

2" = 100'

FEET MD

COMPANY : Carrizo Oil and Gas  
 WELL : Timbro Ranch 1-41-9-59  
 FIELD : Wildcat  
 COUNTY : Weld  
 STATE : Colorado  
 COUNTRY : U.S.A.  
 UWI : 05 123 34438 01

COMPANY : Carrizo Oil and Gas  
 WELL : Timbro Ranch 1-41-9-59  
 FIELD : Wildcat  
 COUNTY : Weld  
 STATE : Colorado  
 COUNTRY : U.S.A.  
 UWI : 05 123 34438 01

WELL LOCATION  
 LAT:40°47'12.444"N LONG:103°55'7.860"W  
 N:1533377.37 Ft E:3437830.84 Ft  
 SEC:1 TWP:9N RANGE:59W

OTHER SERVICES  
 DIRECTIONAL  
 ROP  
 PRT  
 CONDUCTIVITY  
 FETR

DEPTH REF. : RKB  
 REF. HEIGHT : 17.000 Ft  
 GROUND LEVEL : 4893.500 ft  
 RKB to Ground Level  
 G.L. to Mean Sea Level

BOREHOLE RECORD

DEVIATION RECORD

HOLE SIZE in	FROM Ft	TO Ft	INCLINATION deg	FROM Ft	TO Ft
12.25	0	1447	0 - 4	0	5380
8.75	1447	6104	4 - 59	5380	6104
6.125	6104		59 - 77	6104	6239
			77 - 93	6239	
CASING RECORD					
CASING SIZE in	FROM Ft	TO Ft			
9 5/8	0	1437			
7	0	5819			

DRILLING CO. : Xtreme  
 RIG : 19  
 LMD UNIT NO. : C70  
 SPUD DATE : 02/02/2012  
 LMD START DATE : 02/09/2012  
 LMD END DATE :  
 DISTRICT : Casper  
 DEPTH : 4897 Ft  
 DEPTH :  
 TOTAL DEPTH :

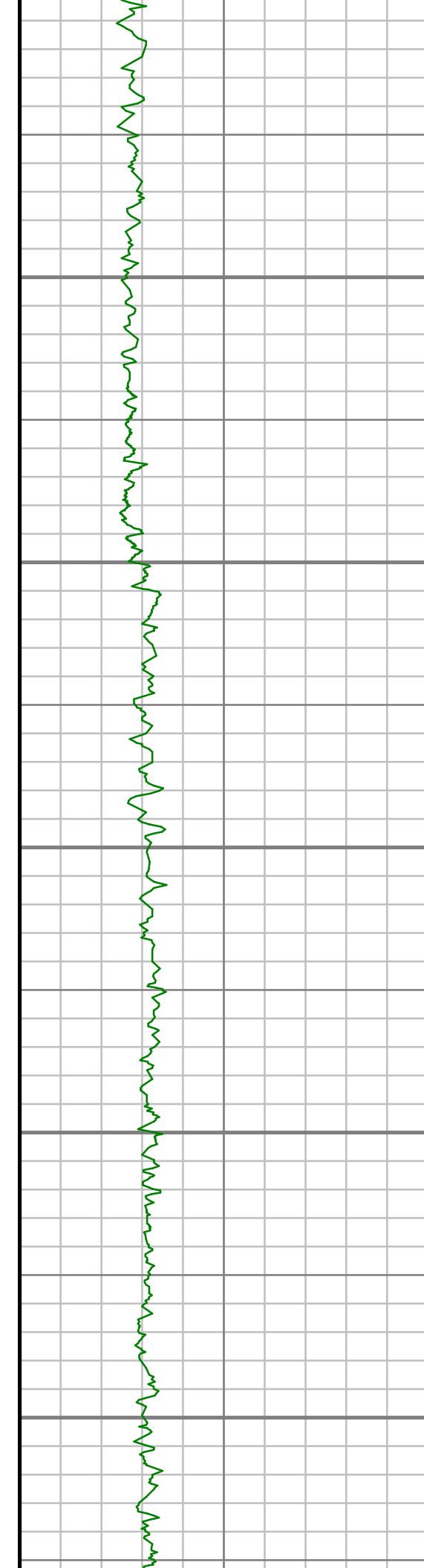
Run Data

RUN NUMBER	2	3	4	5	6	7
START DATE	02/09/2012	02/11/2012	02/11/2012	02/14/2012	02/14/2012	02/16/2012
START TIME	12:00	07:00	23:00	06:00	19:00	00:30
END DATE	02/11/2012	02/11/2012	02/12/2012	02/14/2012	02/15/2012	02/16/2012
END TIME	04:00	19:30	23:00	18:00	23:00	12:00
DEPTH IN (ft)	4900	5756	5860	6104	6104	6104
DEPTH OUT (ft)	5756	5860	6104	6104	6104	6239
LOG TOP (ft)	4897	5689	5821	6065	6065	6065
LOG BOTTOM (ft)	5689	5821	6065	6065	6065	6195
HOLE SIZE (in)	8.75	8.75	8.75	6.125	6.125	6.125
MUD DATA @ (ft)	5756	5756	5860	6104	6104	6104
MUD TYPE	WATER BASED	WATER BASED	WATER BASED	WATER BASED	WATER BASED	WATER BASED
DENSITY (lb / gal)	9.5	9.5	9.1	9.4	9.7	9.7
VISCOSITY (s / qt)	48	42	42	44	48	48
pH	10	10	10	11	11	11
FLUID LOSS (cm3 / 30)	-	-	-	-	-	-
SALINITY (ppm)	-	-	-	-	-	-
Rm (ohmm @ deg F)	-	-	-	-	-	-
Rmf (ohmm @ deg F)	-	-	-	-	-	-
MAX TEMP (deg F)	164	163	181	161	176	164
Rm @ MAX TEMP (ohmm)	-	-	-	-	-	-
LWD ENGINEER #1	M. SCHUSTER	M. SCHUSTER	M. SCHUSTER	M. SCHUSTER	M. SCHUSTER	M. SCHUSTER
LWD ENGINEER #2	K. EDWARDS	K. EDWARDS	K. EDWARDS	K. EDWARDS	K. EDWARDS	K. EDWARDS
LWD ENGINEER #3	-	-	-	-	-	-

