



Weatherford[®]

**CML IMPULSE SHUTTLE
ARRAY INDUCTION
ELECTRIC LOG**

SANDRIDGE EXPLORATION & PRODUCTION

SARAH 1-34H

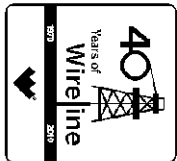
BEAIS EAST

COMANCHE

U.S.A. / KANSAS

SL:200' FNL & 810' FWL OF NW/4

BHL:330' FLS & 810' FWL OF SW/4



Other Services

MPD/MDN

15-033-21622

Elevation: 1831 feet

Permanent Datum G.L., Elevation 1831 feet

Log Measured From DF

Drilling Measured From DF

Elevations:	feet
KB	1851.00
DF	1851.00
GL	1831.00

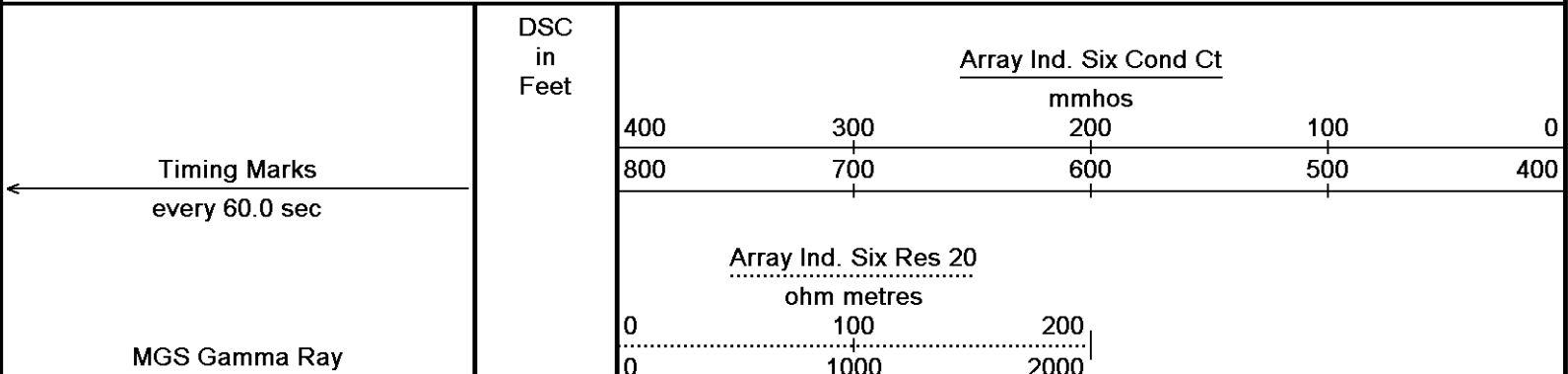
SEC	TWP	RGE	Other Services	
34	33S	17W	MPD/MDN	
API Number	15-033-21622			
Permit Number				
Date	22-MAR-2012			
Run Number	ONE			
Depth Driller	9752.00	feet		
Depth Logger	9596.00	feet		
First Reading	9592.00	feet		
Last Reading	5598.00	feet		
Casing Driller	5598.00	feet		
Casing Logger	5598.00	feet		
Bit Size	6.125	inches		
Hole Fluid Type	WBM			
Density / Viscosity	8.60	lb/USg	28.00 CP	
PH / Fluid Loss	10.00			
Sample Source	MUD TANK			
Rm @ Measured Temp	1.30 @ 78.0	ohm-m		
Rmf @ Measured Temp	1.04 @ 78.0	ohm-m		
Rmc @ Measured Temp	1.56 @ 78.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.74 @ 136.0	ohm-m		
Time Since Circulation	8 HOURS			
Max Recorded Temp	136.00	deg C		
Equipment Name	COMPACT			
Equipment / Base	18077	OKC		
Recorded By	MIKE GARRISON			
Witnessed By	KATHY GENTRY			
Service Order	3534318		DC11665	

REMARKS

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.

2 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 23-MAR-2012 03:50
 Filename: C:\Minimus\Data\SDRG (SARAH 1-34H)\mms 158 rtap.dta Recorded on 23-MAR-2012 02:08
 System Versions: Processed with 12.02.4401 Plotted with 12.02.4401

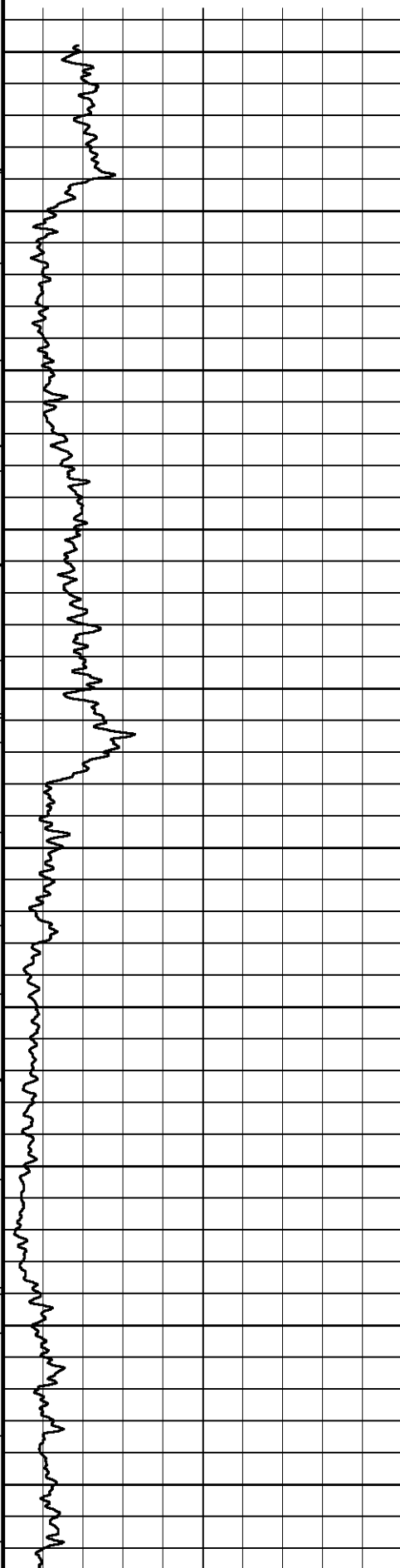


	API	
0	75	150
150	225	300

Array Ind. Six Res Rt

	ohm metres	
0	100	200
0	1000	2000

Replay
Scale
1:600



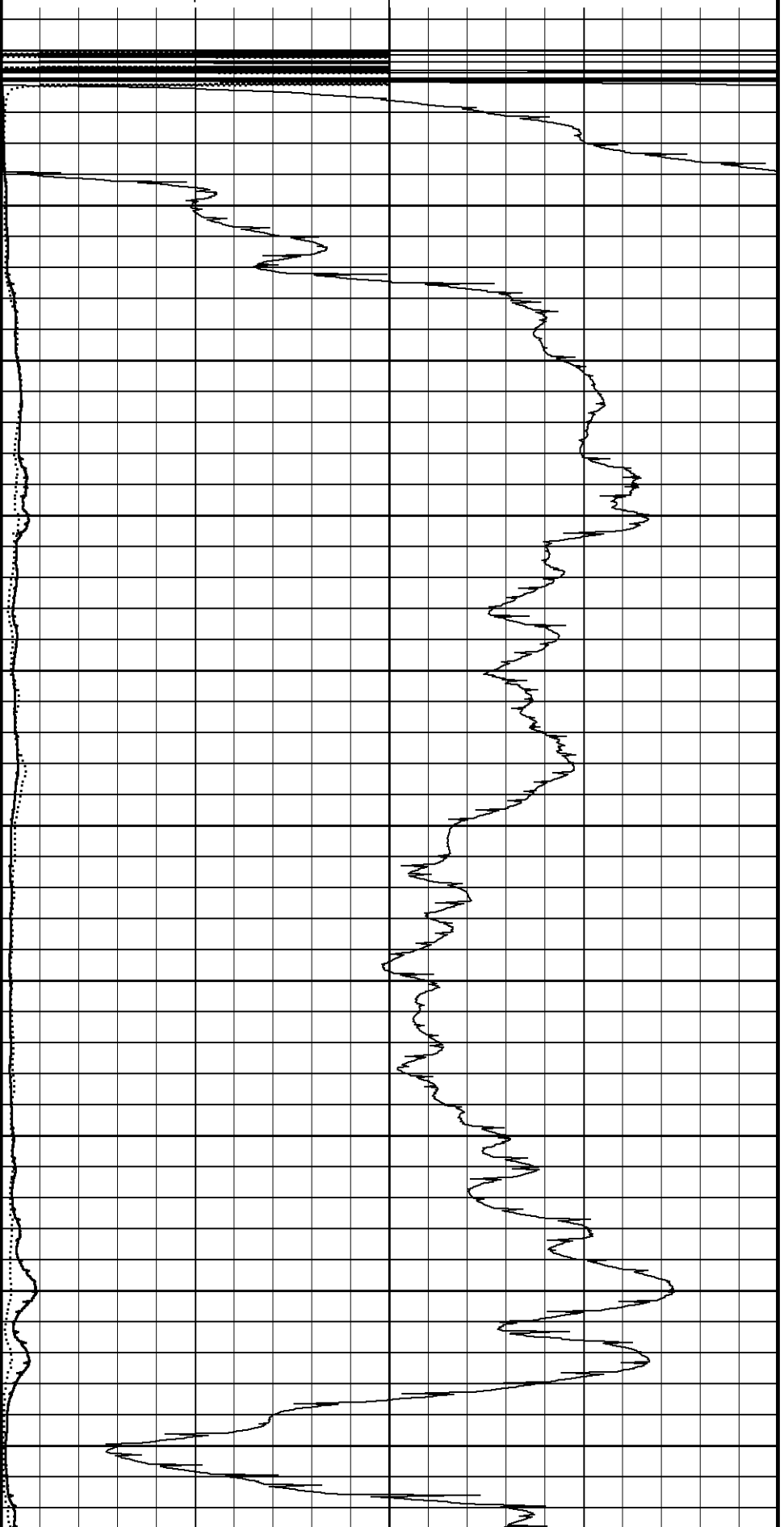
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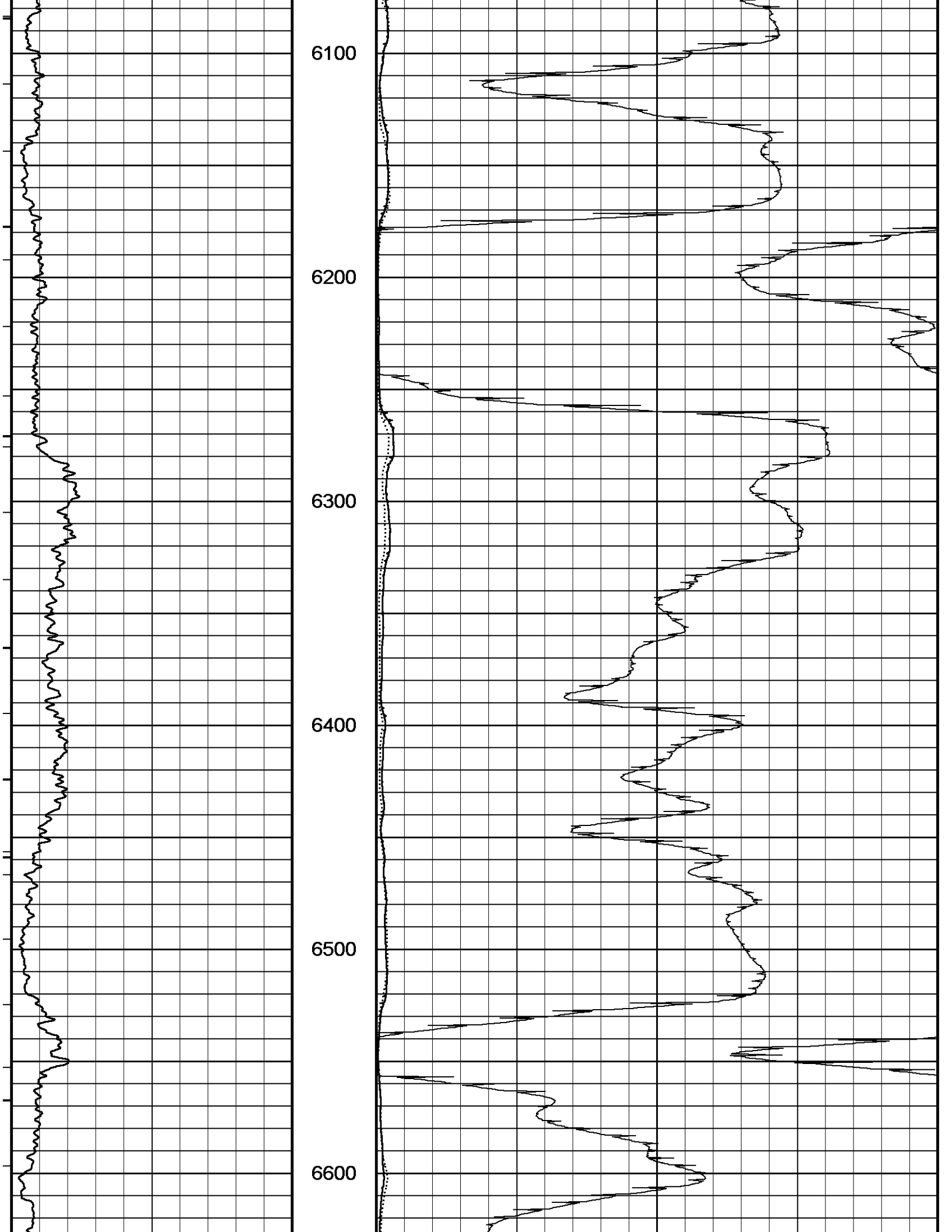
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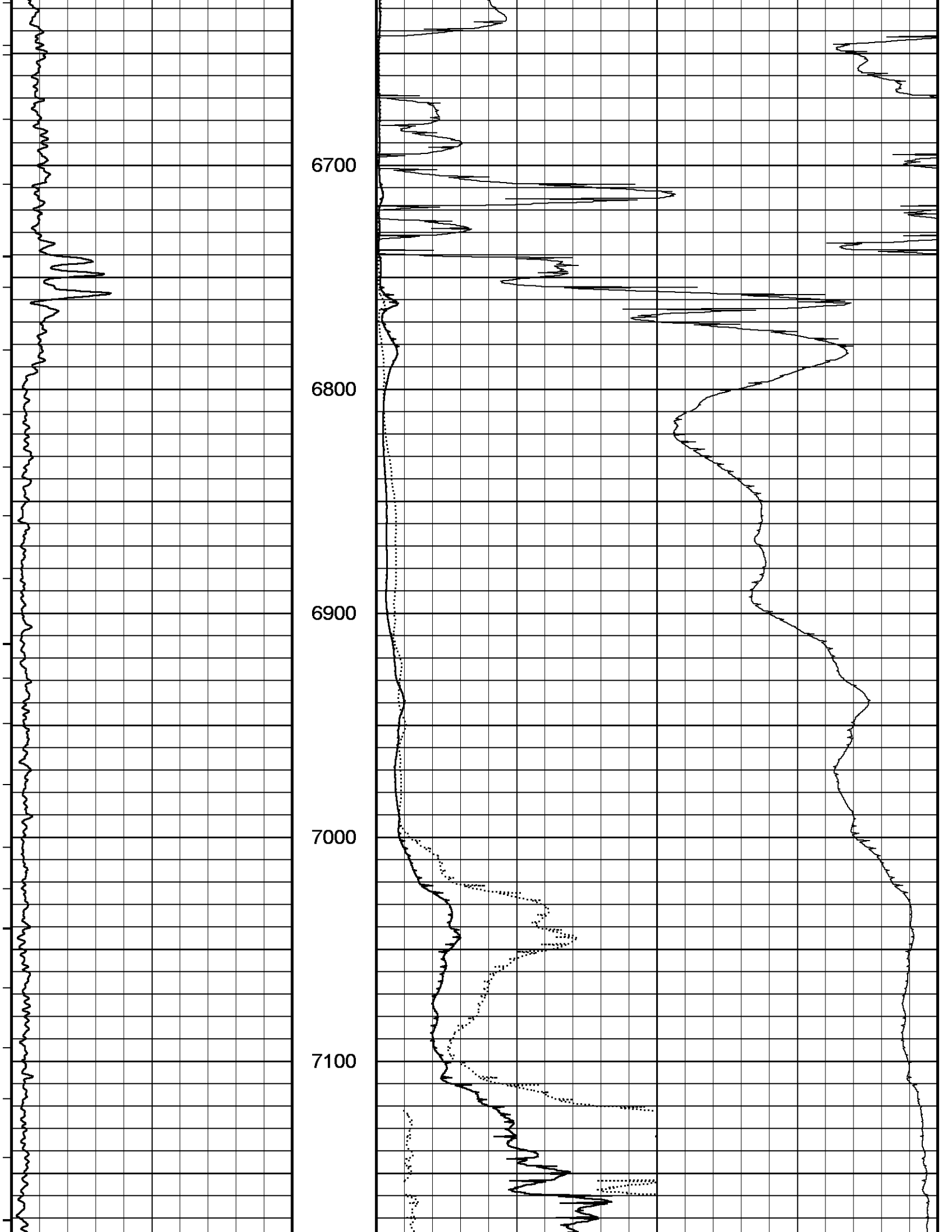
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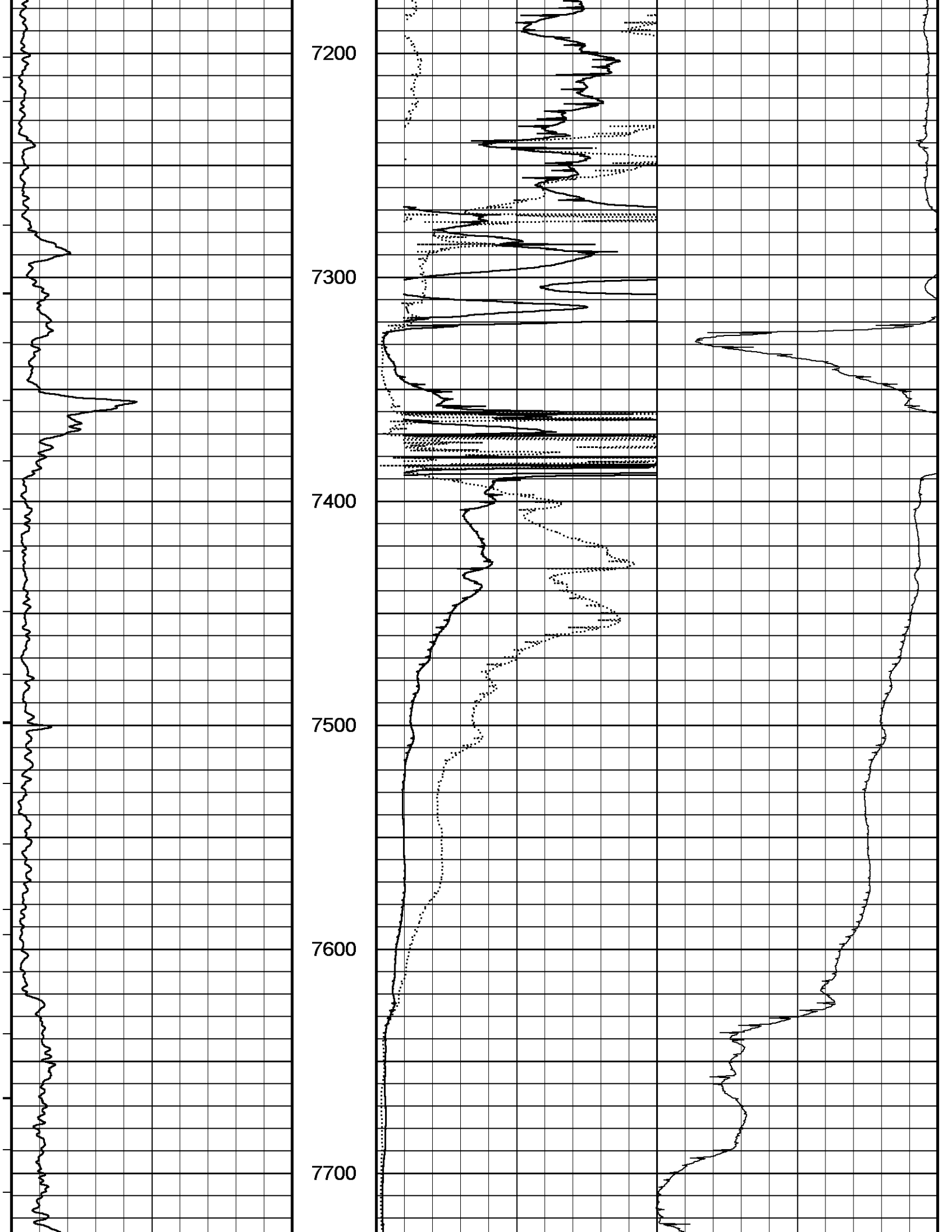
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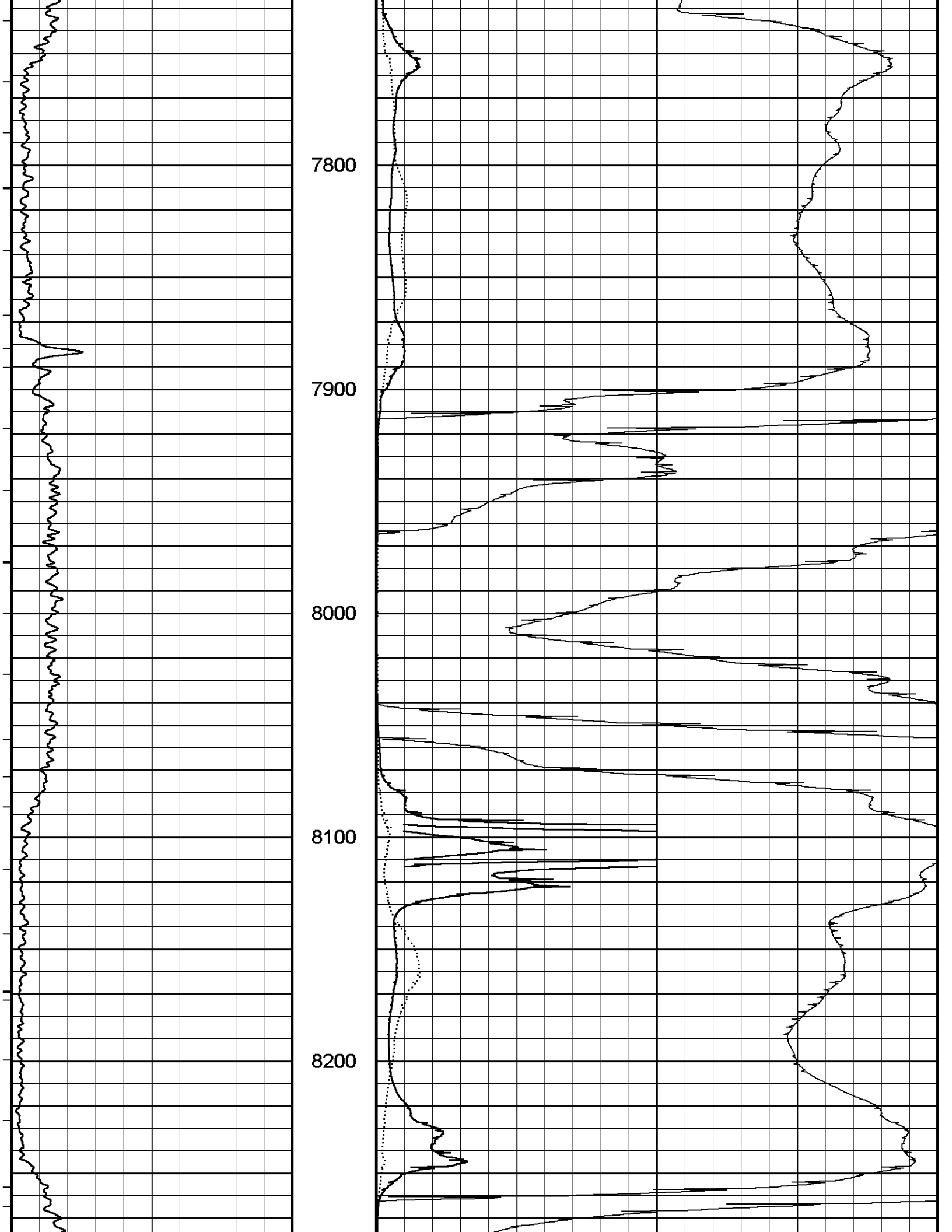
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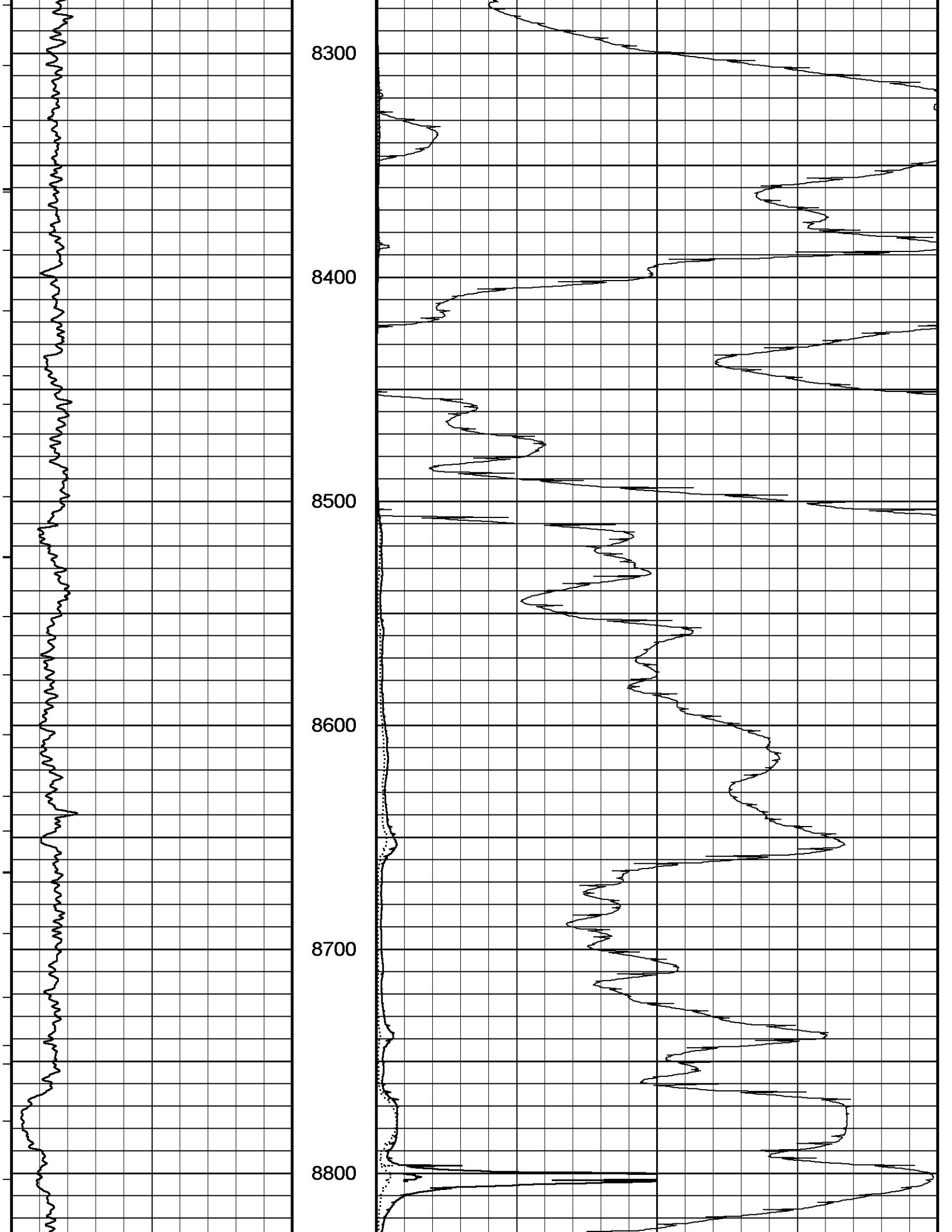


