KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1064419

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 # 111008

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: Karen Sharp
Phone: (405) 429-5745

Well Information:

API No. 15 - 15-077-21746-01-00
Spot Description:
SW SE SW SW Sec. 20 Twp. 34 S. R. 6 ☐ East ☑ West
200 Feet from ☐ North / ☑ South Line of Section
760 Feet from ☐ East / ☑ West Line of Section
County: Harper
Lease Name: Britt Well #: 1-20H

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

Formation: Mississippi Interval: 4686-4714 Estimated BTU Value: 1100

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

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

☑ **C. Distance to the nearest pipeline or gathering facility:** 9.5

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.

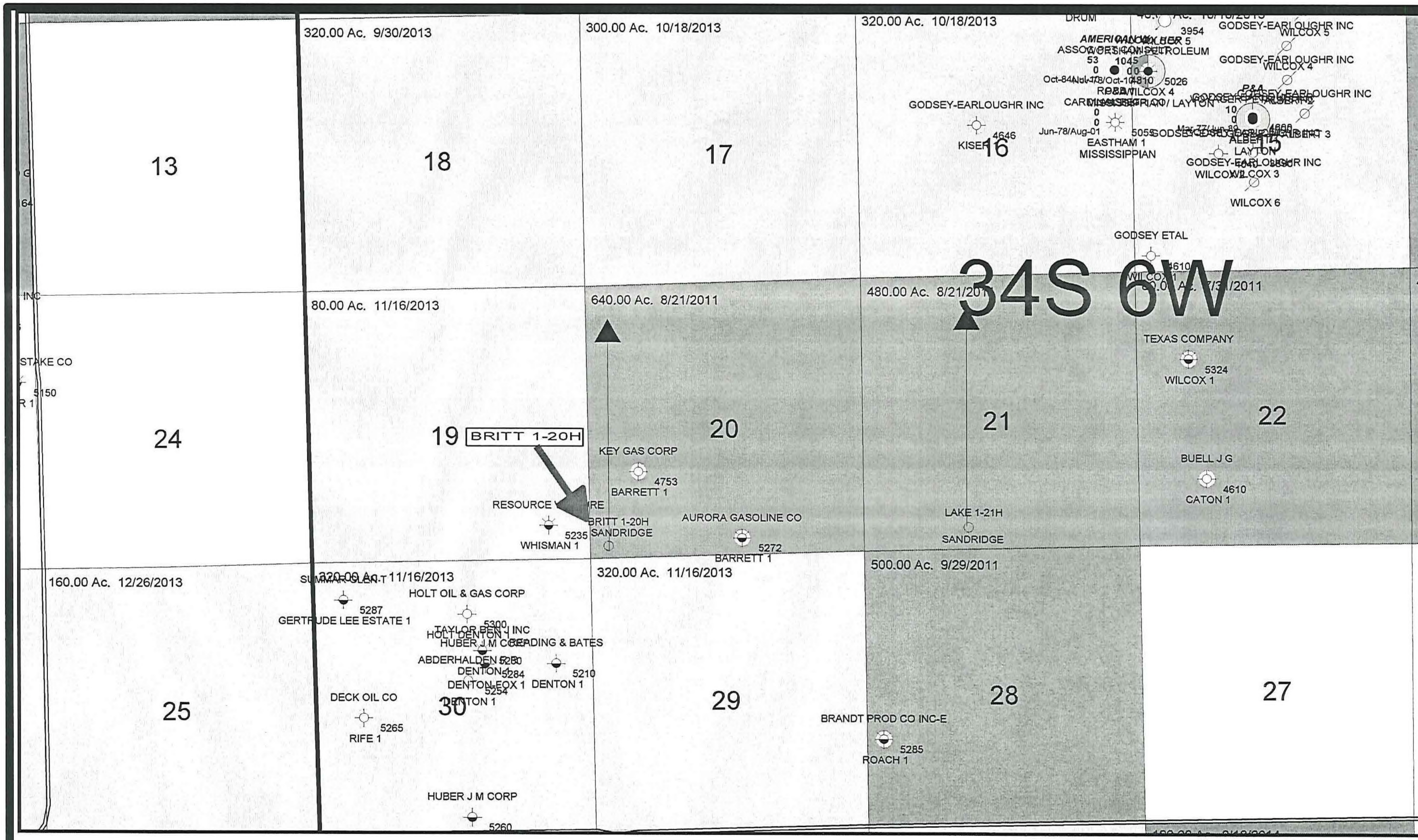
KCC Office Use Only

☐ Denied ☐ Approved Permit Expires: 05/01/2012
15-Day Periods Ends: 11/02/2011
Approved By: Jim Hemmen 11/03/2011 Date: 11/03/2011

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



PRODUCING FORMATION LEGEND

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

N

WELL POSTING LEGEND

SandRidge ENERGY

Waldron

Harper County, Kansas

Britt 1-20H, 20-T34S-R6W

Production Map

Britt 1-20H Prod.gmp

Date: 16 May, 2011	Geol: T. Alcorn

SANDRIDGE
THE POWER OF US™

October 11, 2011

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

Re: Temporary Flare Permit
Britt 1-20H
API 077-21746-01-00
Harper County, Kansas
Sec 20, T34S, R6W

Dear Mr. Bond:

SandRidge has filed an online application for 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. Please find attached the report that our flow hands are responsible for maintaining every day they are on location. You will see that all pressures, rates, and volumes are closely monitored and recorded. These records are kept on file indefinitely.

The Britt 1-20H has recently reached it's TD, and we anticipate the completion process to begin October 21st. We would like to have a permit to flare in place effective October 29th. Our plans are to have this well tied into a sales line; however, there is currently no line in place and it will take some time to complete as the nearest line with capacity belongs to White Cliff and is 9.5 miles from location. We would like to be able to bring this well online as soon as our completion work is done. Flaring would be necessary until the sales line is in place. Because of the long lay and the resulting high cost of installation, we would like to get a test (gas) on the well before beginning the project.

If there is any additional information SandRidge can provide at this time to help in the processing and approval of our flare permit, please feel free to contact me. We appreciate any consideration you may afford us in our endeavor.

Sincerely,

Forrest Walton /fs

Forrest Walton
Sr. Completions Engineer
SandRidge Energy

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
Additional LTR		BLWLTR:	0
		WATER PUMP TOTAL:	0

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	
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4:00am								0				0	0		0	0	0	
5:00am								0				0	0		0	0	0	

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

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: Karen Sharp
Phone: (405) 429-5745
CONTRACTOR: License # 34464
Name: Lariat Services, Inc.
Wellsite Geologist: Tammy Alcorn
Purchaser: NCRA

Designate Type of Completion:

- [x] New Well [ ] Re-Entry [ ] Workover
- [x] Oil [ ] WSW [x] SWD [ ] SIOW
- [ ] Gas [ ] D&A [ ] ENHR [ ] SIGW
- [ ] OG [ ] GSW [ ] Temp. Abd.
- [ ] CM *(Coal Bed Methane)*
- [ ] Cathodic [ ] Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: Original Total Depth:

- [ ] Deepening [ ] Re-perf. [ ] Conv. to ENHR [ ] Conv. to SWD
- [ ] Conv. to GSW
- [ ] Plug Back: Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

09/12/2011 (Spud Date or Recompletion Date) | 10/01/2011 (Date Reached TD) | (Completion Date or Recompletion Date)

API No. 15 - 15-077-21746-01-00
Spot Description:
SW - SE - SW - SW Sec. 20 Twp. 34 S. R. 6 [ ] East [x] West
200 Feet from [ ] North / [x] South Line of Section
760 Feet from [ ] East / [x] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[x] NE [ ] NW [ ] SE [x] SW
County: Harper
Lease Name: Britt Well #: 1-20H
Field Name:
Producing Formation: Mississippi Lime
Elevation: Ground: 1313 Kelly Bushing: 1324
Total Depth: 9060 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 747 Feet
Multiple Stage Cementing Collar Used? [ ] Yes [x] No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: ppm Fluid volume: bbls
Dewatering method used:
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. [ ] East [ ] West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature:
Title: Date:

KCC Office Use ONLY

- [ ] Letter of Confidentiality Received
  Date:
- [ ] Confidential Release Date:
- [ ] Wireline Log Received
- [ ] Geologist Report Received
- [ ] UIC Distribution

ALT [ ] I [ ] II [ ] III Approved by: Date:

*

Side Two

Operator Name: SandRidge Exploration and Production LLC Lease Name: Britt Well #: 1-20H

Sec. 20 Twp. 34 S. R. 6 ☐ East ☑ West County: Harper

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken *(Attach Additional Sheets)*	☐ Yes	☑ No	
Samples Sent to Geological Survey	☐ Yes	☑ No	
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☑ Yes	☐ No	
Electric Log Submitted Electronically *(If no, Submit Copy)*	☐ Yes	☑ No	

List All E. Logs Run:
Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Oswego Limestone	4260	
Cherokee Group	4563	
Verdigris Limestone	4614	
Mississippi Lime	4940	

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	9.63	36	747	J-55	50	
Intermediate	8.75	7	29	5190	N-80	250	
Prod Liner	6.03	4.5	11.6	9055	P-110	450	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
_____
_____

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Britt 1-20H
Doc ID	1064463

All Electric Logs Run

Induction
Gamma Ray
Compensated Neutron/Density
Micro w/PE

DRAFT

SandRidge ENERGY

Current

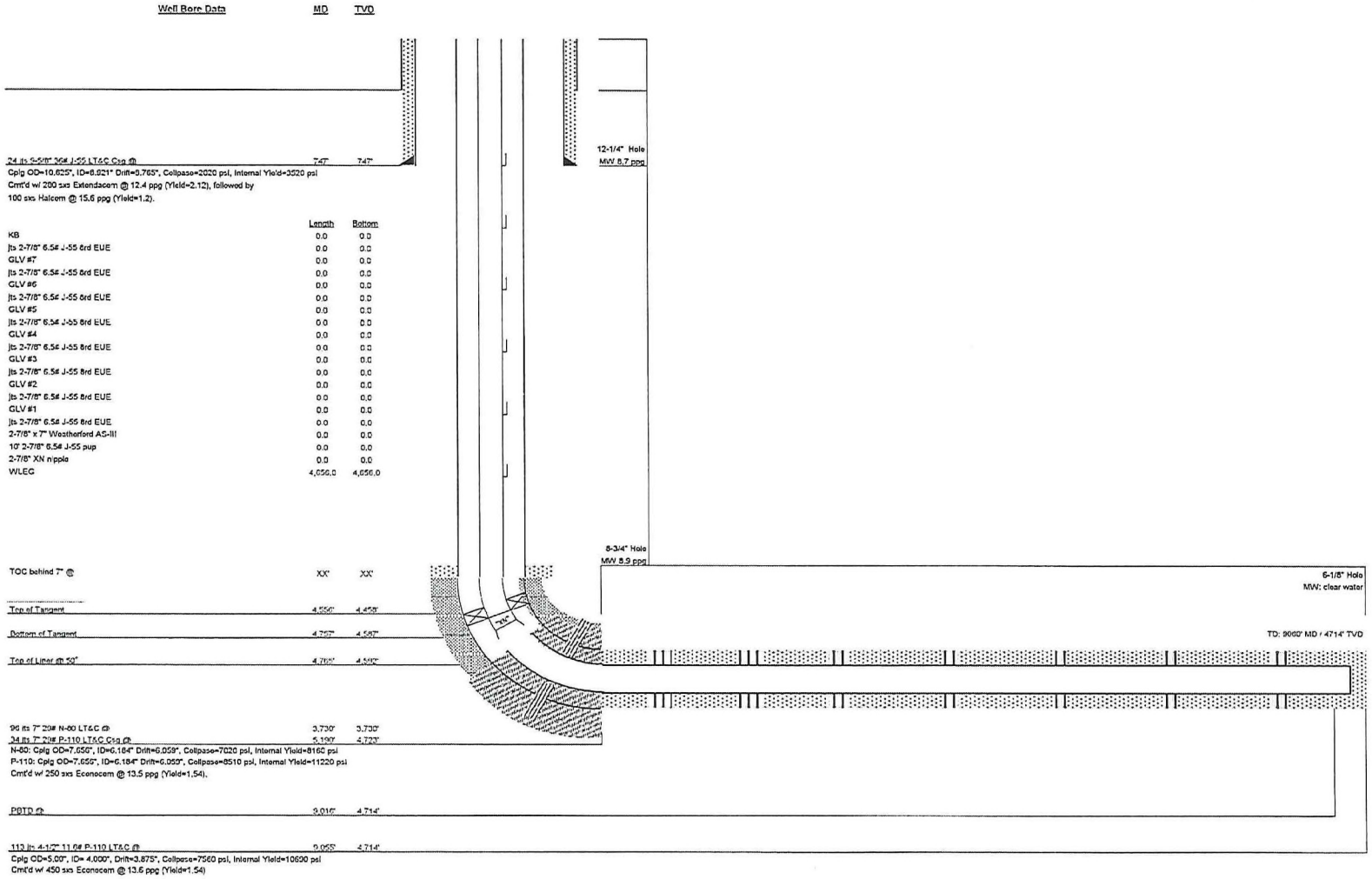
Spud:

Field	Waldron West
County	Harper
State	Kansas
Well	Britt 1-20H
Location	SEC 20, TWP 34S, RGE 6W
KB	1330'
GL	1316'

Wellbore Schematic

15-077-2174601
API No.

Original Completion ☐
Current ☐
Proposed ☒



Forrest Walton
10/11/2011

ThruBit
LOGGING SOLUTIONS

ARRAY INDUCTION GAMMA RAY MEMORY LOG

Company SANDRIDGE ENERGY
Well BRITT 1-20H
Field WALDRON WEST
County HARPER
State KANSAS

Company SANDRIDGE ENERGY
Well BRITT 1-20H
Field WALDRON WEST
County HARPER State KANSAS
Location: API # : 15-077-21746
SHL: 200' FSL & 760' FWL
BHL: 330' FNL & 760' FWL
SEC 20 TWP 34S RGE 6W

Other Services
THRUBIT
PORTAL BIT

Permanent Datum G.L. Elevation
Log Measured From K.B. 14' ABOVE PERM DATUM
Drilling Measured From K.B.

Elevation
K.B. 1330'
D.F. 1330'
G.L. 1316'

Date	2 OCTOBER 2011			
Run Number	ONE			
Depth Driller	9060			
Depth Logger	9026			
Bottom Logged Interval	9016			
Top Log Interval	5185			
Casing Driller	7.0" @ 5190'			
Casing Logger	5185			
Bit Size	6.125			
Type Fluid in Hole	WBM			
Density / Viscosity	8.4 / 27			
pH / Fluid Loss	11.0 / NA			
Source of Sample	MUD PIT			
Rm @ Meas. Temp	0.34 ohms @ 65 degf			
Rmf @ Meas. Temp	0.25 ohms @ 65 degf			
Rmc @ Meas. Temp	0.43 ohms @ 65 degf			
Source of Rmf / Rmc	CALCULATED			
Rm @ BHT	0.16 ohms @ 146 degf			
Time Circulation Stopped	10:45 PM 10-1-2011			
Time Logger on Bottom	11:30 PM 10-1-2011			
Maximum Recorded Temperature	146 degf			
Equipment Number	T005			
Location	OKC, OK			
Recorded By	DENGLER			
Witnessed By	JACKIE KENNEDY	TAMMY ALCORN		

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

SERVICE: HORIZONTAL PUMP DOWN MEMORY BIT DEPTH: 8972 LOG TO: 5185
ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST
LIMESTONE MATRIX, 2.71 g/cc, USED FOR POROSITY MEASUREMENTS
TOOLS RAN WITH DECENTRALIZER AND SWIVEL
TBHV REPRESENTS TOTAL BOREHOLE VOLUME, ft3
ABHV REPRESENTS ANNULAR BOREHOLE VOLUME, ft3, CALCULATED FOR 4.5" CASING
USED RIGMINDER WITH RIGSENSE TO ACQUIRE LOG DEPTH
CORRELATED TO PIPE TALLLY PROVIDED BY CUSTOMER

RIG: KEEN 18
CREW: J. DENGLER, J. HIRSCHLER, R. DENTON

Service Ticket No. 764 API No. 15-077-21746 PGM Ver

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

EQUIPMENT DATA

Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	PS26T	Serial No.	ENP3N	Serial No.	PS41D	Serial No.	PS15R
Model No.	GAMMA RAY	Model No.	NEUTRON	Model No.	DENSITY	Model No.	INDUCTION
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	9026	5185		30	

	GAMMA RAY		NEUTRON		DENSITY		INDUCTION	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	150	30	-10	30	-10	.2	2000

DIRECTIONAL INFORMATION

Maximum Deviation	93.0	deg. @	5743.0	KOP	3782	

ThruBit LOGGING SOLUTIONS

MAIN PASS

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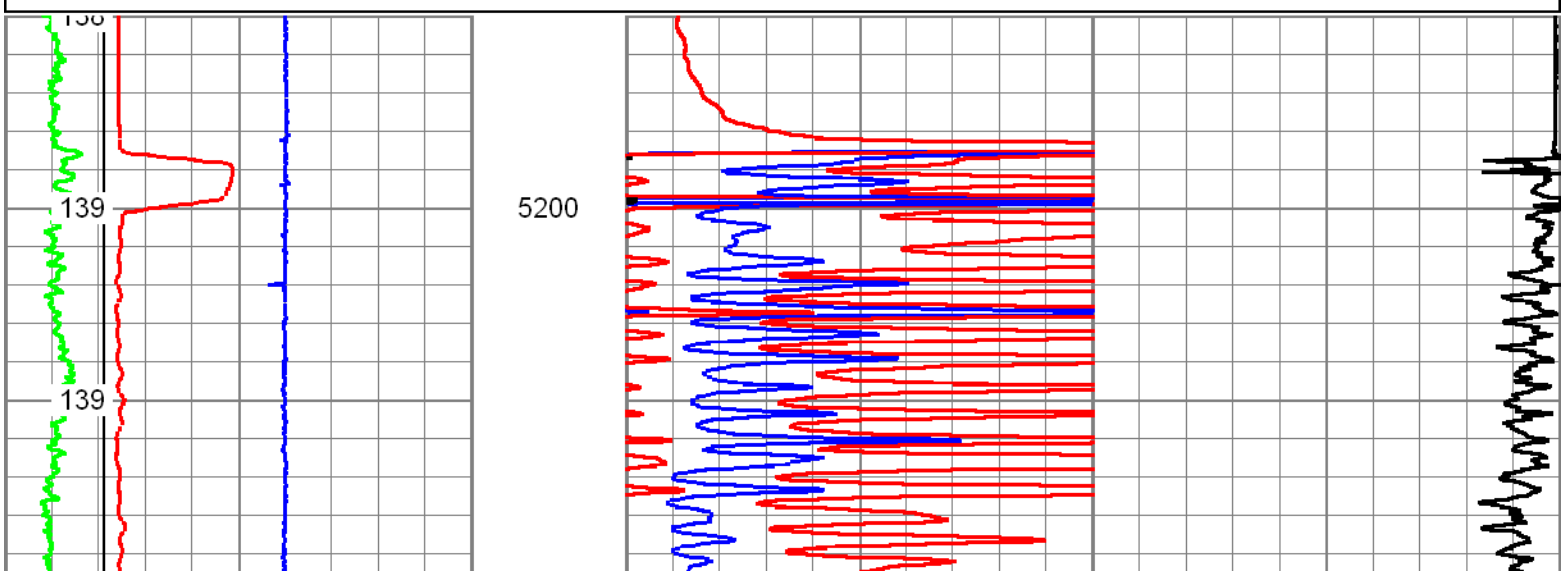
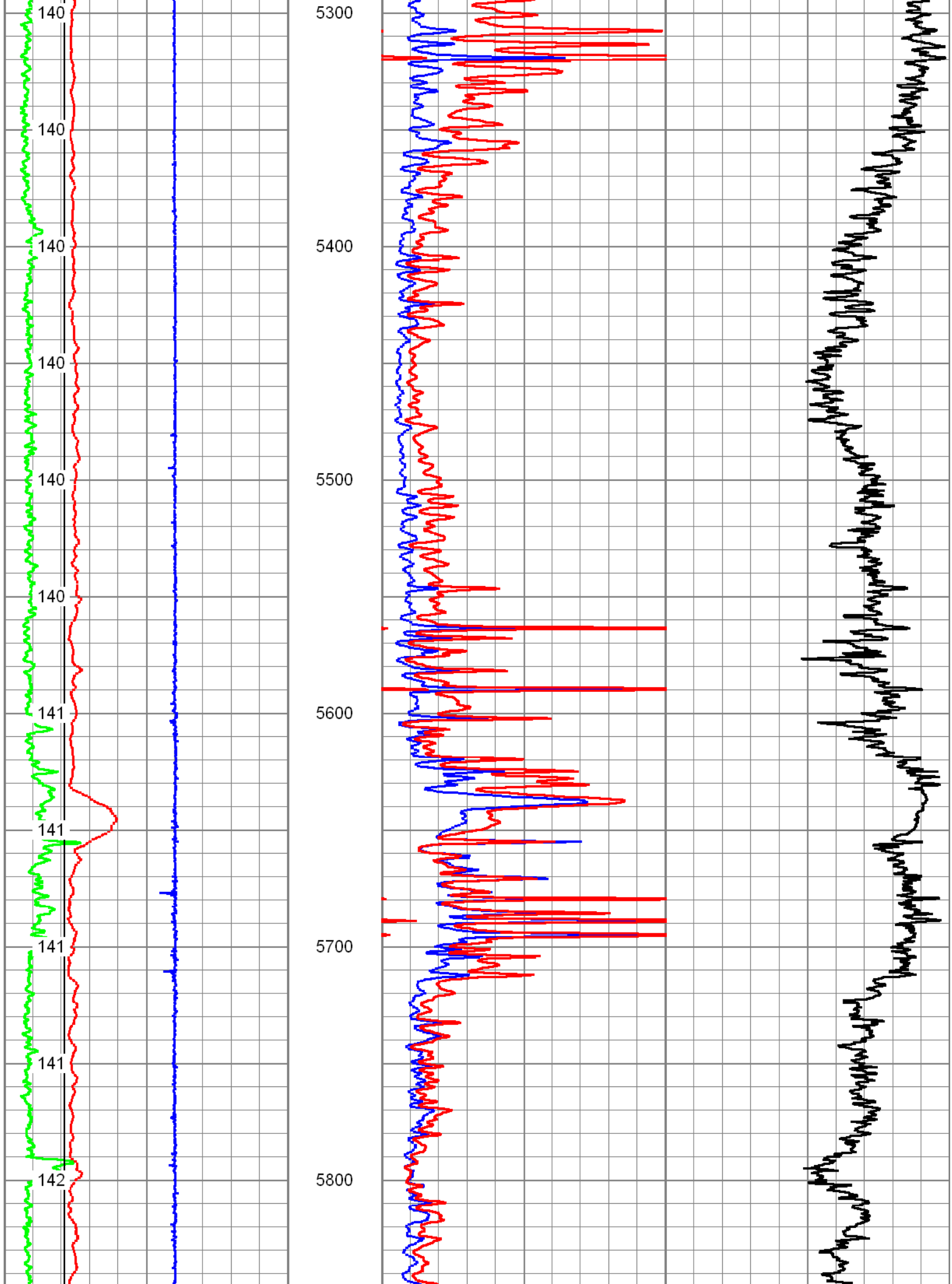
Presentation Format: chespk2r
Dataset Creation: Sun Oct 02 08:01:47 2011
Charted by: Depth in Feet scaled 1:600