Run Data						
RUN NUMBER	8	9				
START DATE	02/16/2012	02/21/2012				
START TIME	18:00	02:00				
END DATE	02/20/2012					
END TIME	17:00					
DEPTH IN (ft)	6239	8977				
DEPTH OUT (ft)	8977					
LOG TOP (ft)	6195	8937				
LOG BOTTOM (ft)	8937					
HOLE SIZE (in)	6.125	6.125				
MUD DATA @ (ft)	8712					
MUD TYPE	WATER BASED	WATER BASED				
DENSITY (lb / gal)	9.7					
VISCOSITY (s / qt)	56					
pH	11					
FLUID LOSS (cm3 / 30)	-	-				
SALINITY (ppm)	-	-				
Rm (ohmm @ deg F)	-	-				
Rmf (ohmm @ deg F)	-	-				
MAX TEMP (deg F)	175					
Rm @ MAX TEMP (ohmm)	-	-				
LWD ENGINEER #1	M. SCHUSTER	M. SCHUSTER				
LWD ENGINEER #2	K. EDWARDS	K. EDWARDS				
LWD ENGINEER #3	-	-				

Remarks
CARRIZO OIL AND GAS PRODUCTION AFE# 311170
SCIENTIFIC DRILLING INTERNATIONAL JOB# 41HMP1202154
SCIENTIFIC DRILLING INTERNATIONAL WO# 156214
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO GAMMA RAY CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO ROP CURVE
NO LOGGING COLLECTED FROM RUN #1 - SURVEY SERVICES ONLY FOR PILOT HOLE
RUN # 2: MWD/GAMMA RAY LOGGING RUN
SENSOR S/N: CONTROLLER = 552/ MWD EYE = 566/ GAMMA RAY = 151
BIT TO SENSOR OFFSETS: SURVEY = 49 FT/ GAMMA RAY = 39 FT
RUN # 3: MWD/GAMMA RAY LOGGING RUN
SENSOR S/N: CONTROLLER = 552/ MWD EYE = 566/ GAMMA RAY = 151
BIT TO SENSOR OFFSETS: SURVEY = 49 FT/ GAMMA RAY = 40 FT
RUN # 4: MWD/GAMMA RAY LOGGING RUN
SENSOR S/N: CONTROLLER = 552/ MWD EYE = 566/ GAMMA RAY = 151
BIT TO SENSOR OFFSETS: SURVEY = 48 FT/ GAMMA RAY = 39 FT
RUN # 5: MWD/GAMMA RAY LOGGING RUN
SENSOR S/N: CONTROLLER = 552/ MWD EYE = 566/ GAMMA RAY = 151





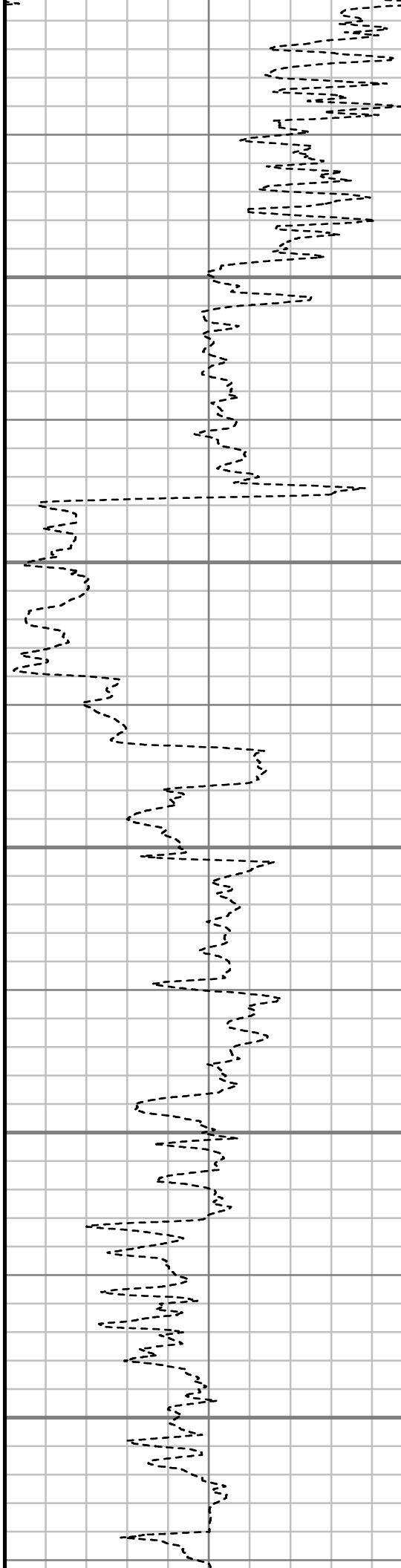
5100

5200

5300

5400

5500



MD: 5058.00 ft Inc: 2.64 deg  
Az: 266.83 deg TVD: 5052.54 ft  
VS: 5.92 ft

MD: 5143.00 ft Inc: 2.20 deg  
Az: 269.73 deg TVD: 5137.46 ft  
VS: 6.18 ft

MD: 5167.00 ft Inc: 2.20 deg  
Az: 263.49 deg TVD: 5161.45 ft  
VS: 6.28 ft

MD: 5182.00 ft Inc: 2.46 deg  
Az: 247.32 deg TVD: 5176.43 ft  
VS: 6.46 ft

MD: 5197.00 ft Inc: 3.08 deg  
Az: 229.83 deg TVD: 5191.42 ft  
VS: 6.97 ft

MD: 5212.00 ft Inc: 3.96 deg  
Az: 212.52 deg TVD: 5206.39 ft  
VS: 7.59 ft

MD: 5227.00 ft Inc: 5.45 deg  
Az: 205.84 deg TVD: 5221.34 ft  
VS: 8.69 ft

MD: 5252.00 ft Inc: 6.33 deg  
Az: 199.95 deg TVD: 5246.21 ft  
VS: 11.09 ft

MD: 5294.00 ft Inc: 6.33 deg  
Az: 195.82 deg TVD: 5287.95 ft  
VS: 15.56 ft

MD: 5336.00 ft Inc: 5.80 deg  
Az: 194.50 deg TVD: 5329.71 ft  
VS: 19.88 ft

MD: 5379.00 ft Inc: 5.98 deg  
Az: 187.03 deg TVD: 5372.49 ft  
VS: 24.24 ft

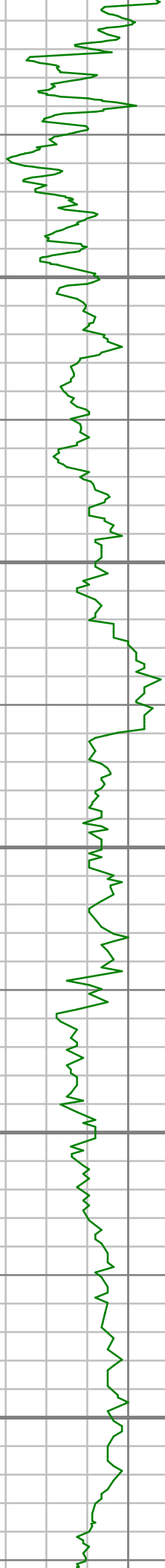
MD: 5422.00 ft Inc: 9.67 deg  
Az: 178.85 deg TVD: 5415.08 ft  
VS: 30.08 ft