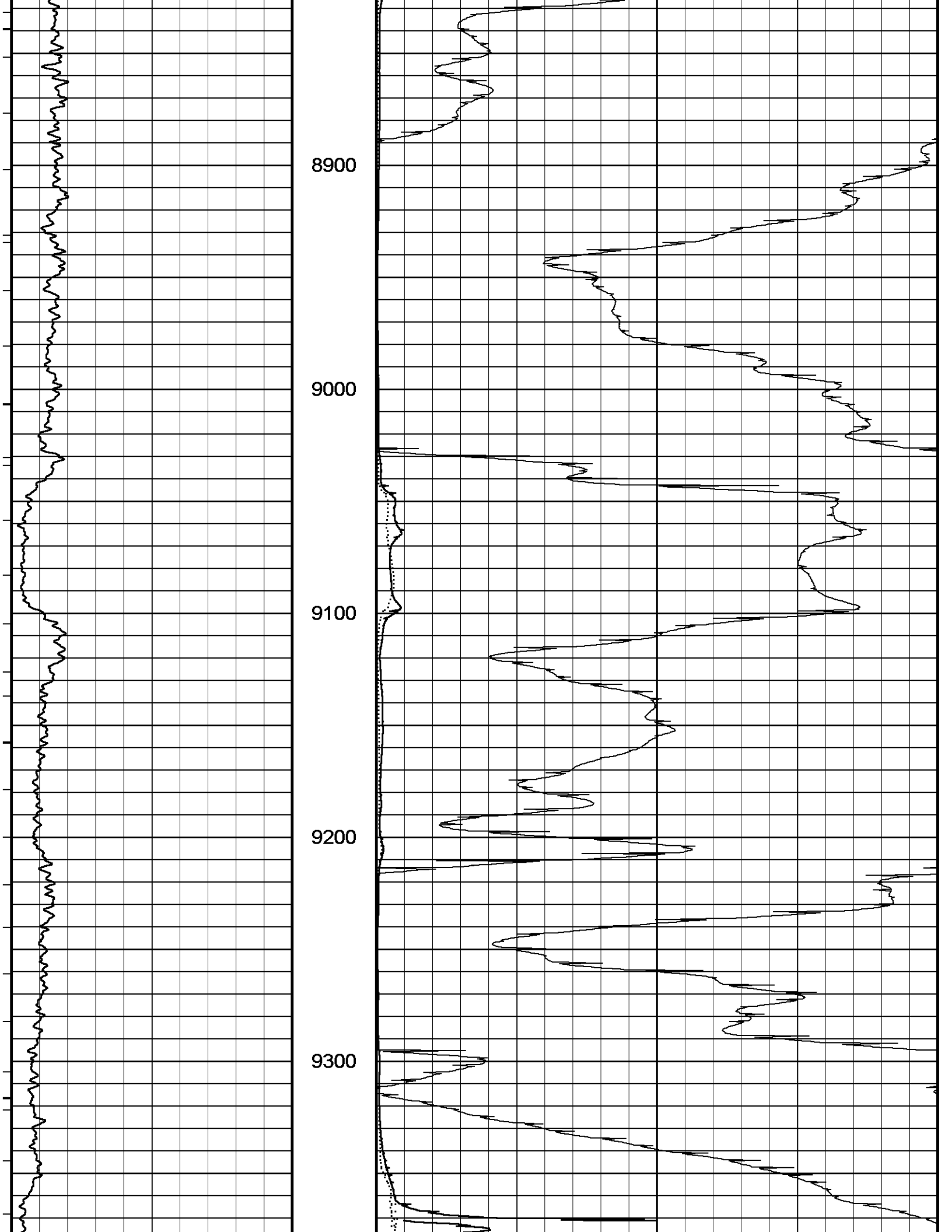


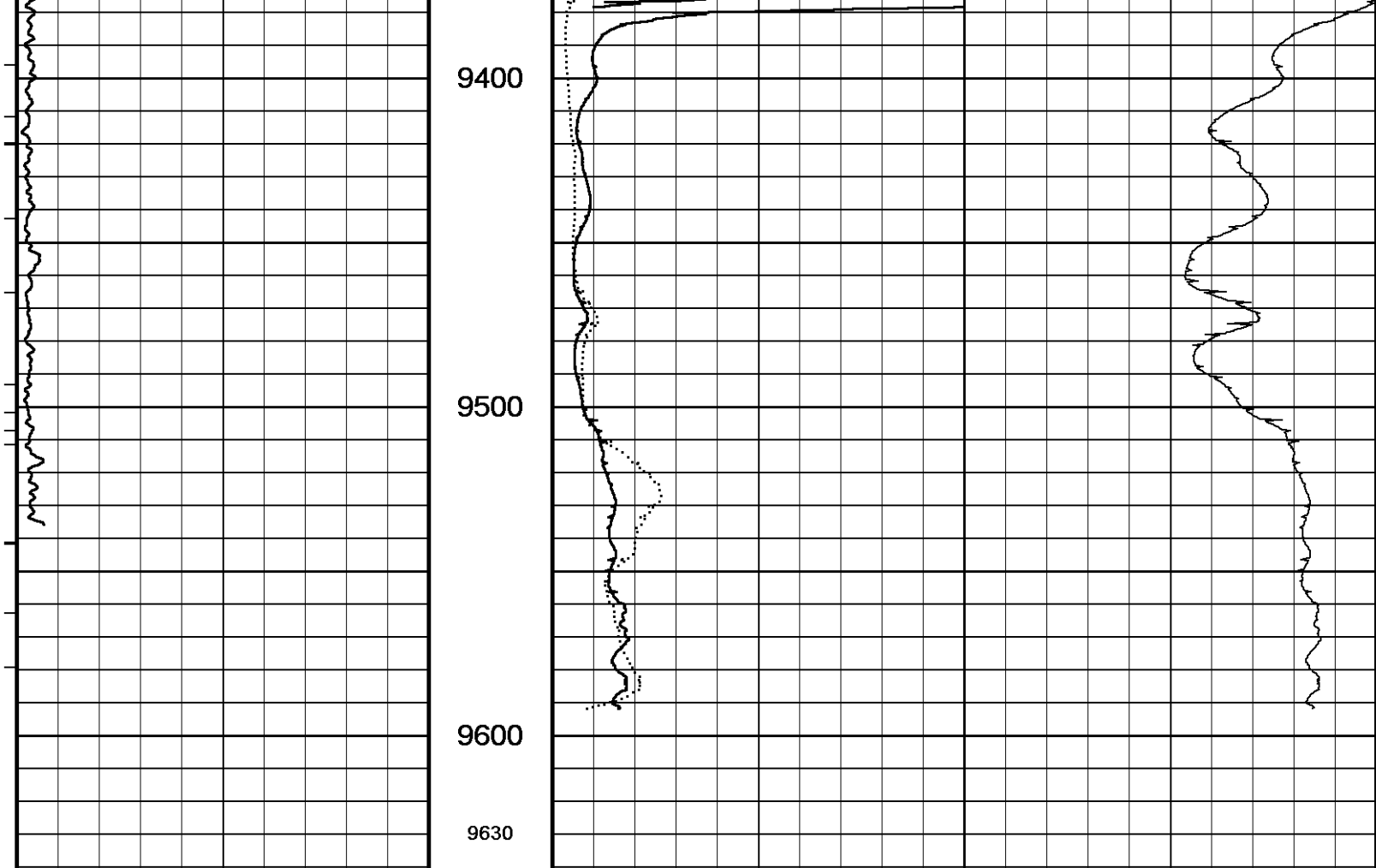








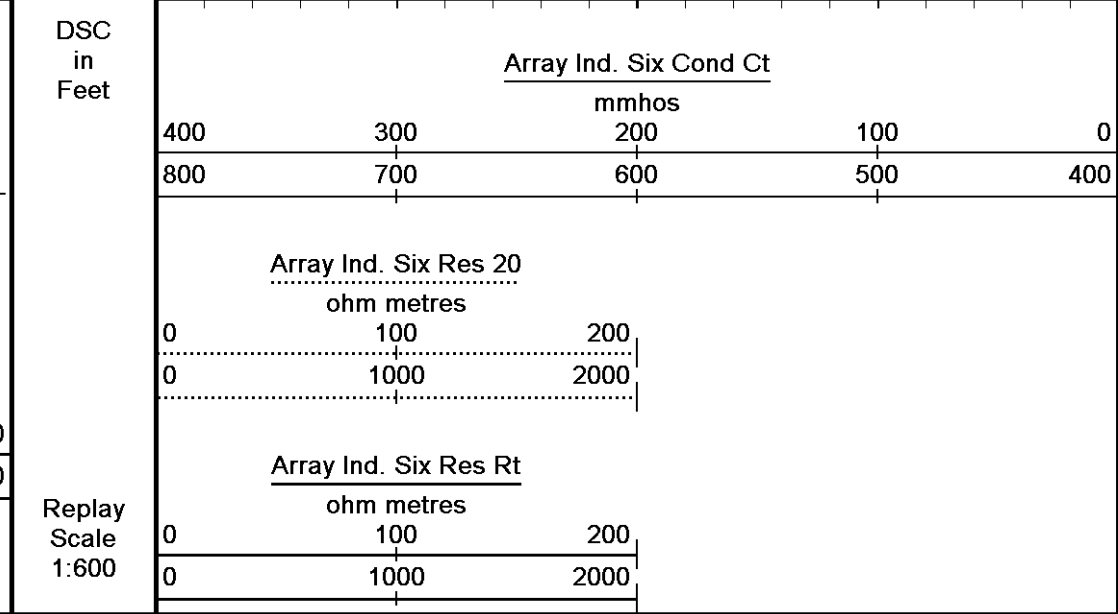




Timing Marks every 60.0 sec

MGS Gamma Ray

0	API	150
	75	
150	225	300



Depth Based Data - Maximum Sampling Increment 10.0cm
 Filename: C:\Minimus\Data\SDRG (SARAH 1-34H)\mms 158 rtap.dta
 System Versions: Processed with 12.02.4401 Plotted with 12.02.4401