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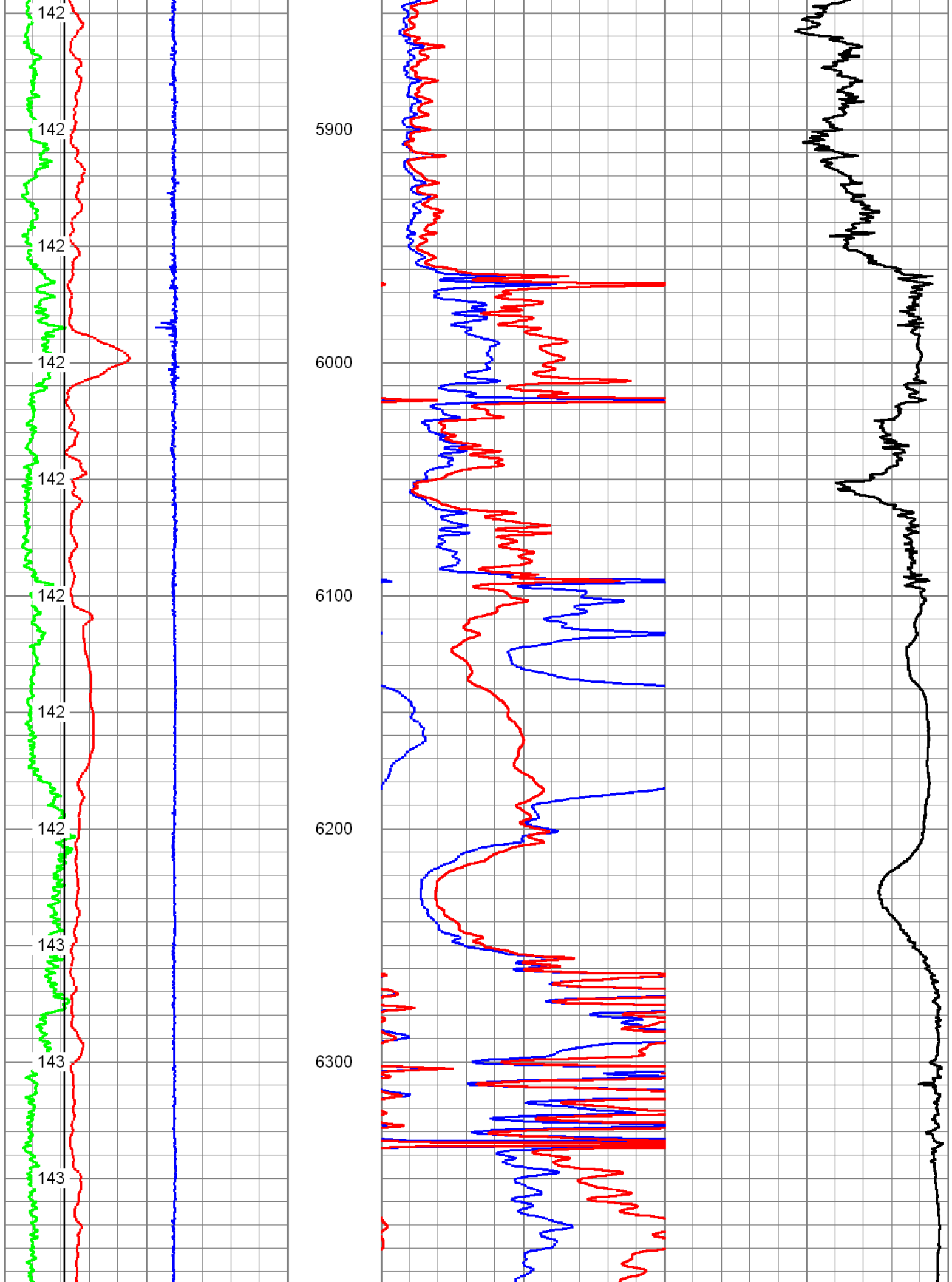
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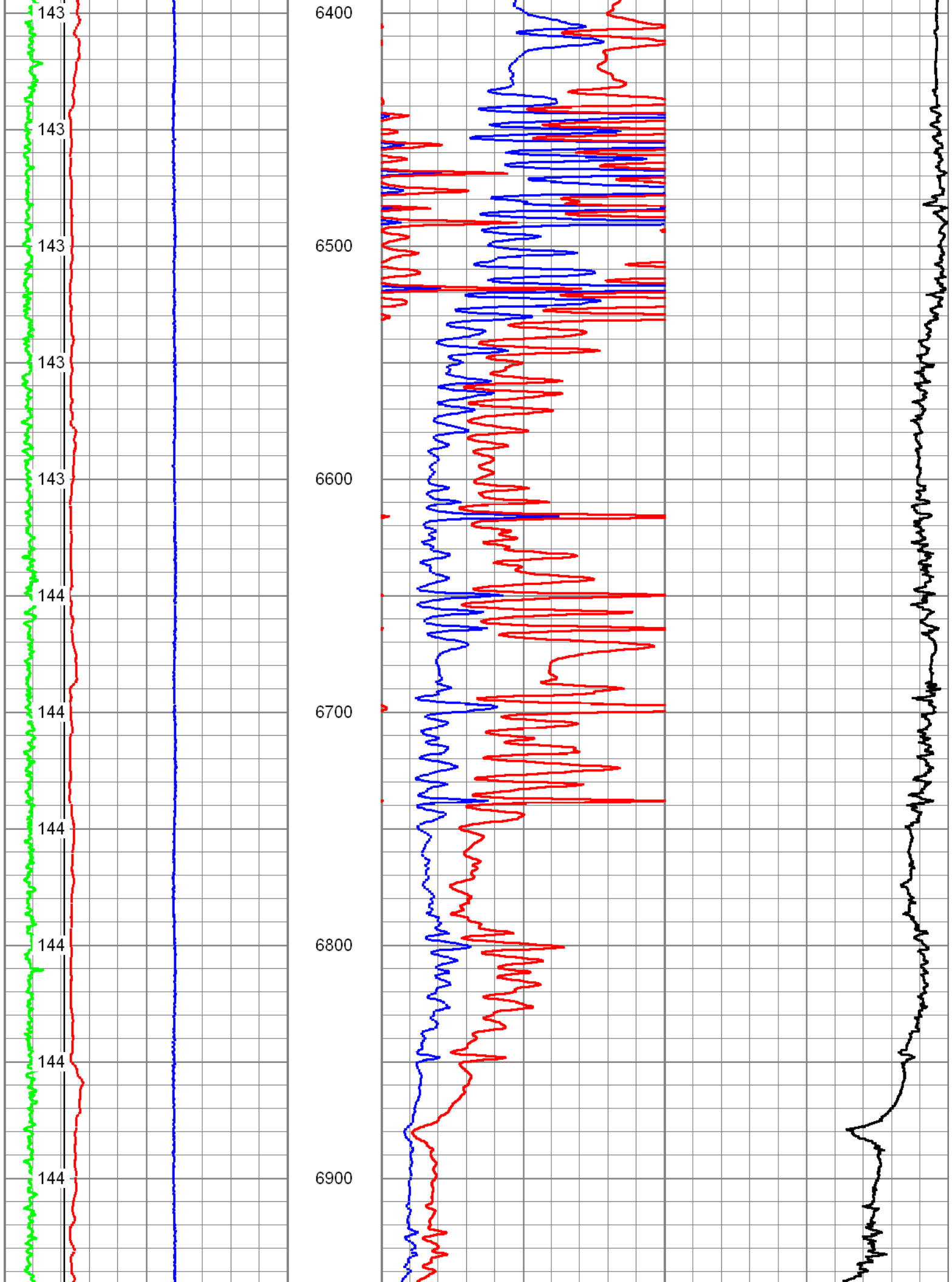
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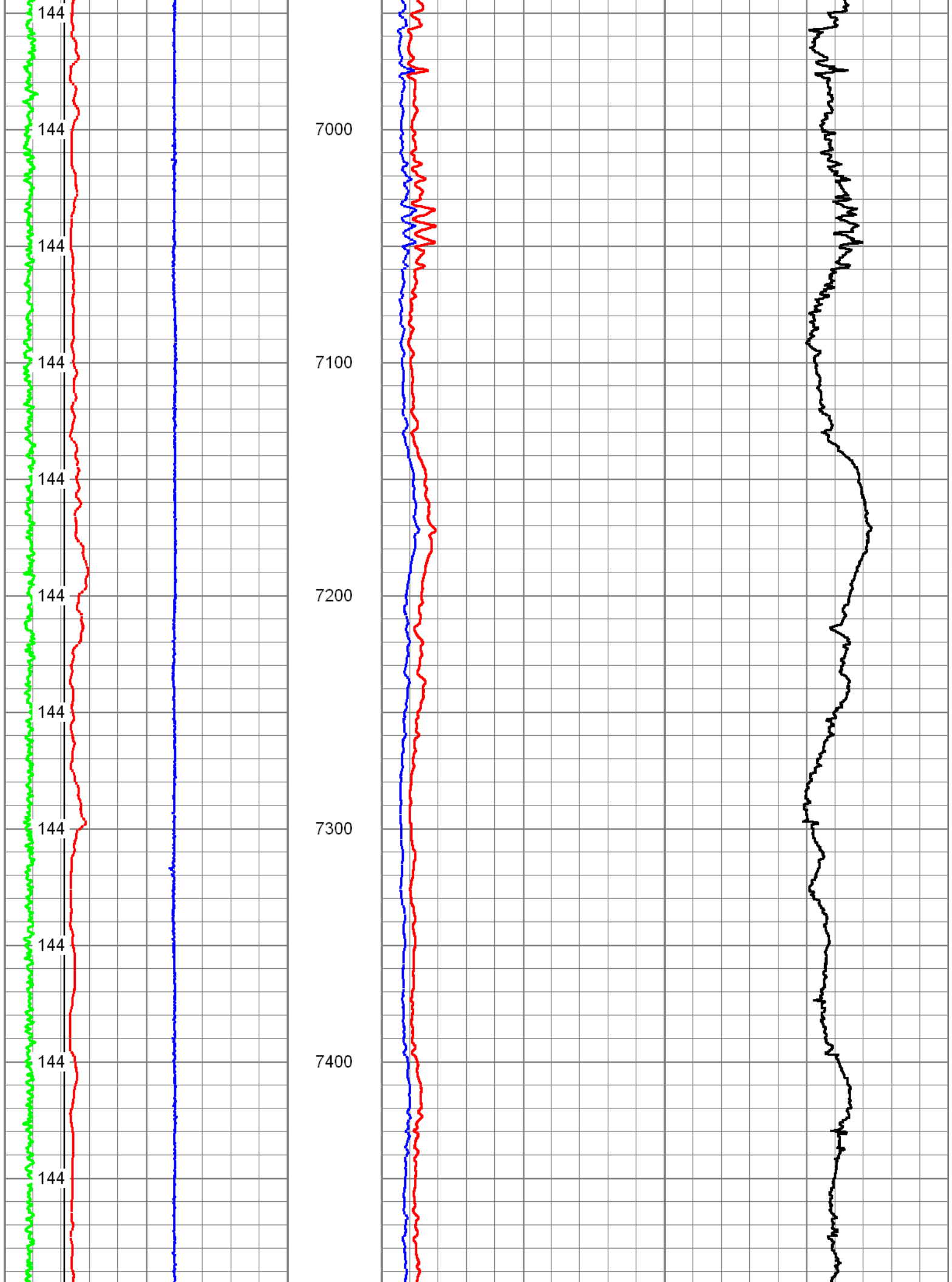
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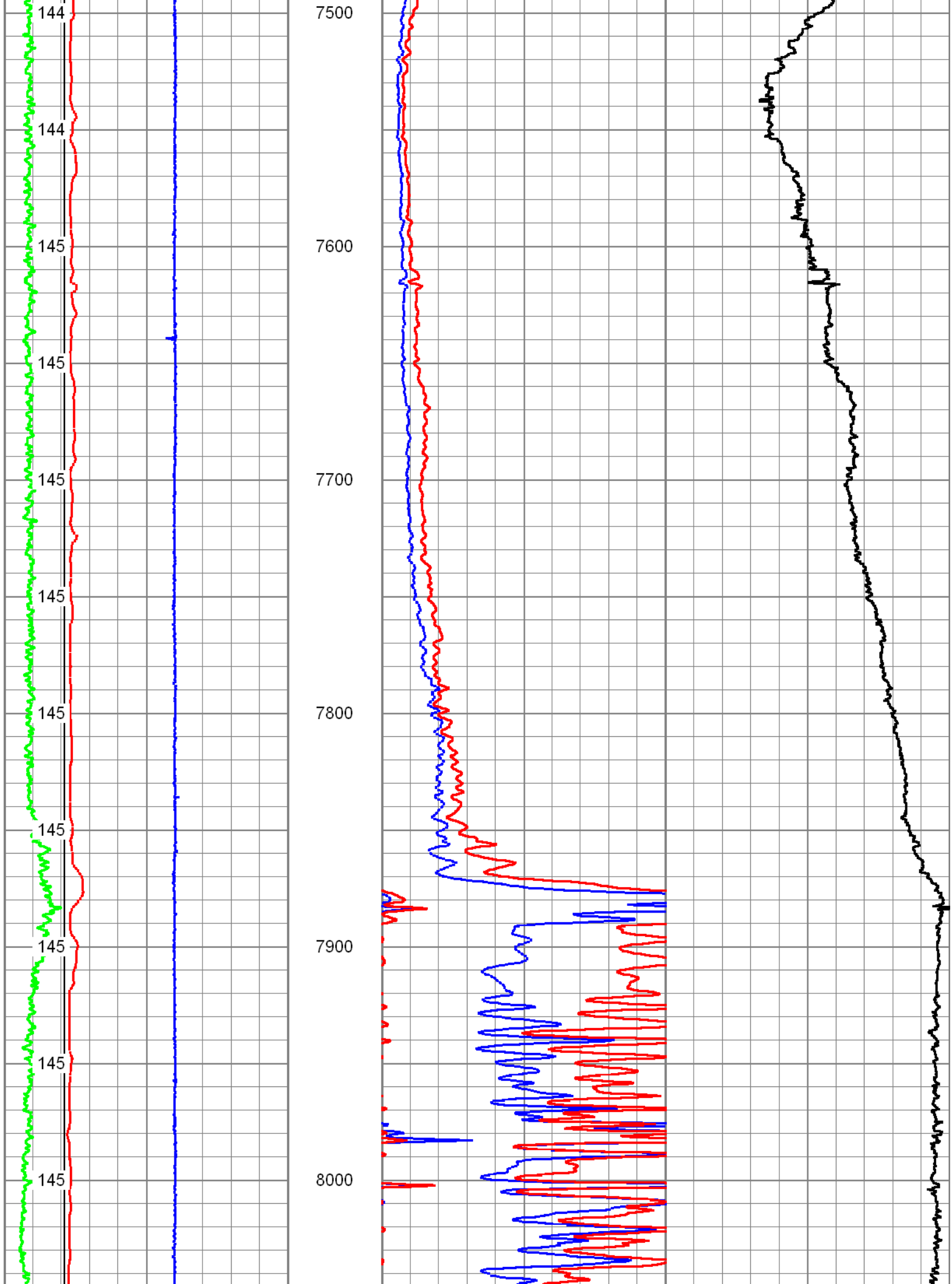
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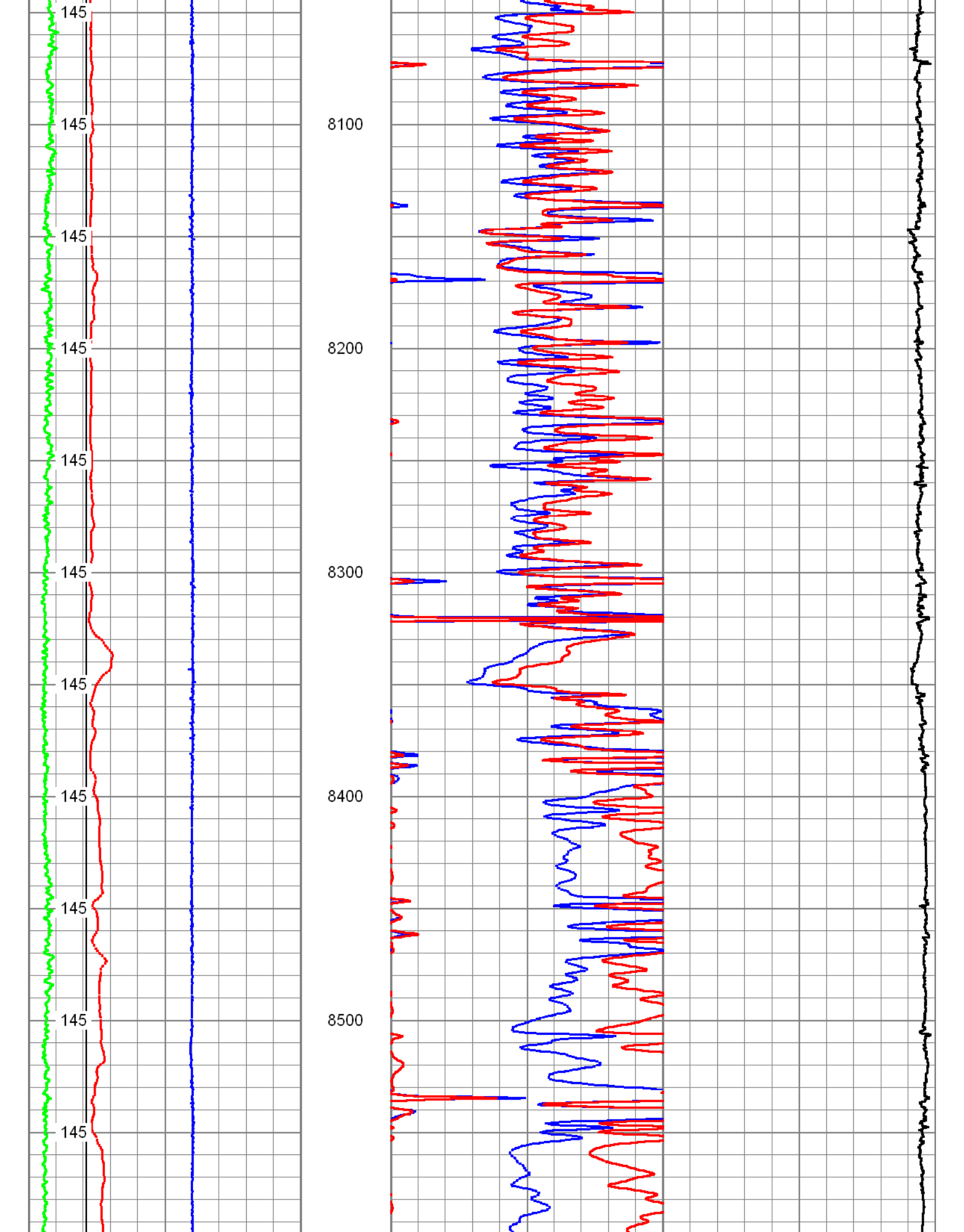
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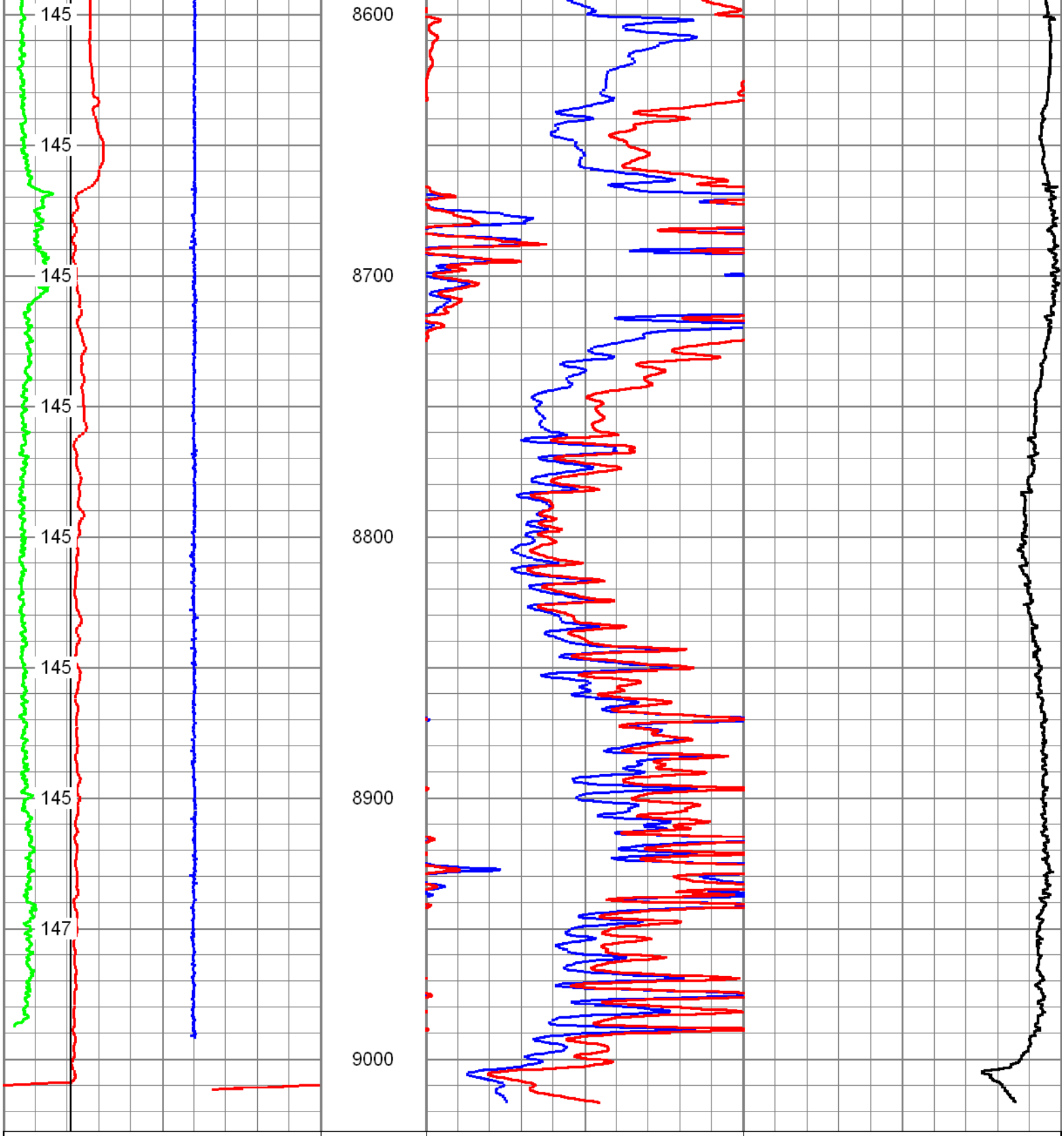
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0 GR (GAPI) 150
4 DCAL (in) 14
-5 ACCY 5
4 BOREID (in) 14
GRTEMP (degF)
50 20in 2ft Res (Ohm-m) 500
50 90in 2ft Res (Ohm-m) 500
1000 DEEP COND (Ohm-m) 0
0 20in 2ft Res (Ohm-m) 50
0 90in 2ft Res (Ohm-m) 50

ThruBit
LOGGING SOLUTIONS

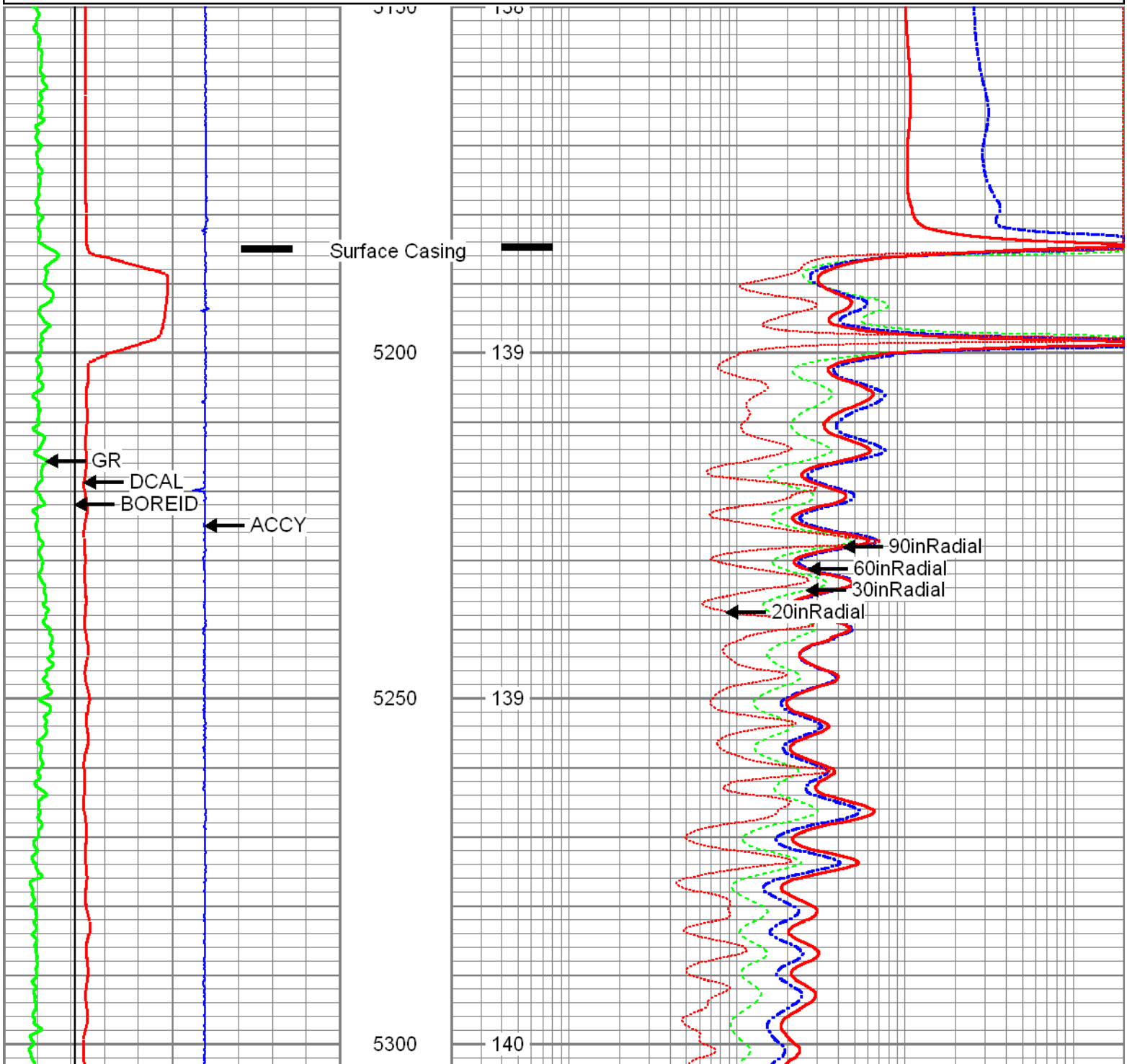
MAIN PASS

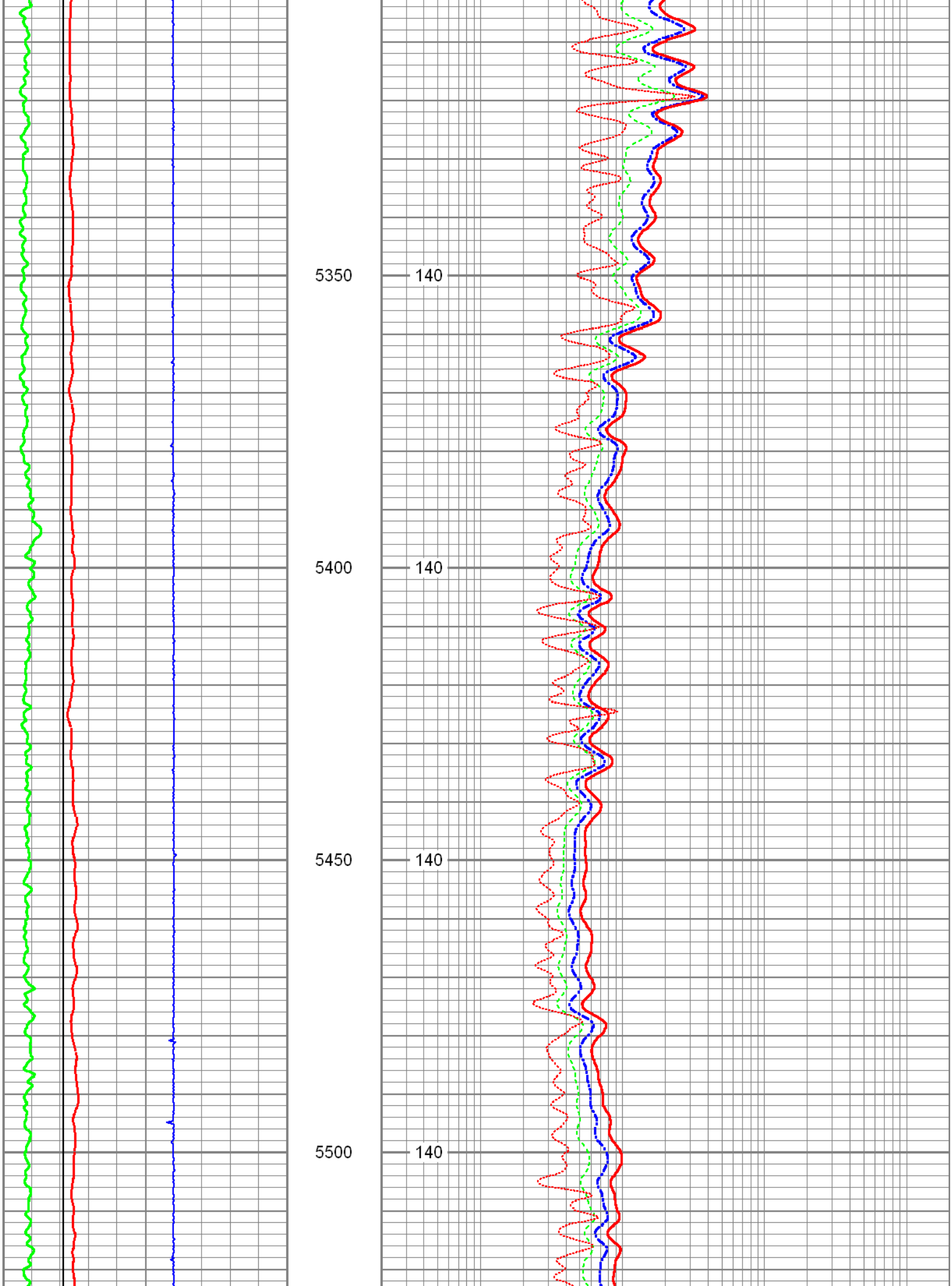
Database File:	sandridge_britt_mem.db
Dataset Pathname:	proc1/pass1.2
Presentation Format:	CHESPK~3
Dataset Creation:	Sun Oct 02 08:01:47 2011
Charted by:	Depth in Feet scaled 1:240

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

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

GRTEMP (degF)

