



Weatherford

TEMPERATURE LOG

COMPANY

BILL BARRETT CORPORATION

WELL GGU FEDERAL 31A-29-691

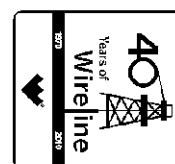
FIELD GIBSON GULCH

PROVINCE/COUNTY GARFIELD

COUNTRY/STATE U.S.A. / COLORADO

LOCATION SHL: 1215' FNL & 1356' FEL

BHL: 1146' FNL & 1990' FEL



SEC 29 TWP 6S RGE 91W Other Services

API Number 05-045-19798

Permit Number

Permanent Datum G.L., Elevation 6103 feet

Log Measured From K.B. @ 23 FT above Permanent Datum

Drilling Measured From K.B.

Elevations:
KB 6126.00
DF
GL 6103.00

Date 14-MAR-2011

Run Number ONE

Depth Driller 8200.00 feet

Depth Logger 8196.00 feet

First Reading 50.00 feet

Last Reading 8196.00 feet

Casing Driller 852.00 feet

Casing Logger 850.00 feet

Bit Size 7.875 inches

Hole Fluid Type WATER

Density / Viscosity

PH / Fluid Loss

Sample Source

Rm @ Measured Temp

Rmf @ Measured Temp

Rmc @ Measured Temp

Source Rmf / Rmc

Rm @ BHT

Time Since Circulation

Max Recorded Temp 207.00 deg F

Equipment Name COMPACT

Equipment / Base 13038 GD JCT

Recorded By J. GARCIA

Witnessed By J. BOYD

K. SALLER

BOREHOLE RECORD

Last Edited: 14-MAR-2011 12:52

Bit Size
inches

8.750

Depth From
feet

850.00

Depth To
feet

8200.00

CASING RECORD

Type

Size
inchesDepth From
feetShoe Depth
feetWeight
pounds/ft

SURFACE

9.625

0.00

850.00

36.00

PRODUCTI

4.500

0.00

8200.00

11.60

REMARKS

TOP OF CEMENT IS APPROXIMATELY 3120 FEET.

4.5 INCH PRODUCTION CASING.

CASED HOLE TEMPERATURE LOG WAS LOGGED WITH SHA, MCG AND MHT.

CORRELATED TO WEATHERFORDS OPEN HOLE LOGS.

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER REQUEST.

ENGINEER: J.GARCIA, K. SALLER

OPERATORS: L STAAKE

RIG: PATTERSON 307

SERVICE ORDER # 3524795

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

↓

5 INCH MAIN LOG

↓

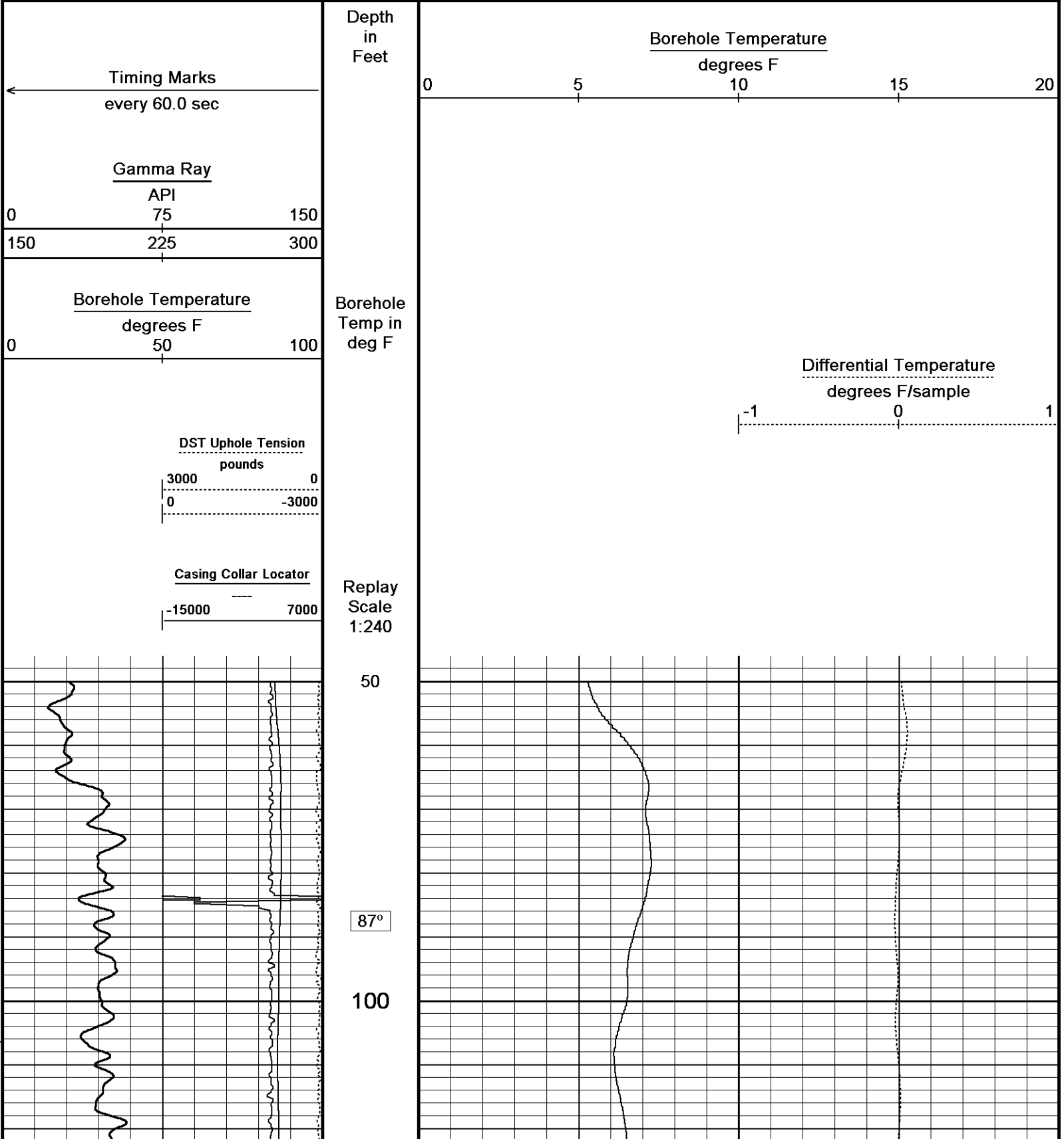
Depth Based Data - Maximum Sampling Increment 10.0cm

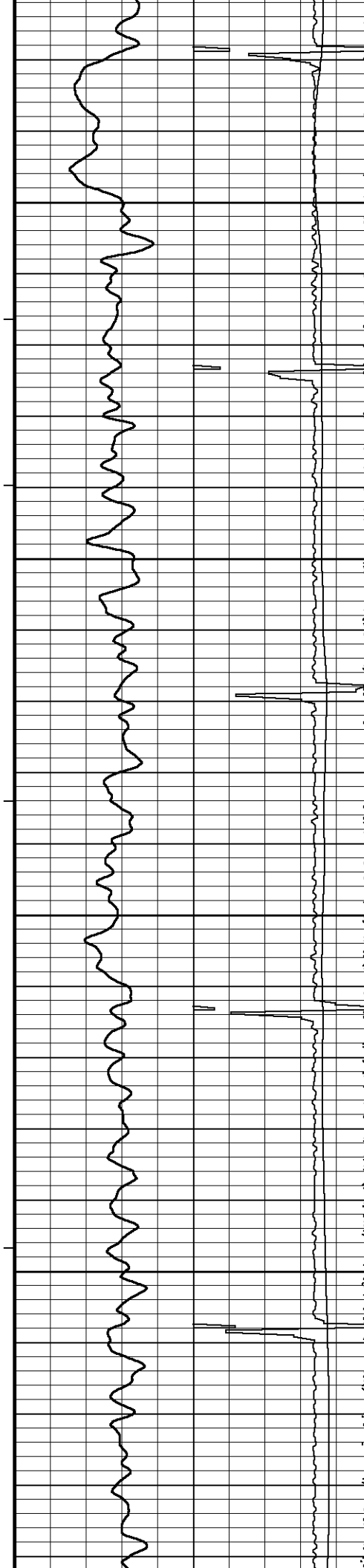
Plotted on 14-MAR-2011 12:57

Filename: C:\MINIMUS\LOGS\BBC TEMP\GGU Federal 31A-29-691\temp.dta

Recorded on 14-MAR-2011 11:03

System Versions: Logged with 11.02.2782 Plotted with 11.02.2782





89°

150

90°

200

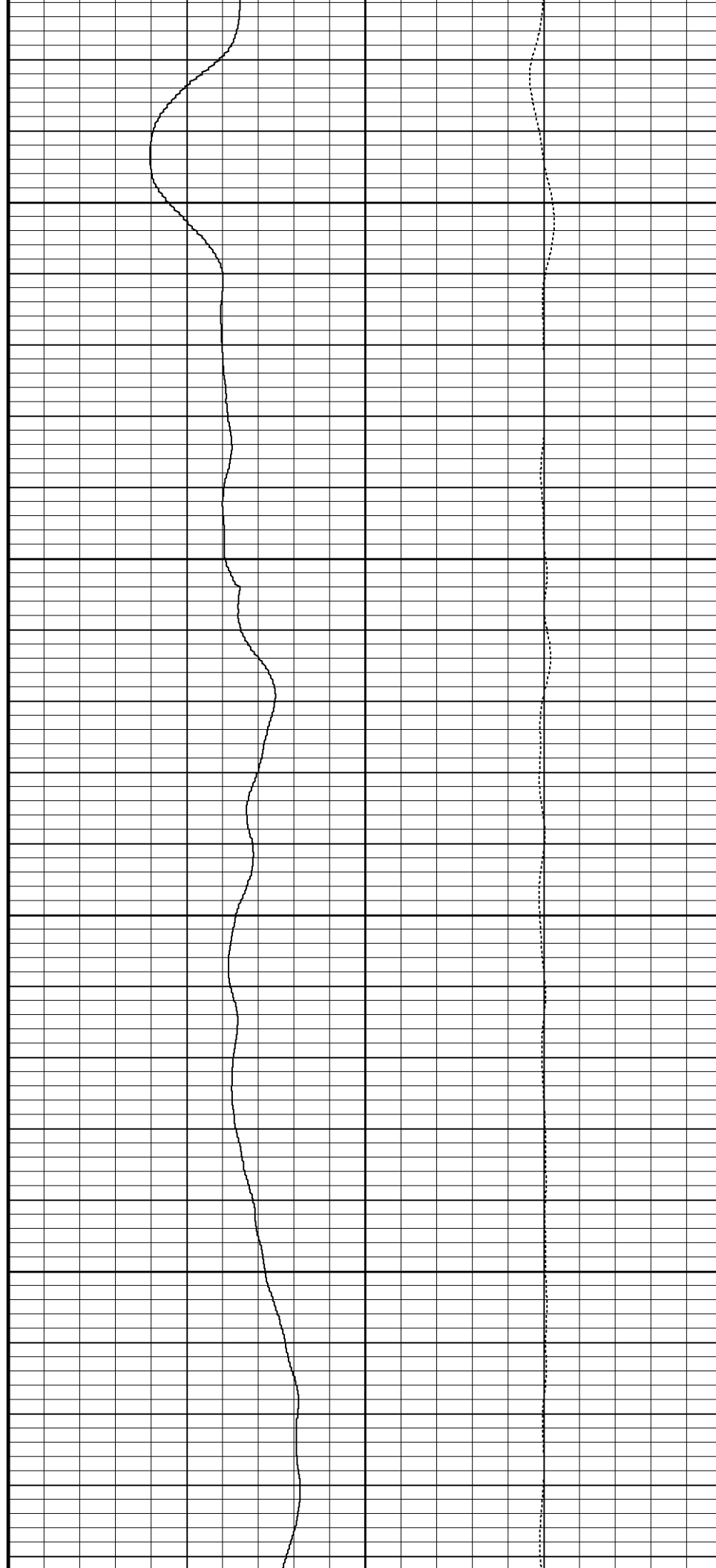
92°

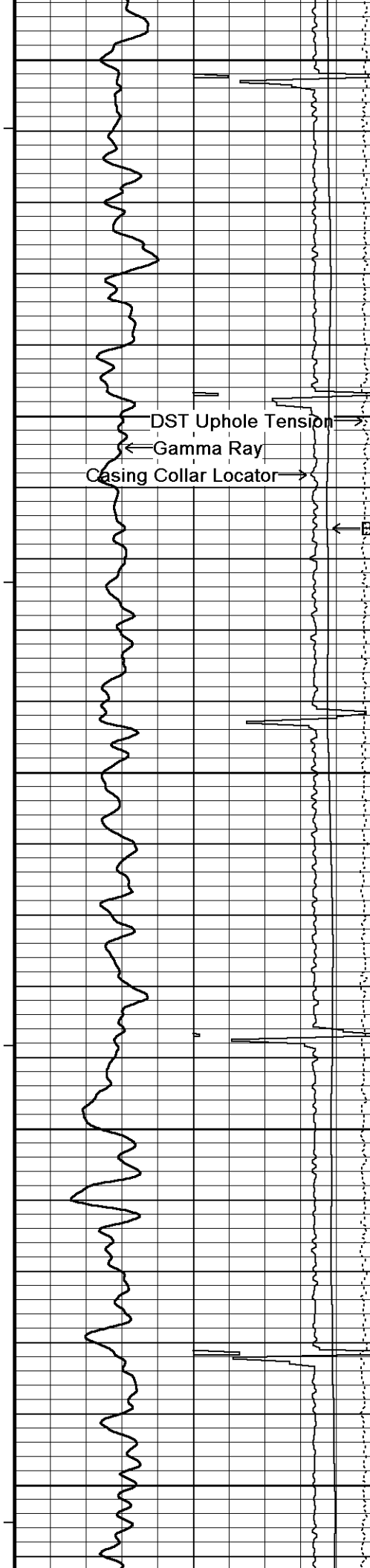
250

92°

300

93°





350

94°

400

DST Uphole Tension

Gamma Ray

Casing Collar Locator

Borehole Temperature

93°

450

94°

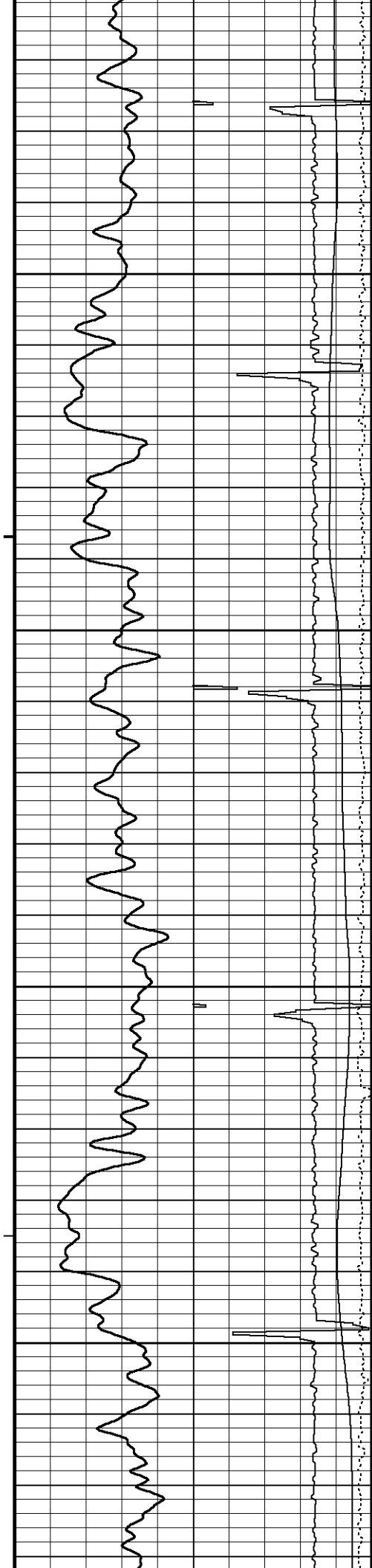
500

95°

550

Borehole Temperature

Differential Temperature



95°

600

94°

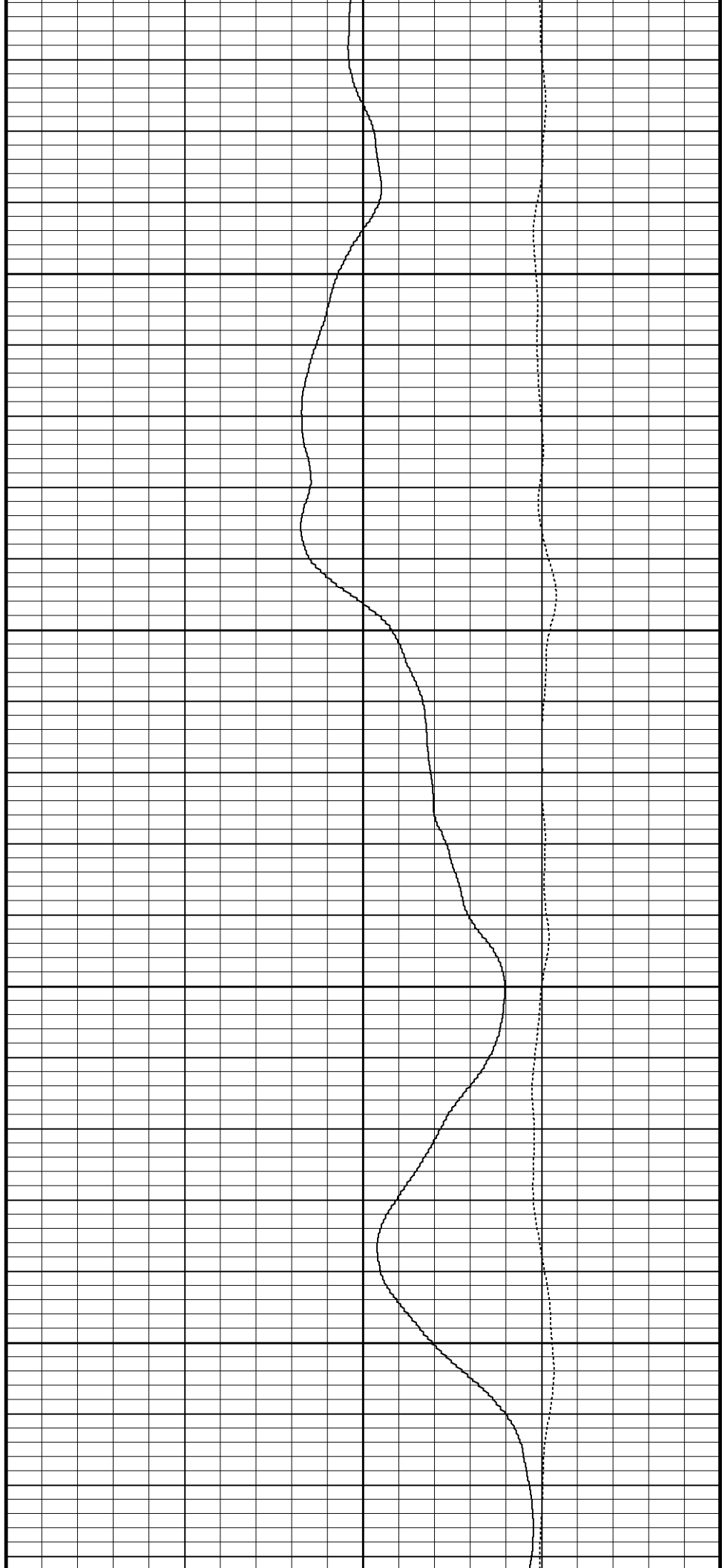
650

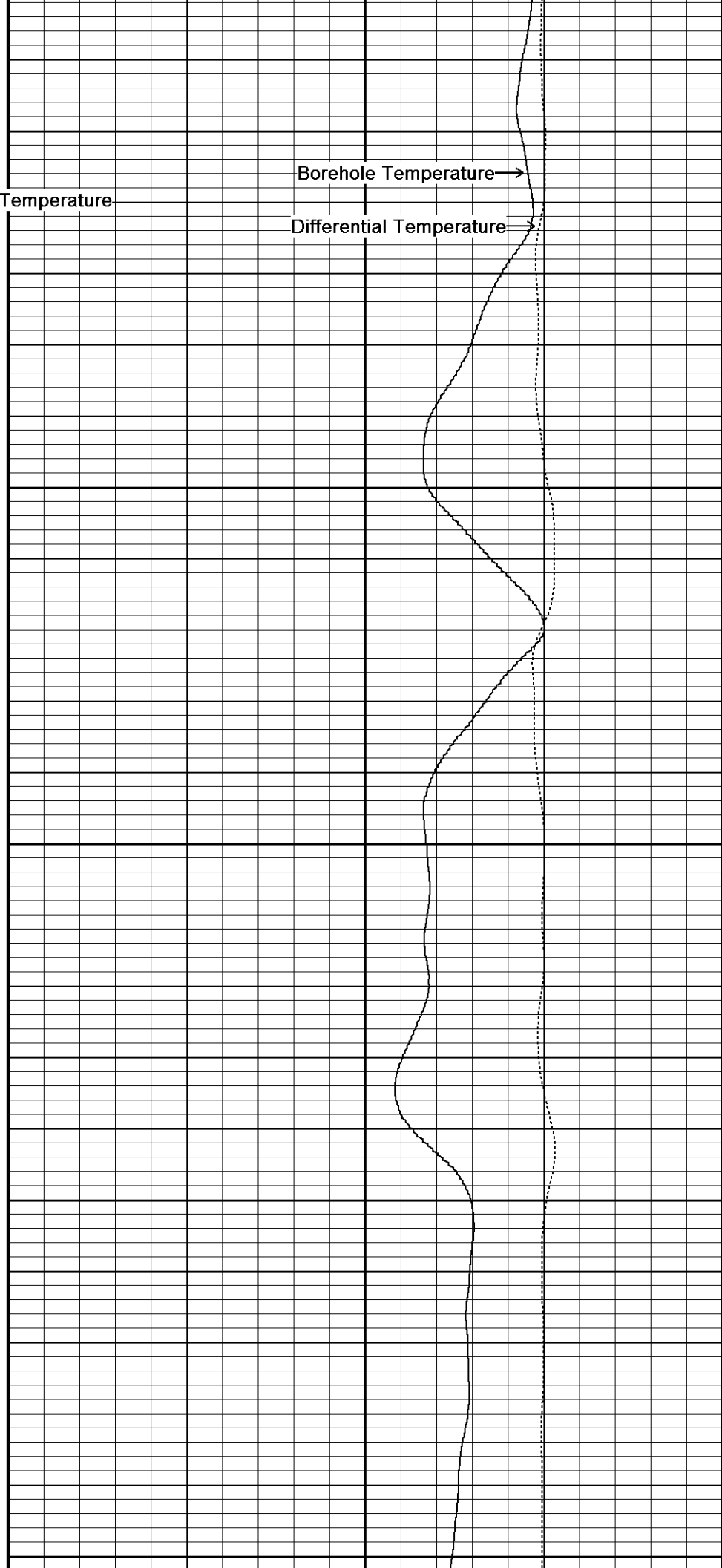
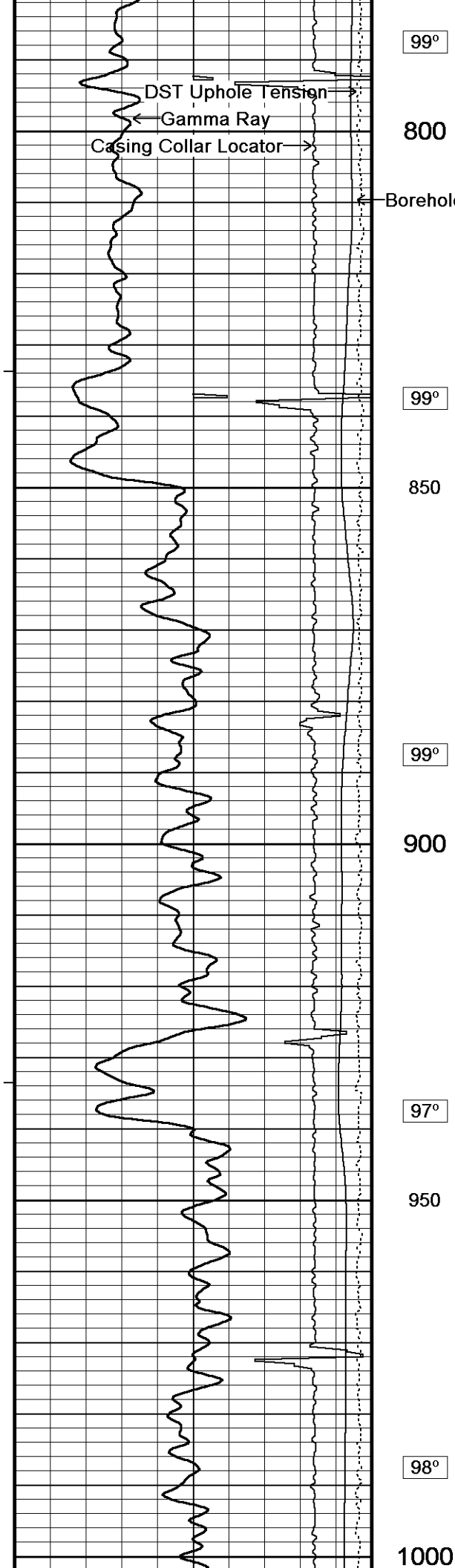
97°