Plotted on 23-MAR-2012 03:50
 Recorded on 23-MAR-2012 02:08

2 INCH MAIN LOG

5 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm
 Filename: C:\Minimus\Data\SDRG (SARAH 1-34H)\mms 158 rtap.dta
 System Versions: Processed with 12.02.4401 Plotted with 12.02.4401

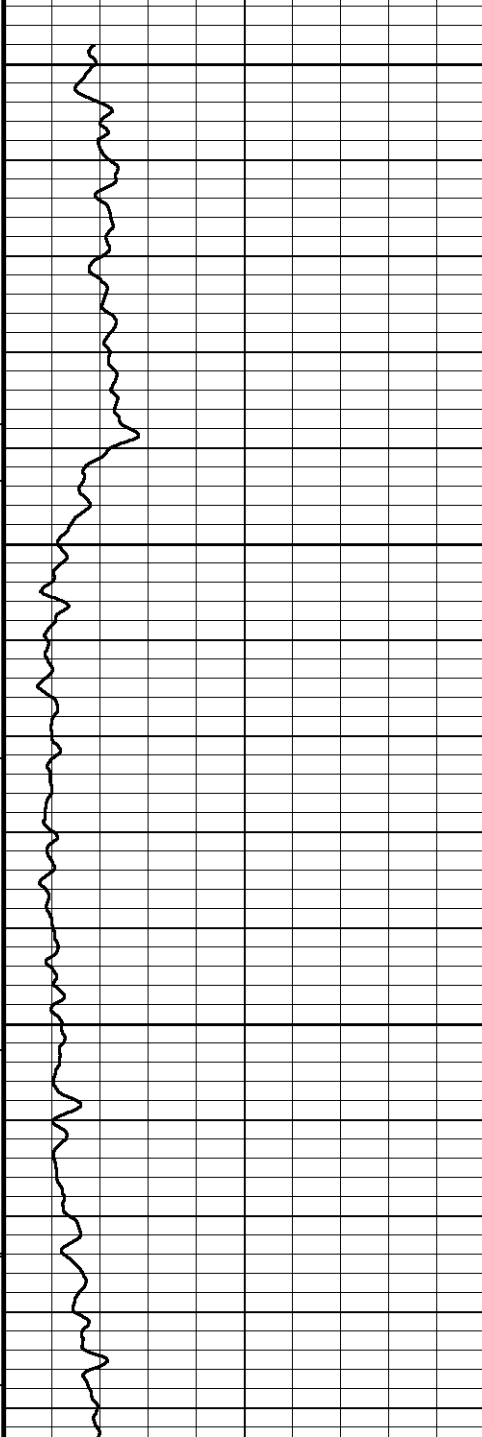
Plotted on 23-MAR-2012 03:50
 Recorded on 23-MAR-2012 02:08



Timing Marks
every 60.0 sec

MGS Gamma Ray
API
0 75 150
150 225 300

Replay
Scale
1:240



Borehole
Temp in
deg F

Replay
Scale
1:240

5600

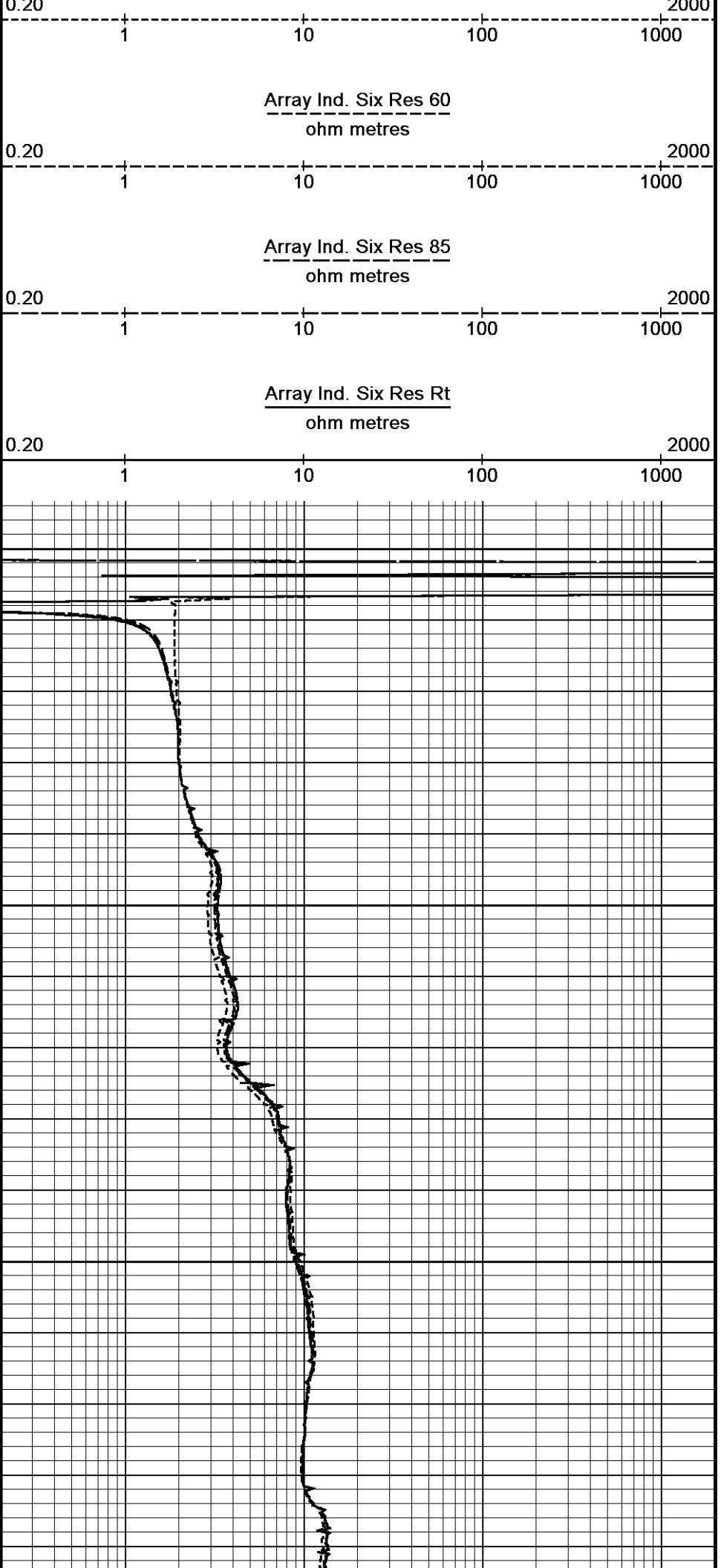
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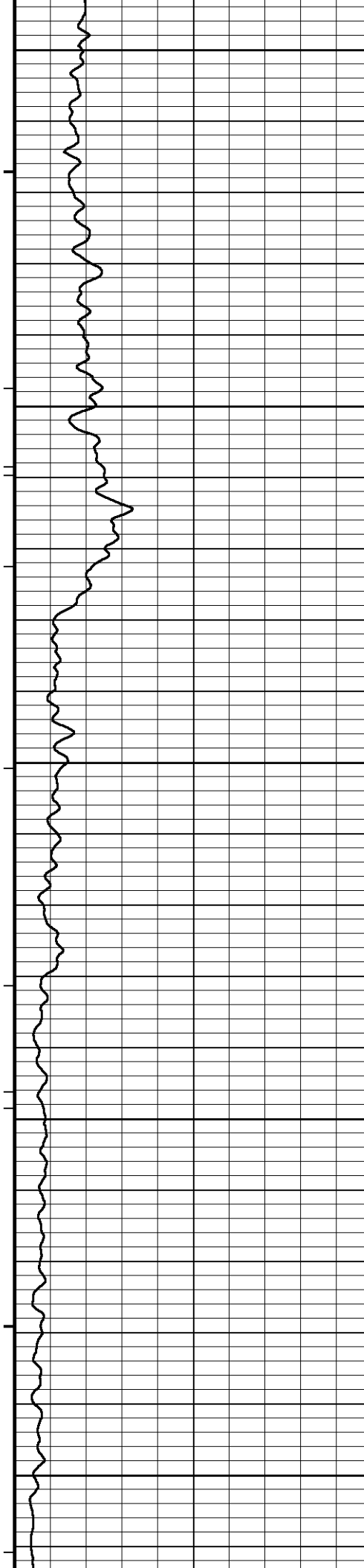
5650

132°

5700

132°





5750

132°

5800

132°

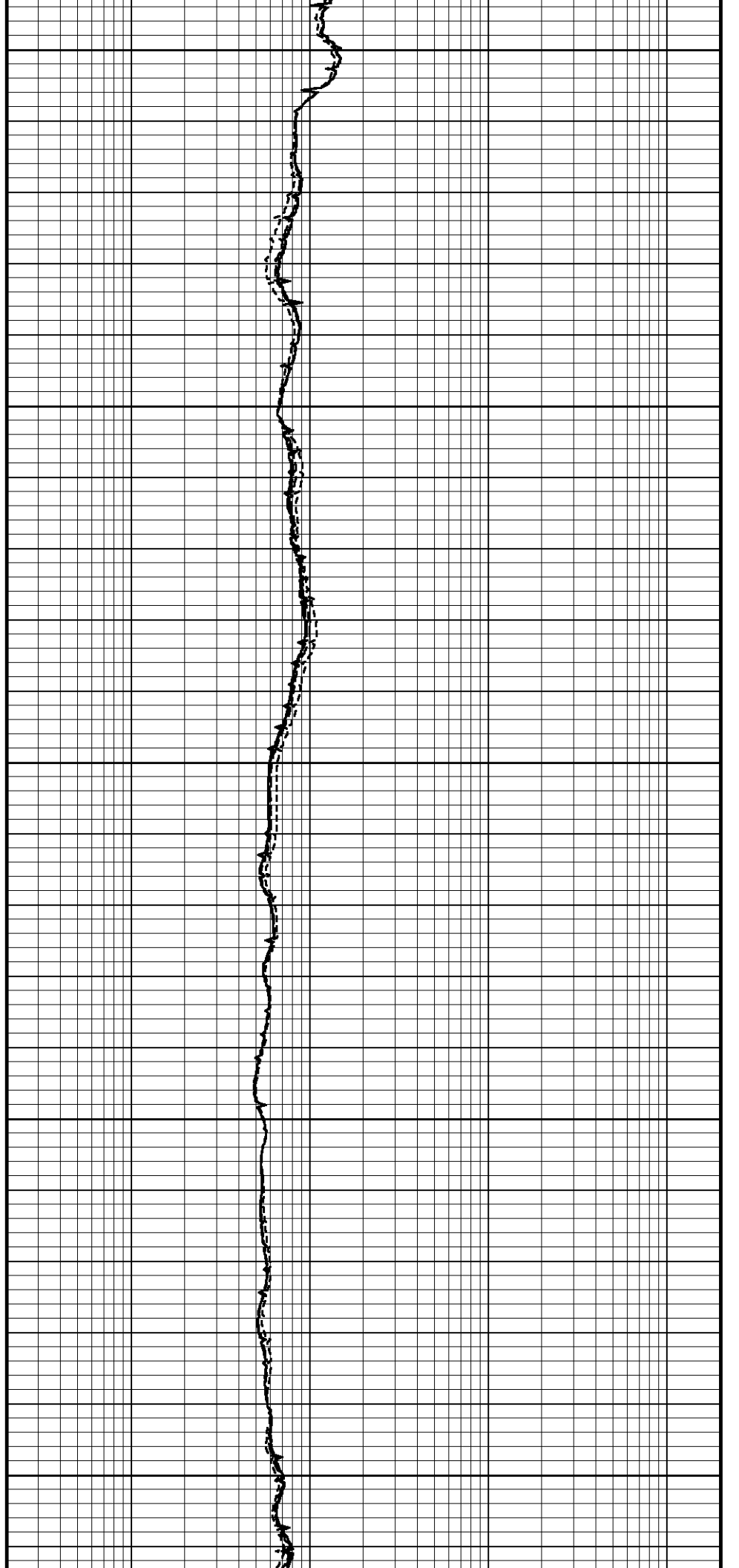
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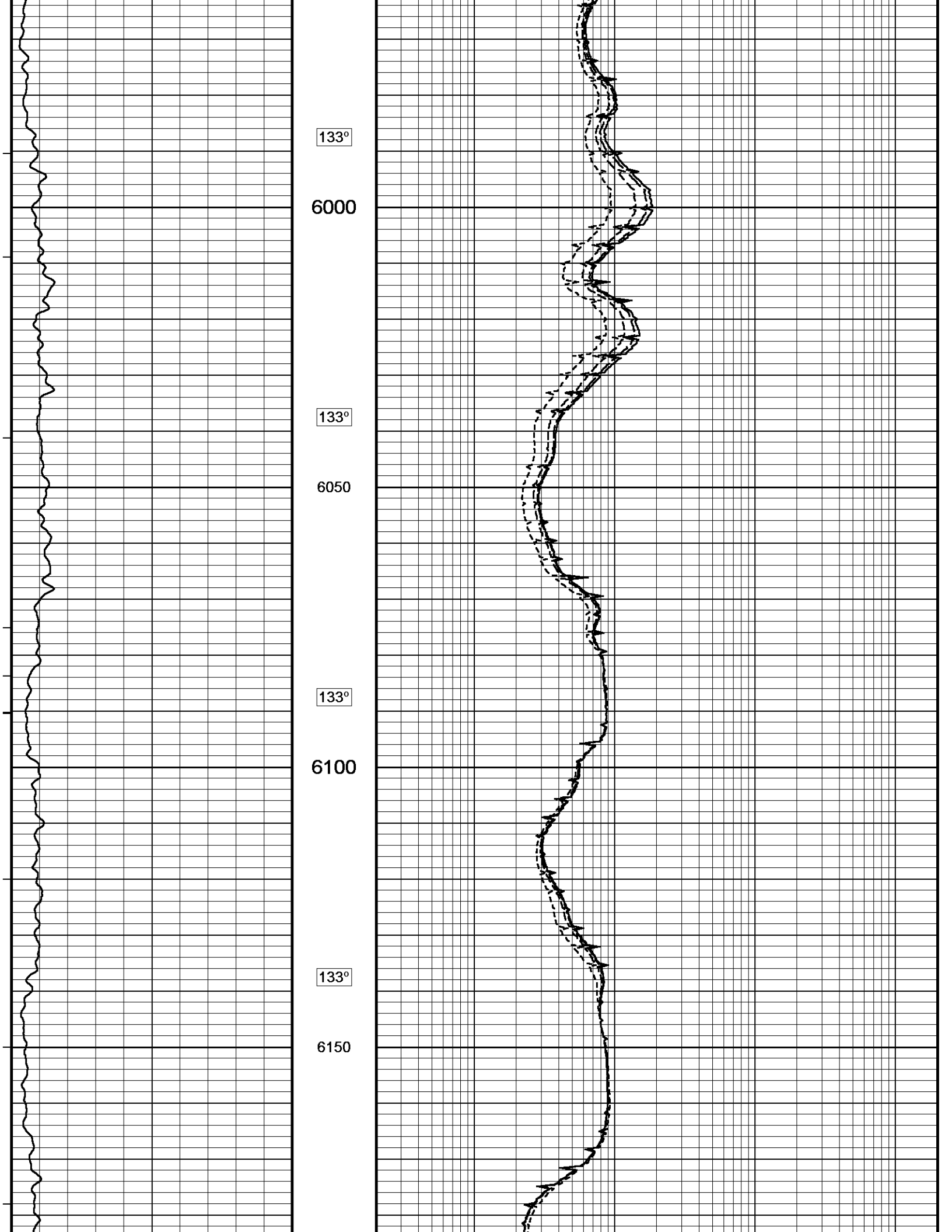
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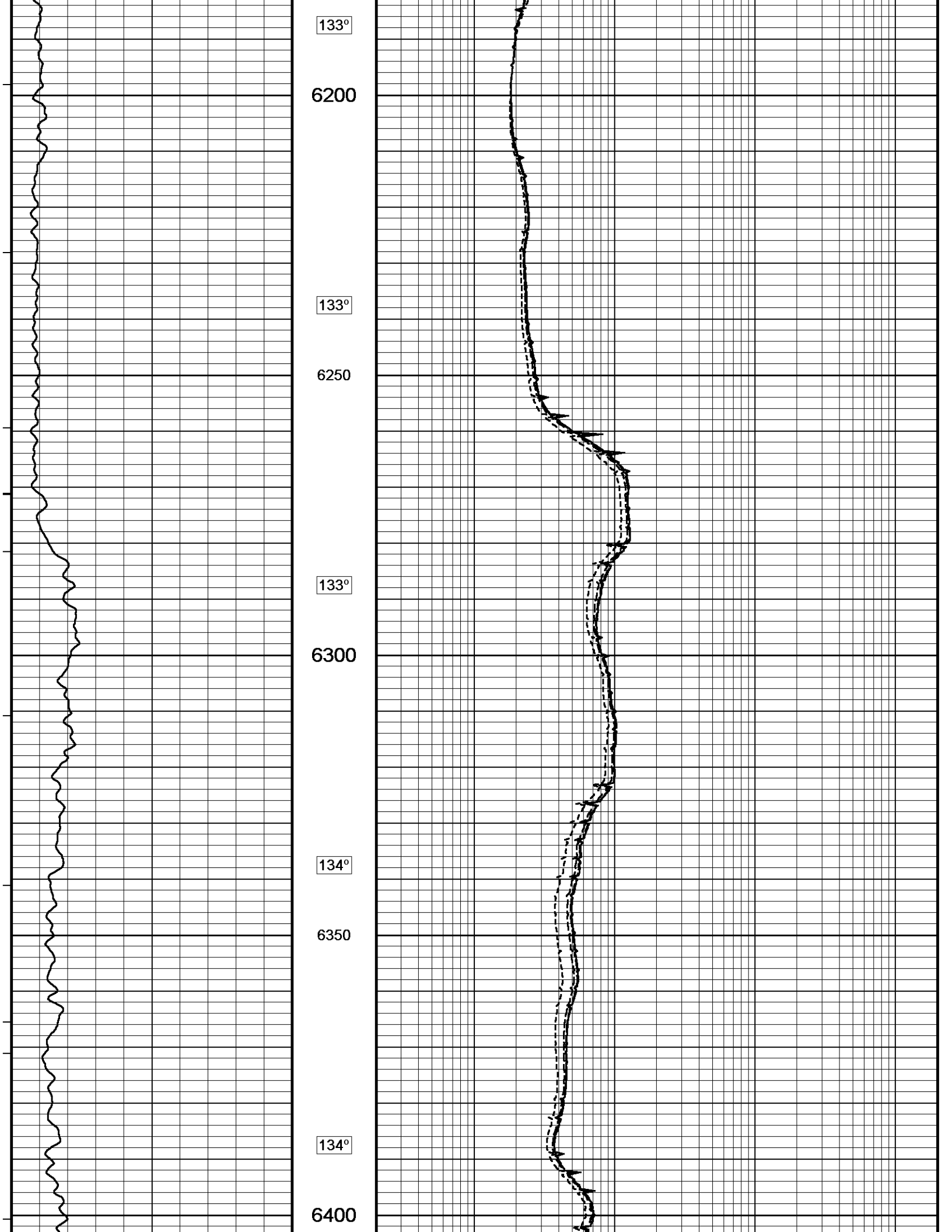
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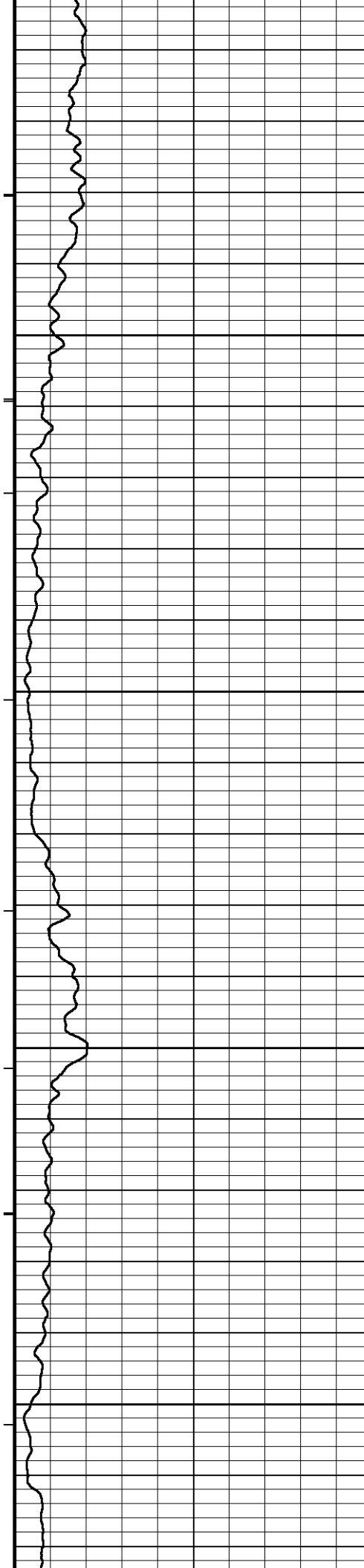
132°

