

Lower Intermediate Casing Logs

- **Borehole Profile Log / Future Casing Diameter = 9.625"**
- **Platform Express / Compensated Neutron Log / Three Detector Litho-Density**
- **Array Induction Tool**
- **Fullbore Micro Imager / Field Print**
- **Borehole Compensated Sonic / Spectral Gamma Ray**
- **Spectral Gamma Ray**

**Borehole Profile Log /
Future Casing Diameter = 9.625”**

Company: PB ENERGY STORAGE SERVICES, INC

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County: Lea State: New Mexico

Borehole Profile Log

Future Casing Diameter = 9.625"

County:		Lea	
Field:		AGI; Bone Spring-Wolfcamp	
Location:		1600' FSL & 1750' FWL	
Well:		DCP Linam Ranch AGI #2	
Company:		PB ENERGY STORAGE SERVICES, INC	
Future Casing Diameter = 9.625"			
Location:			
1600' FSL & 1750' FWL		Elev.:	K.B. 3763.00 ft
			G.L. 3738.00 ft
			D.F. 3762.00 ft
Permanent Datum:	Ground Level	Elev.:	3738.00 f
Log Measured From:	Kelly Bushing	25.00 ft	above Perm.Datum
Drilling Measured From:	Kelly Bushing		
API Serial No.	Section:	Township:	Range:
30-025-42139	30	18S	37E

Logging Date	30-Nov-2014		
Run Number	Three		
Depth Driller	8630.00 ft		
Schlumberger Depth	8630.00 ft		
Bottom Log Interval	8628.00 ft		
Top Log Interval	3219.50 ft		
Casing Driller Size @ Depth	13.375 in @ 3220.00 ft		
Casing Schlumberger	3219.5 ft		
Bit Size	12.25 in		
Type Fluid In Hole	Salt Brine		
D M M	Density	8.8 lbm/gal	33 s
	Fluid Loss	0 cm3	10
	Source of Sample		
RM @ Meas Temp	9 ohm.m @ 80 degF		
RMF @ Meas Temp	7.5 ohm.m @ 80 degF		
RMC @ Meas Temp	0.06 ohm.m @ 75 degF		
Source RMF	RMC	Pressed	
RM @ BHT	RMF @ BHT	6.85 @ 107.3 5.71 @ 107.3	
Max Recorded Temperatures			
Circulation Stopped	Time	30-Nov-2014 02:00:00	
Logger on Bottom	Time	30-Nov-2014 22:30:32	
Unit Number	Location:	2133 Roswell	
Recorded By	Tyler Bolton		
Witnessed By	Russell Bentley		

Disclaimer

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Remarks and Equipment Summary

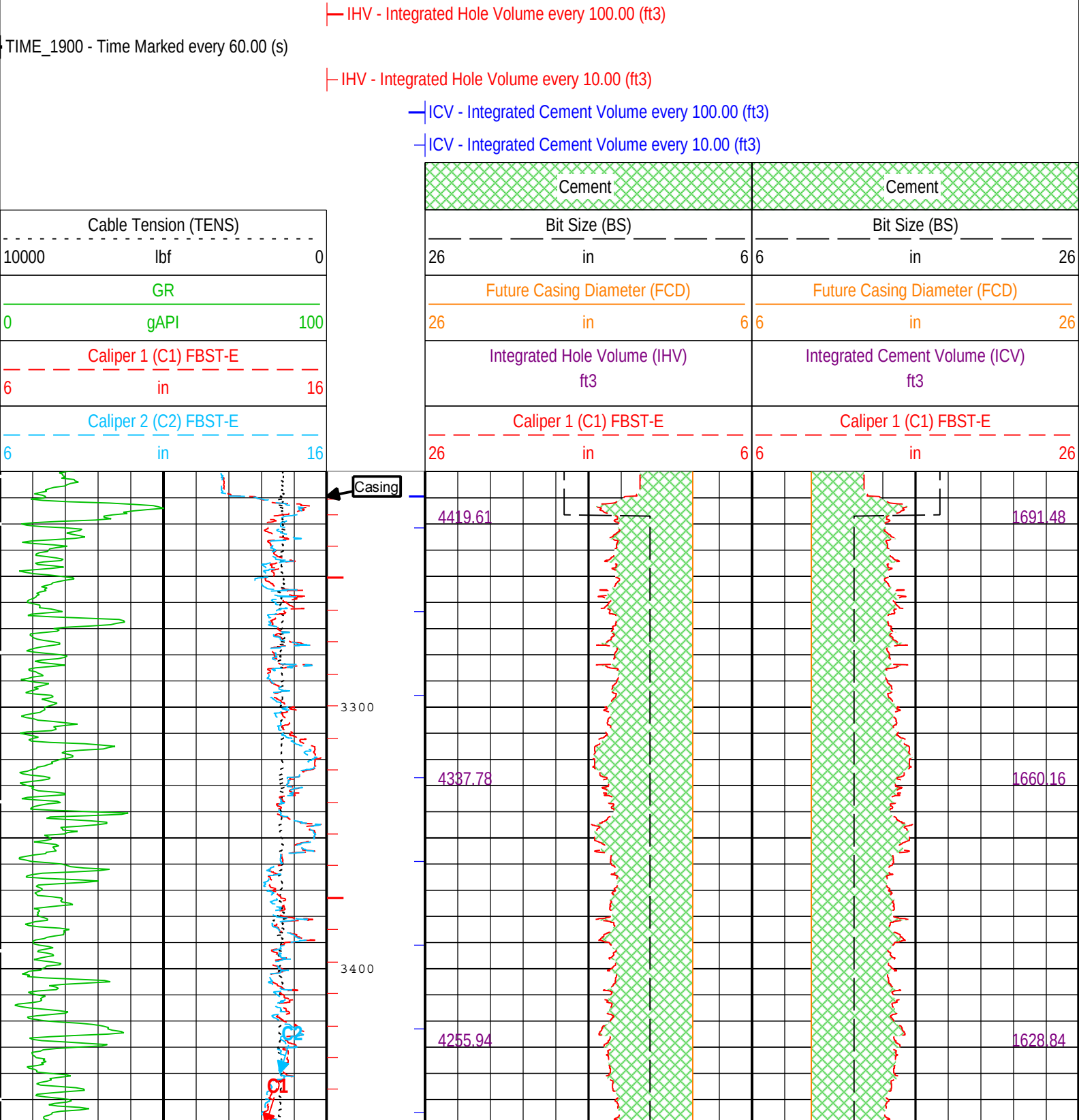
Three: Toolstring				Three: Remarks
Equip name LEH-QC:1317	Length 32.38	MP name	Offset	Toolstring run as per toolsketch.
				1.5" standoff used on FMI cartridge.
				Rig: Precision #107
EDTC-B:9071 EDTH-B:8196 EDTG-A:79243 EDTC-B:9071	29.92			Your Schlumberger crew: Tyler Bolton, Adam Jaramillo, Jose Gomez.
		CTEM	26.42	
		ACCZ	0.00	
		HV	0.00	
		Gamma Ray	24.55	
		TelStatus	23.42	
FBST-E ECH-MJA FBPC-A AH-287 FBSH-D FBAC-B DHRU-F FBSS-B	23.42			
		Deviation	9.94	
		GPIT-F Inclino meter	9.94	
		GPIT	0.00	
		Buttons	1.33	
		TOOL_ZERO		
Lengths are in ft Maximum Outer Diameter = 5.000 in Line: Sensor Location, Value: Gating Offset All measurements are relative to TOOL_ZERO				

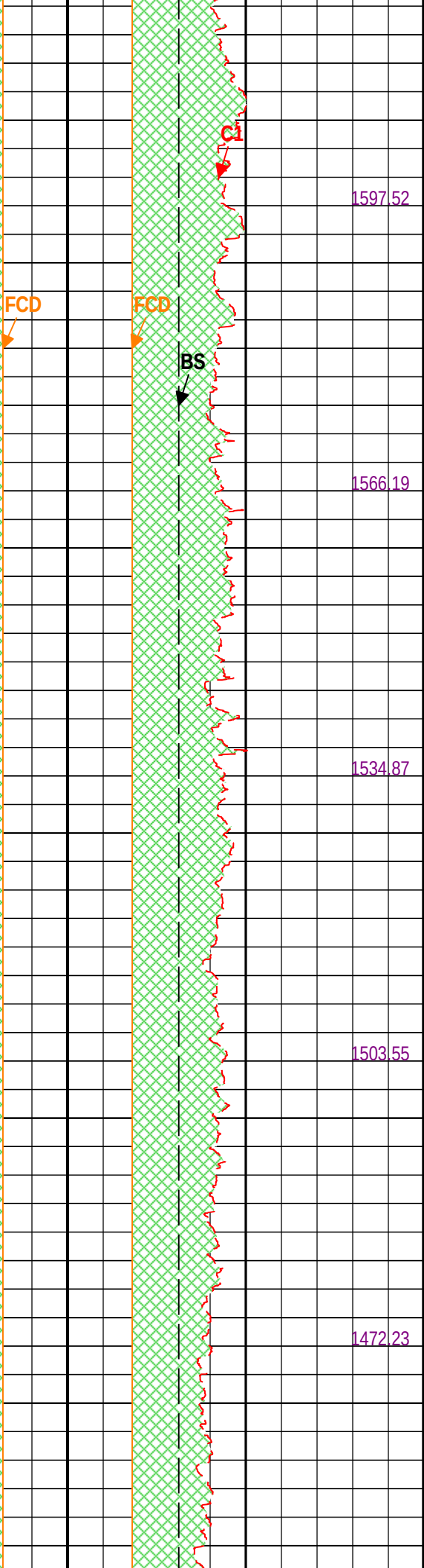
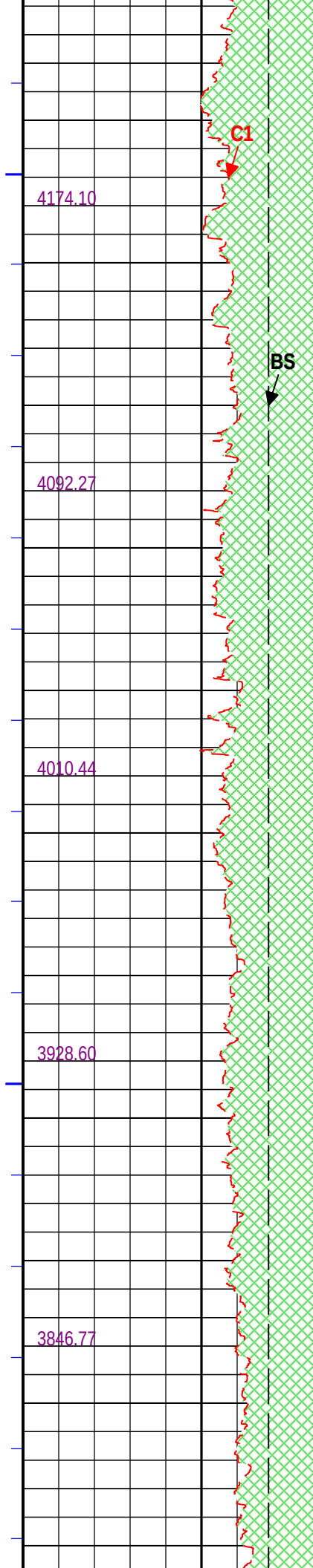
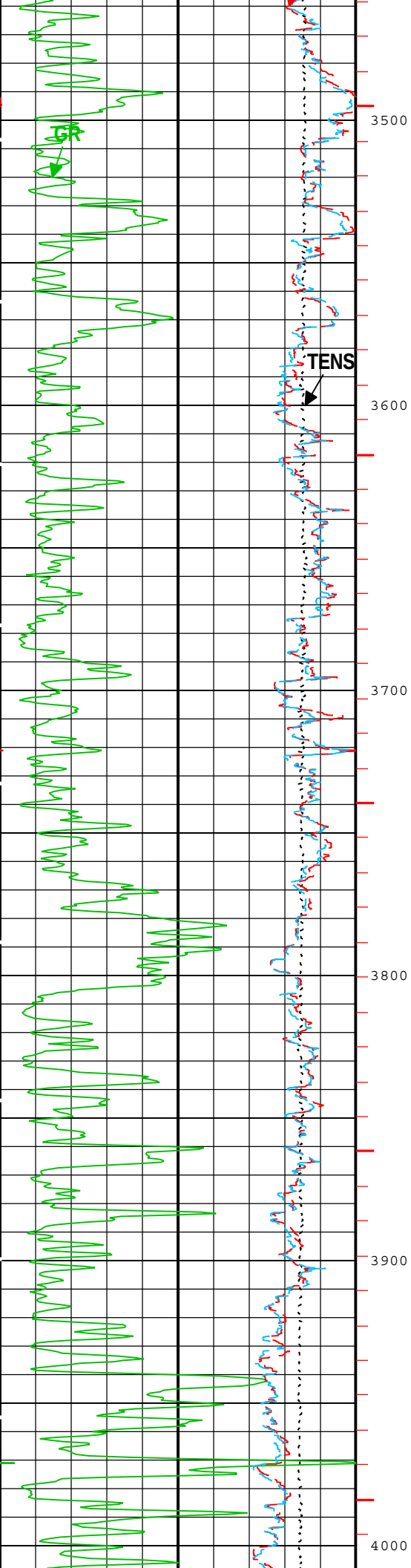
Depth Summary

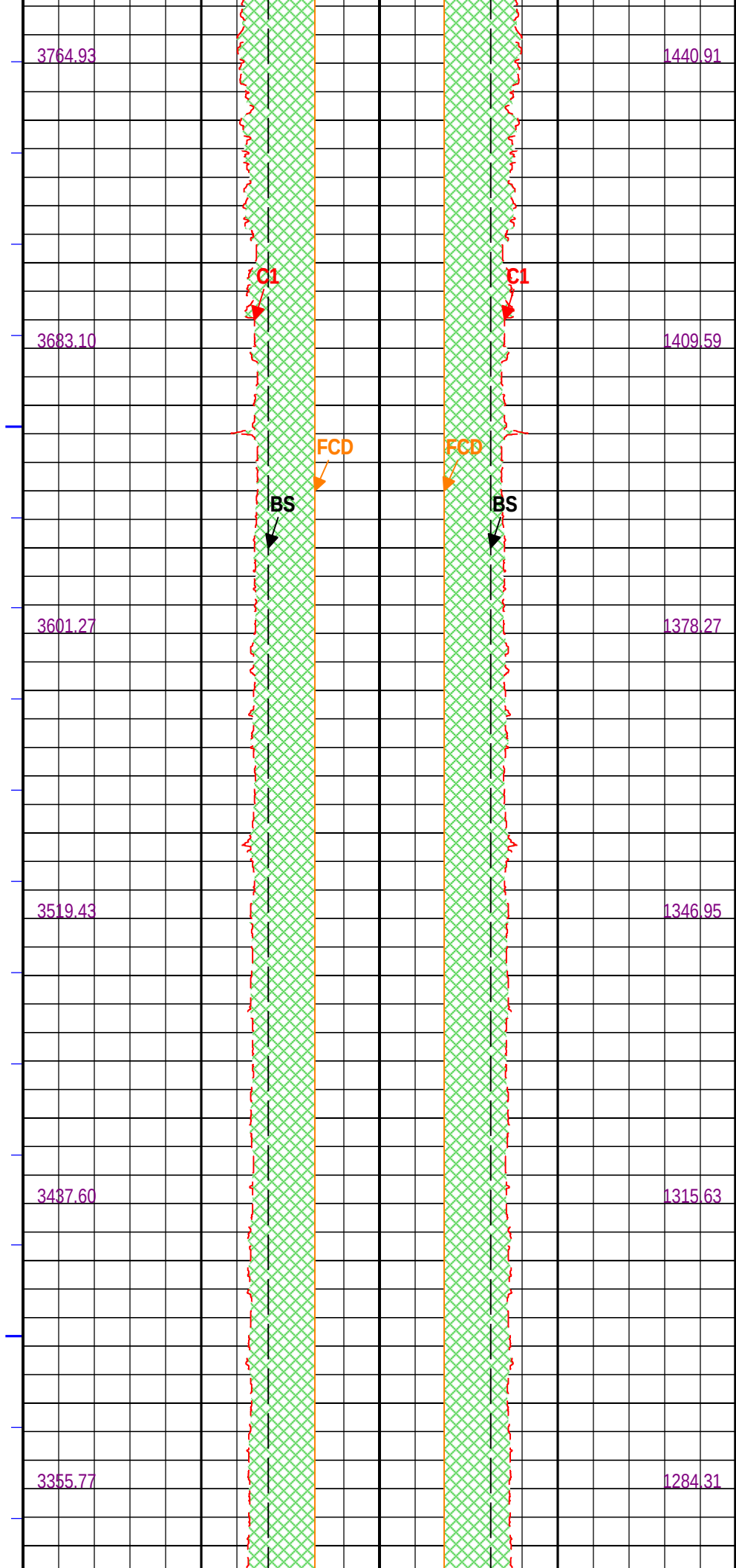
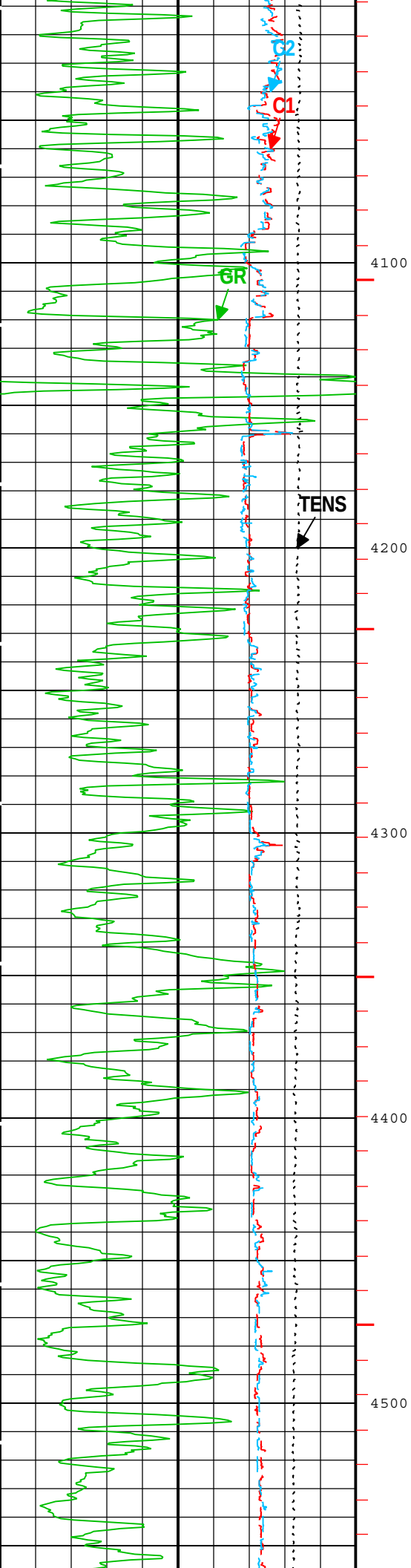
	Three		
Depth Measuring Device			
Type	IDW-JA		

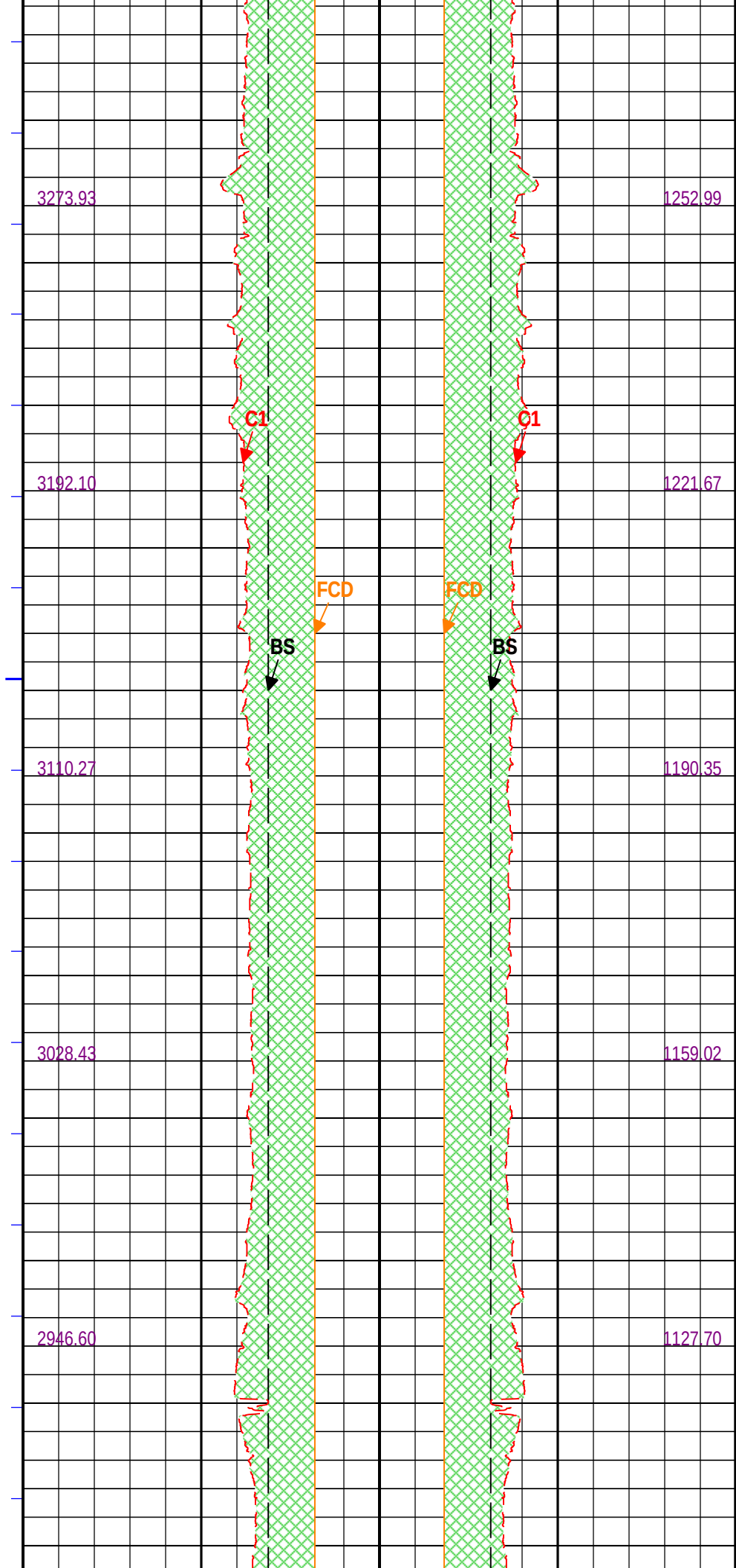
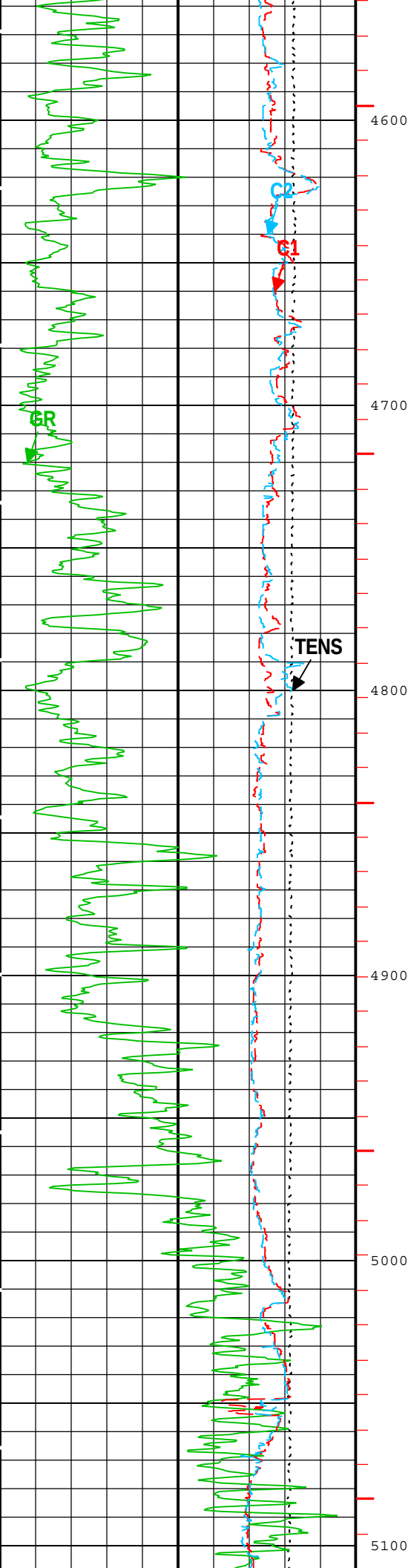
Description: HRI T BASIC LOG	Format: log (Caliper 2 inch General)	Index Scale: 2 in per 100 ft	Index Unit: ft	Index Type: Measured	Depth	Creation
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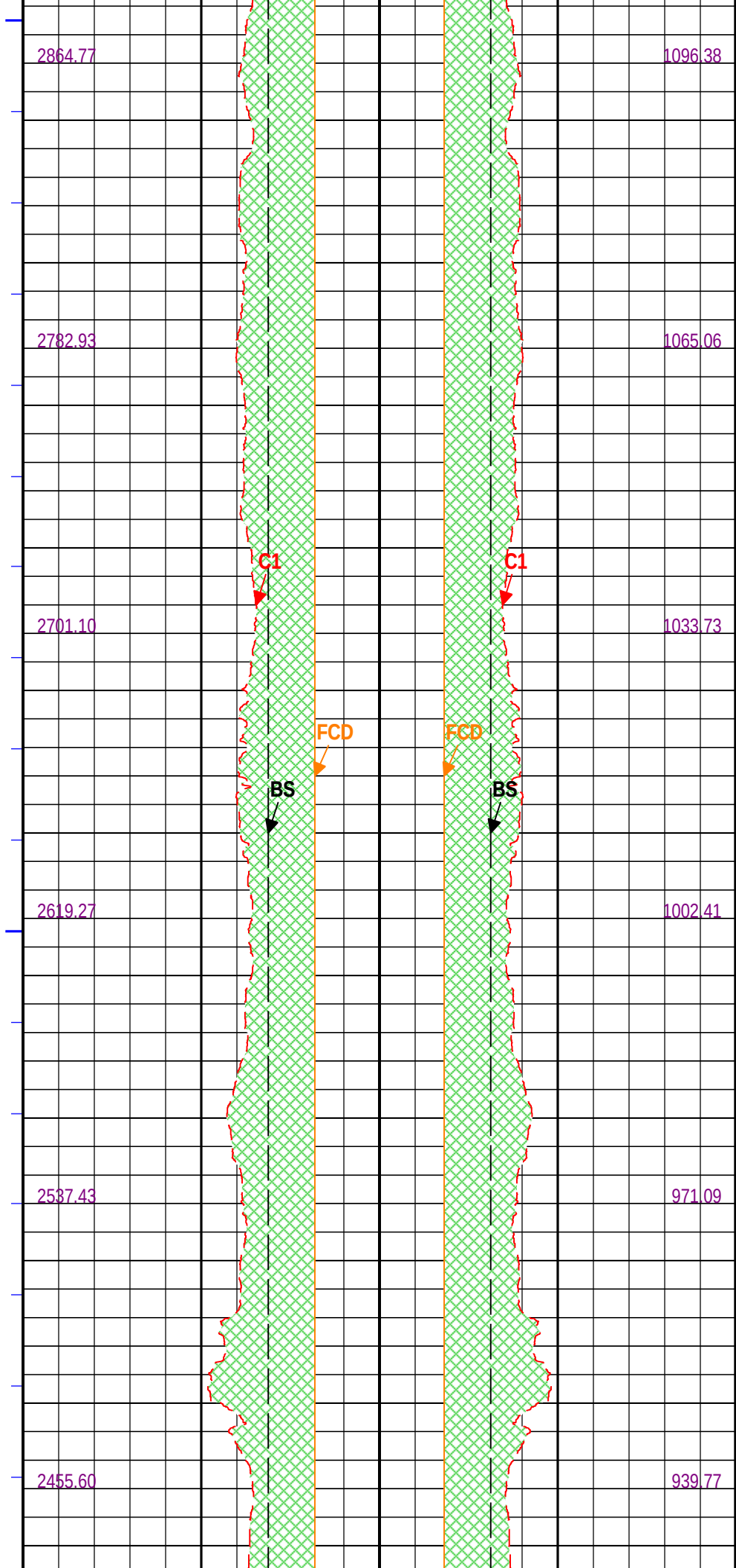
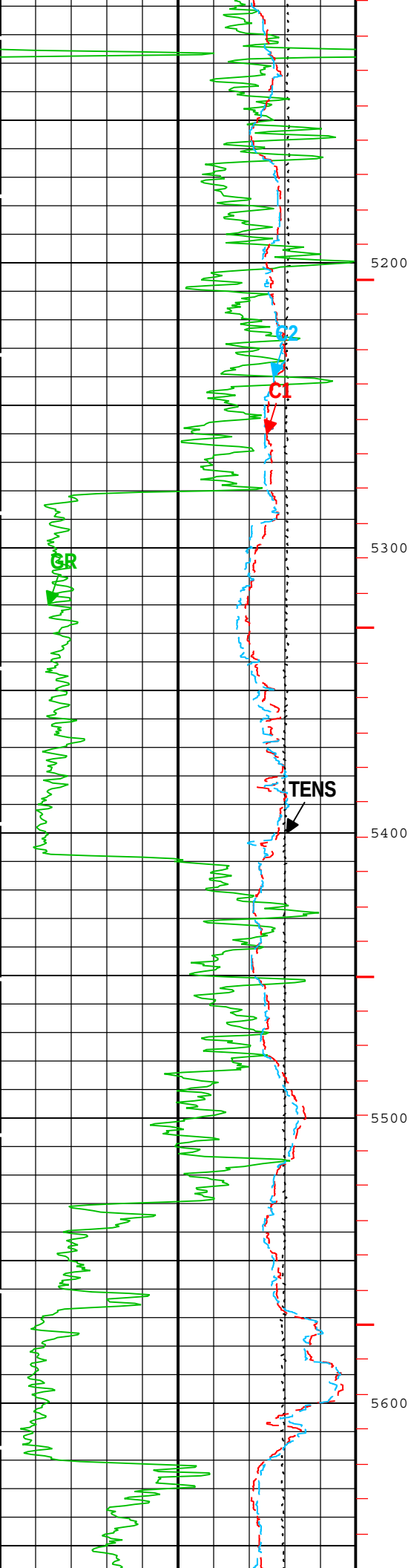
Description: FIRE1_BASIC LOG Format: Log (Caliper 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Dec-2014 00:16:00		
Channel	Source	Sampling
BS	Borehole	6in
C1	FBST-E:FBPC-A:FBPC-A	1.5in
C2	FBST-E:FBPC-A:FBPC-A	1.5in
FCD	Borehole	6in
GR_CAL	EDTC-B:EDTC-B:EDTC-B	6in
ICV	Borehole	6in
IHV	Borehole	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in

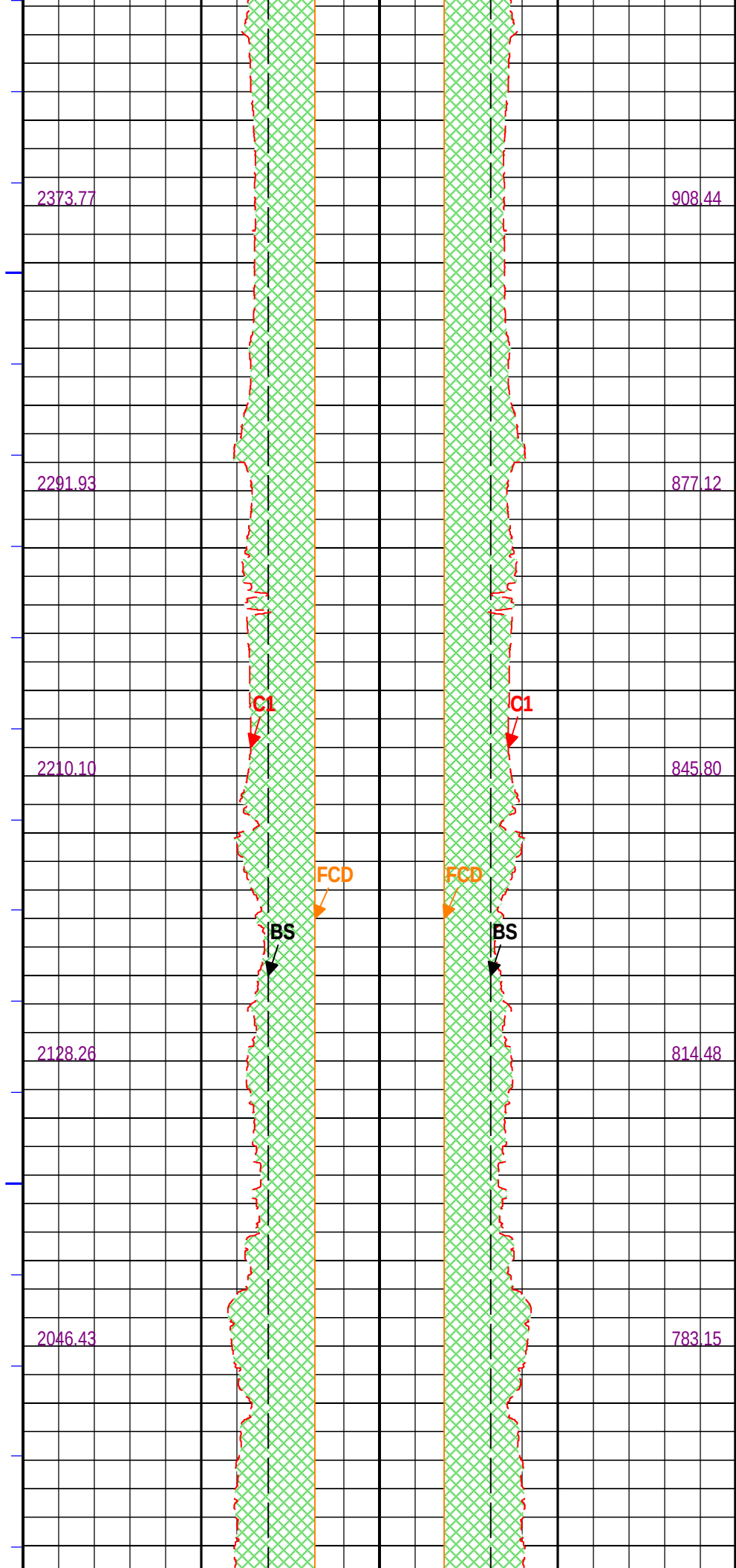
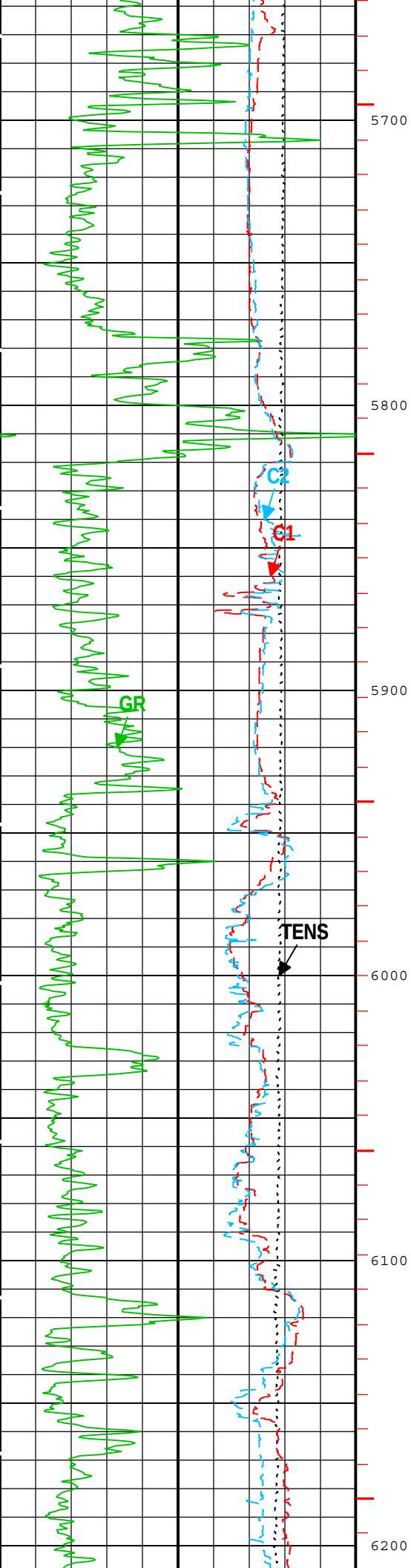


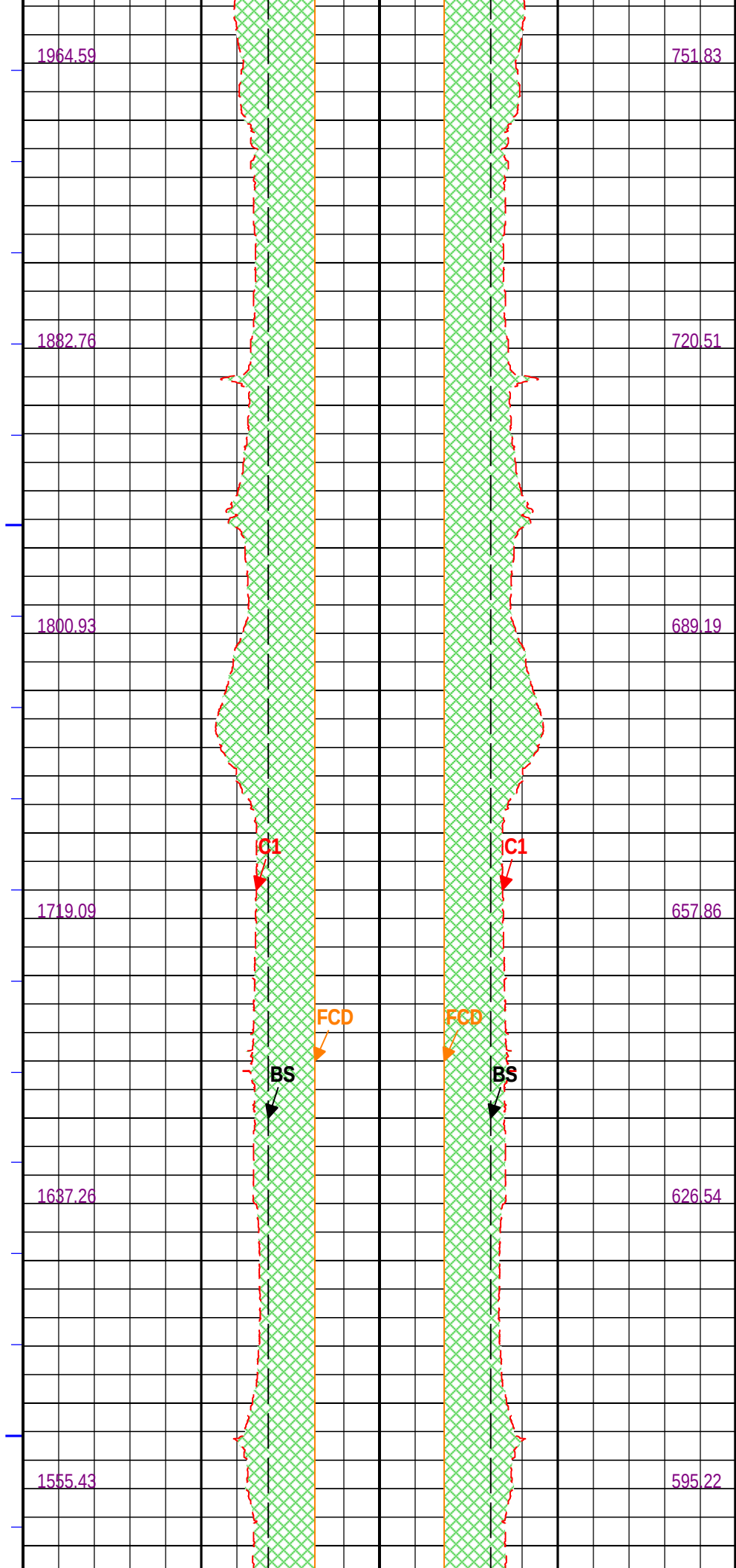
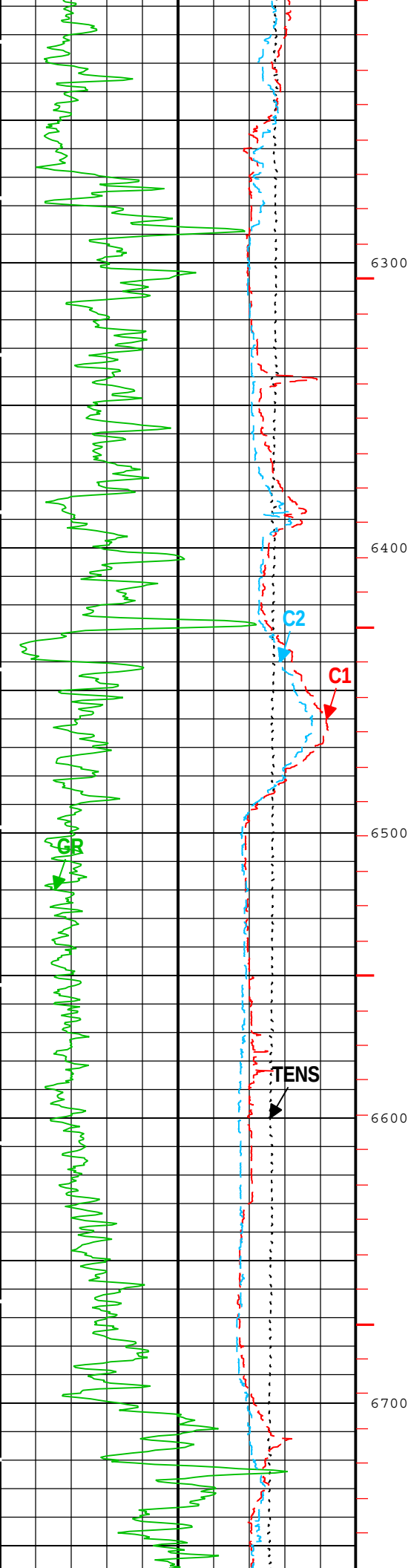


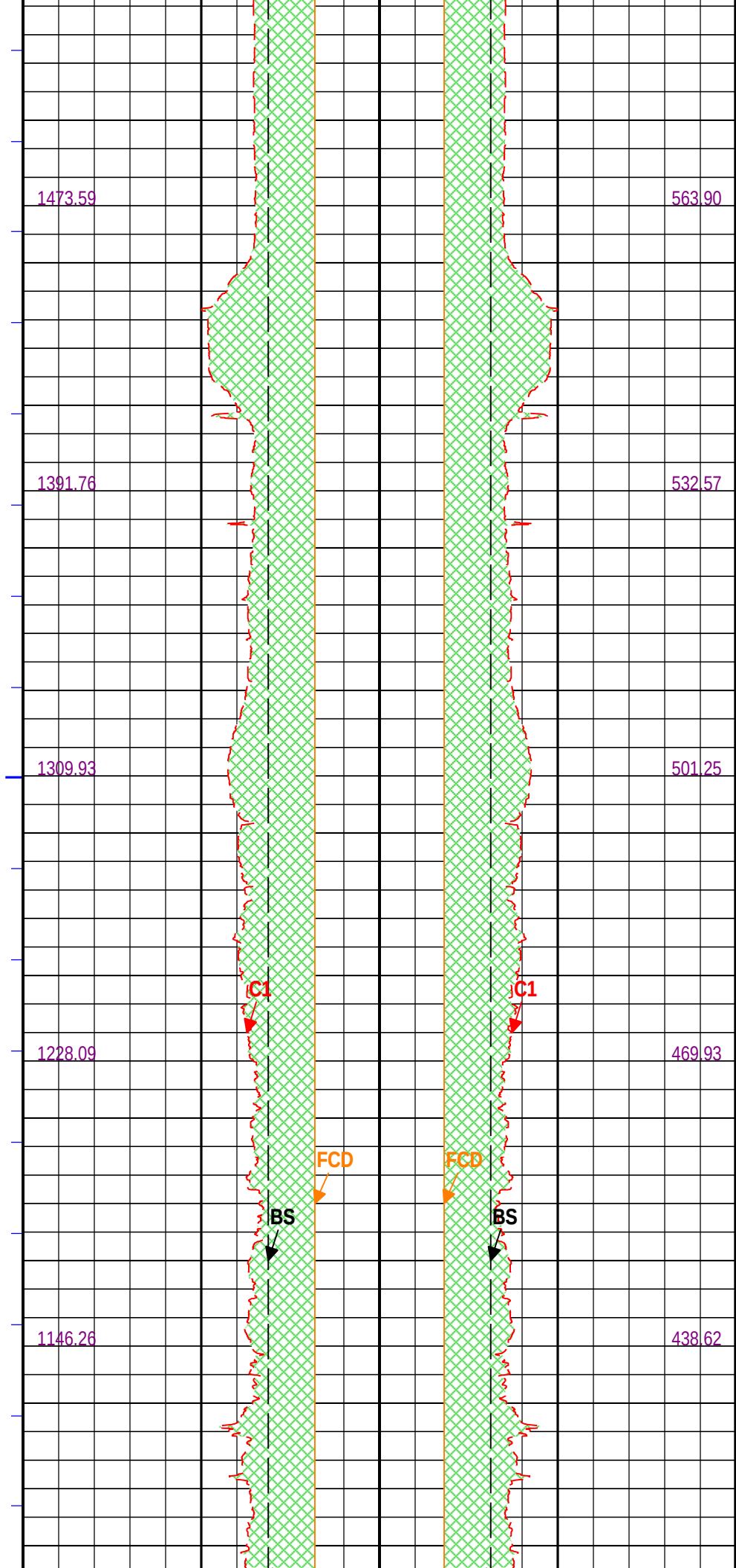
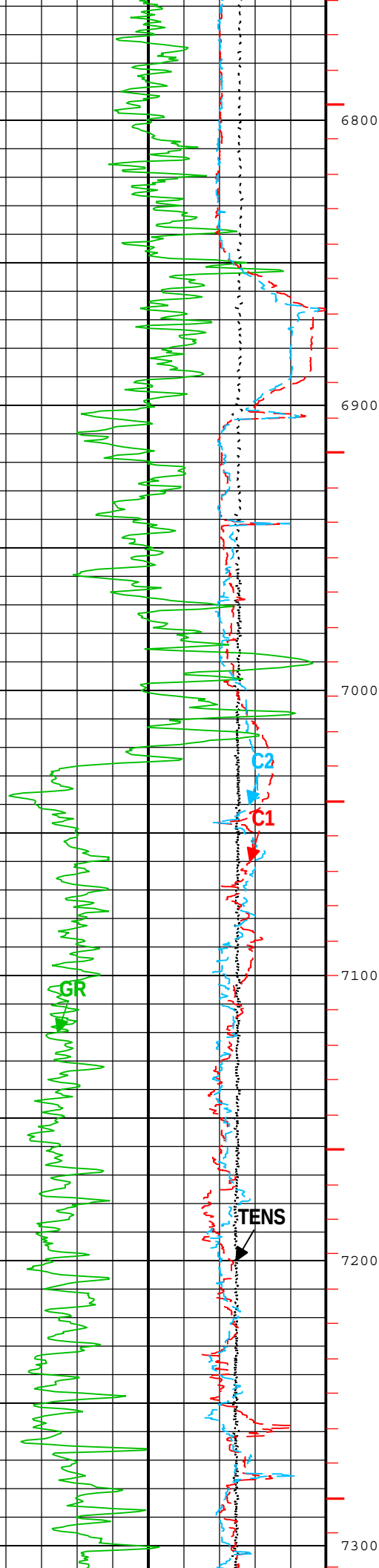


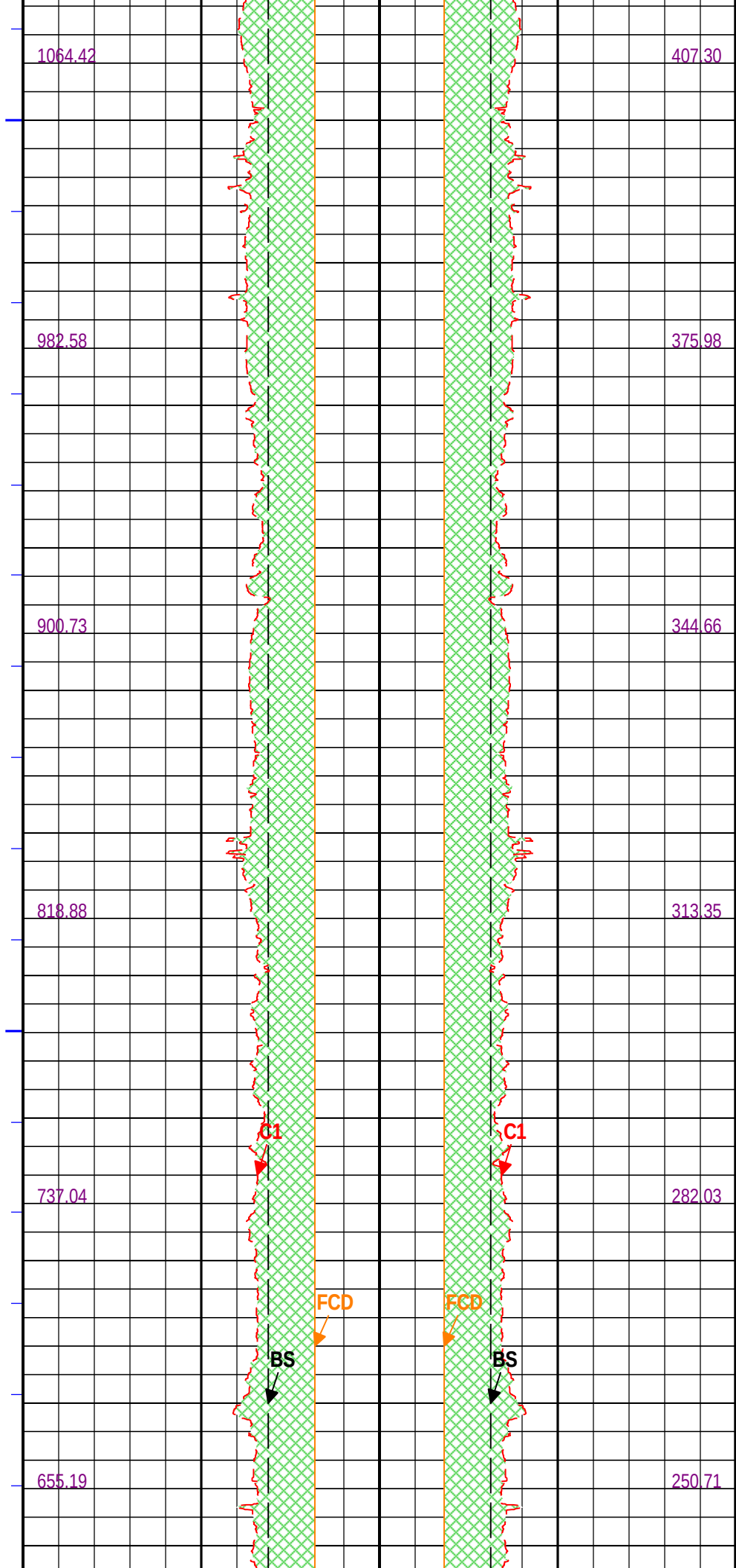
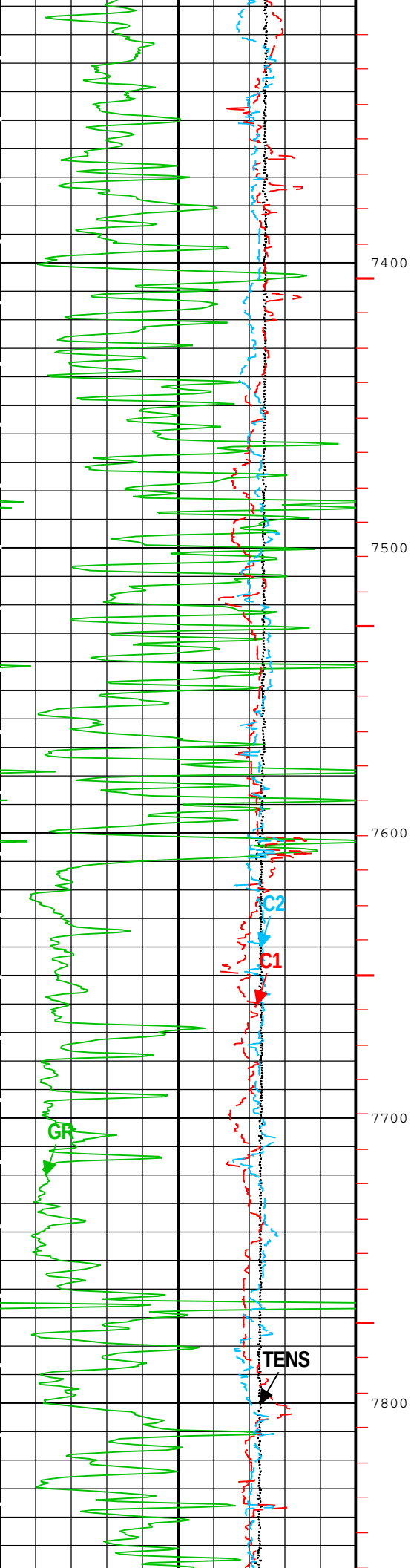


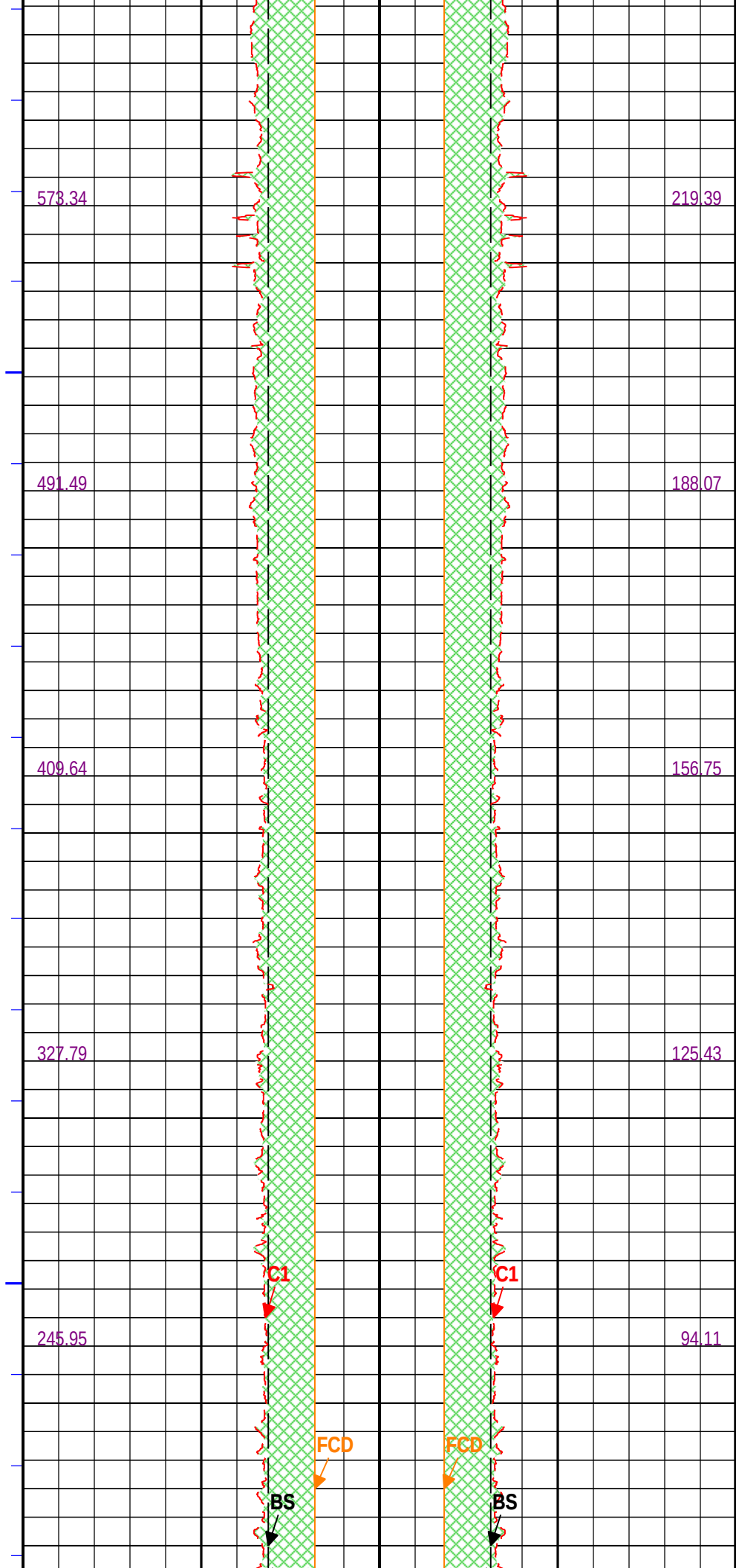
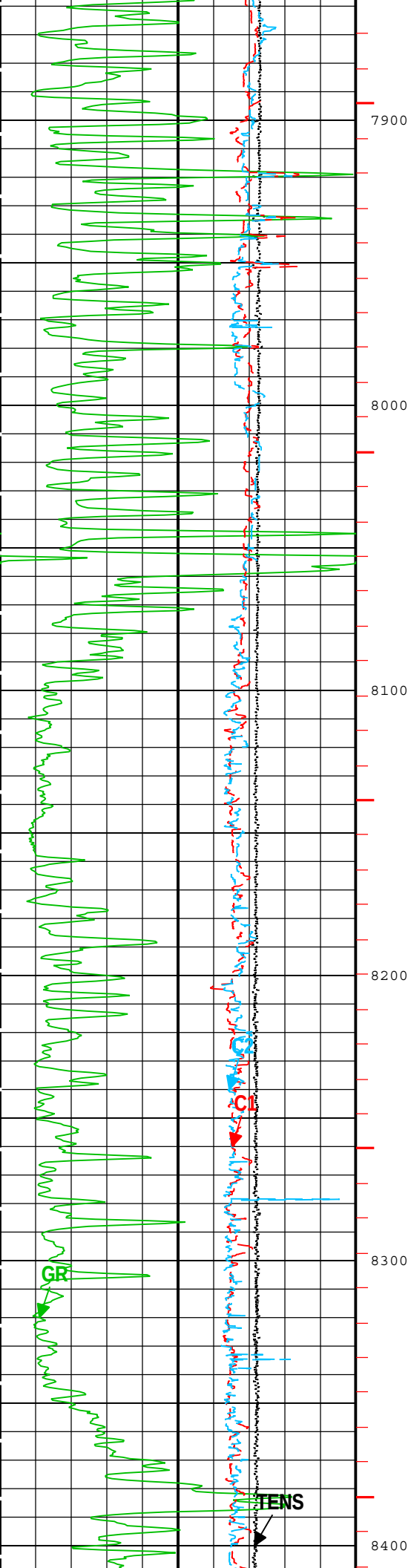


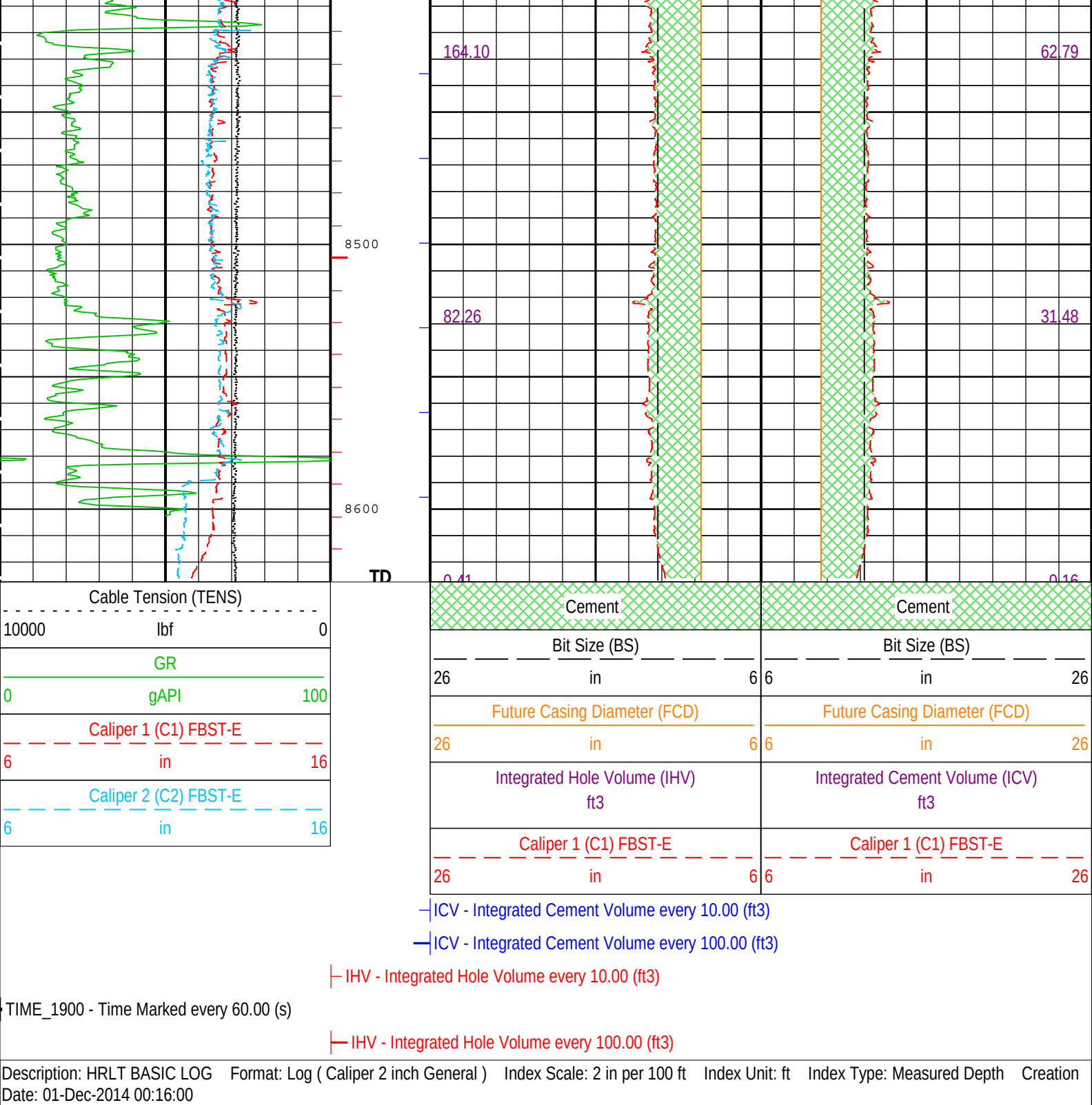












Calibration Report

FBST-E (Full-Bore Scanner Tool E) Calibration - Run Three

Primary Equipment :

DHRU-FA

DHRU-F

FBSS-B

FBSS-B

Calibration Parameter :

Small Ring Size (Caliper Calibration Small Ring)

8.00

Large Ring Size (Caliper Calibration Large Ring)

12.00

FBST-E Caliper Calibration - Caliper Accumulations

Before (Measured): 17:51:23 29-Nov-2014 Expired by 1 days After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring RC1	in	Before	8.00	6.80	8.36	9.20	

		After After-Before	-----	-----	NOT DONE	-----	
Small Ring RC2	in	Before After After-Before	8.00	6.80	7.97 NOT DONE	9.20	
		After-Before	-----	-----	-----	-----	
Large Ring RC1	in	Before After After-Before	12.00	10.20	12.21 NOT DONE	13.80	
		After-Before	-----	-----	-----	-----	
Large Ring RC2	in	Before After After-Before	12.00	10.20	12.00 NOT DONE	13.80	
		After-Before	-----	-----	-----	-----	

Signals and Temperature Correction for Accelerometers

Master (EEPROM):			00:00:00 04-Oct-2012		
GPITF_ACCX_MODEL GPIT-F Accelero X Model (Master)					
	Racx**0		Racx**1		
Temp**0	-0.03333		0.0006638		
Temp**1	-7.771E-06		-3.444E-08		
Temp**2	8.959E-06		-2.757E-10		
Temp**3	-4.713E-08		2.285E-13		
GPITF_ACCY_MODEL GPIT-F Accelero Y Model (Master)					
	Racy**0		Racy**1		
Temp**0	0.04686		-0.0006655		
Temp**1	-0.0002331		3.334E-08		
Temp**2	-3.538E-06		3.014E-10		
Temp**3	1.849E-08		-2.73E-13		
GPITF_ACCZ_MODEL GPIT-F Accelero Z Model (Master)					
	Racz**0		Racz**1		
Temp**0	-0.01314		0.0006667		
Temp**1	9.169E-06		-2.171E-08		
Temp**2	8.335E-06		-4.72E-10		
Temp**3	-4.427E-08		9.685E-13		

Perpendicular Correction for Accelerometers

Master (EEPROM):	00:00:00 04-Oct-2012						
GPITF_ACC_AXIS_MODE L (Master)	GPIT-F Accelero Axis Model						
	Data**0	Data**1	Data**2	Data**3	Data**4	Data**5	Data**6
Temp**0	-0.0005227	0.0008336	0.0003593	0.0001488	0.0004628	4.525E-05	0
Temp**1	8.049E-07	-3.174E-06	1.143E-07	1.53E-06	1.362E-06	8.665E-07	0

Signals and Temperature Correction for Magnetometer

Master (EEPROM):		00:00:00 04-Oct-2012	
GPITF_MAGX_MODEL (Master)		GPIT-F Magneto X Model	
	Rmagx**0	Rmagx**1	
Temp**0	57.56	4.874	
Temp**1	-2.347	-2.662E-05	
Temp**2	0.01477	-6.708E-07	
Temp**3	-8.858E-05	6.087E-09	
GPITF_MAGY_MODEL		GPIT-F Magneto Y Model	

(Master)		
	Rmagy**0	Rmagy**1
Temp**0	38.46	-4.93
Temp**1	0.1296	0.0001116
Temp**2	-0.008689	8.468E-07
Temp**3	6.574E-05	-8.802E-09
GPITF_MAGZ_MODEL GPIT-F Magneto Z Model		
(Master)		
	Rmagz**0	Rmagz**1
Temp**0	35.44	4.851
Temp**1	-4.25	0.000166
Temp**2	0.03124	-3.518E-06
Temp**3	-0.0001583	1.679E-08

Perpendicular Correction for Magnetometer							
Master (EEPROM): 00:00:00 04-Oct-2012							
GPITF_MAG_AXIS_MODE GPIT-F Magneto Axis Model							
L (Master)							
	Data**0	Data**1	Data**2	Data**3	Data**4	Data**5	Data**6
Temp**0	0.003859	0.001726	-0.0007542	0.00483	0.002056	-0.002547	0
Temp**1	1.317E-07	5.254E-06	1.094E-06	-2.631E-06	-3.543E-06	1.014E-05	0

Master (EEPROM): 00:00:00 01-Oct-2012		
GPITF_ELEC_COEFF1 GPIT-F Electronic Coeff 1		
(Master)		
	Data**0	Data**1
Temp**0	-0.9382	249.7
Temp**1	-0.01715	0.0134
Temp**2	0.0005491	-0.0003015
Temp**3	-5.533E-06	2.603E-06
Temp**4	1.868E-08	-7.892E-09
GPITF_ELEC_COEFF2 GPIT-F Electronic Coeff 2		
(Master)		
	Data**0	Data**1
Temp**0	-0.402	249.8
Temp**1	0.007364	0.005135
Temp**2	1.248E-05	-0.0001542
Temp**3	-7.07E-07	1.672E-06
Temp**4	2.341E-09	-5.987E-09
GPITF_ELEC_COEFF3 GPIT-F Electronic Coeff 3		
(Master)		
	Data**0	Data**1
Temp**0	-1.457	249.9
Temp**1	-0.01965	0.00888
Temp**2	0.0007153	-0.000217
Temp**3	-6.86E-06	2.09E-06
Temp**4	2.25E-08	-6.92E-09

Master (EEPROM): 00:00:00 01-Oct-2012	

GPITF_ELEC_COEFF4 GPIT-F Electronic Coeff 4 (Master)		
	Data**0	Data**1
Temp**0	-0.6109	0.1279
Temp**1	-0.0004855	5.293E-06
Temp**2	9.099E-05	-1.394E-07
Temp**3	-8.39E-07	1.344E-09
Temp**4	3.656E-09	-4.337E-12
GPITF_ELEC_COEFF5 GPIT-F Electronic Coeff 5 (Master)		
	Data**0	Data**1
Temp**0	-0.6109	0.1279
Temp**1	-0.0004855	5.293E-06
Temp**2	9.099E-05	-1.394E-07
Temp**3	-8.39E-07	1.344E-09
Temp**4	3.656E-09	-4.337E-12
GPITF_ELEC_COEFF6 GPIT-F Electronic Coeff 6 (Master)		
	Data**0	Data**1
Temp**0	-0.6109	0.1279
Temp**1	-0.0004855	5.293E-06
Temp**2	9.099E-05	-1.394E-07
Temp**3	-8.39E-07	1.344E-09
Temp**4	3.656E-09	-4.337E-12

EDTC-B (Enhanced Digital Telemetry Cartridge - Version B) Calibration - Run Three

Primary Equipment :		
EDTC-B	EDTC-B	9071
Calibration Parameter :		
Plus Reference (Jig minus background reference)	160	

EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration

Before (Measured):		19:18:19 30-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.19	31.53	32.06	32.84	

EDTC-B Memory Data - EDTC-B Memory Data

Master (EEPROM):		19:53:21 30-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Initial PMT HV	V	Master			1513.000		
Accelerometer Serial Number		Master			1235		
Accelerometer Coefficients - 0		Master	-----	-----	2.911	-----	
Accelerometer Coefficients - 1		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 2		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 3		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 4		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 5		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 6		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 7		Master	-----	-----	-0.004	-----	
Accelerometer Coefficients - 8		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 9		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 10		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 11		Master	-----	-----	0.000	-----	
Gamma-Ray Detector Serial Number		Master			79243		

EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients

Before (Measured):		11:22:01 30-Nov-2014					
--------------------	--	----------------------	--	--	--	--	--

Before (Measured):		11:32:01 30-Nov-2014		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Gamma Ray Gain		Before	1.000	0.900	1.096	1.100	
		After	----	----	----	----	
		After-Before	----	----	----	----	
EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations							
Before (Measured):		11:32:01 30-Nov-2014		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before		0	19.321	120.000	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RGR Plus Measurement	gAPI	Before	160.000	145.000	145.997	175.000	
		After			NOT DONE		
		After-Before	----	----	----	----	

Company: PB ENERGY STORAGE SERVICES, INC

Schlumberger

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County:	Lea
State:	New Mexico

Borehole Profile Log
Future Casing Diameter = 9.625"

**Platform Express /
Compensated Neutron Log /
Three Detector Litho-Density**

Company: PB ENERGY STORAGE SERVICES, INC

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County: Lea State: New Mexico

Platform Express

Compensated Neutron Log

Three Detector Litho-Density

County:		Lea			
Field:		AGI; Bone Spring-Wolfcamp			
Location:		1600' FSL & 1750' FWL			
Well:		DCP Linam Ranch AGI #2			
Company:		PB ENERGY STORAGE SERVICES, INC			
		Location:			
		1600' FSL & 1750' FWL	Elev.:	K.B.	3763.00 ft
				G.L.	3738.00 ft
				D.F.	3762.00 ft
			Permanent Datum:	Ground Level	Elev.:
Log Measured From:	Kelly Bushing	25.00 ft	above Perm.Datum		
Drilling Measured From:	Kelly Bushing				
API Serial No.	Section:	Township:	Range:		
30-025-42139	30	18S	37E		

Run Number Two

Depth Driller 8630.00 ft

Schlumberger Depth 8630.00 ft

Bottom Log Interval 8587.00 ft

Top Log Interval 3219.50 ft

Casing Driller Size @ Depth 13.375 in @ 3220.00 ft

Casing Schlumberger 3219.5 ft

Bit Size 12.25 in

Type Fluid In Hole Salt Brine

Density 8.8 lbm/gal

Fluid Loss PH 0 cm3

Source of Sample Active Tank

RM @ Meas Temp 9 ohm.m @ 80 degF

RMF @ Meas Temp 7.5 ohm.m @ 80 degF

RMC @ Meas Temp 0.06 ohm.m @ 75 degF

Source RMF Pressed

RM @ BHT 6.85 @ 107.3 5.71 @ 107.3

Max Recorded Temperatures 125 degF

Circulation Stopped 30-Nov-2014 02:00:00

Logger on Bottom 30-Nov-2014 13:10:30

Unit Number 2133

Recorded By Tyler Bolton

Witnessed By Russell Bentley

Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

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 - Log (Porosity_5_Inch)
 - Parameter Listing
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 - Composite Summary

- Two Main Pass 1" = 100'
 - Integration Summary
 - Composite Summary
 - Log (Porosity 1 inch General)

8.2 Log (Porosity_5_Inch RA)

9. Two Repeat Pass 5" = 100'

9.1 Integration Summary

9.2 Composite Summary

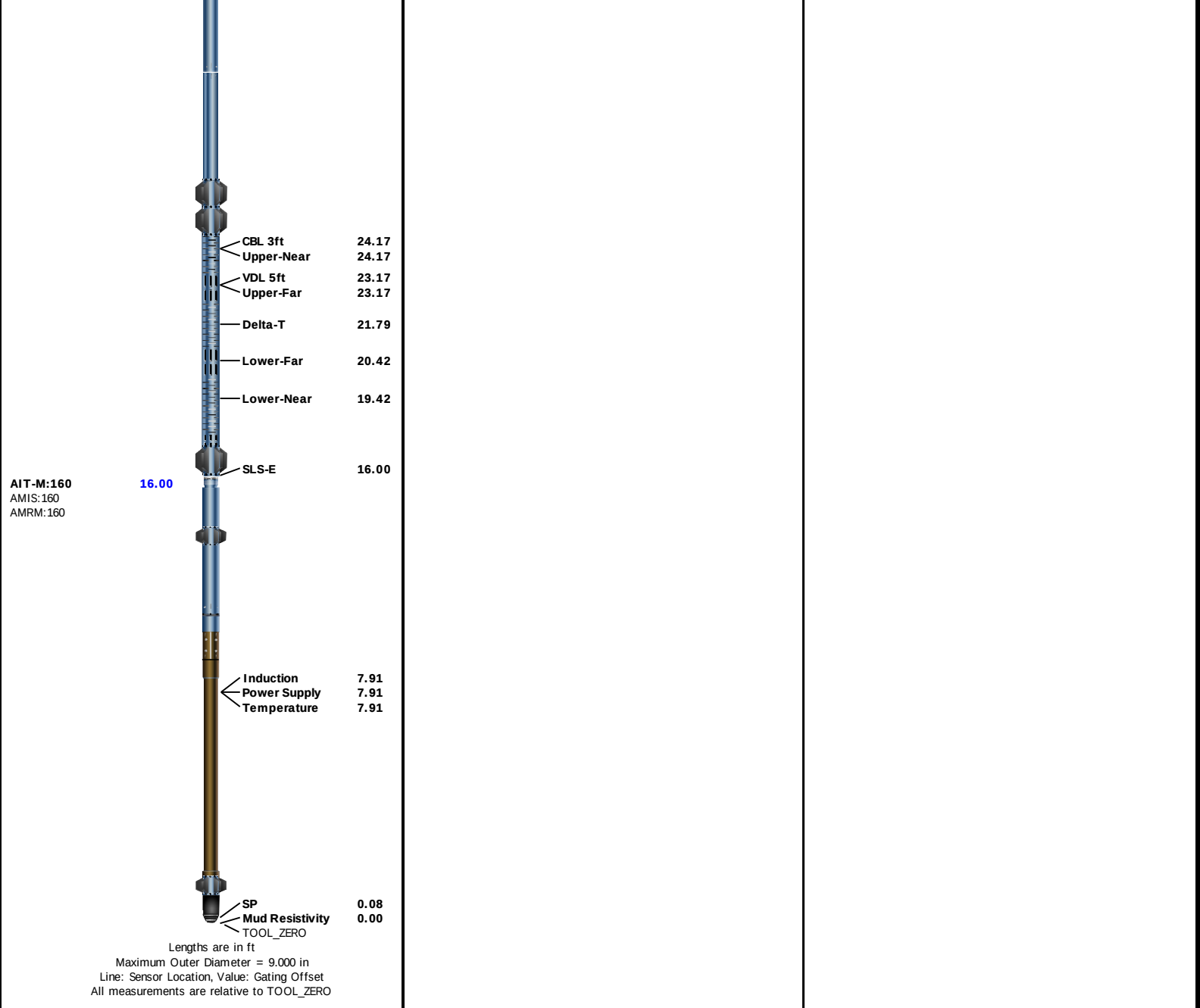
9.3 Log (Porosity_5_Inch)

10. Calibration Report

11. Tail

Remarks and Equipment Summary

Two: Toolstring				Two: Remarks	
Equip name LEH-QC:1317	Length 82.94		MP name	Offset	Toolstring run as per toolsketch.
					Bowspring used to eccentralize HGNS.
					0.125" standoff created by wear-ring on HGNS.
					1.5" standoffs used on AIT, and DSLT.
EDTC-B:9071 EDTH-B:8196 EDTG-A:79243 EDTC-B:9071	80.48				Porosity computed on a Limestone scale with density of 2.71 g/cc and slowness of 47.6 us/ft.
					Rig: Precision 107
					Your Schlumberger Crew: Tyler Bolton, Adam Jaramillo, Jose Gomez.
HNGS-BA:84 HEH-K:1035 HNGS-BA:84	73.98				
HNGC-B:610 HNGH-A:4094 HNGC-B:610	65.79				
HGNS-B:951 HGNH:3894 NPV-N NSR-F:2683 HAC CZ-B:448 HMCA-B HGNS-B:951	62.29				
HDRS-B:1829 ECH-MEB:952 HRCC-B:839 HRMS-B:1829 Short Spacing:27483 Backscatter Long Spacing:28774 GSR-J:5339 HRGD-B:3968 GPV-Q	52.88				
AH-184:4882	40.64				
AH-107	38.64				
DSLT-H:8091 ECH-KH:8585 DSL C-H:8091 SLS-E:1561	36.64				

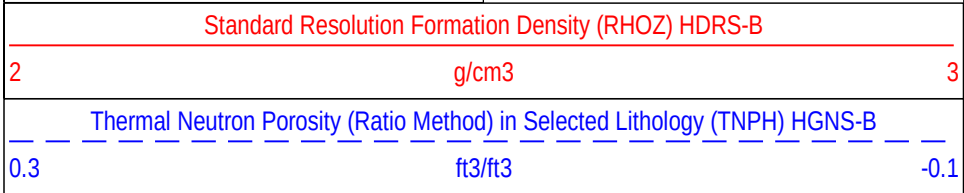
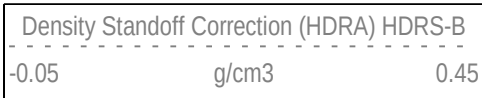
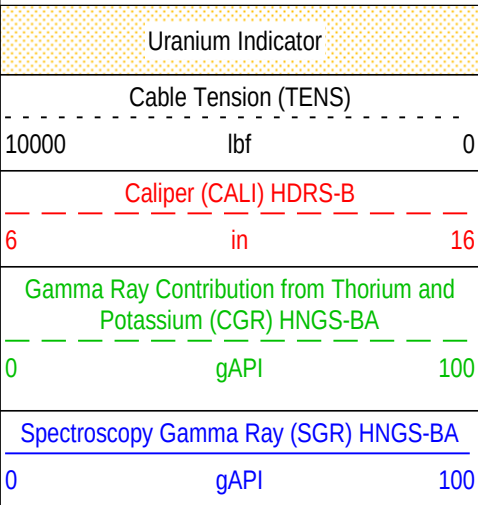


Depth Summary

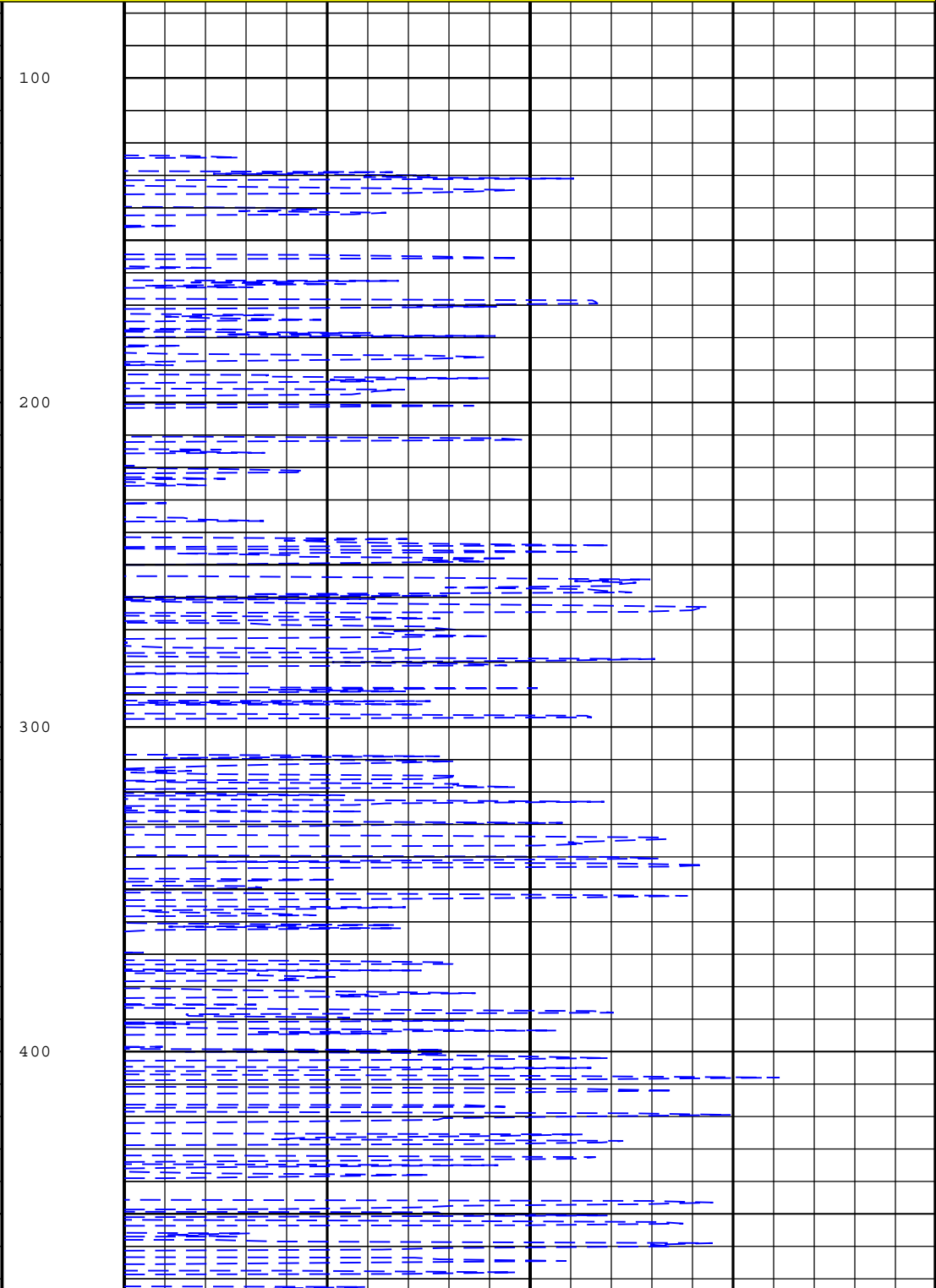
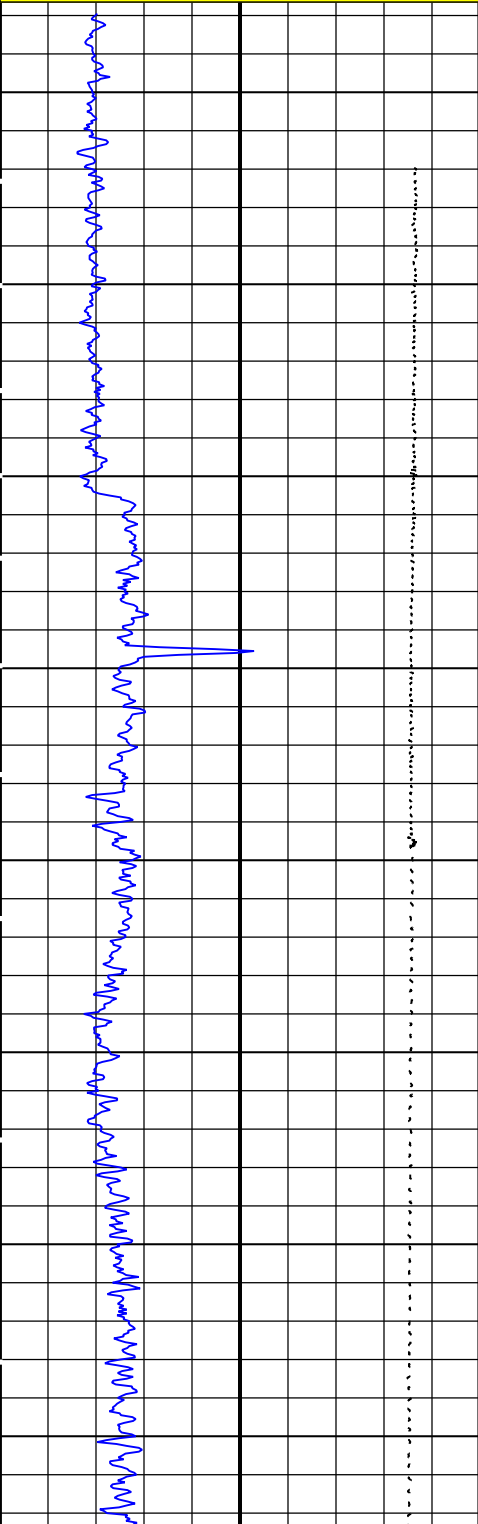
Two			
Depth Measuring Device			
Type	IDW-JA		
Serial Number	5910		
Calibration Date	02-Jun-2014		
Calibrator Serial Number			
Calibration Cable Type	7-46P XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		
Tension Device			
Type	CMTD-B/A		
Serial Number	5044		
Calibration Date	18-Oct-2014		
Calibrator Serial Number	80725A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	19		
Calibration Peak Error	36		
Logging Cable			
Type	7-46P-XS		

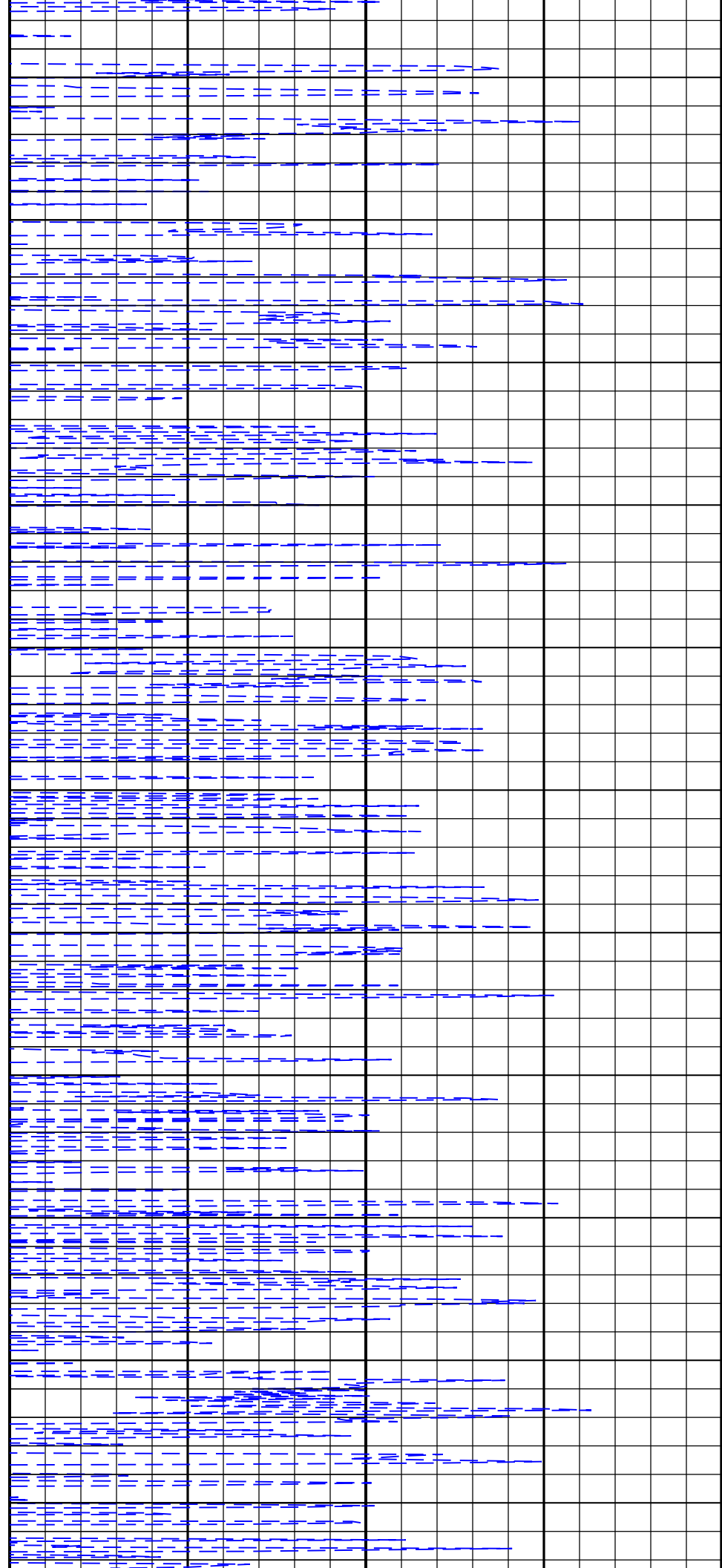
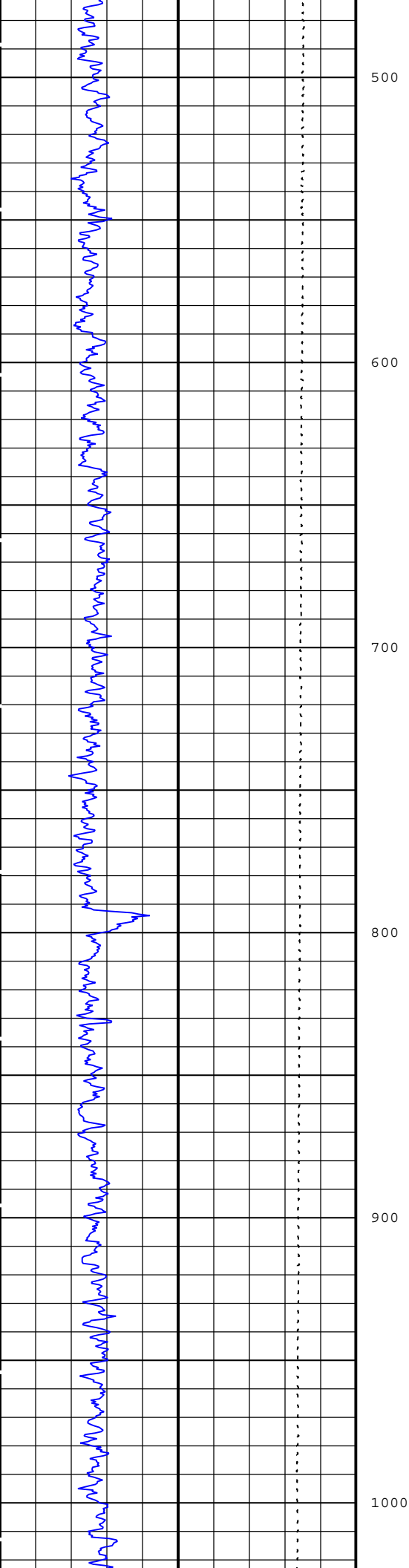
Serial Number	U711059			
Length	15500.00 ft			
Conveyance Type	Wireline			
Rig Type	Land			
Two:Depth Control Parameters		Depth Control Remarks		
Log Sequence	Subsequent Trip To the Well	All primary and secondary depth control procedures followed. IDW used as primary depth control device. Z-chart used as secondary depth control device.		
Reference Log Name	Platform Express-CNL			
Reference Log Run Number	One			
Reference Log Date	01-Nov-2014			
Subsequent Trip Down Log Correction	7.29 ft			
Two				
Main Pass 2" = 100'				
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	HVAS, FCD		ft3
IHV	Integrated Hole Volume	HVAS		ft3
Software Version				
Acquisition System			Version	
MaxWell			4.0.9163.3000	
Application Patch			Patch-SP-10767_22480-4.0.9163.3001	
			Patch-NPD_CMRTF_SP3-23787-4.0.9530.3002	
Computation	Description			Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels			4.0.9469.3000
HENVIR	Computation Ensemble for the HGNS Neutron environmental corrections			4.0.9033.3000
Tool Elements	Description	Software Version		Firmware Version
HRGD-B	HILT Resistivity Gamma-Ray Density Device, 125 degC	4.0.9486.3000		3.0
HNGS-BA	HNGS Sonde Element	4.0.9469.3000		2.0
HGNS-B	HILT Gamma-Ray and Neutron Sonde, 125 degC	4.0.9033.3000		2.0
HRCC-B	HILT High-Resolution Control Cartridge, 125 degC	4.0.9486.3000		2.0
Log	Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2 Two: Main[3]:Up:S021			
Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:36:40				
Channel	Source	Sampling		
CALI	HDRS-B:HRCC-B:HRCC-B	1in		
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in		
HDRA	HDRS-B:HRMS-B:HRGD-B	2in		
ICV	Borehole	6in		
IHV	Borehole	6in		
RHOZ	HDRS-B:HRMS-B:HRGD-B	2in		
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in		
TENS	WLWorkflow	1in		
TIME_1900	WLWorkflow	0.1in		
TNPH	HGNS-B:HGNS-B:HGNS-B	6in		
IHV - Integrated Hole Volume every 100.00 (ft3) IHV - Integrated Hole Volume every 10.00 (ft3) ICV - Integrated Cement Volume every 100.00 (ft3) ICV - Integrated Cement Volume every 10.00 (ft3)				

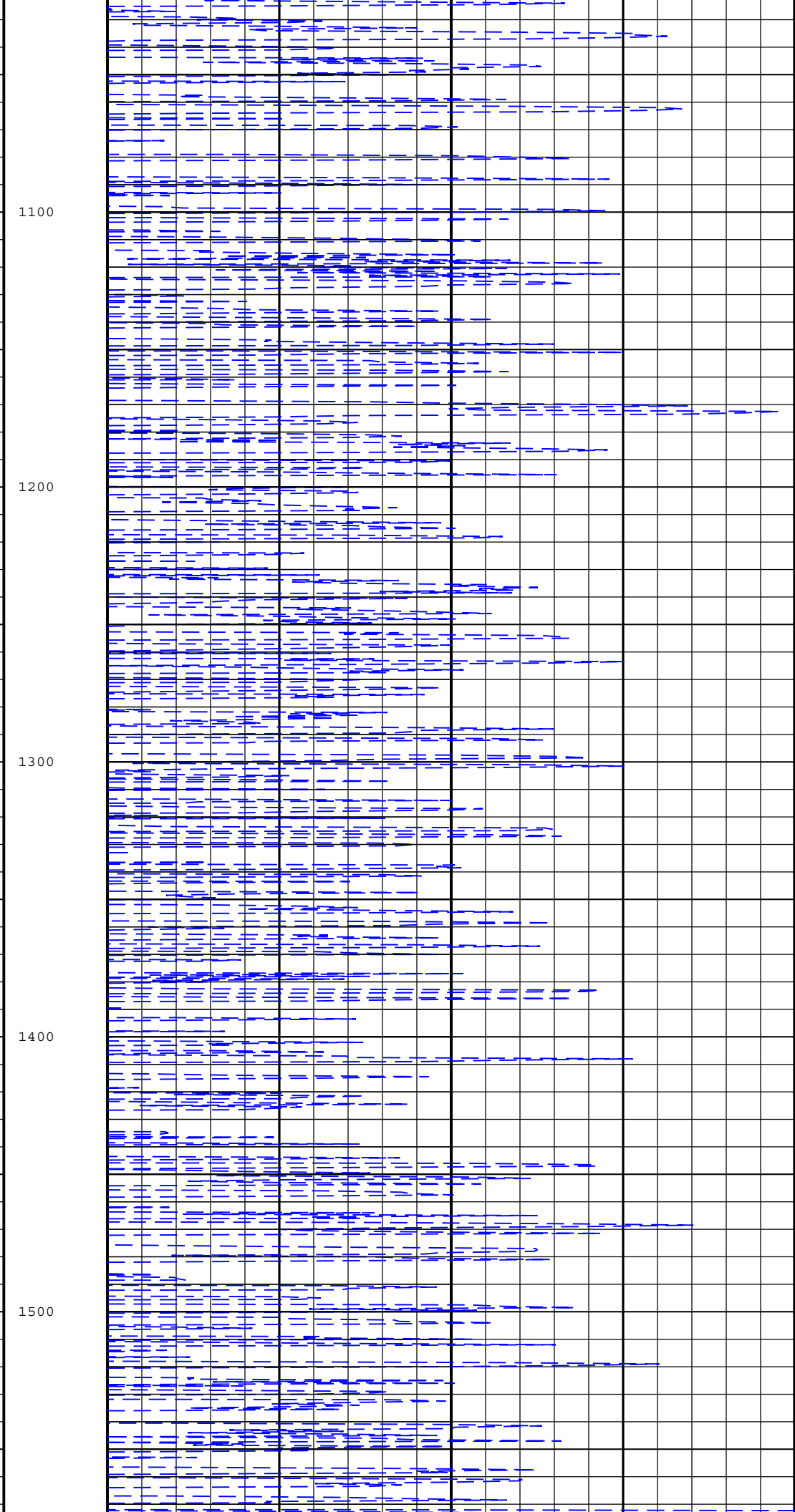
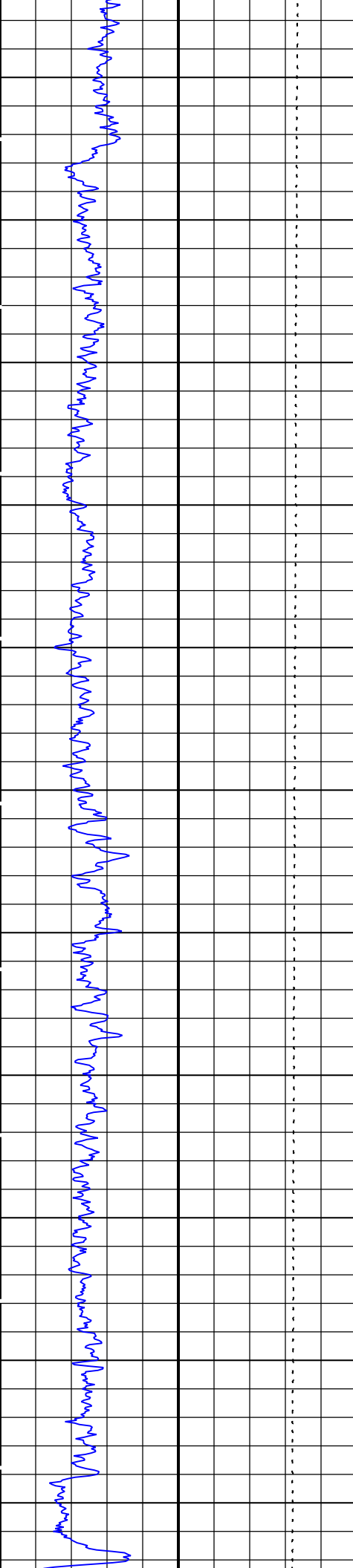
TIME_1900 - Time Marked every 60.00 (s)

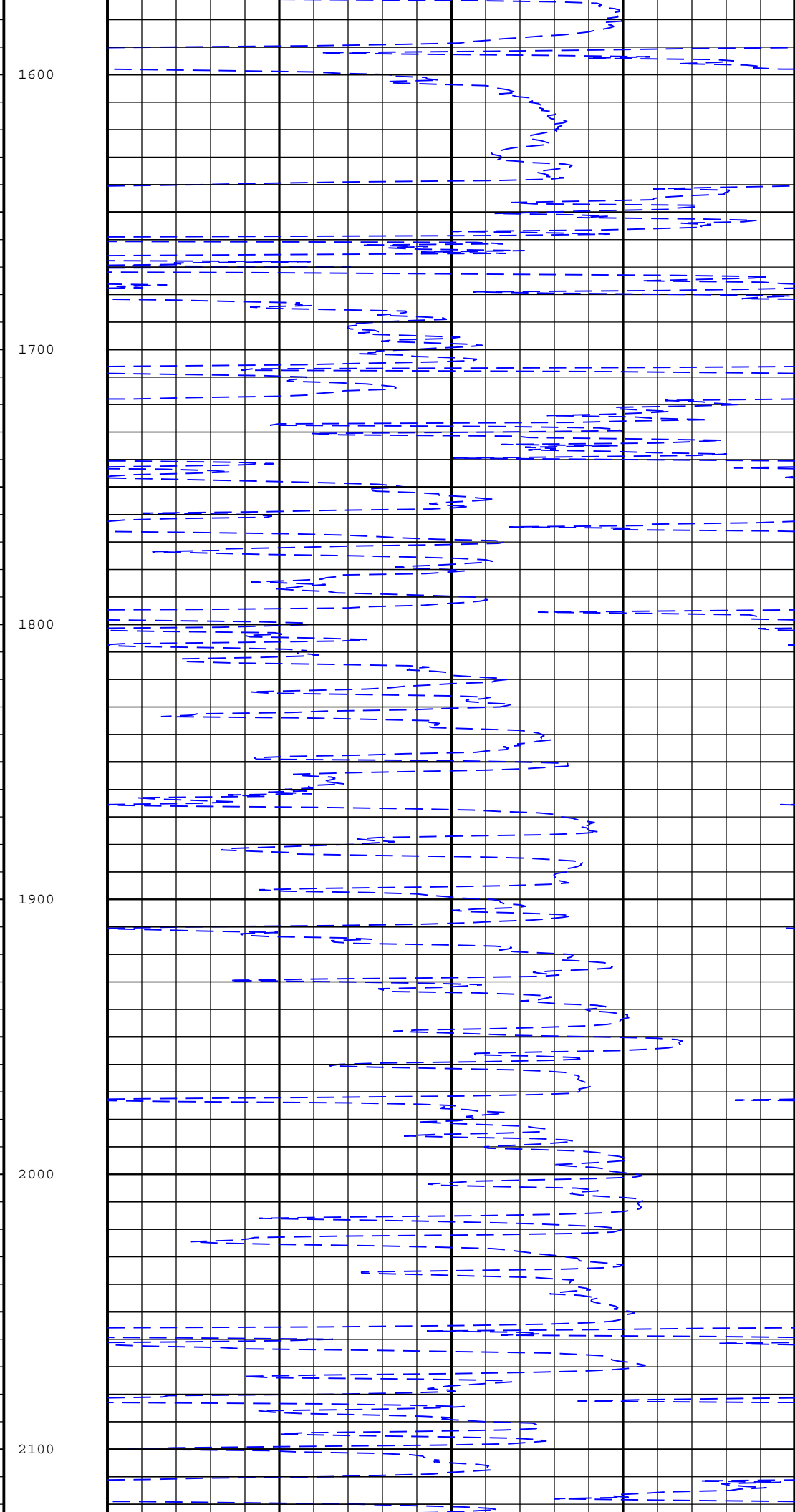
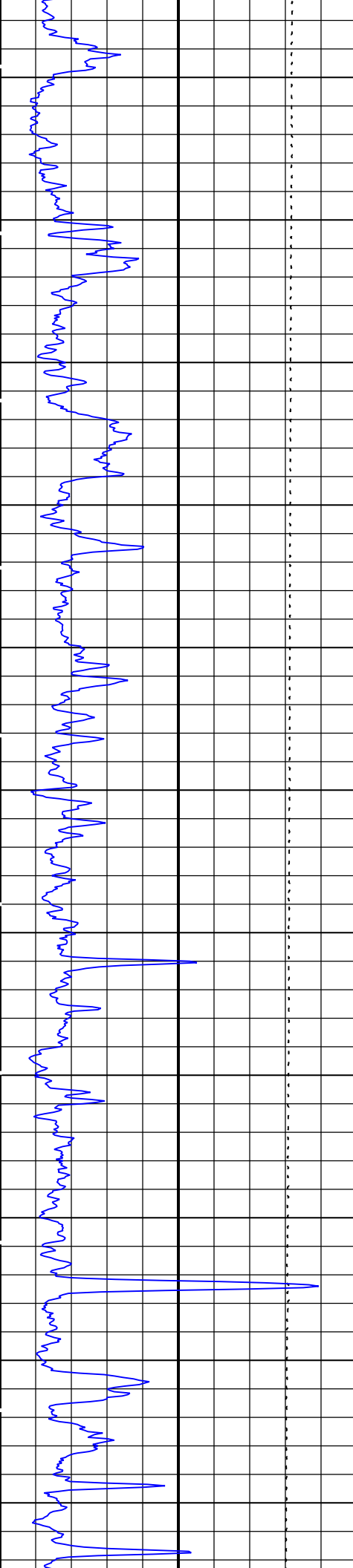


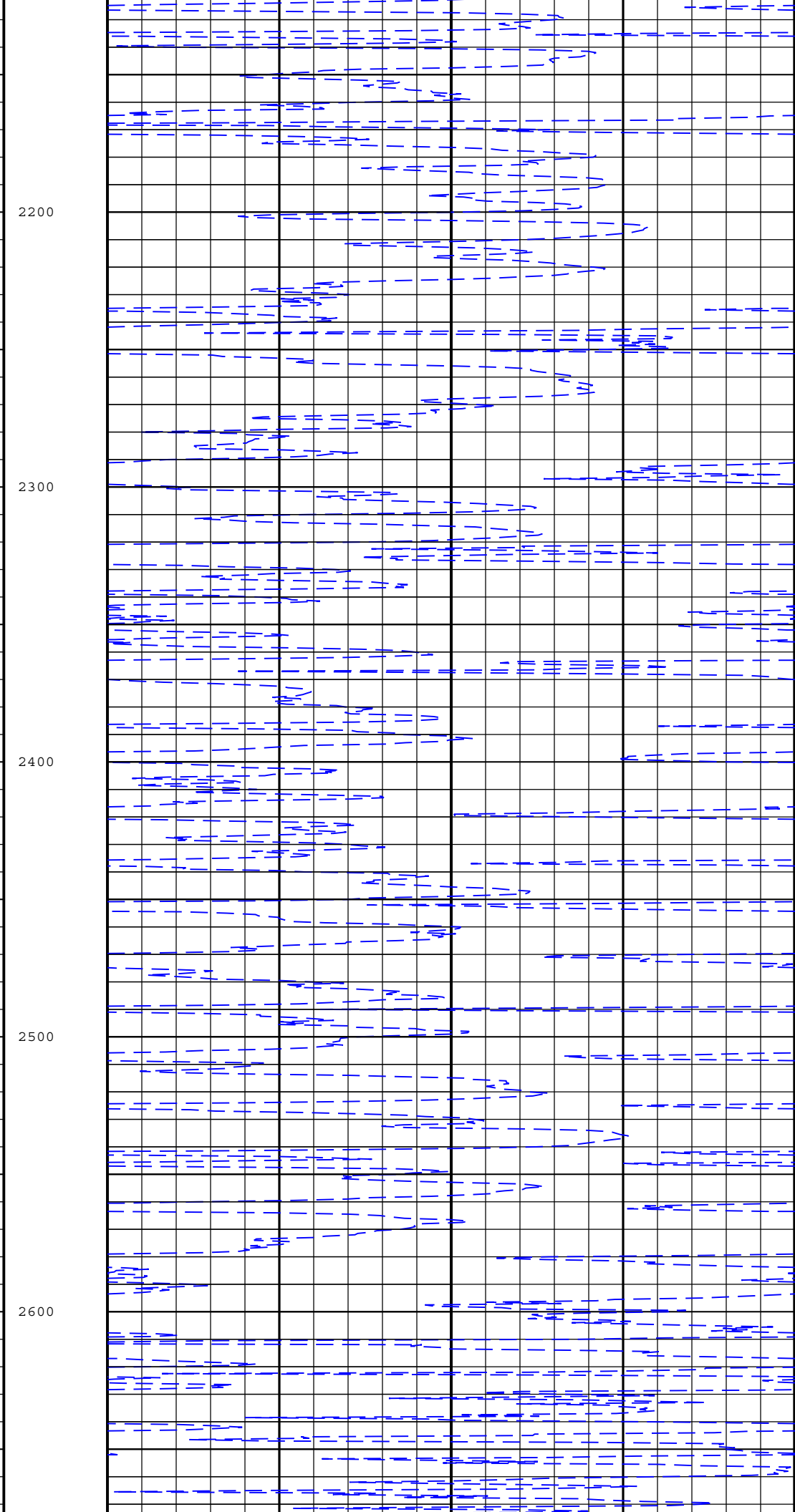
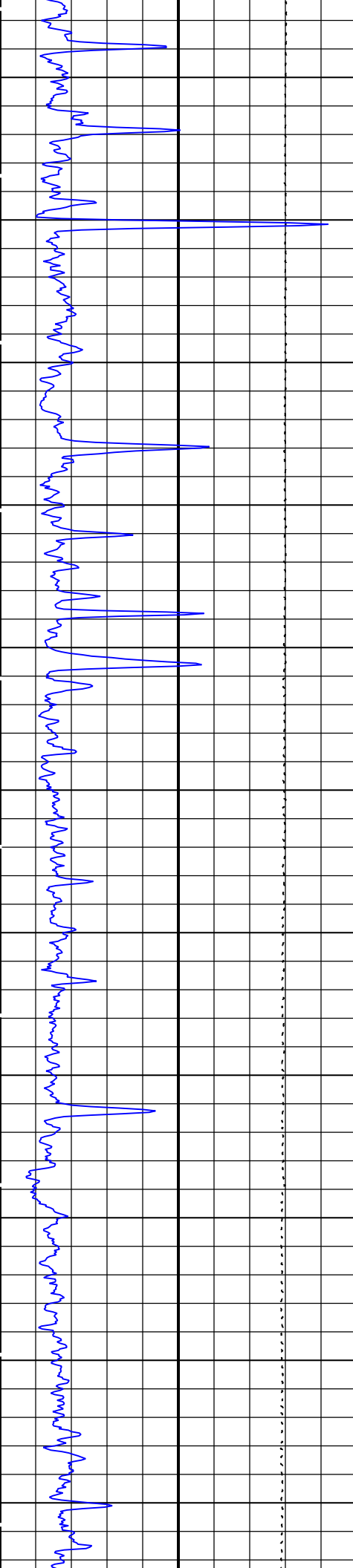
2" Porosity

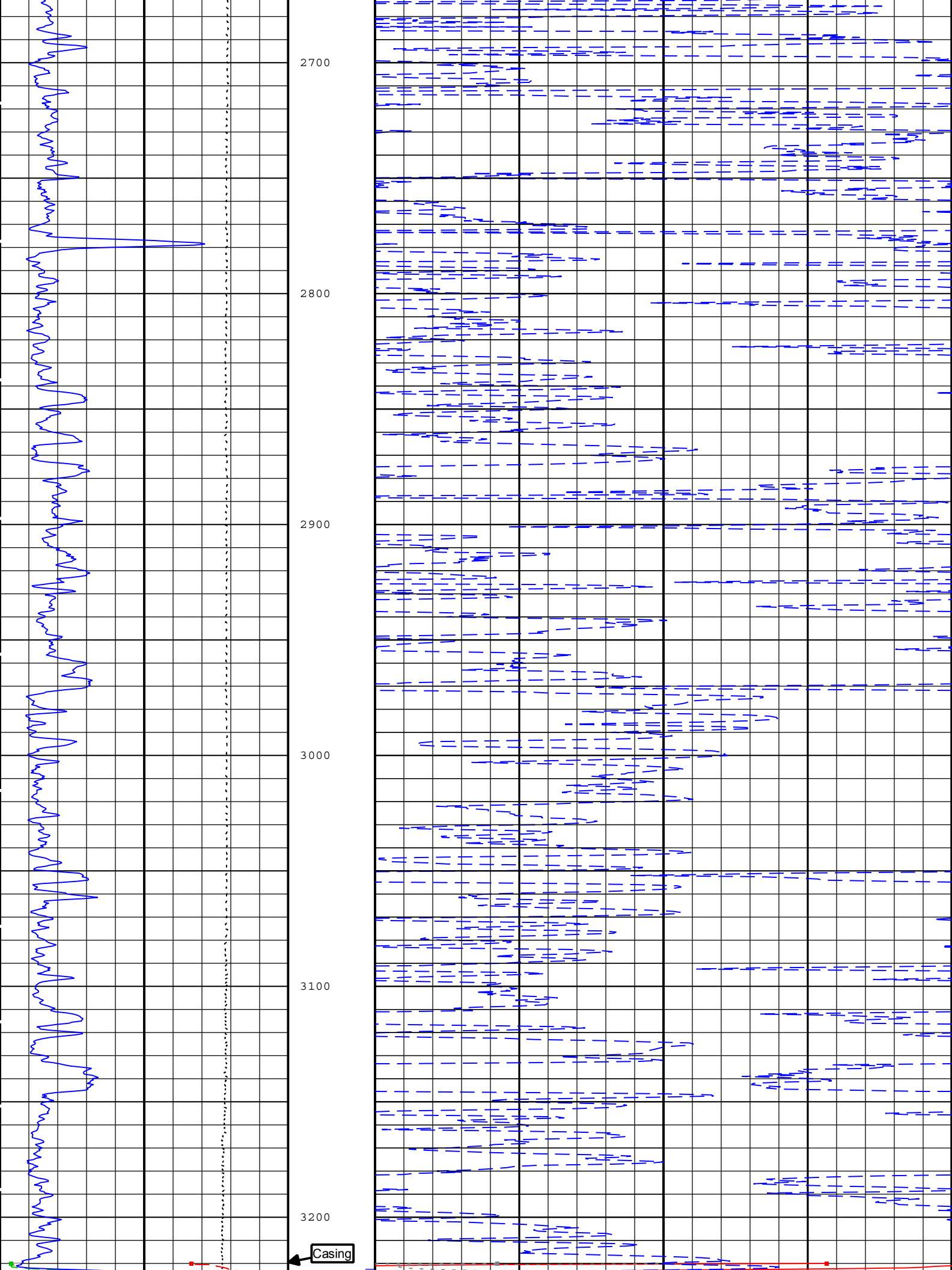


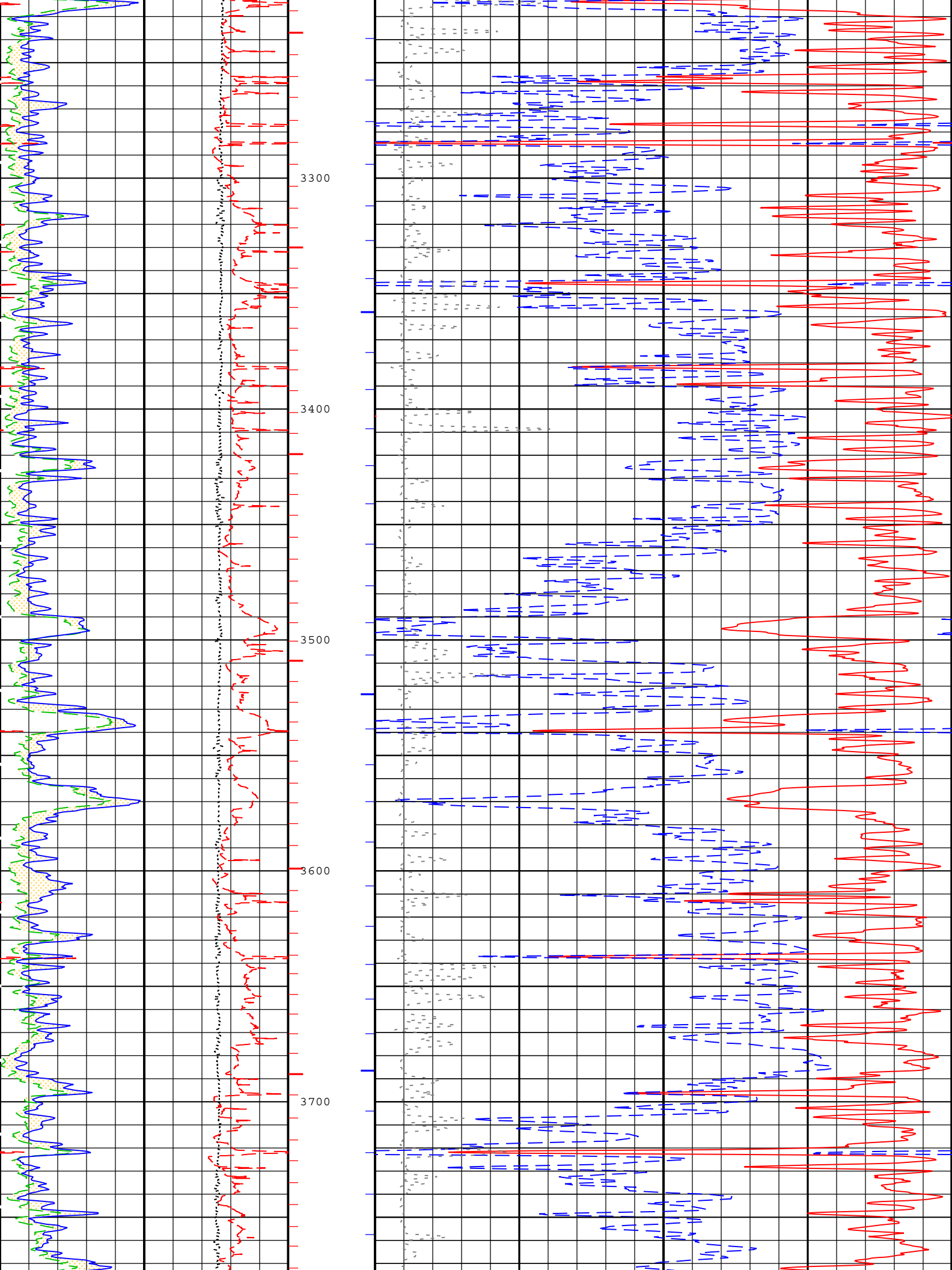


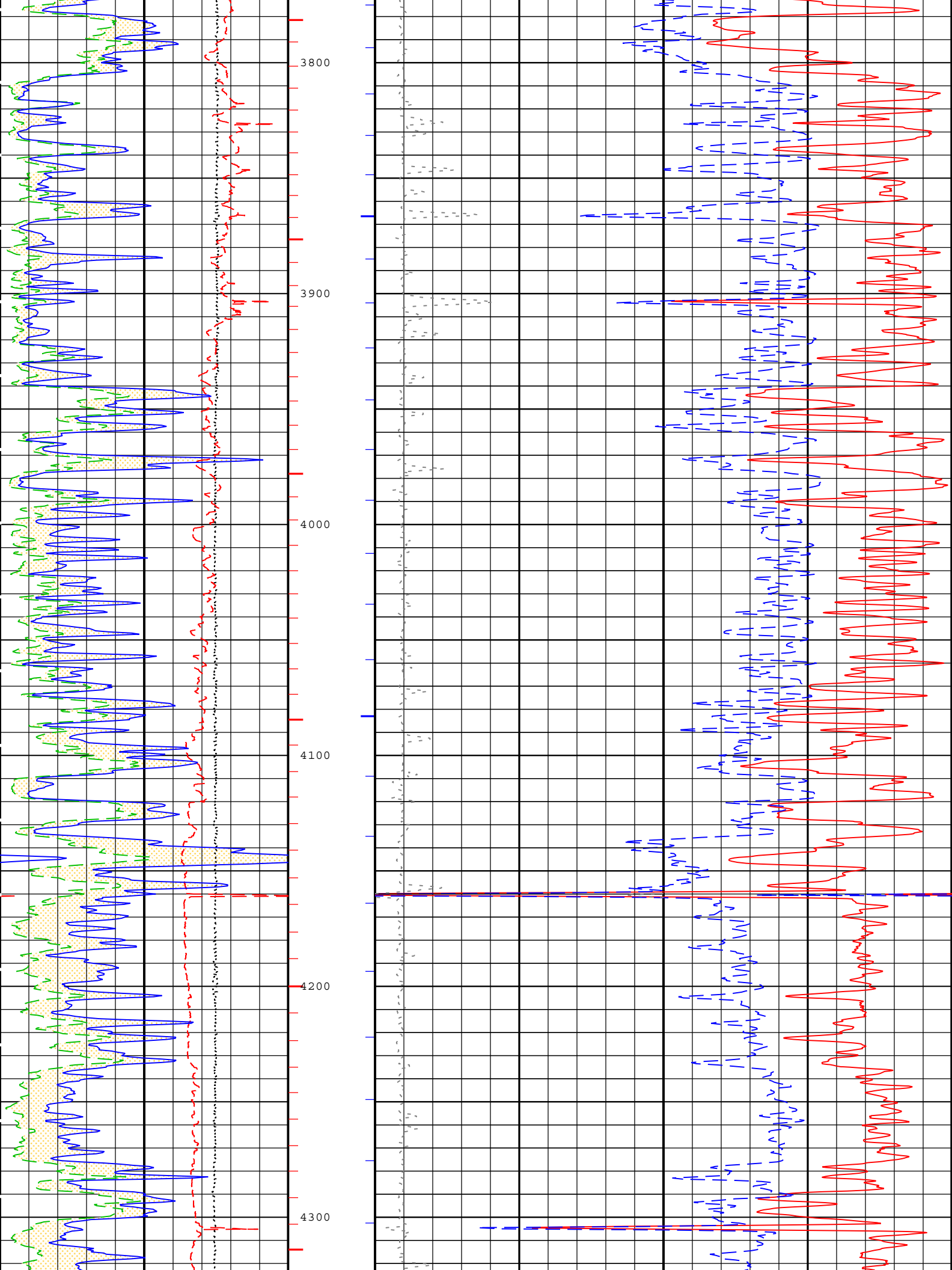


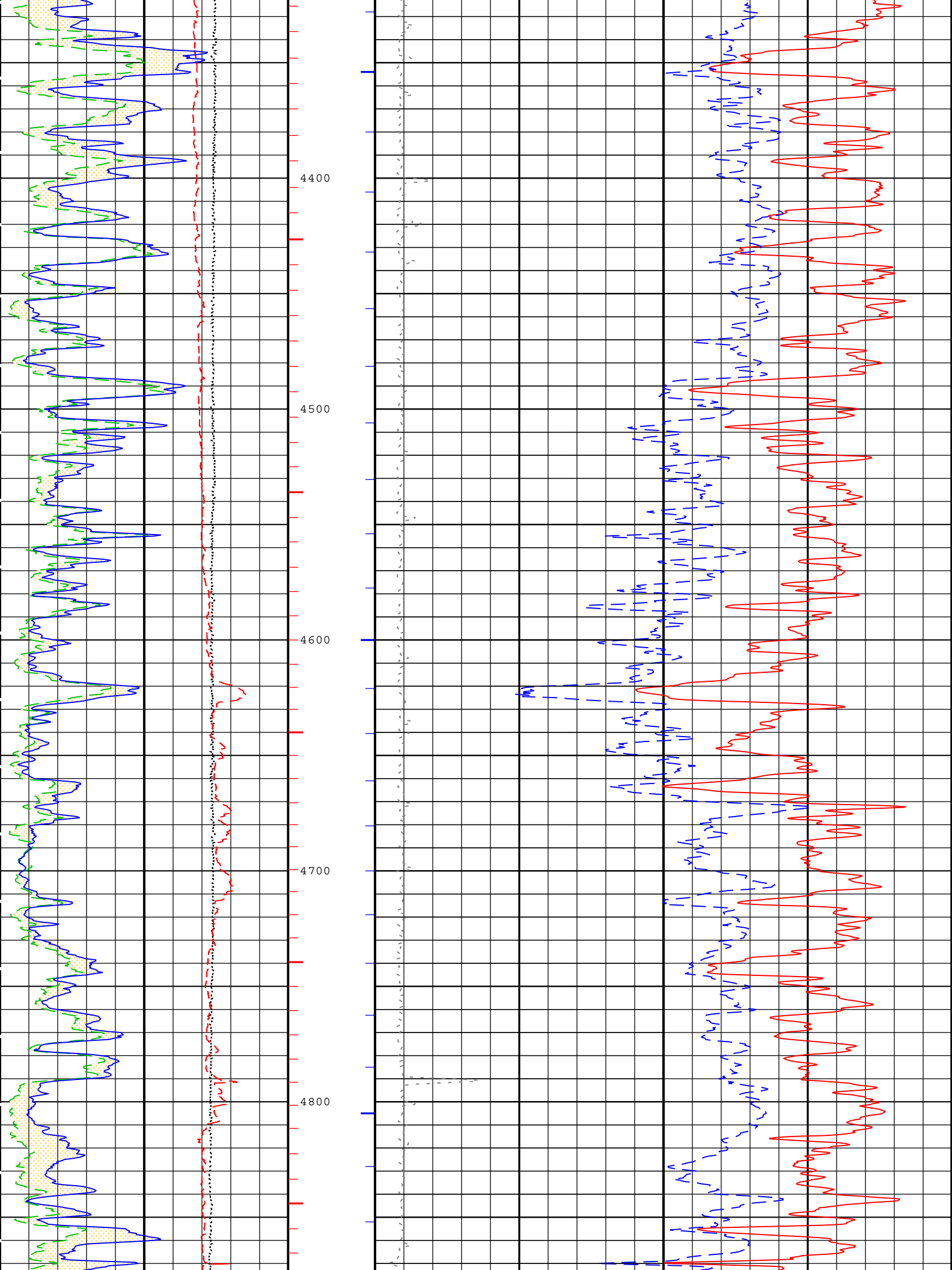


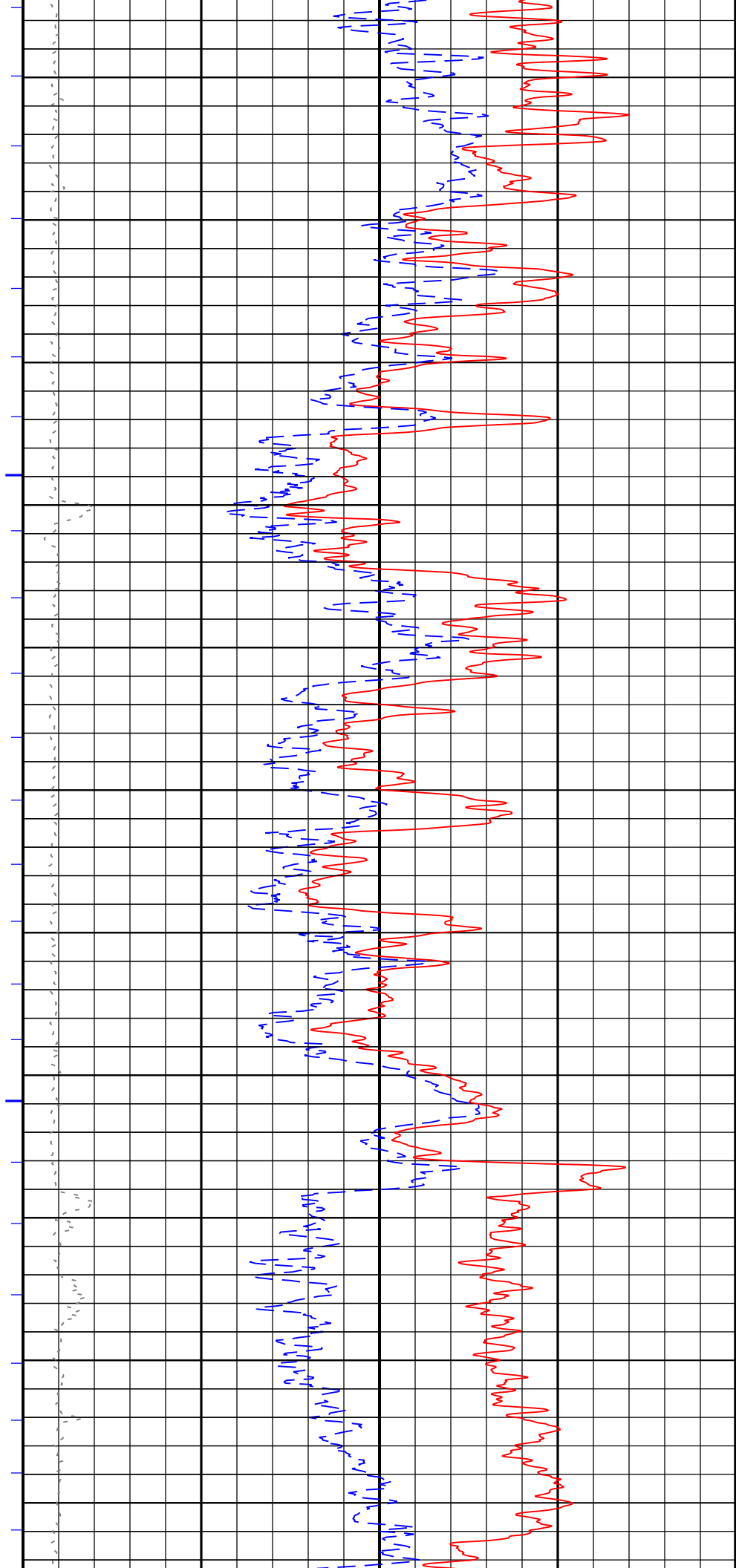
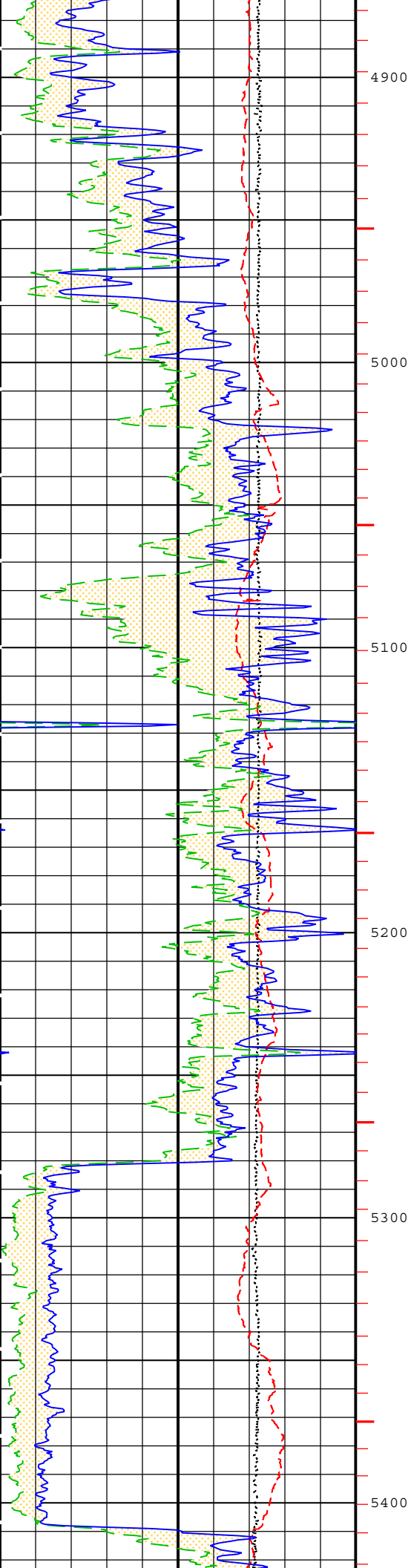


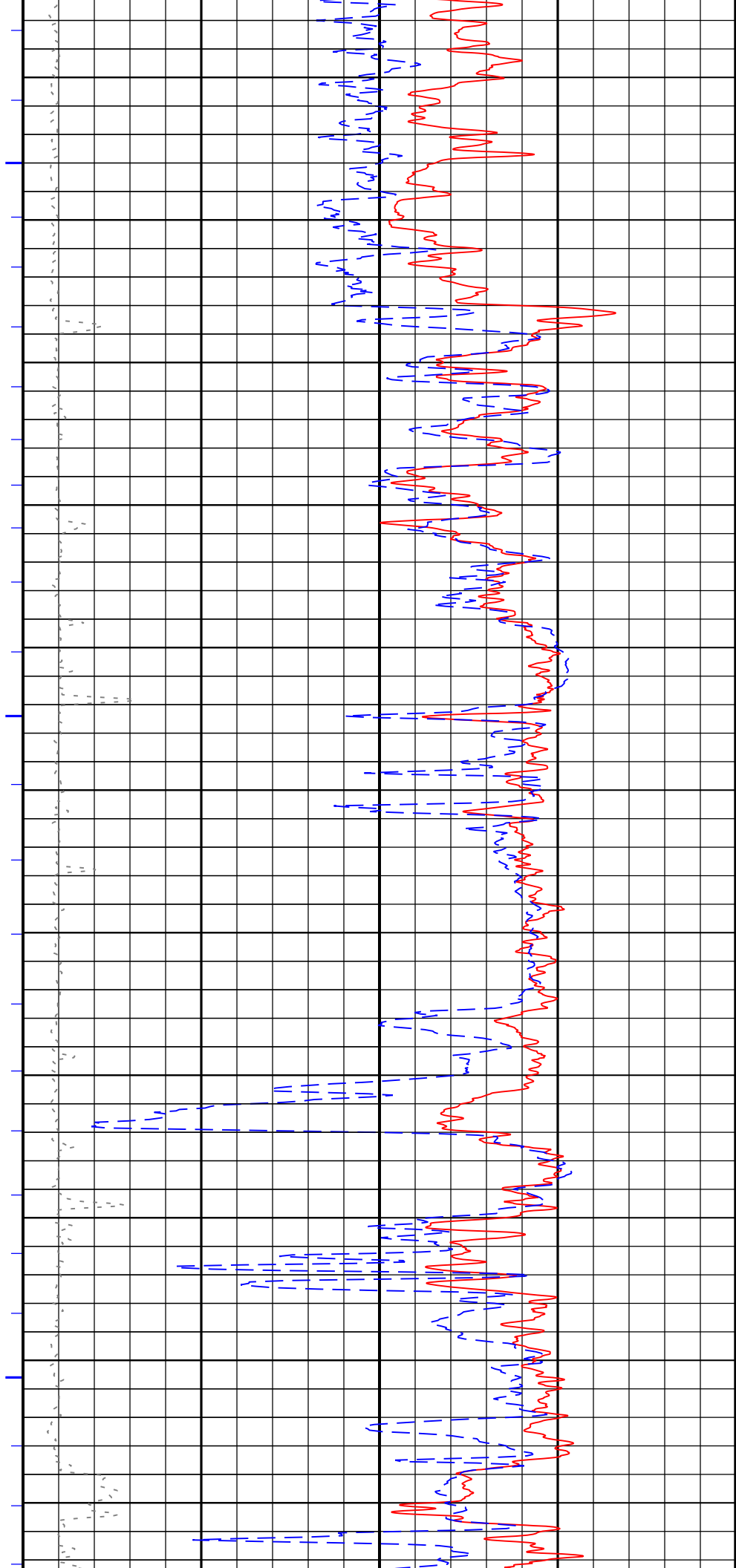
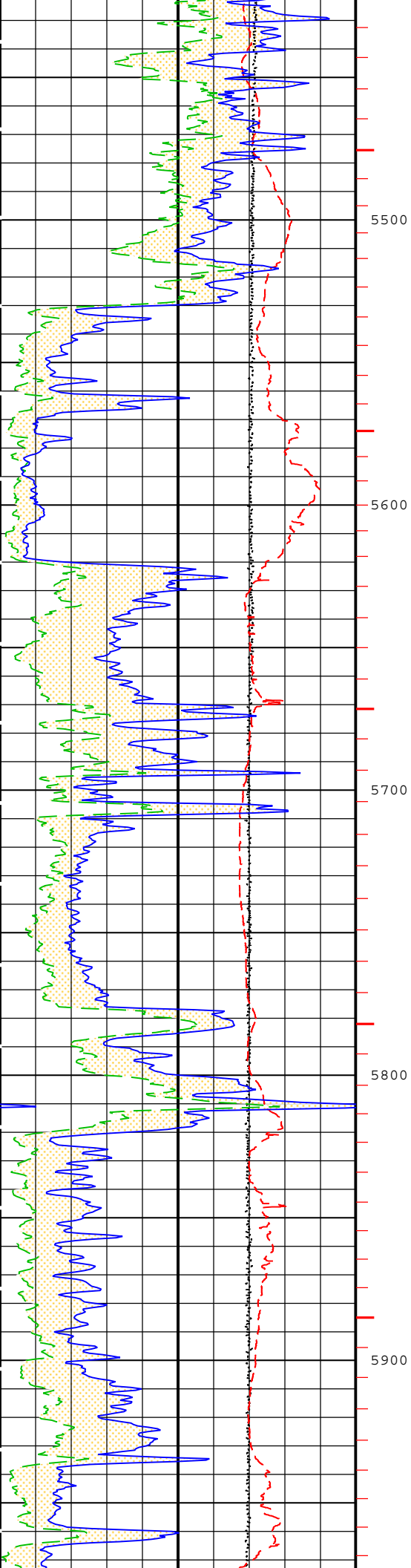


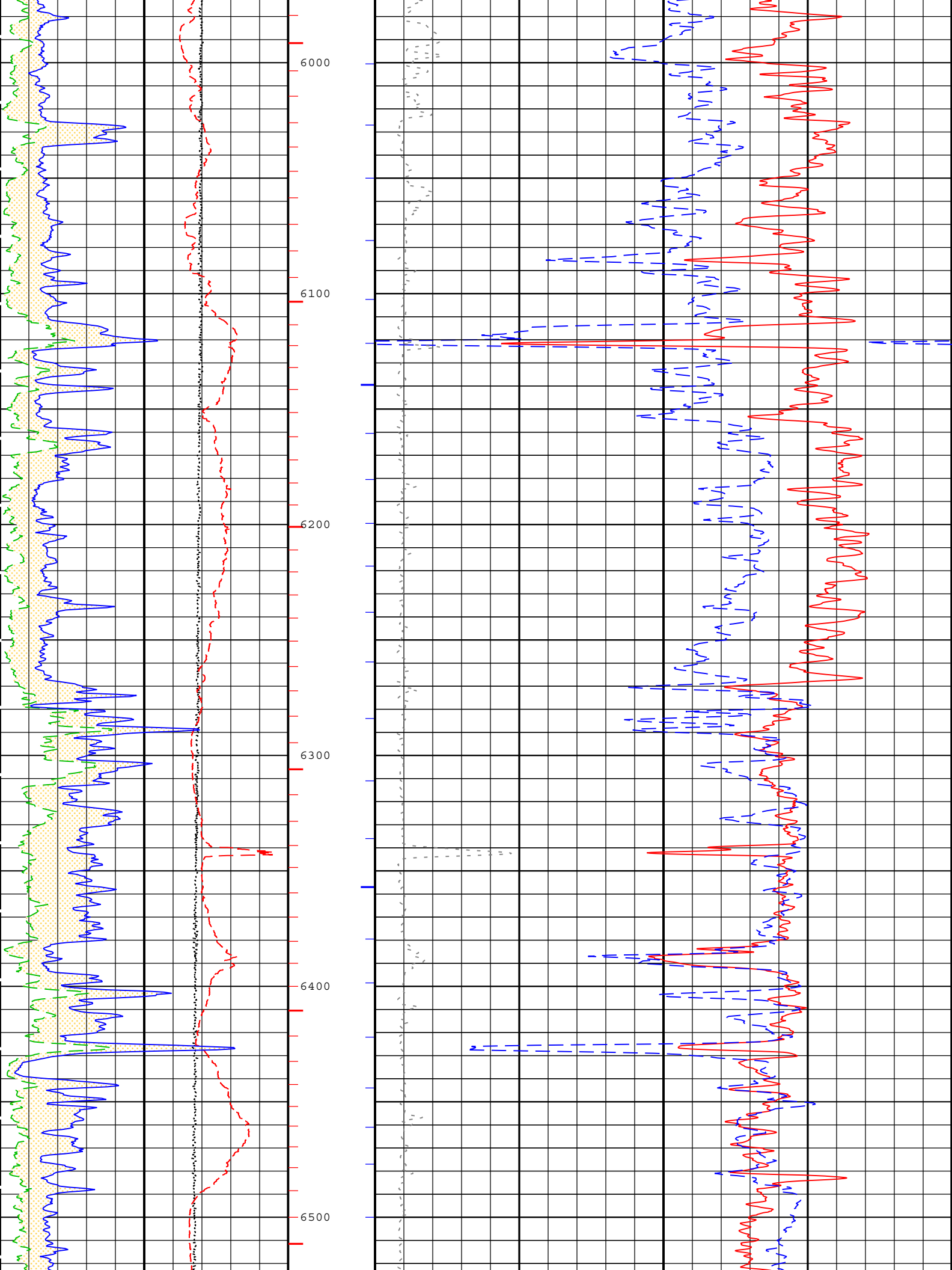


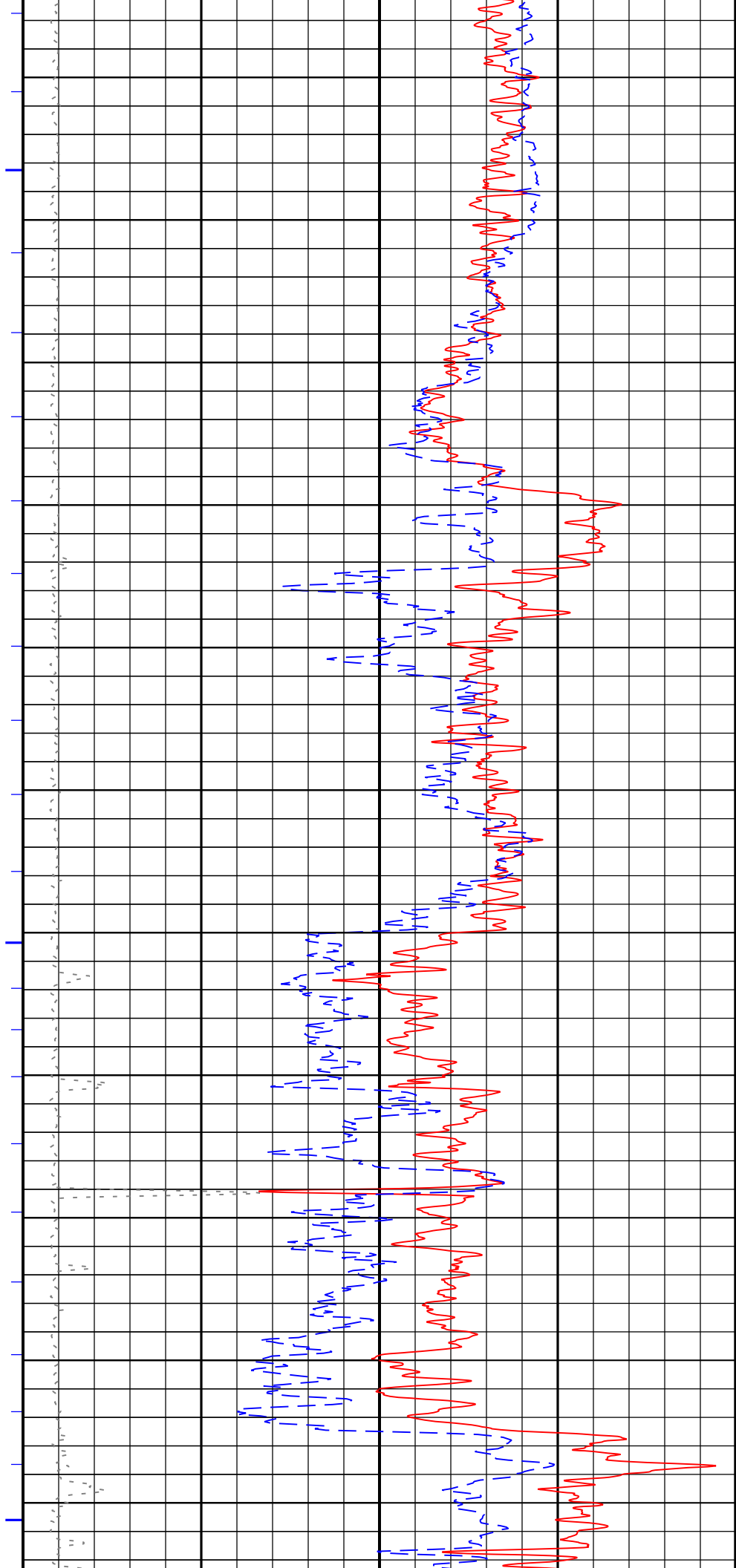
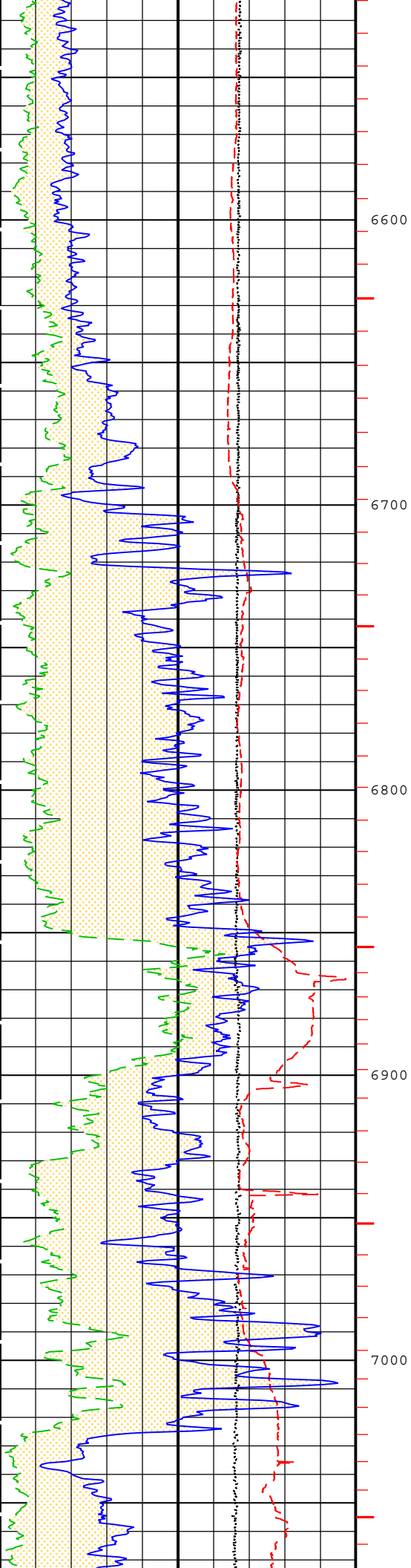


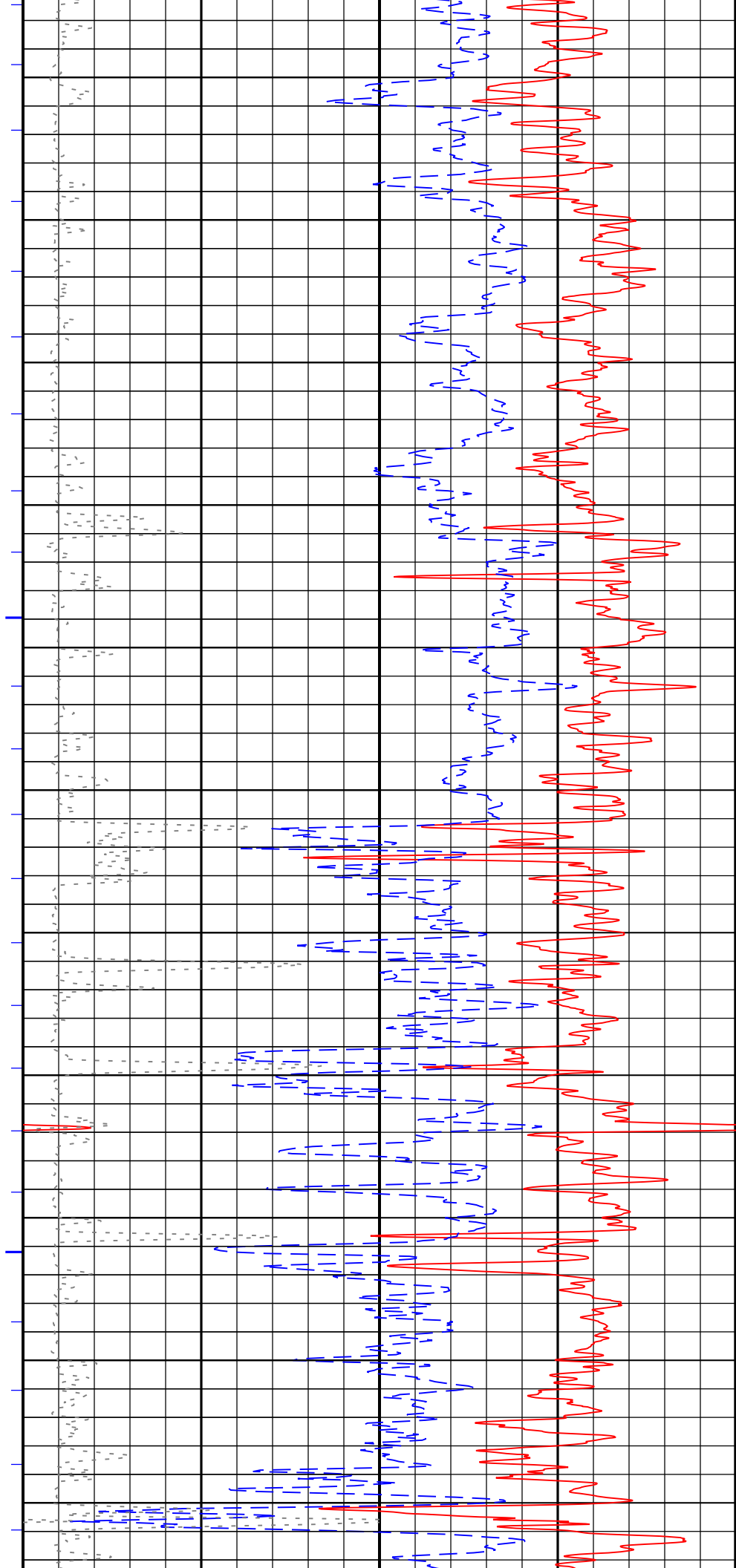
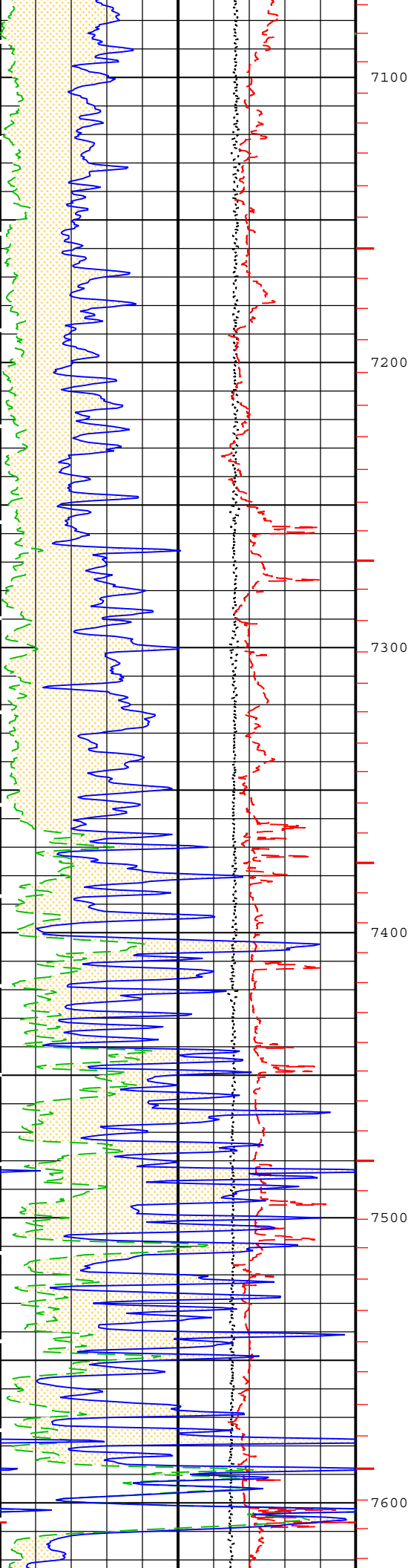


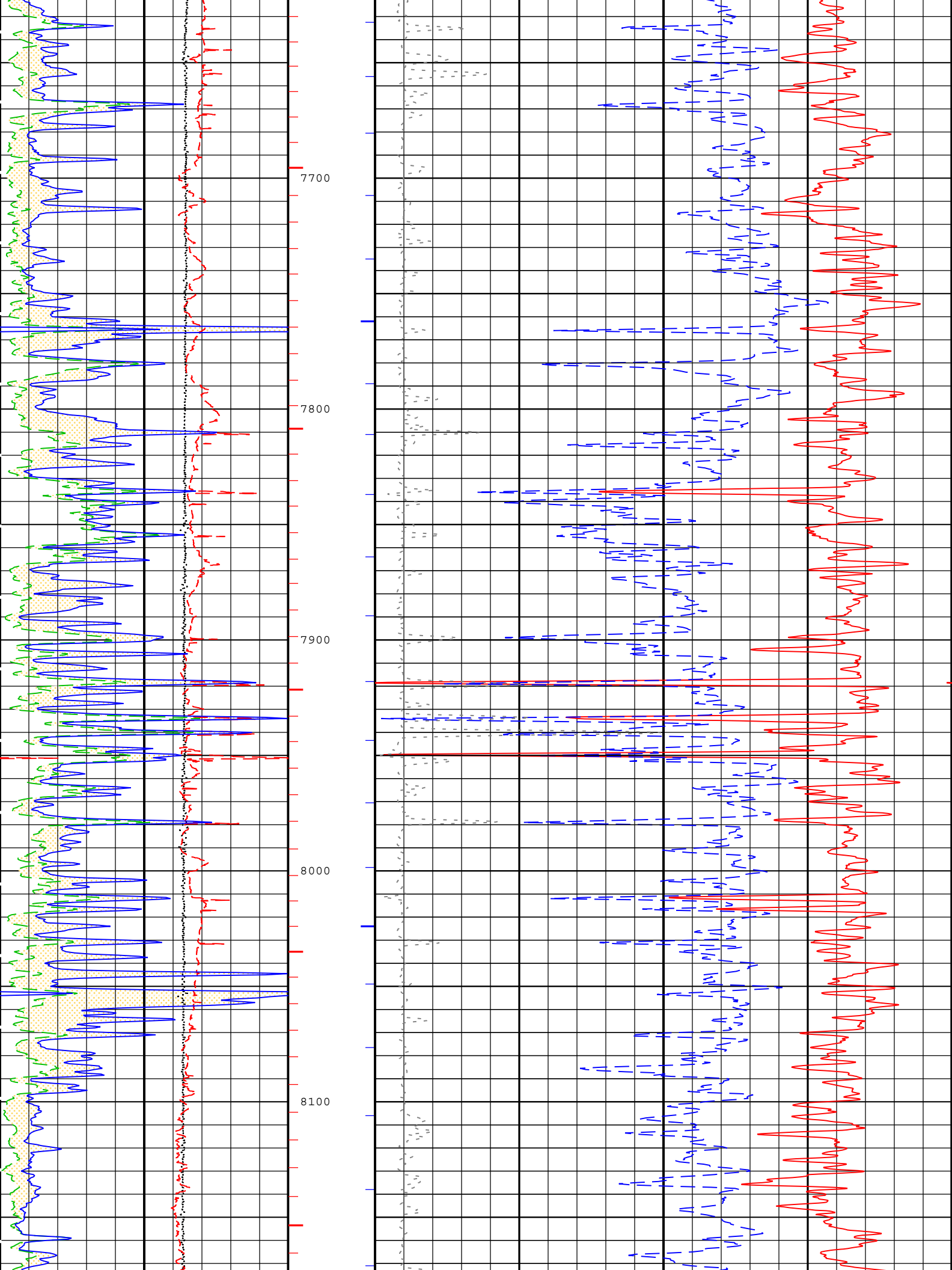


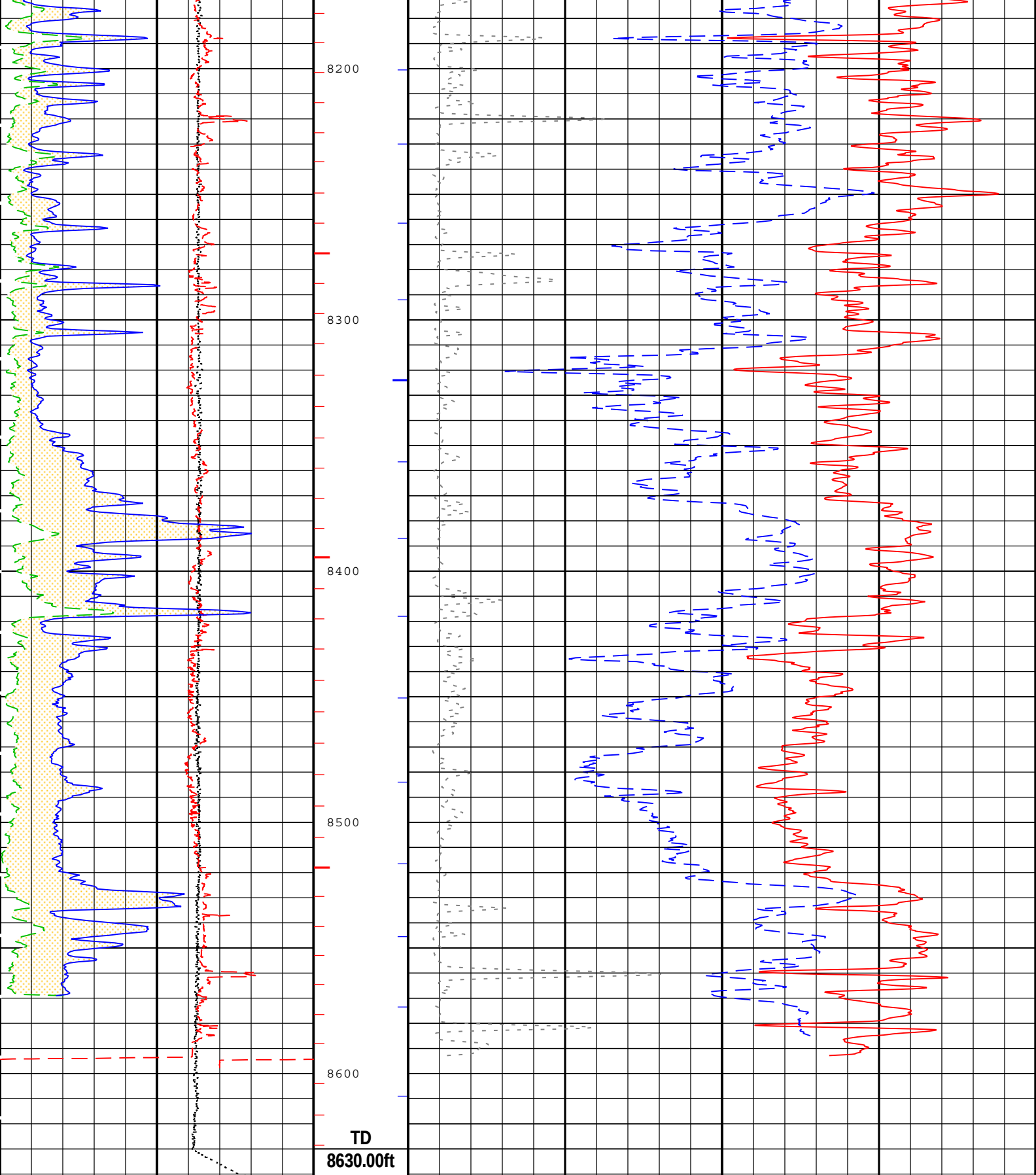












2" Porosity			
Uranium Indicator		Standard Resolution Formation Density (RHOZ) HDRS-B	
Cable Tension (TENS)		Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-B	
10000	lbf	0.3	ft3/ft3
Caliper (CALI) HDRS-B		Density Standoff Correction (HDRA) HDRS-B	
6	in	-0.05	g/cm3
			0.45

Gamma Ray Contribution from Thorium and Potassium (CGR) HNGS-BA		
0	gAPI	100
Spectroscopy Gamma Ray (SGR) HNGS-BA		
0	gAPI	100

TIME_1900 - Time Marked every 60.00 (s)

- ICV - Integrated Cement Volume every 10.00 (ft3)
- ICV - Integrated Cement Volume every 100.00 (ft3)
- IHV - Integrated Hole Volume every 10.00 (ft3)
- IHV - Integrated Hole Volume every 100.00 (ft3)

Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:36:40

Two				
Main Pass 5" = 100'				
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	HVAS, FCD		ft3
IHV	Integrated Hole Volume	HVAS		ft3
Log	Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2 Two: Main[3]:Up:S021			

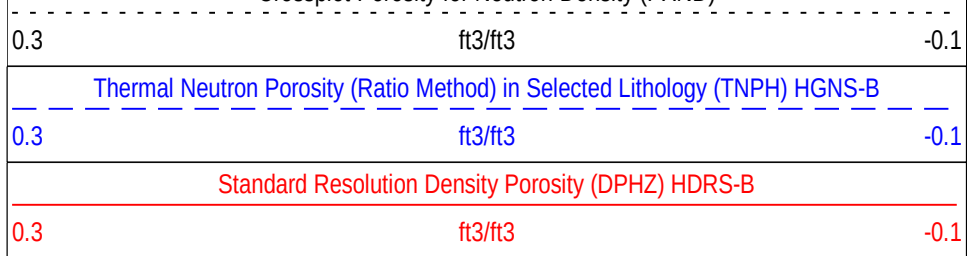
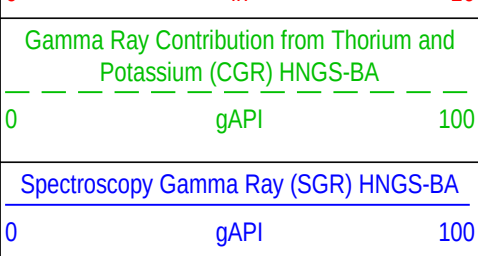
Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:36:43

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
DPHZ	HDRS-B:HRMS-B:HRGD-B	2in
HDRA	HDRS-B:HRMS-B:HRGD-B	2in
ICV	Borehole	6in
IHV	Borehole	6in
PEFZ	HDRS-B:HRMS-B:HRGD-B	2in
PXND	PEQL	6in
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
TENS	WLWorkflow	1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in

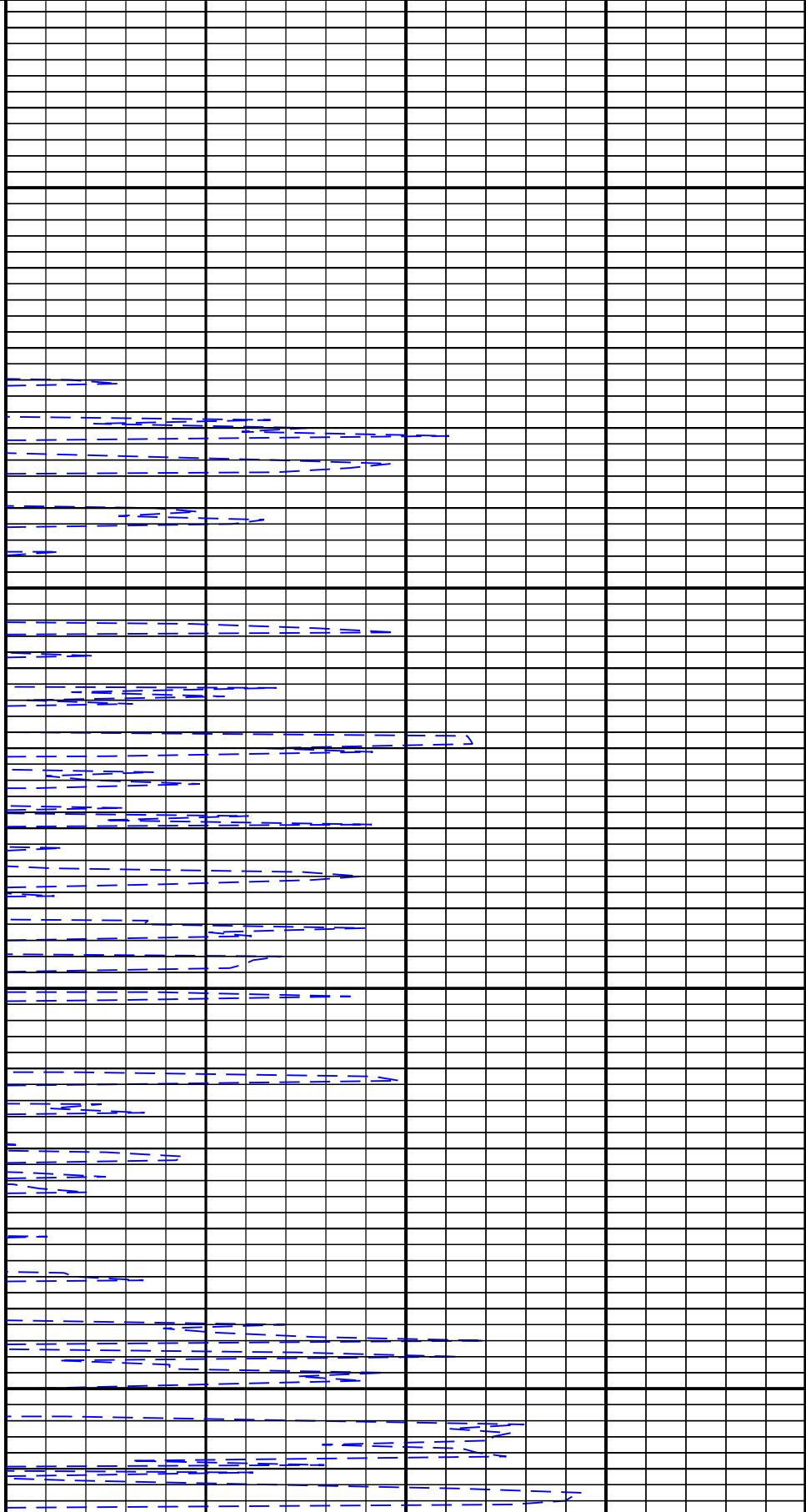
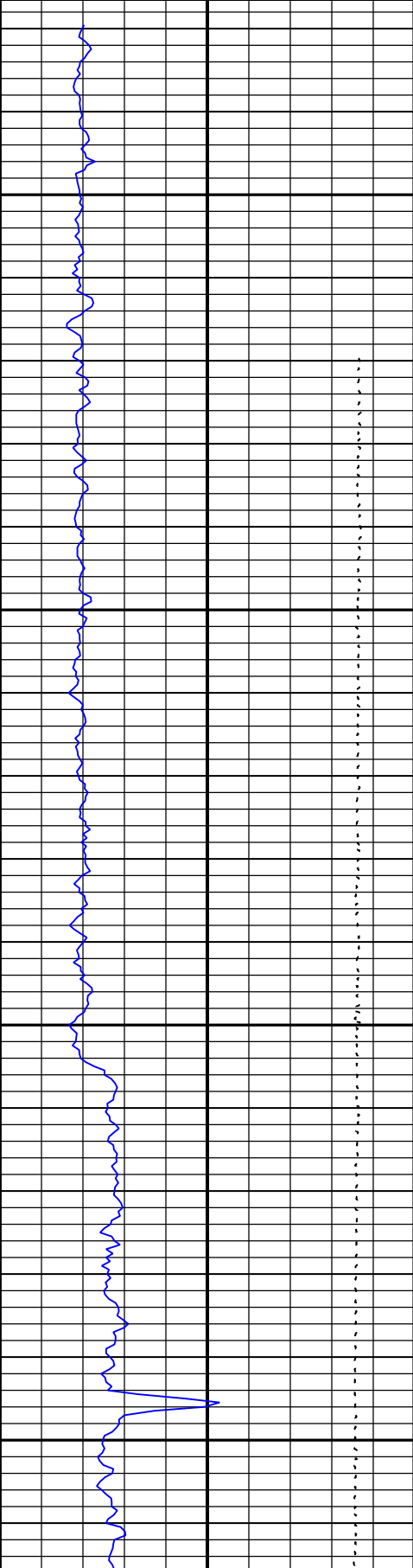
- IHV - Integrated Hole Volume every 100.00 (ft3)
- IHV - Integrated Hole Volume every 10.00 (ft3)
- ICV - Integrated Cement Volume every 100.00 (ft3)
- ICV - Integrated Cement Volume every 10.00 (ft3)

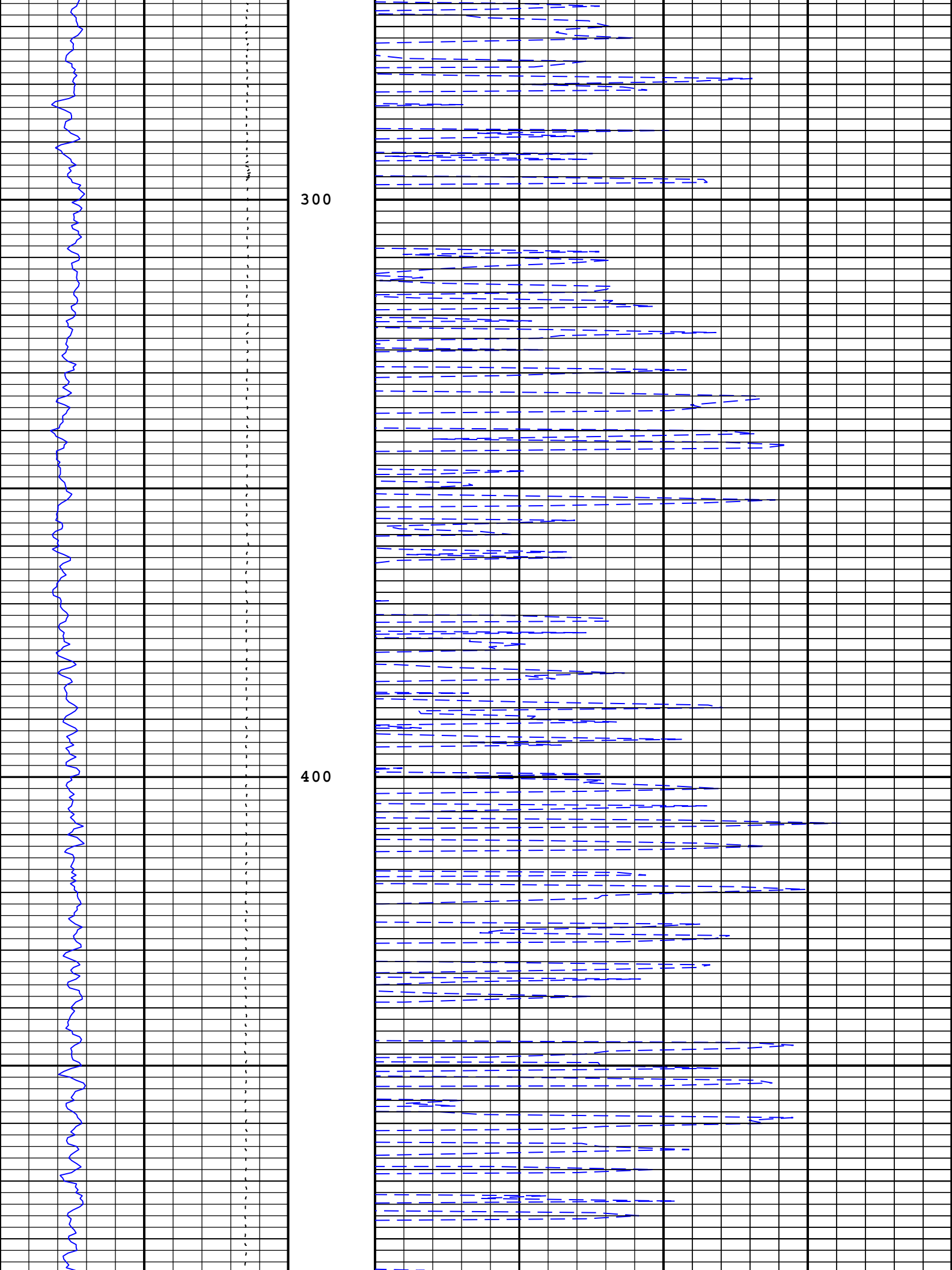
TIME_1900 - Time Marked every 60.00 (s)

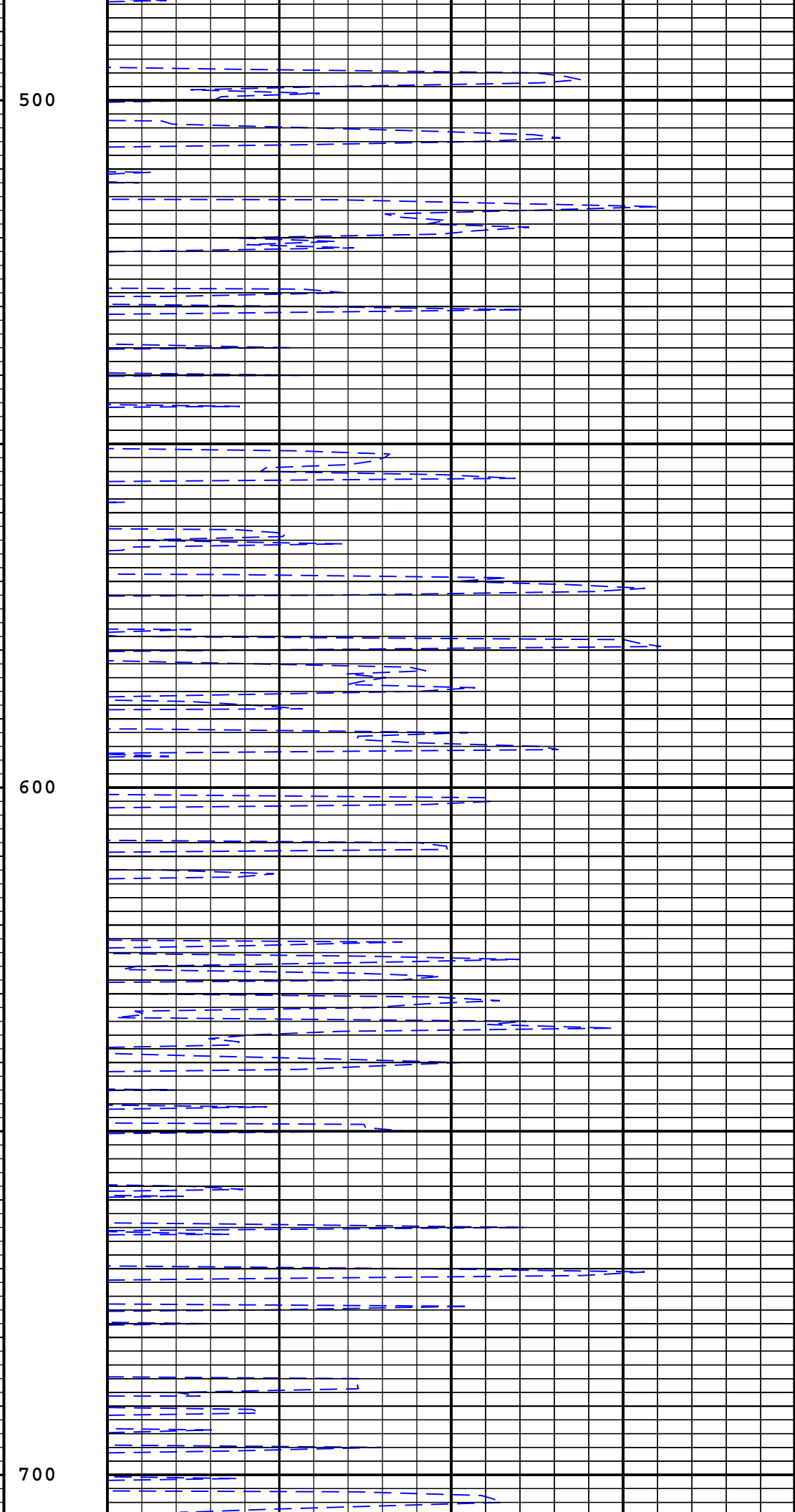
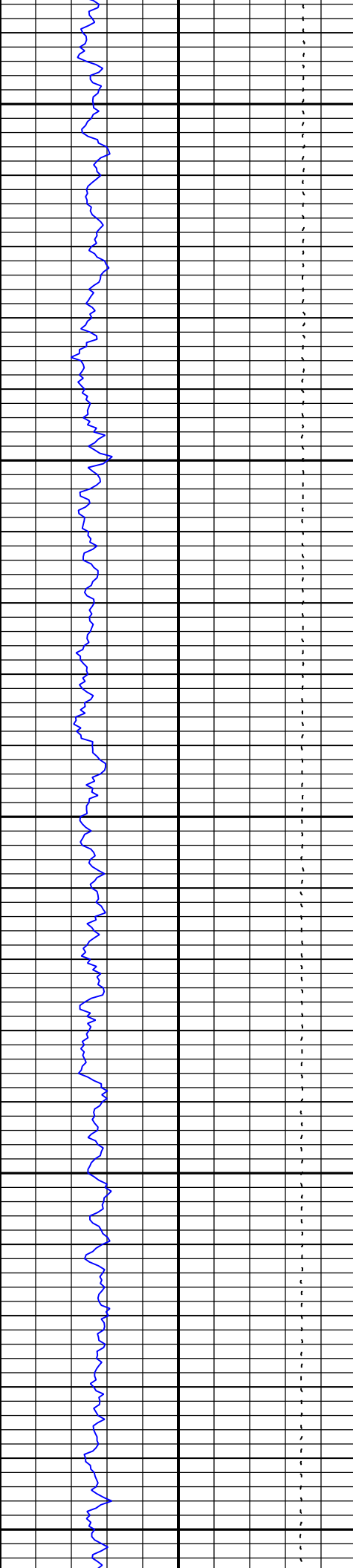
Uranium Indicator			Density Standoff Correction (HDRA) HDRS-B		
Cable Tension (TENS)			Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-B		
10000	lbf	0	0		10
Caliper (CALI) HDRS-B			Crossplot Porosity for Neutron-Density (PXND)		
6	in	16			