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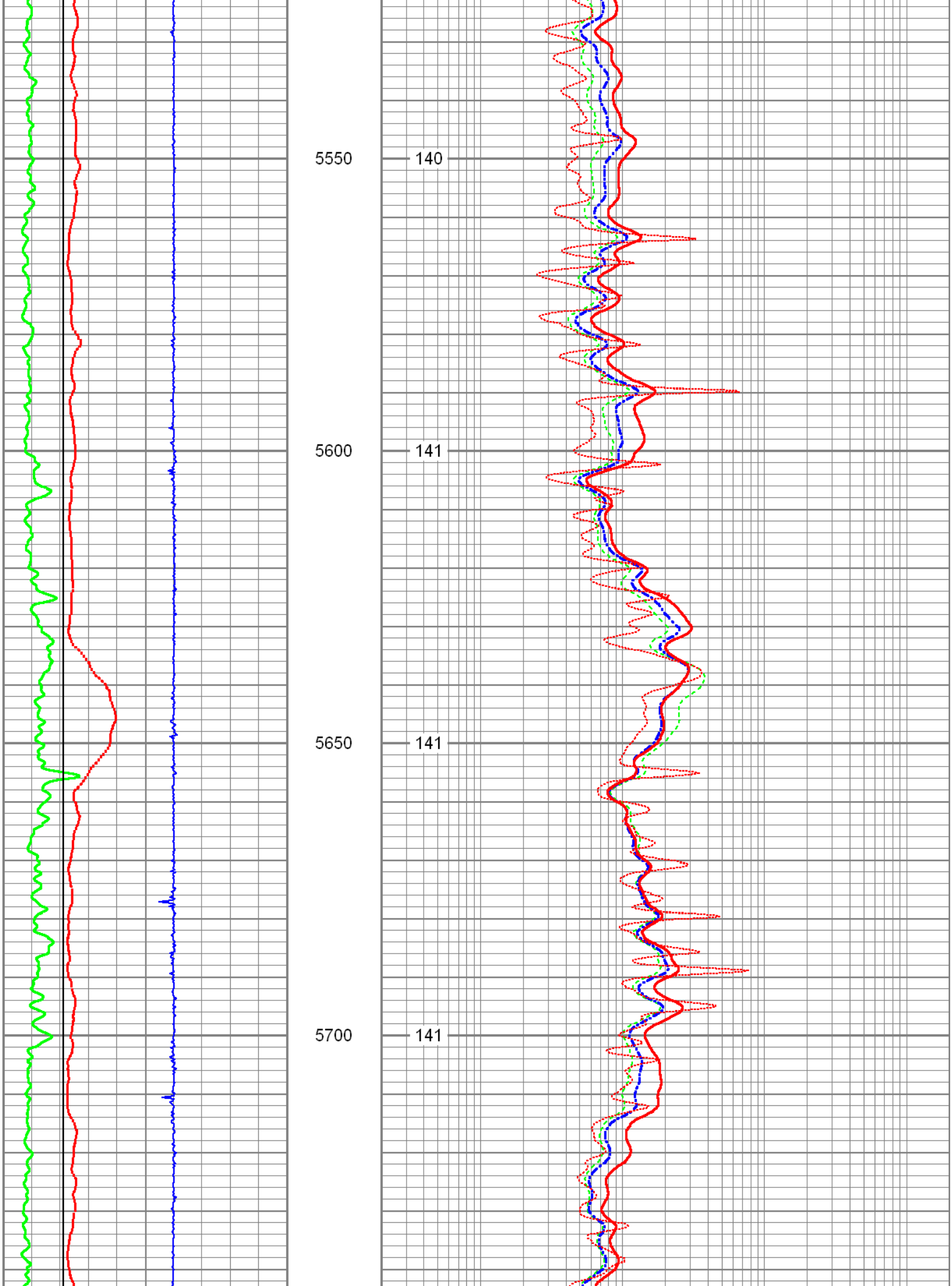
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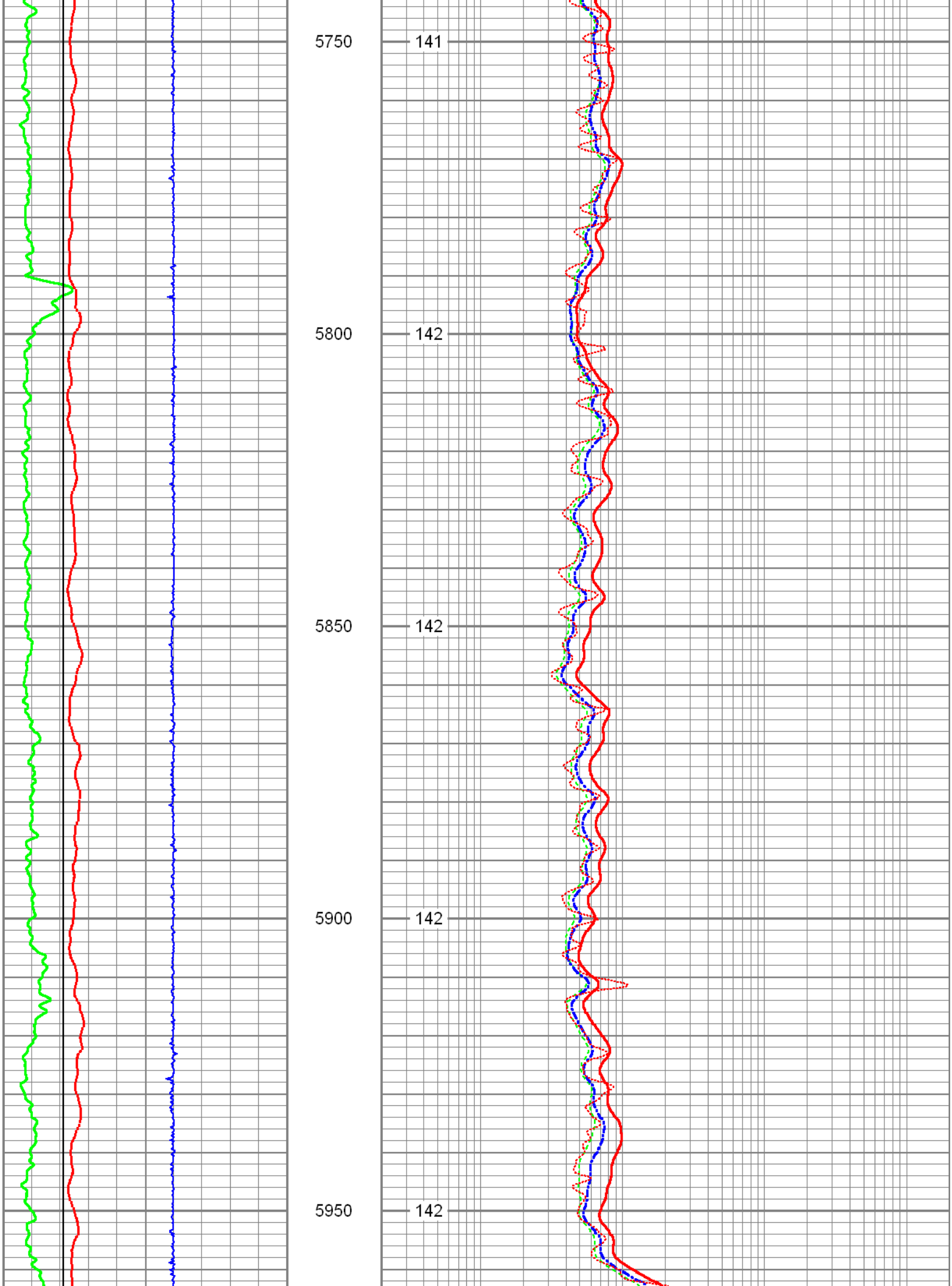
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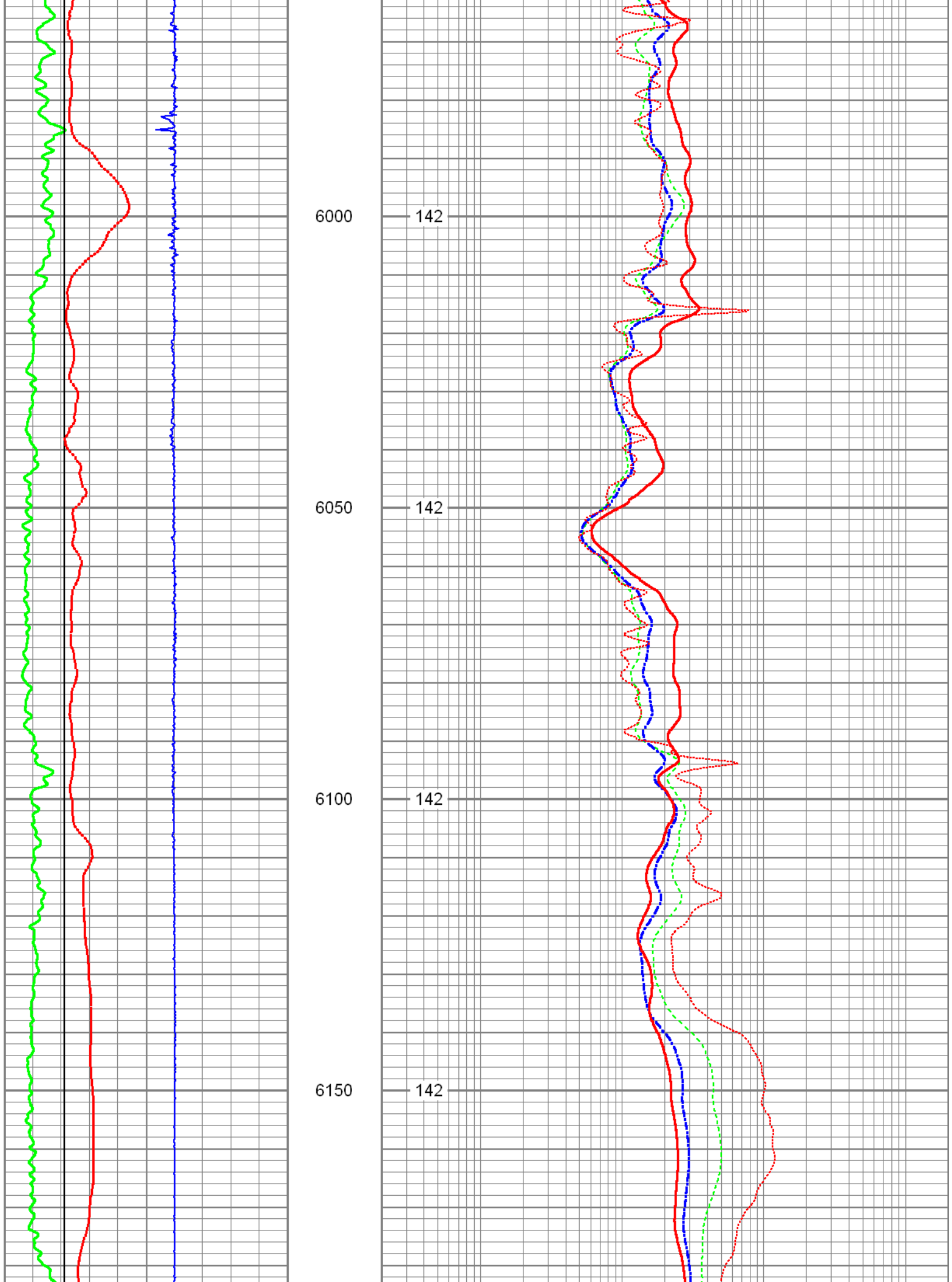
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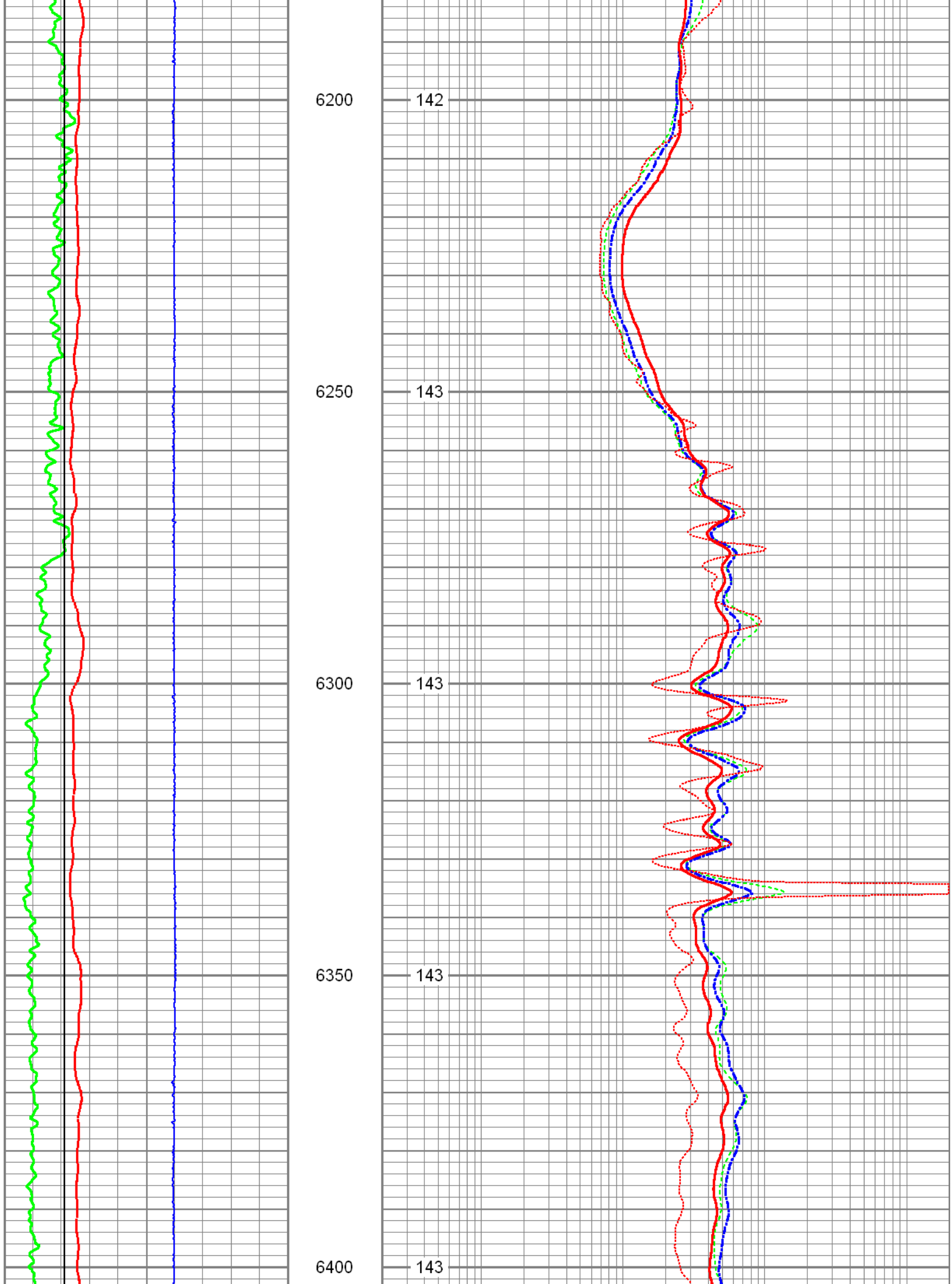
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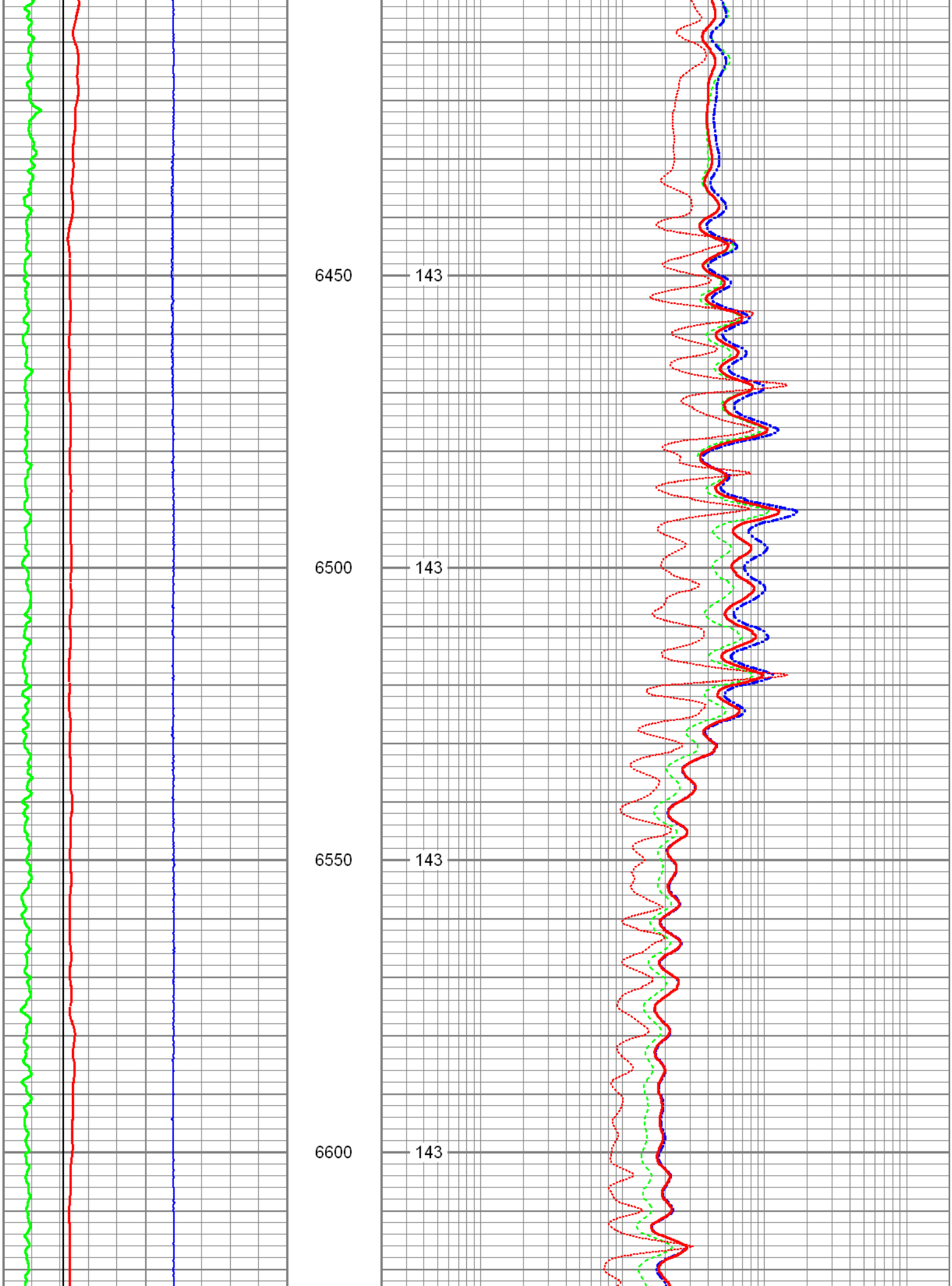
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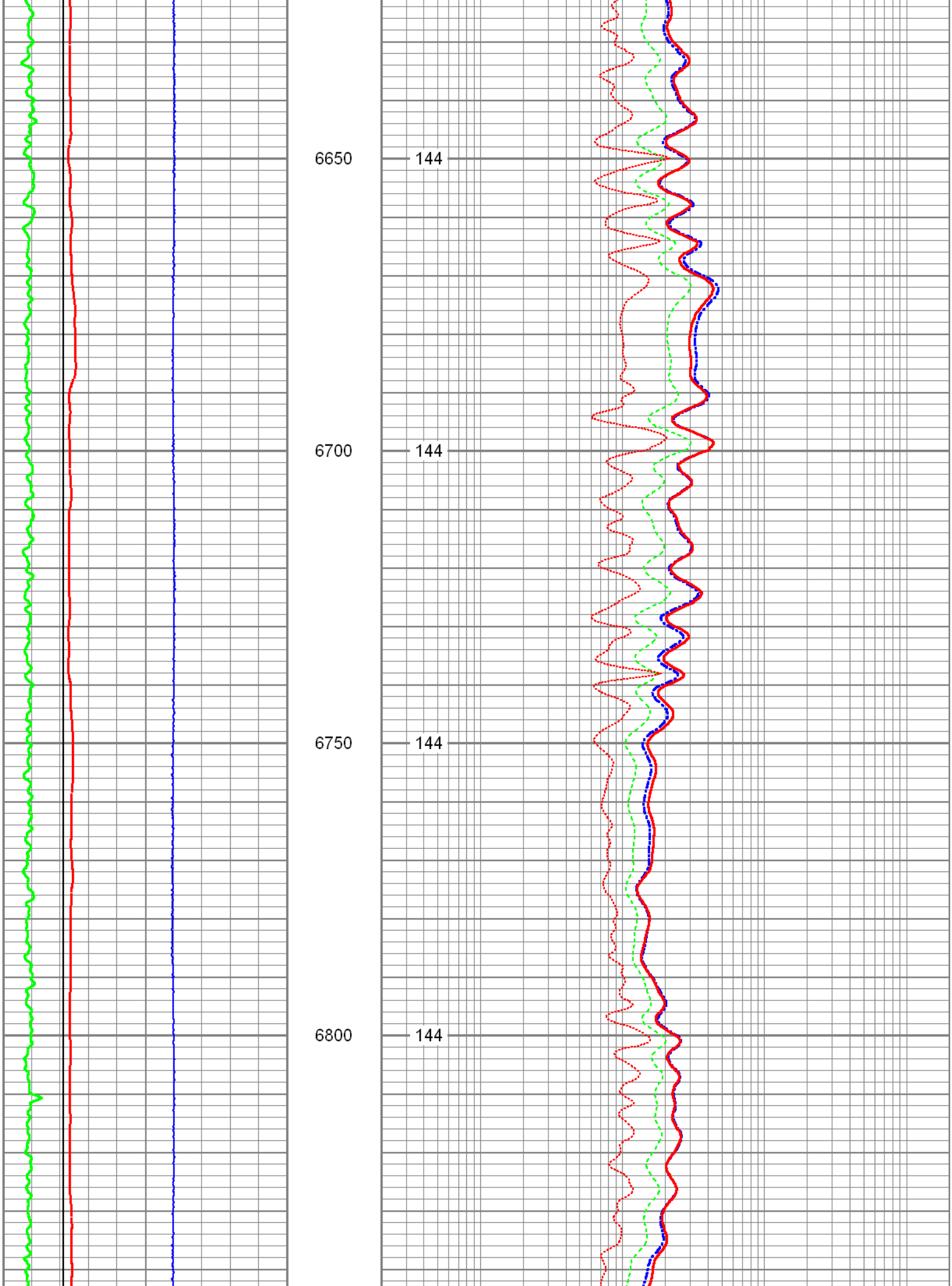
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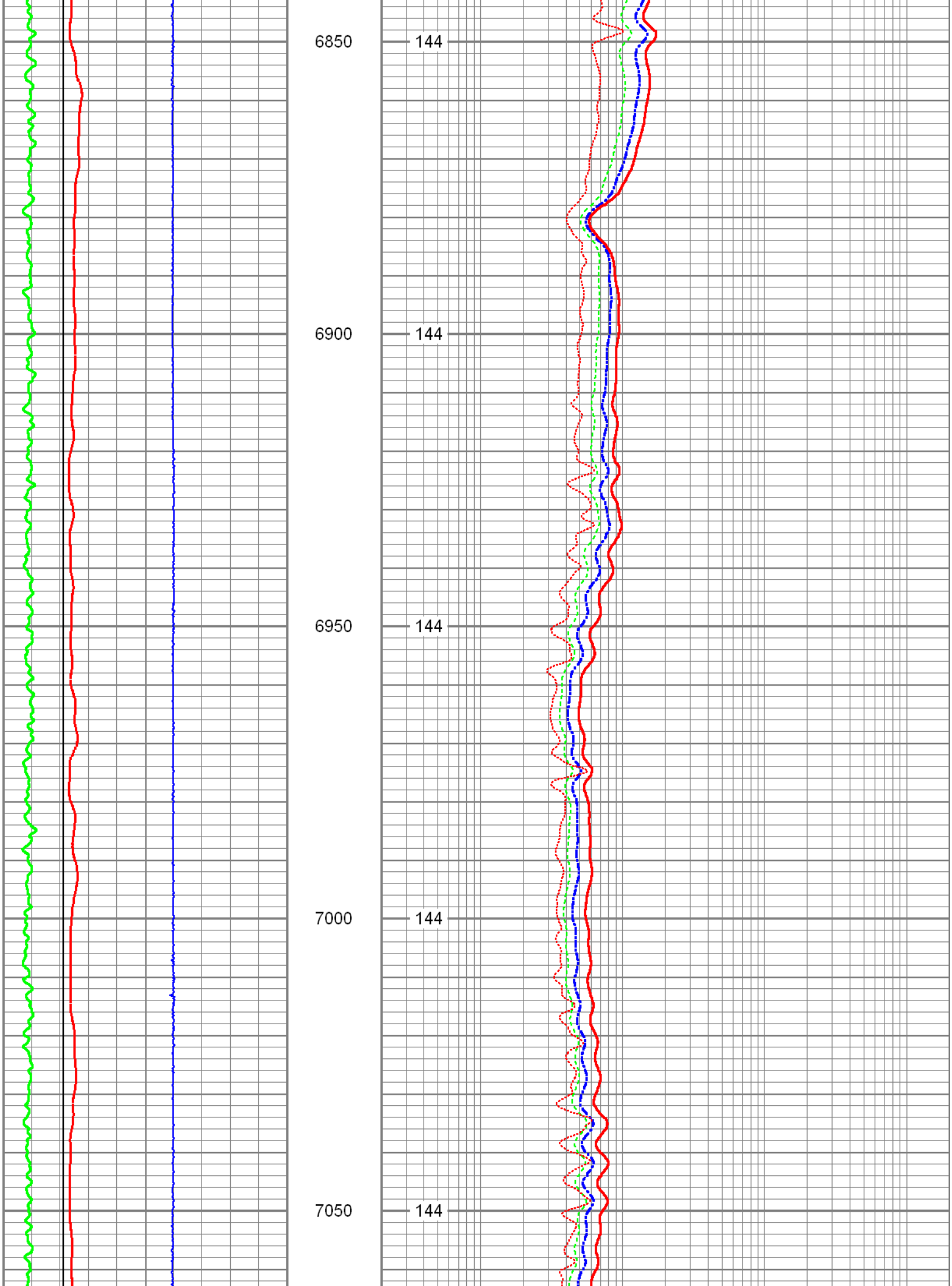
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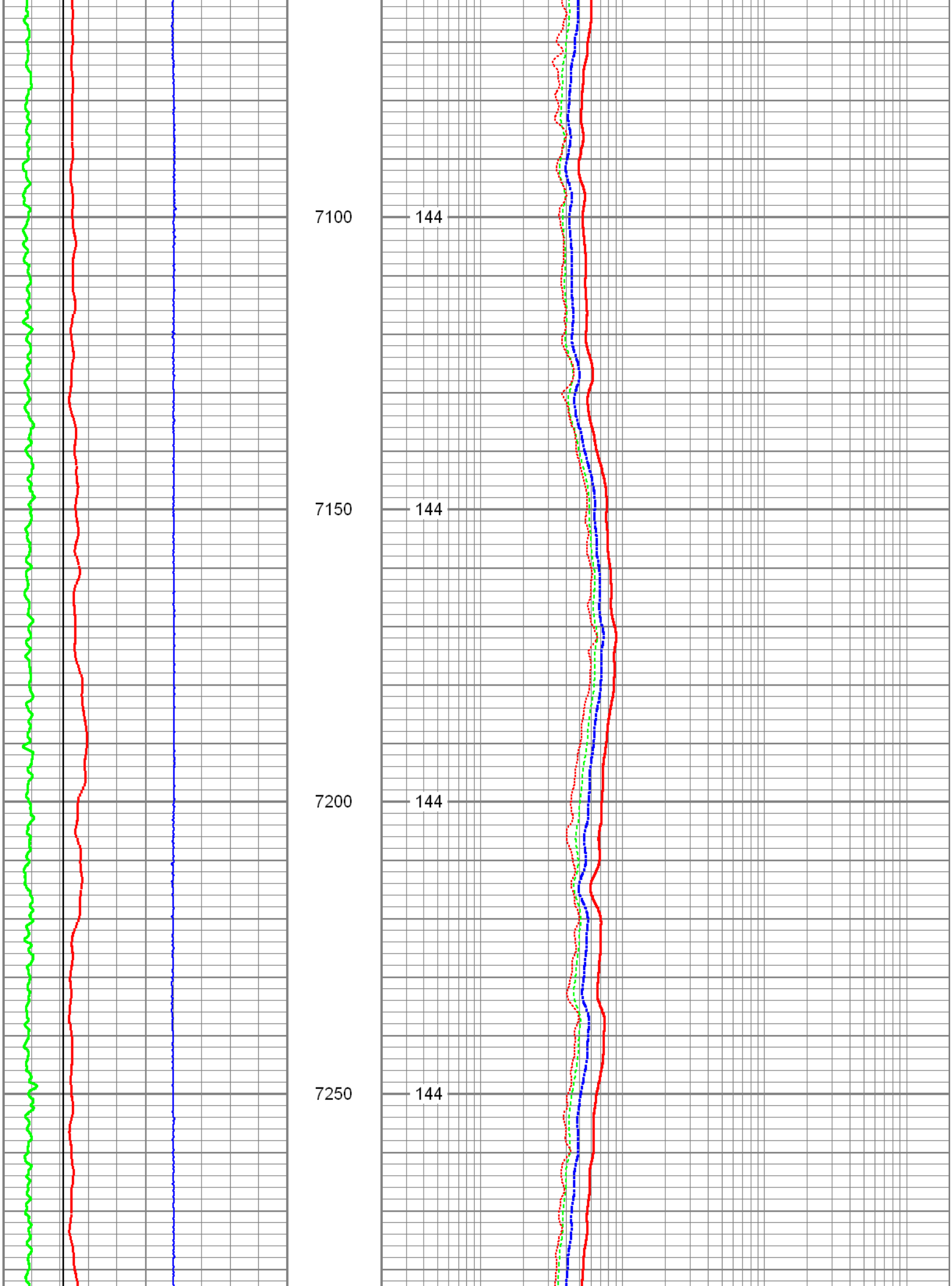
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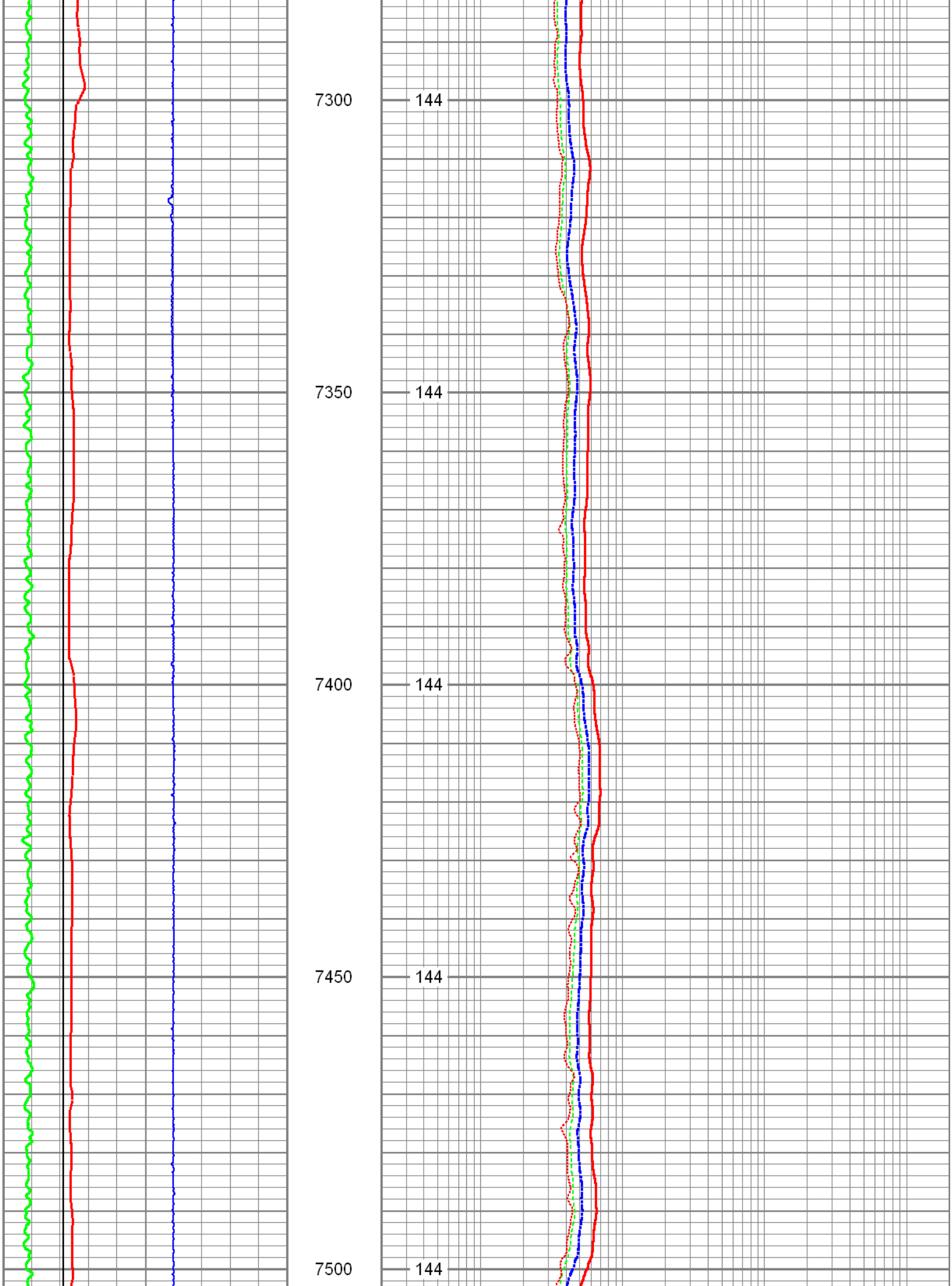
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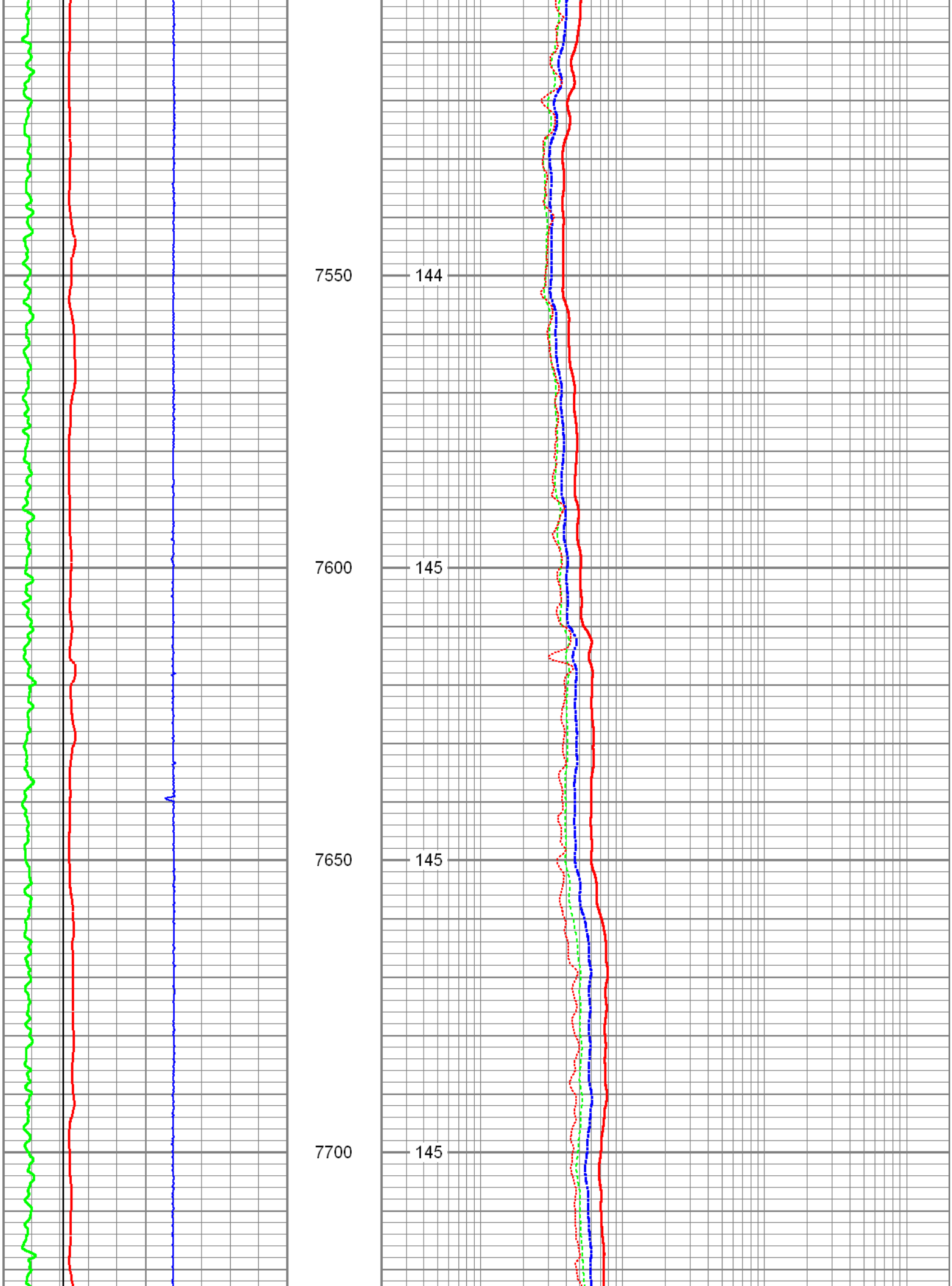
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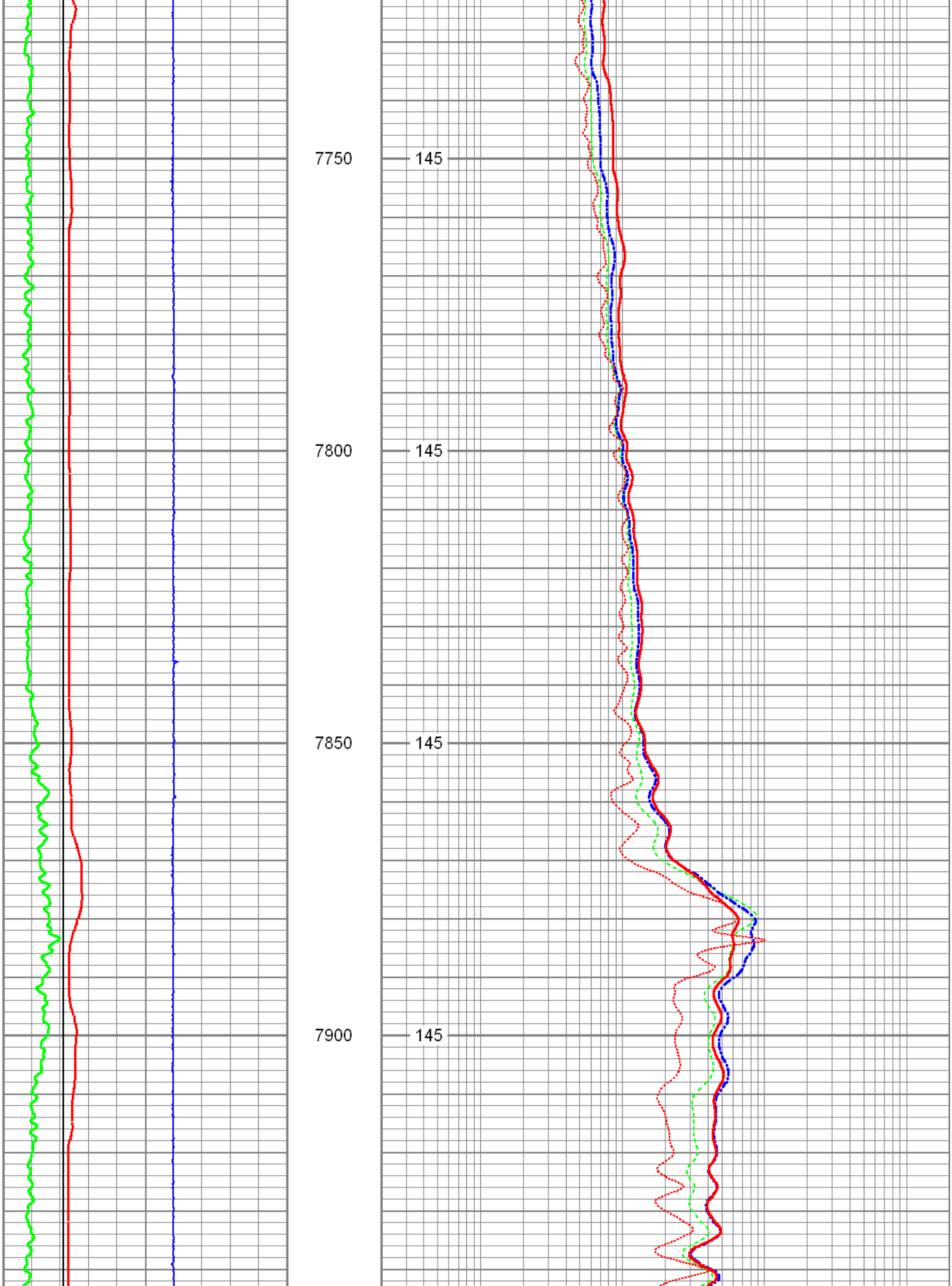
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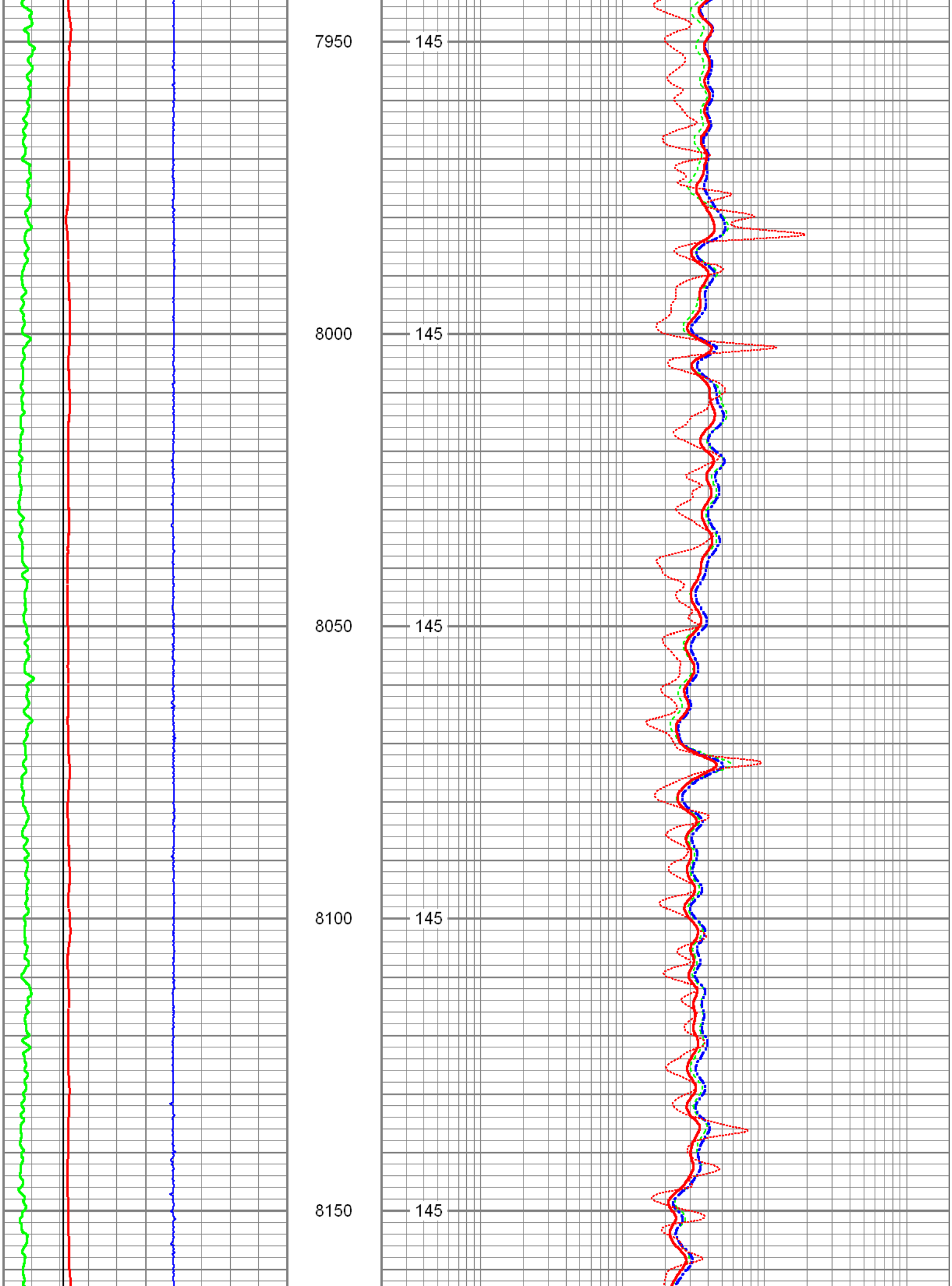
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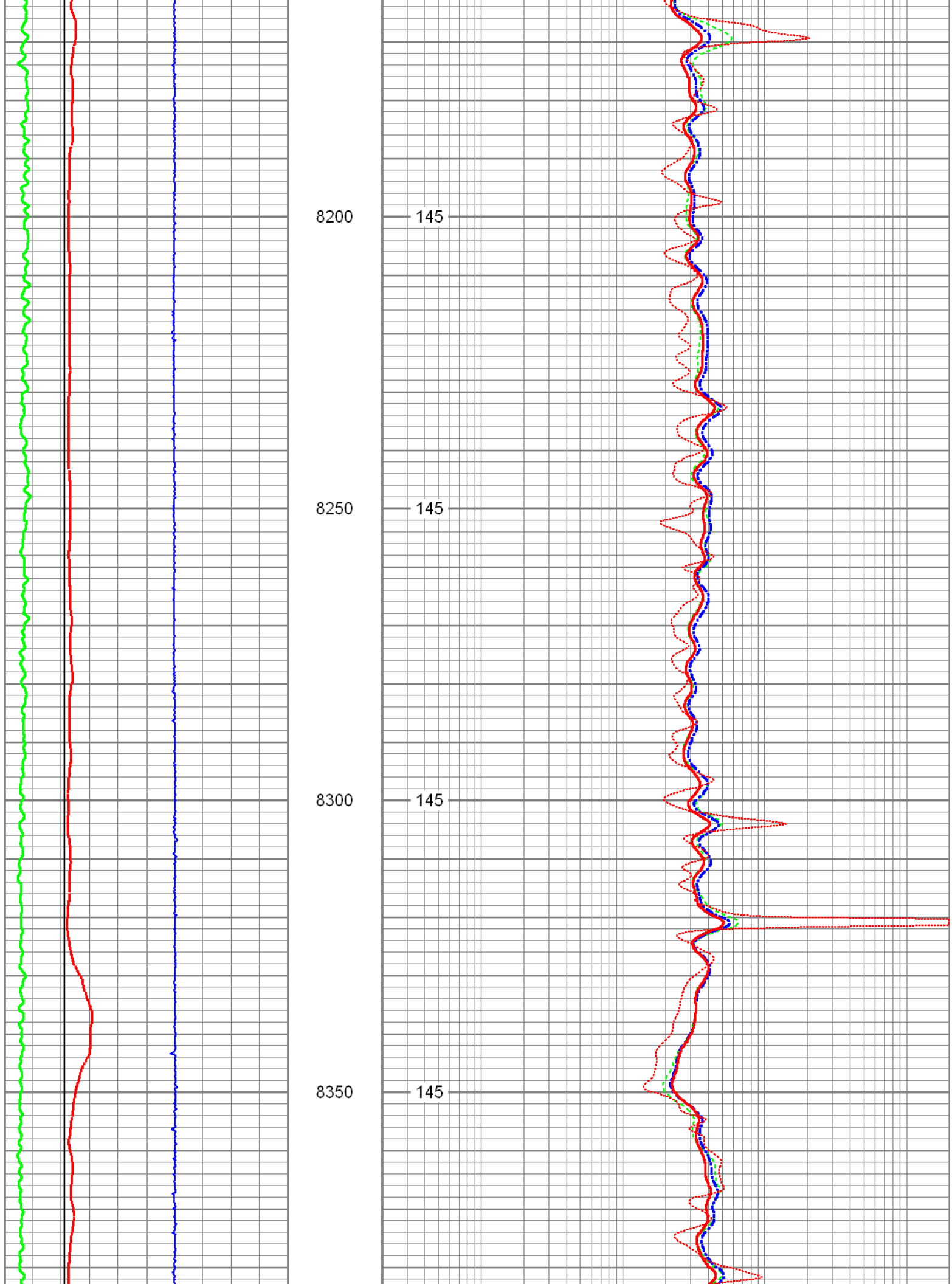
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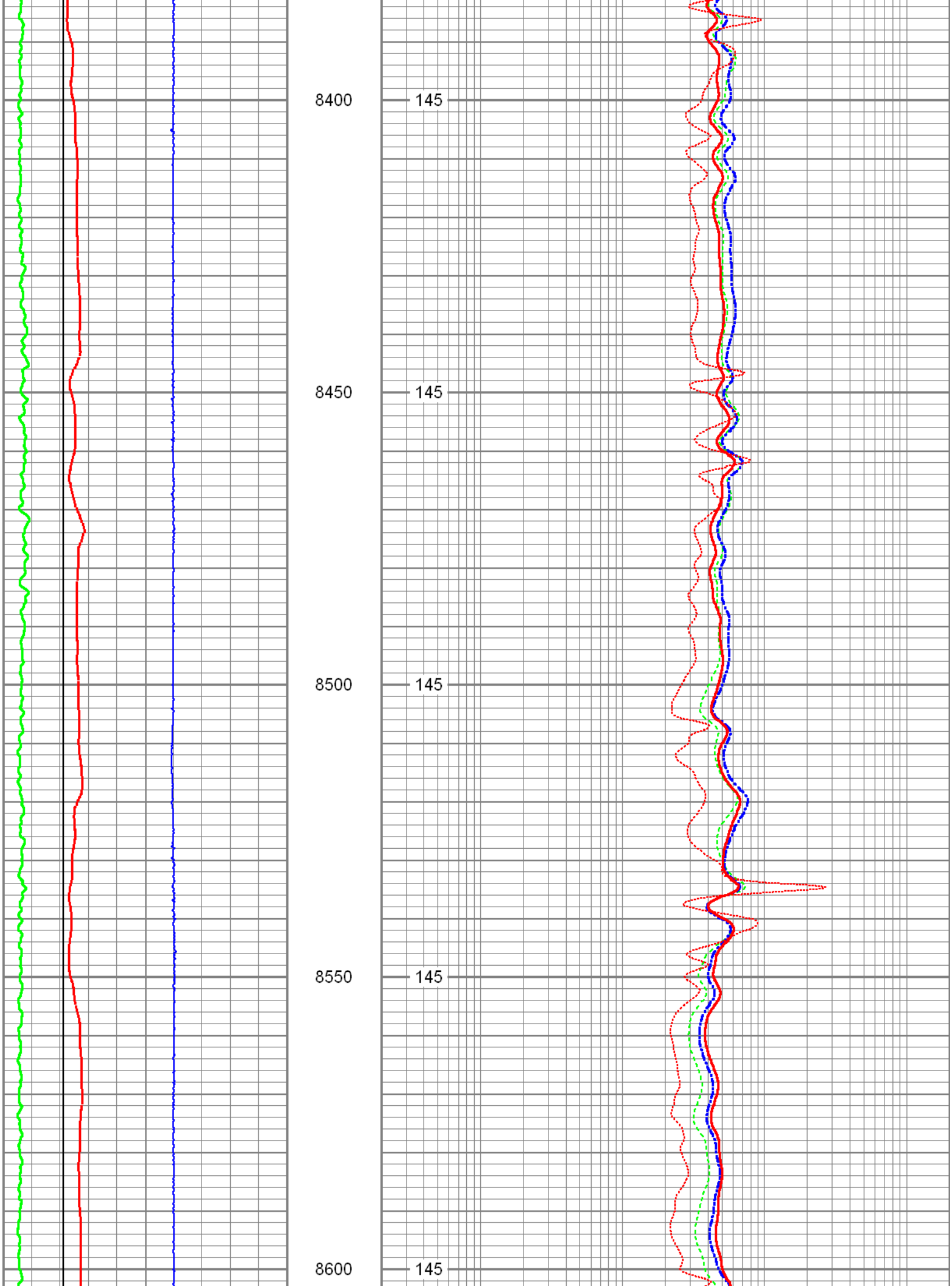
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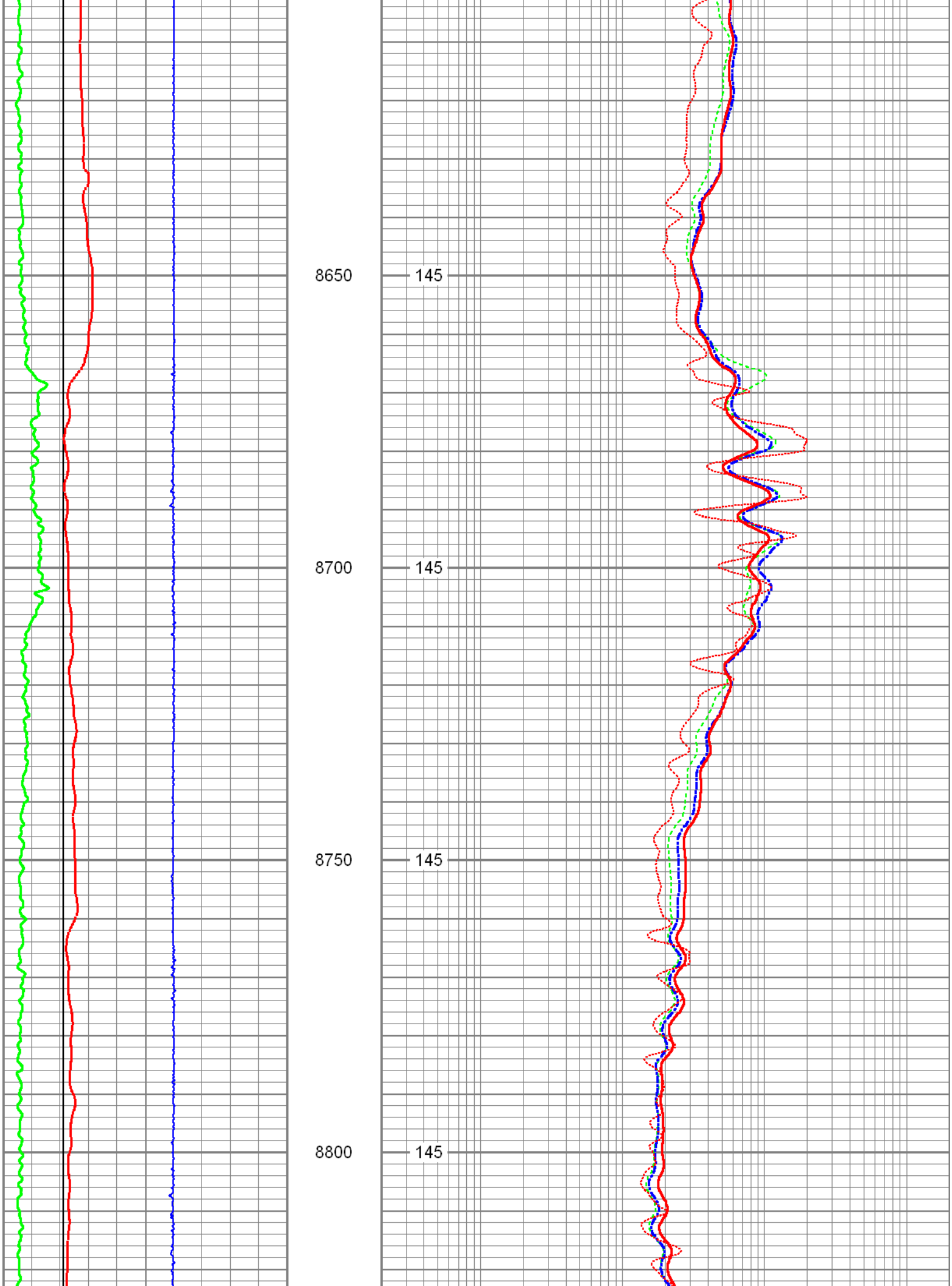
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8800
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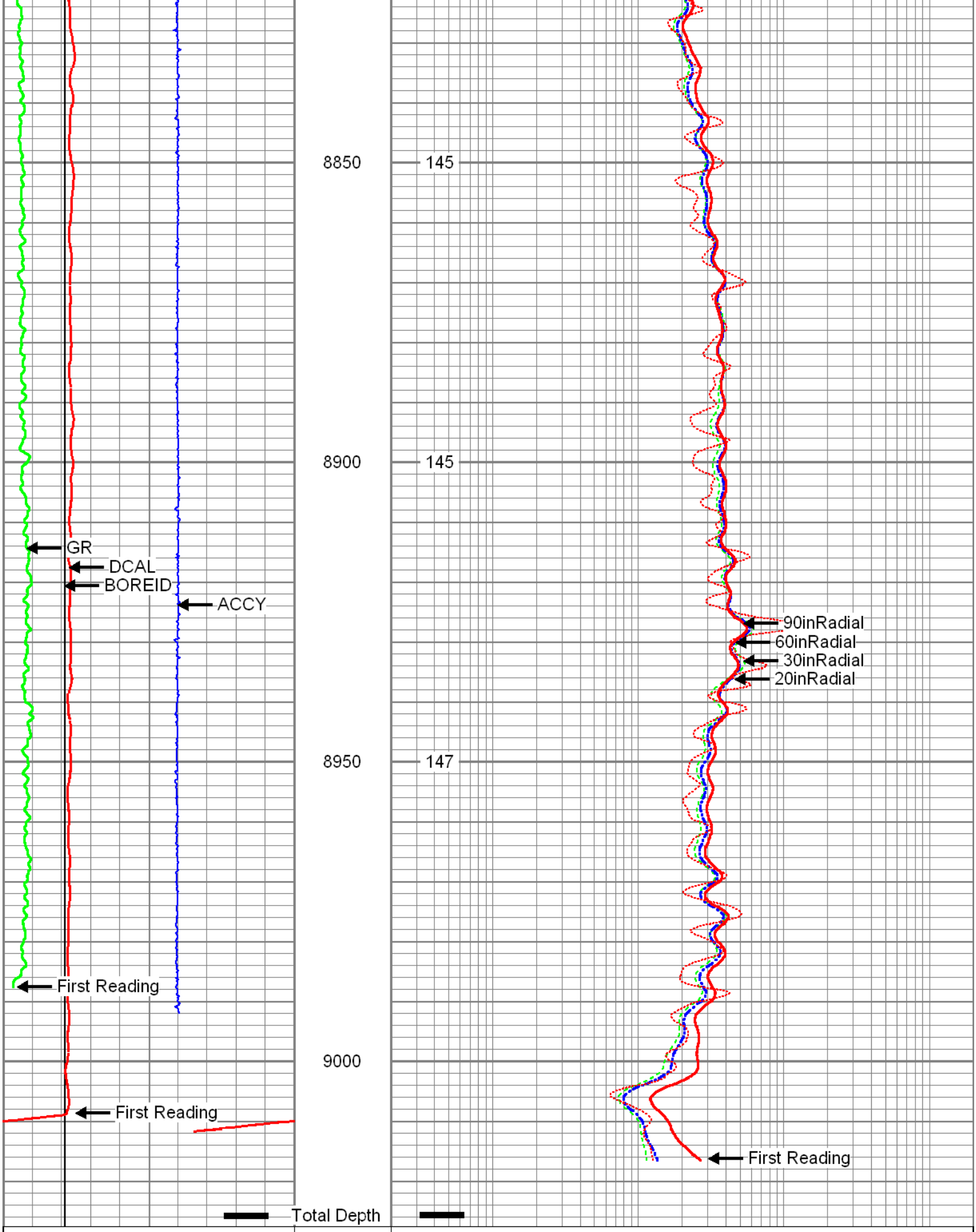
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8900
145
8950
147
9000
GR
DCAL
BOREID
ACCY
First Reading
First Reading
90inRadial
60inRadial
30inRadial
20inRadial
First Reading
Total Depth
0
GR (GAPI)
150
4
BOREID (in)
14
4
DCAL (in)
14
0.2
30inRadial (Ohm-m)
2000
0.2
60inRadial (Ohm-m)
2000
0.2
90inRadial (Ohm-m)
2000

