



**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 OF 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.

**OTHER SERVICES1**

- OS1: HRLA
- OS2: HLDS
- OS3: MTT
- OS4: MSS
- OS5: VSI

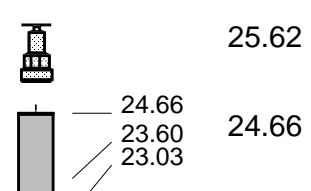
**REMARKS: RUN NUMBER 1**

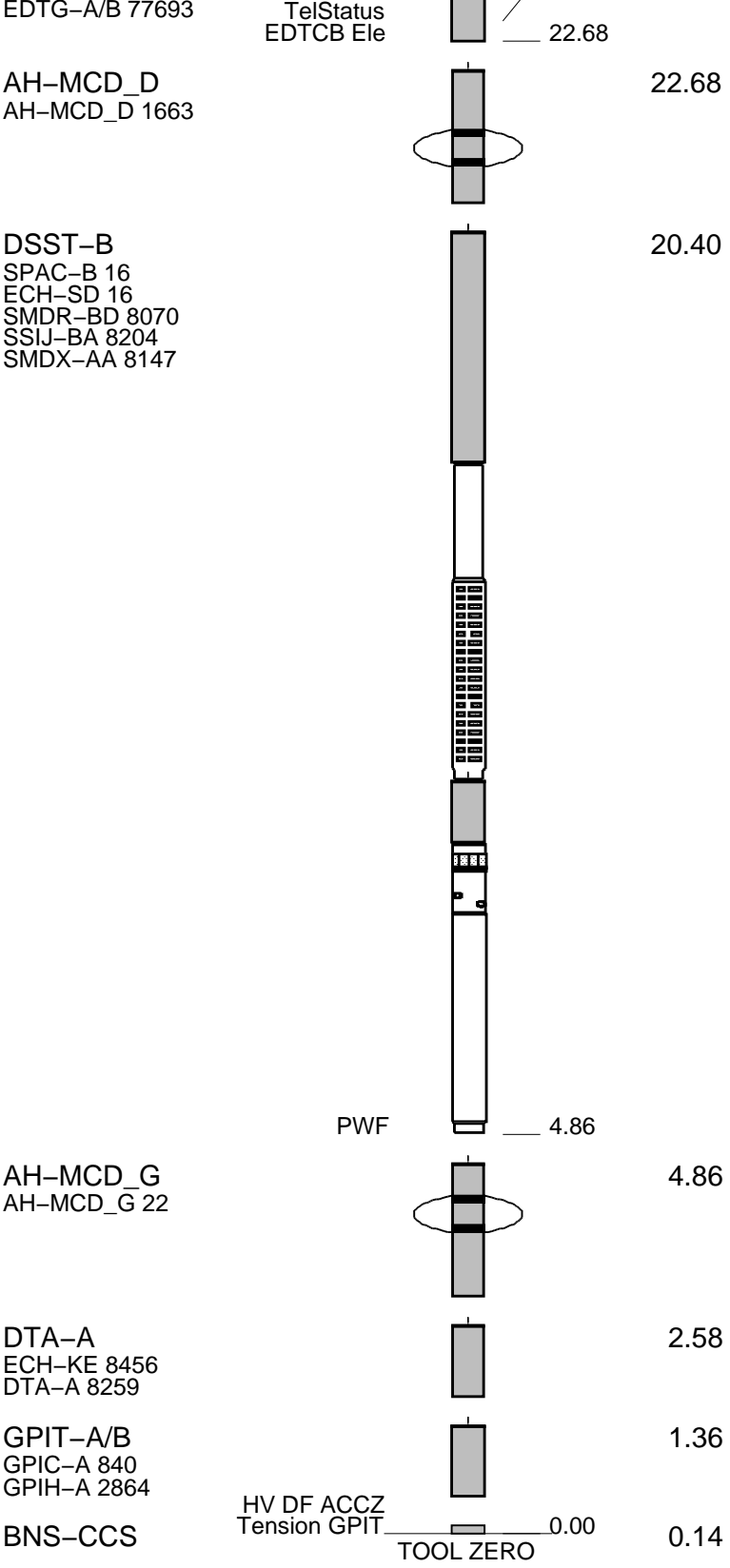
Hole U1309D was originally drilled during ODP Leg 304 in 2004 and deepened during Leg 305 in 2005.  
 Log data recorded on expeditions 304 and 305 provides sonic measurements to approximately 2450mbrf.  
 After the first run in hole on this expedition, it was discovered that the MCD centralizer arms suffered extreme wear, so to avoid this problem on the DSI run, the pipe was lowered to 2356mbrf and only the lower section of the hole where sonic data had not previously been recorded was logged.  
 Logs were correlated to the "Dual-Laterolog Tool" log recorded by Schlumberger on 31 JAN 05.  
 The DSI was run with the following modes:  
 Upper Dipole in Standard Frequency (Odd Receiver Array)  
 Lower Dipole in Standard Frequency (Even Receiver Array)  
 Stoneley (Even)  
 Monopole P&S in Standard Frequency (Odd array, DDBHC mode)  
 Both Cross Dipole (BCR)  
 Tools hung up on an apparent ledge at 3043m; up log was recorded from that depth.  
 Dipole STC processing windows adjusted to 60uS to 360uS range at client request based on down-log observations.  
 Downlog flipped and reprocessed using same processing parameters as uplog in lieu of a repeat pass to prevent centralizer wear.

RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
	19C0-187				
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

**EQUIPMENT DESCRIPTION**

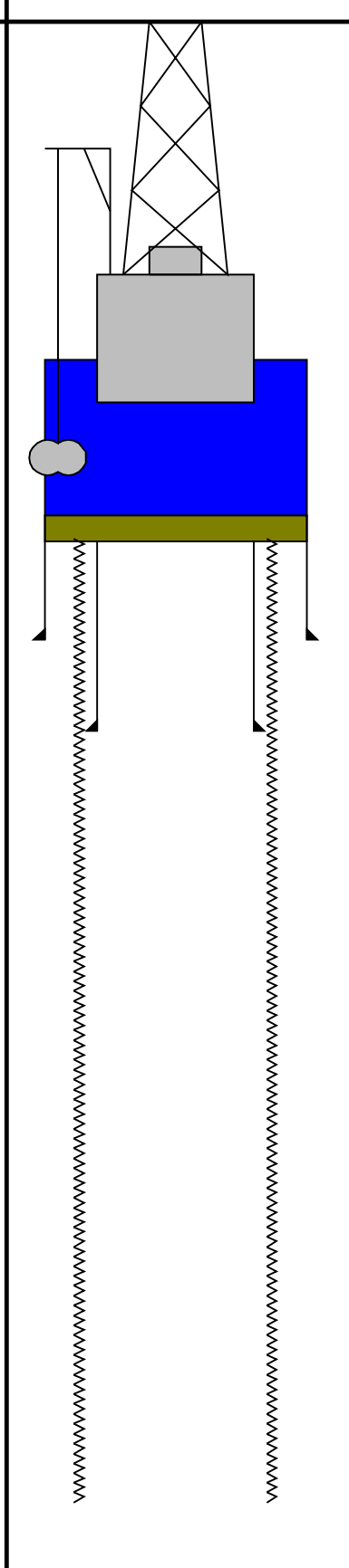
RUN 1	RUN 2
<b>SURFACE EQUIPMENT</b> WITM (EDTS)-A	

RUN 1	RUN 2
<b>DOWNHOLE EQUIPMENT</b>	
LEH-MT LEH-MT 101 EDTC-B EDTH-B 8528 EDTC-B 8529	25.62 24.66 24.66
MDSB_EDTC Mud Tempe CTEM Gamma Ray EFTB DIAG	 24.66 23.60 23.03



Production String	(in)	(m)	Well Schematic	(m)	(in)	Casing String
	OP	ID		MD	MD	

CD ID MD



MD CD ID

Kelly Bushing Elevation  
 Derrick Floor Elevation  
 Mean Sea Level  
 Seismic Gun depth below MSL

0.0  
 0.0  
 11.0  
 7.0

1650.0  
 1656.0 9.875  
 1676.0 13.375  
 1711.0 8.000  
 3071.5 9.875

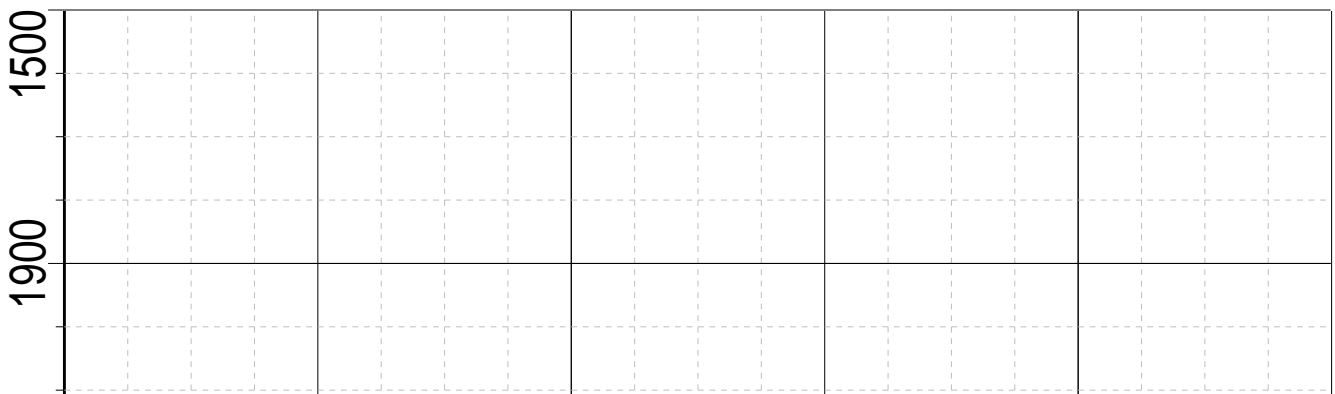
Top of Re-entry Cone  
 Sea Bed  
 Casing Shoe  
 Drill Pipe (Driller's Depth)  
 1711mbrf for Triple-Combo  
 1759mbrf for VSI & MSS  
 2356mbrf for DSI  
 Driller's Total Depth

