Weatherford®

CML IMPULSE SHUTTLE
ARRAY INDUCTION
SHALLOW FOC ELECTRIC LOG

COMPANY	SANDRIDGE ENERGY
WELL	WARREN 3317 1-26H
FIELD	SHIMMER SOUTH
PROVINCE/COUNTY	COMANCHE
COUNTRY/STATE	USA \ KANSAS
LOCATION	S2 S2 SE SE
	200' FL & 660' FEL

SEC	TWP	RGE	Other Services
26	33S	17W	MPD/MDN

API Number 15-033-21654
Permit Number

Permanent Datum GL, Elevation 1797 feet
Log Measured From KB
Drilling Measured From KB

Elevations:	feet
KB	1818.00
DF	1818.00
GL	1797.00

Date	23-AUG-2012			
Run Number	ONE			
Depth Driller	9786.00	feet		
Depth Logger	9786.00	feet		
First Reading	9747.00	feet		
Last Reading	5590.00	feet		
Casing Driller	5621.00	feet		
Casing Logger	5611.00	feet		
Bit Size	6.125	inches		
Hole Fluid Type	WATER			
Density / Viscosity	8.70 lb/USg	30.00 CP		
PH / Fluid Loss	9.50	60.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.30 @ 80.0	ohm-m		
Rmf @ Measured Temp	0.24 @ 80.0	ohm-m		
Rmc @ Measured Temp	0.36 @ 80.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.18 @138.0	ohm-m		
Time Since Circulation	16 HOUR			
Max Recorded Temp	138.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	18077	OKC		
Recorded By	GUTHMUELLER			
Witnessed By	K GENTRY			
AFE# DC11668	SO#3536733			

BOREHOLE RECORD

Last Edited: 23-AUG-2012 15:04

Bit Size inches	Depth From feet	Depth To feet
12.250	0.00	754.00
8.750	754.00	5621.00
6.125	5621.00	9786.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURF	9.625	0.00	754.00	36.00
INTER	7.000	0.00	5621.00	26.00

REMARKS

TOOLS RAN:SMR-173,SER-189,200V MBS-135,MTI-068,MGS-142,MCL-063, MDN-391, MPD-166,MFE-363, MAI-427 RAN IN COMBINATION
WELL LOGGED USING IMPULSE METHOD OF DEPLOYMENT, AND MEMORY LOGGING SYSTEM

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

2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY
ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.
ANNULAR VOLUME CALCULATED FOR 4.5 INCH CASING

DRILL PIPE DEPTH DURING DEPLOYMENT: 9657

DRILL PIPE DEPTH DURING DEPLOYMENT: 9657
LOGGING TOOL DEPTH AFTER DEPLOYMENT: 9747

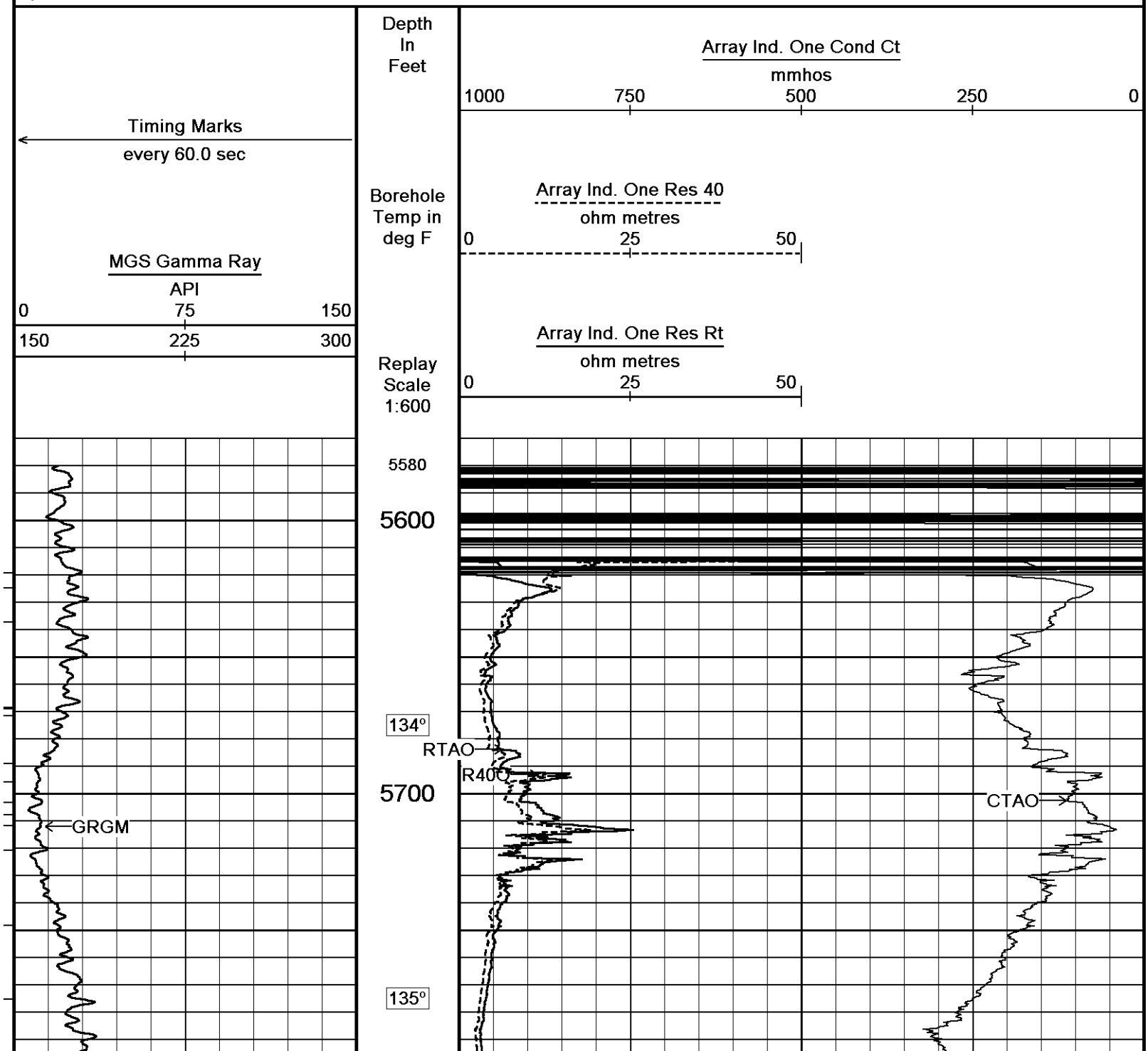
SERVICE ORDER # 3536733
RIG: LARIAT 19

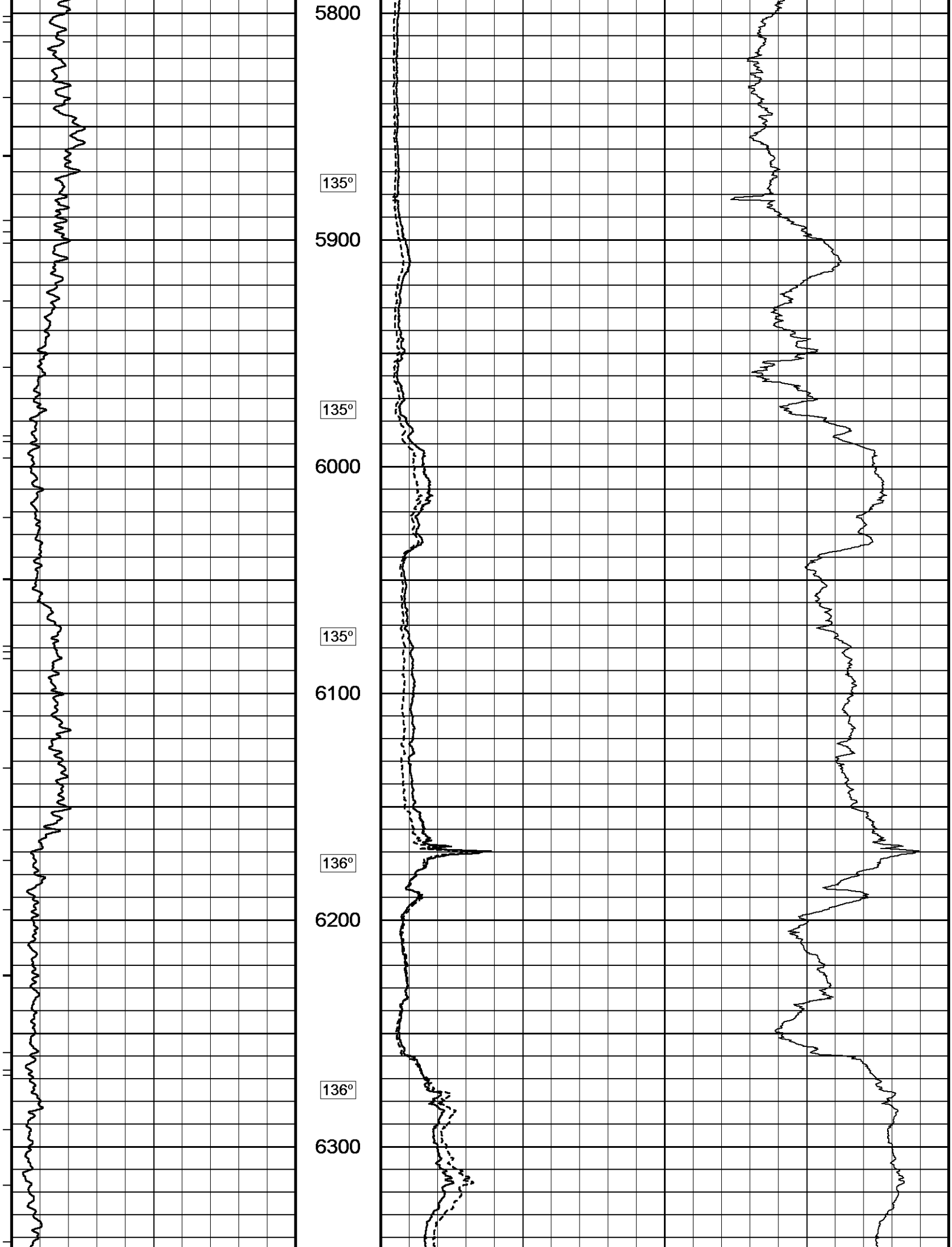
OPERATOR(S): D TURNER, S WORLEY

HOLE RUGOSITY MAY AFFECT LOG QUALITY.

2 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 24-AUG-2012 01:27
Filename: C:\Data\15033216540100_SDRGE WARREN 3317 1-26H\31828rtap1.dta
Recorded on 24-AUG-2012 00:00
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

