



Weatherford

**CML MESSENGER SHUTTLE
ARRAY INDUCTION
LOG**

COMPANY

SANDRIDGE ENERGY

WELL

SUTTON 1-9H

FIELD

CHEYENNE VALLEY

PROVINCE/COUNTY

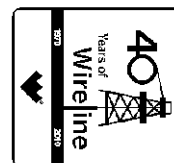
NESS

COUNTRY/STATE

USA / KANSAS

LOCATION

**SHL: 200' FSL & 475' FEL
BHL: 330' FNL & 400' FEL**



SEC

TWP
18S

RGE

25W

Other Services
MPD/MDN
CMI

Permit Number

15-135-25423-01

Permanent Datum G.L., Elevation 2494 feet

Log Measured From DF

Drilling Measured From D.F. @ 20 FEET

Date

11-JUL-2012

Elevations:
KB 2514.00
DF 2514.00
GL 2494.00

Run Number

ONE

Depth Driller

8869.00 feet

Depth Logger

8869.00 feet

First Reading

8854.00 feet

Last Reading

4990.00 feet

Casing Driller

4990.00 feet

Casing Logger

4990.00 feet

Bit Size

6.125

inches

Hole Fluid Type

WATER

Density / Viscosity

9.25 lb/USg

49.00 CP

PH / Fluid Loss

9.00

4.20 ml/30Min

Sample Source

FLOWLINE

Rm @ Measured Temp

0.70 @ 96.0 ohm-m

Rmf @ Measured Temp

0.56 @ 96.0 ohm-m

Rmc @ Measured Temp

0.84 @ 96.0 ohm-m

Source Rmf / Rmc

CALC

CALC

Rm @ BHT

0.51 @131.0 ohm-m

Time Since Circulation

0 HOURS

Max Recorded Temp

131.00 deg F

Equipment Name

COMPACT

Equipment / Base

18006

OKC

Recorded By

D. ROWELL

Witnessed By

J. BORELL

W. SCOTT

S.O.# / AFE

3535169 / DC11946

BOREHOLE RECORD

Last Edited: 11-JUL-2012 12:16

Bit Size
inches

6.125

Depth From
feet

4990.00

Depth To
feet

8869.00

CASING RECORD

Type

Size
inches

Depth From
feet

Shoe Depth
feet

Weight
pounds/ft

SURFACE

9.625

0.00

1575.00

36.00

INTERMED

7.000

0.00

4990.00

26.00

REMARKS

WLS SOFTWARE VERSION 12.02.4401 USED.
200V COMPACT MEMORY LOGGING - SHUTTLE MESSENGER SYSTEM

HARDWARE: BHA: SMS, SLS, SSS, 3 JOINTS OF 3.5" IF GARAGE PIPE, SLL, SUL, 3.5" DP, SFV, 3.5" DP

MPD: ECCENTRALISED SINGLE MIS.D, SHA, SKJ (BOTTOM)
MDN: SKJ, SHA, ECCENTRALISED DOUBLE MIS.D (TOP)
MAI: 0.5" STANDOFF- MIS.E INLINE STANDOFF (TOP), INDUCTION STANDOFF ASSEMBLY (BOTTOM)
CMI: FULLY CENTRALIZED

DEPTH MEASURED USING ADVANTAGE RIG DEPTH SYSTEM CORRECTED TO PIPE STRAP. VERIFIED WITH MWD LOGS.

TOOLS DEPLOYED WITH END OF BHA AT : 8754 FT.
AFTER DEPLOYMENT LOGGING TOOL WAS AT:8854 FT.

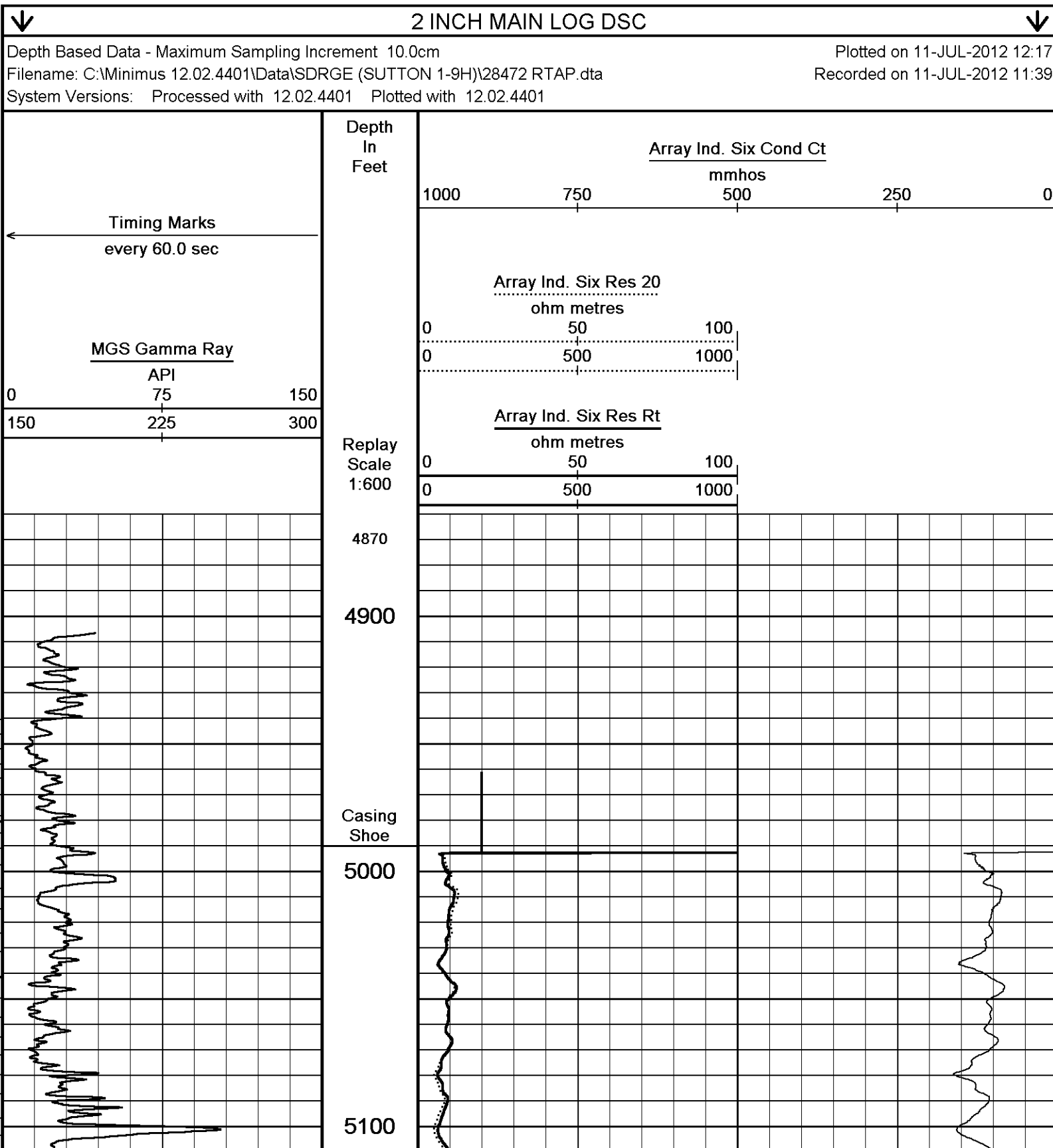
CHOLORIDES 7000 Mg/L

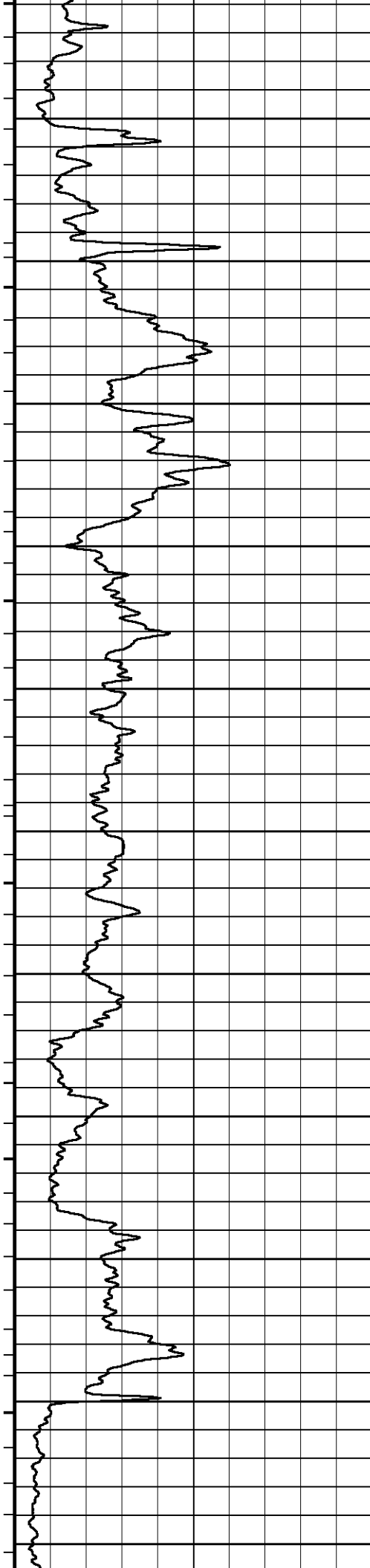
OPERATORS: R. BRADSHAW, G. GARCIA

SERVICE ORDER # 3535169

RIG: LARIAT 19

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.





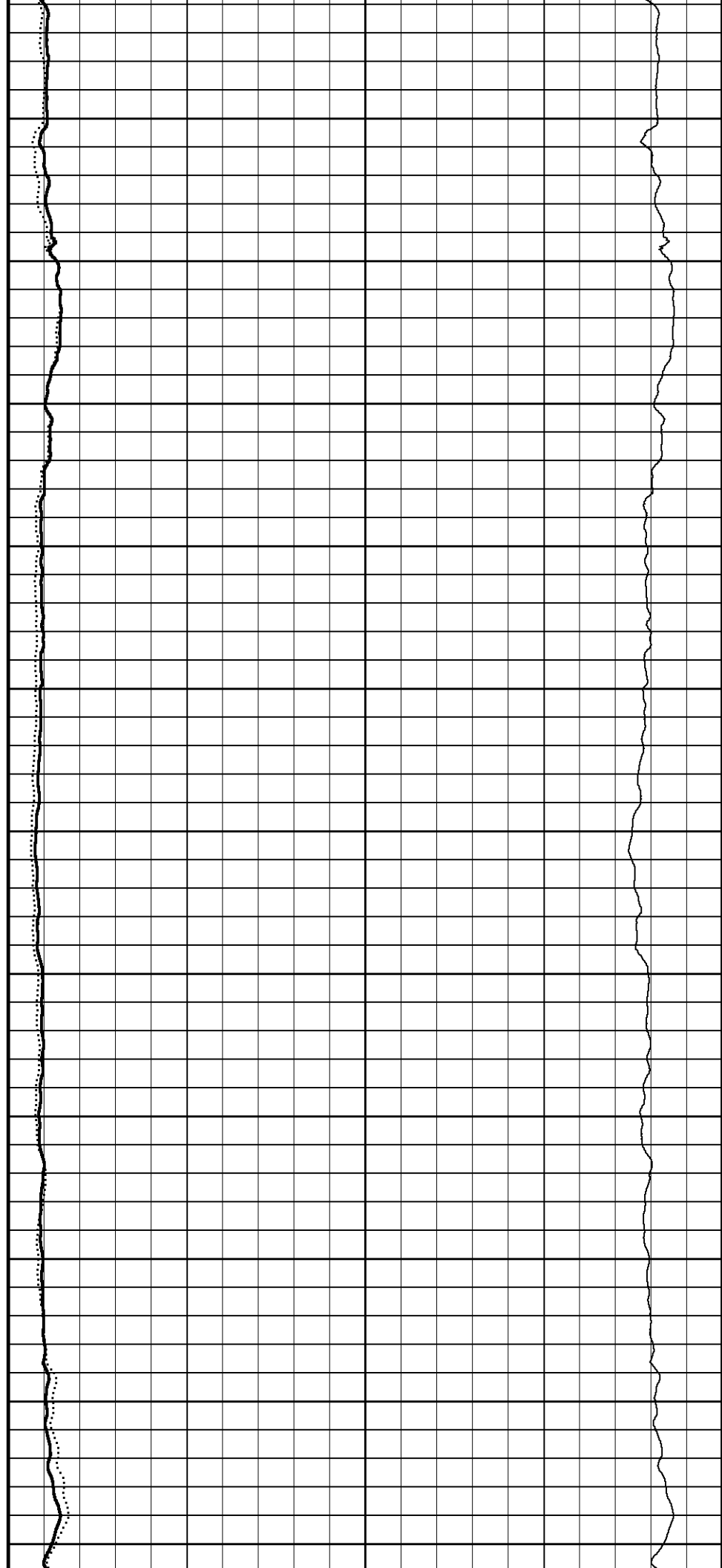
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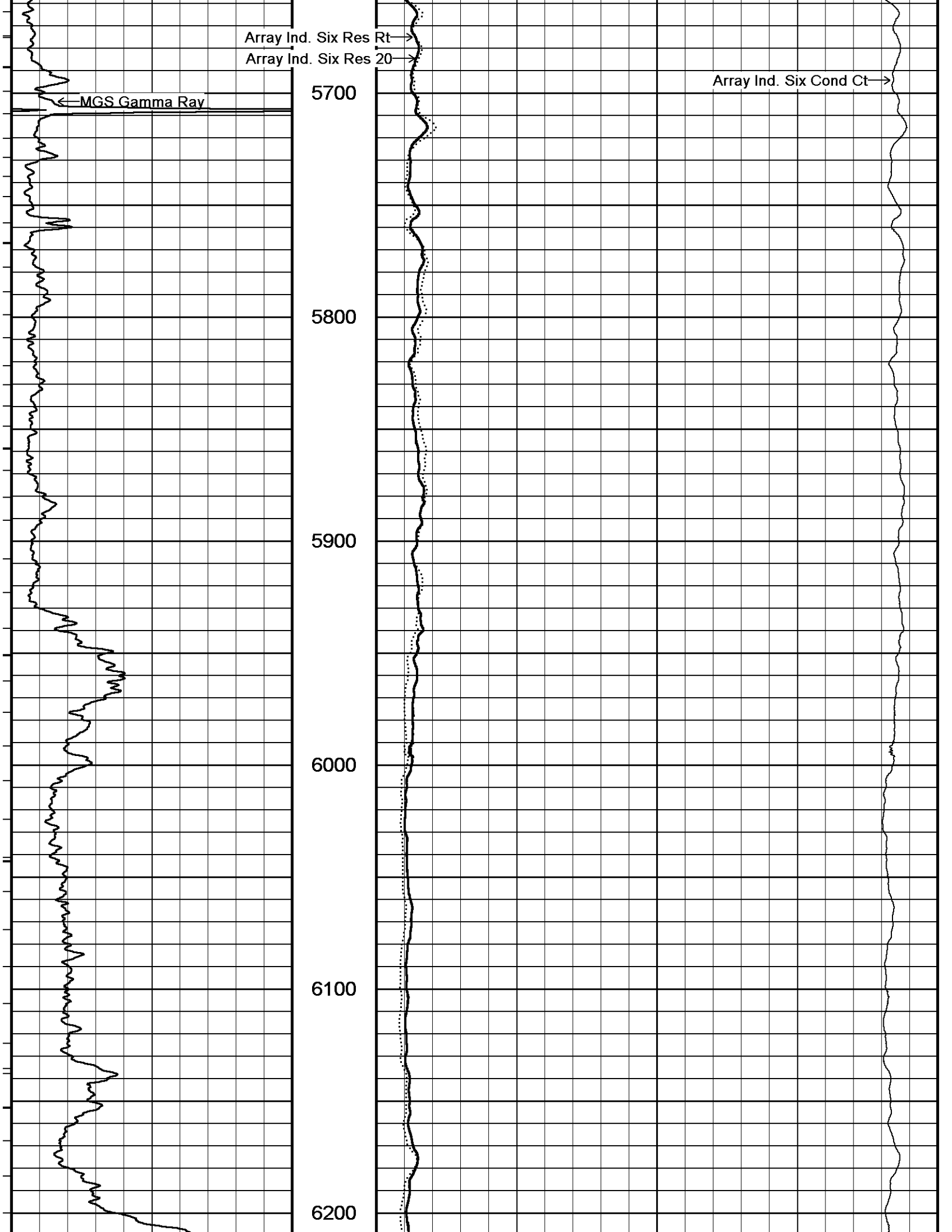
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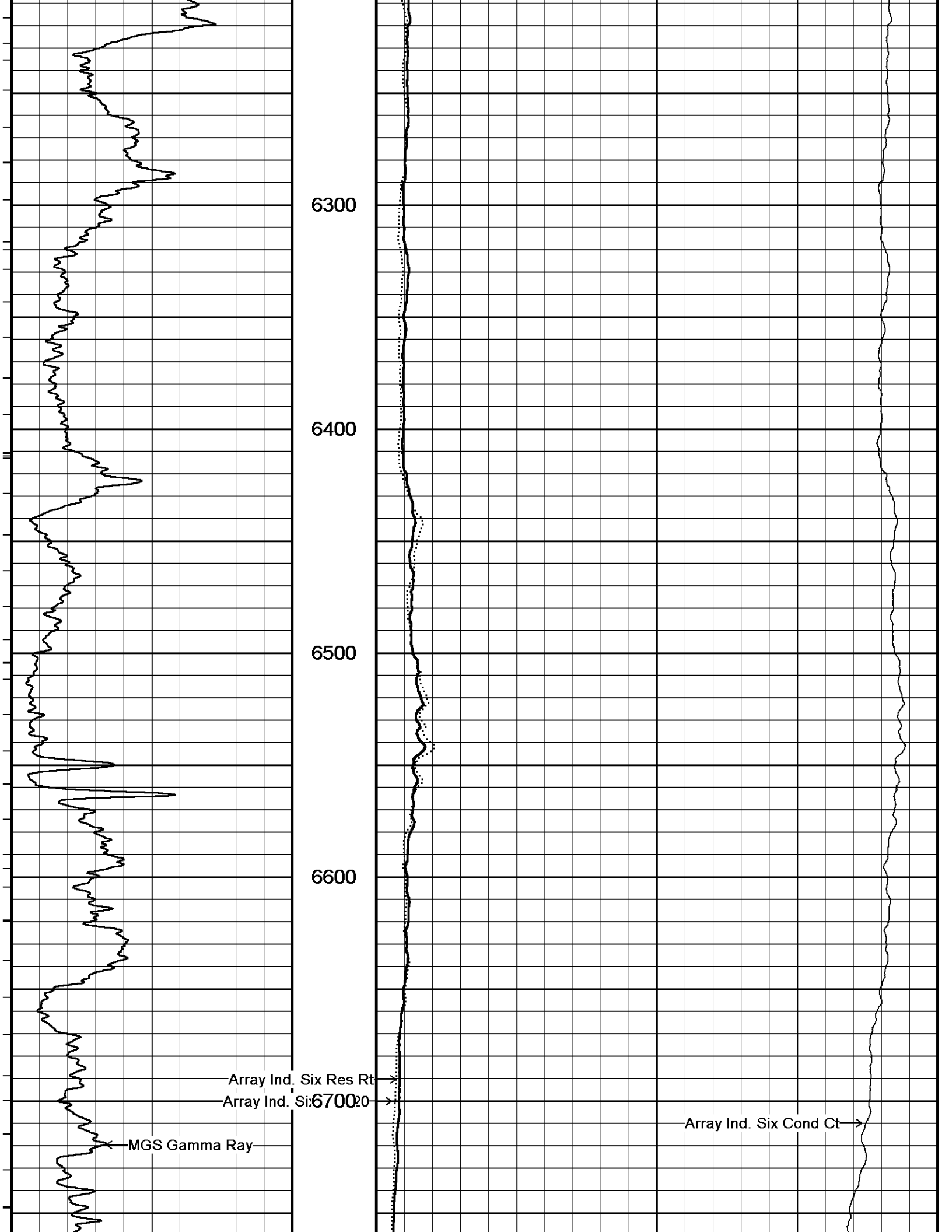
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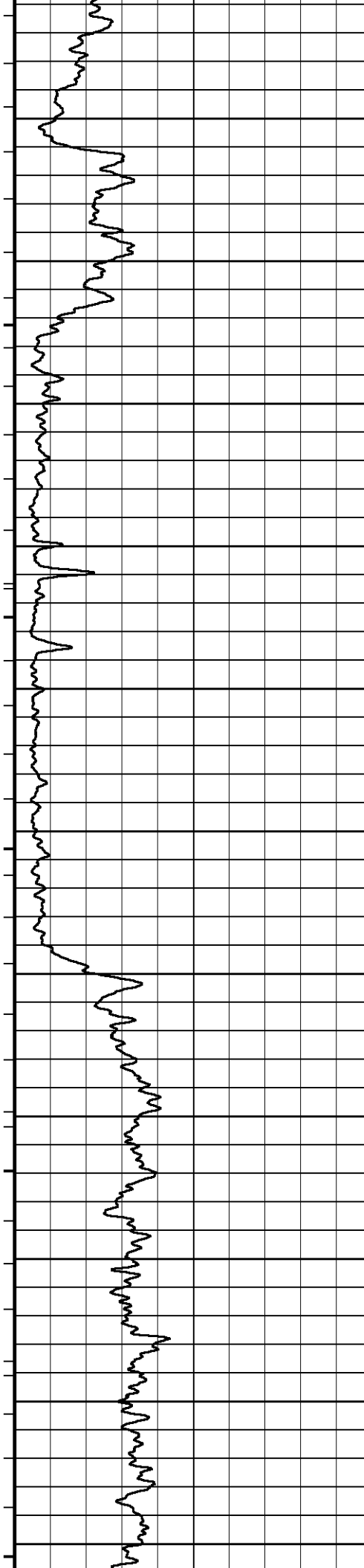
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5600

