Weatherford®

CML IMPULSE SHUTTLE ARRAY INDUCTION LOG

COMPANY	SANDRIDGE ENERGY, INC,
WELL	POWERS 1-2H
FIELD	FORD
PROVINCE/COUNTY	FORD
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	350' FNL & 250' FEL

SEC	TWP	RGE	Other Services
2	27S	22W	MPD/MDN
API Number 15-057-20800			CMI
Permit Number			

Permanent Datum G.L., Elevation 2355 feet
Log Measured From KB
Drilling Measured From K.B. @ 18 FEET

Elevations:	feet
KB	2373.00
DF	2372.00
GL	2355.00

Date	15-JUL-2012		
Run Number	ONE		
Depth Driller	9182.00	feet	
Depth Logger	9182.00	feet	
First Reading	9134.00	feet	
Last Reading	5525.00	feet	
Casing Driller	5525.00	feet	
Casing Logger	5525.00	feet	
Bit Size	6.125	inches	
Hole Fluid Type	WBM		
Density / Viscosity	9.30 g/c3	32.00 CP	
PH / Fluid Loss	9.00	60.00 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	1.56 @ 82.0	ohm-m	
Rmf @ Measured Temp	1.25 @ 82.0	ohm-m	
Rmc @ Measured Temp	1.872 @ 82.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.98 @130.0	ohm-m	
Time Since Circulation	1 HOUR		
Max Recorded Temp	130.00	deg F	
Equipment Name	COMPACT		
Equipment / Base	18077	OKC	
Recorded By	STEVEN TOTTEY		
Witnessed By	JAY CHAPMAN		
S.O. / AFE	3536722		

BOREHOLE RECORD

Last Edited: 16-JUL-2012 07:59

Bit Size inches	Depth From feet	Depth To feet
6.125	5525.00	9182.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
INTER	7.000	0.00	5525.00	17.00

REMARKS

TOOLS RAN: 200V SRT-69,MBS-115,SKJ-207,MMSE158,SHA-167,MTI-061,
MGS-136,MCL-069,SKJ-479,SHA-431,MIS-606,MDN-391,MPD-394,MIS-275,SHA-434,SKJ-478,MISB 336, MIE-233,MISB-336,MAI-392 RAN IN COMBINATION

HARDWARE: MAI: MIS-B 0.5" STANDOFF USED ABOVE MAI, ISA 0.5" STANDOFF USED BELOW MAI.
MDN: MIS-A DOUBLE BOWSPRING USED ABOVE MDN.
MPD: 4INCH PROFILE PLATE USED, MIS-A SINGLE BOWSPRING USED BELOW MPD

2.71 G/C/C DENSITY MATRIX USED TO CALCULATE POROSITY
ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

DRILL PIPE DEPTH DURING DEPLOYMENT: 9032
LOGGING TOOL DEPTH AFTER DEPLOYMENT: 9137

ANNULAR HOLE VOLUME CALCULATED USING WITH 4.5 INCH PRODUCTION CASING

SERVICE ORDER # 3536722
RIG: Lariat #41

OPERATOR(S): Drew Turner _Curtus Kulhman

HOLE RUGOSITY MAY AFFECT LOG QUALITY.

2 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-JUL-2012 09:34
Filename: C:\Data\SANDRIDGE POWERS 1-2H\POWERS 1-2H RTAP.dta
Recorded on 16-JUL-2012 07:45
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

Timing Marks
every 60.0 sec

MGS Gamma Ray
API
0 75 150
150 225 300

Depth In Feet

Borehole Temp in deg F

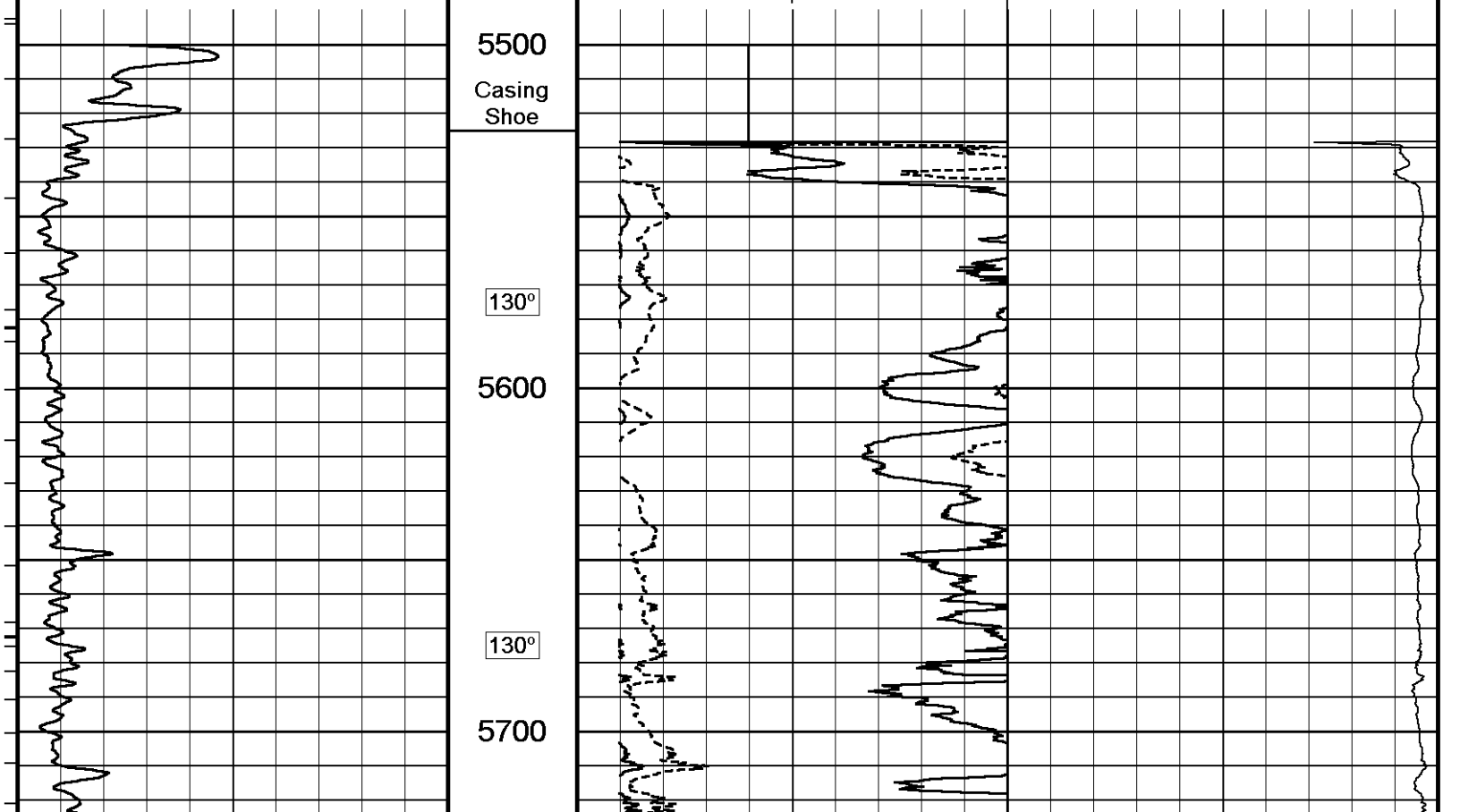
Array Ind. Six Cond Ct
mmhos
1000 750 500 250 0
2000 1750 1500 1250 1000

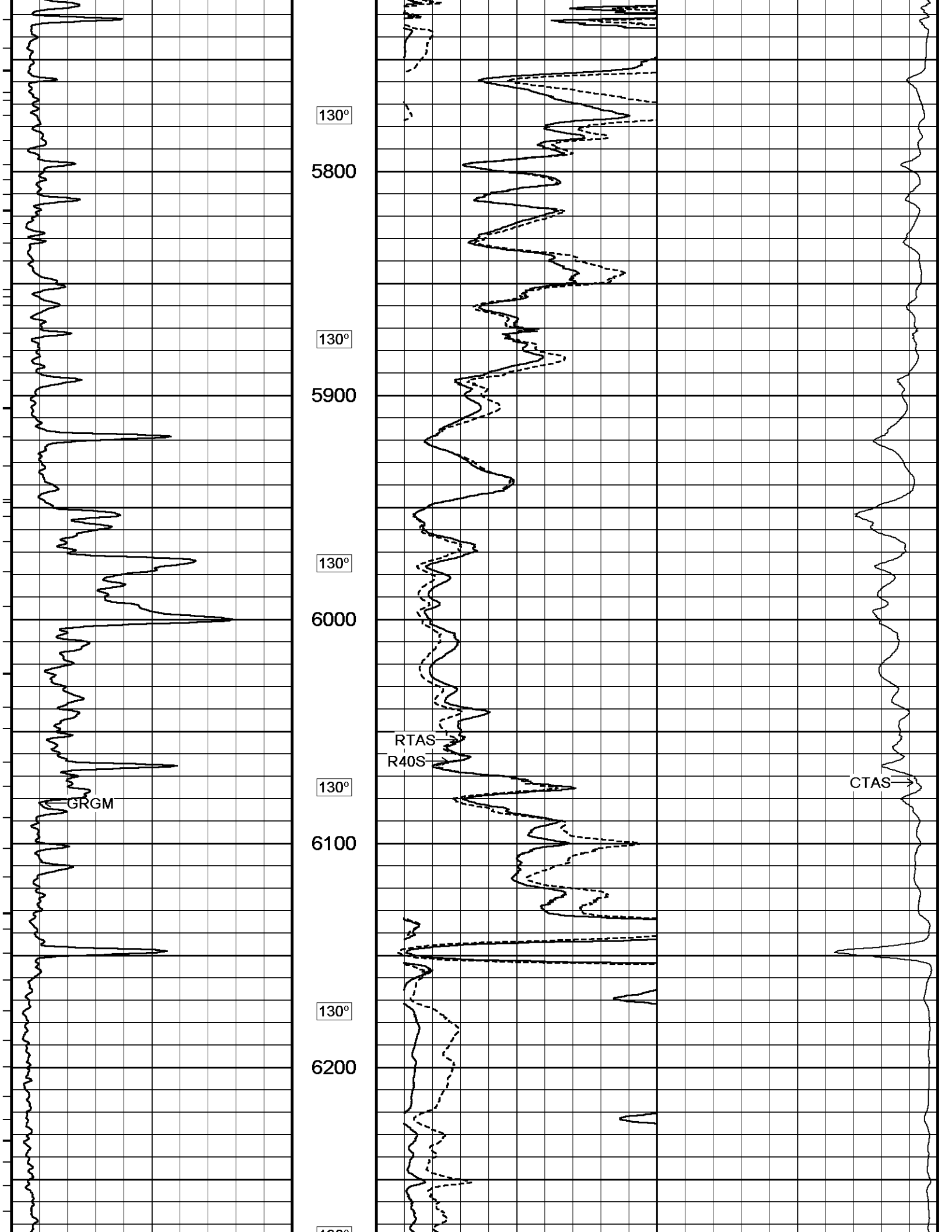
Array Ind. Six Res 40
ohm metres
0 25 50
0 250 500