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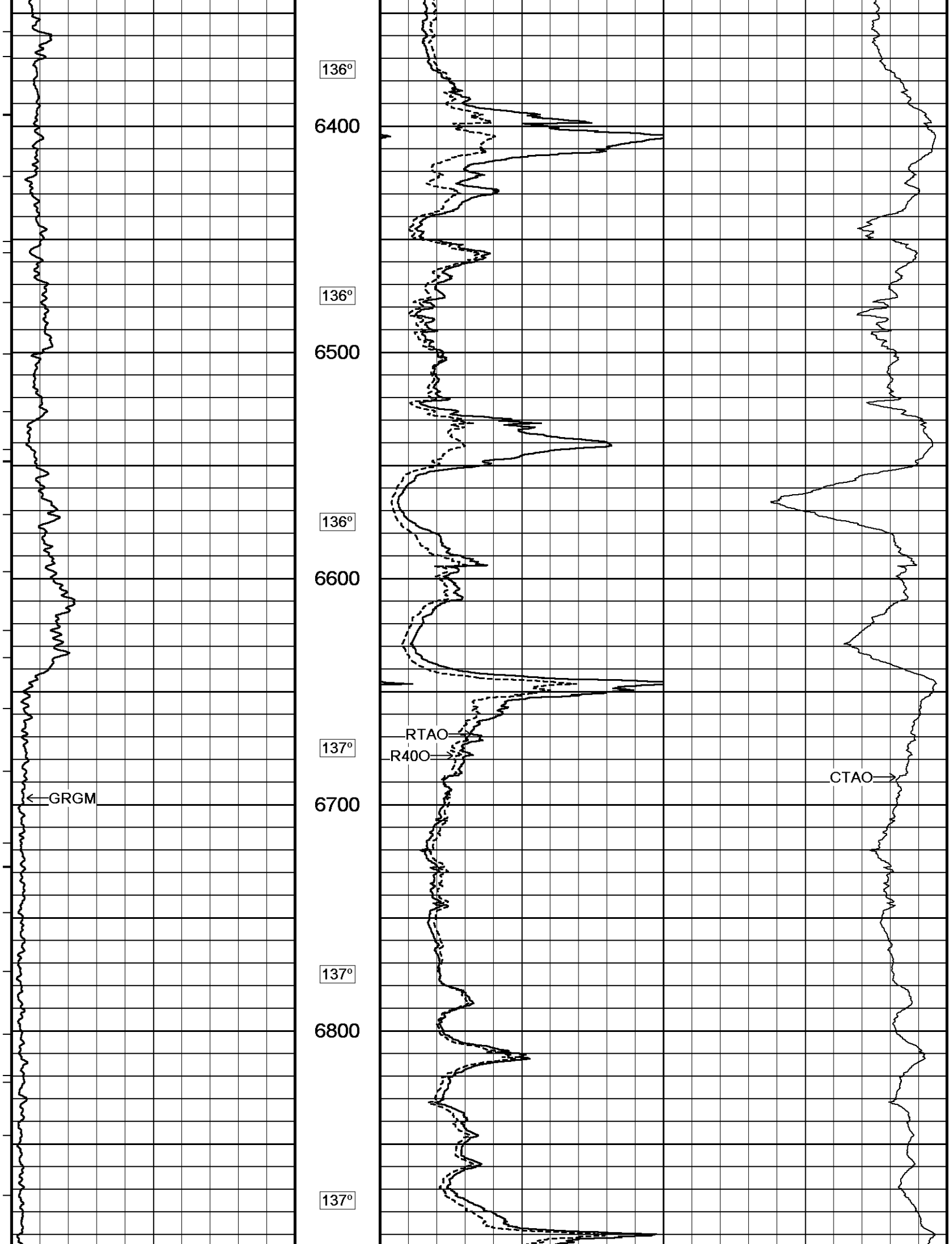
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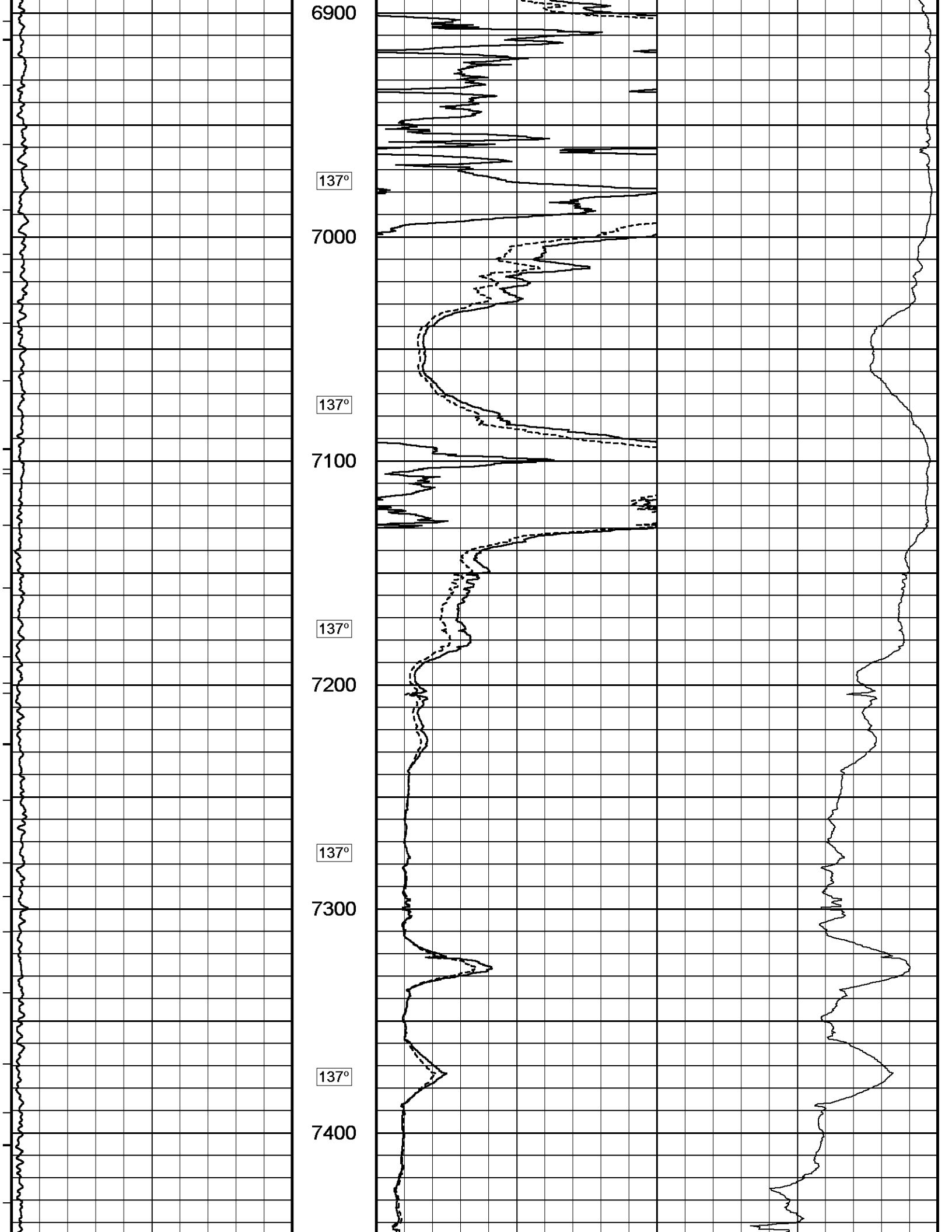
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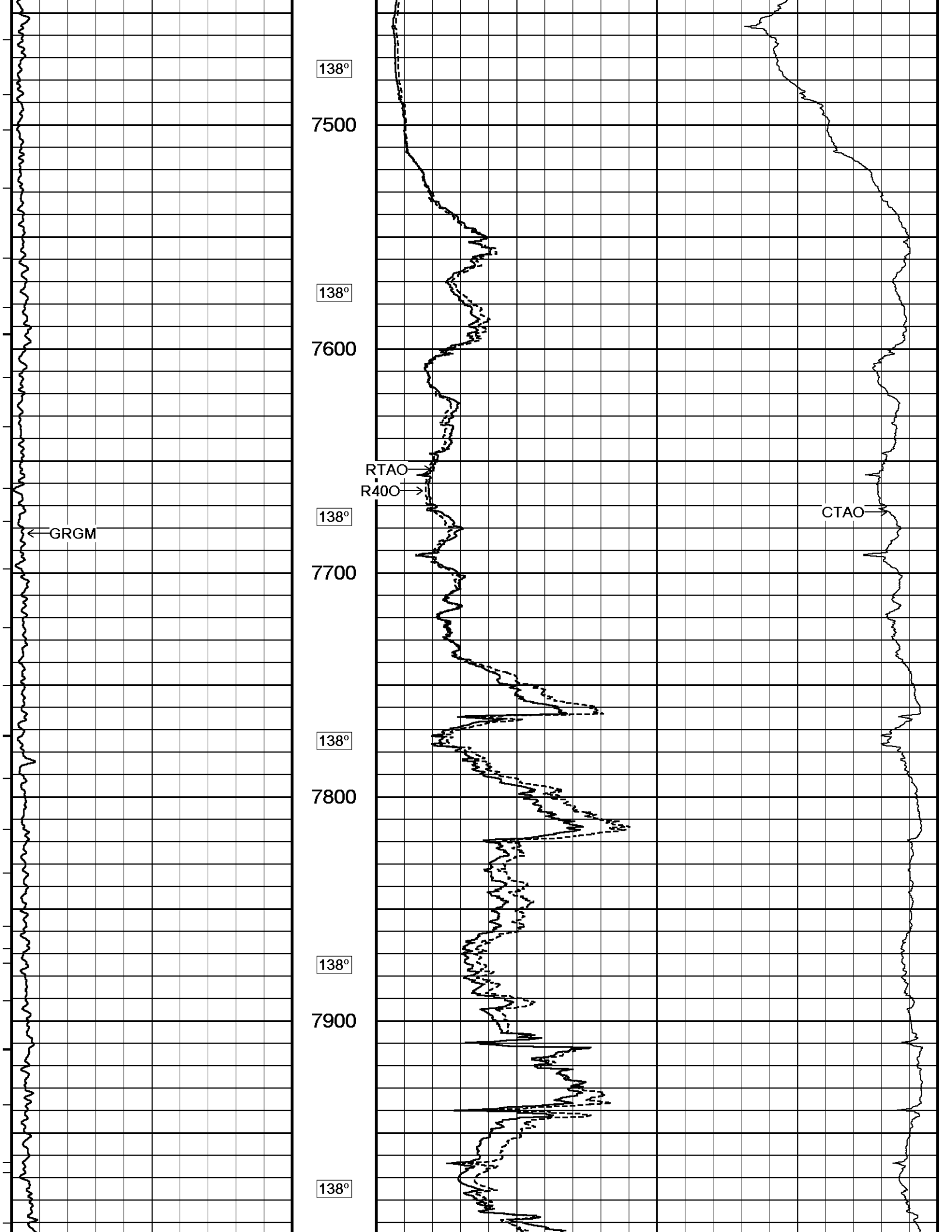
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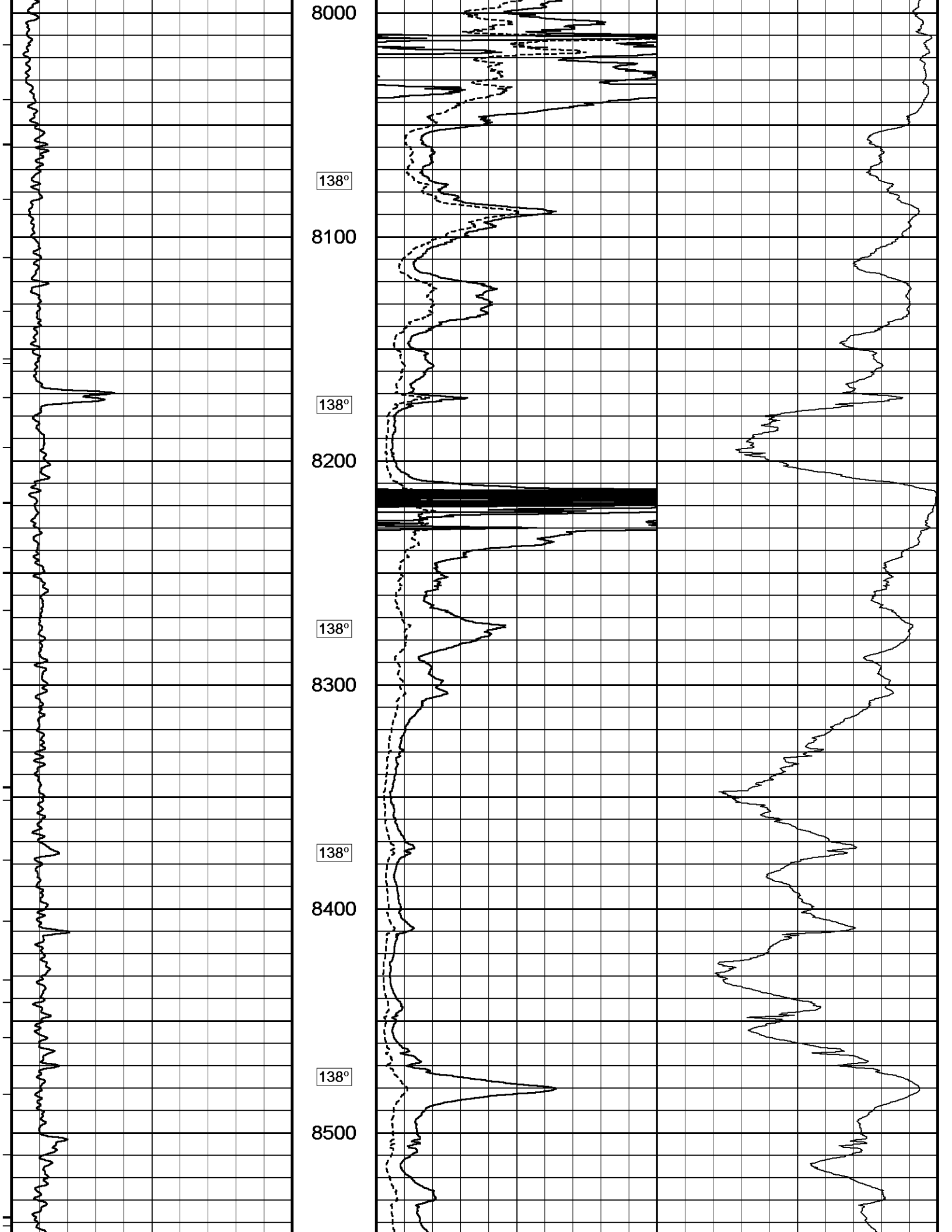
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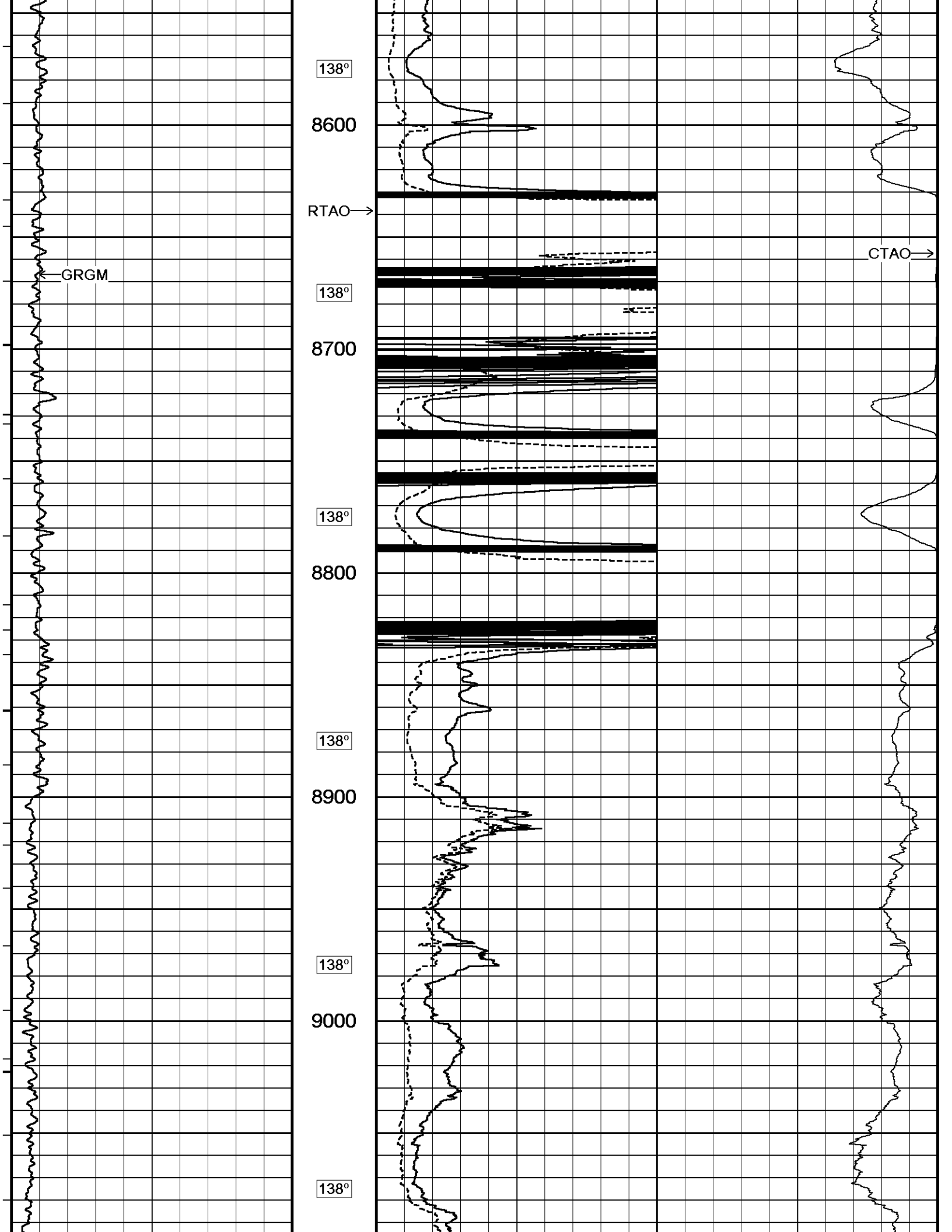
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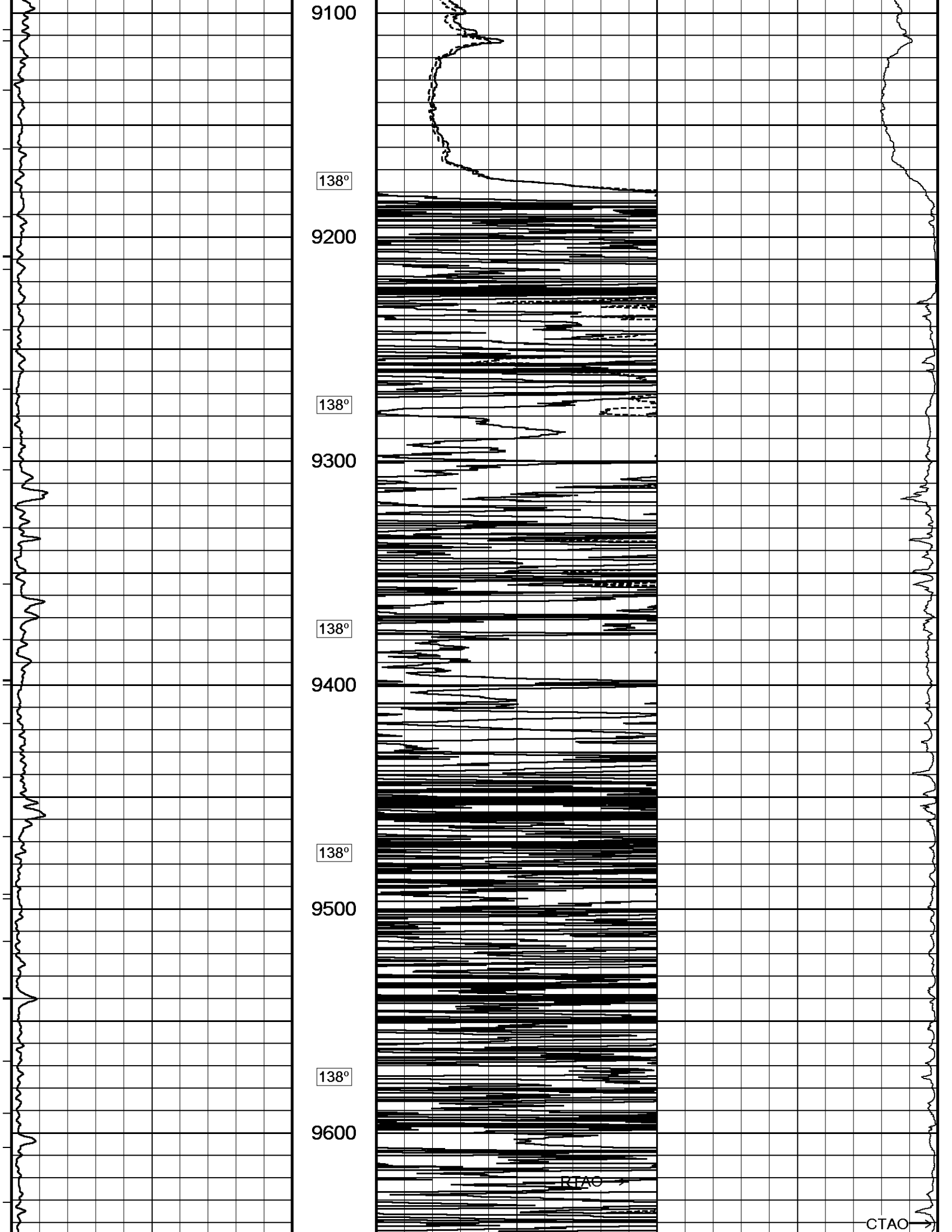
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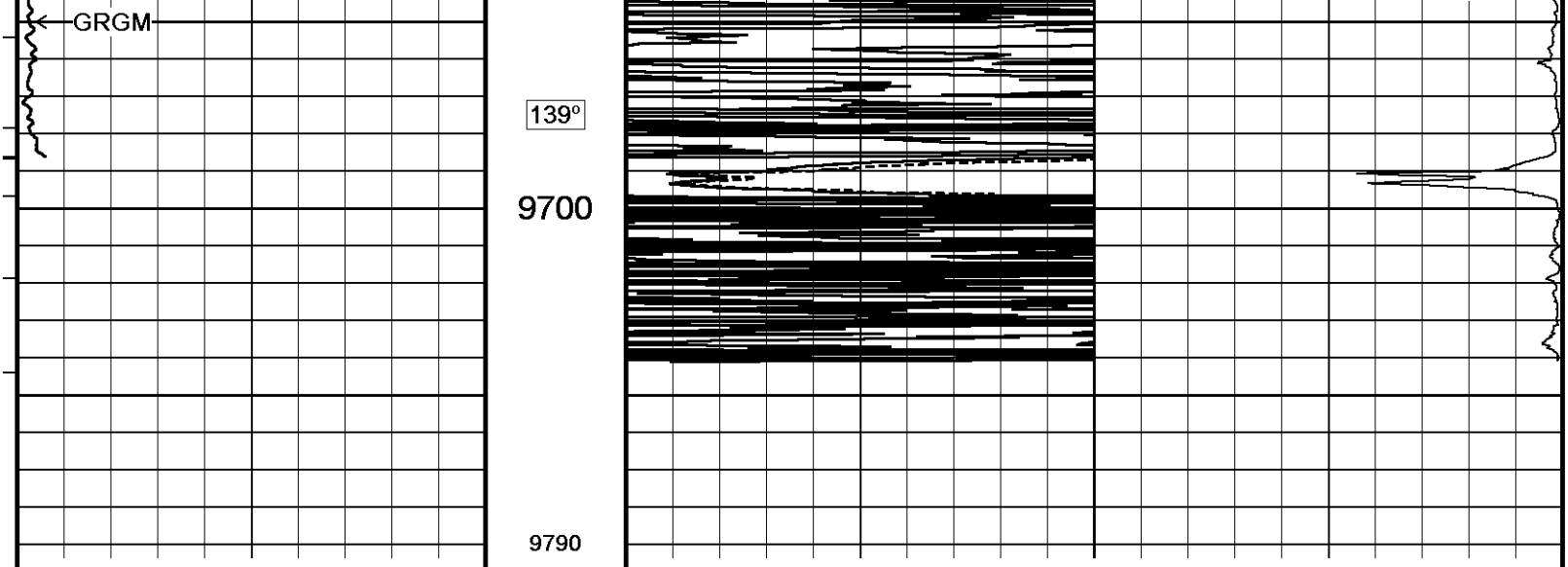