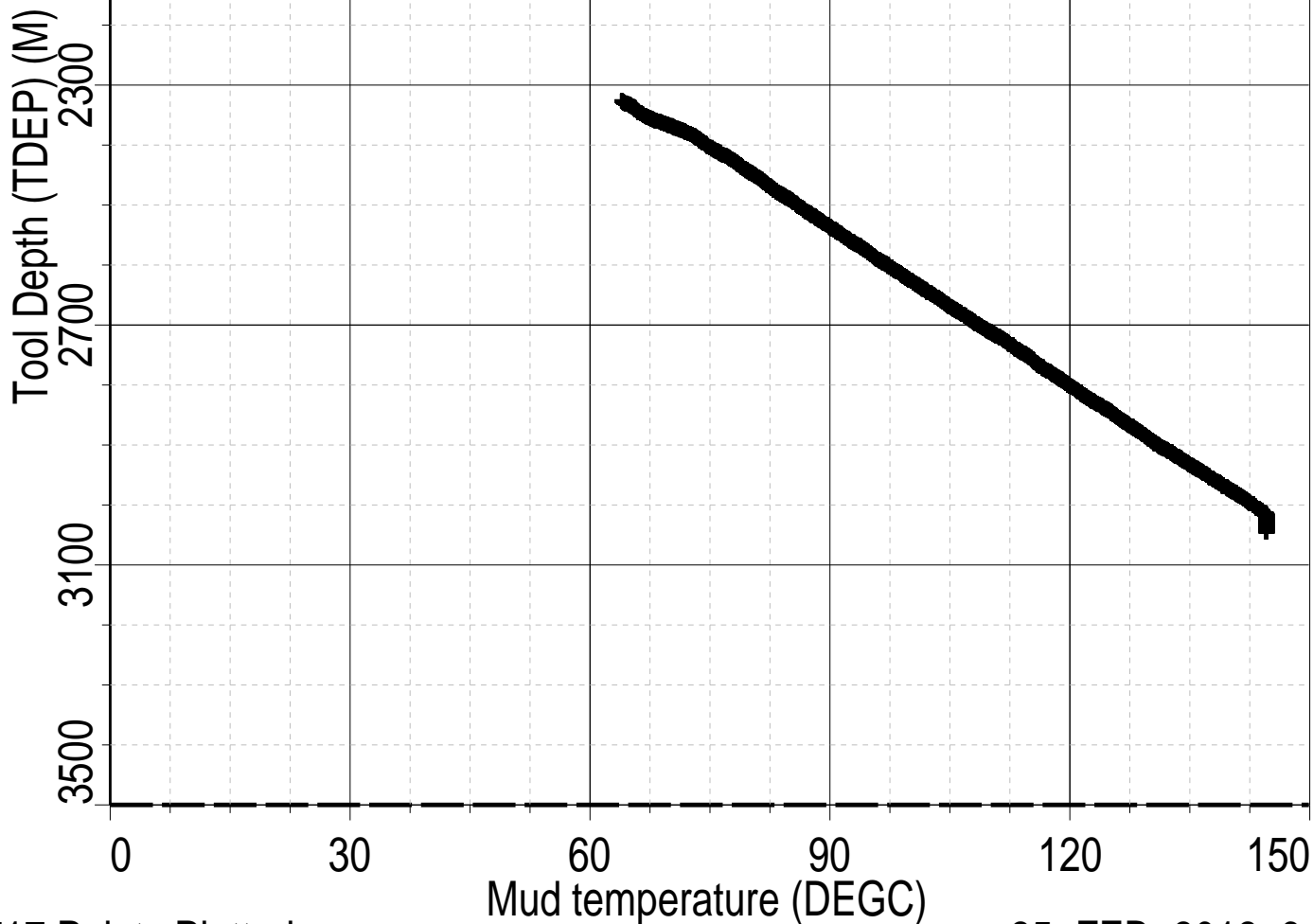
**Schlumberger**

**LEH-MT Mud Temperature**

MAXIS Field Log

Index: 3045.0 – 2326.2 M





4717 Points Plotted

25-FEB-2012 6:19

**Schlumberger**

**Down Log**

MAXIS Field Log

Company: Lamont Doherty

Well: Expedition 340T, Site U1309D

**Input DLIS Files**

DEFAULT	Flip_DSI_026LUP	PRODUCER	25-Feb-2012 06:12	3040.5 M	2308.7 M
---------	-----------------	----------	-------------------	----------	----------

