

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	PA 333-34	Wellbore No.	OH
Well Name	PA 333-34	Common Name	PA 333-34
Project	PA 34-06S-095W	Site	PA 43-34 Pad
Vertical Section Azimuth	238.27 (°)	North Reference	
Origin N/S	0.0 (ft)	Origin E/W	0.0 (ft)
Spud Date	8/29/2002	UWI	
Active Datum	KELLY BUSHING @5,189.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: MWD 0 - 7050

Survey Name	MWD 0 - 7050	Company	ANADRILL
Date Started	8/29/2002	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 (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
8/29/2002	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NORMAL	200.0	0.40	312.00	200.00	0.47	-0.52	0.20	0.20	0.20	0.00	312.00
8/30/2002	NORMAL	293.0	2.30	243.00	292.97	-0.16	-2.42	2.15	2.35	2.04	-74.19	-78.82
	NORMAL	381.0	4.80	230.00	380.80	-3.33	-6.82	7.55	2.97	2.84	-14.77	-24.41
	NORMAL	472.0	7.00	231.00	471.31	-9.27	-14.04	16.82	2.42	2.42	1.10	3.17
	NORMAL	562.0	8.25	230.00	560.51	-16.87	-23.25	28.65	1.40	1.39	-1.11	-6.56
	NORMAL	653.0	9.50	234.00	650.42	-25.48	-34.33	42.60	1.53	1.37	4.40	28.26
	NORMAL	743.0	9.50	239.00	739.19	-33.67	-46.71	57.43	0.92	0.00	5.56	92.47
	NORMAL	835.0	9.70	249.00	829.90	-40.36	-60.45	72.64	1.82	0.22	10.87	88.11
	NORMAL	925.0	9.20	254.00	918.68	-45.06	-74.44	87.02	1.07	-0.56	5.56	123.79
8/31/2002	NORMAL	1,017.0	10.20	248.00	1,009.37	-50.14	-89.07	102.13	1.54	1.09	-6.52	-48.30
	NORMAL	1,107.0	9.50	247.00	1,098.04	-56.03	-103.29	117.32	0.80	-0.78	-1.11	-166.76
	NORMAL	1,199.0	9.75	247.00	1,188.75	-62.04	-117.45	132.53	0.27	0.27	0.00	0.00
	NORMAL	1,288.0	10.25	244.00	1,276.40	-68.45	-131.51	147.85	0.81	0.56	-3.37	-47.66
	NORMAL	1,380.0	10.50	250.00	1,366.89	-74.91	-146.74	164.21	1.20	0.27	6.52	79.94
	NORMAL	1,505.0	11.30	250.00	1,489.64	-82.99	-168.95	187.35	0.64	0.64	0.00	0.00
9/1/2002	NORMAL	1,598.0	12.25	248.00	1,580.68	-89.81	-186.66	205.99	1.11	1.02	-2.15	-24.23
9/2/2002	NORMAL	1,812.0	13.75	248.00	1,789.19	-107.84	-231.30	253.44	0.70	0.70	0.00	0.00
	NORMAL	1,905.0	12.25	245.00	1,879.80	-116.15	-250.49	274.13	1.77	-1.61	-3.23	-157.23
	NORMAL	2,030.0	11.25	244.00	2,002.18	-127.10	-273.47	299.44	0.82	-0.80	-0.80	-168.98
9/3/2002	NORMAL	2,217.0	10.50	243.00	2,185.82	-142.83	-305.04	334.57	0.41	-0.40	-0.53	-166.37

## 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 (°)
9/3/2002	NORMAL	2,465.0	10.50	242.00	2,429.67	-163.70	-345.13	379.64	0.07	0.00	-0.40	-90.49
	NORMAL	2,717.0	10.20	246.00	2,677.57	-183.56	-385.79	424.66	0.31	-0.12	1.59	114.62
	NORMAL	2,904.0	10.00	246.00	2,861.67	-196.89	-415.75	457.16	0.11	-0.11	0.00	180.00
	NORMAL	3,029.0	9.20	245.00	2,984.92	-205.53	-434.72	477.83	0.65	-0.64	-0.80	-168.72
	NORMAL	3,217.0	8.50	241.00	3,170.68	-218.62	-460.49	506.64	0.50	-0.37	-2.13	-140.64
9/4/2002	NORMAL	3,406.0	8.25	241.00	3,357.67	-231.96	-484.57	534.14	0.13	-0.13	0.00	180.00
	NORMAL	3,526.0	8.25	243.00	3,476.43	-240.05	-499.77	551.32	0.24	0.00	1.67	90.99
	NORMAL	3,620.0	8.20	240.00	3,569.46	-246.46	-511.58	564.74	0.46	-0.05	-3.19	-98.13
	NORMAL	3,716.0	7.30	243.00	3,664.58	-252.65	-522.95	577.66	1.03	-0.94	3.13	157.28
	NORMAL	3,808.0	7.30	242.00	3,755.84	-258.05	-533.31	589.32	0.14	0.00	-1.09	-90.50
	NORMAL	3,901.0	7.00	245.00	3,848.11	-263.22	-543.67	600.84	0.51	-0.32	3.23	130.26
9/5/2002	NORMAL	3,993.0	6.20	244.00	3,939.50	-267.77	-553.21	611.35	0.88	-0.87	-1.09	-172.32
	NORMAL	3,993.0	6.20	244.00	3,939.50	-267.77	-553.21	611.35	0.00	0.00	0.00	0.00
	NORMAL	4,086.0	5.90	240.00	4,031.98	-272.36	-561.87	621.13	0.56	-0.32	-4.30	-127.41
	NORMAL	4,180.0	5.00	237.00	4,125.56	-277.00	-569.49	630.05	1.00	-0.96	-3.19	-163.92
	NORMAL	4,273.0	3.75	236.00	4,218.28	-280.91	-575.41	637.14	1.35	-1.34	-1.08	-177.01
	NORMAL	4,366.0	2.40	242.00	4,311.15	-283.53	-579.65	642.12	1.49	-1.45	6.45	169.57
9/6/2002	NORMAL	4,461.0	1.40	262.00	4,406.10	-284.62	-582.55	645.17	1.25	-1.05	21.05	156.18
	NORMAL	4,647.0	1.00	260.00	4,592.05	-285.22	-586.40	648.76	0.22	-0.22	-1.08	-175.02
	NORMAL	4,897.0	1.90	263.00	4,841.97	-286.11	-592.66	654.55	0.36	0.36	1.20	6.32
9/7/2002	NORMAL	5,083.0	2.40	221.00	5,027.85	-289.42	-598.28	661.07	0.87	0.27	-22.58	-94.13
	NORMAL	5,145.0	2.00	242.00	5,089.81	-290.91	-600.09	663.39	1.44	-0.65	33.87	126.63
9/8/2002	NORMAL	5,430.0	2.50	242.00	5,374.58	-296.16	-609.97	674.55	0.18	0.18	0.00	0.00
9/9/2002	NORMAL	5,948.0	2.00	232.00	5,892.18	-307.03	-627.06	694.81	0.12	-0.10	-1.93	-146.79
9/11/2002	NORMAL	6,450.0	1.75	237.00	6,393.91	-316.60	-640.40	711.18	0.06	-0.05	1.00	149.28
9/12/2002	NORMAL	7,050.0	3.00	190.00	6,993.44	-337.05	-650.81	730.80	0.37	0.21	-7.83	-82.29