9790

Depth In Feet

Timing Marks
every 60.0 sec

MGS Gamma Ray
API
0 75 150
150 225 300

Array Ind. One Cond Ct
mmhos
1000 750 500 250 0

Borehole Temp in deg F

Array Ind. One Res 40
ohm metres
0 25 50

Array Ind. One Res Rt
ohm metres
0 25 50

Replay Scale 1:600

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Data\15033216540100_SDRGE WARREN 3317 1-26H\31828rtap1.dta
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

Plotted on 24-AUG-2012 01:27
Recorded on 24-AUG-2012 00:00

2 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Data\15033216540100_SDRGE WARREN 3317 1-26H\31828rtap1.dta
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

Plotted on 24-AUG-2012 01:27
Recorded on 24-AUG-2012 00:00

Depth In Feet

Timing Marks
every 60.0 sec

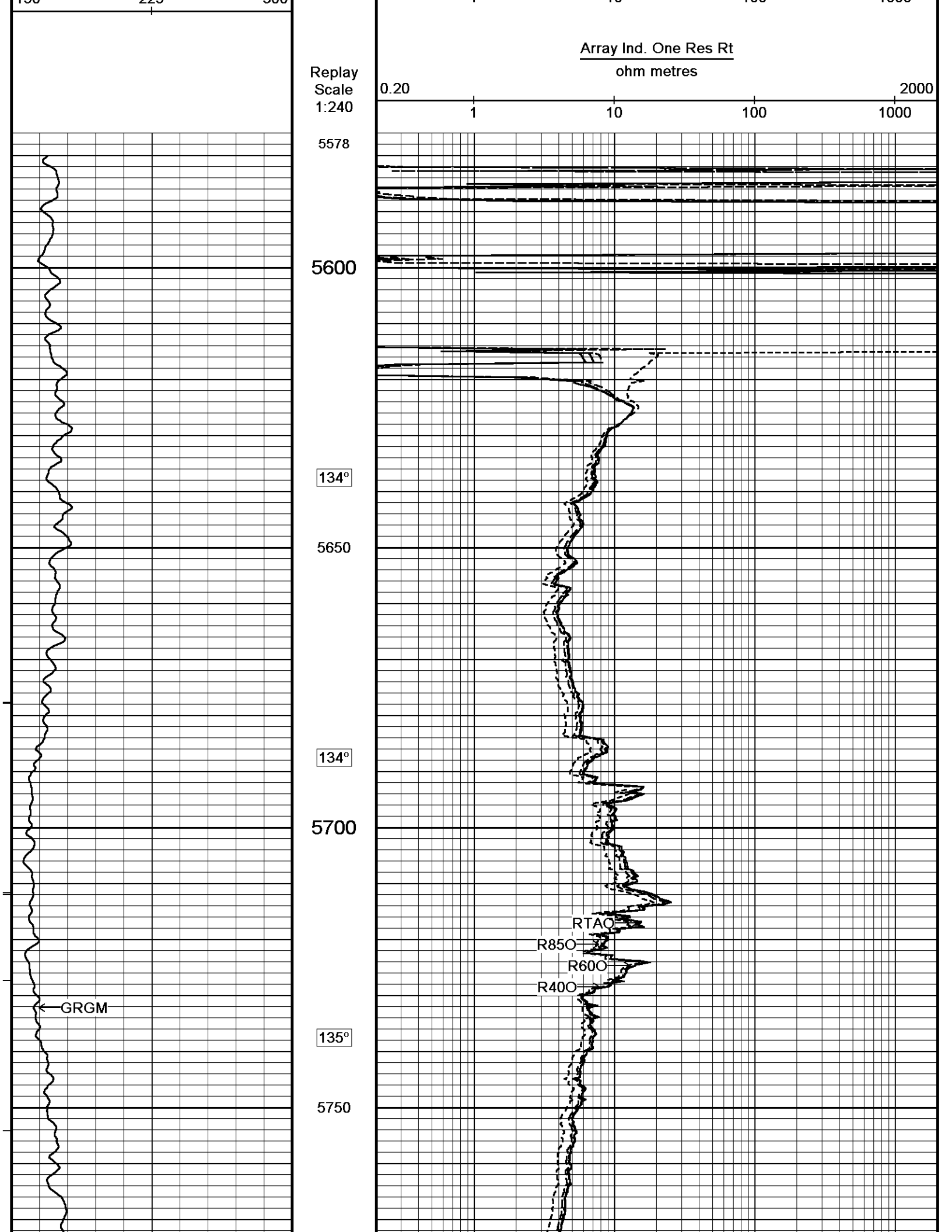
MGS Gamma Ray
API
0 75 150
150 225 300

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

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

Borehole Temp in deg F

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


Array Ind. One Res Rt
ohm metres
0.20
2000
1
10
100
1000
Replay
Scale
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R60O
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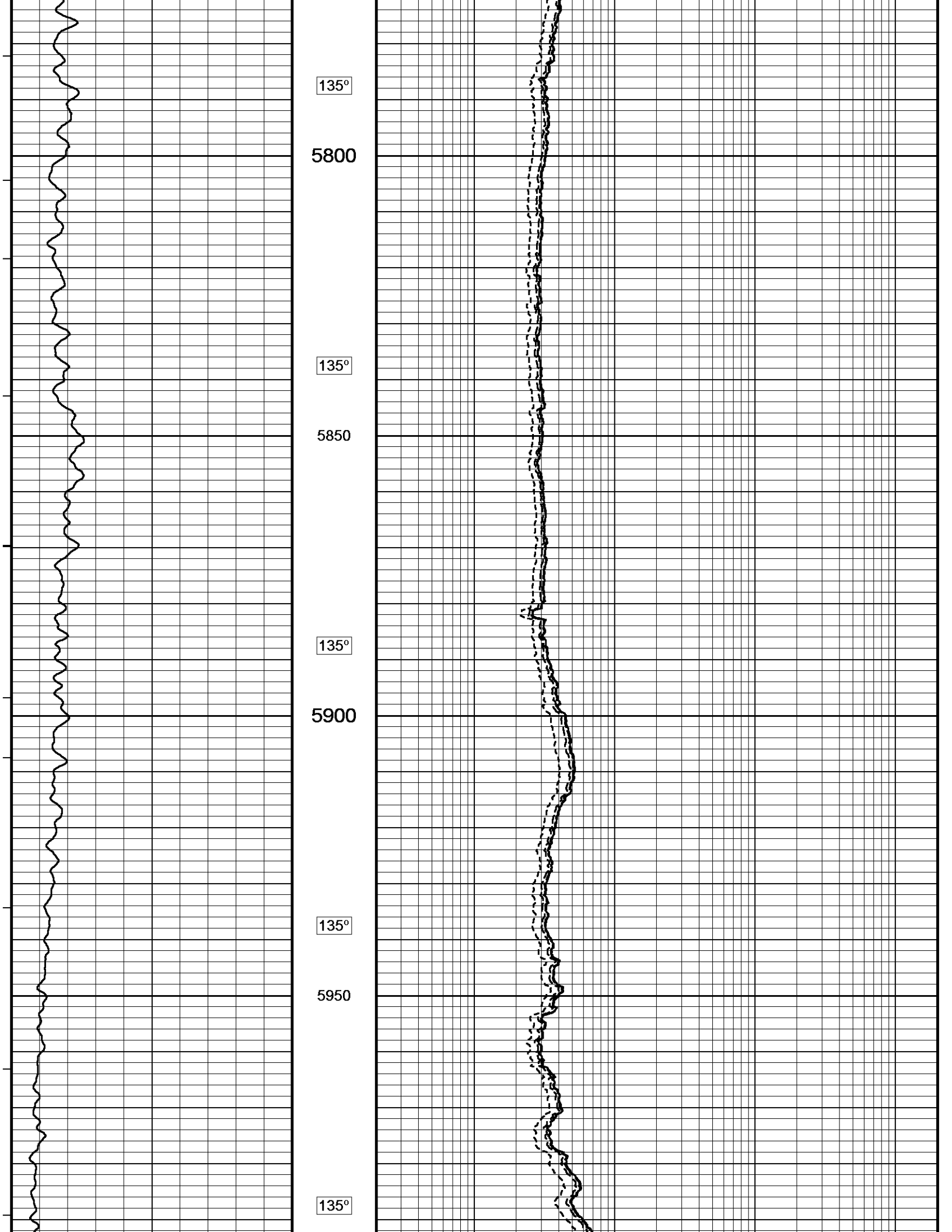
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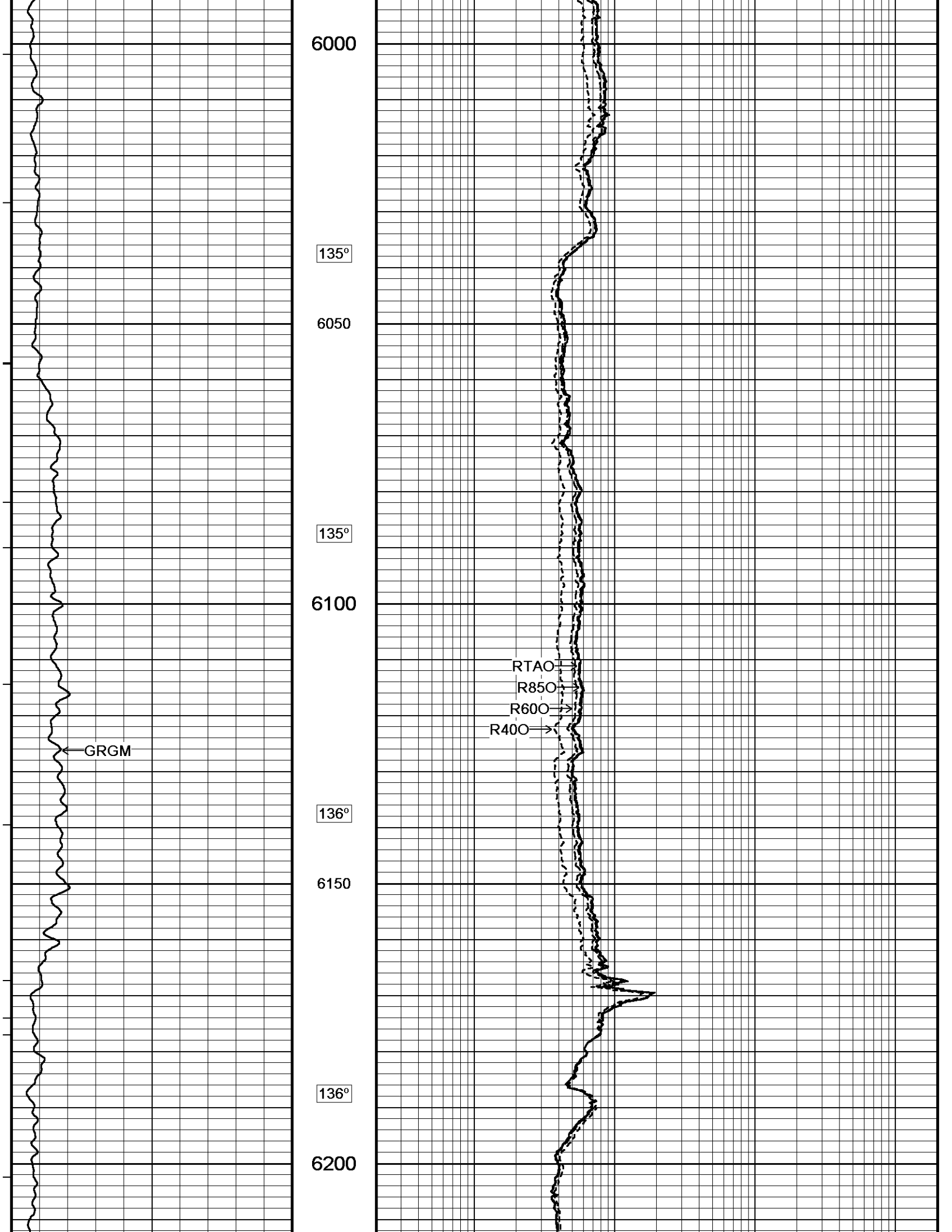
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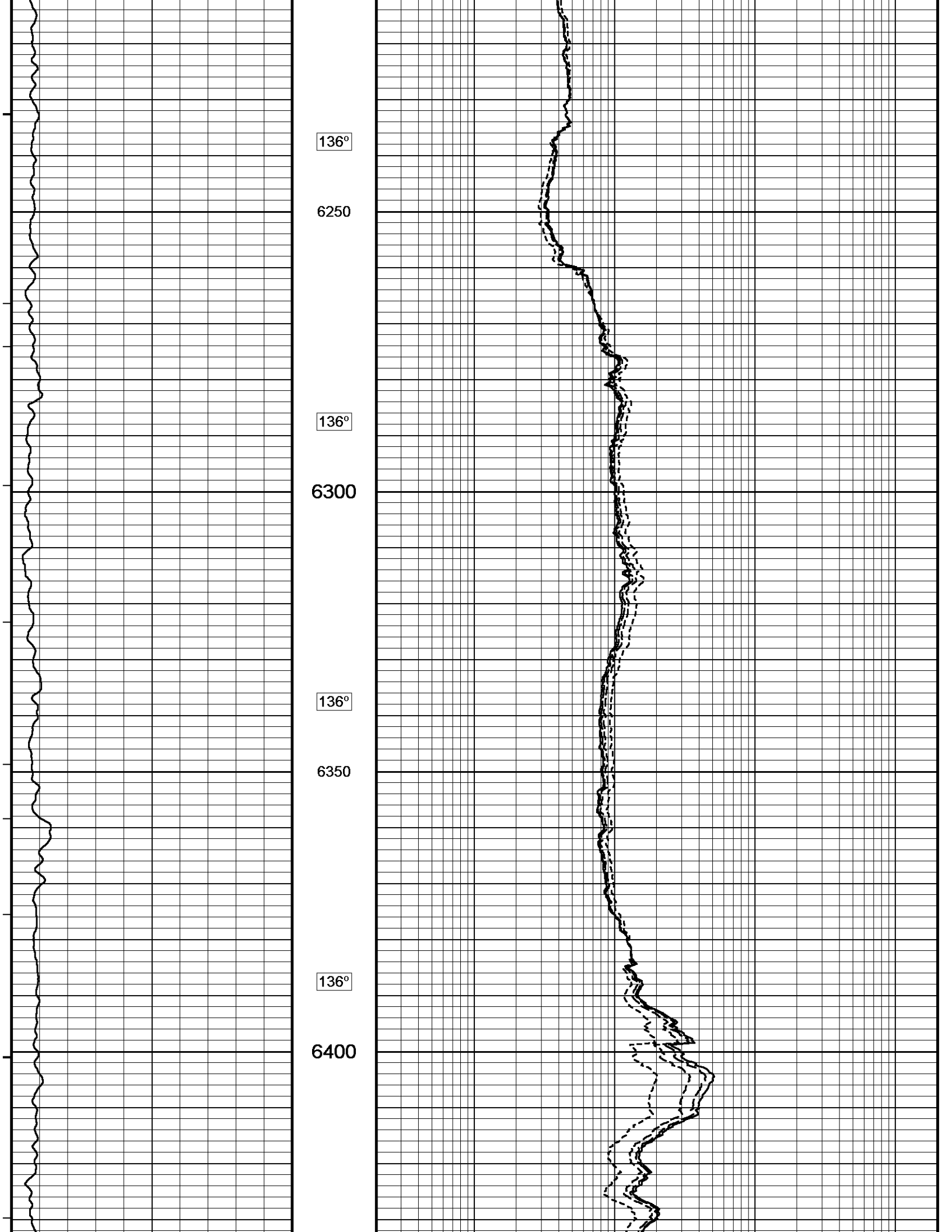
