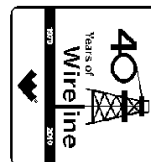




**Weatherford**<sup>®</sup>

TEMPERATURE LOG

COMPANY **BILL BARRETT CORPORATION**  
 WELL **CB-TG LAND 21C-20-692**  
 FIELD **MAMM CREEK**  
 PROVINCE/COUNTY **GARFIELD**  
 COUNTRY/STATE **U.S.A. / COLORADO**  
 LOCATION **SHL: 643' FNL & 2577' FEL**  
**BHL: 469' FNL & 1972' FWL**



SEC **20** TWP **6S** RGE **92W** Other Services  
 API Number **05-045-19769**  
 Permit Number

Permanent Datum G.L., Elevation 5530 feet  
 Log Measured From K.B. @ 23 FT above Permanent Datum  
 Drilling Measured From K.B.

Elevations: **5553.00** feet  
**5552.00** KB  
**5530.00** DF  
**GL**

Date	22-JUNE-2011
Run Number	ONE
Depth Driller	7594.00 feet
Depth Logger	7602.00 feet
First Reading	200.00 feet
Last Reading	7602.00 feet
Casing Driller	7686.00 feet
Casing Logger	
Bit Size	7.875 inches
Hole Fluid Type	WATER
Density / Viscosity	
PH / Fluid Loss	
Sample Source	NONE
Rm @ Measured Temp	
Rmf @ Measured Temp	
Rmc @ Measured Temp	
Source Rmf / Rmc	CALC CALC
Rm @ BHT	
Time Since Circulation	6 HOURS
Max Recorded Temp	195.00 deg F
Equipment Name	COMPACT
Equipment / Base	13045 GD JCT
Recorded By	M.RICHINS
Witnessed By	C. CROWTON

BOREHOLE RECORD

Last Edited: 22-JUN-2011 02:52

Bit Size inches	Depth From feet	Depth To feet
8.750	813.00	4423.00
7.880	4423.00	7687.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	813.00	36.00
PRODUCT	4.500	0.00	7686.00	11.60

REMARKS

TOP OF CEMENT IS APPROXIMATELY 4590 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

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER REQUEST.

ENGINEER: M.RICHINS

OPERATORS: K.BOBLITT

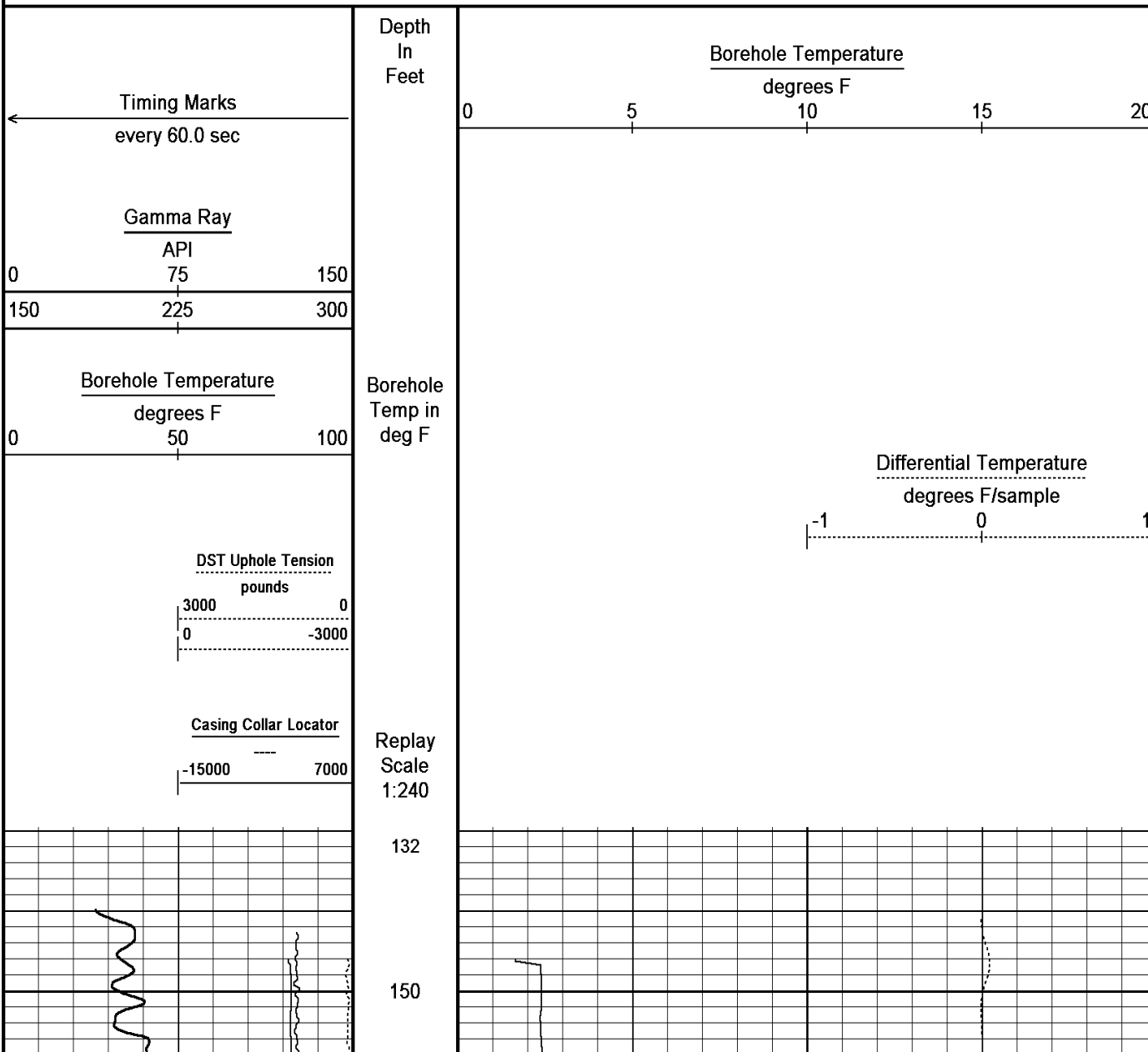
RIG: NABORS M37

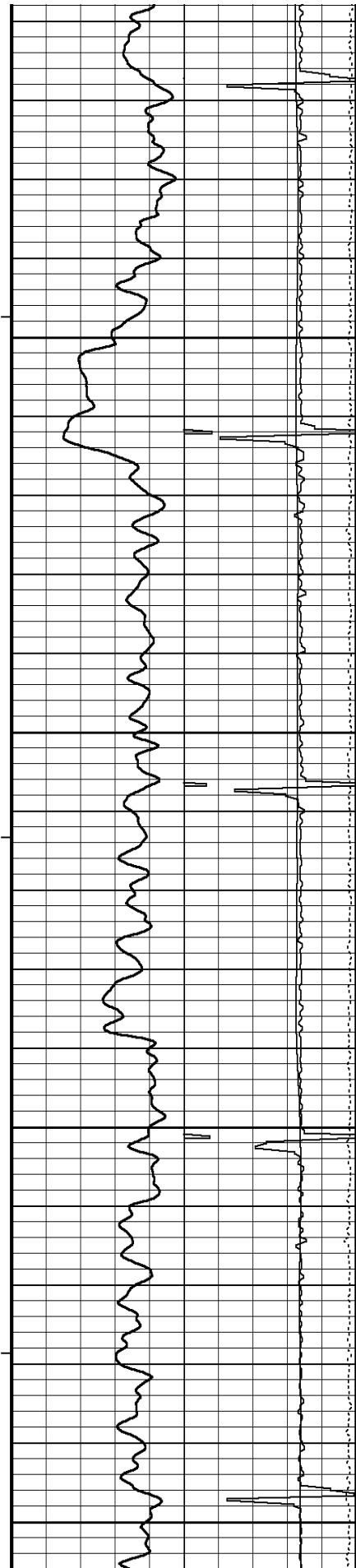
SERVICE ORDER #3524782

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 22-JUN-2011 05:04  
 Filename: C:\Minimus\LOGS\Bill Barrett Temp Logs\CB TG Land 21C-20-692 (TEMP)\MAIN.dta Recorded on 22-JUN-2011 02:54  
 System Versions: Logged with 11.02.3186 Plotted with 11.02.3186