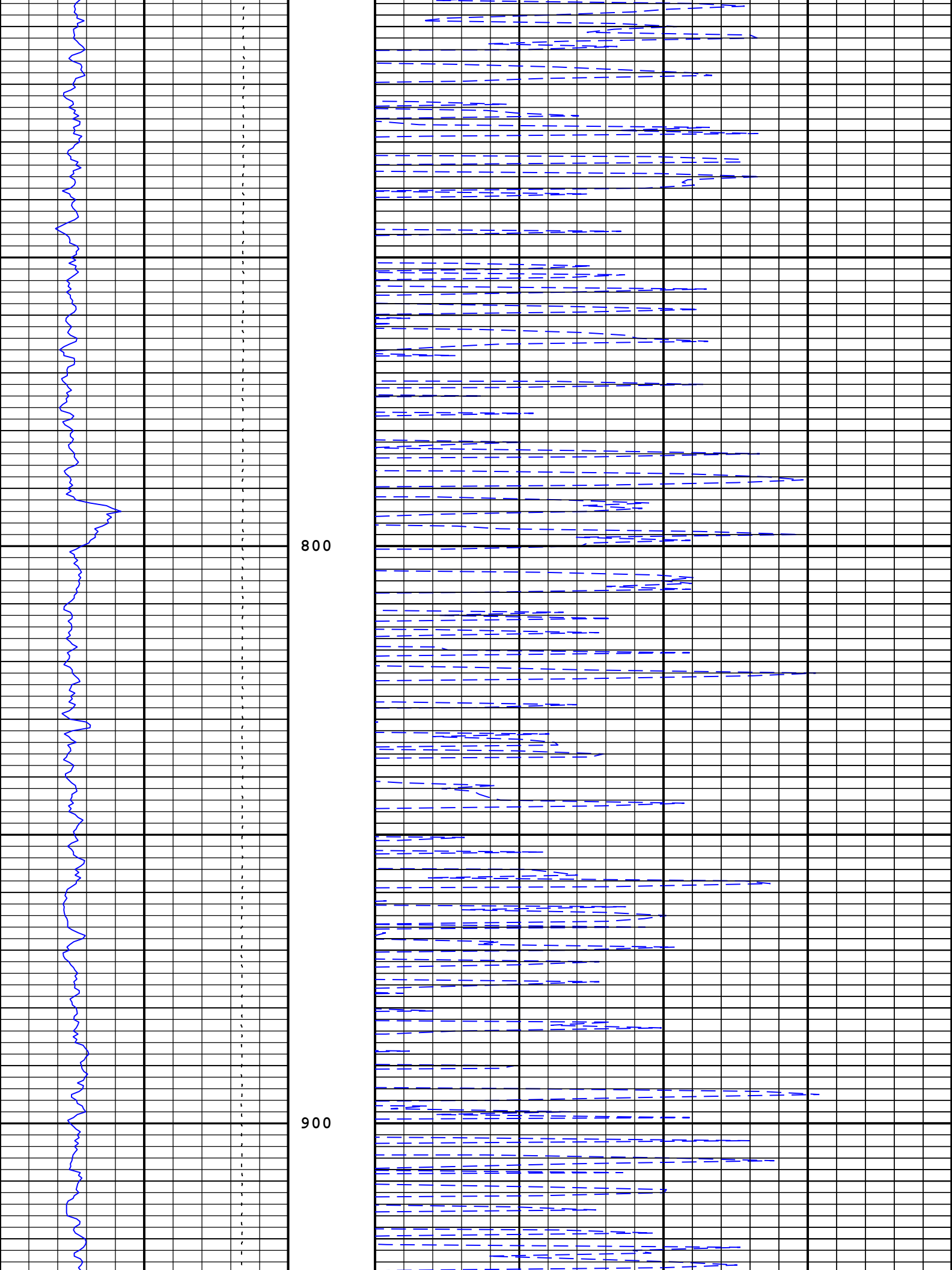


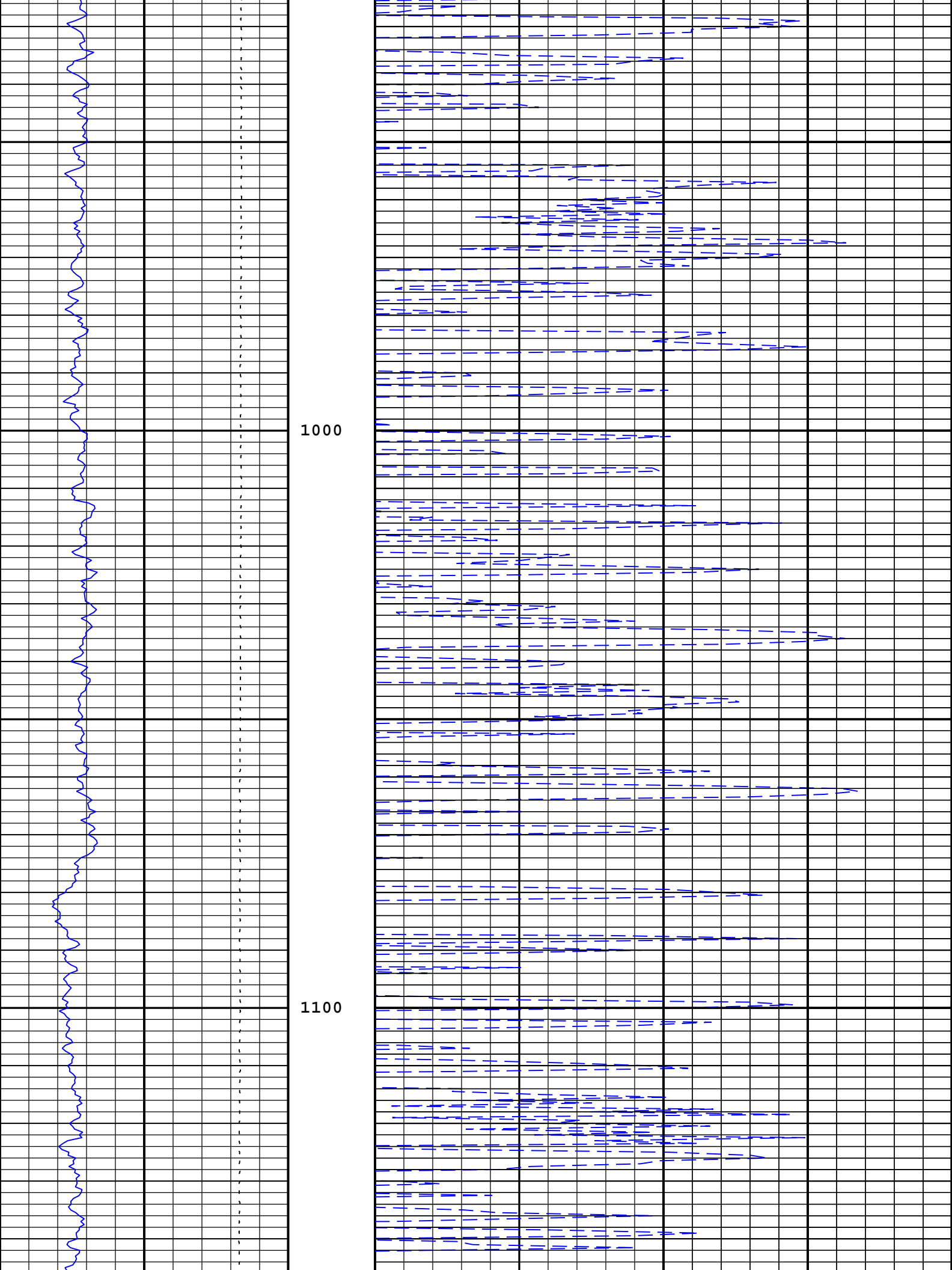
5" Porosity

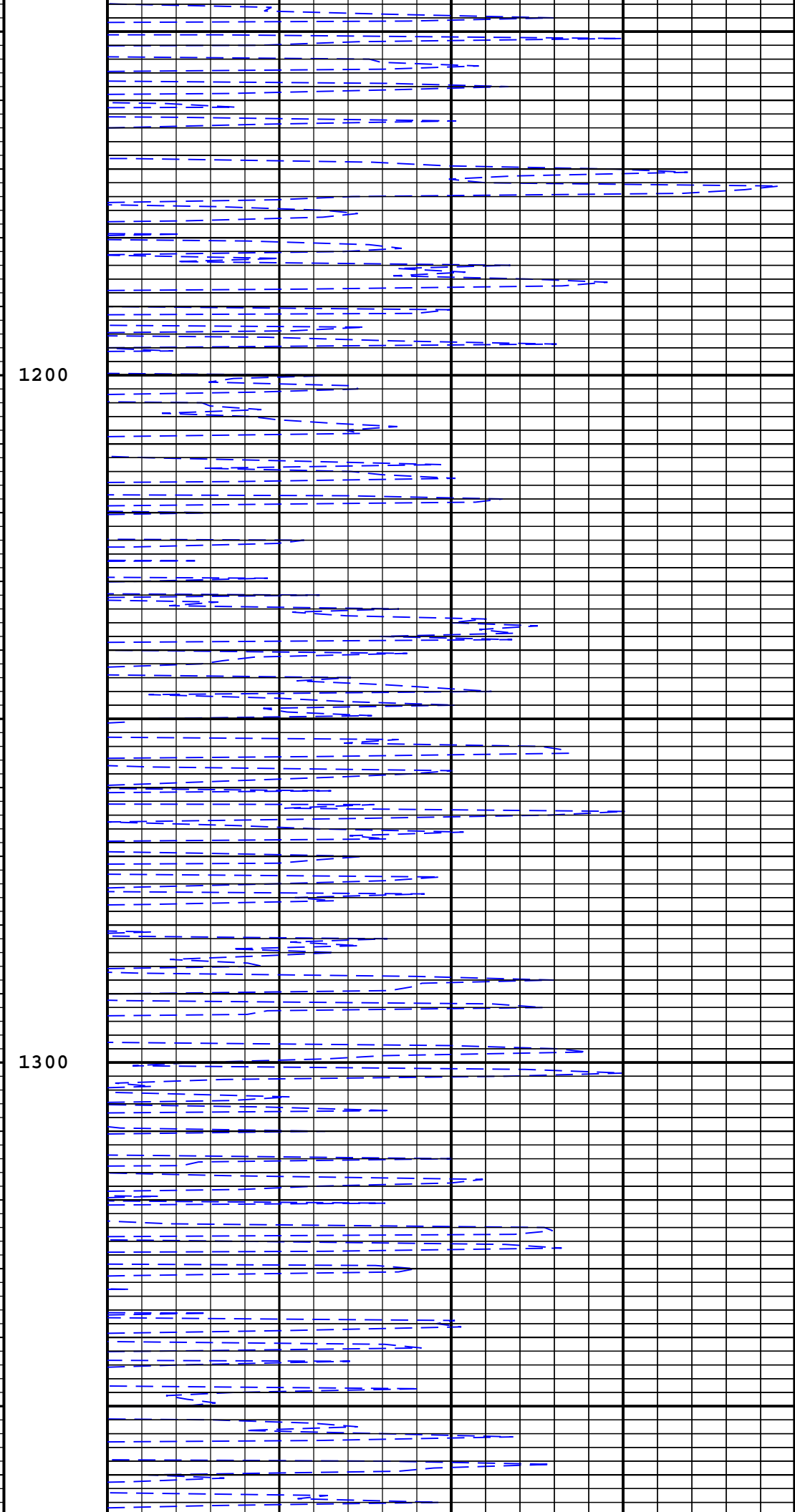
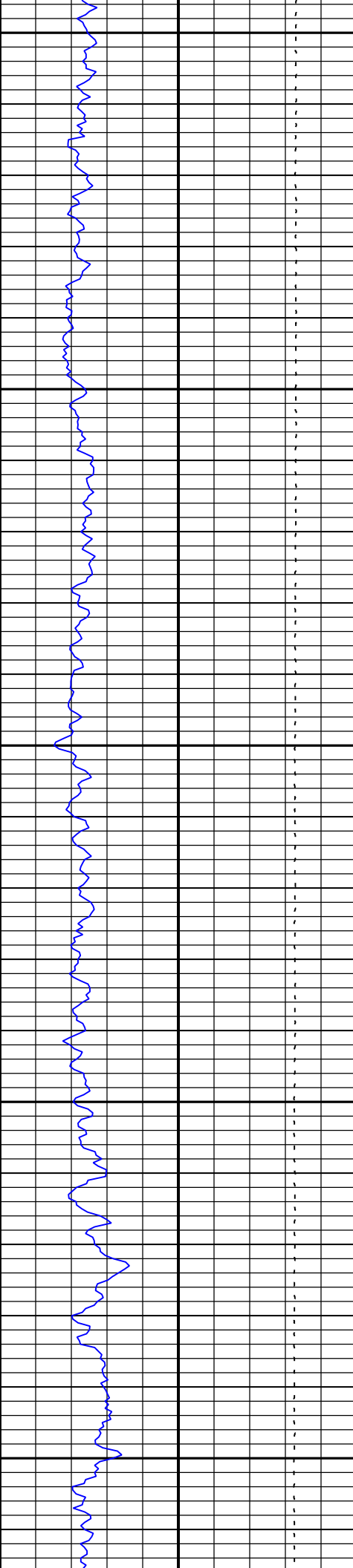


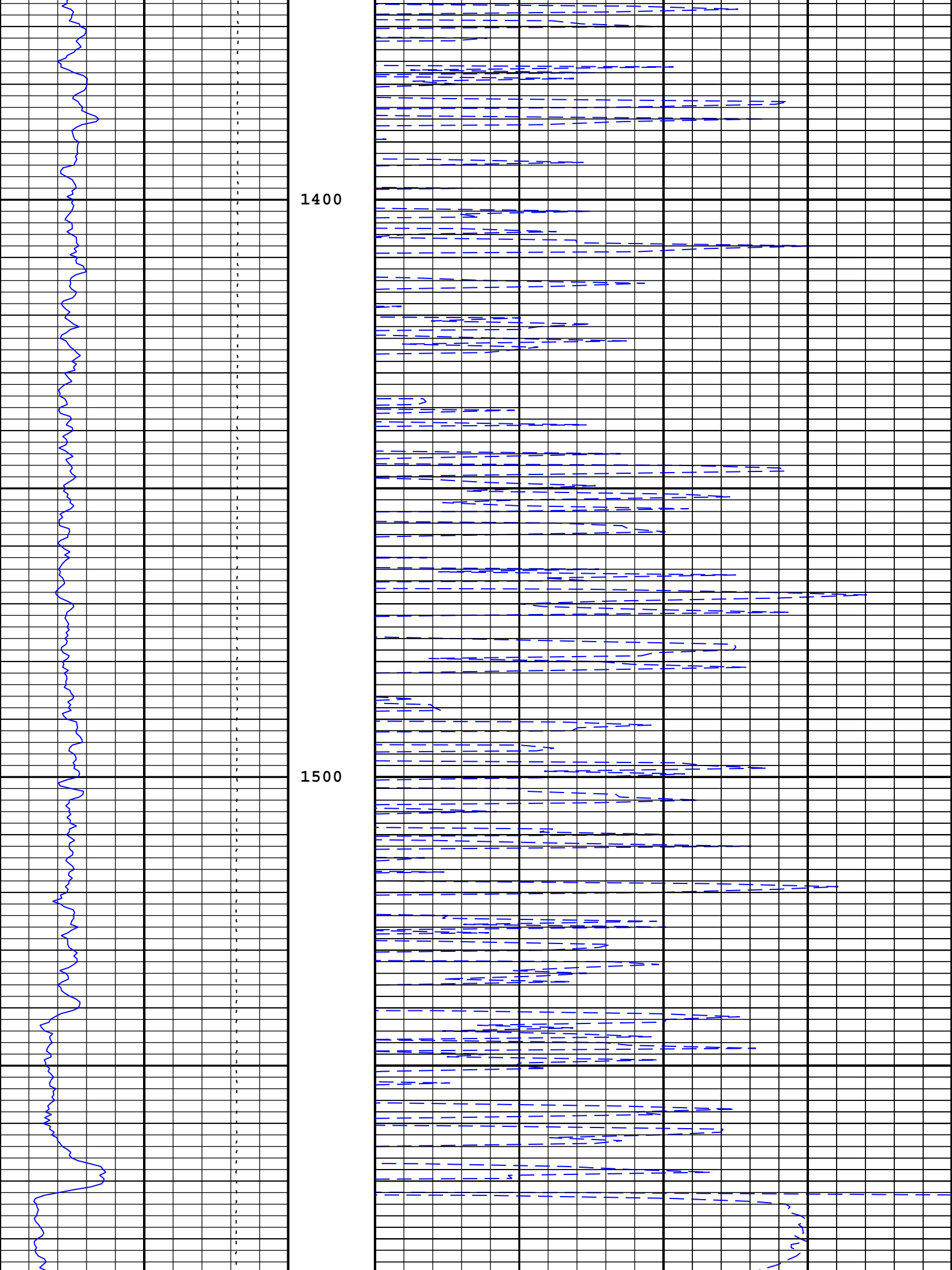


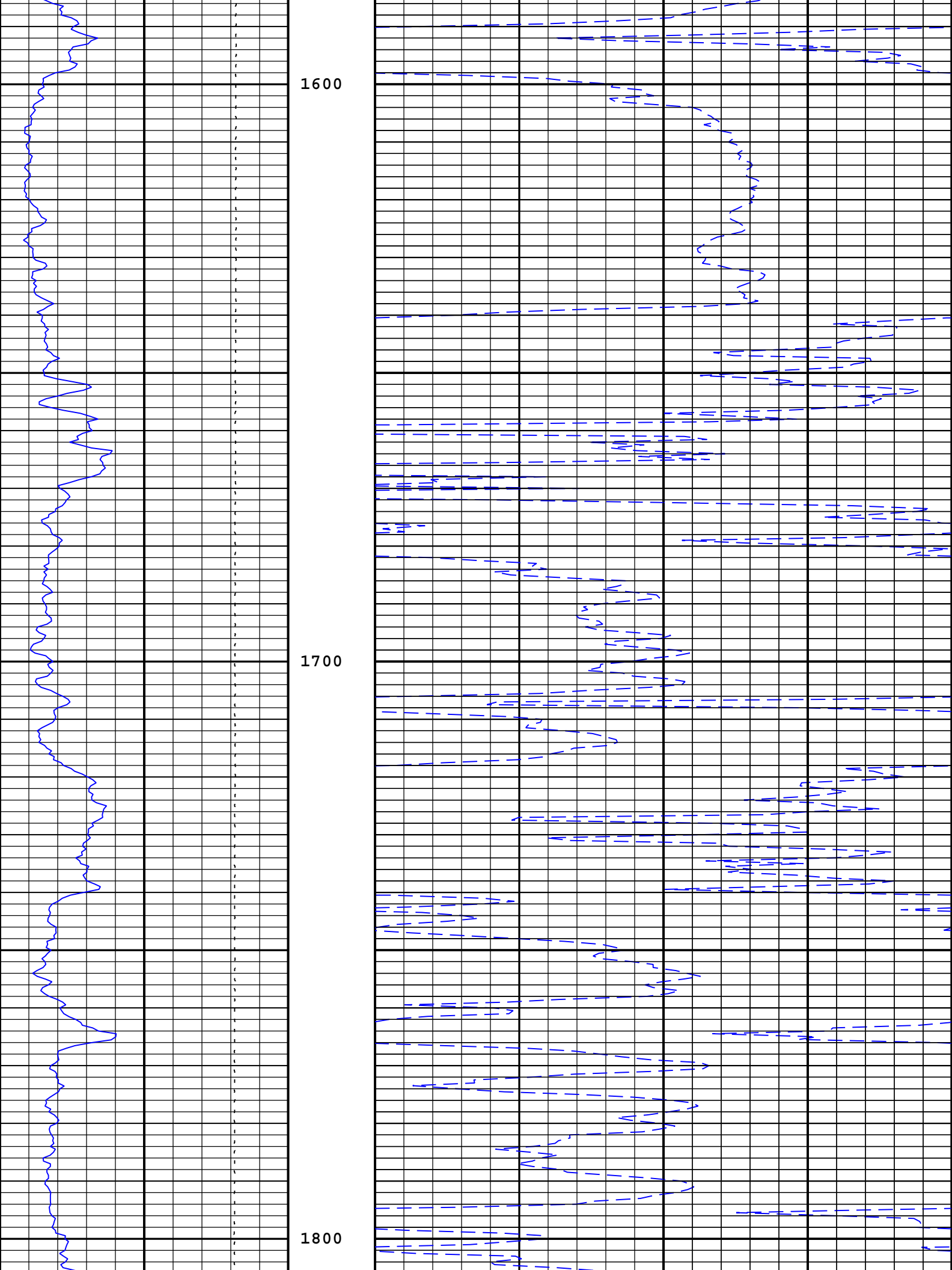


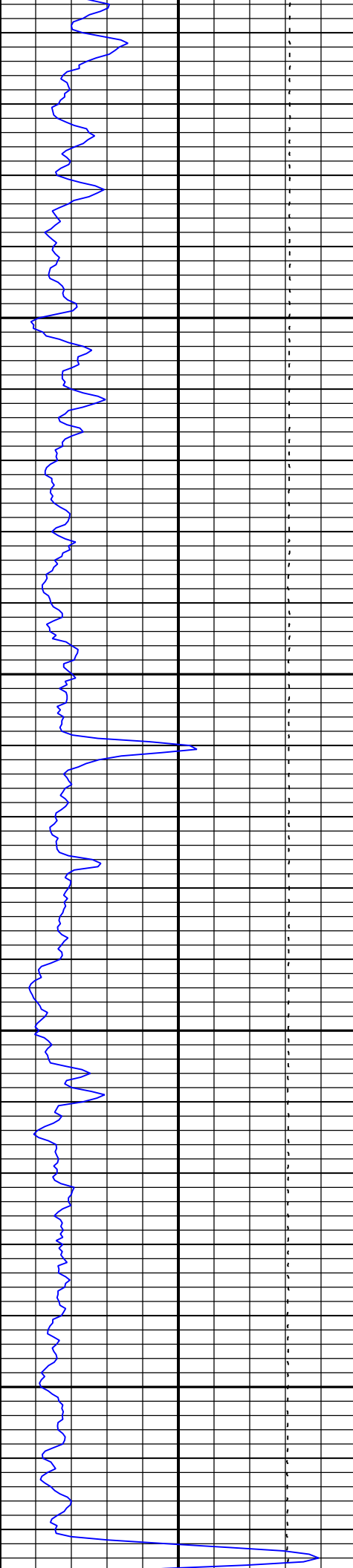






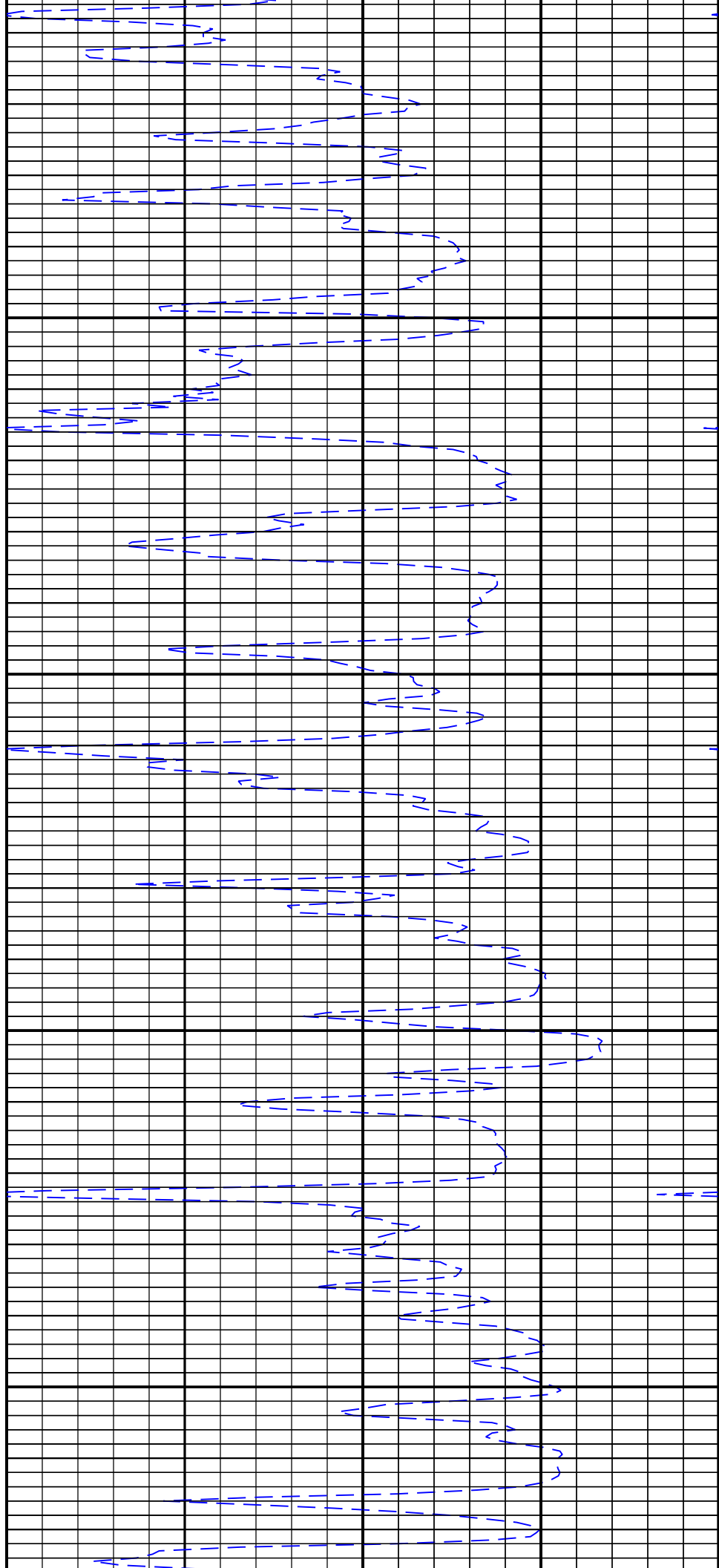


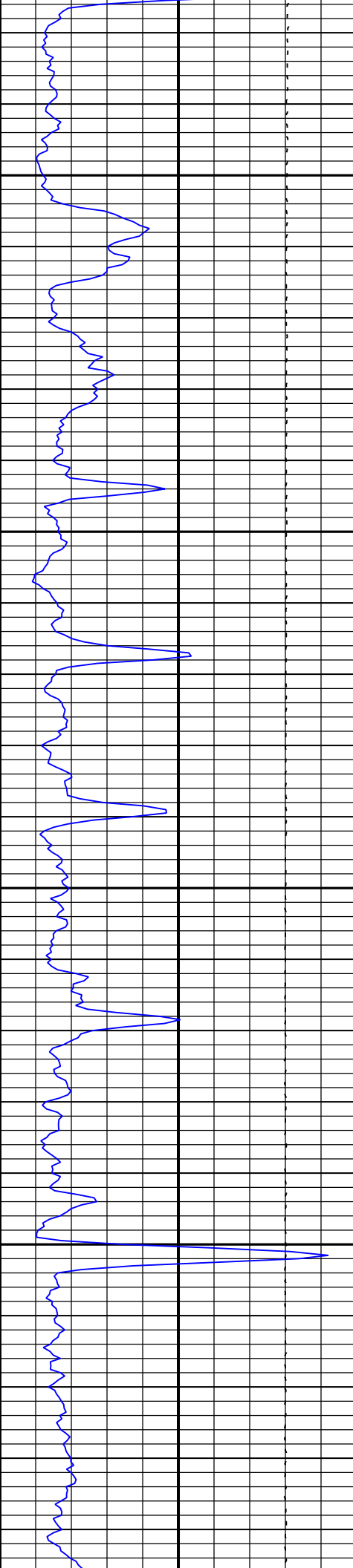




1900

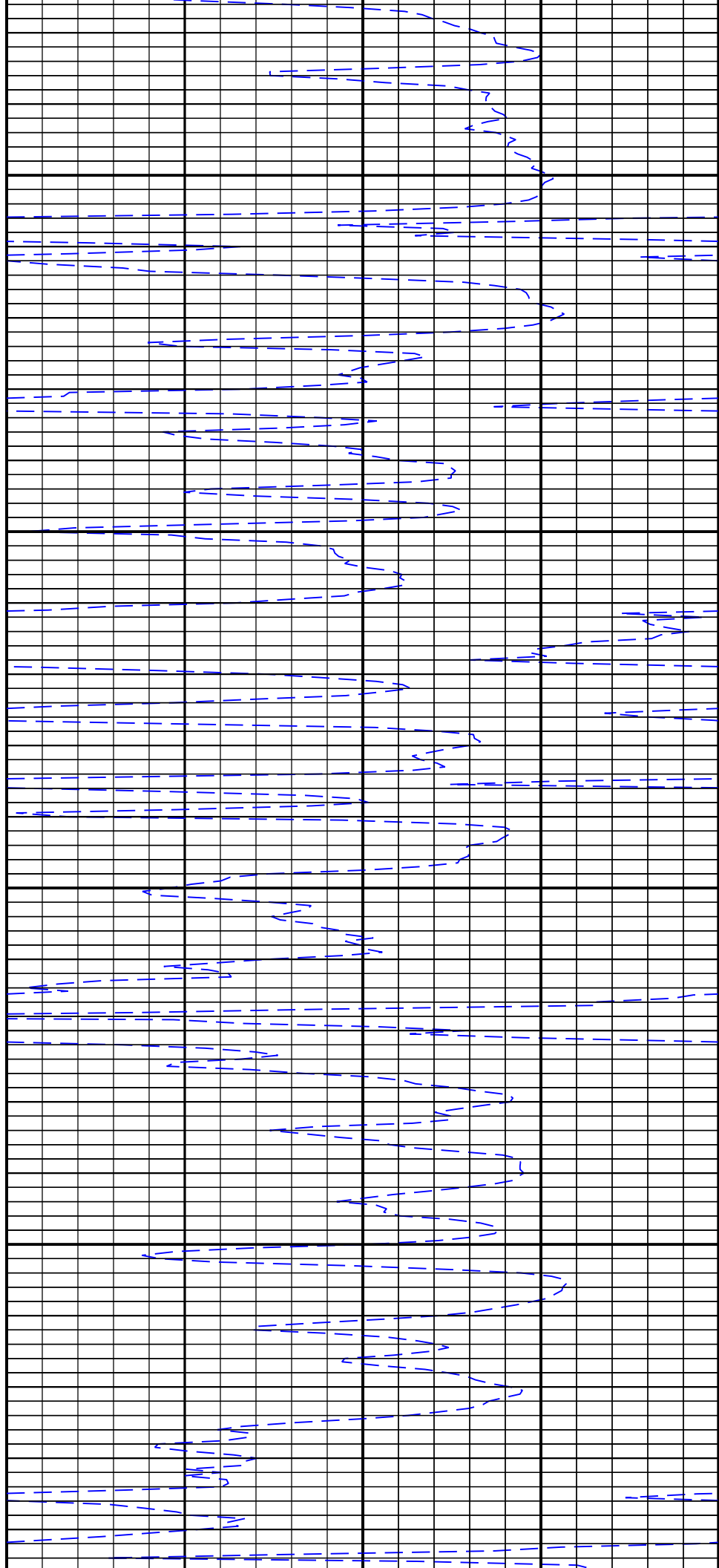
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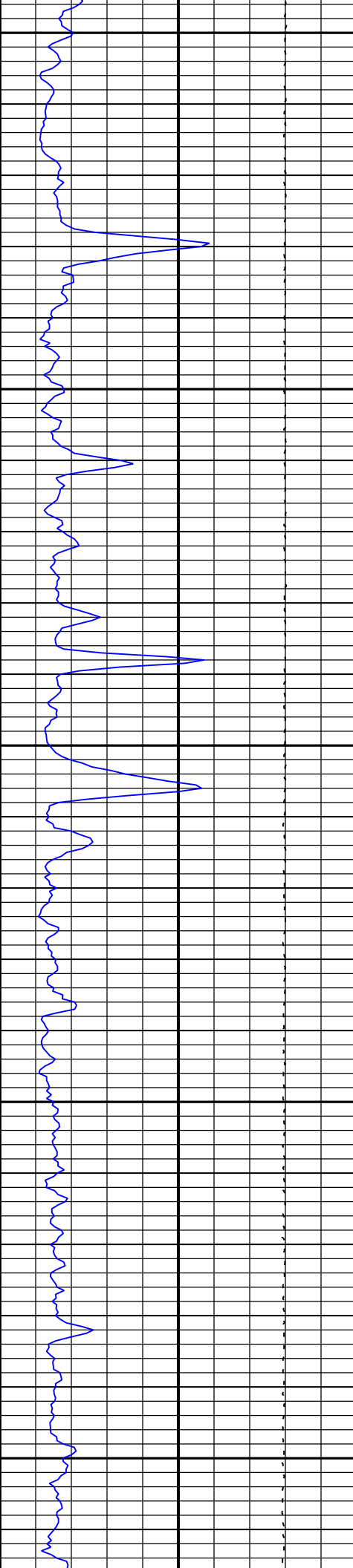




2100

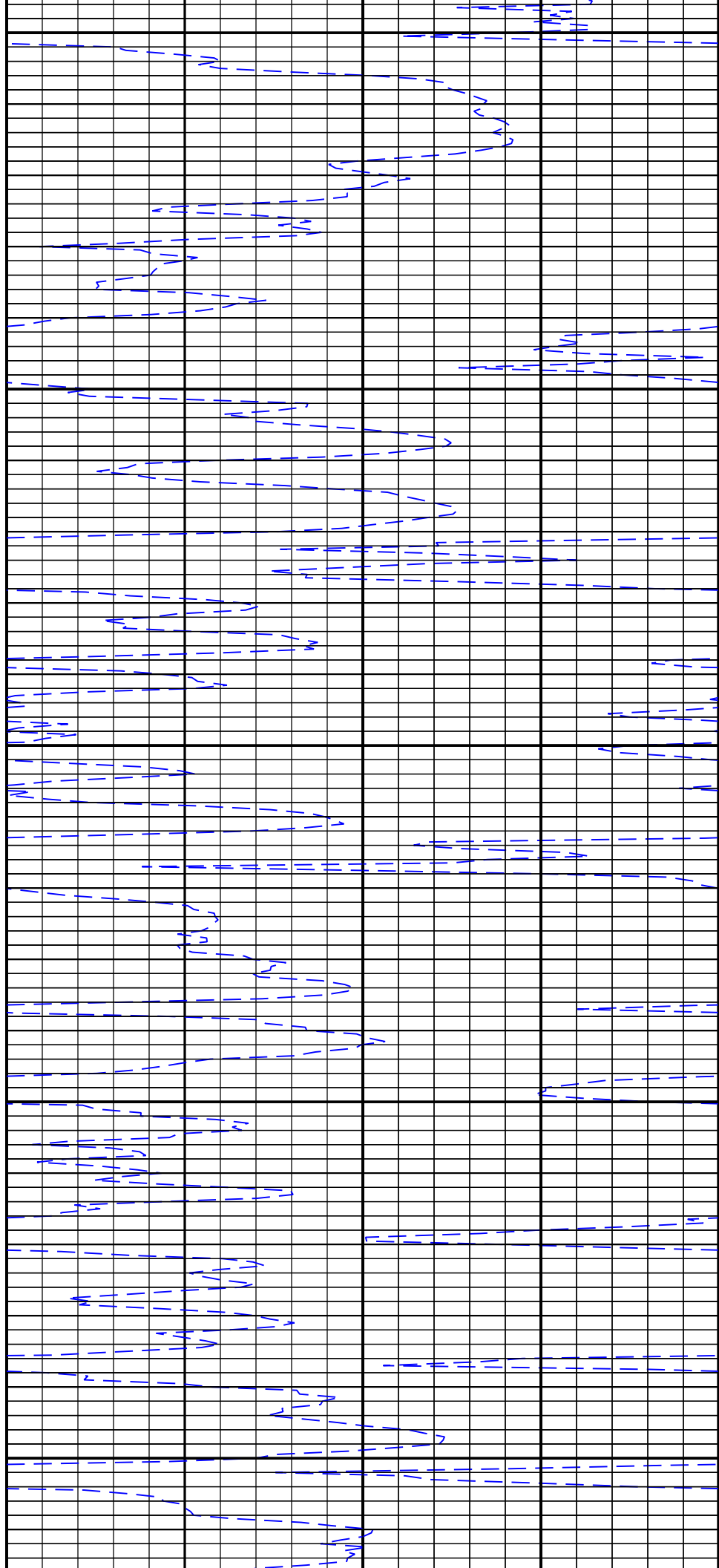
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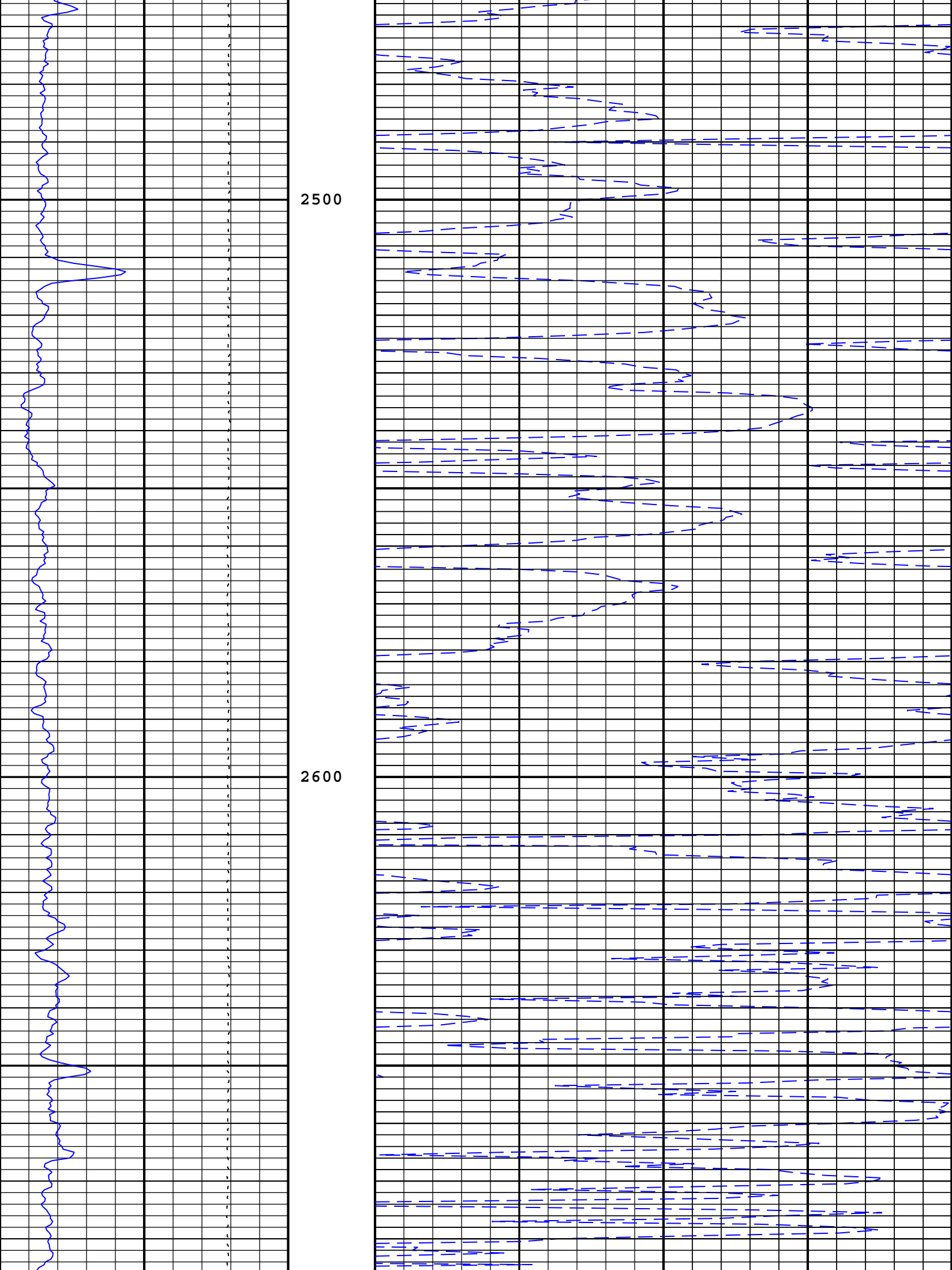


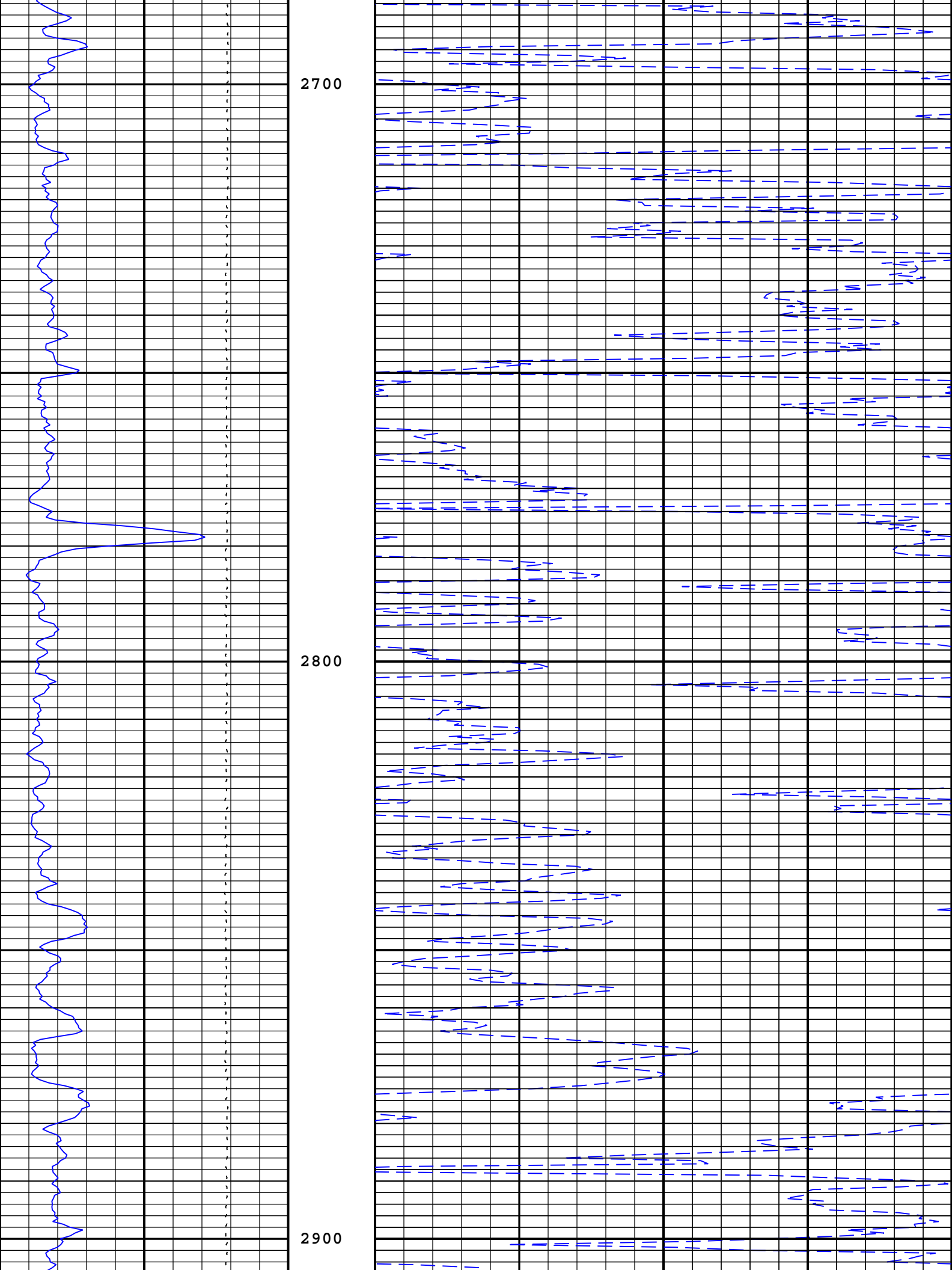


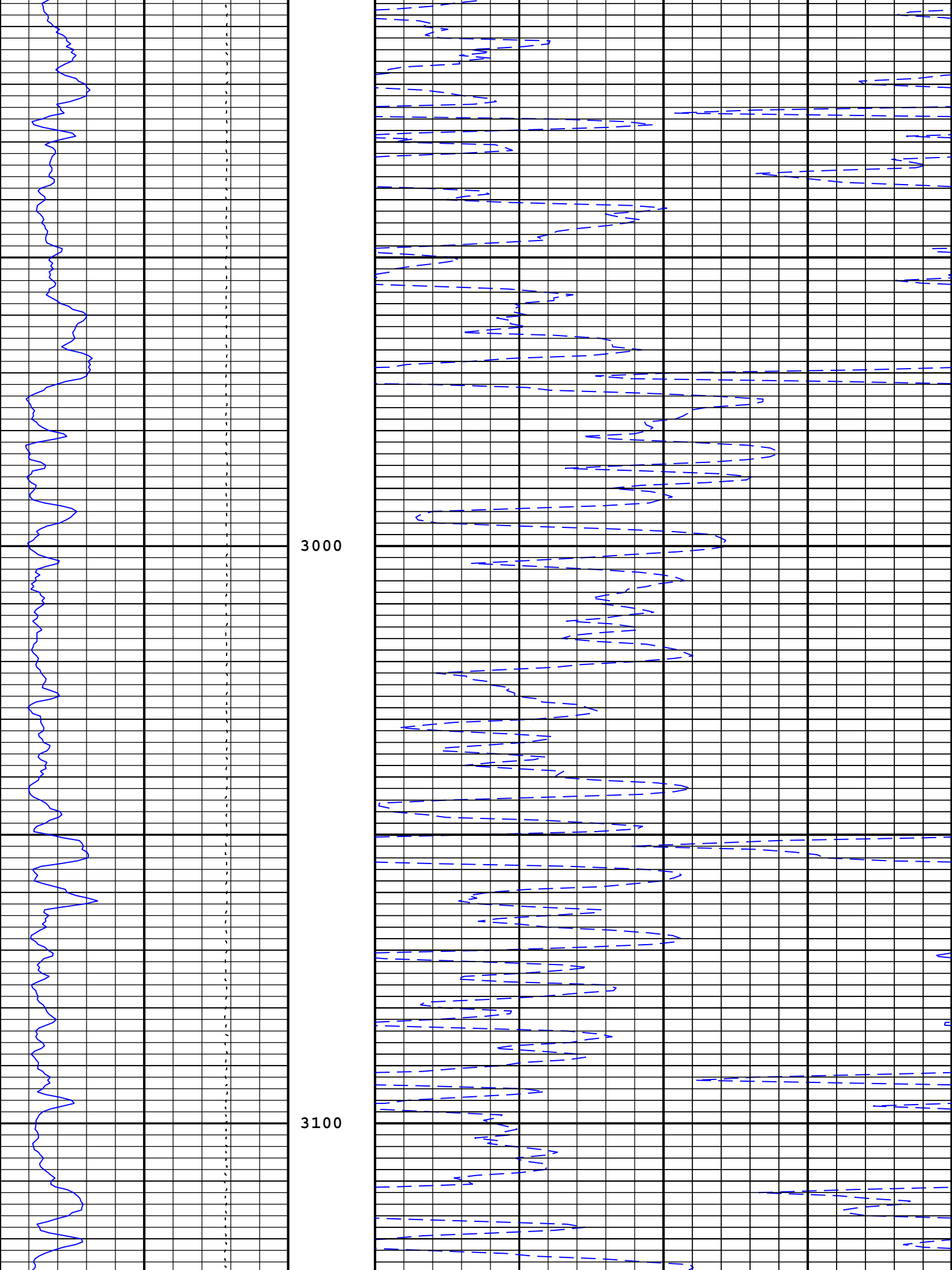
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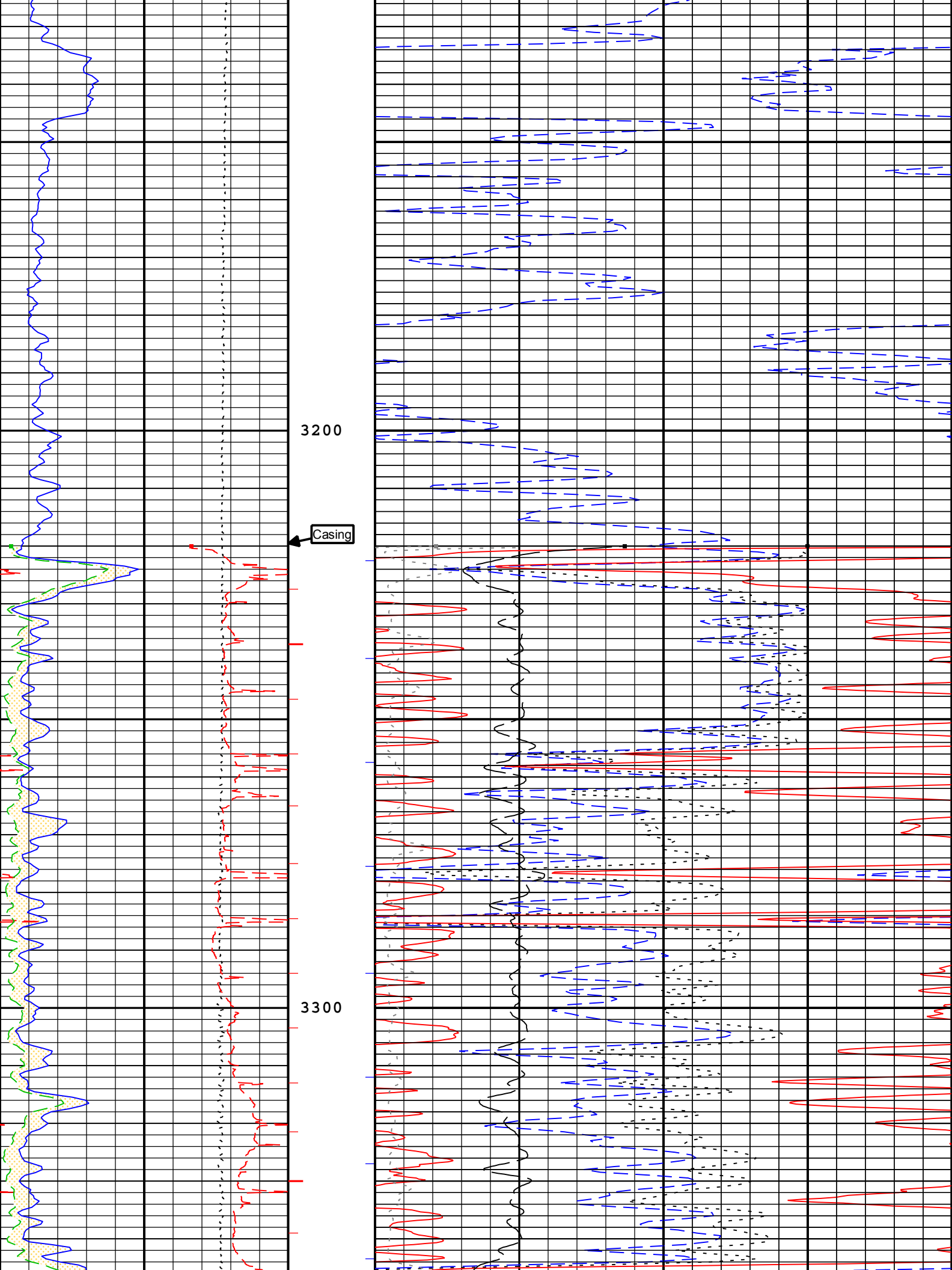
2400

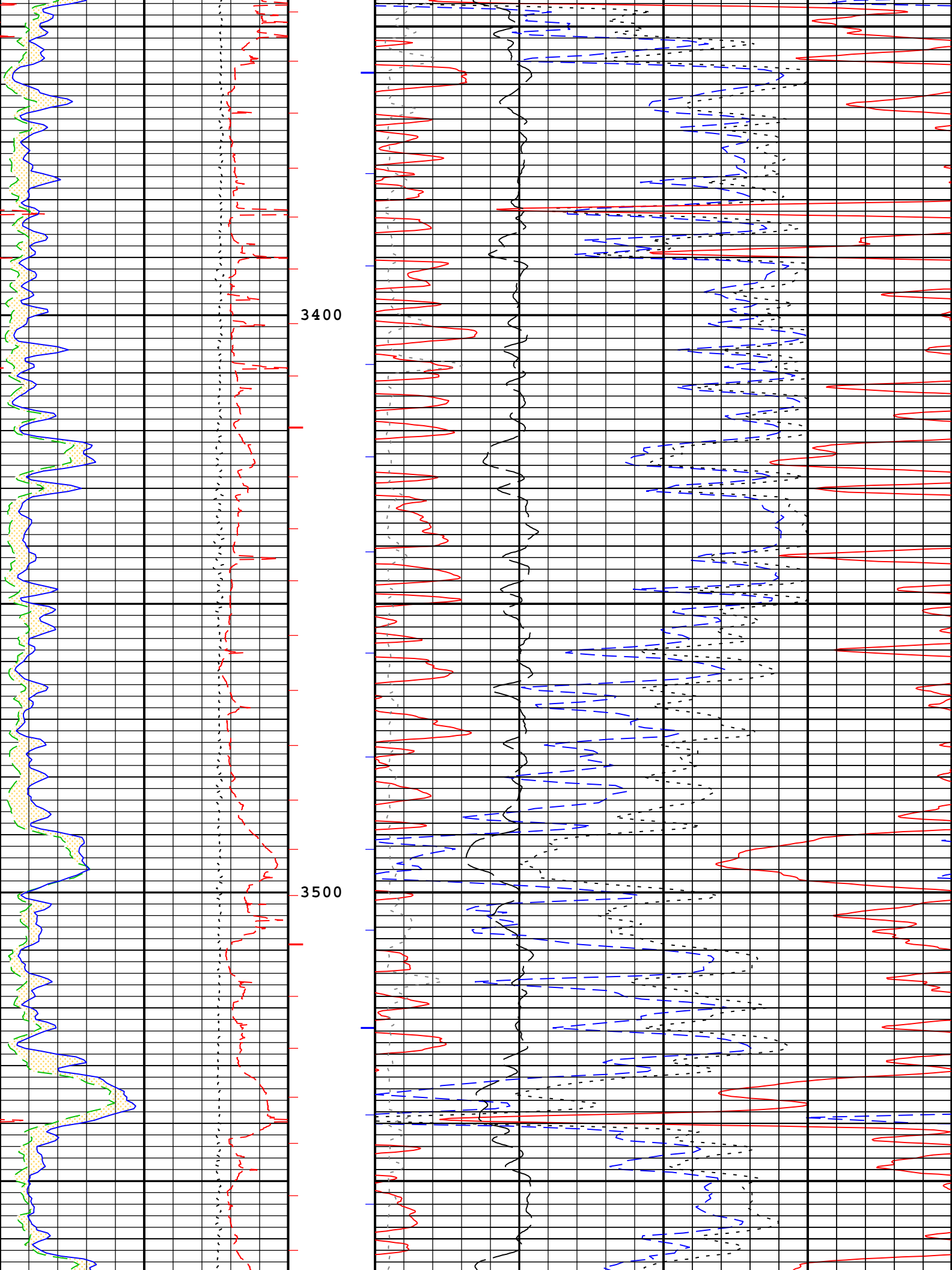


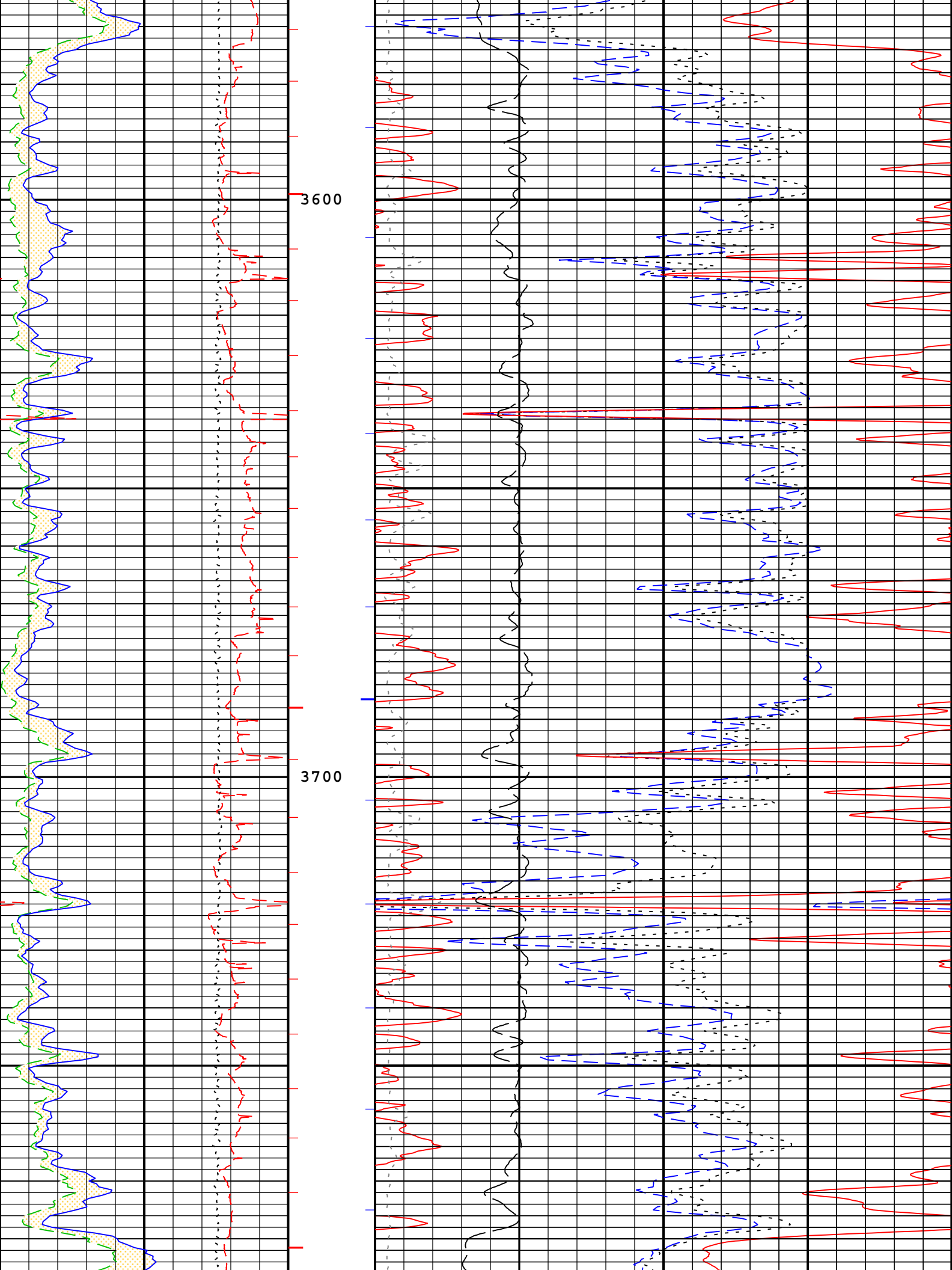


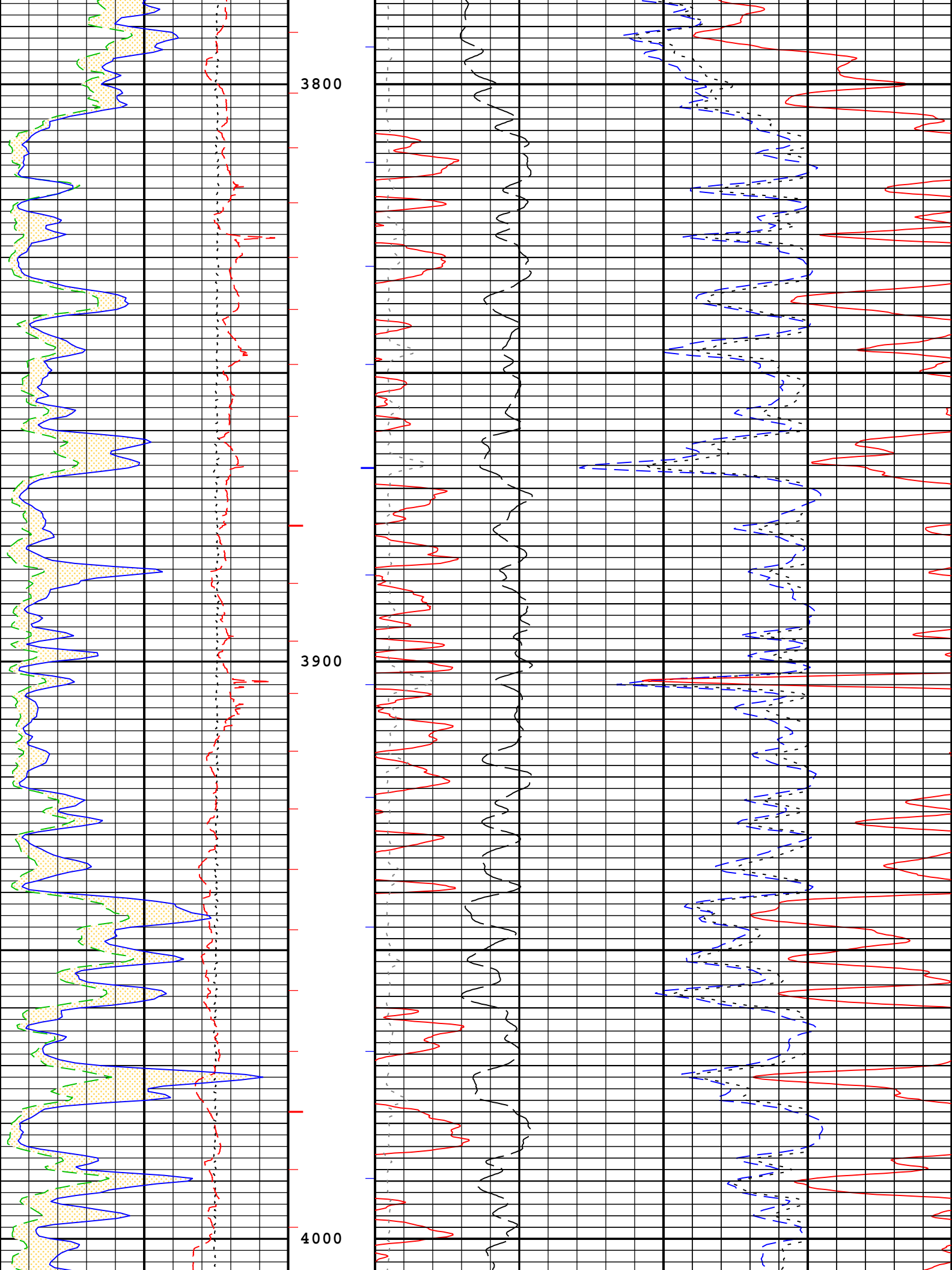


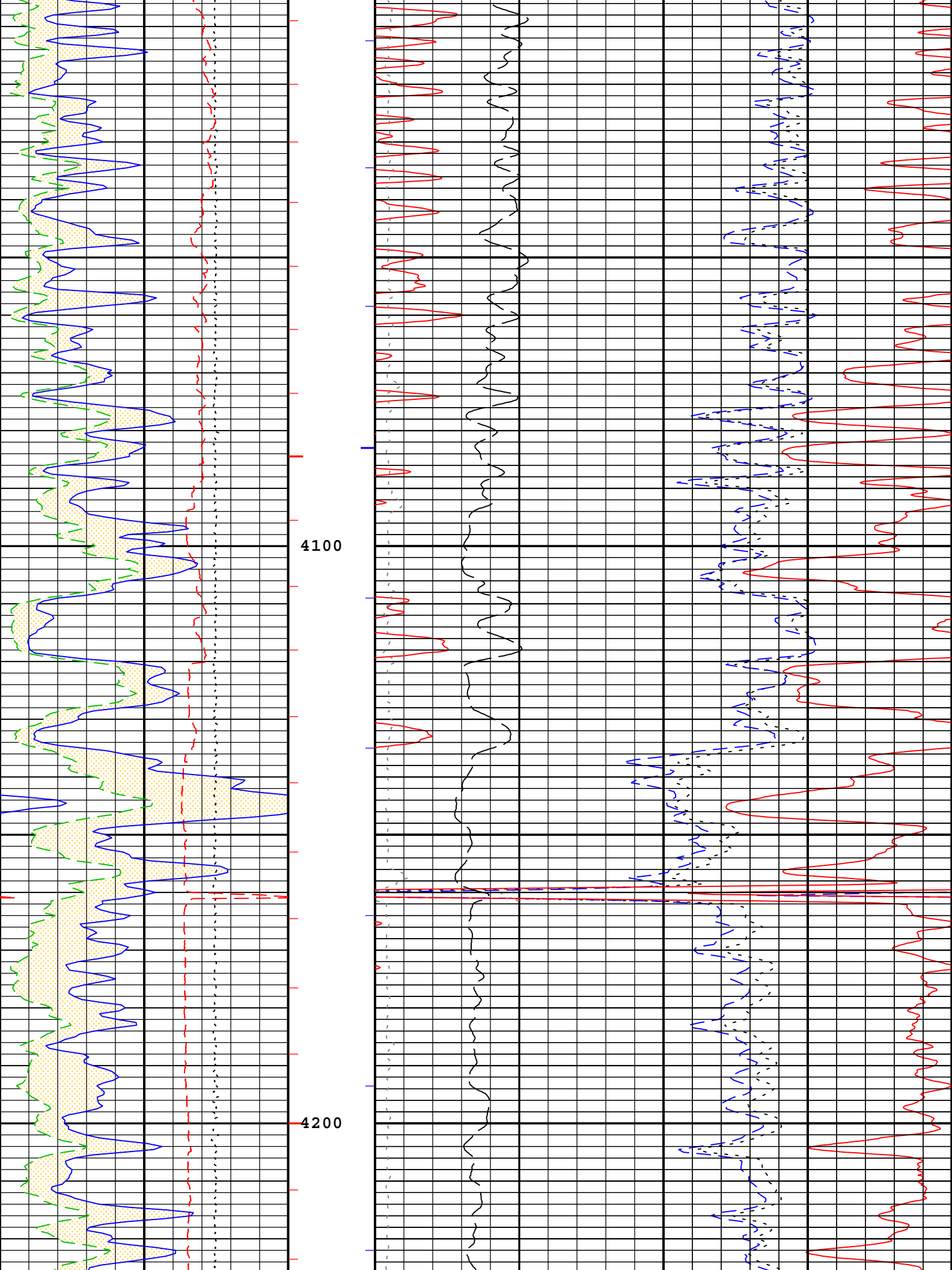


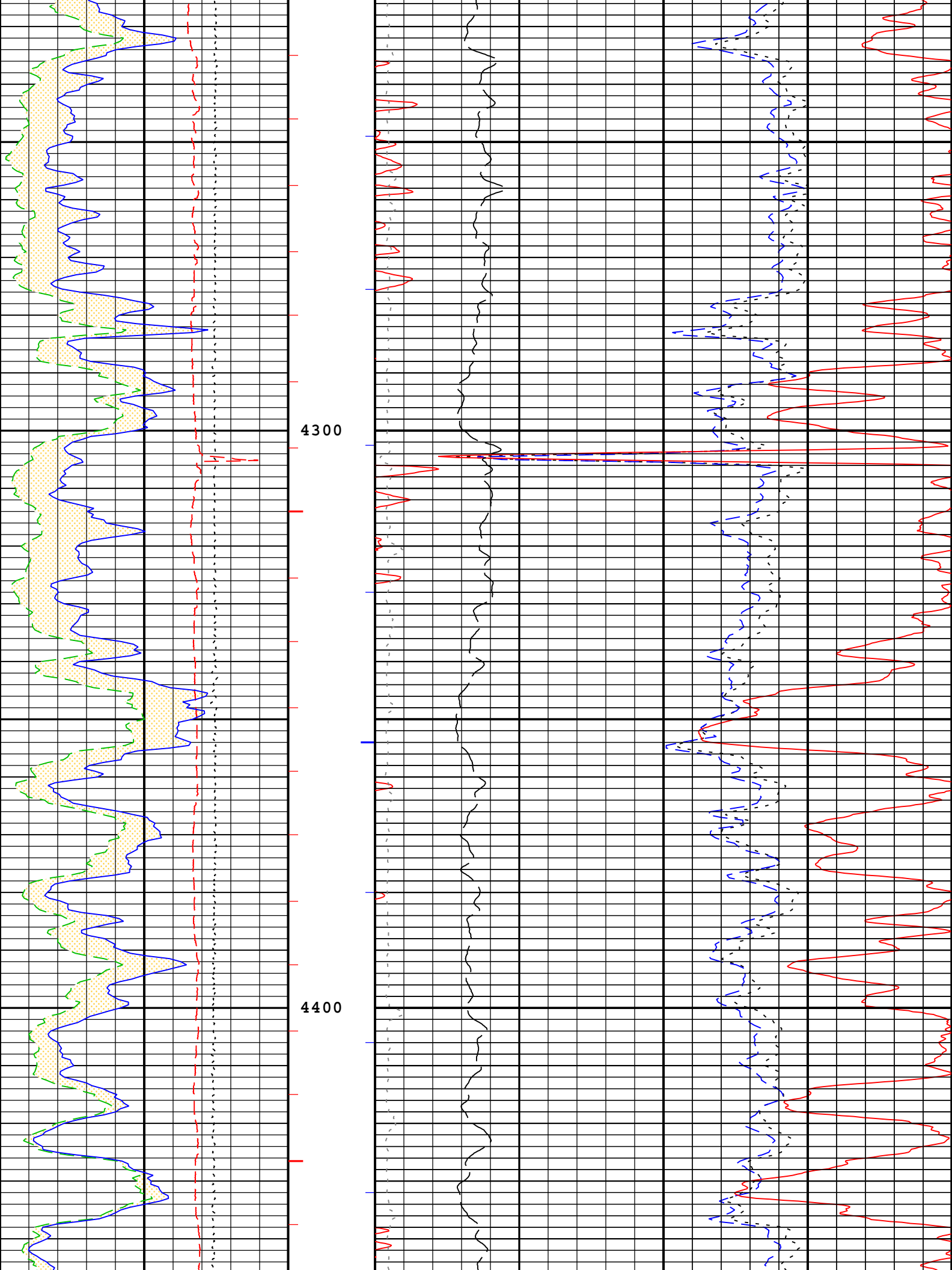


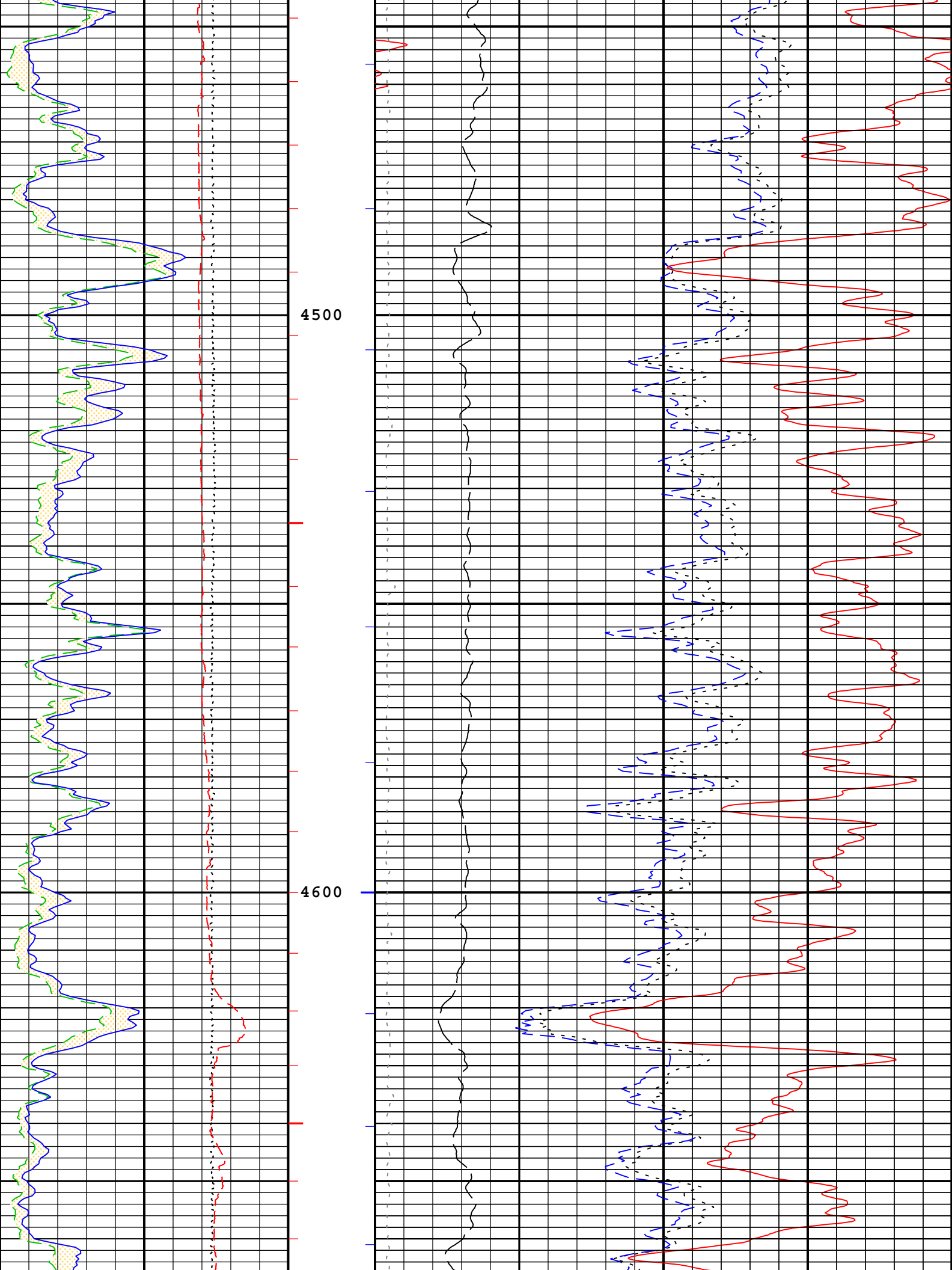


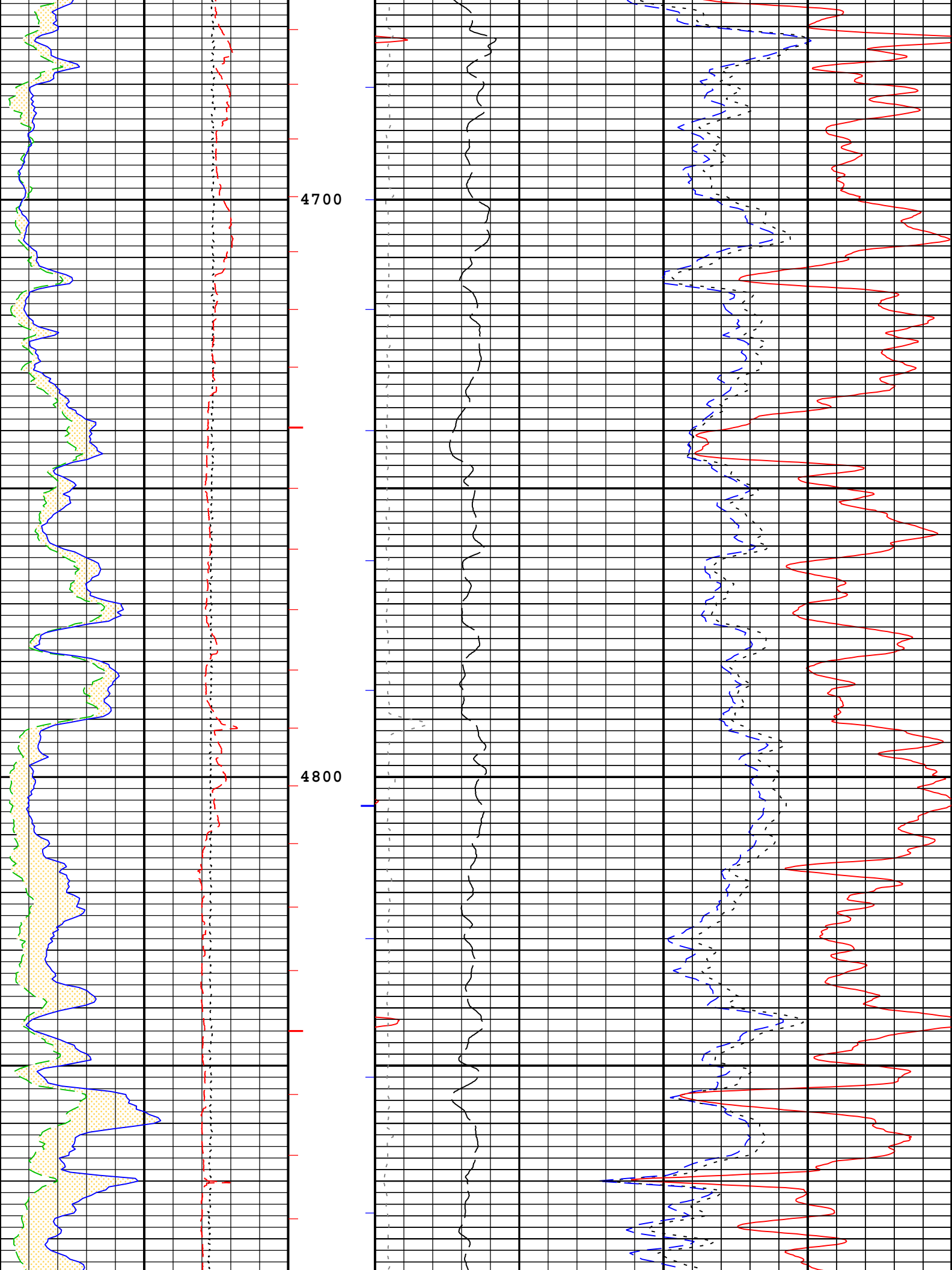


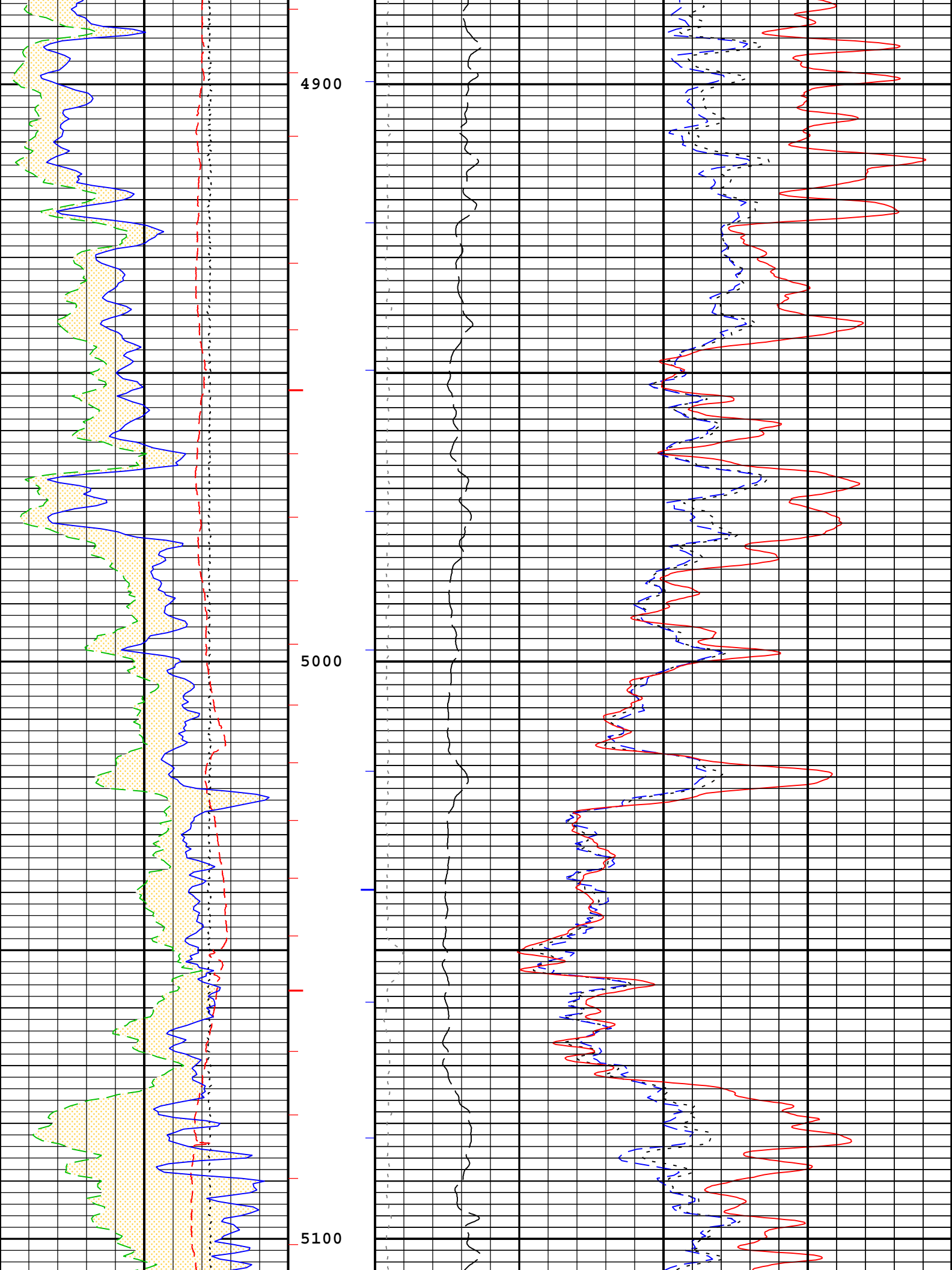


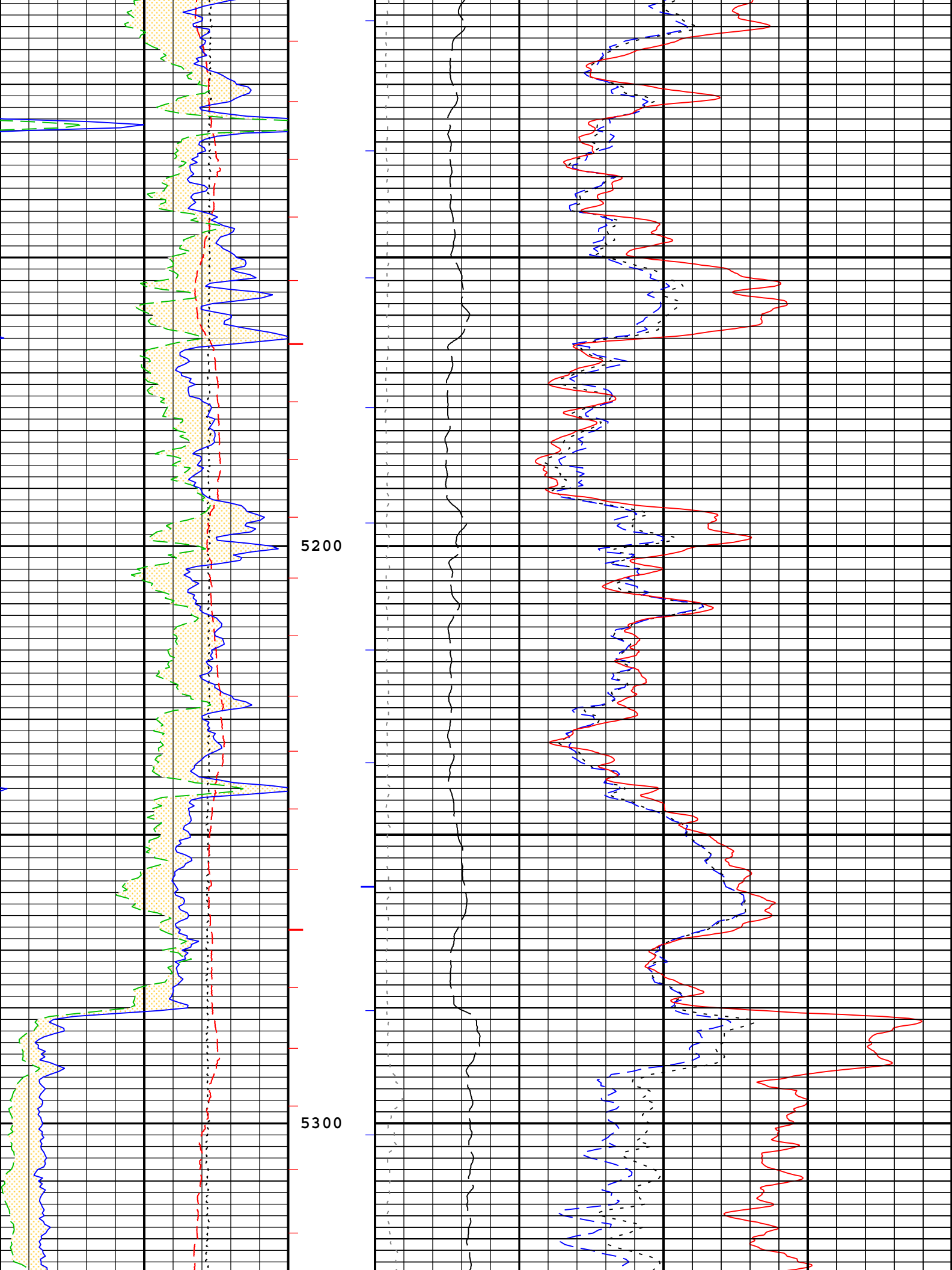


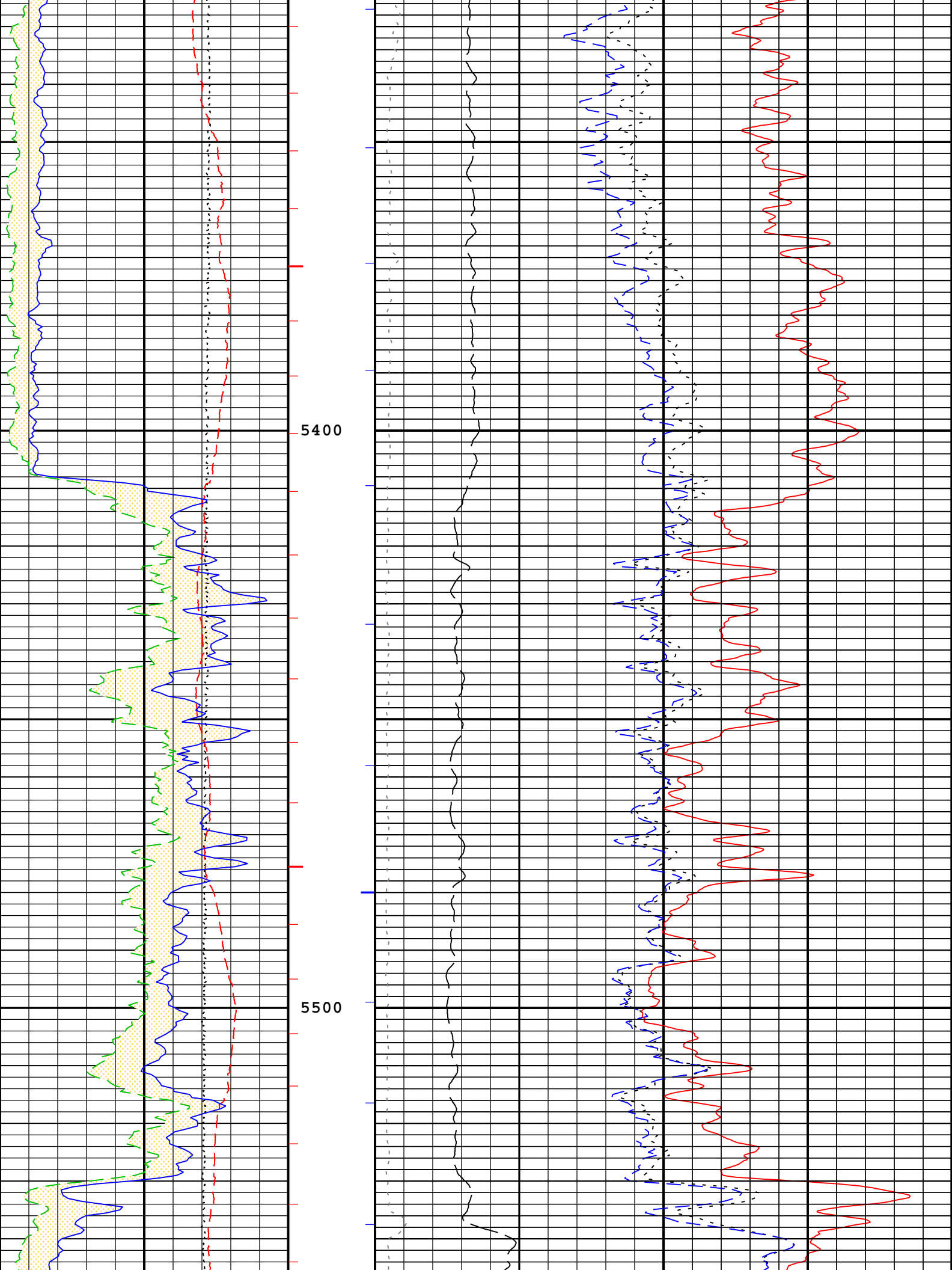


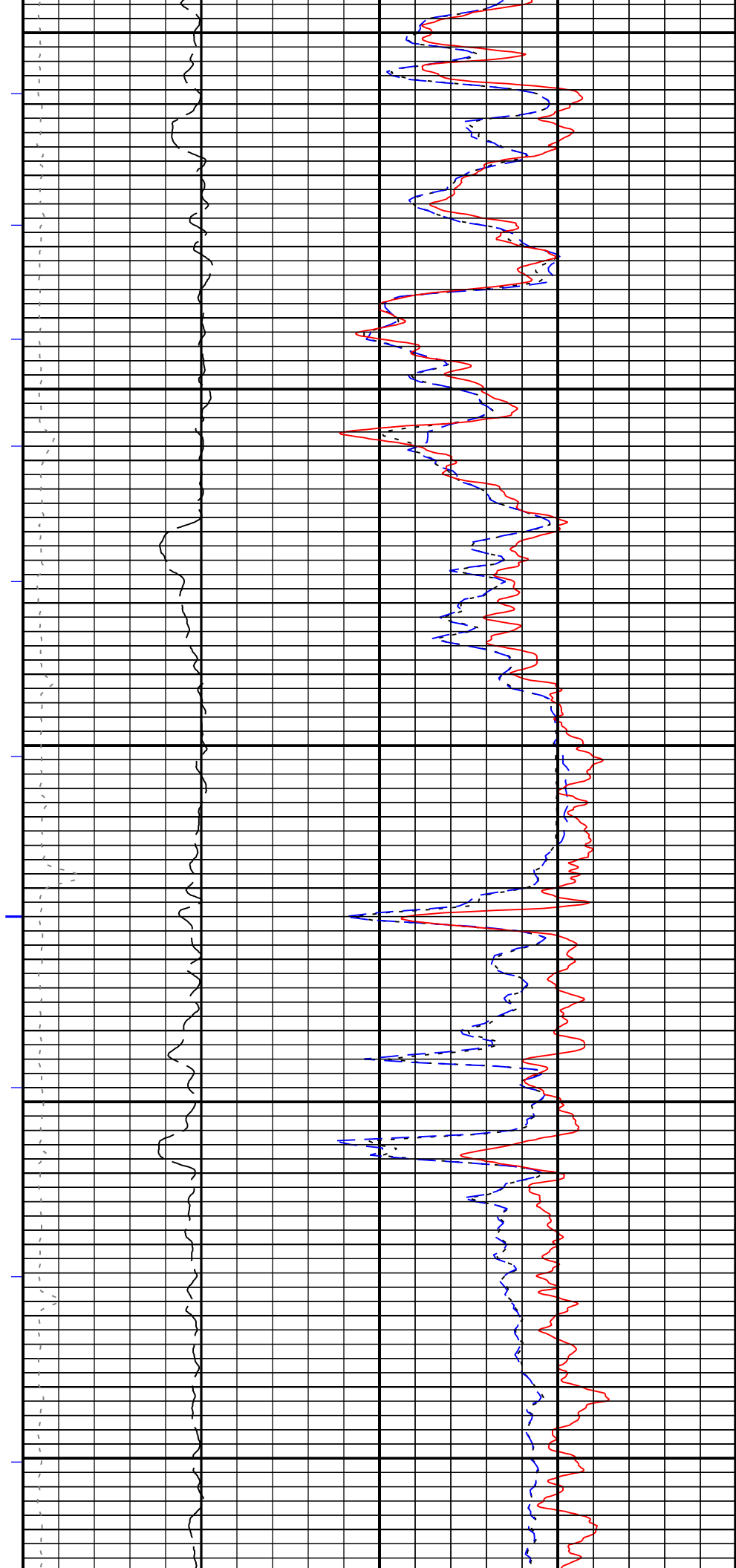
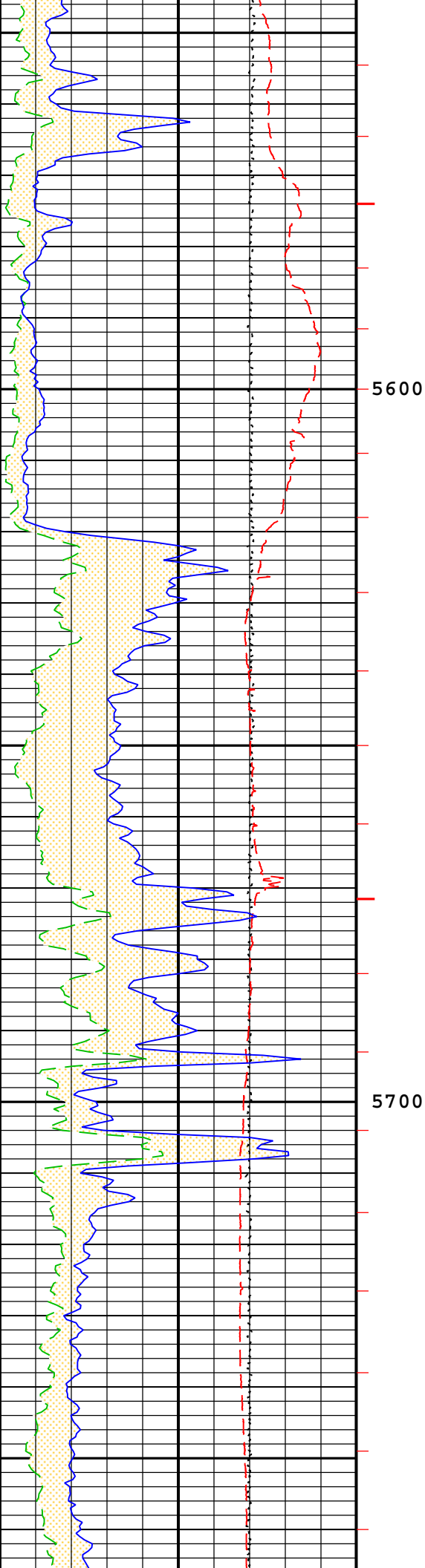


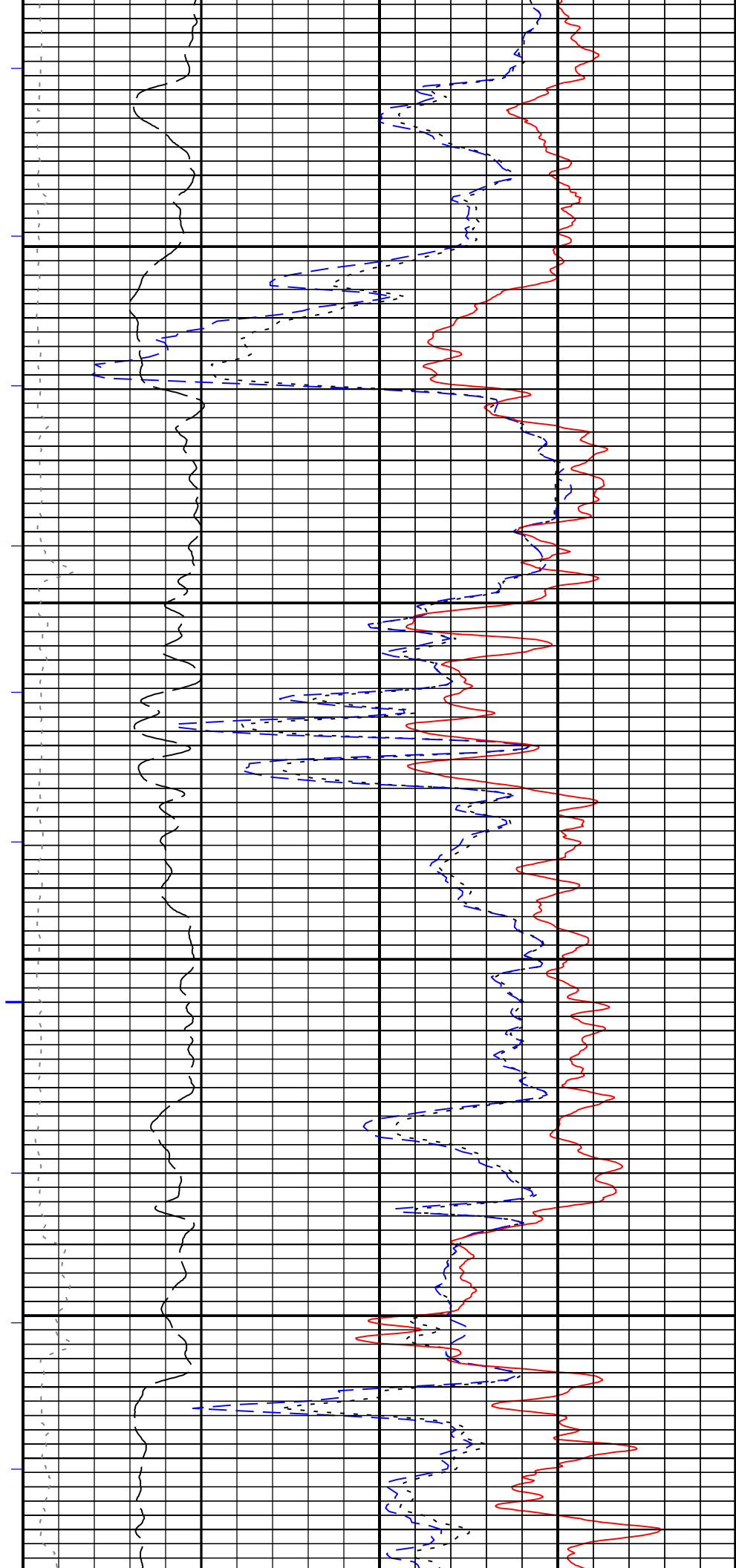
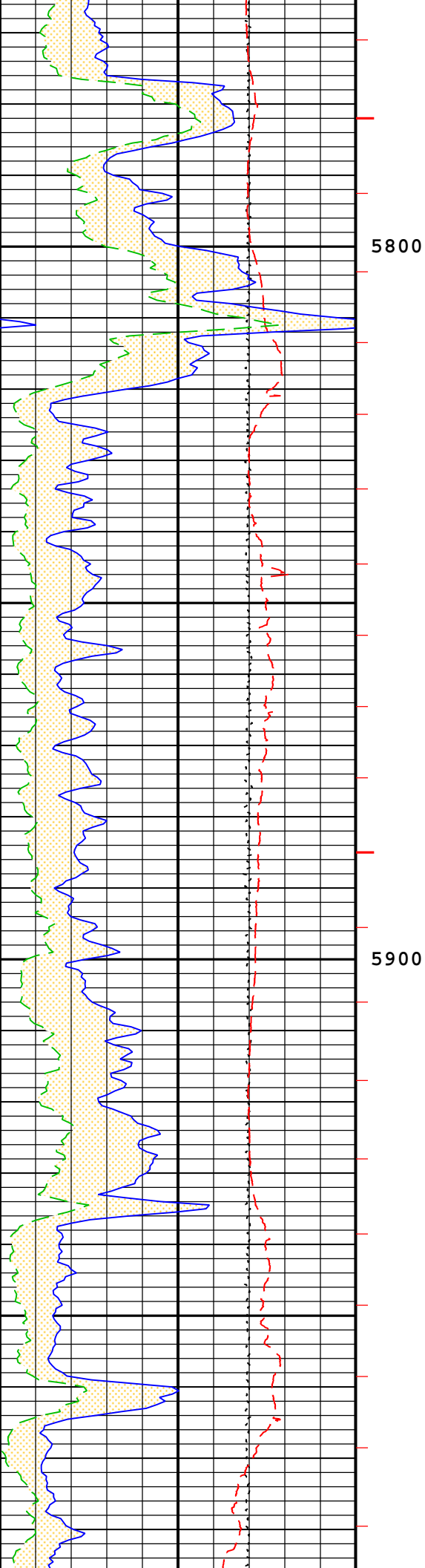


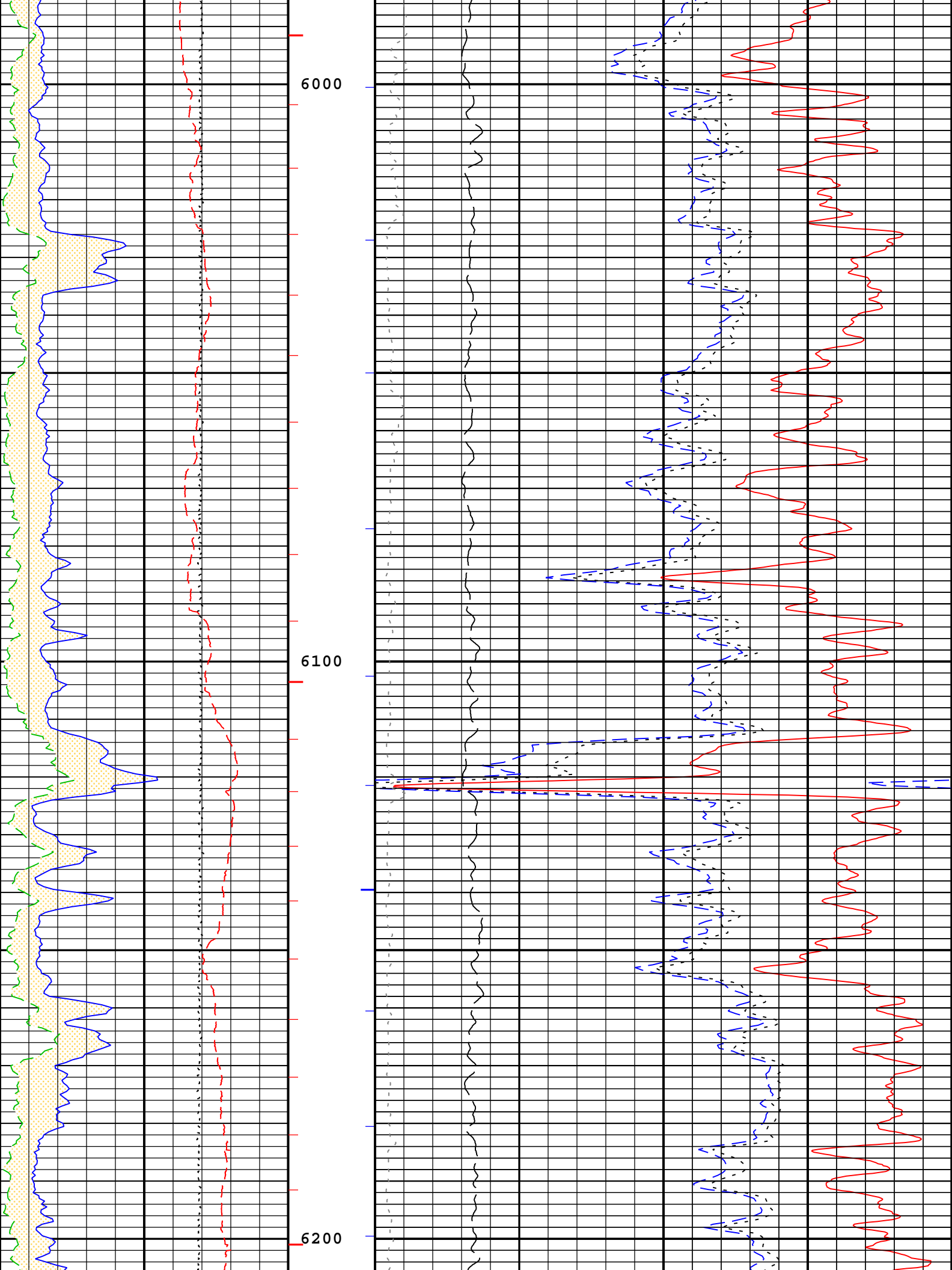


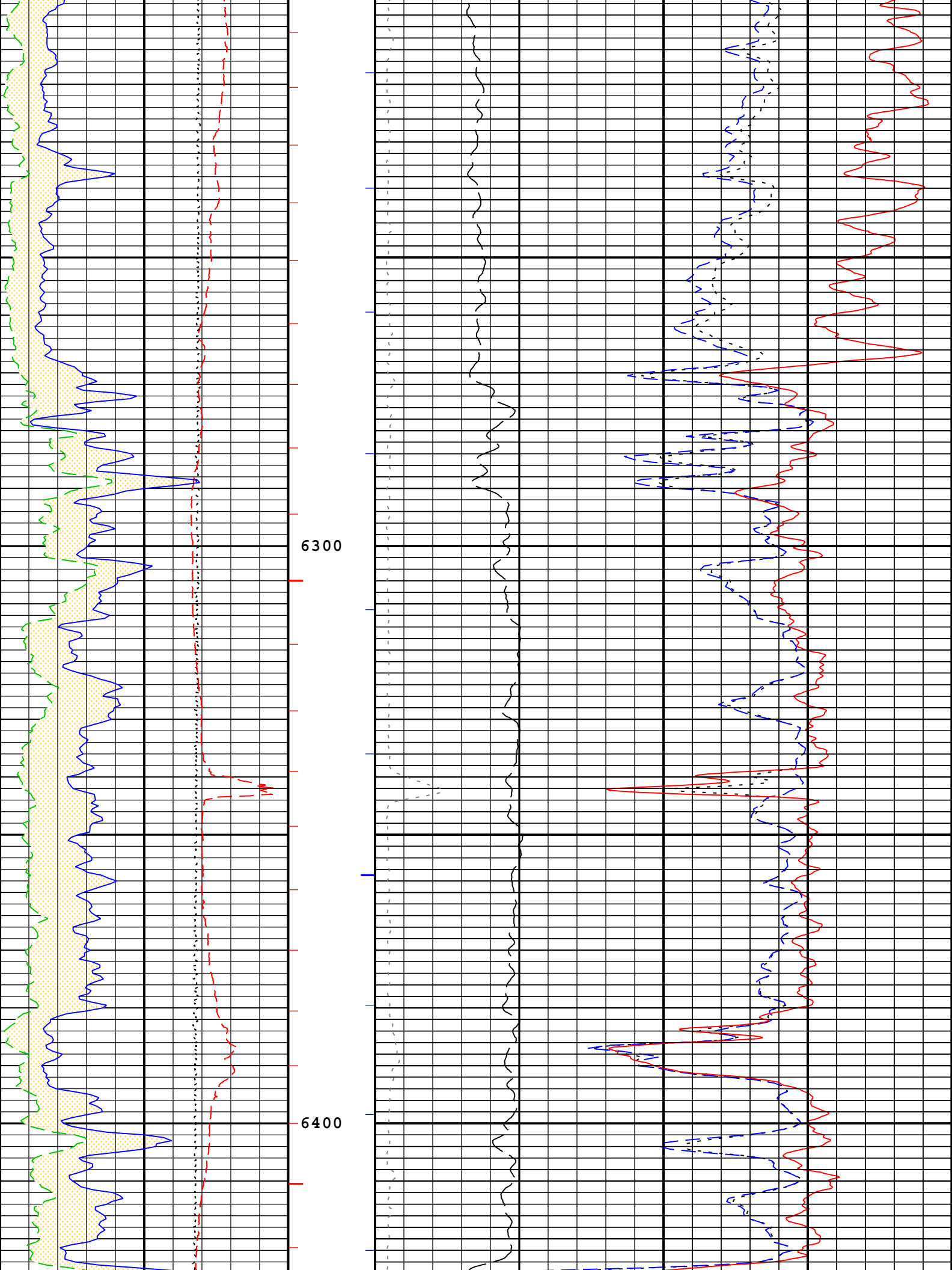


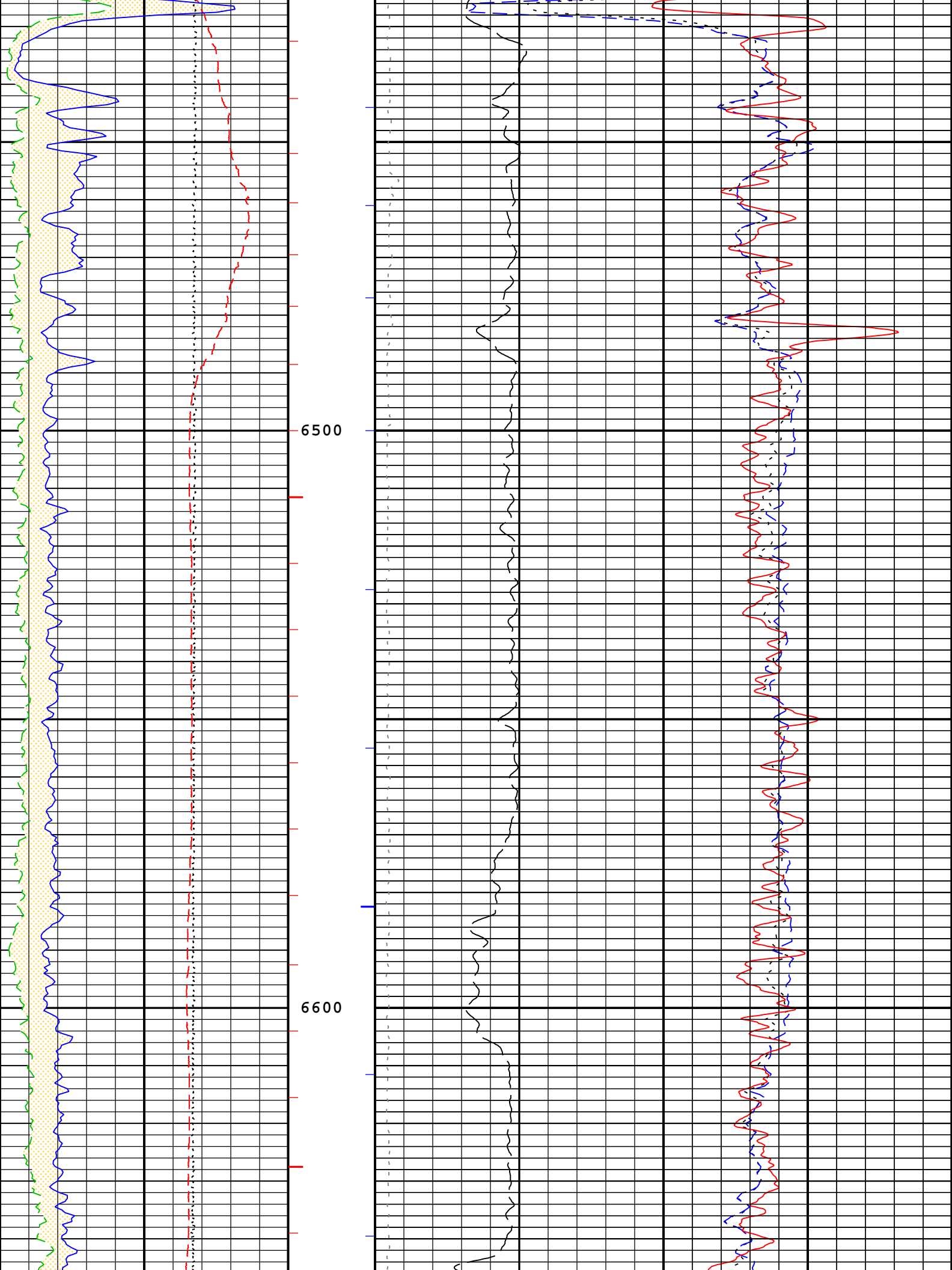


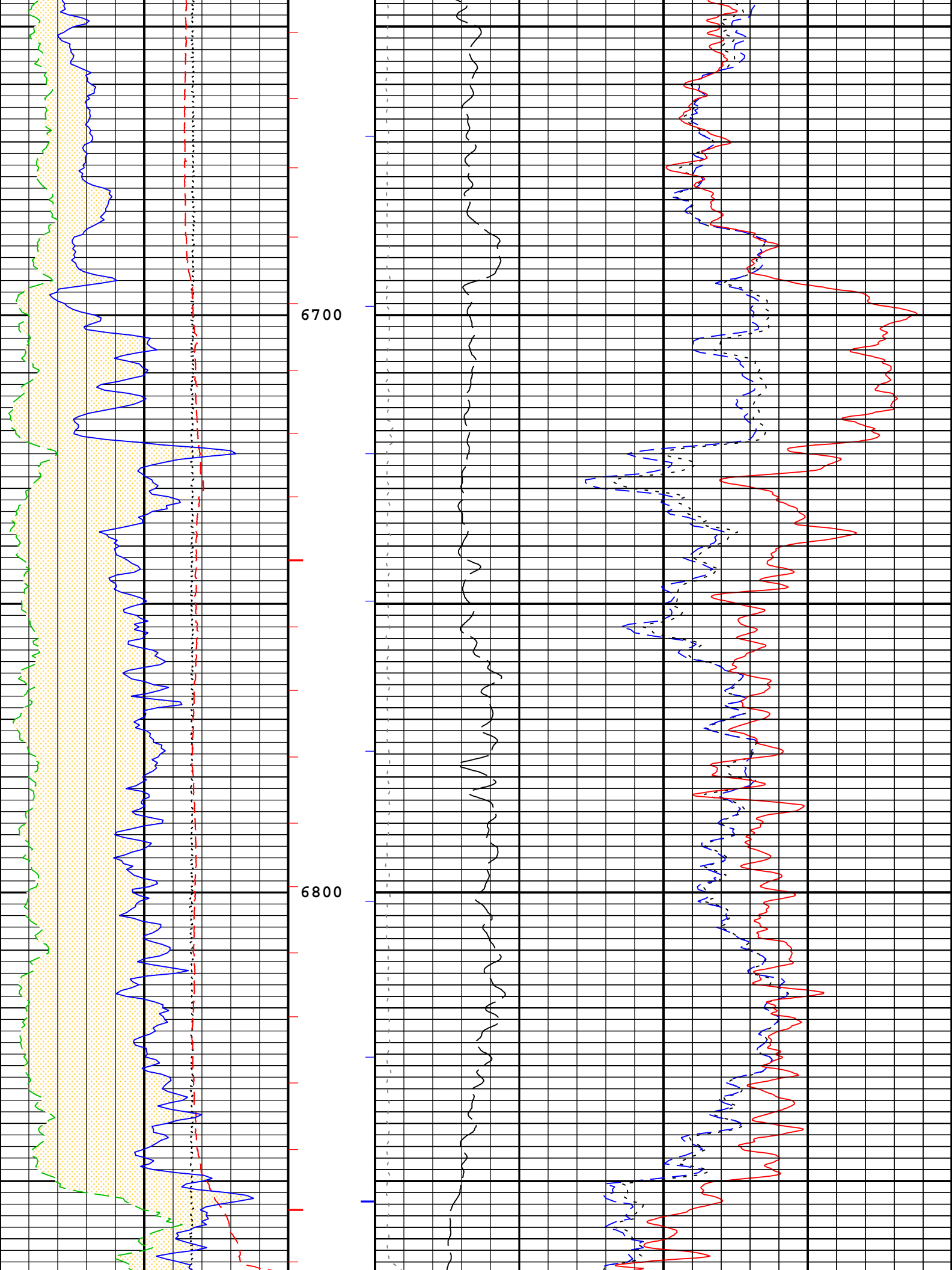


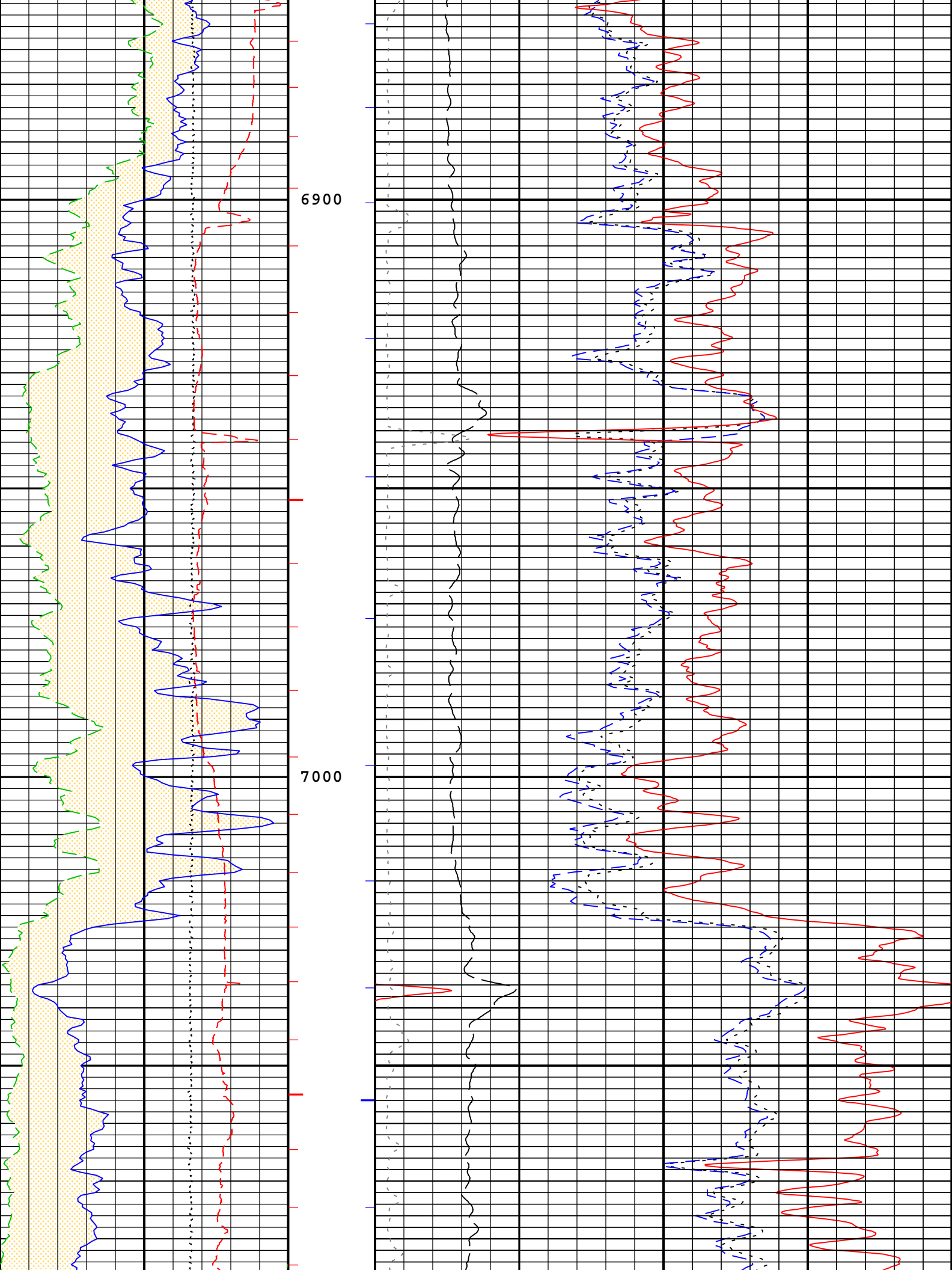


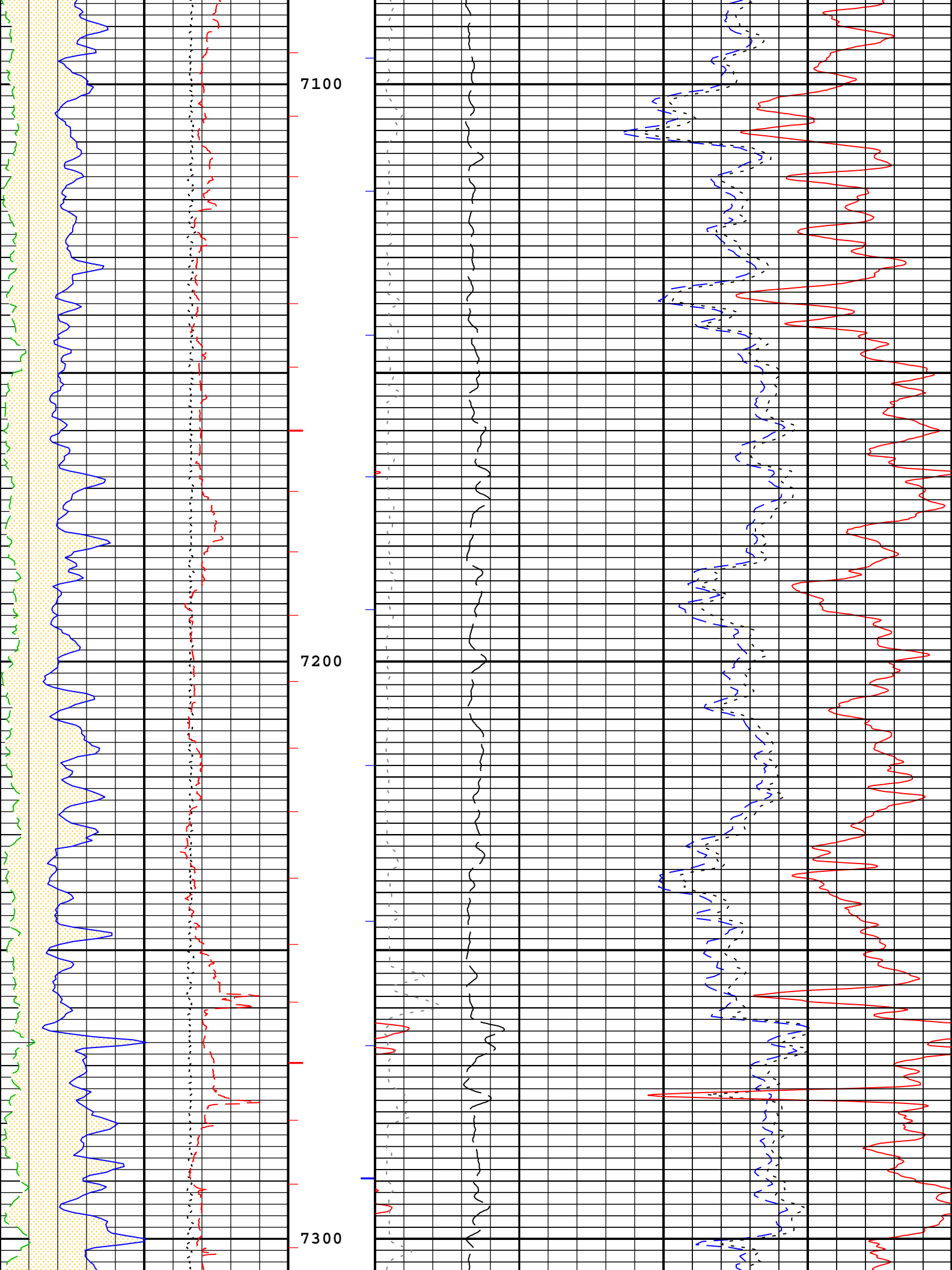


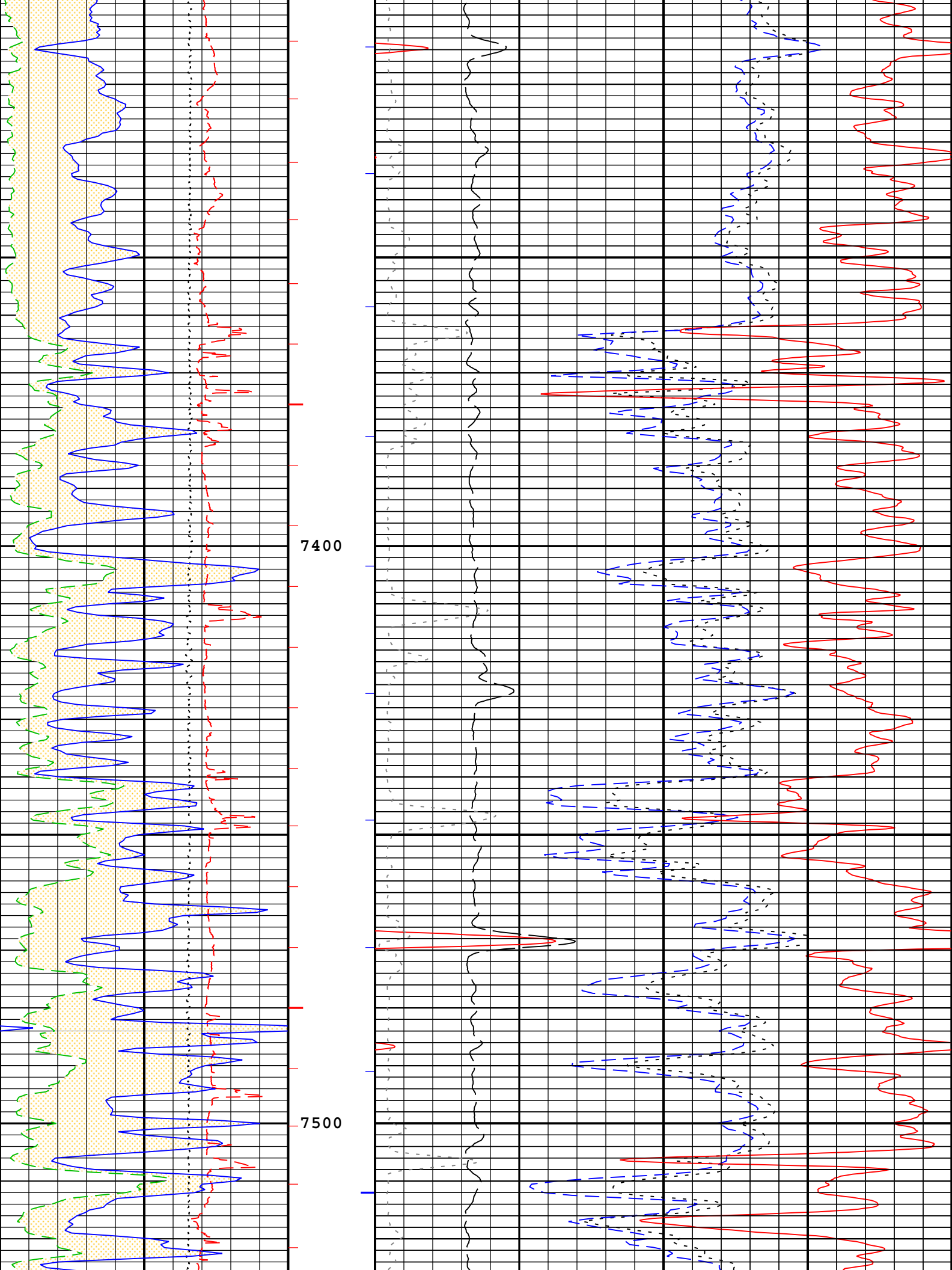


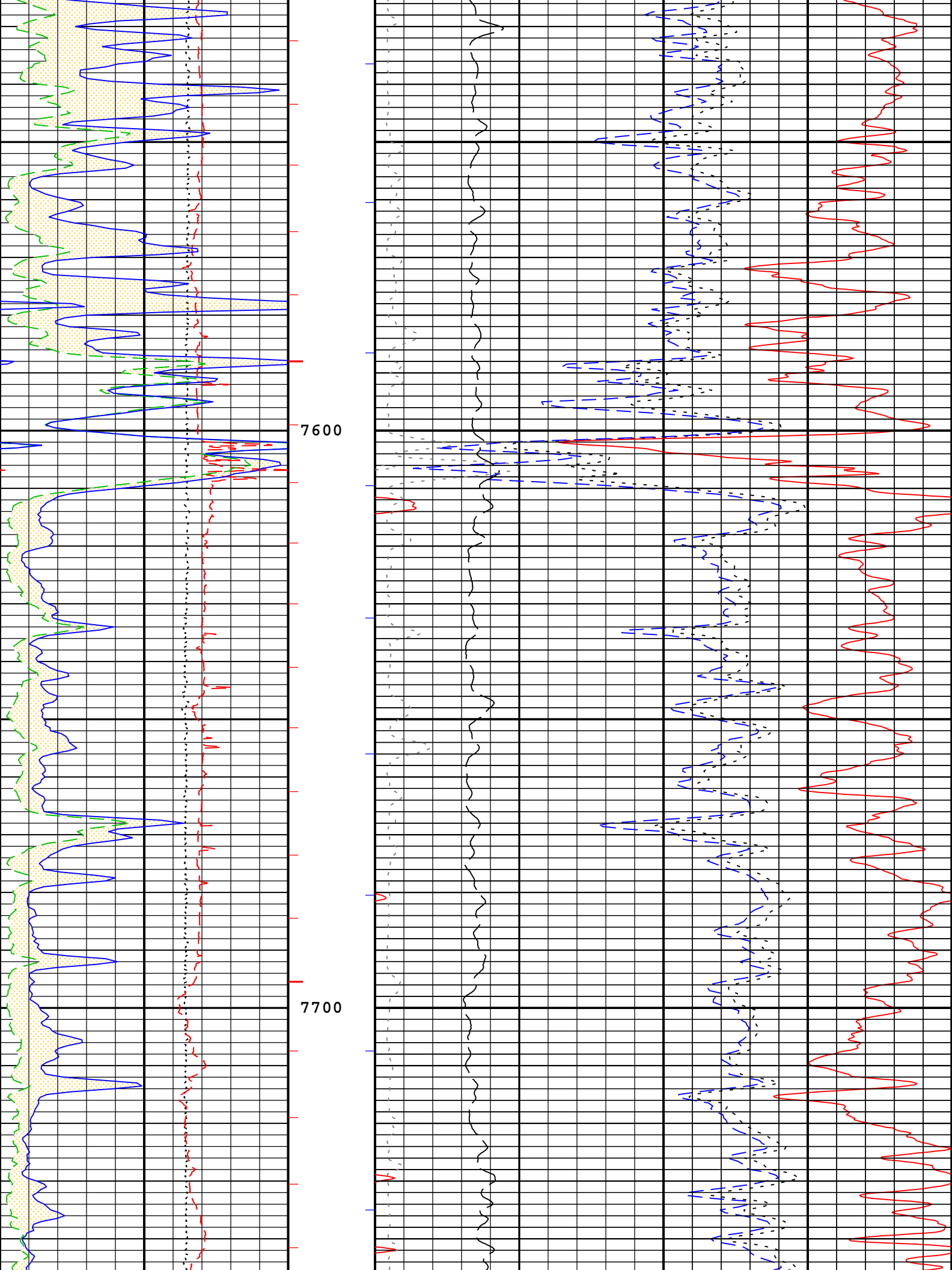


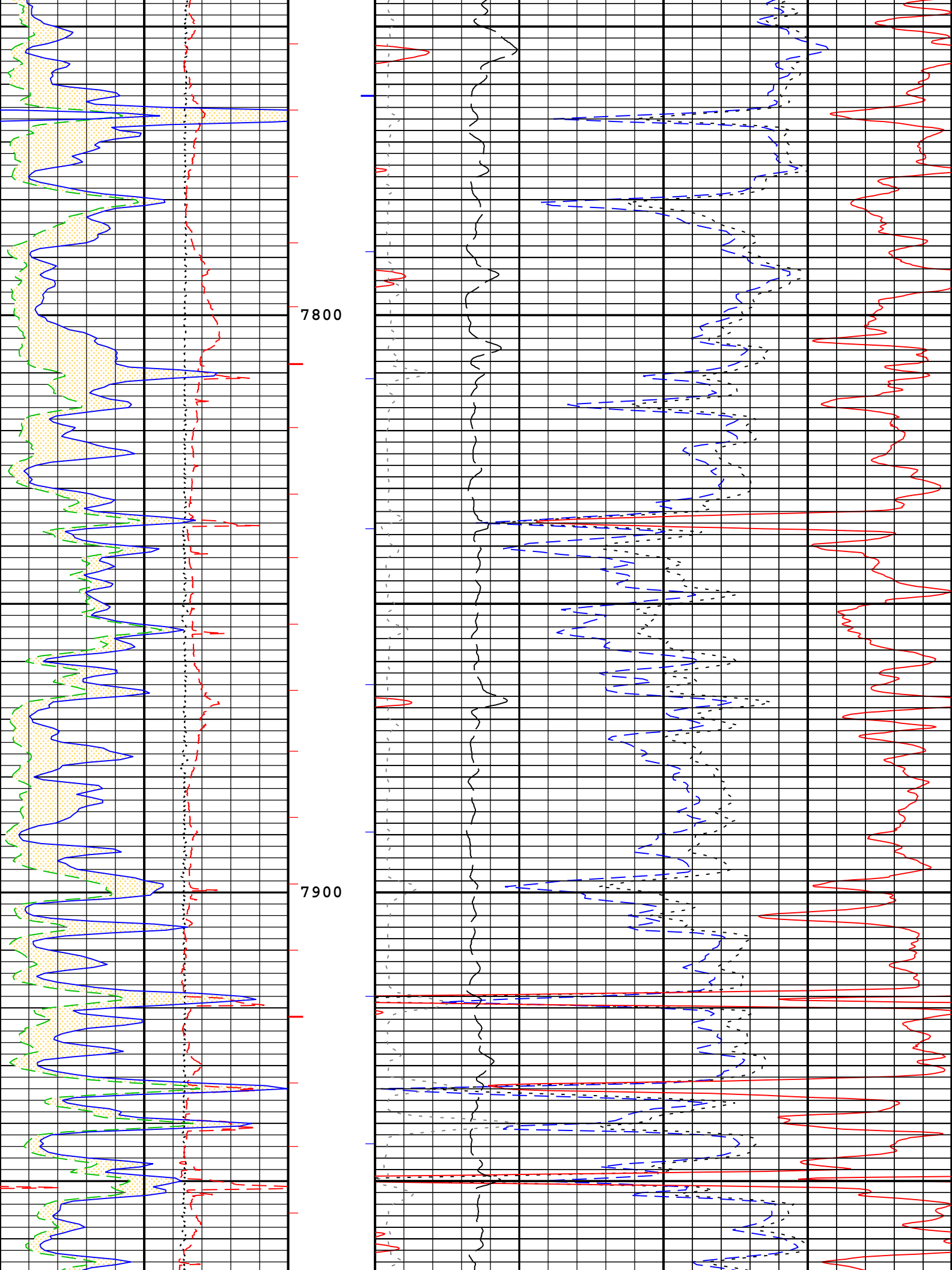


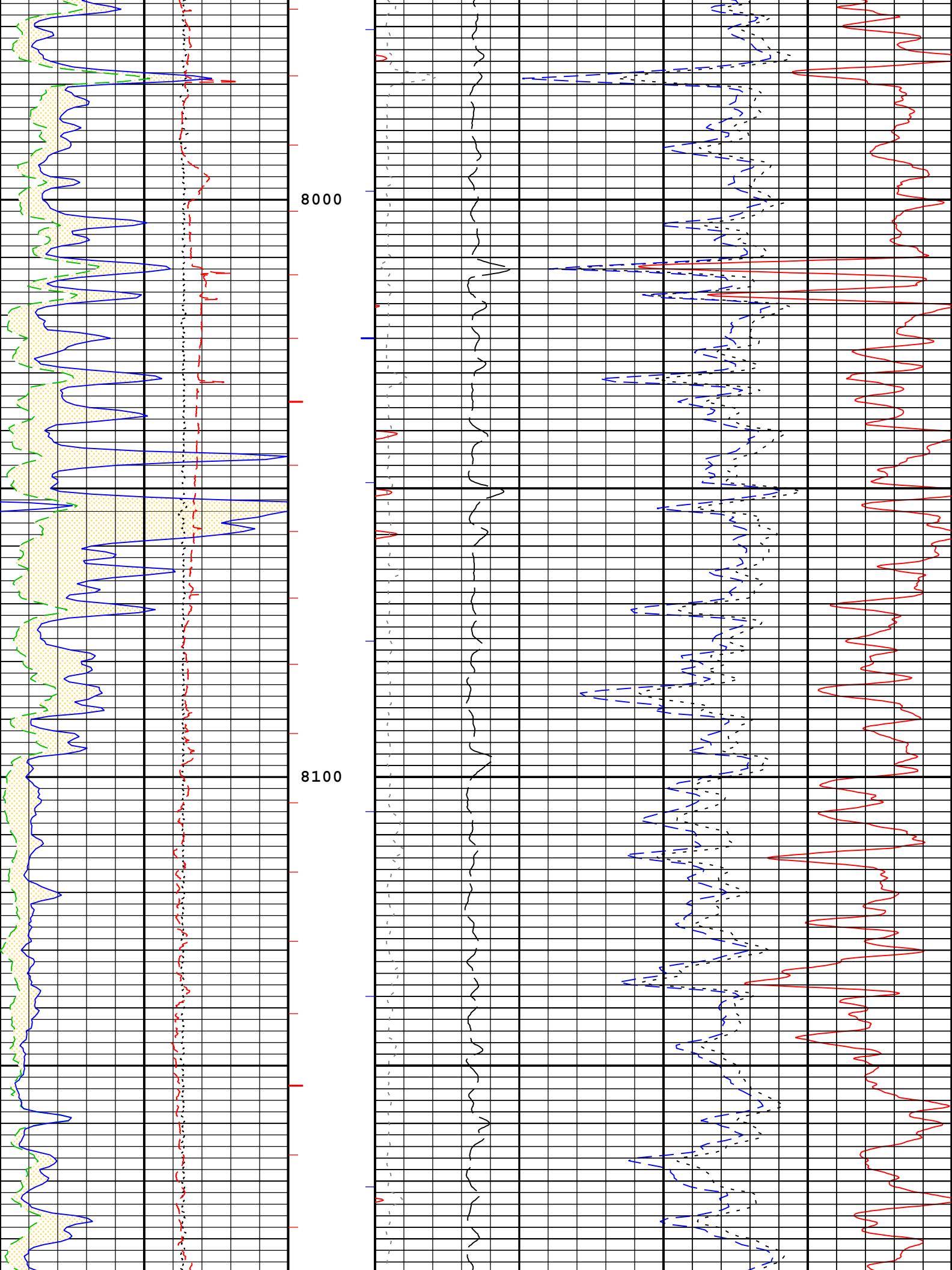


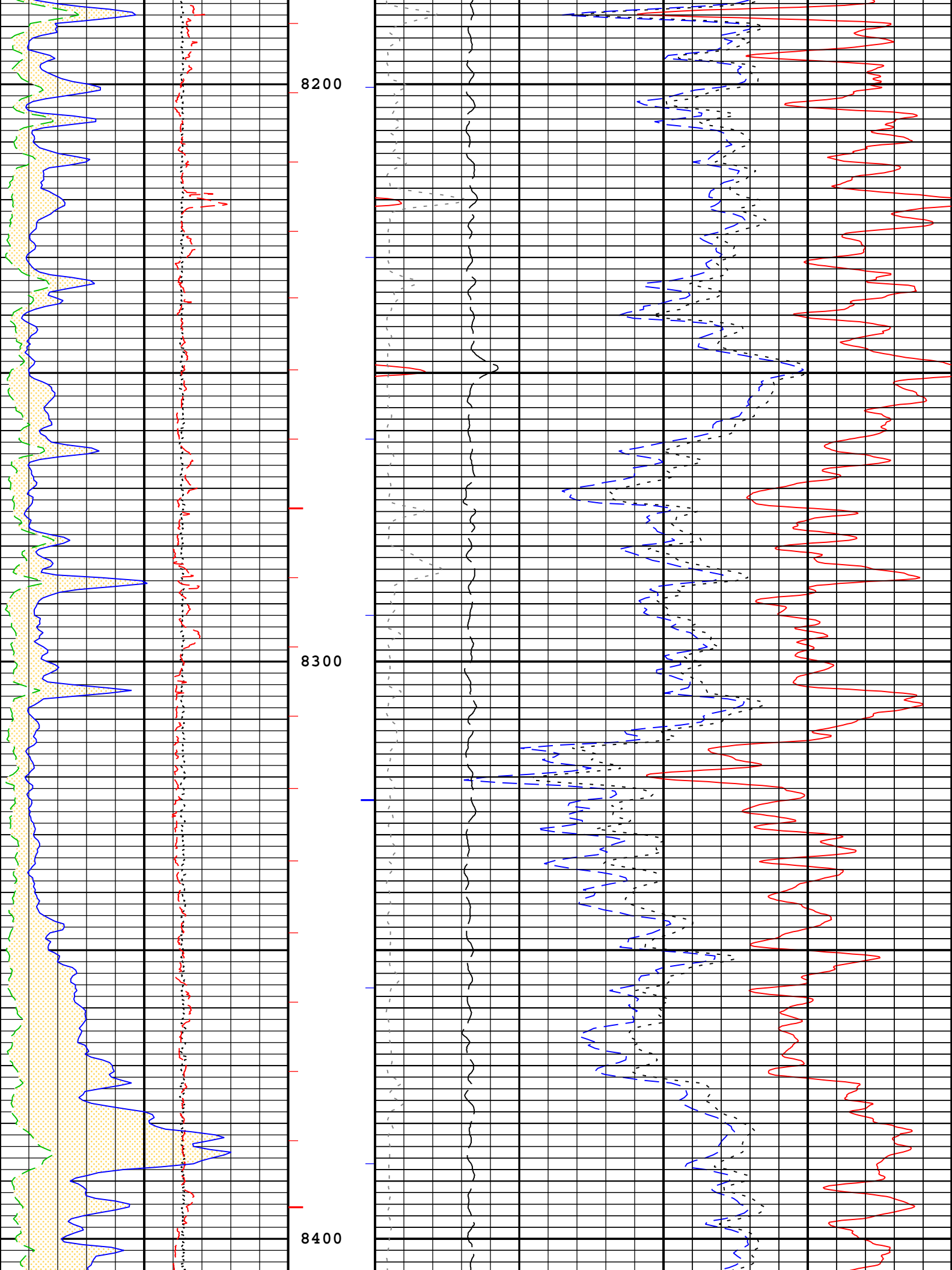


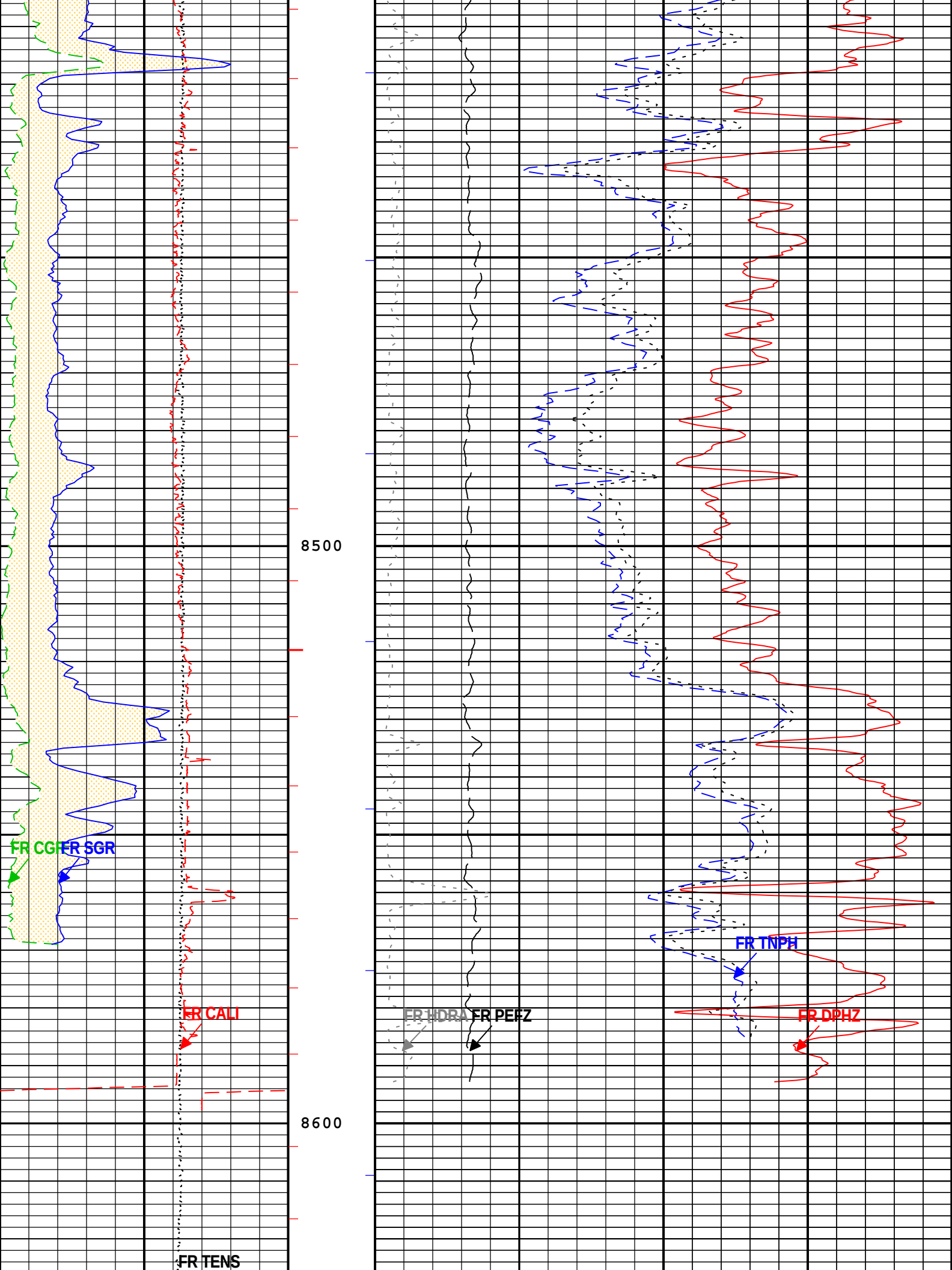












8630.00ft

5" Porosity

Cable Tension (TENS)

0.3	ft3/ft3	-0.1
-----	---------	------

TIME 1900 - Time Marked every 60.00 (s)

—ICV - Integrated Cement Volume every 10.00 (ft3)

—ICV - Integrated Cement Volume every 100.00 (ft3)

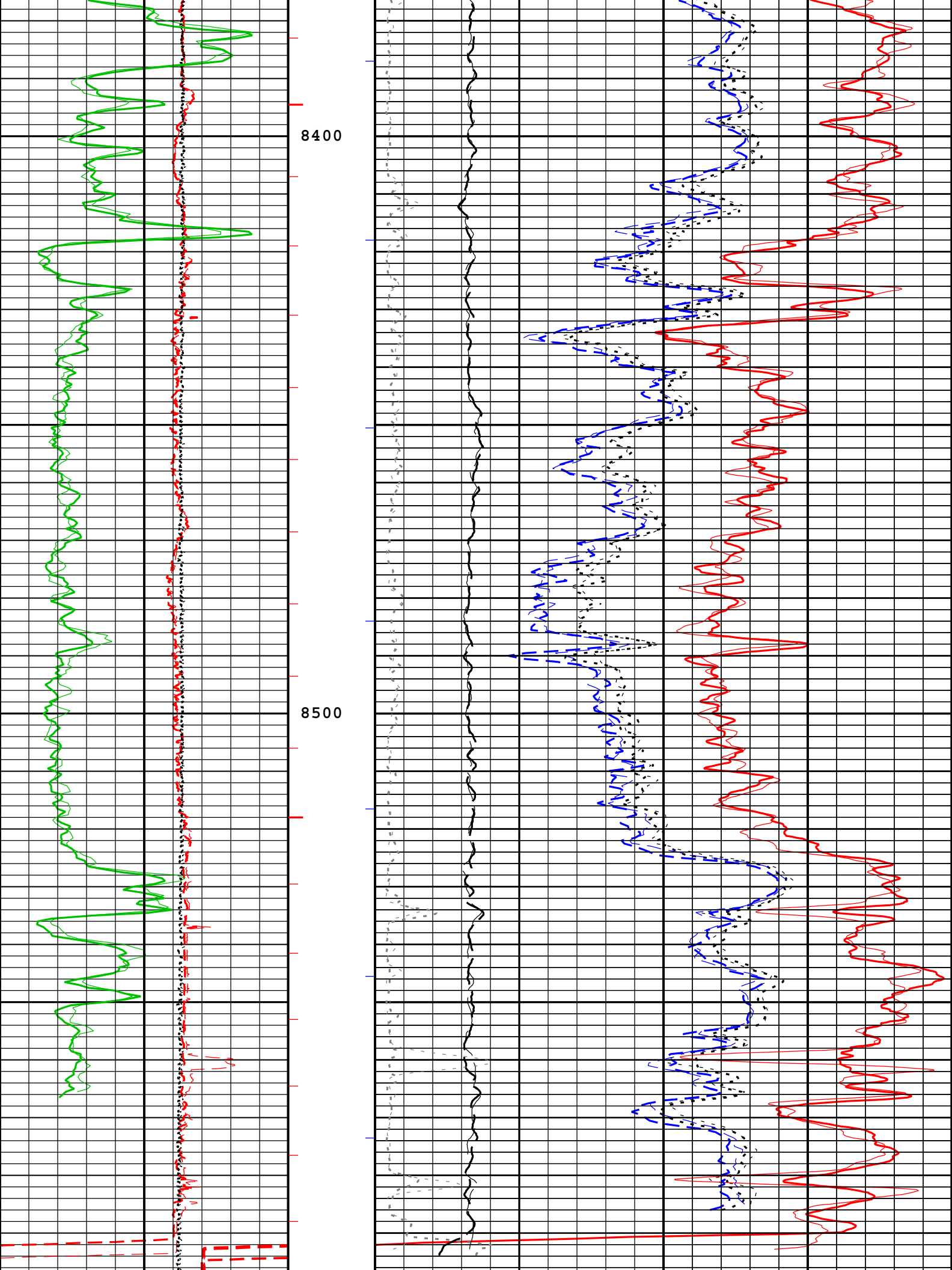
└ IHV - Integrated Hole Volume every 10.00 (ft3)

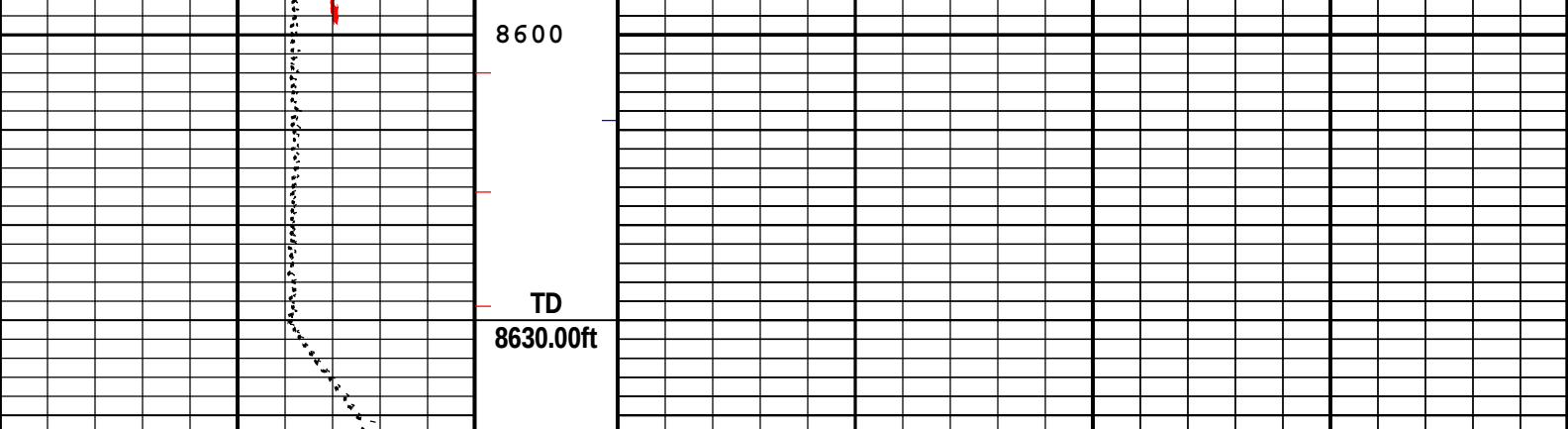
— IHV - Integrated Hole Volume every 100.00 (ft3)

Description: HRLT BASIC LOG	Format: Log (Porosity_5_Inch)	Index Scale: 5 in per 100 ft	Index Unit: ft	Index Type: Measured Depth	Creation Date: 30-Nov-2014 17:36:43
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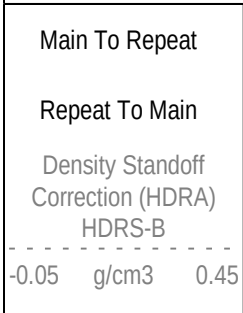
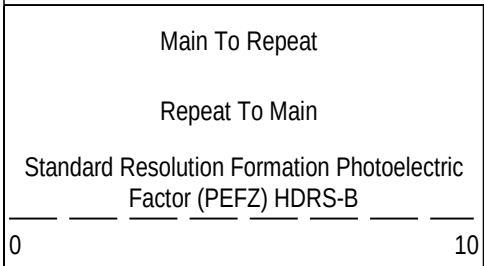
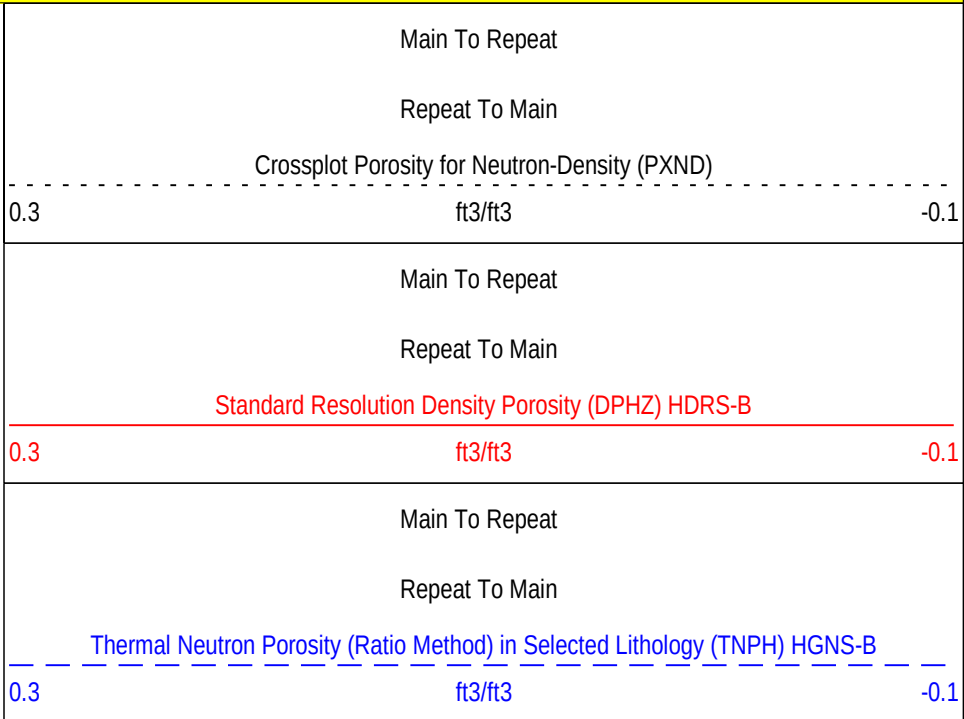
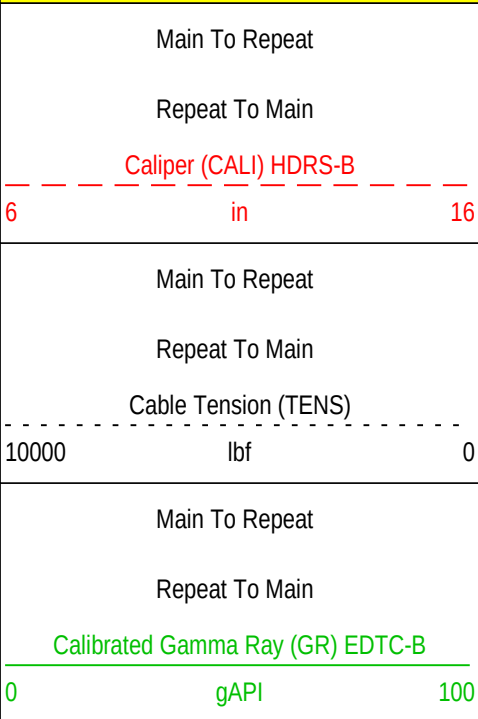
Channel Processing Parameters	
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Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BHT	Bottom Hole Temperature	Borehole	107.3	degF
BS	Bit Size	WLSESSION	Depth Zoned	in
BSAL	Borehole Salinity	Borehole	500	ppm
CALI_SHIFT	CALI Supplementary Offset	HDRS-B	0.168	in
CBLO	Casing Bottom (Logger)	WLSESSION	3219.5	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	Depth Zoned	in
DBCC	Barite Constant Correction Flag	HNGS-BA	None	
DFD	Drilling Fluid Density	Borehole	8.8	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	Salt Brine	
DHC	Density Hole Correction	HDRS-B	Bit Size	
FCD	Future Casing (Outer) Diameter	WLSESSION	9.625	in
FD	Fluid Density	Borehole	1	g/cm3
FSAL	Formation Salinity	Borehole	0	ppm
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	AMF	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	





Repeat Analysis



—ICV - Integrated Cement Volume every 10.00 (ft3)

—ICV - Integrated Cement Volume every 100.00 (ft3)

—IHV - Integrated Hole Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

—IHV - Integrated Hole Volume every 100.00 (ft3)

Integration Summary

Pass Summary

All depths are referenced to toolstring zero

Log

Company:PB ENERGY STORAGE SERVICES, INC

Well:DCP Linam Ranch AGI #2

Two: Repeat[2]:Up:S021

Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:36:48

— IHV - Integrated Hole Volume every 100.00 (ft3)

└ IHV - Integrated Hole Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

—ICV - Integrated Cement Volume every 100.00 (ft3)

—ICV - Integrated Cement Volume every 10.00 (ft3)

Density Standoff
Correction (HDRA)
HDRS-B

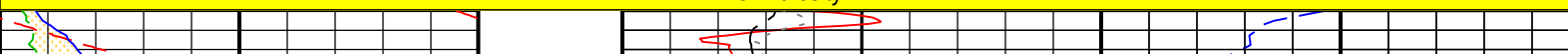
-0.05 g/cm³ 0.45

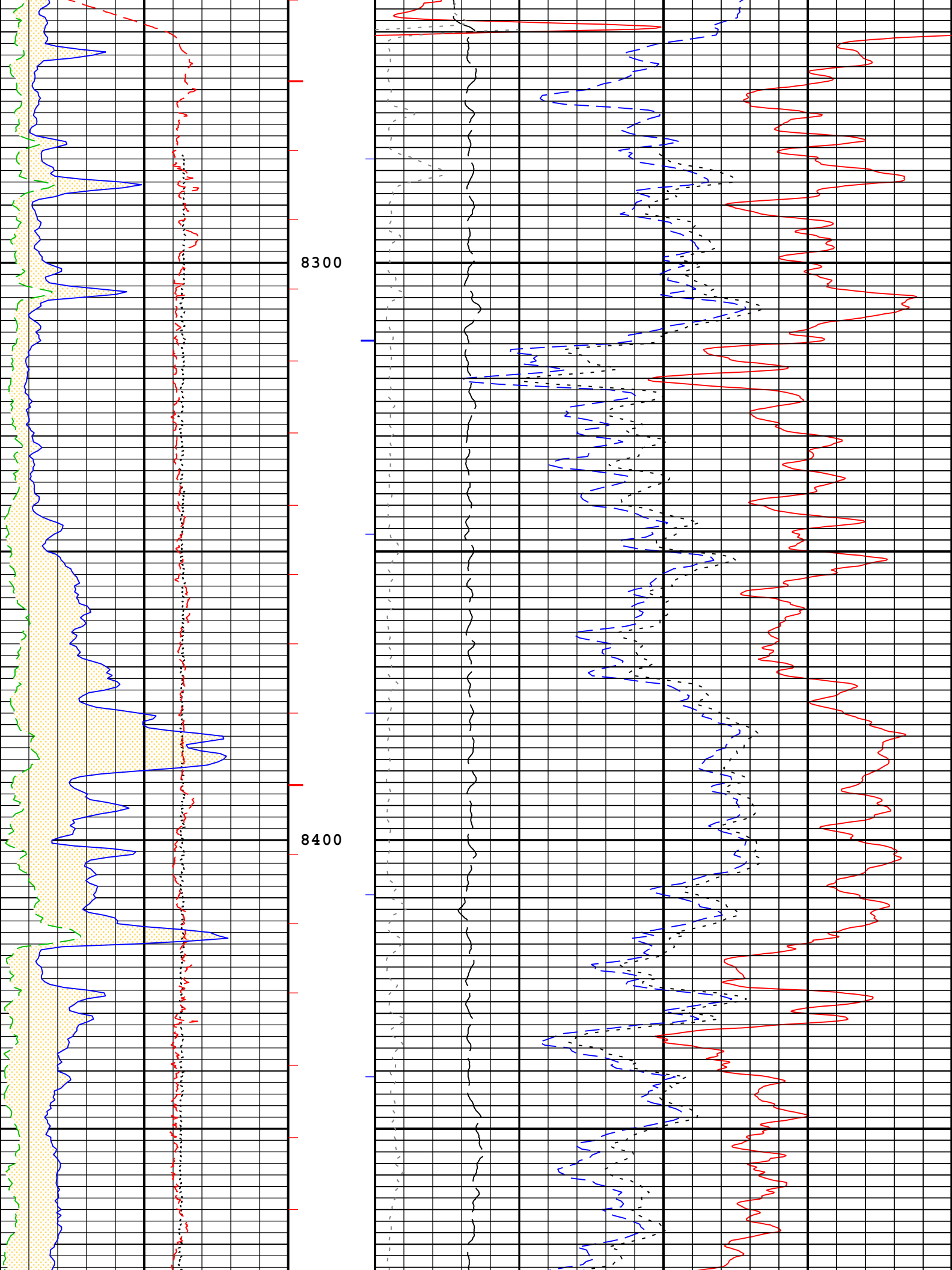
Crossplot Porosity for Neutron-Density (PXND)

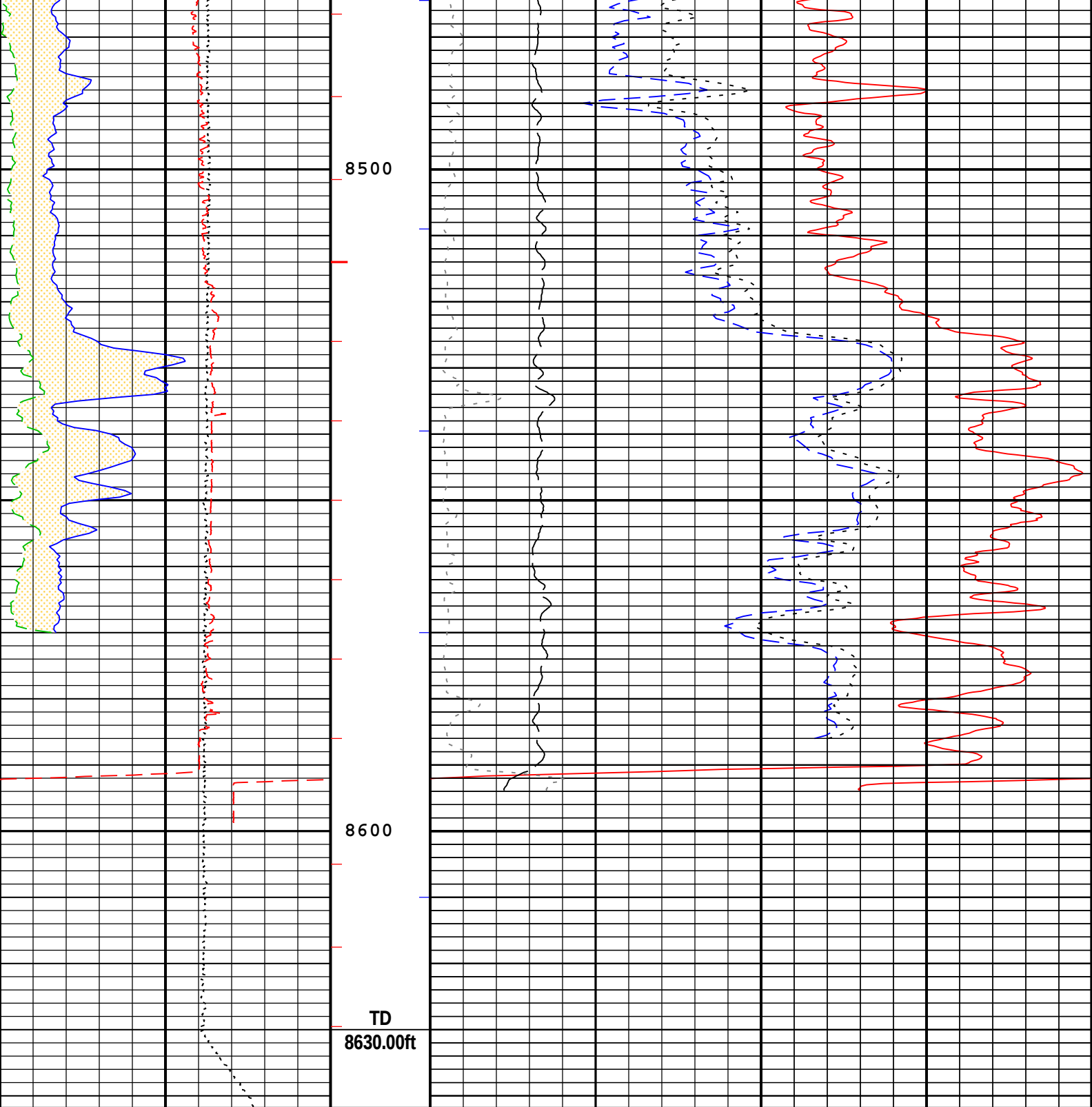
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-B

Standard Resolution Density Porosity (DPHZ) HDRS-B		
0.3	ft3/ft3	-0.3

5" Porosity







5" Porosity	
Uranium Indicator	Crossplot Porosity for Neutron-Density (PXND)
Cable Tension (TENS)	0.3 ft3/ft3 -0.1
10000 lbf 0	Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-B
Caliper (CALI) HDRS-B	0.3 ft3/ft3 -0.1
6 in 16	Standard Resolution Density Porosity (DPHZ) HDRS-B
Gamma Ray Contribution from Thorium and Potassium (CGR) HGNS-BA	0.3 ft3/ft3 -0.1
0 gAPI 100	Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-B
Spectroscopy Gamma Ray (SGR) HGNS-BA	0 10
	Density Standoff

0

gAPI

100

Correction (HDRA)

HDRS-B

-0.05g/cm30.45

ICV - Integrated Cement Volume every 10.00 (ft3)

ICV - Integrated Cement Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

IHV - Integrated Hole Volume every 10.00 (ft3)

IHV - Integrated Hole Volume every 100.00 (ft3)

Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:36:48

Calibration Report

HDRS-B (HILT Density and Rxo Sonde, 125 degC) Calibration - Run Two

Primary Equipment :			
HILT High-Resolution Control Cartridge, 125 degC	HRCC-B	839	
15 kpsi, tungsten shielding	HRGD-B	3968	
Auxiliary Equipment :			
HRDD Backscatter Detector	Backscatter		
HRDD Long Spacing Detector	Long Spacing	28774	
HRDD Short Spacing Detector	Short Spacing	27483	
Cesium 137 Gamma-Ray Logging Source	GSR-J	5339	
HILT High-Resolution Control Cartridge, 125 degC	HRCC-B	839	
HRMS, 125 degC, 10 kpsi	HRMS-B	1829	
Calibration Parameter :			
Small Ring Size (Caliper Calibration Small Ring)	8.00		
Large Ring Size (Caliper Calibration Large Ring)	12.00		

HDRS Caliper Calibration - Caliper Accumulations

Before (Measured): 10:47:41 26-Nov-2014 Expired by 3 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	in	Before	8.00	6.00	8.43	10.00	
Large Ring	in	Before	12.00	9.00	12.60	15.00	

HDRS Density Calibration - Inversion Results

Master (EEPROM): 19:43:00 07-Nov-2014							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Rho Aluminum	g/cm3	Master	2.596	2.586	2.600	2.606	
Rho Magnesium	g/cm3	Master	1.686	1.676	1.690	1.696	
Pe Aluminum		Master	2.570	2.470	2.565	2.670	
Pe Magnesium		Master	2.650	2.550	2.599	2.750	

HDRS Density Calibration - Deviation Summary

Master (EEPROM): 19:43:00 07-Nov-2014							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Average Deviation	%	Master	0	-0.6000	0.2183	0.6000	
BS Max Deviation	%	Master	0	-1.6000	0.5835	1.6000	
SS Average Deviation	%	Master	0	-1.0000	0.3844	1.0000	
SS Max Deviation	%	Master	0	-2.5000	2.0238	2.5000	
LS Average Deviation	%	Master	0	-1.5000	0.7605	1.5000	
LS Max Deviation	%	Master	0	-3.5000	1.8937	3.5000	

HDRS Density Calibration - Background Summary

Master (EEPROM): 19:43:00 07-Nov-2014				Before (Measured): 10:27:31 26-Nov-2014 Expired by 3 days			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Master	1.0000		0.7478		
		Before	0.7478	0.7104	0.7506	0.7851	
		Before-Master	-----	-----	0.0028	-----	
BS Window Sum	1/s	Master	1		23005		
		Before	23005	21854	23204	24155	

SS Window Ratio		Before-Master	-----	-----	199	-----	
		Master	1.0000		0.4775		
		Before	0.4775	0.4537	0.4805	0.5014	
SS Window Sum	1/s	Before-Master	-----	-----	0.0030	-----	
		Master	1		10860		
		Before	10860	10317	10860	11403	
LS Window Ratio		Before-Master	-----	-----	0	-----	
		Master	1.0000		0.2972		
		Before	0.2972	0.2824	0.2931	0.3121	
LS Window Sum	1/s	Before-Master	-----	-----	-0.0041	-----	
		Master	1		1200		
		Before	1200	1140	1197	1260	
		Before-Master	-----	-----	-3	-----	

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM):		19:43:00 07-Nov-2014		Before (Measured):		10:27:31 26-Nov-2014 Expired by 3 days	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Master		1000	1841	2400	
		Before		1000	1848	2400	
		Before-Master	-----	-100	7	100	
SS PM High Voltage	V	Master		1000	1788	2400	
		Before		1000	1802	2400	
		Before-Master	-----	-100	14	100	
LS PM High Voltage	V	Master		1000	1314	2400	
		Before		1000	1314	2400	
		Before-Master	-----	-100	0	100	

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM):		19:43:00 07-Nov-2014		Before (Measured):		10:27:31 26-Nov-2014 Expired by 3 days	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Crystal Resolution	%	Master		5.00	11.23	25.00	
		Before		5.00	11.07	25.00	
		Before-Master	-----	-1.00	-0.16	1.00	
SS Crystal Resolution	%	Master		5.00	9.80	20.00	
		Before		5.00	9.86	20.00	
		Before-Master	-----	-1.00	0.06	1.00	
LS Crystal Resolution	%	Master		5.00	8.65	20.00	
		Before		5.00	8.62	20.00	
		Before-Master	-----	-1.00	-0.03	1.00	

HDRS MCFL Calibration - MCFL Accumulations

Before (Measured):		10:27:46 26-Nov-2014 Expired by 3 days					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Main Resistivity	ohm.m	Before	3875	3565	3851	4185	
Deep Resistivity	ohm.m	Before	3830	3524	3800	4136	
Shallow Resistivity	ohm.m	Before	3830	3524	3811	4136	

HGNS-B (HILT Gamma-Ray and Neutron Sonde, 125 degC) Calibration - Run Two

Primary Equipment :			
HILT Gamma-Ray and Neutron Sonde, 125 degC		HGNS-B	951
Auxiliary Equipment :			
HGNS Accelerometer, 125 degC		HACCZ-B	448
Calibration Parameter :			
Water Temperature			
Housing Size			
JIG-BKG (Jig minus background reference)		165	

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured):		12:29:12 30-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.2	31.5	32.1	32.8	

HGNS Accelerometer EEPROM - Accelerometer EEPROM Read

Master (EEPROM):		00:00:00 15-Dec-1996					
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Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Accelerometer Manufacturer		Master			Sunstrand			
Accelerometer Reference Temperature	degF	Master		30.2	68.0	122.0		
Accelerometer Coefficients - 0		Master	----	----	3515.000	----		
Accelerometer Coefficients - 1		Master	----	----	10.230	----		
Accelerometer Coefficients - 2		Master	----	----	0.026	----		
Accelerometer Coefficients - 3		Master	----	----	0.000	----		
Accelerometer Coefficients - 4		Master	----	----	2.177	----		
Accelerometer Coefficients - 5		Master	----	----	0.000	----		
Accelerometer Coefficients - 6		Master	----	----	0.000	----		
Accelerometer Coefficients - 7		Master	----	----	0.000	----		
Accelerometer Coefficients - 8		Master	----	----	295.800	----		
Accelerometer Coefficients - 9		Master	----	----	0.992	----		
HGNS Neutron Calibration - HGNS Neutron Accumulations								
Master (Manual Entry):		10:25:24 26-Sep-2014		Before (Measured):		10:24:21 26-Nov-2014 Expired by 3 days		
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Near Zero Measurement - 0	1/s	Master	----	----	----	----		
		Before	0	5.0	27.9	40.0		
		Before-Master	----	----	----	----		
Far Zero Measurement - 0	1/s	Master	----	----	----	----		
		Before	0	5.0	28.7	40.0		
		Before-Master	----	----	----	----		
Near Plus Measurement - 0	1/s	Master	----	----	----	----		
		Before	----	----	----	----		
		Before-Master	----	----	----	----		
Far Plus Measurement - 0	1/s	Master	----	----	----	----		
		Before	----	----	----	----		
		Before-Master	----	----	----	----		
Near Corrected Plus Measurement	1/s	Master		4700.0	5109.0	6900.0		
		Before	----	----	----	----		
		Before-Master	----	----	----	----		
Far Corrected Plus Measurement	1/s	Master		1900.0	2098.0	2900.0		
		Before	----	----	----	----		
		Before-Master	----	----	----	----		
HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations								
Before (Measured):		10:53:42 26-Nov-2014 Expired by 3 days						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
RGR Zero Measurement	gAPI	Before	30.0	0	58.6	120.0		
RGR Plus Measurement	gAPI	Before	185.4	157.1	157.7	206.3		
GR Calibration Gain		Before	0.89	0.80	1.05	1.05		

Company:	PB ENERGY STORAGE SERVICES, INC	Schlumberger
Well:	DCP Linam Ranch AGI #2	
Field:	AGI; Bone Spring-Wolfcamp	
County:	Lea	
State:	New Mexico	

Platform Express

Compensated Neutron Log

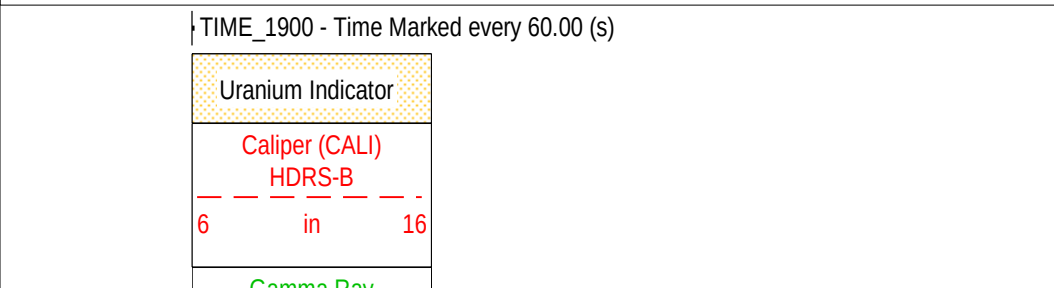
Three Detector Litho-Density

Two

Main Pass 1" = 100'

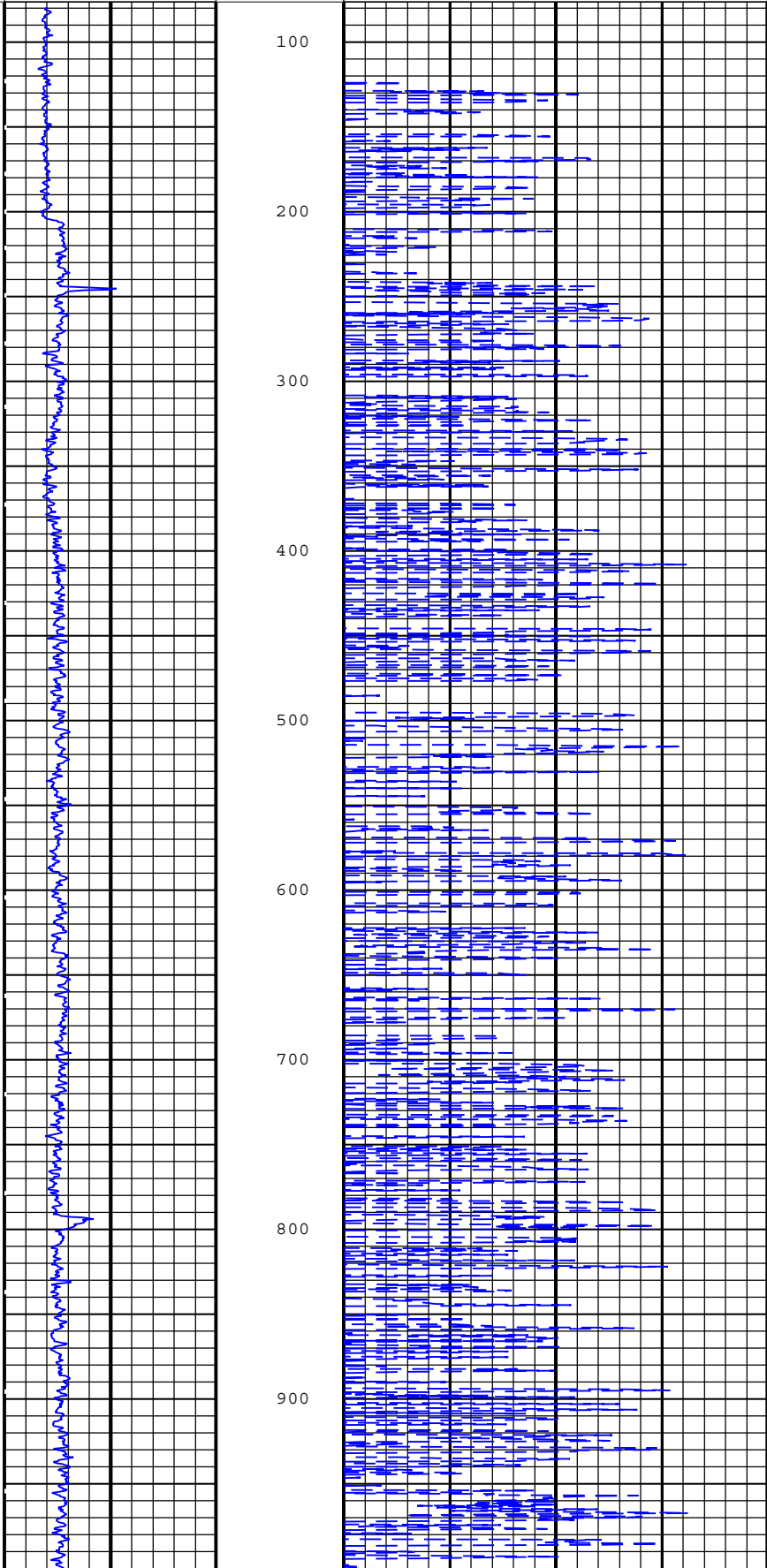
Log	Company:PB ENERGY STORAGE SERVICES, INC	Well:DCP Linam Ranch AGI #2
		Two: Main[3]:Up:S021

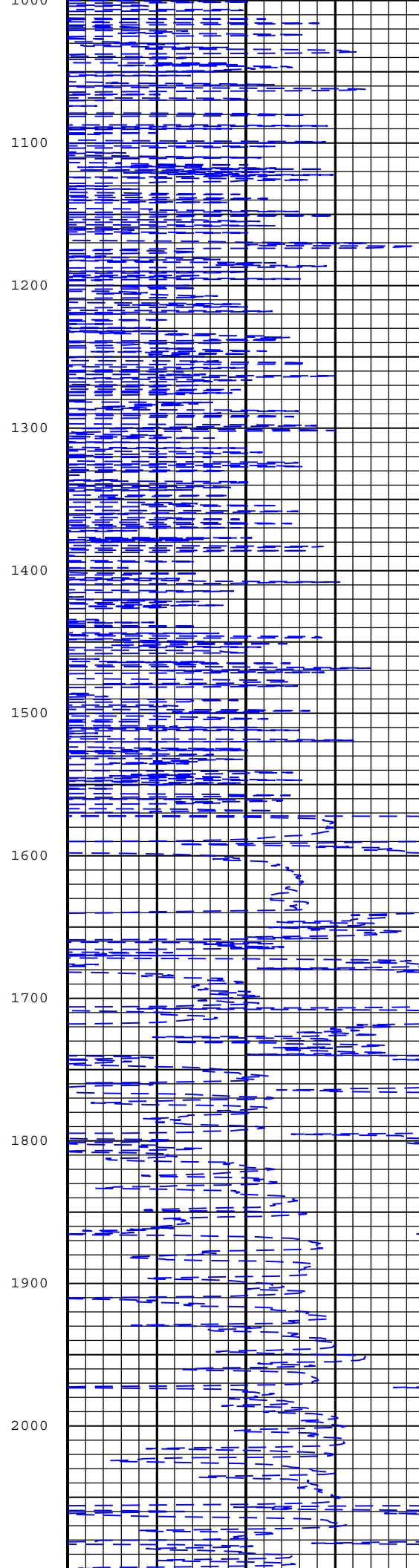
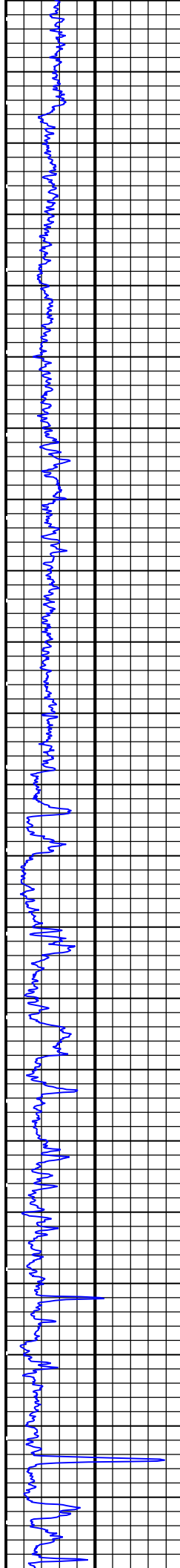
Description: HRLT BASIC LOG Format: Log (Porosity 1 inch General) Index Scale: 1 in per 100 ft		
Index Unit: ft	Index Type: Measured Depth	Creation Date: 30-Nov-2014 17:36:51
Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
RHOZ	HDRS-B:HRMS-B:HRGD-B	2in
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in

