





## DEPTH SUMMARY LISTING

Date Created: 2-DEC-2004 11:59:18

## Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	7-46ZV-XS
Serial Number:	1914	Serial Number:	2336	Serial Number:	74172
Calibration Date:	24-Mar-2004	Calibration Date:	28-Apr-2004	Length:	7324.04 M
Calibrator Serial Number:	9	Calibrator Serial Number:	1051	Conveyance Method: Wireline Rig Type: Offshore_Fixed	
Calibration Cable Type:	7-46V-XS	Calibration Gain:	0.87		
Wheel Correction 1:	-5	Calibration Offset:	115.00		
Wheel Correction 2:	-5				

## Depth Control Parameters

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	SP-HRLA-PEX-CMR-GR Nuclear Resistivity Pri
Reference Log Run Number:	Suite-1, Run1
Reference Log Date:	24-Nov-2004

## Depth Control Remarks

1. Subsequent run in hole. Log correlated to Schlumberger SP-HRLA-PEX-CMR-GR log, dated 24-Nov-0
2. Primary depth reference IDW-E
3.
4.
5.
6.

## DISCLAIMER

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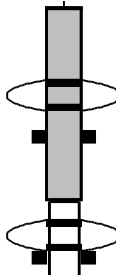
OTHER SERVICES1	OTHER SERVICES2
OS1: SP-HRLA-PEX-CMR-G	OS1:
OS2: VSI-GR	OS2:
OS3: MDT-GR	OS3:
OS4: MSCT-GR	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Subsequent run in hole. Log correlated to Run 1, SP-HRLA-PEX-CMR-GR, 24 November 2004.	
Toolstring run as per tool sketch, with FMI and DSI centralised using 4 CMEZs.	
DSI was run in the following modes:	
Downlog in casing from 280m - P&S in Low Frequency Mode	
Downlog in openhole from 2400 to 3450m - P&S, Upper and Lower Dipole	
Upllog in openhole from 3527 to 2421.2m - P&S, Upper and Lower Dipole	
Upllog in casing from 2421.2 to 1700m - P&S, Upper and Lower Dipole all in Low Frequency Mode	
The main pass was logged from 3527 to 2421.2m.	
The repeat section was logged from 3527 to 3385m.	

The repeat section was logged from 3527 to 3563m.  
Maximum hole deviation from Sperry Sun survey.

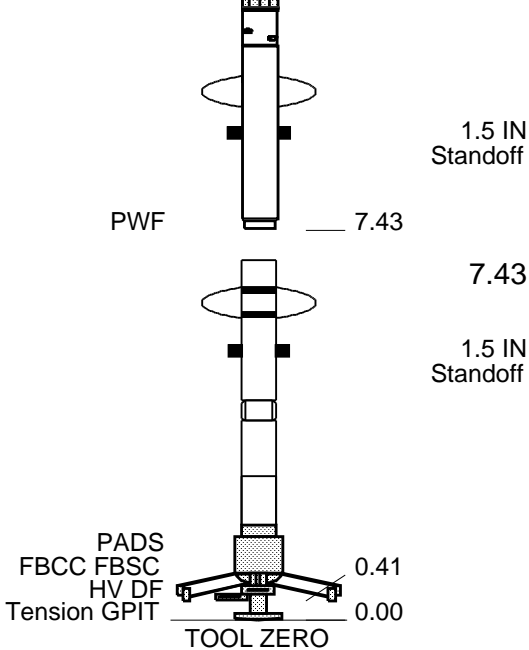
RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1			RUN 2		
SURFACE EQUIPMENT					
GSR-U 2003 WITM (DTS)-A 964					
DOWNHOLE EQUIPMENT					
LEH-QT 1519 LEH-QT 1519		32.36			
DTPC-A ECH-KJ 64 DTPC-A 64		31.47			
DTC-H 8457 ECH-KH DTCH0-A DTCH1-A	CTEM TelStatus ToolStatu 	28.40 27.76			
DTA-A 8351 ECH-KE 8351 DTA-A 8351		27.76			
HNGS-BA HNGS-BA 28 HNSH-BA 28	Upper_1 Lower_2 	25.84 25.63			
HNGC-A HNGH-A 3	HNGC Stat 	23.51			
DSST-B SPAC-B 8056 ECH-SD 8038 SMDR-BD 8094 SSIJ-BA 8142 SMDX-AA 8063		22.98			
		1.5 IN Standoff			
		1.5 IN Standoff			

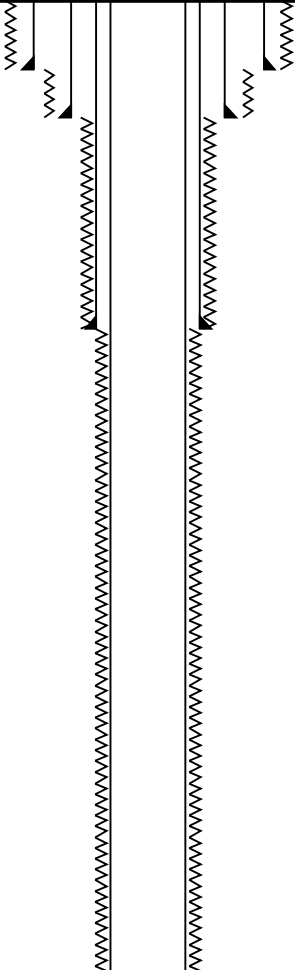
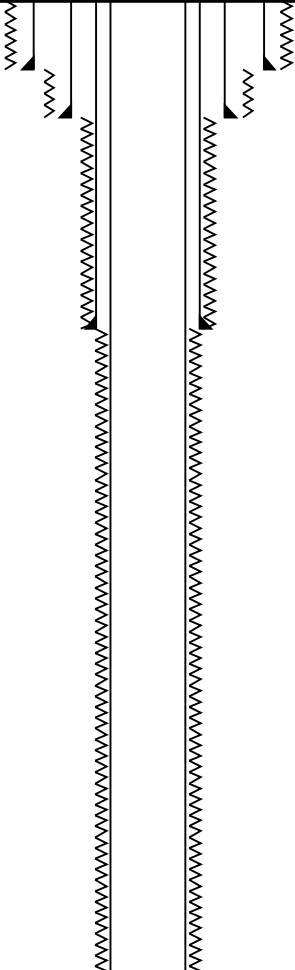


FBST-B  
ECH-MRA 4742  
FBCC-A 794  
AH-185 909  
FBSH-A 855  
GPIC-AC 735  
FBSC-B 858  
FBSS-B 830



MAXIMUM STRING DIAMETER 6.63 IN  
MEASUREMENTS RELATIVE TO TOOL ZERO  
ALL LENGTHS IN METERS

Client: Origin Energy Resources Ltd. Drawing Date: 11/23/2004  
Well: Trefoil-1 API #:  
Field: Trefoil Rig Name: ENSCO 102  
State: Tasmania Reference Datum: Mean Sea Level  
Country: Australia Elevation: 39.6 m

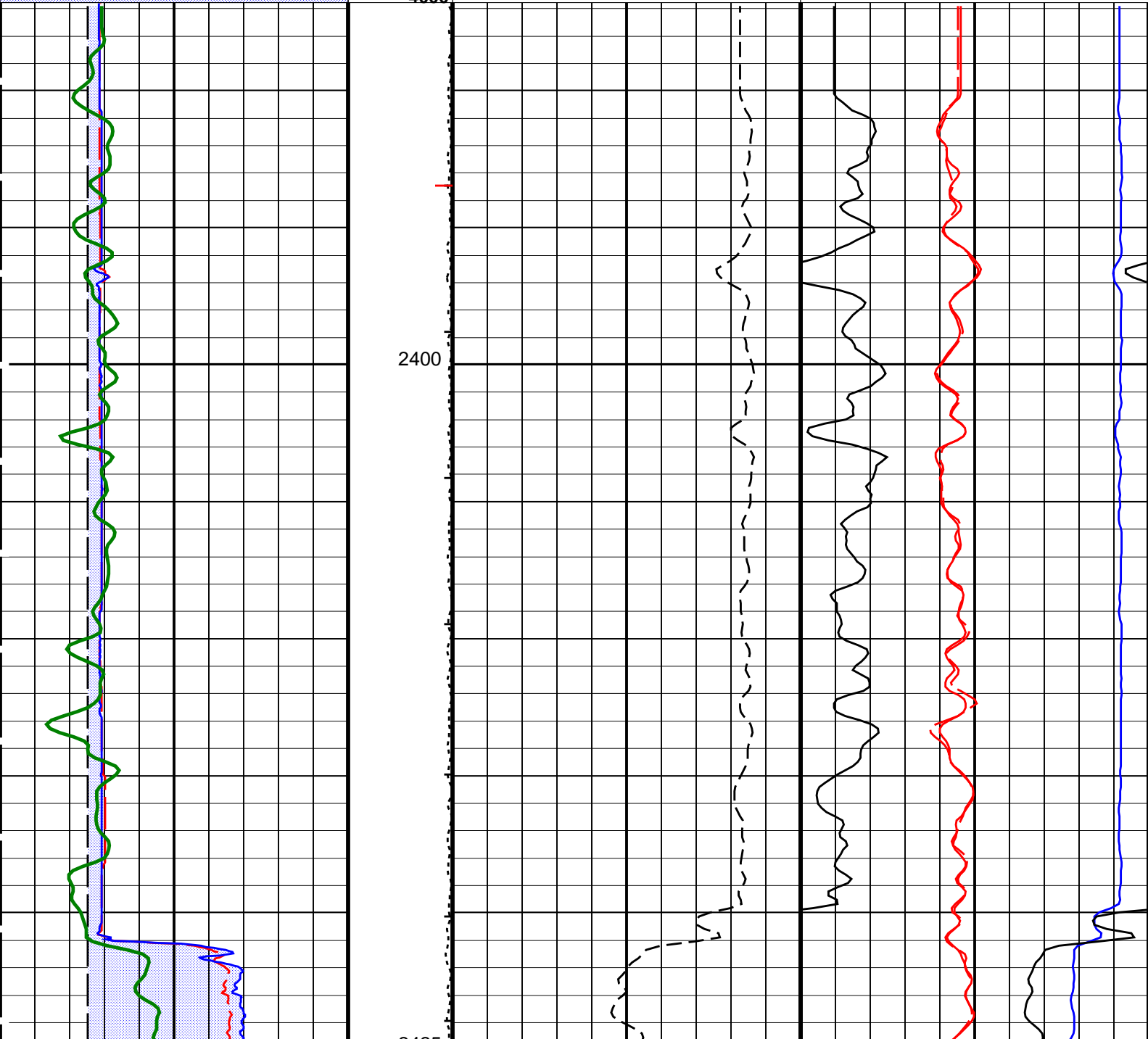
Production String	(in)		(m)	Well Schematic	(m)		(in)	Casing String
	OD	ID	MD		MD	OD	ID	
					0.0	30.000		Casing String Segment
					142.6	30.000		Borehole Segment Bottom
					142.6	26.000		Borehole Segment
					214.6	26.000		Borehole Segment Bottom
					214.6	16.000		Borehole Segment
					659.6	18.000		Borehole Segment Bottom
					659.6	12.250		Borehole Segment

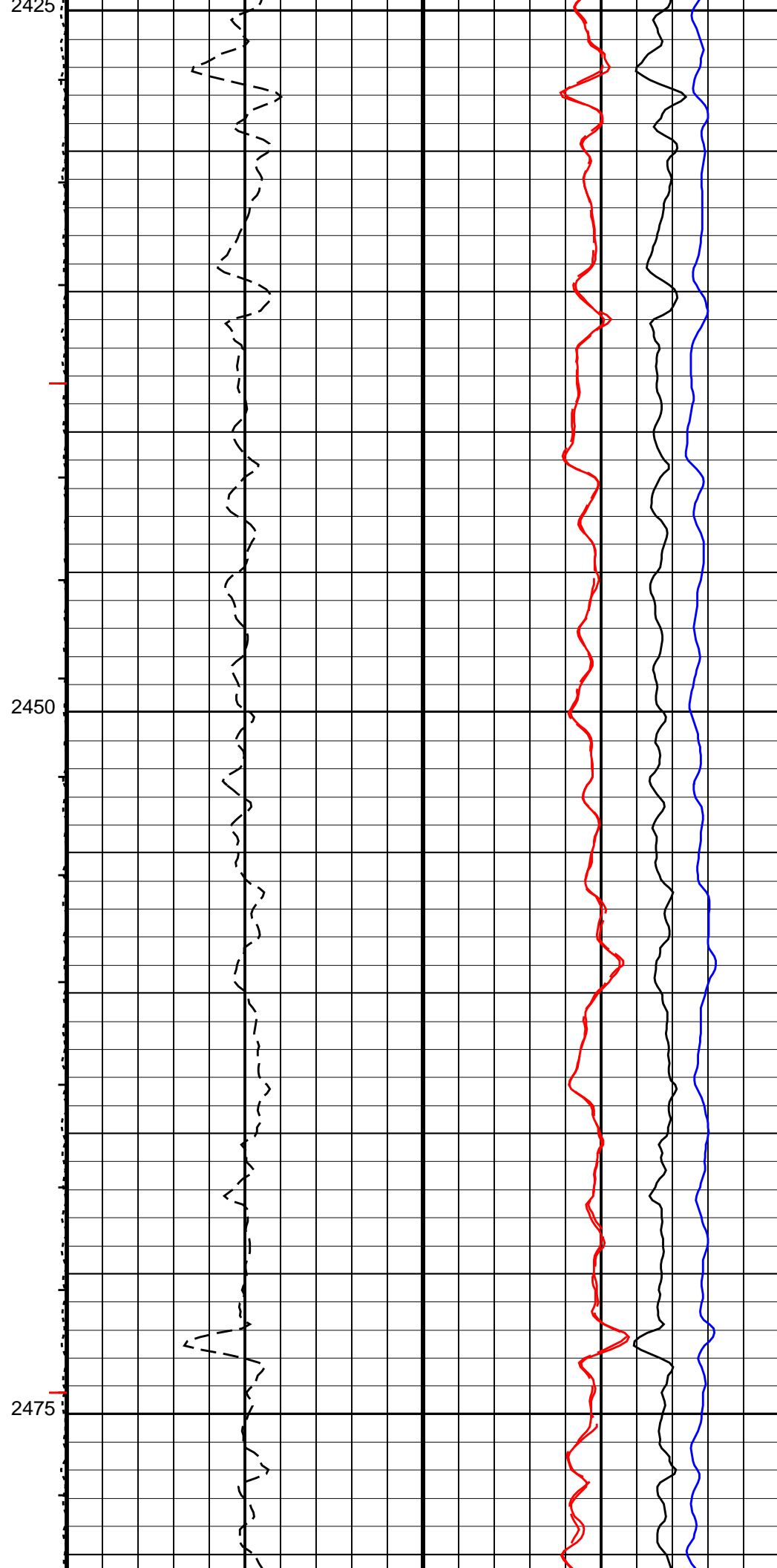
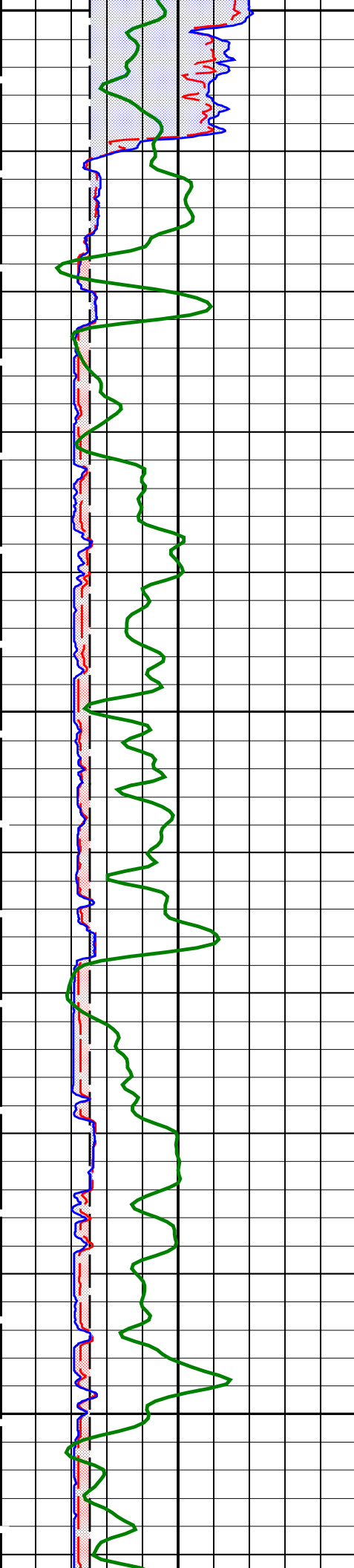


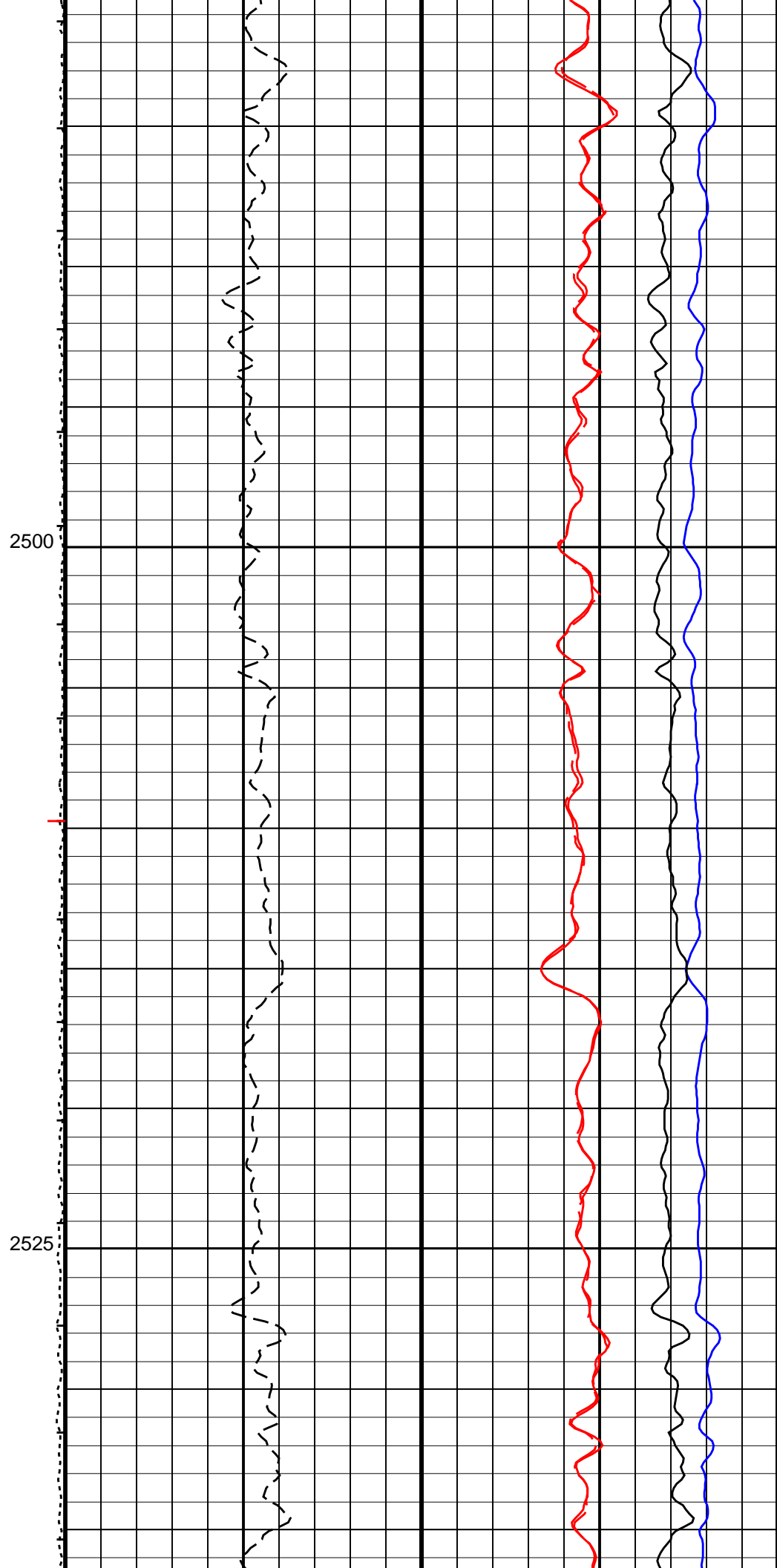
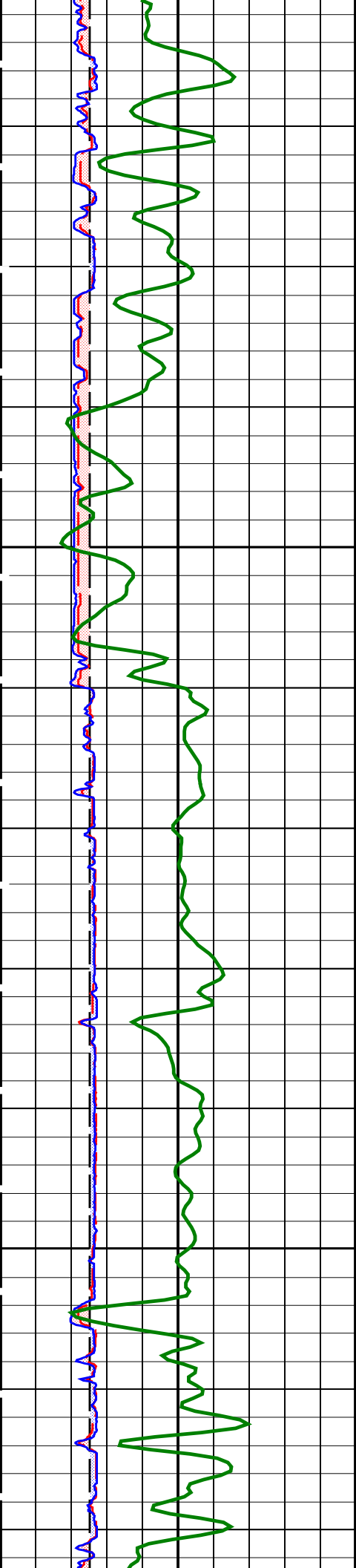
➔ Integrated Transit Time Major Pip Every 10 MS