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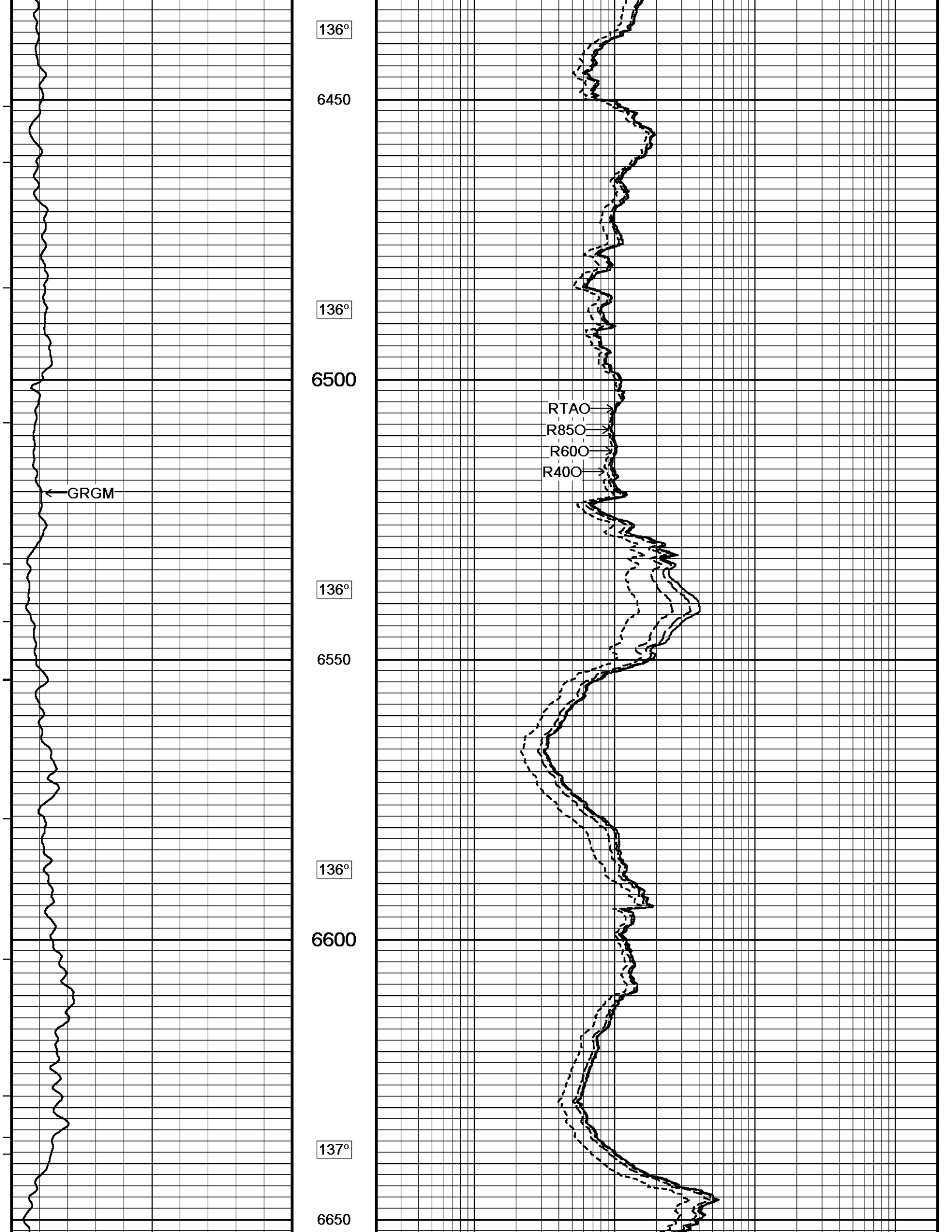
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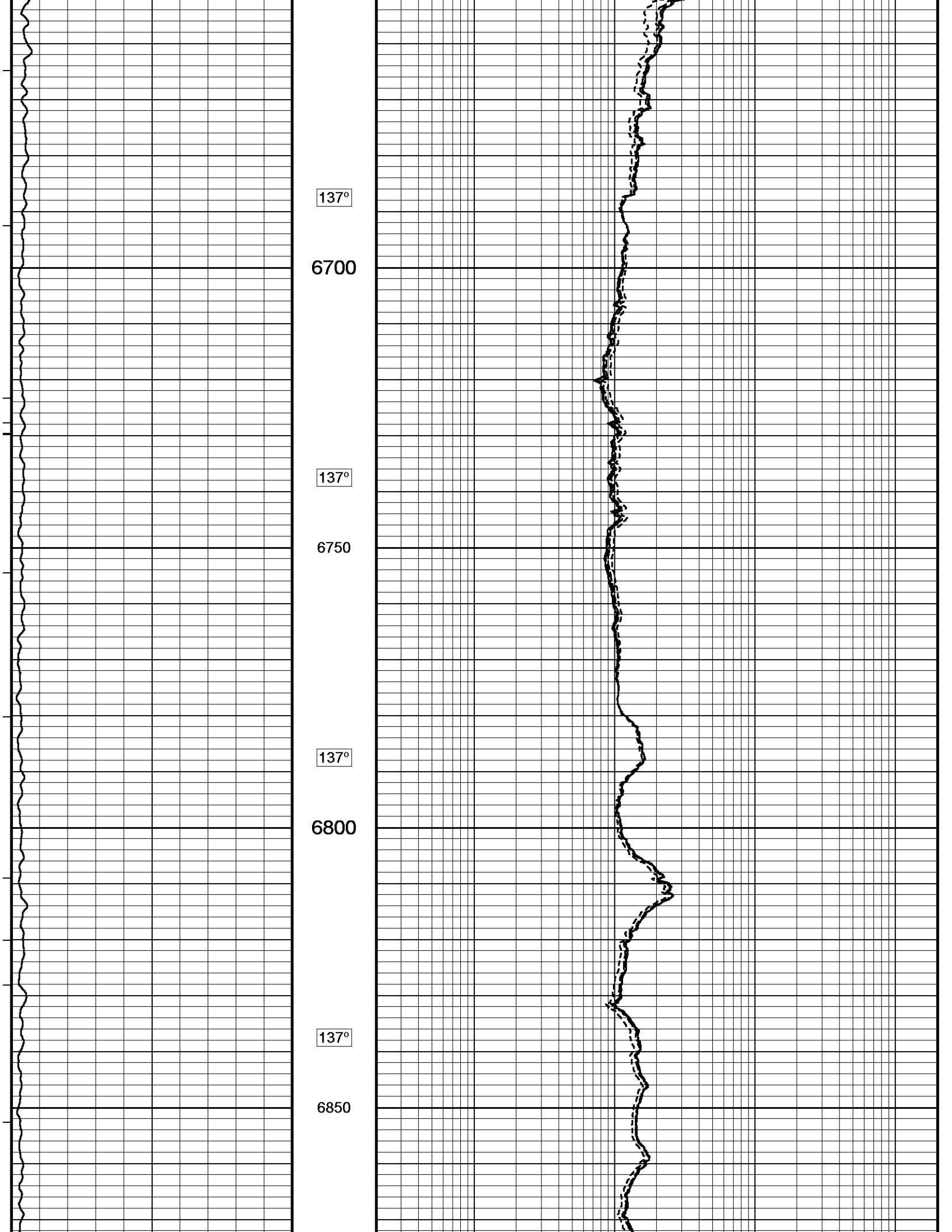
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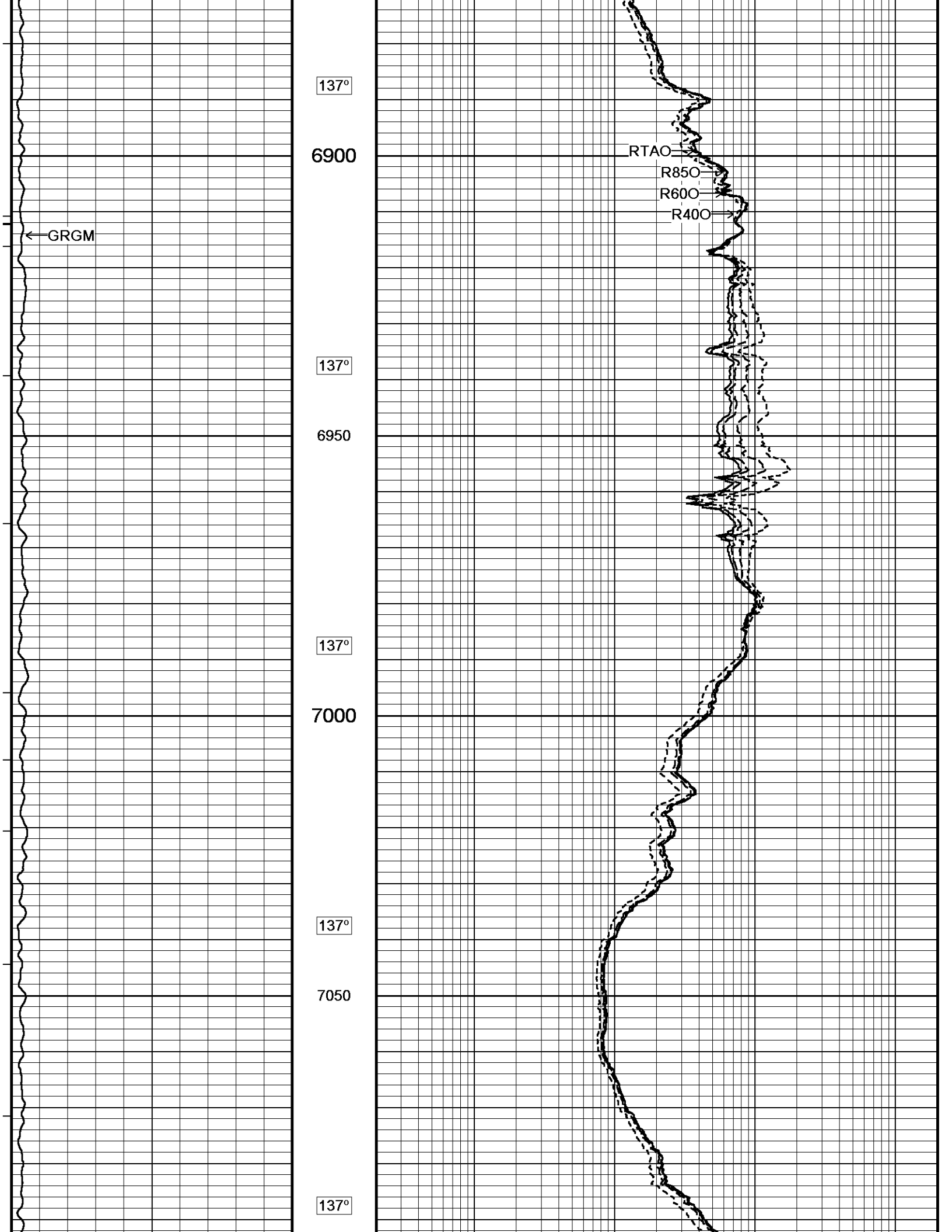
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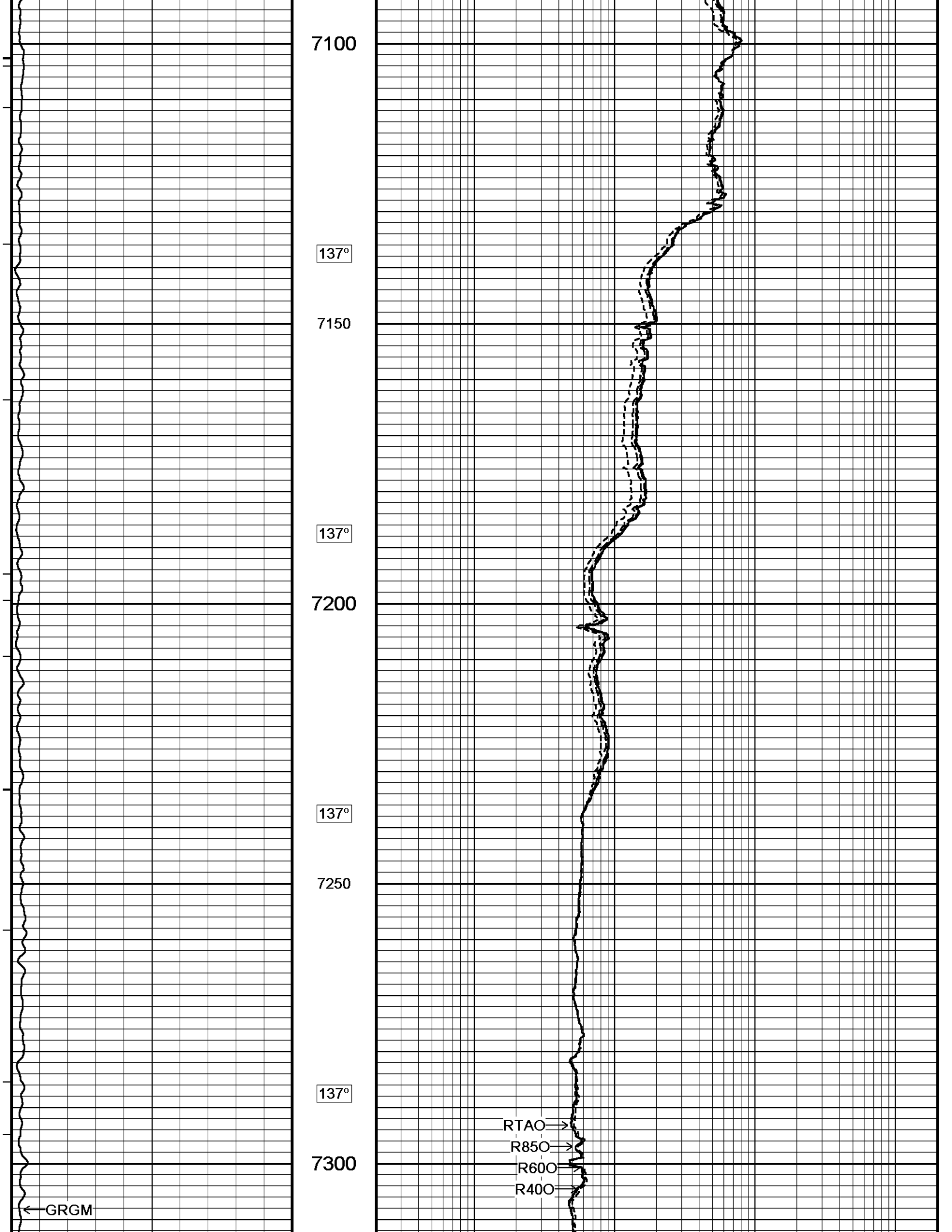
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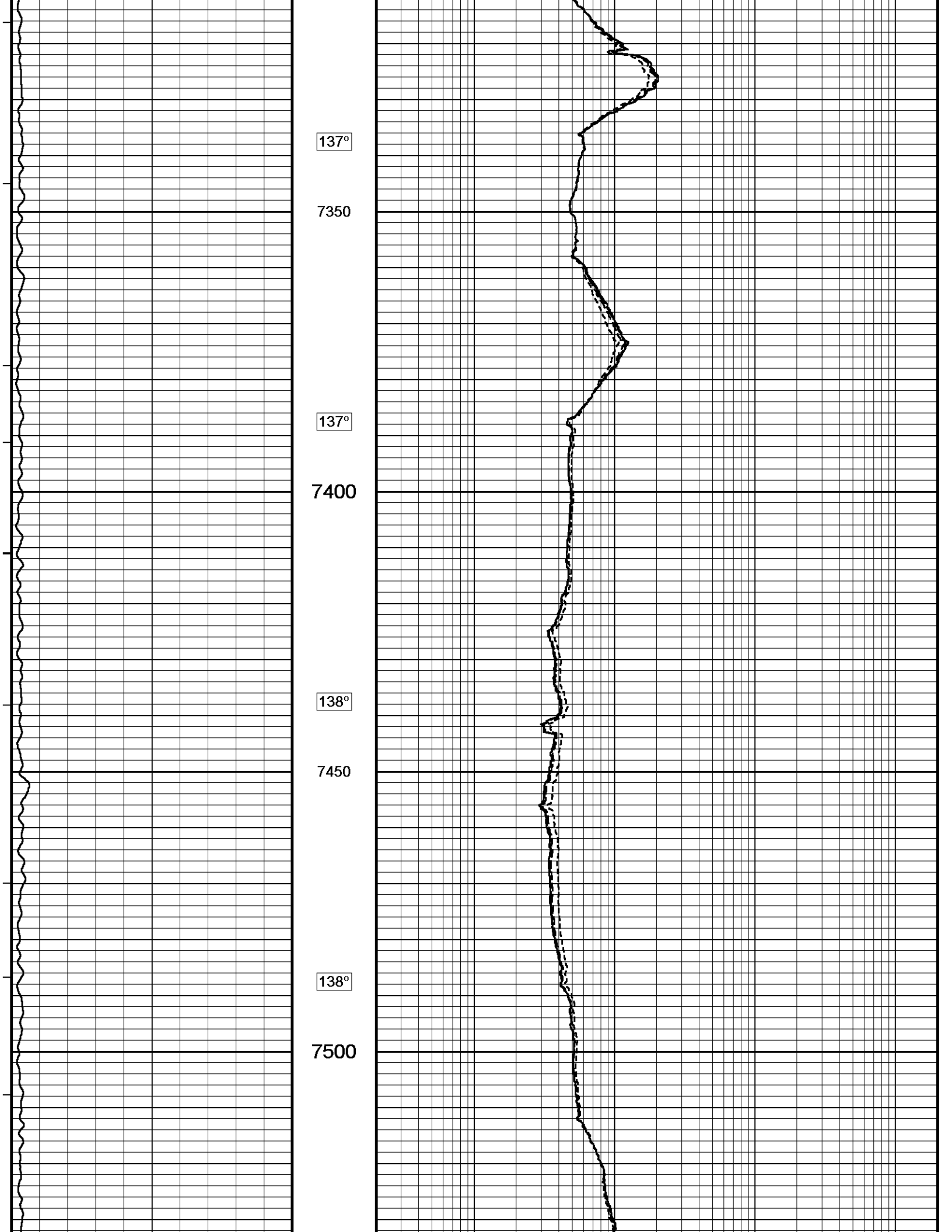
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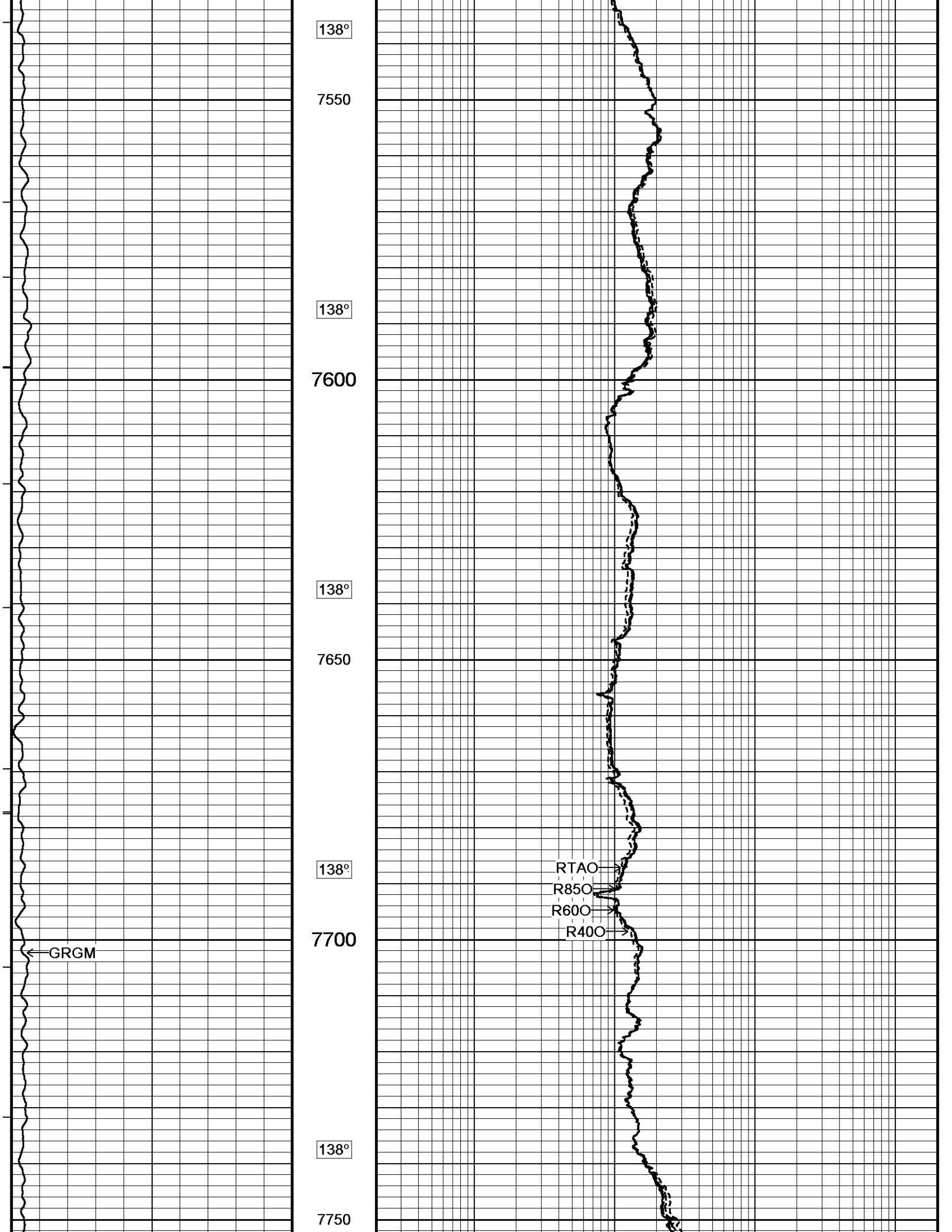
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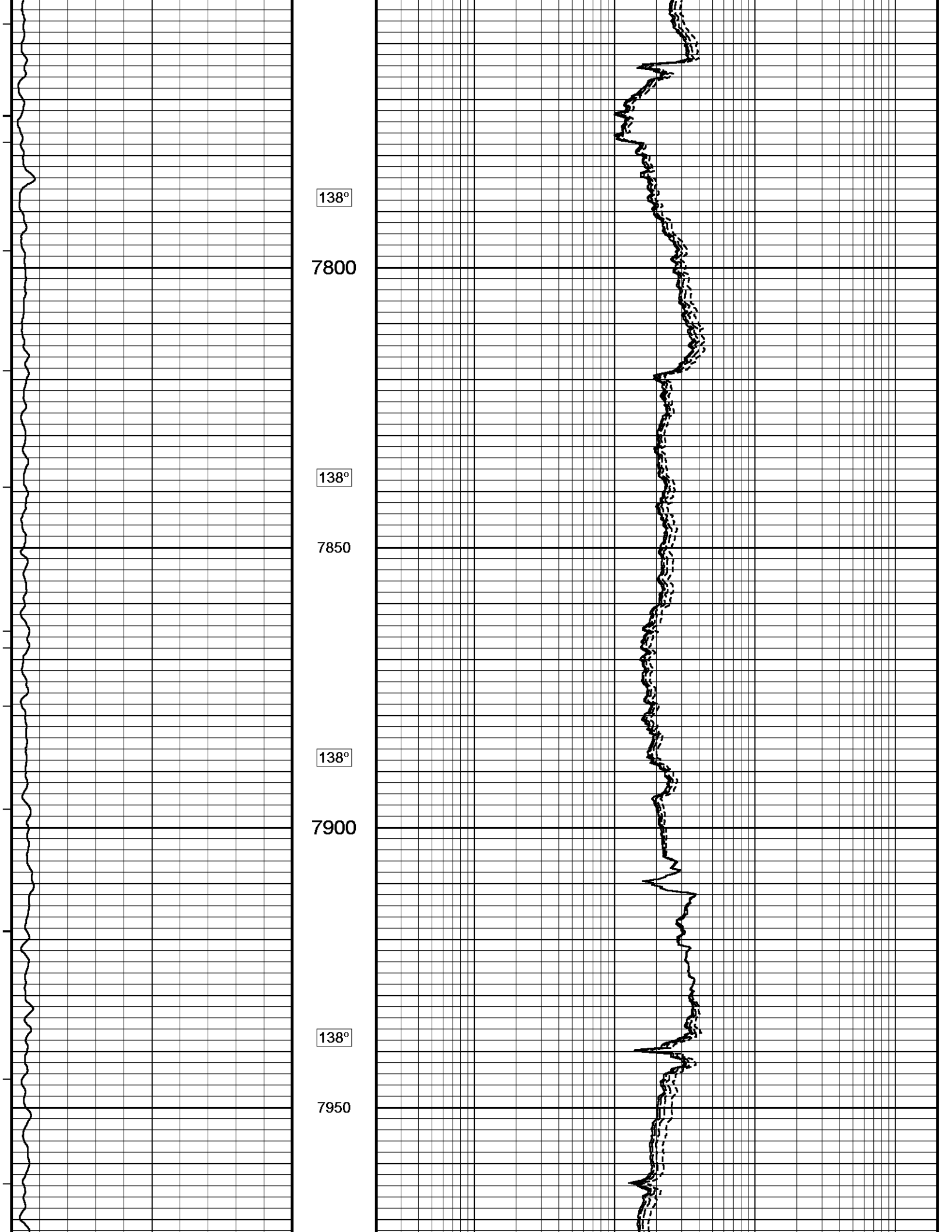
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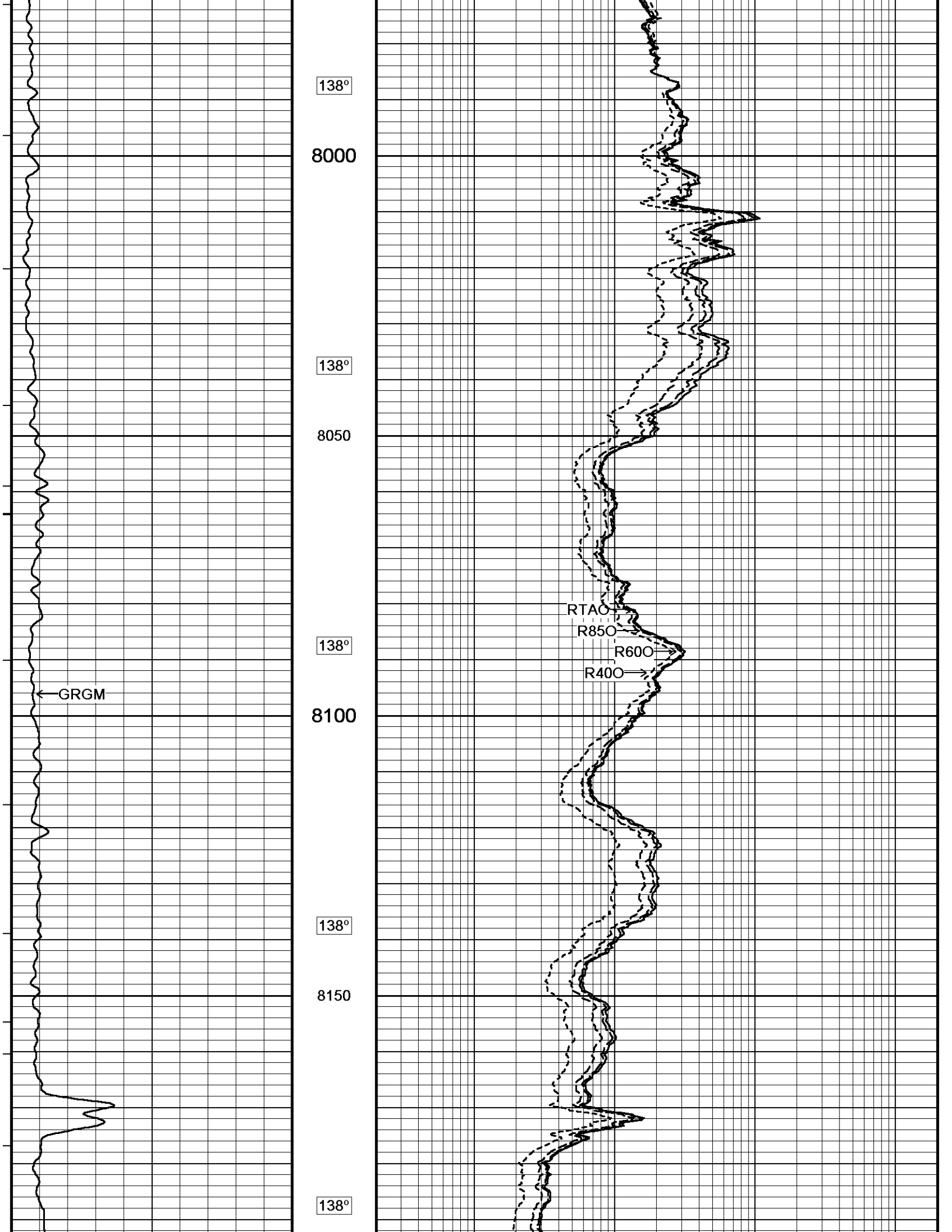