-5	ACCY	5	0.2	20inRadial (Ohm-m)	2000
			GRTEMP (degF)		

Log Variables

Database:C:\Warrior\Data\sandridge_britt_mem.db
Dataset: field/well/proc1/pass1.2

Top - Bottom

A	BHCOR	BHFL_TYPE	BHIDSRC	BOREID in	BOTTEMP degF	CASED?
1	On	WBM	CURVE	6.125	145	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	1.2	8.4	Limestone	0	INTERNAL
SO in	**SRFTEMP degF**	**SZCOR**	**TDEPTH ft**	**TMPCOR**	**TOOLPOS**	
0.5	65	On	9060	On	Free	

Calibration Report

Database File: sandridge_britt_mem.db
Dataset Pathname: proc1/pass1.2
Dataset Creation: Sun Oct 02 08:01:47 2011

ThruBit Induction Calibration Report

Serial-Model: 15-PS

Shop Calibration Performed: Wed Jul 27 09:57:49 2011

BaseLine

	R	X
Freq 1		
A1	-416.1370	372.5410
A2	-152.4940	314.8840
A3	-26.4327	118.7310
A4	-15.0593	219.6400
A5	-13.7591	134.3270
Freq 2		
A1	-204.9750	205.6680
A2	-97.7937	180.2830
A3	-18.8361	27.4327
A4	-18.8506	56.1229
A5	-18.5381	-8.2029
Freq 3		
A1	-122.2030	74.3532
A2	-72.5857	92.8226
A3	-14.3723	-35.9529
A4	-20.2749	-53.6801

A5	-20.5684	-111.6360
Freq 4		
A1	-61.4427	-116.4680
A2	-49.8873	-25.3842
A3	-10.7600	-129.7020
A4	-23.5591	-218.7220
A5	-25.8085	-284.1170

Calibration Coefficients

	R	X
Freq 1		
A1	0.9920	0.0043
A2	0.9868	0.0033
A3	0.9936	-0.0050
A4	0.9908	0.0053
A5	0.9904	0.0032
Freq 2		
A1	0.9862	-0.0058
A2	0.9803	-0.0060
A3	0.9816	-0.0068
A4	0.9855	-0.0040
A5	0.9854	-0.0066
Freq 3		
A1	1.0017	-0.0044
A2	0.9960	-0.0044
A3	0.9971	-0.0053
A4	1.0006	-0.0023
A5	1.0002	-0.0034
Freq 4		
A1	0.9881	-0.0055
A2	0.9832	-0.0045
A3	0.9864	-0.0075
A4	0.9883	-0.0025
A5	0.9907	-0.0052
Temperature	38.6248	

ThruBit Density Calibration Report

Serial-Model:	41-PS
Shop Calibration Performed:	Thu Sep 22 12:44:17 2011

References

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

Readings

	Counts	Units
SS1 Background	146.88	cps

LS1 Background	163.47	cps
LS4 Background	34.17	cps
SS1 Aluminium	5327.78	cps
LS1 Aluminium	952.92	cps
LS4 Aluminium	1072.72	cps
SS1 Magnesium	8575.44	cps
LS1 Magnesium	5835.08	cps
LS1 Al + Fe	804.59	cps
LS4 Al + Fe	458.31	cps

Results

SS Slope	1.82
LS Slope	0.45
PEF K Factor	3.480
PEF B Factor	-0.082

Compensated Neutron Calibration Report

Serial Number:	E03
Tool Model:	ENP
Source Number:	
Calibration Tank Temperature:	0.0 degF

BACKGROUND MEASUREMENT

SS Counts	LS Counts
0.0	0.0

WATER TANK REFERENCE Thu Sep 01 09:01:30 2011

SS Counts		LS Counts		
0.0	cps	0.0	cps	
Tank Ratio Ref		**Tank Ratio**		**Tank Ratio Gain**
30.9580	SS/LS	31.1488	SS/LS	0.9939

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

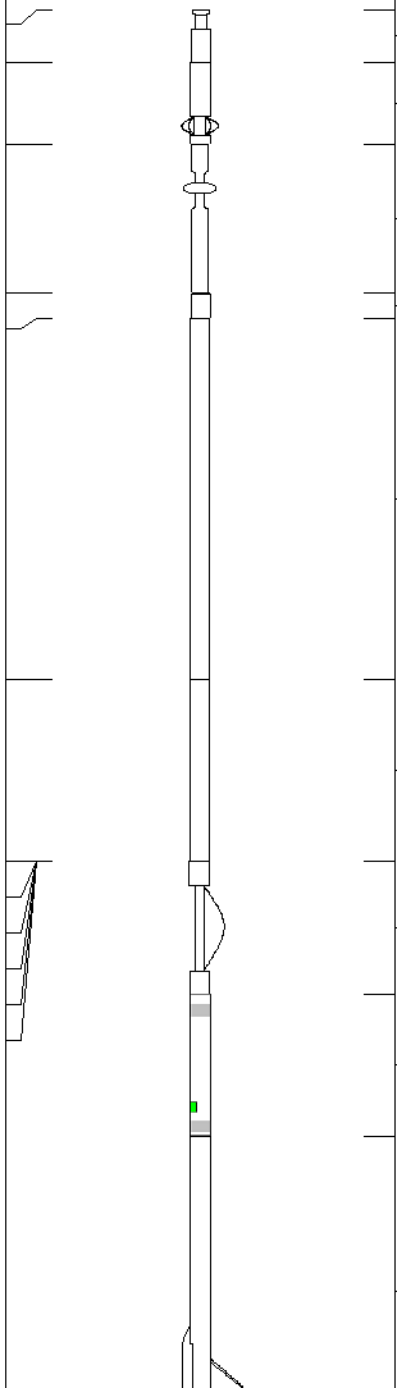
Serial Number:	26
Tool Model:	PS
Performed:	Sun Apr 10 10:00:25 2011
Calibrator Value:	162.7 GAPI

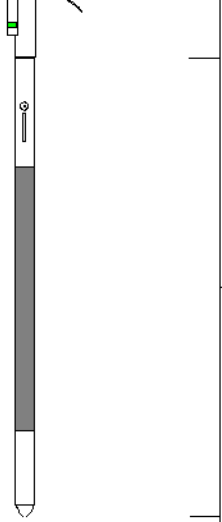
Background Reading:	68.8	cps
Calibrator Reading:	448.0	cps
Sensitivity:	0.3760	GAPI/cps

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	63.87		Cablehead Thrubit 10 to 1 Cablehead	1.79	2.13	5.00
Thrubit	62.07		Small_Release Thrubit Small Release Tool	2.75	1.69	20.00
Thrubit	59.32		HangOff_Tool Thrubit Hang Off Tool	5.00	2.45	60.00
Thrubit	54.32		10-1 Thrubit 10 to 1 Crossover	0.88	2.13	3.95
TBBAT	53.45		TBBAT-A (1) Thrubit Battery	12.17	2.13	38.20
TMG	41.28		TMG-PS (26) ThruBit Telemetry Gamma Ray	6.13	2.13	45.00
Thrubit	35.16		Decentralizer Thrubit (Small) Decentralizer	4.50	2.13	22.60
ACCX	35.16		TBN-ENP (E03) ThruBit Neutron	4.77	2.13	63.00
ACCY	35.16		TBD-PS (41) Thrubit Density	10.47	2.13	94.00
ACCZ	35.16					
GRHEADV	35.16					
DHTEN	35.16					



TBI-PS (15) Thrubit Induction	15.42	2.13	94.00

Dataset:	sandridge_britt_mem.db: field/well/proc1/pass1.2
Total Length:	63.87 ft
Total Weight:	445.75 lb
O.D.	2.45 in

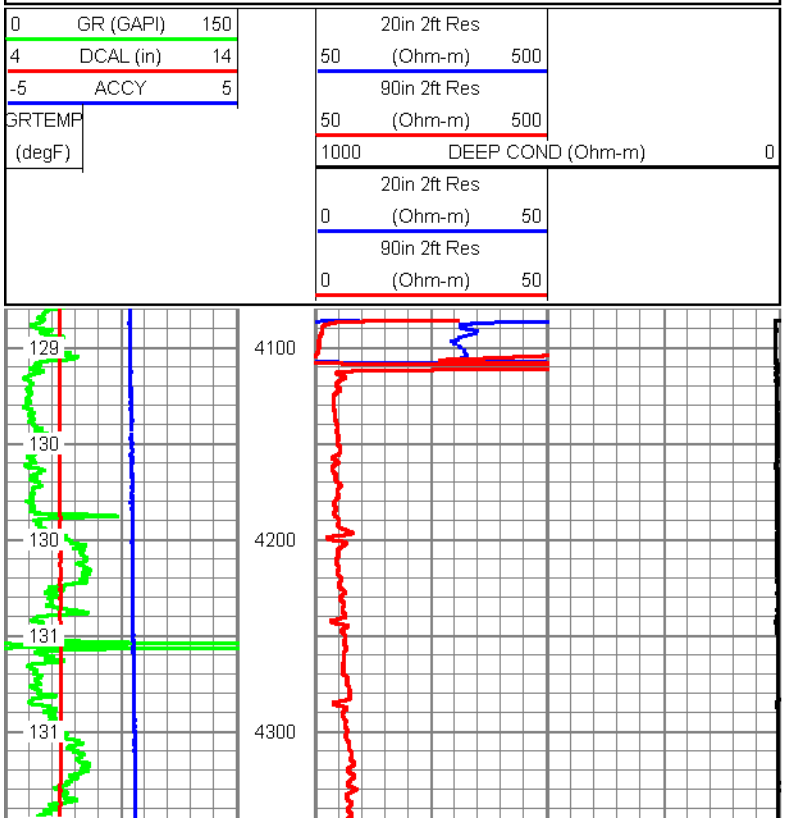
ThruBit LOGGING SOLUTIONS

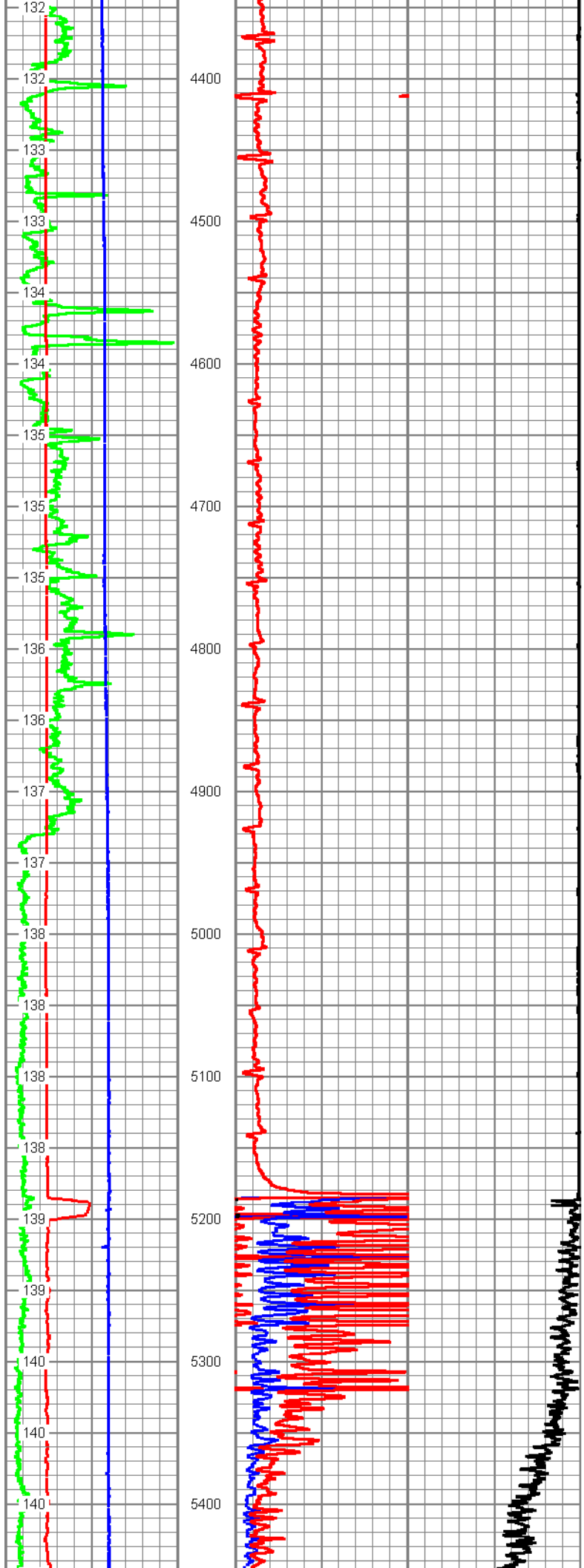
Company	SANDRIDGE ENERGY
Well	BRITT 1-20H
Field	WALDRON WEST
County	HARPER
State	KANSAS

ThruBit LOGGING SOLUTIONS

MAIN PASS

Database File:	sandridge_britt_mem.db
Dataset Pathname:	proc1/pass1.2
Presentation Format:	chespk1r
Dataset Creation:	Sun Oct 02 08:01:47 2011
Charted by:	Depth in Feet scaled 1:1200

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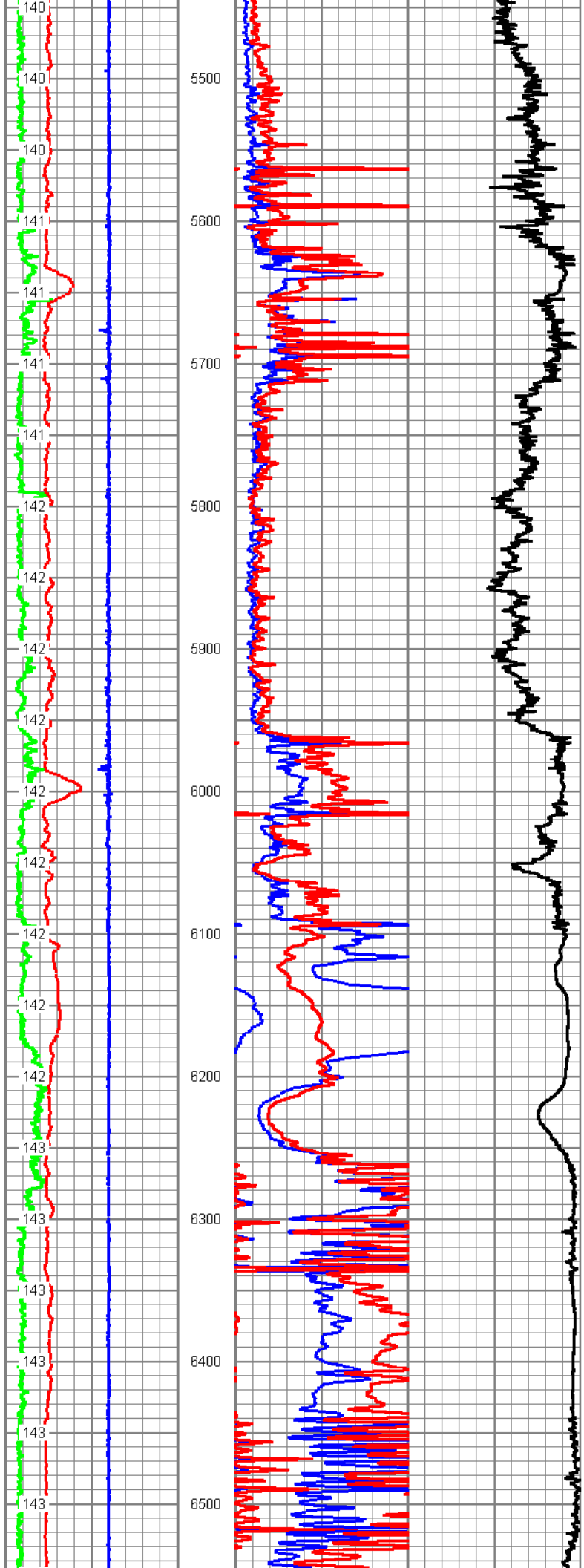
5400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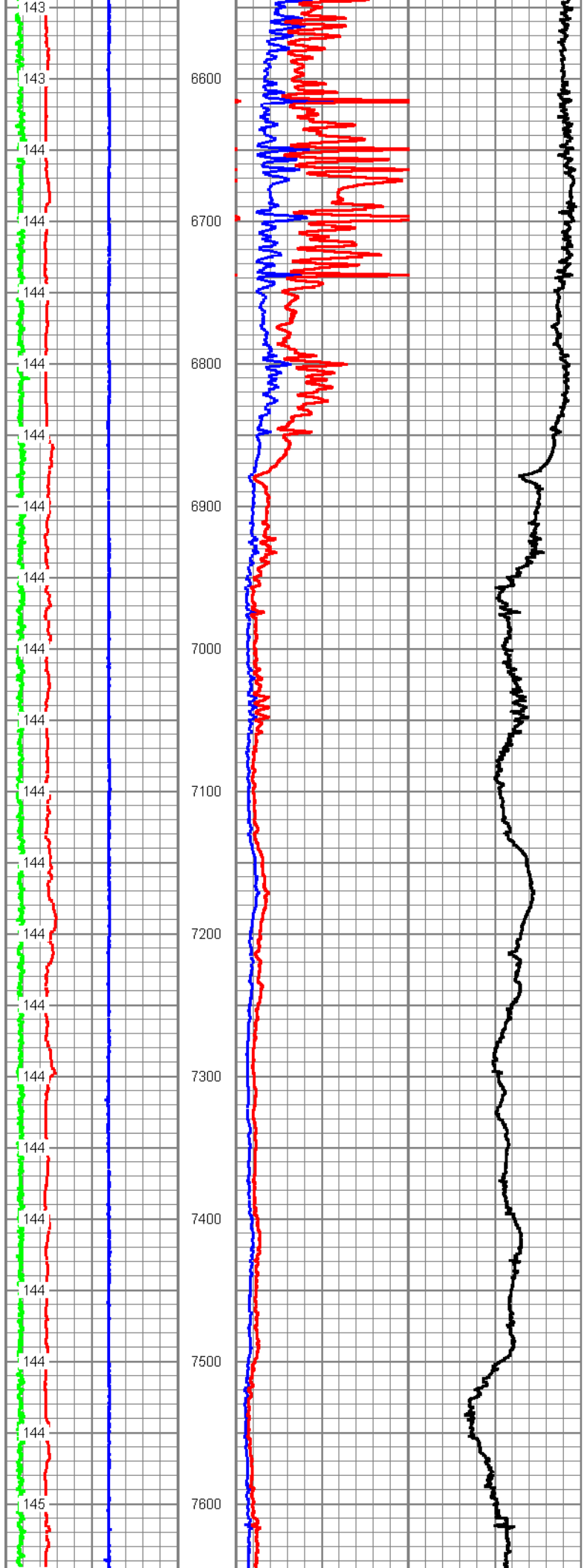
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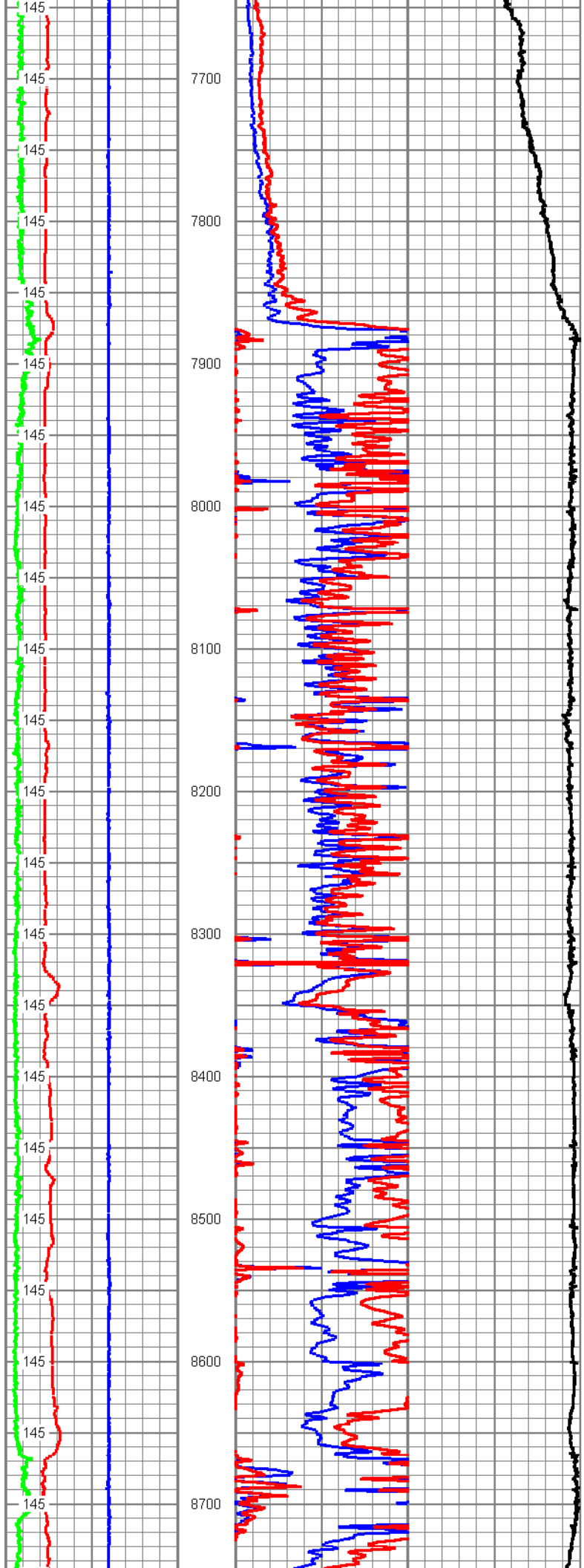
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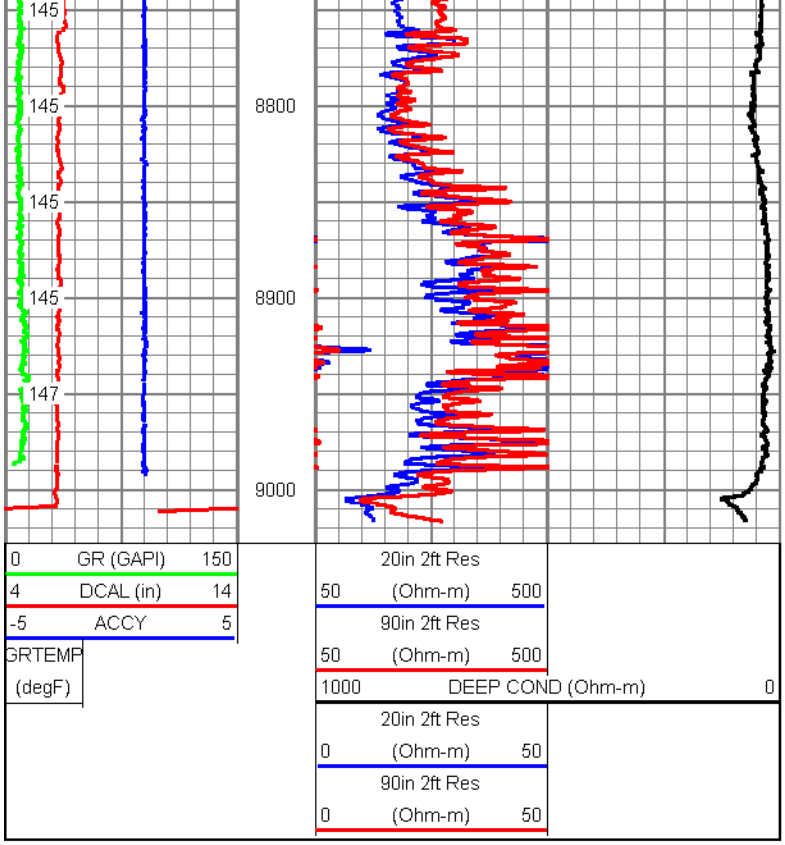


0	GR (GAPI)	150
4	DCAL (in)	14
-5	ACCY	5
GRTEMP (degF)		

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

ThruBit
LOGGING SOLUTIONS

DUAL SPACED NEUTRON
SPECTRAL DENSITY
GAMMA RAY
MEMORY LOG

Company SANDRIDGE ENERGY
Well BRITT 1-20H
Field WALDRON WEST
County HARPER
State KANSAS

Location: API # : 15-077-21746
SHL: 200' FSL & 760' FWL
BHL: 330' FNL & 760' FWL
SEC 20 TWP 34S RGE 6W

Permanent Datum G.L. Elevation
Log Measured From K.B. 14' ABOVE PERM DATUM
Drilling Measured From K.B.

