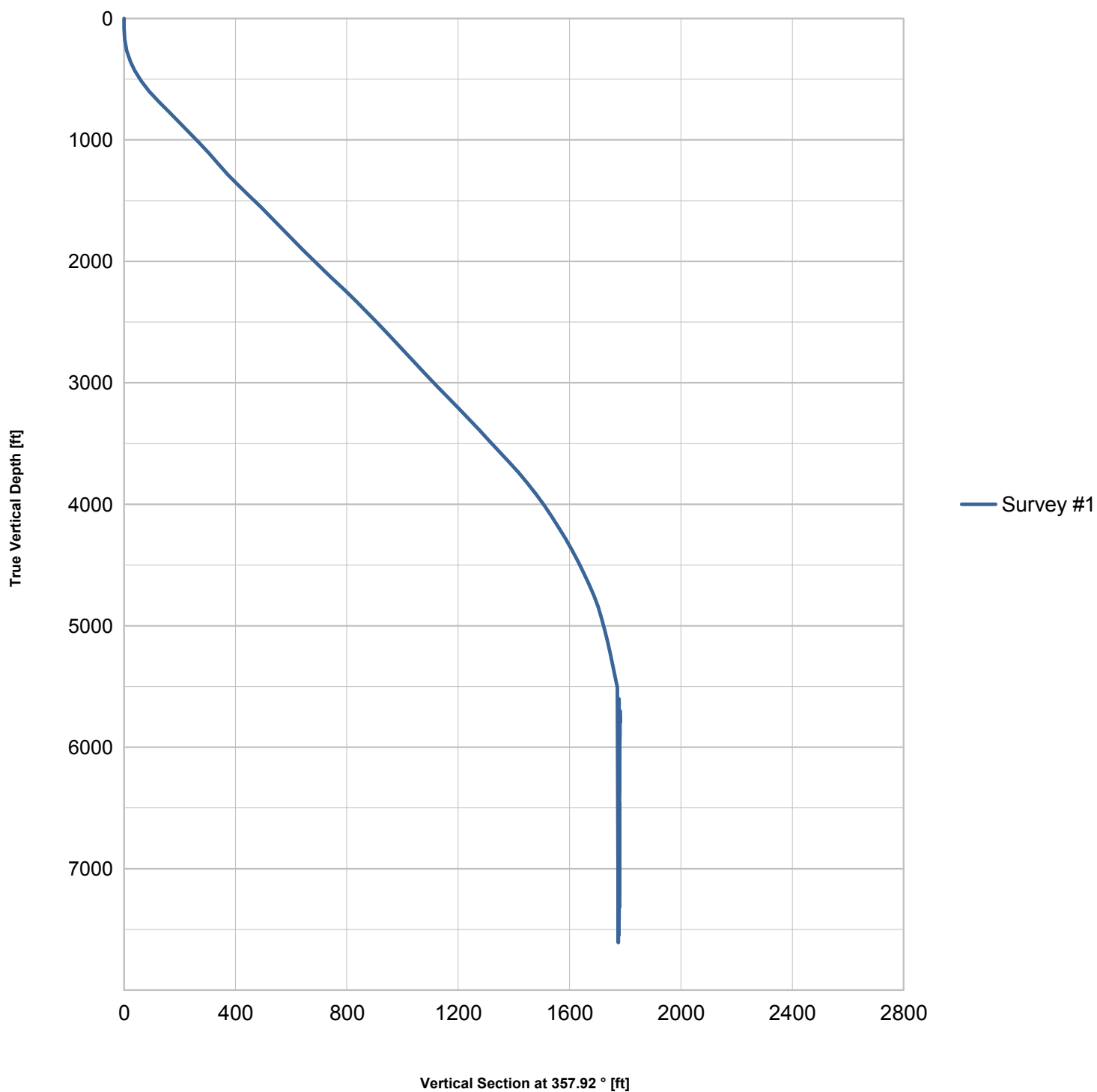
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
1/25/2012	NORMAL	1,929.0	23.08	357.02	1,814.01	602.93	-20.71	603.28	0.92	-0.30	-2.20	249.82
	NORMAL	2,024.0	23.38	356.48	1,901.30	640.34	-22.83	640.74	0.39	0.32	-0.57	324.38
	NORMAL	2,120.0	24.03	355.95	1,989.20	678.85	-25.38	679.32	0.71	0.68	-0.55	341.61
	NORMAL	2,282.0	24.61	356.72	2,136.86	745.37	-29.56	745.95	0.45	0.43	0.27	14.50
1/25/2012	NORMAL	2,215.0	24.32	356.54	2,075.87	717.67	-27.93	718.21	0.40	0.31	0.62	40.07
1/27/2012	NORMAL	2,397.0	25.25	356.90	2,241.14	793.77	-32.25	794.41	0.56	0.56	0.16	6.84
	NORMAL	2,493.0	23.42	359.16	2,328.61	833.29	-33.64	833.96	2.14	-1.91	2.35	154.05
	NORMAL	2,588.0	22.99	358.74	2,415.92	870.72	-34.33	871.39	0.48	-0.45	-0.44	200.86
	NORMAL	2,684.0	22.75	357.68	2,504.38	908.01	-35.49	908.70	0.50	-0.25	-1.10	239.29
	NORMAL	2,779.0	22.51	358.21	2,592.06	944.54	-36.80	945.25	0.33	-0.25	0.56	139.89
	NORMAL	2,875.0	22.34	357.49	2,680.80	981.13	-38.17	981.87	0.34	-0.18	-0.75	237.91
	NORMAL	2,970.0	22.04	356.76	2,768.77	1,016.97	-39.97	1,017.75	0.43	-0.32	-0.77	222.25
	NORMAL	3,066.0	21.85	357.16	2,857.81	1,052.79	-41.88	1,053.62	0.25	-0.20	0.42	141.99
	NORMAL	3,161.0	22.85	357.58	2,945.67	1,088.88	-43.53	1,089.74	1.07	1.05	0.44	9.27
	NORMAL	3,257.0	22.98	359.23	3,034.10	1,126.24	-44.57	1,127.11	0.68	0.14	1.72	79.32
	NORMAL	3,351.0	23.15	358.61	3,120.58	1,163.06	-45.26	1,163.94	0.32	0.18	-0.66	304.70
	NORMAL	3,447.0	23.12	0.05	3,208.87	1,200.77	-45.71	1,201.64	0.59	-0.03	1.50	93.70
	NORMAL	3,543.0	22.17	0.12	3,297.46	1,237.73	-45.65	1,238.58	0.99	-0.99	0.07	178.41
	NORMAL	3,638.0	22.14	0.05	3,385.45	1,273.56	-45.60	1,274.38	0.04	-0.03	-0.07	221.31
	NORMAL	3,734.0	22.13	359.58	3,474.37	1,309.73	-45.72	1,310.53	0.18	-0.01	-0.49	266.55
	NORMAL	3,829.0	22.06	358.92	3,562.40	1,345.46	-46.18	1,346.25	0.27	-0.07	-0.69	253.95