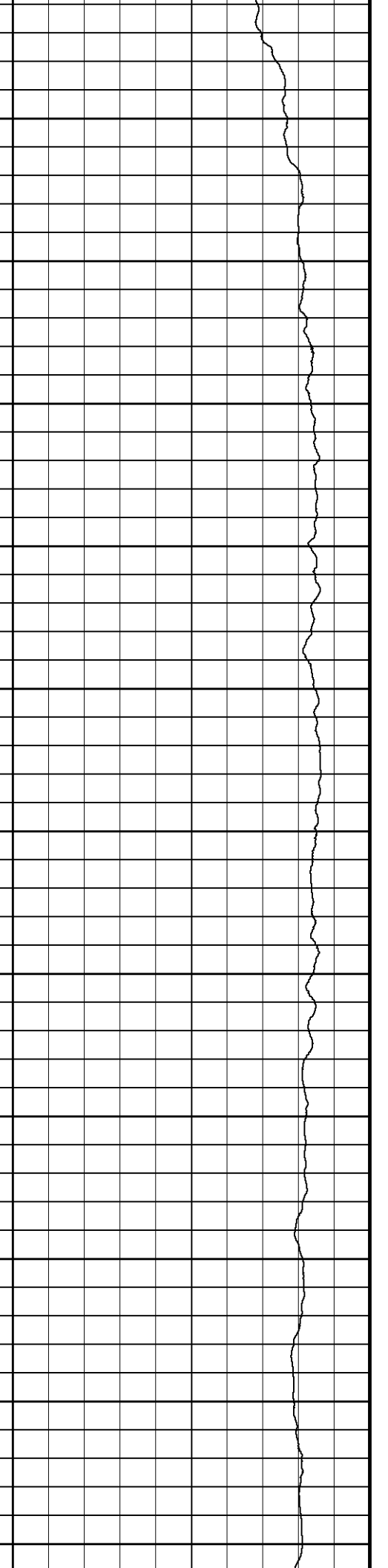
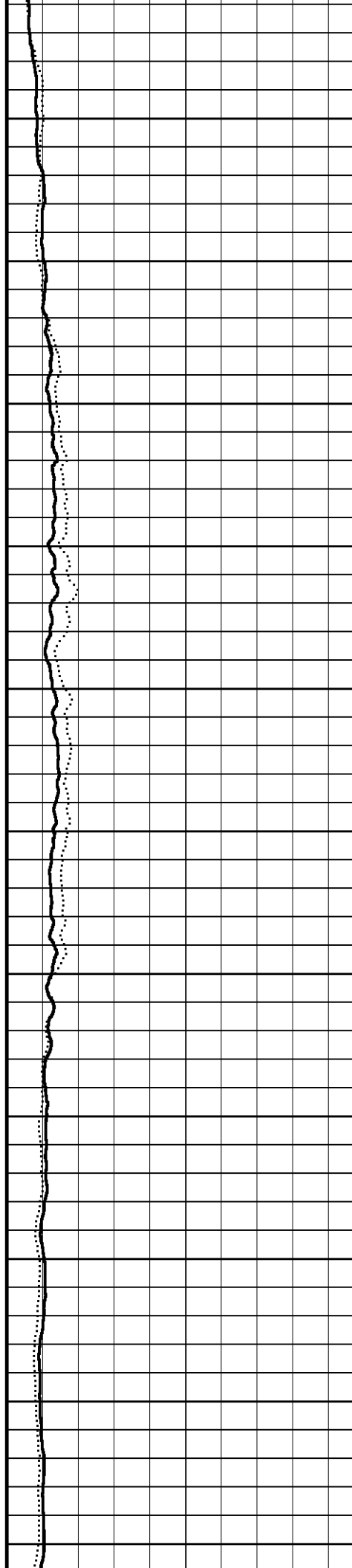


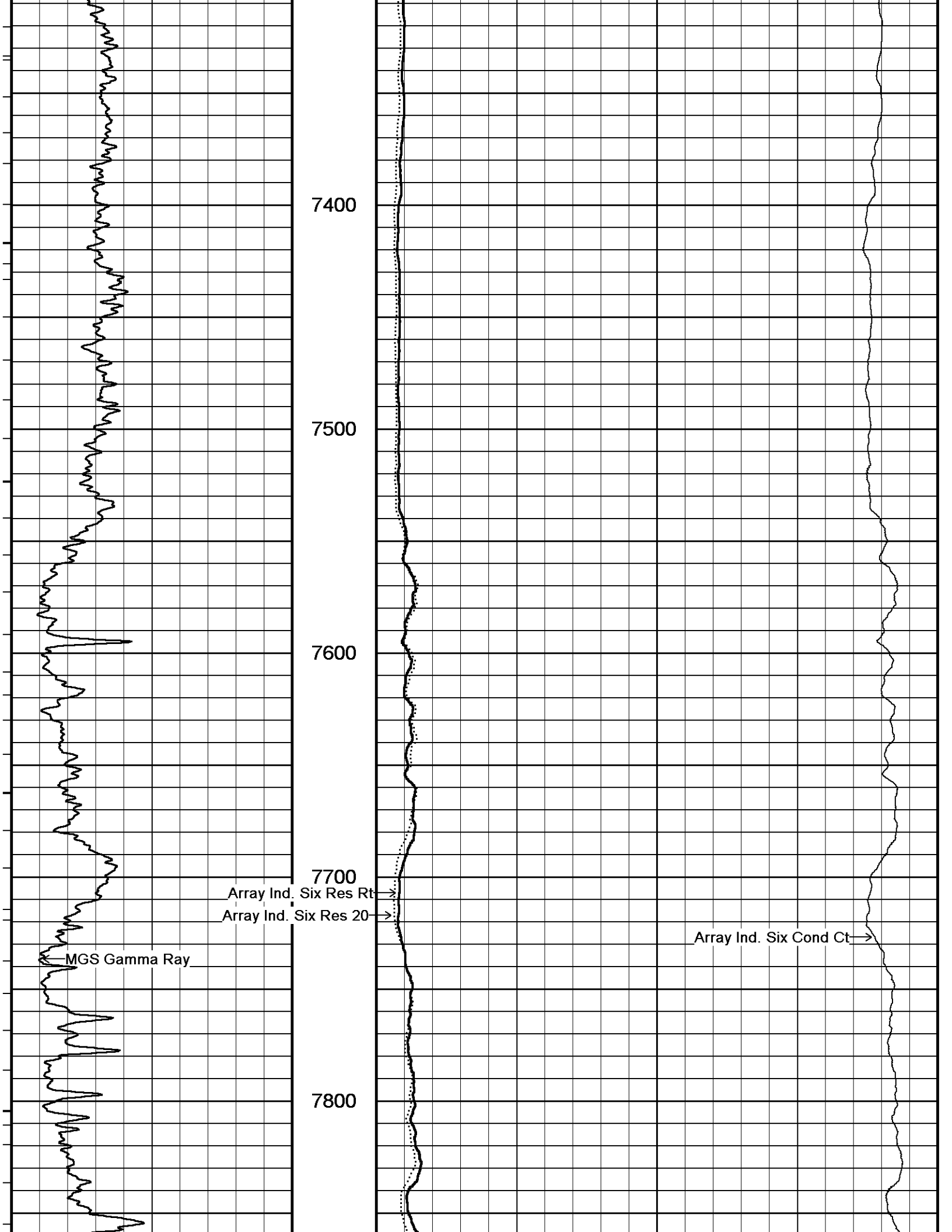


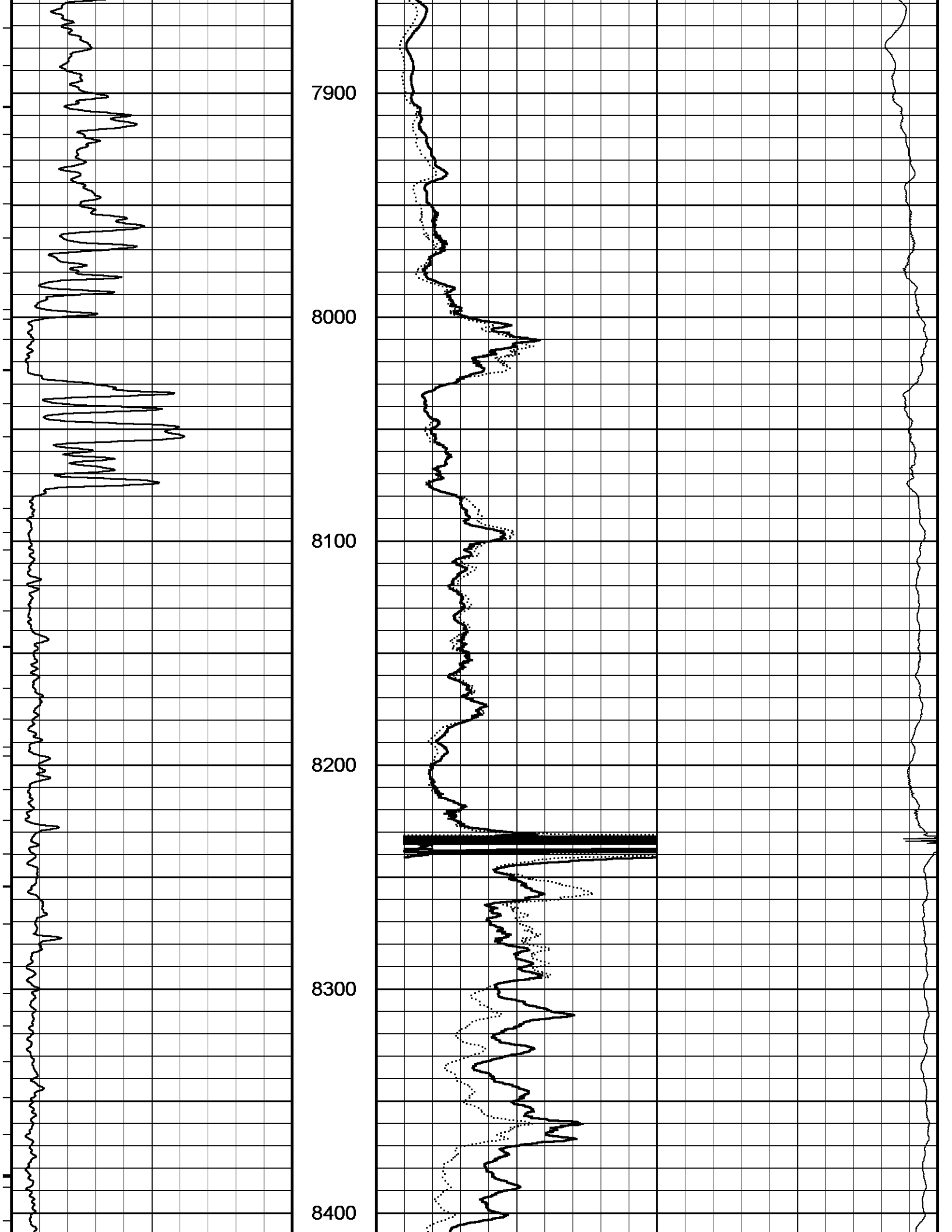


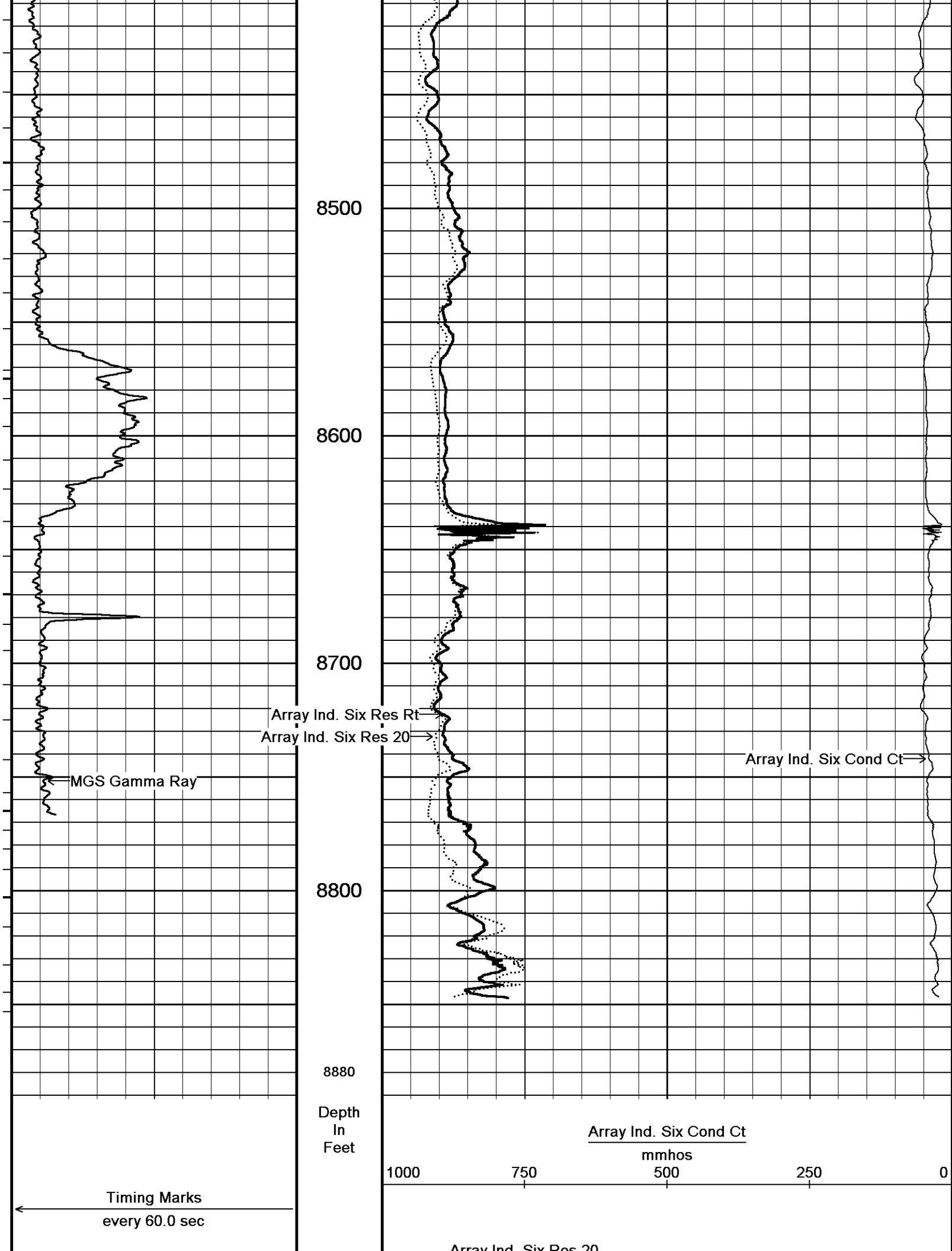


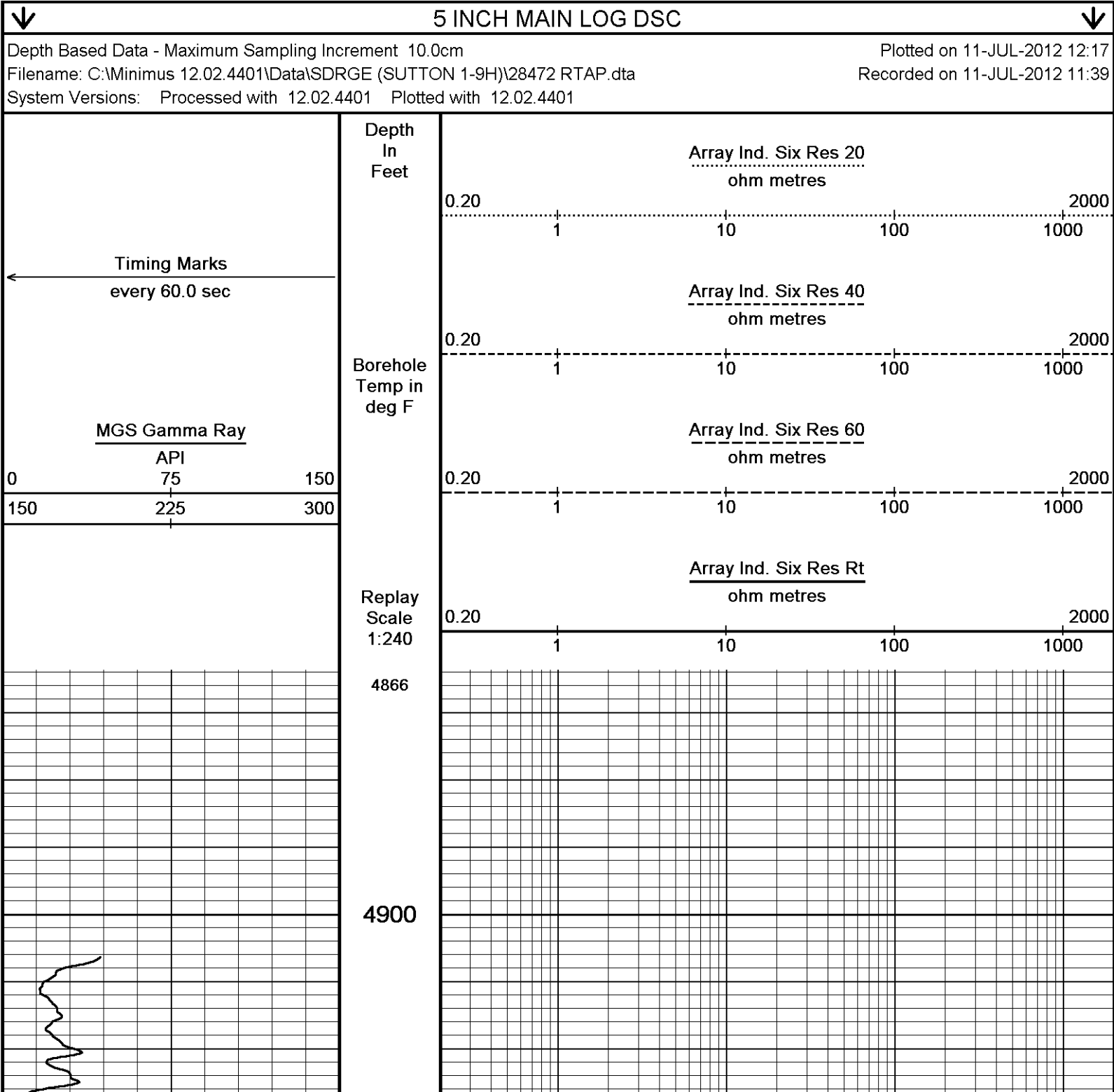
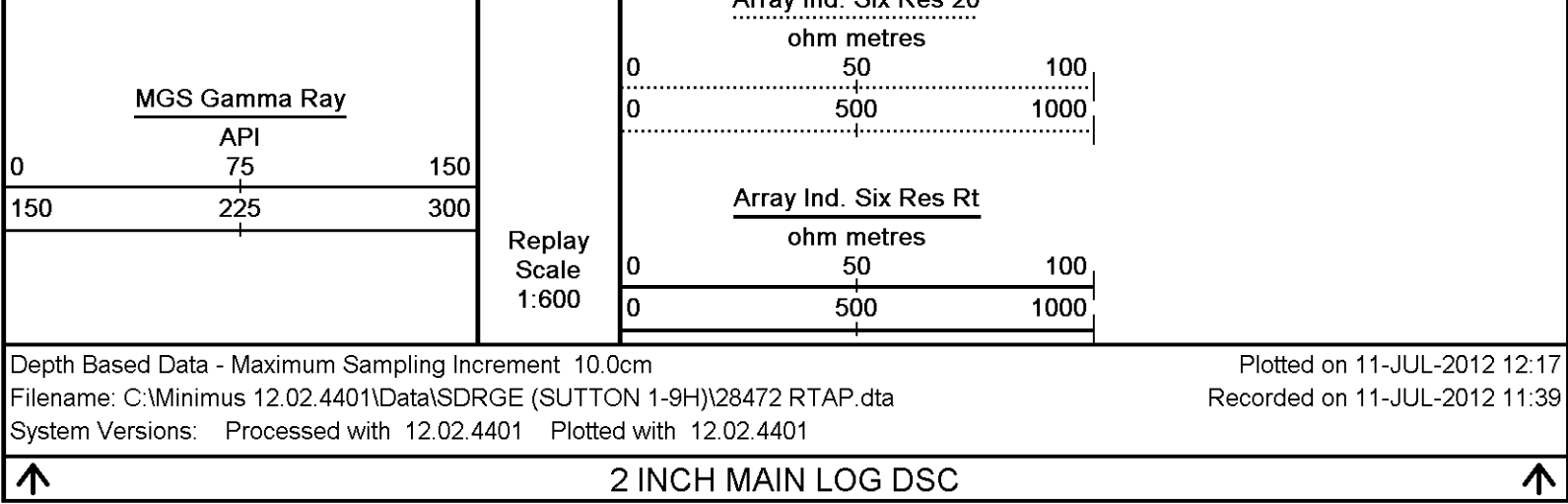
6800
6900
7000
7100
7200
7300

