KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1069395

Form ACO-18
Form must be typed
Form must be signed
May 2009

APPLICATION FOR VENTING OR FLARING OF GAS OTHER THAN CASINGHEAD GAS (K.A.R. 82-3-314)

Venting / Flaring ID # 111206

Operator Information:

OPERATOR: License # 34192
Name: SandRidge Exploration and Production LLC
Address 1: 123 ROBERT S. KERR AVE
Address 2:
City: OKLAHOMA CITY State: OK Zip: 73102 + 6406
Contact Person: Forrest Walton
Phone: (405) 429-5810

Well Information:

API No. 15 - 15-077-21747-01-00
Spot Description:
S2 S2 SE SW Sec. 21 Twp. 34 S. R. 6 ☐ East ☑ West
200 Feet from ☐ North / ☑ South Line of Section
1980 Feet from ☐ East / ☑ West Line of Section
County: Harper
Lease Name: Lake Well #: 1-21H

☐ **A. Formation/Interval and estimated BTU Value of gas to be vented:**

Formation: Mississippi Interval: 4831-9041 Estimated BTU Value: 1000

☐ **B. Expected Maximum Gas Vented Volume:**

Formation: Mississippi BOPD: 100 MCFPD: 1000 BWPD: 3000

☐ **C. Distance to the nearest pipeline or gathering facility:** 9

Include the following attachments for all applications:

☑ 1. Wireline log of subject well, if available. If not available attach, a written explanation why not available.
☑ 2. Completed Well Completion form for the subject well, Form ACO-1.
☑ 3. Method of measuring vented / flared gas.
☑ 4. Written explanation of why venting or flaring is necessary.
☑ 5. Signed certificate showing service of the application and affidavit of publication as required in K.A.R. 82-3-135a.

Include the following for coalbed natural gas venting applications only:

☑ 6. Plat Map including location of subject well, all other wells on subject lease and all wells on offsetting leases. Include the names and address of offsetting operators.

☑ 7. Completed Affidavit for Venting of Coalbed Natural Gas, Form CG-4.

AFFIDAVIT

I am the affiant and I hereby certify that to the best of my current information, knowledge and personal belief, this request to vent/flare natural gas is true and proper and I have no information or knowledge, which is inconsistent with the information supplied in this application.

KCC Office Use Only

☐ Denied ☐ Approved Permit Expires: 06/06/2012
15-Day Periods Ends:
Approved By: Jim Hemmen 12/08/2011 Date: 12/08/2011

Submitted Electronically

Protests may be filed by any party having a valid interest in the application. Protests must be in writing and comply with K.A.R. 82-3-135b and must be filed within 15 days of publication of the notice of the application.

Mail will all required attachments and files to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

ThruBit
LOGGING SOLUTIONS

ARRAY INDUCTION GAMMA RAY MEMORY LOG

Company SANDRIDGE ENERGY
Well LAKE 1-21H
Field WALDRON WEST - MISSISSIPPI LIME
County HARPER
State KANSAS

Company SANDRIDGE ENERGY
Well LAKE 1-21H
Field WALDRON WEST - MISSISSIPPI LIME
County HARPER State KANSAS

Location: API # : 15077217470100
SURF LOC: 200' FSL & 1980' FWL OF SW/4
SEC 21 TWP 34S RGE 6W

Permanent Datum GROUND LEVEL Elevation 1301'
Log Measured From D.F. 22' ABOVE PERM DATUM
Drilling Measured From D.F.

Other Services
THRUBIT
PORTAL BIT

Elevation
K.B. 1323'
D.F. 1323'
G.L. 1301'

Date	01 NOVEMBER 2011		
Run Number	ONE		
Depth Driller	9041'		
Depth Logger	8990'		
Bottom Logged Interval	8979'		
Top Log Interval	4000'		
Casing Driller	7" @ 5094'		
Casing Logger	7" @ 5093'		
Bit Size	6.125"		
Type Fluid in Hole	FRESH WATER		
Density / Viscosity	8.40 / 30		
pH / Fluid Loss	10 / NA		
Source of Sample	MUD PIT		
Rm @ Meas. Temp	1.0 OHMS@73 DEGF		
Rmf @ Meas. Temp	0.75 OHMS@73 DEGF		
Rmc @ Meas. Temp	1.25 OHMS@73 DEGF		
Source of Rmf / Rmc	CALCULATED		
Rm @ BHT	.55 OHMS@ 139 DEGF		
Time Circulation Stopped	11:00 01NOV2011		
Time Logger on Bottom	12:10 01NOV2011		
Maximum Recorded Temperature	139 DEGF		
Equipment Number	T004		
Location	OKC, OK		
Recorded By	D. THOMAS		
Witnessed By	BENJAMIN SIMMONS		

<<< Fold Here >>>

Comments

SERVICE: LEVEL 4 - MEMORY PUMP DOWN - BIT DEPTH: 8872' LOG TO: 4000'
ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST
LIMESTONE MATRIX, 2.71 G/CC, USED FOR POROSITY MEASUREMENTS
TOOL STRING RAN WITH EVANS SWIVEL, S. DECENTRALIZER, AND NO STANDOFFS
ABHV REPRESENTS TOTAL BOREHOLE VOLUME, FT3
ABHV REPRESENTS ANNULAR BOREHOLE VOLUME, FT3, MEASURED FOR 4.50" CSG
RIG MINDER LITE USED WITH MDTOTCO RIGSENSE TO CREATE LOG DEPTH
LOG DEPTH CORRELATED TO MWD GAMMA RAY AT CLIENTS REQUEST

RIG: KEEN #8
CREW: D. THOMAS/K. REED/T. DENNIS

Service Ticket No. 807 API No. 15077217470100 PGM Ver WARRIOR 7.0

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA

GAMMA RAY	NEUTRON	DENSITY	INDUCTION

Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	ENP3T	Serial No.	PS27N	Serial No.	PS37D	Serial No.	PS28R
Model No.	ENP	Model No.	PS	Model No.	PS	Model No.	PS
Diameter	2.125"	Diameter	2.125"	Diameter	2.125"	Diameter	2.125"

LOGGING DATA

General Data

Pass	Depths		Well Head	Speed	Logging Run Comments
No.	From	To	Pressure	Ft/Min	
ONE	8990'	4000'		30	

	GAMMA RAY		NEUTRON		DENSITY		INDUCTION	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0 API	150 API	30 %	-10 %	30 %	-10 %	0.2 OHM-M	2000 OHM-M

DIRECTIONAL INFORMATION

Maximum Deviation	93.4	deg. @	7059'	KOP	3690'	

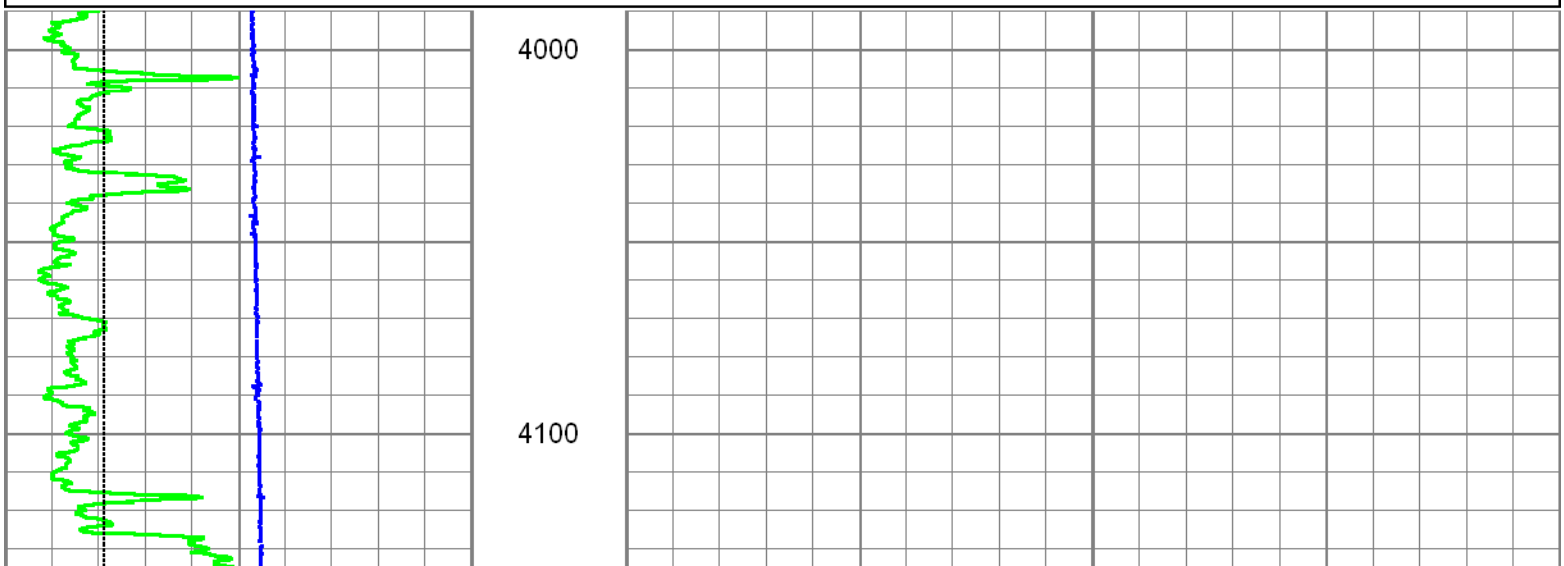
ThruBit LOGGING SOLUTIONS

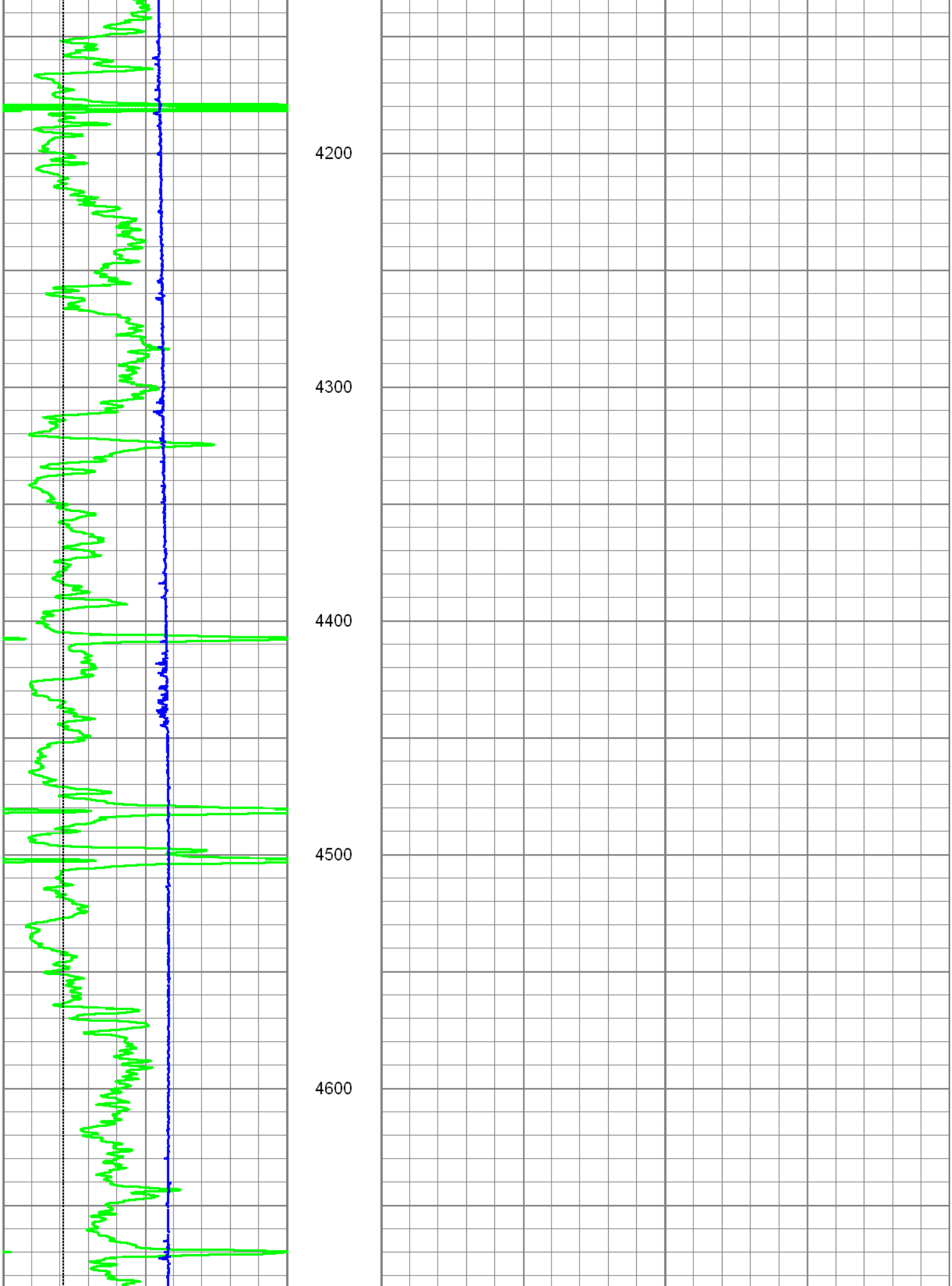
MAIN PASS

Database File: lake_mem.db
Dataset Pathname: proc1/pass1.4
Presentation Format: 6_2r_chk
Dataset Creation: Tue Nov 01 19:56:55 2011
Charted by: Depth in Feet scaled 1:600

0	GR (GAPI)	150
4	DCAL (in)	14
-5	ACCY	5
4	BOREID (in)	14
GRTEMP (degF)		

50	20in 2ft Res (Ohm-m)	500
50	90in 2ft Res (Ohm-m)	500
1000	DEEP COND (Ohm-m)	0
0	20in 2ft Res (Ohm-m)	50
0	90in 2ft Res (Ohm-m)	50

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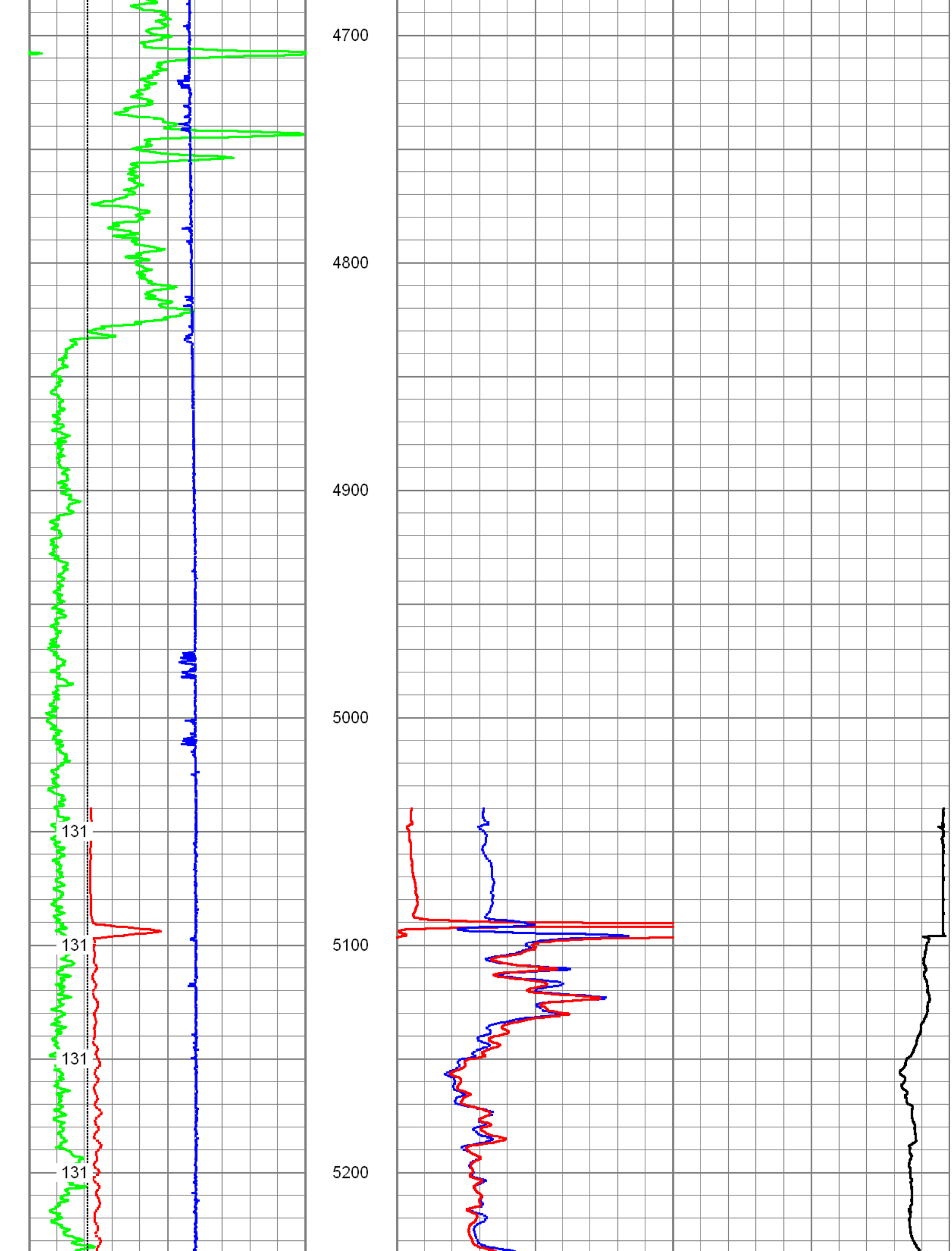
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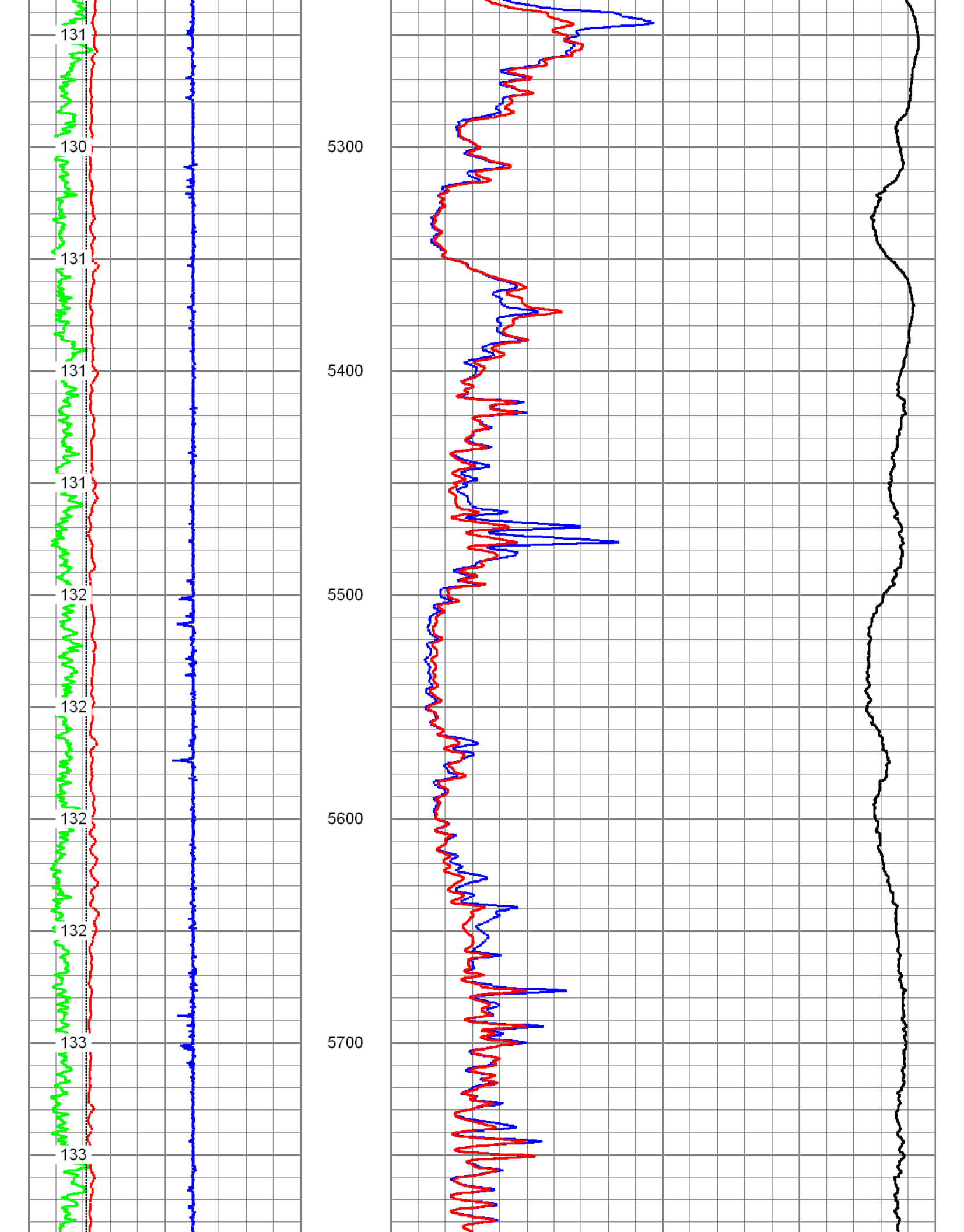
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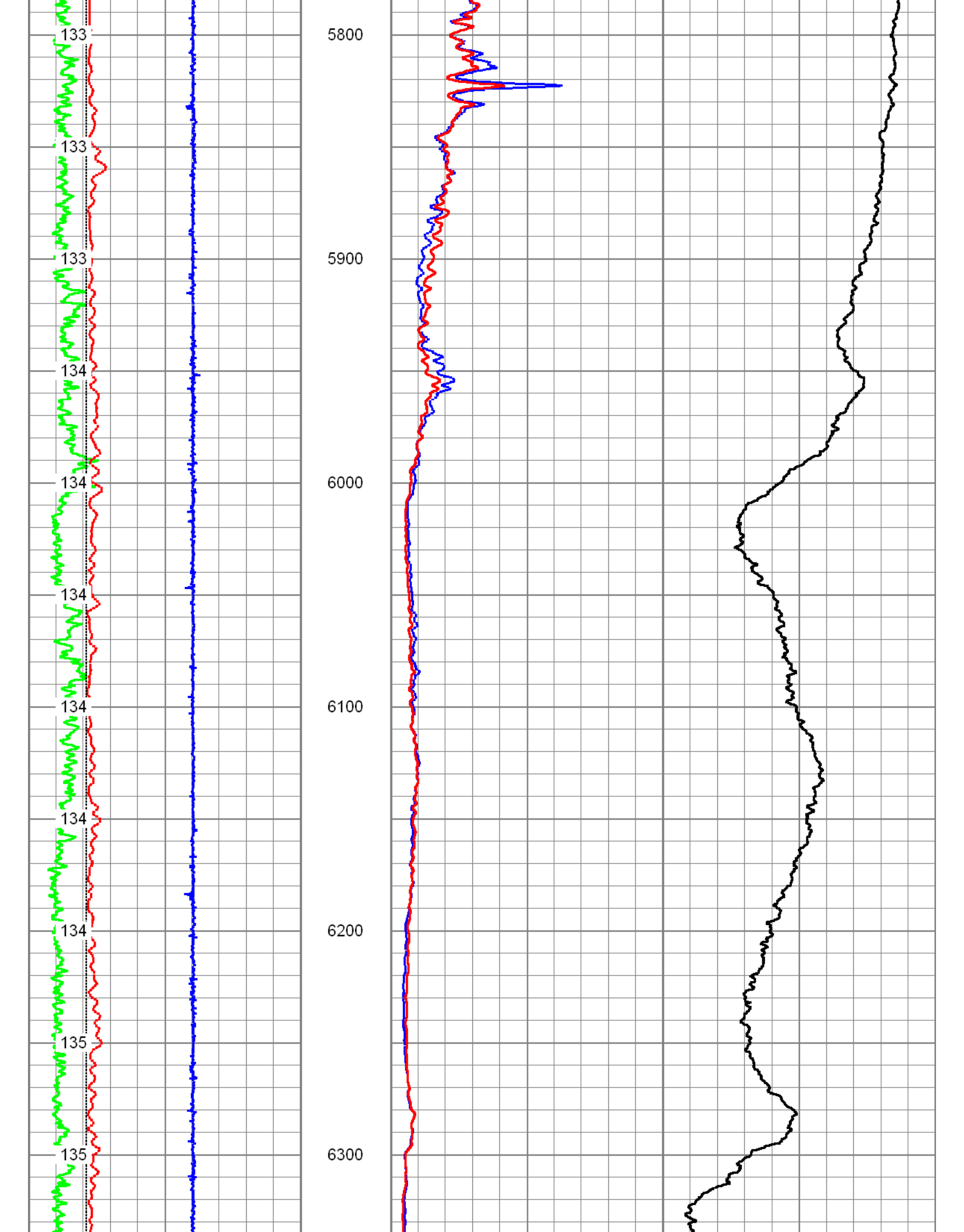
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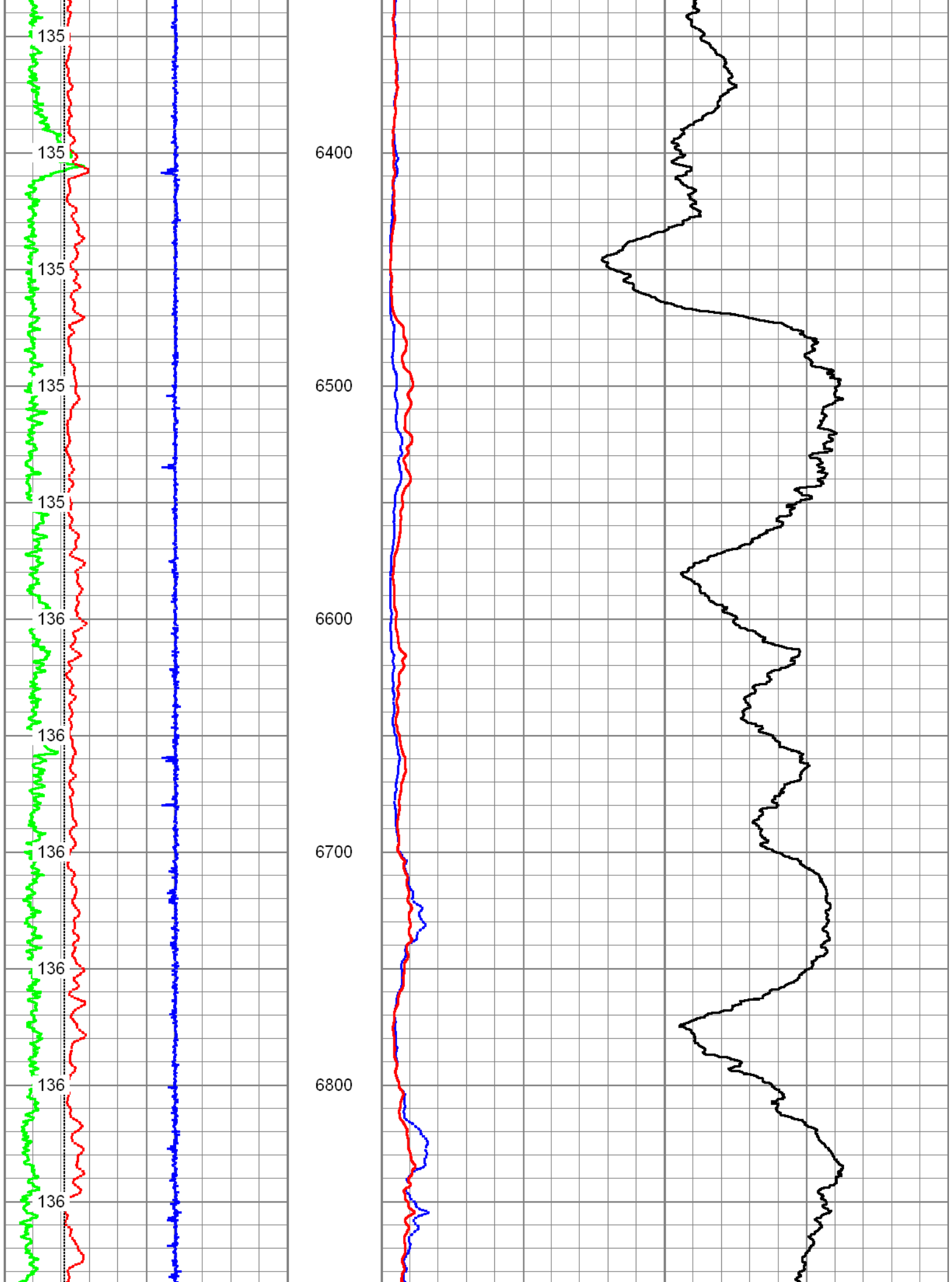
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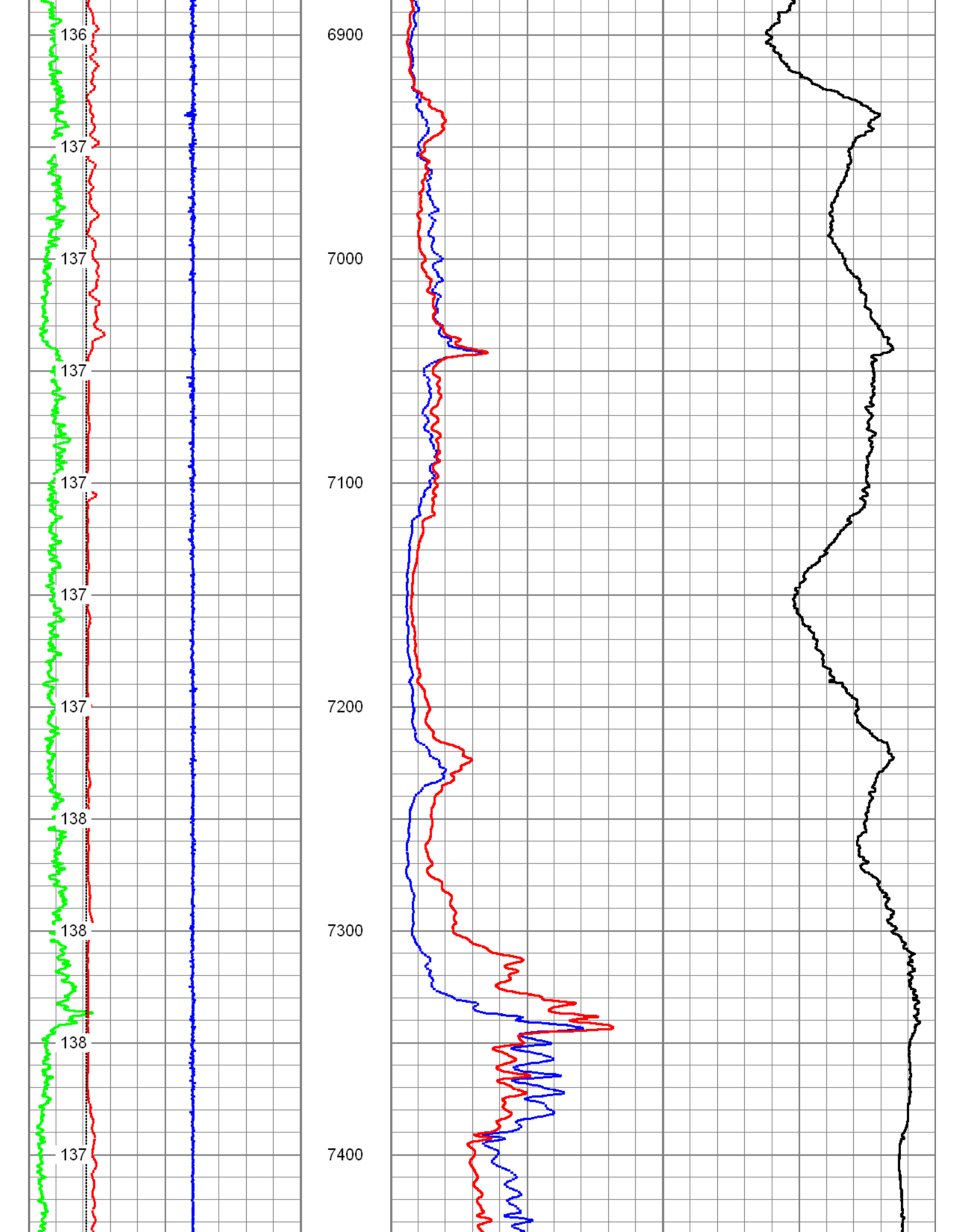
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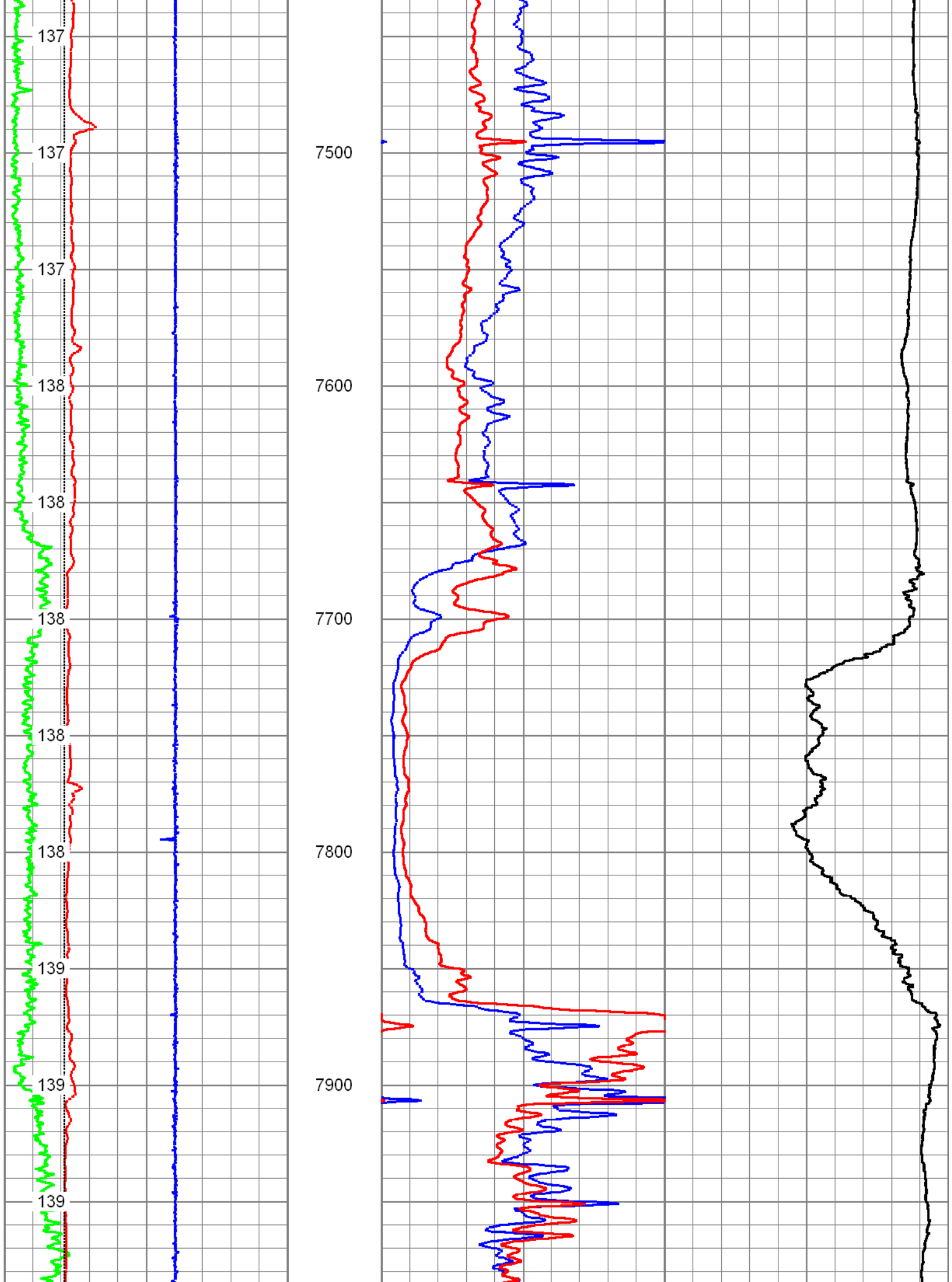
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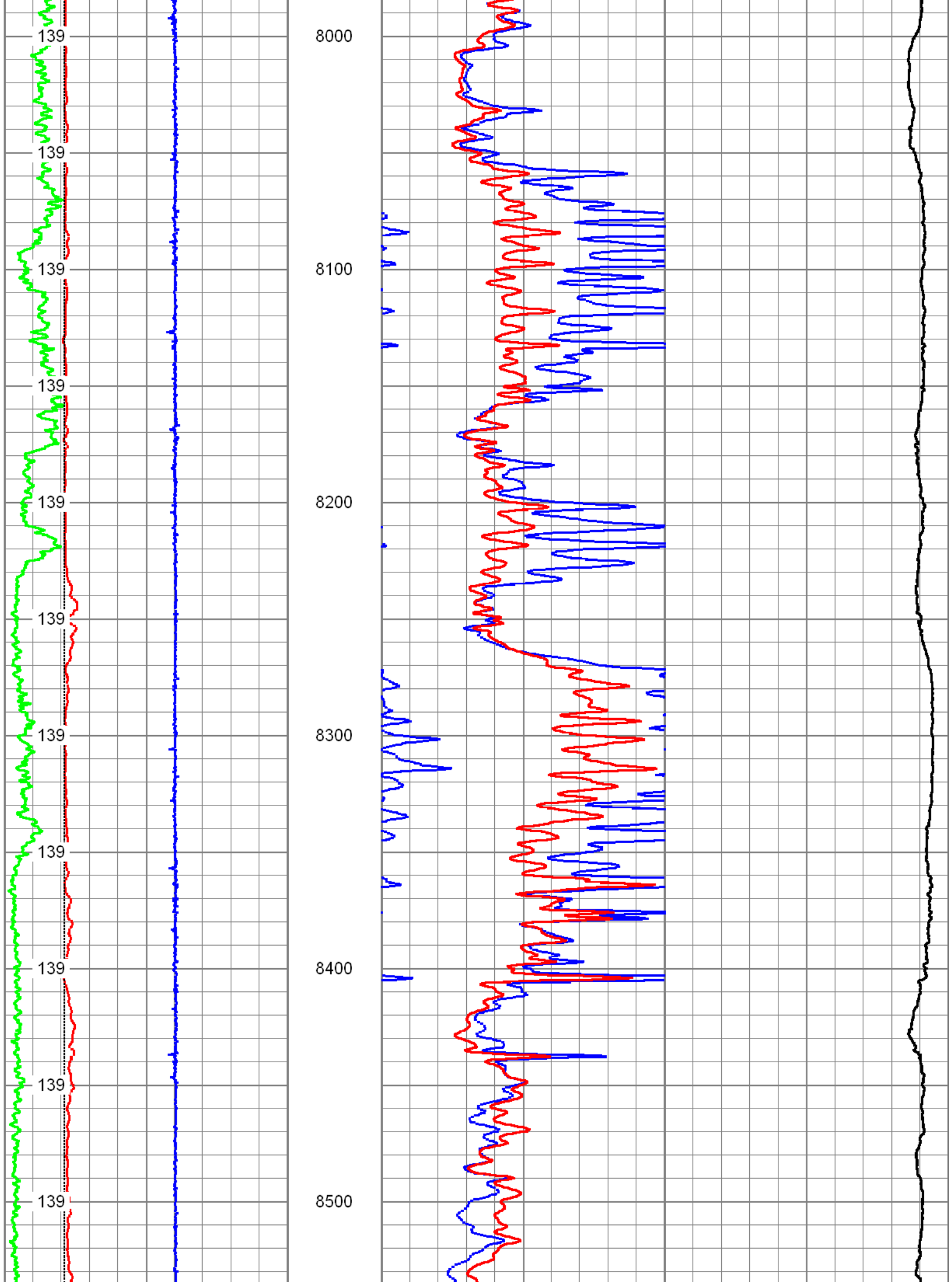
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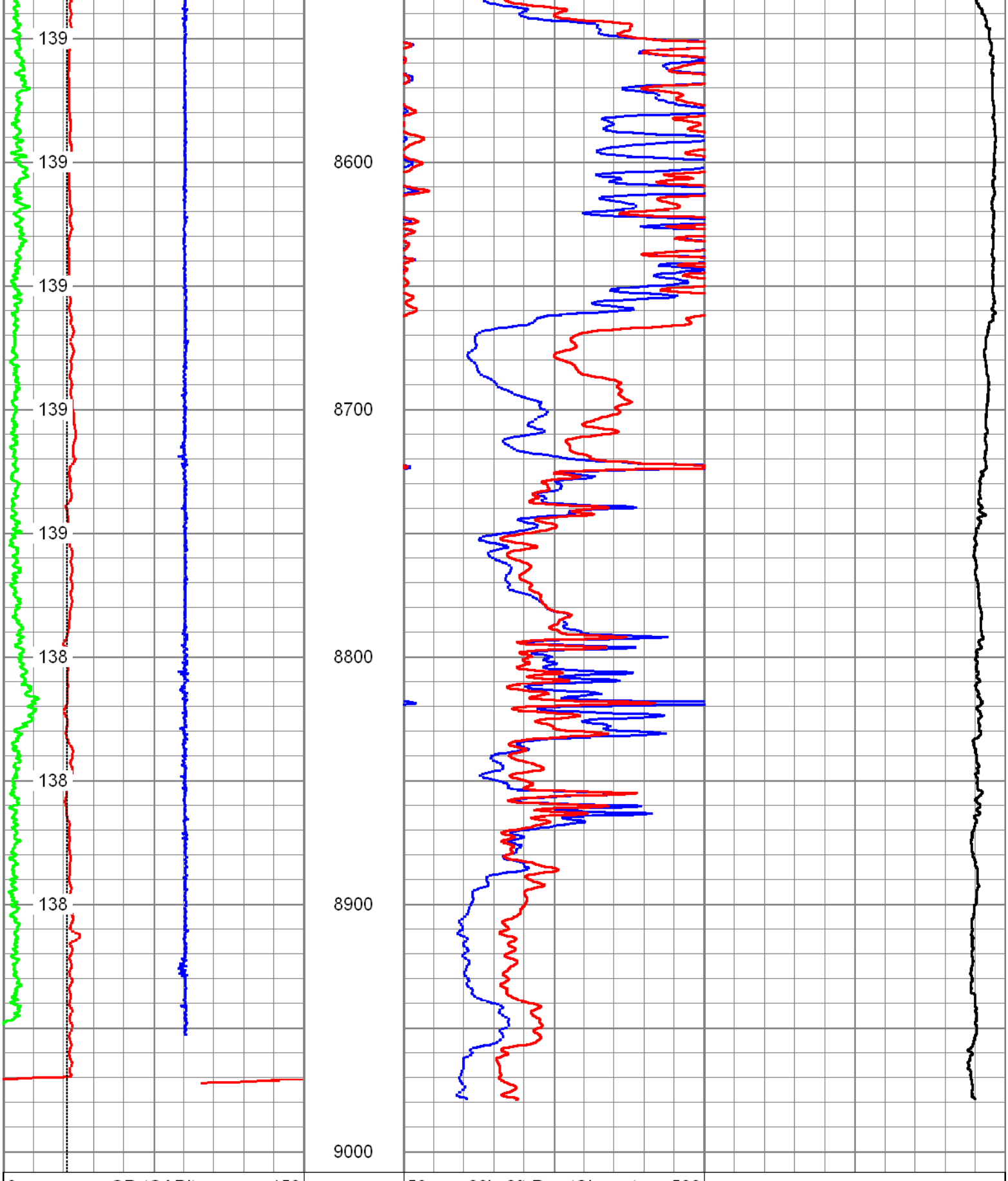