5950









134°

6450

134°

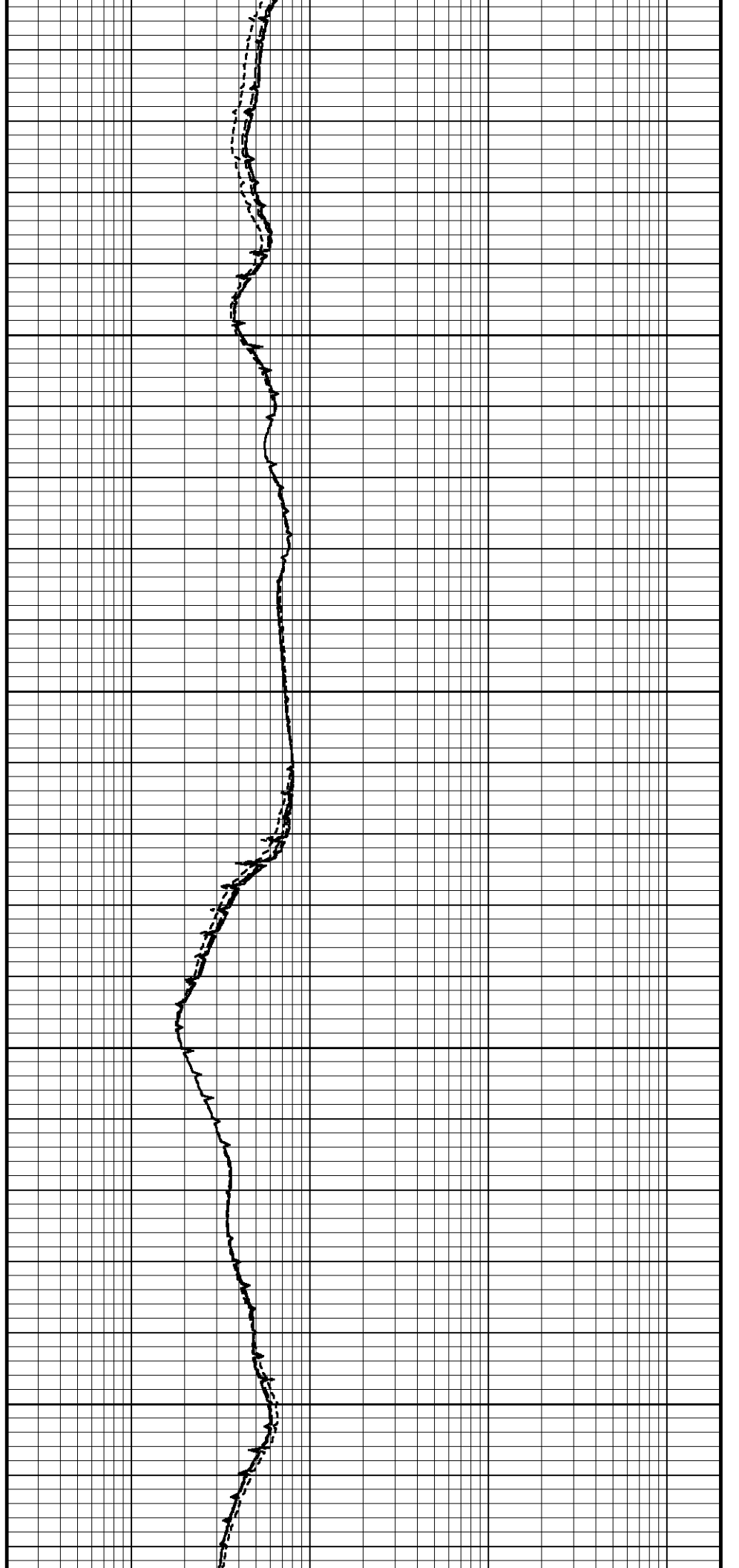
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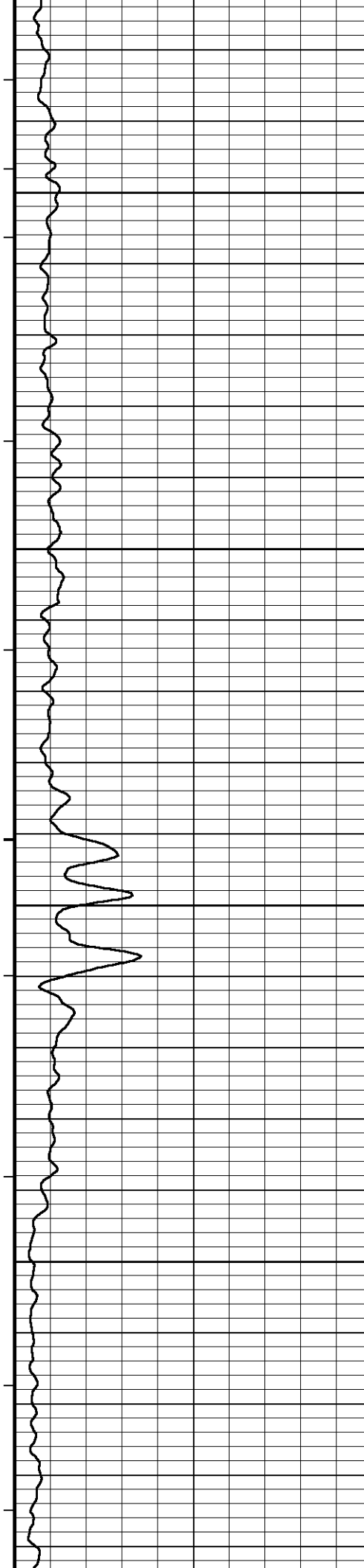
134°