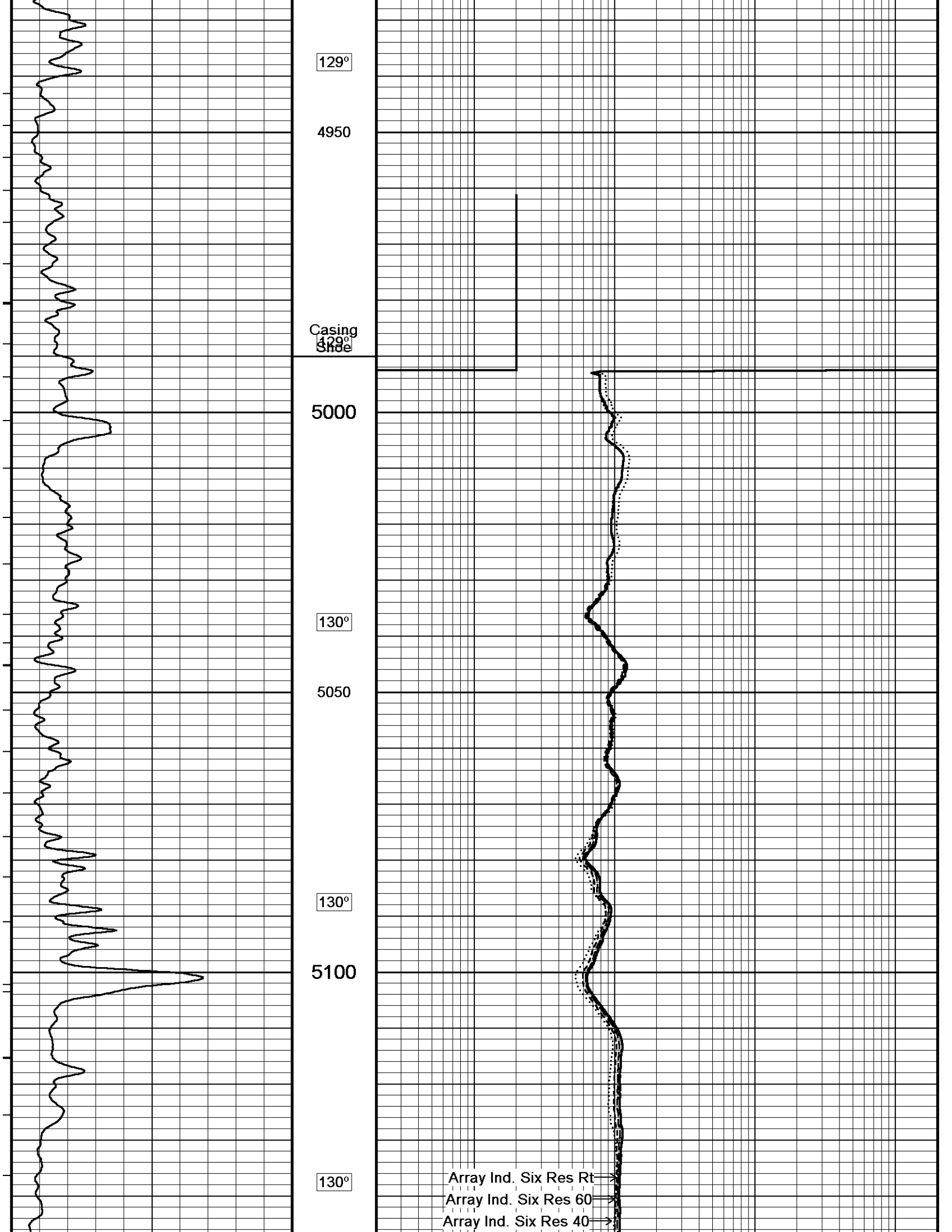


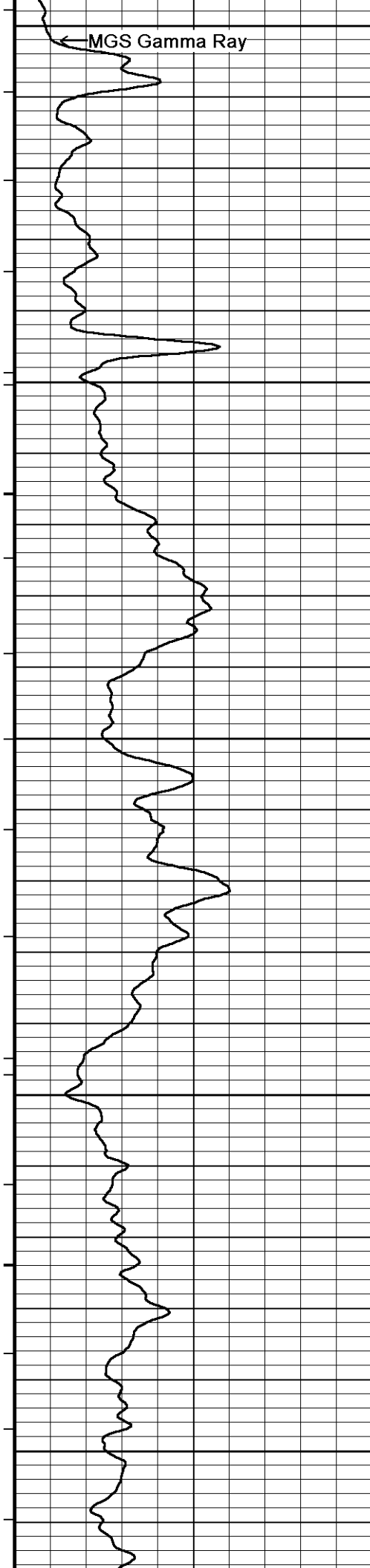












5150

130°

5200

130°

5250

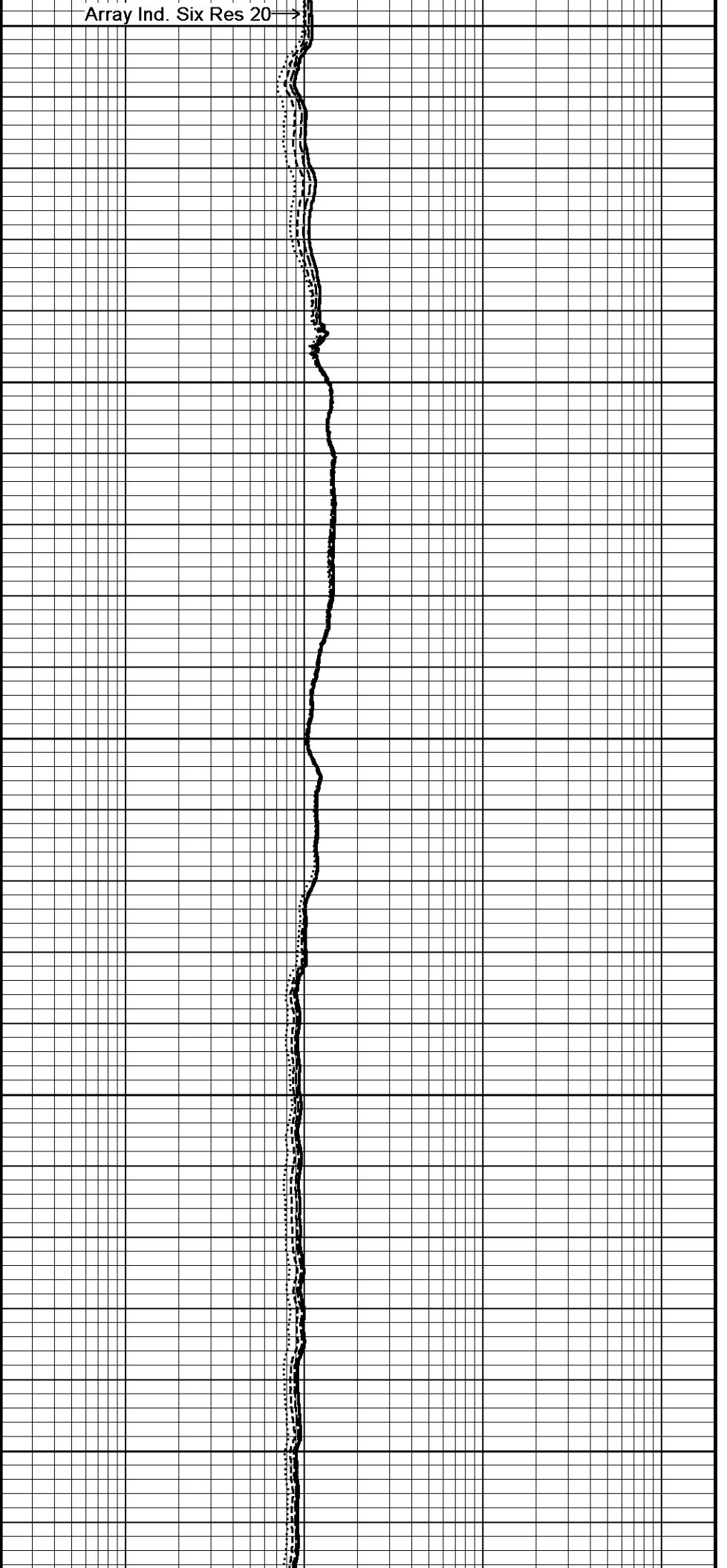
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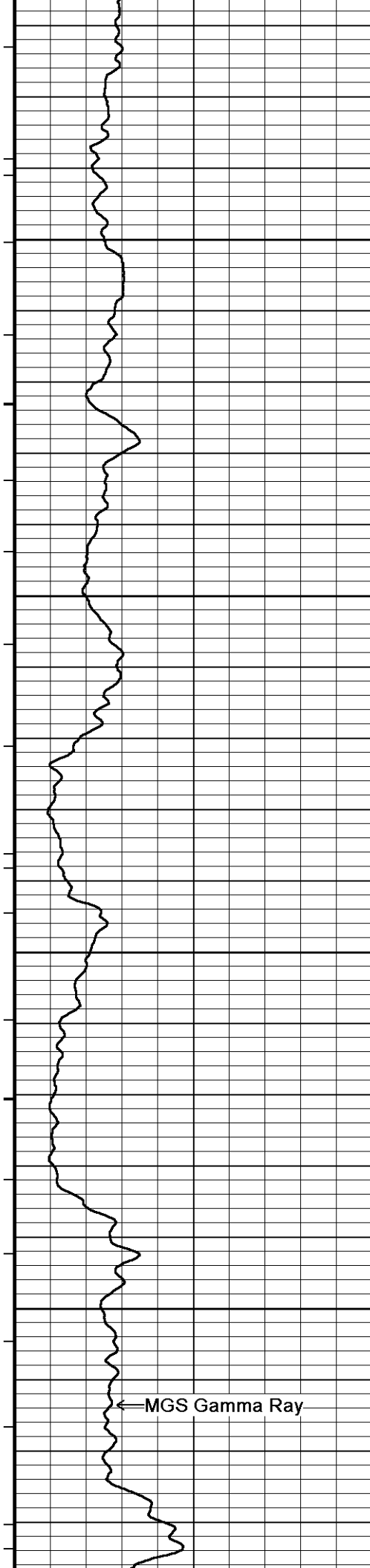
5300

130°

5350

Array Ind. Six Res 20 →





130°

5400

130°

5450

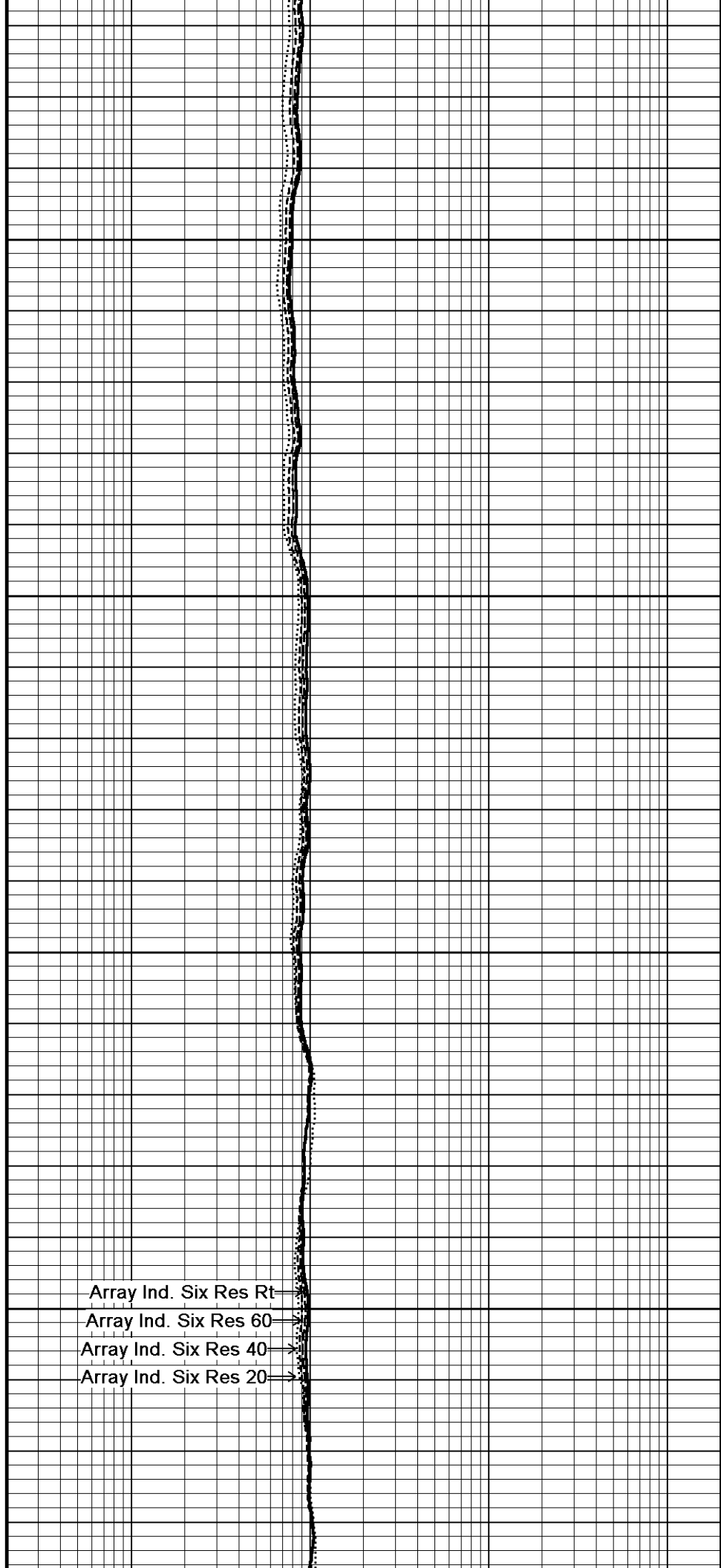
130°

5500

130°

5550

←MGS Gamma Ray

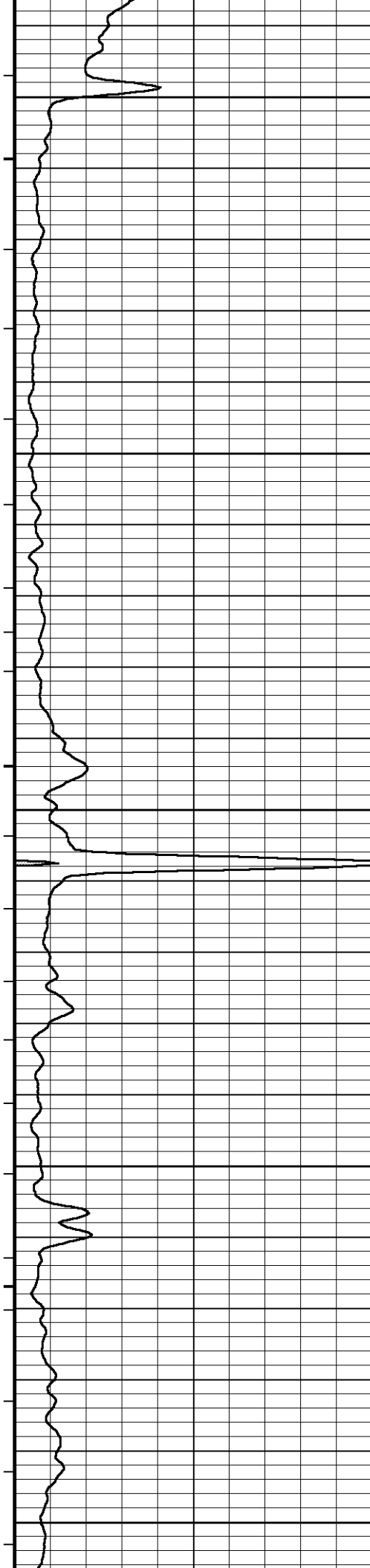


Array Ind. Six Res Rt

Array Ind. Six Res 60

Array Ind. Six Res 40

Array Ind. Six Res 20



130°

5600

131°

5650

131°

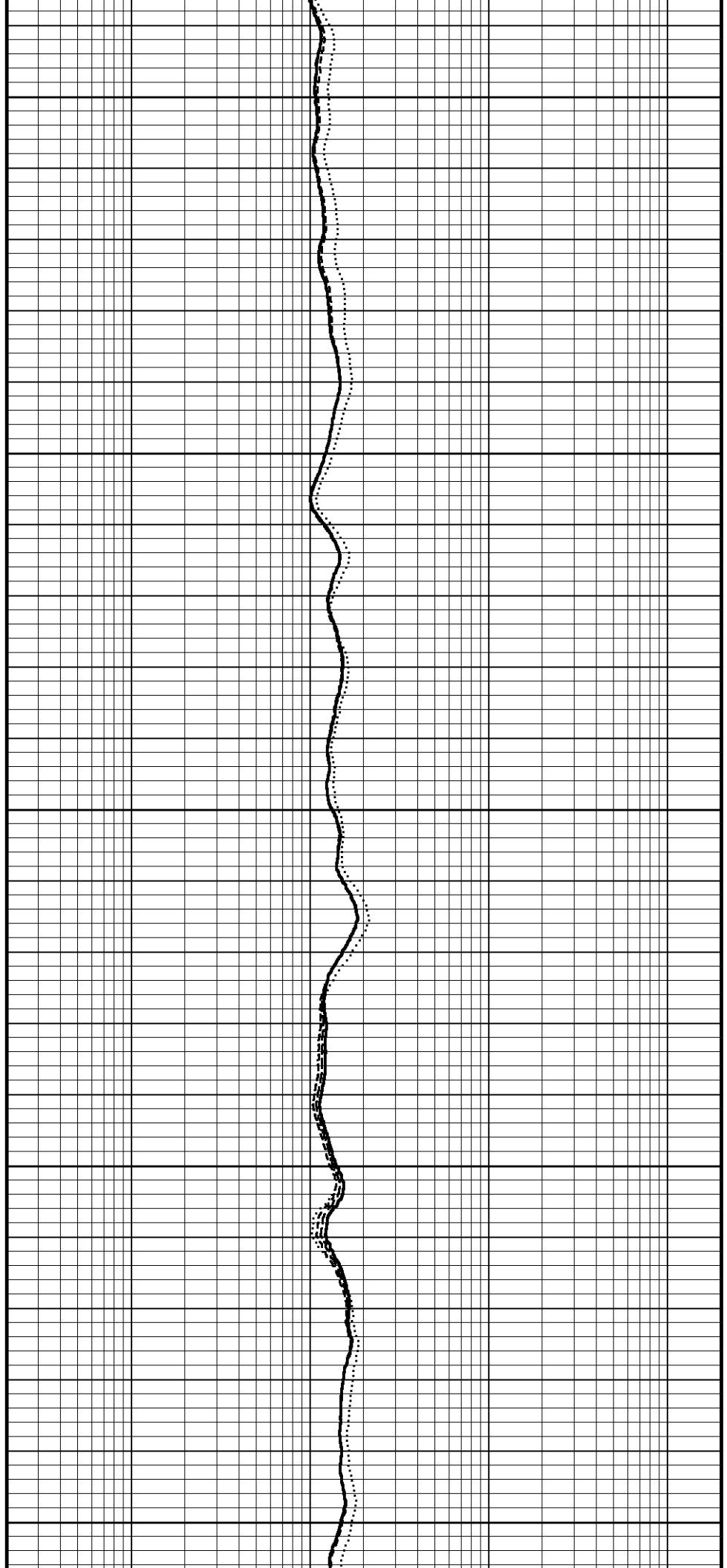
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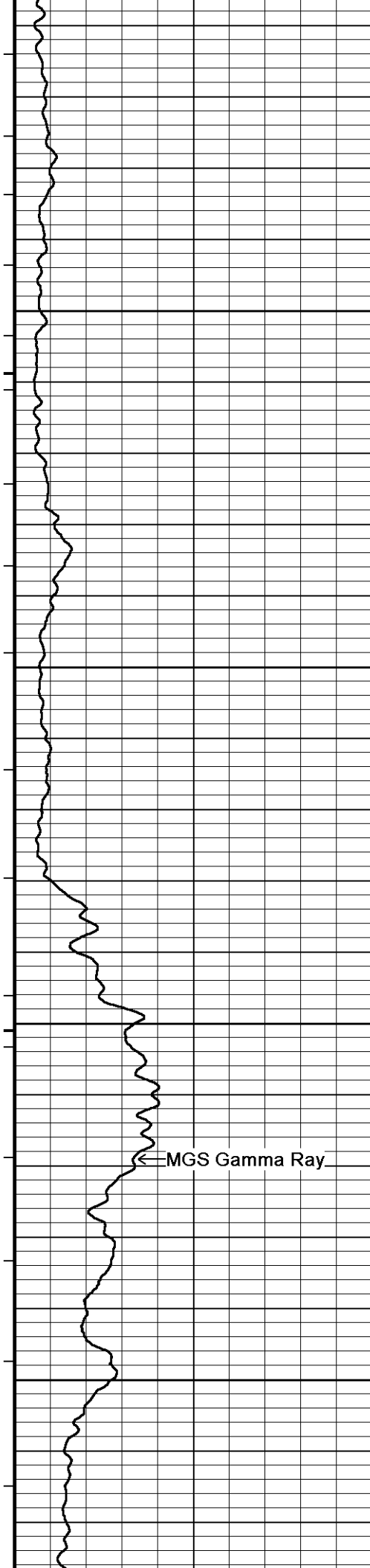
131°