88°

200

88°

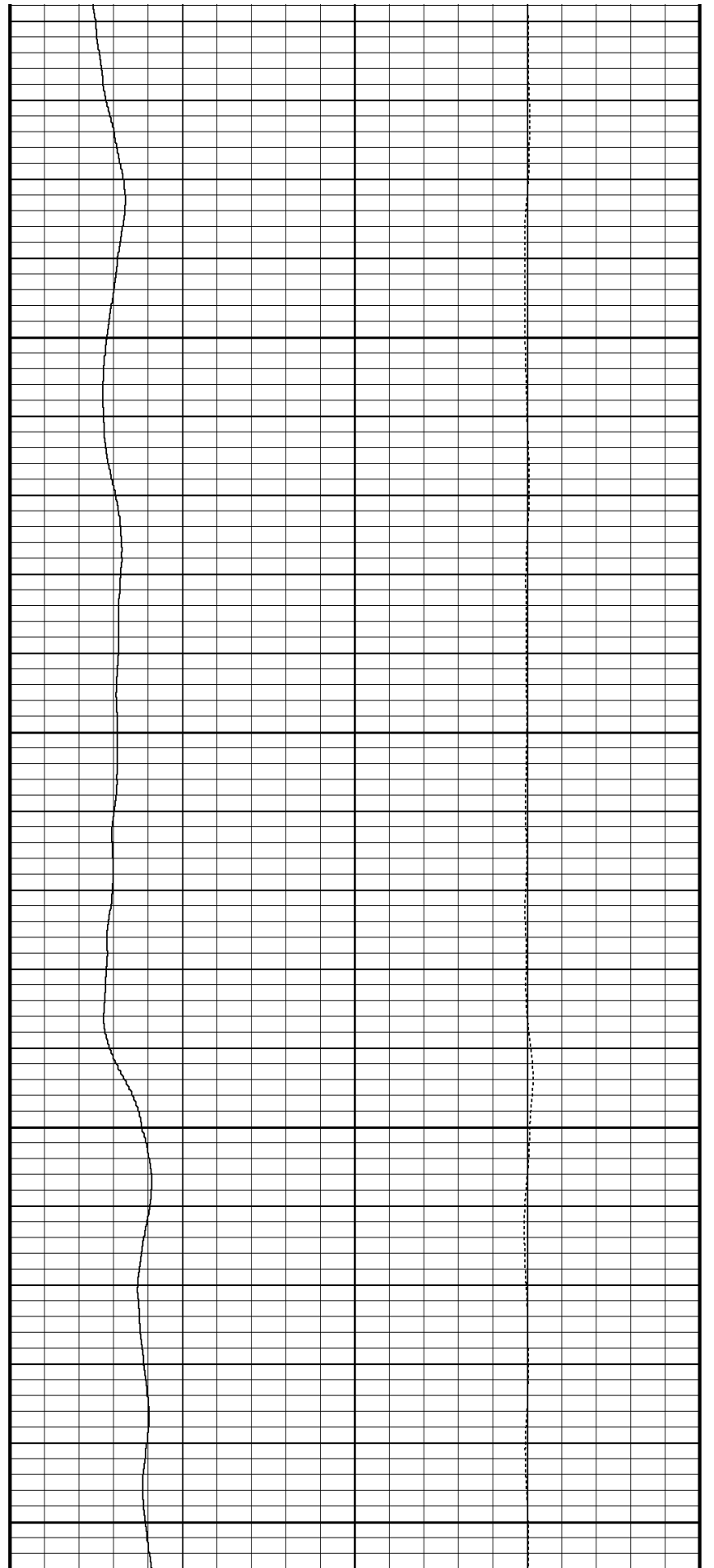
250

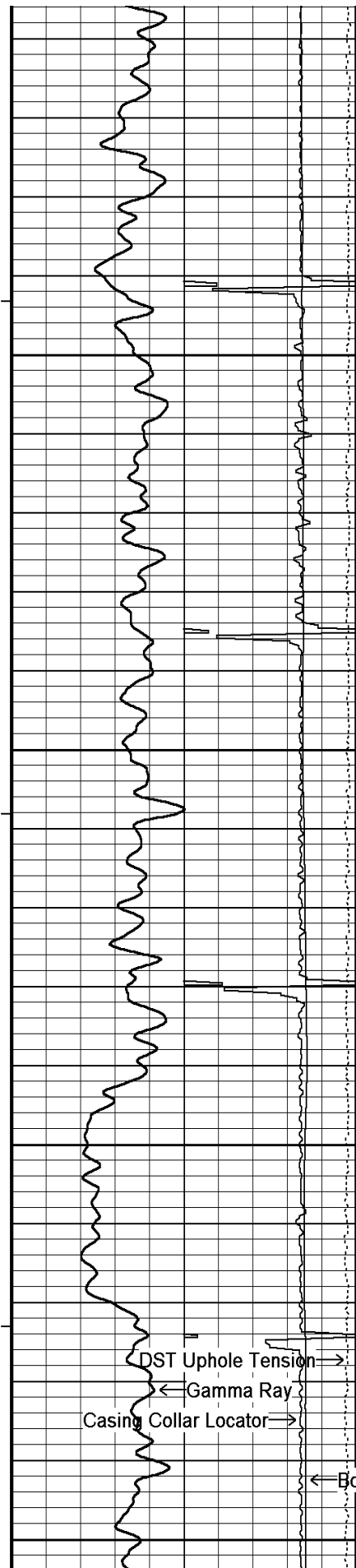
88°

300

89°

350





89°

400

90°

450

91°

500

DST Uphole Tension →  
 ← Gamma Ray  
 Casing Collar Locator →

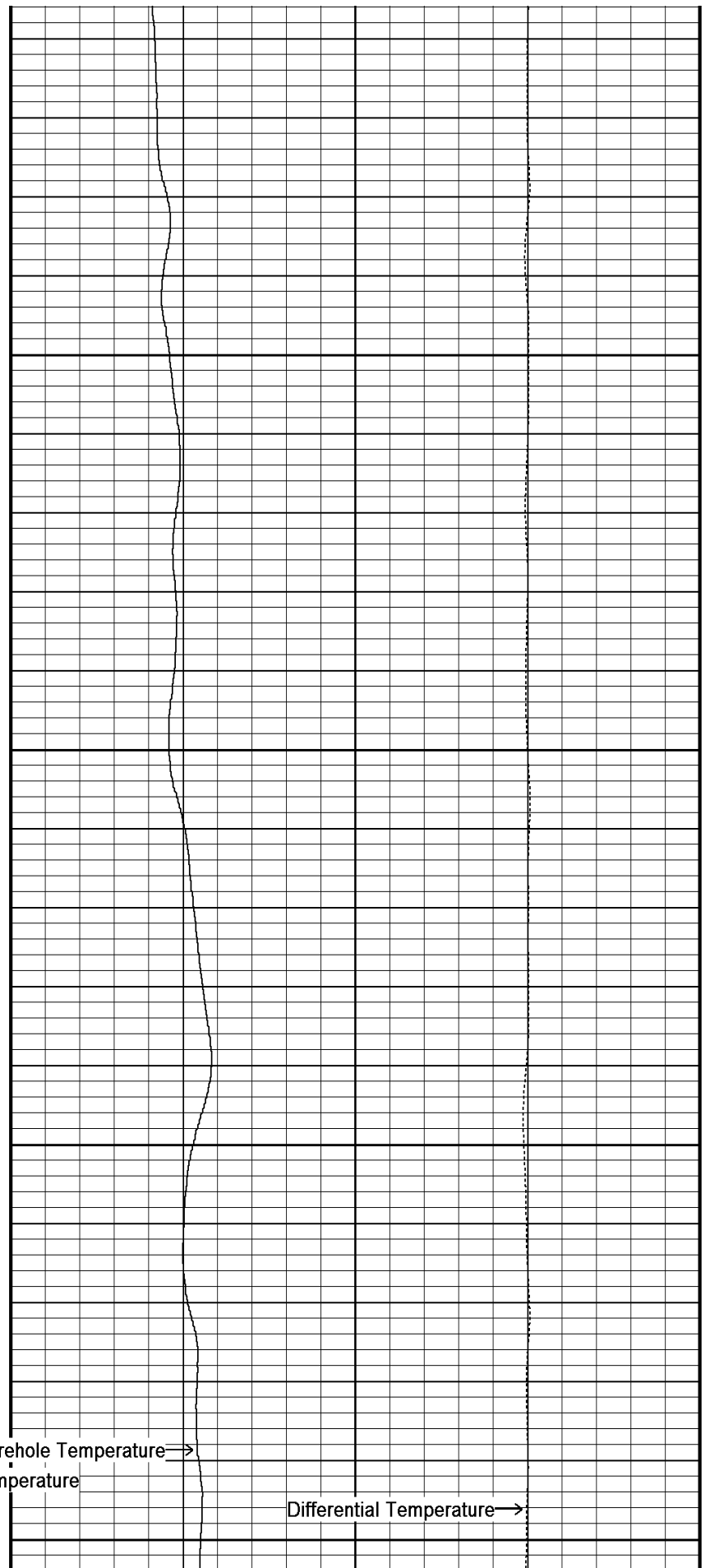
91°

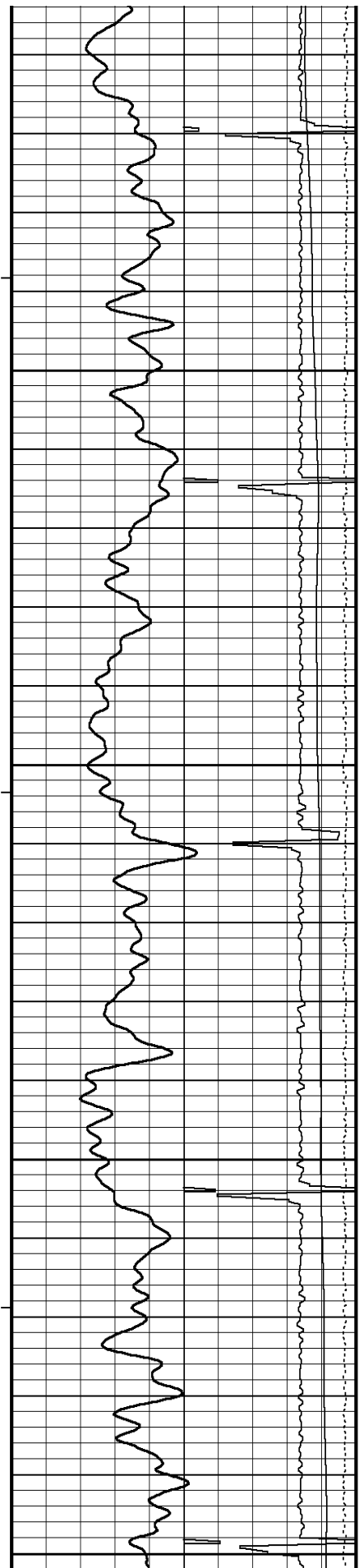
Borehole Temperature →

← Borehole Temperature

550

Differential Temperature →





92°

600

94°

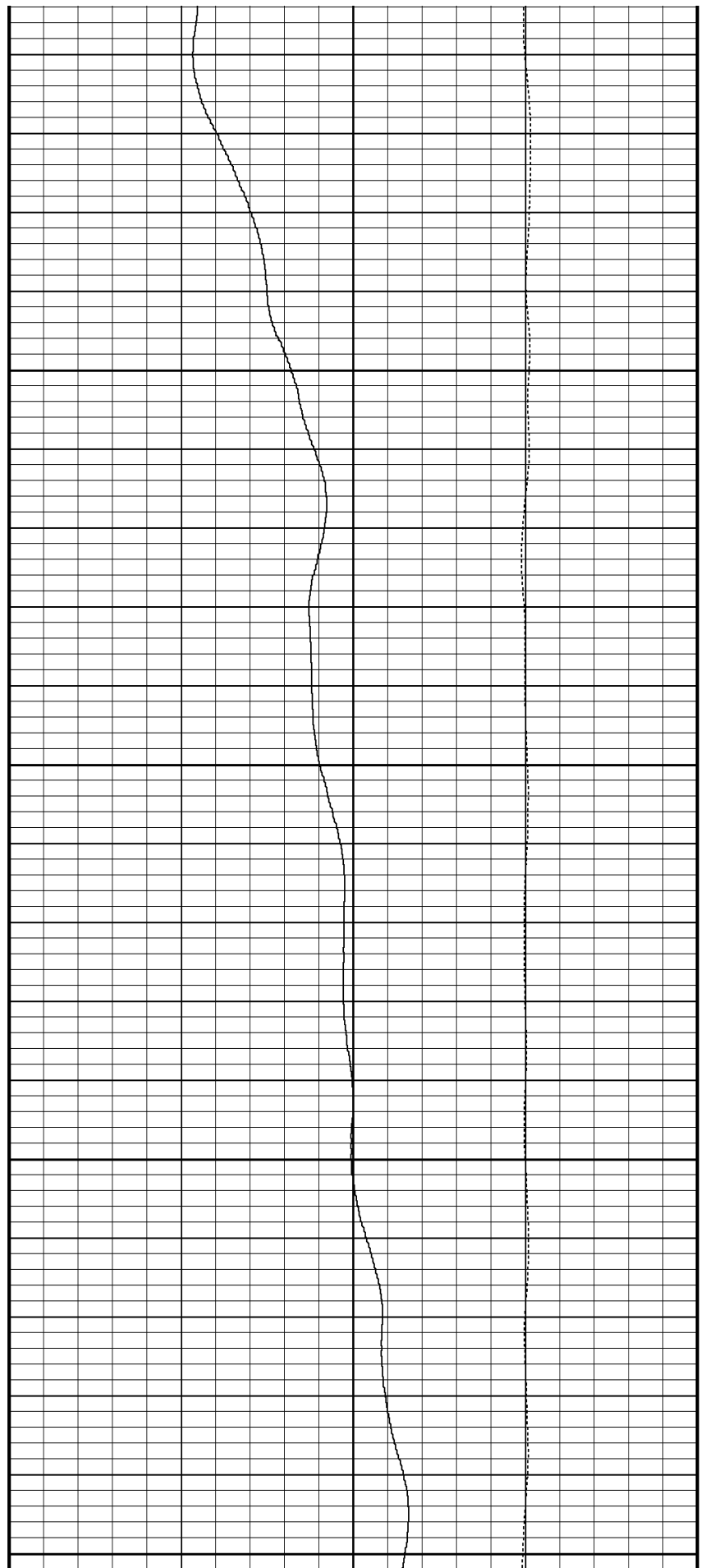
650

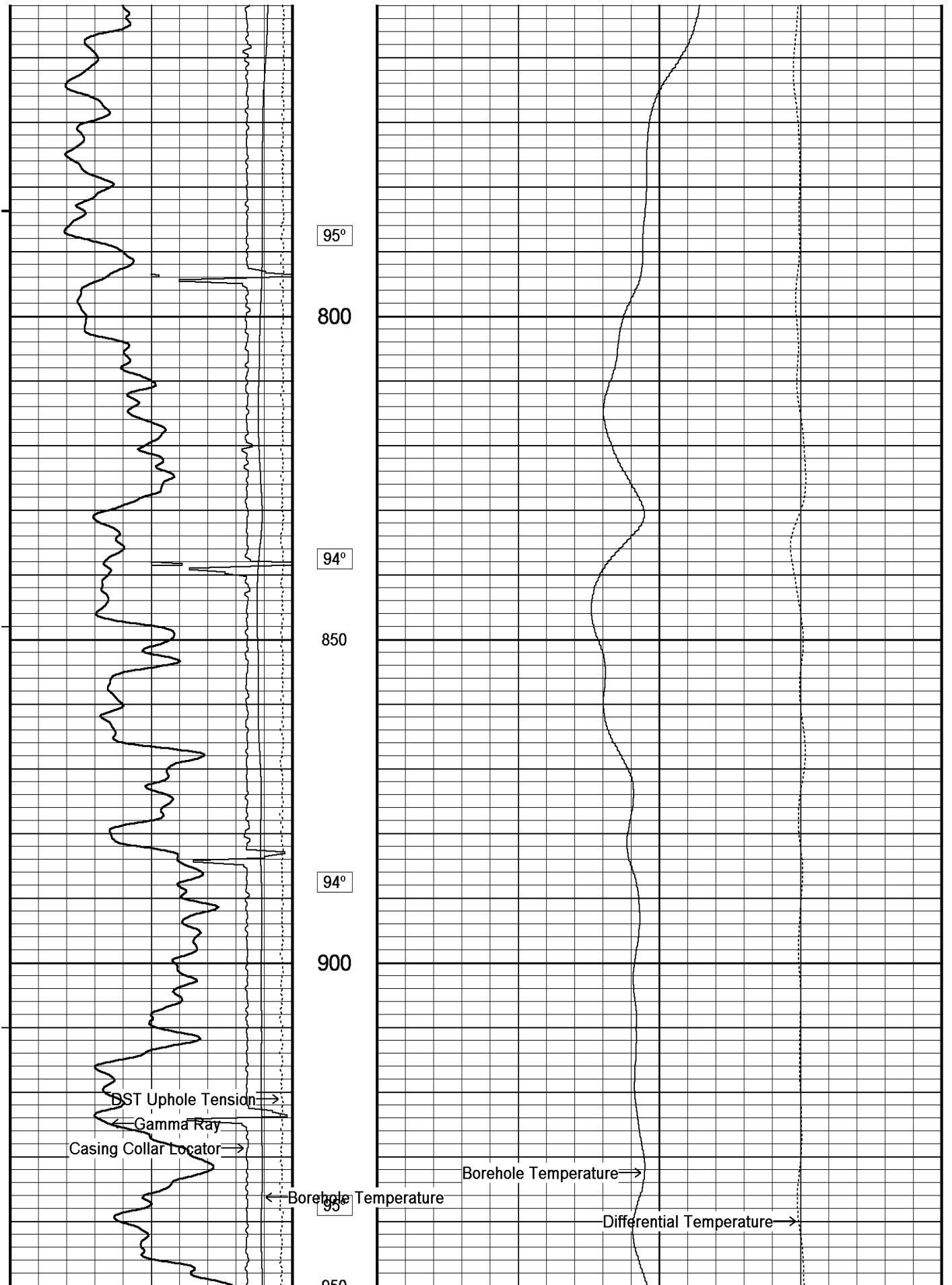
95°

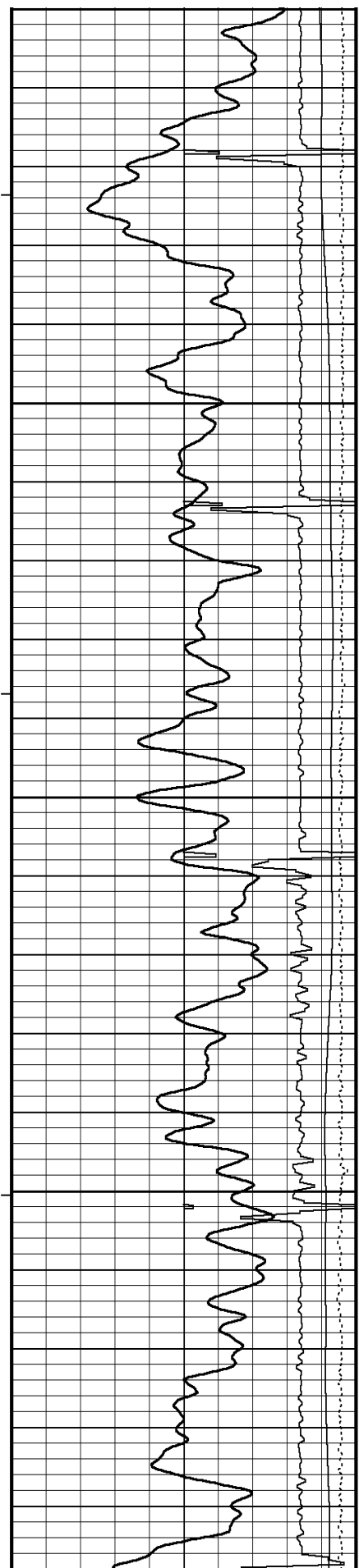
700

96°

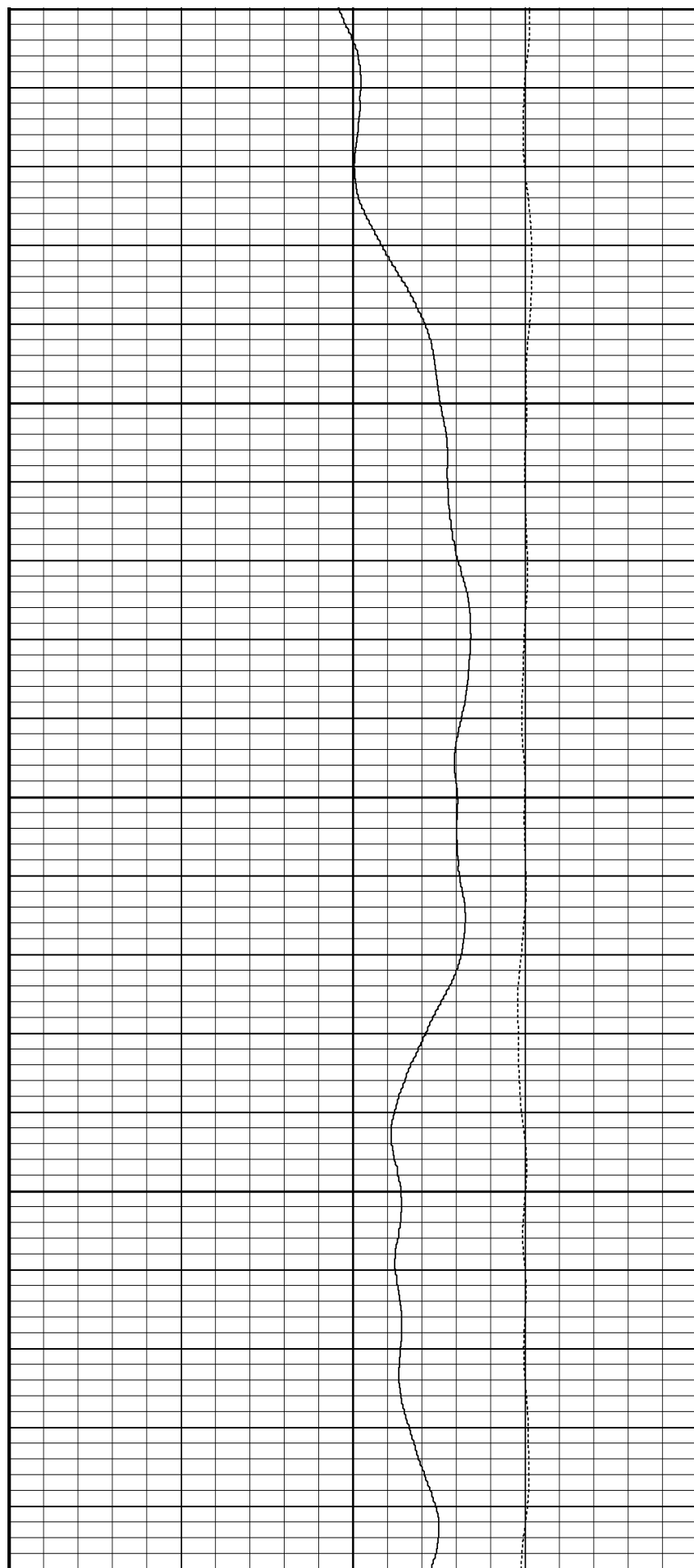
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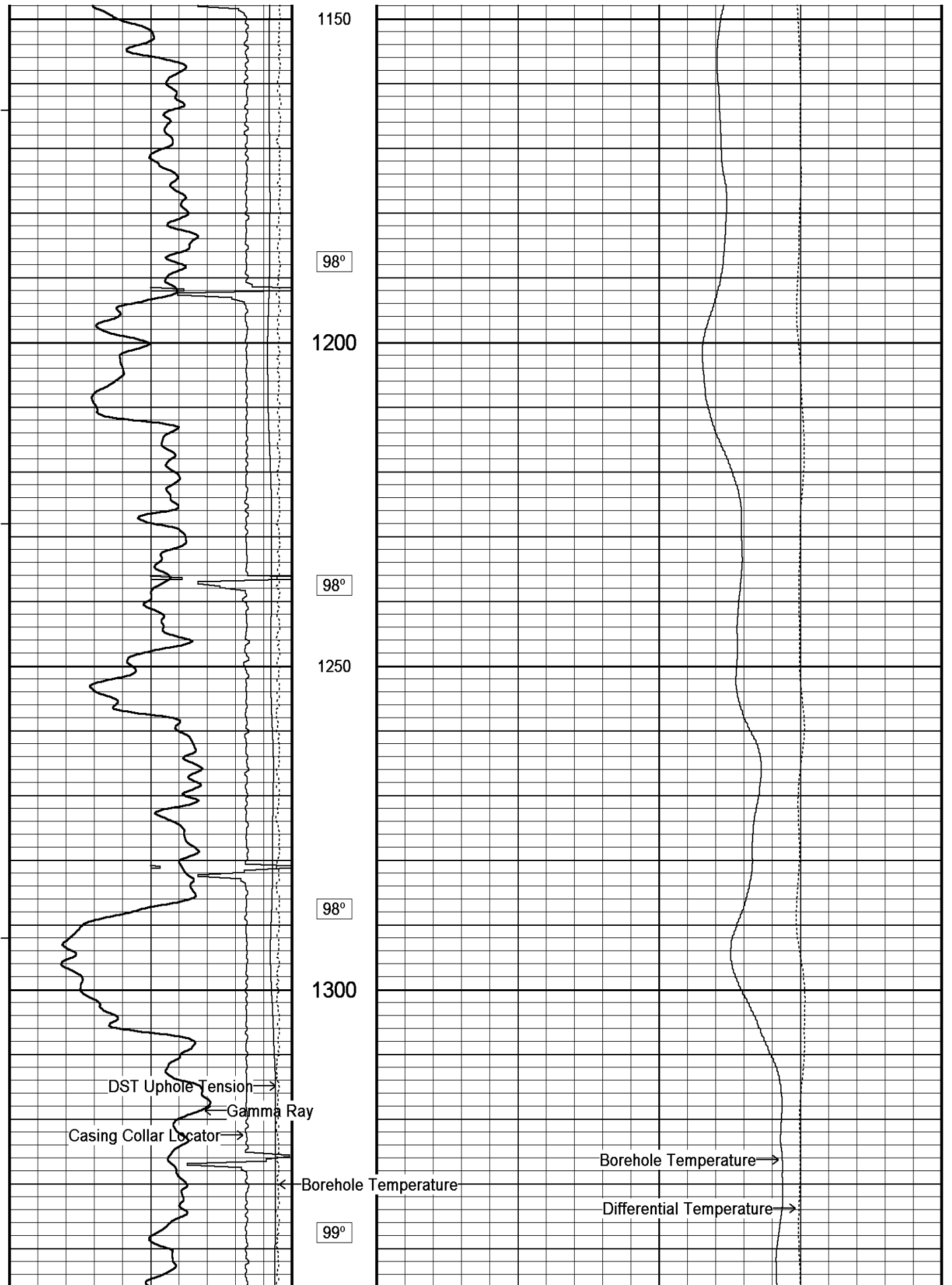


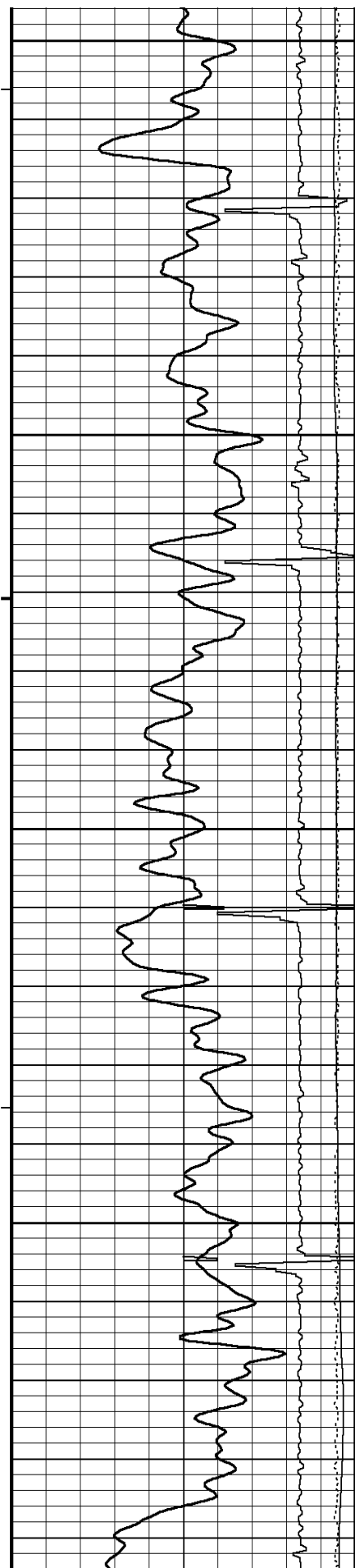




950  
96°  
1000  
98°  
1050  
97°  
1100  
97°







1350

99°

1400

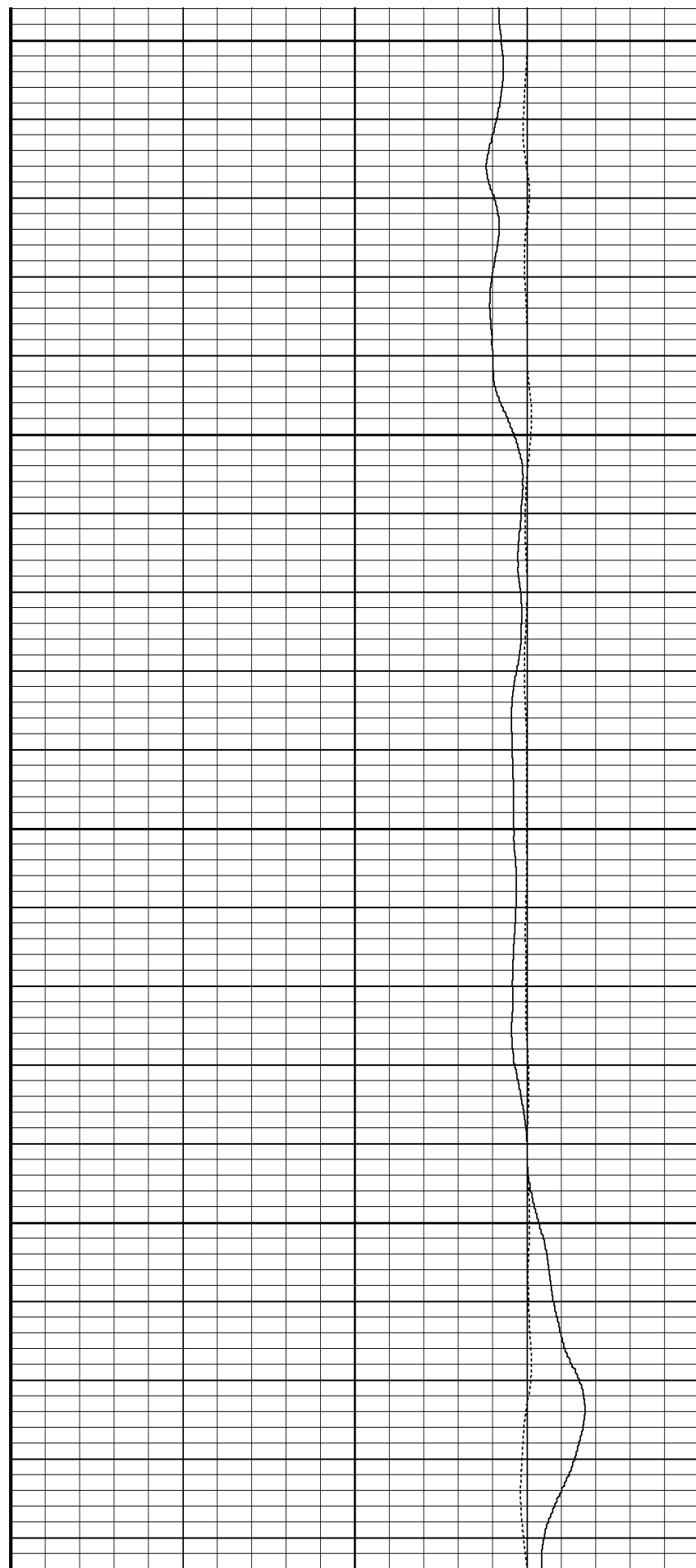
100°

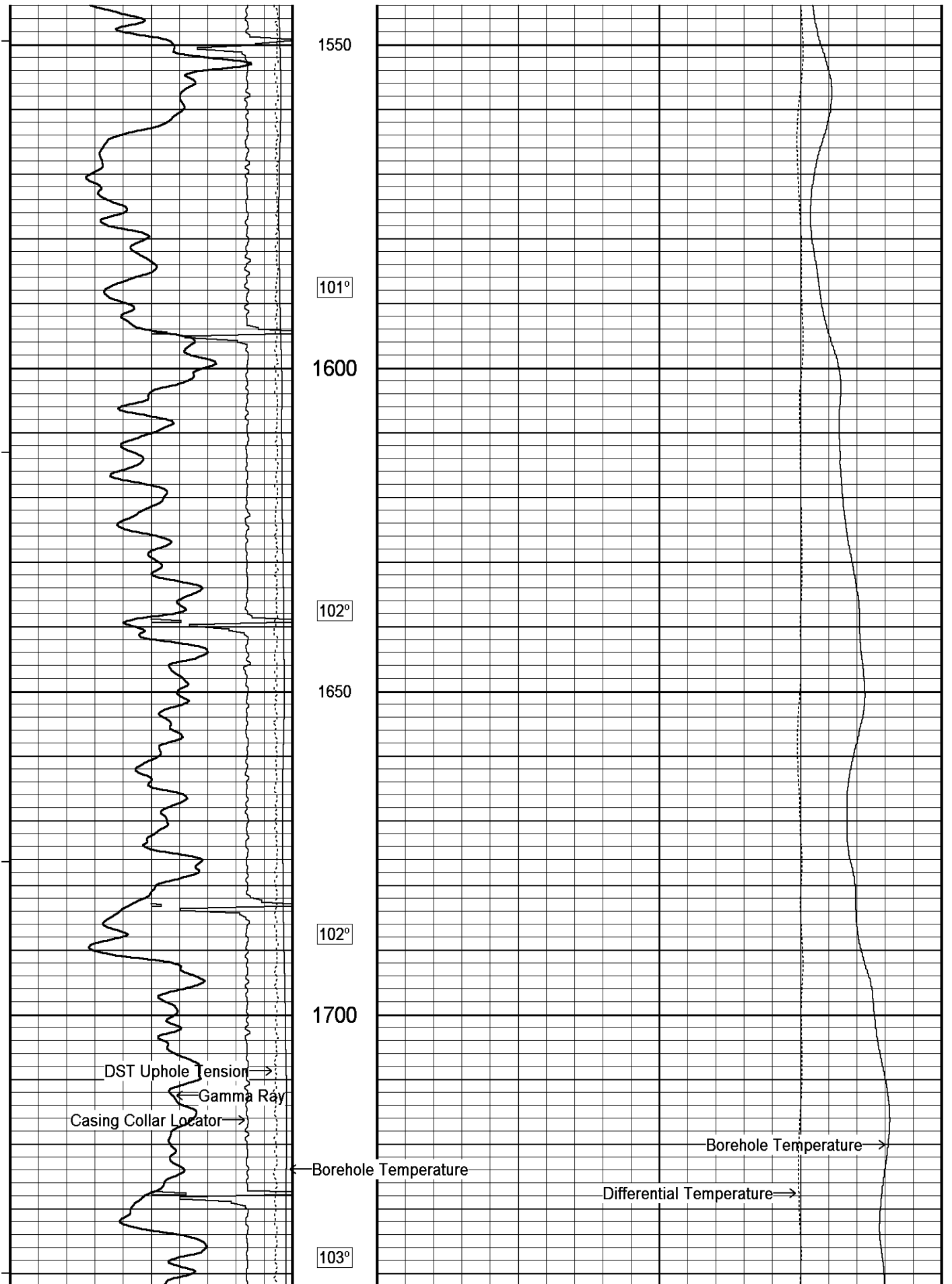
1450

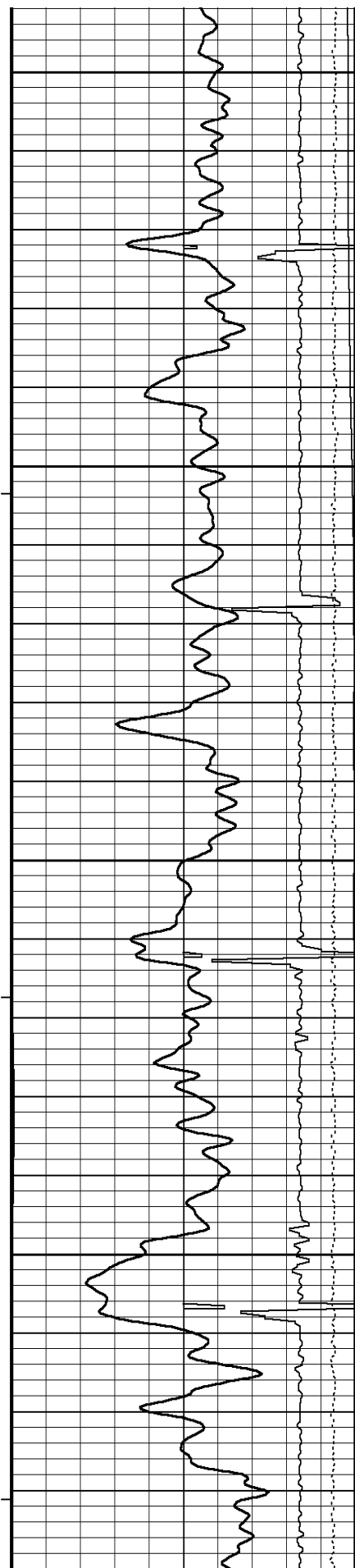
100°

1500

101°







1750

103°

1800

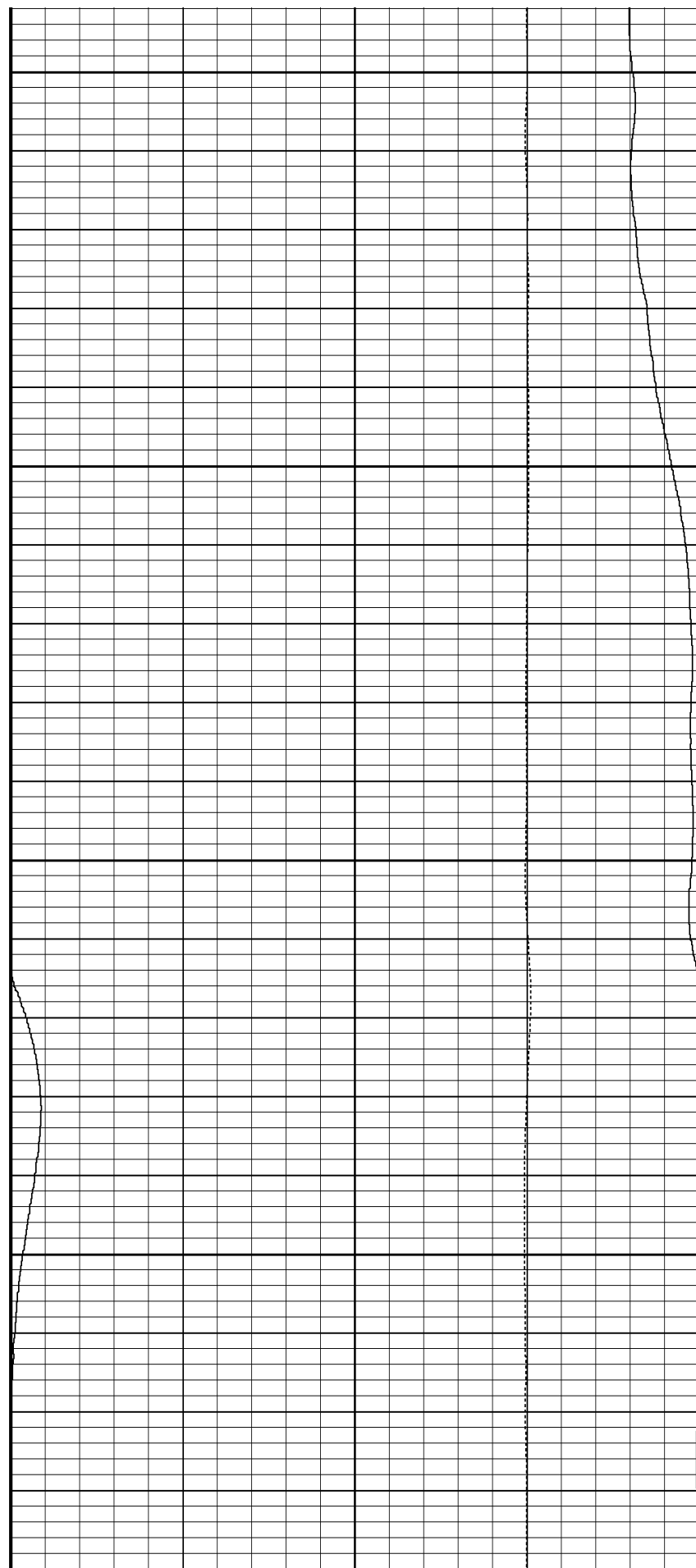
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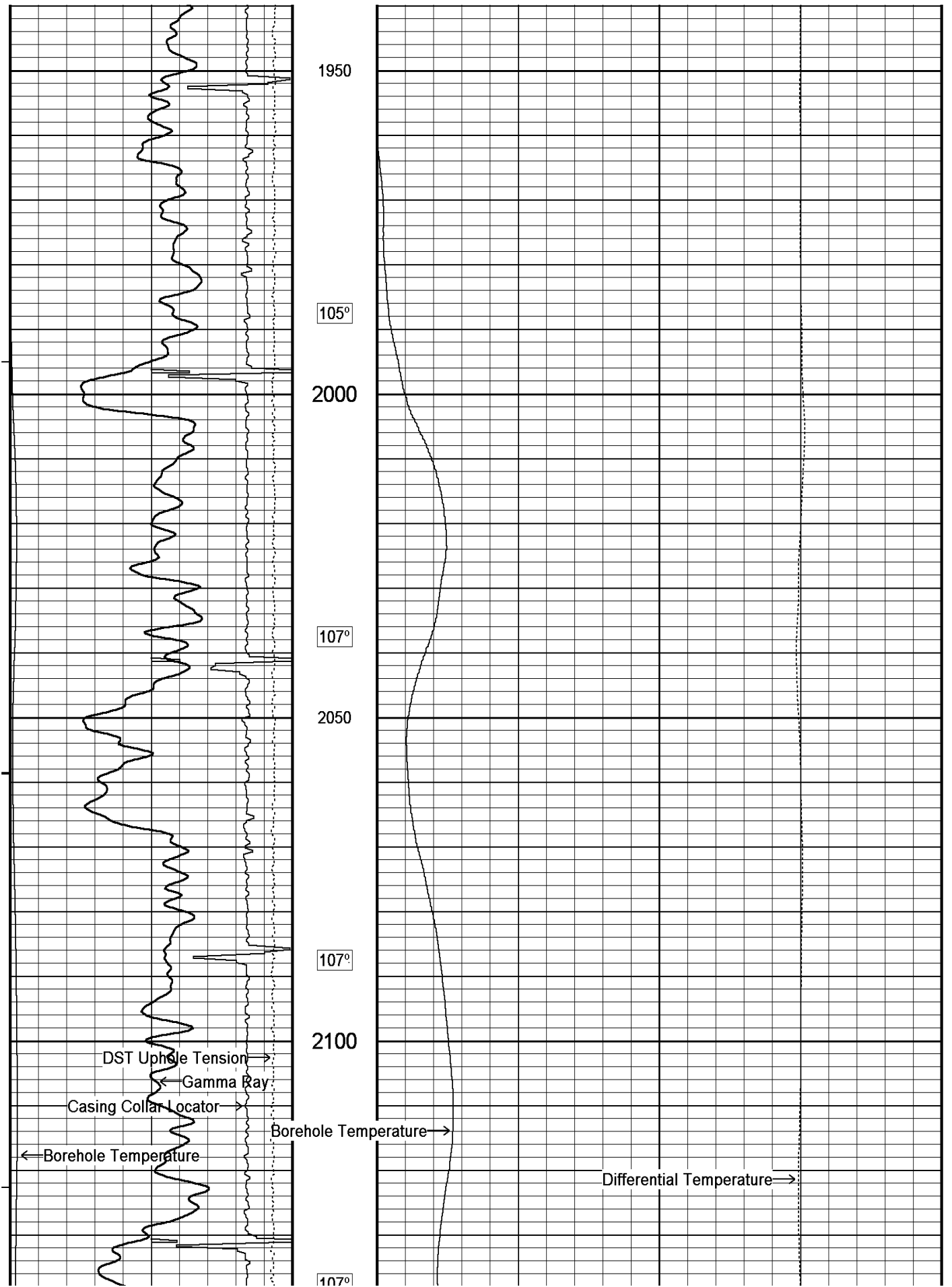
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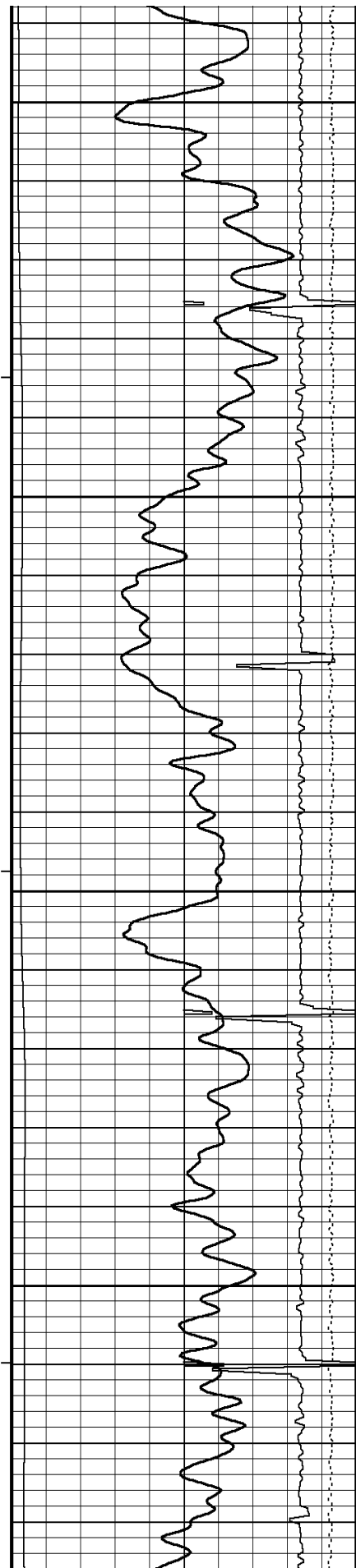
105°