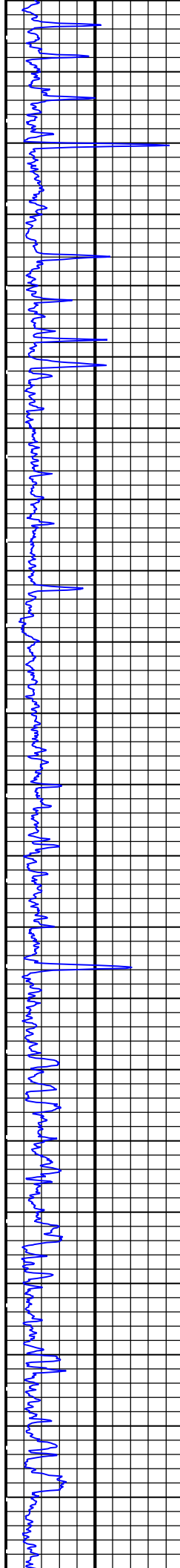


Gamma Ray Contribution from Thorium and Potassium (CGR) HNGS-BA		
0	gAPI	100
Spectroscopy Gamma Ray (SGR) HNGS-BA		
0	gAPI	100

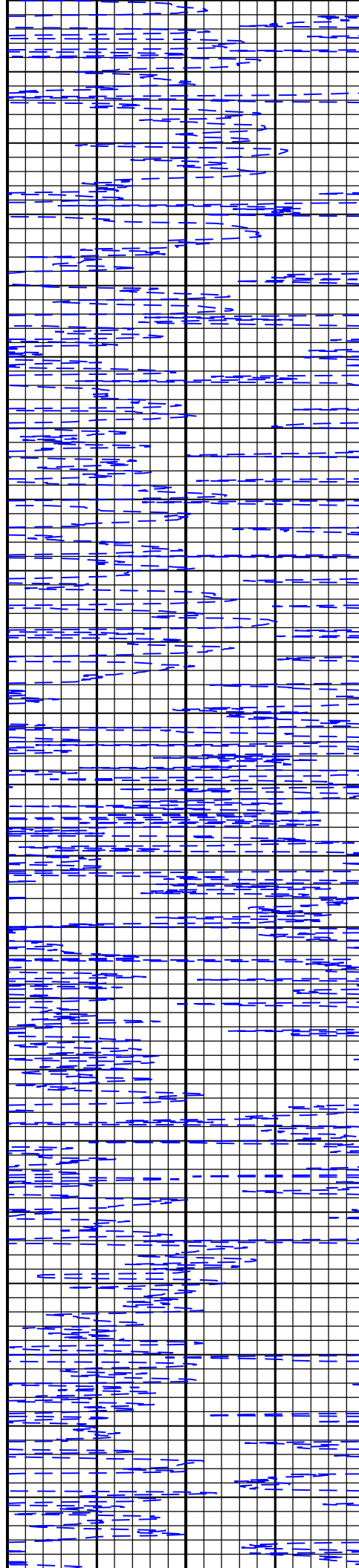
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-B		
0.3	ft3/ft3	-0.1
Standard Resolution Formation Density (RHOZ) HDRS-B		
2	g/cm3	3

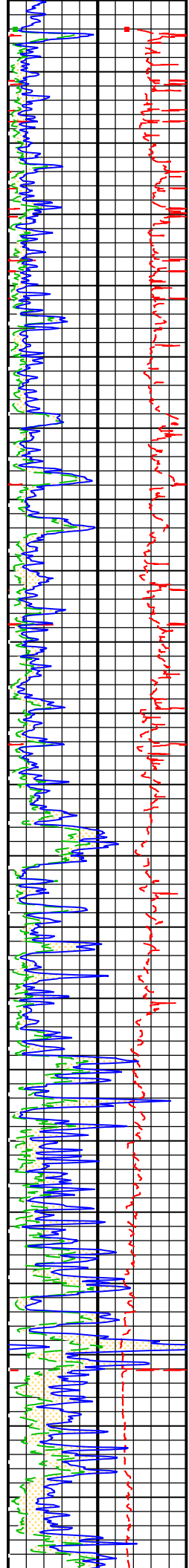
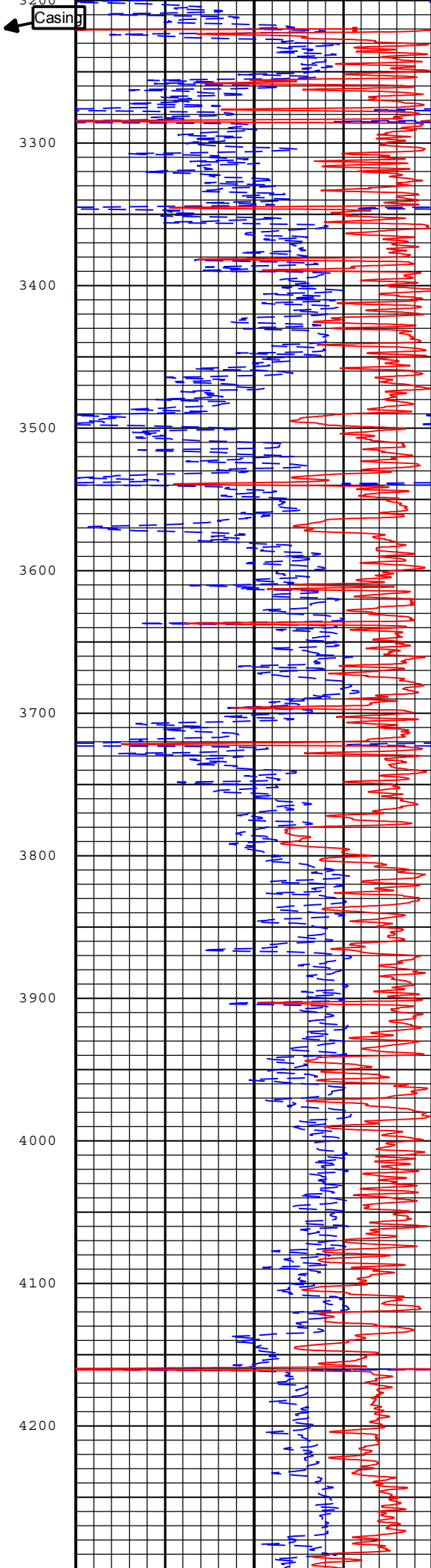


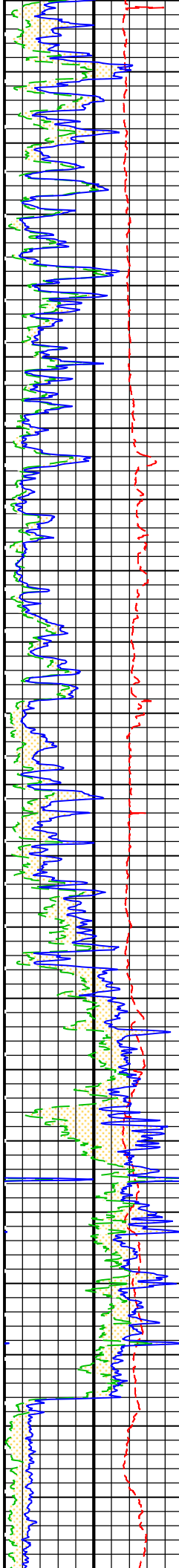




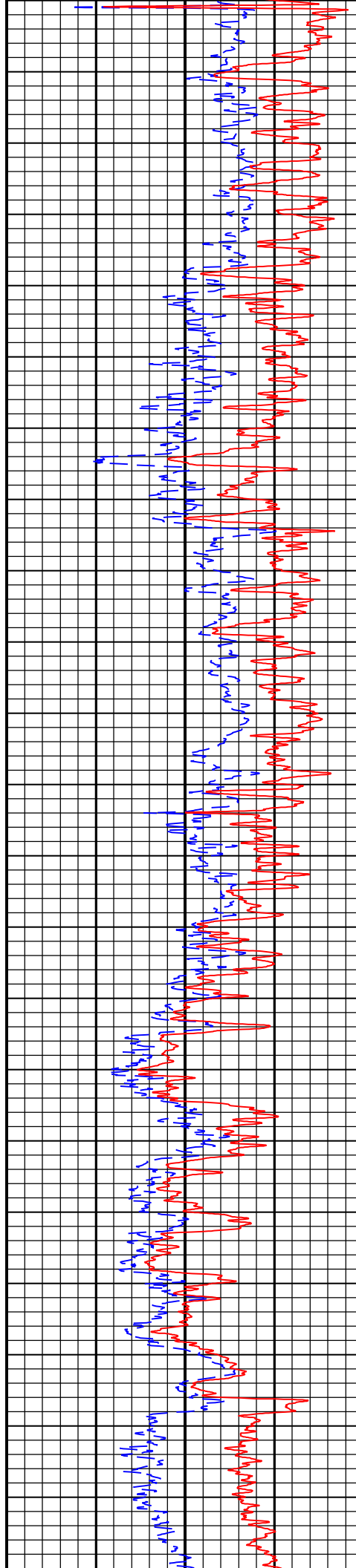
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2600
2700
2800
2900
3000
3100

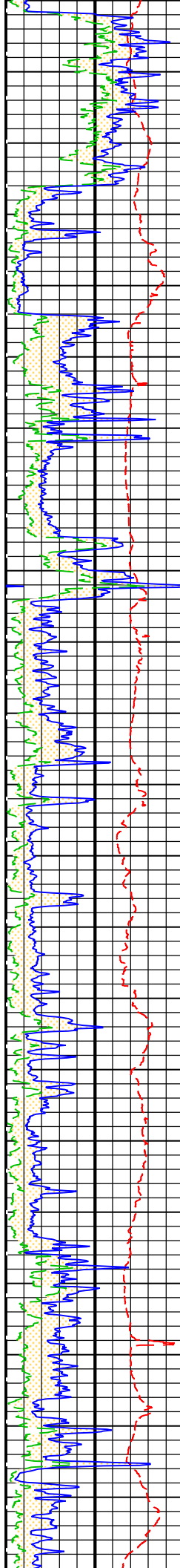




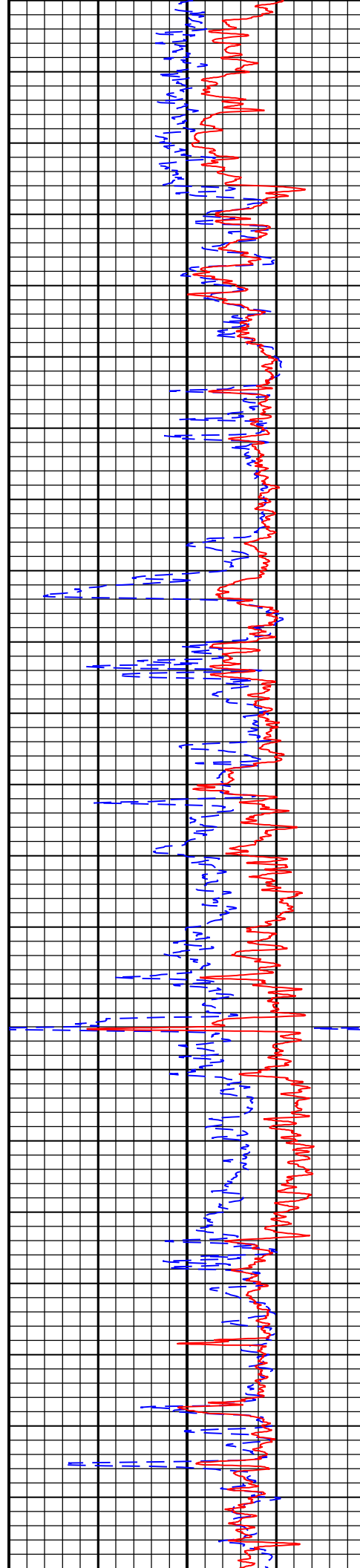


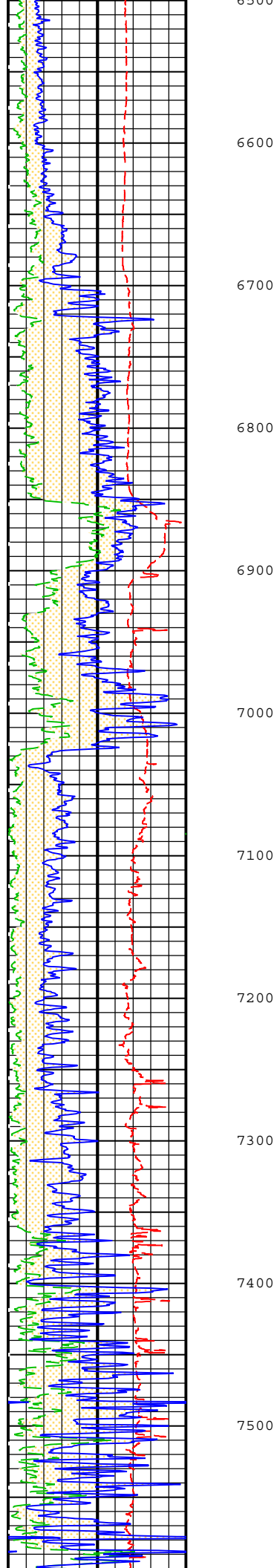
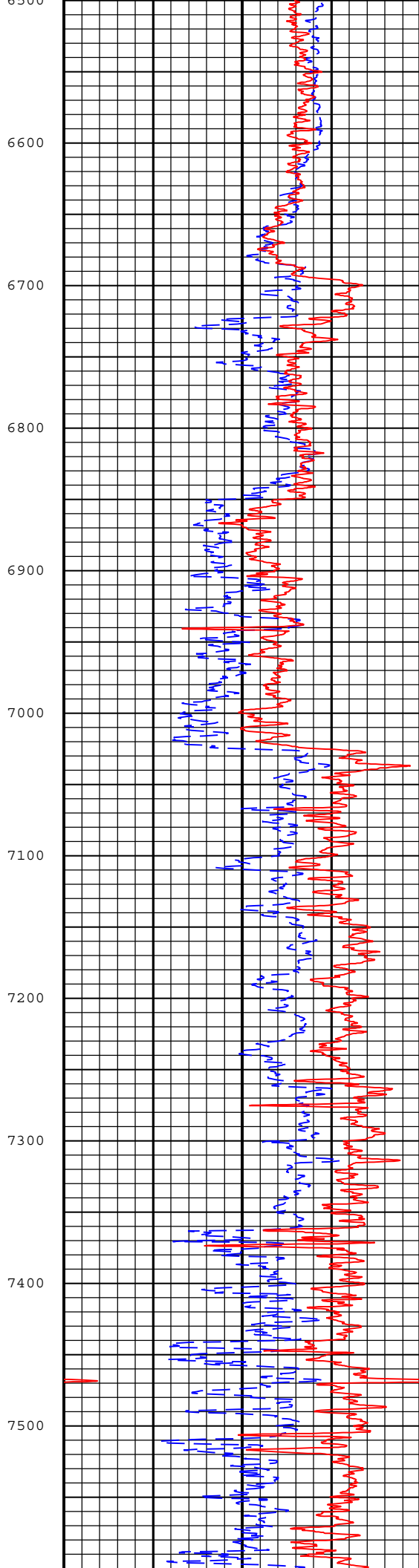
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4500
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4700
4800
4900
5000
5100
5200
5300

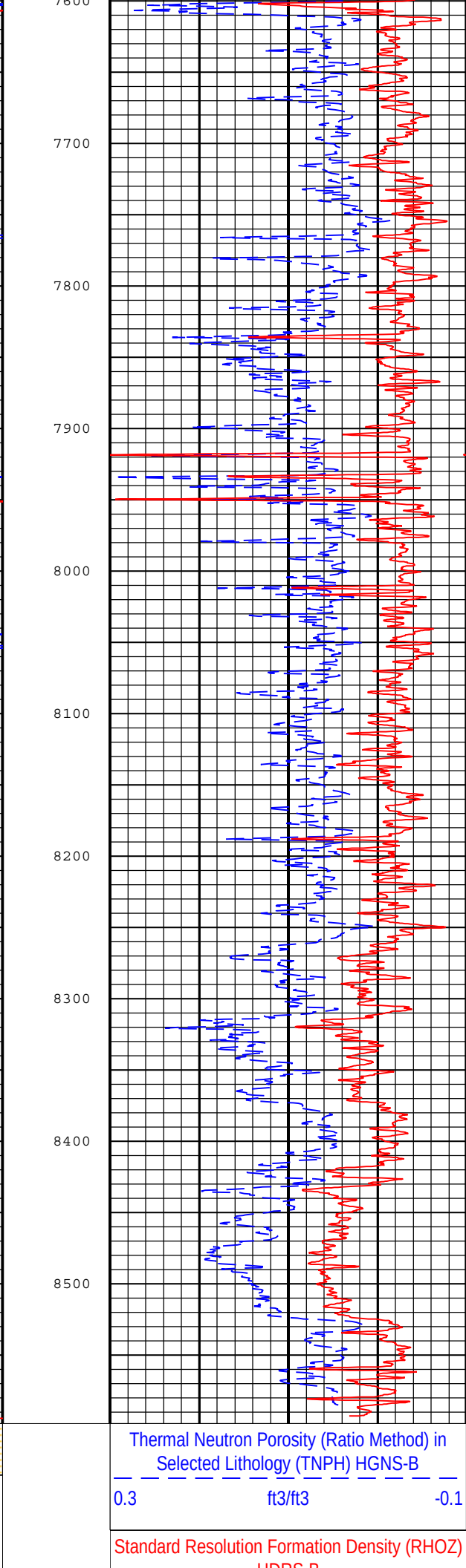
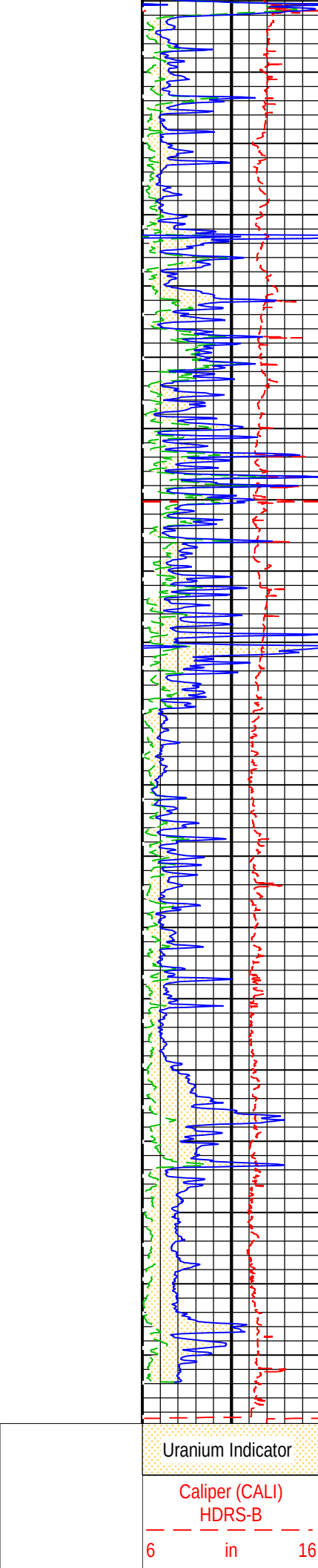




5400
5500
5600
5700
5800
5900
6000
6100
6200
6300
6400







Description: HRLT BASIC LOG Format: Log (Porosity 1 inch General) Index Scale: 1 in per 100 ft
Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:36:51

Array Induction Tool

Company: PB ENERGY STORAGE SERVICES, INC

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County: Lea Country: USA

Array Induction Tool

County:	Lea				
Field:	AGI; Bone Spring-Wolfcamp				
Location:	1600' FSL & 1750' FWL				
Well:	DCP Linam Ranch AGI #2				
Company:	PB ENERGY STORAGE SERVICES, INC				
		Location:			
		1600' FSL & 1750' FWL	Elev.:		K.B. 3763.00 ft G.L. 3738.00 ft D.F. 3762.00 ft
		Permanent Datum:	Ground Level	Elev.:	3738.00 f
		Log Measured From:	Kelly Bushing	25.00 ft	above Perm.Datum
		Drilling Measured From:	Kelly Bushing		
		API Serial No. 30-025-42139	Max.Hole Deviation	Longitude: -103.29000 degrees	Latitude: 32.720000 degrees
Logging Date	30-Nov-2014				

Run Number	Two	
Depth Driller	8630.00 ft	
Schlumberger Depth	8630.00 ft	
Bottom Log Interval	8622.00 ft	
Top Log Interval	3219.50 ft	
Casing Driller Size @ Depth	13.375 in @ 3220.00 ft	
Casing Schlumberger	3219.5 ft	
Bit Size	12.25 in	
Type Fluid In Hole	Salt Brine	
Density	8.8 lbm/gal	33 s
Fluid Loss	0 cm3	10
Source of Sample	Active Tank	
RM @ Meas Temp	9 ohm.m @ 80 degF	
RMF @ Meas Temp	7.5 ohm.m @ 80 degF	
RMC @ Meas Temp	0.06 ohm.m @ 75 degF	
Source RMF	Pressed	
RM @ BHT	6.85 @ 107.3 5.71 @ 107.3	
Max Recorded Temperatures	125 degF	
Circulation Stopped	30-Nov-2014 02:00:00	
Logger on Bottom	30-Nov-2014 13:10:30	
Unit Number	2133	
Recorded By	Tyler Bolton	
Witnessed By	Russell Bentley	

Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

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8.2 Log (Log (AIT_5_Inch) RA)

9. Two Repeat Pass 5" = 100'

9.1 Integration Summary

9.2 Composite Summary

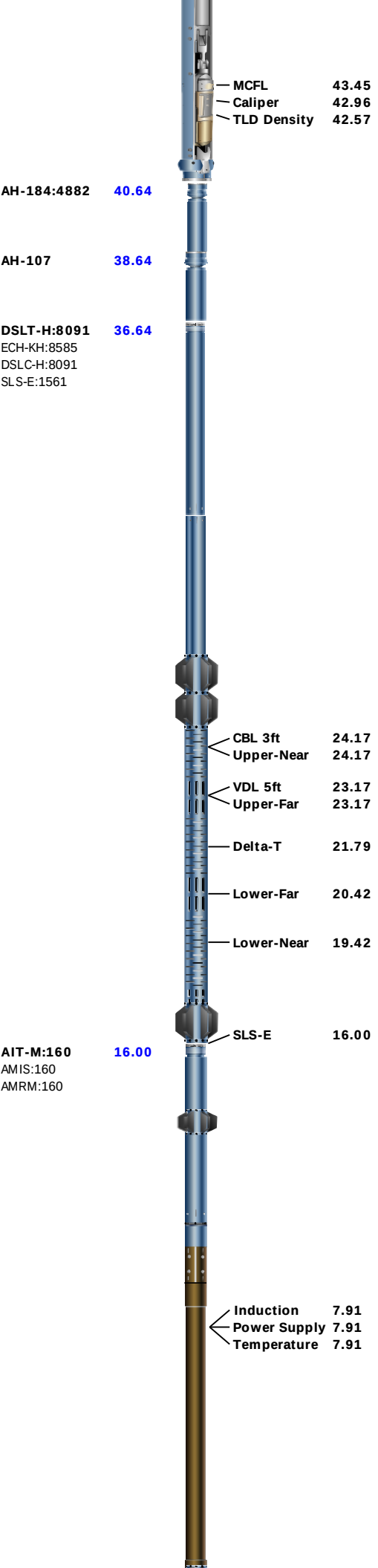
9.3 Log (Copy of Log (AIT_5_Inch))

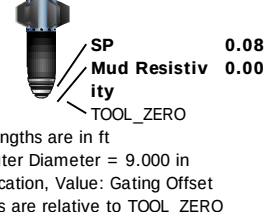
10. Calibration Report

11. Tail

Remarks and Equipment Summary

Two: Toolstring				Two: Remarks	
Equip name	Length	MP name	Offset	Toolstring run as per toolsketch.	
LEH-QC:1317	82.94			Bowspring used to eccentralize HGNS.	
				0.125" standoff created by wear-ring on HGNS.	
EDTC-B:9071	80.48			1.5" standoffs used on AIT, and DSLT.	
EDTH-B:8196				Porosity computed on a Limestone scale with density of 2.71 g/cc and slowness of 47.6 us/ft.	
EDTG-A:79243				Rig: Precision 107	
EDTC-B:9071				Your Schlumberger Crew: Tyler Bolton, Adam Jaramillo, Jose Gomez.	
		CTEM	76.98		
		ACCZ	0.00		
		HV	0.00		
		Gamma Ray	75.11		
		TelStatus	73.98		
HNGS-BA:84	73.98				
HEH-K:1035					
HNGS-BA:84					
		GR	70.99		
HNGC-B:610	65.79				
HNGH-A:4094					
HNGC-B:610					
		Tel Status	64.04		
HGNS-B:951	62.29	Temperature	62.26		
HGNH:3894					
NPV-N		GR	61.55		
NSR-F:2683					
HACCZ-B:448					
HMCA-B					
HGNS-B:951					
		CNL Porosity	55.21		
		HMCA	52.88		
		HGNS	52.88		
		Acceleromete	0.00		
		r			
HDRS-B:1829	52.88				
ECH-MEB:952					
HRCC-B:839					
HRMS-B:1829					
Short Spacing:274					
83					
Backscatter					
Long Spacing:287		HRCC	48.88		
74					
GSR-J:5339					
HRGD-B:3968					
GPV-Q					



					
Depth Summary					
		Two			
Depth Measuring Device					
Type	IDW-JA				
Serial Number	5910				
Calibration Date	02-Jun-2014				
Calibrator Serial Number					
Calibration Cable Type	7-46P XS				
Wheel Correction 1	-2				
Wheel Correction 2	-1				
Tension Device					
Type	CMTD-B/A				
Serial Number	5044				
Calibration Date	18-Oct-2014				
Calibrator Serial Number	80725A				
Number of Calibration Points	10				
Calibration Root Mean Square Error	19				
Calibration Peak Error	36				
Logging Cable					
Type	7-46P-XS				
Serial Number	U711059				
Length	15500.00 ft				
Conveyance Type	Wireline				
Rig Type	Land				
Two:Depth Control Parameters			Depth Control Remarks		
Log Sequence	Subsequent Trip To the Well		All primary and secondary depth control procedures followed. IDW used as primary depth control device. Z-chart used as secondary depth control device.		
Reference Log Name	Platform Express-CNL				
Reference Log Run Number	One				
Reference Log Date	01-Nov-2014				
Subsequent Trip Down Log Correction	7.29 ft				
Two					
Main Pass 2" = 100'					
Integration Summary					
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit	
ICV	Integrated Cement Volume	HVAS, FCD	2381.29	ft3	
IHV	Integrated Hole Volume	HVAS	5118.77	ft3	
Log	Company:PB ENERGY STORAGE SERVICES, INC		Well:DCP Linam Ranch AGI #2		
			Two: Main[3]:Up:S021		
Description: AIT Basic Log Two Format: Log (Log (AIT_2_Inch)) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:11:05					
Channel	Source	Sampling			
AMF	AIT-M:AMIS:AMIS	12in			
AT10	AIT-M:AMIS:AMIS	3in			
AT60	AIT-M:AMIS:AMIS	3in			
AT90	AIT-M:AMIS:AMIS	3in			

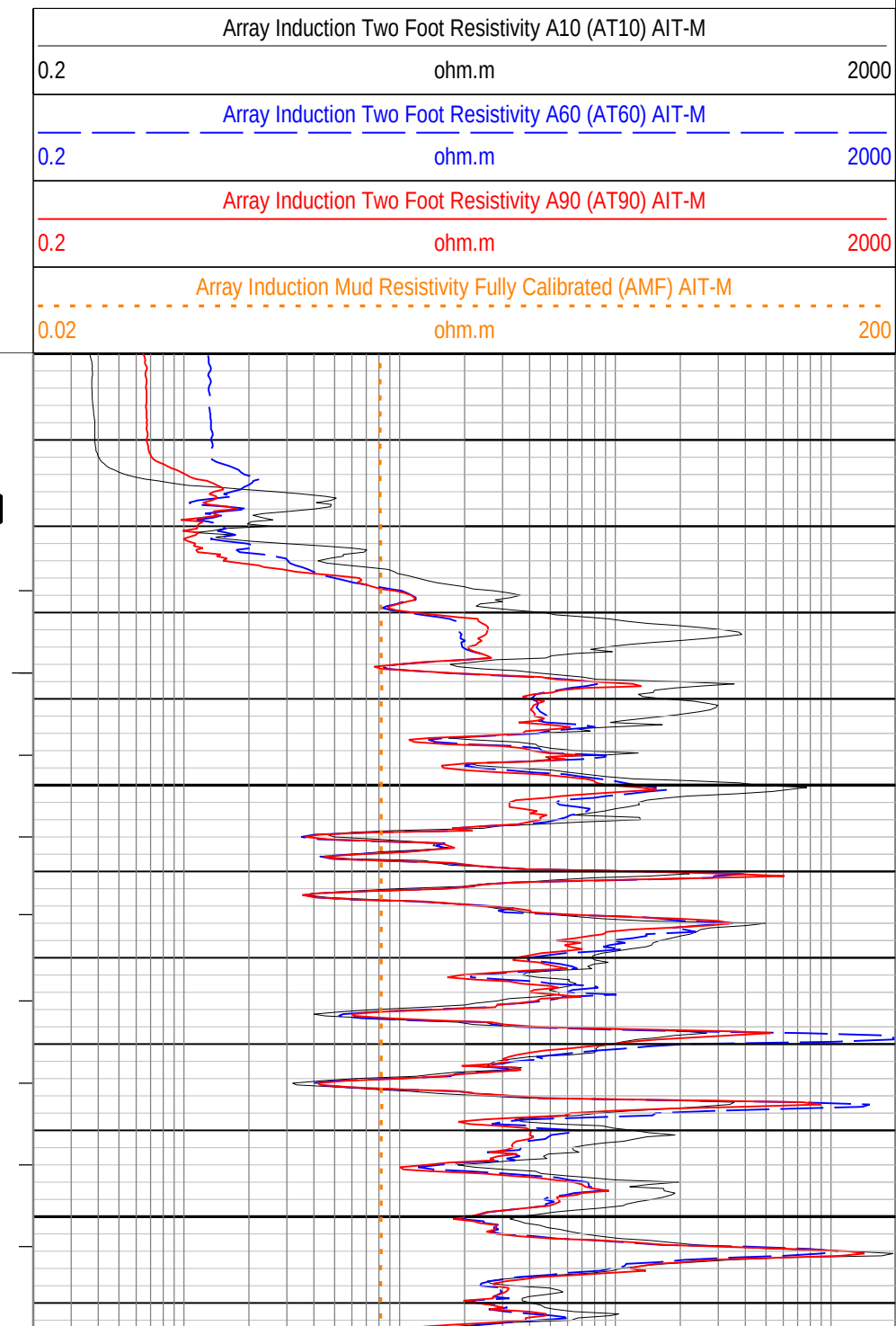
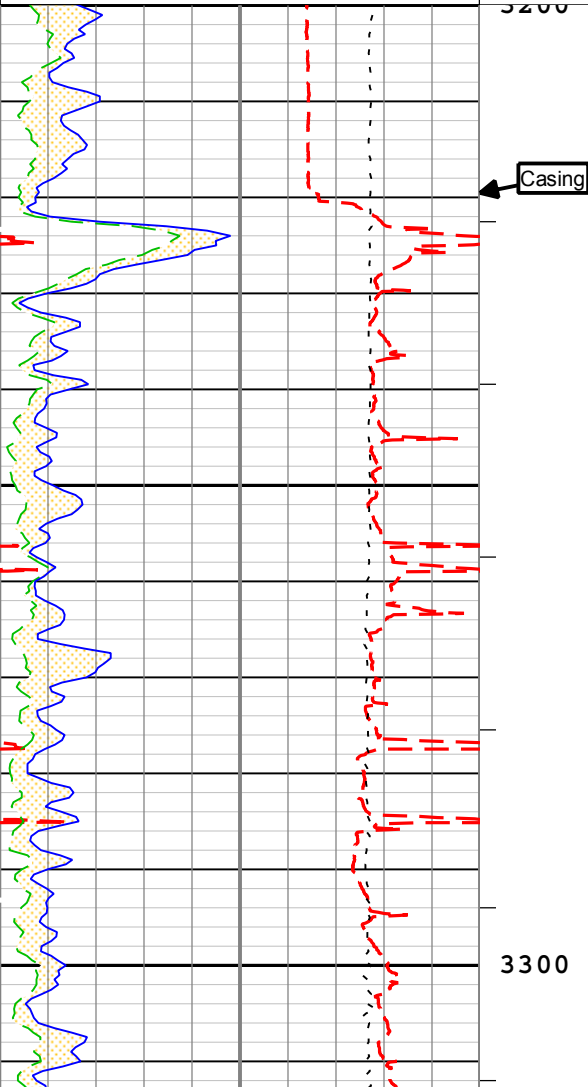
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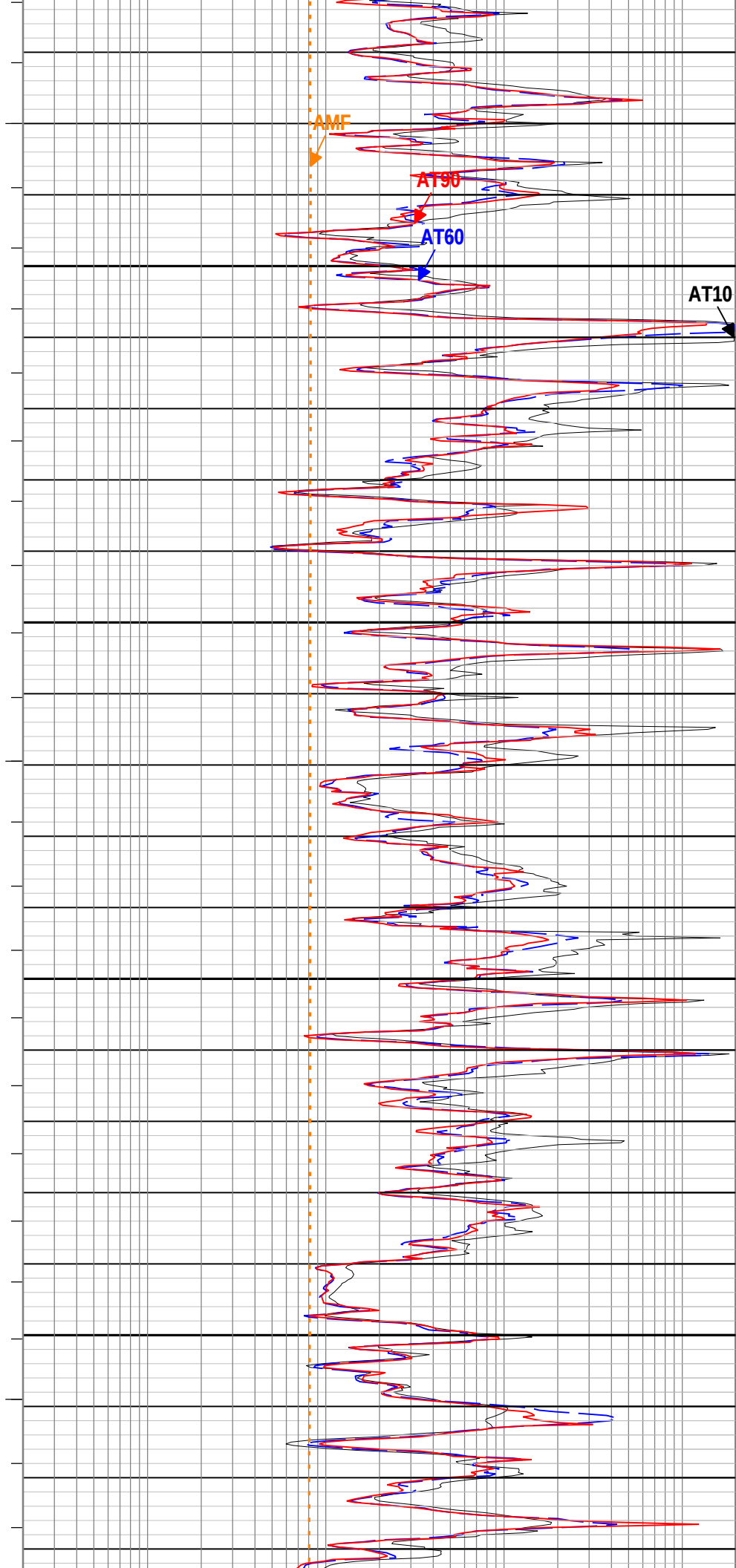
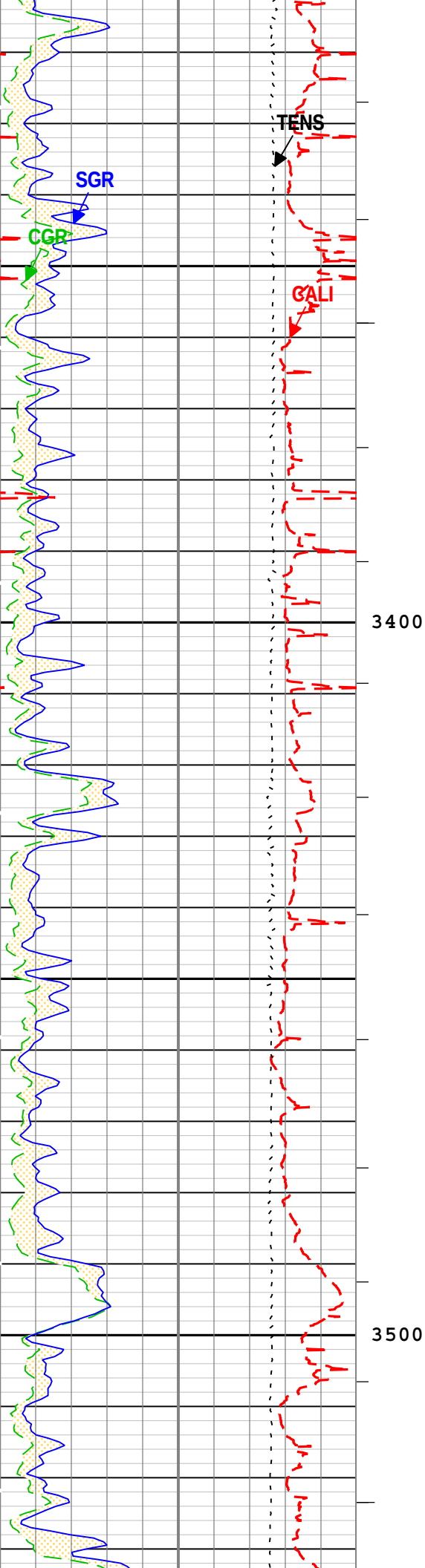
—| ICHV - Integrated Cement Volume every 10.00 (ft3)

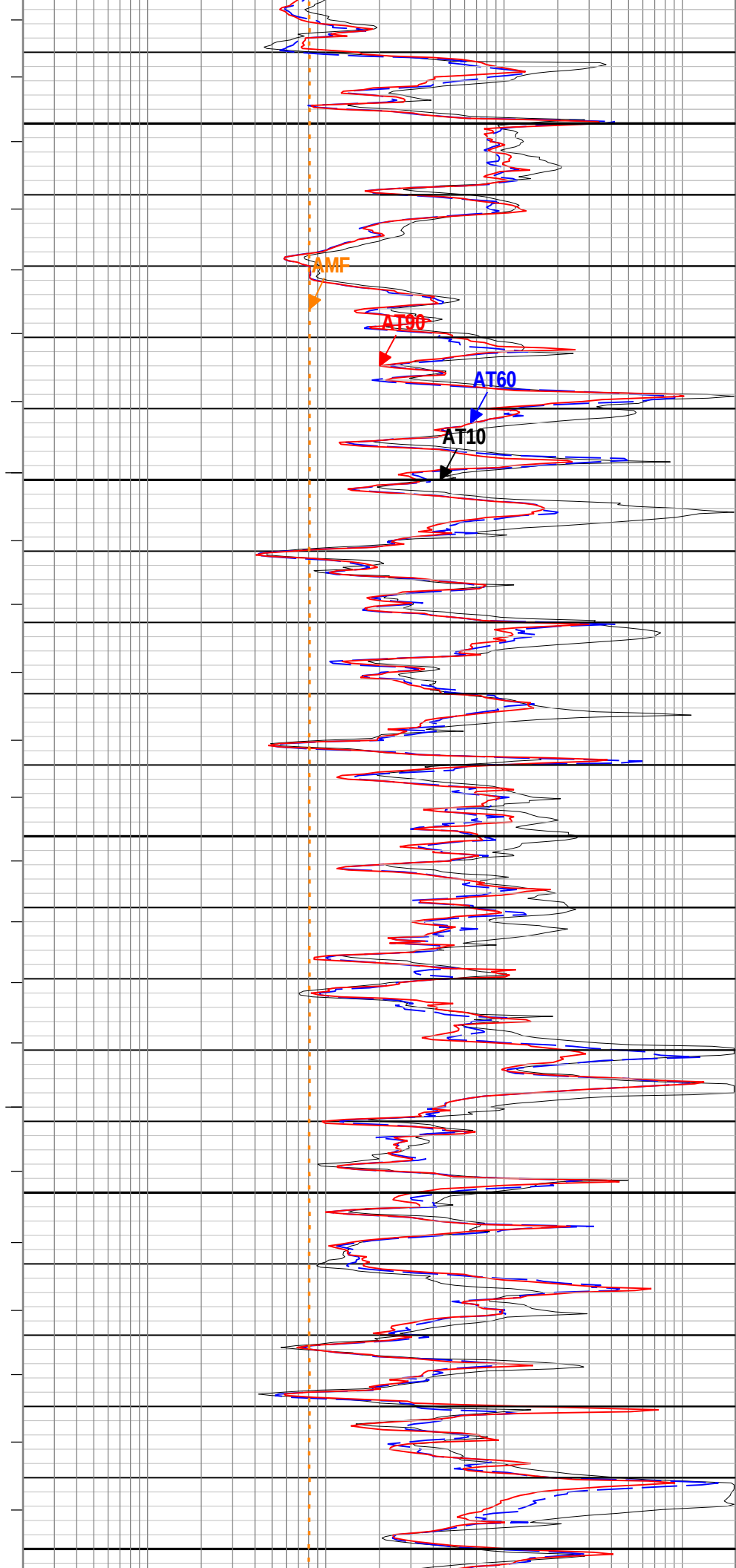
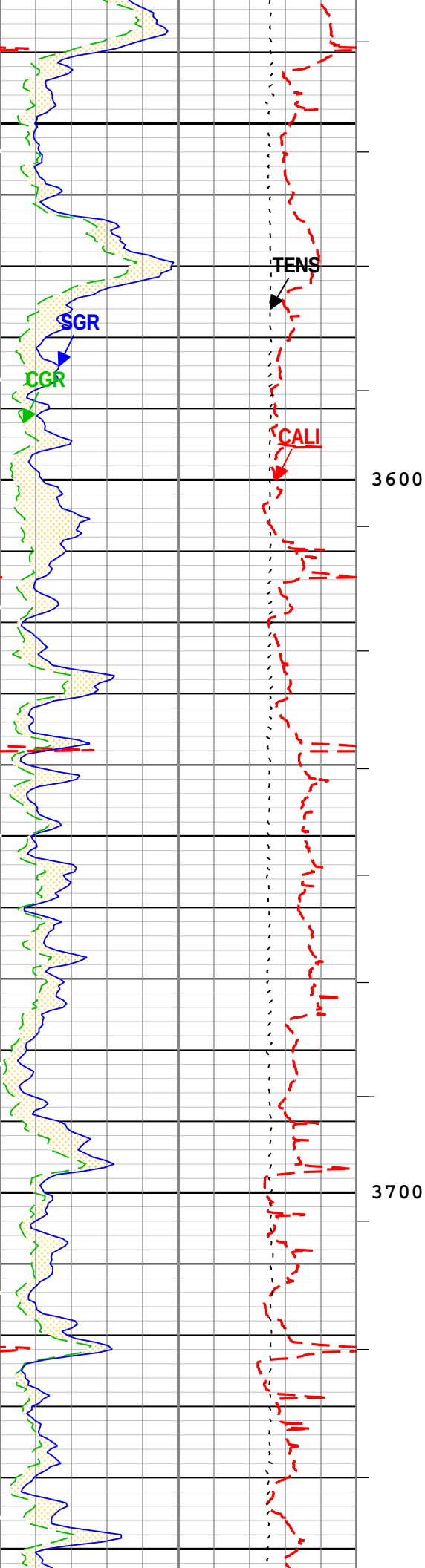
—| ICHV - Integrated Cement Volume every 100.00 (ft3)

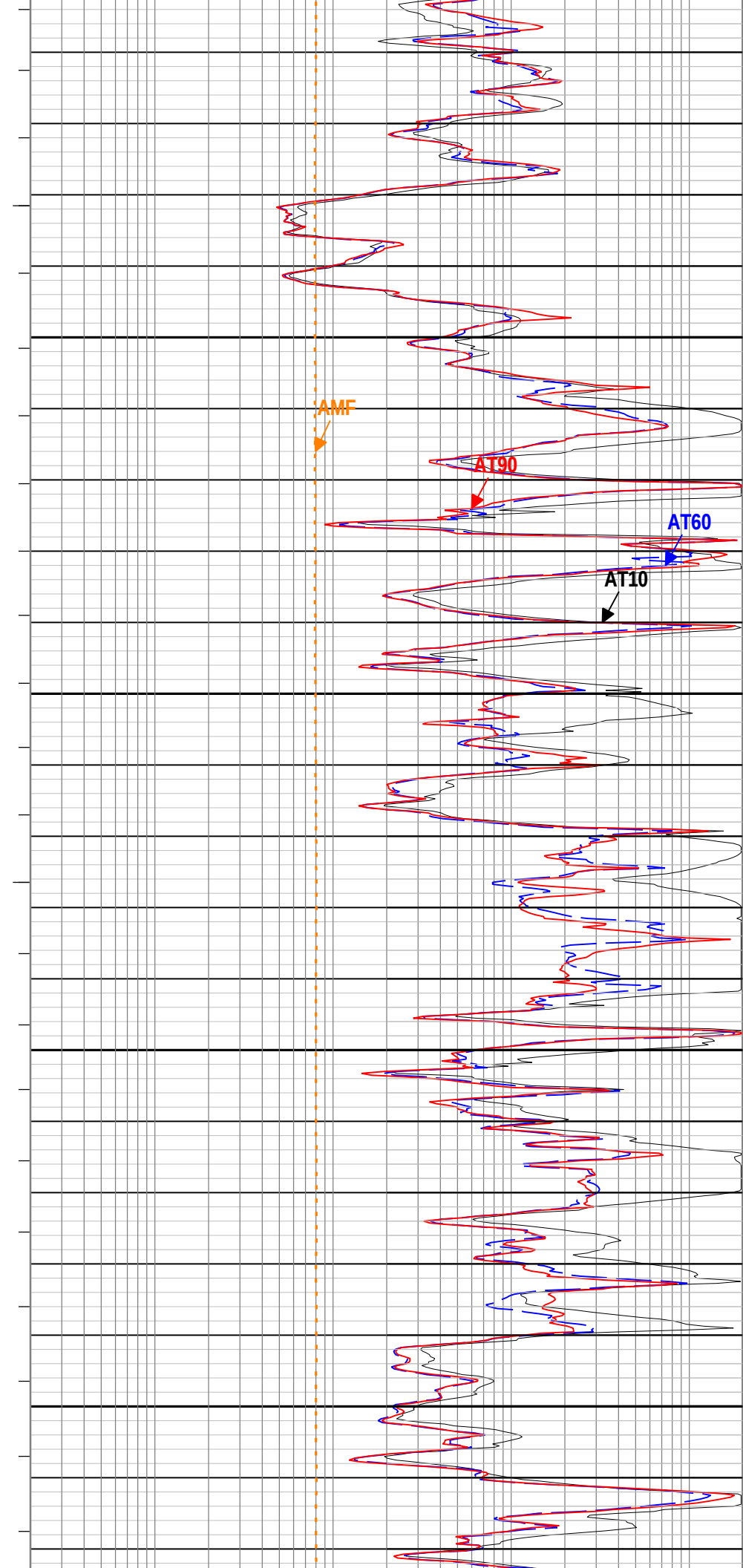
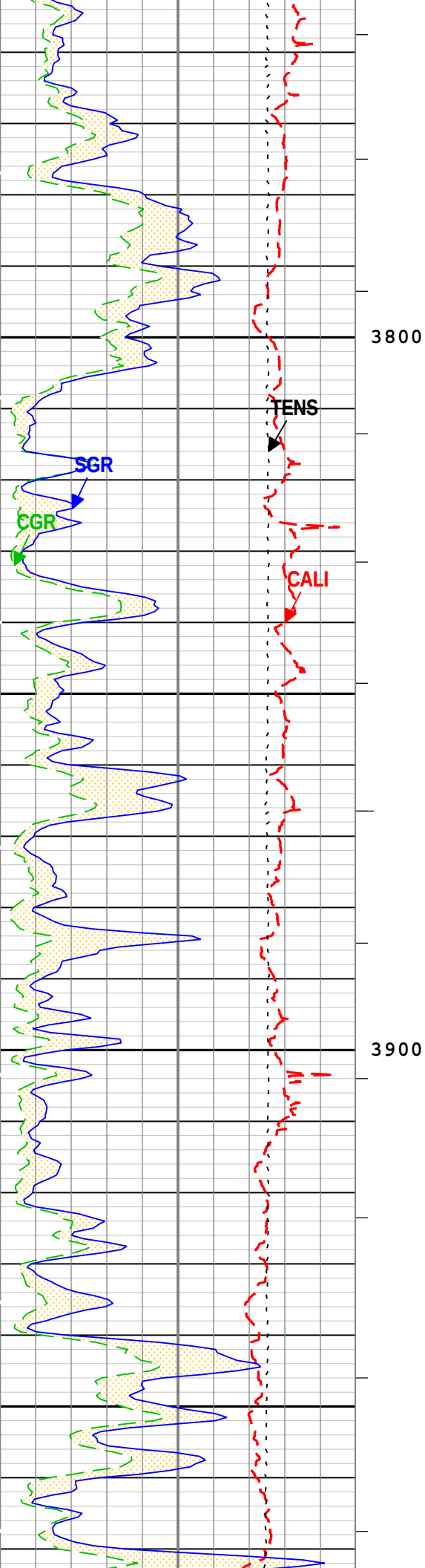
—| IHV - Integrated Hole Volume every 10.00 (ft3)

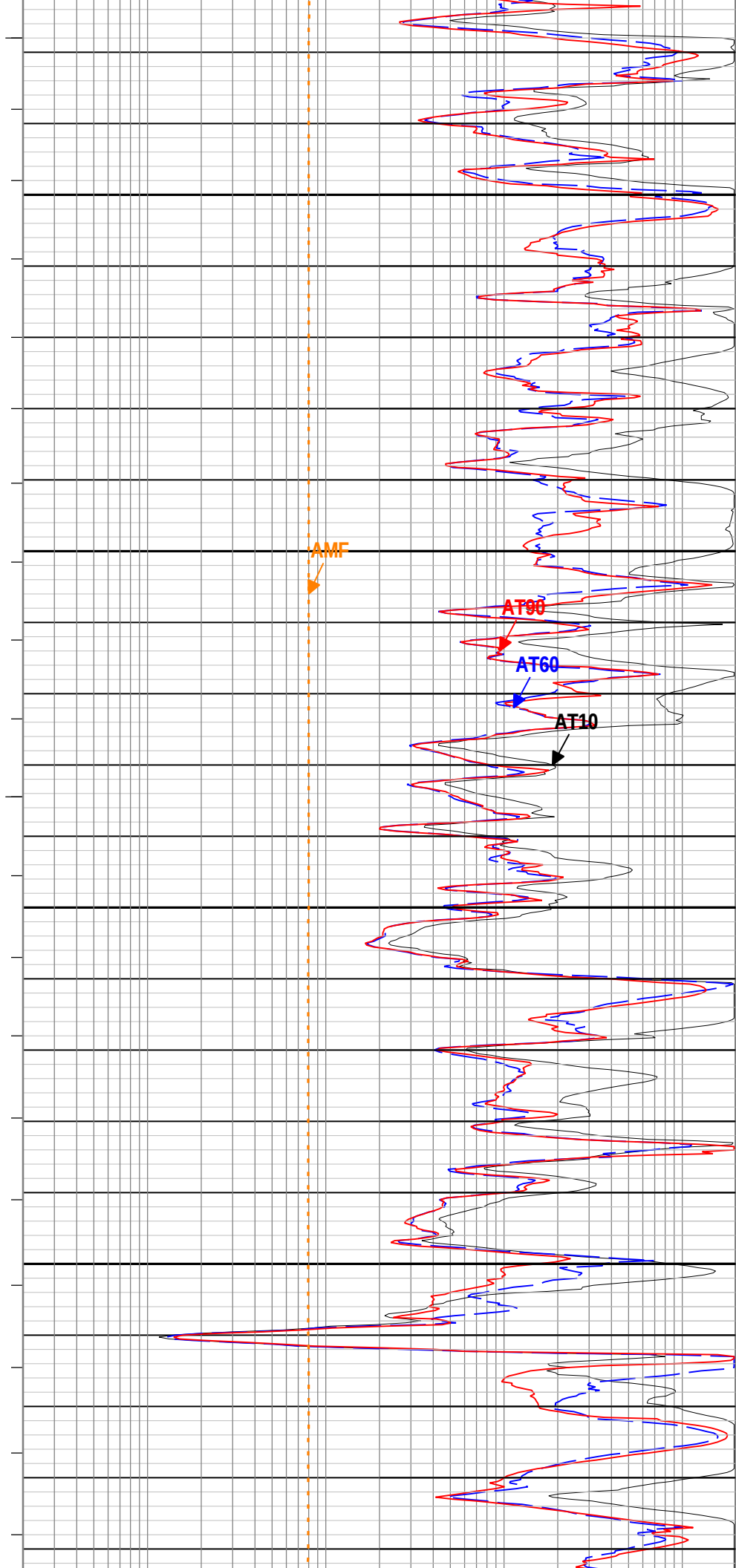
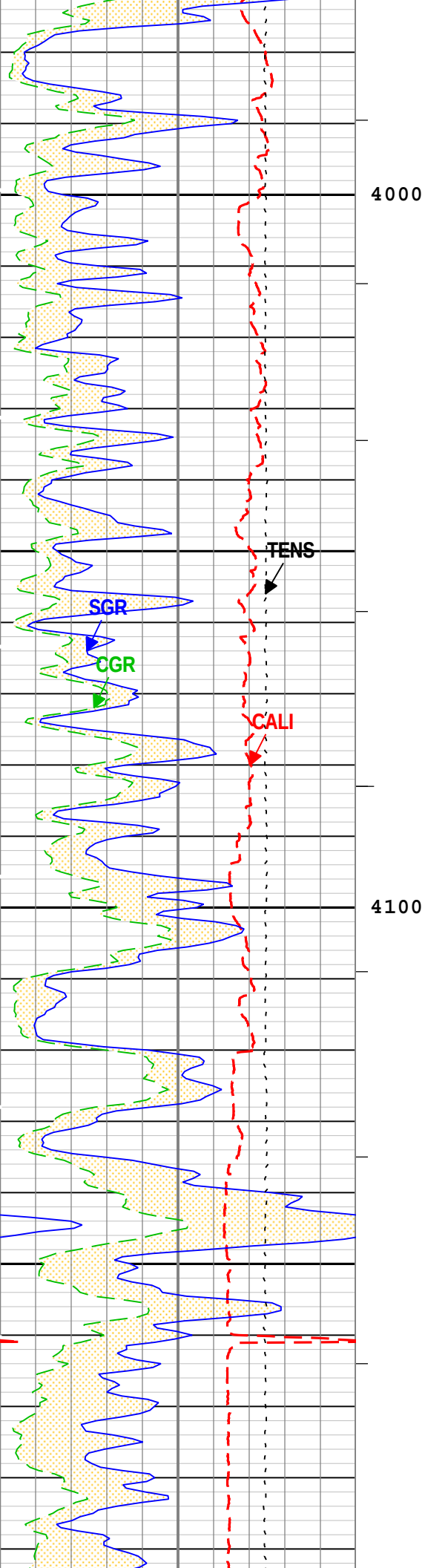
—| IHV - Integrated Hole Volume every 100.00 (ft3)

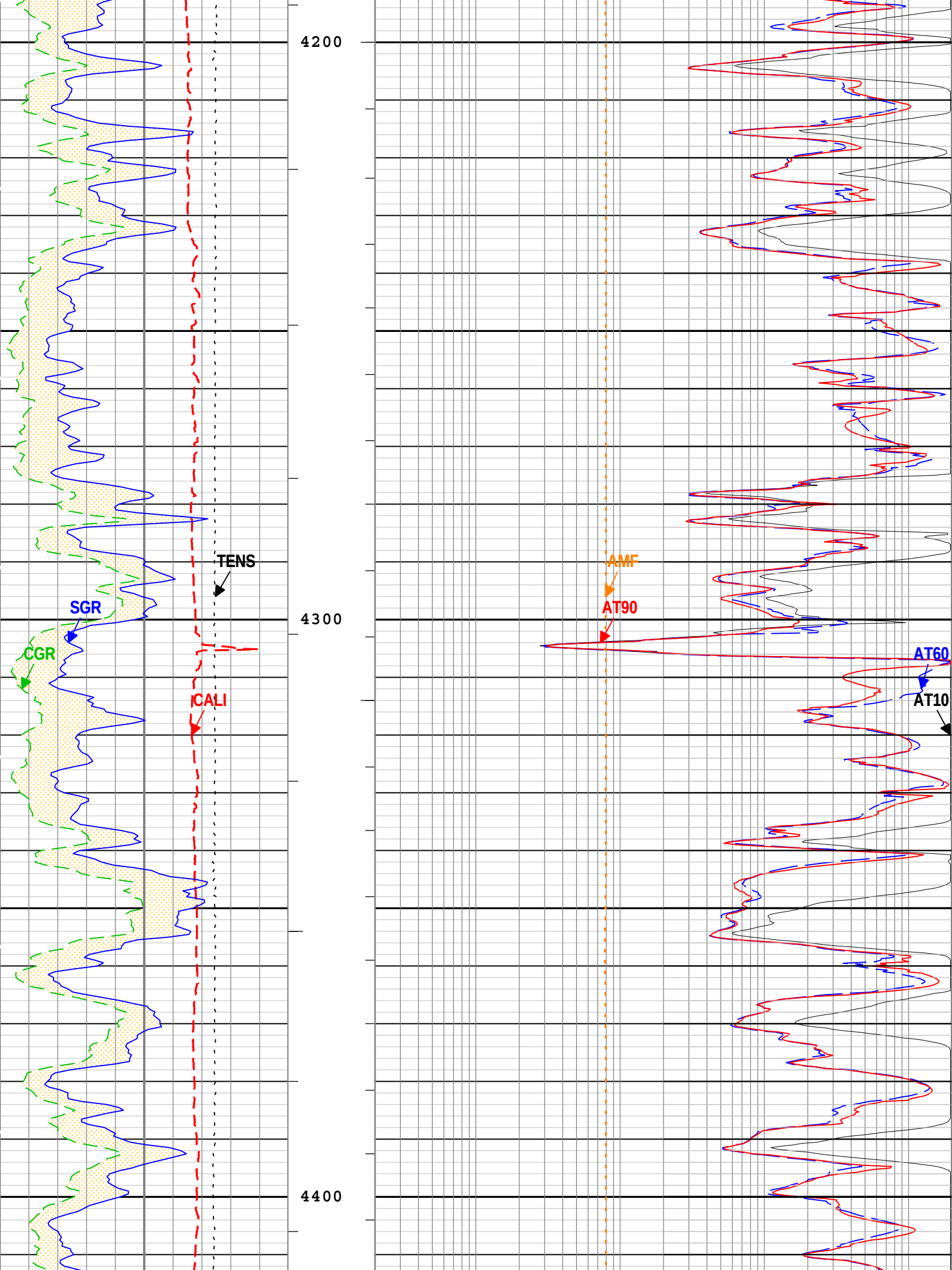


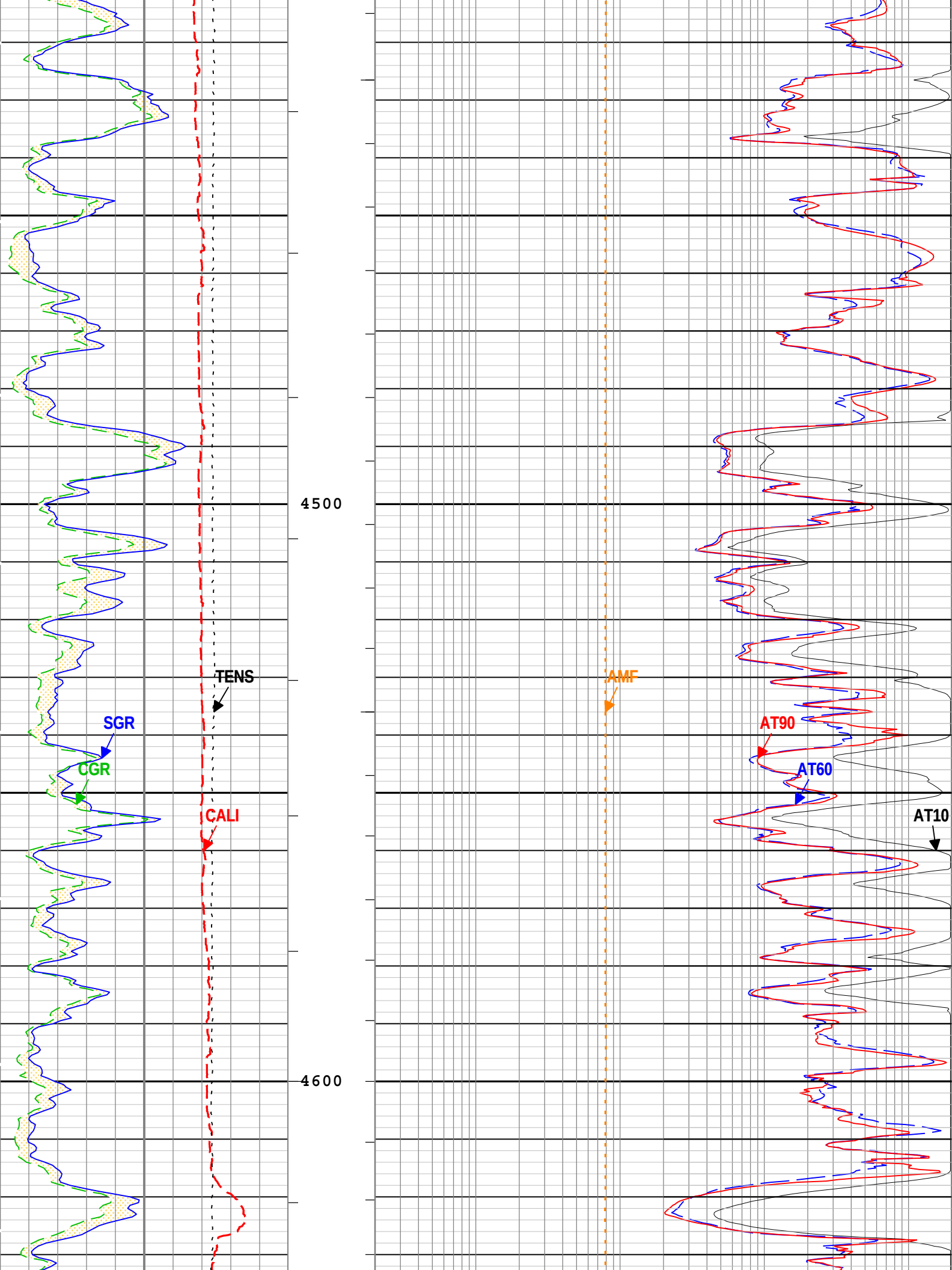


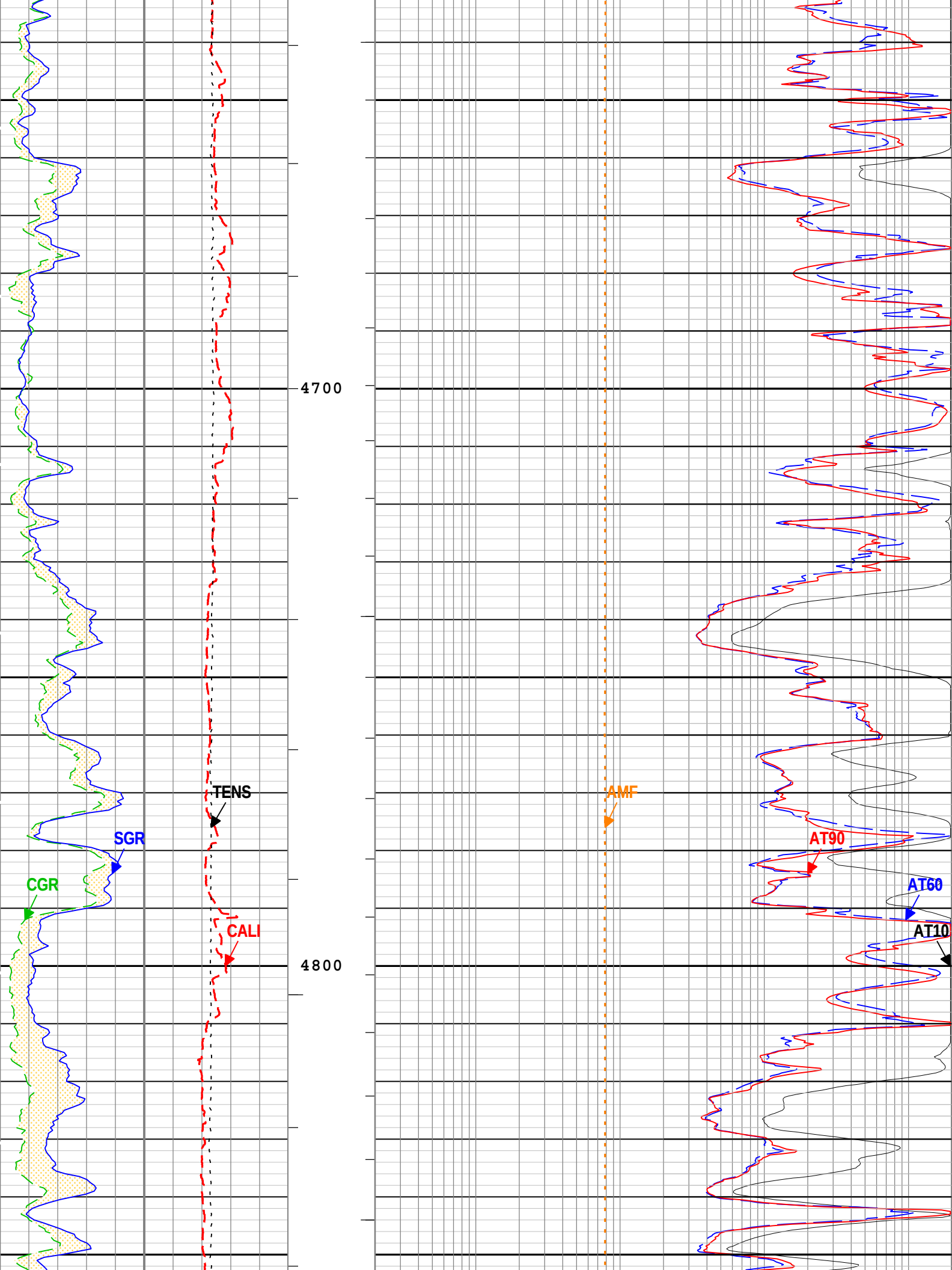


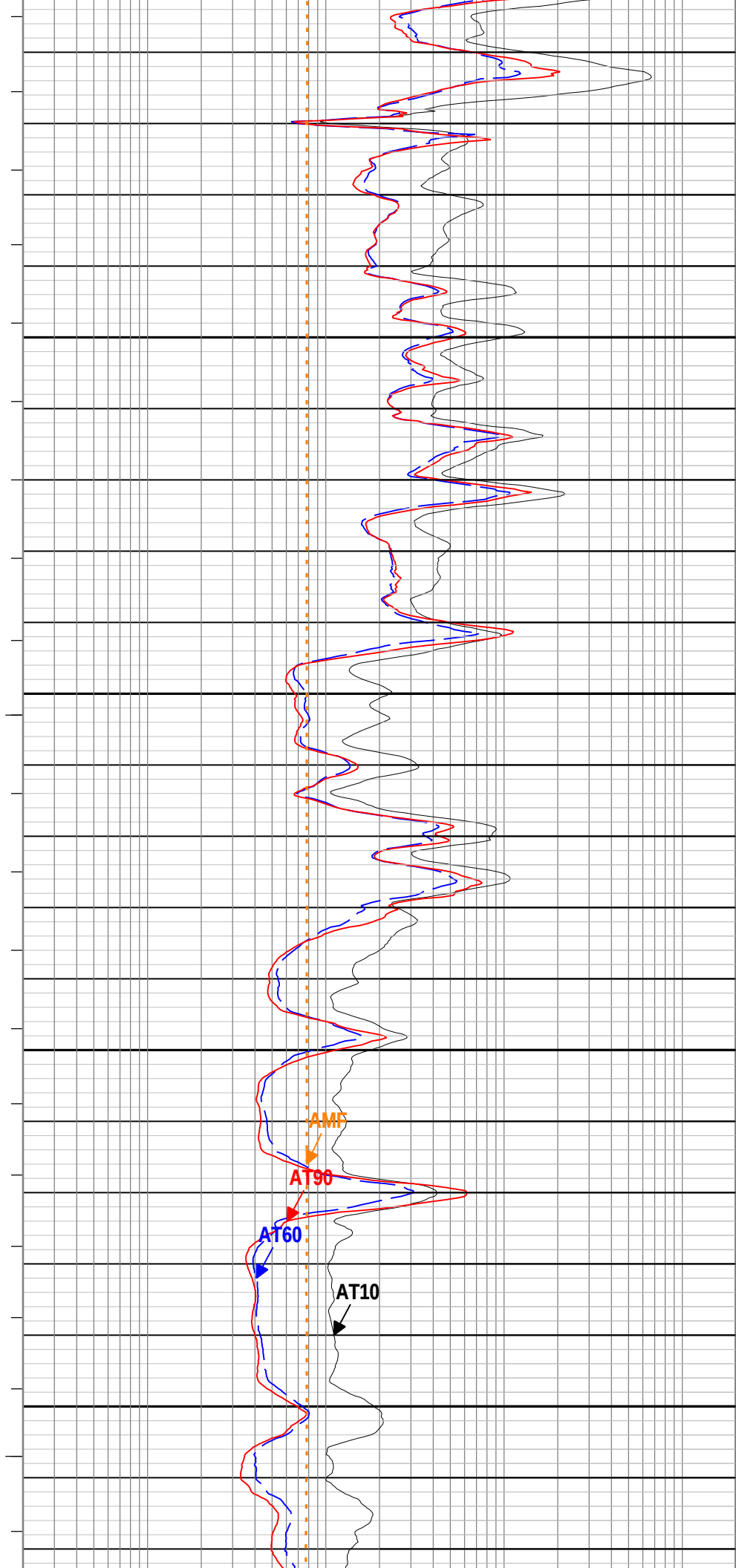
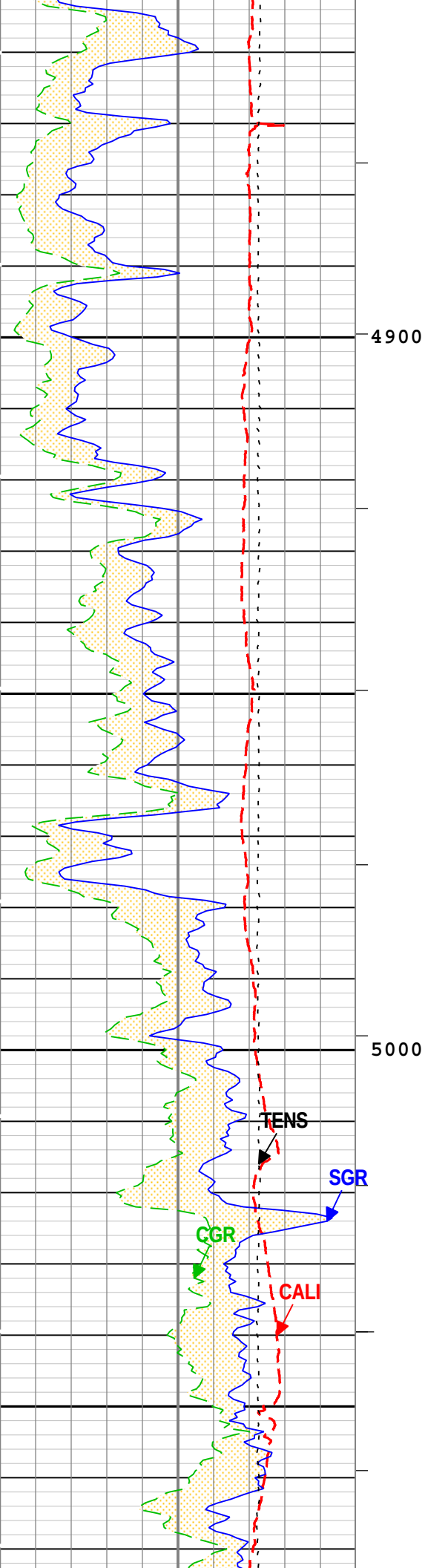


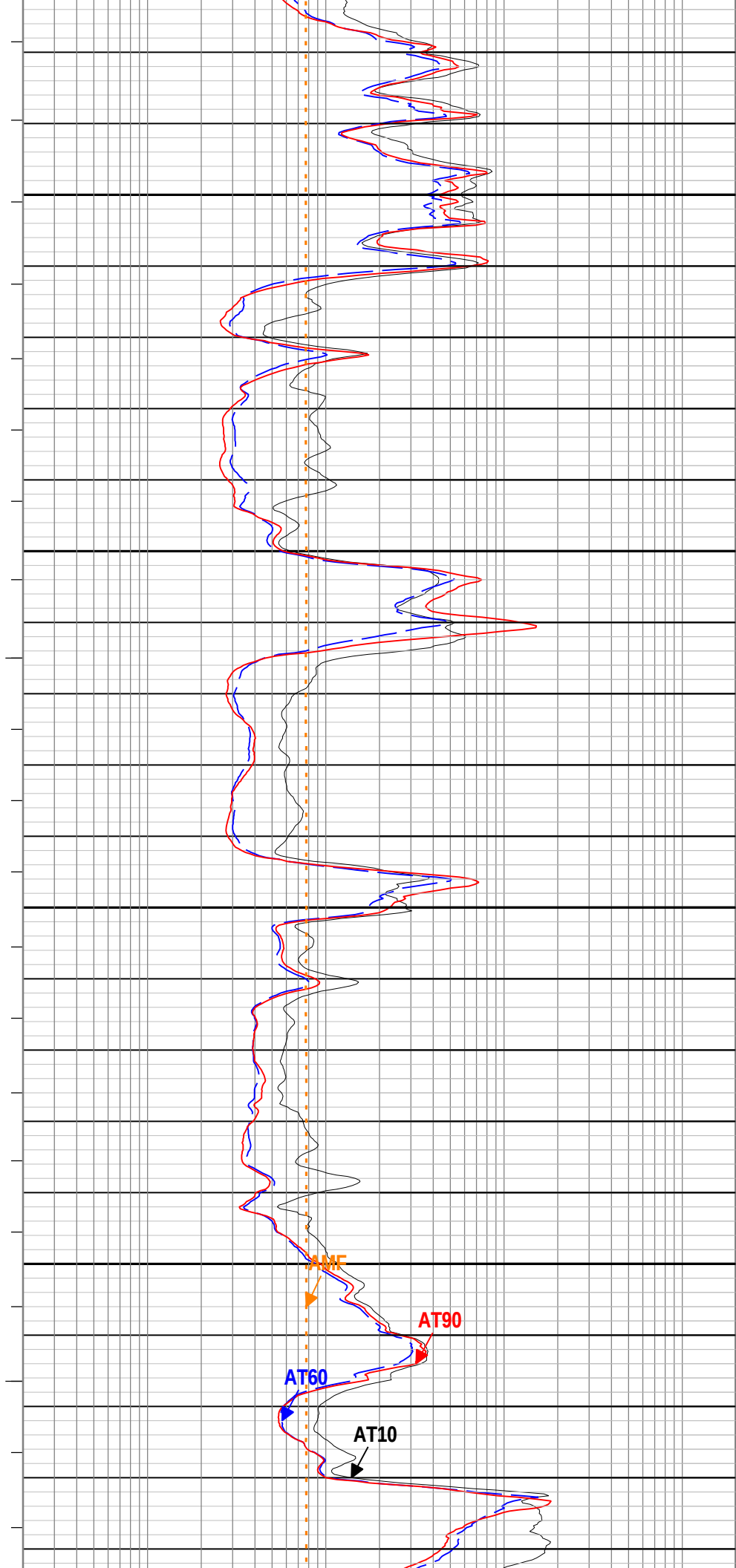
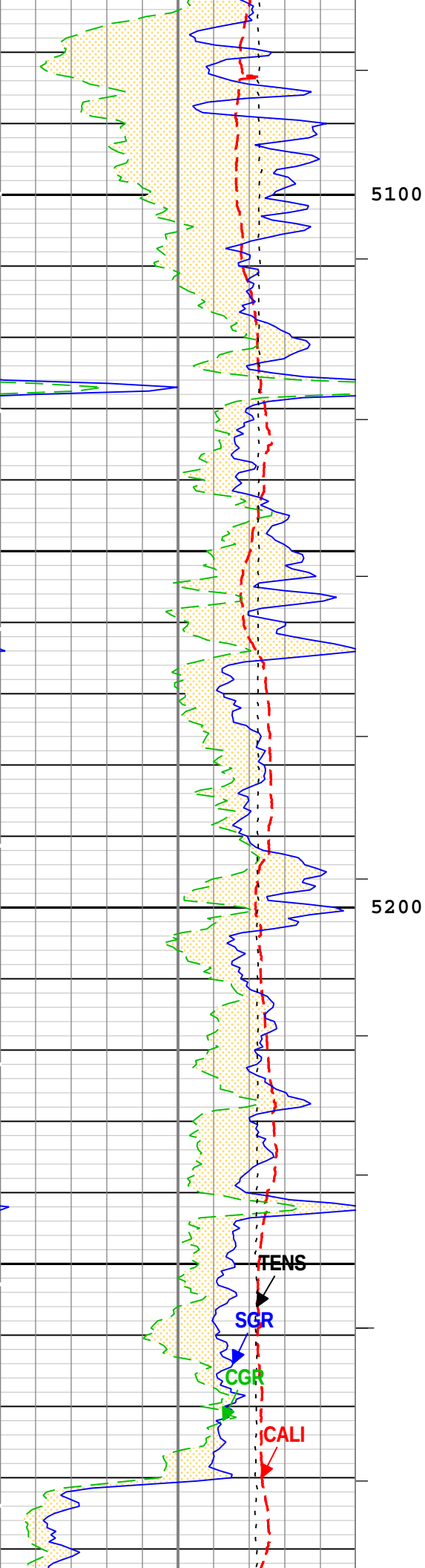


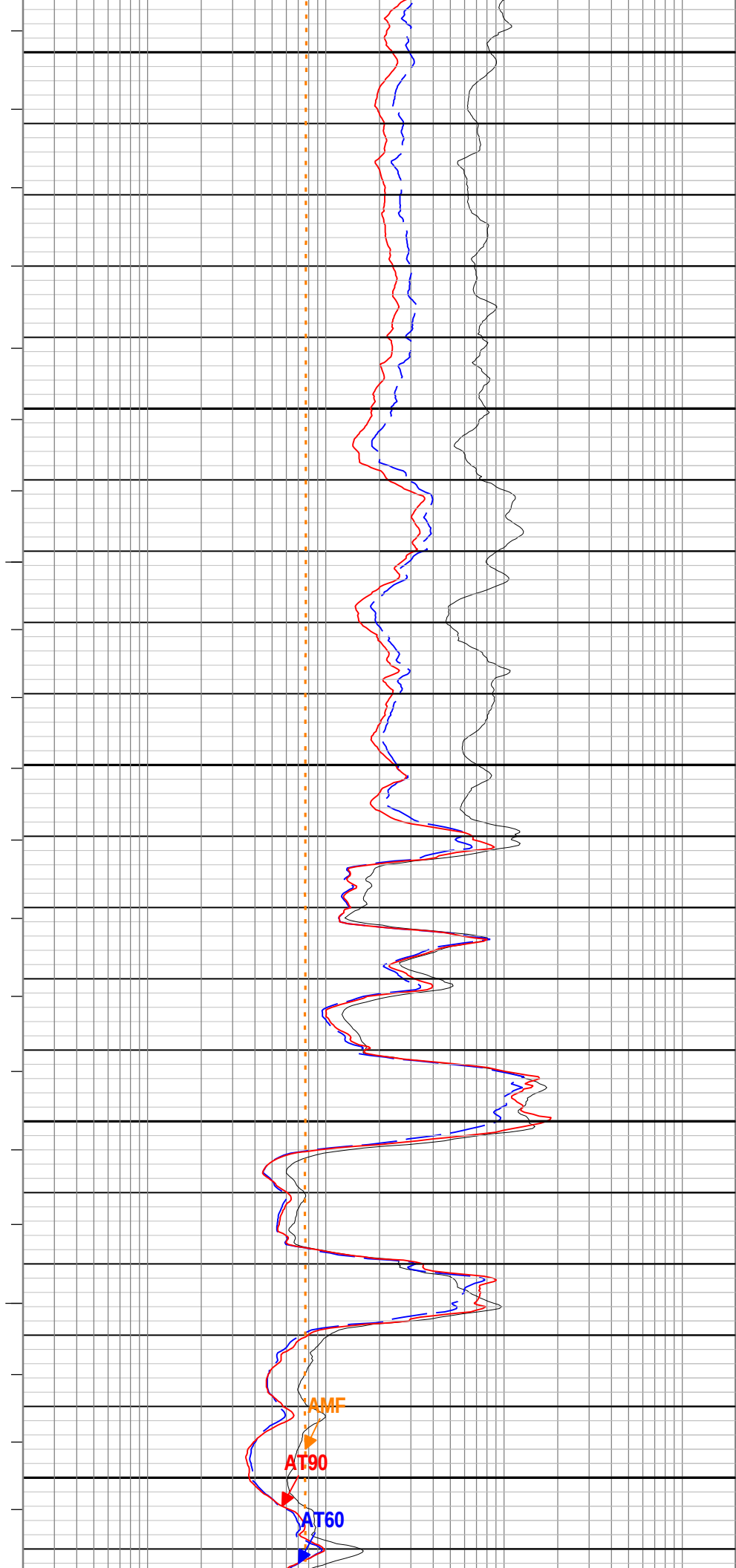
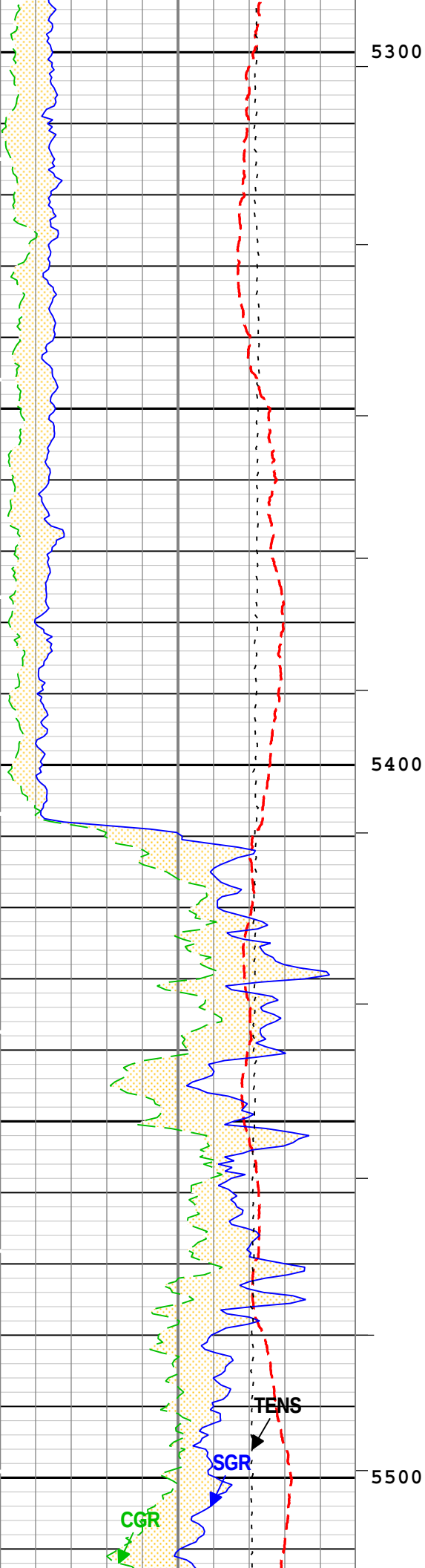


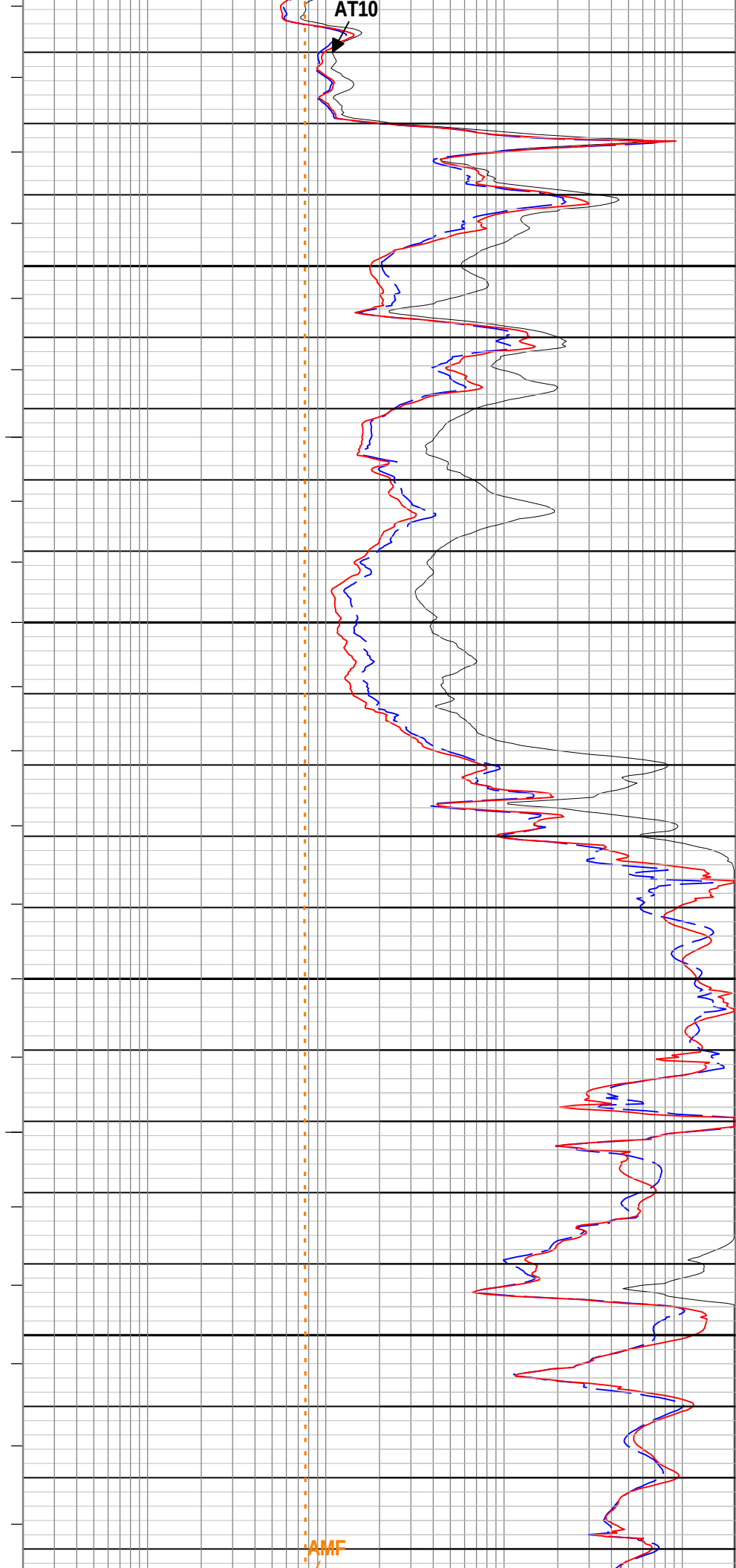
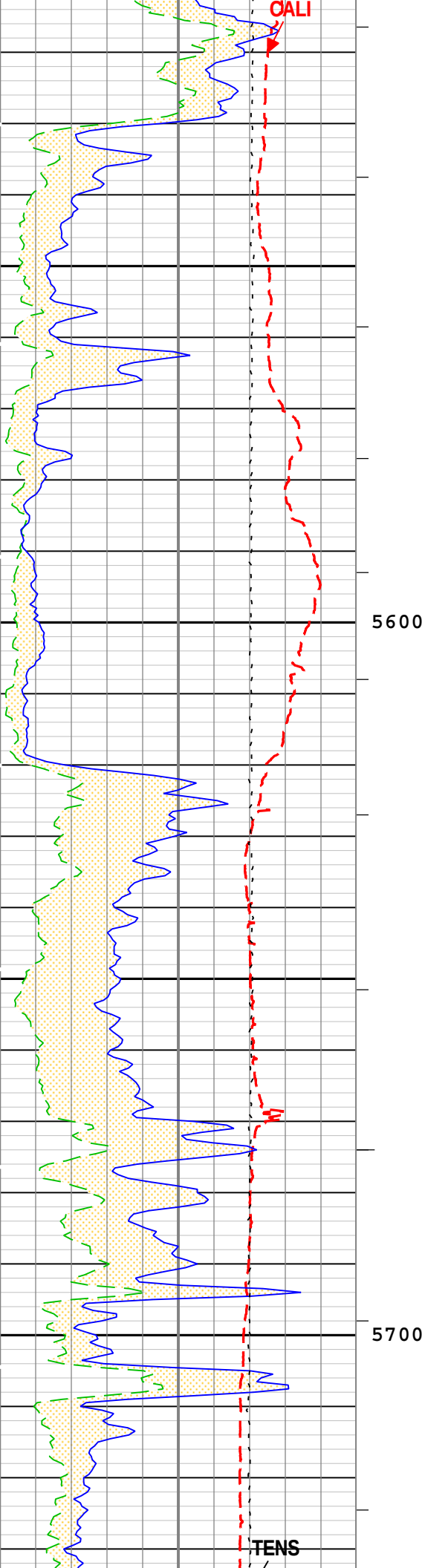


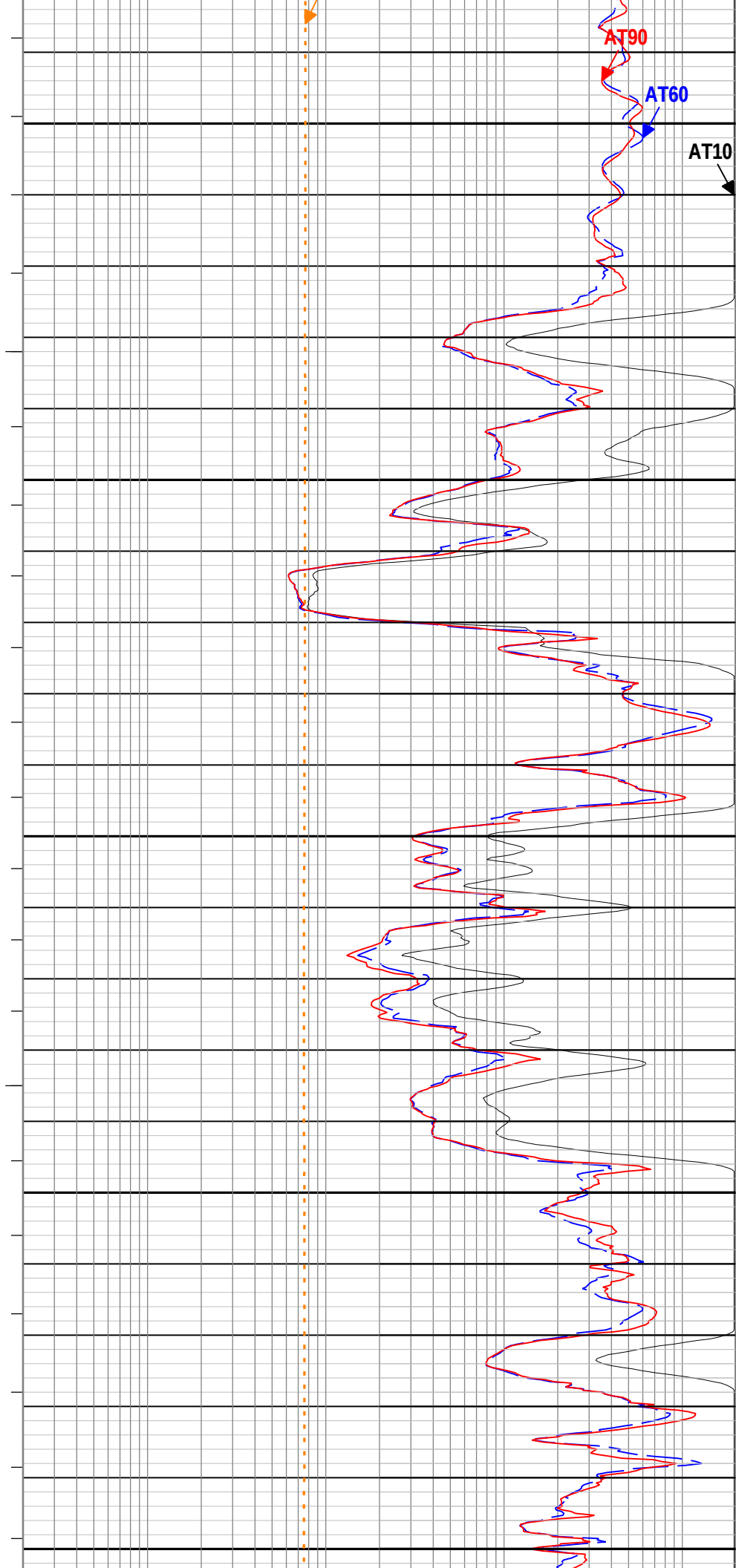
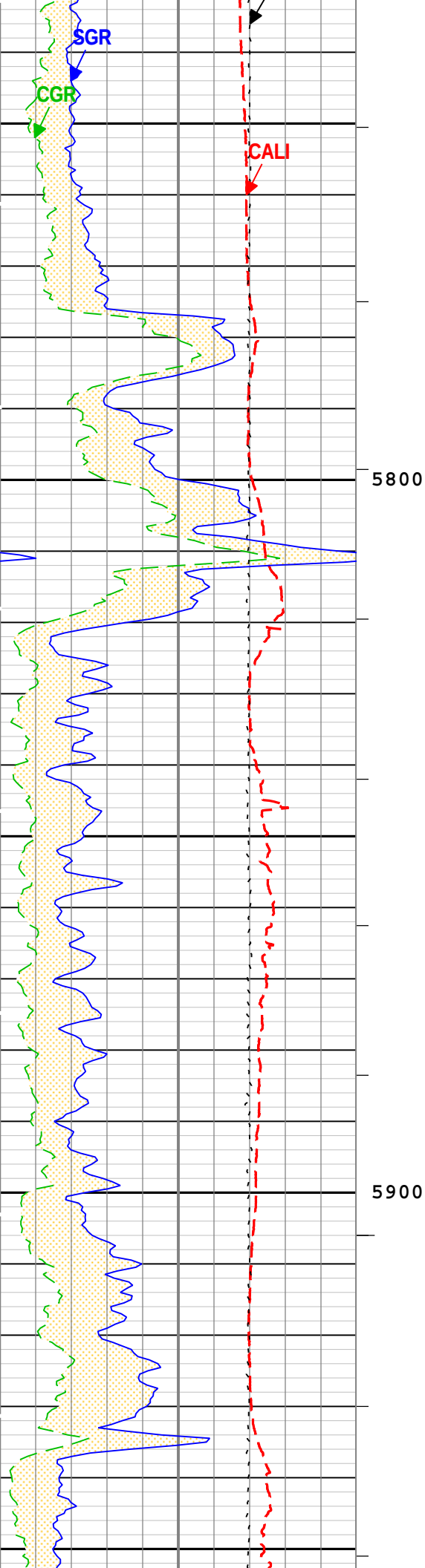


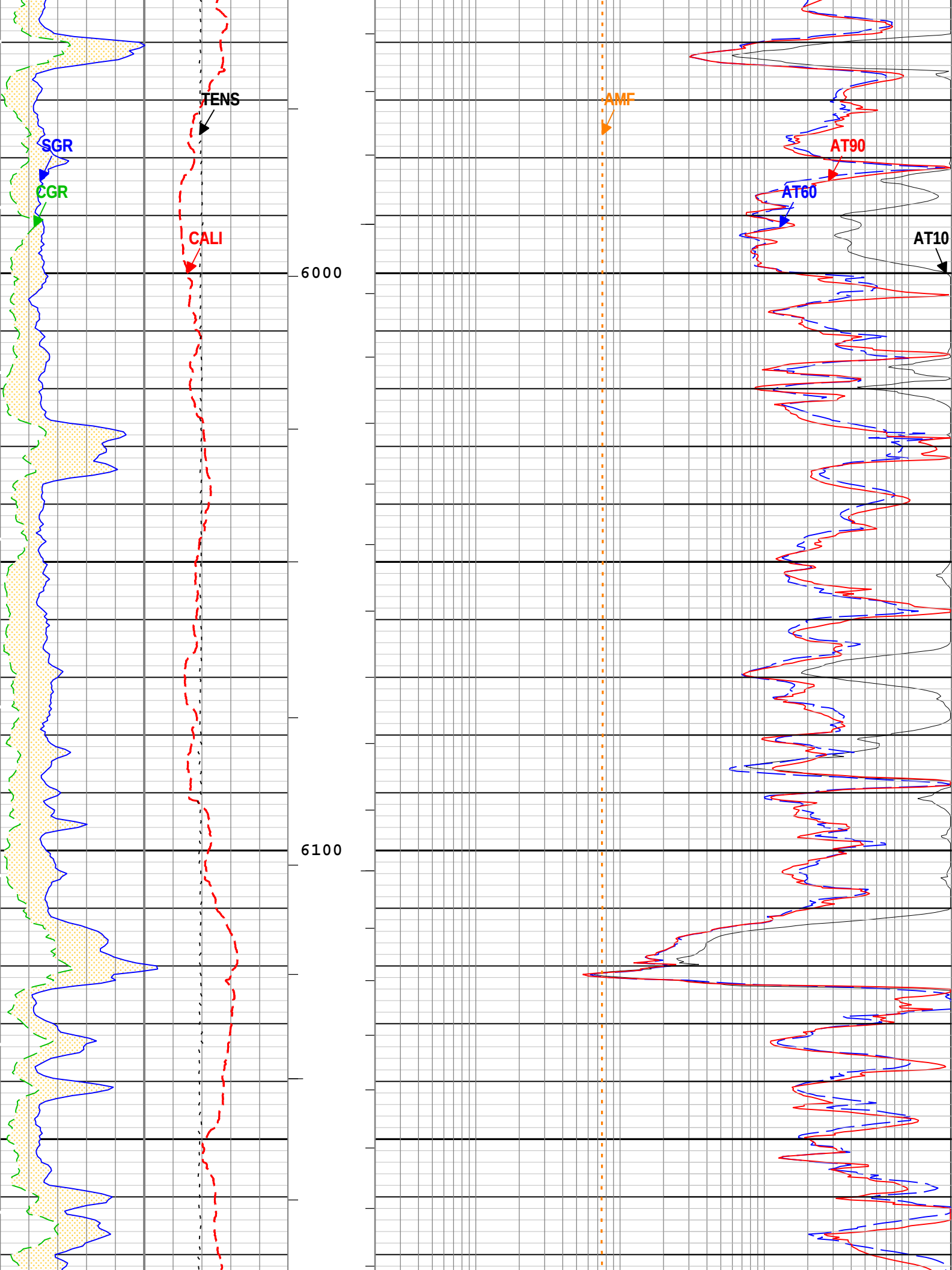


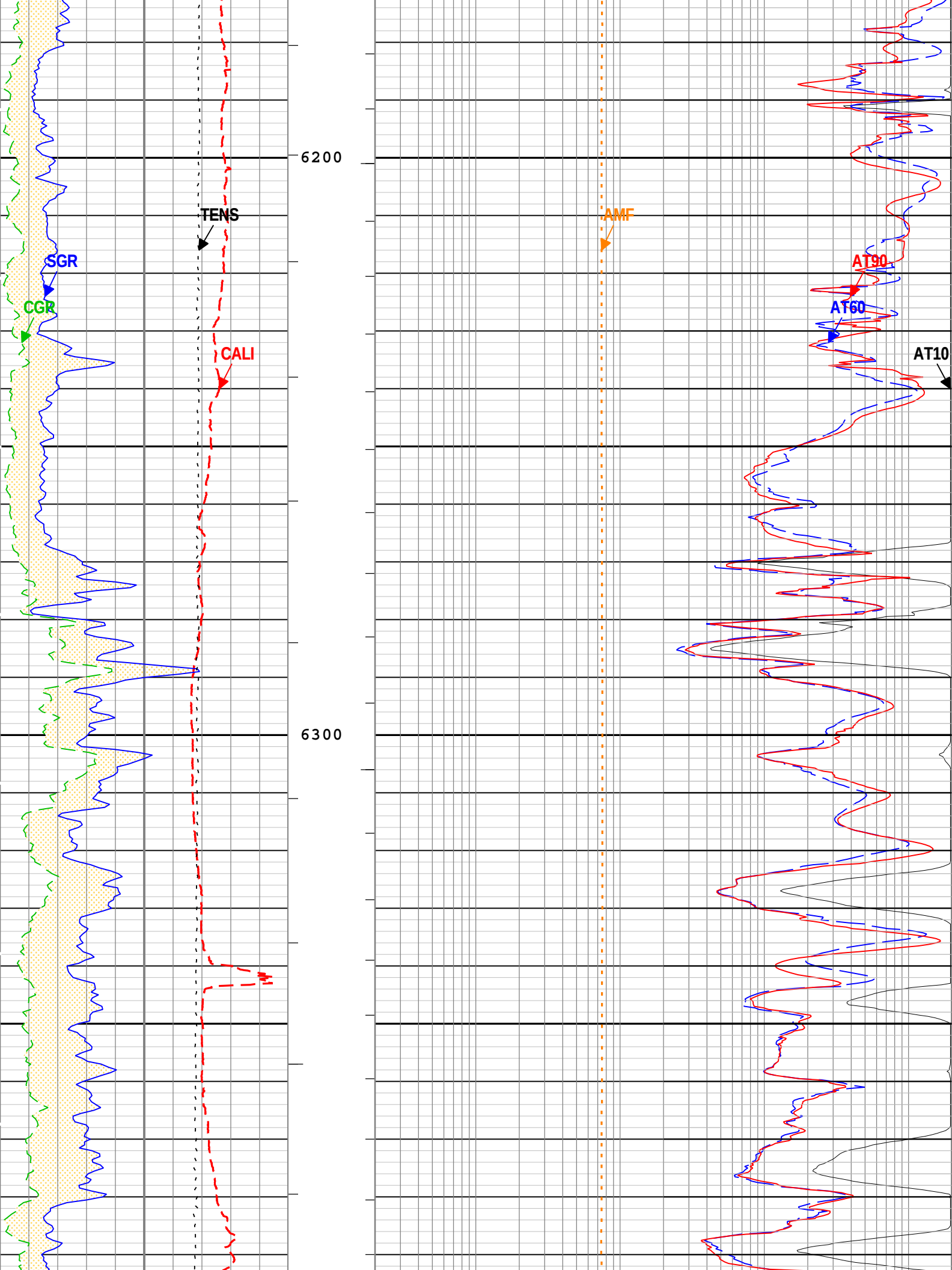


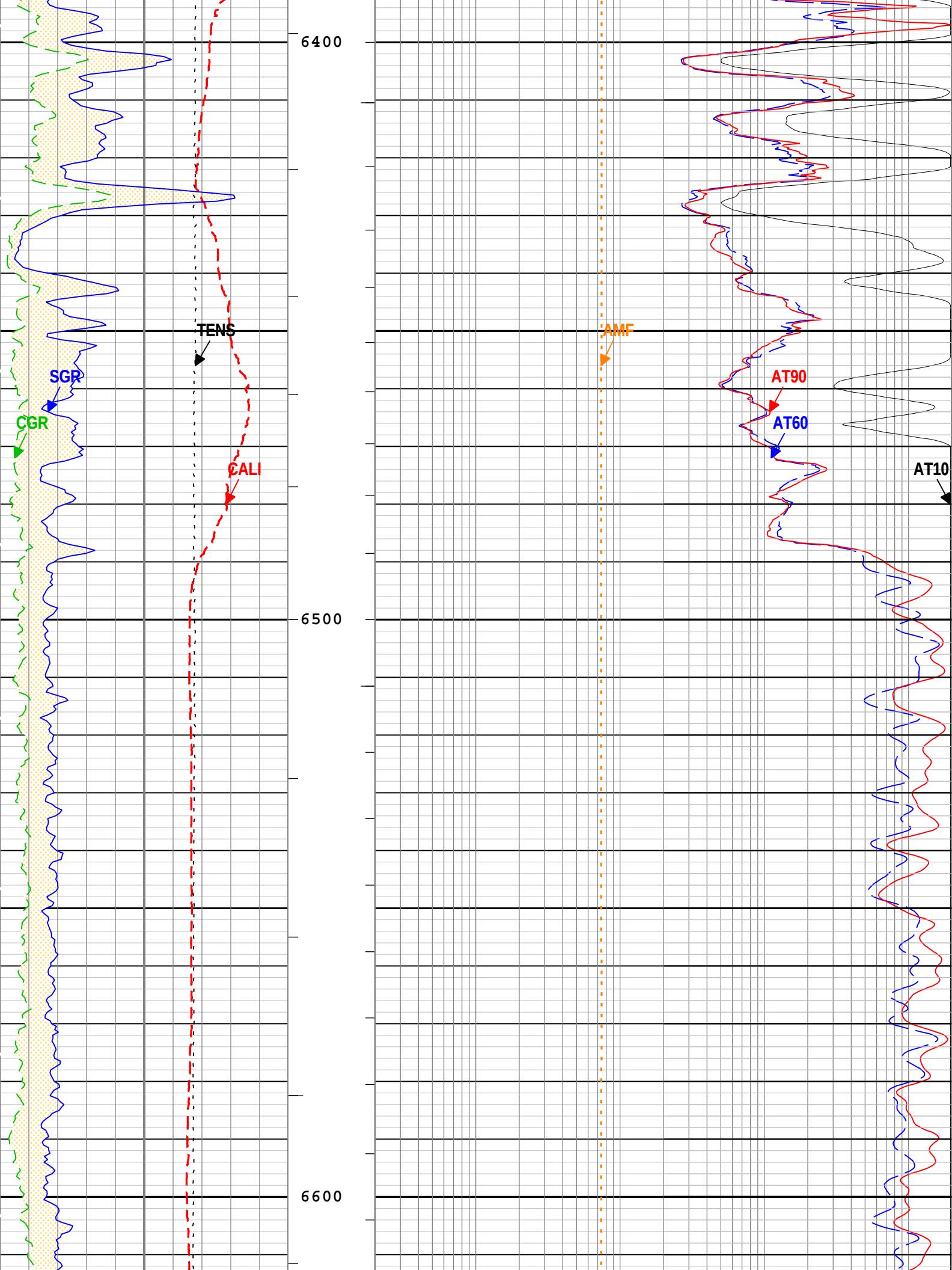


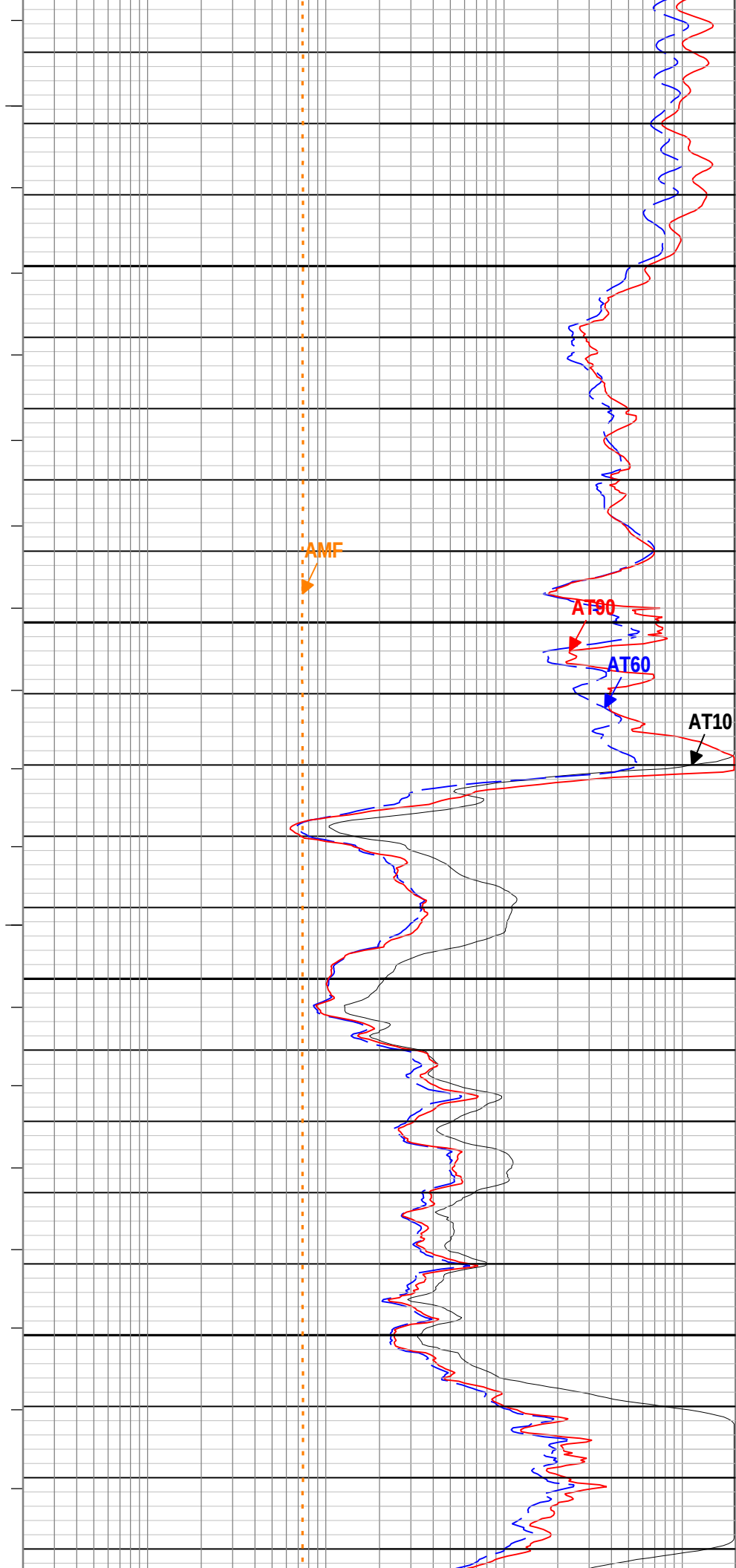
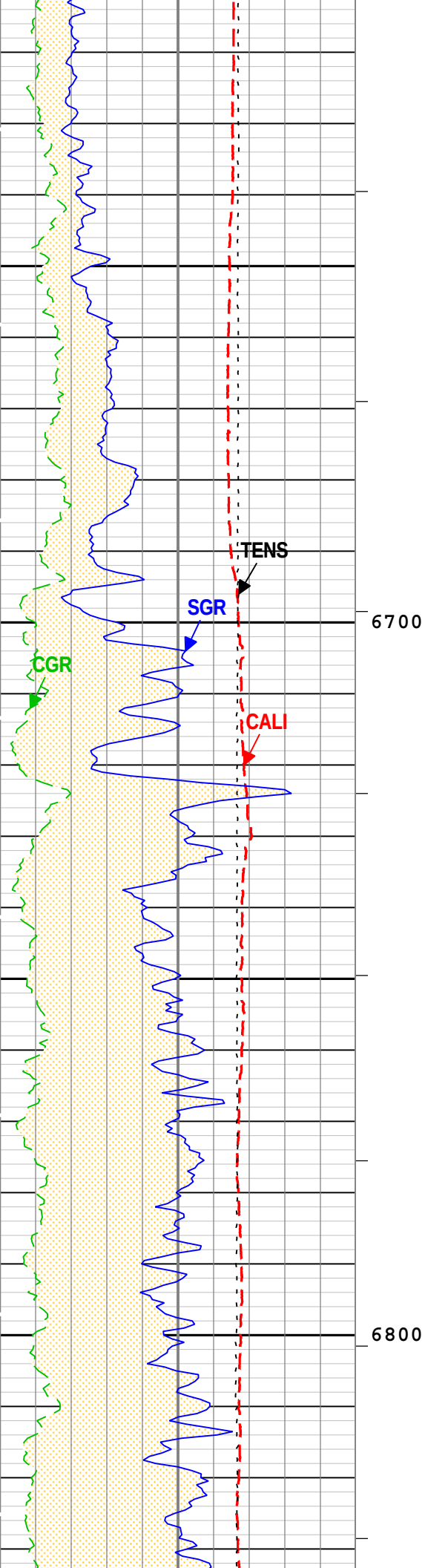


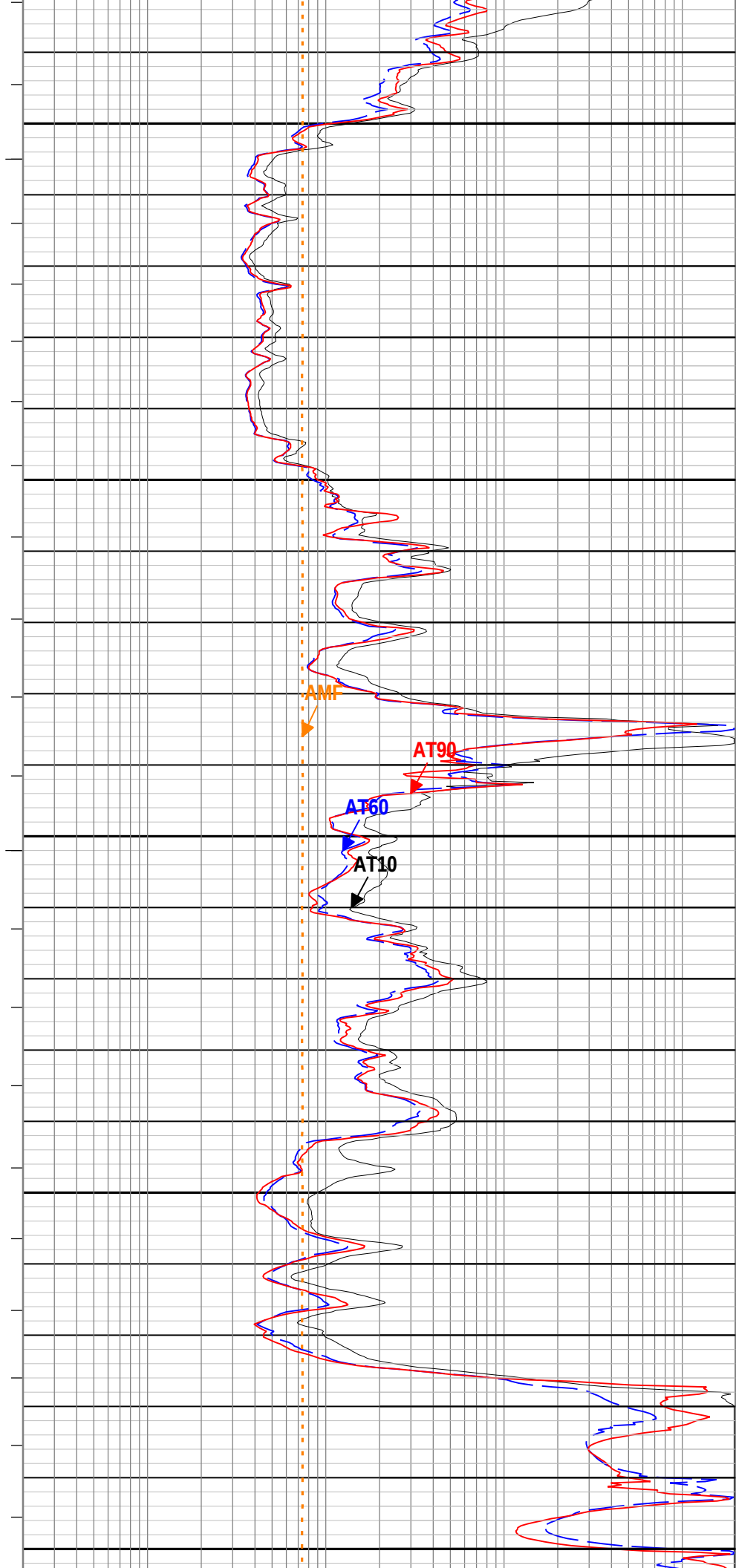
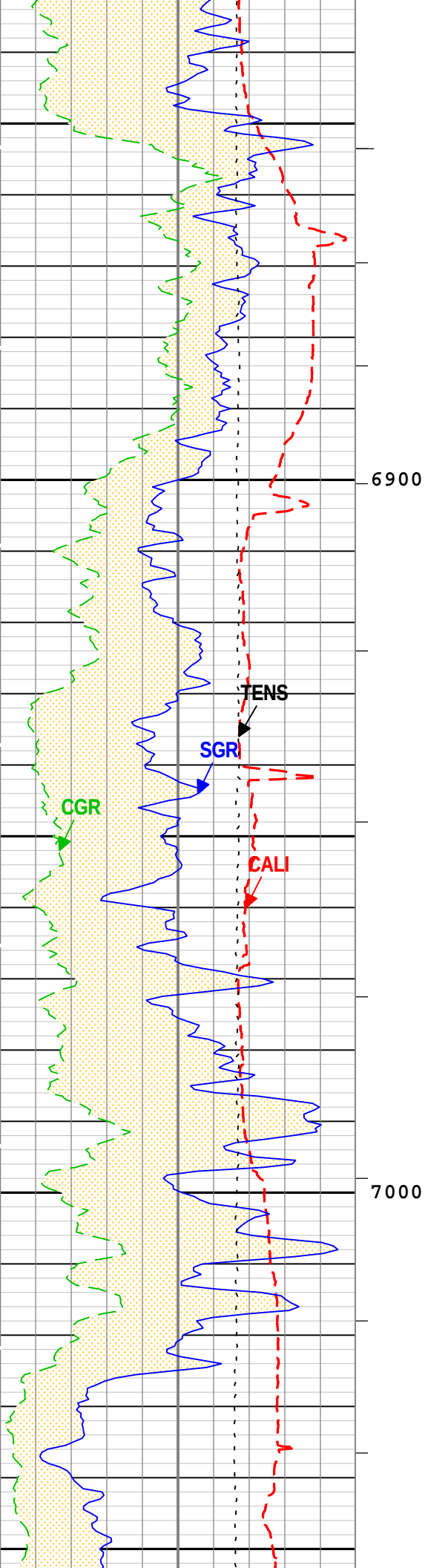


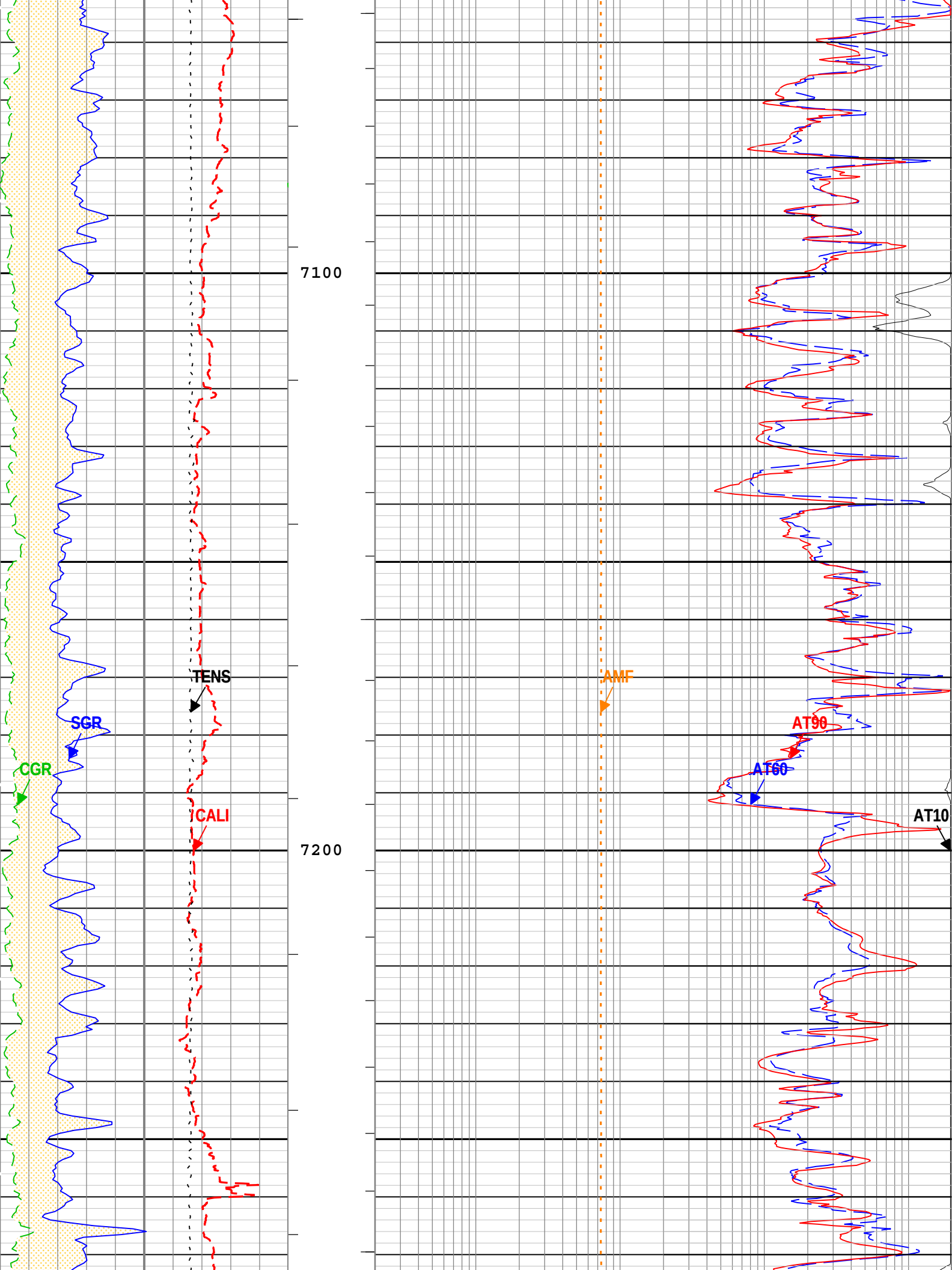


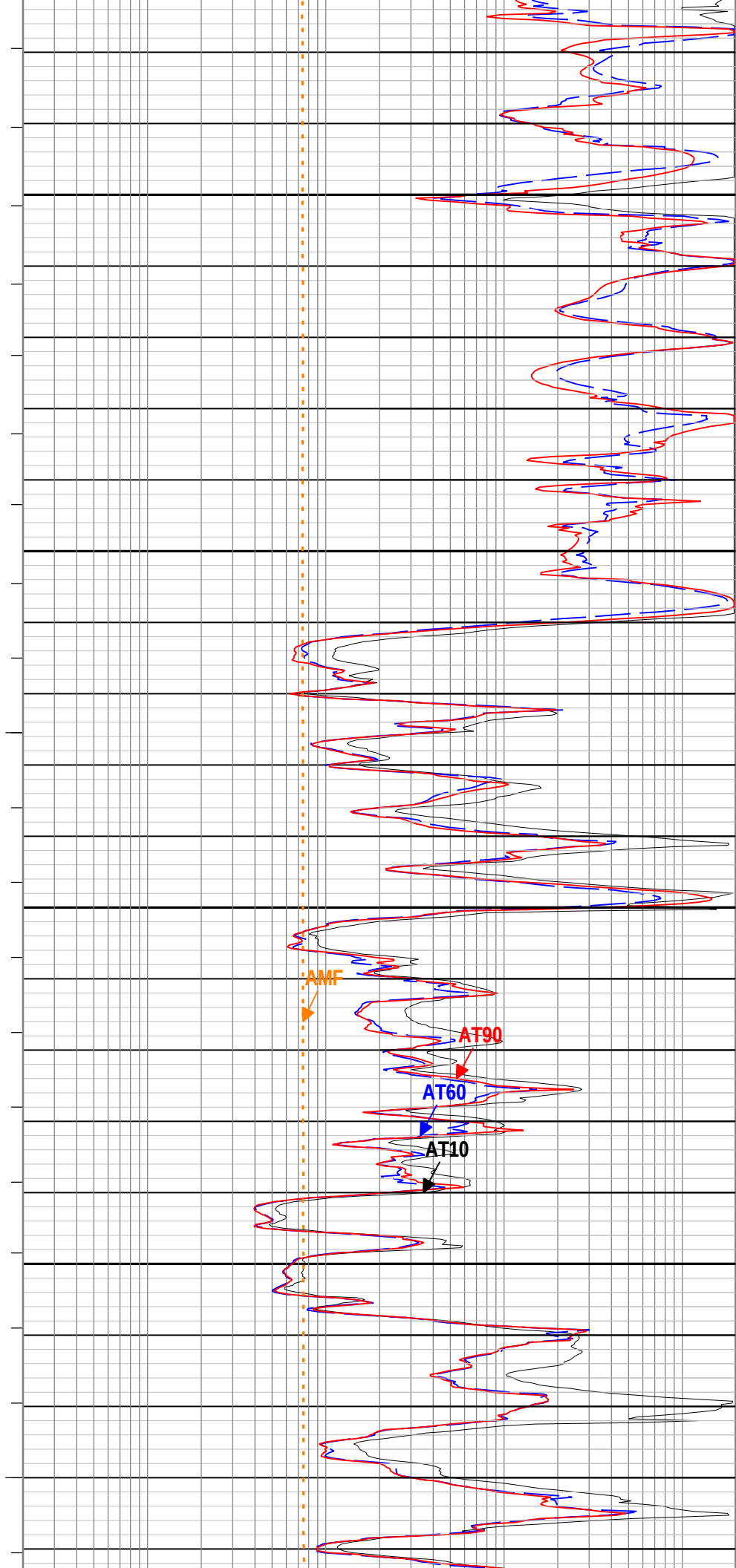
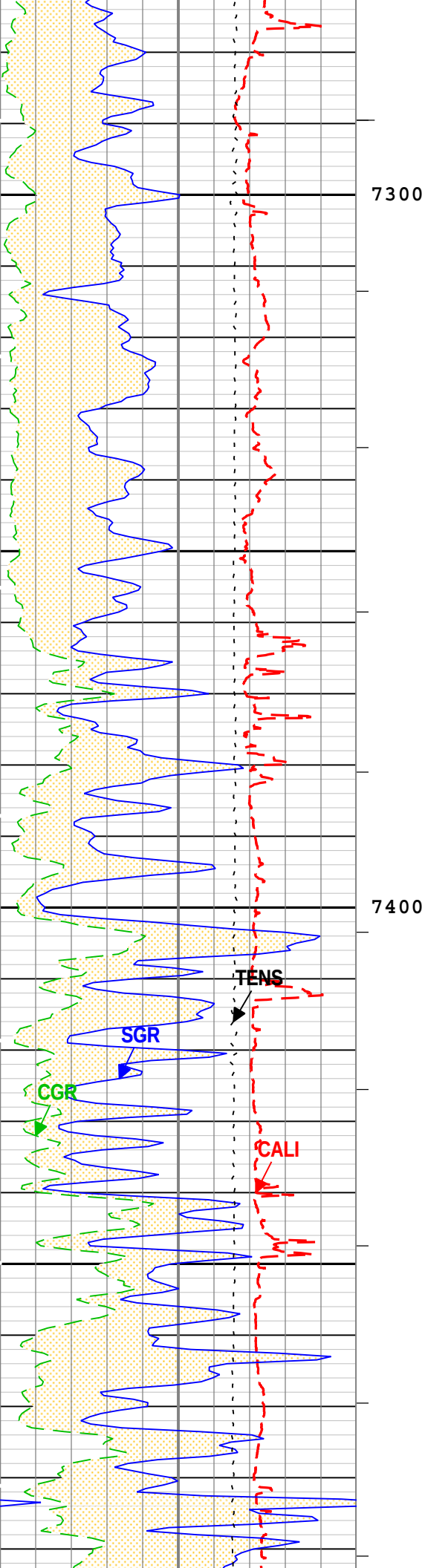


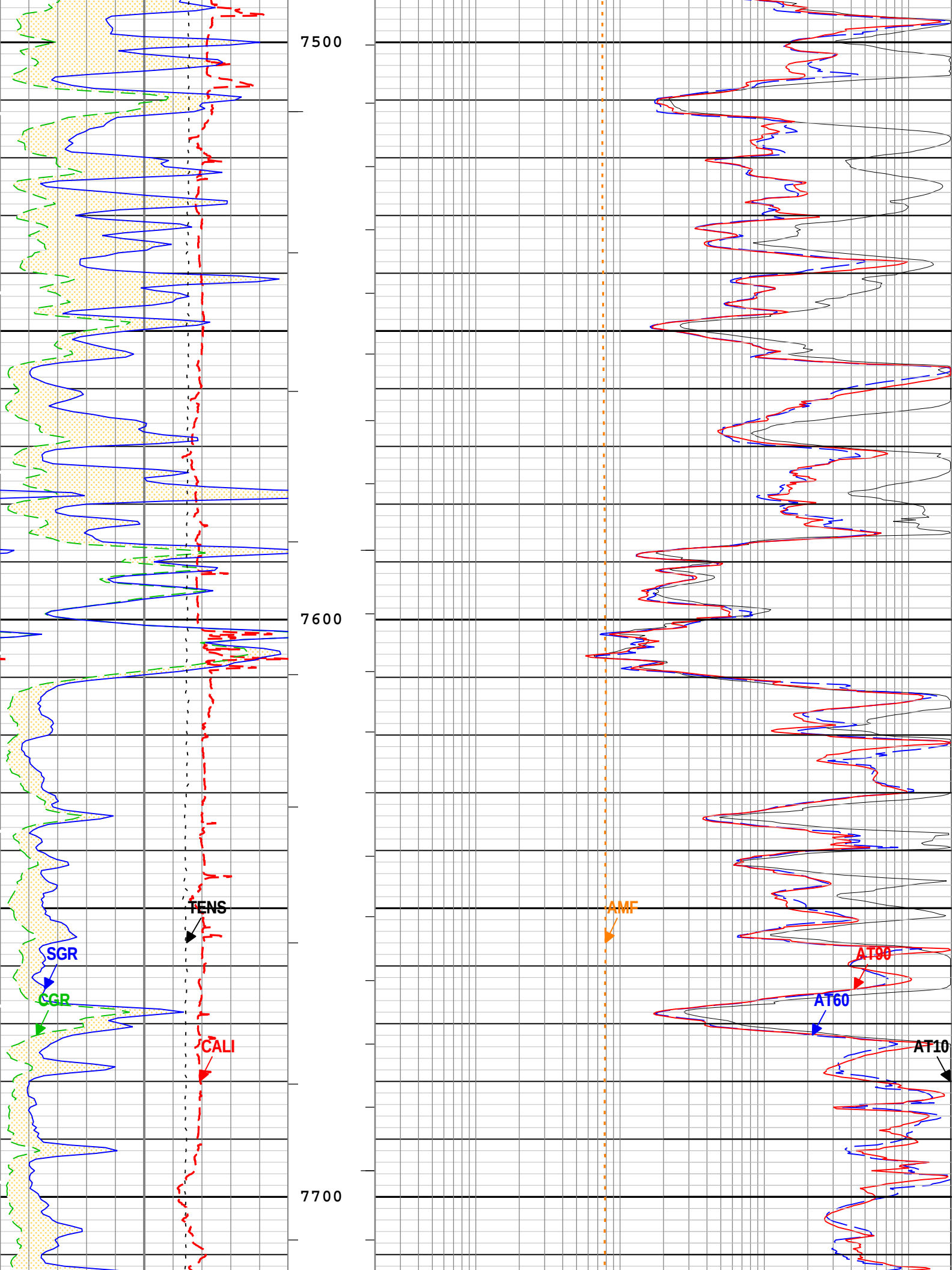


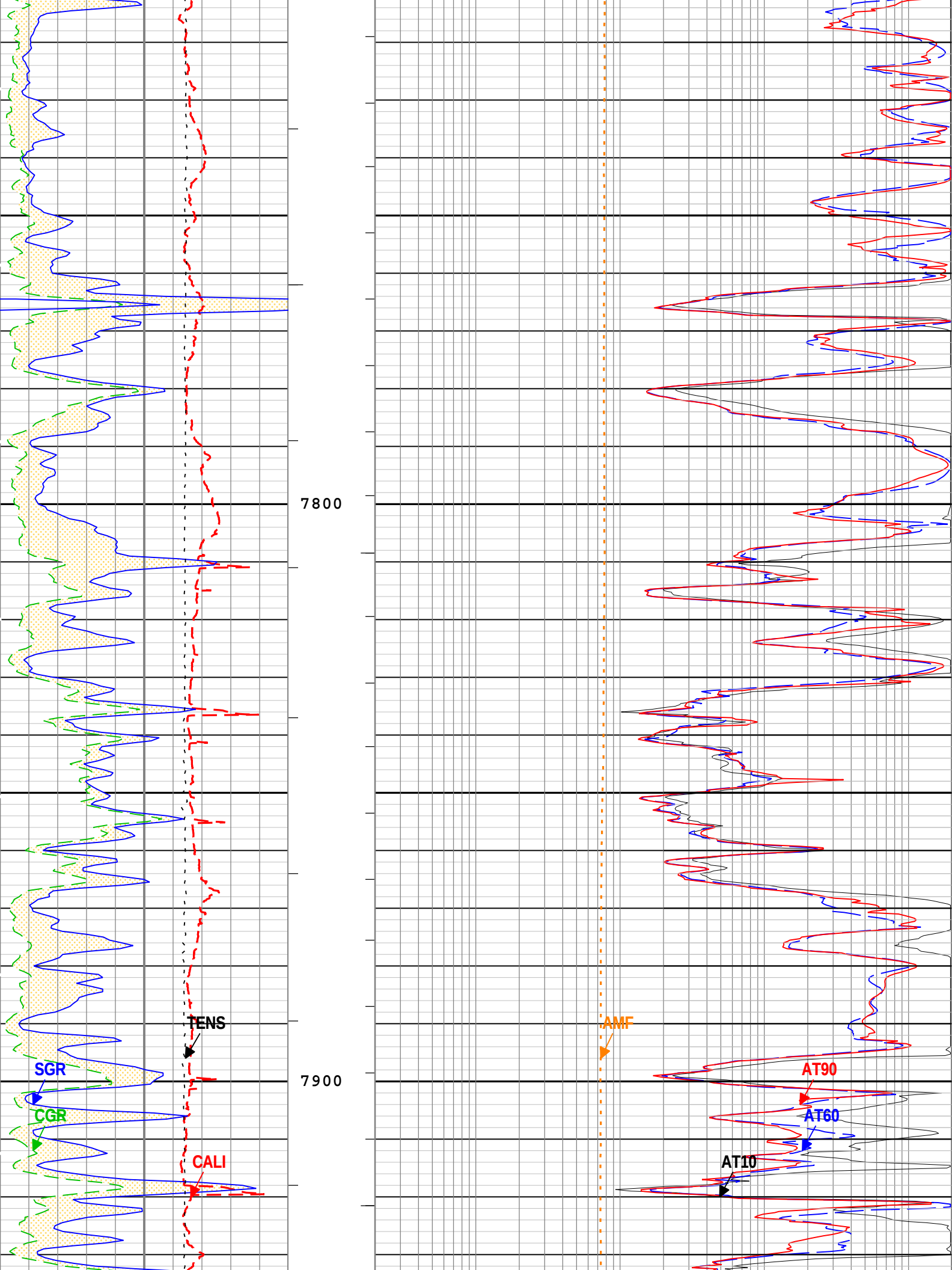


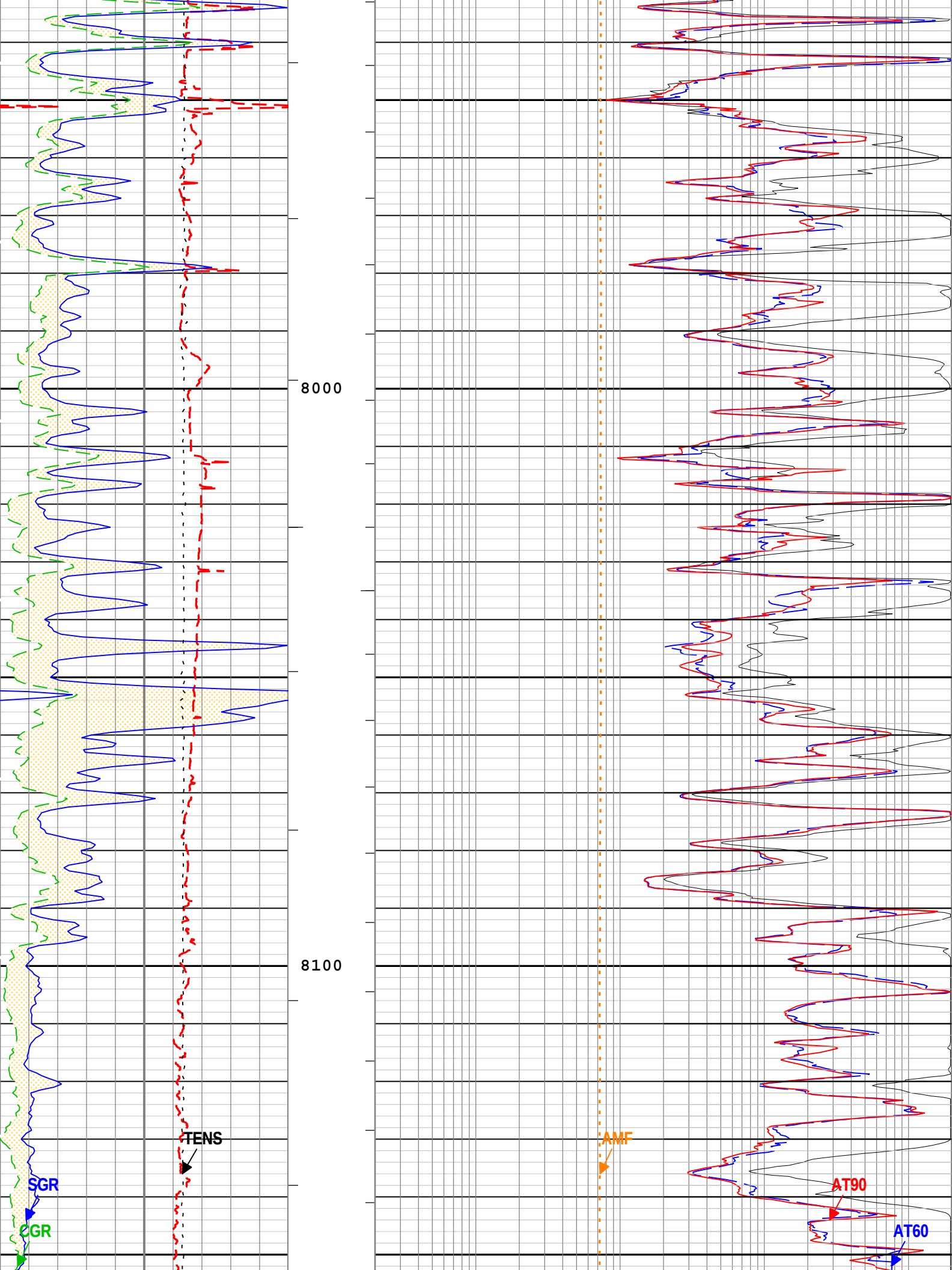


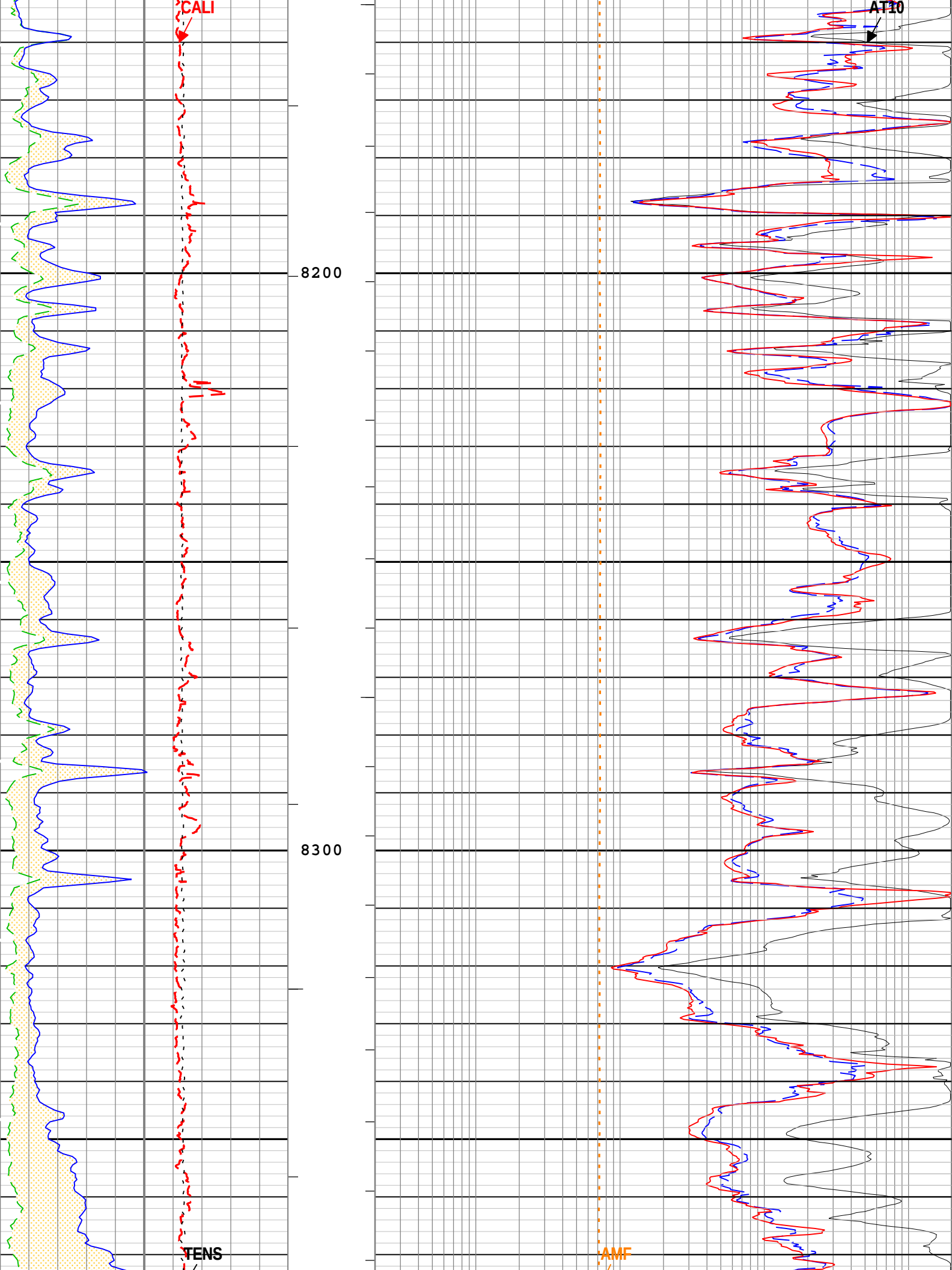


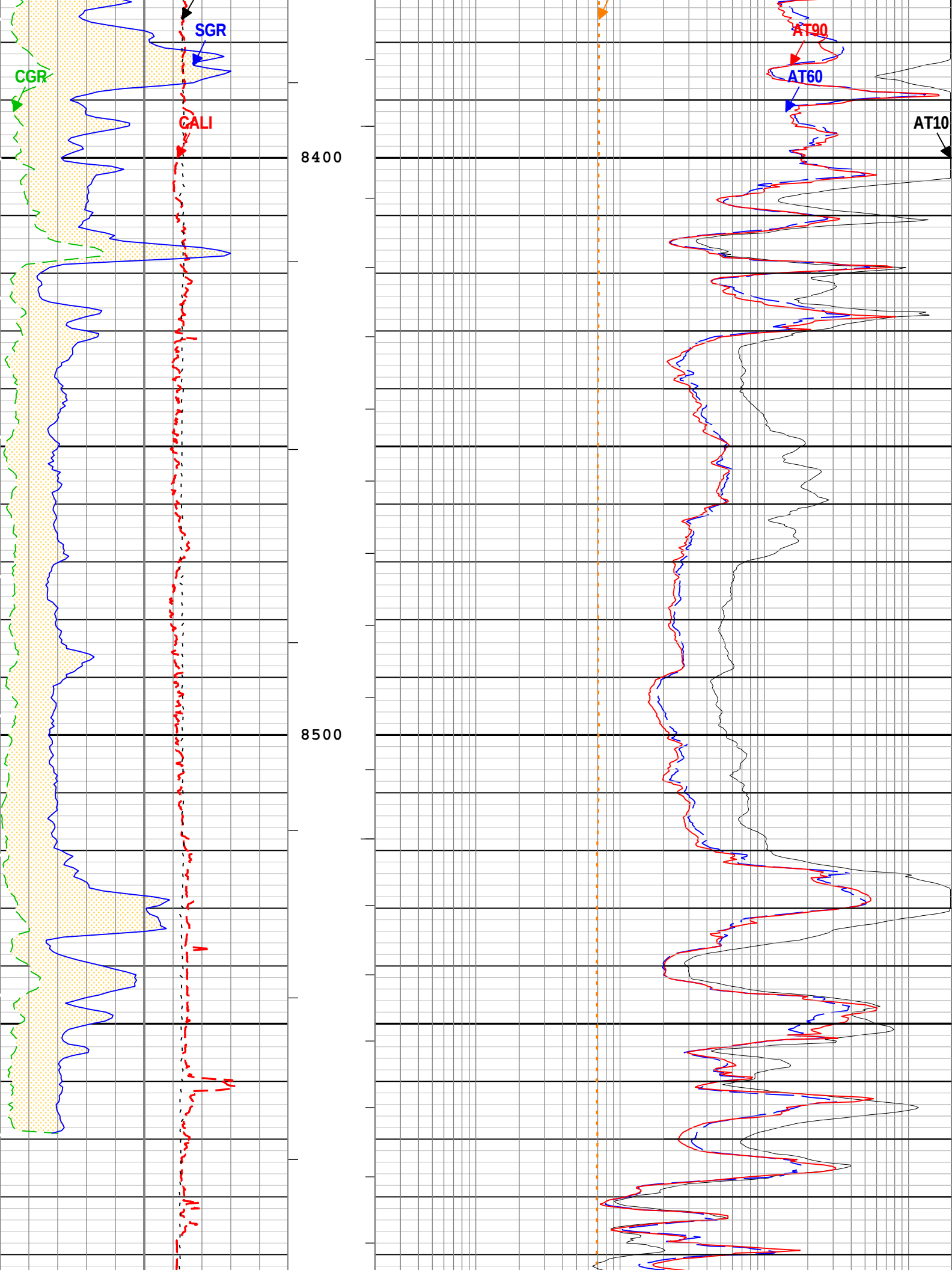


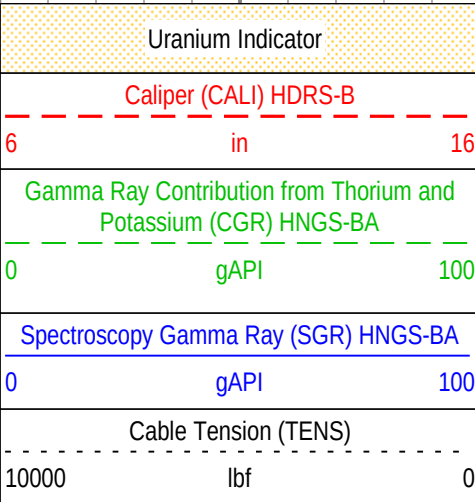
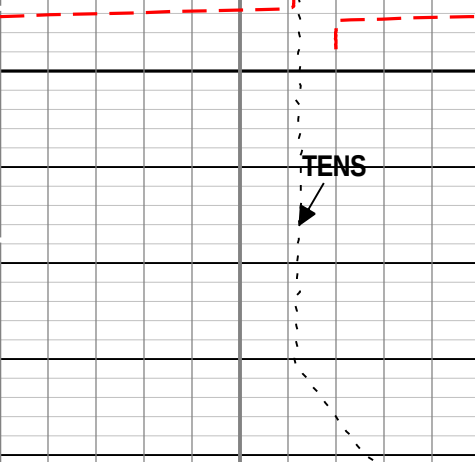












TIME_1900 - Time Marked every 60.00 (s)

— ICV - Integrated Cement Volume every 100.00 (ft3)

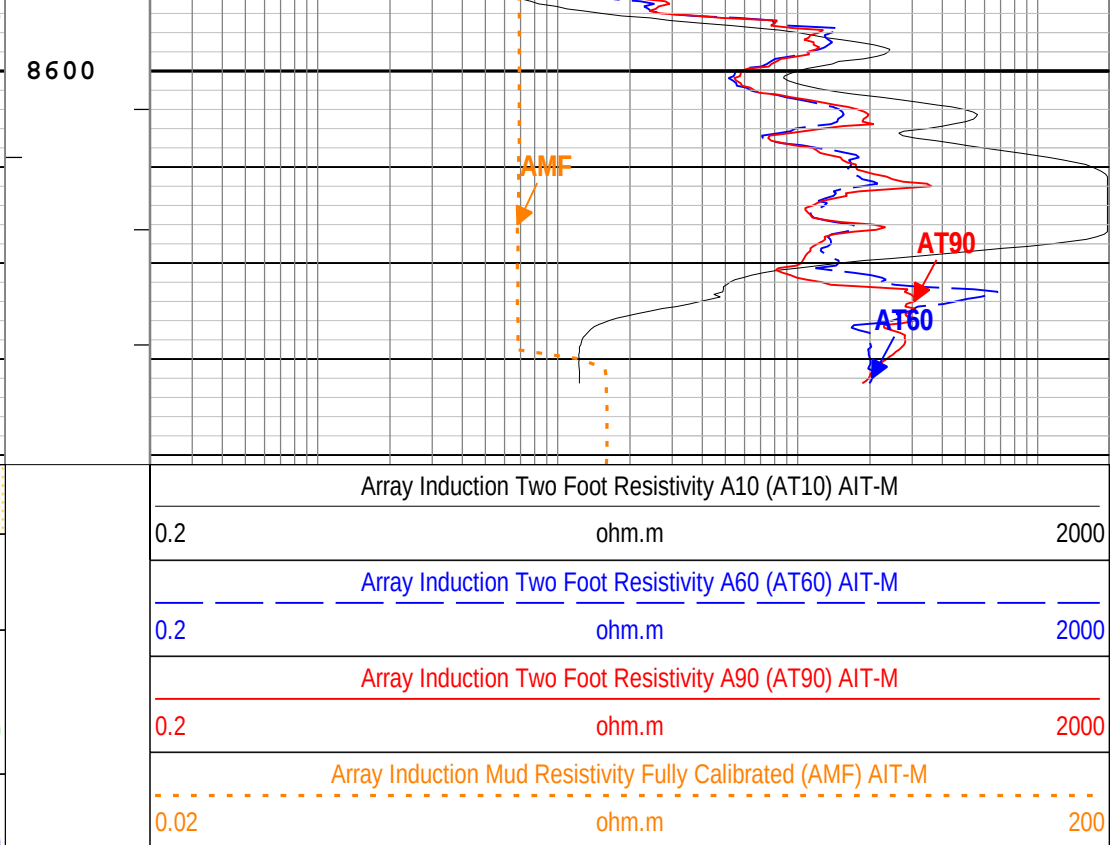
— ICV - Integrated Cement Volume every 10.00 (ft3)

— IHV - Integrated Hole Volume every 100.00 (ft3)

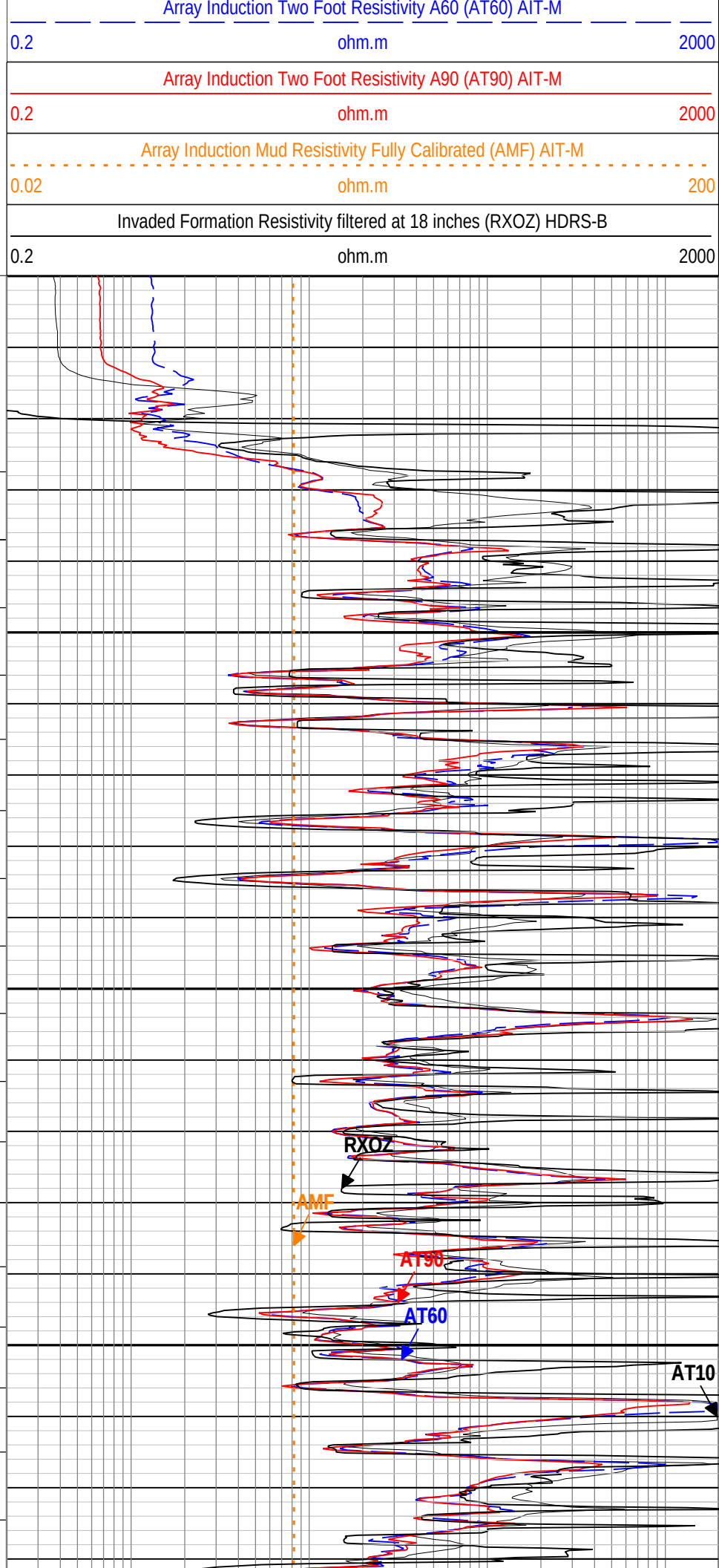
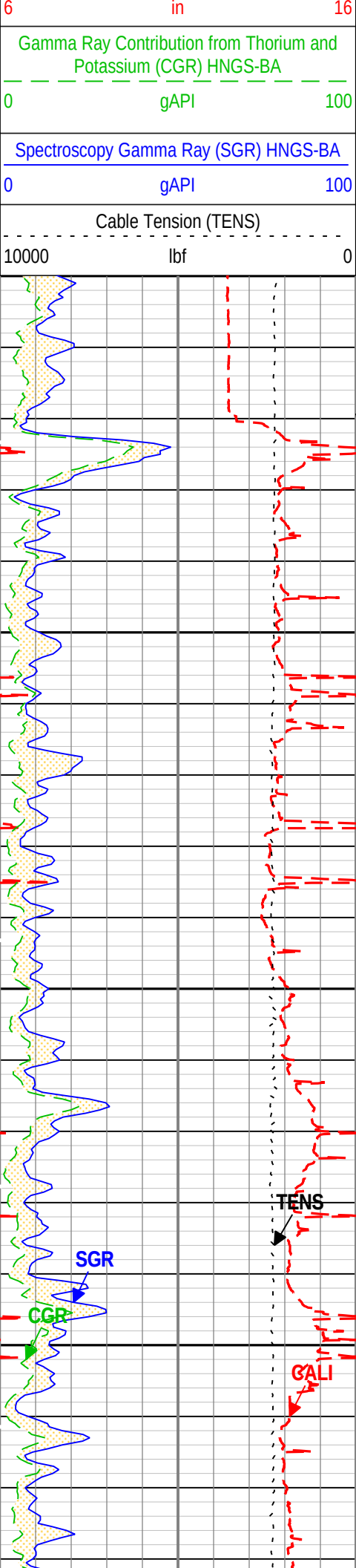
— IHV - Integrated Hole Volume every 10.00 (ft3)

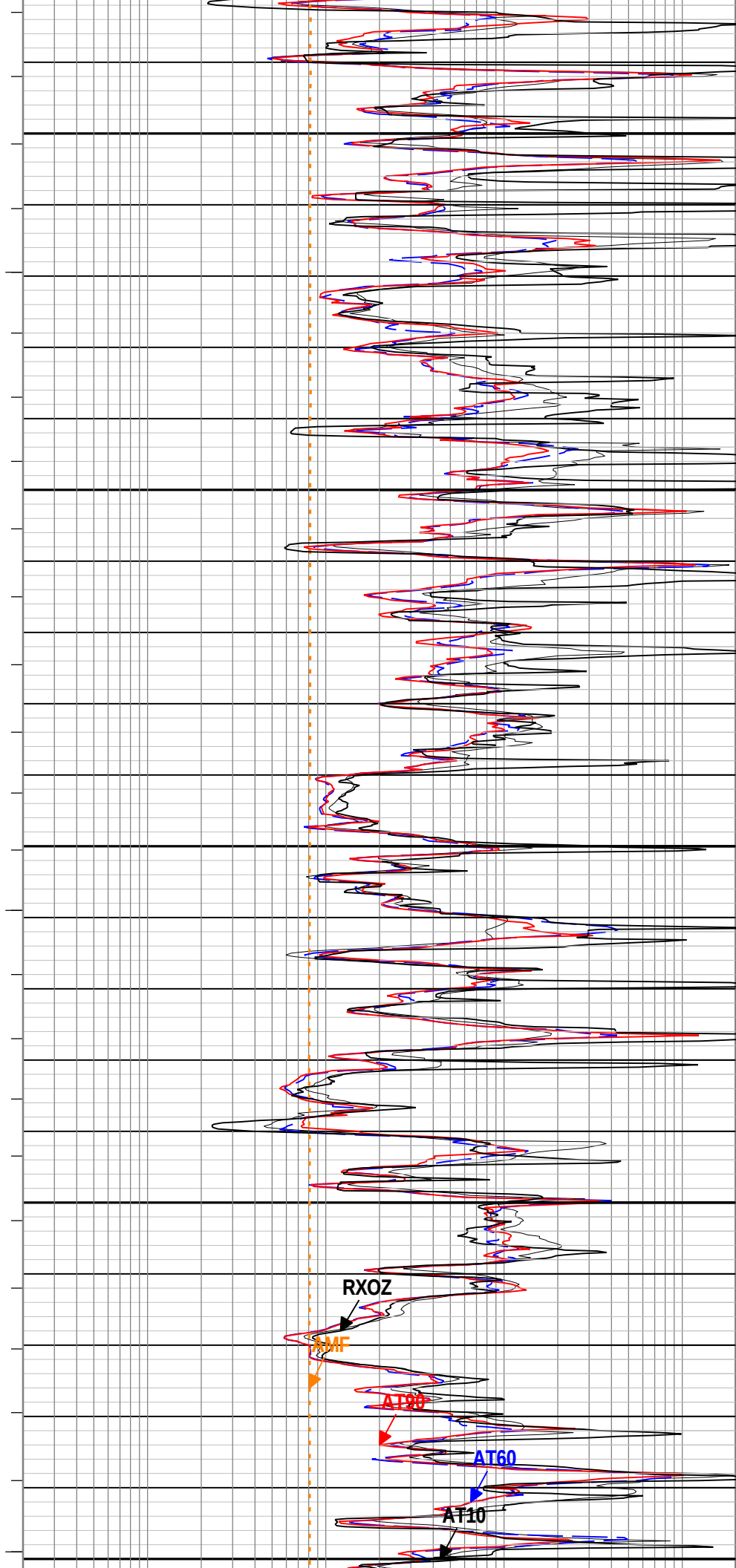
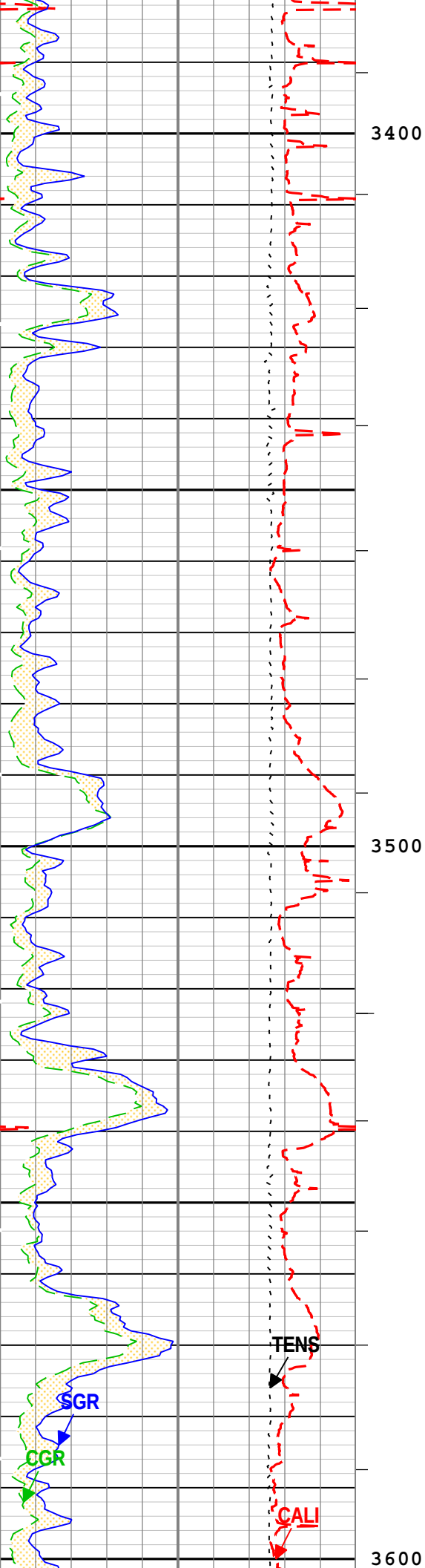
Description: AIT Basic Log Two Format: Log (Log (AIT_2_Inch)) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:11:05

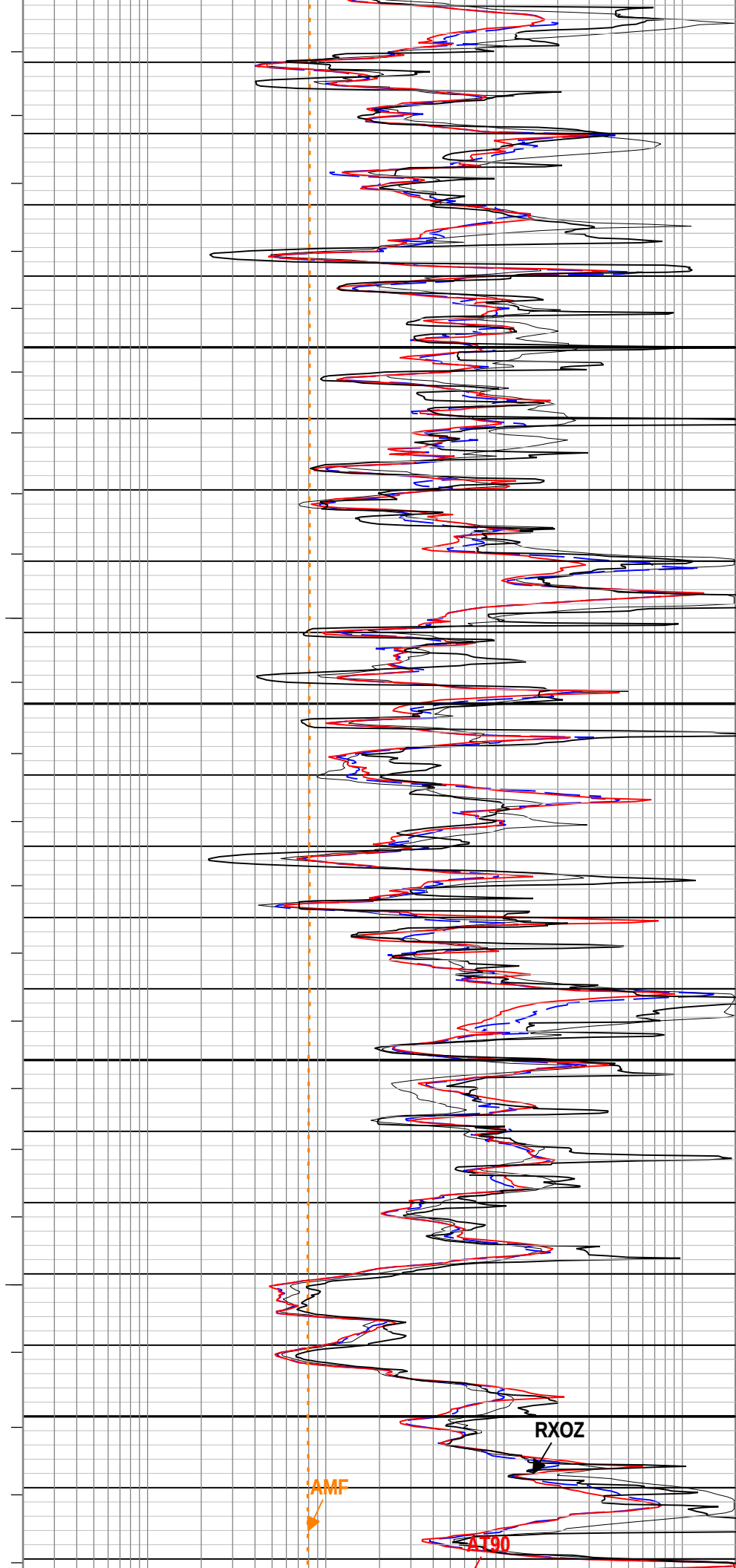
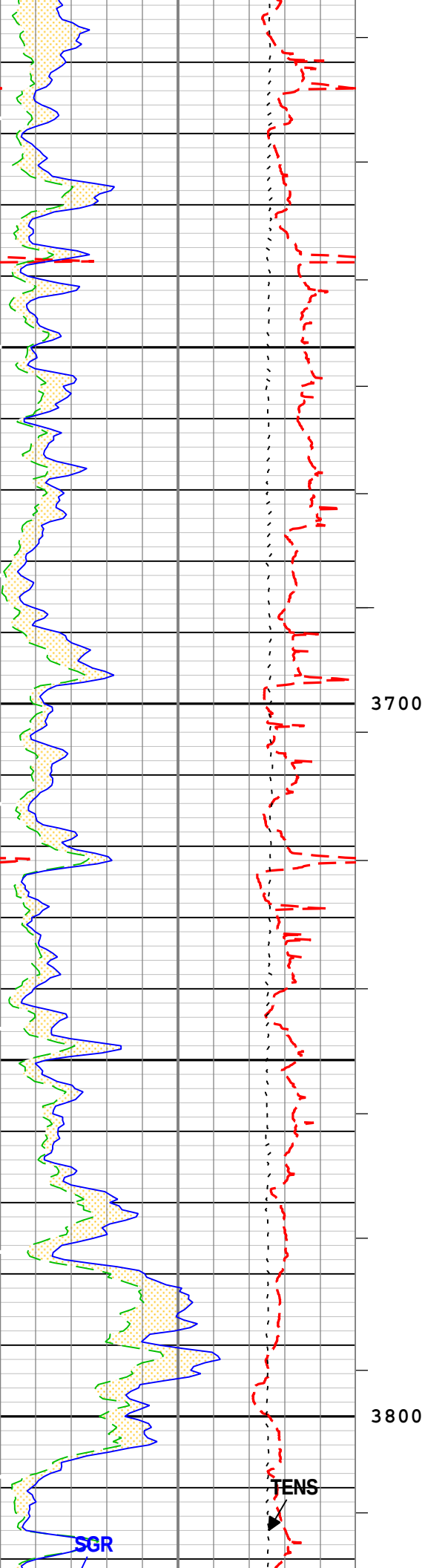
Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Standoff	
ACDE	Array Induction Casing Detection Enable	AIT-M	No	
ASTA	Array Induction Tool Standoff	AIT-M	1.625	in
BARI	Barite Mud Presence Flag	Borehole	No	
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-B	0.168	in
CBLO	Casing Bottom (Logger)	WLSESSION	3219.5	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	Depth Zoned	in
DBCC	Barite Constant Correction Flag	HNGS-BA	None	
DFD	Drilling Fluid Density	Borehole	8.8	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	9.625	in
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	AMF	
HCRB	Apply Borehole Potassium Correction	HNGS-BA	None	

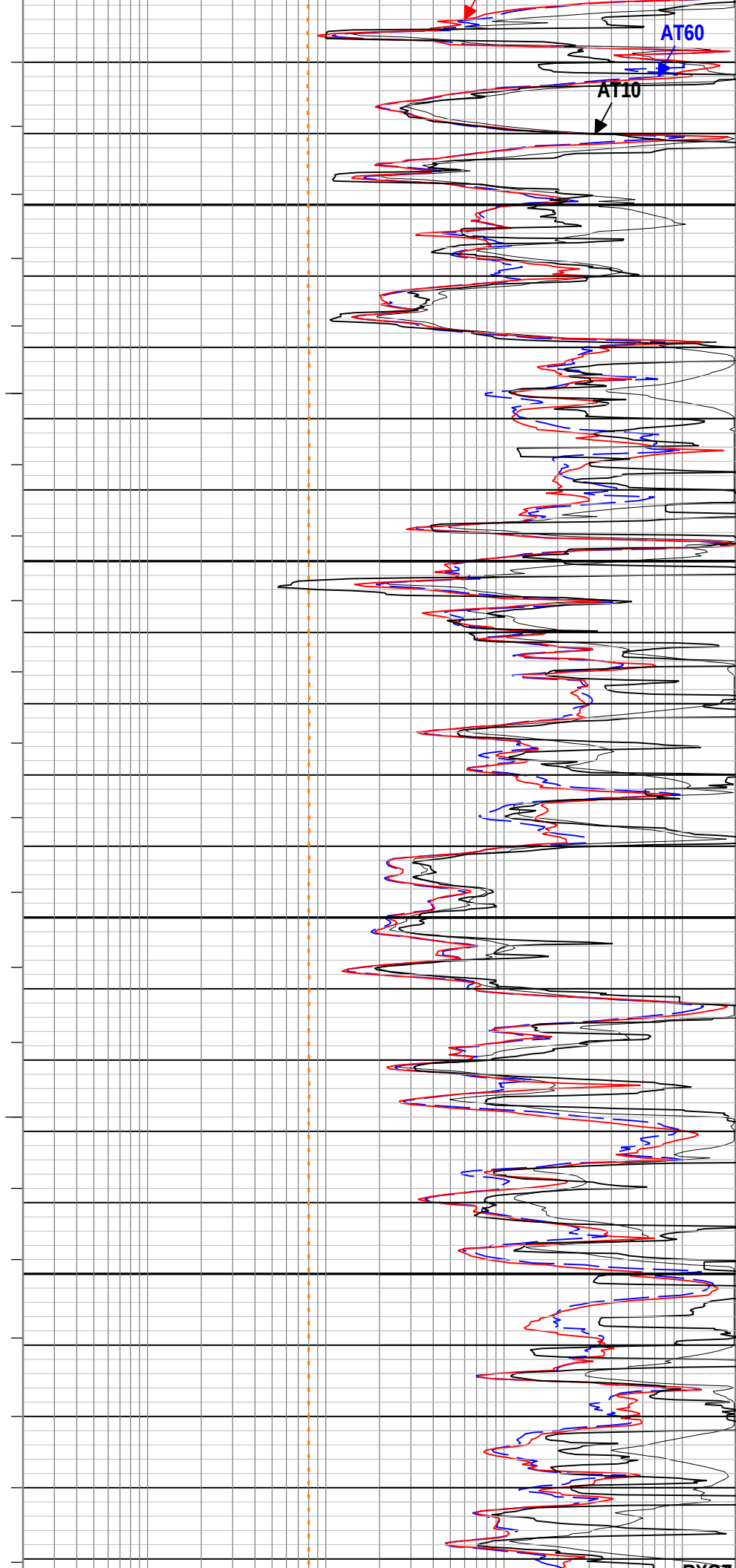
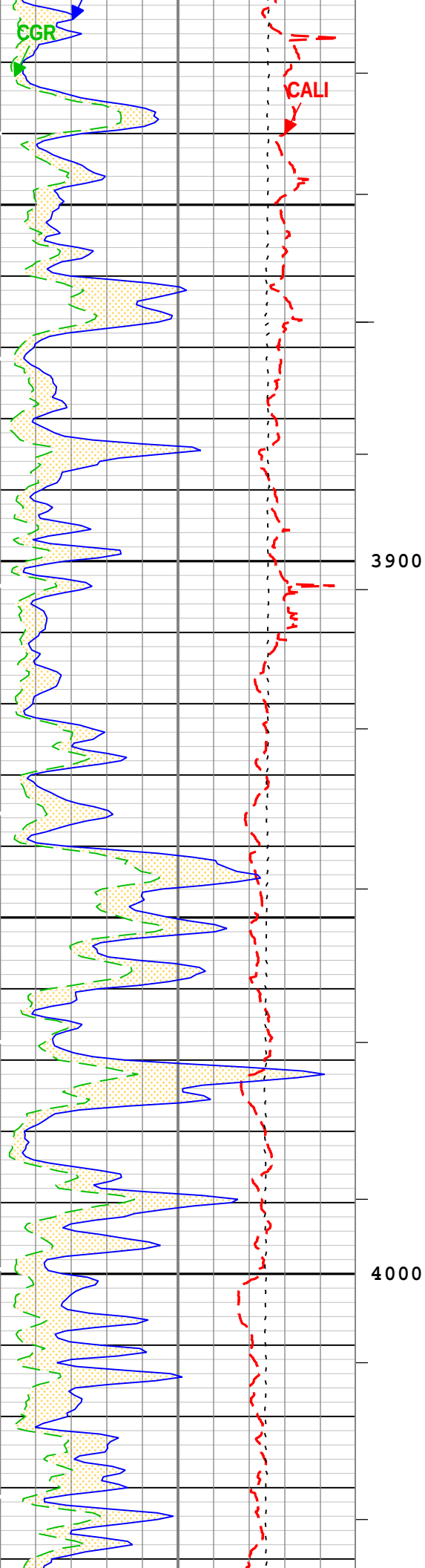


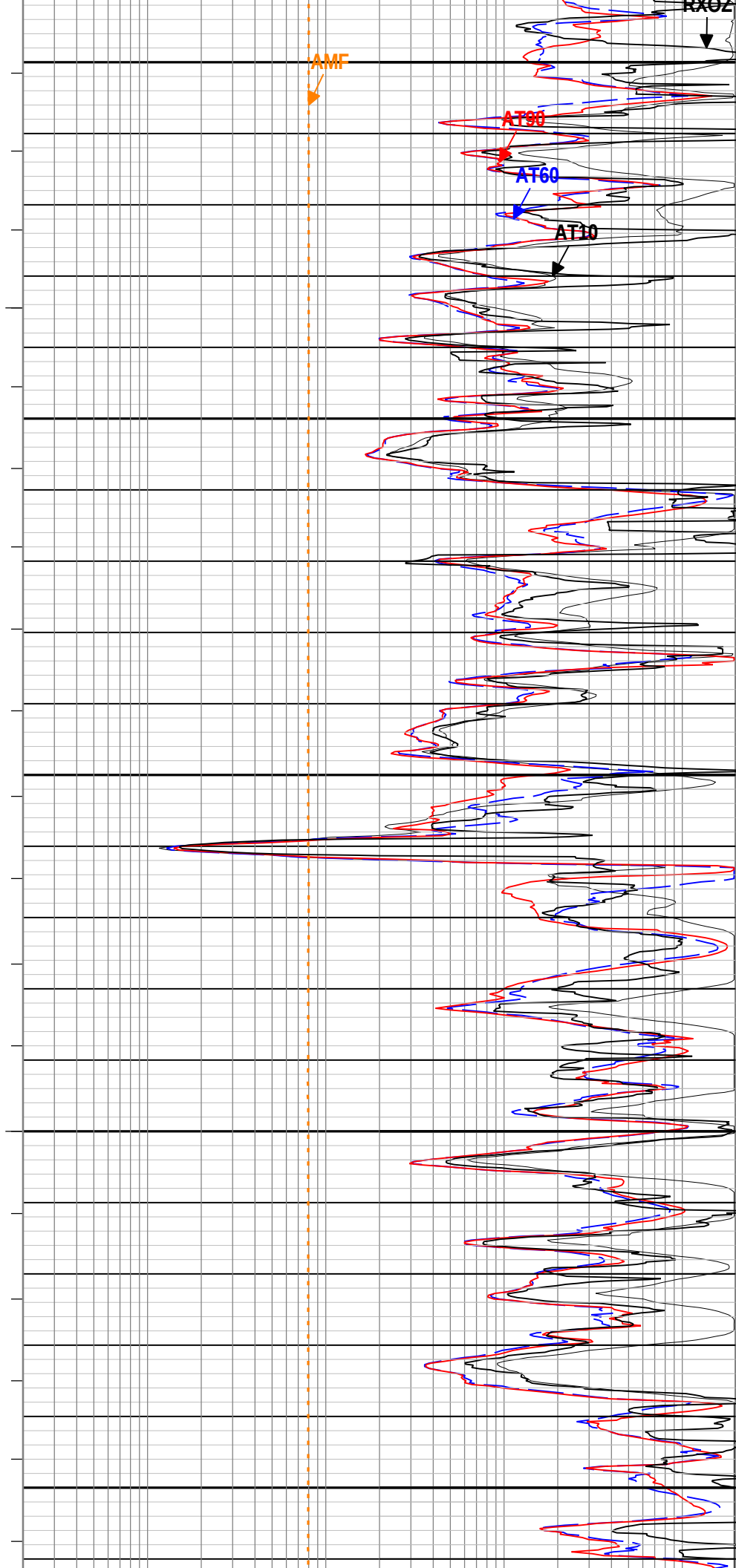
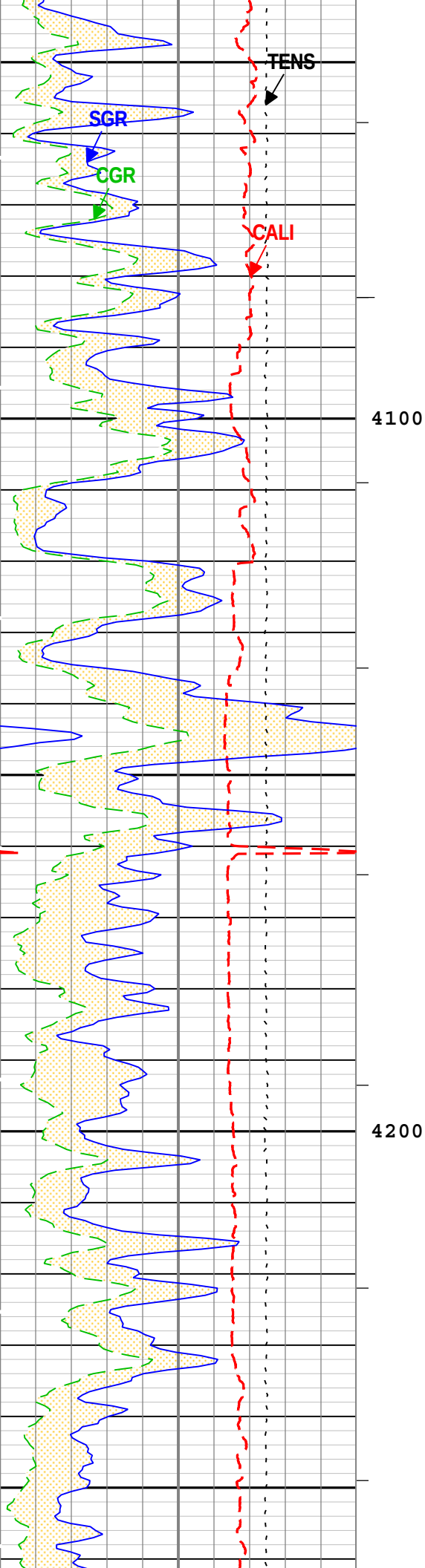
HEMA	Hematite Presence Flag	Borehole	No	
HVCS	Integrated Hole Volume Caliper Selection	Borehole	Measured Area	
SGRC	Standard Gamma Ray Correction Flag	HNGS-BA	Yes	
Depth Zone Parameters				
Parameter	Value	Start (ft)	Stop (ft)	
BHS	Cased	0	3520	
BHS	Open	3520	8641	
BS	26	0	1570	
BS	17.5	1570	3226.75	
BS	12.25	3226.75	8630	
CSODDRL	20	0	1570	
CSODDRL	13.375	1570	3220	
All depth are actual.				
Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h
Two				
Main Pass 5" = 100'				
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	HVAS, FCD	2381.29	ft3
IHV	Integrated Hole Volume	HVAS	5118.77	ft3
Log	Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2 Two: Main[3]:Up:S021			
Description: AIT Basic Log Two Format: Log (Log (AIT_5_Inch)) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:11:07				
Channel	Source	Sampling		
AMF	AIT-M:AMIS:AMIS	12in		
AT10	AIT-M:AMIS:AMIS	3in		
AT60	AIT-M:AMIS:AMIS	3in		
AT90	AIT-M:AMIS:AMIS	3in		
CALI	HDRS-B:HRCC-B:HRCC-B	1in		
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in		
ICV	Borehole	6in		
IHV	Borehole	6in		
RXOZ	HDRS-B:HRMS-B:HRGD-B	2in		
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in		
TENS	WLWorkflow	6in		
TIME_1900	WLWorkflow	0.1in		
— IHV - Integrated Hole Volume every 10.00 (ft3) — IHV - Integrated Hole Volume every 100.00 (ft3) —ICV - Integrated Cement Volume every 10.00 (ft3) —ICV - Integrated Cement Volume every 100.00 (ft3)				
TIME_1900 - Time Marked every 60.00 (s)				
Uranium Indicator		Array Induction Two Foot Resistivity A10 (AT10) AIT-M		
Caliper (CALI) HDRS-B		0.2	ohm.m	2000