6550

134°

6600





134°

6650

134°

6700

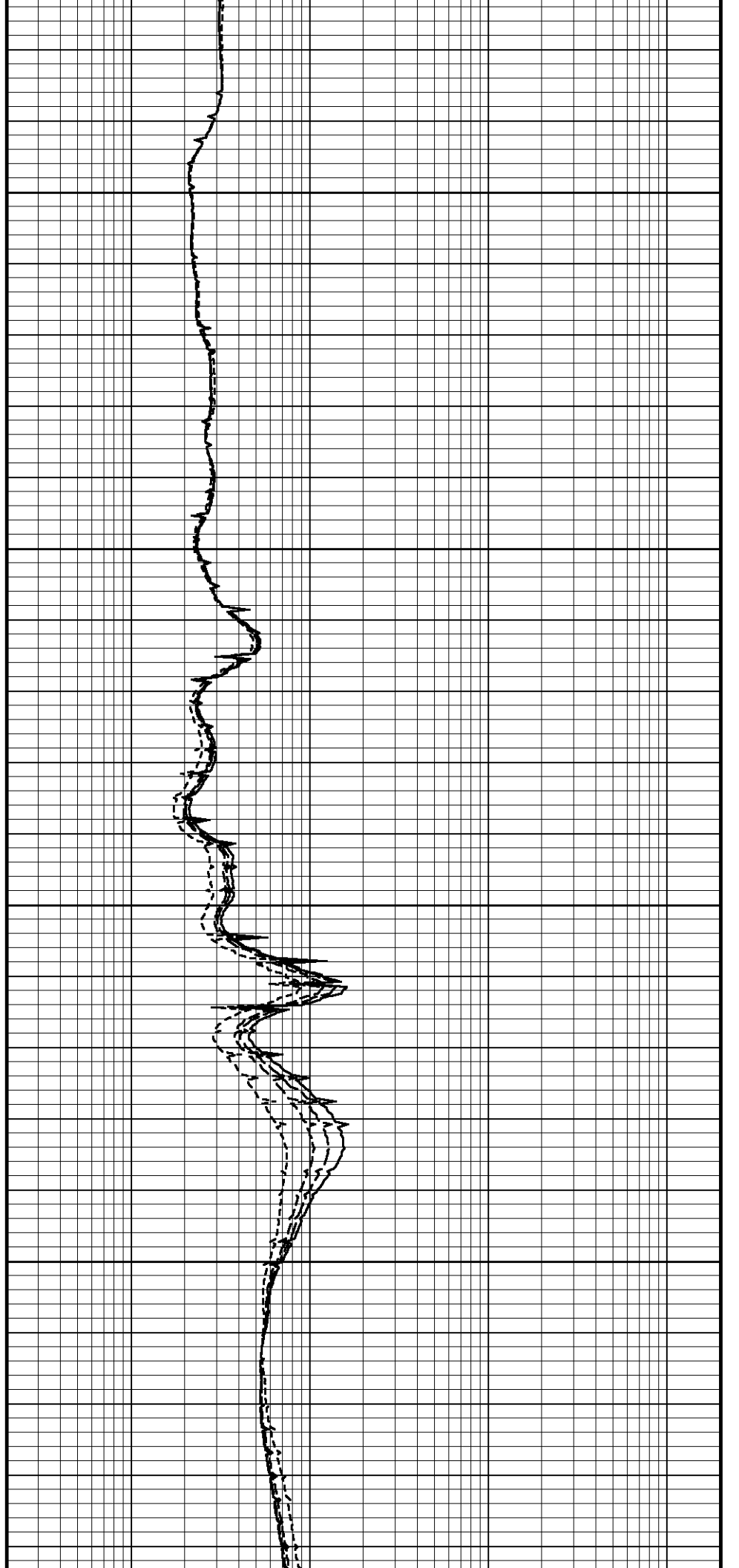
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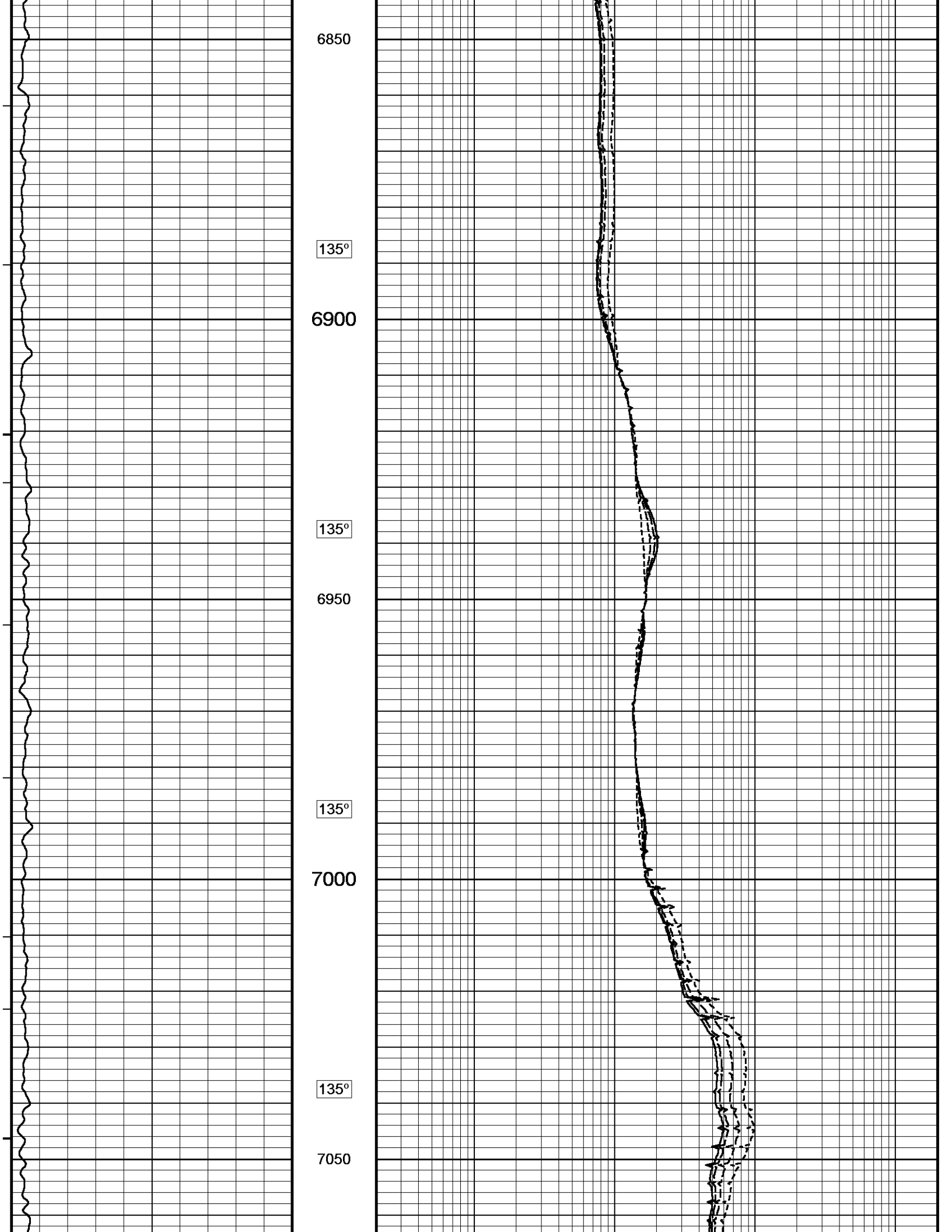
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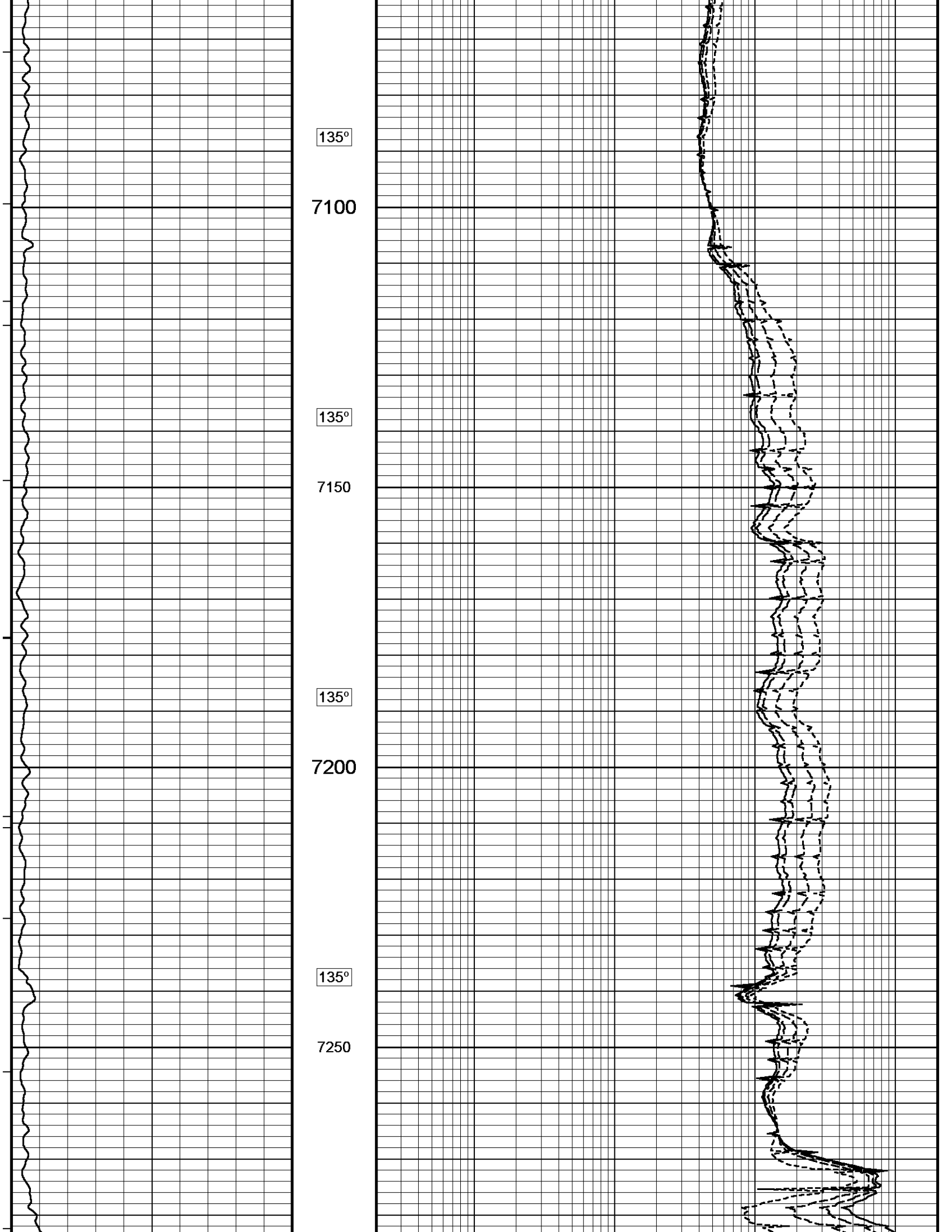
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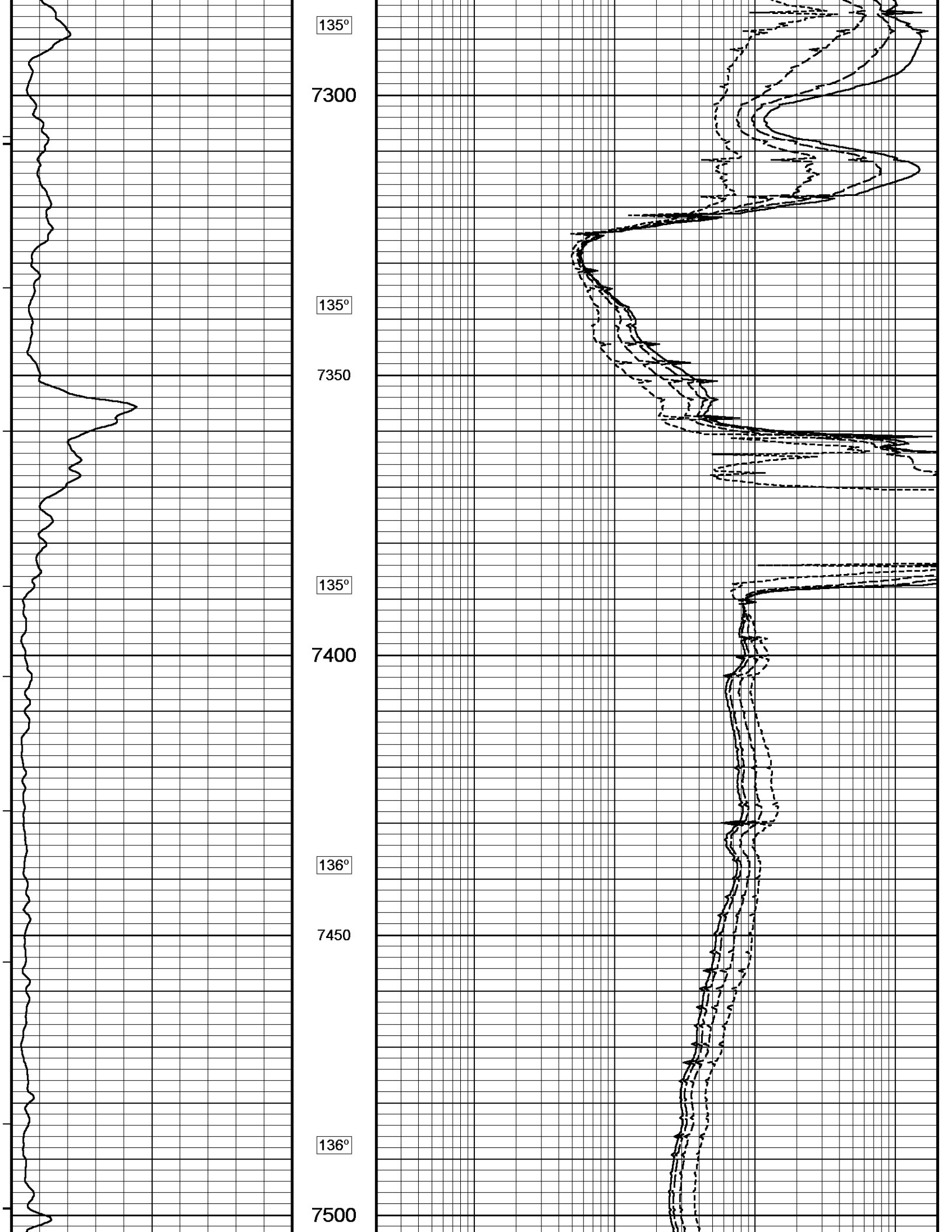
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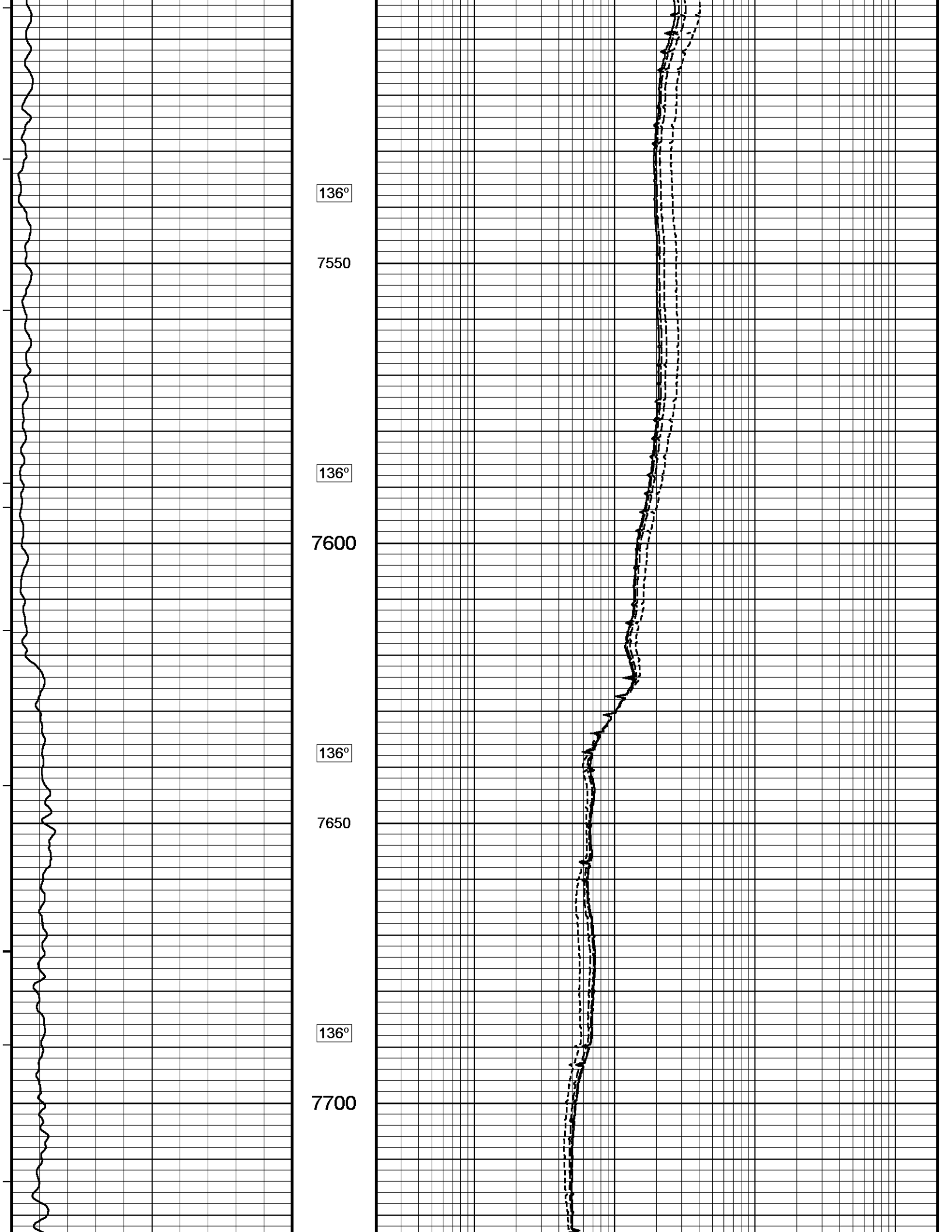
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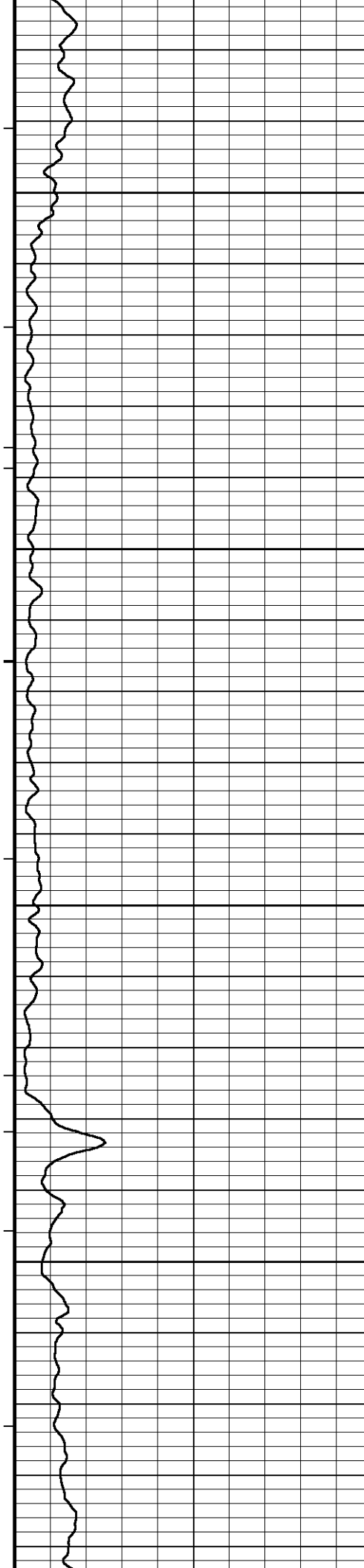