1900

105°







107

2150

108°

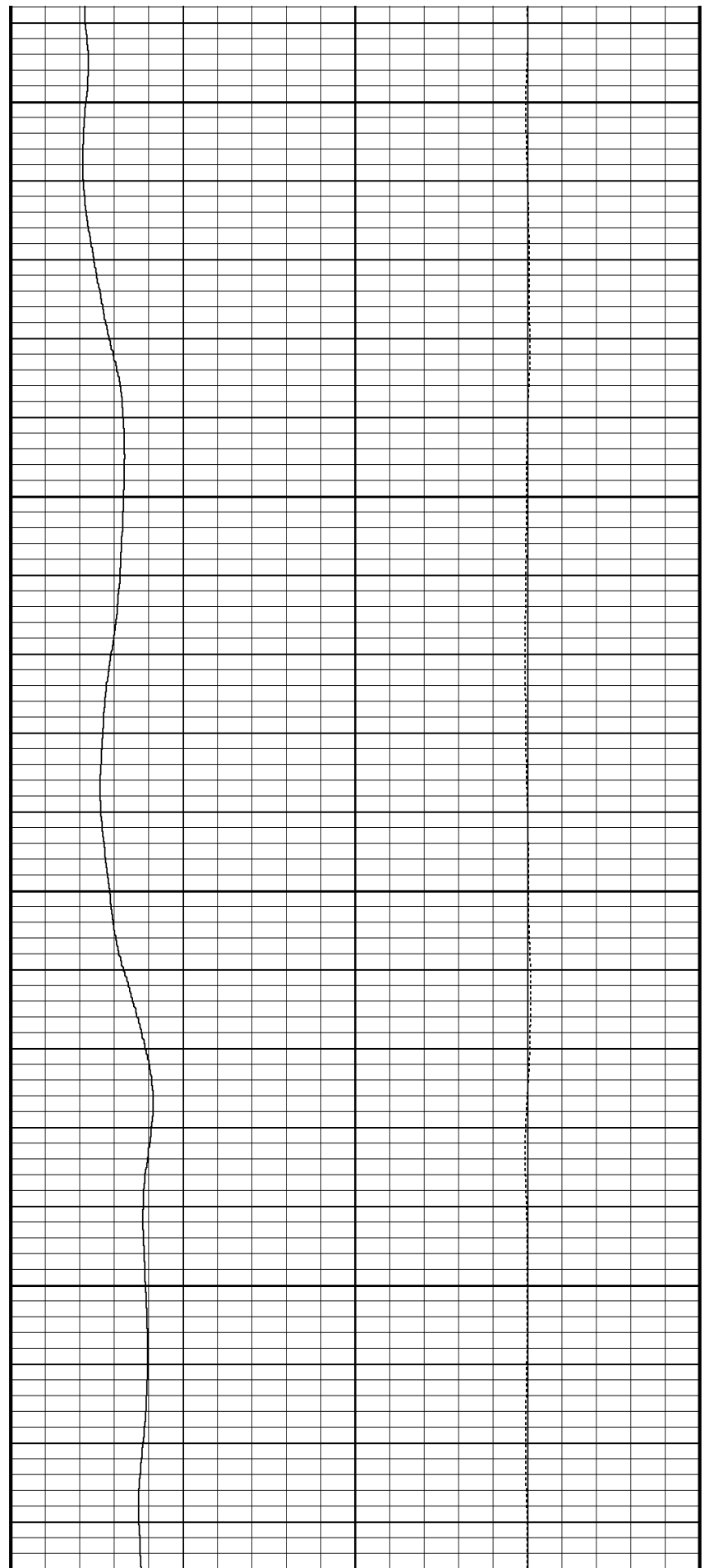
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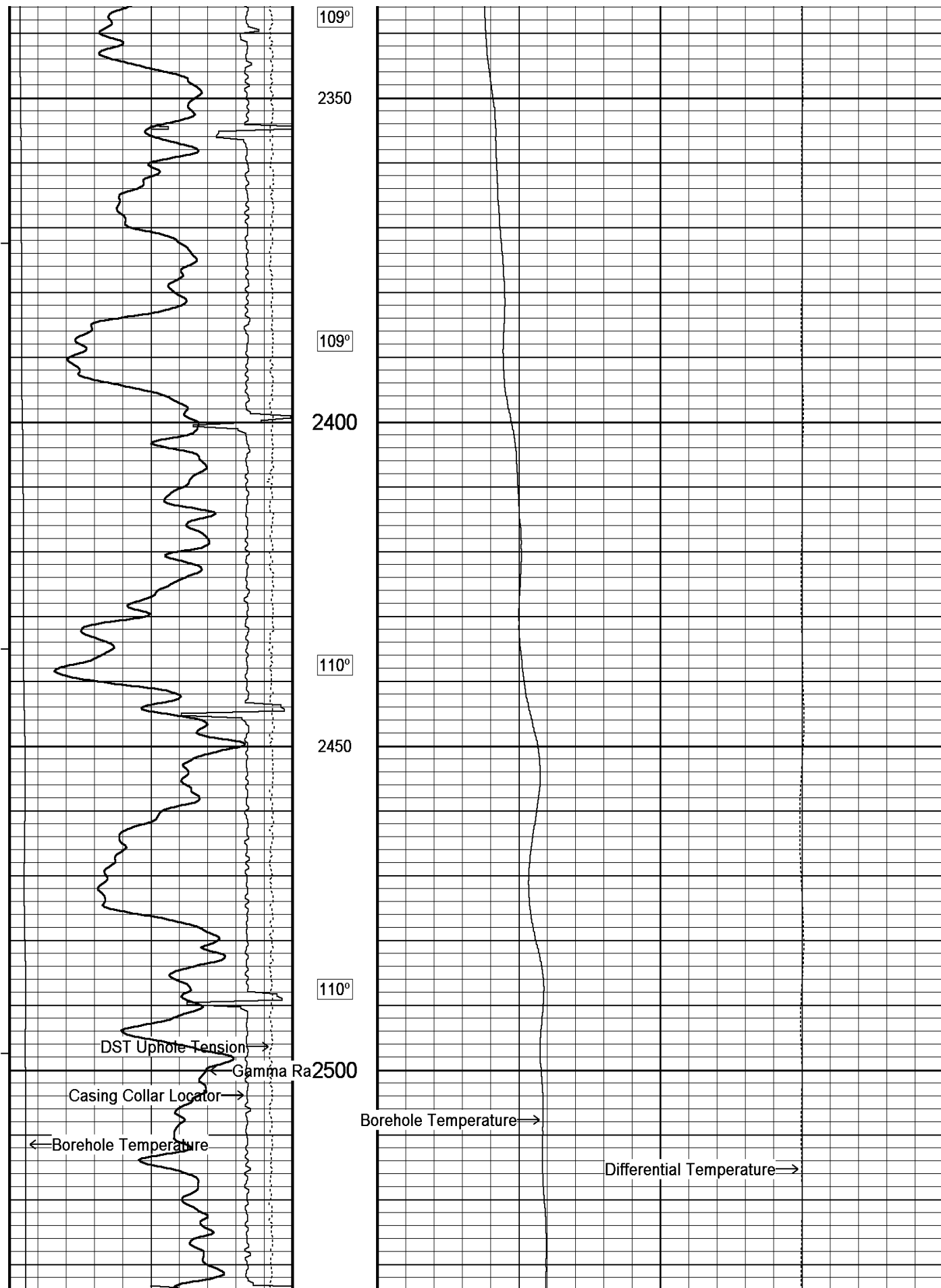
108°