MD: 5463.00 ft Inc: 11.59 deg  
Az: 173.59 deg TVD: 5455.38 ft  
VS: 37.59 ft

MD: 5506.00 ft Inc: 15.04 deg  
Az: 174.55 deg TVD: 5497.21 ft  
VS: 47.38 ft

MD: 5548.00 ft Inc: 18.29 deg





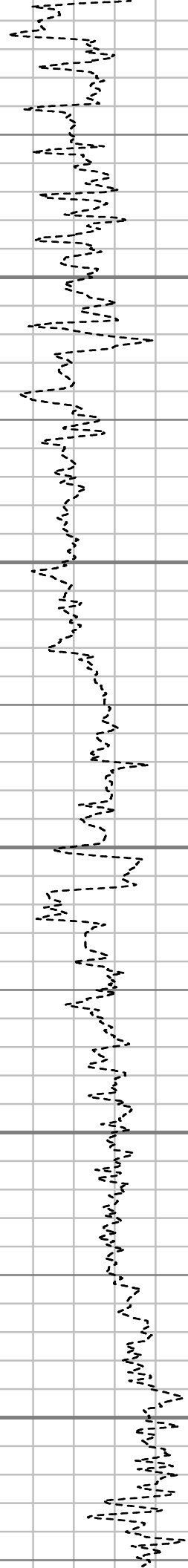
6200

6300

6400

6500

6600



MD: 6100.00 ft Inc: 63.73 deg  
Az: 179.20 deg TVD: 5949.14 ft  
VS: 405.56 ft

MD: 6115.00 ft Inc: 65.86 deg  
Az: 180.08 deg TVD: 5955.52 ft  
VS: 419.12 ft

MD: 6130.00 ft Inc: 68.32 deg  
Az: 181.14 deg TVD: 5961.36 ft  
VS: 432.88 ft

MD: 6145.00 ft Inc: 70.43 deg  
Az: 182.19 deg TVD: 5966.64 ft  
VS: 446.96 ft

MD: 6160.00 ft Inc: 72.98 deg  
Az: 182.28 deg TVD: 5971.35 ft  
VS: 461.21 ft

MD: 6185.00 ft Inc: 77.12 deg  
Az: 183.16 deg TVD: 5977.80 ft  
VS: 485.35 ft

MD: 6201.00 ft Inc: 79.84 deg  
Az: 183.25 deg TVD: 5980.99 ft  
VS: 501.37 ft

MD: 6218.00 ft Inc: 82.39 deg  
Az: 183.77 deg TVD: 5983.31 ft  
VS: 515.84 ft

MD: 6231.00 ft Inc: 84.68 deg  
Az: 184.30 deg TVD: 5985.00 ft  
VS: 530.74 ft

MD: 6246.00 ft Inc: 86.09 deg  
Az: 184.13 deg TVD: 5986.20 ft  
VS: 545.69 ft

MD: 6261.00 ft Inc: 87.05 deg  
Az: 184.51 deg TVD: 5987.40 ft  
VS: 560.35 ft

MD: 6266.00 ft Inc: 87.48 deg  
Az: 184.35 deg TVD: 5987.34 ft  
VS: 565.65 ft

MD: 6285.00 ft Inc: 88.55 deg  
Az: 182.19 deg TVD: 5988.00 ft  
VS: 584.63 ft

MD: 6302.00 ft Inc: 88.64 deg  
Az: 181.31 deg TVD: 5988.41 ft  
VS: 601.37 ft

MD: 6316.00 ft Inc: 88.81 deg  
Az: 181.31 deg TVD: 5988.72 ft  
VS: 615.62 ft

MD: 6331.00 ft Inc: 89.16 deg  
Az: 180.87 deg TVD: 5988.99 ft  
VS: 630.62 ft

MD: 6348.00 ft Inc: 89.78 deg  
Az: 180.54 deg TVD: 5989.13 ft  
VS: 645.40 ft

MD: 6354.00 ft Inc: 90.99 deg  
Az: 179.99 deg TVD: 5989.14 ft  
VS: 653.60 ft

MD: 6371.00 ft Inc: 91.19 deg  
Az: 180.96 deg TVD: 5988.94 ft  
VS: 670.59 ft

MD: 6388.00 ft Inc: 92.15 deg  
Az: 180.70 deg TVD: 5988.51 ft  
VS: 689.50 ft

MD: 6395.00 ft Inc: 92.59 deg  
Az: 180.70 deg TVD: 5988.05 ft  
VS: 696.57 ft

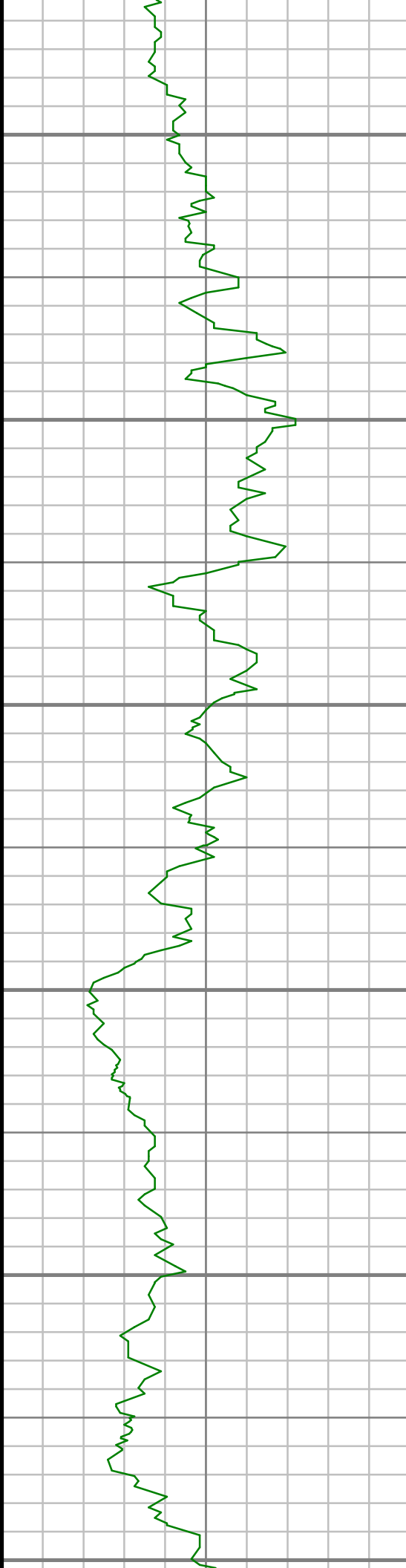
MD: 6438.00 ft Inc: 92.42 deg  
Az: 180.61 deg TVD: 5986.26 ft  
VS: 737.51 ft