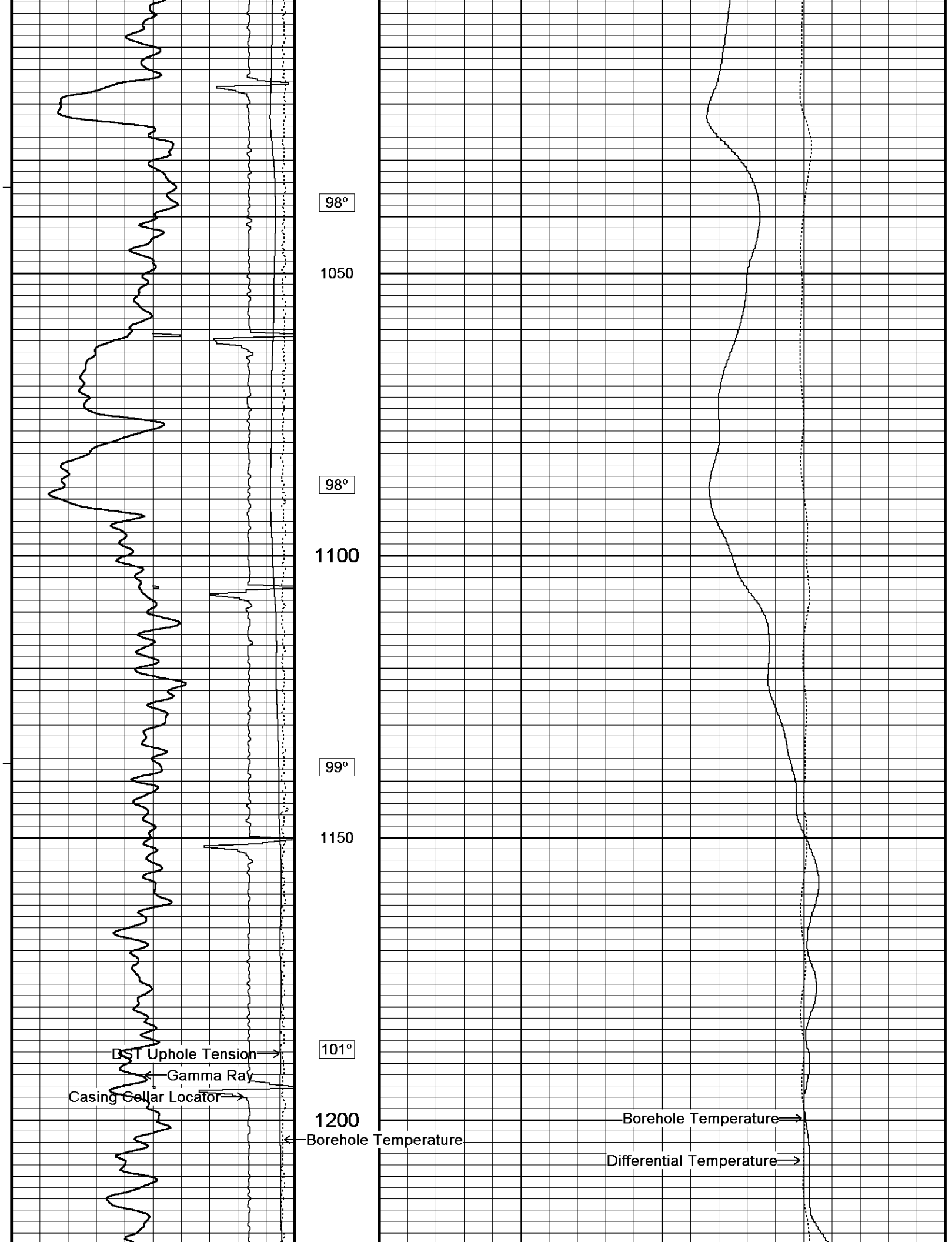
700

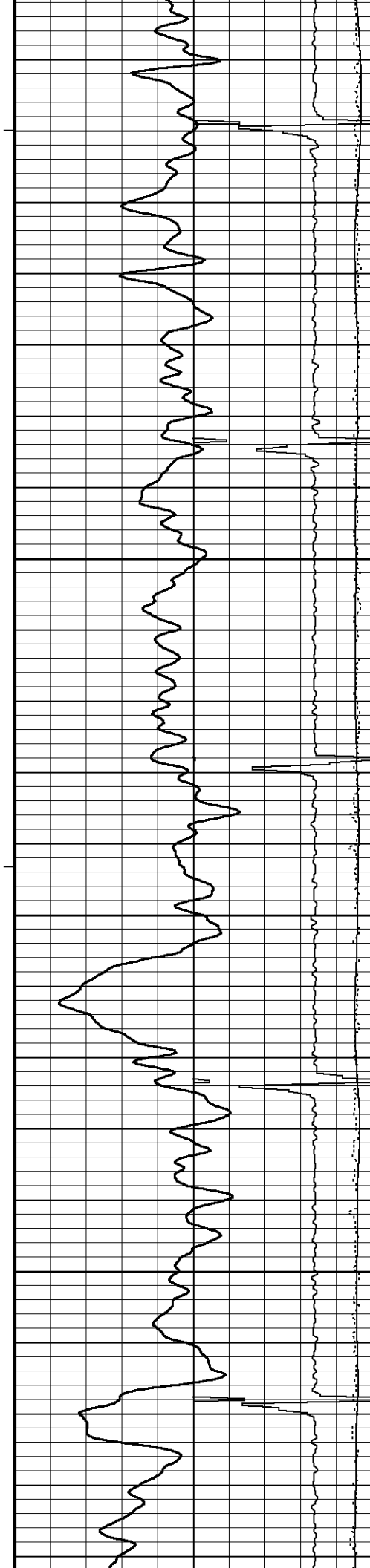
97°

750









101°

1250

101°

1300

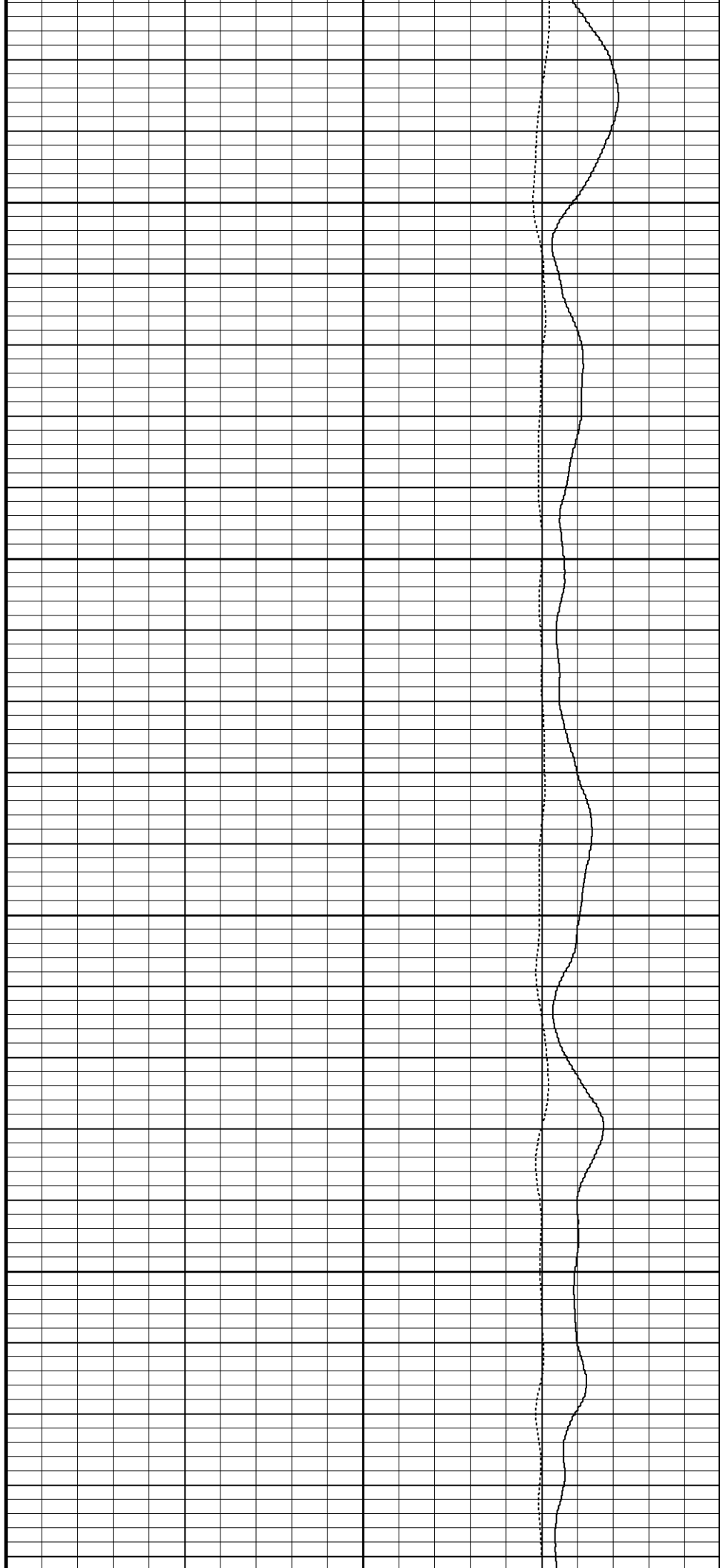
101°

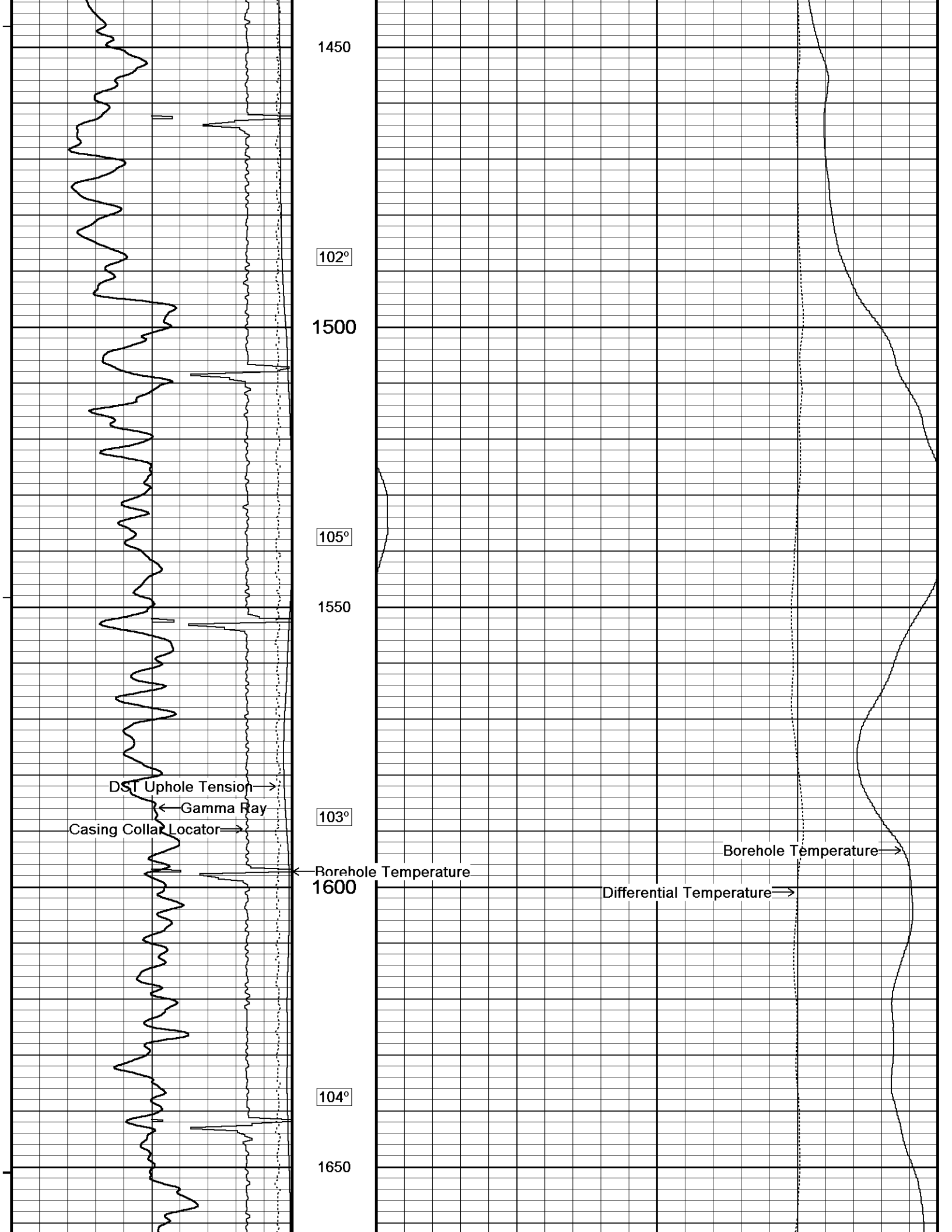
1350

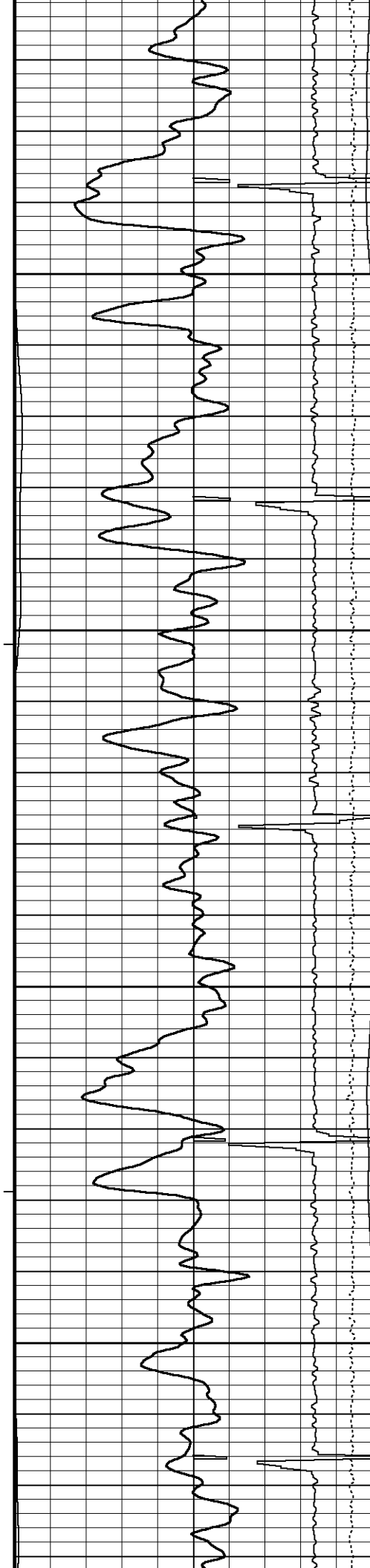
102°

1400

102°







104°

1700

106°

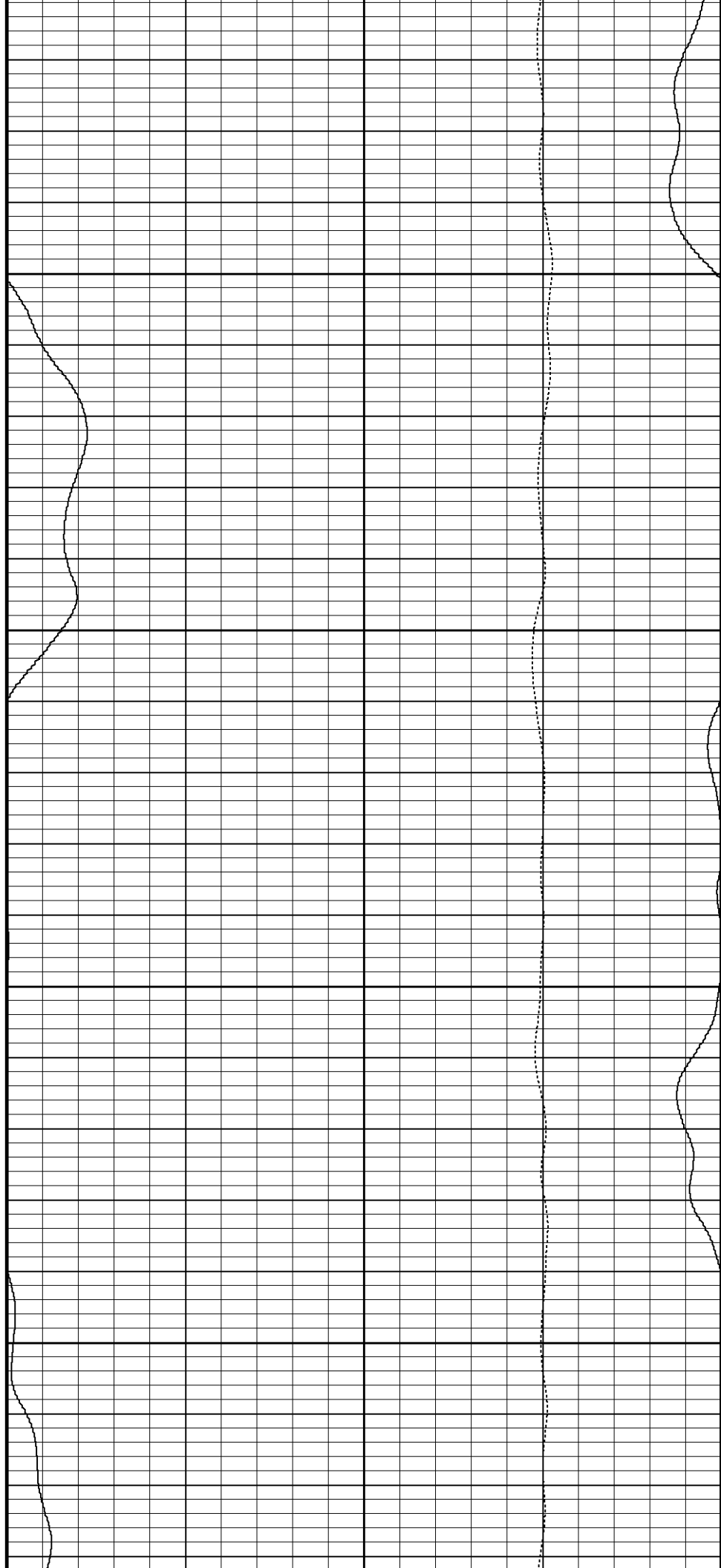
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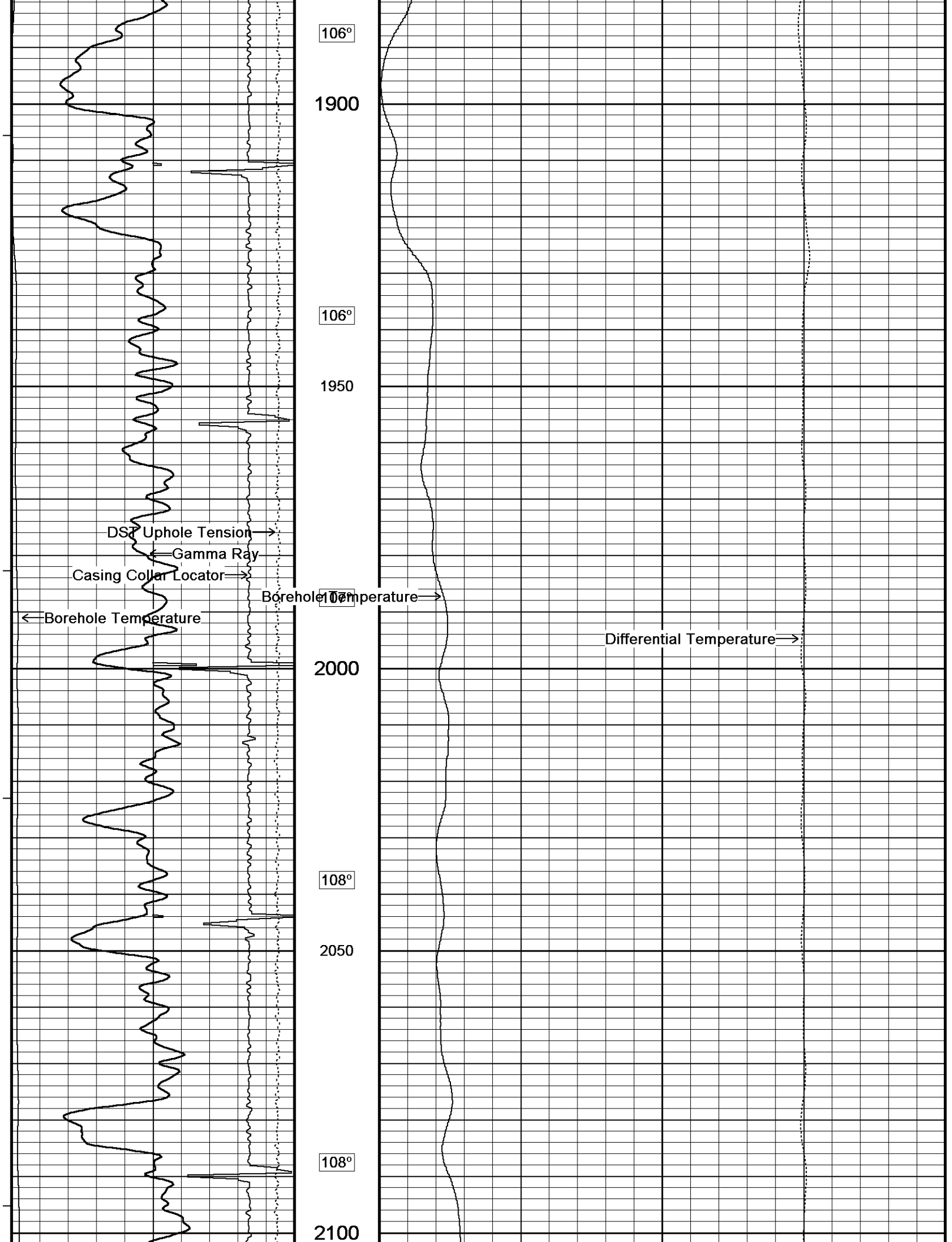
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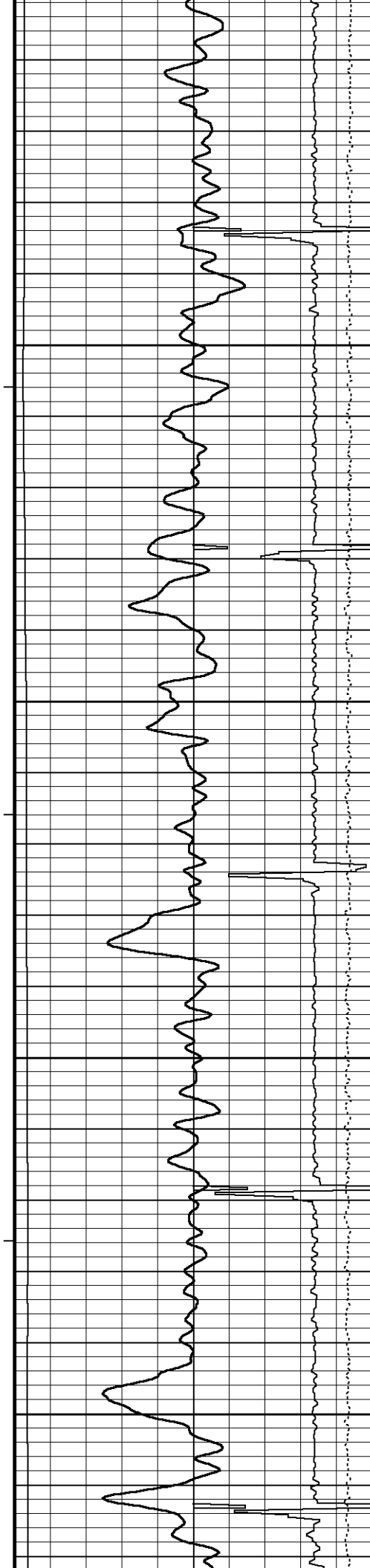
1800