1/28/2012	NORMAL	3,924.0	22.25	357.93	3,650.38	1,381.27	-47.17	1,382.07	0.44	0.20	-1.04	296.51
	NORMAL	4,019.0	20.62	359.18	3,738.81	1,415.97	-48.06	1,416.79	1.78	-1.72	1.32	164.93
	NORMAL	4,114.0	19.57	1.58	3,828.03	1,448.61	-47.86	1,449.39	1.41	-1.11	2.53	142.98
	NORMAL	4,210.0	18.31	3.20	3,918.83	1,479.74	-46.57	1,480.45	1.42	-1.31	1.69	158.11
	NORMAL	4,304.0	17.03	1.46	4,008.39	1,508.24	-45.40	1,508.89	1.47	-1.36	-1.85	201.59
	NORMAL	4,401.0	15.76	1.92	4,101.45	1,535.61	-44.59	1,536.21	1.32	-1.31	0.47	174.38
	NORMAL	4,496.0	15.20	359.60	4,193.00	1,560.96	-44.25	1,561.53	0.88	-0.59	-2.44	226.76
	NORMAL	4,592.0	14.34	358.16	4,285.83	1,585.42	-44.72	1,586.00	0.97	-0.90	-1.50	202.42
	NORMAL	4,688.0	13.61	357.26	4,378.99	1,608.59	-45.64	1,609.18	0.79	-0.76	-0.94	196.14
	NORMAL	4,783.0	12.53	354.44	4,471.52	1,630.01	-47.17	1,630.65	1.32	-1.14	-2.97	209.19
	NORMAL	4,878.0	11.76	354.90	4,564.40	1,649.91	-49.03	1,650.60	0.82	-0.81	0.48	173.06
	NORMAL	4,973.0	11.38	356.11	4,657.47	1,668.90	-50.53	1,669.64	0.47	-0.40	1.27	148.03
	NORMAL	5,068.0	10.30	355.13	4,750.77	1,686.72	-51.89	1,687.49	1.15	-1.14	-1.03	189.20
	NORMAL	5,164.0	7.92	356.23	4,845.55	1,701.87	-53.05	1,702.67	2.49	-2.48	1.15	176.36
	NORMAL	5,259.0	7.13	356.49	4,939.73	1,714.29	-53.84	1,715.11	0.83	-0.83	0.27	177.66
	NORMAL	5,354.0	6.64	359.35	5,034.05	1,725.66	-54.26	1,726.50	0.63	-0.52	3.01	146.43
	NORMAL	5,450.0	5.88	356.97	5,129.48	1,736.12	-54.59	1,736.96	0.84	-0.79	-2.48	197.67
	NORMAL	5,545.0	5.11	357.87	5,224.04	1,745.21	-55.00	1,746.06	0.82	-0.81	0.95	174.06
1/29/2012	NORMAL	5,641.0	5.20	3.81	5,319.65	1,753.82	-54.87	1,754.66	0.56	0.09	6.19	83.39
	NORMAL	5,736.0	5.24	2.22	5,414.26	1,762.45	-54.42	1,763.27	0.16	0.04	-1.67	284.66
	NORMAL	5,831.0	4.55	5.95	5,508.91	1,770.54	-53.86	1,771.33	0.80	-0.73	3.93	157.09
	NORMAL	5,927.0	3.08	13.28	5,604.70	1,776.84	-52.87	1,777.58	1.61	-1.53	7.64	165.28