Other Services
THRUBIT
PORTAL BIT

Elevation
K.B. 1330'
D.F. 1330'
G.L. 1316'

Date	2 OCTOBER 2011			
Run Number	ONE			
Depth Driller	9060			
Depth Logger	9026			
Bottom Logged Interval	9016			
Top Log Interval	5185			
Casing Driller	7.0" @ 5190'			
Casing Logger	5185			
Bit Size	6.125			
Type Fluid in Hole	WBM			
Density / Viscosity	8.4 / 27			
pH / Fluid Loss	11.0 / NA			
Source of Sample	MUD PIT			
Rm @ Meas. Temp	0.34 ohms @ 65 degf			
Rmf @ Meas. Temp	0.25 ohms @ 65 degf			
Rmc @ Meas. Temp	0.43 ohms @ 65 degf			
Source of Rmf / Rmc	CALCULATED			
Rm @ BHT	0.16 ohms @ 146 degf			
Time Circulation Stopped	10:45 PM 10-1-2011			
Time Logger on Bottom	11:30 PM 10-1-2011			
Maximum Recorded Temperature	146 degf			
Equipment Number	T005			
Location	OKC, OK			
Recorded By	DENGLER			
Witnessed By	JACKIE KENNEDY	TAMMY ALCORN		

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

SERVICE: HORIZONTAL PUMP DOWN MEMORY BIT DEPTH: 8972 LOG TO: 5185
ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST
LIMESTONE MATRIX, 2.71 g/cc, USED FOR POROSITY MEASUREMENTS
TOOLS RAN WITH DECENTRALIZER AND SWIVEL
TBHV REPRESENTS TOTAL BOREHOLE VOLUME, ft3
ABHV REPRESENTS ANNULAR BOREHOLE VOLUME, ft3, CALCULATED FOR 4.5" CASING
USED RIGMINDER WITH RIGSENSE TO ACQUIRE LOG DEPTH
CORRELATED TO PIPE TALLLY PROVIDED BY CUSTOMER

RIG: KEEN 18
CREW: J. DENGLER, J. HIRSCHLER, R. DENTON

Service Ticket No. 764 API No. 15-077-21746 PGM Ver

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

EQUIPMENT DATA

Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	PS26T	Serial No.	ENP3N	Serial No.	PS41D	Serial No.	PS15R
Model No.	GAMMA RAY	Model No.	NEUTRON	Model No.	DENSITY	Model No.	INDUCTION
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	9026	5185		30	

	GAMMA RAY		NEUTRON		DENSITY		INDUCTION	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	150	30	-10	30	-10	.2	2000

DIRECTIONAL INFORMATION

Maximum Deviation	93.0	deg. @	5743.0	KOP	3782	

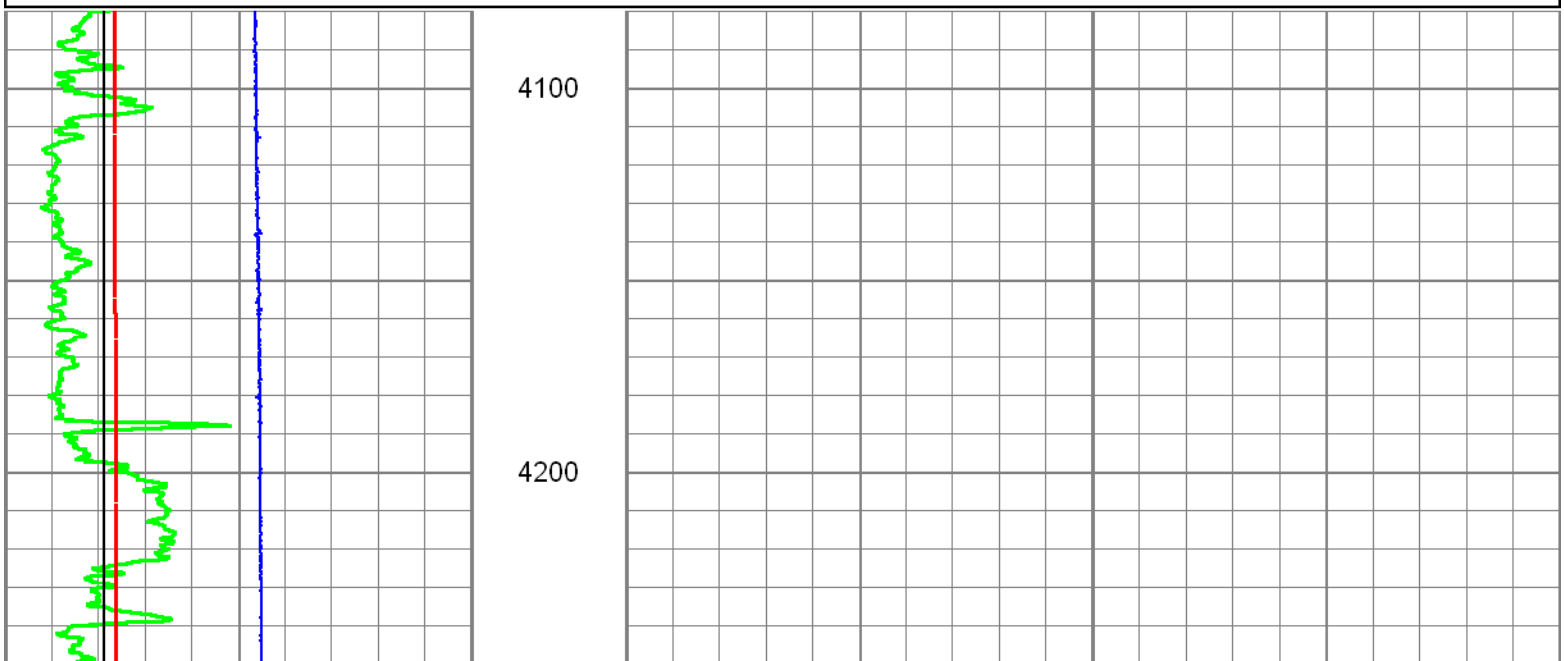
ThruBit LOGGING SOLUTIONS

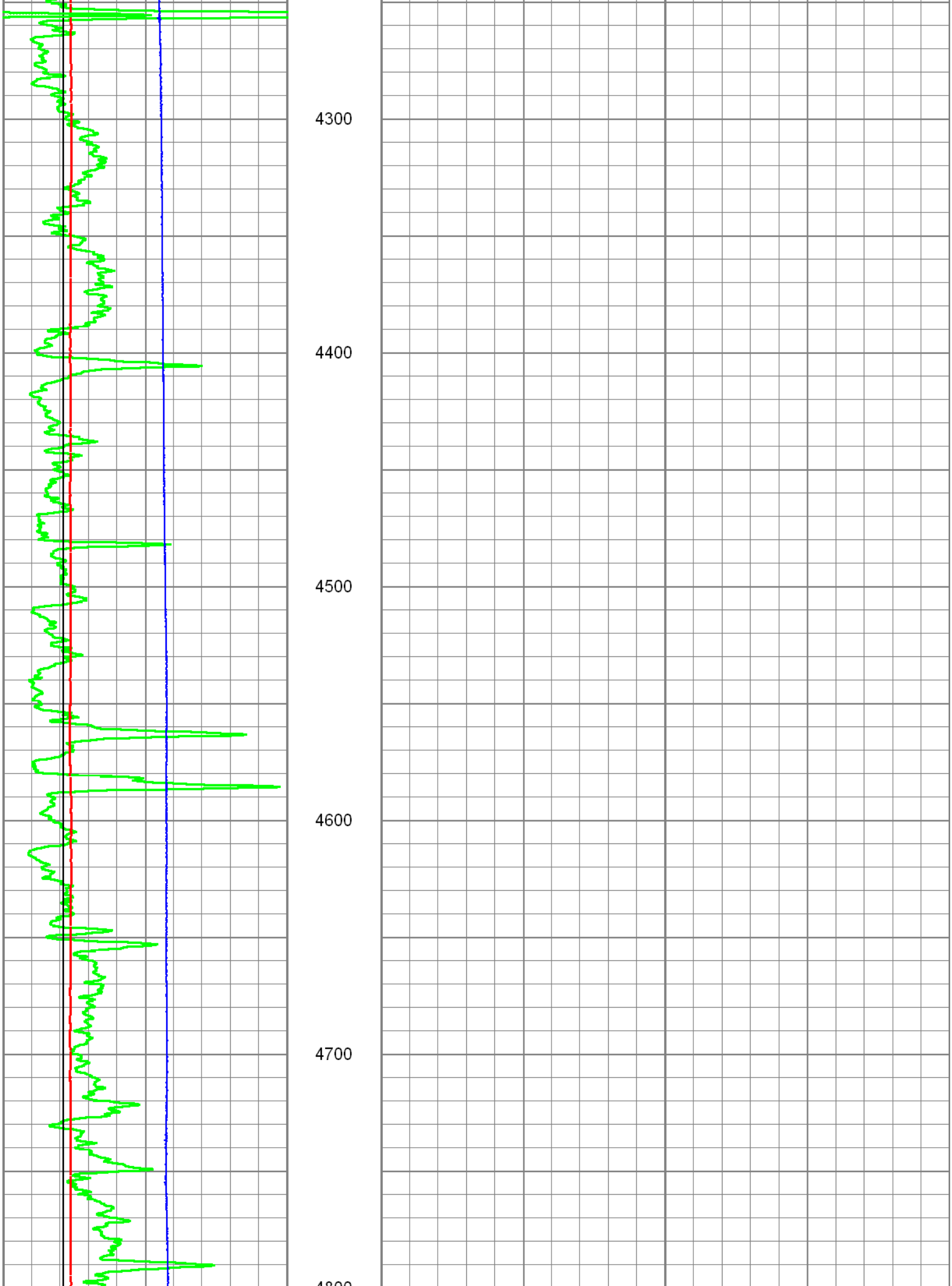
MAIN PASS

Database File: sandridge_britt_mem.db
Dataset Pathname: proc1/pass1.2
Presentation Format: chespk2n
Dataset Creation: Sun Oct 02 08:01:47 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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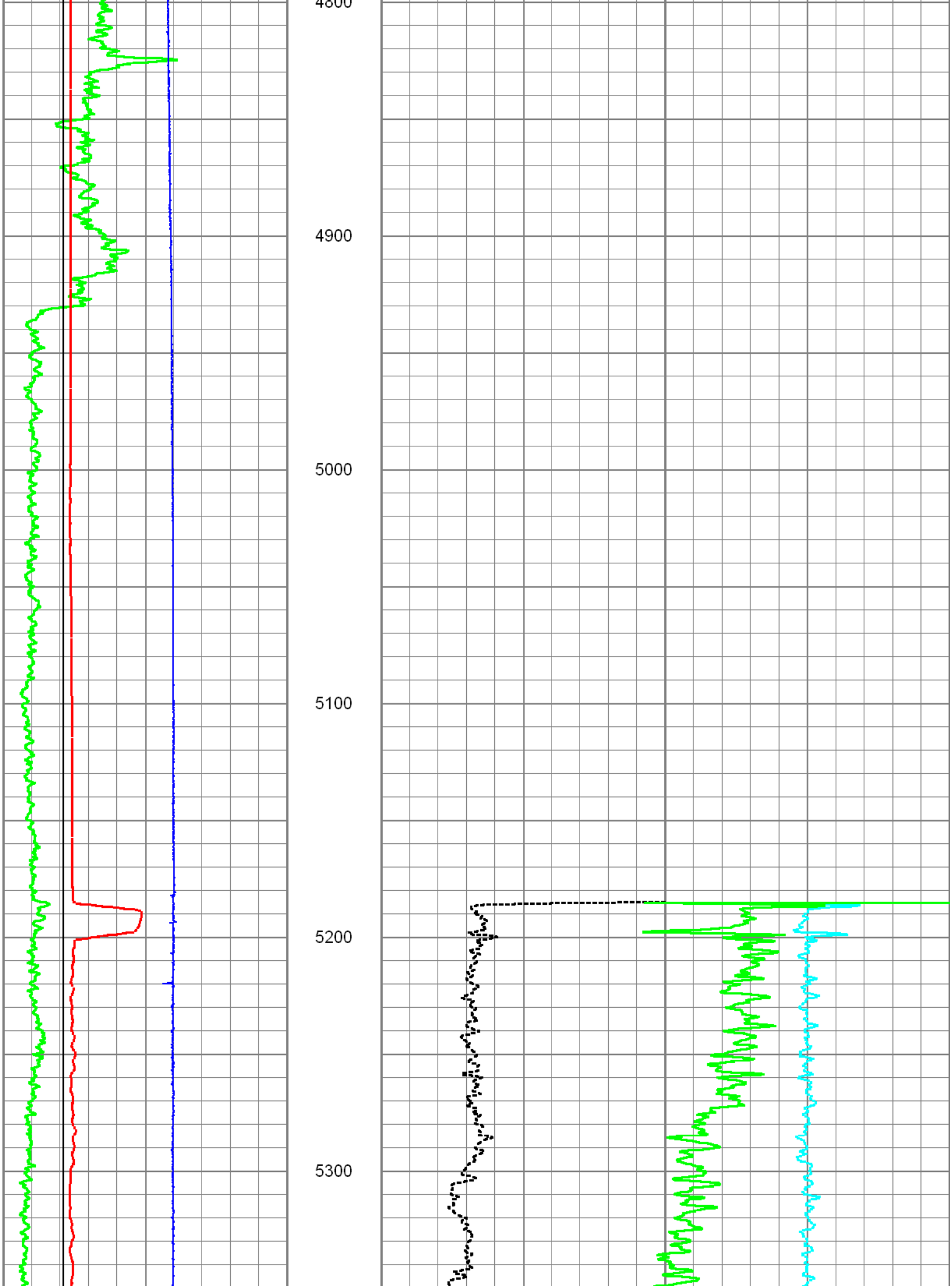
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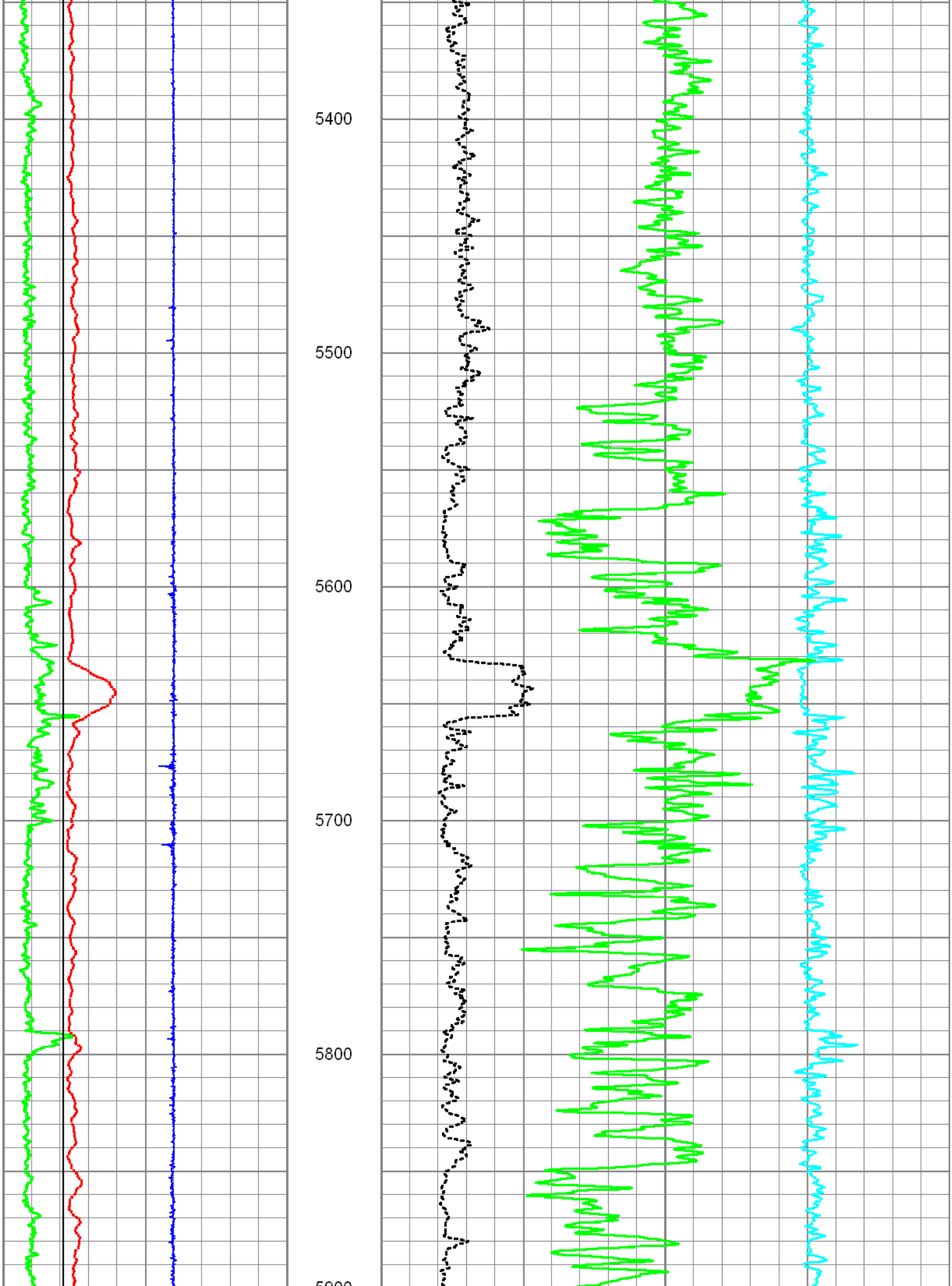
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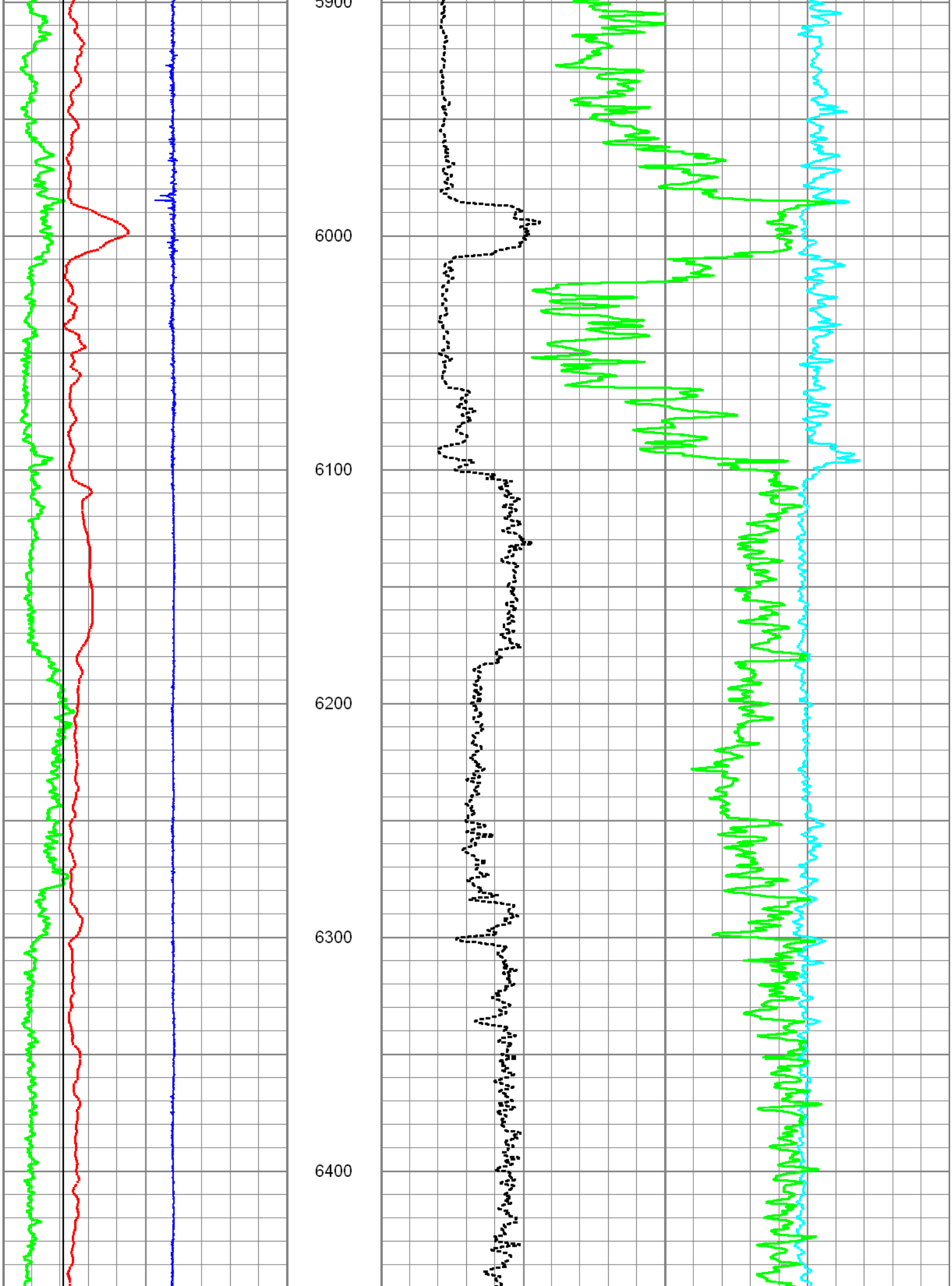
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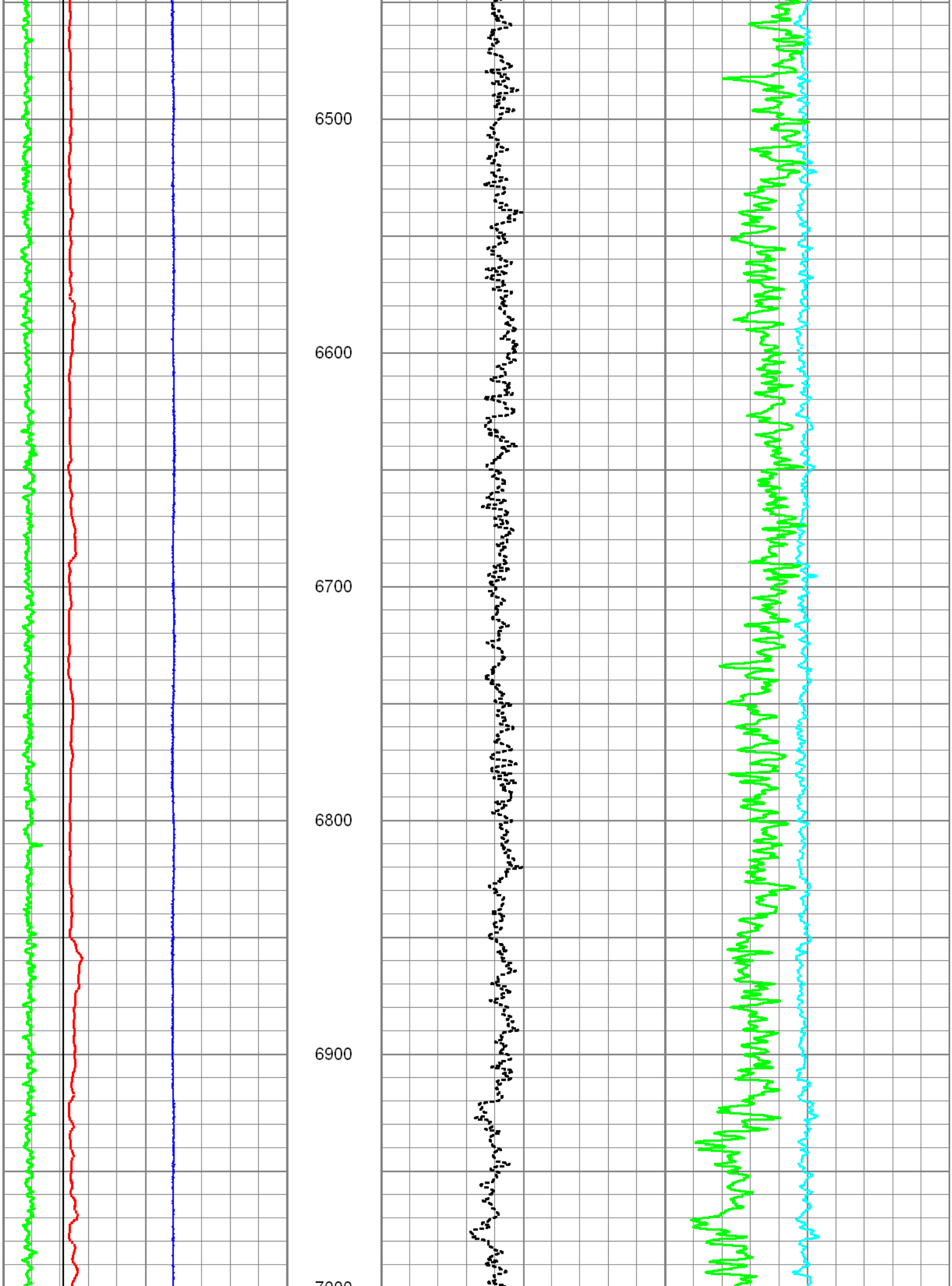
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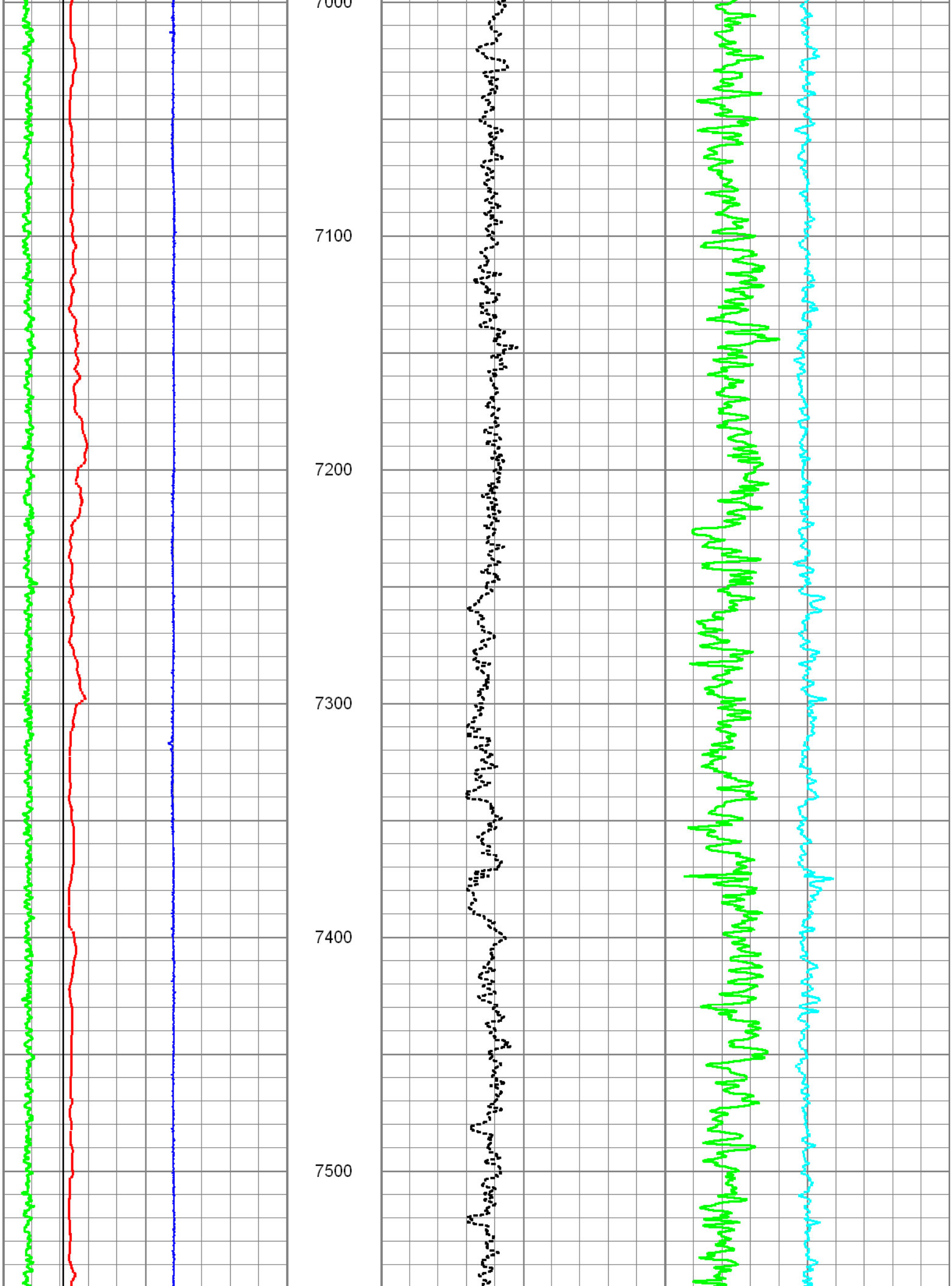
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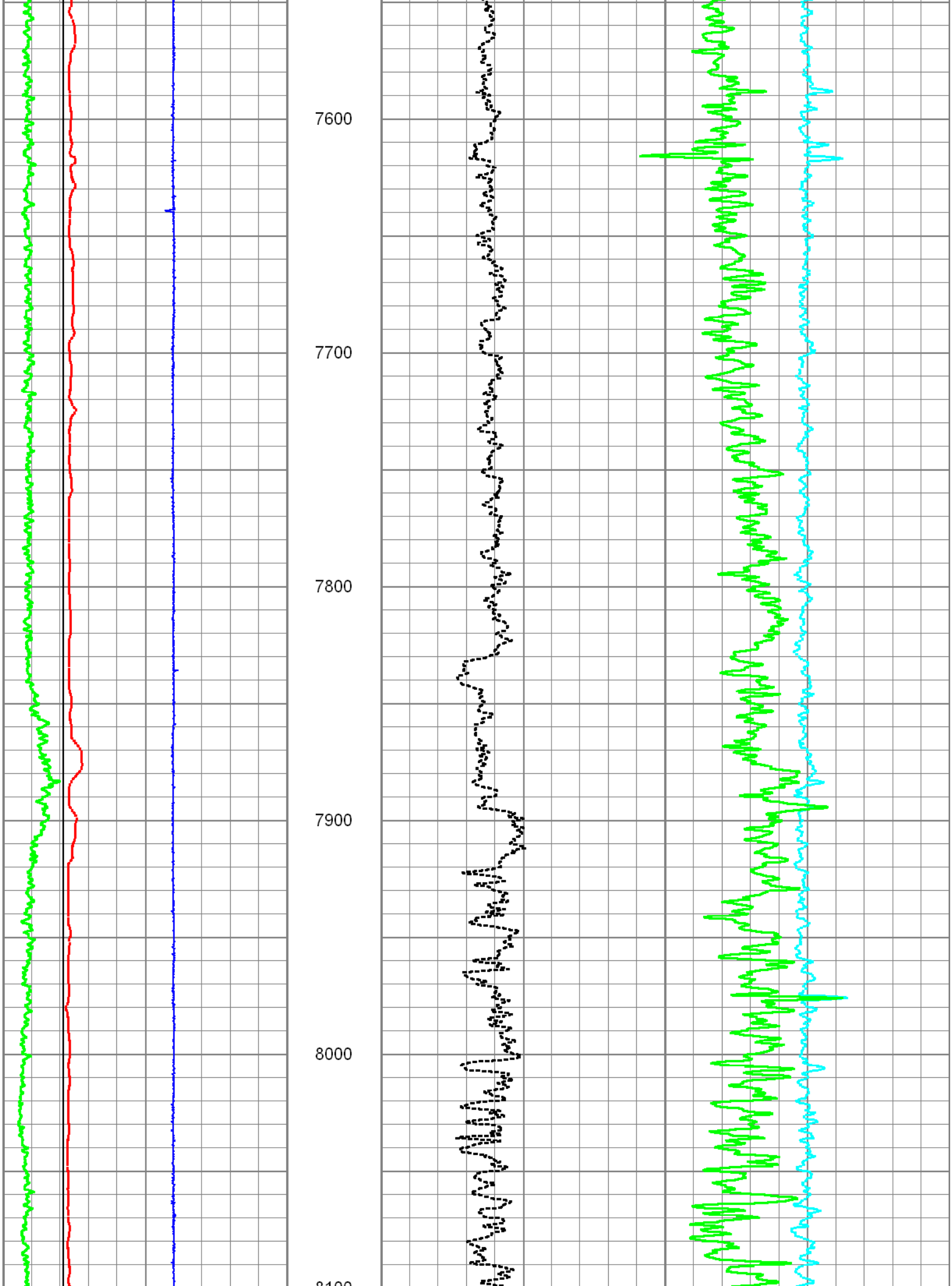
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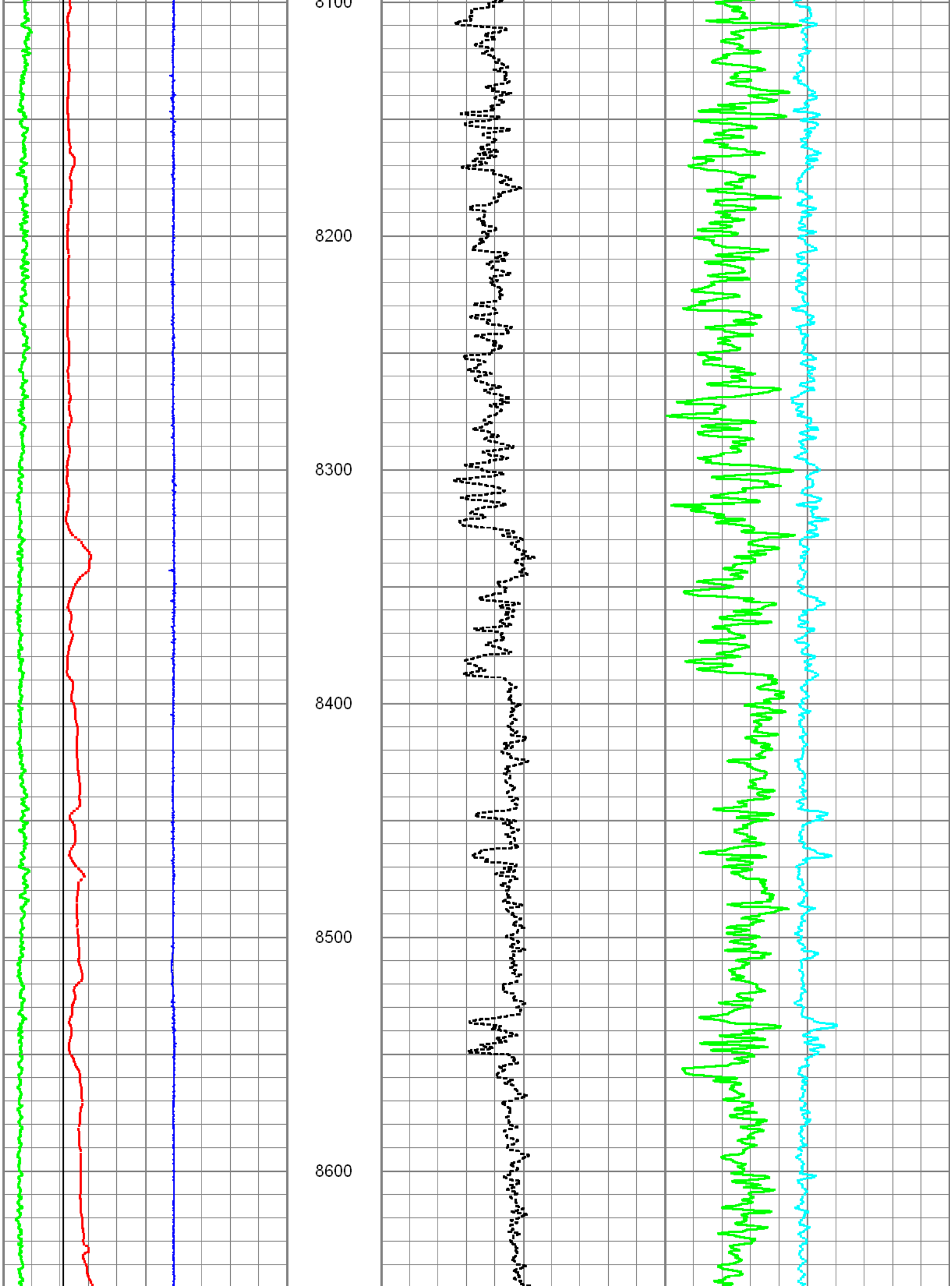
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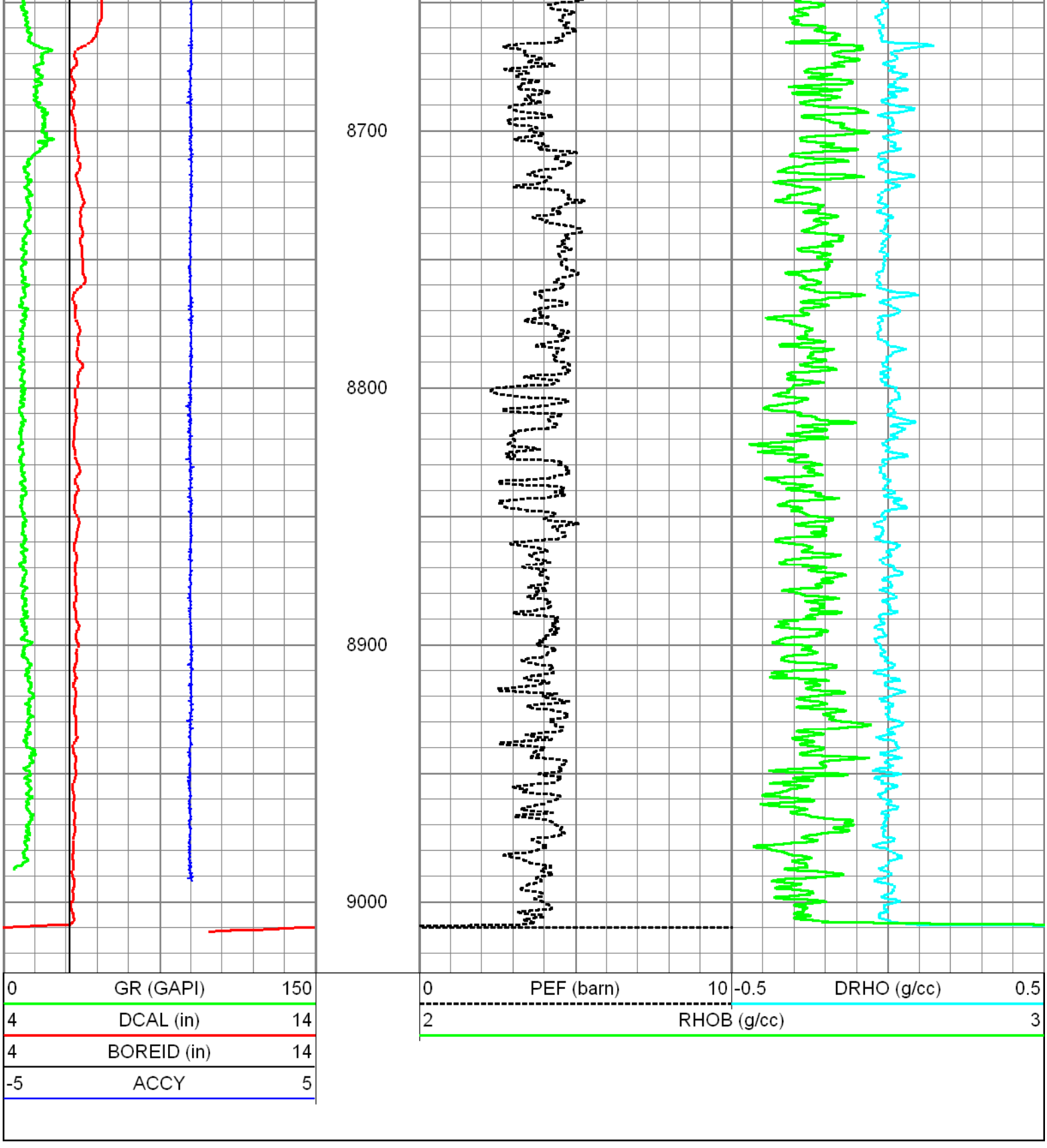