## 2.2 Survey Name: MWD 0 - 0

Survey Name	MWD 0 - 0	Company	ANADRILL
Date Started	9/14/2002	Ended	
Tool Name	MWD	Engineer	

## 2.2.1 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

## 2.2.2 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 (°)
9/14/2002	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 2.3 Survey Name: PA 333-34 Gyro Survey 1.99 - 7051.99

Survey Name	PA 333-34 Gyro Survey 1.99 - 7051.99	Company	WILLIAMS COMPANIES, INC.
Date Started	7/29/2005	Ended	
Tool Name	MWD	Engineer	WILLIAMS COMPANIES, INC.

## 2.3.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
2.0	0.00	0.00	1.99	0.00	0.00

## 2.3.2 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 (°)
7/29/2005	Tie On	2.0	0.00	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NORMAL	27.0	0.06	246.93	26.99	-0.01	-0.01	0.01	0.24	0.24	0.00	246.93
	NORMAL	52.0	0.13	246.93	51.99	-0.02	-0.05	0.05	0.28	0.28	0.00	0.00
	NORMAL	77.0	0.19	246.93	76.99	-0.05	-0.11	0.12	0.24	0.24	0.00	0.00
	NORMAL	102.0	0.23	256.23	101.99	-0.08	-0.20	0.21	0.21	0.16	37.20	45.15
	NORMAL	127.0	0.34	330.31	126.99	-0.02	-0.29	0.26	1.42	0.44	296.32	112.70
	NORMAL	152.0	0.40	326.66	151.99	0.11	-0.37	0.26	0.26	0.24	-14.60	-23.28
	NORMAL	177.0	0.38	311.48	176.99	0.24	-0.48	0.28	0.42	-0.08	-60.72	-108.48
	NORMAL	202.0	0.40	308.85	201.99	0.35	-0.61	0.34	0.11	0.08	-10.52	-43.15
	NORMAL	227.0	0.61	264.68	226.99	0.39	-0.81	0.48	1.71	0.84	-176.68	-84.95
	NORMAL	252.0	1.25	254.25	251.98	0.31	-1.21	0.87	2.64	2.56	-41.72	-20.07
	NORMAL	277.0	1.99	243.26	276.97	0.04	-1.86	1.56	3.20	2.96	-43.96	-28.33
	NORMAL	302.0	2.55	240.45	301.95	-0.43	-2.73	2.55	2.28	2.24	-11.24	-12.65
	NORMAL	327.0	3.40	235.58	326.92	-1.13	-3.82	3.84	3.54	3.40	-19.48	-19.00
	NORMAL	352.0	4.04	233.20	351.87	-2.07	-5.14	5.46	2.63	2.56	-9.52	-14.75
	NORMAL	377.0	4.79	230.11	376.79	-3.27	-6.65	7.37	3.15	3.00	-12.36	-19.14
	NORMAL	402.0	5.37	229.71	401.69	-4.70	-8.34	9.56	2.32	2.32	-1.60	-3.69
	NORMAL	427.0	6.14	230.24	426.57	-6.31	-10.26	12.04	3.09	3.08	2.12	4.21
	NORMAL	452.0	6.86	230.58	451.41	-8.11	-12.44	14.85	2.88	2.88	1.36	3.23
	NORMAL	477.0	7.22	229.57	476.22	-10.08	-14.79	17.88	1.52	1.44	-4.04	-19.48
	NORMAL	502.0	7.35	230.10	501.02	-12.12	-17.21	21.02	0.59	0.52	2.12	27.60
	NORMAL	527.0	7.85	229.70	525.80	-14.25	-19.74	24.29	2.01	2.00	-1.60	-6.24
	NORMAL	552.0	8.02	230.09	550.56	-16.47	-22.38	27.70	0.71	0.68	1.56	17.77
	NORMAL	577.0	8.33	230.23	575.30	-18.75	-25.11	31.22	1.24	1.24	0.56	3.74
	NORMAL	602.0	8.61	231.82	600.03	-21.07	-27.97	34.87	1.46	1.12	6.36	40.70