105°

1850







108°

2150

108°

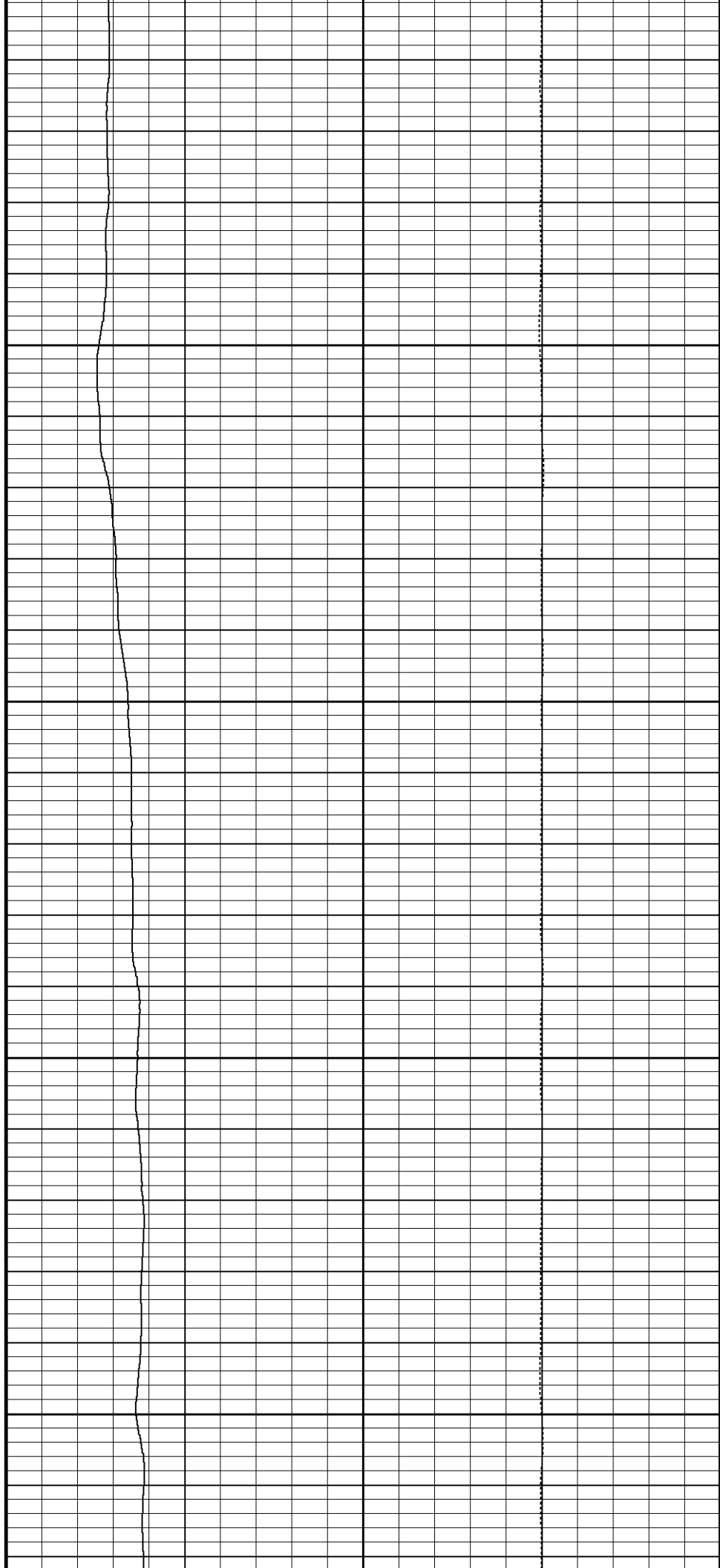
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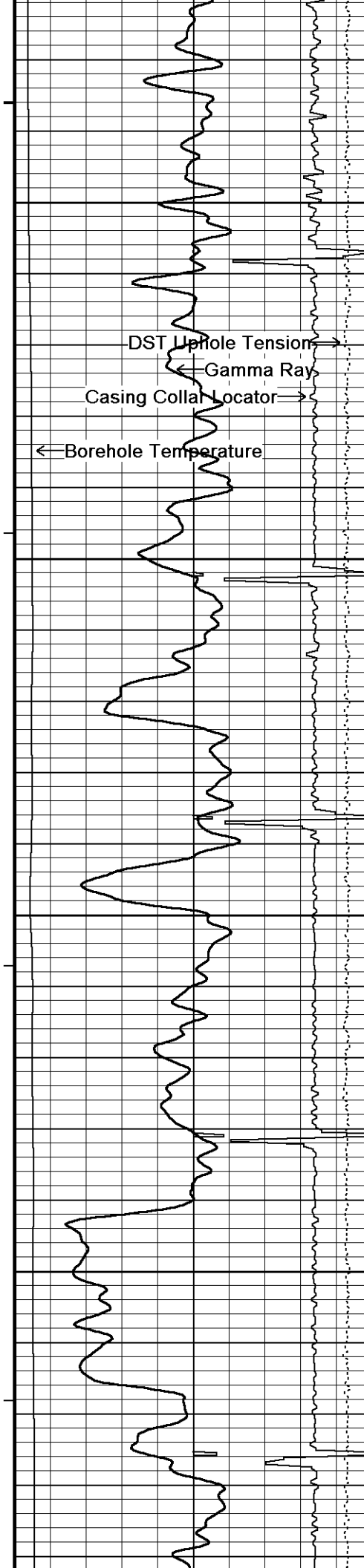
109°

2250

109°

2300





109°

2350

DST Uphole Tension →

← Gamma Ray

Casing Collar Locator →

← Borehole Temperature

110°

2400

110°

2450

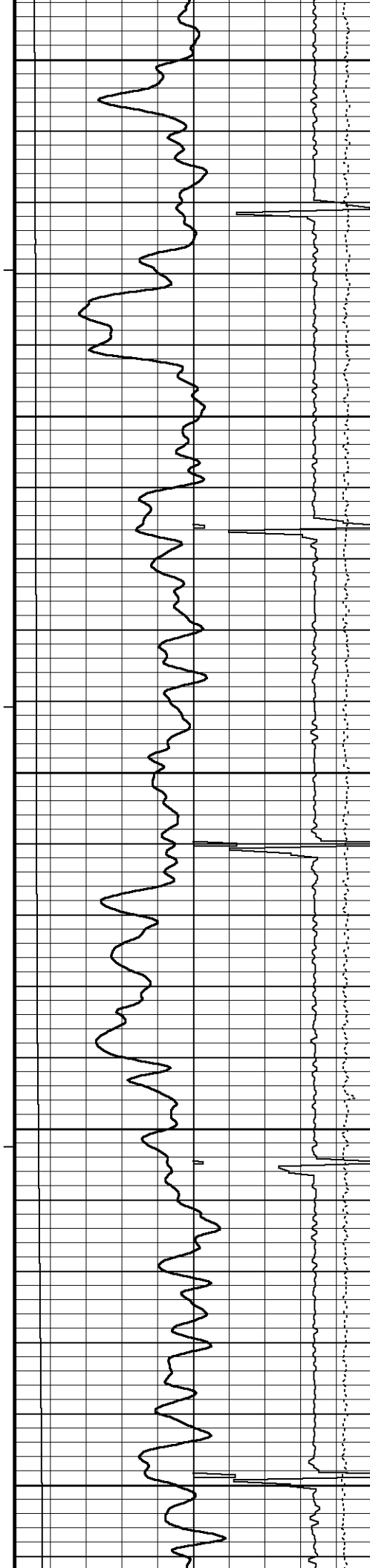
110°

2500

111°

Borehole Temperature →

Differential Temperature →



2550

111°

2600

111°

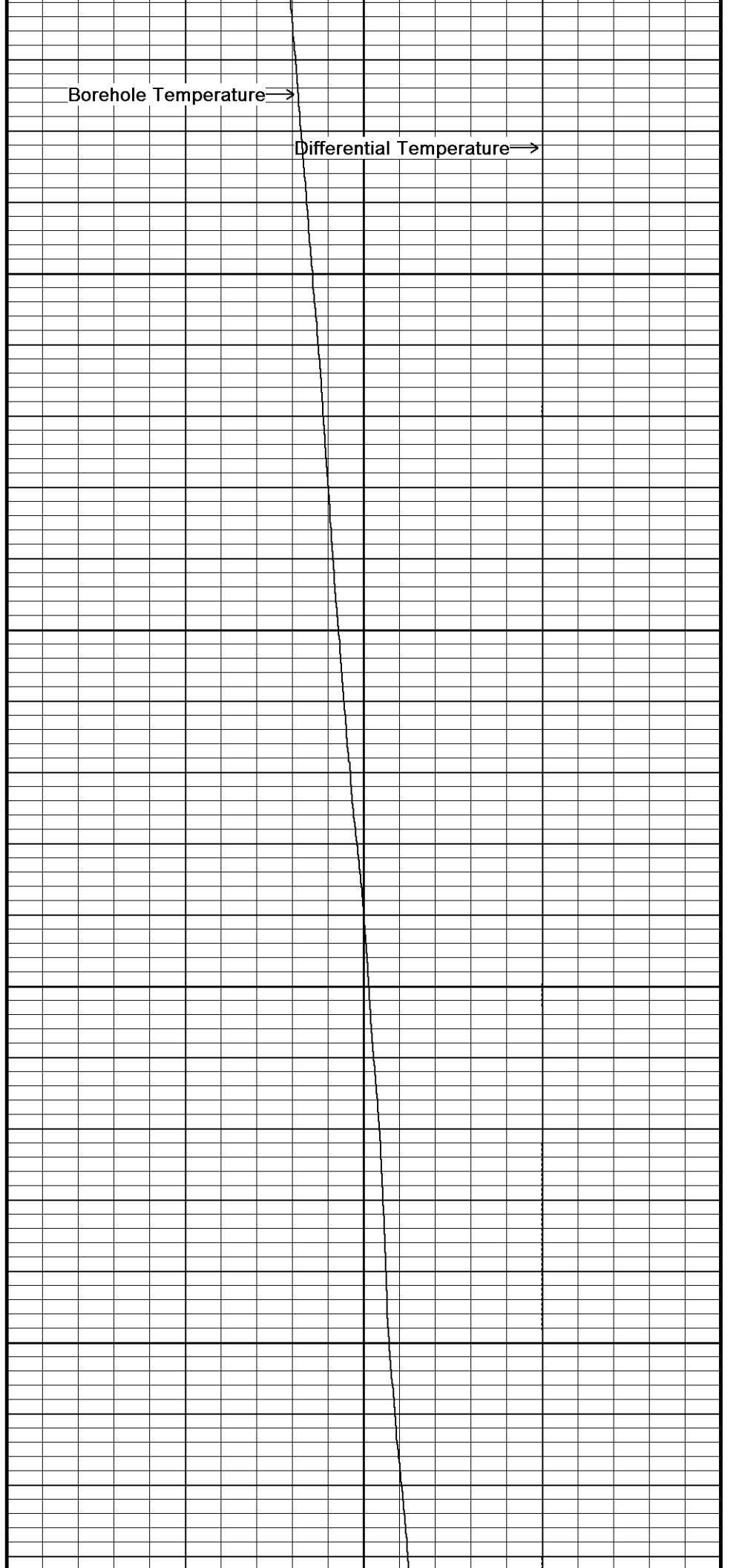
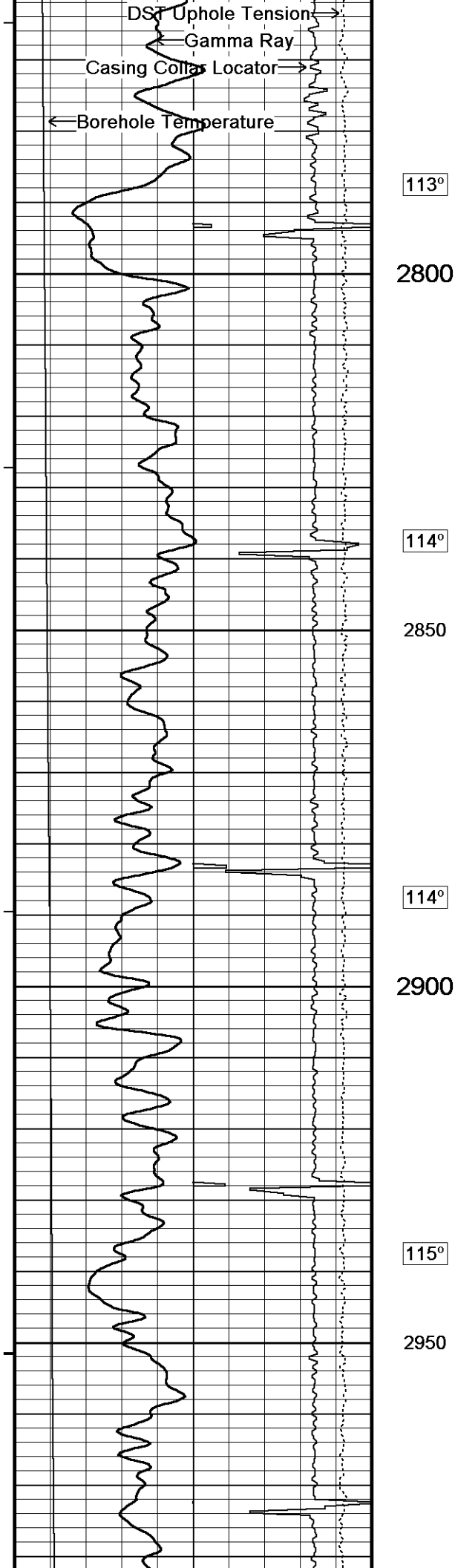
2650