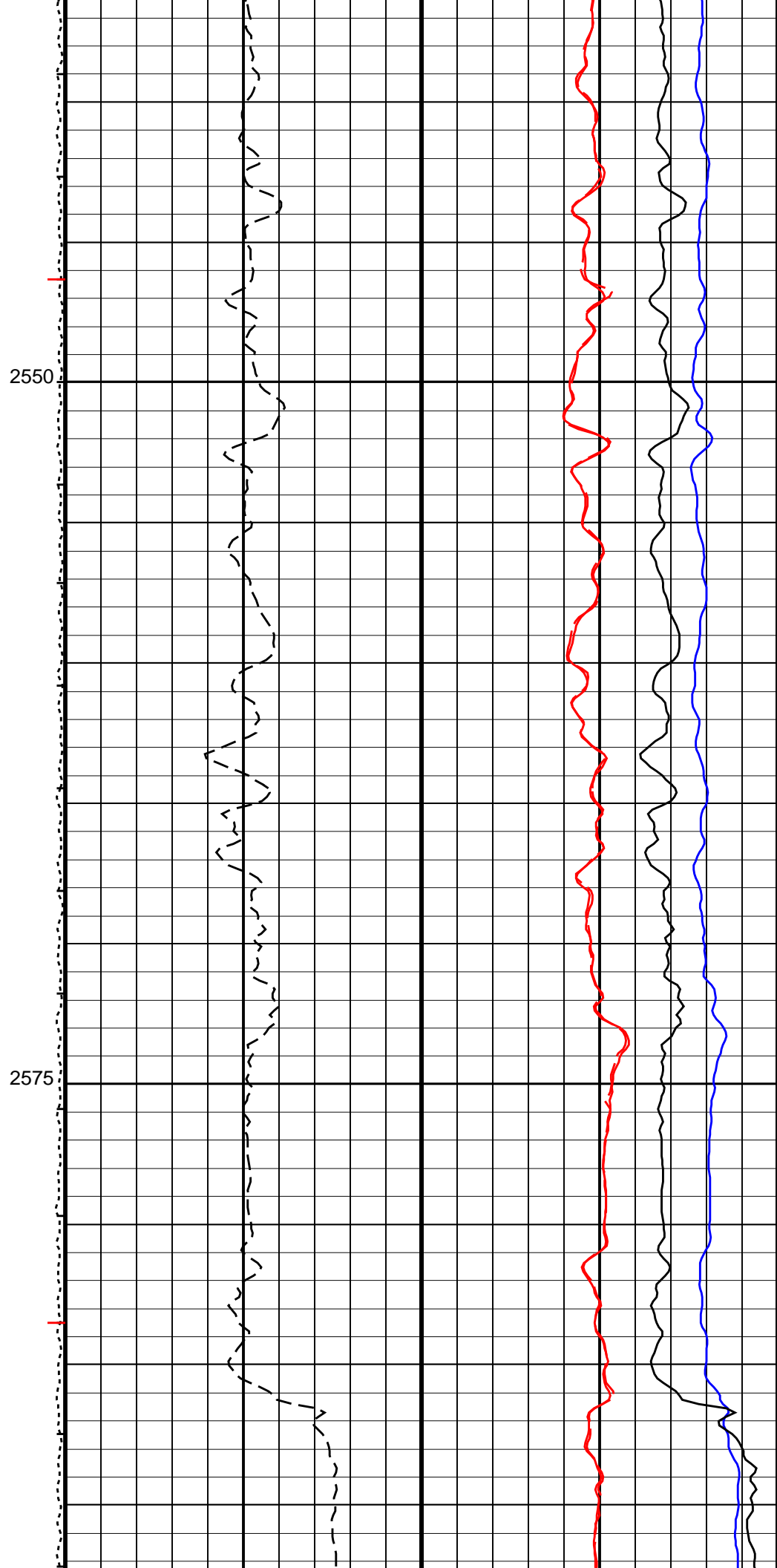
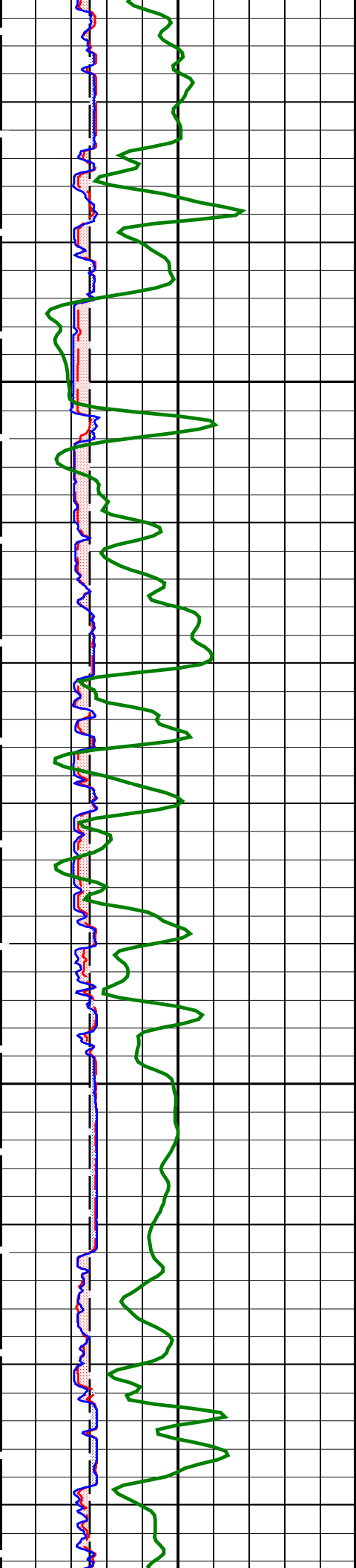
<b>Delta-T Shear – Upper Dipole (DT2)</b>		
<b>440</b>	<b>(US/F)</b>	<b>40</b>
<b>Delta-T Shear – Lower Dipole (DT1)</b>		
<b>440</b>	<b>(US/F)</b>	<b>40</b>
<b>Delta-T Compressional (DTCO)</b>		
<b>440</b>	<b>(US/F)</b>	<b>40</b>

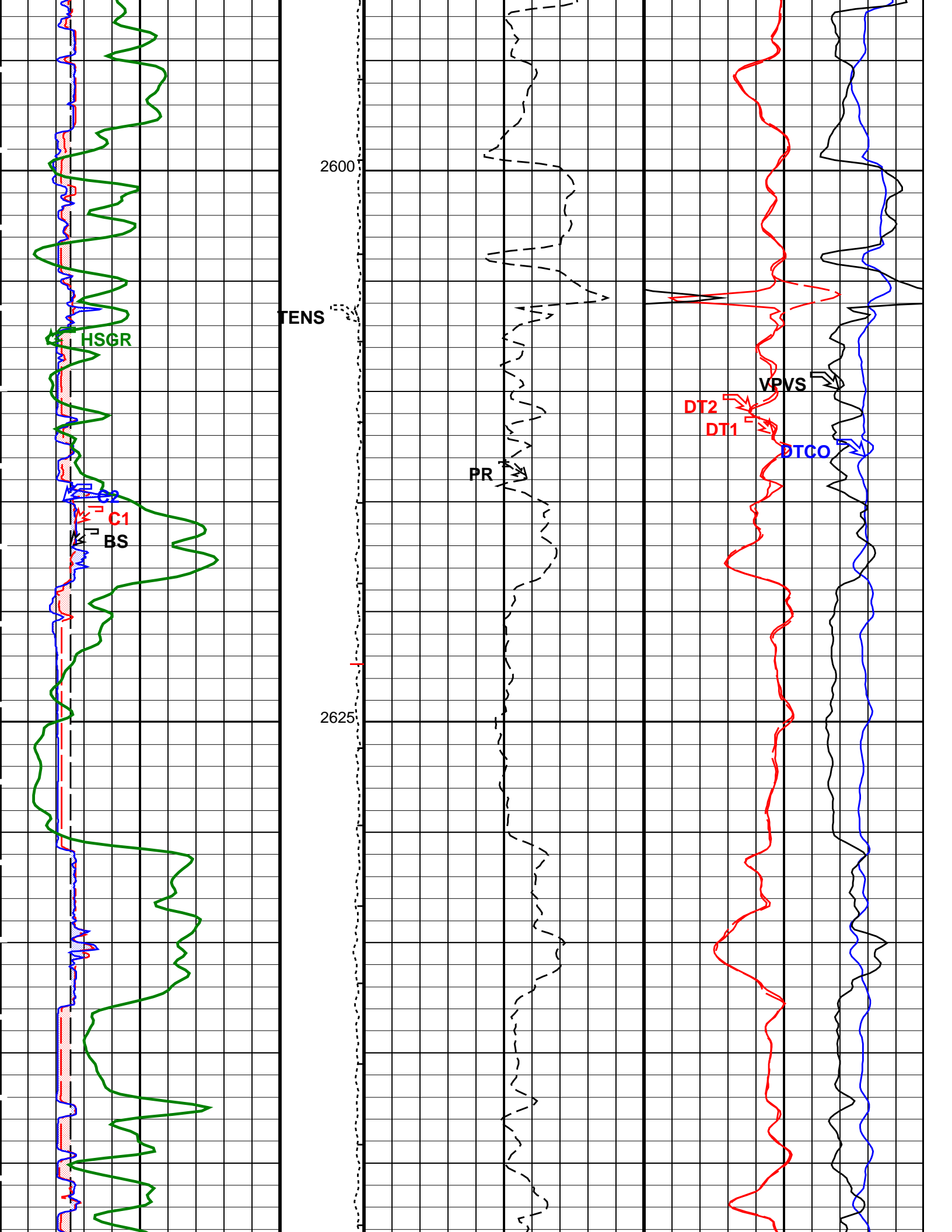
Tension (TENS) (LBF)	Poisson's Ratio (PR)	Sonic Vp / Vs Ratio (VPVS)
	0 ----- 0.5	0.4 ----- 2.4
7000 4000		

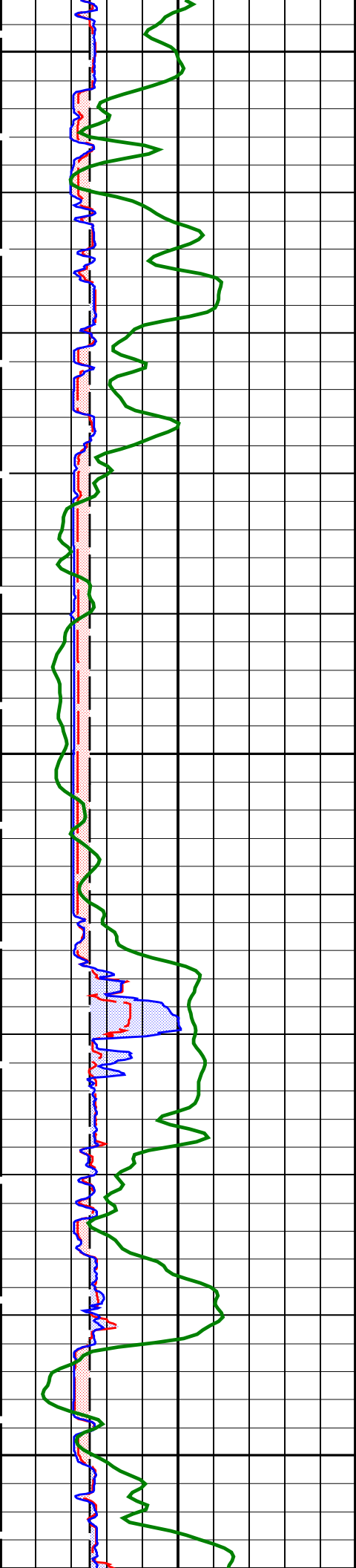








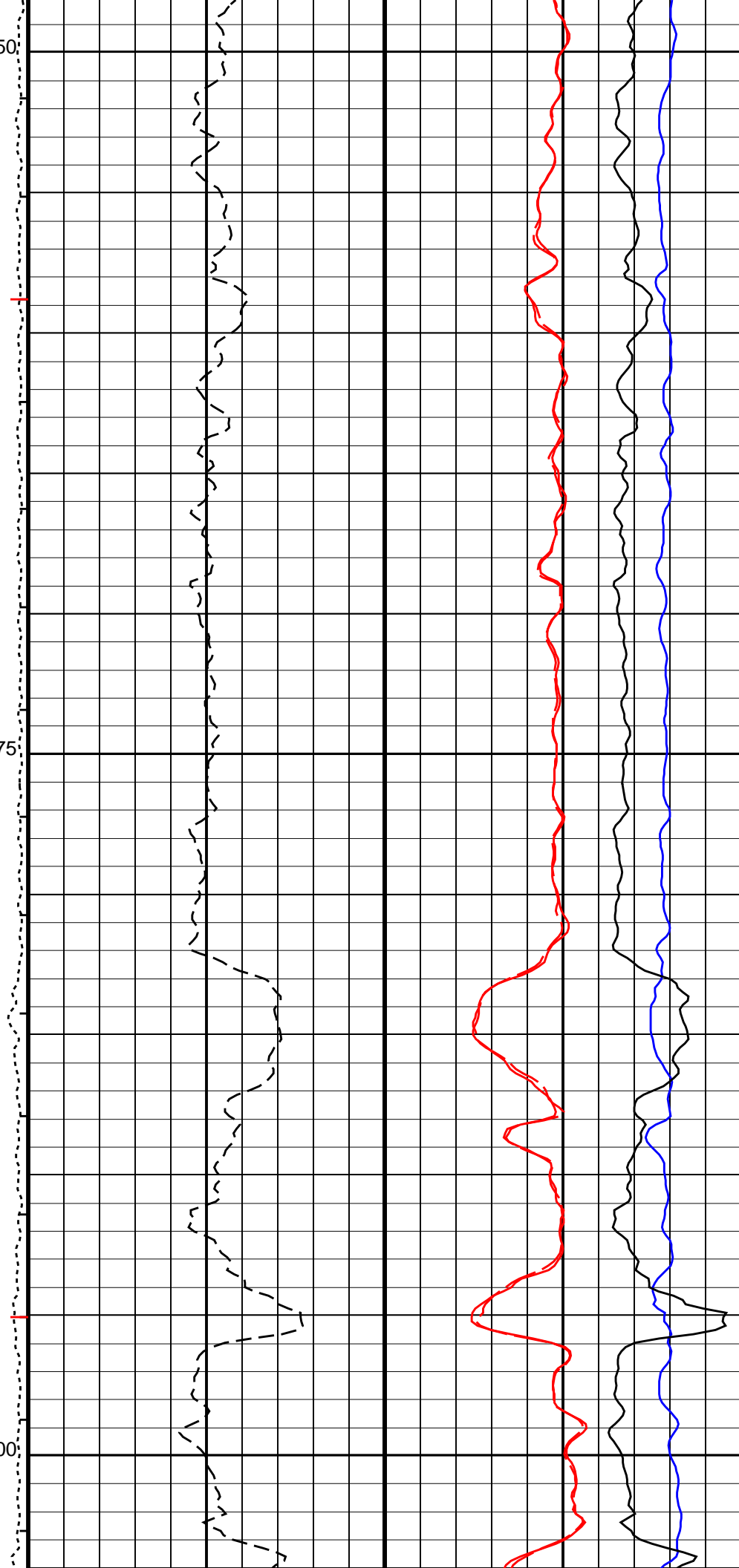




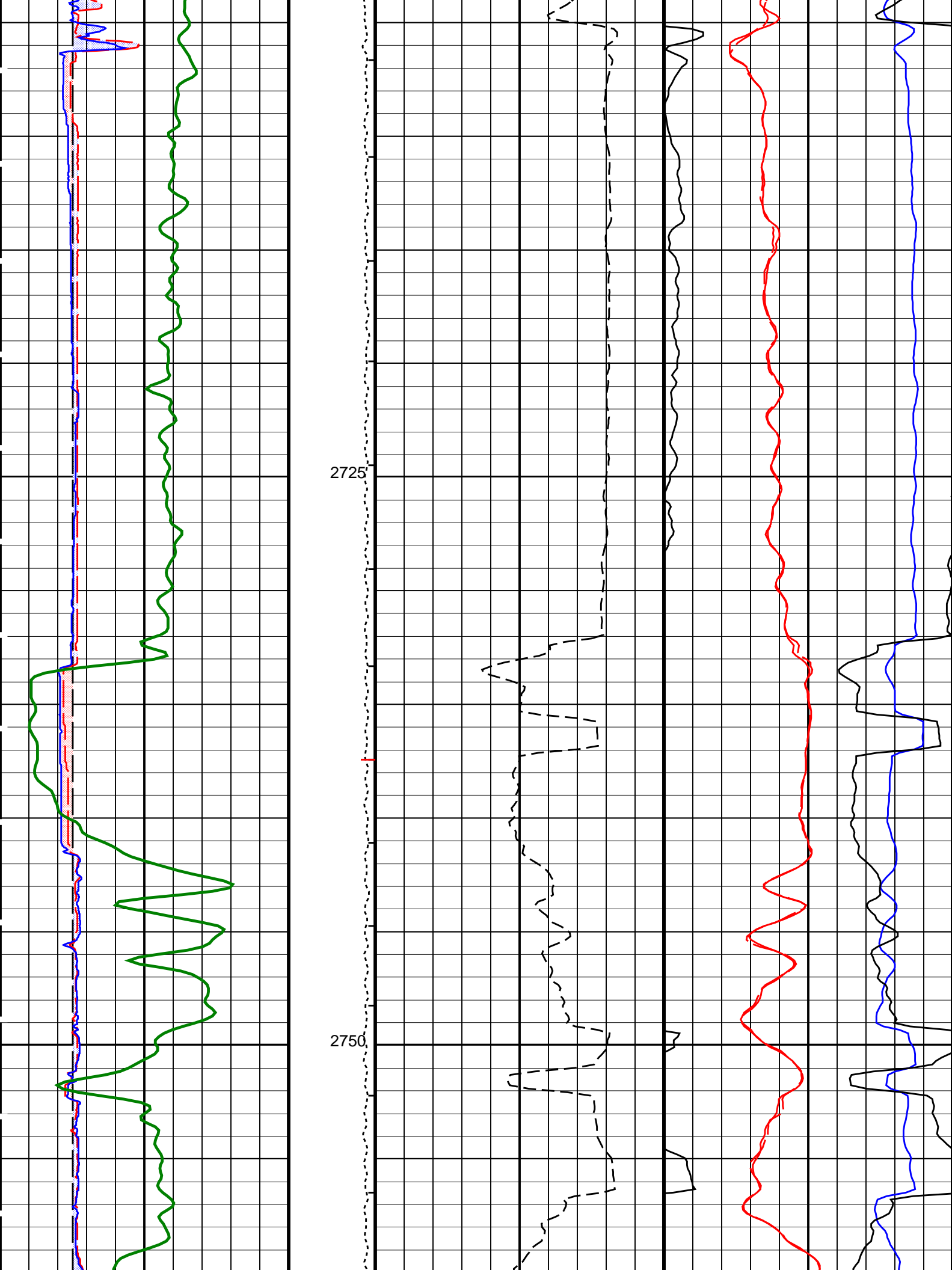
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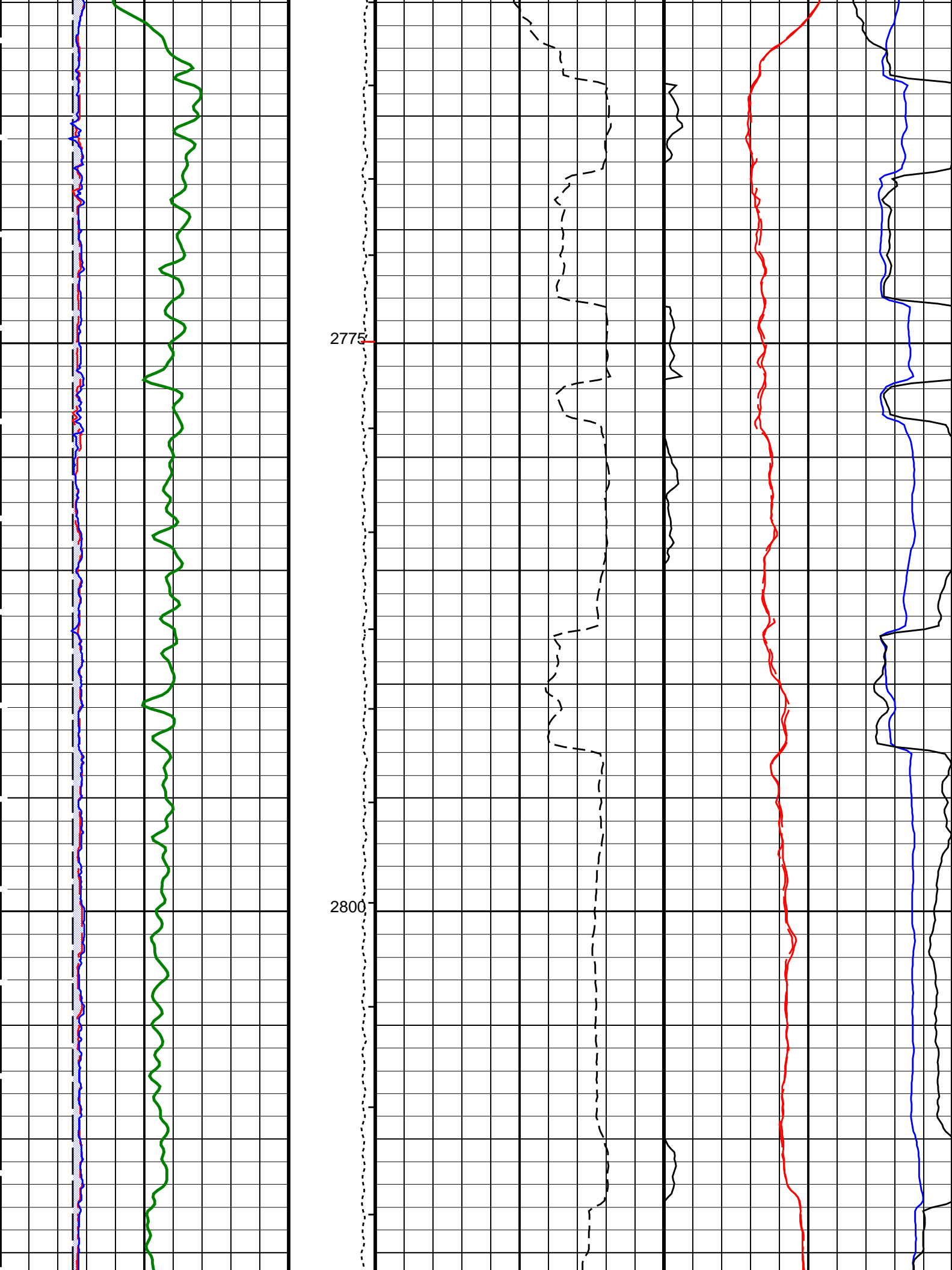
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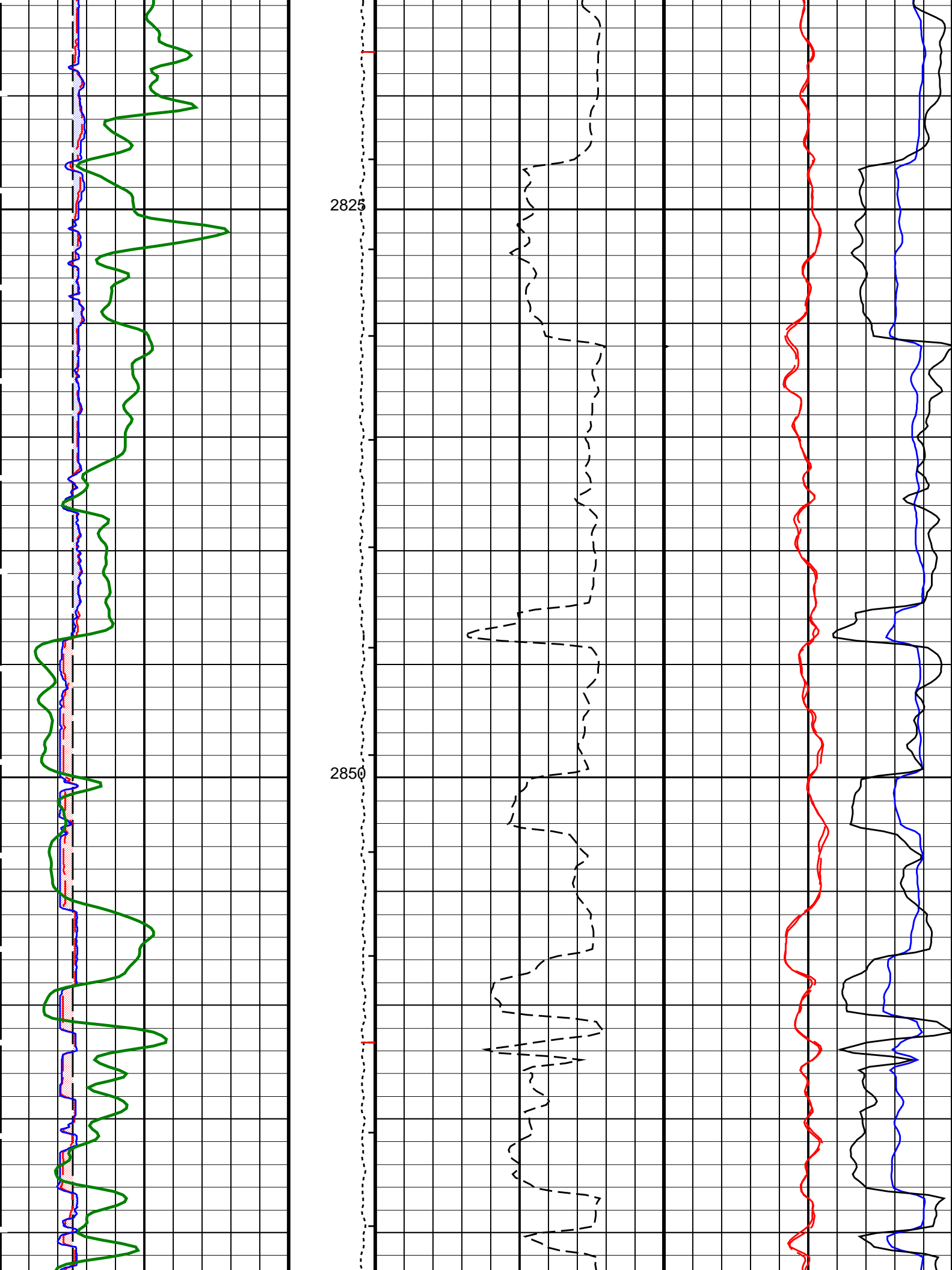
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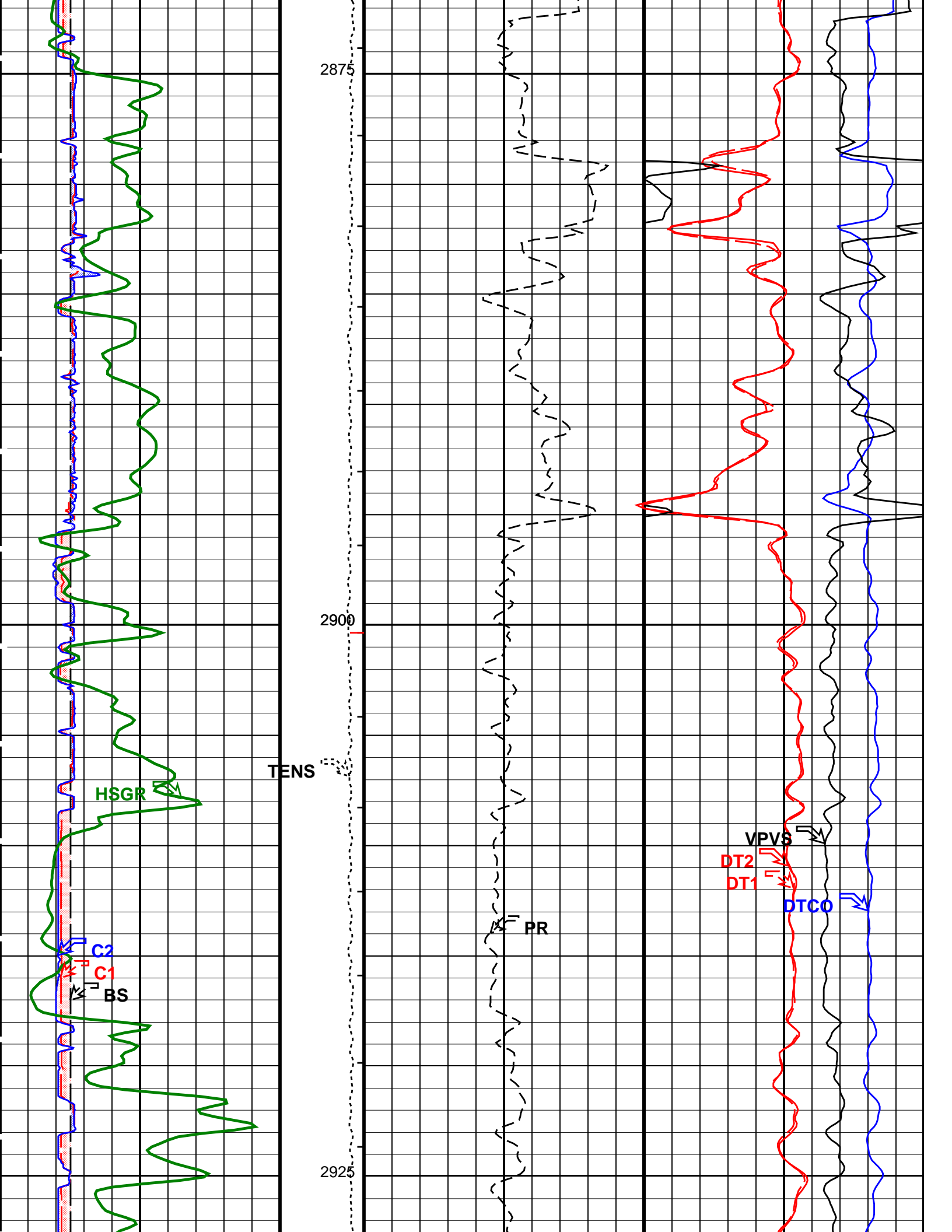