MD: 6480.00 ft Inc: 92.95 deg  
Az: 180.17 deg TVD: 5984.29 ft  
VS: 779.44 ft

MD: 6523.00 ft Inc: 92.77 deg  
Az: 179.47 deg TVD: 5982.15 ft  
VS: 822.34 ft

MD: 6565.00 ft Inc: 92.51 deg  
Az: 180.08 deg TVD: 5980.22 ft  
VS: 864.25 ft

MD: 6607.00 ft Inc: 92.33 deg  
Az: 180.44 deg TVD: 5978.44 ft  
VS: 906.18 ft



6700

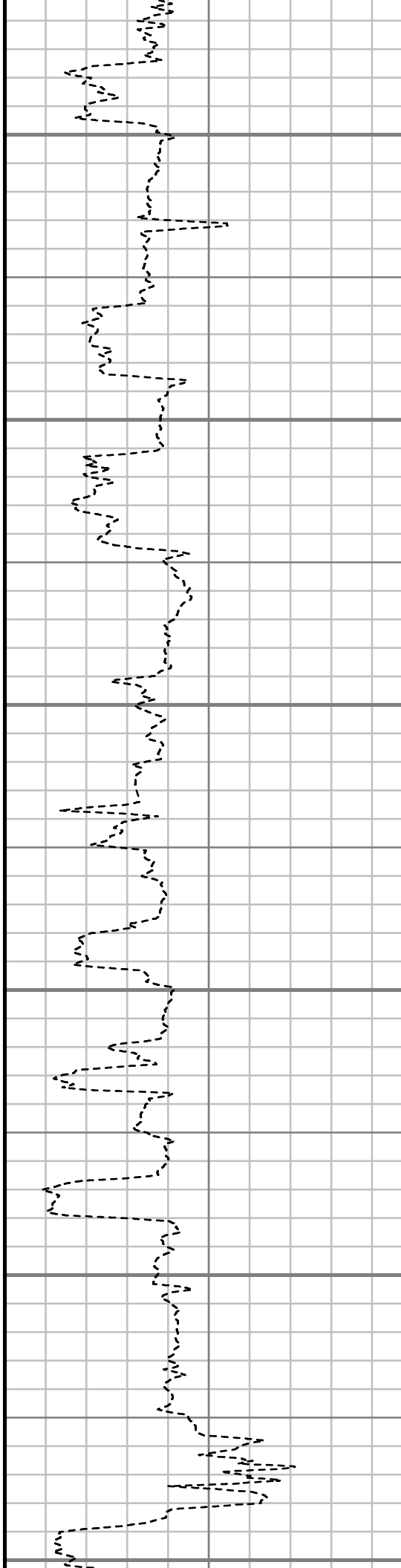
6800

6900

7000

7100

7200



MD: 6661.00 ft Inc: 92.07 deg  
Az: 180.44 deg TVD: 5976.37 ft  
VS: 960.11 ft

MD: 6692.00 ft Inc: 90.40 deg  
Az: 179.73 deg TVD: 5975.71 ft  
VS: 991.08 ft

MD: 6744.00 ft Inc: 89.78 deg  
Az: 179.20 deg TVD: 5975.63 ft  
VS: 1043.01 ft

MD: 6778.00 ft Inc: 90.22 deg  
Az: 177.36 deg TVD: 5975.63 ft  
VS: 1076.92 ft

MD: 6821.00 ft Inc: 91.38 deg  
Az: 176.09 deg TVD: 5975.03 ft  
VS: 1119.70 ft

MD: 6865.00 ft Inc: 92.15 deg  
Az: 175.25 deg TVD: 5973.67 ft  
VS: 1163.37 ft

MD: 6907.00 ft Inc: 91.89 deg  
Az: 174.72 deg TVD: 5972.19 ft  
VS: 1205.00 ft

MD: 6951.00 ft Inc: 91.98 deg  
Az: 175.78 deg TVD: 5970.71 ft  
VS: 1248.63 ft

MD: 6996.00 ft Inc: 92.25 deg  
Az: 177.51 deg TVD: 5969.04 ft  
VS: 1293.37 ft

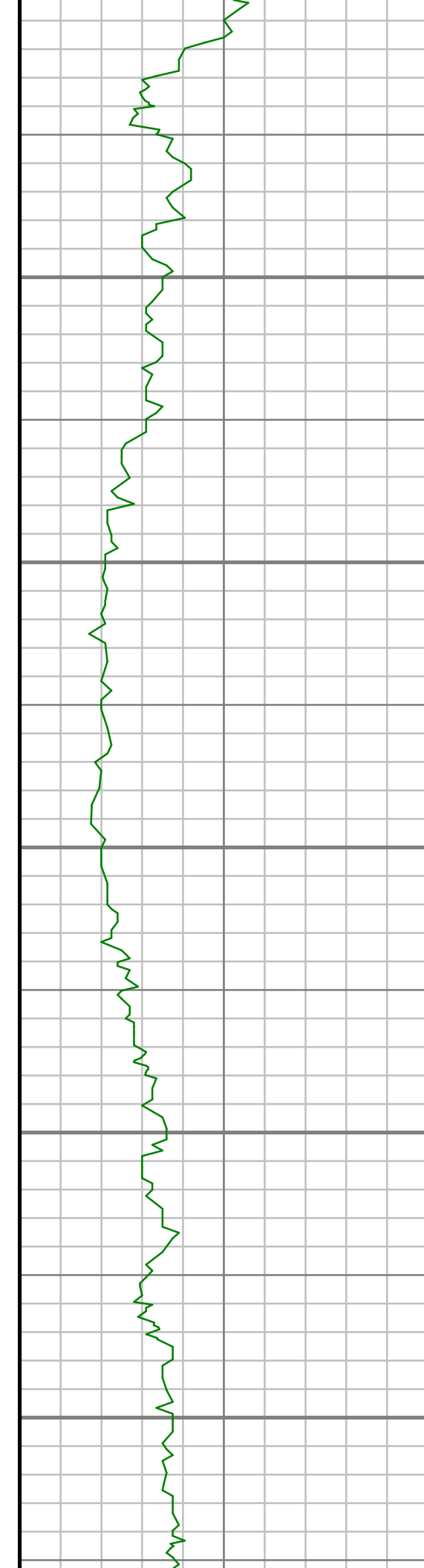
MD: 7034.00 ft Inc: 91.19 deg  
Az: 178.06 deg TVD: 5967.90 ft  
VS: 1331.23 ft