136°

7750

136°

7800

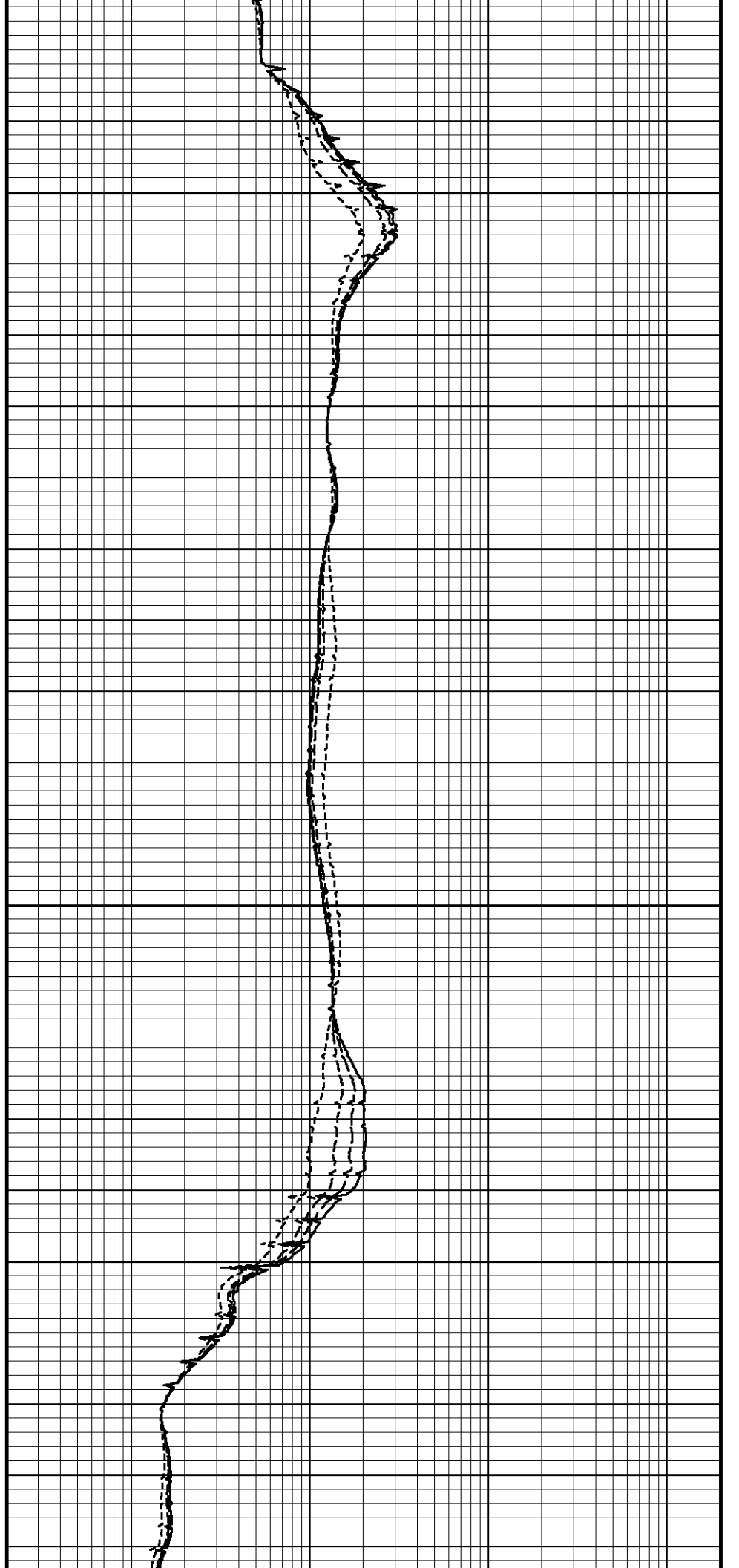
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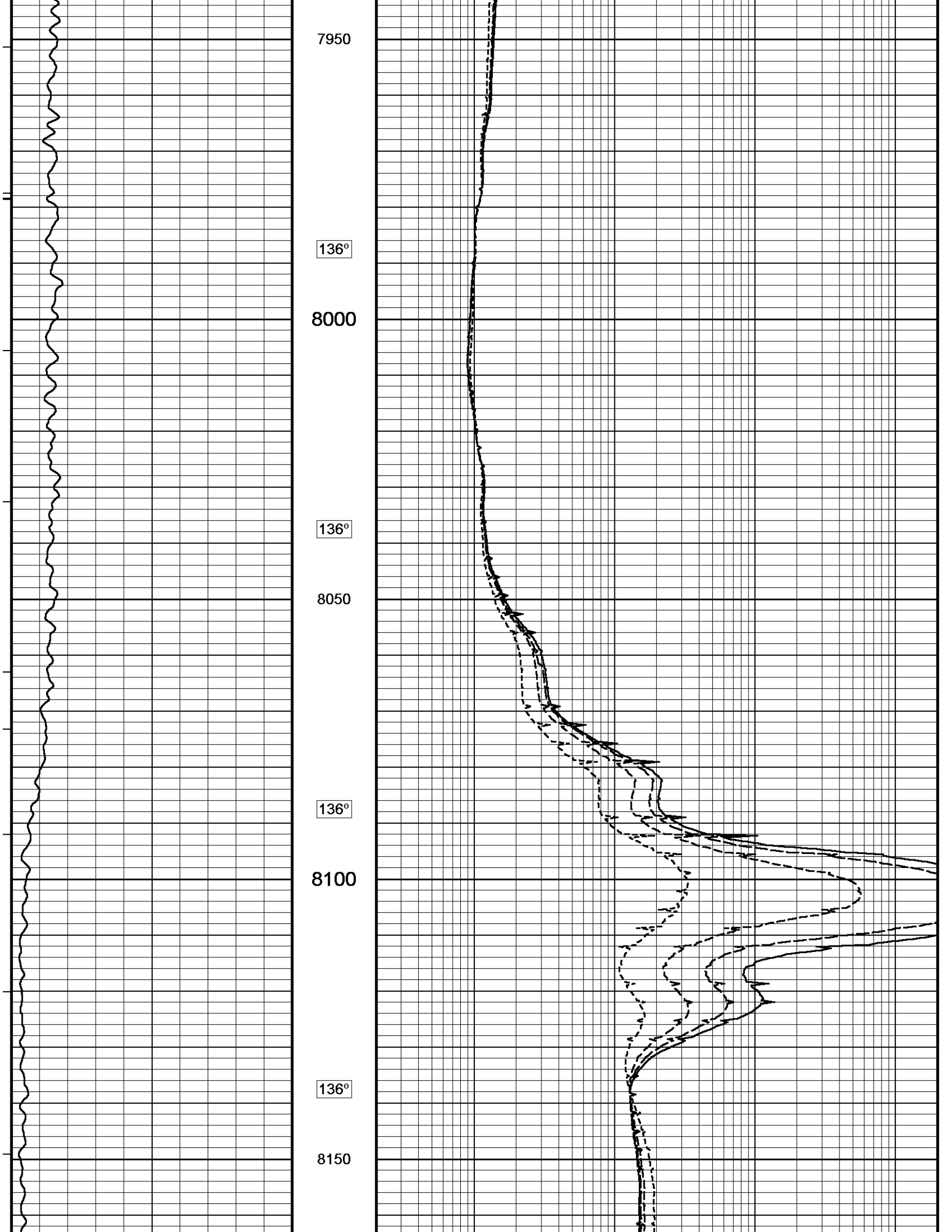
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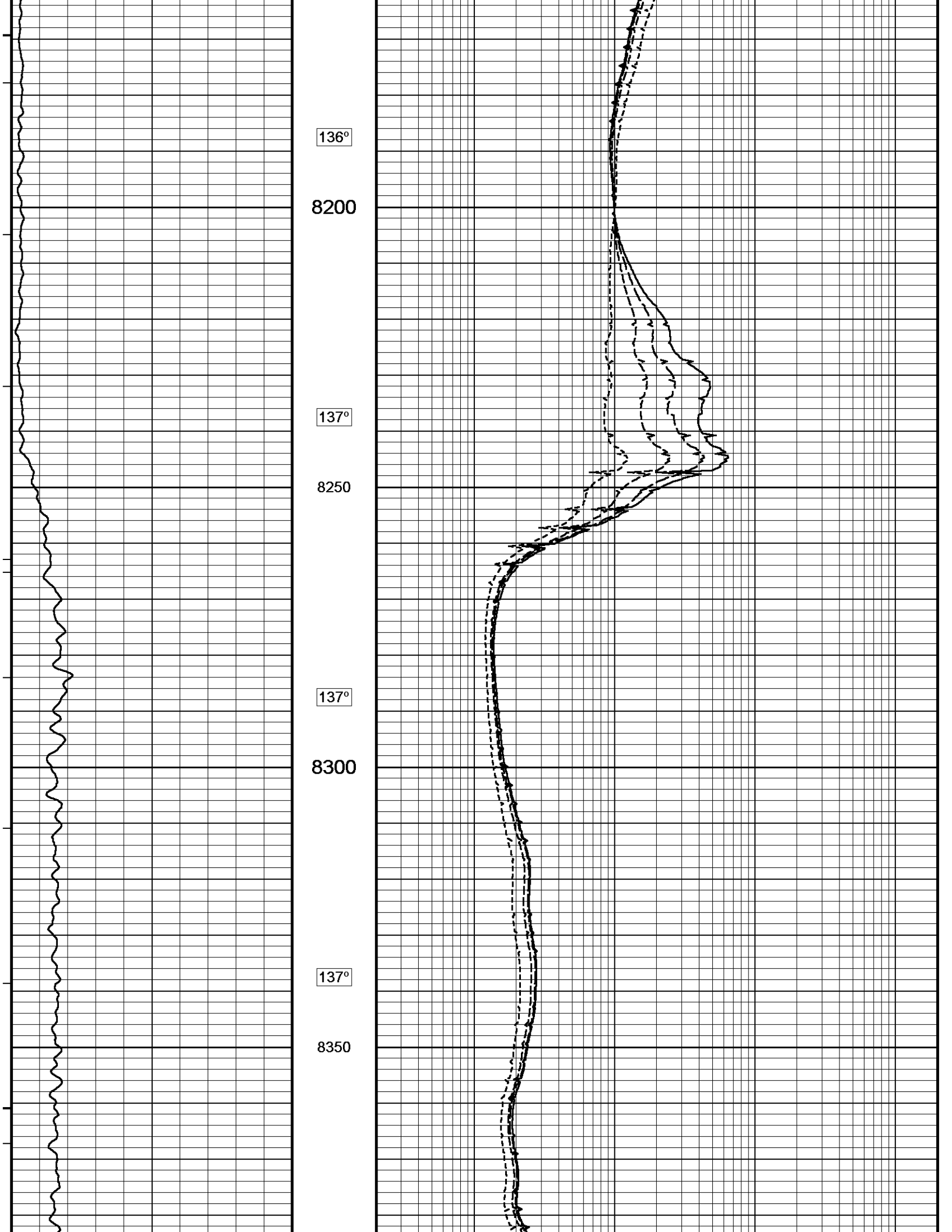
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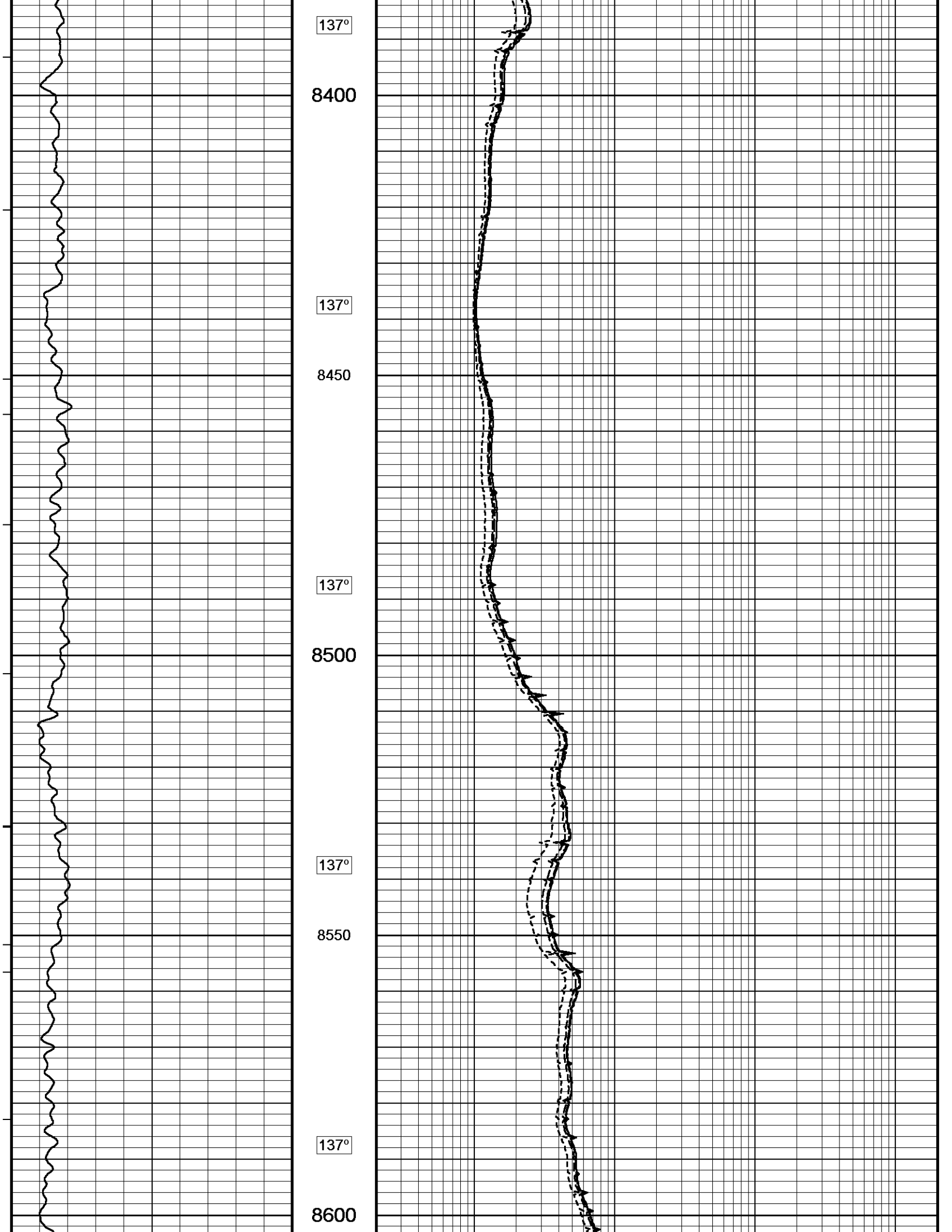
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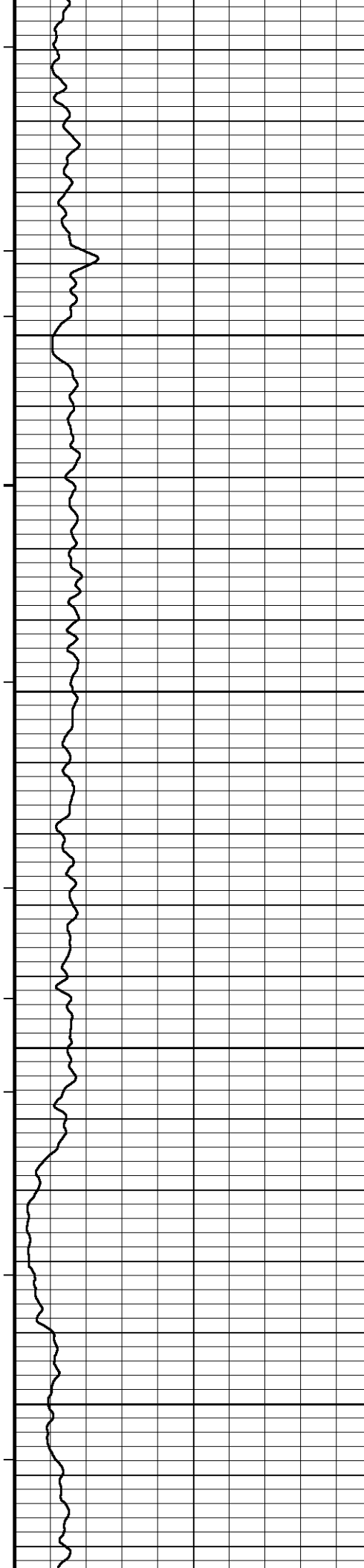
136°