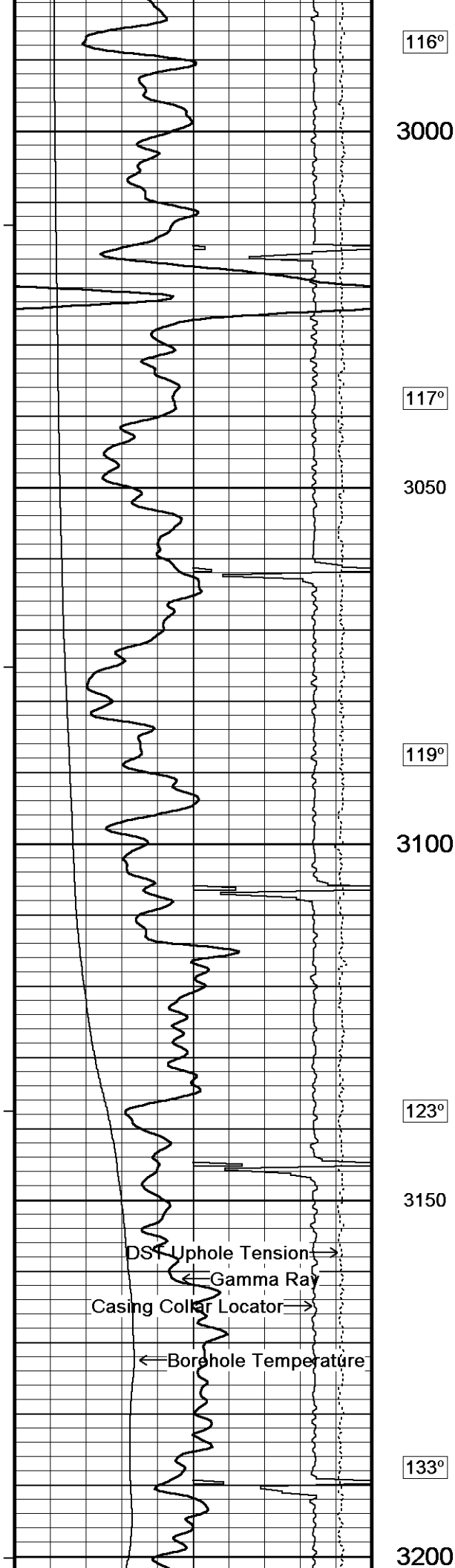
112°

2700

112°

2750





116°

3000

117°

3050

119°

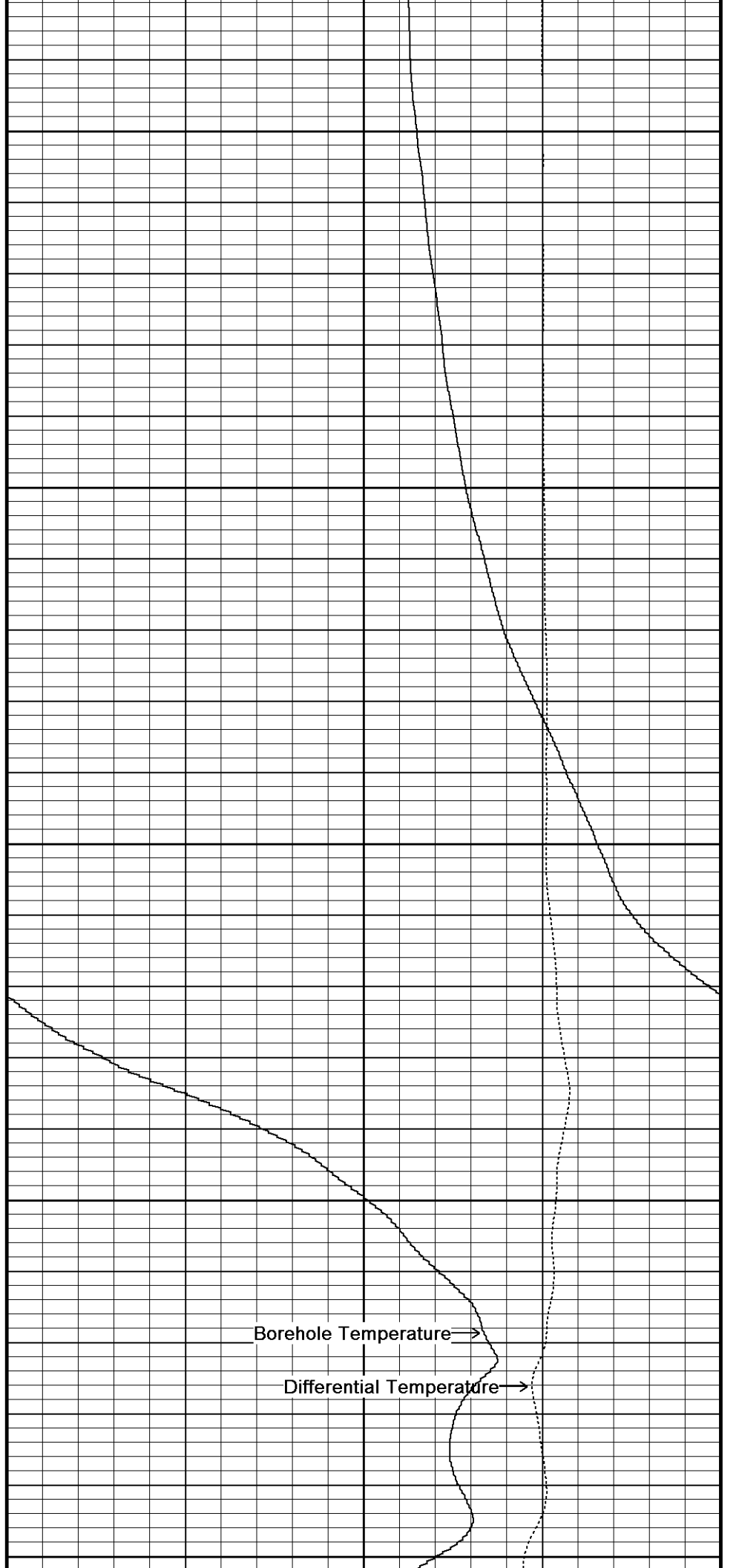
3100

123°

3150

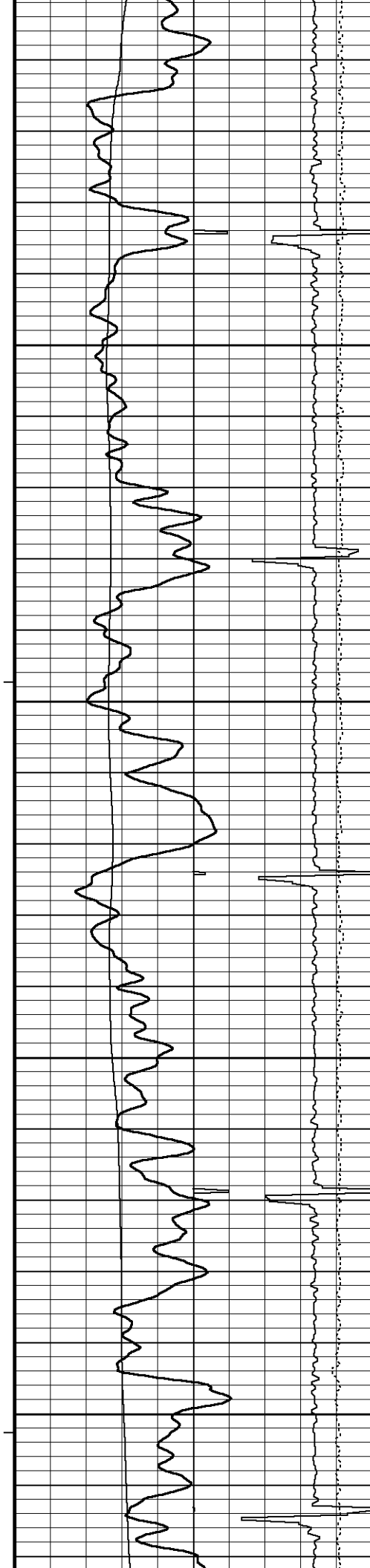
133°

3200



Borehole Temperature

Differential Temperature



131°

3250

130°

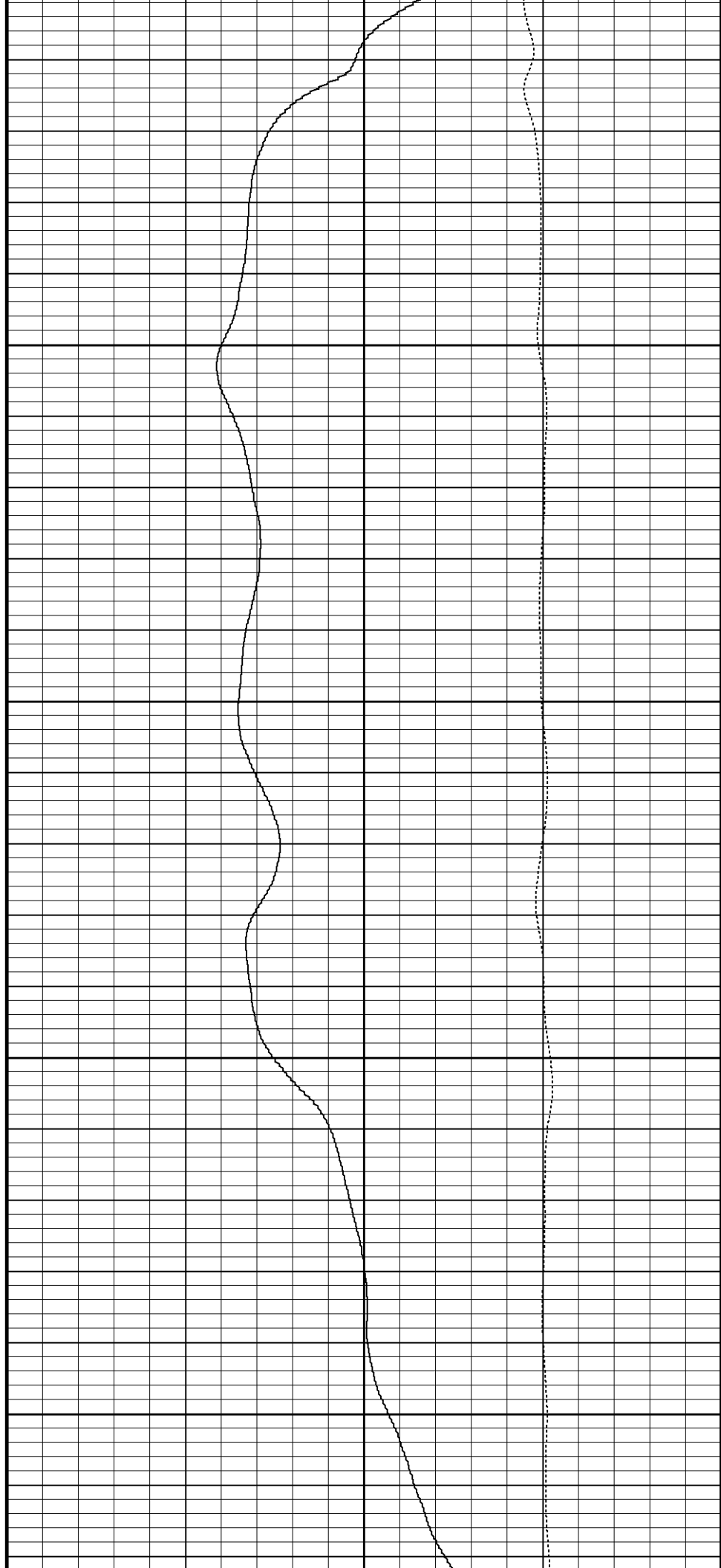
3300

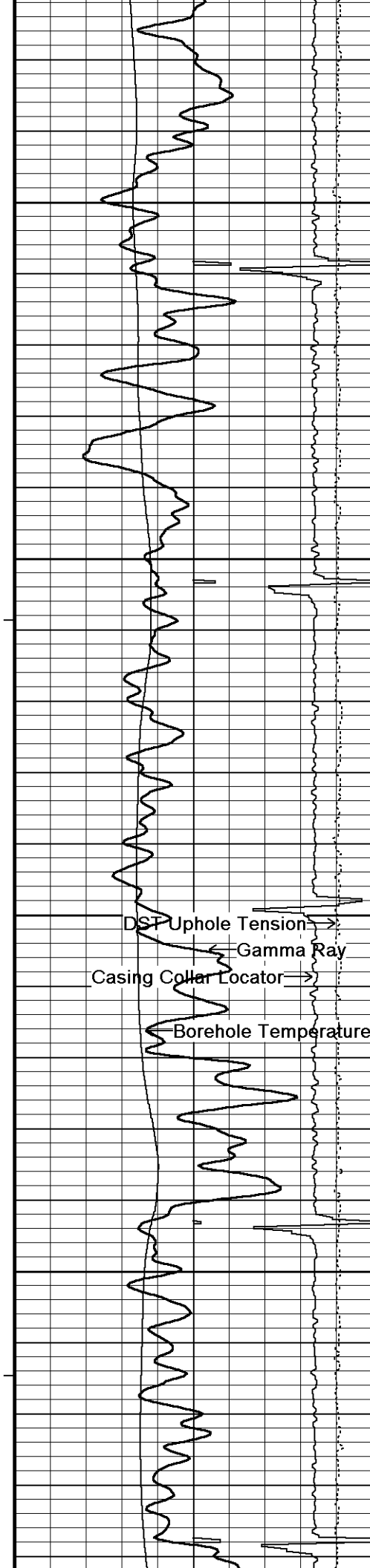
130°

3350

132°

3400





134°

3450

136°

3500

137°

3550

DST Uphole Tension →
← Gamma Ray
Casing Collar Locator →
Borehole Temperature

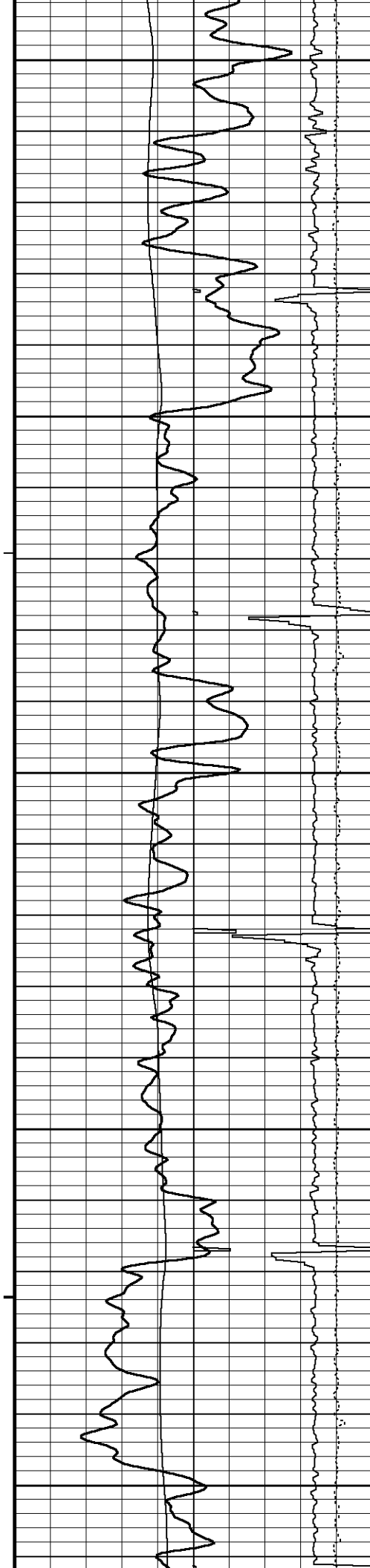
139°

3600

138°

Borehole Temperature →

Differential Temperature →



3650

140°

3700

141°

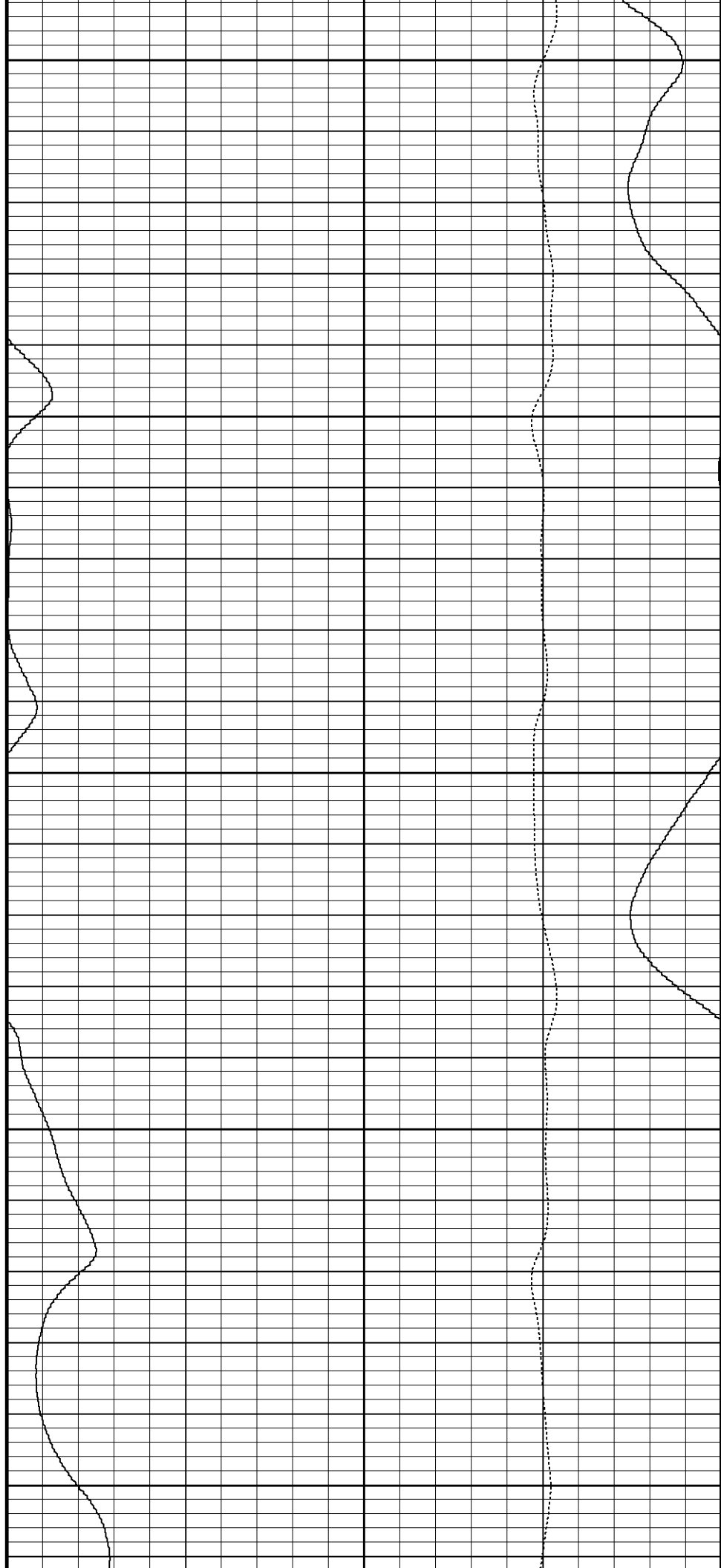
3750

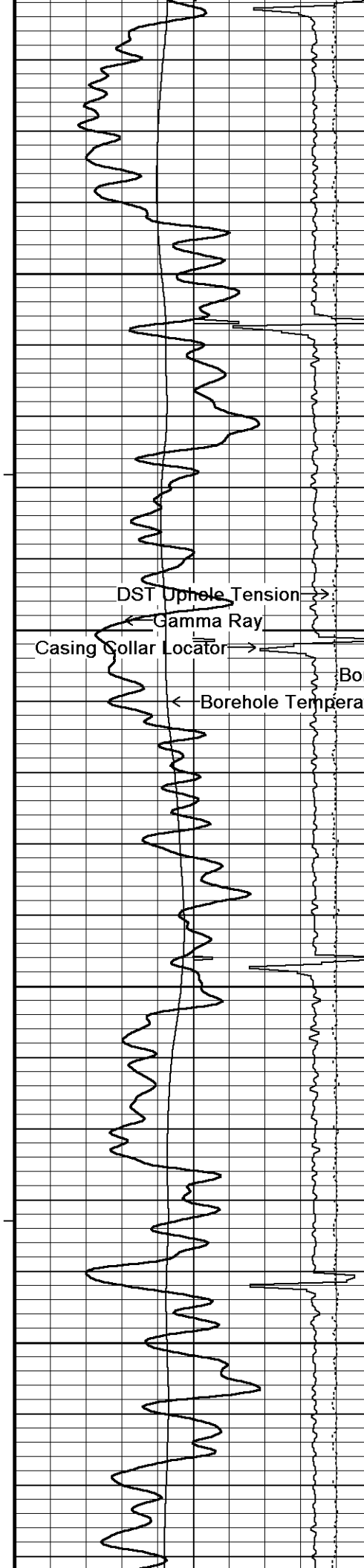
141°

3800

142°