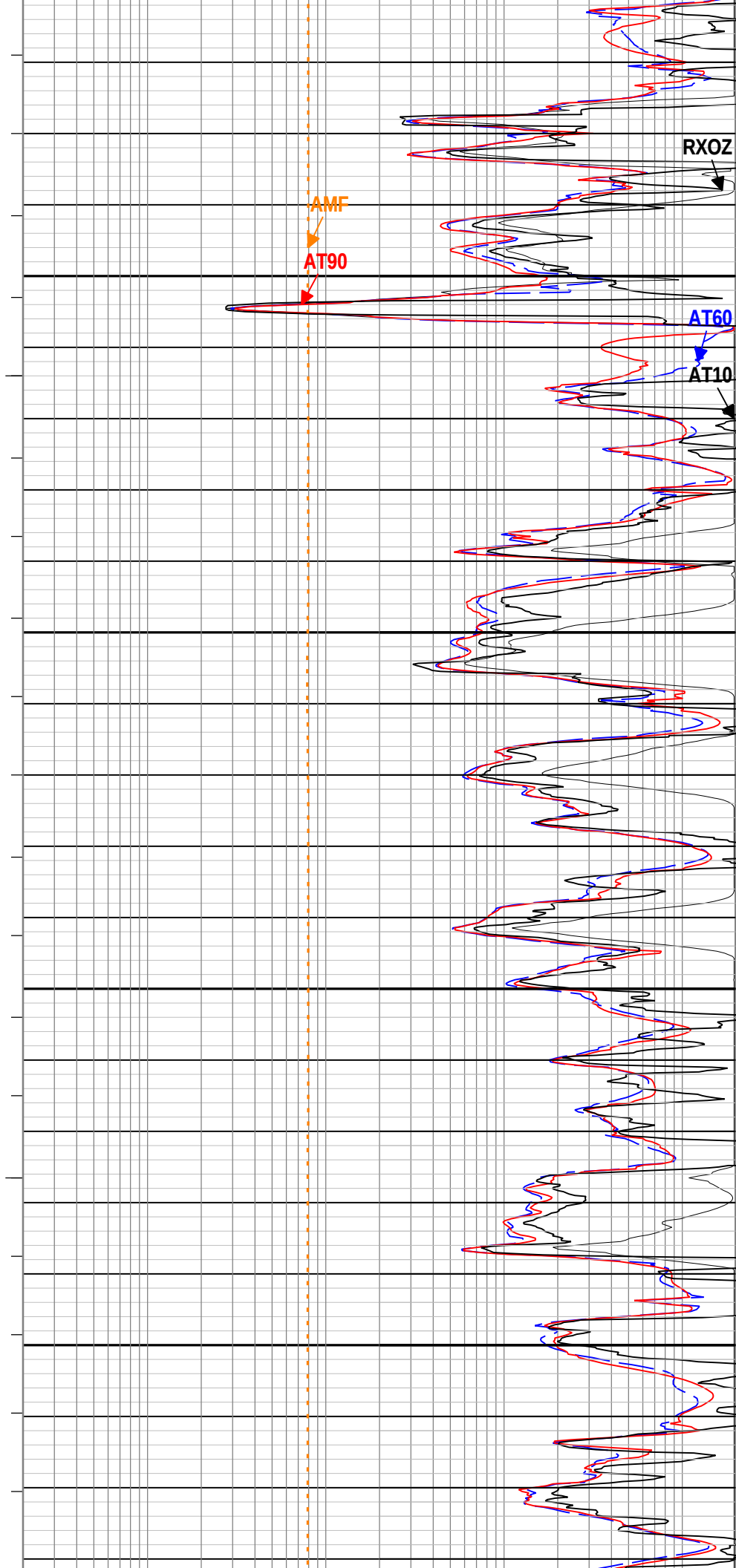
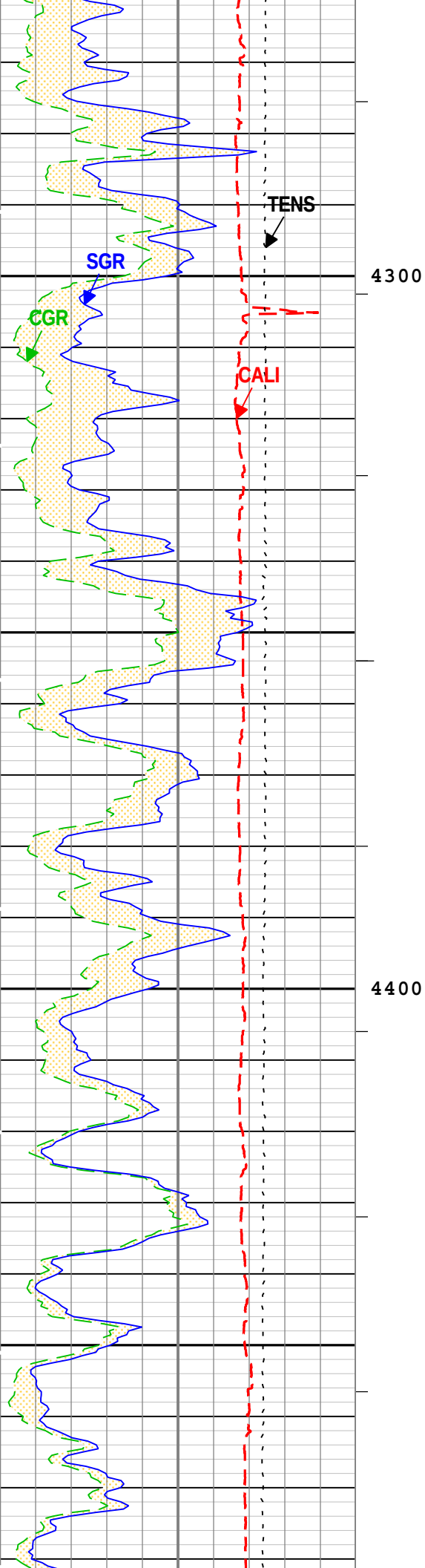


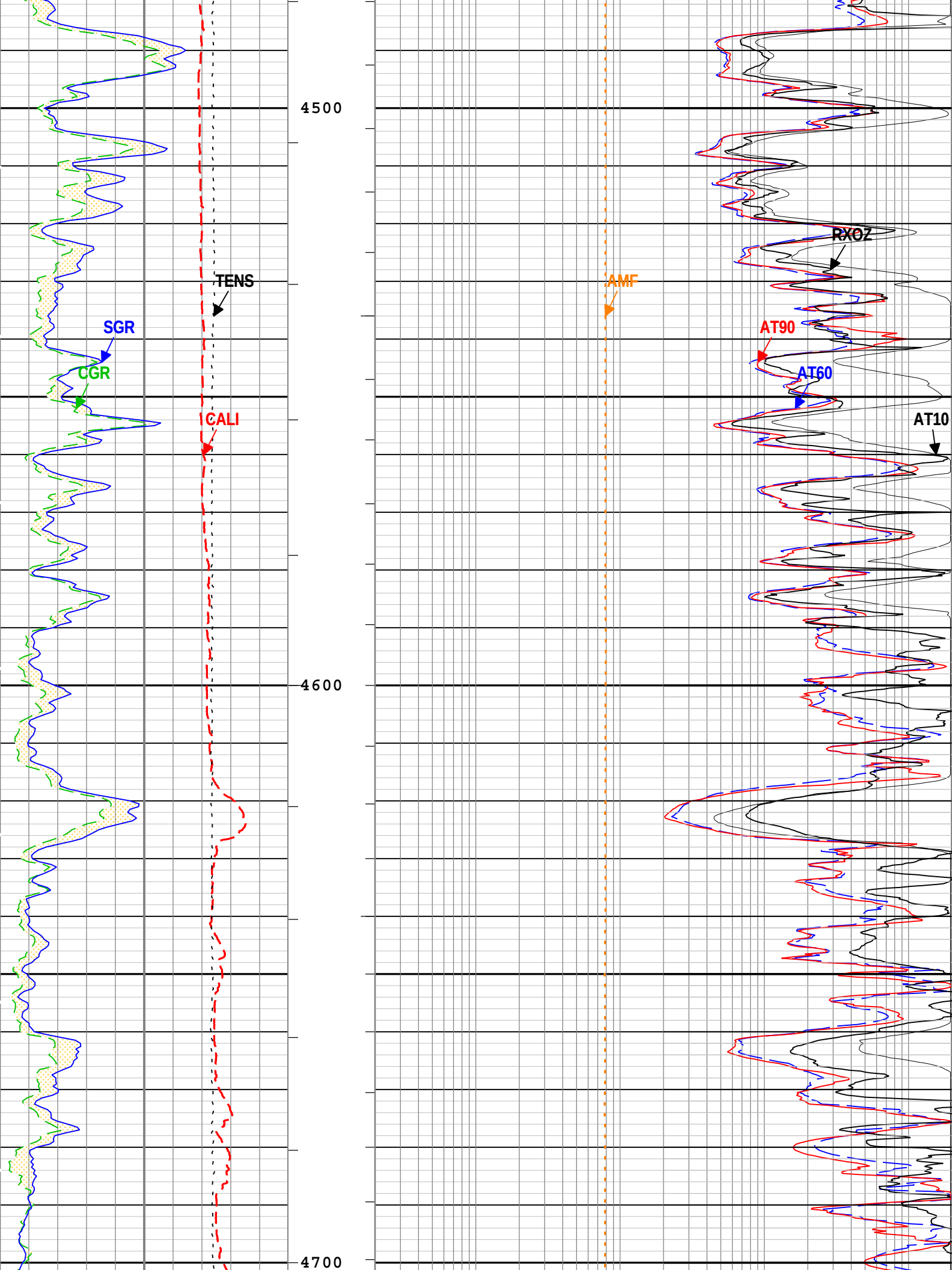


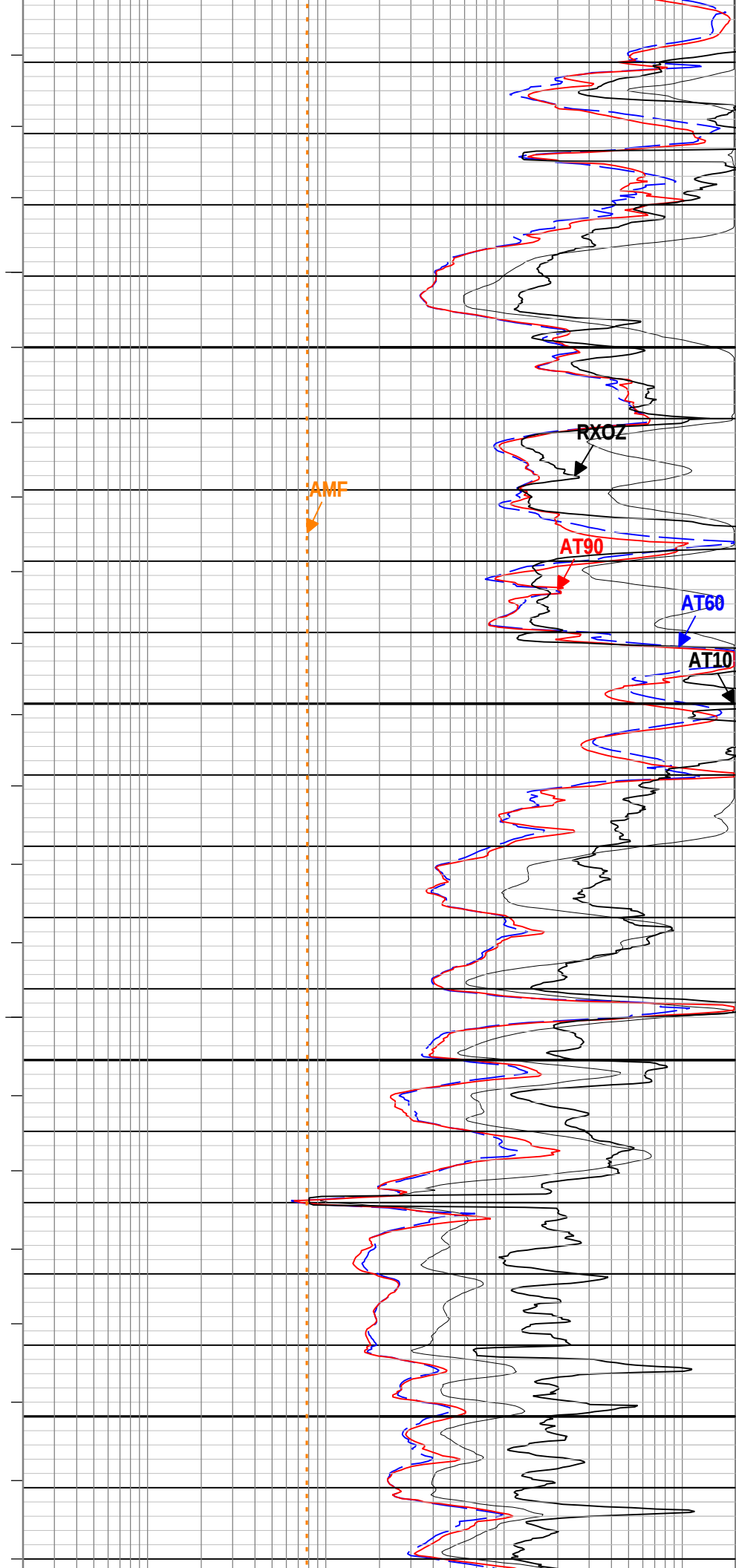
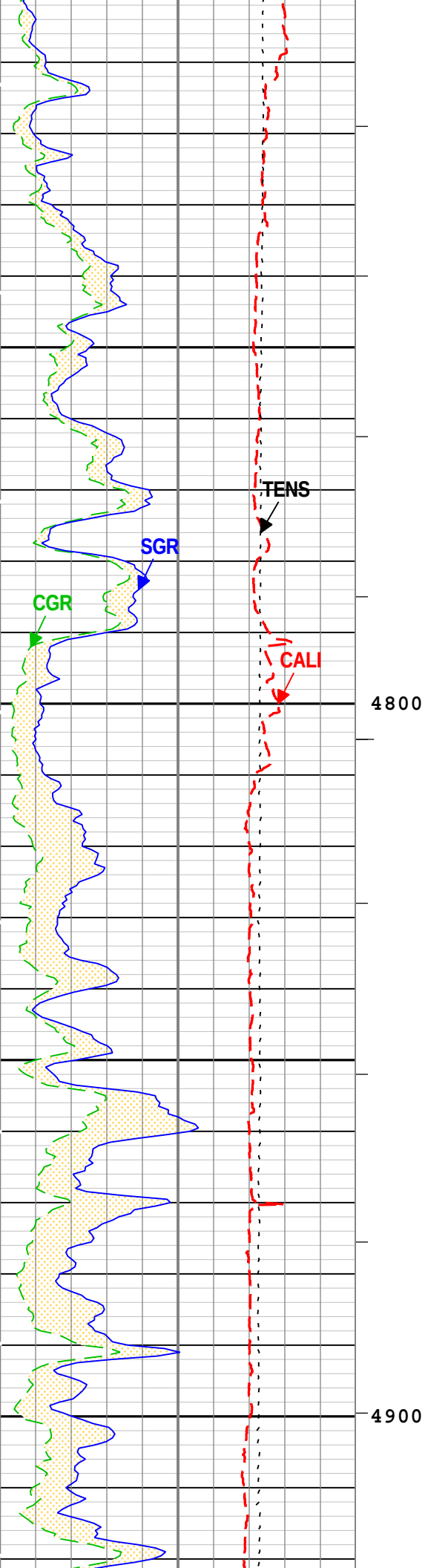


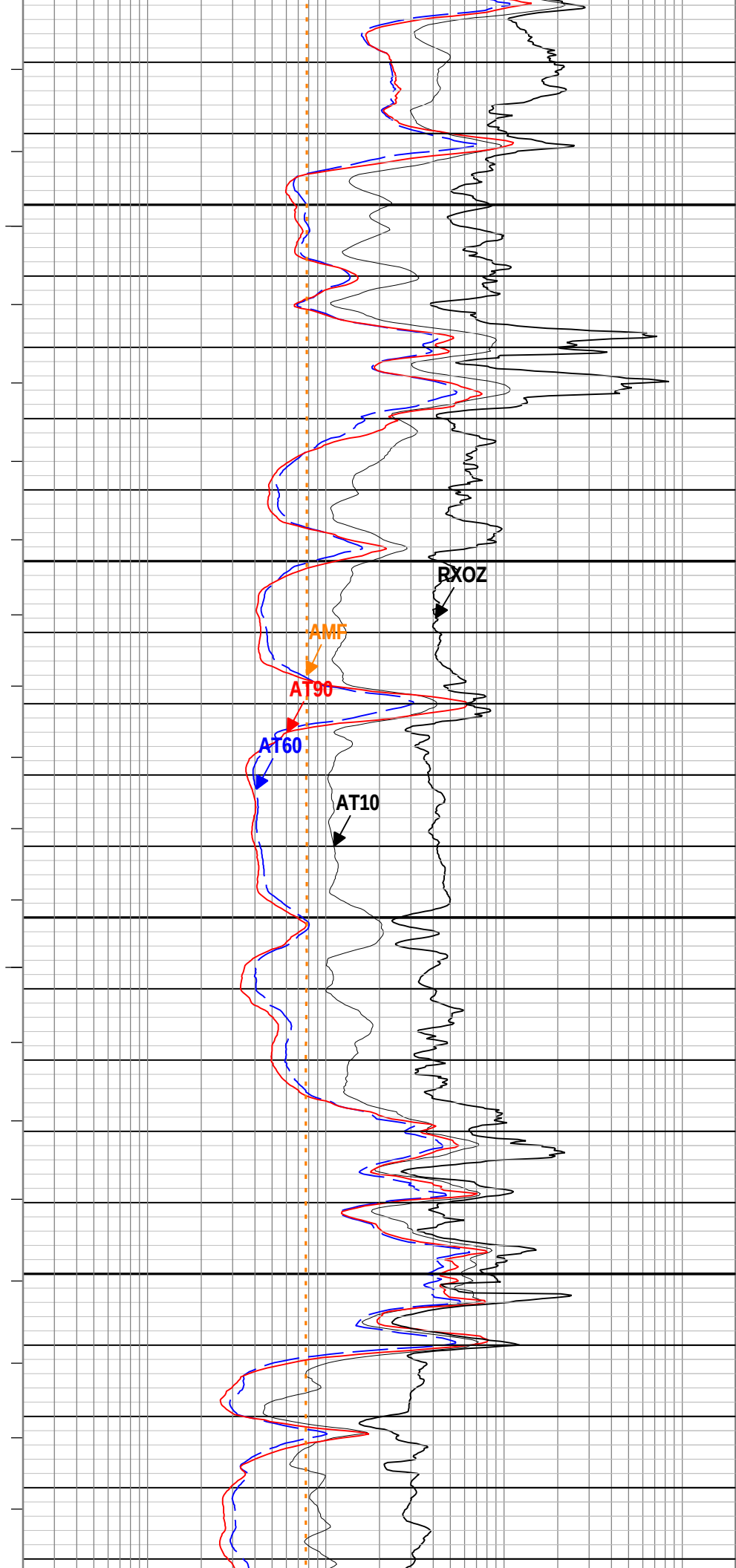
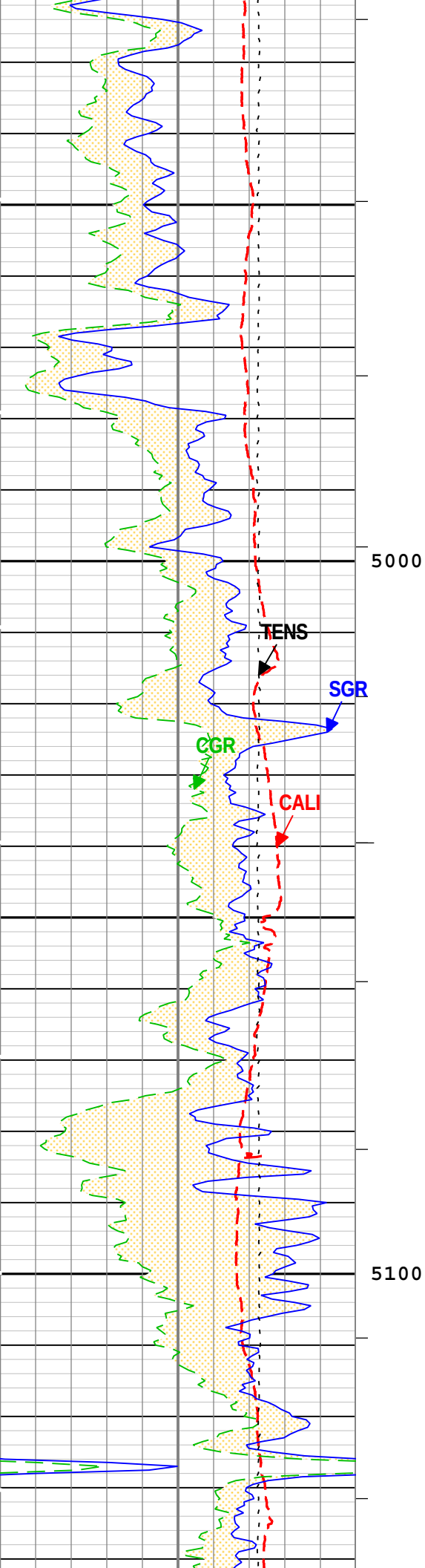


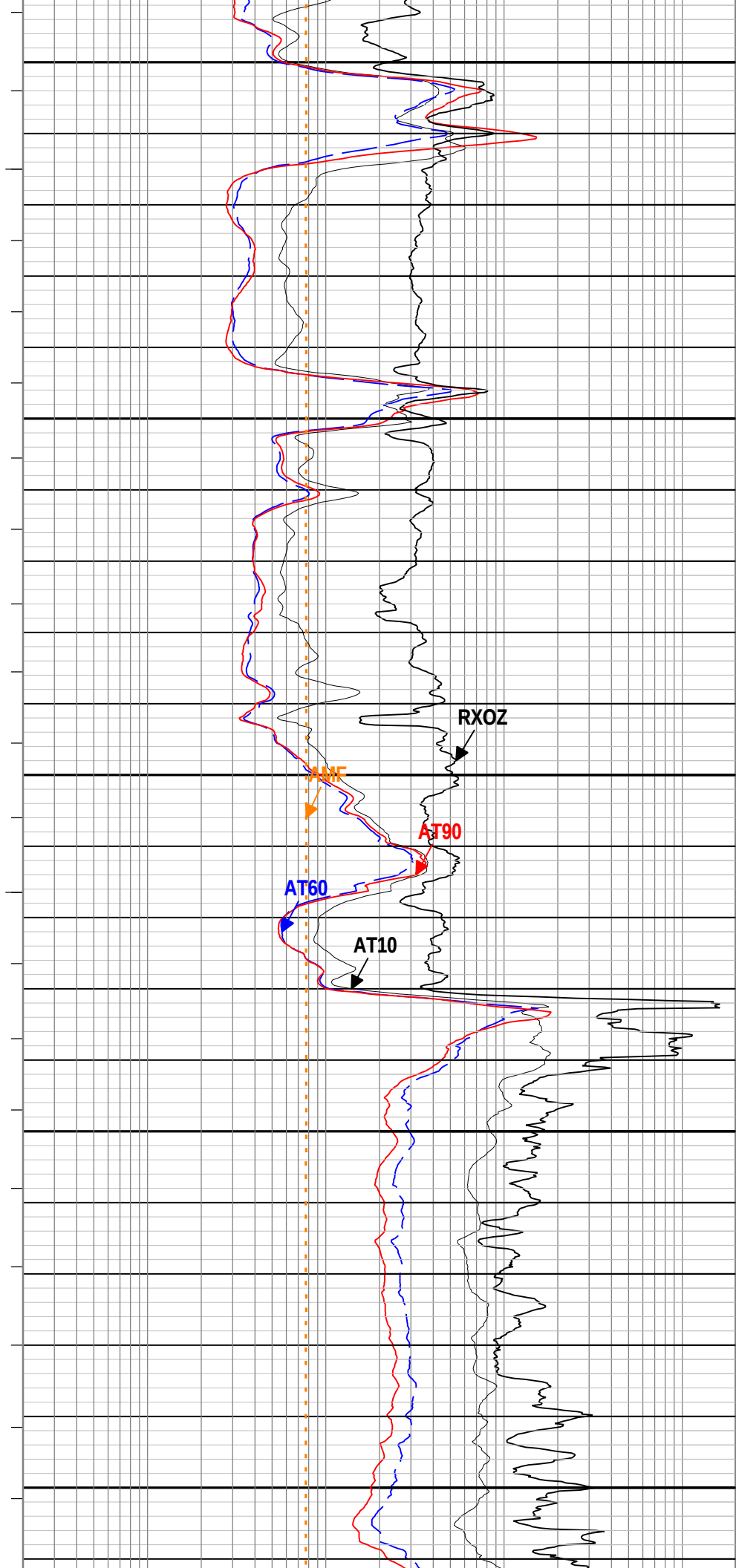
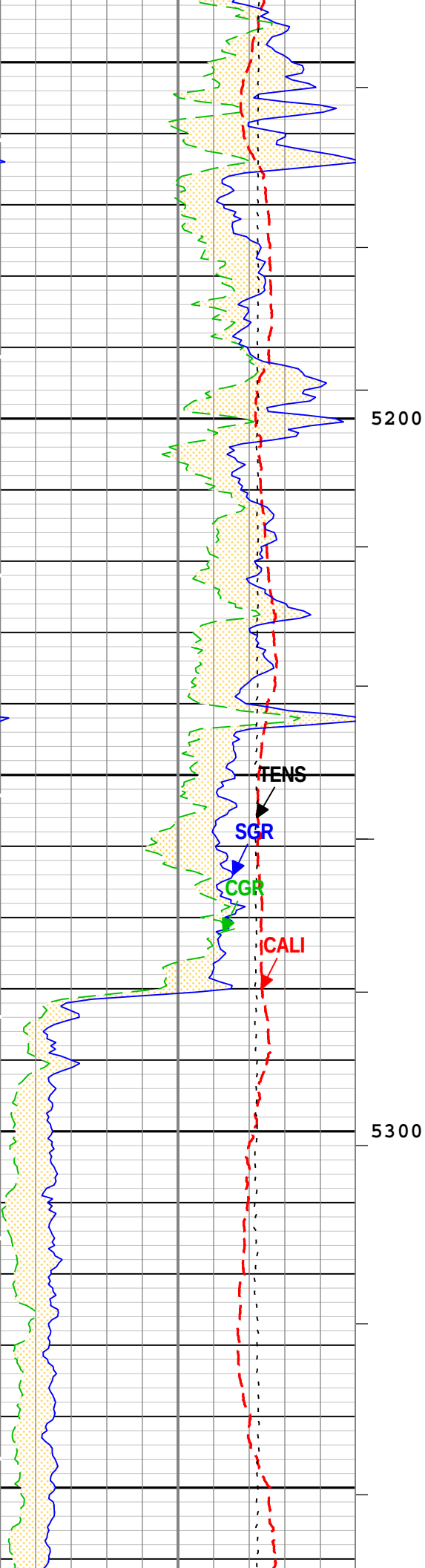


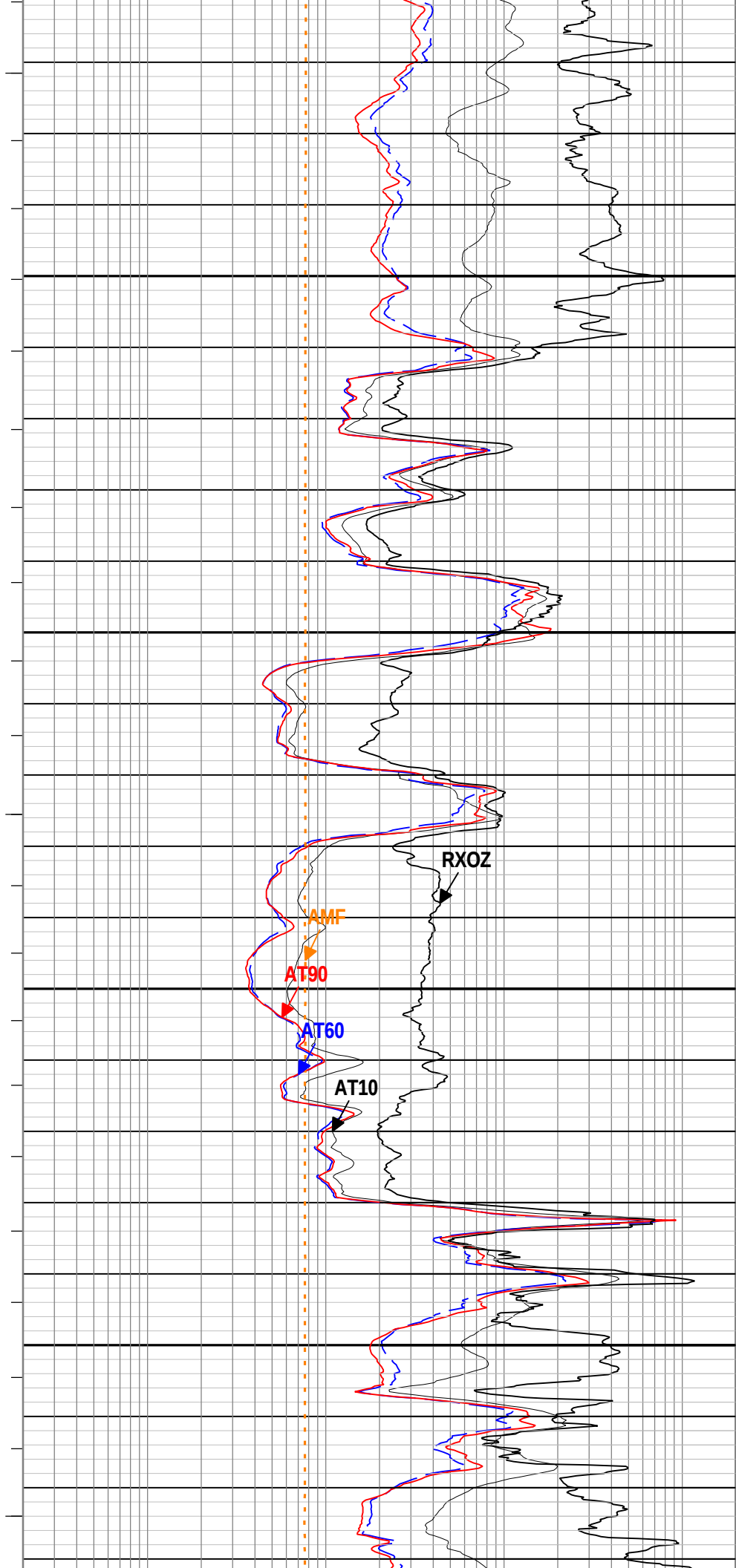
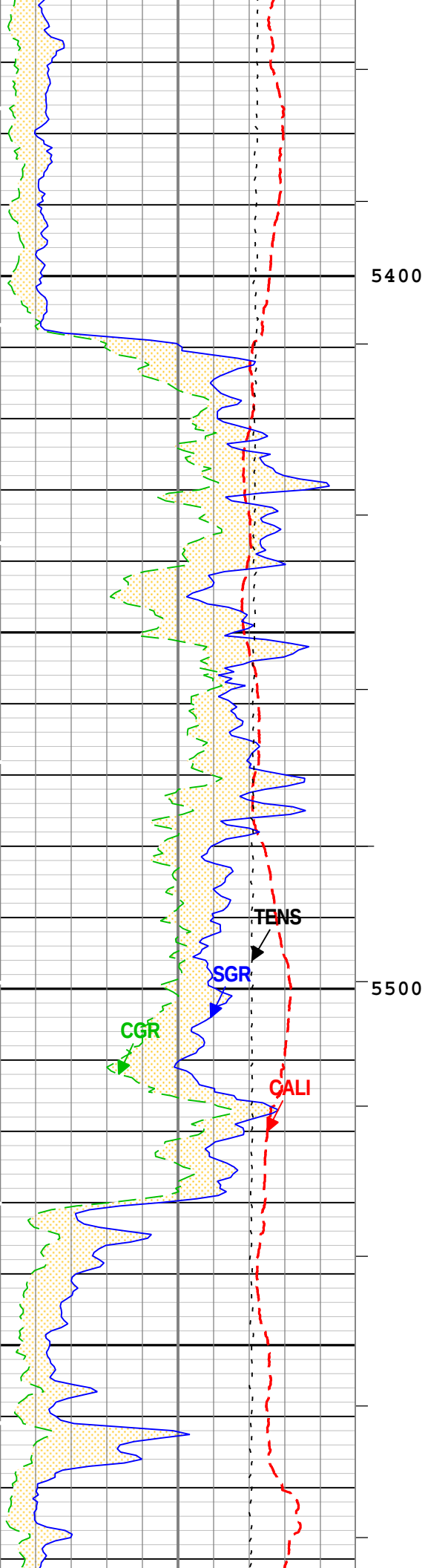


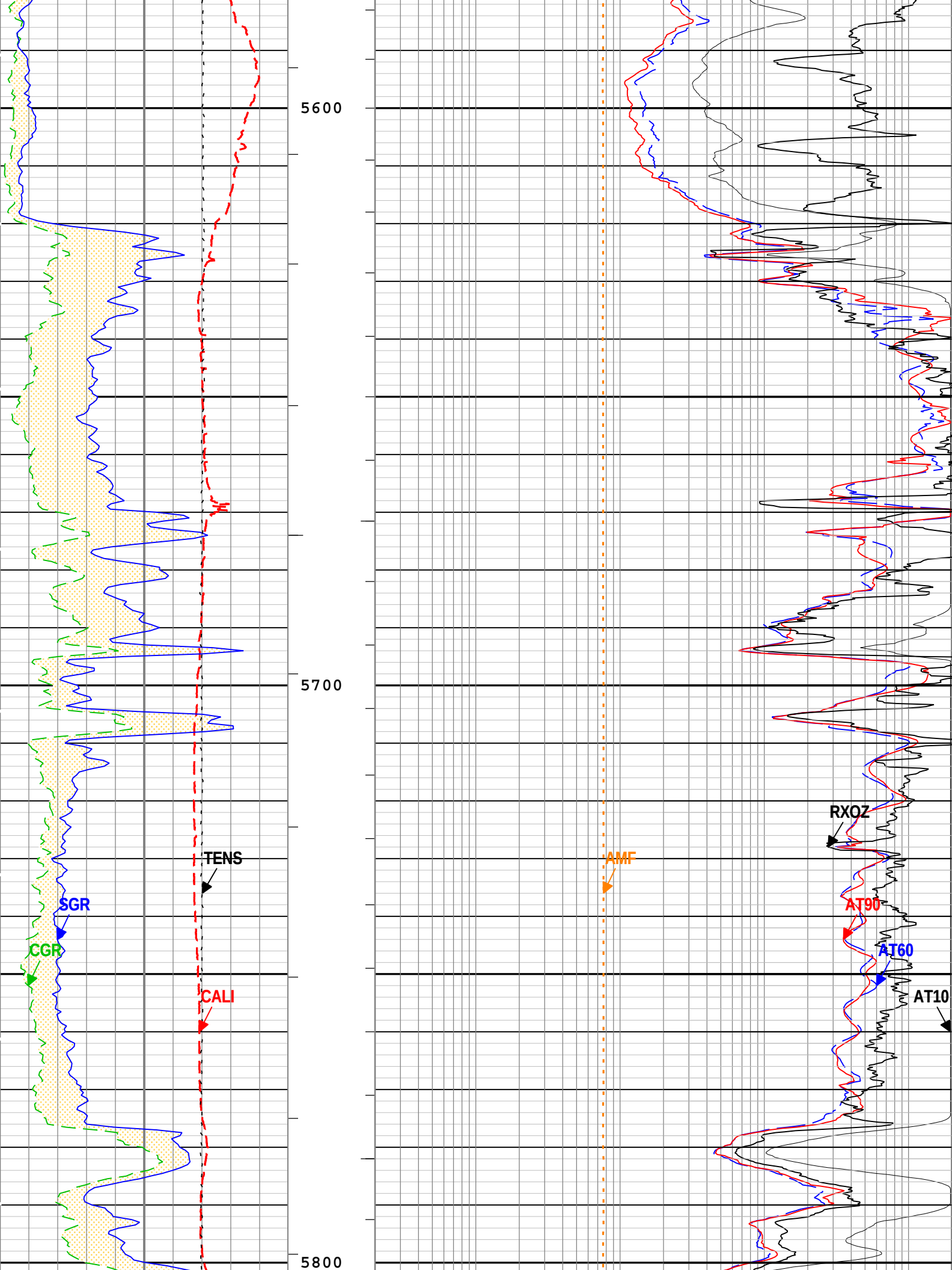


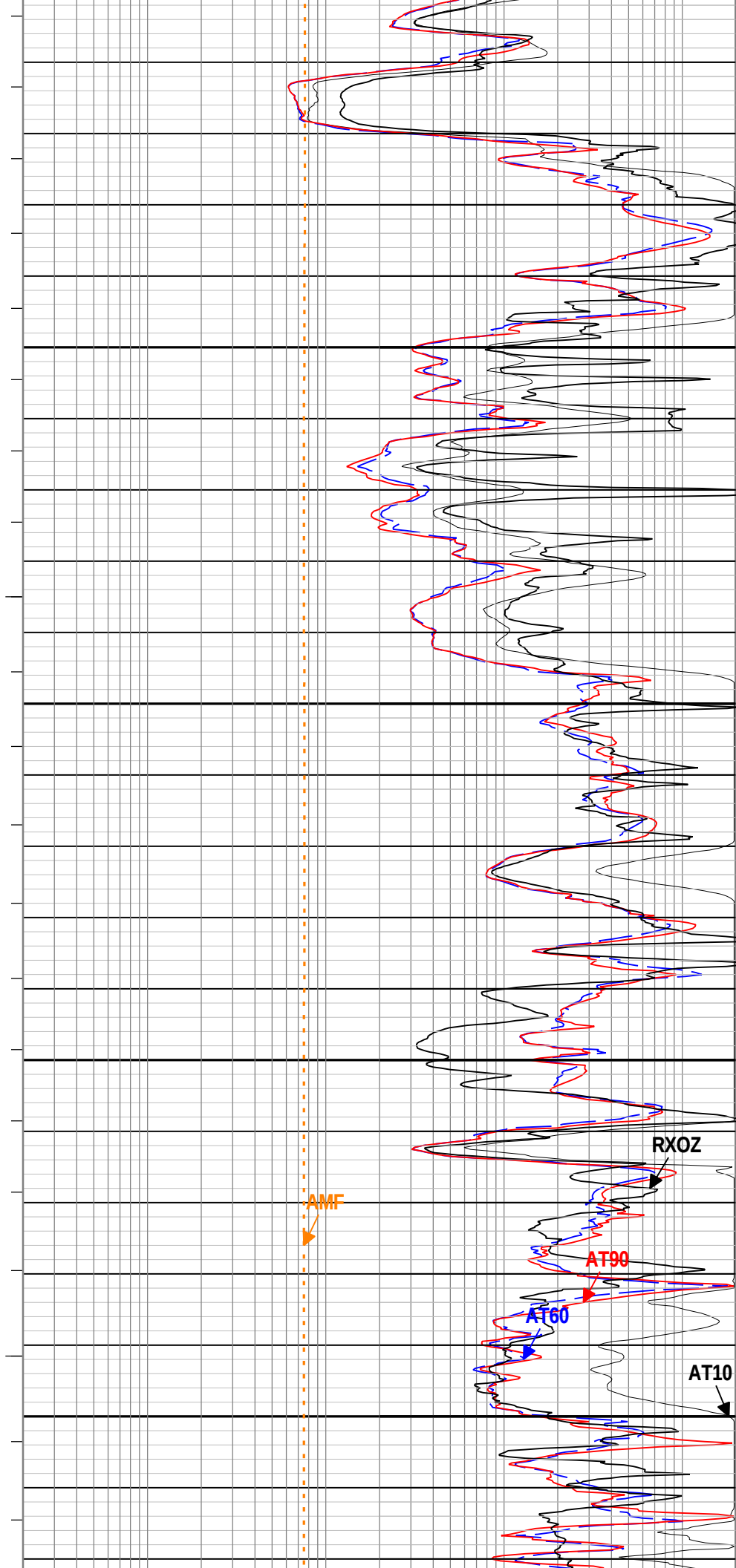
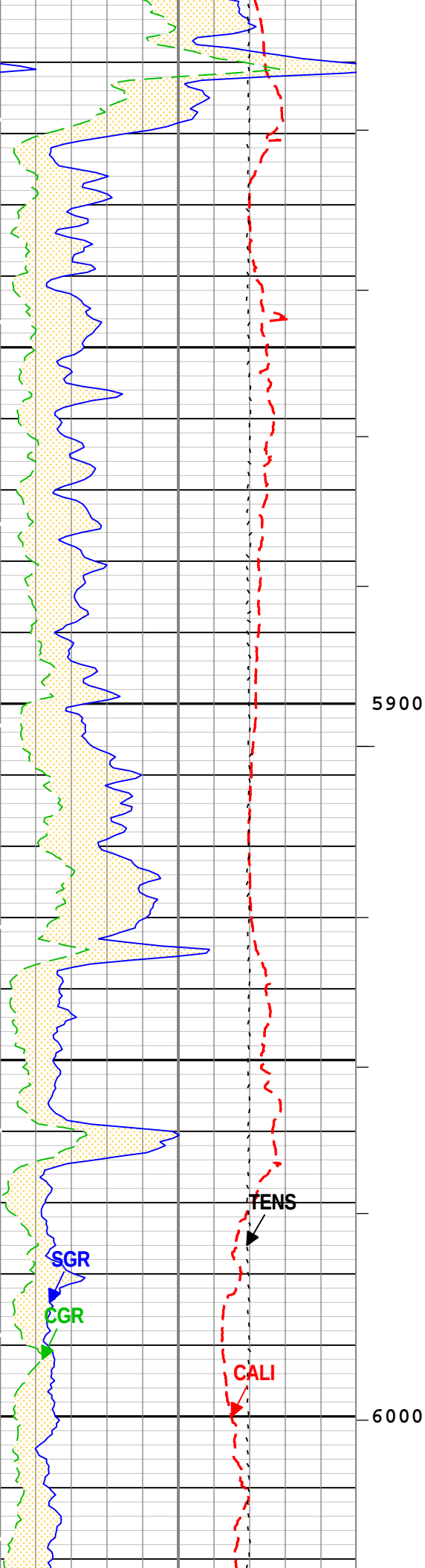


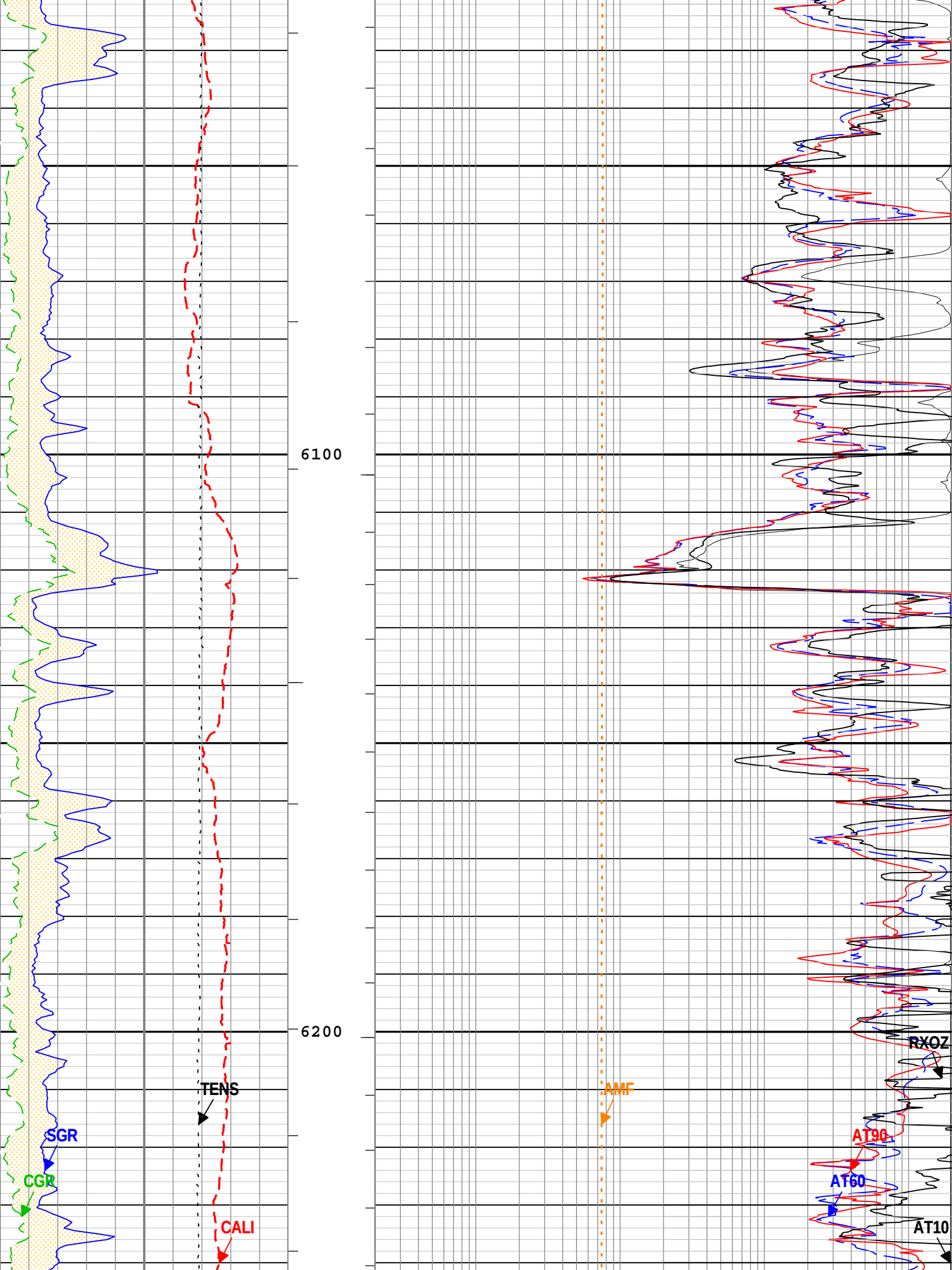


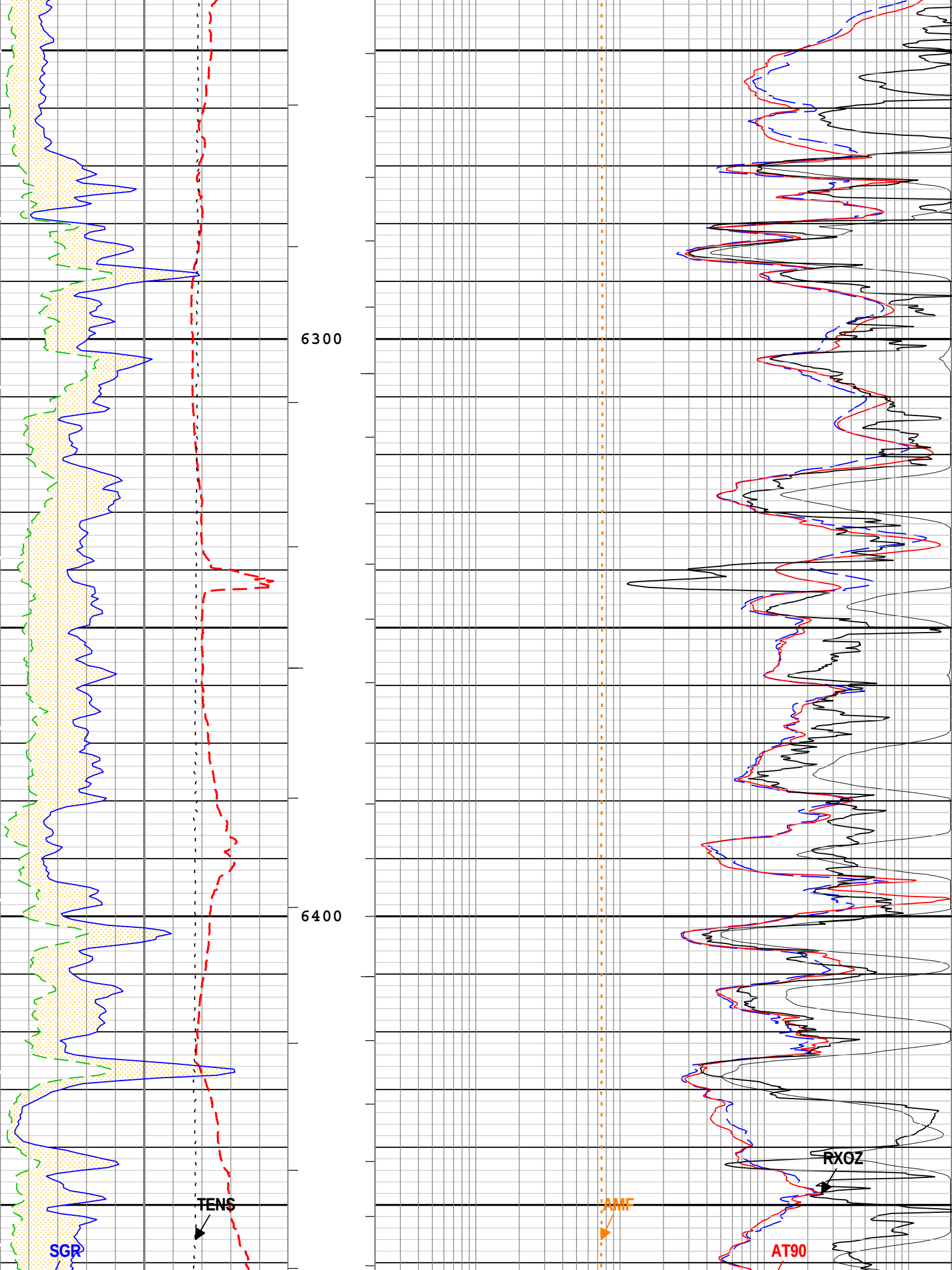


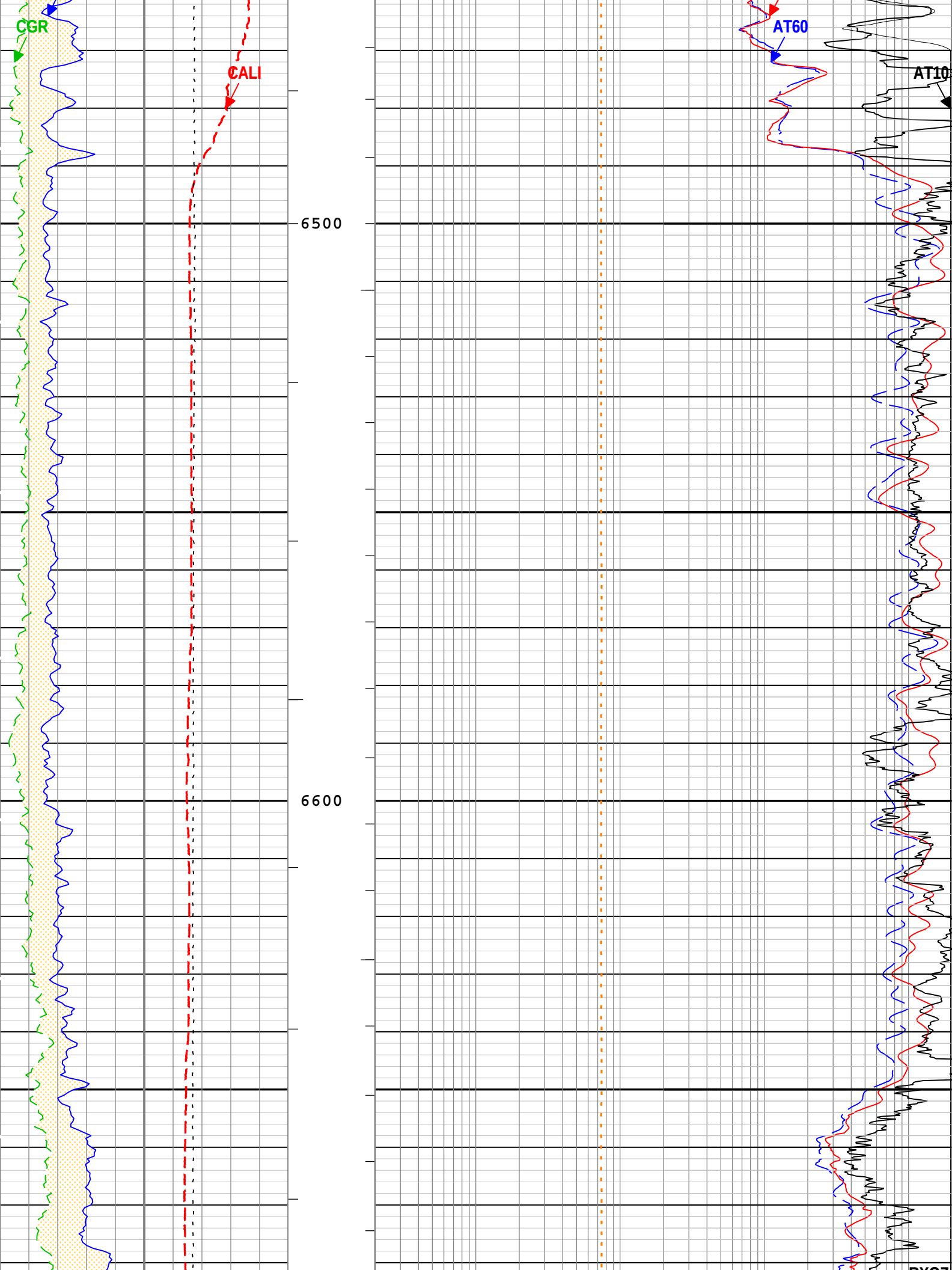


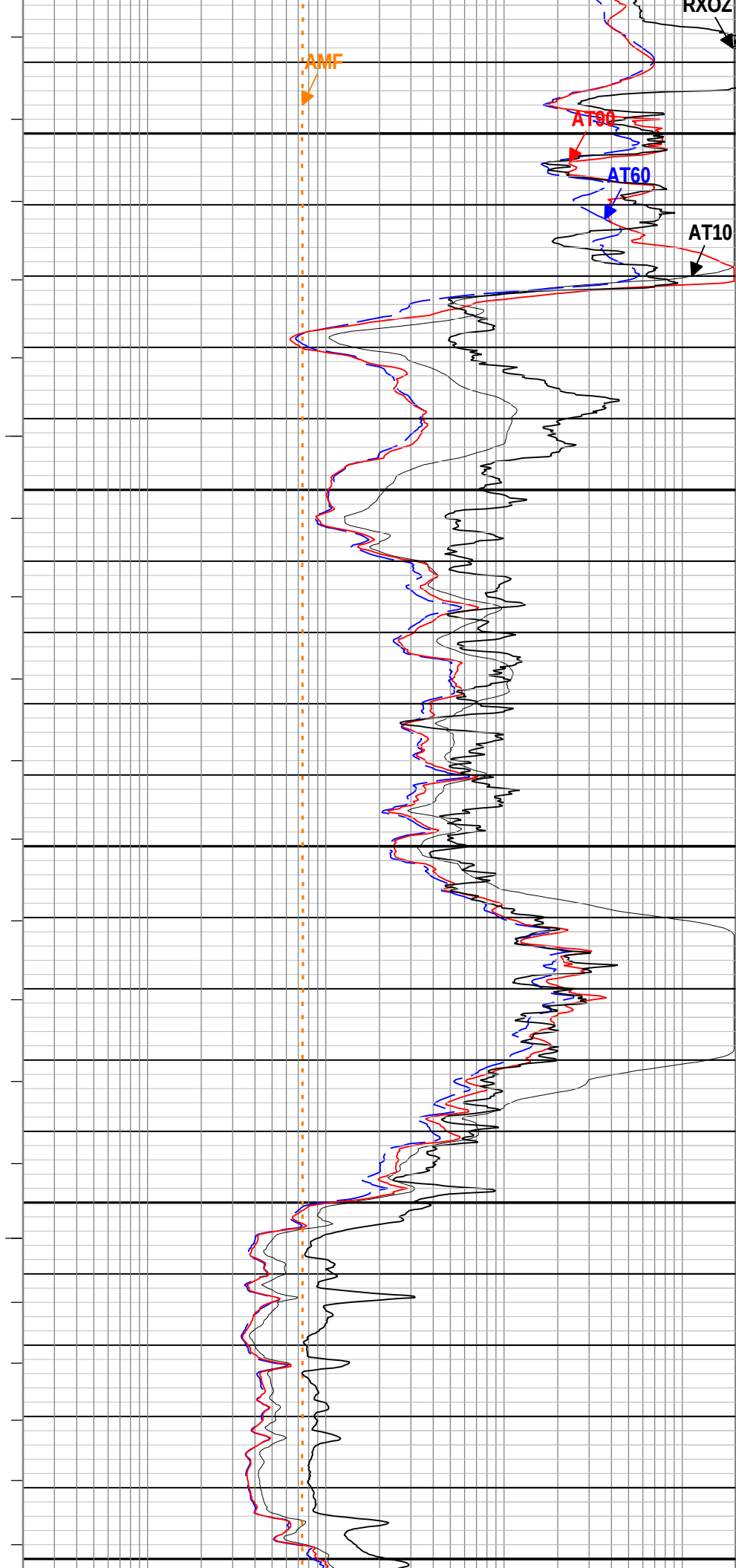
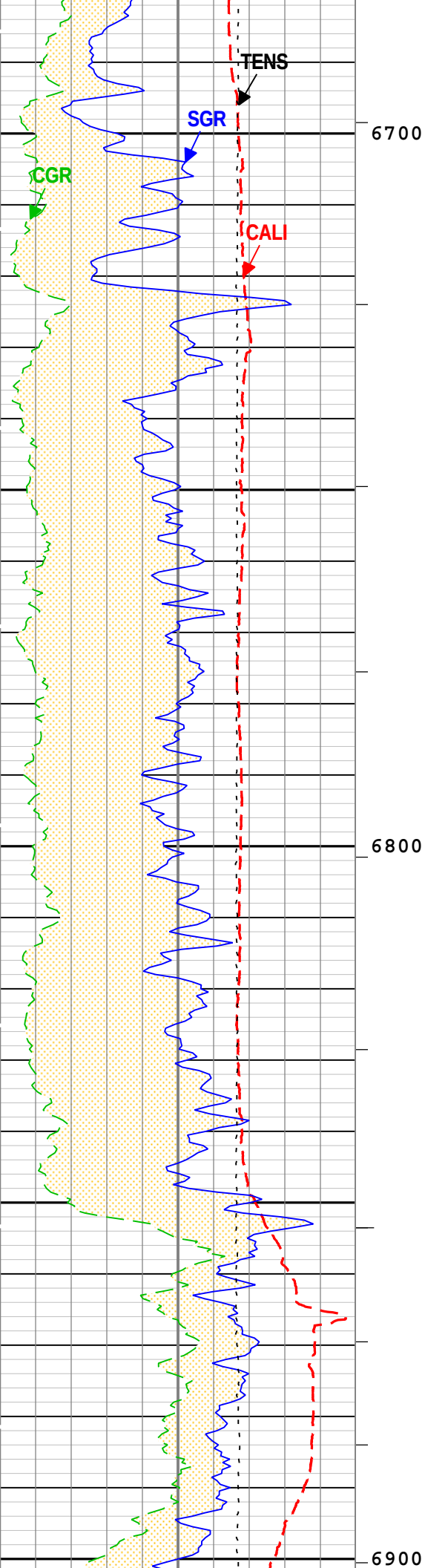


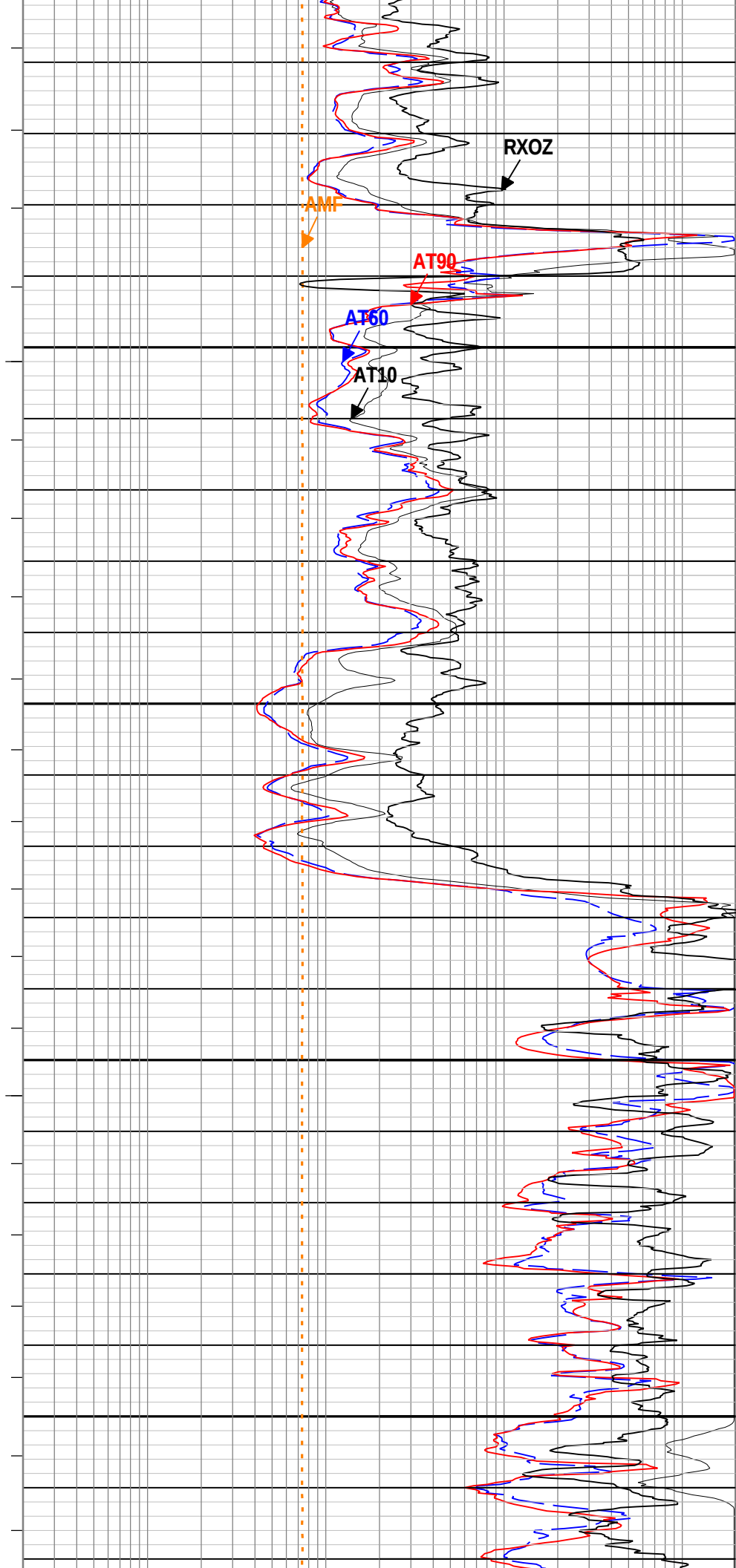
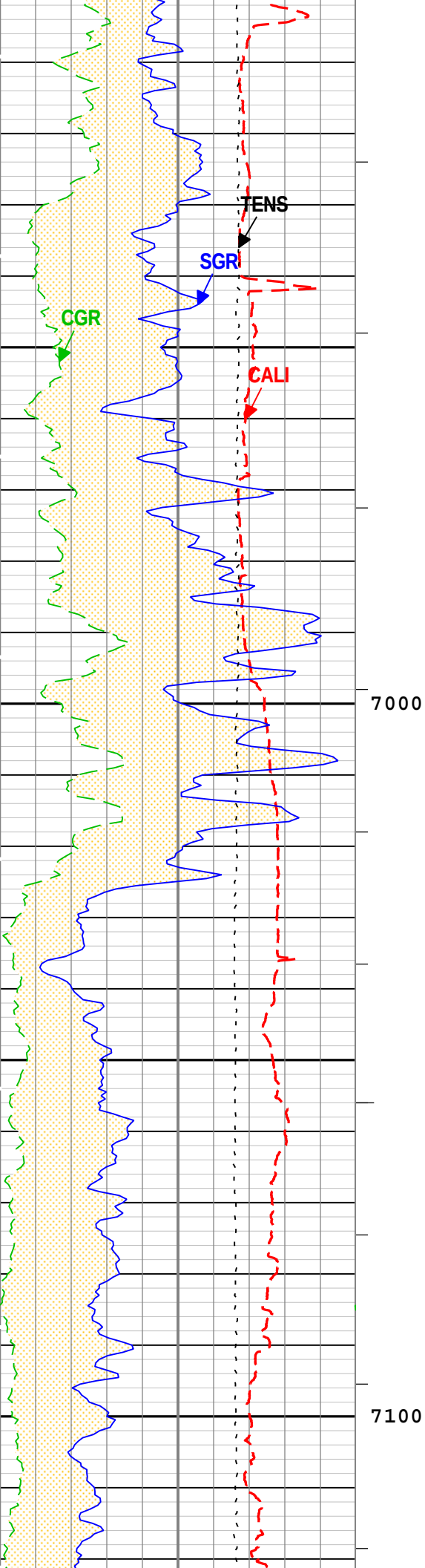


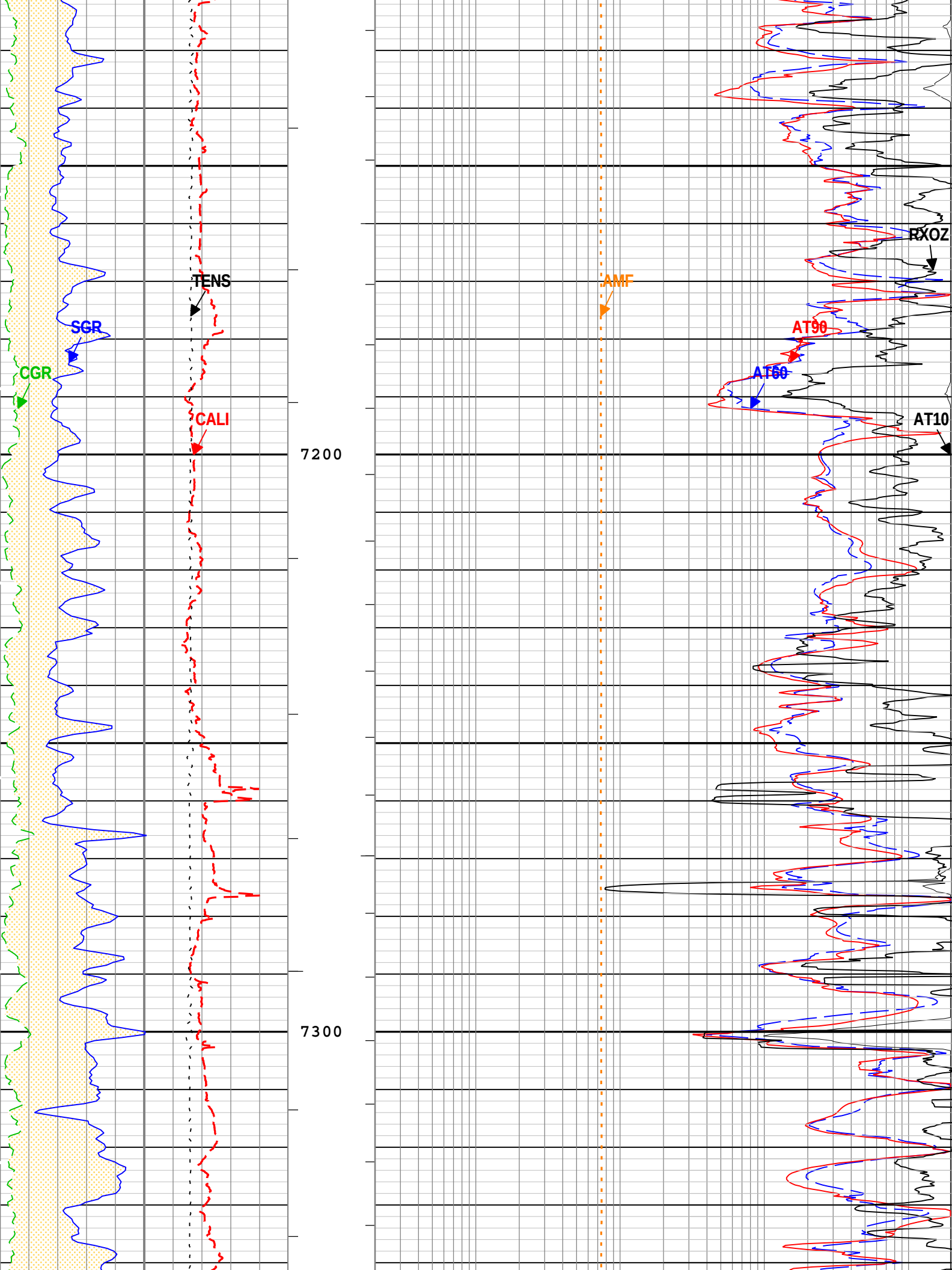


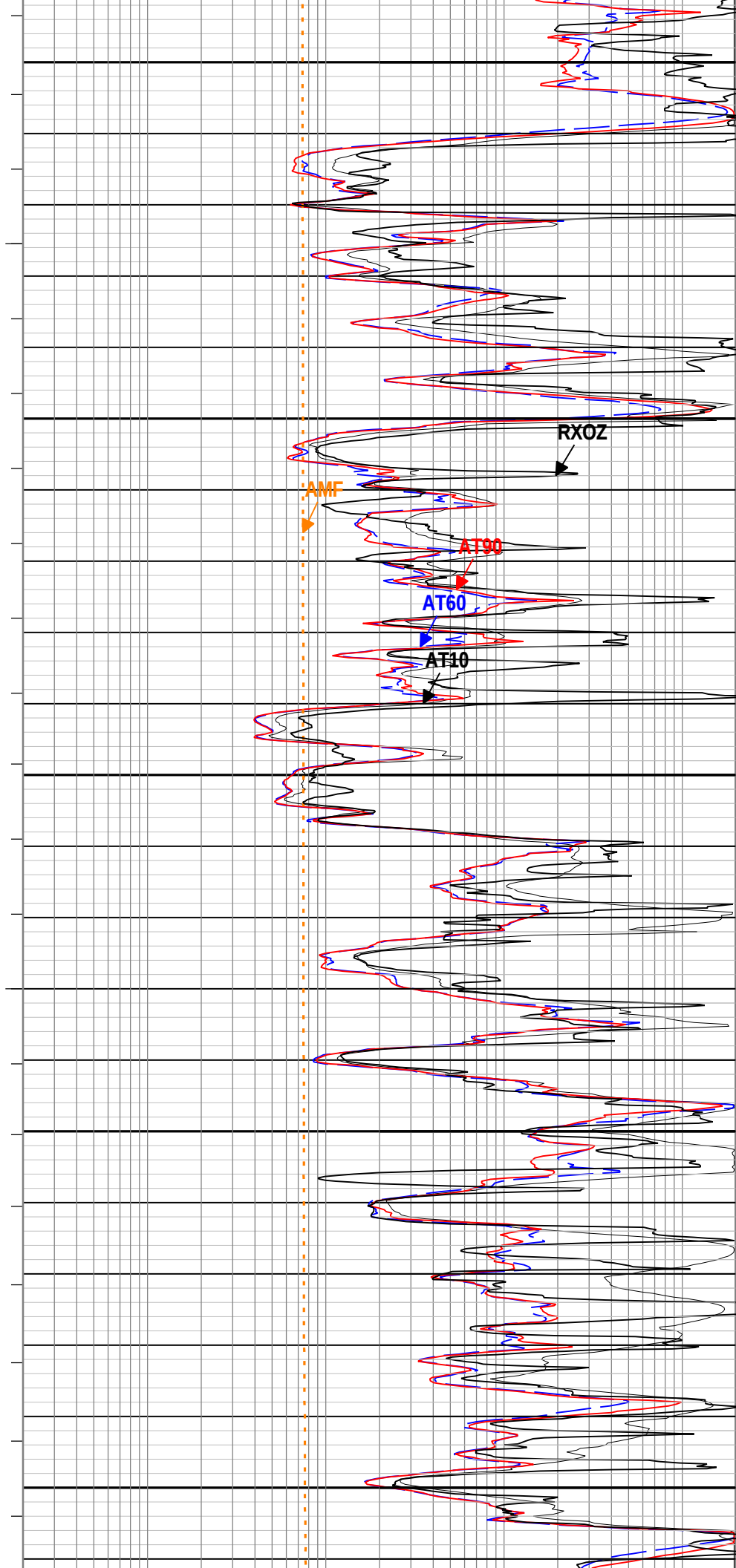
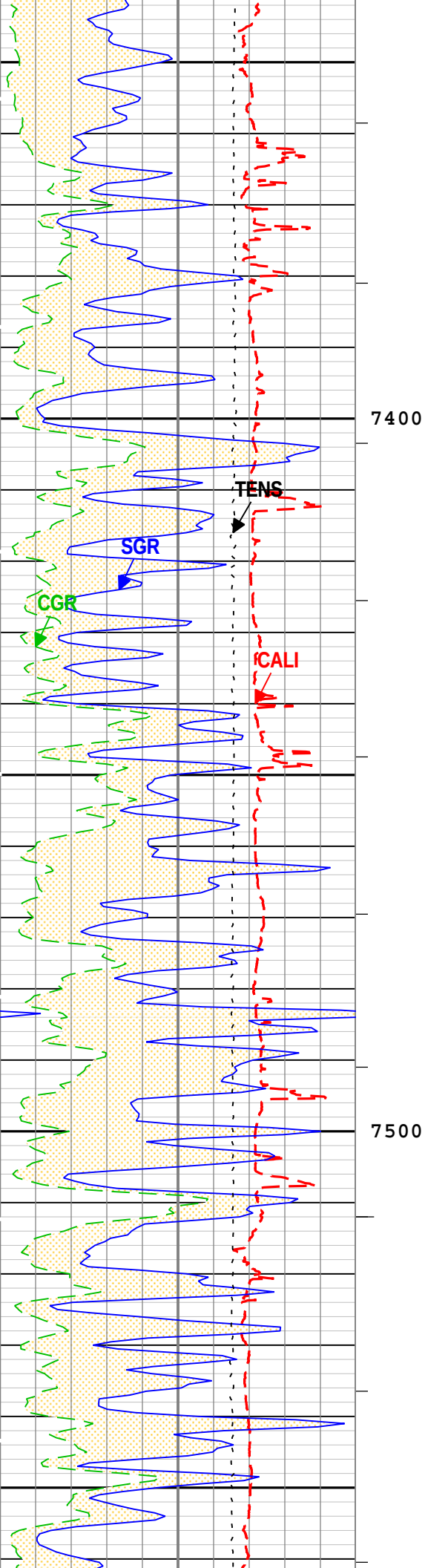


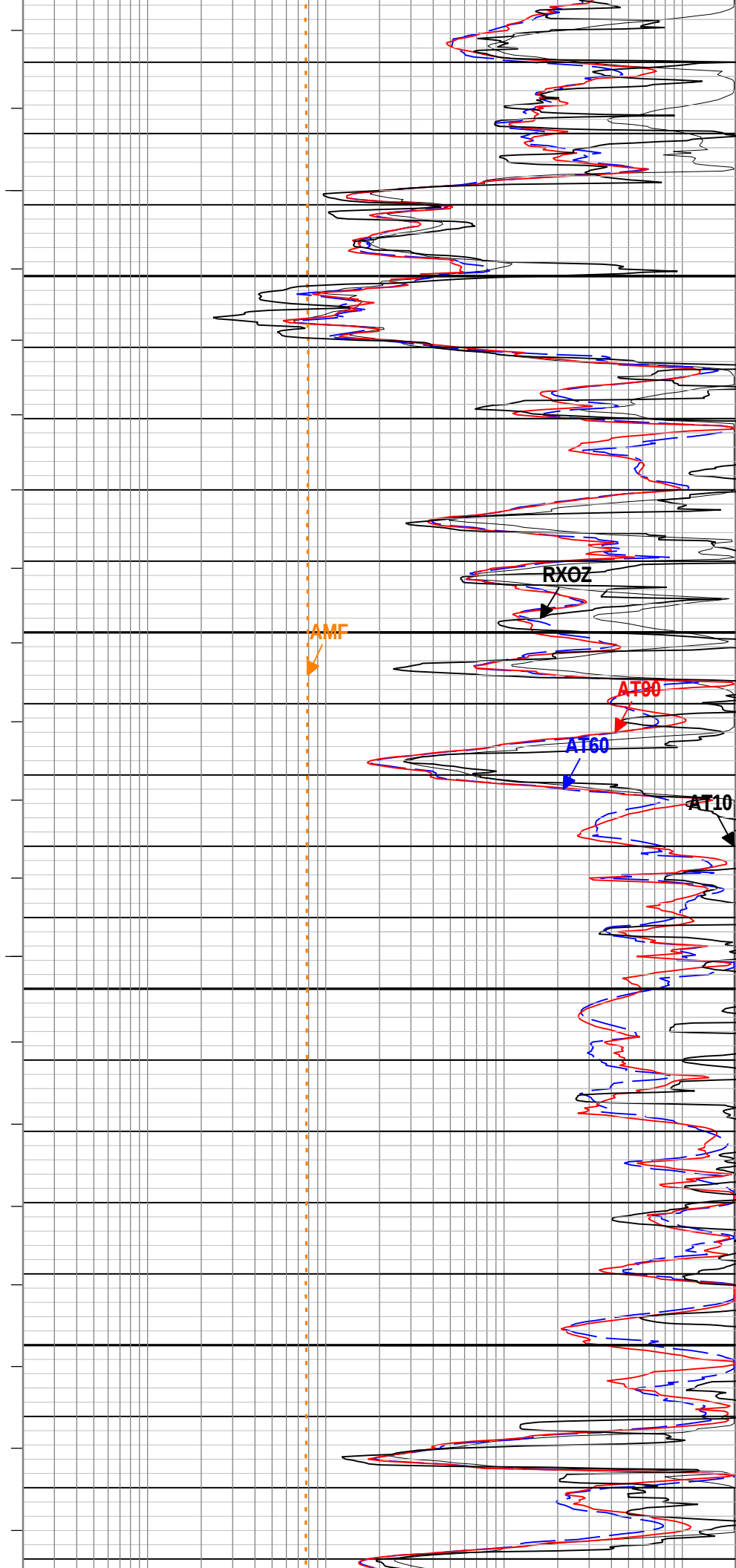
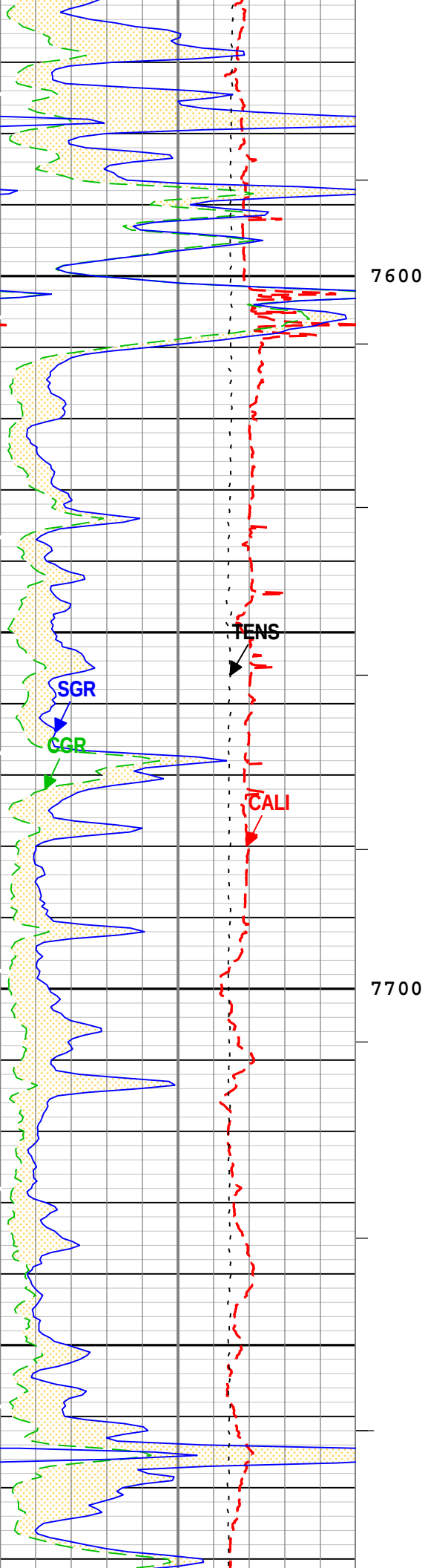


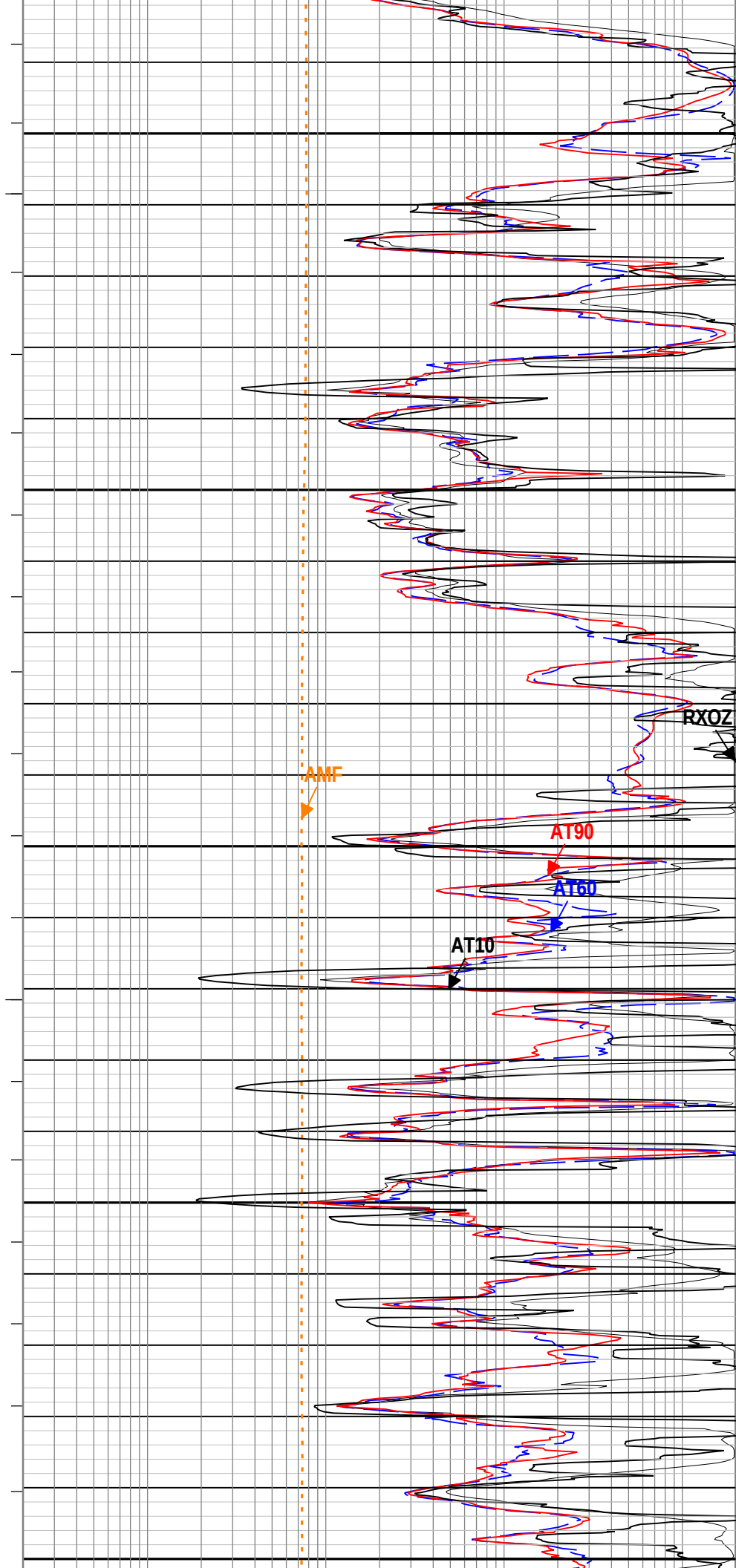
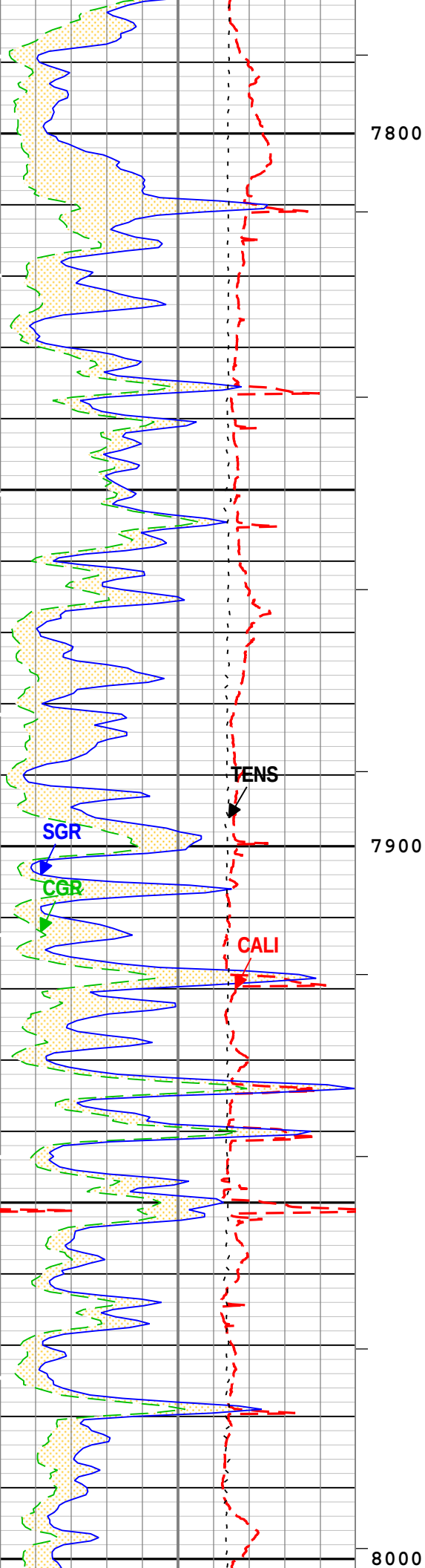


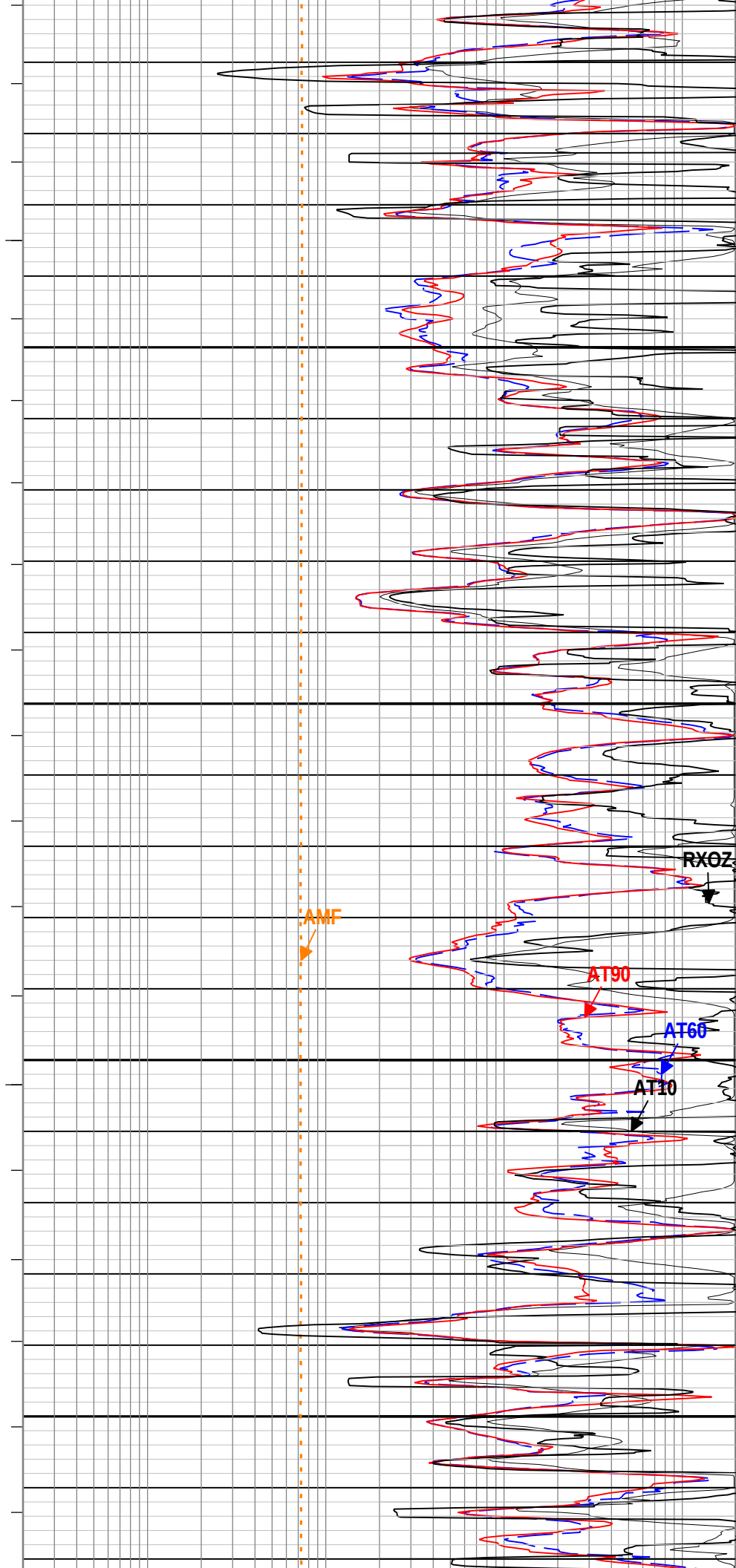
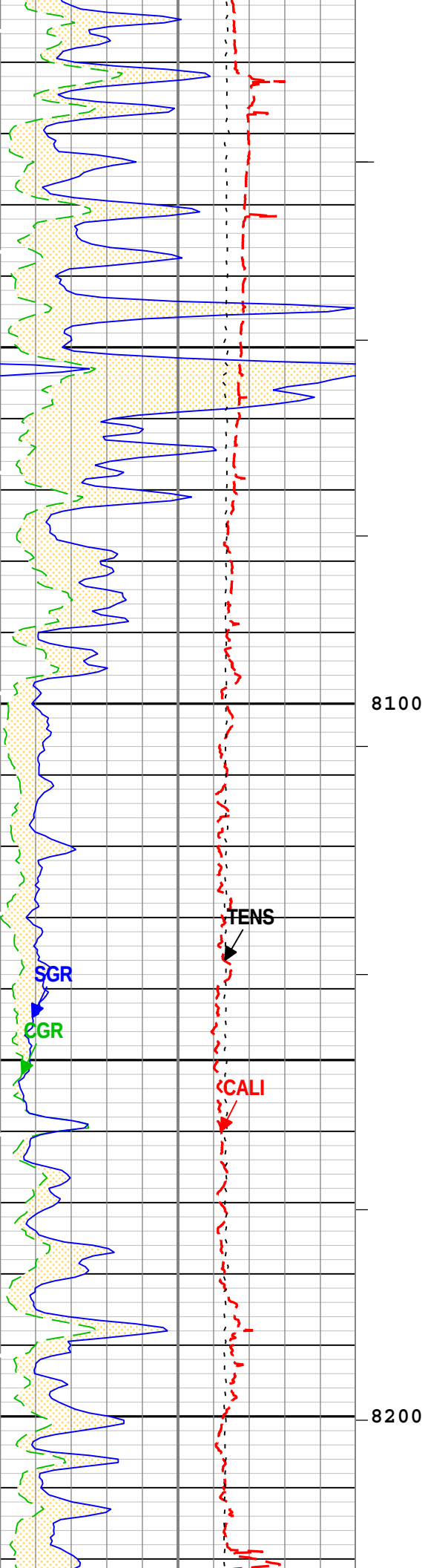


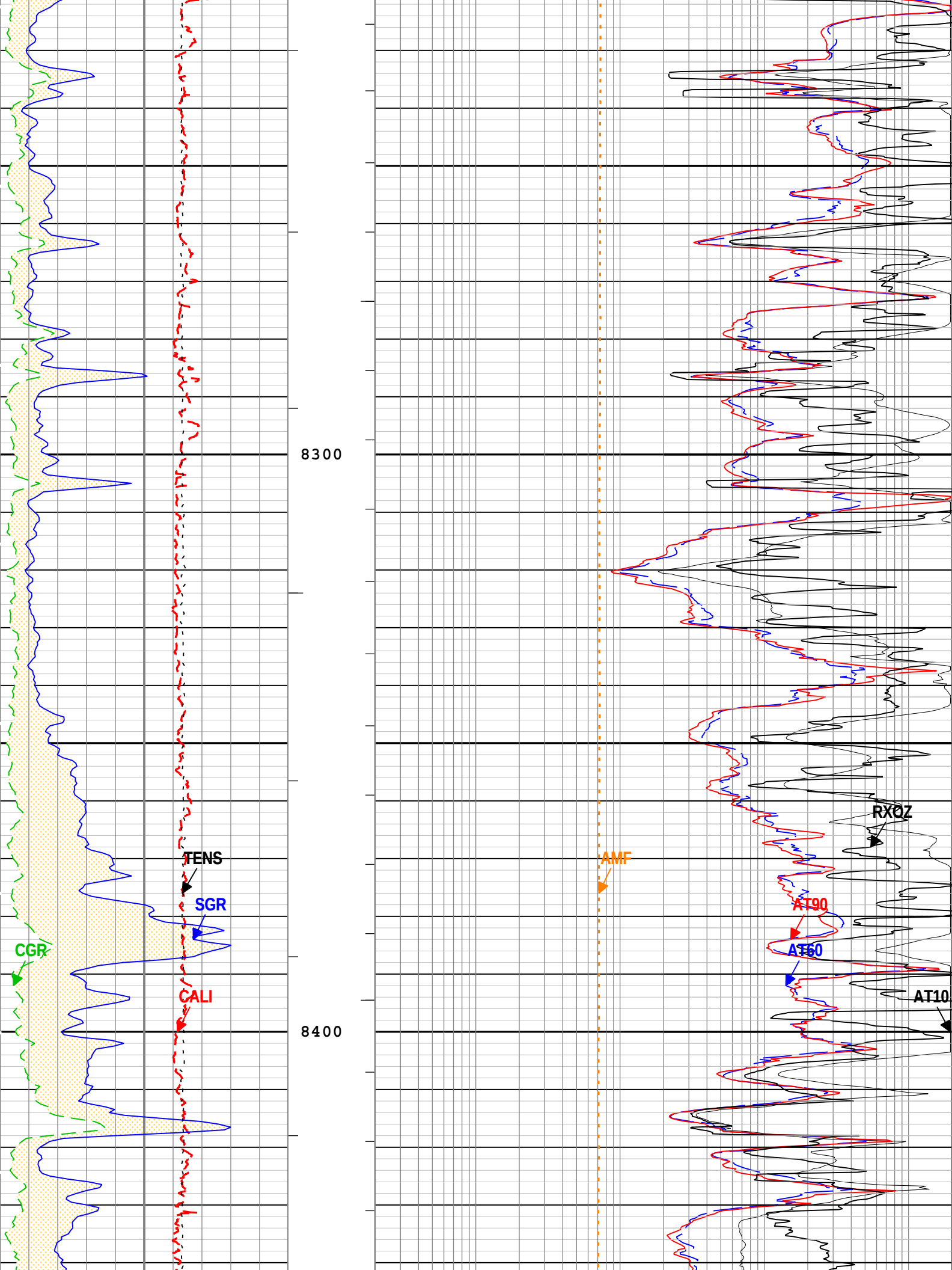


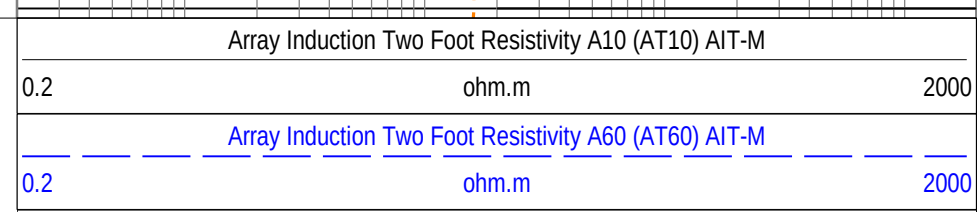
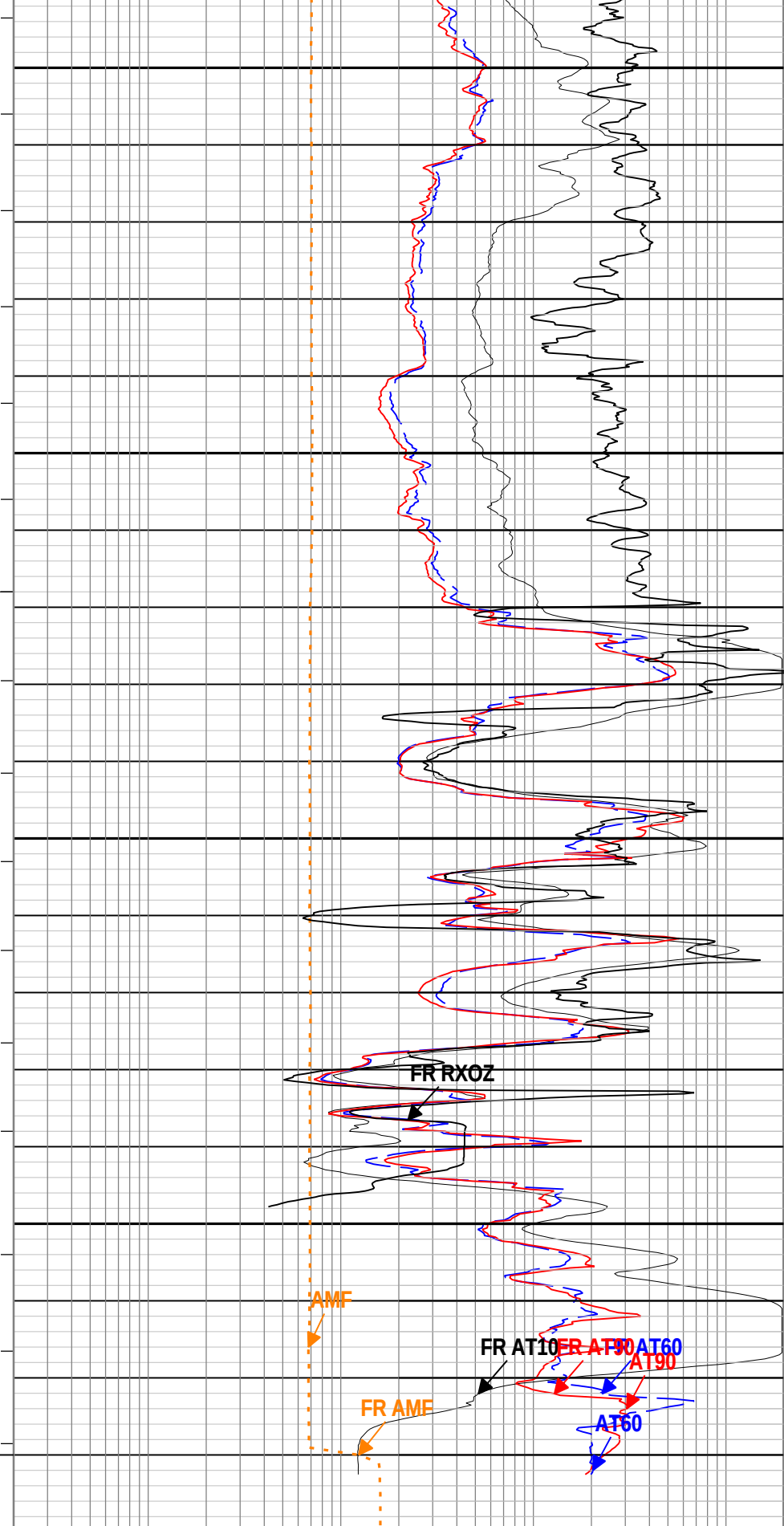
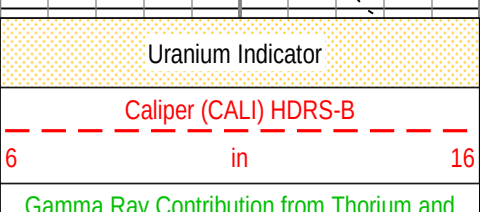
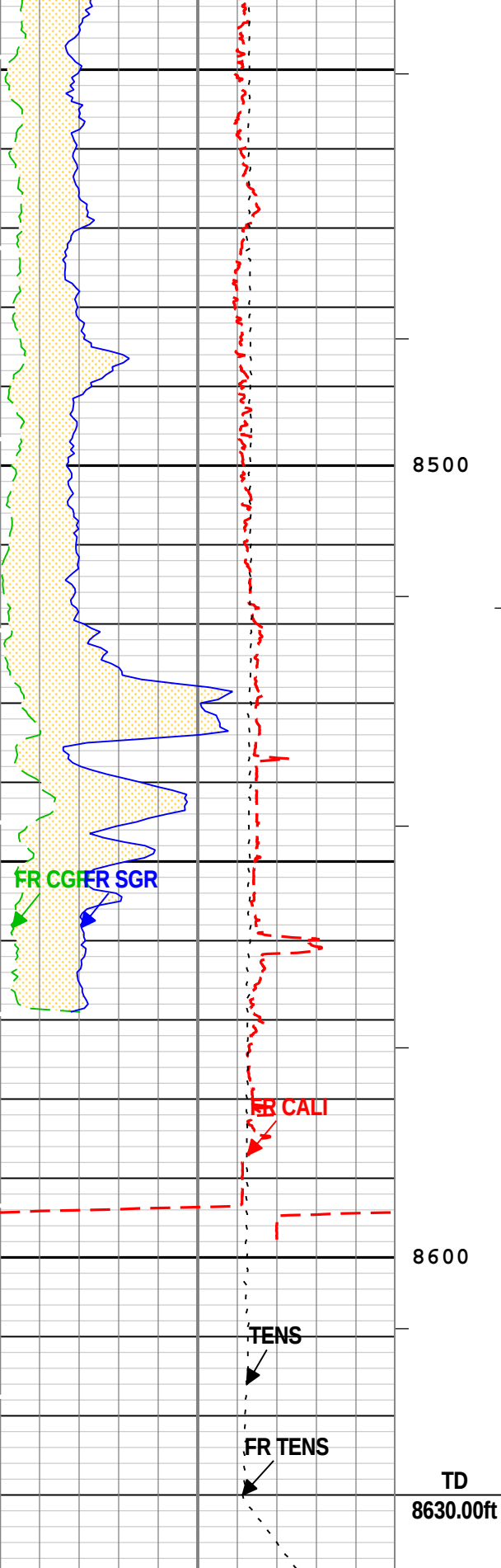












Gamma Ray Contribution from Potassium and Potassium (CGR) HNGS-BA		
0	gAPI	100
Spectroscopy Gamma Ray (SGR) HNGS-BA		
0	gAPI	100
Cable Tension (TENS)		
10000	lbf	0

TIME_1900 - Time Marked every 60.00 (s)

└─ ICV - Integrated Cement Volume every 100.00 (ft3)

└─ ICV - Integrated Cement Volume every 10.00 (ft3)

└─ IHV - Integrated Hole Volume every 100.00 (ft3)

└─ IHV - Integrated Hole Volume every 10.00 (ft3)

Description: AIT Basic Log Two Format: Log (Log (AIT_5_Inch)) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:11:07

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
AAPL	Array Induction Answer Product Level(Depth Log/View only)	AIT-M	Radial	
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Standoff	
ACDE	Array Induction Casing Detection Enable	AIT-M	No	
ACEN	Array Induction Tool Centering Flag (in Borehole)	AIT-M	Eccentered	
AMRF	Array Induction Mud Resistivity Factor	AIT-M	1	
ASTA	Array Induction Tool Standoff	AIT-M	1.625	in
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	AIT-M	Internal	
BAR1	Detector 1 Barite Constant	HNGS-BA	1	
BAR2	Detector 2 Barite Constant	HNGS-BA	1	
BARI	Barite Mud Presence Flag	Borehole	No	
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-B	0.168	in
CBLO	Casing Bottom (Logger)	WLSESSION	3219.5	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	Depth Zoned	in
DBCC	Barite Constant Correction Flag	HNGS-BA	None	
DFD	Drilling Fluid Density	Borehole	8.8	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	9.625	in
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	AMF	
H1P	Detector 1 Allow/Disallow in Processing	HNGS-BA	Allow	
H2P	Detector 2 Allow/Disallow in Processing	HNGS-BA	Allow	
HALF	Alpha Filter Length	HNGS-BA	60	in
HATIM	Marquardt Accumulation Time	HNGS-BA	600	s
HCRB	Apply Borehole Potassium Correction	HNGS-BA	None	
HEMA	Hematite Presence Flag	Borehole	No	
HVCS	Integrated Hole Volume Caliper Selection	Borehole	Measured Area	
IHVC	Integrated Hole Volume Control	Borehole	Start	
MHCC	Switch to select MCFL High Contrast Correction	HDRS-B	No	
MPOF	MCFL Processing Operation Mode	HDRS-B	On	
SGRC	Standard Gamma Ray Correction Flag	HNGS-BA	Yes	

Array Induction Two Foot Resistivity A90 (AT90) AIT-M		
0.2	ohm.m	2000
Array Induction Mud Resistivity Fully Calibrated (AMF) AIT-M		
0.02	ohm.m	200
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-B		
0.2	ohm.m	2000

TPOS	Tool Position: Centered or Eccentered	HNGS-BA	Eccentered	
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Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BHS	Cased	0	3520
BHS	Open	3520	8641
BS	26	0	1570
BS	17.5	1570	3226.75
BS	12.25	3226.75	8630
CSODDRL	20	0	1570
CSODDRL	13.375	1570	3220

All depth are actual.

Tool Control Parameters

Parameter	Description	Tool	Value	Unit
HRGD_BRD_TYPE	HRGD Board Type	HDRS-B	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h
STSO_HRDD	Temperature Source for the Density Algorithm	HDRS-B	HET data channel	

Two

Main Pass 5" = 100'

Log

Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2
Two: Main[3]:Up:S021

Description: AIT Basic Log Two Format: Log (Log (AIT_5_Inch) RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:11:10

TIME_1900 - Time Marked every 60.00 (s)

└─IHV - Integrated Hole Volume every 10.00 (ft3)

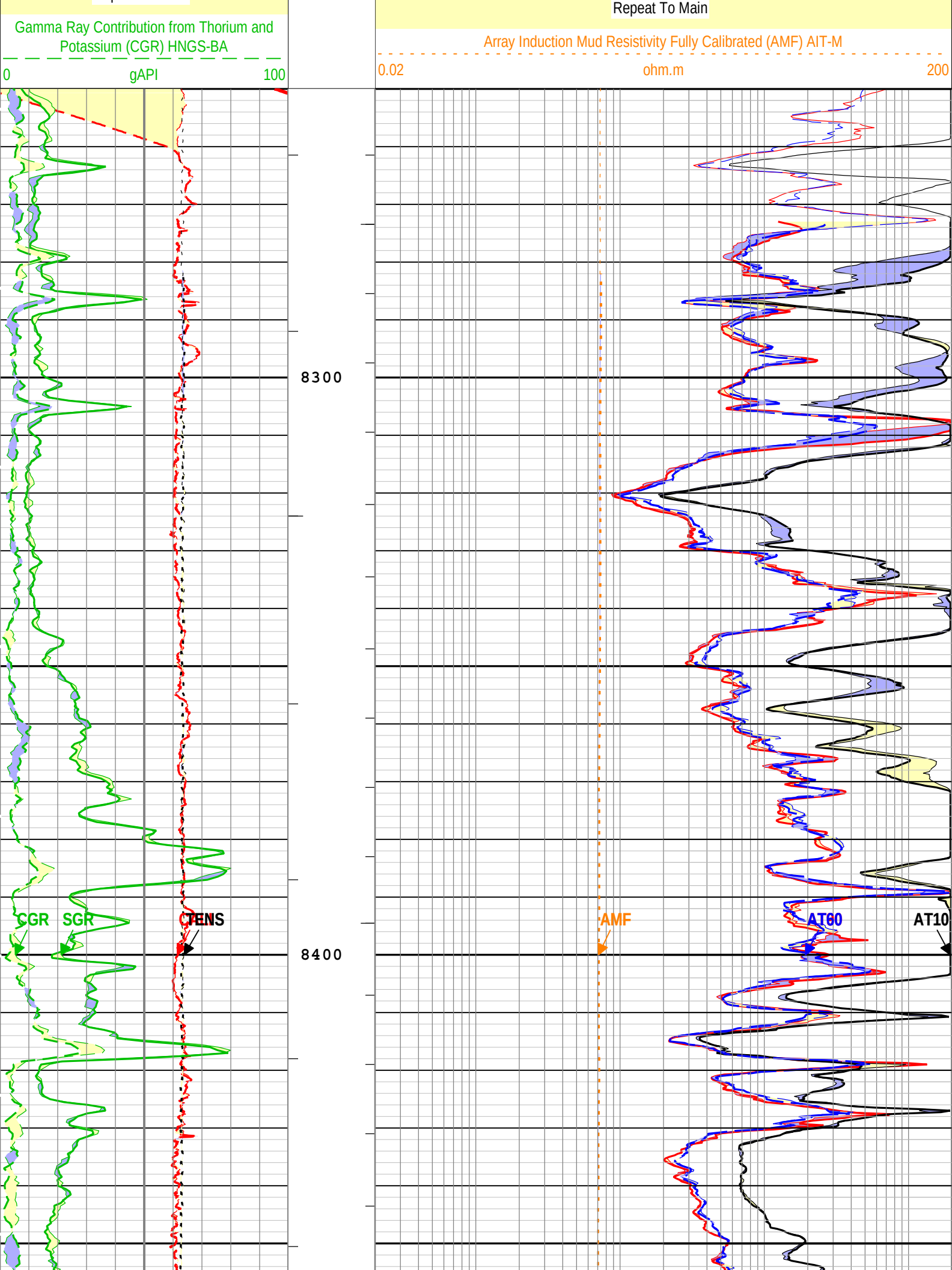
└─IHV - Integrated Hole Volume every 100.00 (ft3)

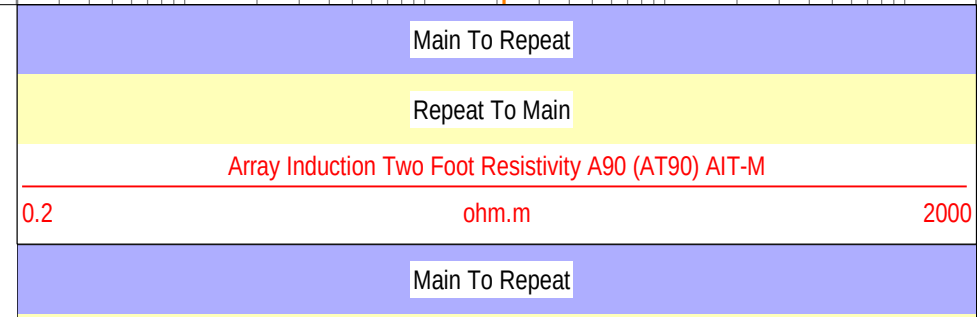
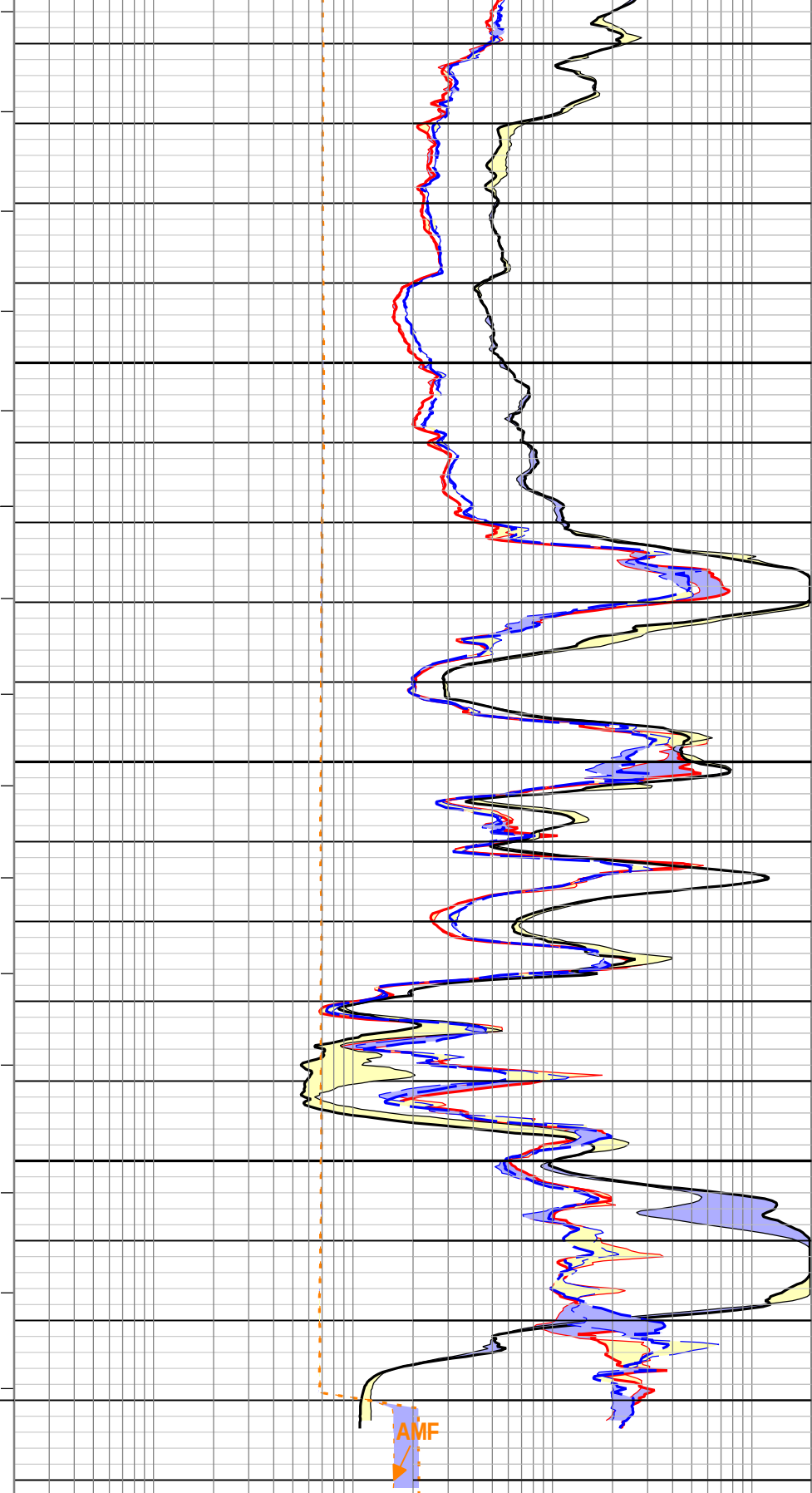
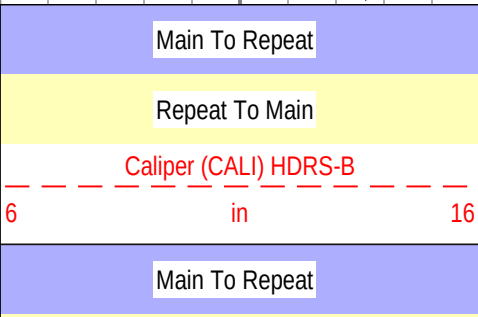
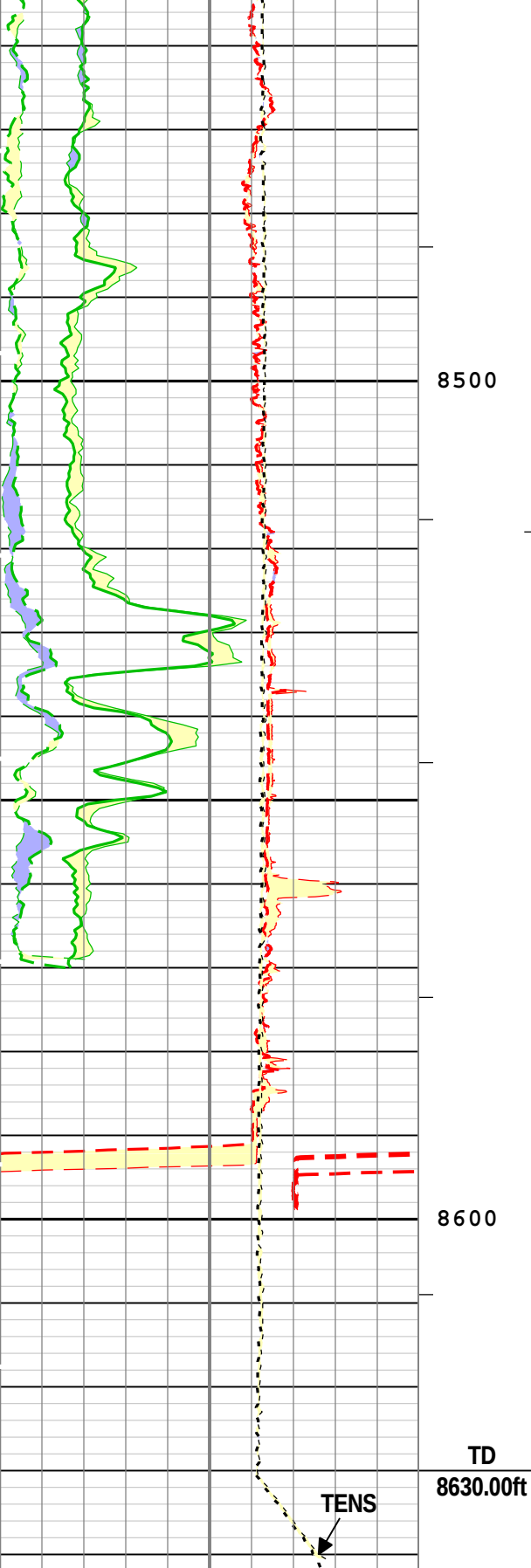
└─ICV - Integrated Cement Volume every 10.00 (ft3)

└─ICV - Integrated Cement Volume every 100.00 (ft3)

Main To Repeat
Repeat To Main
Caliper (CALI) HDRS-B
6 in 16
Main To Repeat
Repeat To Main
Cable Tension (TENS)
10000 lbf 0
Main To Repeat
Repeat To Main
Spectroscopy Gamma Ray (SGR) HNGS-BA
0 gAPI 100
Main To Repeat
Repeat To Main

Main To Repeat
Repeat To Main
Array Induction Two Foot Resistivity A90 (AT90) AIT-M
0.2 ohm.m 2000
Main To Repeat
Repeat To Main
Array Induction Two Foot Resistivity A10 (AT10) AIT-M
0.2 ohm.m 2000
Main To Repeat
Repeat To Main
Array Induction Two Foot Resistivity A60 (AT60) AIT-M
0.2 ohm.m 2000
Main To Repeat
Repeat To Main

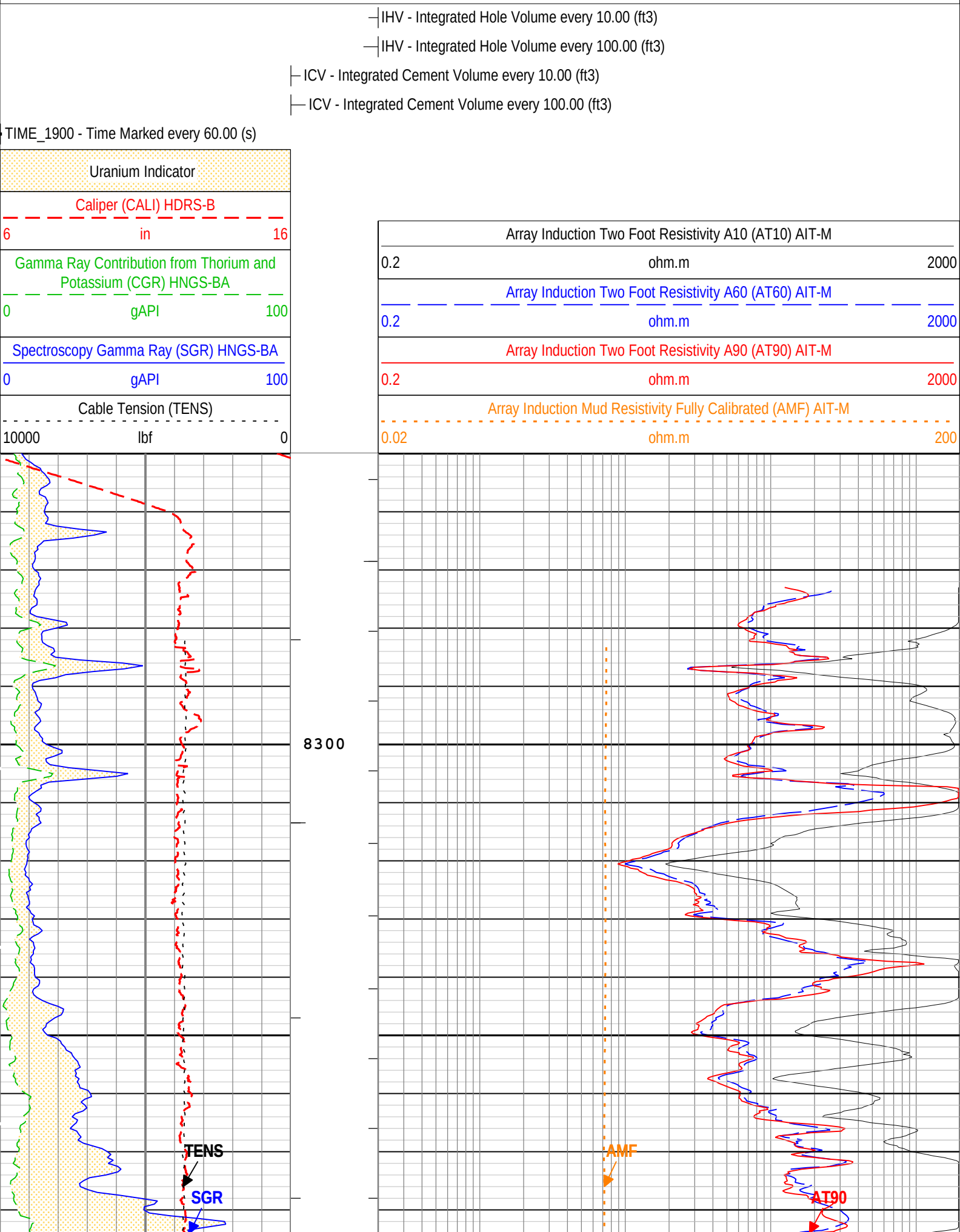


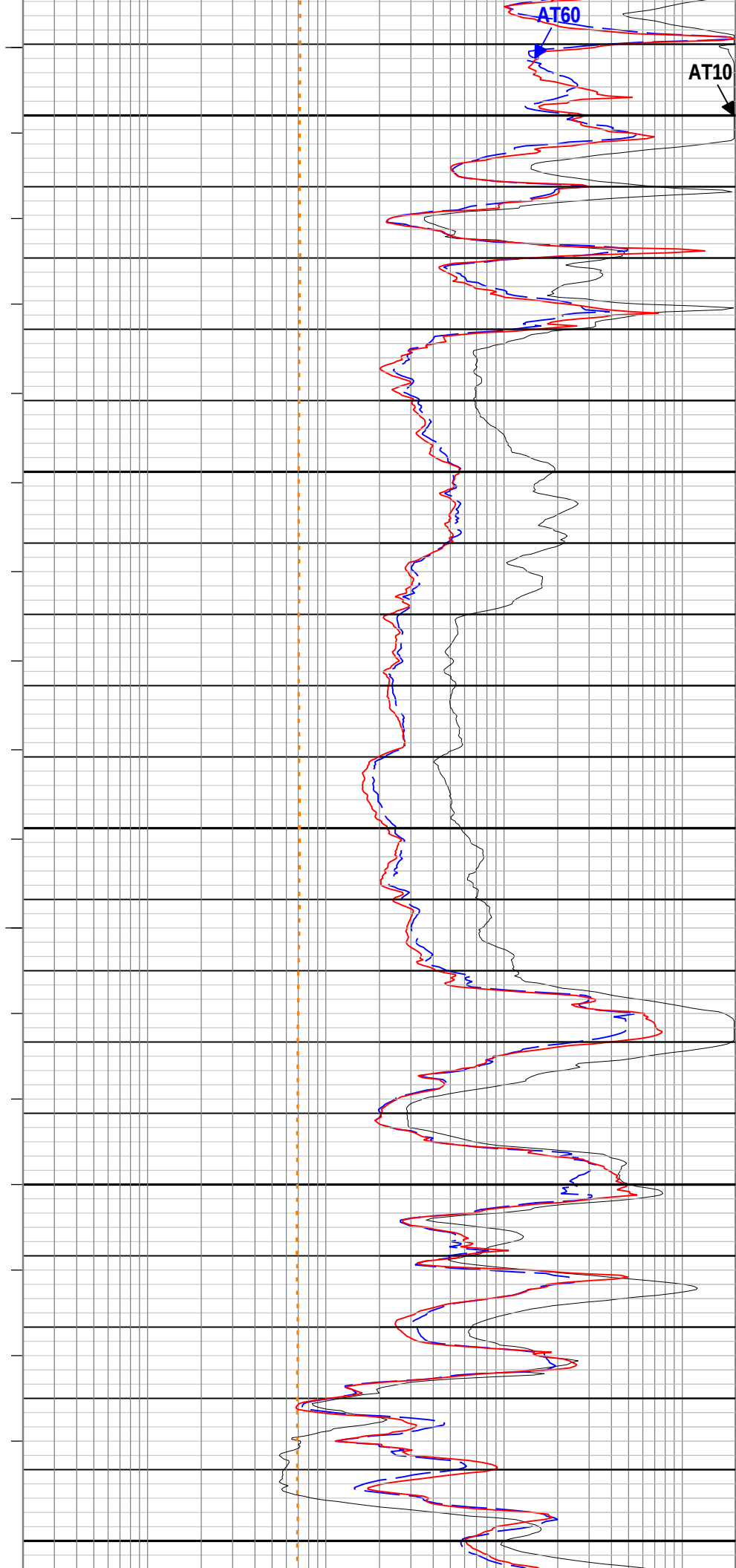
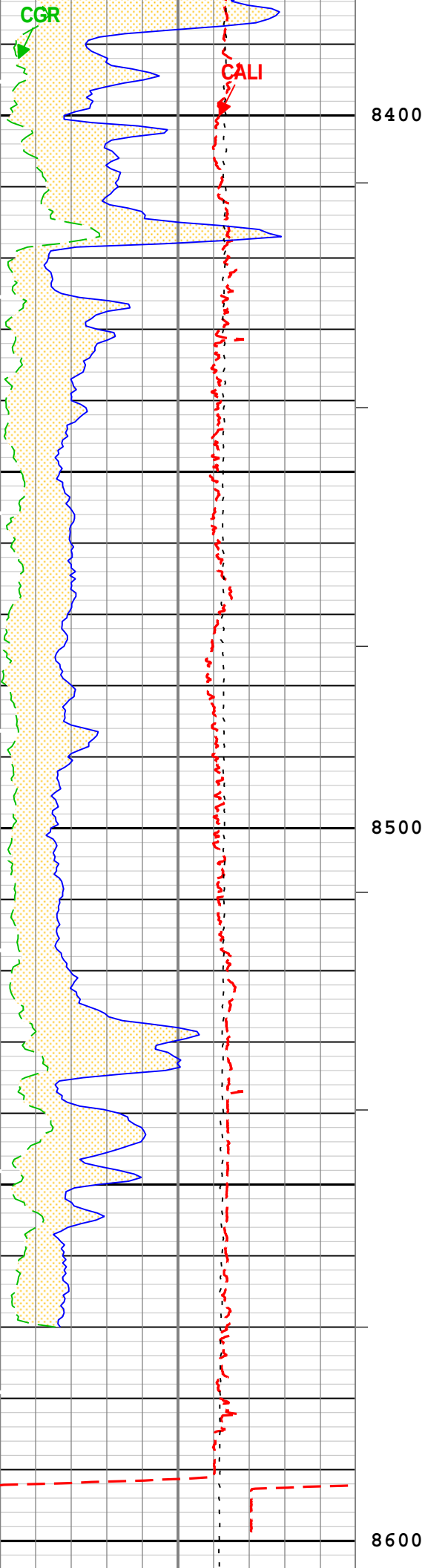


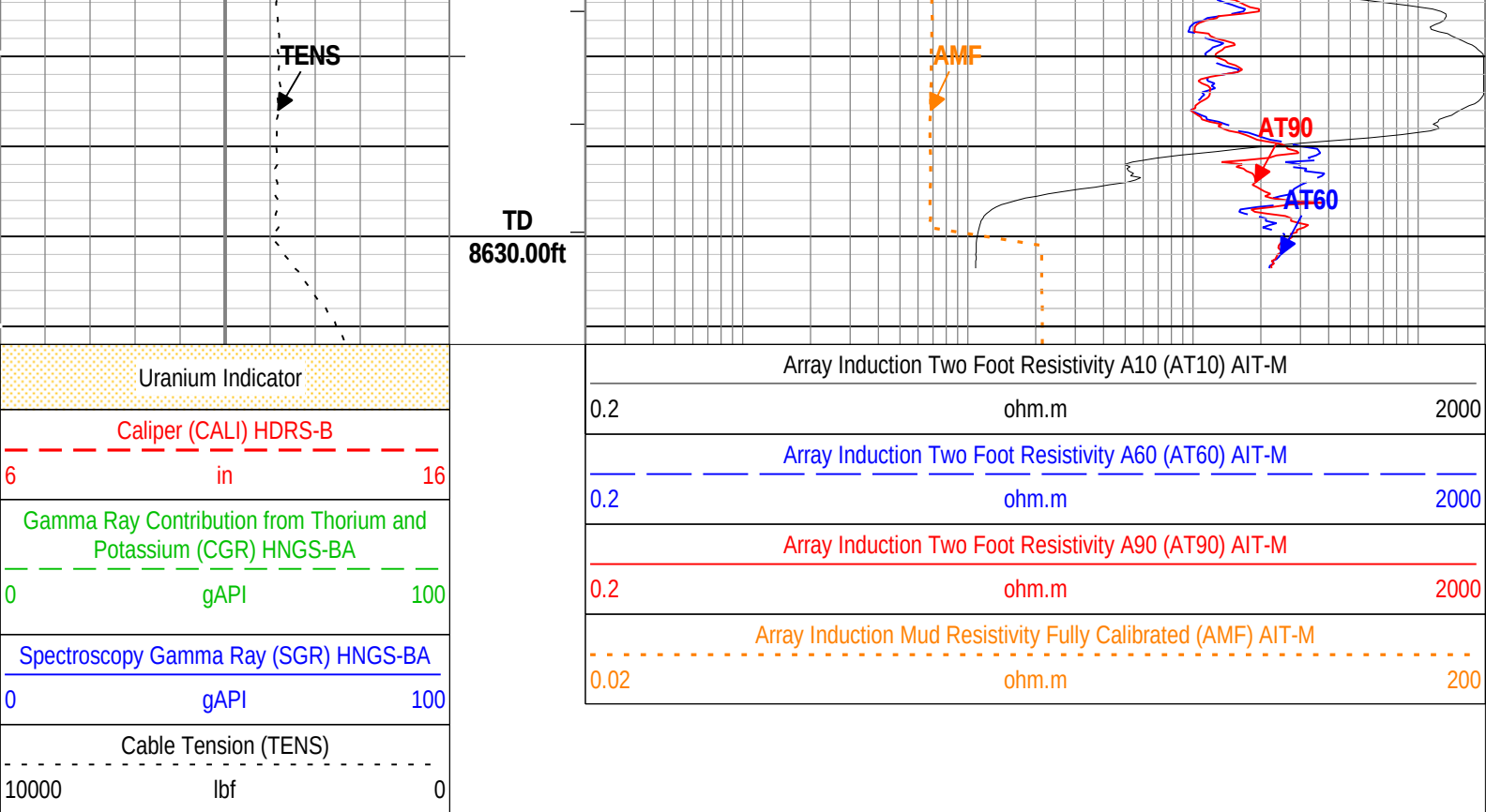
Repeat To Main			Repeat To Main						
Cable Tension (TENS)			Array Induction Two Foot Resistivity A10 (AT10) AIT-M						
10000	lbf	0	0.2	ohm.m					2000
Main To Repeat			Main To Repeat						
Repeat To Main			Repeat To Main						
Spectroscopy Gamma Ray (SGR) HNGS-BA			Array Induction Two Foot Resistivity A60 (AT60) AIT-M						
0	gAPI	100	0.2	ohm.m					2000
Main To Repeat			Main To Repeat						
Repeat To Main			Repeat To Main						
Gamma Ray Contribution from Thorium and Potassium (CGR) HNGS-BA			Array Induction Mud Resistivity Fully Calibrated (AMF) AIT-M						
0	gAPI	100	0.02	ohm.m					200
—ICV - Integrated Cement Volume every 100.00 (ft3)									
—ICV - Integrated Cement Volume every 10.00 (ft3)									
— IHV - Integrated Hole Volume every 100.00 (ft3)									
— IHV - Integrated Hole Volume every 10.00 (ft3)									
TIME_1900 - Time Marked every 60.00 (s)									
Description: AIT Basic Log Two Format: Log (Log (AIT_5_Inch) RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:11:10									
Two									
Repeat Pass 5" = 100'									
Integration Summary									
Output Channel(s)		Output Description		Input Parameter			Output Value		Unit
ICV		Integrated Cement Volume		HVAS, FCD			117.36		ft3
IHV		Integrated Hole Volume		HVAS			310.86		ft3
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Two	Repeat[2]:Up	Up	8280.83 ft	8641.74 ft	30-Nov-2014 1:13:56 PM	30-Nov-2014 1:26:00 PM	ON	10.16 ft	No
All depths are referenced to toolstring zero									
Log	Company:PB ENERGY STORAGE SERVICES, INC						Well:DCP Linam Ranch AGI #2		
Two: Repeat[2]:Up:S021									
Description: AIT Basic Log Two Format: Log (Copy of Log (AIT_5_Inch)) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:11:11									
Channel	Source			Sampling					
AMF	AIT-M:AMIS:AMIS			12in					
AT10	AIT-M:AMIS:AMIS			3in					
AT60	AIT-M:AMIS:AMIS			3in					
AT90	AIT-M:AMIS:AMIS			3in					
CALI	HDRS-B:HRCC-B:HRCC-B			1in					
CGR	HNGS-BA:HNGS-BA:HNGS-BA			6in					
ICV	Borehole			6in					
IHV	Borehole			6in					
SGR	HNGS-BA:HNGS-BA:HNGS-BA			6in					

TENSWLWorkflow6in0.1in

TIME_1900WLWorkflow0.1in







TIME_1900 - Time Marked every 60.00 (s)

— ICV - Integrated Cement Volume every 100.00 (ft3)

— ICV - Integrated Cement Volume every 10.00 (ft3)

— IHV - Integrated Hole Volume every 100.00 (ft3)

— IHV - Integrated Hole Volume every 10.00 (ft3)

Description: AIT Basic Log Two Format: Log (Copy of Log (AIT_5_Inch)) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 30-Nov-2014 17:11:11

Calibration Report

AIT-M (Array Induction Tool - M) Calibration - Run Two

Primary Equipment :		
File code for AIT-MA Sonde Tool Element	AMIS	160
Auxiliary Equipment :		
AITM Rm/SP Bottom Nose	AMRM	160

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM): 23:06:02 06-Feb-2009 Expired by 2032 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.035	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	0.421	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.049	1.050	
Test Loop Phase - 1	deg	Master	0	-3.000	0.538	3.000	
Test Loop Gain - 2		Master	1.000	0.950	1.024	1.050	
Test Loop Phase - 2	deg	Master	0	-3.000	0.030	3.000	
Test Loop Gain - 3		Master	1.000	0.950	1.020	1.050	
Test Loop Phase - 3	deg	Master	0	-3.000	0.115	3.000	
Test Loop Gain - 4		Master	1.000	0.950	1.014	1.050	
Test Loop Phase - 4	deg	Master	0	-3.000	0.069	3.000	
Test Loop Gain - 5		Master	1.000	0.950	1.049	1.050	
Test Loop Phase - 5	deg	Master	0	-3.000	0.060	3.000	
Test Loop Gain - 6		Master	1.000	0.950	1.036	1.050	
Test Loop Phase - 6	deg	Master	0	-3.000	0.347	3.000	
Test Loop Gain - 7		Master	1.000	0.950	1.017	1.050	
Test Loop Phase - 7	deg	Master	0	-3.000	0.083	3.000	

AIT Sonde Calibration - Sonde Error Correction

AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM): 23:06:02 06-Feb-2009 Expired by 2032 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-94.760	119.000	
Sonde Error Correction Quad - 0		Master	-----	-2250.000	-540.082	2250.000	
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	162.422	204.000	
Sonde Error Correction Quad - 1		Master	-----	-625.000	26.053	625.000	
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	106.467	156.000	
Sonde Error Correction Quad - 2		Master	-----	-350.000	1.164	350.000	
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	59.000	89.000	
Sonde Error Correction Quad - 3		Master	-----	-250.000	-19.124	250.000	
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	24.880	35.000	
Sonde Error Correction Quad - 4		Master	-----	-63.000	17.167	63.000	
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	11.379	24.000	
Sonde Error Correction Quad - 5		Master	-----	-50.000	5.199	50.000	
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	9.087	15.000	
Sonde Error Correction Quad - 6		Master	-----	-30.000	-0.973	30.000	
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-2.119	5.000	
Sonde Error Correction Quad - 7		Master	-----	-30.000	2.223	30.000	

AIT Mud Calibration - Mud Calibration Gain

Master (EEPROM): 23:06:02 06-Feb-2009 Expired by 2032 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coarse Gain		Master	1.000	0.800	1.069	1.200	
Fine Gain		Master	1.000	0.800	1.069	1.200	

AIT Electronics Check - Thru Calibration Check

Master (EEPROM): 23:06:02 06-Feb-2009 Expired by 2032 days Before (Measured): 22:35:39 29-Nov-2014							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Thru Cal Mag - 0	V	Master	-----	0.366	0.612	0.854	
		Before	-----	0.366	0.612	0.854	
		Before-Master	-----	-----	0.000	-----	
Thru Cal Phase - 0	deg	Master	-----	137.000	-167.088	-103.000	
		Before	-----	137.000	-159.827	-103.000	
		Before-Master	-----	-----	7.261	-----	
Thru Cal Mag - 1	V	Master	-----	0.762	1.254	1.778	
		Before	-----	0.762	1.254	1.778	
		Before-Master	-----	-----	0.000	-----	
Thru Cal Phase - 1	deg	Master	-----	136.000	-168.180	-104.000	
		Before	-----	136.000	-160.916	-104.000	
		Before-Master	-----	-----	7.264	-----	
Thru Cal Mag - 2	V	Master	-----	0.372	0.622	0.868	
		Before	-----	0.372	0.622	0.868	
		Before-Master	-----	-----	0.000	-----	
Thru Cal Phase - 2	deg	Master	-----	132.000	-171.787	-108.000	
		Before	-----	132.000	-164.525	-108.000	
		Before-Master	-----	-----	7.262	-----	
Thru Cal Mag - 3	V	Master	-----	0.420	0.702	0.980	
		Before	-----	0.420	0.702	0.980	
		Before-Master	-----	-----	0.000	-----	
Thru Cal Phase - 3	deg	Master	-----	131.000	-172.562	-109.000	
		Before	-----	131.000	-165.300	-109.000	
		Before-Master	-----	-----	7.262	-----	
Thru Cal Mag - 4	V	Master	-----	0.804	1.314	1.876	
		Before	-----	0.804	1.314	1.876	
		Before-Master	-----	-----	0.000	-----	
Thru Cal Phase - 4	deg	Master	-----	125.000	-178.803	-115.000	
		Before	-----	125.000	-171.531	-115.000	
		Before-Master	-----	-----	7.272	-----	
Thru Cal Mag - 5	V	Master	-----	1.176	1.916	2.744	
		Before	-----	1.176	1.917	2.744	
		Before-Master	-----	-----	0.001	-----	
Thru Cal Phase - 5	deg	Master	-----	122.000	179.521	-118.000	
		Before	-----	122.000	-173.199	-118.000	
		Before-Master	-----	-----	-352.720	-----	
Thru Cal Mag - 6	V	Master	-----	1.176	1.913	2.744	
		Before	-----	1.176	1.914	2.744	

		Before-Master	----	----	0.001	----	
Thru Cal Phase - 6	deg	Master	----	121.000	179.552	-119.000	
		Before	----	121.000	-173.167	-119.000	
		Before-Master	----	----	-352.719	----	
Thru Cal Mag - 7	V	Master	----	0.846	1.374	1.974	
		Before	----	0.846	1.375	1.974	
		Before-Master	----	----	0.001	----	
Thru Cal Phase - 7	deg	Master	----	115.000	178.849	-125.000	
		Before	----	115.000	-173.812	-125.000	
		Before-Master	----	----	-352.661	----	
SPA Zero	mV	Master		-50.000	0.193	50.000	
		Before		-50.000	0.286	50.000	
		Before-Master	----	----	0.093	----	
SPA Plus	mV	Master		941.000	989.291	1040.000	
		Before		941.000	989.215	1040.000	
		Before-Master	----	----	-0.076	----	
Temperature Zero	V	Master		-0.050	0.000	0.050	
		Before		-0.050	0.000	0.050	
		Before-Master	----	----	0.000	----	
Temperature Plus	V	Master		0.870	0.917	0.960	
		Before		0.870	0.916	0.960	
		Before-Master	----	----	-0.001	----	

Company:	PB ENERGY STORAGE SERVICES, INC	Schlumberger
Well:	DCP Linam Ranch AGI #2	
Field:	AGI; Bone Spring-Wolfcamp	
County:	Lea	
Country:	USA	

Array Induction Tool

Two

Main Pass 1" = 100'

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	HVAS, FCD	2381.29	ft3
IHV	Integrated Hole Volume	HVAS	5118.77	ft3

Log	Company:PB ENERGY STORAGE SERVICES, INC	Well:DCP Linam Ranch AGI #2
	Two: Main[3]:Up:S021	

Description: AIT Basic Log Two

Format: Log (Log (AIT_1_Inch))

Index Scale: 1 in per 100 ft

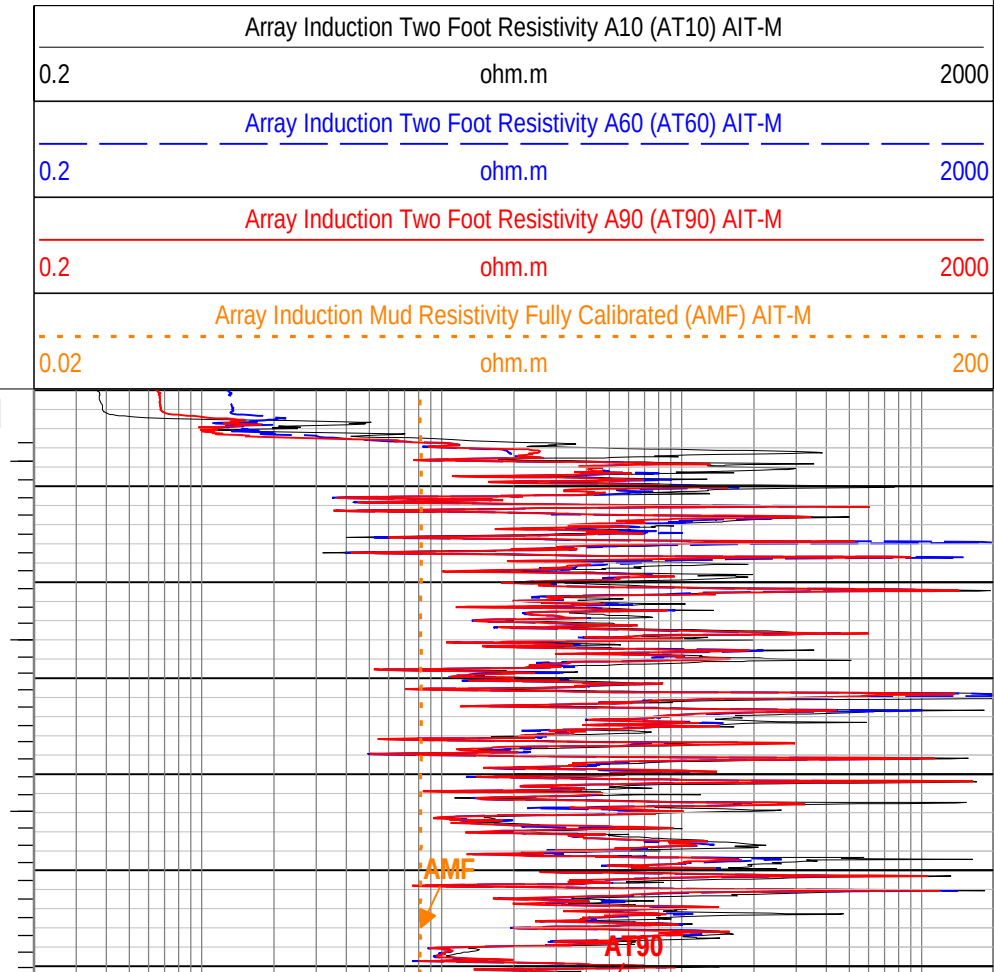
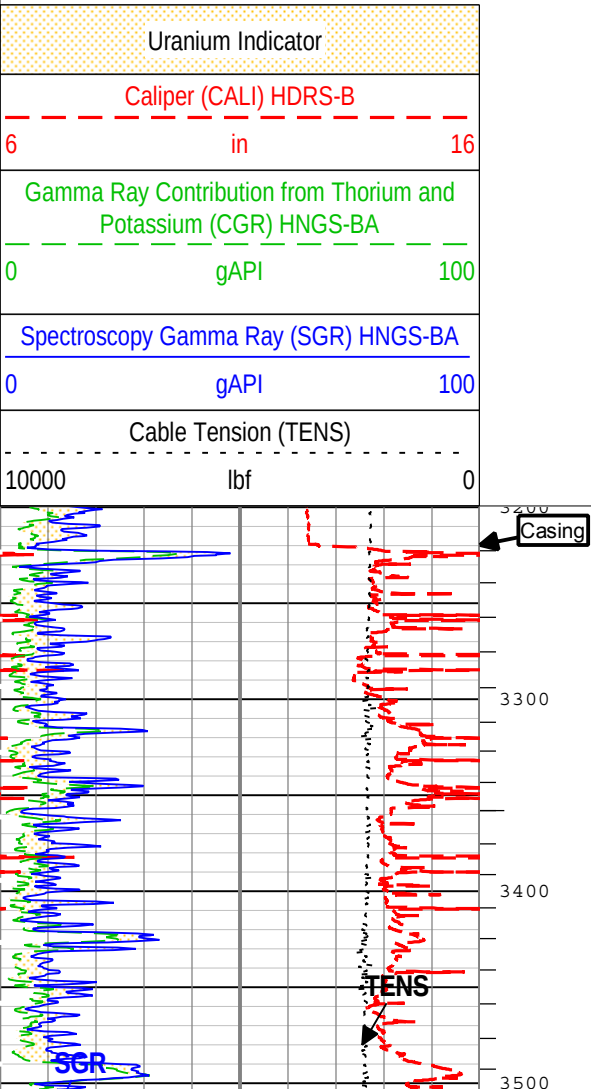
Index Unit: ft

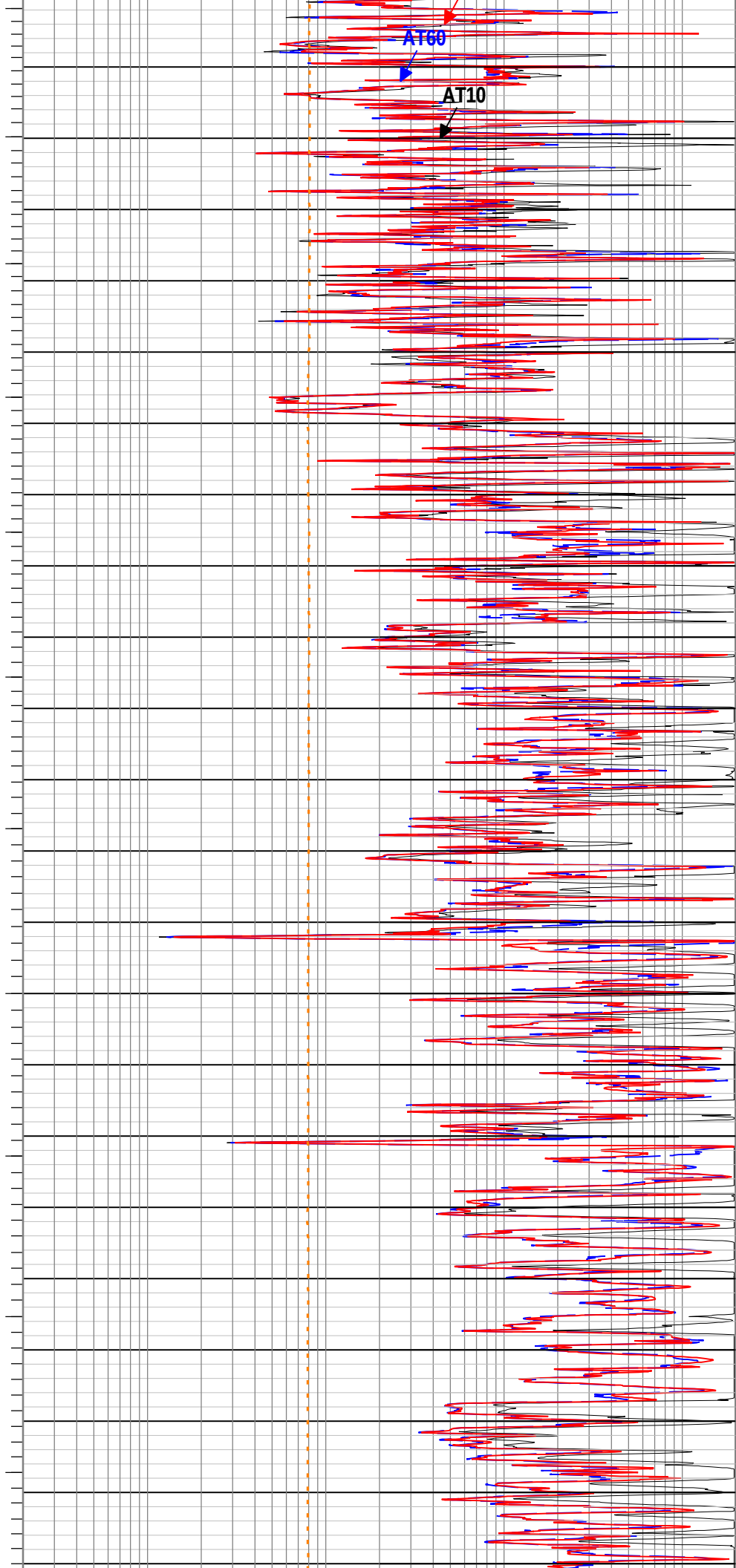
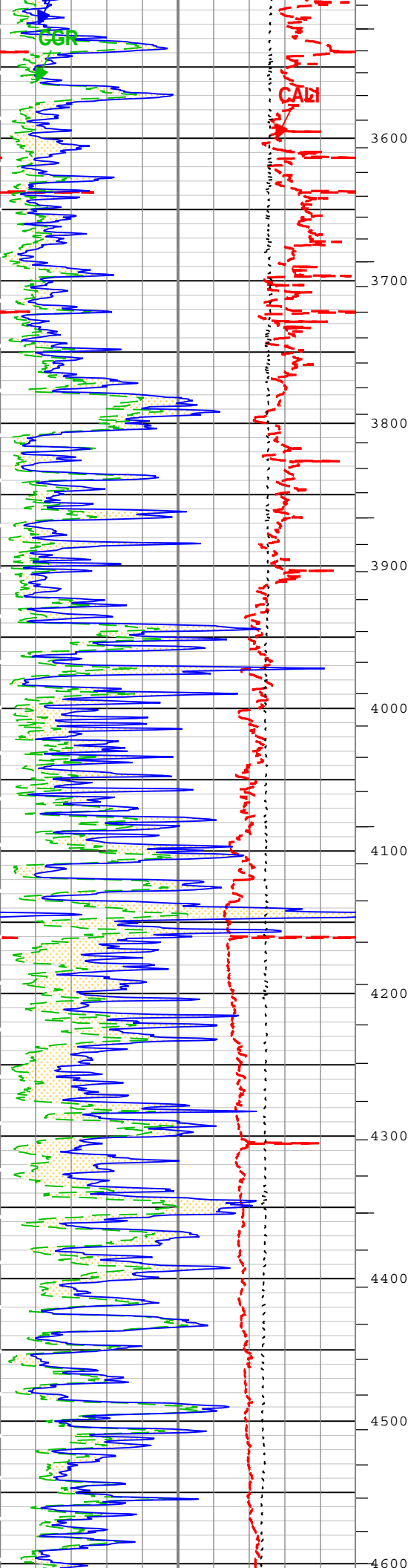
Index Type: Measured Depth

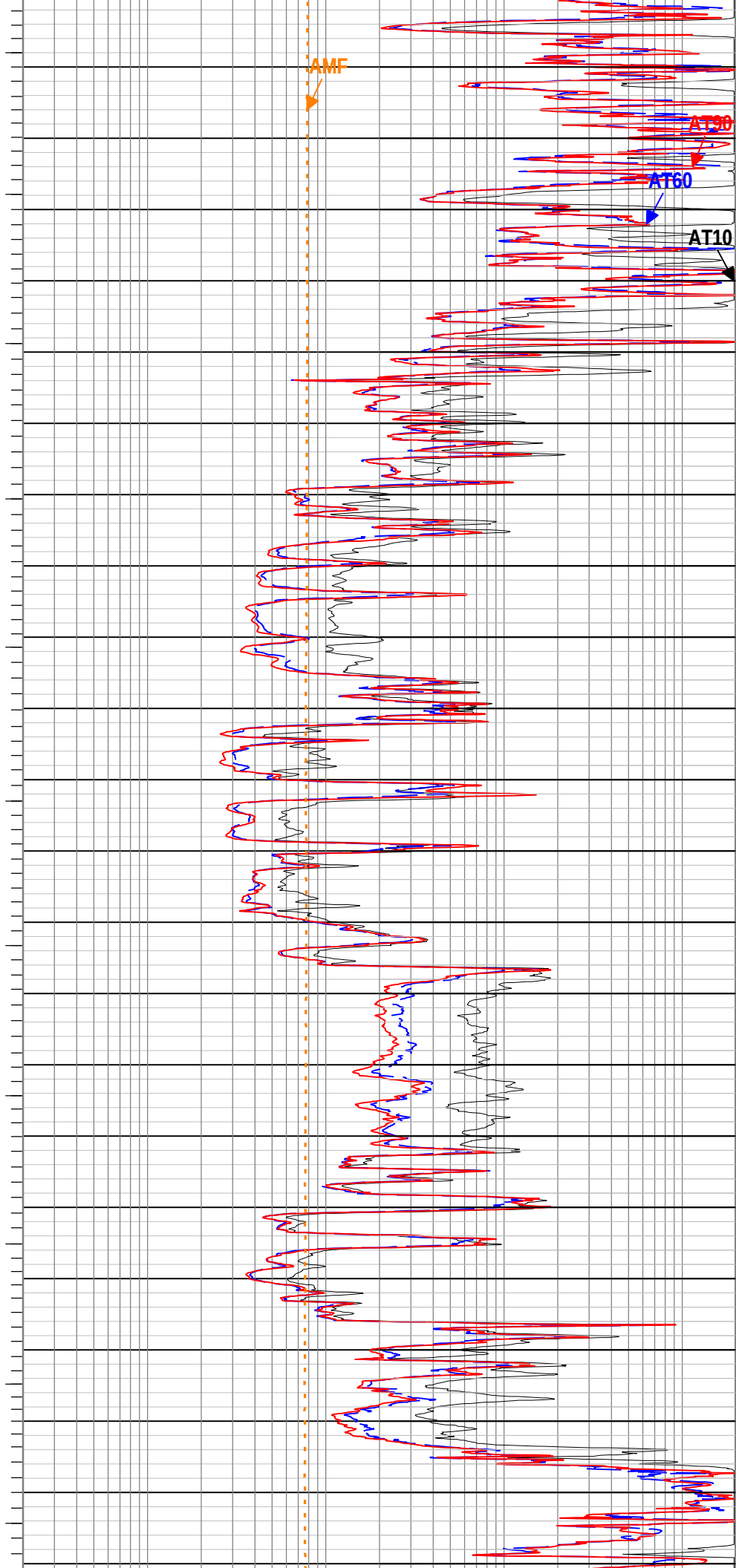
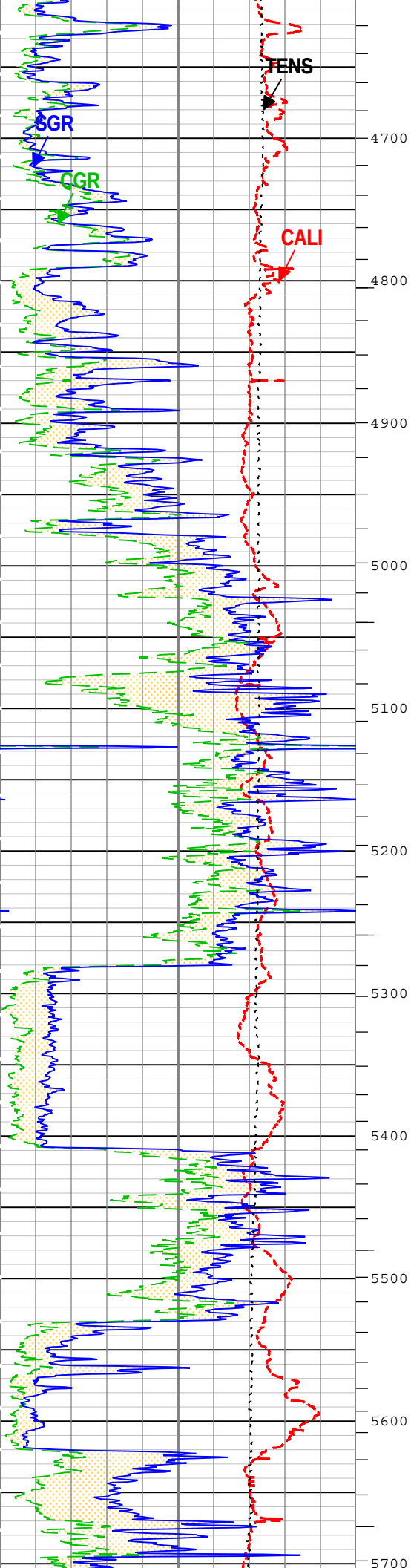
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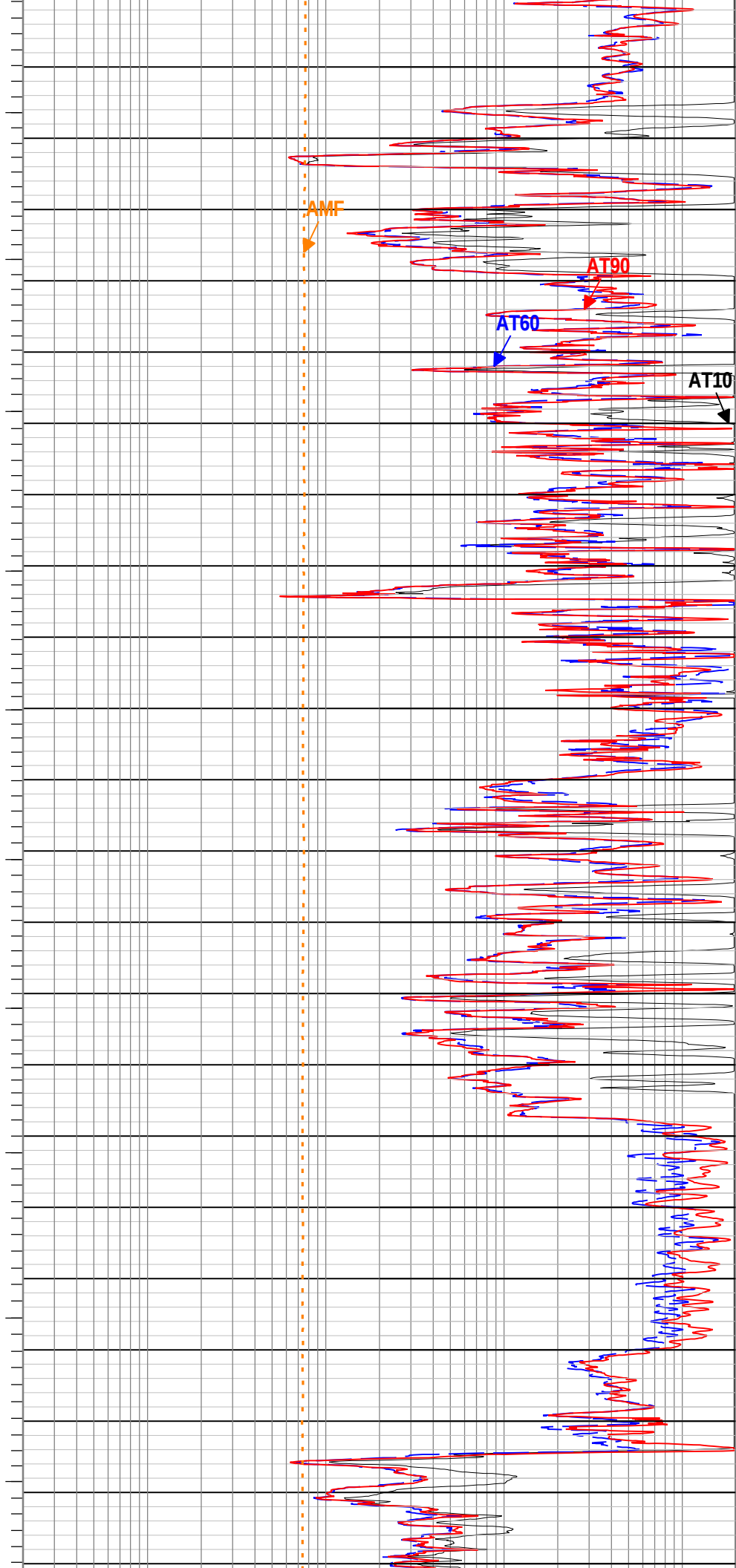
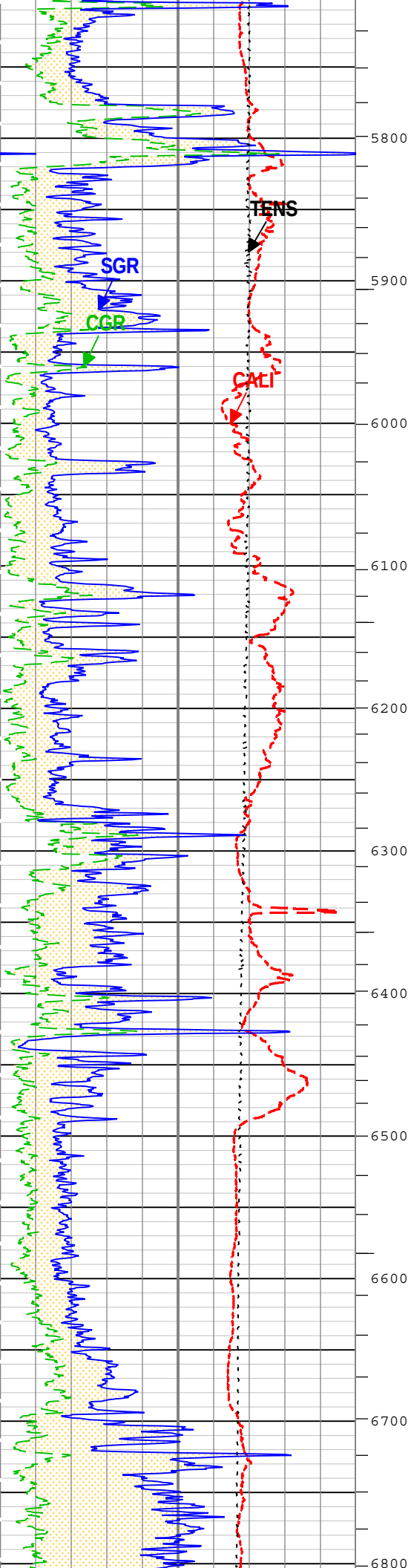
Channel	Source	Sampling
AMF	AIT-M:AMIS:AMIS	12in
AT10	AIT-M:AMIS:AMIS	3in
AT60	AIT-M:AMIS:AMIS	3in
AT90	AIT-M:AMIS:AMIS	3in
CALI	HDRS-B:HRCC-B:HRCC-B	1in
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
ICV	Borehole	6in
IHV	Borehole	6in
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

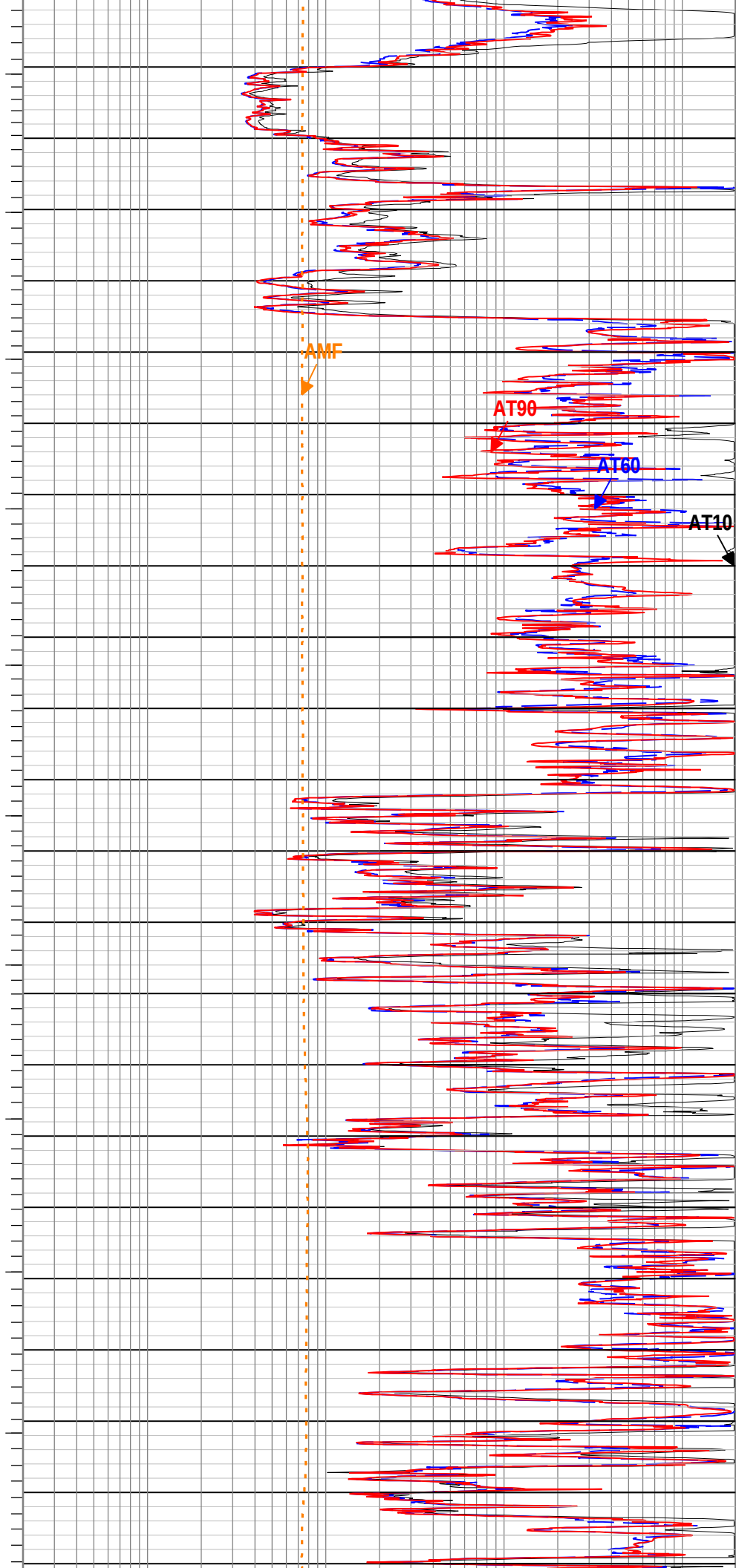
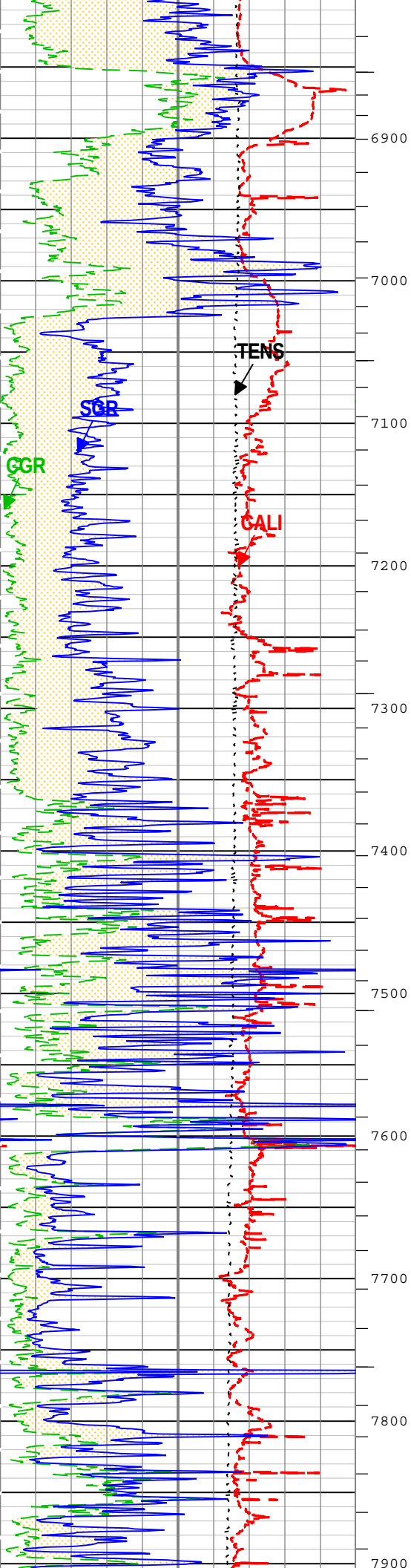
TIME_1900 - Time Marked every 60.00 (s)	
	IHV - Integrated Hole Volume every 10.00 (ft3) IHV - Integrated Hole Volume every 100.00 (ft3) ICV - Integrated Cement Volume every 10.00 (ft3) ICV - Integrated Cement Volume every 100.00 (ft3)

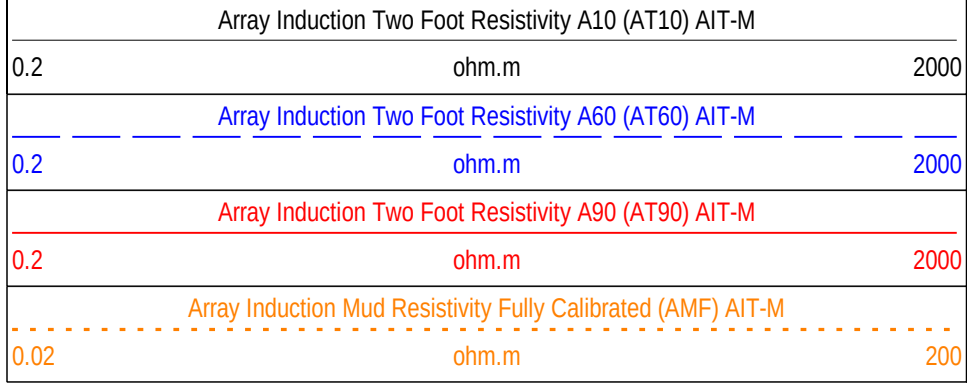
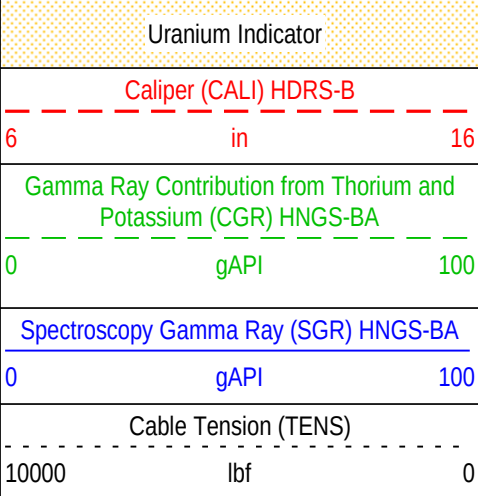
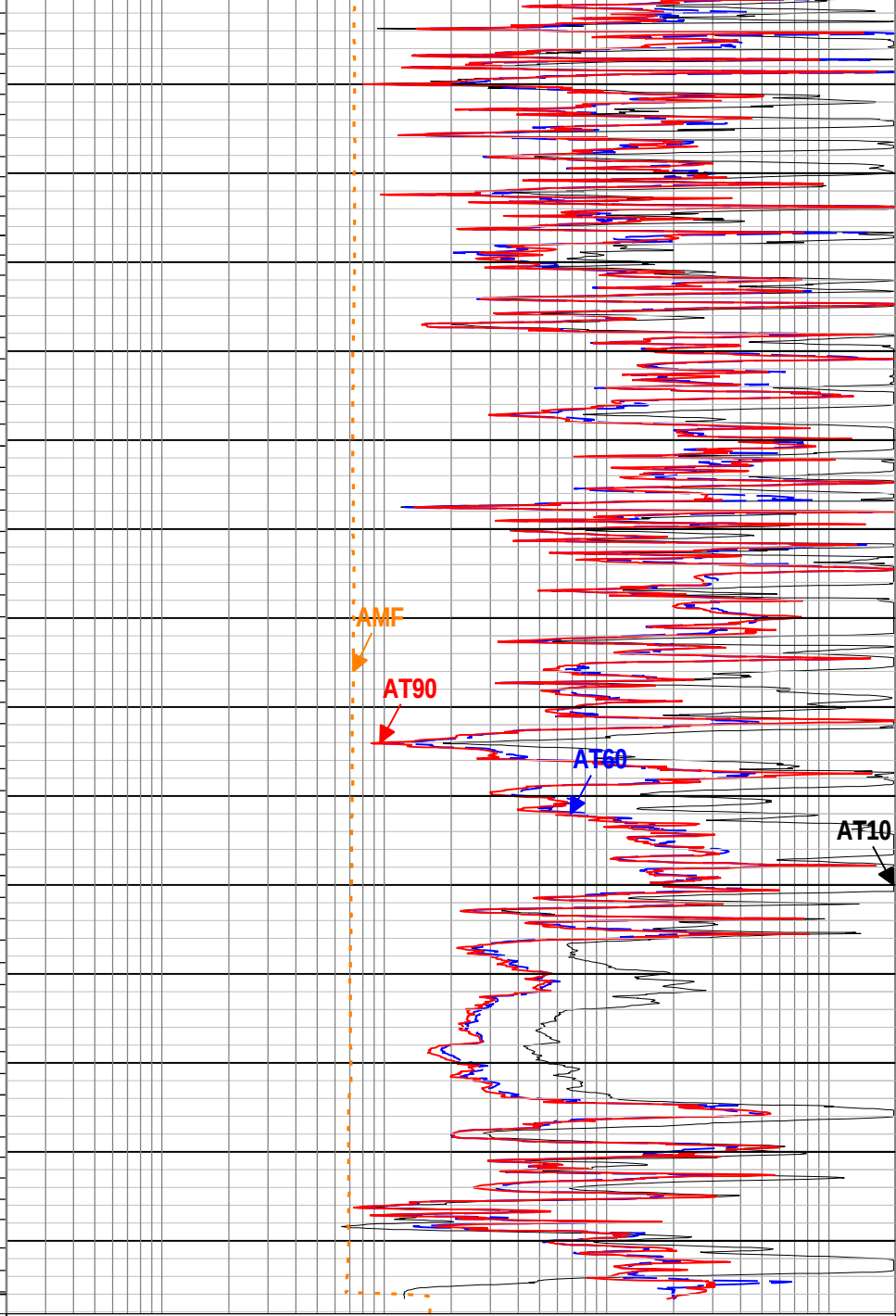
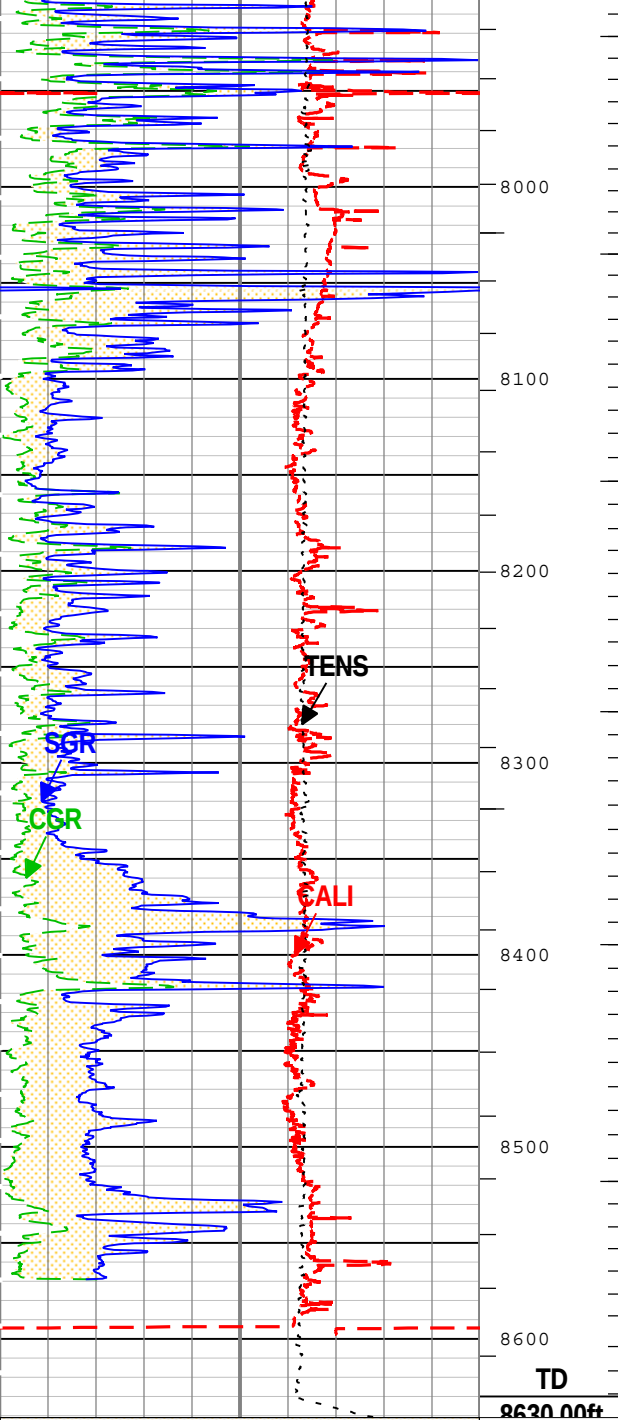












ICV - Integrated Cement Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)

IHV - Integrated Hole Volume every 100.00 (ft3)

IHV - Integrated Hole Volume every 10.00 (ft3)

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Standoff	
ACDE	Array Induction Casing Detection Enable	AIT-M	No	
ASTA	Array Induction Tool Standoff	AIT-M	1.625	in
BARI	Barite Mud Presence Flag	Borehole	No	
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-B	0.168	in
CBLO	Casing Bottom (Logger)	WLSESSION	3219.5	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	Depth Zoned	in
DBCC	Barite Constant Correction Flag	HNGS-BA	None	
DFD	Drilling Fluid Density	Borehole	8.8	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	9.625	in
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	AMF	
HCRB	Apply Borehole Potassium Correction	HNGS-BA	None	
HEMA	Hematite Presence Flag	Borehole	No	
HVCS	Integrated Hole Volume Caliper Selection	Borehole	Measured Area	
SGRC	Standard Gamma Ray Correction Flag	HNGS-BA	Yes	
Depth Zone Parameters				
Parameter	Value	Start (ft)	Stop (ft)	
BHS	Cased	0	3520	
BHS	Open	3520	8641	
BS	26	0	1570	
BS	17.5	1570	3226.75	
BS	12.25	3226.75	8630	
CSODDRL	20	0	1570	
CSODDRL	13.375	1570	3220	
All depth are actual.				
Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h

Fullbore Micro Imager / Field Print

Company: PB ENERGY STORAGE SERVICES, INC

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County: Lea State: New Mexico

Fullbore Micro Imager

Field Print

County:	Lea	
Field:	AGI; Bone Spring-Wolfcamp	
Location:	1600' FSL & 1750' FWL	
Well:	DCP Linam Ranch AGI #2	
Company:	PB ENERGY STORAGE SERVICES, INC	
Location:	1600' FSL & 1750' FWL	Elev.: K.B. 3763.00 ft
		G.L. 3738.00 ft
		D.F. 3762.00 ft
Permanent Datum:	Ground Level	Elev.: 3738.00 f
Log Measured From:	Kelly Bushing	25.00 ft above Perm.Datum
Drilling Measured From:	Kelly Bushing	
API Serial No.	Section: 30	Township: 18S
30-025-42139		Range: 37E
Logging Date	30-Nov-2014	

Run Number	Three	
Depth Driller	8630.00 ft	
Schlumberger Depth	8630.00 ft	
Bottom Log Interval	8628.00 ft	
Top Log Interval	7000.00 ft	
Casing Driller Size @ Depth	13.375 in @ 3220.00 ft	
Casing Schlumberger	3219.5 ft	
Bit Size	12.25 in	
Type Fluid In Hole	Salt Brine	
Density	8.8 lbm/gal	33 s
Fluid Loss	0 cm3	10
Source of Sample	Active Tank	
RM @ Meas Temp	9 ohm.m @	80 degF
RMF @ Meas Temp	7.5 ohm.m @	80 degF
RMC @ Meas Temp	0.06 ohm.m @	75 degF
Source RMF	Pressed	
RM @ BHT	6.85 @ 107.3	5.71 @ 107.3
Max Recorded Temperatures	125 degF	
Circulation Stopped	30-Nov-2014 02:00:00	
Logger on Bottom	30-Nov-2014 22:30:32	
Unit Number	2133	
Recorded By	Tyler Bolton	
Witnessed By	Russell Bentley	

Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

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Remarks and Equipment Summary

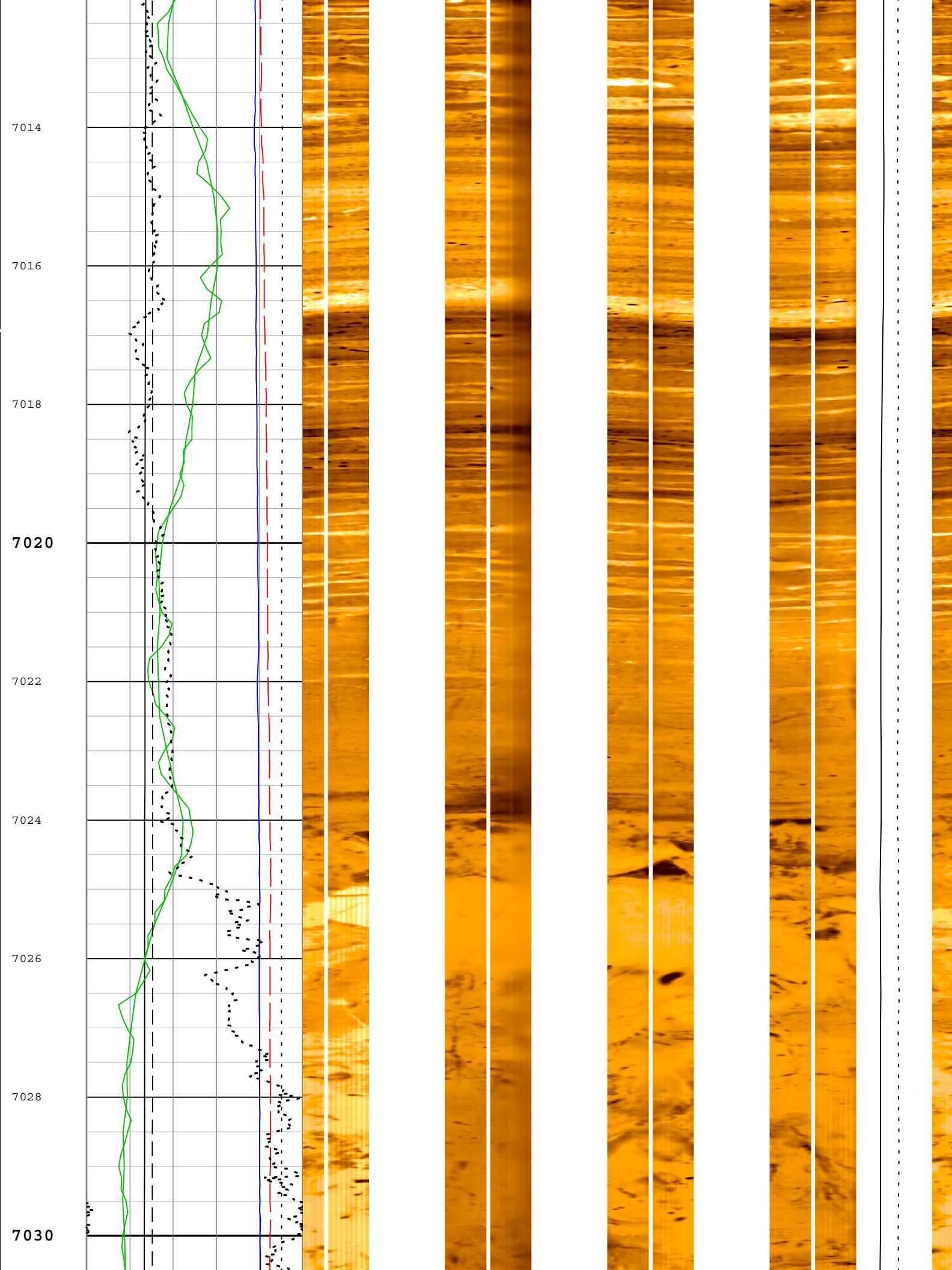
Three: Toolstring				Three: Remarks	
Equip name LEH-QC:1317 Length 32.38 MP name Offset EDTC-B:9071 EDTH-B:8196 EDTG-A:79243 EDTC-B:9071 FBST-E ECH-MJA FBPC-A AH-287 FBSH-D FBAC-B DHRU-F FBSS-B CTEM ACCZ HV Gamma Ray TelStatus 26.42 0.00 0.00 24.55 23.42 Deviation GPIT-F Inclino meter GPIT 9.94 9.94 0.00 Buttons 1.33 TOOL_ZERO Lengths are in ft Maximum Outer Diameter = 5.000 in Line: Sensor Location, Value: Gating Offset All measurements are relative to TOOL_ZERO				Toolstring run as per toolsketch.	
				1.5" standoff used on FMI cartridge.	
				Rig: Precision #107	
				Your Schlumberger crew: Tyler Bolton, Adam Jaramillo, Jose Gomez.	