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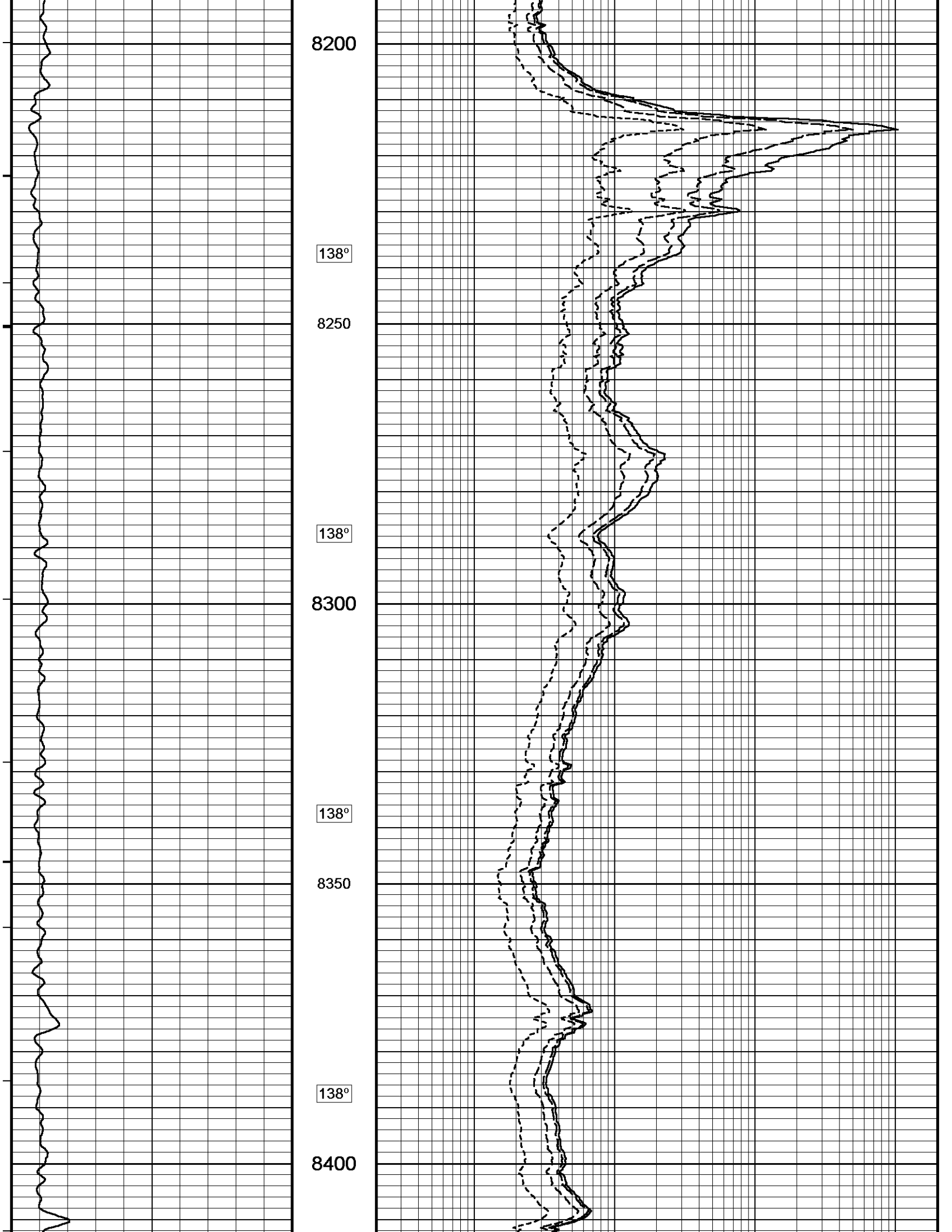
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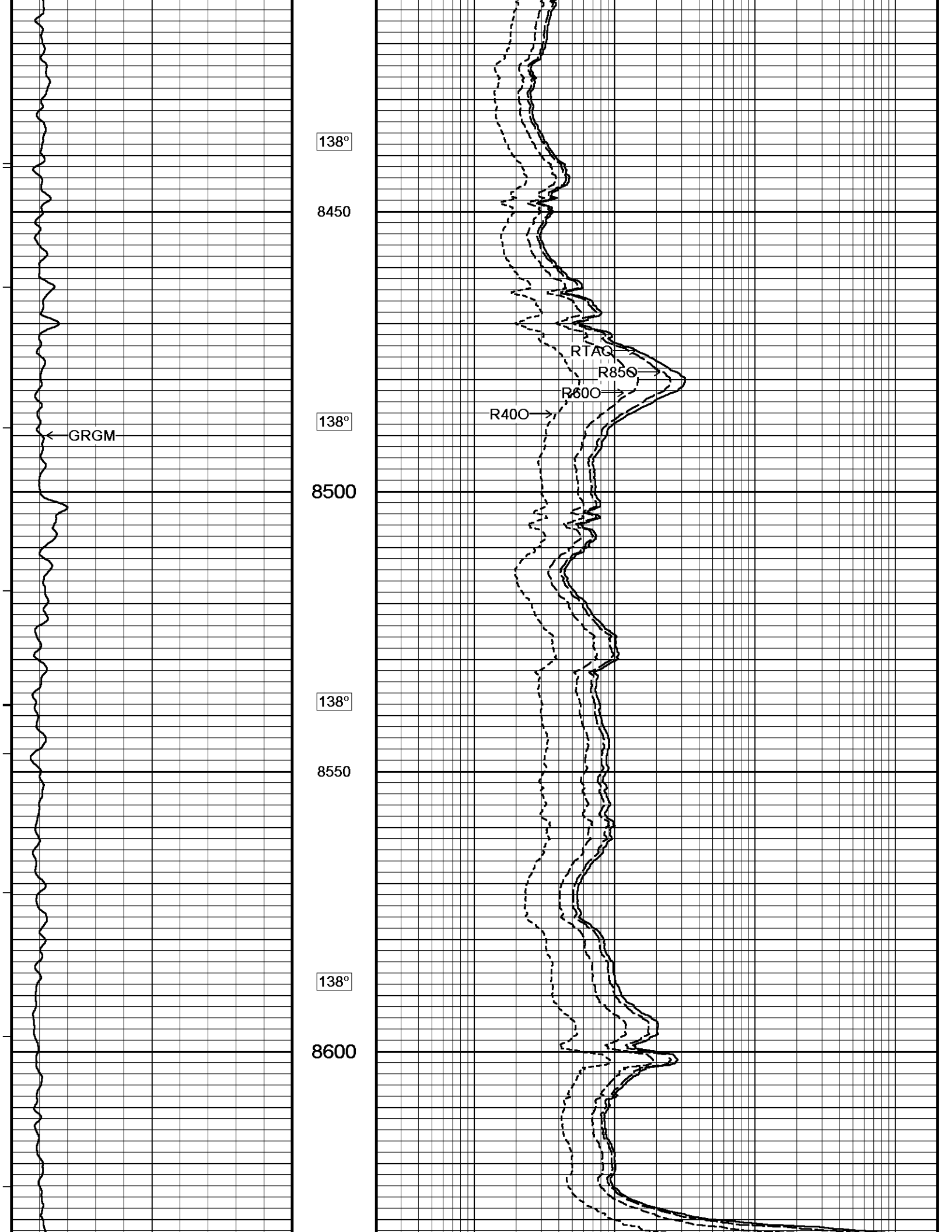
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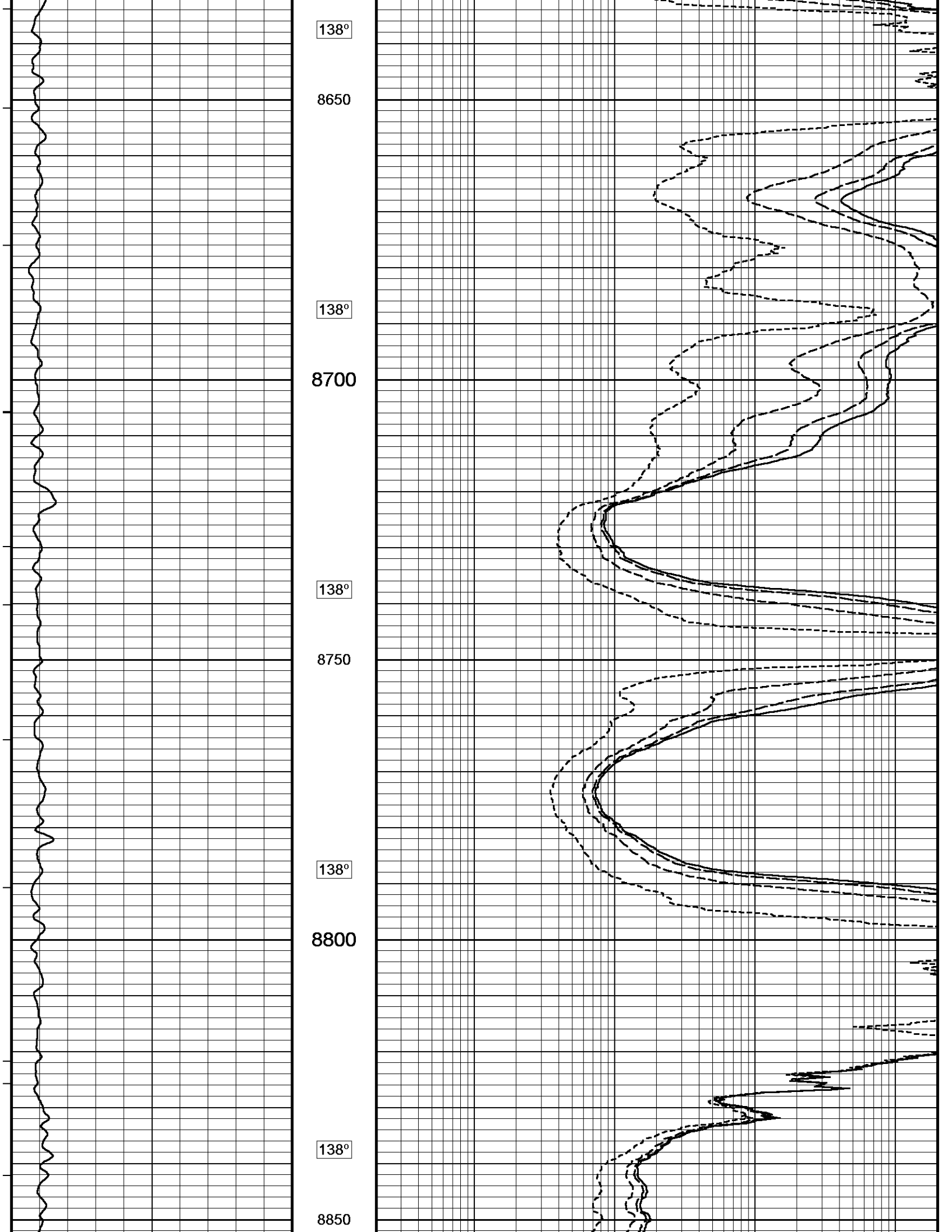
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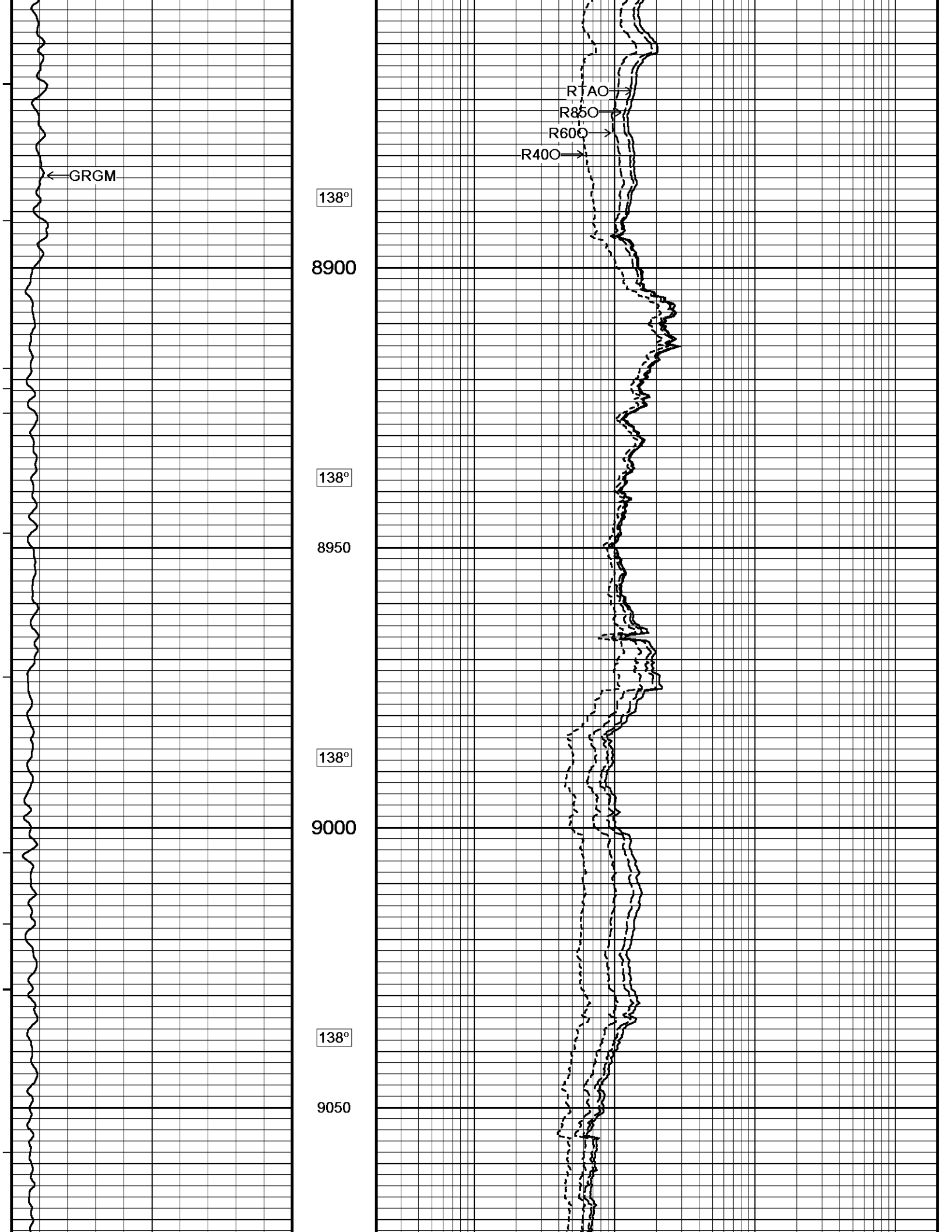
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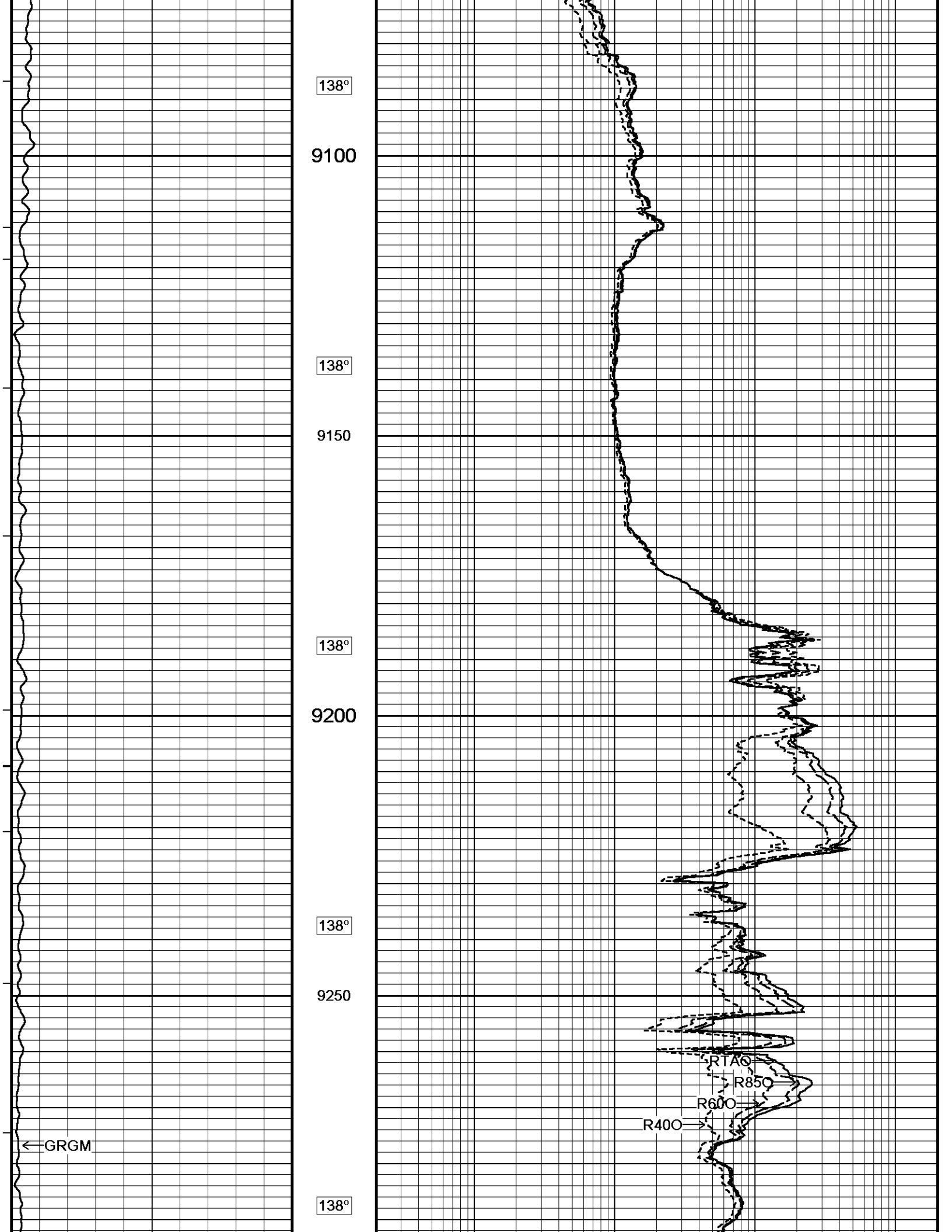
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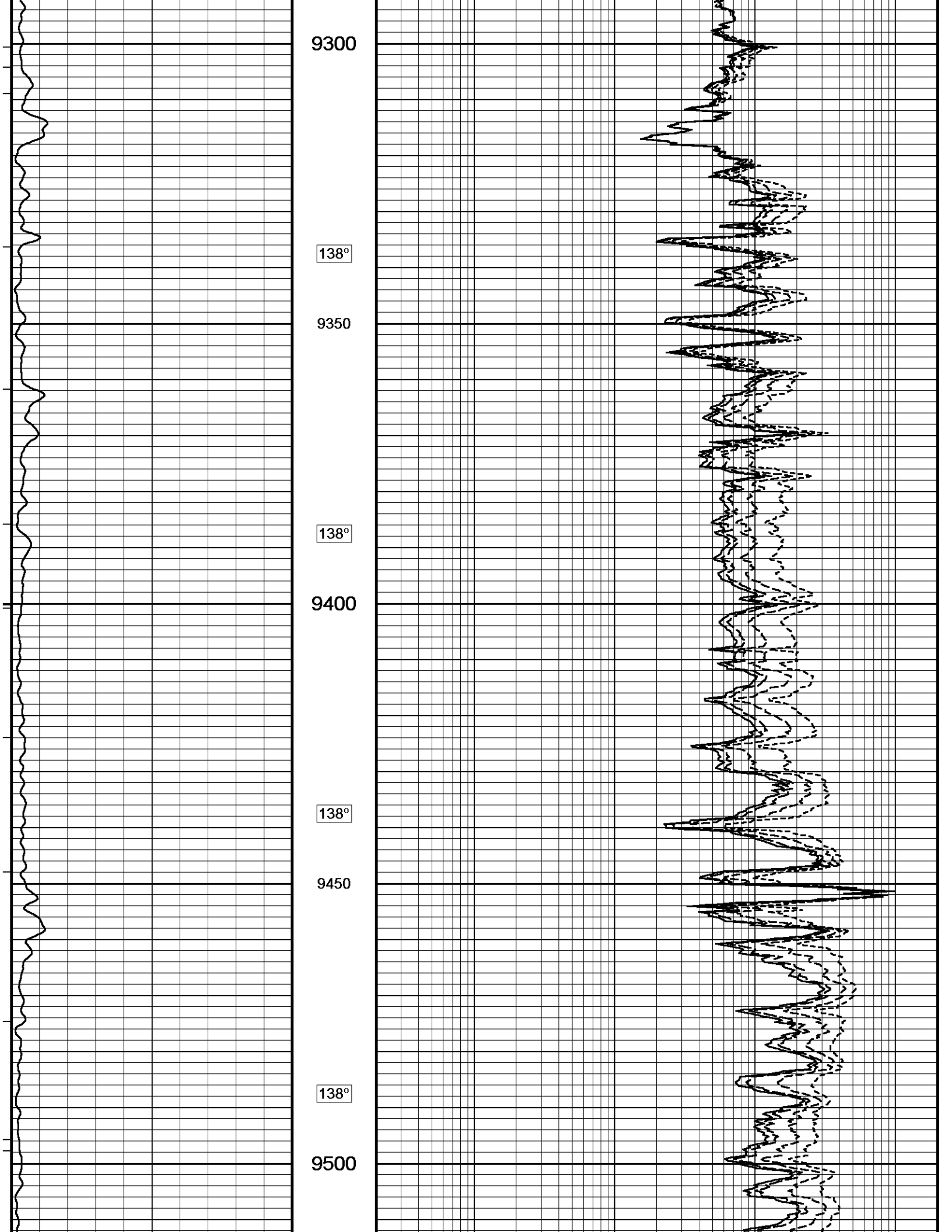
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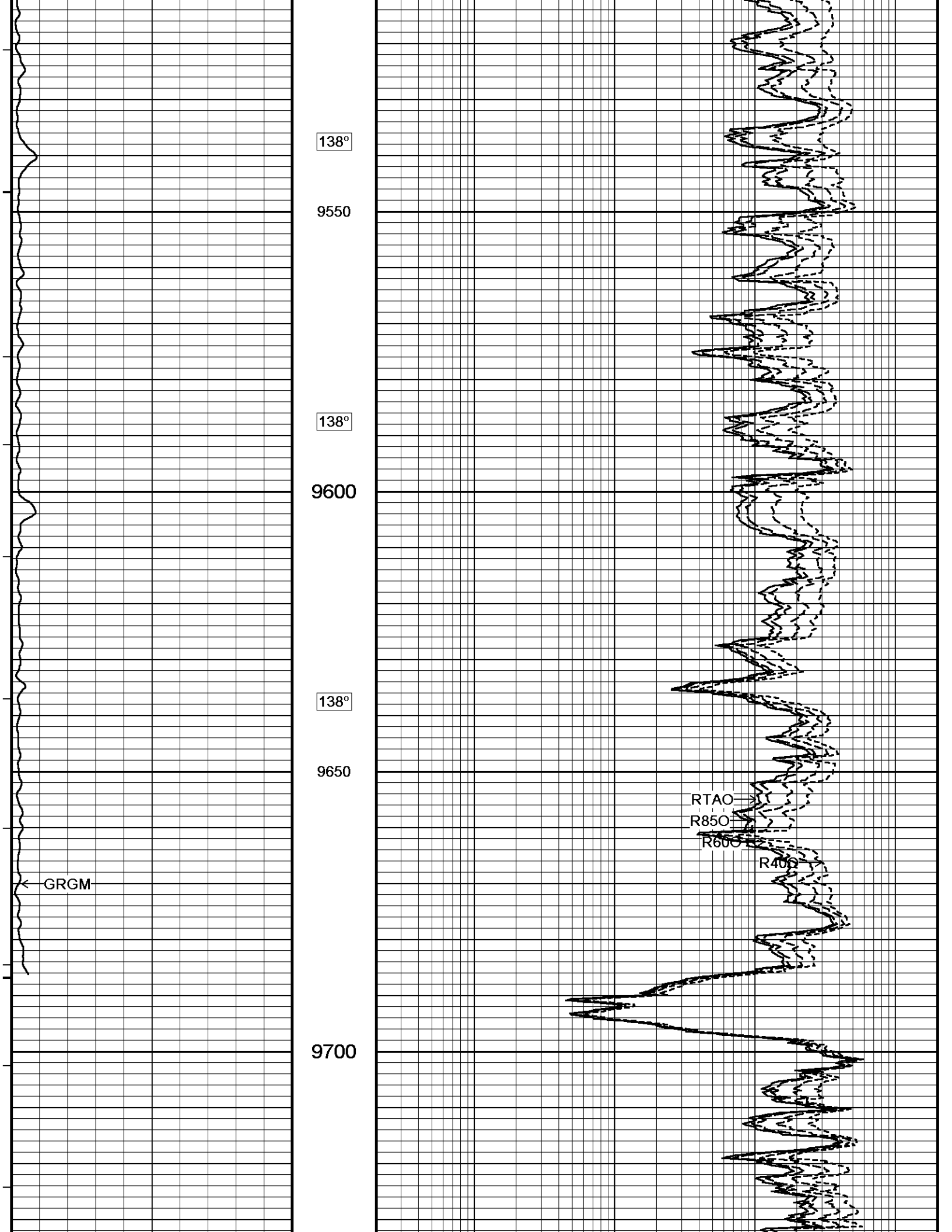
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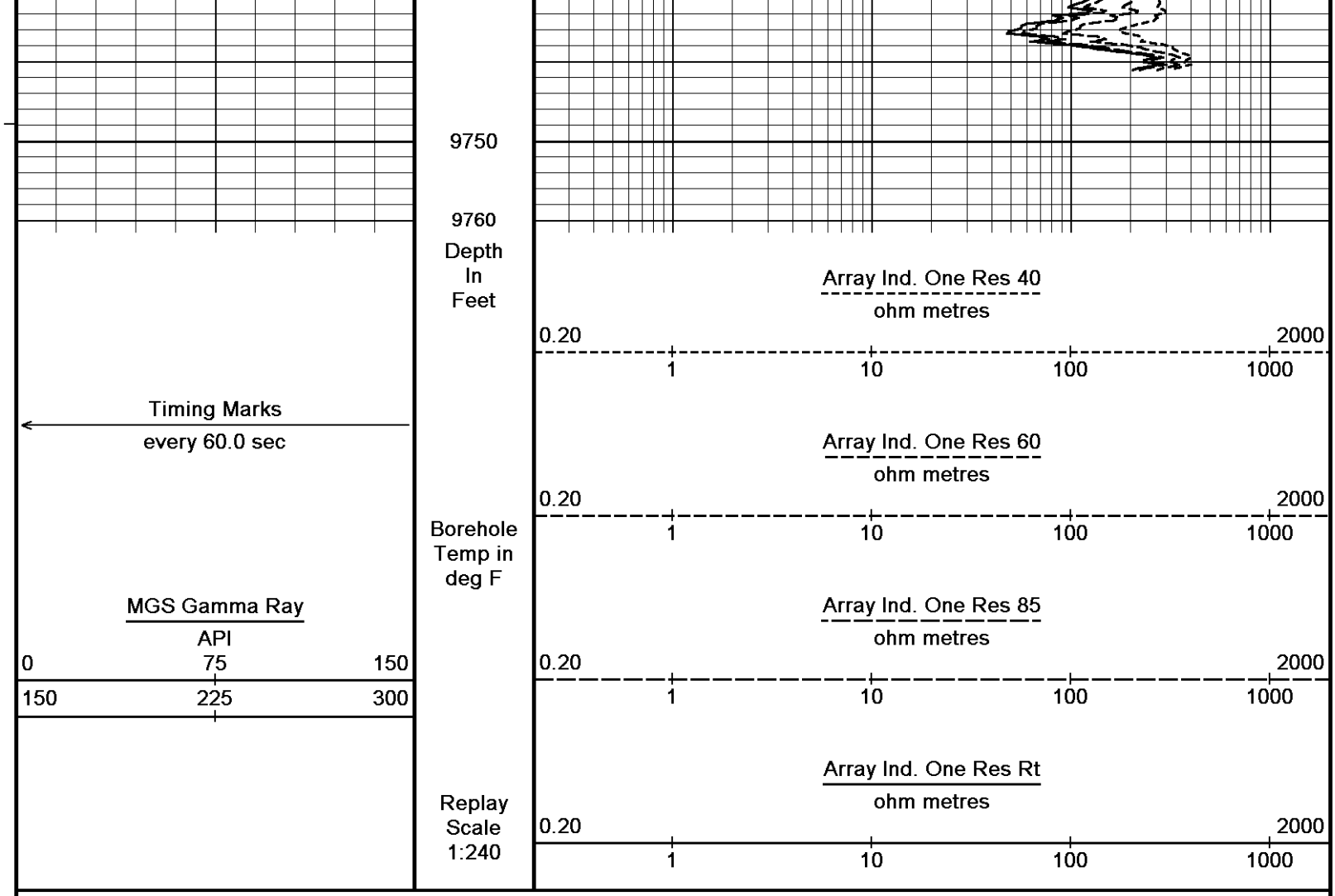


Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 24-AUG-2012 01:27
Filename: C:\Data\15033216540100_SDRGE WARREN 3317 1-26H\31828rtap1.dta
Recorded on 24-AUG-2012 00:00
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

BEFORE SURVEY CALIBRATION

C:\Data\15033216540100_SDRGE WARREN 3317 1-26H\31828rtap1.dta

General Constants All 000

Last Edited on 24-AUG-2012,01:09

General Parameters		
Mud Resistivity	0.300	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. One Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	

Strain Gauge Constants SER-B.A 189

Last Edited on 23-AUG-2012,00:24

Atmospheric Pressure	14.70	psi
Serial Number	266583	

Serial Number	266583
Calibration Date	17-Aug-2011
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	0.026	0.026	0.029	0.029	0.029	0.029	0.025	0.024
3000.0	5.206	5.208	5.209	5.210	5.207	5.209	5.200	5.202
6000.0	10.396	10.399	10.399	10.402	10.397	10.400	10.387	10.391
9000.0	15.596	15.600	15.600	15.604	15.597	15.601	15.586	15.591
12000.0	20.808	20.812	20.813	20.816	20.810	20.814	20.798	20.801
15000.0	26.033		26.039		26.037		26.023	

Strain Gauge Constants MMS-E.B 166

Last Edited on 23-AUG-2012,00:24

Atmospheric Pressure	14.70	psi
Serial Number	262005	
Calibration Date	04-Jan-2011	
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	0.096	0.097	0.113	0.113	0.129	0.129	0.138	0.139
3000.0	5.275	5.280	5.290	5.294	5.303	5.306	5.307	5.310
6000.0	10.464	10.472	10.478	10.485	10.488	10.494	10.487	10.494
9000.0	15.664	15.672	15.676	15.684	15.683	15.691	15.679	15.687
12000.0	20.876	20.882	20.888	20.893	20.892	20.898	20.885	20.890
15000.0	26.101		26.111		26.114		26.103	

MMS Parameters MMS-E.B 166

Last Edited on 23-AUG-2012 00:26

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	65535.0	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

High Resolution Temperature Calibration MGS-C.J 142

Field Calibration on 06-AUG-2012,04:44

	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 06-AUG-2012,04:44

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

Gamma Calibration MGS-C.J 142

Field Calibration on 09-AUG-2012,02:02

	Measured	Calibrated (API)
Background	39	27
Calibrator (Gross)	1048	723
Calibrator (Net)	1009	696

Gamma Constants MGS-C.J 142

Last Edited on 23-AUG-2012,05:22

Gamma Calibrator Number	036	
Mud Density	1.04	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN-B.J 391

Base Calibration on 02-FEB-2012 17:34
Field Check on 07-AUG-2012,15:49

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3186	96	3714	110
Ratio	33.156		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2267	3463
Ratio	0.655	

Field Check

	Calibrated (cps)	
	2268	3414
Ratio	0.664	

Neutron Constants MDN-B.J 391

Last Edited on 22-AUG-2012,23:24

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	1.80	kpsi
Temperature Source	MGS External Temperature	
Temperature	N/A	degrees F
Mud Salinity	3.67	kppm
Salinity Correction	Applied	
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	140.00	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-B.J 363

Base Calibration on 29-JUN-2012 13:12
Field Check on 22-AUG-2012 23:17

Base Calibration

	Measured	Calibrated (ohm-m)

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	963.1	126.8
Base Check		281.8
Field Check		282.0

FE Constants MFE-B.J 363

Last Edited on 07-AUG-2012,15:08

Running Mode	No Sleeve	
MFE K Factor	0.1268	
Caliper Source for FE correction	Density Caliper	
Caliper Value for FE correction	N/A	inches
Rm Source for FE correction	Temperature Corr	
Temp. for Rm Corr.	MGS External Temperature	
Stand-off	0.5	inches

Induction Calibration MAI-B.J 427

Base Calibration on 20-AUG-2012,13:38
Field Check on 22-AUG-2012 23:15

Base Calibration

Test Loop Calibration	Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High
1	14.4	434.9	9.3	966.2
2	5.8	355.4	7.6	821.4
3	2.7	244.4	5.2	566.0
4	1.8	129.3	2.6	279.2
Array Temperature		75.0	Deg F	

Channel	Base Check (mmho/m)		Field Check (mmho/m)		
	Low	High	Low	High	
1	0.0	0.0	19.5	4141.3	
2	0.0	0.0	32.3	3769.7	
3	0.0	0.0	31.4	3209.4	
4	0.0	0.0	20.1	2123.0	
Deep	0.0	0.0	19.7	2019.4	
Medium	0.0	0.0	45.5	4288.6	
Shallow	0.0	0.0	47.6	5678.1	
Array Temperature	0.0		78.4		Deg F

Induction Constants MAI-B.J 427

Last Edited on 24-AUG-2012,01:09

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	0.00	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	0.0080	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 427

Field Calibration on 20-AUG-2012,14:27

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

High Resolution Temperature Constants MAI-B.J 427

Last Edited on 20-AUG-2012,14:27

Pre-filter Length	11

Caliper Calibration MPD-B 166

Base Calibration on 20-JUL-2012,11:40
Field Calibration on 08-AUG-2012,15:14

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)
6.27	6.08

Photo Density Calibration MPD-B 166

Base Calibration on 20-JUL-2012,10:36
Field Check on 22-AUG-2012 23:23

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

1185.0	1356.9

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

214.6	1060.3

Density Constants MPD-B 166

Last Edited on 23-AUG-2012,05:23

Density Source Id	236	
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	1.04	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc

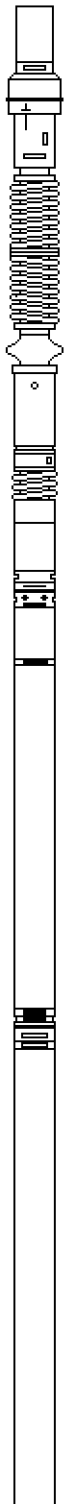
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.02	gm/cc
Density Z/A Correction	Hybrid	

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\15033216540100_SDRGE WARREN 3317 1-26H\31828rtap1.dta

Shuttle Mechanical Release (SMR A)
SMR-A 173 LG: 8.53 ft WT: 77.2 lb OD: 2.52 in



Shuttle Electrical Release
SER-B.A 189 LG: 6.90 ft WT: 50.7 lb OD: 2.24 in

MBS-F.A 200v Compact Battery Sub
MBS-F.A 135 LG: 10.61 ft WT: 70.5 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

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

61.76 ft GRGM - MGS Gamma Ray

59.77 ft GSXT - MGS External Temperature

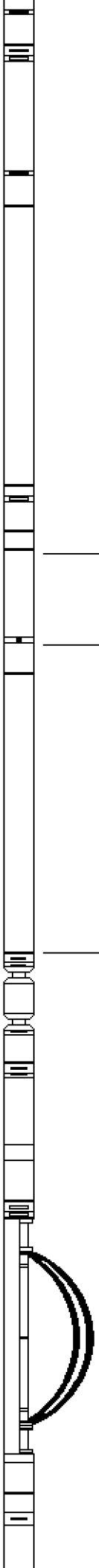
Compact Collar Locator
MCL-B.J 63 LG: 3.17 ft WT: 26.5 lb OD: 2.24 in

57.75 ft GCSL - MCL C. Collar Locator

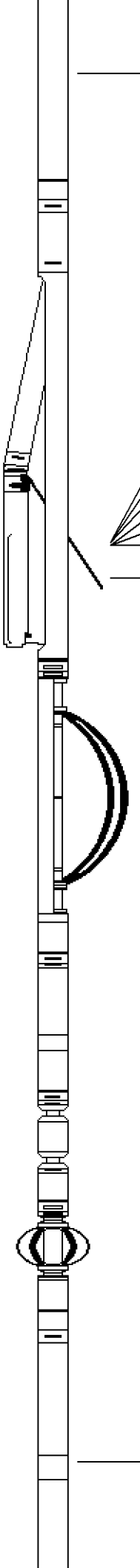
SKJ-E.B Compact Knuckle Joint
SKJ-E.B 479 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

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.A Compact Inline Bowspring sub
MIS-D.A 310 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



42.89 ft NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD-B 166 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

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

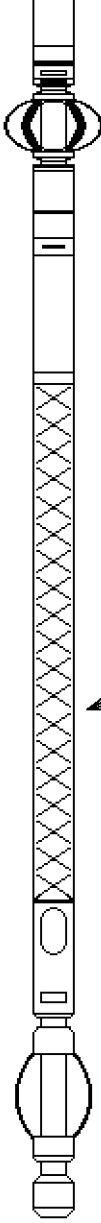
MIS-E.B Compact Inline Standoff sub
MIS-E.B 597 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Focussed Electric
MFE-B.J 363 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

15.86 ft FEFE - Shallow FE

MIS-E.A Compact Inline Standoff sub
MIS-E.A 337 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction
MAI-B.J 427 LG: 12.52 ft WT: 48.5 lb OD: 2.24 in



3.34 ft	CTAO - Array Ind. One Cond Ct
3.34 ft	R60O - Array Ind. One Res 60
3.34 ft	R85O - Array Ind. One Res 85
3.34 ft	RTAO - Array Ind. One Res Rt

Tool Zero (1.84ft from bottom)

Total Length: 97.17 ft Weight: 727.5 lb All measurements relative to tool zero.

COMPANY	SANDRIDGE ENERGY
WELL	WARREN 3317 1-26H
FIELD	SHIMMER SOUTH
PROVINCE/COUNTY	COMANCHE
COUNTRY/STATE	USA \ KANSAS

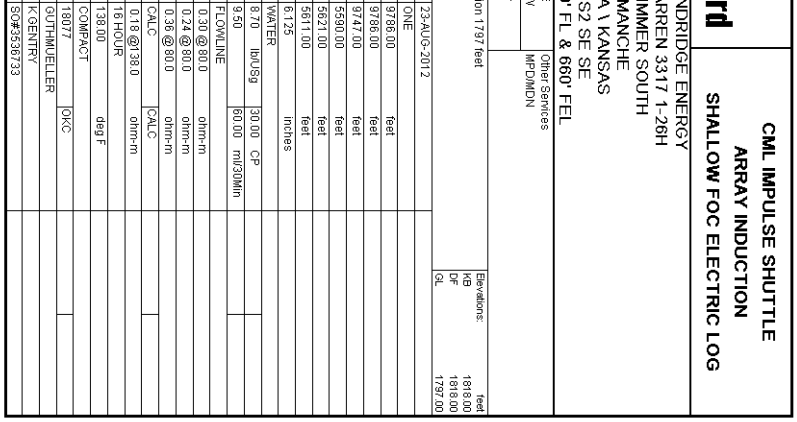
Elevation Kelly Bushing	1818.00	feet	First Reading	9747.00	feet
Elevation Drill Floor	1818.00	feet	Depth Driller	9786.00	feet
Elevation Ground Level	1797.00	feet	Depth Logger	9786.00	feet