**Output DLIS Files**

DEFAULT	DSI_027PUP	FN:14	PRODUCER	25-Feb-2012 06:14	3043.6 M	2311.8 M
---------	------------	-------	----------	-------------------	----------	----------

**OP System Version: 19C0-187**

GPIT-A/B	19C0-187	DTA-A	19C0-187
DSST-B	19C0-187	EDTC-B	19C0-187

**PIP SUMMARY**

Time Mark Every 60 S

Peak Coherence / TA - P & S Shear (CHTS)

-1 (----) 9

<b>Delta-T Shear - P &amp; S (DT4S)</b>		
440	(US/F)	40
<b>Delta-T Shear / TA - P &amp; S (DTTS)</b>		
440	(US/F)	40
<b>Delta-T Shear / RA - P &amp; S (DTRS)</b>		
440	(US/F)	40
<b>Delta-T Comp - P &amp; S (DT4P)</b>		
440	(US/F)	40
<b>Delta-T Comp / TA - P &amp; S (DTTP)</b>		
440	(US/F)	40
<b>Delta-T Comp / RA - P &amp; S (DTRP)</b>		
440	(US/F)	40

<b>Waveform Data Copy Indicator 4 - Monopole P&amp;S (WCI4)</b>		
0	(----)	10

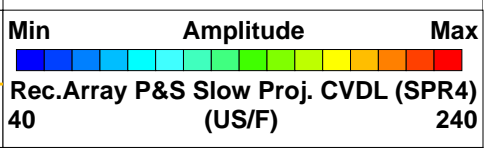
<b>Gamma Ray (GR_EDTC)</b>		
0	(GAPI)	15