	NORMAL	627.0	8.94	233.05	624.74	-23.39	-31.00	38.67	1.52	1.32	4.92	30.23
	NORMAL	652.0	9.20	234.94	649.42	-25.71	-34.19	42.60	1.58	1.04	7.56	49.83
	NORMAL	677.0	9.29	235.70	674.10	-27.99	-37.49	46.61	0.61	0.36	3.04	53.98
	NORMAL	702.0	9.28	236.40	698.77	-30.25	-40.83	50.64	0.45	-0.04	2.80	95.41
	NORMAL	727.0	9.38	237.90	723.44	-32.44	-44.24	54.69	1.05	0.40	6.00	68.39
	NORMAL	752.0	9.39	239.51	748.11	-34.56	-47.72	58.77	1.05	0.04	6.44	88.61
	NORMAL	777.0	9.39	242.66	772.77	-36.53	-51.29	62.84	2.06	0.00	12.60	91.55
	NORMAL	802.0	9.34	246.26	797.44	-38.29	-54.96	66.88	2.35	-0.20	14.40	96.65
	NORMAL	827.0	9.36	248.95	822.11	-39.83	-58.71	70.89	1.75	0.08	10.76	88.71
	NORMAL	852.0	9.36	249.86	846.77	-41.26	-62.52	74.88	0.59	0.00	3.64	90.45
	NORMAL	877.0	9.36	250.28	871.44	-42.65	-66.34	78.86	0.27	0.00	1.68	90.21
	NORMAL	902.0	9.39	250.27	896.11	-44.02	-70.18	82.84	0.12	0.12	-0.04	-3.11
	NORMAL	927.0	9.45	250.61	920.77	-45.39	-74.03	86.84	0.33	0.24	1.36	43.01
	NORMAL	952.0	9.50	250.44	945.43	-46.76	-77.91	90.86	0.23	0.20	-0.68	-29.32
	NORMAL	977.0	9.60	249.63	970.08	-48.18	-81.81	94.92	0.67	0.40	-3.24	-53.75
	NORMAL	1,002.0	9.73	248.46	994.73	-49.68	-85.73	99.05	0.94	0.52	-4.68	-57.08
	NORMAL	1,027.0	9.76	248.18	1,019.37	-51.25	-89.66	103.21	0.22	0.12	-1.12	-57.80
	NORMAL	1,052.0	9.78	247.41	1,044.00	-52.85	-93.59	107.40	0.53	0.08	-3.08	-81.68
	NORMAL	1,077.0	9.62	245.08	1,068.65	-54.54	-97.44	111.57	1.70	-0.64	-9.32	-113.32
	NORMAL	1,102.0	9.60	244.13	1,093.30	-56.33	-101.21	115.71	0.64	-0.08	-3.80	-97.66
	NORMAL	1,127.0	9.65	244.02	1,117.94	-58.16	-104.97	119.87	0.21	0.20	-0.44	-20.25
	NORMAL	1,152.0	9.63	244.16	1,142.59	-59.99	-108.74	124.04	0.12	-0.08	0.56	130.54
	NORMAL	1,177.0	9.68	244.15	1,167.24	-61.82	-112.51	128.21	0.20	0.20	-0.04	-1.93
	NORMAL	1,202.0	9.73	244.19	1,191.88	-63.66	-116.31	132.40	0.20	0.20	0.16	7.70
	NORMAL	1,227.0	9.85	244.22	1,216.51	-65.51	-120.13	136.63	0.48	0.48	0.12	2.45
	NORMAL	1,252.0	9.99	243.87	1,241.14	-67.39	-124.01	140.91	0.61	0.56	-1.40	-23.47
	NORMAL	1,277.0	9.97	244.30	1,265.76	-69.28	-127.90	145.22	0.31	-0.08	1.72	105.23
	NORMAL	1,302.0	10.10	243.98	1,290.38	-71.18	-131.82	149.56	0.57	0.52	-1.28	-23.37
	NORMAL	1,327.0	10.08	245.11	1,314.99	-73.07	-135.78	153.91	0.80	-0.08	4.52	96.32
	NORMAL	1,352.0	10.17	246.49	1,339.60	-74.87	-139.79	158.27	1.03	0.36	5.52	70.33
	NORMAL	1,377.0	10.32	247.49	1,364.21	-76.61	-143.88	162.66	0.93	0.60	4.00	50.35
	NORMAL	1,402.0	10.46	248.21	1,388.80	-78.30	-148.05	167.11	0.76	0.56	2.88	43.20