0	GR (GAPI)	150
4	DCAL (in)	14
-5	ACCY	5
4	BOREID (in)	14
GRTEMP (degF)		

50	20in 2ft Res (Ohm-m)	500
50	90in 2ft Res (Ohm-m)	500
1000	DEEP COND (Ohm-m)	0
0	20in 2ft Res (Ohm-m)	50
0	90in 2ft Res (Ohm-m)	50

ThruBit LOGGING SOLUTIONS

MAIN PASS

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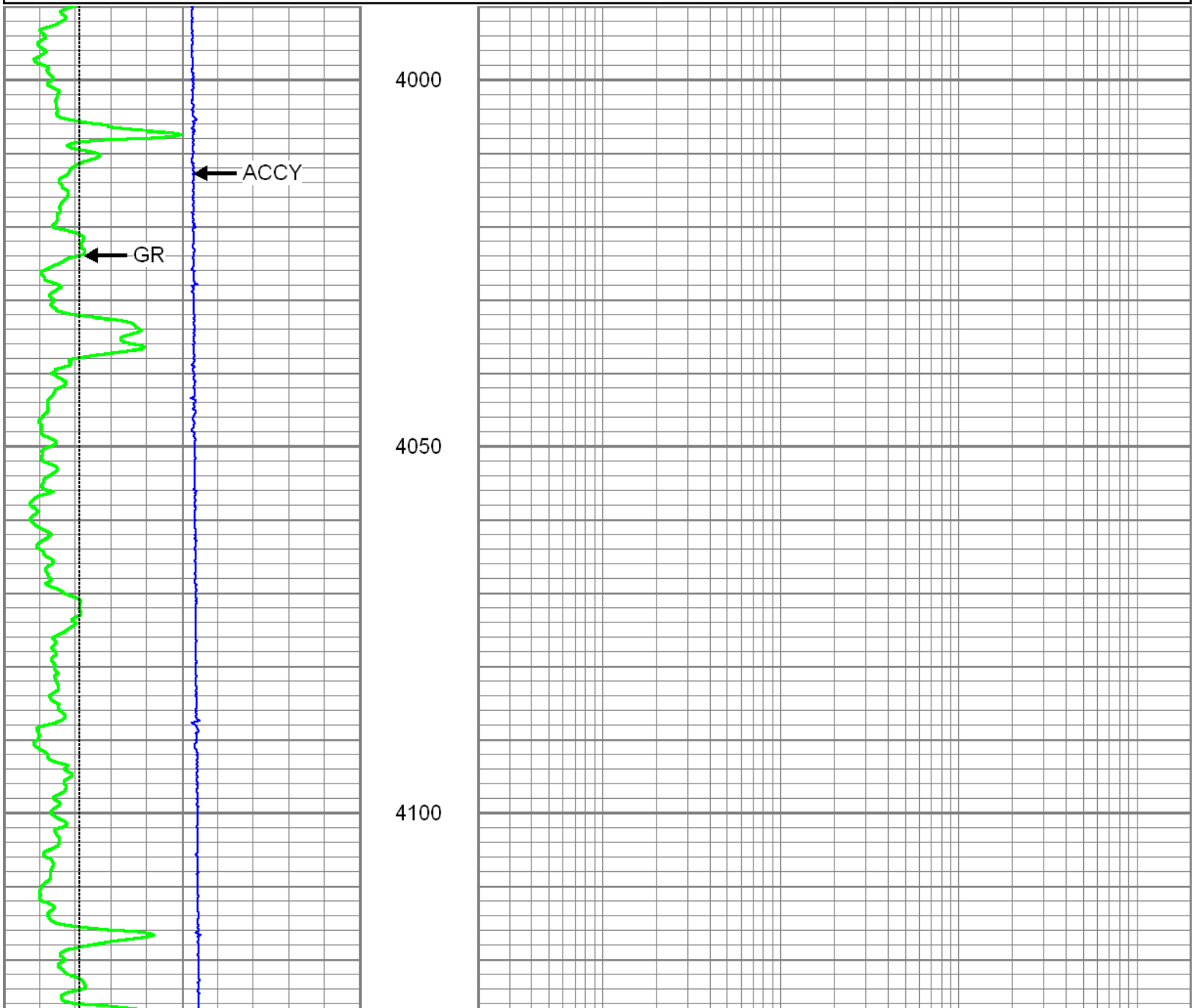
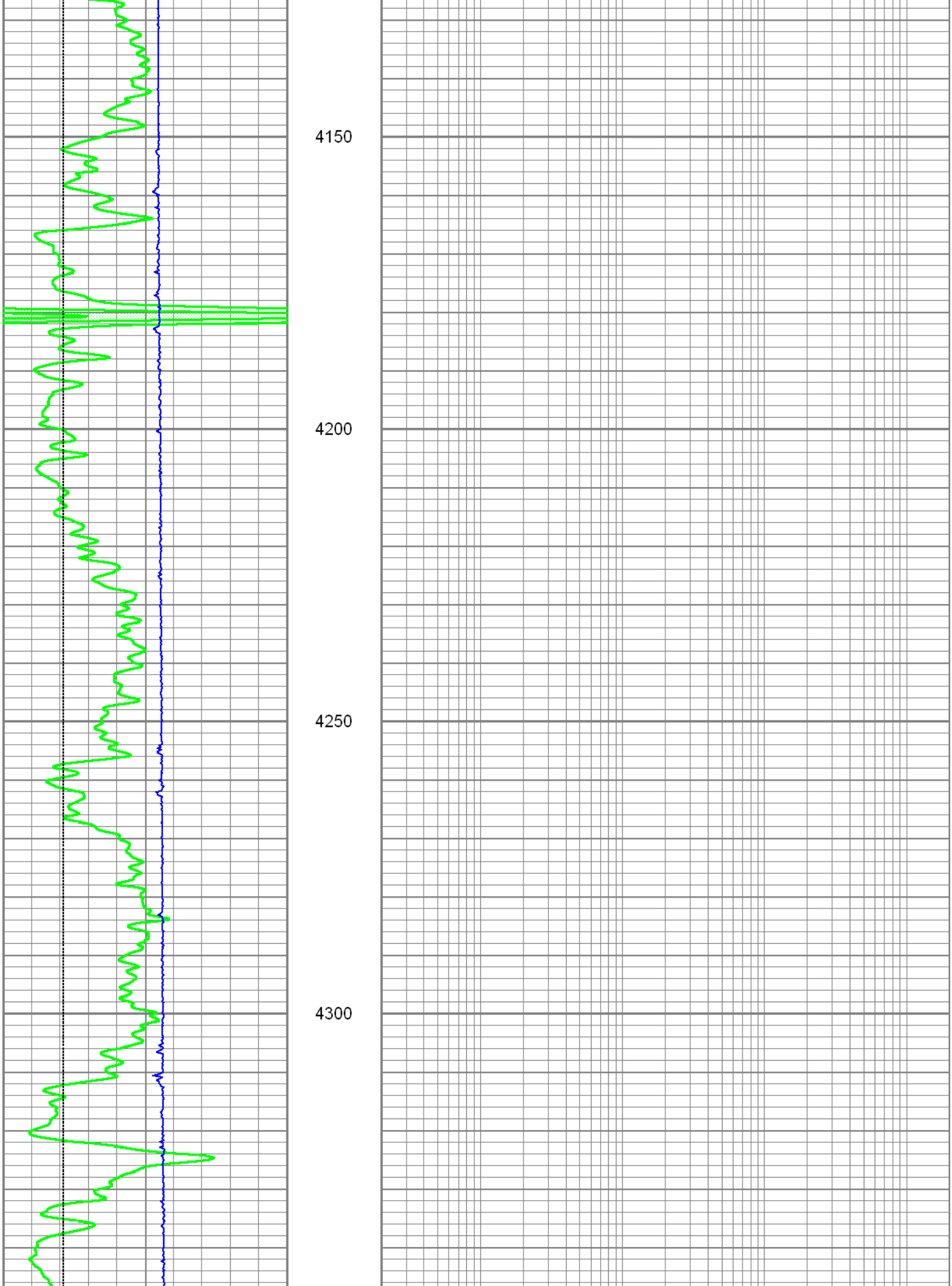
4	DCAL (in)	14
-5	ACCY	5

0.2	20inRadial (Ohm-m)	2000
0.2	30inRadial (Ohm-m)	2000
0.2	60inRadial (Ohm-m)	2000
0.2	90inRadial (Ohm-m)	2000

GRTEMP (degF)

