Schlumberger

Company: **CAERUS OPERATING LLC**

Well: **Puckett 13D−26**

Field: **Grand Valley**

County: **Garfield** State: **Colorado**

Triple Combo

County: Garfield
Field: Grand Valley
Location: SENW Sec. 26 T6S R97W
Well: Puckett 13D−26
Company: CAERUS OPERATING LLC

LOCATION

SENW Sec. 26 T6S R97W
SHL: 2283 FNL 1671 FWL
Latitude: 39.494975 Longitude: −108.190817

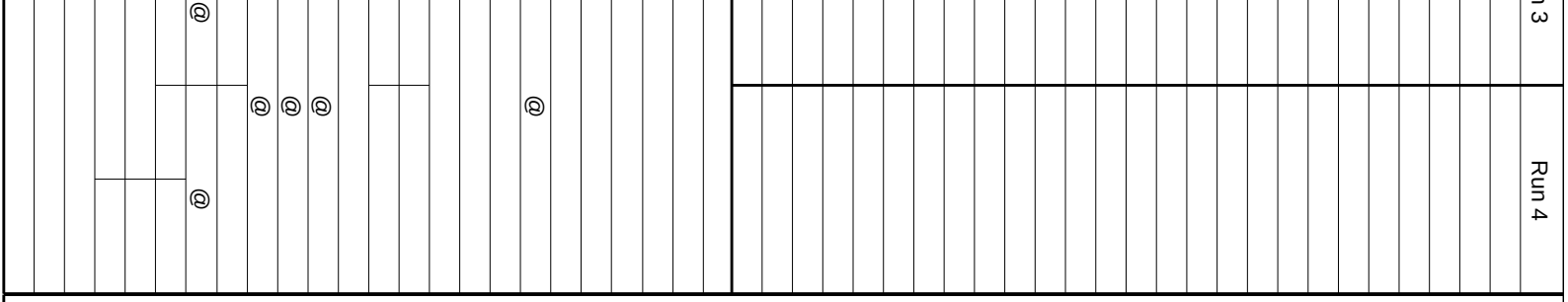
Elev.: K.B. 30.00 ft
G.L. 8322.00 ft
D.F. 29.00 ft

Permanent Datum: Ground Level Elev.: 8322.00 ft
Log Measured From: Kelly Bushing 30.00 ft above Perm. Datum
Drilling Measured From: Kelly Bushing

API Serial No.	Section	Township	Range
0504523418	26	6S	97W

	Run 1	Run 2	Run
Logging Date	23−Jan−2018		
Run Number	1		
Depth Driller	7115 ft		
Schlumberger Depth	8908 ft		
Bottom Log Interval	8908 ft		
Top Log Interval	2548 ft		
Casing Driller Size @ Depth	9.625 in @ 2548 ft	@	@
Casing Schlumberger	2554 ft		
Bit Size	8.750 in		
Type Fluid In Hole	WBM		
MUD Density / Viscosity	8.8 lbm/gal / 45 s		
MUD Fluid Loss / PH	6.4 cm3 / 8.5		
MUD Source Of Sample	Sample		
RM @ Measured Temperature	1.502 ohm.m @ 75 degF	@	@
RMF @ Measured Temperature	1.127 ohm.m @ 75 degF	@	@
RMC @ Measured Temperature	2.253 ohm.m @ 75 degF	@	@
Source RMF / RMC	Calculated / Calculated		
RM @ MRT / RMF @ MRT	0.622 @ 191 / 0.466 @ 191	@ / @	@ / @
Maximum Recorded Temperatures	191 degF		
Circulation Stopped / Time	23−Jan−2018 / 14:30		
Logger On Bottom / Time	23−Jan−2018 / 16:00		
Unit Number / Location	9115 / Fort Morgan		
Recorded By	Stephen Tang		
Witnessed By	Doug McAdam		

	Run 1	Run 2	Run
Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth	@		
Casing Schlumberger			
Bit Size			
Type Fluid In Hole			
MUD Density / Viscosity			
MUD Fluid Loss / PH			
MUD Source Of Sample			
RM @ Measured Temperature	@		
RMF @ Measured Temperature	@		
RMC @ Measured Temperature	@		
Source RMF / RMC			
RM @ MRT / RMF @ MRT	@ / @		
Maximum Recorded Temperatures			
Circulation Stopped / Time			
Logger On Bottom / Time			
Unit Number / Location			
Recorded By			
Witnessed By			



DISCLAIMER

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OTHER SERVICES1	OTHER SERVICES2
OS1:	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Toolstring ran as per toolsketch.	
Log depth recorded as driller depth.	
Logs processed from memory data.	
First log in well.	

RUN 1

SERVICE ORDER #: DW01−00041
PROGRAM VERSION: 19C2−270
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

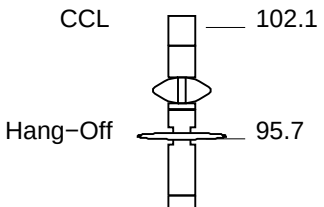
RUN 1 RUN 2

SURFACE EQUIPMENT

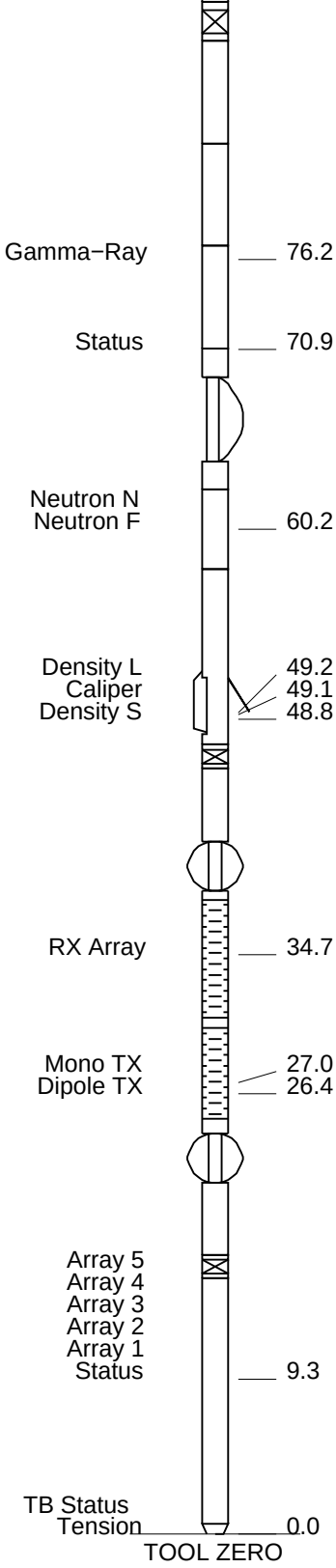
WITM (ThruBit)

DOWNHOLE EQUIPMENT

TBT−A
CCL
BDOT−B
THOT
T10_1
SAH−TB
TBAT1
TBAT2



WCIB
TMG−A
TILE−B
TBN−A
NNLS−EWA
TBD−A
GGLS−FZ
KAH−TB_2
TBDS−B
KAH−TB_1
TBI−A



MAXIMUM STRING DIAMETER 2.13 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Schlumberger

5" Main Pass

MAXIS Field Log

Company: CAERUS OPERATING LLC **Well: Puckett 13D−26**

Output DLIS Files

DEFAULT	ThruBit_013PUP	FN:12	PRODUCER	23−Jan−2018 12:15	8740.2 FT	1992.2 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 3416.44 F3

Cement Volume = 2733.20 F3 (assuming 4.50 IN casing O.D.)

Computed from 8740.2 FT to 2554.2 FT using data channel(s) CALI

OP System Version: 19C2−270

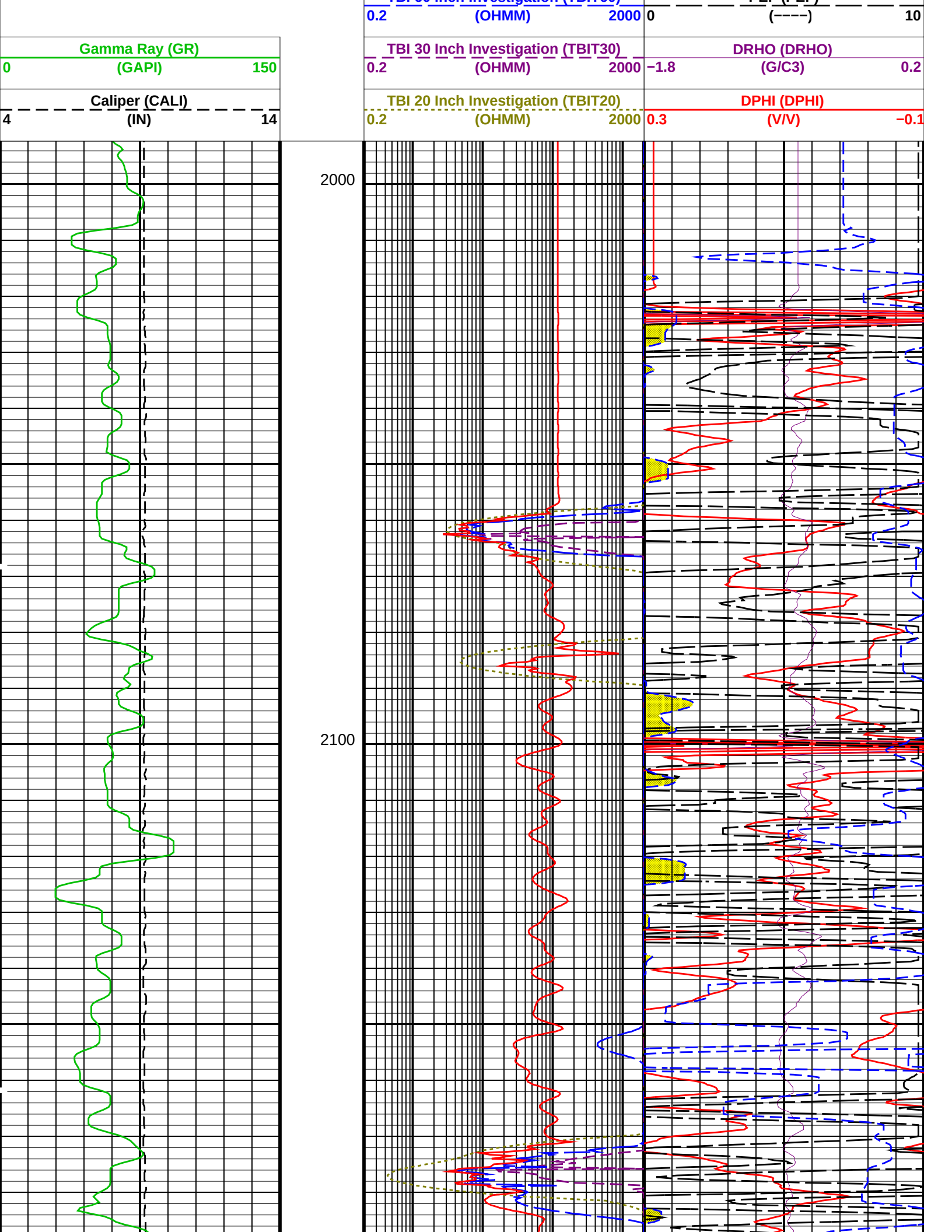
TBT−A SRPC−5318−Thrubit−SP3.4

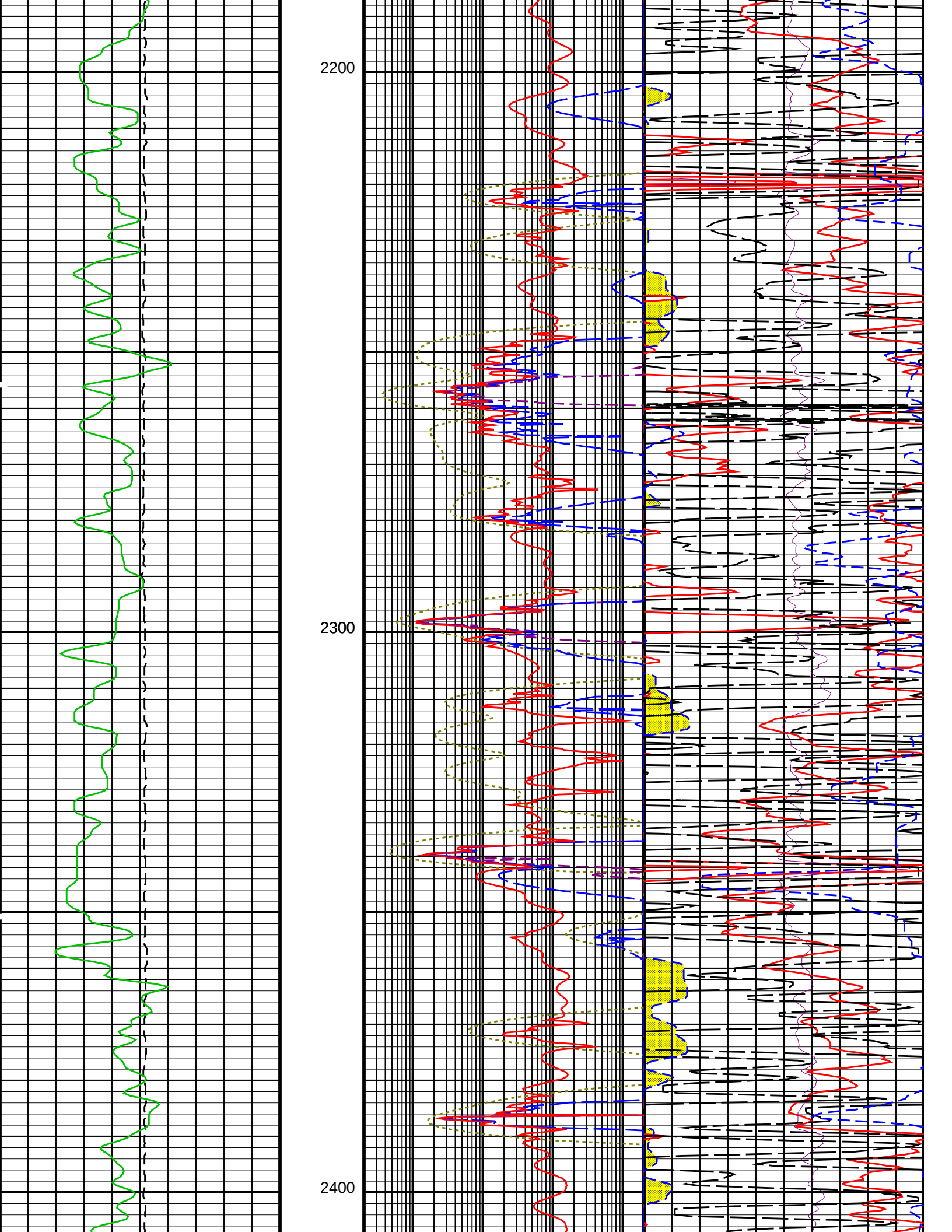
PIP SUMMARY

- Integrated Cement Volume Major Pip Every 100 F3
- Integrated Cement Volume Minor Pip Every 10 F3
- Integrated Hole Volume Major Pip Every 100 F3
- Integrated Hole Volume Minor Pip Every 10 F3

Time Mark Every 60 S

	TBI 90 Inch Investigation (TBIT90)	TNPH (TNPH)
	0.2 (OHMM) 2000	30 (%) −10
	TBI 60 Inch Investigation (TBIT60)	PEF (PEF)