Array Ind. Six Res Rt
ohm metres
0 25 50
0 250 500

Replay Scale 1:600

5500
Casing Shoe
130°
5600
130°
5700

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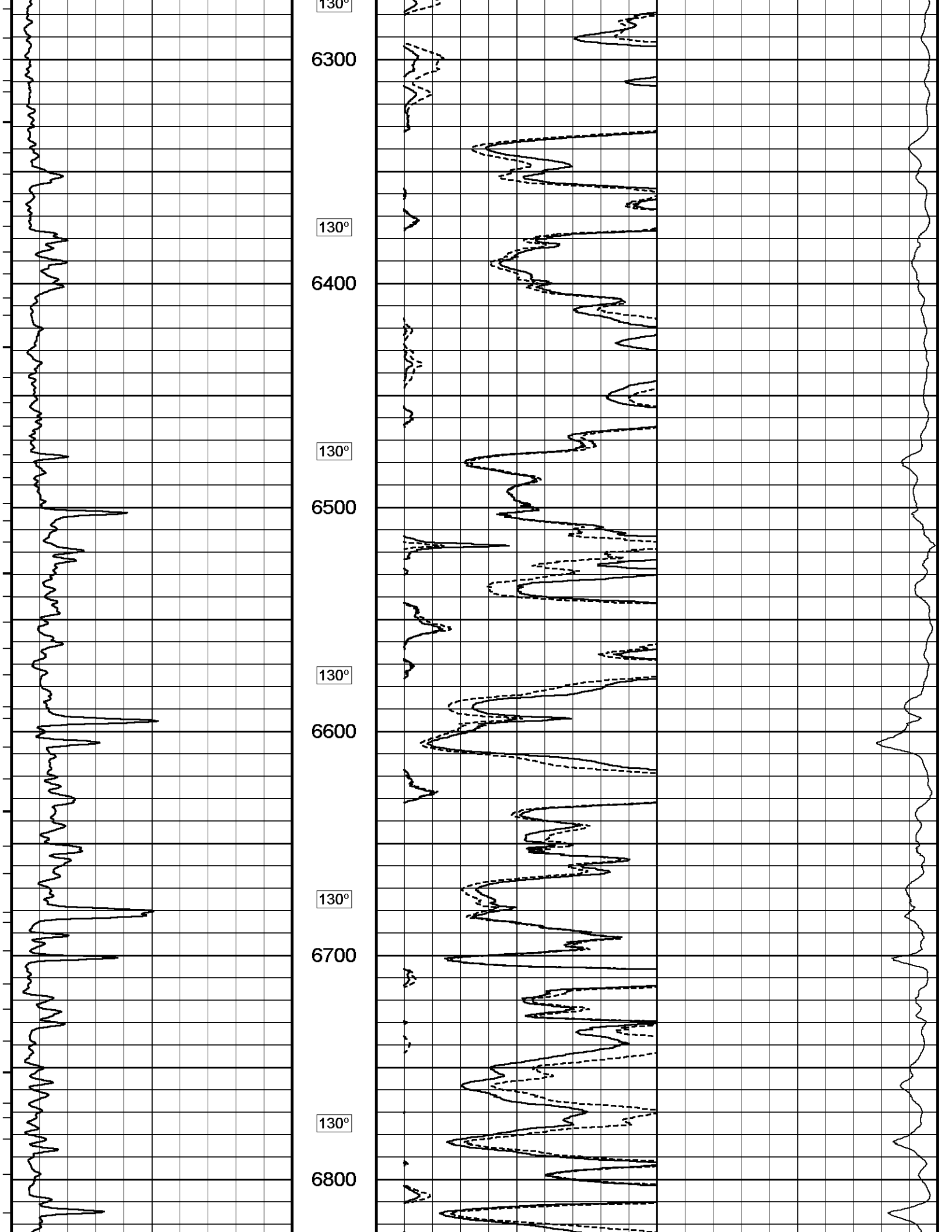
130°
5900
130°
6000
RTAS
R40S
130°
GRGM
6100
CTAS
130°
6200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6600
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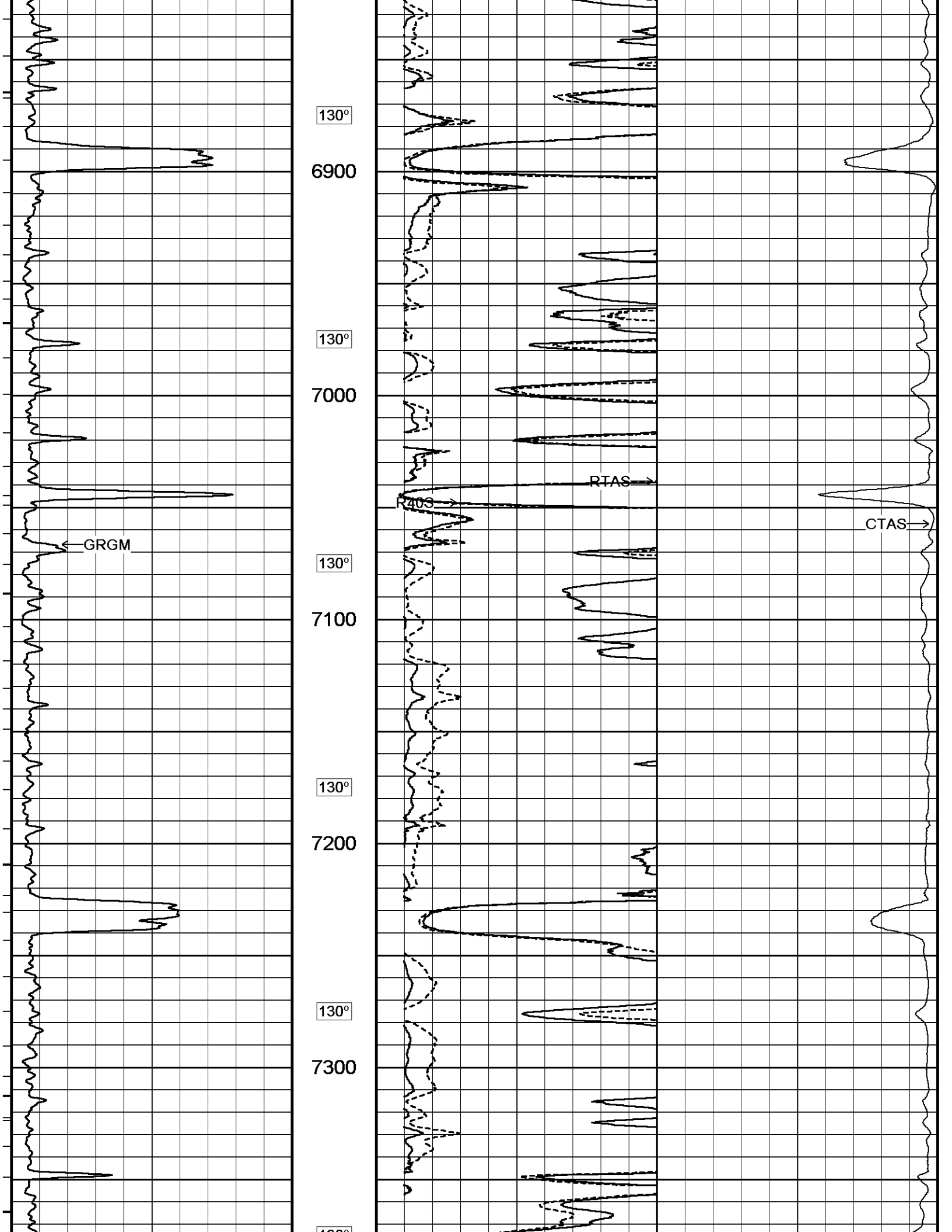
6700
130°
6800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7000
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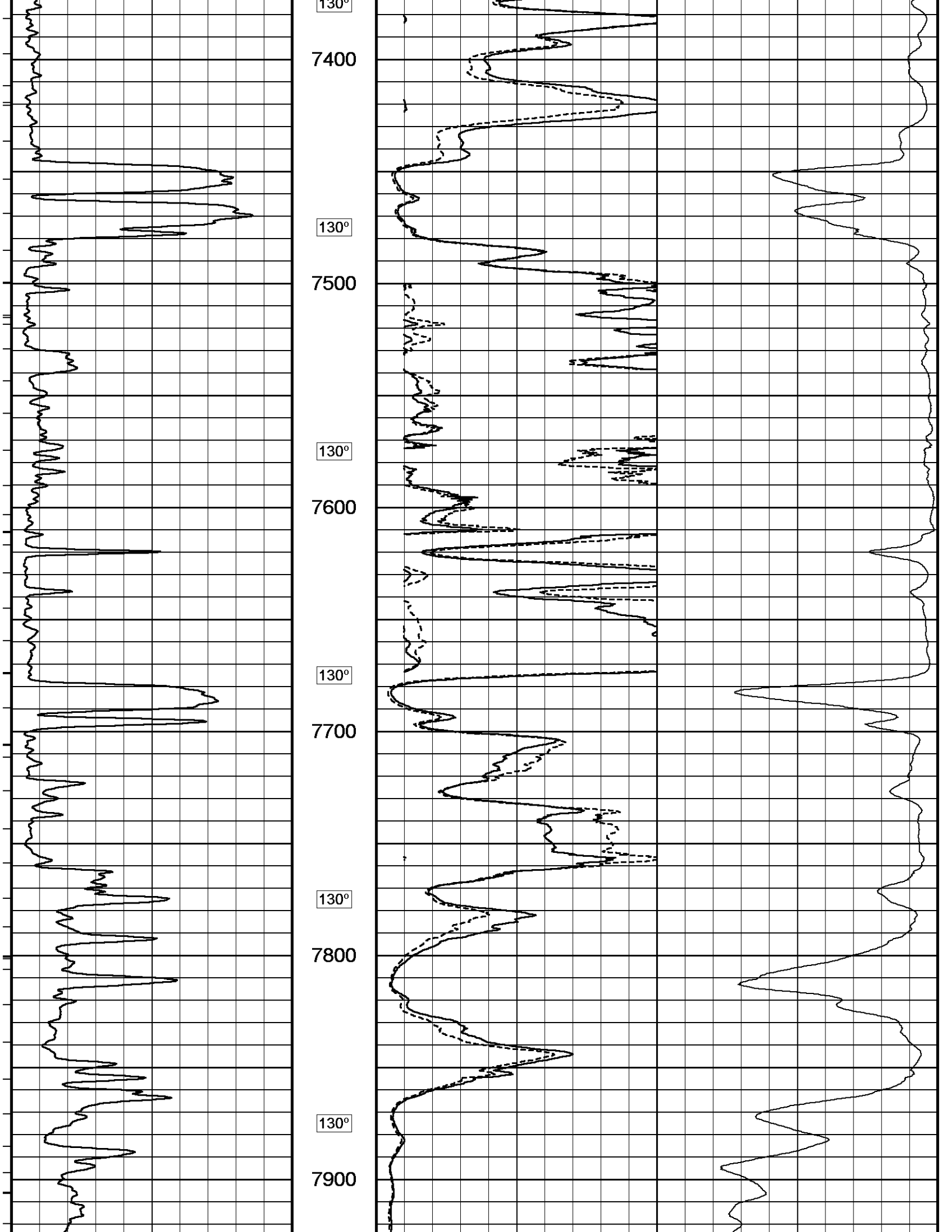
R40S
CTAS
GRGM
130°
7100
130°
7200
130°
7300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130°
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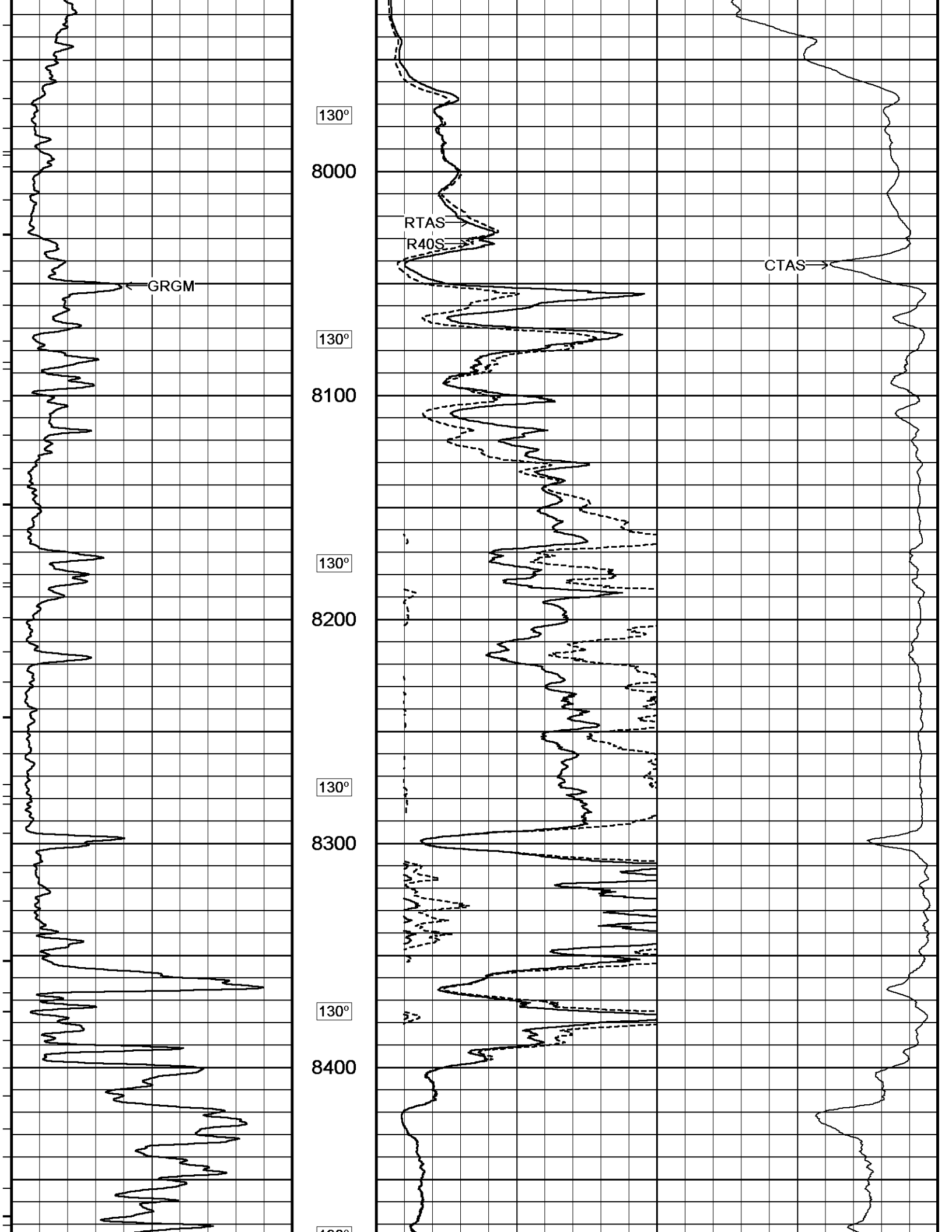
130°
7800
130°
7900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R40S
CTAS
GRGM
130°
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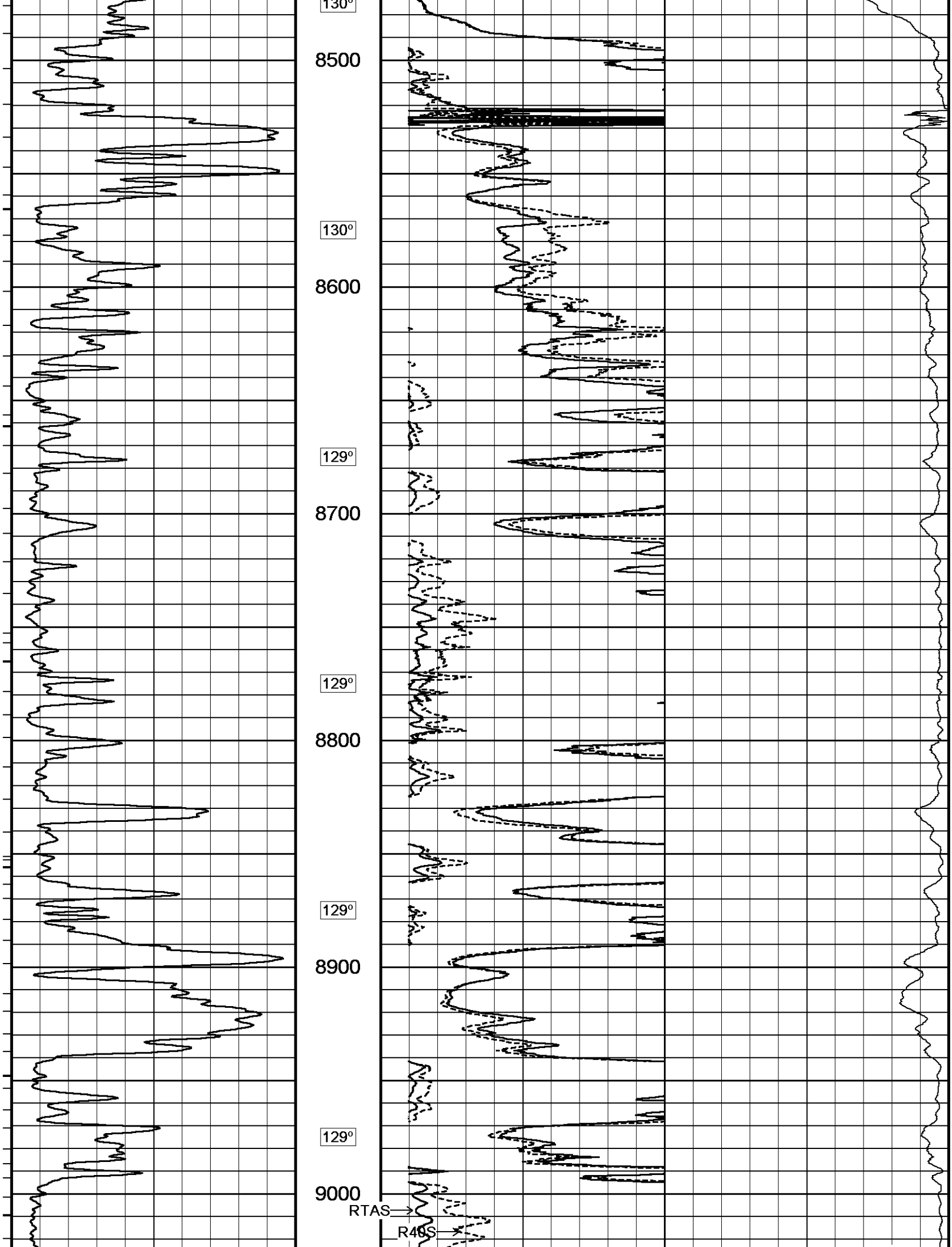
130°
8200
130°
8300
130°
8400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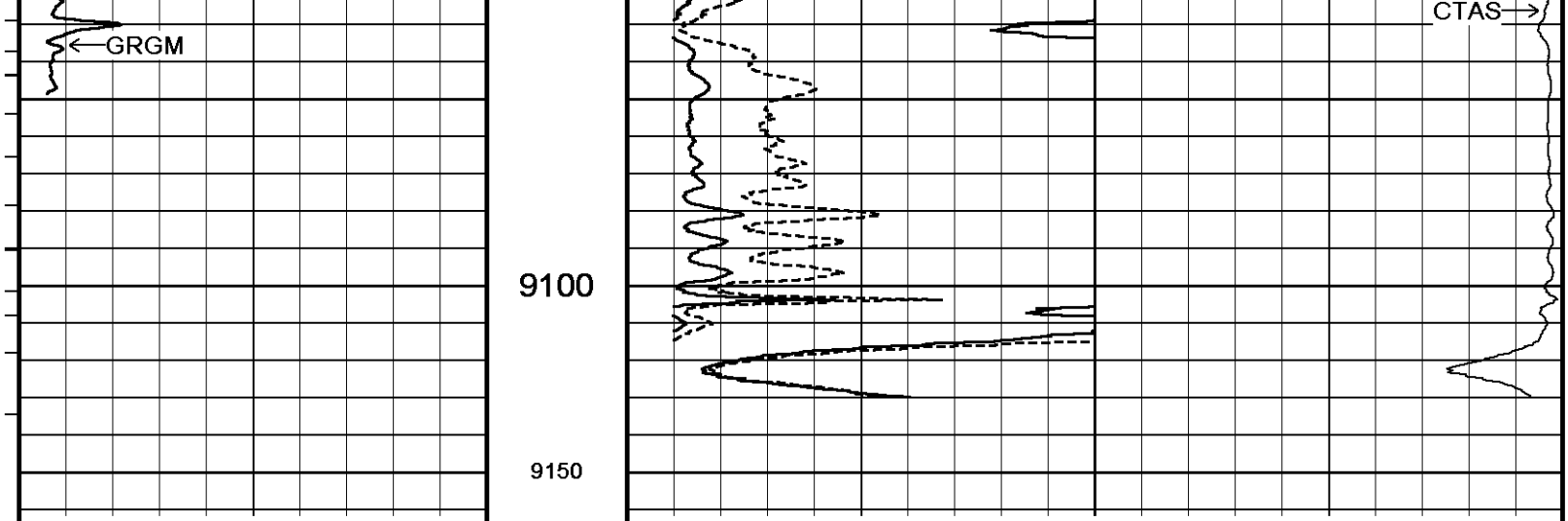
129°
9000
RTAS
R48S