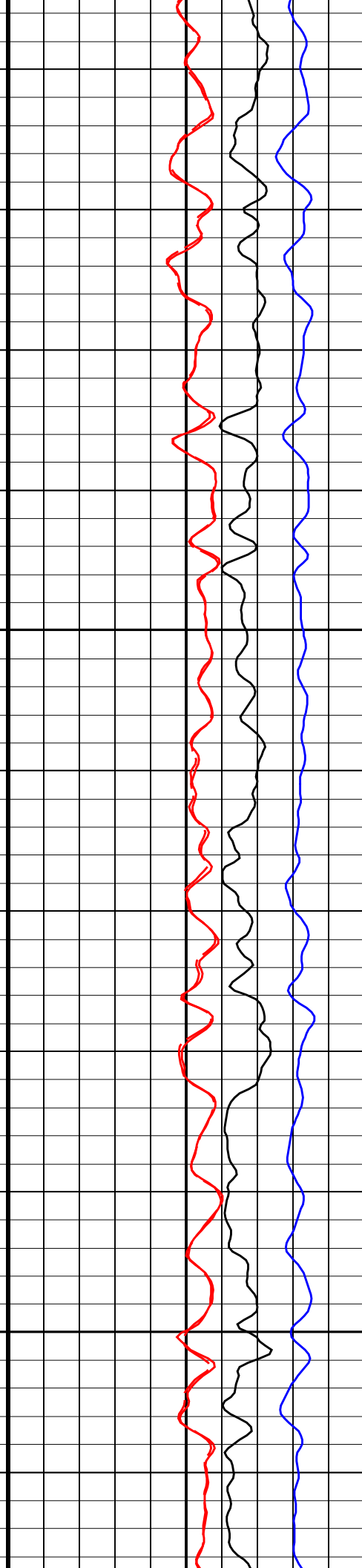
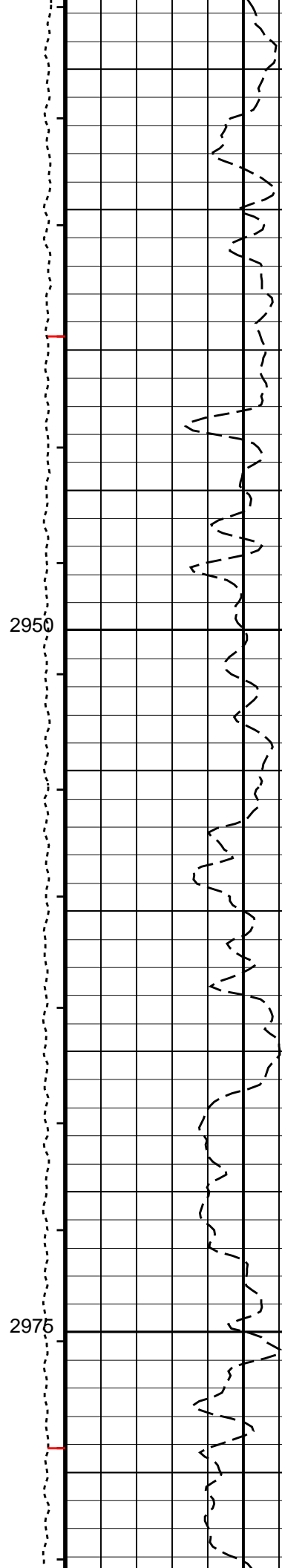
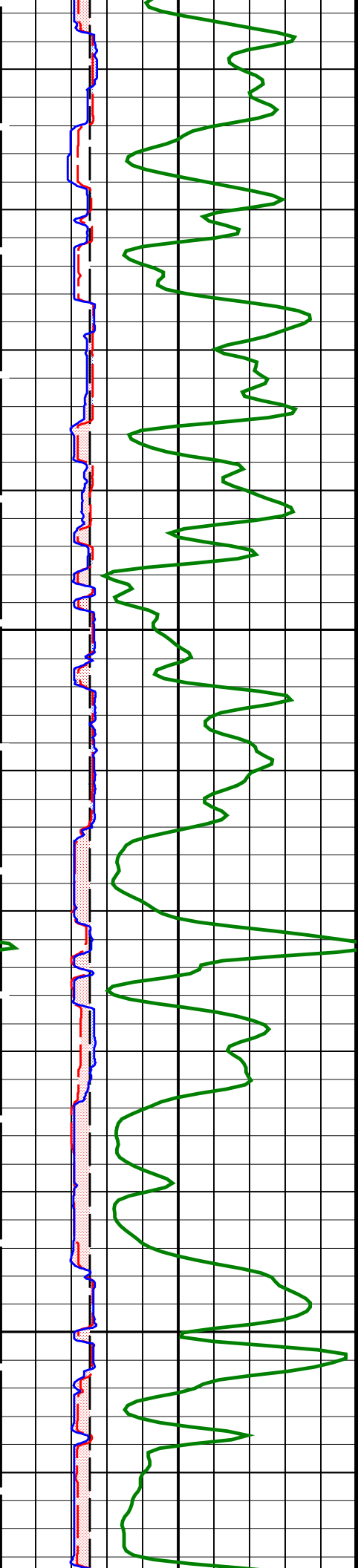


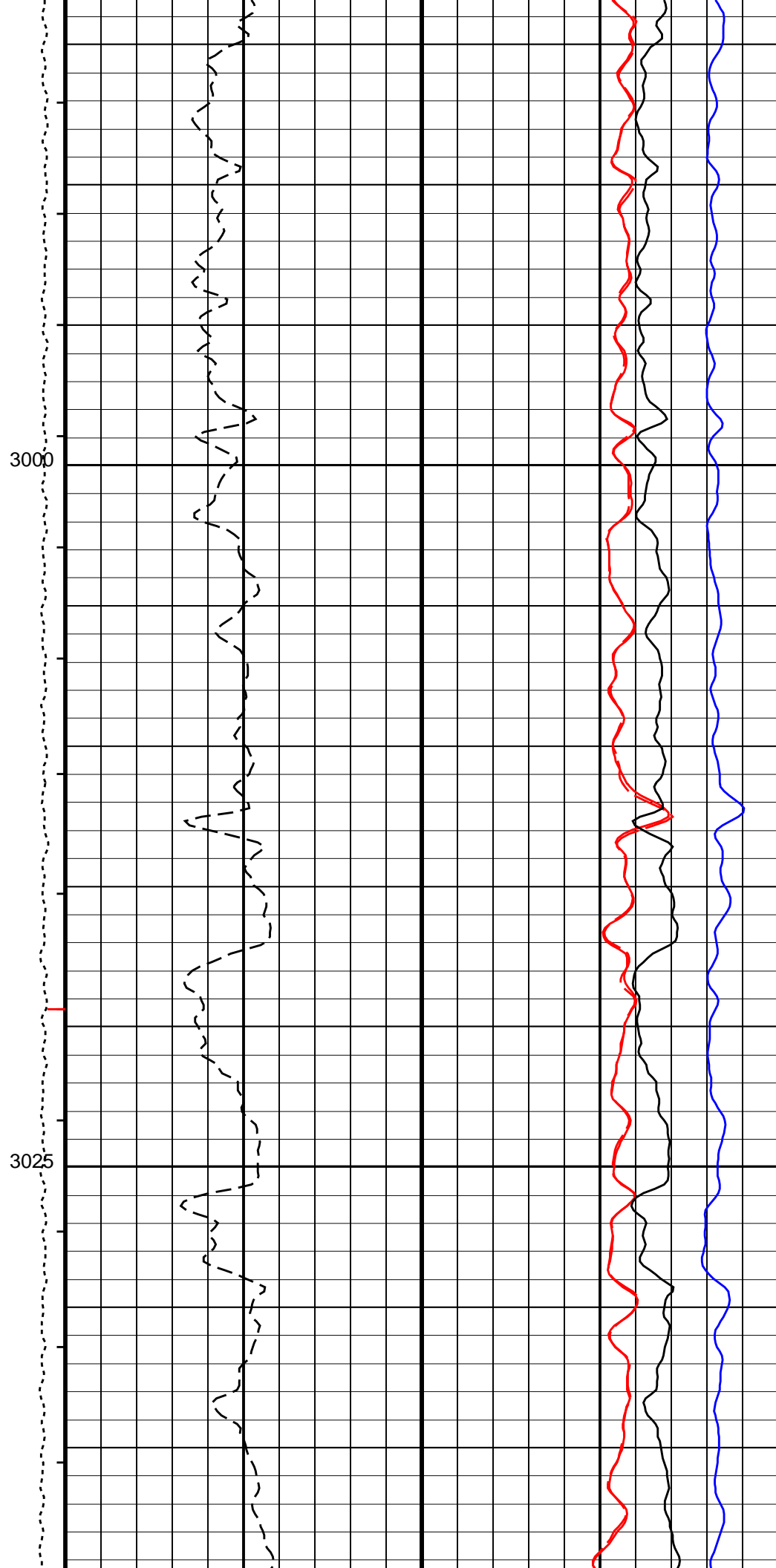
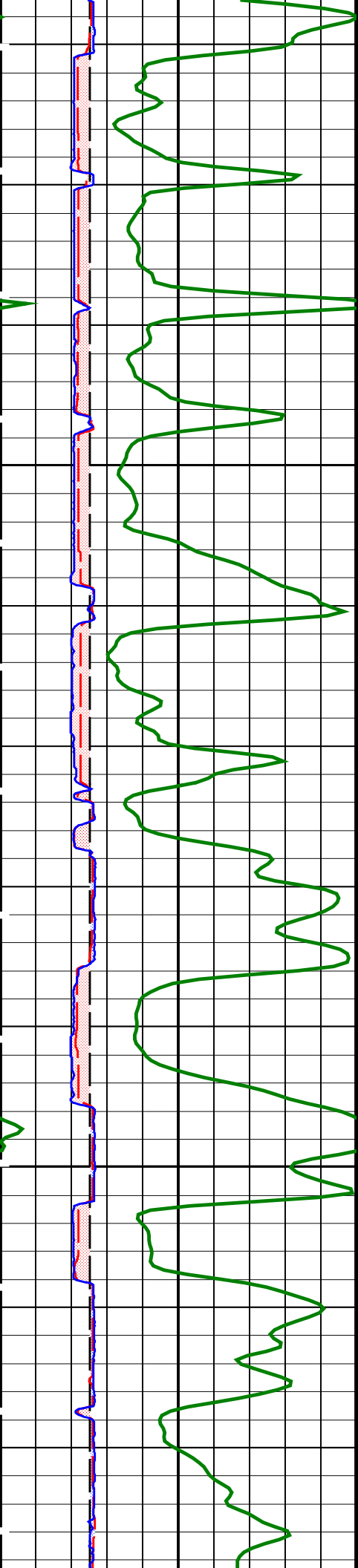


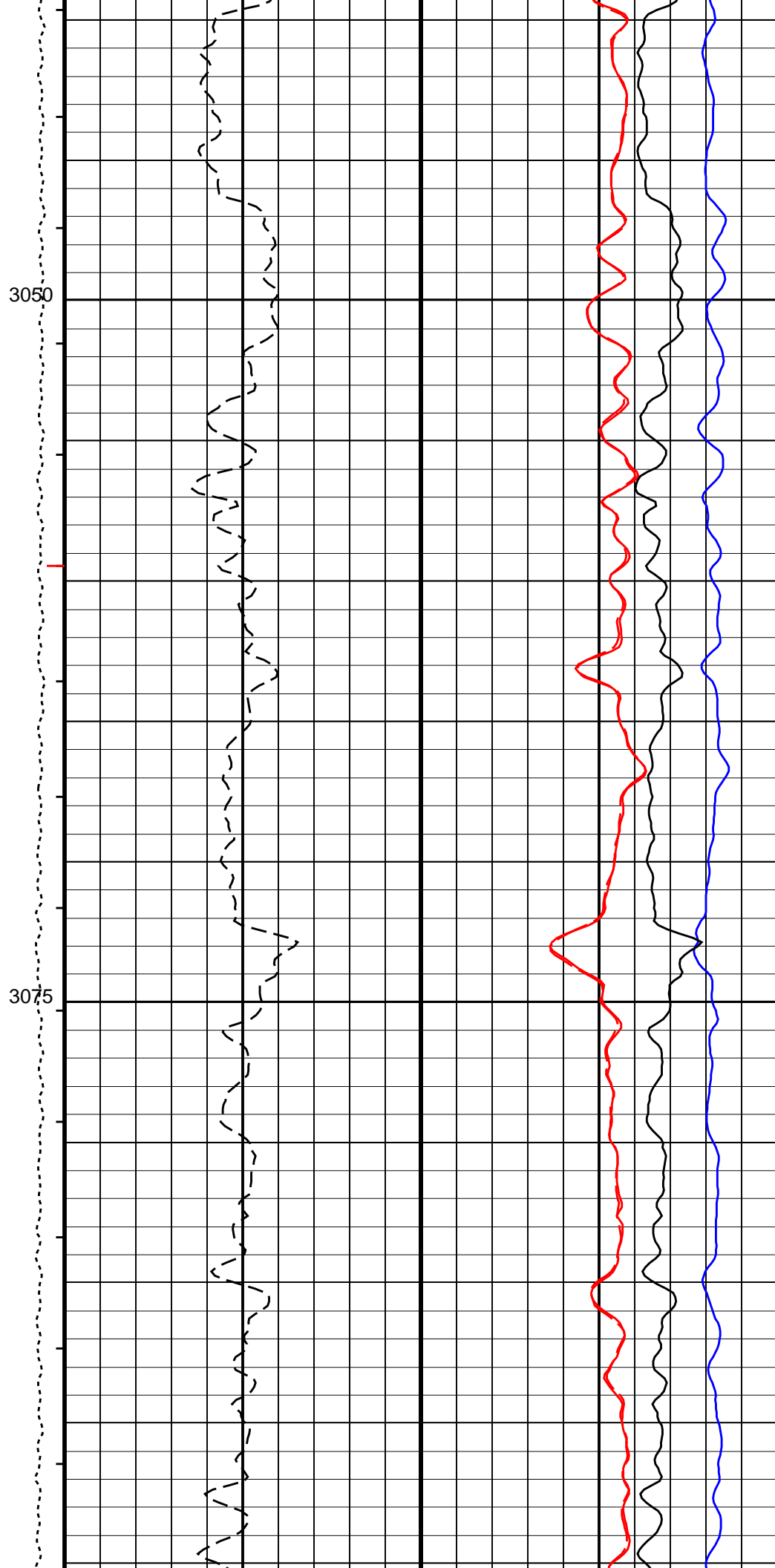
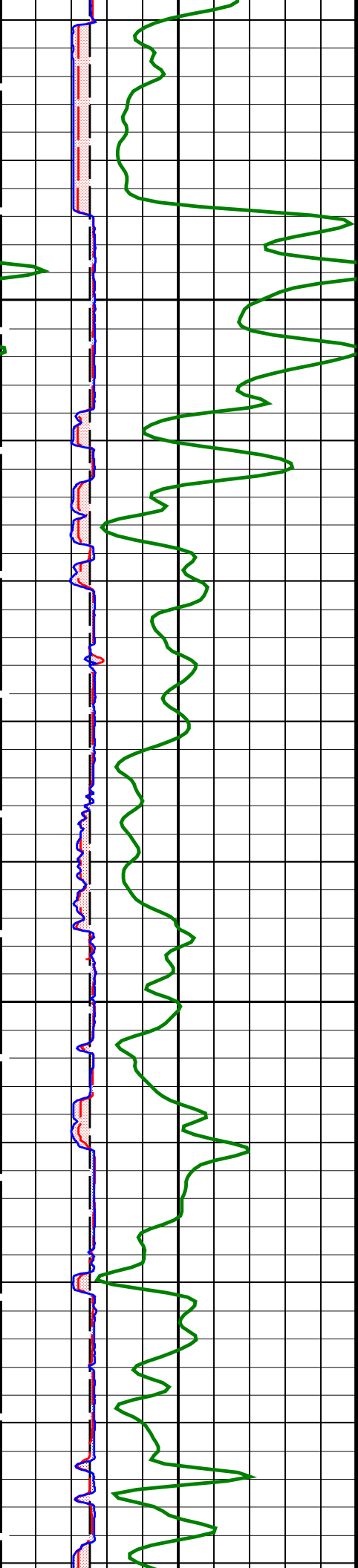