0.2 (OHMM) 2000
0 (----) 10
Gamma Ray (GR)
0 (GAPI) 150
TBI 30 Inch Investigation (TBIT30)
0.2 (OHMM) 2000
DRHO (DRHO)
−1.8 (G/C3) 0.2
Caliper (CALI)
4 (IN) 14
TBI 20 Inch Investigation (TBIT20)
0.2 (OHMM) 2000
DPHI (DPHI)
0.3 (V/V) −0.1
2000
2100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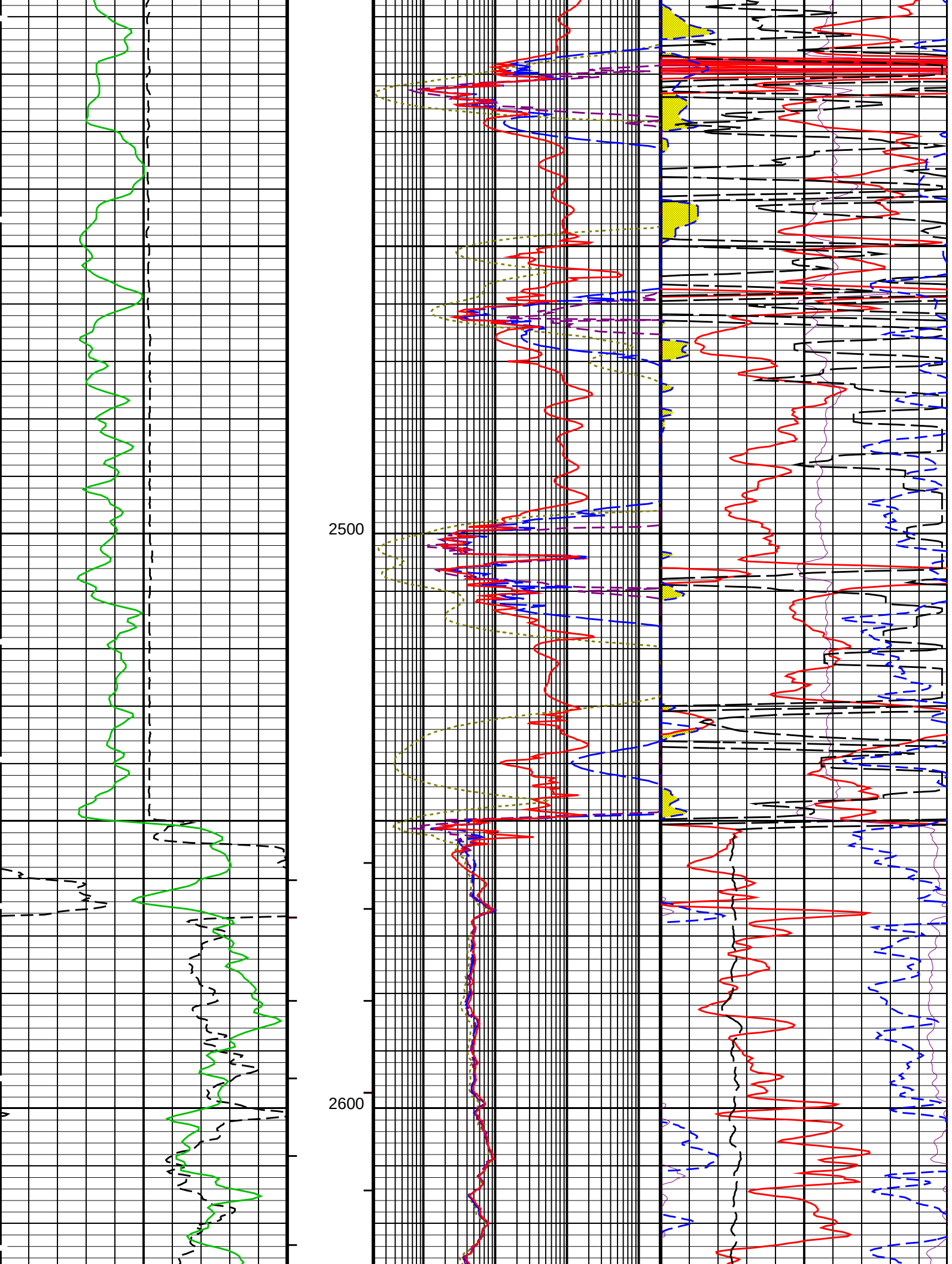
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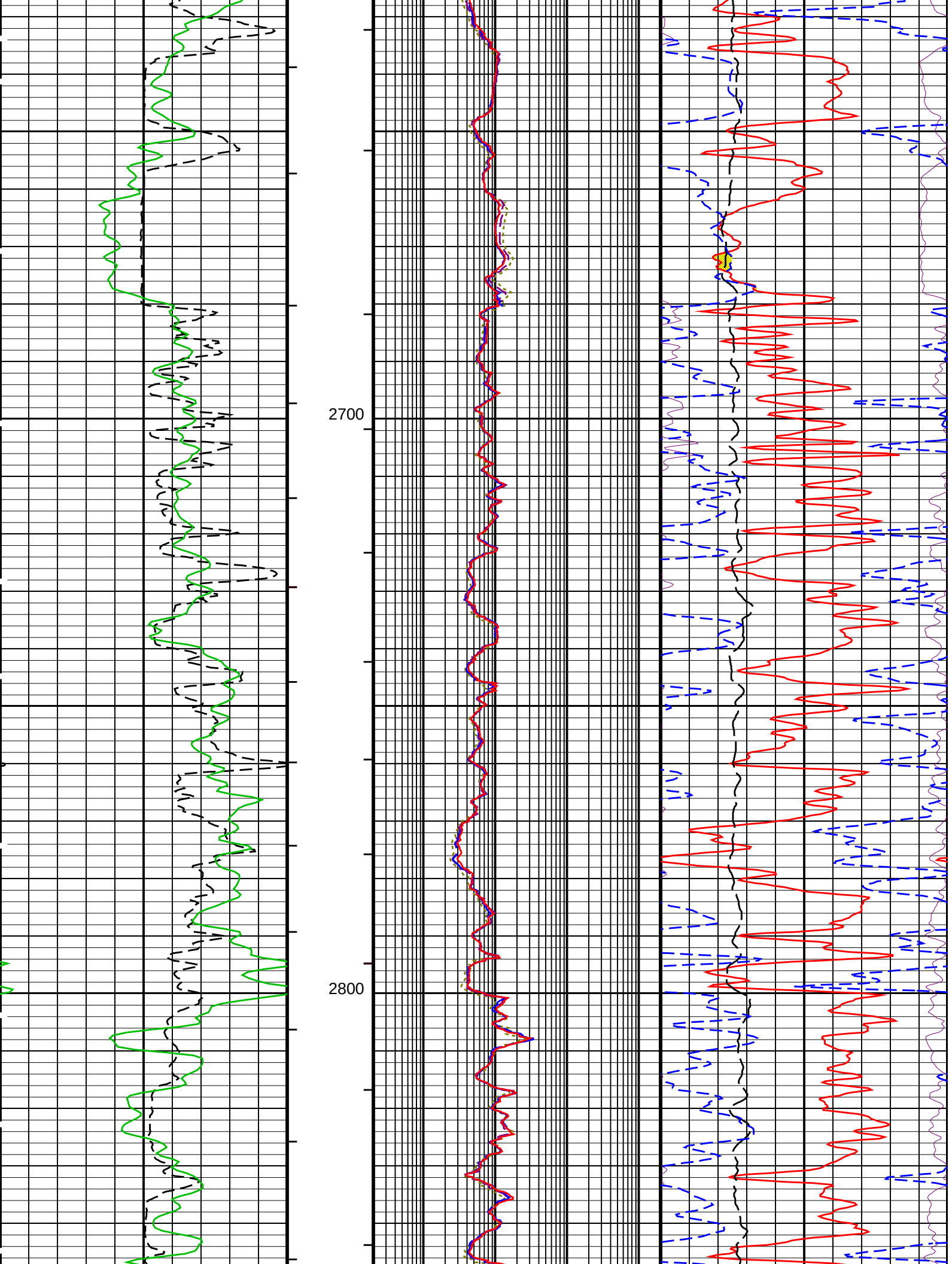
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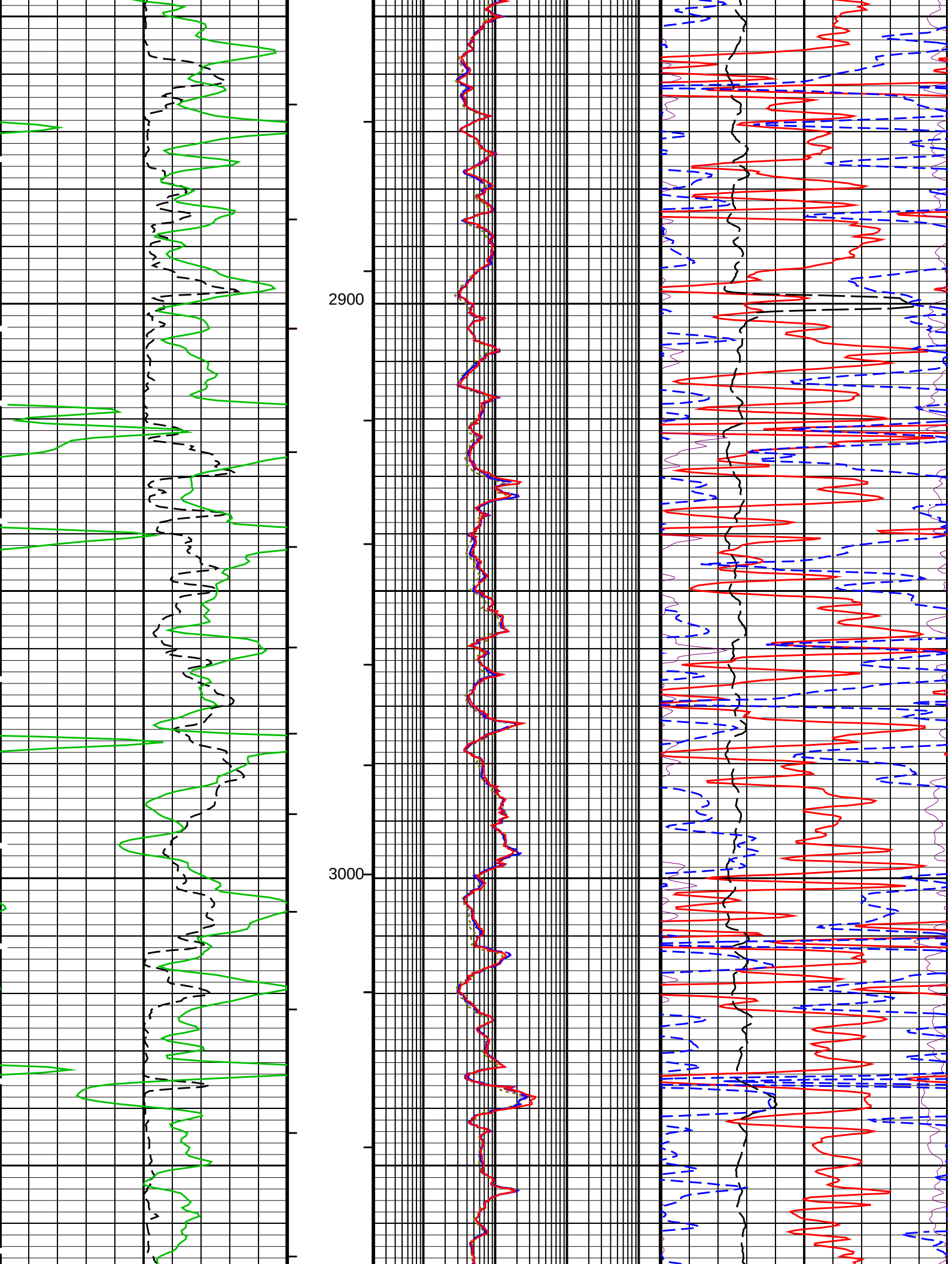
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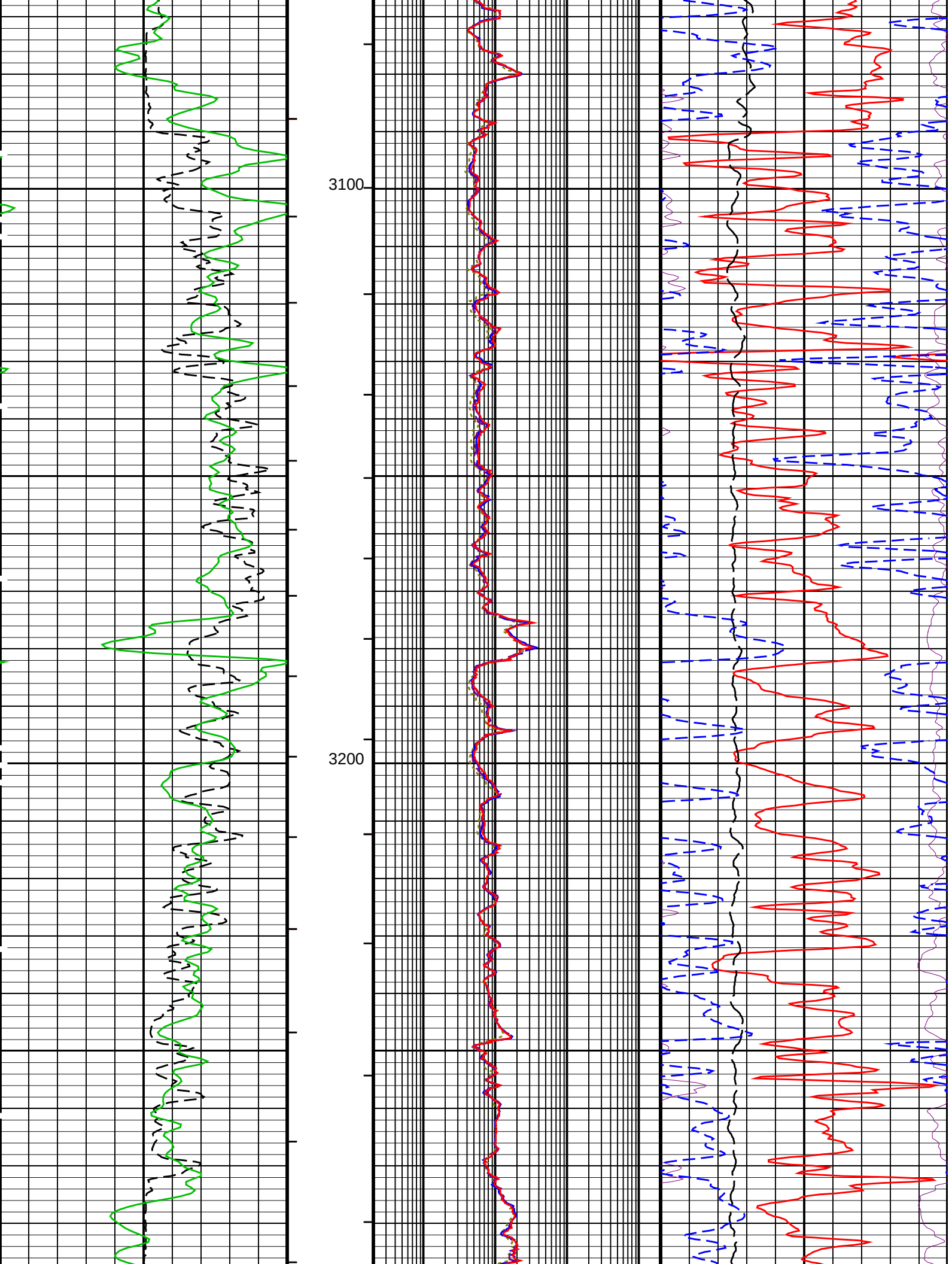