<b>SAM4 Waveform Gain (WFG4)</b>		
0	(----)	1000

<b>Peak Coherence / RA - P &amp; S Shear (CHRS)</b>		
-1	(----)	9

<b>Peak Coherence / TA - P &amp; S Comp (CHTP)</b>		
0	(----)	10

<b>Peak Coherence / RA - P &amp; S Comp (CHRP)</b>		
0	(----)	10

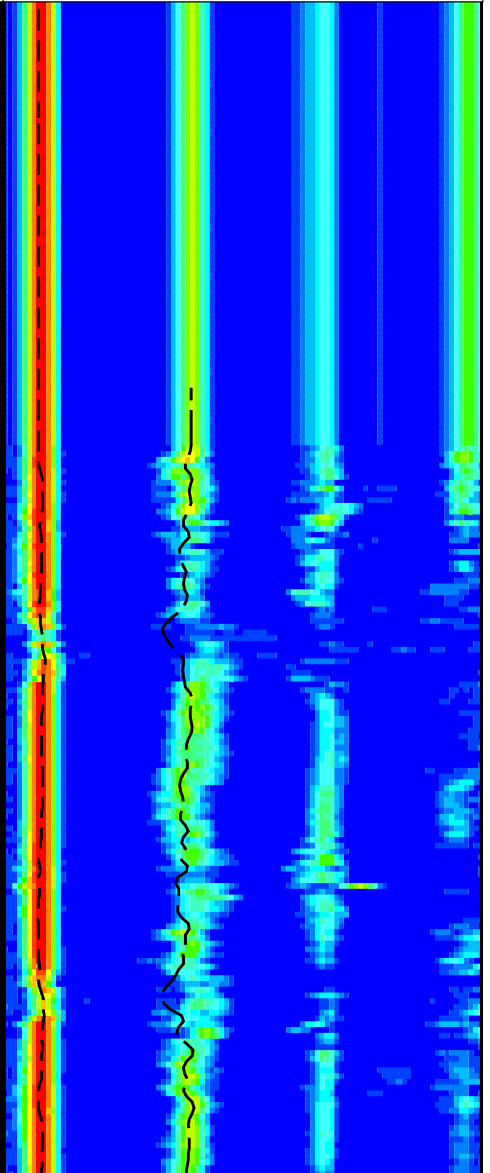
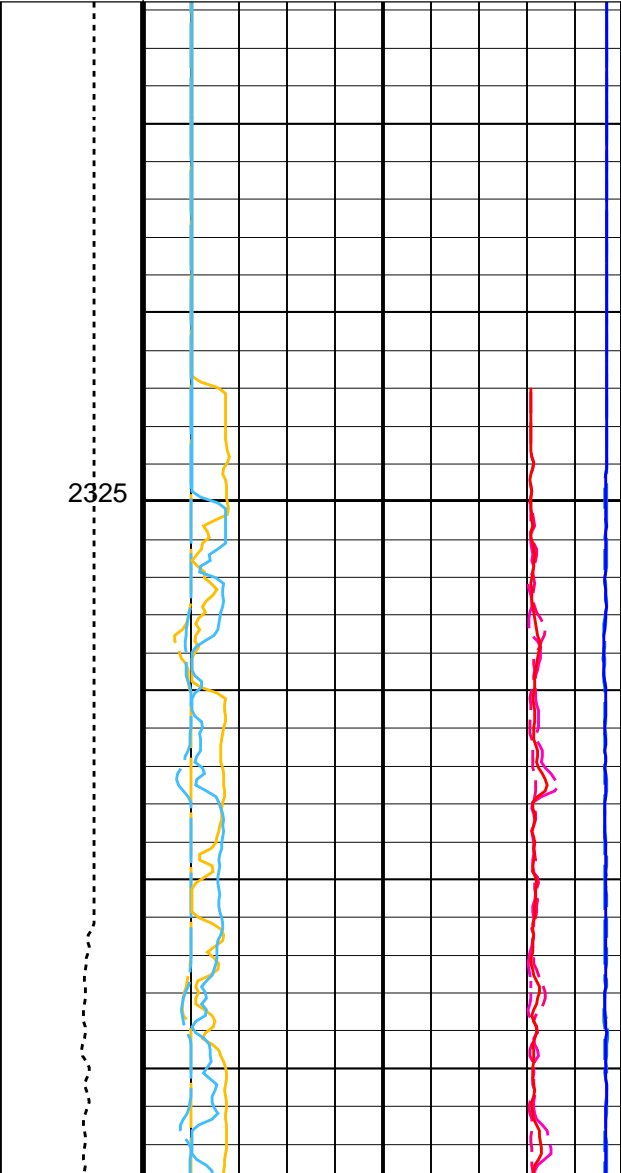
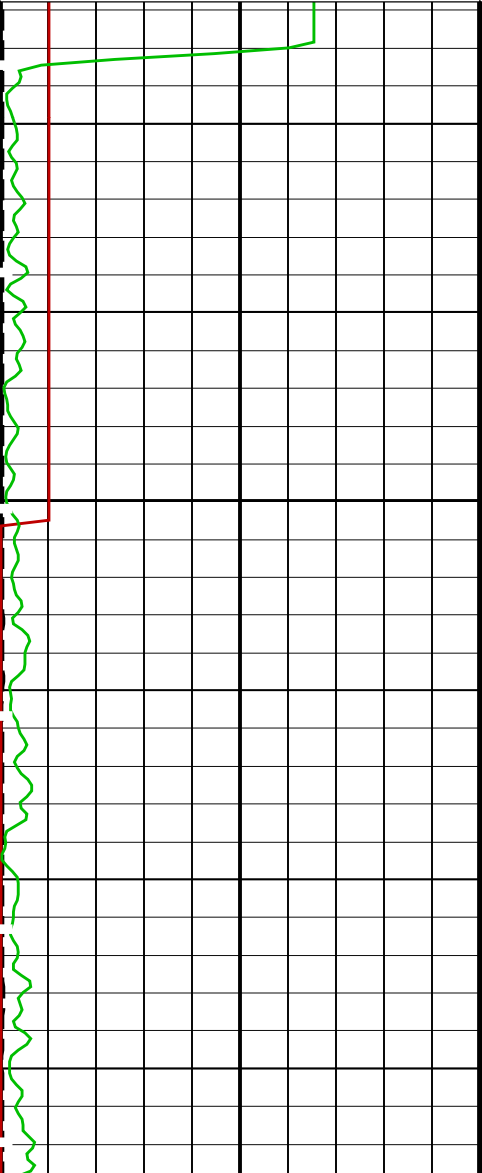