Depth In Feet

Timing Marks
every 60.0 sec

MGS Gamma Ray
API
0 75 150
150 225 300

Array Ind. Six Cond Ct
mmhos
1000 750 500 250 0
2000 1750 1500 1250 1000

Borehole Temp in deg F

Array Ind. Six Res 40
ohm metres
0 25 50
0 250 500

Array Ind. Six Res Rt
ohm metres
0 25 50
0 250 500

Replay Scale 1:600

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Data\SANDRIDGE POWERS 1-2H\POWERS 1-2H RTAP.dta
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Plotted on 16-JUL-2012 09:34
Recorded on 16-JUL-2012 07:45

2 INCH MAIN LOG

5 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Data\SANDRIDGE POWERS 1-2H\POWERS 1-2H RTAP.dta
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600
Plotted on 16-JUL-2012 09:34
Recorded on 16-JUL-2012 07:45

Depth In Feet

Timing Marks
every 60.0 sec

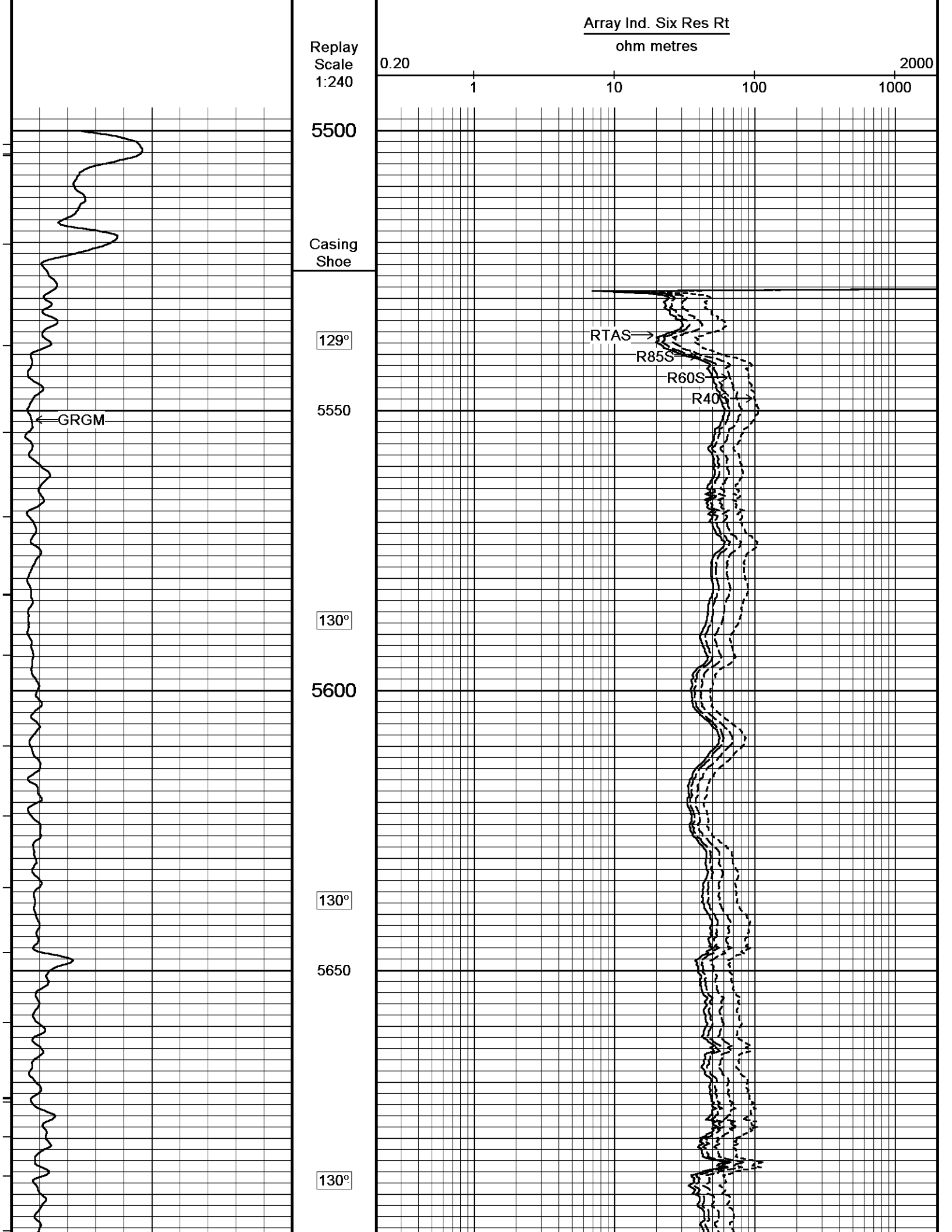
MGS Gamma Ray
API
0 75 150
150 225 300

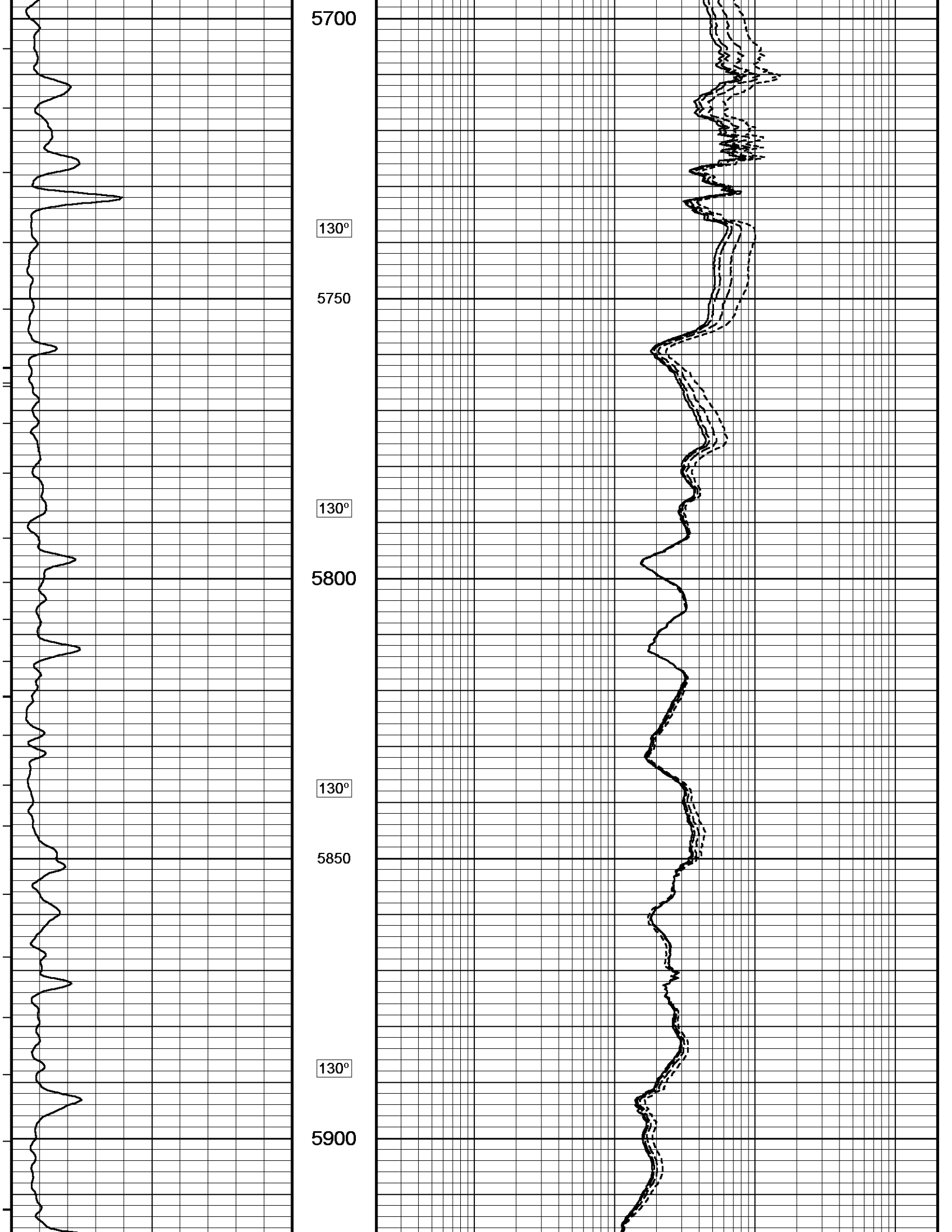
Array Ind. Six Res 40
ohm metres
0.20 2000
1 10 100 1000