MD: 7077.00 ft Inc: 89.69 deg  
Az: 178.06 deg TVD: 5967.57 ft  
VS: 1374.10 ft

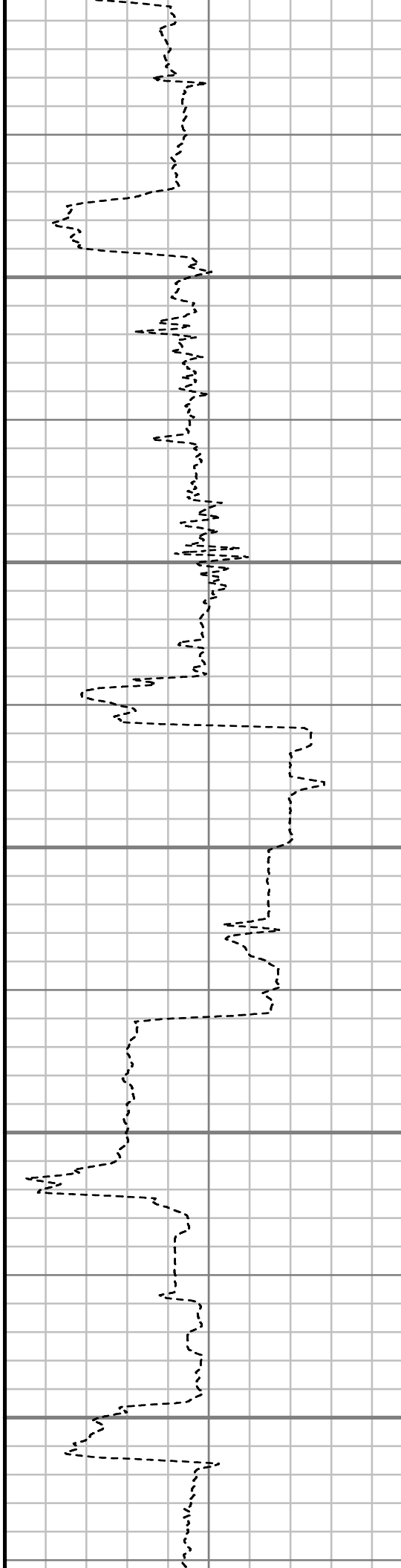
MD: 7118.00 ft Inc: 89.60 deg  
Az: 178.24 deg TVD: 5967.83 ft  
VS: 1414.99 ft

MD: 7161.00 ft Inc: 89.60 deg  
Az: 178.33 deg TVD: 5968.12 ft  
VS: 1457.87 ft

MD: 7200.00 ft Inc: 87.95 deg



7300  
7400  
7500  
7600  
7700



MD: 7200.00 ft Inc: 87.63 deg  
Az: 178.15 deg TVD: 5968.99 ft  
VS: 1496.76 ft

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MD: 7246.00 ft Inc: 87.67 deg  
Az: 178.15 deg TVD: 5970.79 ft  
VS: 1542.60 ft

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MD: 7287.00 ft Inc: 89.08 deg  
Az: 177.62 deg TVD: 5971.95 ft  
VS: 1583.45 ft

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MD: 7373.00 ft Inc: 89.25 deg  
Az: 177.36 deg TVD: 5973.21 ft  
VS: 1669.13 ft

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MD: 7456.00 ft Inc: 90.48 deg  
Az: 177.71 deg TVD: 5973.40 ft  
VS: 1751.82 ft

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MD: 7543.00 ft Inc: 90.92 deg  
Az: 177.18 deg TVD: 5972.33 ft  
VS: 1838.49 ft

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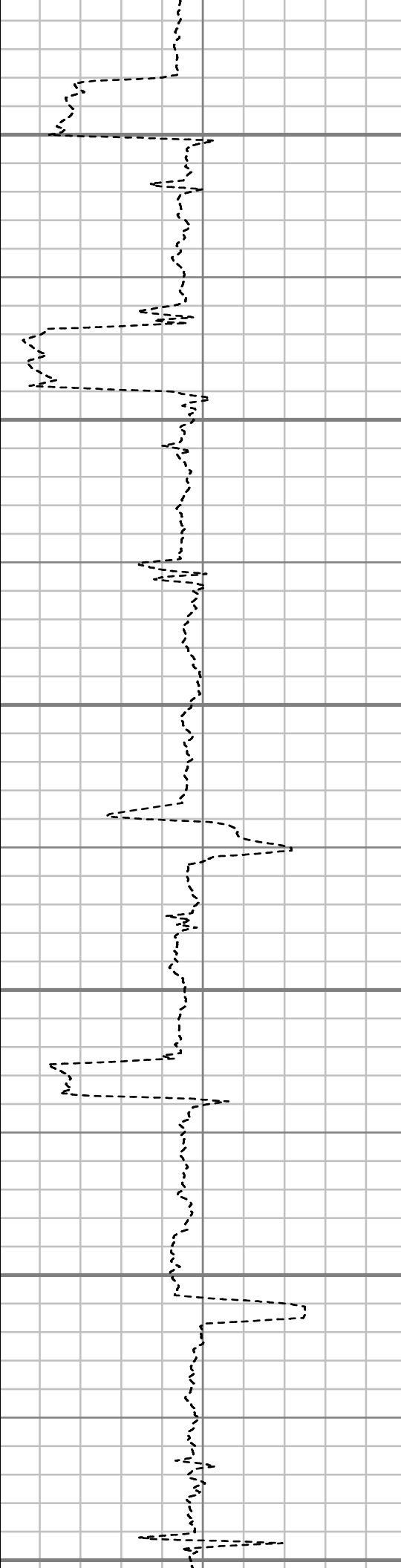
MD: 7628.00 ft Inc: 90.84 deg  
Az: 177.53 deg TVD: 5971.03 ft  
VS: 1923.15 ft

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MD: 7712.00 ft Inc: 90.22 deg  
Az: 177.45 deg TVD: 5970.25 ft  
VS: 2006.84 ft