137°

8650

137°

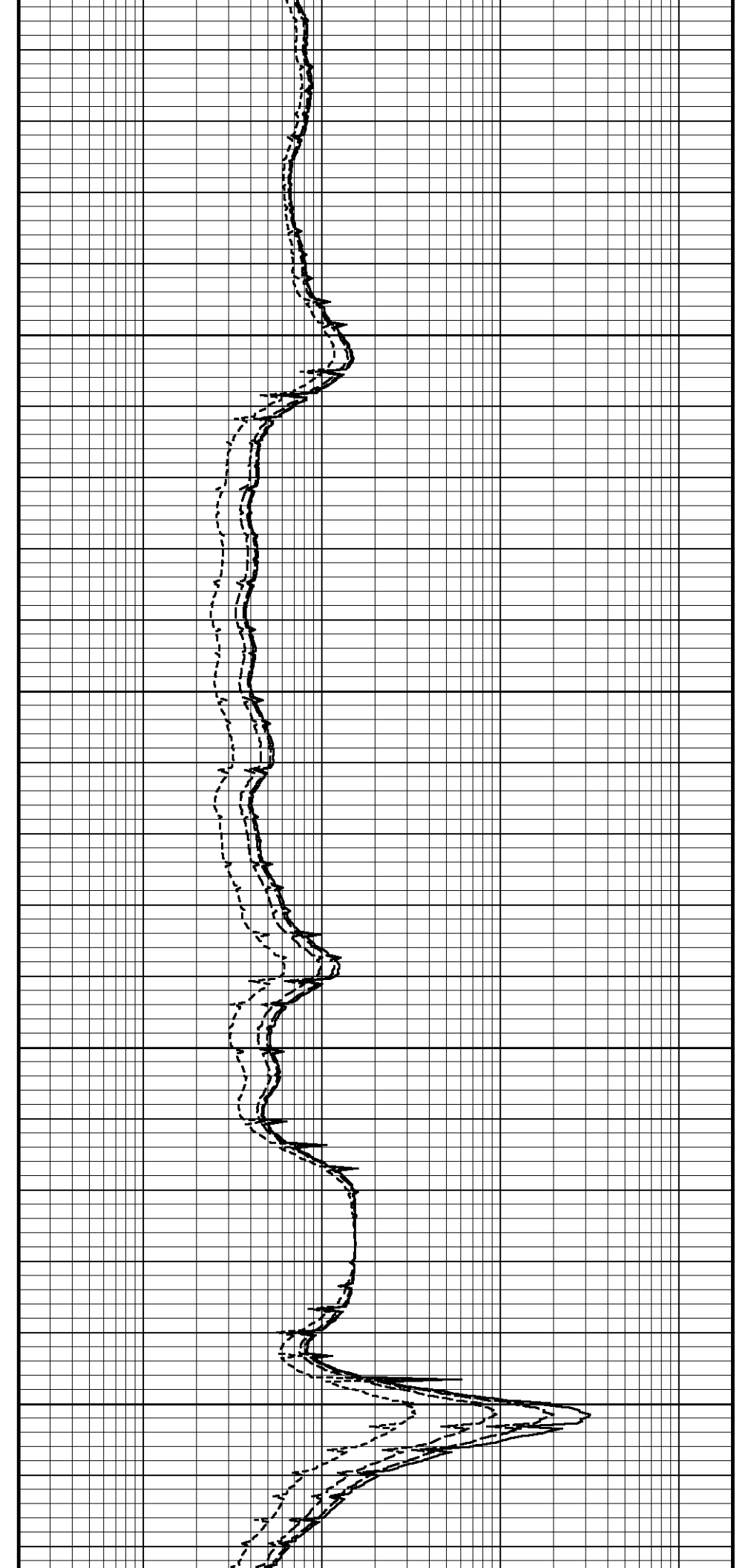
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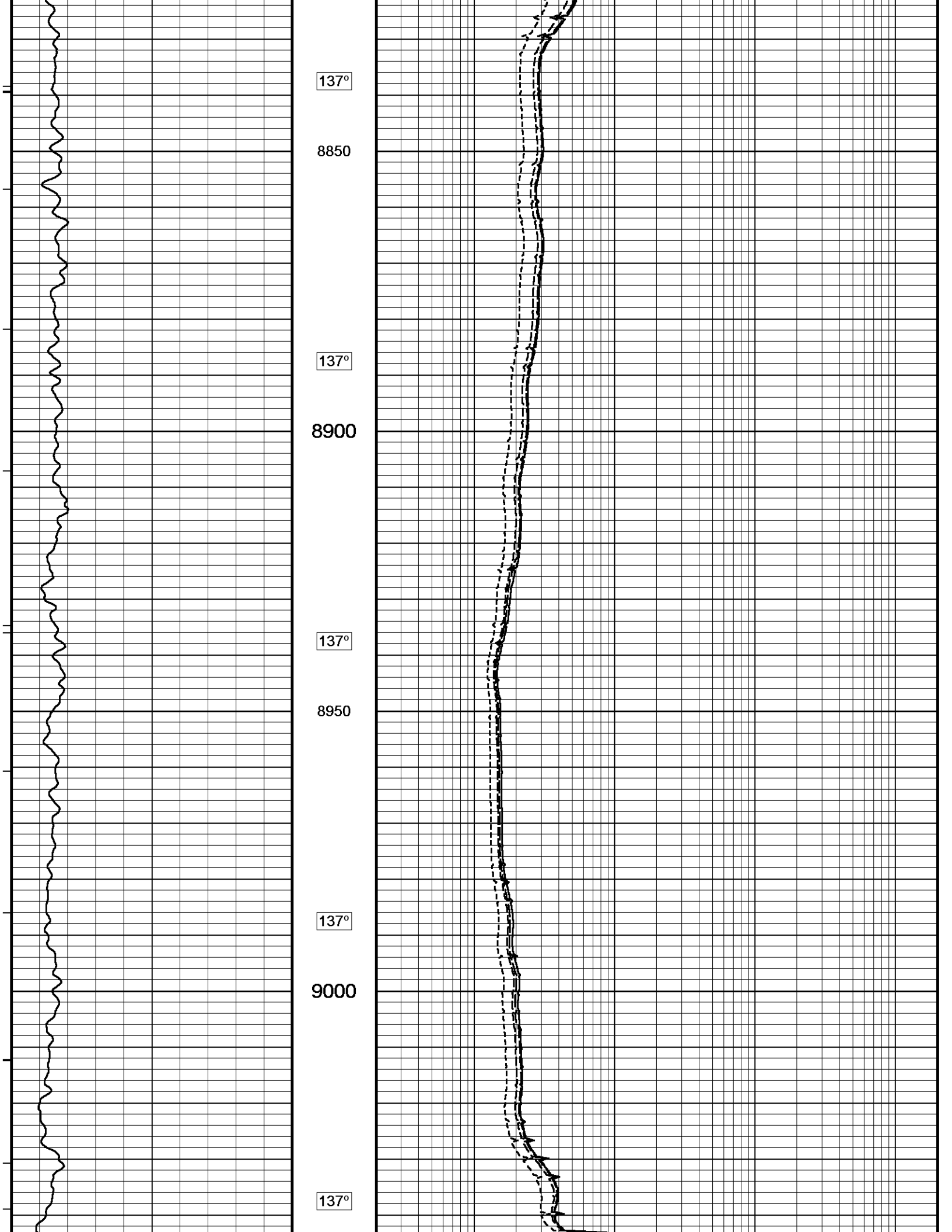
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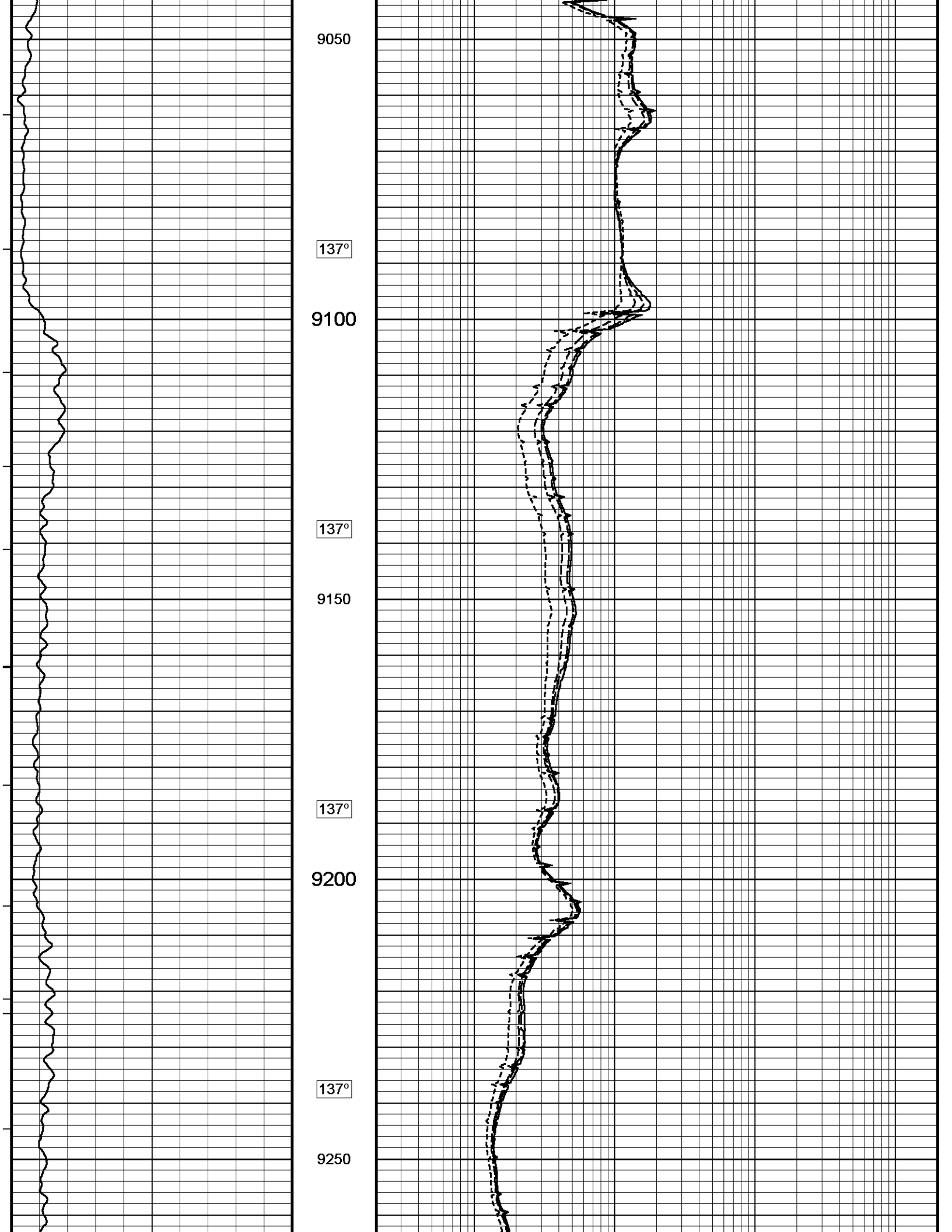
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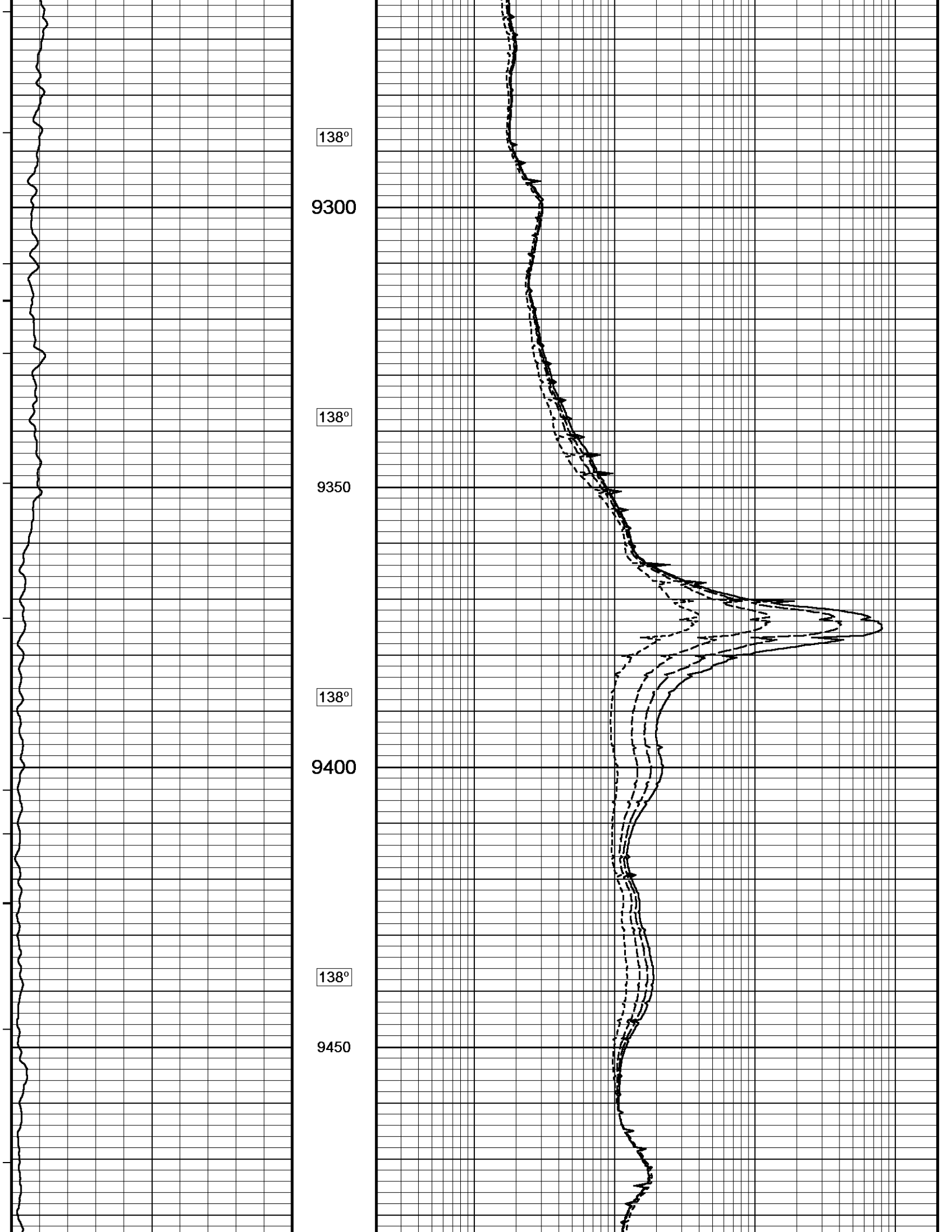
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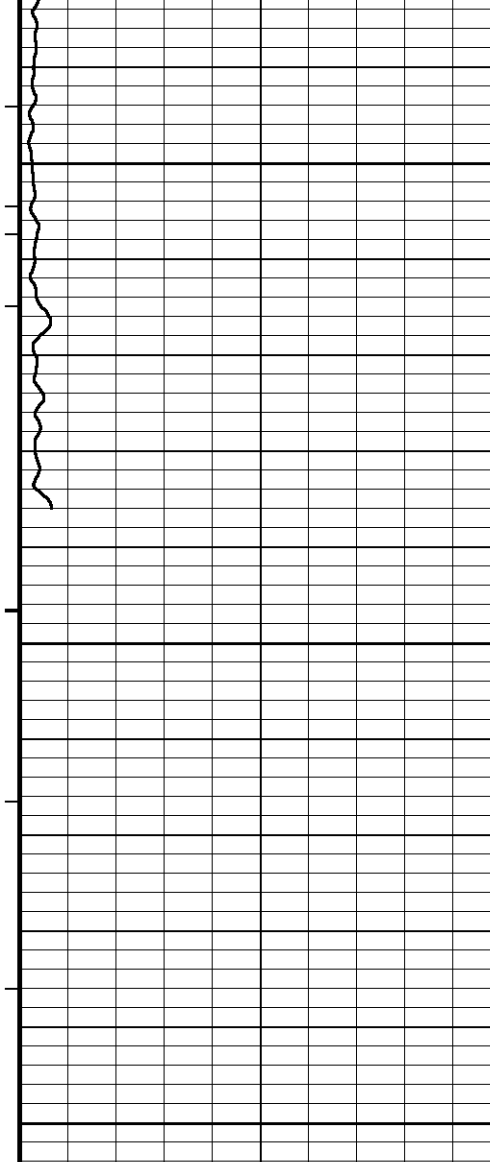
8800











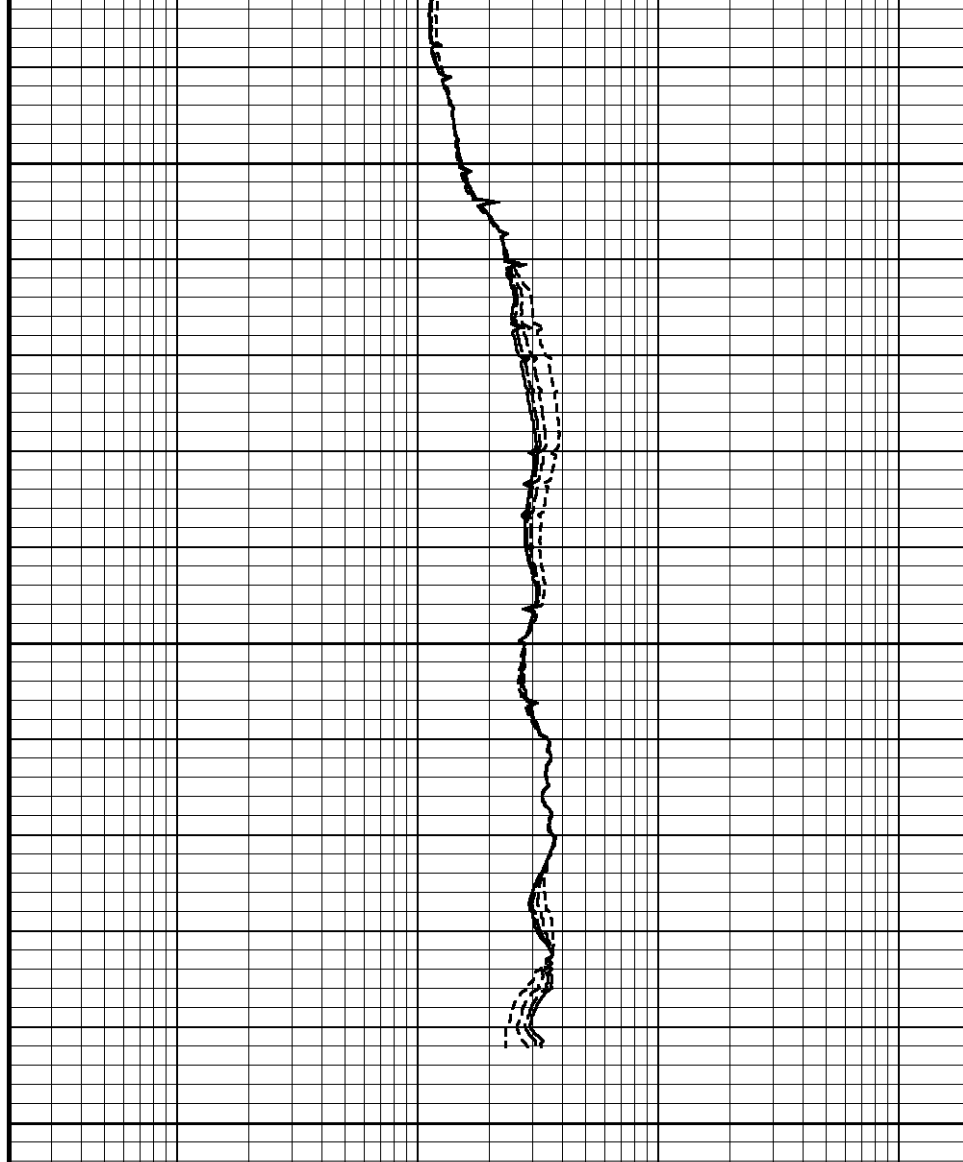
138°

9500

9550

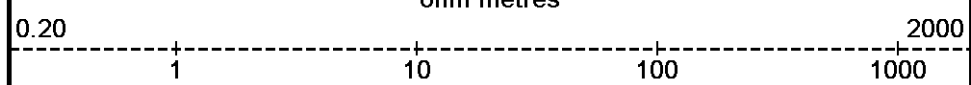
9600

DSC
in
Feet



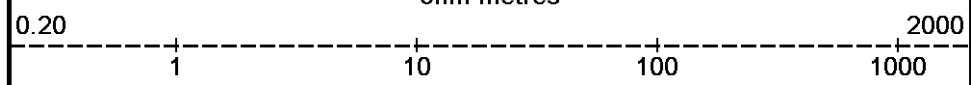
Timing Marks
every 60.0 sec

Array Ind. Six Res 40
ohm metres



Borehole
Temp in
deg F

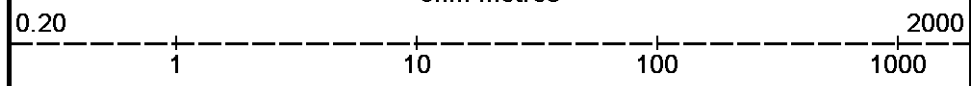
Array Ind. Six Res 60
ohm metres



MGS Gamma Ray

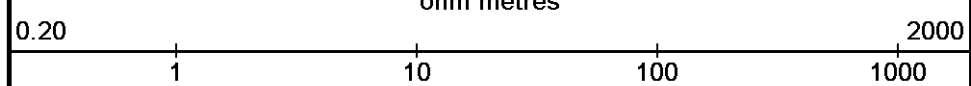
0	API	150
	75	
150	225	300

Array Ind. Six Res 85
ohm metres



Replay
Scale
1:240

Array Ind. Six Res Rt
ohm metres



BEFORE SURVEY CALIBRATION

C:\Minimus\Data\SDRG (SARAH 1-34H)\TOOL CHECK 2.dta

General Constants All 000

Last Edited on 08-MAR-2012 19:58

General Parameters

Mud Resistivity	2.400	ohm-metres
Mud Resistivity Temperature	60.000	degrees F
Water Level	0.000	feet
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	4.500	inches
Caliper for Differential Caliper	None	

Rwa Parameters

Porosity used	Limestone Density Por.	
Resistivity used	Deep Induction	
RWA Constant A	0.610	
RWA Constant M	2.150	

MMS Parameters MMS-E.B 158

Last Edited on 21-MAR-2012 16:28

Logging Parameters

Firmware Version	2v40	
Caliper Open On	MAI	
Caliper Open Delay	0.0	minutes
Caliper Closed On	Unknown	
Caliper Closed Delay	N/A	minutes
Sample Rate	1.00	seconds
Use Deep Sleep	No	
Delay Deep Sleep	N/A	
Deep Sleep Wake Time	N/A	minutes
Deep Sleep Wake on Temperature	N/A	
Deep Sleep Wake Temperature	N/A	degrees C
Deep Sleep Wake on Pressure	N/A	
Deep Sleep Wake Pressure	N/A	psi
MMI Pad Pressure	0.0	

Release Parameters

Pulse Duration Base Level	10.0	seconds
Pulse Duration Transition Time	60.0	seconds
Pulse Duration Status Pulse From	20.0	seconds
Pulse Duration Caliper Close From	145.0	seconds
Pulse Duration Caliper Open From	150.0	seconds
Pulse Duration Release Pulse From	215.0	seconds
Pulse Duration Release Pulse To	280.0	seconds
Pulse Release Duration	240.0	seconds
Pulse Discriminator Pressure Band	96.0	seconds
Pulse Pressure Discriminator	213.0	seconds
Use Negative Pulsing	No	
Good Status Reply Open Hole	0.0	seconds
Good Status Reply Cased Hole	20.0	seconds
Bad Status Reply	60.0	seconds
Status Pulse To	80.0	seconds
Caliper Close To	0.0	seconds
Caliper Open To	210.0	seconds

Configuration

SER,MMS,MGS,MDN,MPD,MPD,MFE,MAI

Gamma Constants MGS-C.J 134

Last Edited on

Gamma Calibrator Number	000
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Gamma Calibrator Number	0.00	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Bit Size	
Tool Position	Centred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Constants MGS-C.J 134

Last Edited on

Pre-filter Length 11

DOWNHOLE EQUIPMENT

C:\Minimus\Data\SDRG (SARAH 1-34H)\TOOL CHECK 2.dta

Shuttle Mechanical Release (SMR A)
SMR-A 166 LG: 8.53 ft WT: 77.2 lb OD: 2.52 in

Shuttle Electrical Release
SER-A 146 LG: 6.90 ft WT: 50.7 lb OD: 2.24 in

MBS-F.A 200v Compact Battery Sub
MBS-F.A 60 LG: 10.22 ft WT: 81.6 lb OD: 2.24 in

Compact Memory Sub E.B
MMS-E.B 158 LG: 5.20 ft WT: 37.5 lb OD: 2.24 in

Compact Short Gamma
MGS-C.J 134 LG: 3.41 ft WT: 24.3 lb OD: 2.24 in

Compact Collar Locator
MCL-B.J 68 LG: 3.17 ft WT: 26.5 lb OD: 2.24 in

Compact Tool Isolator sub.
MTI-B.A 67 LG: 1.54 ft WT: 13.2 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 431 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

SKJ-E.A Compact Knuckle Joint
SKJ-E.A 479 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 606 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Neutron
MDN-B.J 391 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-C.J 394 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 275 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 434 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

SKJ-E.A Compact Knuckle Joint
SKJ-E.A 476 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 595 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 175 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in



63.30 ft GRGM - MGS Gamma Ray
61.31 ft GSXT - MGS External Temperature

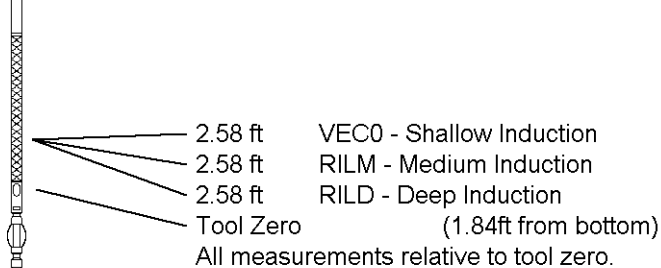
42.89 ft NPRL - Limestone Neutron Por.