Array Ind. Six Res 60
ohm metres
0.20 2000
1 10 100 1000

Borehole Temp in deg F

Array Ind. Six Res 85
ohm metres
0.20 2000
1 10 100 1000


Array Ind. Six Res Rt
ohm metres
0.20
1
10
100
1000
2000
Replay
Scale
1:240
5500
Casing
Shoe
129°
RTAS
R85S
R60S
R40S
5550
GRGM
130°
5600
130°
5650
130°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130°
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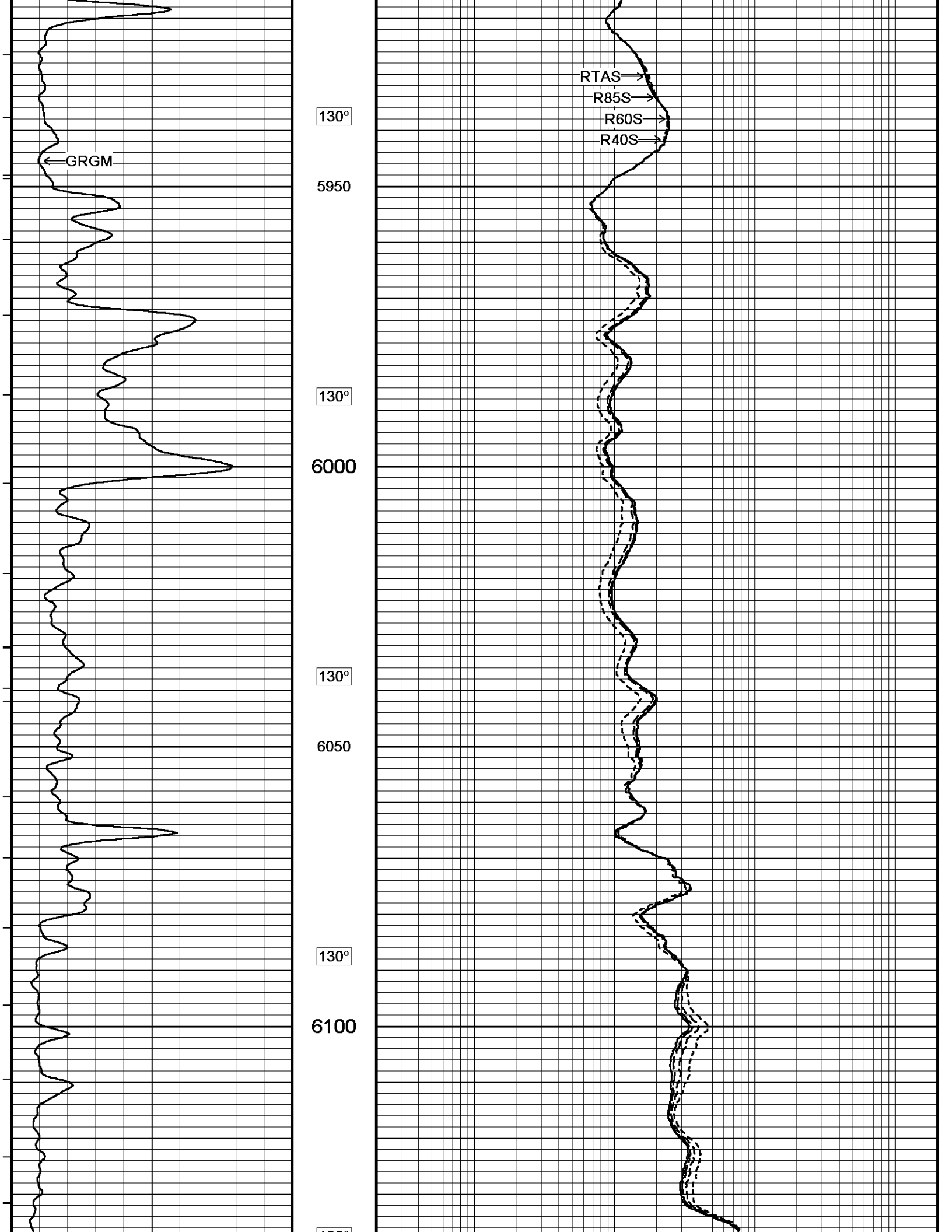
5800
130°
5850
130°
5900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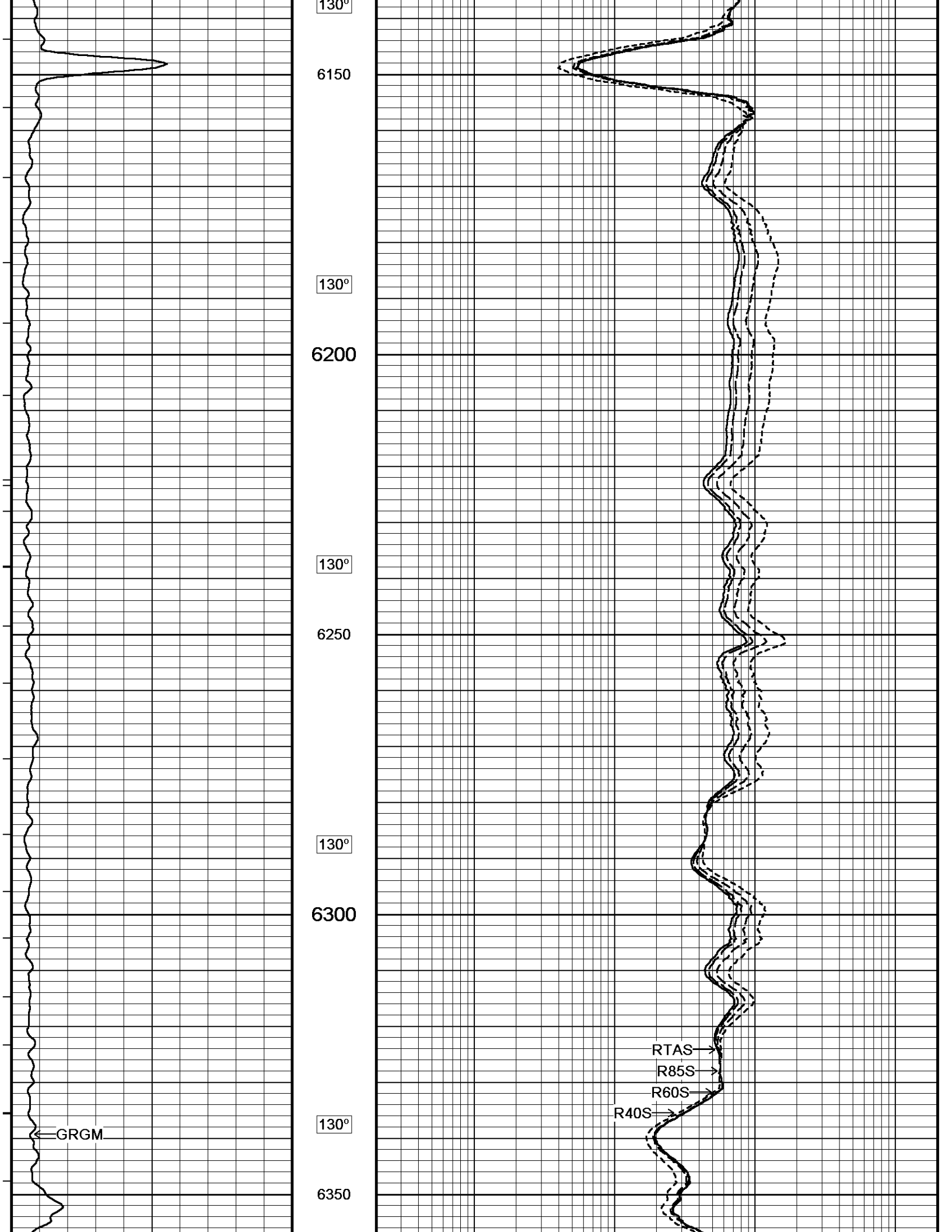
130°
5950
130°
6000
130°
6050
130°
6100
RTAS
R85S
R60S
R40S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130°
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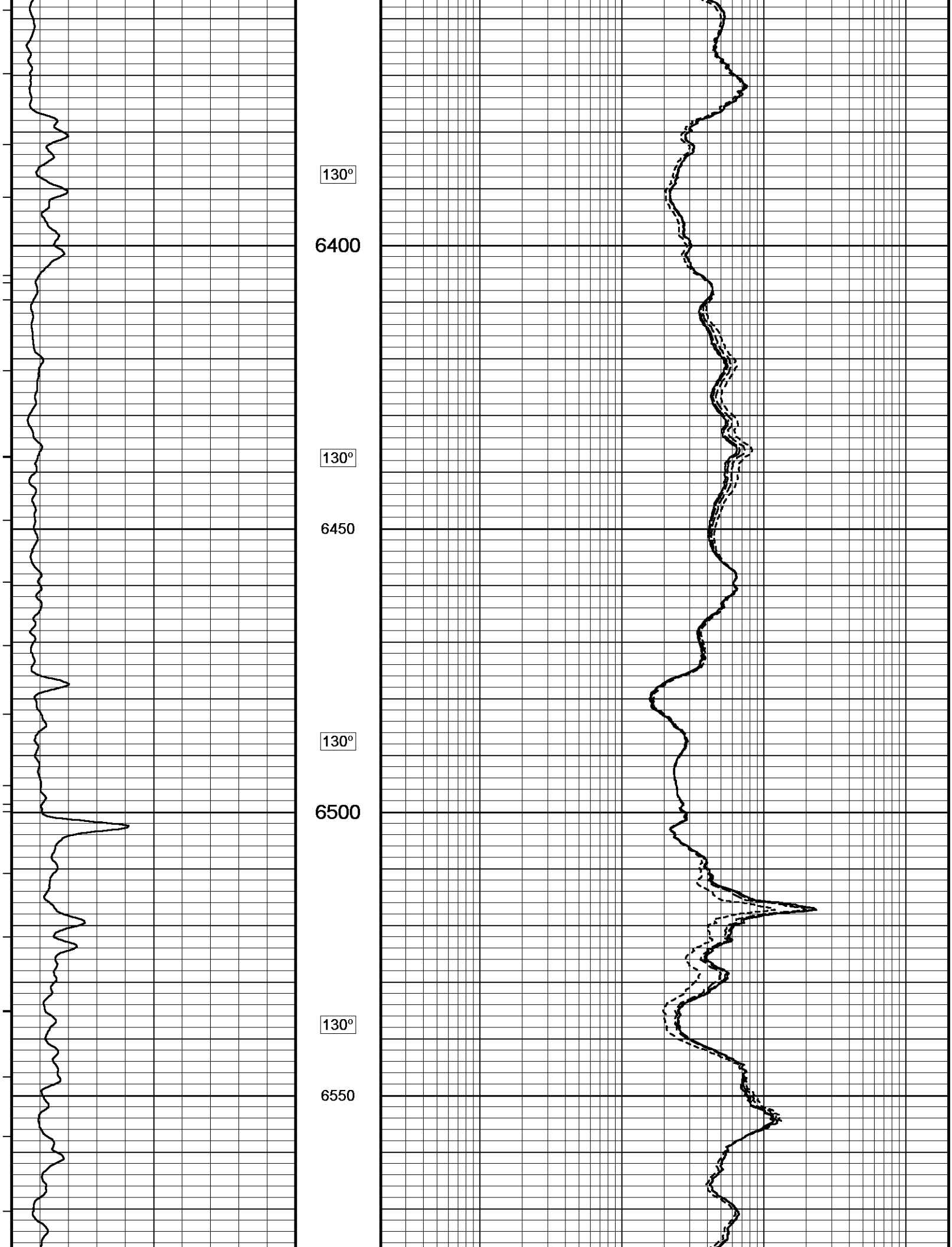
130°
6350
GRGM
RTAS
R85S
R60S
R40S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130°
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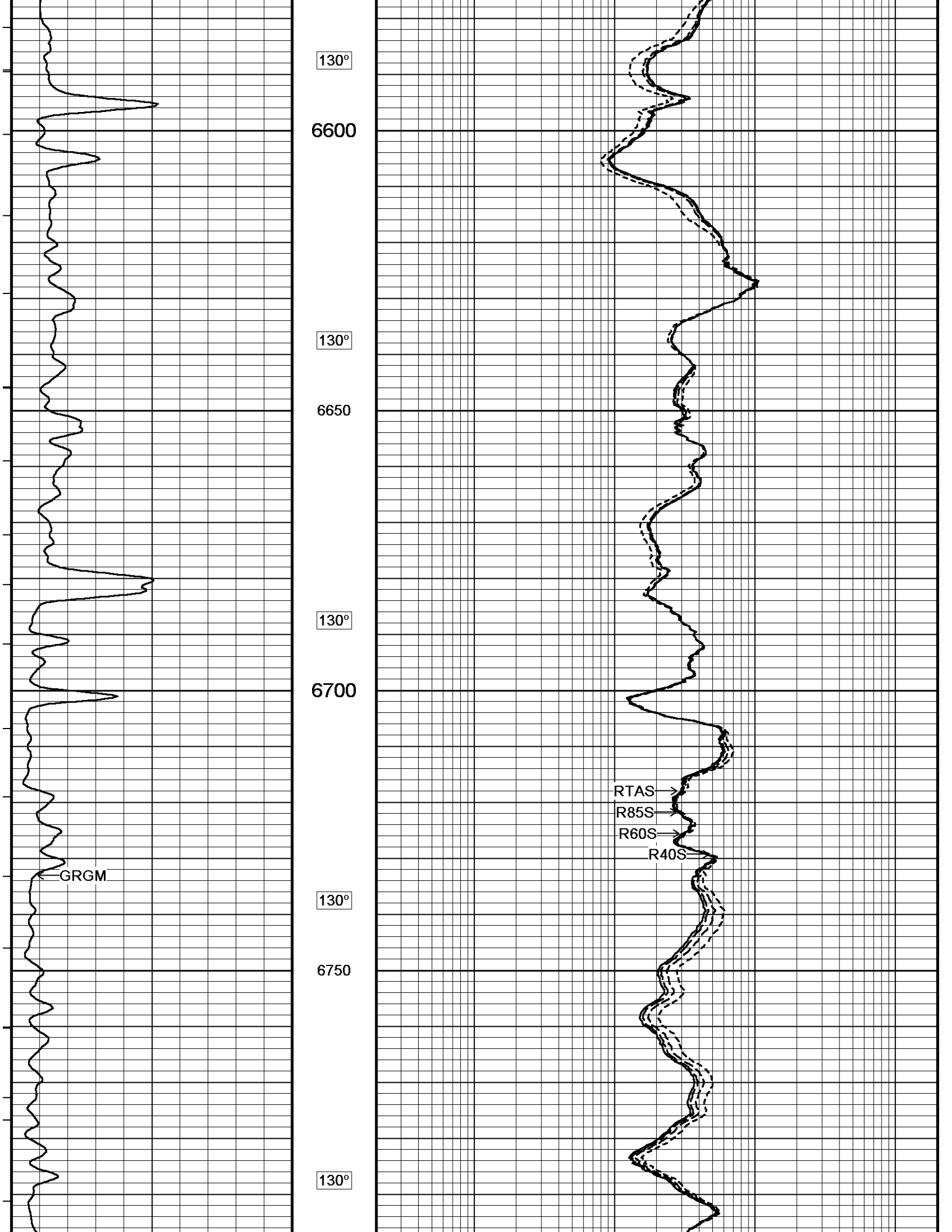
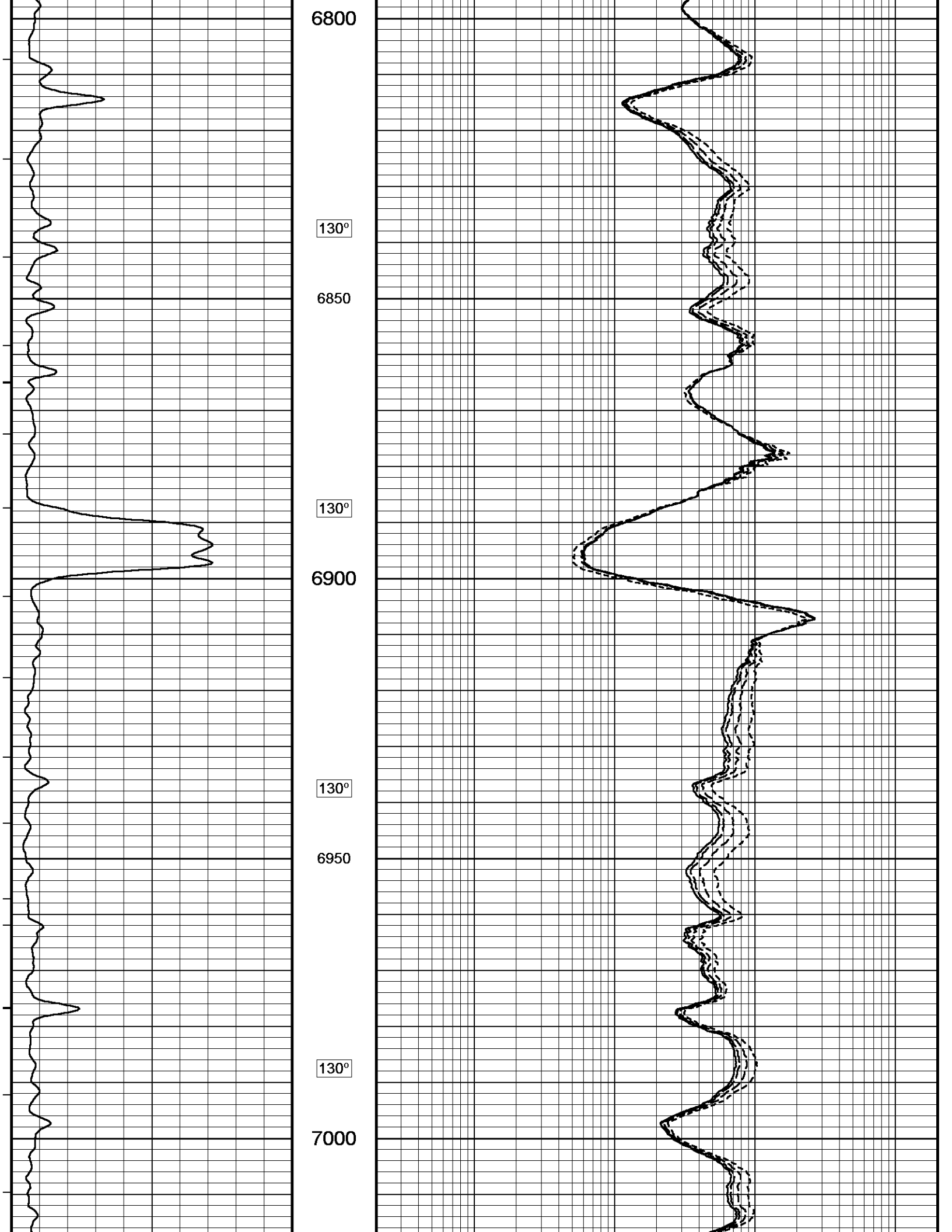

130°
6600
130°
6650
130°
6700
RTAS
R85S
R60S
R40S
GRGM
130°
6750
130°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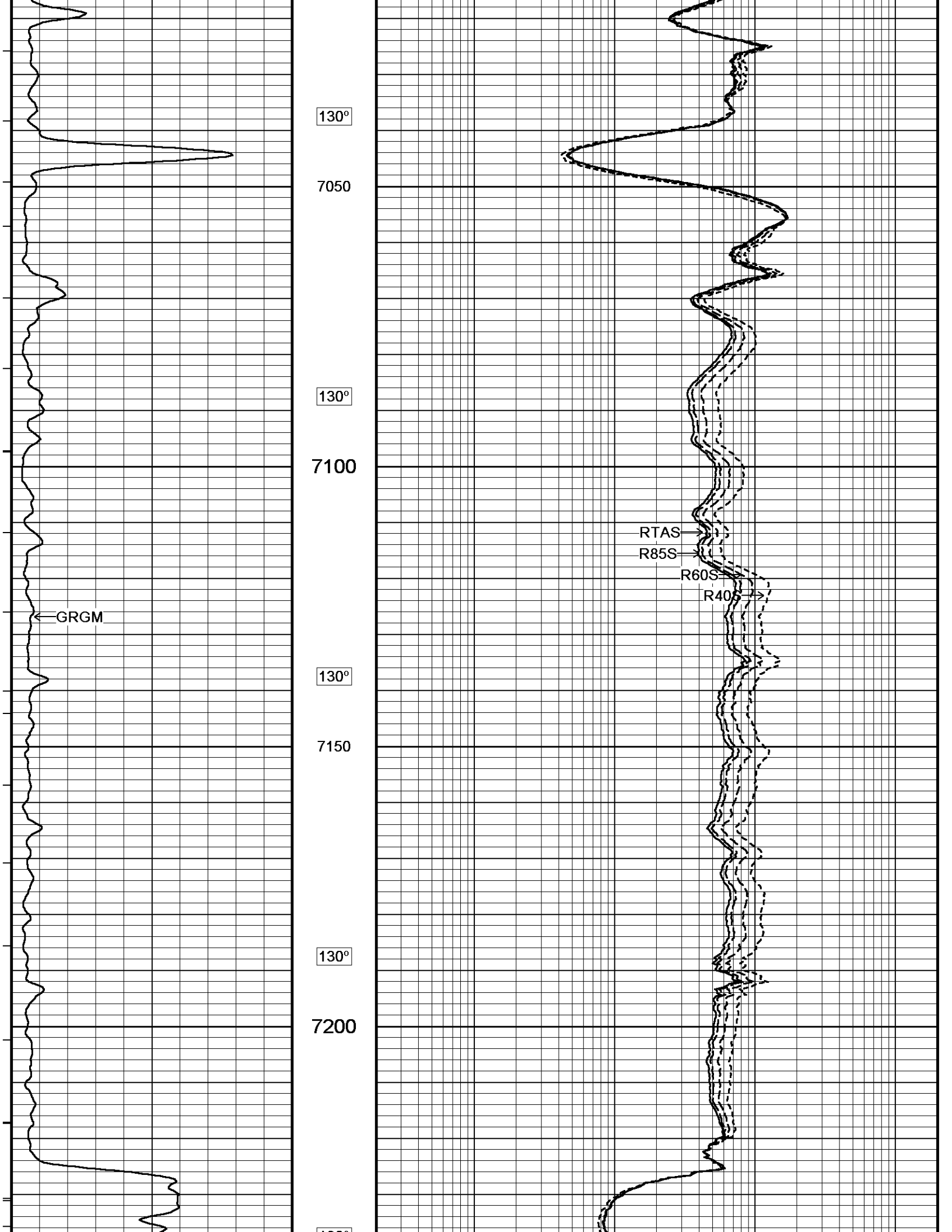
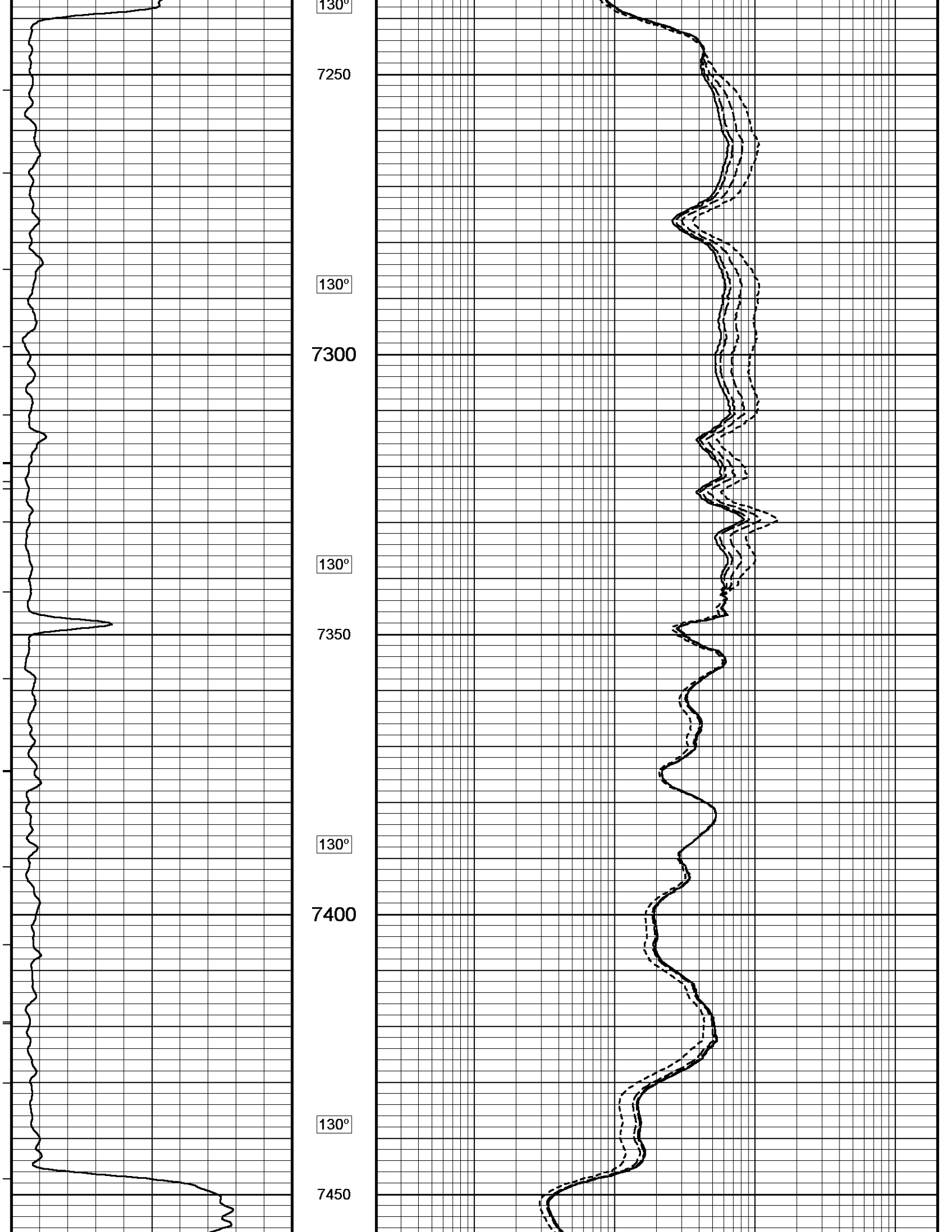
130°
6900
130°
6950
130°
7000