7800



MD: 7796.00 ft Inc: 90.40 deg  
Az: 177.62 deg TVD: 5969.80 ft  
VS: 2090.53 ft

7900

MD: 7880.00 ft Inc: 89.60 deg  
Az: 179.47 deg TVD: 5969.80 ft  
VS: 2174.34 ft

8000

MD: 7971.00 ft Inc: 89.25 deg  
Az: 179.38 deg TVD: 5970.71 ft  
VS: 2265.21 ft

8100

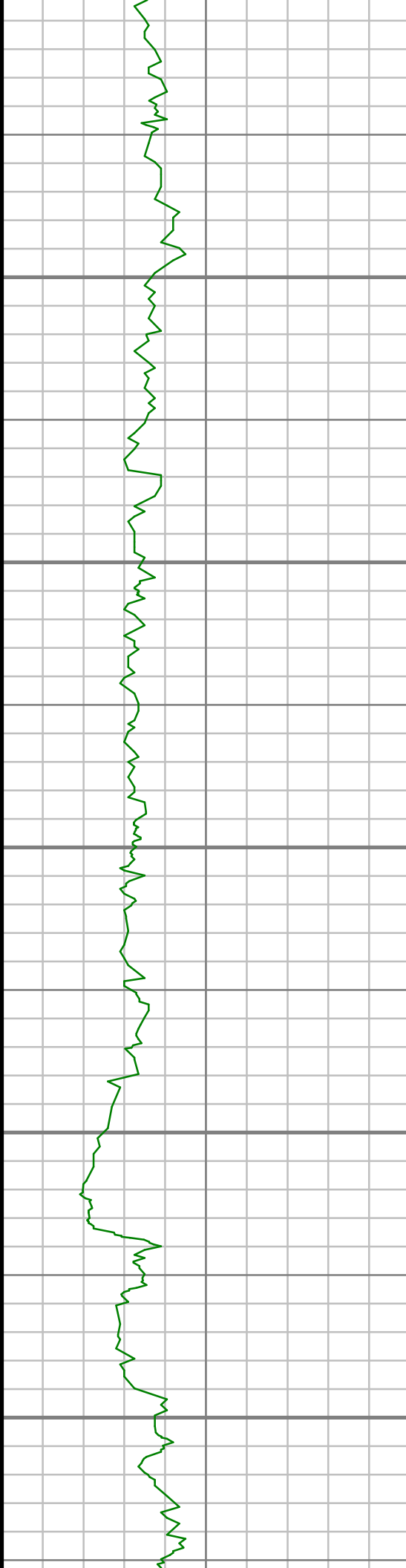
MD: 8056.00 ft Inc: 90.31 deg  
Az: 181.14 deg TVD: 5971.04 ft  
VS: 2350.14 ft

8200

MD: 8139.00 ft Inc: 89.43 deg  
Az: 180.44 deg TVD: 5971.23 ft  
VS: 2433.11 ft

8300

MD: 8223.00 ft Inc: 89.52 deg  
Az: 180.87 deg TVD: 5972.00 ft  
VS: 2517.06 ft



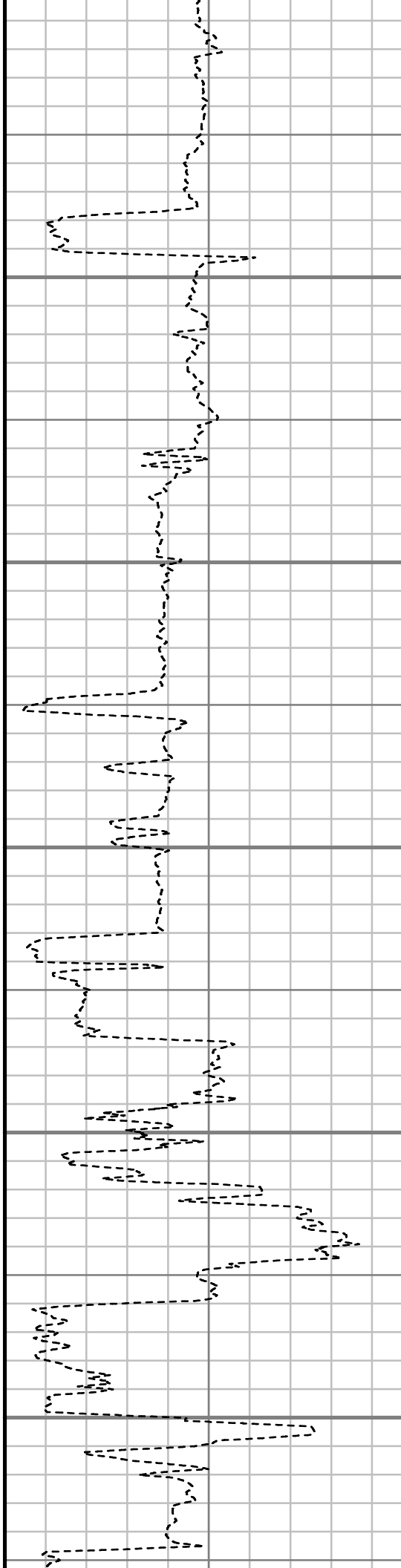
8400

8500

8600

8700

8800



MD: 8309.00 ft Inc: 90.13 deg  
Az: 182.19 deg TVD: 5972.26 ft  
VS: 2603.05 ft

MD: 8394.00 ft Inc: 88.72 deg  
Az: 182.90 deg TVD: 5973.11 ft  
VS: 2688.04 ft

MD: 8477.00 ft Inc: 88.46 deg  
Az: 182.54 deg TVD: 5975.15 ft  
VS: 2771.02 ft

MD: 8521.00 ft Inc: 89.87 deg  
Az: 185.18 deg TVD: 5975.79 ft  
VS: 2814.99 ft

MD: 8563.00 ft Inc: 89.83 deg  
Az: 188.28 deg TVD: 5975.90 ft  
VS: 2856.87 ft

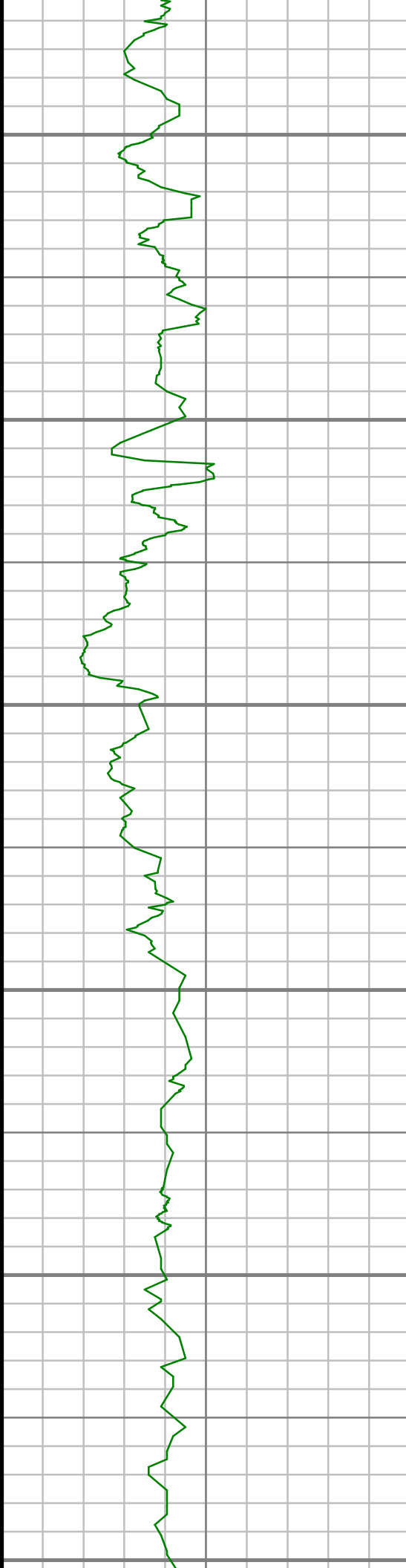
MD: 8647.00 ft Inc: 89.60 deg  
Az: 193.88 deg TVD: 5976.32 ft  
VS: 2939.87 ft