35.65 ft AVOL - Annular Volume
35.65 ft HVOL - Hole Volume
35.65 ft CLDC - Density Caliper
33.72 ft DEN - Compensated Density
33.72 ft DCOR - Density Correction
33.72 ft DPRL - Limestone Density Por.
33.65 ft PDPE - PE

MIS-E.B Compact Inline Standoff sub
 MIS-E.B 597 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction
 MAI-B.J 392 LG: 12.52 ft WT: 48.5 lb OD: 2.24 in

Total Length: 96.78 ft Weight: 738.5 lb

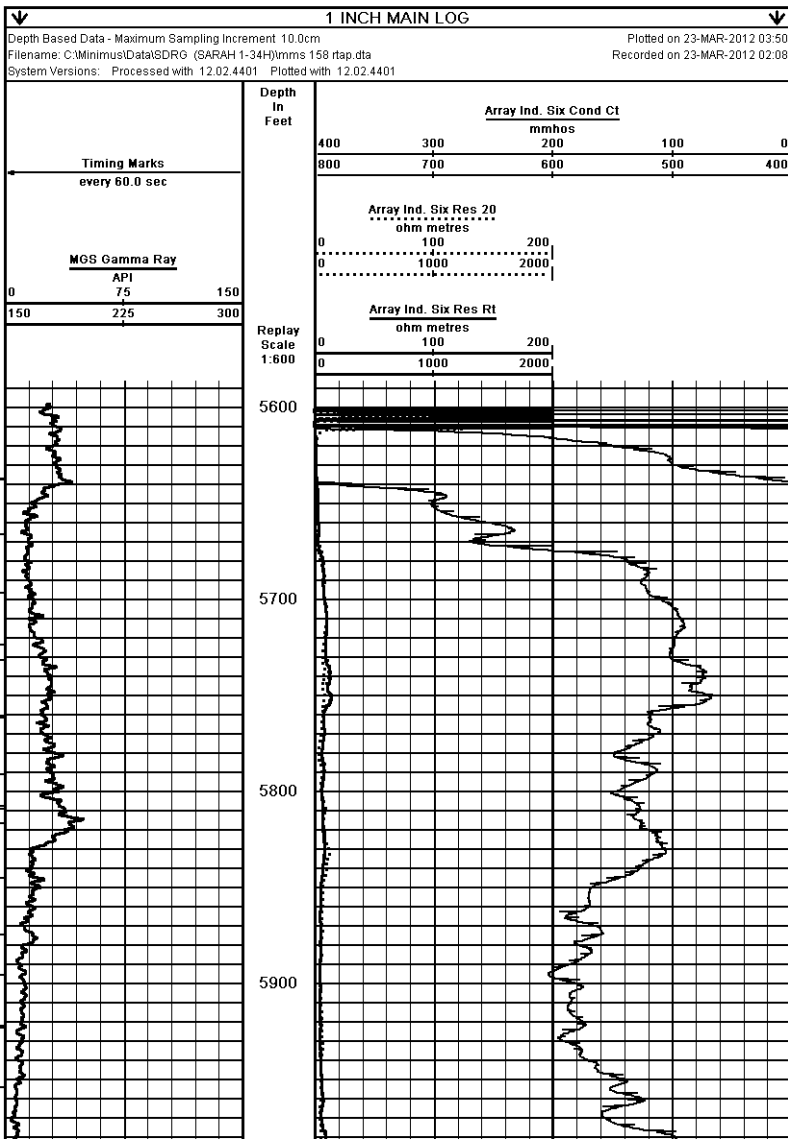
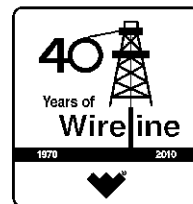


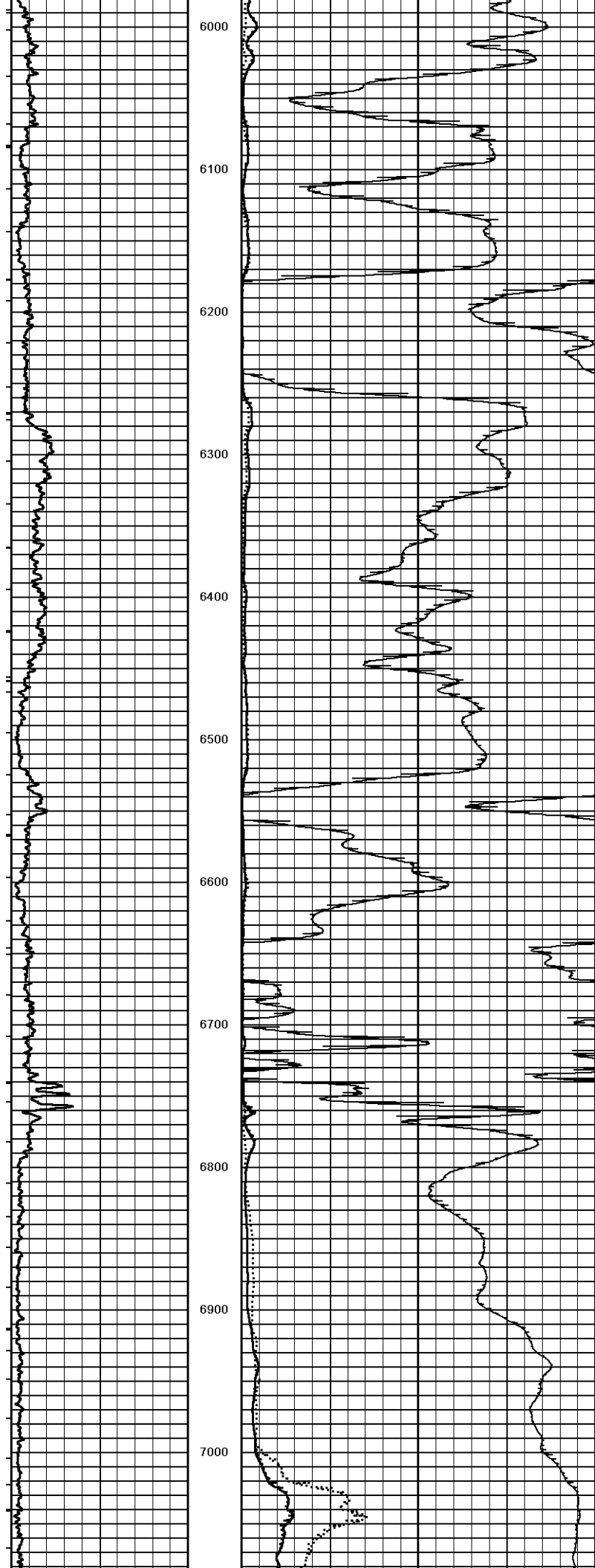
COMPANY SANDRIDGE EXPLORATION & PRODUCTION LLC
WELL SARAH 1-34H
FIELD BEAIS EAST
PROVINCE/COUNTY COMANCHE
COUNTRY/STATE U.S.A. / KANSAS

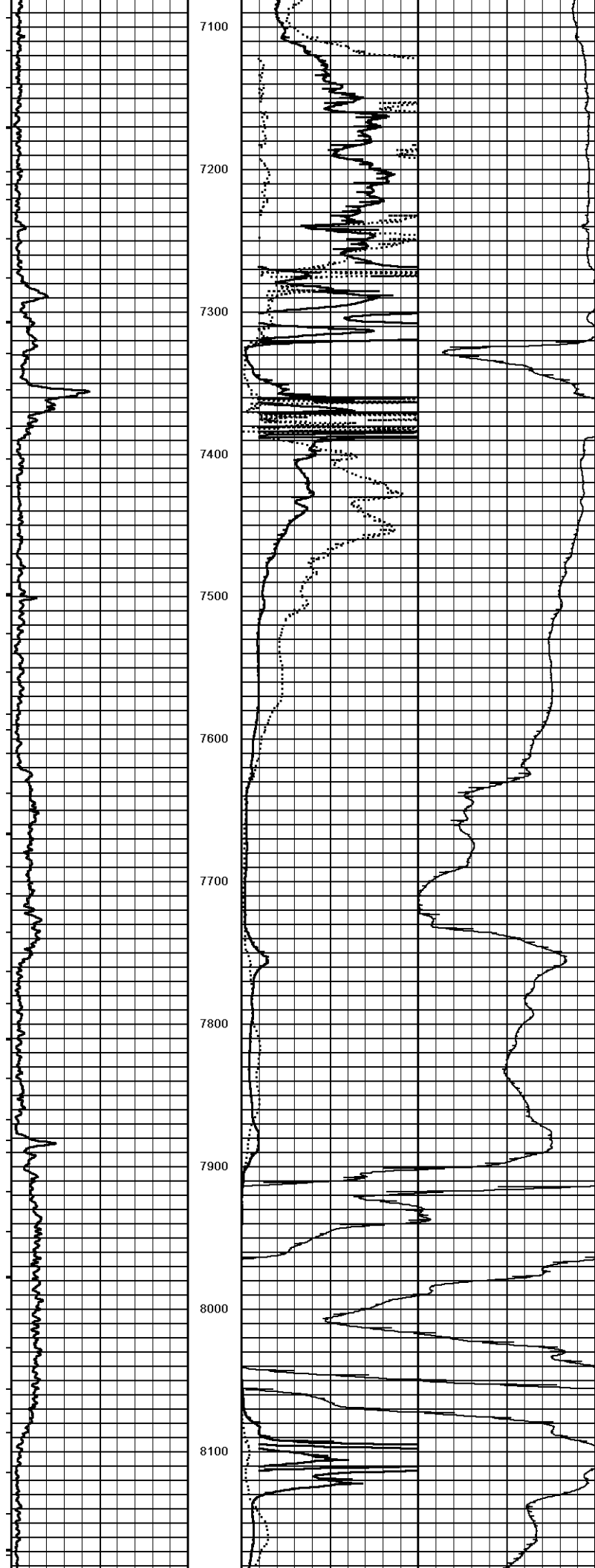
Elevation Kelly Bushing	1851.00	feet	First Reading	9592.00	feet
Elevation Drill Floor	1851.00	feet	Depth Driller	9752.00	feet
Elevation Ground Level	1831.00	feet	Depth Logger	9596.00	feet

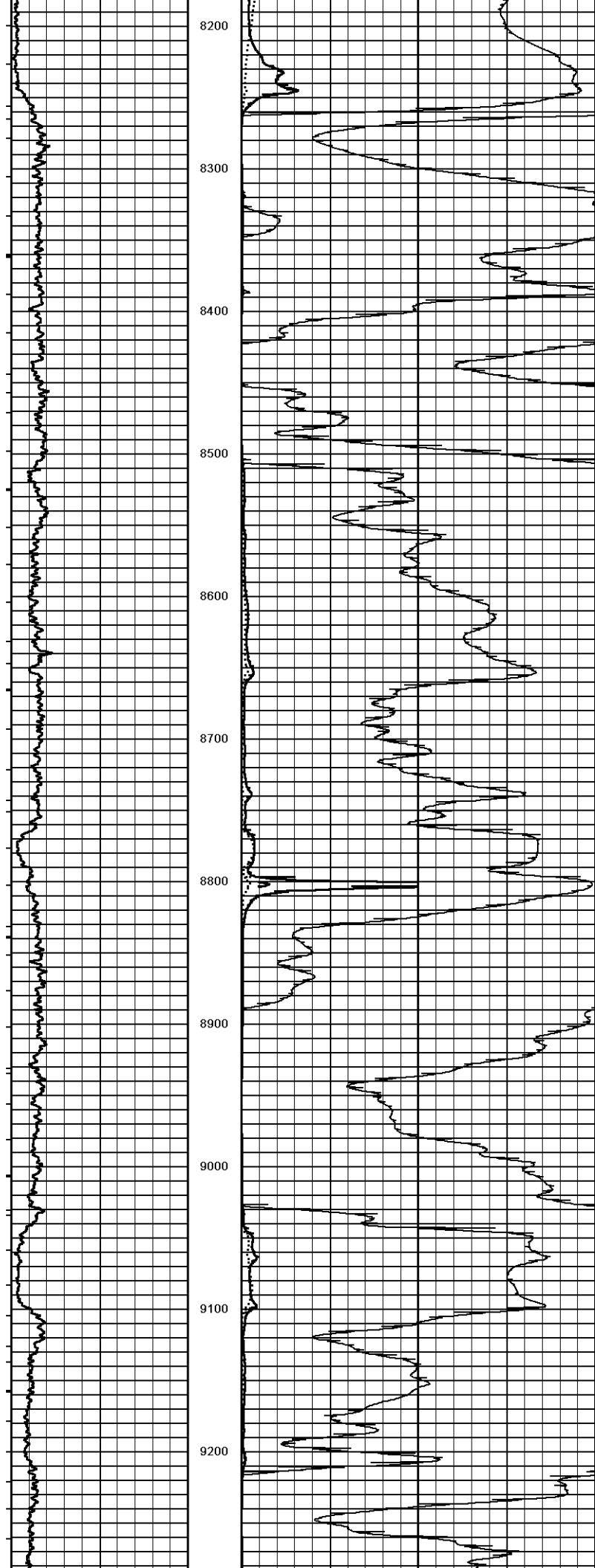


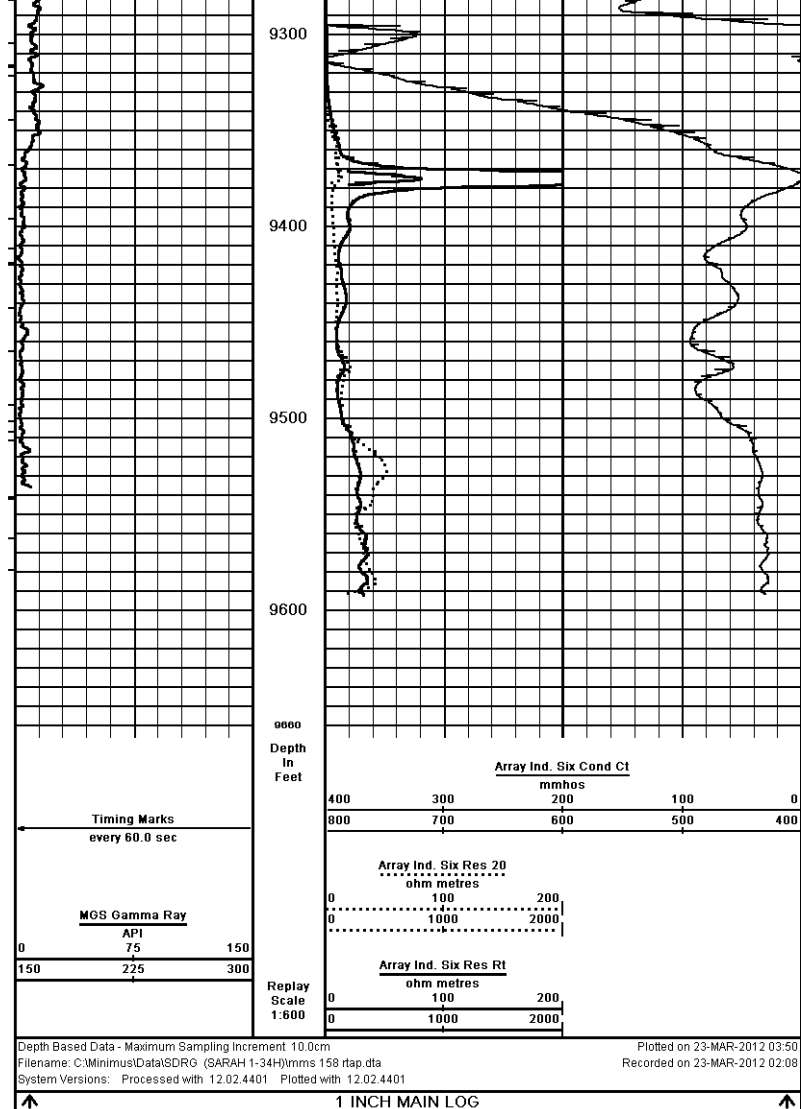
**CML IMPULSE SHUTTLE
 ARRAY INDUCTION
 ELECTRIC LOG**











COMPANY	SANDRIDGE EXPLORATION & PRODUCTION LLC				
WELL	SARAH 1-34H				
FIELD	BEAIS EAST				
PROVINCE/COUNTY	COMANCHE				
COUNTRY/STATE	U.S.A. / KANSAS				
Elevation Kelly Bushing	1851.00	feet	First Reading	9592.00	feet
Elevation Drill Floor	1851.00	feet	Depth Driller	9752.00	feet
Elevation Ground Level	1831.00	feet	Depth Logger	9596.00	feet

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ARRAY INDUCTION
ELECTRIC LOG