ThruBit LOGGING SOLUTIONS

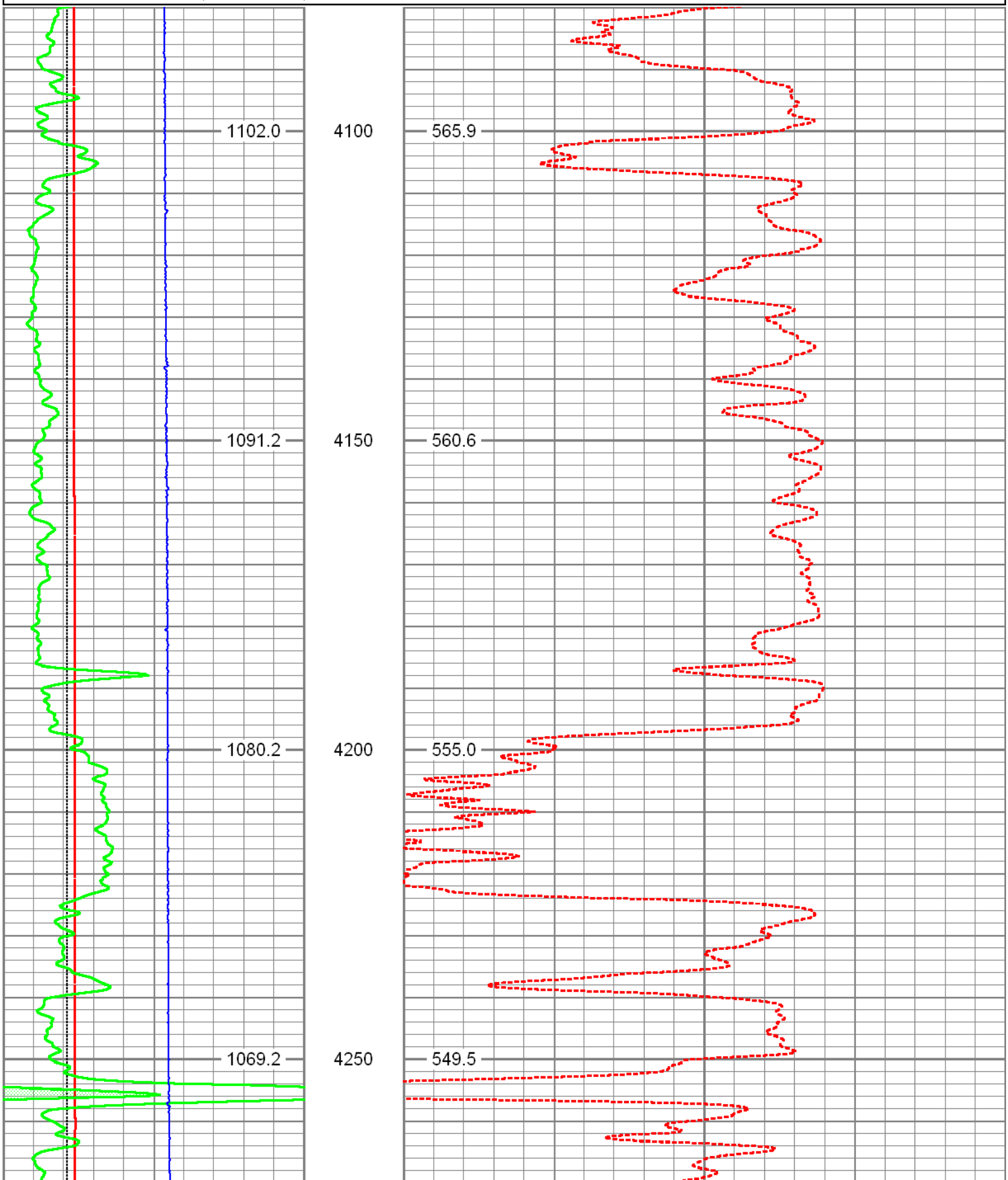
MAIN PASS

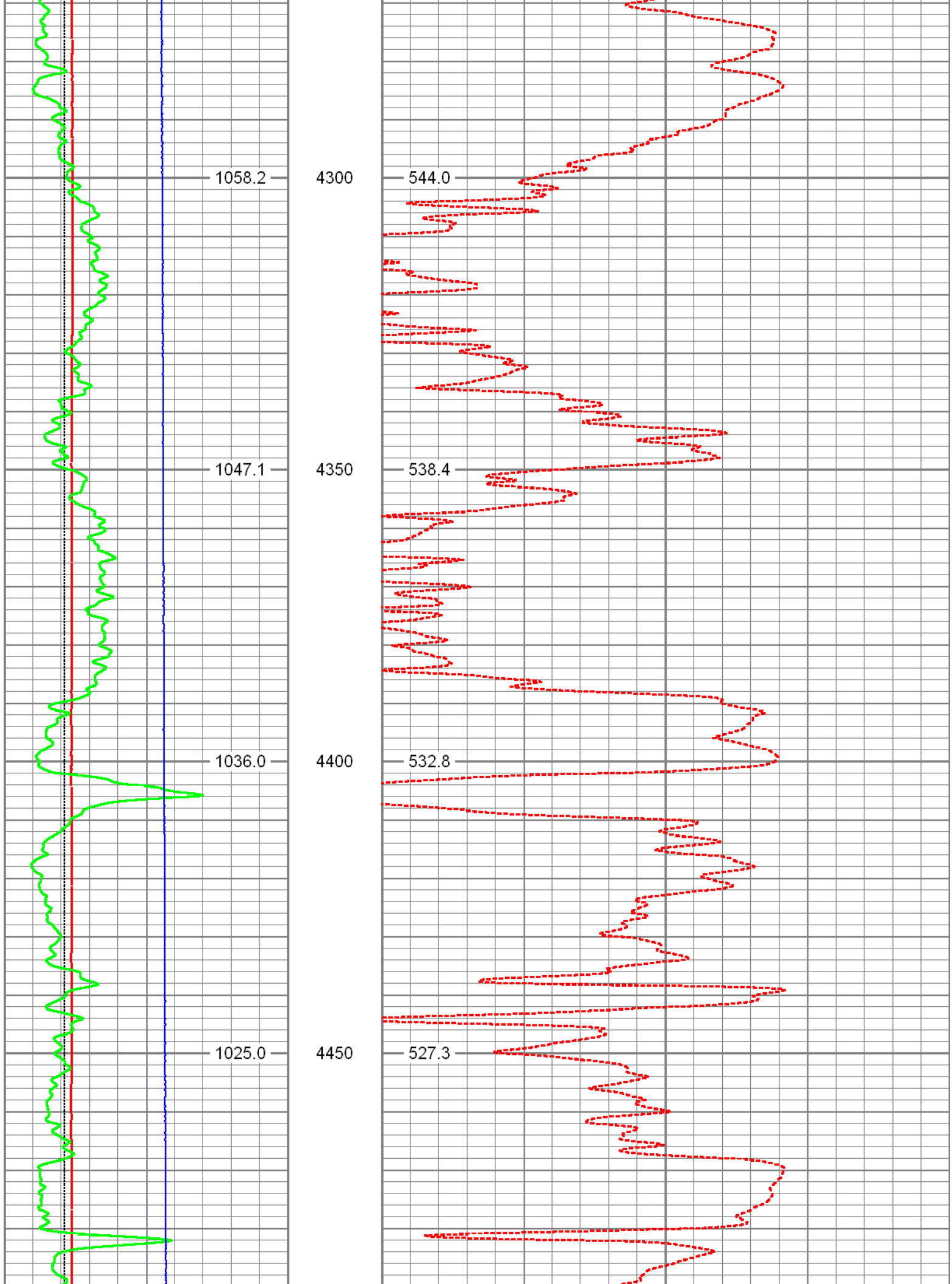
Database File:	sandridge_britt_mem.db
Dataset Pathname:	proc1/pass1.2
Presentation Format:	chespk5n
Dataset Creation:	Sun Oct 02 08:01:47 2011
Charted by:	Depth in Feet scaled 1:240