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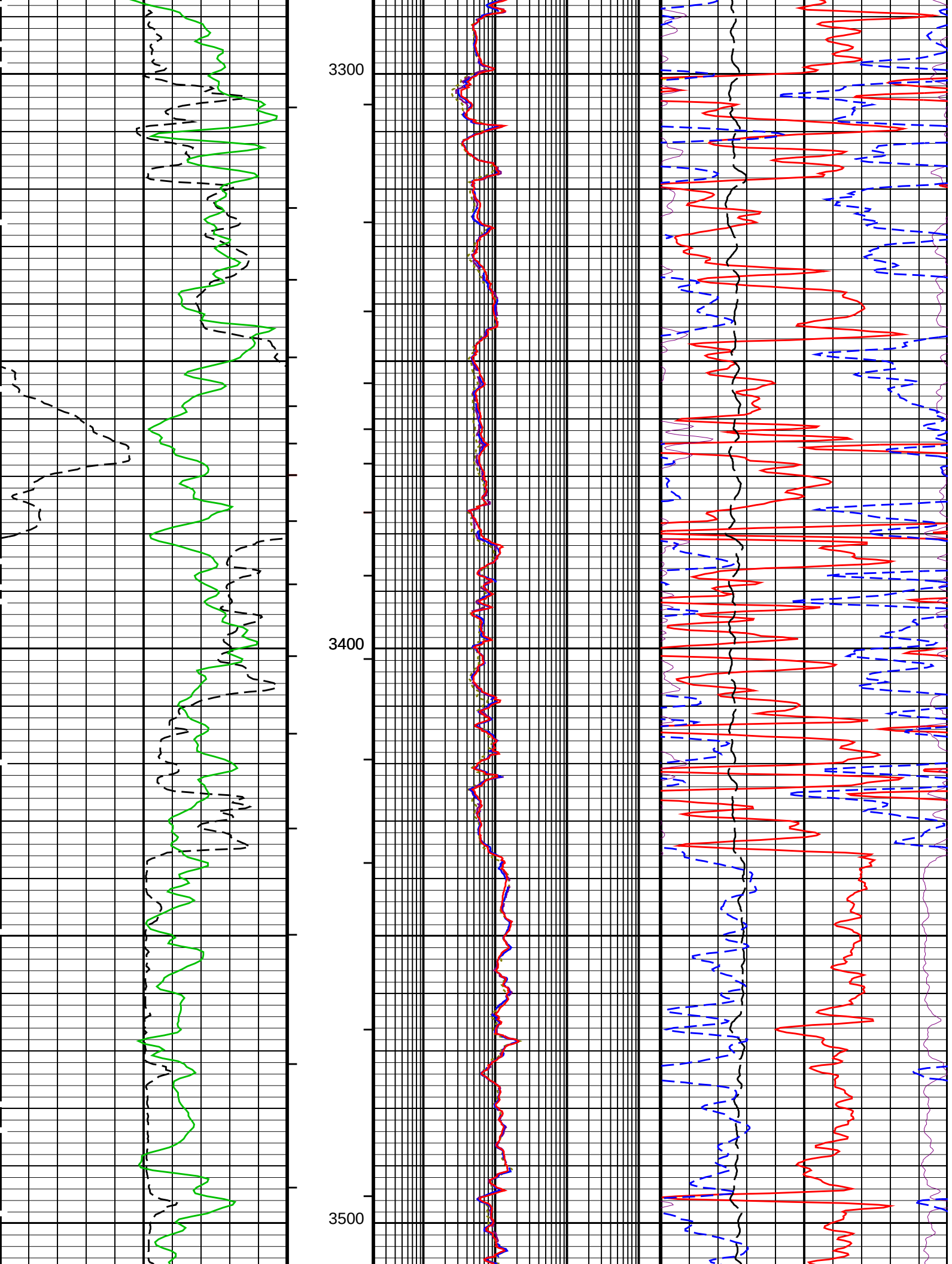
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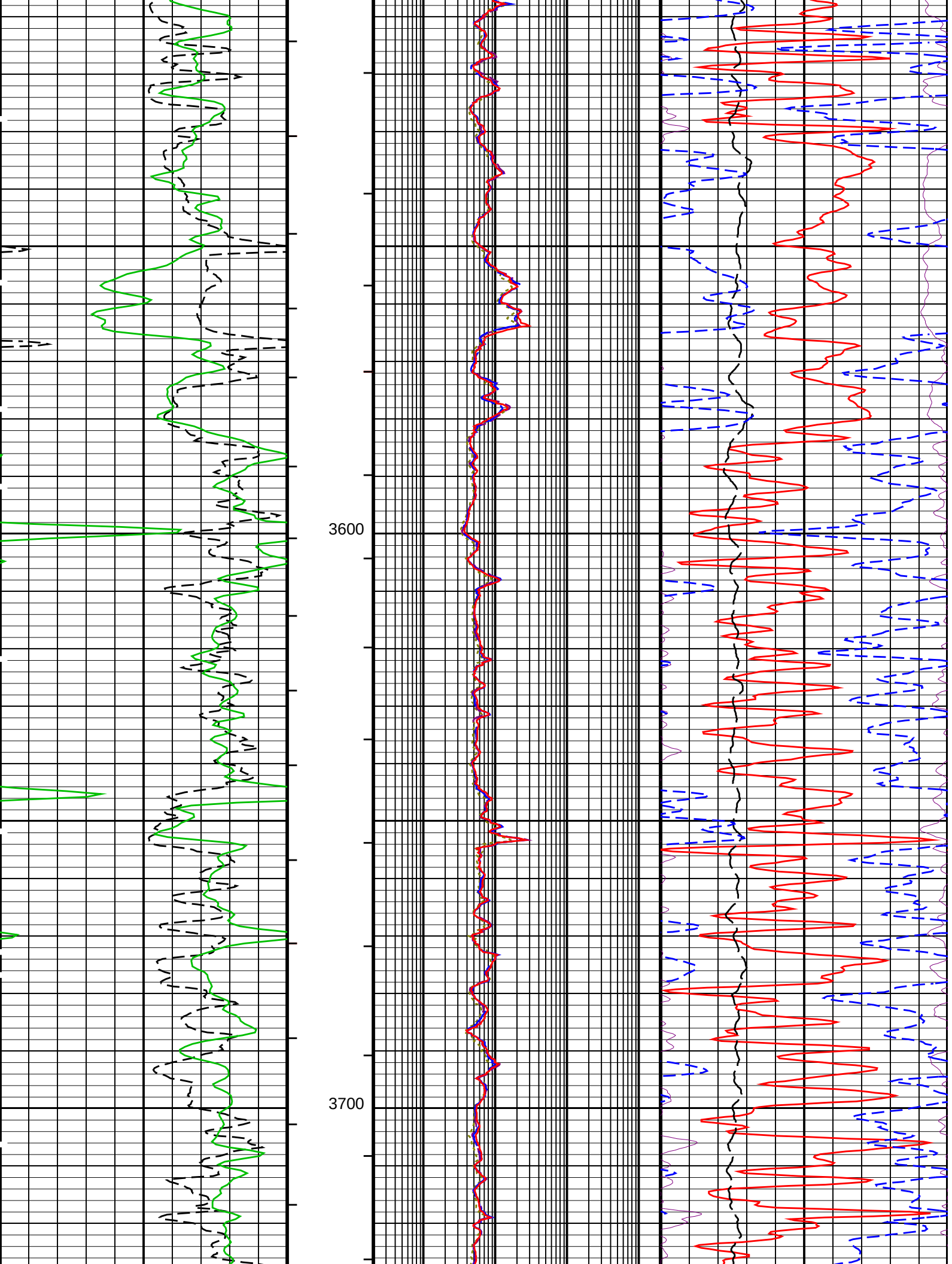
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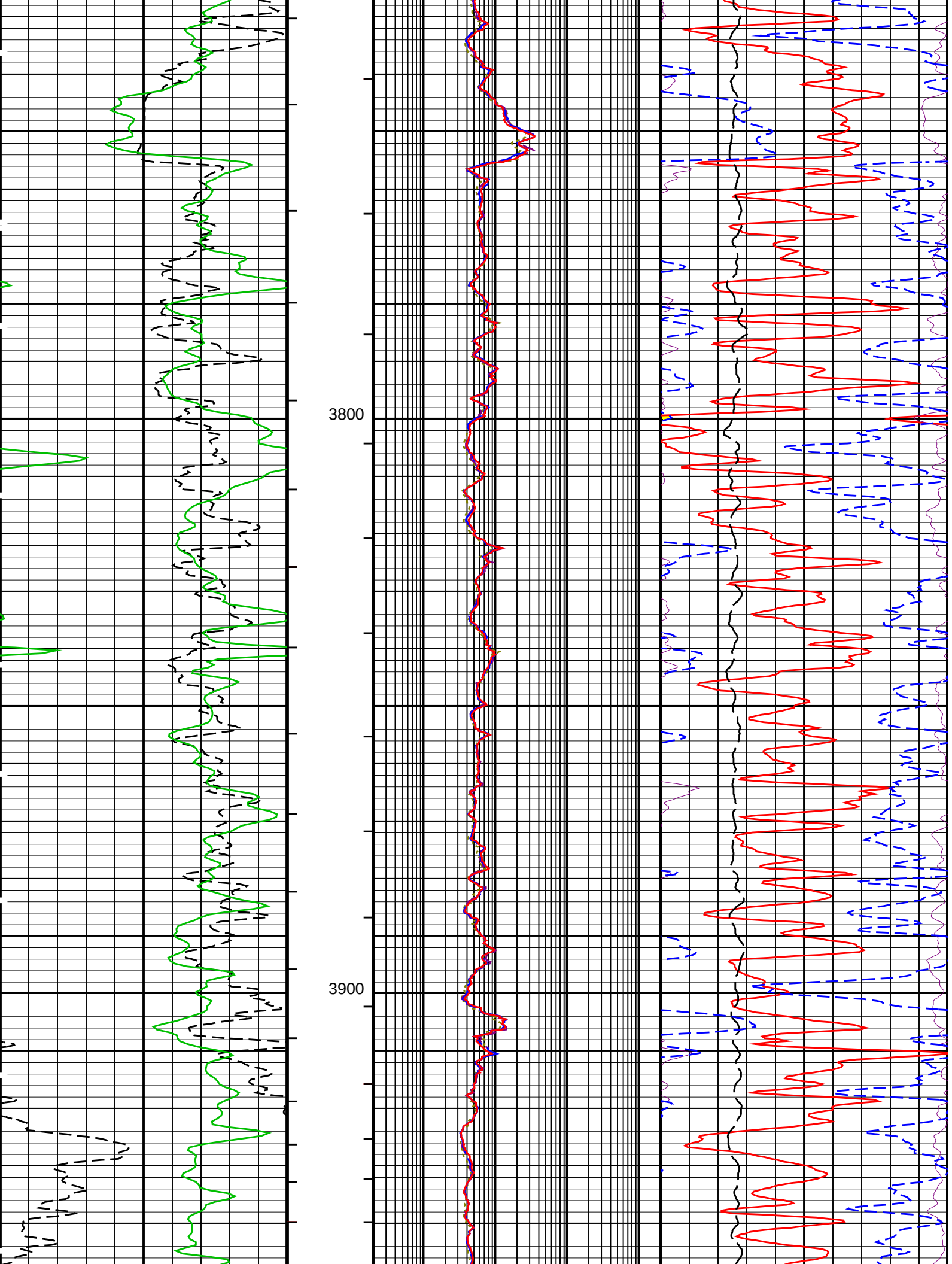
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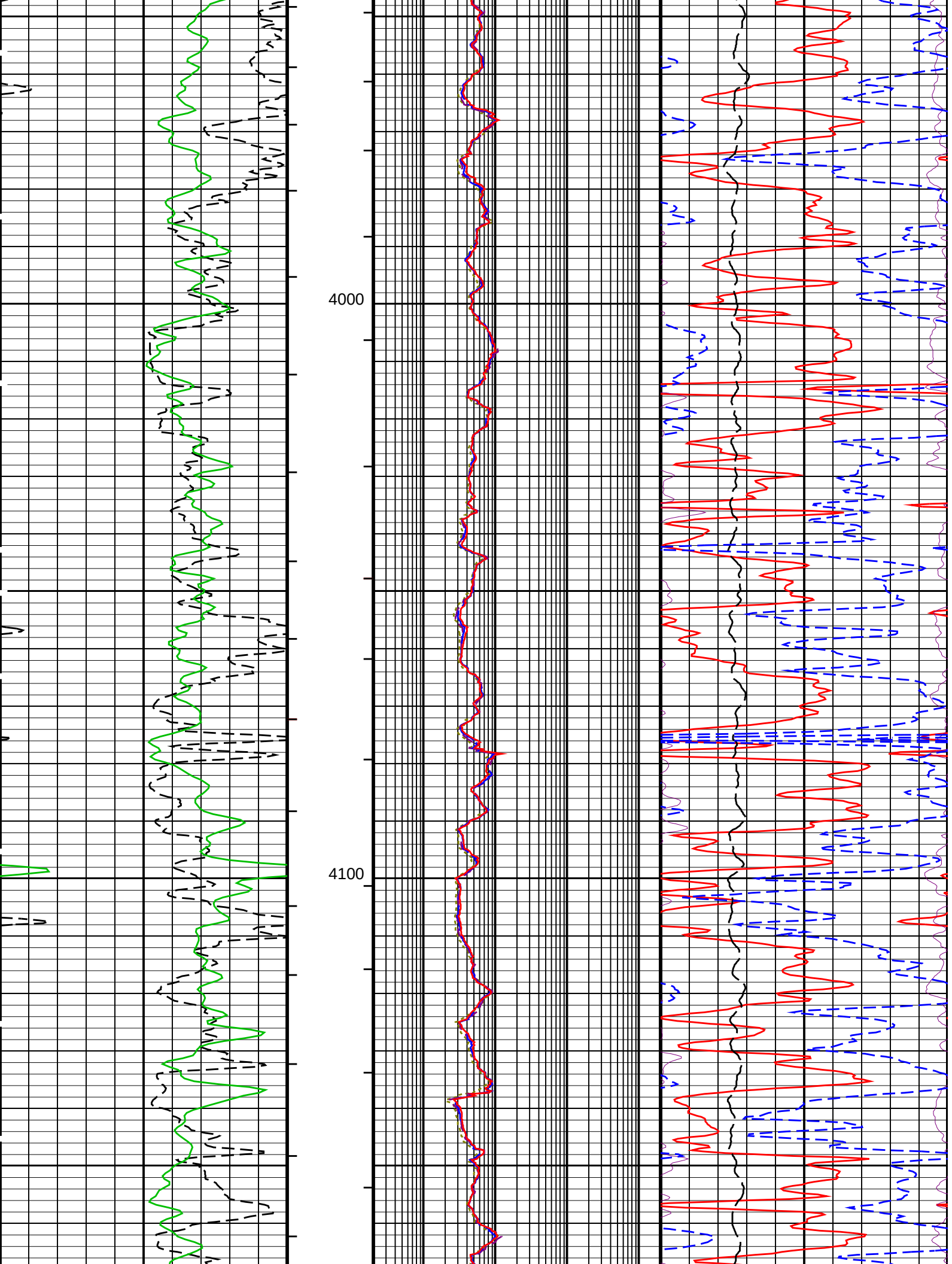
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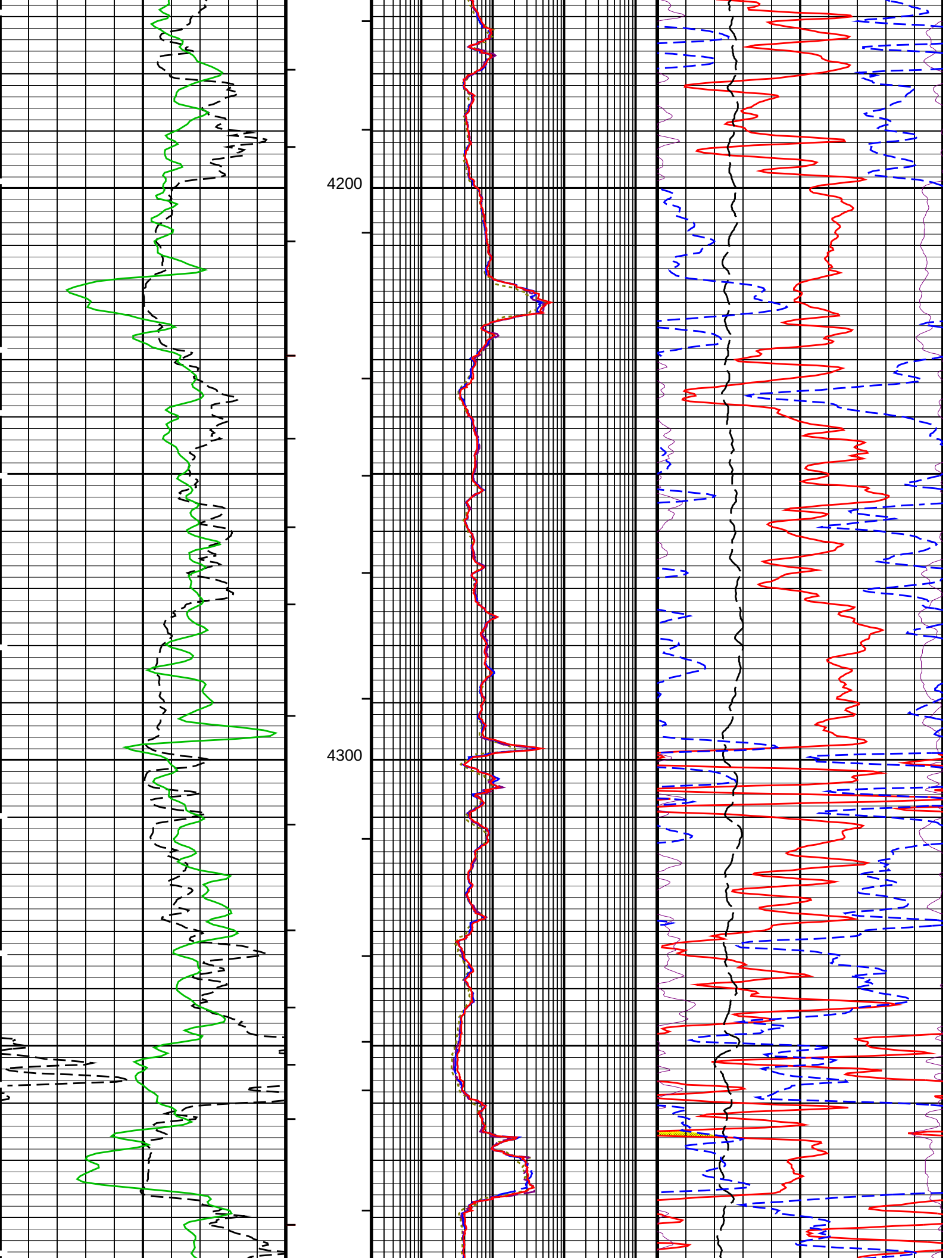
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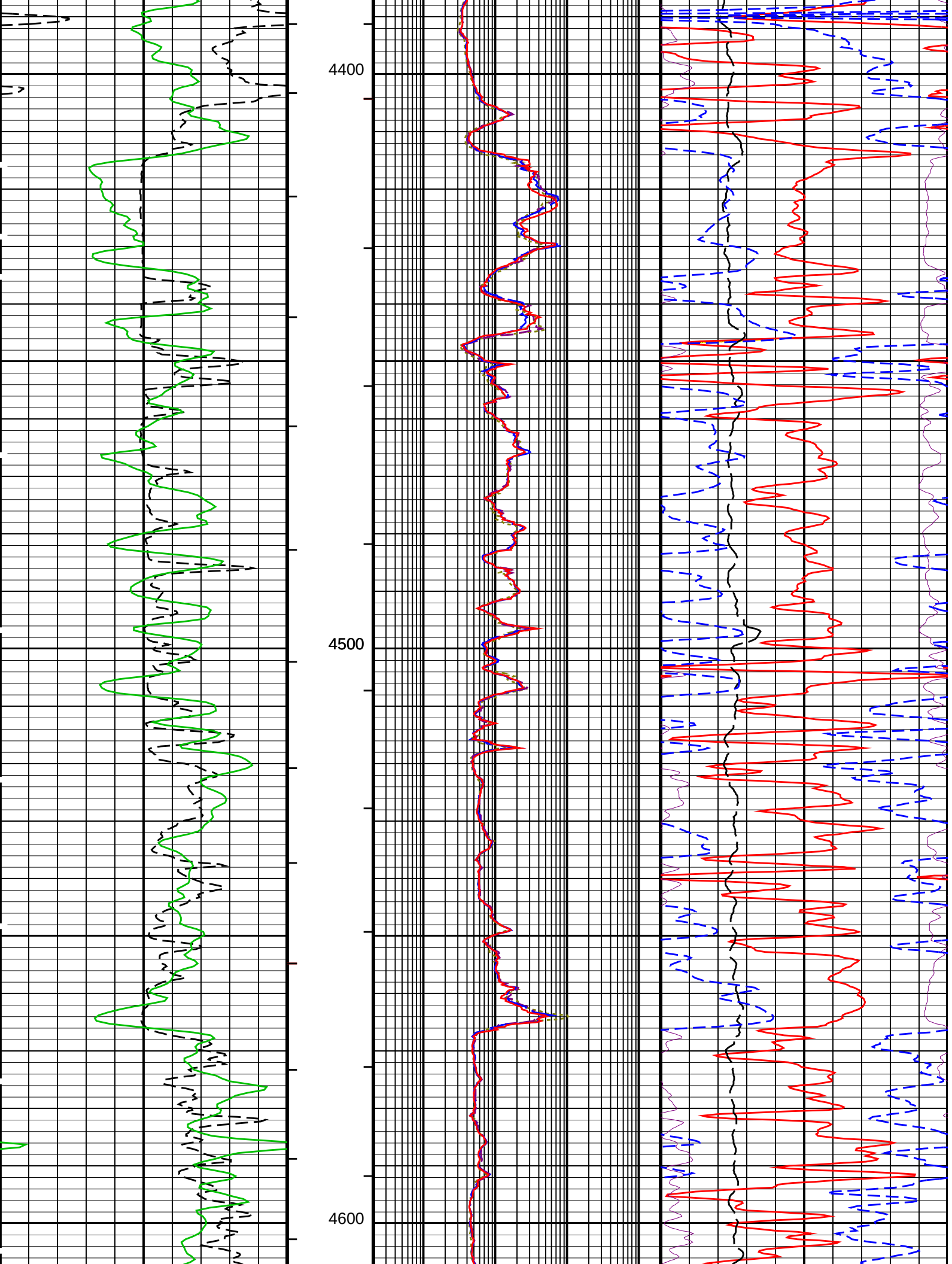