3850





142°

3900

143°

3950

DST Uphole Tension →
← Gamma Ray
Casing Collar Locator →

Borehole Temperature →

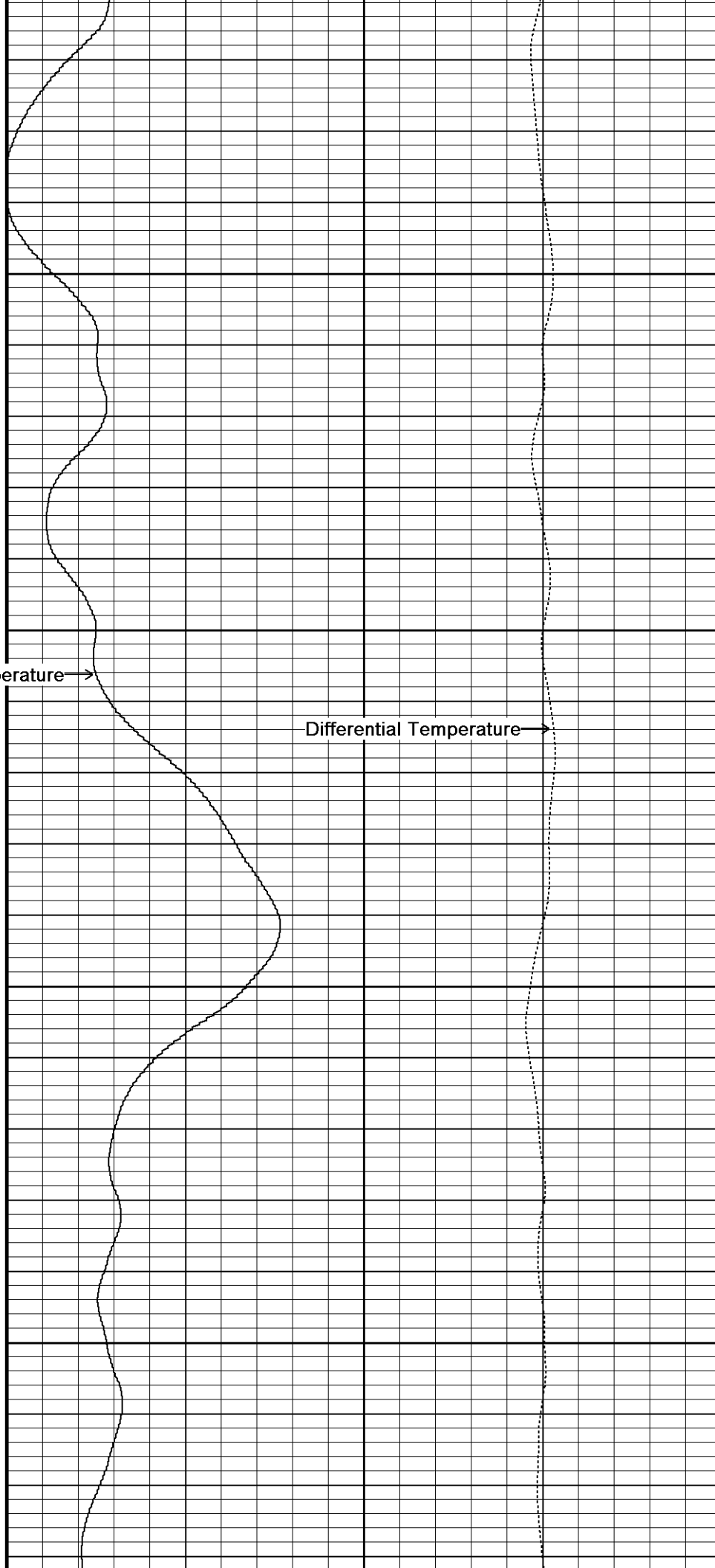
← Borehole Temperature

145°

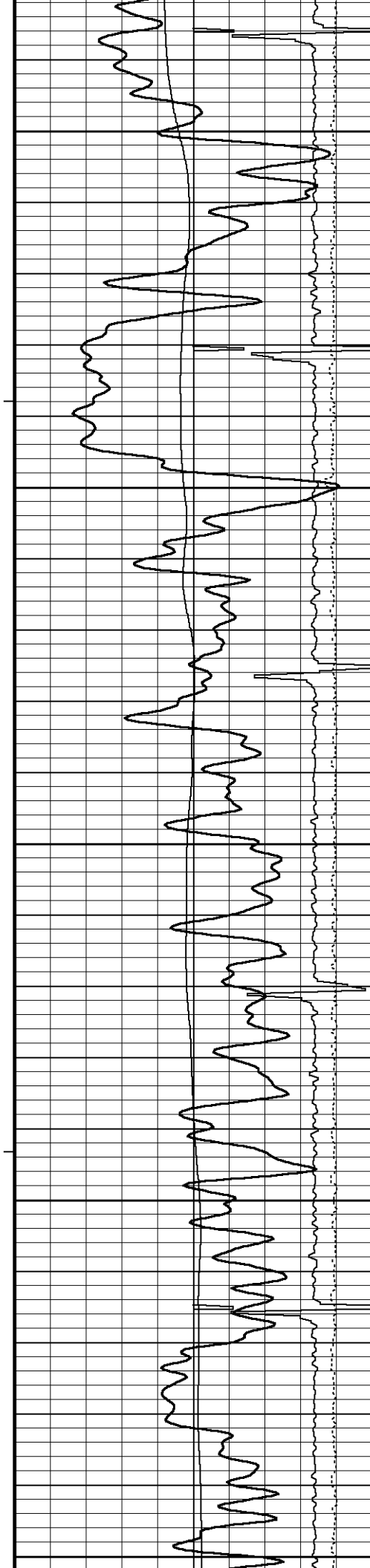
4000

145°

4050



Differential Temperature →



144°

4100

147°

4150

149°

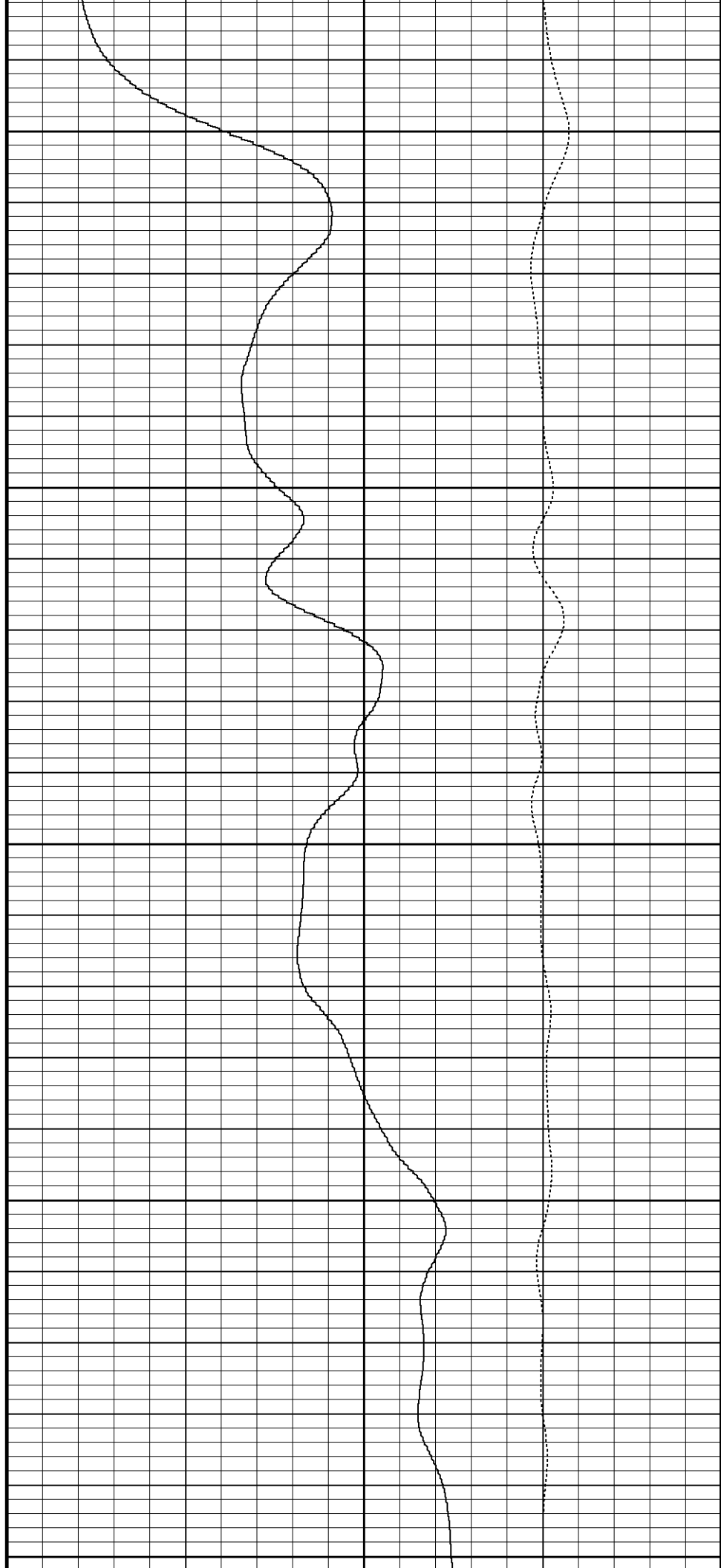
4200

149°

4250

151°

4300



DST Uphole Tension →
← Gamma Ray
Casing Collar Locator →
← Borehole Temperature

152°

4350

156°

4400

154°

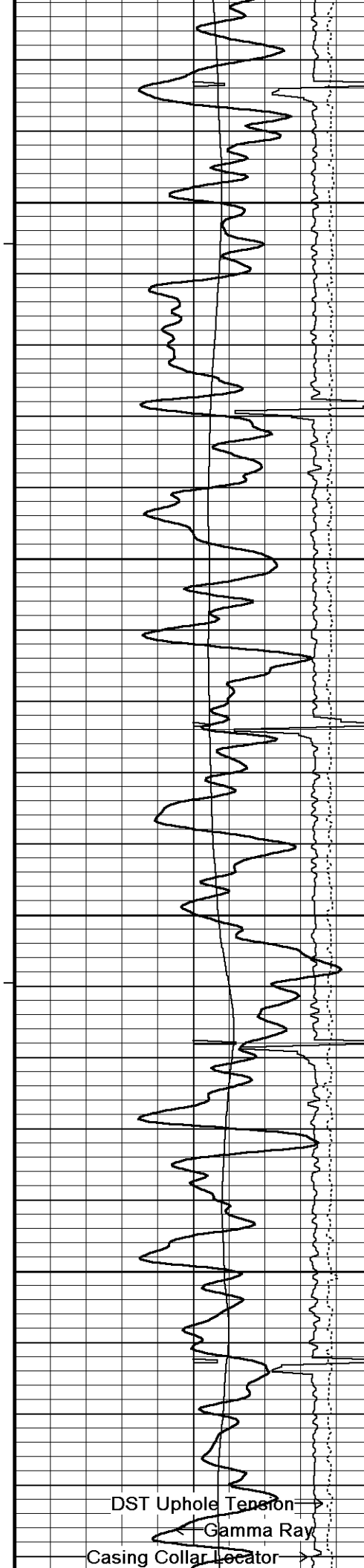
4450

153°

4500

← Borehole Temperature

Differential Temperature →



155°

4550

155°

4600

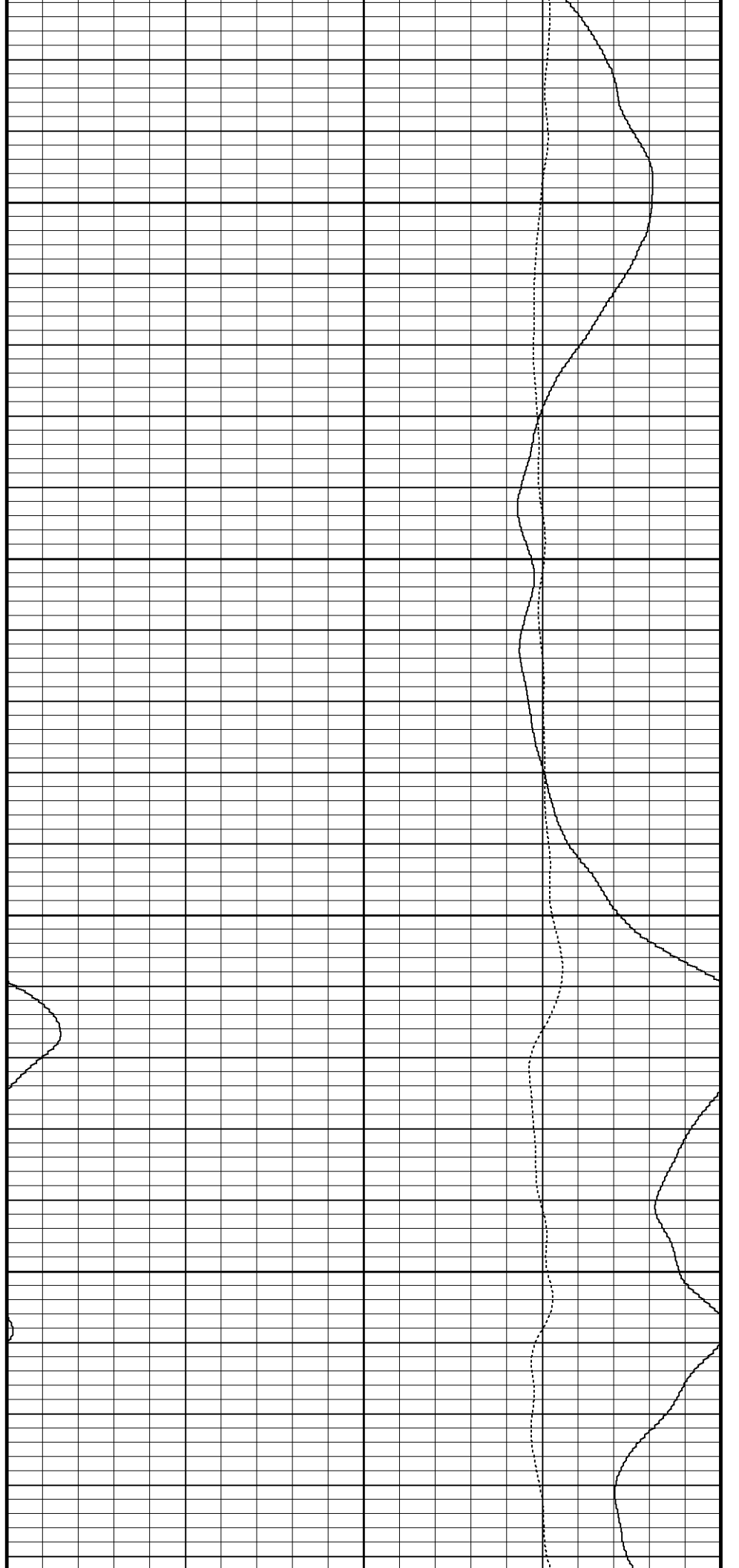
155°

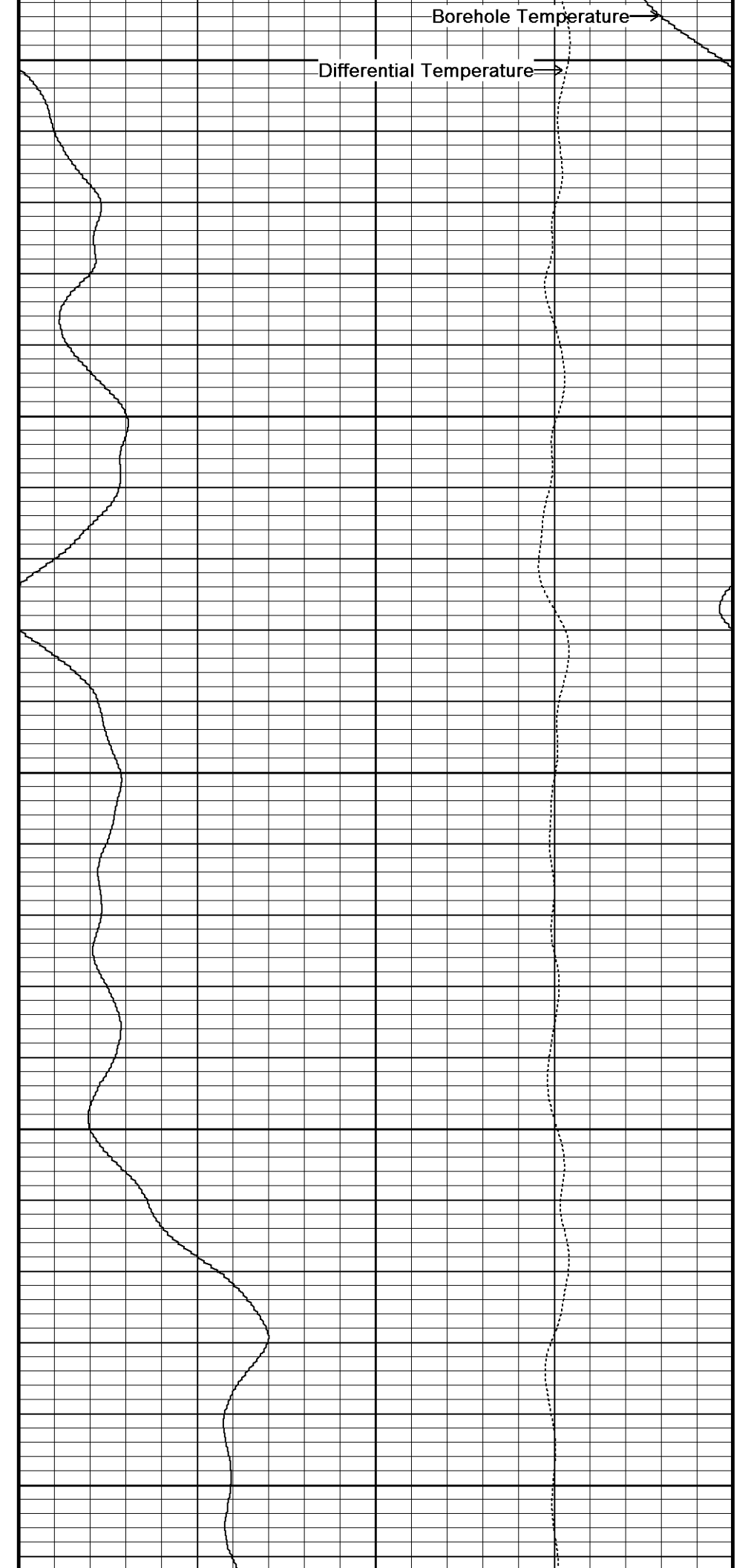
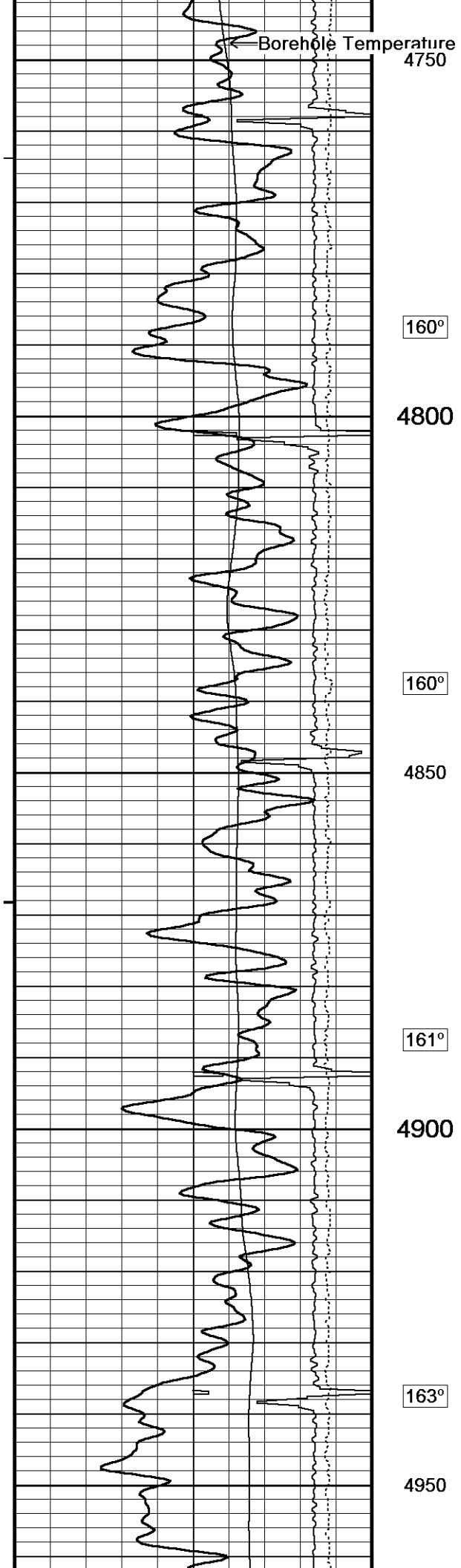
4650