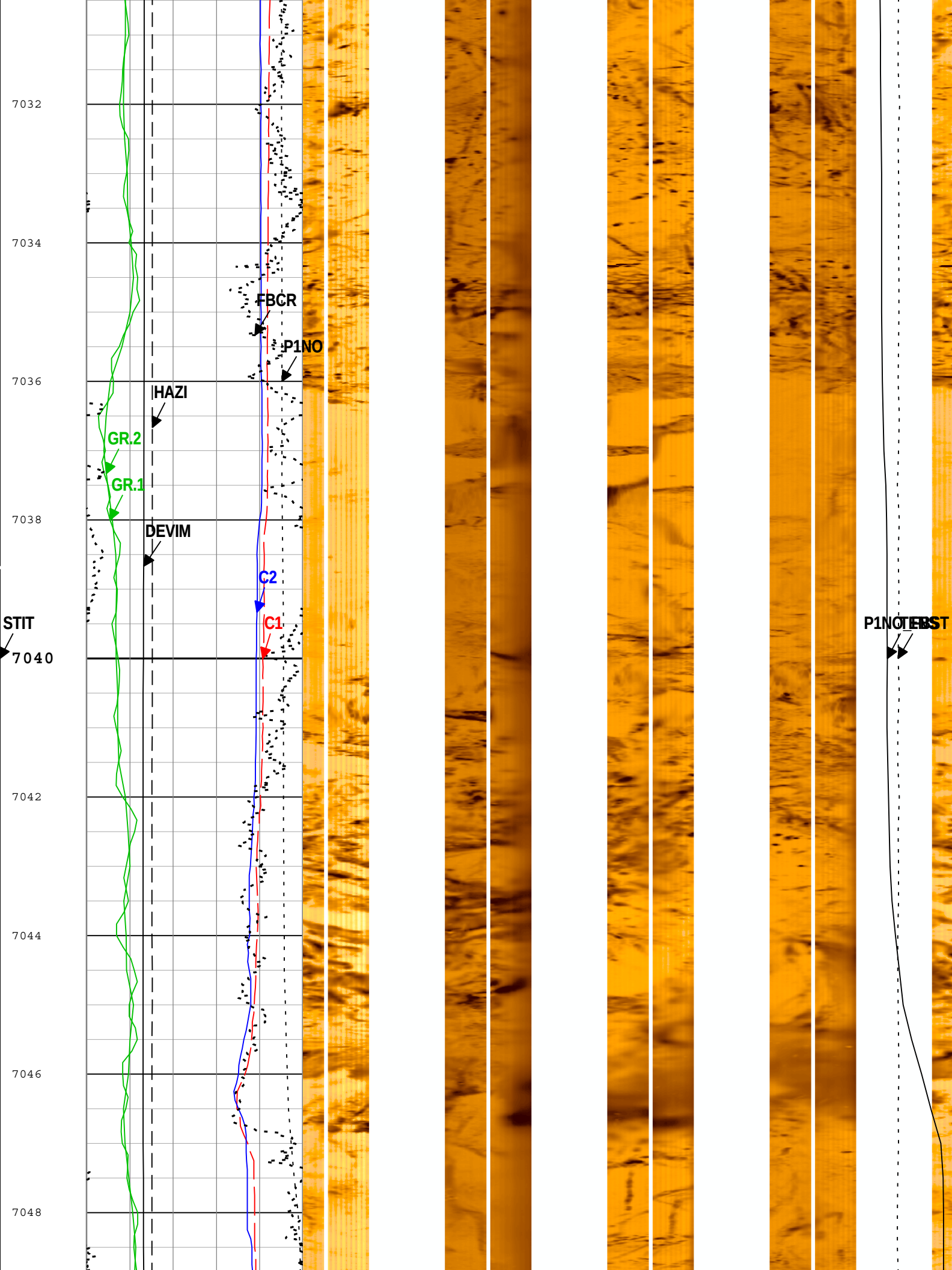
Depth Summary

		Three		
Depth Measuring Device				
Type		IDW-JA		

Serial Number	5910		
Calibration Date	02-JUN-2014		
Calibrator Serial Number			
Calibration Cable Type	7-46PXS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		
Tension Device			
Type	CMTD-B/A		
Serial Number	5044		
Calibration Date	18-Oct-2014		
Calibrator Serial Number	80725A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	19		
Calibration Peak Error	36		
Logging Cable			
Type	7-46P-XS		
Serial Number	U711059		
Length	15500.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		
Three:Depth Control Parameters		Depth Control Remarks	
Log Sequence	Subsequent Trip To the Well	All primary and secondary Schlumberger depth control procedures followed. IDW used as primary depth control device. Z-chart used as secondary depth control device.	
Reference Log Name	Platform Express CNL		
Reference Log Run Number	One		
Reference Log Date	01-Nov-2014		
Subsequent Trip Down Log Correction	10.68 ft		
Three			
Repeat Pass 120" = 100'			
Log	Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2 Three: Main[4]:Up:S024		
Description: FMI Raw Image Log Format: Log (FMI Raw Image Log) Index Scale: 60 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 23:20:00			
Channel	Source	Sampling	
C1	FBST-E:FBPC-A:FBPC-A	1.5in	
C2	FBST-E:FBPC-A:FBPC-A	1.5in	
DEVIM	FBST-E:FBAC-B:FBAC-B	6in	
FBCR	FBST-E	0.1in	
GR.1	EDTC-B:EDTC-B:EDTC-B	2in	
GR.2	EDTC-B:EDTC-B:EDTC-B	6in	
HAZI	FBST-E:FBAC-B:DHRU-F	6in	
P1NO	FBST-E:FBAC-B:DHRU-F	6in	
P1NO_FBST	FBST-E	6in	
STIT	DepthCorrection	6in	
TENS	WLWorkflow	6in	
TIME_1900	WLWorkflow	0.1in	
TIME_1900 - Time Marked every 60.00 (s)			
Caliper 1 (C1) FBST-E 6in16 Caliper 2 (C2) FBST-E 6in16 Memorized Deviation (DEVIM)			

[illegible]





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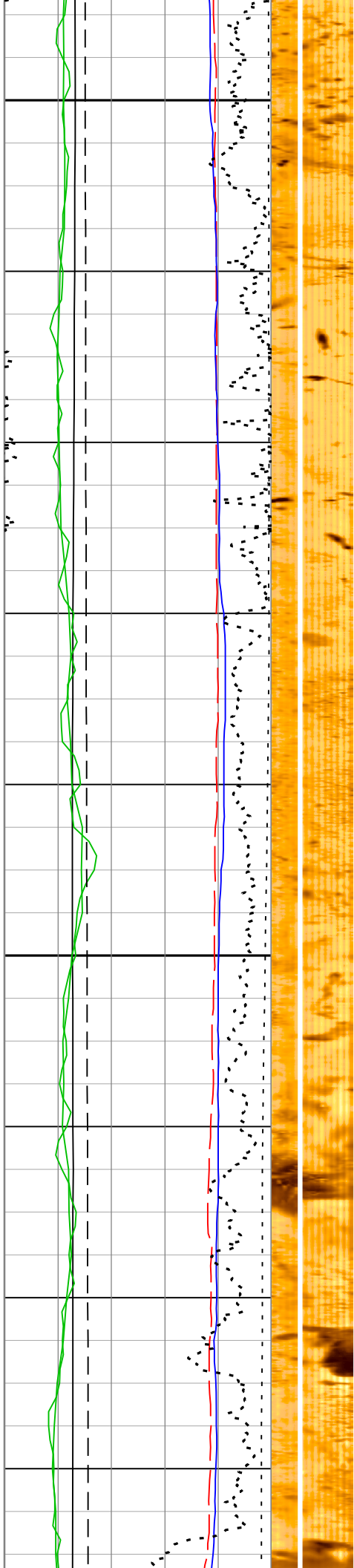
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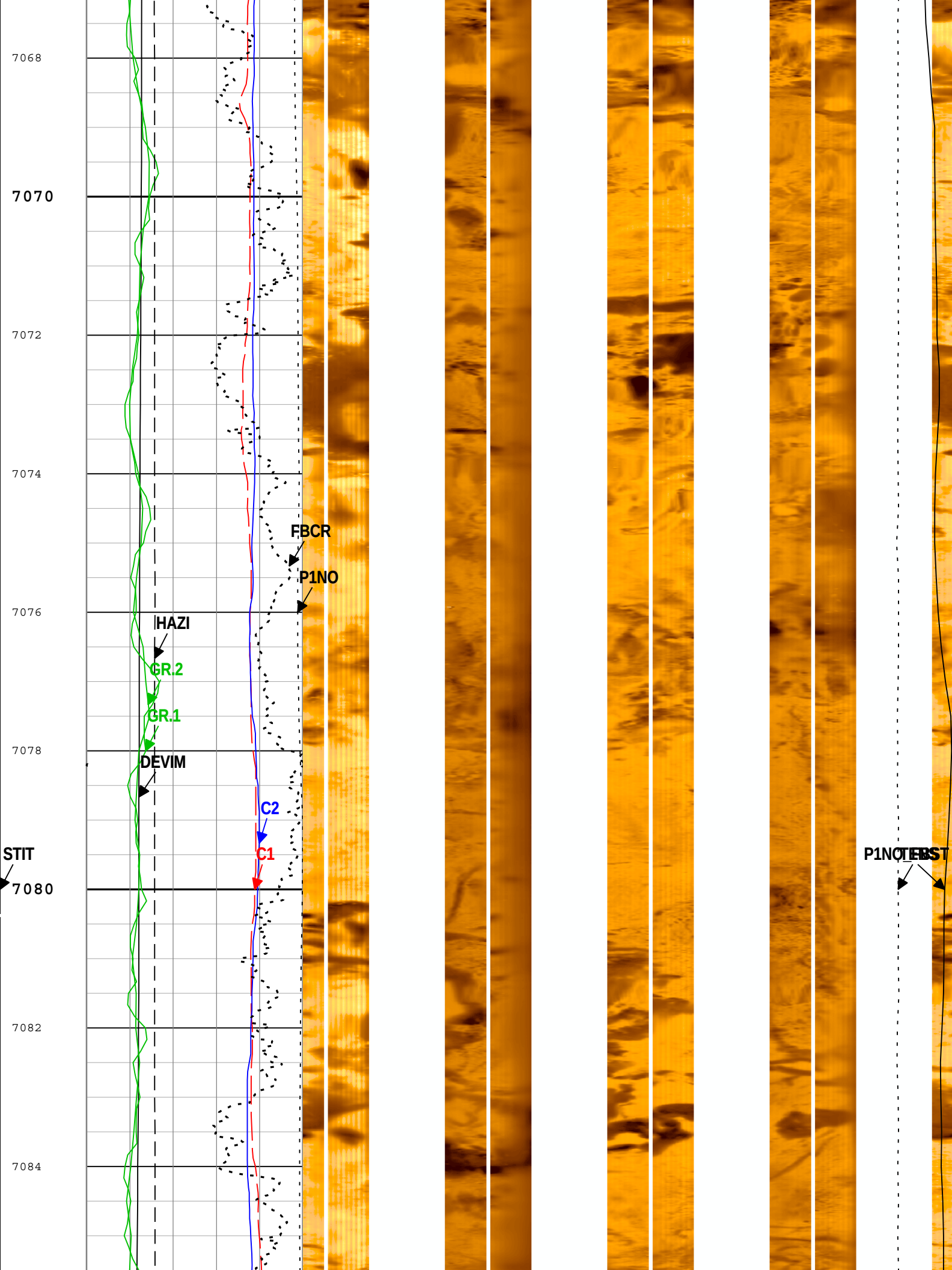
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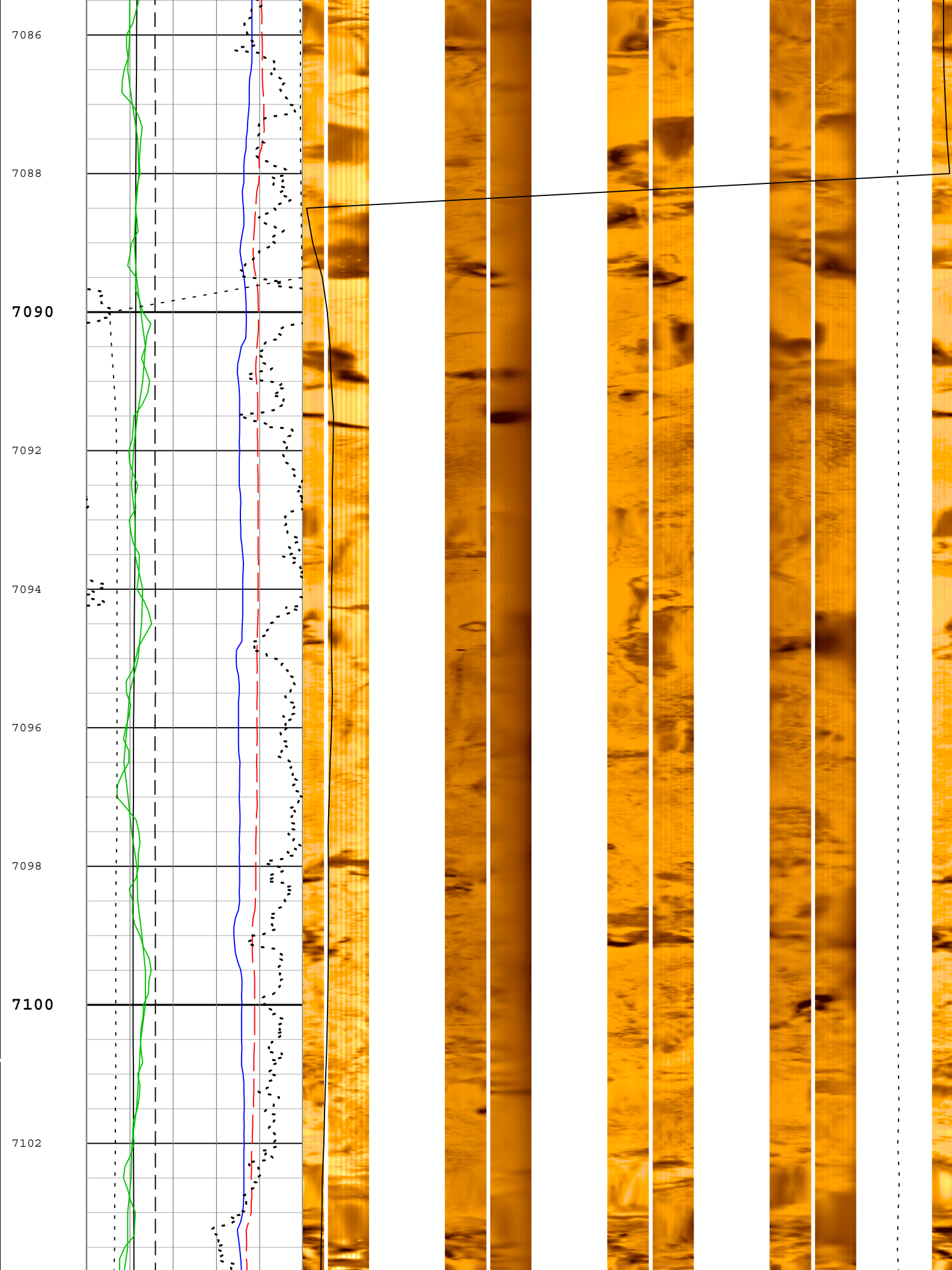
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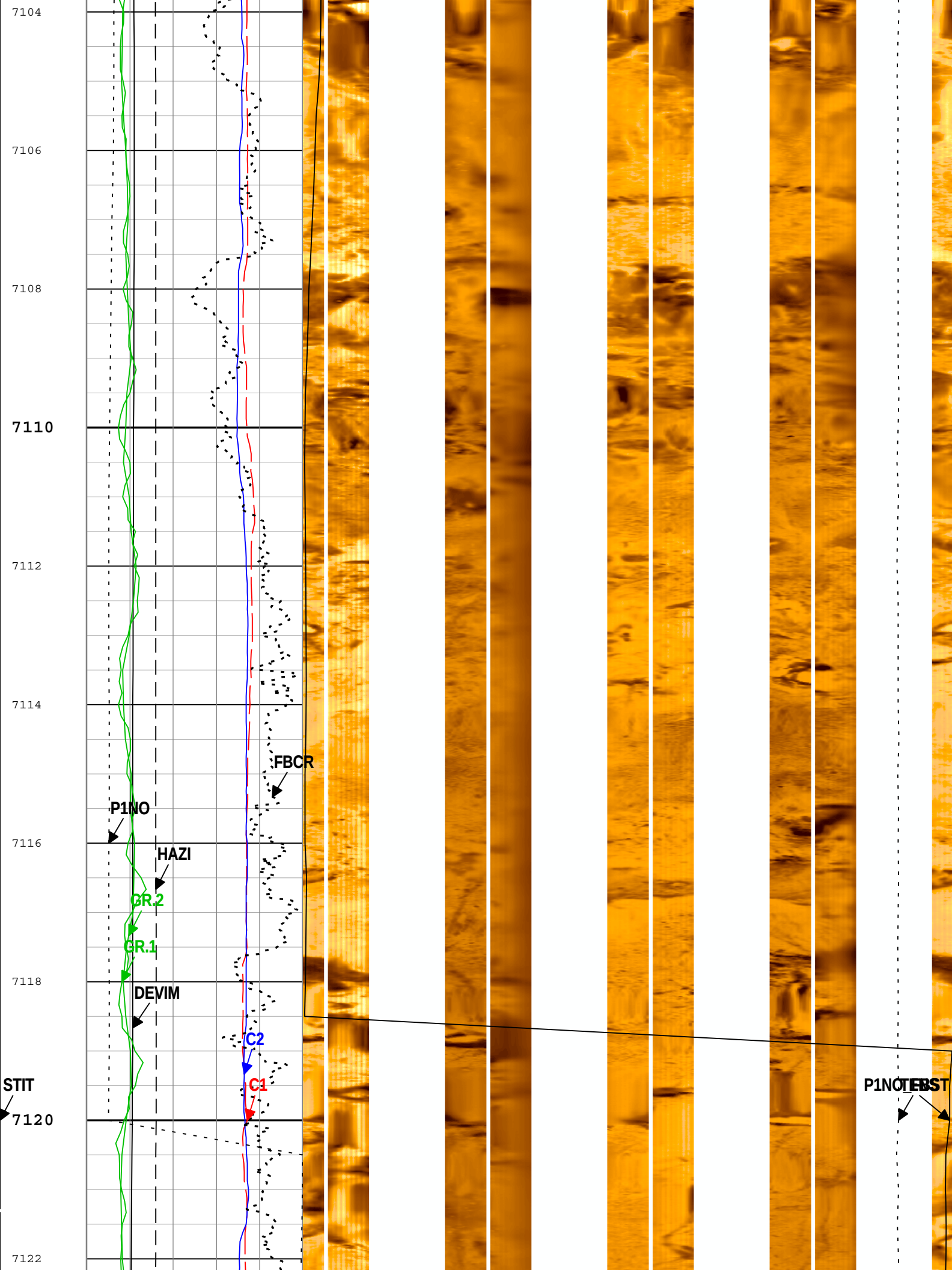
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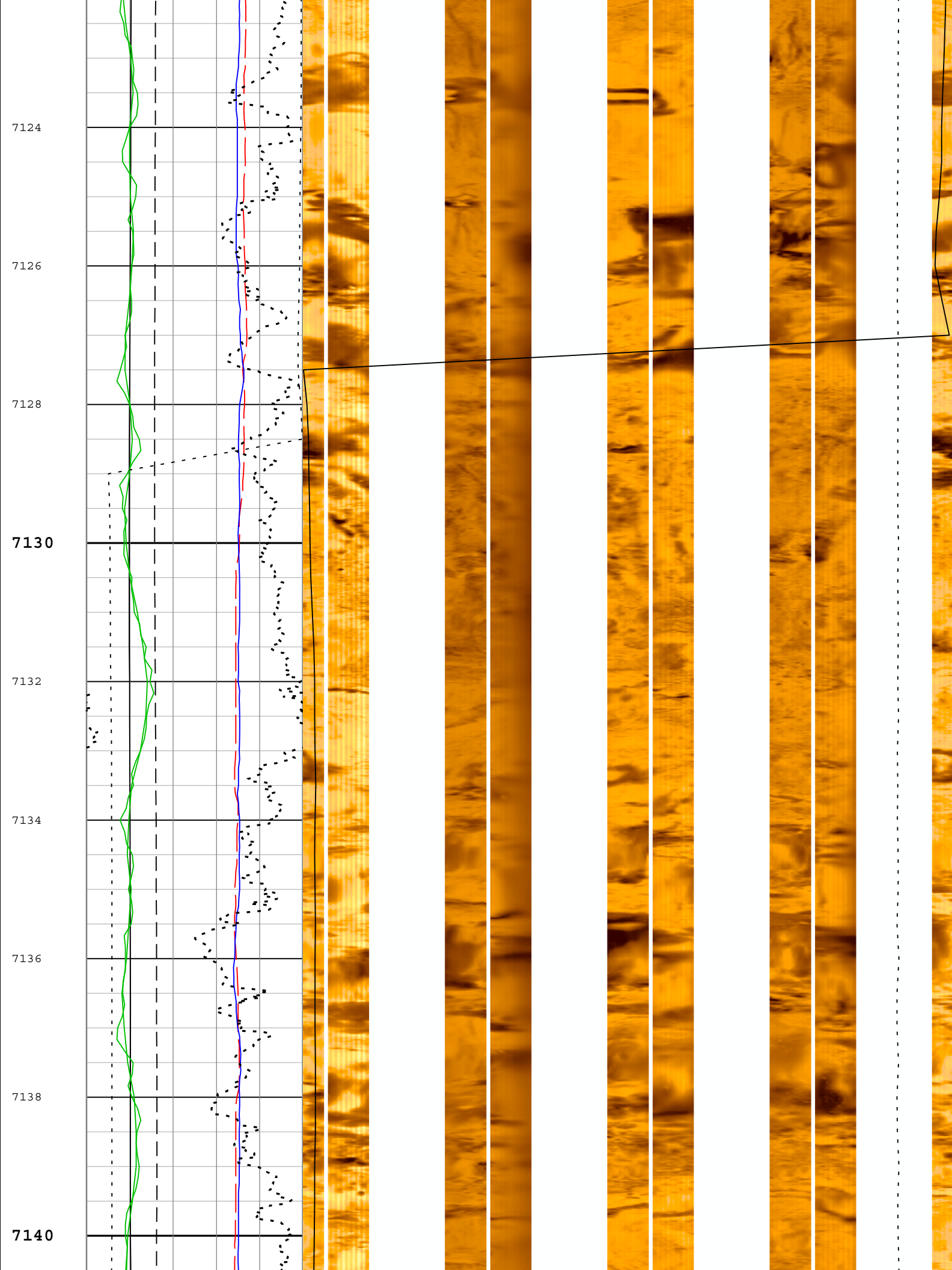
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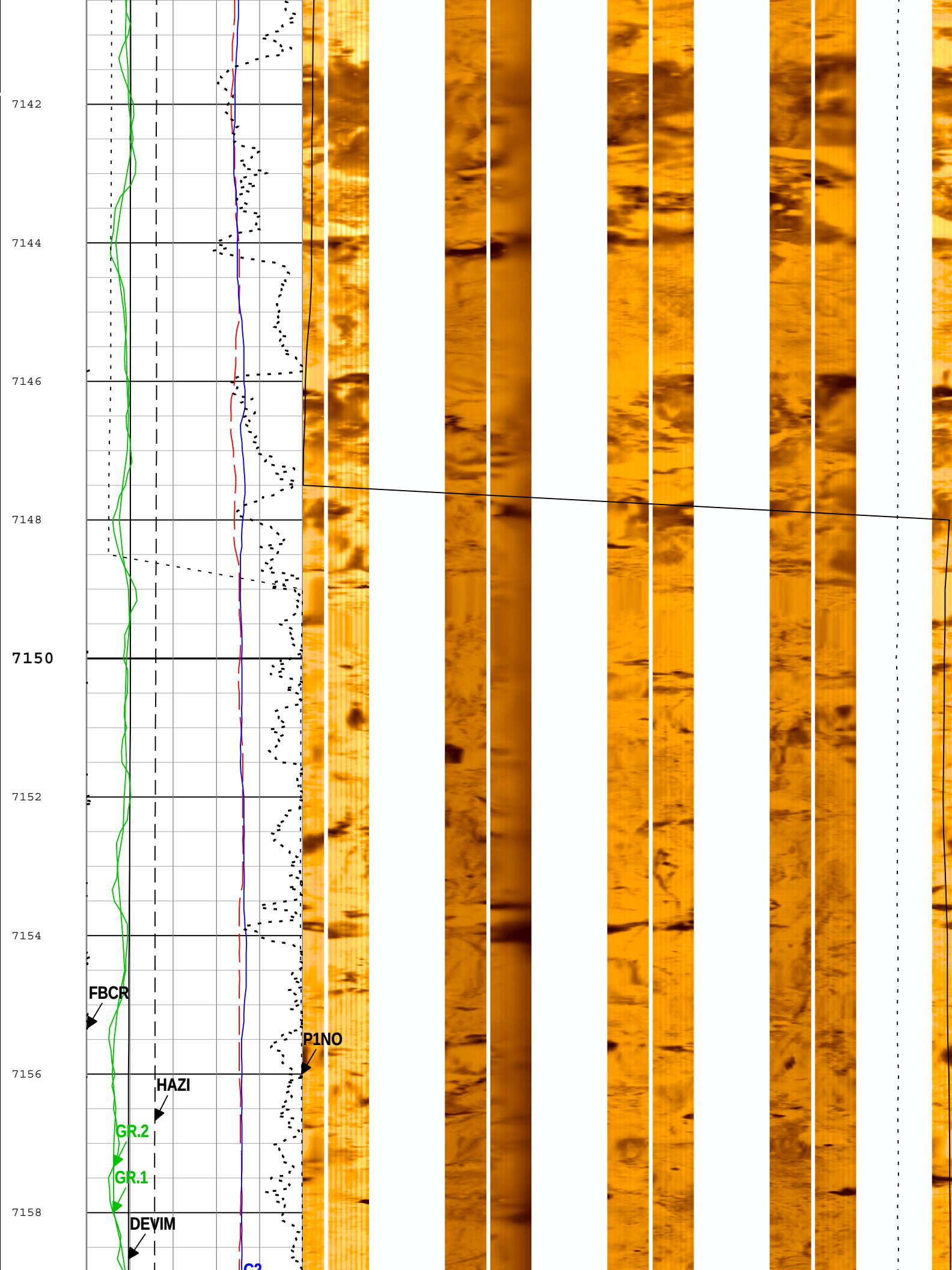


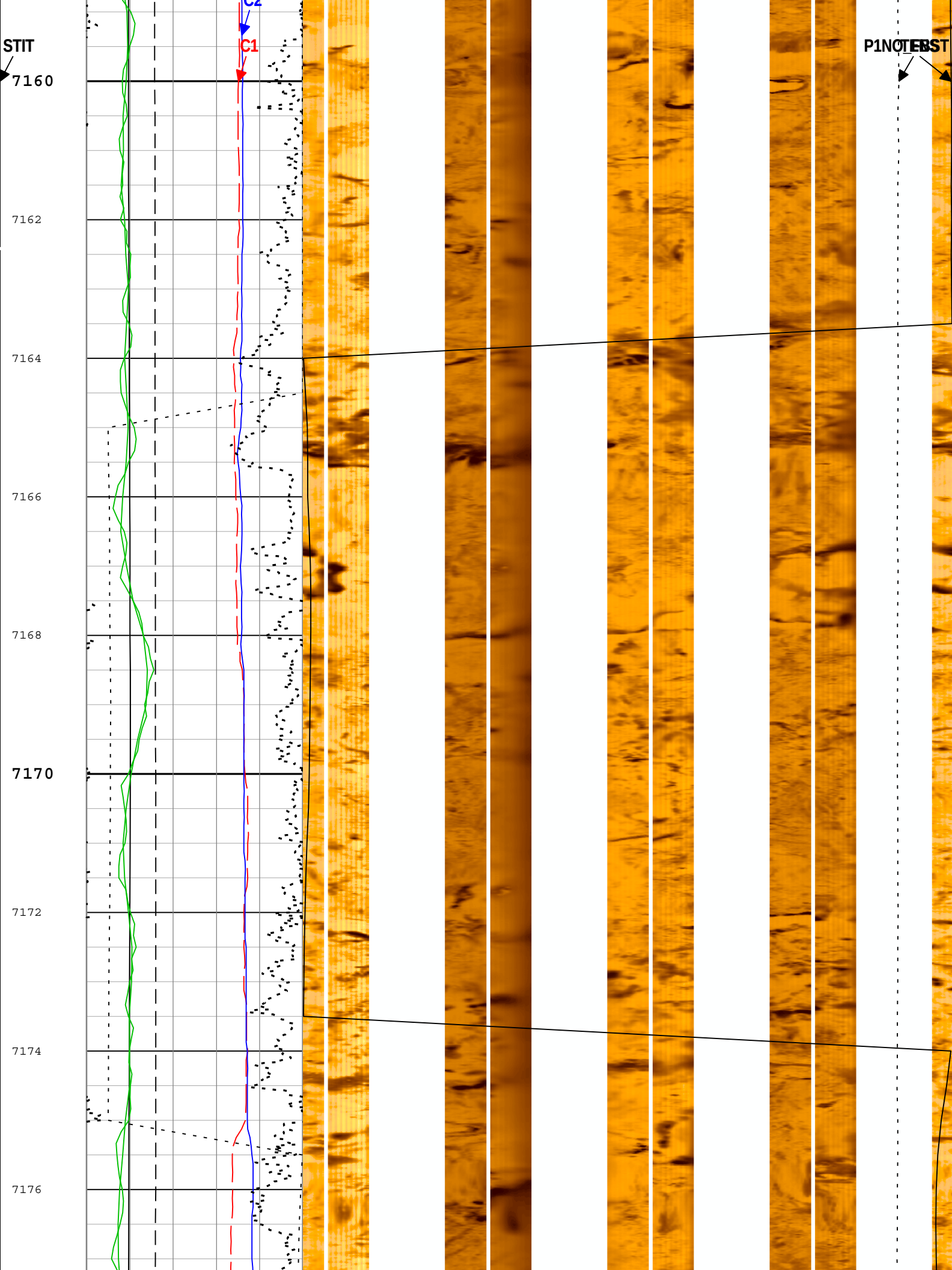












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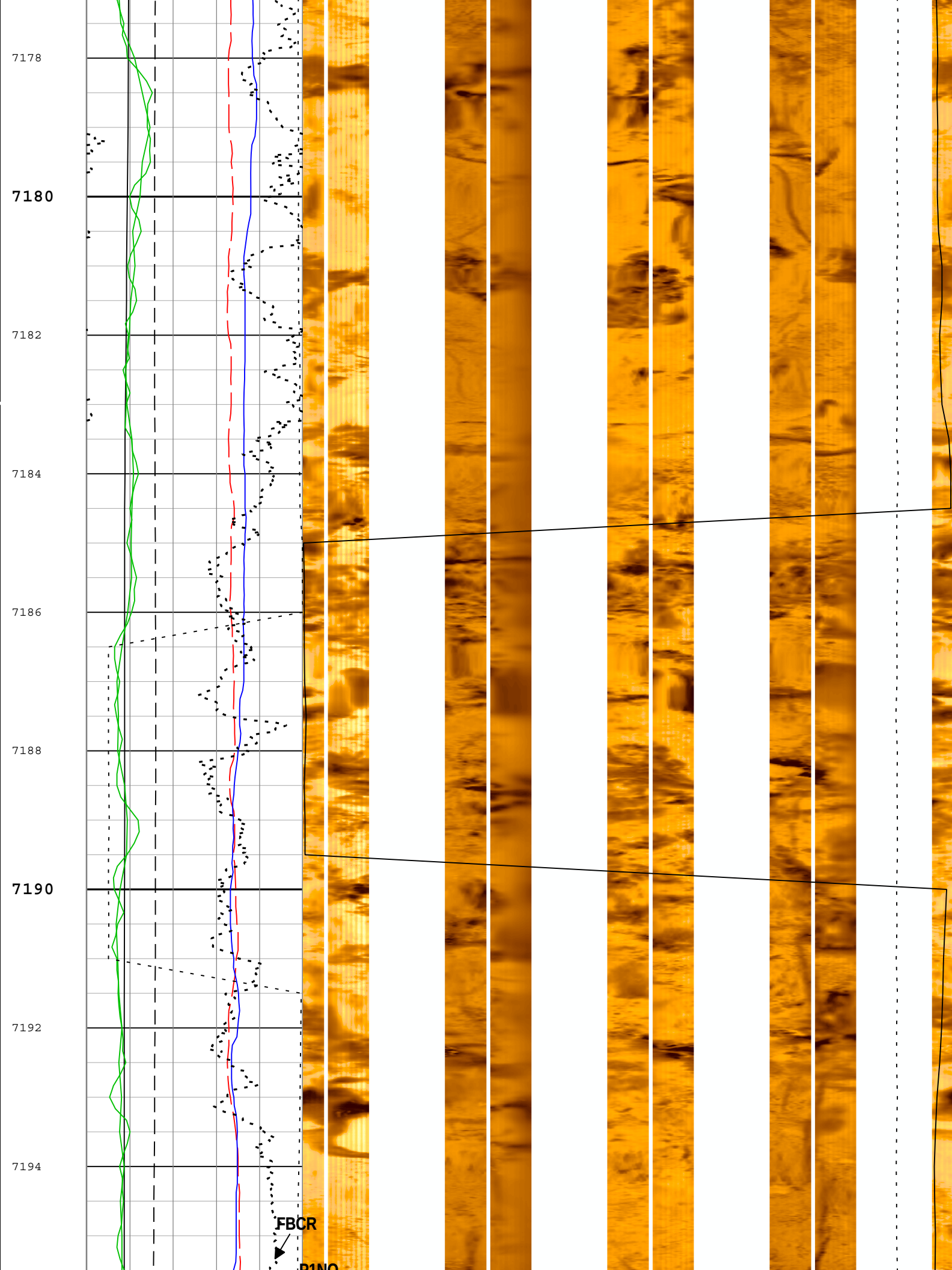
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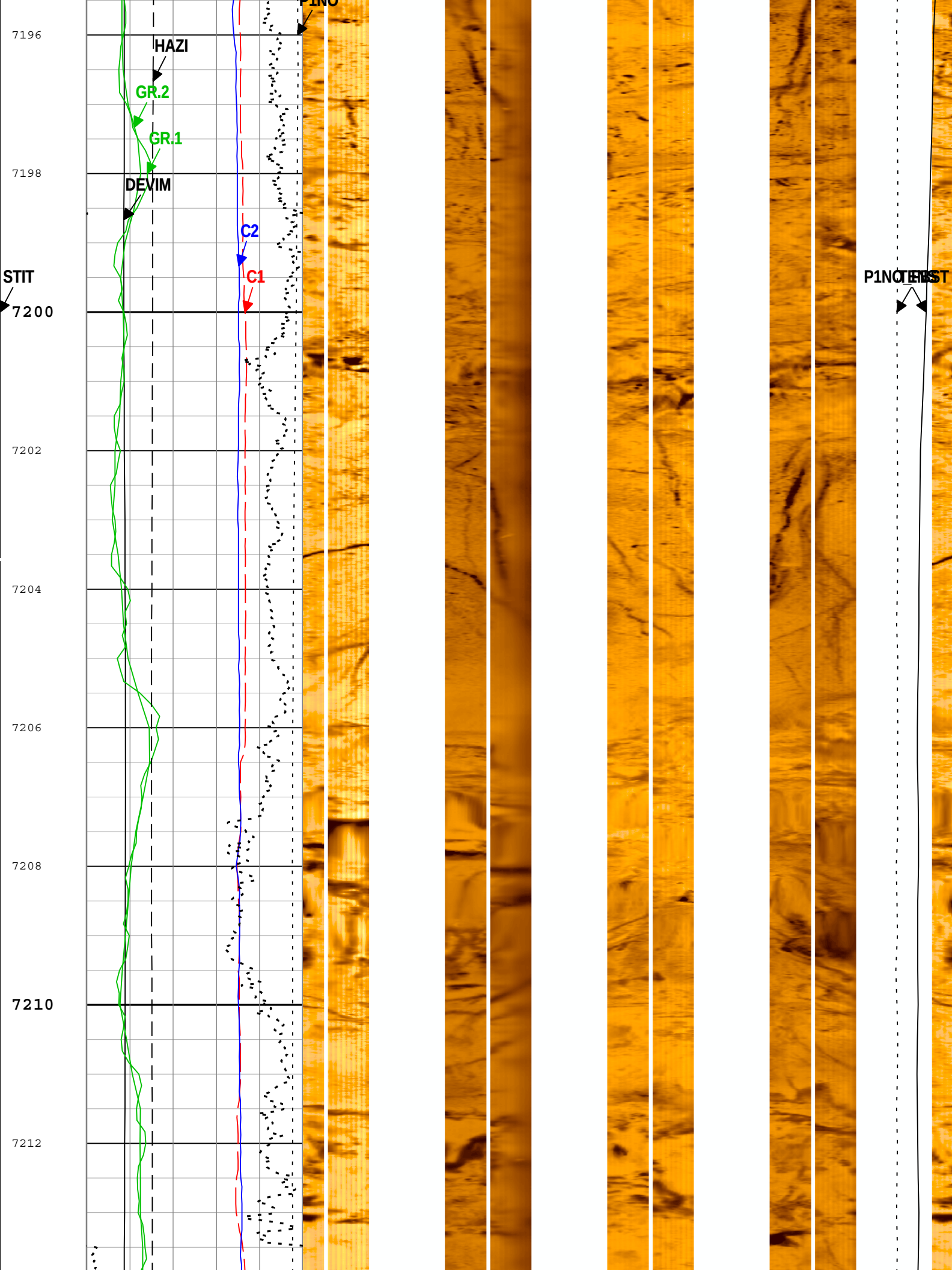
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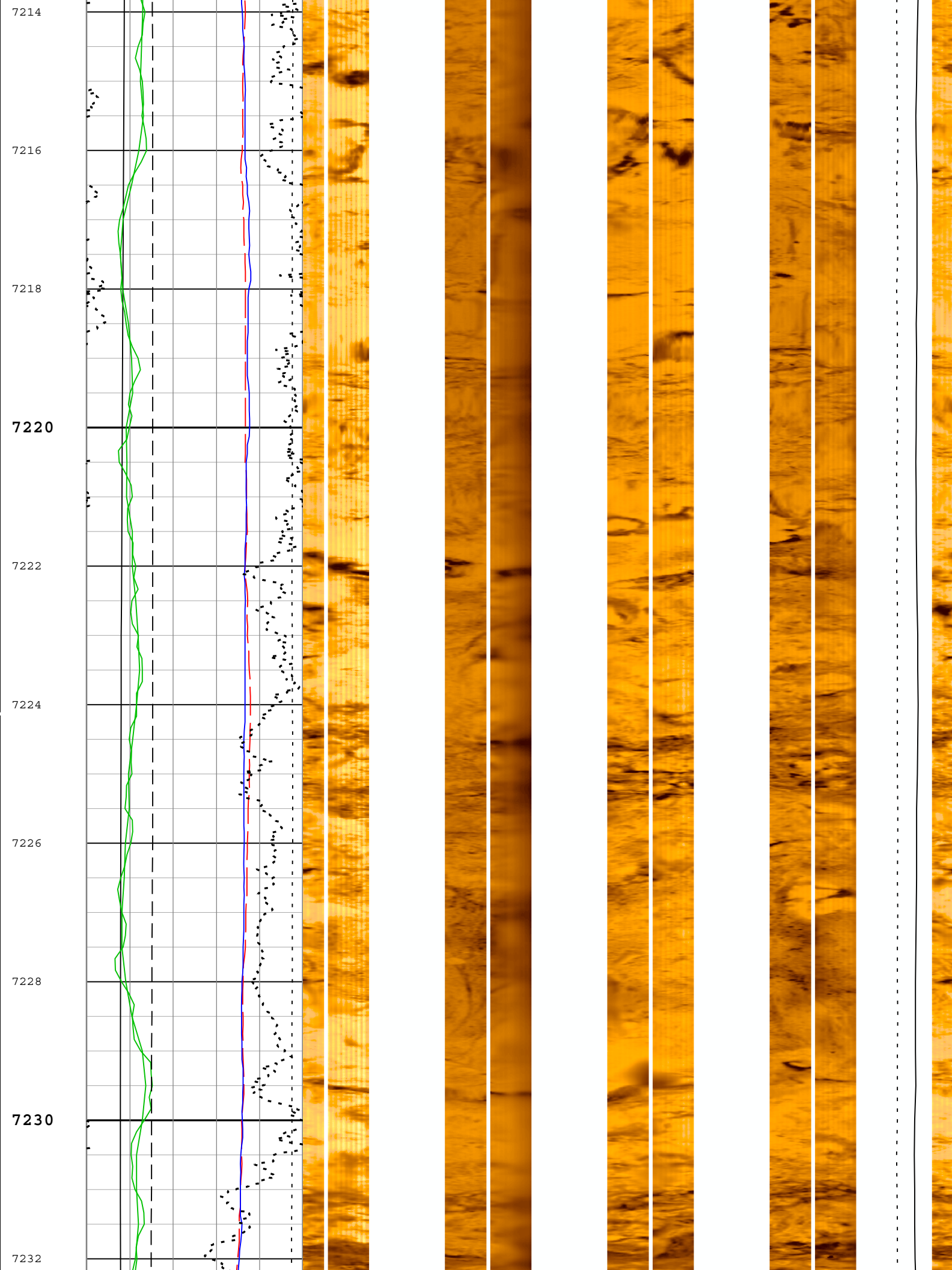
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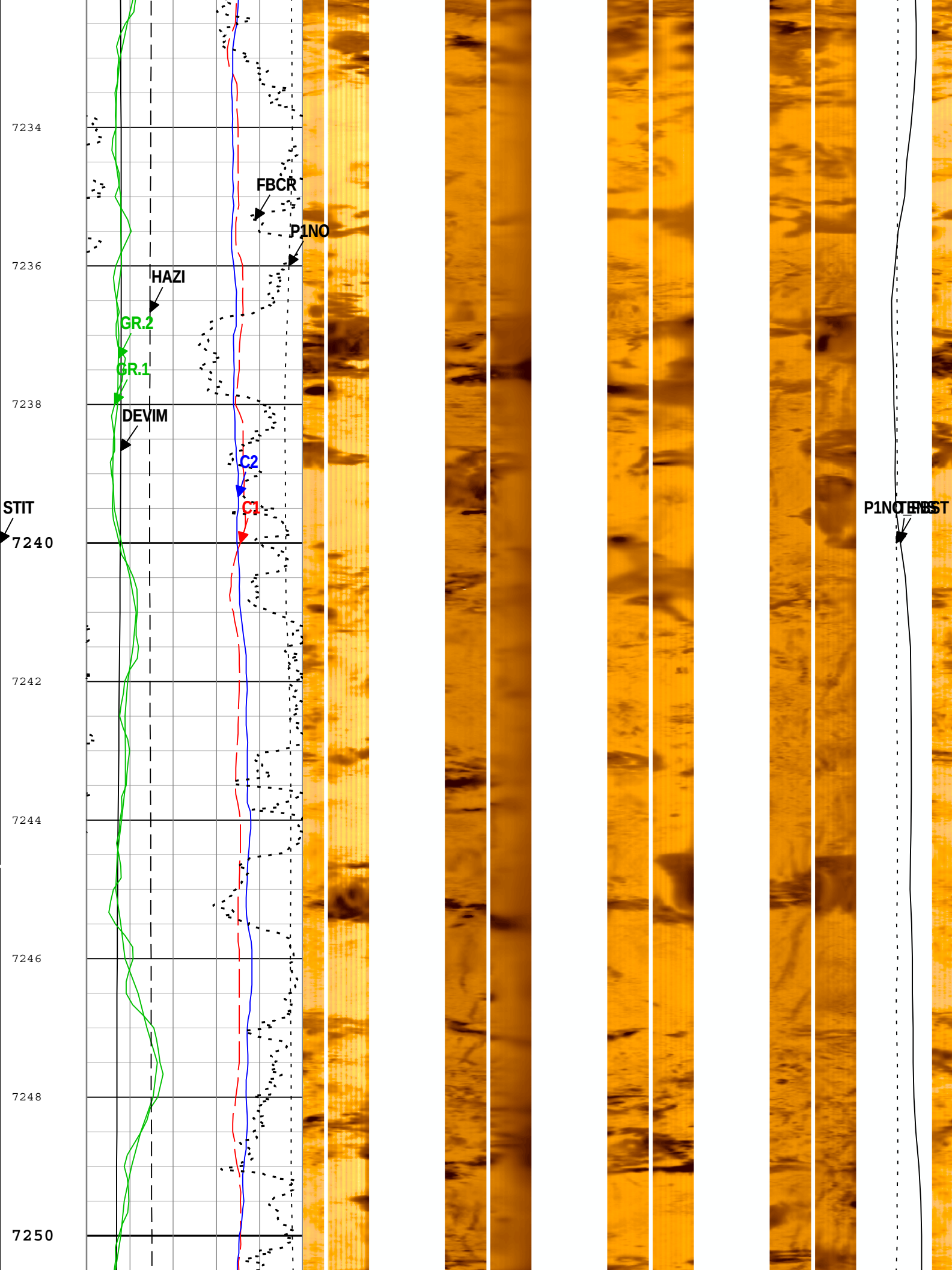
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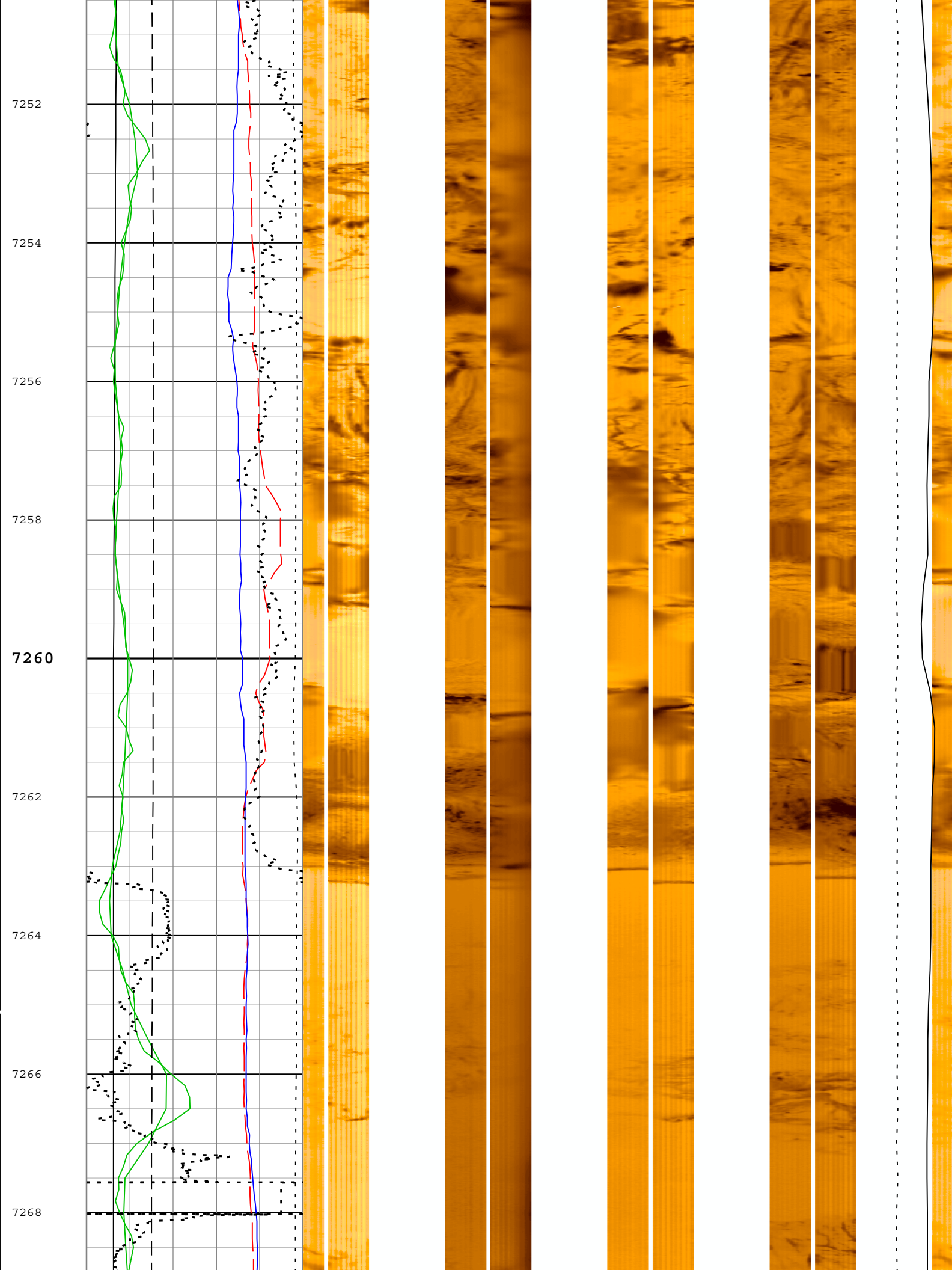
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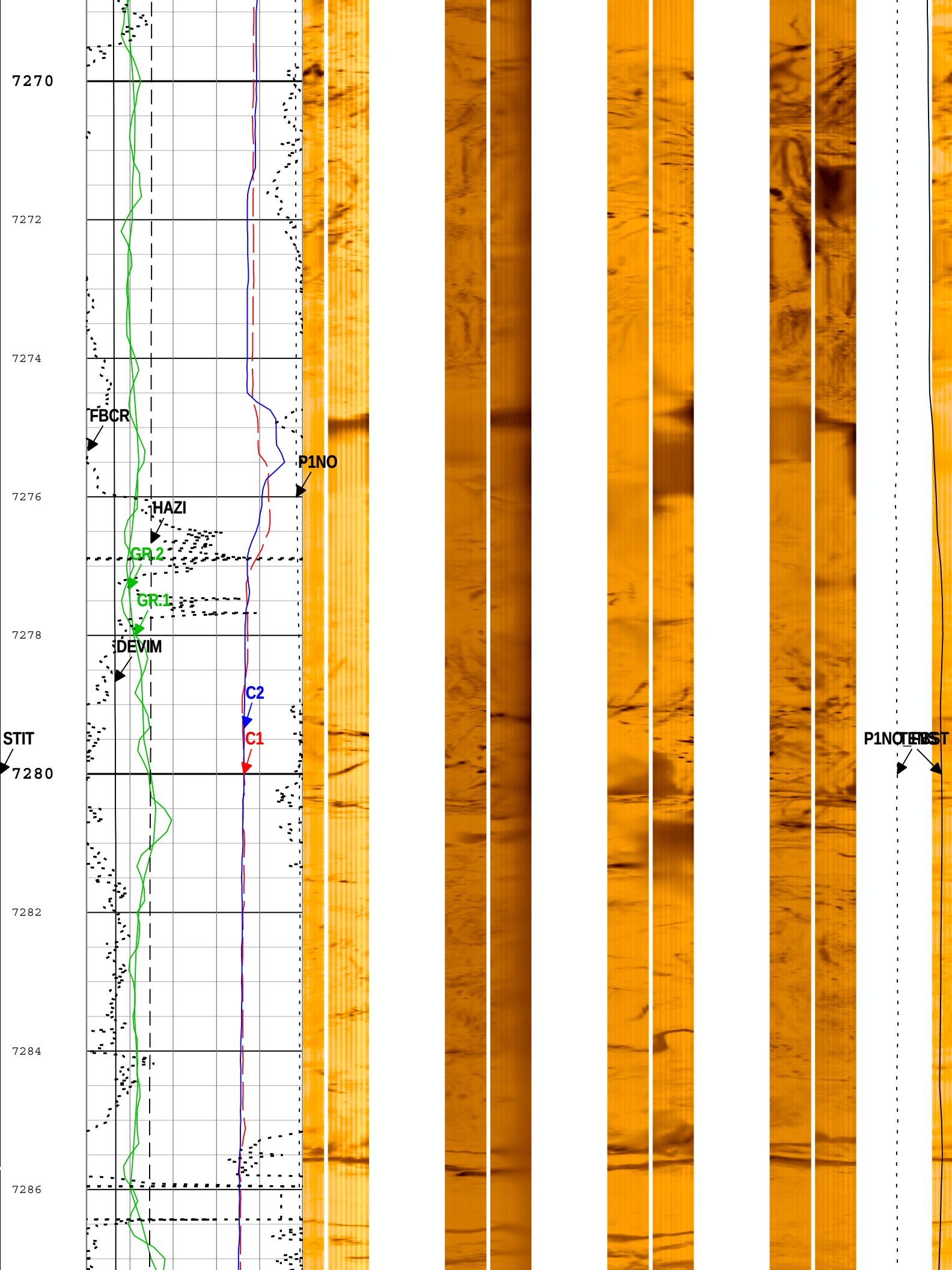












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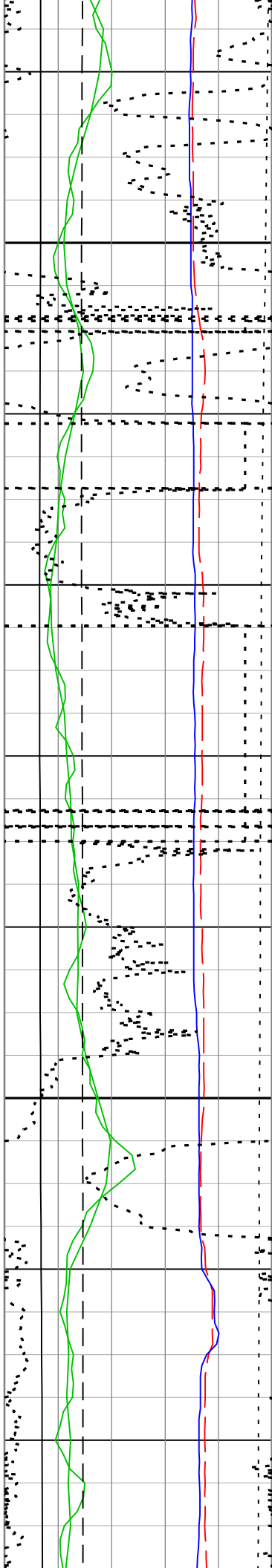
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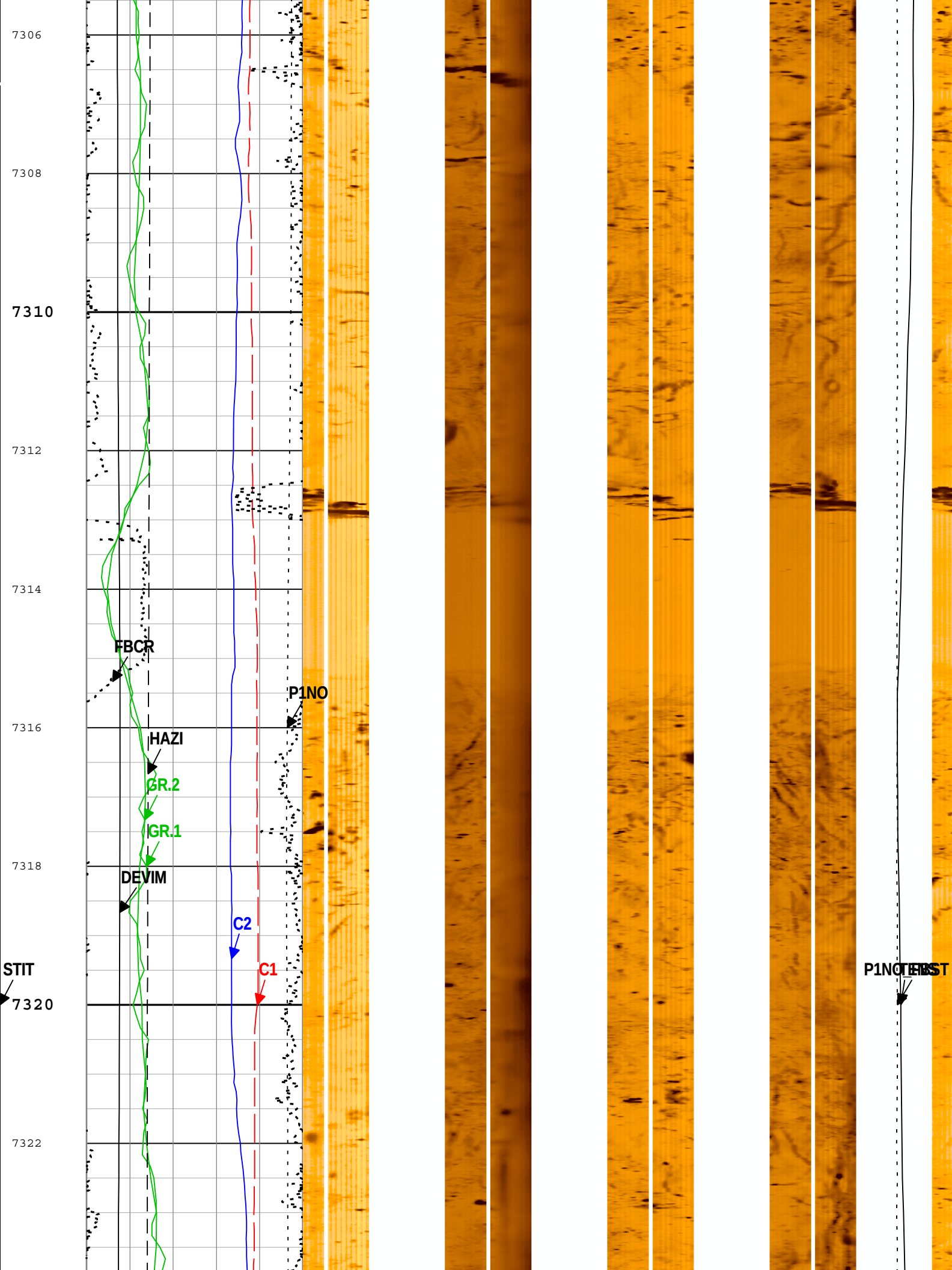
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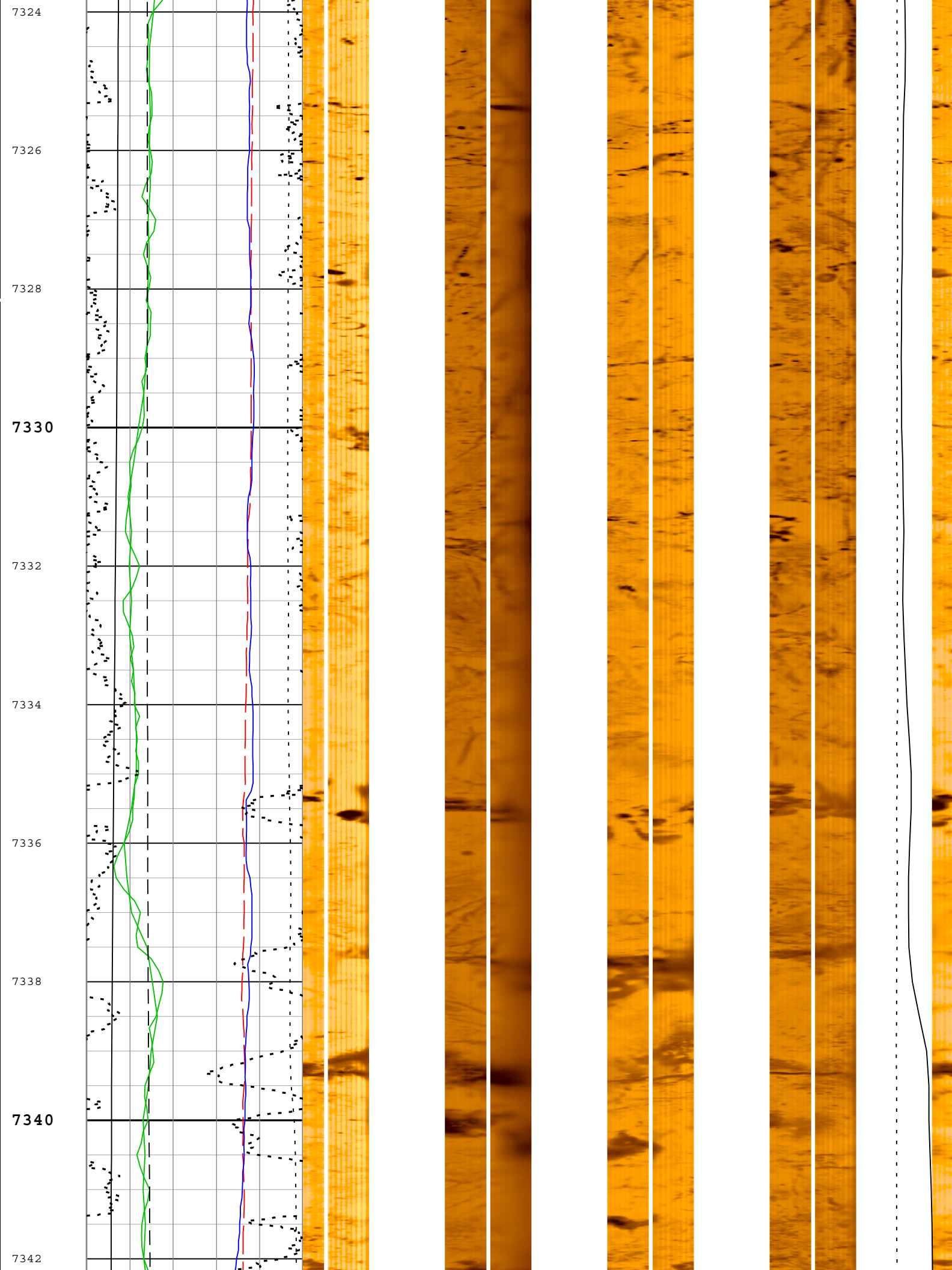
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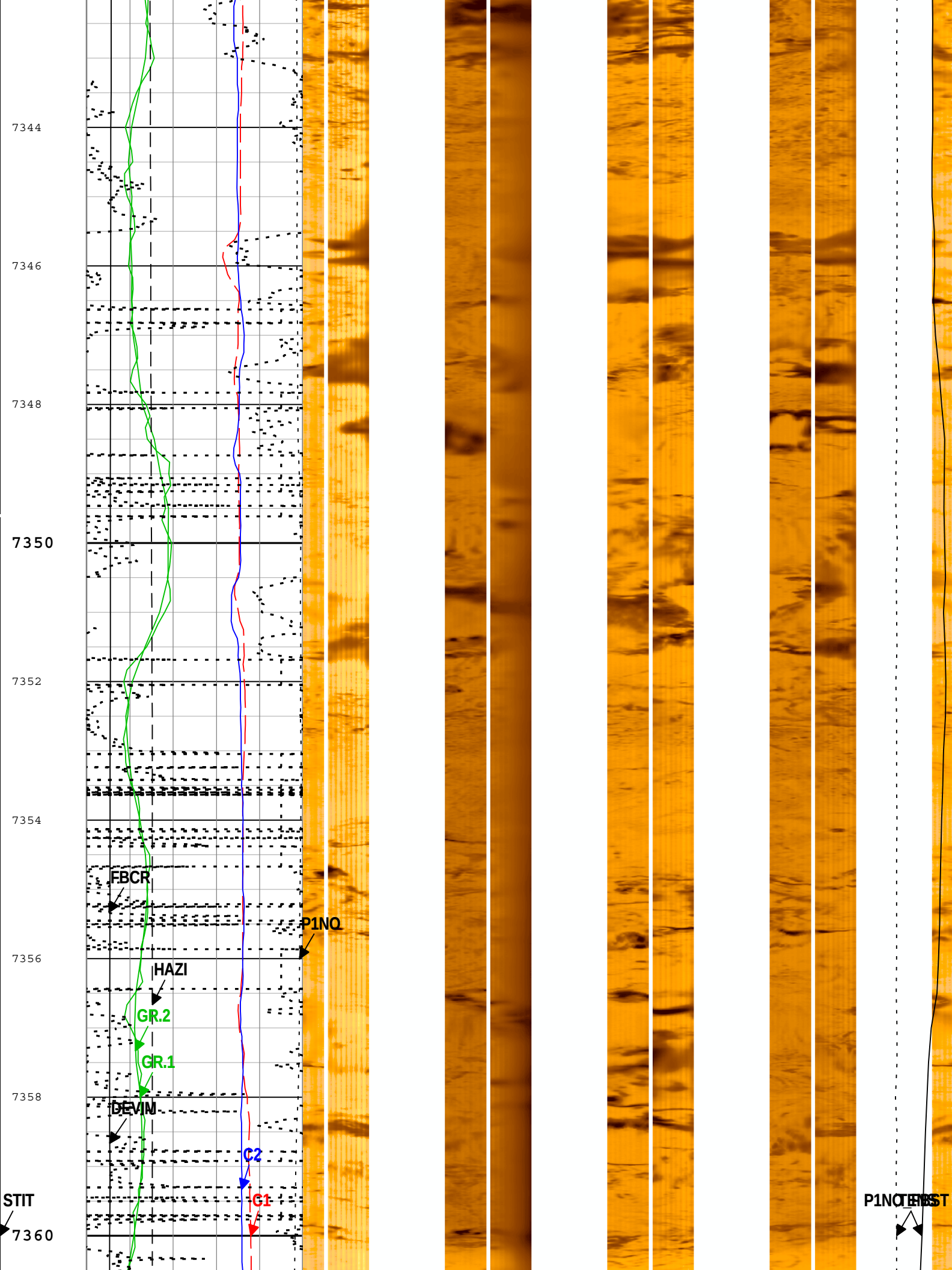
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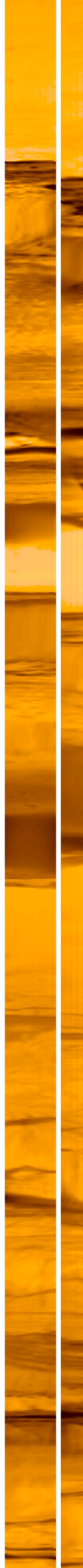
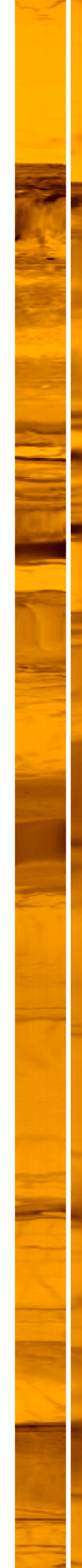
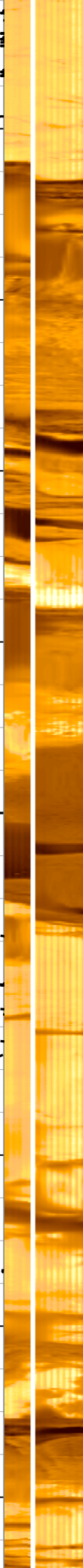
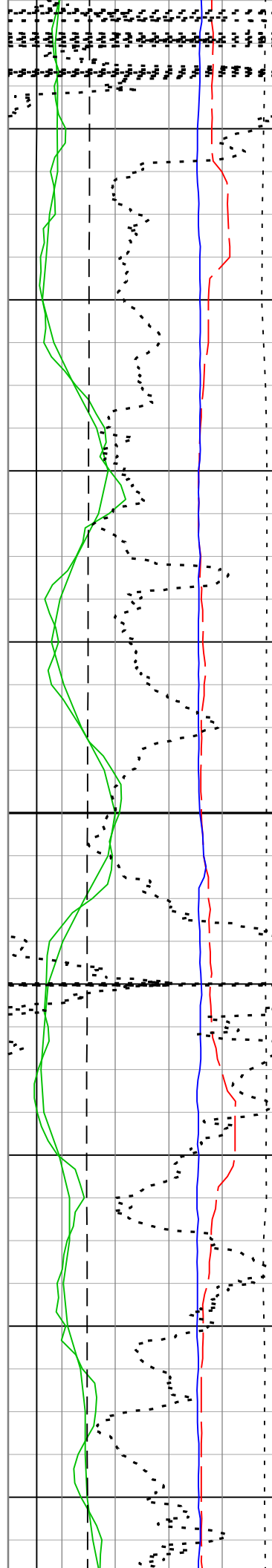
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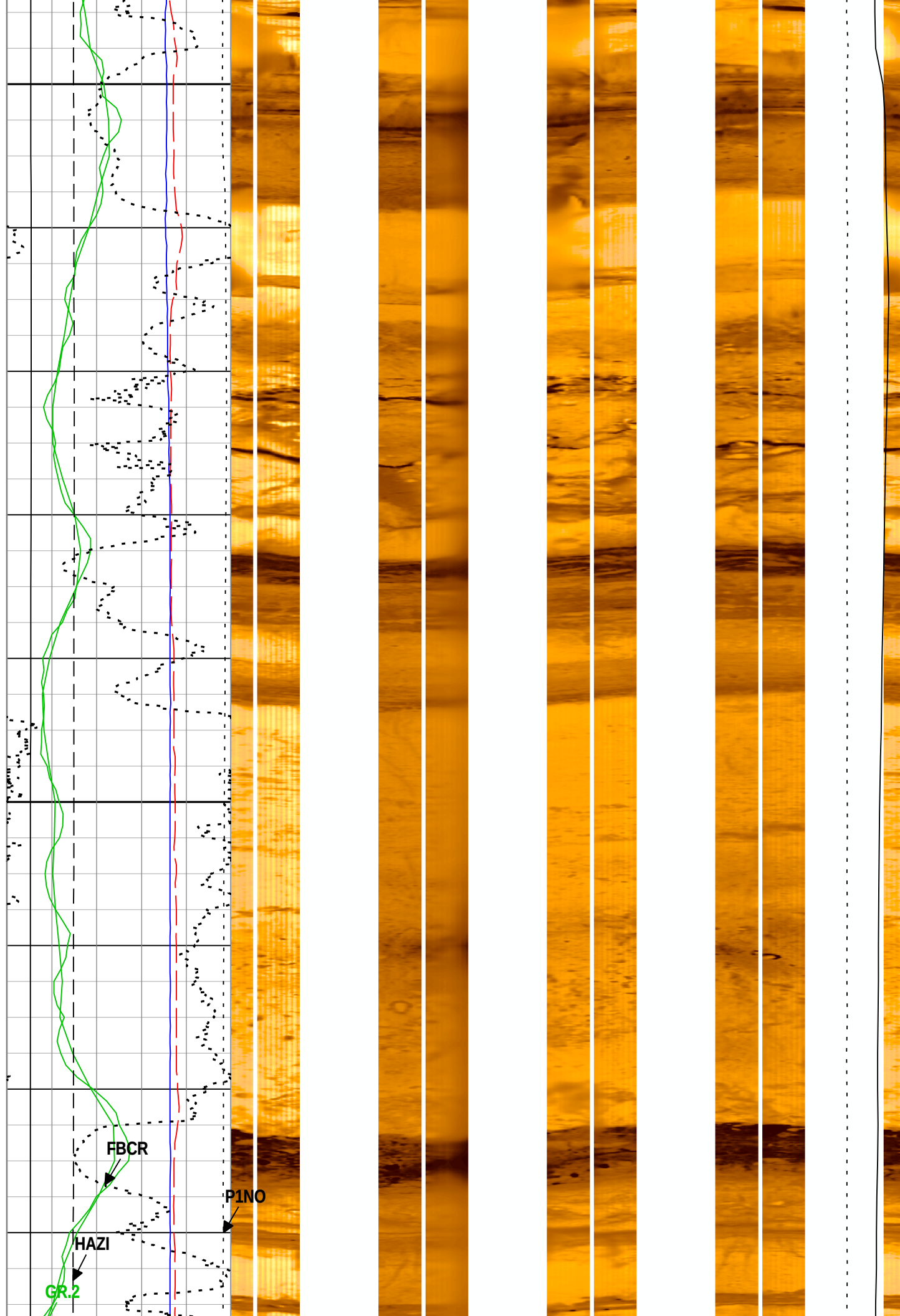
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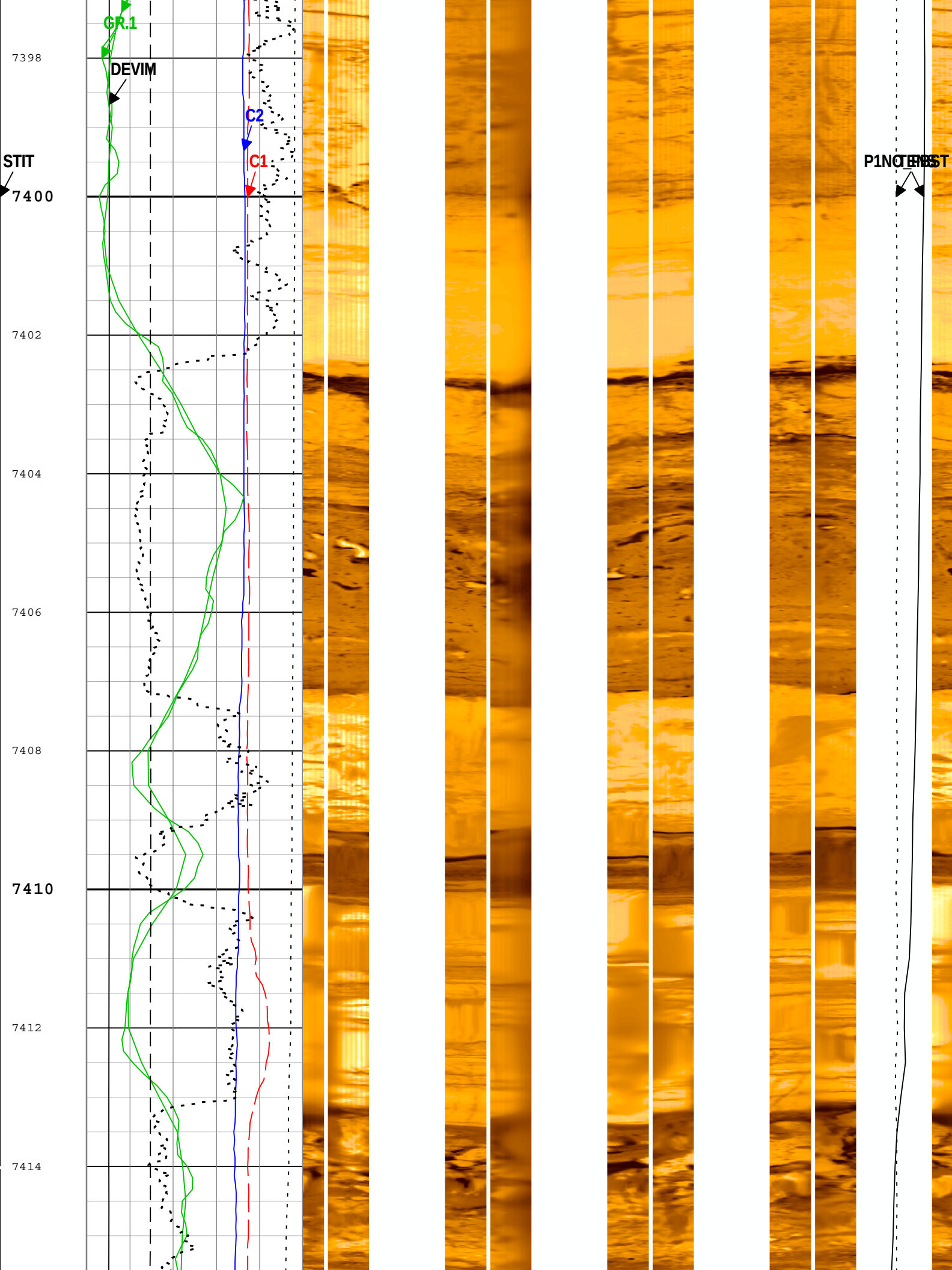
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FBCR

HAZI

P1NO





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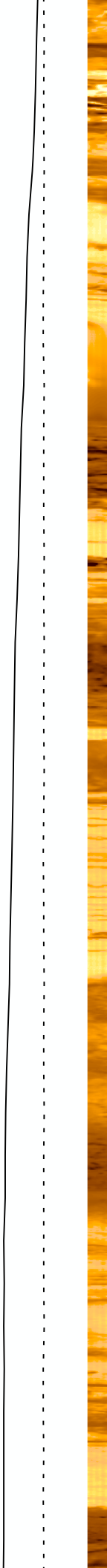
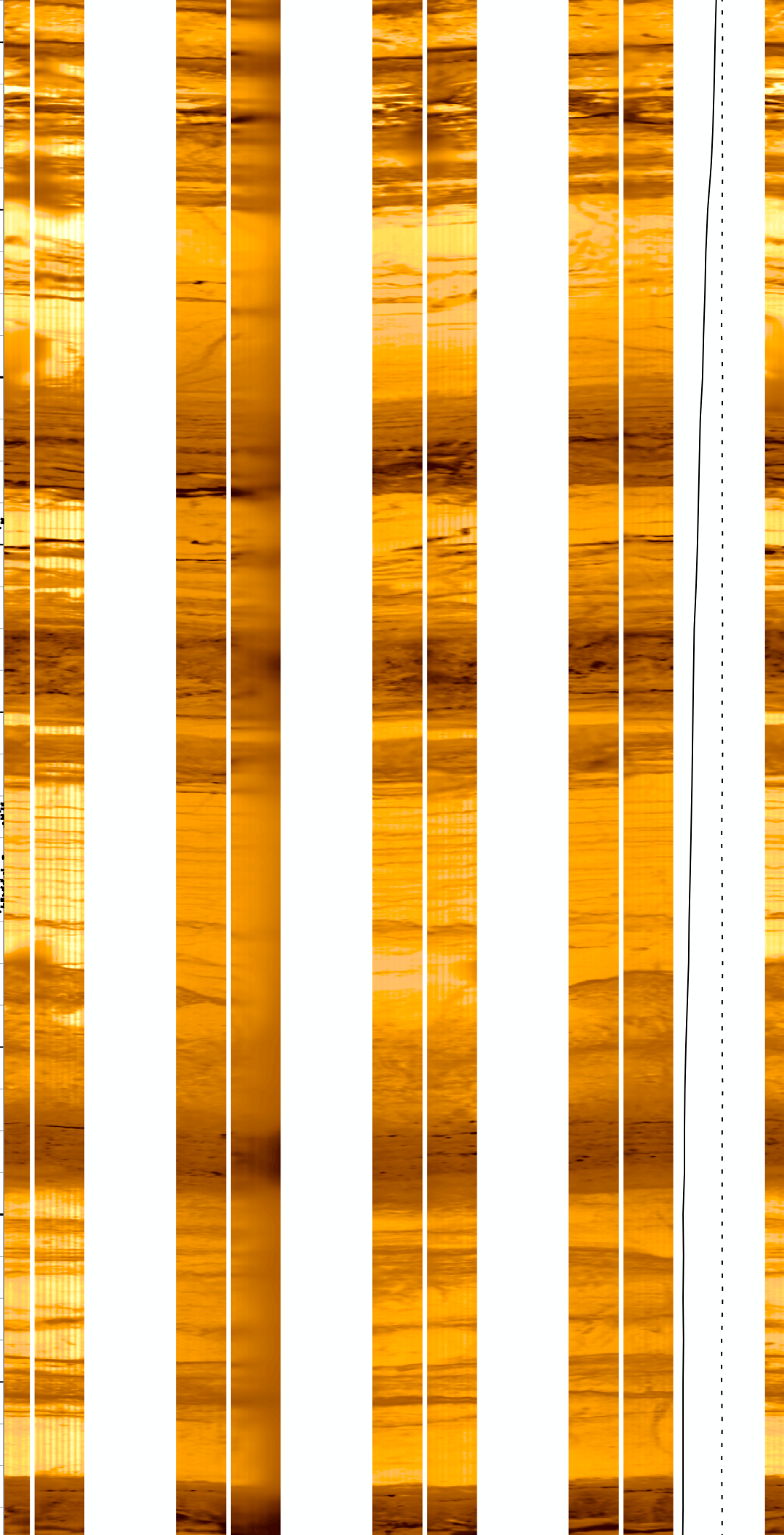
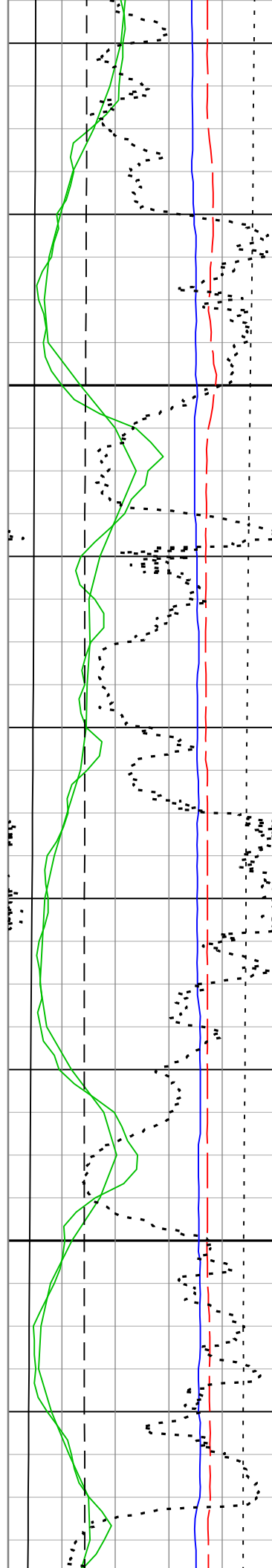
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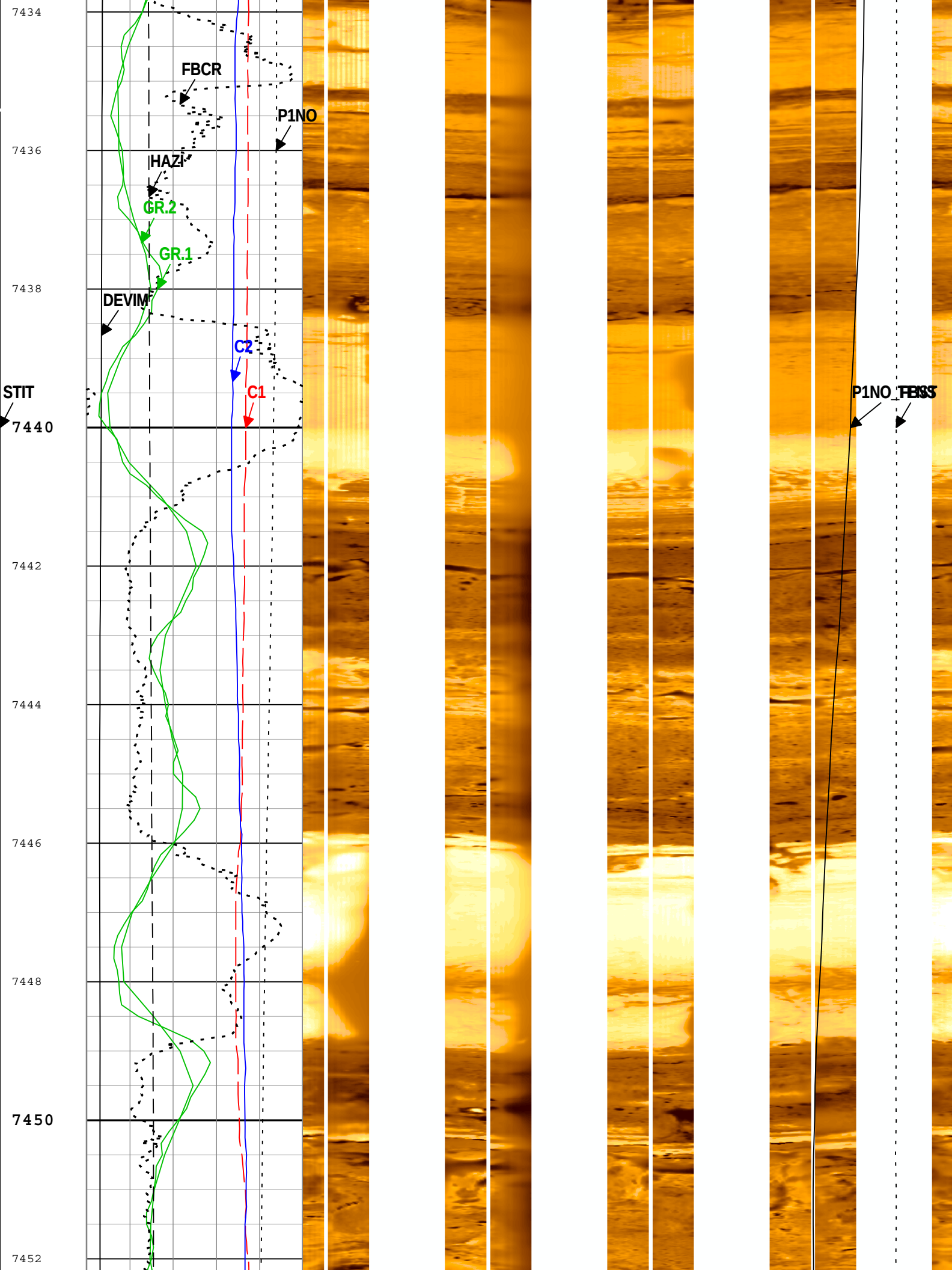
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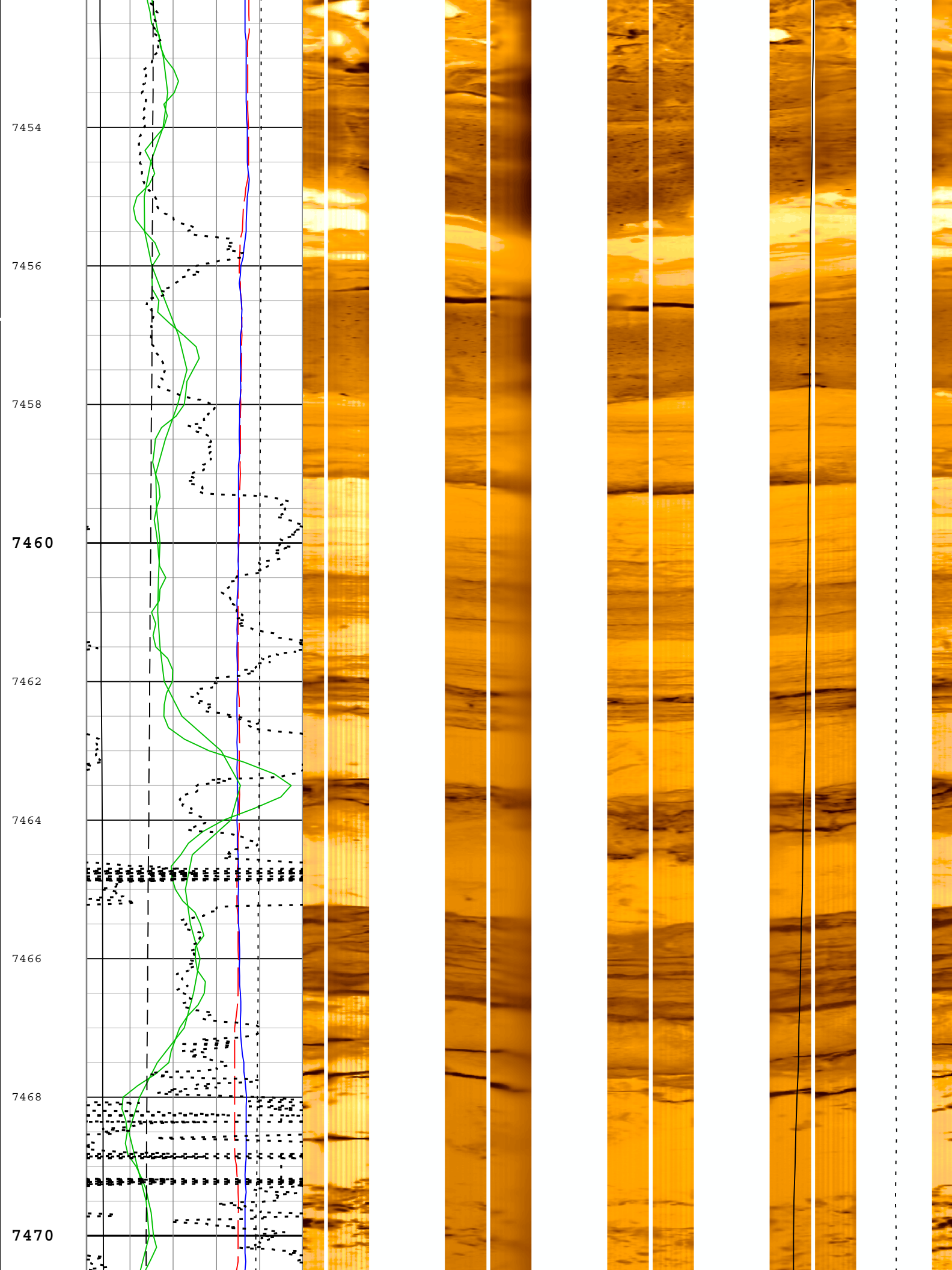
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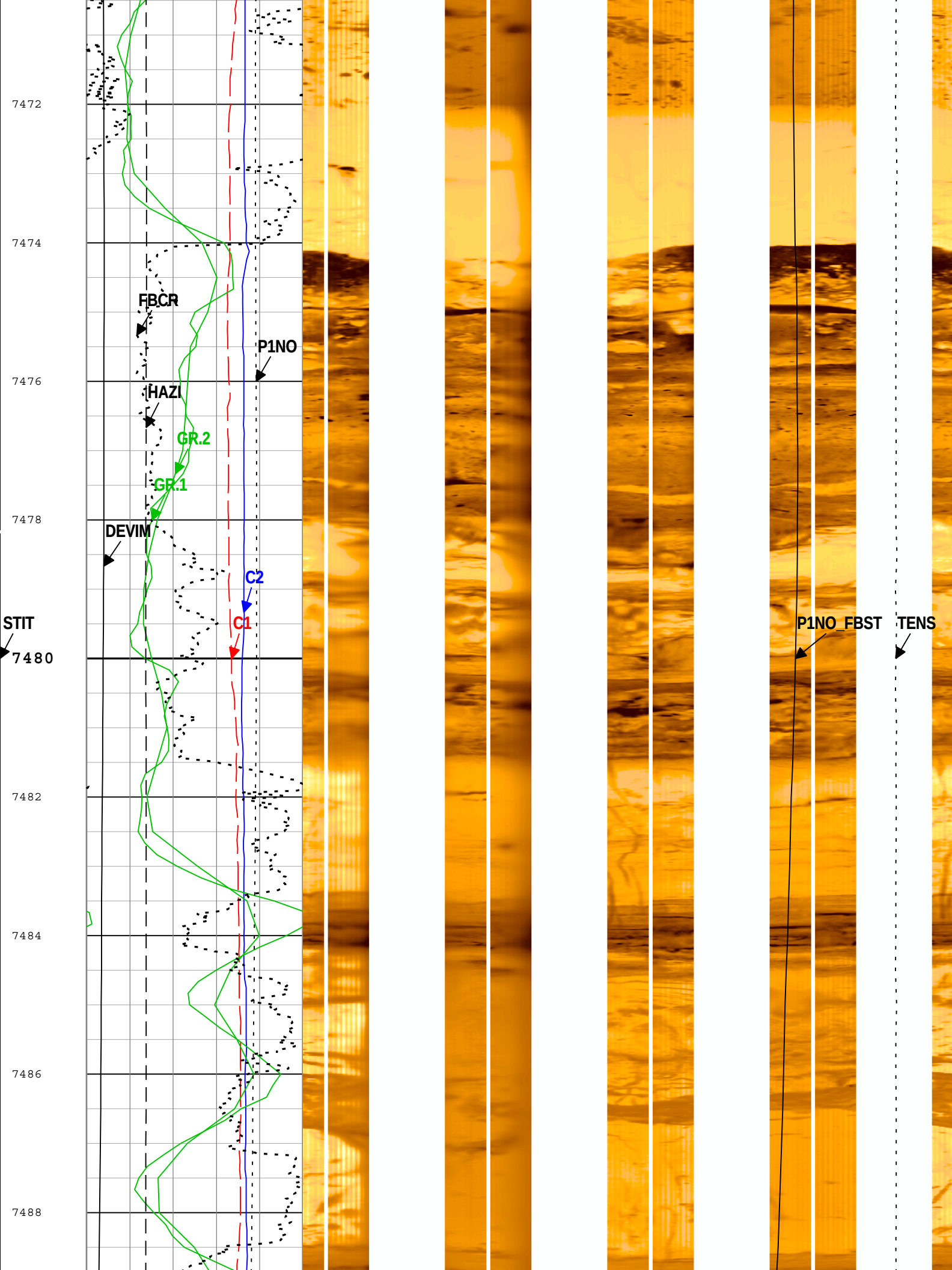
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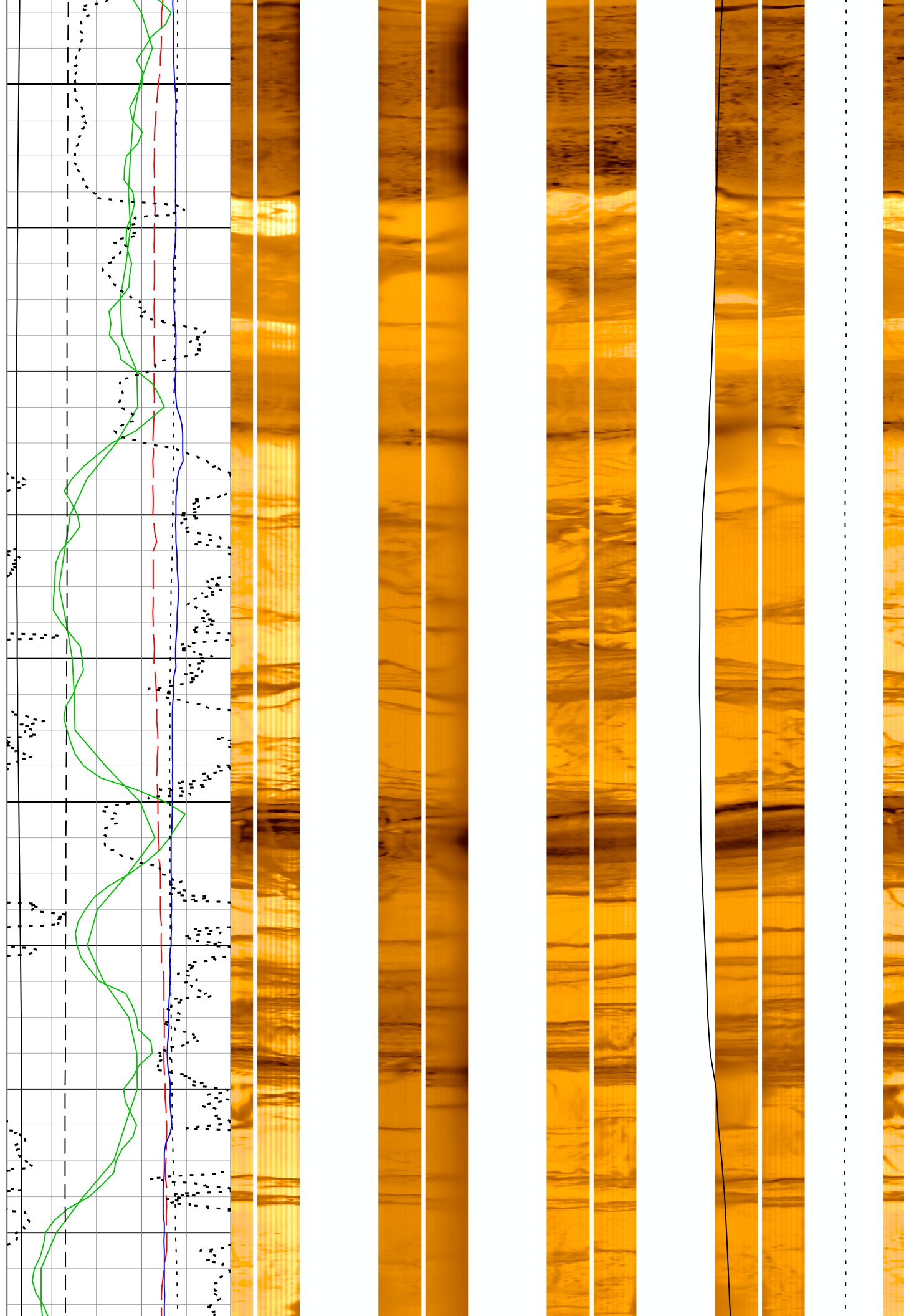
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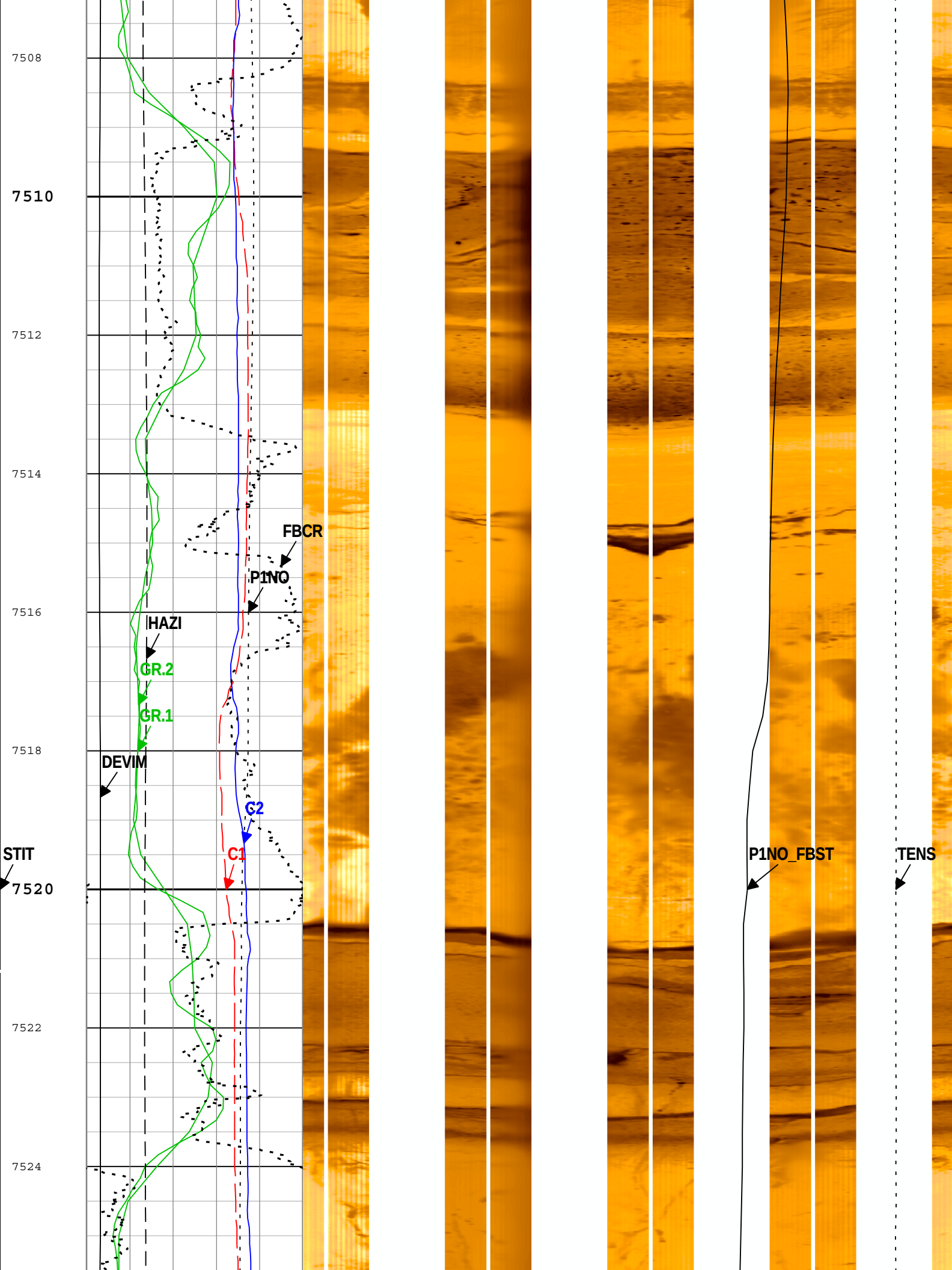
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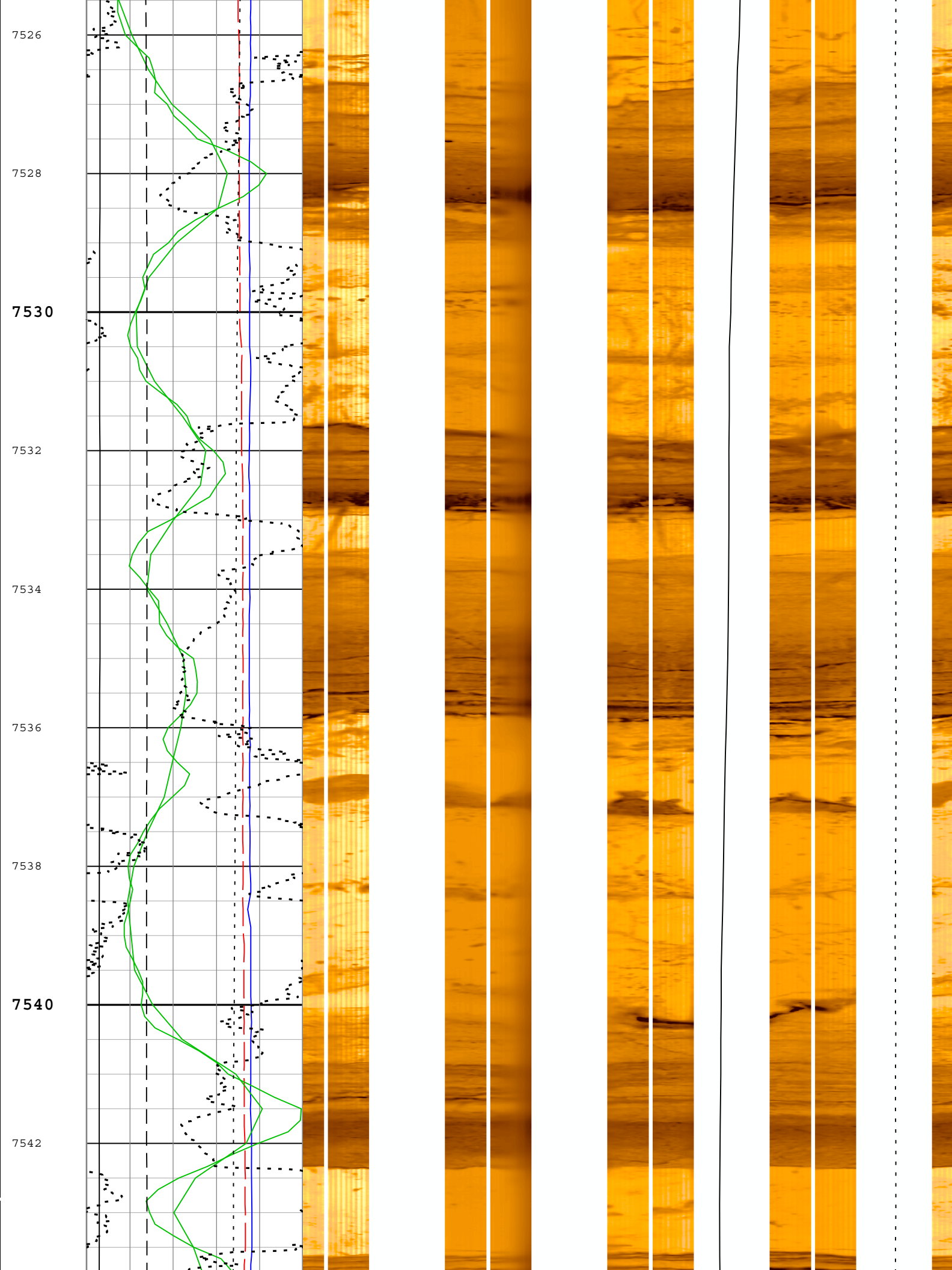
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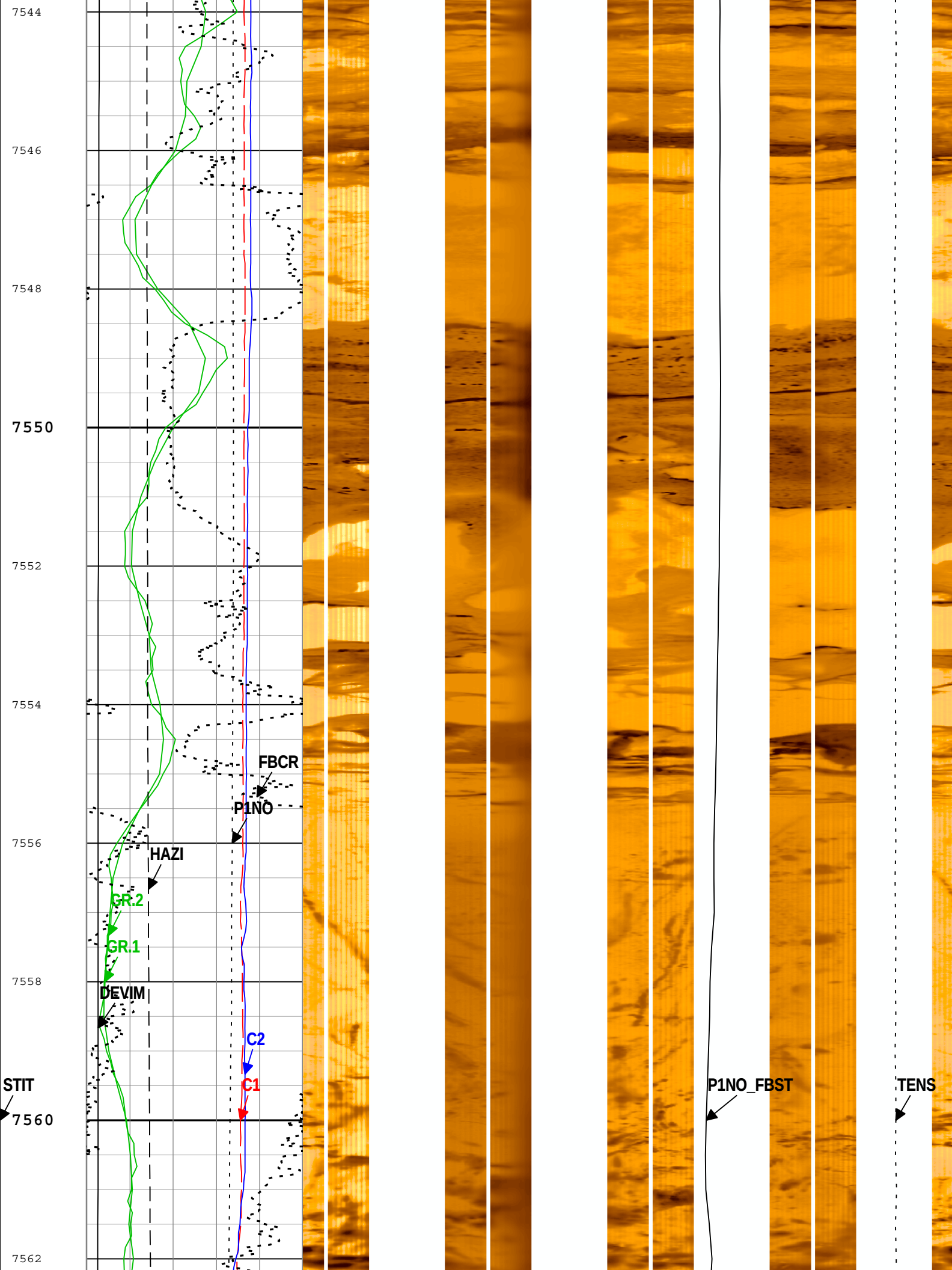
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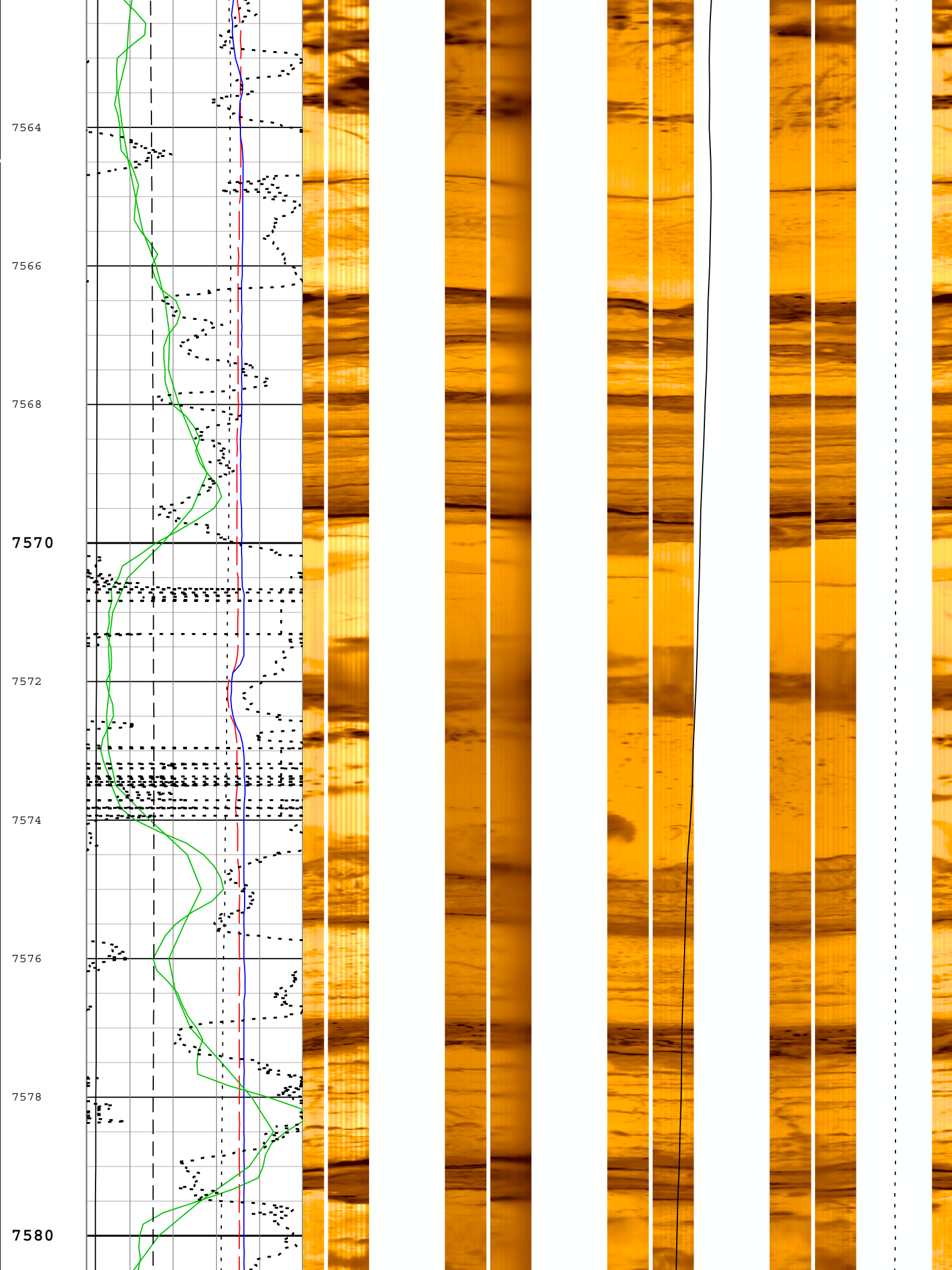
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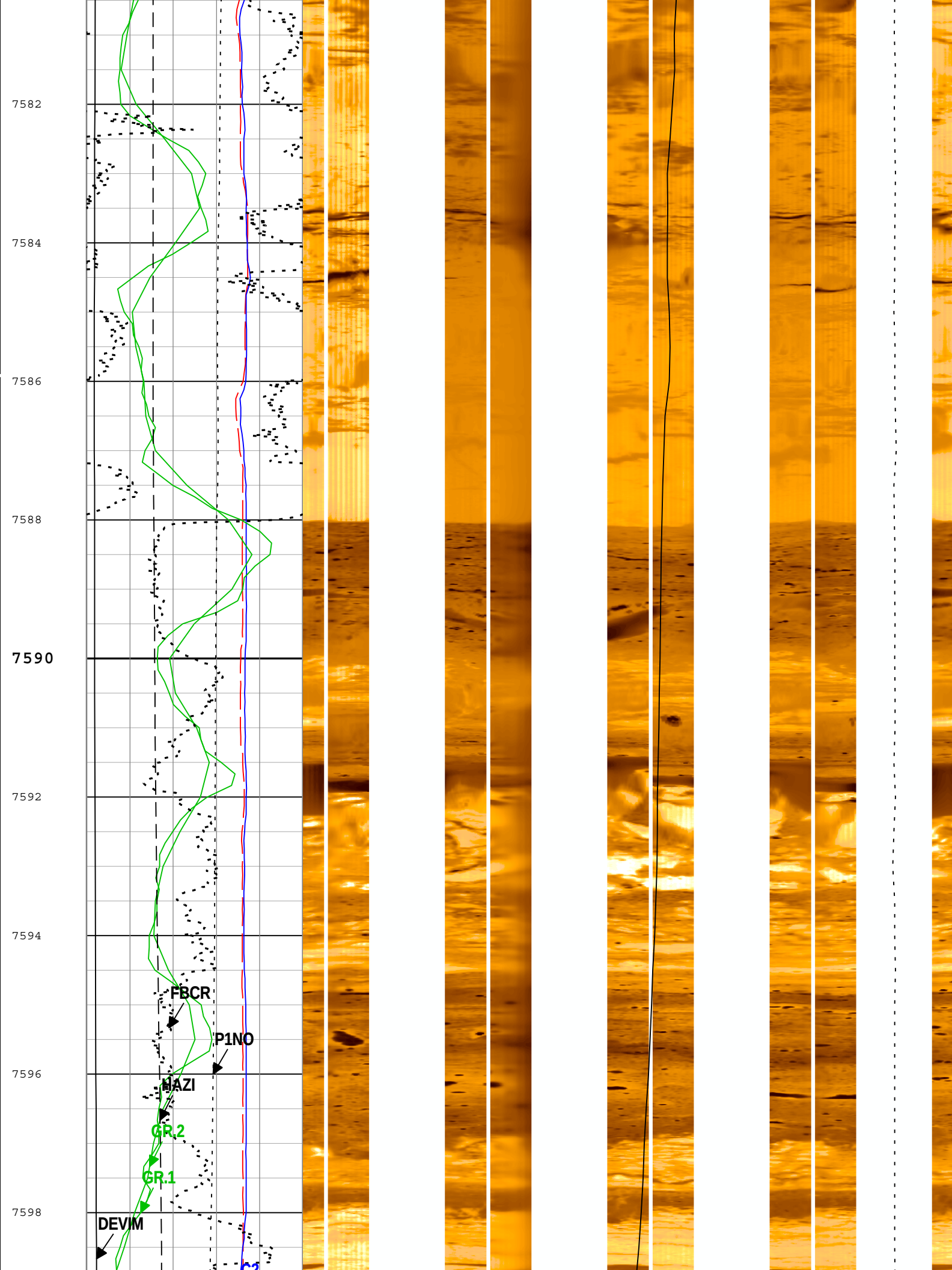


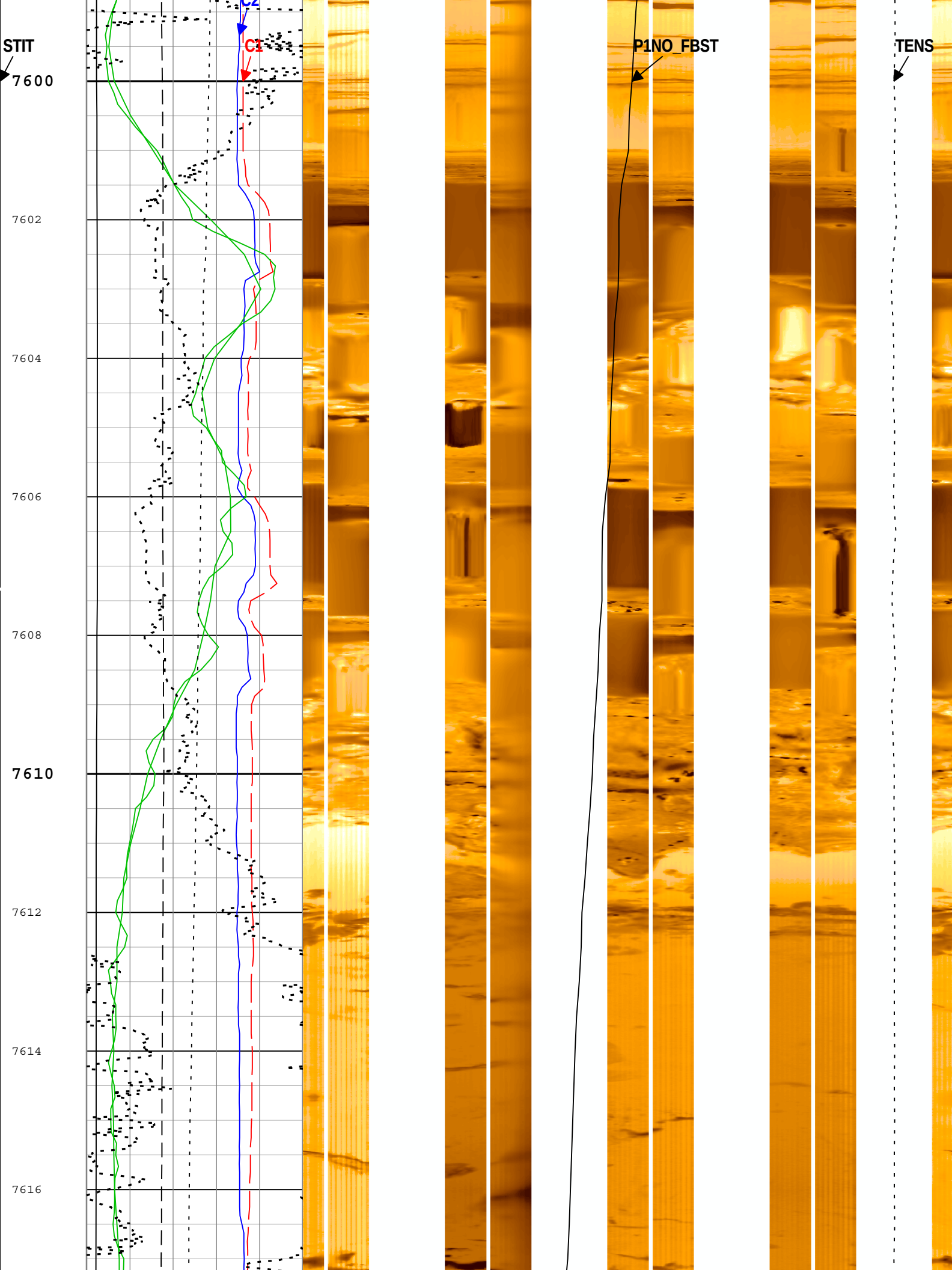


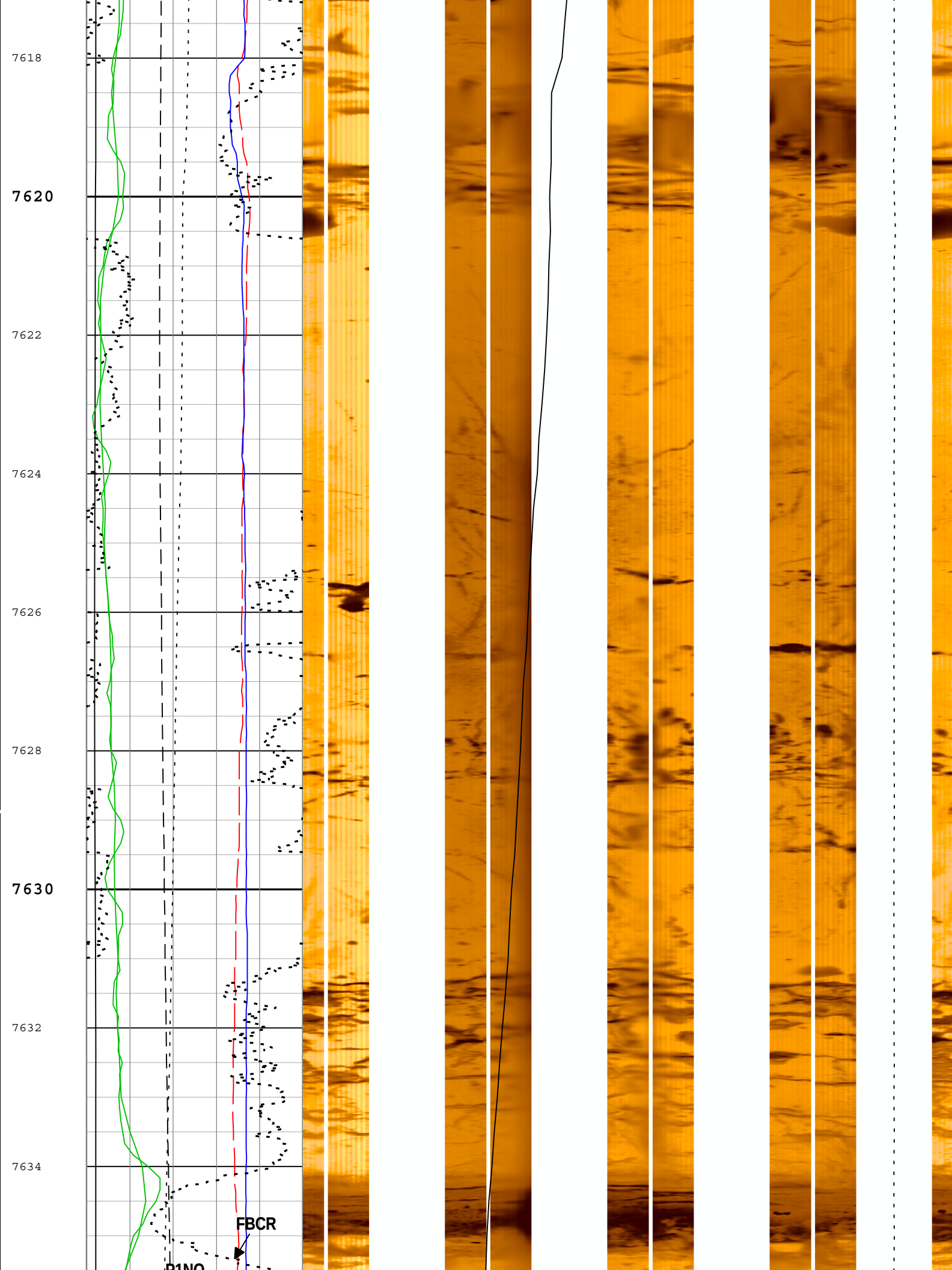


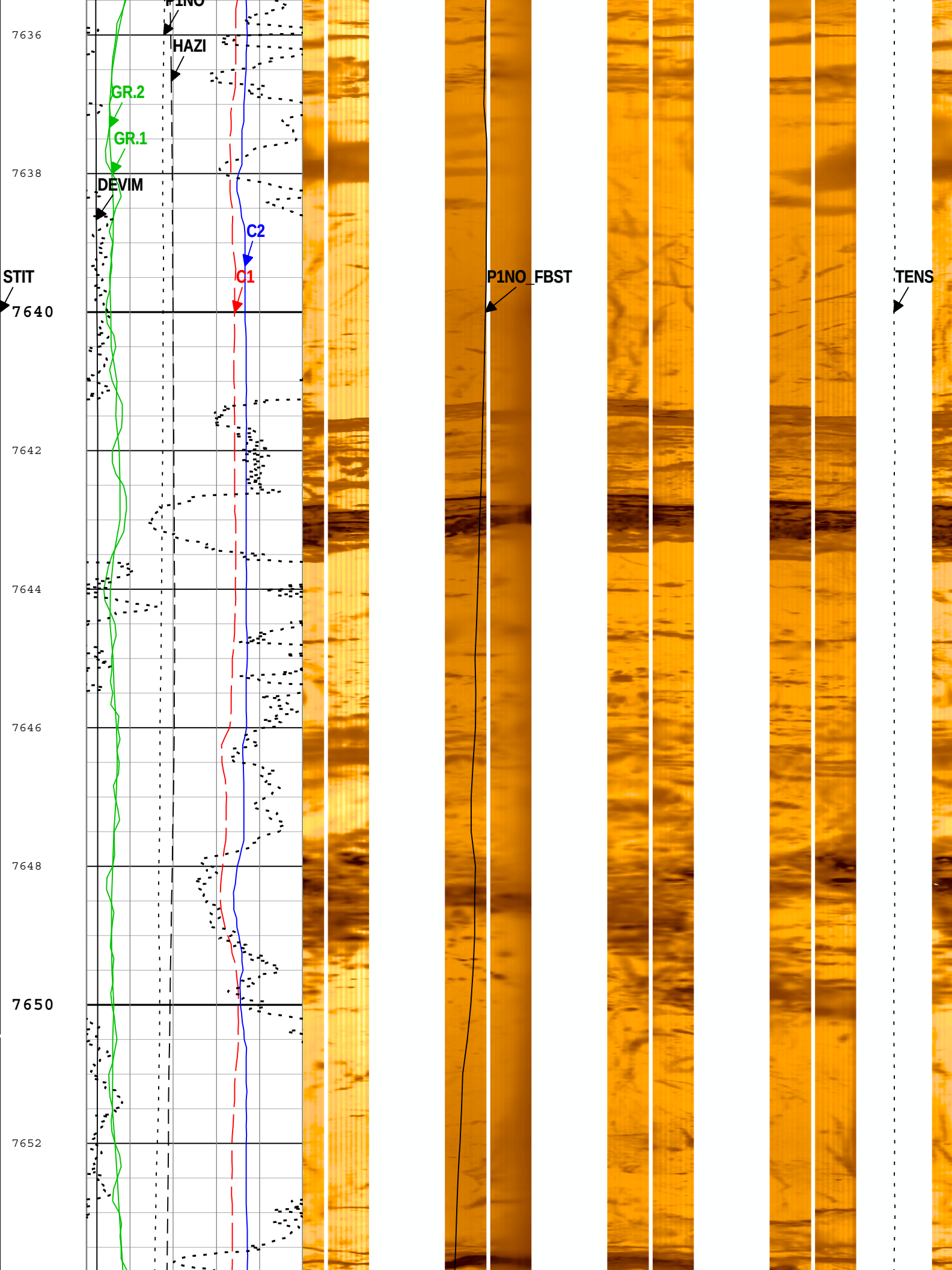


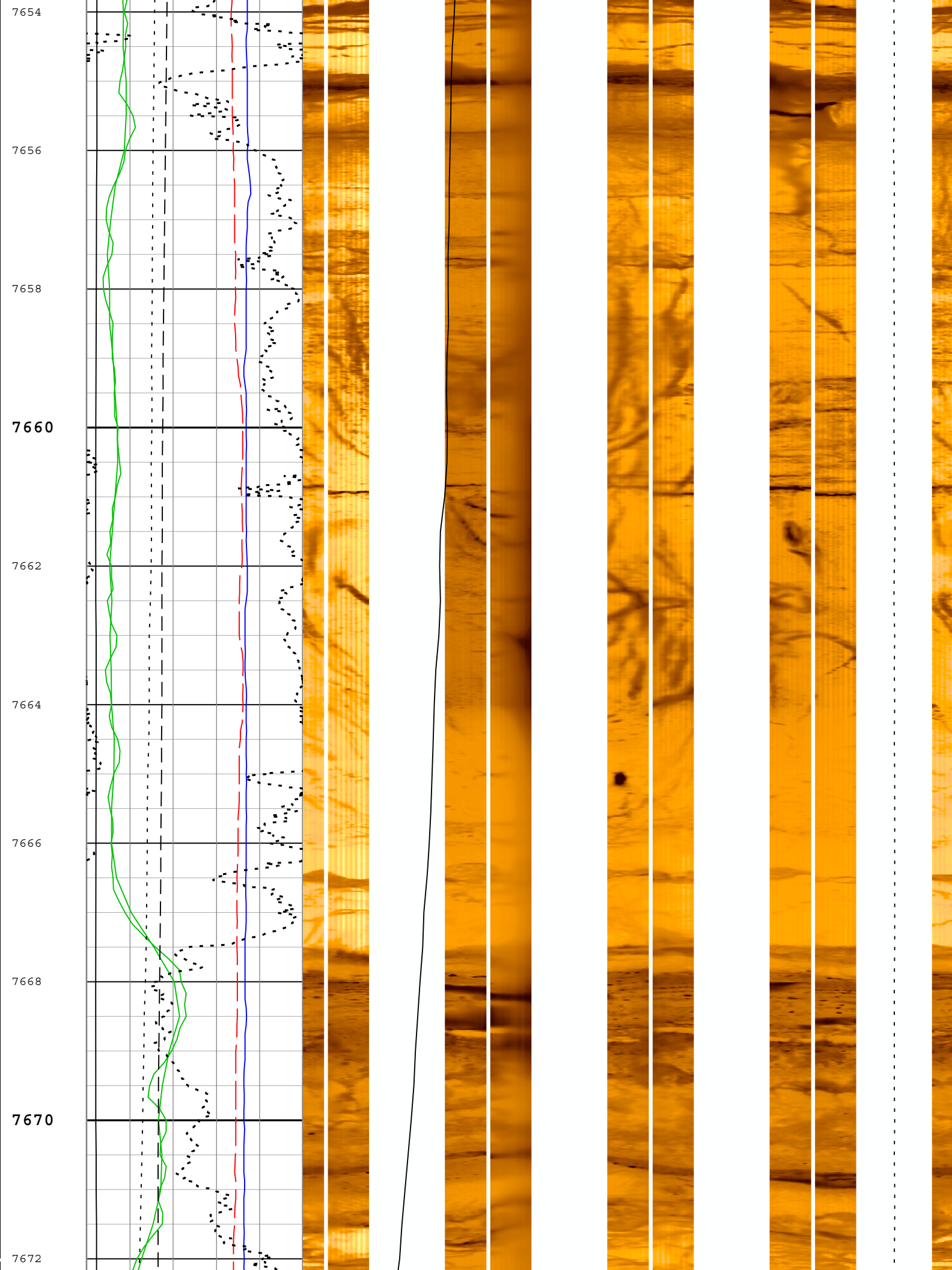


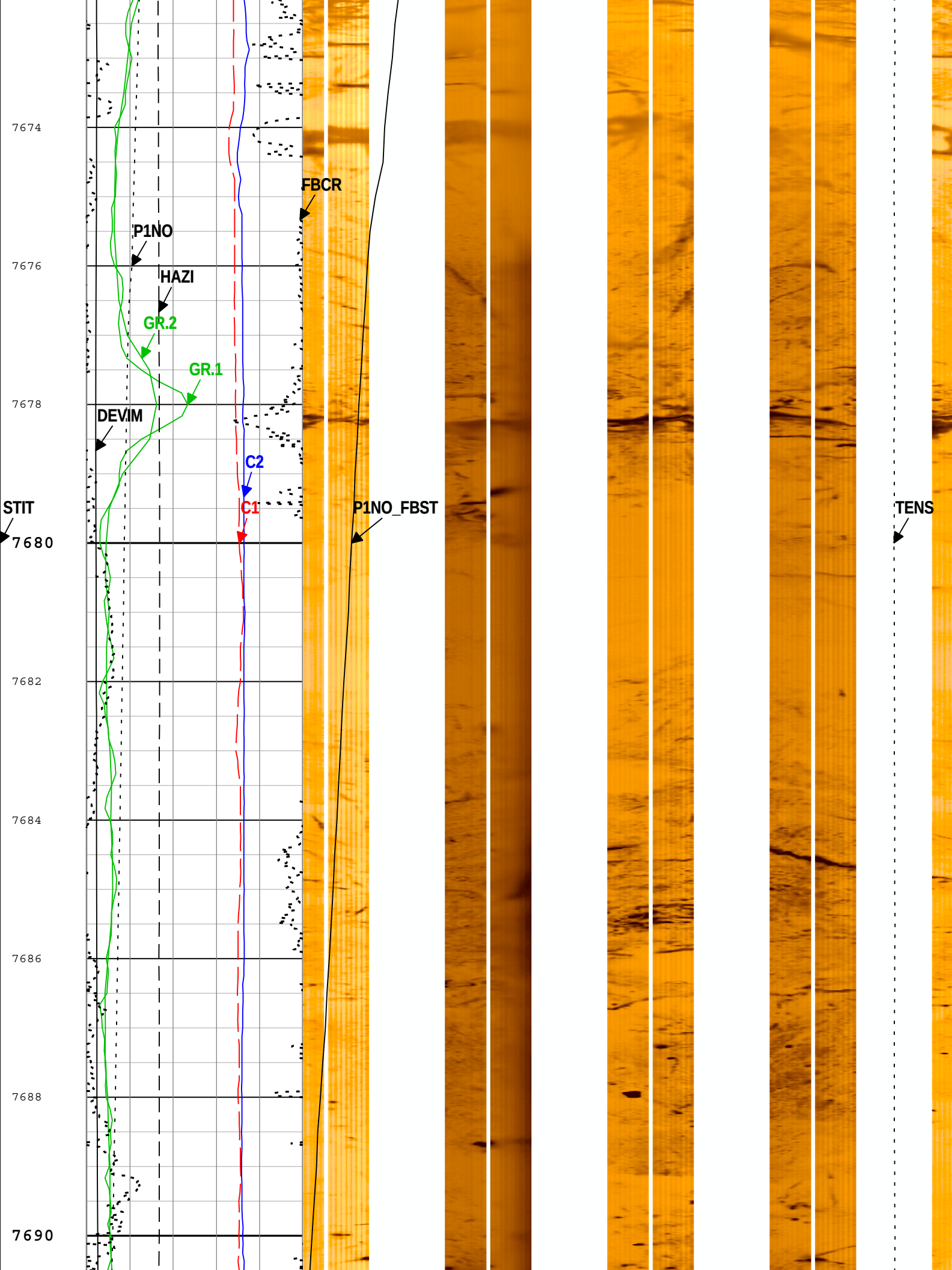


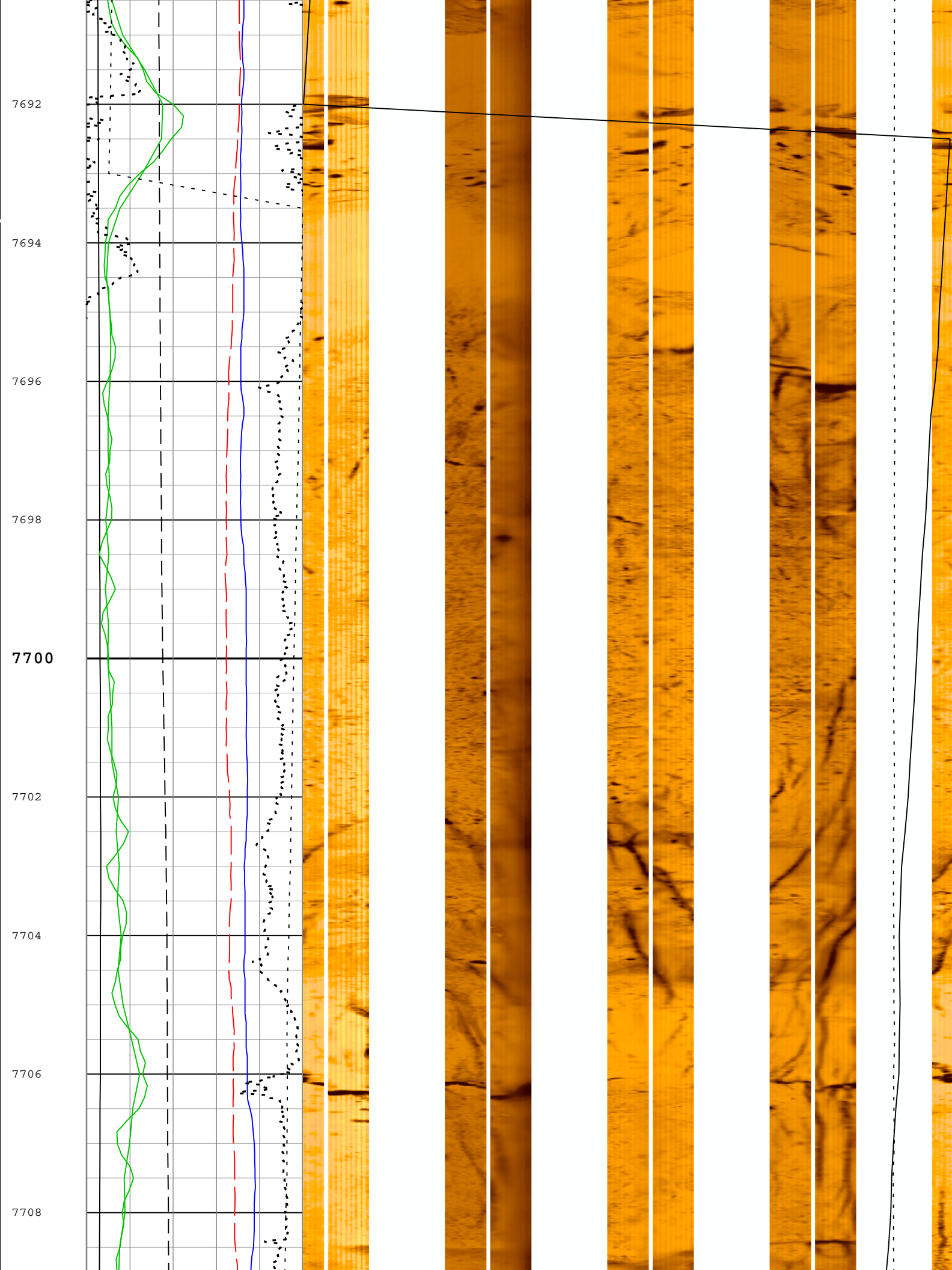


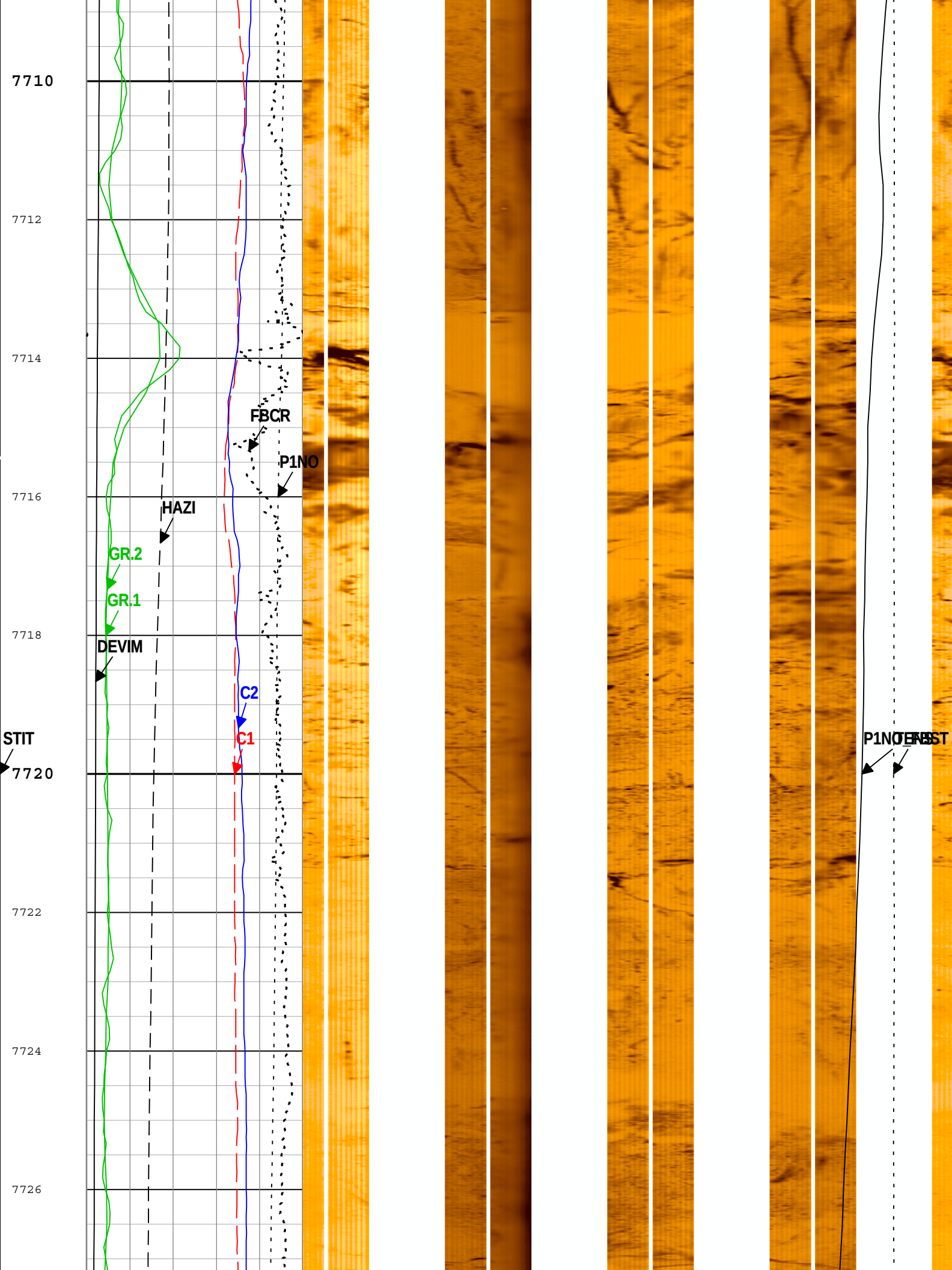












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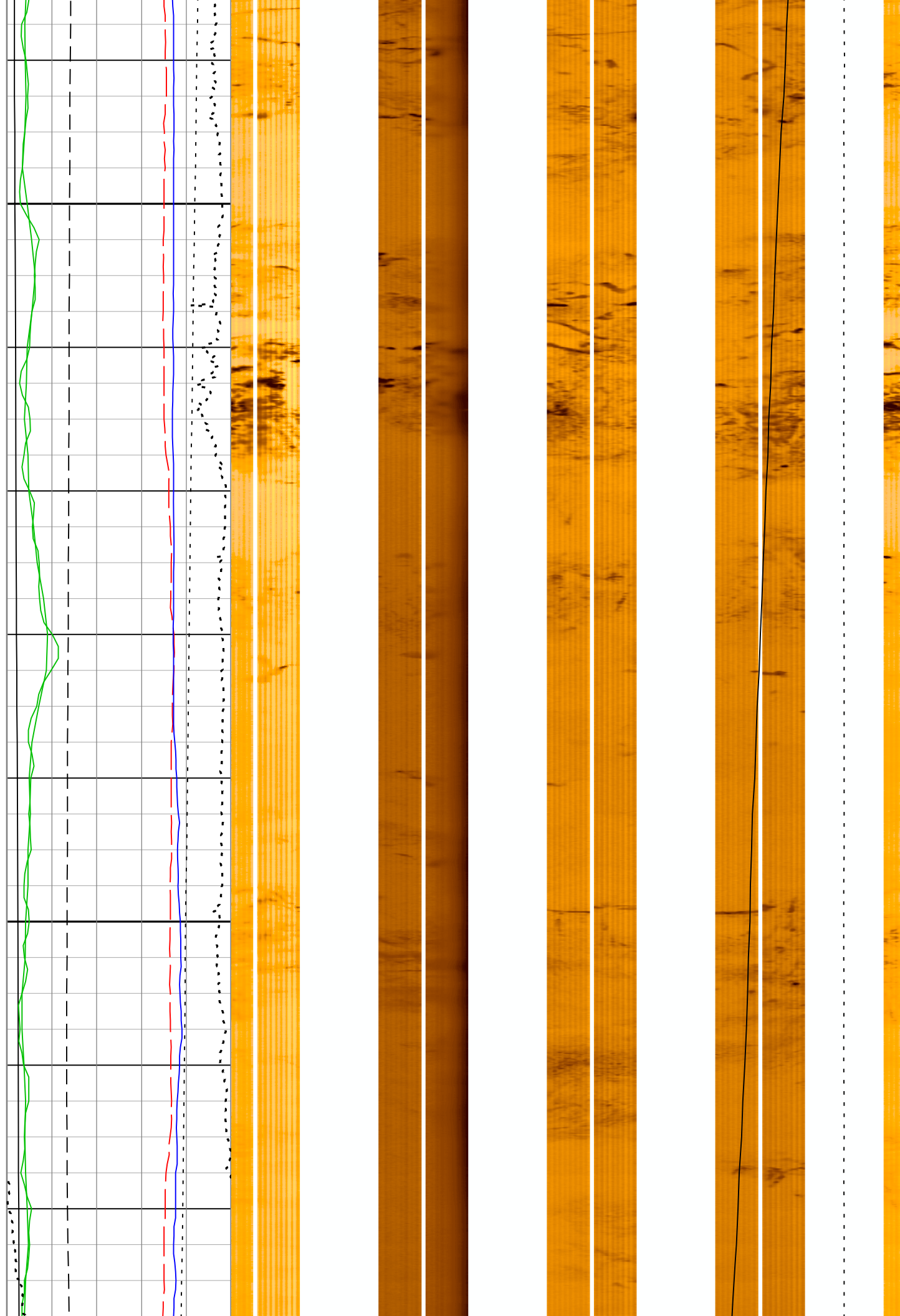
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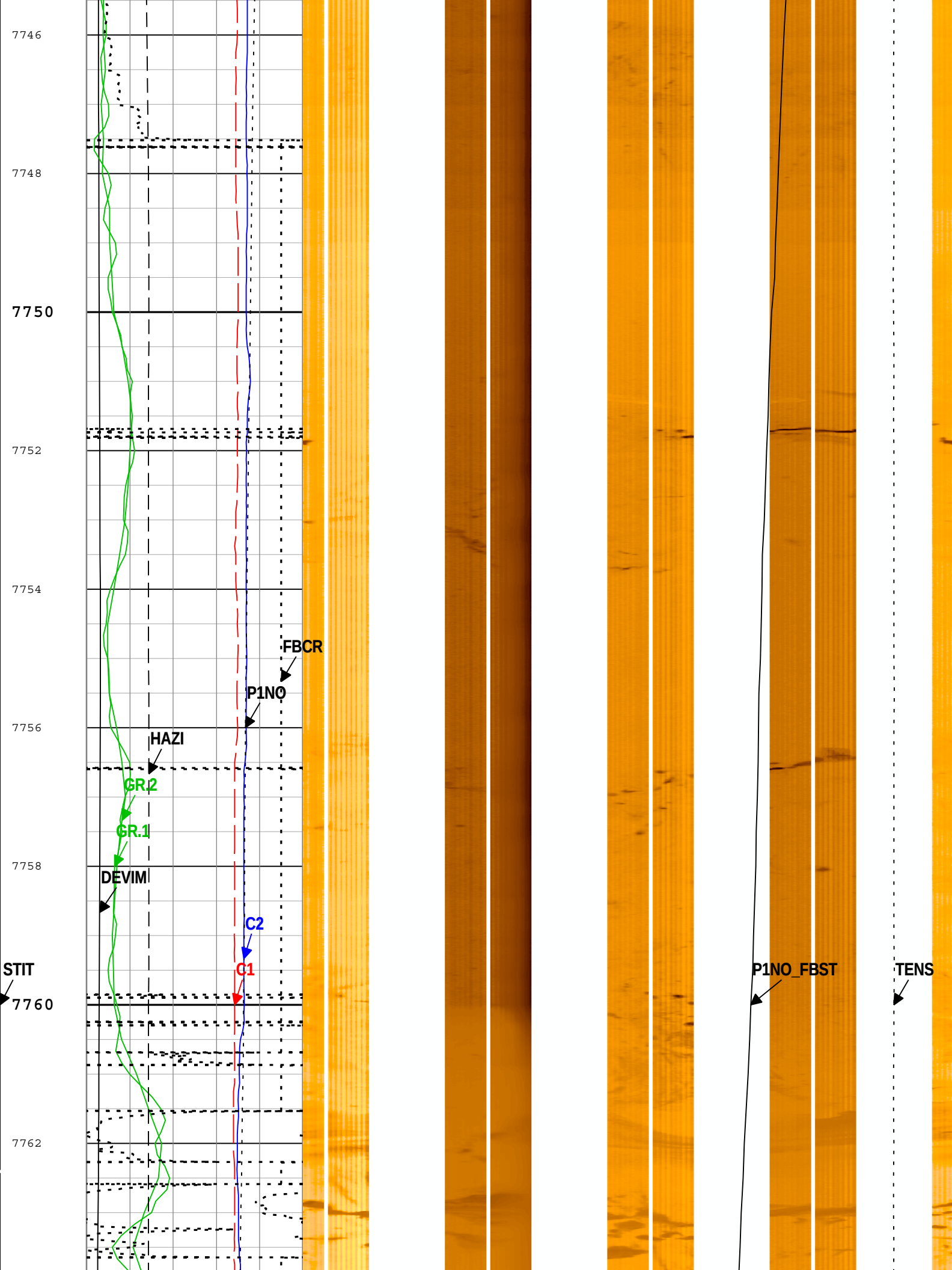
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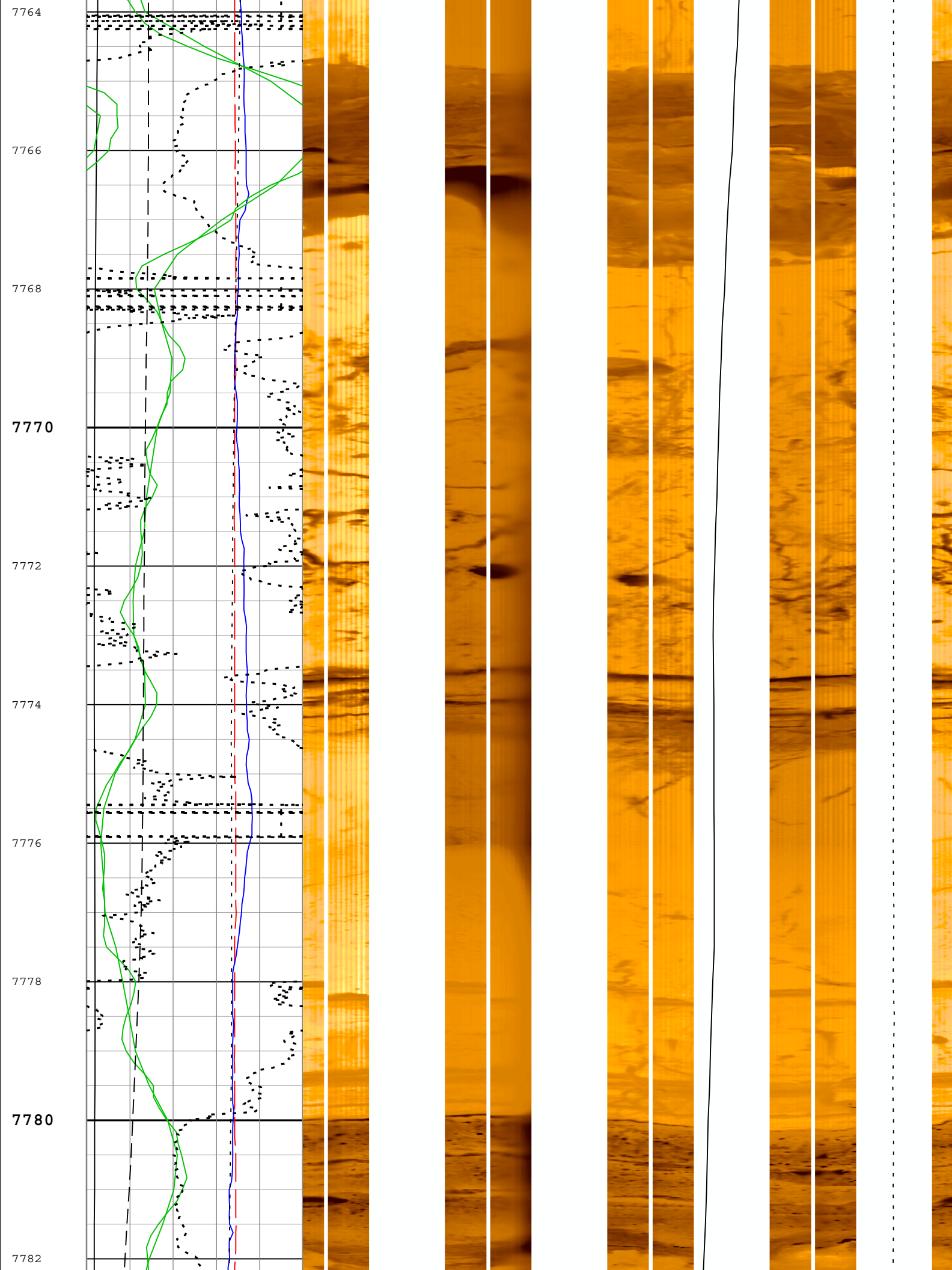
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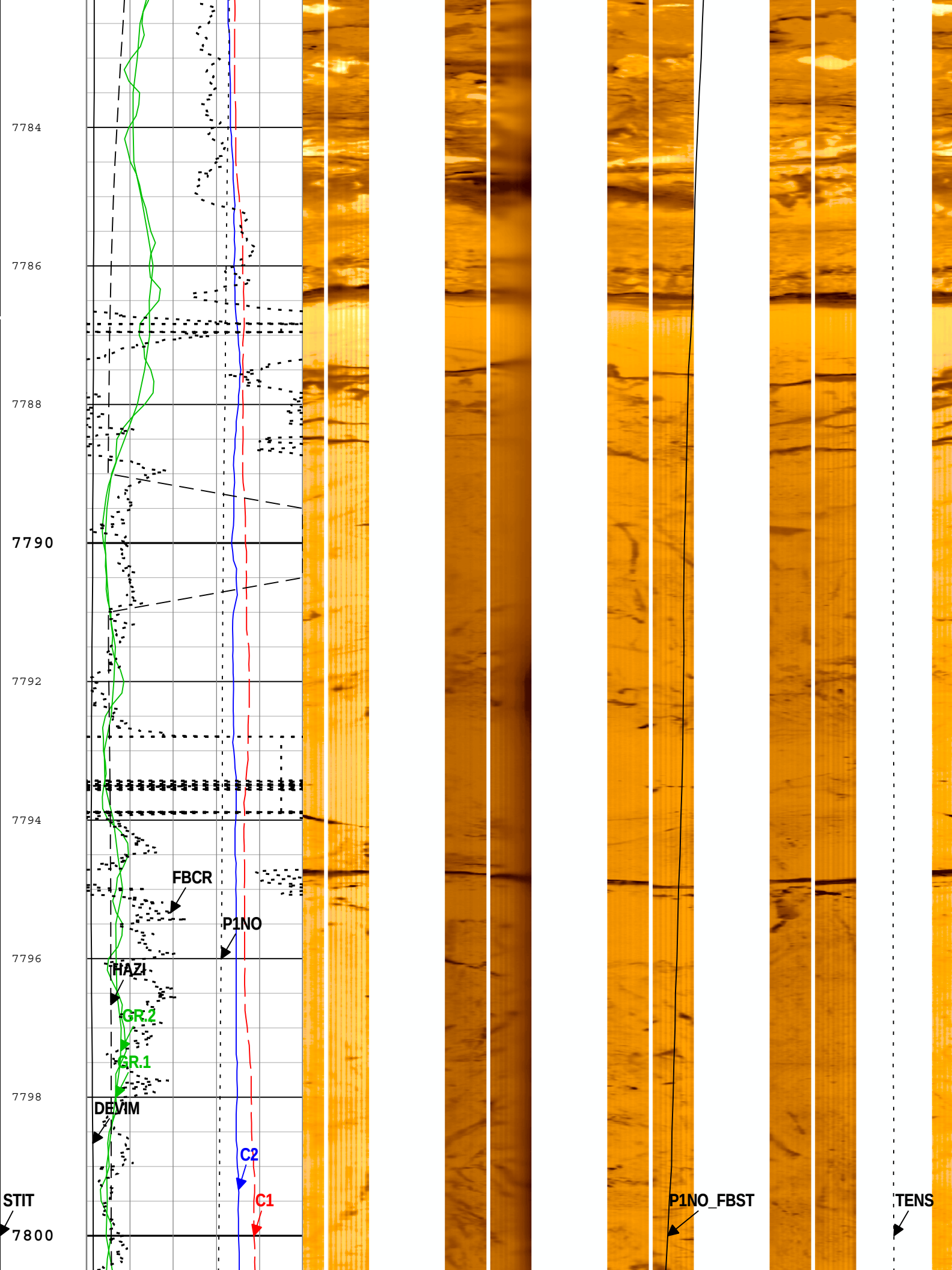
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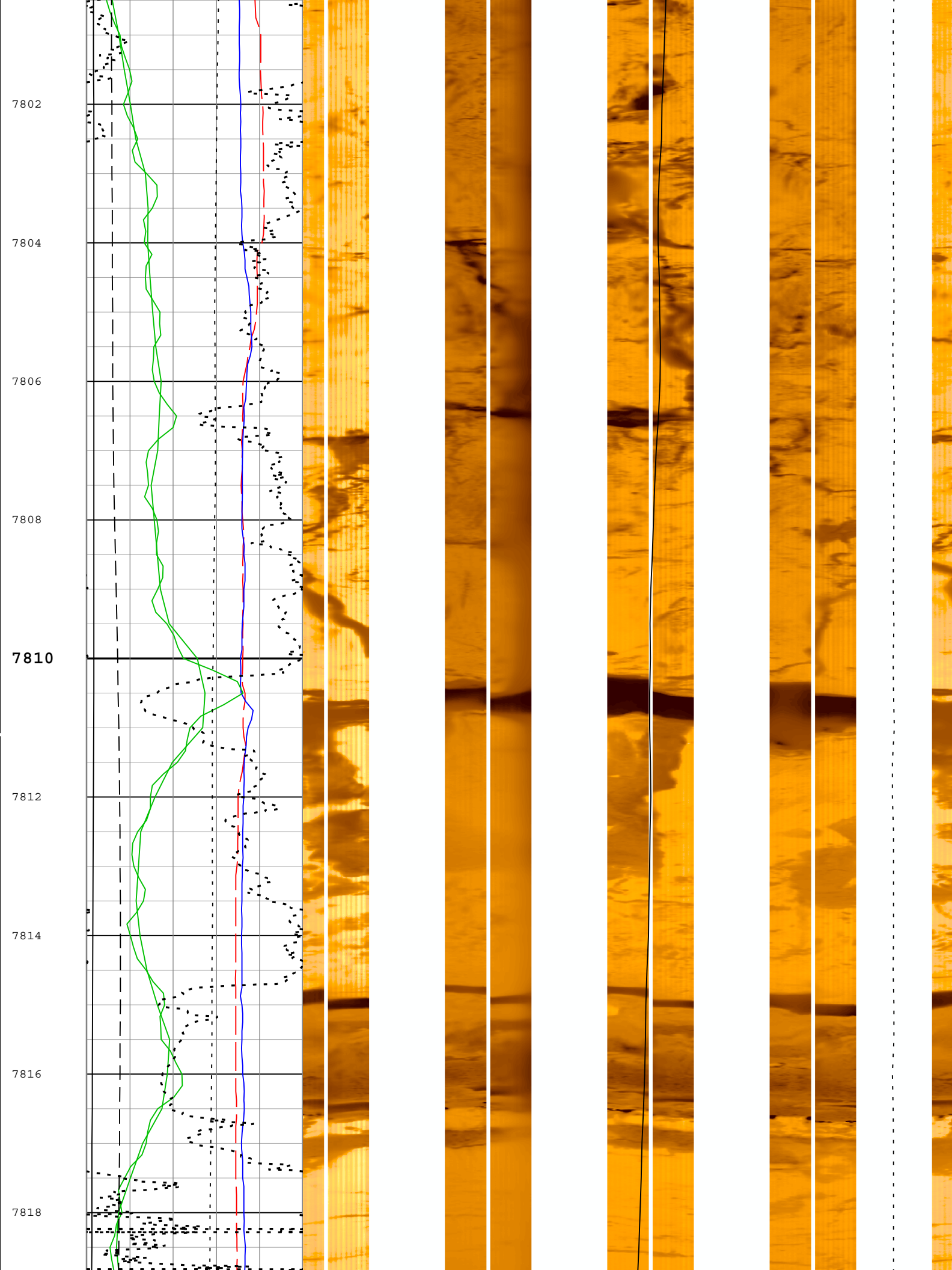
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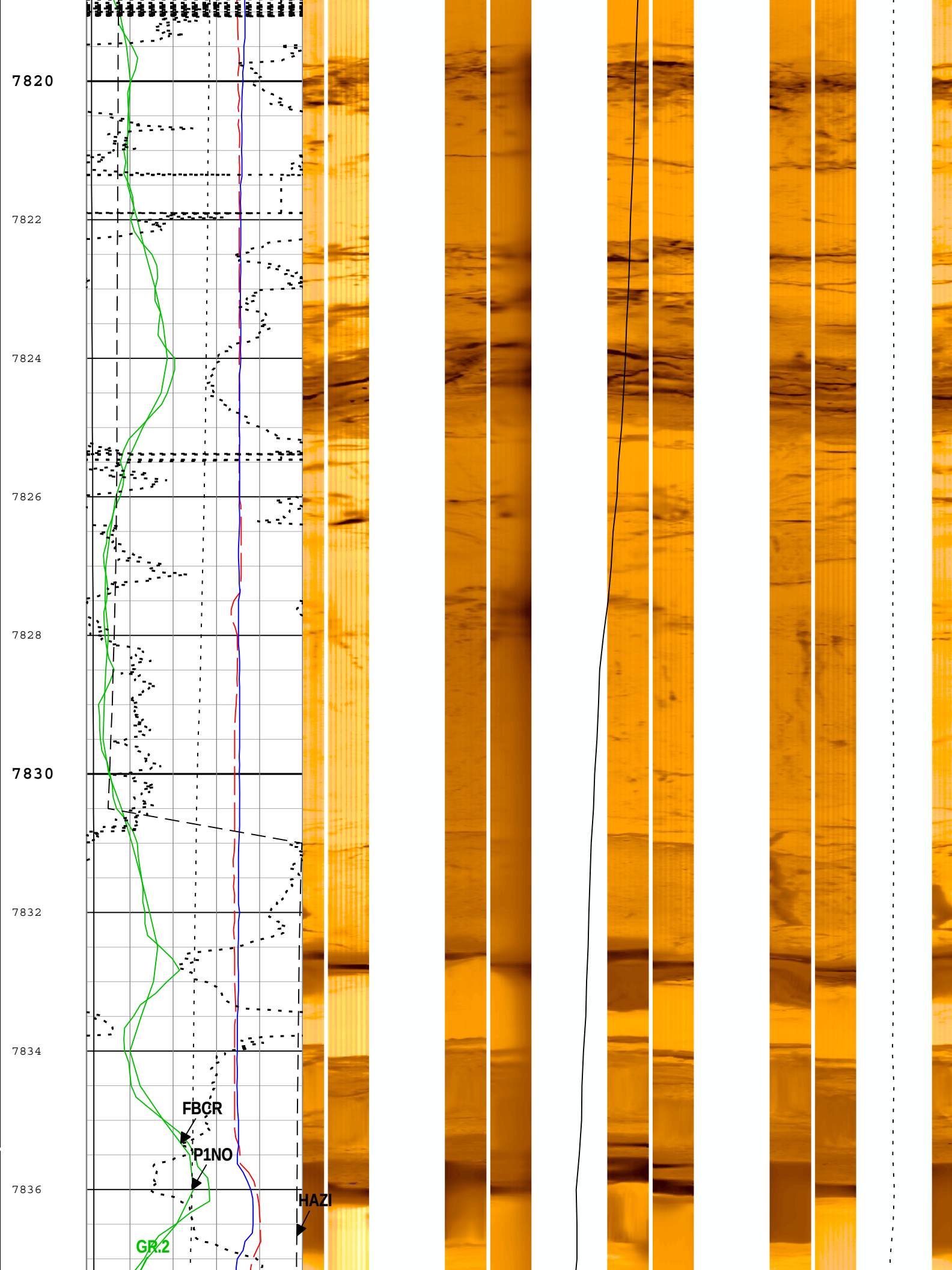