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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1036.0
4400
532.8
1025.0
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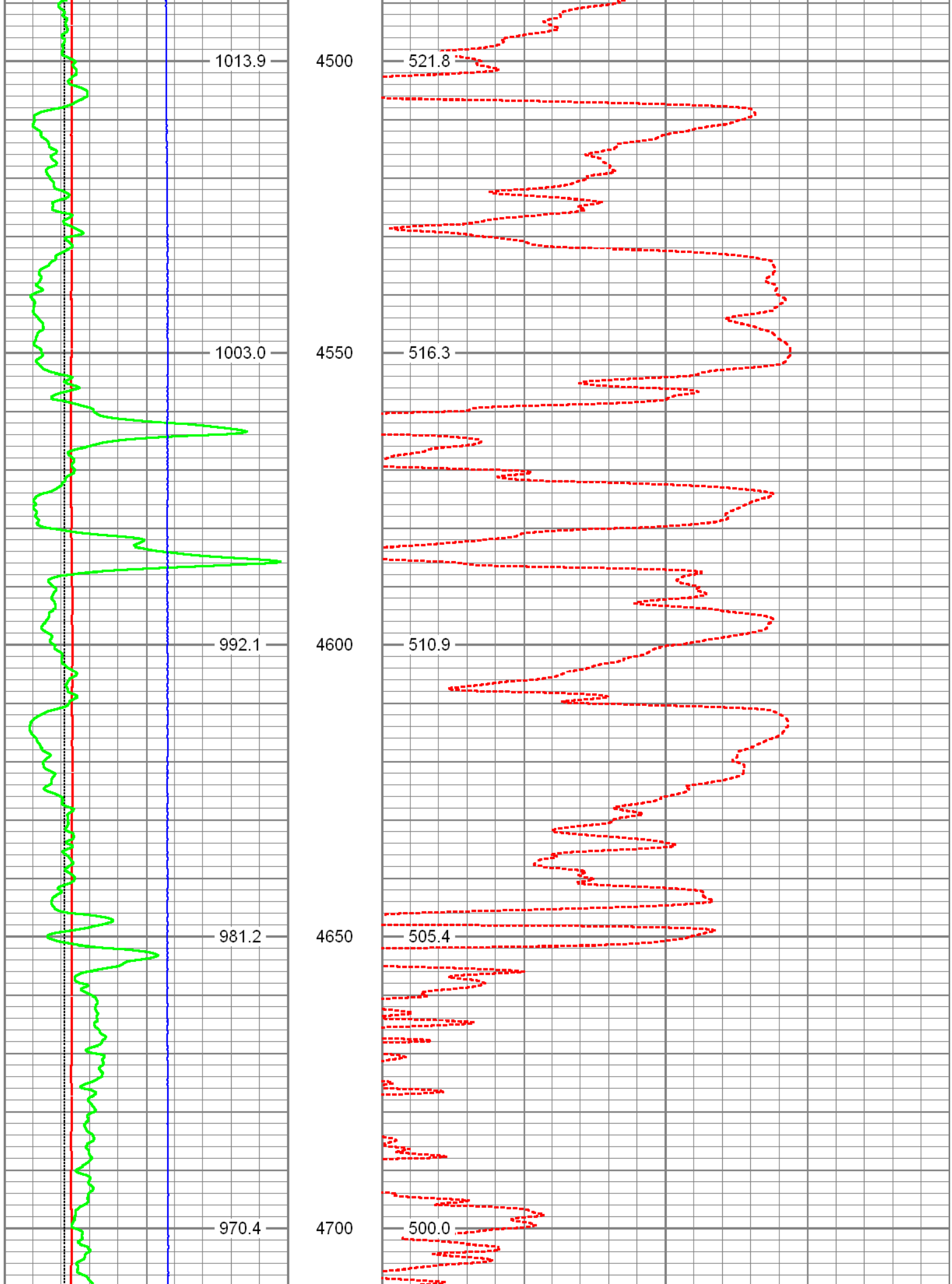
527.3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4500
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992.1
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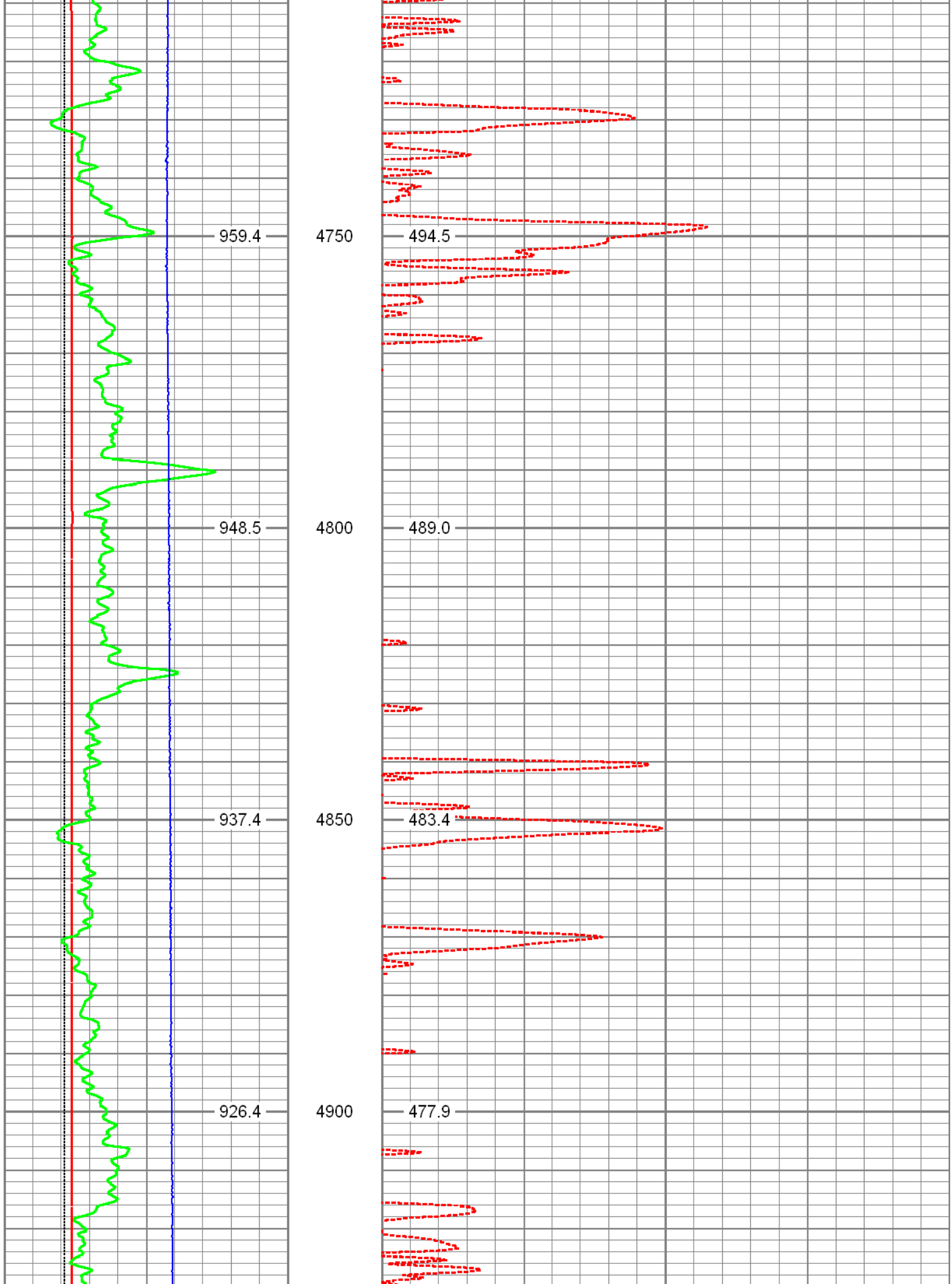
4650
505.4
970.4
4700
500.0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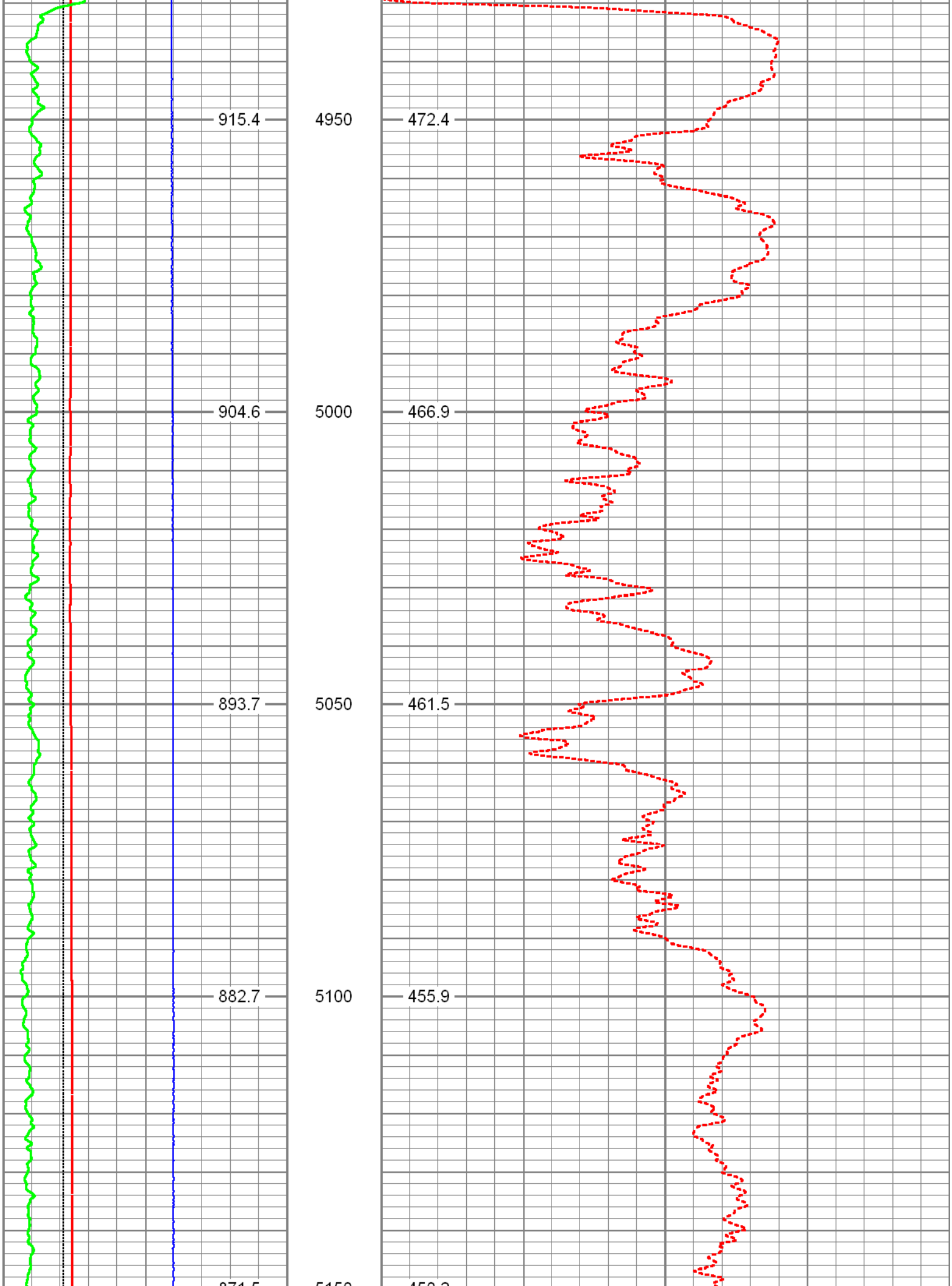
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461.5
882.7
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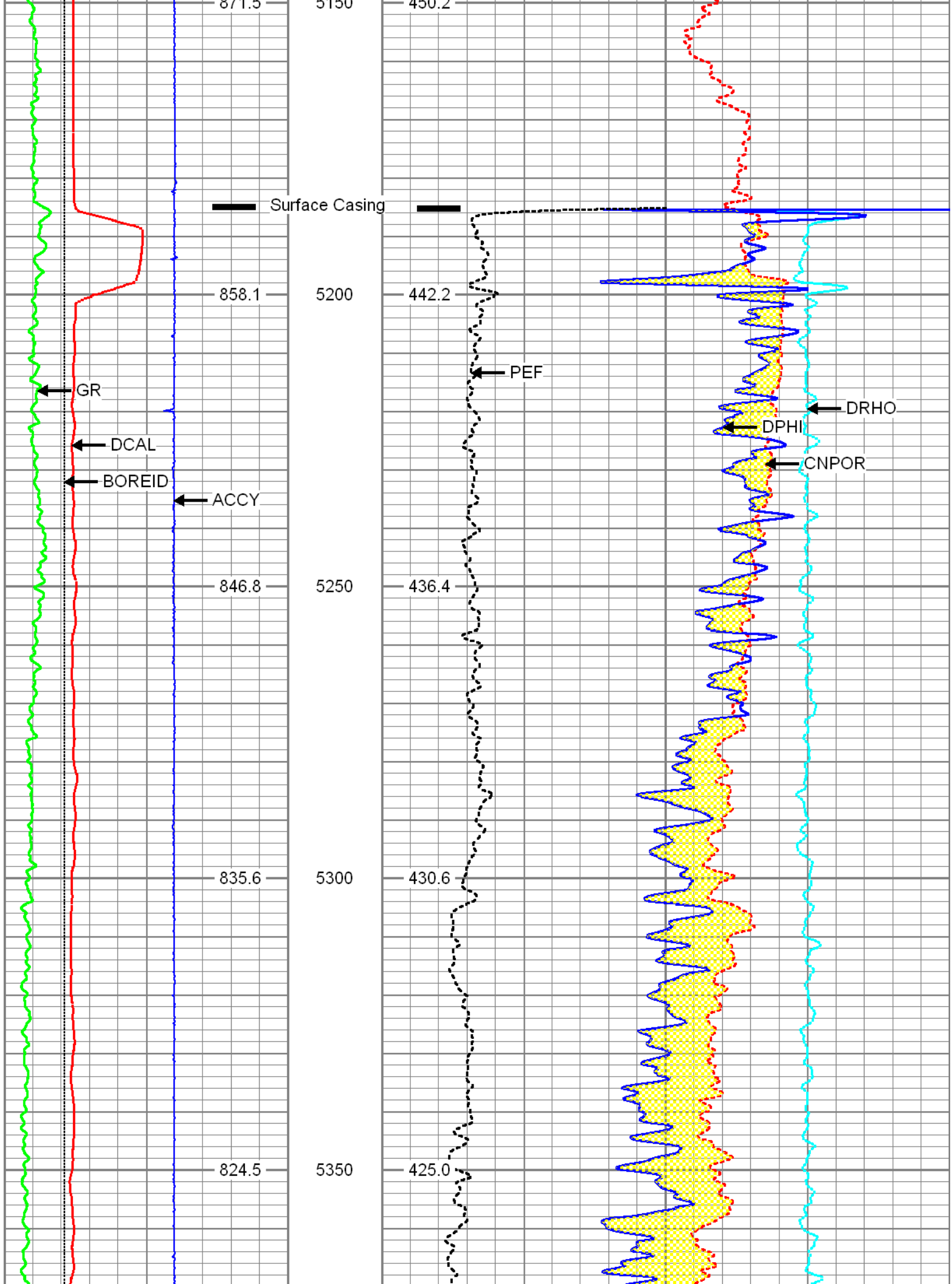
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5150
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Surface Casing
858.1
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GR
DRHO
DPHI
DCAL
CNPOR
BOREID
ACCY
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5300
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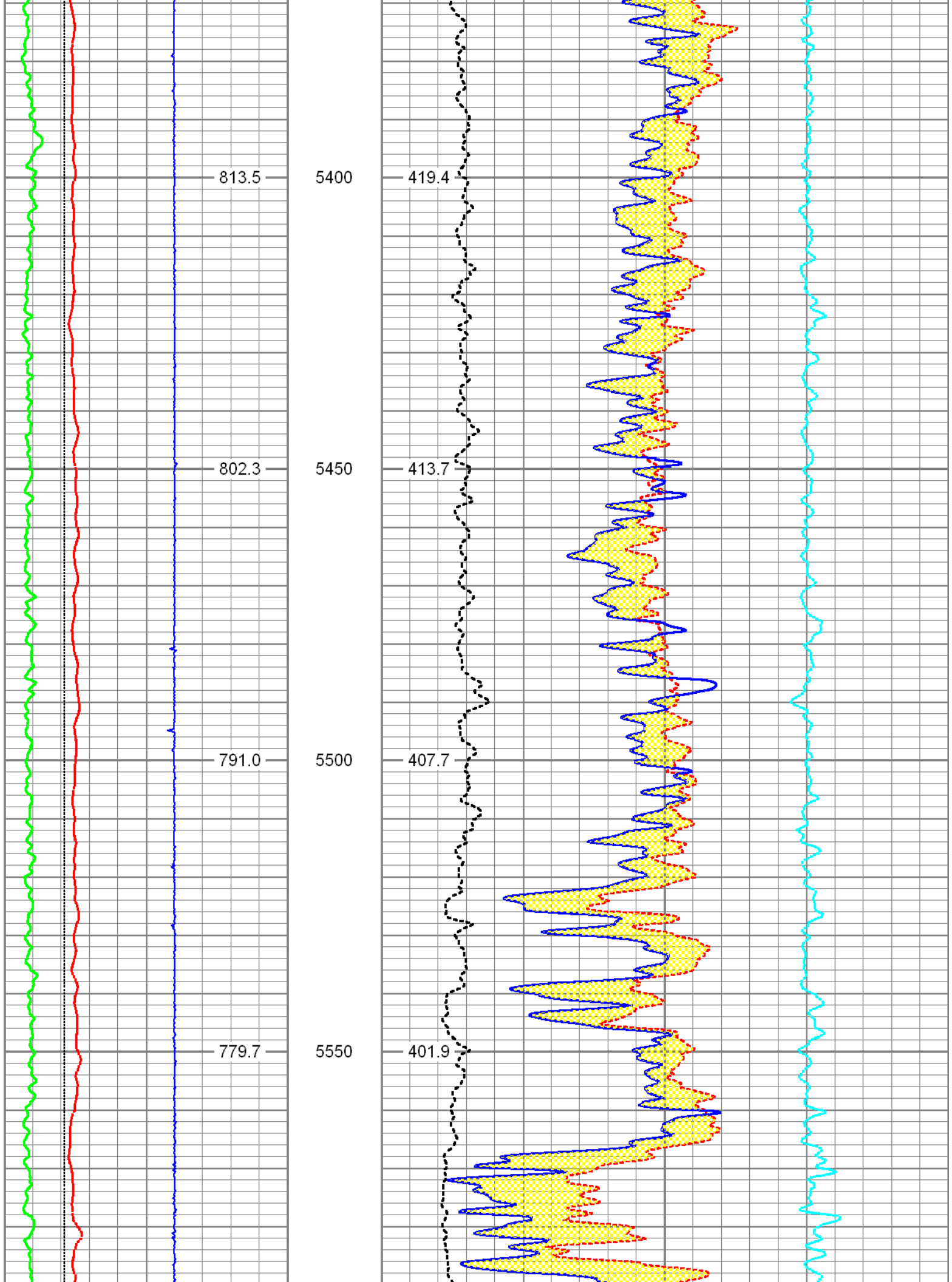
824.5
5350
425.0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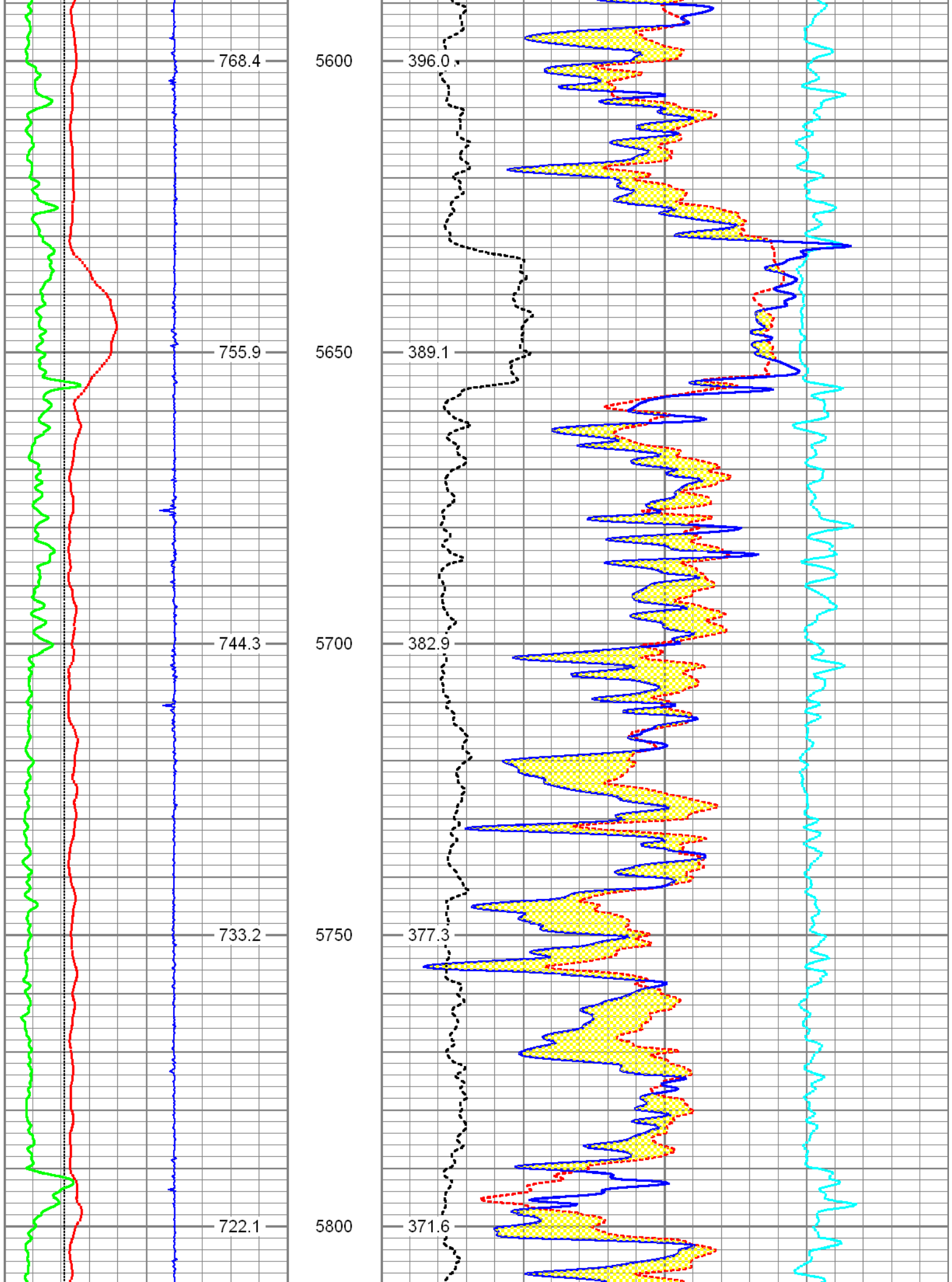
401.9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744.3
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382.9
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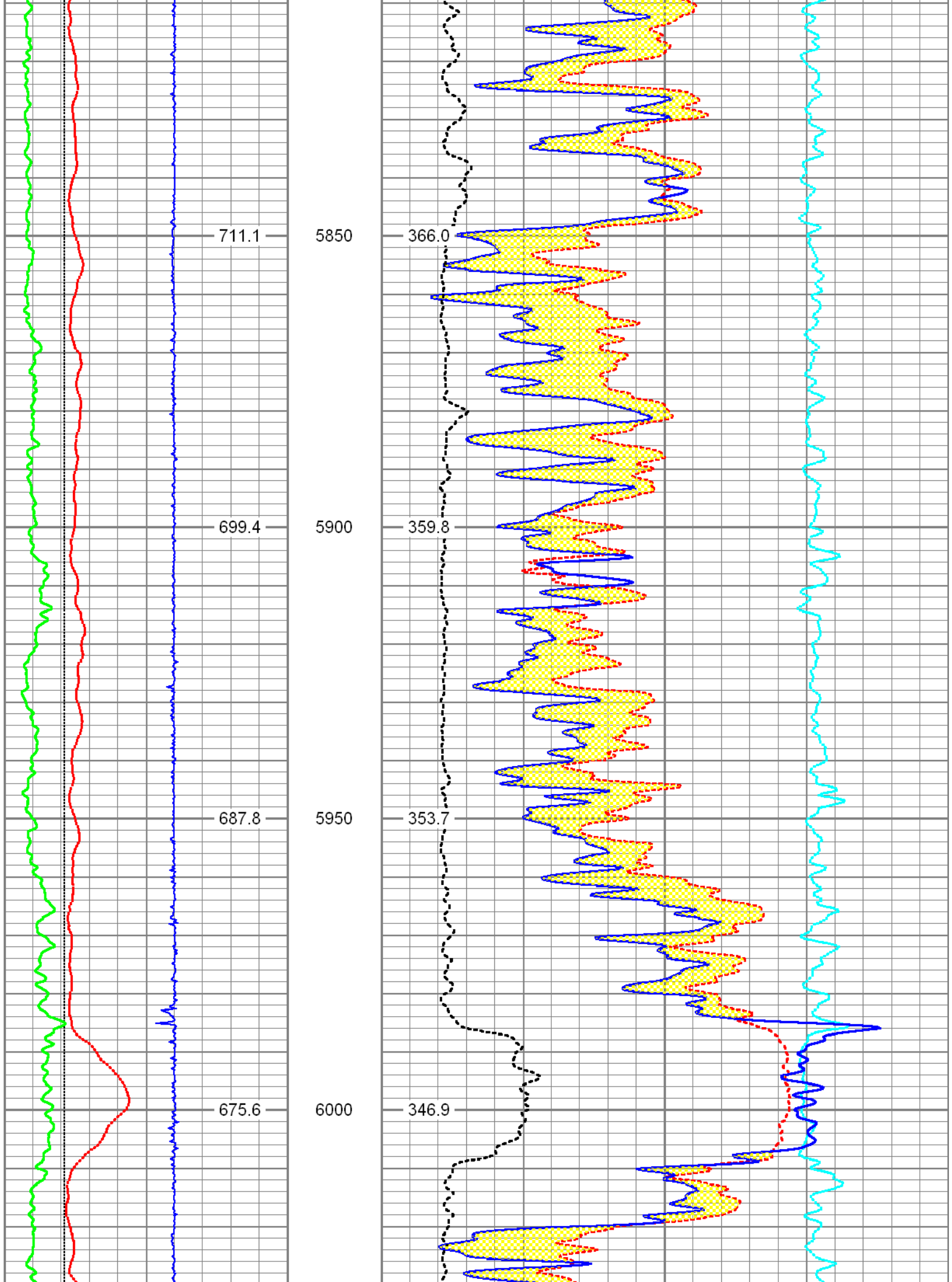
371.6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353.7
675.6
6000
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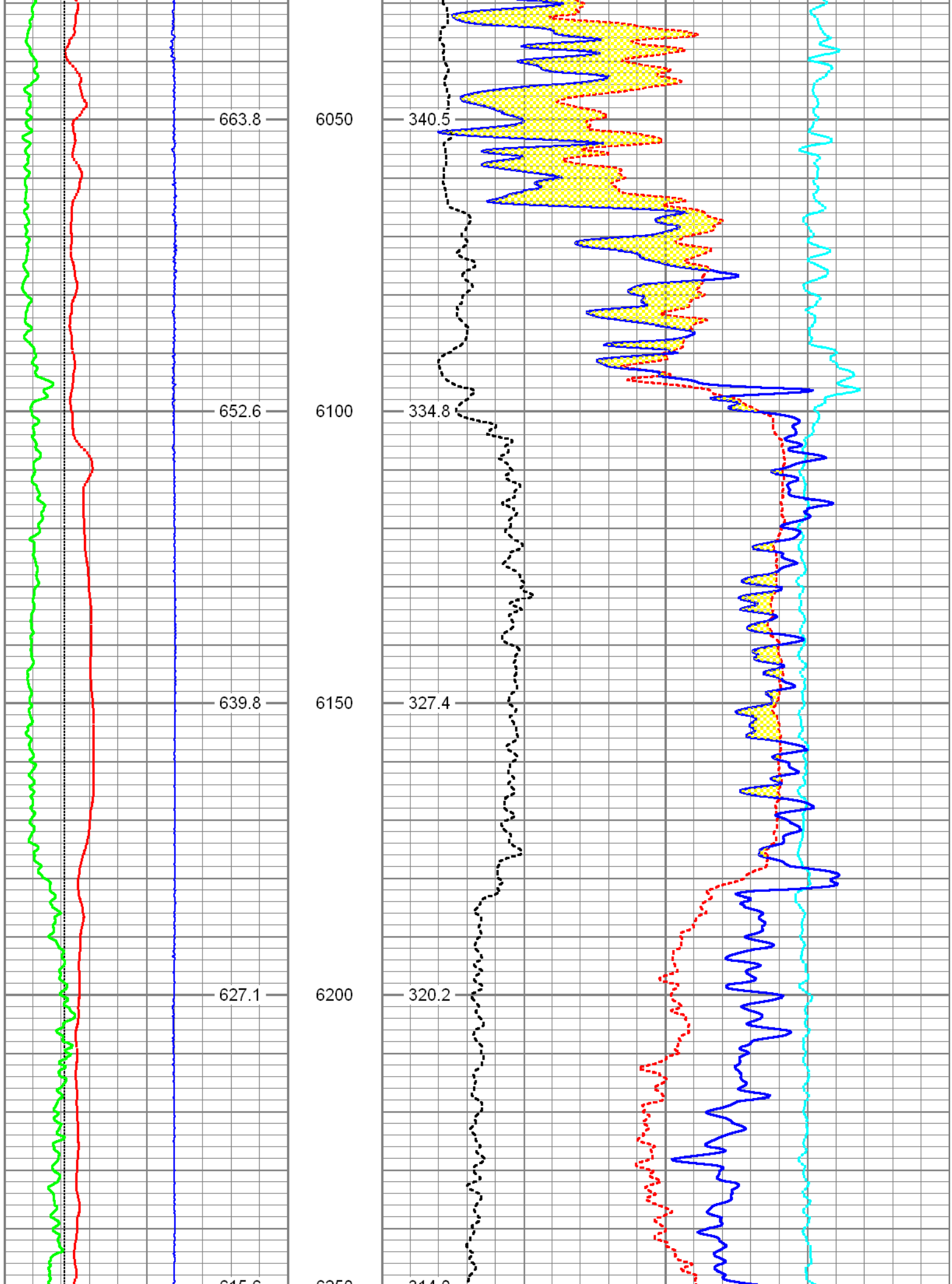
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334.8
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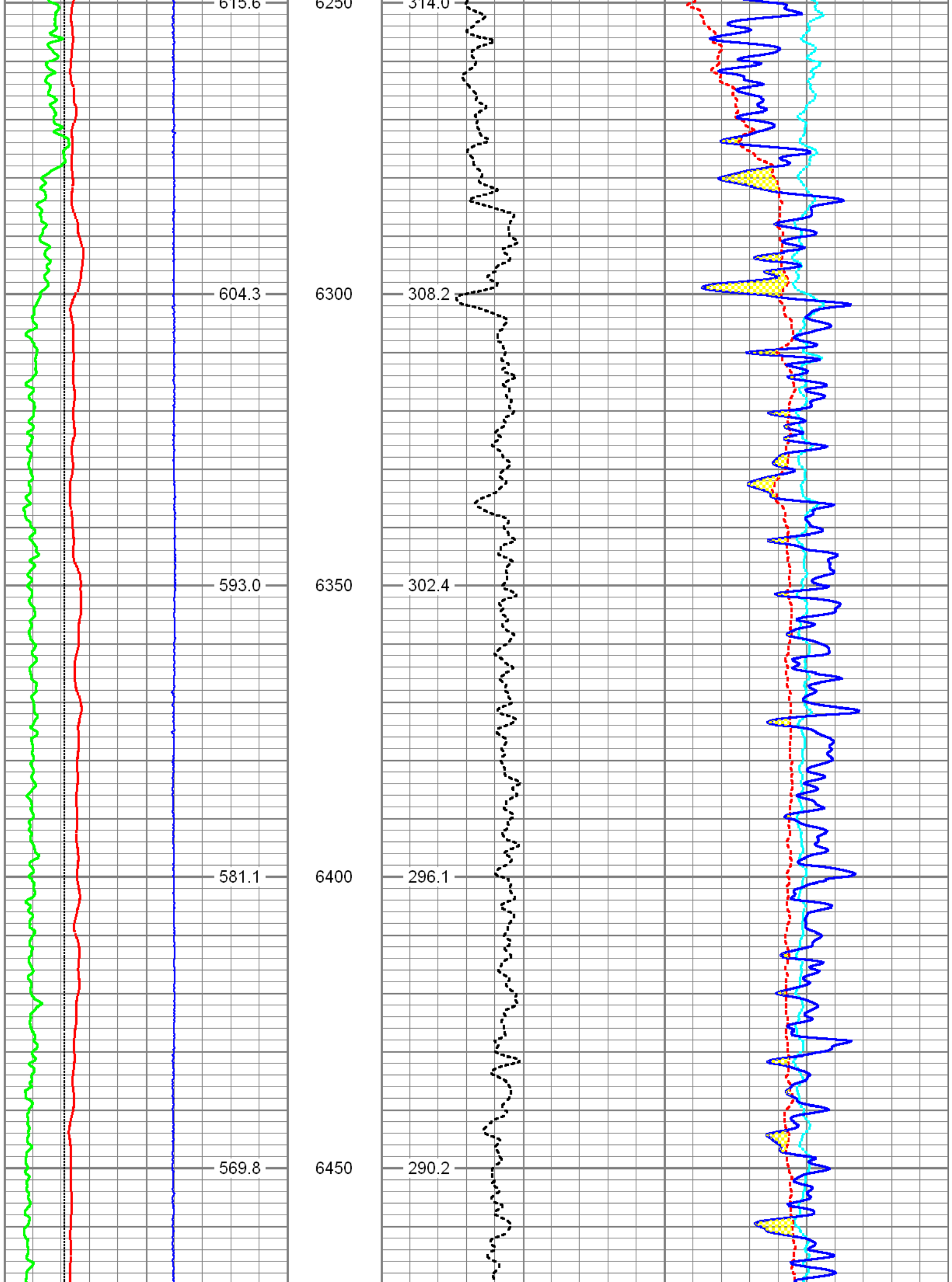
327.4
627.1
6200
320.2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302.4
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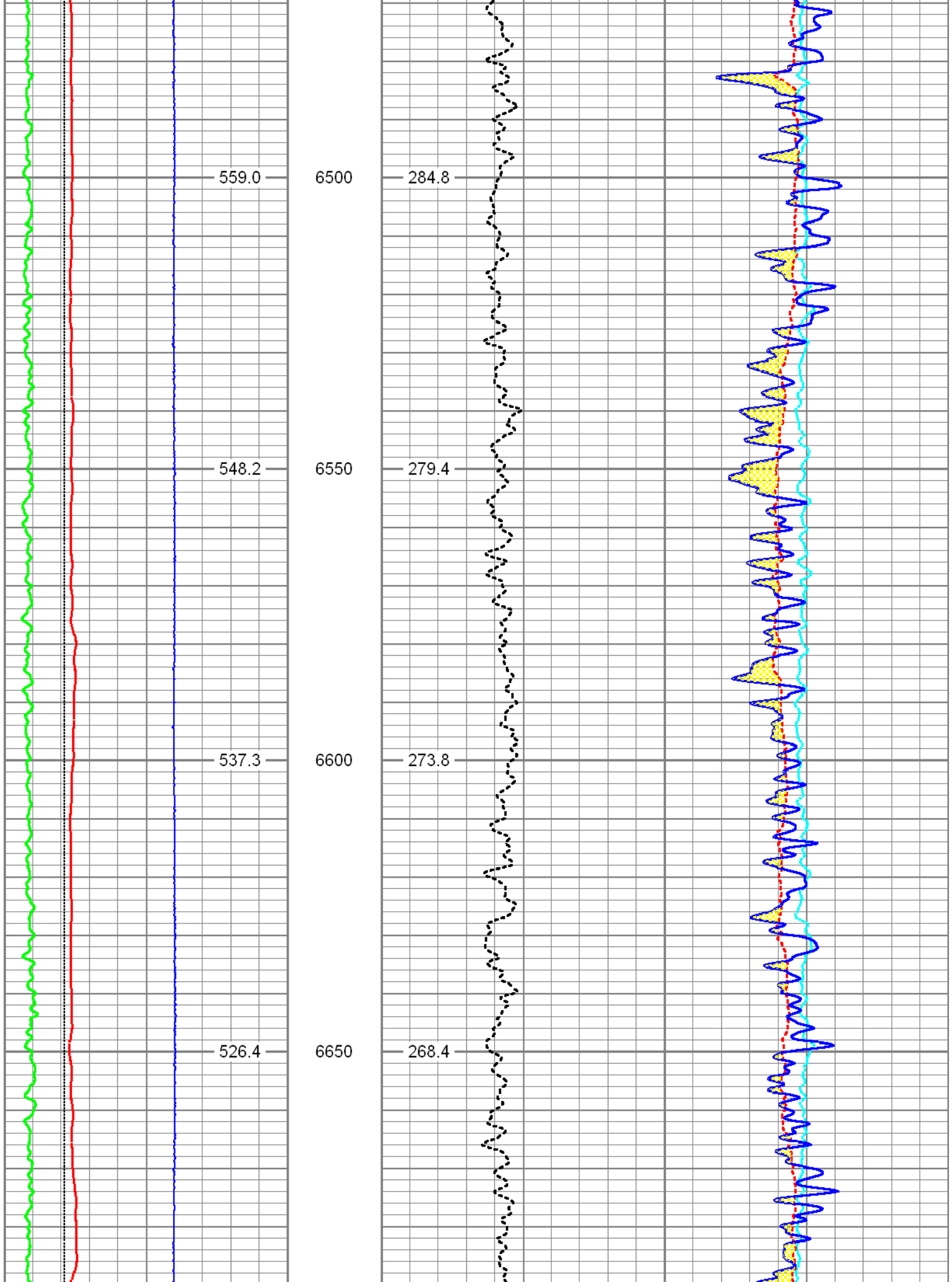
6450
290.2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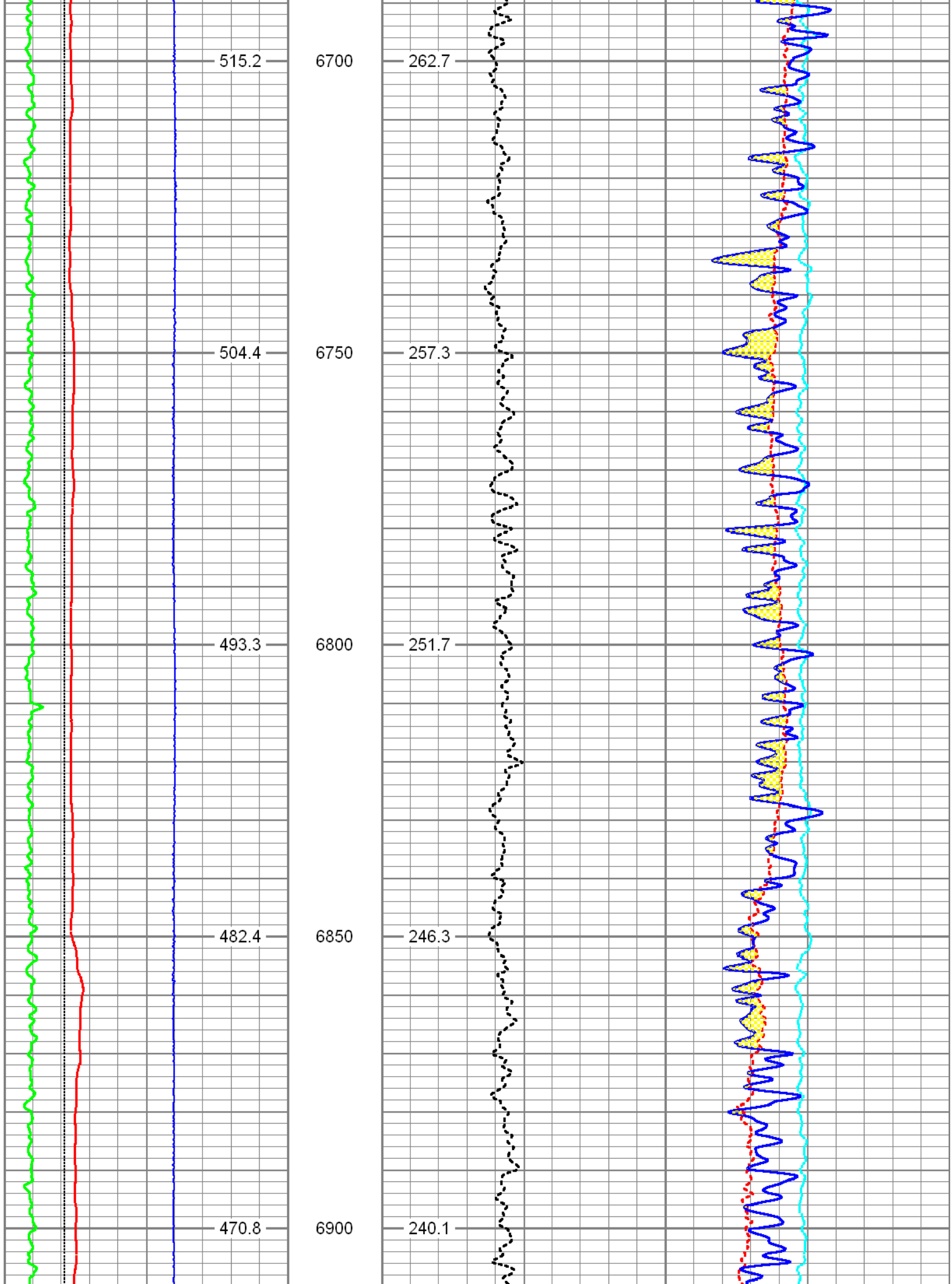
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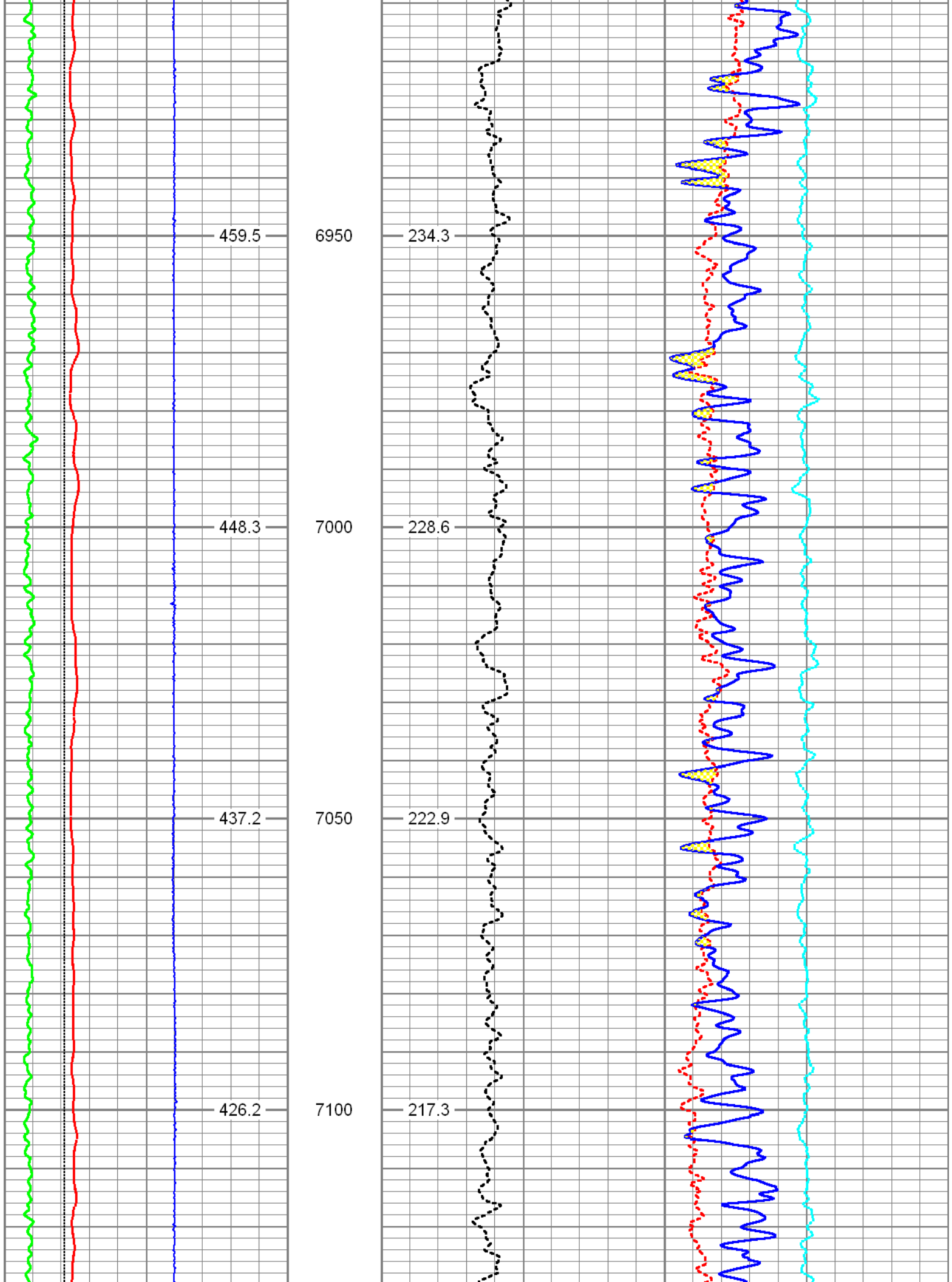
240.1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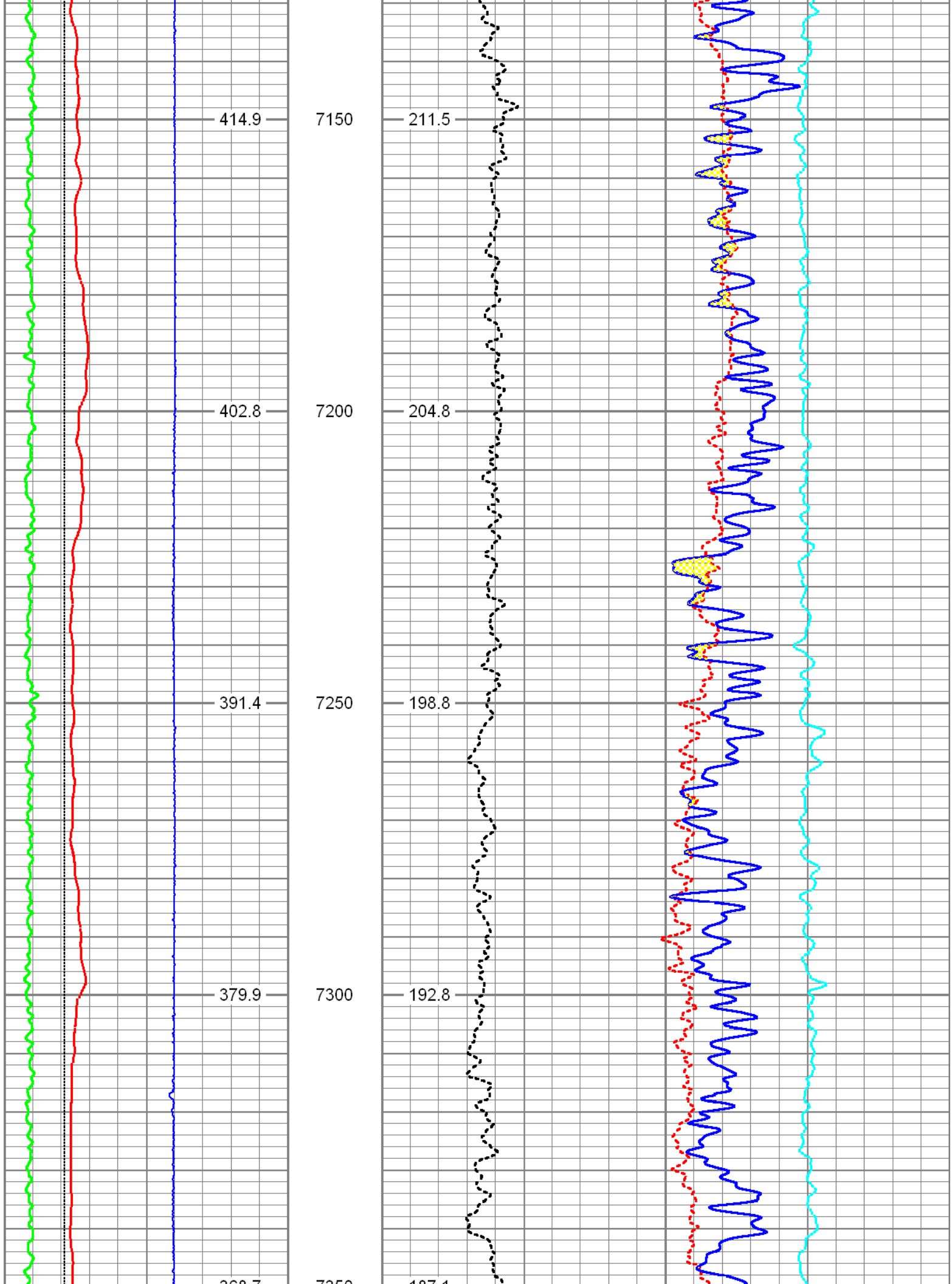
217.3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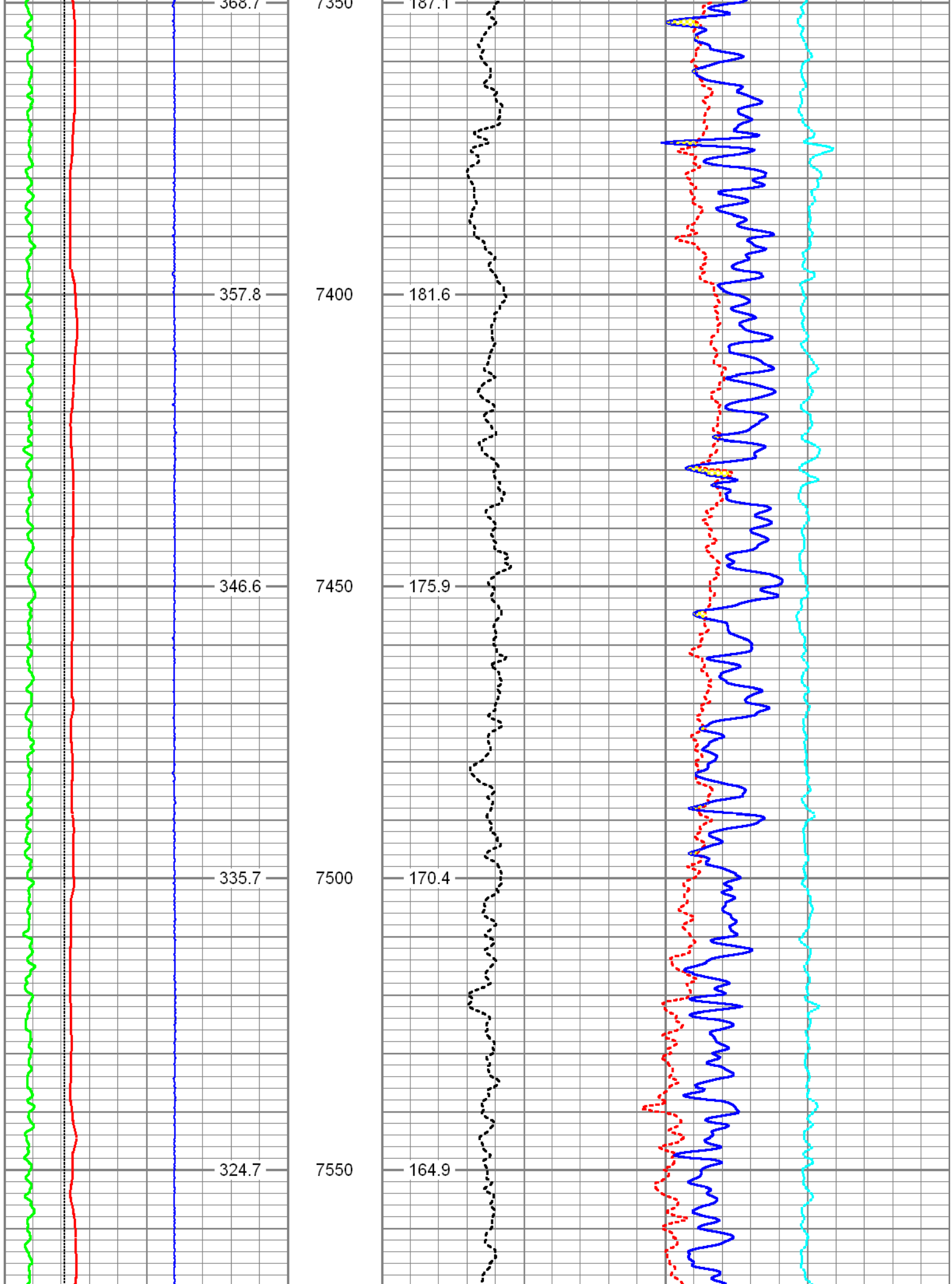
192.8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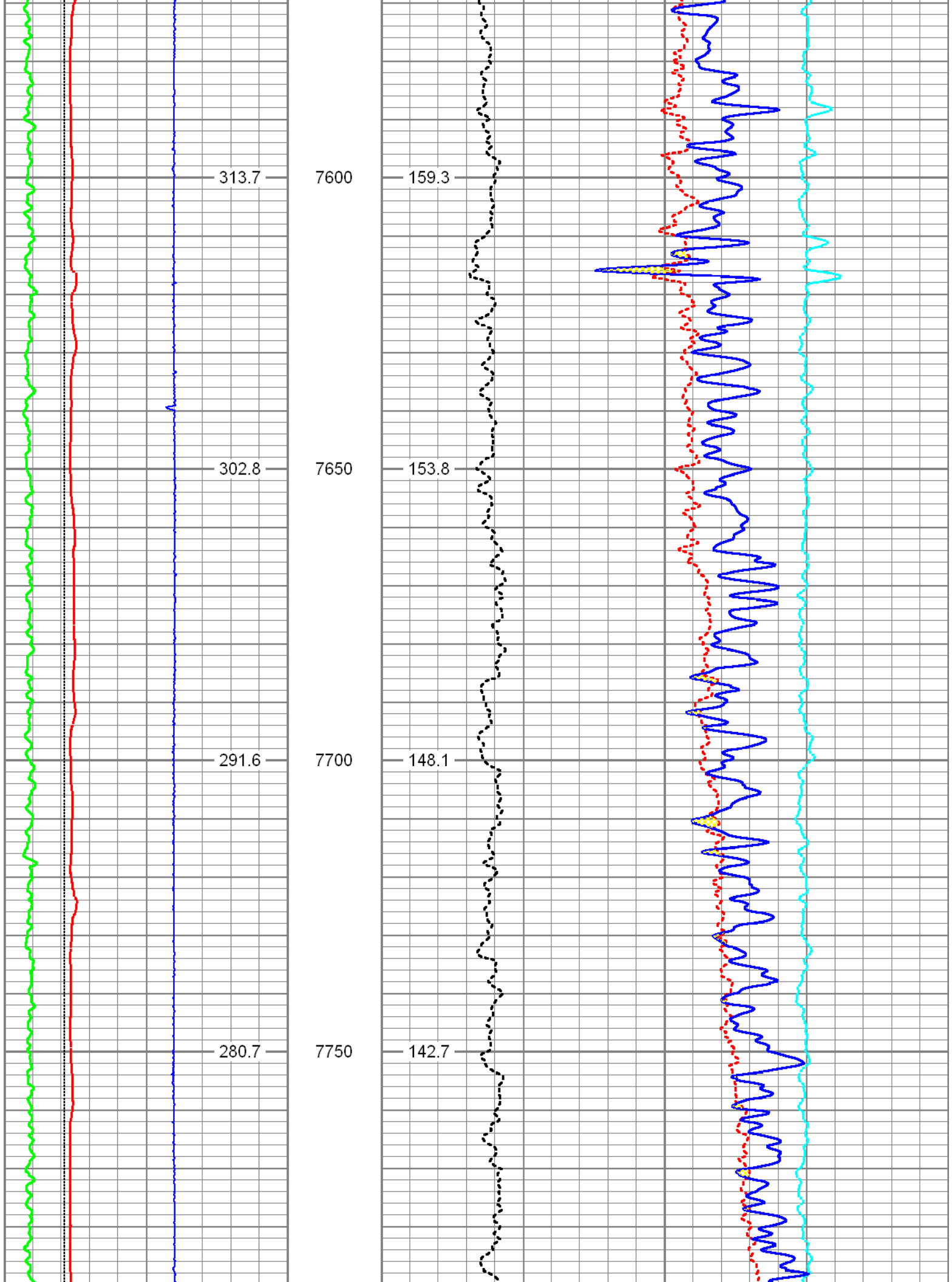
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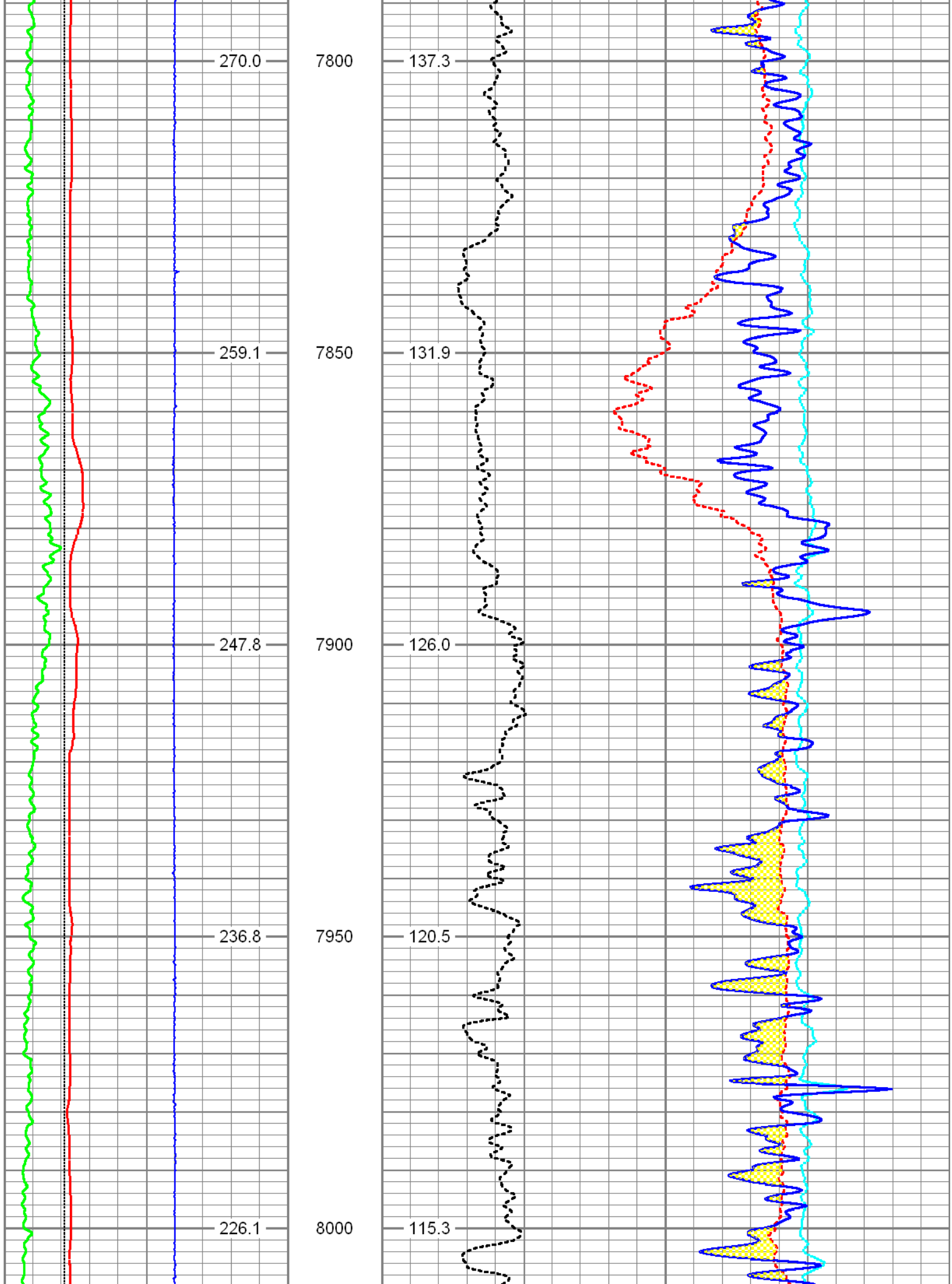
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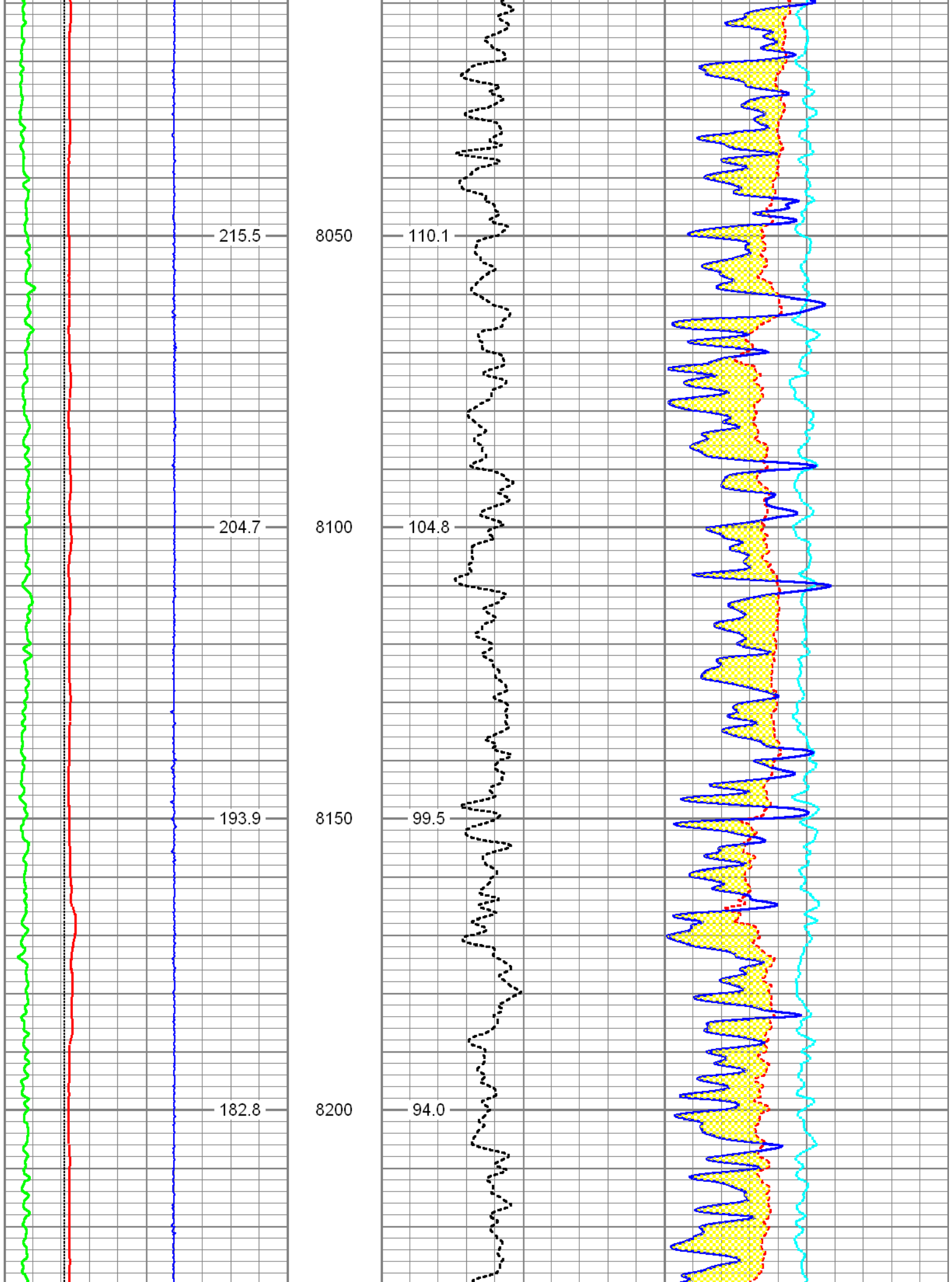
8000
115.3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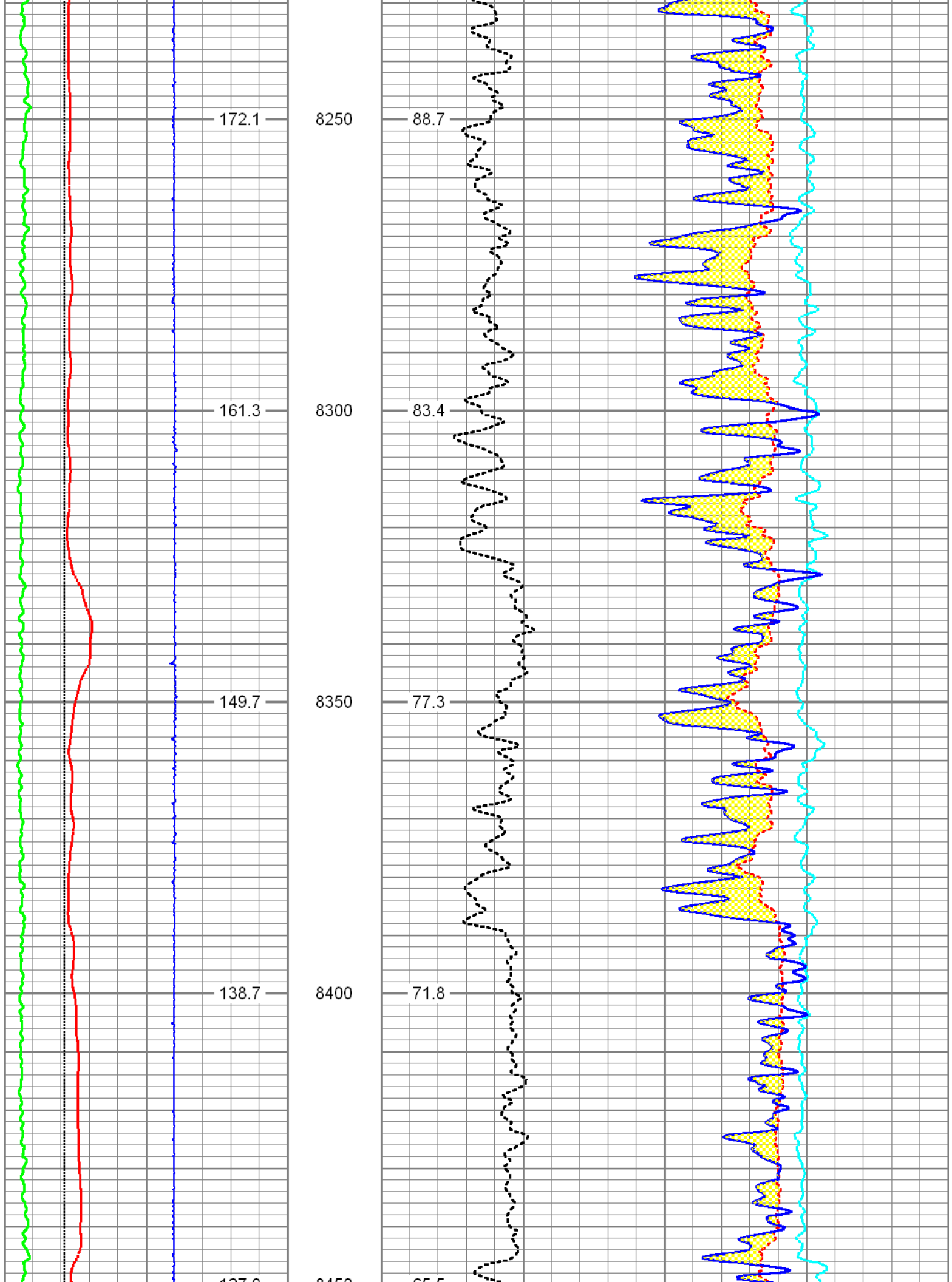
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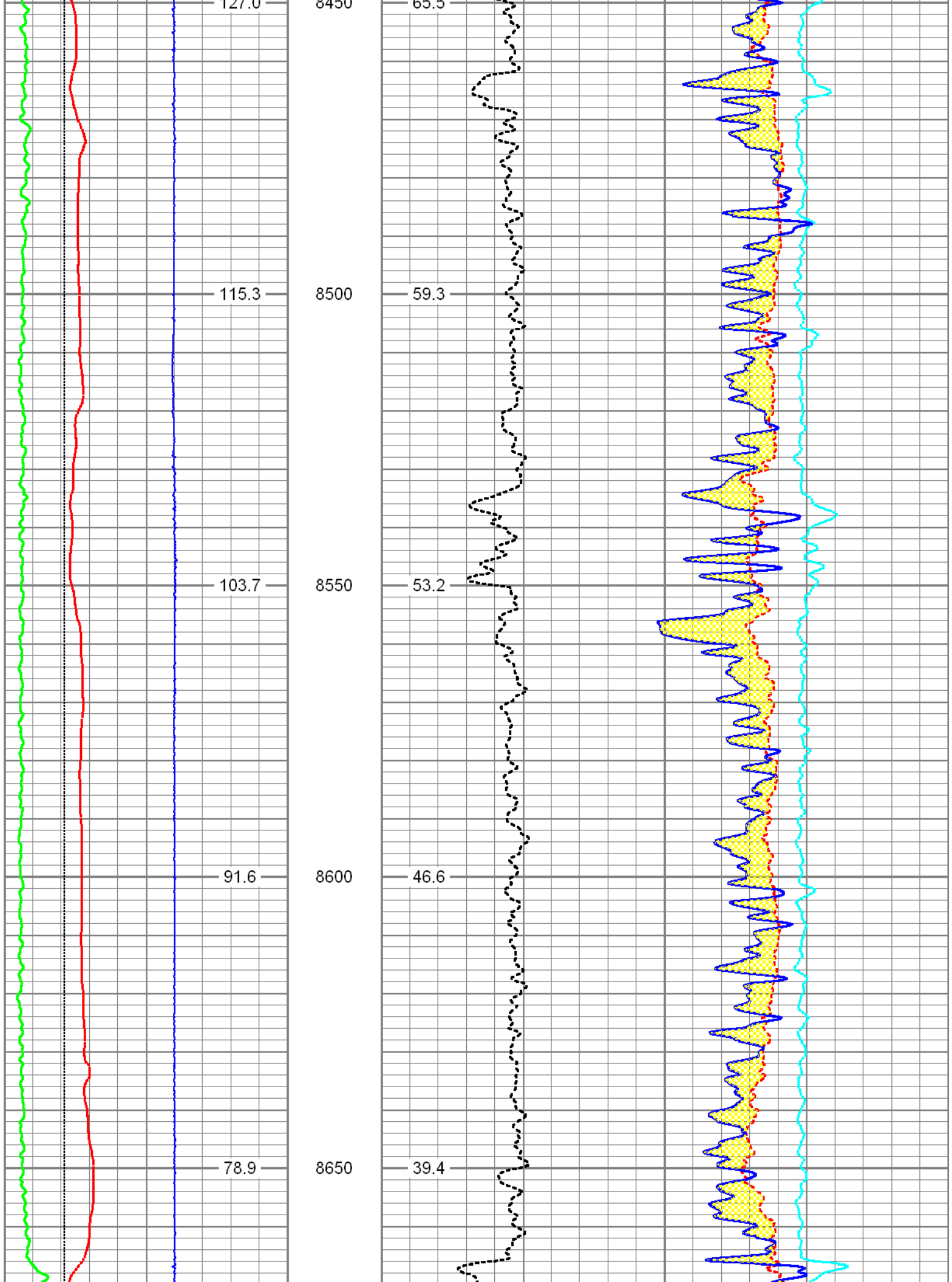
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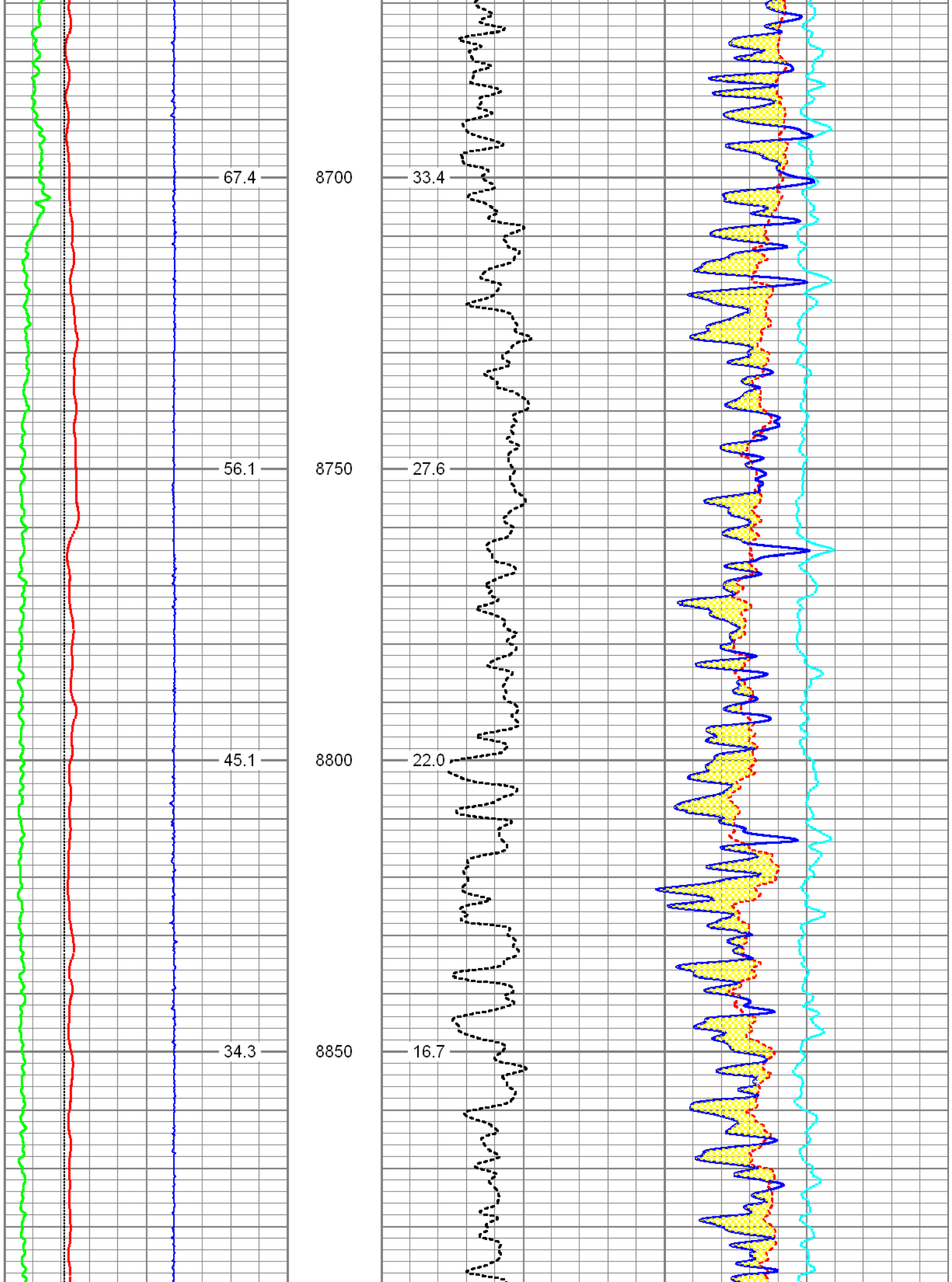
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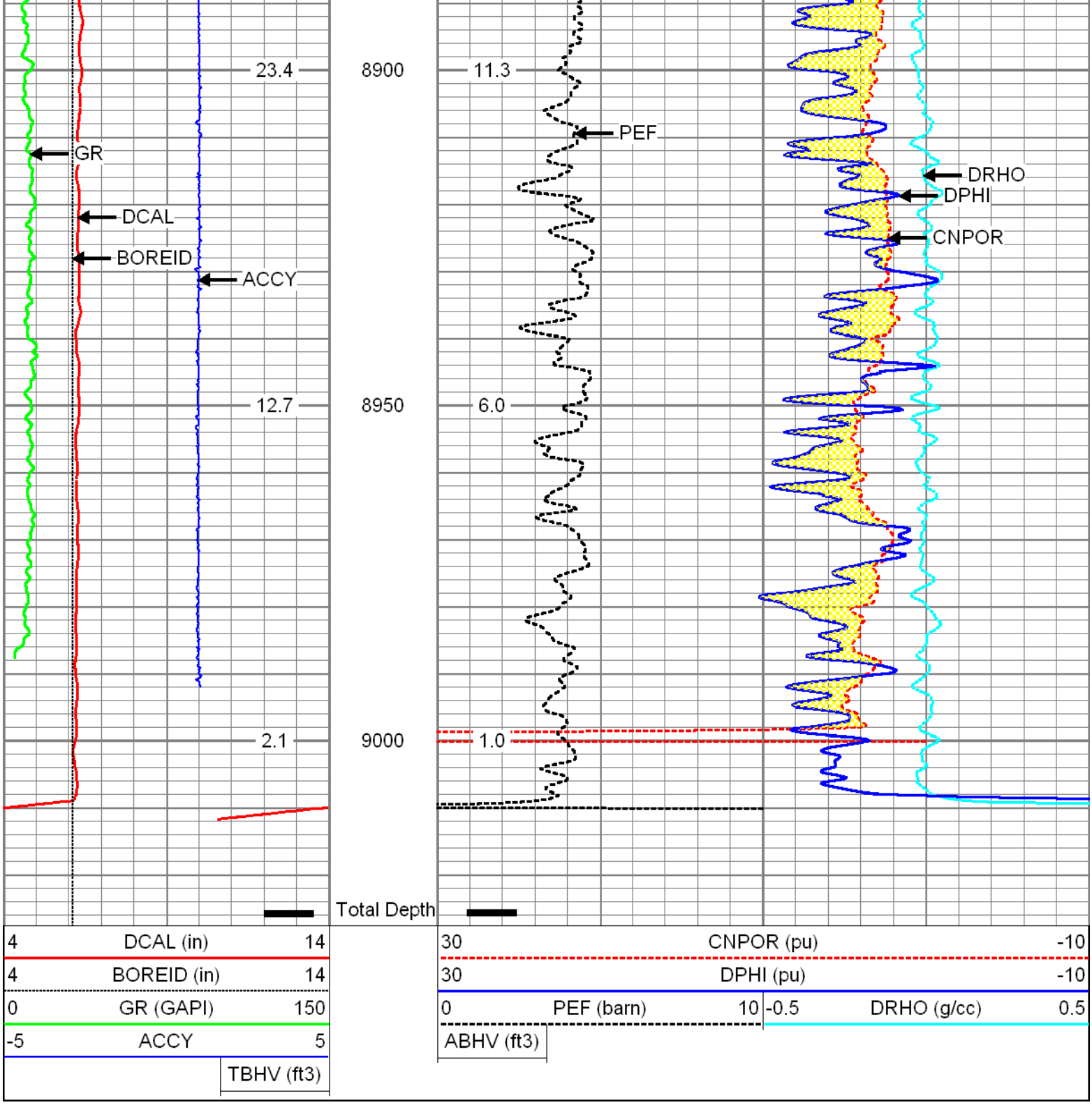