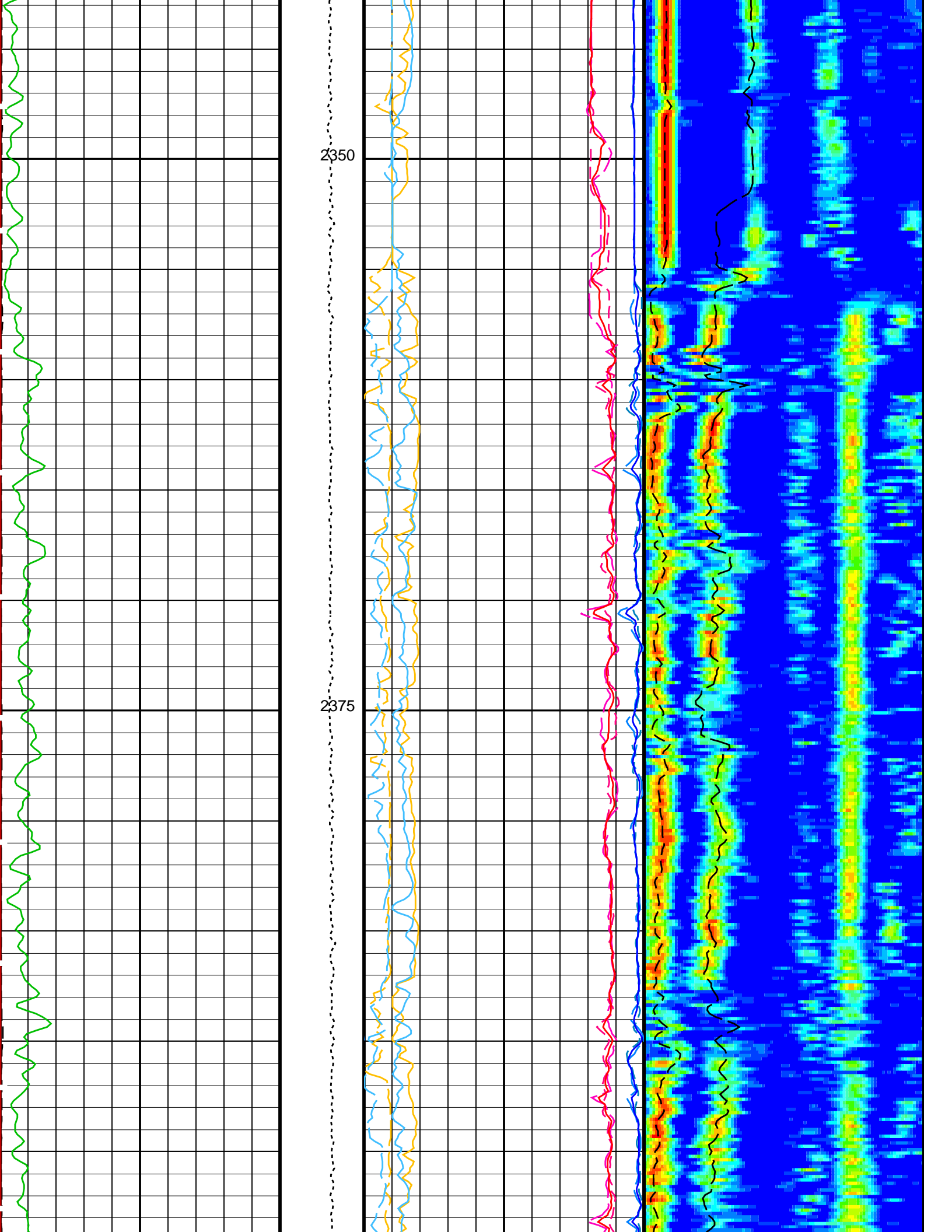
<b>Delta-T Shear / RA - P &amp; S (DTRS)</b>		
40	(US/F)	240