MD: 8690.00 ft Inc: 88.99 deg  
Az: 194.50 deg TVD: 5976.84 ft  
VS: 2981.97 ft

MD: 8733.00 ft Inc: 88.81 deg  
Az: 194.23 deg TVD: 5977.67 ft  
VS: 3024.03 ft

MD: 8774.00 ft Inc: 89.08 deg  
Az: 192.74 deg TVD: 5978.42 ft  
VS: 3064.25 ft

MD: 8817.00 ft Inc: 89.69 deg  
Az: 191.95 deg TVD: 5978.89 ft  
VS: 3106.61 ft



8900

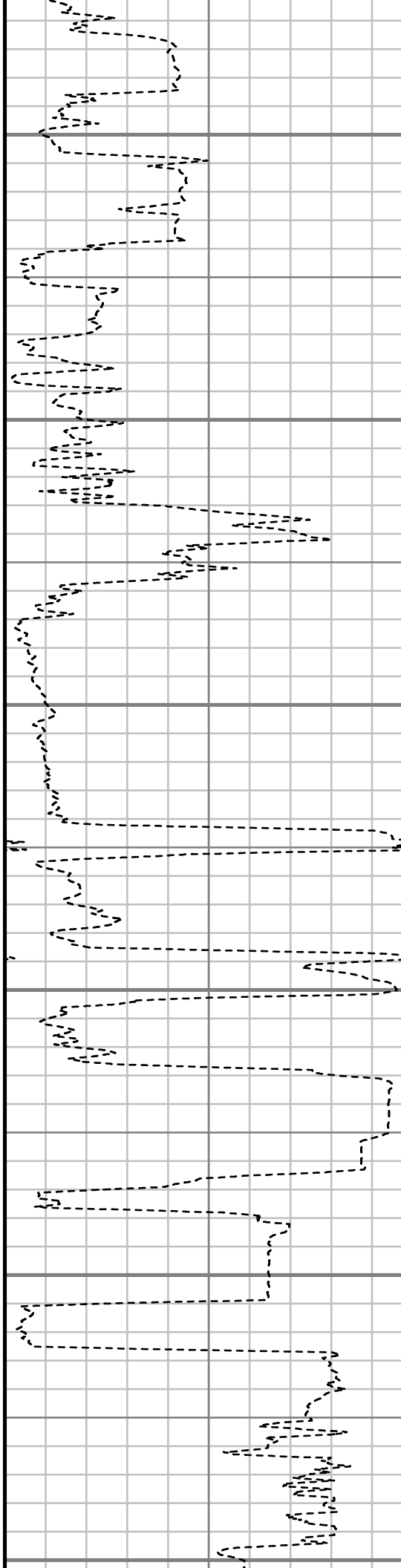
9000

9100

9200

9300

9400



MD: 8863.00 ft Inc: 88.46 deg  
Az: 190.98 deg TVD: 5979.63 ft  
VS: 3152.03 ft

MD: 8902.00 ft Inc: 87.93 deg  
Az: 190.37 deg TVD: 5980.85 ft  
VS: 3190.60 ft

MD: 8933.00 ft Inc: 87.32 deg  
Az: 189.75 deg TVD: 5982.14 ft  
VS: 3221.30 ft

MD: 8988.00 ft Inc: 87.85 deg  
Az: 189.66 deg TVD: 5984.46 ft  
VS: 3275.80 ft

MD: 9009.00 ft Inc: 88.37 deg  
Az: 188.78 deg TVD: 5985.15 ft  
VS: 3296.64 ft

MD: 9073.00 ft Inc: 88.90 deg  
Az: 188.26 deg TVD: 5986.67 ft  
VS: 3360.26 ft

MD: 9115.00 ft Inc: 91.45 deg  
Az: 185.53 deg TVD: 5986.54 ft  
VS: 3402.13 ft

MD: 9156.00 ft Inc: 92.07 deg  
Az: 183.77 deg TVD: 5985.29 ft  
VS: 3443.07 ft

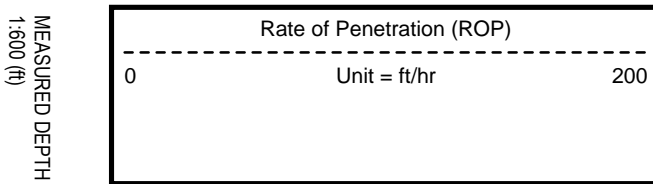
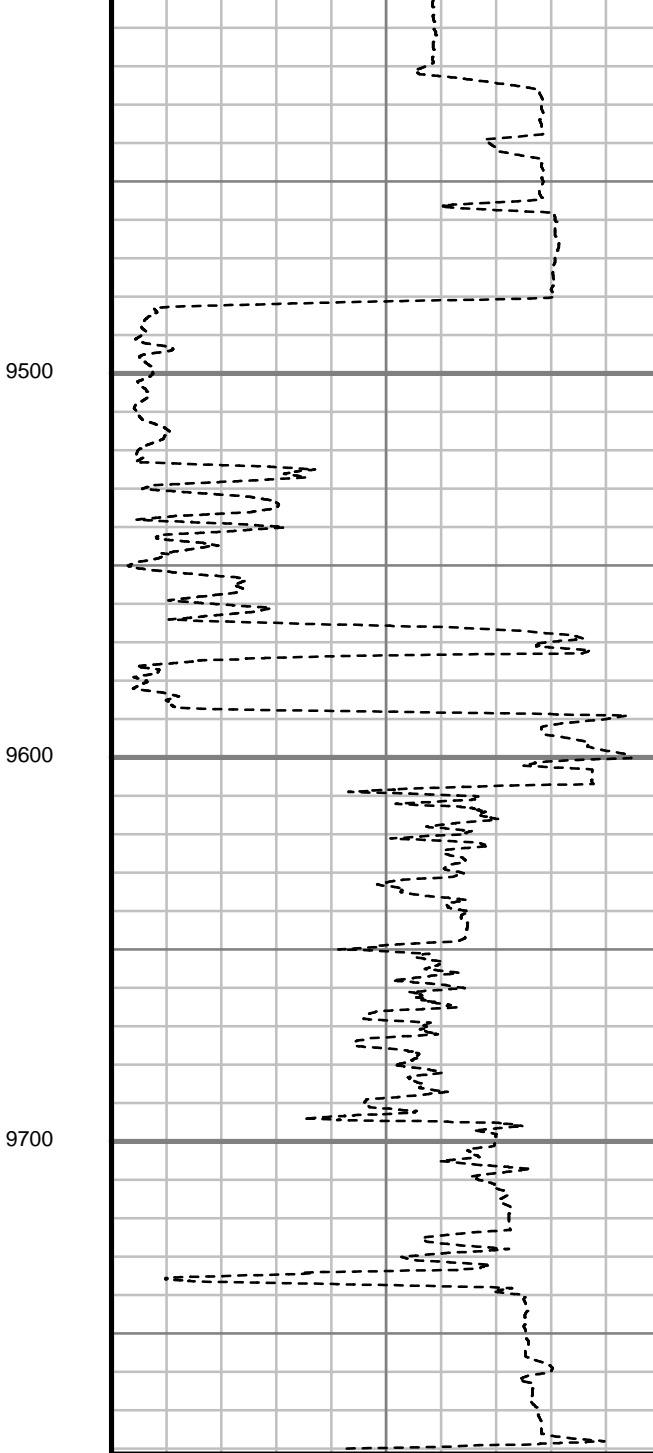