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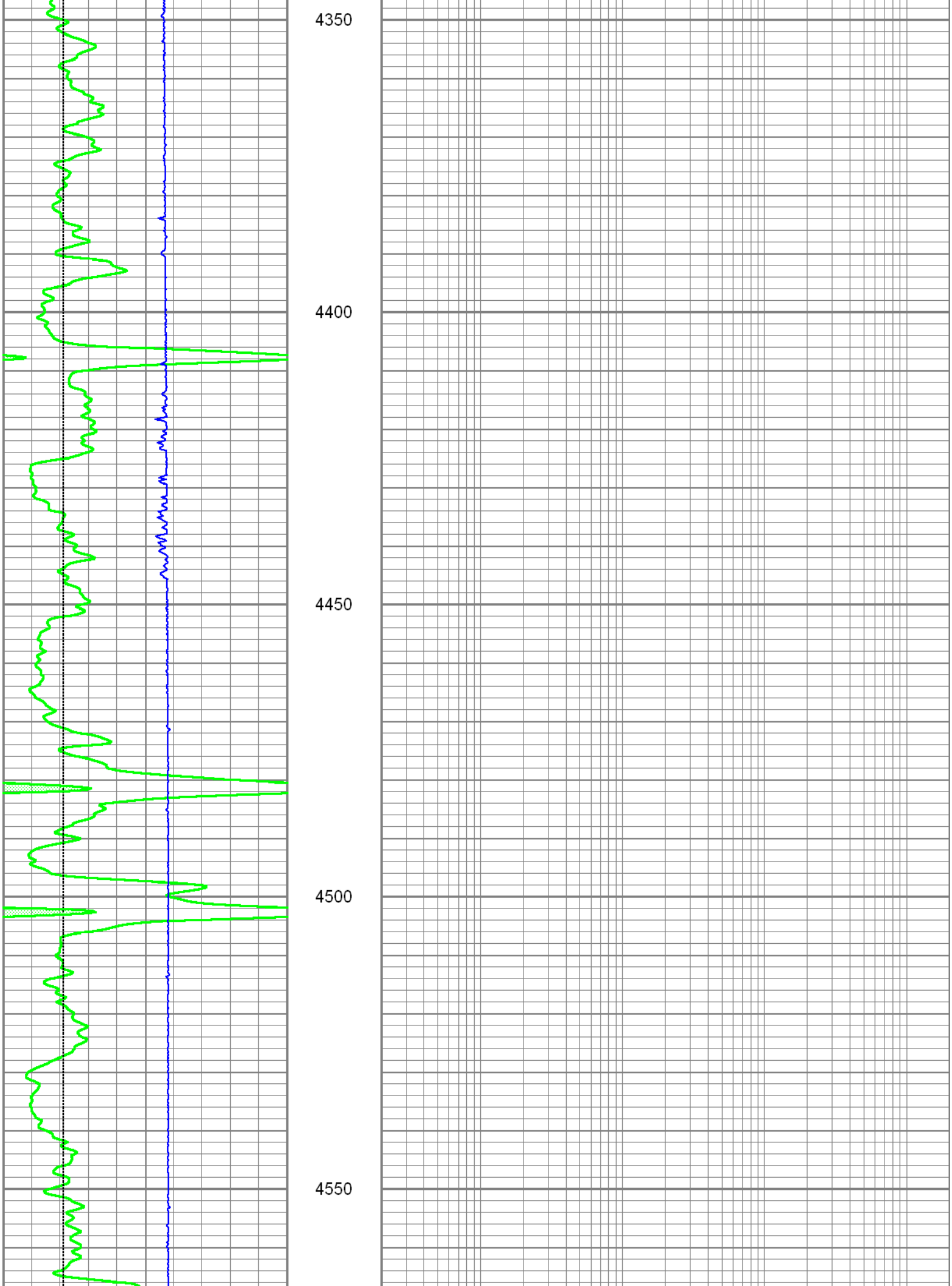
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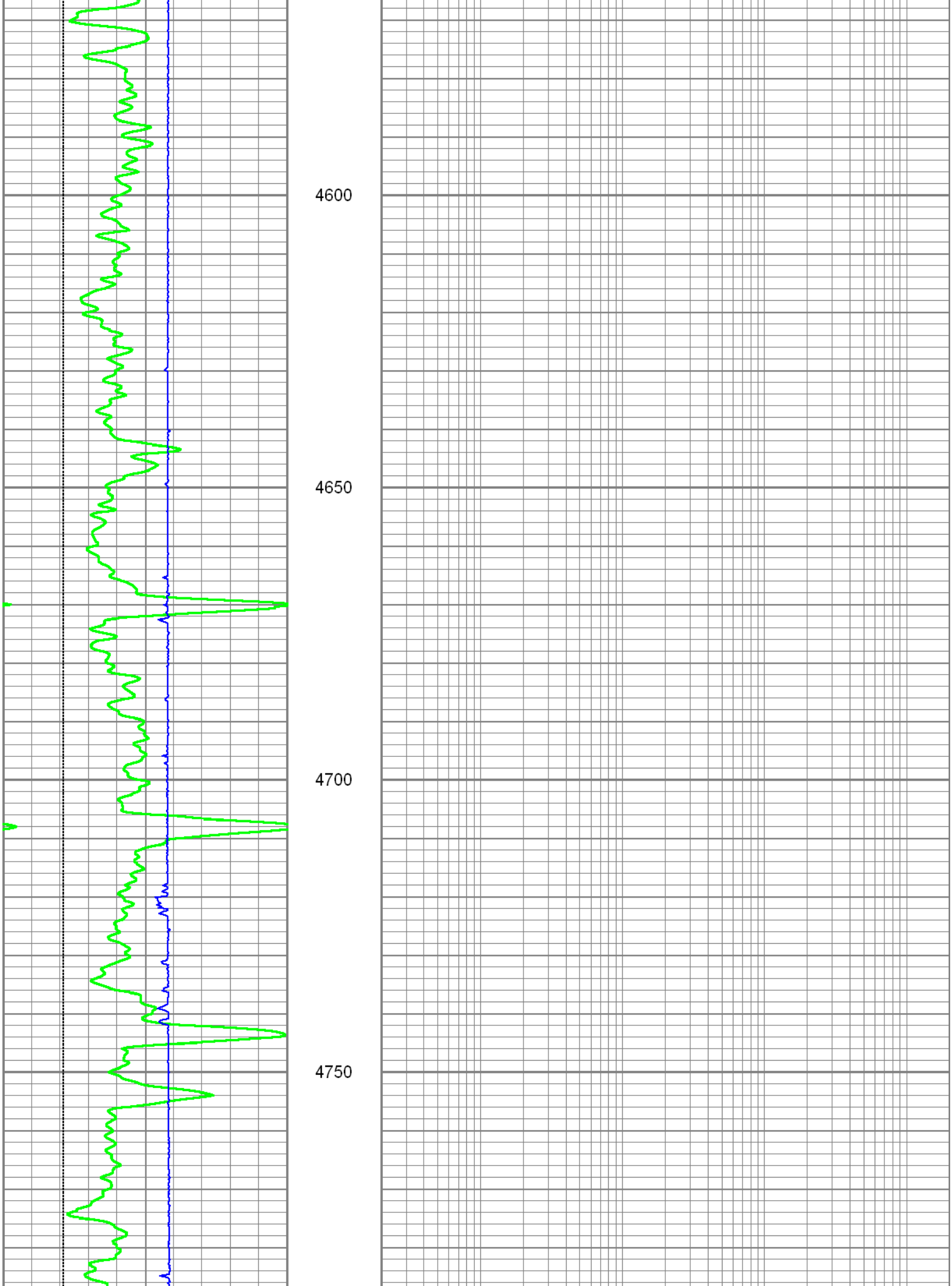
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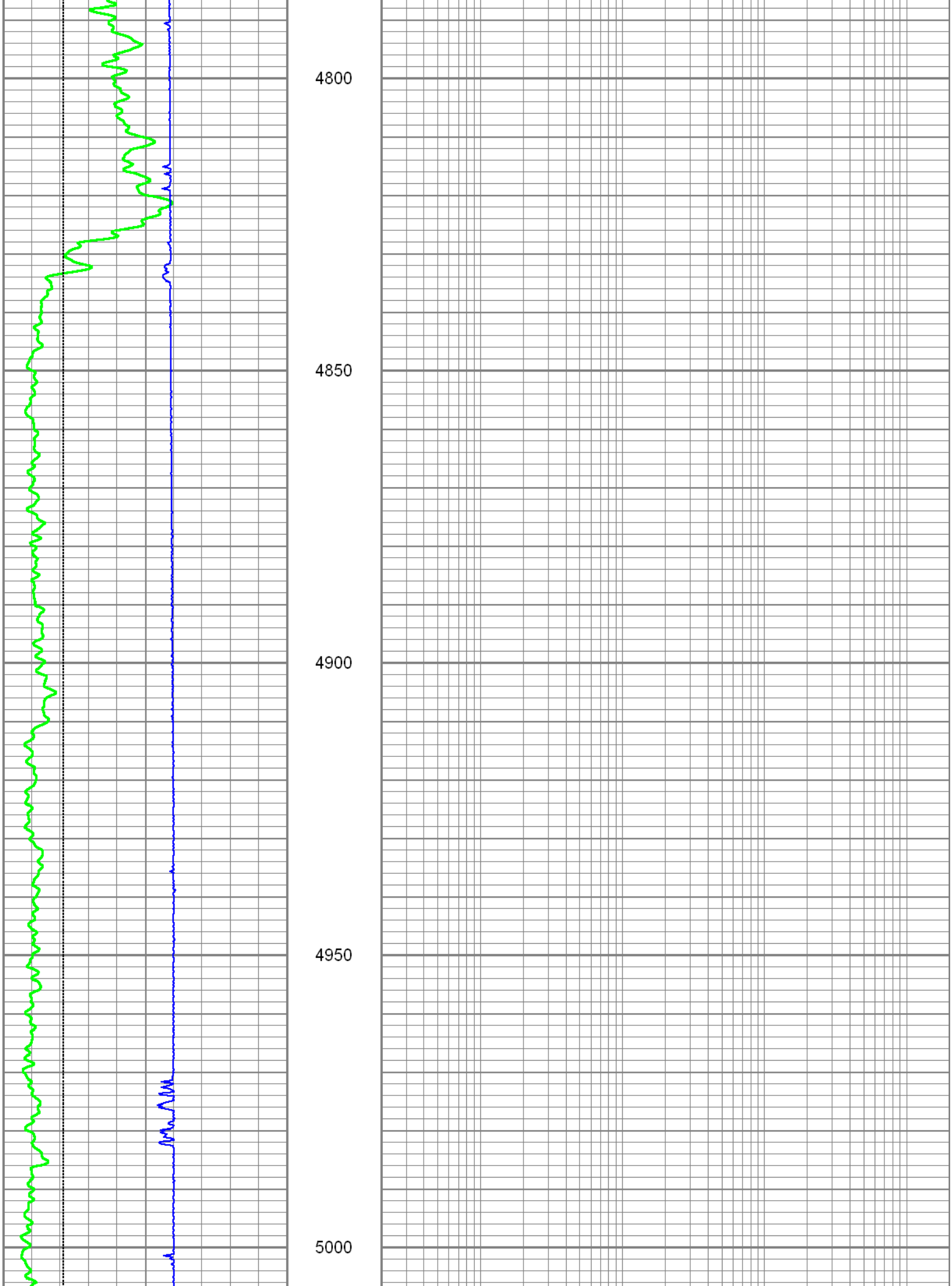
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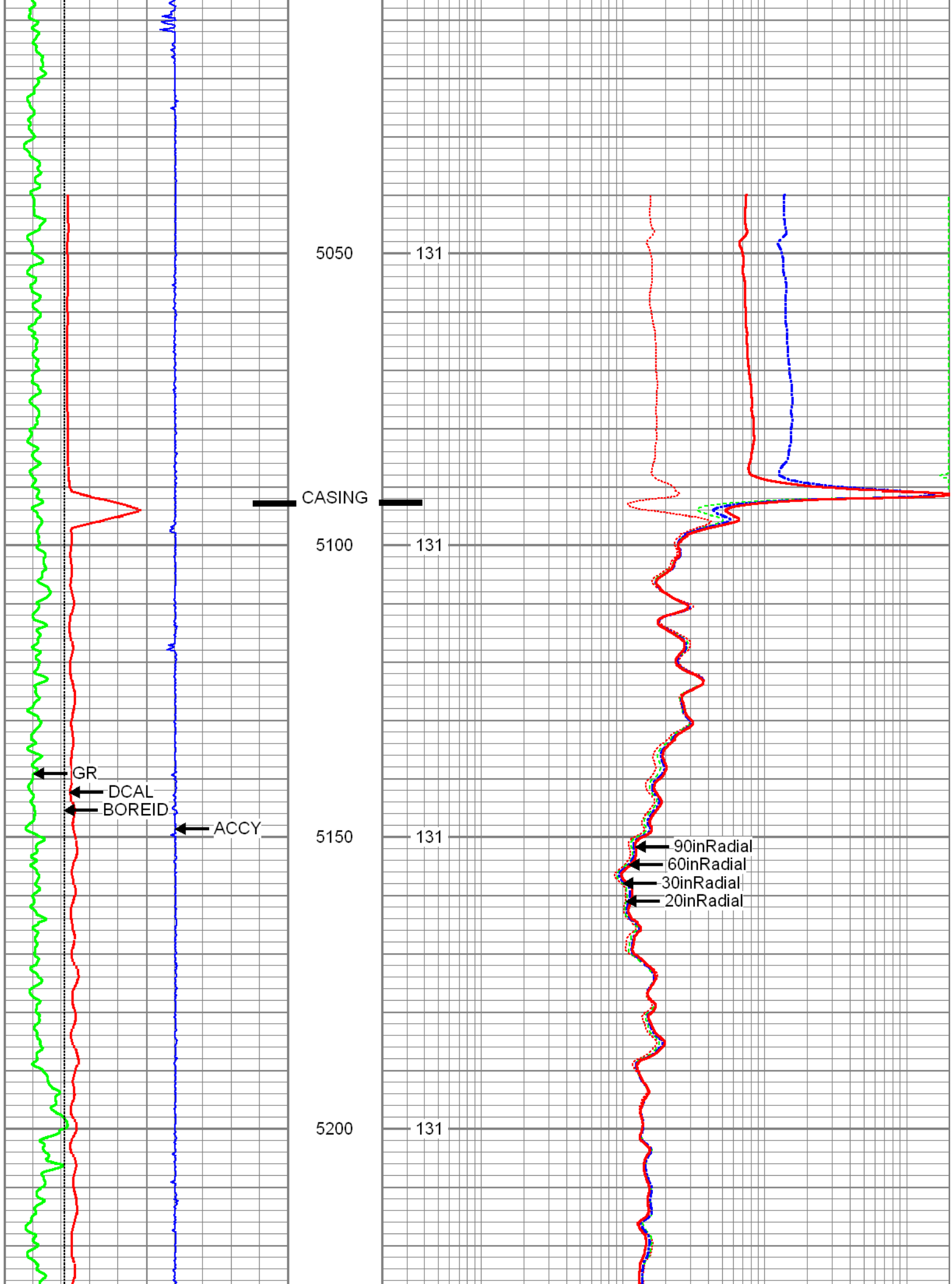
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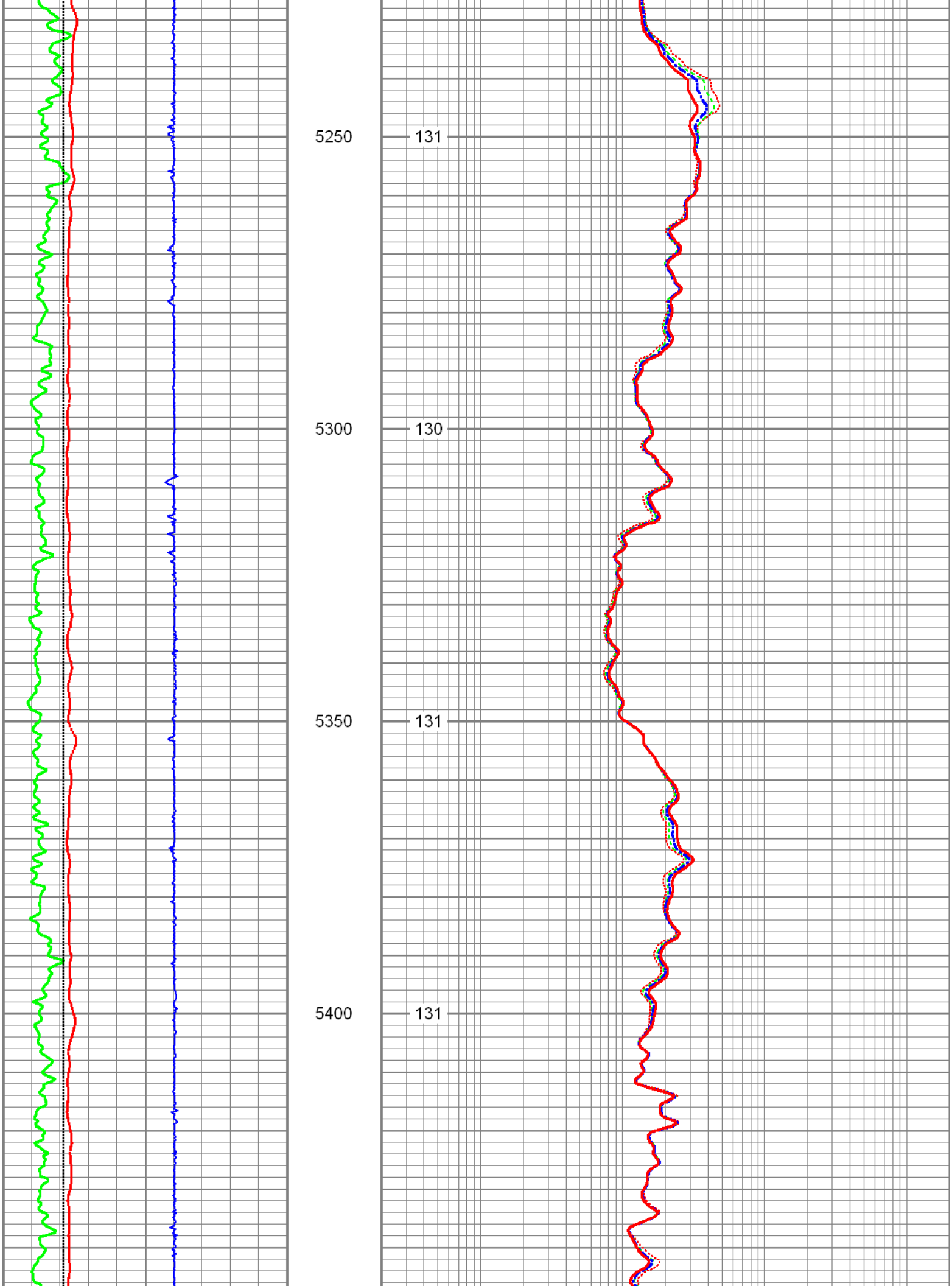
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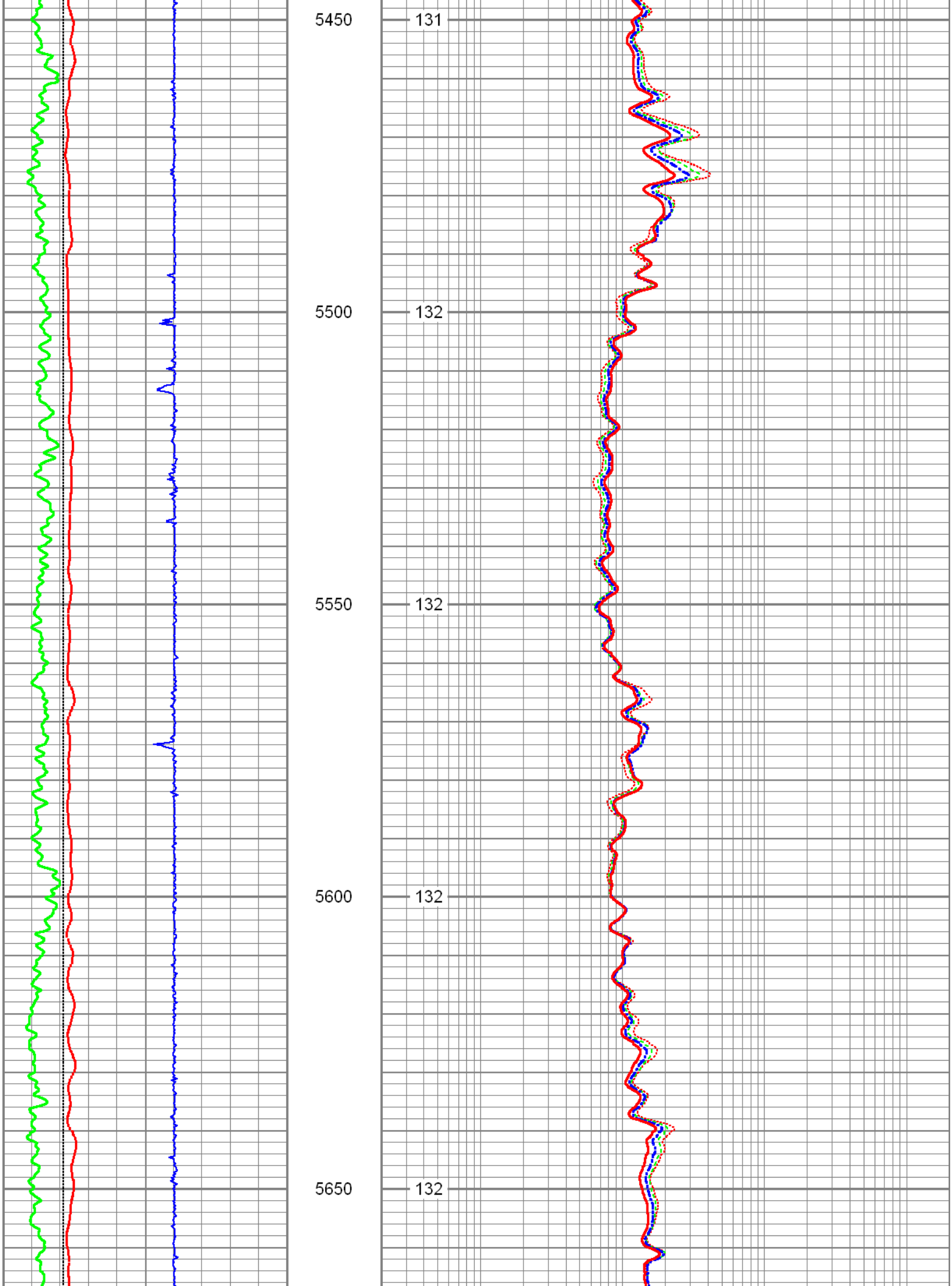
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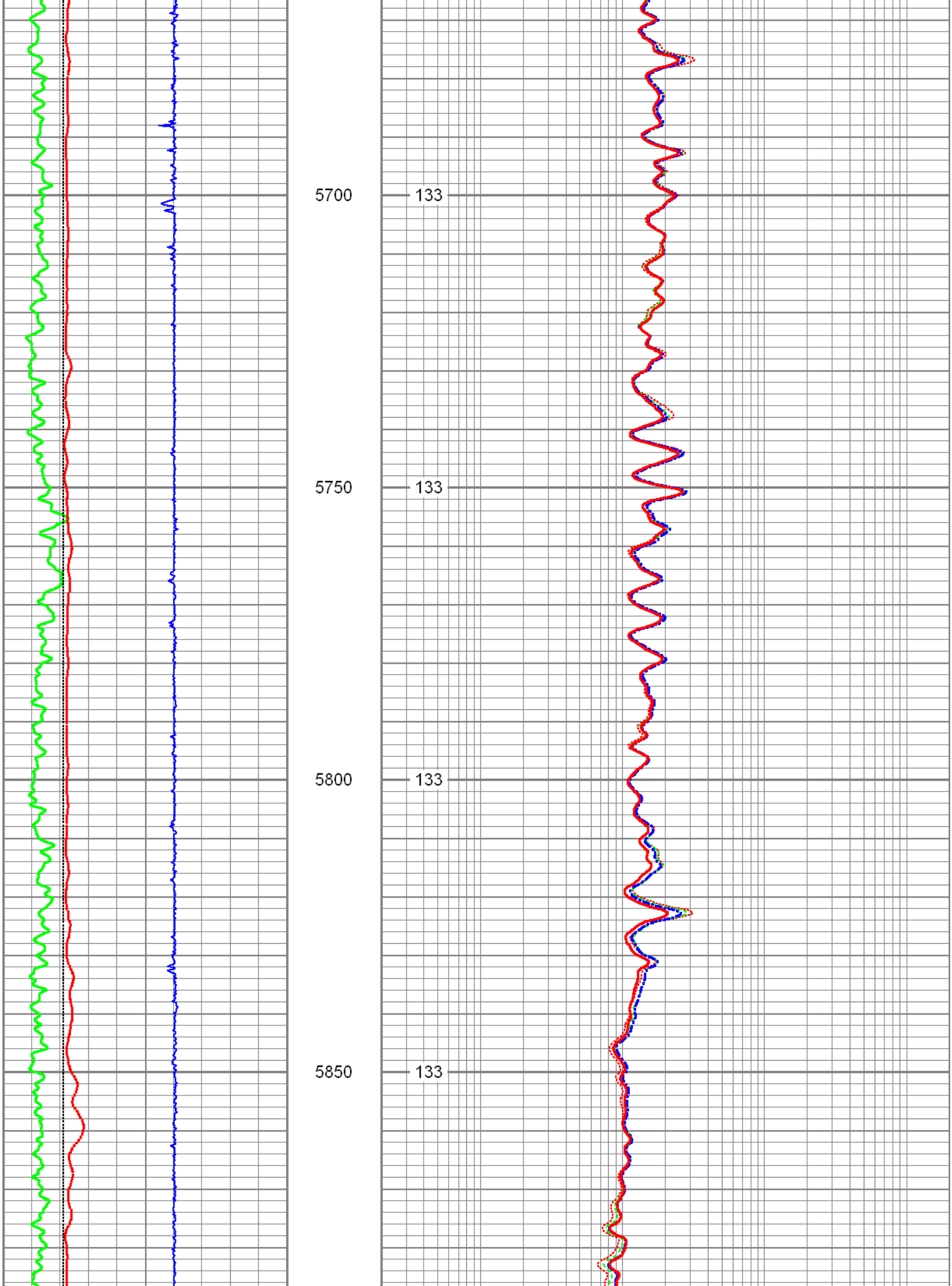
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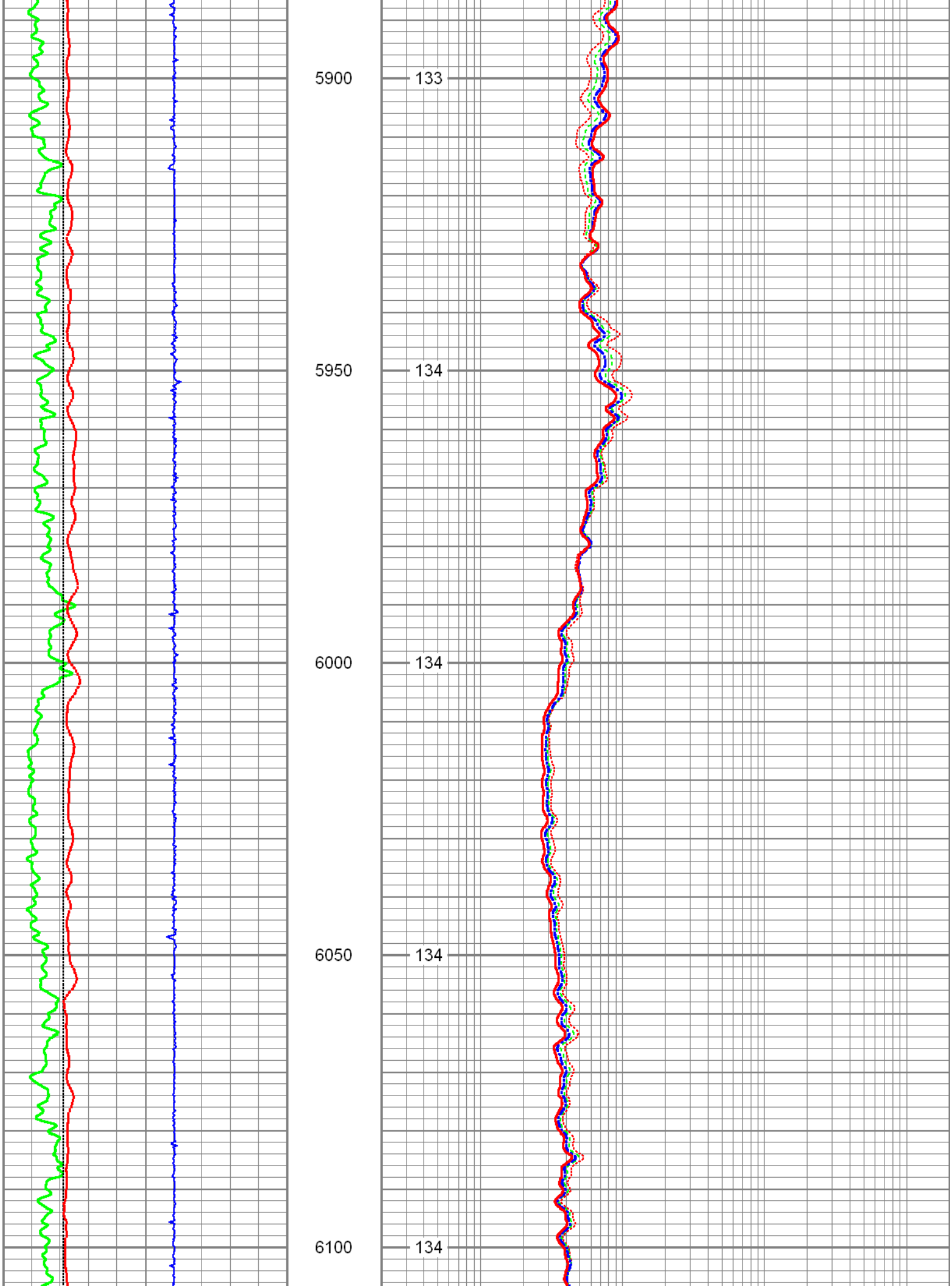
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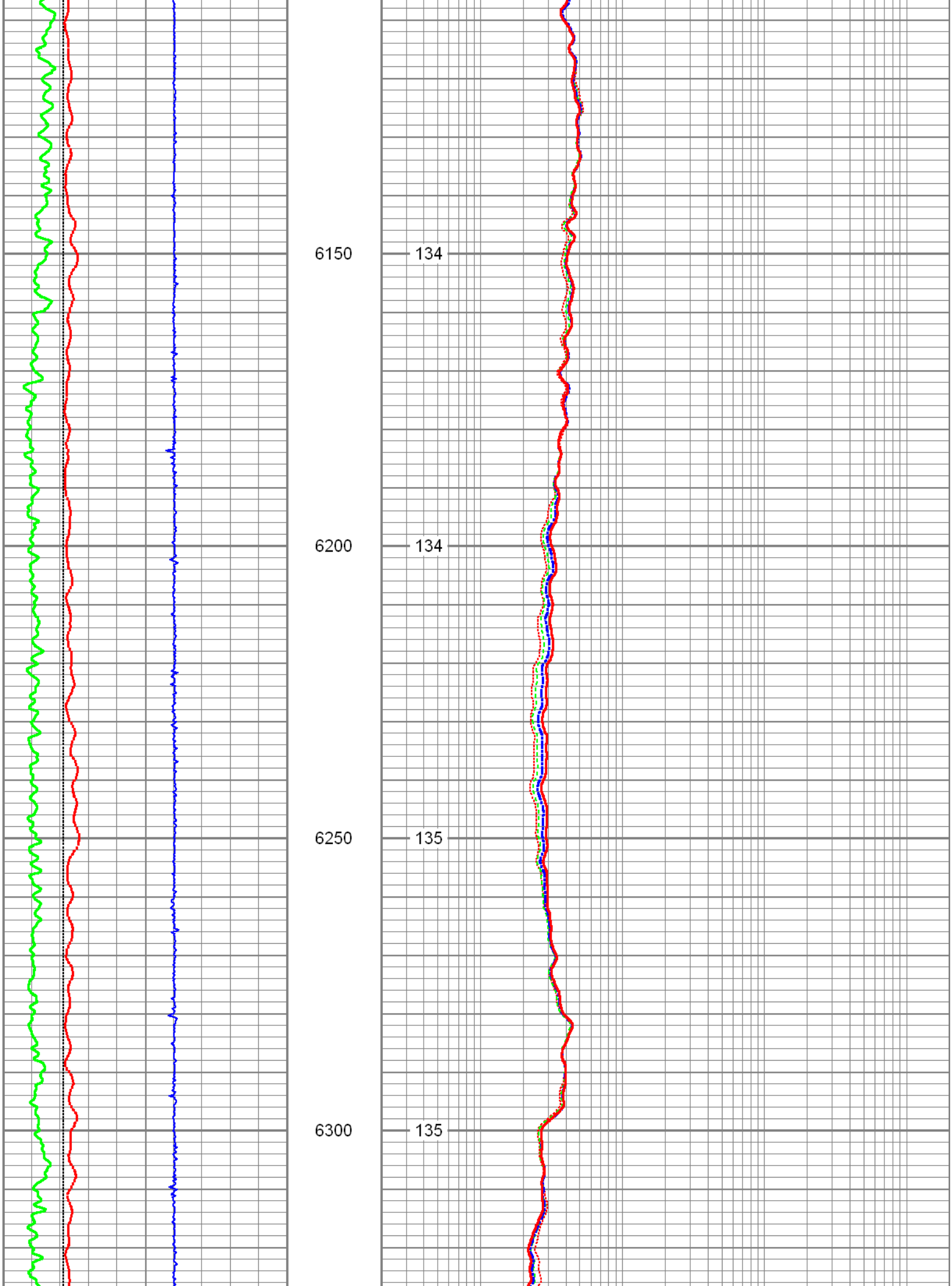
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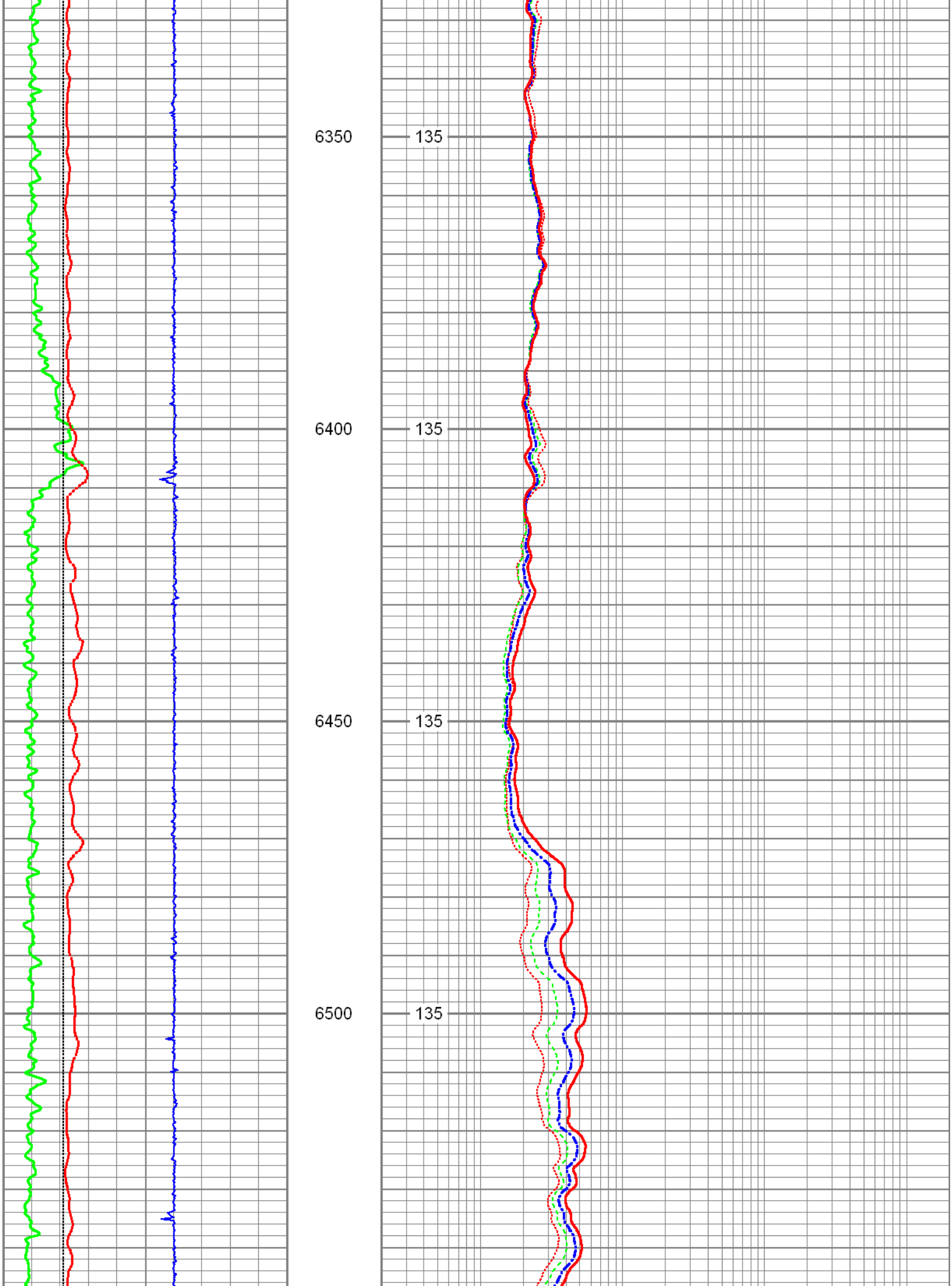
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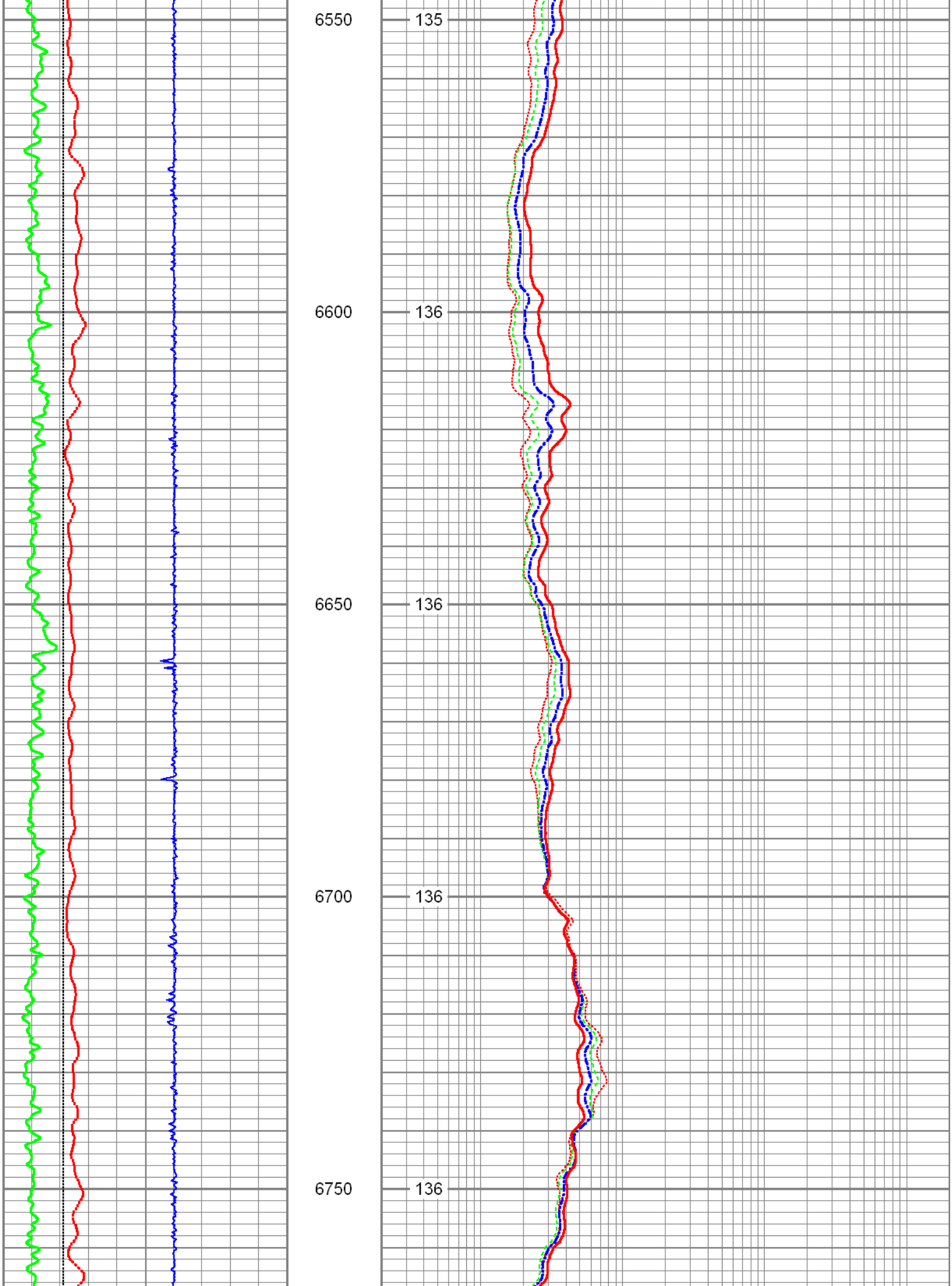
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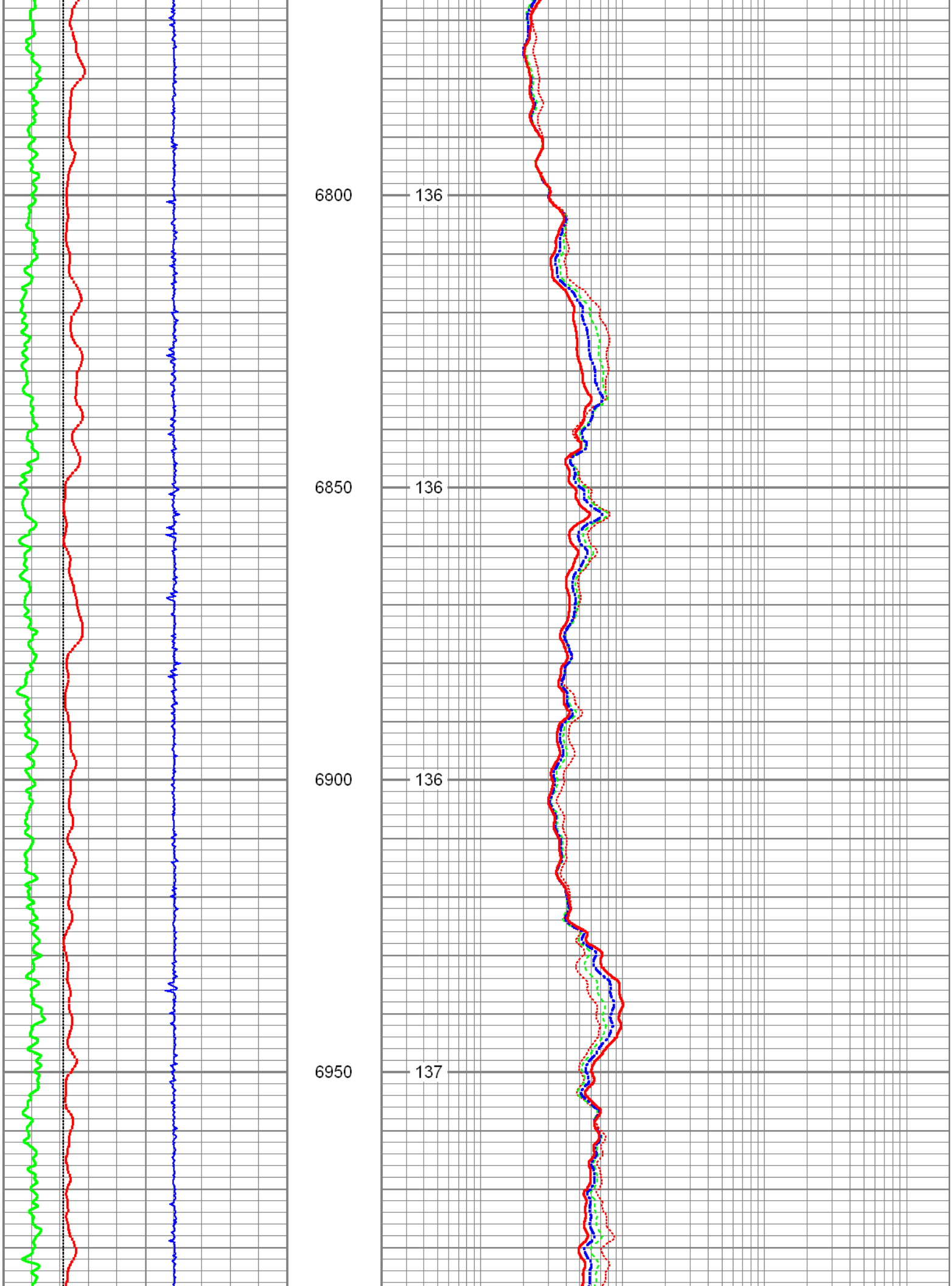
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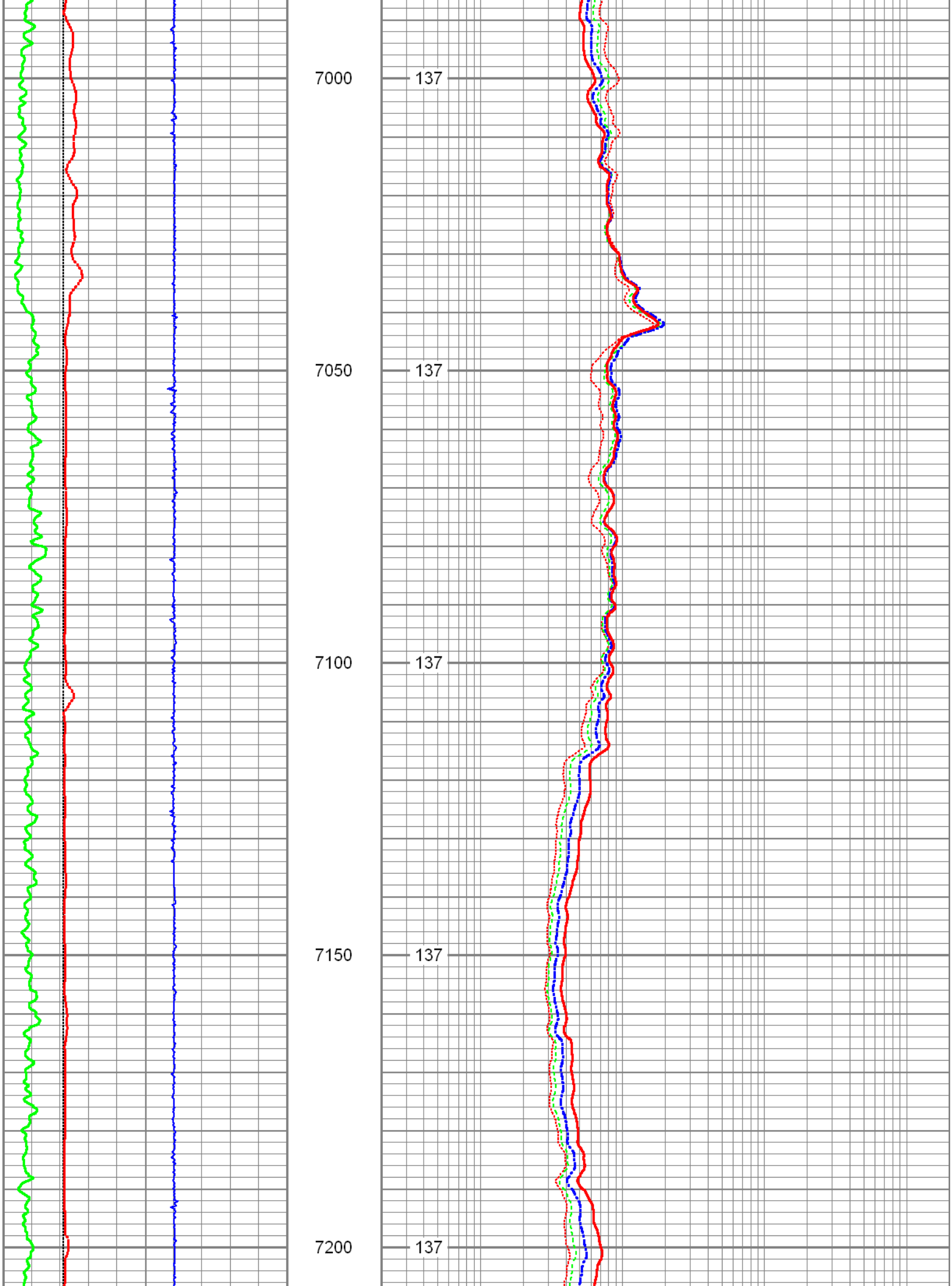
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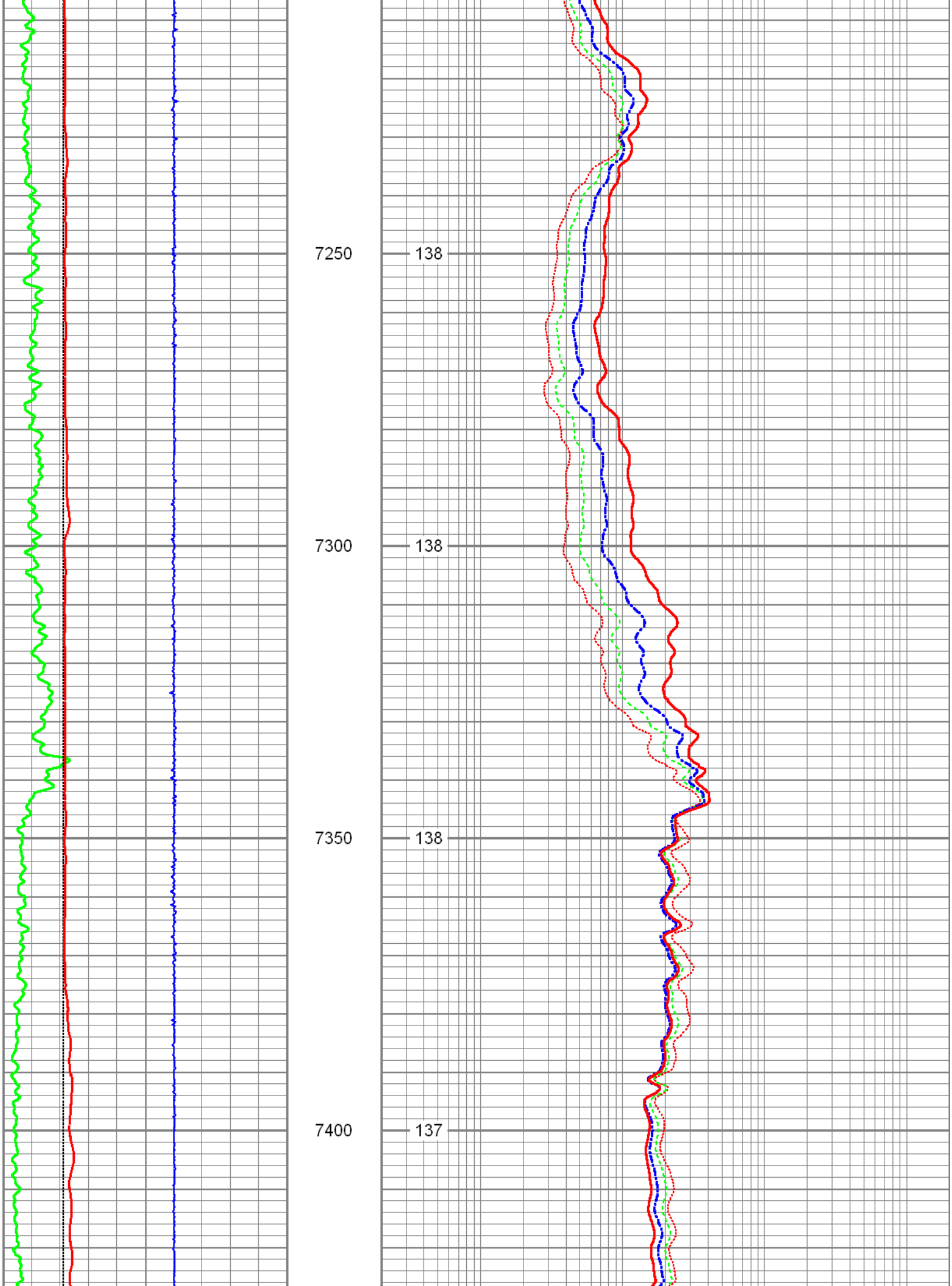
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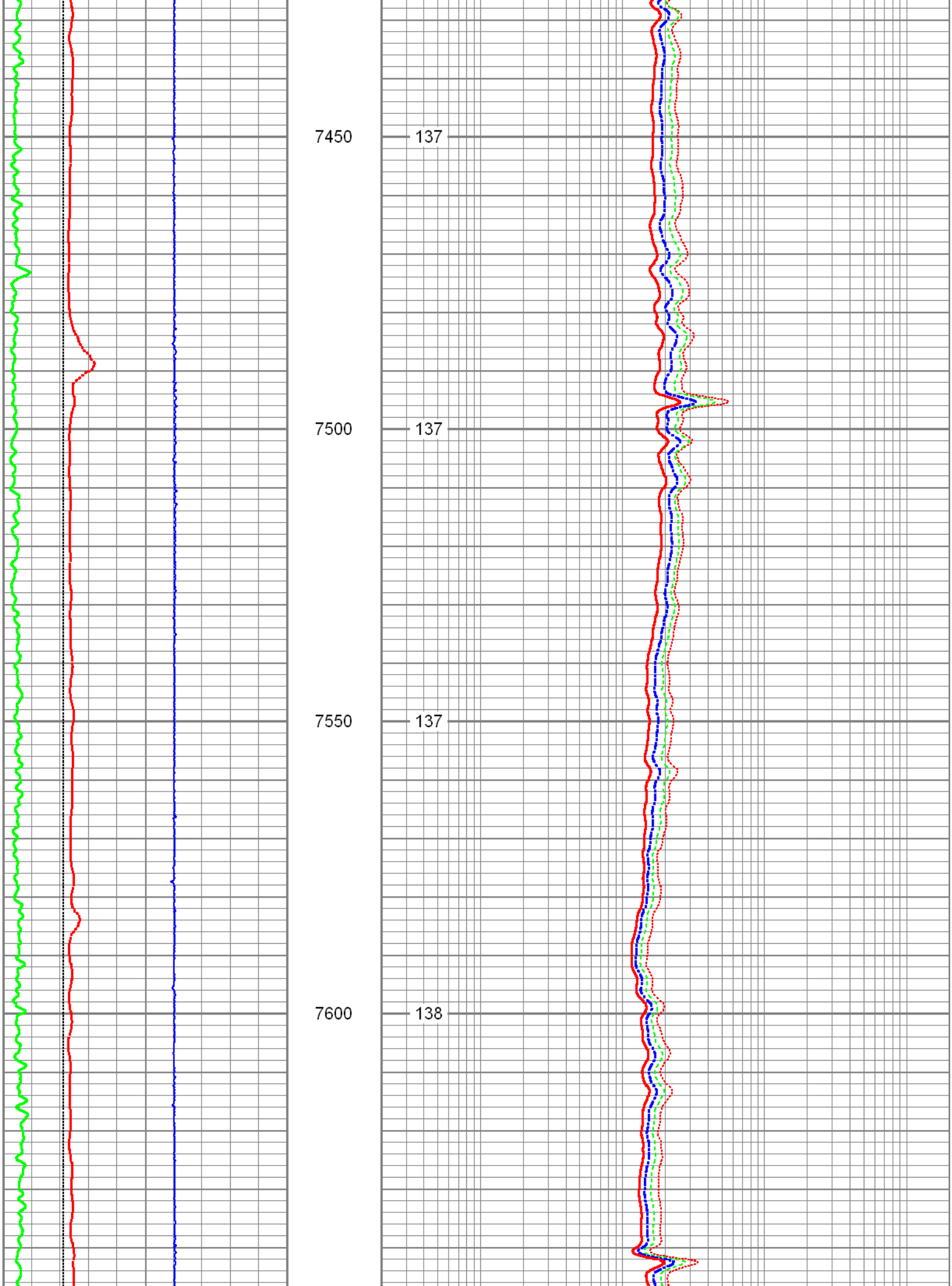
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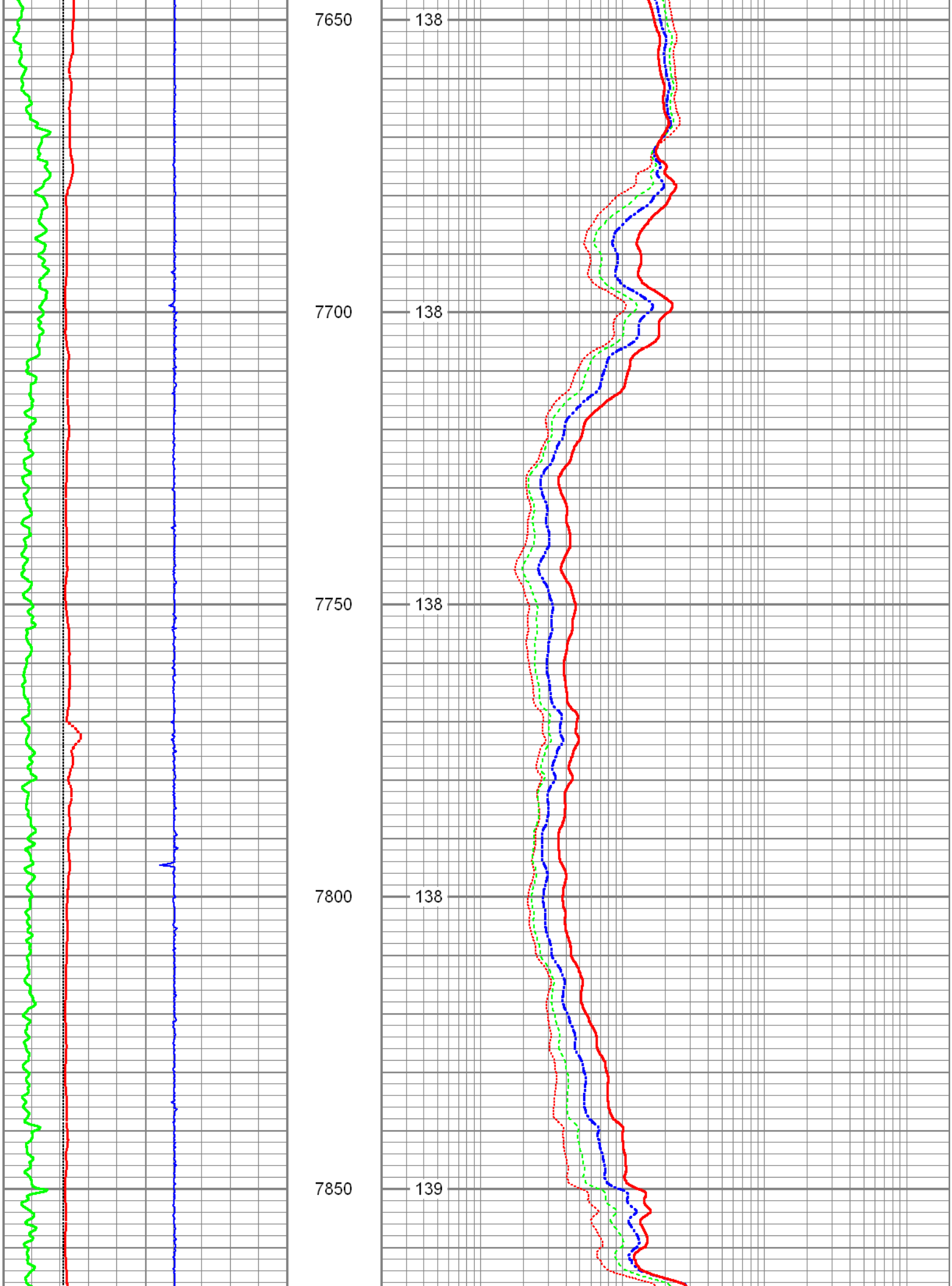
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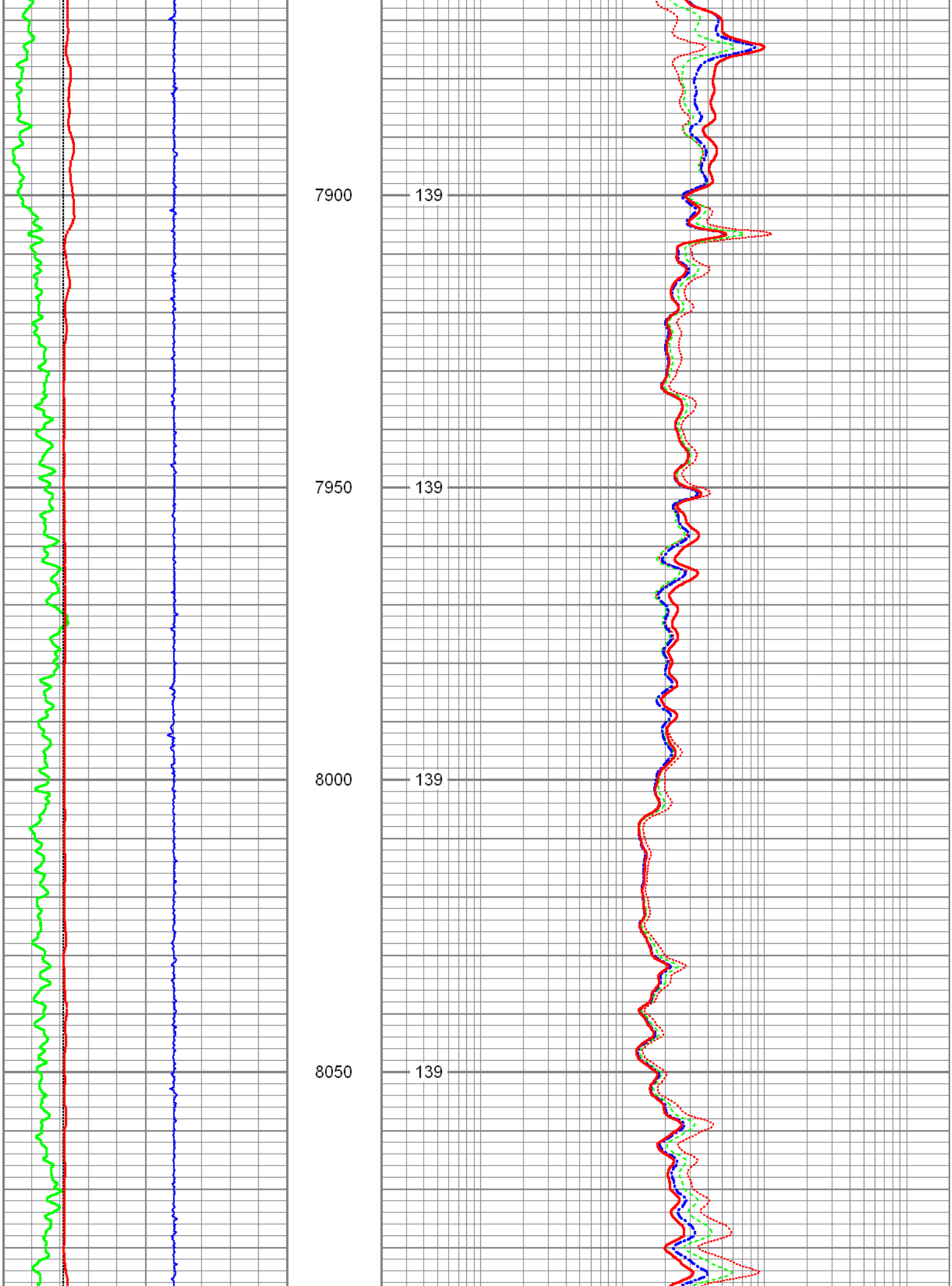
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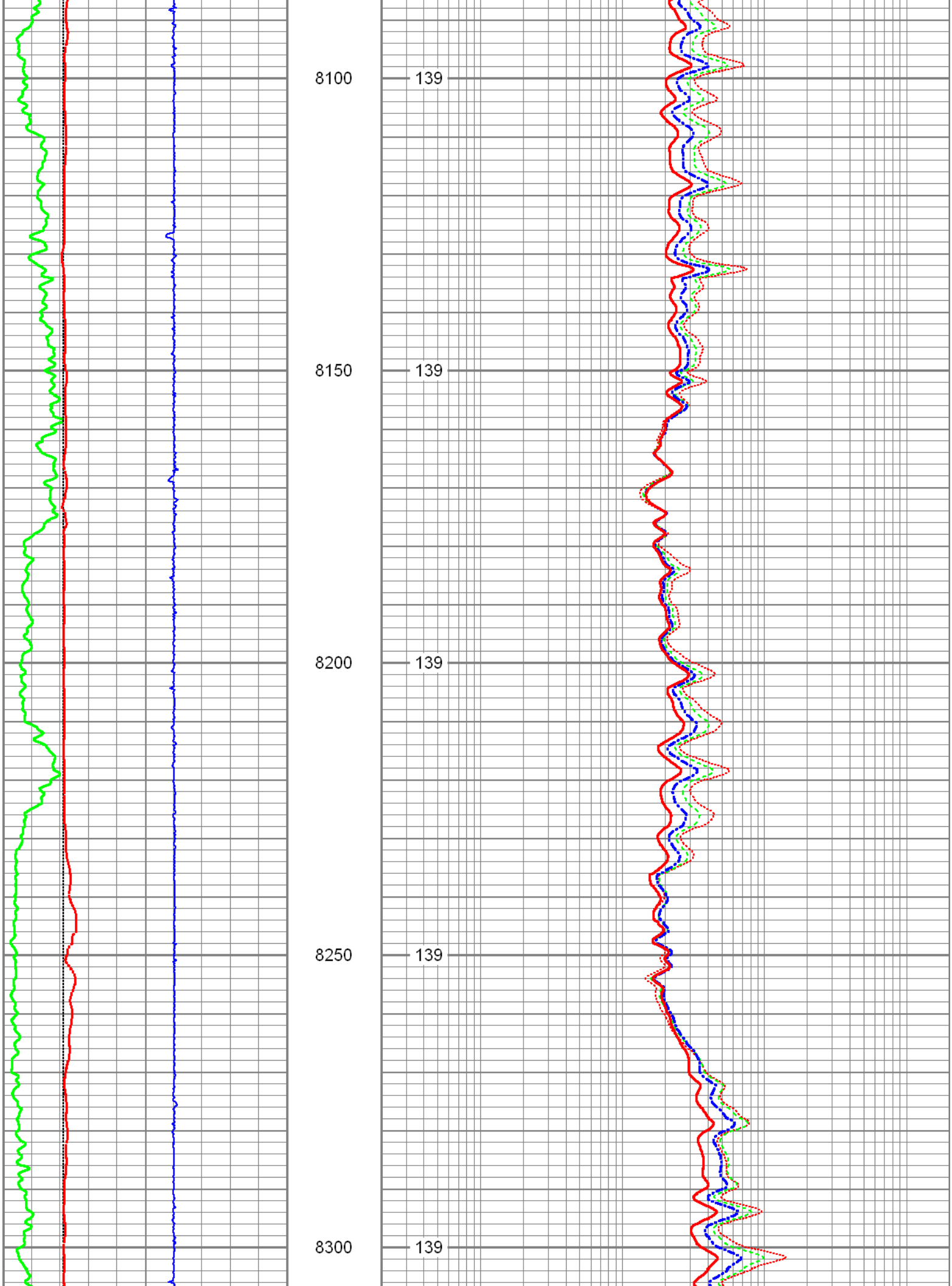
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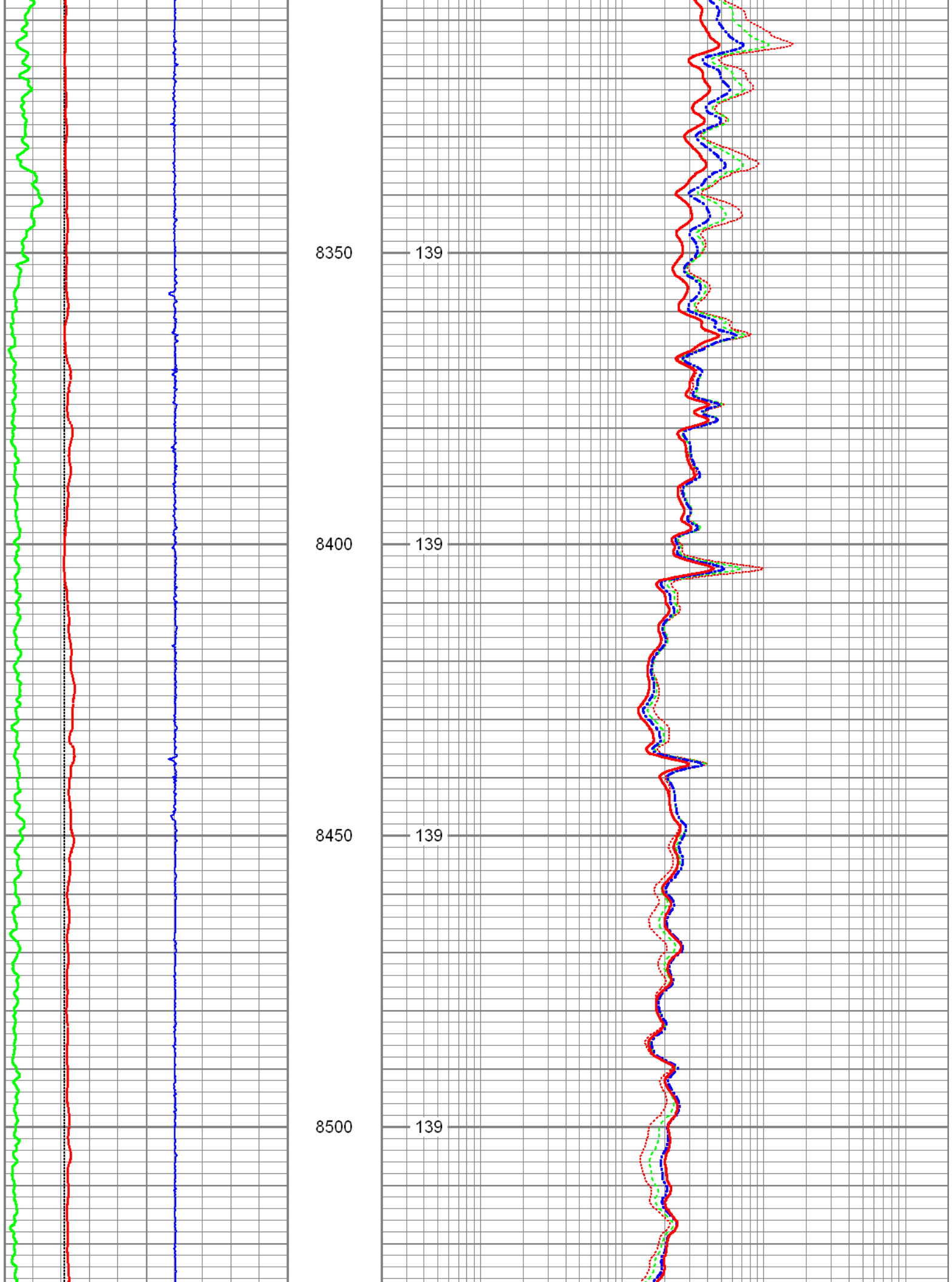
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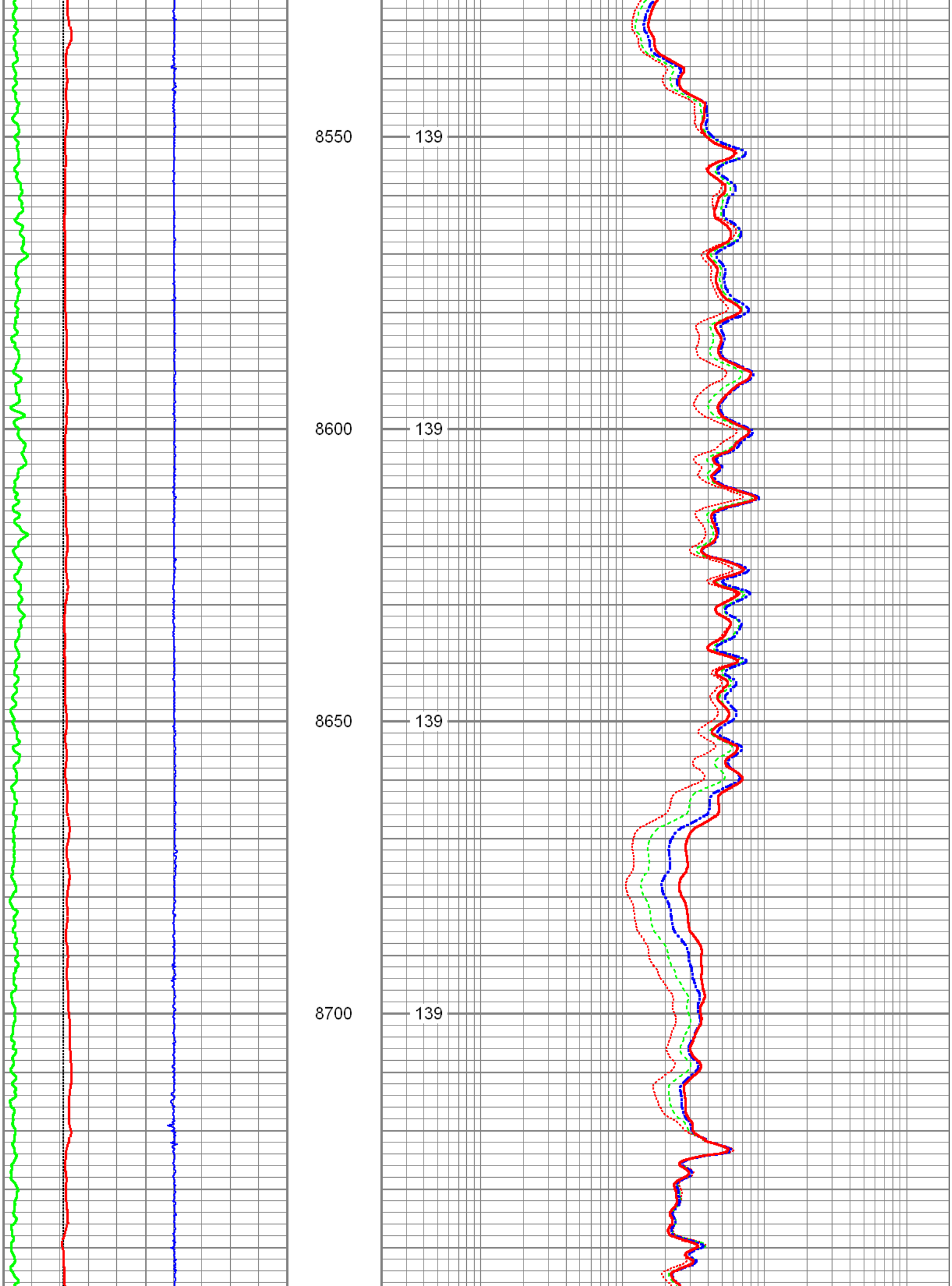
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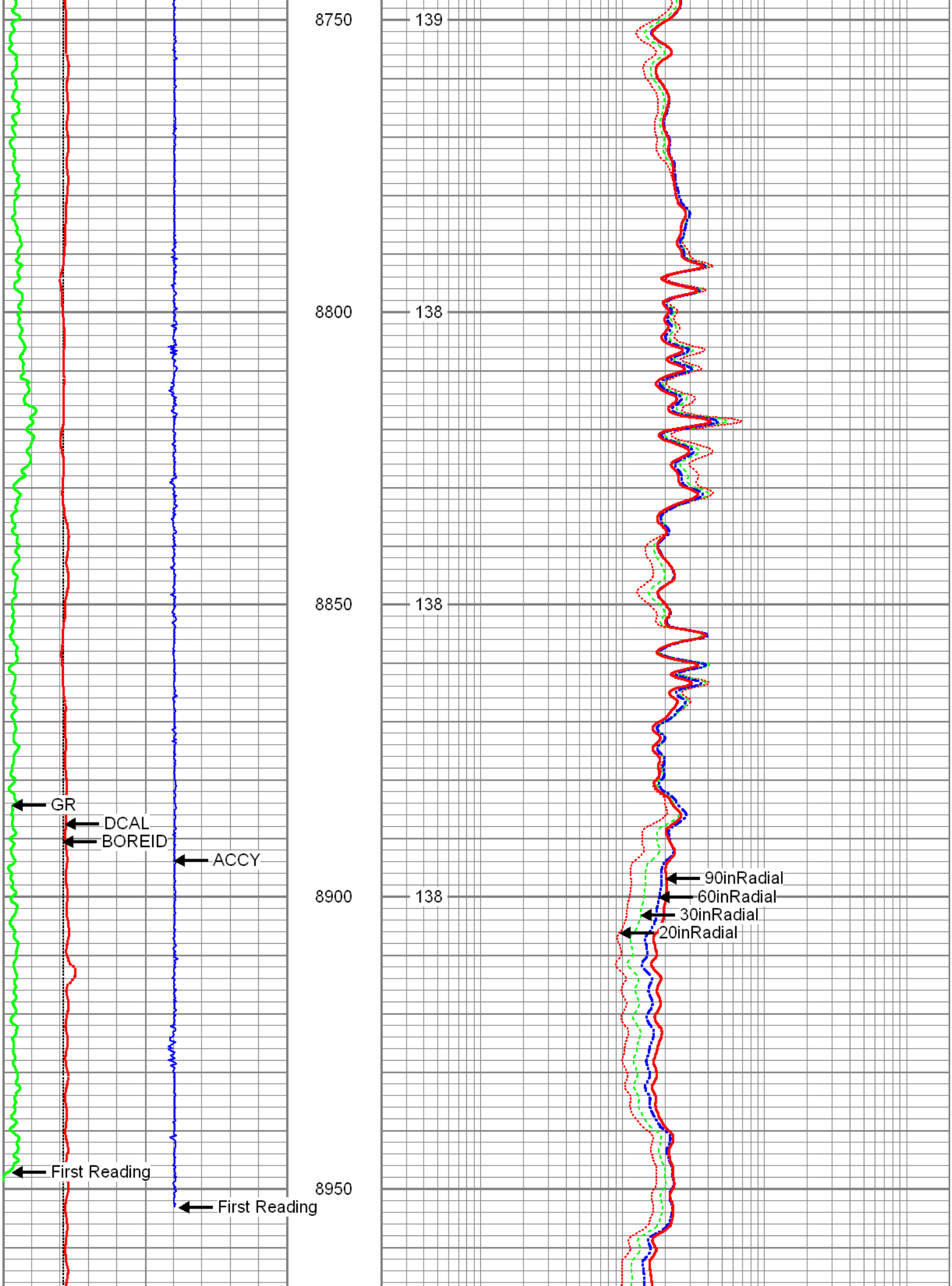
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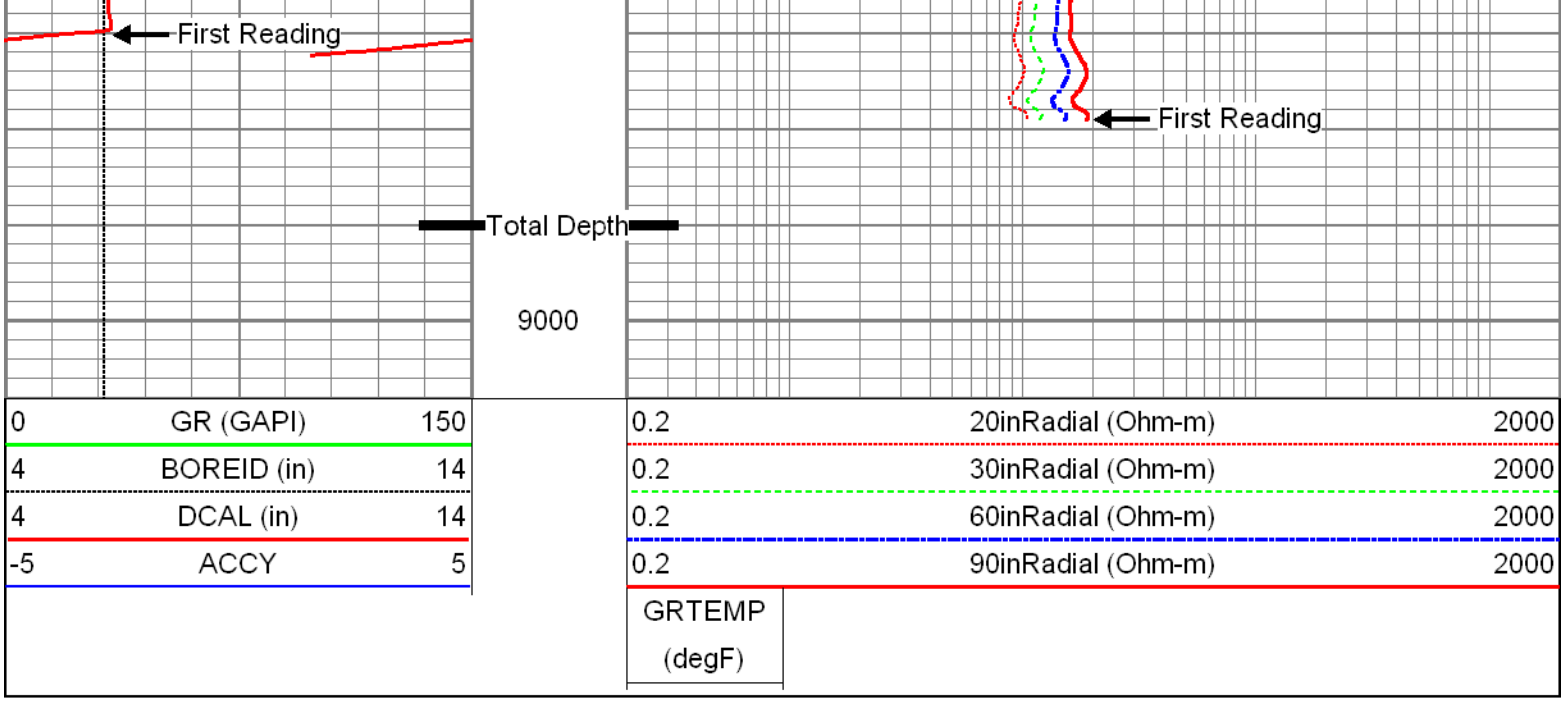