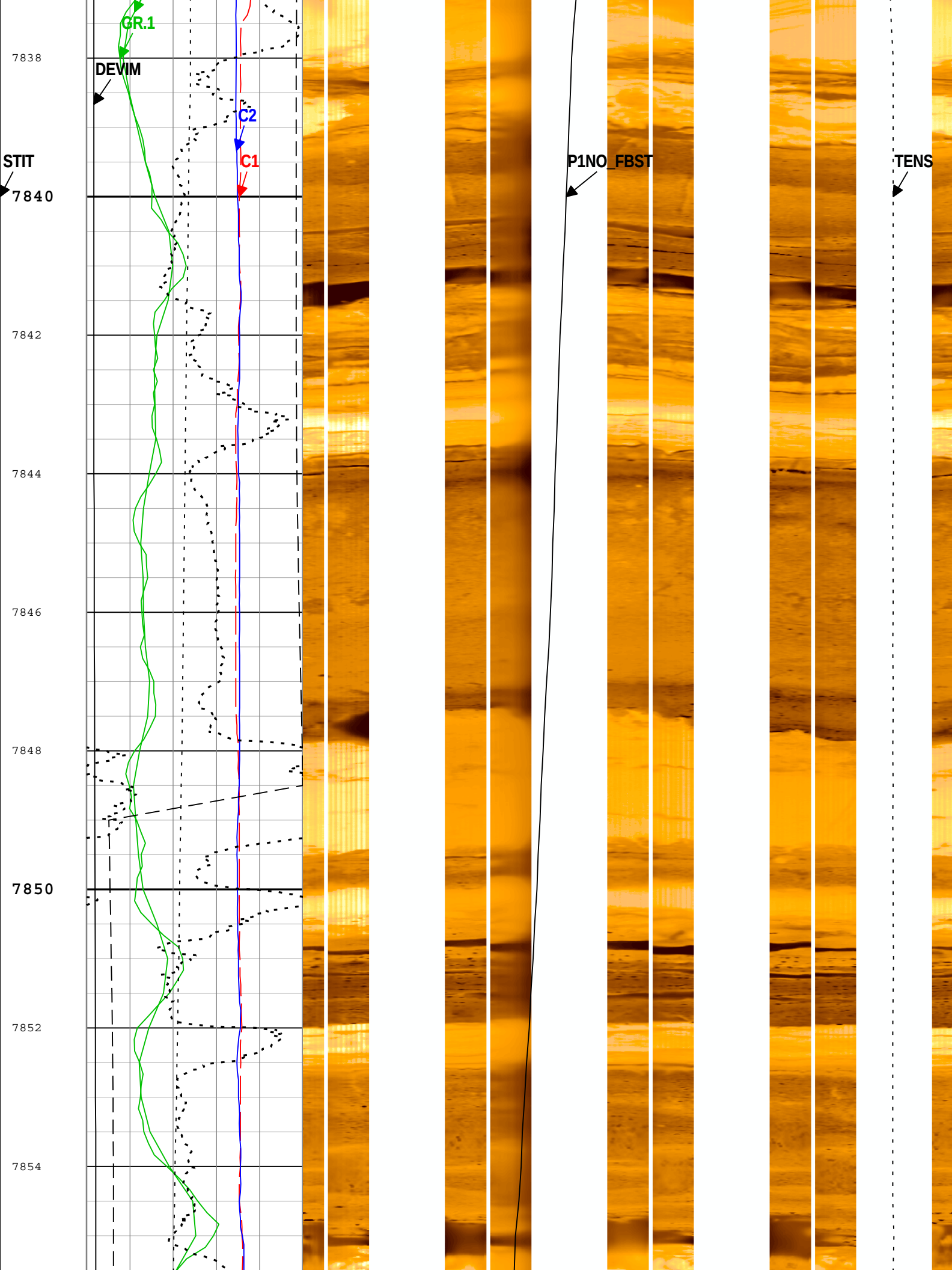


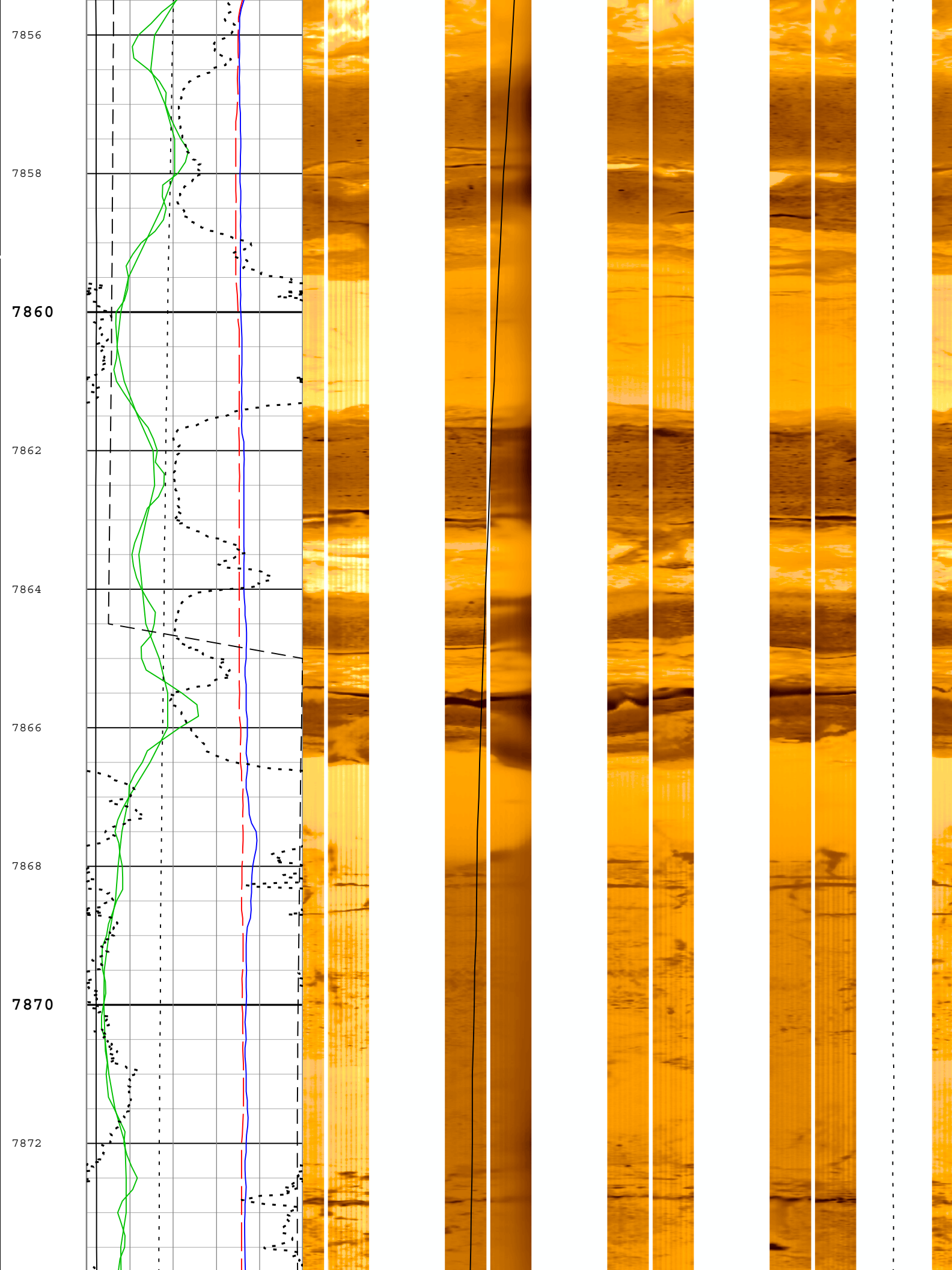


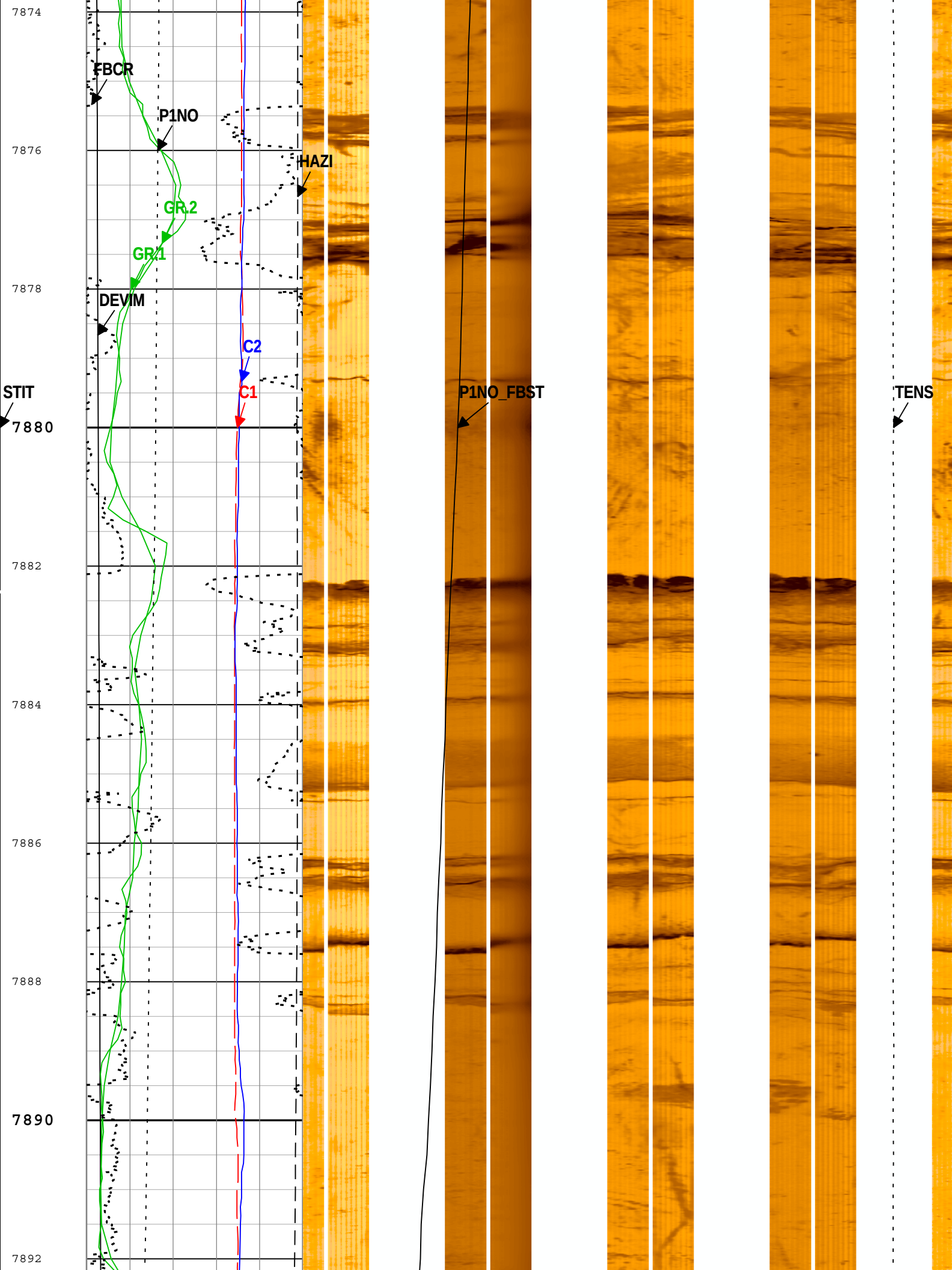


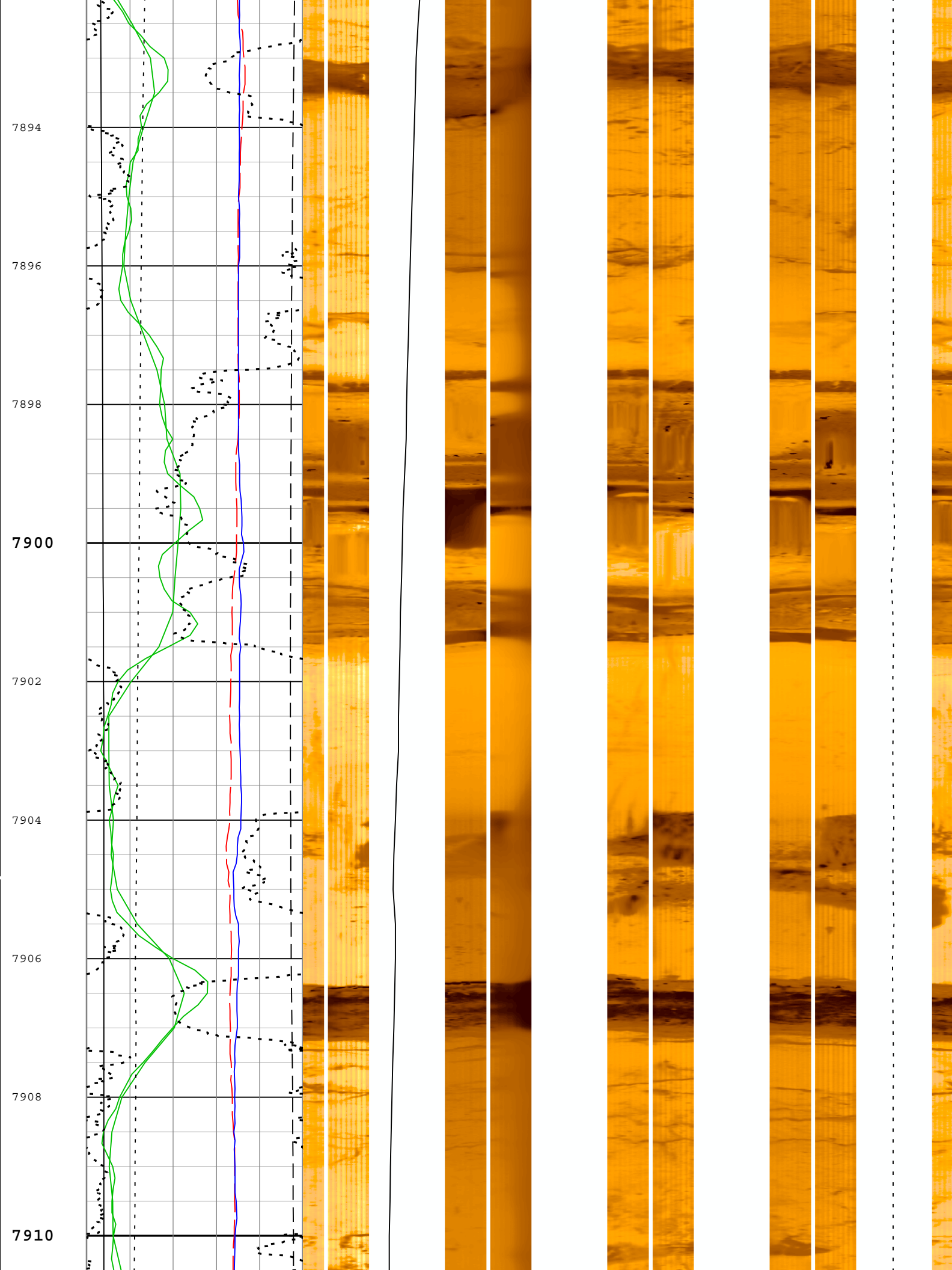


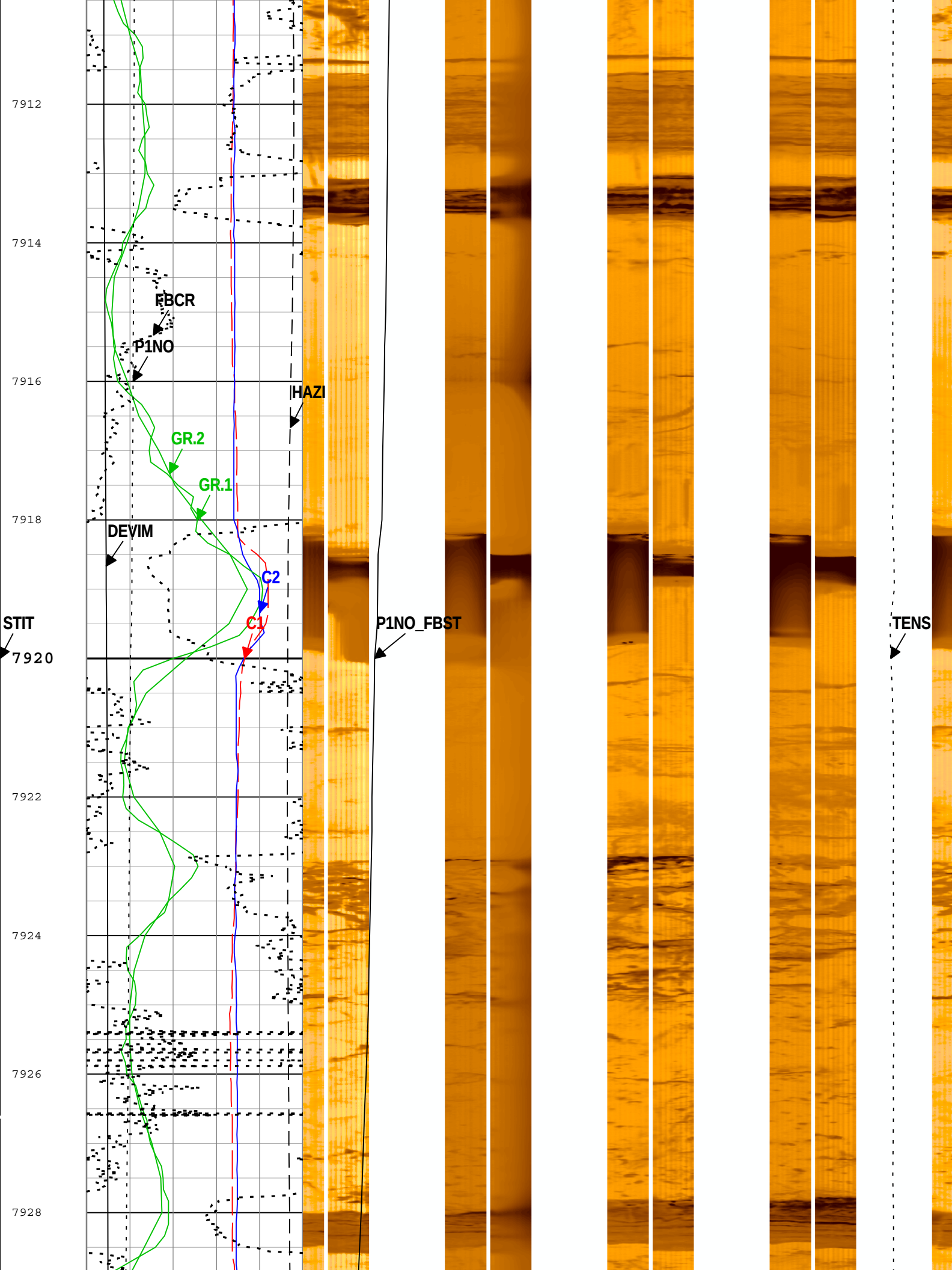












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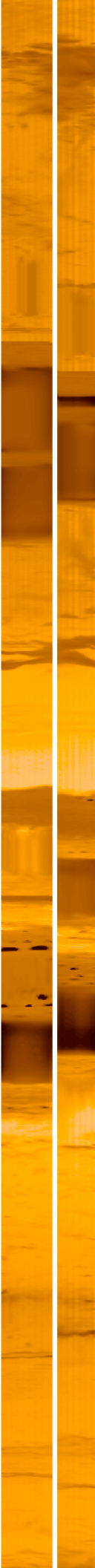
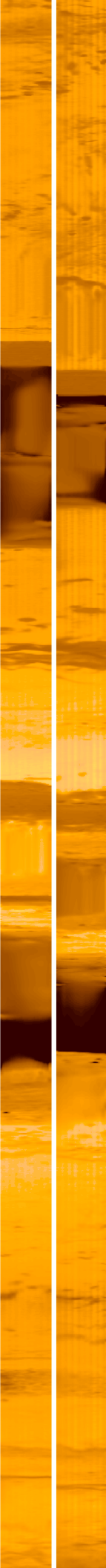
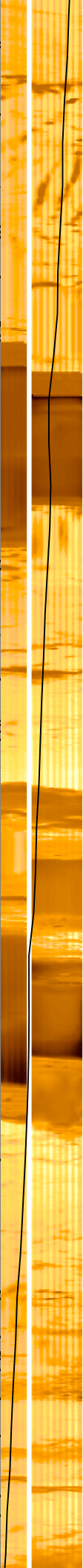
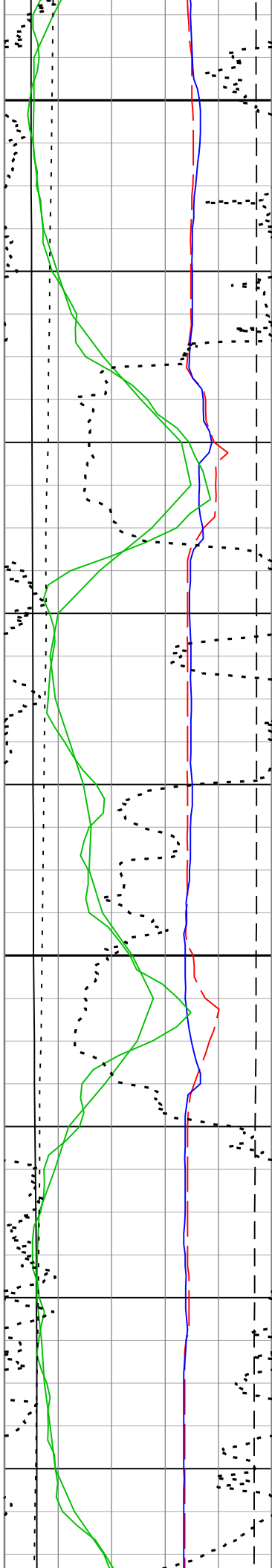
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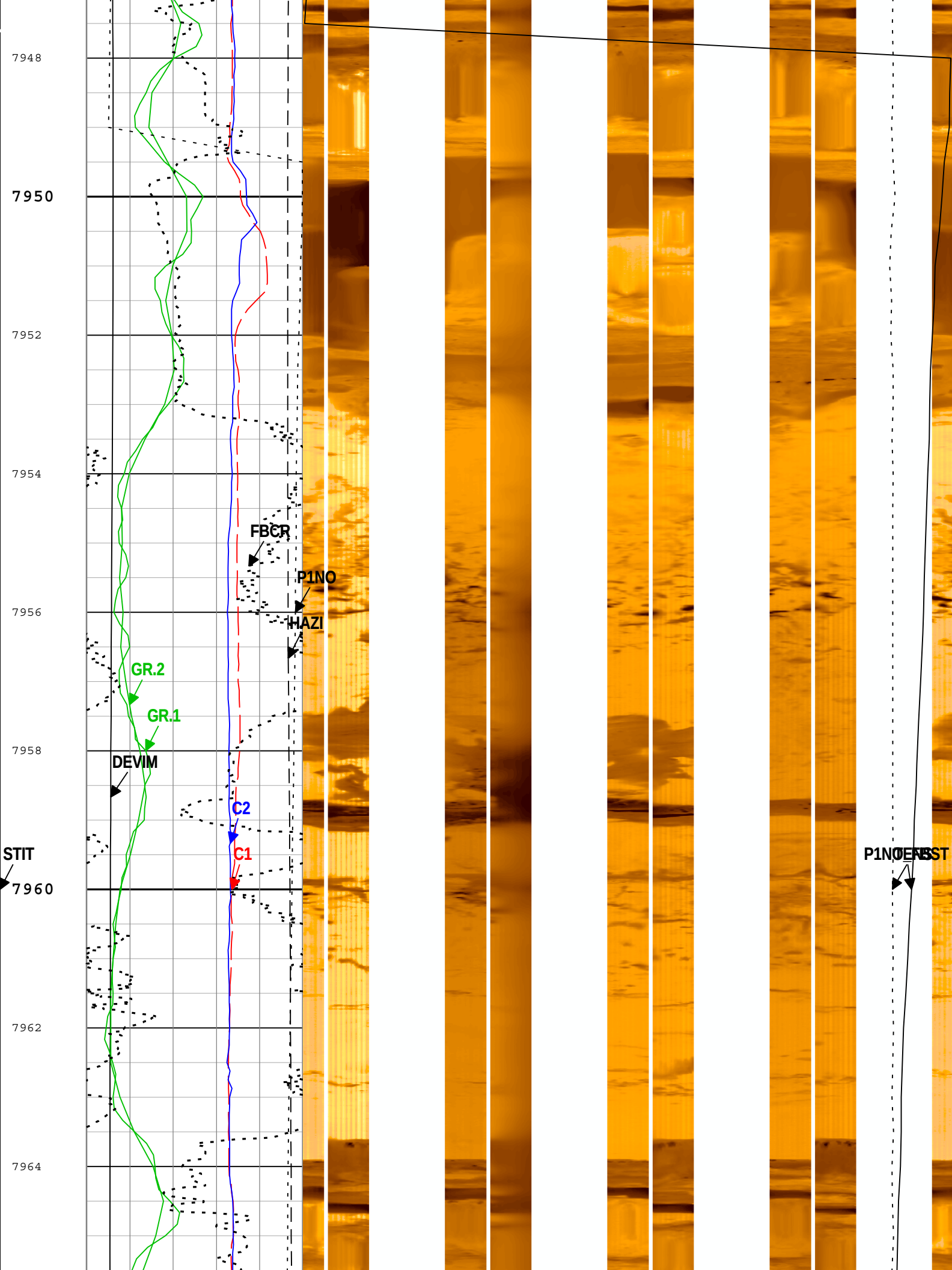
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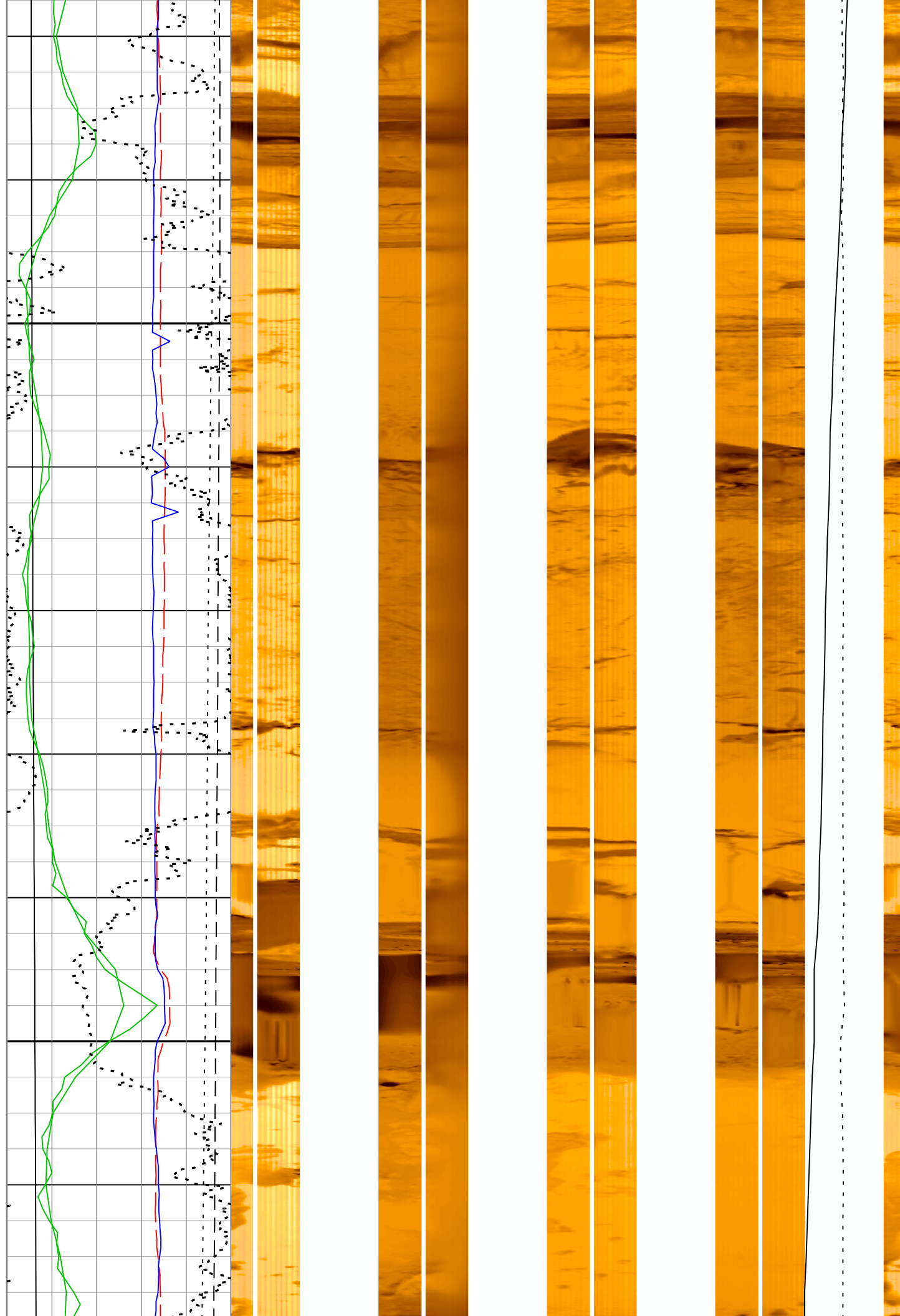
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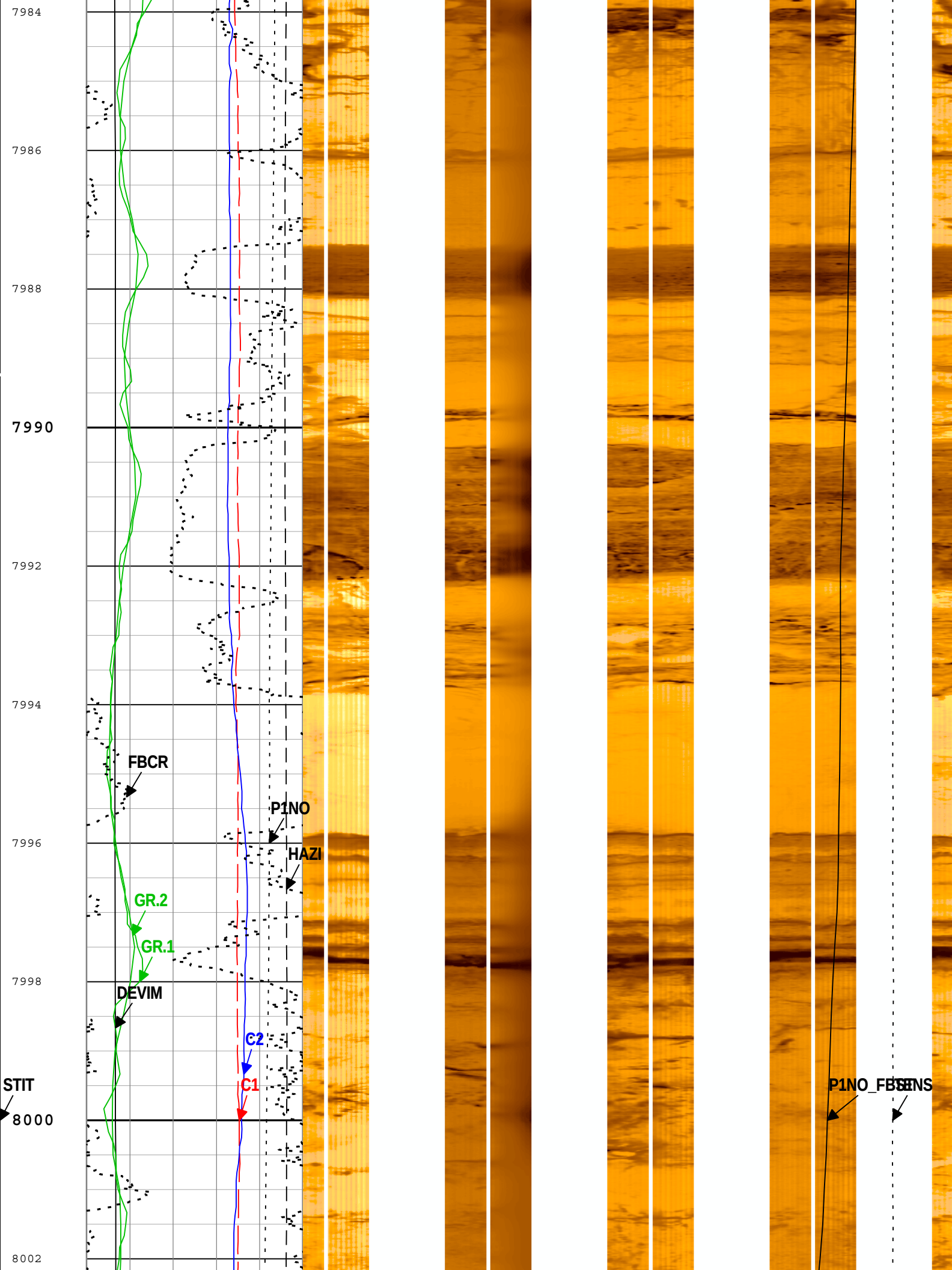
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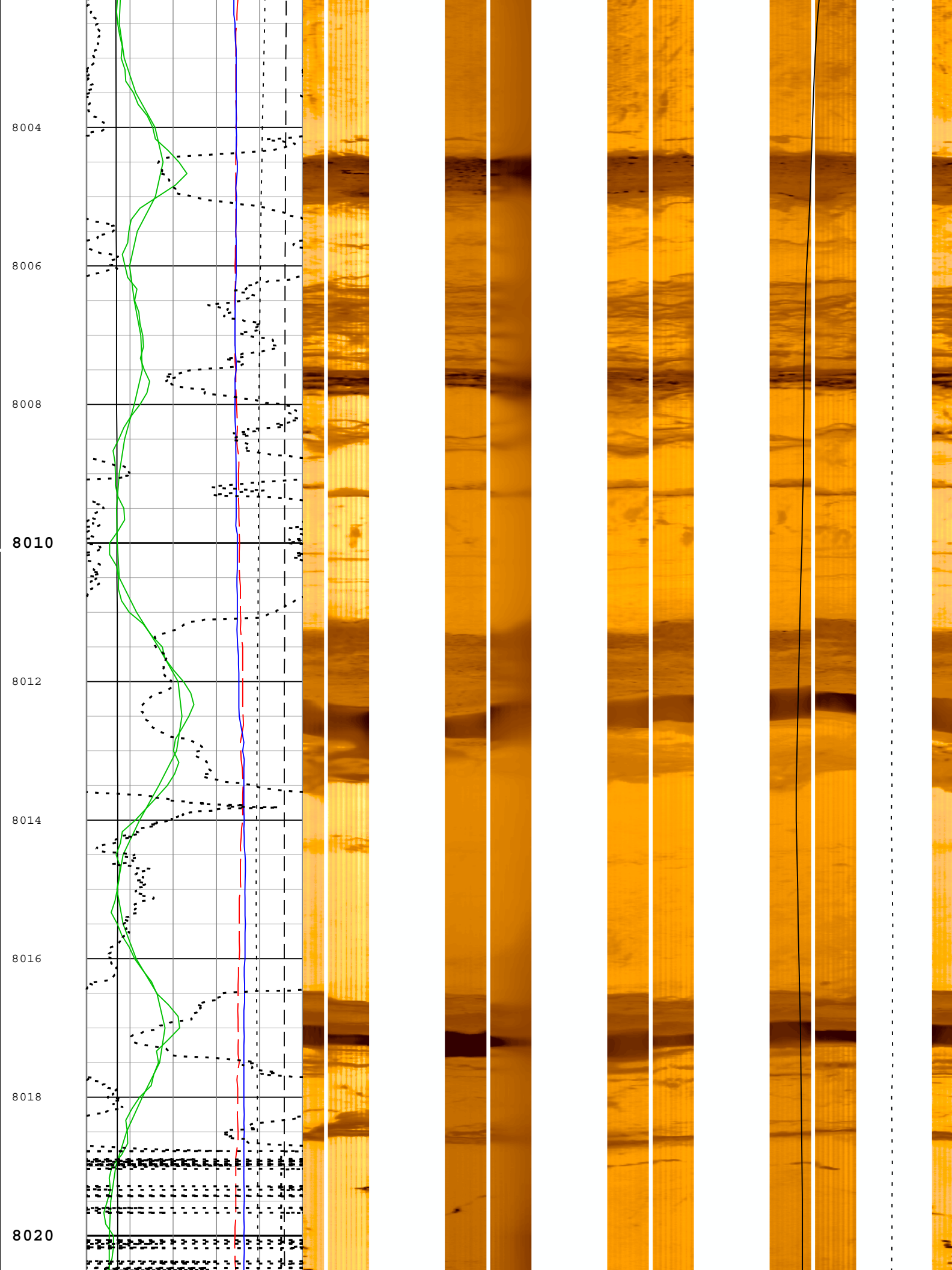
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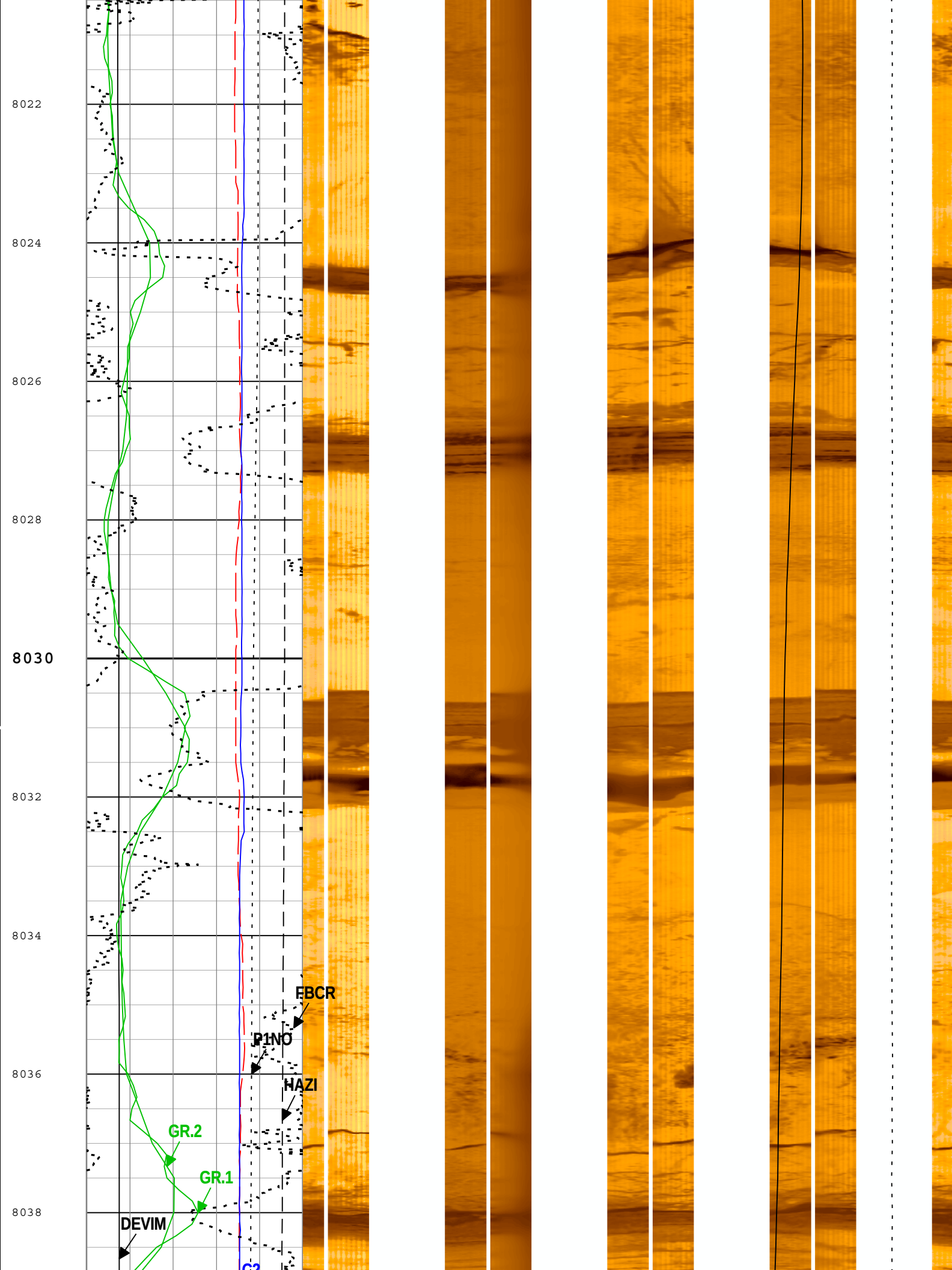
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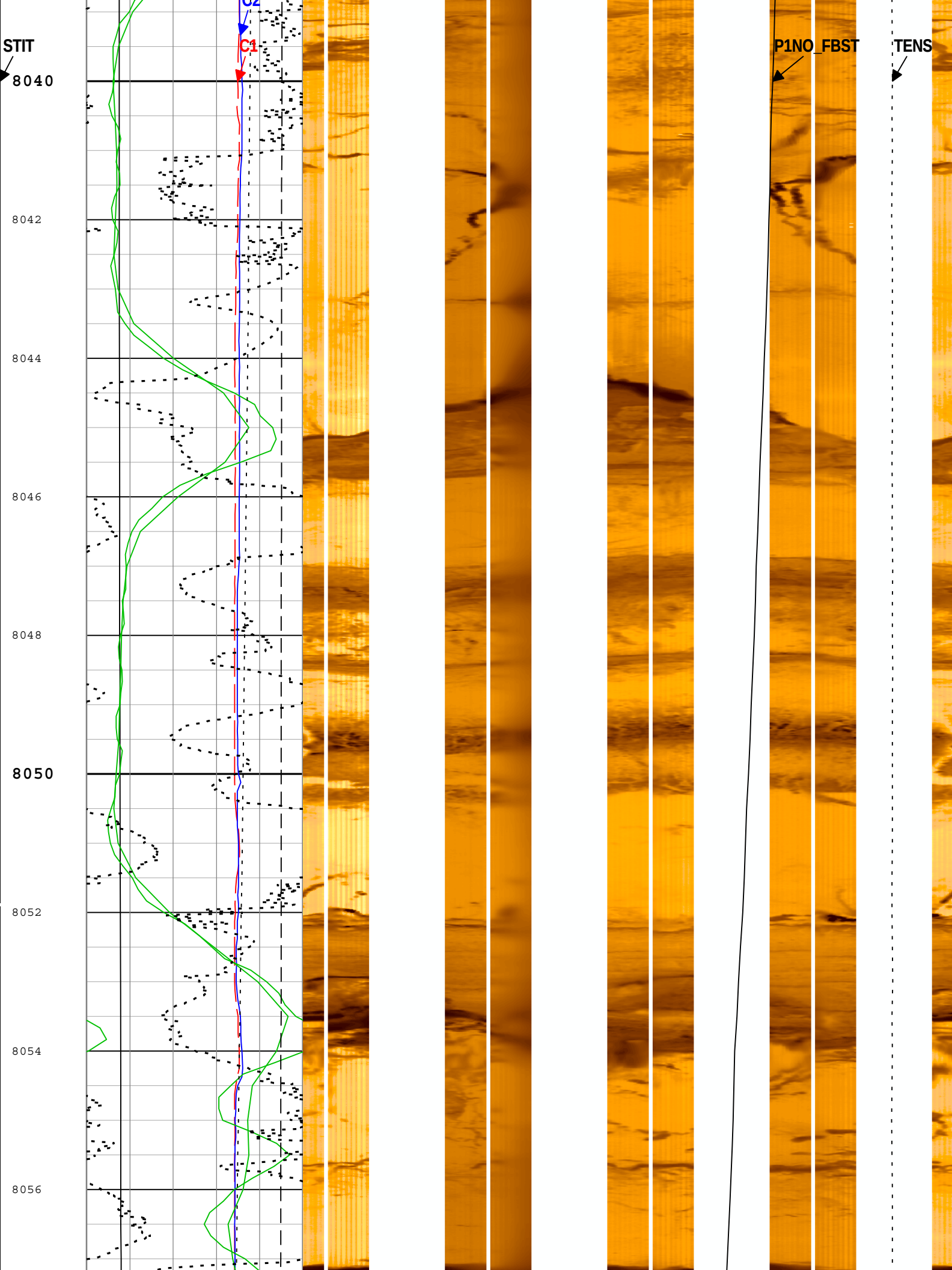
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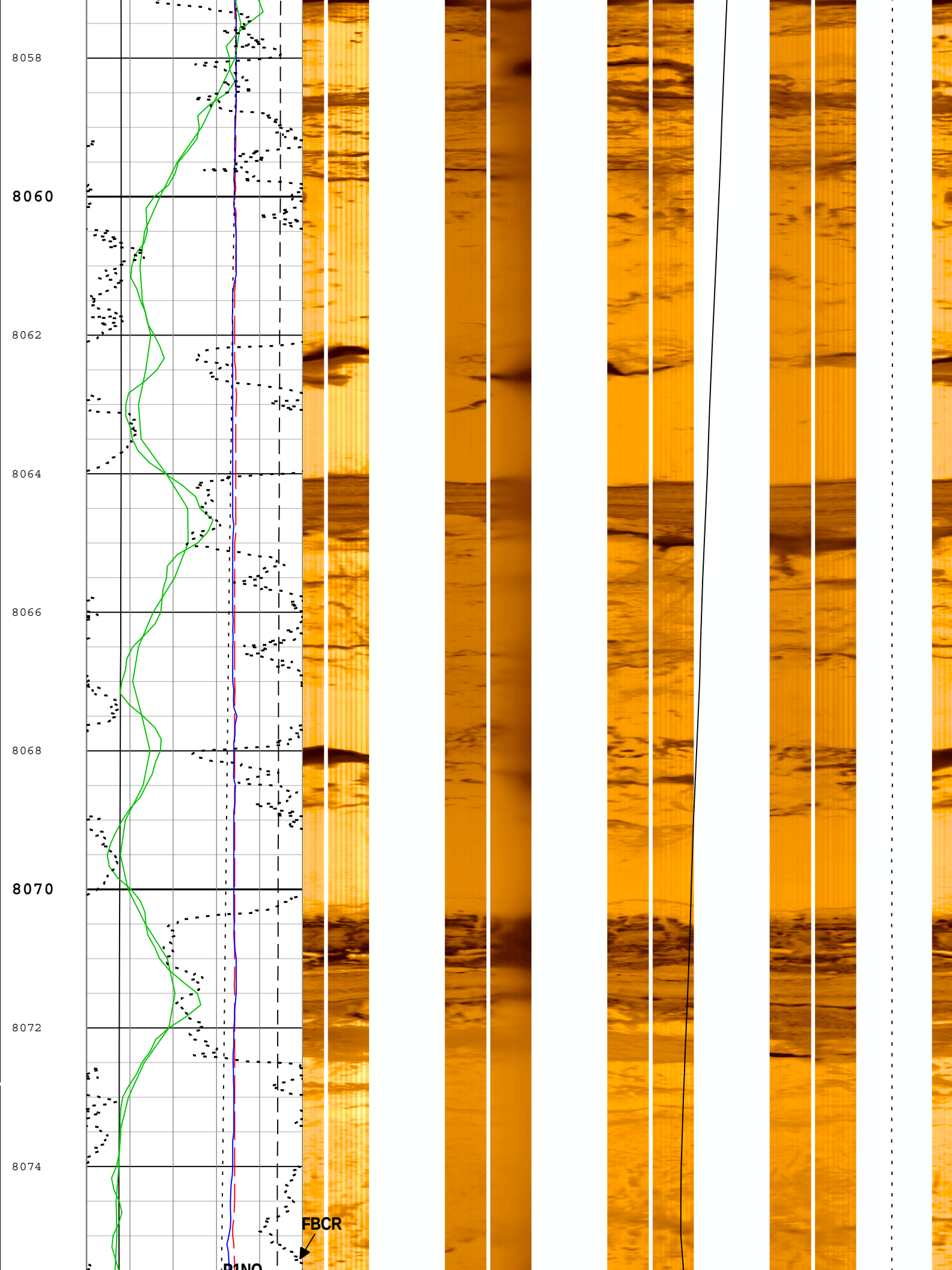


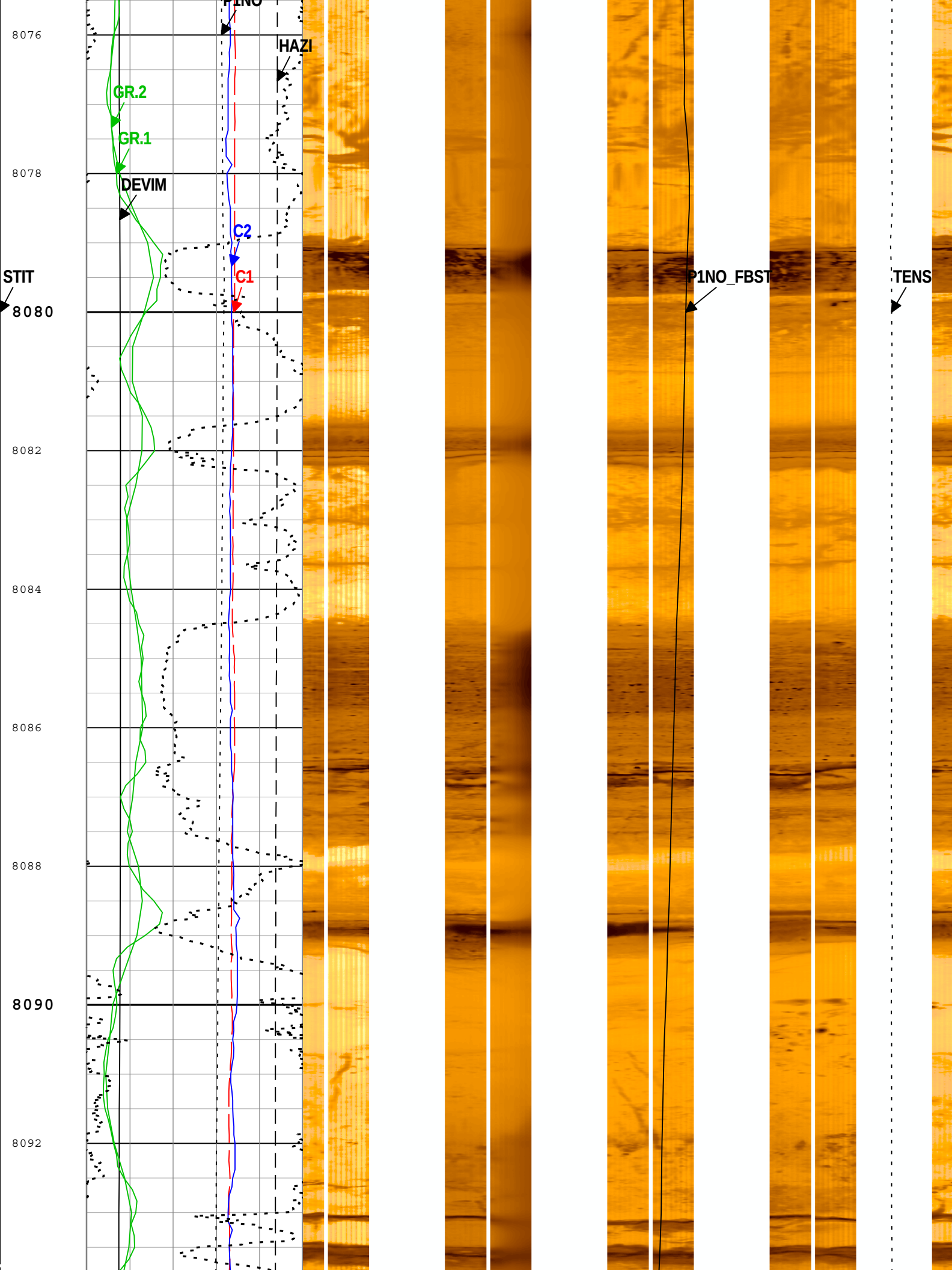


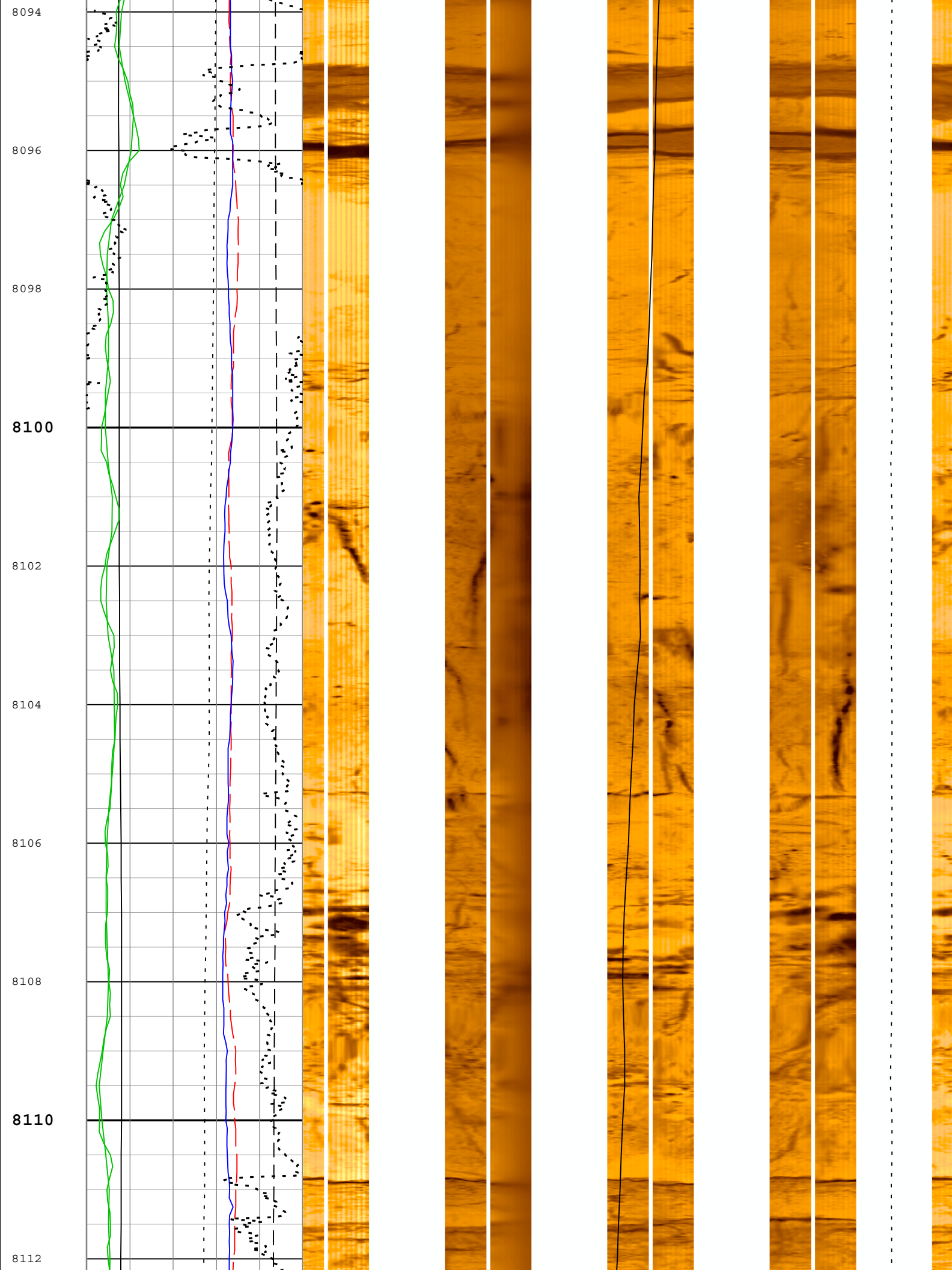


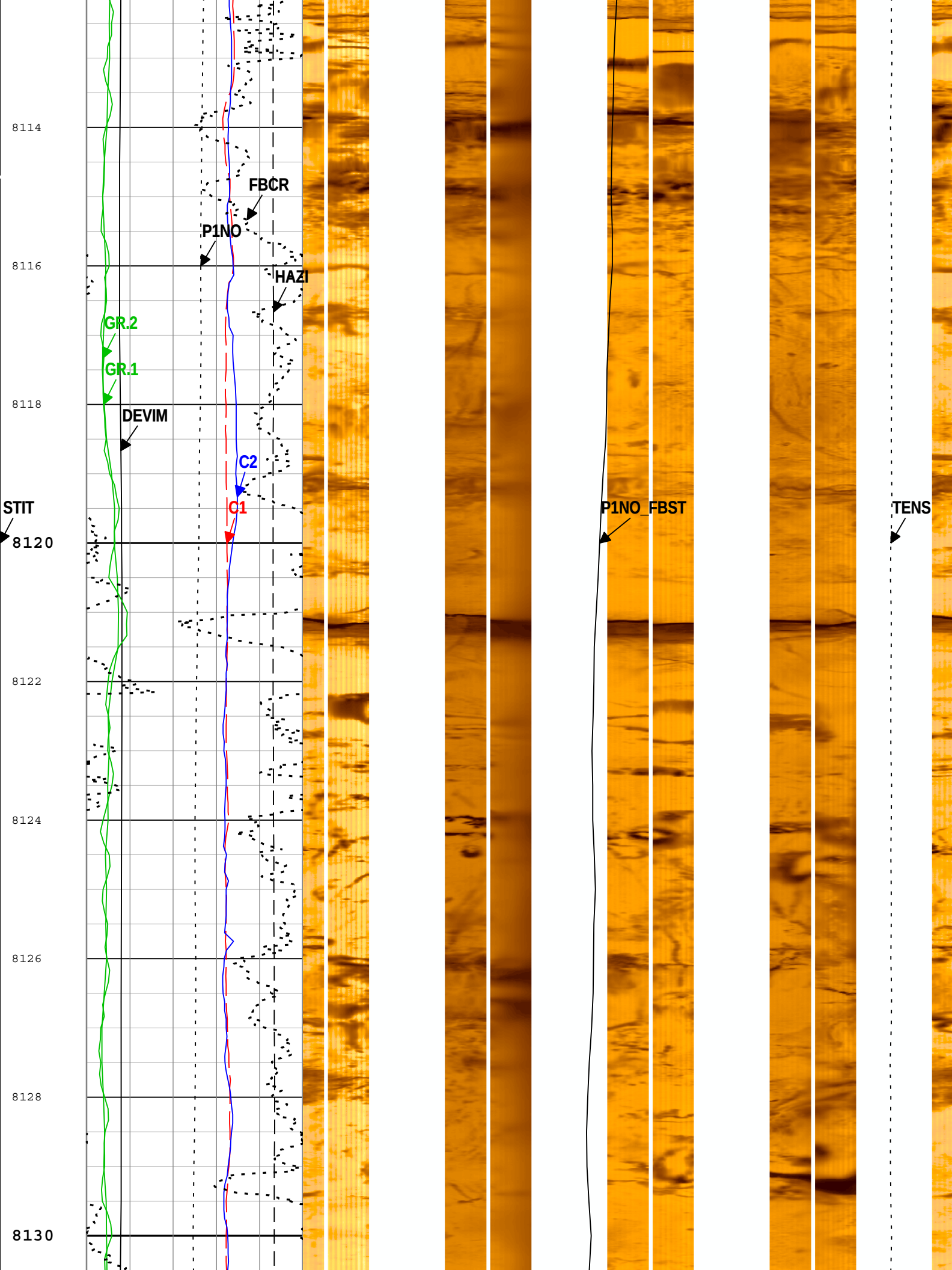












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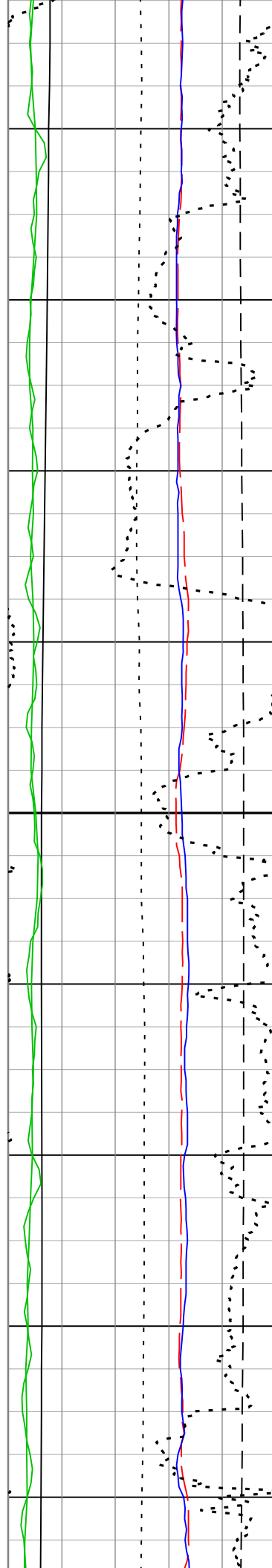
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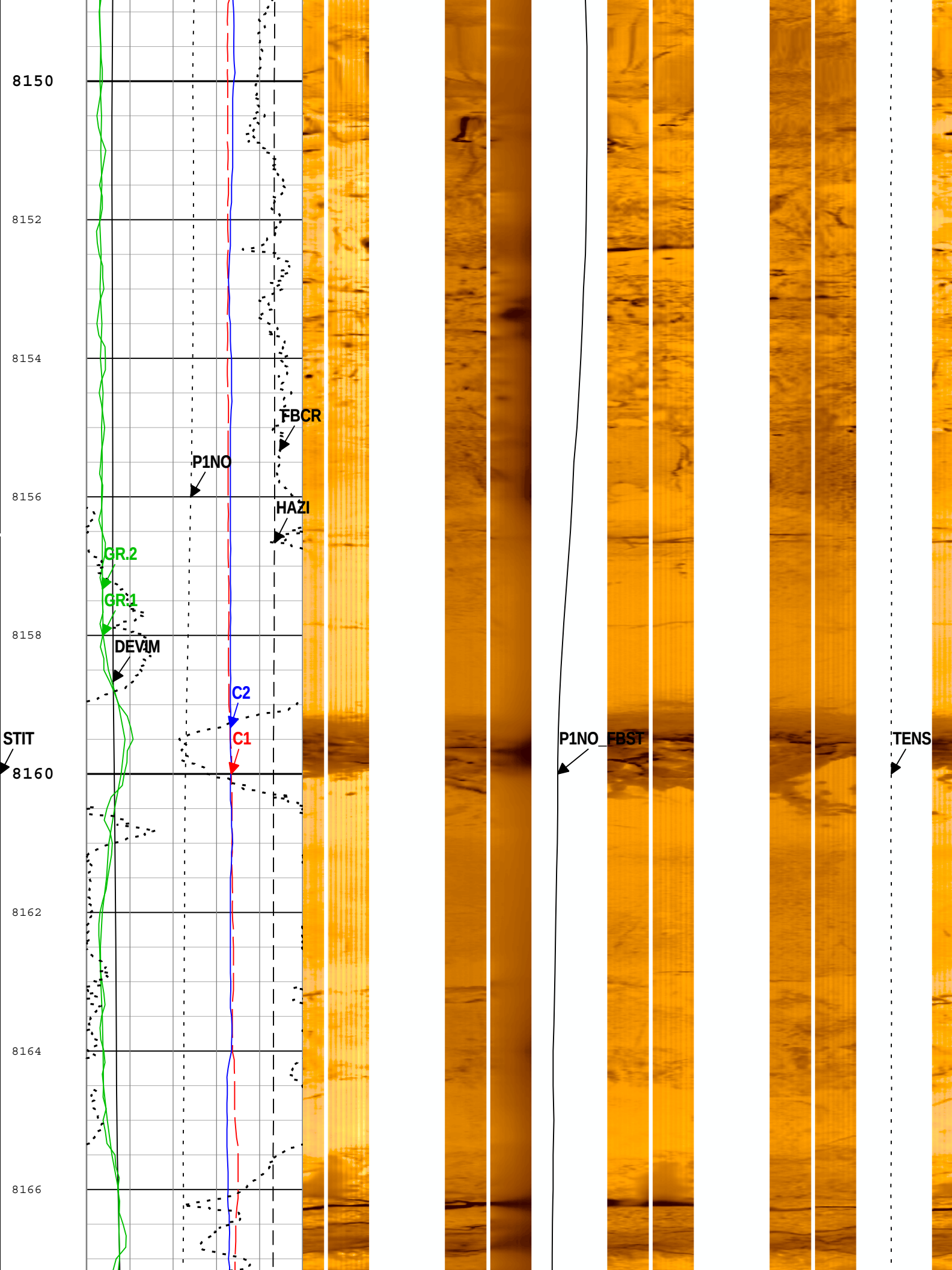
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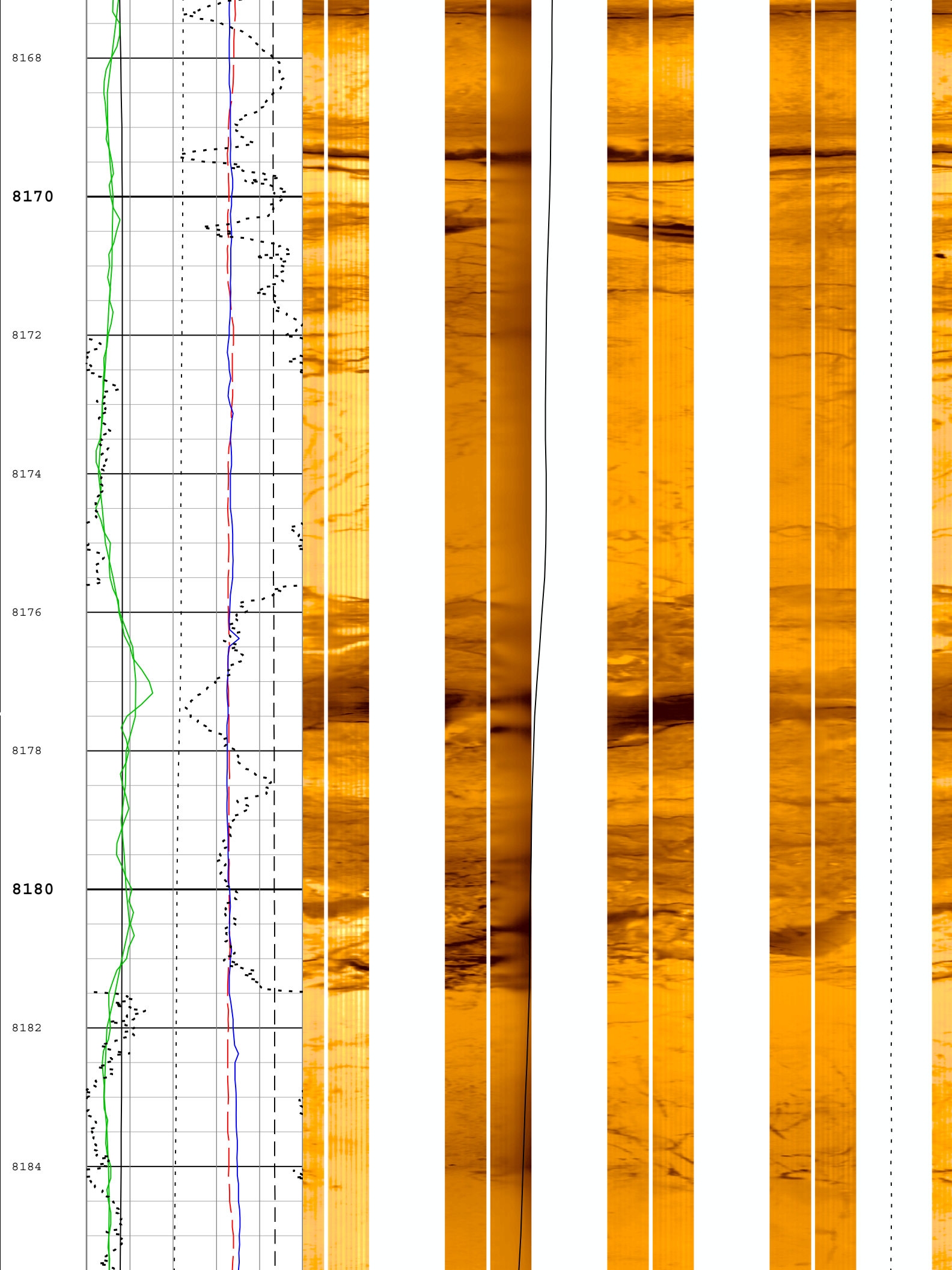
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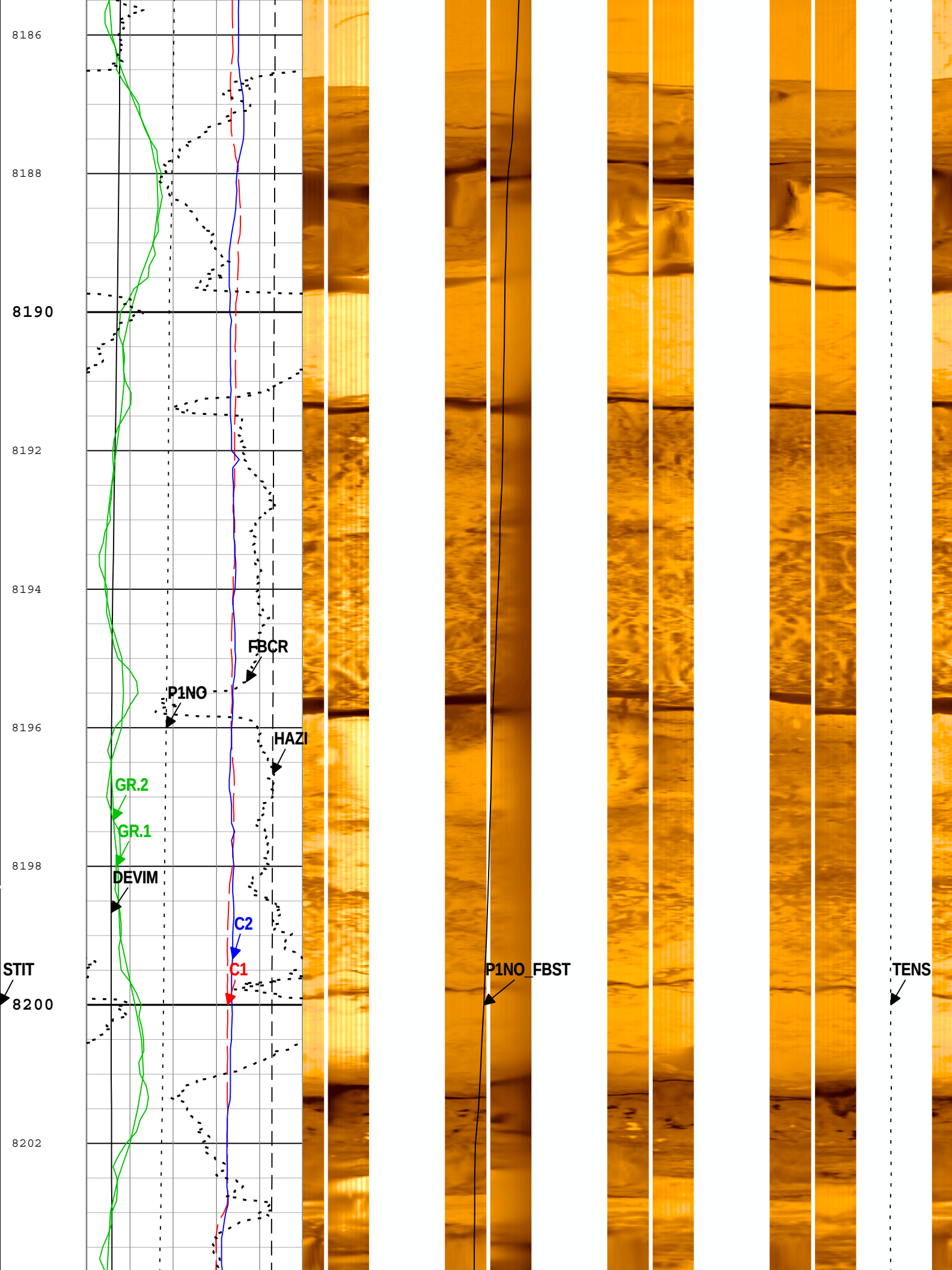
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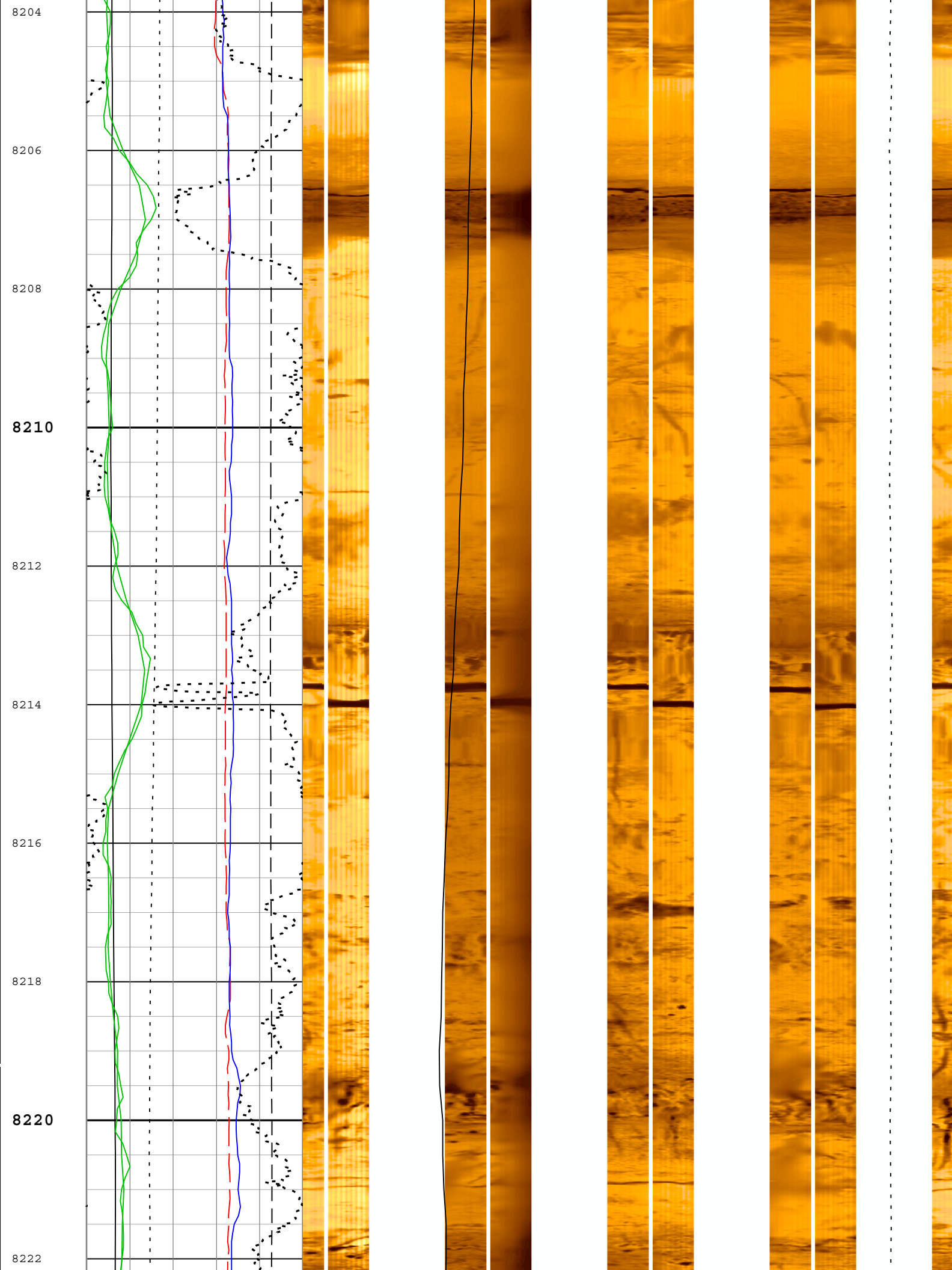
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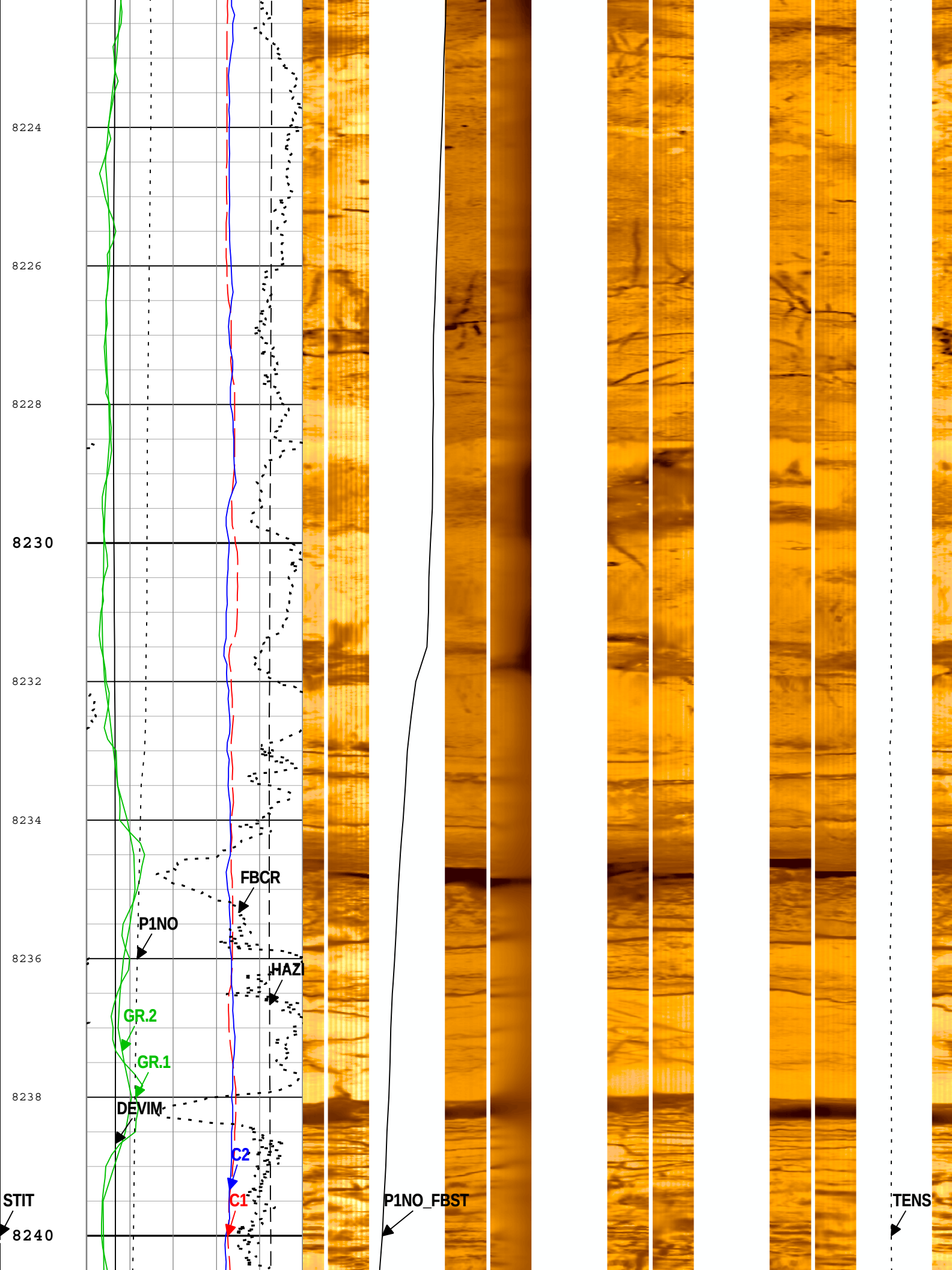












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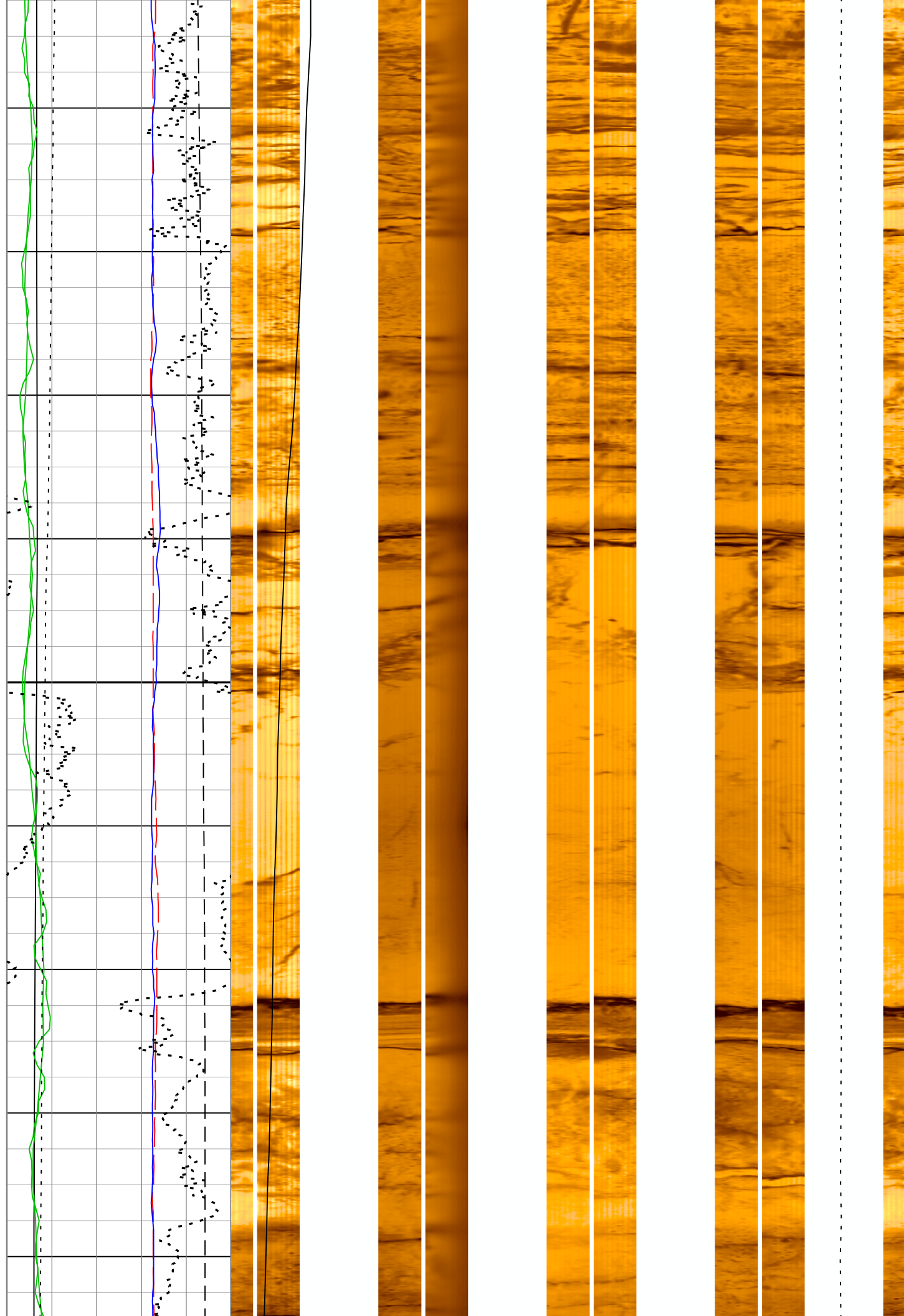
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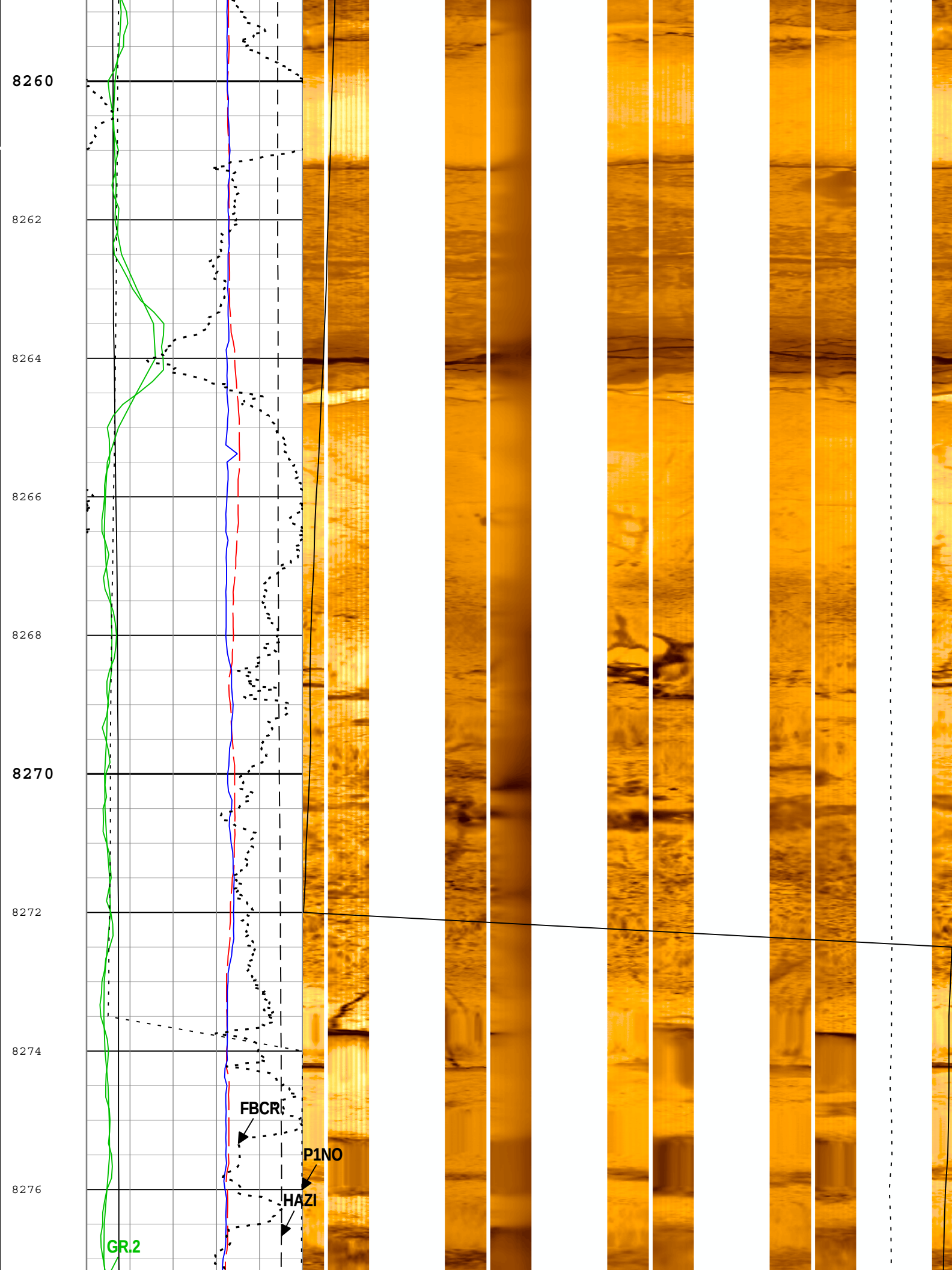
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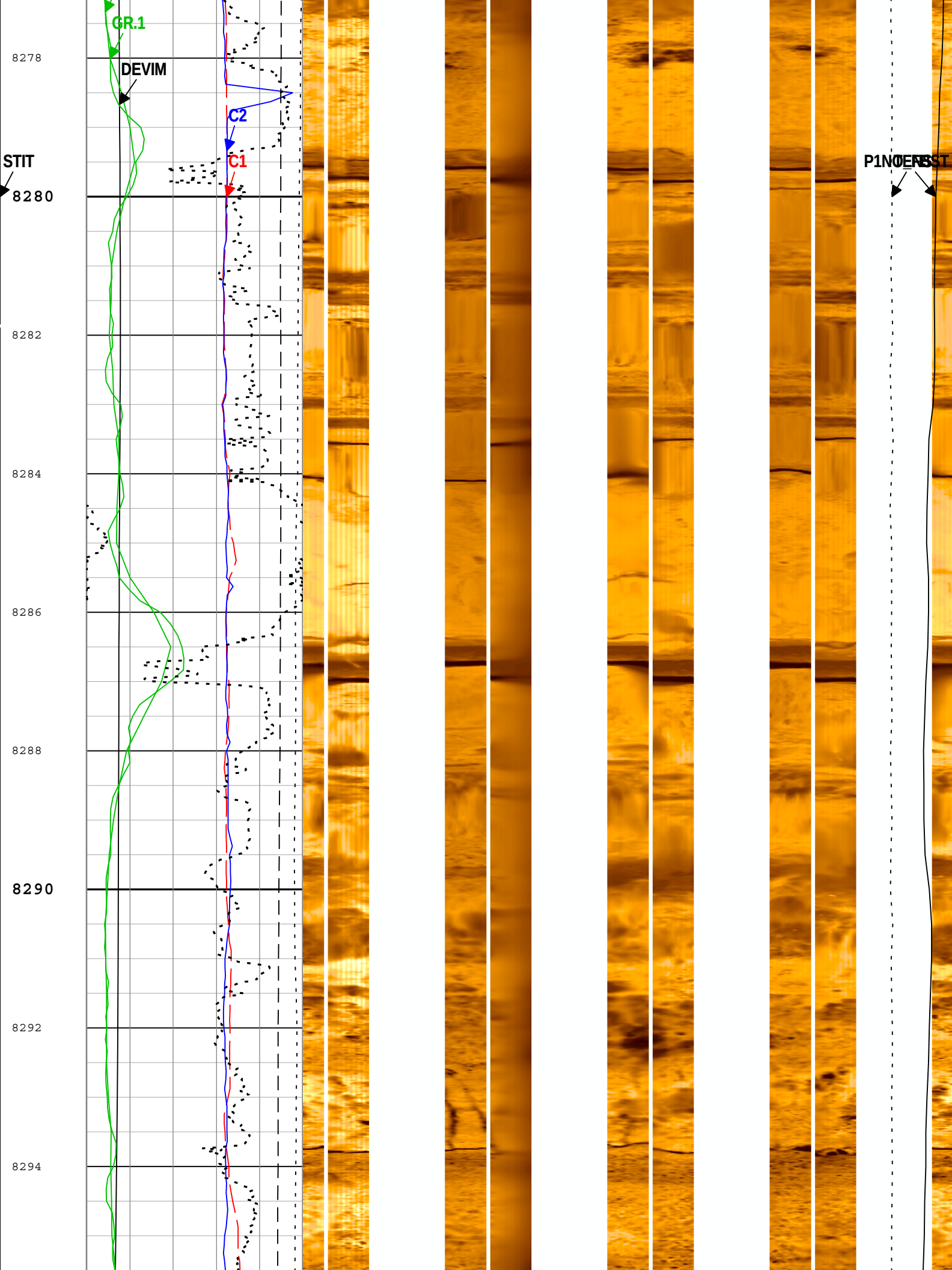
GR.2

FBCR

P1NO

HAZI





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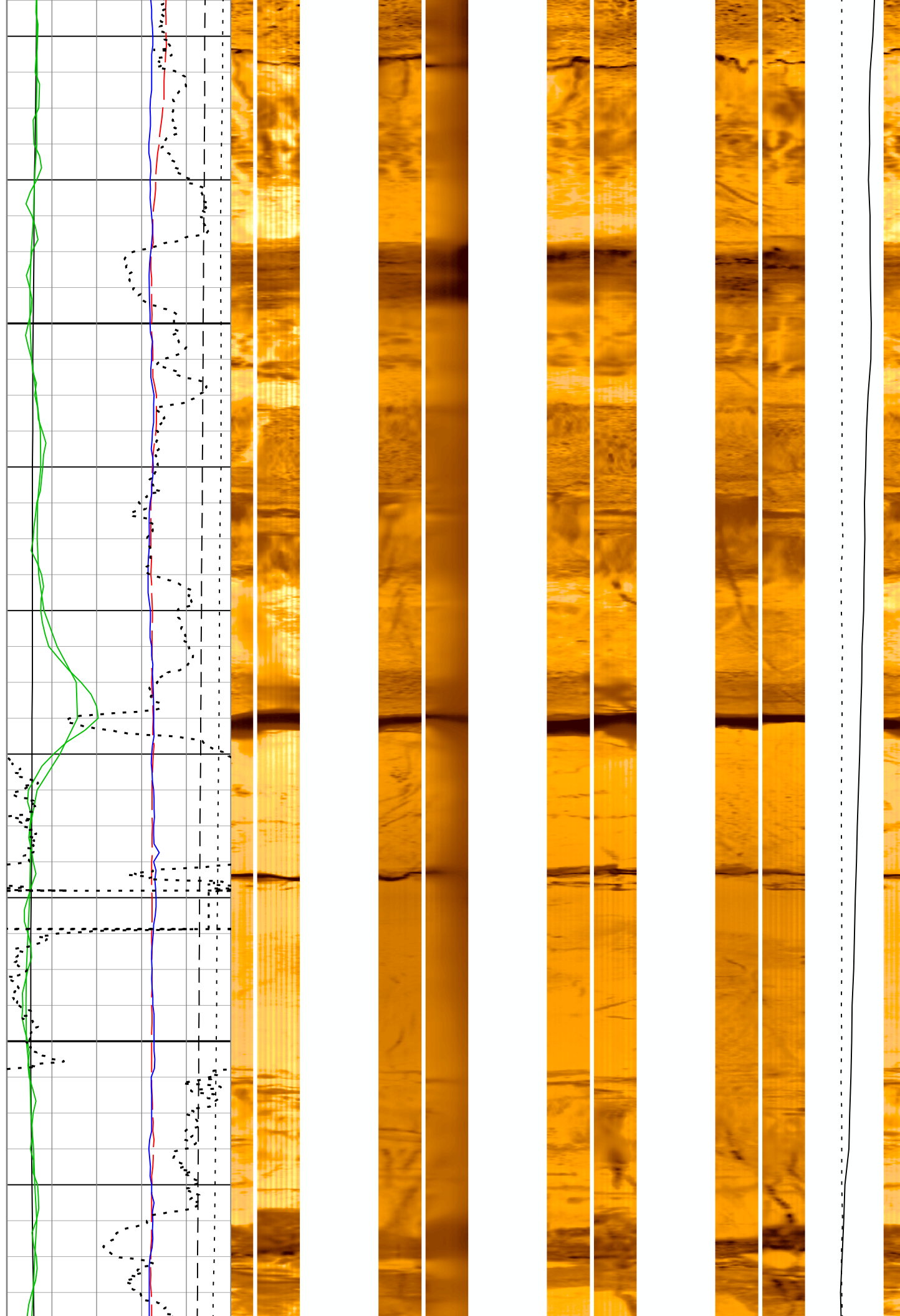
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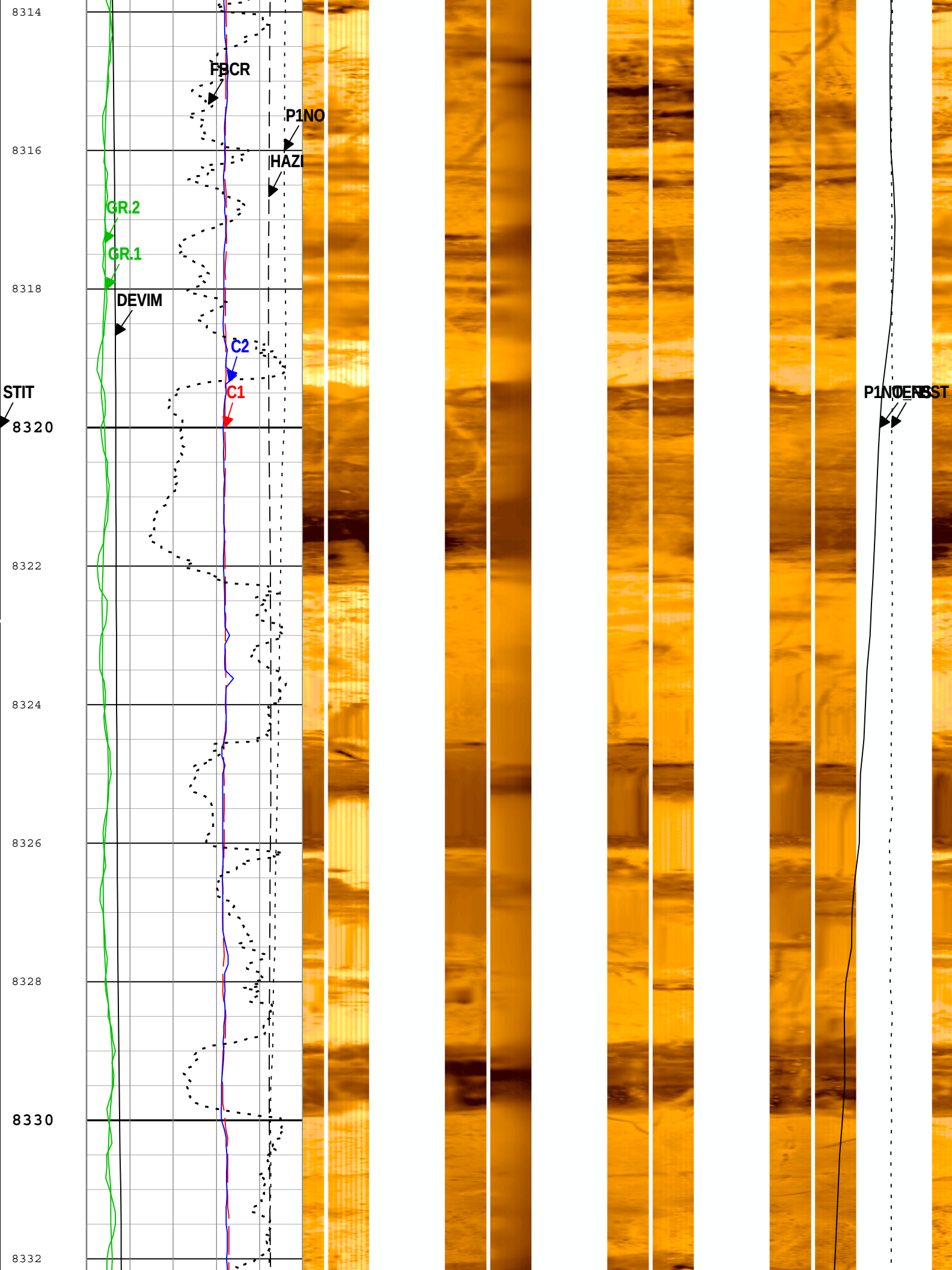
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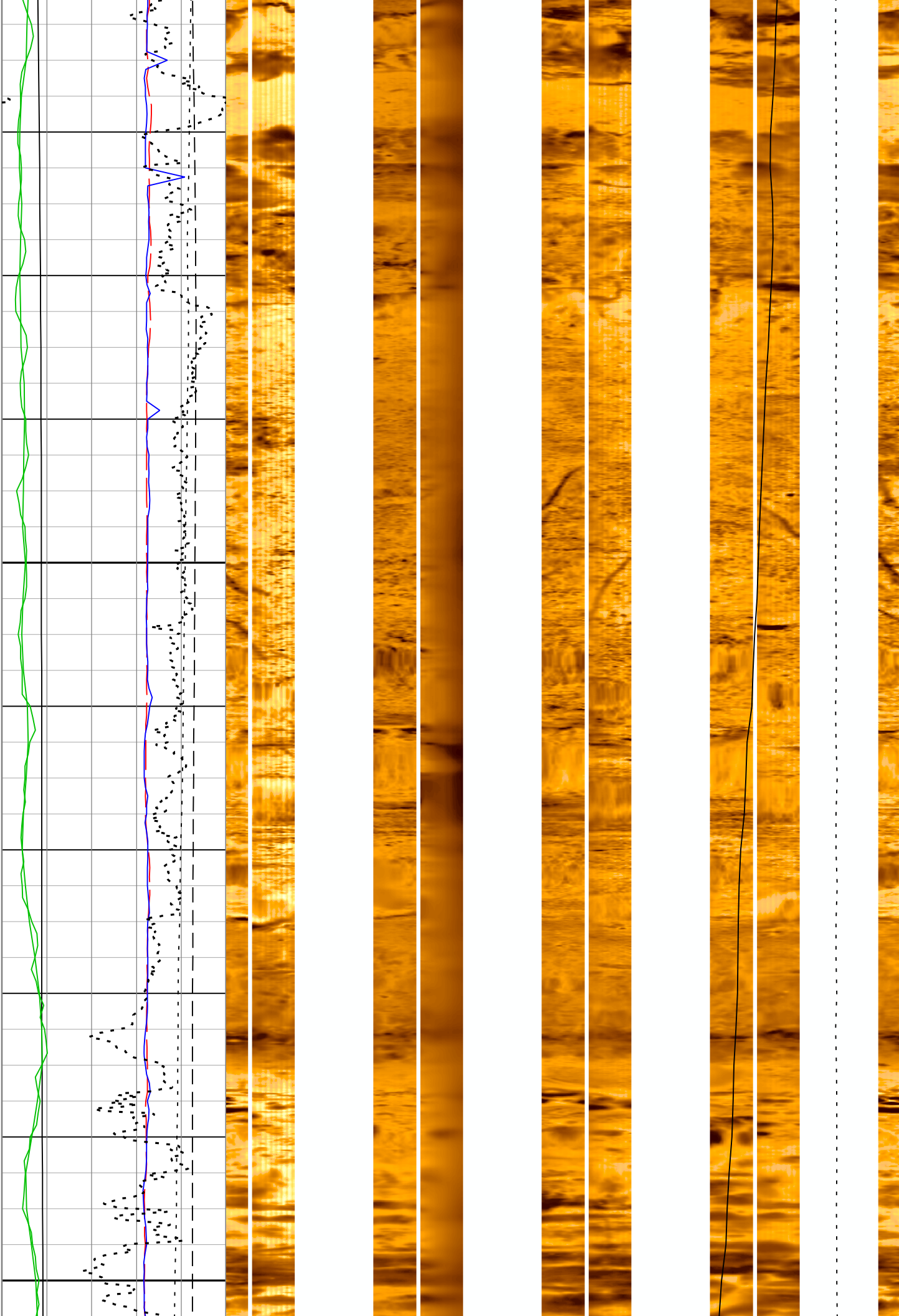
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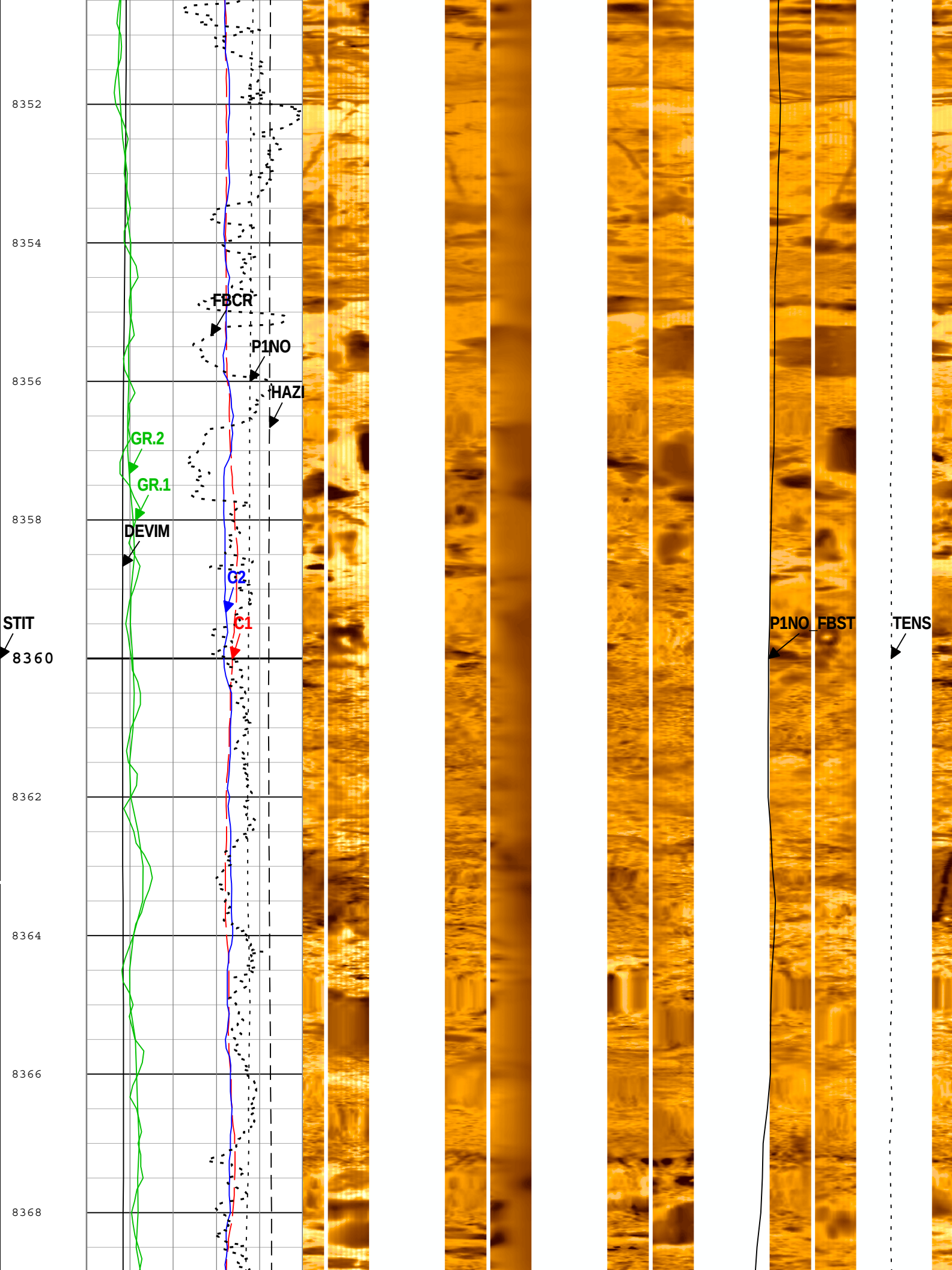
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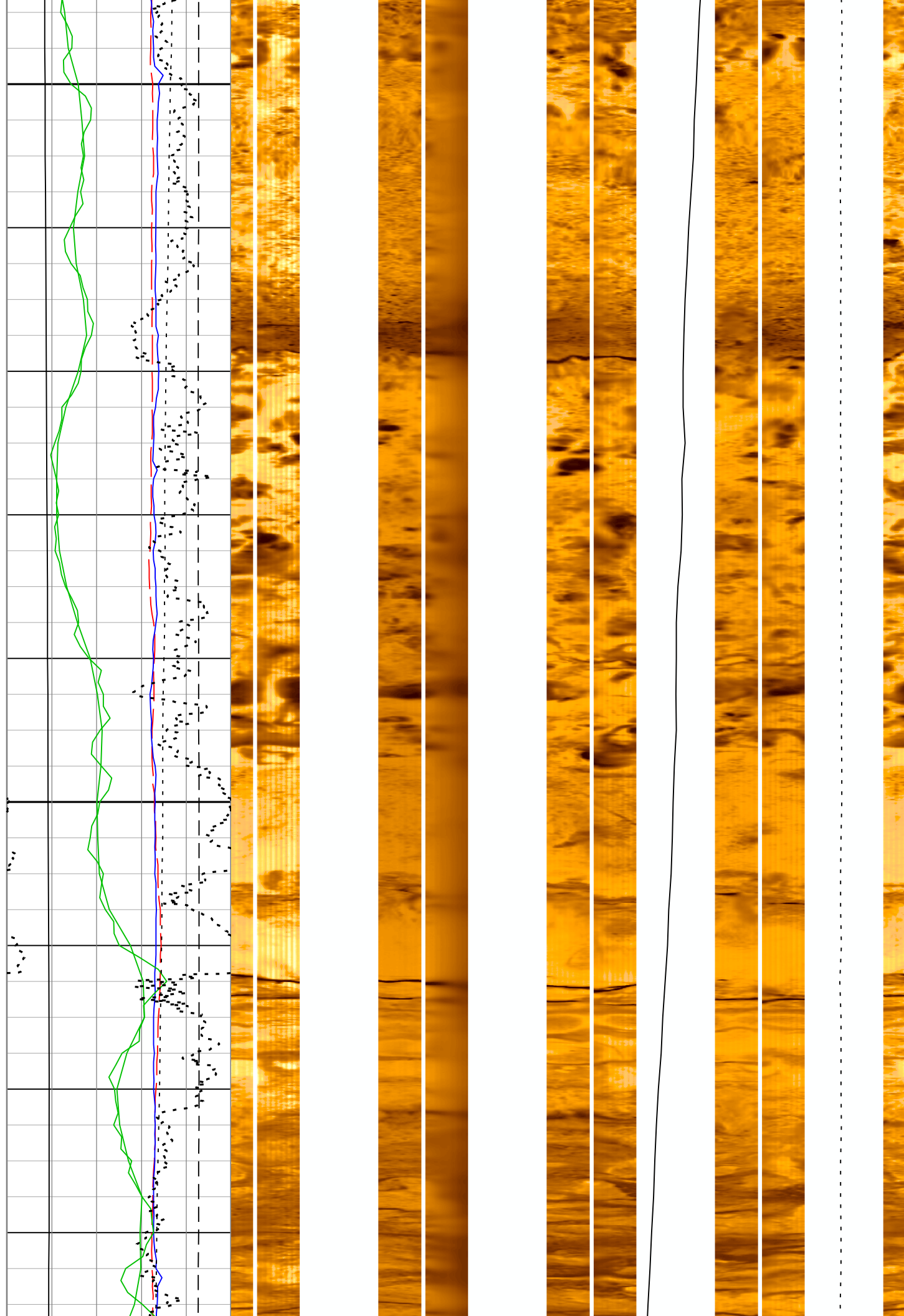
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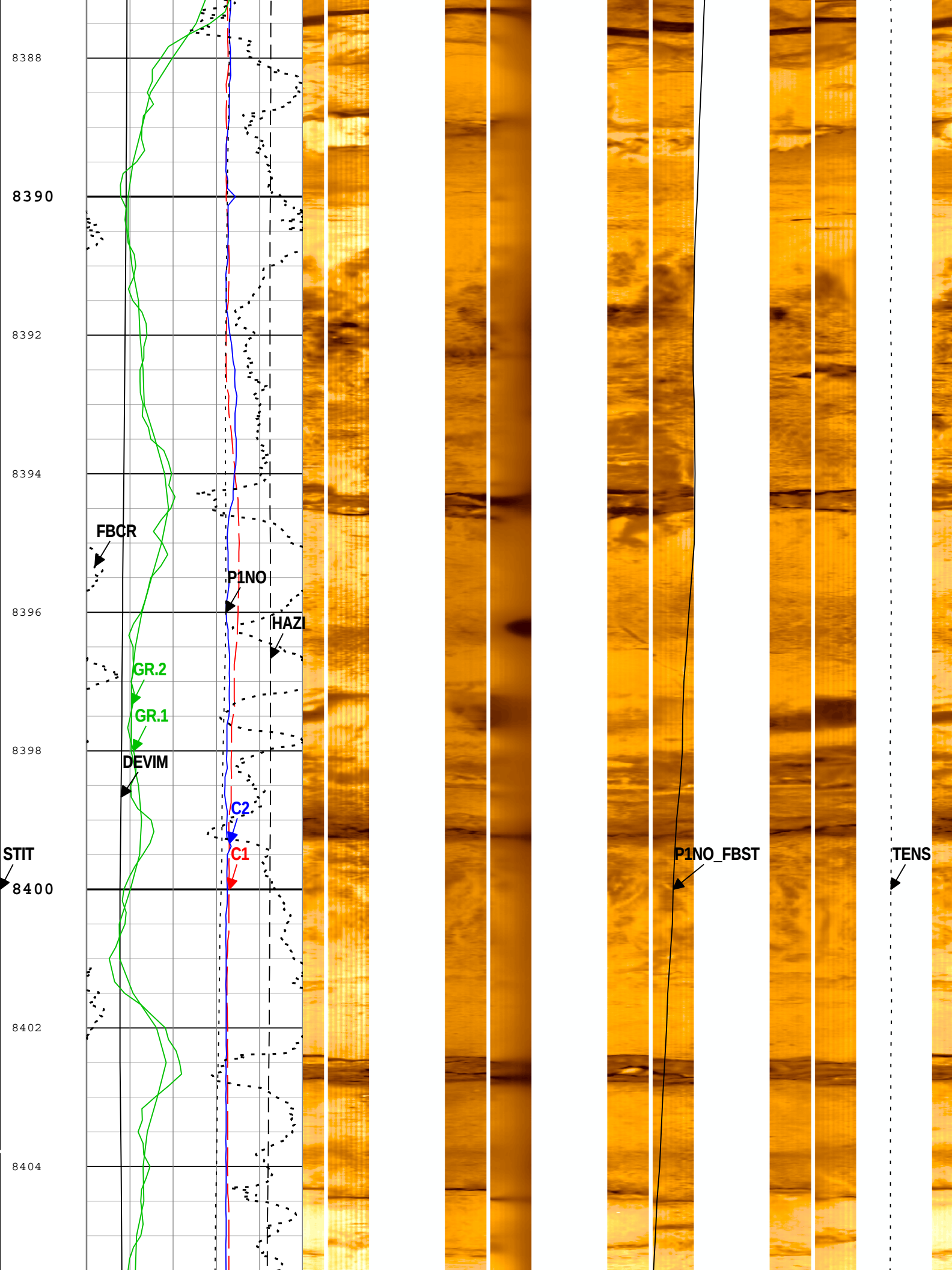
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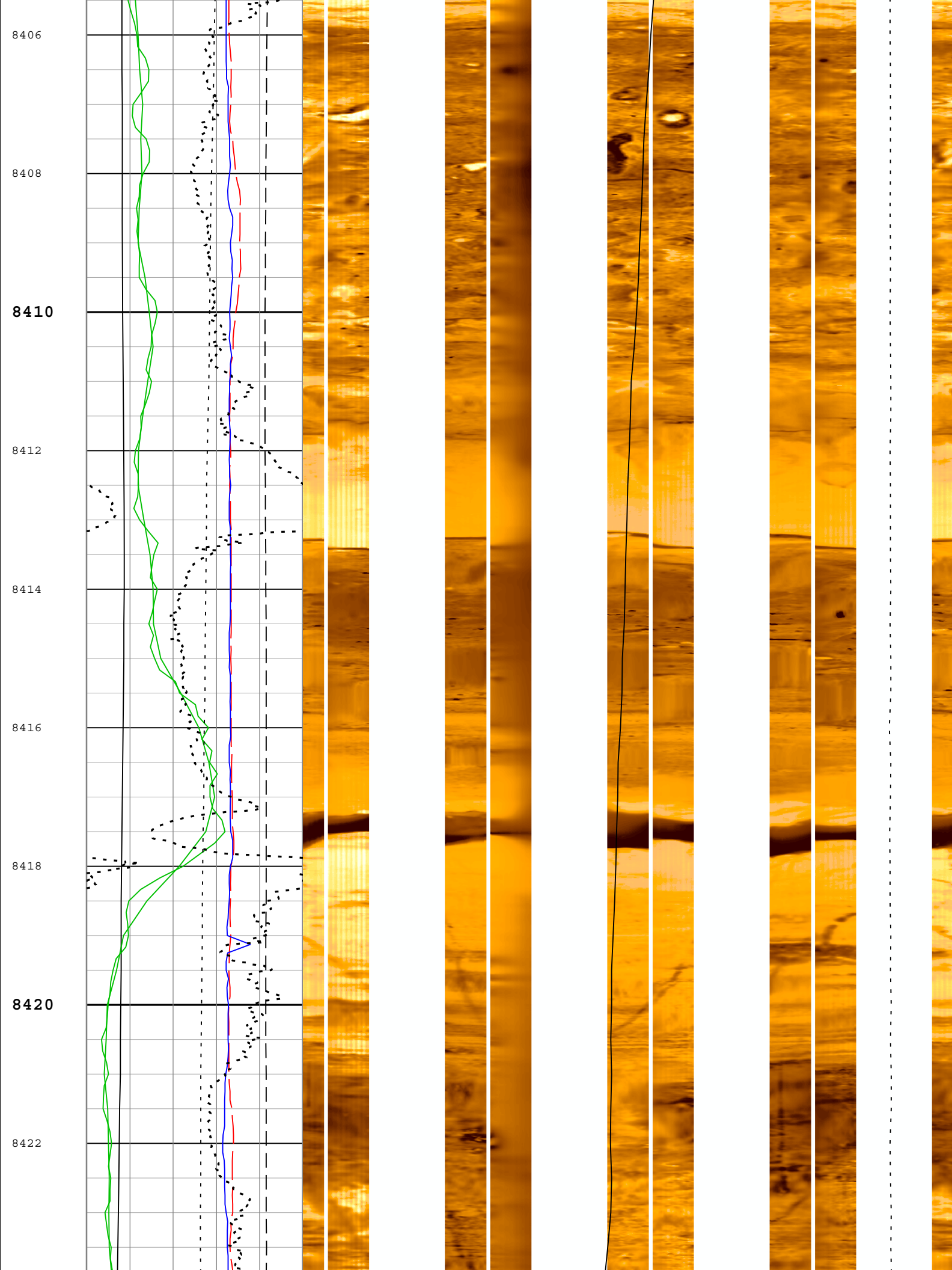
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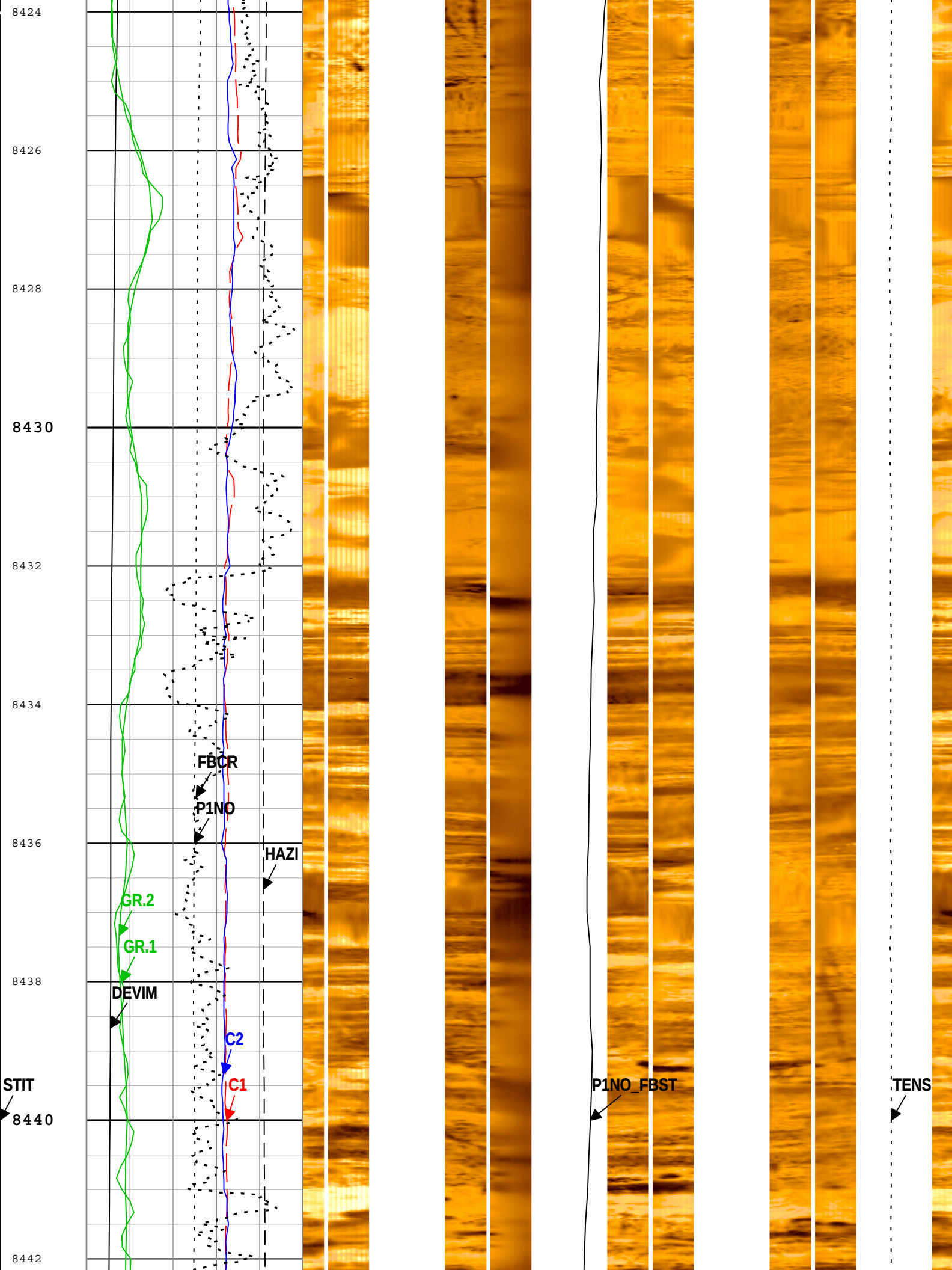
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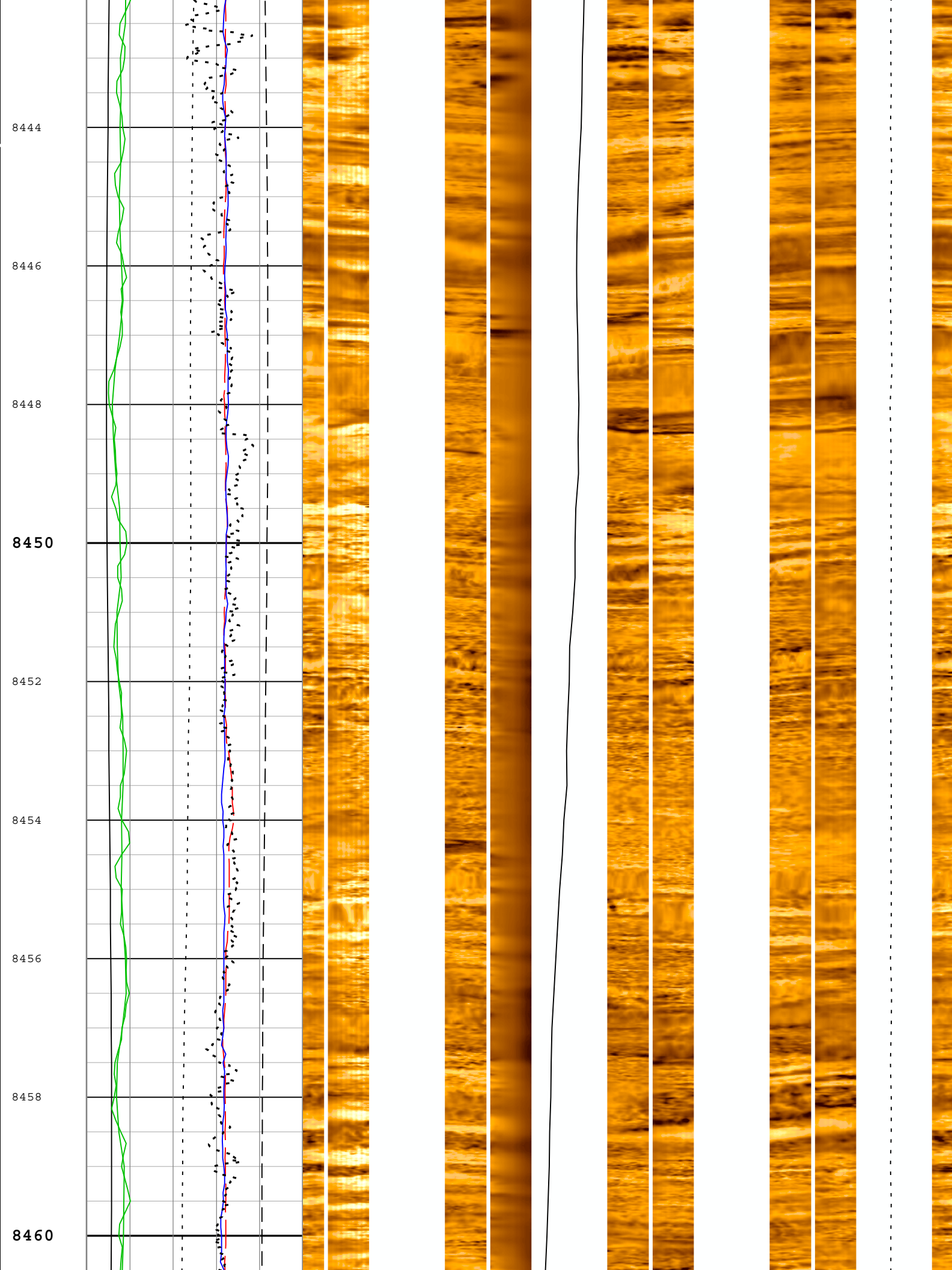
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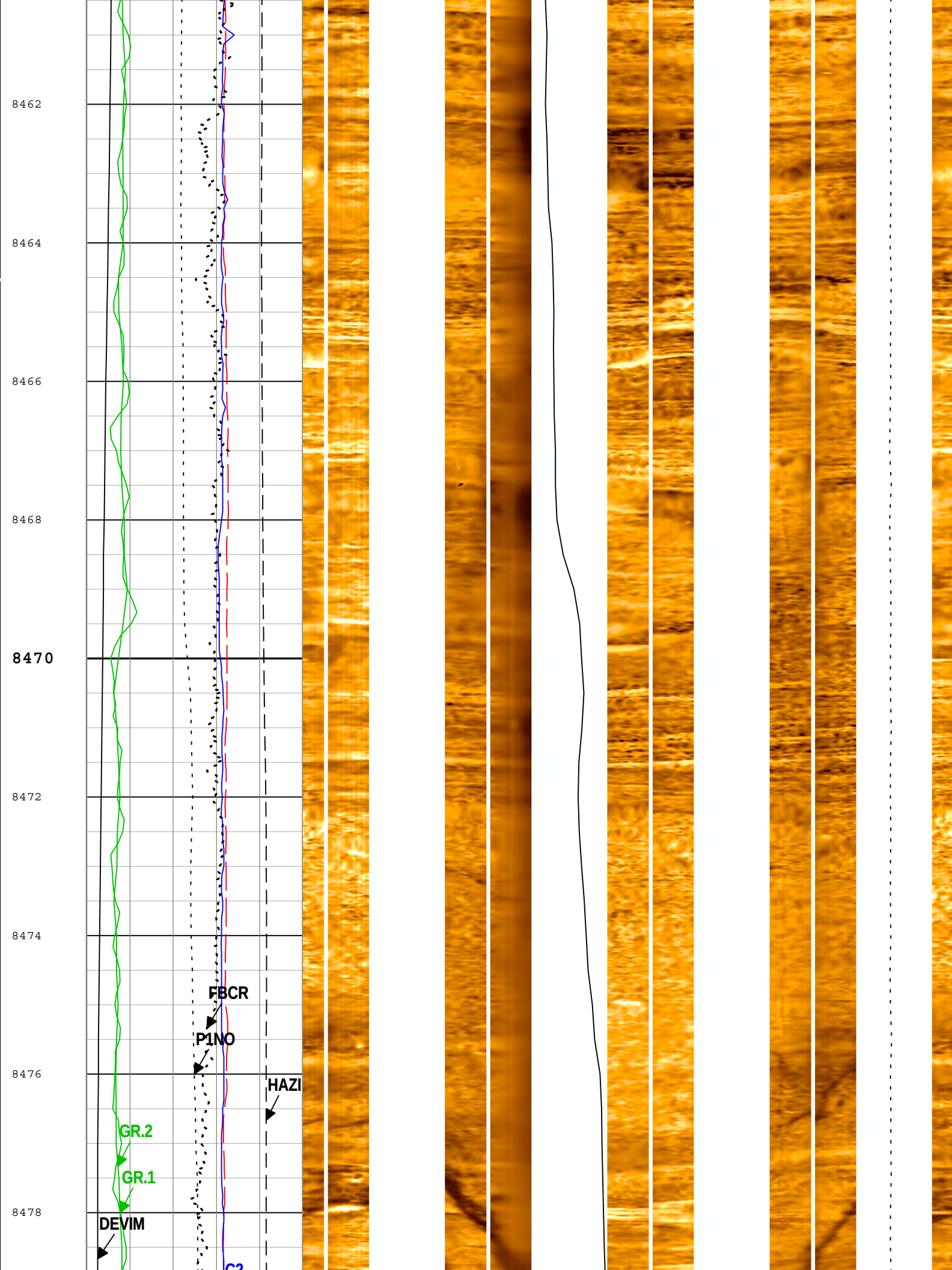


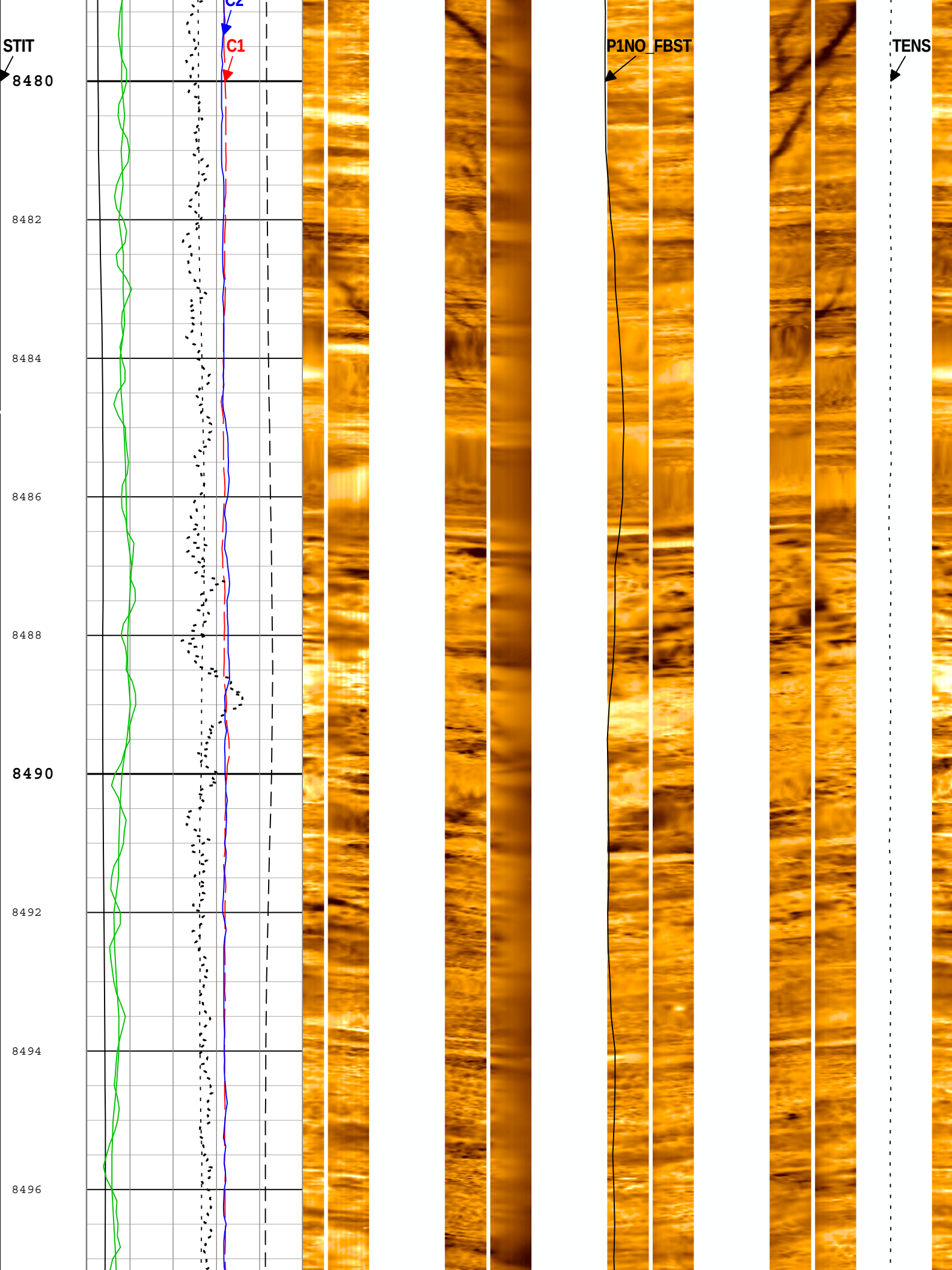












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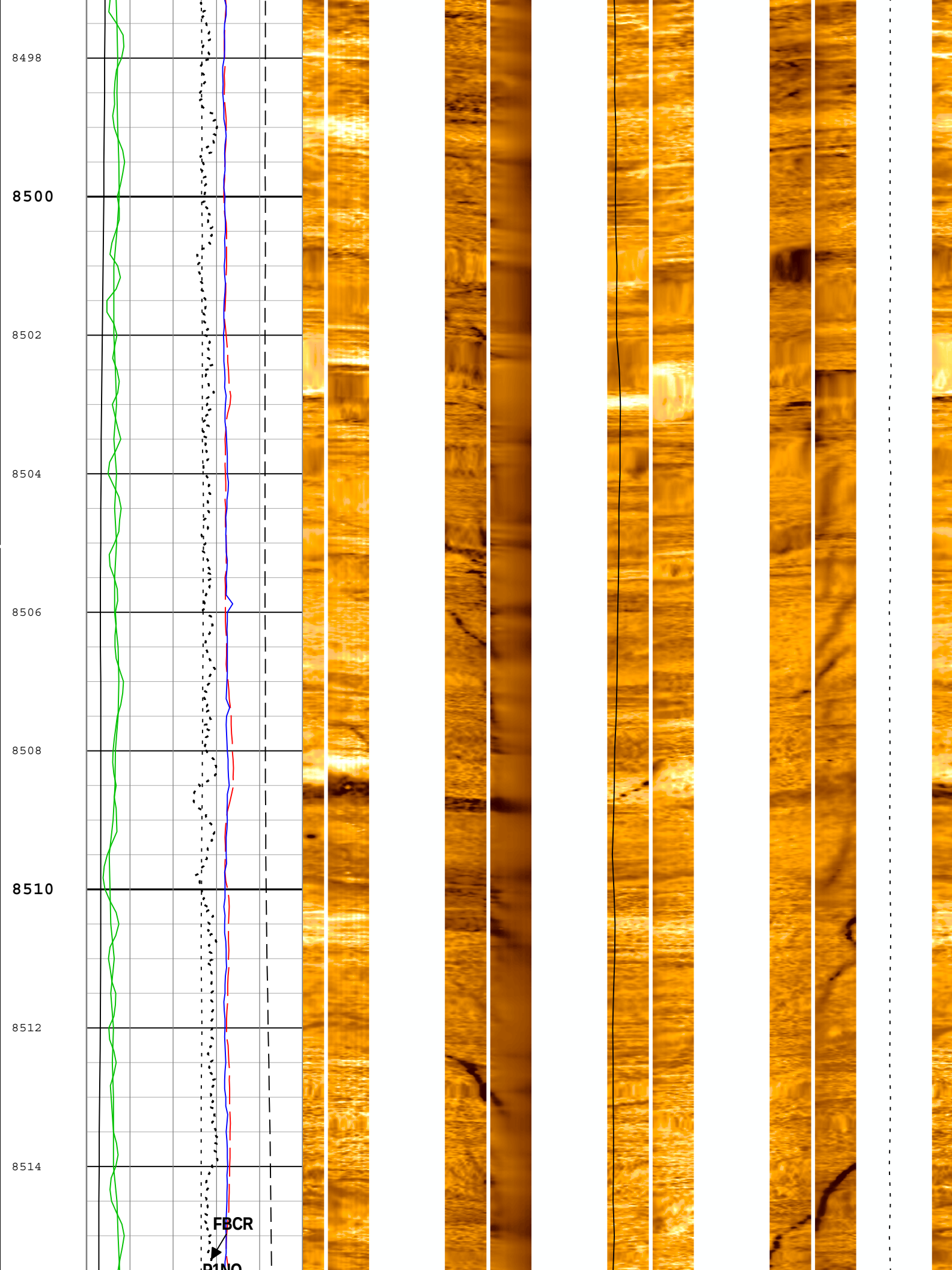
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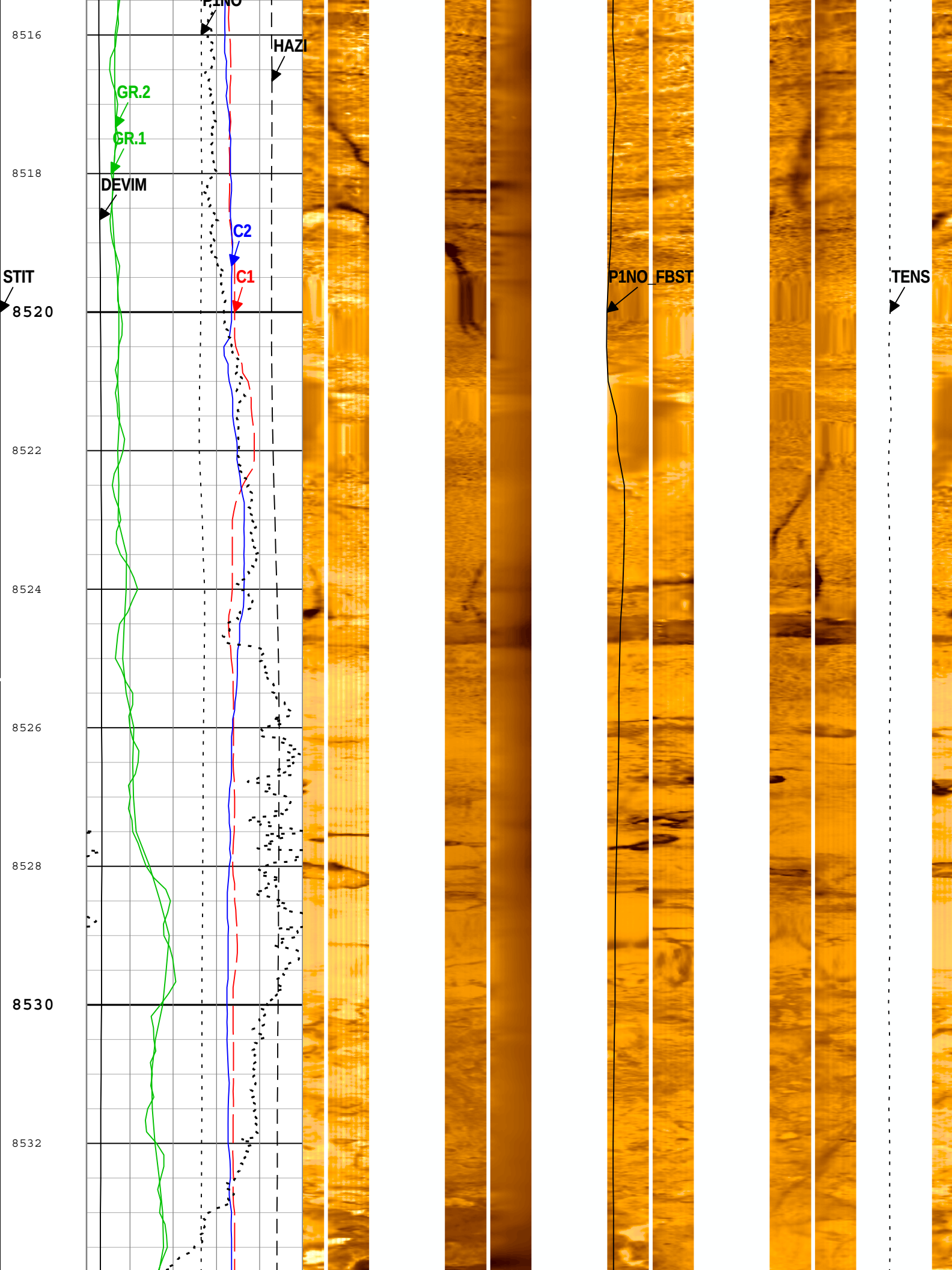
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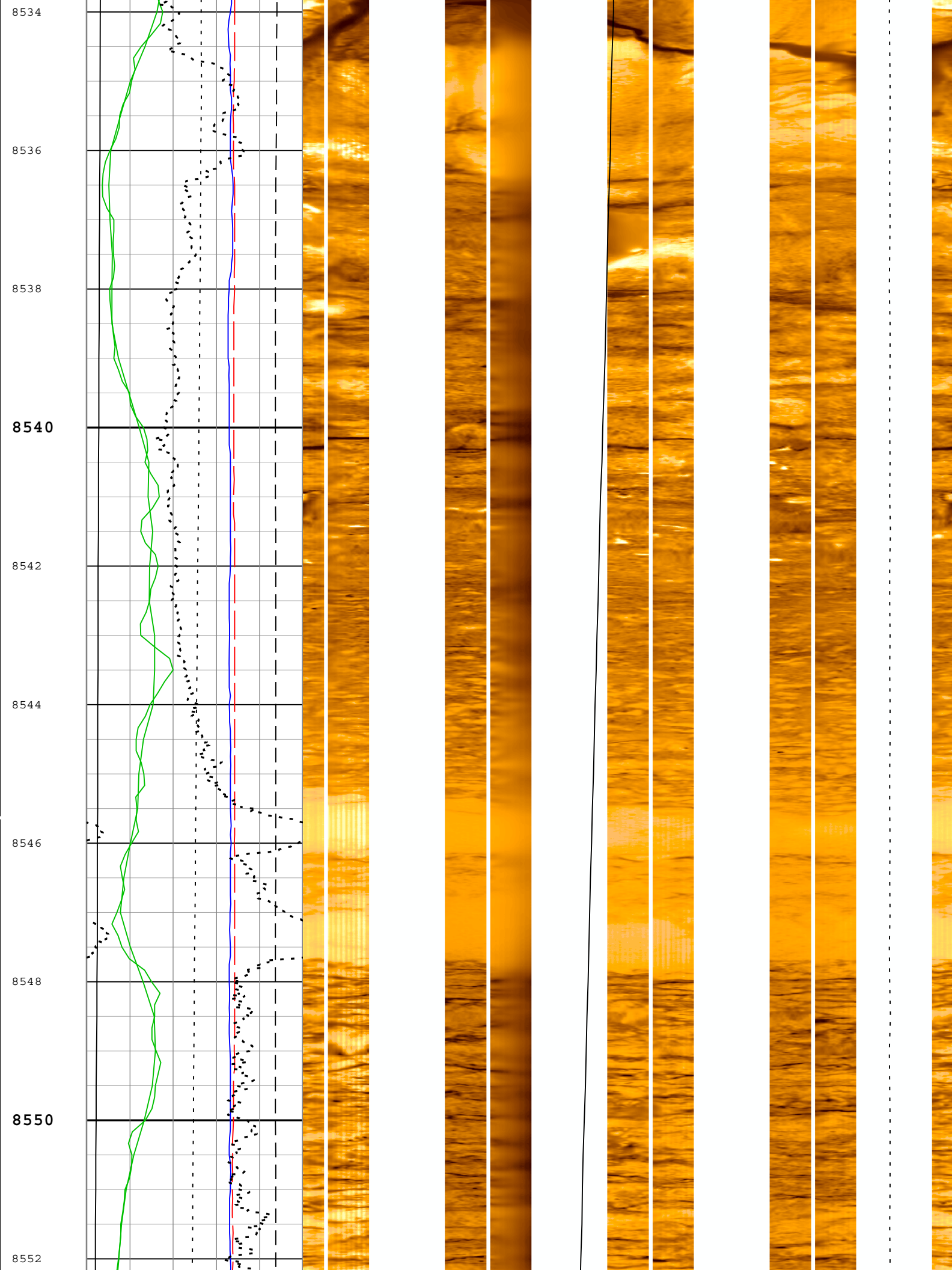
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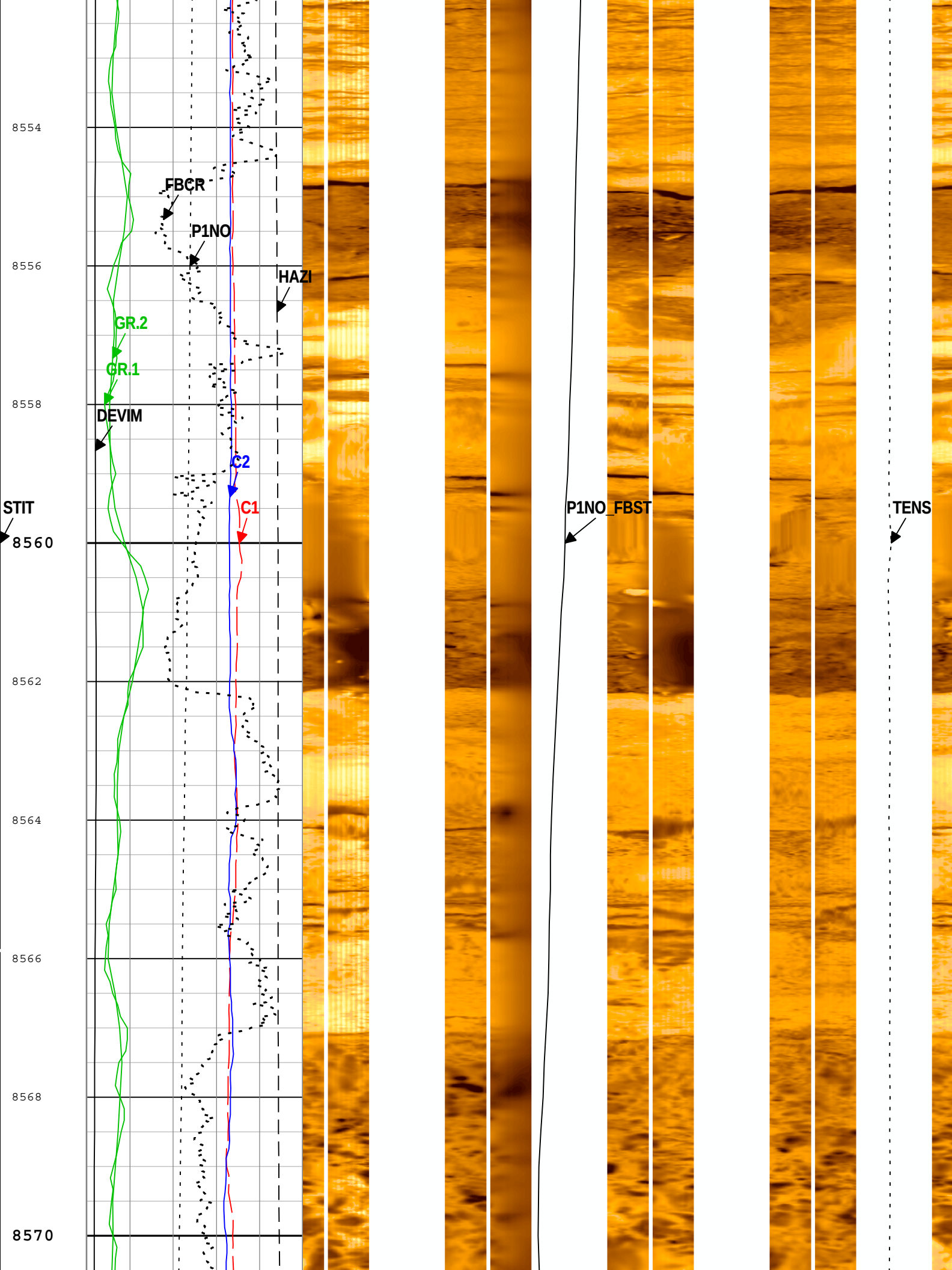
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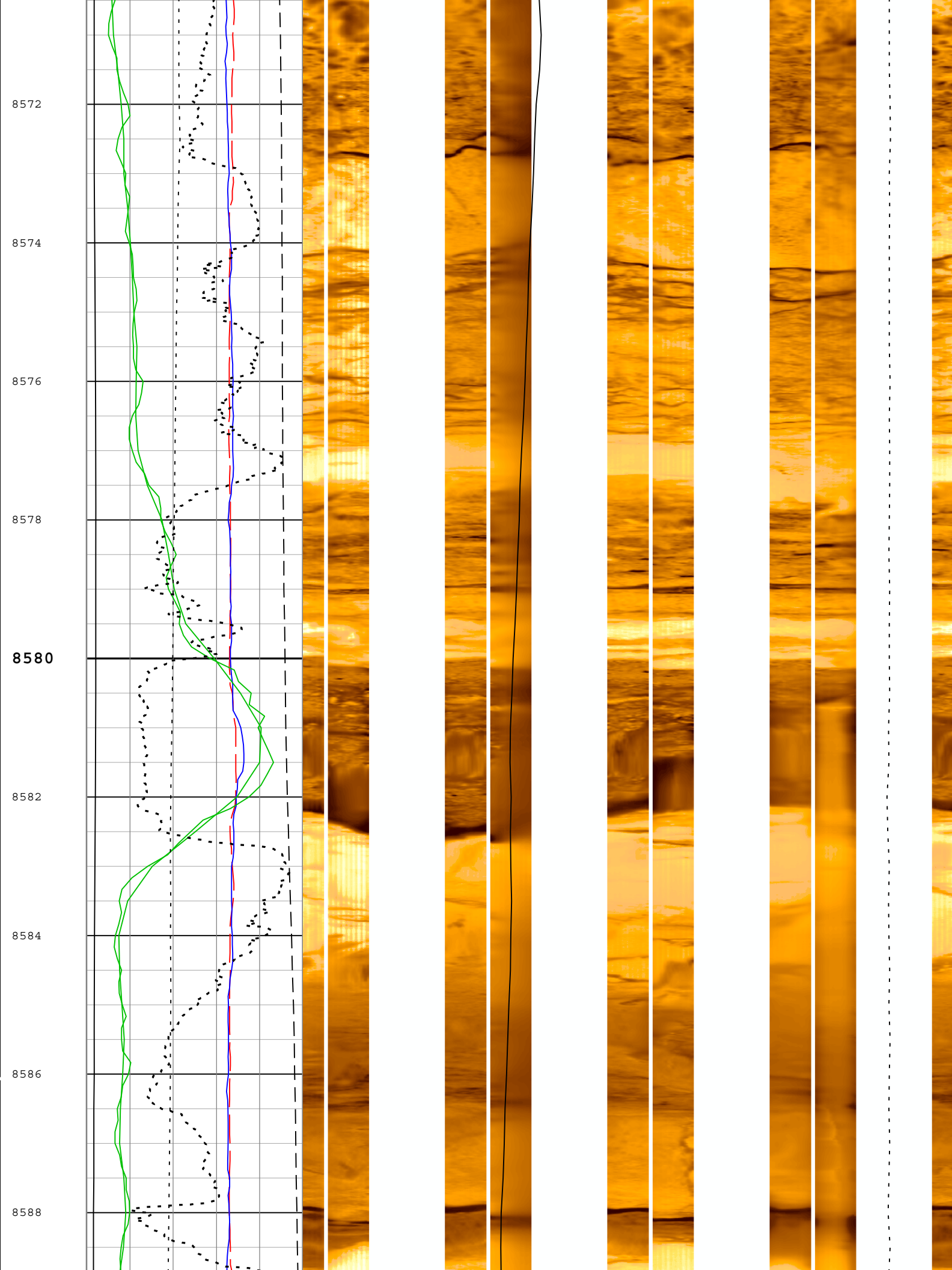
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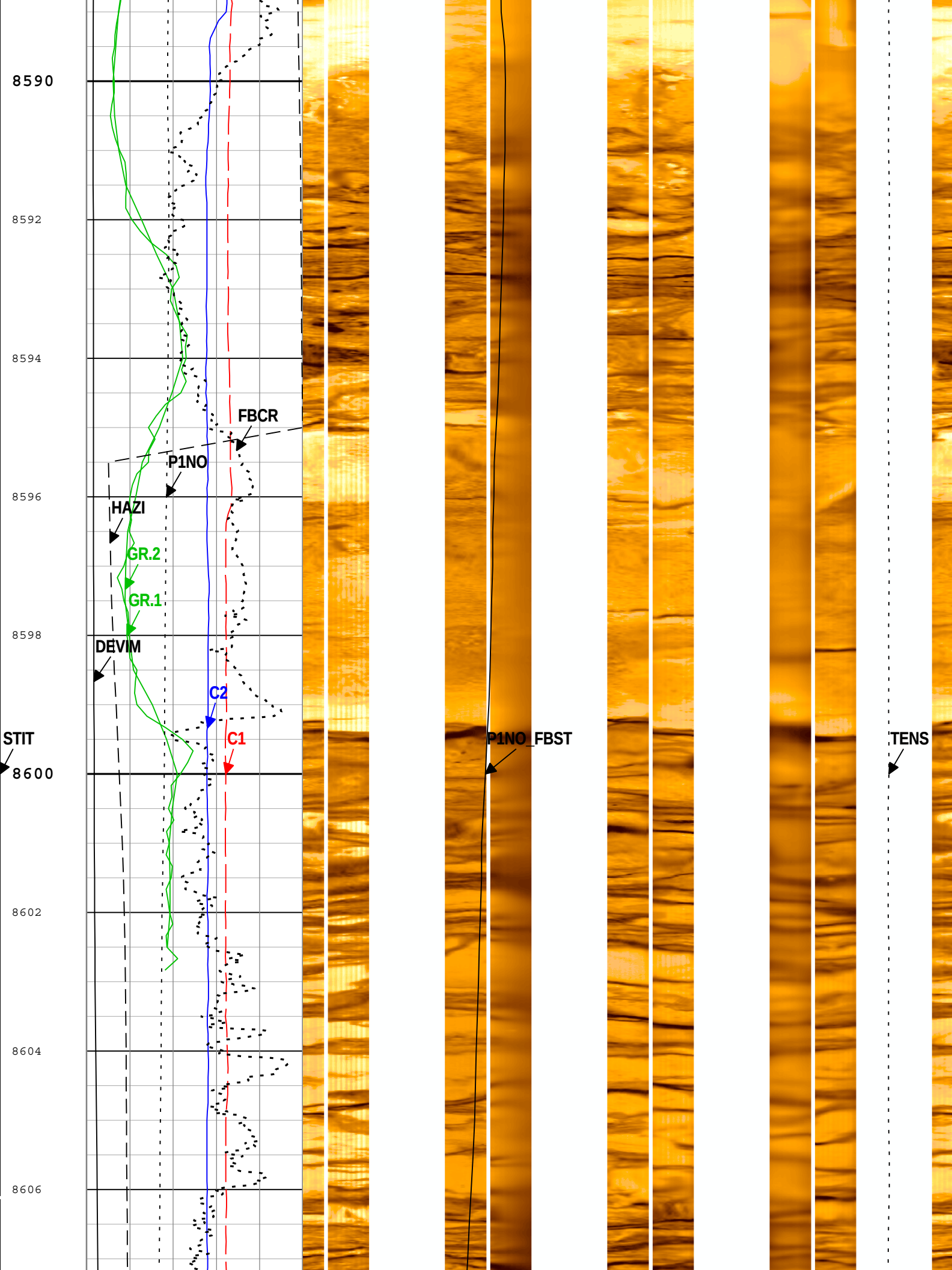












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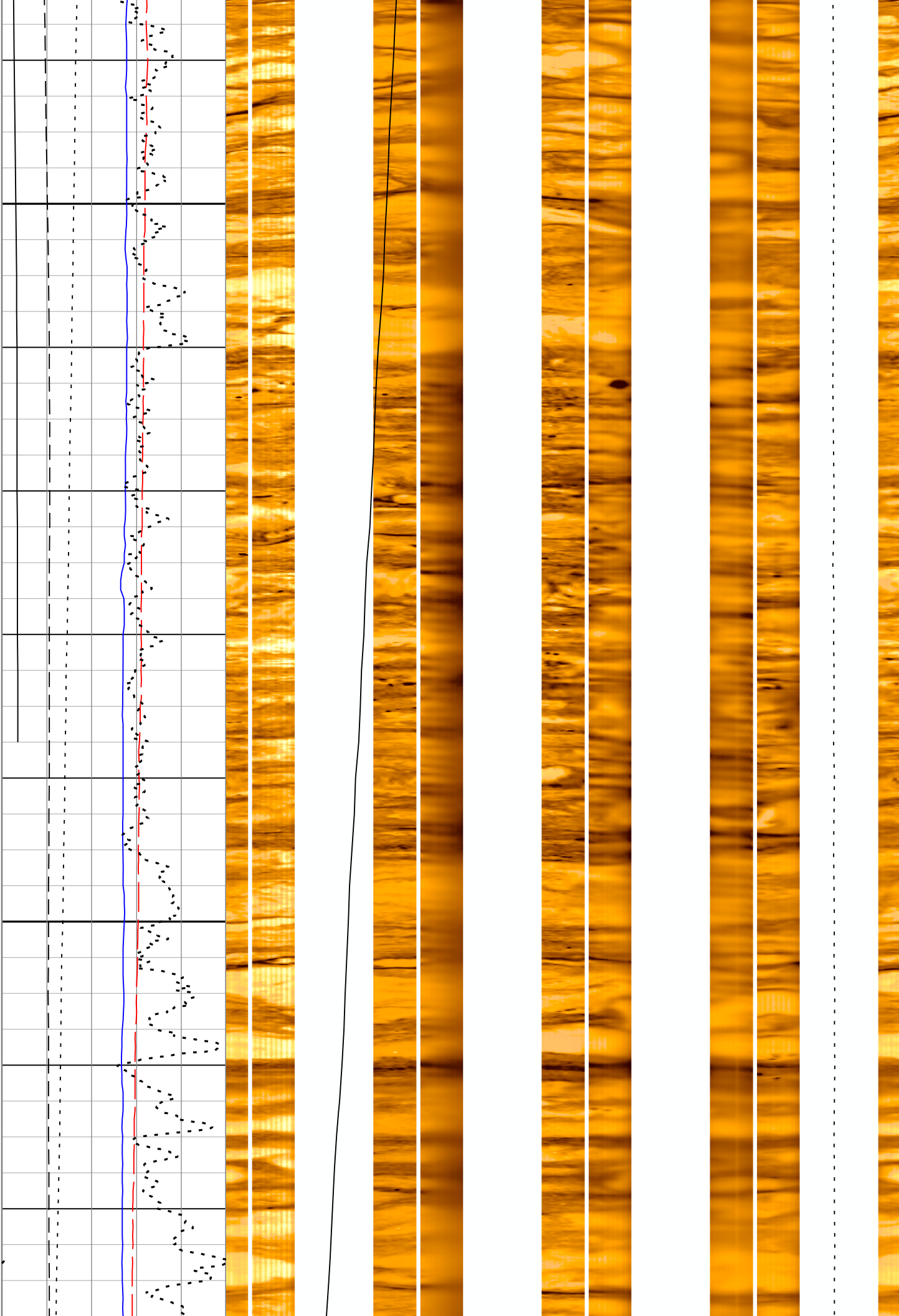
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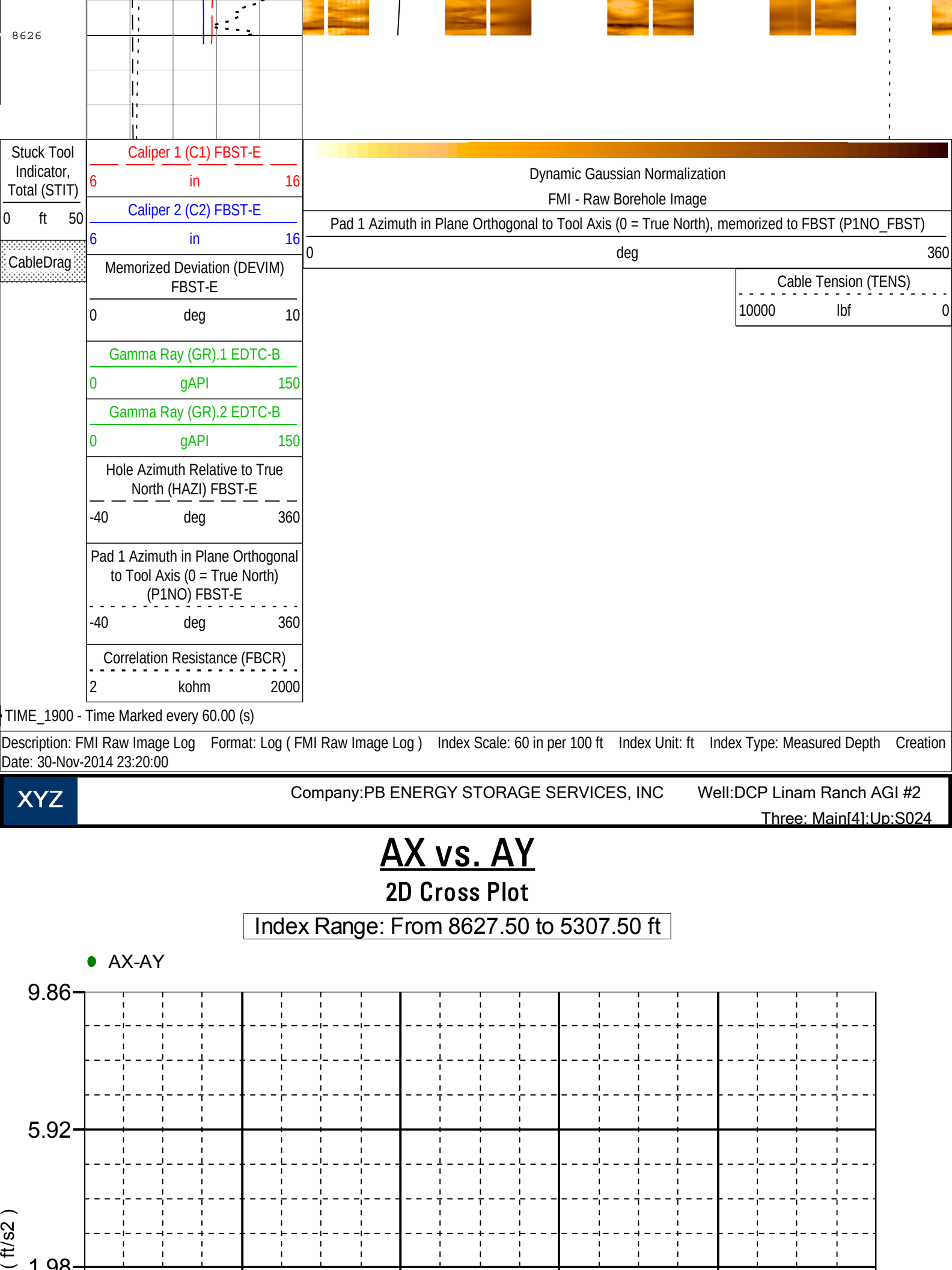
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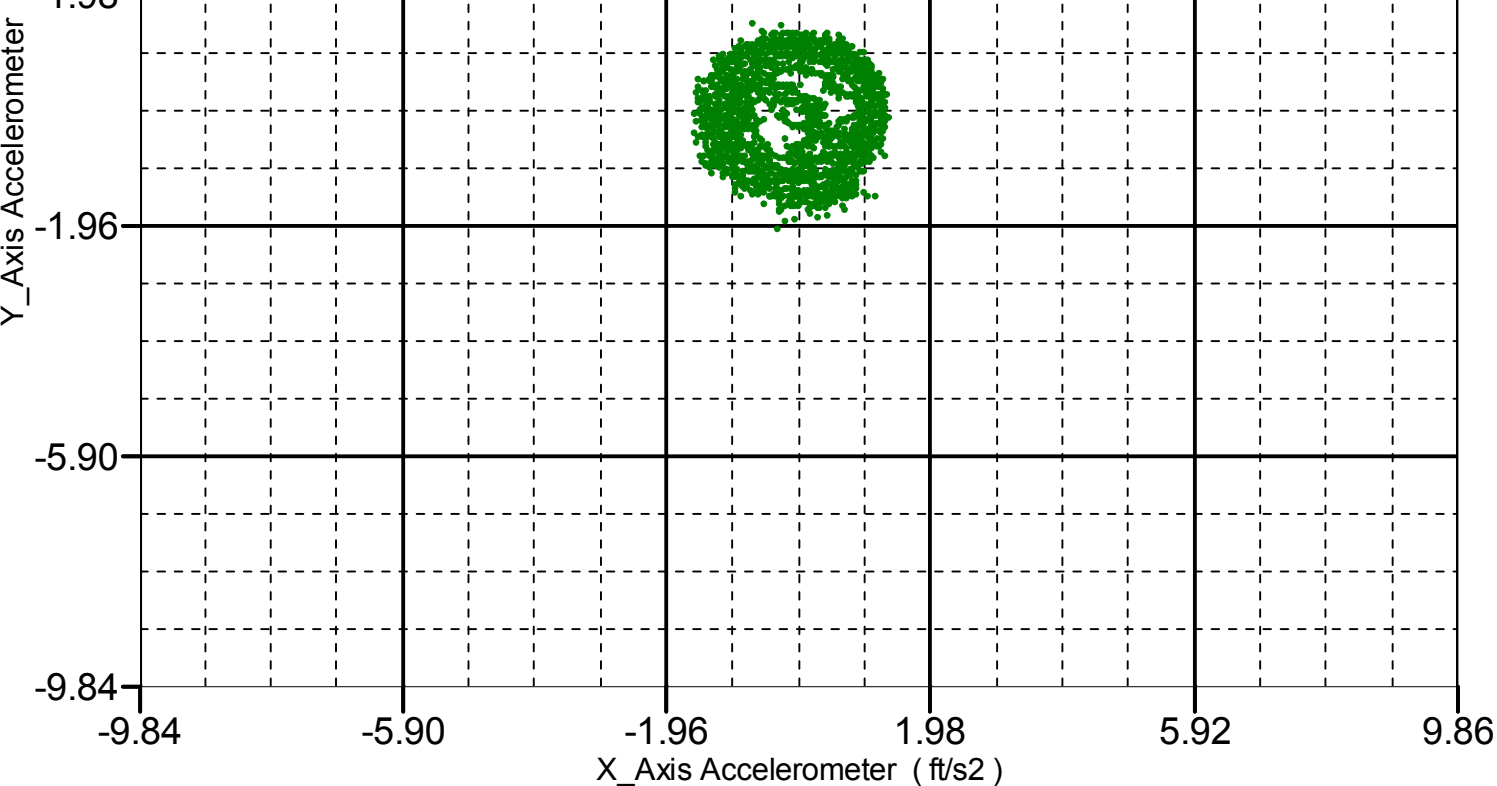
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XYZ

Company:PB ENERGY STORAGE SERVICES, INC

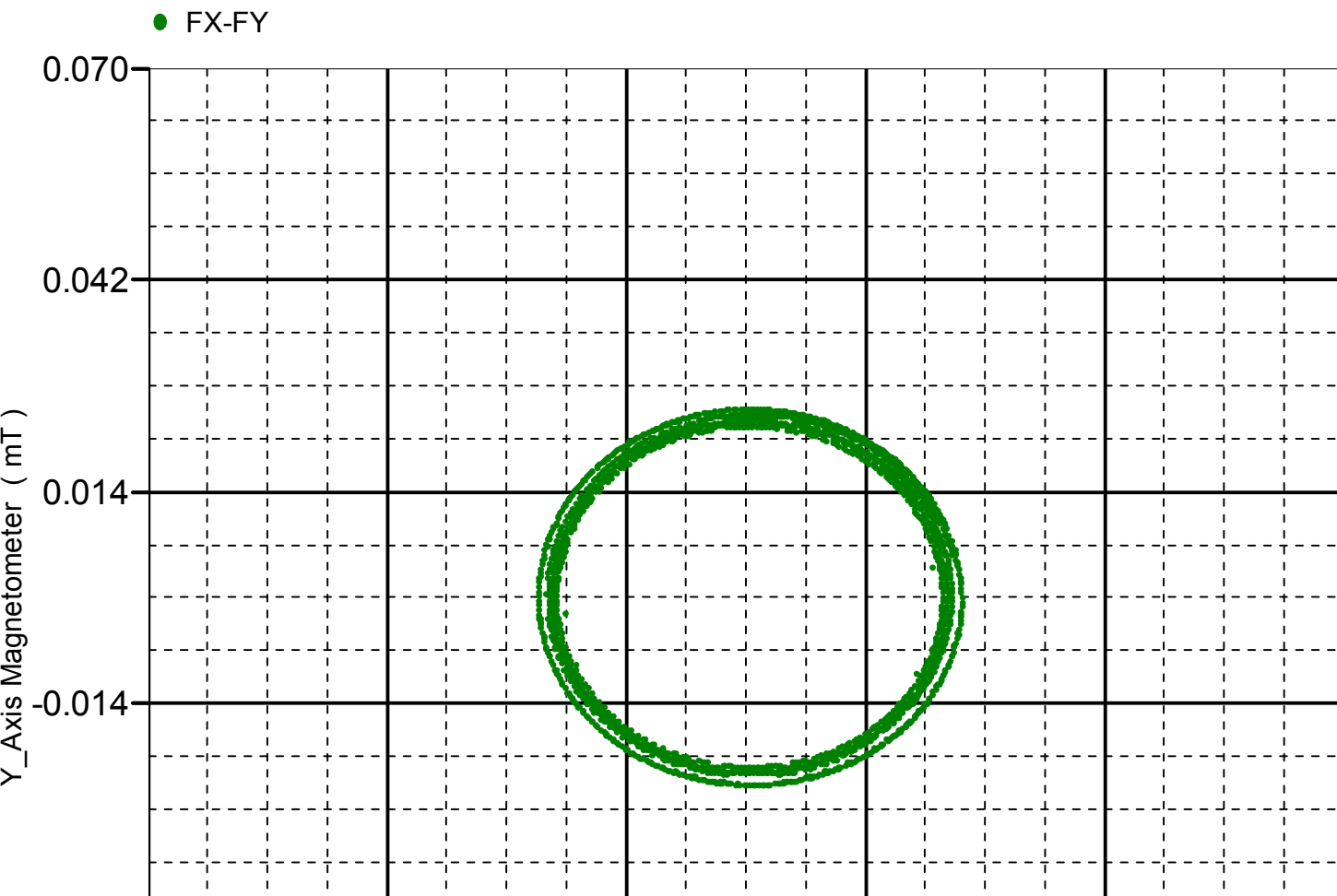
Well:DCP Linam Ranch AGI #2

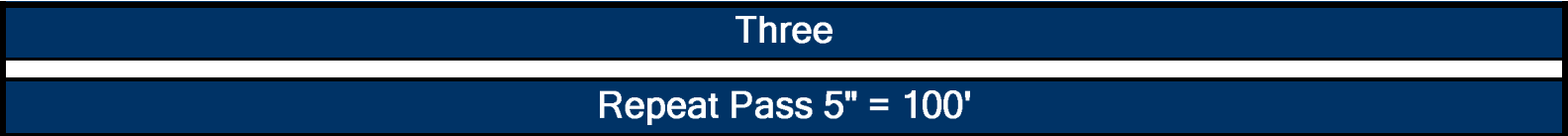
Three: Main[4]:Up:S024

FX vs. FY

2D Cross Plot

Index Range: From 8627.50 to 5306.88 ft

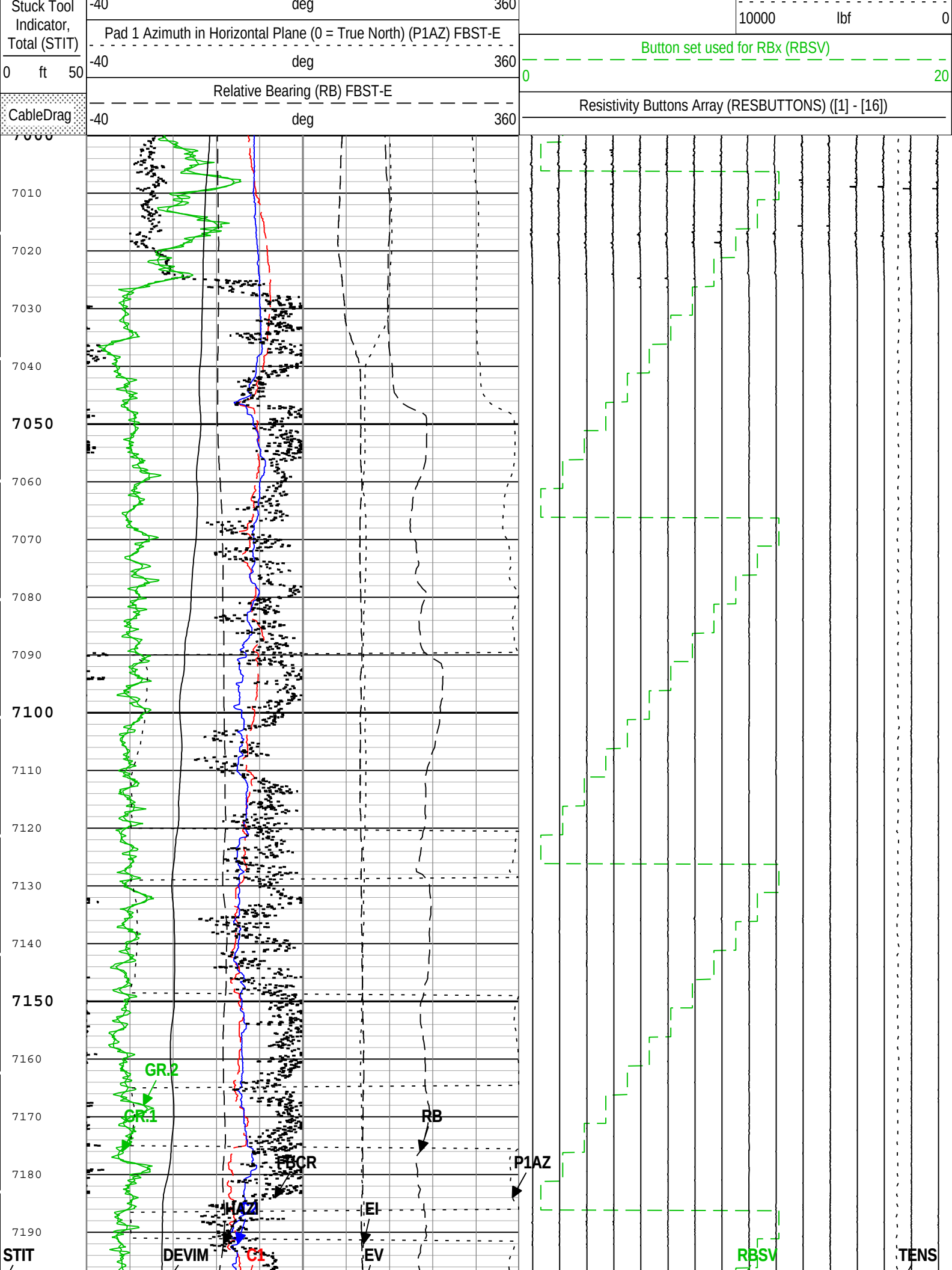


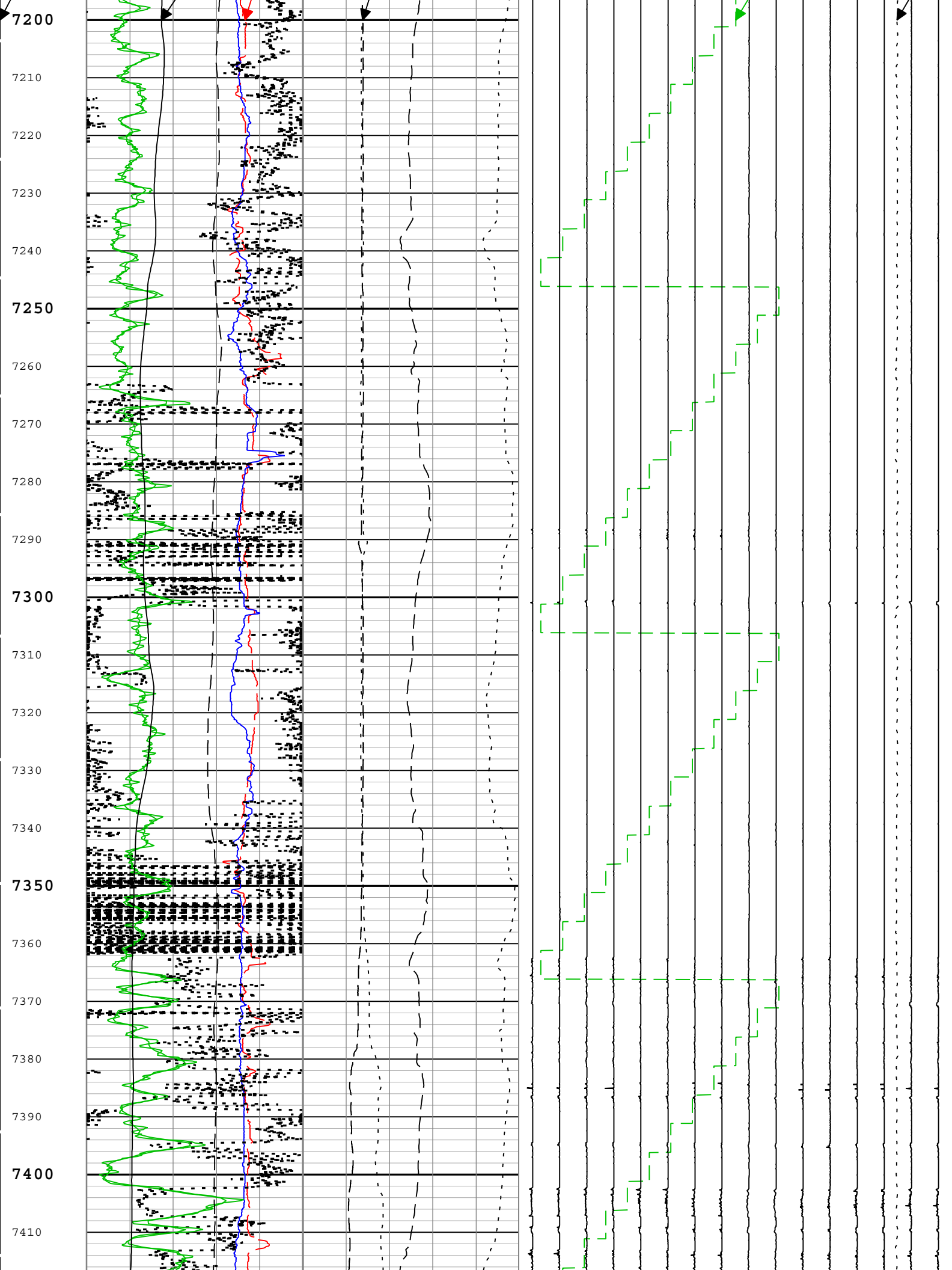


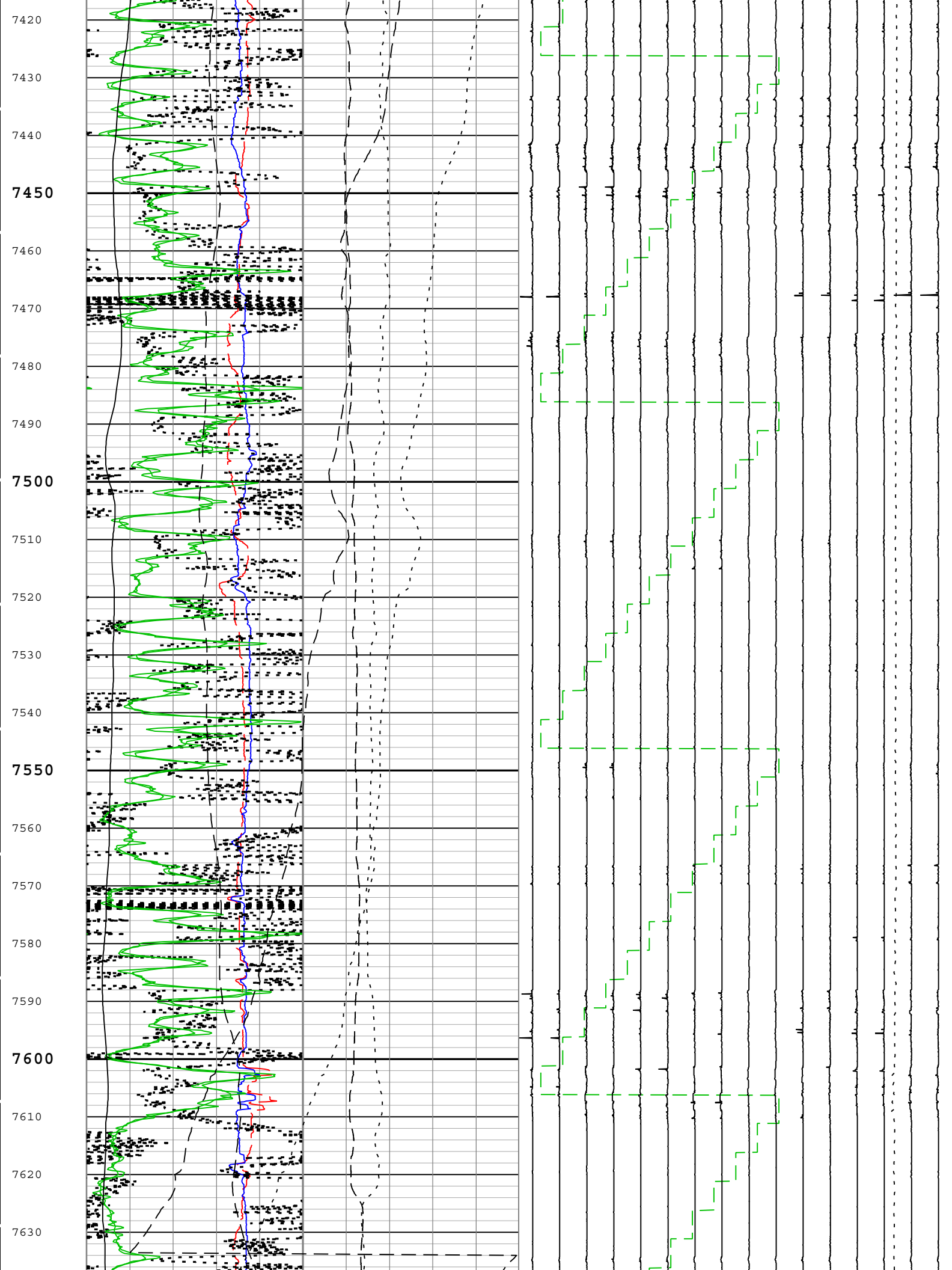
Description: FMI LQC Resistivity	Format: Log (FMI LQC Resistivity)	Index Scale: 5 in per 100 ft	Index Unit: ft	Index Type: Measured Depth	Creation Date: 30-Nov-2014 23:20:40
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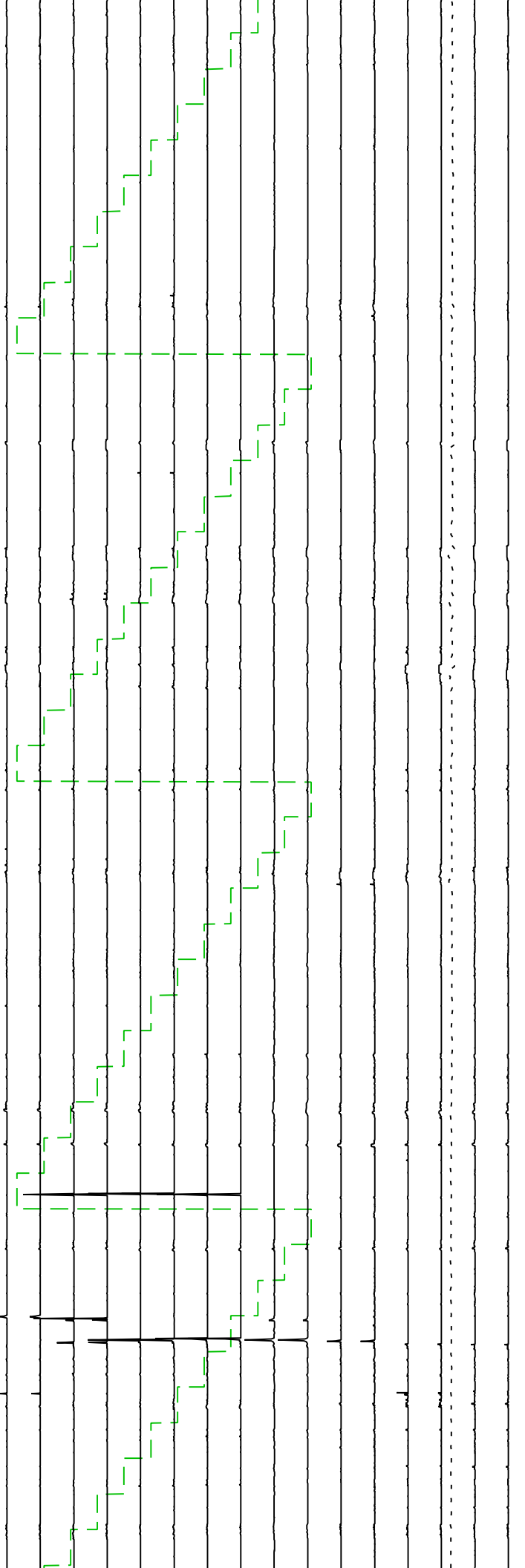
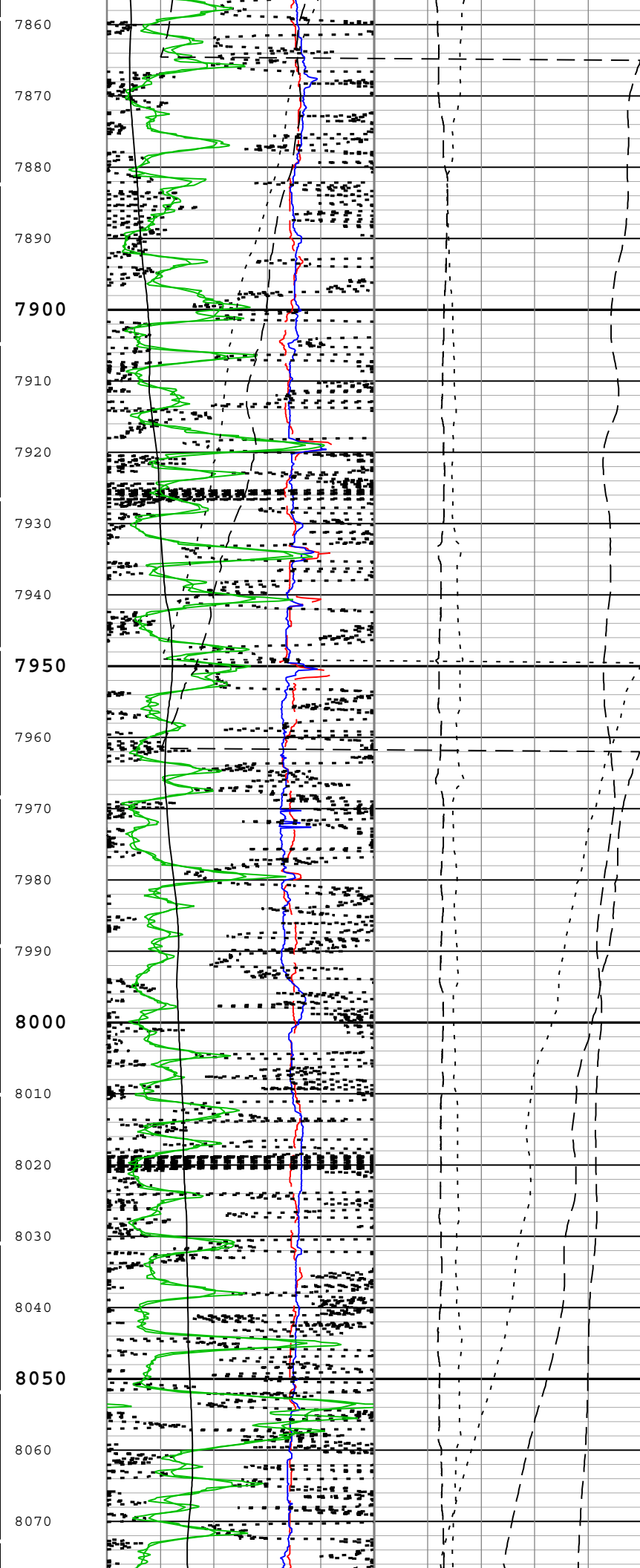
TIME 1900 - Time Marked every 60.00 (s)