5750

131°

5800





131°

5850

131°

5900

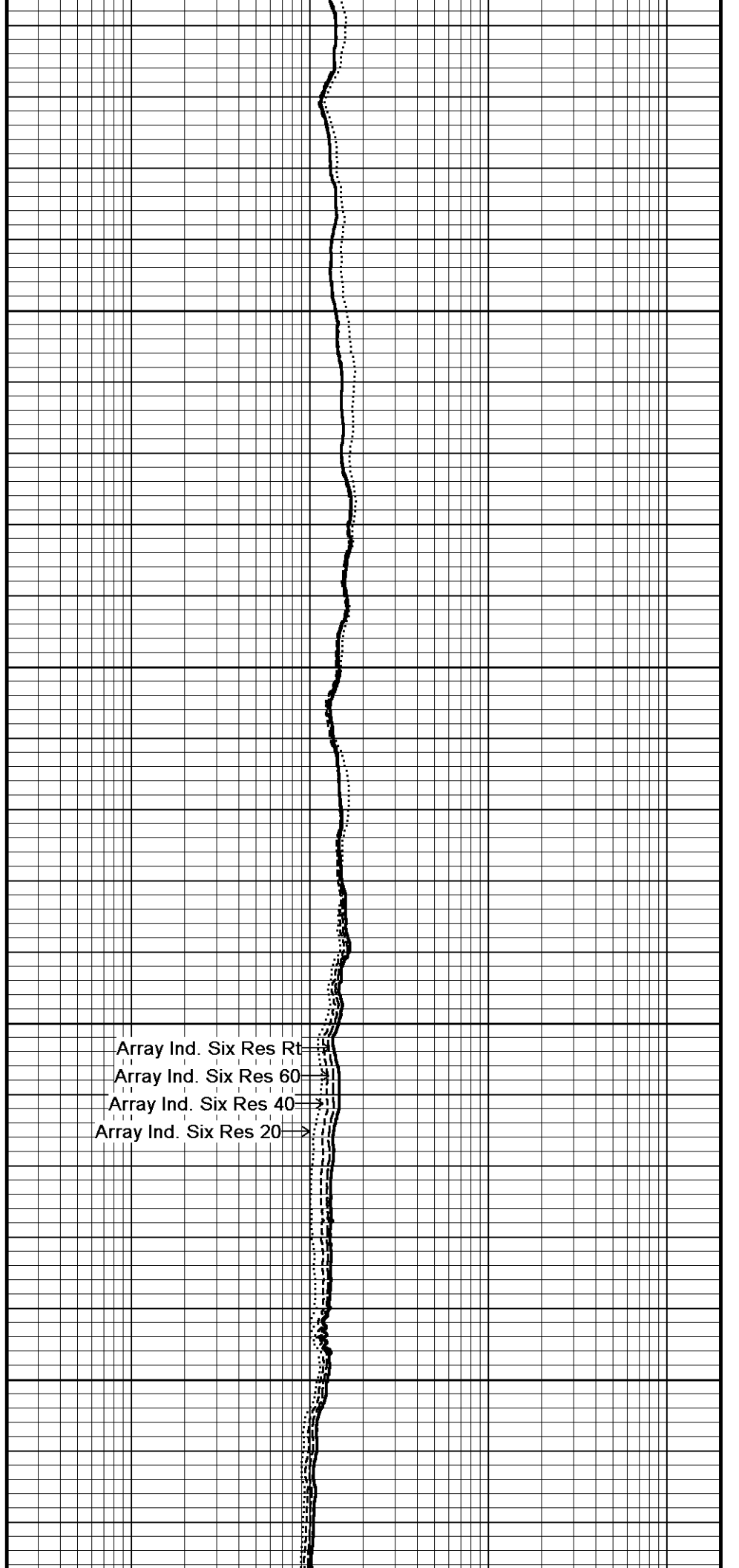
131°

5950

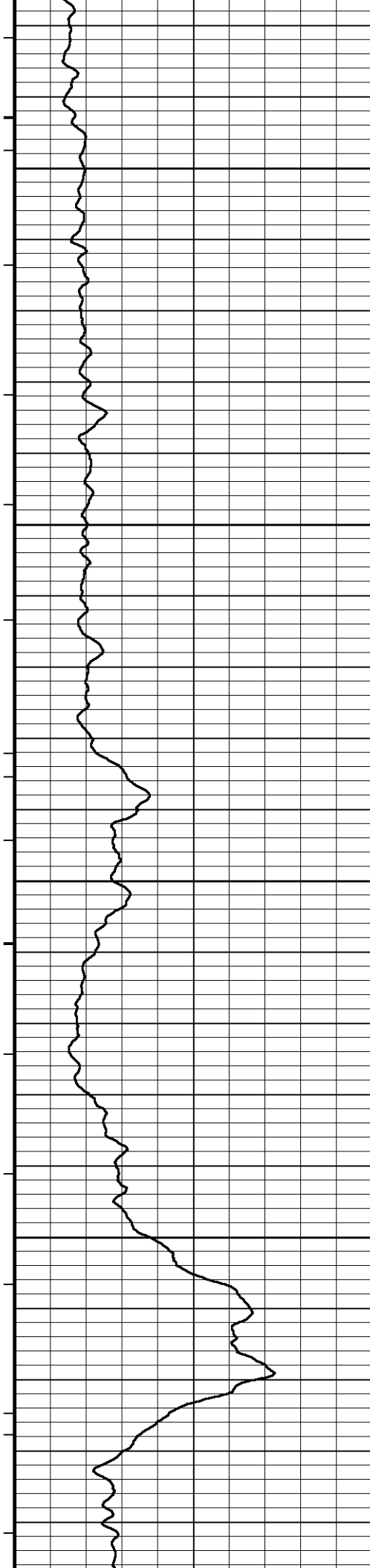
← MGS Gamma Ray

131°

6000



Array Ind. Six Res Rt
Array Ind. Six Res 60
Array Ind. Six Res 40
Array Ind. Six Res 20



131°

6050

131°

6100

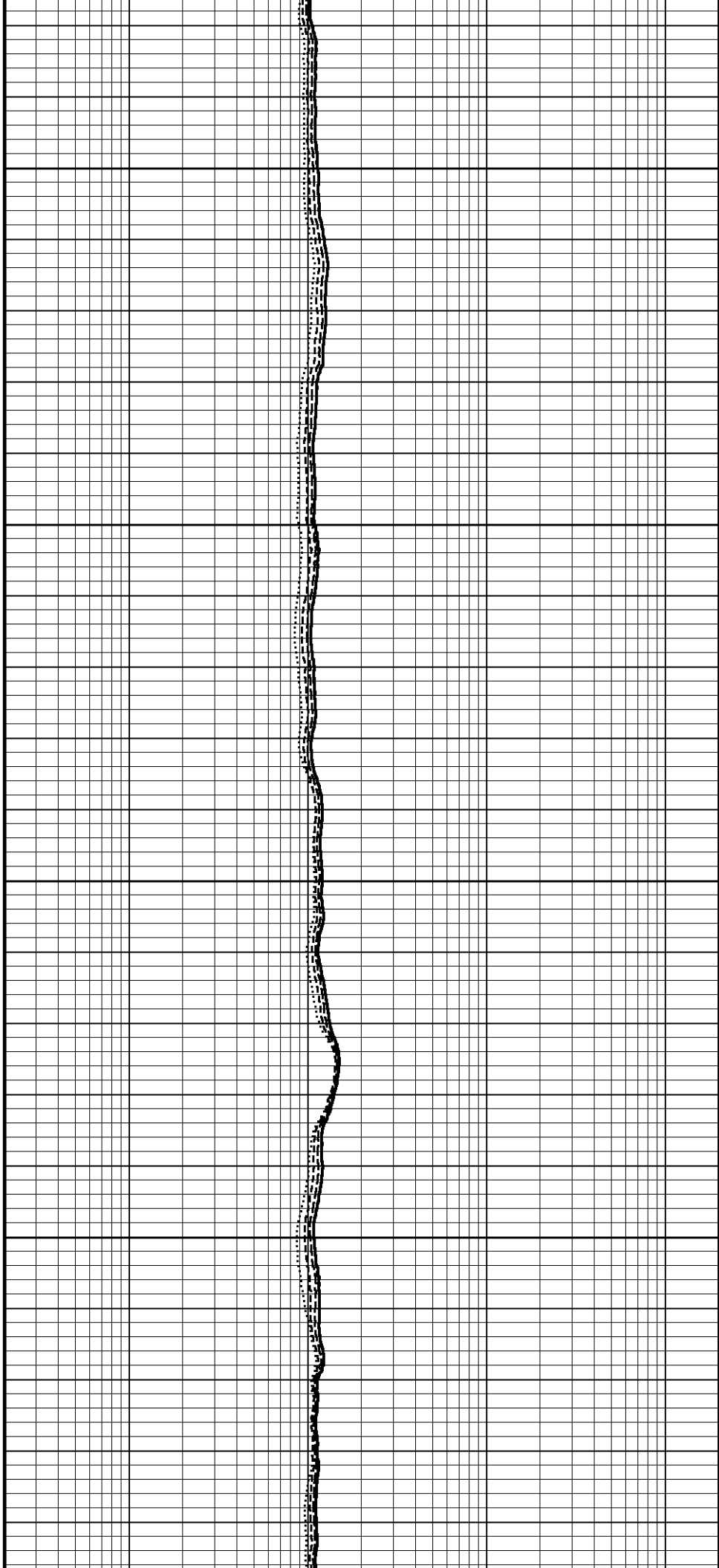
131°

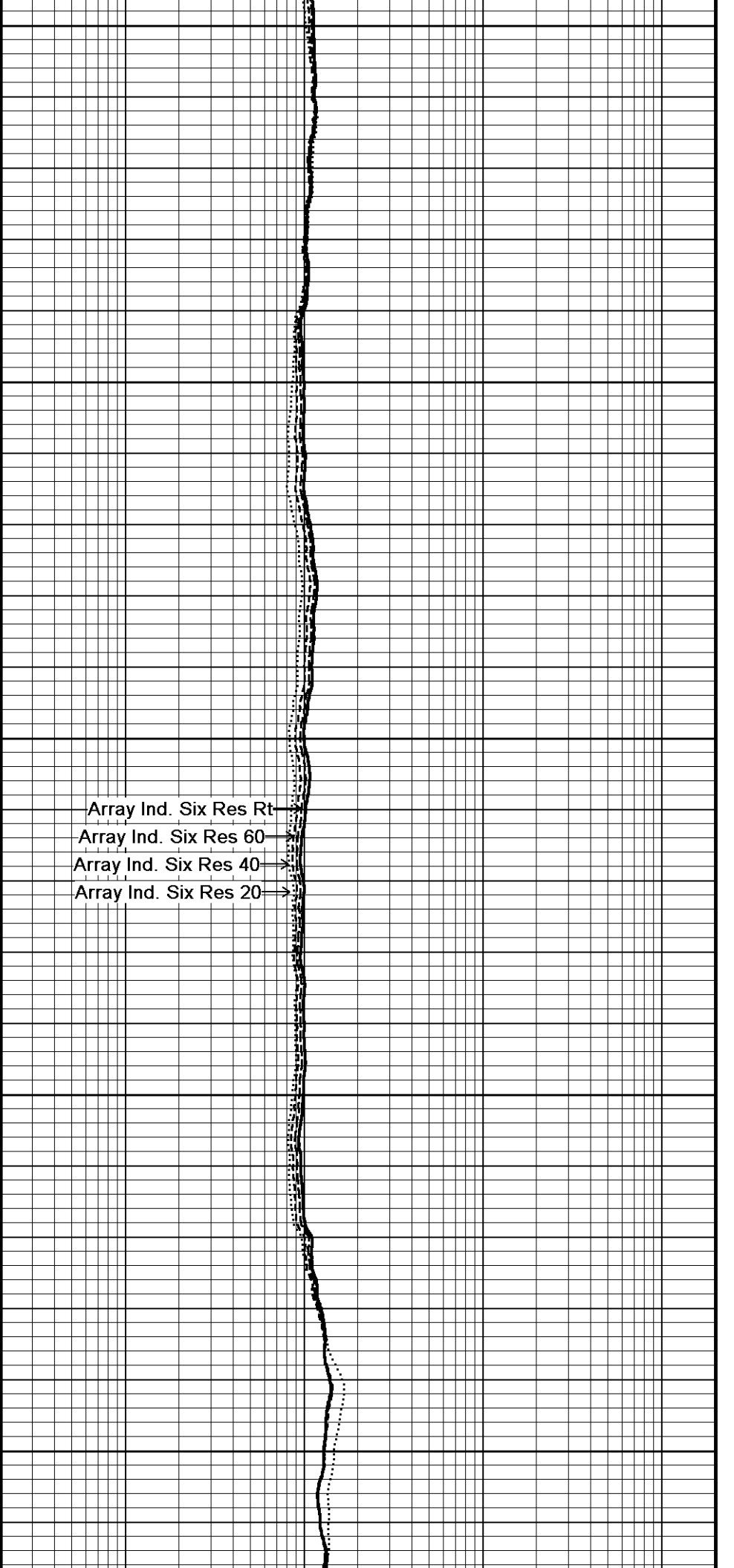
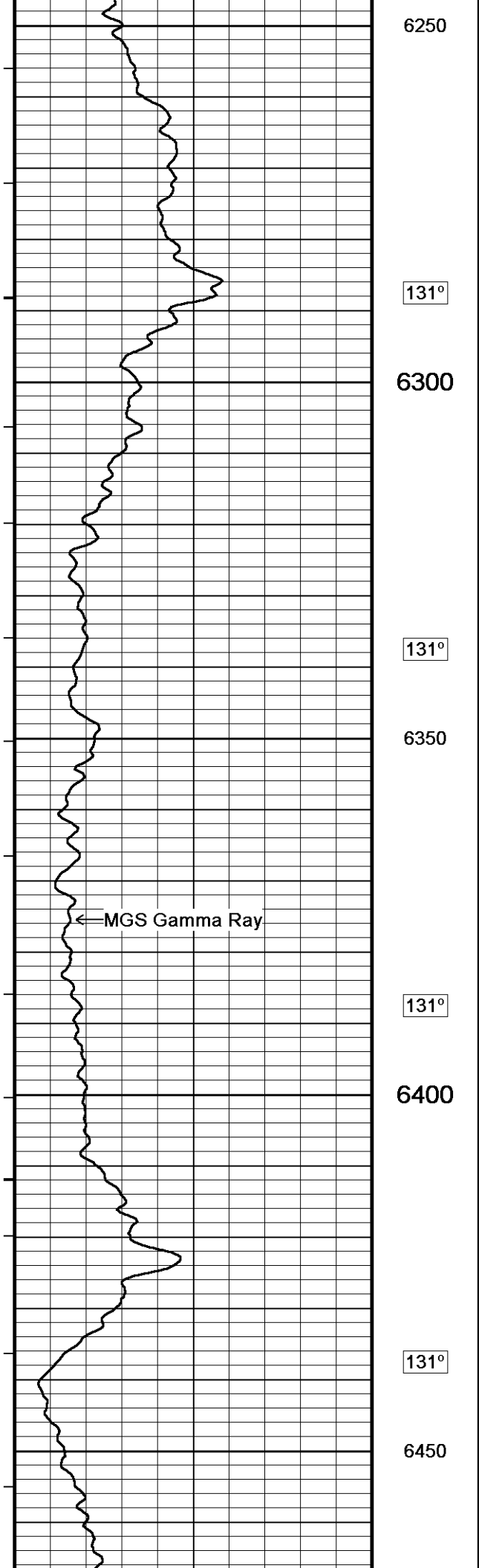
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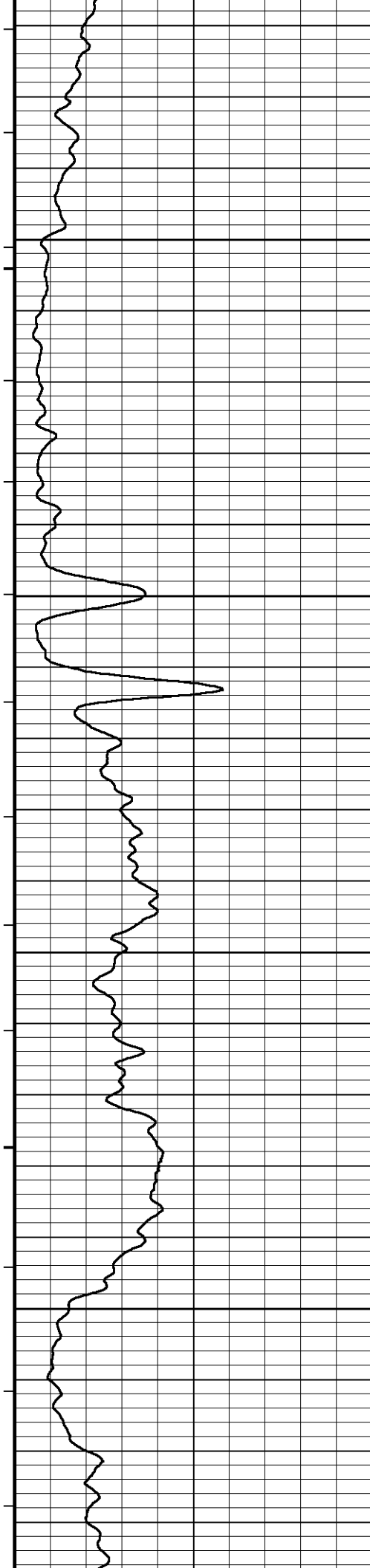
131°

6200

131°







131°

6500

131°

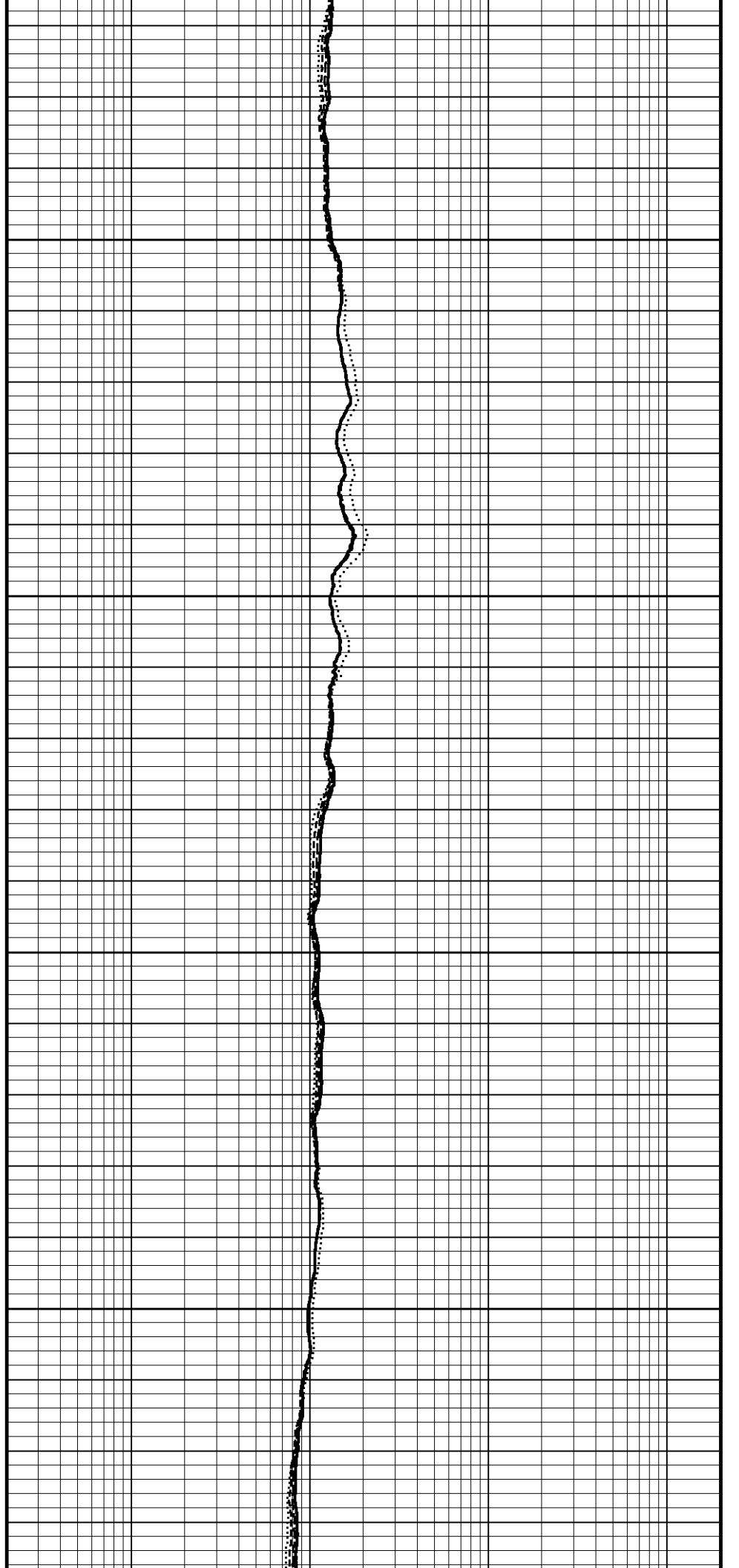
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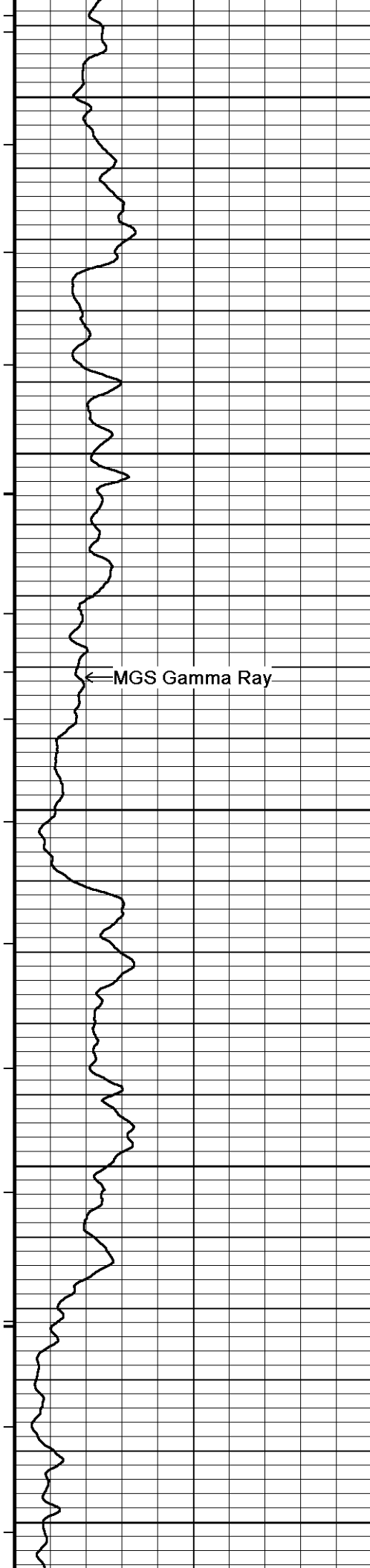
131°