<b>Delta-T Comp / RA - P &amp; S (DTRP)</b>		
40	(US/F)	240

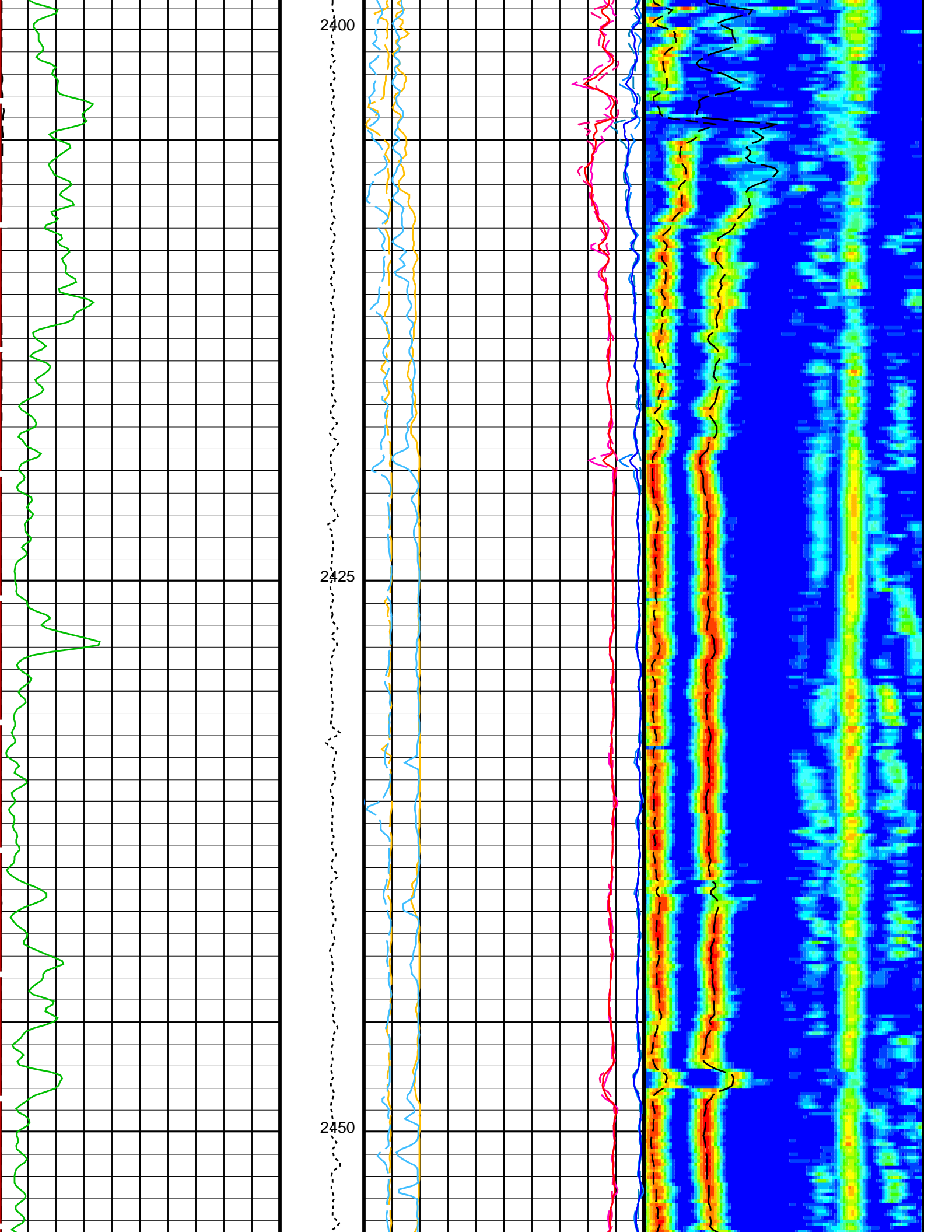
Tension (TENS) (LBF)