Log Variables

Database:C:\Warrior\Data\lake_mem.db
Dataset: field/well/proc1/pass1.4

Top - Bottom

A	BHCOR	BHFL_TYPE	BHIDSRC	BOREID in	BOTTEMP degF	CASED?
1	On	WBM	CURVE	6.125	139	No
CASEOD in	**CASETHCK in**	**CEMWATERSA kppm**	**CMNTTHCK in**	**FLUIDDEN g/cc**	**FRMSALIN kppm**	**LATNOR**
4.5	0	0	0	1	0	Off
M	**MATRXDEN g/cc**	**MUDSALIN kppm**	**MudWgt lb/gal**	**NPORSEL**	**PERFS**	**RESTMPSRC**
2	2.71	0.5	8.4	Limestone	0	INTERNAL
SO in	**SRFTEMP degF**	**SZCOR**	**TDEPTH ft**	**TMPCOR**	**TOOLPOS**	
0.5	65	On	9041	On	Free	

Calibration Report

Database File: lake_mem.db
Dataset Pathname: proc1/pass1.4
Dataset Creation: Tue Nov 01 19:56:55 2011

ThruBit Induction Calibration Report

Serial-Model: 28-PS

Shop Calibration Performed: Fri Sep 23 09:20:31 2011

BaseLine

	R	X
Freq 1		
A1	-470.1870	249.0440

A2	-138.9390	347.1110
A3	-24.0713	103.0540
A4	-14.2642	243.0030
A5	-13.8958	127.7210
Freq 2		
A1	-244.9020	132.4970
A2	-90.4781	197.6480
A3	-18.5957	15.7641
A4	-17.5275	72.6951
A5	-18.6822	-14.1379
Freq 3		
A1	-155.2820	24.1584
A2	-69.8682	102.6450
A3	-15.0466	-45.4471
A4	-18.8594	-40.3685
A5	-20.3409	-117.9110
Freq 4		
A1	-84.4895	-144.2320
A2	-50.5612	-21.3602
A3	-12.9257	-136.6600
A4	-22.2849	-207.9640
A5	-26.1856	-291.2480

Calibration Coefficients

	R	X
Freq 1		
A1	0.9896	0.0017
A2	0.9914	0.0035
A3	0.9968	-0.0039
A4	0.9917	0.0055
A5	1.0258	0.0037
Freq 2		
A1	0.9837	-0.0070
A2	0.9850	-0.0054
A3	0.9846	-0.0053
A4	0.9873	-0.0037
A5	1.0222	-0.0062
Freq 3		
A1	1.0020	-0.0064
A2	1.0038	-0.0049
A3	1.0028	-0.0054
A4	1.0053	-0.0035
A5	1.0425	-0.0057
Freq 4		
A1	0.9935	-0.0005
A2	0.9946	0.0004
A3	0.9957	-0.0017
A4	0.9987	0.0016
A5	1.0430	-0.0020
Temperature	25.6493	

Serial-Model:	37-PS
Shop Calibration Performed:	Mon Oct 10 10:19:08 2011

References

	Density	Units
Aluminium	2.602	g/cc
Magnesium	1.715	g/cc

Readings

	Counts	Units
SS1 Background	136.46	cps
LS1 Background	145.91	cps
LS4 Background	31.58	cps
SS1 Aluminium	4725.47	cps
LS1 Aluminium	831.46	cps
LS4 Aluminium	942.52	cps
SS1 Magnesium	7752.53	cps
LS1 Magnesium	5150.12	cps
LS1 Al + Fe	714.49	cps
LS4 Al + Fe	420.27	cps

Results

SS Slope	1.75
LS Slope	0.45
PEF K Factor	3.433
PEF B Factor	-0.111

Compensated Neutron Calibration Report

Serial Number:	27
Tool Model:	PS
Source Number:	
Calibration Tank Temperature:	0.0 degF

BACKGROUND MEASUREMENT

SS Counts	LS Counts
0.0	0.0

WATER TANK REFERENCE Thu Oct 27 10:55:08 2011

SS Counts		LS Counts		
0.0	cps	0.0	cps	
Tank Ratio Ref		Tank Ratio		Tank Ratio Gain
30.9580	SS/LS	29.8823	SS/LS	1.0360

ALUMINUM SLEEVE REFERENCE

SS Counts		LS Counts	
0.0	cps	0.0	cps

Al Ratio Ref		Al Ratio		Al Ratio Gain
0.000	SS/LS	0.000	SS/LS	1.02

Sleeve Porosity	
0.00	pu

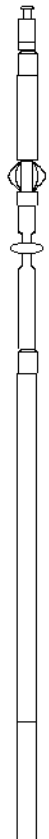
Gamma Ray Calibration Report

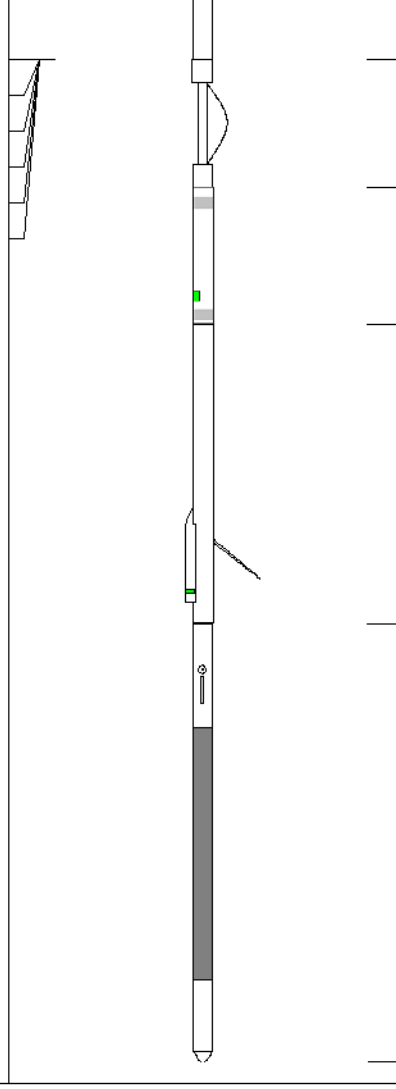
Serial Number:	E03	
Tool Model:	ENP	
Performed:	Wed Oct 26 15:53:00 2011	
Calibrator Value:	166.6	GAPI
Background Reading:	68.5	cps
Calibrator Reading:	484.2	cps
Sensitivity:	0.3750	GAPI/cps

Inclinometer Calibration Report

Performed: Sun Jun 13 14:33:21 1993

	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	0.00	1.00	0.00	1.00	gee
Y Accelerometer	0.00	1.00	0.00	1.00	gee
Z Accelerometer					

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
Thrubit	66.21		WPhead Weak Point Cable Head	1.58	2.13	5.15
Thrubit	64.63		10-1 Thrubit 10 to 1 Crossover	0.88	2.13	3.95
Thrubit	63.75		Small_Release Thrubit Small Release Tool	4.54	2.13	42.00
Thrubit	59.21		HangOff_Tool Thrubit Hang Off Tool	5.00	2.25	35.00
Thrubit	54.21		10-1 Thrubit 10 to 1 Crossover	0.88	2.13	3.95
TBBAT	53.33		TBBAT-A (1) Thrubit Battery	12.17	2.13	38.20
TMG	41.17		TMG-ENP (E03) ThruBit Telemetry Gamma Ray	6.15	2.13	45.00

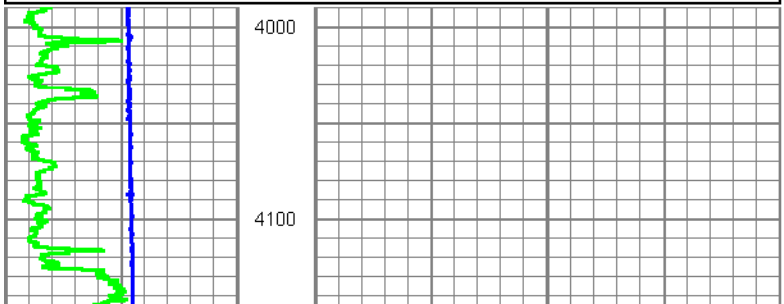
Thrubit	35.02		ThruBit Telemetry Gamma Ray			
ACCX	35.02					
ACCY	35.02		Decentralizer Thrubit Small Decentralizer	4.50	2.13	35.00
ACCZ	35.02					
GRHEADV	35.02		TBN-PS (27) ThruBit Neutron	4.76	2.13	63.00
DHTEN	35.02					
			TBD-PS (37) Thrubit Density	10.47	2.13	94.00
			TBI-PS (28) Thrubit Induction	15.29	2.13	94.00

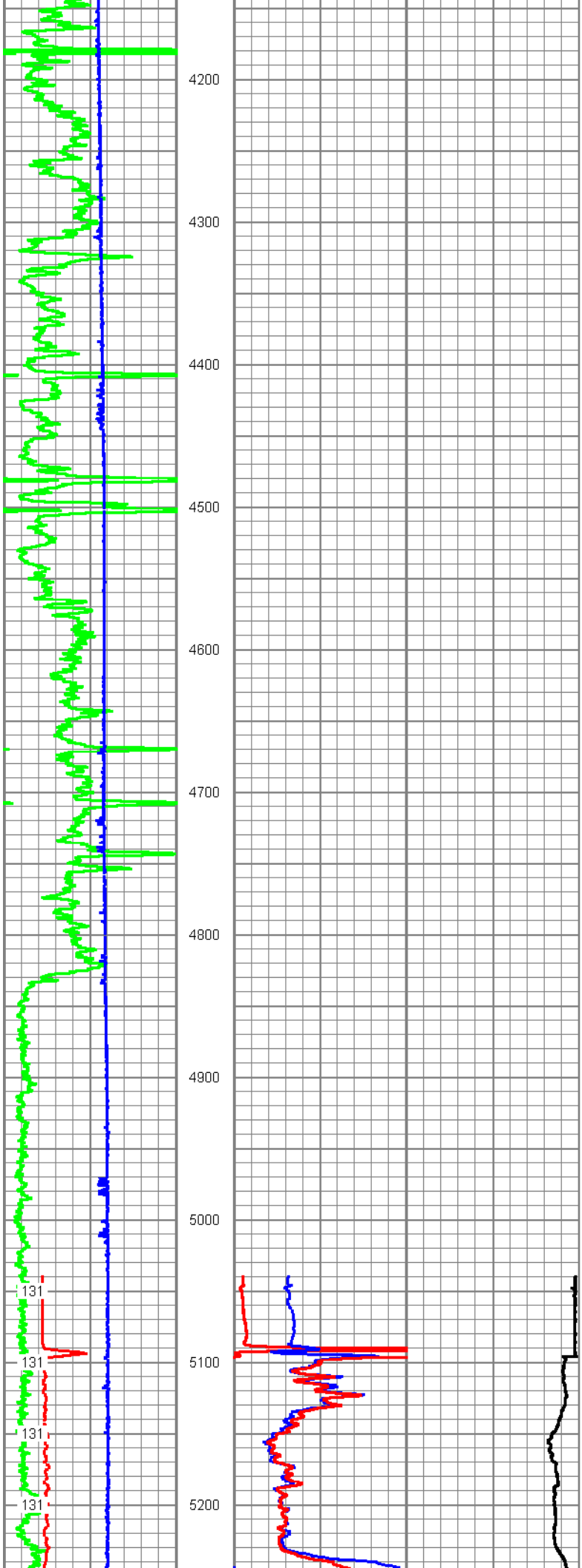
Dataset:	lake_mem.db: field/well/proc1/pass1.4
Total Length:	66.21 ft
Total Weight:	459.25 lb
O.D.	2.25 in

MAIN PASS

Database File:	lake_mem.db
Dataset Pathname:	proc1/pass1.4
Presentation Format:	6_1r_chk
Dataset Creation:	Tue Nov 01 19:56:55 2011
Charted by:	Depth in Feet scaled 1:1200

0 GR (GAPI) 150	20in 2ft Res 50 (Ohm-m) 500	
4 DCAL (in) 14		
-5 ACCY 5	90in 2ft Res 50 (Ohm-m) 500	
GRTEMP (degF)	1000 DEEP COND (Ohm-m) 0	
	20in 2ft Res 0 (Ohm-m) 50	
	90in 2ft Res 0 (Ohm-m) 50	

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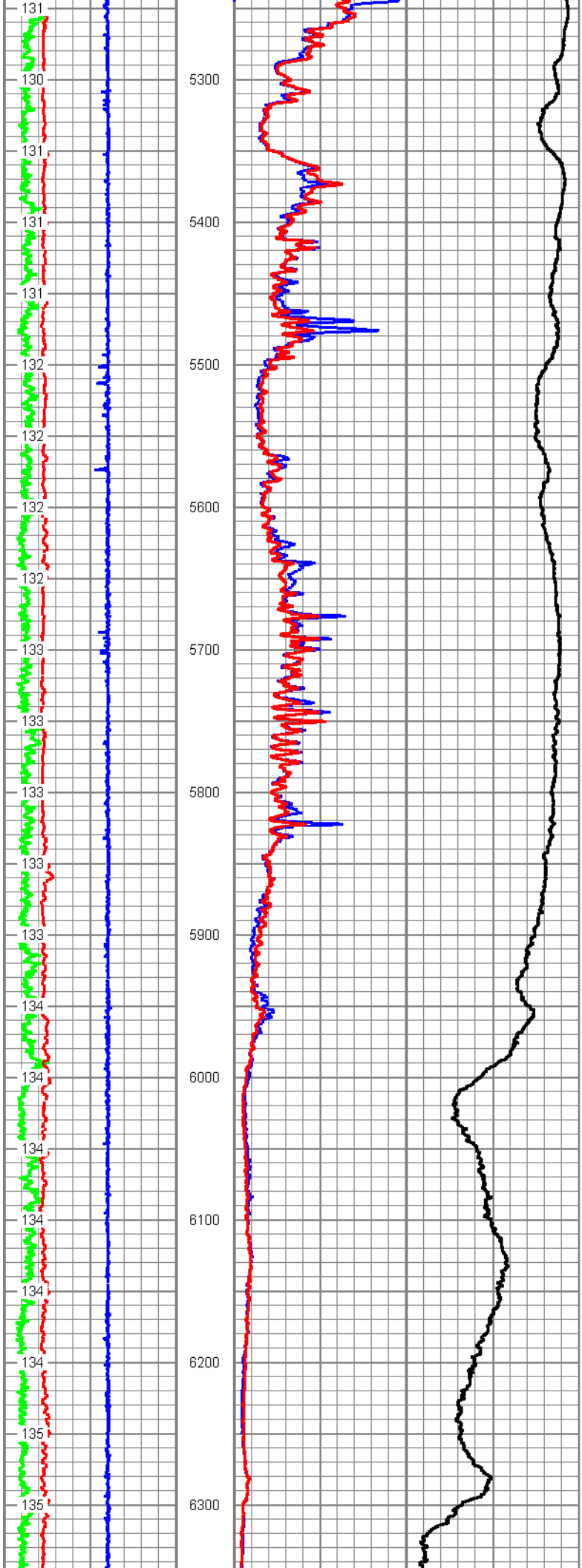
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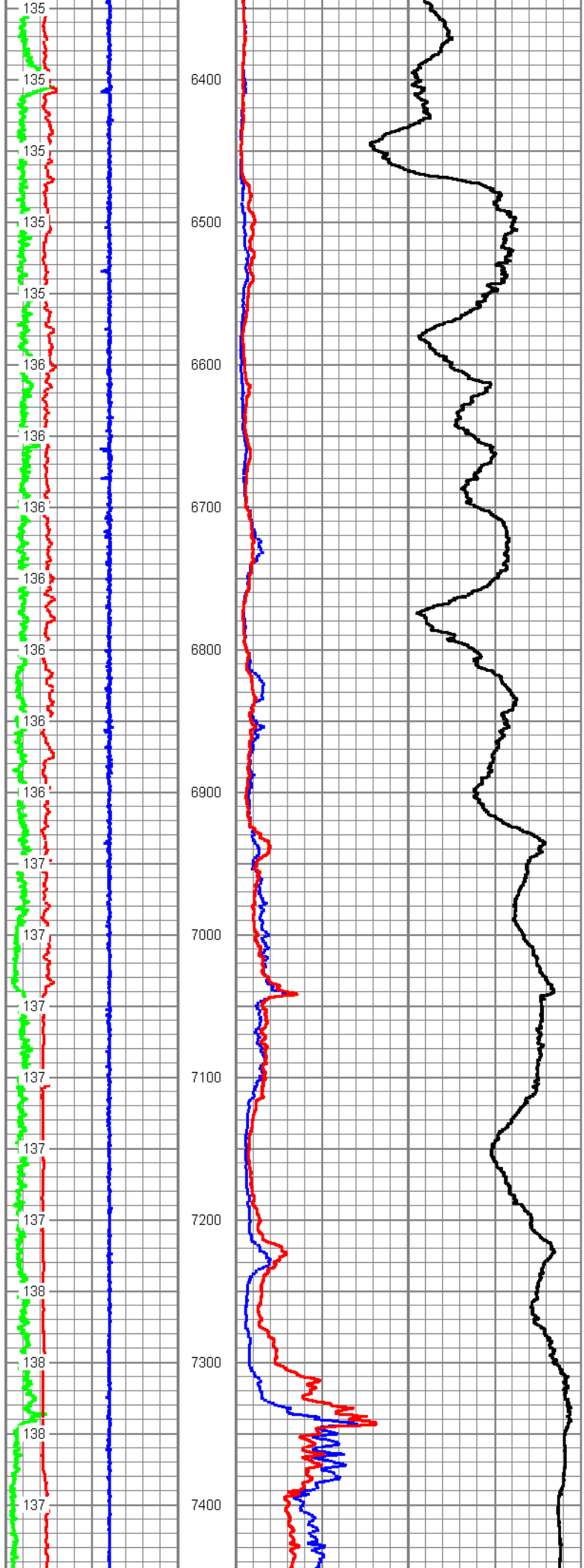
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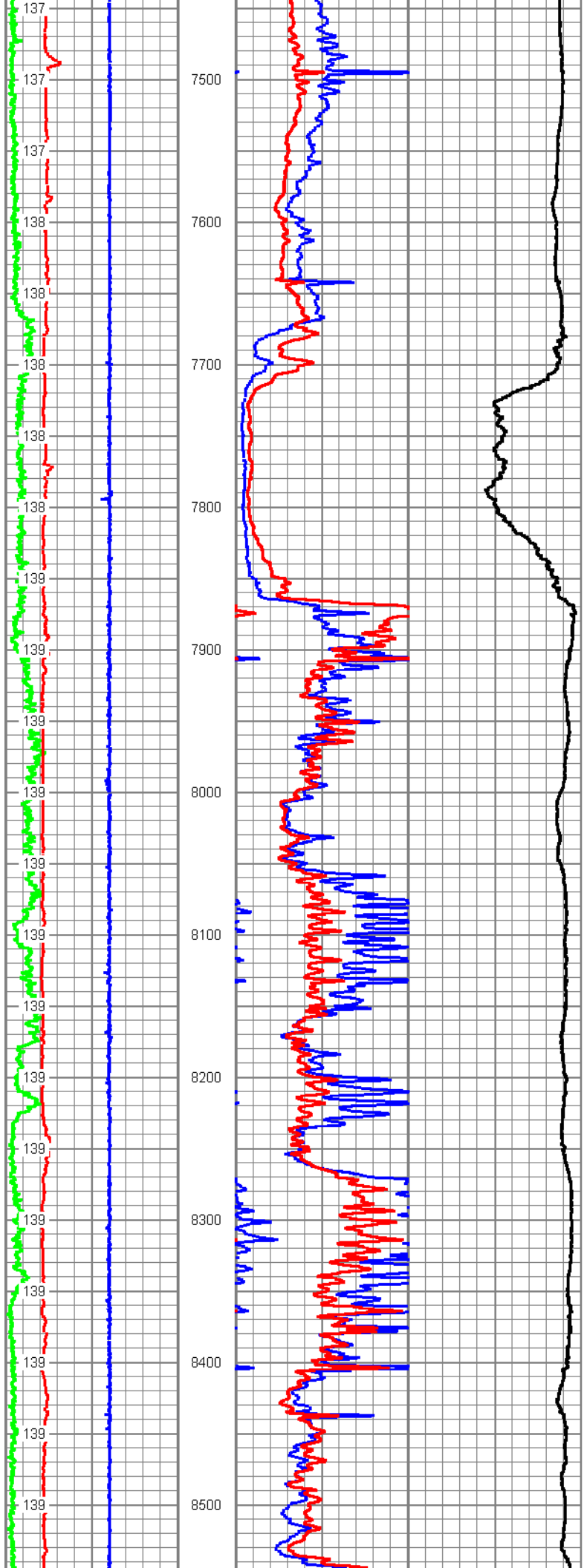
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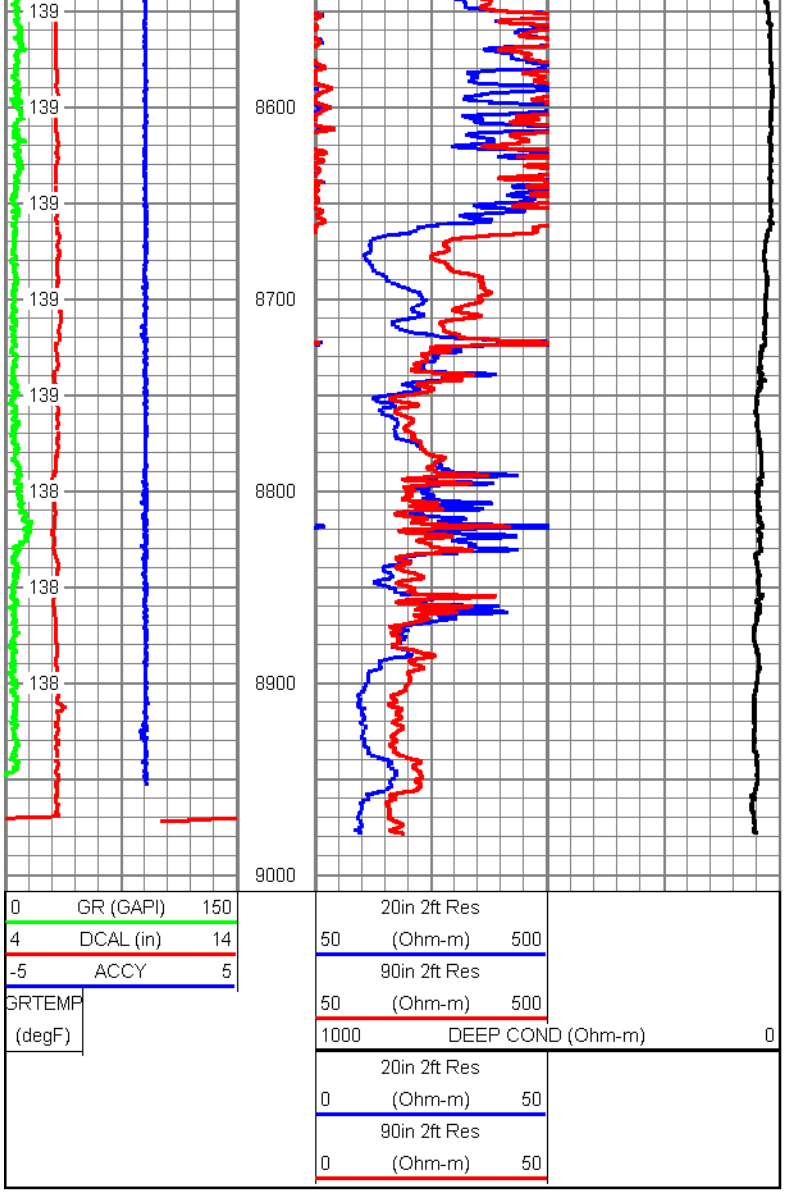


ThruBit LOGGING SOLUTIONS

Company	SANDRIDGE ENERGY
Well	LAKE 1-21H
Field	WALDRON WEST - MISSISSIPPI LIME
County	HARPER
State	KANSAS

ThruBit
LOGGING SOLUTIONS

SPECTRAL DENSITY DUAL SPACED NEUTRON GAMMA RAY MEMORY LOG

Company SANDRIDGE ENERGY
Well LAKE 1-21H
Field WALDRON WEST - MISSISSIPPI LIME
County HARPER
State KANSAS

Company SANDRIDGE ENERGY
Well LAKE 1-21H
Field WALDRON WEST - MISSISSIPPI LIME
County HARPER State KANSAS

Location: API # : 15077217470100
SURF LOC: 200' FSL & 1980' FWL OF SW/4
SEC 21 TWP 34S RGE 6W

Permanent Datum GROUND LEVEL Elevation 1301'
Log Measured From D.F. 22' ABOVE PERM DATUM
Drilling Measured From D.F.

Other Services
THRUBIT
PORTAL BIT

Elevation
K.B. 1323'
D.F. 1323'
G.L. 1301'

Date	01 NOVEMBER 2011		
Run Number	ONE		
Depth Driller	9041'		
Depth Logger	8990'		
Bottom Logged Interval	8970'		
Top Log Interval	4000'		
Casing Driller	7" @ 5094'		
Casing Logger	7" @ 5093'		
Bit Size	6.125"		
Type Fluid in Hole	FRESH WATER		
Density / Viscosity	8.40 / 30		
pH / Fluid Loss	10 / NA		
Source of Sample	MUD PIT		
Rm @ Meas. Temp	1.0 OHMS@73 DEGF		
Rmf @ Meas. Temp	0.75 OHMS@73 DEGF		
Rmc @ Meas. Temp	1.25 OHMS@73 DEGF		
Source of Rmf / Rmc	CALCULATED		
Rm @ BHT	.55 OHMS@ 139 DEGF		
Time Circulation Stopped	11:00 01NOV2011		
Time Logger on Bottom	12:10 01NOV2011		
Maximum Recorded Temperature	139 DEGF		
Equipment Number	T004		
Location	OKC, OK		
Recorded By	D. THOMAS		
Witnessed By	BENJAMIN SIMMONS		

<<< Fold Here >>>

Comments

SERVICE: LEVEL 4 - MEMORY PUMP DOWN - BIT DEPTH: 8872' LOG TO: 4000'
ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST
LIMESTONE MATRIX, 2.71 G/CC, USED FOR POROSITY MEASUREMENTS
TOOL STRING RAN WITH EVANS SWIVEL, S. DECENTRALIZER, AND NO STANDOFFS
ABHV REPRESENTS TOTAL BOREHOLE VOLUME, FT3
ABHV REPRESENTS ANNULAR BOREHOLE VOLUME, FT3, MEASURED FOR 4.50" CSG
RIG MINDER LITE USED WITH MDTOTCO RIGSENSE TO CREATE LOG DEPTH
LOG DEPTH CORRELATED TO MWD GAMMA RAY AT CLIENTS REQUEST

RIG: KEEN #8
CREW: D. THOMAS/K. REED/T. DENNIS

Service Ticket No.	807	API No.	15077217470100	PGM Ver	WARRIOR 7.0

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA

GAMMA RAY	NEUTRON	DENSITY	INDUCTION

Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	ENP3T	Serial No.	PS27N	Serial No.	PS37D	Serial No.	PS28R
Model No.	ENP	Model No.	PS	Model No.	PS	Model No.	PS
Diameter	2.125"	Diameter	2.125"	Diameter	2.125"	Diameter	2.125"

LOGGING DATA

General Data

Pass	Depths		Well Head	Speed	Logging Run Comments
No.	From	To	Pressure	Ft/Min	
ONE	8990'	4000'		30	

	GAMMA RAY		NEUTRON		DENSITY		INDUCTION	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0 API	150 API	30 %	-10 %	30 %	-10 %	0.2 OHM-M	2000 OHM-M

DIRECTIONAL INFORMATION

Maximum Deviation	93.4	deg. @	7059'	KOP	3690'	

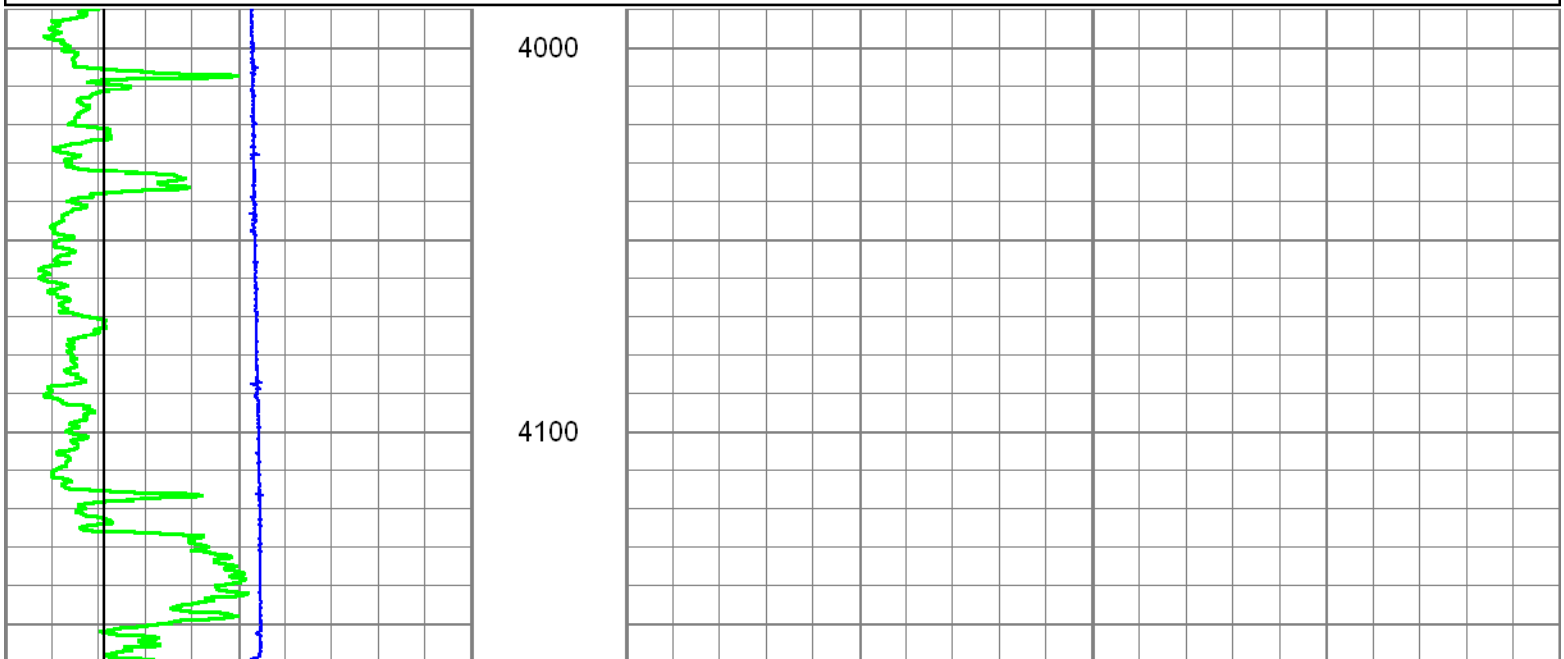
ThruBit LOGGING SOLUTIONS

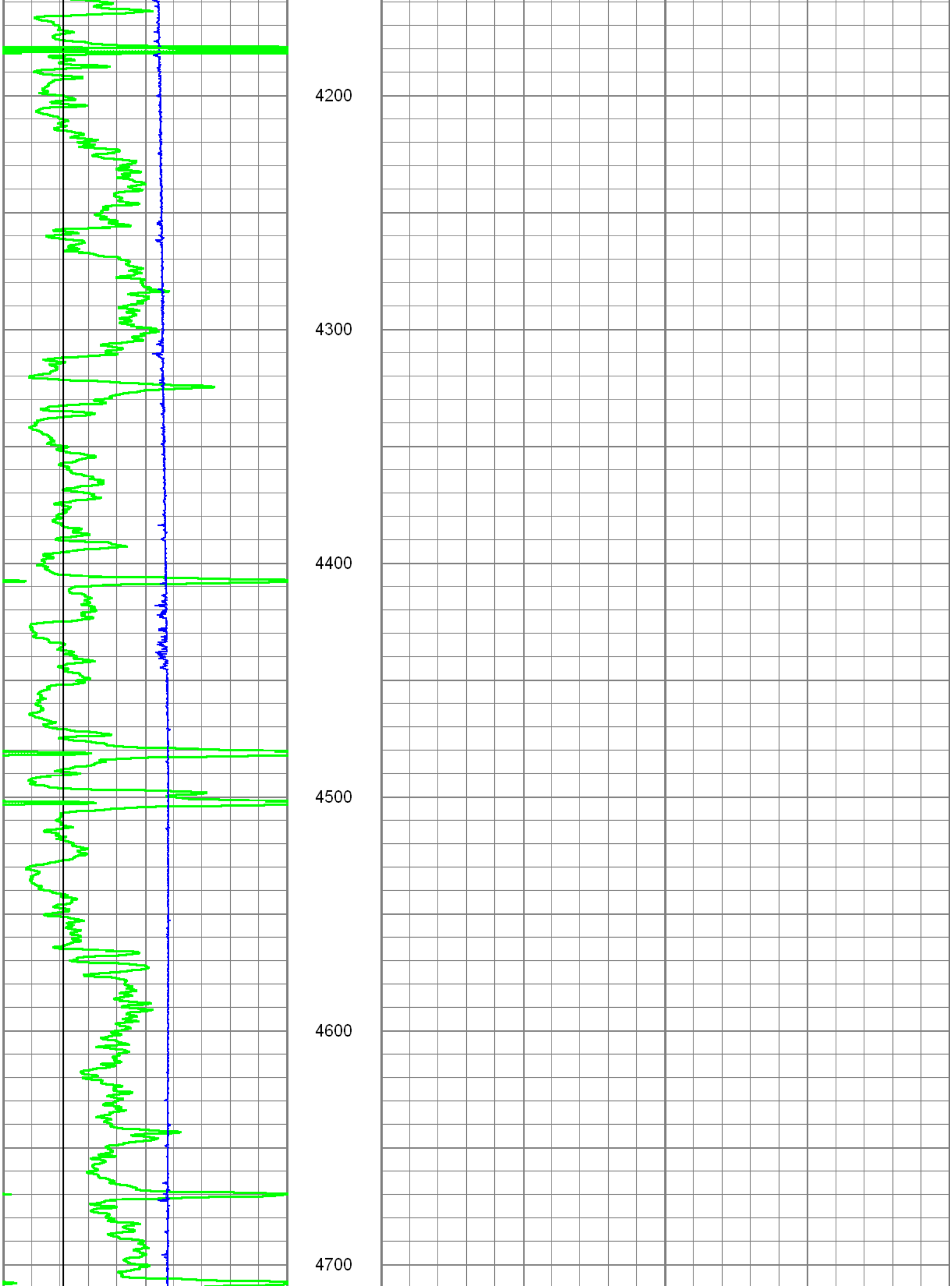
MAIN PASS

Database File: lake_mem.db
Dataset Pathname: proc1/pass1.4
Presentation Format: 6_2n_chk
Dataset Creation: Tue Nov 01 19:56:55 2011
Charted by: Depth in Feet scaled 1:600