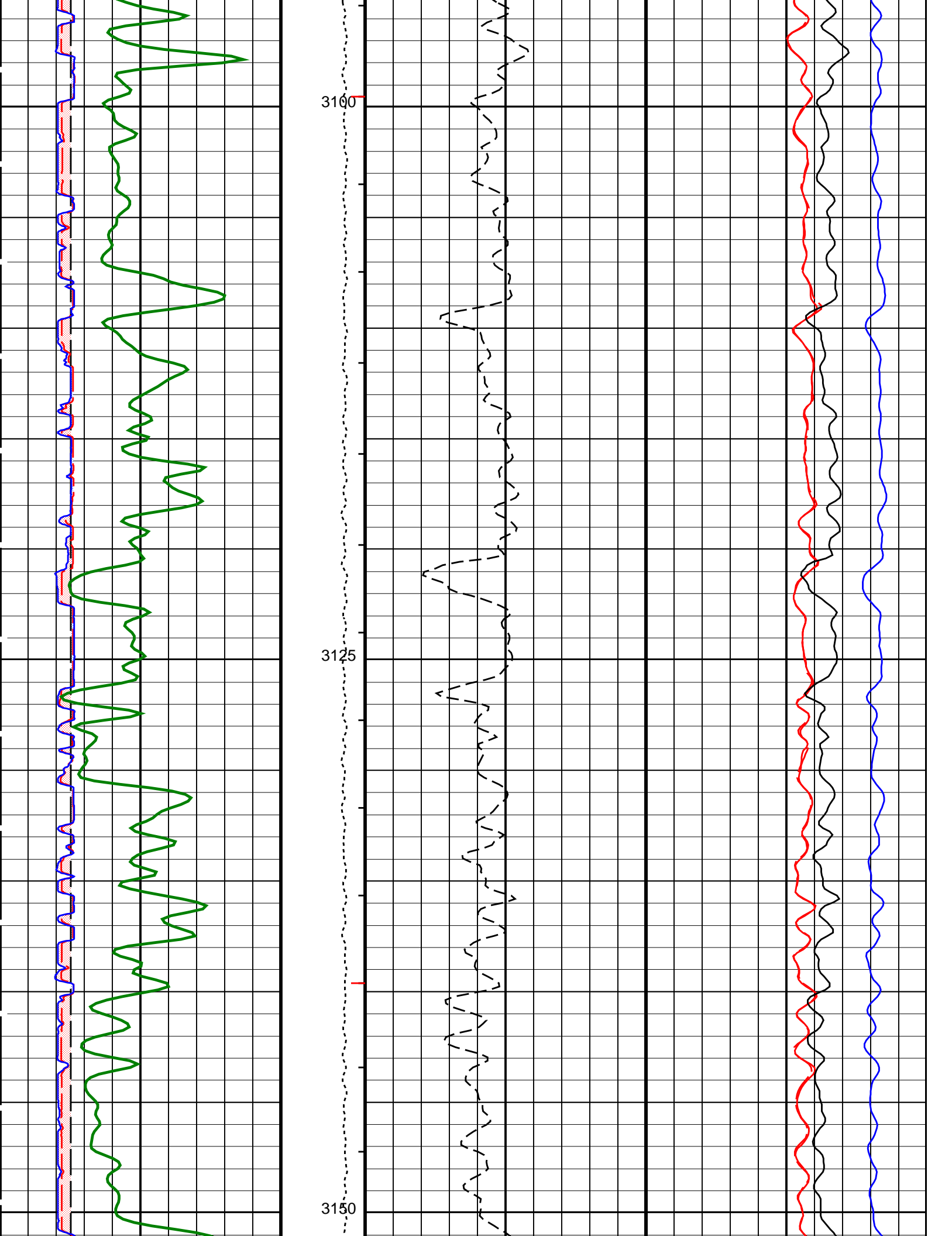




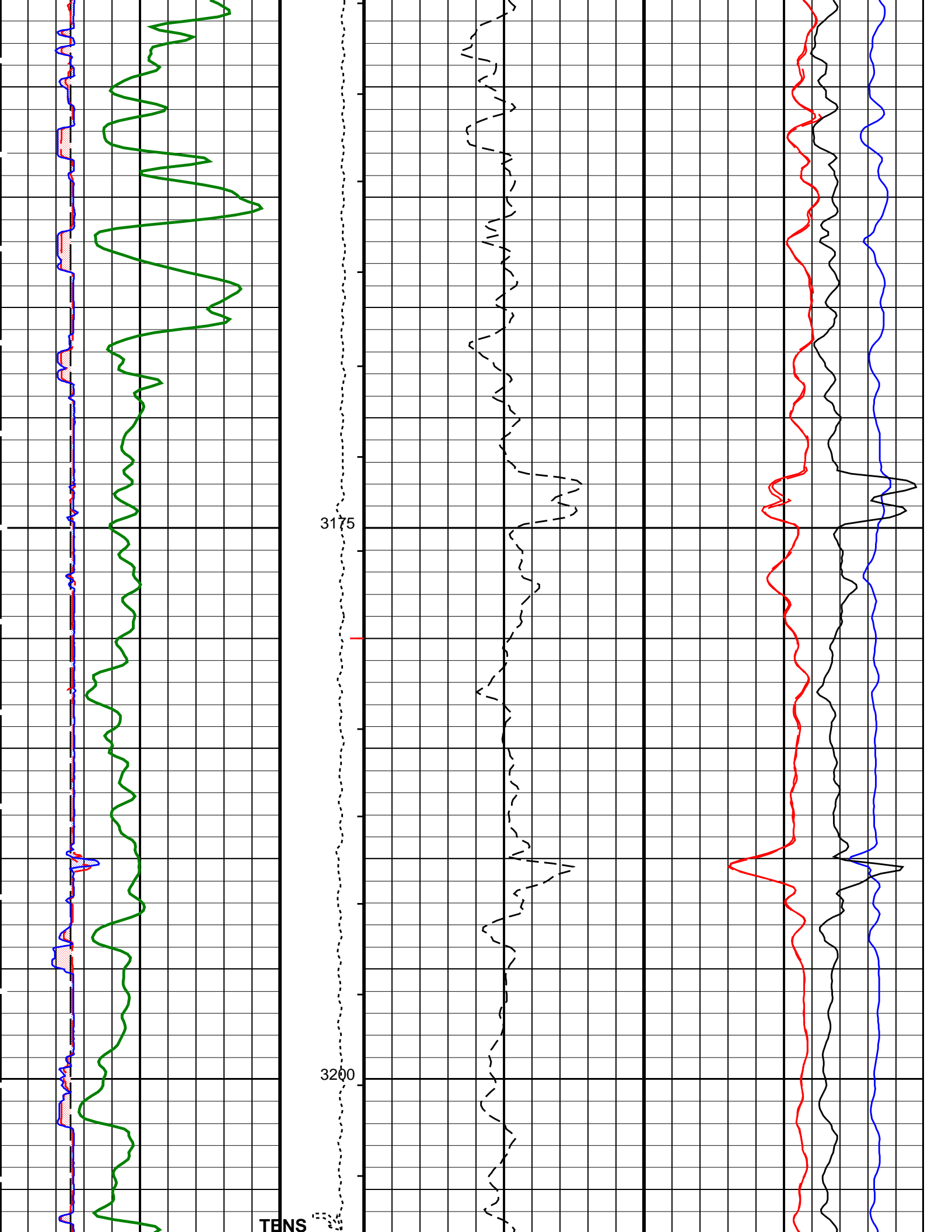


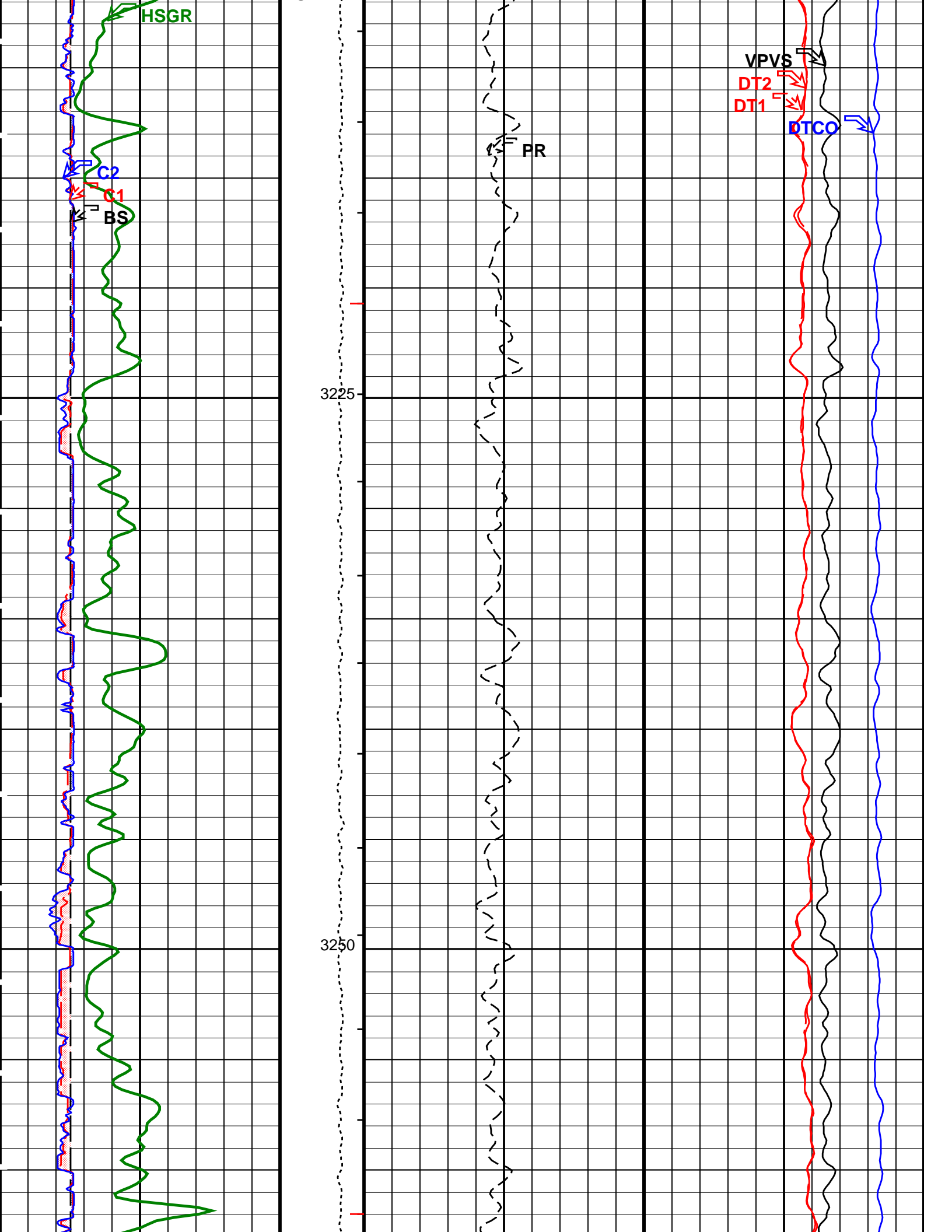


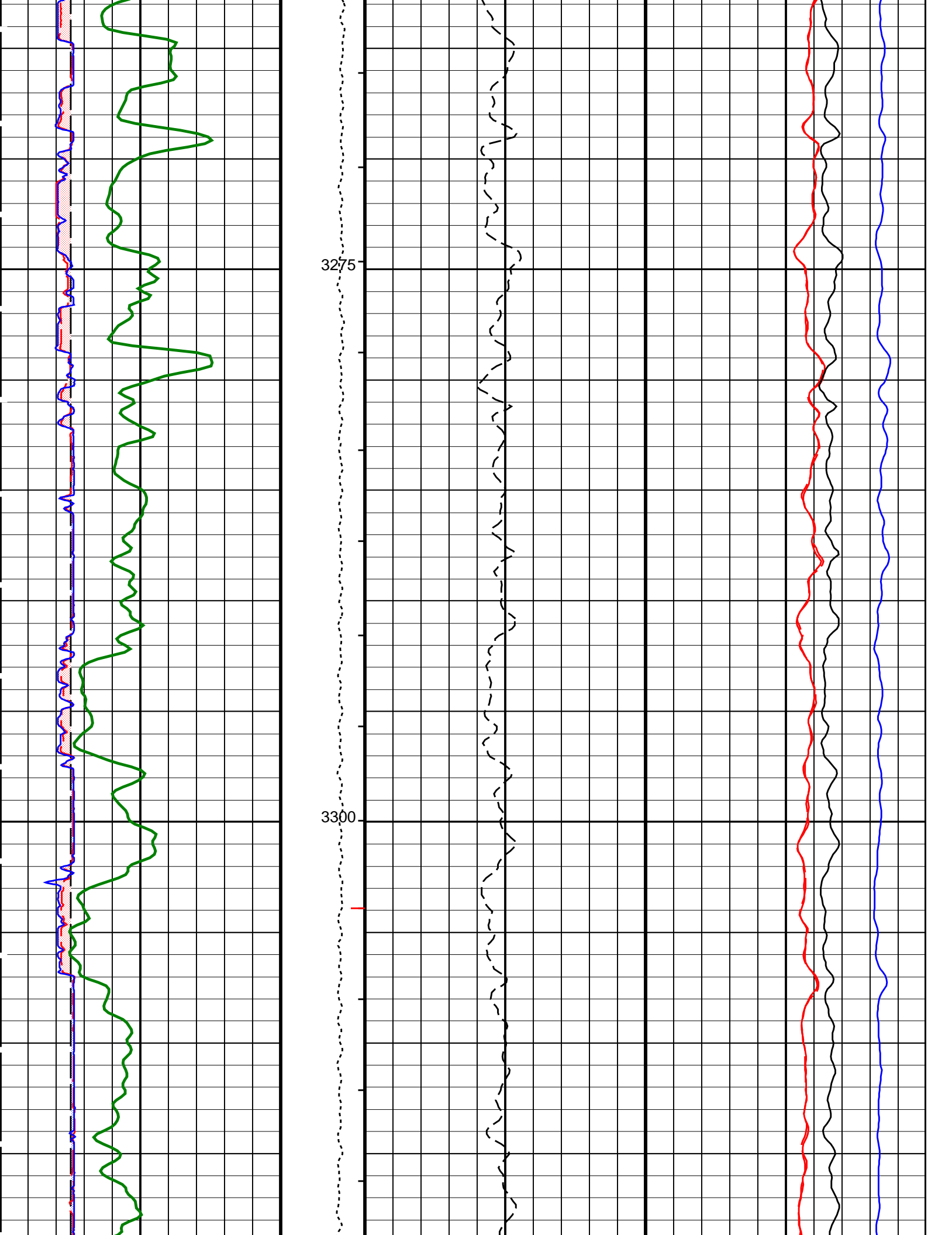


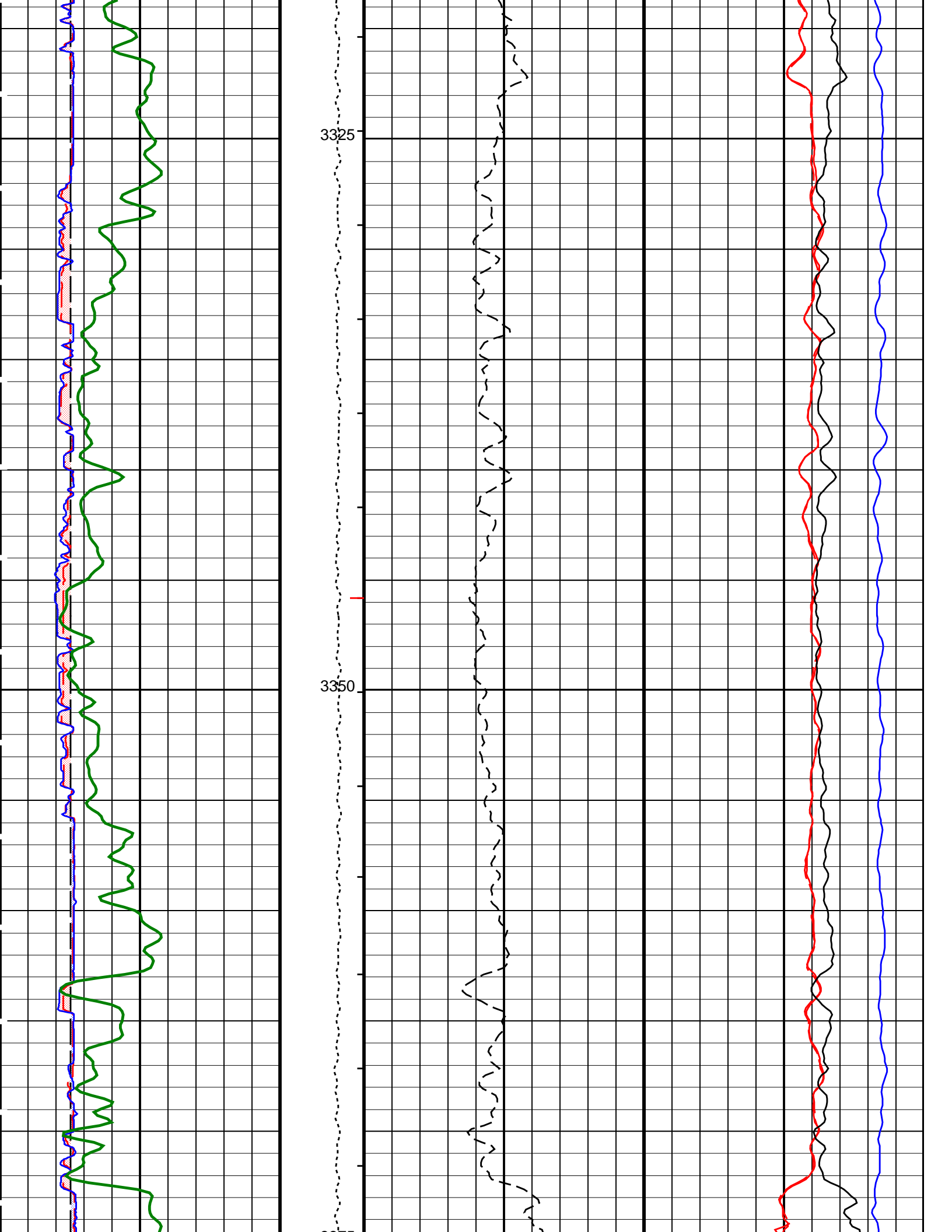


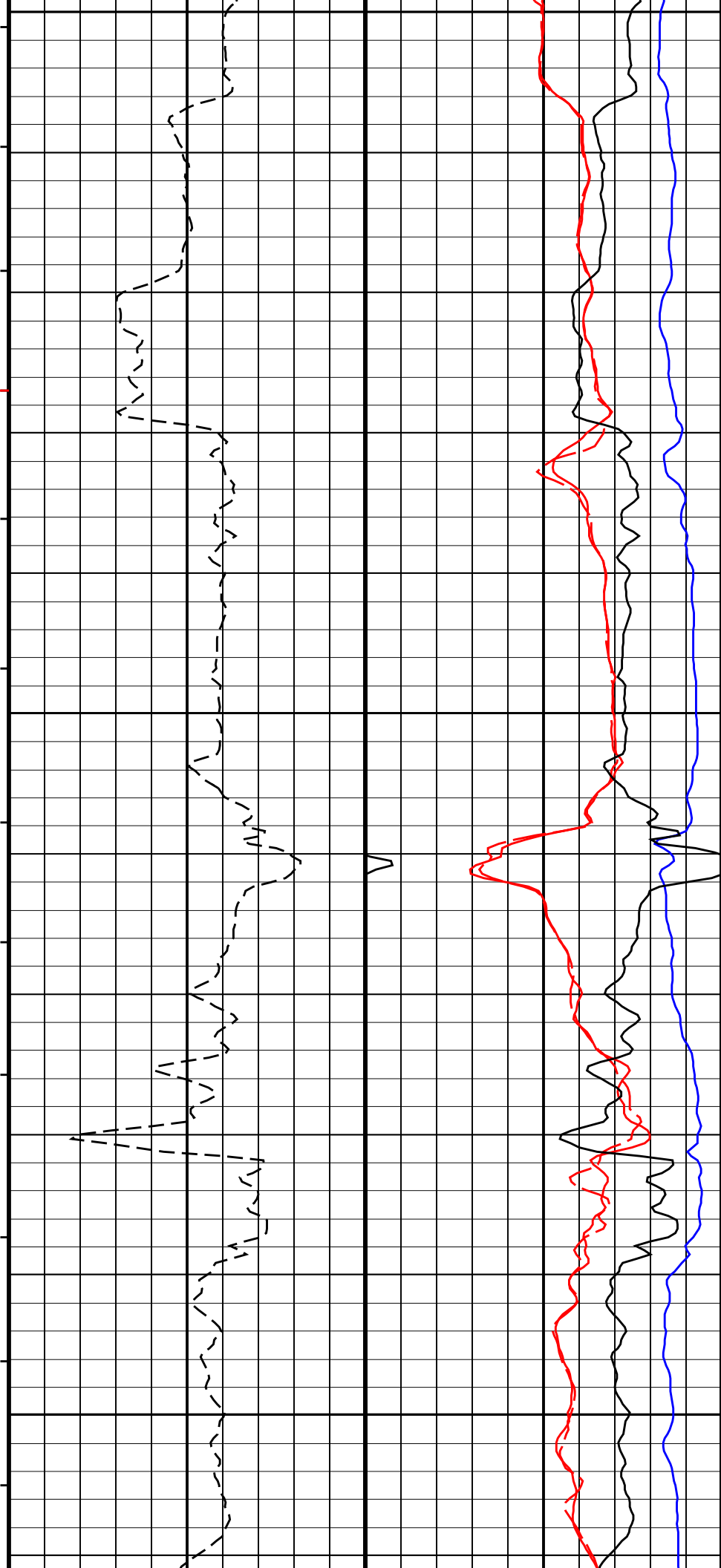
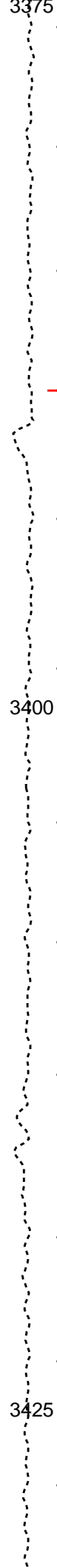
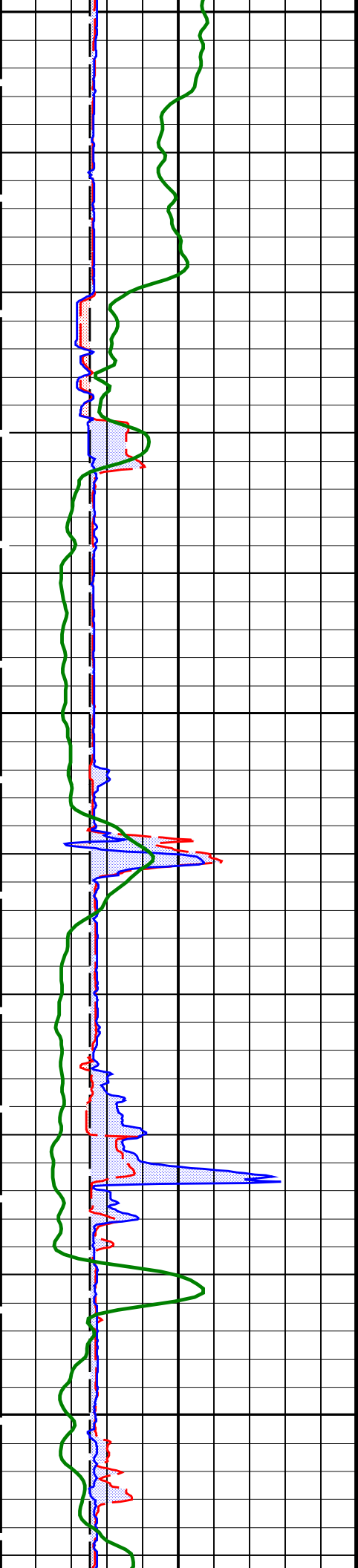