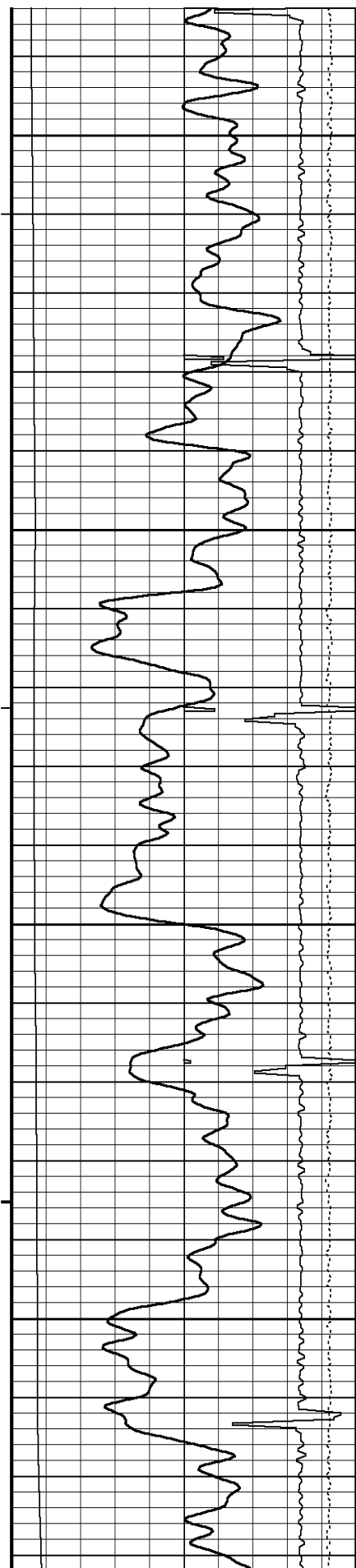
2250

108°

2300







110°

2550

111°

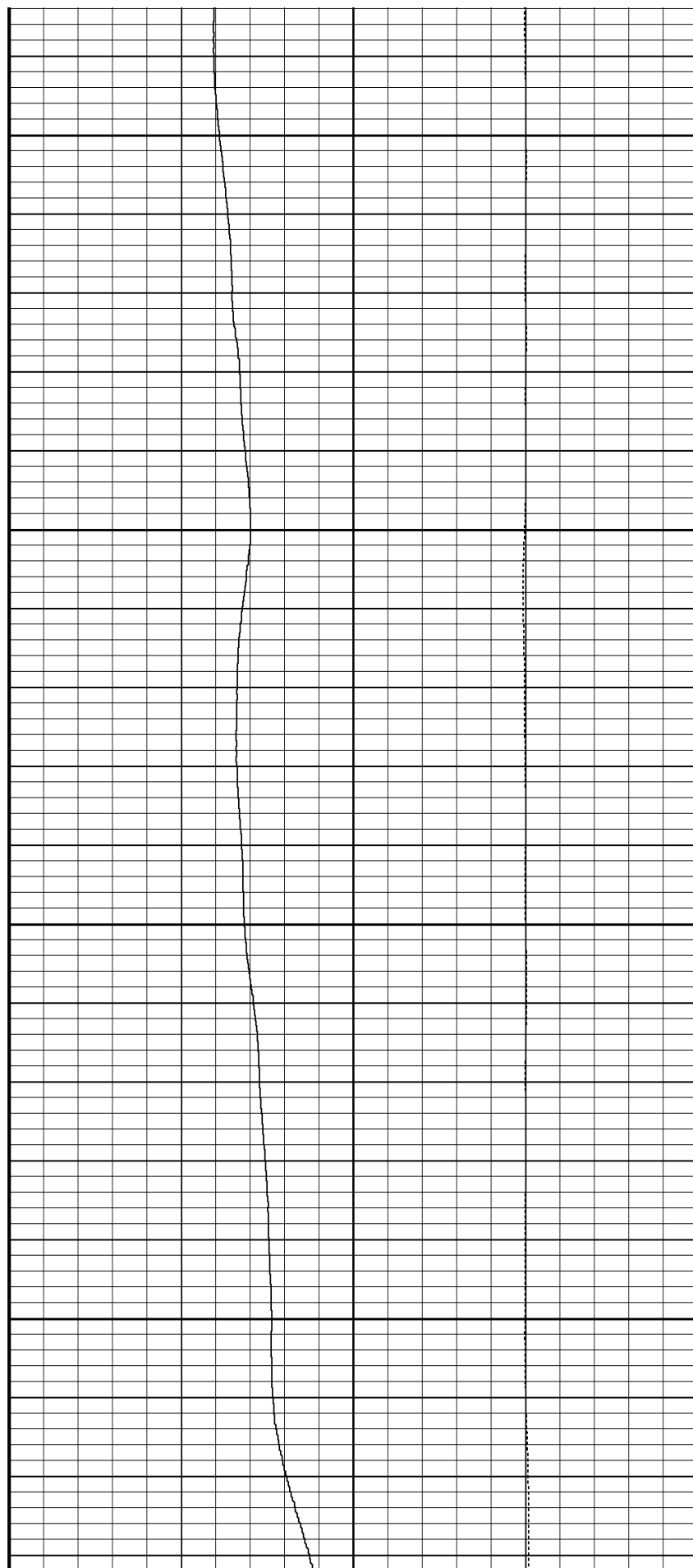
2600

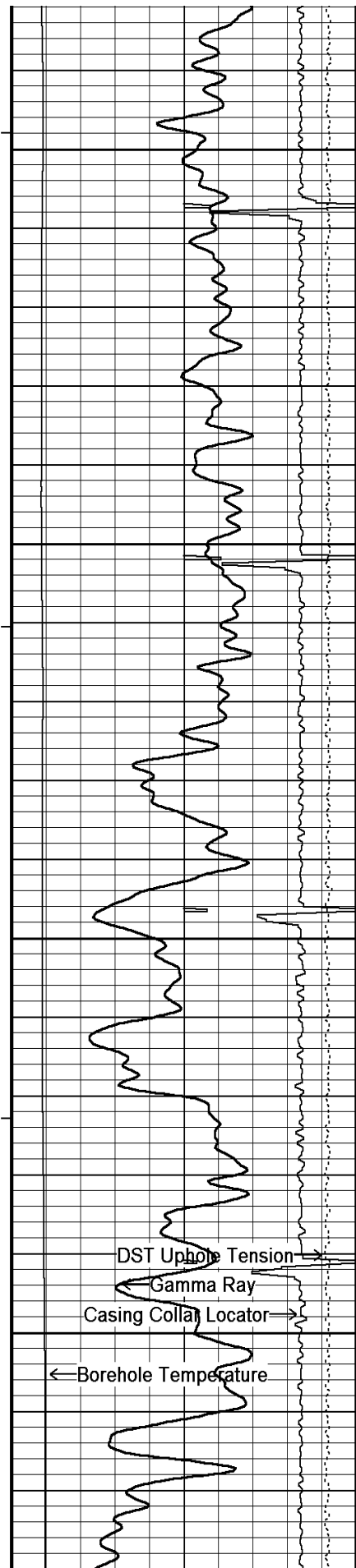
111°

2650

112°

2700





113°

2750

113°

2800

113°

2850

114°

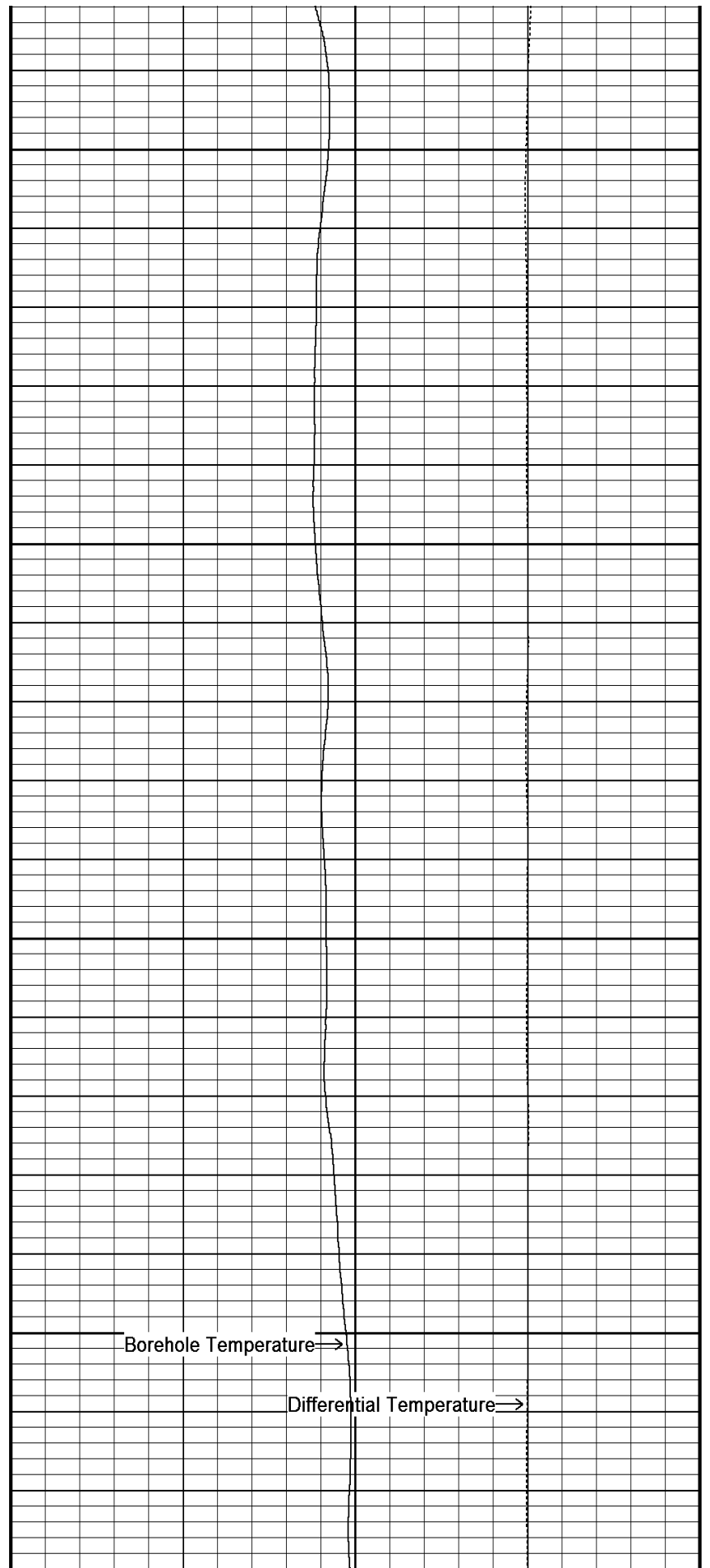
2900

DST Uphole Tension →

← Gamma Ray

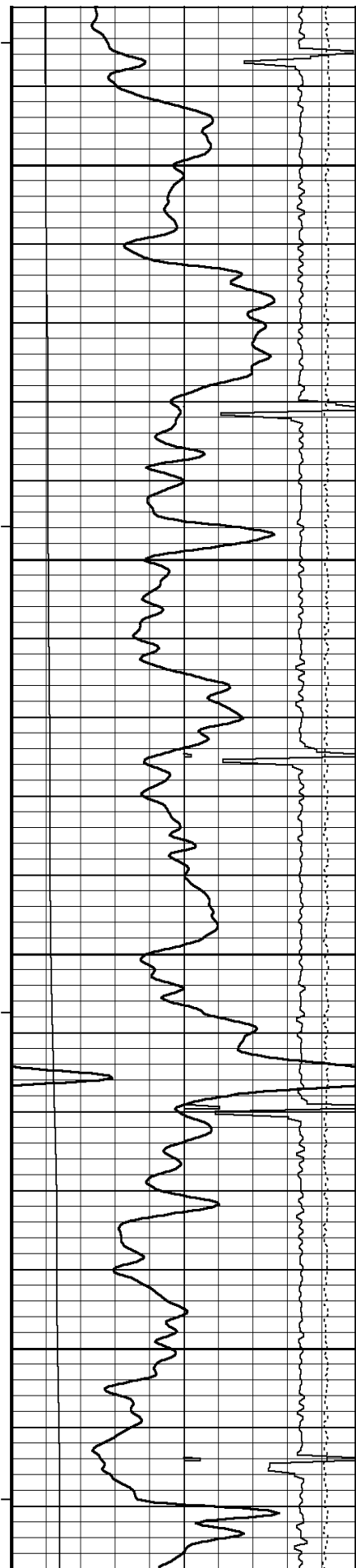
Casing Collar Locator →

← Borehole Temperature



Borehole Temperature →

Differential Temperature →



114°

2950

115°

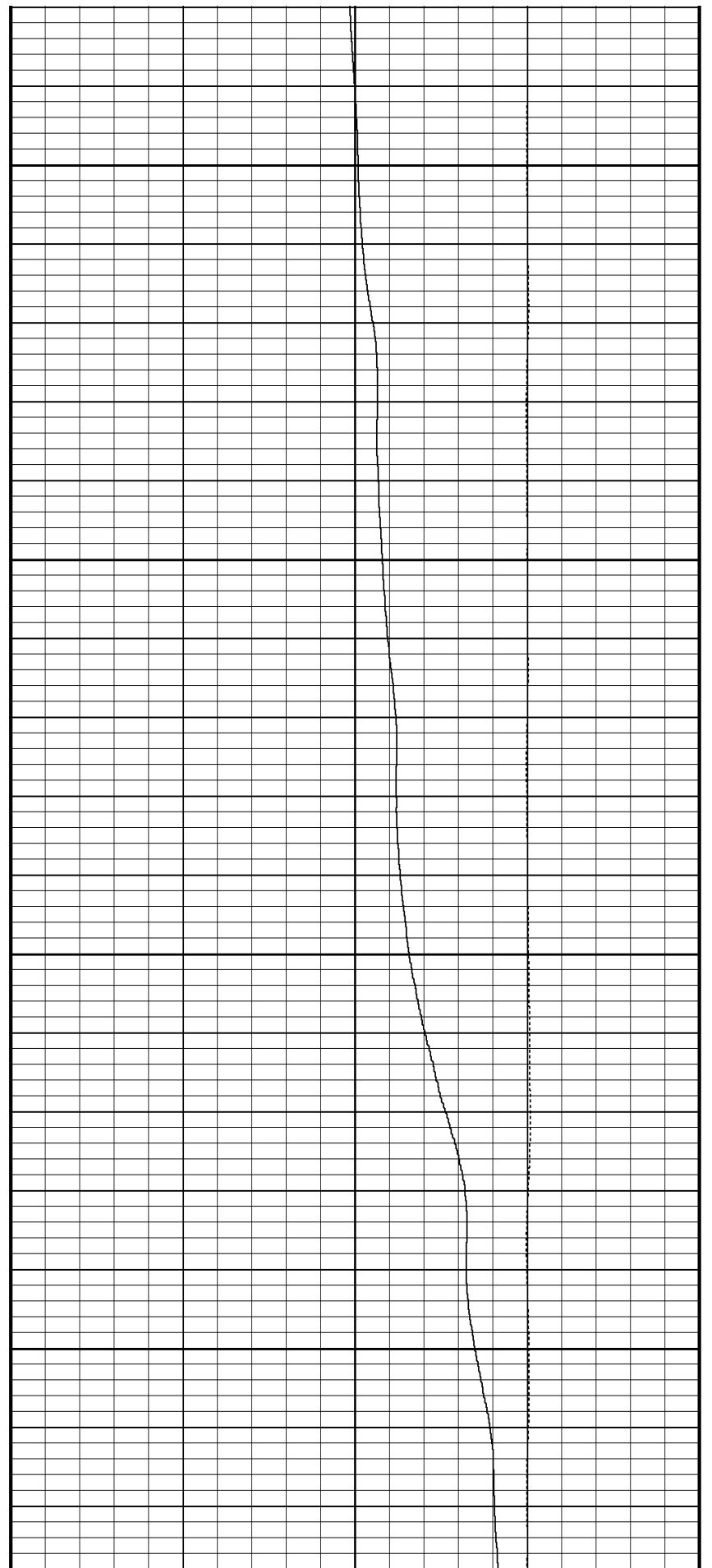
3000

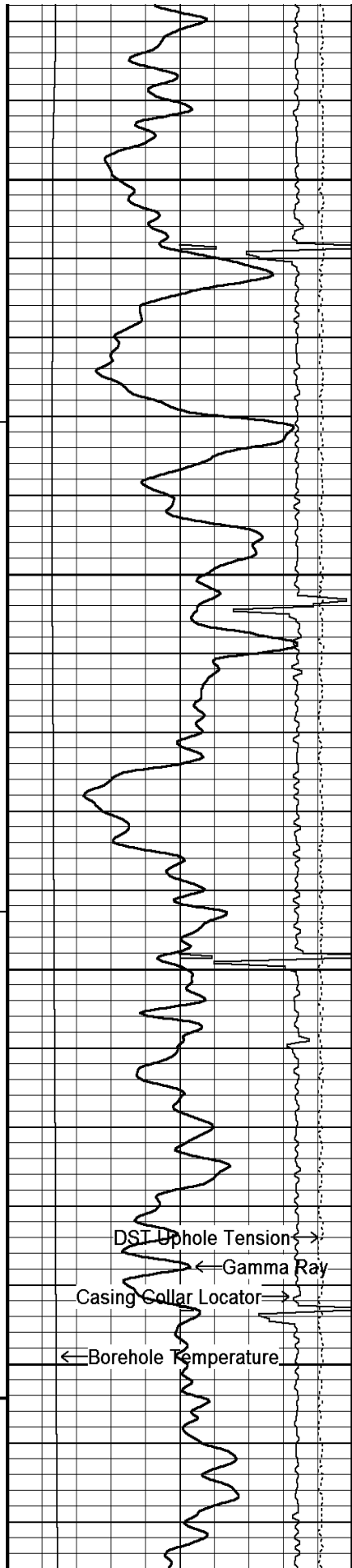
115°

3050

117°

3100





118°

3150

117°

3200

118°

3250

118°

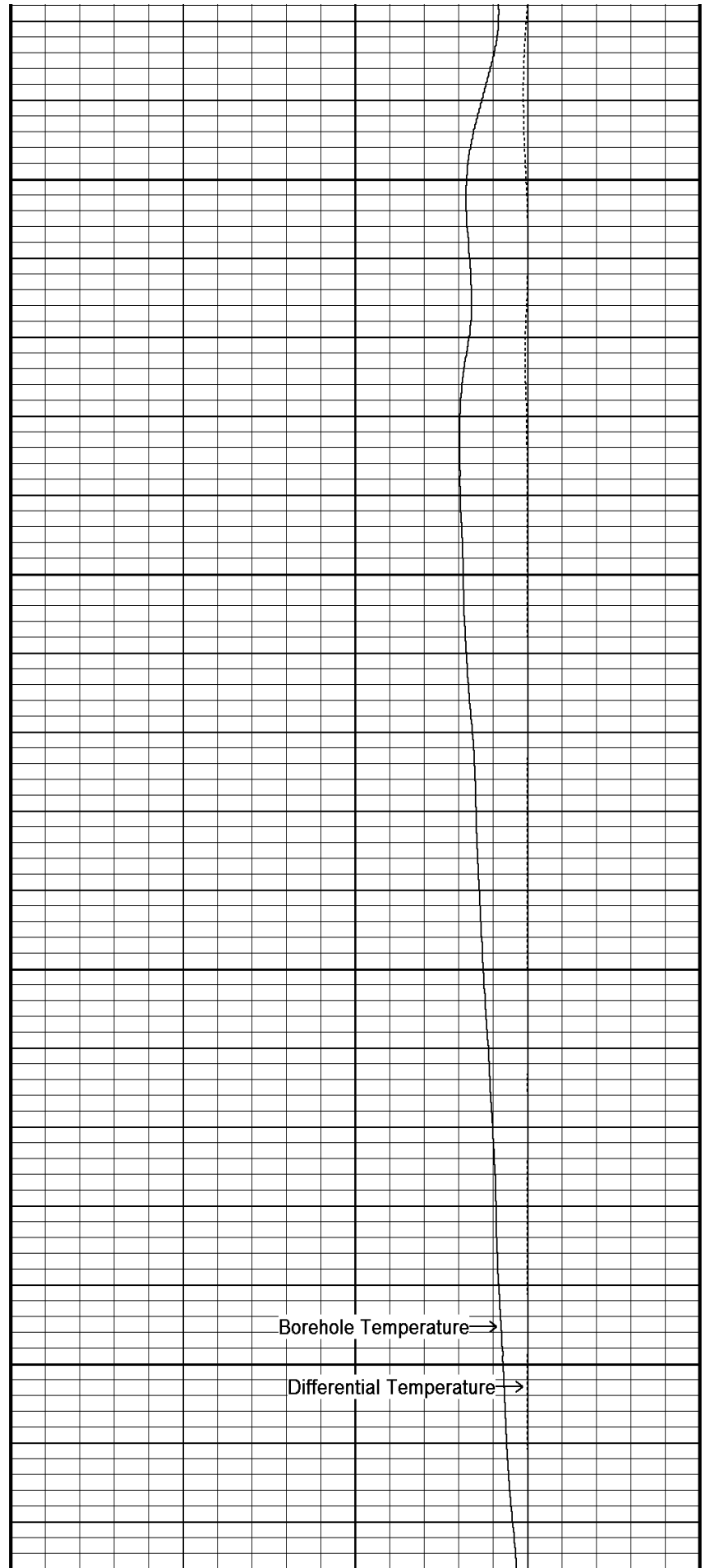
3300

DST Uphole Tension →

← Gamma Ray

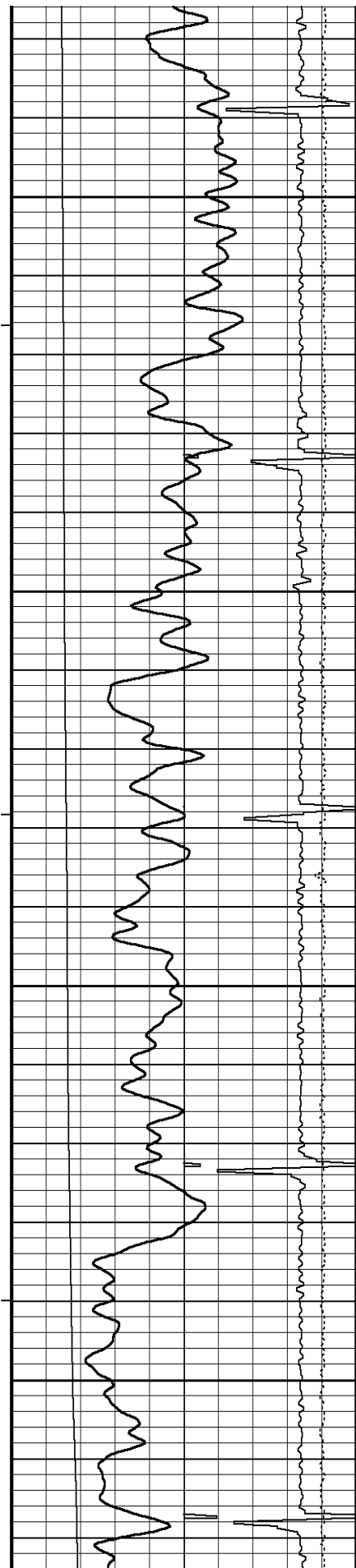
Casing Collar Locator →

← Borehole Temperature



Borehole Temperature →

Differential Temperature →



119°

3350

119°

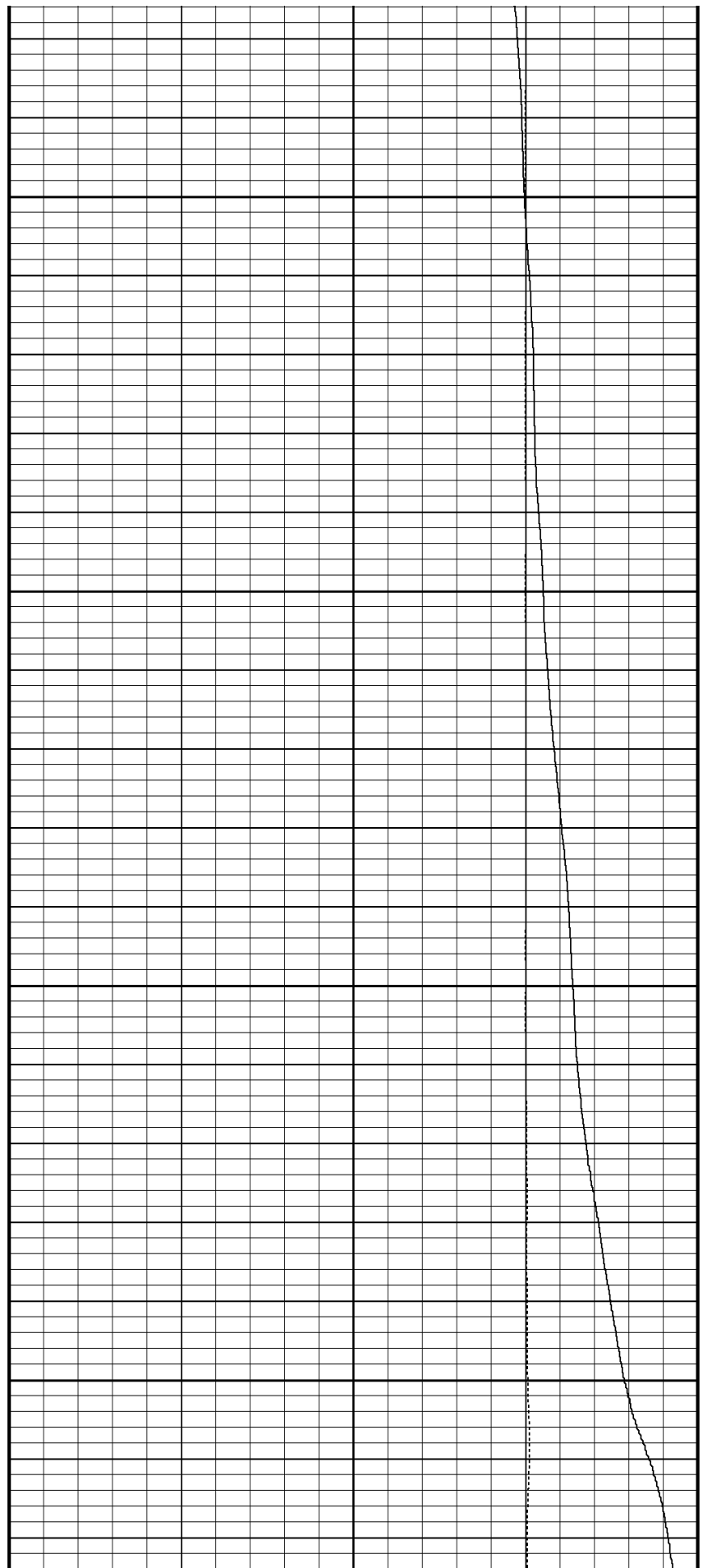
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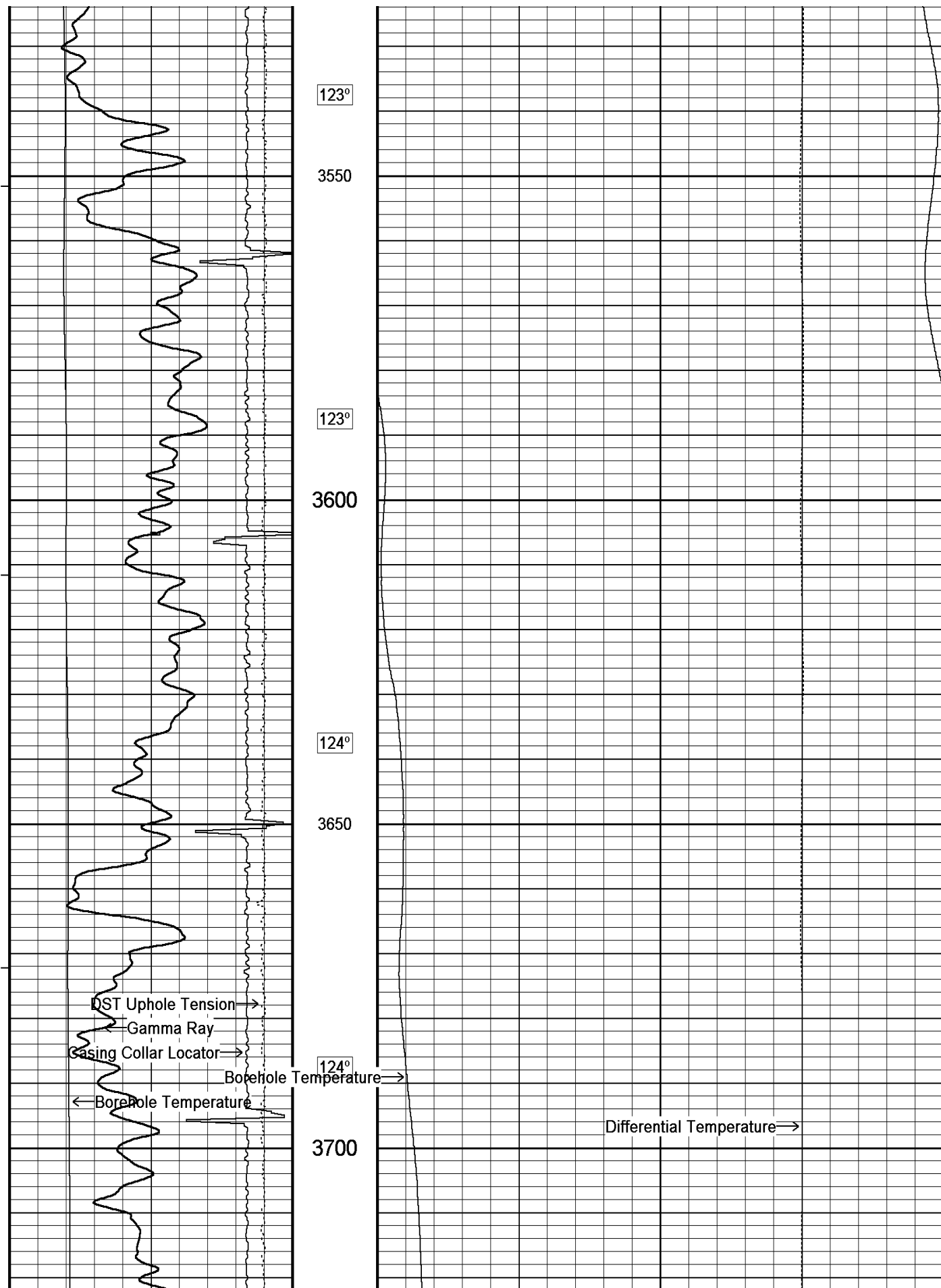
120°