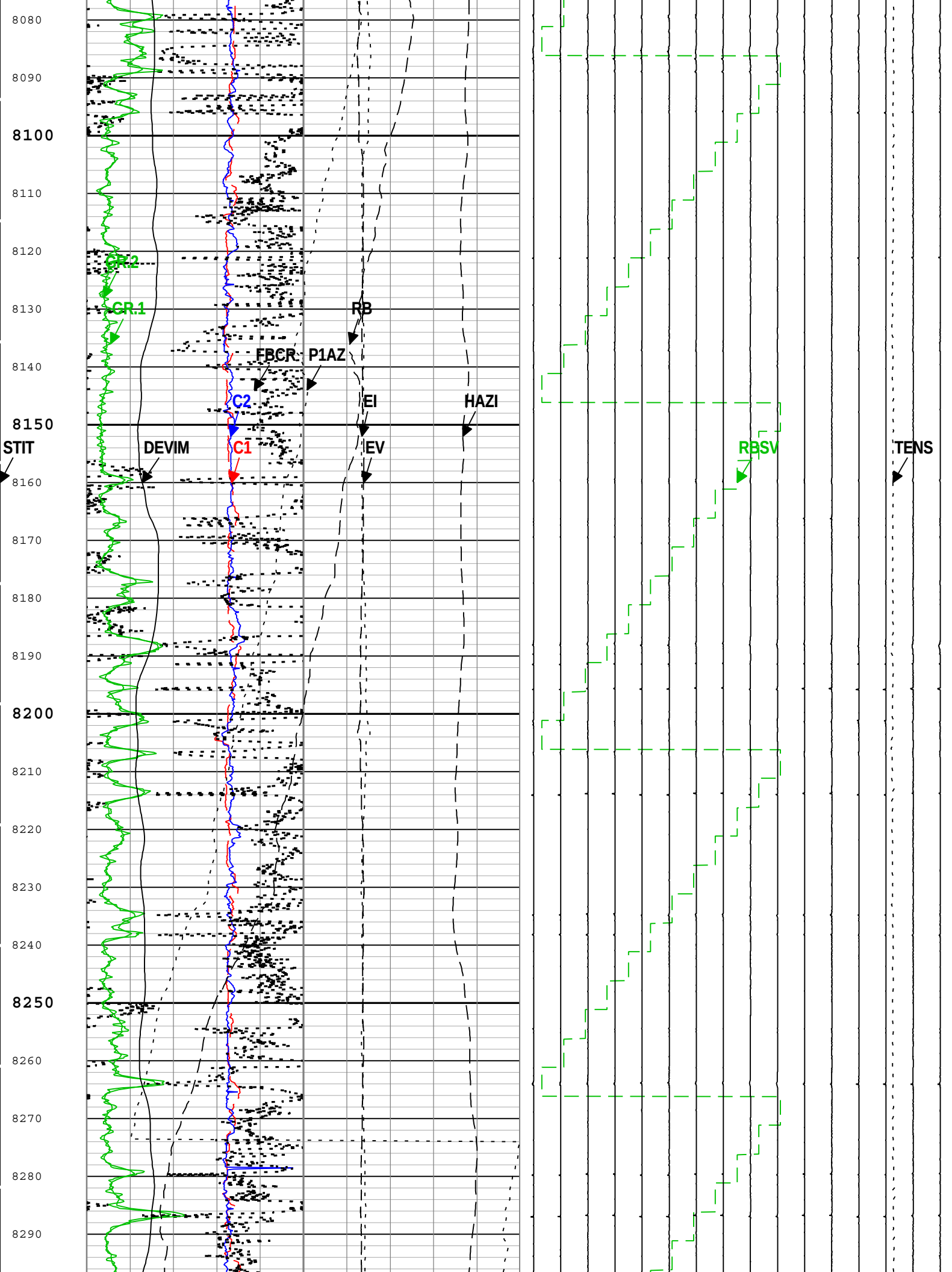
Cable Tension (TENS)

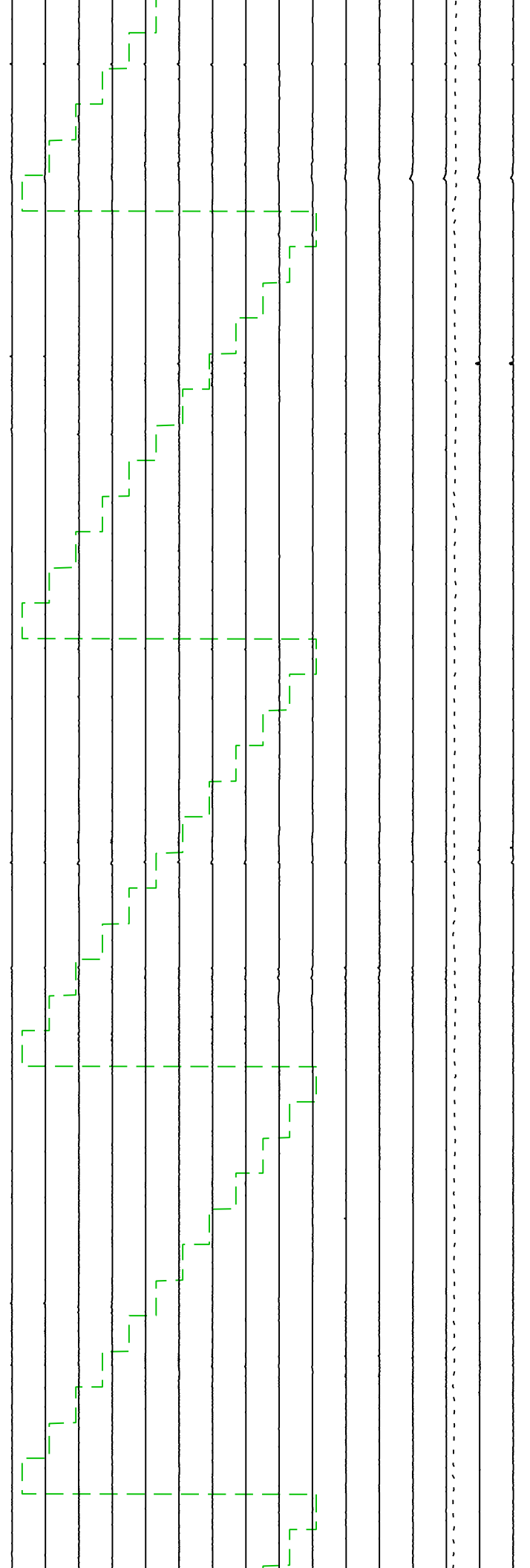
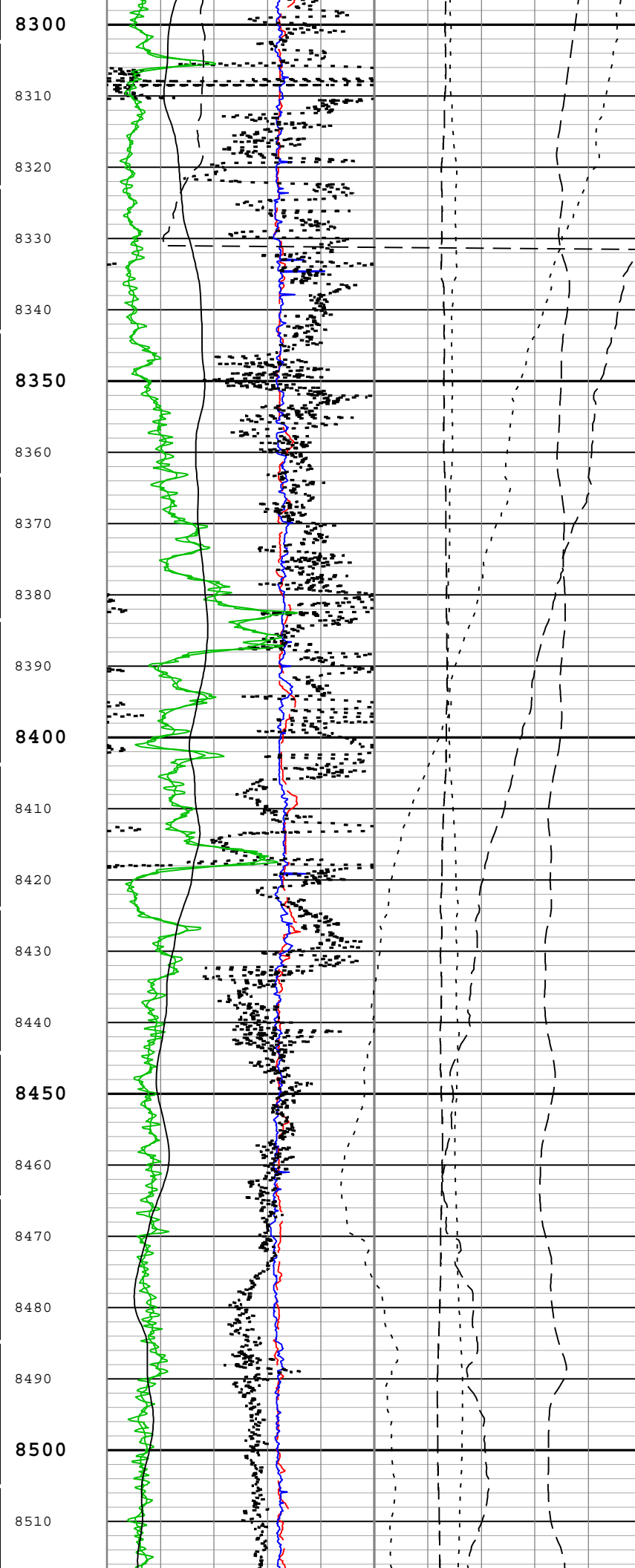


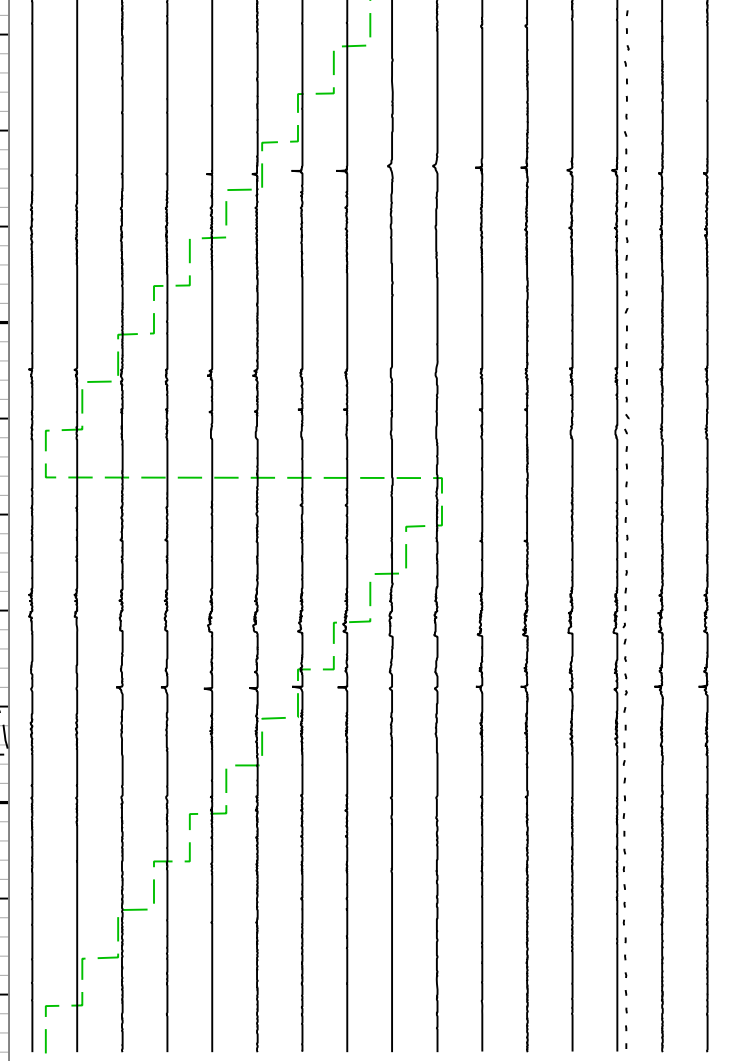
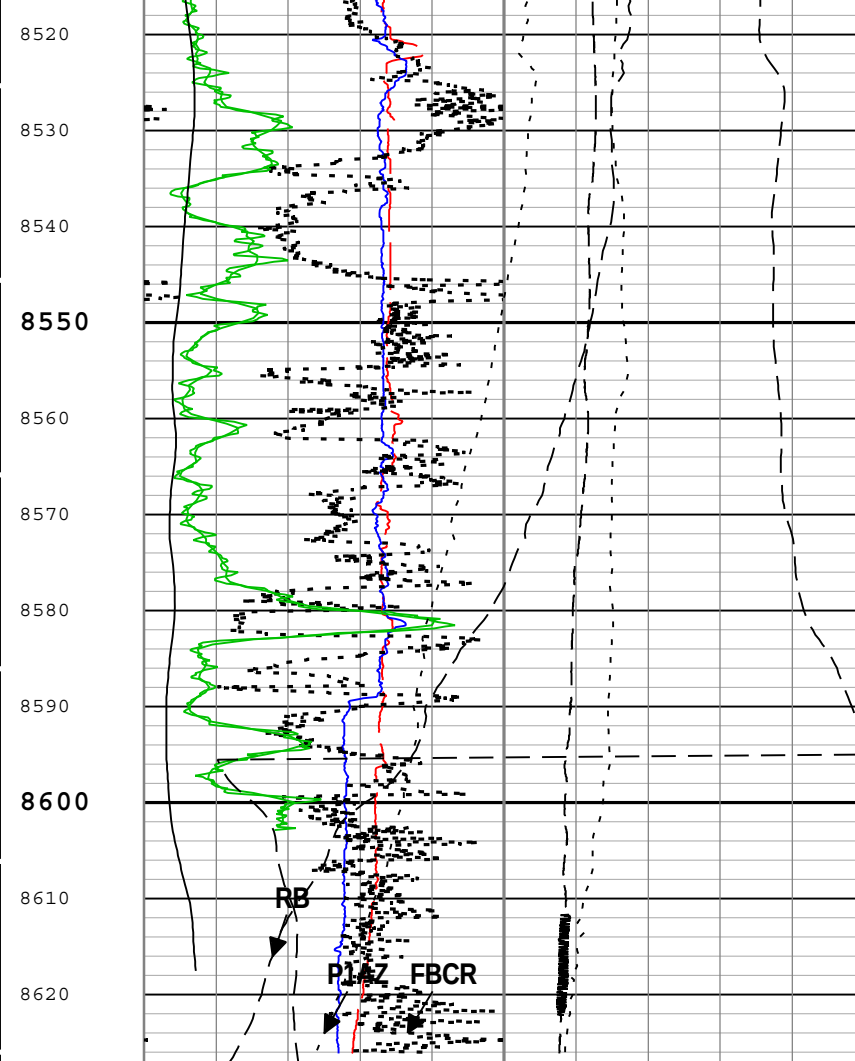












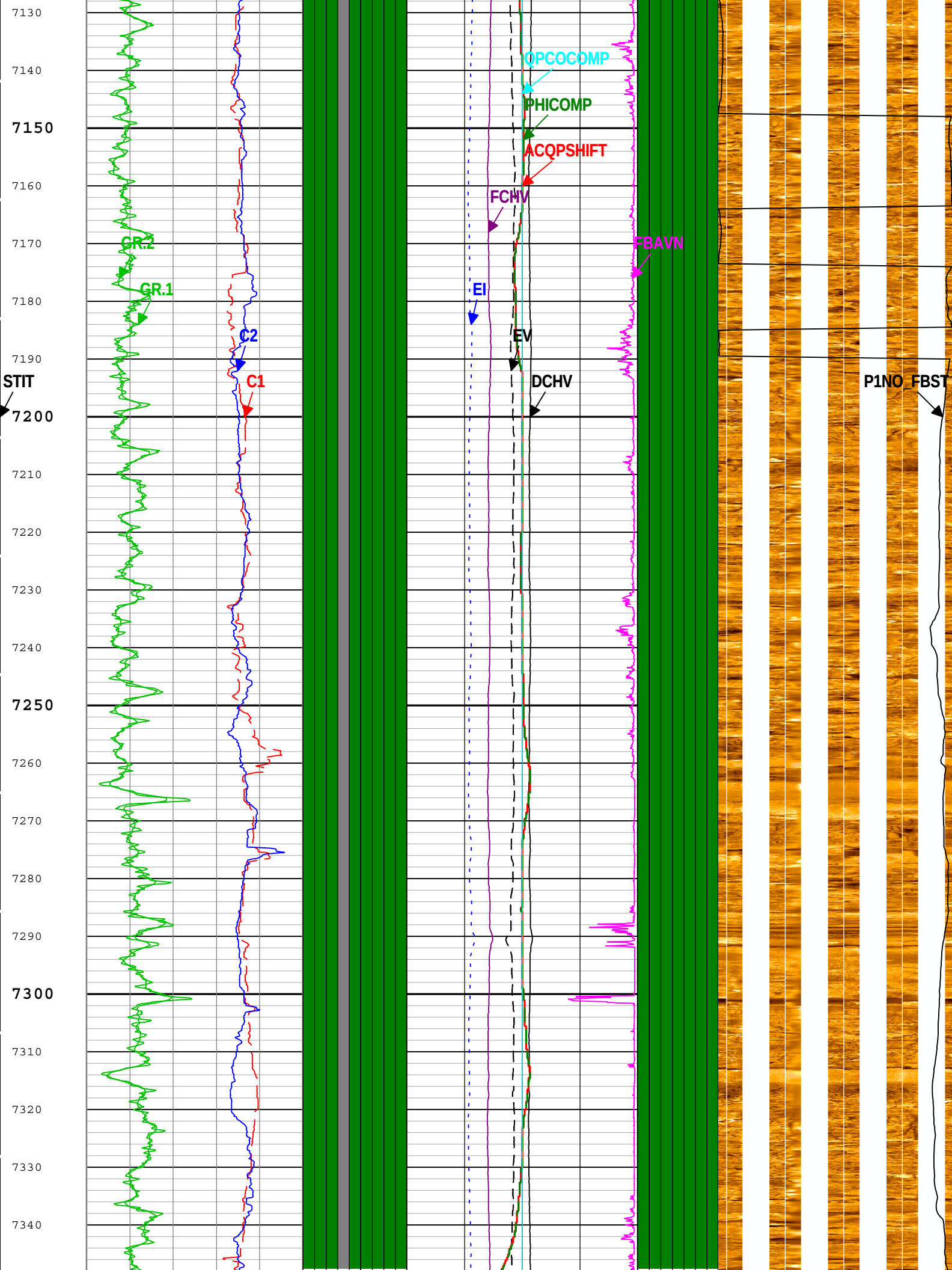
Stuck Tool Indicator, Total (STIT)	Memorized Deviation (DEVIM) FBST-E		Button set used for RBx (RBSV)	
	0	deg	10	20
0 ft 50	Hole Azimuth Relative to True North (HAZI) FBST-E		Resistivity Buttons Array (RESBUTTONS) ([1] - [16])	
	-40	deg	360	
CableDrag	Pad 1 Azimuth in Horizontal Plane (0 = True North) (P1AZ) FBST-E		Cable Tension (TENS)	
	-40	deg	360	10000 lbf 0
Relative Bearing (RB) FBST-E				
-40 deg 360				
Caliper 1 (C1) FBST-E		EMEX Voltage (EV) FBST-E		
6	in	16	0	V 50
Caliper 2 (C2) FBST-E		EMEX Current (EI) FBST-E		
6	in	16	0	A 10
Correlation Resistance (FBCR)				
2 kohm 2000				
Gamma Ray (GR).1 EDTC-B				
0 gAPI 150				
Gamma Ray (GR).2 EDTC-B				
0 gAPI 150				

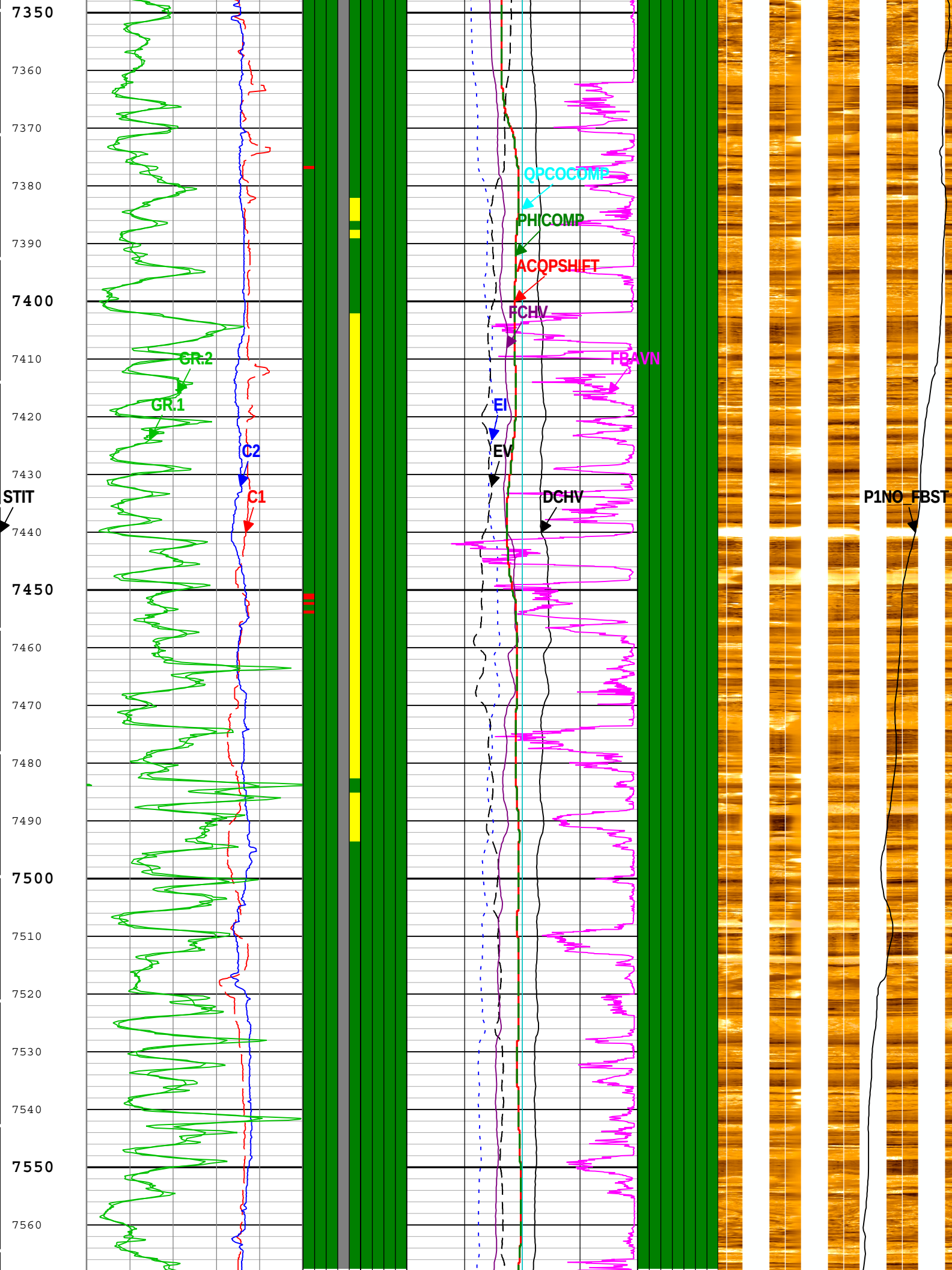
TIME_1900 - Time Marked every 60.00 (s)

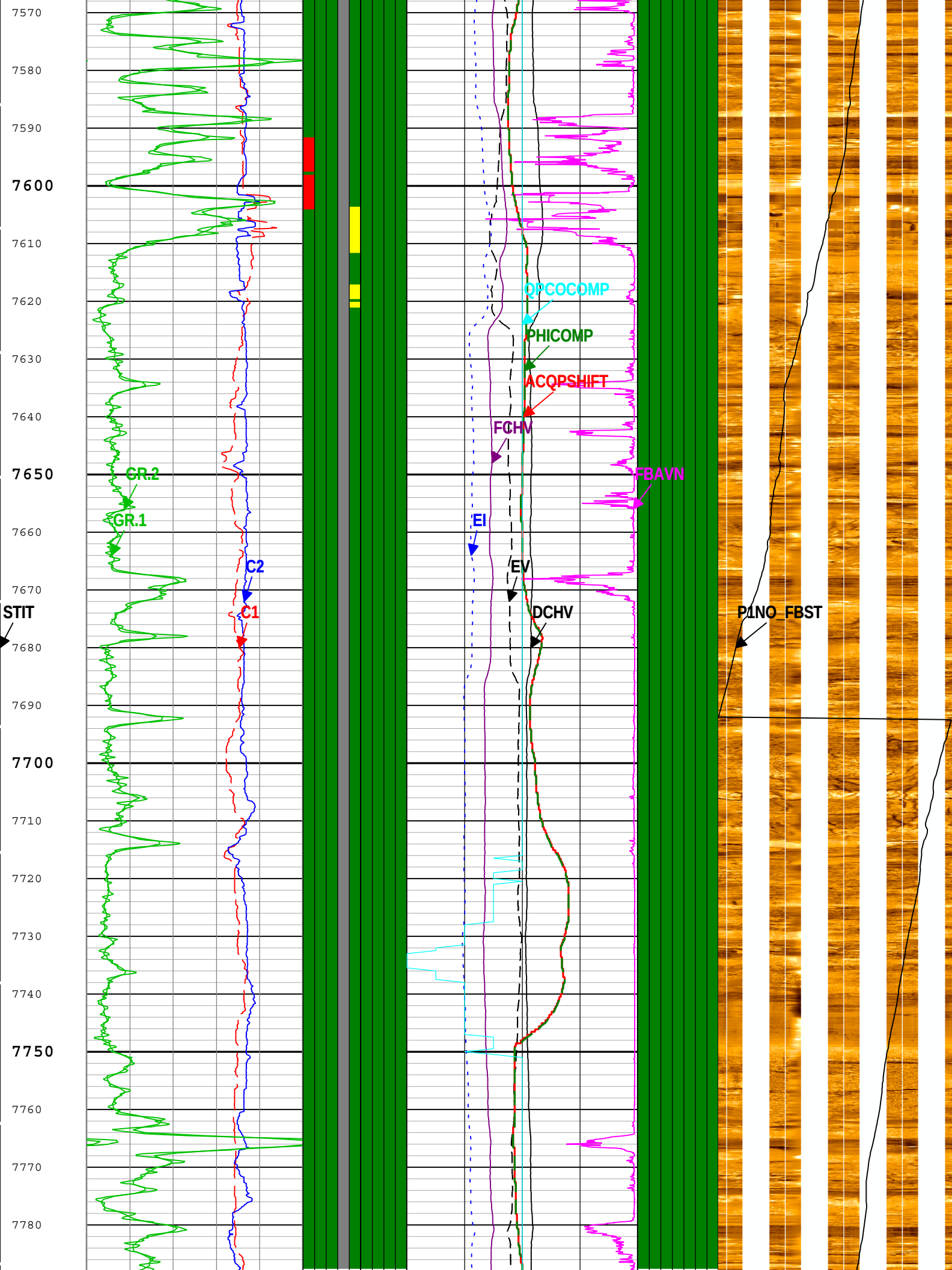
Description: FMI LQC Resistivity Format: Log (FMI LQC Resistivity) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 23:20:40

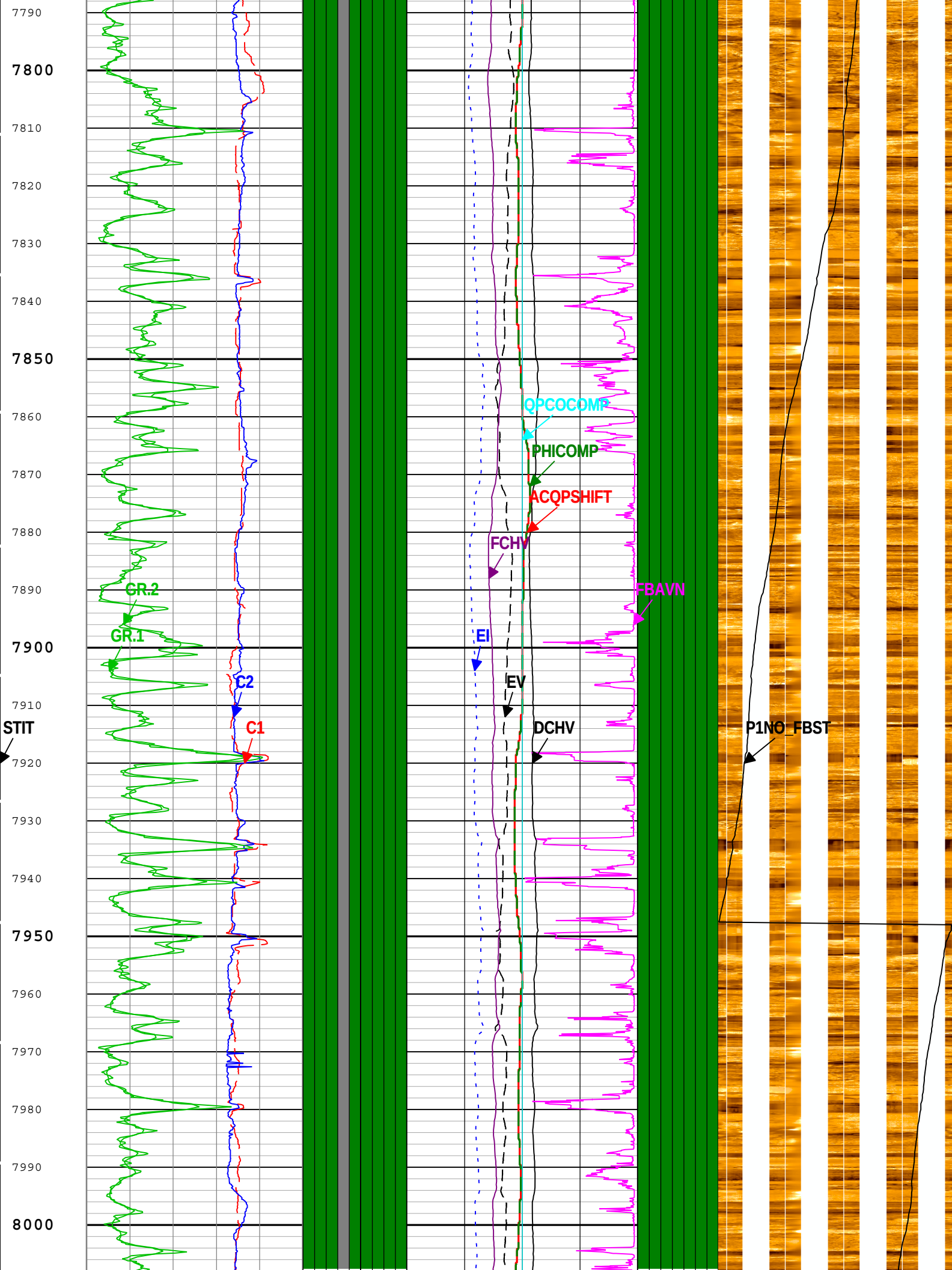
Repeat Pass 5" = 100'							
Log	Company:PB ENERGY STORAGE SERVICES, INC			Well:DCP Linam Ranch AGI #2			
	Three: Main[4]:Up:S024						
Description: FMI Main LQC Log Format: Log (FMI Main LQC Log) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 23:20:47							
Channel	Source	Sampling					
ACQPSHIFT	FBST-E:FBPC-A:FBPC-A	0.1in					
C1	FBST-E:FBPC-A:FBPC-A	1.5in					
C2	FBST-E:FBPC-A:FBPC-A	1.5in					
DCHV	FBST-E:FBPC-A:FBPC-A	6in					
EI	FBST-E:FBPC-A:FBPC-A	6in					
EV	FBST-E:FBPC-A:FBPC-A	0.1in					
FBAVN	FBST-E:FBPC-A:FBPC-A	0.1in					
FCHV	FBST-E:FBPC-A:FBPC-A	6in					
GR.1	EDTC-B:EDTC-B:EDTC-B	2in					
GR.2	EDTC-B:EDTC-B:EDTC-B	6in					
LQC_DHRU_FLAG	FBST-E	6in					
LQC_HDW_FLAG	FBST-E	6in					
LQC_PADS_FLAG	FBST-E	6in					
P1NO_FBST	FBST-E	6in					
PHICOMP	FBST-E:FBPC-A:FBPC-A	6in					
QPCOCOMP	FBST-E:FBPC-A:FBPC-A	6in					
STIT	DepthCorrection	6in					
TIME_1900	WLWorkflow	0.1in					
LQC DHRU Flag (LQC_DHRU_FLAG[0])							
1 - ANOR - Acceleration Computed Norm - :			OK		Error / Out of Tolerance		
2 - FNOR - Magnetic Field Intensity Computed Norm - :			OK		Error / Out of Tolerance		
3 - FINC - Magnetic Field Inclination - :			OK		Error / Out of Tolerance		
4 - DHRU Temperations (three sensors) - :			OK		Warning, limit value		
			High Standard Deviation between 3 sensors		Error / Out of Tolerance		
LQC Hardware Flag (LQC_HDW_FLAG[0])							
1 - Power Supply Currents - :			OK		Error / Out of Tolerance		
2 - Temperatures - :			OK		Warning		Error / Out of Tolerance
3 - Pad Pressure Critical : less than 10 - :			OK		Warning		Error / Out of Tolerance
4 - ACAUX Presence - :			OK		Warning		measurement is unavailable
5 - Modulus of EMEX Current too High - :			OK		Warning		Error / Out of Tolerance
TIME_1900 - Time Marked every 60.00 (s)							
LQC Pads Flag (LQC_PADS_FLAG[0])							
1 - FBAC Pads / Flaps Board Temperatures - :			OK		Error / Out of Tolerance		
2 - FBAC Pads and Flaps Power Supplies Currents - :			OK		Error / Out of Tolerance		
3 - FBAC Pads and Flaps Power Supplies Voltages - :			OK		Error / Out of Tolerance		
4 - FBAC Arm A Acquisition Board Error - :			OK		Error / Out of Tolerance		
5 - FBAC Arm B Acquisition Board Error - :			OK		Error / Out of Tolerance		
6 - FBAC Arm C Acquisition Board Error - :			OK		Error / Out of Tolerance		
7 - FBAC Arm D Acquisition Board Error - :			OK		Error / Out of Tolerance		
			Direct Current Head Voltage (DCHV)				
			FBST-E				
			0	V	180		
			EMEX Voltage (EV) FBST-E				

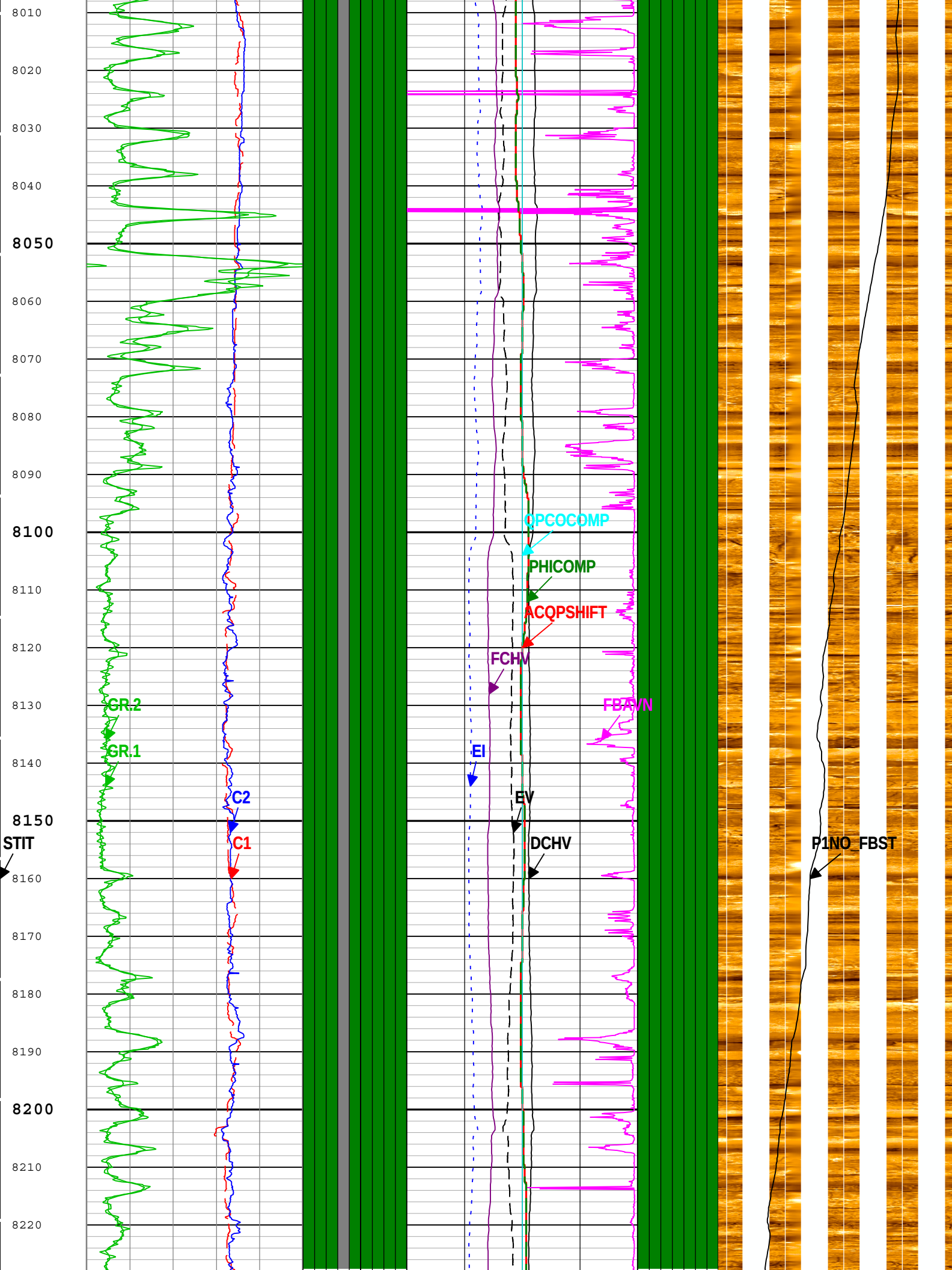
		EMEX Voltage (EV) FBST-E		0 V 30	
		EMEX Current (EI) FBST-E		0 A 10	
		Buttons Average, Normalized (FBAVN) FBST-E		2000 0	
		Regulated EMEX Voltage (FCHV) FBST-E		0 V 180	
		Acquisition Phase Shift (ACQPSHIFT) FBST-E		-90 deg 90	
		Caliper 1 (C1) FBST-E		6 in 16	
		Caliper 2 (C2) FBST-E		6 in 16	
		Gamma Ray (GR).1 EDTC-B		0 gAPI 150	
		Gamma Ray (GR).2 EDTC-B		0 gAPI 150	
		LQC Hardware Flag (LQC_HW_FLAG[0])		1 5	
		LQC DHRU Flag (LQC_DHRU_FLAG[0])		1 4	
		Computed Phase Compensation (PHICOMP) FBST-E		-90 deg 90	
		Quality of Phase Compensation (QPCOCOMP) FBST-E		0 8	
		LQC Pads Flag (LQC_PADS_FLAG[0])		1 7	
		Dynamic Gaussian Normalization FMI - Equalized Borehole Image		0 deg 360	
		Pad 1 Azimuth in Plane Orthogonal to Tool Axis (0 = True North), memorized to FBST (P1NO_FBST)		0 deg 360	
Stuck Tool Indicator, Total (STIT)		0 ft 50			
CableDrag					

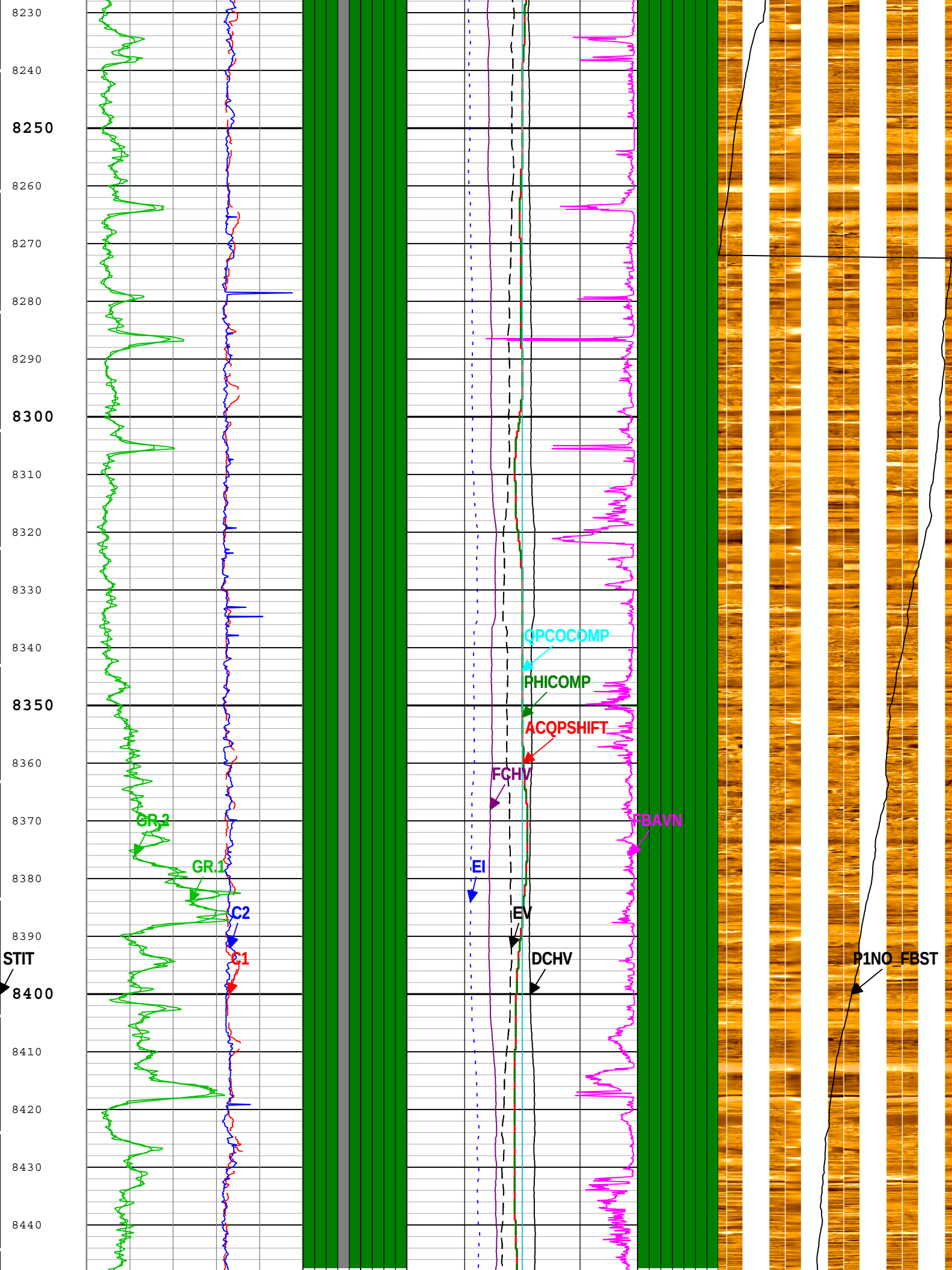


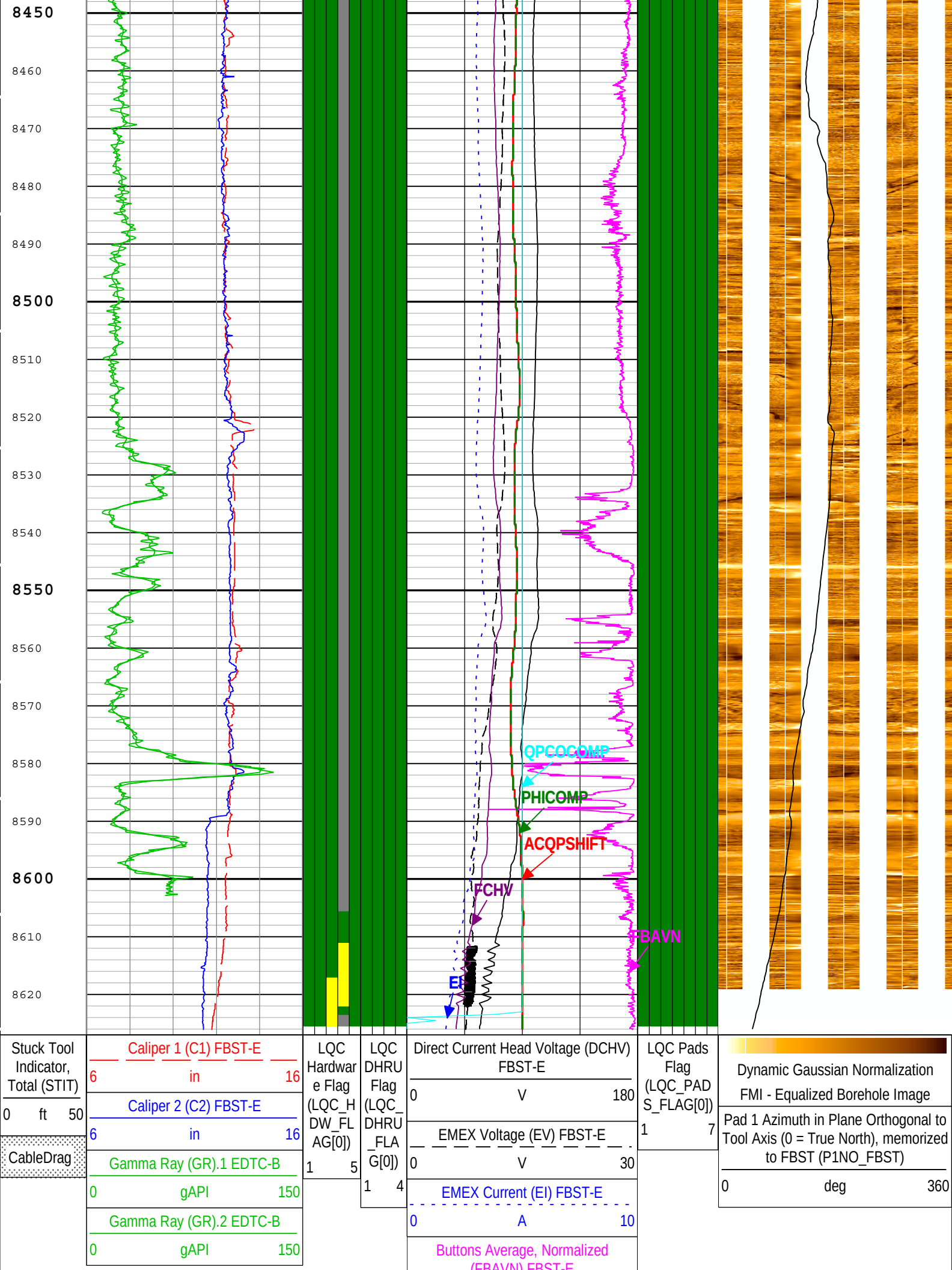












	(FBADN) FBST-E		
	2000		0
	Regulated EMEX Voltage (FCHV) FBST-E		
	0	V	180
	Acquisition Phase Shift (ACQPSHIFT) FBST-E		
	-90	deg	90
	Computed Phase Compensation (PHICOMP) FBST-E		
	-90	deg	90
	Quality of Phase Compensation Computation (QPCOCOMP) FBST-E		
	0		8

LQC Pads Flag (LQC_PADS_FLAG[0])			
1 - FBAC Pads / Flaps Board Temperatures - :	OK	Error / Out of Tolerance	
2 - FBAC Pads and Flaps Power Supplies Currents - :	OK	Error / Out of Tolerance	
3 - FBAC Pads and Flaps Power Supplies Voltages - :	OK	Error / Out of Tolerance	
4 - FBAC Arm A Acquisition Board Error - :	OK	Error / Out of Tolerance	
5 - FBAC Arm B Acquisition Board Error - :	OK	Error / Out of Tolerance	
6 - FBAC Arm C Acquisition Board Error - :	OK	Error / Out of Tolerance	
7 - FBAC Arm D Acquisition Board Error - :	OK	Error / Out of Tolerance	

TIME_1900 - Time Marked every 60.00 (s)			
LQC Hardware Flag (LQC_HDW_FLAG[0])			
1 - Power Supply Currents - :	OK	Error / Out of Tolerance	
2 - Temperatures - :	OK	Warning	Error / Out of Tolerance
3 - Pad Pressure Critical : less than 10 - :	OK	Warning	Error / Out of Tolerance
4 - ACAUX Presence - :	OK	Warning	measurement is unavailable
5 - Modulus of EMEX Current too High - :	OK	Warning	Error / Out of Tolerance

LQC DHRU Flag (LQC_DHRU_FLAG[0])			
1 - ANOR - Acceleration Computed Norm - :	OK	Error / Out of Tolerance	
2 - FNOR - Magnetic Field Intensity Computed Norm - :	OK	Error / Out of Tolerance	
3 - FINC - Magnetic Field Inclination - :	OK	Error / Out of Tolerance	
4 - DHRU Temperations (three sensors) - :	OK	Warning, limit value	
	High Standard Deviation between 3 sensors	Error / Out of Tolerance	

Description: FMI Main LQC Log
Format: Log (FMI Main LQC Log)
Index Scale: 5 in per 100 ft
Index Unit: ft
Index Type: Measured Depth
Creation Date: 30-Nov-2014 23:20:47

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	3219.5	ft
CDEN	Cement Density	EDTC-B	2	g/cm3
DFD	Drilling Fluid Density	Borehole	8.8	lbm/gal
FDBD	Dead Buttons Detection	FBST-E	Off	
FDBP	Dead Buttons Patching	FBST-E	Off	
GCSE DOWN PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	

GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS	
ICMO	Inclinometry Computation Mode	FBST-E	Automatic Selection	
LOG_SPEED_RNG	Logging Speed Range	FBST-E	Normal (600 ft/h - 3600 ft/h)	
TD	Total Measured Depth	Borehole	8630	ft
USER_LOCB	User-supplied values for Magnetic Flux Density	WLSESSION	48566.35	nT
USER_MDEC	User-supplied values for Magnetic Declination	WLSESSION	7.24	deg
USER_MDIP	User-supplied values for Magnetic Dip Angle	WLSESSION	60.61	deg

Depth Zone Parameters				
Parameter	Value	Start (ft)	Stop (ft)	
BS	26	0	1570	
BS	17.5	1570	3226.75	
BS	12.25	3226.75	8627	
All depth are actual.				

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
AMIP	Adaptive Mode Initial Phase	FBST-E	0	deg
APM	Acquisition Phase Mode	FBST-E	WBM - Adaptive Phase Control	
EMXGMOD	EMEX and Gain Modes	FBST-E	EMEX= Auto and Gain= Auto	
FLM	Logging Mode	FBST-E	Full Image Mode	
GAIN_FBST	Electronic Gain Value in Manual Mode	FBST-E	0 dB	
GARM_A	Electronic Gain Value for Arm A	FBST-E	0 dB	
GARM_B	Electronic Gain Value for Arm B	FBST-E	0 dB	
GARM_C	Electronic Gain Value for Arm C	FBST-E	0 dB	
GARM_D	Electronic Gain Value for Arm D	FBST-E	0 dB	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h
MPSC	Manual Phase Shift Compensation	FBST-E	0	deg
XVOL	EMEX Voltage	FBST-E	0	V

Three				

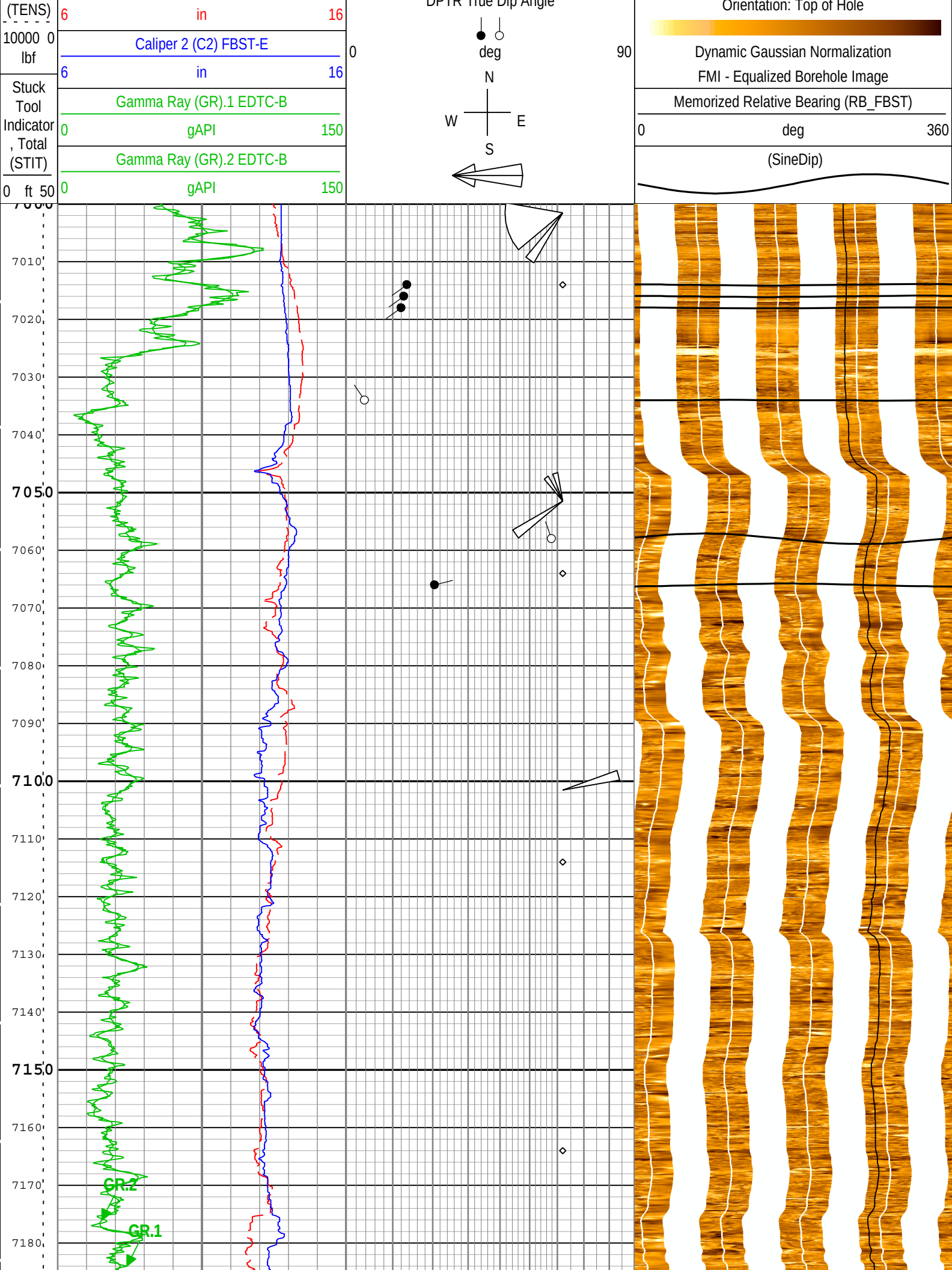
Software Version				
Acquisition System		Version		
MaxWell		4.0.9163.3000		
Application Patch		Patch-SP-10767_22480-4.0.9163.3001		
		Patch-NPD_CMRTF_SP3-23787-4.0.9530.3002		
Computation	Description		Version	
FBST_BORDIP	BORDIP Computation Application for FBST		4.0.9469.3000	
DepthCorrection	DepthCorrection		4.0.9469.3000	
Tool Elements	Description	Software Version	Firmware Version	
FBPC-A	FullBore Scanner Control Cartridge	4.0.9469.3000		
EDTC-B	Enhanced Digital Telemetry Cartridge - B	4.0.9469.3000		

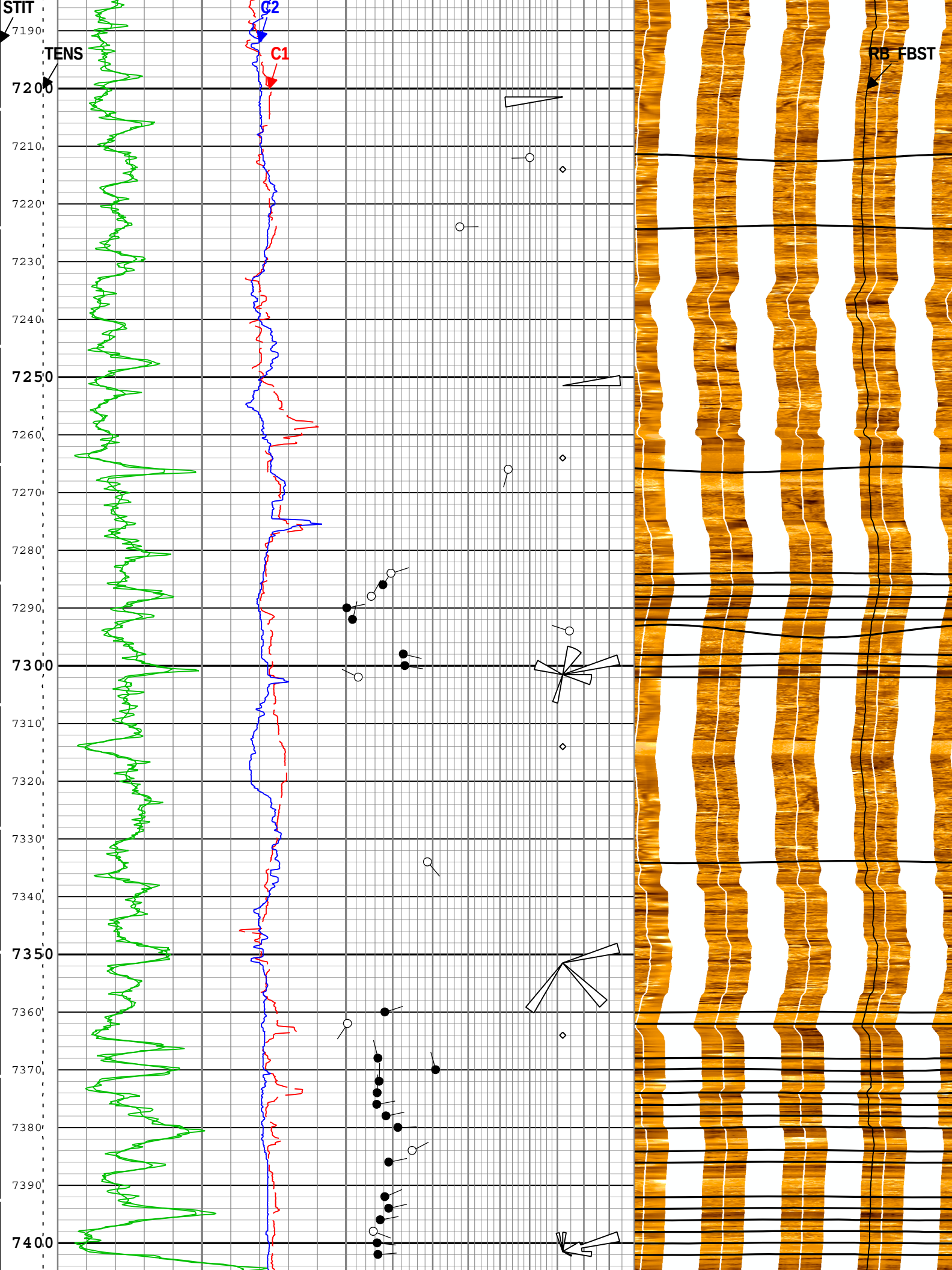
Log	Company:PB ENERGY STORAGE SERVICES, INC	Well:DCP Linam Ranch AGI #2
	Three: Main[4]:Up:S024	

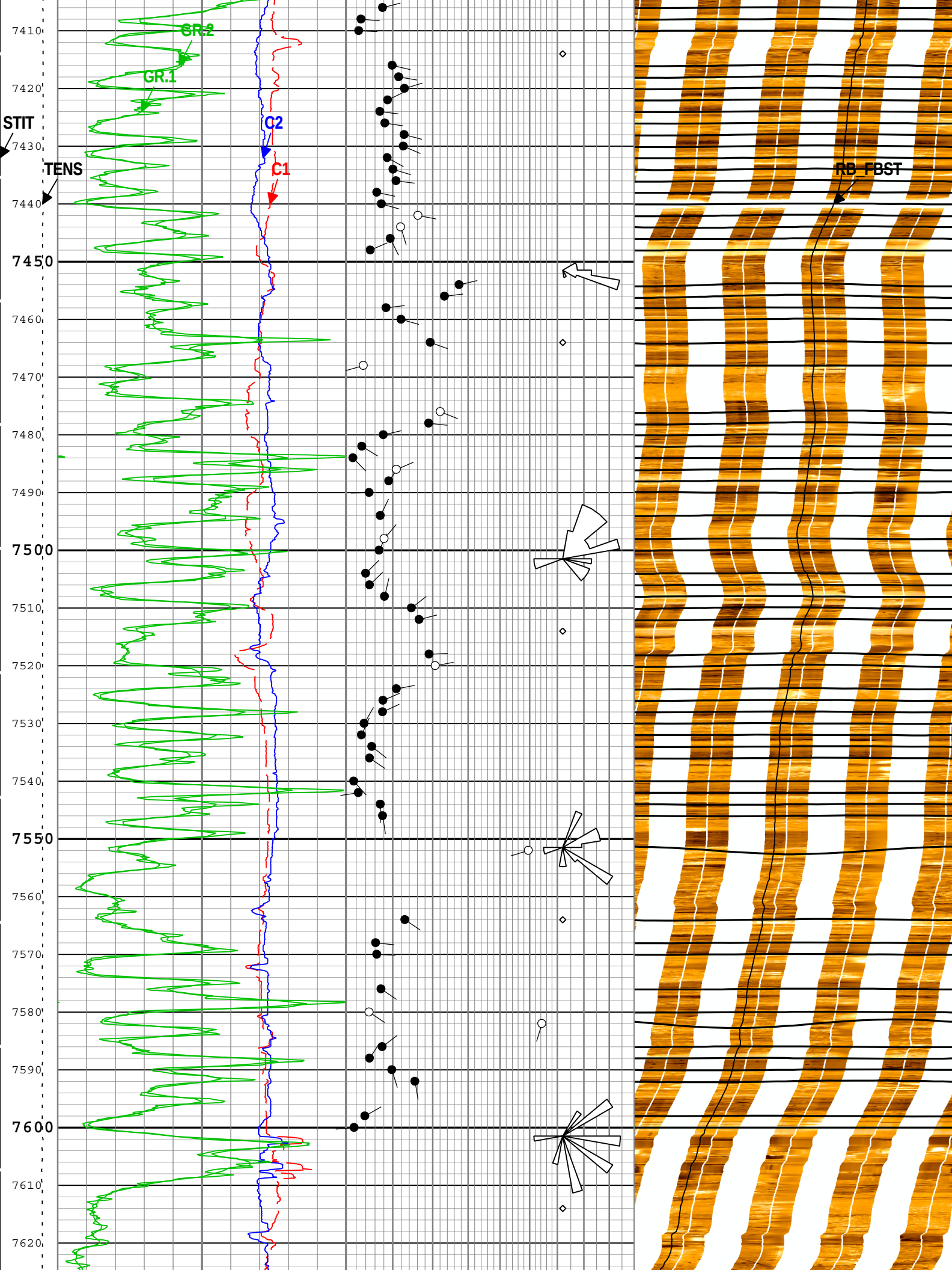
Description: Bordip + FMI Log Format: Log (Bordip + FMI Log) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 23:20:59

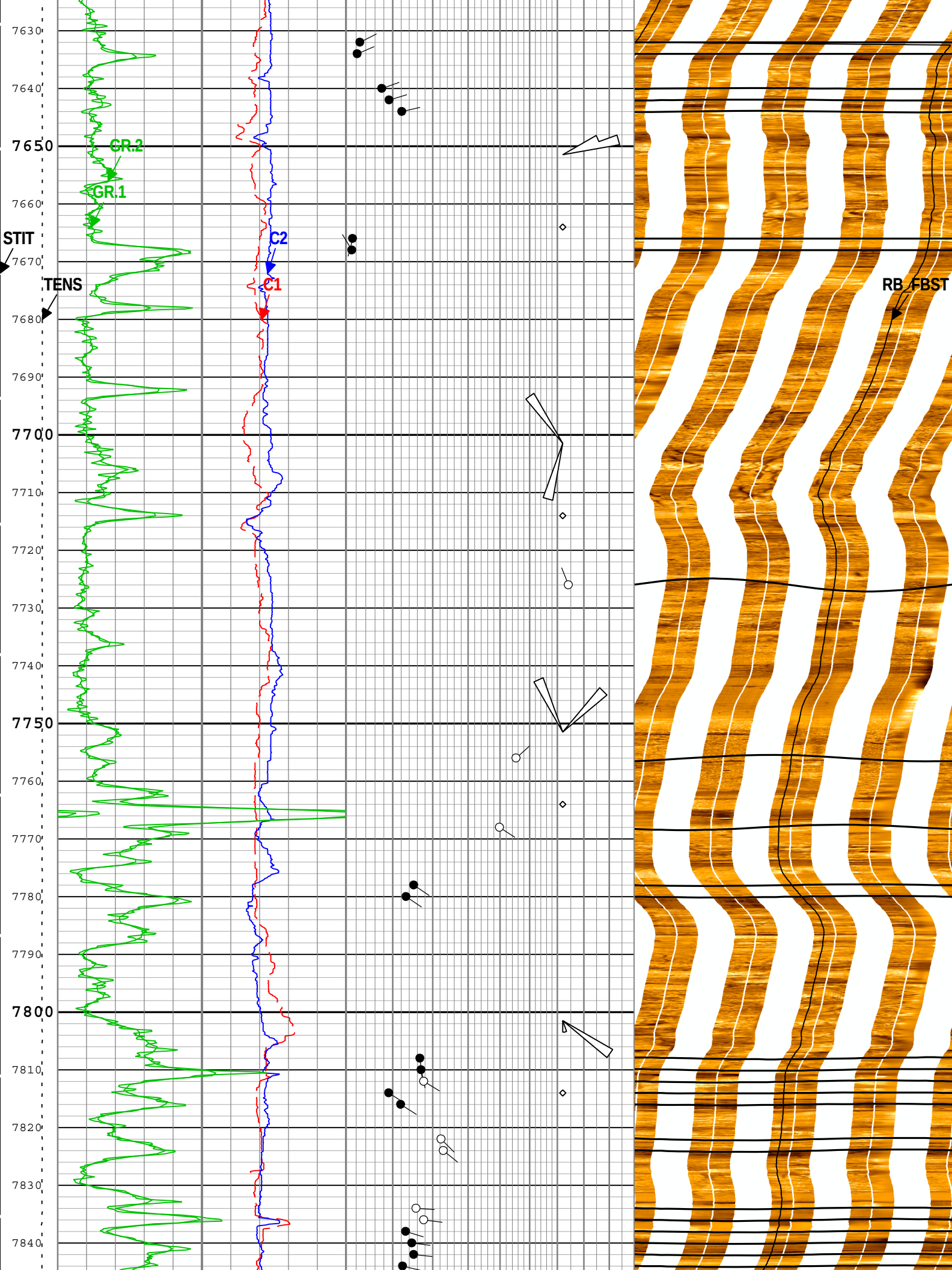
TIME_1900 - Time Marked every 60.00 (s)

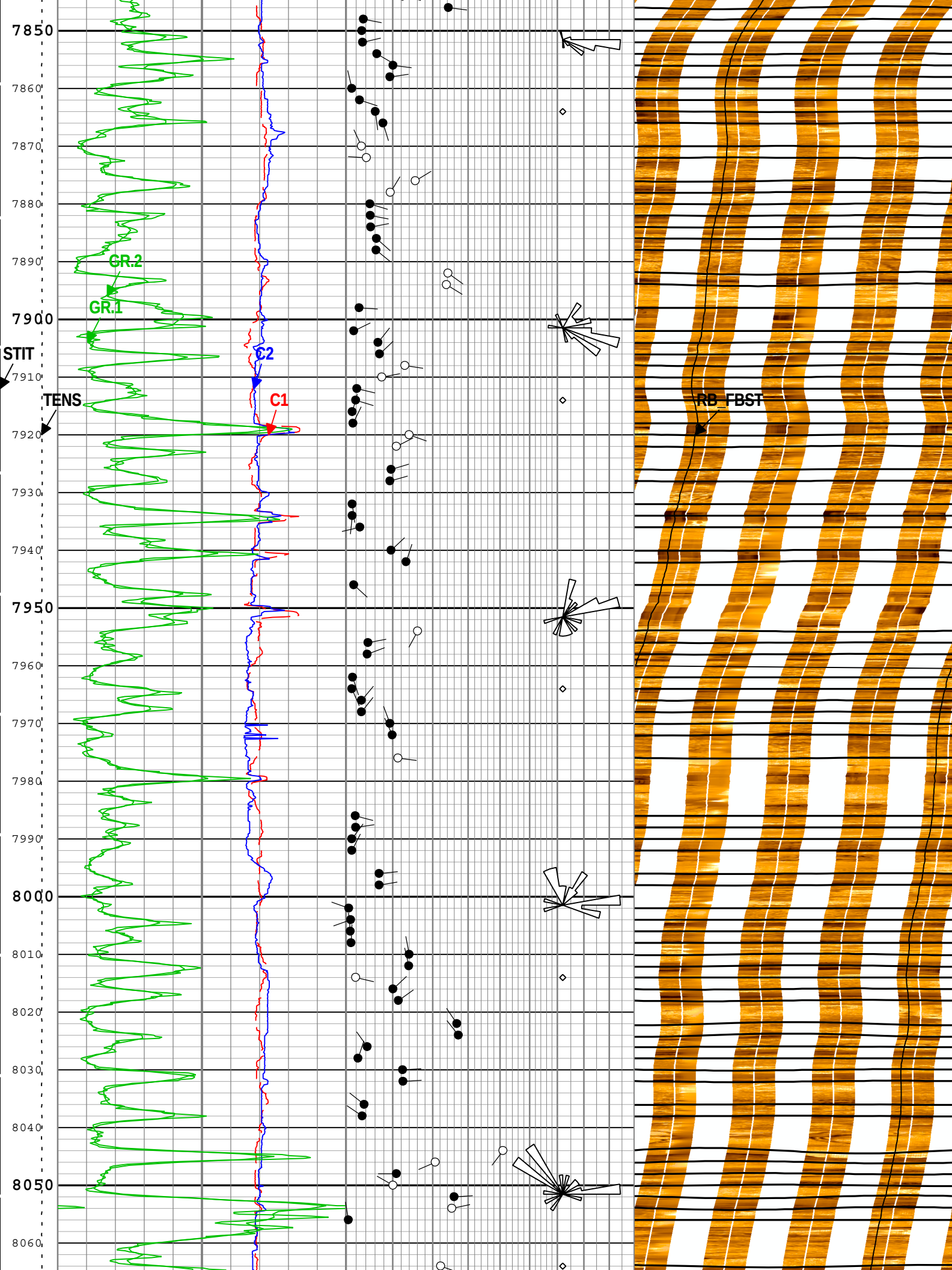
Cable Tension	Caliper 1 (C1) FBST-E		U	R	B	L	U
		DRTB True Dip Angle					

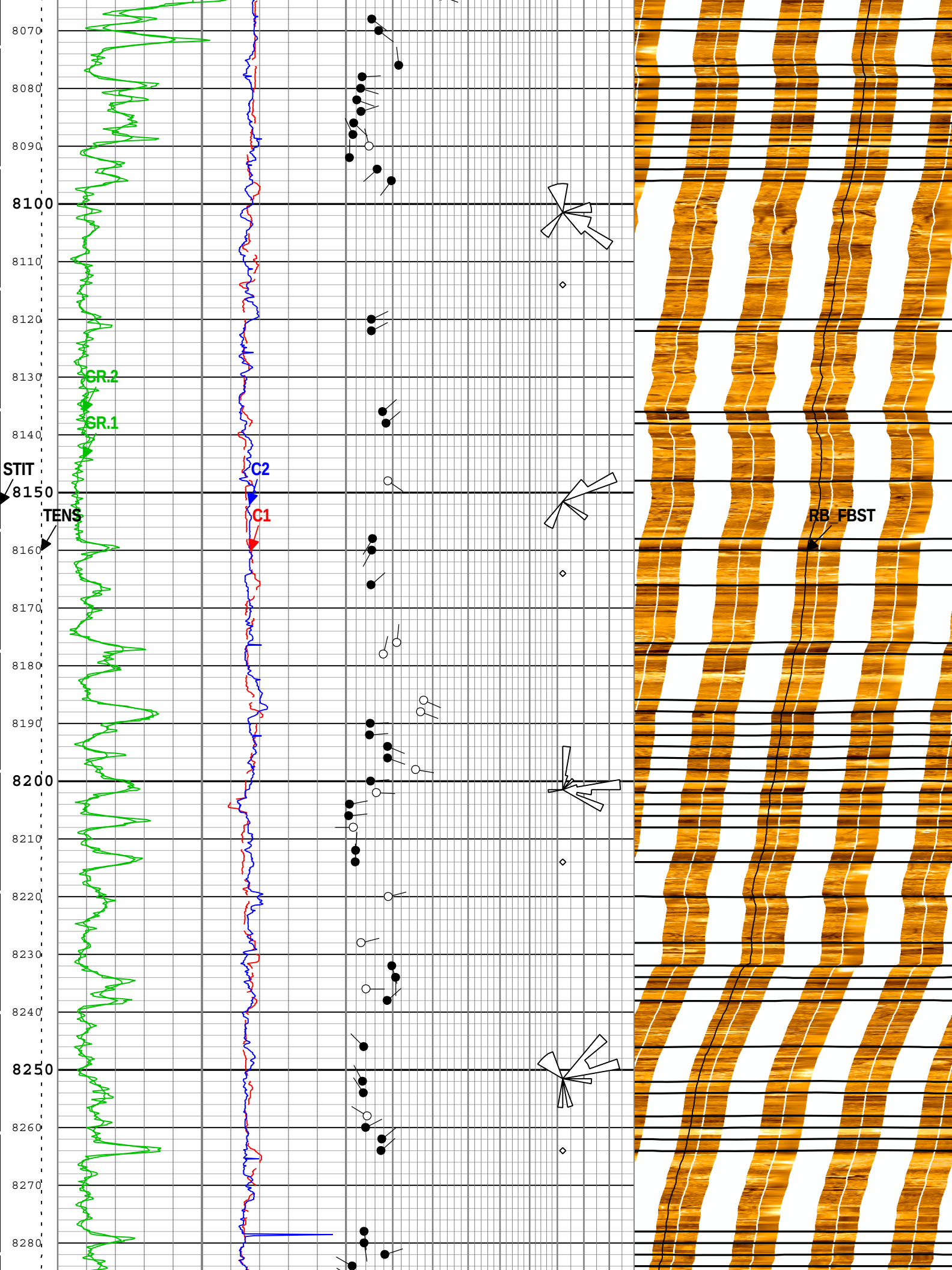


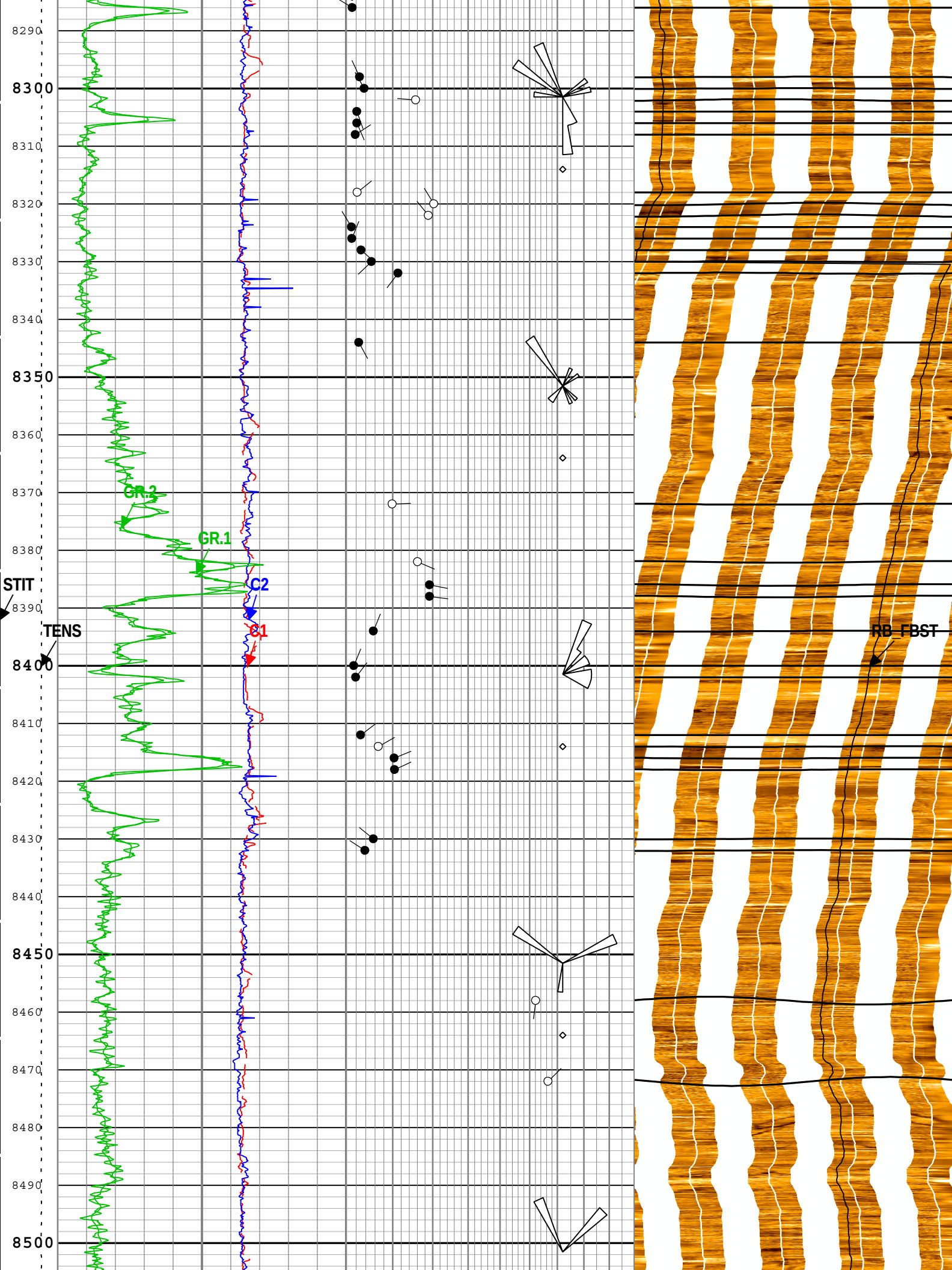


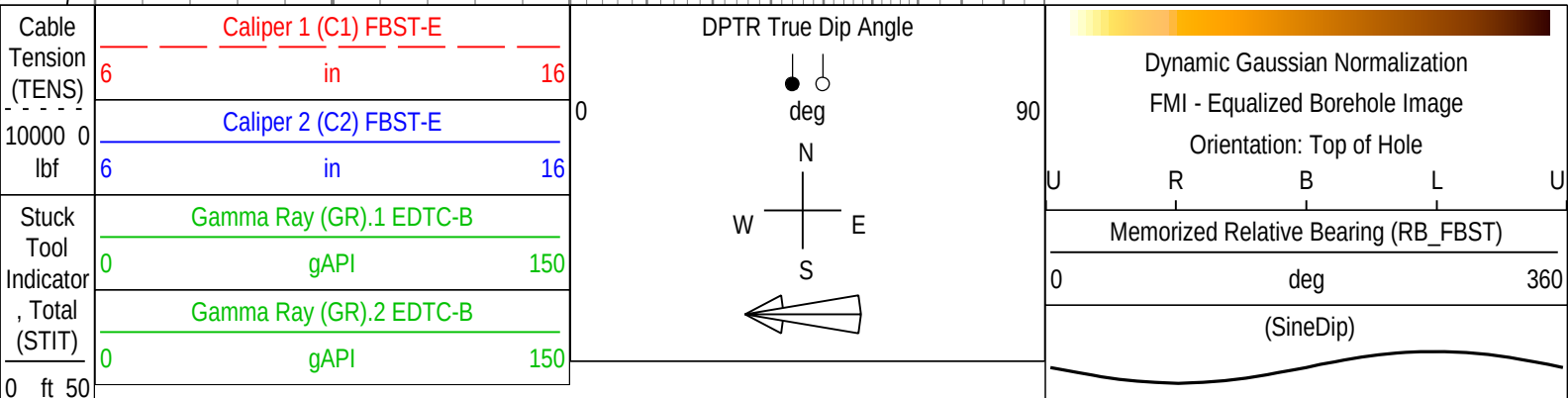
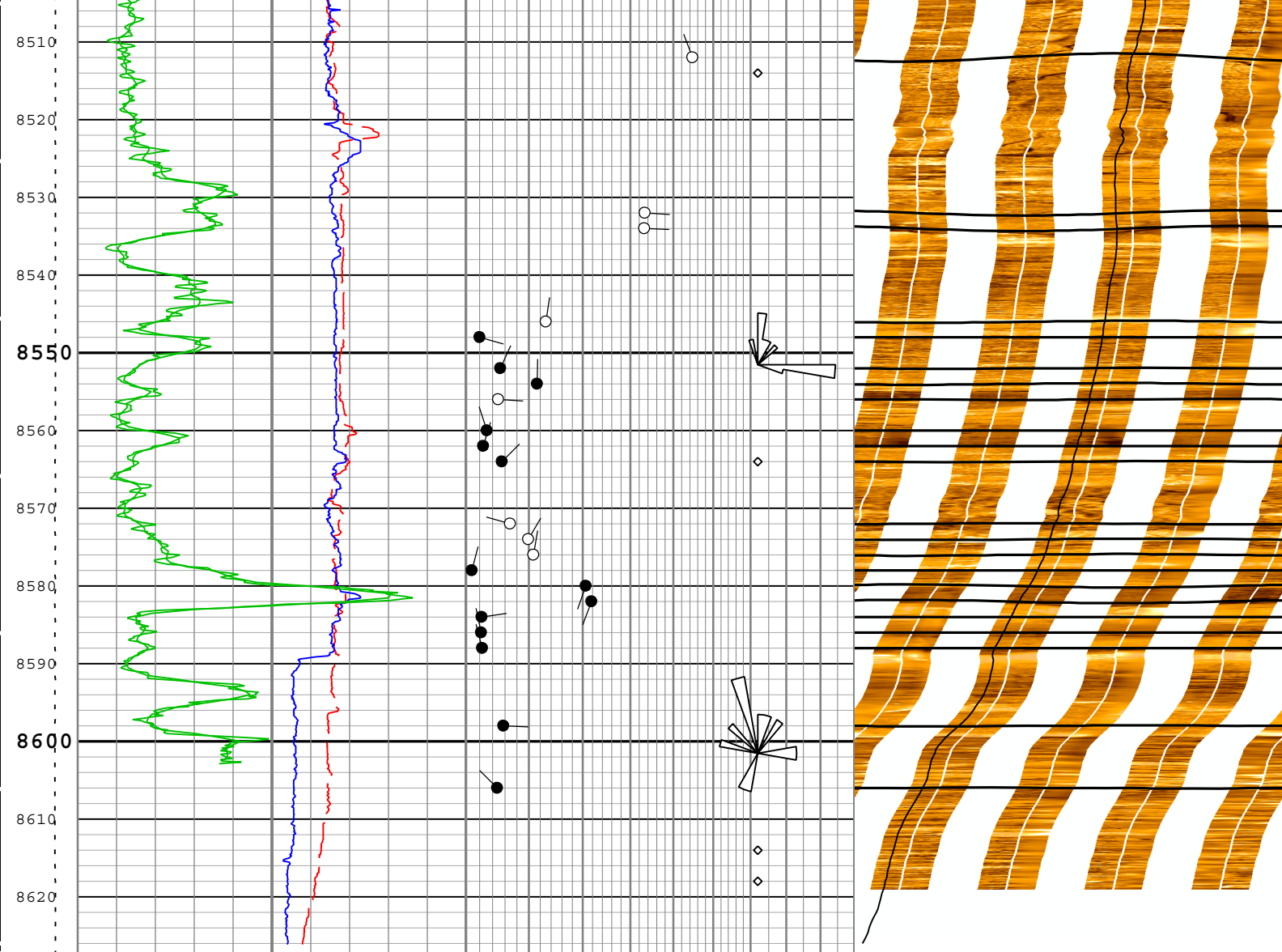












TIME_1900 - Time Marked every 60.00 (s)

Description: Bordip + FMI Log Format: Log (Bordip + FMI Log) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 23:20:59

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	3219.5	ft
CDEN	Cement Density	EDTC-B	2	g/cm3
CORINT	Correlation interval	FBST-E	4	ft
CORRELAT_CUT	Correlation Cutoff for Dip Computation (between 0.0 and 1.0)	FBST-E	0.3	

DFD	Drilling Fluid Density	Borehole	8.8	lbm/gal
FDBD	Dead Buttons Detection	FBST-E	Off	
FDBP	Dead Buttons Patching	FBST-E	Off	
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS	
ICMO	Inclinometry Computation Mode	FBST-E	Automatic Selection	
LOG_SPEED_RNG	Logging Speed Range	FBST-E	Normal (600 ft/h - 3600 ft/h)	
SEARCH_ANGLE	Angular range to search around focus dip	FBST-E	60	deg
STEP	Step Length between Correlations	FBST-E	2	ft
TD	Total Measured Depth	Borehole	8630	ft
USER_LOCB	User-supplied values for Magnetic Flux Density	WLSESSION	48566.35	nT
USER_MDEC	User-supplied values for Magnetic Declination	WLSESSION	7.24	deg
USER_MDIP	User-supplied values for Magnetic Dip Angle	WLSESSION	60.61	deg

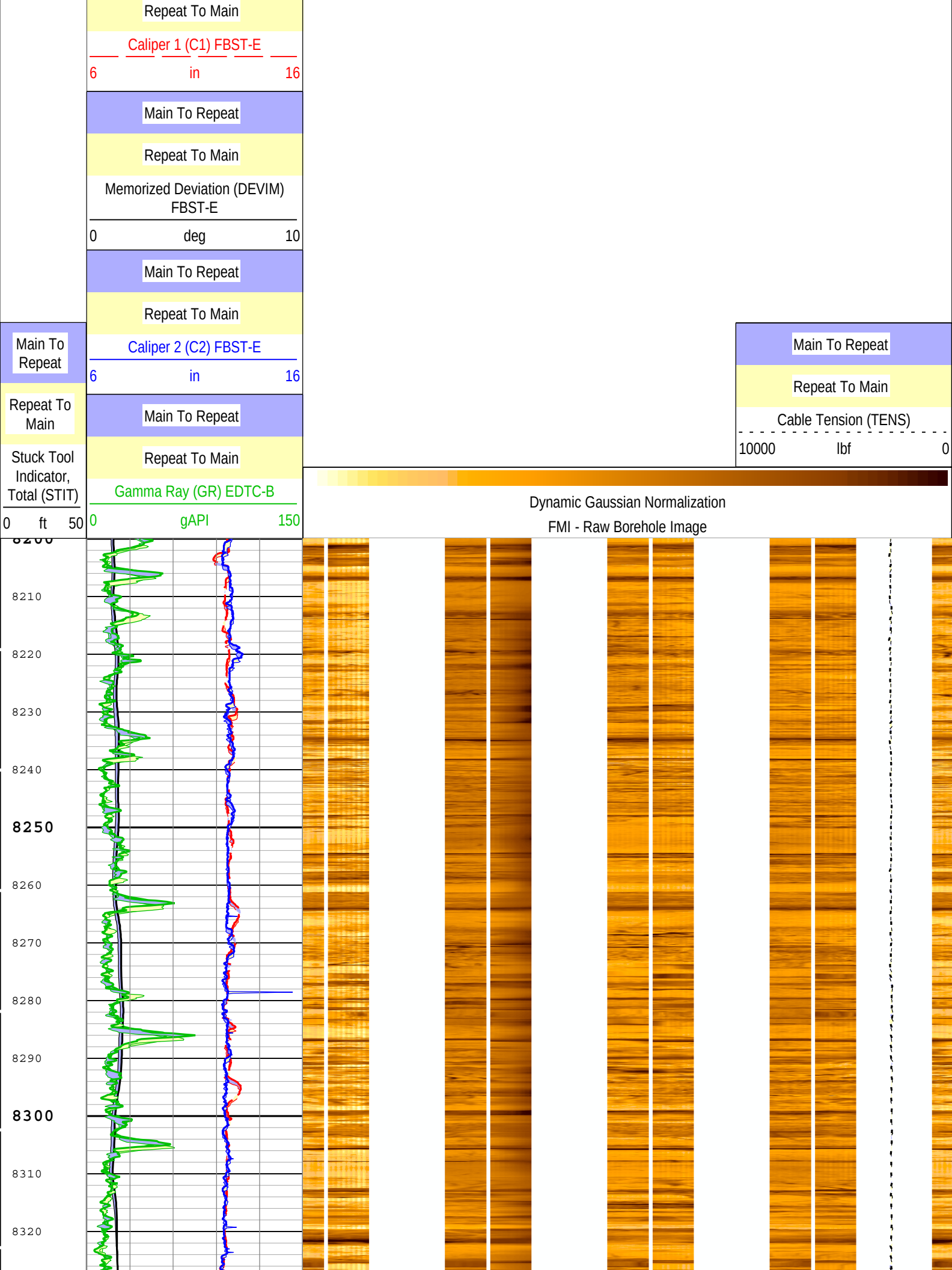
Depth Zone Parameters				
Parameter	Value	Start (ft)	Stop (ft)	
BS	26	0	1570	
BS	17.5	1570	3226.75	
BS	12.25	3226.75	8627.5	
All depth are actual.				

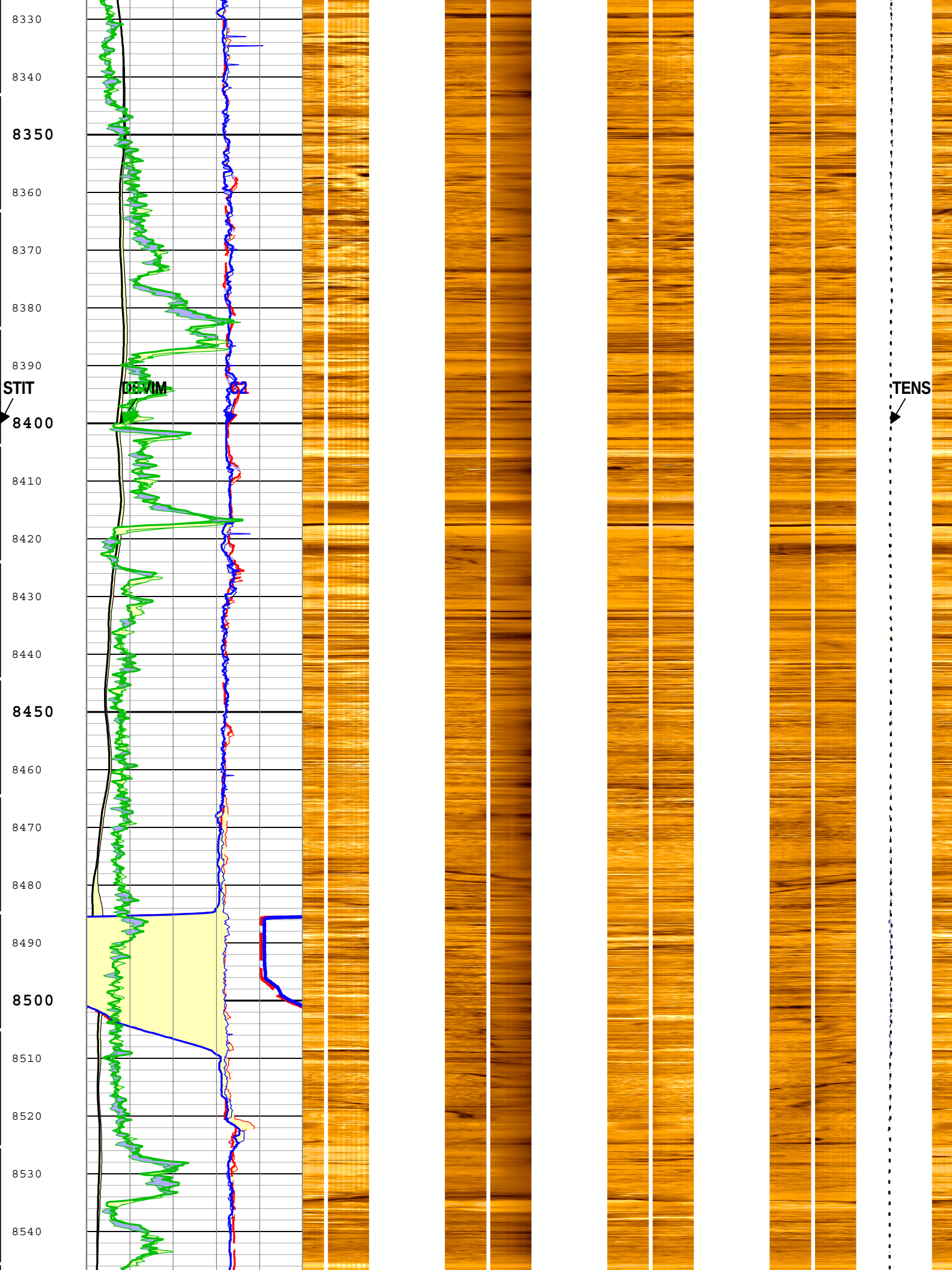
Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
AMIP	Adaptive Mode Initial Phase	FBST-E	0	deg
APM	Acquisition Phase Mode	FBST-E	WBM - Adaptive Phase Control	
EMXGMOD	EMEX and Gain Modes	FBST-E	EMEX= Auto and Gain= Auto	
FLM	Logging Mode	FBST-E	Full Image Mode	
GAIN_FBST	Electronic Gain Value in Manual Mode	FBST-E	0 dB	
GARM_A	Electronic Gain Value for Arm A	FBST-E	0 dB	
GARM_B	Electronic Gain Value for Arm B	FBST-E	0 dB	
GARM_C	Electronic Gain Value for Arm C	FBST-E	0 dB	
GARM_D	Electronic Gain Value for Arm D	FBST-E	0 dB	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h
MPSC	Manual Phase Shift Compensation	FBST-E	0	deg
XVOL	EMEX Voltage	FBST-E	0	V

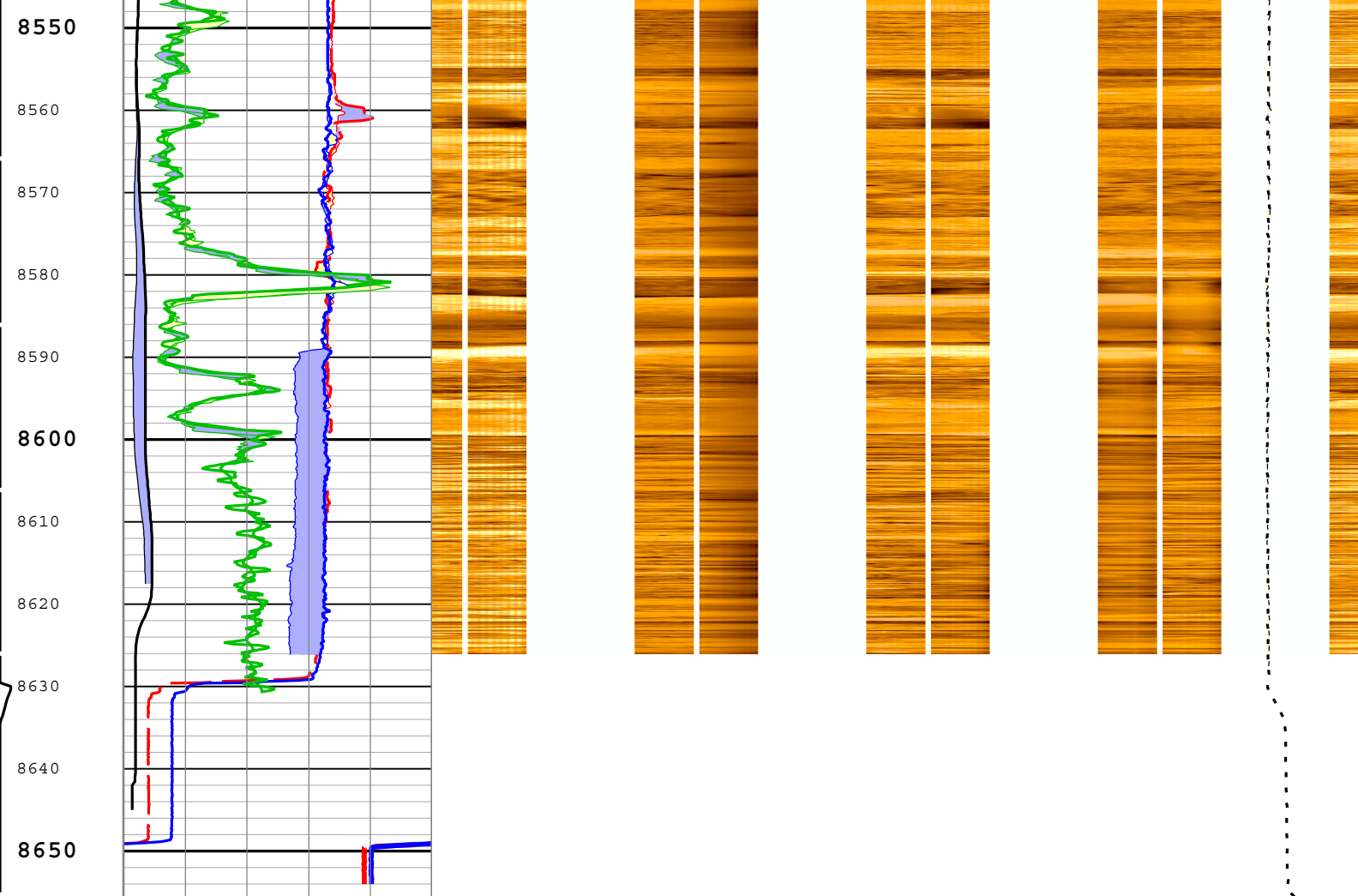
Three				

Log	Company:PB ENERGY STORAGE SERVICES, INC	Well:DCP Linam Ranch AGI #2
Three: Main[4]:Up:S024		
Description: FMI Raw Image Log Format: Log (FMI Raw Image Log RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth		
Creation Date: 30-Nov-2014 23:21:10		

TIME_1900 - Time Marked every 60.00 (s)				
Main To Repeat Repeat To Main Gamma Ray (GR) EDTC-B 0gAPI150 Main To Repeat				







Main To Repeat	Main To Repeat	Dynamic Gaussian Normalization	
	Repeat To Main	FMI - Raw Borehole Image	
Repeat To Main	Gamma Ray (GR) EDTC-B		Main To Repeat
Stuck Tool Indicator, Total (STIT)	0 gAPI 150		Repeat To Main
	Main To Repeat		Cable Tension (TENS)
0 ft 50	Repeat To Main		10000 lbf 0
	Caliper 1 (C1) FBST-E		
	6 in 16		
	Main To Repeat		
	Repeat To Main		
	Memorized Deviation (DEVIM) FBST-E		
	0 deg 10		
	Main To Repeat		
	Repeat To Main		
	Caliper 2 (C2) FBST-E		
	6 in 16		
	Main To Repeat		

Repeat To Main

Gamma Ray (GR) EDTC-B

0

gAPI

150

TIME_1900 - Time Marked every 60.00 (s)

Description: FMI Raw Image Log Format: Log (FMI Raw Image Log RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth

Creation Date: 30-Nov-2014 23:21:10

Calibration Report

FBST-E (Full-Bore Scanner Tool E) Calibration - Run Three

Primary Equipment :

DHRU-FA

DHRU-F

FBSS-B

FBSS-B

Calibration Parameter :

Small Ring Size (Caliper Calibration Small Ring)

8.00

Large Ring Size (Caliper Calibration Large Ring)

12.00

FBST-E Caliper Calibration - Caliper Accumulations

Before (Measured): **17:51:23 29-Nov-2014** Expired by 1 days After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring RC1	in	Before	8.00	6.80	8.36	9.20	
		After			NOT DONE		
		After-Before	-----	-----	-----	-----	
Small Ring RC2	in	Before	8.00	6.80	7.97	9.20	
		After			NOT DONE		
		After-Before	-----	-----	-----	-----	
Large Ring RC1	in	Before	12.00	10.20	12.21	13.80	
		After			NOT DONE		
		After-Before	-----	-----	-----	-----	
Large Ring RC2	in	Before	12.00	10.20	12.00	13.80	
		After			NOT DONE		
		After-Before	-----	-----	-----	-----	

Signals and Temperature Correction for Accelerometers

Master (EEPROM): 00:00:00 04-Oct-2012

GPITF_ACCX_MODEL GPIT-F Accelero X Model
(Master)

	Racx**0	Racx**1
Temp**0	-0.03333	0.0006638
Temp**1	-7.771E-06	-3.444E-08
Temp**2	8.959E-06	-2.757E-10
Temp**3	-4.713E-08	2.285E-13

GPITF_ACCY_MODEL GPIT-F Accelero Y Model
(Master)

	Racy**0	Racy**1
Temp**0	0.04686	-0.0006655
Temp**1	-0.0002331	3.334E-08
Temp**2	-3.538E-06	3.014E-10
Temp**3	1.849E-08	-2.73E-13

GPITF_ACCZ_MODEL GPIT-F Accelero Z Model
(Master)

	Racz**0	Racz**1
Temp**0	-0.01314	0.0006667
Temp**1	9.169E-06	-2.171E-08
Temp**2	8.335E-06	-4.72E-10
Temp**3	-4.427E-08	9.685E-13

Perpendicular Correction for Accelerometers

Master (EEPROM): 00:00:00 04-Oct-2012

GPITF_ACC_AXIS_MODE GPIT-F Accelero Axis Model
L (Master)

	Data**0	Data**1	Data**2	Data**3	Data**4	Data**5	Data**6
Temp**0	-0.0005227	0.0008336	0.0003593	0.0001488	0.0004628	4.525E-05	0
Temp**1	8.049E-07	-3.174E-06	1.143E-07	1.53E-06	1.362E-06	8.665E-07	0

Signals and Temperature Correction for Magnetometer

Master (EEPROM): 00:00:00 04-Oct-2012

GPITF_MAGX_MODEL GPIT-F Magneto X Model
(Master)

	Rmagx**0	Rmagx**1
Temp**0	57.56	4.874
Temp**1	-2.347	-2.662E-05
Temp**2	0.01477	-6.708E-07
Temp**3	-8.858E-05	6.087E-09

GPITF_MAGY_MODEL GPIT-F Magneto Y Model
(Master)

	Rmagy**0	Rmagy**1
Temp**0	38.46	-4.93
Temp**1	0.1296	0.0001116
Temp**2	-0.008689	8.468E-07
Temp**3	6.574E-05	-8.802E-09

GPITF_MAGZ_MODEL GPIT-F Magneto Z Model
(Master)

	Rmagz**0	Rmagz**1
Temp**0	35.44	4.851
Temp**1	-4.25	0.000166
Temp**2	0.03124	-3.518E-06
Temp**3	-0.0001583	1.679E-08

Perpendicular Correction for Magnetometer

Master (EEPROM): 00:00:00 04-Oct-2012

GPITF_MAG_AXIS_MODE GPIT-F Magneto Axis Model
L (Master)

	Data**0	Data**1	Data**2	Data**3	Data**4	Data**5	Data**6
Temp**0	0.003859	0.001726	-0.0007542	0.00483	0.002056	-0.002547	0
Temp**1	1.317E-07	5.254E-06	1.094E-06	-2.631E-06	-3.543E-06	1.014E-05	0

Master (EEPROM): 00:00:00 01-Oct-2012

GPITF_ELEC_COEFF1 GPIT-F Electronic Coeff 1
(Master)

	Data**0	Data**1
Temp**0	-0.9382	249.7
Temp**1	-0.01715	0.0134
Temp**2	0.0005491	-0.0003015
Temp**3	-5.533E-06	2.603E-06
Temp**4	1.868E-08	-7.892E-09

GPITF_ELEC_COEFF2 GPIT-F Electronic Coeff 2 (Master)		
	Data**0	Data**1
Temp**0	-0.402	249.8
Temp**1	0.007364	0.005135
Temp**2	1.248E-05	-0.0001542
Temp**3	-7.07E-07	1.672E-06
Temp**4	2.341E-09	-5.987E-09
GPITF_ELEC_COEFF3 GPIT-F Electronic Coeff 3 (Master)		
	Data**0	Data**1
Temp**0	-1.457	249.9
Temp**1	-0.01965	0.00888
Temp**2	0.0007153	-0.000217
Temp**3	-6.86E-06	2.09E-06
Temp**4	2.25E-08	-6.92E-09

Master (EEPROM): 00:00:00 01-Oct-2012		
GPITF_ELEC_COEFF4 GPIT-F Electronic Coeff 4 (Master)		
	Data**0	Data**1
Temp**0	-0.6109	0.1279
Temp**1	-0.0004855	5.293E-06
Temp**2	9.099E-05	-1.394E-07
Temp**3	-8.39E-07	1.344E-09
Temp**4	3.656E-09	-4.337E-12
GPITF_ELEC_COEFF5 GPIT-F Electronic Coeff 5 (Master)		
	Data**0	Data**1
Temp**0	-0.6109	0.1279
Temp**1	-0.0004855	5.293E-06
Temp**2	9.099E-05	-1.394E-07
Temp**3	-8.39E-07	1.344E-09
Temp**4	3.656E-09	-4.337E-12
GPITF_ELEC_COEFF6 GPIT-F Electronic Coeff 6 (Master)		
	Data**0	Data**1
Temp**0	-0.6109	0.1279
Temp**1	-0.0004855	5.293E-06
Temp**2	9.099E-05	-1.394E-07
Temp**3	-8.39E-07	1.344E-09
Temp**4	3.656E-09	-4.337E-12

EDTC-B (Enhanced Digital Telemetry Cartridge - Version B) Calibration - Run Three

Primary Equipment :

EDTC-B

EDTC-B

9071

Calibration Parameter :

Plus Reference (Jig minus background reference)

160

EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration

Before (Measured): 19:18:19 30-Nov-2014							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.19	31.53	32.06	32.84	
EDTC-B Memory Data - EDTC-B Memory Data							
Master (EEPROM): 19:53:21 30-Nov-2014							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Initial PMT HV	V	Master			1513.000		
Accelerometer Serial Number		Master			1235		
Accelerometer Coefficients - 0		Master	----	----	2.911	----	
Accelerometer Coefficients - 1		Master	----	----	0.000	----	
Accelerometer Coefficients - 2		Master	----	----	0.000	----	
Accelerometer Coefficients - 3		Master	----	----	0.000	----	
Accelerometer Coefficients - 4		Master	----	----	0.000	----	
Accelerometer Coefficients - 5		Master	----	----	0.000	----	
Accelerometer Coefficients - 6		Master	----	----	0.000	----	
Accelerometer Coefficients - 7		Master	----	----	-0.004	----	
Accelerometer Coefficients - 8		Master	----	----	0.000	----	
Accelerometer Coefficients - 9		Master	----	----	0.000	----	
Accelerometer Coefficients - 10		Master	----	----	0.000	----	
Accelerometer Coefficients - 11		Master	----	----	0.000	----	
Gamma-Ray Detector Serial Number		Master			79243		
EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients							
Before (Measured): 11:32:01 30-Nov-2014 After:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Gamma Ray Gain		Before	1.000	0.900	1.096	1.100	
		After	----	----	----	----	
		After-Before	----	----	----	----	
EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations							
Before (Measured): 11:32:01 30-Nov-2014 After:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before		0	19.321	120.000	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RGR Plus Measurement	gAPI	Before	160.000	145.000	145.997	175.000	
		After			NOT DONE		
		After-Before	----	----	----	----	

Company:	PB ENERGY STORAGE SERVICES, INC	Schlumberger
Well:	DCP Linam Ranch AGI #2	
Field:	AGI; Bone Spring-Wolfcamp	
County:	Lea	
State:	New Mexico	

Fullbore Micro Imager
Field Print

Borehole Compensated Sonic / Spectral Gamma Ray

Company: PB ENERGY STORAGE SERVICES, INC

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County: Lea Country: USA

Borehole Compensated Sonic
Spectral Gamma RayLea
AGI; Bone Spring-Wolfcamp
1600' FSL & 1750' FWL
DCP Linam Ranch AGI #2
PB ENERGY STORAGE SERVICES, INC

Location:		Elev.:	
1600' FSL & 1750' FWL		K.B.	3763.00 ft
		G.L.	3738.00 ft
		D.F.	3762.00 ft
Permanent Datum:	Ground Level	Elev.:	3738.00 f
Log Measured From:	Kelly Bushing	25.00 ft	above Perm.Datum
Drilling Measured From:	Kelly Bushing		
API Serial No.	Section:	Township:	Range:
30-025-42139	30	18S	37E

Logging Date 30-Nov-2014

Run Number Two

Depth Driller 8630.00 ft

Schlumberger Depth 8630.00 ft

Bottom Log Interval 8608.00 ft

Top Log Interval 3219.50 ft

Casing Driller Size @ Depth 13.375 in @ 3220.00 ft

Casing Schlumberger 3219.5 ft

Bit Size 12.25 in

Type Fluid In Hole Salt Brine

Density 8.8 lbm/gal 33 s

Fluid Loss PH 0 cm3 10

Source of Sample Active Tank

RM @ Meas Temp 9 ohm.m @ 80 degF

RMF @ Meas Temp 7.5 ohm.m @ 80 degF

RMC @ Meas Temp 0.06 ohm.m @ 75 degF

Source RMF RMC Pressed

RM @ BHT RMF @ BHT 6.85 @ 107.3 5.71 @ 107.3

Max Recorded Temperatures 125 degF

Circulation Stopped 30-Nov-2014 02:00:00

Logger on Bottom 30-Nov-2014 13:10:30

Unit Number 2133 Roswell

Recorded By Tyler Bolton

Witnessed By Russell Bentley

Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

Contents

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- Disclaimer
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 - Integration Summary
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 - Integration Summary
 - Composite Summary
 - Log (BHC 5 inch General)
 - Parameter Listing
- Two Repeat Analysis 5" = 100'
 - Composite Summary

- Two Main Pass 1" = 100'
 - Integration Summary
 - Composite Summary
 - Log (BHC 1 inch General)

8.2 Log (BHC 5 inch General RA)

9. Two Repeat Pass 5" = 100'

9.1 Integration Summary

9.2 Composite Summary

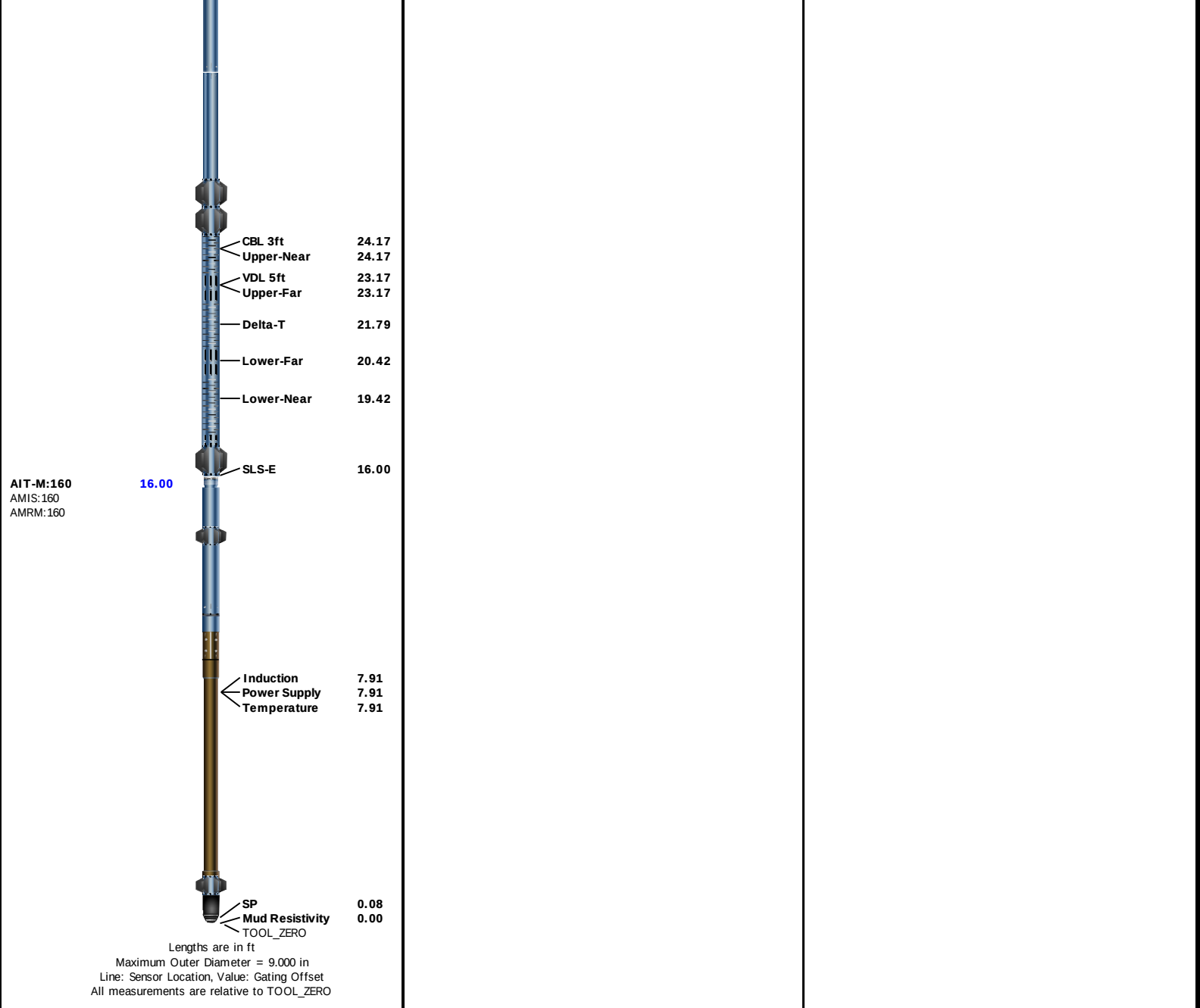
9.3 Log (BHC 5 inch General)

10. Calibration Report

11. Tail

Remarks and Equipment Summary

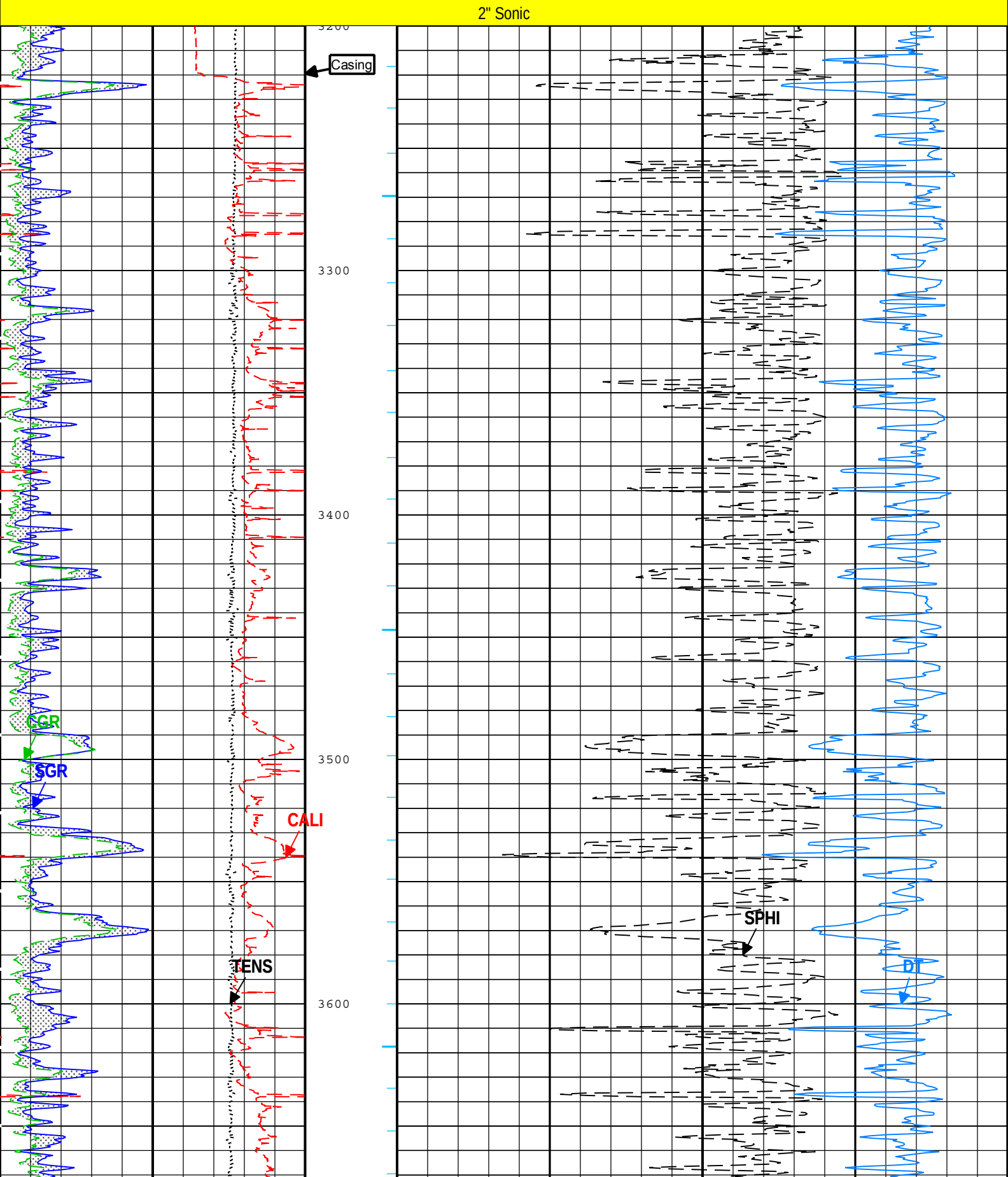
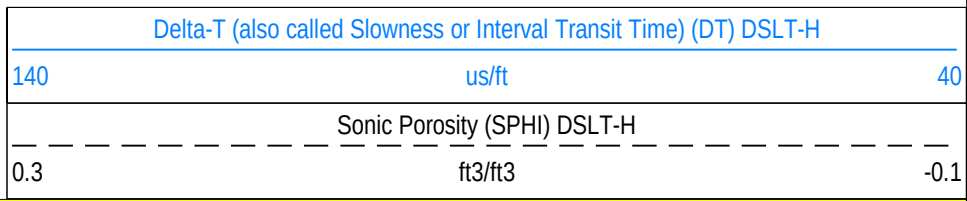
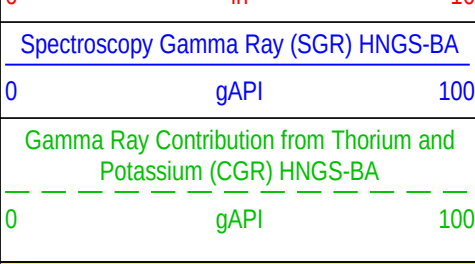
Two: Toolstring				Two: Remarks	
Equip name LEH-QC:1317	Length 82.94		MP name	Offset	Toolstring run as per toolsketch.
					Bowspring used to eccentralize HGNS.
					0.125" standoff created by wear-ring on HGNS.
					1.5" standoffs used on AIT, and DSLT.
EDTC-B:9071 EDTH-B:8196 EDTG-A:79243 EDTC-B:9071	80.48				Porosity computed on a Limestone scale with density of 2.71 g/cc and slowness of 47.6 us/ft.
HNGS-BA:84 HEH-K:1035 HNGS-BA:84	73.98				Rig: Precision 107
					Your Schlumberger Crew: Tyler Bolton, Adam Jaramillo, Jose Gomez.

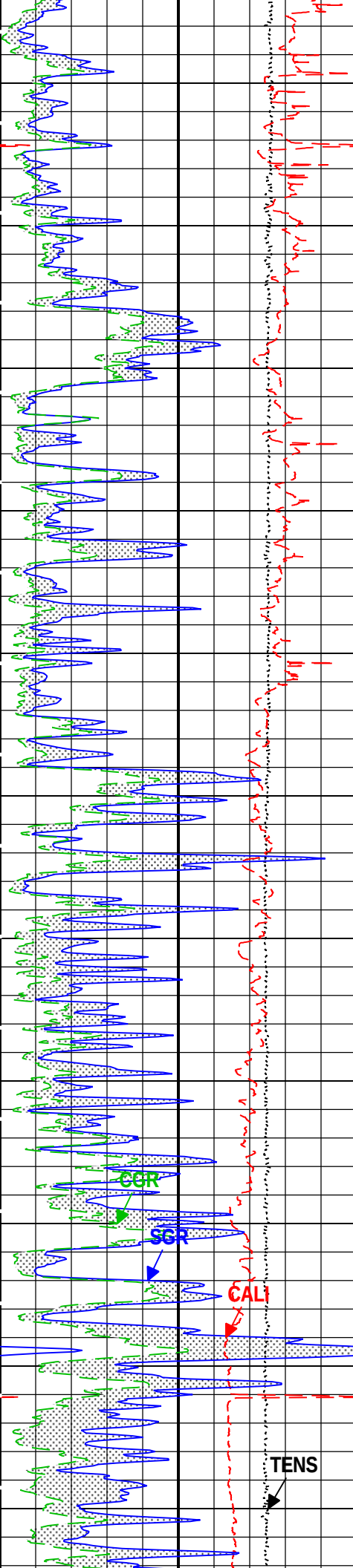


Depth Summary

Two			
Depth Measuring Device			
Type	IDW-JA		
Serial Number	5910		
Calibration Date	02-Jun-2014		
Calibrator Serial Number			
Calibration Cable Type	7-46P XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		
Tension Device			
Type	CMTD-B/A		
Serial Number	5044		
Calibration Date	18-Oct-2014		
Calibrator Serial Number	80725A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	19		
Calibration Peak Error	36		
Logging Cable			
Type	7-46P-XS		

Serial Number	U711059			
Length	15500.00 ft			
Conveyance Type	Wireline			
Rig Type	Land			
Two:Depth Control Parameters		Depth Control Remarks		
Log Sequence	Subsequent Trip To the Well	All primary and secondary depth control procedures followed. IDW used as primary depth control device. Z-chart used as secondary depth control device.		
Reference Log Name	Platform Express-CNL			
Reference Log Run Number	One			
Reference Log Date	01-Nov-2014			
Subsequent Trip Down Log Correction	7.29 ft			
Two				
Main Pass 2" = 100'				
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ITT	Integrated Transit Time	ITTS	0.2939	s
Software Version				
Acquisition System			Version	
MaxWell			4.0.9163.3000	
Application Patch			Patch-SP-10767_22480-4.0.9163.3001	
			Patch-NPD_CMRTF_SP3-23787-4.0.9530.3002	
Computation	Description		Version	
Sonic Openhole Ensemble	Sonic Openhole Ensemble		4.0.9469.3000	
Tool Elements	Description	Software Version		Firmware Version
SLS-E	Sonic Logging Sonde E supports 3'-5'BHC DT and CBL/VDL	4.0.9469.3000		4.0
HNGS-BA	HNGS Sonde Element	4.0.9469.3000		2.0
HRCC-B	HILT High-Resolution Control Cartridge, 125 degC	4.0.9486.3000		2.0
Log	Company:PB ENERGY STORAGE SERVICES, INC		Well:DCP Linam Ranch AGI #2	
Two: Main[3]:Up:S021				
Description: HRLT BASIC LOG Format: Log (BHC 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:16:54				
Channel	Source	Sampling		
CALI	HDRS-B:HRCC-B:HRCC-B	1in		
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in		
DT	DSLT-H:SLS-E:SLS-E	6in		
ITT	DSLT-H:SLS-E:SLS-E	6in		
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in		
SPHI	DSLT-H:SLS-E:SLS-E	6in		
TENS	WLWorkflow	1in		
TIME_1900	WLWorkflow	0.1in		
—ITT - Integrated Transit Time every 10.00 (ms)				
TIME_1900 - Time Marked every 60.00 (s)				
—ITT - Integrated Transit Time every 1.00 (ms)				
Uranium Indicator				
Cable Tension (TENS)				
10000 lbf 0				
Caliper (CALI) HDRS-B				
6 in 16				





3700

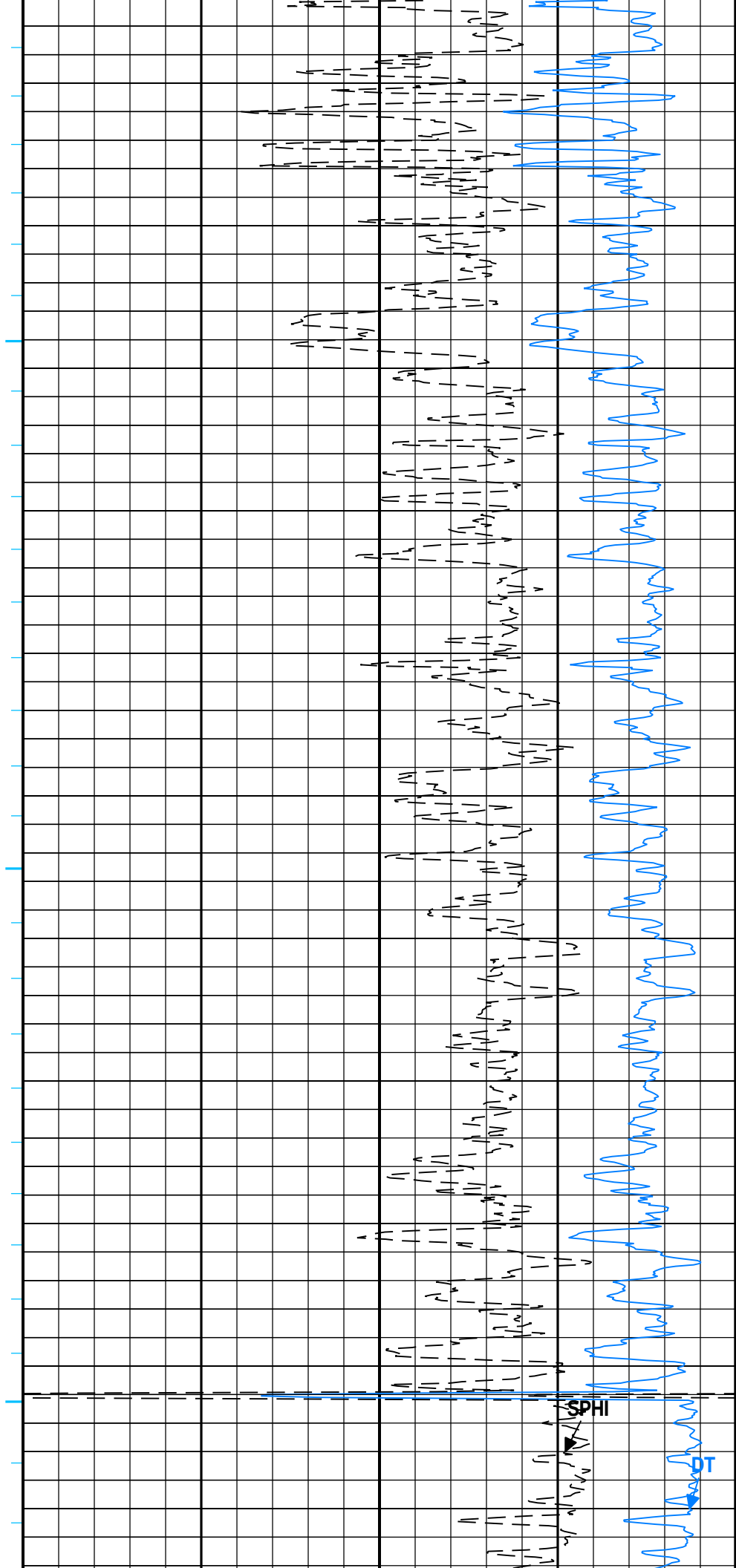
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3900

4000

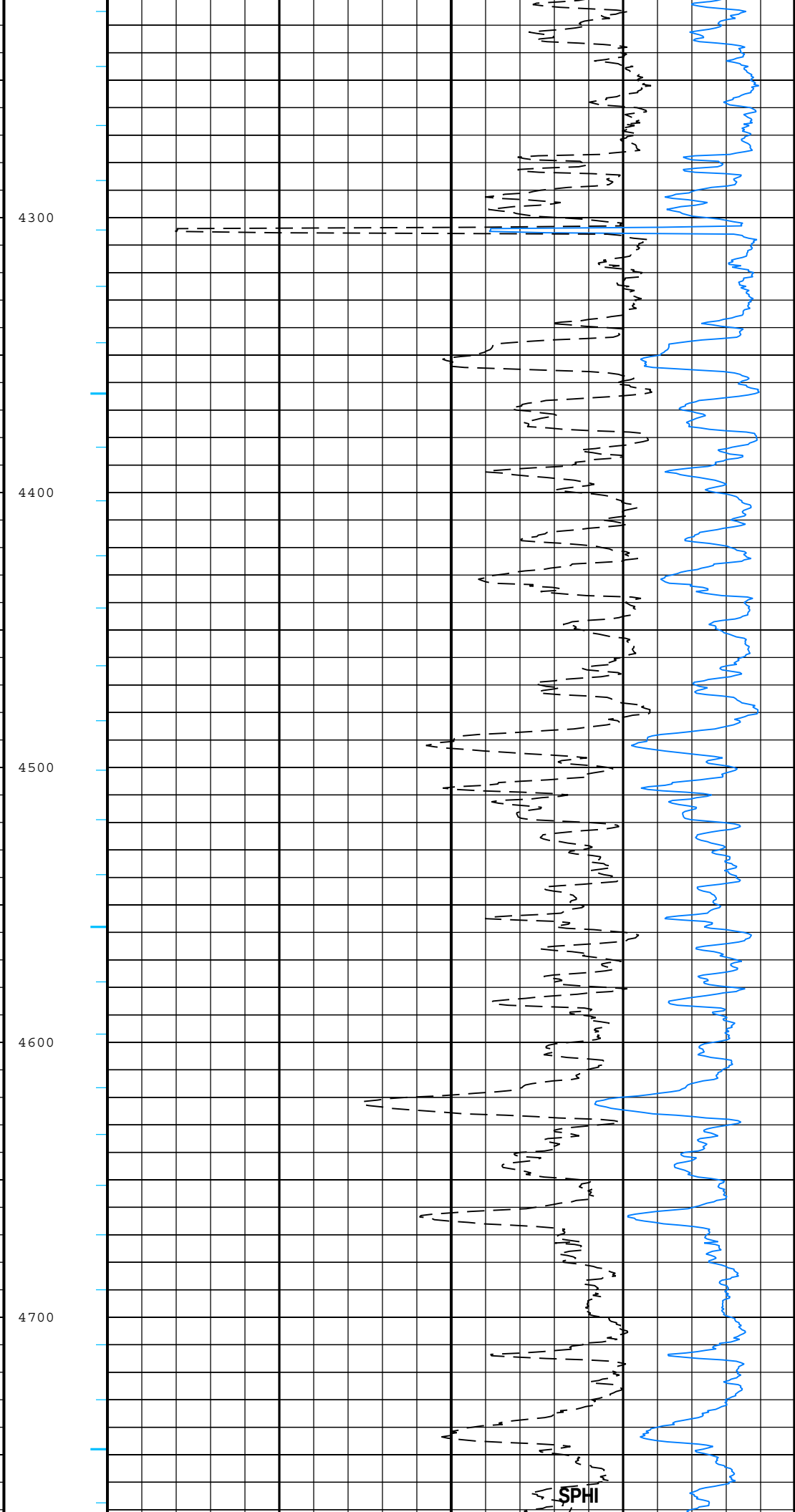
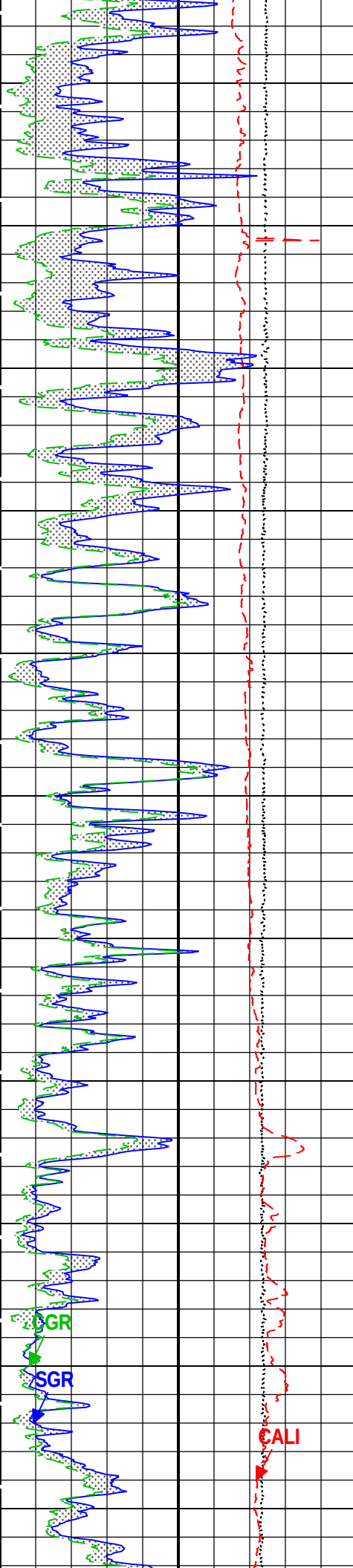
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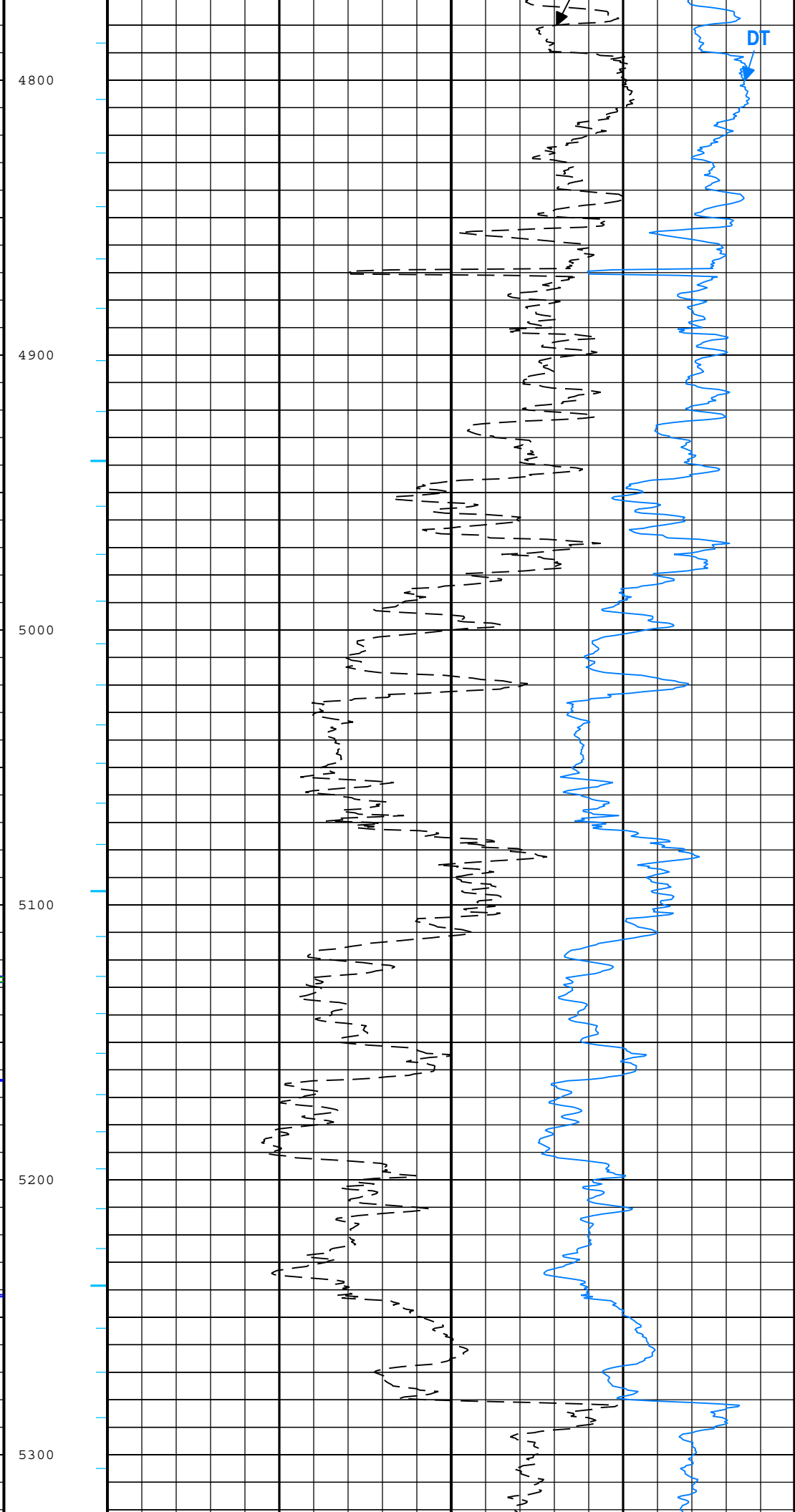
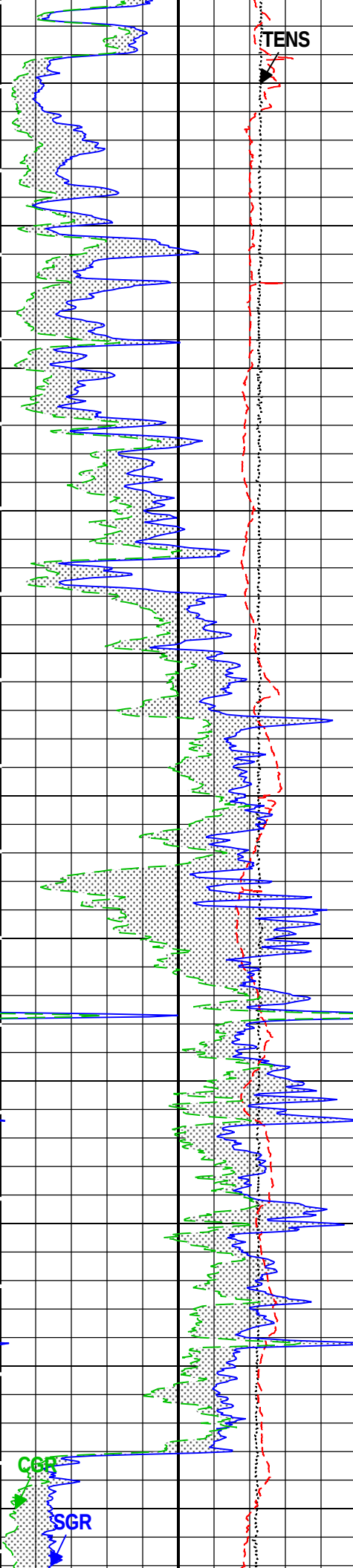
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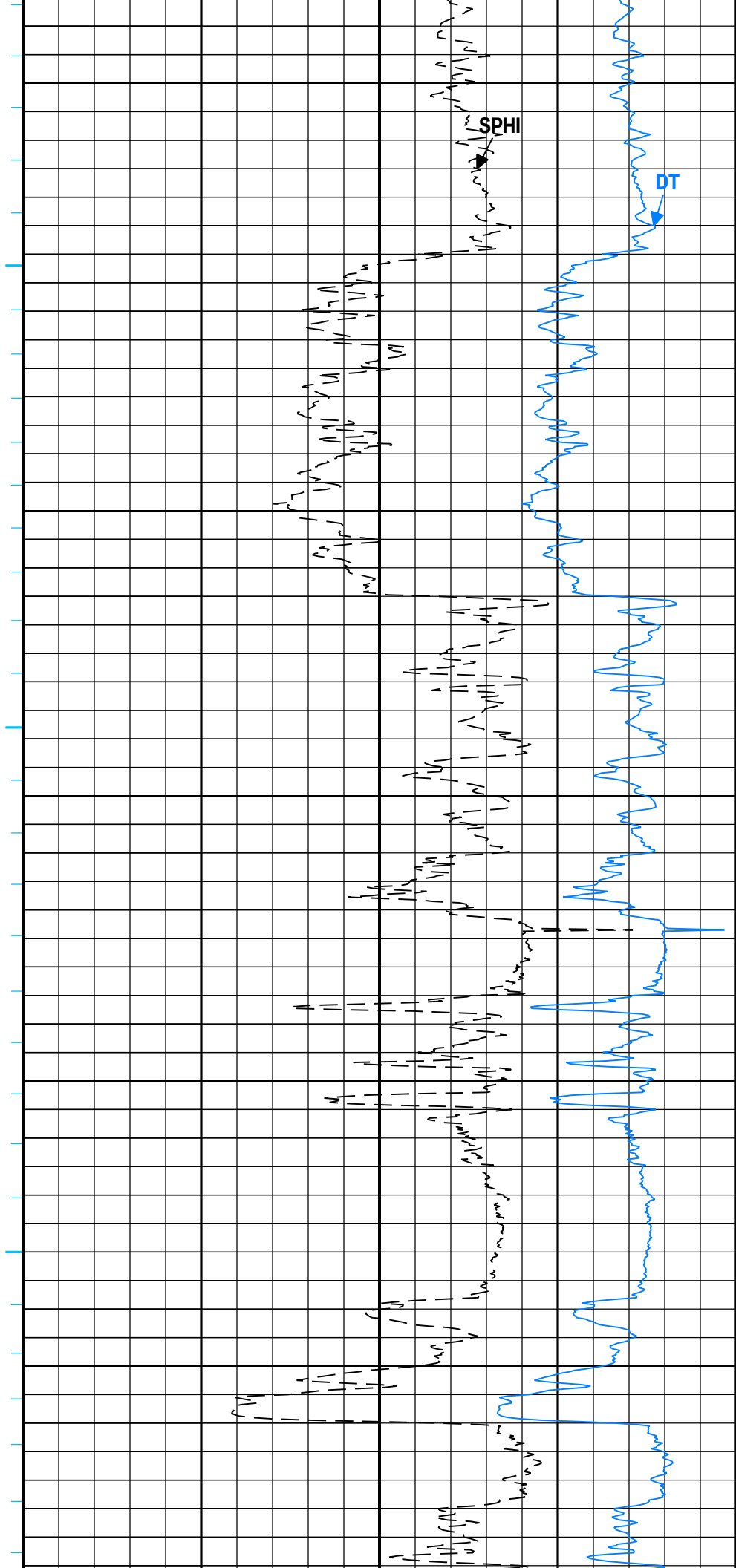
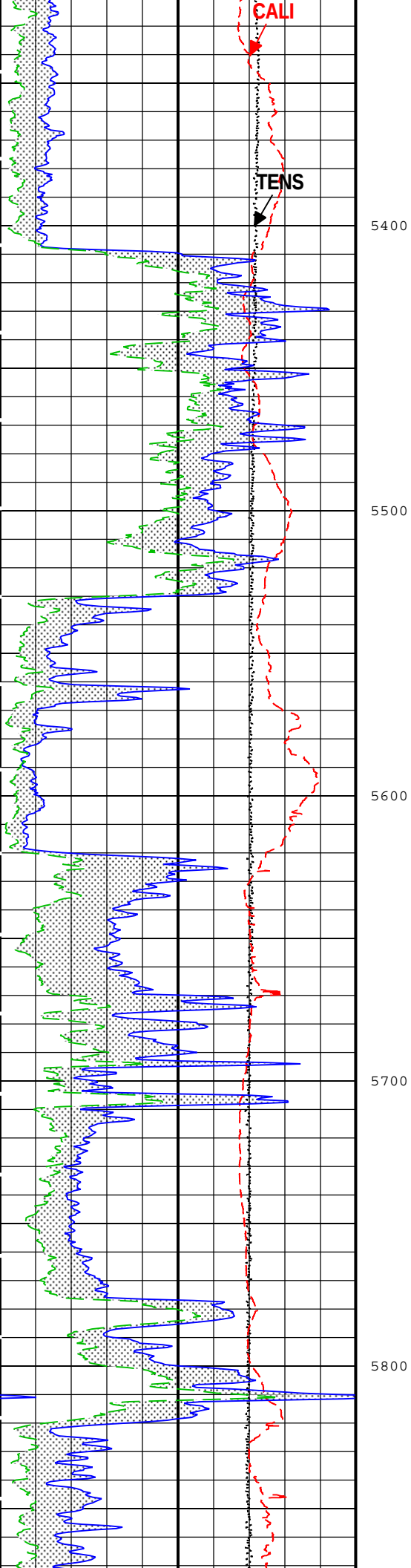


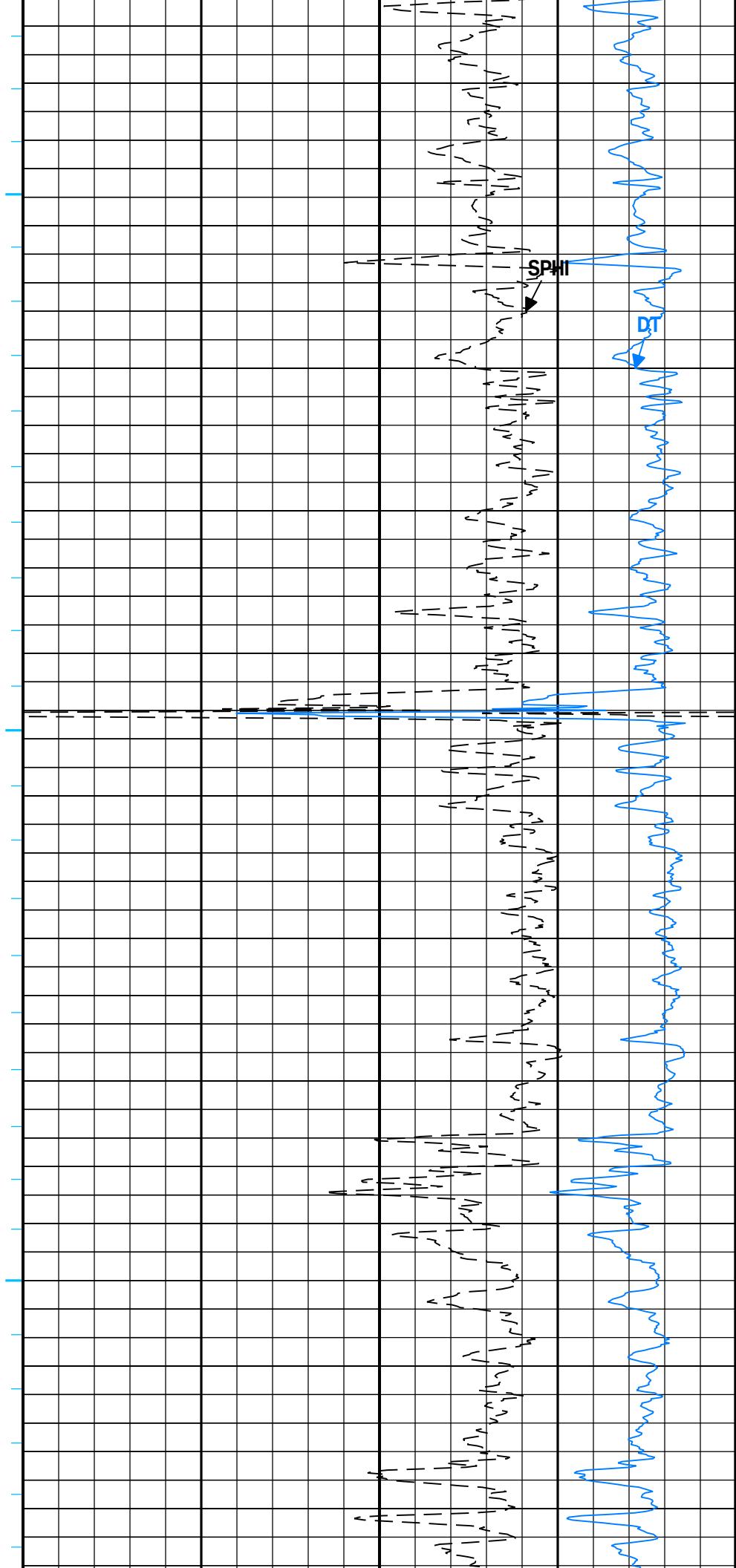
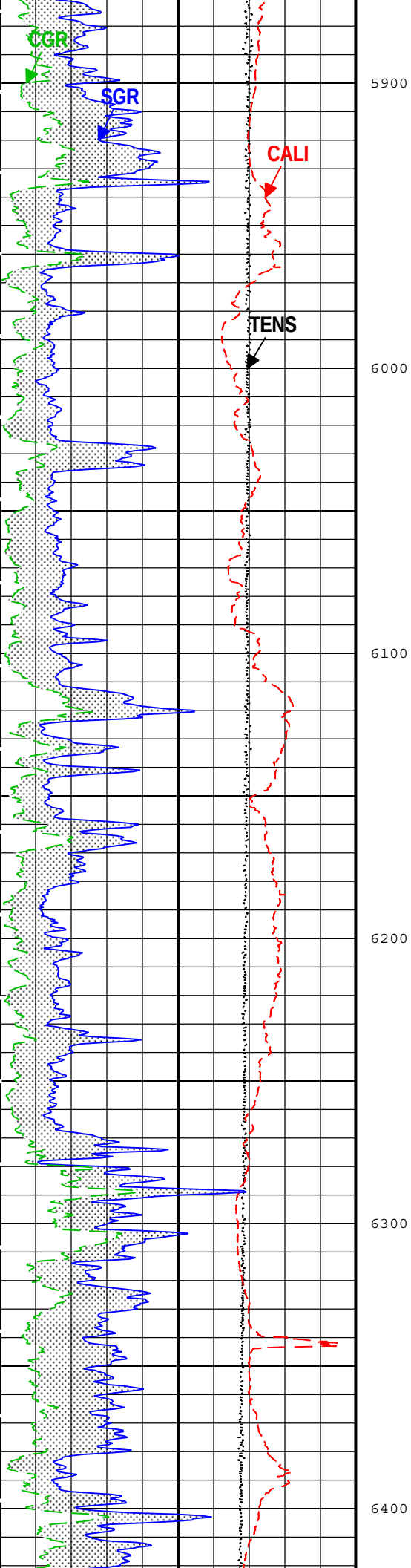
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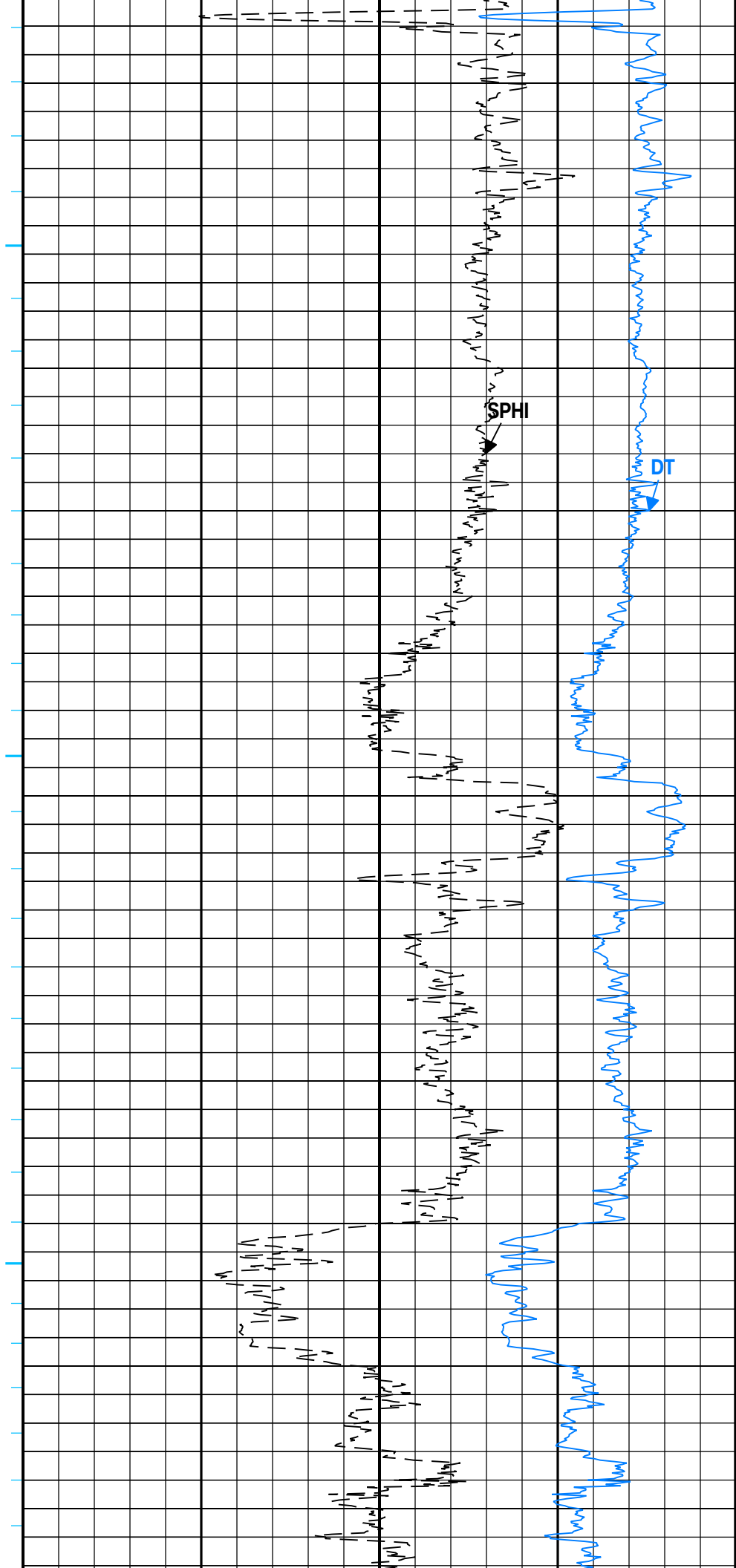
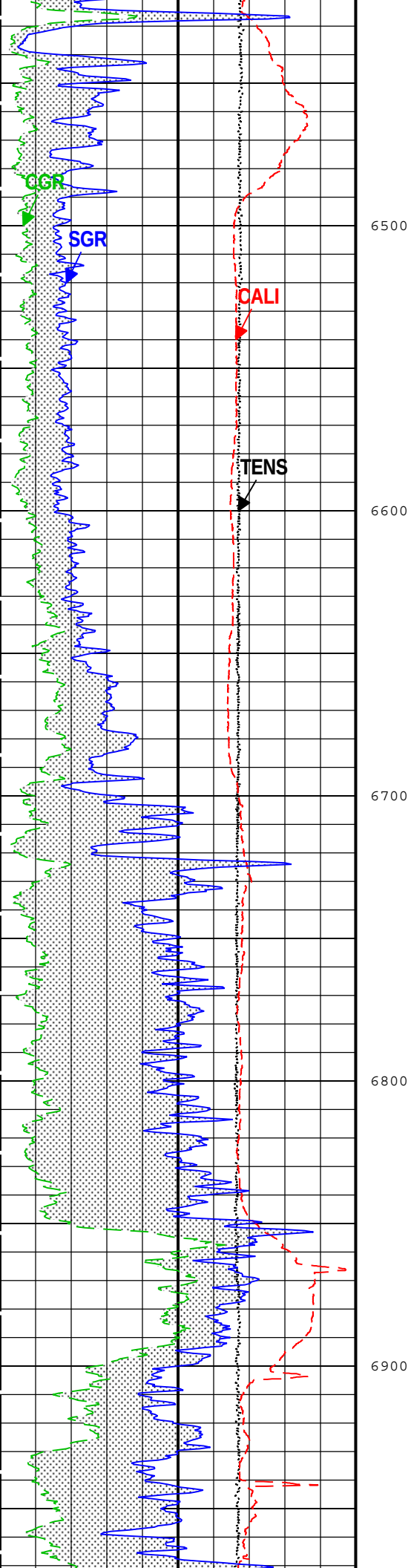
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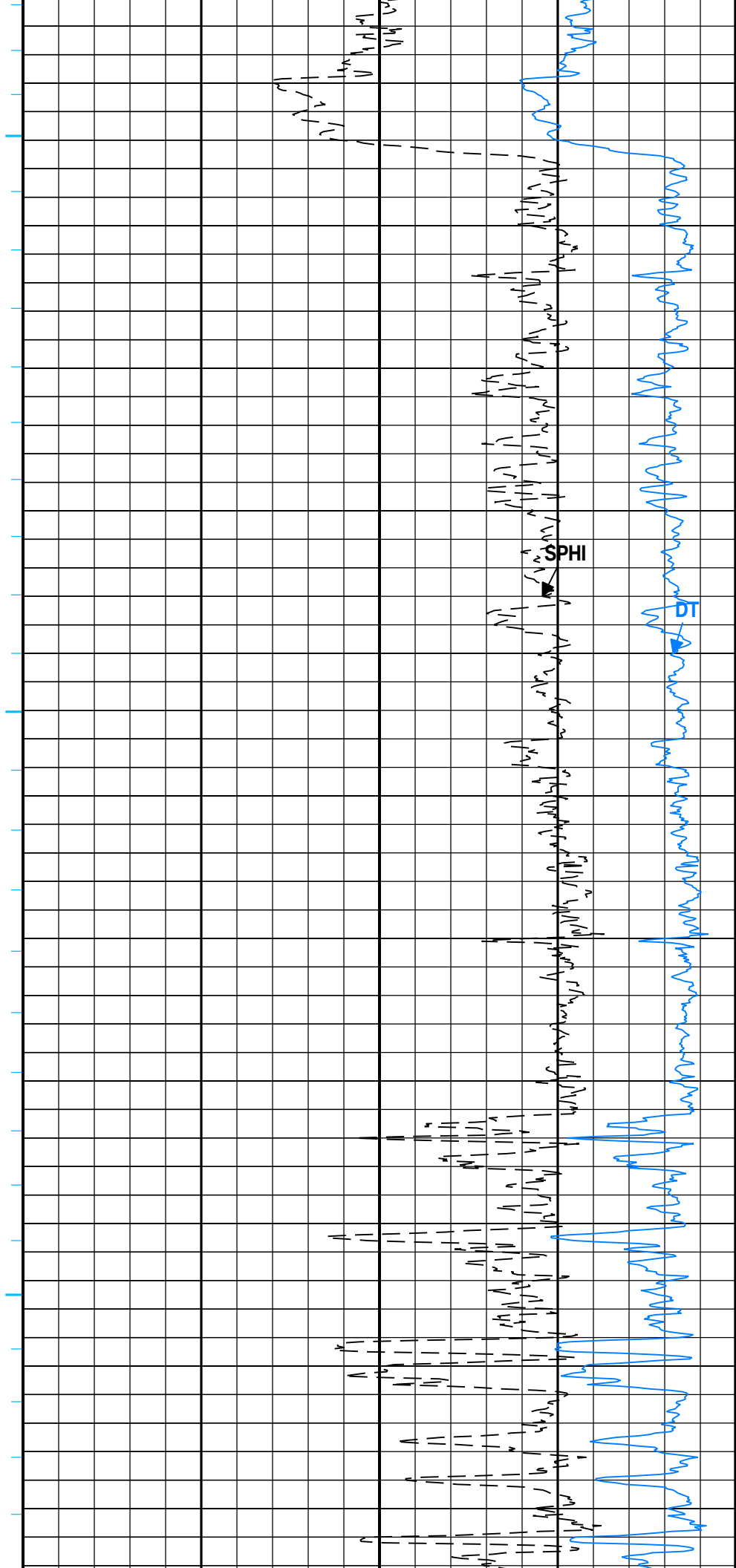
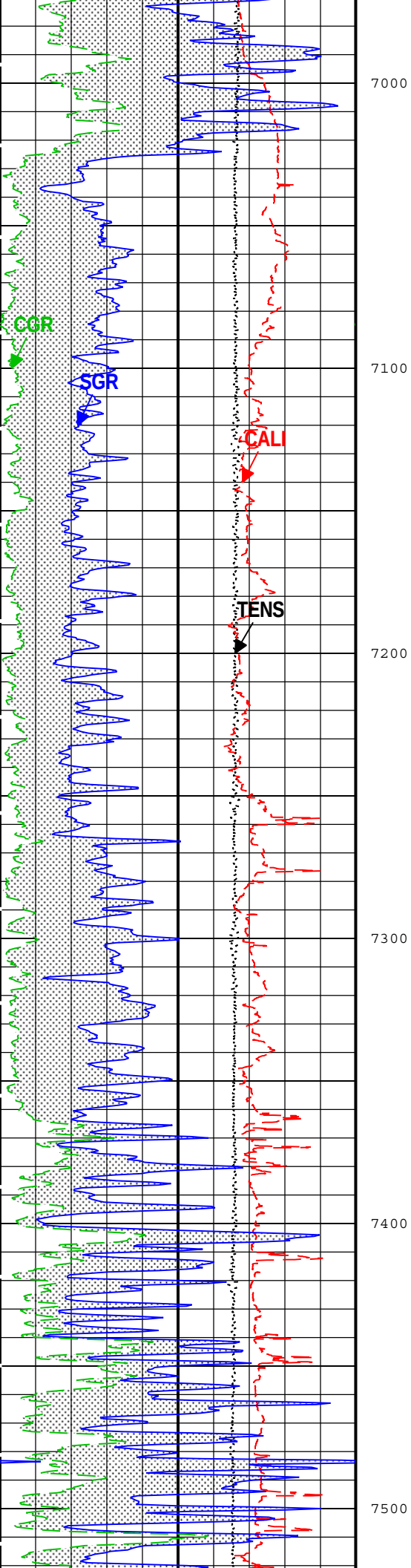


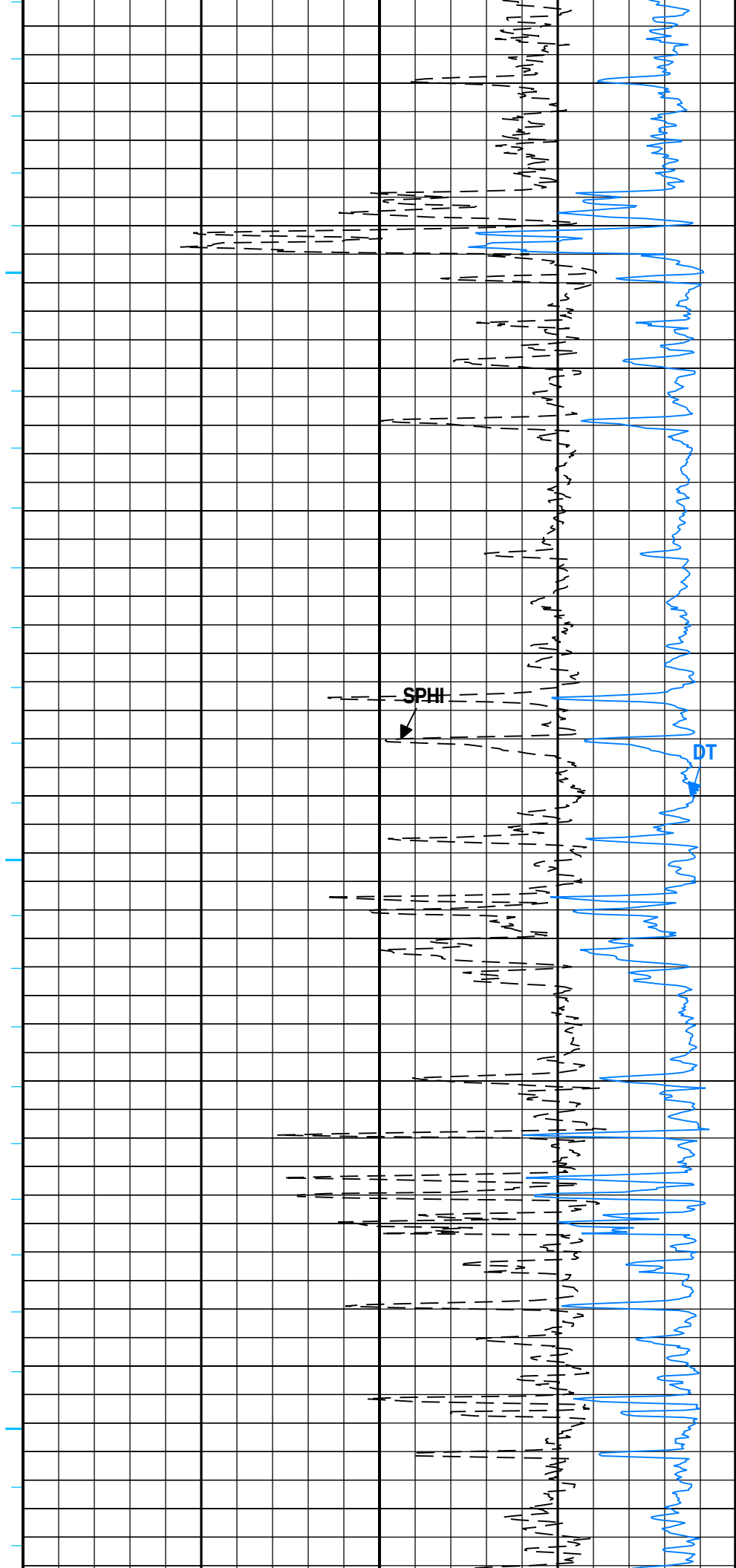
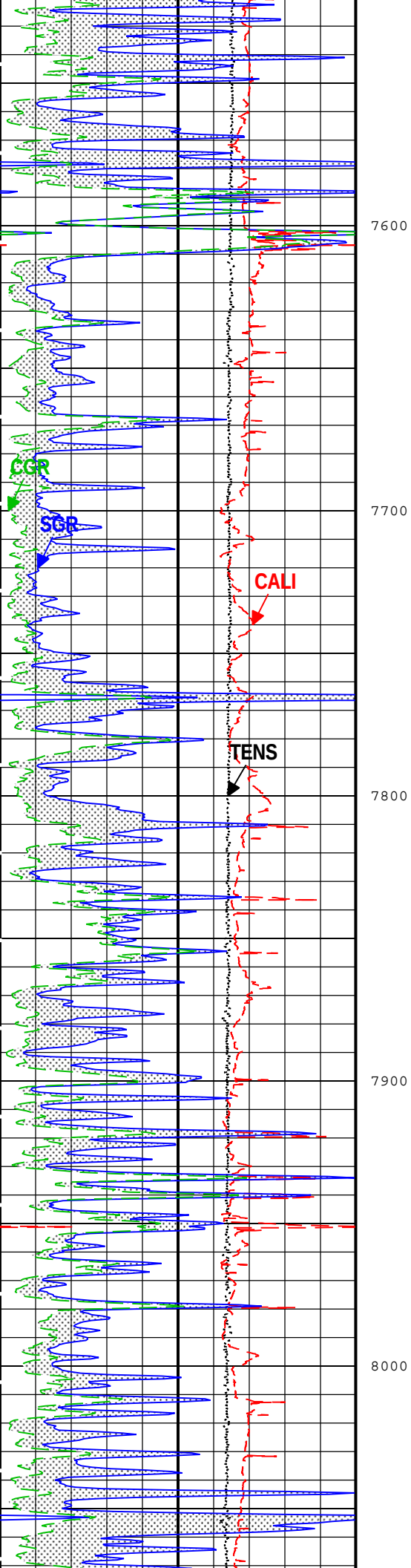


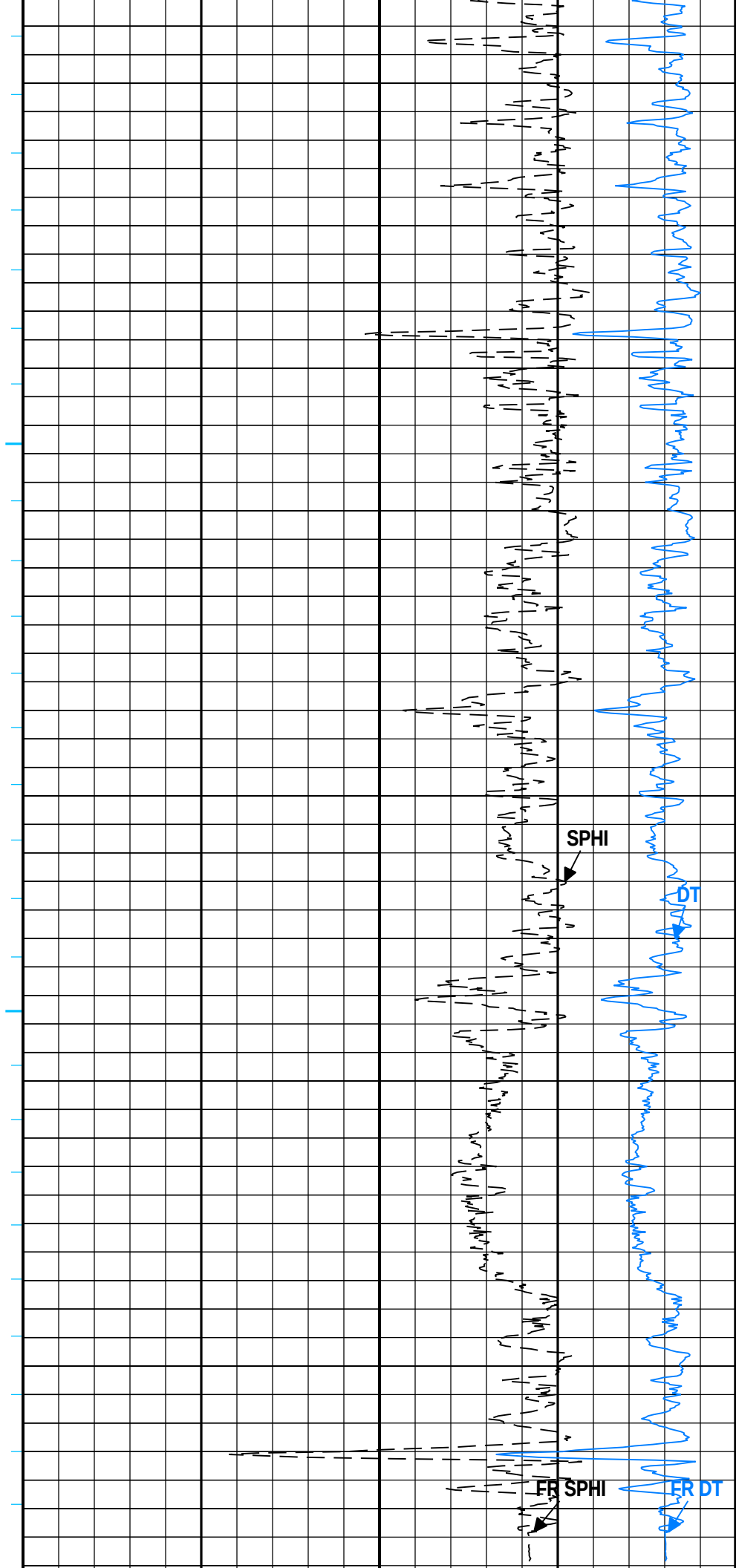
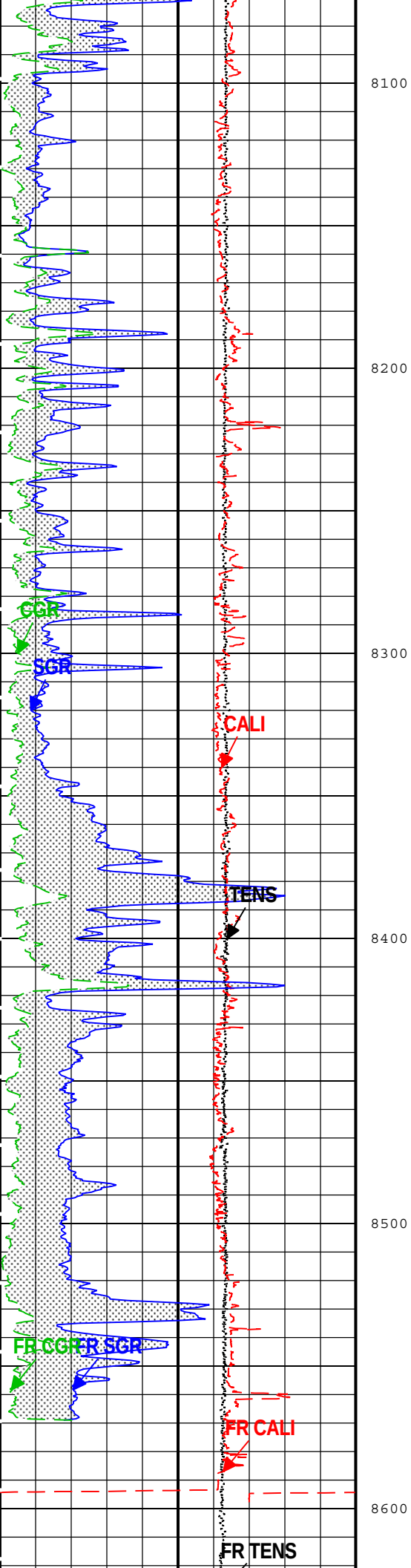


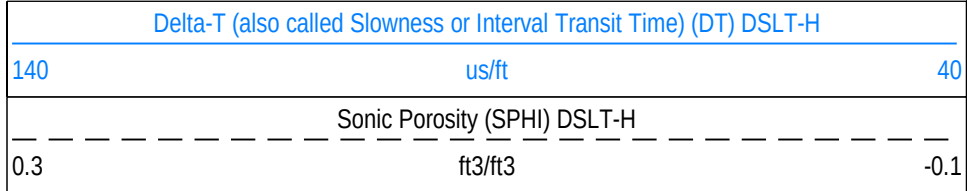
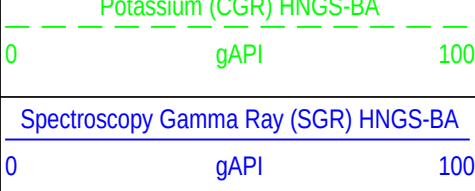