## 2.3.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (%/100ft)	Bulld Rate (%/100ft)	Turn (%/100ft)	TFace (°)
7/29/2005	NORMAL	1,427.0	10.49	248.77	1,413.38	-79.97	-152.28	171.58	0.42	0.12	2.24	73.86
	NORMAL	1,452.0	10.65	248.35	1,437.95	-81.65	-156.55	176.09	0.71	0.64	-1.68	-25.92
	NORMAL	1,477.0	10.93	248.65	1,462.51	-83.36	-160.91	180.70	1.14	1.12	1.20	11.49
	NORMAL	1,502.0	11.18	248.33	1,487.05	-85.12	-165.37	185.42	1.03	1.00	-1.28	-13.95
	NORMAL	1,527.0	11.32	248.41	1,511.57	-86.92	-169.90	190.22	0.56	0.56	0.32	6.40
	NORMAL	1,552.0	11.68	247.95	1,536.07	-88.77	-174.53	195.13	1.49	1.44	-1.84	-14.52
	NORMAL	1,577.0	12.09	247.91	1,560.53	-90.71	-179.30	200.20	1.64	1.64	-0.16	-1.17
	NORMAL	1,602.0	12.32	248.25	1,584.96	-92.68	-184.20	205.41	0.96	0.92	1.36	17.52
	NORMAL	1,627.0	12.66	247.80	1,609.37	-94.70	-189.21	210.74	1.41	1.36	-1.80	-16.19
	NORMAL	1,652.0	12.95	247.27	1,633.75	-96.82	-194.34	216.21	1.25	1.16	-2.12	-22.31
	NORMAL	1,677.0	13.00	247.57	1,658.11	-98.98	-199.52	221.75	0.34	0.20	1.20	53.56
	NORMAL	1,702.0	13.28	246.38	1,682.46	-101.20	-204.75	227.37	1.56	1.12	-4.76	-44.59
	NORMAL	1,727.0	13.37	245.53	1,706.79	-103.55	-210.01	233.08	0.86	0.36	-3.40	-65.74
	NORMAL	1,752.0	13.30	245.95	1,731.11	-105.92	-215.27	238.79	0.48	-0.28	1.68	126.06
	NORMAL	1,777.0	13.35	245.95	1,755.44	-108.26	-220.53	244.50	0.20	0.20	0.00	0.00
	NORMAL	1,802.0	13.38	245.63	1,779.76	-110.63	-225.80	250.23	0.32	0.12	-1.28	-68.08
	NORMAL	1,827.0	13.28	245.43	1,804.09	-113.02	-231.04	255.95	0.44	-0.40	-0.80	-155.34
	NORMAL	1,852.0	13.20	244.85	1,828.42	-115.43	-236.24	261.64	0.62	-0.32	-2.32	-121.34
	NORMAL	1,877.0	13.07	244.11	1,852.77	-117.88	-241.37	267.28	0.85	-0.52	-2.96	-128.07
	NORMAL	1,902.0	12.84	243.12	1,877.13	-120.37	-246.39	272.86	1.28	-0.92	-3.96	-136.50
	NORMAL	1,927.0	12.47	242.47	1,901.52	-122.87	-251.26	278.32	1.59	-1.48	-2.60	-159.27
	NORMAL	1,952.0	12.11	241.68	1,925.95	-125.36	-255.96	283.63	1.59	-1.44	-3.16	-155.35
	NORMAL	1,977.0	11.88	240.86	1,950.41	-127.86	-260.52	288.82	1.15	-0.92	-3.28	-143.86
	NORMAL	2,002.0	11.57	240.66	1,974.88	-130.34	-264.95	293.90	1.25	-1.24	-0.80	-172.63
	NORMAL	2,027.0	11.27	240.24	1,999.39	-132.78	-269.26	298.84	1.25	-1.20	-1.68	-164.71
	NORMAL	2,052.0	11.23	239.61	2,023.91	-135.22	-273.48	303.72	0.52	-0.16	-2.52	-108.34
	NORMAL	2,077.0	11.03	239.69	2,048.44	-137.66	-277.64	308.54	0.80	-0.80	0.32	175.62
	NORMAL	2,102.0	10.95	239.80	2,072.98	-140.06	-281.76	313.31	0.33	-0.32	0.44	165.37
	NORMAL	2,127.0	10.88	239.62	2,097.53	-142.45	-285.85	318.04	0.31	-0.28	-0.72	-154.13
	NORMAL	2,152.0	10.84	239.34	2,122.08	-144.84	-289.90	322.75	0.26	-0.16	-1.12	-127.31
	NORMAL	2,177.0	10.66	239.49	2,146.64	-147.22	-293.92	327.41	0.73	-0.72	0.60	171.24
	NORMAL	2,202.0	10.57	239.64	2,171.21	-149.55	-297.89	332.02	0.38	-0.36	0.60	163.01
	NORMAL	2,227.0	10.54	239.83	2,195.79	-151.86	-301.84	336.59	0.18	-0.12	0.76	130.85
	NORMAL	2,252.0	10.55	239.94	2,220.37	-154.15	-305.80	341.17	0.09	0.04	0.44	63.64
	NORMAL	2,277.0	10.74	239.26	2,244.94	-156.49	-309.78	345.78	0.91	0.76	-2.72	-33.80
	NORMAL	2,302.0	10.54	239.85	2,269.51	-158.83	-313.76	350.40	0.91	-0.80	2.36	151.71
	NORMAL	2,327.0	10.57	239.98	2,294.08	-161.12	-317.73	354.98	0.15	0.12	0.52	38.51
	NORMAL	2,352.0	10.55	239.91	2,318.66	-163.42	-321.69	359.56	0.10	-0.08	-0.28	-147.36
	NORMAL	2,377.0	10.51	239.93	2,343.24	-165.71	-325.64	364.12	0.16	-0.16	0.08	174.79
	NORMAL	2,402.0	10.43	239.91	2,367.82	-167.99	-329.58	368.66	0.32	-0.32	-0.08	-177.41
	NORMAL	2,427.0	10.40	239.70	2,392.41	-170.26	-333.48	373.18	0.19	-0.12	-0.84	-128.42
	NORMAL	2,452.0	10.43	239.86	2,417.00	-172.53	-337.39	377.70	0.17	0.12	0.64	44.03
	NORMAL	2,477.0	10.38	239.92	2,441.59	-174.80	-341.29	382.21	0.20	-0.20	0.24	167.80
	NORMAL	2,502.0	10.34	239.93	2,466.18	-177.05	-345.18	386.71	0.16	-0.16	0.04	177.43
	NORMAL	2,527.0	10.36	239.74	2,490.77	-179.31	-349.07	391.20	0.16	0.08	-0.76	-59.73
	NORMAL	2,552.0	10.31	240.12	2,515.37	-181.56	-352.95	395.68	0.34	-0.20	1.52	126.44
	NORMAL	2,577.0	10.33	240.04	2,539.96	-183.79	-356.83	400.16	0.10	0.08	-0.32	-35.66
	NORMAL	2,602.0	10.17	240.67	2,564.57	-185.99	-360.70	404.60	0.78	-0.64	2.52	145.29
	NORMAL	2,627.0	10.16	240.58	2,589.17	-188.15	-364.54	409.01	0.08	-0.04	-0.36	-122.24
	NORMAL	2,652.0	10.11	240.95	2,613.78	-190.30	-368.38	413.40	0.33	-0.20	1.48	127.70
	NORMAL	2,677.0	10.16	241.23	2,638.39	-192.43	-372.23	417.80	0.28	0.20	1.12	44.72
	NORMAL	2,702.0	10.21	241.05	2,663.00	-194.56	-376.10	422.21	0.24	0.20	-0.72	-32.57
	NORMAL	2,727.0	10.04	242.06	2,687.61	-196.66	-379.97	426.60	0.98	-0.68	4.04	134.25
	NORMAL	2,752.0	10.03	242.38	2,712.23	-198.69	-383.82	430.95	0.23	-0.04	1.28	100.32
	NORMAL	2,777.0	10.01	242.53	2,736.85	-200.70	-387.68	435.28	0.13	-0.08	0.60	127.54
	NORMAL	2,802.0	10.04	242.97	2,761.46	-202.69	-391.55	439.62	0.33	0.12	1.76	68.83
	NORMAL	2,827.0	10.06	243.27	2,786.08	-204.66	-395.44	443.97	0.22	0.08	1.20	69.24