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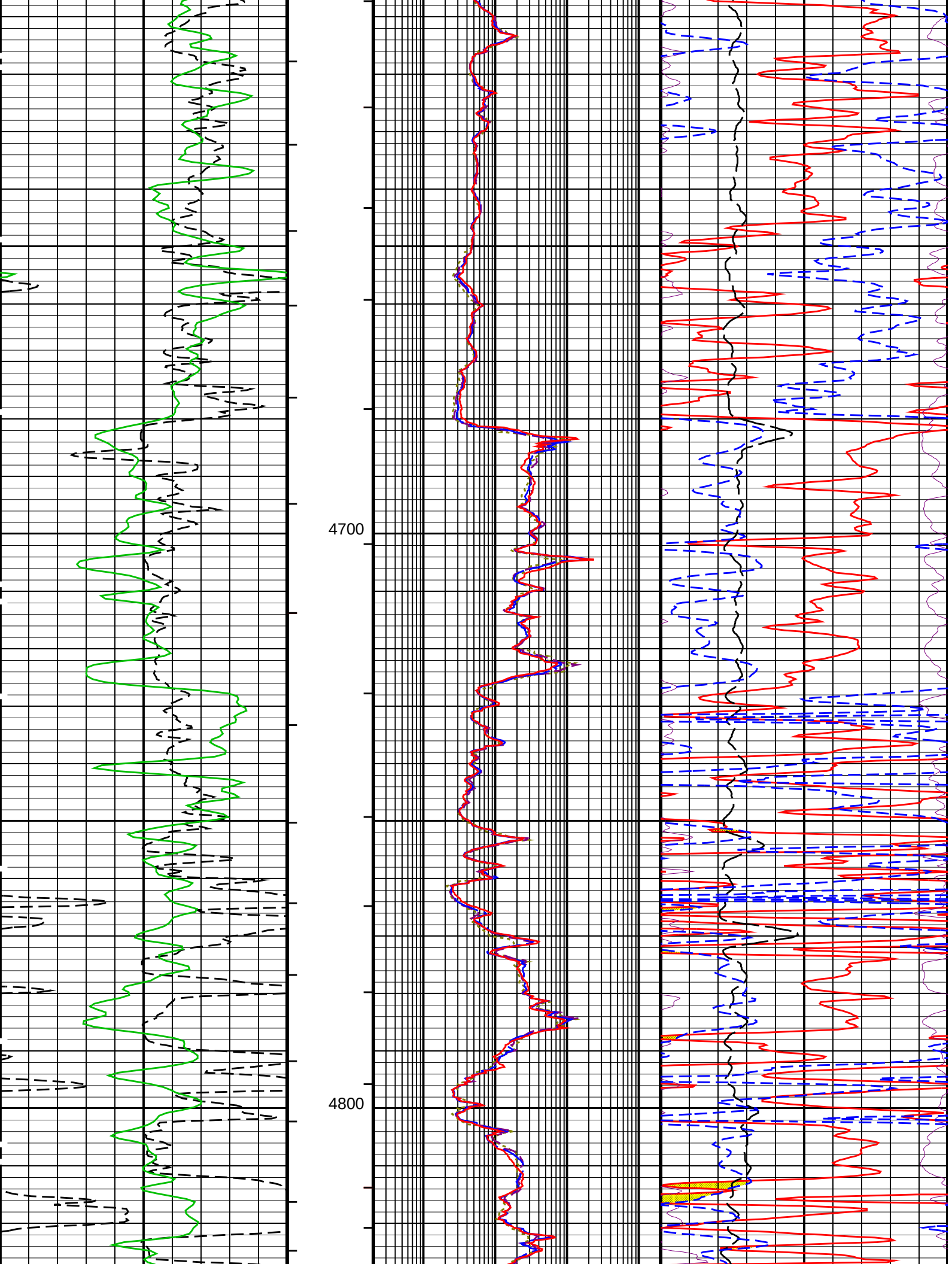
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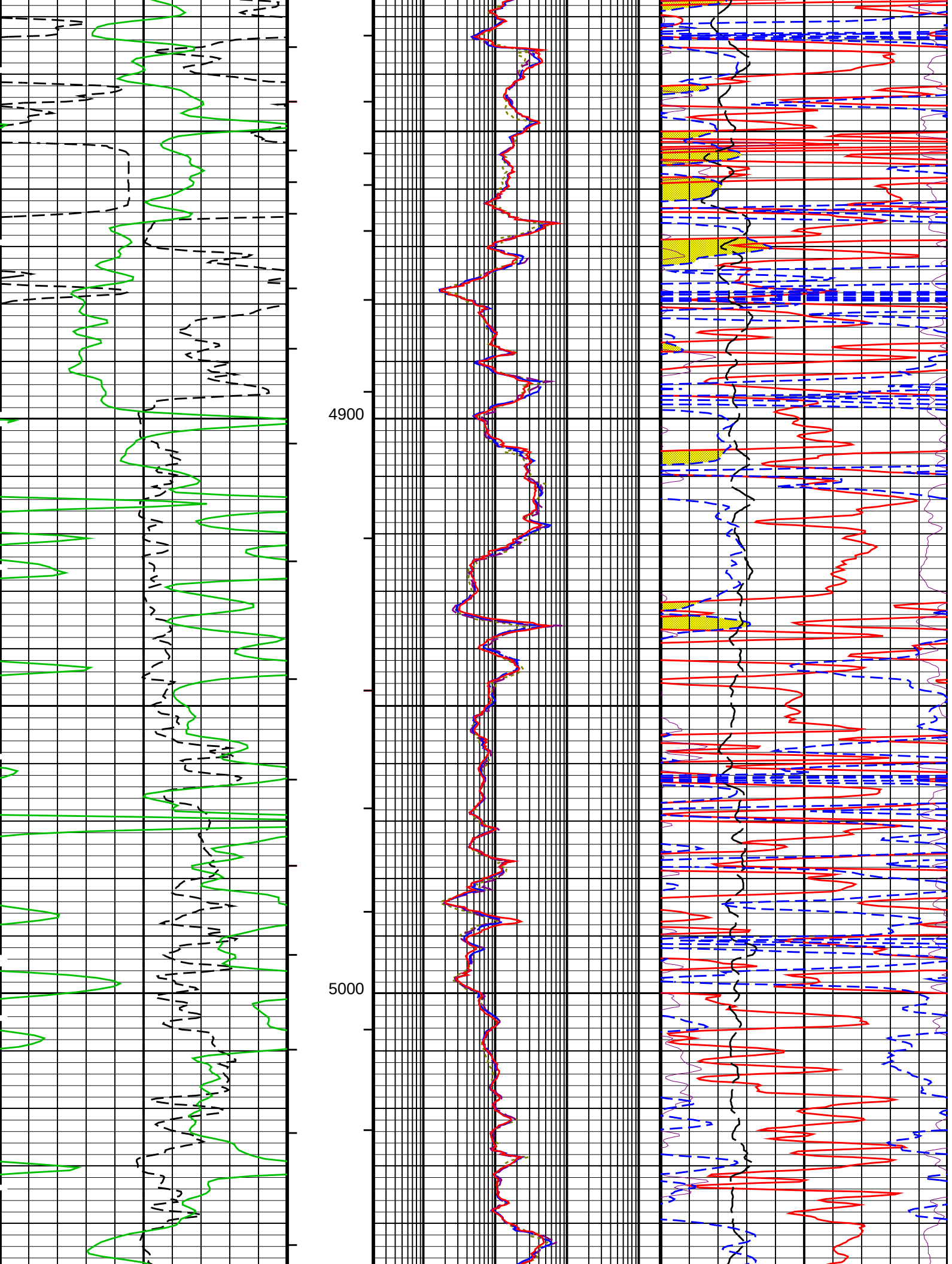
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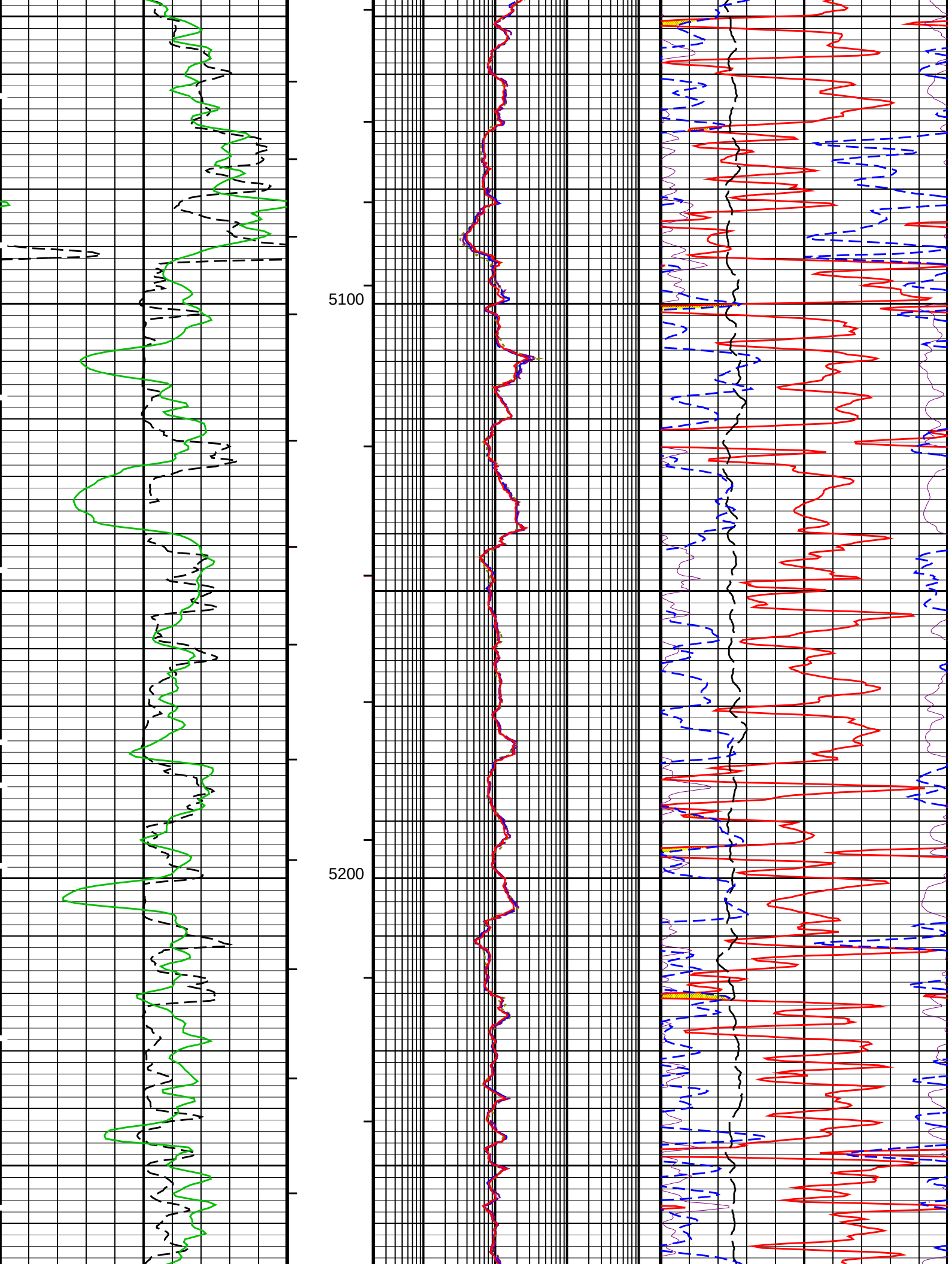
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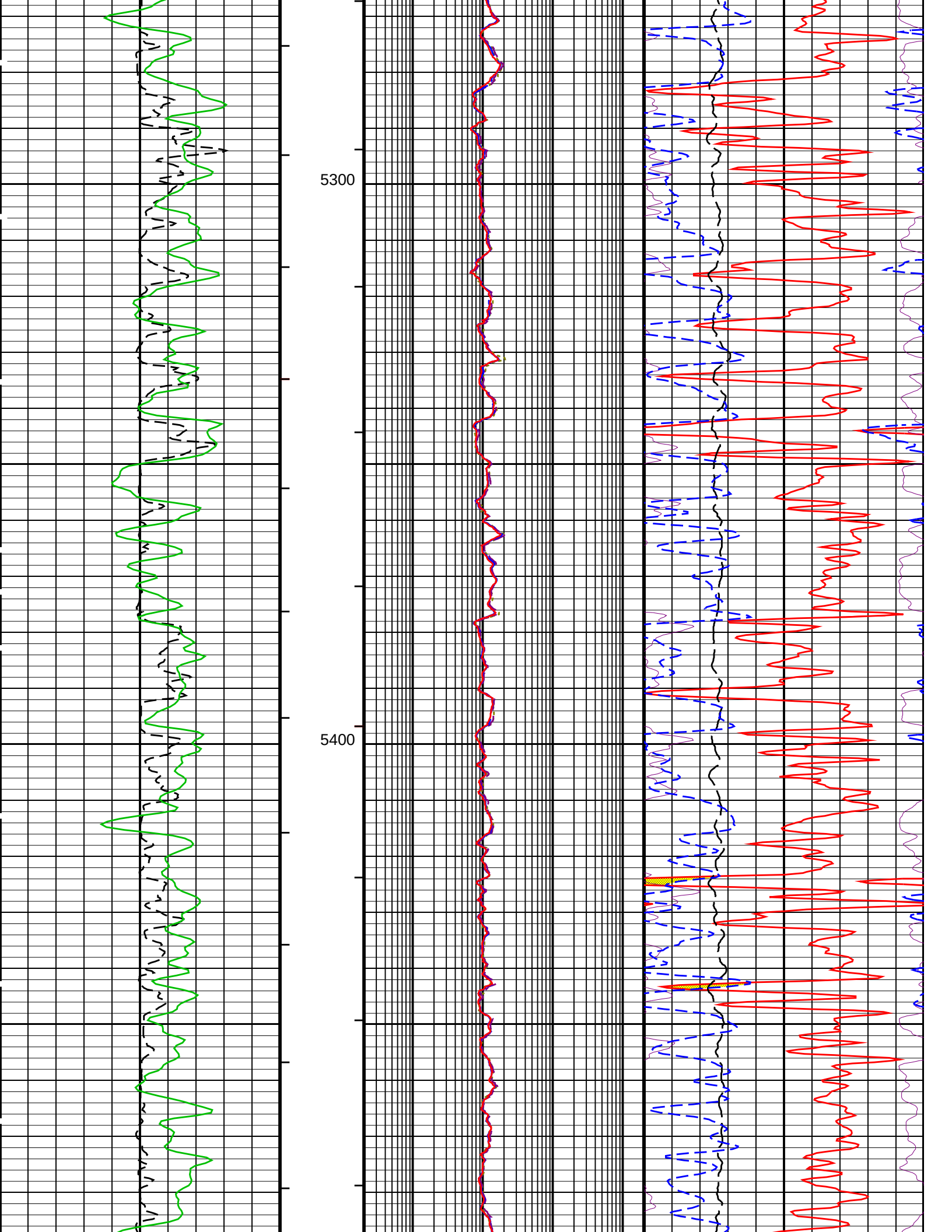
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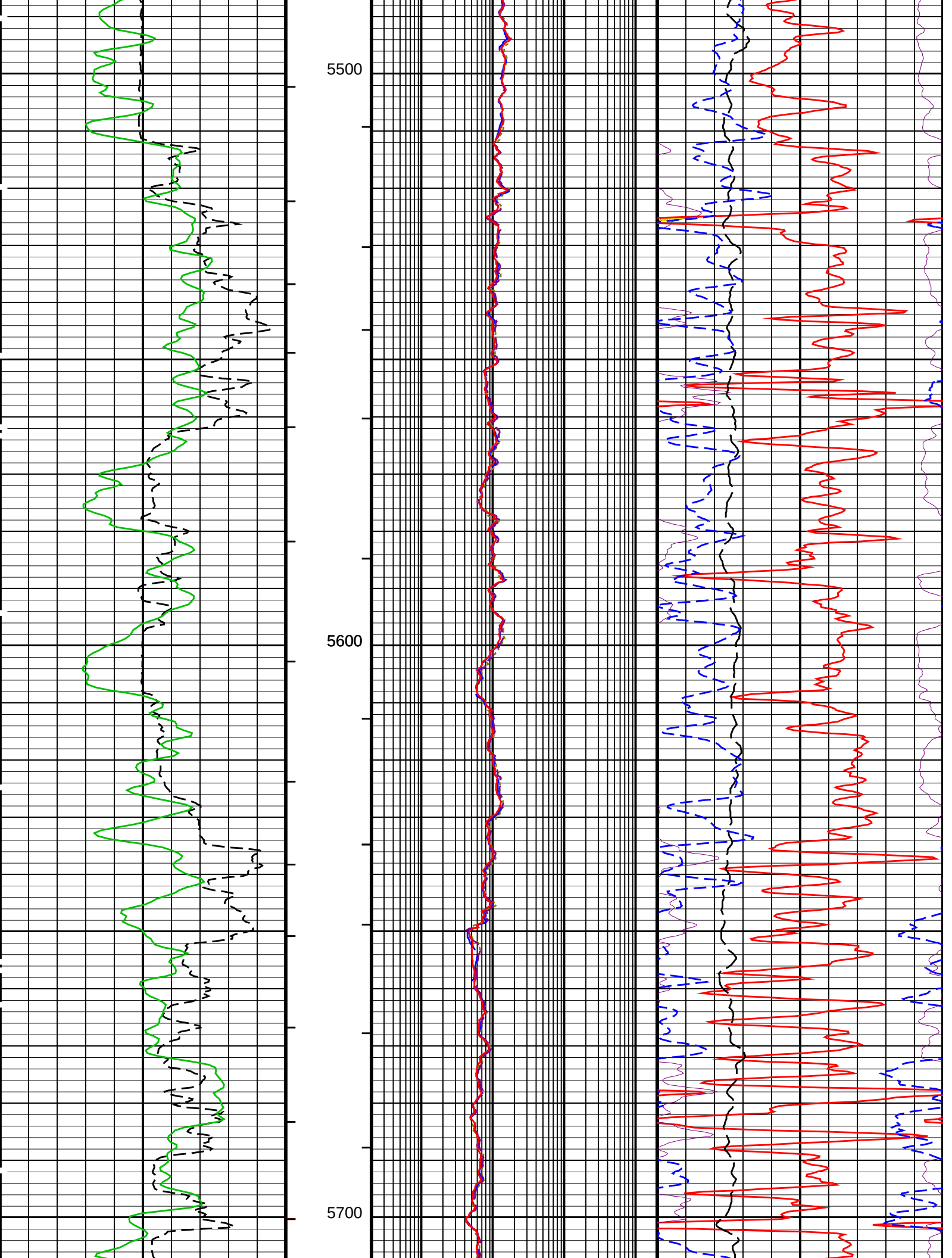
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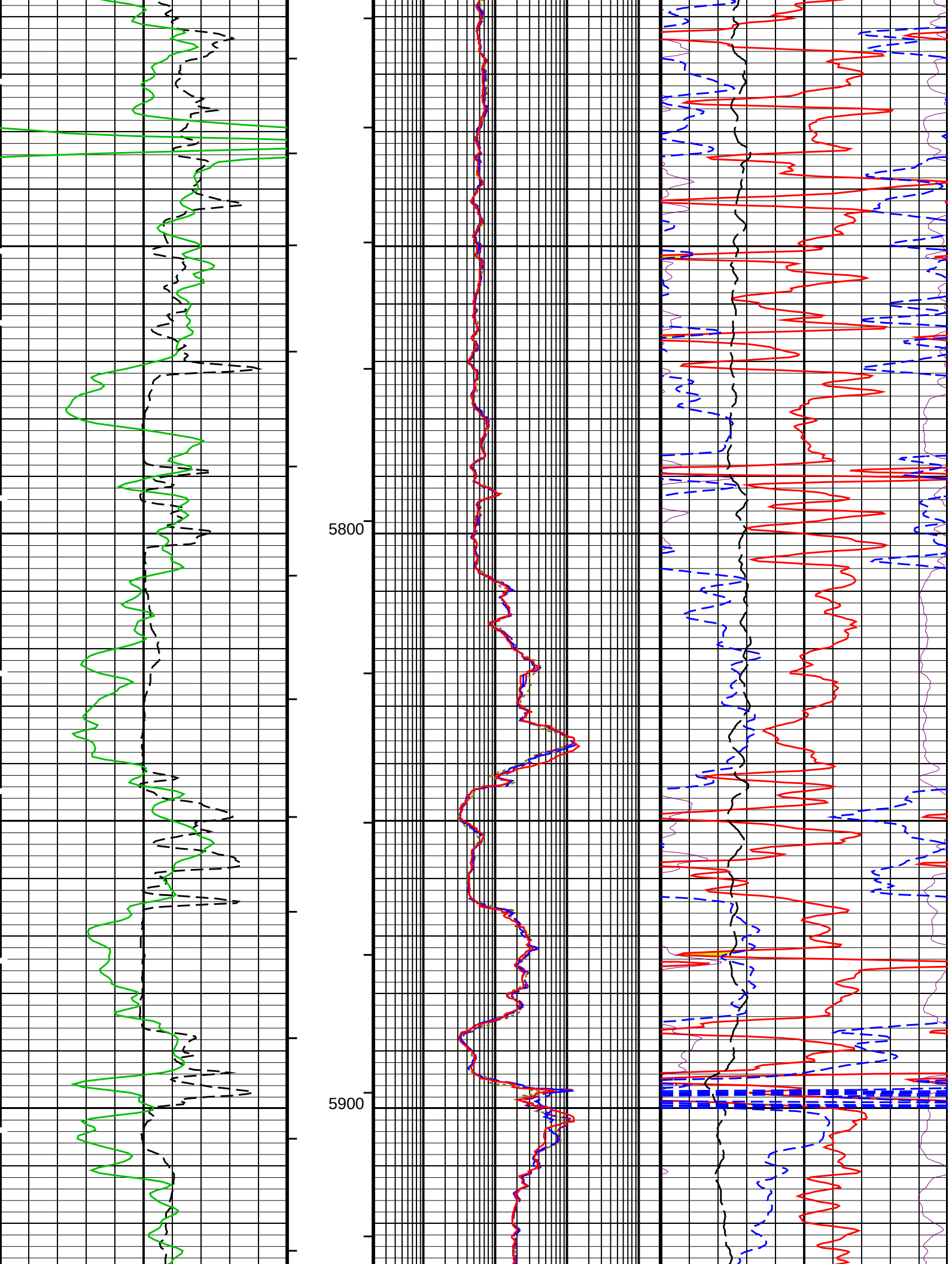