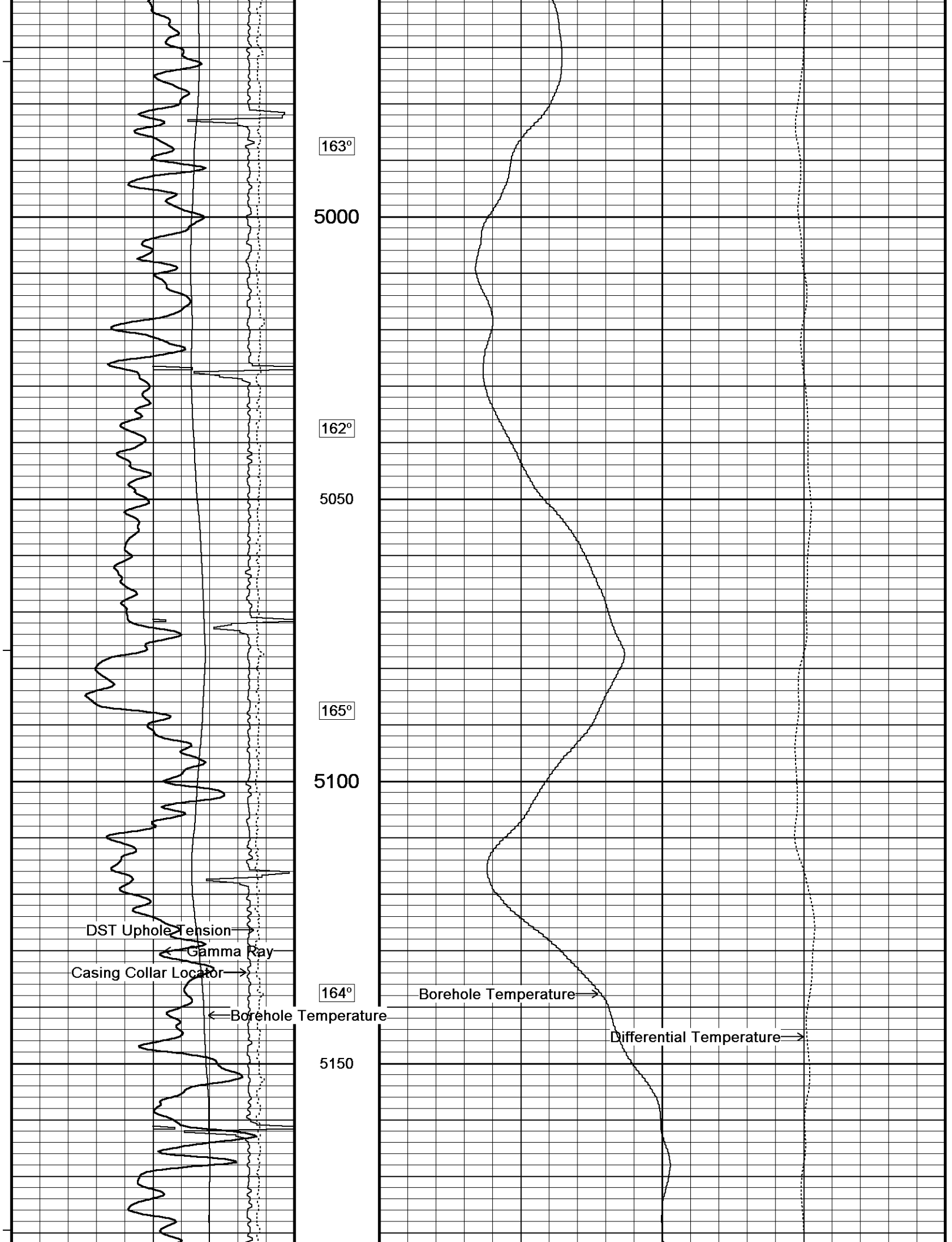
157°

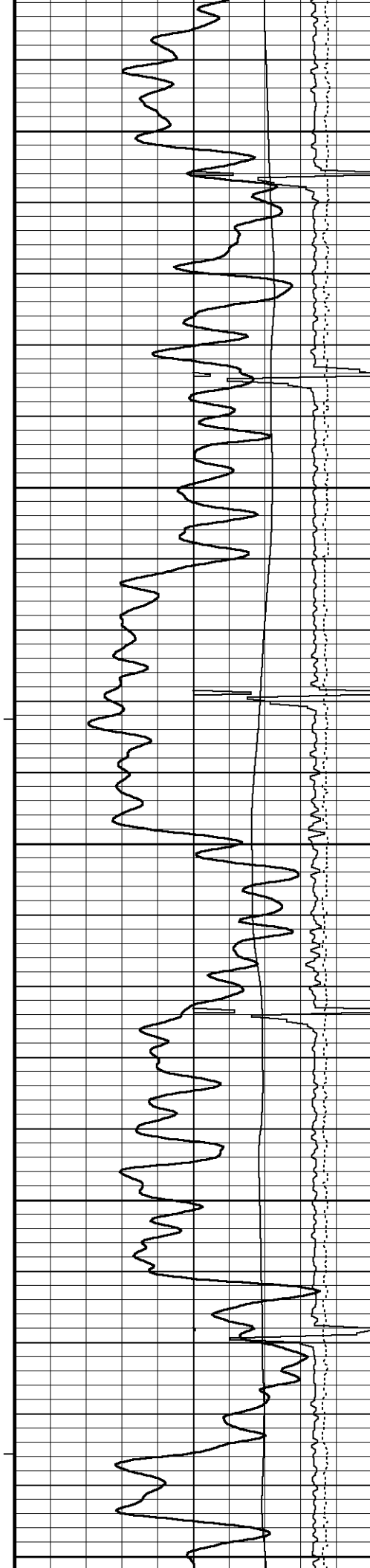
4700

157°









167°

5200

169°

5250

167°

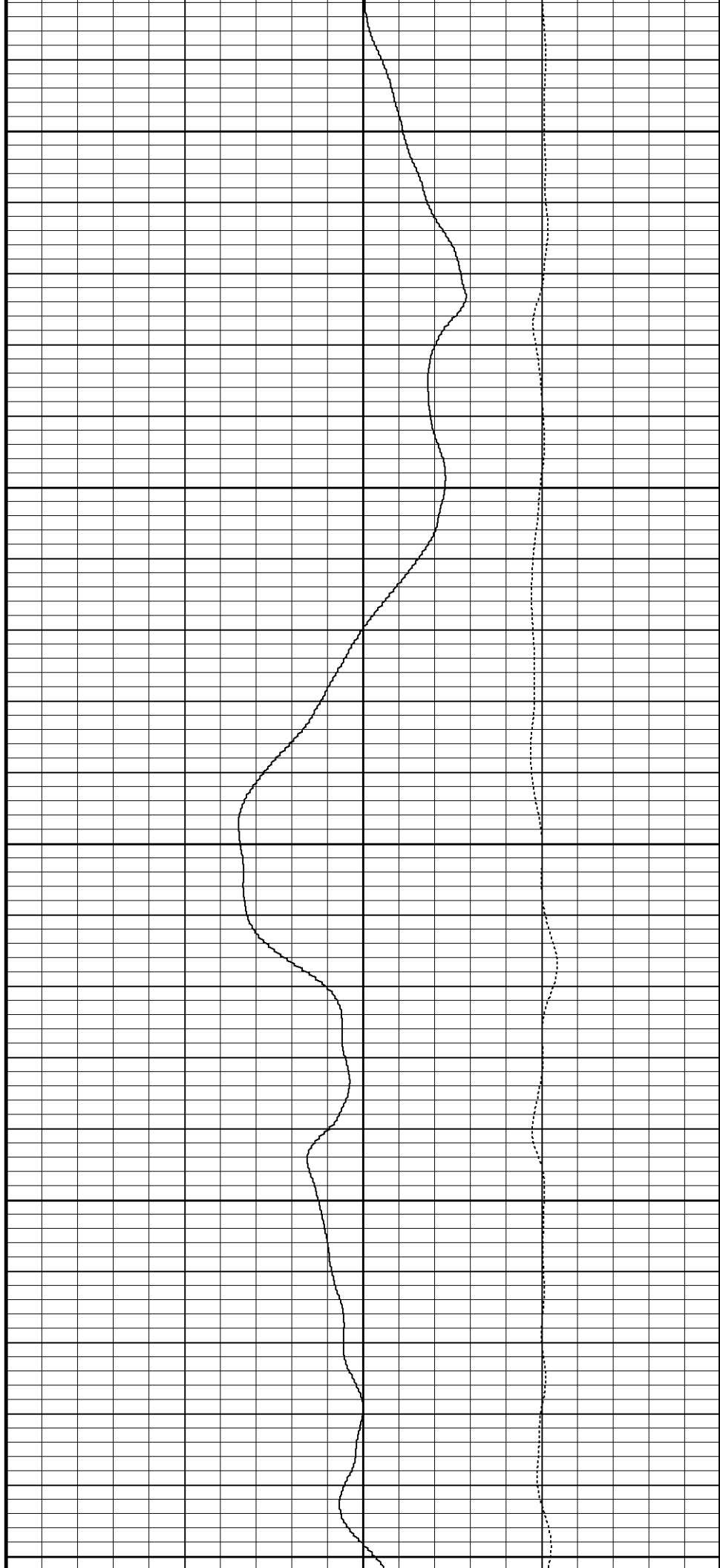
5300

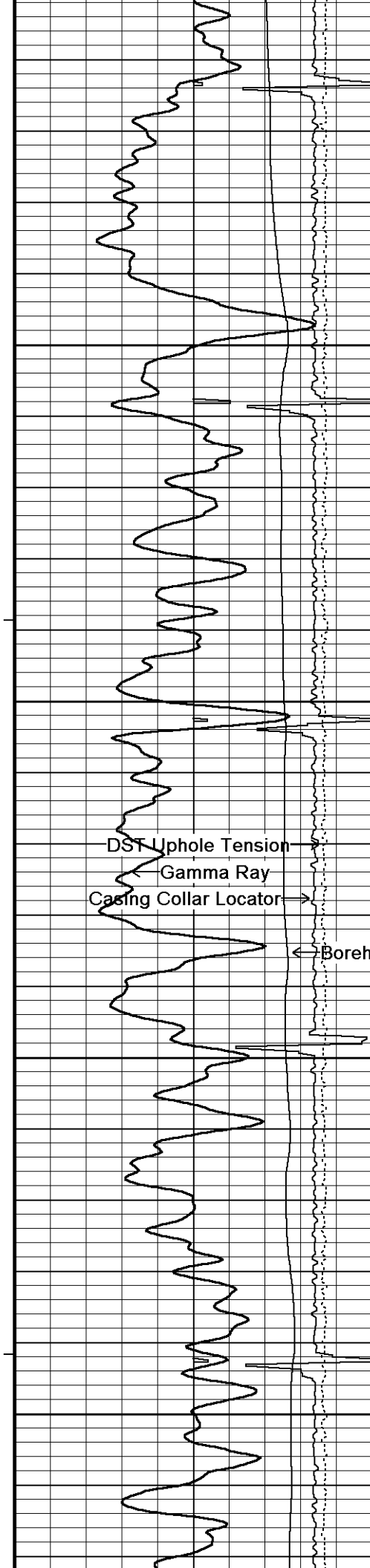
167°

5350

167°

5400





169°

5450

171°

5500

DST Uphole Tension
Gamma Ray
Casing Collar Locator

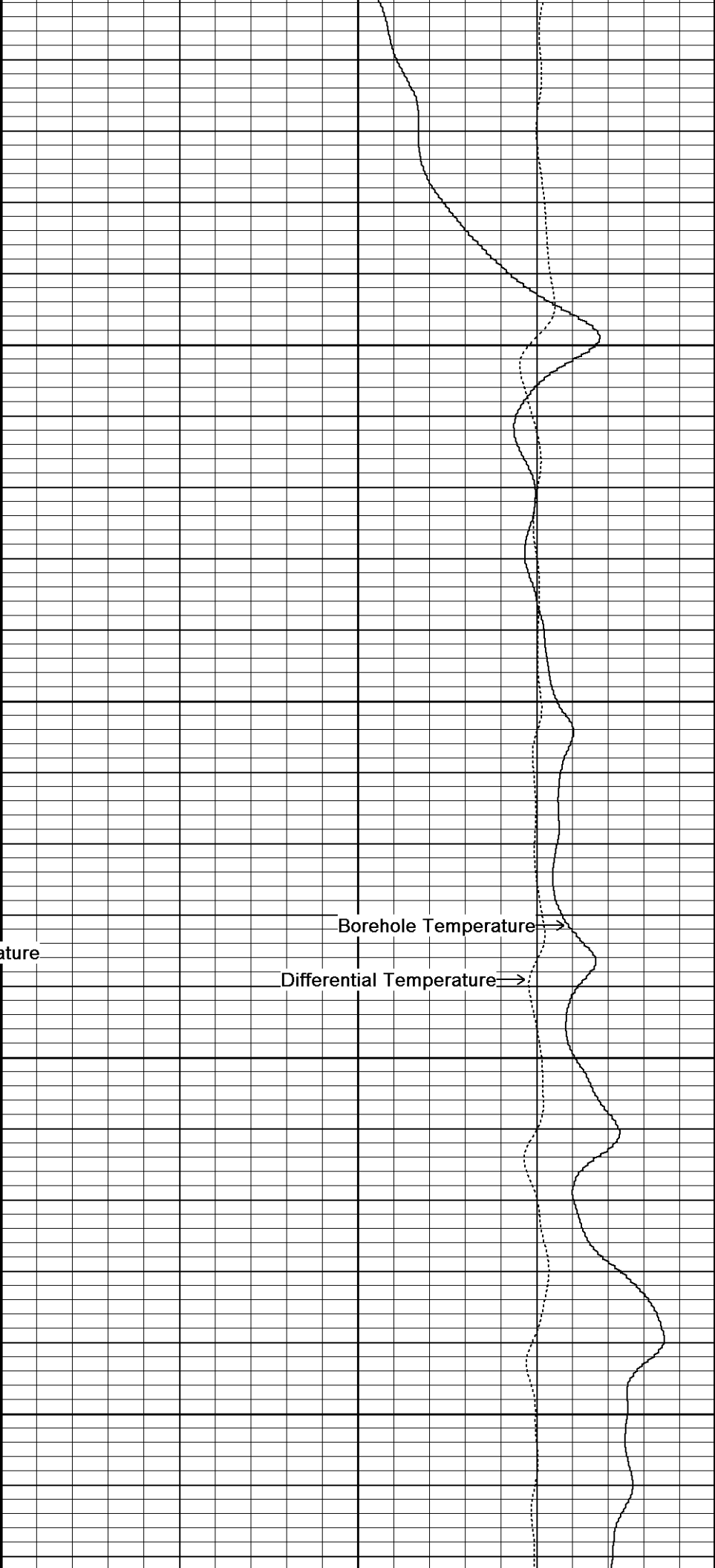
Borehole Temperature

172°

5550

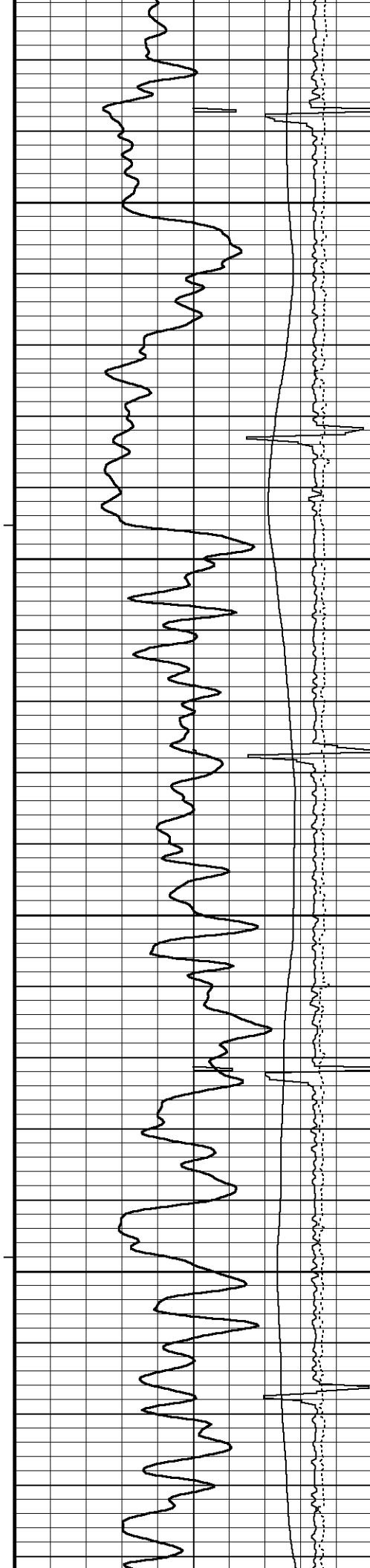
174°

5600



Borehole Temperature

Differential Temperature



173°

5650

171°

5700

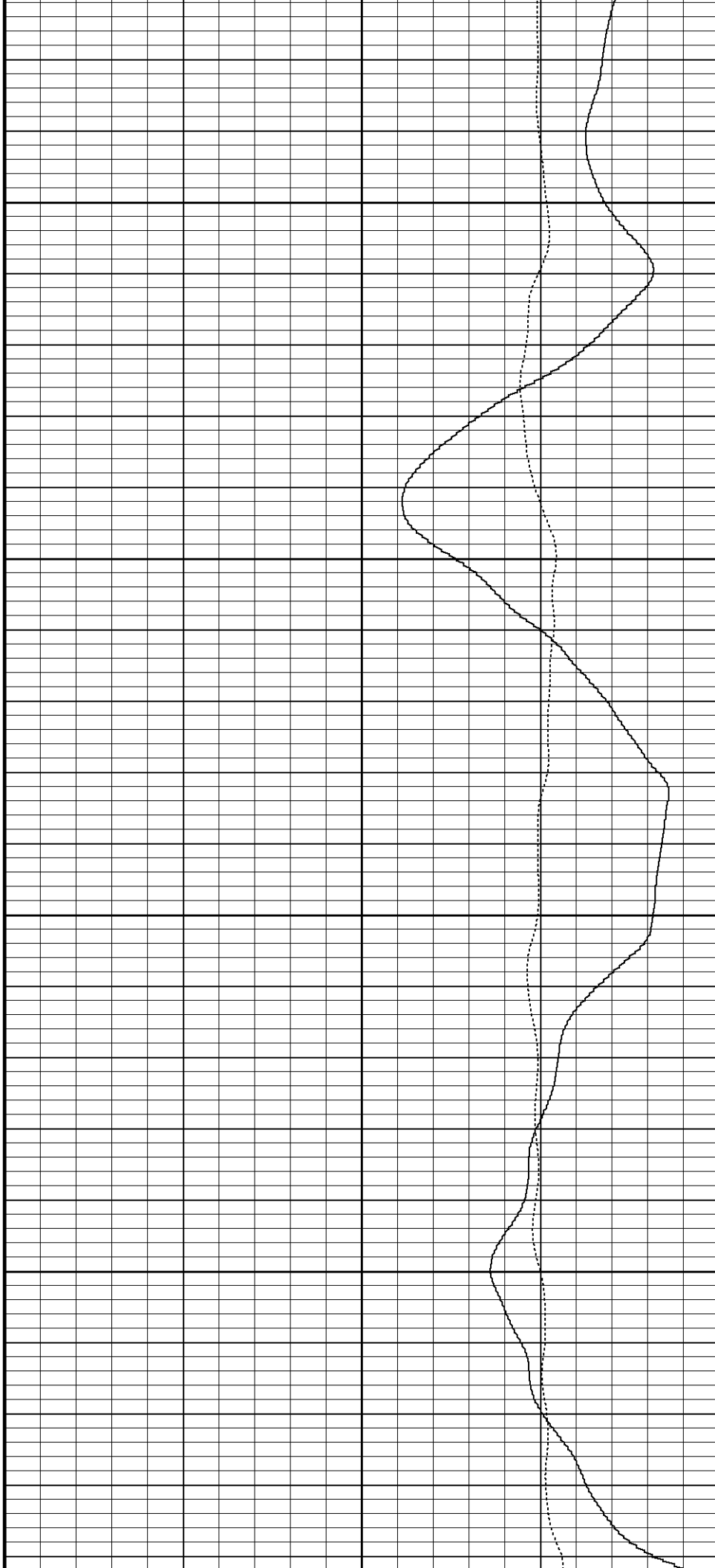
174°

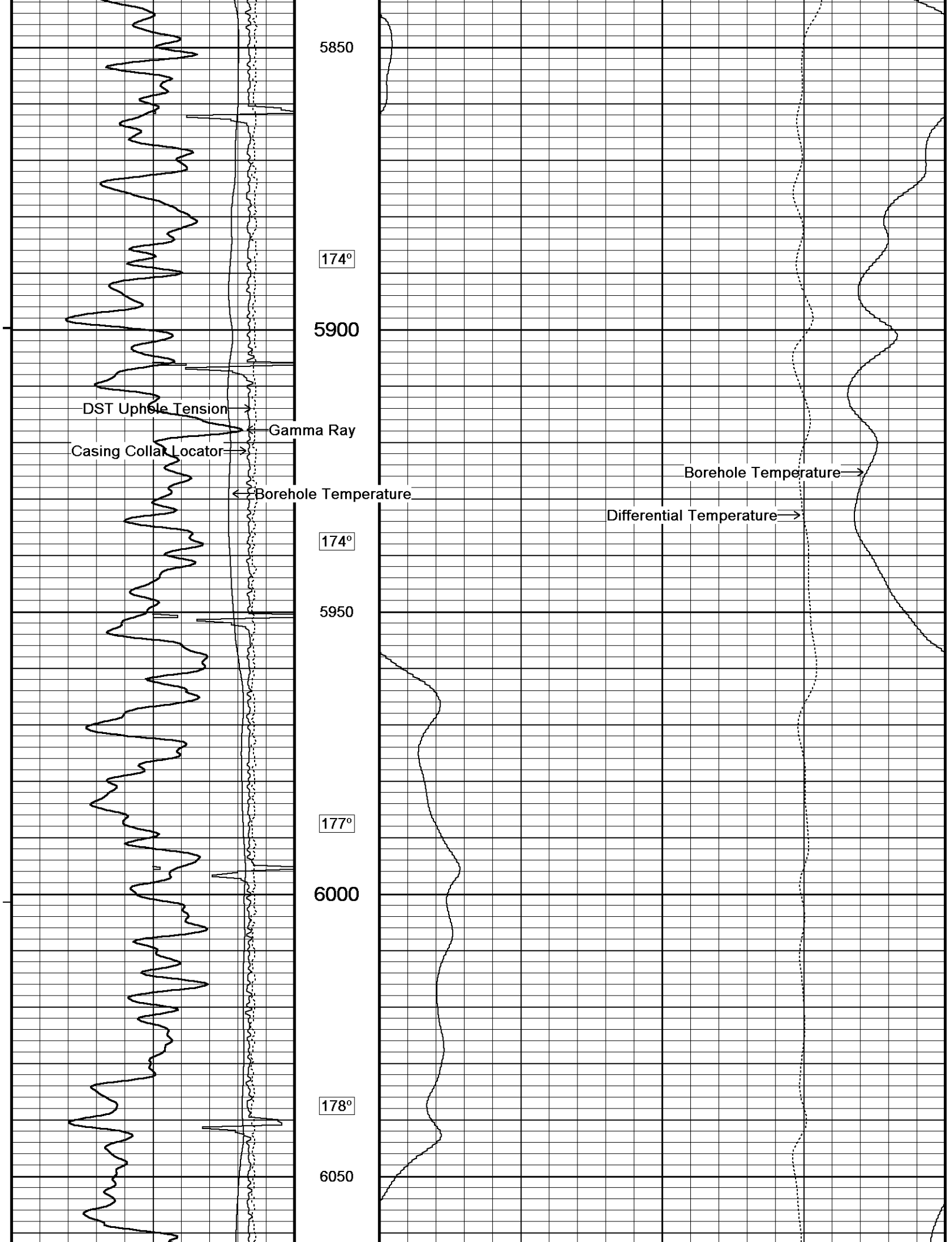
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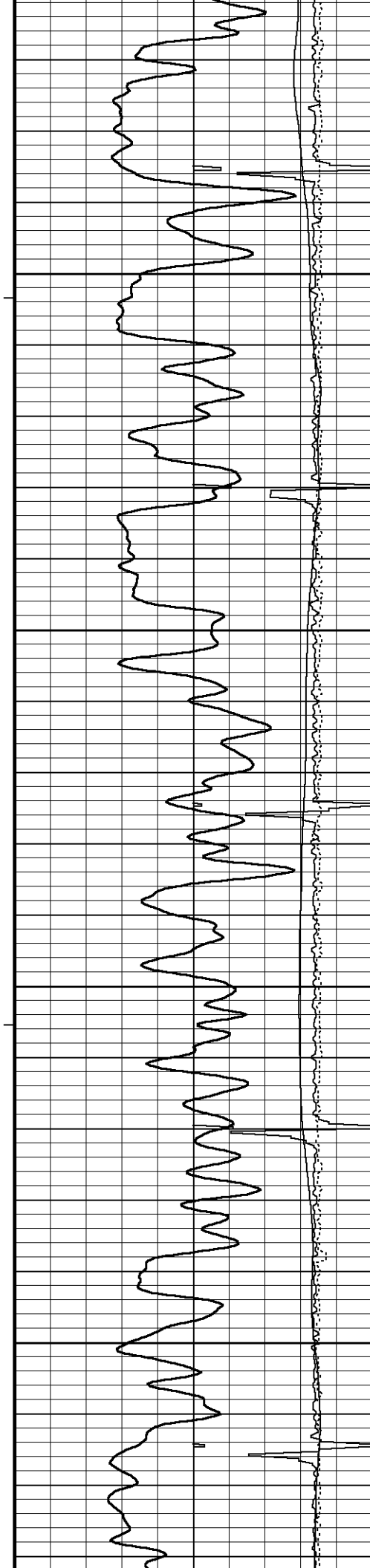
172°

5800

173°







177°

6100

180°

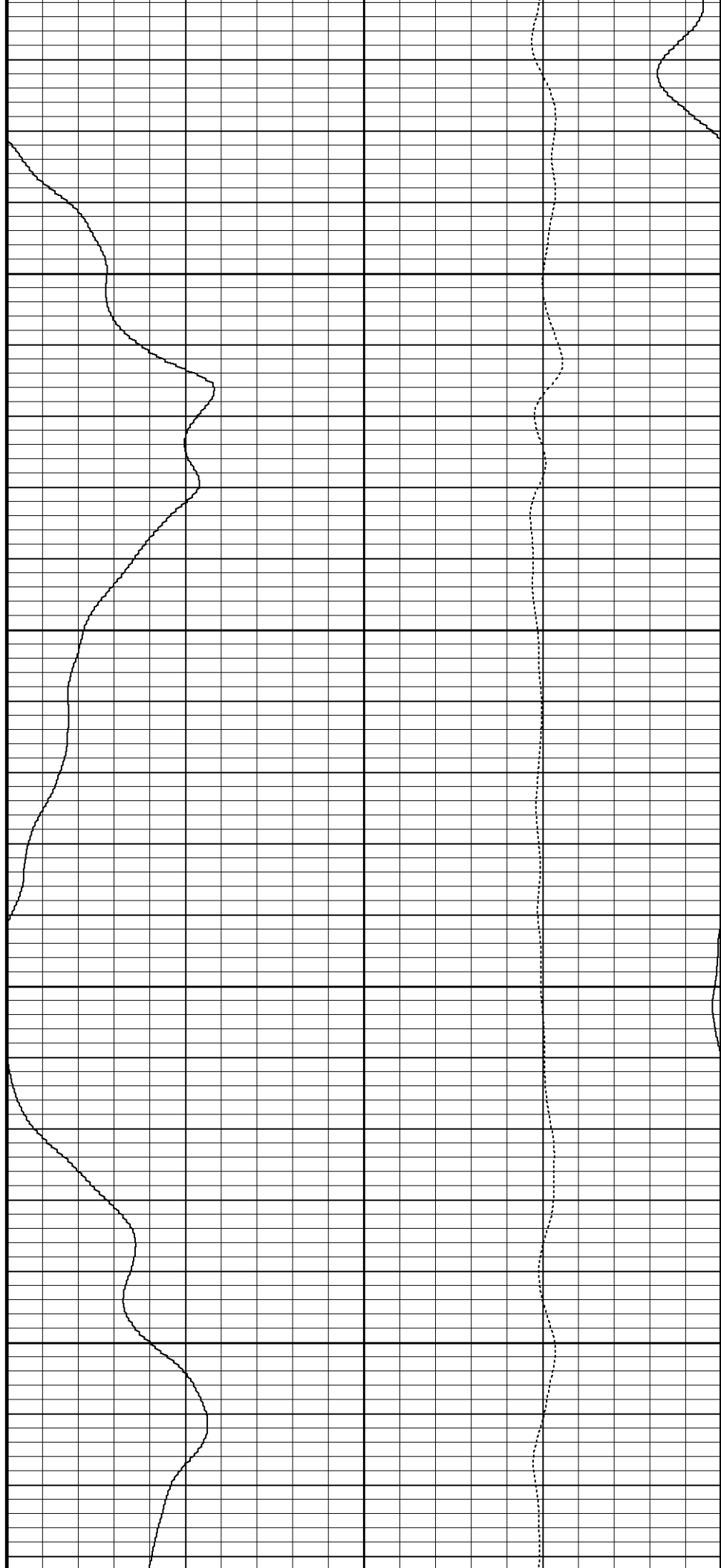
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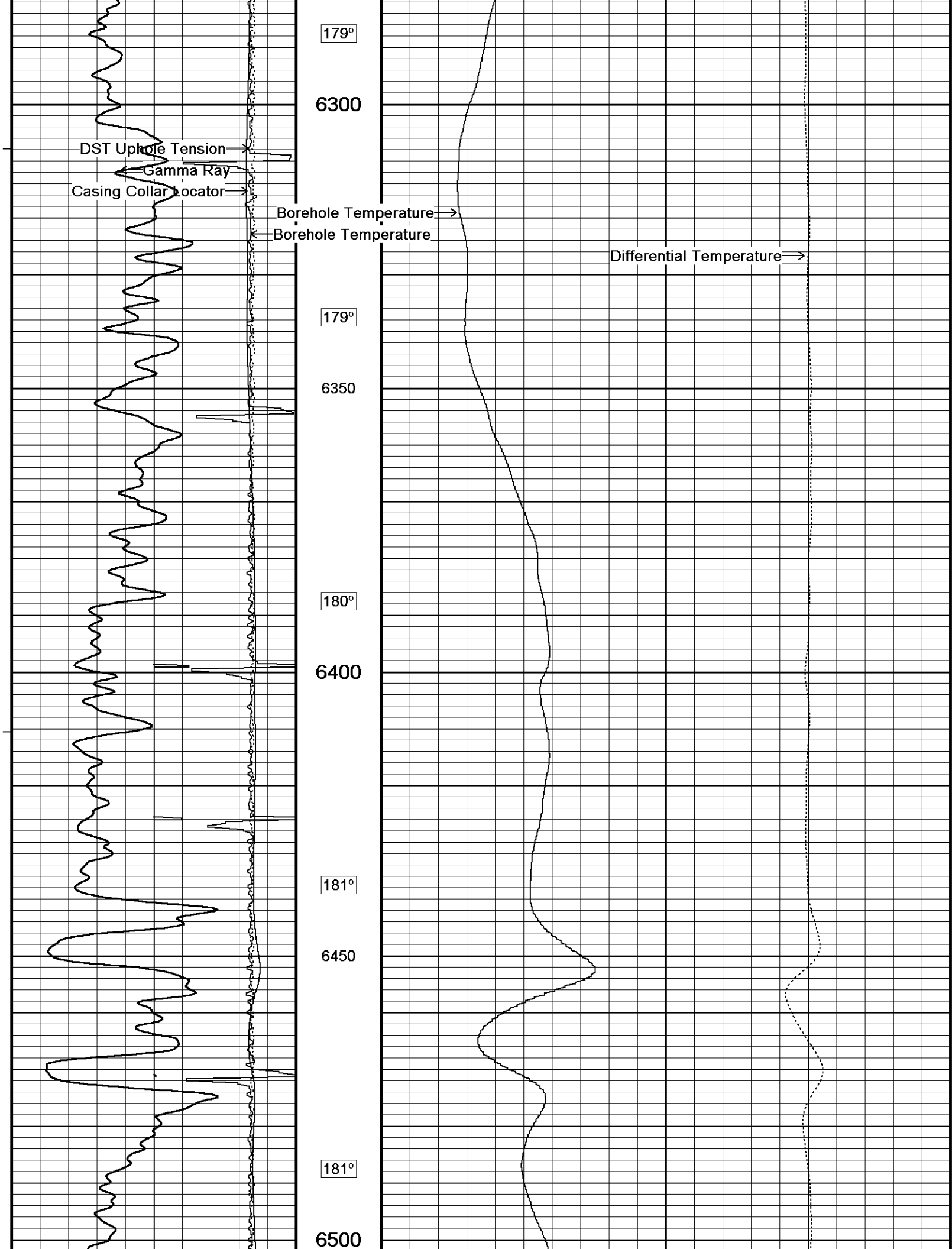
177°