## 2.3.2 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 (°)
7/29/2005	NORMAL	2,852.0	9.94	243.78	2,810.70	-206.60	-399.32	448.29	0.60	-0.48	2.04	143.82
	NORMAL	2,877.0	9.94	243.87	2,835.32	-208.50	-403.20	452.59	0.06	0.00	0.36	90.04
	NORMAL	2,902.0	9.96	243.85	2,859.95	-210.41	-407.07	456.89	0.08	0.08	-0.08	-9.81
	NORMAL	2,927.0	9.94	244.13	2,884.57	-212.30	-410.96	461.19	0.21	-0.08	1.12	112.60
	NORMAL	2,952.0	9.82	244.16	2,909.20	-214.17	-414.82	465.45	0.48	-0.48	0.12	177.56
	NORMAL	2,977.0	9.45	243.17	2,933.85	-216.03	-418.57	469.62	1.62	-1.48	-3.96	-156.36
	NORMAL	3,002.0	9.07	241.85	2,958.52	-217.88	-422.14	473.63	1.74	-1.52	-5.28	-151.45
	NORMAL	3,027.0	9.02	241.63	2,983.21	-219.74	-425.60	477.55	0.24	-0.20	-0.88	-145.44
	NORMAL	3,052.0	9.04	241.42	3,007.90	-221.61	-429.05	481.47	0.15	0.08	-0.84	-58.85
	NORMAL	3,077.0	8.86	241.16	3,032.60	-223.48	-432.46	485.35	0.74	-0.72	-1.04	-167.46
	NORMAL	3,102.0	8.79	240.80	3,057.30	-225.34	-435.81	489.19	0.36	-0.28	-1.44	-141.90
	NORMAL	3,127.0	8.57	241.22	3,082.02	-227.17	-439.11	492.95	0.92	-0.88	1.68	164.14
	NORMAL	3,152.0	8.68	240.69	3,106.73	-228.99	-442.39	496.70	0.54	0.44	-2.12	-36.11
	NORMAL	3,177.0	9.49	237.07	3,131.42	-231.04	-445.76	500.64	3.96	3.24	-14.48	-37.01
	NORMAL	3,202.0	8.58	239.93	3,156.11	-233.09	-449.11	504.57	4.06	-3.64	11.44	155.14
	NORMAL	3,227.0	8.46	239.44	3,180.83	-234.96	-452.31	508.27	0.56	-0.48	-1.96	-149.07
	NORMAL	3,252.0	8.42	239.87	3,205.56	-236.81	-455.47	511.94	0.30	-0.16	1.72	122.58
	NORMAL	3,277.0	8.49	239.54	3,230.29	-238.67	-458.65	515.61	0.34	0.28	-1.32	-34.89
	NORMAL	3,302.0	8.31	239.34	3,255.02	-240.53	-461.79	519.27	0.73	-0.72	-0.80	-170.88
	NORMAL	3,327.0	8.19	238.66	3,279.76	-242.37	-464.87	522.85	0.62	-0.48	-2.72	-141.22
	NORMAL	3,352.0	8.14	238.94	3,304.51	-244.21	-467.90	526.40	0.26	-0.20	1.12	141.64
	NORMAL	3,377.0	8.18	239.06	3,329.26	-246.04	-470.94	529.95	0.17	0.16	0.48	23.12
	NORMAL	3,402.0	8.18	239.05	3,354.00	-247.87	-474.00	533.51	0.01	0.00	-0.04	-90.00
	NORMAL	3,427.0	8.04	239.22	3,378.75	-249.68	-477.02	537.03	0.57	-0.56	0.68	170.36
	NORMAL	3,452.0	8.03	239.00	3,403.51	-251.47	-480.02	540.53	0.13	-0.04	-0.88	-108.12
	NORMAL	3,477.0	8.05	239.02	3,428.26	-253.27	-483.02	544.03	0.08	0.08	0.08	7.97
	NORMAL	3,502.0	8.16	239.29	3,453.01	-255.08	-486.04	547.55	0.47	0.44	1.08	19.22
	NORMAL	3,527.0	8.12	238.79	3,477.76	-256.90	-489.08	551.09	0.33	-0.16	-2.00	-119.71
	NORMAL	3,552.0	8.03	238.58	3,502.51	-258.73	-492.08	554.60	0.38	-0.36	-0.84	-161.96
	NORMAL	3,577.0	8.07	238.36	3,527.26	-260.56	-495.06	558.10	0.20	0.16	-0.88	-37.71
	NORMAL	3,602.0	8.00	238.02	3,552.02	-262.40	-498.03	561.60	0.34	-0.28	-1.36	-145.99
	NORMAL	3,627.0	8.05	237.26	3,576.77	-264.27	-500.98	565.09	0.47	0.20	-3.04	-65.14
	NORMAL	3,652.0	7.91	236.75	3,601.53	-266.16	-503.89	568.56	0.63	-0.56	-2.04	-153.43
	NORMAL	3,677.0	7.87	236.37	3,626.30	-268.05	-506.76	571.99	0.26	-0.16	-1.52	-127.67
	NORMAL	3,702.0	7.68	236.55	3,651.07	-269.92	-509.58	575.37	0.77	-0.76	0.72	172.79
	NORMAL	3,727.0	7.37	236.78	3,675.85	-271.72	-512.31	578.64	1.25	-1.24	0.92	174.56
	NORMAL	3,752.0	7.18	237.88	3,700.65	-273.42	-514.98	581.80	0.94	-0.76	4.40	144.30
	NORMAL	3,777.0	7.23	238.07	3,725.45	-275.09	-517.63	584.94	0.22	0.20	0.76	25.58
	NORMAL	3,802.0	7.22	237.97	3,750.25	-276.75	-520.30	588.08	0.06	-0.04	-0.40	-128.54
	NORMAL	3,827.0	7.23	237.89	3,775.05	-278.42	-522.97	591.23	0.06	0.04	-0.32	-45.21
	NORMAL	3,852.0	7.25	238.72	3,799.85	-280.08	-525.65	594.38	0.43	0.08	3.32	79.59
	NORMAL	3,877.0	7.09	239.36	3,824.66	-281.68	-528.32	597.50	0.72	-0.64	2.56	153.79
	NORMAL	3,902.0	6.74	239.90	3,849.48	-283.20	-530.92	600.51	1.42	-1.40	2.16	169.74
	NORMAL	3,927.0	6.71	240.54	3,874.31	-284.66	-533.46	603.43	0.32	-0.12	2.56	112.13
	NORMAL	3,952.0	6.64	240.65	3,899.14	-286.09	-535.99	606.34	0.28	-0.28	0.44	169.70
	NORMAL	3,977.0	6.38	240.68	3,923.97	-287.47	-538.46	609.17	1.04	-1.04	0.12	179.27
	NORMAL	4,002.0	6.10	240.54	3,948.83	-288.81	-540.83	611.88	1.12	-1.12	-0.56	-176.96
	NORMAL	4,027.0	5.99	239.90	3,973.69	-290.11	-543.11	614.51	0.52	-0.44	-2.56	-148.82
	NORMAL	4,052.0	5.92	239.38	3,998.55	-291.43	-545.35	617.11	0.35	-0.28	-2.08	-142.64
	NORMAL	4,077.0	5.81	238.21	4,023.42	-292.75	-547.54	619.66	0.65	-0.44	-4.68	-133.20
	NORMAL	4,102.0	5.75	236.65	4,048.29	-294.10	-549.66	622.18	0.67	-0.24	-6.24	-111.68
	NORMAL	4,127.0	5.72	236.05	4,073.17	-295.49	-551.74	624.68	0.27	-0.12	-2.40	-116.88
	NORMAL	4,152.0	5.51	233.81	4,098.05	-296.89	-553.74	627.12	1.21	-0.84	-8.96	-134.89
	NORMAL	4,177.0	5.28	233.04	4,122.94	-298.29	-555.63	629.46	0.96	-0.92	-3.08	-162.91
	NORMAL	4,202.0	5.01	231.95	4,147.84	-299.66	-557.41	631.69	1.15	-1.08	-4.36	-160.64
	NORMAL	4,227.0	4.79	231.00	4,172.75	-300.99	-559.08	633.81	0.94	-0.88	-3.80	-160.23
	NORMAL	4,252.0	4.27	230.25	4,197.67	-302.24	-560.60	635.77	2.09	-2.08	-3.00	-173.87