Log Variables

Database:C:\Warrior\Data\sandridge_britt_mem.db
Dataset: field/well/proc1/pass1.2

Top - Bottom

A	BHCOR	BHFL_TYPE	BHIDSRC	BOREID in	BOTTEMP degF	CASED?
1	On	WBM	CURVE	6.125	145	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

	g/cc	kppm	lb/gal			
2	2.71	1.2	8.4	Limestone	0	INTERNAL

SO in	SRFTEMP degF	SZCOR	TDEPTH ft	TMPCOR	TOOLPOS
0.5	65	On	9060	On	Free

Calibration Report

Database File: sandridge_britt_mem.db
Dataset Pathname: proc1/pass1.2
Dataset Creation: Sun Oct 02 08:01:47 2011

ThruBit Induction Calibration Report

Serial-Model: 15-PS

Shop Calibration Performed: Wed Jul 27 09:57:49 2011

BaseLine

	R	X
Freq 1		
A1	-416.1370	372.5410
A2	-152.4940	314.8840
A3	-26.4327	118.7310
A4	-15.0593	219.6400
A5	-13.7591	134.3270
Freq 2		
A1	-204.9750	205.6680
A2	-97.7937	180.2830
A3	-18.8361	27.4327
A4	-18.8506	56.1229
A5	-18.5381	-8.2029
Freq 3		
A1	-122.2030	74.3532
A2	-72.5857	92.8226
A3	-14.3723	-35.9529
A4	-20.2749	-53.6801
A5	-20.5684	-111.6360
Freq 4		
A1	-61.4427	-116.4680
A2	-49.8873	-25.3842
A3	-10.7600	-129.7020
A4	-23.5591	-218.7220
A5	-25.8085	-284.1170

Calibration Coefficients

	R	X
Freq 1		
A1	0.9920	0.0043
A2	0.9868	0.0033
A3	0.9936	-0.0050
A4	0.9908	0.0053
A5	0.9904	0.0032

A5	0.9904	0.0032
Freq 2		
A1	0.9862	-0.0058
A2	0.9803	-0.0060
A3	0.9816	-0.0068
A4	0.9855	-0.0040
A5	0.9854	-0.0066
Freq 3		
A1	1.0017	-0.0044
A2	0.9960	-0.0044
A3	0.9971	-0.0053
A4	1.0006	-0.0023
A5	1.0002	-0.0034
Freq 4		
A1	0.9881	-0.0055
A2	0.9832	-0.0045
A3	0.9864	-0.0075
A4	0.9883	-0.0025
A5	0.9907	-0.0052
Temperature	38.6248	

ThruBit Density Calibration Report

Serial-Model:	41-PS
Shop Calibration Performed:	Thu Sep 22 12:44:17 2011

References

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

Readings

	Counts	Units
SS1 Background	146.88	cps
LS1 Background	163.47	cps
LS4 Background	34.17	cps
SS1 Aluminium	5327.78	cps
LS1 Aluminium	952.92	cps
LS4 Aluminium	1072.72	cps
SS1 Magnesium	8575.44	cps
LS1 Magnesium	5835.08	cps
LS1 Al + Fe	804.59	cps
LS4 Al + Fe	458.31	cps

Results

SS Slope	1.82
LS Slope	0.45
PEF K Factor	3.480
PEF B Factor	-0.082

Compensated Neutron Calibration Report

Serial Number:	E03
Tool Model:	ENP
Source Number:	
Calibration Tank Temperature:	0.0 degF

BACKGROUND MEASUREMENT

SS Counts	LS Counts
0.0	0.0

WATER TANK REFERENCE Thu Sep 01 09:01:30 2011

SS Counts		LS Counts		
0.0	cps	0.0	cps	
Tank Ratio Ref		**Tank Ratio**		**Tank Ratio Gain**
30.9580	SS/LS	31.1488	SS/LS	0.9939

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			

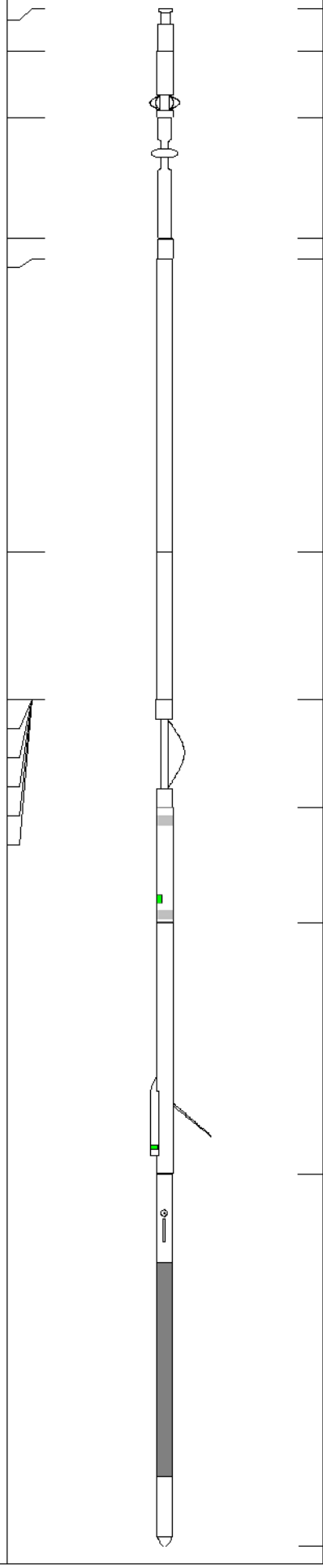
Gamma Ray Calibration Report

Serial Number:	26	
Tool Model:	PS	
Performed:	Sun Apr 10 10:00:25 2011	
Calibrator Value:	162.7	GAPI
Background Reading:	68.8	cps
Calibrator Reading:	448.0	cps
Sensitivity:	0.3760	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	63.87		Cablehead Thrubit 10 to 1 Cablehead	1.79	2.13	5.00
Thrubit	62.07					
			Small_Release Thrubit Small Release Tool	2.75	1.69	20.00
Thrubit	59.32					
			HangOff_Tool Thrubit Hang Off Tool	5.00	2.45	60.00
Thrubit	54.32		10-1 Thrubit 10 to 1 Crossover	0.88	2.13	3.95
TBBAT	53.45					
			TBBAT-A (1) Thrubit Battery	12.17	2.13	38.20
TMG	41.28					
			TMG-PS (26) ThruBit Telemetry Gamma Ray	6.13	2.13	45.00
Thrubit	35.16					
ACCX	35.16					
ACCY	35.16		Decentralizer Thrubit (Small) Decentralizer	4.50	2.13	22.60
ACCZ	35.16					
GRHEADV	35.16					
DHTEN	35.16		TBN-ENP (E03) ThruBit Neutron	4.77	2.13	63.00
			TBD-PS (41) Thrubit Density	10.47	2.13	94.00
			TBI-PS (15) Thrubit Induction	15.42	2.13	94.00

Dataset:	sandridge_britt_mem.db: field/well/proc1/pass1.2
Total Length:	63.87 ft
Total Weight:	445.75 lb
O.D.	2.45 in

Company	SANDRIDGE ENERGY
Well	BRITT 1-20H
Field	WALDRON WEST
County	HARPER
State	KANSAS

American Measurement Services

A Limited Liability Company
Ames, Oklahoma

Station Number:	KS03R00
Producer:	SANDRIDGE ENERGY
Lease:	BRITT 1-20H
Sample Pressure:	110.0
Sample Temperature:	75.0
Cylinder Number:	4115
Analysis By:	AMS
Date Sampled:	10/31/2011
Analysis Run Date:	10/31/2011

Gas Components	*Mole Percent*	*GPM*
Methane	54.233	
Ethane	6.192	1.6460
Propane	3.718	1.0180
IButane	0.567	0.1845
NButane	1.633	0.5120
IPentan	0.401	0.1459
NPentan	0.549	0.1979
C6 +	0.749	0.3251
Nitrogen	26.383	
CO2	5.574	
	100.00%	4.0295

BTU @ 14.65 @ 60 F - Real

Dry	898.7
Wet	883.0
Specific Gravity - Real	0.8552
Z =	0.9973

Gasoline Content

Propane And Heavier	2.3835
Butane And Heavier	1.3654
Pentane And Heavier	0.6689

H2S Field Test: PPM

Field Remarks: Pulled from separator

Analysis Based Upon GPA 2145, 2172, And 2261