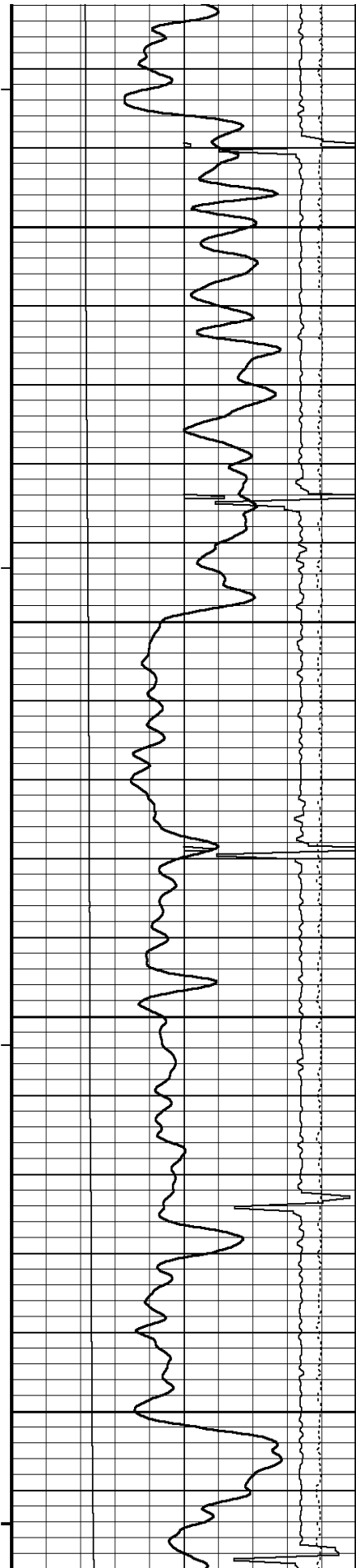
3450

121°

3500







125°

3750

125°

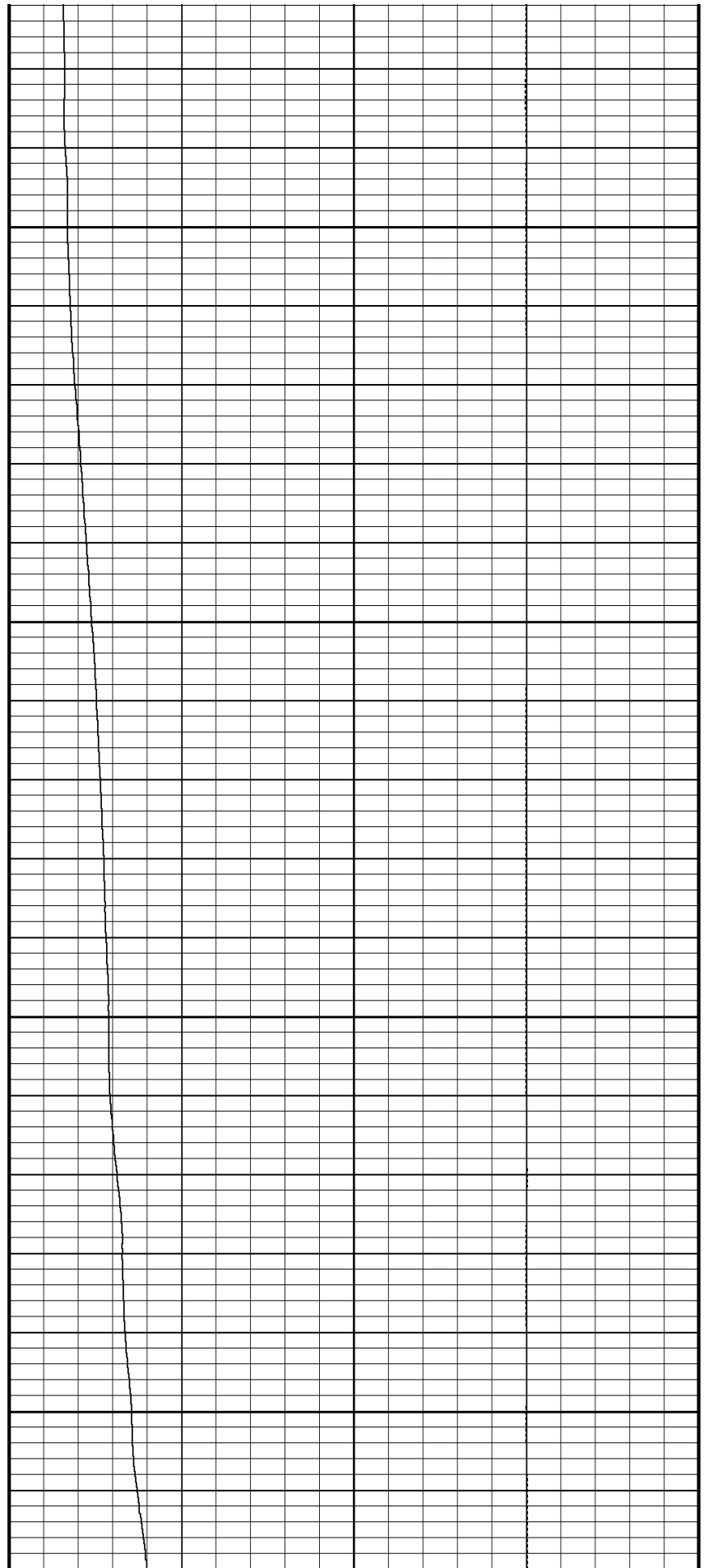
3800

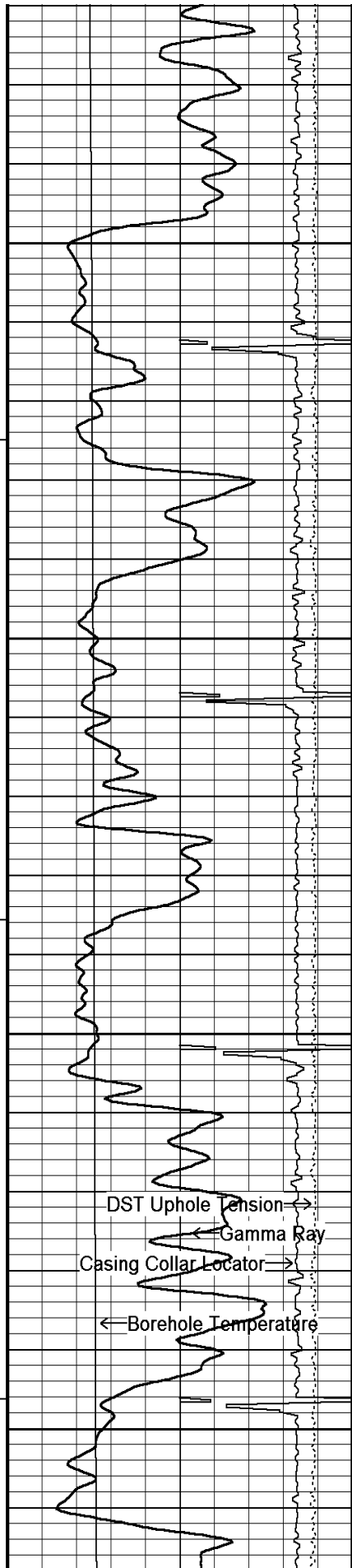
126°

3850

126°

3900





127°

3950

128°

4000

128°

4050

DST Uphole Tension →

← Gamma Ray

Casing Collar Locator →

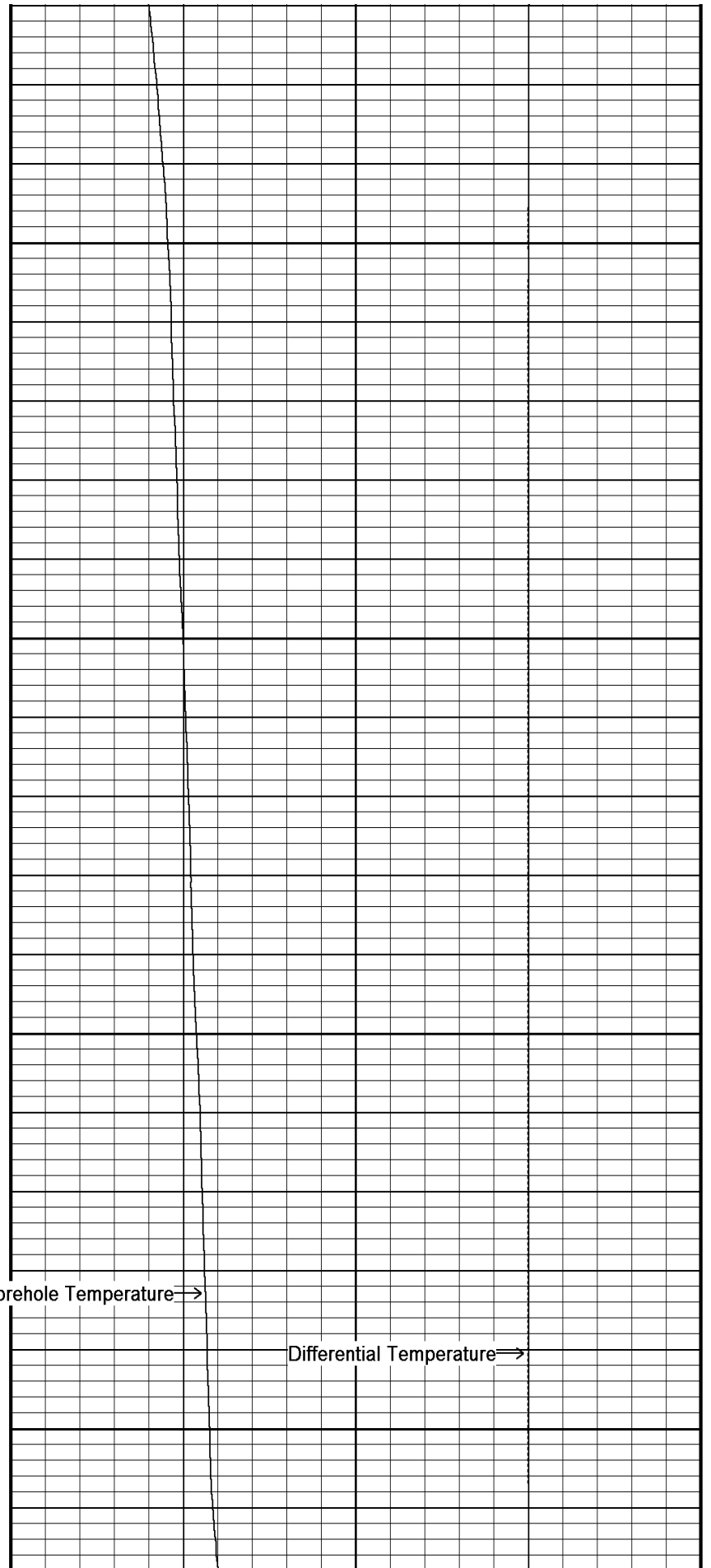
← Borehole Temperature

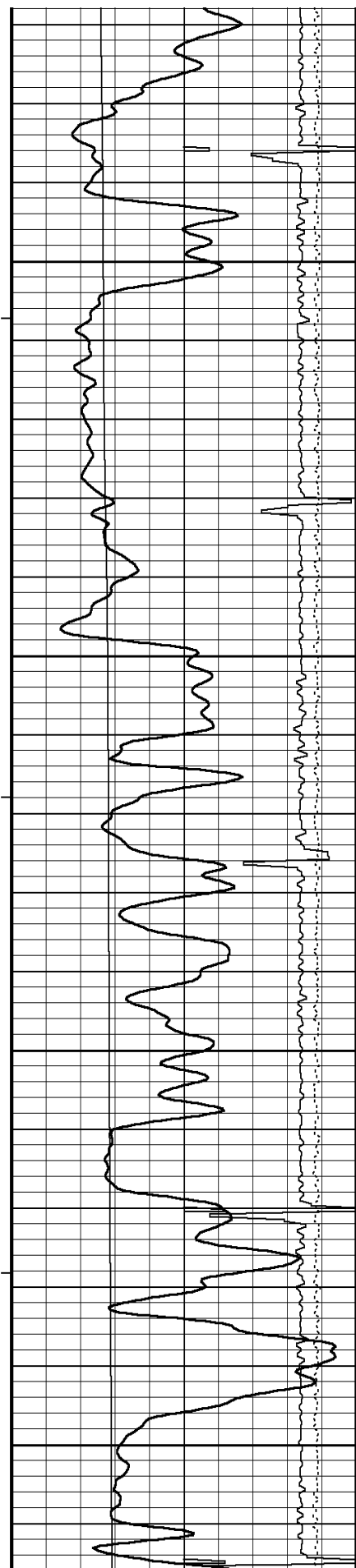
128°

4100

Borehole Temperature →

Differential Temperature →





129°

4150

130°

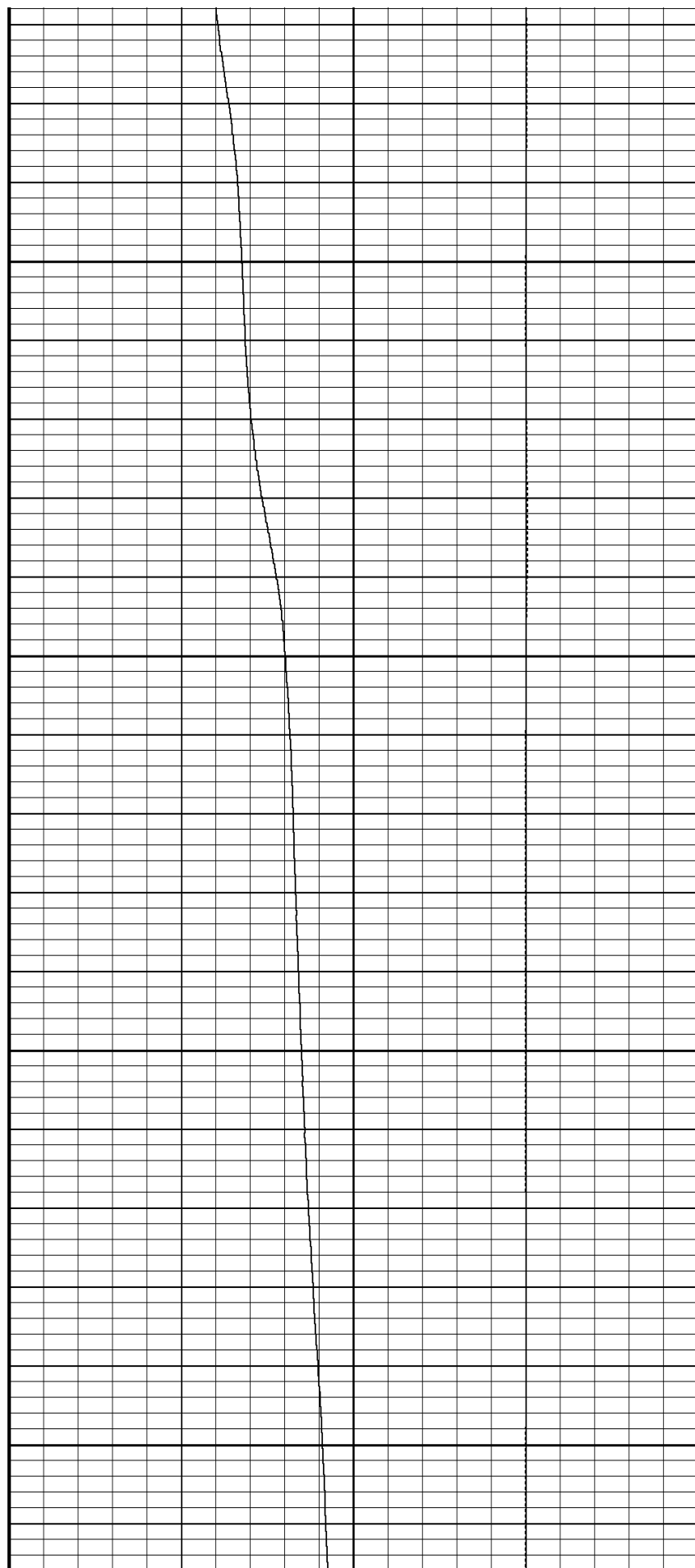
4200

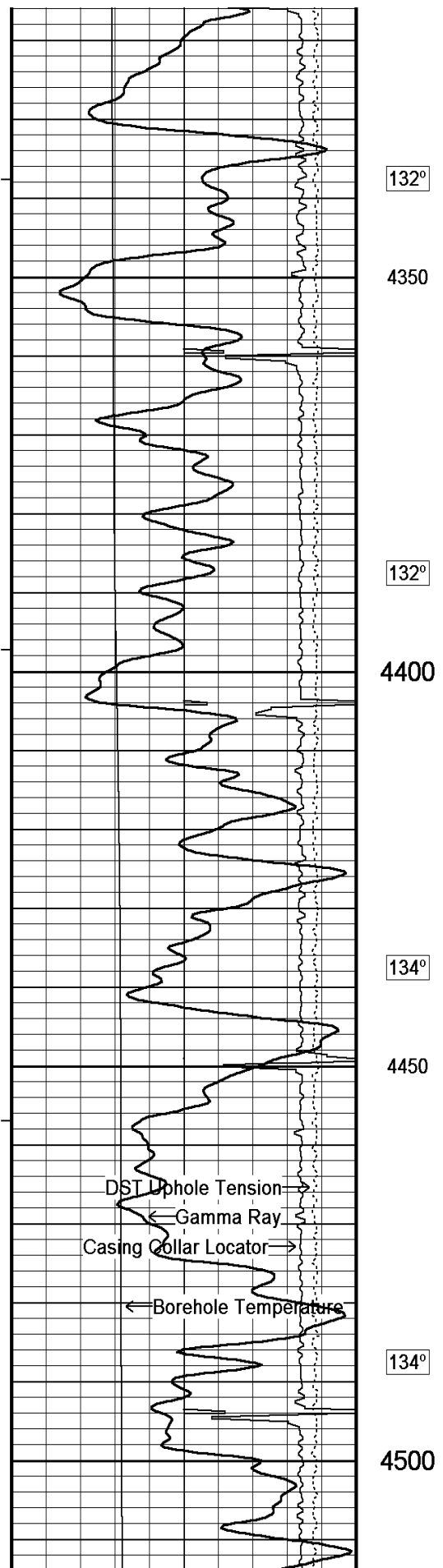
131°

4250

131°

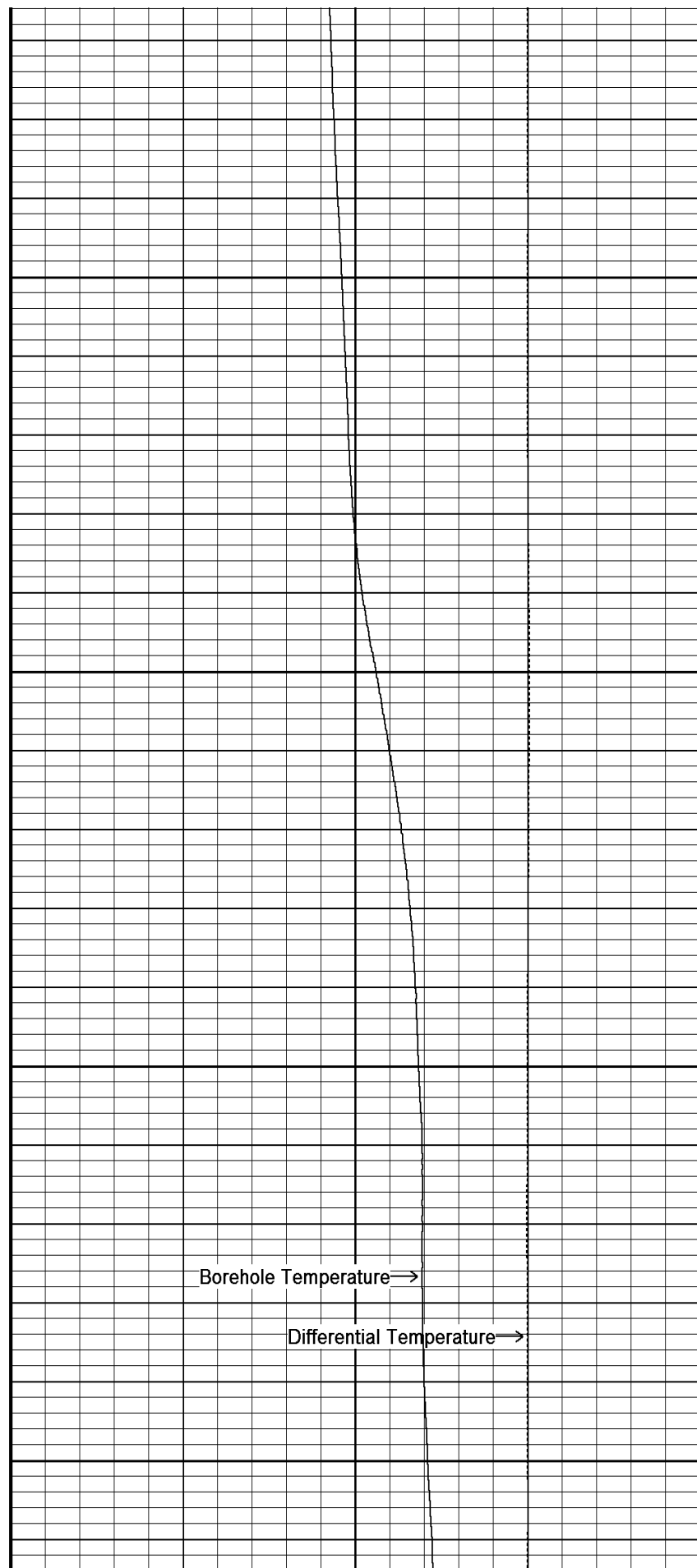
4300



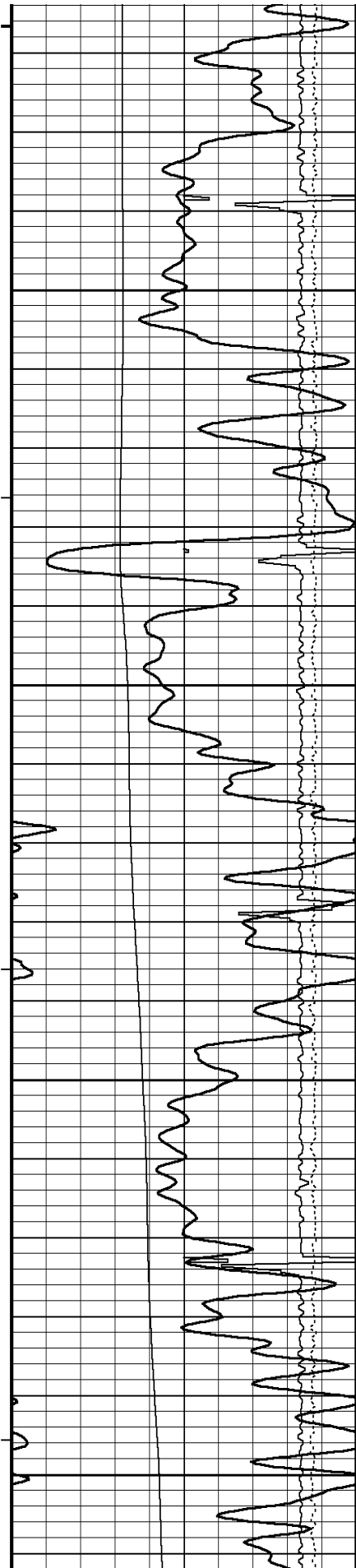


132°  
4350  
132°  
4400  
134°  
4450  
134°  
4500

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



Borehole Temperature →  
Differential Temperature →



134°

4550

134°

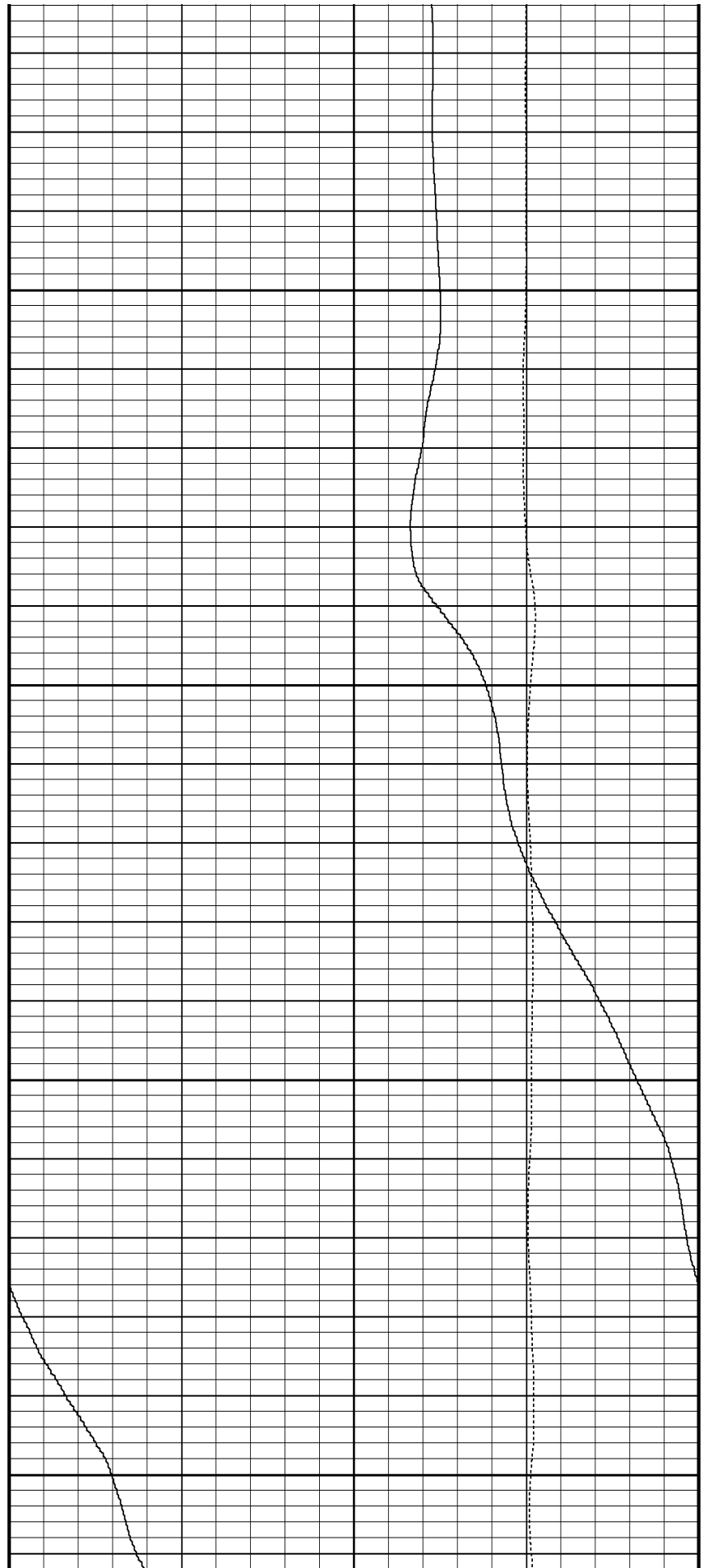
4600

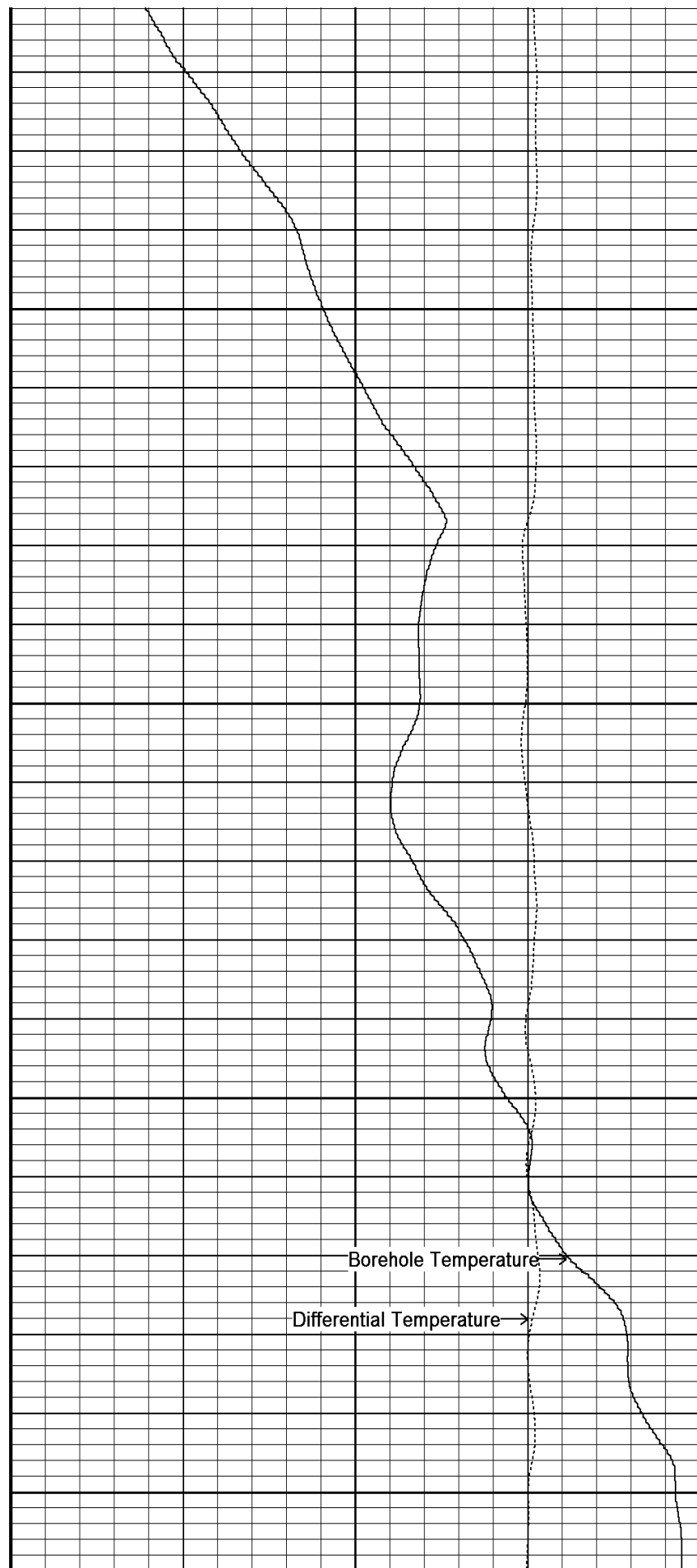
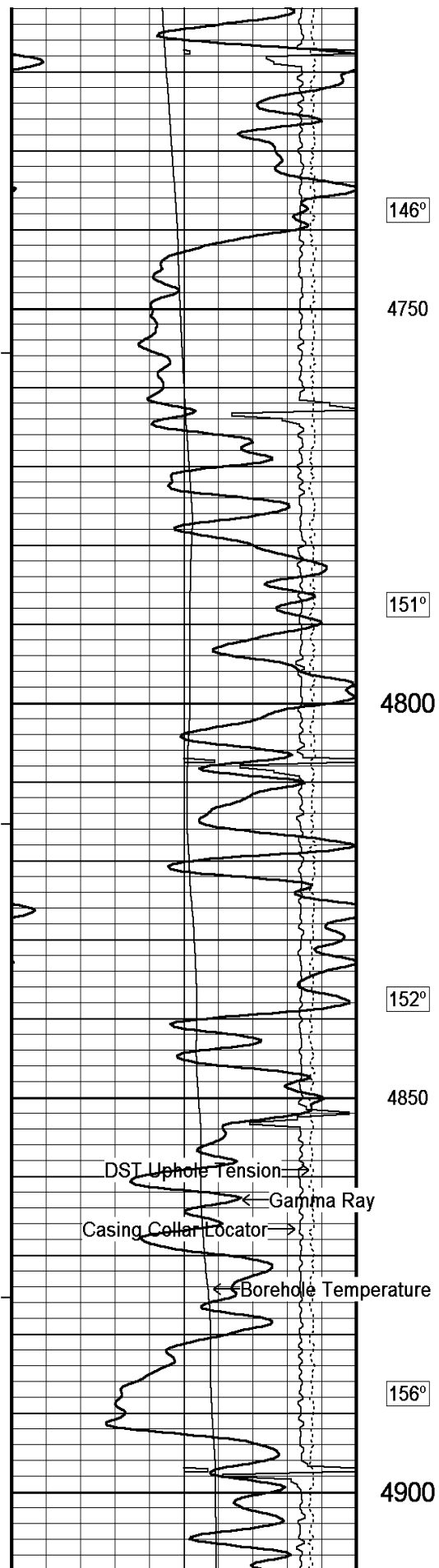
137°