## 2.3.2 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 (°)
7/29/2005	NORMAL	4,277.0	3.84	231.46	4,222.61	-303.36	-561.98	637.52	1.75	-1.72	4.84	169.35
	NORMAL	4,302.0	3.65	231.83	4,247.55	-304.37	-563.26	639.14	0.77	-0.76	1.48	172.94
	NORMAL	4,327.0	3.39	232.05	4,272.50	-305.32	-564.46	640.67	1.04	-1.04	0.88	177.14
	NORMAL	4,352.0	3.05	231.50	4,297.46	-306.18	-565.57	642.06	1.37	-1.36	-2.20	-175.08
	NORMAL	4,377.0	2.39	230.01	4,322.44	-306.93	-566.49	643.24	2.65	-2.64	-5.96	-174.63
	NORMAL	4,402.0	2.34	233.24	4,347.42	-307.57	-567.30	644.26	0.57	-0.20	12.92	112.17
	NORMAL	4,427.0	2.18	232.29	4,372.40	-308.17	-568.08	645.24	0.66	-0.64	-3.80	-167.30
	NORMAL	4,452.0	1.88	232.92	4,397.38	-308.71	-568.78	646.13	1.20	-1.20	2.52	176.06
	NORMAL	4,477.0	1.38	237.65	4,422.37	-309.12	-569.37	646.84	2.07	-2.00	18.92	167.29
	NORMAL	4,502.0	1.20	246.75	4,447.36	-309.38	-569.86	647.40	1.09	-0.72	36.40	135.79
	NORMAL	4,527.0	0.98	258.70	4,472.36	-309.53	-570.31	647.85	1.26	-0.88	47.80	139.93
	NORMAL	4,552.0	0.90	264.96	4,497.36	-309.59	-570.72	648.23	0.52	-0.32	25.04	131.02
	NORMAL	4,577.0	0.93	271.67	4,522.35	-309.60	-571.11	648.58	0.44	0.12	26.84	77.73
	NORMAL	4,602.0	0.97	272.83	4,547.35	-309.58	-571.53	648.92	0.18	0.16	4.64	26.26
	NORMAL	4,627.0	0.93	275.89	4,572.35	-309.55	-571.94	649.25	0.26	-0.16	12.24	129.78
	NORMAL	4,652.0	0.97	273.02	4,597.34	-309.52	-572.35	649.59	0.25	0.16	-11.48	-51.39
	NORMAL	4,677.0	0.94	274.55	4,622.34	-309.49	-572.77	649.93	0.16	-0.12	6.12	140.40
	NORMAL	4,702.0	0.95	277.15	4,647.33	-309.45	-573.18	650.25	0.18	0.04	10.40	78.17
	NORMAL	4,727.0	1.03	267.02	4,672.33	-309.43	-573.61	650.61	0.77	0.32	-40.52	-70.56
	NORMAL	4,752.0	1.07	265.08	4,697.33	-309.47	-574.07	651.02	0.21	0.16	-7.76	-42.60
	NORMAL	4,777.0	1.20	259.34	4,722.32	-309.53	-574.56	651.47	0.69	0.52	-22.96	-44.07
	NORMAL	4,802.0	1.39	249.69	4,747.32	-309.69	-575.10	652.01	1.15	0.76	-38.60	-53.83
	NORMAL	4,827.0	1.44	250.01	4,772.31	-309.90	-575.68	652.62	0.20	0.20	1.28	9.14
	NORMAL	4,852.0	1.44	249.67	4,797.30	-310.12	-576.27	653.23	0.03	0.00	-1.36	-90.17
	NORMAL	4,877.0	1.49	248.35	4,822.29	-310.35	-576.86	653.86	0.24	0.20	-5.28	-34.68
	NORMAL	4,902.0	1.48	248.90	4,847.28	-310.58	-577.47	654.50	0.07	-0.04	2.20	125.33
	NORMAL	4,927.0	1.50	249.78	4,872.27	-310.81	-578.08	655.14	0.12	0.08	3.52	49.29
	NORMAL	4,952.0	1.57	247.58	4,897.27	-311.05	-578.70	655.79	0.37	0.28	-8.80	-41.20
	NORMAL	4,977.0	1.57	248.13	4,922.26	-311.31	-579.33	656.47	0.06	0.00	2.20	90.27
	NORMAL	5,002.0	1.63	247.21	4,947.25	-311.58	-579.98	657.16	0.26	0.24	-3.68	-23.64
	NORMAL	5,027.0	1.69	242.31	4,972.24	-311.89	-580.63	657.88	0.62	0.24	-19.60	-69.55
	NORMAL	5,052.0	1.85	230.79	4,997.22	-312.31	-581.27	658.64	1.56	0.64	-46.08	-71.62
	NORMAL	5,077.0	1.90	226.23	5,022.21	-312.86	-581.89	659.45	0.63	0.20	-18.24	-73.76
	NORMAL	5,102.0	2.00	226.30	5,047.20	-313.44	-582.50	660.28	0.40	0.40	0.28	1.40
	NORMAL	5,127.0	2.04	224.38	5,072.18	-314.06	-583.13	661.14	0.31	0.16	-7.68	-60.38
	NORMAL	5,152.0	2.02	225.86	5,097.16	-314.69	-583.75	662.00	0.22	-0.08	5.92	111.62
	NORMAL	5,177.0	1.96	230.59	5,122.15	-315.27	-584.40	662.86	0.70	-0.24	18.92	112.42
	NORMAL	5,202.0	1.81	237.47	5,147.14	-315.75	-585.06	663.68	1.08	-0.60	27.52	126.94
	NORMAL	5,227.0	1.85	237.93	5,172.12	-316.18	-585.74	664.47	0.17	0.16	1.84	20.40
	NORMAL	5,252.0	1.85	236.95	5,197.11	-316.61	-586.42	665.28	0.13	0.00	-3.92	-90.49
	NORMAL	5,277.0	1.89	237.39	5,222.10	-317.05	-587.10	666.10	0.17	0.16	1.76	19.97
	NORMAL	5,302.0	1.88	237.26	5,247.08	-317.50	-587.80	666.92	0.04	-0.04	-0.52	-156.91
	NORMAL	5,327.0	1.93	237.31	5,272.07	-317.95	-588.50	667.75	0.20	0.20	0.20	1.93
	NORMAL	5,352.0	1.94	237.97	5,297.05	-318.40	-589.21	668.59	0.10	0.04	2.64	66.16
	NORMAL	5,377.0	2.00	236.77	5,322.04	-318.86	-589.93	669.45	0.29	0.24	-4.80	-35.11
	NORMAL	5,402.0	2.04	235.37	5,347.02	-319.35	-590.66	670.33	0.25	0.16	-5.60	-51.67
	NORMAL	5,427.0	2.05	233.23	5,372.01	-319.87	-591.39	671.22	0.31	0.04	-8.56	-83.61
	NORMAL	5,452.0	2.09	227.44	5,396.99	-320.45	-592.08	672.12	0.85	0.16	-23.16	-82.07
	NORMAL	5,477.0	2.07	225.63	5,421.98	-321.07	-592.74	673.01	0.27	-0.08	-7.24	-107.84
	NORMAL	5,502.0	2.14	224.18	5,446.96	-321.72	-593.39	673.90	0.35	0.28	-5.80	-37.99
	NORMAL	5,527.0	2.20	222.27	5,471.94	-322.41	-594.04	674.81	0.38	0.24	-7.64	-51.28
	NORMAL	5,552.0	2.28	222.10	5,496.92	-323.14	-594.69	675.75	0.32	0.32	-0.68	-4.83
	NORMAL	5,577.0	2.29	219.14	5,521.90	-323.89	-595.34	676.70	0.47	0.04	-11.84	-86.64
	NORMAL	5,602.0	2.33	218.15	5,546.88	-324.68	-595.97	677.65	0.23	0.16	-3.96	-45.43
	NORMAL	5,627.0	2.33	217.80	5,571.86	-325.48	-596.60	678.60	0.06	0.00	-1.40	-90.17
	NORMAL	5,652.0	2.38	217.11	5,596.84	-326.30	-597.22	679.56	0.23	0.20	-2.76	-29.90
	NORMAL	5,677.0	2.37	213.84	5,621.82	-327.14	-597.82	680.52	0.54	-0.04	-13.08	-95.85