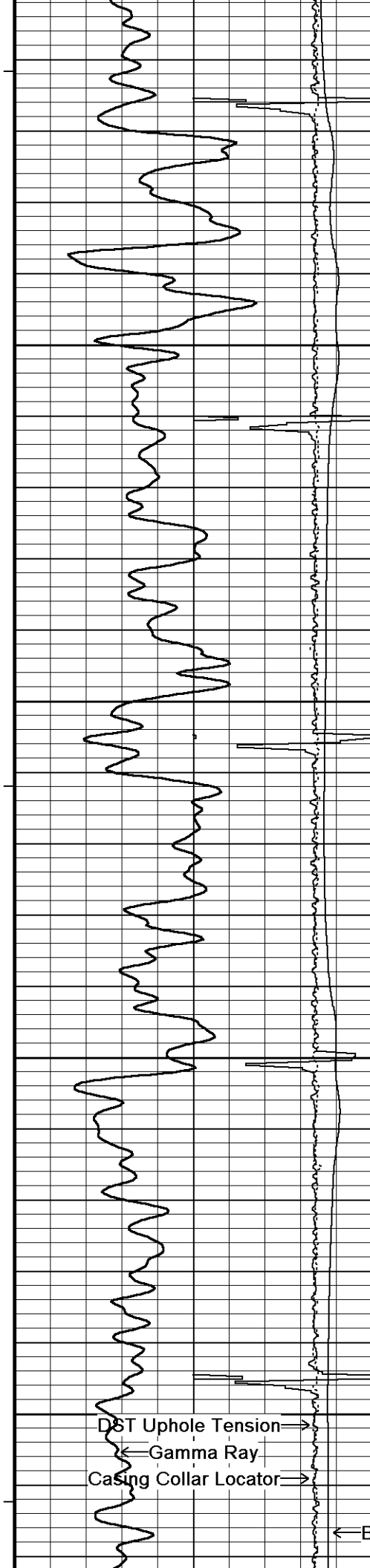
6200

178°

6250







183°

6550

183°

6600

183°

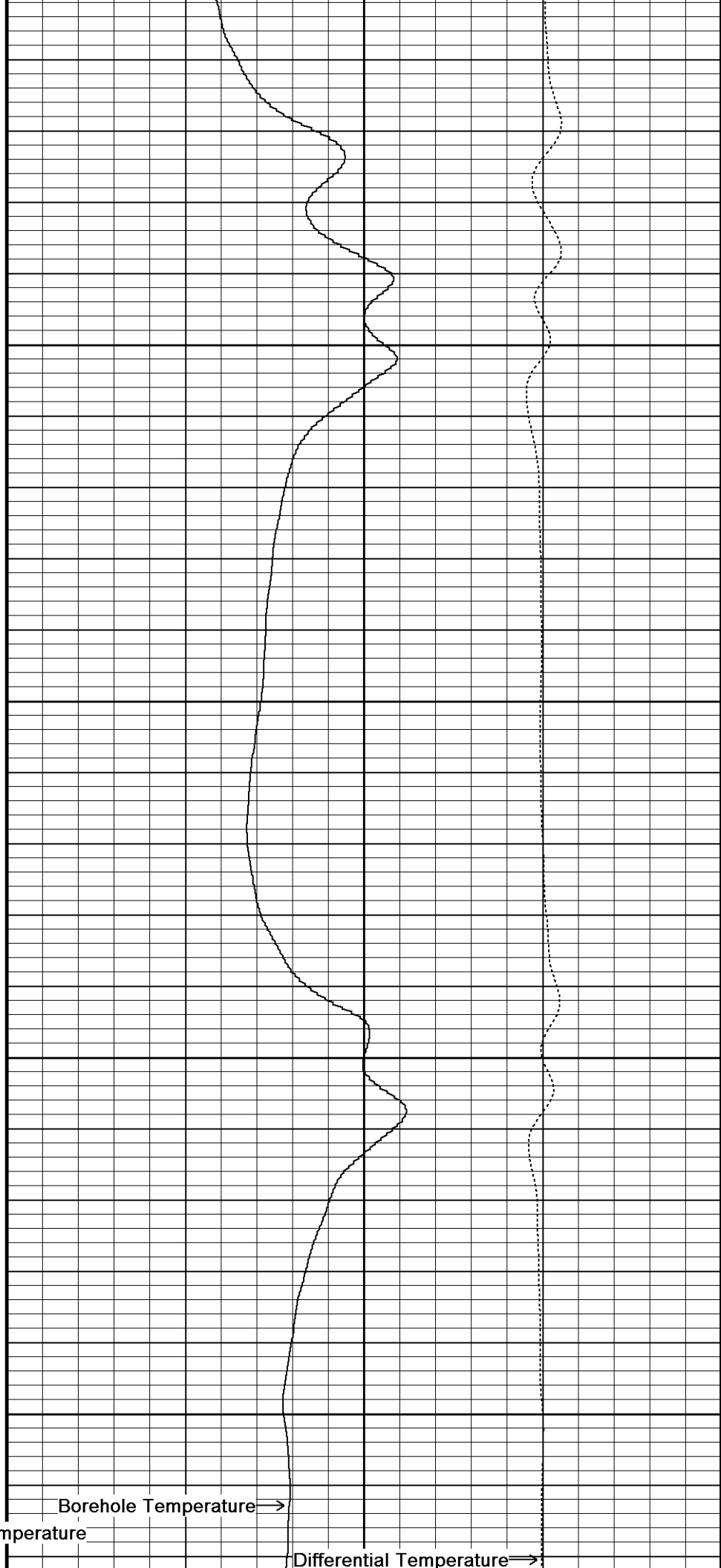
6650

183°

6700

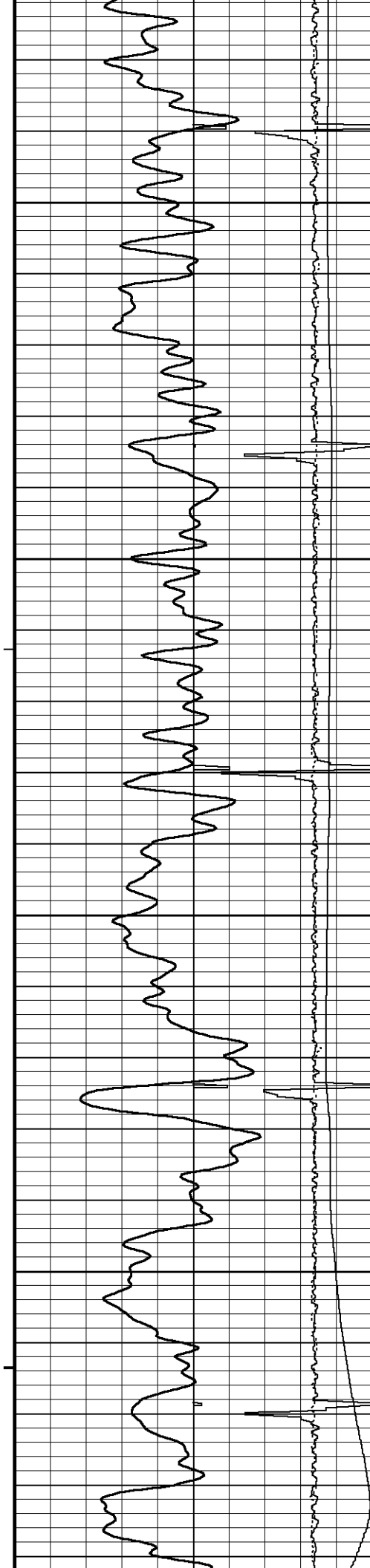
DST Uphole Tension →
← Gamma Ray
Casing Collar Locator →

← Borehole Temperature



Borehole Temperature →

Differential Temperature →



183°

6750

184°

6800

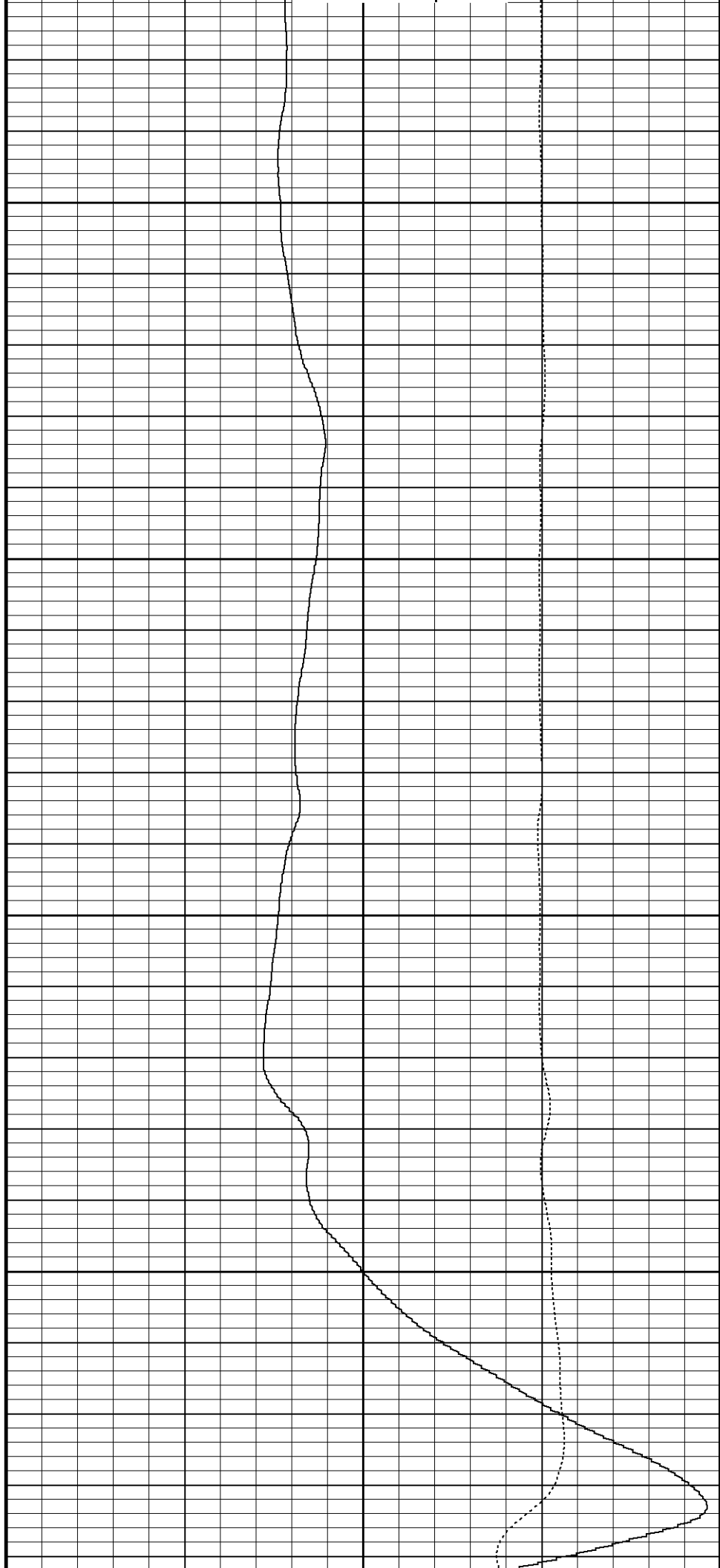
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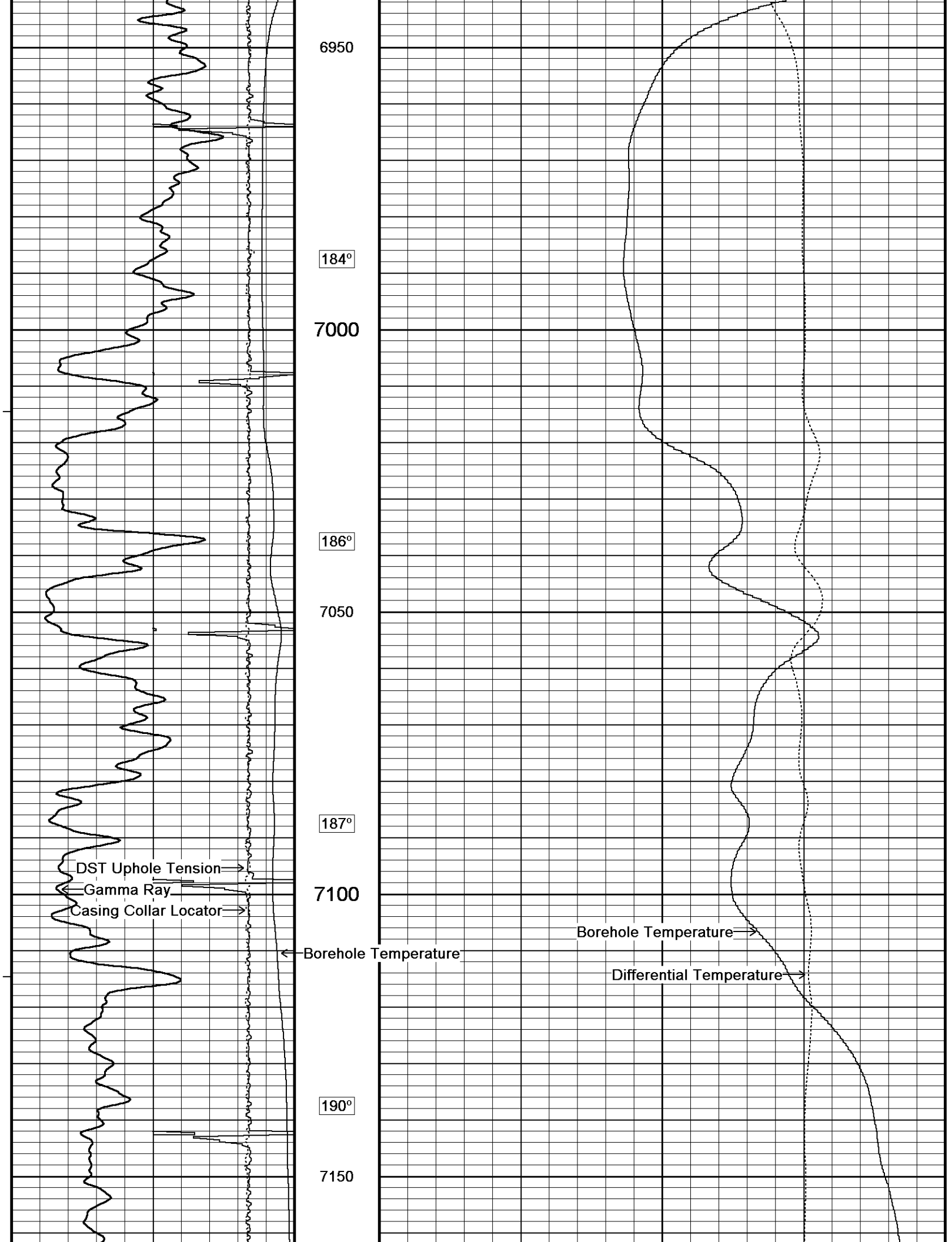
6850