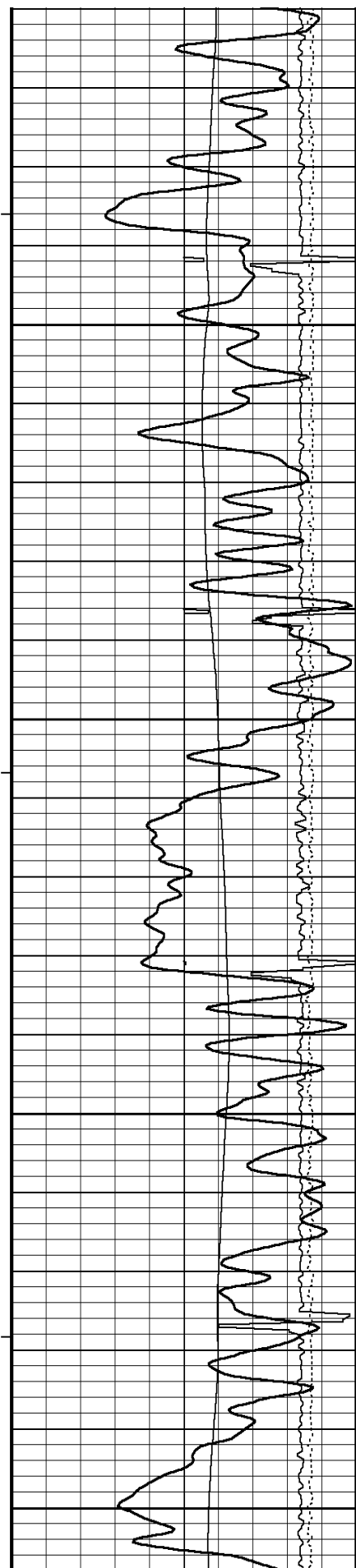
4650

141°

4700







156°

4950

156°

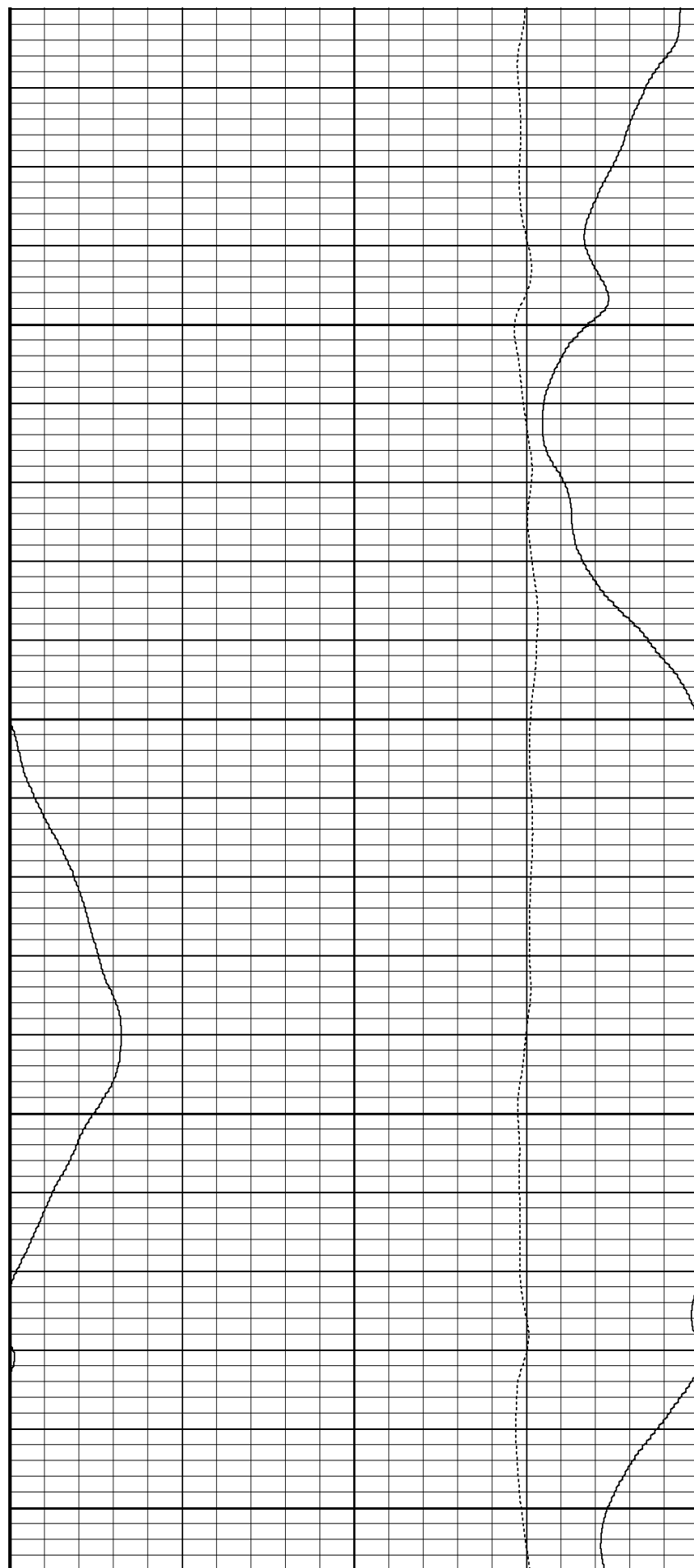
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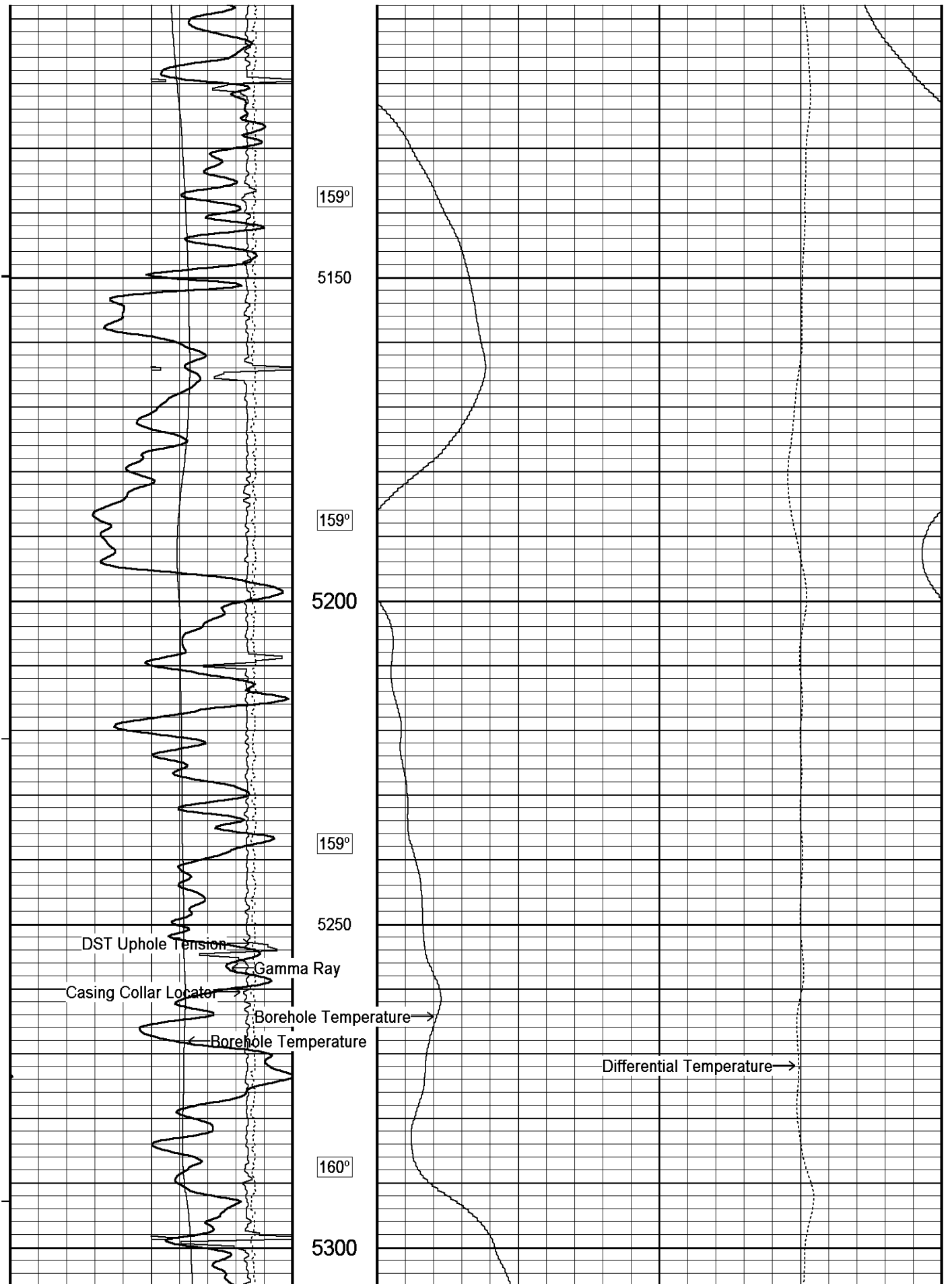
160°

5050

158°

5100





159°

5150

159°

5200

159°

5250

DST Uphole Tension

Gamma Ray

Casing Collar Locator

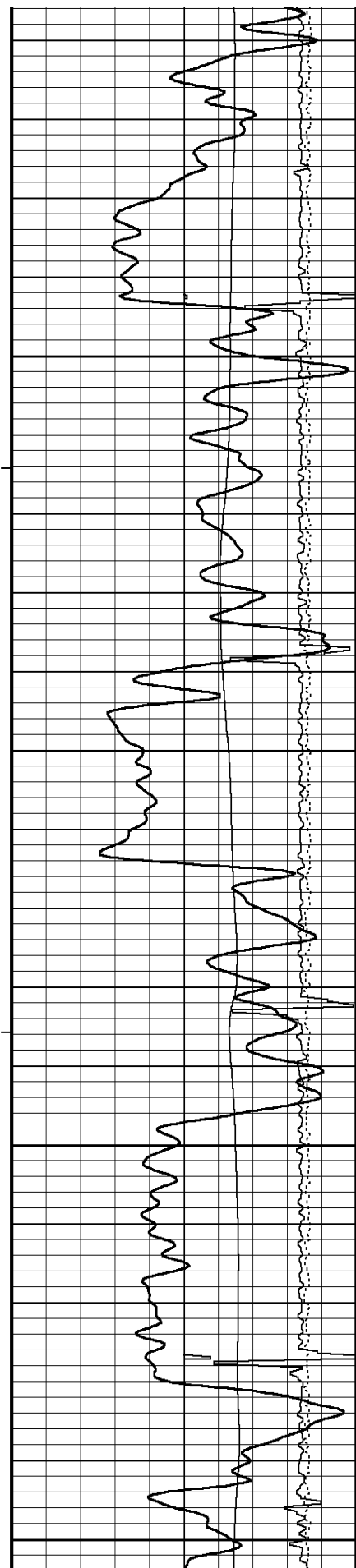
Borehole Temperature

Borehole Temperature

Differential Temperature

160°

5300



162°

5350

160°

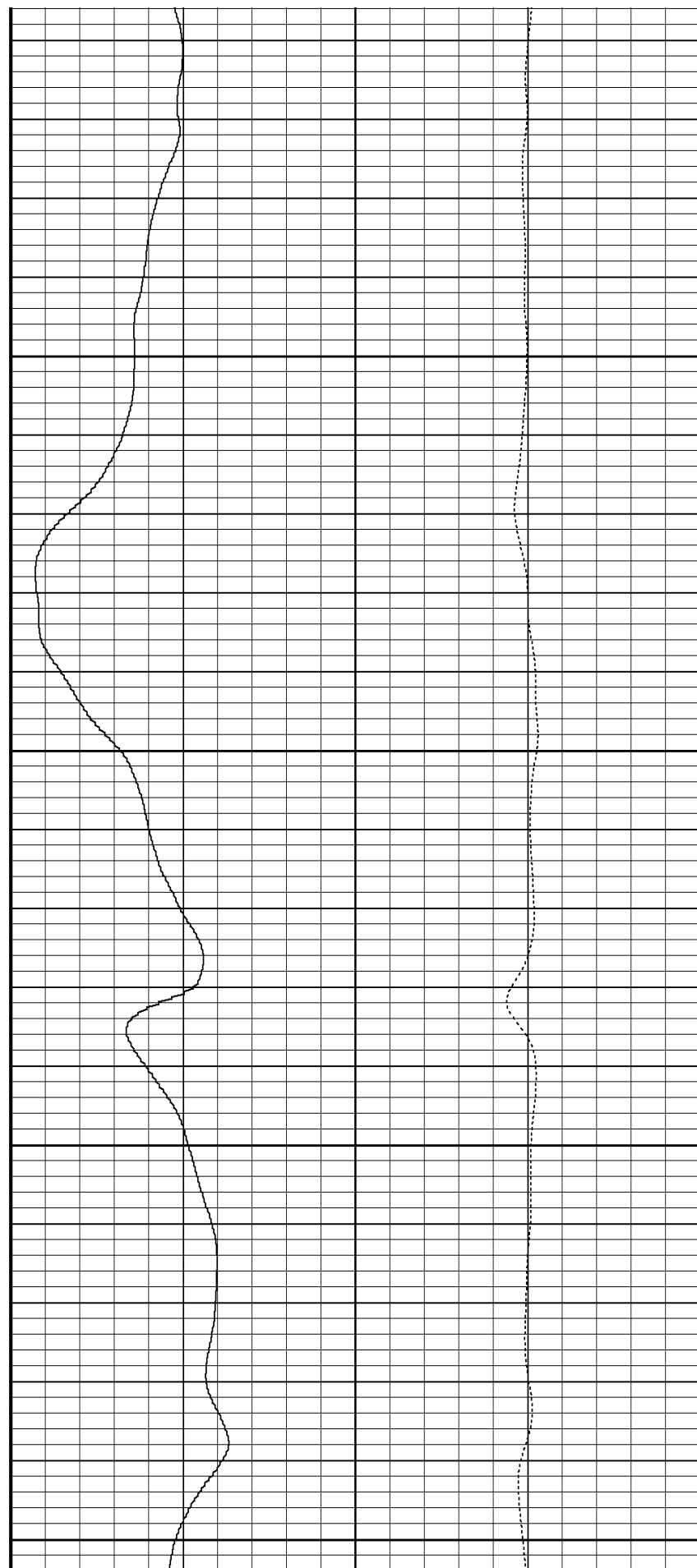
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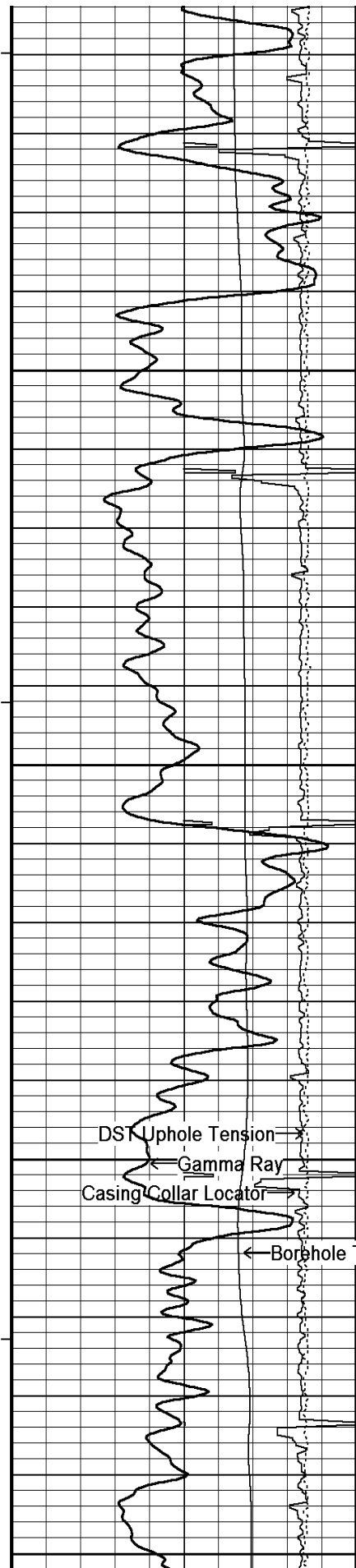
162°