	NORMAL	6,022.0	1.66	20.38	5,699.61	1,780.61	-51.81	1,781.32	1.52	-1.49	7.47	171.85
	NORMAL	6,118.0	0.58	181.97	5,795.60	1,781.43	-51.34	1,782.12	2.31	-1.13	168.32	175.26
	NORMAL	6,213.0	0.60	189.22	5,890.60	1,780.46	-51.43	1,781.15	0.08	0.02	7.63	78.65
1/30/2012	NORMAL	6,308.0	0.83	197.53	5,985.59	1,779.31	-51.72	1,780.01	0.26	0.24	8.75	28.46
	NORMAL	6,404.0	0.50	269.35	6,081.58	1,778.64	-52.35	1,779.37	0.86	-0.34	74.81	144.82
	NORMAL	6,499.0	0.20	272.59	6,176.58	1,778.64	-52.93	1,779.39	0.32	-0.32	3.41	177.84
	NORMAL	6,594.0	0.14	27.21	6,271.58	1,778.75	-53.04	1,779.51	0.30	-0.06	120.65	153.77
	NORMAL	6,690.0	0.38	225.70	6,367.58	1,778.64	-53.22	1,779.40	0.54	0.25	-168.24	193.54
	NORMAL	6,785.0	1.02	181.45	6,462.57	1,777.57	-53.46	1,778.34	0.84	0.67	-46.58	296.23
	NORMAL	6,880.0	0.75	169.22	6,557.56	1,776.11	-53.37	1,776.88	0.35	-0.28	-12.87	208.97
	NORMAL	6,976.0	0.50	248.66	6,653.56	1,775.34	-53.64	1,776.12	0.86	-0.26	82.75	143.25
	NORMAL	7,072.0	0.71	258.58	6,749.55	1,775.07	-54.61	1,775.89	0.24	0.22	10.33	31.53
	NORMAL	7,167.0	0.74	335.65	6,844.55	1,775.52	-55.44	1,776.36	0.95	0.03	81.13	127.04
	NORMAL	7,262.0	0.89	305.48	6,939.54	1,776.50	-56.30	1,777.38	0.47	0.16	-31.76	273.77

### 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
1/30/2012	NORMAL	7,358.0	0.65	294.50	7,035.53	1,777.16	-57.40	1,778.08	0.29	-0.25	-11.44	206.17
	NORMAL	7,453.0	0.27	287.86	7,130.53	1,777.45	-58.10	1,778.39	0.40	-0.40	-6.99	184.67
	NORMAL	7,548.0	0.44	265.03	7,225.53	1,777.49	-58.68	1,778.45	0.23	0.18	-24.03	308.45
	NORMAL	7,645.0	0.47	251.21	7,322.52	1,777.33	-59.43	1,778.32	0.12	0.03	-14.25	278.31
	NORMAL	7,740.0	0.81	228.19	7,417.52	1,776.76	-60.30	1,777.78	0.44	0.36	-24.23	311.02
	NORMAL	7,871.0	1.12	209.57	7,548.50	1,775.03	-61.62	1,776.09	0.33	0.24	-14.21	305.11
	NORMAL	7,931.0	1.12	209.57	7,608.49	1,774.01	-62.20	1,775.10	0.00	0.00	0.00	0.00

### 3 Charts

#### 3.1 Vertical Section View



### 3.2 Plan View