130°
7050
130°
7100
RTAS
R85S
R60S
R40S
GRGM
130°
7150
130°
7200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7250
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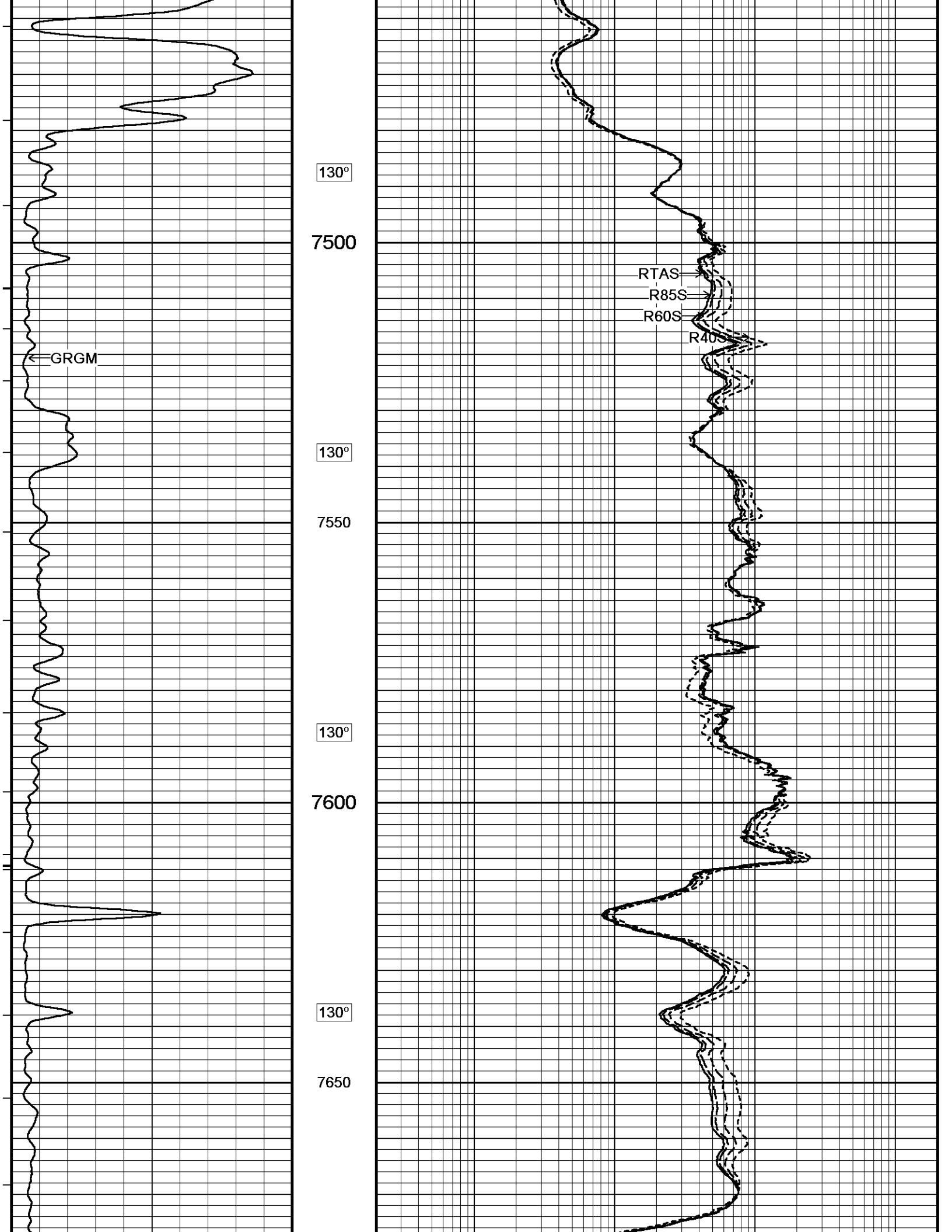
7350
130°
7400
130°
7450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RTAS
R85S
R60S
R40S
GRGM
130°
7550
130°
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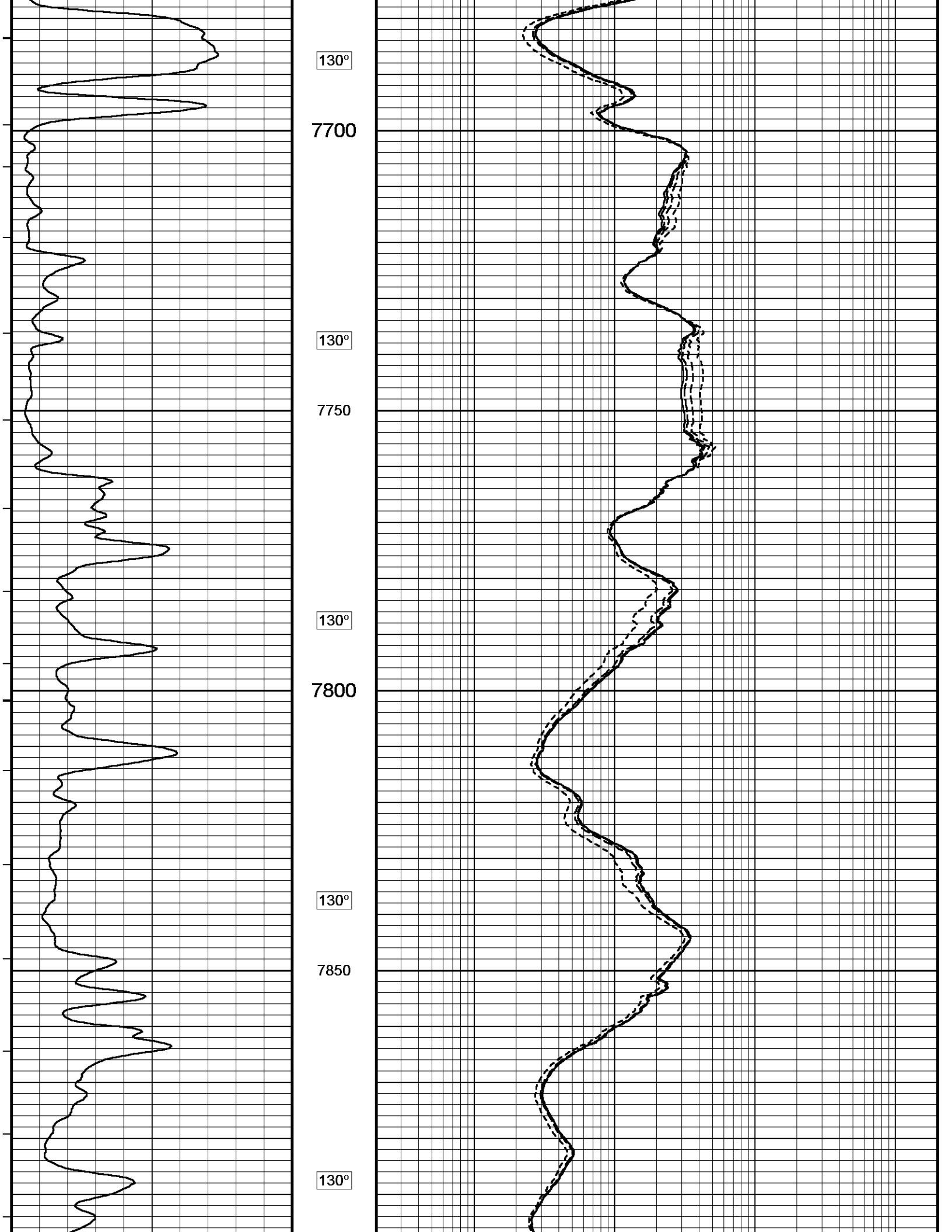
130°
7650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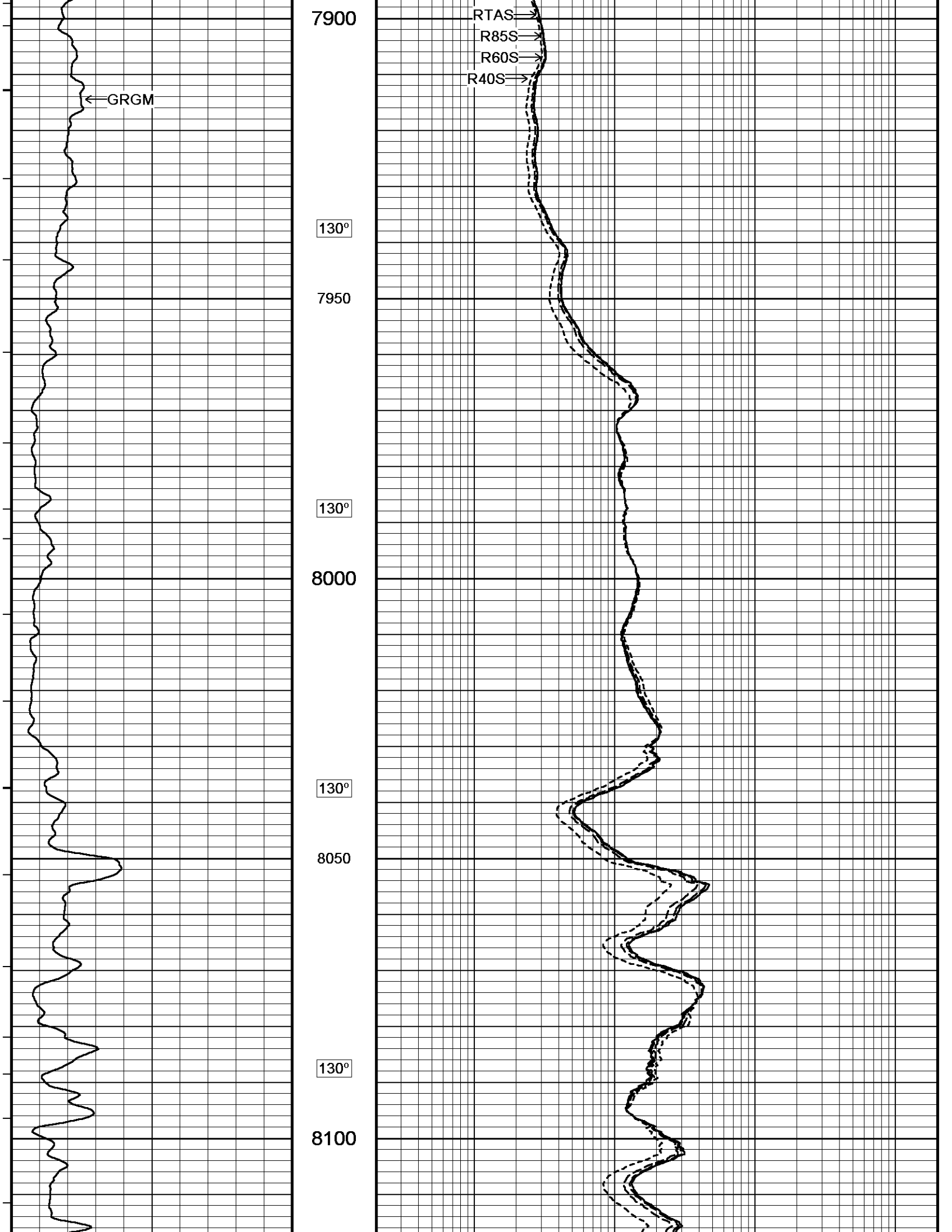
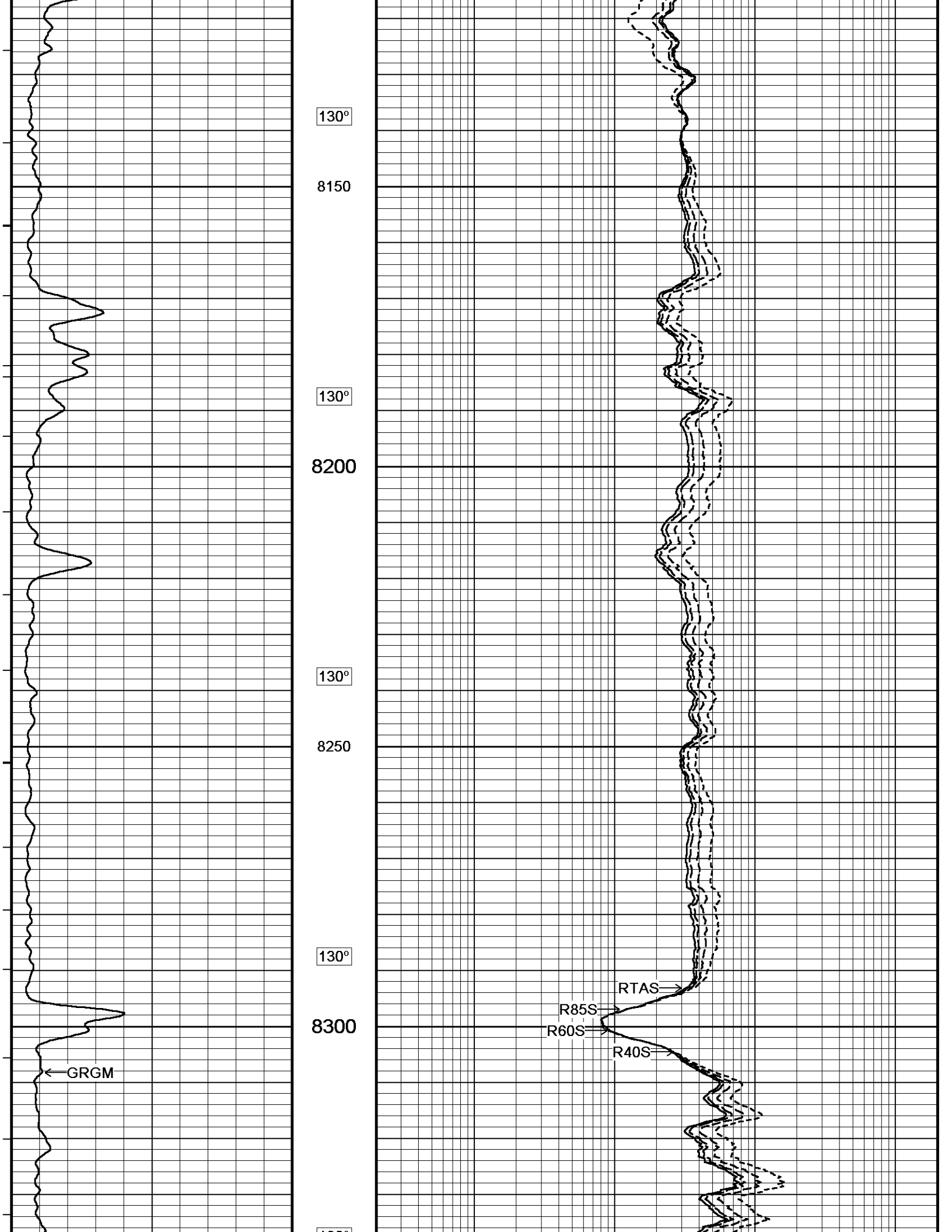
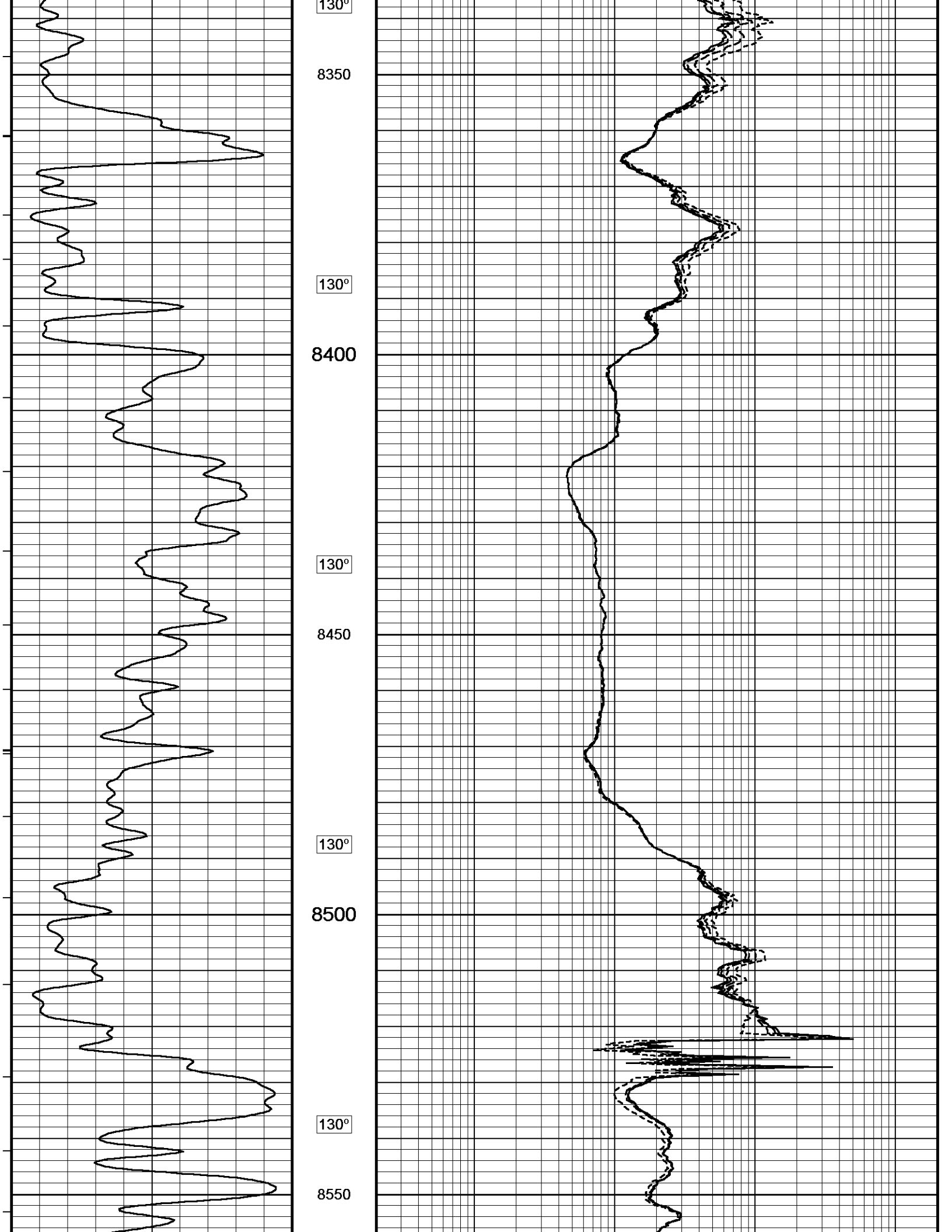
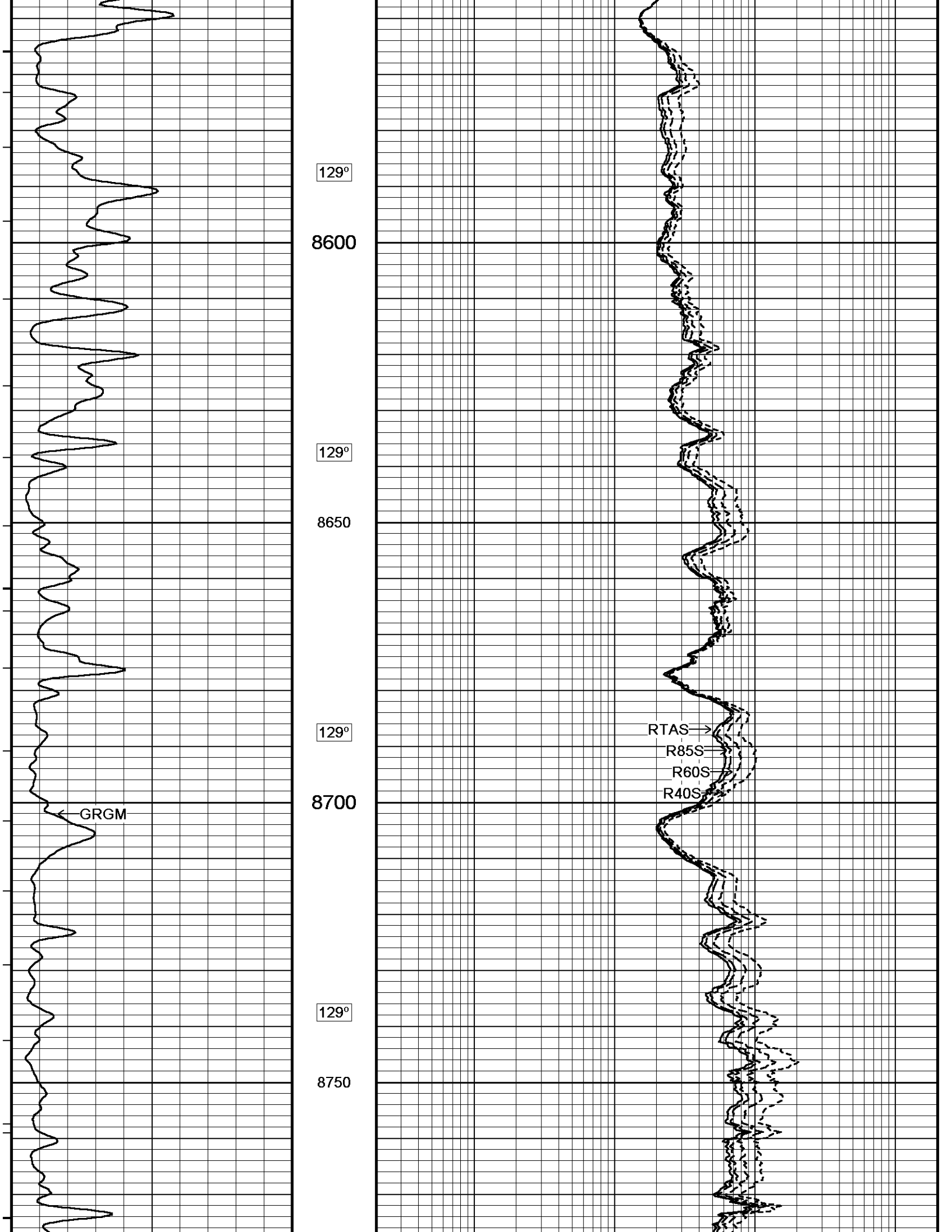
130°
7850
130°