6600

131°

6650





← MGS Gamma Ray

131°

6700

131°

6750

131°

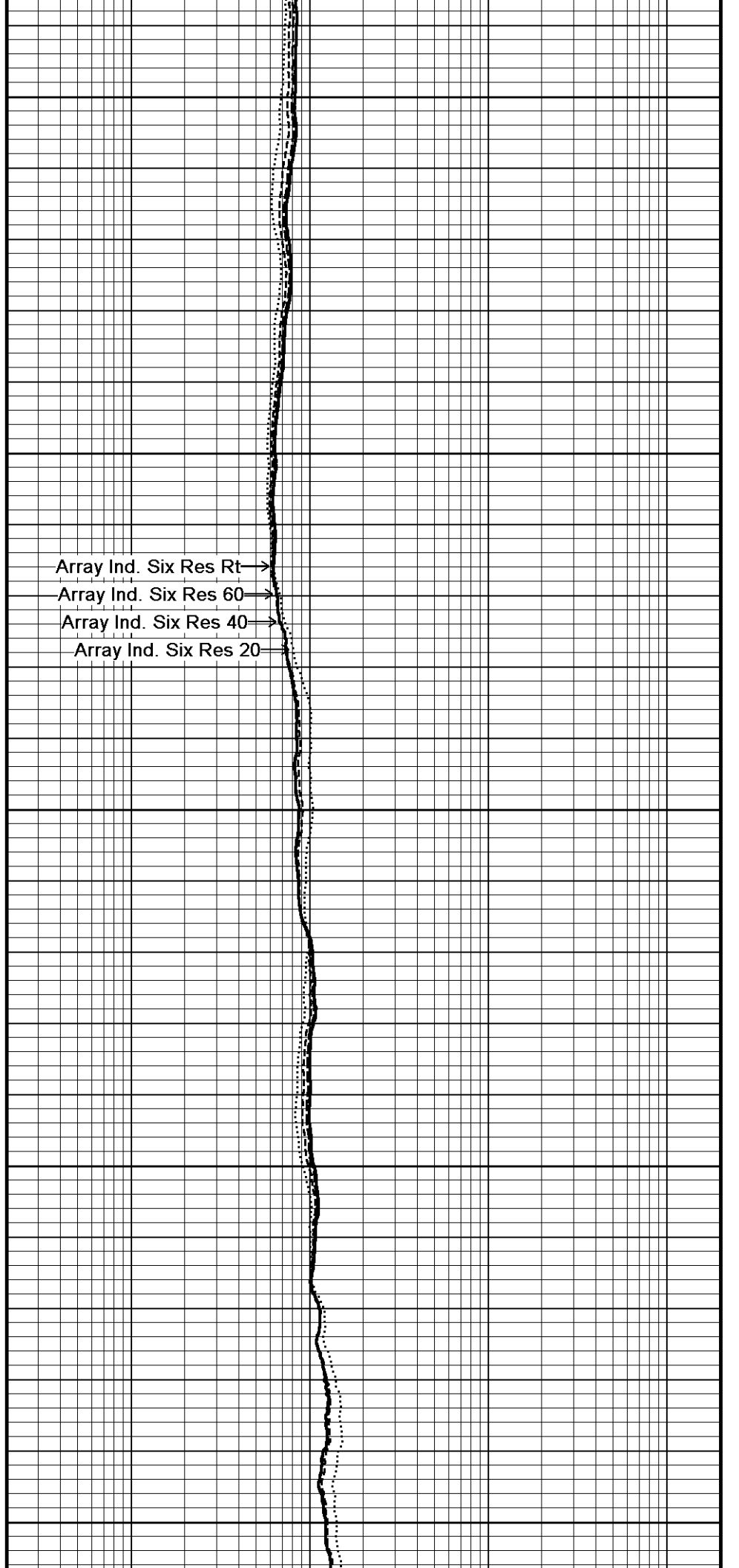
6800

131°

6850

131°

6900

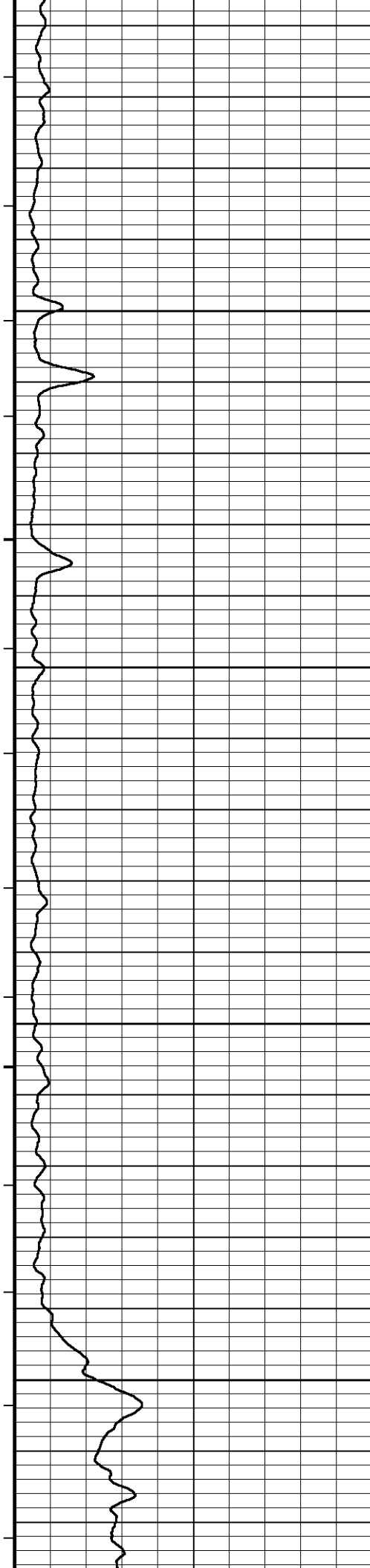


Array Ind. Six Res Rt →

Array Ind. Six Res 60 →

Array Ind. Six Res 40 →

Array Ind. Six Res 20 →



131°

6950

131°

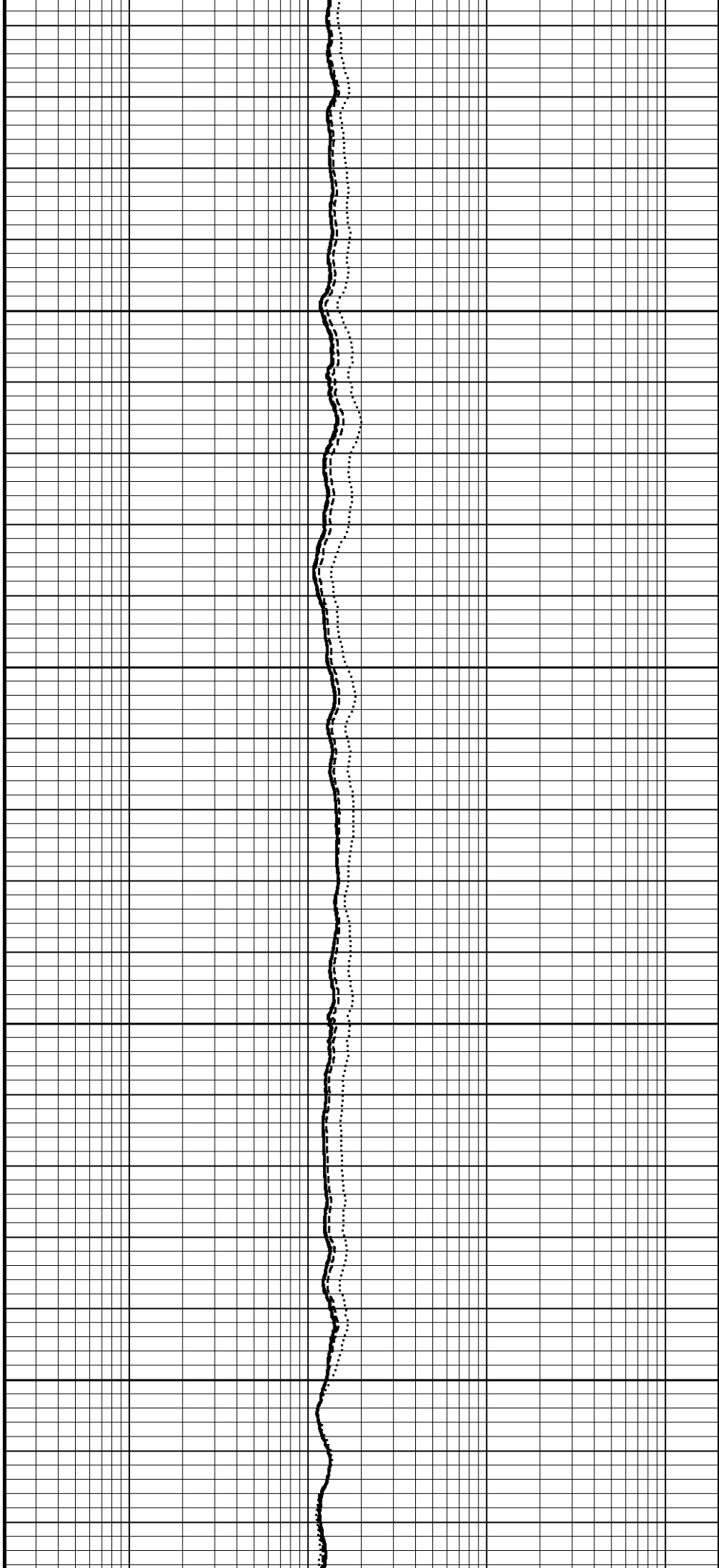
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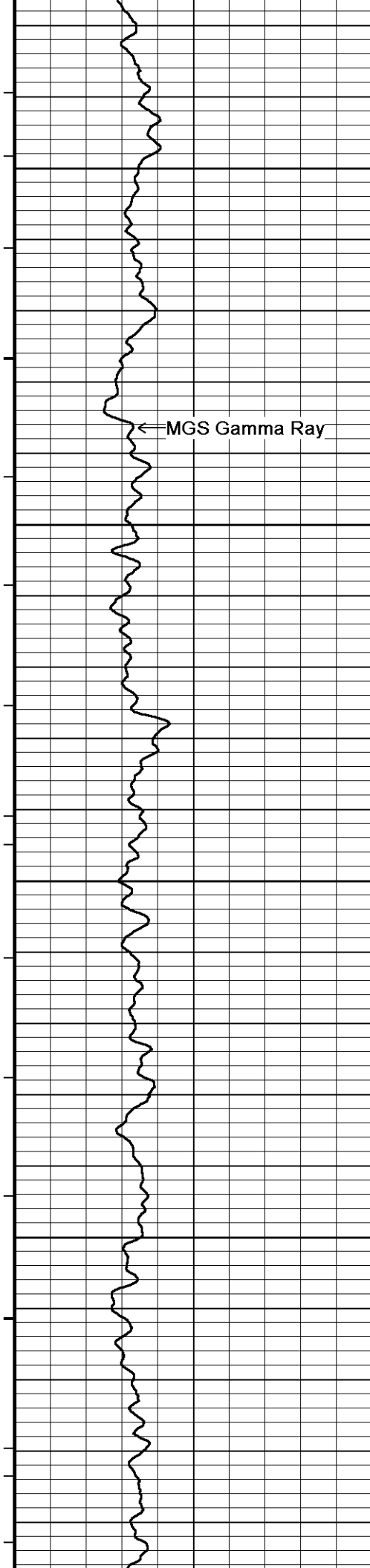
131°

7050

131°

7100





← MGS Gamma Ray

131°

7150

131°

7200

131°

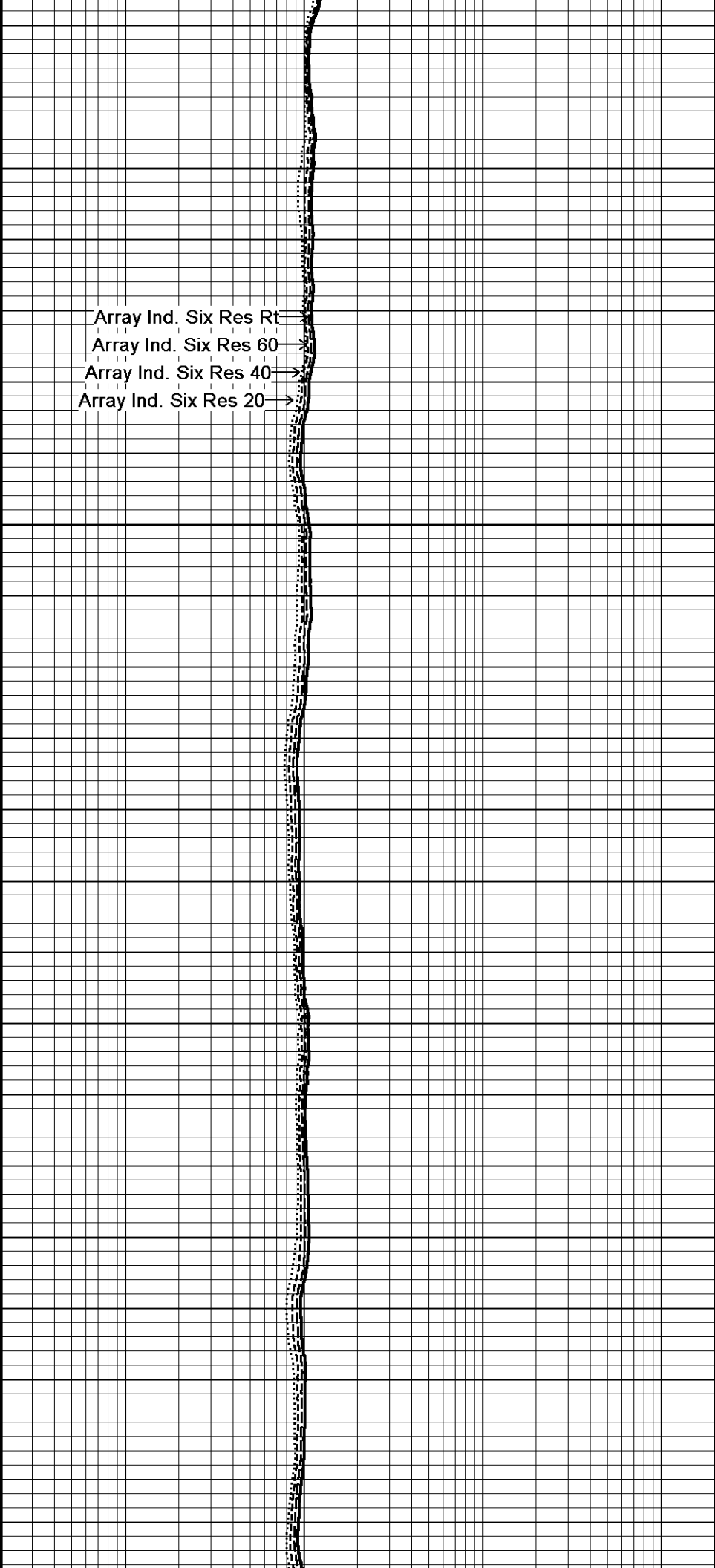
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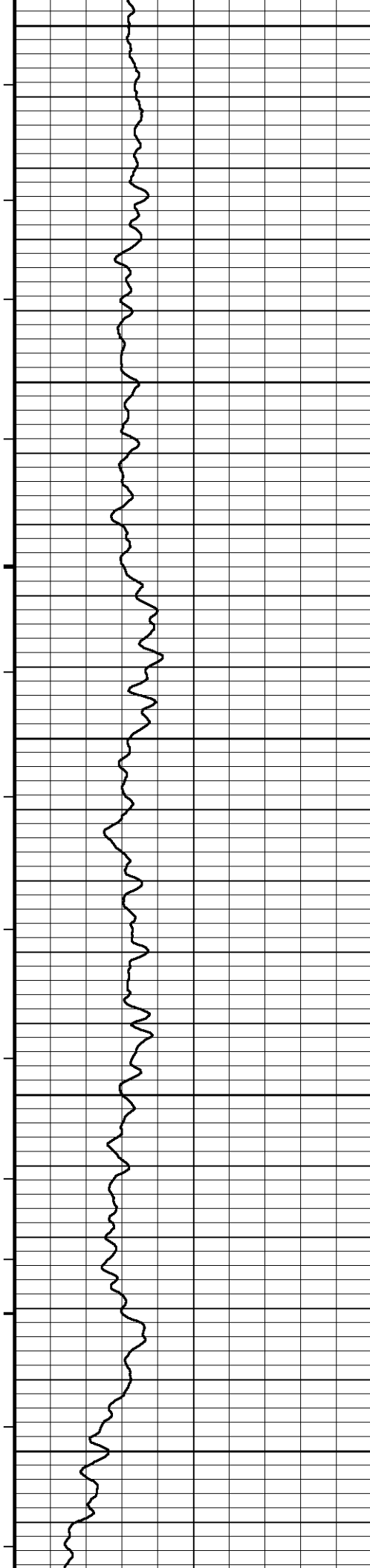
131°

7300

131°

Array Ind. Six Res Rt
Array Ind. Six Res 60
Array Ind. Six Res 40
Array Ind. Six Res 20