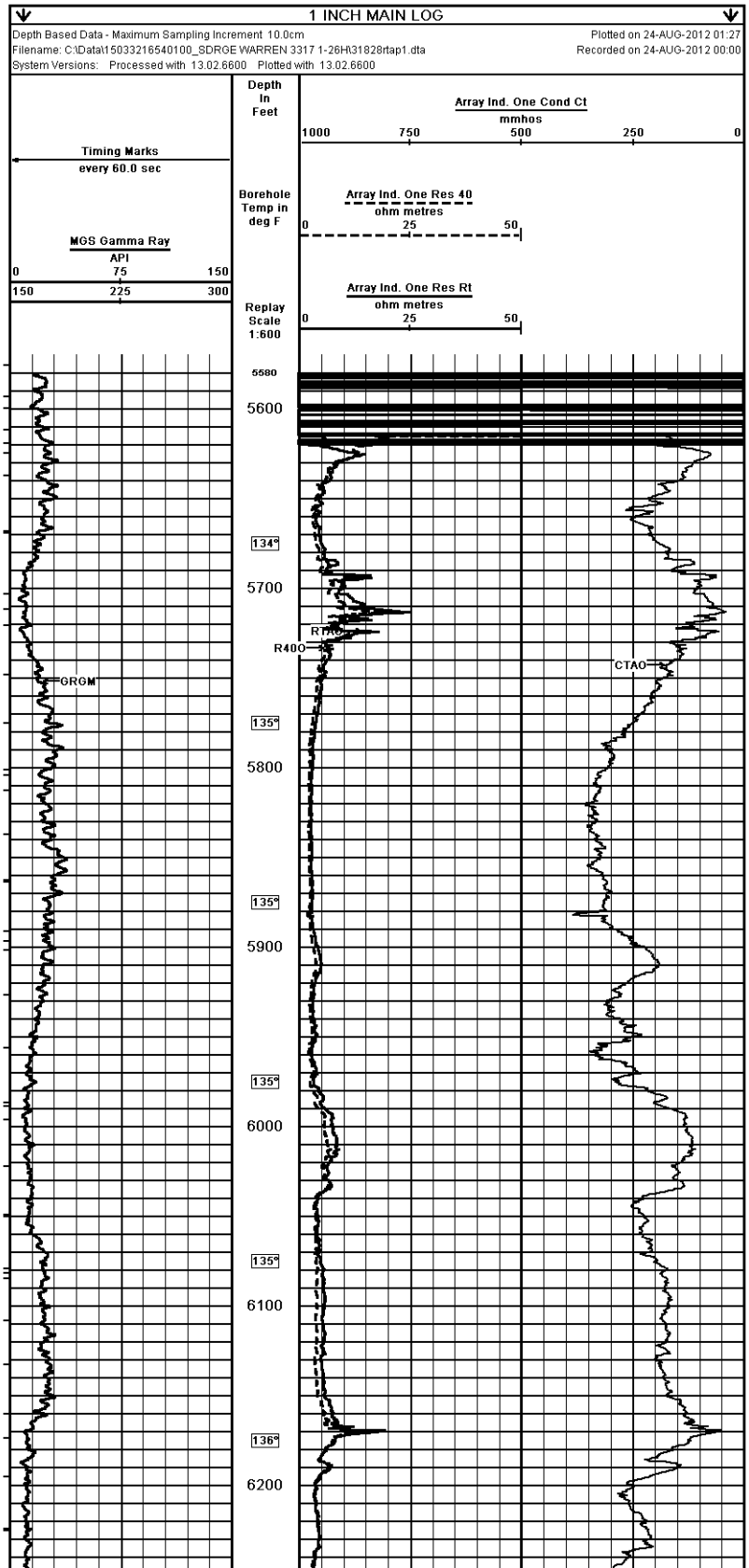
Weatherford®

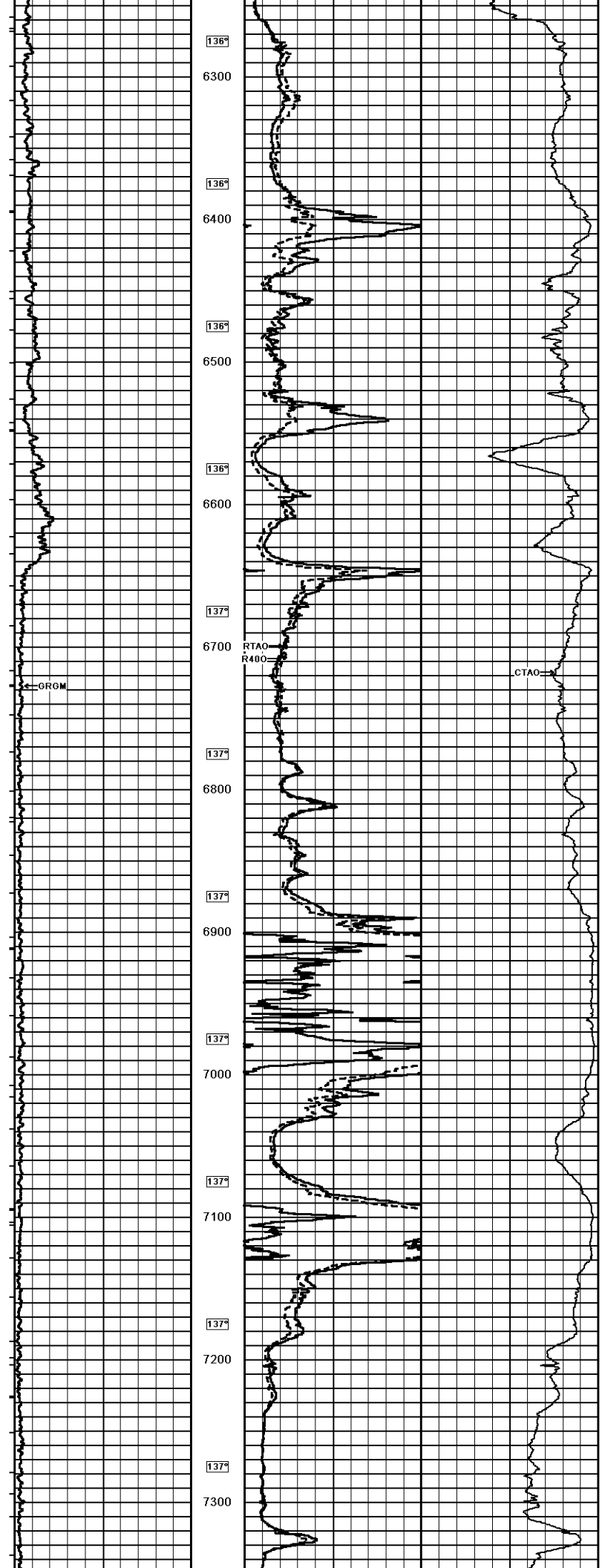
CML IMPULSE SHUTTLE
ARRAY INDUCTION
SHALLOW FOC ELECTRIC LOG

Weatherford

COMPANY	SA
WELL	WA
FIELD	SHI
PROVINCE/COUNTY	CO
COUNTRY/STATE	US
LOCATION	S2
	20
SEC	
26	
TWP	
33S	
RGE	
17W	
API Number	
Permit Number	15-033-21654
Permanent Datum GL Elevat	
Log Measured From KB	
Drilling Measured From KB	
Date	
Run Number	
Depth Driller	
Depth Logger	
First Reading	
Last Reading	
Casing Driller	
Casing Logger	
Bit Size	
Hole Fluid Type	
Density / Viscosity	
PH / Fluid Loss	
Sample Source	
Rm @ Measured Temp	
Rmf @ Measured Temp	
Rmc @ Measured Temp	
Source Rmf / Rmc	
Rm @ BHT	
Time Since Circulation	
Max Recorded Temp	
Equipment Name	
Equipment / Base	
Recorded By	
Witnessed By	
AFE# DC11688	


CML IMPULSE SHUTTLE
ARRAY INDUCTION
SHALLOW FOC ELECTRIC LOG
NDRIDGE ENERGY
RREN 3317 1-26H
MMER SOUTH
MANCHE
A \ KANSAS
S2 SE SE
' FL & 660' FEL
on 1797 feet
Other Services
MPD/MDN
Elevations:
KB
DF
GL
feet
1818.00
1818.00
1797.00
23-AUG-2012
ONE
9786.00 feet
9786.00 feet
9747.00 feet
5590.00 feet
5621.00 feet
5611.00 feet
6.125 inches
WATER
8.70 lbUSg
9.50 lbUSg
30.00 CP
60.00 ml/30Min
FLOWLINE
0.30 @ 80.0 ohmm
0.24 @ 80.0 ohmm
0.38 @ 80.0 ohmm
CALC
0.18 @ 138.0 ohmm
16-HOUR
138.00 degF
COMPACT
18077
OKC
K.GENTRY
GUTHMUELLER
SO#3536733


1 INCH MAIN LOG
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 24-AUG-2012 01:27
Filename: C:\Data\15033216540100_SDRGE WARREN 3317 1-26H\31828rtap1.dta
Recorded on 24-AUG-2012 00:00
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600
Depth In Feet
Timing Marks every 60.0 sec
MGS Gamma Ray API
0 75 150
150 225 300
Array Ind. One Cond Ct mmhos
1000 750 500 250 0
Borehole Temp in deg F
Array Ind. One Res 40 ohm metres
0 25 50
Array Ind. One Res Rt ohm metres
0 25 50
Replay Scale 1:600
5580
5600
5700
5800
5900
6000
6100
6200
134°
135°
135°
135°
136°
RTAO
R400
CTAO
GRGM


136°
6300
136°
6400
136°
6500
136°
6600
137°
6700
RTAO
R40O
CTAO
GRGM
137°
6800
137°
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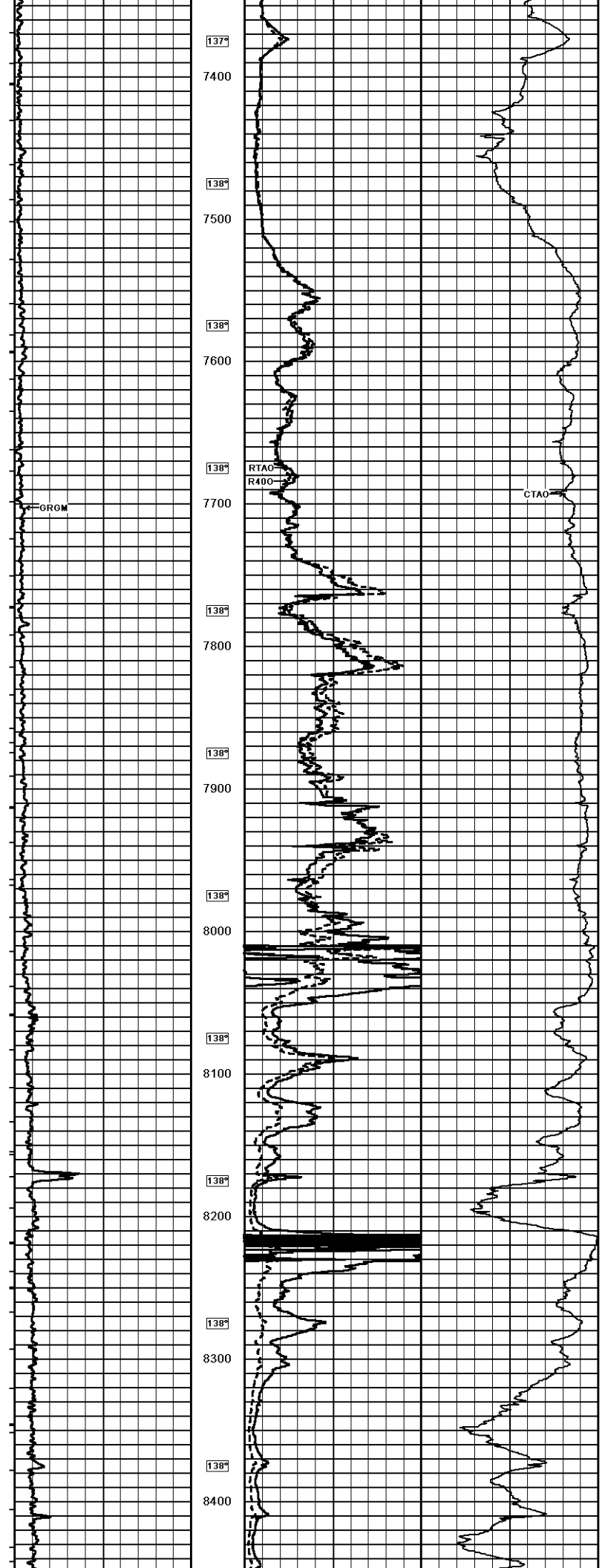
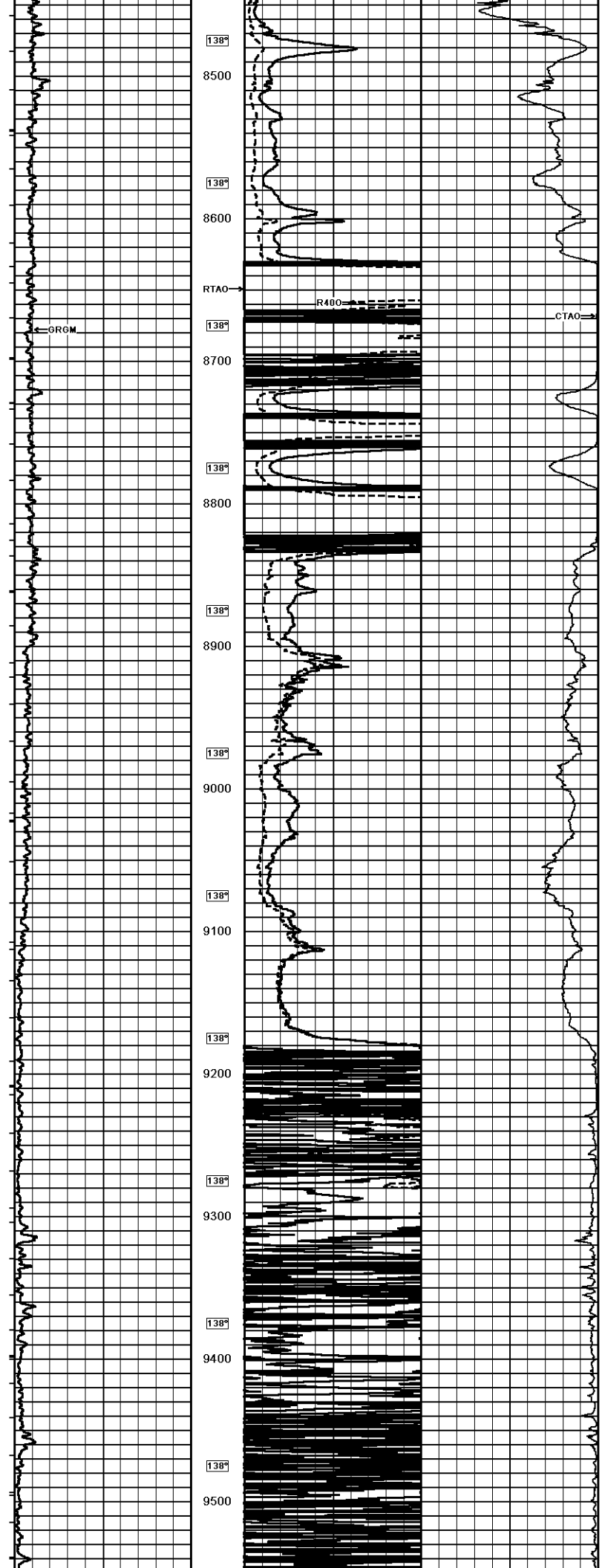
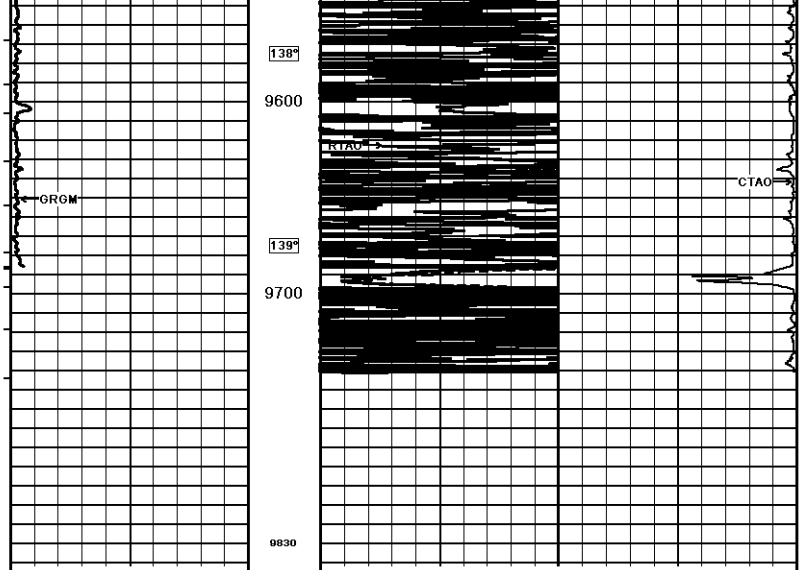
7000
137°
7100
137°
7200
137°
7300


137°
7400
138°
7500
138°
7600
138°
RTAO
R400
7700
GROM
CTAO
138°
7800
138°
7900
138°
8000
138°
8100
138°
8200
138°
8300
138°
8400


GRGM
RTAO
R400
CTAO
138°
8500
8600
8700
8800
8900
9000
9100
9200
9300
9400
9500



Depth In Feet

Timing Marks every 60.0 sec

MGS Gamma Ray API
0 75 150
150 225 300

Array Ind. One Cond Ct mmhos
1000 750 500 250 0

Borehole Temp in deg F

Array Ind. One Res 40 ohm metres
0 25 50

Array Ind. One Res Rt ohm metres
0 25 50

Replay Scale 1:600

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 24-AUG-2012 01:27
Filename: C:\Data\15033216540100_SDRGE WARREN 3317 1-26H\31828rtap1.dta
Recorded on 24-AUG-2012 00:00
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

1 INCH MAIN LOG

COMPANY	SANDRIDGE ENERGY
WELL	WARREN 3317 1-26H
FIELD	SHIMMER SOUTH
PROVINCE/COUNTY	COMANCHE
COUNTRY/STATE	USA \ KANSAS

Elevation Kelly Bushing	1818.00	feet	First Reading	9747.00	feet
Elevation Drill Floor	1818.00	feet	Depth Driller	9786.00	feet
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ARRAY INDUCTION
SHALLOW FOC ELECTRIC LOG