RTAS
R85S
R60S
R40S
GRGM
7900
130°
7950
130°
8000
130°
8050
130°
8100


130°
8150
130°
8200
130°
8250
130°
8300
GRGM
RTAS
R85S
R60S
R40S


130°
8350
130°
8400
130°
8450
130°
8500
130°
8550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8600
129°
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8700
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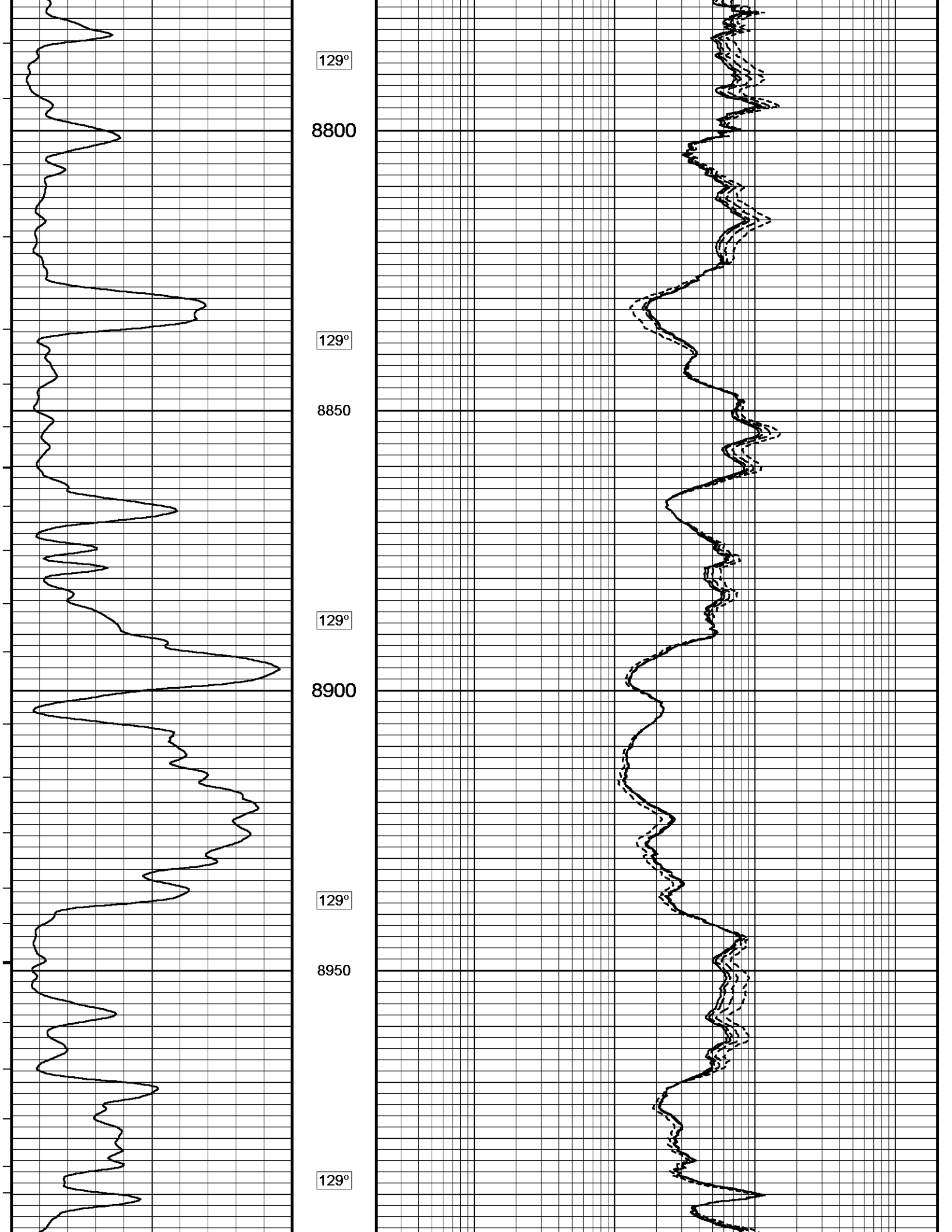
8750
GRGM
RTAS
R85S
R60S
R40S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8800
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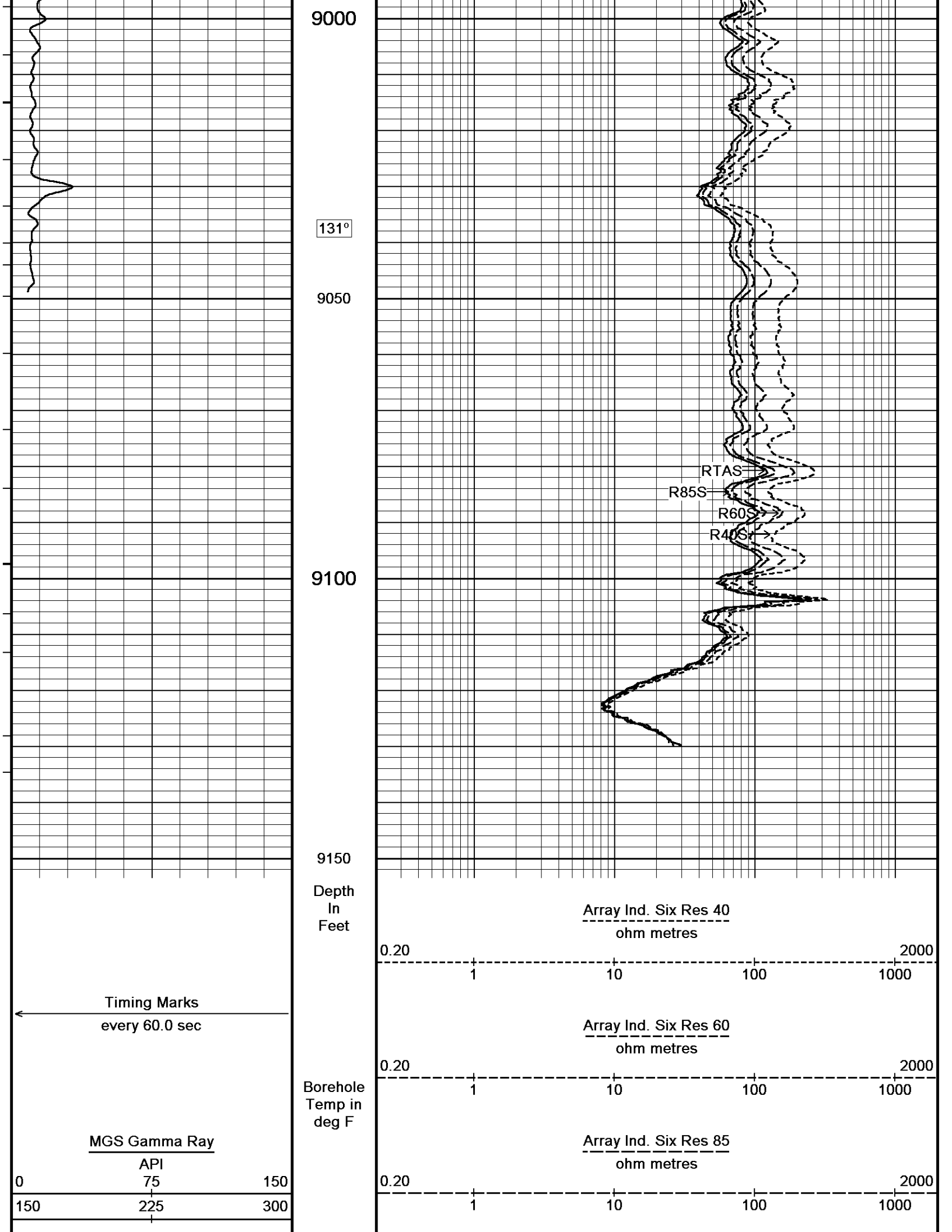
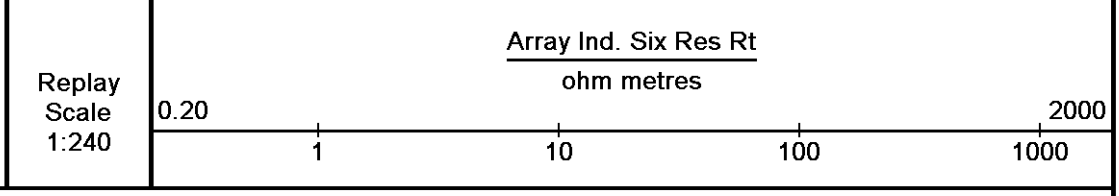
8900
129°
8950
129°