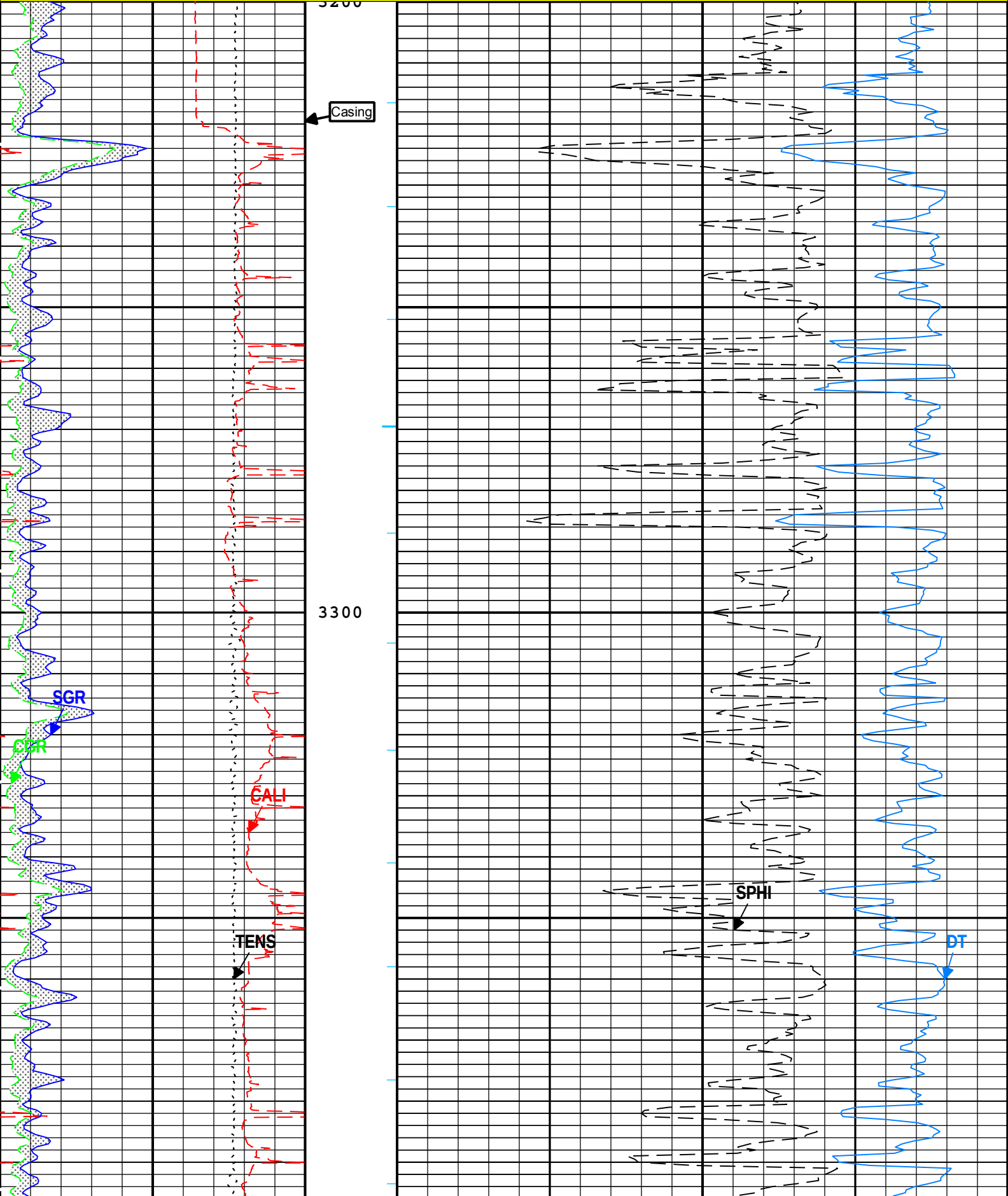


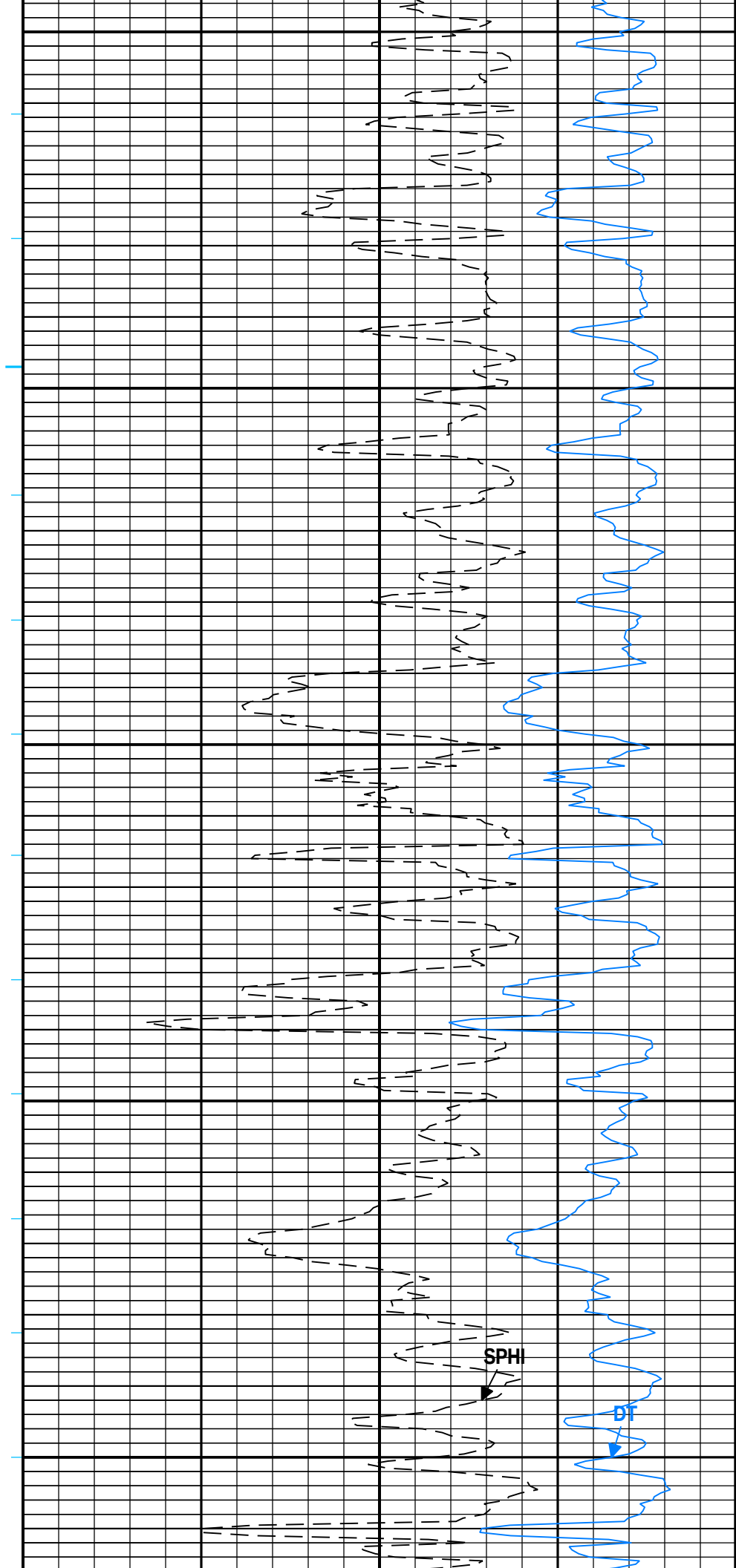
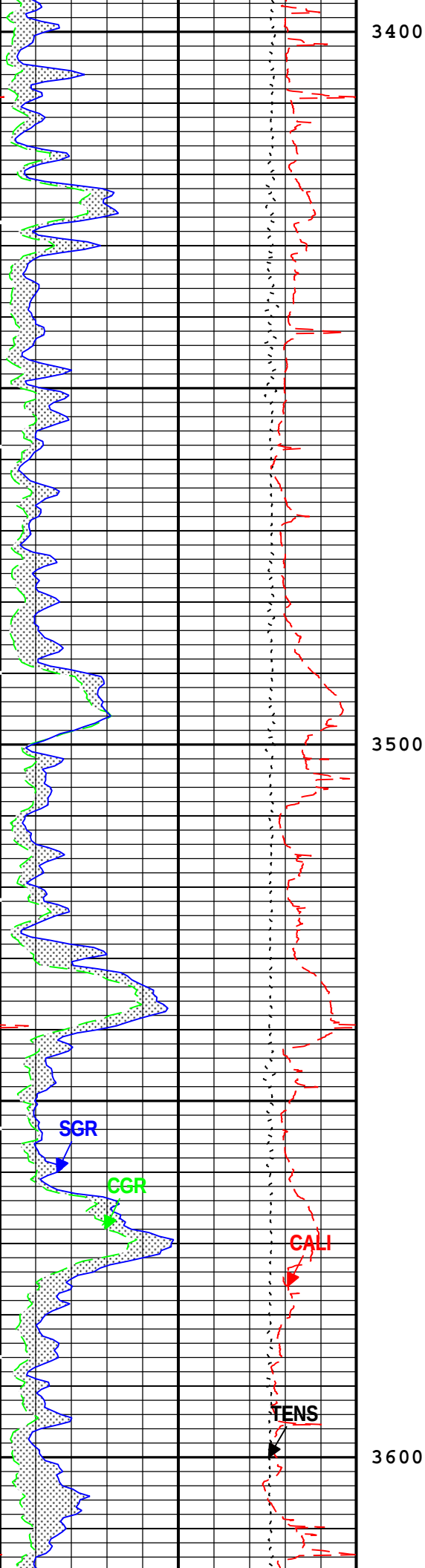


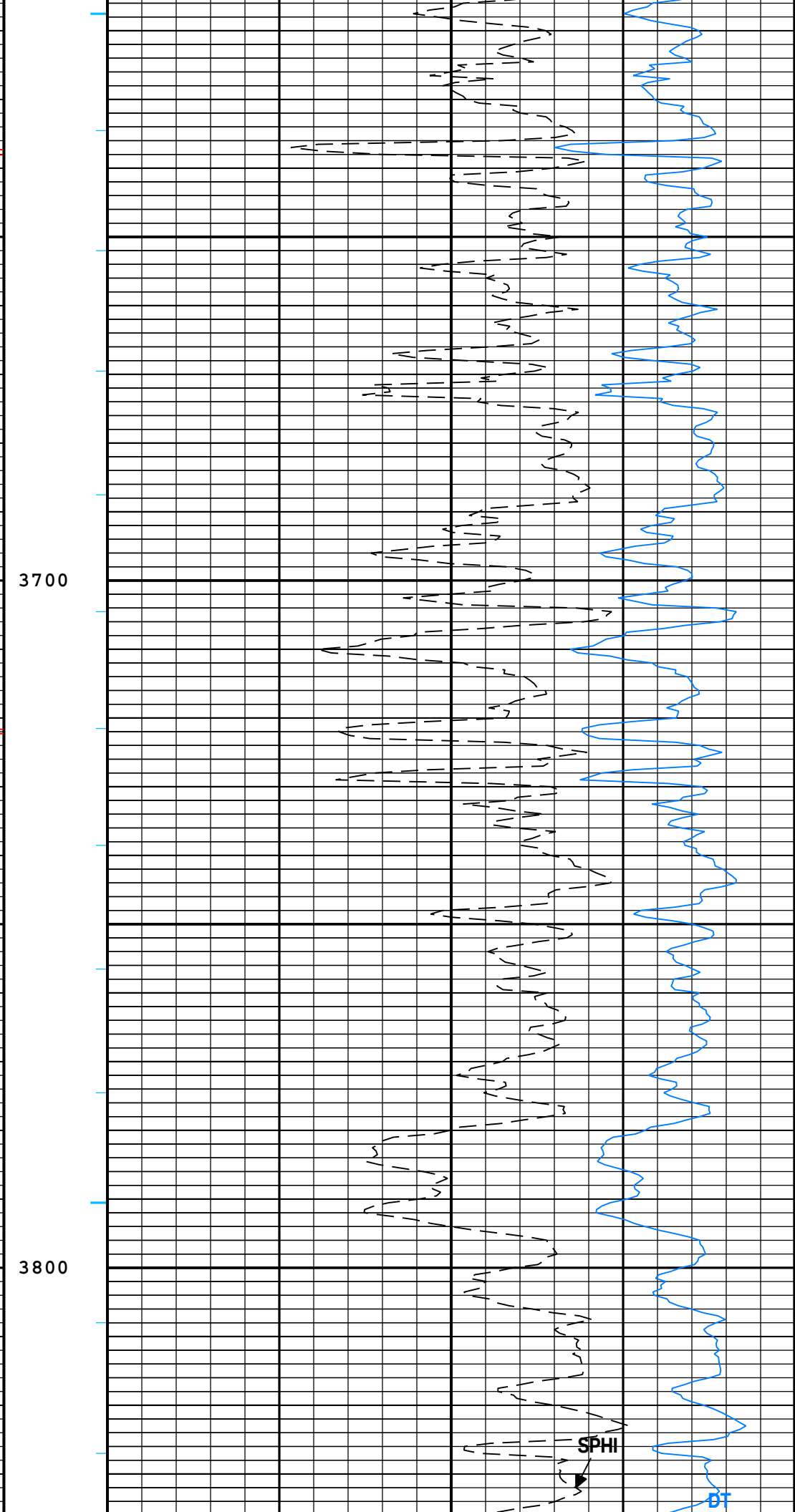
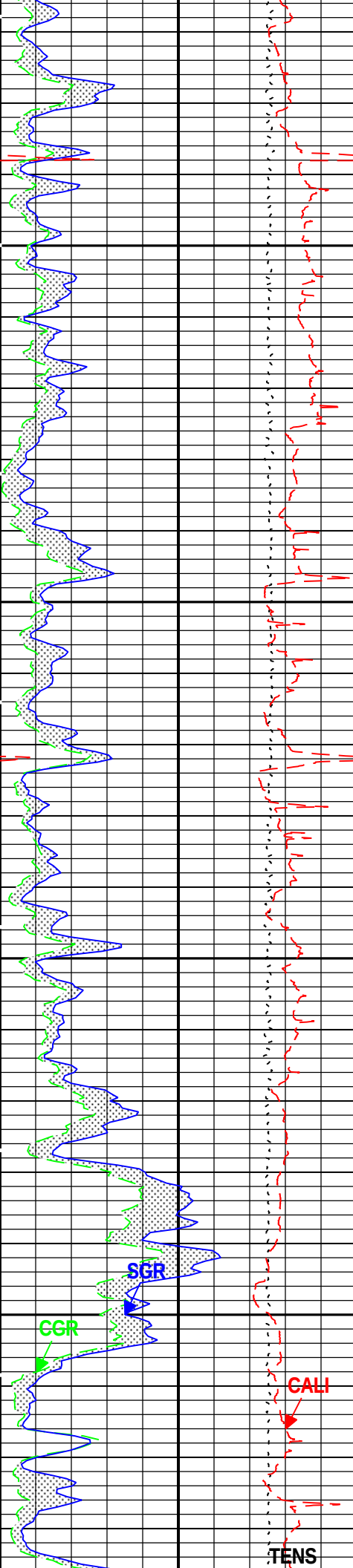


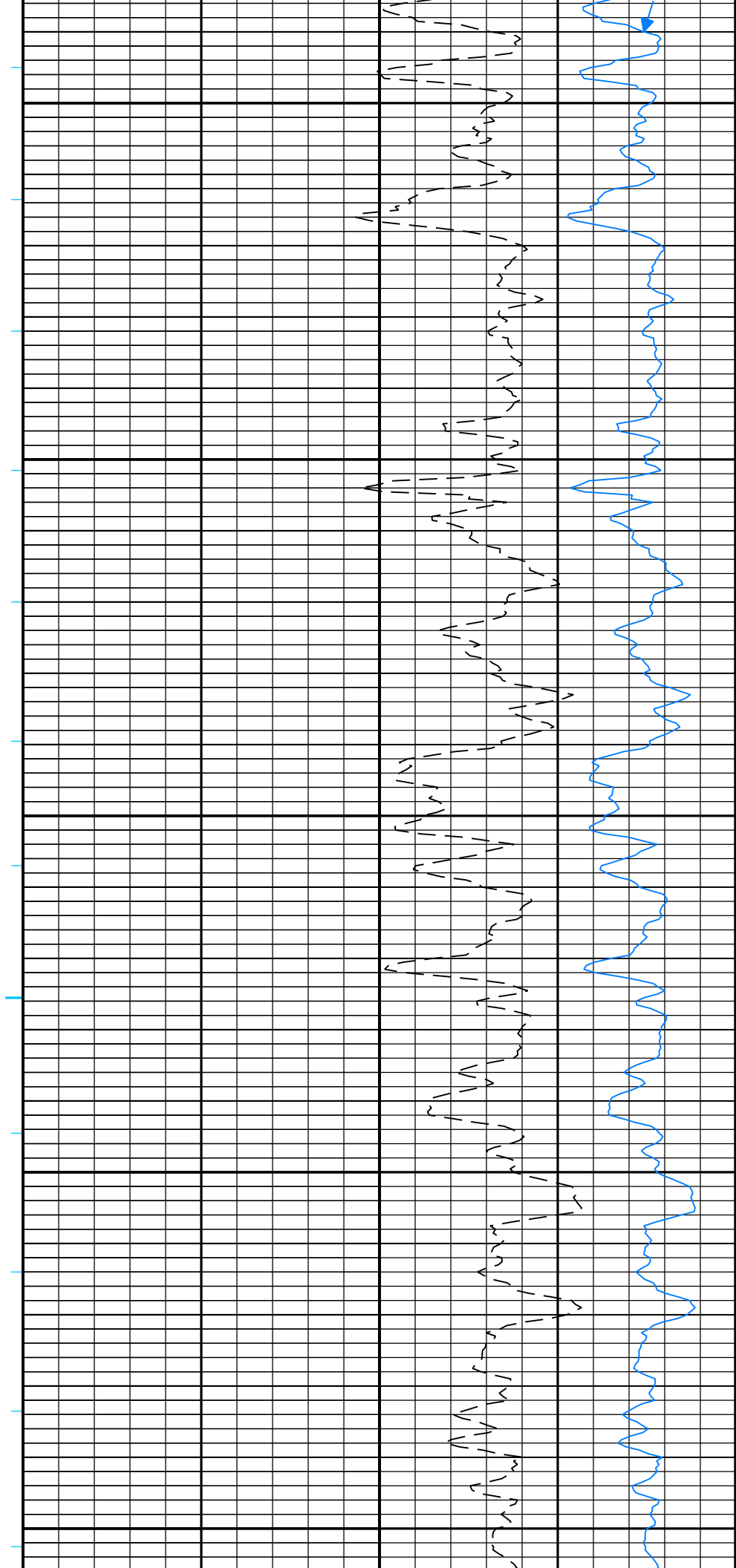
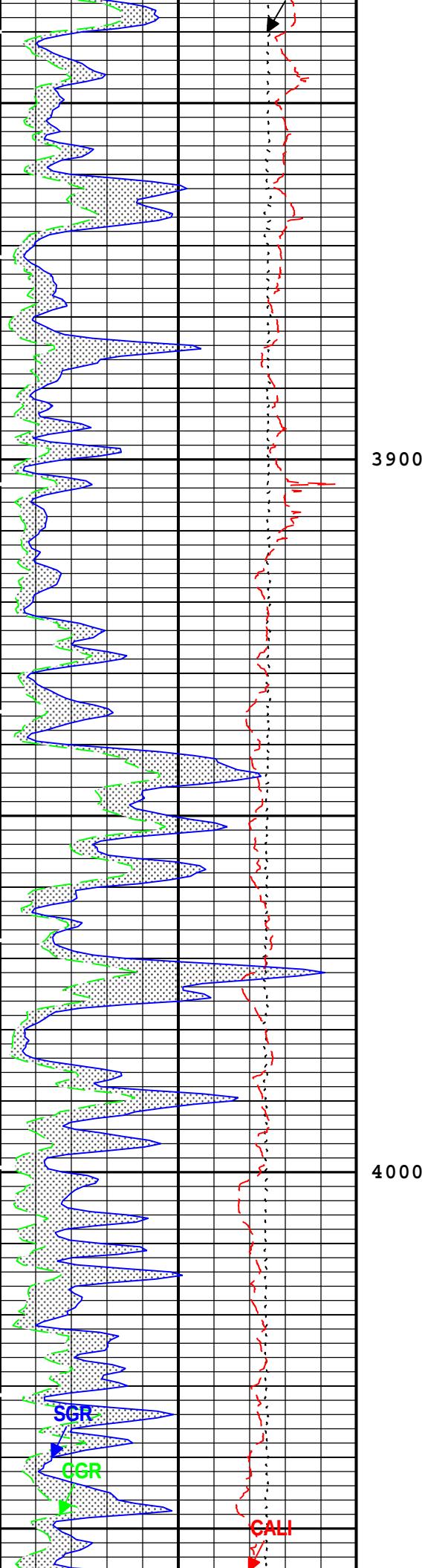


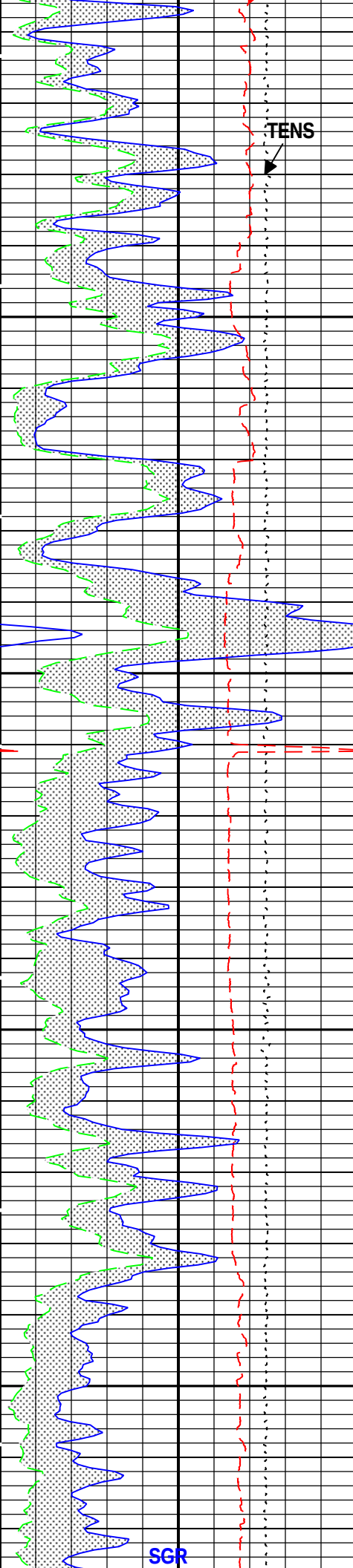
5" Sonic









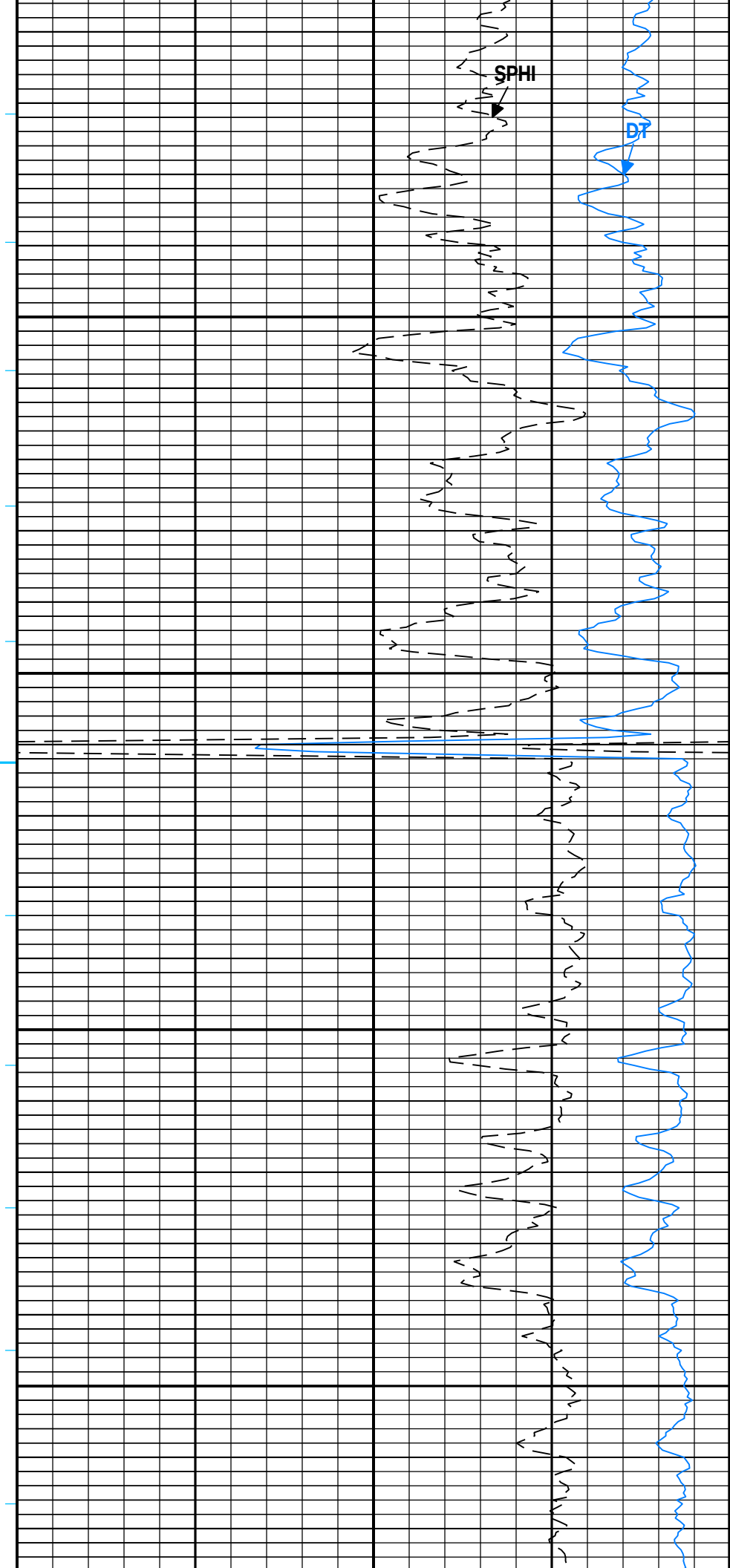


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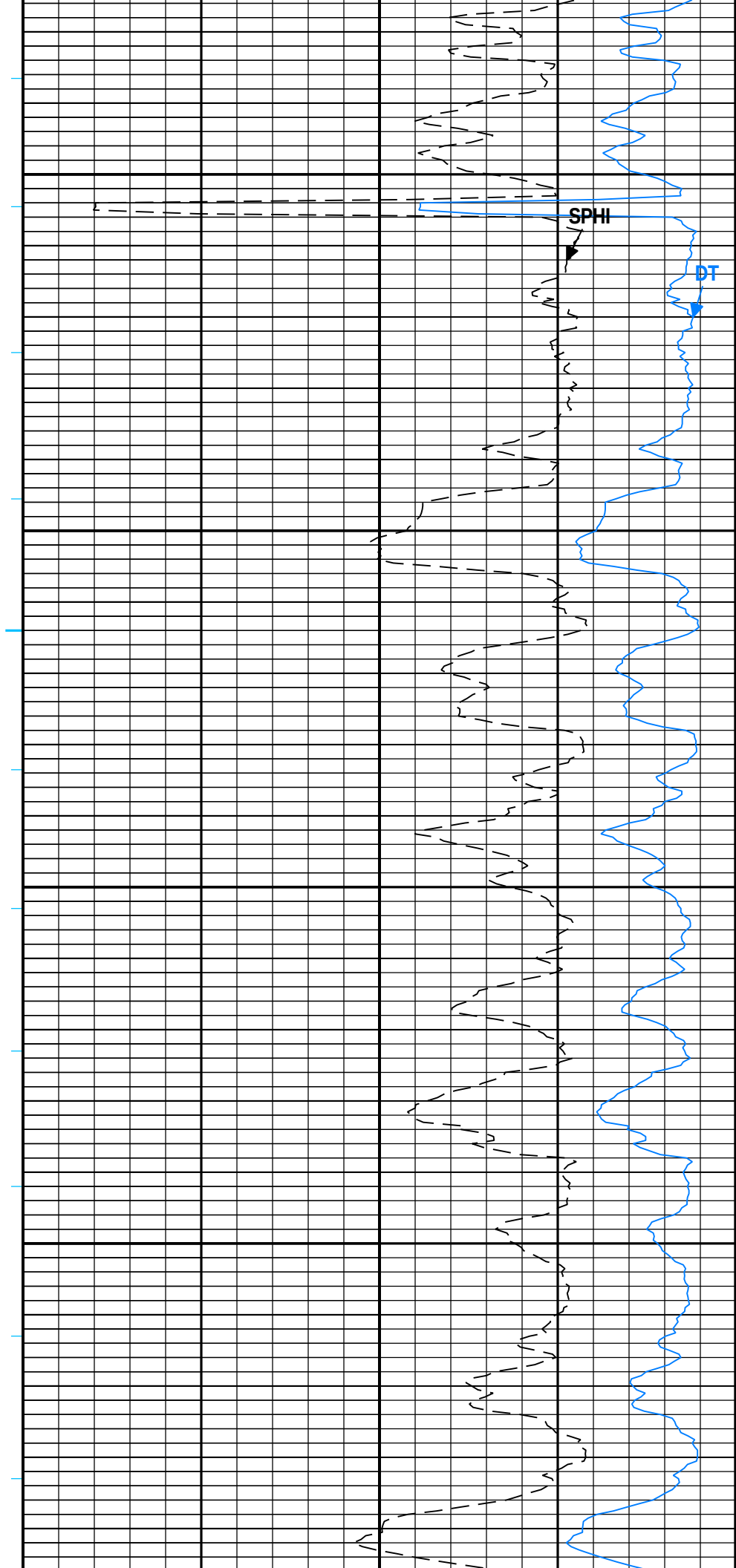
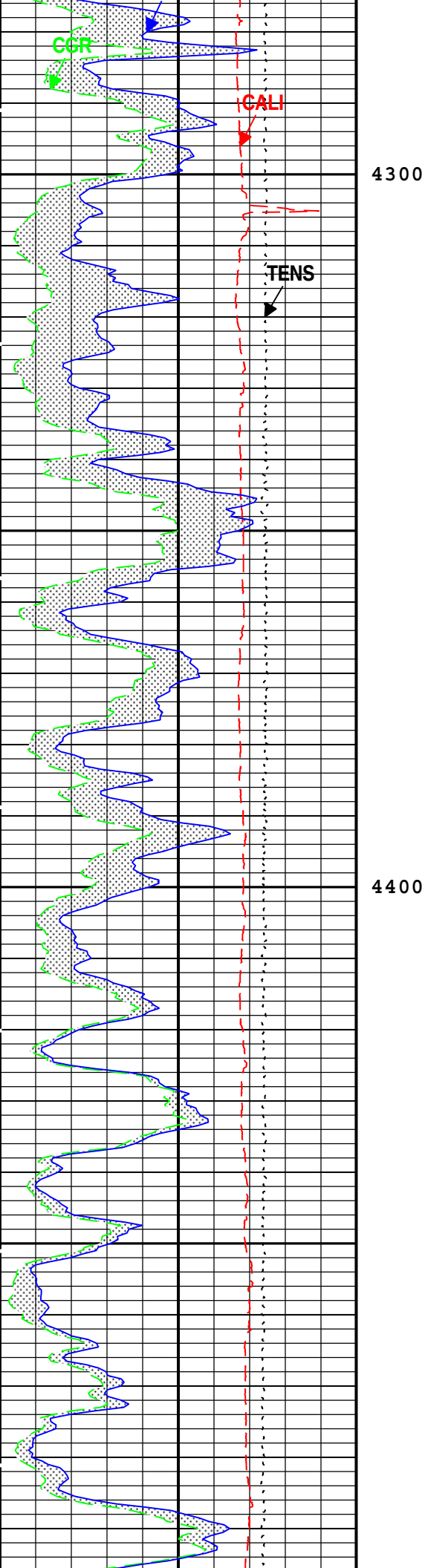
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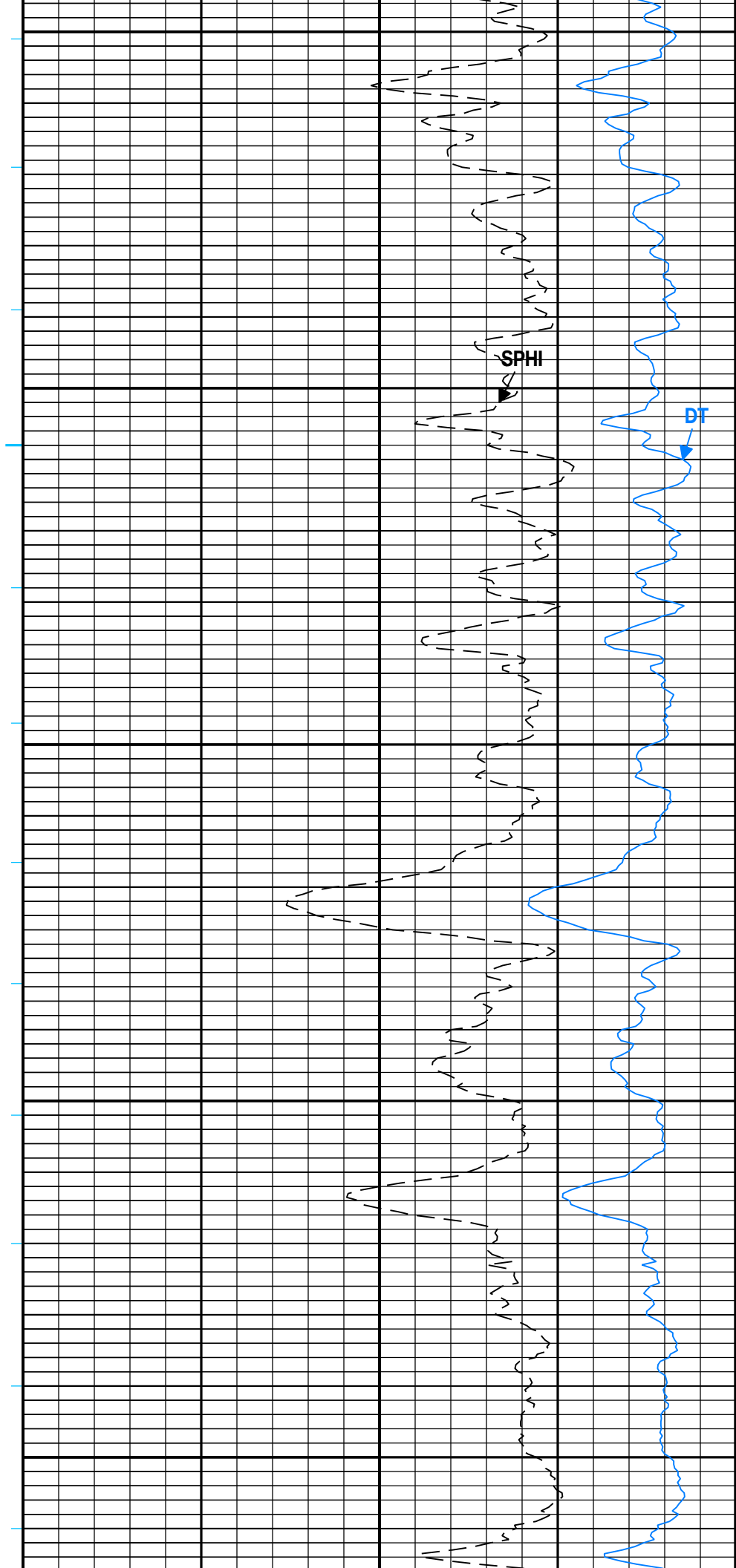
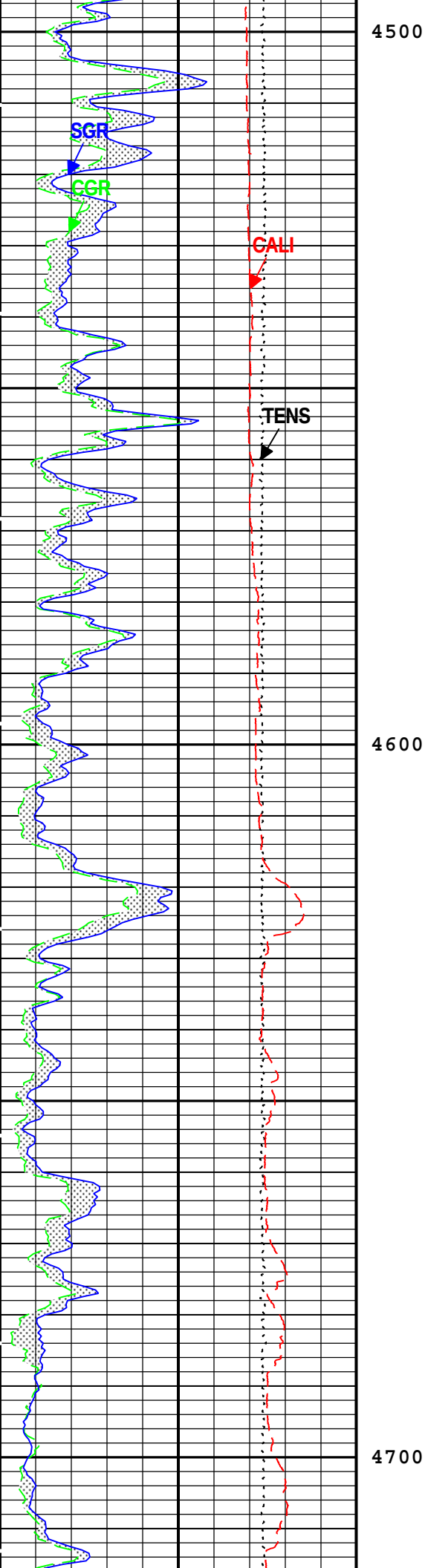
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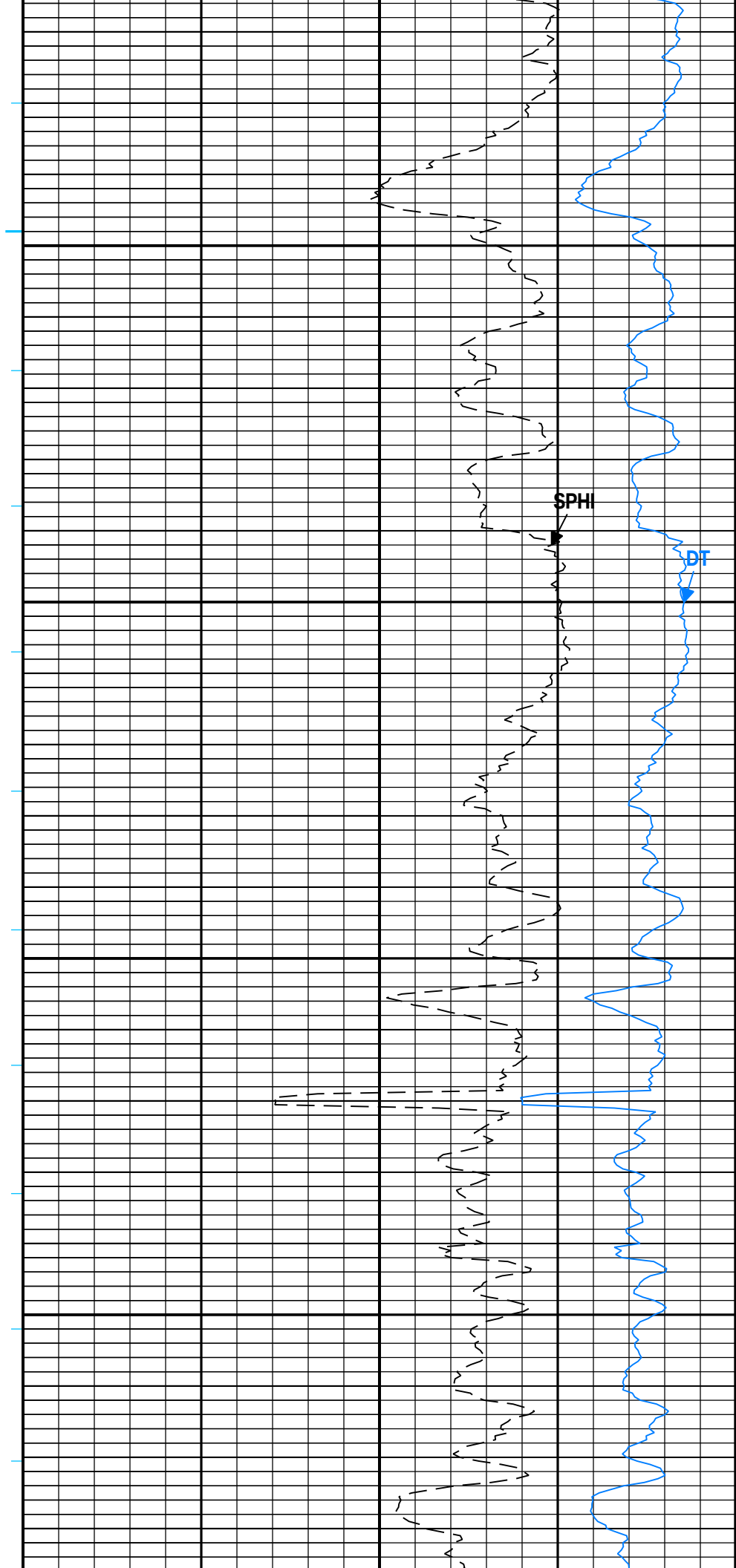
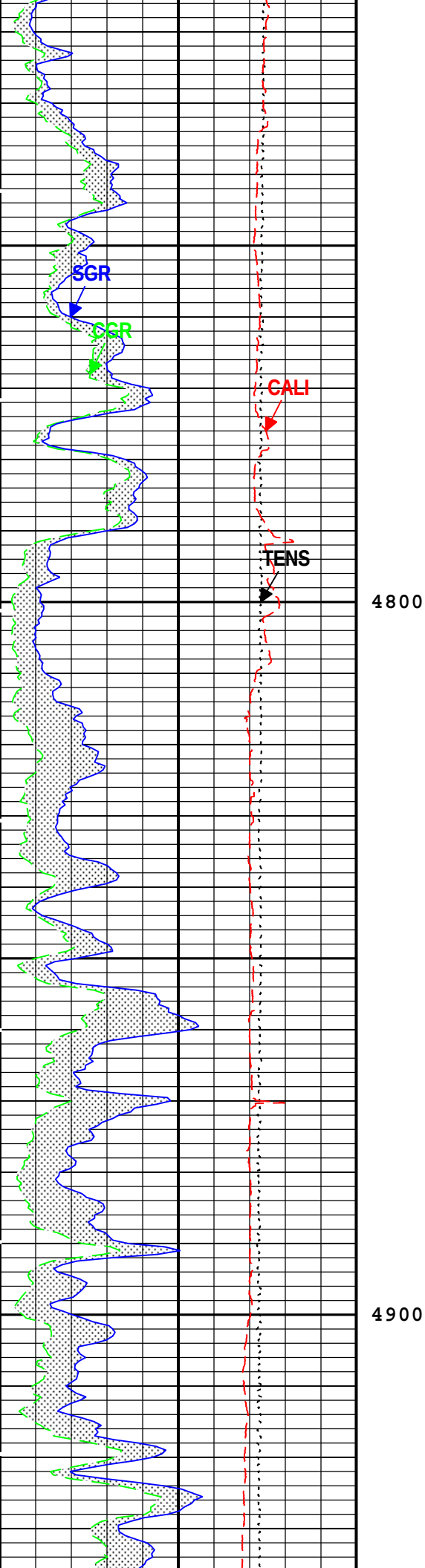


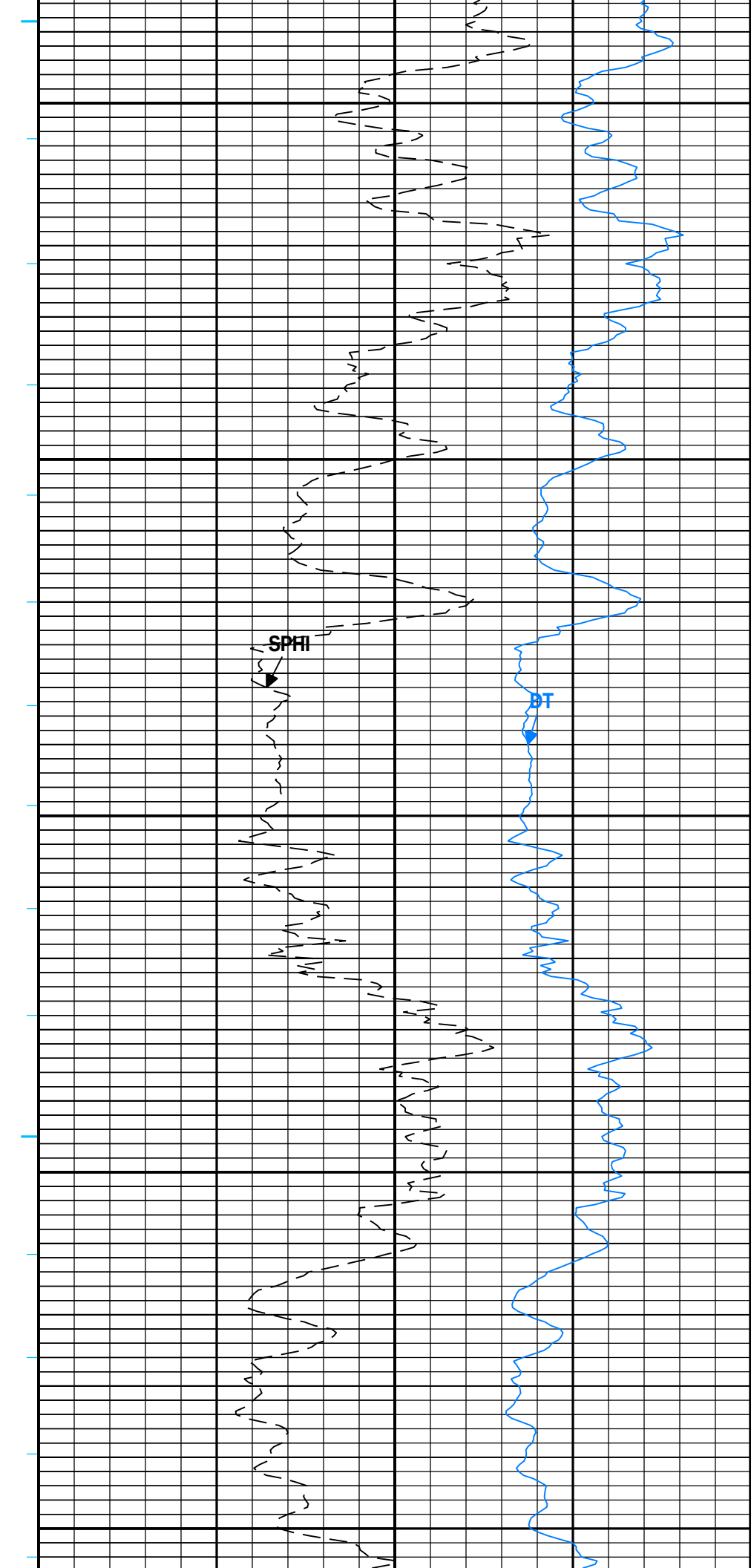
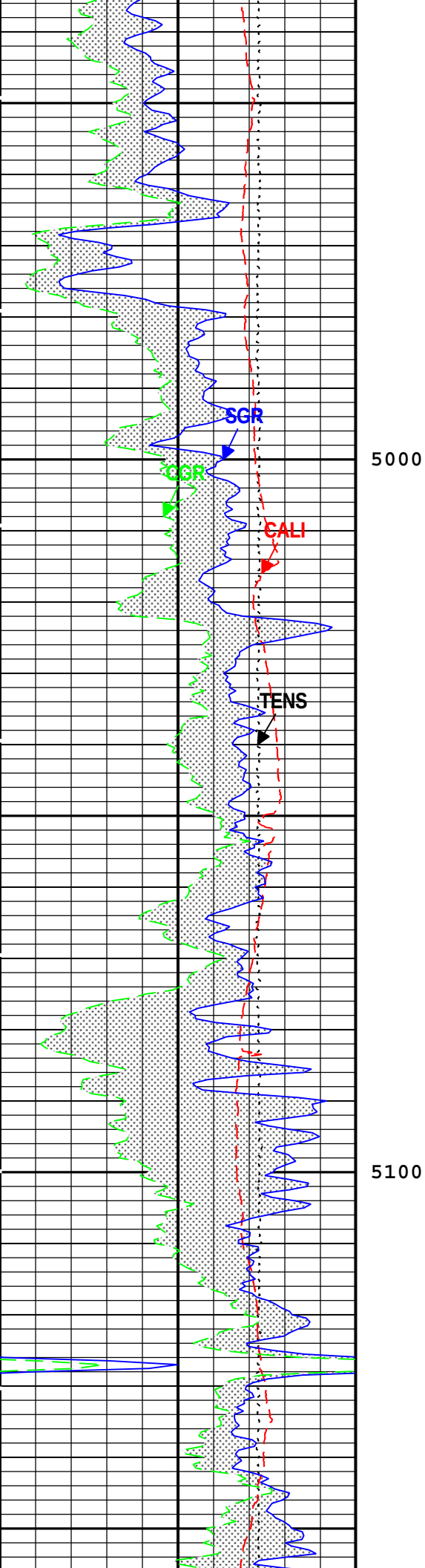
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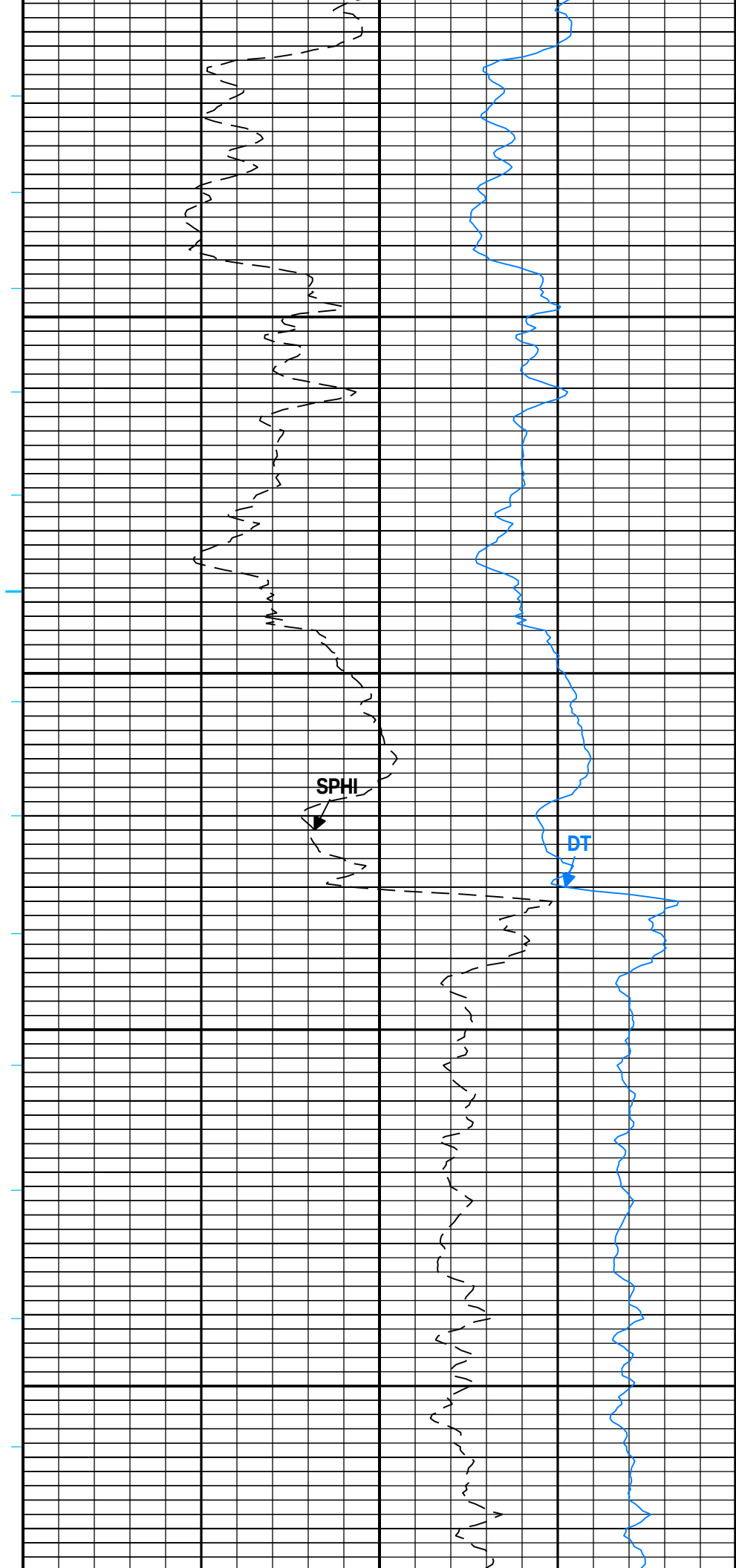
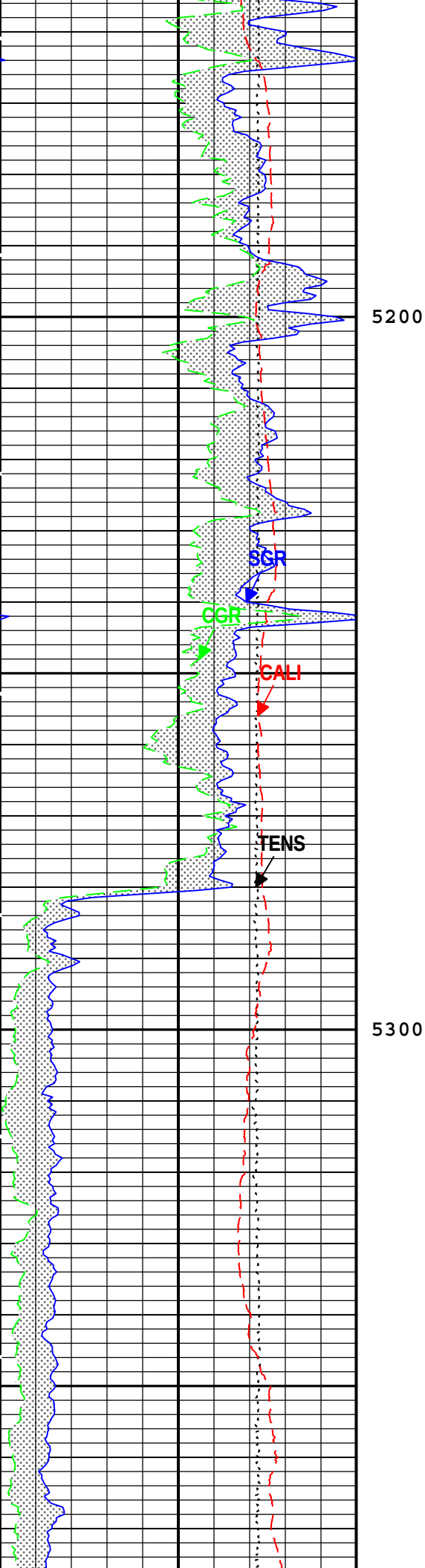
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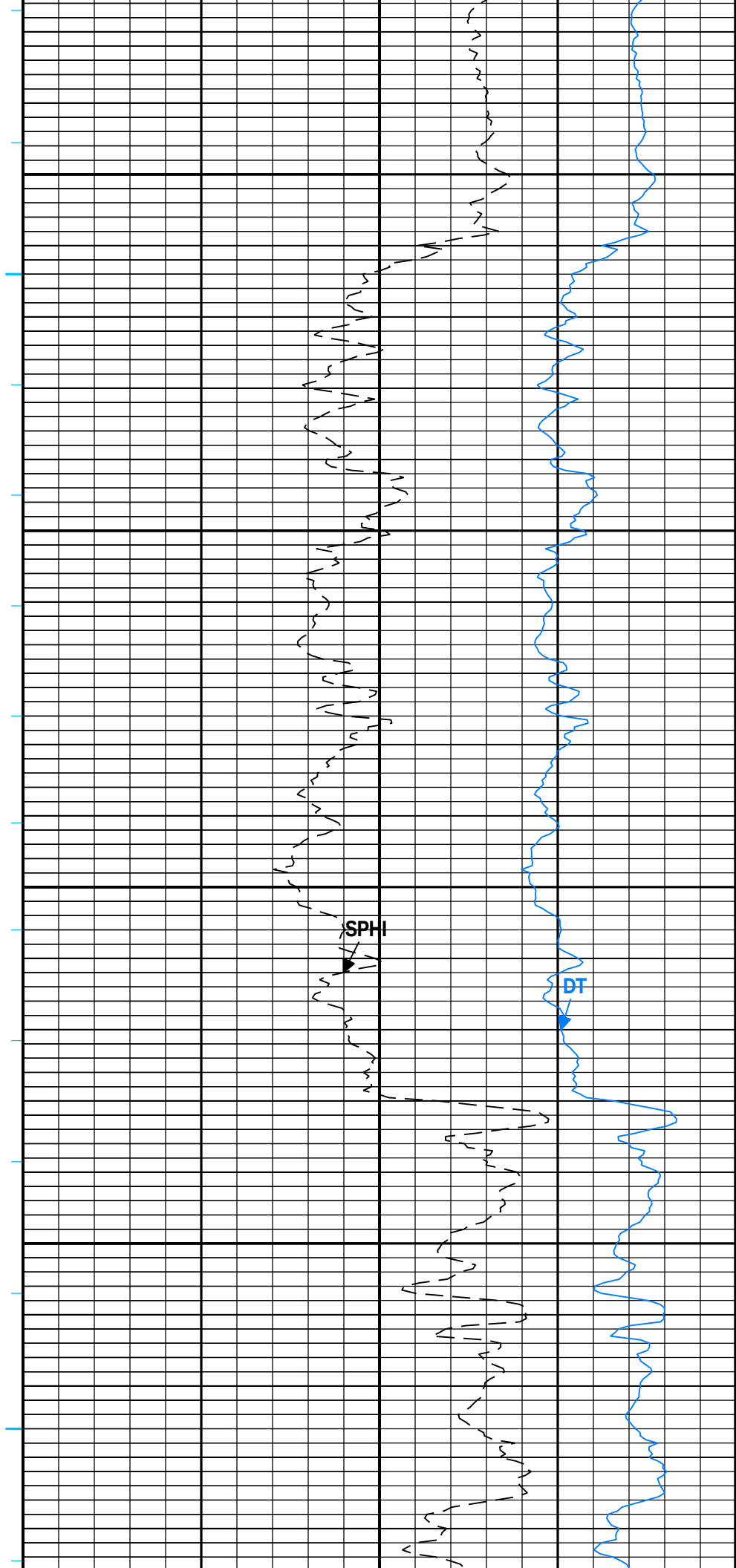
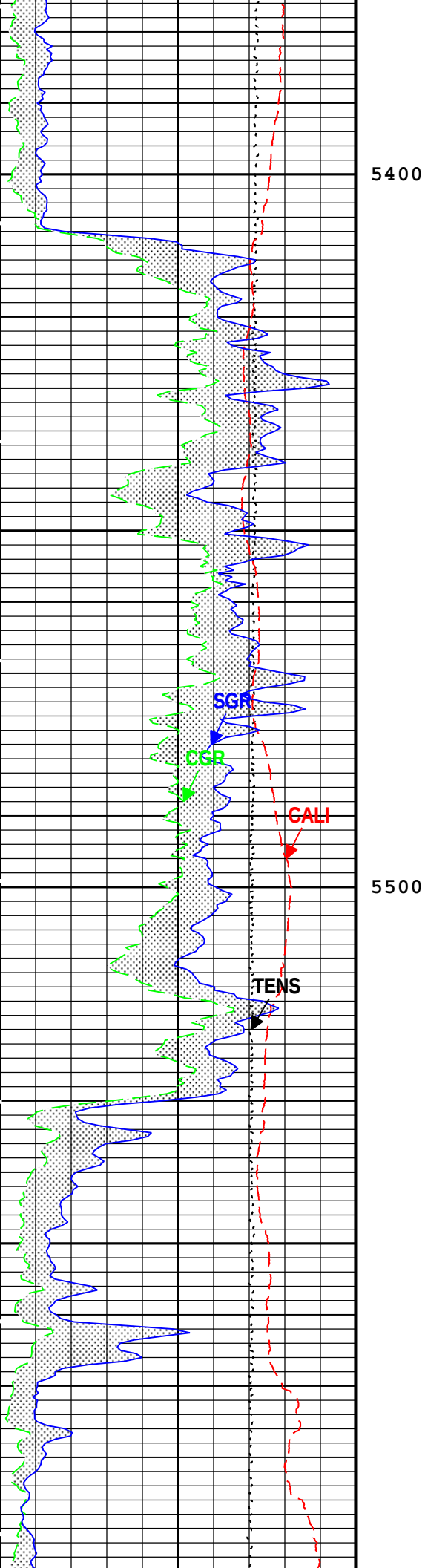


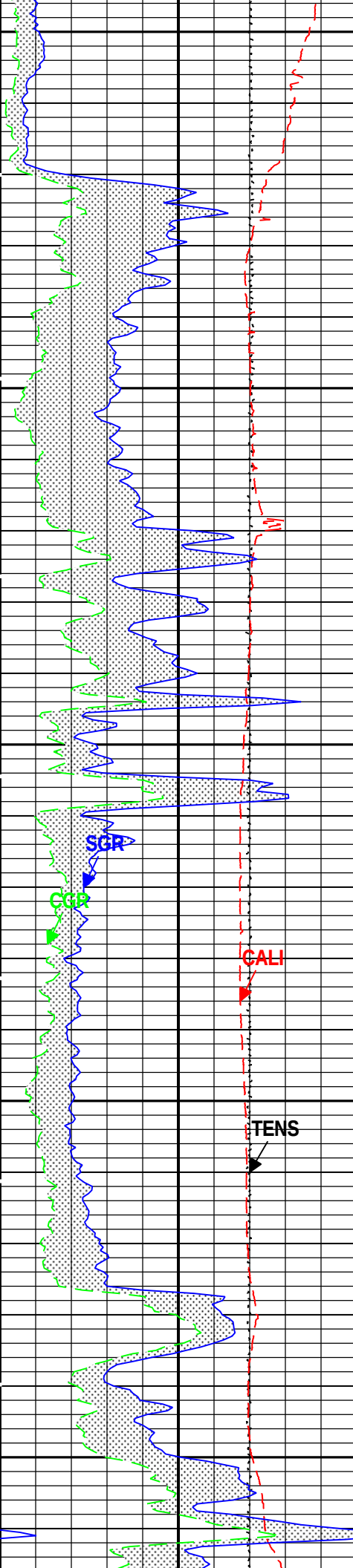








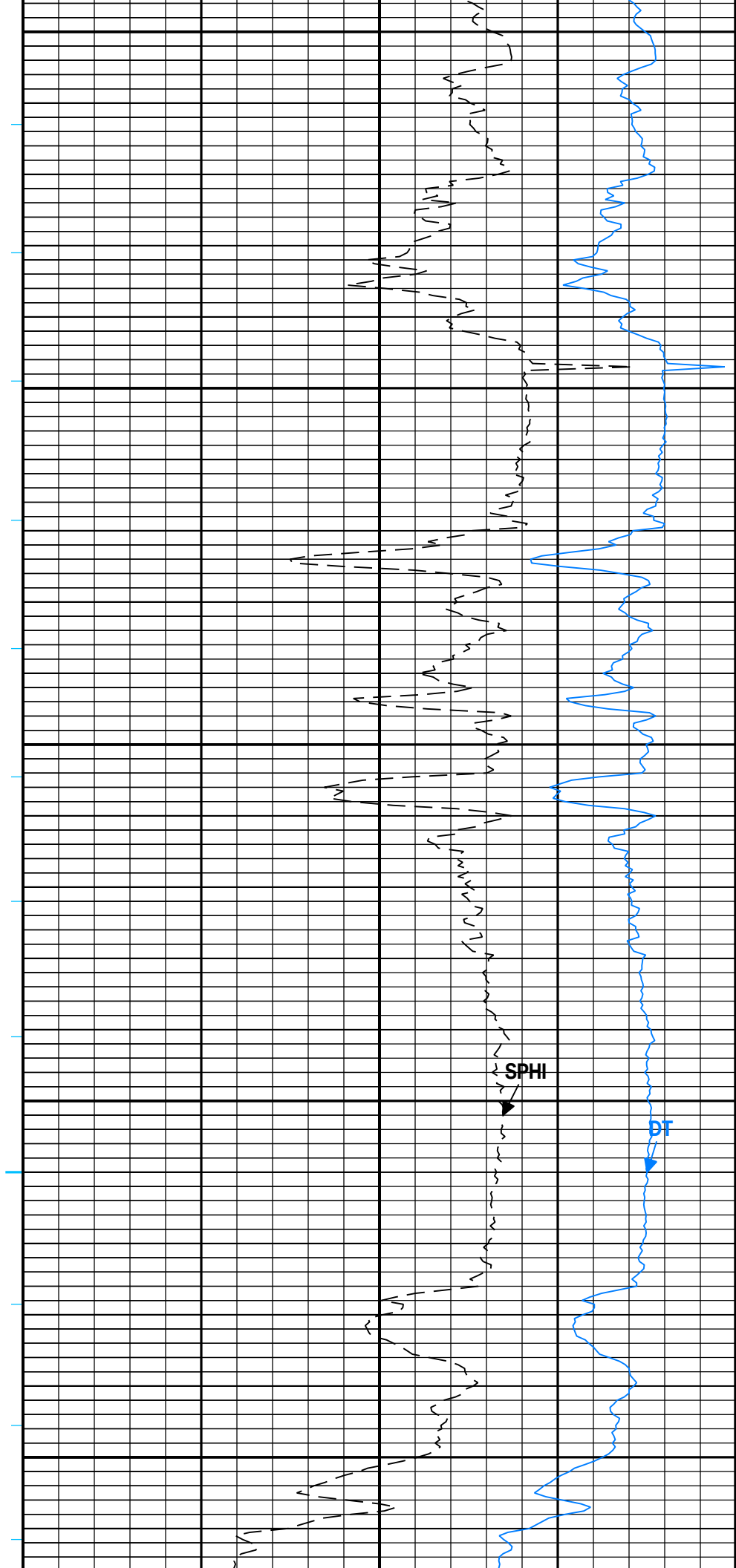




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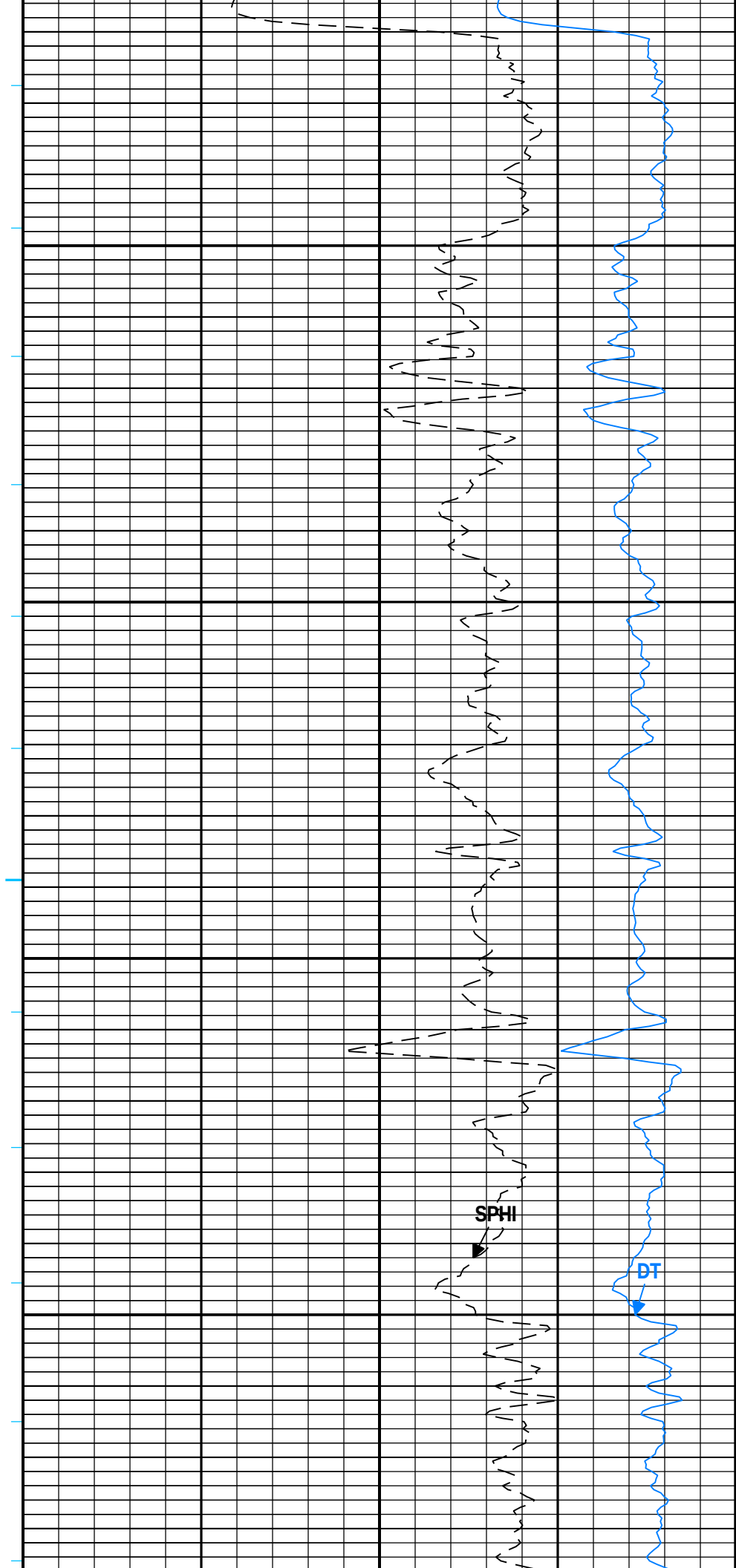
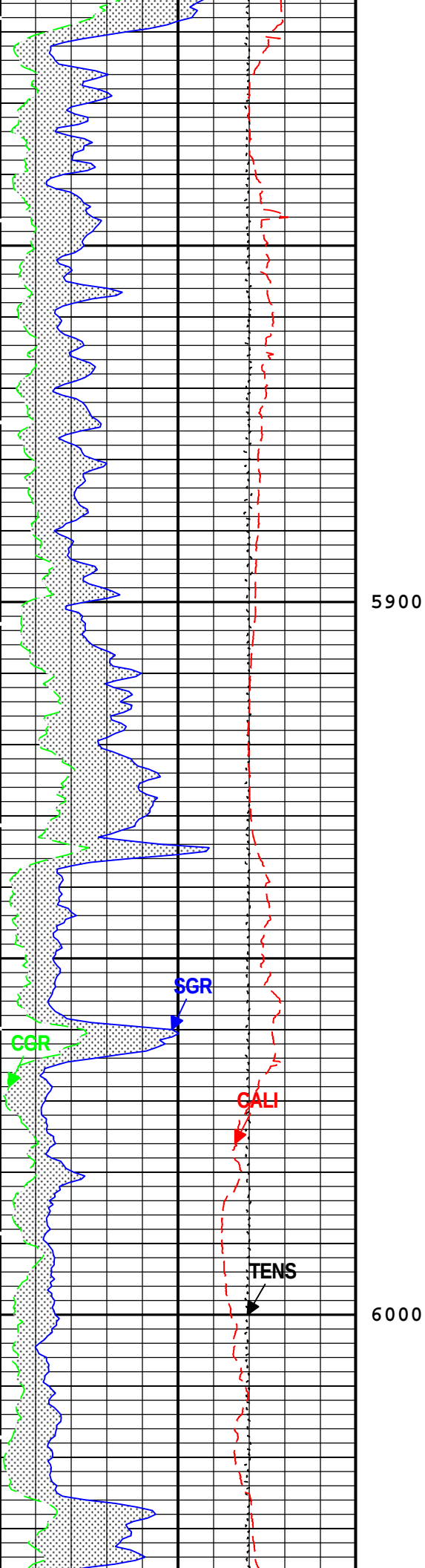
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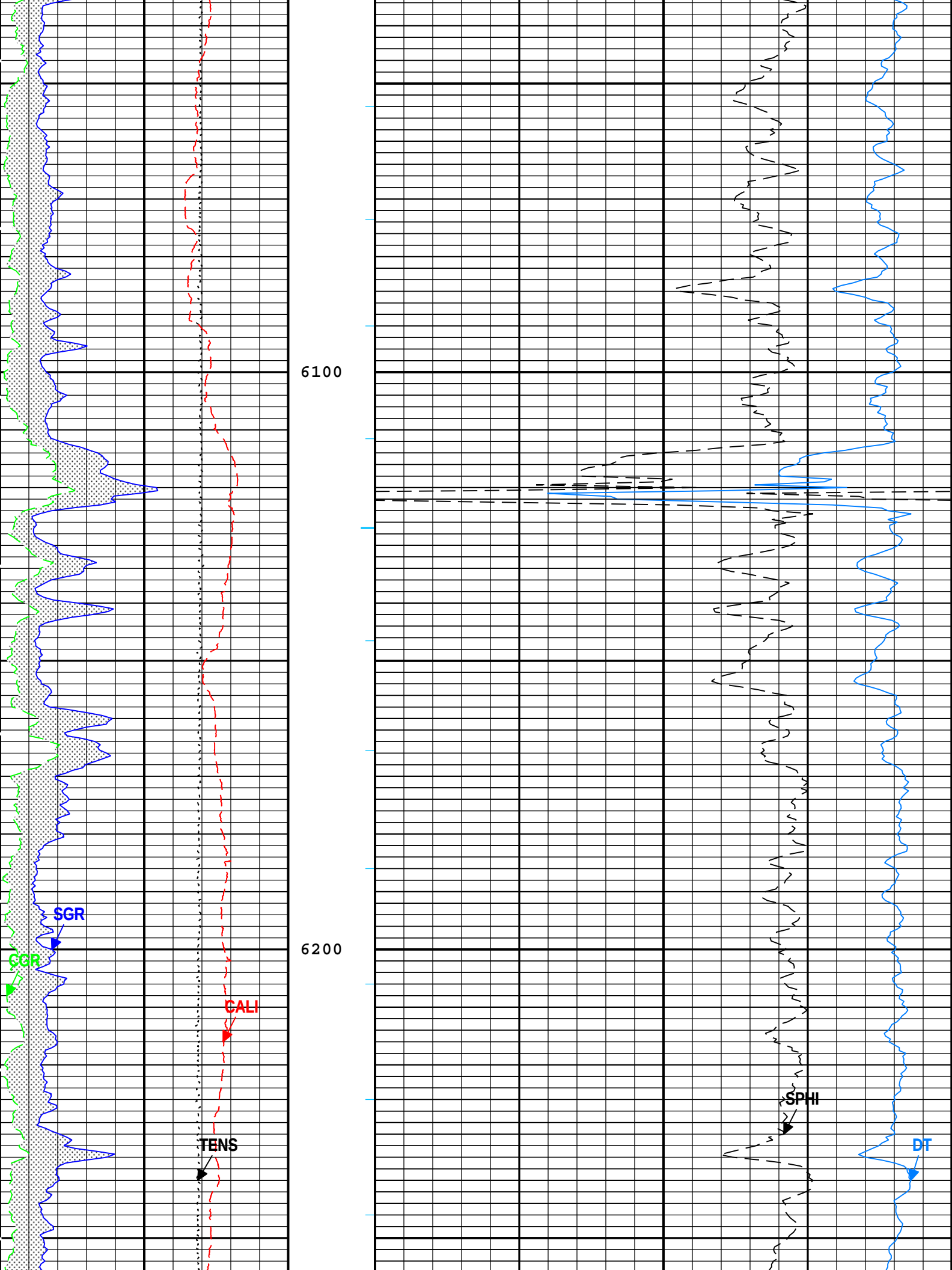
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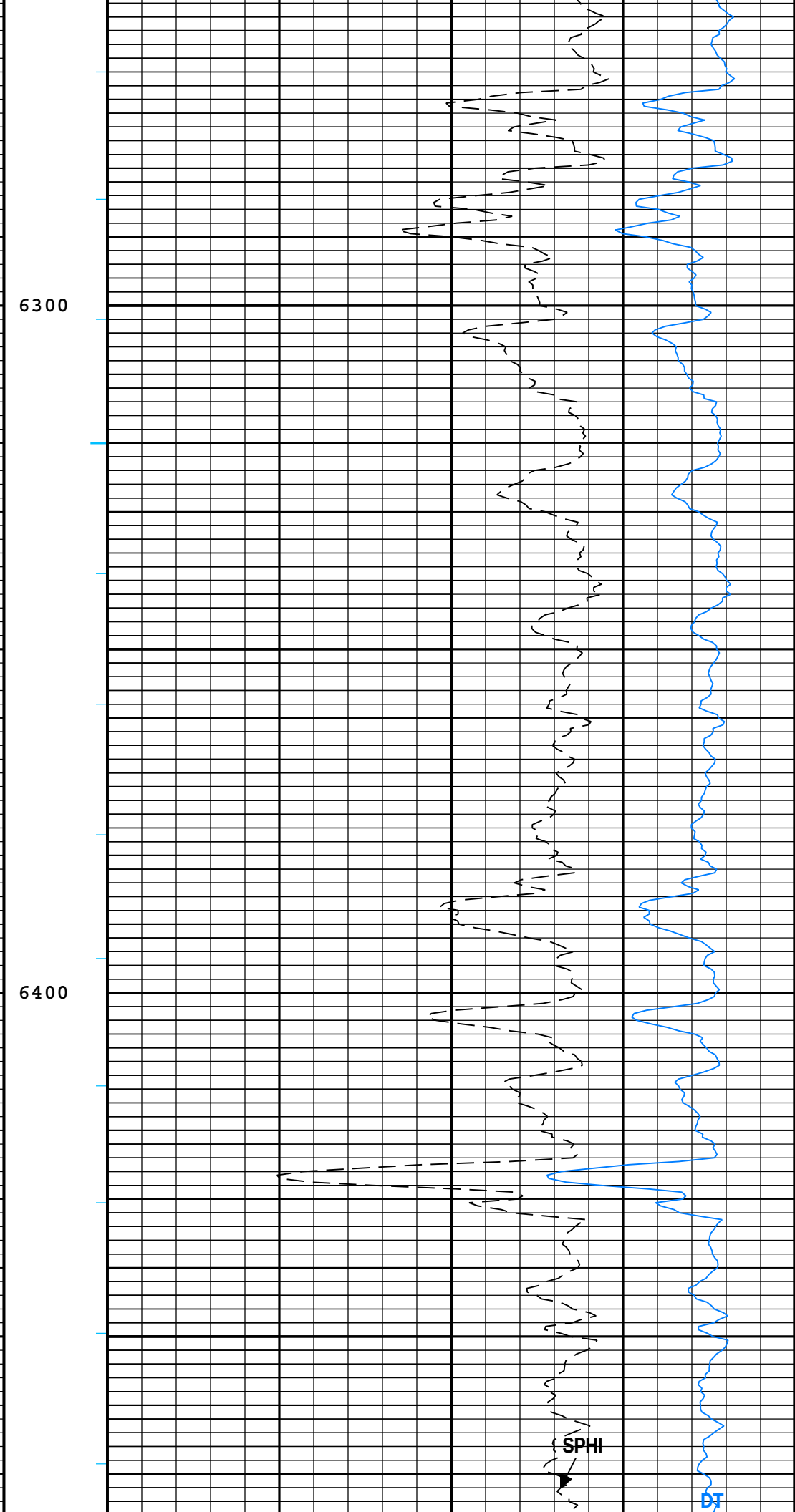
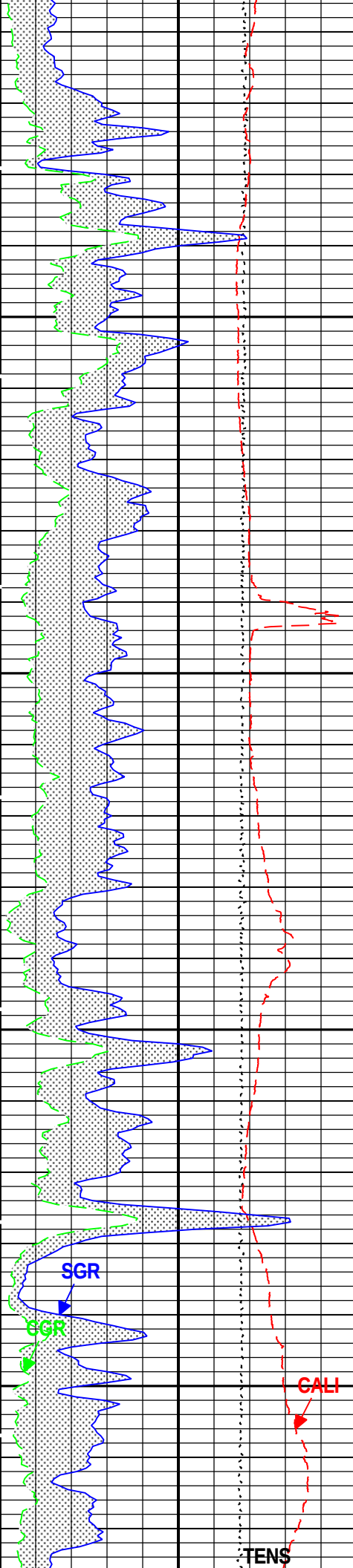


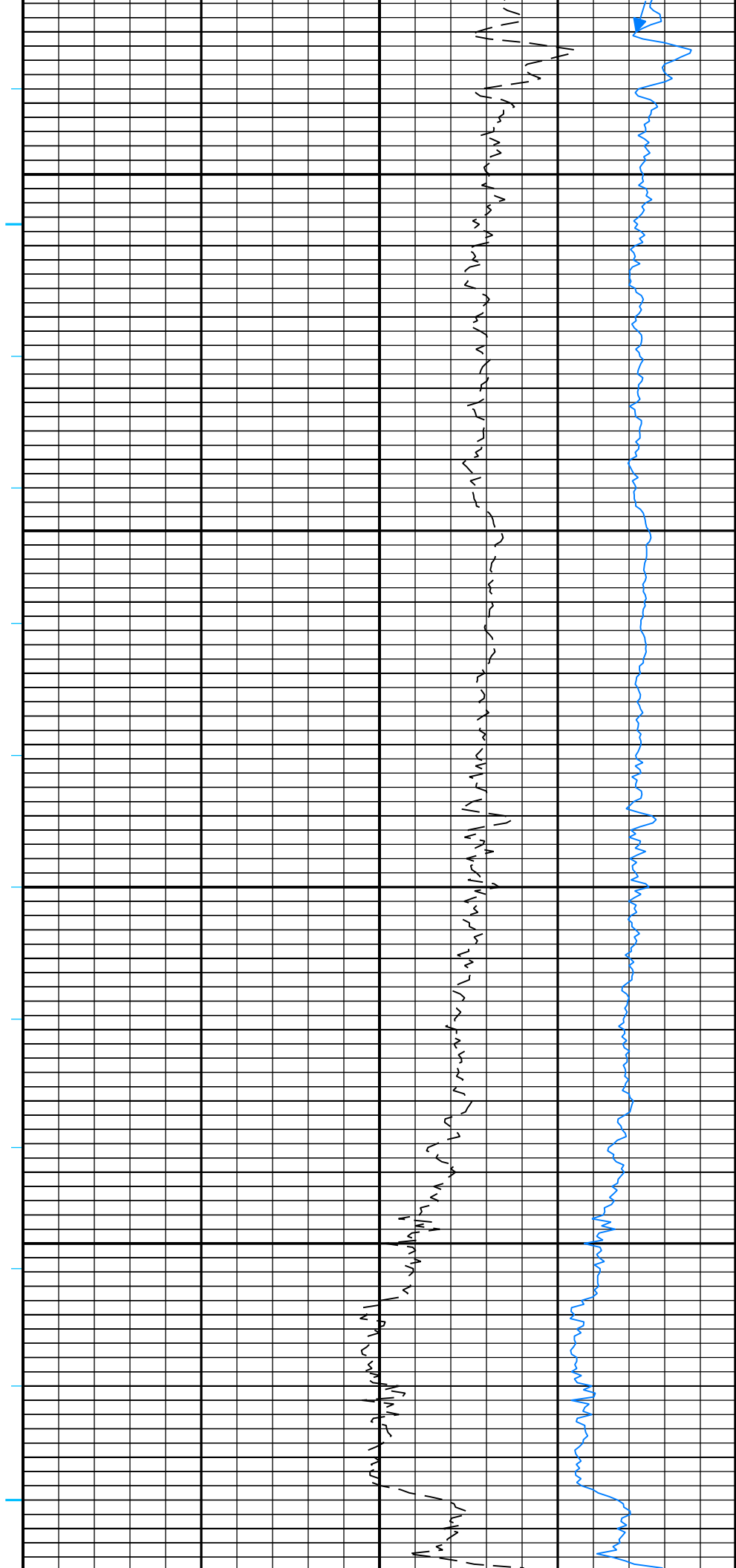
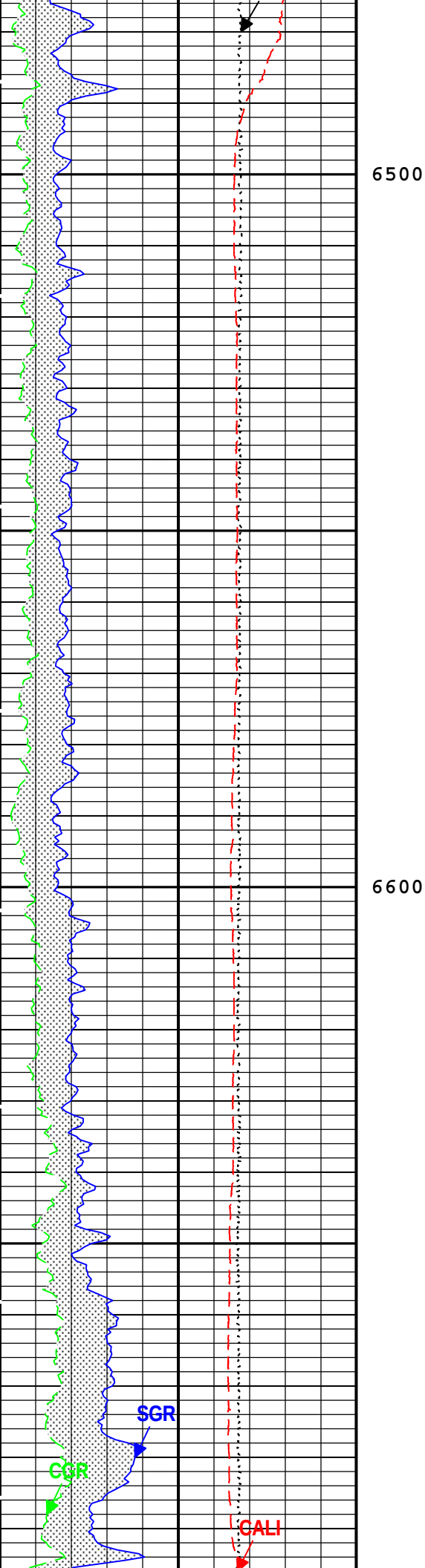
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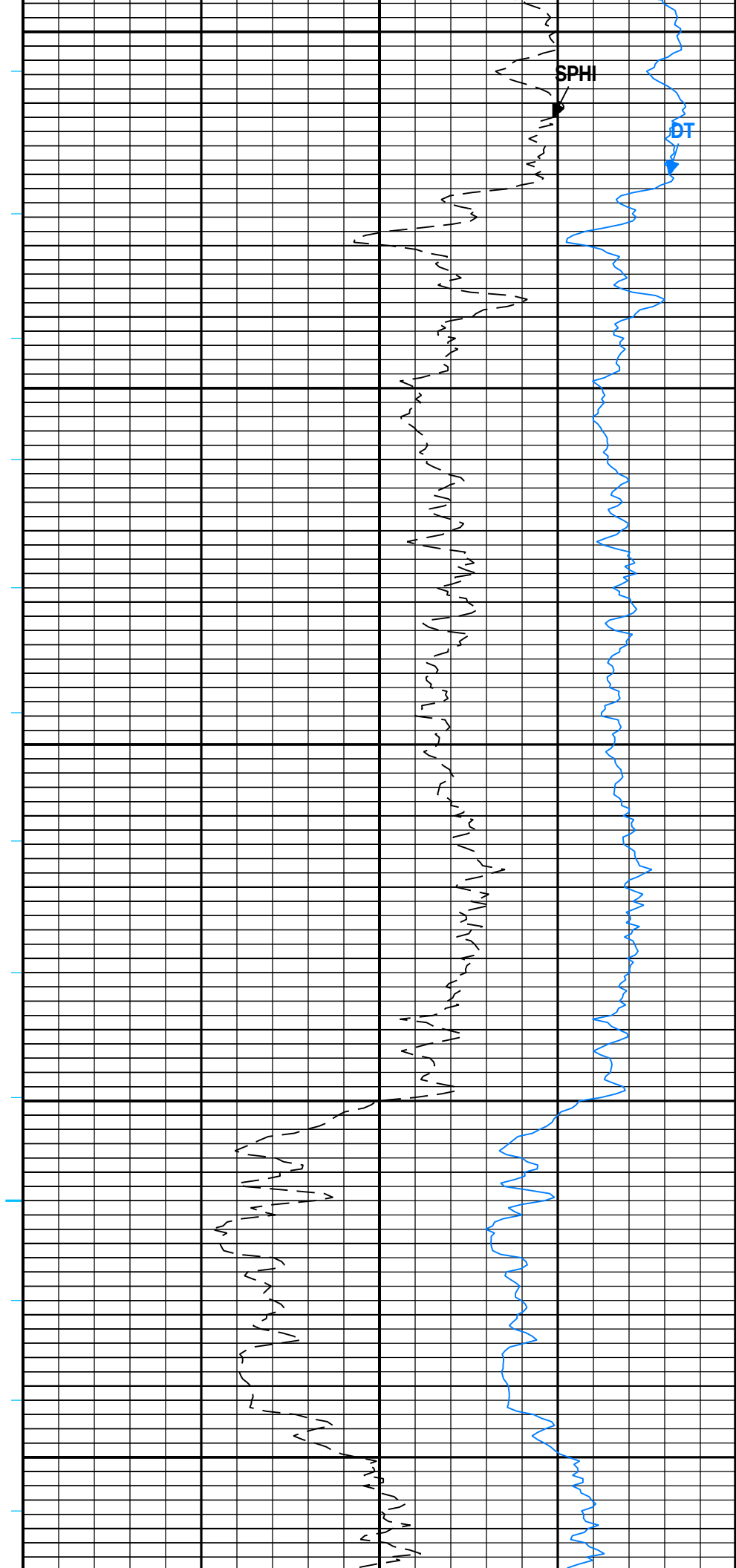
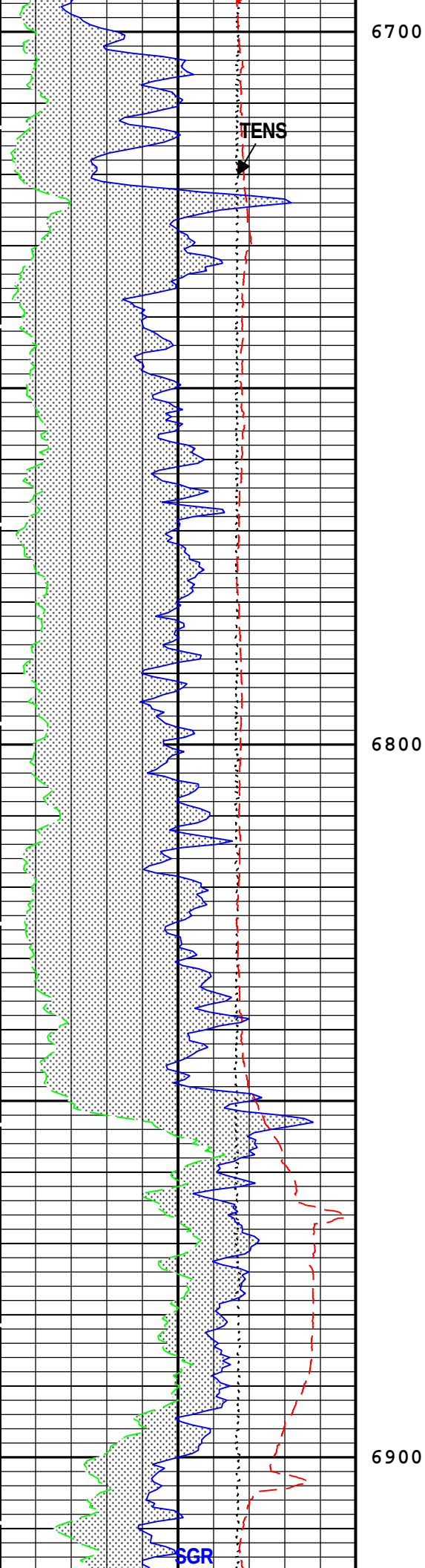
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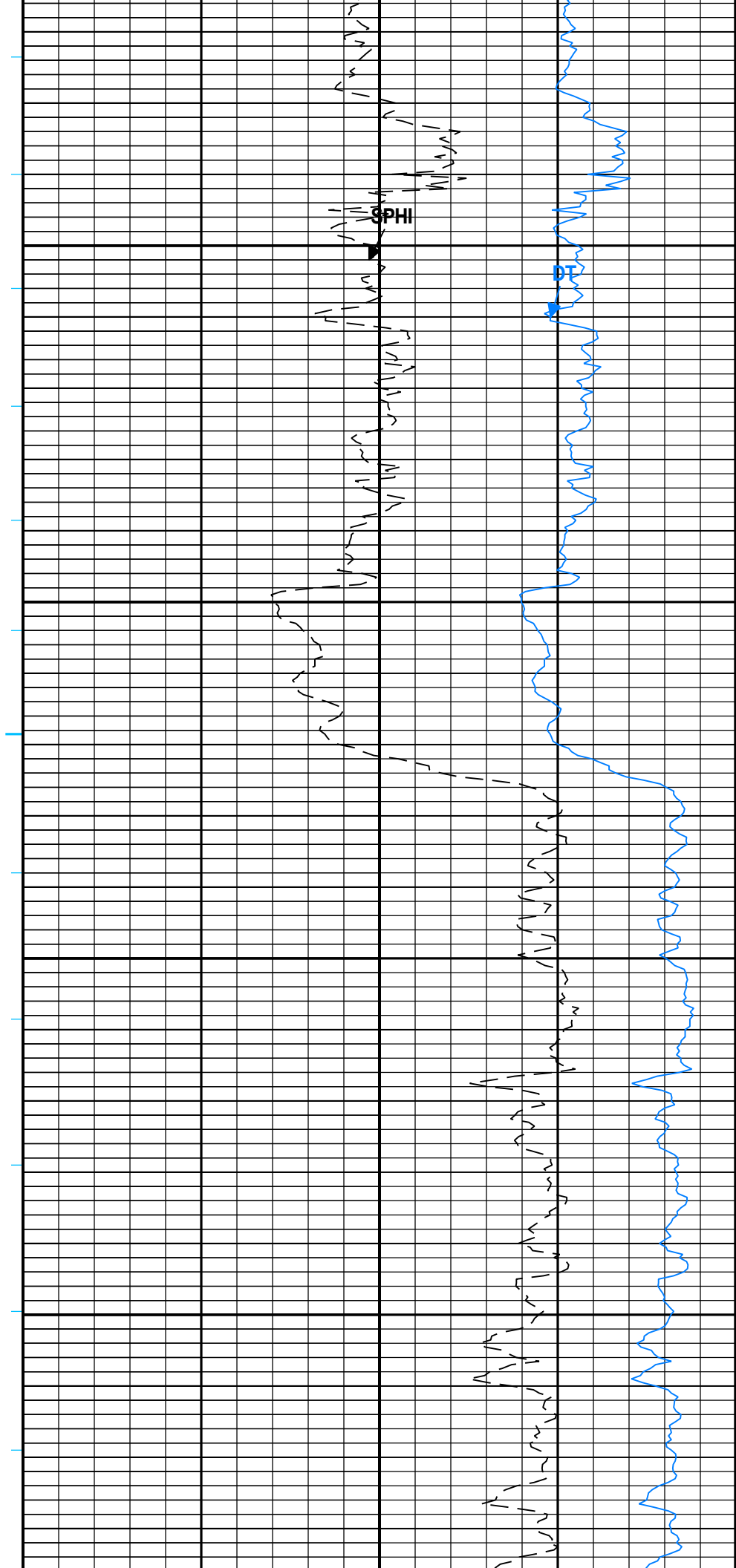
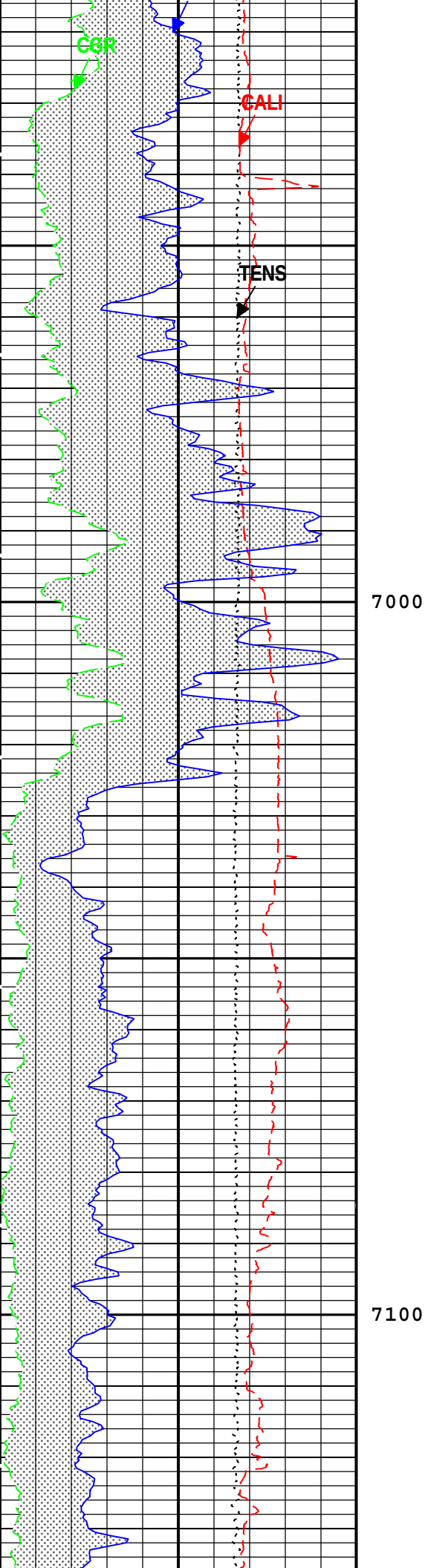


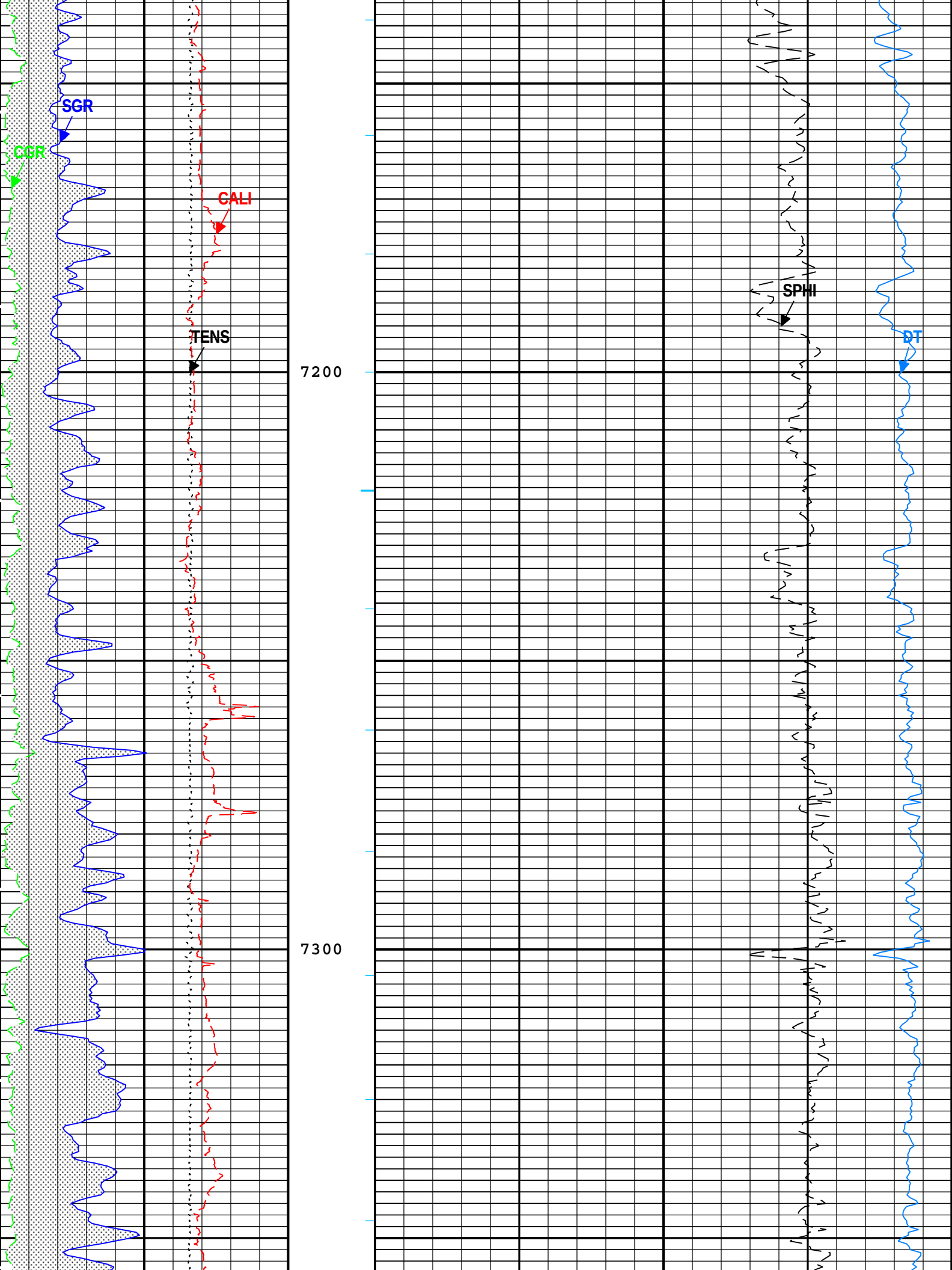


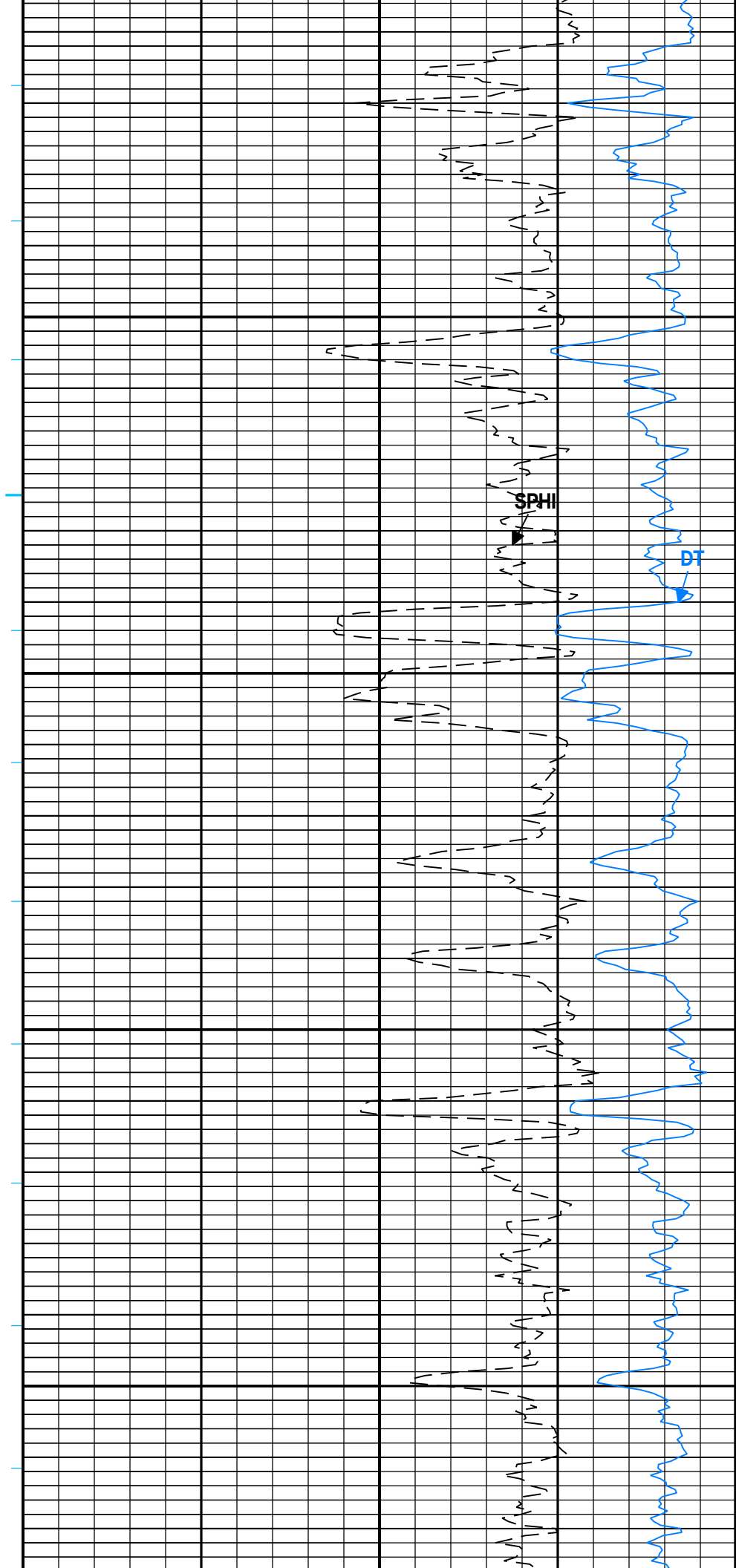
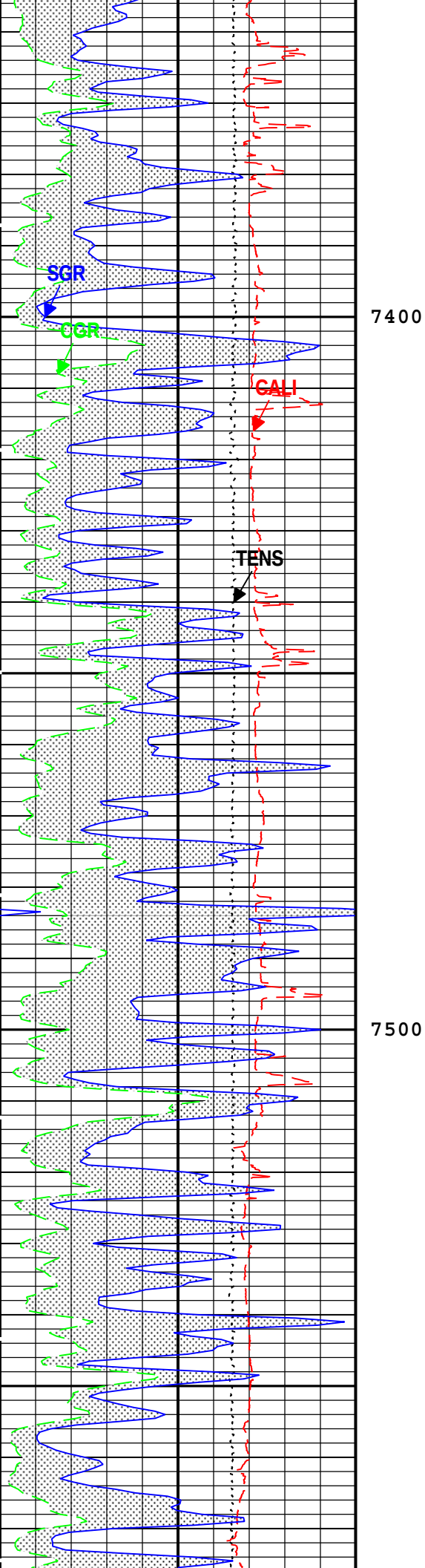


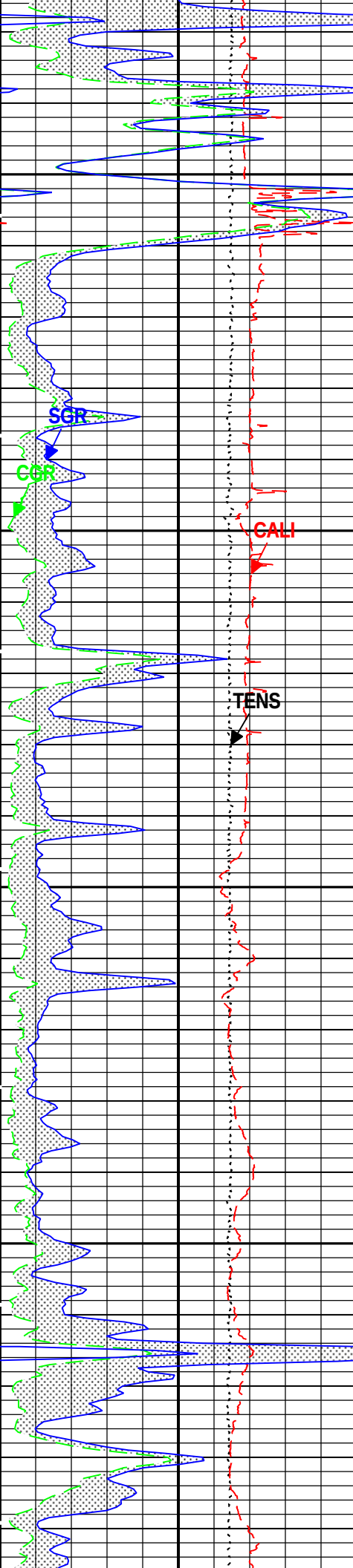






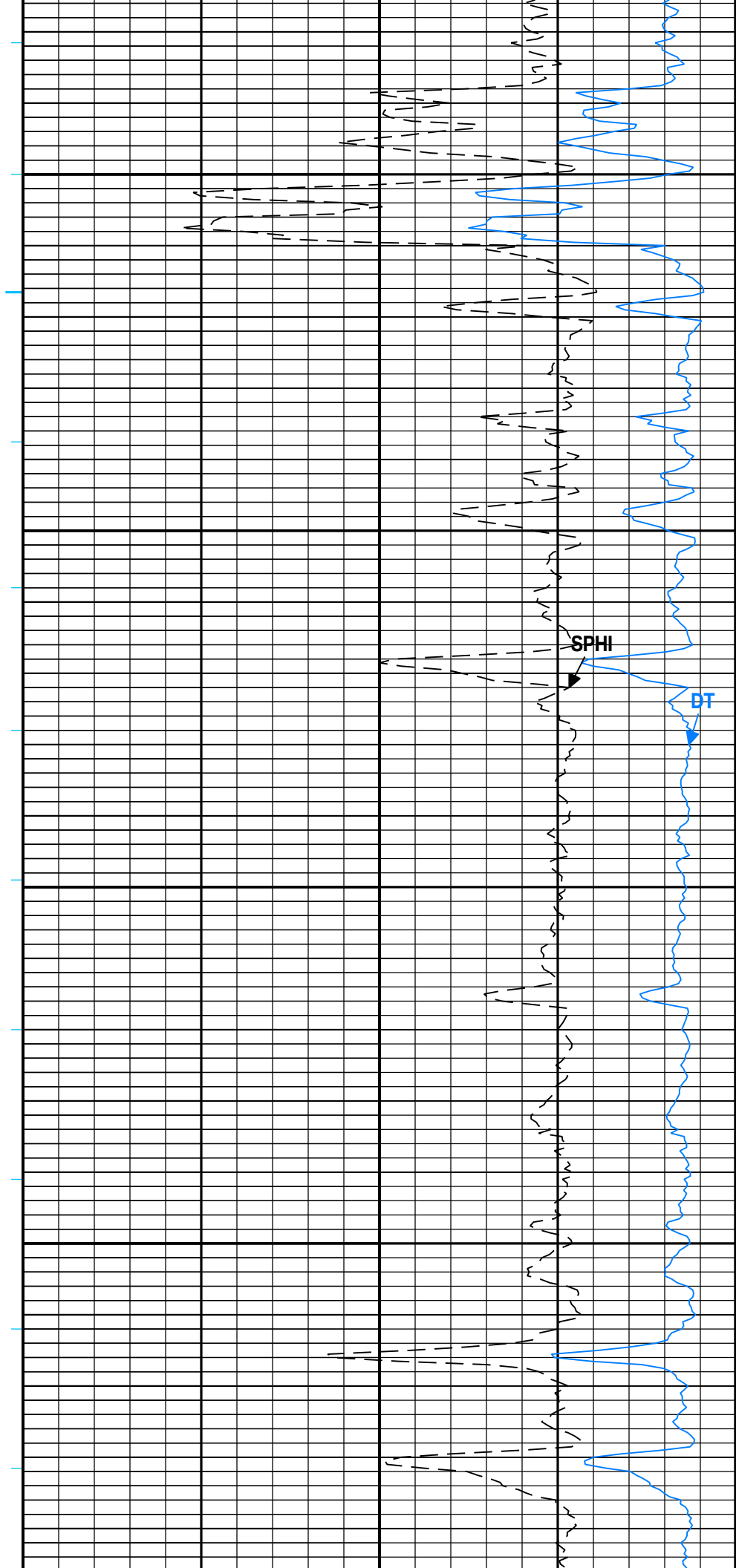


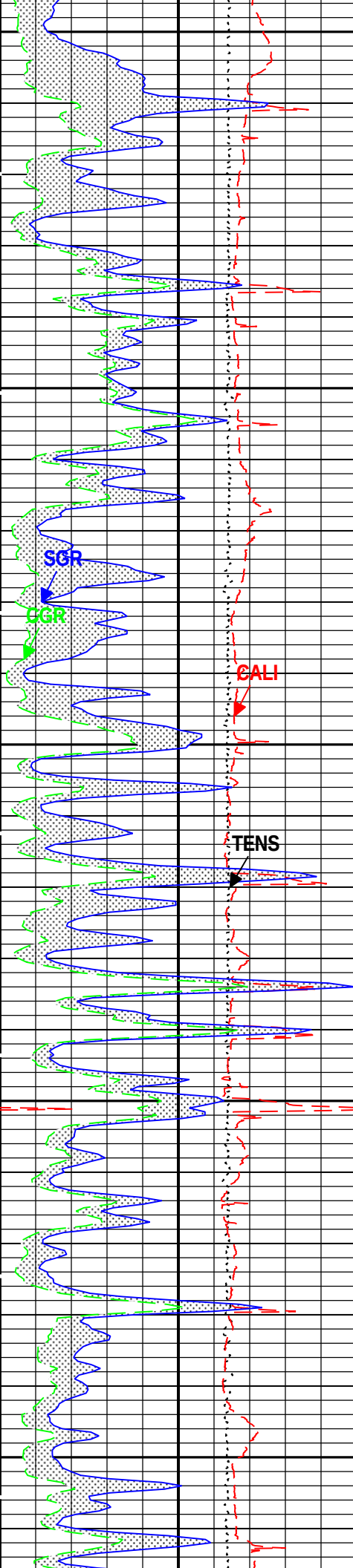




7600

7700

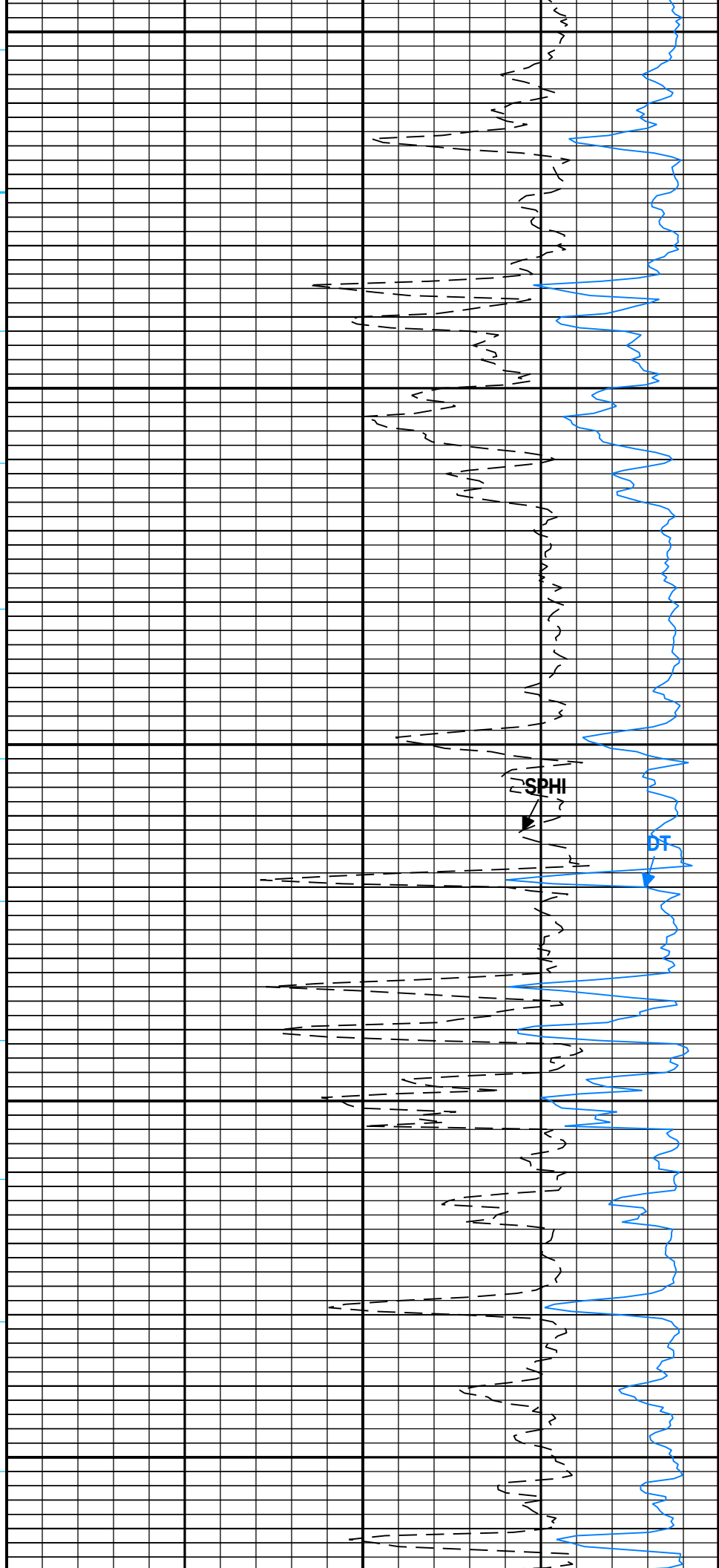


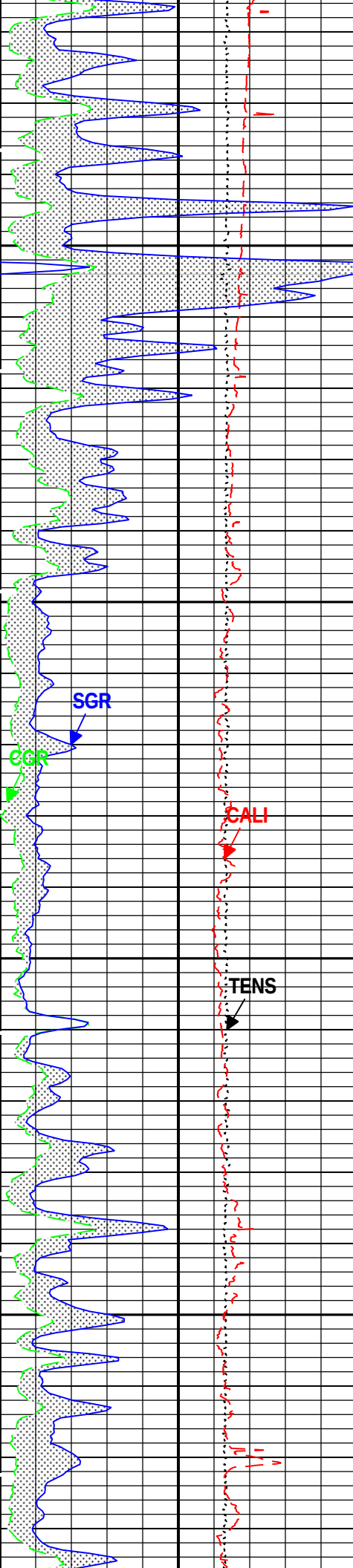


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7900

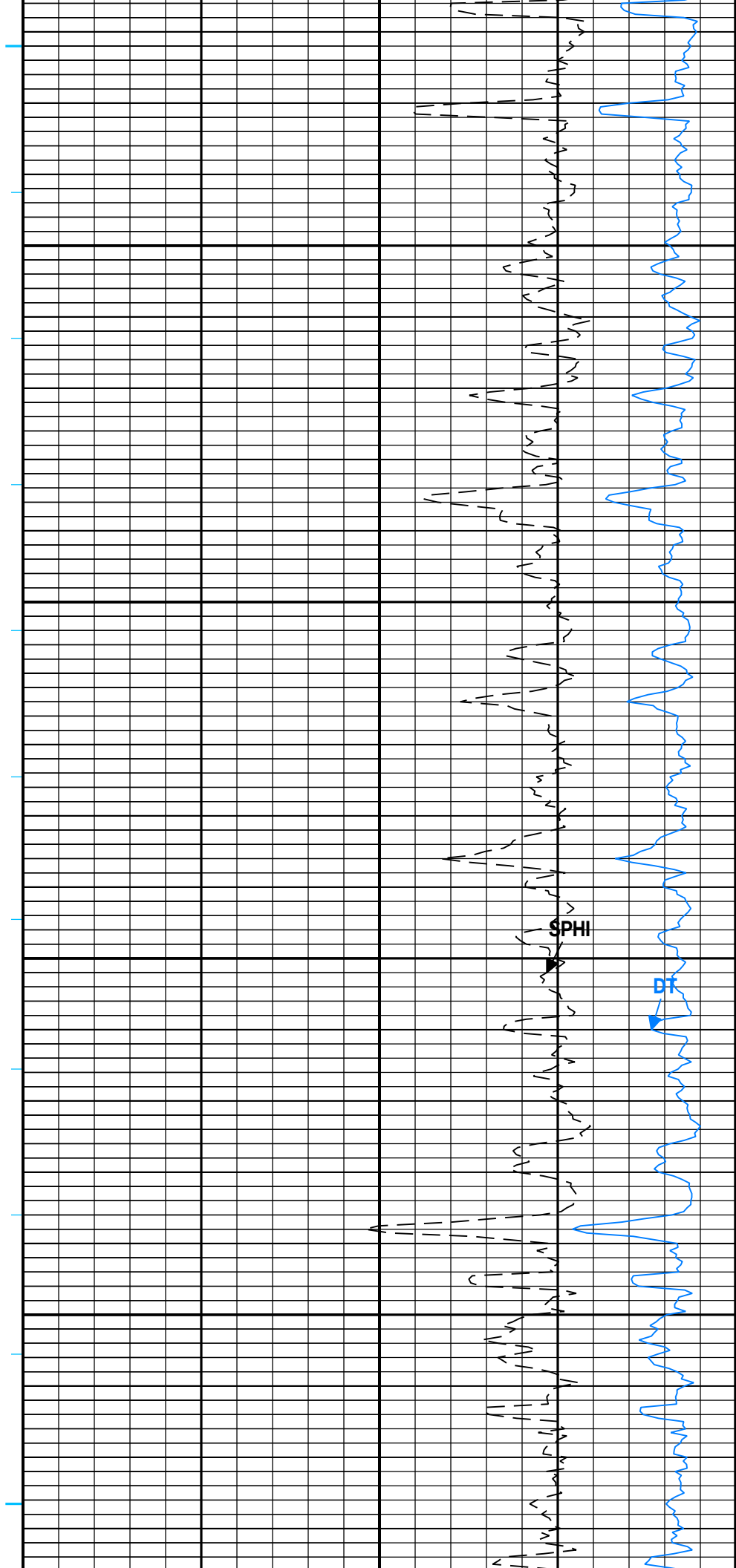
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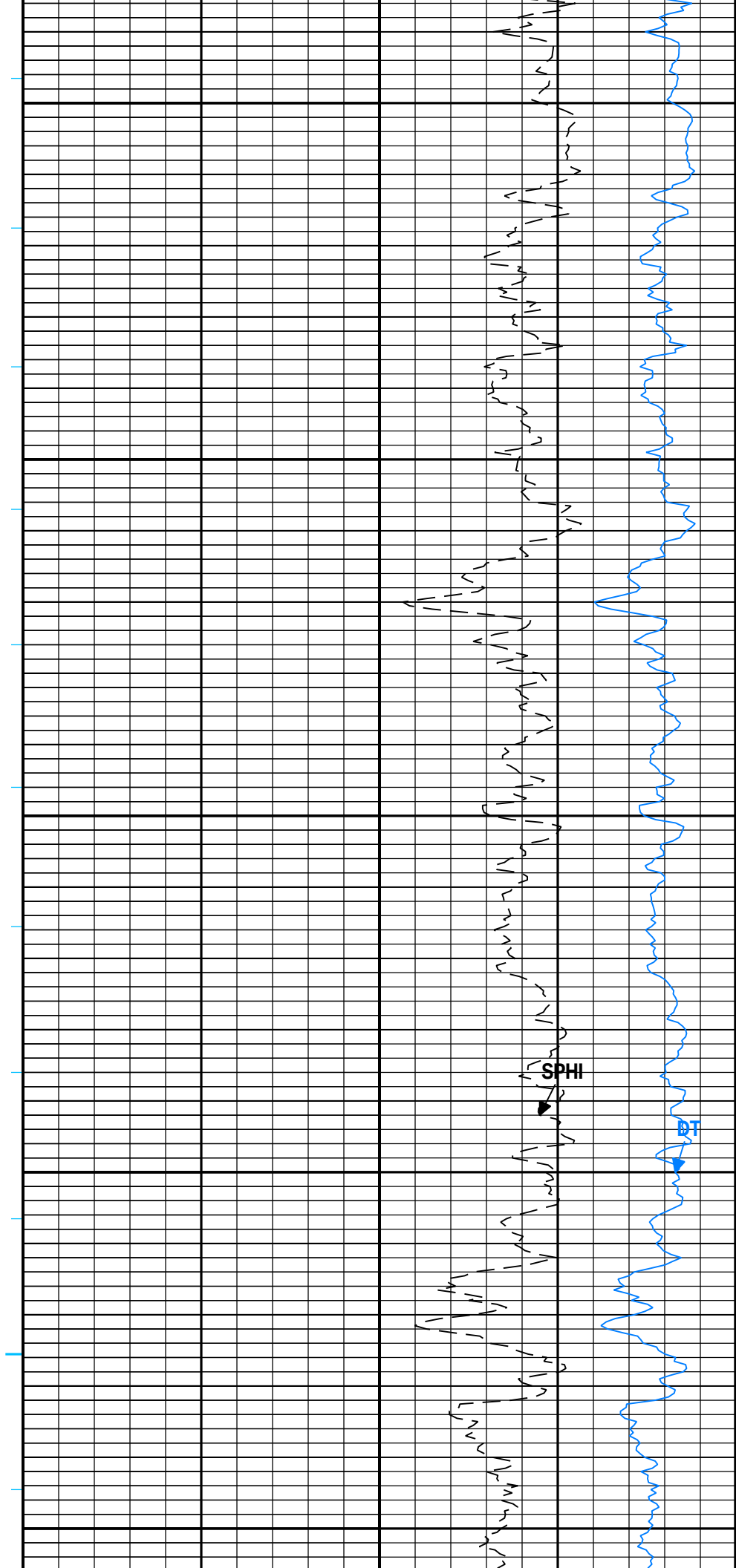
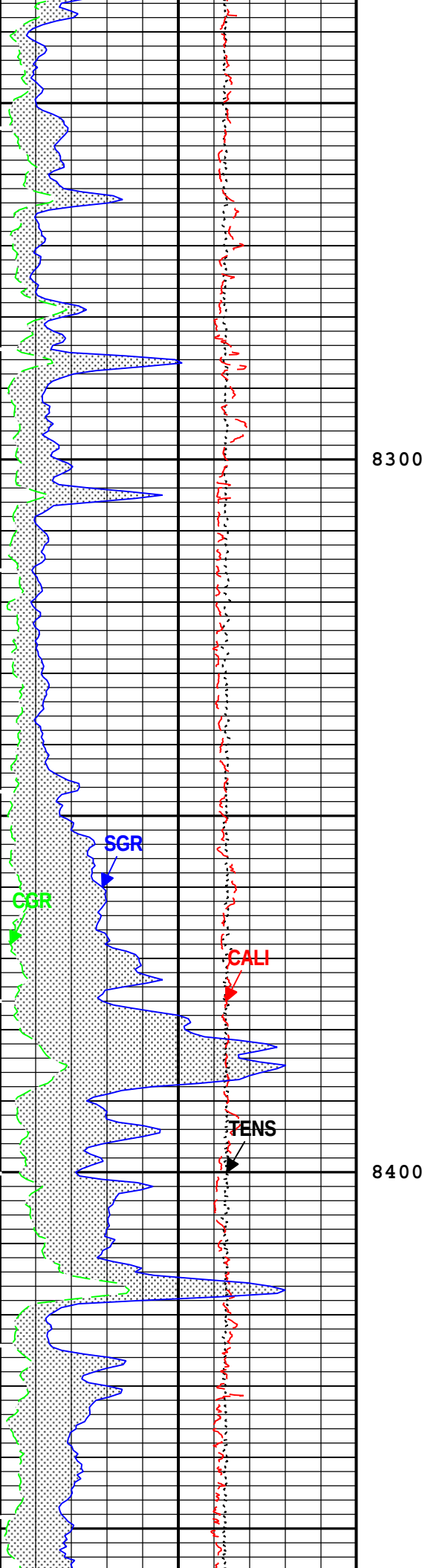
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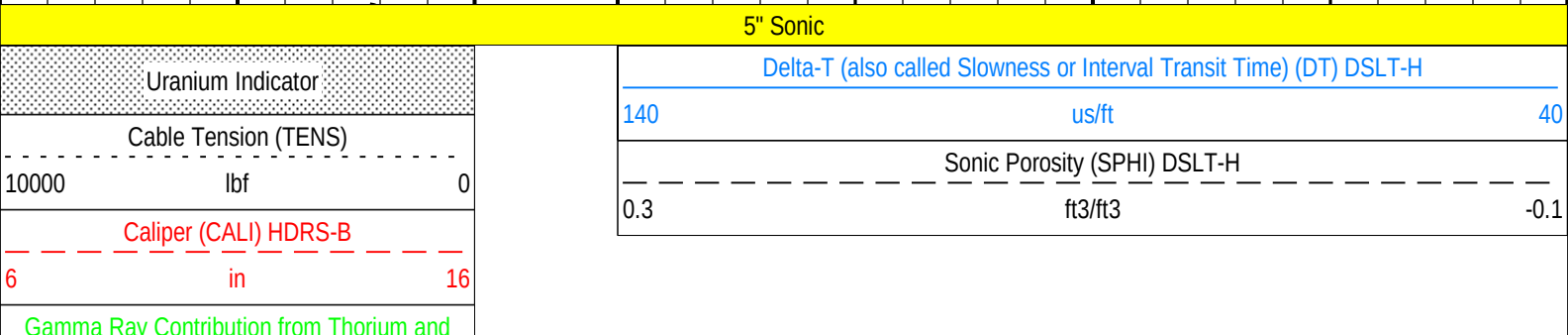
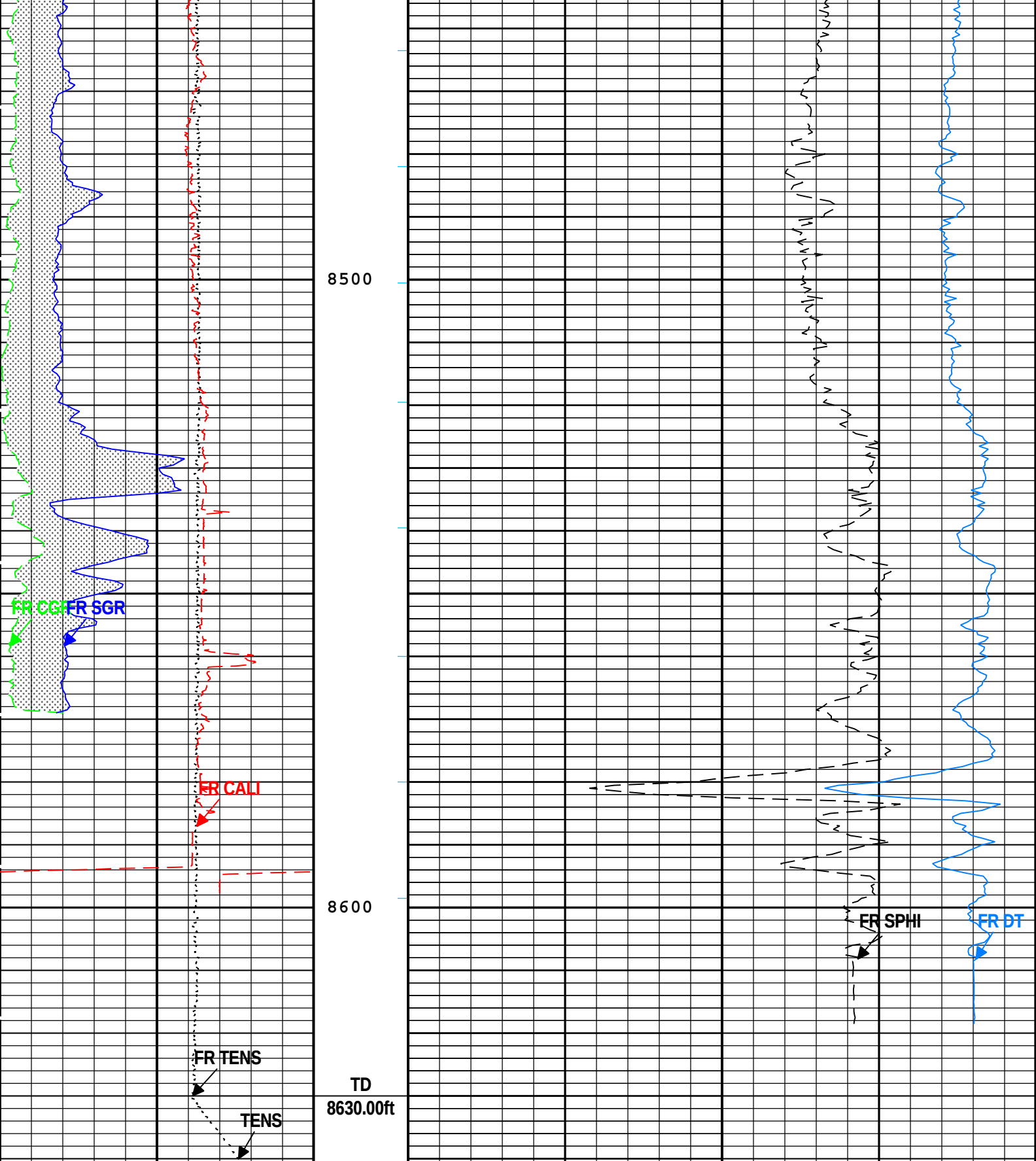
8200



SPHI

DT





Potassium (CGR) HNGS-BA		
0	gAPI	100
Spectroscopy Gamma Ray (SGR) HNGS-BA		
0	gAPI	100

ITT - Integrated Transit Time every 10.00 (ms)

TIME_1900 - Time Marked every 60.00 (s)

ITT - Integrated Transit Time every 1.00 (ms)

Description: HRLT BASIC LOG Format: Log (BHC 5 inch General) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:16:56

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-B	0.168	in
CBLO	Casing Bottom (Logger)	WLSESSION	3219.5	ft
CDTS	Correction for Delta-T Shale, Empirical	Borehole	100	us/ft
DBCC	Barite Constant Correction Flag	HNGS-BA	None	
DETE	Delta-T Detection	DSLT-H	E2	
DFD	Drilling Fluid Density	Borehole	8.8	lbm/gal
DTCM	Delta-T Computation Mode	DSLT-H	Full	
DTF	Delta-T Fluid	Borehole	189	us/ft
DTM	Delta-T Matrix	Borehole	47.6	us/ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
HCRB	Apply Borehole Potassium Correction	HNGS-BA	None	
HEMA	Hematite Presence Flag	Borehole	No	
ITTS	Integrated Transit Time Source	DSLT-H	DT	
MAHTR	Manual High Threshold Reference for first arrival detection	DSLT-H	120	
MNHTR	Minimum High Threshold Reference for first arrival detection	DSLT-H	100	
NMSG	Near Minimum Sliding Gate	DSLT-H	140	us
SGAD	Sliding Gate Status	DSLT-H	On	
SGRC	Standard Gamma Ray Correction Flag	HNGS-BA	Yes	
SPFS	Sonic Porosity Formula	Borehole	Wyllie	
SPSO	Sonic Porosity Source	DSLT-H	DT	

Depth Zone Parameters			
Parameter	Value	Start (ft)	Stop (ft)
BHS	Cased	0	3520
BHS	Open	3520	8640.75
BS	26	0	1570
BS	17.5	1570	3226.75
BS	12.25	3226.75	8630

All depth are actual.

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
DSLT_MODE	DSLT Acquisition Mode	DSLT-H	BHC	
DSLT_RATE	DSLT Firing Rate	DSLT-H	15 Hz	

DTFS	DSLTLT Telemetry Frame Size	DSLTLT-H	536	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h

Two

Repeat Analysis 5" = 100'

Log

Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2

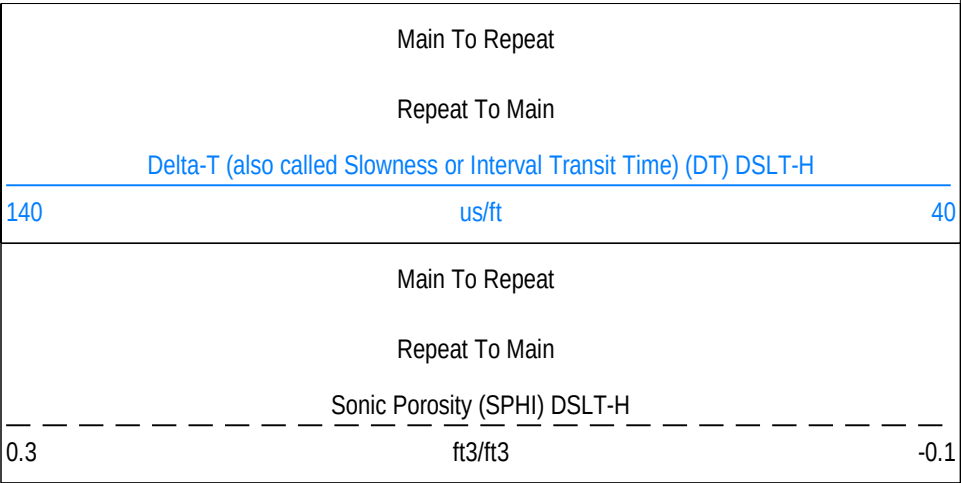
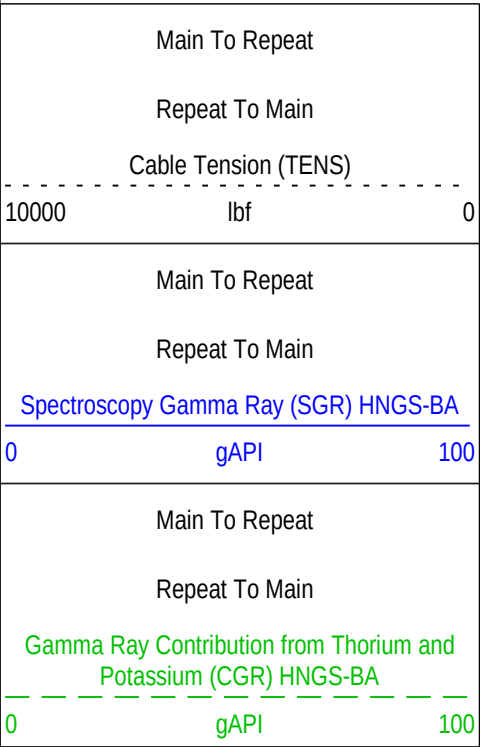
Two: Main[3]:Up:S021

Description: HRLT BASIC LOG Format: Log (BHC 5 inch General RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:16:58

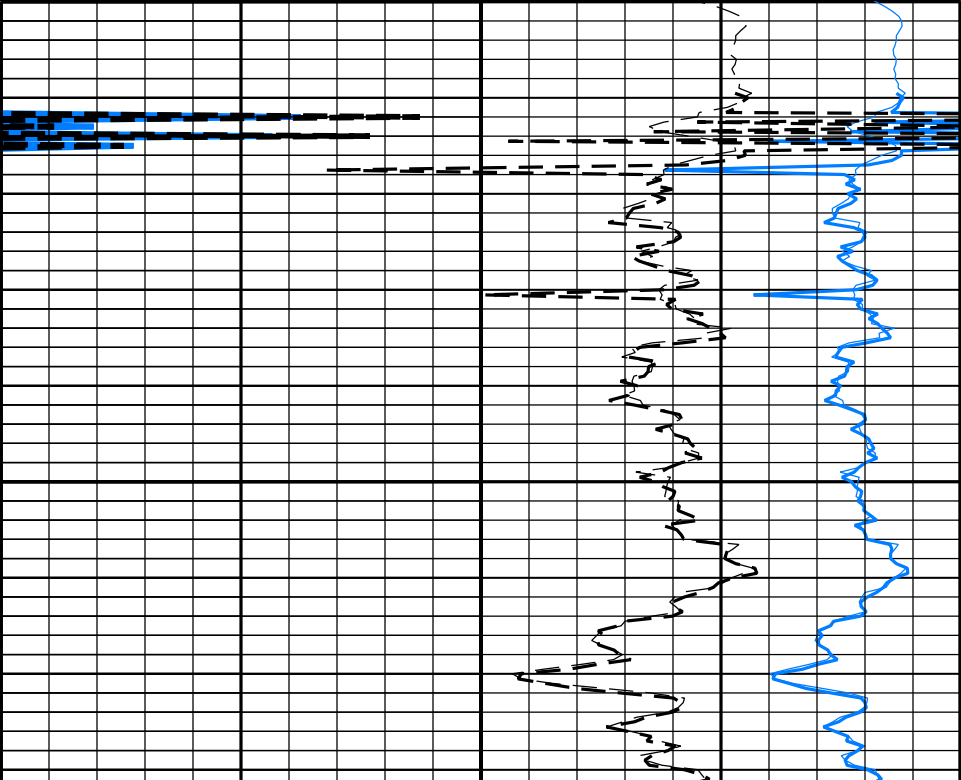
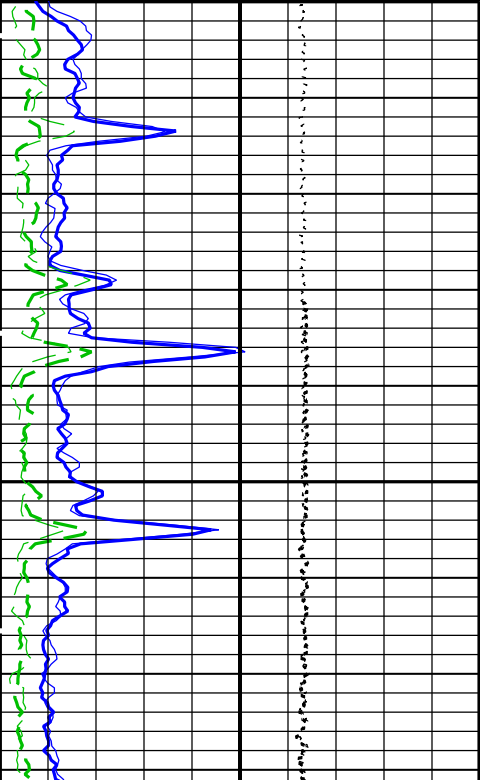
ITT - Integrated Transit Time every 1.00 (ms)

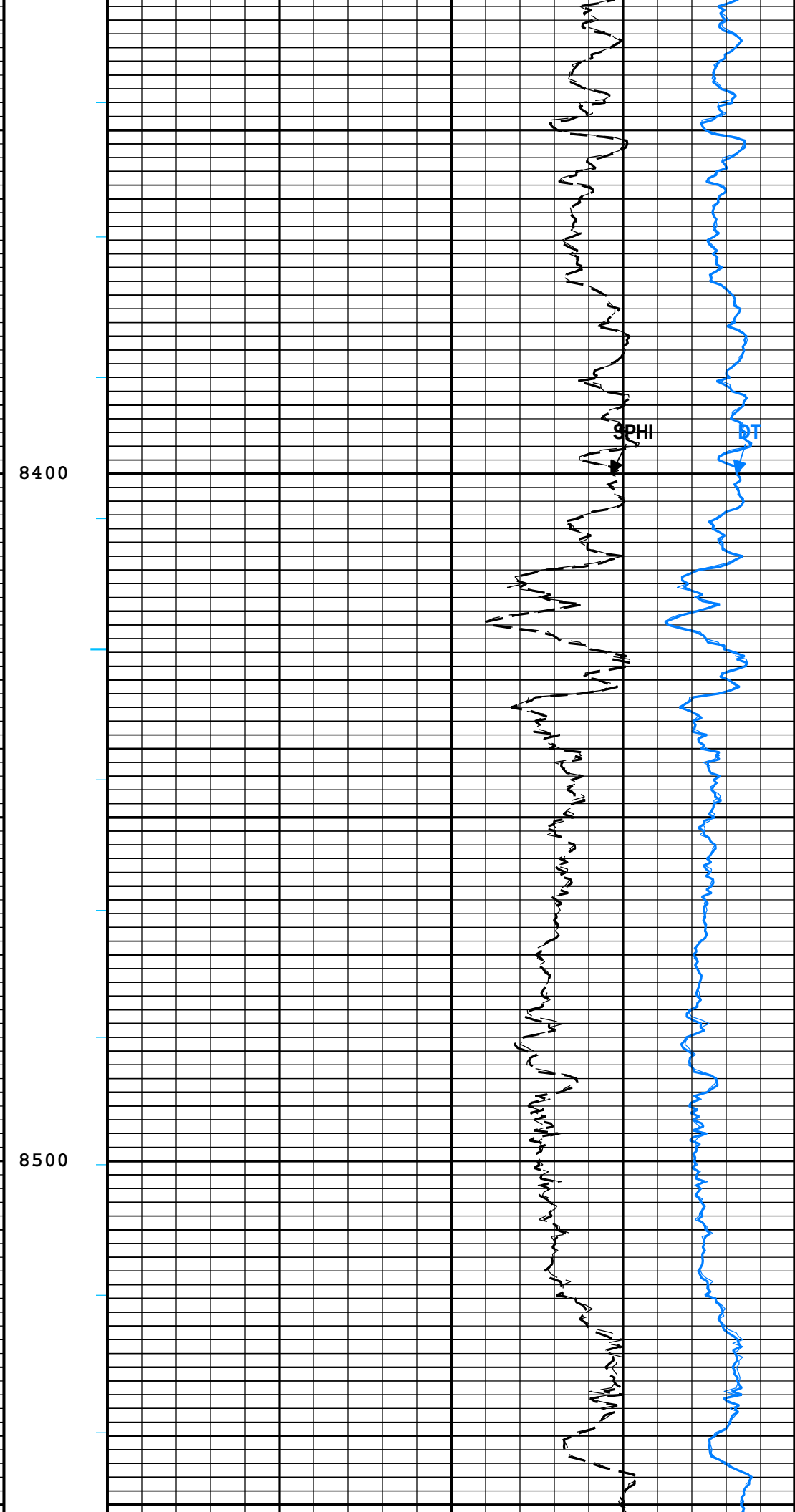
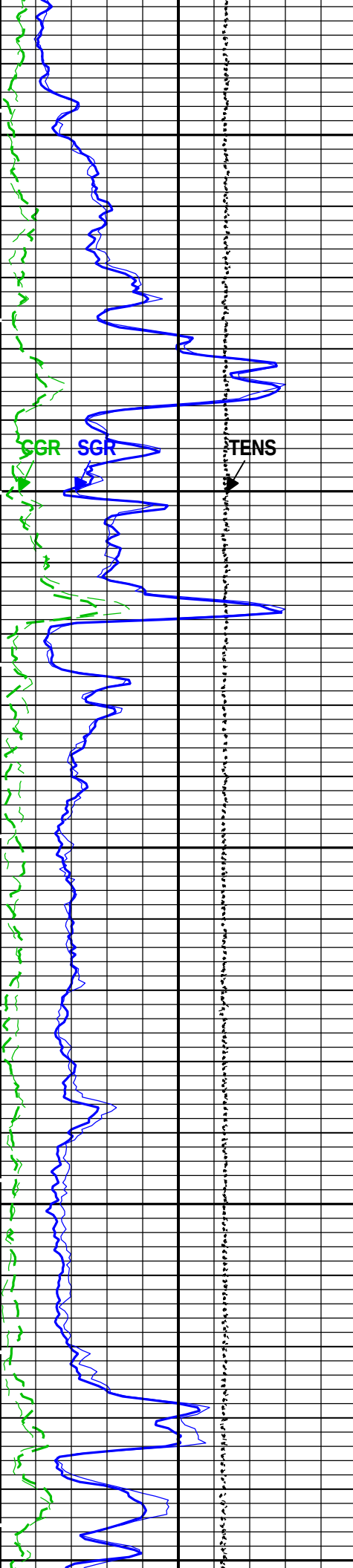
ITT - Integrated Transit Time every 10.00 (ms)

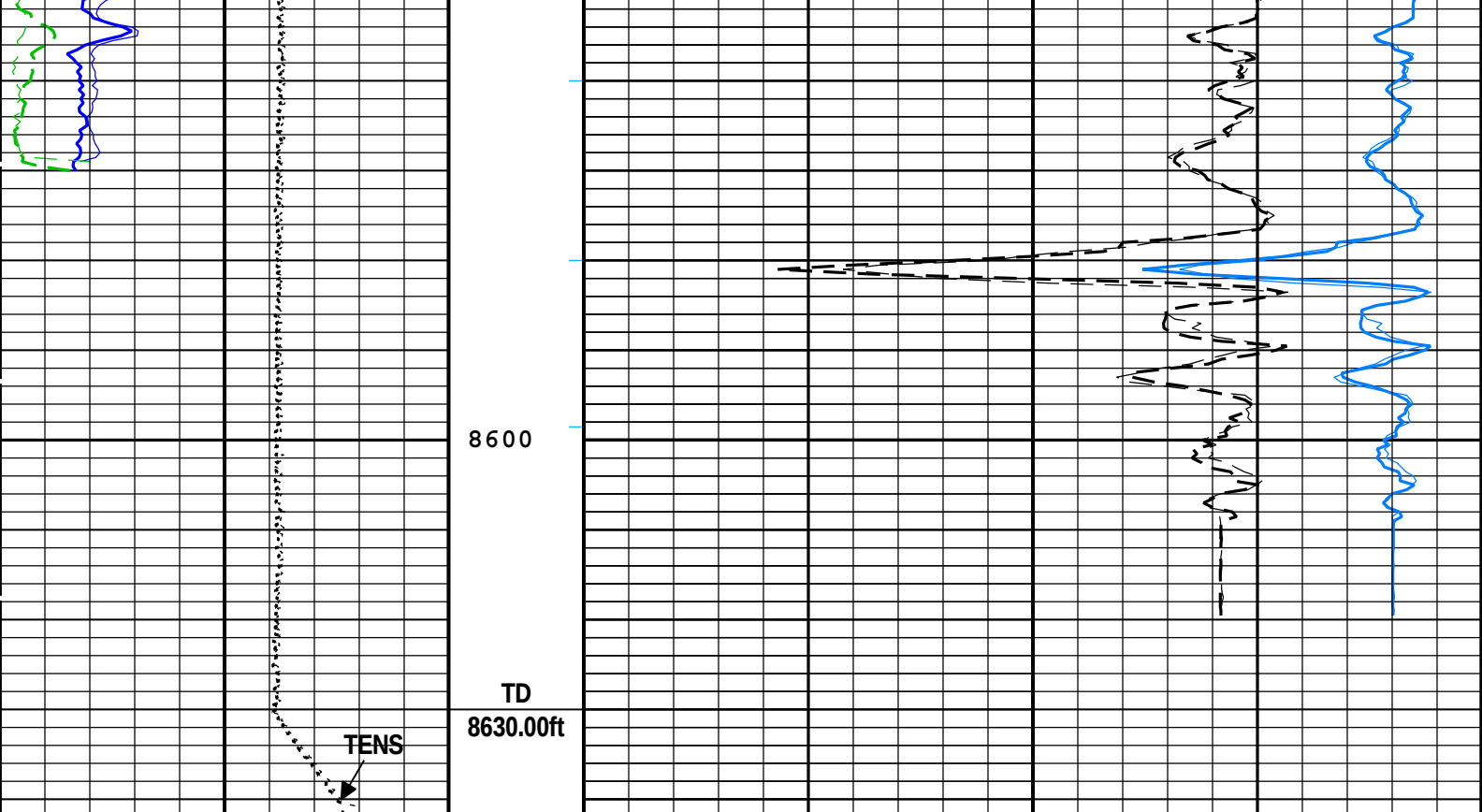
TIME_1900 - Time Marked every 60.00 (s)



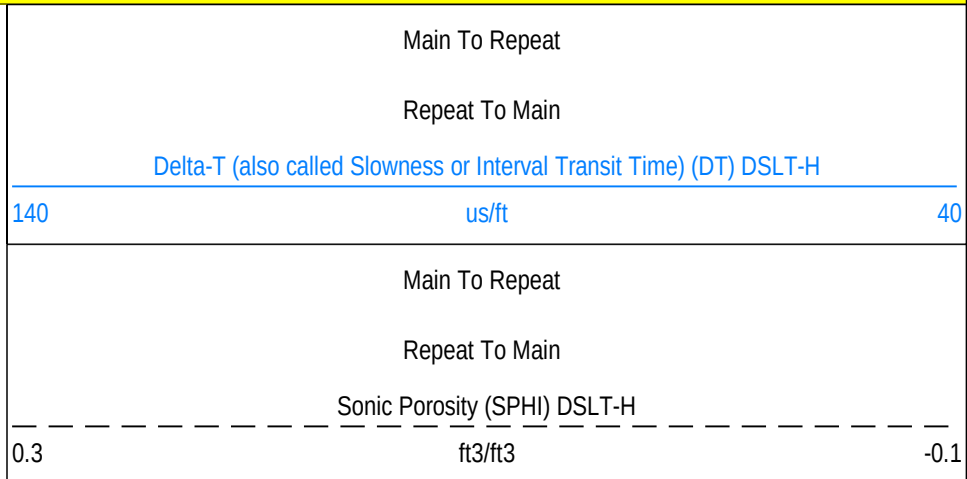
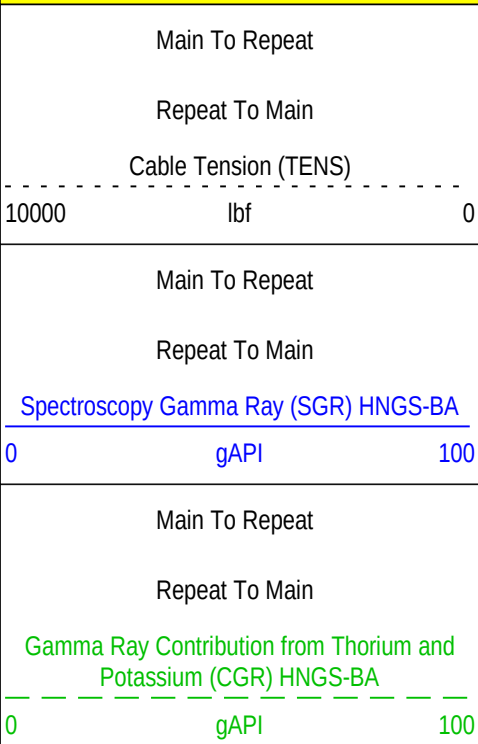
Repeat Analysis: 5"







Repeat Analysis: 5"



TIME_1900 - Time Marked every 60.00 (s)

—ITT - Integrated Transit Time every 10.00 (ms)
—ITT - Integrated Transit Time every 1.00 (ms)

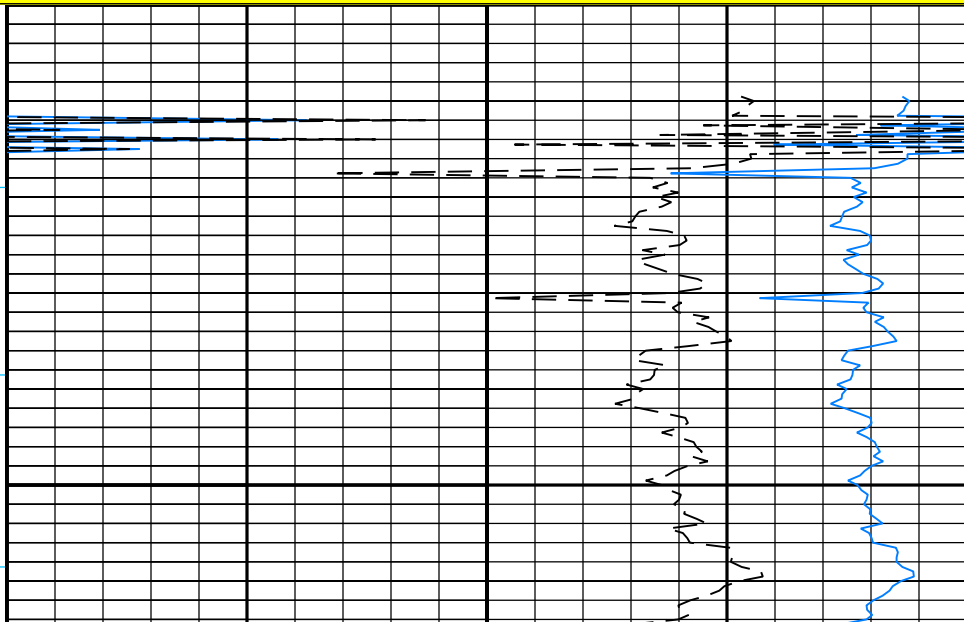
Description: HRLT BASIC LOG Format: Log (BHC 5 inch General RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:16:58

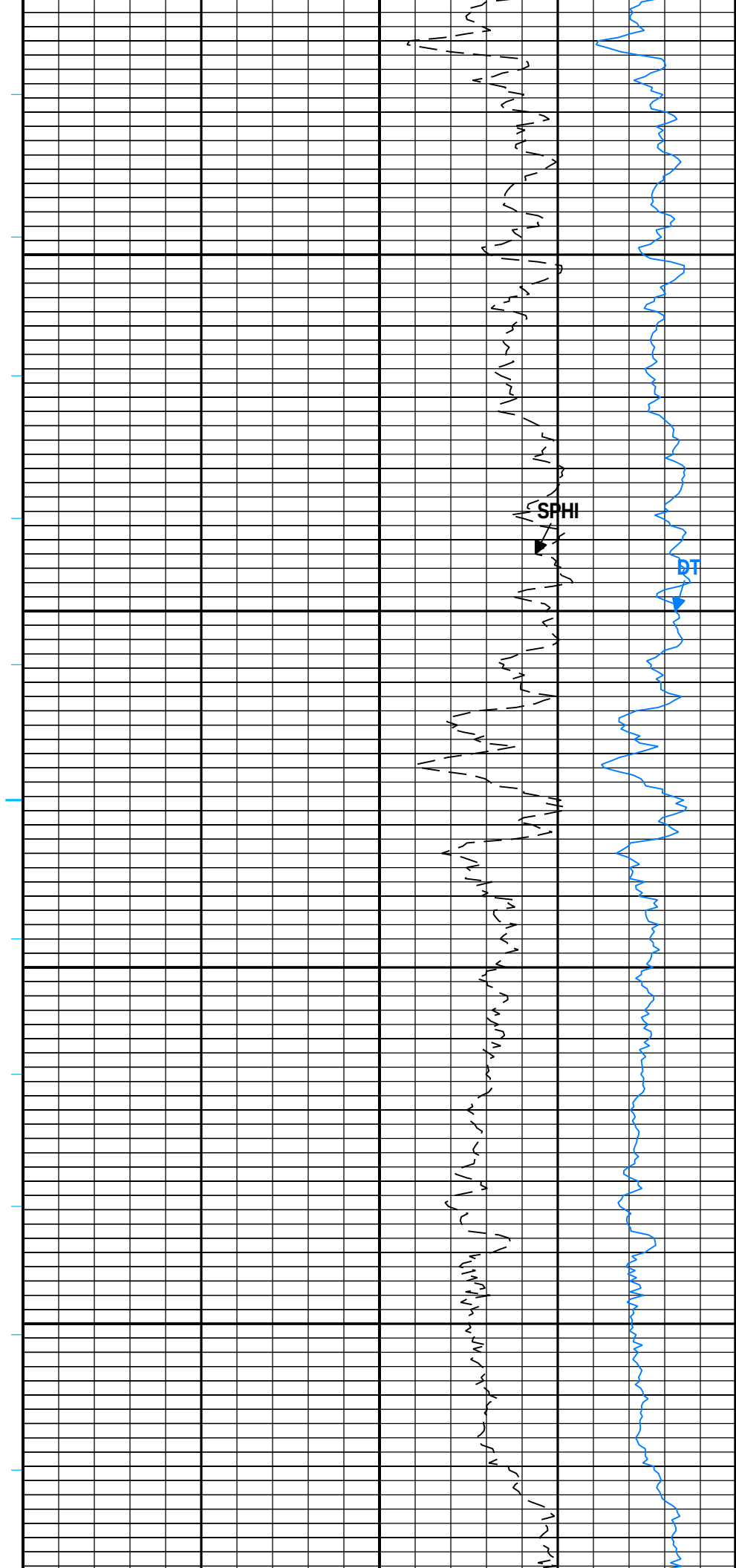
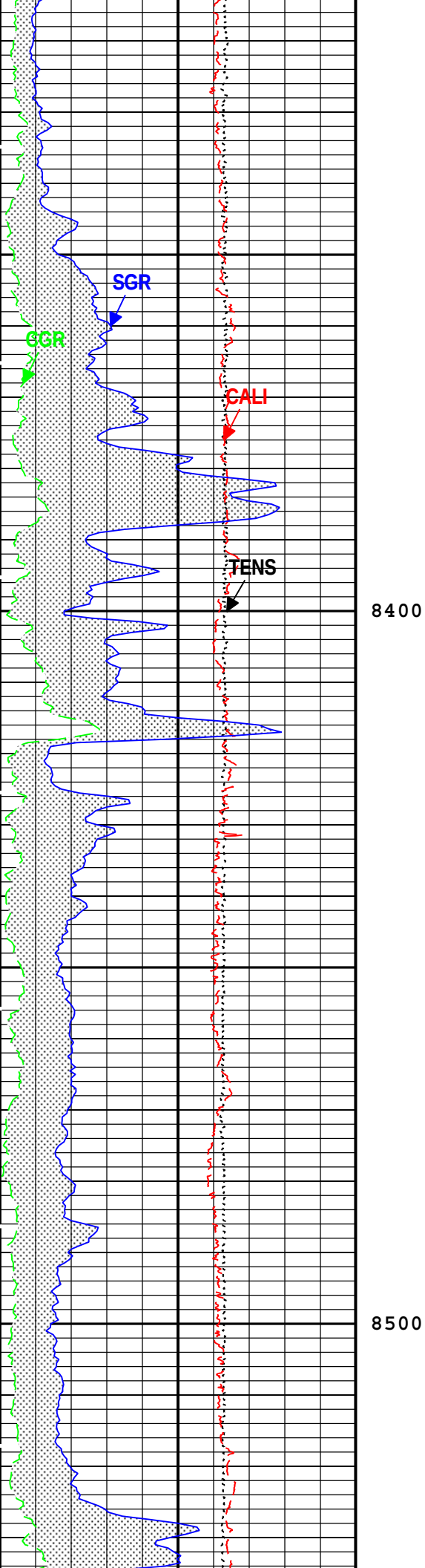
Two

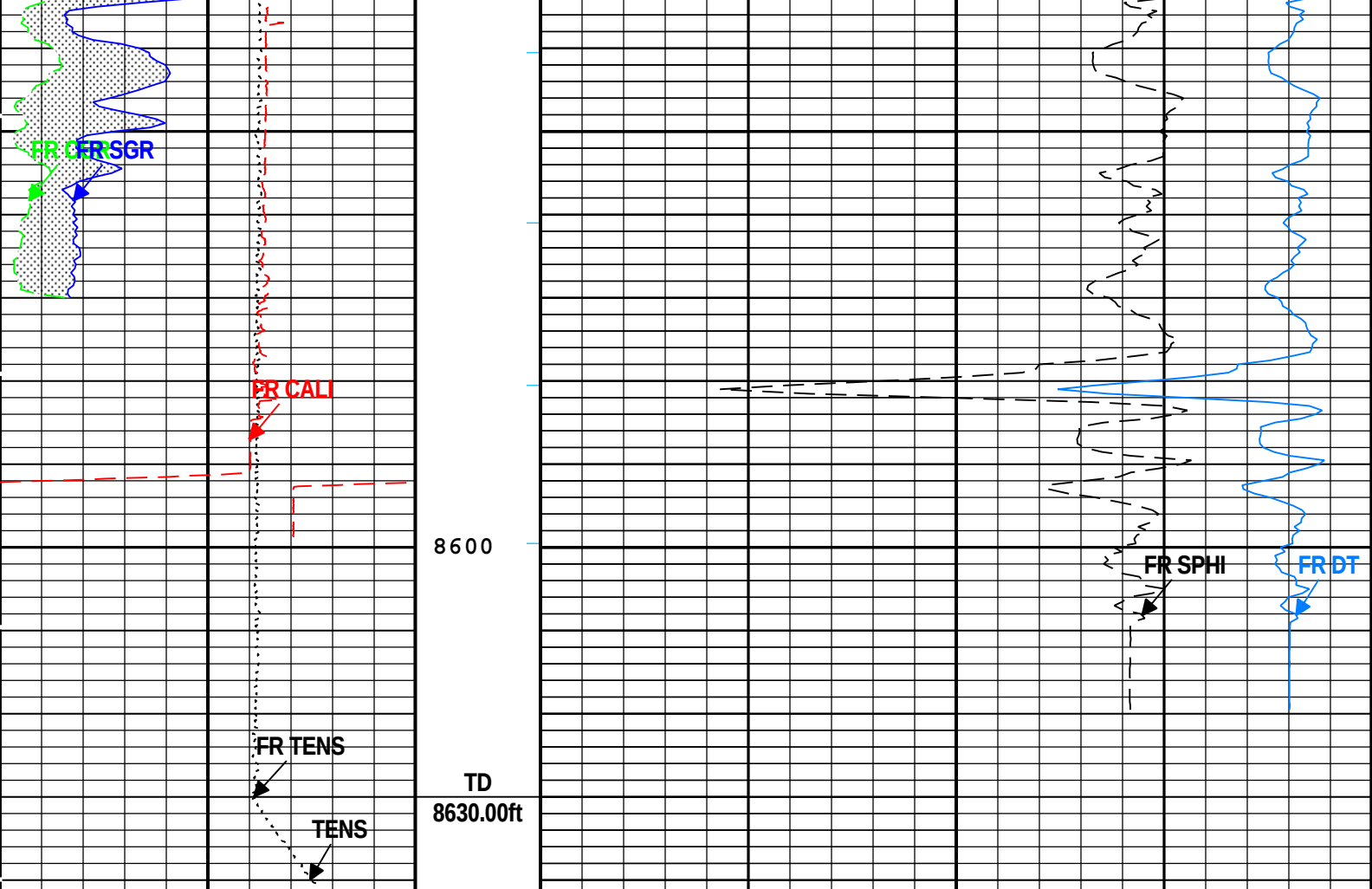
Repeat Pass 5" = 100'

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
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Uranium Indicator		
Cable Tension (TENS)		
10000	lbf	0
Caliper (CALI) HDRS-B		
6	in	16
Gamma Ray Contribution from Thorium and Potassium (CGR) HNGS-BA		
0	gAPI	100
Spectroscopy Gamma Ray (SGR) HNGS-BA		
0	gAPI	100

5" Sonic		
Delta-T (also called Slowness or Interval Transit Time) (DT) DSLT-H		
140	us/ft	40
Sonic Porosity (SPHI) DSLT-H		
0.3	ft3/ft3	-0.1

TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (BHC 5 inch General) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:16:59

Calibration Report

HNGS-BA (Hostile-environment Natural Gamma-ray Sonde) Calibration - Run Two

Primary Equipment :

HNGS Sonde Element	HNGS-BA	84
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Auxiliary Equipment :

Hostile Natural Gamma Ray Cartridge	HNGC-B	610
HNGS Housing Element	HEH-K	1035

HNGS Background and Na22 Set Point Determination - Detector 1 Check

Master (EEPROM):		08:19:35 16-Oct-2014		Before (Measured):		10:25:53 26-Nov-2014	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Na 511 Peak Location		Master	40.000	37.500	40.630	42.500	
		Before	40.000	37.500	40.756	42.500	
		Before-Master	-----	-----	0.126	-----	
Na 511 Peak Resolution	%	Master	15.500	12.000	16.191	19.000	
		Before	15.500	12.000	15.163	19.000	
		Before-Master	-----	-----	-1.028	-----	
High Voltage DAC Value	V	Master			1177.372		
		Before	1150.000	850.000	1156.771	1600.000	
		Before-Master	-----	-----	-20.601	-----	
Na 1785 Peak Location		Master	142.650	135.000	144.204	150.300	
		Before	142.650	135.000	144.844	150.300	
		Before-Master	-----	-----	0.640	-----	
Na 1785 Peak Resolution	%	Master	8.500	7.000	10.443	11.000	
		Before	8.500	7.000	9.146	11.000	
		Before-Master	-----	-----	-1.297	-----	
Temperature - 0	degF	Master	-----	-----	-----	-----	
		Before	59.900	-20.002	59.654	140.000	
		Before-Master	-----	-----	-----	-----	
Na Count Rate	CPS	Master	45.000	10.000	39.856	100.000	
		Before	45.000	10.000	40.517	100.000	
		Before-Master	-----	-----	0.661	-----	

HNGS Background and Na22 Set Point Determination - Detector 2 Check

Master (EEPROM):		08:19:35 16-Oct-2014		Before (Measured):		10:25:53 26-Nov-2014	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Na 511 Peak Location		Master	40.000	37.500	40.601	42.500	
		Before	40.000	37.500	40.570	42.500	
		Before-Master	-----	-----	-0.031	-----	
Na 511 Peak Resolution	%	Master	15.500	12.000	14.250	19.000	
		Before	15.500	12.000	14.448	19.000	
		Before-Master	-----	-----	0.198	-----	
High Voltage DAC Value	V	Master			1112.869		
		Before	1150.000	850.000	1090.086	1600.000	
		Before-Master	-----	-----	-22.783	-----	
Na 1785 Peak Location		Master	142.650	135.000	144.597	150.300	
		Before	142.650	135.000	144.621	150.300	
		Before-Master	-----	-----	0.024	-----	
Na 1785 Peak Resolution	%	Master	8.500	7.000	8.462	11.000	
		Before	8.500	7.000	8.094	11.000	
		Before-Master	-----	-----	-0.368	-----	
Temperature - 0	degF	Master	-----	-----	-----	-----	
		Before	59.900	-20.002	57.493	140.000	
		Before-Master	-----	-----	-----	-----	
Na Count Rate	CPS	Master	45.000	10.000	40.262	100.000	
		Before	45.000	10.000	40.542	100.000	
		Before-Master	-----	-----	0.280	-----	

HNGS Background and Na22 Set Point Determination - Ratio of Detector 1 to Detector 2

Master (EEPROM):		08:19:35 16-Oct-2014		Before (Measured):		10:25:53 26-Nov-2014	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coincidence Count Rate Ratio		Master			0.987		
		Before	1.000	0.950	0.994	1.050	
		Before-Master	-----	-----	0.007	-----	

HNGS Background and Na22 Set Point Determination - Detector 1 Calibration

Master (EEPROM):		08:19:35 16-Oct-2014		Before (Measured):		10:25:53 26-Nov-2014	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Th Peak Location		Master	209.630	201.000	208.805	218.250	
		Before	-----	-----	-----	-----	
		Before-Master	-----	-----	-----	-----	
Th Peak Resolution	%	Master	7.000	5.000	7.753	9.000	
		Before	-----	-----	-----	-----	

		Before-Master	----	----	----	----	
Background Count Rate	CPS	Master			109.633		
		Before	142.500	10.000	190.061	265.000	
		Before-Master	----	----	80.428	----	
Gain Ratio		Master	1.000	0.940	0.978	1.060	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	

HNCS Background and Na22 Set Point Determination - Detector 2 Calibration

Master (EEPROM):		08:19:35 16-Oct-2014		Before (Measured):		10:25:53 26-Nov-2014	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Th Peak Location		Master	209.630	201.000	210.075	218.250	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	
Th Peak Resolution	%	Master	7.000	5.000	7.198	9.000	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	
Background Count Rate	CPS	Master			106.568		
		Before	142.500	10.000	171.011	265.000	
		Before-Master	----	----	64.443	----	
Gain Ratio		Master	1.000	0.940	0.985	1.060	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	

HNCS Background and Na22 Set Point Determination - Detector 1 Calibration

Master (EEPROM):		08:19:35 16-Oct-2014		Before (Measured):		10:25:53 26-Nov-2014	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Na 511 Peak Set Point		Master	40.000	38.000	42.000	43.500	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	

HNCS Background and Na22 Set Point Determination - Detector 2 Calibration

Master (EEPROM):		08:19:35 16-Oct-2014		Before (Measured):		10:25:53 26-Nov-2014	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Na 511 Peak Set Point		Master	40.000	38.000	42.000	43.500	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	

Company:	PB ENERGY STORAGE SERVICES, INC	Schlumberger
Well:	DCP Linam Ranch AGI #2	
Field:	AGI; Bone Spring-Wolfcamp	
County:	Lea	
Country:	USA	
Borehole Compensated Sonic Spectral Gamma Ray		

Main Pass 1" = 100'

Log

Company:PB ENERGY STORAGE SERVICES, INC

Well:DCP Linam Ranch AGI #2

Two: Main[3]:Up:S021

Description: HRLT BASIC LOG Format: Log (BHC 1 inch General) Index Scale: 1 in per 100 ft Index
Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:17:01

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
DT	DSLT-H:SLS-E:SLS-E	6in
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
SPHI	DSLT-H:SLS-E:SLS-E	6in
TIME_1900	WLWorkflow	0.1in

TIME_1900 - Time Marked every 60.00 (s)

Caliper (CALI)
HDRS-B

6 in 16

Gamma Ray
Contribution from
Thorium and
Potassium (CGR)
HNGS-BA

0 gAPI 100

Spectroscopy Gamma
Ray (SGR) HNGS-BA

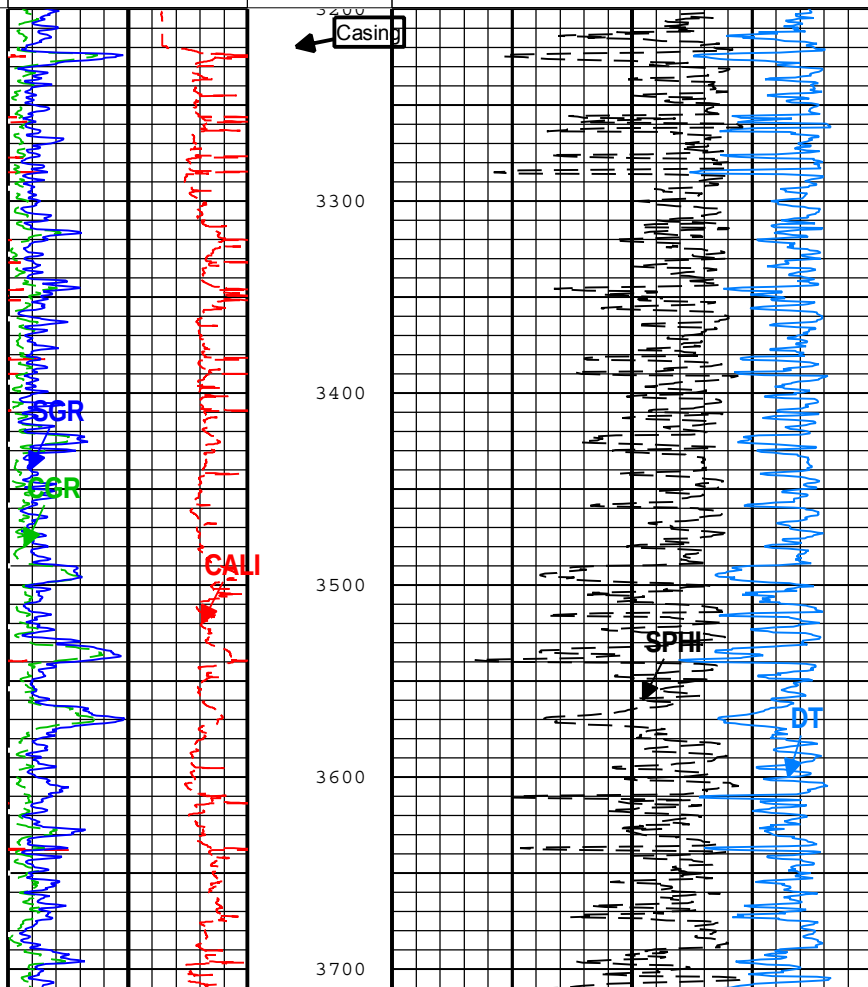
0 gAPI 100

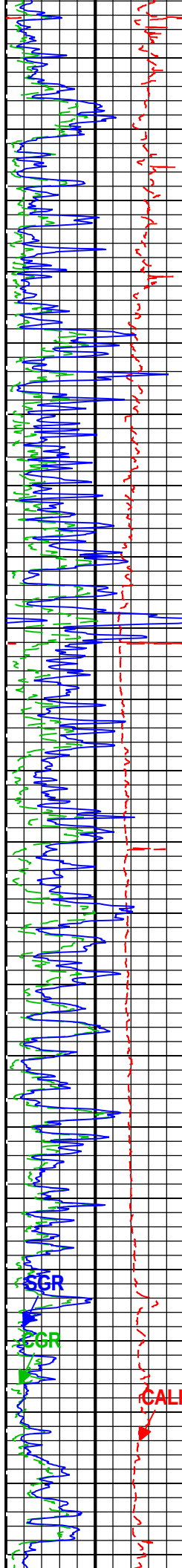
Delta-T (also called Slowness or Interval Transit
Time) (DT) DSLT-H

140 us/ft 40

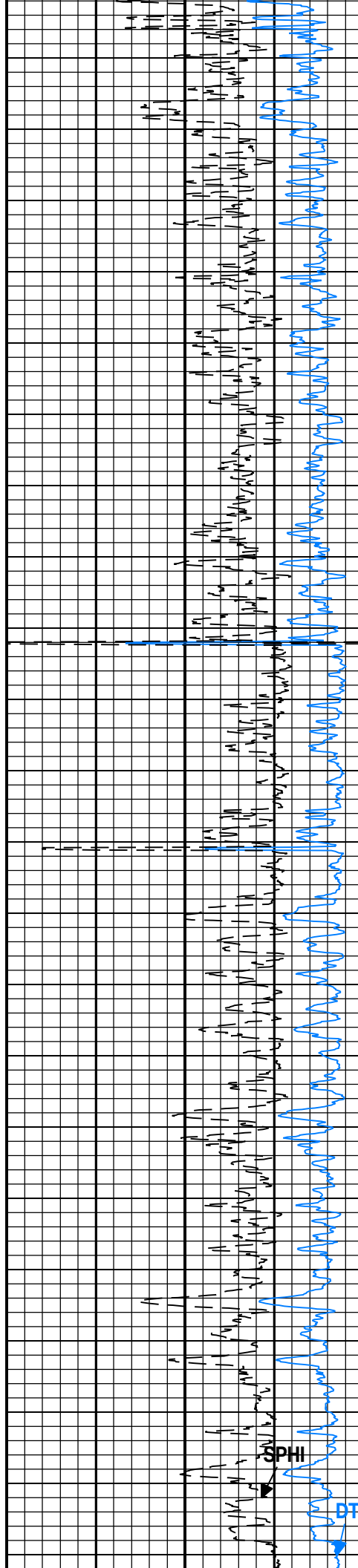
Sonic Porosity (SPHI) DSLT-H

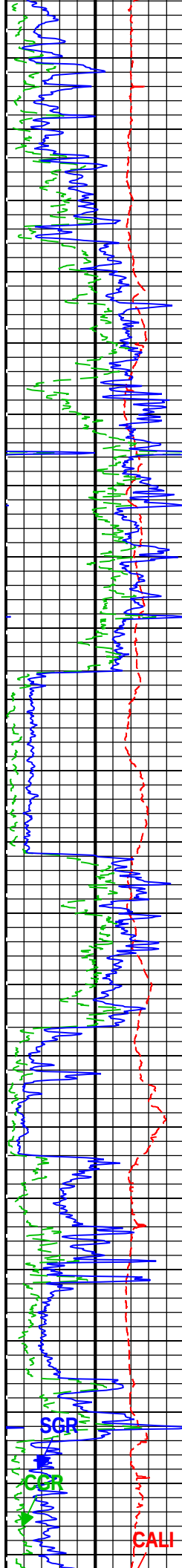
0.3 ft3/ft3 -0.1





3800
3900
4000
4100
4200
4300
4400
4500
4600
4700
4800





4900

5000

5100

5200

5300

5400

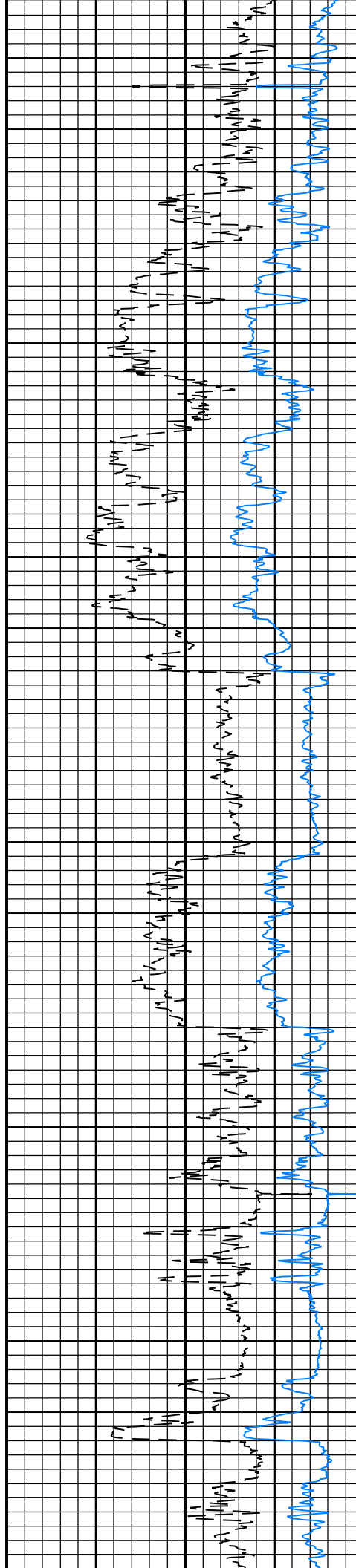
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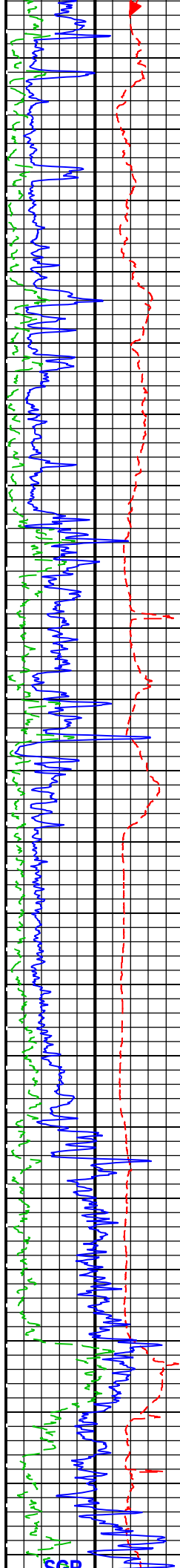
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