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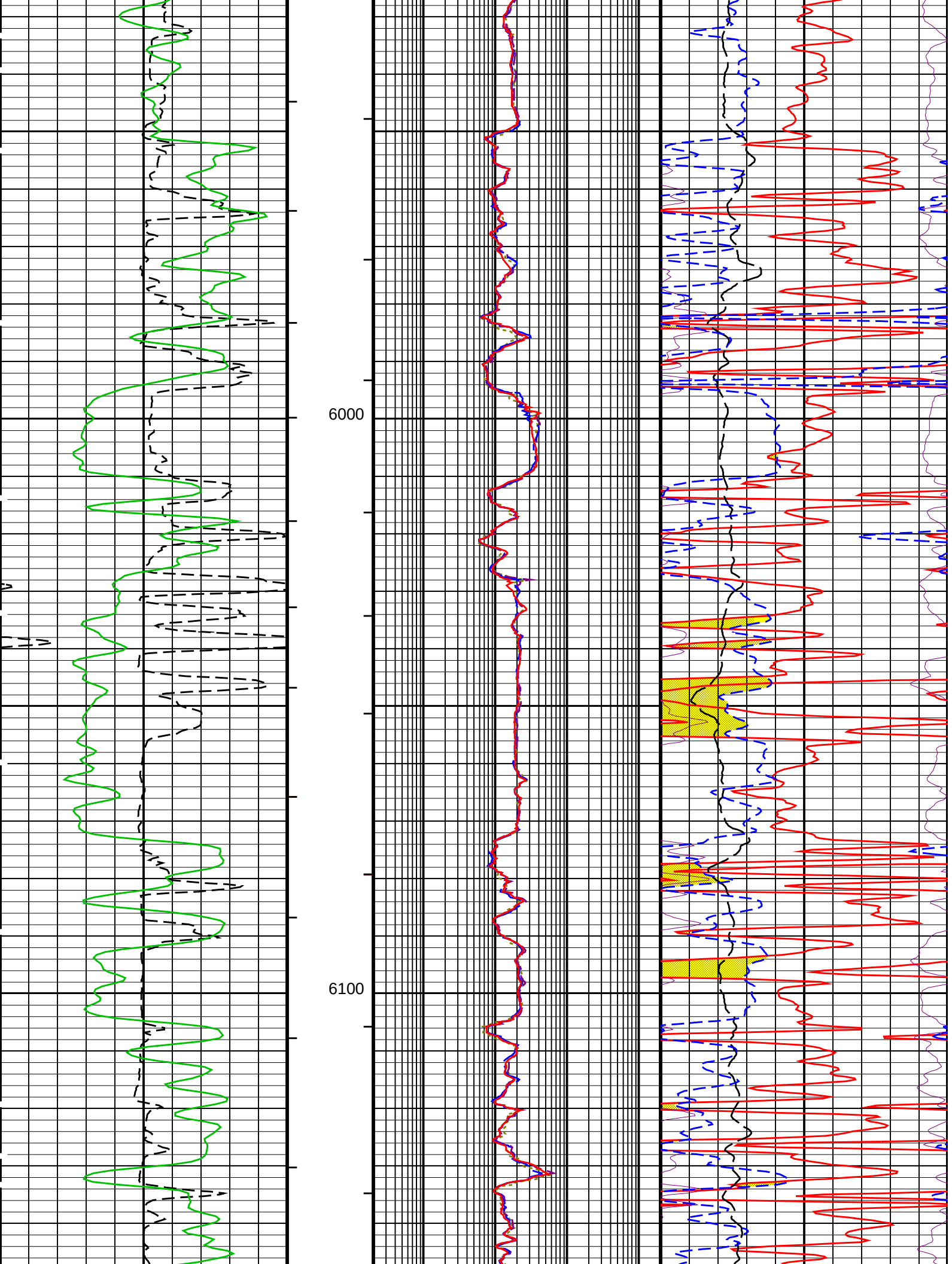
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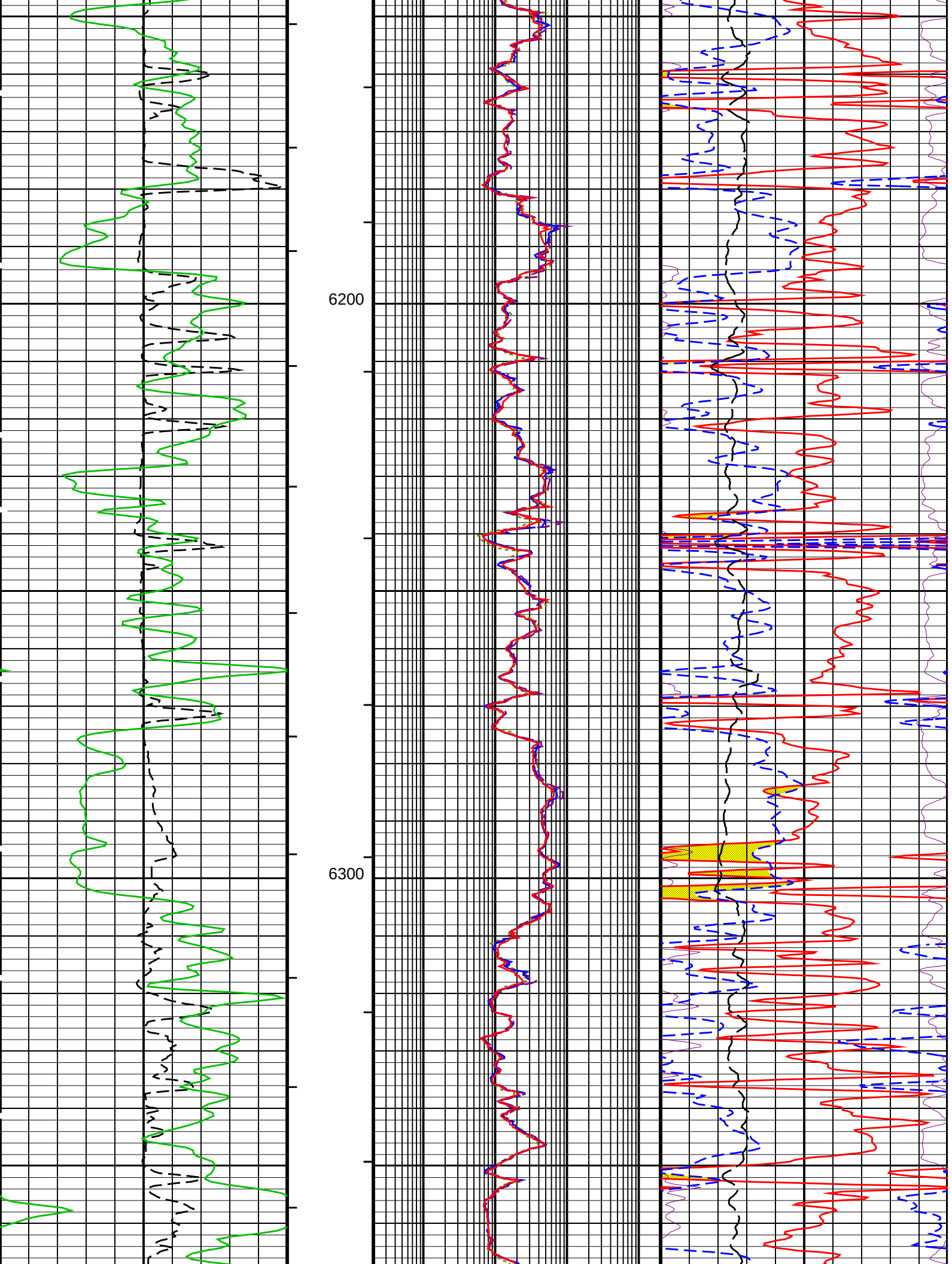
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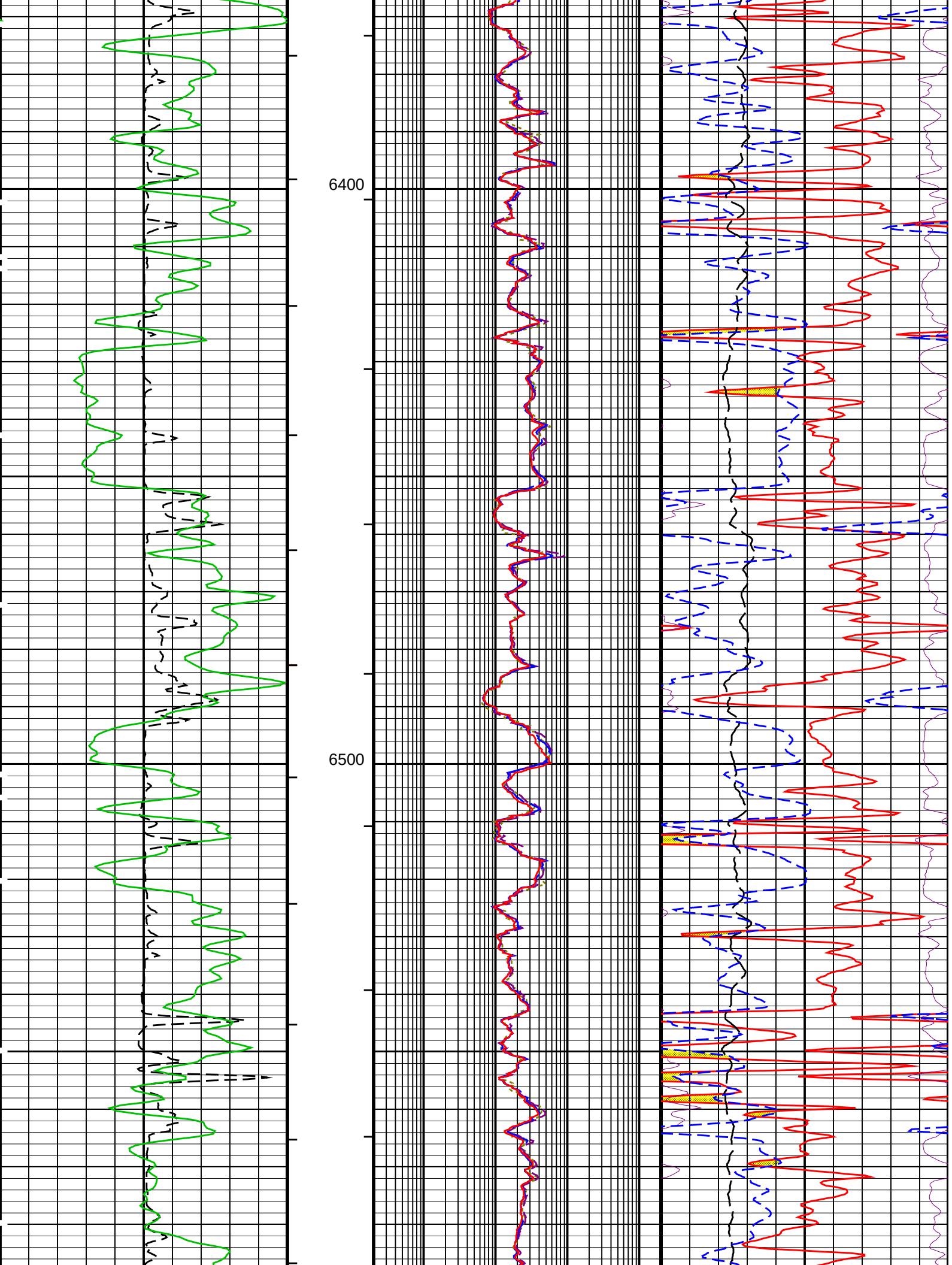
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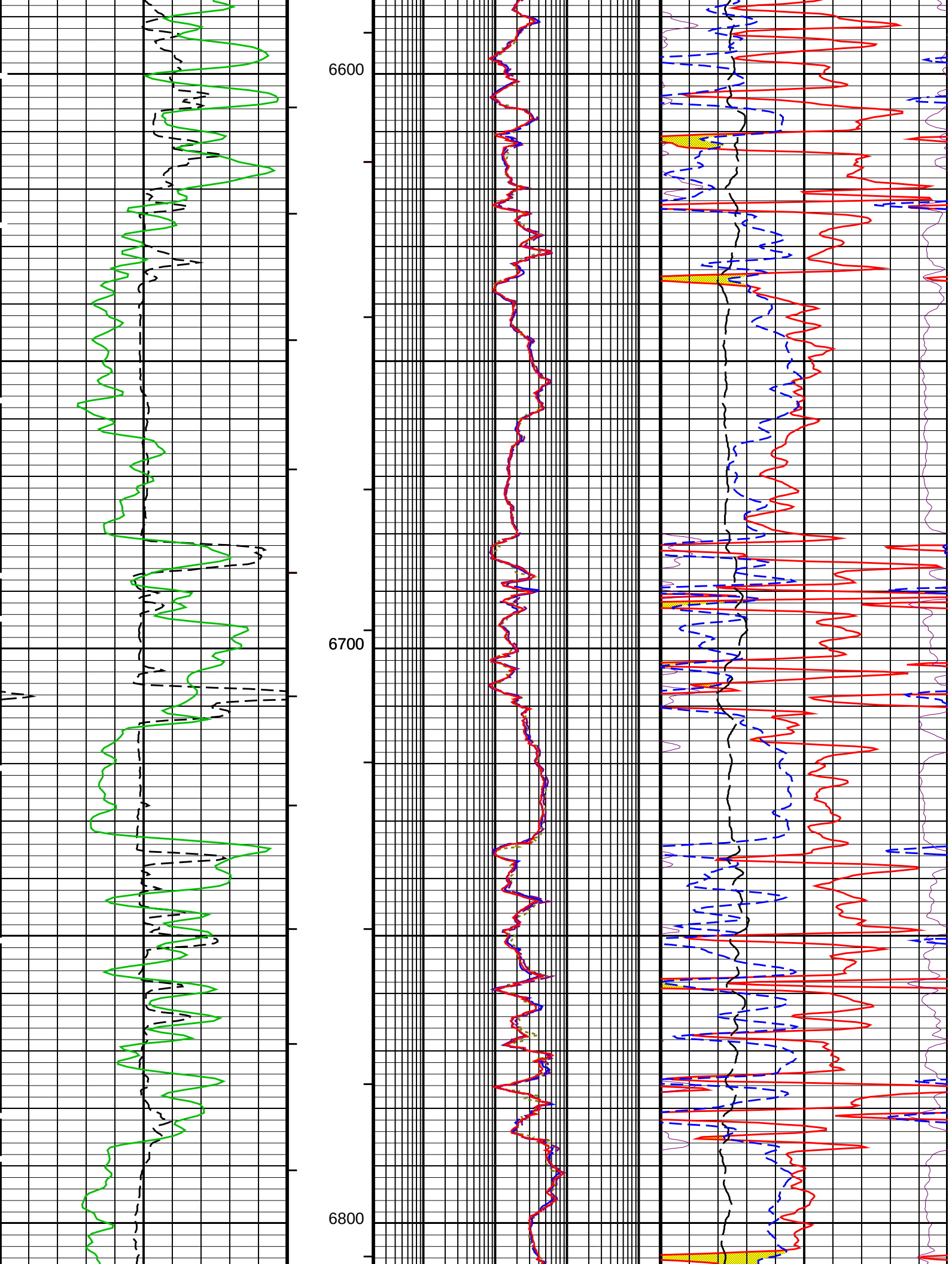
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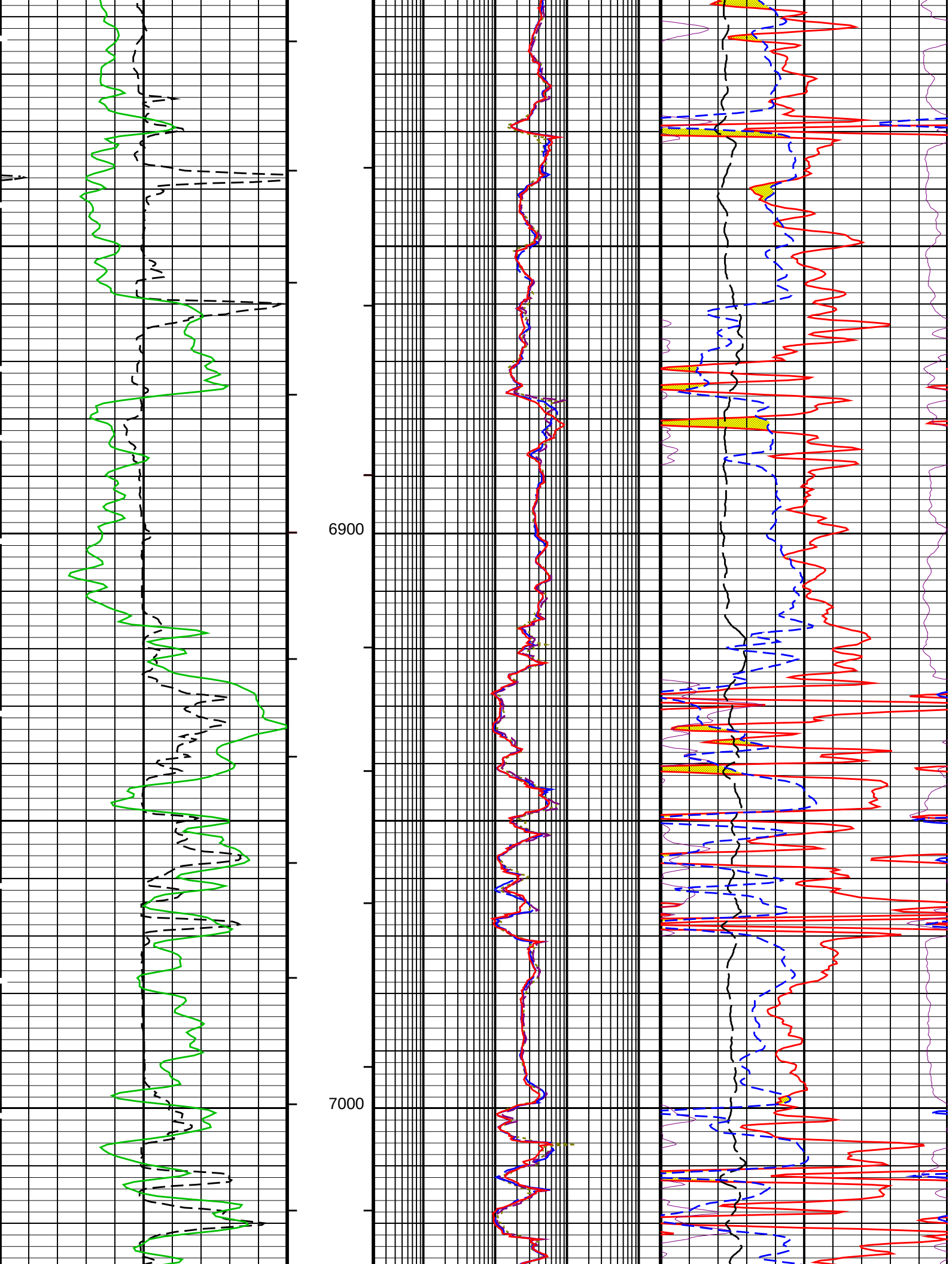
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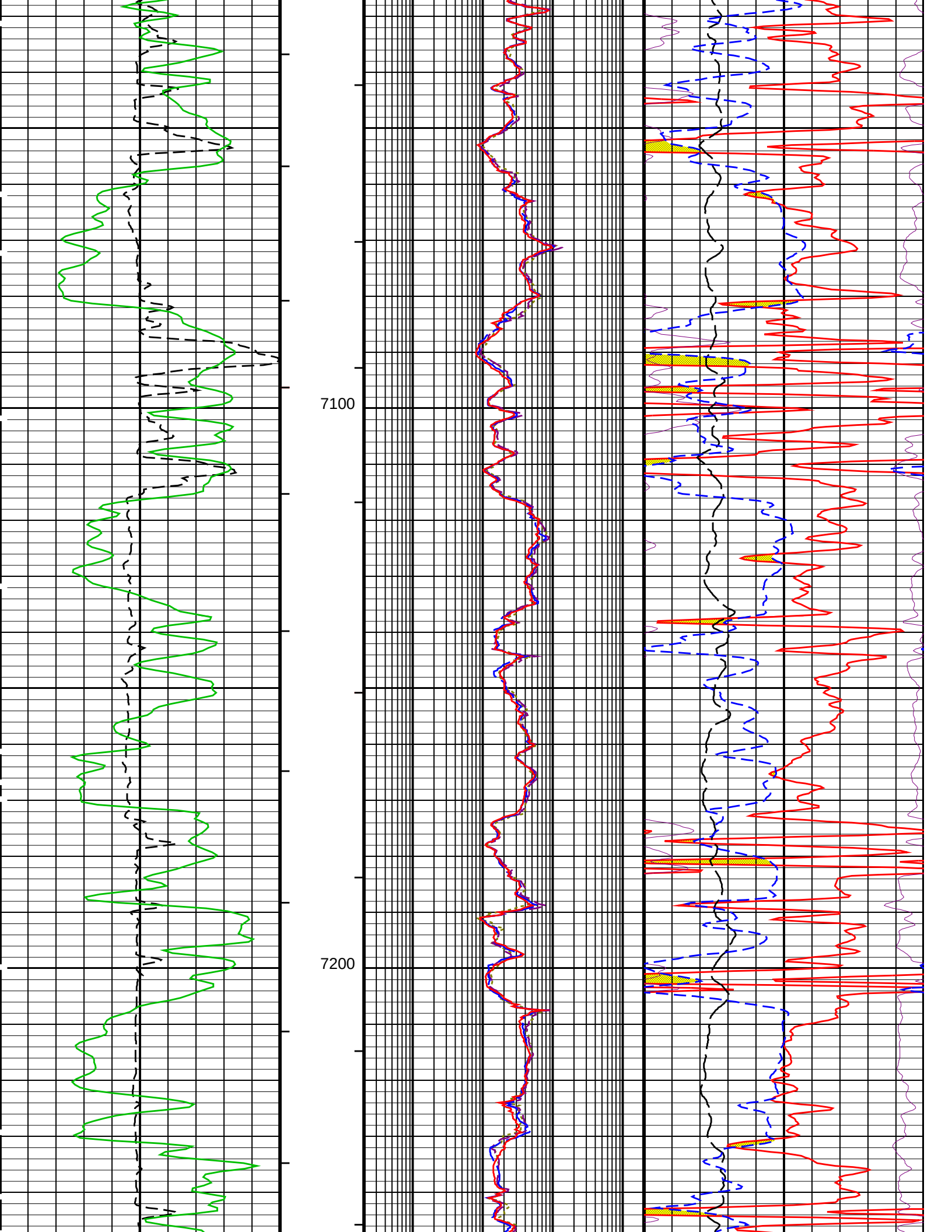
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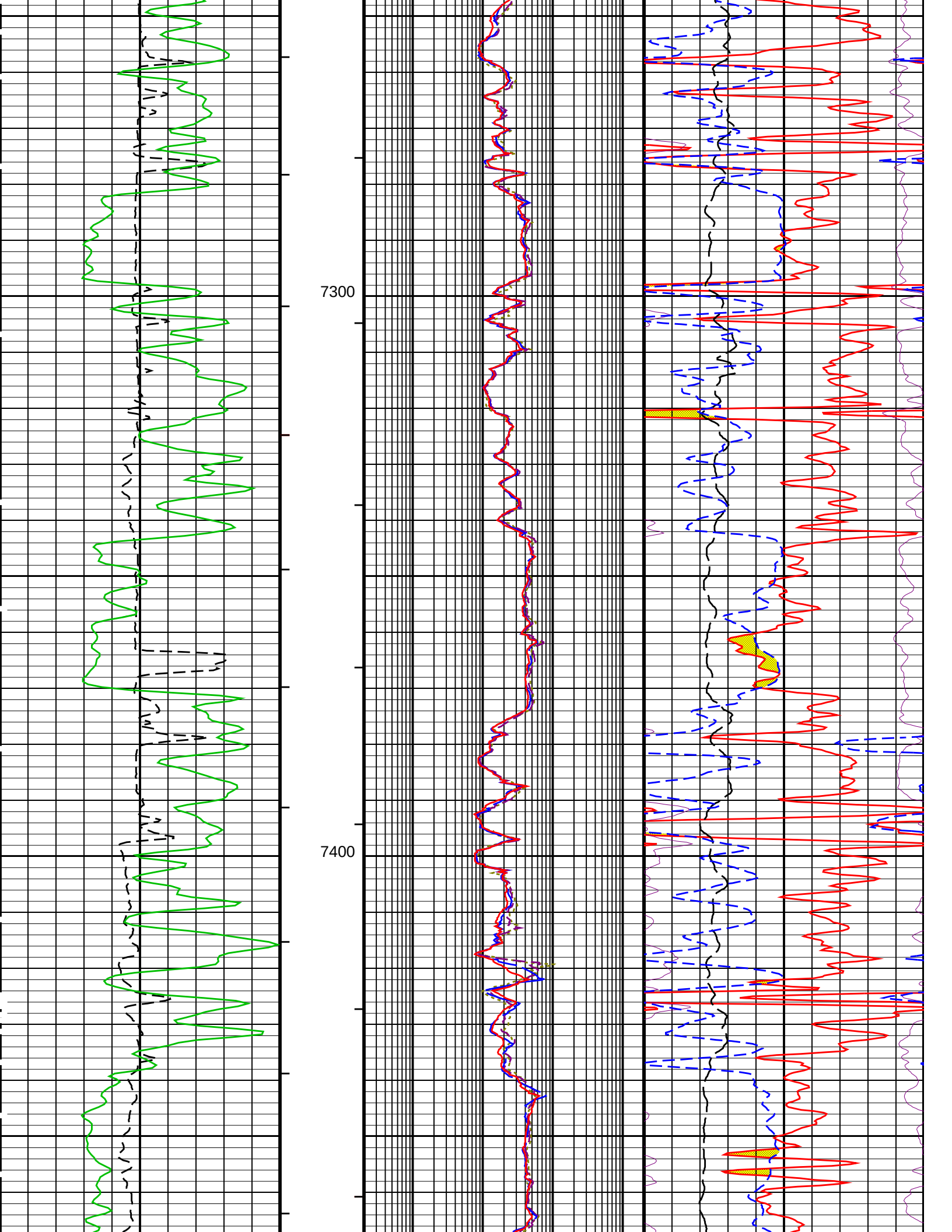