0	GR (GAPI)	150
4	DCAL (in)	14
4	BOREID (in)	14
-5	ACCY	5

0	PEF (barn)	10	-0.5 DRHO (g/cc)	0.5
2	RHOB (g/cc)	3		

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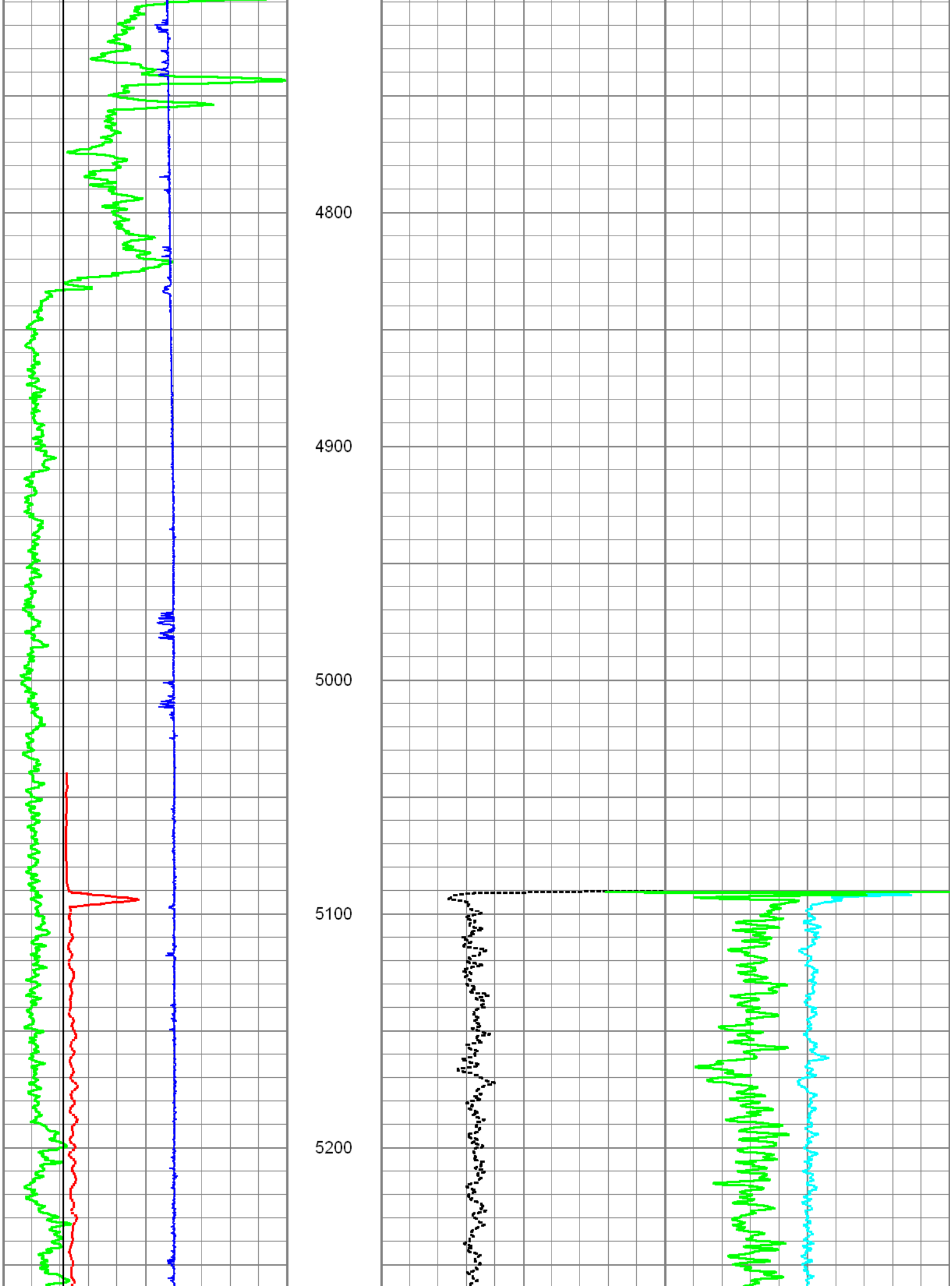
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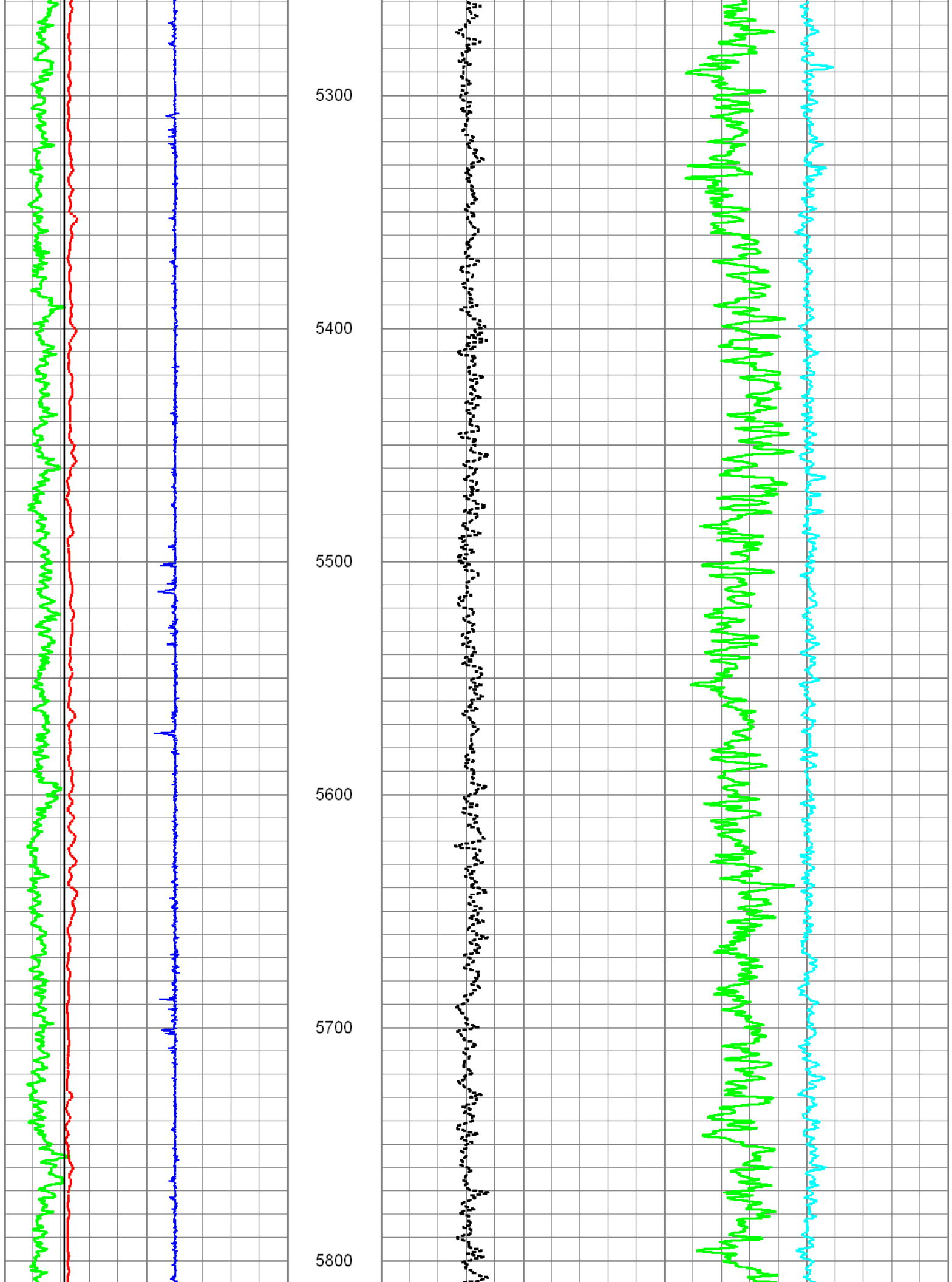
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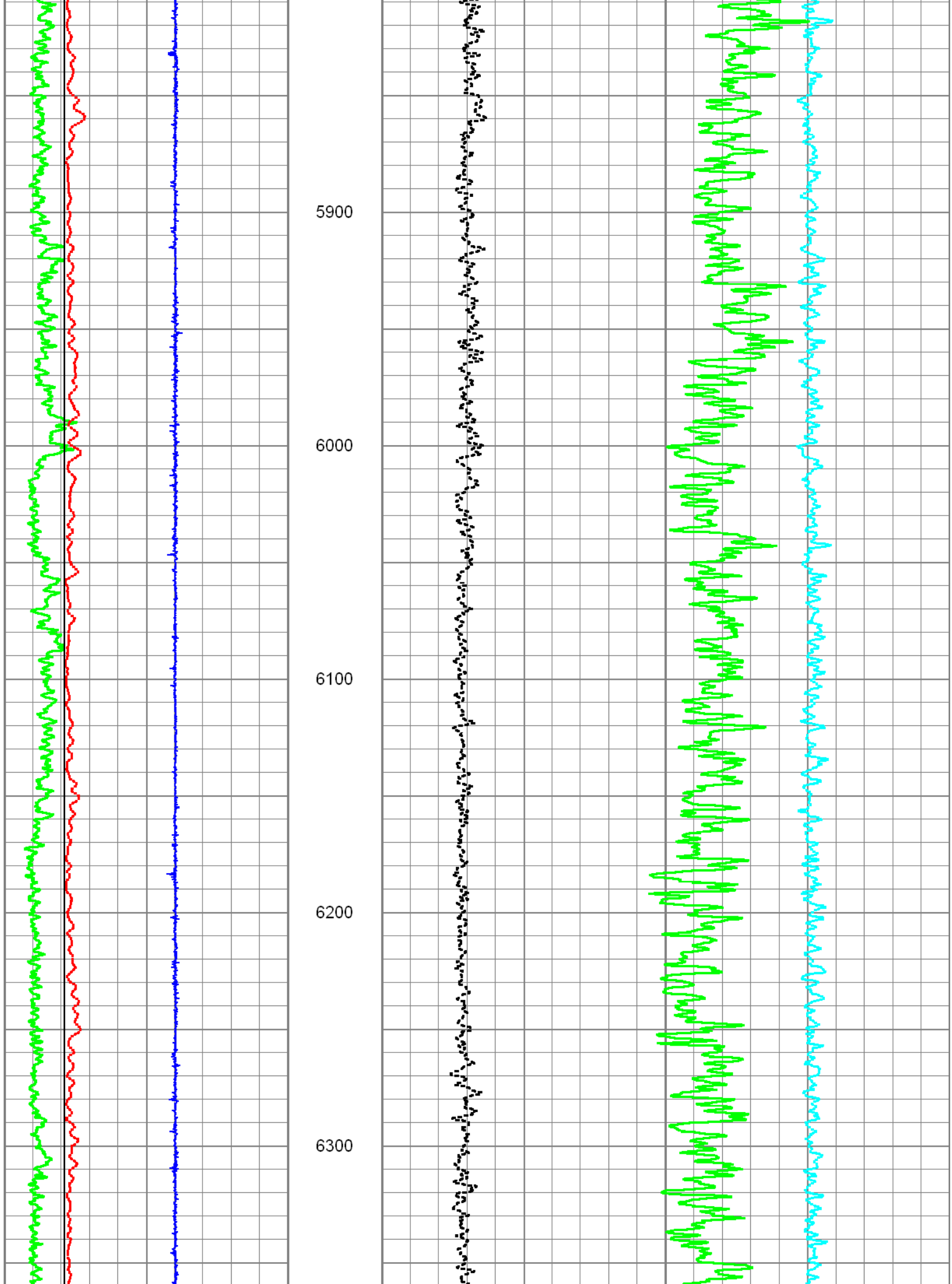
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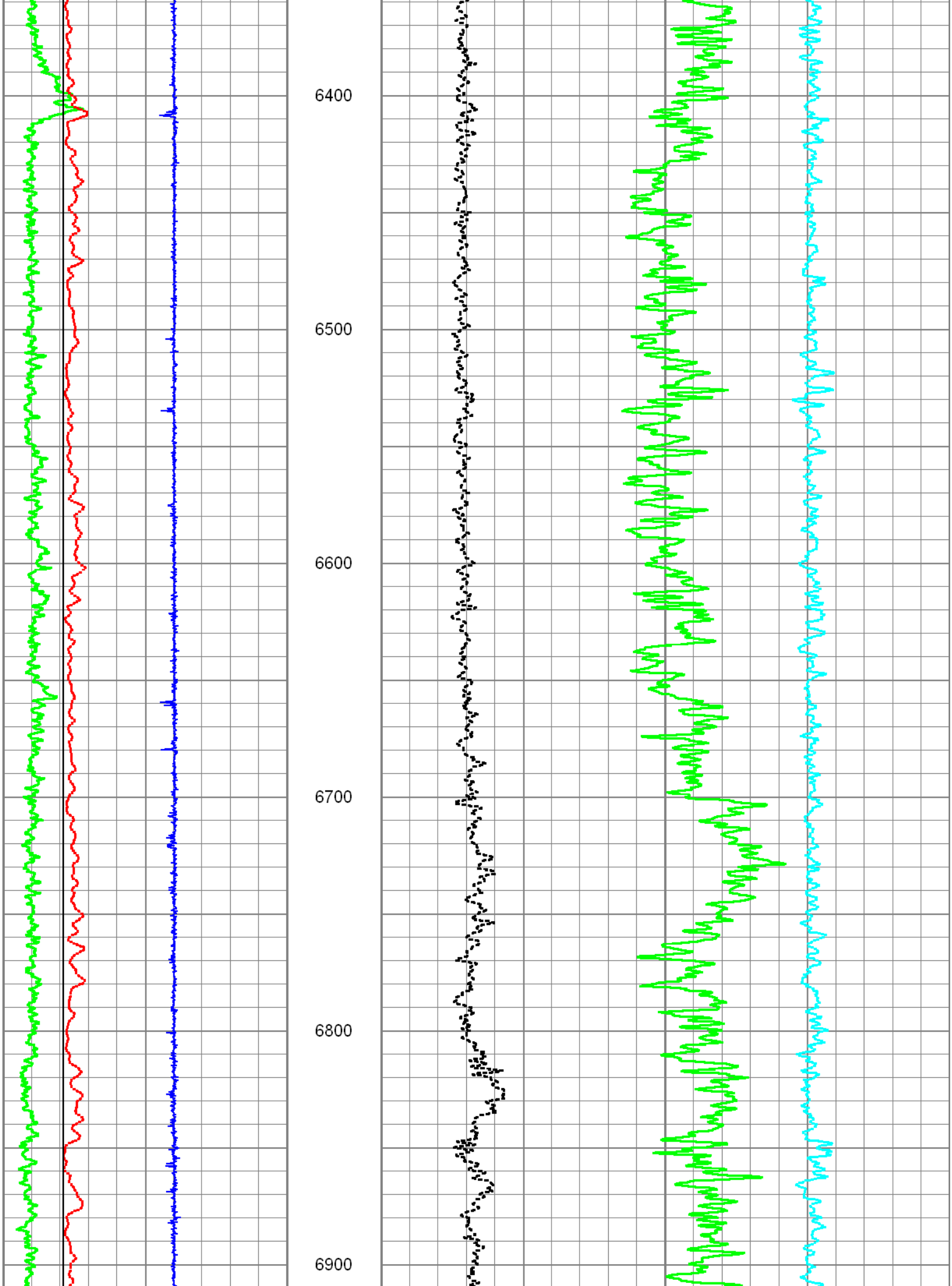
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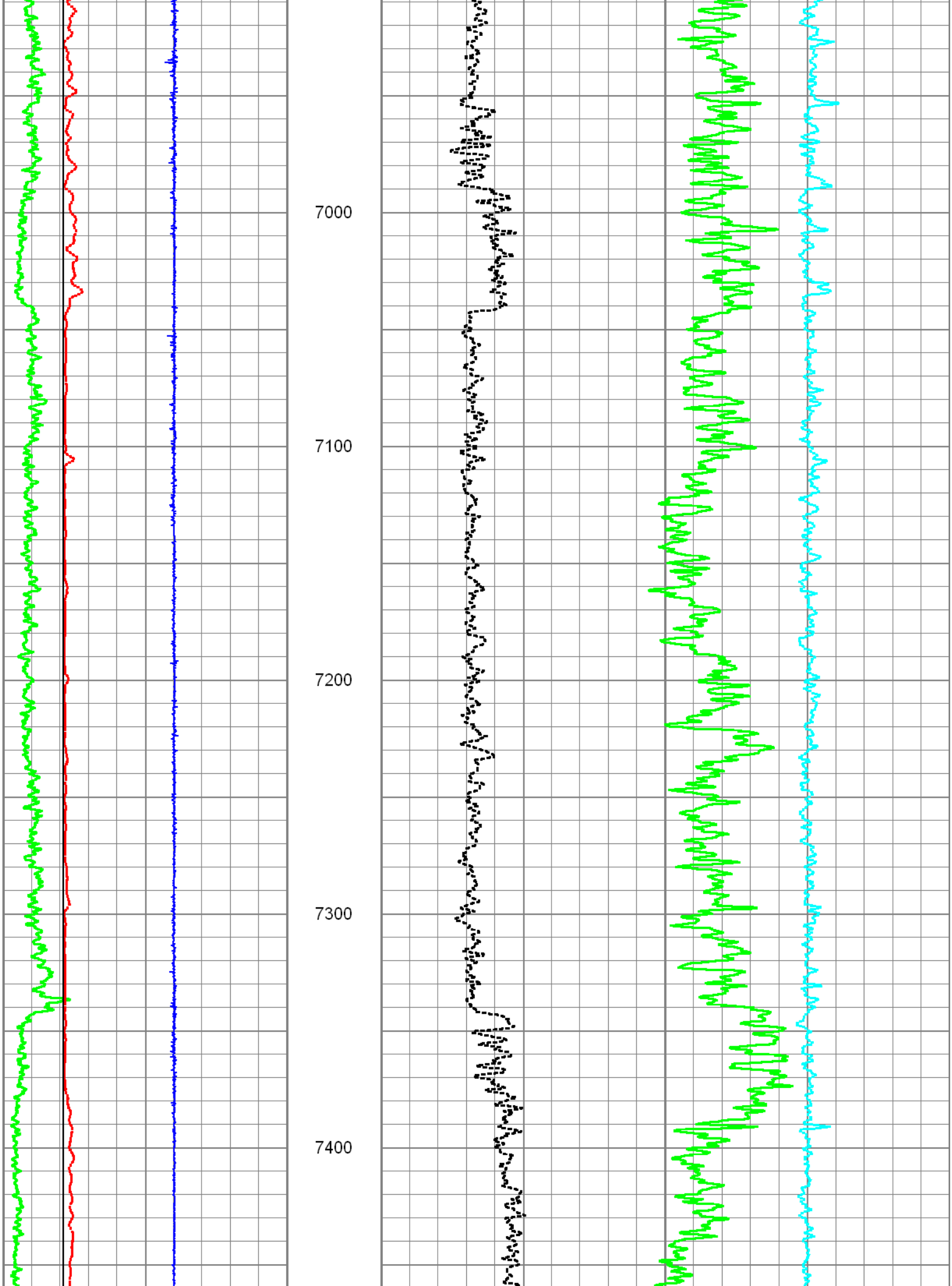
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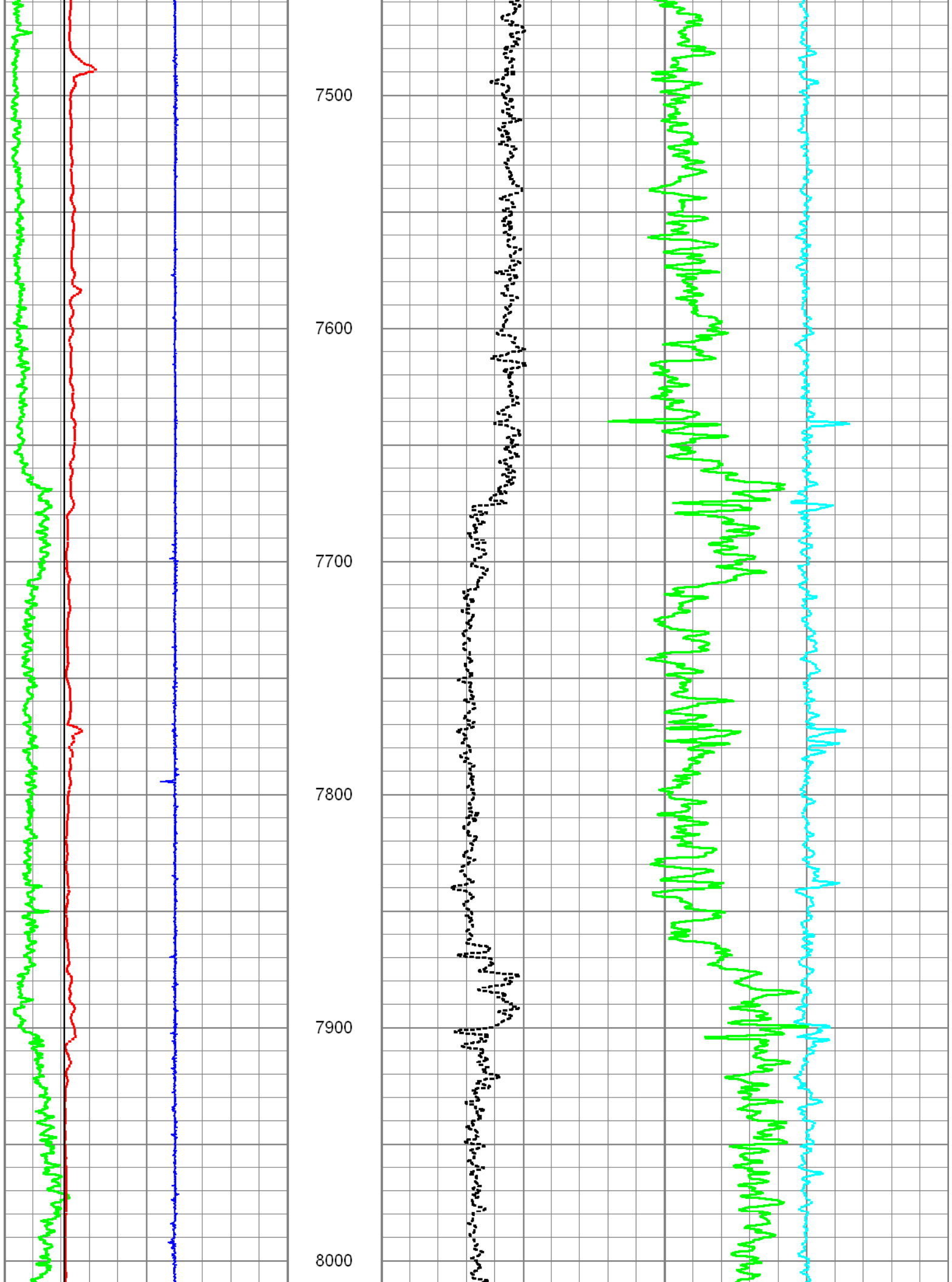
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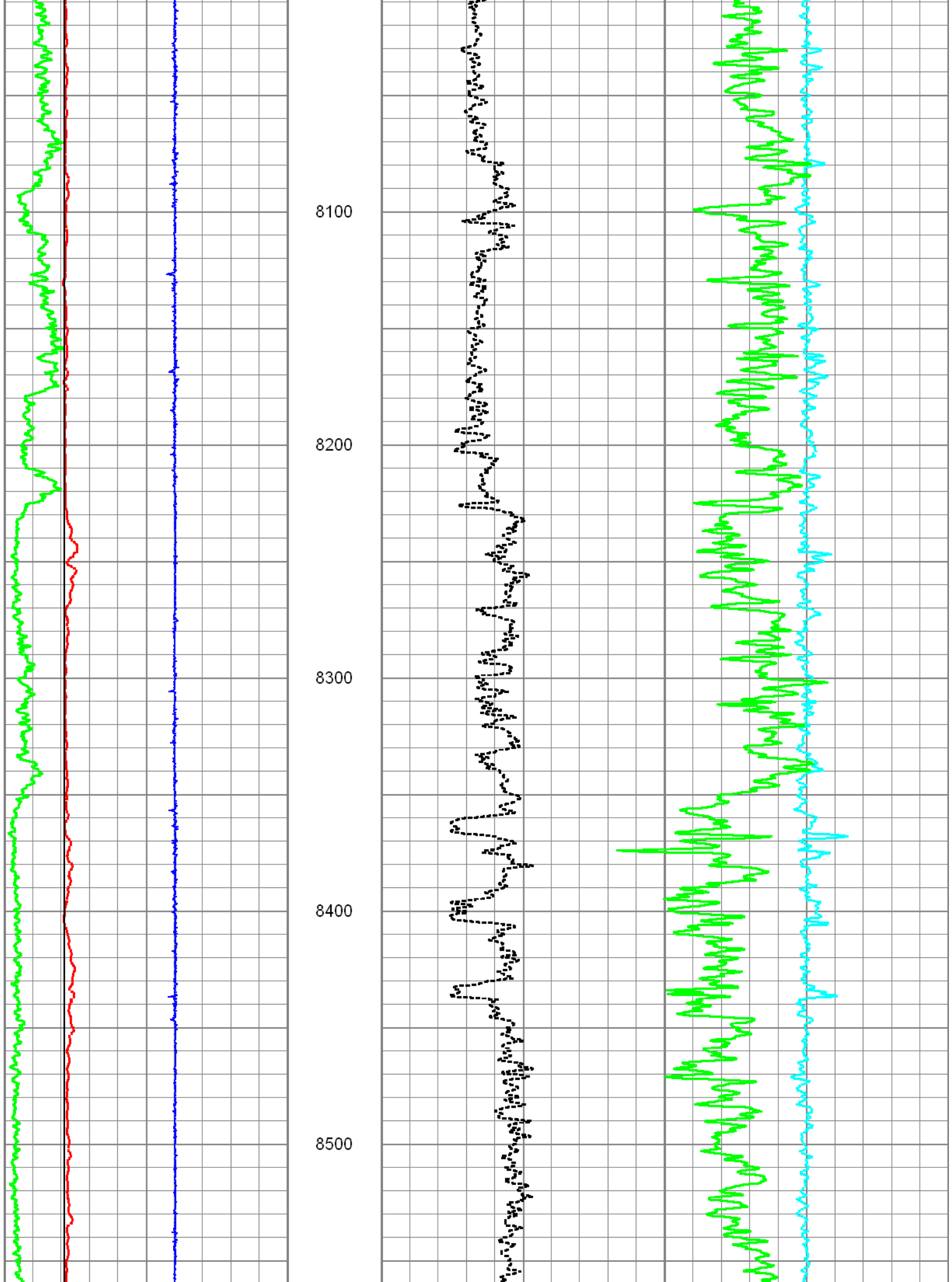
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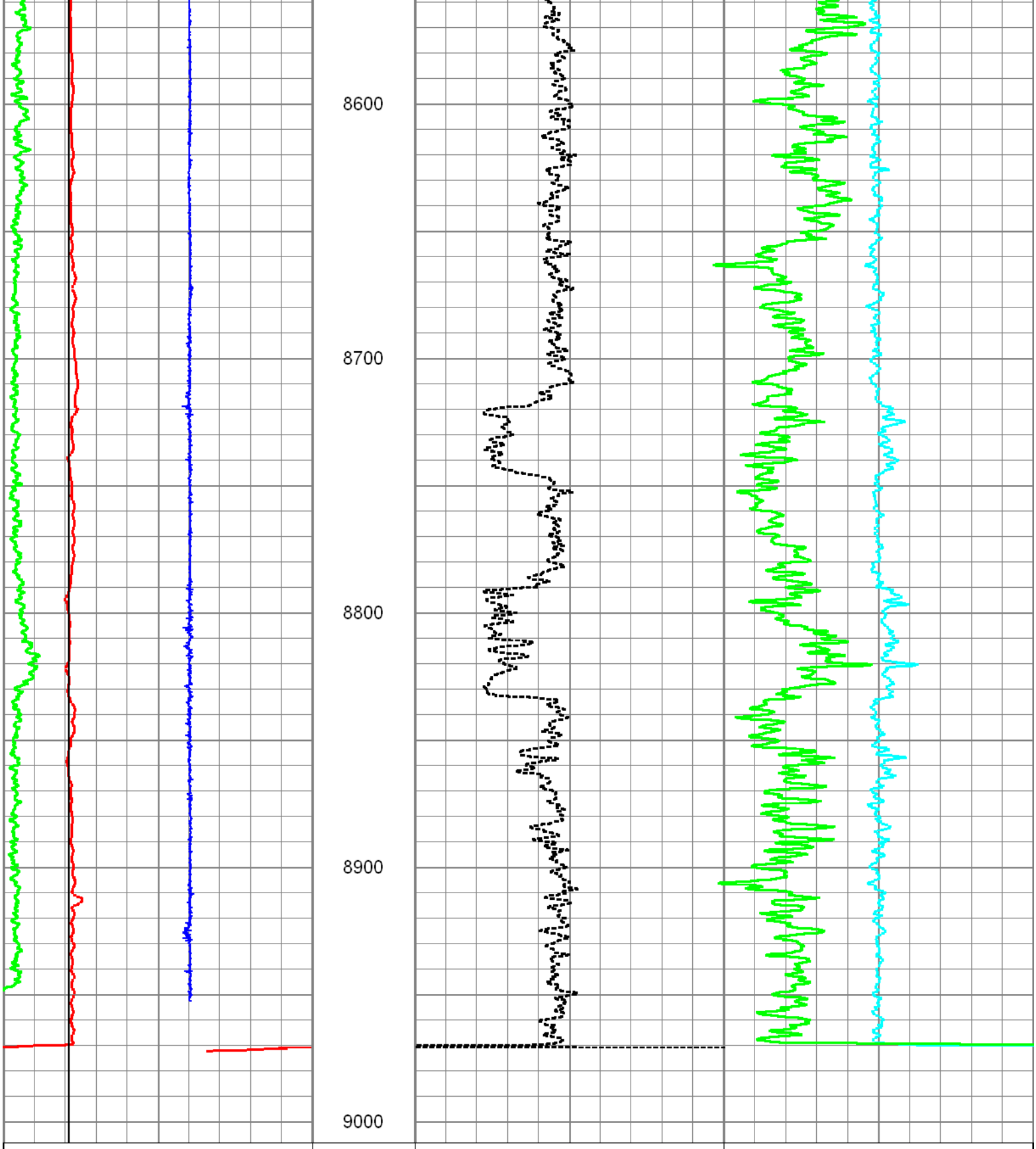
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0 GR (GAPI) 150
4 DCAL (in) 14
4 BOREID (in) 14
-5 ACCY 5
0 PEF (barn) 10
2 RHOB (g/cc) 3
-0.5 DRHO (g/cc) 0.5

MAIN PASS

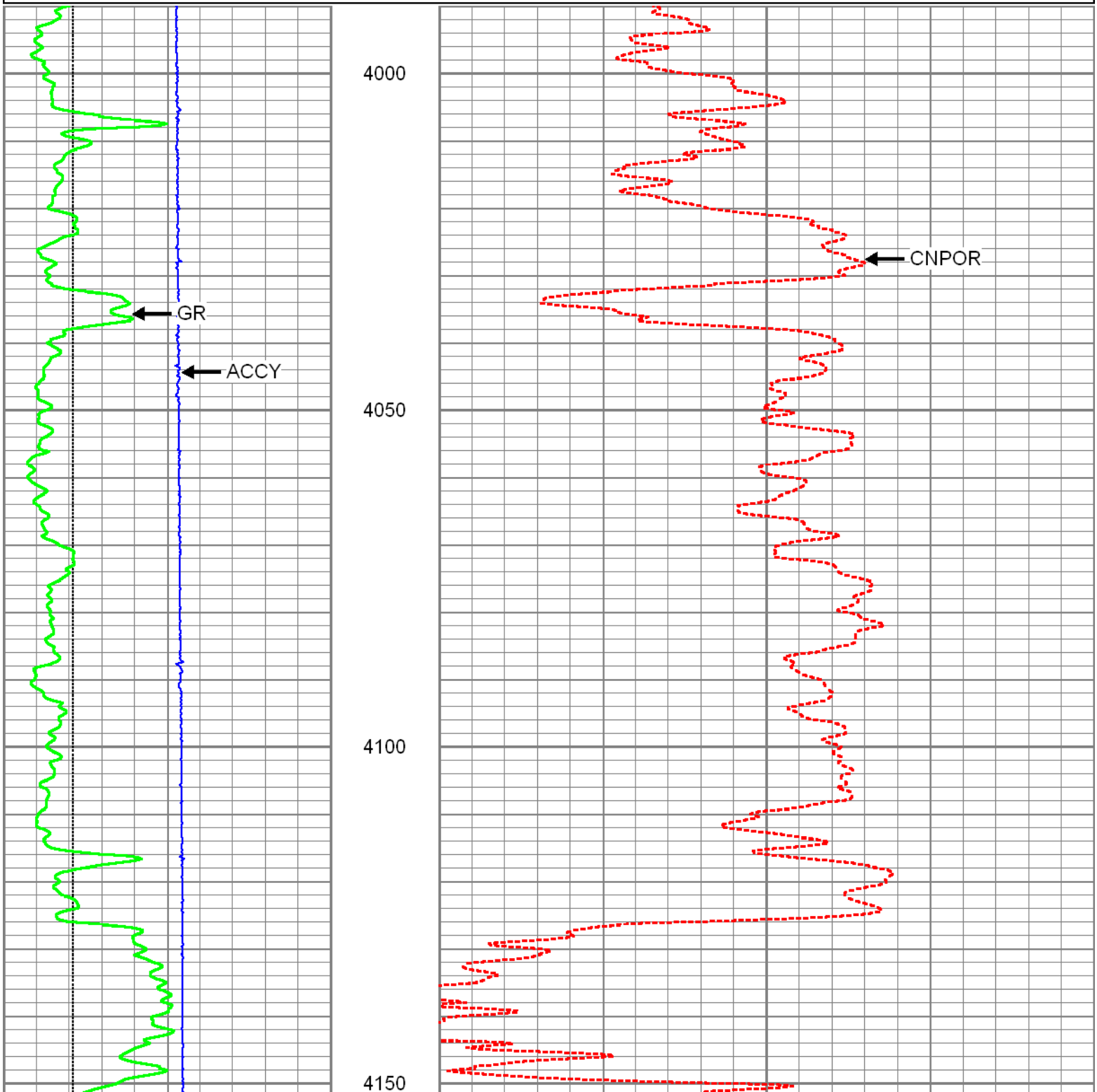
ThruBit
LOGGING SOLUTIONS

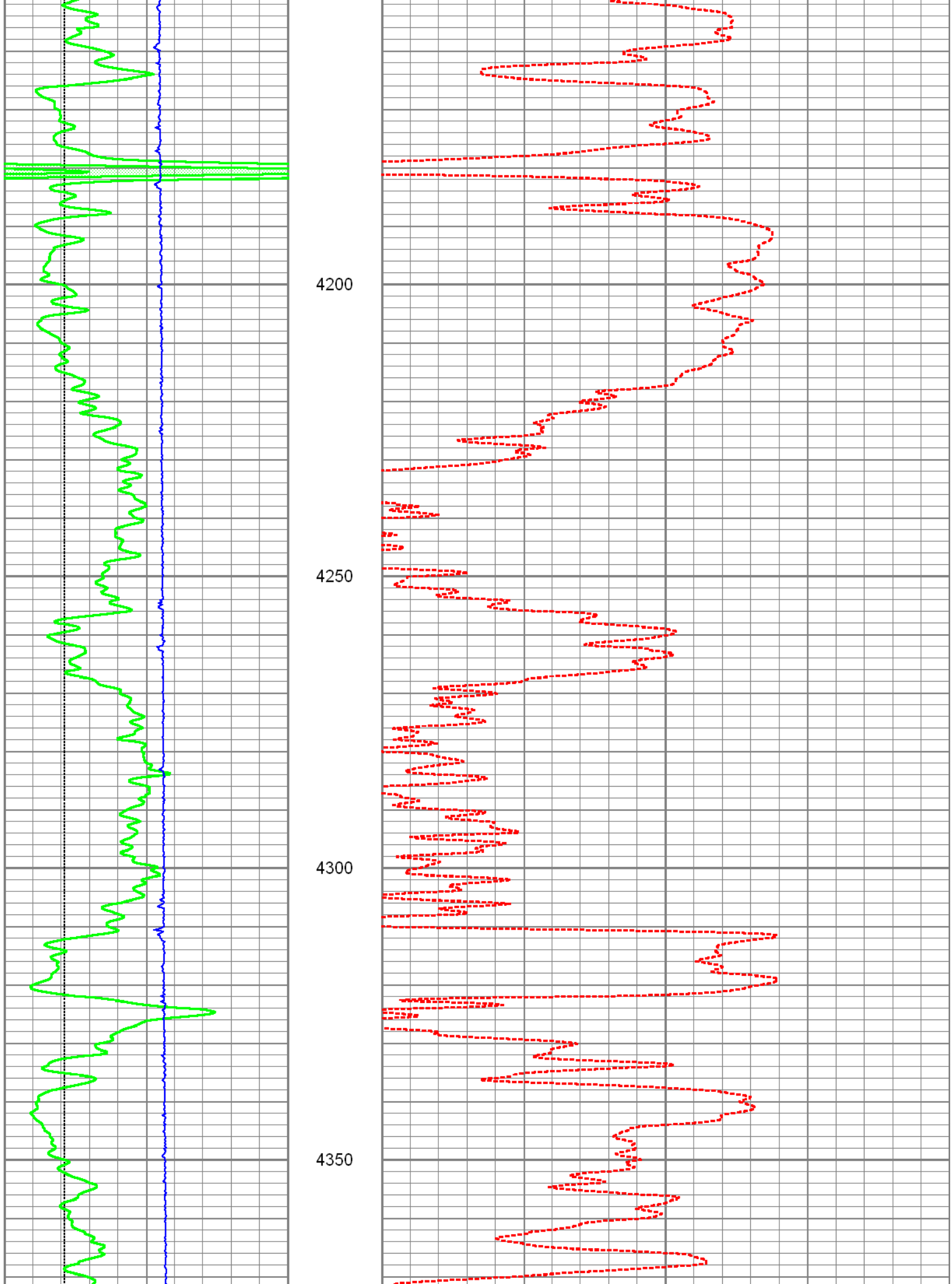
MAIN PASS

Database File:	lake_mem.db
Dataset Pathname:	proc1/pass1.4
Presentation Format:	6_5n_chk
Dataset Creation:	Tue Nov 01 19:56:55 2011
Charted by:	Depth in Feet scaled 1:240