5450

164°

5500





163°

5550

165°

5600

166°

5650

166°

5700

DST Uphole Tension

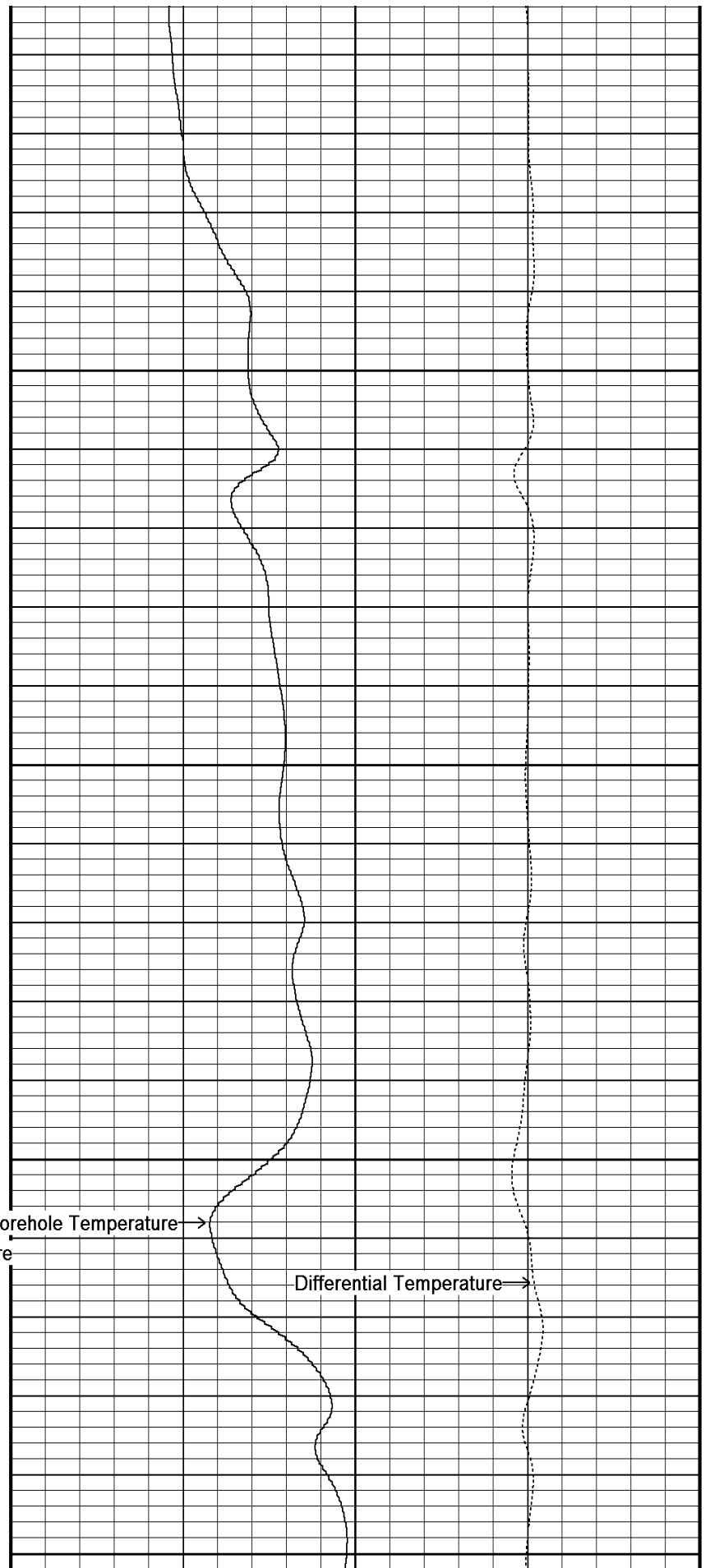
Gamma Ray

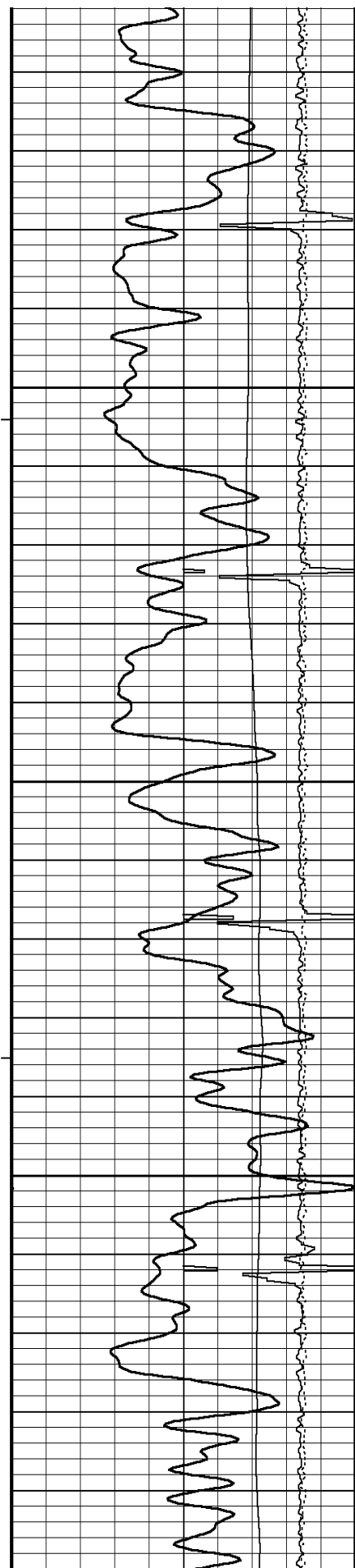
Casing Collar Locator

Borehole Temperature

Borehole Temperature

Differential Temperature





$166^\circ$

5750

$167^\circ$

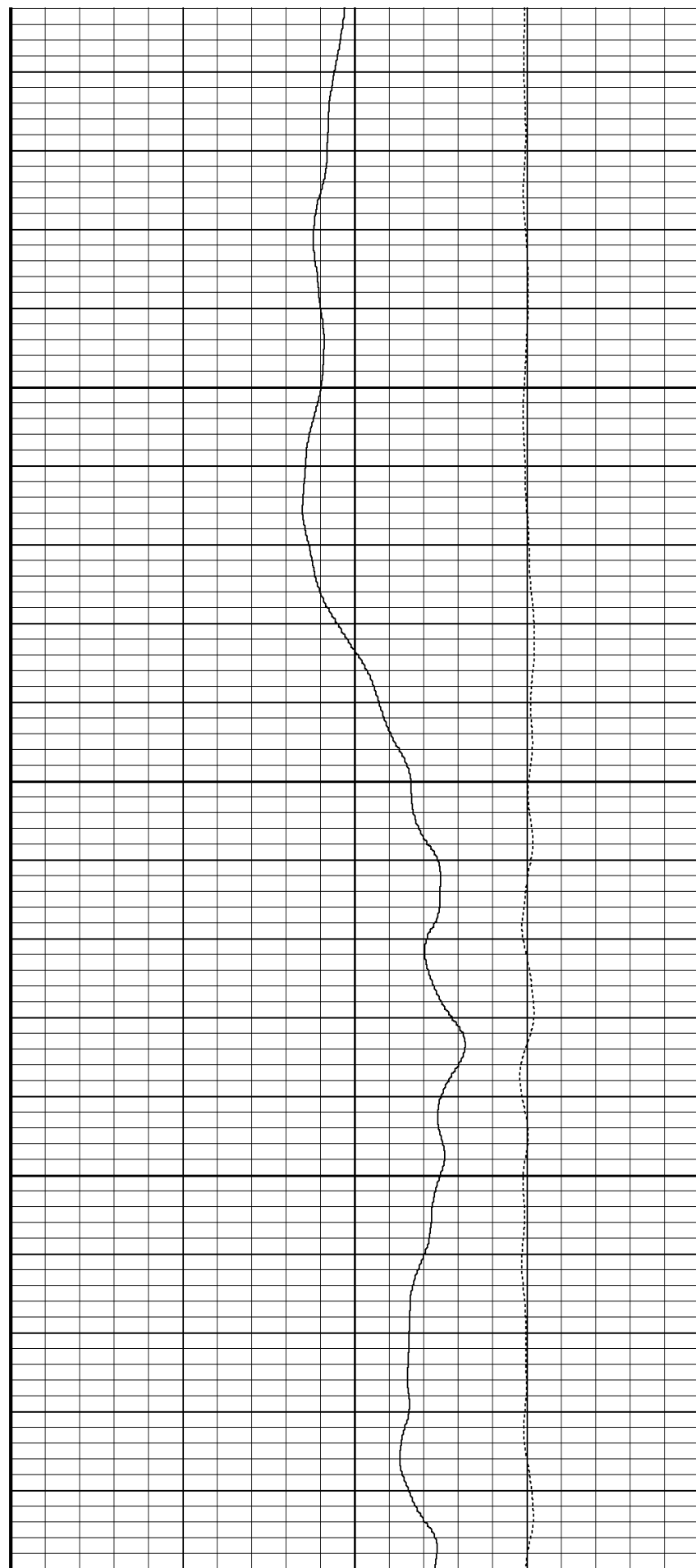
5800

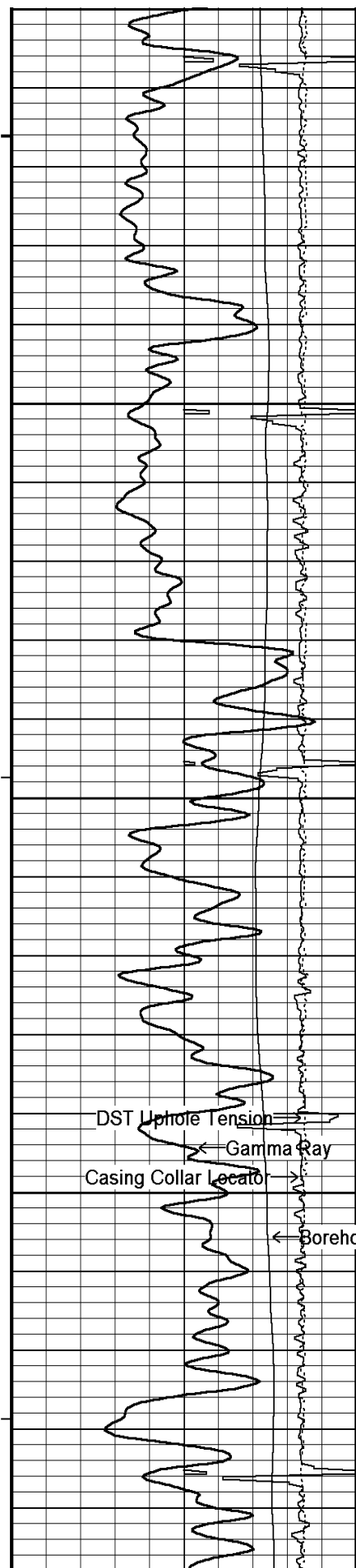
$169^\circ$

5850

$169^\circ$

5900





5900

170°

5950

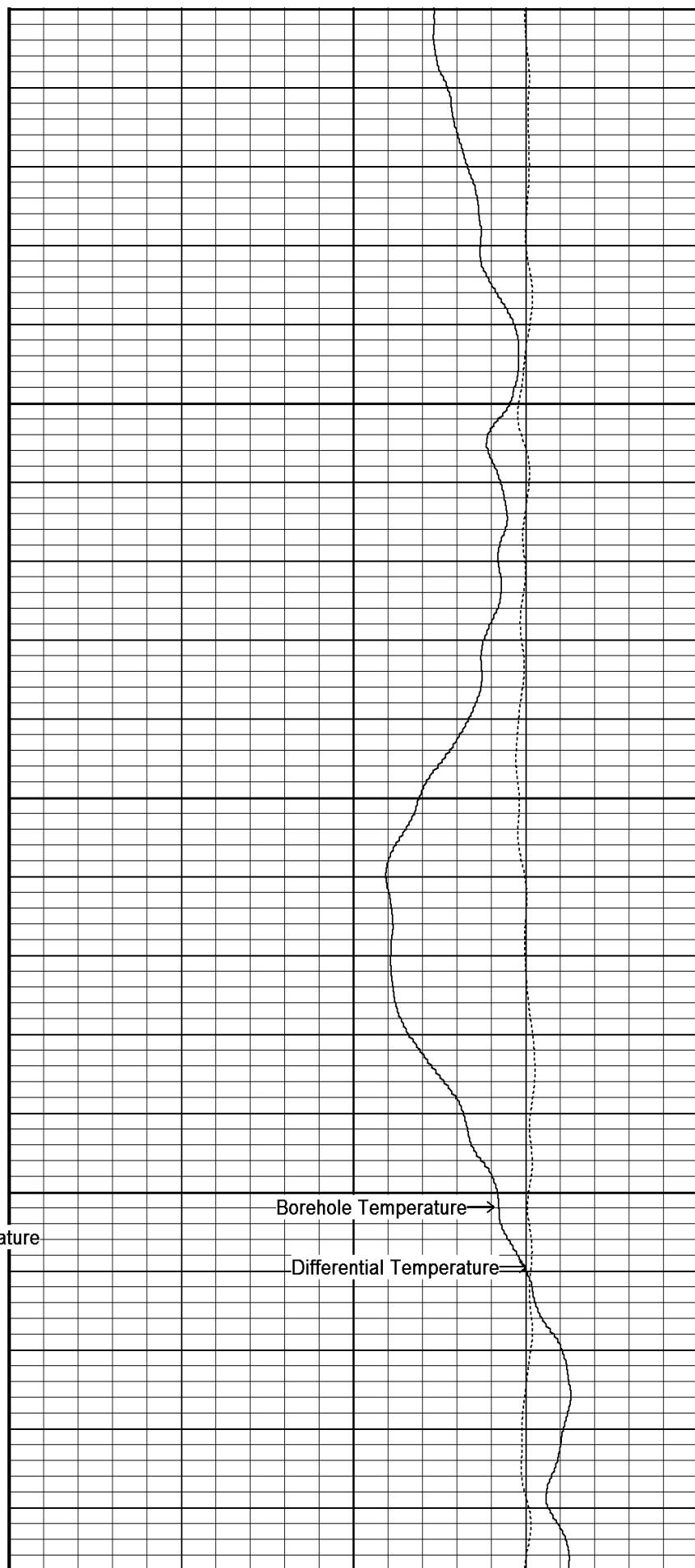
171°

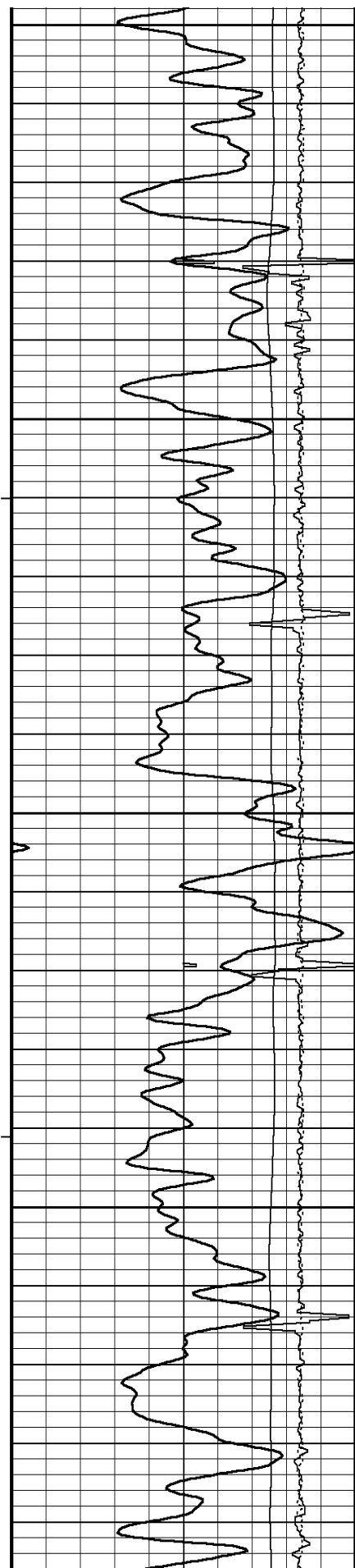
6000

169°

6050

172°





6100

172°

6150

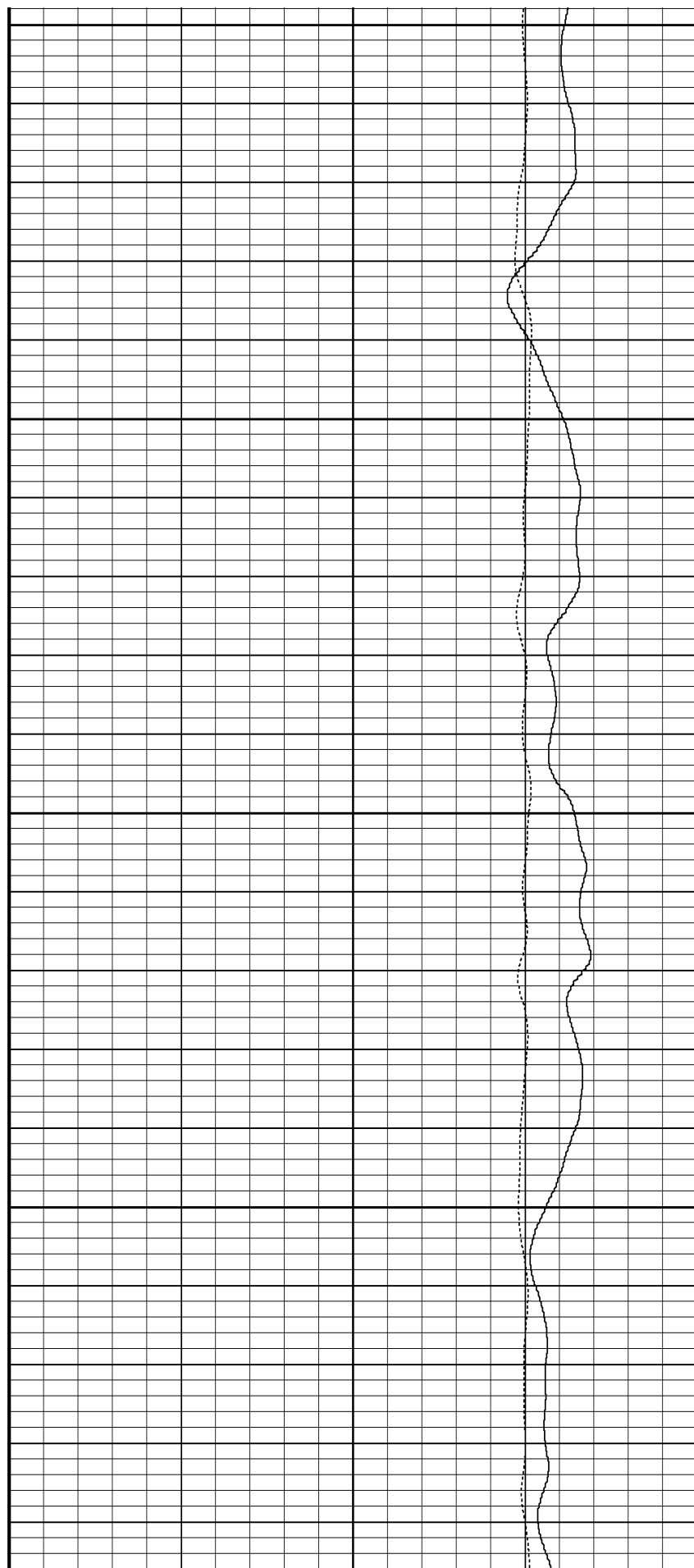
172°

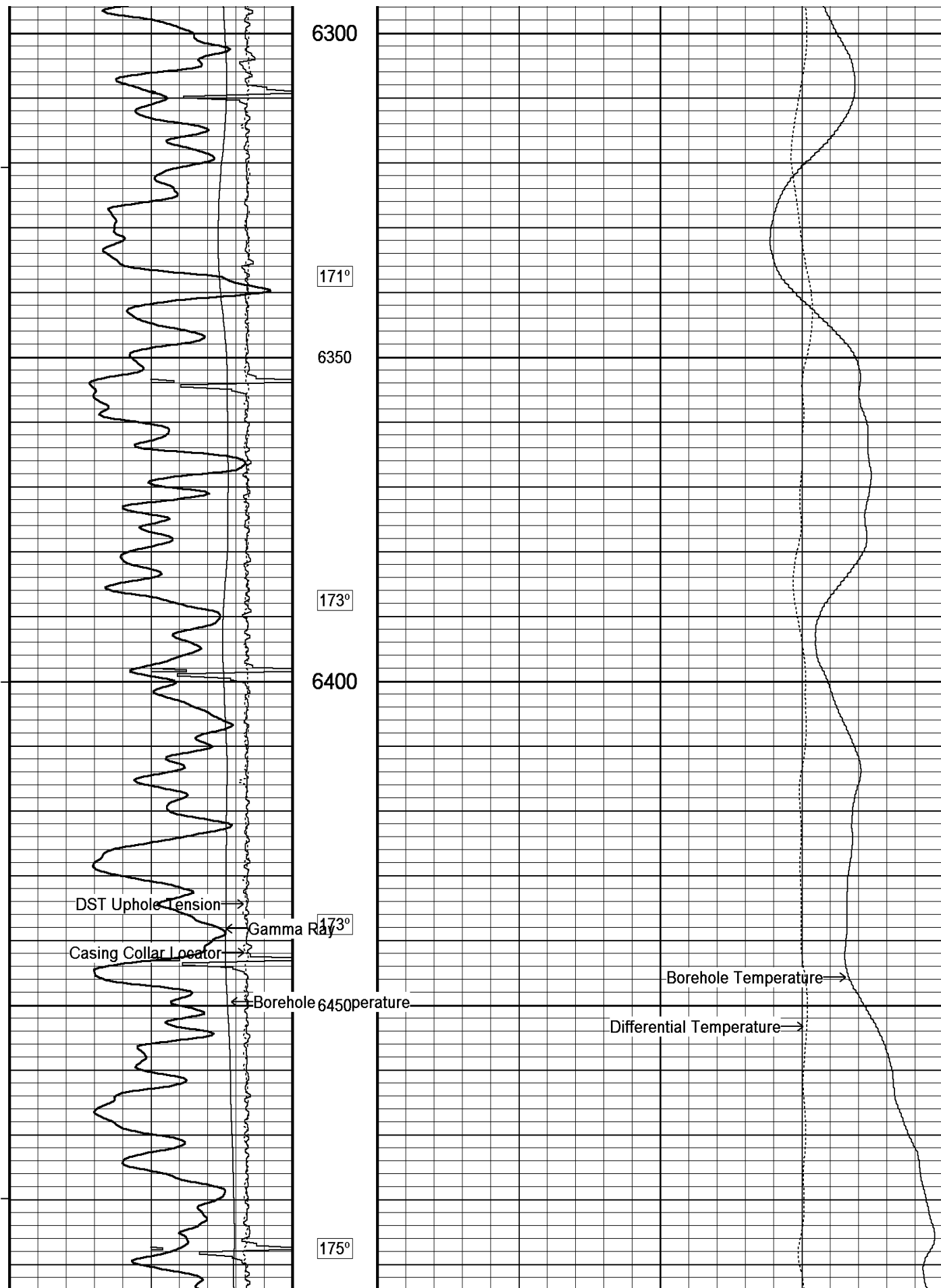
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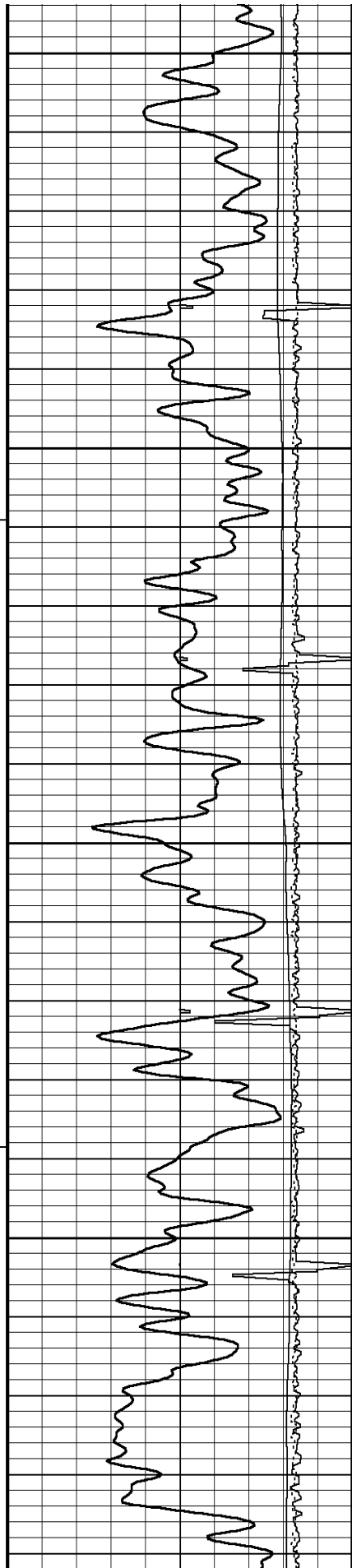
173°