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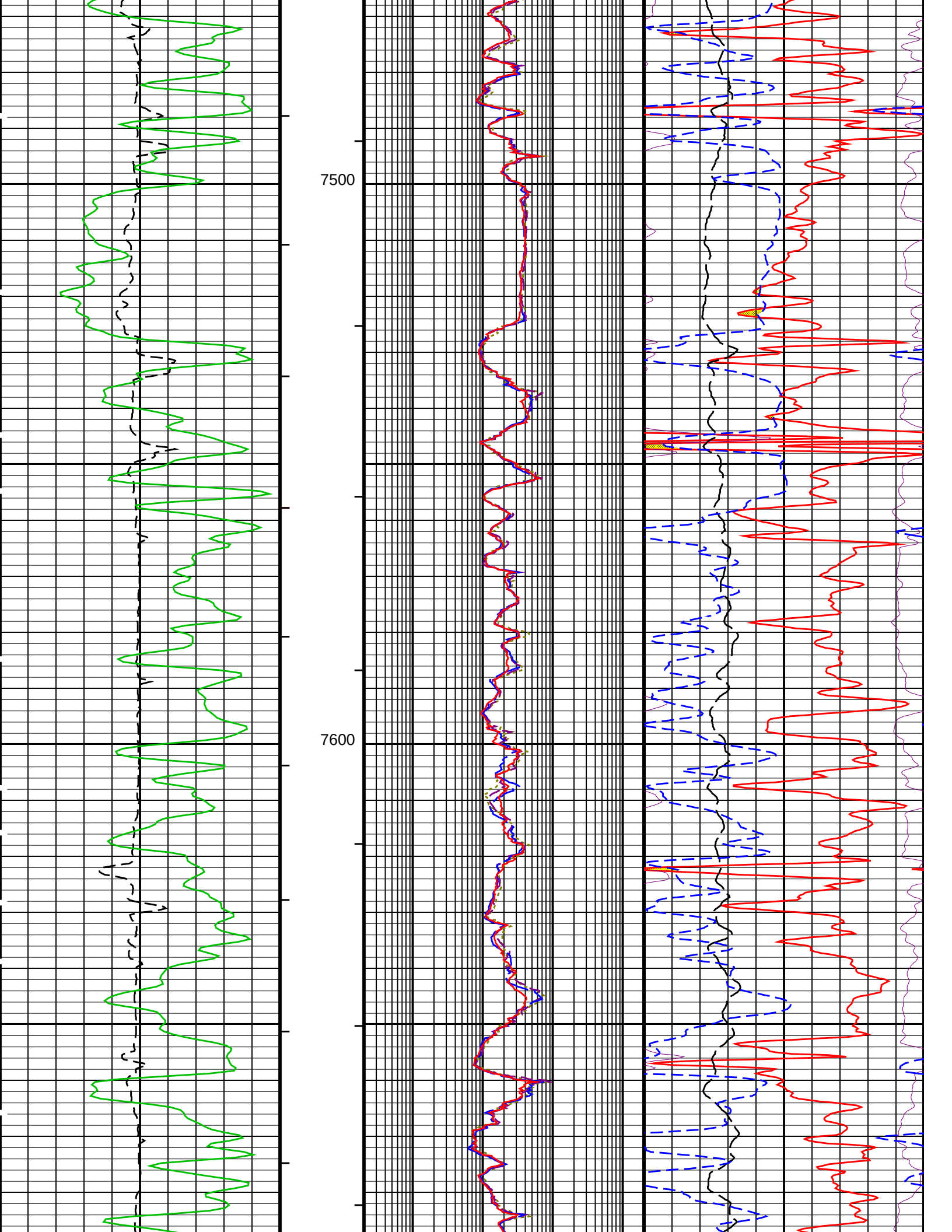
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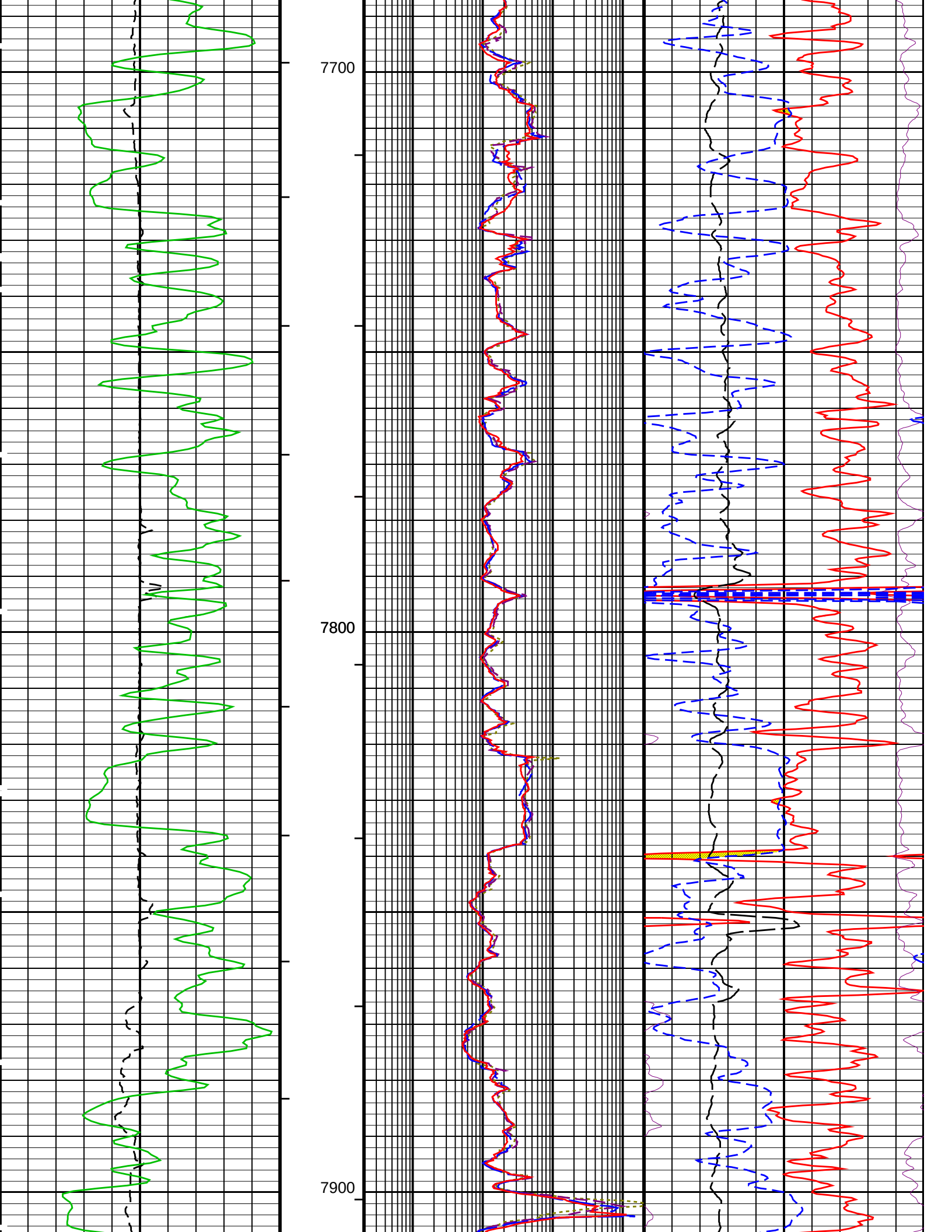
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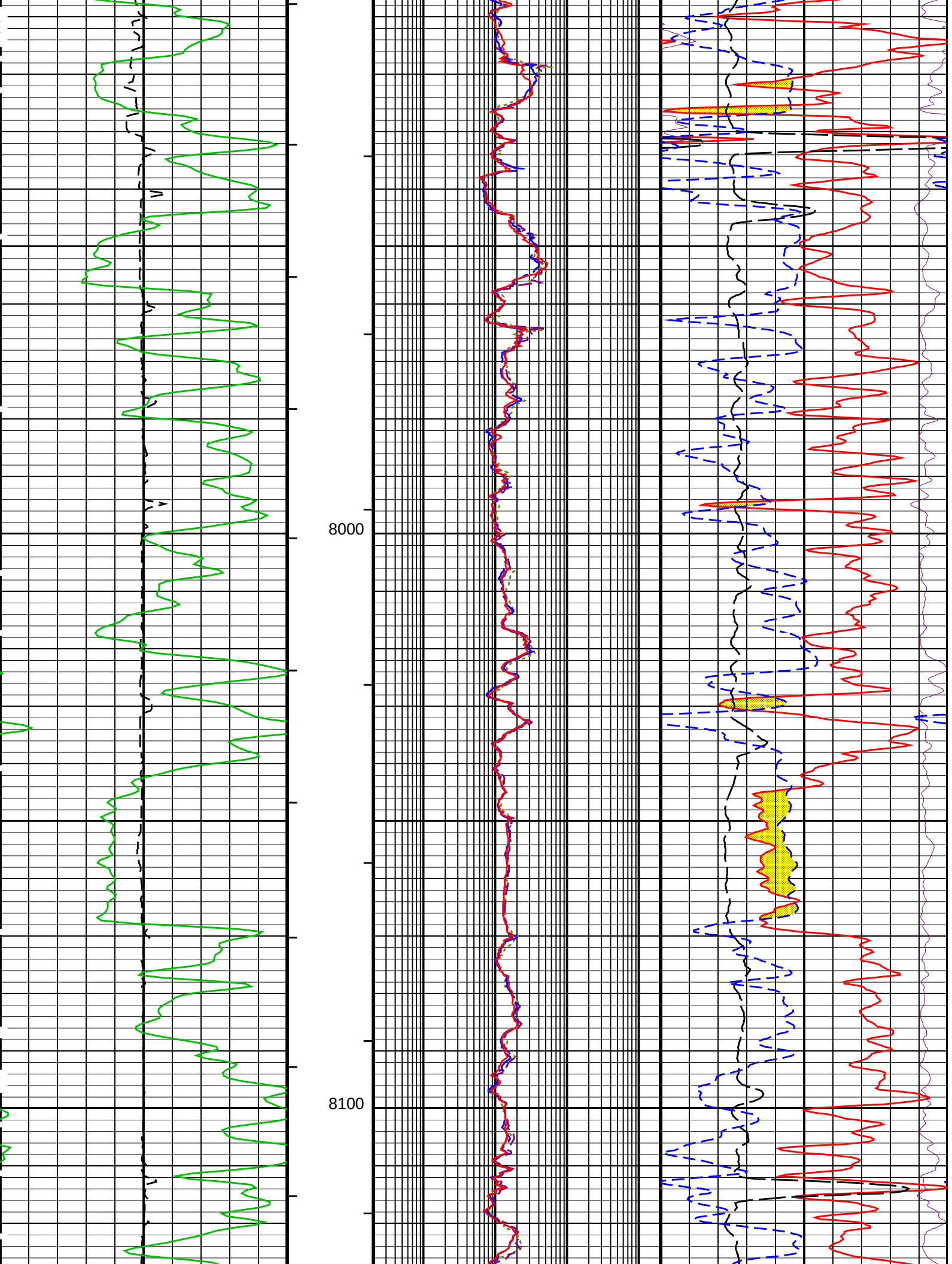
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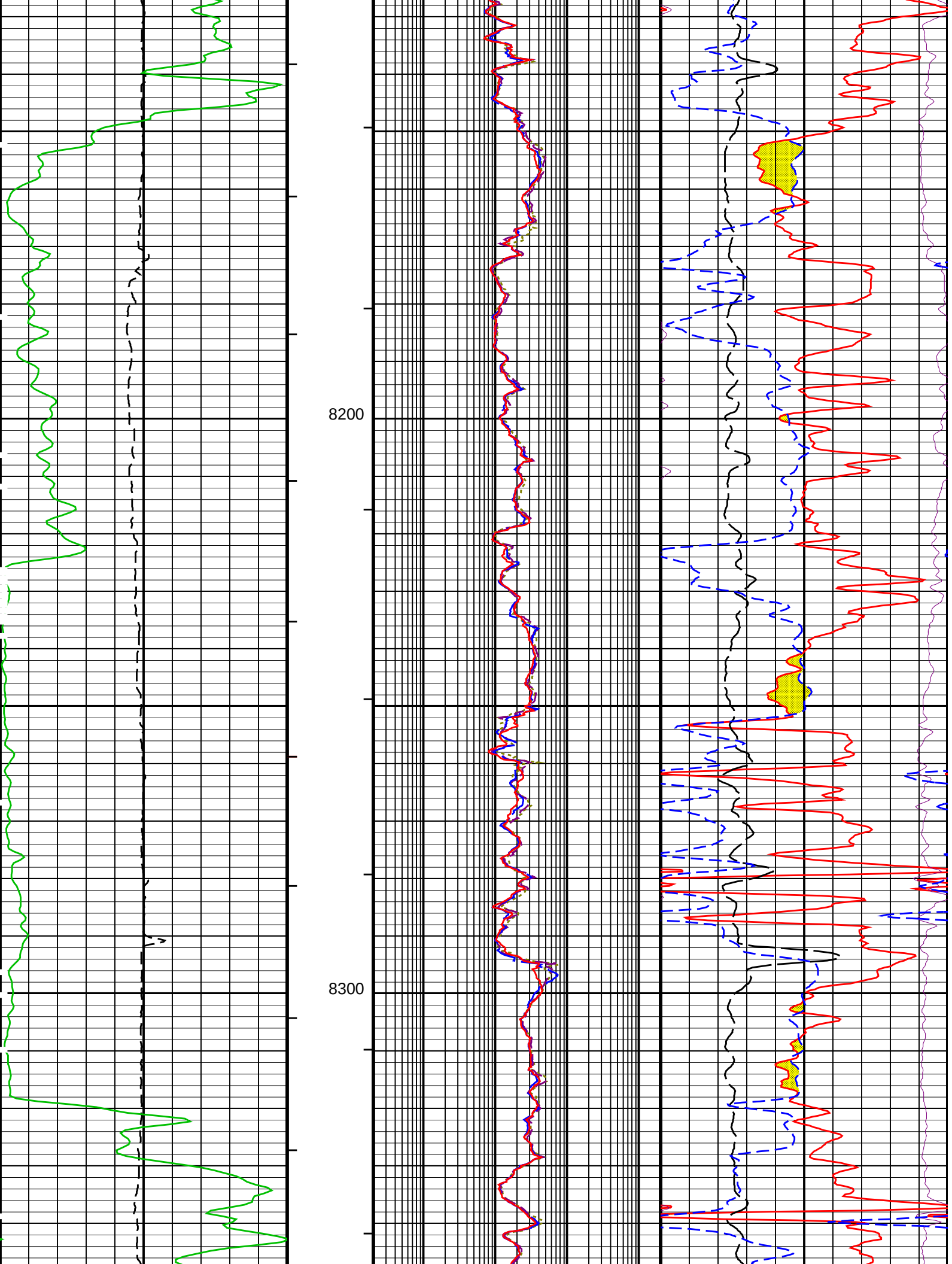
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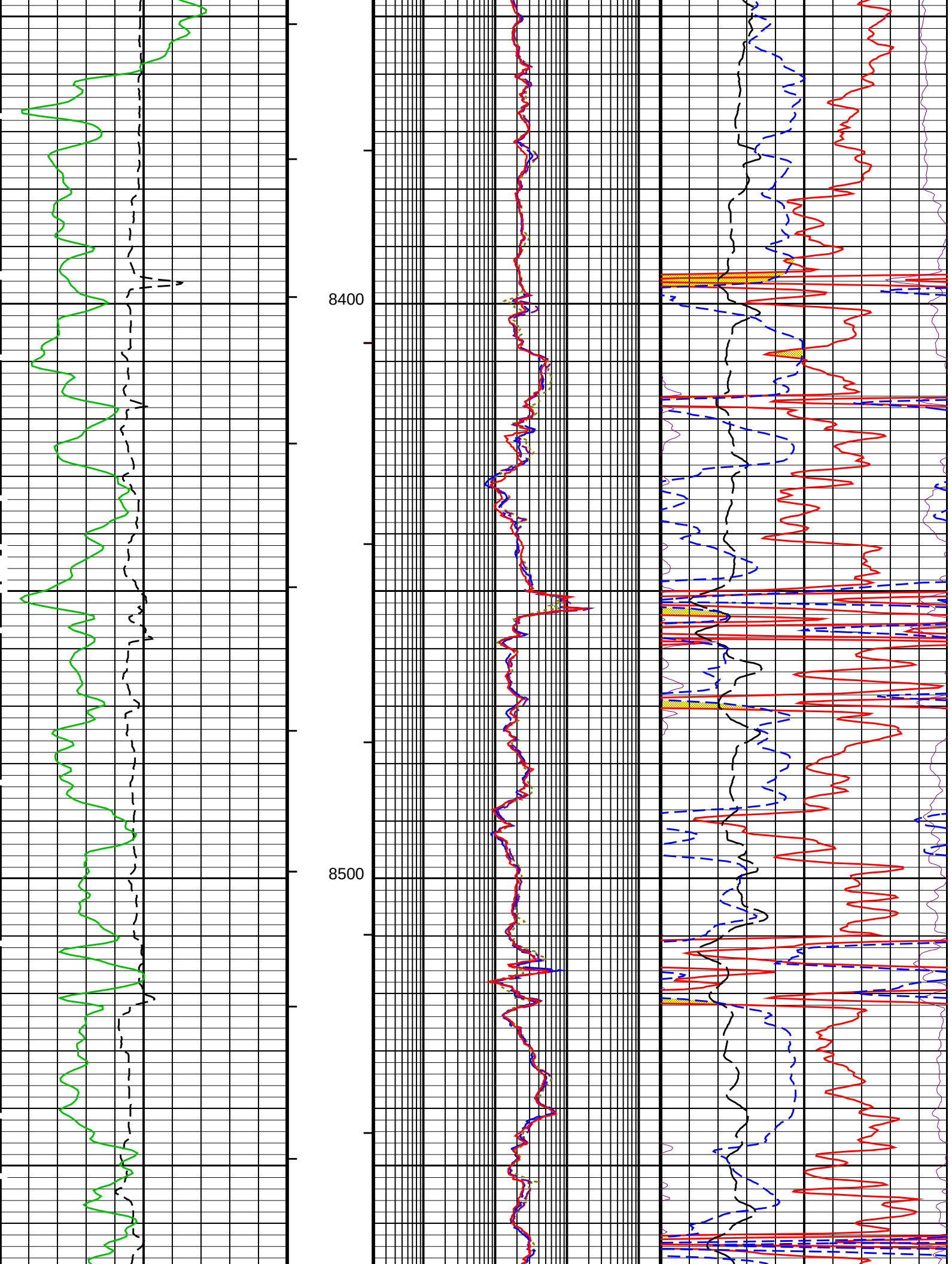
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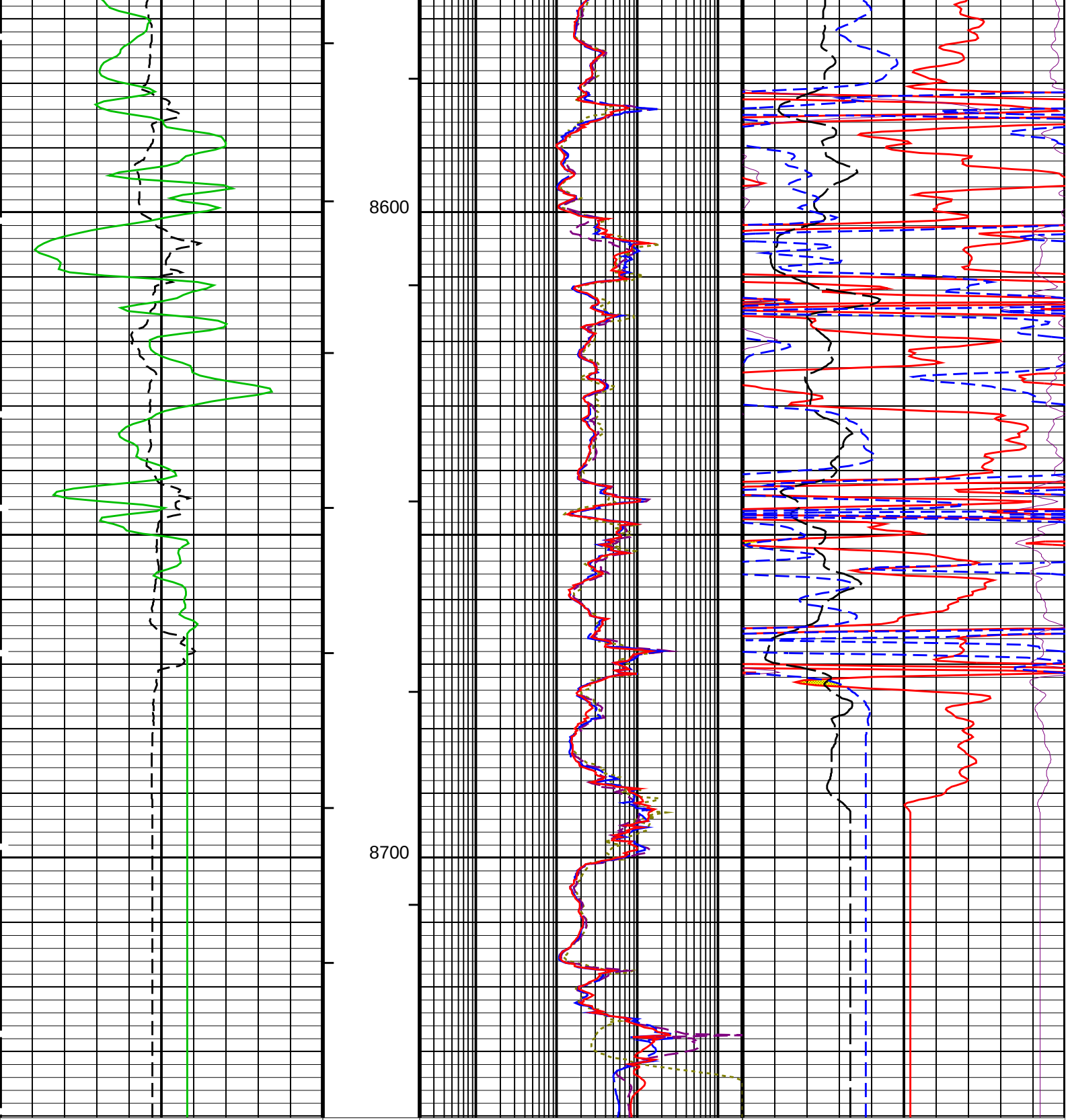