4	DCAL (in)	14
4	BOREID (in)	14
0	GR (GAPI)	150
-5	ACCY	5
	TBHV (ft3)	

30	CNPOR (pu)			-10
30	DPHI (pu)			-10
0	PEF (barn)	10	-0.5 DRHO (g/cc)	0.5
	ABHV (ft3)			

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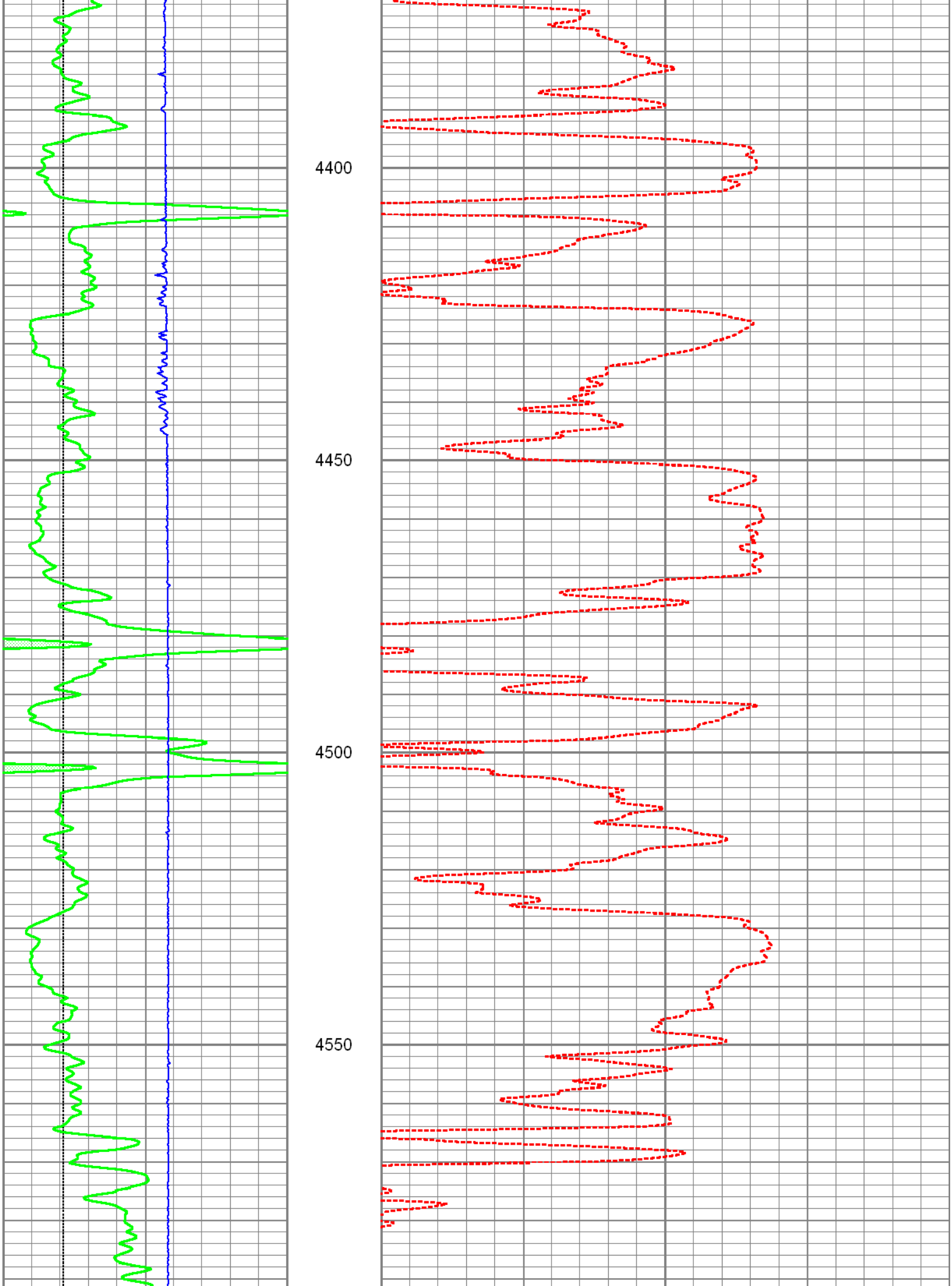
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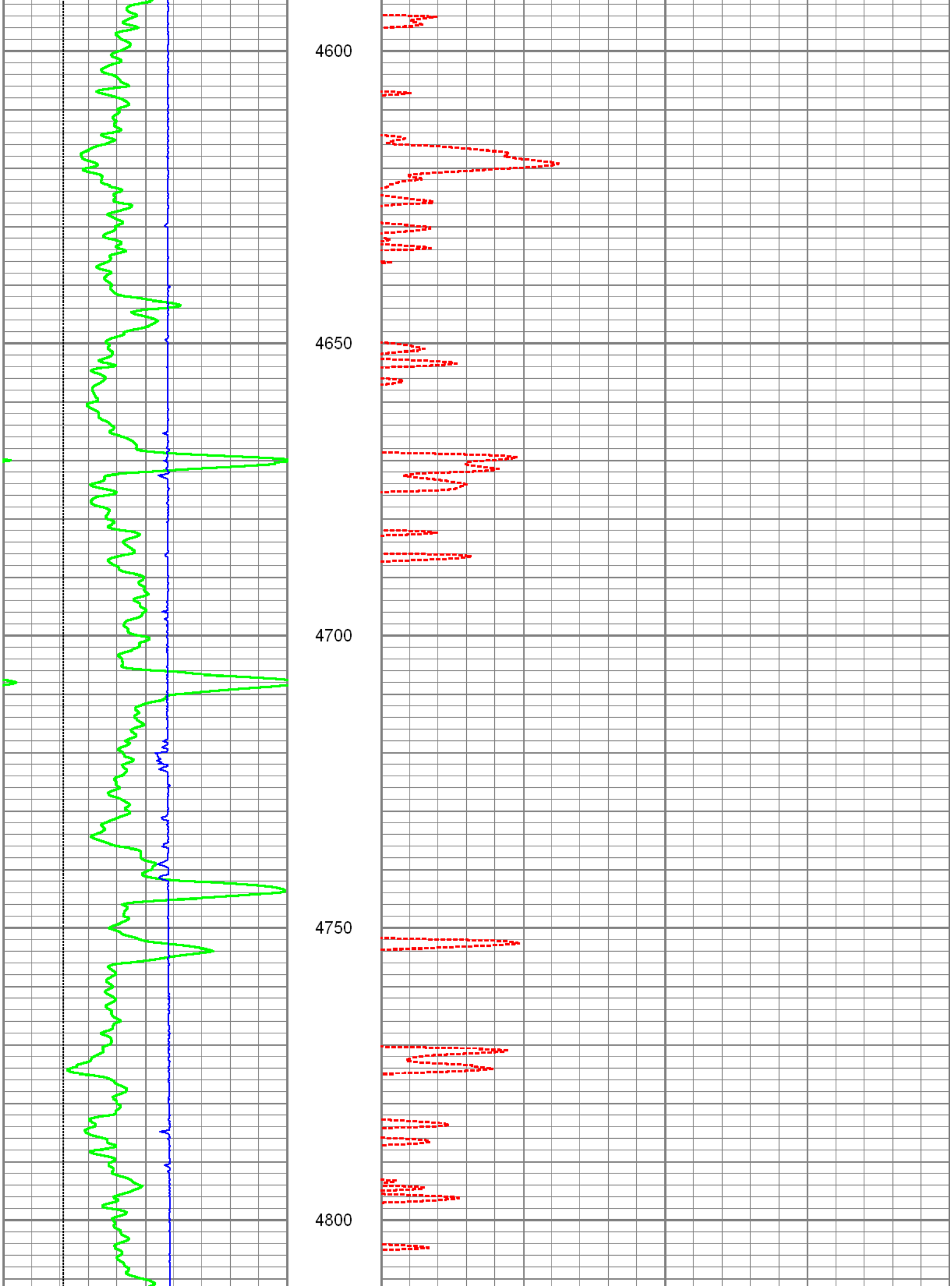
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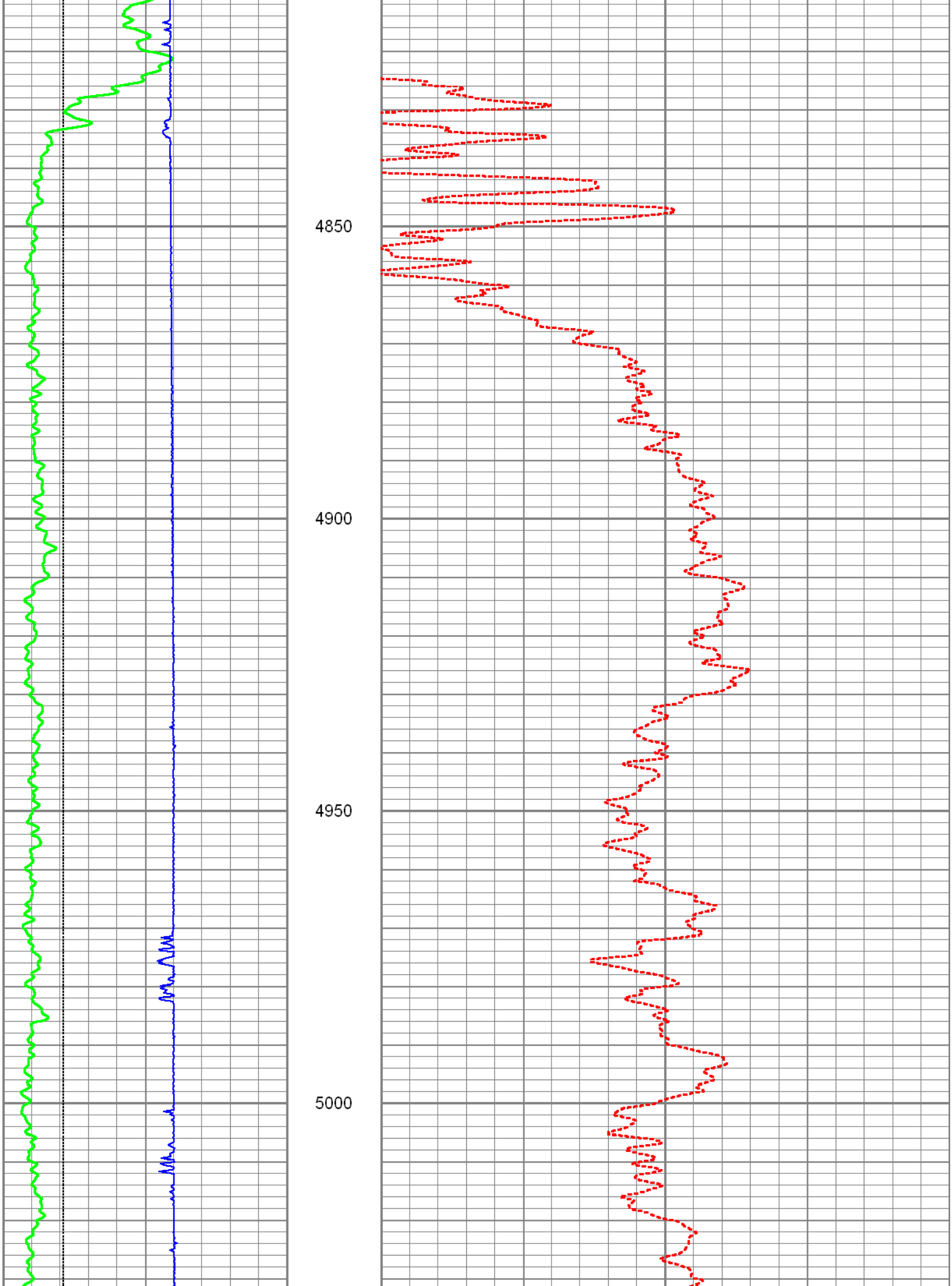
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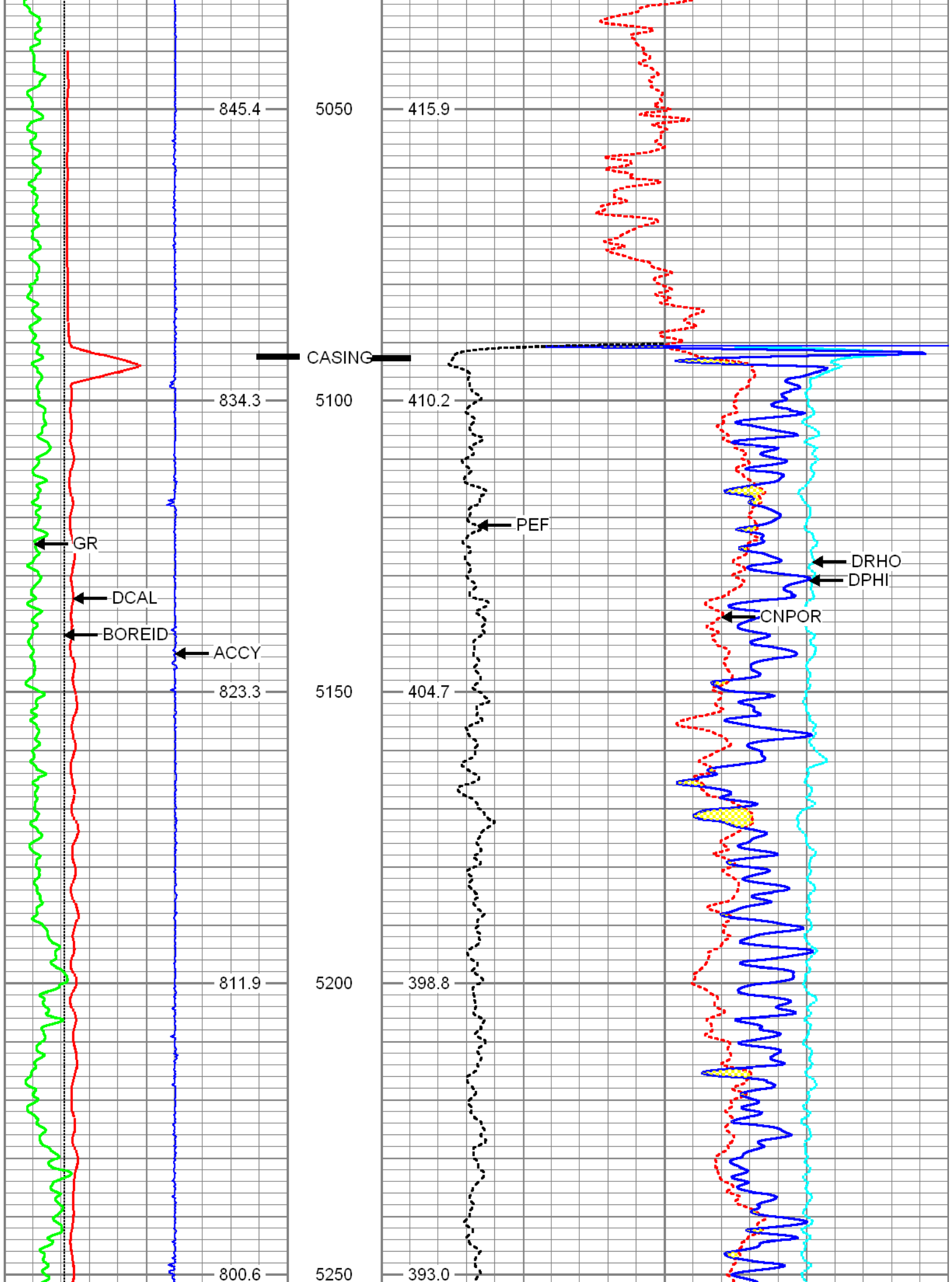
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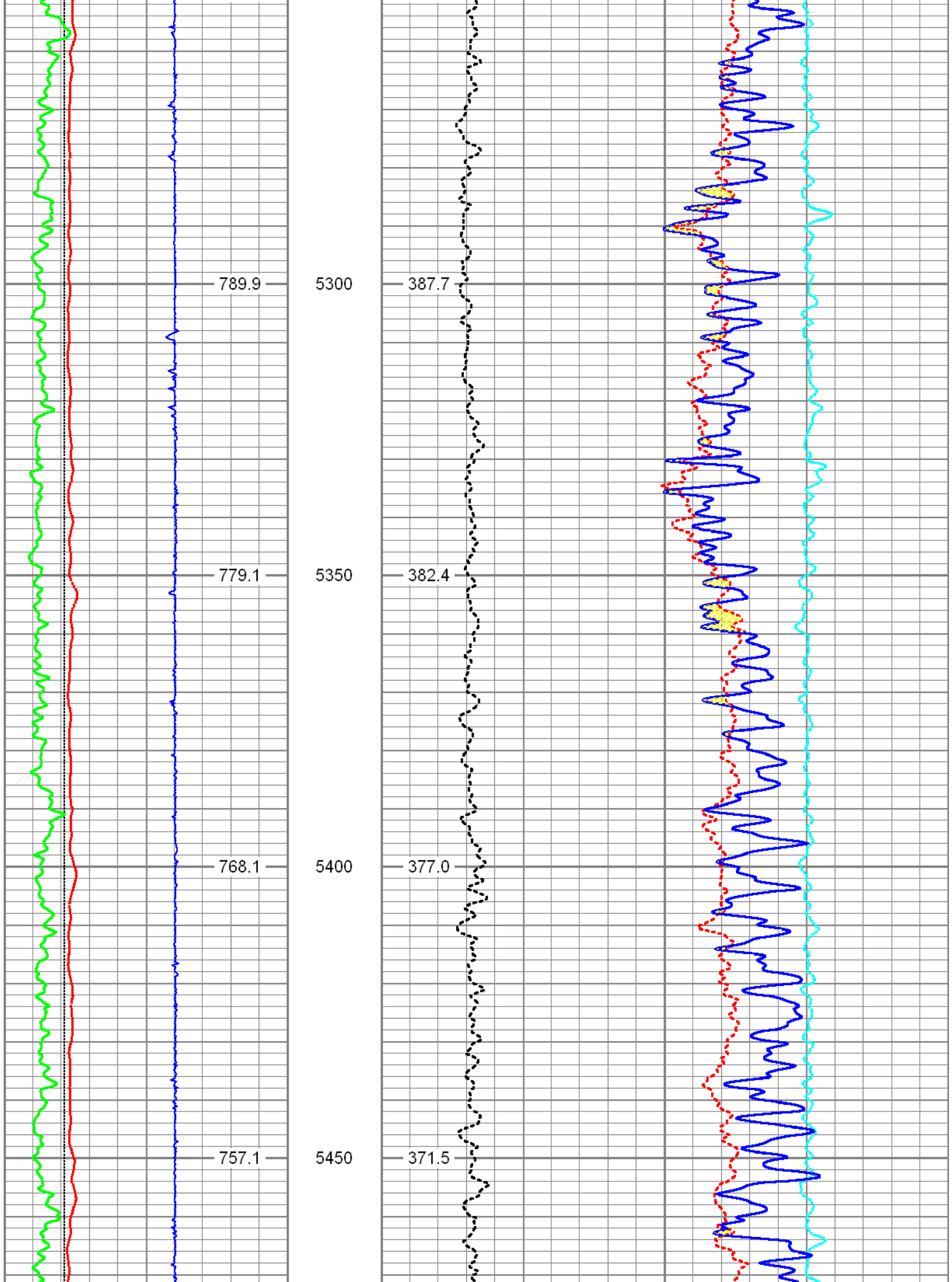
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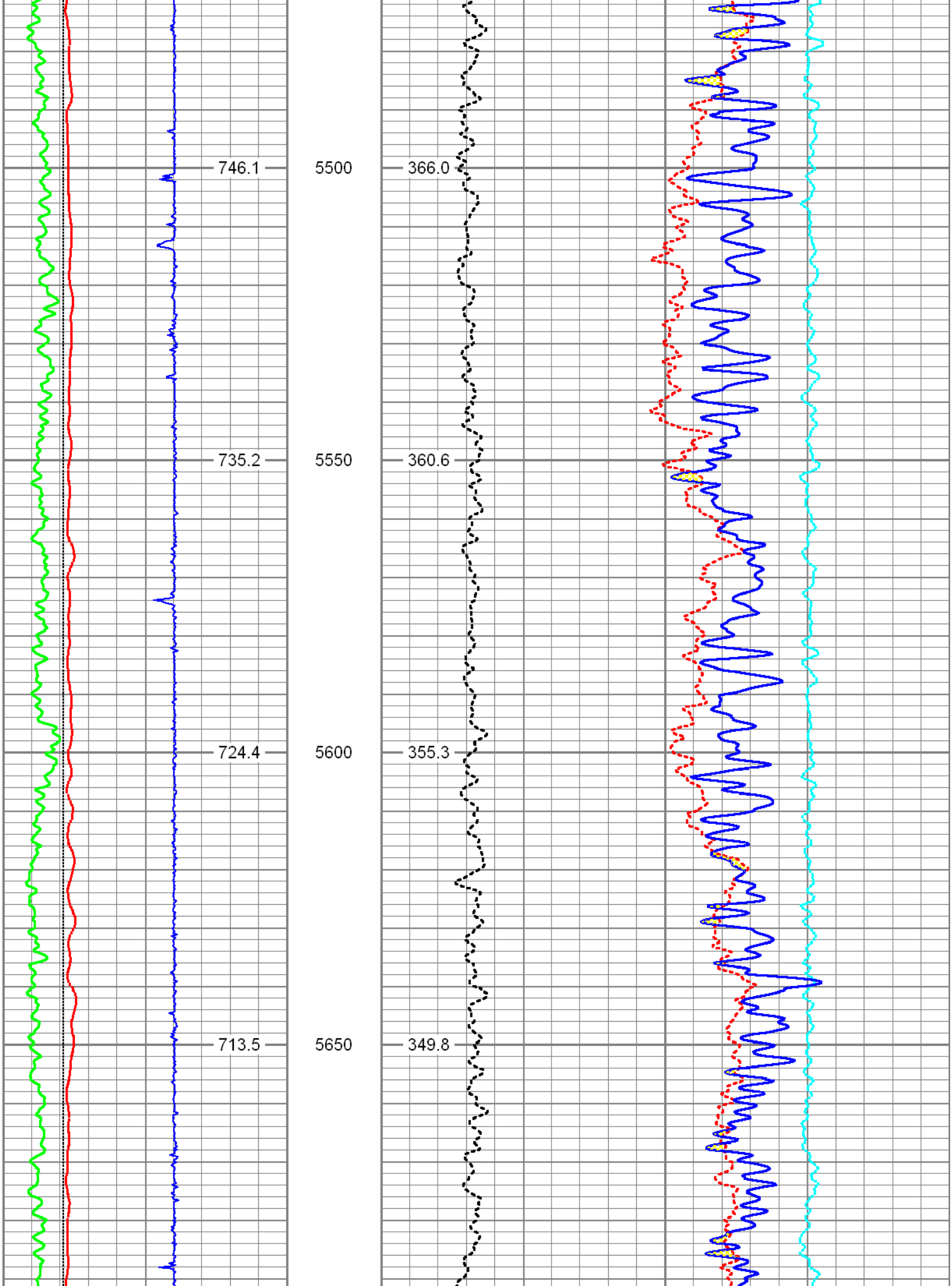
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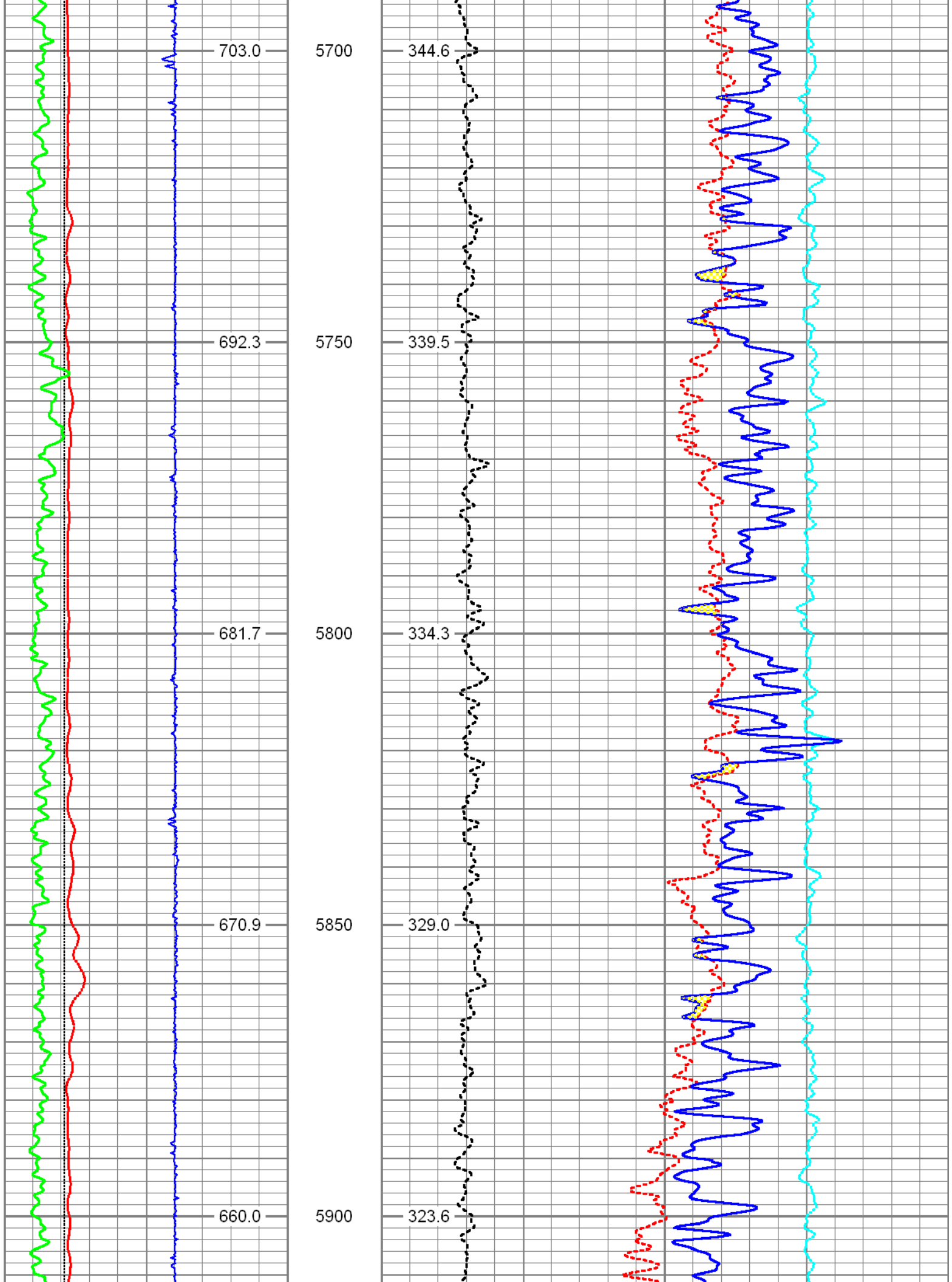
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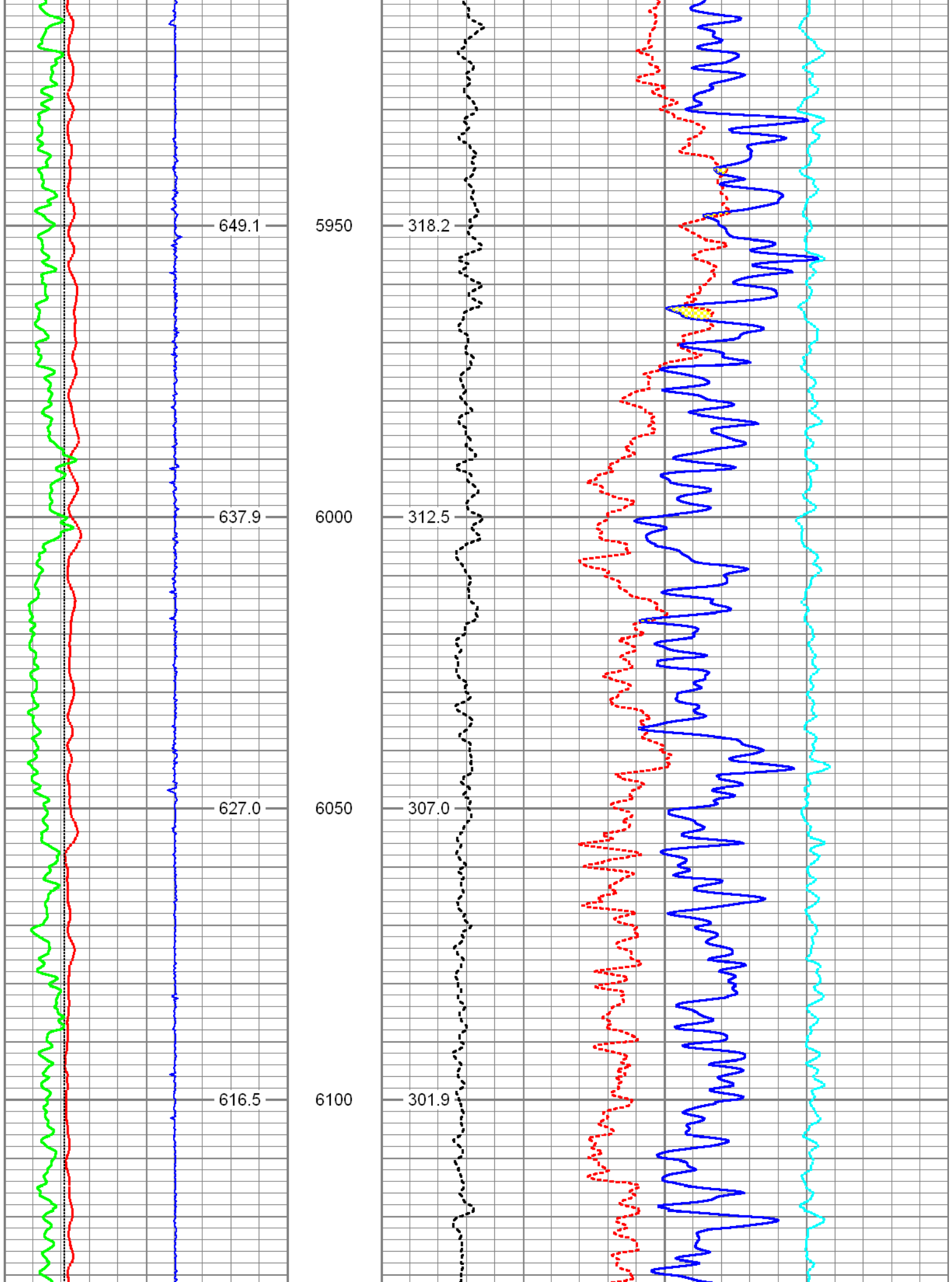
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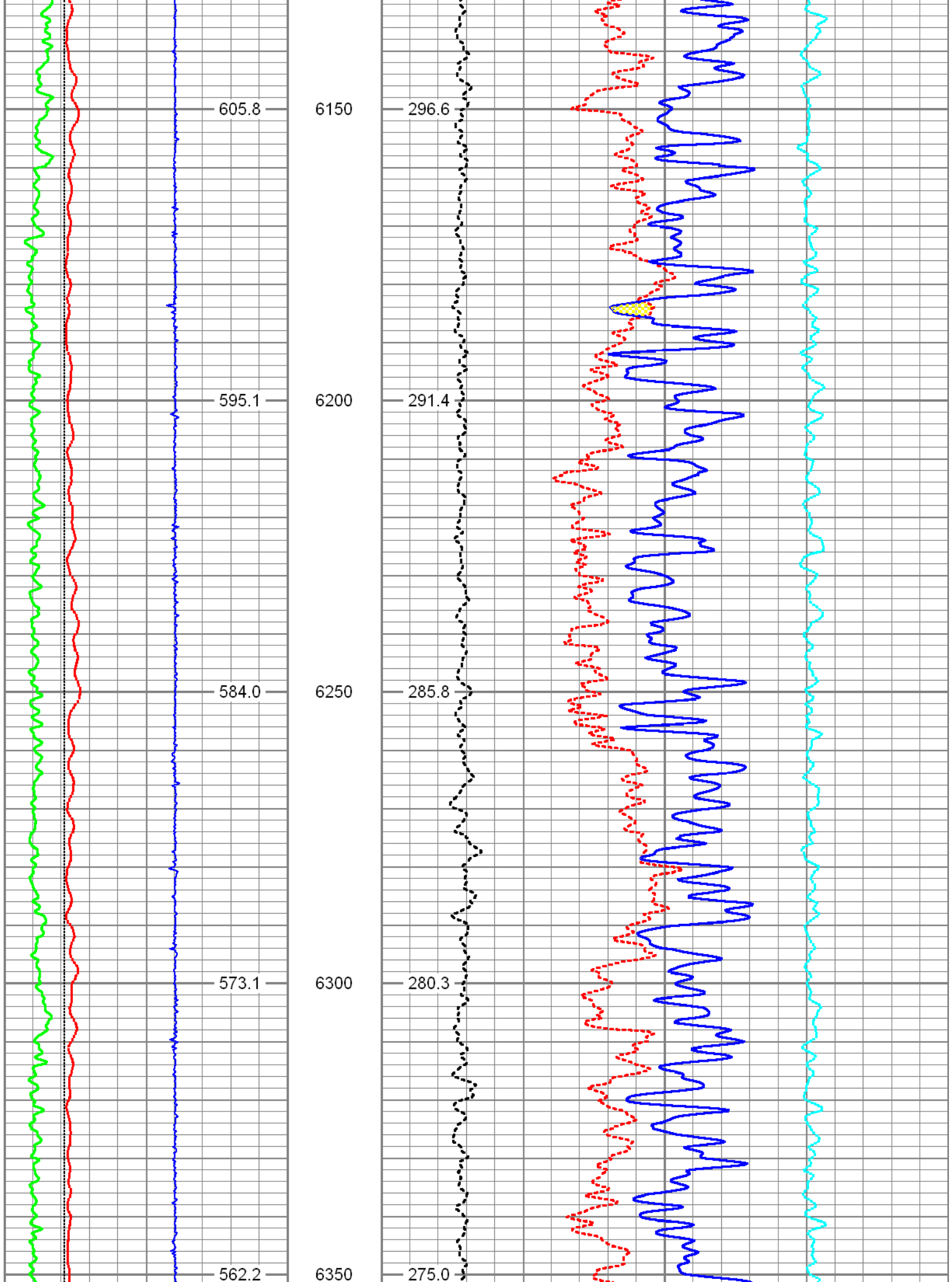
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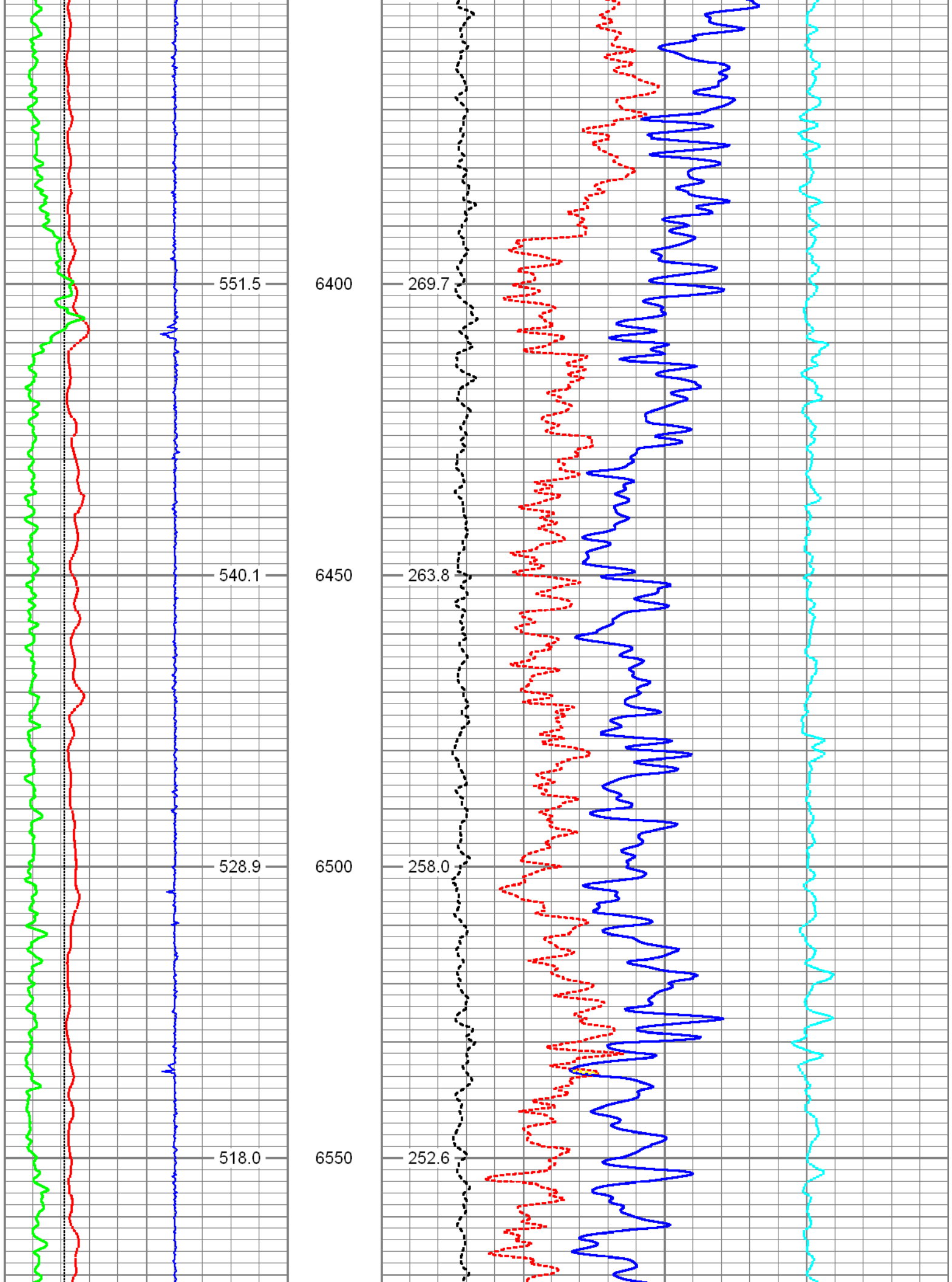
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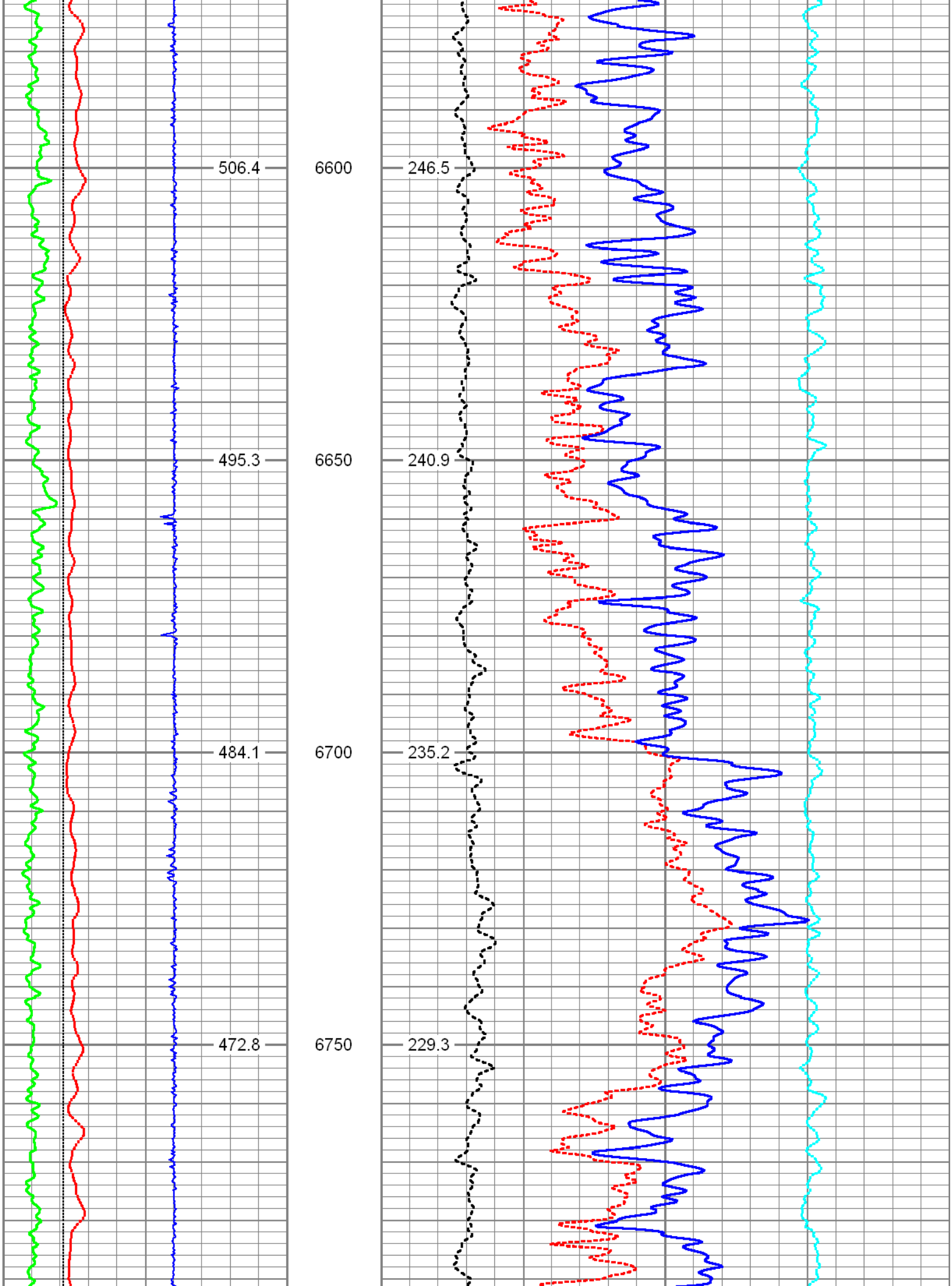
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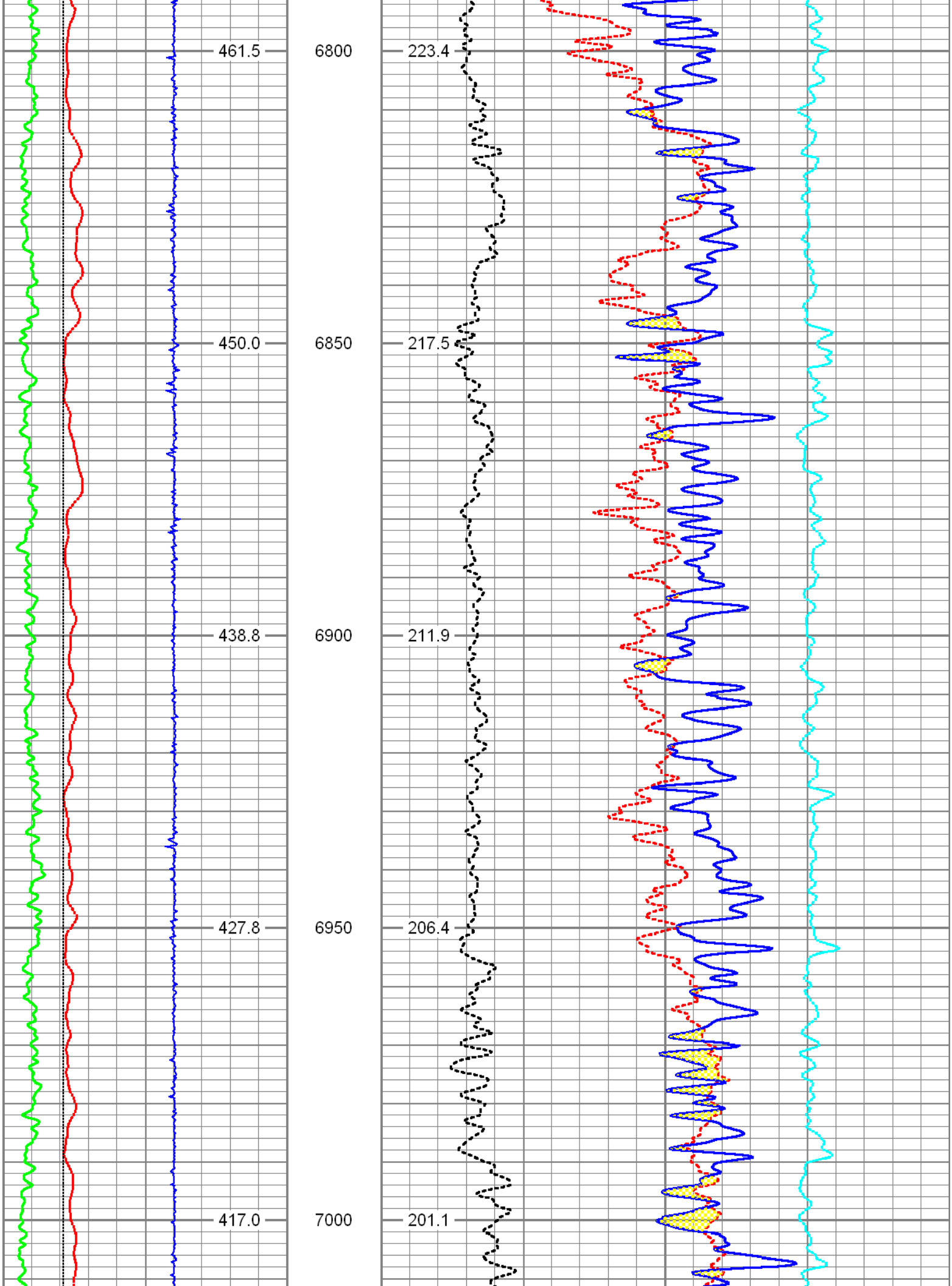
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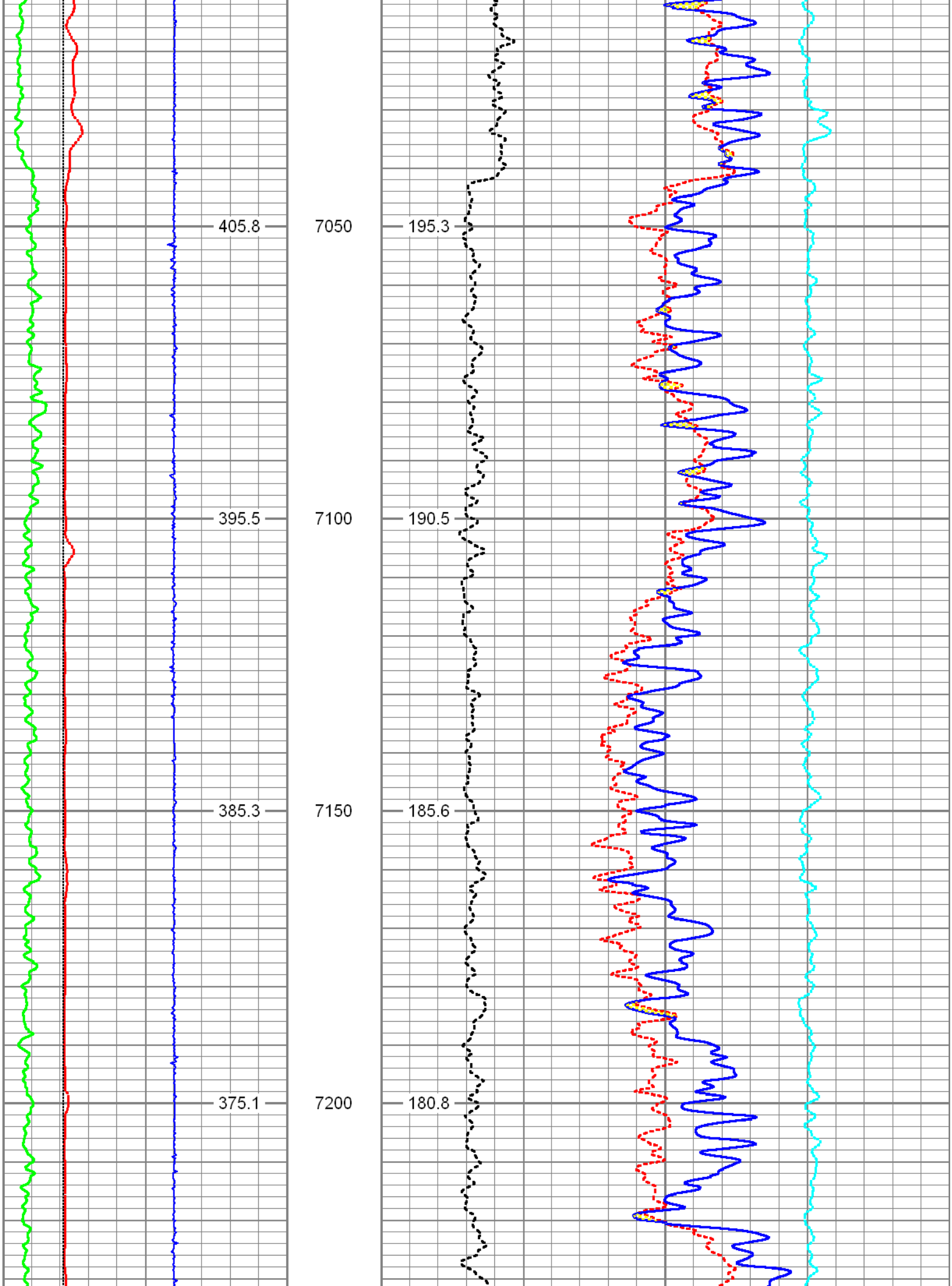
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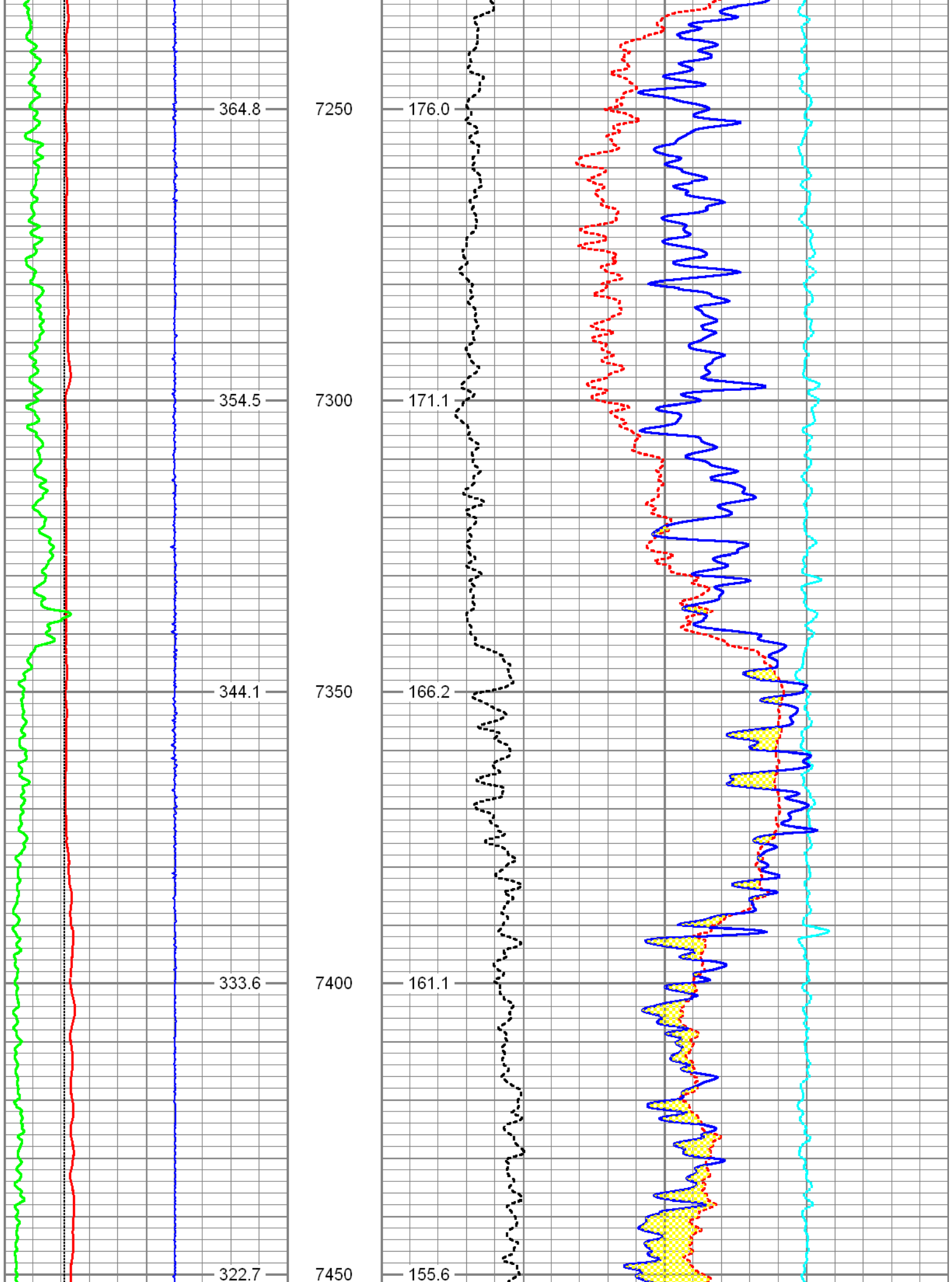
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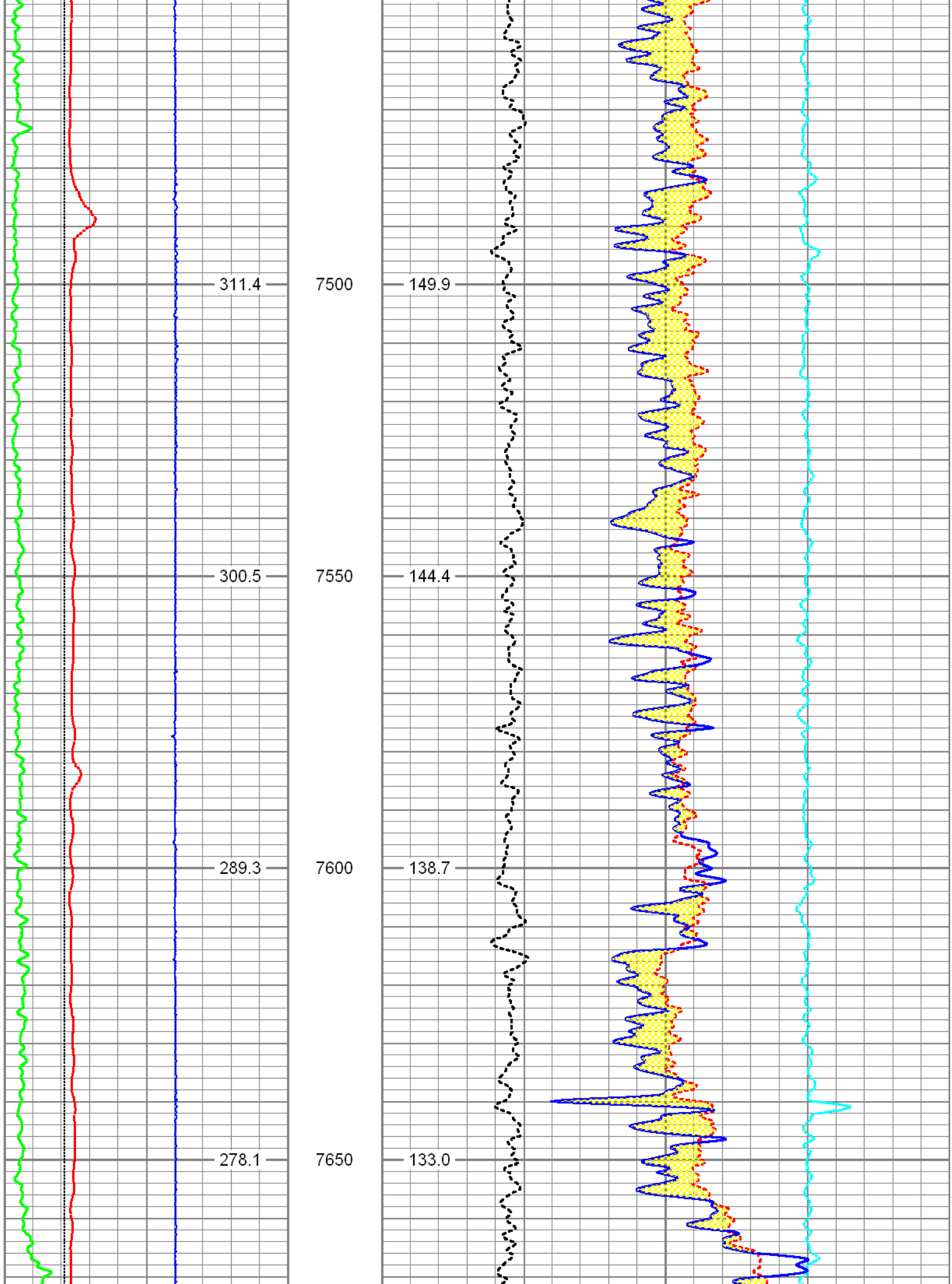
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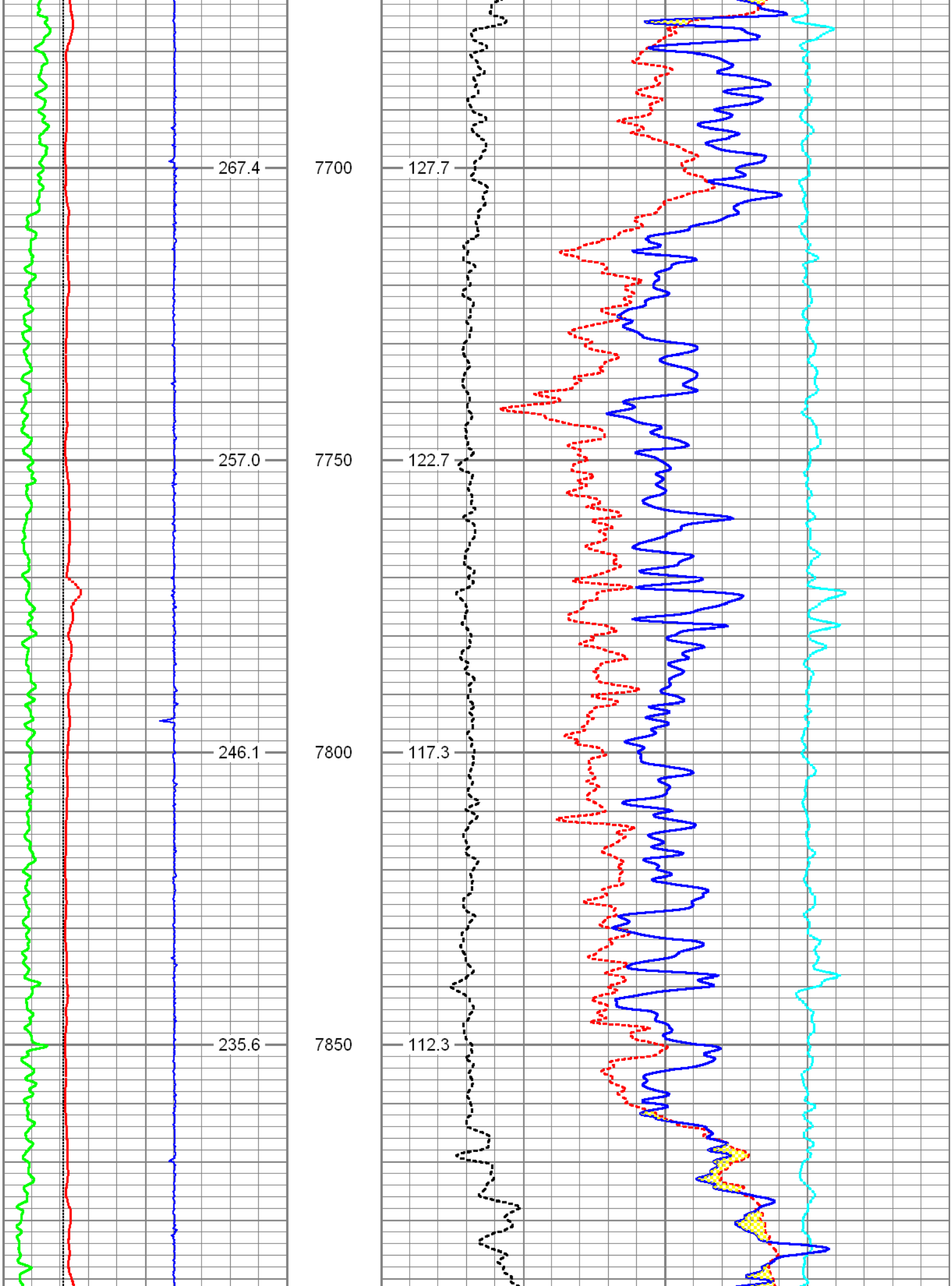
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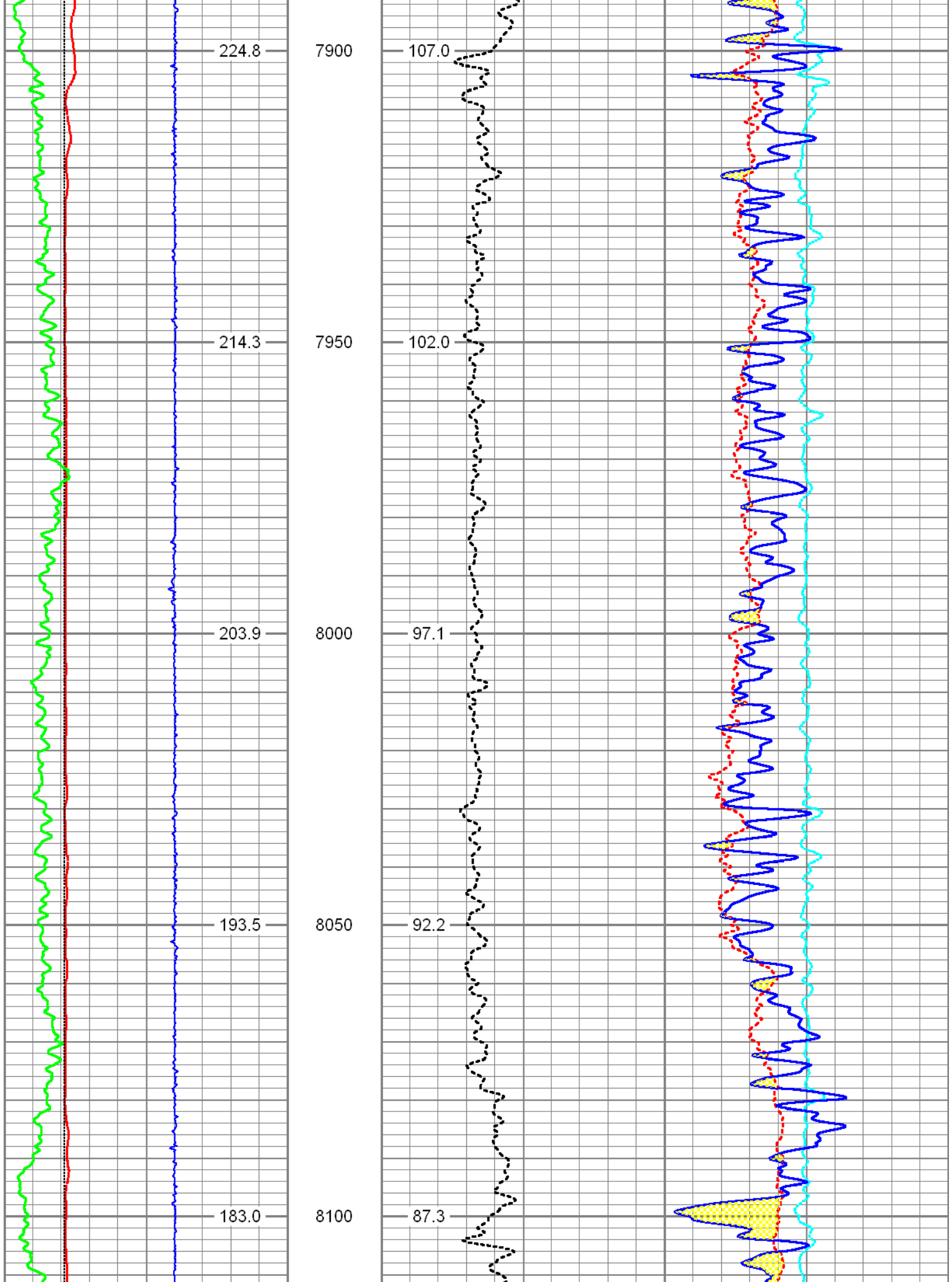
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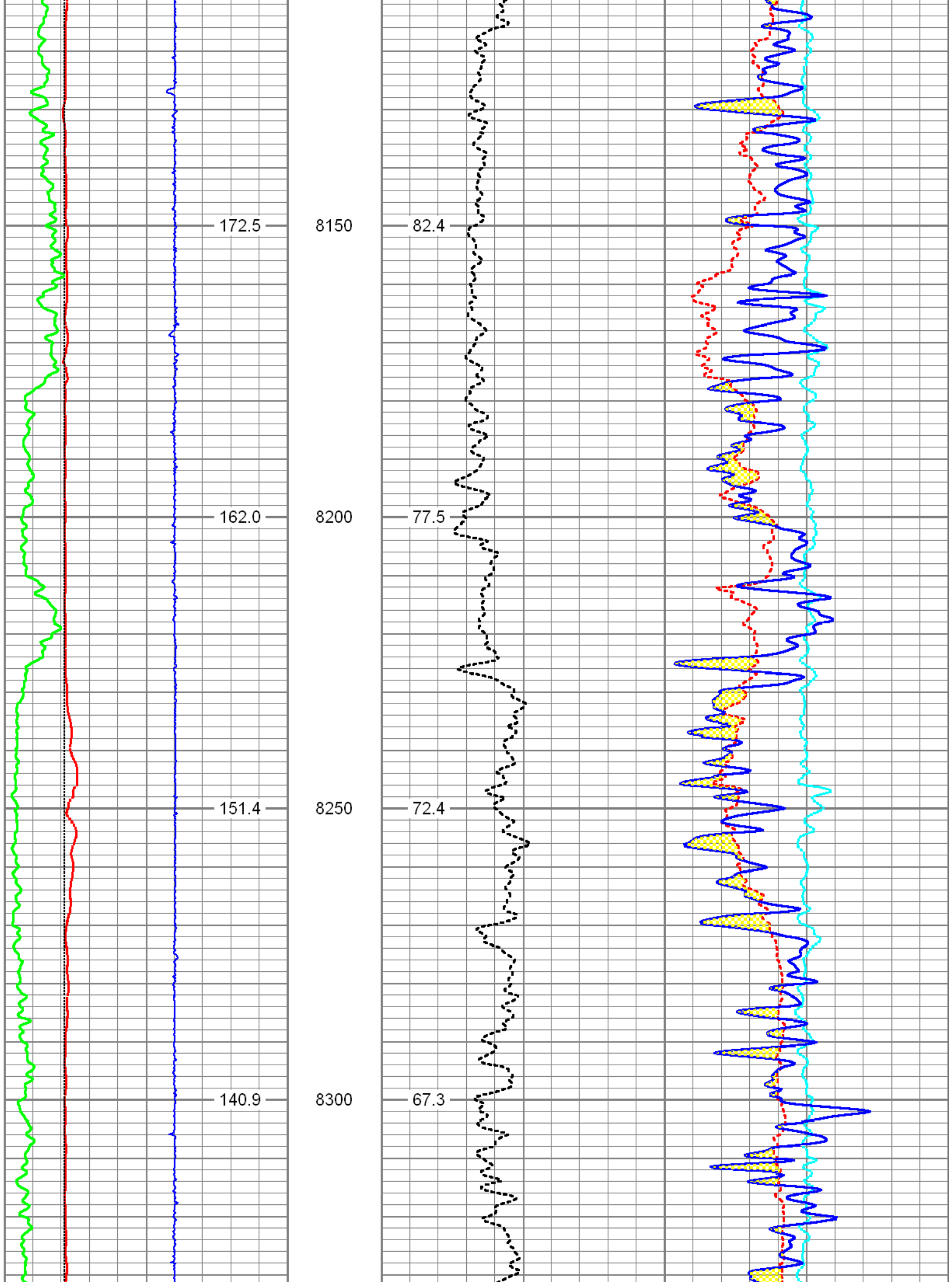
87.3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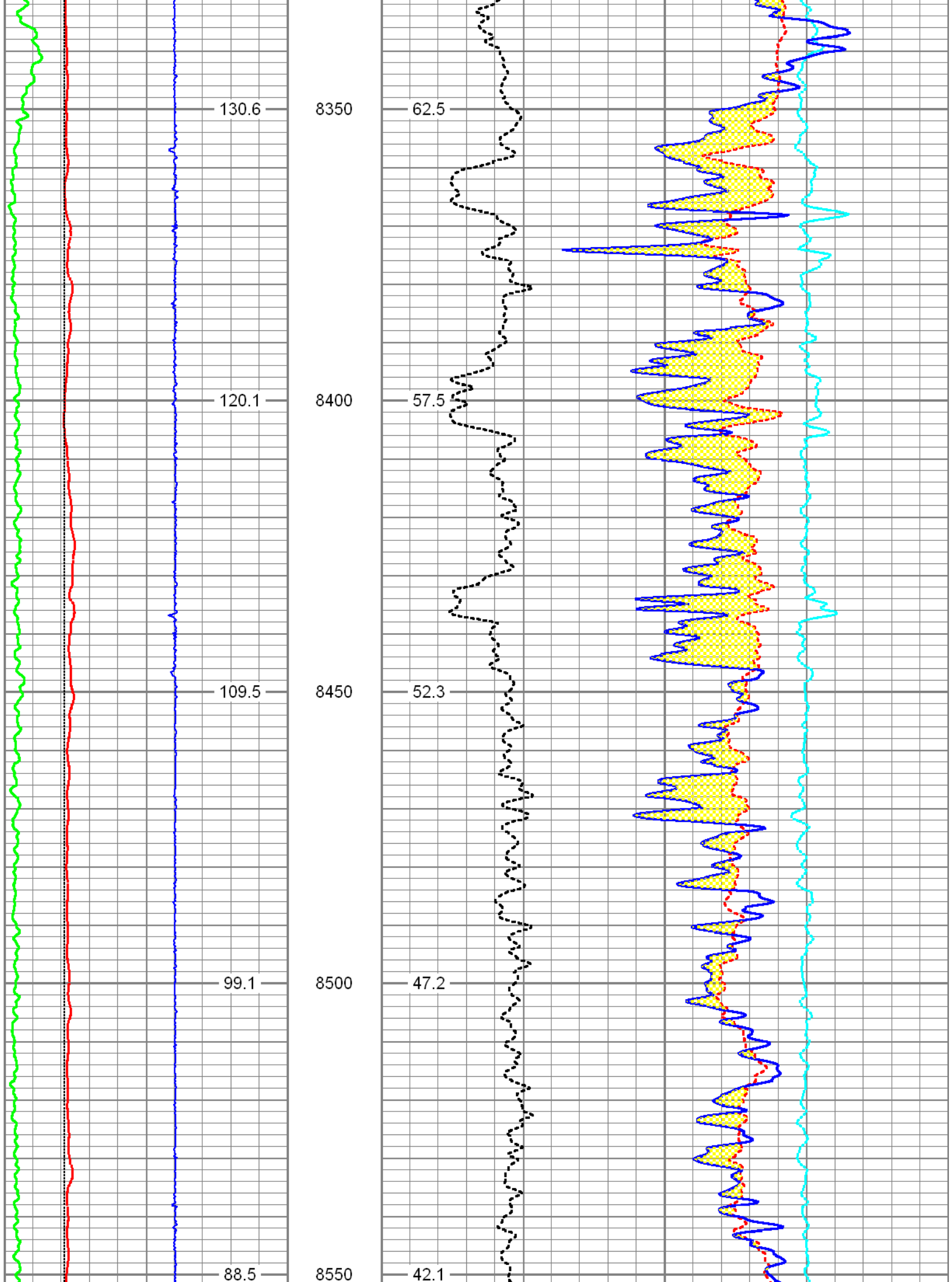
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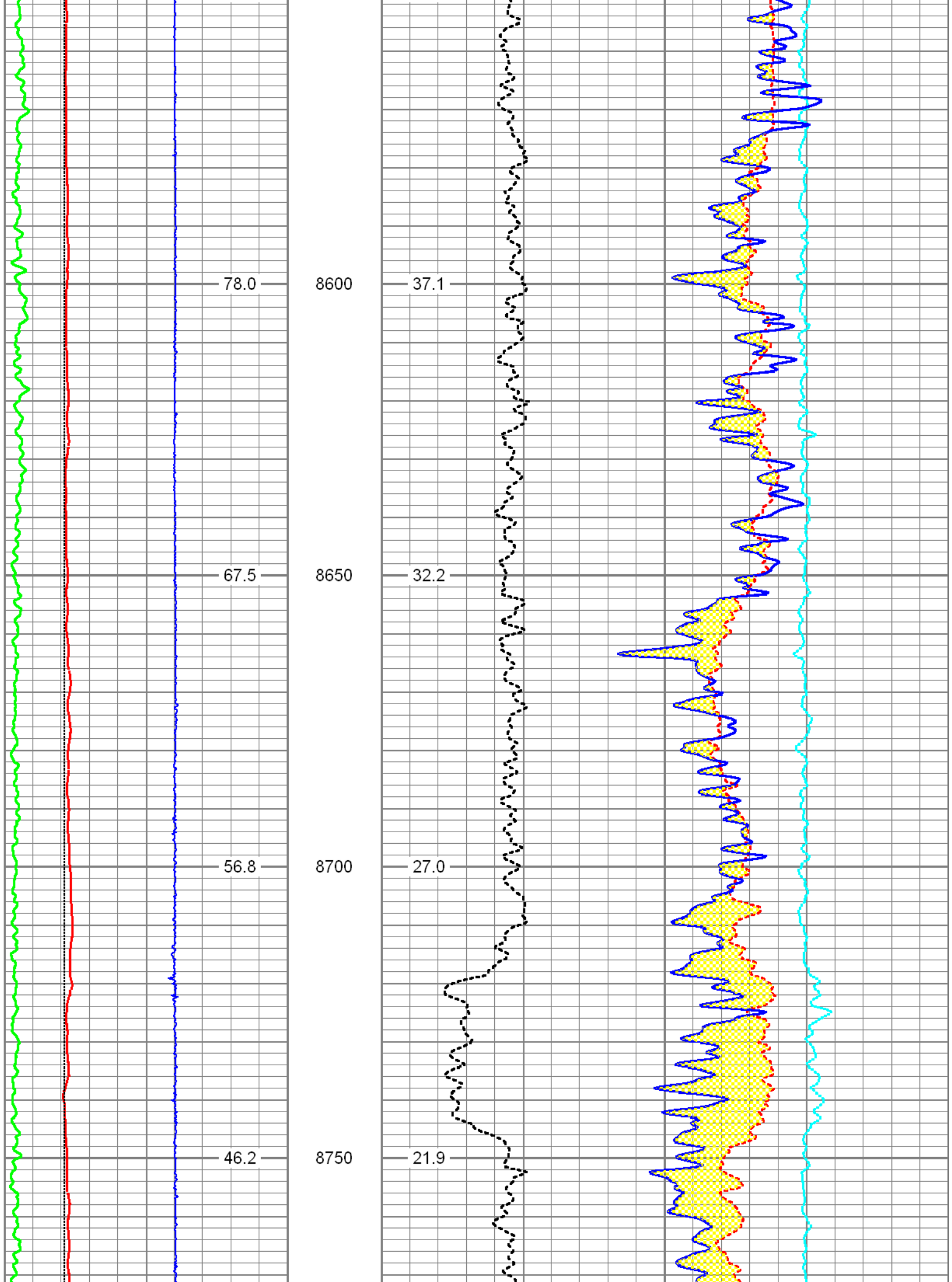
8550
42.1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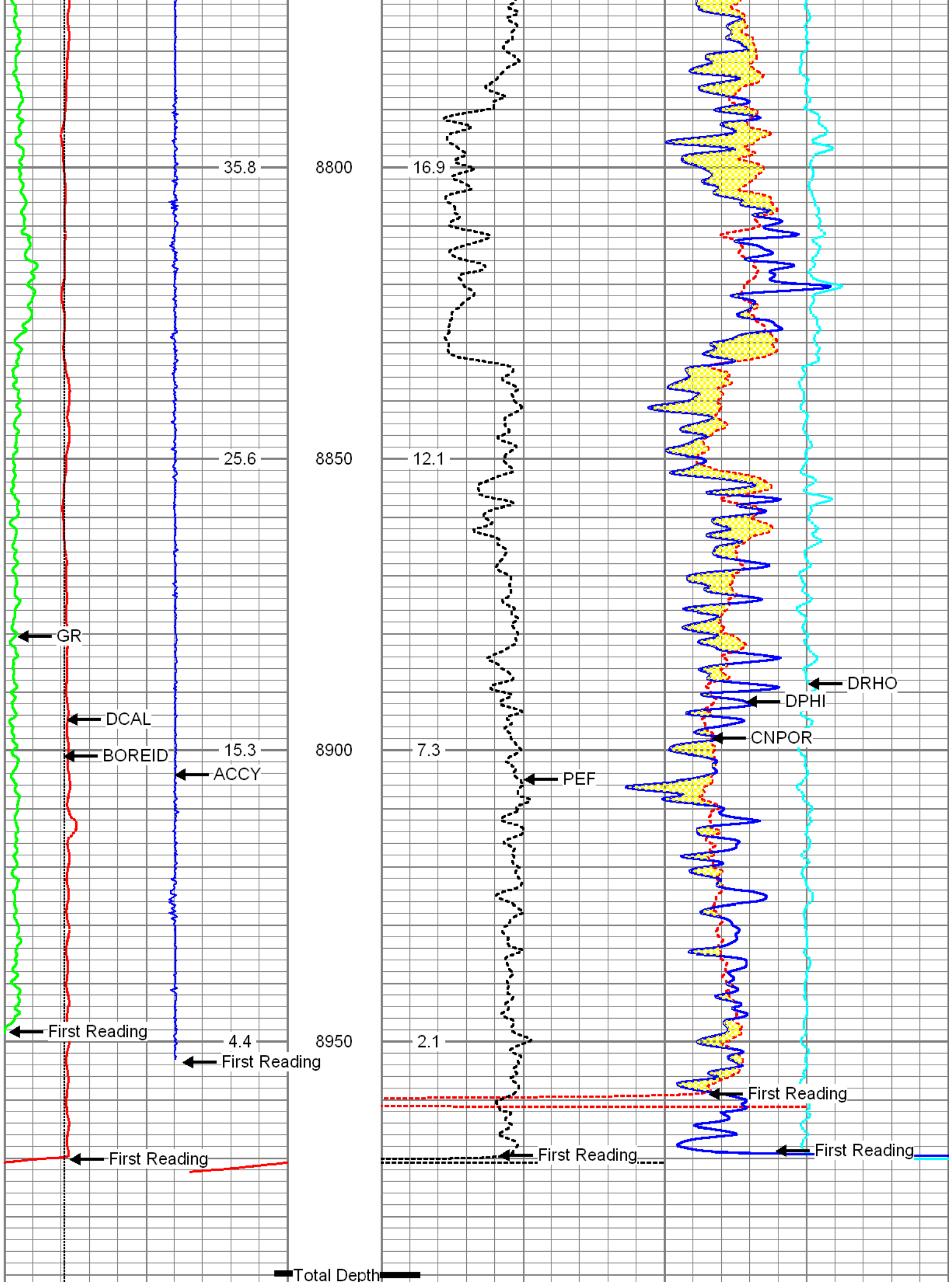
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DPHI
BOREID
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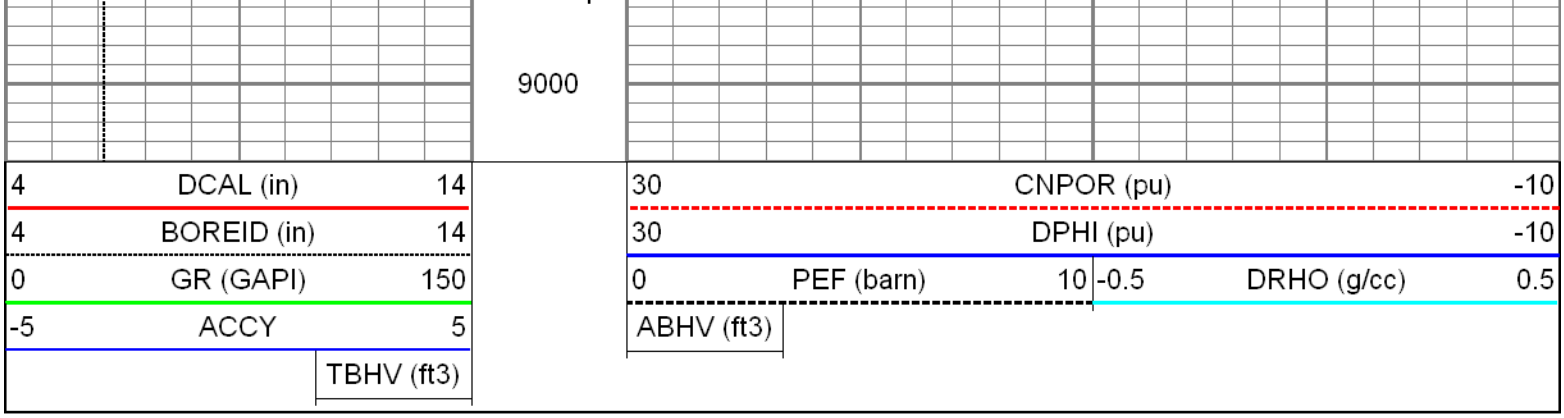
ACCY
PEF
First Reading
4.4
8950
2.1
First Reading
First Reading
First Reading
First Reading
Total Depth