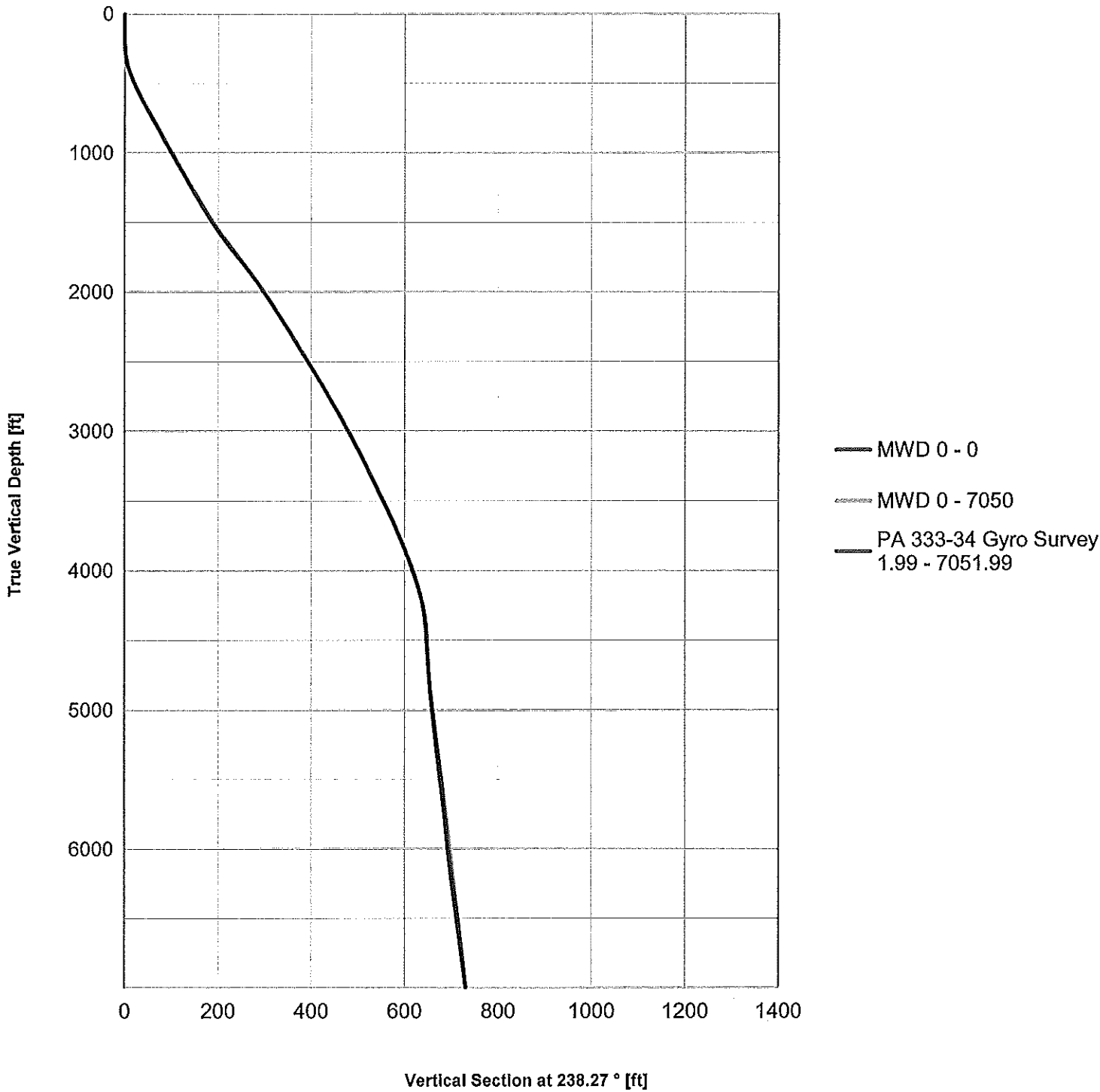


## 2.3.2 Survey Stations (Continued)

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 (°)
7/29/2005	NORMAL	5,702.0	2.31	213.17	5,646.80	-327.99	-598.38	681.44	0.26	-0.24	-2.68	-155.82
	NORMAL	5,727.0	2.25	211.91	5,671.78	-328.83	-598.92	682.34	0.31	-0.24	-5.04	-140.75
	NORMAL	5,752.0	2.21	212.68	5,696.76	-329.65	-599.44	683.22	0.20	-0.16	3.08	143.55
	NORMAL	5,777.0	2.30	211.13	5,721.74	-330.49	-599.96	684.10	0.43	0.36	-6.20	-34.90
	NORMAL	5,802.0	2.25	209.02	5,746.72	-331.35	-600.46	684.97	0.39	-0.20	-8.44	-121.89
	NORMAL	5,827.0	2.22	207.86	5,771.70	-332.20	-600.92	685.82	0.22	-0.12	-4.64	-124.13
	NORMAL	5,852.0	2.02	203.53	5,796.68	-333.04	-601.32	686.60	1.02	-0.80	-17.32	-143.46
	NORMAL	5,877.0	2.10	206.43	5,821.67	-333.85	-601.70	687.35	0.53	0.32	11.60	53.95
	NORMAL	5,902.0	2.12	203.65	5,846.65	-334.68	-602.09	688.12	0.42	0.08	-11.12	-80.33
	NORMAL	5,927.0	2.22	203.47	5,871.63	-335.55	-602.47	688.90	0.40	0.40	-0.72	-3.99
	NORMAL	5,952.0	2.16	203.56	5,896.61	-336.43	-602.85	689.68	0.24	-0.24	0.36	176.76
	NORMAL	5,977.0	2.14	203.21	5,921.60	-337.29	-603.22	690.45	0.10	-0.08	-1.40	-146.89
	NORMAL	6,002.0	2.14	202.38	5,946.58	-338.15	-603.59	691.21	0.12	0.00	-3.32	-90.41
	NORMAL	6,027.0	2.25	202.06	5,971.56	-339.04	-603.95	691.98	0.44	0.44	-1.28	-6.52
	NORMAL	6,052.0	2.30	204.38	5,996.54	-339.95	-604.34	692.80	0.42	0.20	9.28	62.66
	NORMAL	6,077.0	2.30	203.53	6,021.52	-340.86	-604.75	693.62	0.14	0.00	-3.40	-90.42