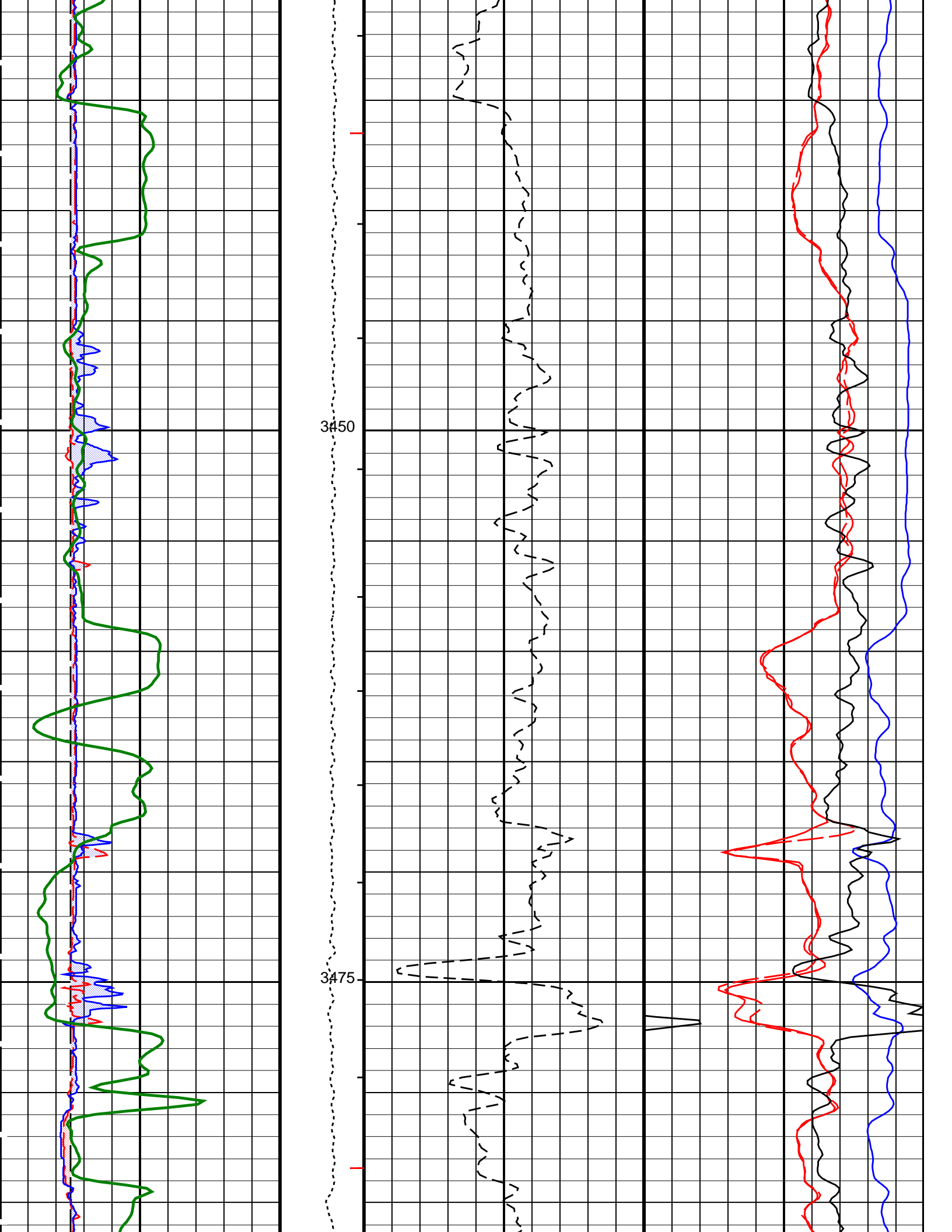


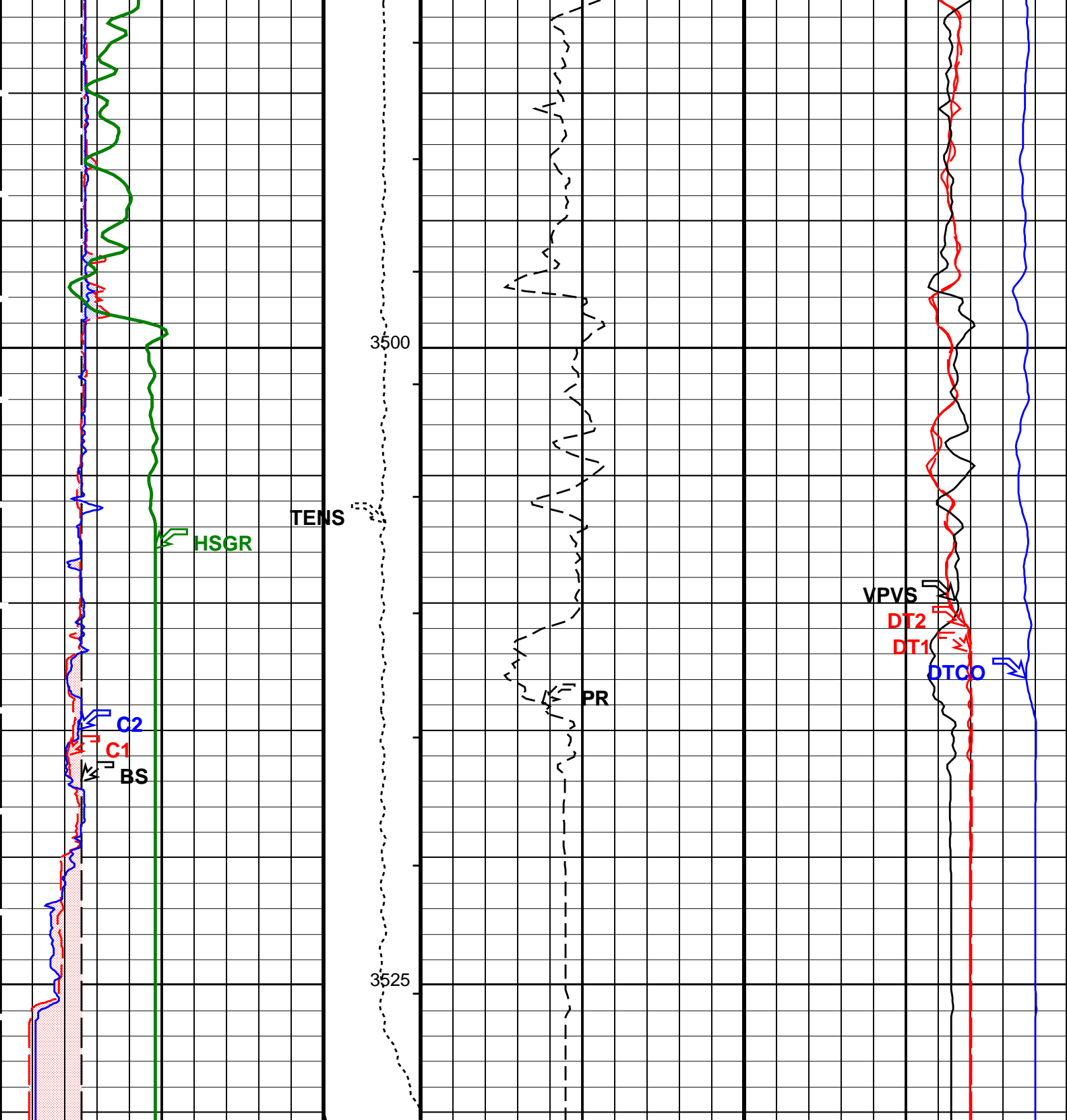











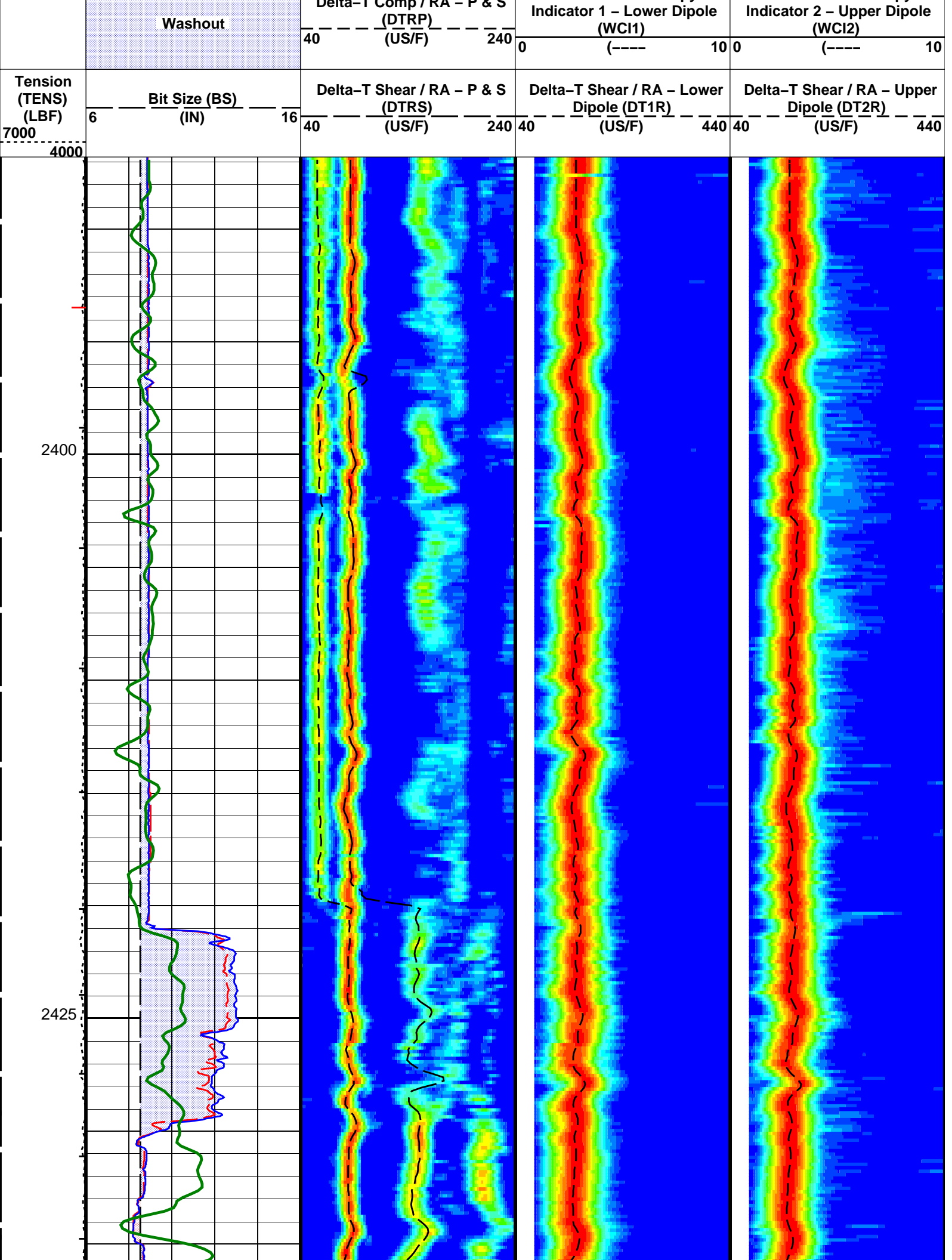


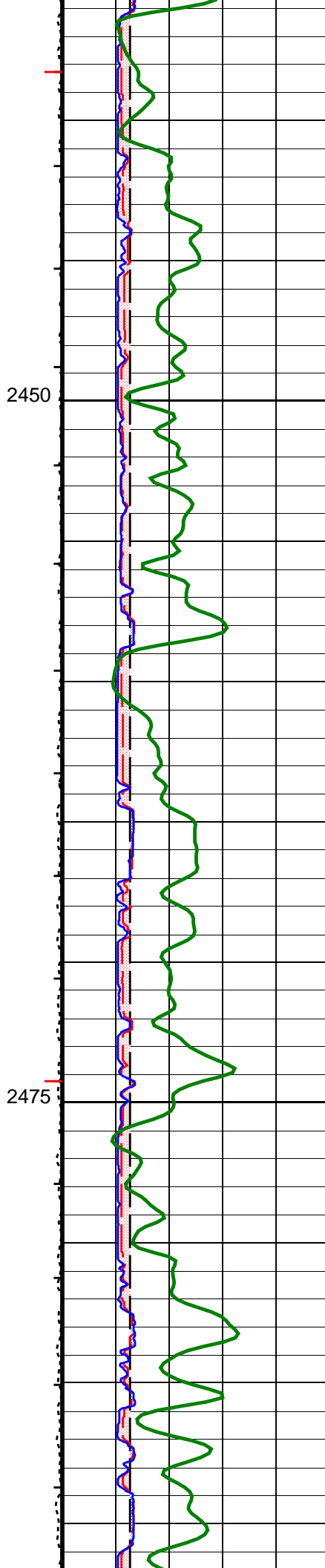
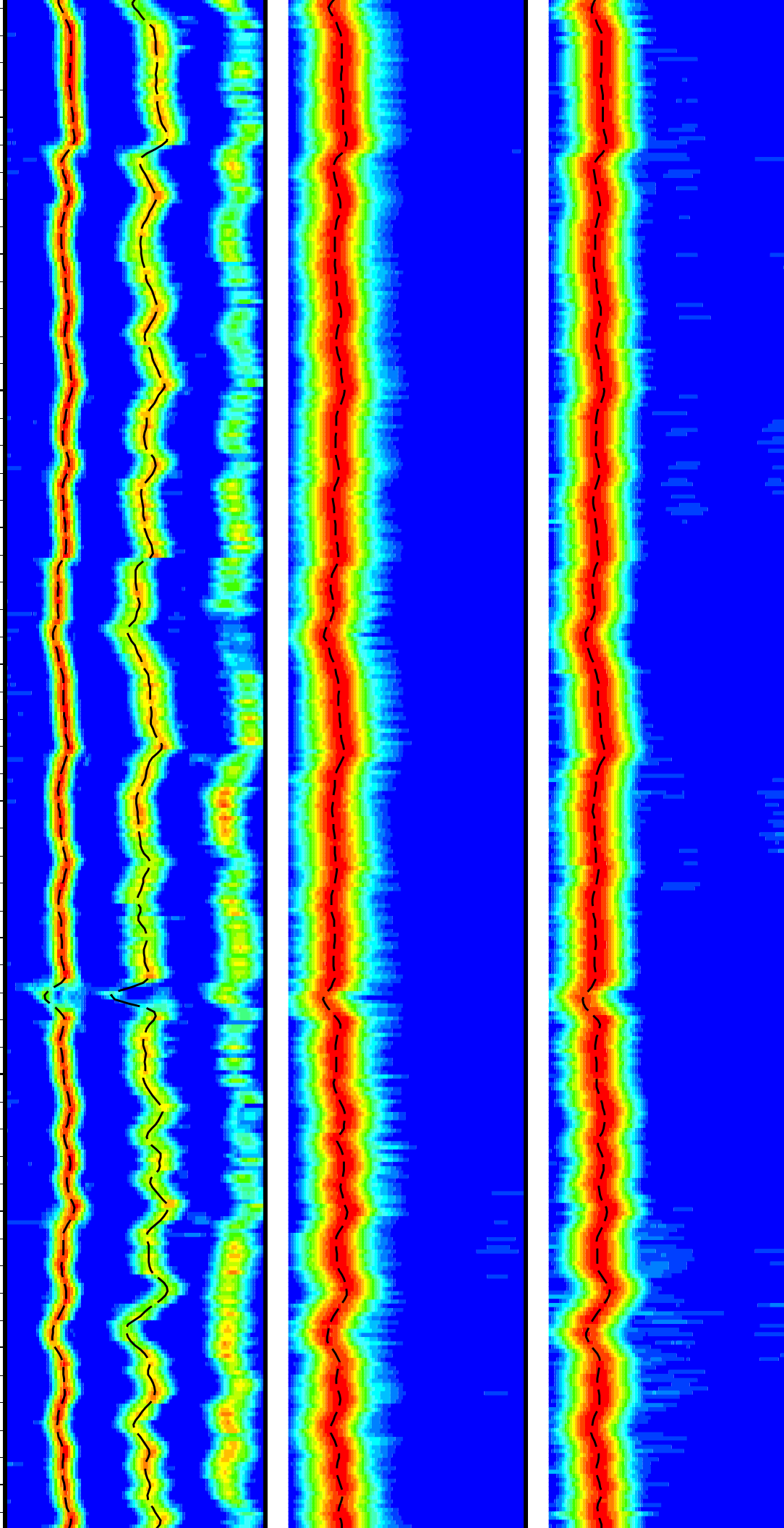


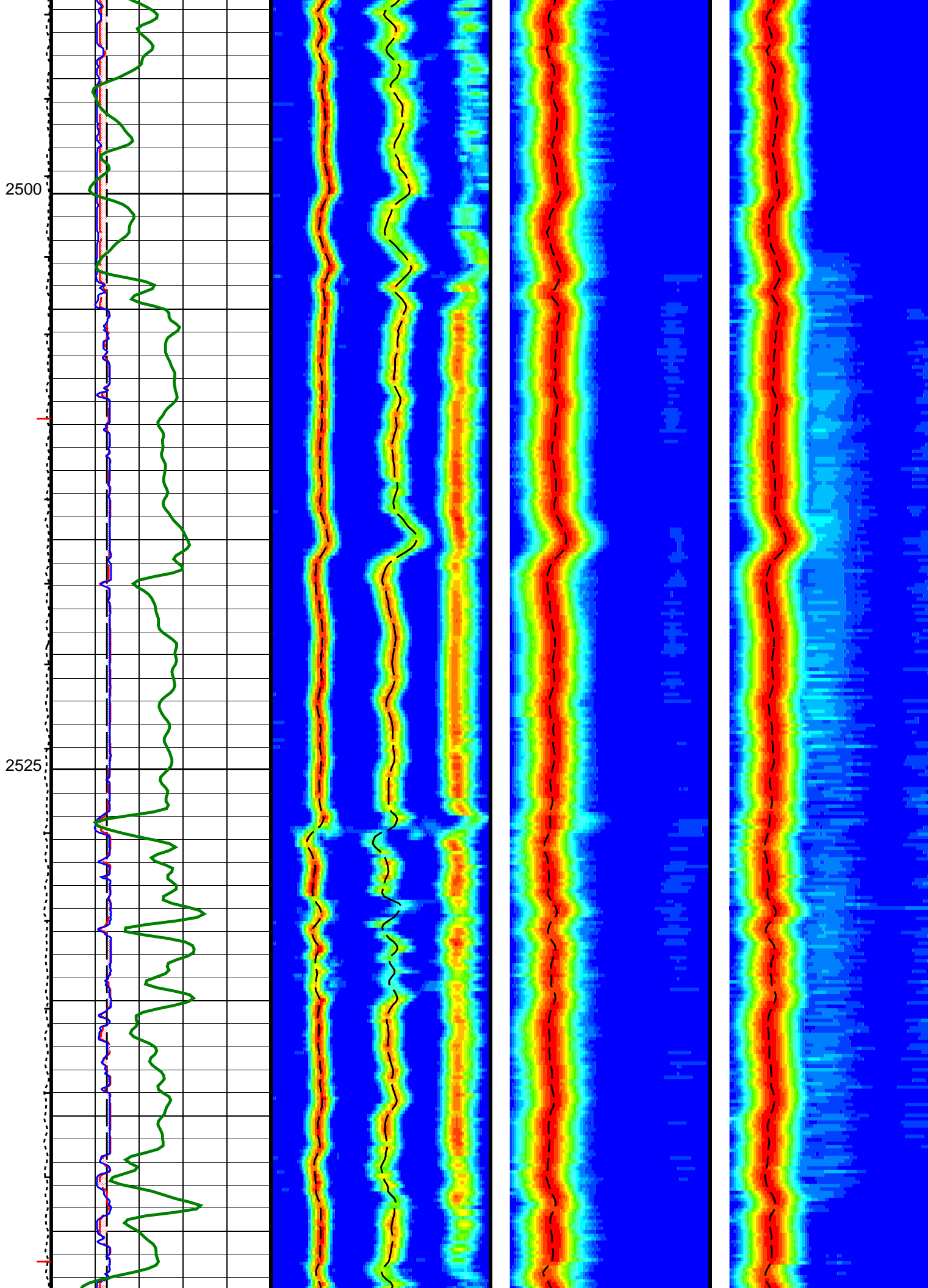
Washout	Tension (TENS) (LBF)	Poisson's Ratio (PR)		Sonic Vp / Vs Ratio (VPVS)	
	7000	0	0.5	0.4	2.4
	4000				
Undergauge		Delta-T Compressional (DTCO)			
		440	(US/F)		40
Bit Size (BS)		Delta-T Shear – Lower Dipole (DT1)			
6	(IN)	16	440	(US/F) 40	
Caliper 1 (C1)		Delta-T Shear – Upper Dipole (DT2)			
6	(IN)	16	440	(US/F) 40	
Caliper 2 (C2)					

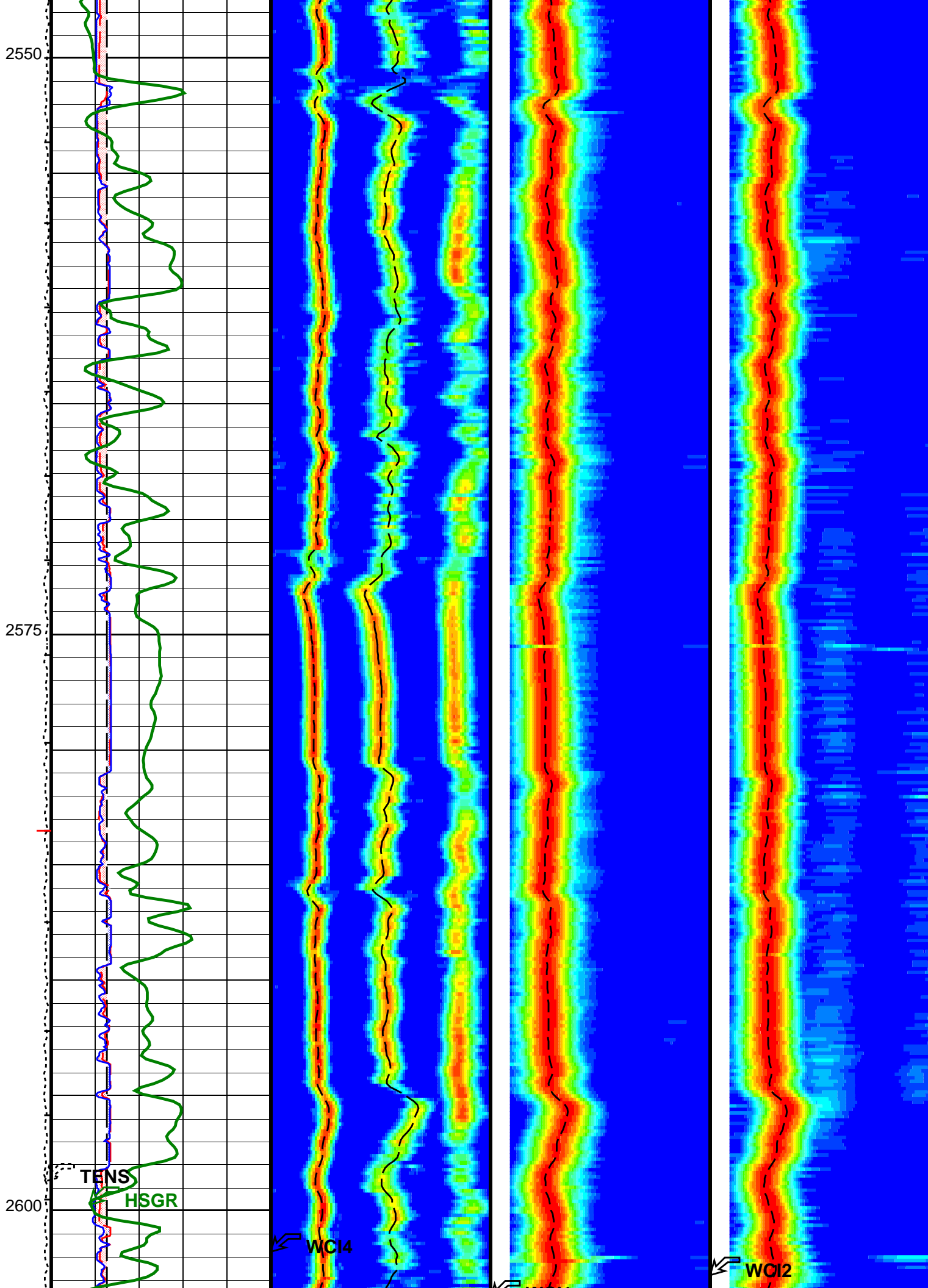
	HNGS Spectroscopy Gamma Ray (HSGR)			
	0	(GAPI) 200		
	Caliper 2 (C2)			
	6	(IN) 16		
	Caliper 1 (C1) (IN)		<div> <div>Min</div> <div>Amplitude</div> <div>Max</div> <div>  </div> </div>	
6	16	<div> <div>Rec.Array P&amp;S Slow Proj.</div> <div>CVDL (SPR4)</div> <div>(US/F)</div> <div>40</div> <div>240</div> </div>		
Undergauge	Waveform Data Copy Indicator 4 – Monopole P&S (WC14)		<div> <div>Min</div> <div>Amplitude</div> <div>Max</div> <div>  </div> </div>	<div> <div>Min</div> <div>Amplitude</div> <div>Max</div> <div>  </div> </div>
	0	(----) 10	<div> <div>Rec.Array L.Dipole Slow Proj.</div> <div>CVDL (SPR1)</div> <div>(US/F)</div> <div>40</div> <div>440</div> </div>	<div> <div>Rec.Array U.Dipole Slow Proj.</div> <div>CVDL (SPR2)</div> <div>(US/F)</div> <div>40</div> <div>440</div> </div>
	Delta T Comp / PA P & S		Waveform Data Copy	Waveform Data Copy