Log Variables

Database:C:\Warrior\Data\lake_mem.db
Dataset: field/well/proc1/pass1.4

Top - Bottom

A	BHCOR	BHFL_TYPE	BHIDSRC	BOREID in	BOTTEMP degF	CASED?
1	On	WBM	CURVE	6.125	139	No
CASEOD in	**CASETHCK in**	**CEMWATERSA kppm**	**CMNTTHCK in**	**FLUIDDEN g/cc**	**FRMSALIN kppm**	**LATNOR**
4.5	0	0	0	1	0	Off
M	**MATRXDEN g/cc**	**MUDSALIN kppm**	**MudWgt lb/gal**	**NPORSEL**	**PERFS**	**RESTMPSRC**
2	2.71	0.5	8.4	Limestone	0	INTERNAL
SO in	**SRFTEMP degF**	**SZCOR**	**TDEPTH ft**	**TMPCOR**	**TOOLPOS**	
0.5	65	On	9041	On	Free	

Calibration Report

Database File: lake_mem.db
Dataset Pathname: proc1/pass1.4
Dataset Creation: Tue Nov 01 19:56:55 2011

ThruBit Induction Calibration Report

Serial-Model: 28-PS

Shop Calibration Performed: Fri Sep 23 09:20:31 2011

BaseLine

	R	X
Freq 1		
A1	-470.1870	249.0440
A2	-138.9390	347.1110
A3	-24.0713	103.0540
A4	-14.2642	243.0030
A5	-13.8958	127.7210
Freq 2		
A1	-244.9020	132.4970
A2	-90.4781	197.6480
A3	-18.5957	15.7641

A4	-17.5275	72.6951
A5	-18.6822	-14.1379
Freq 3		
A1	-155.2820	24.1584
A2	-69.8682	102.6450
A3	-15.0466	-45.4471
A4	-18.8594	-40.3685
A5	-20.3409	-117.9110
Freq 4		
A1	-84.4895	-144.2320
A2	-50.5612	-21.3602
A3	-12.9257	-136.6600
A4	-22.2849	-207.9640
A5	-26.1856	-291.2480

Calibration Coefficients

	R	X
Freq 1		
A1	0.9896	0.0017
A2	0.9914	0.0035
A3	0.9968	-0.0039
A4	0.9917	0.0055
A5	1.0258	0.0037
Freq 2		
A1	0.9837	-0.0070
A2	0.9850	-0.0054
A3	0.9846	-0.0053
A4	0.9873	-0.0037
A5	1.0222	-0.0062
Freq 3		
A1	1.0020	-0.0064
A2	1.0038	-0.0049
A3	1.0028	-0.0054
A4	1.0053	-0.0035
A5	1.0425	-0.0057
Freq 4		
A1	0.9935	-0.0005
A2	0.9946	0.0004
A3	0.9957	-0.0017
A4	0.9987	0.0016
A5	1.0430	-0.0020
Temperature	25.6493	

ThruBit Density Calibration Report

Serial-Model:	37-PS
Shop Calibration Performed:	Mon Oct 10 10:19:08 2011

References

	Density	Units

Aluminium	2.602	g/cc
Magnesium	1.715	g/cc

Readings

	Counts	Units
SS1 Background	136.46	cps
LS1 Background	145.91	cps
LS4 Background	31.58	cps
SS1 Aluminium	4725.47	cps
LS1 Aluminium	831.46	cps
LS4 Aluminium	942.52	cps
SS1 Magnesium	7752.53	cps
LS1 Magnesium	5150.12	cps
LS1 Al + Fe	714.49	cps
LS4 Al + Fe	420.27	cps

Results

SS Slope	1.75
LS Slope	0.45
PEF K Factor	3.433
PEF B Factor	-0.111

Compensated Neutron Calibration Report

Serial Number:	27
Tool Model:	PS
Source Number:	
Calibration Tank Temperature:	0.0 degF

BACKGROUND MEASUREMENT

SS Counts	LS Counts
0.0	0.0

WATER TANK REFERENCE Thu Oct 27 10:55:08 2011

SS Counts		LS Counts		
0.0	cps	0.0	cps	
Tank Ratio Ref		**Tank Ratio**		**Tank Ratio Gain**
30.9580	SS/LS	29.8823	SS/LS	1.0360

ALUMINUM SLEEVE REFERENCE

SS Counts		LS Counts		
0.0	cps	0.0	cps	
Al Ratio Ref		**Al Ratio**		**Al Ratio Gain**
0.000	SS/LS	0.000	SS/LS	1.02

Sleeve Porosity

0.00 pu

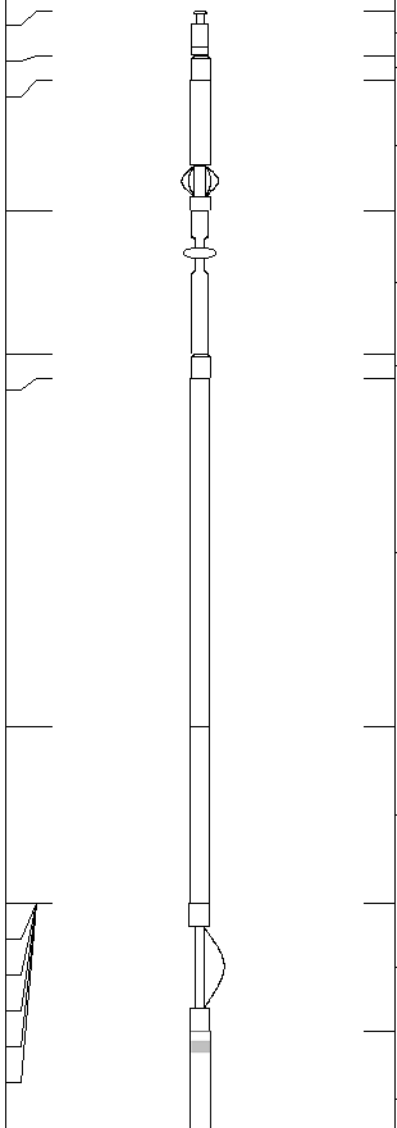
Gamma Ray Calibration Report

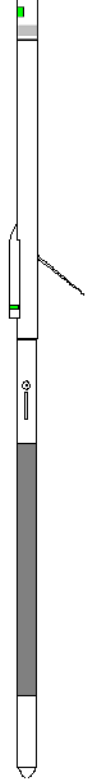
Serial Number:	E03	
Tool Model:	ENP	
Performed:	Wed Oct 26 15:53:00 2011	
Calibrator Value:	166.6	GAPI
Background Reading:	68.5	cps
Calibrator Reading:	484.2	cps
Sensitivity:	0.3750	GAPI/cps

Inclinometer Calibration Report

Performed: Sun Jun 13 14:33:21 1993

	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	0.00	1.00	0.00	1.00	gee
Y Accelerometer	0.00	1.00	0.00	1.00	gee
Z Accelerometer					

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
Thrubit	66.21		WPhead Weak Point Cable Head	1.58	2.13	5.15
Thrubit	64.63					
Thrubit	63.75		10-1 Thrubit 10 to 1 Crossover	0.88	2.13	3.95
			Small_Release Thrubit Small Release Tool	4.54	2.13	42.00
Thrubit	59.21					
			HangOff_Tool Thrubit Hang Off Tool	5.00	2.25	35.00
Thrubit	54.21		10-1 Thrubit 10 to 1 Crossover	0.88	2.13	3.95
TBBAT	53.33					
			TBBAT-A (1) Thrubit Battery	12.17	2.13	38.20
TMG	41.17					
			TMG-ENP (E03) ThruBit Telemetry Gamma Ray	6.15	2.13	45.00
Thrubit	35.02					
ACCX	35.02		Decentralizer Thrubit Small Decentralizer	4.50	2.13	35.00
ACCY	35.02					
ACCZ	35.02					
GRHEADV	35.02					
DHTEN	35.02		TBN-PS (27) ThruBit Neutron	4.76	2.13	63.00



TBD-PS (37) Thrubit Density	10.47	2.13	94.00
TBI-PS (28) Thrubit Induction	15.29	2.13	94.00

Dataset:	lake_mem.db: field/well/proc1/pass1.4
Total Length:	66.21 ft
Total Weight:	459.25 lb
O.D.	2.25 in

ThruBit LOGGING SOLUTIONS

Company	SANDRIDGE ENERGY
Well	LAKE 1-21H
Field	WALDRON WEST - MISSISSIPPI LIME
County	HARPER
State	KANSAS

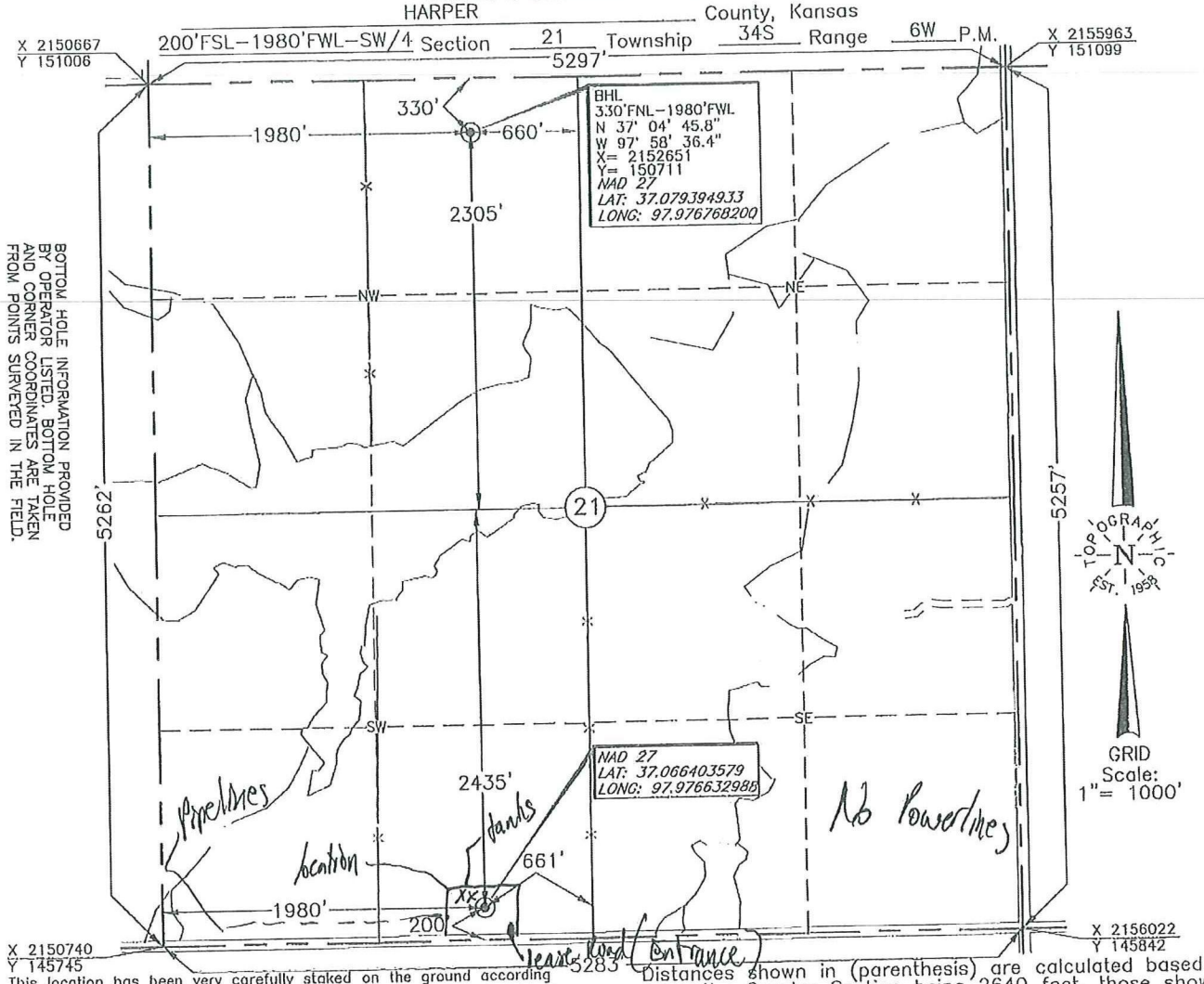
TOPOGRAPHIC LAND SURVEYORS

6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219

Certificate of Authorization No. 1293.