Caliper (CALI)
4 (IN) 14

Gamma Ray (GR)
0 (GAPI) 150

TBI 20 Inch Investigation (TBIT20)
0.2 (OHMM) 2000

TBI 30 Inch Investigation (TBIT30)
0.2 (OHMM) 2000

TBI 60 Inch Investigation (TBIT60)
0.2 (OHMM) 2000

TBI 90 Inch Investigation (TBIT90)
0.2 (OHMM) 2000

DPHI (DPHI)
0.3 (V/V) −0.1

DRHO (DRHO)
−1.8 (G/C3) 0.2

PEF (PEF)
0 (−−−−) 10

TNPH (TNPH)
30 (%) −10

PIP SUMMARY

Integrated Cement Volume Major Pip Every 100 F3

Integrated Cement Volume Minor Pip Every 10 F3

Integrated Cement Volume Minor Pip Every 10 F3
Integrated Hole Volume Major Pip Every 100 F3
Integrated Hole Volume Minor Pip Every 10 F3
Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	TBT−A: ThruBit String		
	Description of this pass		
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Enabled? (for TBN)	No	
CSAL	Cement Salinity	0	PPM
CSID	Casing Size I.D.	6.5	IN
DHC	Density Hole Correction	CALIPER	
FD	Fluid Density	1	G/C3
FSAL	Formation Salinity	0	PPM
FSCO	Formation Salinity Correction Enabled? (for TBN)	No	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MDEN	Matrix Density	2.68	G/C3
MT	Mud Type (for TBN and TBI correction)	WBM	
MWCO	Mud Weight Correction Enabled? (for TBN)	No	
SOCO	Stand−Off Correction Enabled? (for TBN)	No	
SOFF	TBN Standoff	0	IN
TBDS_SAMPLING	TBDS Sampling	6_Inches	
TBD_CAL_BLOCK	TBD Calibration Block Type	Schlumberger	
TBD_SPIKE_REJECT	TBD Spike Detection Option	Correct	
TBD_SPIKE_THRESHOLD	TBD Attenuation Change Threshold for Spike Detection	5	%
TBI_ALGO	TBI Algorithm Selection	AIT	
TBI_BHC_MODE	Borehole Correction Mode (for TBI)	Solve_For_Standoff	
TBI_BHC_OP	Borehole Correction Option (for TBI)	Caliper	
TBI_CALTYP	TBI Mastercal Type	Schlumberger	
TBI_REPL_ARRAY_DEST	TBI: Replace This Array	None	
TBI_REPL_ARRAY_SOURCE	TBI: With This Array	None	
TBI_RMUD_SRC	RMUD Source for Borehole Correction (for TBI)	Data_Channel_RMUD	
TBI_TC_OP	Induction Temperature Correction Option	Lower	
TBN_ALGO	Porosity Algorithm	Schmid_McKeon	
TBN_BHC_OP	Borehole Correction Option (for TBN)	Caliper	
TBN_CAL_TANK	TBN Calibration Tank Type	Schlumberger	
TBN_FILTER	Filter Length	3_point	
TBN_PRES_OP	Pressure Correction Enabled? (for TBN)	No	
TBN_TEMP_OP	Temperature Correction Enabled? (for TBN)	No	
TBN_WPRE	Well Pressure (for TBN)	0	PSIG
WMUD	Mud Weight	8.345	LB/G
	HOLEV: Integrated Hole/Cement Volume		
BHS	Borehole Status	OPEN	
FCD	Future Casing (Outer) Diameter	4.5	IN
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
	System and Miscellaneous		
BSAL	Borehole Salinity	1000.00	PPM
RMS	Resistivity of Mud Sample	1.5020	OHMM
TD	Total Depth	8915	FT

Format: TB_TCOM Vertical Scale: 5" per 100’ Graphics File Created: 23−Jan−2018 12:16

OP System Version: 19C2−270

TBT−A SRPC−5318−Thrubit−SP3.4

Output DLIS Files

DEFAULT ThruBit_013PUP FN:12 PRODUCER 23−Jan−2018 12:15

Company: CAERUS OPERATING LLC Well: Puckett 13D−26

Output DLIS Files

DEFAULT ThruBit_012PUP FN:11 PRODUCER 23−Jan−2018 12:14 8895.1 FT 8664.1 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 99.25 F3

Cement Volume = 73.68 F3 (assuming 4.50 IN casing O.D.)

Computed from 8895.1 FT to 8664.1 FT using data channel(s) CALI

OP System Version: 19C2−270

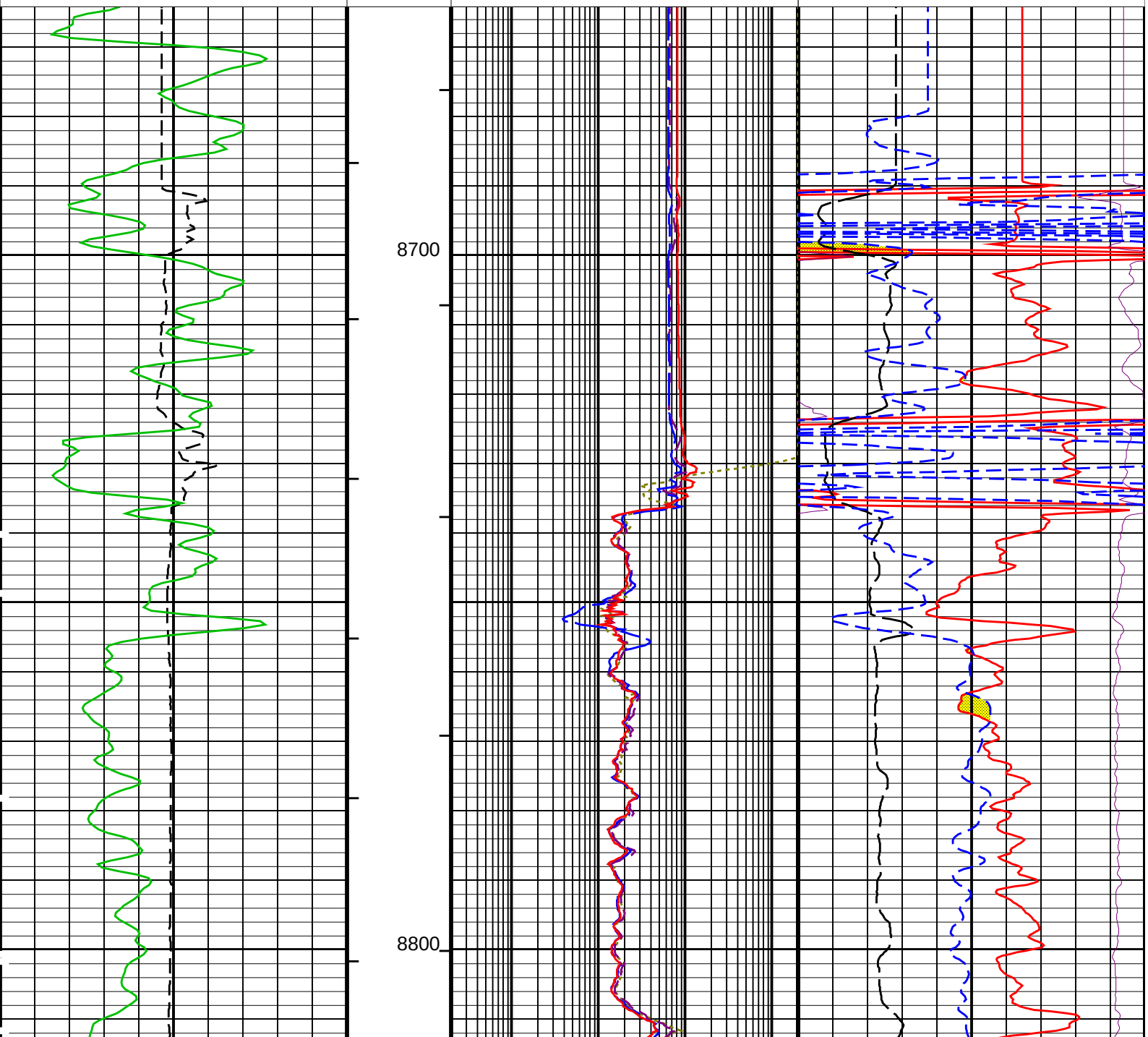
TBT−A **SRPC−5318−Thrubit−SP3.4**

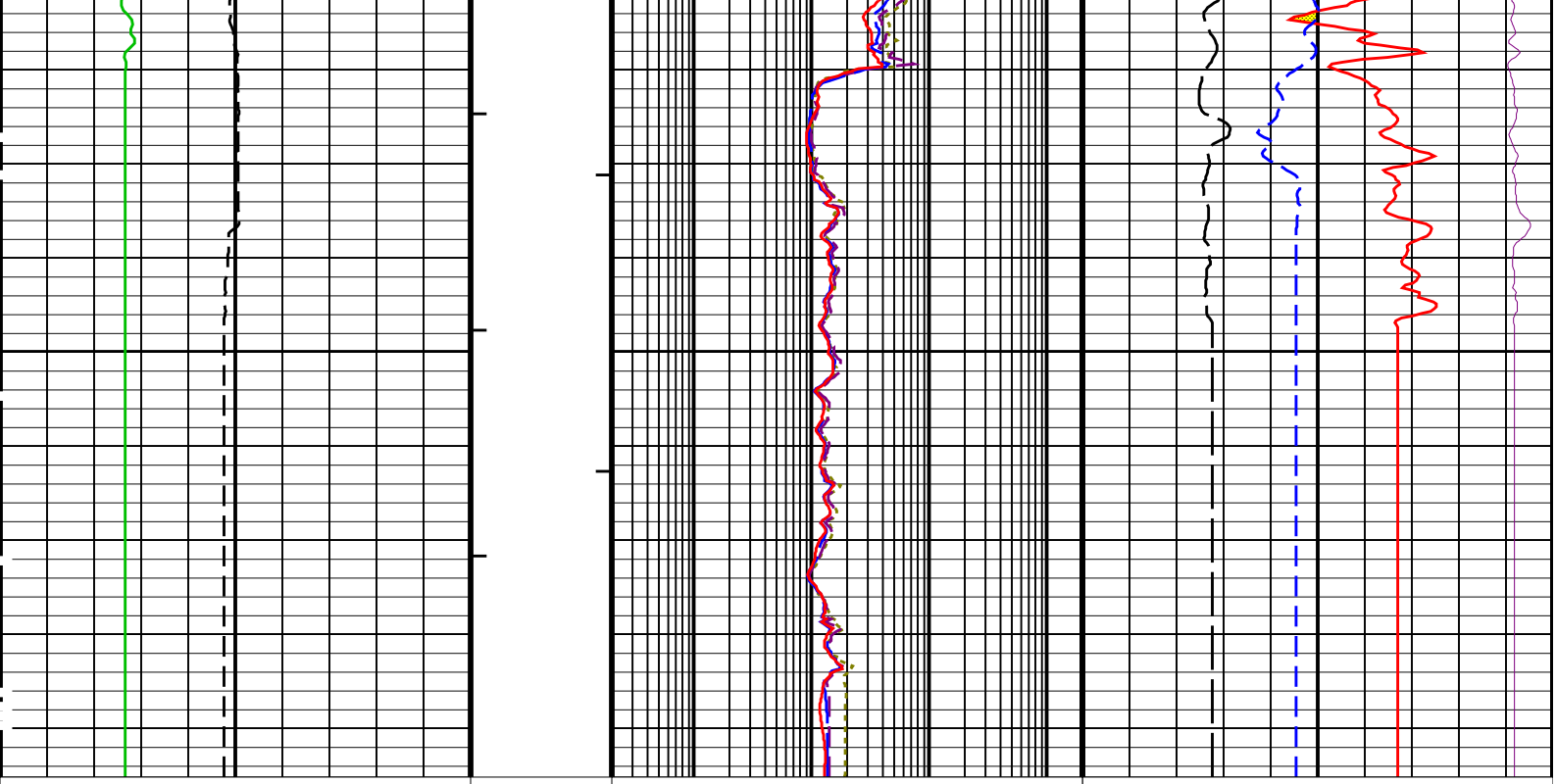
PIP SUMMARY

- Integrated Cement Volume Major Pip Every 100 F3
- Integrated Cement Volume Minor Pip Every 10 F3
- Integrated Hole Volume Major Pip Every 100 F3
- Integrated Hole Volume Minor Pip Every 10 F3

Time Mark Every 60 S

Gamma Ray (GR) 0 (GAPI) 150	TBI 90 Inch Investigation (TBIT90) 0.2 (OHMM) 2000	TNPH (TNPH) 30 (%) −10
Caliper (CALI) 4 (IN) 14	TBI 60 Inch Investigation (TBIT60) 0.2 (OHMM) 2000	PEF (PEF) 0 (−−−−) 10
	TBI 30 Inch Investigation (TBIT30) 0.2 (OHMM) 2000	DRHO (DRHO) −1.8 (G/C3) 0.2
	TBI 20 Inch Investigation (TBIT20) 0.2 (OHMM) 2000	DPHI (DPHI) 0.3 (V/V) −0.1