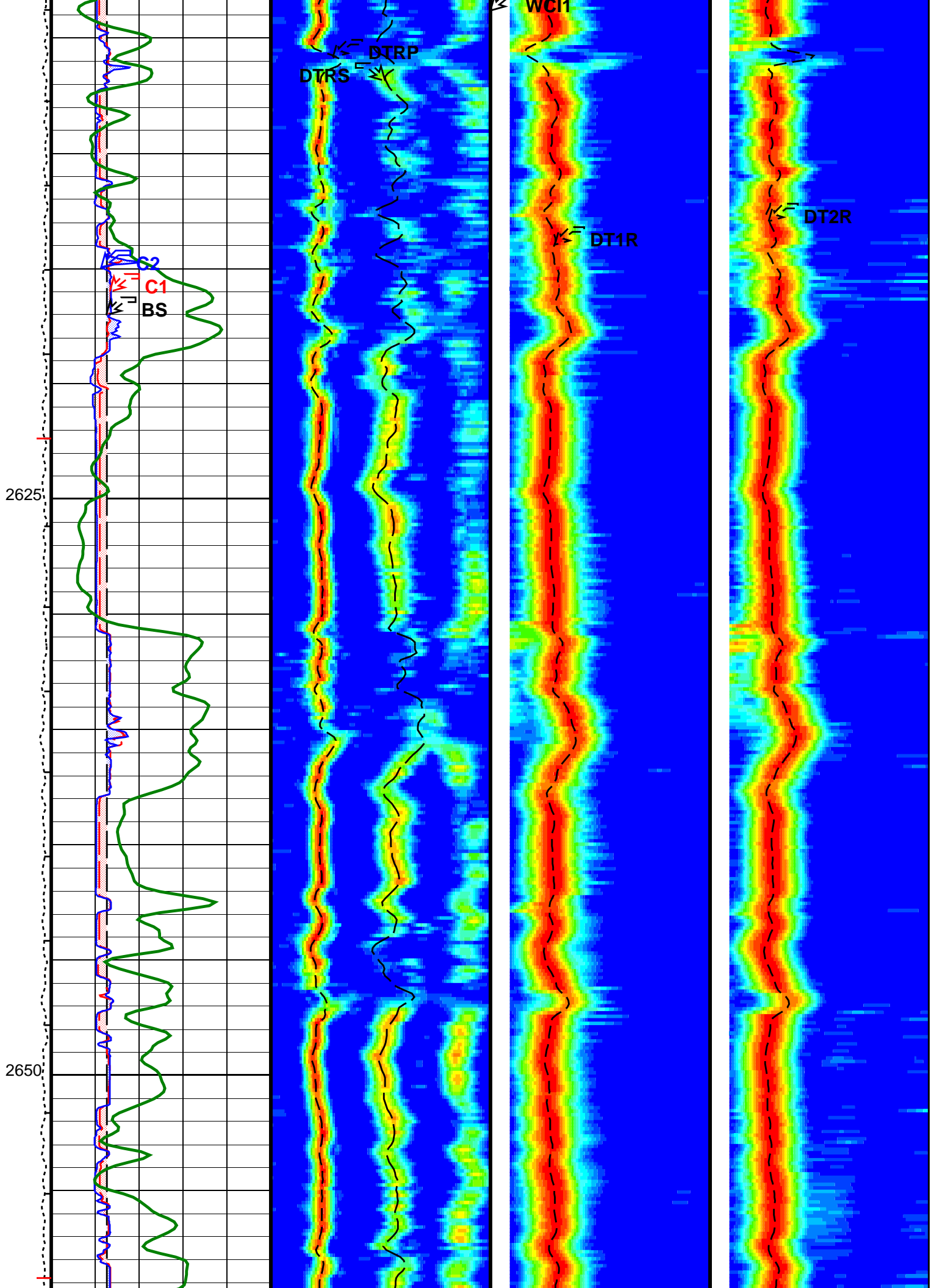


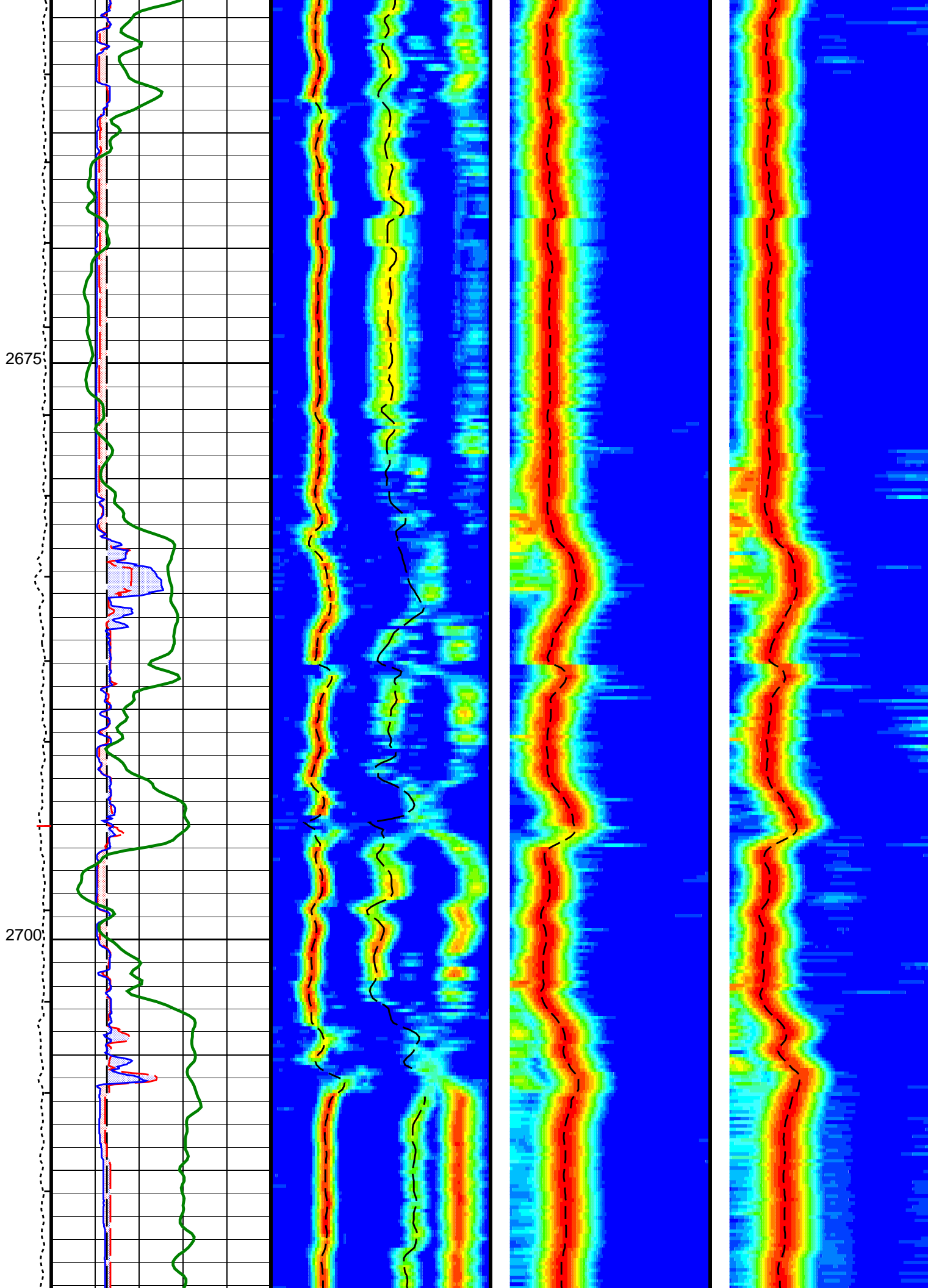




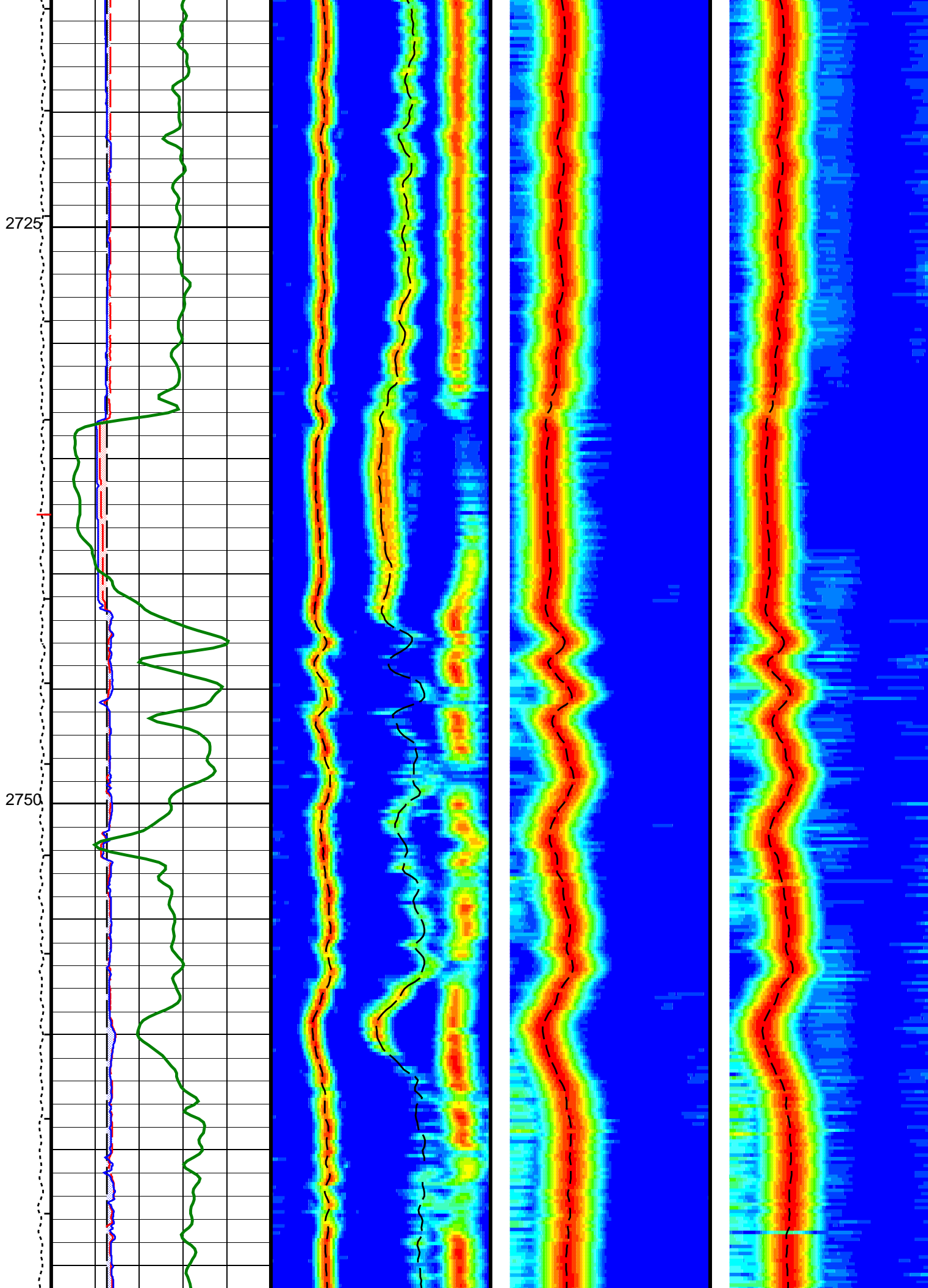


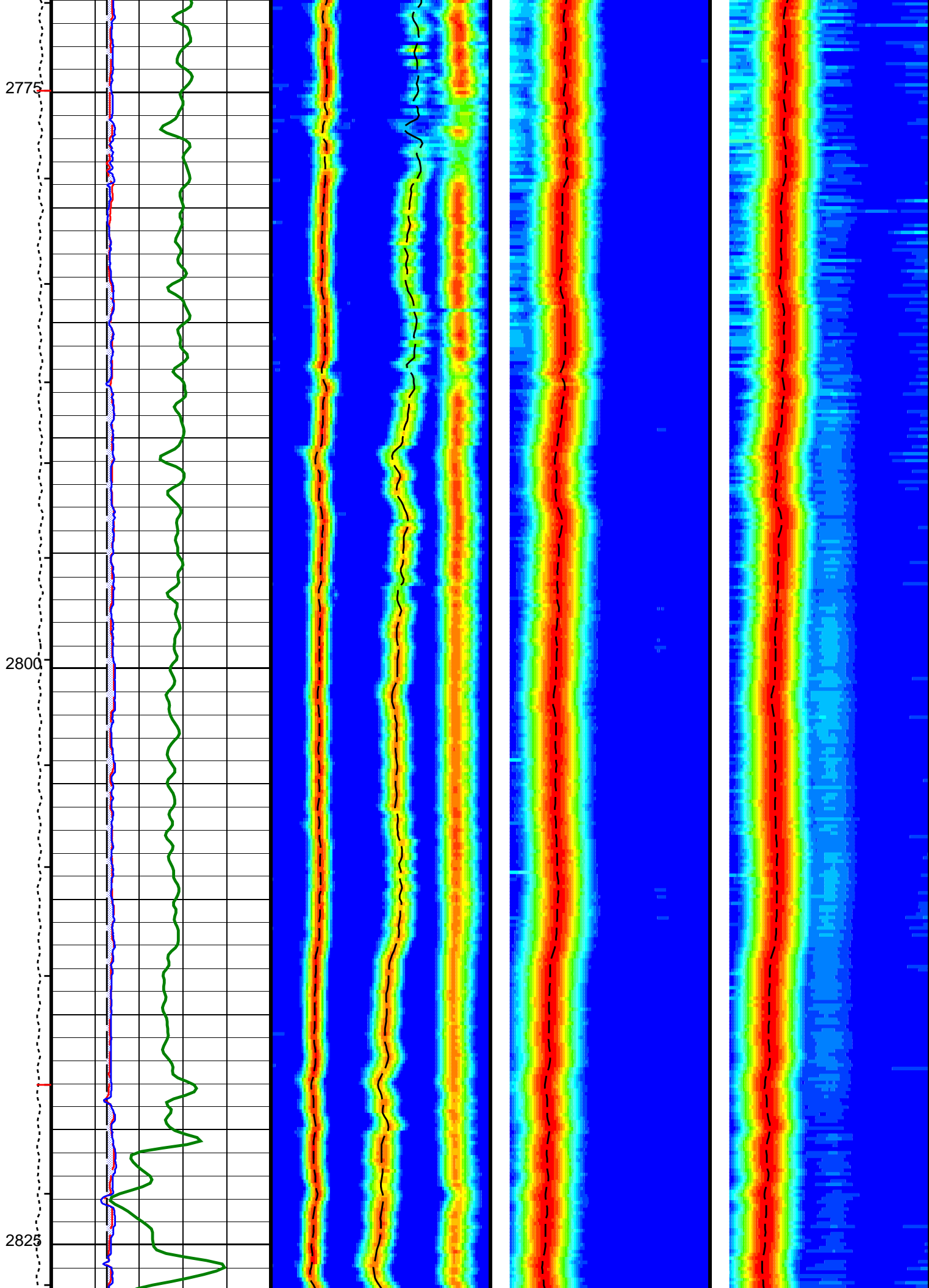




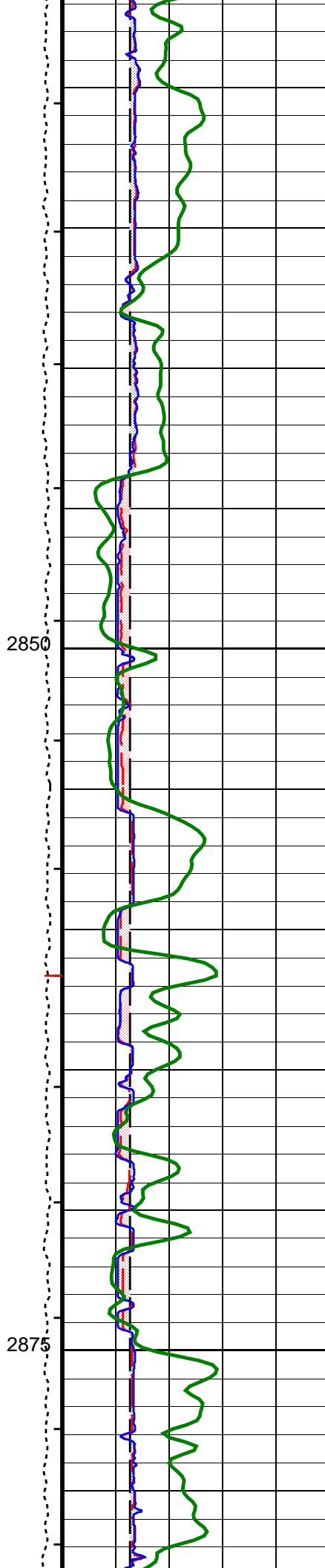
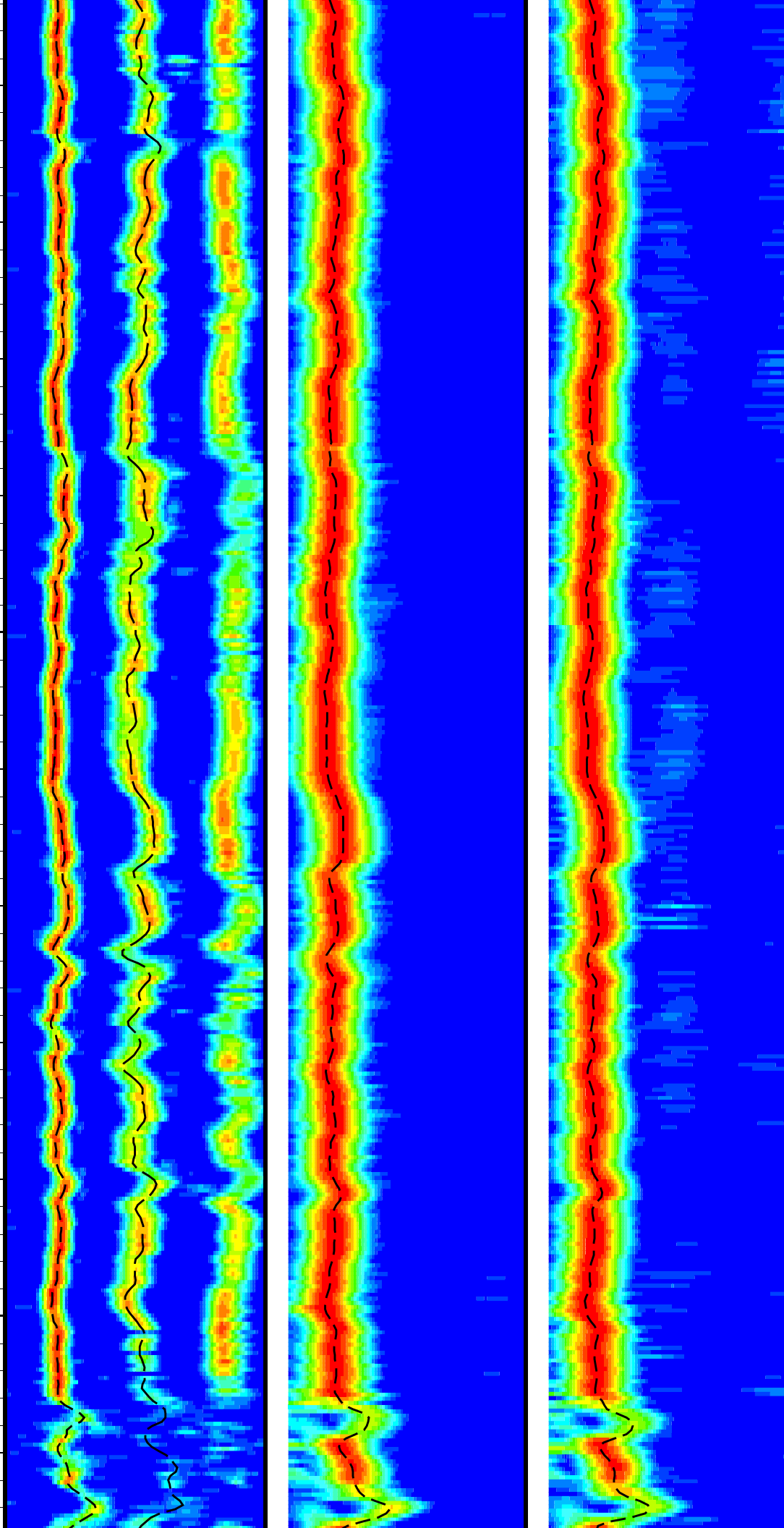