HARPER County, Kansas

200'FSL-1980'FWL-SW/4 Section 21 Township 34S Range 6W P.M.



BOTTOM HOLE INFORMATION PROVIDED BY OPERATOR LISTED. BOTTOM HOLE AND CORNER COORDINATES ARE TAKEN FROM POINTS SURVEYED IN THE FIELD.

This location has been very carefully staked on the ground according to the best official survey records, maps, and photographs available to us, but its accuracy is not guaranteed.
Review this plat and notify us immediately of any possible discrepancy.

Distances shown in (parenthesis) are calculated based upon the Quarter Section being 2640 feet, those shown in [brackets] are based on GLO (General Land Office) distances and have not been measured.

Operator: SANDRIDGE ENERGY, INC.

Lease Name: LAKE

Well No.: 1-21H

ELEVATION: 1301' Gr. at Stake

Topography & Vegetation Loc. fell in terraced wheat field

Good Drill Site? Yes

Reference Stakes or Alternate Location
Stakes Set None

Best Accessibility to Location From county road South of location

Distance & Direction from Hwy Jct or Town From SH 179 at the Oklahoma-Kansas State Line, North of Manchester, Oklahoma, go ±3.7 mi. North on SH 179, then ±0.5 mi. East, then 1.0 mi. North, then 3.0 mi. East to the SW Corner of Section 21, T34S-R6W

(The following information was gathered using a GPS receiver Accuracy ±2-3 Meters.)

GPS
DATUM: NAD-27
LAT: 37°03'59.1"N
LONG: 97°58'35.9"W

STATE PLANE COORDINATES:
ZONE: KS SOUTH
X: 2152717
Y: 145981

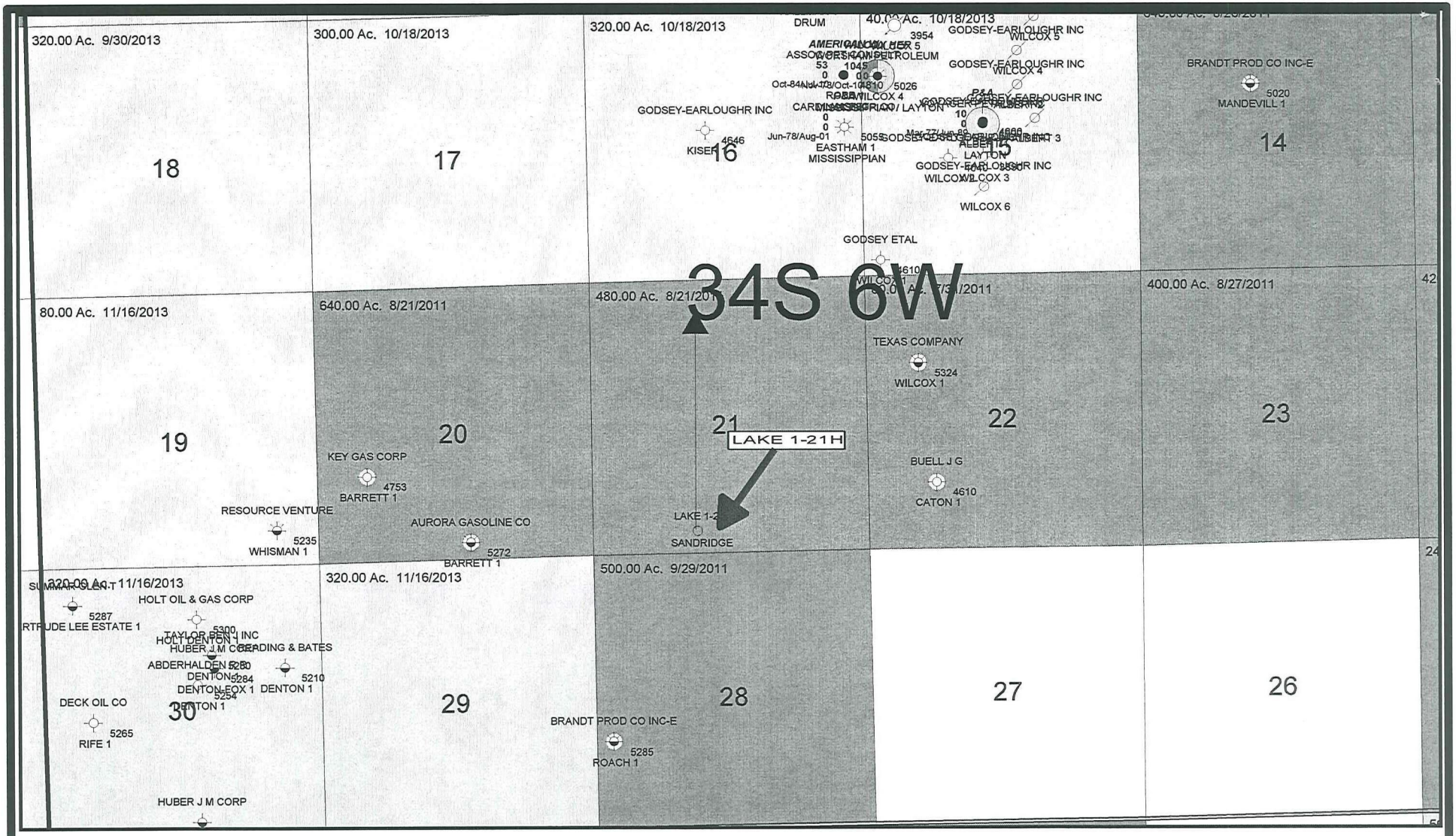
Date of Drawing: May 25, 2011

Invoice # 168359 Date Staked: May 23, 2011 AD

CERTIFICATE:

I, T. Wayne Fisch a Registered Land Surveyor and an authorized agent of Topographic Land Surveyors, do hereby certify that the above described well location was surveyed and staked on the ground as shown herein.

T. WAYNE FISCH LICENSED LS-1213 5/31/2011 KANSAS LAND SURVEYOR



PRODUCING FORMATION LEGEND

- Tonkawa-Virgilian
- Cottage Grove
- Oswego
- Red Fork
- Inola
- Morrow
- Chester
- Meremec
- Hunton
- Pre-Hunton (Viola/Simp/Arbk)

SCRGE_EXP_Leases_2014 <Global_Use>
Tract
Tract

SCRGE_EXP_Leases_2013 <Global_Use>
Tract
Tract

SCRGE_EXP_Leases_2012 <Global_Use>
Tract
Tract

SCRGE_EXP_Leases_2011 <Global_Use>
Tract
Tract

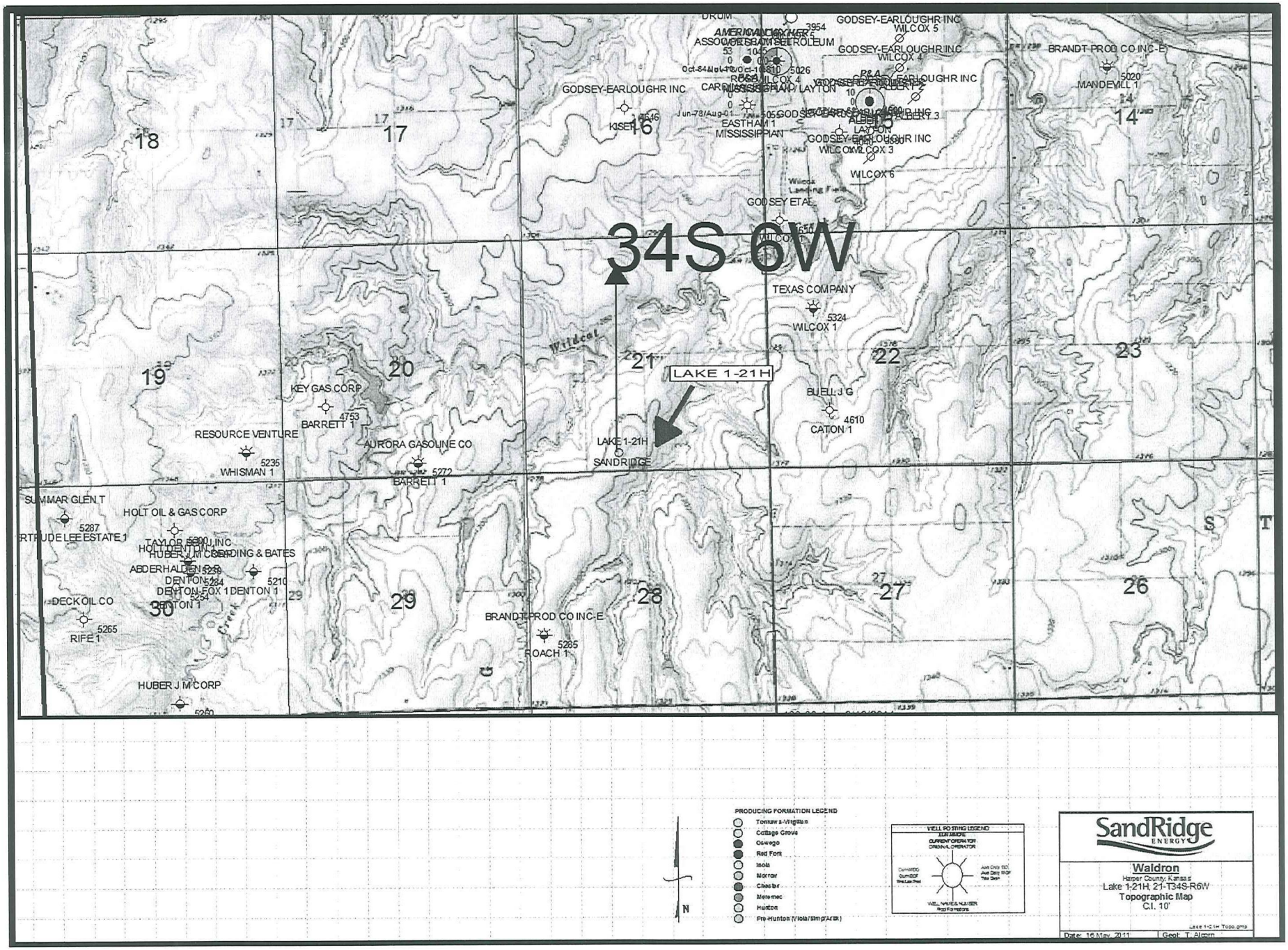
WELL POSTING LEGEND
ELRAMORE
CURRENT OPERATOR
ORIGINAL OPERATOR
Cum MBO
Cum BCF
First/Last Prod
Ave Daily BO
Ave Daily MCF
Total Depth
WELL NAME & NUMBER
Prod Formations

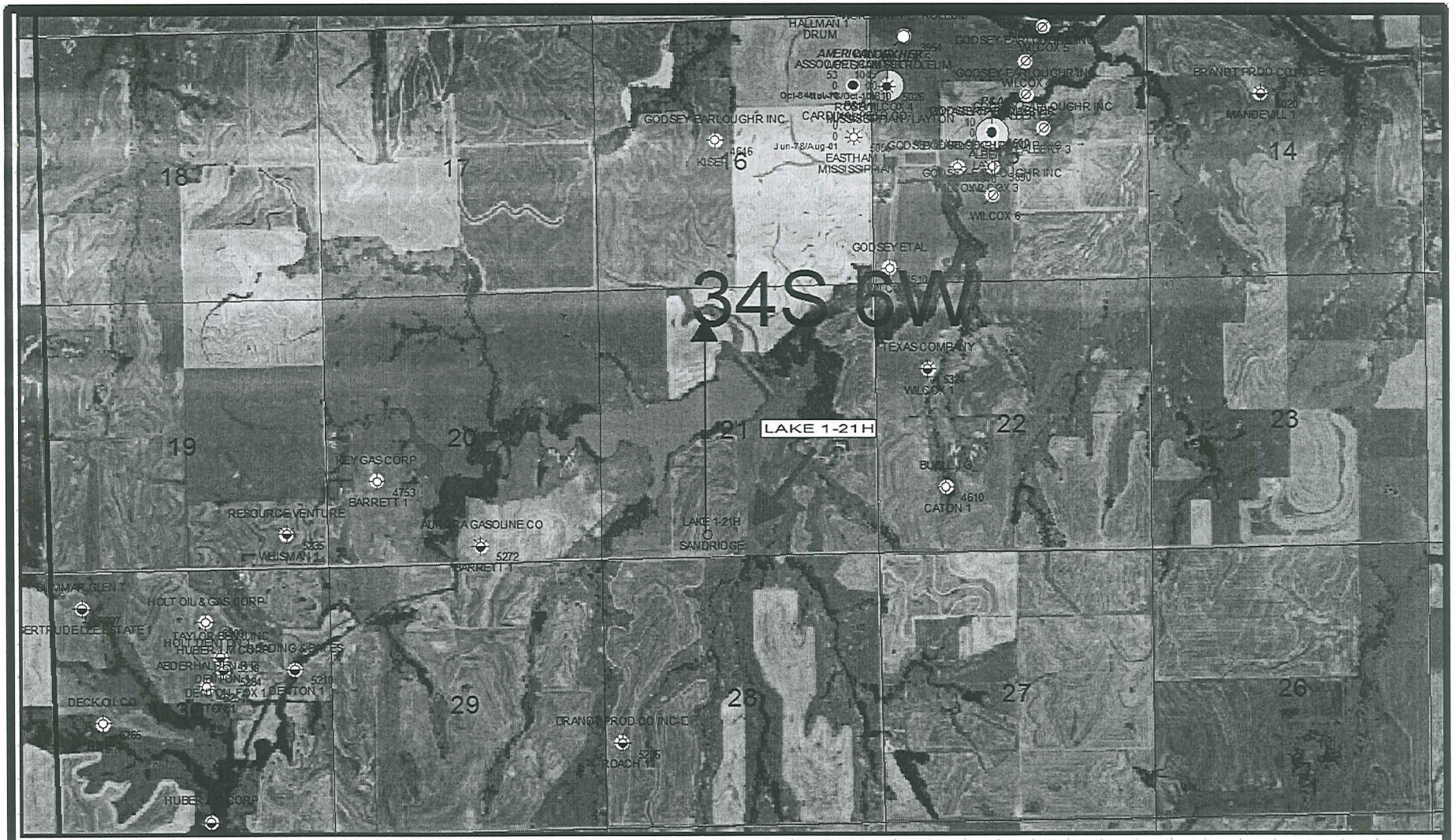
SandRidge ENERGY

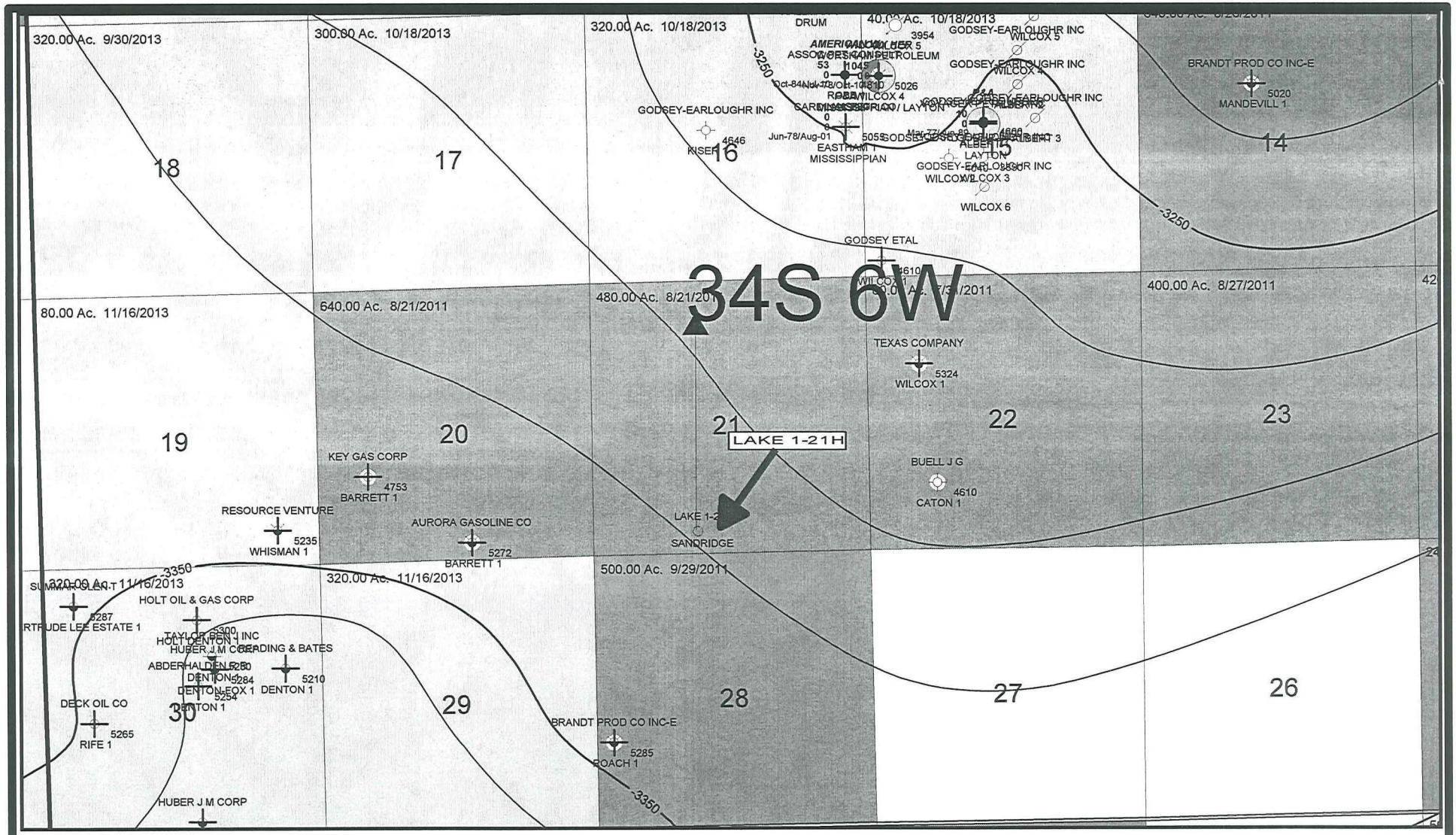
Waldron
Harper County, Kansas
Lake 1-21H, 21-T34S-R6W
Production Map

Lake 1-21H Prod.gmp

Date: 16 May, 2011 | **Geol:** T. Alcorn


34S 6W
LAKE 1-21H
SANDRIDGE
GODSEY-EARLOUGHR INC
WILCOX 5
WILCOX 4
WILCOX 3
WILCOX 6
GODSEY ETAL
TEXAS COMPANY
WILCOX 1
5324
BUELL J G
CATON 1
4610
KEY GAS CORP
BARRETT 1
4753
RESOURCE VENTURE
WHISMAN 1
5235
AURORA GASOLINE CO
BARRETT 1
5272
BRANDT PROD CO INC-E
MANDEVILL 1
5020
KISER 1
EASTHAM 1
MISSISSIPPIAN
HOLT OIL & GAS CORP
SUMMAR GLEN T
5287
TAYLOR 5300 INC
HUBER J M CORP
DECK OIL CO
RIFE 1
5265
ROACH 1
5285
17
18
19
20
21
22
23
26
27
28
29
30
PRODUCING FORMATION LEGEND
Tonkawa-Virgilian
Cottage Grove
Oswego
Red Fork
Inola
Morrow
Chester
Meramec
Hunton
Pre-Hunton (Viola/Simpson)
N
SandRidge ENERGY
Waldron
Harper County, Kansas
Lake 1-21H, 21-T34S-R6W
Topographic Map
C.I. 10'
Date: 16 May, 2011
Geol: T. Almon


34S 6W
LAKE 1-21H
SANDRIDGE
17
18
19
20
21
22
23
26
27
28
29
14
HALLMAN 1
DRUM
GODSEY EARLOUGHR INC
WILCOX 6
GODSEY ET AL
TEXAS COMPANY
WILCOX 1
BUBILLO
CATON 1
KEY GAS CORP
BARRETT 1
RESOURCE VENTURE
WHISMAN 1
AURORA GASOLINE CO
BARRETT 1
LAKE 1-21H
SANDRIDGE
HOLT OIL & GAS CORP
DECK OIL CO
ROACH 1
BRANDT PROD CO INC E
MANDEVILL 1
PRODUCING FORMATION LEGEND
Tonkawa-Virgilian
Cottage Grove
Oswego
Red Fork
Inola
Morrow
Chester
Meramec
Hunton
Pre-Hunton (Viola/Simpson)
N
WELL POSTING LEGEND
SandRidge
ENERGY
Waldron
Harper County, Kansas
Lake 1-21H, 21-T34S-R6W
Photographic Map
Date: 16 May, 2011
Geol: T. Alcorn



PRODUCING FORMATION LEGEND

- Tonkawa-Virgilian
- Cottage Grove
- Oswego
- Red Fork
- Inola
- Morrow
- Chester
- Meremec
- Hunton
- Pre-Hunton (Viola/Simp/Arbk)

WELL POSTING LEGEND

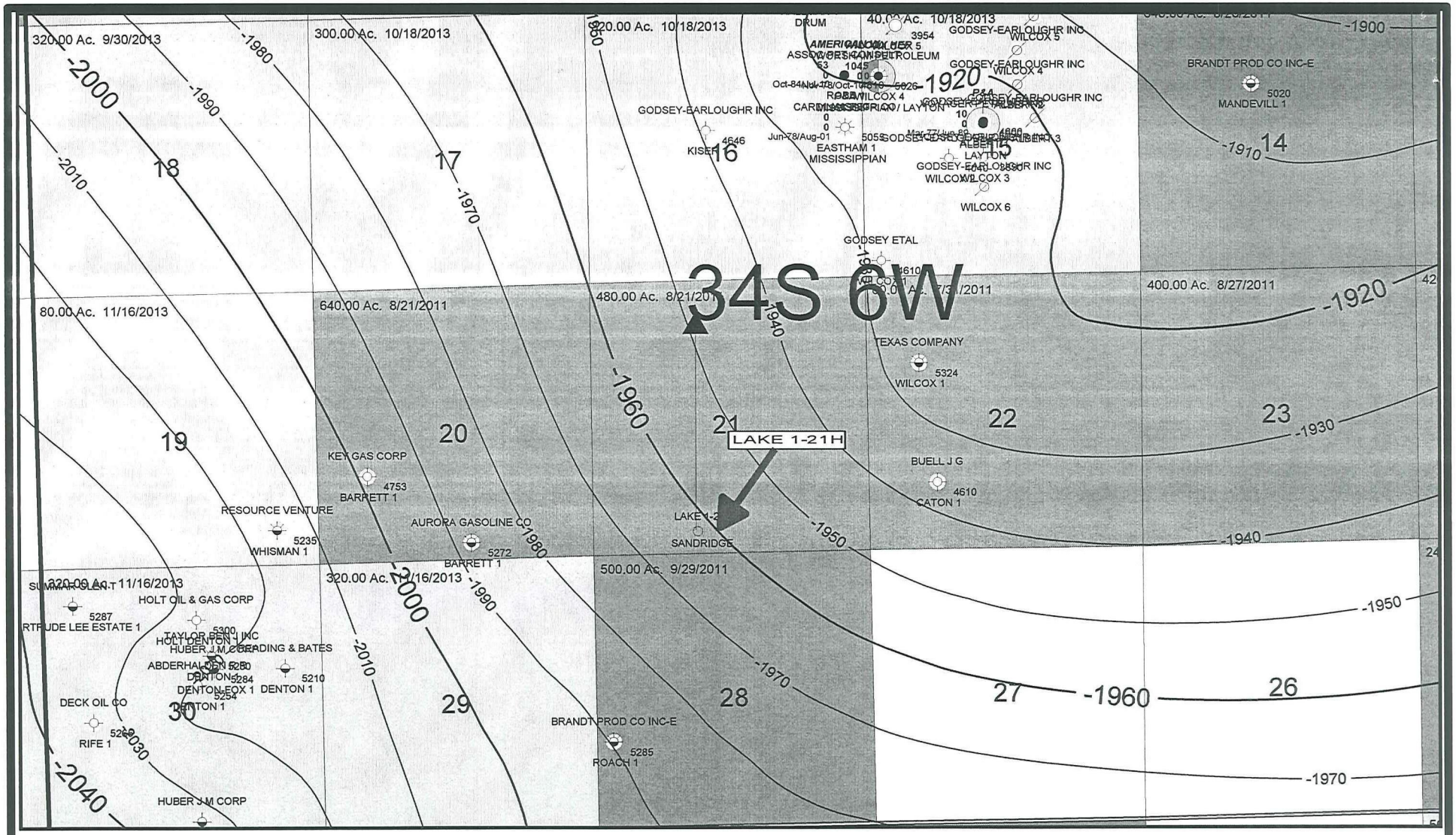
EUR MCFE
CURRENT OPERATOR
ORIGINAL OPERATOR
Cum MBO
Cum BCF
First/Last Prod
Ave Daily BO
Ave Daily MCF
Total Depth
WELL NAME & NUMBER
Prod Formations

SandRidge ENERGY

Waldron
Harper County, Kansas
Lake 1-21H, 21-T34S-R6W
Subsea Structure Map
Top Mississippi Lime
CI = 20'

Lake 1-21H MissStr.grp

Date: 16 May, 2011 | Geol: T. Alcorn



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SDRGE_EXP_Leases_2014 <Global_User>
Tract

SDRGE_EXP_Leases_2013 <Global_User>
Tract

SDRGE_EXP_Leases_2012 <Global_User>
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SDRGE_EXP_Leases_2011 <Global_User>
Tract

WELL POSTING LEGEND
EUR/MCFE
CURRENT OPERATOR
ORIGINAL OPERATOR
Cum MBO
Cum BCF
First/Last Prod
Ave Daily BO
Ave Daily MCF
Total Depth
WELL NAME & NUMBER
Prod Formations

SandRidge ENERGY

Waldron
Harper County, Kansas
Lake 1-21H, 21-T34S-R6W
Subsea Structure Map
Base Heebner Shale
CI = 10'

Lake 1-21H B Heebner.gmp

Date: 16 May, 2011 | Geol: T. Alcorn

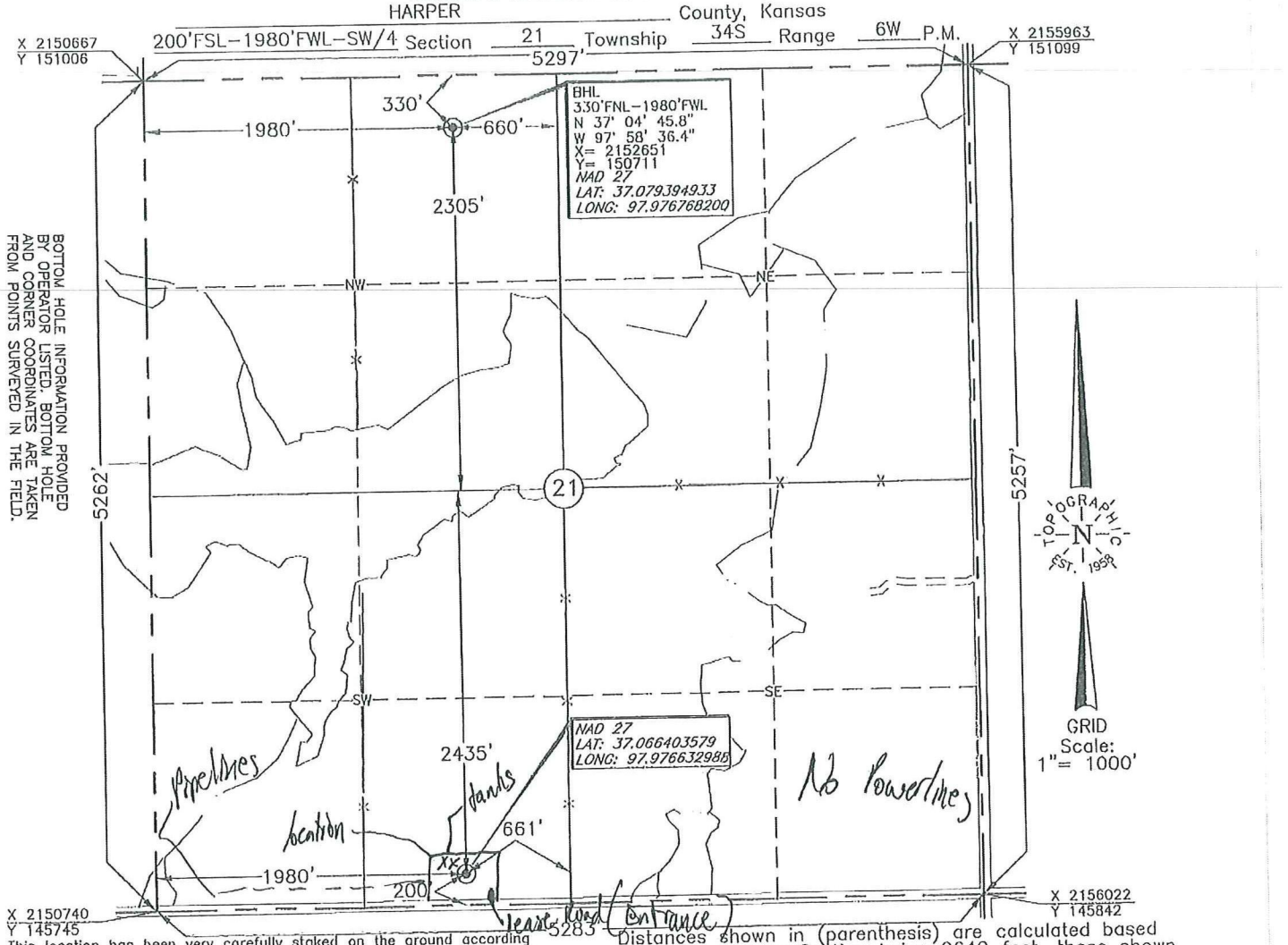
TOPOGRAPHIC LAND SURVEYORS

6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219

Certificate of Authorization No. 1293.

HARPER County, Kansas

200'FSL-1980'FWL-SW/4 Section 21 Township 34S Range 6W P.M.



BOTTOM HOLE INFORMATION PROVIDED BY OPERATOR LISTED. BOTTOM HOLE AND CORNER COORDINATES ARE TAKEN FROM POINTS SURVEYED IN THE FIELD.

This location has been very carefully staked on the ground according to the best official survey records, maps, and photographs available to us, but its accuracy is not guaranteed.
Review this plat and notify us immediately of any possible discrepancy.

Distances shown in (parenthesis) are calculated based upon the Quarter Section being 2640 feet, those shown in [brackets] are based on GLO (General Land Office) distances and have not been measured.

Operator: SANDRIDGE ENERGY, INC.

Lease Name: LAKE

Well No.: 1-21H

ELEVATION: 1301' Gr. at Stake

Topography & Vegetation: Loc. fell in terraced wheat field

Good Drill Site? Yes

Reference Stakes or Alternate Location
Stakes Set: None

Best Accessibility to Location: From county road South of location

Distance & Direction from Hwy Jct or Town: From SH 179 at the Oklahoma-Kansas State Line, North of Manchester, Oklahoma, go ±3.7 mi. North on SH 179, then ±0.5 mi. East, then 1.0 mi. North, then 3.0 mi. East to the SW Corner of Section 21, T34S-R6W

(The following information was gathered using a GPS receiver Accuracy ±2-3 Meters.)

GPS
DATUM: NAD-27
LAT: 37°03'59.1"N
LONG: 97°58'35.9"W

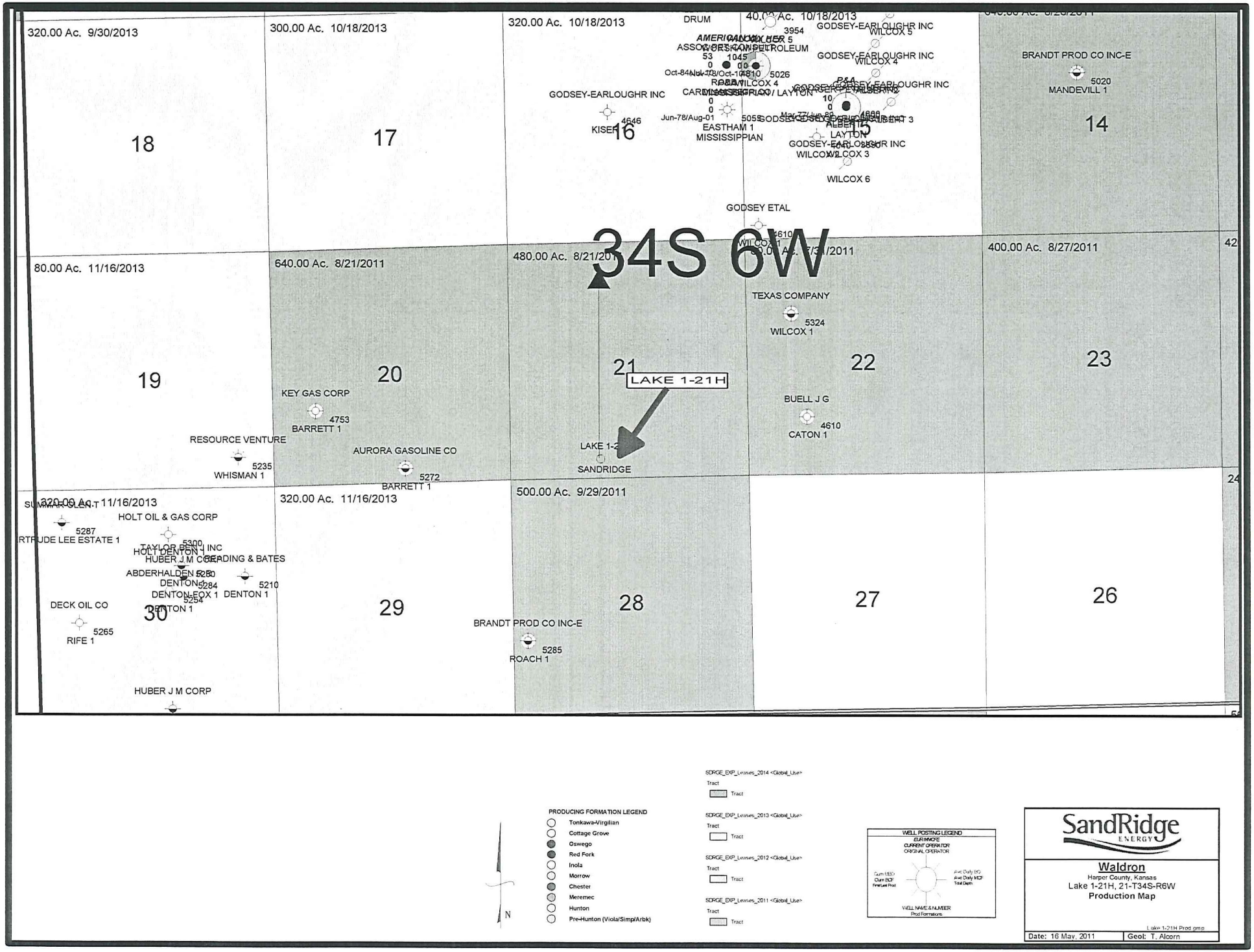
STATE PLANE COORDINATES:
ZONE: KS SOUTH
X: 2152717
Y: 145981

Date of Drawing: May 25, 2011
Invoice # 168359 Date Staked: May 23, 2011 AD

CERTIFICATE:

I, T. Wayne Fisch a Registered Land Surveyor and an authorized agent of Topographic Land Surveyors, do hereby certify that the above described well location was surveyed and staked on the ground as shown herein.

T. WAYNE FISCH LICENSED LS-1213 5/31/2011 KANSAS LAND SURVEYOR


320.00 Ac. 9/30/2013
300.00 Ac. 10/18/2013
320.00 Ac. 10/18/2013
40.00 Ac. 10/18/2013
640.00 Ac. 8/27/2011
18
17
16
15
14
34S 6W
80.00 Ac. 11/16/2013
640.00 Ac. 8/21/2011
480.00 Ac. 8/21/2011
400.00 Ac. 8/27/2011
19
20
21
22
23
LAKE 1-21H
320.00 Ac. 11/16/2013
320.00 Ac. 11/16/2013
500.00 Ac. 9/29/2011
30
29
28
27
26
GODSEY-EARLOUGHR INC
WILCOX 5
WILCOX 4
WILCOX 3
WILCOX 6
GODSEY ETAL
TEXAS COMPANY
WILCOX 1
5324
BUELL J G
4610
CATON 1
KEY GAS CORP
4753
BARRETT 1
RESOURCE VENTURE
5235
WHISMAN 1
AURORA GASOLINE CO
5272
BARRETT 1
SANDRIDGE
BRANDT PROD CO INC-E
5020
MANDEVILL 1
HOLT OIL & GAS CORP
5287
HUBER J M CORP
DECK OIL CO
5265
RIFE 1
BRANDT PROD CO INC-E
5285
ROACH 1
PRODUCING FORMATION LEGEND
Tonkawa-Virgilian
Cottage Grove
Oswego
Red Fork
Inola
Morrow
Chester
Meremec
Hunton
Pre-Hunton (Viola/Simp/Arbk)
N
SDRGE_EXP_Leases_2014 <Global_User>
Tract
SDRGE_EXP_Leases_2013 <Global_User>
Tract
SDRGE_EXP_Leases_2012 <Global_User>
Tract
SDRGE_EXP_Leases_2011 <Global_User>
Tract
WELL POSTING LEGEND
CURRENT OPERATOR
ORIGINAL OPERATOR
WELL NAME & NUMBER
Prod Formations
SandRidge ENERGY
Waldron
Harper County, Kansas
Lake 1-21H, 21-T34S-R6W
Production Map
Lake 1-21H Prod.gmp
Date: 16 May, 2011
Geol: T. Alcorn

American Measurement Services

A Limited Liability Company
Ames, Oklahoma

Station Number:	KS03R0010
Producer:	SANDRIDGE ENERGY
Lease:	LAKE 1-21H
Sample Pressure:	57.08
Sample Temperature:	57.00
Cylinder Number:	1092
Analysis By:	AMS
Date Sampled:	11/30/2011
Analysis Run Date:	11/30/2011

Gas Components	*Mole Percent*	*GPM*
Methane	51.803	
Ethane	7.866	2.0910
Propane	5.064	1.3866
IButane	0.737	0.2399
NButane	2.026	0.6353
IPentan	0.470	0.1711
NPentan	0.621	0.2238
C6 +	0.765	0.3317
Nitrogen	29.640	
CO2	1.008	
	100.00%	5.0794

BTU @ 14.65 @ 60 F - Real

Dry	962.5
Wet	945.7
Specific Gravity - Real	0.8571
Z =	0.9972

Gasoline Content

Propane And Heavier	2.9884
Butane And Heavier	1.6018
Pentane And Heavier	0.7266

H2S Field Test: PPM

Field Remarks:

Analysis Based Upon GPA 2145, 2172, And 2261

SANDRIDGE
THE POWER OF US™

December 6, 2011

Mr. Steve Bond
Kansas Corporation Commission
210 E. Frontview, Ste A
Dodge City KS 67801

Re: Temporary Flare Permit
Lake 1-21H
API 15-077-21747-01-00
Sec 21-T34S-R6W S/2 S/2 SE SW
Harper County, Kansas

Dear Mr. Bond:

SandRidge is requesting approval of a flare permit for the above captioned well. We are fully committed to flaring this well in accordance with safety and operational policies required by the KCC as well as our own internal policies. We will meter and record all volumes, including liquids and gas, which are produced by this well. In all wells that SandRidge brings online, there is contract flow testing personnel responsible for monitoring flow rates, pressures, volumes and activity. It is our practice to keep a flow hand on location 24/7 until all utilities, equipment and safety mechanisms are in place. Attached is the report that our flow hands are responsible for maintaining every day they are on location. All pressures, rates and volumes are closely monitored and recorded. These records are kept on file indefinitely.

The Lake 1-21H recently reached its TD and we anticipate the completion process to begin very soon. Our plans are to have this well tied into a sales line; however, there is currently no line in place and the nearest line is more than nine (9) miles from location. We would like to be able to bring this well online as soon as our completion process is completed. Flaring would be necessary until the sales line is in place. We would like to get a gas test on the well as soon as possible.

If you require any additional information which SandRidge can provide at this time, please feel free to contact me. We appreciate your consideration in our endeavor.

Sincerely,

Forrest Walton

Forrest Walton
Sr. Completions Engineer

/ks
Attach.

SandRidge ENERGY

Well Name:

Legals:

County, State:

Date:

Cum BB Gas		Cumulative Gas:	
Prev Cum BB Gas	0	Previous Cum Gas:	0
Daily BB Gas	0	Daily Gas Sales:	0
Start LTR	OIL SOLD	BOPD:	0
Cumulative Flair		CBO:	0
Previous Cum Flair	0	BWPD	0
Daily Gas Flair	0	CBLWR:	0
		BLWLTR:	0
		WATER PUMP TOTAL:	0

Additional LTR

Operator: email: phone #:

Operator: email: phone #:

Company Man: email: phone #:

TIME	TBG	CSG	CHOKE	INJ PRESS	INJ GAS	BB Gas	Cum Gas Meter	MCFHr	Spot MCFD	STATIC	BOPH	BOPD	CBO	BWPH	BWPD	CBLWR	BLWLTR	Comments
Begin																	0	
6:00am								0				0	0		0	0	0	
7:00am								0				0	0		0	0	0	
8:00am								0				0	0		0	0	0	
9:00am								0				0	0		0	0	0	
10:00am								0				0	0		0	0	0	
11:00am								0				0	0		0	0	0	
12:00pm								0				0	0		0	0	0	
1:00pm								0				0	0		0	0	0	
2:00pm								0				0	0		0	0	0	
3:00pm								0				0	0		0	0	0	
4:00pm								0				0	0		0	0	0	
5:00pm								0				0	0		0	0	0	
6:00pm								0				0	0		0	0	0	
7:00pm								0				0	0		0	0	0	
8:00pm								0				0	0		0	0	0	
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1:00am								0				0	0		0	0	0	
2:00am								0				0	0		0	0	0	
3:00am								0				0	0		0	0	0	
4:00am								0				0	0		0	0	0	
5:00am								0				0	0		0	0	0	