7350

131°

7400

131°

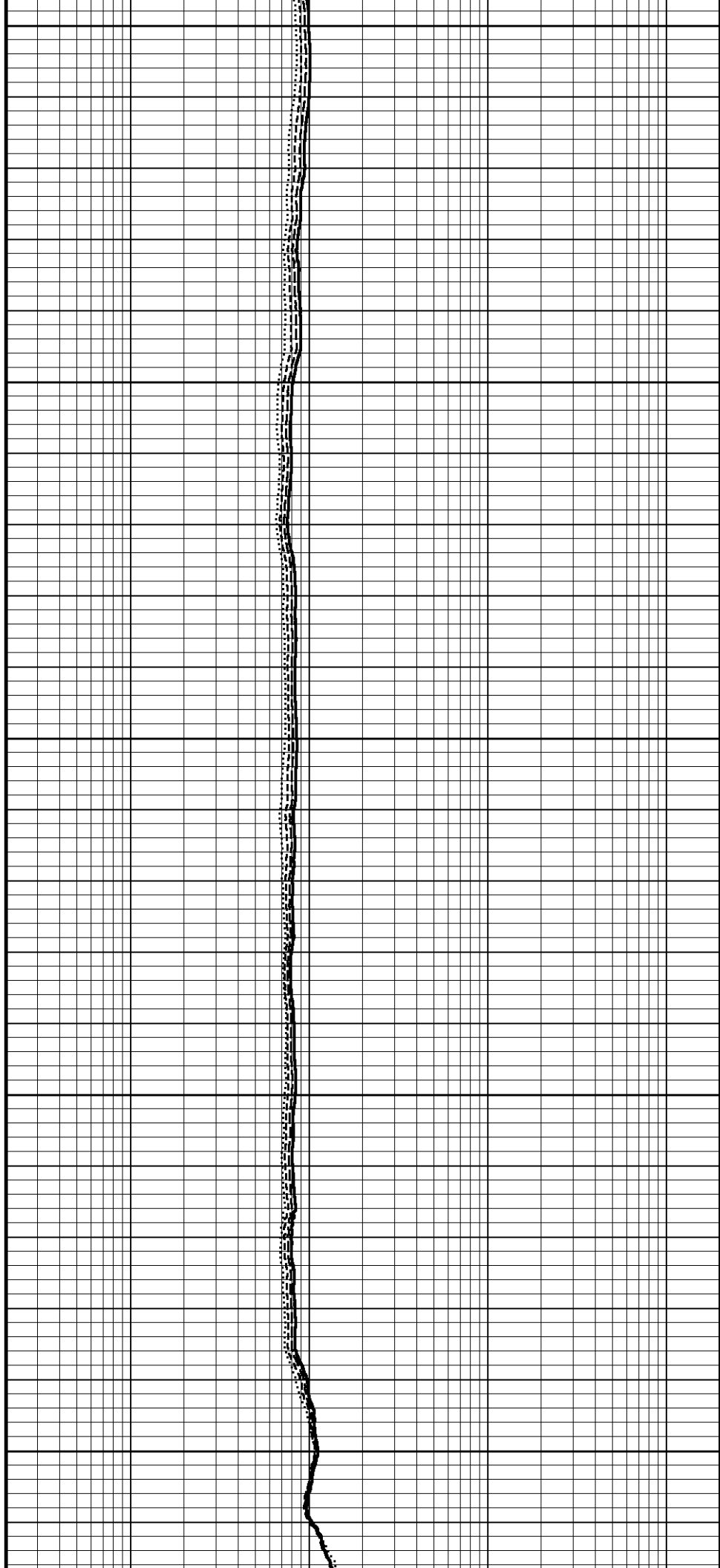
7450

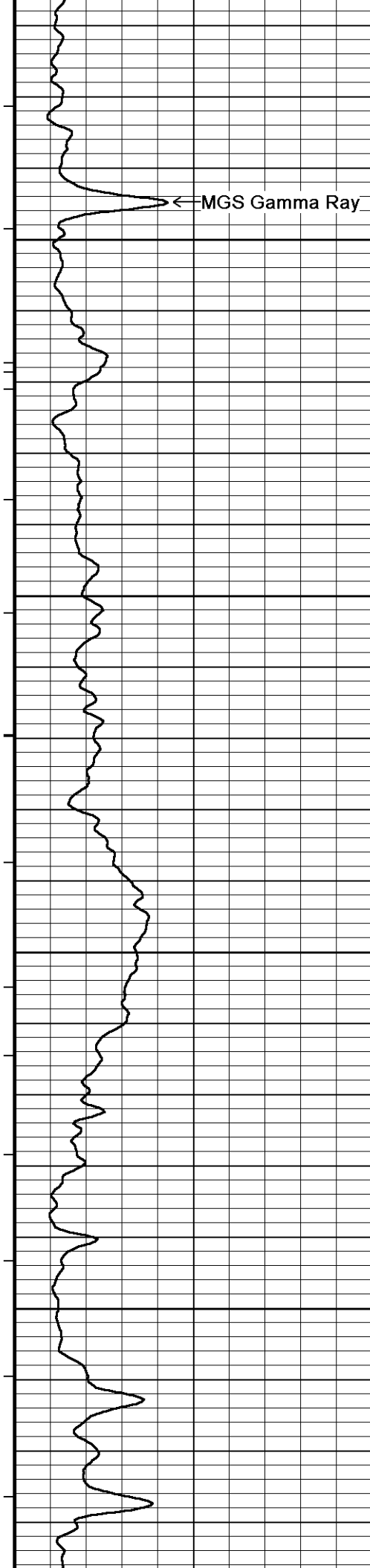
131°

7500

130°

7550





130°

7600

130°

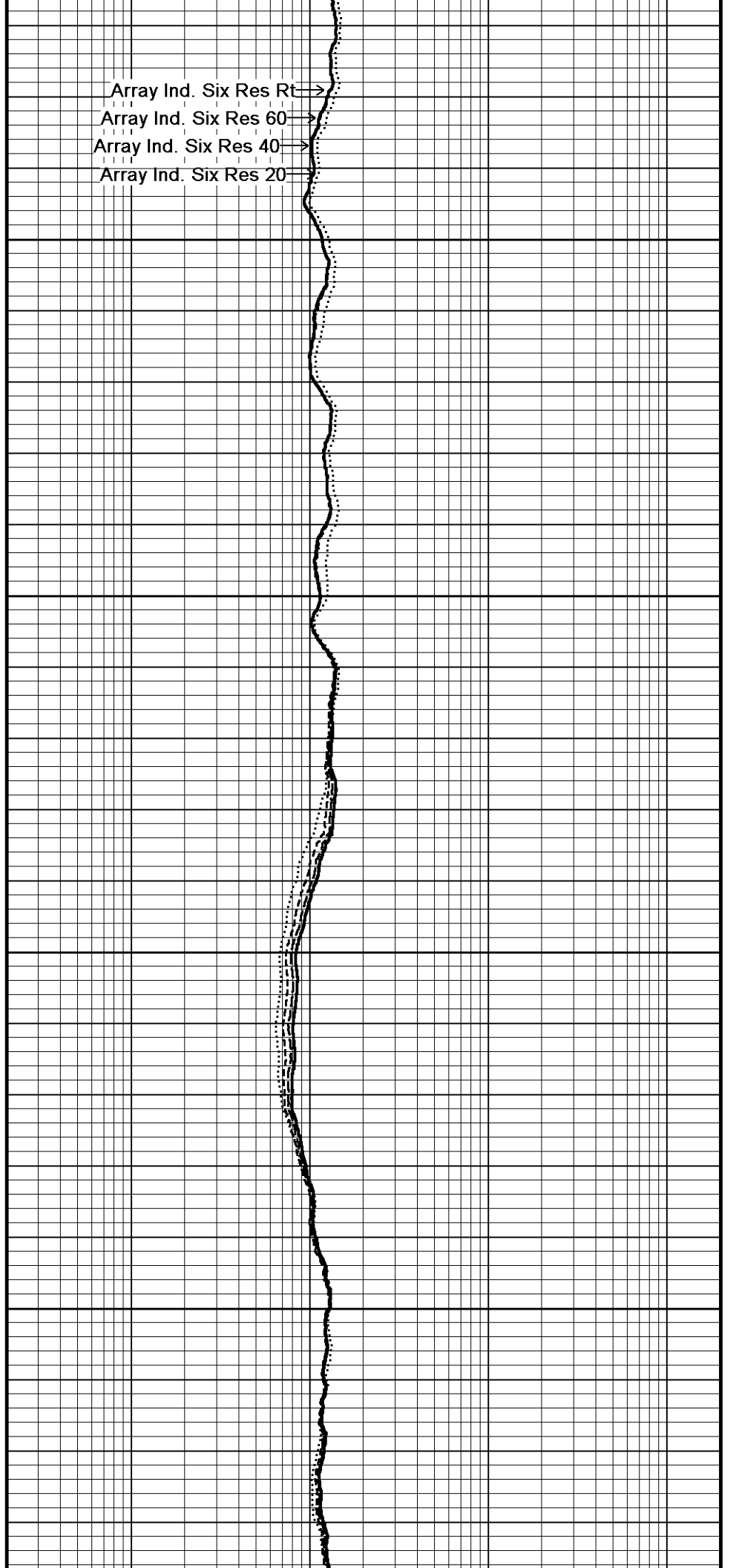
7650

130°

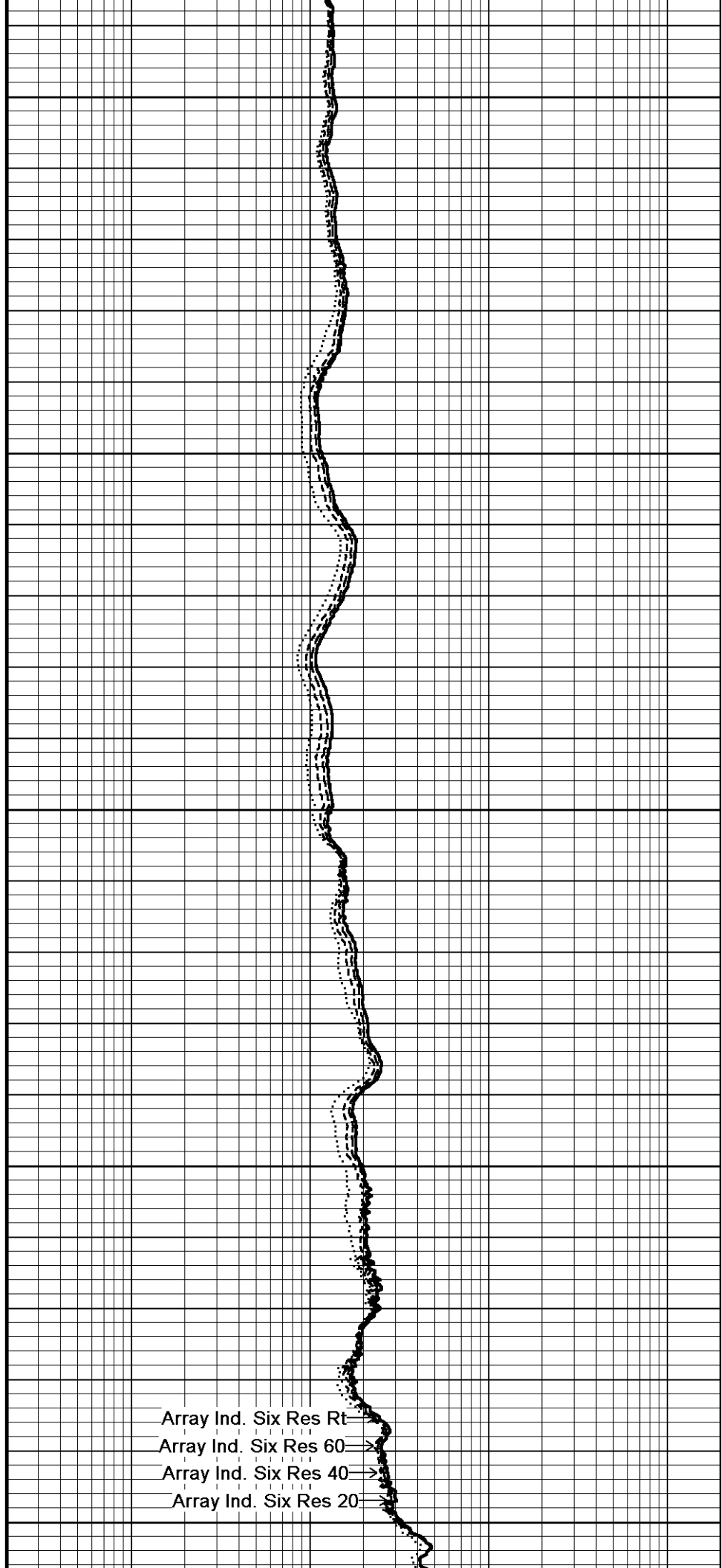
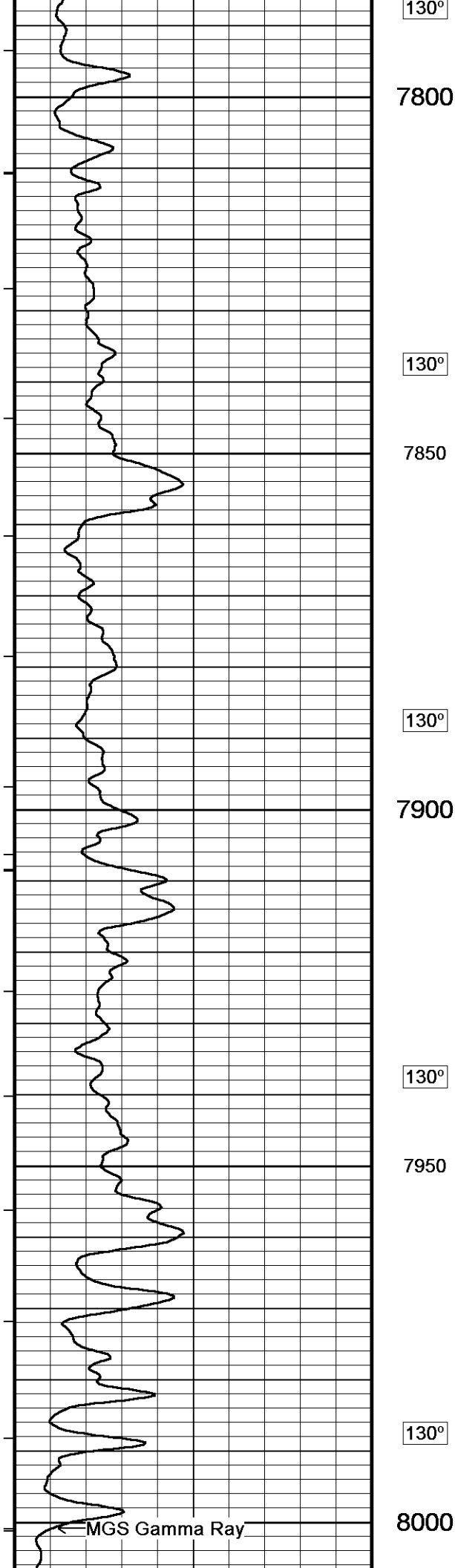
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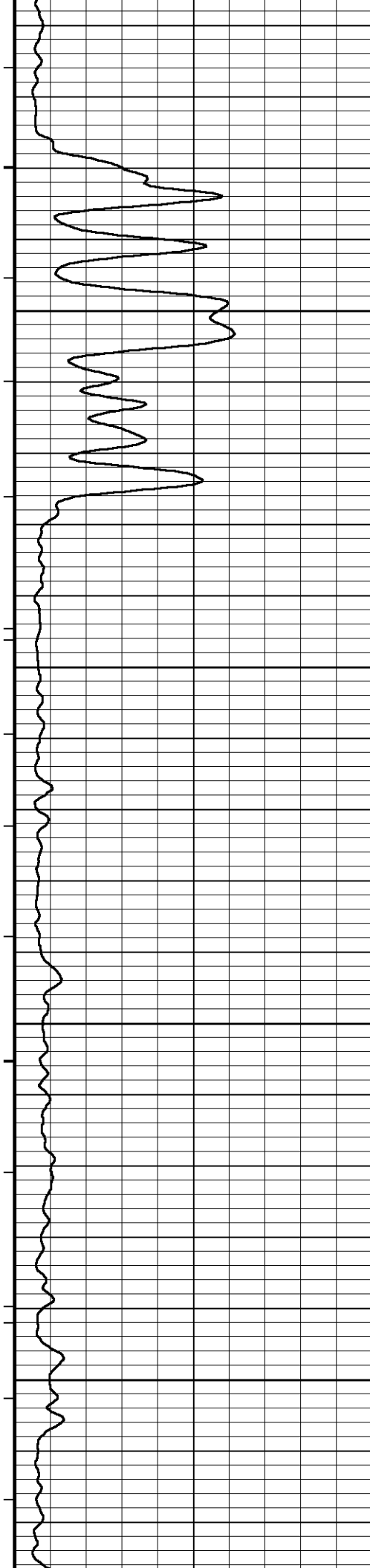
130°

7750



Array Ind. Six Res Rt
Array Ind. Six Res 60
Array Ind. Six Res 40
Array Ind. Six Res 20





130°

8050

130°

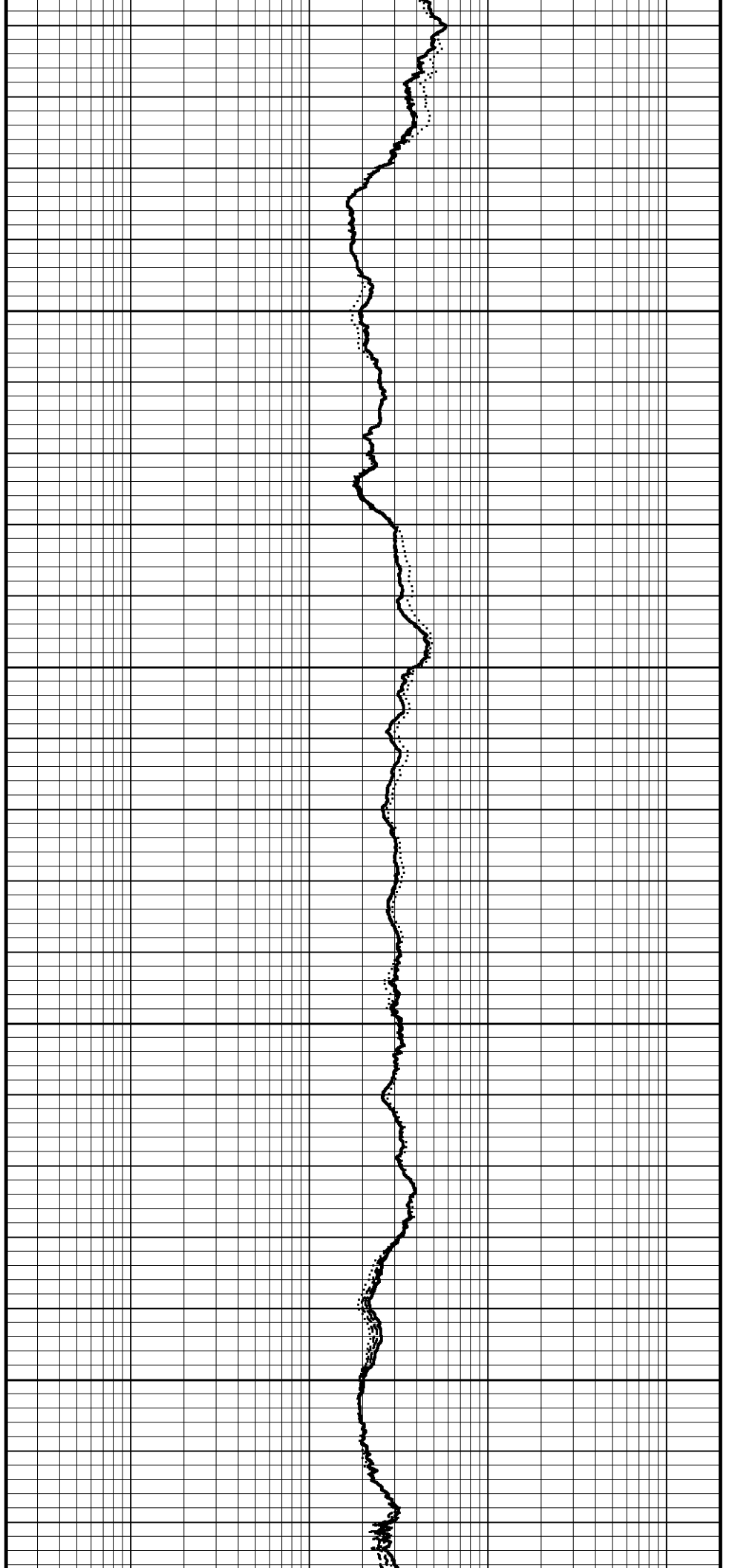
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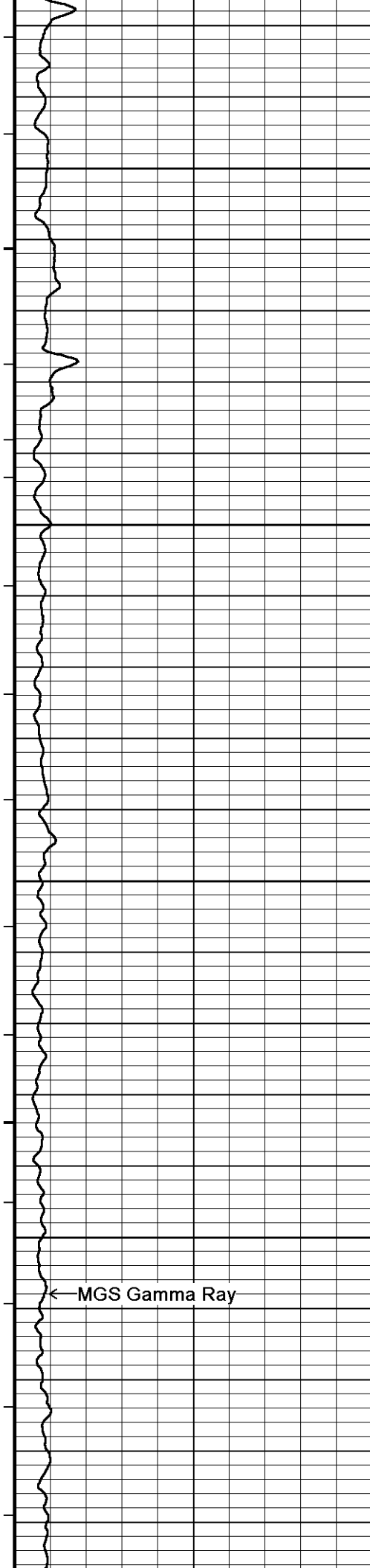
129°

8150

129°

8200





129°

8250

129°

8300

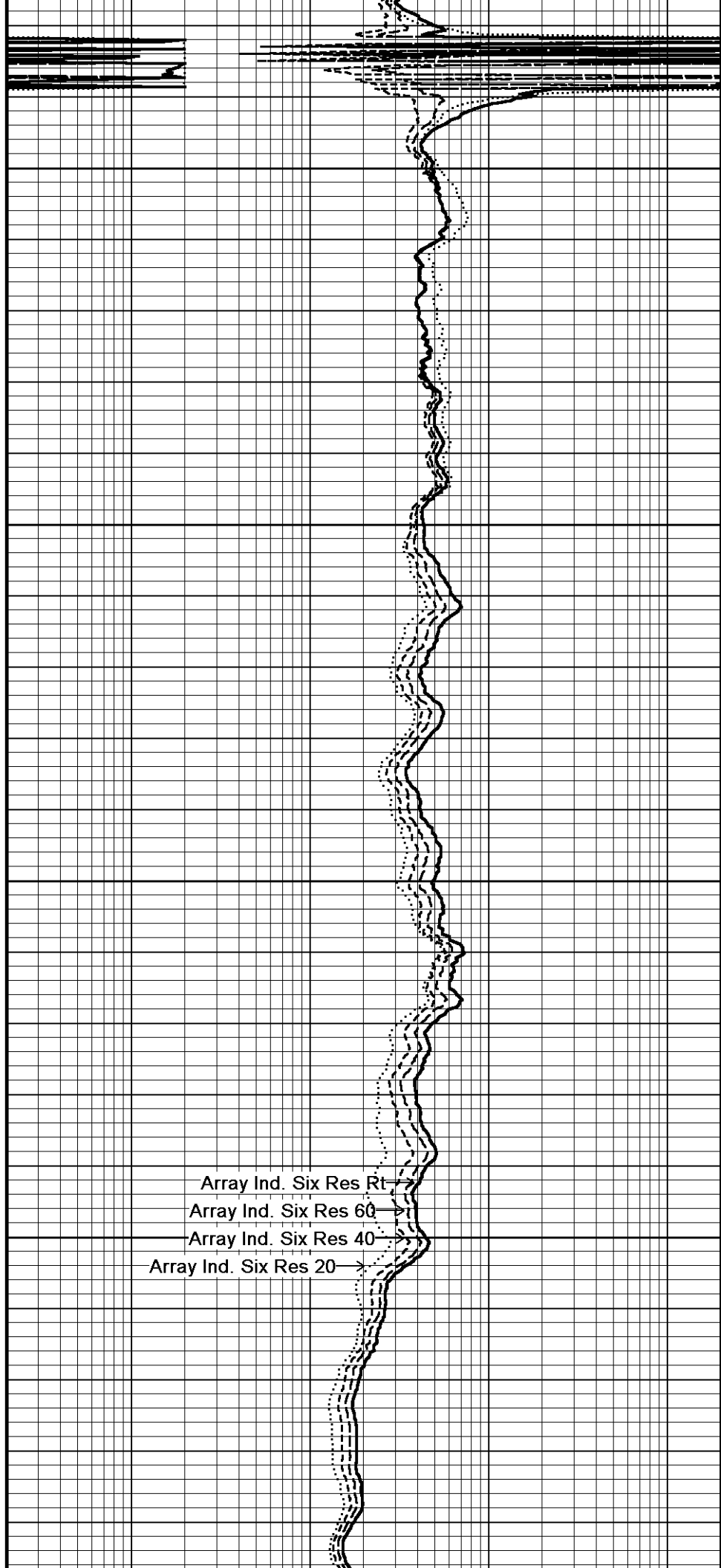
129°

8350

129°

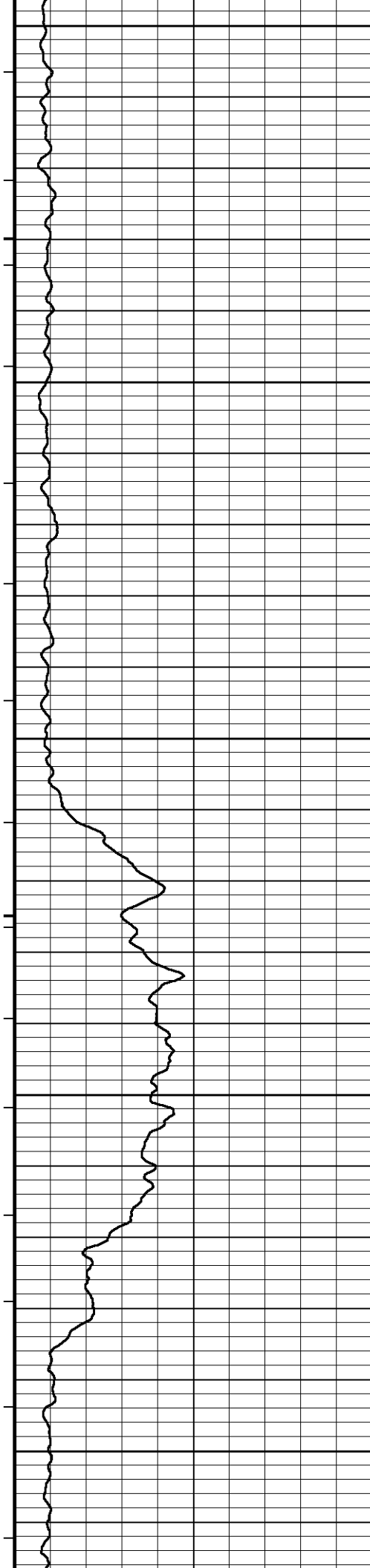
8400

129°



Array Ind. Six Res Rt
Array Ind. Six Res 60
Array Ind. Six Res 40
Array Ind. Six Res 20