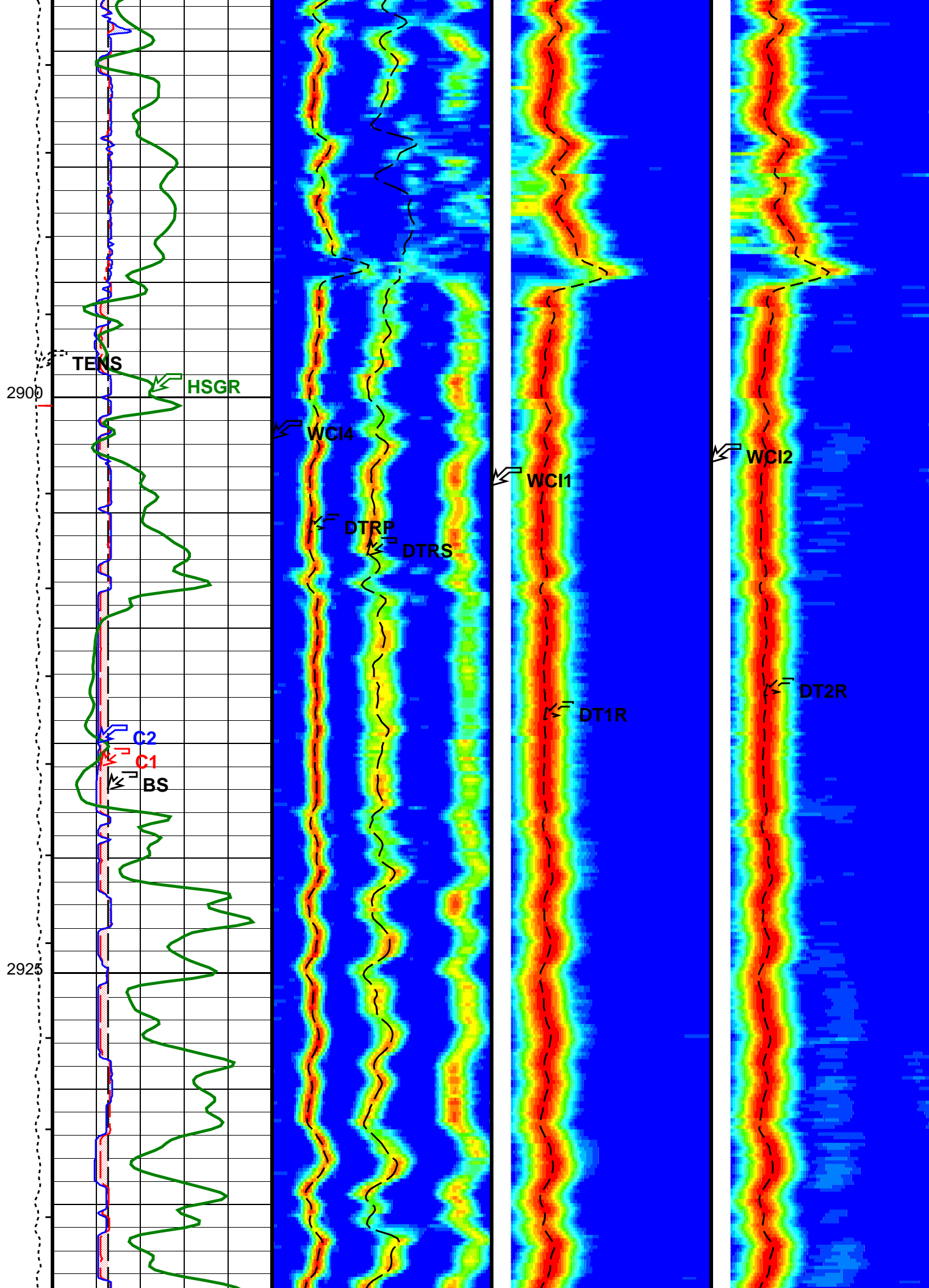


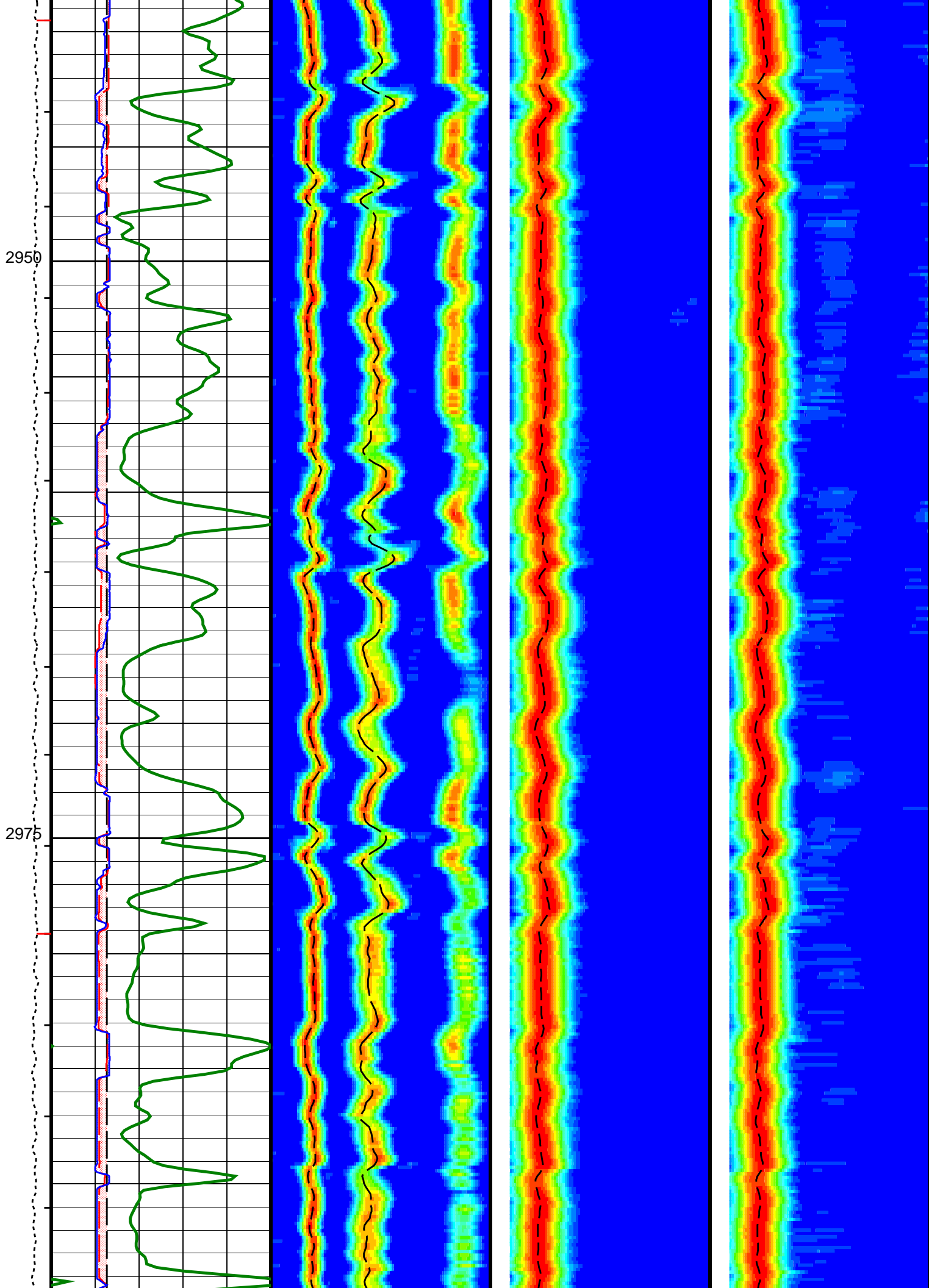


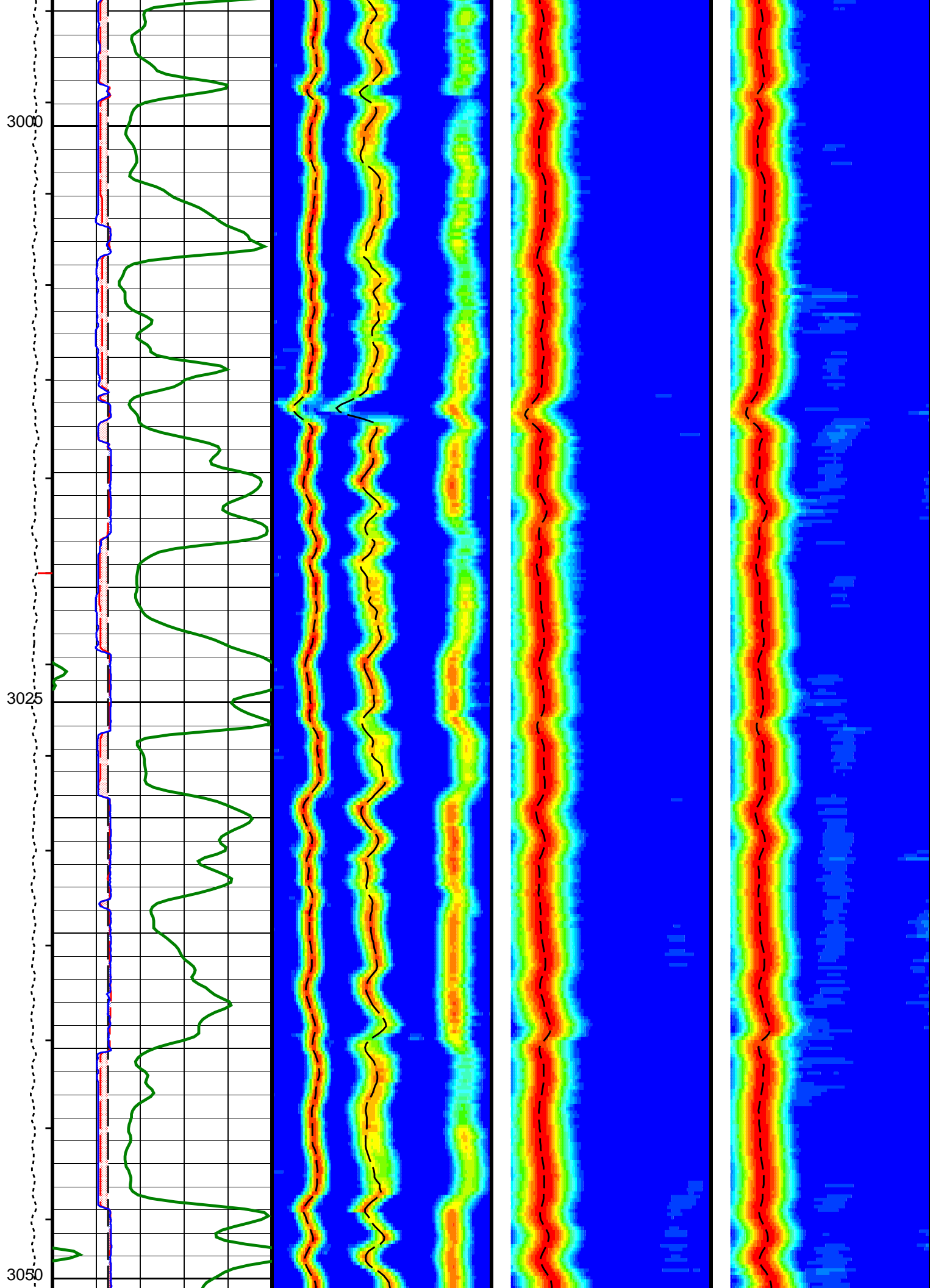


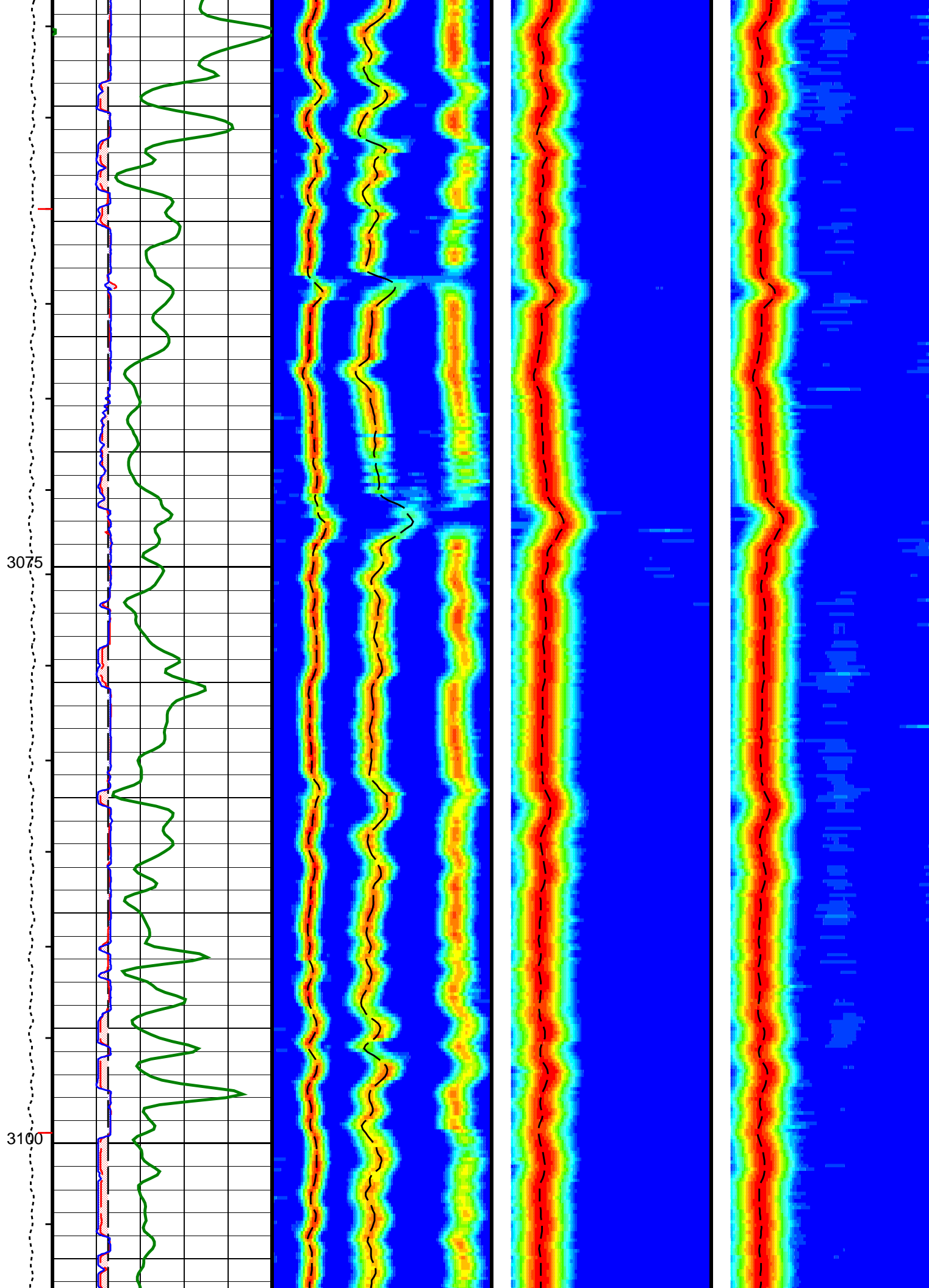


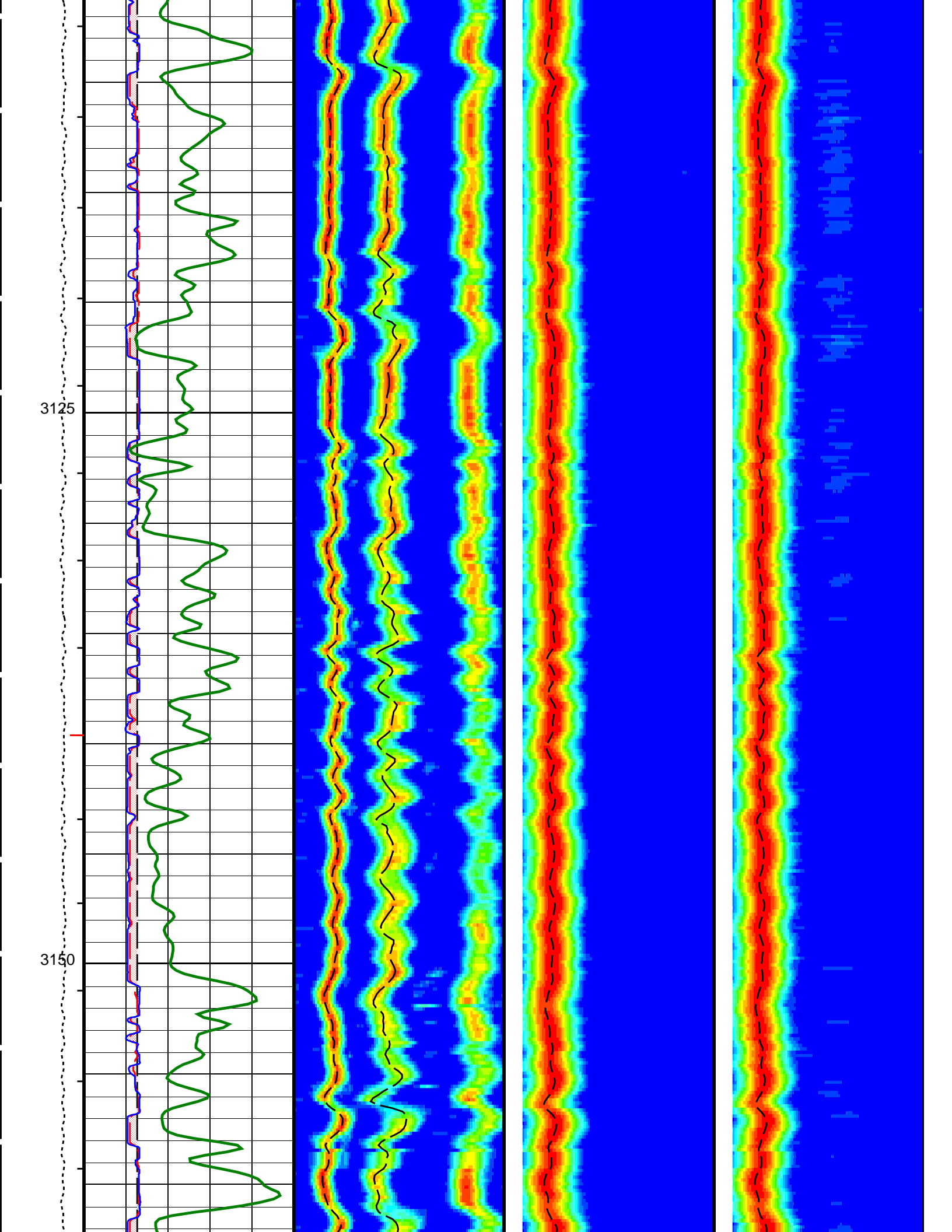




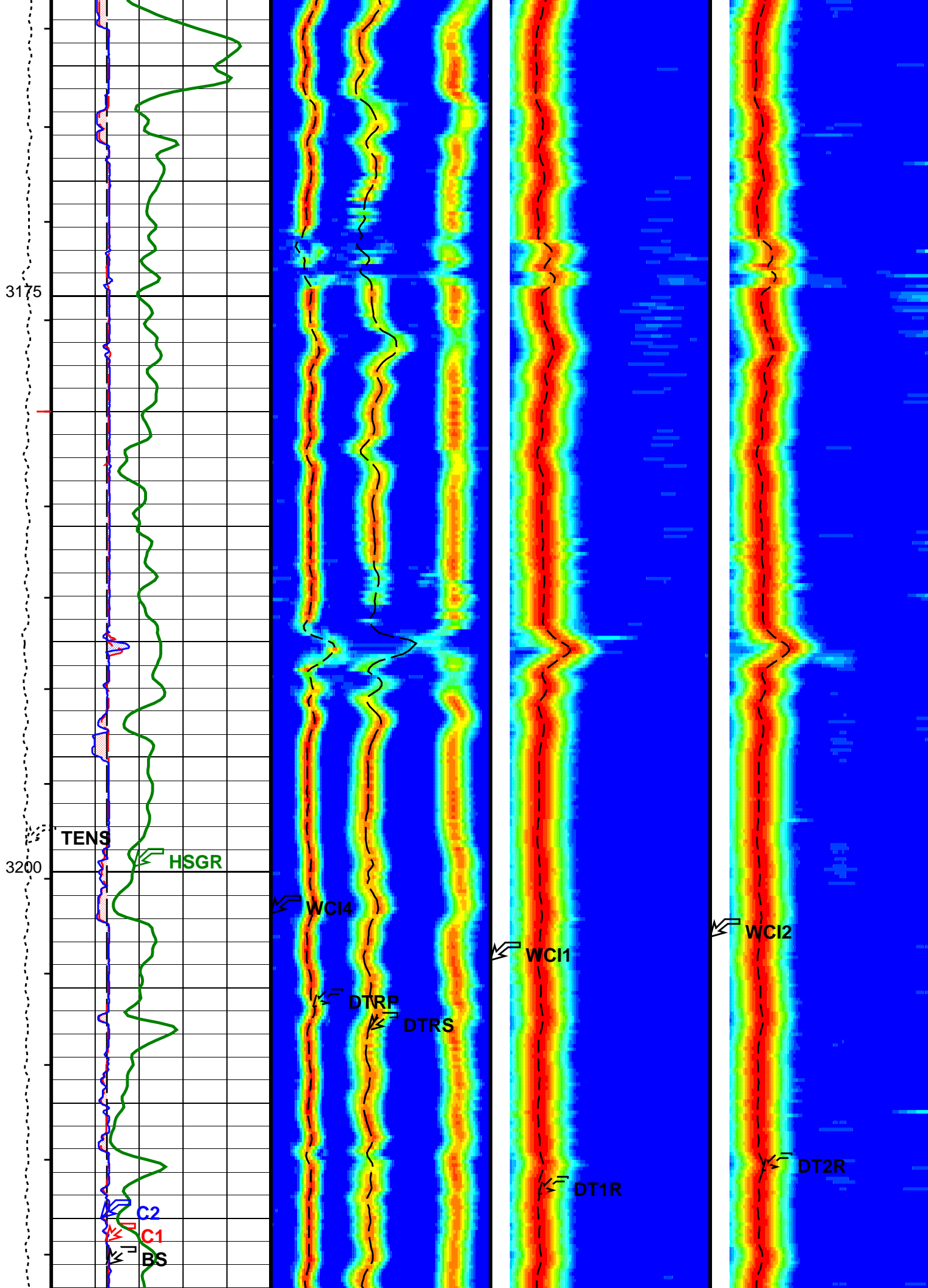


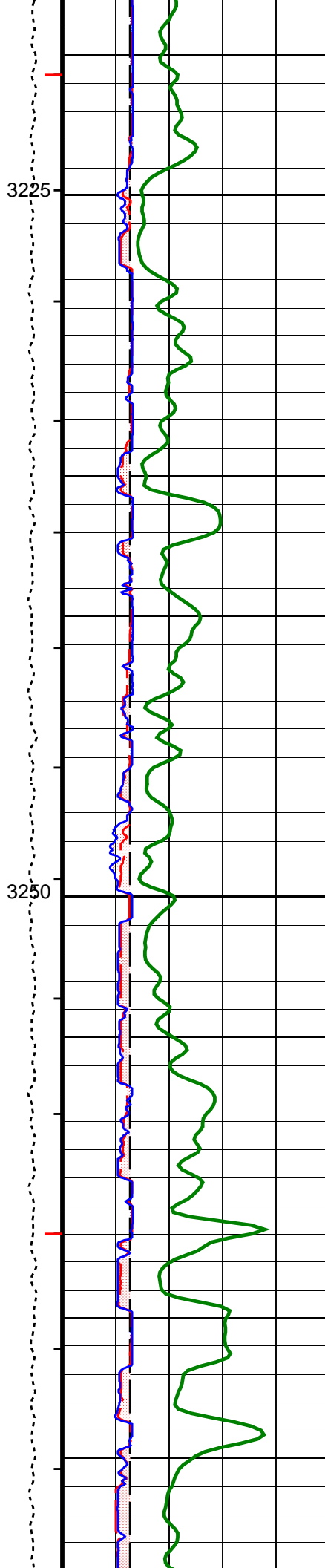
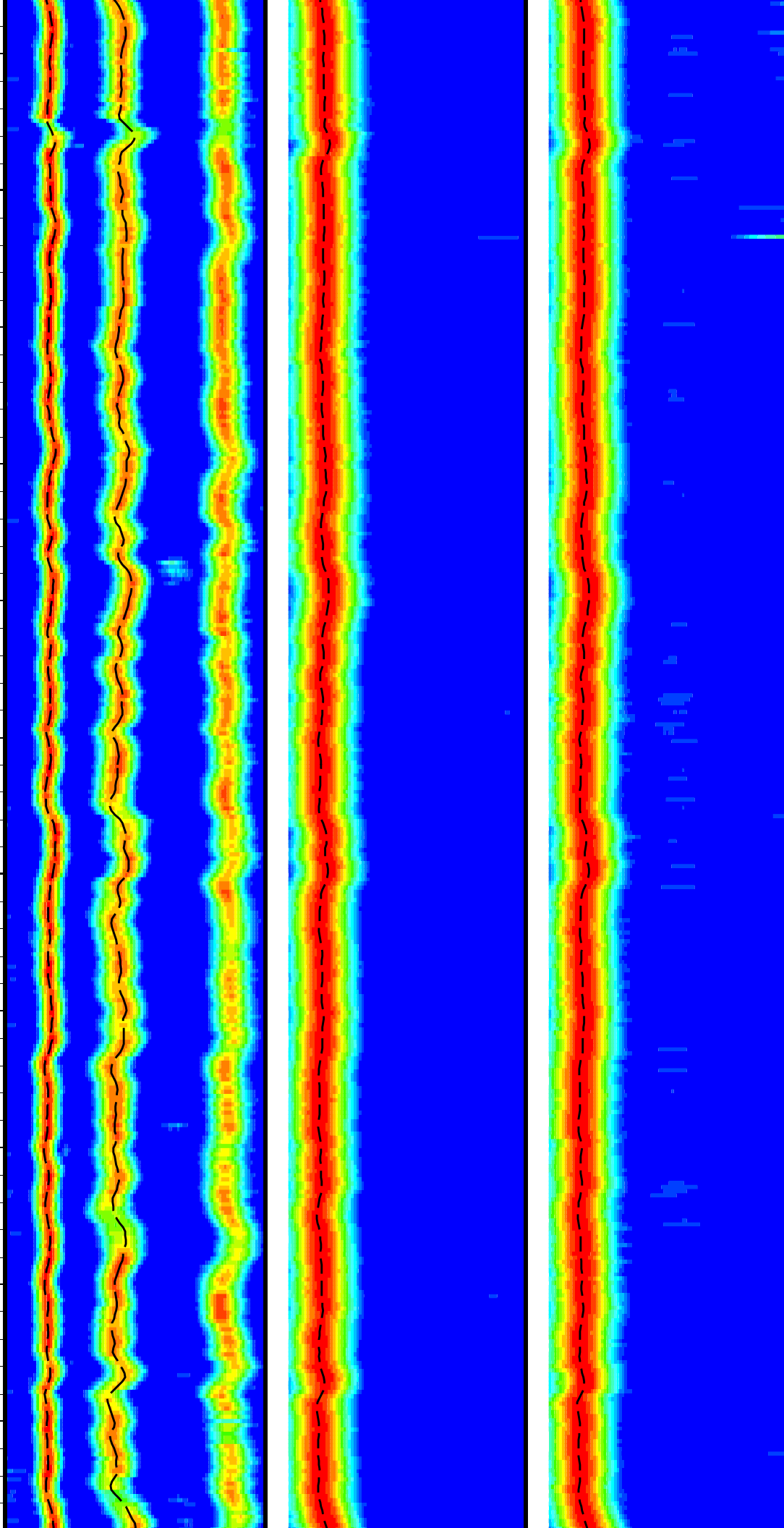