6250

172°







6500

175°

6550

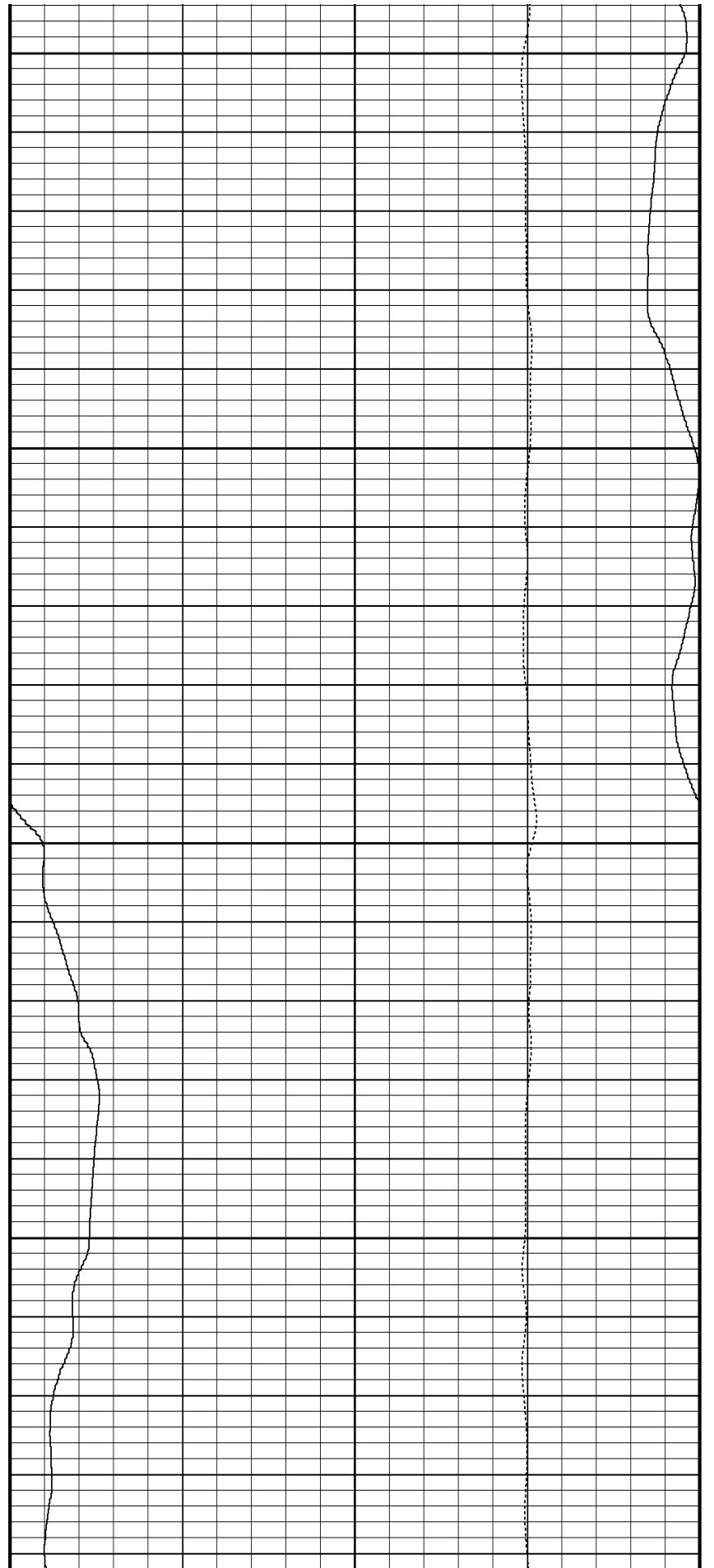
175°

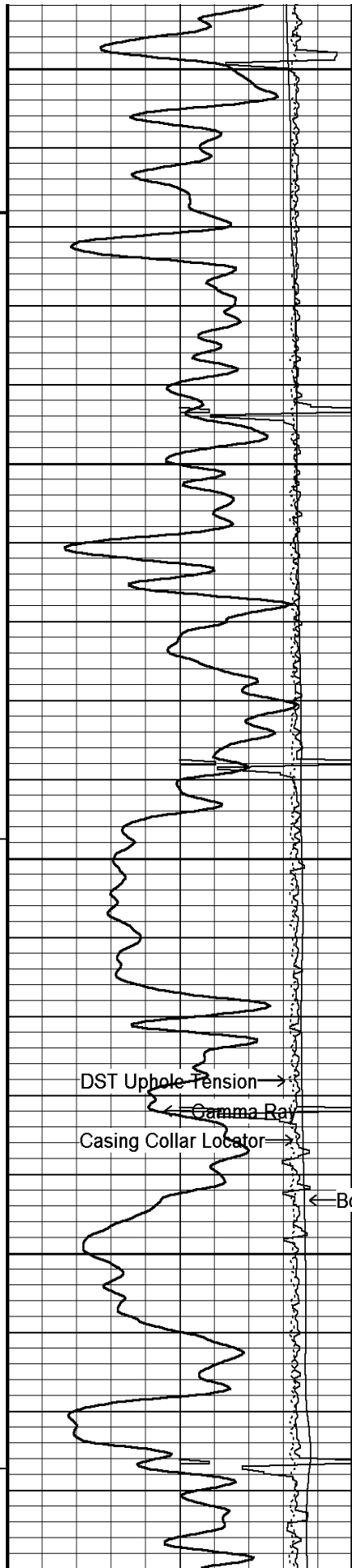
6600

177°

6650

177°





6700

178°

6750

180°

6800

DST Uphole Tension →

← Gamma Ray

Casing Collar Locator →

180°

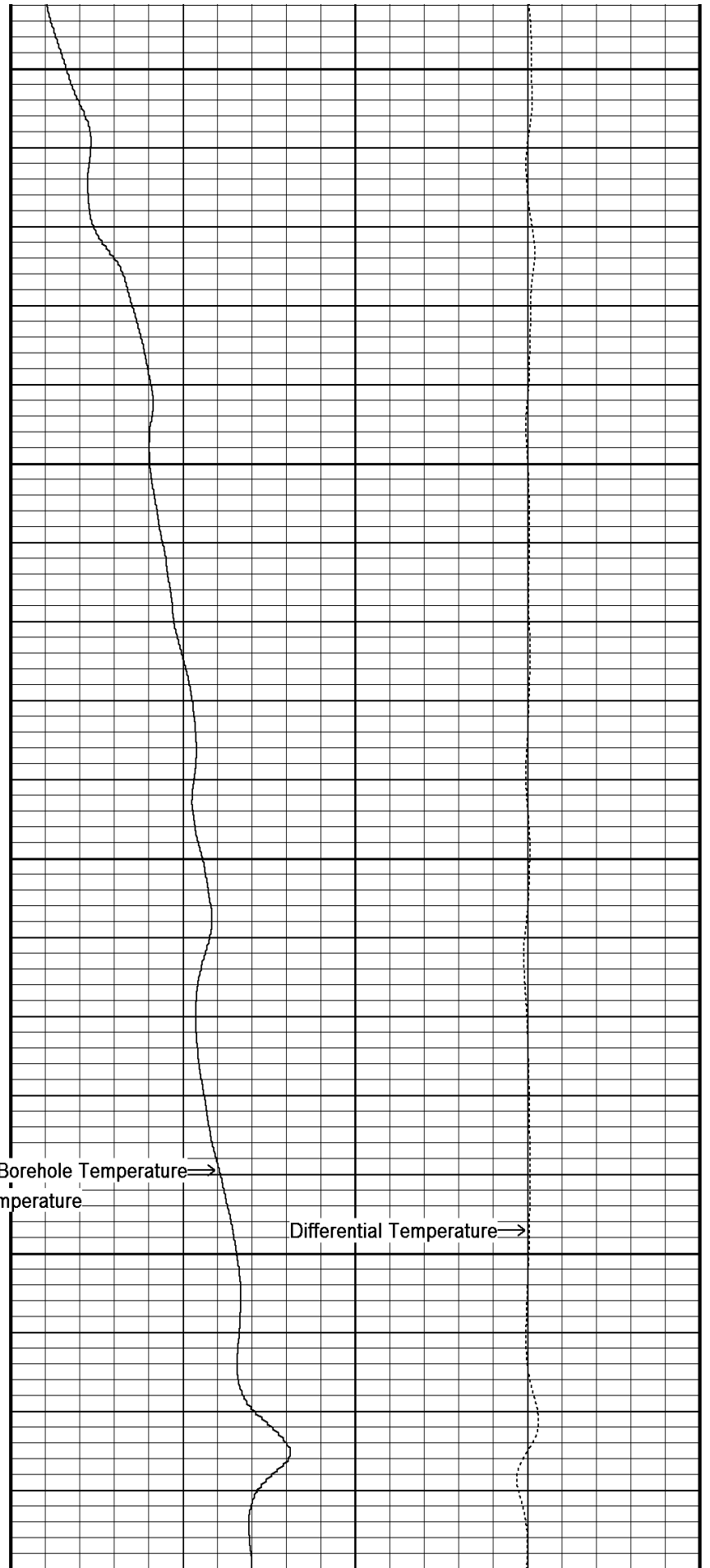
Borehole Temperature →

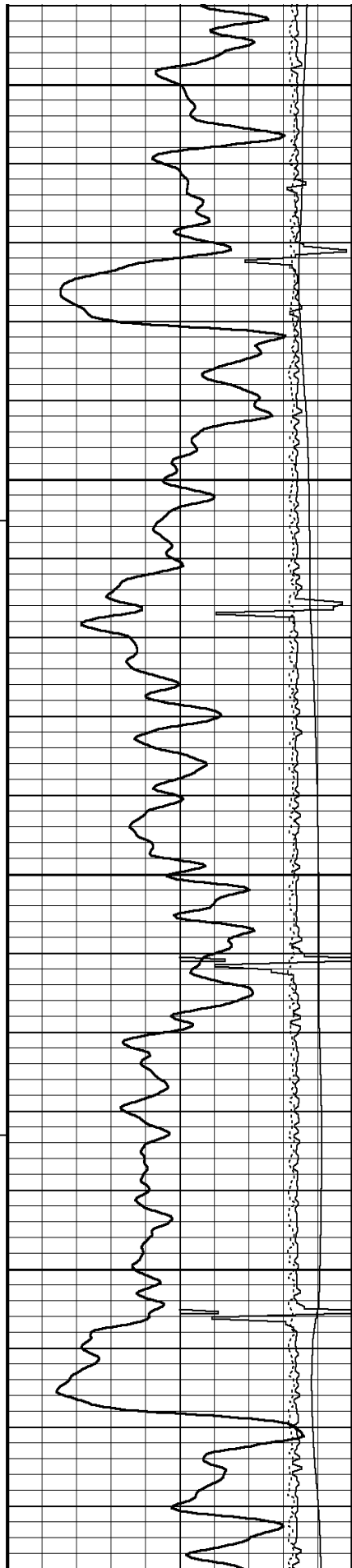
← Borehole Temperature

6850

Differential Temperature →

182°





6900

181°

6950

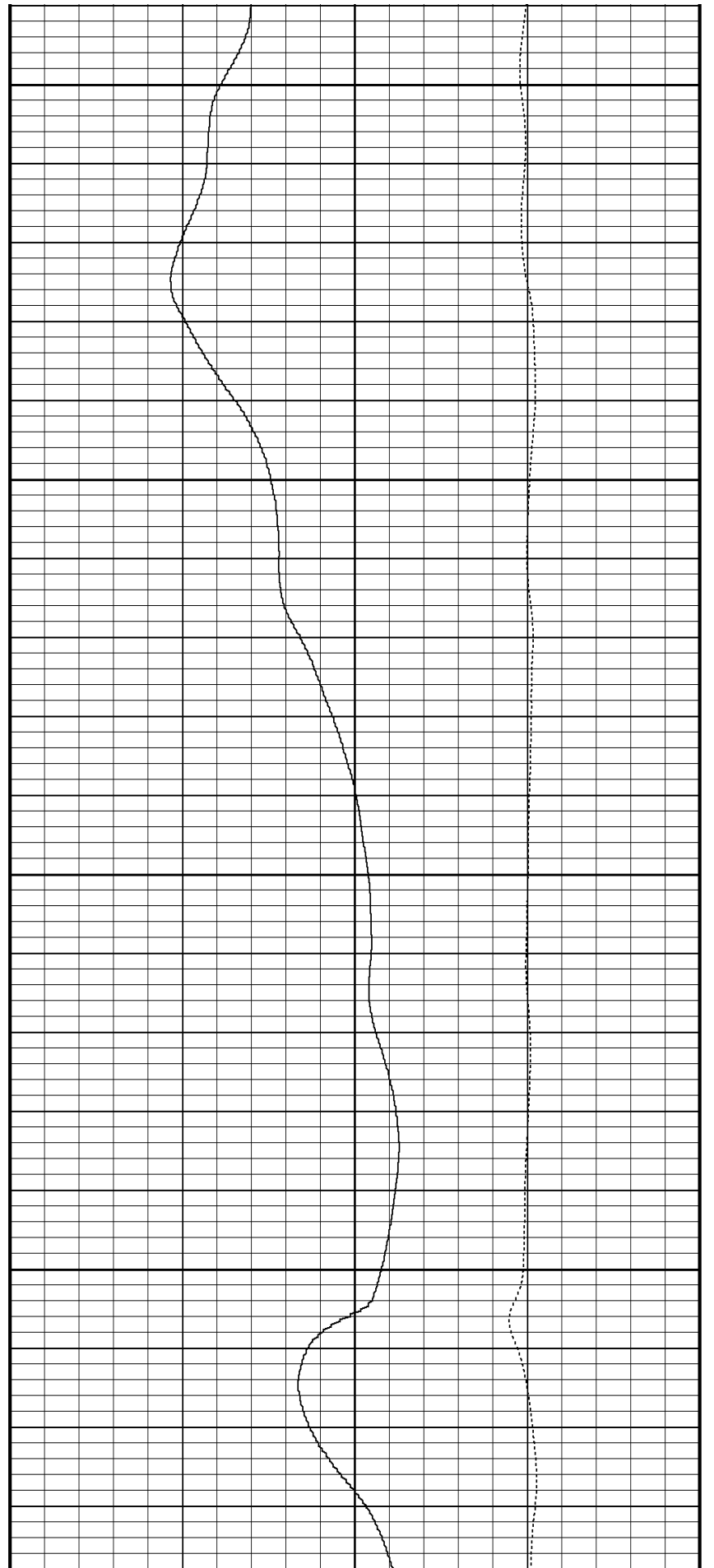
183°

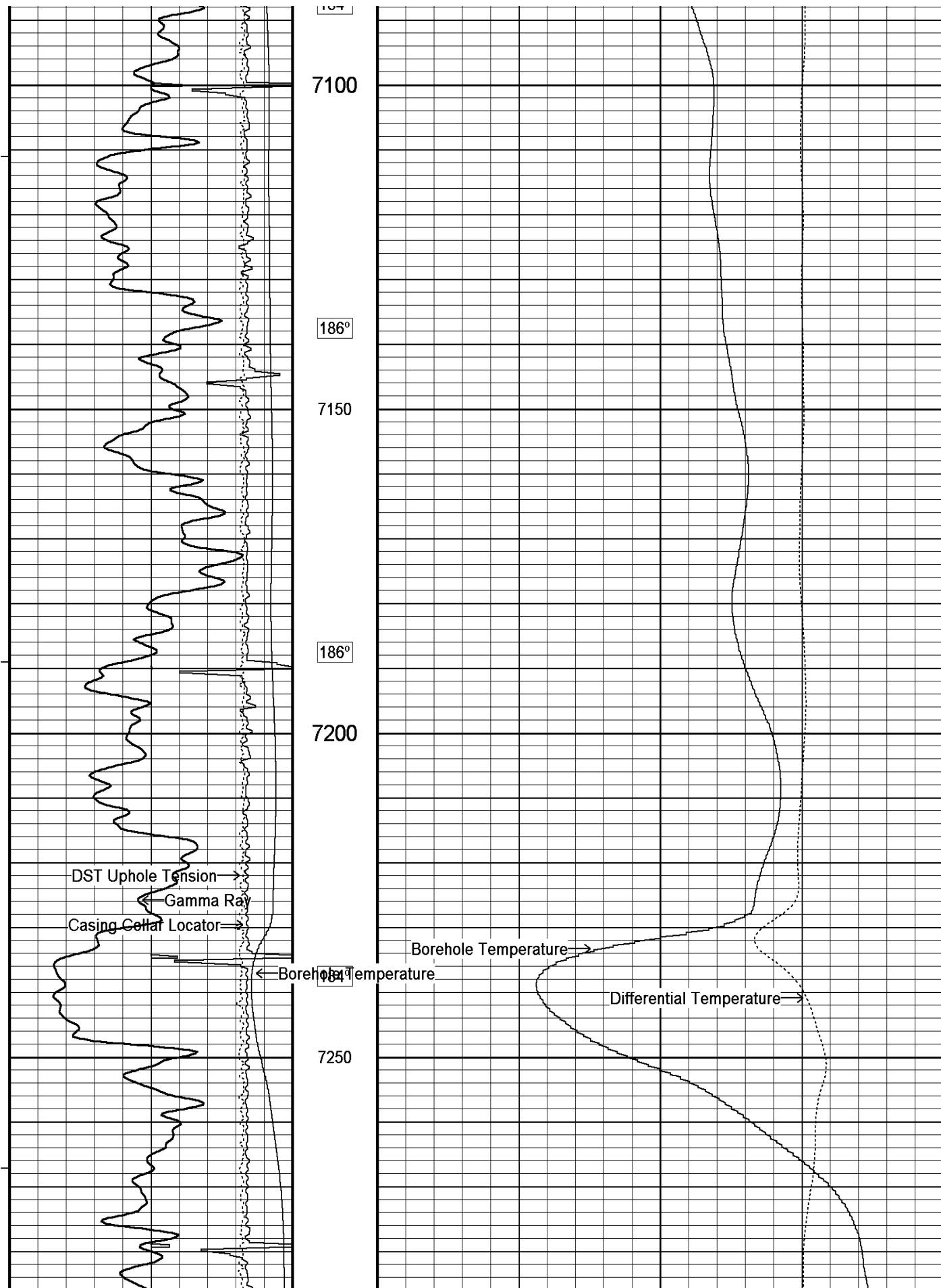
7000

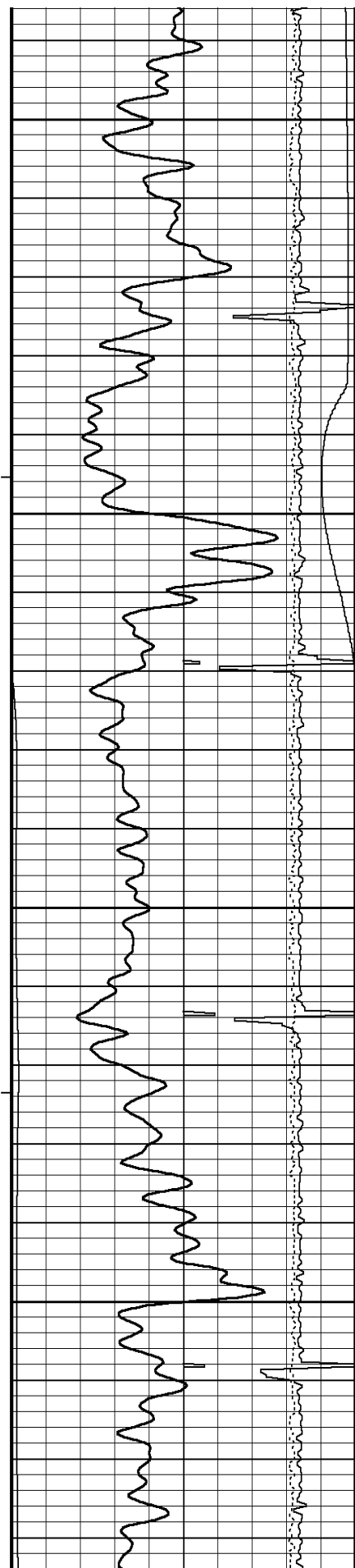
185°

7050

187°







189°

7300

190°

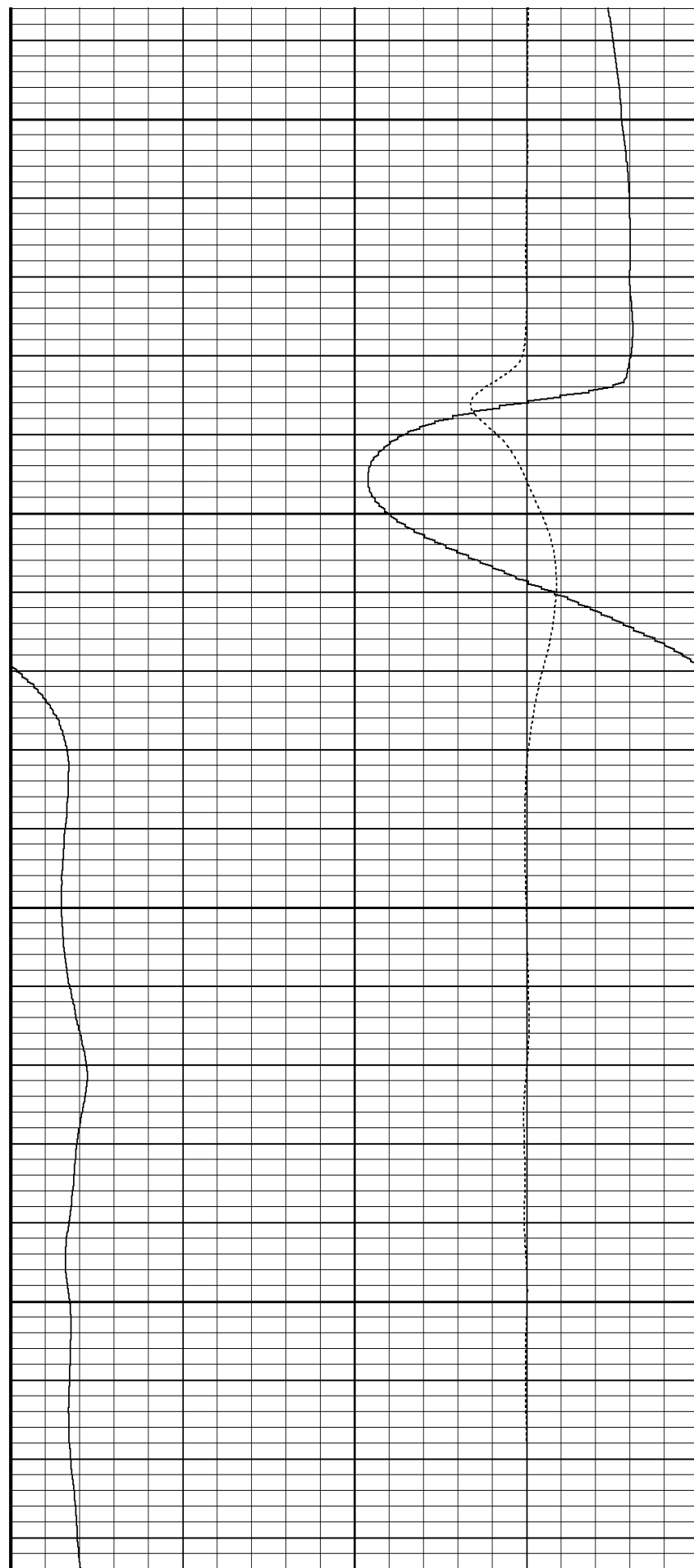
7350

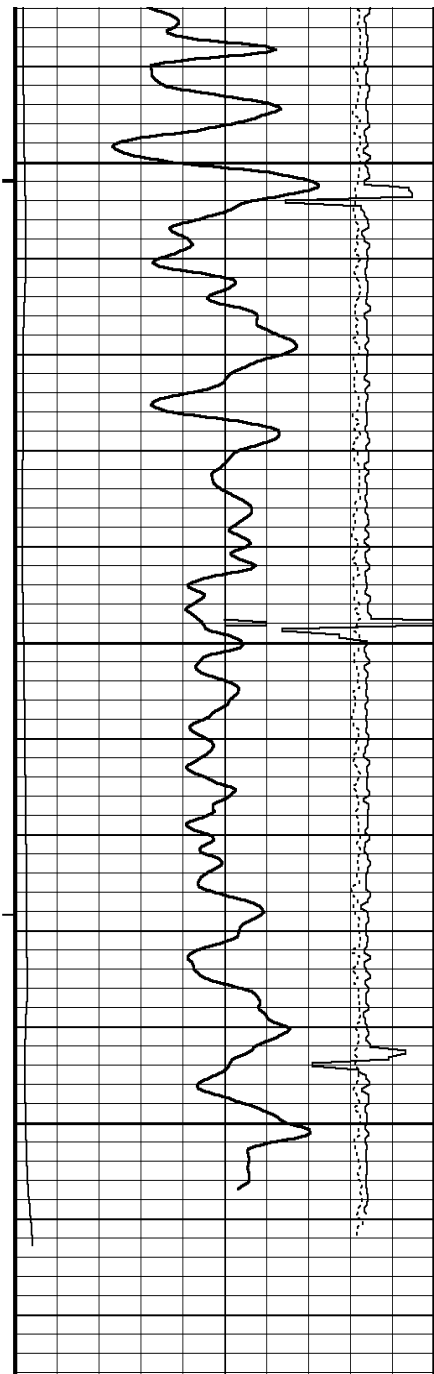
192°

7400

194°

7450





194°

7500

194°

7550

195°

7600

7624

Depth  
In  
Feet

Timing Marks  
every 60.0 sec

Gamma Ray

API

75

0

150

150

225

300

Borehole Temperature

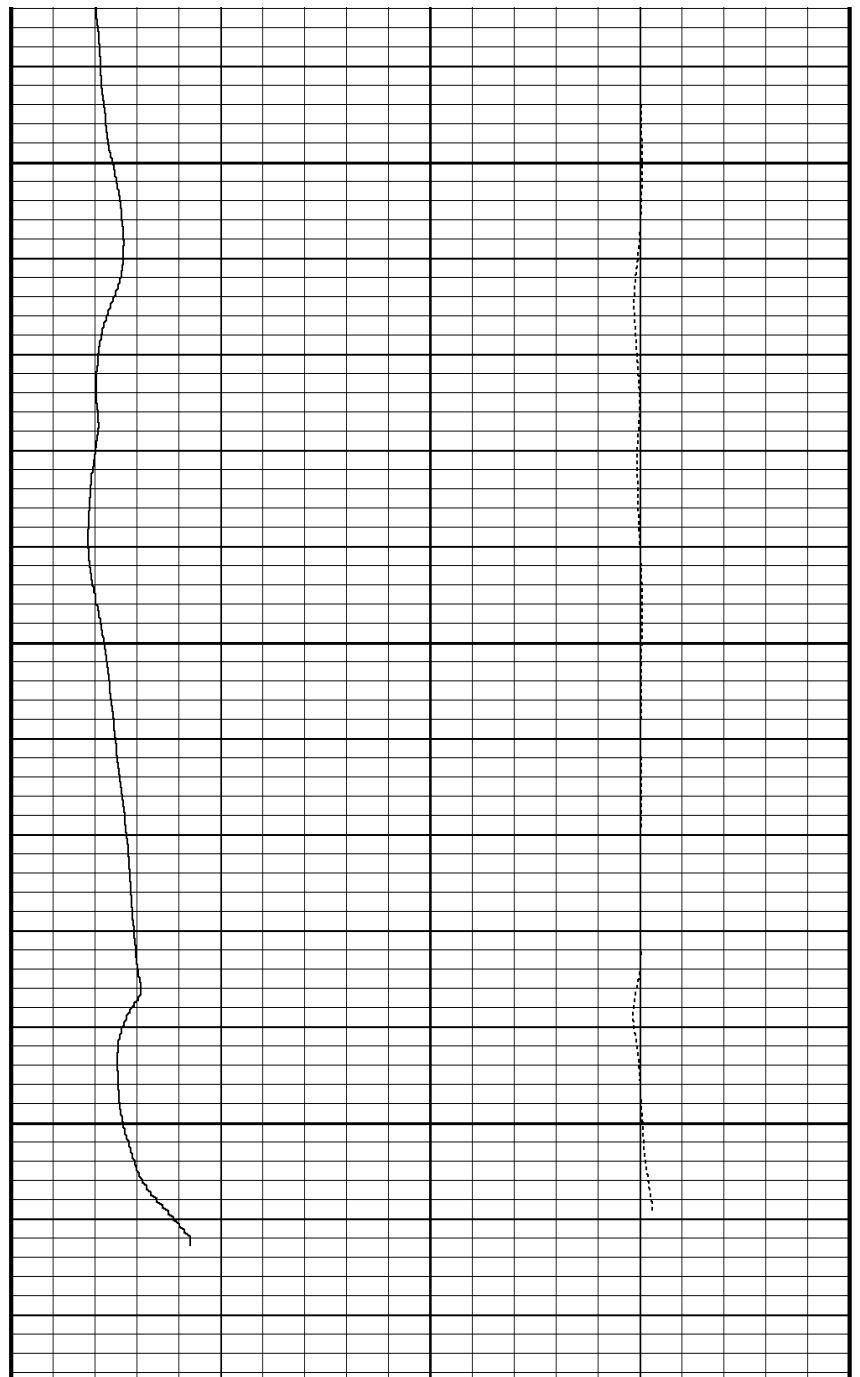
degrees F

50

0

100

Borehole  
Temp in  
deg F



0

5

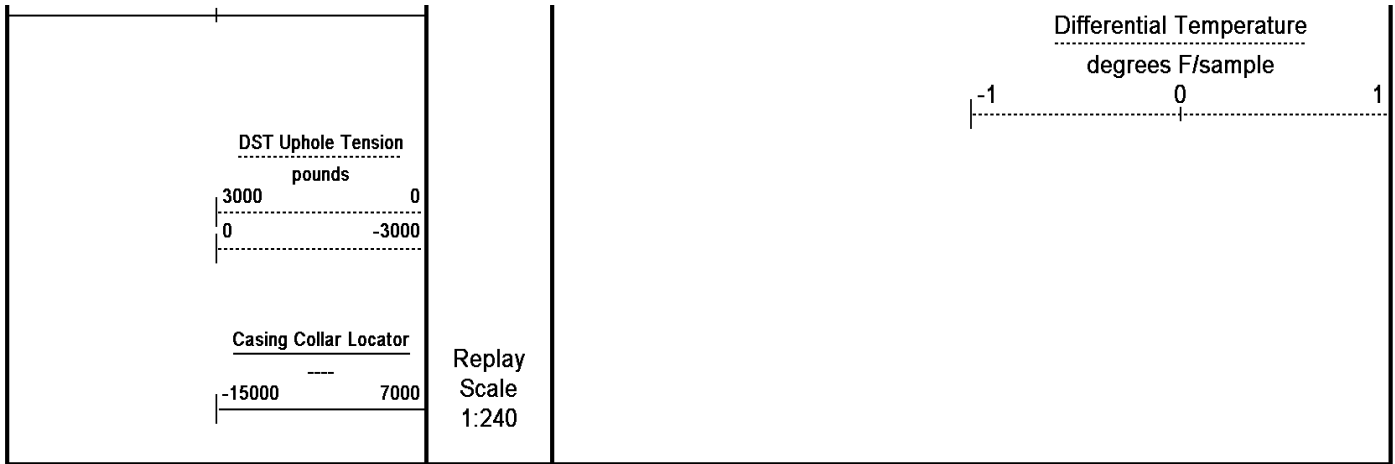
10

15

20

Borehole Temperature

degrees F



Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 22-JUN-2011 05:04  
 Filename: C:\Minimus\LOGS\Bill Barrett Temp Logs\CB TG Land 21C-20-692 (TEMP)\MAIN.dta Recorded on 22-JUN-2011 02:54  
 System Versions: Logged with 11.02.3186 Plotted with 11.02.3186

↑ **5 INCH MAIN LOG** ↑

**BEFORE SURVEY CALIBRATION**  
 C:\Minimus\LOGS\Bill Barrett Temp Logs\CB TG Land 21C-20-692 (TEMP)\MAIN.dta

General Constants All 000 Last Edited on 22-JUN-2011,02:52

<b>General Parameters</b>			
Mud Resistivity	1.000	ohm-metres	
Mud Resistivity Temperature	75.000	degrees F	
Water Level	0.000	feet	
Density/Neutron Processing	Wet Hole		
<b>Hole/Annular Volume and Differential Caliper Parameters</b>			
HVOL Method	Single Caliper		
HVOL Caliper 1	None		
HVOL Caliper 2	N/A		
Annular Volume Diameter	4.500	inches	
Caliper for Differential Caliper	None		
<b>Rwa Parameters</b>			
Porosity used	N/A		
Resistivity used	N/A		
RWA Constant A	N/A		
RWA Constant M	N/A		

Down-hole Tension Calibration SMS 0 Field Calibration on 21-JUN-2011 07:54

Reading No	Measured	Calibrated (lbs)
1	16209.09	0.00
2	17972.06	350.00

High Resolution Temperature Calibration MCG-D.A 342 Field Calibration on 15-JUN-2011,05:46

	Measured	Calibrated(Deg F)
Lower	10.00	10.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG-D.A 342 Last Edited on 8-DEC-2009,15:54

Pre-filter Length	11
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SP Calibration MCG-D.A 342 Field Calibration on 15-JUN-2011,05:46


Measured	Calibrated (Deg F)
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Reference 1	measured	103.8	Calibrated (mv)	100.2
Reference 2		-96.9		-100.2
<b>Gamma Calibration MCG-D.A 342</b>				Field Calibration on 15-JUN-2011 04:49
	Measured		Calibrated (API)	
Background	148		97	
Calibrator (Gross)	954		624	
Calibrator (Net)	806		527	
<b>Gamma Constants MCG-D.A 342</b>				Last Edited on 22-JUN-2011,02:17
Gamma Calibrator Number	GRC-174			
Mud Density	1.14	gm/cc		
Caliper Source for Processing	Bit Size			
Tool Position	Eccentred			
Concentration of KCl	0.00	kppm		
<b>High Resolution Temperature Calibration MHT-A 11</b>				Field Calibration on 22-JUN-2011,02:17
	Measured		Calibrated(Deg F)	
Lower	80.57		61.00	
Upper	140.33		129.00	
<b>High Resolution Temperature Constants MHT-A 11</b>				Last Edited on 22-JUN-2011,02:18
Pre-filter Length	11			

### DOWNHOLE EQUIPMENT

C:\Minimus\LOGS\Bill Barrett Temp Logs\CB TG Land 21C-20-692 (TEMP)\MAIN.dta

MCB-A 11B Tension Cablehead				
MCB-A 178	LG: 2.18 ft	WT: 19.8 lb	OD: 2.24 in	
Compact Comms Gamma				
MCG-D.A 342	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: 12.40 ft	Weight: 97.0 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.

<b>COMPANY</b>	<b>BILL BARRETT CORPORATION</b>
<b>WELL</b>	<b>CB-TG LAND 21C-20-692</b>
<b>FIELD</b>	<b>MAMM CREEK</b>
<b>PROVINCE/COUNTY</b>	<b>GARFIELD</b>
<b>COUNTRY/STATE</b>	<b>U.S.A. / COLORADO</b>

Elevation Kelly Bushing	5553.00	feet	First Reading	200.00	feet
Elevation Drill Floor	5552.00	feet	Depth Driller	7594.00	feet
Elevation Ground Level	5530.00	feet	Depth Logger	7602.00	feet





TEMPERATURE LOG