← MGS Gamma Ray



8450

129°

8500

128°

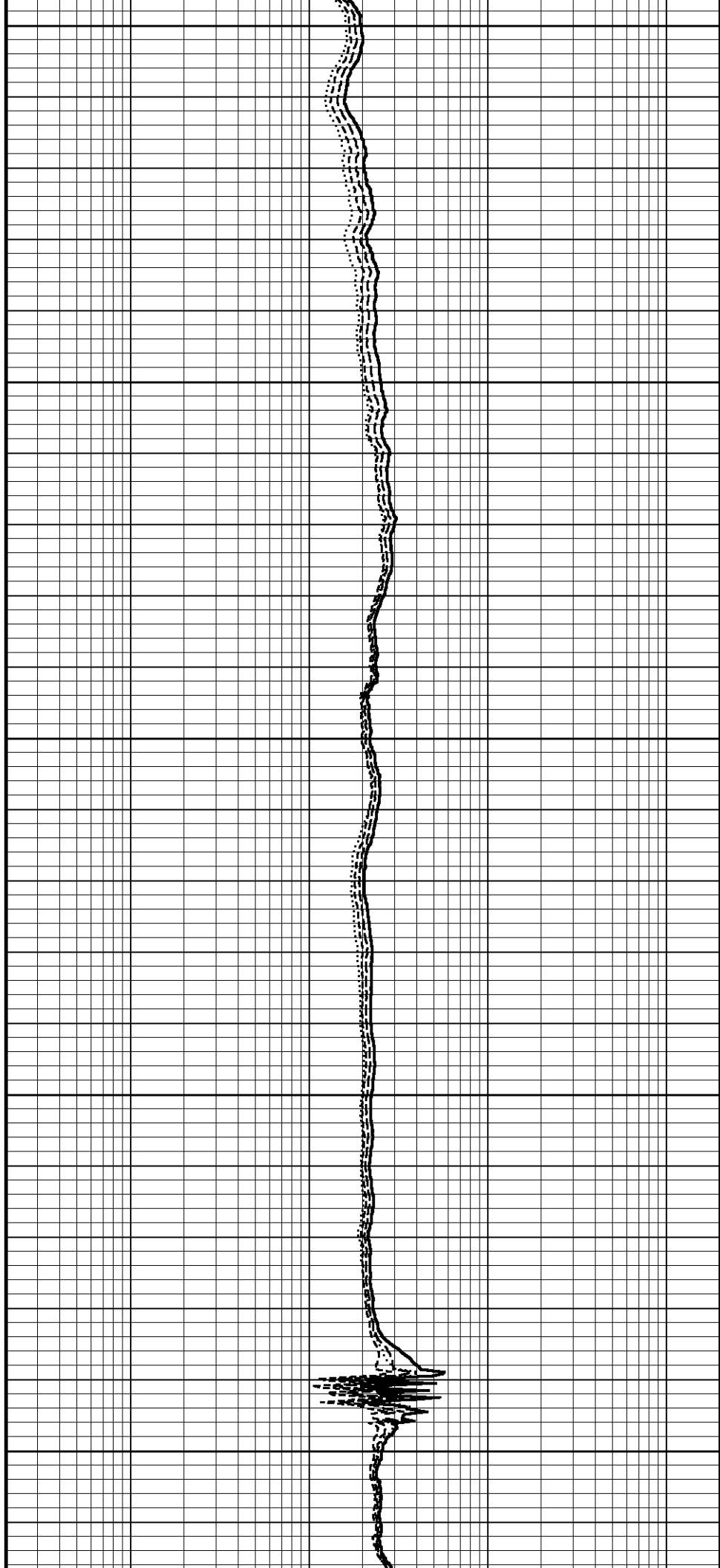
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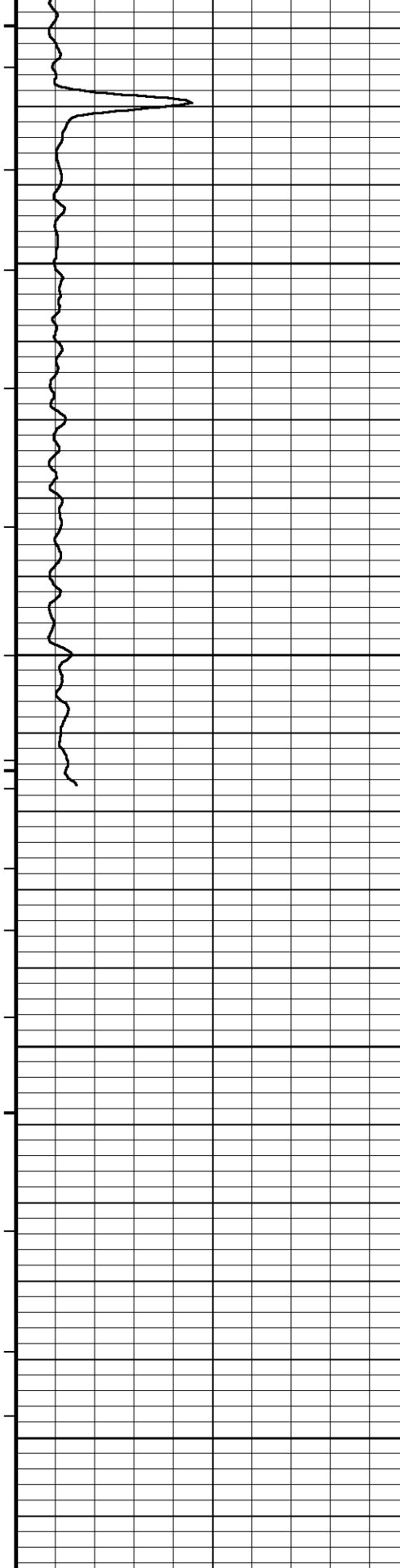
128°

8600

128°

8650





129°

8700

130°

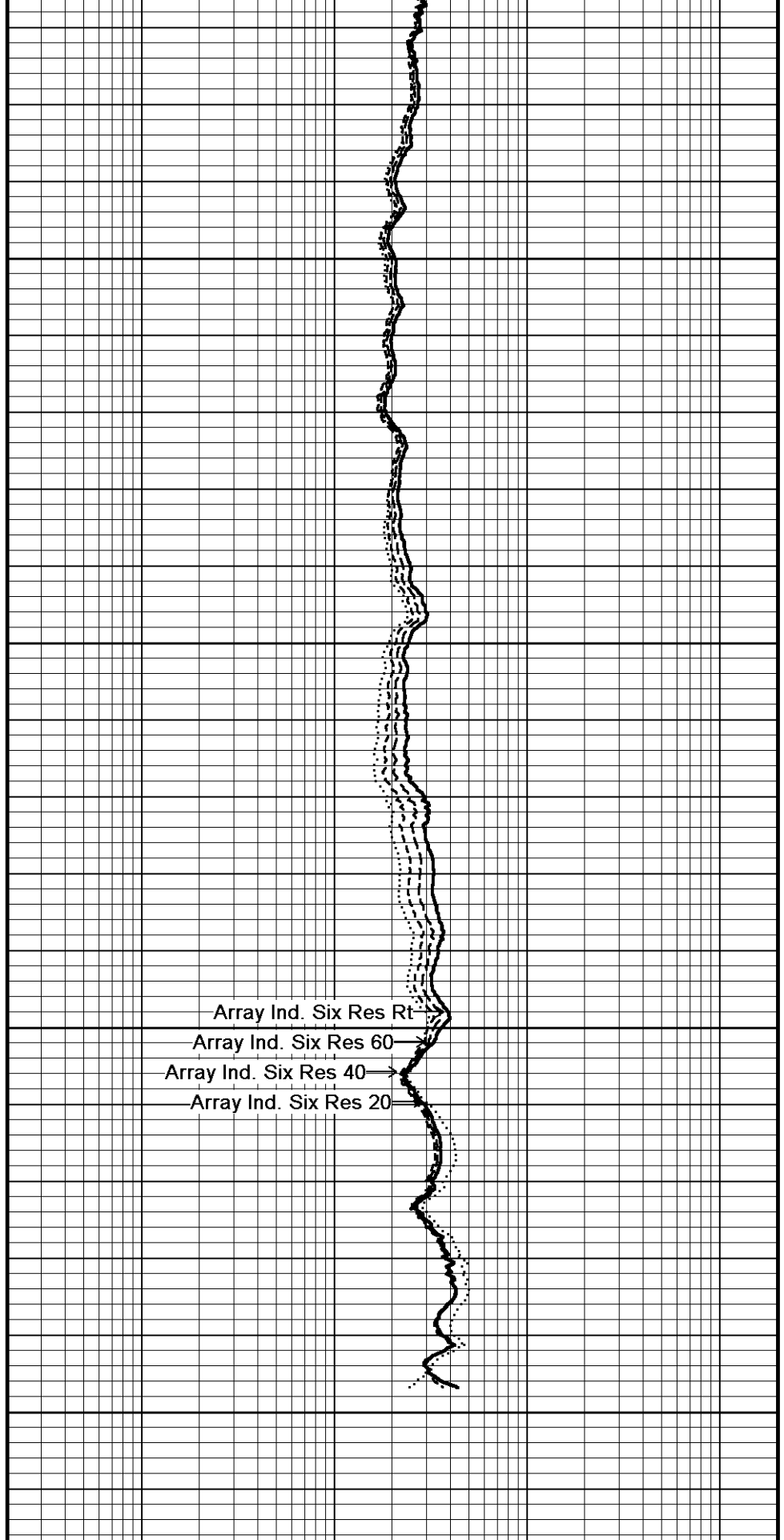
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8800

8850

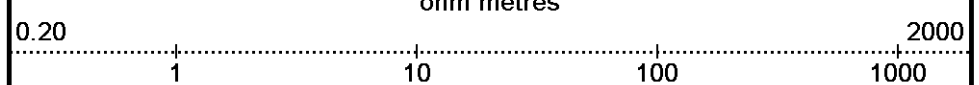
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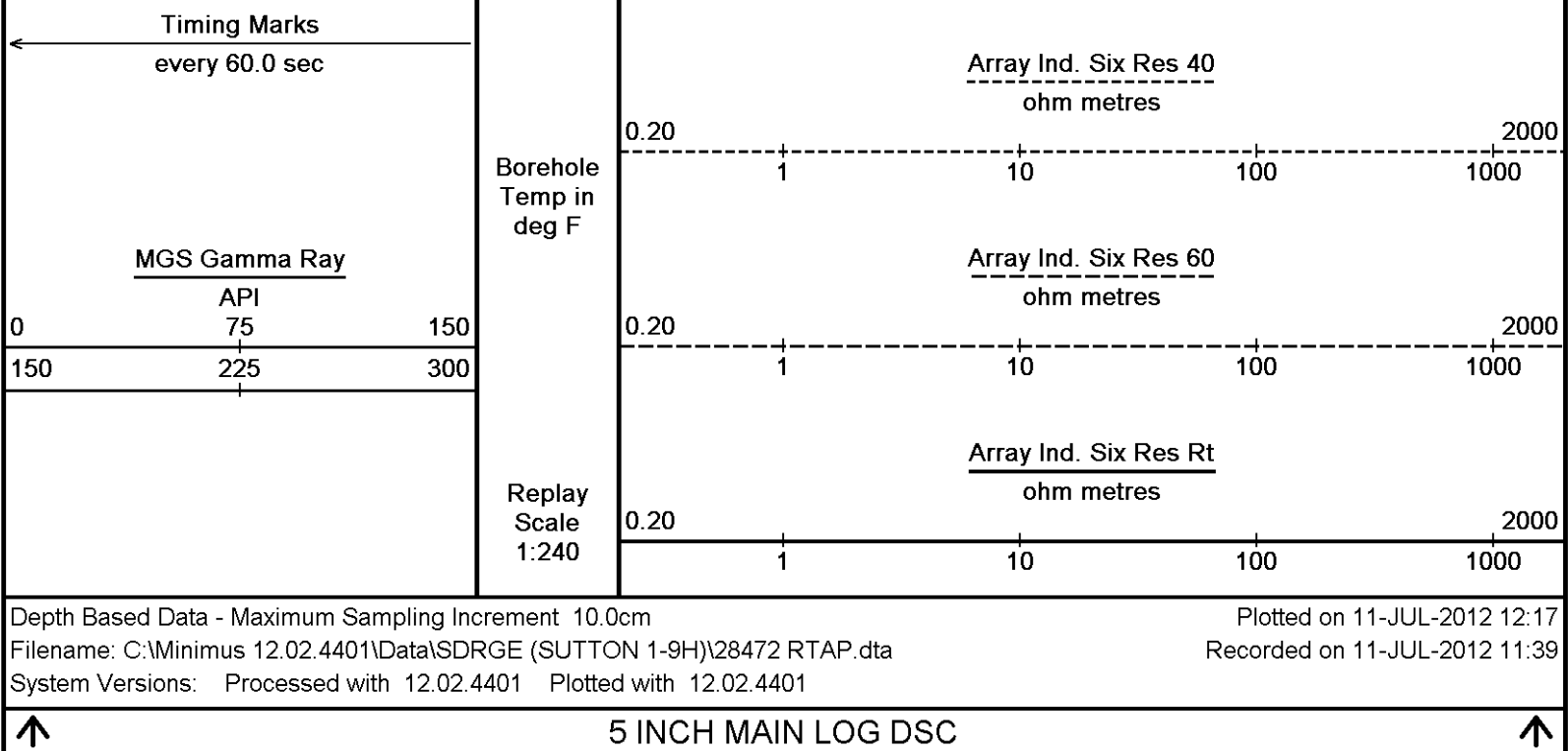
Depth
In
Feet



Array Ind. Six Res Rt
Array Ind. Six Res 60
Array Ind. Six Res 40
Array Ind. Six Res 20

Array Ind. Six Res 20
ohm metres





BEFORE SURVEY CALIBRATION			C:\Minimus 12.02.4401\Data\SDRGE (SUTTON 1-9H)\28472 RTAP.dta
Down-hole Tension Calibration All 000			Field Calibration on 24-FEB-2009 00:00
Reading No	Measured	Calibrated (lbs)	
1	14953.75	0.00	
2	17846.38	1500.00	
General Constants All 000			Last Edited on 11-JUL-2012 09:11
General Parameters			
Mud Resistivity	0.700	ohm-metres	
Mud Resistivity Temperature	96.000	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	Density Caliper		
Rwa Parameters			
Porosity used	Limestone Density Por.		
Resistivity used	Array Ind. Six Res Rt		
RWA Constant A	0.610		
RWA Constant M	2.150		
Down-hole Tension Calibration SMS 0			Field Calibration on 29-MAR-2011 00:00
Reading No	Measured	Calibrated (lbs)	
1	15152.07	0.00	
2	19175.97	2000.00	
Strain Gauge Constants SER-B.A 166			Last Edited on
Atmospheric Pressure	14.70	psi	
Serial Number	0		
Calibration Date	000000000000		
Base Check Date			
Dead Weight Serial Number	0		
Dead Weight Gravitational Correction	1.0		

Temperature	75.0		150.0		250.0		350.0	degrees F
Pressure psia	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.
0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10000.0	0.000		0.000		0.000		0.000	

Gamma Calibration MGS-C.J 134				Field Calibration on 09-JUL-2012 13:41				
	Measured		Calibrated (API)					
Background	50		35					
Calibrator (Gross)	1848		1296					
Calibrator (Net)	1798		1261					

Gamma Constants MGS-C.J 134			Last Edited on 11-JUL-2012 09:09		
Gamma Calibrator Number	46 blue				
Mud Density	1.11	gm/cc			
Caliper Source for Processing	Density Caliper				
Tool Position	Eccentred				
Concentration of KCl	0.00	kppm			

High Resolution Temperature Constants MGS-C.J 134				Last Edited on				
Pre-filter Length	11							

Neutron Calibration MDN-B.J 390				Base Calibration on 03-JUL-2012 15:10 Field Check on 09-JUL-2012 13:27			
Base Calibration							
	Measured		Calibrated (cps)				
	Near	Far	Near	Far			
	2974	91	3714	110			
Ratio	32.653		33.764				
Field Calibrator at Base				Calibrated (cps)			
			1236	1843			
Ratio			0.671				
Field Check				Calibrated (cps)			
			1296	1889			
Ratio			0.687				

Neutron Constants MDN-B.J 390				Last Edited on 04-JUL-2012 21:05	
Neutron Source Id	P31112B				
Neutron Jig Number	5917NC				
Epithermal Neutron	No				
Caliper Source for Processing	Density Caliper				
Stand-off	0.00		inches		
Mud Density	1.02		gm/cc		
Limestone Sigma	7.10		cu		
Sandstone Sigma	4.26		cu		
Dolomite Sigma	4.70		cu		
Formation Pressure Source	Constant Value				
Formation Pressure	1.80		kpsi		
Temperature Source	MGS External Temperature				
Temperature	N/A		degrees F		
Mud Salinity	15.61		kppm		
Formation Fluid Salinity Source	Constant Value				
Formation Fluid Salinity	140.00		kppm		
Barite Mud Correction	Not Applied				
Salinity Correction	Not Applied				

Magnetometer Parameters MIE-A.A 209								
Date Of Last Magnetometer Calibration	26-NOV-2010,12:01							
	X Magnetometer		Y Magnetometer		Z Magnetometer			
Slope	-1.000000		-1.001951		-1.007691			
Offset	0.007782		-0.016800		0.011730			

Magnetometer Calibrator Number 000

Accelerometer Parameters MIE-A.A 209

Date Of Last Accelerometer Calibration 25-NOV-2010,12:19

	X Accelerometer	Y Accelerometer	Z Accelerometer
Slope	-1.113214	-1.109979	-1.101653
Offset	0.005467	0.005399	0.010368

Accelerometer Constants MIE-A.A 209

Last Edited on 25-NOV-2010 12:25

Accelerometer Calibrator Number 000

Accelerometer Temperature Characterisation

X Accelerometer

Serial Number 826

Calibration Date 01-Jan-1998

	B0	B1	B2	B3
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Bias(g)	0.00000e+000	2.32377e-005	-1.87334e-008	9.07324e-011
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	SF0	SF1	SF2	SF3
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Scale Factor(mA/g)	3.00000e+000	2.71389e-004	4.55326e-007	4.58364e-010
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Y Accelerometer

Serial Number 617

Calibration Date 11-May-2008

	B0	B1	B2	B3
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Bias(g)	0.00000e+000	1.76675e-005	6.93464e-010	2.98691e-011
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	SF0	SF1	SF2	SF3
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Scale Factor(mA/g)	3.00000e+000	2.56882e-004	5.72598e-007	2.37496e-010
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Z Accelerometer

Serial Number 844

Calibration Date 01-Jan-1998

	B0	B1	B2	B3
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Bias(g)	0.00000e+000	-1.21769e-005	-1.46867e-008	-6.44015e-011
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	SF0	SF1	SF2	SF3
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Scale Factor(mA/g)	3.00000e+000	2.73539e-004	4.65657e-007	2.88996e-010
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Caliper Calibration MIE-A.A 209

Base Calibration on 25-NOV-2010 07:56

Field Calibration on

Base Calibration

Reading No	Pads 1-5 Meas.	Pads 3-7 Meas.	Calibrator Size (in)
1	26963	26793	5.96
2	36961	37191	7.97
3	46401	44863	9.84
4	58072	58409	11.91
5	0	0	0.00

Reading No	Pad 2 Meas.	Pad 4 Meas.	Pad 6 Meas.	Pad 8 Meas.	Calibrator Size (in)
1	24829	25688	24937	24692	5.96
2	33487	34230	33721	33433	7.97
3	40559	41186	42962	42856	9.84
4	51771	52426	51758	51697	11.91
5	0	0	0	0	0.00

Field Calibration

Measured	Measured	Actual
Pads 1-5 Caliper(in)	Pads 3-7 Caliper(in)	Caliper(in)
0.00	0.00	0.00

Measured	Measured	Measured	Measured	Actual
Pad 2 Caliper(in)	Pad 4 Caliper(in)	Pad 6 Caliper(in)	Pad 8 Caliper(in)	Caliper(in)
0.00	0.00	0.00	0.00	0.00

Caliper Constants MIE-A.A 209

Last Edited on 25-NOV-2010 07:57

Caliper Difference for BRKT 0.120 inches

Navigation Constants MIE-A.A 209

Last Edited on

Magnetic Declination 0.00 degrees East

Pad 1	20/20 Buttons Verified	Pad 5	17/20 Buttons Verified
Pad 2	24/24 Buttons Verified	Pad 6	19/24 Buttons Verified
Pad 3	13/20 Buttons Verified	Pad 7	15/20 Buttons Verified
Pad 4	22/24 Buttons Verified	Pad 8	21/24 Buttons Verified