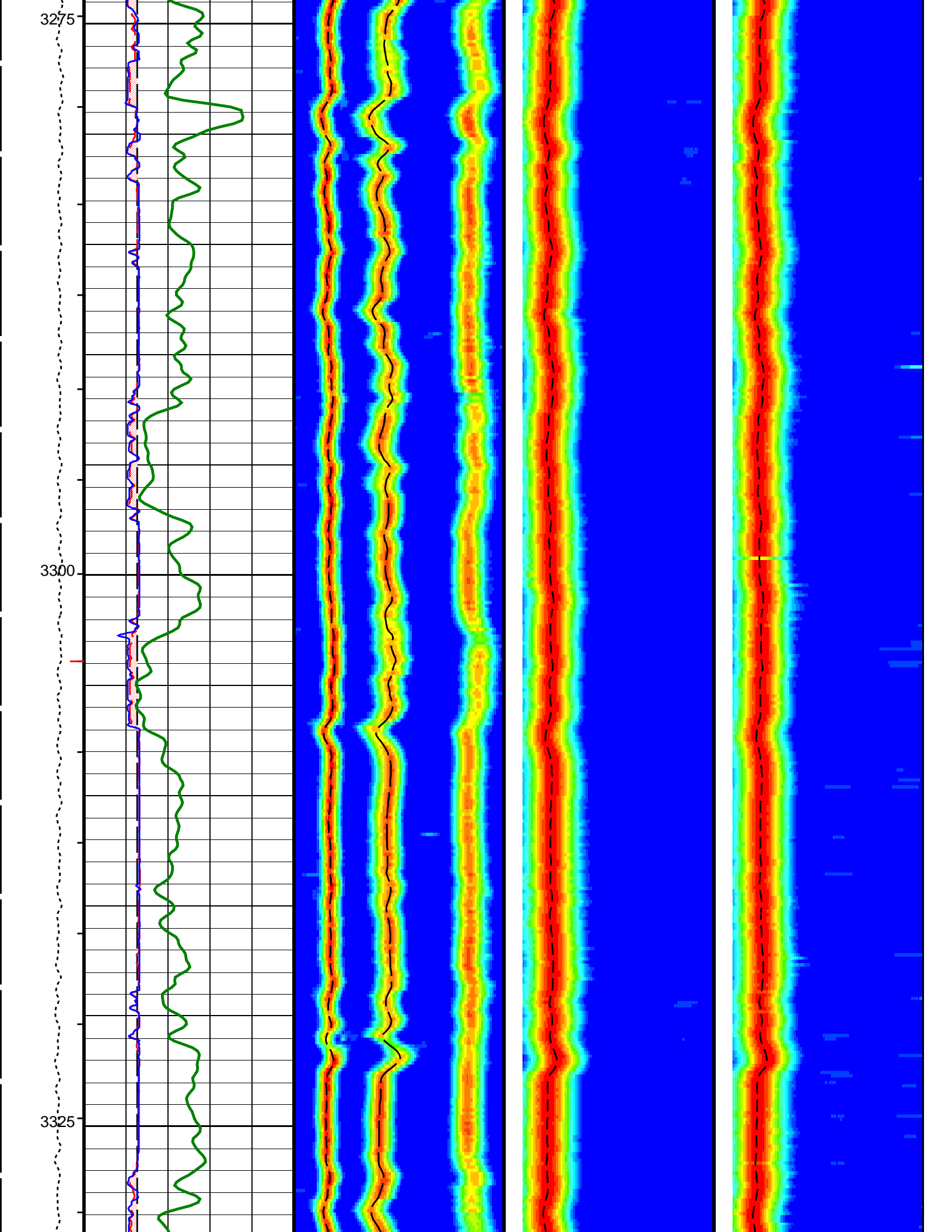


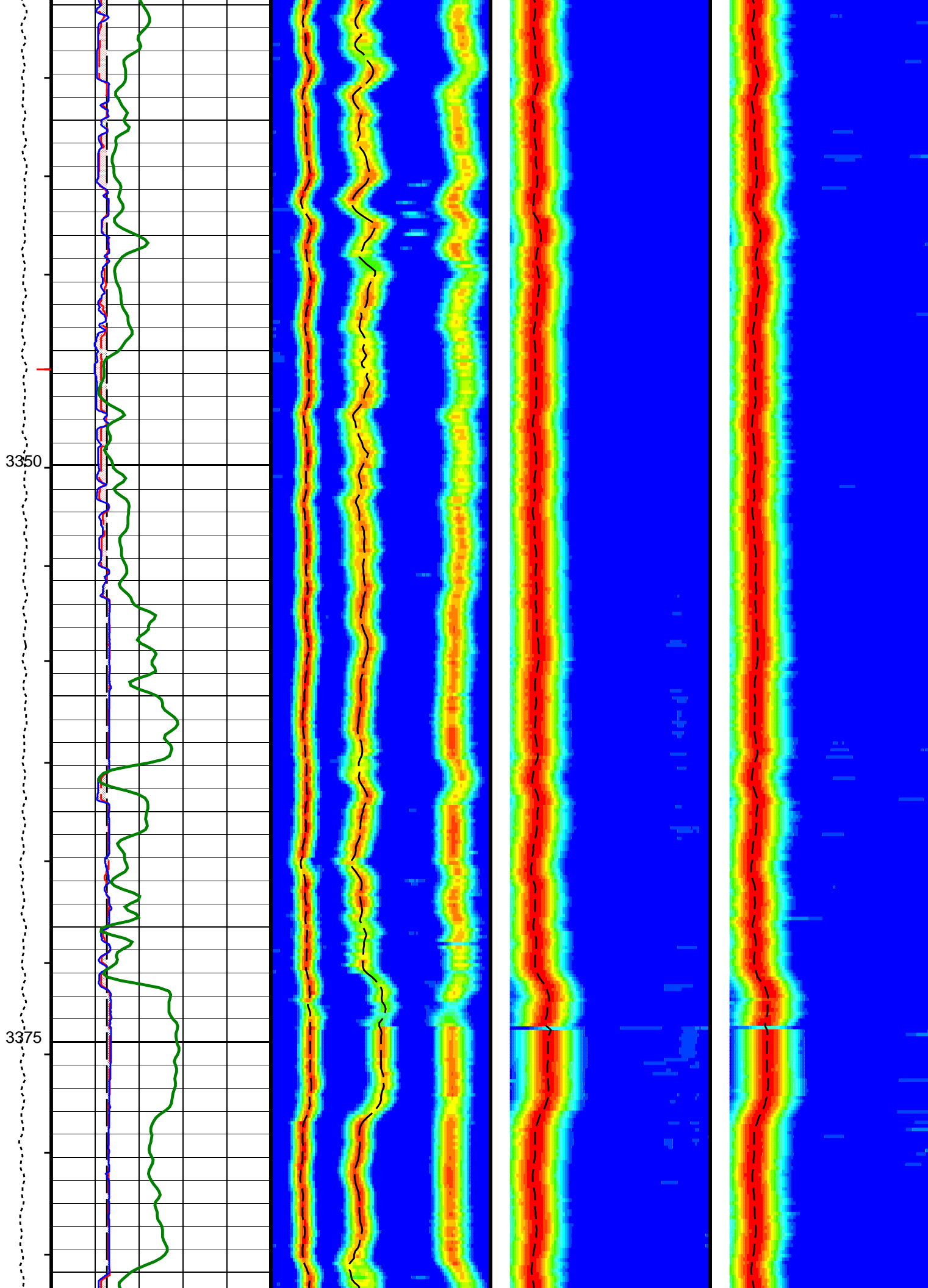


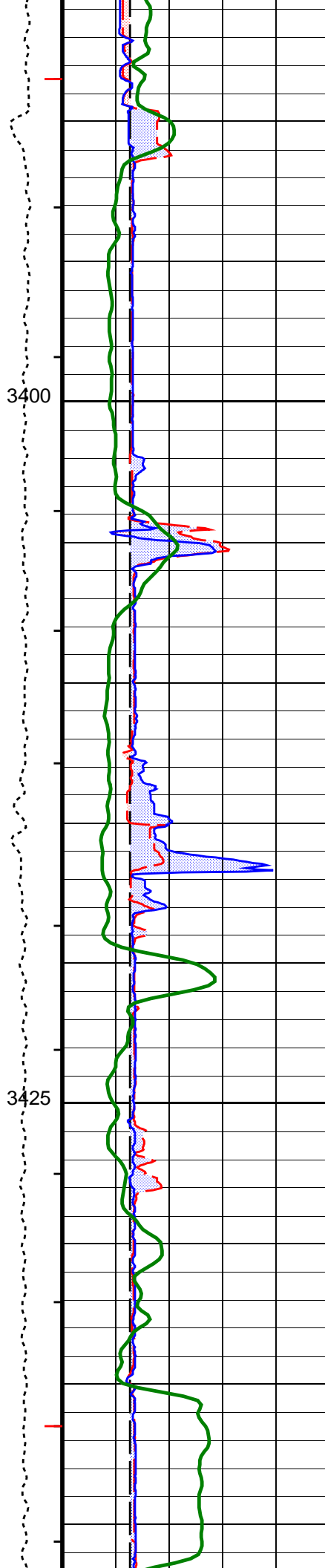
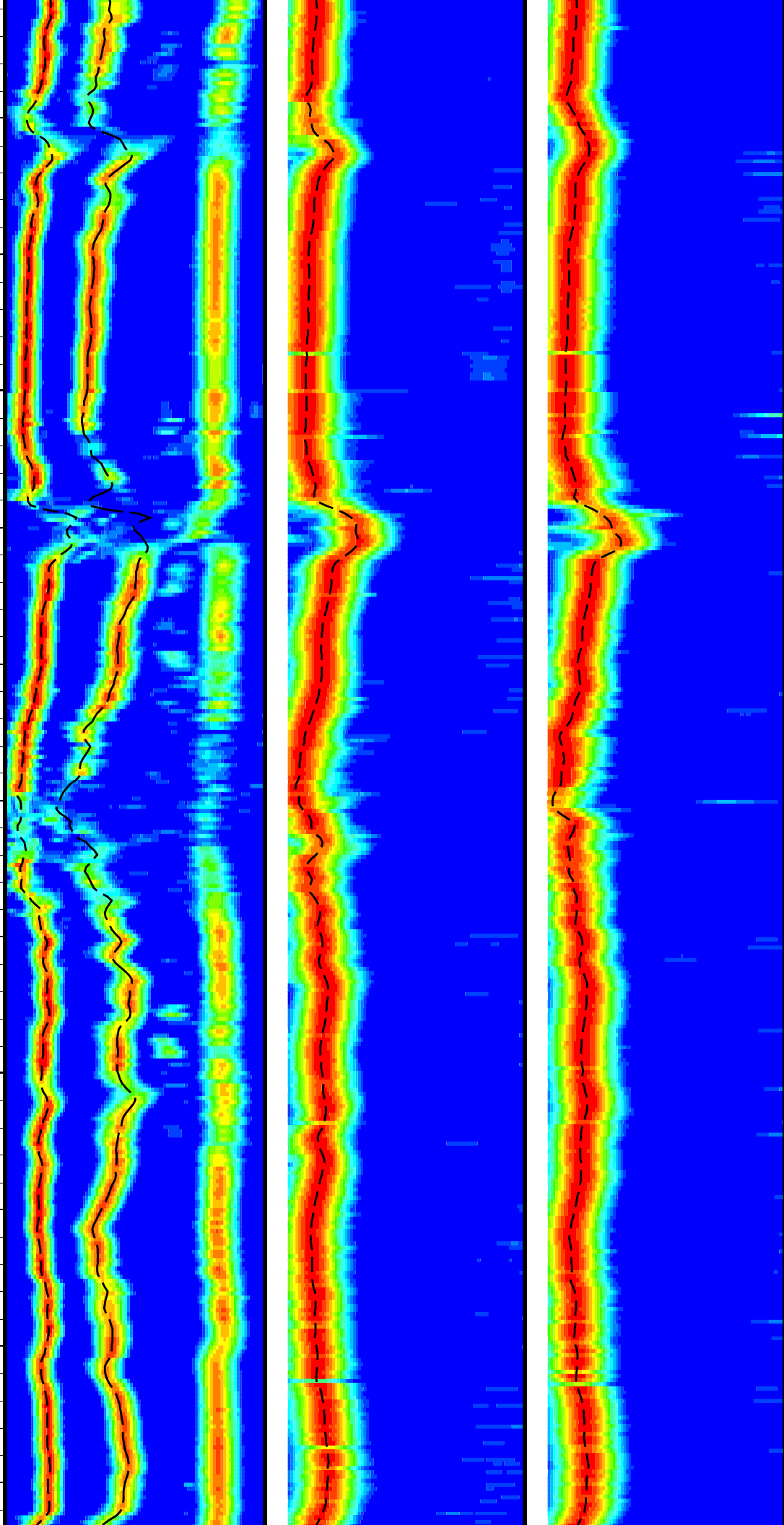


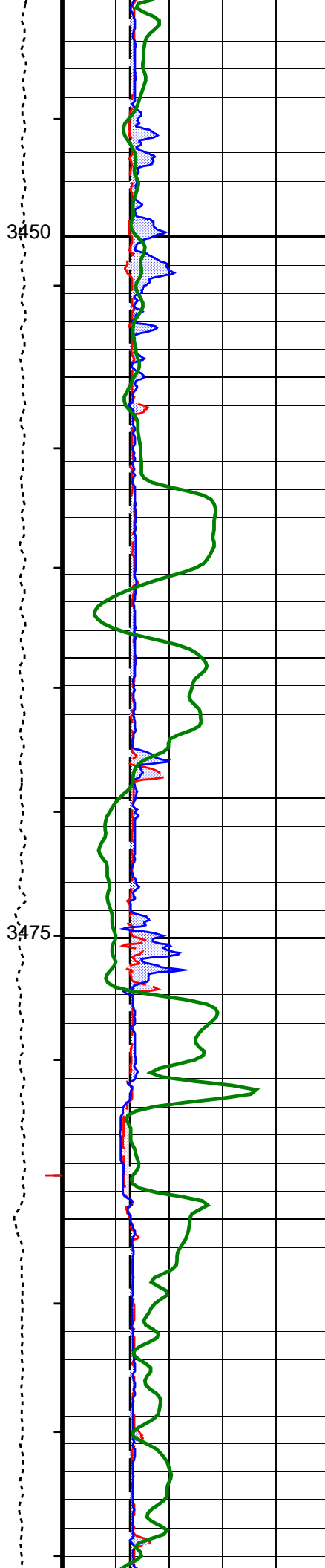
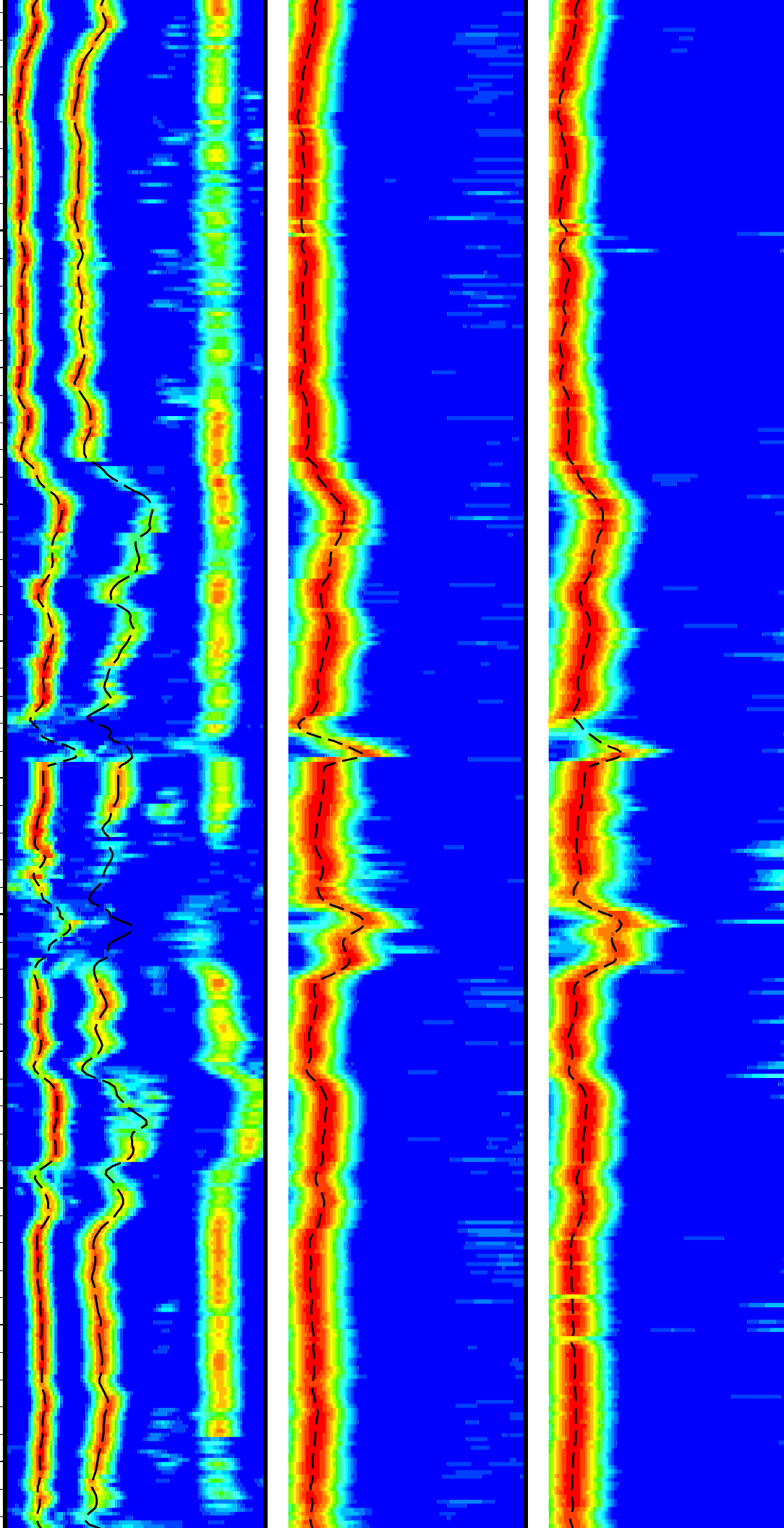


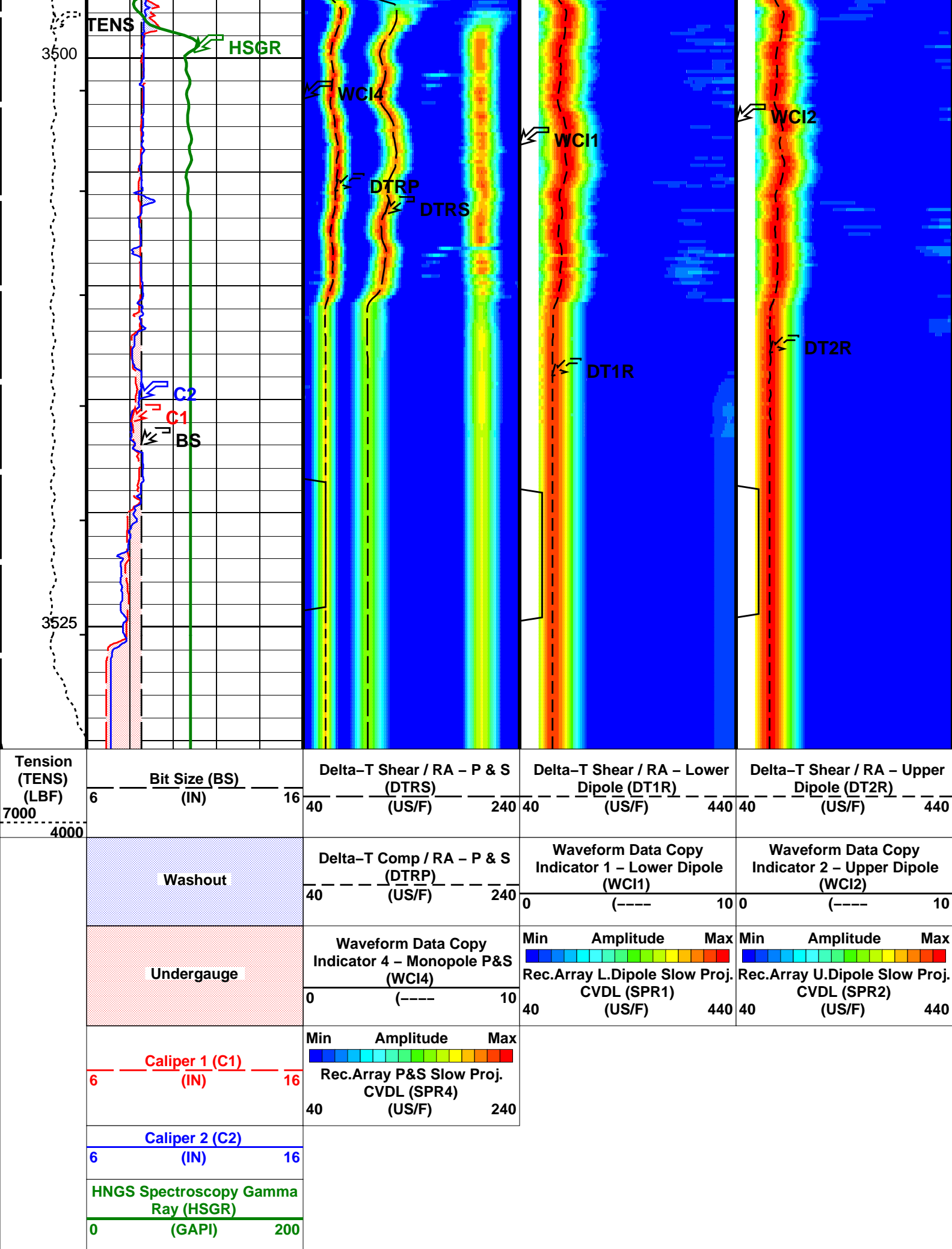












**Time Mark Every 60 S**

**Graphics File Created: 02-Dec-2004 11:55**

## MCM

DSST-B	12C0-301
HNGS-BA	SPC-2602-NUCL
DTC-H	12C0-301

## 02-Dec-2004 06:55

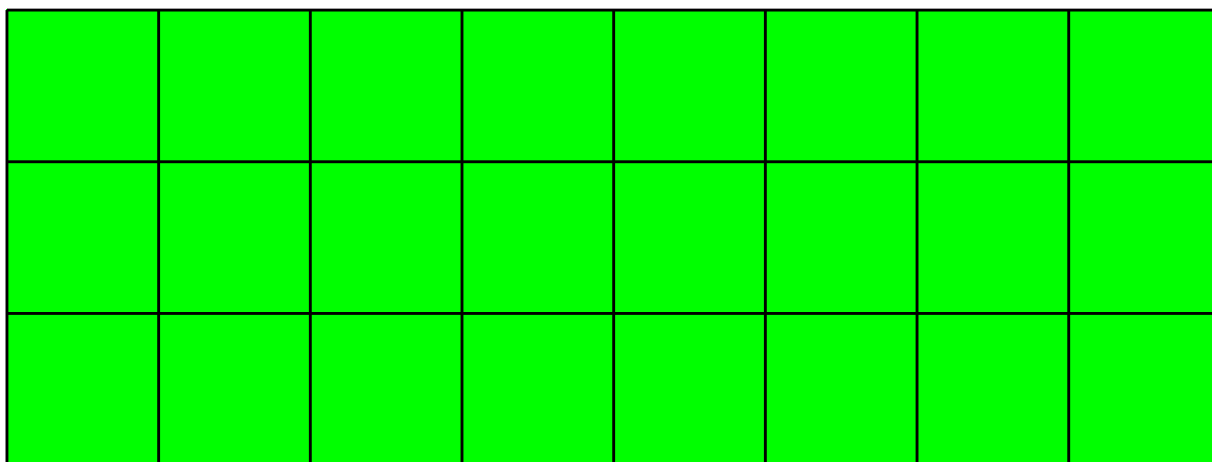
DEFAULT FMI DSI NGS 092PUP FN:84 PRODUCER 02-Dec-2004 11:55



MAXIS Field Log

**R1      R2      R3      R4      R5      R6      R7      R8**

## ODD/EVEN



**= Good**



**= Marginal**



**= Bad**

## Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Full-Bore Scanner – B Wellsite Calibration – Caliper Calibration							
Before: 21–Nov–2004 7:12							
Caliper 1 Small Jig	8.000	N/A	7.026	N/A	N/A	N/A	IN
Caliper 2 Small Jig	8.000	N/A	6.941	N/A	N/A	N/A	IN
Caliper 1 Large Jig	12.00	N/A	11.51	N/A	N/A	N/A	IN
Caliper 2 Large Jig	12.00	N/A	10.94	N/A	N/A	N/A	IN
Full-Bore Scanner – B Wellsite Calibration – CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 21–Nov–2004 5:10							
TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	95	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	6	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	292	N/A	N/A	N/A	
Full-Bore Scanner – B Wellsite Calibration – CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 21–Nov–2004 5:10							
TEMPERATURE REFERENCE :	N/A	N/A	31	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	92	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	12	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	173	N/A	N/A	N/A	
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 20–Nov–2004 23:57 Before: 21–Nov–2004 7:15							
Na 511 Peak Loc	40.00	40.59	40.47	N/A	N/A	1.000	
Na 511 Peak Res	15.50	17.06	18.36	N/A	N/A	2.000	%
High Voltage	1150	1286	1288	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	145.3	146.2	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	10.48	9.773	N/A	N/A	2.000	%
Temperature	15.50	19.43	19.78	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	21.72	21.01	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 20–Nov–2004 23:57 Before: 21–Nov–2004 7:15							
Na 511 Peak Loc	40.00	40.58	40.62	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.30	16.18	N/A	N/A	2.000	%
High Voltage	1150	1245	1247	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	145.2	144.8	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.098	8.969	N/A	N/A	2.000	%
Temperature	15.50	20.06	20.28	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	21.82	21.06	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2							
Master: 20–Nov–2004 23:57 Before: 21–Nov–2004 7:15							
Coincidence Count Rate Ratio	1.000	0.9940	0.9959	N/A	N/A	0.05000	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration							
Master: 20–Nov–2004 23:57							
Na 511 Peak Set Point	40.00	42.00	---	---	---	---	
Th Peak Loc	209.6	208.8	---	---	---	---	
Th Peak Res	7.000	8.378	---	---	---	---	%
Background Count Rate	142.5	16.70	---	---	---	---	CPS
Gain Ratio	1.000	0.9789	---	---	---	---	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration							
Master: 20–Nov–2004 23:57							
Na 511 Peak Set Point	40.00	42.00	---	---	---	---	
Th Peak Loc	209.6	209.4	---	---	---	---	
Th Peak Res	7.000	7.666	---	---	---	---	%
Background Count Rate	142.5	15.85	---	---	---	---	CPS
Gain Ratio	1.000	0.9815	---	---	---	---	

## Full-Bore Scanner – B / Equipment Identification

## Primary Equipment:

FullBore Scanner Sonde  
FullBore Scanner Sonde Upper part

FBSS – B  
FBSS – A

830

855

FullBore Scanner Sonde Upper part  
FullBore Scanner Sonde Cartridge  
GPIT Cartridge – AC  
Insulating Sub  
FullBore Scanner Control Cartridge





FBSH – A 855  
FBSC – B 858  
GPIC – AC 735  
AH – 185 909  
FBCC – A 794

Auxiliary Equipment:

Electronics Cartridge Housing

ECH – MRA

4742

Full-Bore Scanner – B Wellsite Calibration					
Caliper Calibration					
Phase	Caliper 1 Small Jig IN	Value	Phase	Caliper 2 Small Jig IN	Value
Before		7.026	Before		6.941
	6.800 (Minimum) 8.000 (Nominal) 9.200 (Maximum)			6.800 (Minimum) 8.000 (Nominal) 9.200 (Maximum)	
Phase	Caliper 1 Large Jig IN	Value	Phase	Caliper 2 Large Jig IN	Value
Before		11.51	Before		10.94
	10.20 (Minimum) 12.00 (Nominal) 13.80 (Maximum)			10.20 (Minimum) 12.00 (Nominal) 13.80 (Maximum)	
Before: 21-Nov-2004 7:12					

#### Hostile Natural Gamma Ray Cartridge – A / Equipment Identification

Primary Equipment:  
HNGC Cartridge

HNGC – A 10

Auxiliary Equipment:  
HNGC Housing

HNGH – A 3





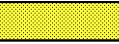





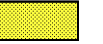



#### Hostile Natural Gamma Ray Sonde / Equipment Identification







Primary Equipment:  
HNGS Sonde

HNGS – BA 28

Auxiliary Equipment:  
HNGS Sonde Housing  
Gamma Source Radioactive



HNSH – BA 28  
GSR – U 2003




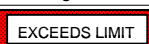

Hostile Natural Gamma Ray Sonde Wellsite Calibration								
Detector 1 Check								
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		40.59	Master		17.06	Master		1286
Before		40.47	Before		18.36	Before		1288
	37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		145.3	Master		10.48	Master		19.43
Before		146.2	Before		9.773	Before		19.78
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	
Phase	Na Count Rate CPS	Value						
Master		21.72						
Before		21.01						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 20-Nov-2004 23:57			Before: 21-Nov-2004 7:15					




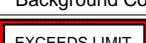

Hostile Natural Gamma Ray Sonde Wellsite Calibration								
Detector 2 Check								
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		40.58	Master		16.30	Master		1245
Before		40.62	Before		16.18	Before		1247
	37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	



37.50 (Minimum)	40.00 (Nominal)	42.50 (Maximum)	12.00 (Minimum)	15.50 (Nominal)	19.00 (Maximum)	900.0 (Minimum)	1150 (Nominal)	1600 (Maximum)			
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value
Master	<div><div></div></div>		145.2	Master	<div><div></div></div>		9.098	Master	<div><div></div></div>		20.06
Before	<div><div></div></div>		144.8	Before	<div><div></div></div>		8.969	Before	<div><div></div></div>		20.28
135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)	7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)	-28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)			
Phase	Na Count Rate CPS		Value								
Master	<div><div></div></div>		21.82								
Before	<div><div></div></div>		21.06								
10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)									
Master: 20-Nov-2004 23:57			Before: 21-Nov-2004 7:15								

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9940
Before		0.9959
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: 20-Nov-2004 23:57		
Before: 21-Nov-2004 7:15		

Hostile Natural Gamma Ray Sonde Master Calibration														
Detector 1 Calibration														
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value
Master				42.00	Master				208.8	Master				8.378
38.00 (Minimum)      40.00 (Nominal)      42.00 (Maximum)				201.0 (Minimum)      209.6 (Nominal)      218.3 (Maximum)				5.000 (Minimum)      7.000 (Nominal)      9.000 (Maximum)						
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master				16.70	Master				0.9789					
20.00 (Minimum)      142.5 (Nominal)      265.0 (Maximum)				0.9400 (Minimum)      1.000 (Nominal)      1.060 (Maximum)										
Master: 20–Nov–2004 23:57														

Hostile Natural Gamma Ray Sonde Master Calibration											
Detector 2 Calibration											
Phase	Na 511 Peak Set Point		Value	Phase	Th Peak Loc		Value	Phase	Th Peak Res %		Value
Master			42.00	Master			209.4	Master			7.666
38.00 (Minimum)      40.00 (Nominal)      42.00 (Maximum)				201.0 (Minimum)      209.6 (Nominal)      218.3 (Maximum)				5.000 (Minimum)      7.000 (Nominal)      9.000 (Maximum)			
Phase	Background Count Rate CPS		Value	Phase	Gain Ratio		Value				
Master			15.85	Master			0.9815				
20.00 (Minimum)      142.5 (Nominal)      265.0 (Maximum)				0.9400 (Minimum)      1.000 (Nominal)      1.060 (Maximum)							
Master: 20-Nov-2004 23:57											

Company: **Origin Energy Resources Ltd.**

**Schlumberger**

Well: **Trefoil-1**  
Field: **Trefoil**  
Rig: **ENSCO 102**  
Country: **Australia**

Country:

Australia

FMI-DSI-HNGS

Dipole Shear Sonic FIELD PRINT

1:200 Scale