	NORMAL	6,102.0	2.35	203.52	6,046.50	-341.79	-605.15	694.46	0.20	0.20	-0.04	-0.47
	NORMAL	6,127.0	2.41	202.33	6,071.48	-342.75	-605.56	695.30	0.31	0.24	-4.76	-40.07
	NORMAL	6,152.0	2.48	203.26	6,096.45	-343.73	-605.97	696.17	0.32	0.28	3.72	30.01
	NORMAL	6,177.0	2.53	203.72	6,121.43	-344.74	-606.40	697.07	0.22	0.20	1.84	22.13
	NORMAL	6,202.0	2.48	205.07	6,146.41	-345.73	-606.86	697.98	0.31	-0.20	5.40	130.95
	NORMAL	6,227.0	2.55	206.91	6,171.38	-346.72	-607.34	698.91	0.43	0.28	7.36	50.00
	NORMAL	6,252.0	2.55	208.30	6,196.36	-347.70	-607.85	699.86	0.25	0.00	5.56	90.69
	NORMAL	6,277.0	2.57	207.97	6,221.33	-348.69	-608.38	700.83	0.10	0.08	-1.32	-36.55
	NORMAL	6,302.0	2.68	208.87	6,246.31	-349.69	-608.92	701.82	0.47	0.44	3.60	20.99
	NORMAL	6,327.0	2.67	209.62	6,271.28	-350.71	-609.49	702.84	0.15	-0.04	3.00	106.32
	NORMAL	6,352.0	2.74	210.15	6,296.25	-351.73	-610.08	703.88	0.30	0.28	2.12	19.93
	NORMAL	6,377.0	2.69	207.92	6,321.22	-352.77	-610.66	704.91	0.47	-0.20	-8.92	-116.44
	NORMAL	6,402.0	2.59	210.37	6,346.20	-353.78	-611.22	705.92	0.60	-0.40	9.80	132.77
	NORMAL	6,427.0	2.68	209.06	6,371.17	-354.77	-611.79	706.93	0.43	0.36	-5.24	-34.44
	NORMAL	6,452.0	2.65	206.76	6,396.14	-355.80	-612.33	707.93	0.44	-0.12	-9.20	-106.82
	NORMAL	6,477.0	2.78	208.95	6,421.12	-356.85	-612.88	708.95	0.67	0.52	8.76	39.69
	NORMAL	6,500.0	2.71	203.46	6,444.09	-357.83	-613.37	709.88	1.18	-0.30	-23.87	-107.64
	NORMAL	7,052.0	3.00	190.00	6,995.41	-384.03	-621.07	730.21	0.13	0.05	-2.44	-73.43

3 Charts

3.1 Vertical Section View





## 3.2 Plan View