Compact Micro Imager Constants MIE-A.A 209

Last Edited on 19-JUN-2012 12:50

Sonde Configuration	Imager Mode	degrees
Arm-Pad Kit	Normal Pads (12.25 in)	
Centre Pad 1 Rotational Offset	0.00	
Image/Borehole Ovality Reference	Azimuth of Pad 1	degrees
Non Active Buttons	Omit	feet
Search Angle	0.00	feet
Correlation Interval	3.28	mAmp
Correlation Step	1.64	mAmp
Current Offset	0.0000	
Squasher Start	11111111.0000	
Image Processing	11111111	

High Resolution Temperature Calibration MAI-B.J 389

Field Calibration on 19-OCT-2011 09:44

	Measured	Calibrated(Deg F)
Lower	10.00	50.00
Upper	100.00	212.00

High Resolution Temperature Constants MAI-B.J 389

Last Edited on

Pre-filter Length	11
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Induction Calibration MAI-B.J 389

Base Calibration on 28-JUN-2012 13:12

Field Check on 09-JUL-2012 12:40

Base Calibration					
Test Loop Calibration		Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High	
1	16.7	465.5	9.3	966.2	
2	6.4	384.0	7.6	821.4	
3	3.1	258.9	5.2	566.0	
4	1.8	133.7	2.6	279.2	
Array Temperature		78.1	Deg F		
Channel		Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High	
1	0.0	0.0	15.4	3894.9	
2	0.0	0.0	29.9	3505.7	
3	0.0	0.0	29.8	3046.6	
4	0.0	0.0	19.9	2061.4	
Deep	0.0	0.0	19.4	2011.2	
Medium	0.0	0.0	42.8	4000.0	
Shallow	0.0	0.0	42.9	5147.6	
Array Temperature		0.0	89.4	Deg F	

Induction Constants MAI-B.J 389

Last Edited on 11-JUL-2012 09:10

Induction Model	RtAP-WBM	
Caliper for Borehole Corr.	Density Caliper	
Hole Size for Borehole Correction	N/A	inches
Tool Centred	No	
Stand-off Type	Fins	
Stand-off	0.50	inches
Number of Fins on Stand-off	6.0000	
Stand-off Fin Angle	60.00	degrees
Stand-off Fin Width	0.5000	inches
Borehole Corr. Rm Source	Temperature Corr	
Temp. for Rm Corr.	Borehole Temp. Unfilt.	
Squasher Start	0.0020	mhos/metre
Squasher Offset	N/A	mhos/metre

Borehole Normalisation

DRM1	0.0000	DRC1	0.0000
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DRM1	0.0000	DRC1	0.0000
DRM2	0.0000	DRC2	0.0000
MRM1	0.0000	MRC1	0.0000
MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000

Calibration Site Corrections

Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre

Apparent Porosity and Water Saturation Constants

Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	100.00	percent
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m
Source for Rt	0.00	
Source for Rxo	0.00	

Caliper Calibration MPD-C.J 393

Base Calibration on 03-JUL-2012 15:02

Field Calibration on 09-JUL-2012 13:30

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	16224	4.01
2	24448	5.96
3	32976	7.98
4	41152	9.86
5	50112	11.88
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.94	5.98

Photo Density Calibration MPD-C.J 393

Base Calibration on 03-JUL-2012 14:33

Field Check on 09-JUL-2012 12:46

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	54678	26470	59869	31110
Reference 2	23479	2726	24557	2522

Field Check at Base

1229.7	1344.0
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Field Check

1228.6	1347.5
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PE Calibration

Base Calibration	WS	Measured		Calibrated Ratio
		WH	Ratio	
Background	227	1110		
Reference 1	22306	54489	0.414	0.369
Reference 2	6605	23344	0.287	0.271

Field Check at Base

227.5	1110.5
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Field Check

225.2	1104.7
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Density Constants MPD-C.J 393

Last Edited on 11-JUL-2012 09:09

Density Source Id	p21137b
Nylon Calibrator Number	633
Aluminium Calibrator Number	633
Density Shoe Profile	4 inch
Caliper Source for Processing	Density Caliper

PE Correction to Density	Not Applied	
Mud Density	1.11	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	

Matrix Density (gm/cc)	Depth (ft)
2.71	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

DOWNHOLE EQUIPMENT

C:\Minimus 12.02.4401\Data\SDRGE (SUTTON 1-9H)\28472 RTAP.dta

Shuttle Mechanical Release (SMR A)

SMR-A 154 LG: 8.53 ft WT: 77.2 lb OD: 2.52 in

Shuttle Electrical Release

SER-B.A 166 LG: 6.90 ft WT: 50.7 lb OD: 2.24 in

MBS-G.A 200v Compact Battery Sub

MBS-G.A 119 LG: 17.06 ft WT: 123.5 lb OD: 2.24 in

SKJ-D Compact Knuckle Joint

SKJ-D 30 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

spacer sub

MLK-A 4 LG: 14.22 ft WT: 30.9 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint

SKJ-E.B 480 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Memory Sub E.B

MMS-E.B 175 LG: 5.20 ft WT: 37.5 lb OD: 2.24 in

MIS-E.B Compact Inline Standoff sub

MIS-E.B 577 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Tool Isolator sub.

MTI-B.A 62 LG: 1.54 ft WT: 13.2 lb OD: 2.24 in

Compact Short Gamma

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

SKJ-E.A Compact Knuckle Joint

SKJ-E.A 185 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SHA-H Compact Swivel Head Adaptor

SHA-H 185 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

MIS-A.A Compact Inline Bowspring sub

MIS-A.A 277 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Neutron

MDN-B.J 390 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in



87.01 ft

GRGM - MGS Gamma Ray

85.02 ft

GSXT - MGS External Temperature

71.31 ft

NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD-C.J 393 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 596 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 270 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 472 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 565 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 451 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 717 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact MMI Memory Section
MIM-A.A 231 LG: 4.65 ft WT: 26.5 lb OD: 2.24 in

Compact MMI Electrode Section
MIE-A.A 209 LG: 13.96 ft WT: 99.2 lb OD: 4.09 in

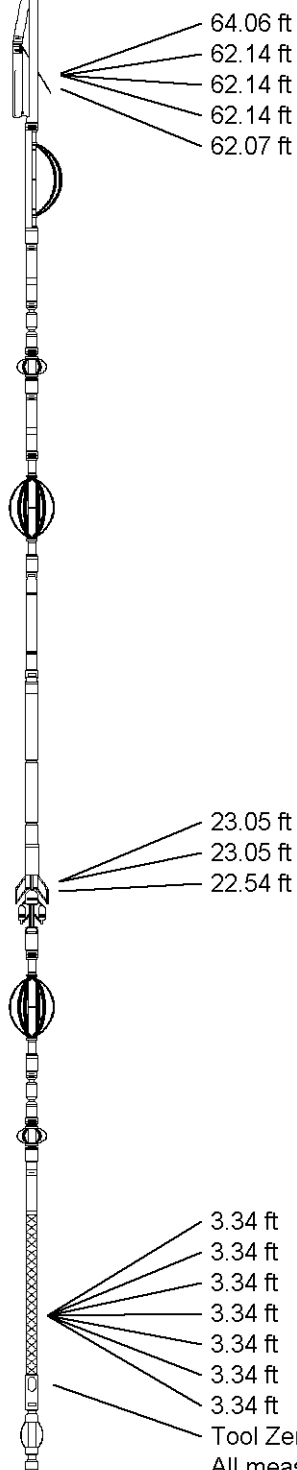
MIS-D.A Compact Inline Bowspring sub
MIS-D.A 718 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 469 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 573 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction
MAI-B.J 389 LG: 12.52 ft WT: 48.5 lb OD: 2.24 in

Total Length: 149.55 ft Weight: 1038.4 lb



CLDC - Density Caliper
DPRL - Limestone Density Por.
DEN - Compensated Density
DCOR - Density Correction
PDPE - PE

IECY - MIE Caliper Y
IECX - MIE Caliper X
IMZA - Z Accelerometer

CTAS - Array Ind. Six Cond Ct
R40S - Array Ind. Six Res 40
R30S - Array Ind. Six Res 30
R20S - Array Ind. Six Res 20
R60S - Array Ind. Six Res 60
R85S - Array Ind. Six Res 85
RTAS - Array Ind. Six Res Rt
Tool Zero (1.84ft from bottom)
All measurements relative to tool zero.

COMPANY	SANDRIDGE ENERGY
WELL	SUTTON 1-9H
FIELD	CHEYENNE VALLEY
PROVINCE/COUNTY	NESS
COUNTRY/STATE	USA / KANSAS

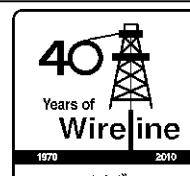
Elevation Kelly Bushing	2514.00	feet
Elevation Drill Floor	2514.00	feet
Elevation Ground Level	2494.00	feet

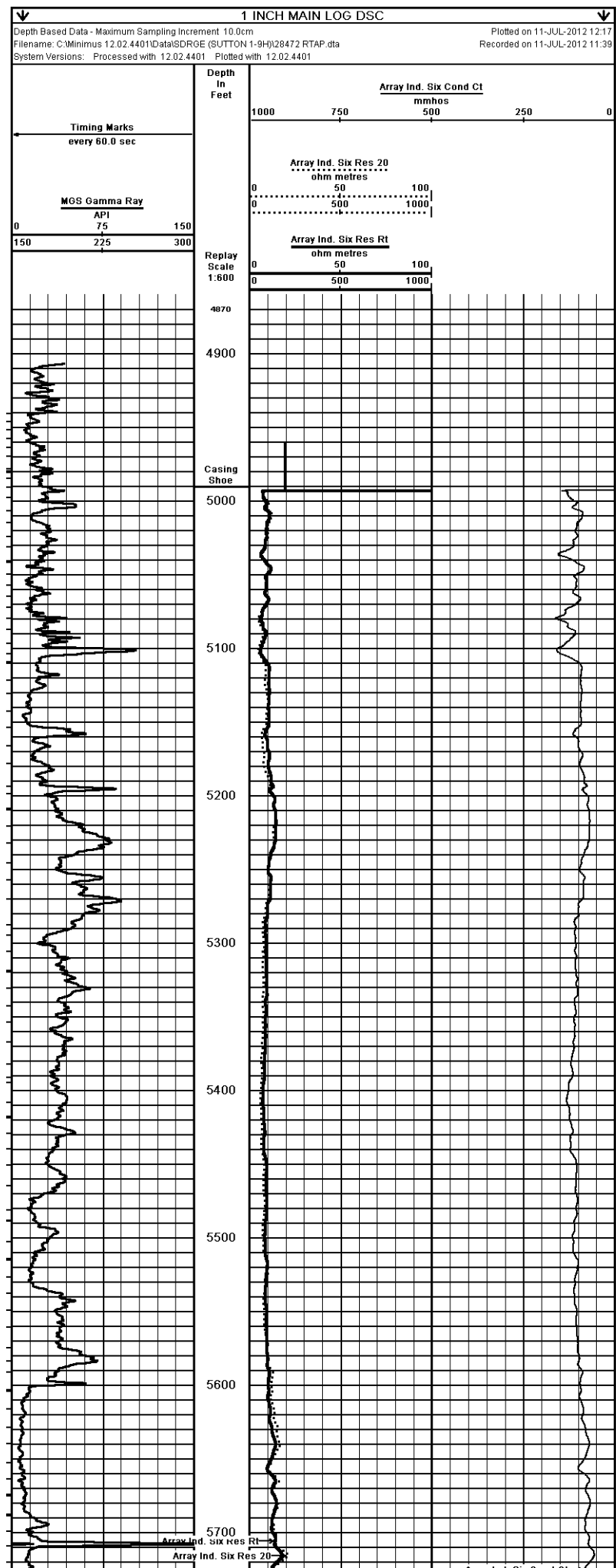
First Reading	8854.00	feet
Depth Driller	8869.00	feet
Depth Logger	8869.00	feet

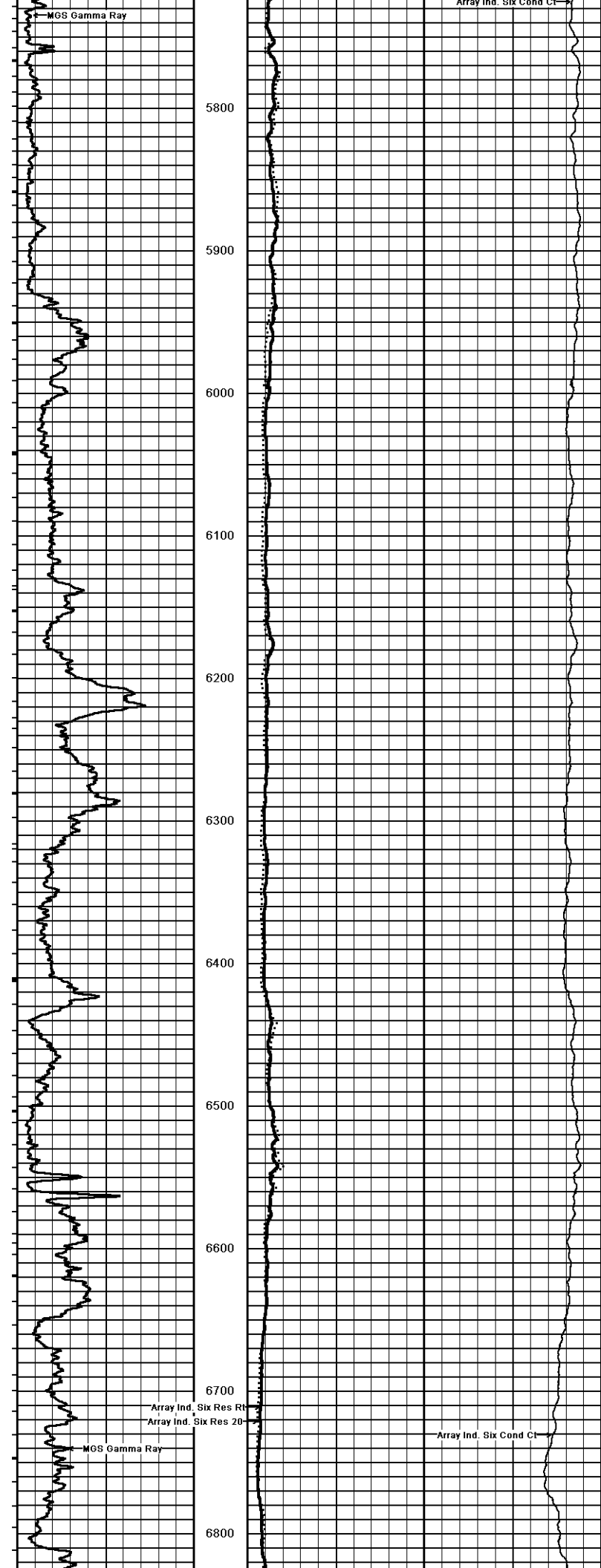


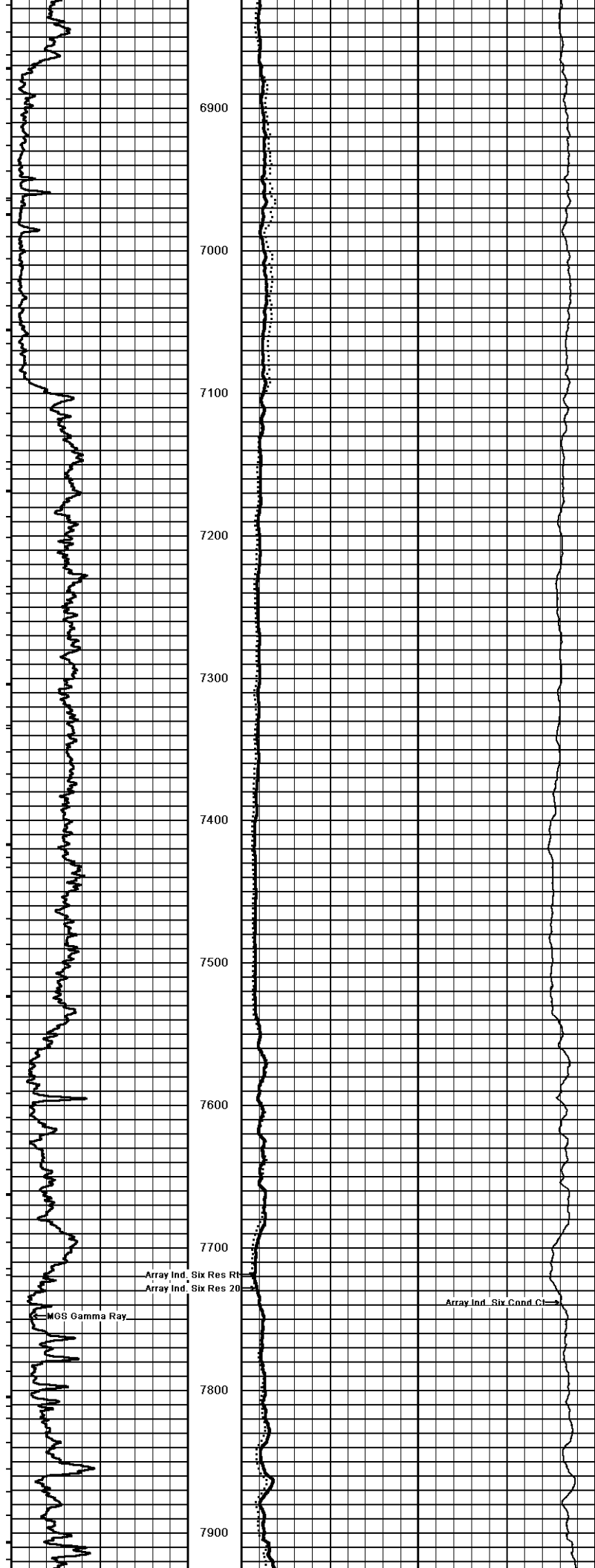
Weatherford®

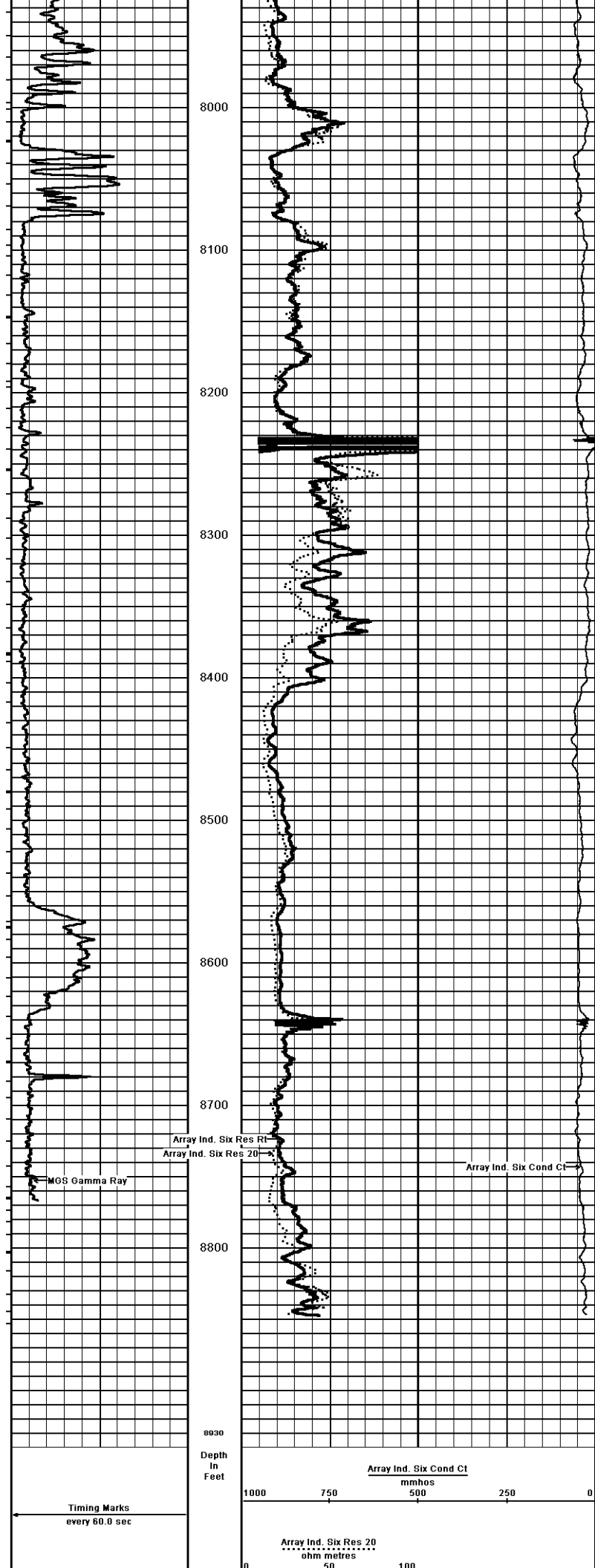
CML MESSENGER SHUTTLE
ARRAY INDUCTION
LOG



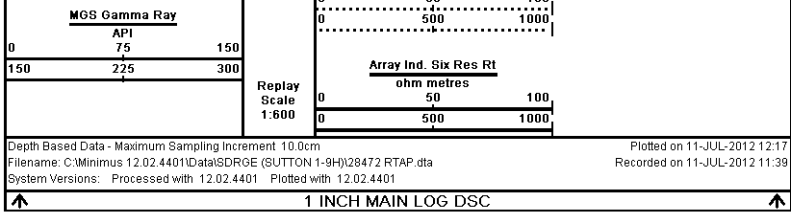








MGS Gamma Ray



COMPANY		SANDRIDGE ENERGY	
WELL		SUTTON 1-9H	
FIELD		CHEYENNE VALLEY	
PROVINCE/COUNTY		NESS	
COUNTRY/STATE		USA / KANSAS	

Elevation Kelly Bushing	2514.00	feet	First Reading	8854.00	feet
Elevation Drill Floor	2514.00	feet	Depth Driller	8869.00	feet
Elevation Ground Level	2494.00	feet	Depth Logger	8869.00	feet


Weatherford

CML MESSENGER SHUTTLE
ARRAY INDUCTION
LOG