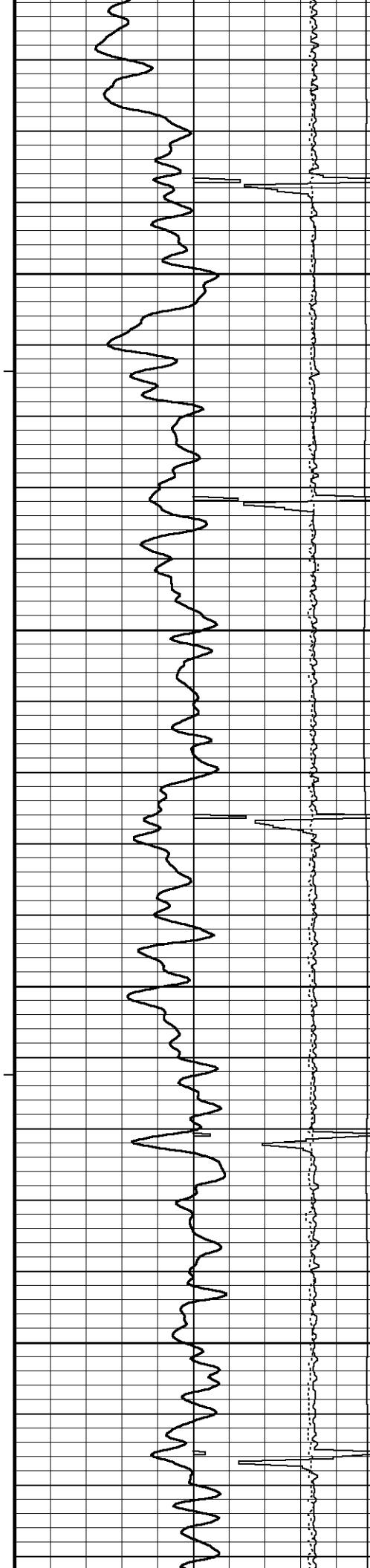
183°

6900

190°







191°

7200

192°

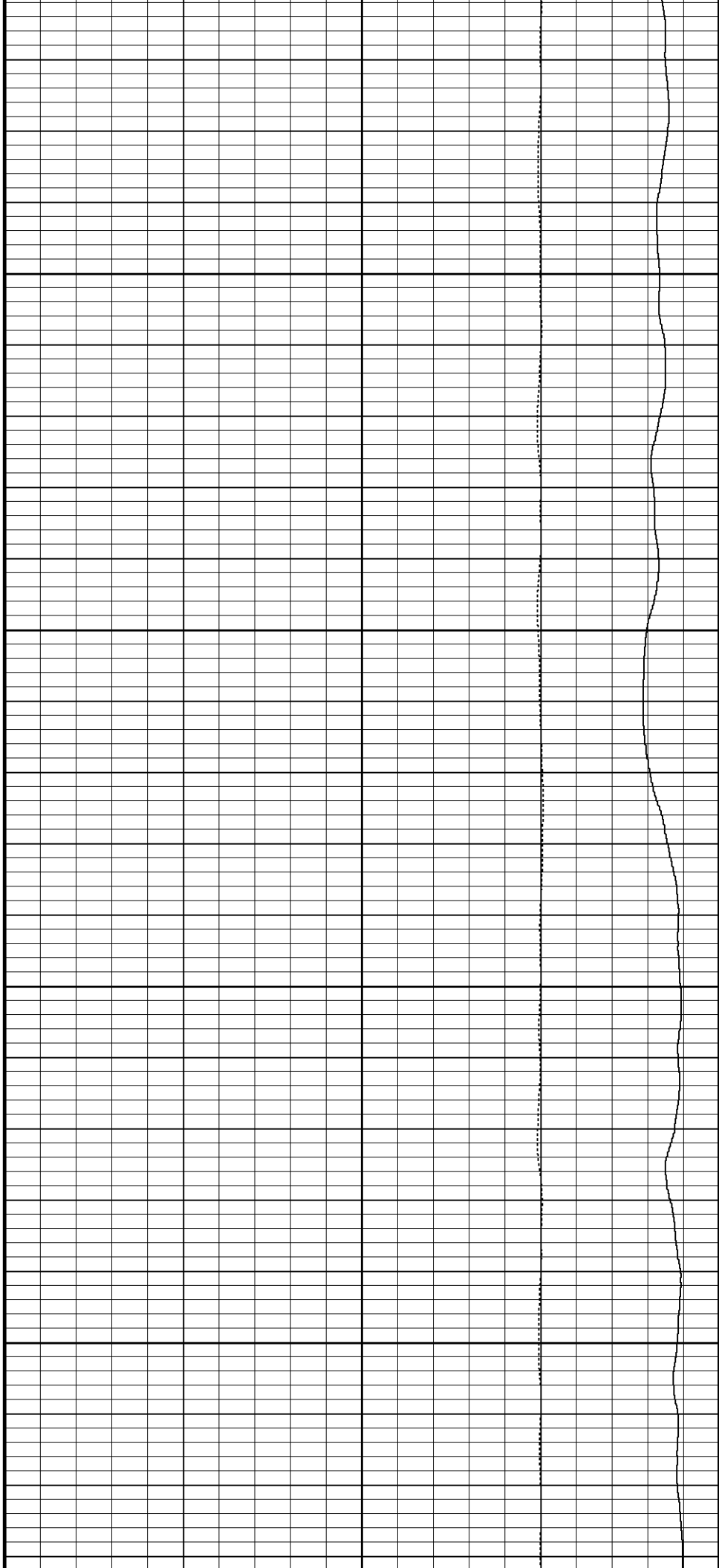
7250

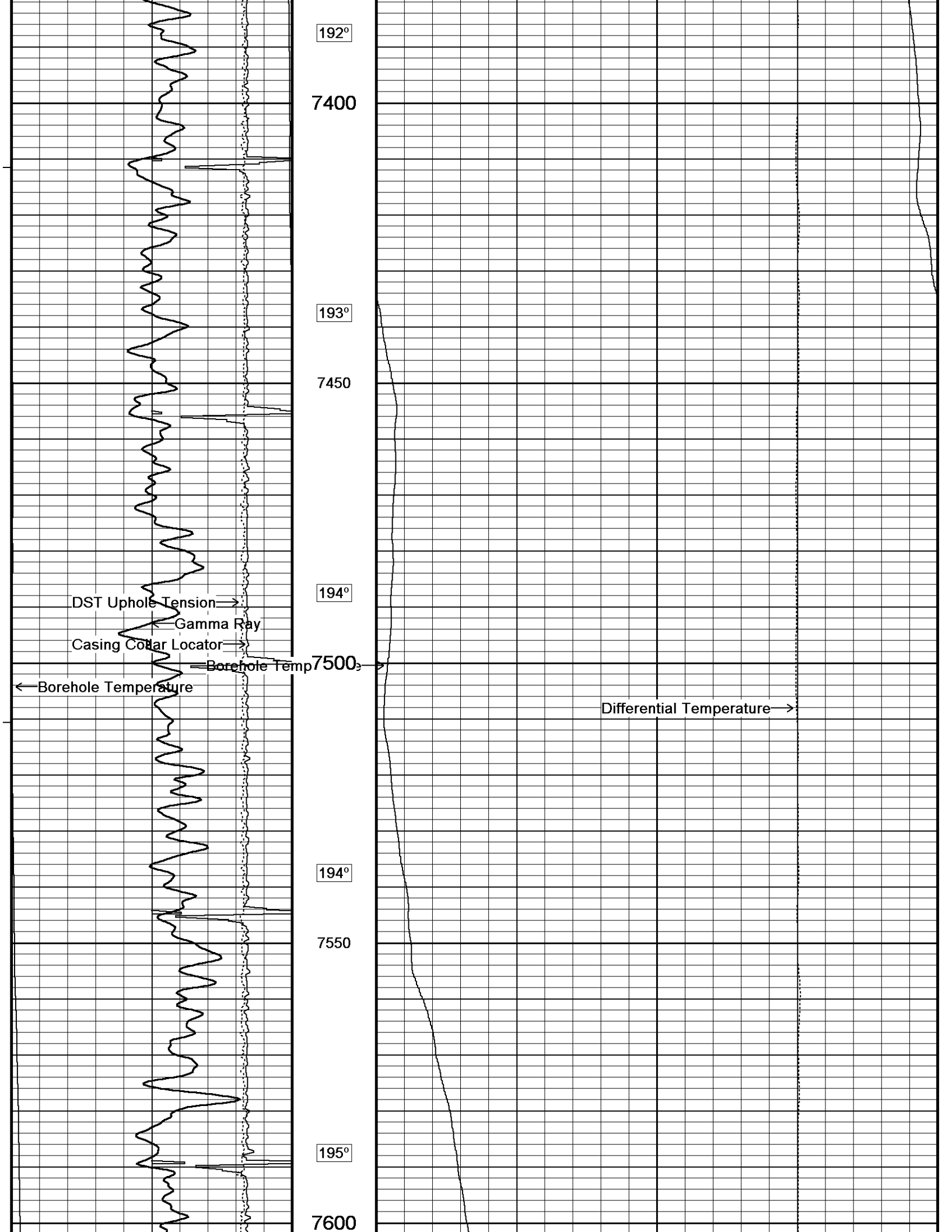
192°

7300

192°

7350





192°

7400

193°

7450

194°

7500

194°

7550

195°

7600

DST Uphole Tension

Gamma Ray

Casing Collar Locator

Borehole Temp

Borehole Temperature

Differential Temperature



196°

7650

196°

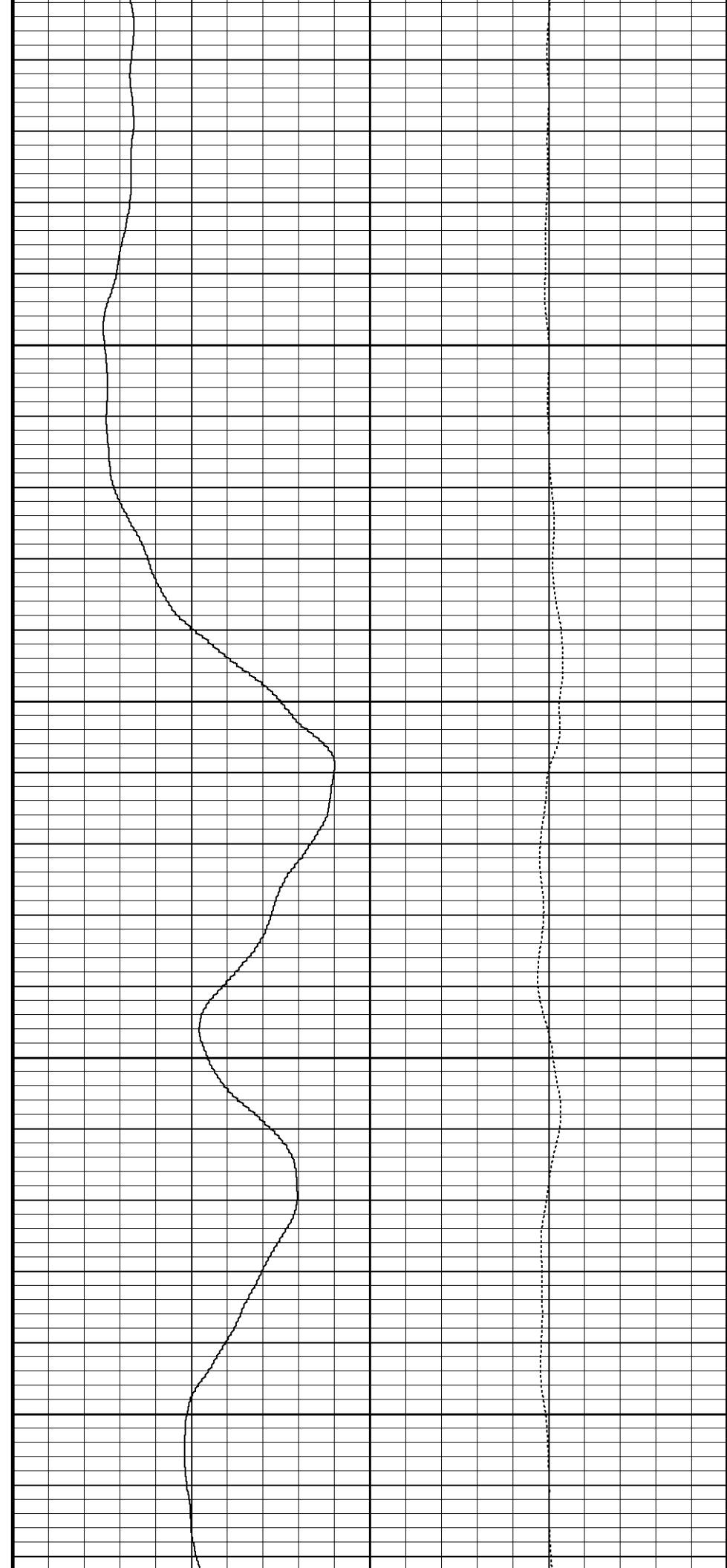
7700

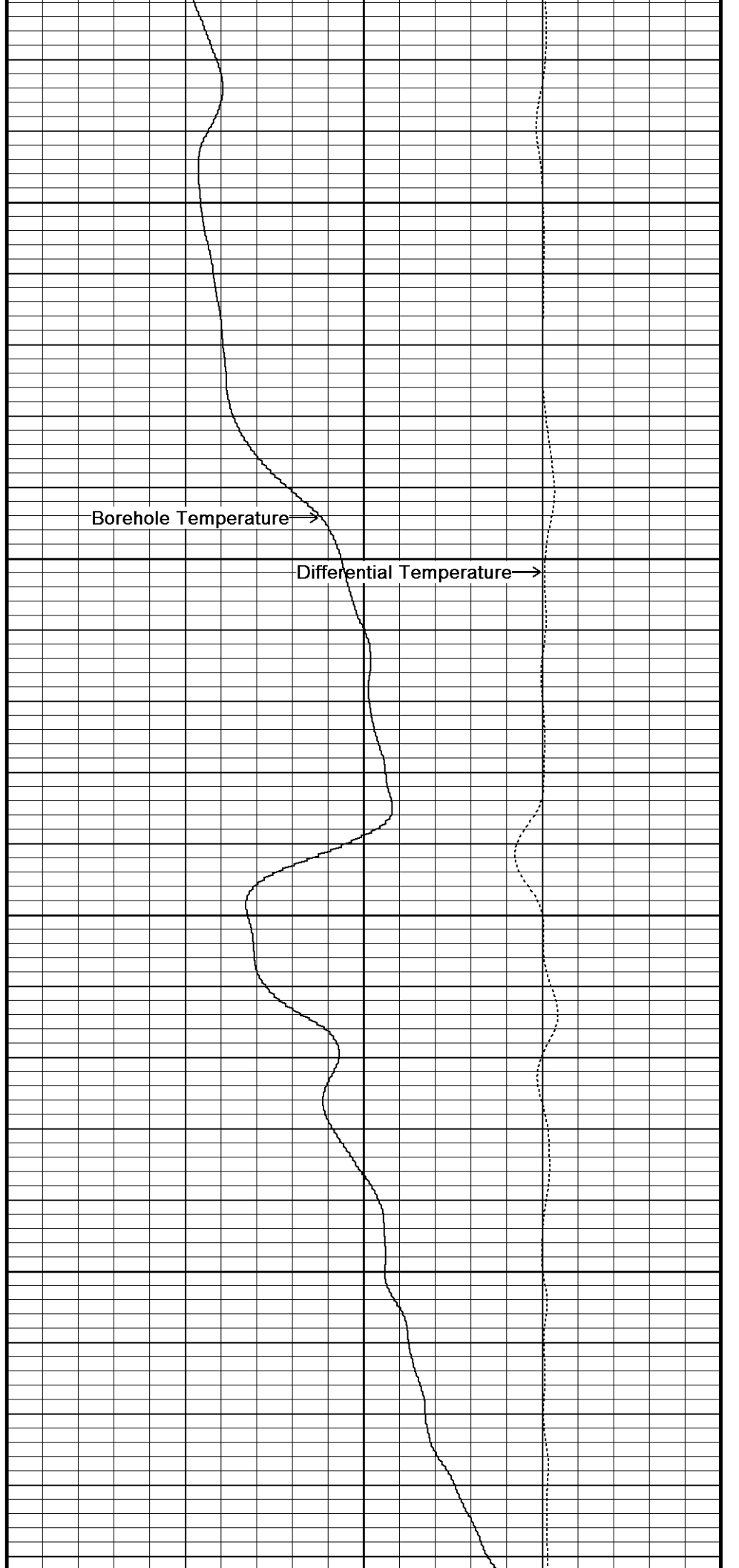
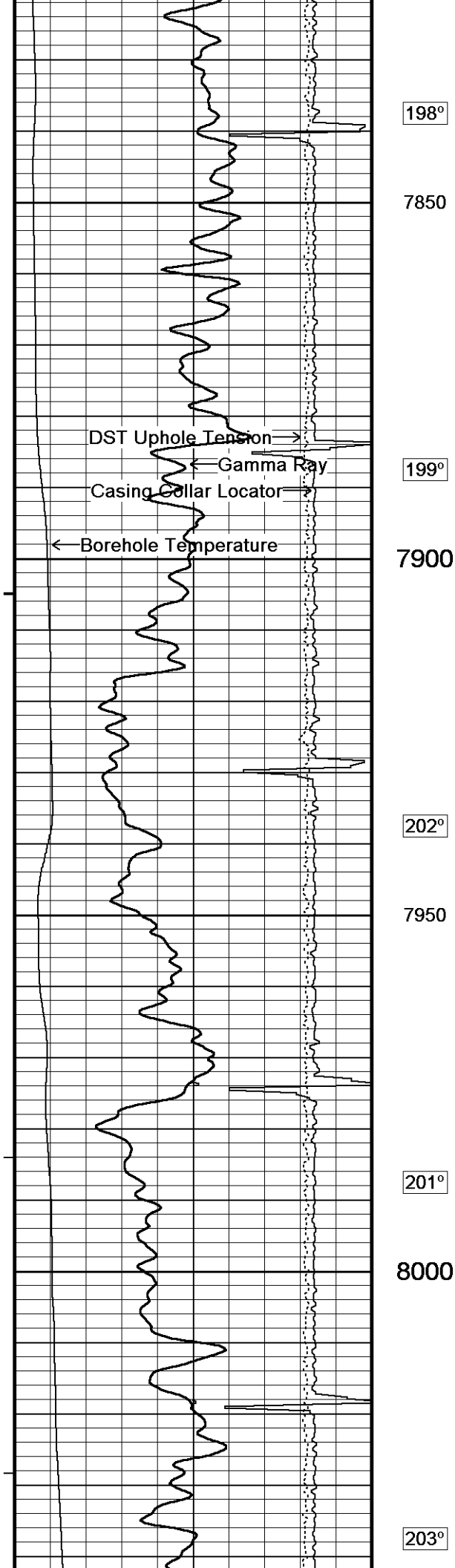
199°

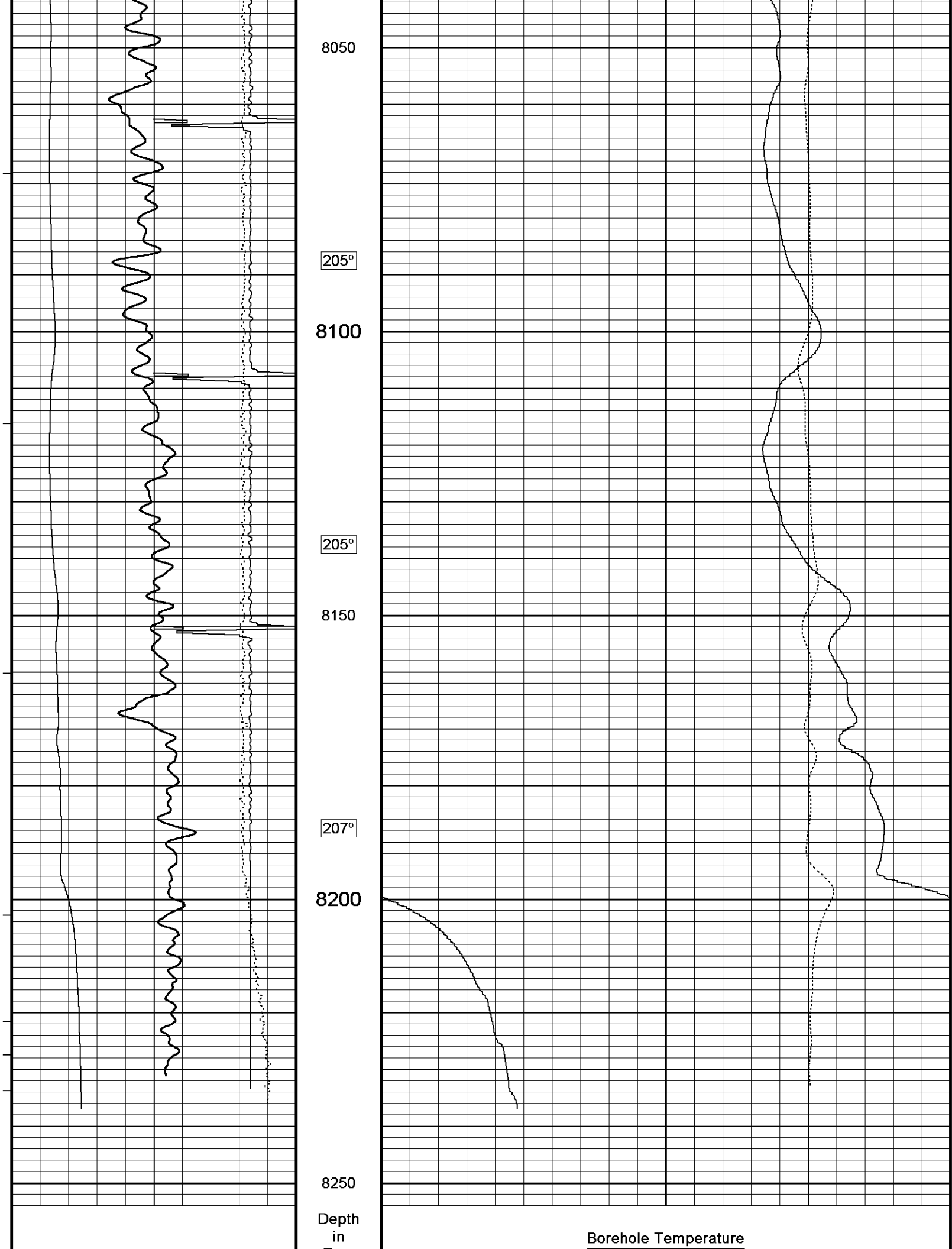
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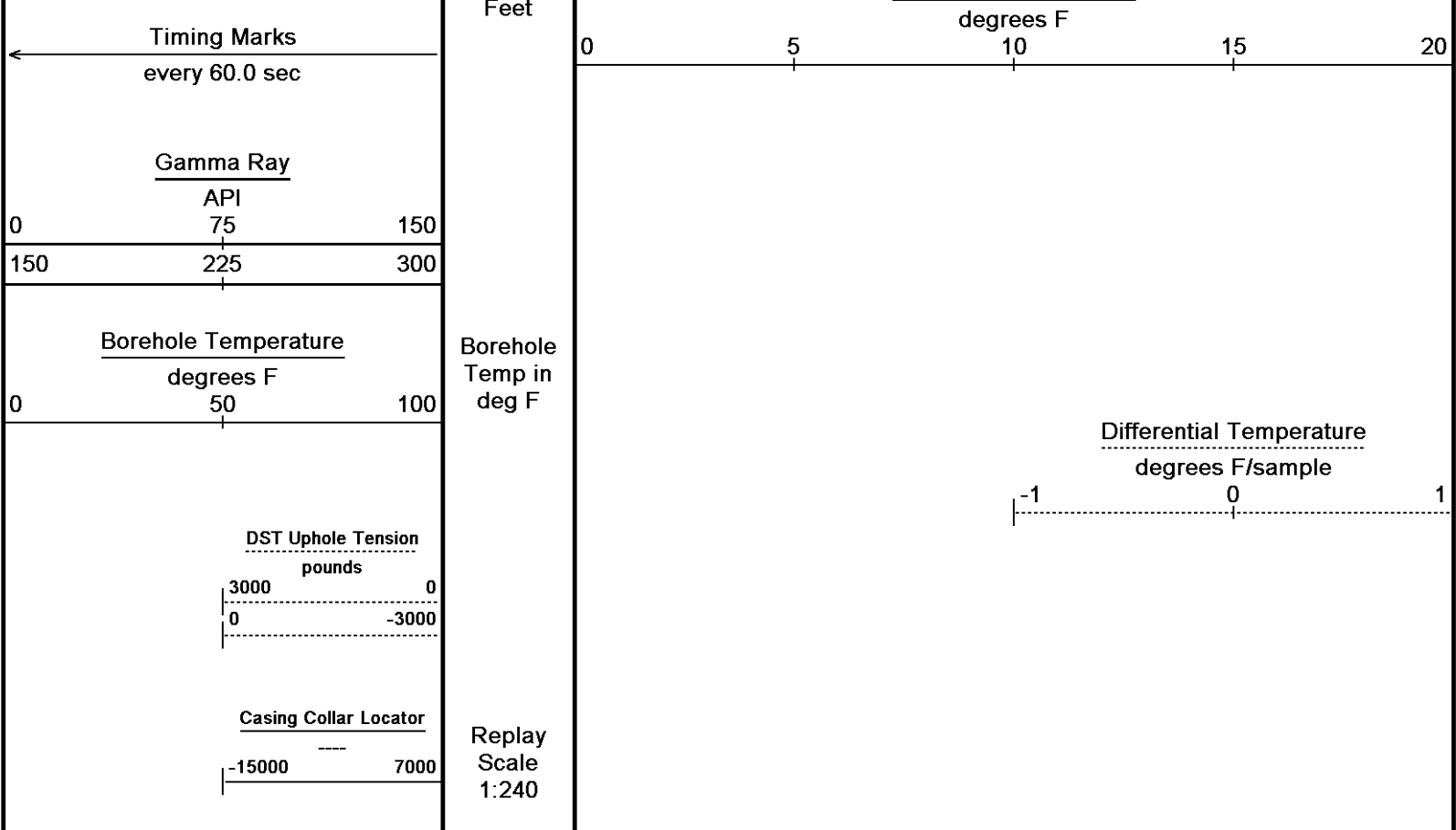
199°

7800









Depth Based Data - Maximum Sampling Increment 10.0cm	Plotted on 14-MAR-2011 12:57
Filename: C:\MINIMUS\LOGS\BBC TEMP\GGU Federal 31A-29-691\temp.dta	Recorded on 14-MAR-2011 11:03
System Versions: Logged with 11.02.2782 Plotted with 11.02.2782	

↑
5 INCH MAIN LOG
↑

BEFORE SURVEY CALIBRATION
 C:\MINIMUS\LOGS\BBC TEMP\GGU Federal 31A-29-691\temp.dta

General Constants All 000		Last Edited on 14-MAR-2011,10:32
<div style="display: flex; justify-content: space-between;"> <div> <p>General Parameters</p> <p>Mud Resistivity 1.720 ohm-metres</p> <p>Mud Resistivity Temperature 91.000 degrees F</p> <p>Water Level 0.000 feet</p> <p>Density/Neutron Processing Wet Hole</p> </div> <div> <p>Hole/Annular Volume and Differential Caliper Parameters</p> <p>HVOL Method Single Caliper</p> <p>HVOL Caliper 1 None</p> <p>HVOL Caliper 2 N/A</p> <p>Annular Volume Diameter 4.500 inches</p> <p>Caliper for Differential Caliper None</p> </div> </div> <div style="margin-top: 10px;"> <p>Rwa Parameters</p> <p>Porosity used N/A</p> <p>Resistivity used N/A</p> <p>RWA Constant A N/A</p> <p>RWA Constant M N/A</p> </div>		

Down-hole Tension Calibration SMS 0			Field Calibration on 14-MAR-2011 10:36
Reading No	Measured	Calibrated (lbs)	
1	15599.80	0.00	
2	15710.05	114.60	

Gamma Calibration MCG-D.J 422			Field Calibration on 14-MAR-2011,10:30
Background	Measured	Calibrated (API)	
	145	81	

Background	143	81
Calibrator (Gross)	1092	608
Calibrator (Net)	947	527
Gamma Constants MCG-D.J 422		Last Edited on 14-MAR-2011,10:30
Gamma Calibrator Number	grc 2005	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Bit Size	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm
High Resolution Temperature Calibration MCG-D.J 422		Field Calibration on 14-MAR-2011,10:30
	Measured	Calibrated(Deg F)
Lower	10.00	10.00
Upper	75.00	75.00
High Resolution Temperature Constants MCG-D.J 422		Last Edited on
Pre-filter Length	11	
SP Calibration MCG-D.J 422		Field Calibration on 06-MAR-2011,19:47
	Measured	Calibrated (mV)
Reference 1	102.1	100.0
Reference 2	-98.4	-100.0
High Resolution Temperature Calibration MHT-A 11		Field Calibration on 14-MAR-2011,10:32
	Measured	Calibrated(Deg F)
Lower	80.57	61.00
Upper	140.33	129.00
High Resolution Temperature Constants MHT-A 11		Last Edited on 14-MAR-2011,10:31
Pre-filter Length	11	

DOWNHOLE EQUIPMENT		C:\MINIMUS\LOGS\BBC TEMPI\GGU Federal 31A-29-691\temp.dta	
3/8" Triple Cone Cable Head (MCB C A) MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in			
SHA-J.A Compact Swivel Head Adaptor SHA-J.A 214 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in			
Compact Comms Gamma MCG-D.J 422 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in			
Compact High Resolution Temperature MHT-A 11 LG: 1.53 ft WT: 13.2 lb OD: 2.24 in			
Total Length: 14.10 ft Weight: 114.6 lb			
		4.94 ft	GRGC - Gamma Ray
		2.76 ft	CCLG - Casing Collar Locator
		2.03 ft	CGXT - MCG External Temperature
		0.00 ft	BHTF - Borehole Temperature
		0.00 ft	BHTD - Differential Temperature
		Tool Zero	(0.13ft from bottom)
		-0.13 ft	SMTU - DST Uphole Tension
		All measurements relative to tool zero.	

COMPANY	BILL BARRETT CORPORATION		
WELL	GGU FEDERAL 31A-29-691		
FIELD	GIBSON GULCH		
PROVINCE/COUNTY	GARFIELD		
COUNTRY/STATE	U.S.A. / COLORADO		
Elevation Kelly Bushing	6126.00	feet	First Reading
Elevation Drill Floor			50.00 feet
Depth Drill			2000.00 feet

Elevation Drill Floor feet
Elevation Ground Level 6103.00 feet

Depth Driller 8200.00 feet
Depth Logger 8196.00 feet



Weatherford®

TEMPERATURE LOG