PIP SUMMARY

- Integrated Cement Volume Major Pip Every 100 F3
- Integrated Cement Volume Minor Pip Every 10 F3
- Integrated Hole Volume Major Pip Every 100 F3
- Integrated Hole Volume Minor Pip Every 10 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	TBT−A: ThruBit String		
	Description of this pass		
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Enabled? (for TBN)	No	
CSAL	Cement Salinity	0	PPM
CSID	Casing Size I.D.	6.5	IN
DHC	Density Hole Correction	CALIPER	
FD	Fluid Density	1	G/C3
FSAL	Formation Salinity	0	PPM
FSCO	Formation Salinity Correction Enabled? (for TBN)	No	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MDEN	Matrix Density	2.68	G/C3
MT	Mud Type (for TBN and TBI correction)	WBM	
MWCO	Mud Weight Correction Enabled? (for TBN)	No	
SOCO	Stand−Off Correction Enabled? (for TBN)	No	
SOFF	TBN Standoff	0	IN
TBDS_SAMPLING	TBDS Sampling	6_Inches	
TBD_CAL_BLOCK	TBD Calibration Block Type	Schlumberger	
TBD_SPIKE_REJECT	TBD Spike Detection Option	Correct	
TBD_SPIKE_THRESHOLD	TBD Attenuation Change Threshold for Spike Detection	5	%
TBI_ALGO	TBI Algorithm Selection	AIT	
TBI_BHC_MODE	Borehole Correction Mode (for TBI)	Solve_For_Standoff	
TBI_BHC_OP	Borehole Correction Option (for TBI)	Caliper	
TBI_CALTYP	TBI Mastercal Type	Schlumberger	
TBI_REPL_ARRAY_DEST	TBI: Replace This Array	None	

TBI_REPL_ARRAY_SOURCE	TBI: With This Array	None	
TBI_RMUD_SRC	RMUD Source for Borehole Correction (for TBI)	Data_Channel_RMUD	
TBI_TC_OP	Induction Temperature Correction Option	Lower	
TBN_ALGO	Porosity Algorithm	Schmid_McKeon	
TBN_BHC_OP	Borehole Correction Option (for TBN)	Caliper	
TBN_CAL_TANK	TBN Calibration Tank Type	Schlumberger	
TBN_FILTER	Filter Length	3_point	
TBN_PRES_OP	Pressure Correction Enabled? (for TBN)	No	
TBN_TEMP_OP	Temperature Correction Enabled? (for TBN)	No	
TBN_WPRE	Well Pressure (for TBN)	0	PSIG
WMUD	Mud Weight	8.345	LB/G
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
FCD	Future Casing (Outer) Diameter	4.5	IN
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BSAL	Borehole Salinity	1000.00	PPM
RMS	Resistivity of Mud Sample	1.5020	OHMM
TD	Total Depth	8915	FT

Format: TB_TCOM **Vertical Scale: 5" per 100'** **Graphics File Created: 23−Jan−2018 12:14**

OP System Version: 19C2−270

TBT−A **SRPC−5318−Thrubit−SP3.4**

Output DLIS Files

DEFAULT **ThruBit_012PUP** **FN:11** **PRODUCER** **23−Jan−2018 12:14**

Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
ThruBit String Master Calibration − TBI Master Calibration Sonde Errors							
Master: 13−Dec−2017 6:17							
Freq 2, A1, R	−249.000	−250.509	−−	−−	−−	−−	
Freq 2, A1, X	150.000	−30.6213	−−	−−	−−	−−	
Freq 2, A2, R	−98.0000	−97.1657	−−	−−	−−	−−	
Freq 2, A2, X	160.000	−63.2901	−−	−−	−−	−−	
Freq 2, A3, R	−23.0000	−22.2737	−−	−−	−−	−−	
Freq 2, A3, X	−20.0000	−96.3707	−−	−−	−−	−−	
Freq 2, A4, R	−19.0000	−22.2689	−−	−−	−−	−−	
Freq 2, A4, X	100.000	40.8593	−−	−−	−−	−−	
Freq 2, A5, R	−20.0000	−20.6904	−−	−−	−−	−−	
Freq 2, A5, X	−25.0000	−51.4674	−−	−−	−−	−−	
ThruBit String Master Calibration − TBI Master Calibration COMPLEX GAINS							
Master: 13−Dec−2017 6:17							
Freq 2, R − 0	1.000	1.011	−−	−−	−−	−−	
Freq 2, R − 1	1.000	1.040	−−	−−	−−	−−	
Freq 2, R − 2	1.000	1.003	−−	−−	−−	−−	
Freq 2, R − 3	1.000	1.028	−−	−−	−−	−−	
Freq 2, R − 4	1.000	1.026	−−	−−	−−	−−	
Freq 2, X − 0	0	−0.02260	−−	−−	−−	−−	
Freq 2, X − 1	0	−0.003239	−−	−−	−−	−−	
Freq 2, X − 2	0	0.009304	−−	−−	−−	−−	
Freq 2, X − 3	0	0.007065	−−	−−	−−	−−	
Freq 2, X − 4	0	0.007129	−−	−−	−−	−−	

ThruBit String Master Calibration − TBD Caliper Master Calibration
Master: 19−Jan−2018 7:40

Caliper 12in Ring	1949.8	1903.7	−−	−−	−−	−−	IN
Caliper 9in Ring	2096.7	2058.0	−−	−−	−−	−−	IN
Caliper 6in Ring	2285.7	2211.5	−−	−−	−−	−−	IN

ThruBit String Master Calibration − TBD Density Master Calibration
Master: 19−Jan−2018 7:40

Aluminium Density	2.607	2.607	−−	−−	−−	−−	G/C3
Magnesium Density	1.752	1.752	−−	−−	−−	−−	G/C3
LS1 Background	143.00	145.05	−−	−−	−−	−−	CPS
SS1 Background	143.00	130.99	−−	−−	−−	−−	CPS
LS4 Background	30.00	30.40	−−	−−	−−	−−	CPS
SS1 Aluminium	7900.00	6468.27	−−	−−	−−	−−	CPS
LS1 Aluminium	1220.0	1044.8	−−	−−	−−	−−	CPS
SS1 Magnesium	13160.0	10454.0	−−	−−	−−	−−	CPS
LS4 Aluminium	830.00	697.91	−−	−−	−−	−−	CPS
SS Slope	1.645	1.731	−−	−−	−−	−−	
LS1 Block + Sleeve	50000	4338.6	−−	−−	−−	−−	CPS
LS Slope	0.4150	0.4281	−−	−−	−−	−−	
LS4 Block + Sleeve	50000	1600.8	−−	−−	−−	−−	CPS
Pef K Factor	4.840	12.05	−−	−−	−−	−−	
LS1 Magnesium	8260.00	6675.16	−−	−−	−−	−−	CPS
Pef B Factor	−0.5550	−0.2599	−−	−−	−−	−−	

ThruBit String Master Calibration − TBD Density Master Calibration. Ti Window, Schlumberger blocks
Master: 19−Jan−2018 7:40

SS1 Background	143.00	130.99	−−	−−	−−	−−	CPS
SS2 Background	38.0000	33.9066	−−	−−	−−	−−	CPS
SS3 Background	23.0000	20.7528	−−	−−	−−	−−	CPS
SS4 Background	31.0000	28.4218	−−	−−	−−	−−	CPS
LS1 Background	143.00	145.05	−−	−−	−−	−−	CPS
LS2 Background	37.0000	36.9704	−−	−−	−−	−−	CPS
LS3 Background	22.0000	22.5958	−−	−−	−−	−−	CPS
LS4 Background	30.00	30.40	−−	−−	−−	−−	CPS
SS1 Aluminium	7900.00	6468.27	−−	−−	−−	−−	CPS
SS2 Aluminium	4050.00	3121.00	−−	−−	−−	−−	CPS
SS3 Aluminium	3420.00	2557.01	−−	−−	−−	−−	CPS
SS4 Aluminium	3360.0000	2618.6284	−−	−−	−−	−−	CPS
LS1 Aluminium	1220.0	1044.8	−−	−−	−−	−−	CPS
LS2 Aluminium	1140.00	965.604	−−	−−	−−	−−	CPS
LS3 Aluminium	1080.00	940.383	−−	−−	−−	−−	CPS
LS4 Aluminium	830.00	697.91	−−	−−	−−	−−	CPS
Magnesium RHOSS	1.6700	1.6864	−−	−−	−−	−−	
Magnesium RHOLS	1.6880	1.6998	−−	−−	−−	−−	
Magnesium RHOB	1.7040	1.7110	−−	−−	−−	−−	
Magnesium PEF	2.5210	2.5005	−−	−−	−−	−−	
Magnesium + Sleeve RHOSS	2.1520	2.1606	−−	−−	−−	−−	
Magnesium + Sleeve RHOLS	1.8550	1.8636	−−	−−	−−	−−	
Magnesium + Sleeve RHOB	1.6060	1.6144	−−	−−	−−	−−	
Magnesium + Sleeve PEF	6.8000	6.9199	−−	−−	−−	−−	

ThruBit String Master Calibration − Thermal Neutron Master Calibration
Master: 29−Nov−2017 20:16

TNF, Background	1.0	0.24	−−	−−	−−	−−	CPS
TNN, Background	1.0	0.21	−−	−−	−−	−−	CPS
TNF, Tank	27990	32620	−−	−−	−−	−−	CPS
TNN, Tank	69600	105280	−−	−−	−−	−−	CPS
TNF, Tank + Al Sleeve	1750.0	1897.3	−−	−−	−−	−−	CPS
TNN, Tank + Al Sleeve	18350.0	22237.3	−−	−−	−−	−−	CPS
Tank + Al Sleeve Ratio	11.128	11.720	−−	−−	−−	−−	
Tank + Al Sleeve Porosity	15.19	15.19	−−	−−	−−	−−	PU
Tank, Ratio	2.6300	3.2275	−−	−−	−−	−−	
Tank, Temperature	70.0	57.0	−−	−−	−−	−−	DEGF

ThruBit String Master Calibration − TMG Accelerometer Calibration
Master: 18−Jan−2018 4:18

Minimum Ax, m/s2	−9.810	−10.20	−−	−−	−−	−−	
Maximum Ax, m/s2	9.810	9.709	−−	−−	−−	−−	
Minimum Ay, m/s2	−9.810	−10.10	−−	−−	−−	−−	
Maximum Ay, m/s2	9.810	9.807	−−	−−	−−	−−	
Minimum Az, m/s2	0	−0.05017	−−	−−	−−	−−	
Maximum Az, m/s2	9.810	9.787	−−	−−	−−	−−	
RB Offset, degrees	0	−14.27	−−	−−	−−	−−	

ThruBit String Master Calibration − TMG Gamma−Ray Calibration
Master: 18−Jan−2018 10:54

GR Background	30.00	61.69	−−	−−	−−	−−	GAPI
GR Jig−Background	160.0	175.3	−−	−−	−−	−−	GAPI

ThruBit String / Equipment Identification

Primary Equipment:	
Induction Resistivity	TBI − A
Dipole Sonic	TBDS − B
Density	TBD − A
Gamma−Ray Logging Source	GGLS − FZ
Thermal Neutron	TBN − A
Neutron Logging Source	NNLS − EWA
Telemetry Memory GR	TMG − A
Telemetry	WCIB −
Auxiliary Equipment:	

ThruBit String Master Calibration

TBI Master Calibration Sonde Errors

	Value	Nominal		Value	Nominal
Freq 2, A1, R	−250.509	−249.000	Freq 2, A1, X	−30.6213	150.000
−336.000 (Minimum) −186.000 (Maximum) (Nominal)			−375.000 (Minimum) 675.000 (Maximum) (Nominal)		
Freq 2, A2, R	−97.1657	−98.0000	Freq 2, A2, X	−63.2901	160.000
−138.000 (Minimum) −76.0000 (Maximum) (Nominal)			−100.000 (Minimum) 425.000 (Maximum) (Nominal)		
Freq 2, A3, R	−22.2737	−23.0000	Freq 2, A3, X	−96.3707	−20.0000
−31.0000 (Minimum) −13.0000 (Maximum) (Nominal)			−325.000 (Minimum) 250.000 (Maximum) (Nominal)		
Freq 2, A4, R	−22.2689	−19.0000	Freq 2, A4, X	40.8593	100.000
−28.0000 (Minimum) −7.00000 (Maximum) (Nominal)			−75.0000 (Minimum) 275.000 (Maximum) (Nominal)		
Freq 2, A5, R	−20.6904	−20.0000	Freq 2, A5, X	−51.4674	−25.0000
−27.0000 (Minimum) −10.0000 (Maximum) (Nominal)			−125.000 (Minimum) 100.000 (Maximum) (Nominal)		

Master: 13−Dec−2017 6:17

ThruBit String Master Calibration

TBI Master Calibration COMPLEX GAINS

Freq 2, R	Value	Nominal	Freq 2, X	Value	Nominal
	1.011	1.000		−0.02260	0
	1.040	1.000		−0.003239	0
	1.003	1.000		0.009304	0
	1.028	1.000		0.007065	0
	1.026	1.000		0.007129	0
0.9500 (Minimum) 1.050 (Maximum) (Nominal)			−0.05000 (Minimum) 0.05000 (Maximum) (Nominal)		

Master: 13−Dec−2017 6:17

ThruBit String Master Calibration

TBD Caliper Master Calibration

Caliper 12in Ring IN	Value	Nominal	Caliper 9in Ring IN	Value	Nominal	Caliper 6in Ring IN	Value	Nominal
	1903.7	1949.8		2058.0	2096.7		2211.5	2285.7
1799.8 (Minimum) 2099.8 (Maximum) (Nominal)			1946.7 (Minimum) 2246.7 (Maximum) (Nominal)			2135.7 (Minimum) 2435.7 (Maximum) (Nominal)		

Master: 19−Jan−2018 7:40

ThruBit String Master Calibration

TBD Density Master Calibration. Ti Window, Schlumberger blocks

LS1 Background CPS	Value	Nominal	SS1 Background CPS	Value	Nominal
	145.05	143.00		130.99	143.00
100.00 (Minimum) 186.00 (Maximum) (Nominal)			100.00 (Minimum) 186.00 (Maximum) (Nominal)		

100.00 (Minimum)	186.00 (Maximum)			100.00 (Minimum)	186.00 (Maximum)		
LS2 Background CPS		Value	Nominal	SS2 Background CPS		Value	Nominal
		36.9704	37.0000			33.9066	38.0000
26.0000 (Minimum)	48.0000 (Maximum)			27.0000 (Minimum)	50.0000 (Maximum)		
LS3 Background CPS		Value	Nominal	SS3 Background CPS		Value	Nominal
		22.5958	22.0000			20.7528	23.0000
15.0000 (Minimum)	29.0000 (Maximum)			16.0000 (Minimum)	30.0000 (Maximum)		
LS4 Background CPS		Value	Nominal	SS4 Background CPS		Value	Nominal
		30.40	30.00			28.4218	31.0000
20.00 (Minimum)	40.00 (Maximum)			22.0000 (Minimum)	40.0000 (Maximum)		
LS1 Aluminium CPS		Value	Nominal	SS1 Aluminium CPS		Value	Nominal
		1044.8	1220.0			6468.27	7900.00
850.00 (Minimum)	1590.0 (Maximum)			5530.00 (Minimum)	10270.0 (Maximum)		
LS2 Aluminium CPS		Value	Nominal	SS2 Aluminium CPS		Value	Nominal
		965.604	1140.00			3121.00	4050.00
800.000 (Minimum)	1480.00 (Maximum)			2840.00 (Minimum)	5270.00 (Maximum)		
LS3 Aluminium CPS		Value	Nominal	SS3 Aluminium CPS		Value	Nominal
		940.383	1080.00			2557.01	3420.00
760.000 (Minimum)	1400.00 (Maximum)			2400.00 (Minimum)	4450.00 (Maximum)		
LS4 Aluminium CPS		Value	Nominal	SS4 Aluminium CPS		Value	Nominal
		697.91	830.00			2618.6284	3360.0000
580.00 (Minimum)	1080.0 (Maximum)			2350.0000 (Minimum)	3700.0000 (Maximum)		
Magnesium RHOLS		Value	Nominal	Magnesium RHOSS		Value	Nominal
		1.6998	1.6880			1.6864	1.6700
1.6630 (Minimum)	1.7130 (Maximum)			1.6350 (Minimum)	1.7050 (Maximum)		
Magnesium PEF		Value	Nominal	Magnesium RHOB		Value	Nominal
		2.5005	2.5210			1.7110	1.7040
2.3700 (Minimum)	2.6700 (Maximum)			1.6870 (Minimum)	1.7210 (Maximum)		
Magnesium + Sleeve RHOLS		Value	Nominal	Magnesium + Sleeve RHOSS		Value	Nominal
		1.8636	1.8550			2.1606	2.1520
1.7950 (Minimum)	1.9150 (Maximum)			2.0920 (Minimum)	2.2120 (Maximum)		
Magnesium + Sleeve PEF		Value	Nominal	Magnesium + Sleeve RHOB		Value	Nominal
		6.9199	6.8000			1.6144	1.6060
5.1000 (Minimum)	8.5000 (Maximum)			1.5780 (Minimum)	1.6340 (Maximum)		
Master: 19−Jan−2018 7:40							

ThruBit String Master Calibration							
Thermal Neutron Master Calibration							
TNF, Background CPS		Value	Nominal	TNN, Background CPS		Value	Nominal
		0.24	1.0			0.21	1.0
0 (Minimum)	2.0 (Maximum)			0 (Minimum)	2.0 (Maximum)		
TNF, Tank CPS		Value	Nominal	TNN, Tank CPS		Value	Nominal
		32620	27990			105280	69600
9330 (Minimum)	56000 (Maximum)			23200 (Minimum)	139200 (Maximum)		
TNF, Tank + Al Sleeve CPS		Value	Nominal	TNN, Tank + Al Sleeve CPS		Value	Nominal
		1897.3	1750.0			22237.3	18350.0
580.00 (Minimum)	3500.0 (Maximum)			6100.00 (Minimum)	36700.0 (Maximum)		
Tank + Al Sleeve Ratio		Value	Nominal	Tank + Al Sleeve Porosity PU		Value	Nominal
		11.720	11.128			15.19	15.19
10.528	11.728			14.69	15.69		

(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)		
Tank, Ratio			Value	Nominal	Tank, Temperature DEGF			Value	Nominal
			3.2275	2.6300				57.0	70.0
2.0300		3.2300			20.0		120		
(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)		

Master: 29−Nov−2017 20:16

ThruBit String Master Calibration

TMG Accelerometer Calibration

Minimum Ax, m/s2			Value	Nominal	Maximum Ax, m/s2			Value	Nominal
			−10.20	−9.810				9.709	9.810
−10.81		−8.810			8.810		10.81		
(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)		
Minimum Ay, m/s2			Value	Nominal	Maximum Ay, m/s2			Value	Nominal
			−10.10	−9.810				9.807	9.810
−10.81		−8.810			8.810		10.81		
(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)		
Minimum Az, m/s2			Value	Nominal	Maximum Az, m/s2			Value	Nominal
			−0.05017	0				9.787	9.810
−1.000		1.000			8.810		10.81		
(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)		
RB Offset, degrees			Value	Nominal					
			−14.27	0					
−360.0		360.0							
(Minimum)	(Nominal)	(Maximum)							

Master: 18−Jan−2018 4:18

ThruBit String Master Calibration

TMG Gamma−Ray Calibration

GR Background GAPI			Value	Nominal	GR Jig−Background GAPI			Value	Nominal
			61.69	30.00				175.3	160.0
0		120.0			128.0		192.0		
(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)		

Master: 18−Jan−2018 10:54

Company: **CAERUS OPERATING LLC**

Schlumberger

Well: **Puckett 13D−26**
Field: **Grand Valley**
County: **Garfield**
State: **Colorado**

Triple Combo