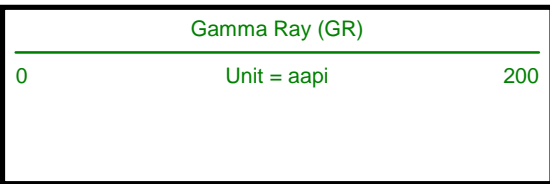
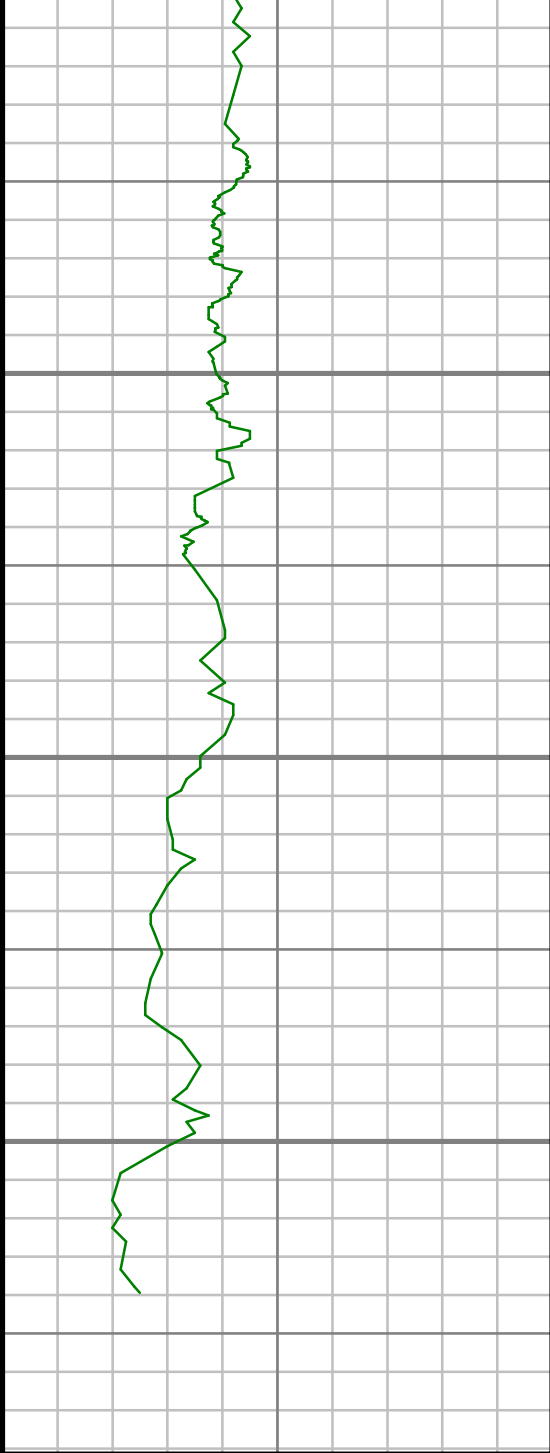
MD: 9198.00 ft Inc: 91.63 deg  
Az: 181.49 deg TVD: 5983.93 ft  
VS: 3485.05 ft

MD: 9243.00 ft Inc: 90.40 deg  
Az: 181.67 deg TVD: 5983.14 ft  
VS: 3530.04 ft

MD: 9283.00 ft Inc: 91.01 deg  
Az: 182.02 deg TVD: 5982.65 ft  
VS: 3570.03 ft

MD: 9327.00 ft Inc: 91.89 deg  
Az: 181.40 deg TVD: 5981.53 ft  
VS: 3614.01 ft

MD: 9372.00 ft Inc: 90.75 deg  
Az: 180.26 deg TVD: 5980.50 ft  
VS: 3658.98 ft



MD: 9414.00 ft Inc: 89.50 deg Az: 179.51 deg TVD: 5980.41 ft VS: 3700.94 ft
MD: 9458.00 ft Inc: 88.81 deg Az: 179.38 deg TVD: 5981.06 ft VS: 3744.88 ft
MD: 9496.00 ft Inc: 90.22 deg Az: 178.33 deg TVD: 5981.38 ft VS: 3782.80 ft
MD: 9539.00 ft Inc: 91.28 deg Az: 175.25 deg TVD: 5980.82 ft VS: 3825.58 ft
MD: 9581.00 ft Inc: 91.19 deg Az: 174.55 deg TVD: 5979.91 ft VS: 3867.21 ft
MD: 9625.00 ft Inc: 90.66 deg Az: 174.19 deg TVD: 5979.21 ft VS: 3910.77 ft
MD: 9667.00 ft Inc: 90.48 deg Az: 174.11 deg TVD: 5978.79 ft VS: 3952.34 ft
MD: 9712.00 ft Inc: 90.04 deg Az: 173.93 deg TVD: 5978.58 ft VS: 3996.85 ft

MEASURED DEPTH  
1:500 (ft)



2" = 100'

FEET MD