9000
131°
9050
RTAS
R85S
R60S
R40S
9100
9150
Depth
In
Feet
Array Ind. Six Res 40
ohm metres
0.20
2000
1
10
100
1000
Timing Marks
every 60.0 sec
Array Ind. Six Res 60
ohm metres
0.20
2000
1
10
100
1000
Borehole
Temp in
deg F
MGS Gamma Ray
API
0
75
150
150
225
300
Array Ind. Six Res 85
ohm metres
0.20
2000
1
10
100
1000



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-JUL-2012 09:34
Filename: C:\Data\SANDRIDGE POWERS 1-2H\POWERS 1-2H RTAP.dta
Recorded on 16-JUL-2012 07:45
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

5 INCH MAIN LOG

BEFORE SURVEY CALIBRATION

C:\Data\SANDRIDGE POWERS 1-2H\POWERS 1-2H RTAP.dta

General Constants All 000

Last Edited on 16-JUL-2012,08:03

General Parameters		
Mud Resistivity	1.000	ohm-metres
Mud Resistivity Temperature	80.000	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	Base Density Porosity	
Resistivity used	Array Ind. Six Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	

Strain Gauge Constants SER-B.A 159

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	

Strain Gauge Constants MMS-E.B 166

Last Edited on 05-JUL-2012,15:52

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

MMS Parameters MMS-E.B 166

Last Edited on 31-AUG-2011 11:09

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	5.0	seconds
Pulse Duration Status Pulse From	10.0	seconds
Pulse Duration Caliper Close From	35.0	seconds
Pulse Duration Caliper Open From	50.0	seconds
Pulse Duration Release Pulse From	70.0	seconds
Pulse Duration Release Pulse To	100.0	seconds
Pulse Release Duration	30.0	seconds
Pulse Discriminator Pressure Band	96.0	seconds
Pulse Pressure Discriminator	213.0	seconds
Use Negative Pulsing	No	
Good Status Reply Open Hole	65535.0	seconds
Good Status Reply Cased Hole	10.0	seconds
Bad Status Reply	25.0	seconds
Status Pulse To	15.0	seconds
Caliper Close To	0.0	seconds
Caliper Open To	55.0	seconds

Configuration

MMS,MPD,MPD,MAI

High Resolution Temperature Calibration MGS-C.J 142

Field Calibration on 12-JUN-2012,12:54

	Measured	Calibrated(Deg F)
Lower	0.00	0.00
Upper	0.00	0.00

High Resolution Temperature Constants MGS-C.J 142

Last Edited on

Pre-filter Length	11

SP Calibration MGS-C.J 142

Field Calibration on 12-JUN-2012,12:55

	Measured	Calibrated (mV)
Reference 1	100.0	100.0
Reference 2	-100.0	-100.0

Gamma Calibration MGS-C.J 142

Field Calibration on 12-JUN-2012 12:59

	Measured	Calibrated (API)
Background	39	28
Calibrator (Gross)	1021	724
Calibrator (Net)	983	696

Gamma Constants MGS-C.J 142

Last Edited on 16-JUN-2012,23:07

Gamma Calibrator Number	036	
Mud Density	1.01	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Concentration of ROI 0.00 kppm

Neutron Calibration MDN-B.J 388

Base Calibration on 29-JUN-2012,14:59
Field Check on 12-JUL-2012,10:55

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3277	100	3714	110
Ratio	32.858		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2207	3289
Ratio	0.671	

Field Check

	Calibrated (cps)	
	2231	3352
Ratio	0.666	

Neutron Constants MDN-B.J 388

Last Edited on 05-JUL-2012,14:40

Neutron Source Id	N1055	
Neutron Jig Number	N639	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.00	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	68.00	degrees F
Mud Salinity	0.00	kppm
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Accelerometer Parameters MIE-A.J 233

Date Of Last Accelerometer Calibration 22-NOV-2011,16:08

	X Accelerometer	Y Accelerometer	Z Accelerometer
Slope	-1.106957	-1.101597	-1.096051
Offset	0.006667	0.007744	-0.005892

Accelerometer Constants MIE-A.J 233

Last Edited on 22-NOV-2011,16:08

Accelerometer Calibrator Number 000

Accelerometer Temperature Characterisation

X Accelerometer

Serial Number	1057			
Calibration Date	27-Apr-2011			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	2.82020e-006	-3.02029e-008	1.94332e-010
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.77285e-004	1.89104e-007	1.67186e-009

Y Accelerometer

Serial Number	1073			
Calibration Date	02-May-2011			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	-1.04005e-005	2.19294e-008	-1.31489e-010
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.69223e-004	2.39527e-007	9.12553e-010

Z Accelerometer

Serial Number	977			
Calibration Date	20-Jan-2011			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	1.86594e-005	1.00709e-008	3.83419e-011
	SF0	SF1	SF2	SF3

Scale Factor(mA/g)	3.00000e+000	2.74913e-004	2.75506e-007	1.29284e-009

Imager Pad Check MIE-A.J 233

Field Check on

Pad 1	Pad Not Tested	Pad 5	Pad Not Tested
Pad 2	Pad Not Tested	Pad 6	Pad Not Tested
Pad 3	Pad Not Tested	Pad 7	Pad Not Tested
Pad 4	Pad Not Tested	Pad 8	Pad Not Tested

Compact Micro Imager Constants MIE-A.J 233

Last Edited on 22-NOV-2011,19:26

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	metres
Search Angle	0.00	metres
Correlation Interval	1.00	mAmp
Correlation Step	0.50	mAmp
Current Offset	0.0000	
Squasher Start	N/A	
Image Processing	Enabled	

Caliper Calibration MIE-A.J 233

Base Calibration on 22-NOV-2011 16:05
Field Calibration on 30-MAY-2012 14:18

Base Calibration

Reading No	Pads 1-5 Meas.	Pads 3-7 Meas.	Calibrator Size (in)
1	25479	25668	5.96
2	36118	36010	7.97
3	45775	45499	9.84
4	57747	57059	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	24613	24005	24629	24615	5.96
2	33696	32386	33383	33850	7.97
3	41885	40590	41925	42007	9.84
4	51911	50551	51787	51761	11.91
5	0	0	0	0	0.00

Field Calibration

Measured Pads 1-5 Caliper(in)	Measured Pads 3-7 Caliper(in)	Actual Caliper(in)
6.32	6.07	6.00

Measured Pad 2 Caliper(in)	Measured Pad 4 Caliper(in)	Measured Pad 6 Caliper(in)	Measured Pad 8 Caliper(in)	Actual Caliper(in)
3.16	2.92	2.93	3.13	6.00

Caliper Constants MIE-A.J 233

Last Edited on 22-NOV-2011,16:06

Caliper Difference for BRKT	0.120	inches

Magnetometer Parameters MIE-A.J 233

Date Of Last Magnetometer Calibration 22-NOV-2011,16:09

	X Magnetometer	Y Magnetometer	Z Magnetometer
Slope	-1.000000	-1.002341	-0.997182
Offset	0.005318	-0.018938	0.000387

Magnetometer Constants MIE-A.J 233

Last Edited on

Magnetometer Calibrator Number	000

Navigation Constants MIE-A.J 233

Last Edited on 30-MAY-2012,14:22

Magnetic Declination	4.18	degrees	East

Induction Calibration MAI-B.J 390

Base Calibration on 16-AUG-2010 14:24
Field Check on 14-JUL-2012 18:18

Base Calibration

Test Loop Calibration Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	16.8	458.6	9.3	966.2

2	6.3	377.7	7.6	821.4
3	3.8	258.6	5.2	566.0
4	1.9	132.3	2.6	279.2

Array Temperature 77.9 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	12.3	3951.3
2	0.0	0.0	27.9	3554.4
3	0.0	0.0	26.0	3053.4
4	0.0	0.0	18.3	2082.7
Deep	0.0	0.0	15.9	2001.1
Medium	0.0	0.0	37.7	4001.6
Shallow	0.0	0.0	41.8	5247.2

Array Temperature 0.0 92.7 Deg F

Induction Constants MAI-B.J 390

Last Edited on 16-JUL-2012,08:04

Induction Model	RtAP-WBM	
Caliper for Borehole Corr.	Bit Size	
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.	MGS External Temperature	
Squasher Start	0.0060	mhos/metre
Squasher Offset	N/A	mhos/metre

Borehole Normalisation

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	

High Resolution Temperature Calibration MAI-B.J 390

Field Calibration on 07-NOV-2011 02:31

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

High Resolution Temperature Constants MAI-B.J 390

Last Edited on

Pre-filter Length 11

Caliper Calibration MPD-B 166

Base Calibration on 12-JUN-2012 12:28
Field Calibration on 12-JUN-2012 12:29

Base Calibration

Reading No	Measured	Calibrator Size (in)

1	11102	4.02
2	20537	5.96
3	30848	8.03
4	41232	10.02
5	51982	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.98	5.96

Photo Density Calibration MPD-B 166

Base Calibration on 12-JUN-2012 12:09
Field Check on 14-JUL-2012 18:22

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	49845	22463	59869	31110
Reference 2	20737	2400	24557	2522

Field Check at Base

1190.7	1364.5

Field Check

1184.3	1353.4

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	215	1064		
Reference 1	19934	49660	0.406	0.369
Reference 2	5690	20604	0.280	0.271

Field Check at Base

215.4	1064.3

Field Check

216.6	1062.0

Density Constants MPD-B 166

Last Edited on 12-JUN-2012,11:24

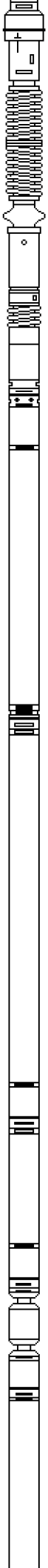
Density Source Id	236	
Nylon Calibrator Number	633	
Aluminium Calibrator Number	633	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.00	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate 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 (m)
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	

DOWNHOLE EQUIPMENT

C:\Data\SANDRIDGE POWERS 1-2H\POWERS 1-2H RTAP.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-B.A 159 LG: 6.90 ft WT: 50.7 lb OD: 2.24 in

MBS-G.A 200v Compact Battery Sub
MBS-G.A 113 LG: 16.66 ft WT: 132.3 lb OD: 2.24 in

Compact Memory Sub E.B
MMS-E.B 166 LG: 5.20 ft WT: 37.5 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 458 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Spacer - Empty Battery
MLK-A 2 LG: 14.23 ft WT: 30.9 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 457 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Tool Isolator sub.
MTI-B.A 68 LG: 1.54 ft WT: 13.2 lb OD: 2.24 in

Compact Short Gamma
MGS-C.J 142 LG: 3.41 ft WT: 24.3 lb OD: 2.24 in

87.87 ft GRGM - MGS Gamma Ray

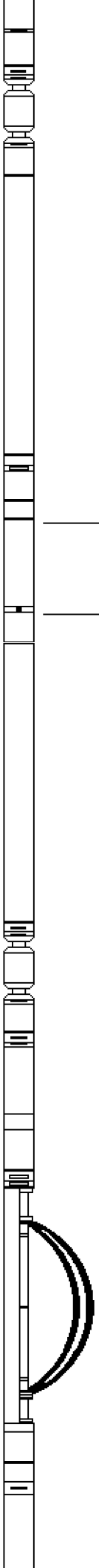
85.89 ft GSXT - MGS External Temperature

Compact Collar Locator
MCL-B.J 63 LG: 3.17 ft WT: 26.5 lb OD: 2.24 in

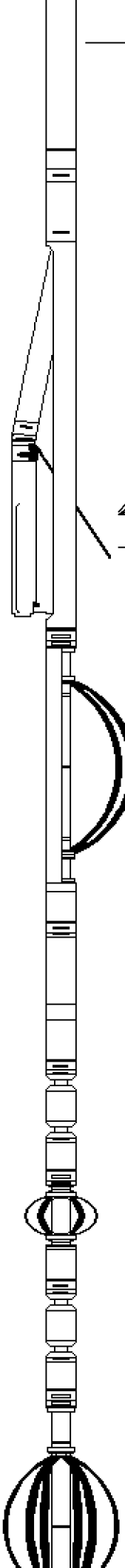
SKJ-E.B Compact Knuckle Joint
SKJ-E.B 479 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

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

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



Compact Neutron
MDN-B.J 388 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in



69.01 ft NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD-B 166 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

61.77 ft CLDC - Density Caliper
59.84 ft DCOR - Density Correction
59.84 ft DEN - Compensated Density
59.84 ft DPRL - Limestone Density Por.
59.77 ft PDPE - PE

MIS-A.A Compact Inline Bowspring sub
MIS-A.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.B Compact Knuckle Joint
SKJ-E.B 474 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 575 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 478 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 593 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

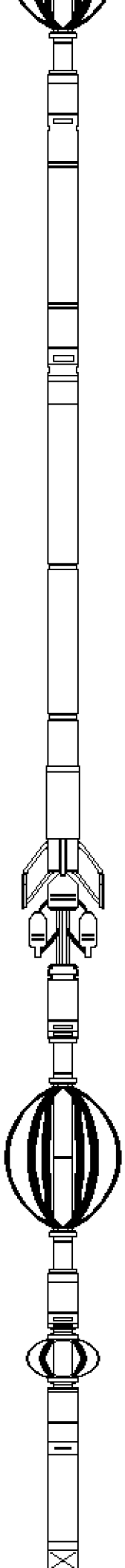
Compact MMI Memory Section
MIM-A.A 157 LG: 4.65 ft WT: 26.5 lb OD: 2.24 in

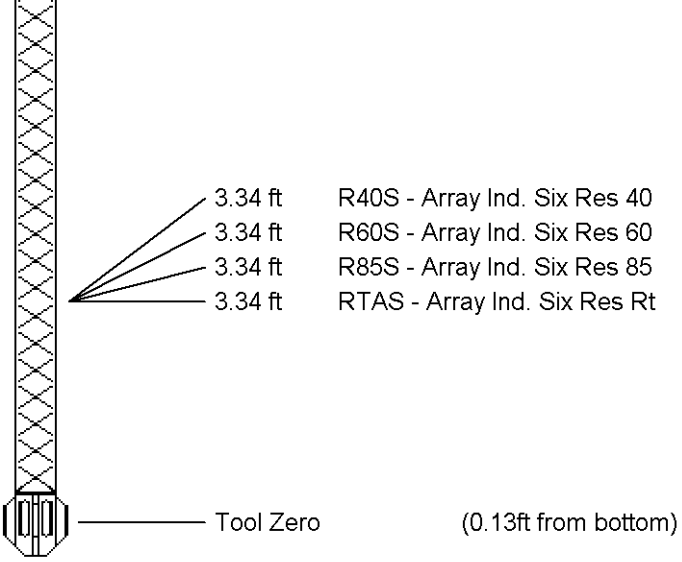
Compact MMI Electrode Section
MIE-A.J 233 LG: 13.96 ft WT: 99.2 lb OD: 4.09 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 698 LG: 5.70 ft WT: 33.1 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 Induction
MAI-B.J 390 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in





Total Length: 146.19 ft Weight: 1036.2 lb All measurements relative to tool zero.

COMPANY	SANDRIDGE ENERGY, INC,
WELL	POWERS 1-2H
FIELD	FORD
PROVINCE/COUNTY	FORD
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2373.00	feet	First Reading	9134.00	feet
Elevation Drill Floor	2372.00	feet	Depth Driller	9182.00	feet
Elevation Ground Level	2355.00	feet	Depth Logger	9182.00	feet

Weatherford®

CML IMPULSE SHUTTLE ARRAY INDUCTION LOG

Weatherford

CML IMPULSE SHUTTLE ARRAY INDUCTION LOG

COMPANY	SANDRIDGE ENERGY, INC.
WELL	POWERS 1-2H
FIELD	FORD
PROVINCE/COUNTY	FORD
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	350' FNL & 250' FEL
SEC	2
TWP	27S
RGE	22W
Other Services	MPD/MDN CMI
API Number	15-057-20800
Permanent Datum	G.L. Elevation 2355 feet
Log Measured From	KB
Drilling Measured From	K.B. @ 18 FEET
Elevations: KB	2373.00 feet
DF	2372.00
GL	2355.00

Date	15-JUL-2012
Run Number	ONE
Depth Driller	9182.00 feet
Depth Logger	9182.00 feet
First Reading	9134.00 feet
Last Reading	5525.00 feet
Casing Driller	5525.00 feet
Casing Logger	5525.00 feet
Bit Size	6.125 inches
Hole Fluid Type	WBM
Density / Viscosity	9.30 g/c3 32.00 CP
PH / Fluid Loss	9.00 60.00 ml/30Min
Sample Source	FLOWLINE
Rm @ Measured Temp	1.56 @ 82.0 ohm-m
Rmf @ Measured Temp	1.25 @ 82.0 ohm-m
Rmc @ Measured Temp	1.872 @ 82.0 ohm-m
Source Rmf / Rmc	CALC CALC
Rm @ BHT	0.98 @ 130.0 ohm-m
Time Since Circulation	1 HOUR
Max Recorded Temp	130.00 deg F
Equipment Name	COMPACT
Equipment / Base	18077 OKC
Recorded By	STEVEN TOTTEY
Witnessed By	JAY CHAPMAN
S.O. / AFE	3536722

1 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-JUL-2012 09:34
Filename: C:\Data\SANDRIDGE POWERS 1-2H\POWERS 1-2H RTAP.dta
Recorded on 16-JUL-2012 07:45
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

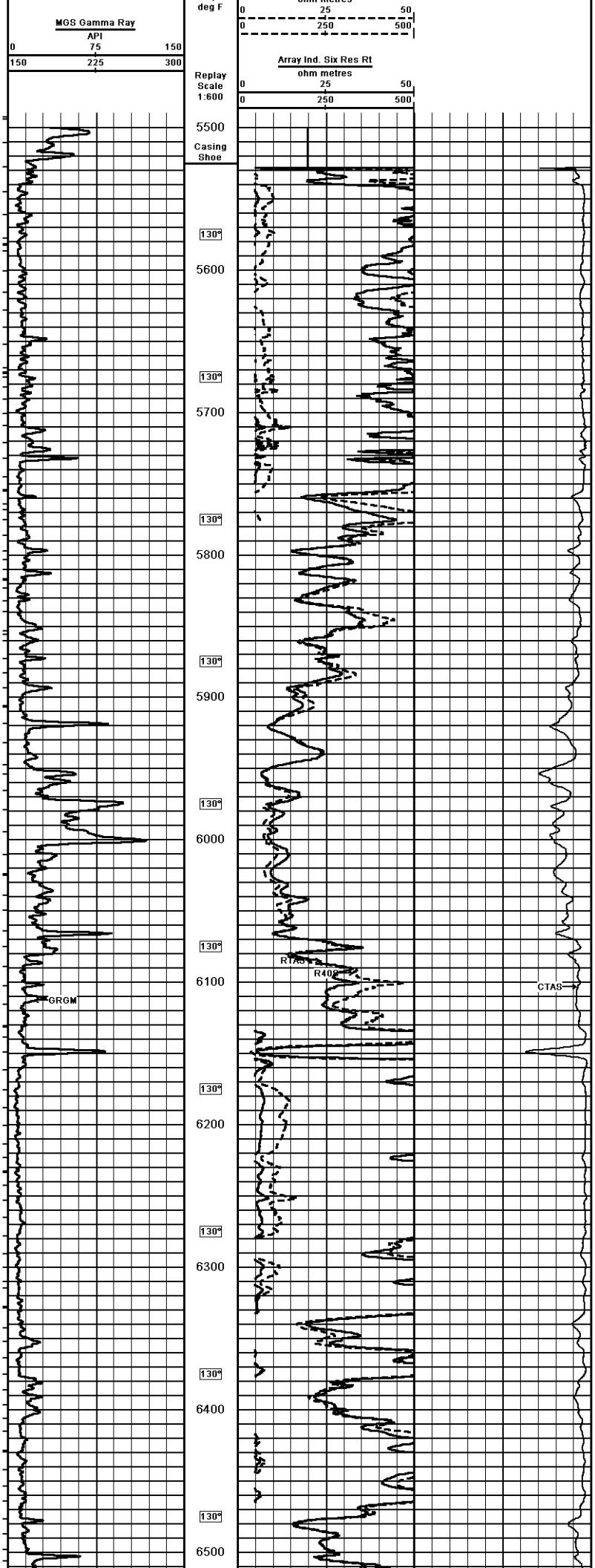
Timing Marks every 60.0 sec

Depth In Feet

Array Ind. Six Cond Ct mmhos
1000 750 500 250 0
2000 1750 1500 1250 1000

Borehole Temp in

Array Ind. Six Res 40 ohm metres


MGS Gamma Ray
API
0
75
150
150
225
300
deg F
0
25
50
0
250
500
Array Ind. Six Res Rt
ohm metres
0
25
50
0
250
500
Replay
Scale
1:600
5500
Casing
Shoe
130°
5600
130°
5700
130°
5800
130°
5900
130°
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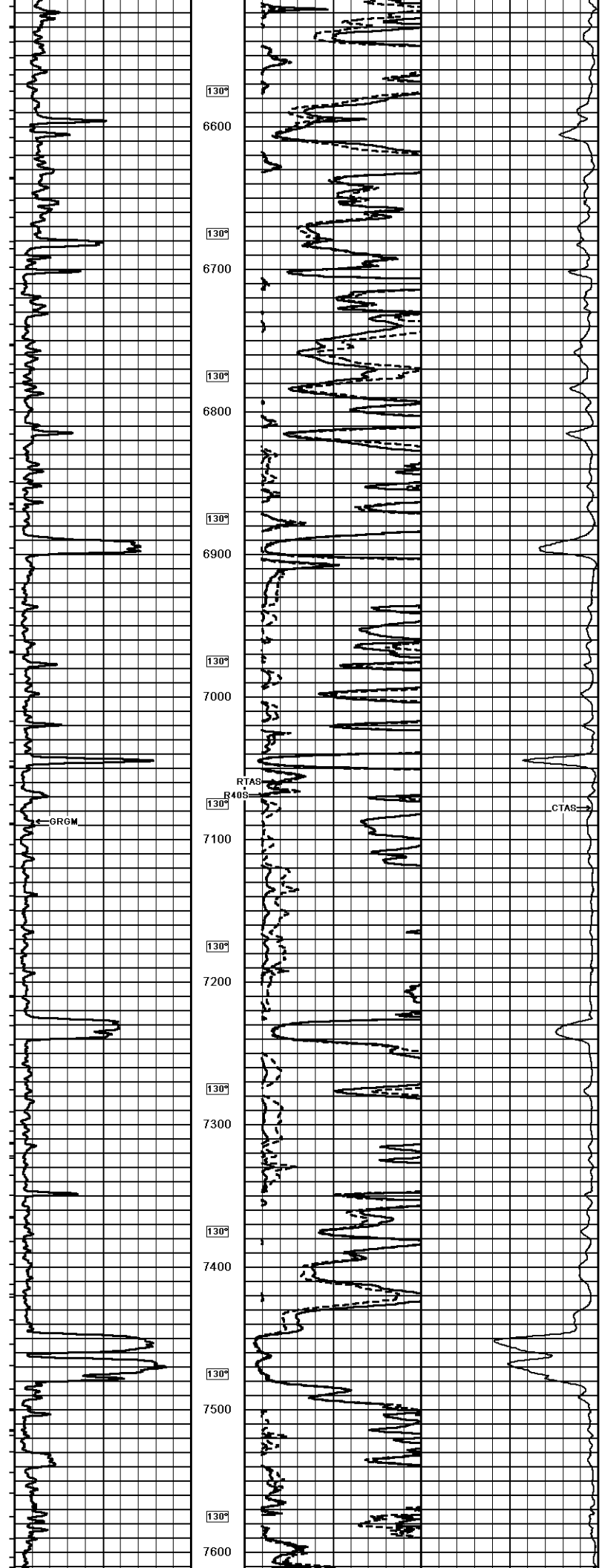
6500
GRGM
RTAS
R40S
CTAS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7100
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7200
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7300
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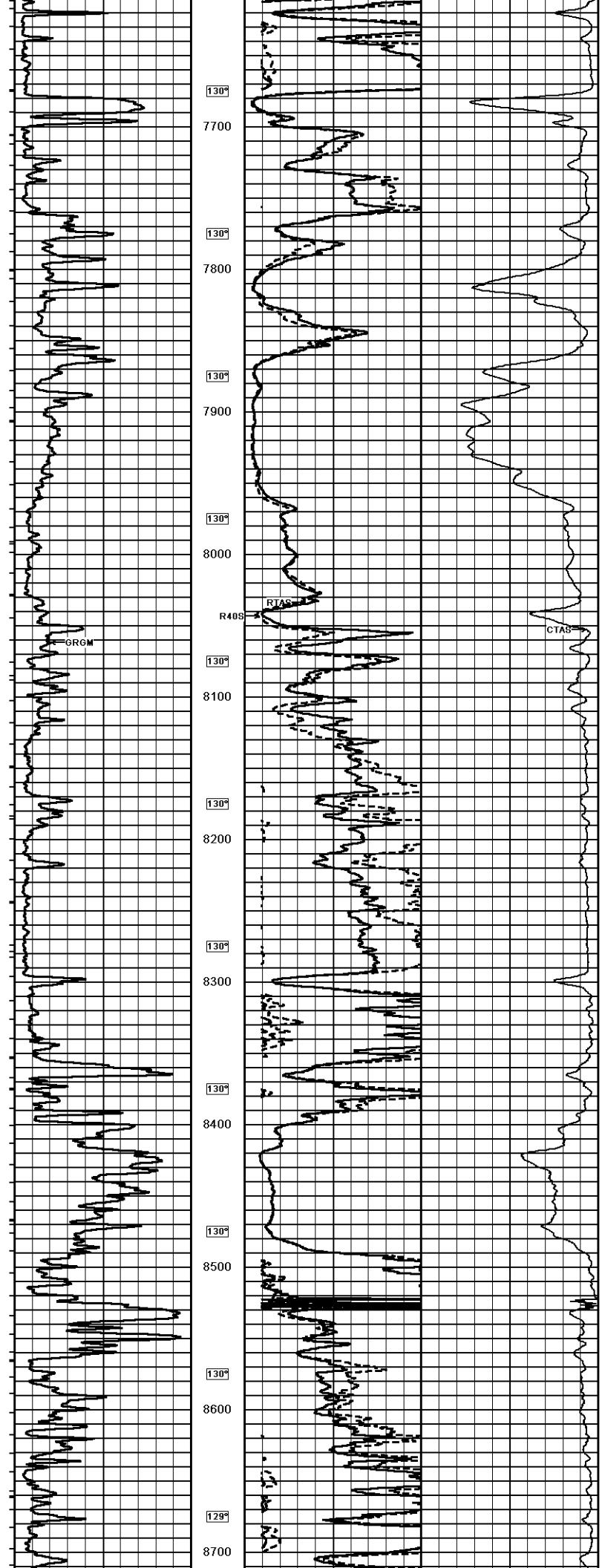
7400
130°
7500
130°
7600


130°
7700
130°
7800
130°
7900
130°
8000
RTAS
R40S
CTAS
GRGM
130°
8100
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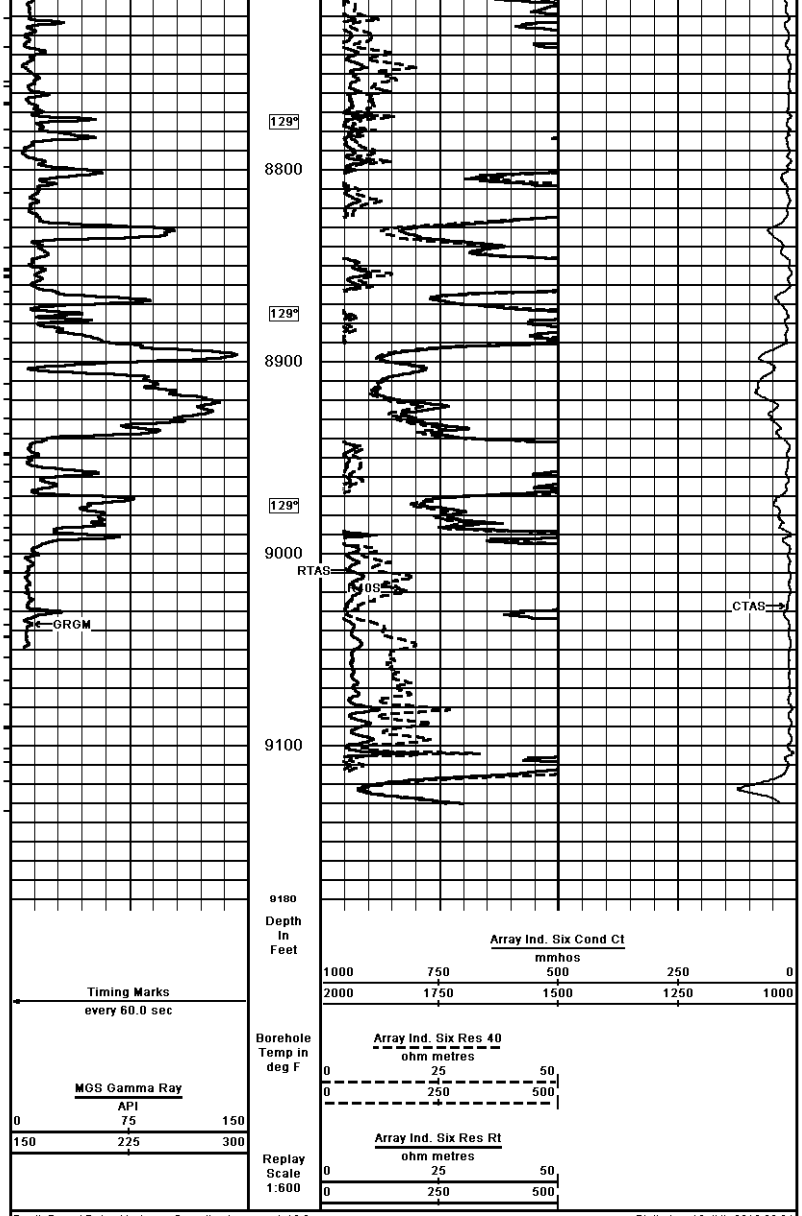
130°
8600
129°
8700



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-JUL-2012 09:34
Filename: C:\Data\SANDRIDGE POWERS 1-2H\POWERS 1-2H RTAP.dta
Recorded on 16-JUL-2012 07:45
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

1 INCH MAIN LOG

COMPANY	SANDRIDGE ENERGY, INC,
WELL	POWERS 1-2H
FIELD	FORD
PROVINCE/COUNTY	FORD
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2373.00	feet	First Reading	9134.00	feet
Elevation Drill Floor	2372.00	feet	Depth Driller	9182.00	feet
Elevation Ground Level	2355.00	feet	Depth Logger	9182.00	feet

Weatherford

CML IMPULSE SHUTTLE
ARRAY INDUCTION
LOG