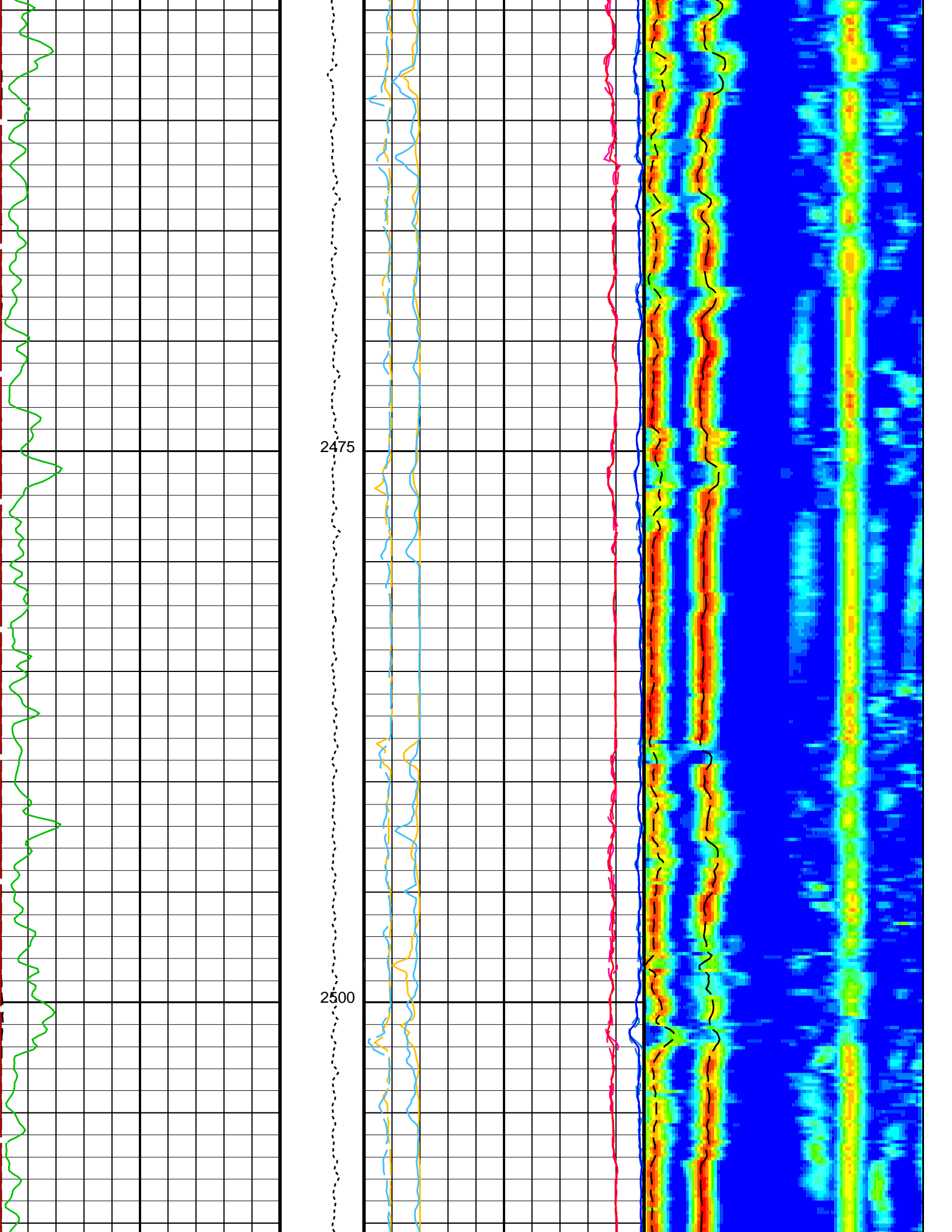
0 5000

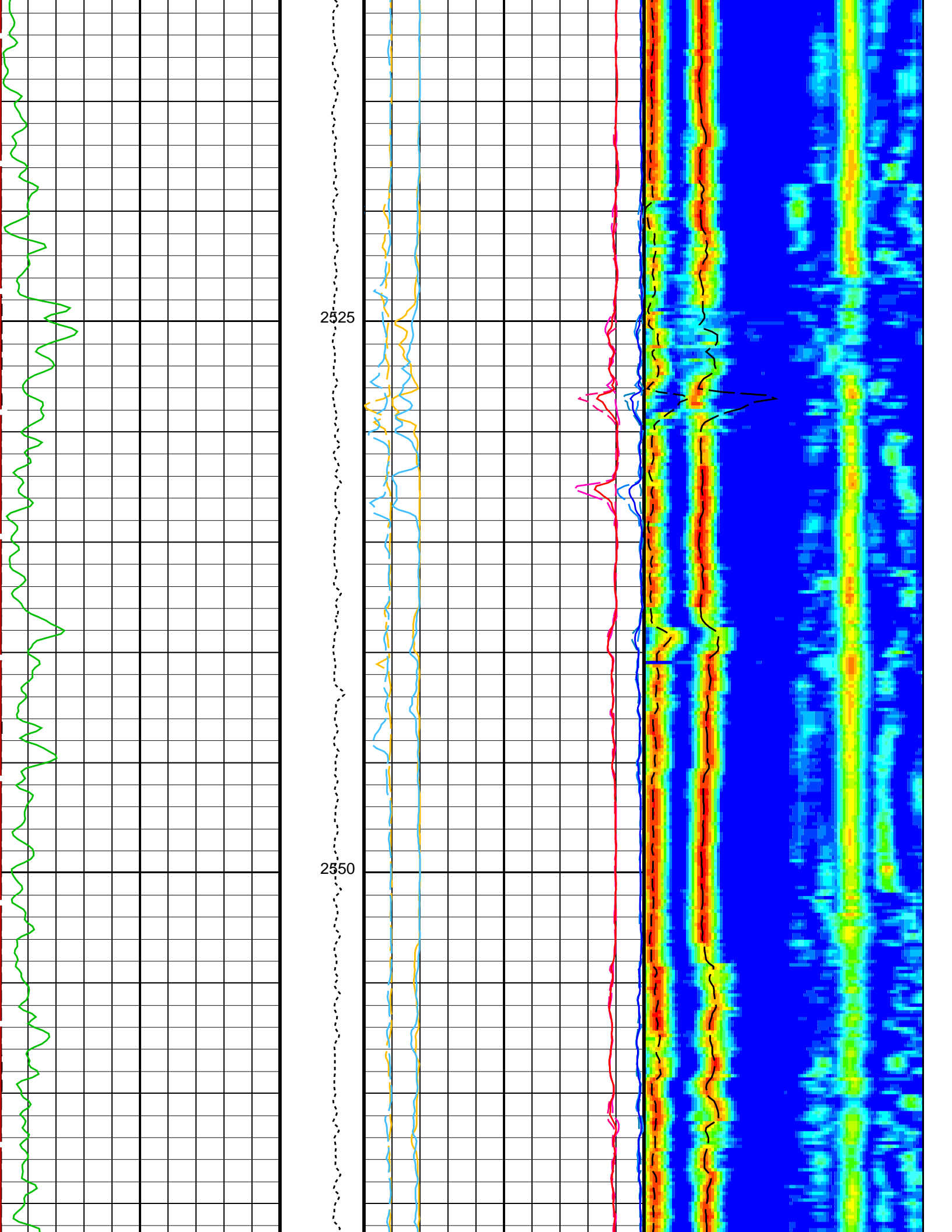


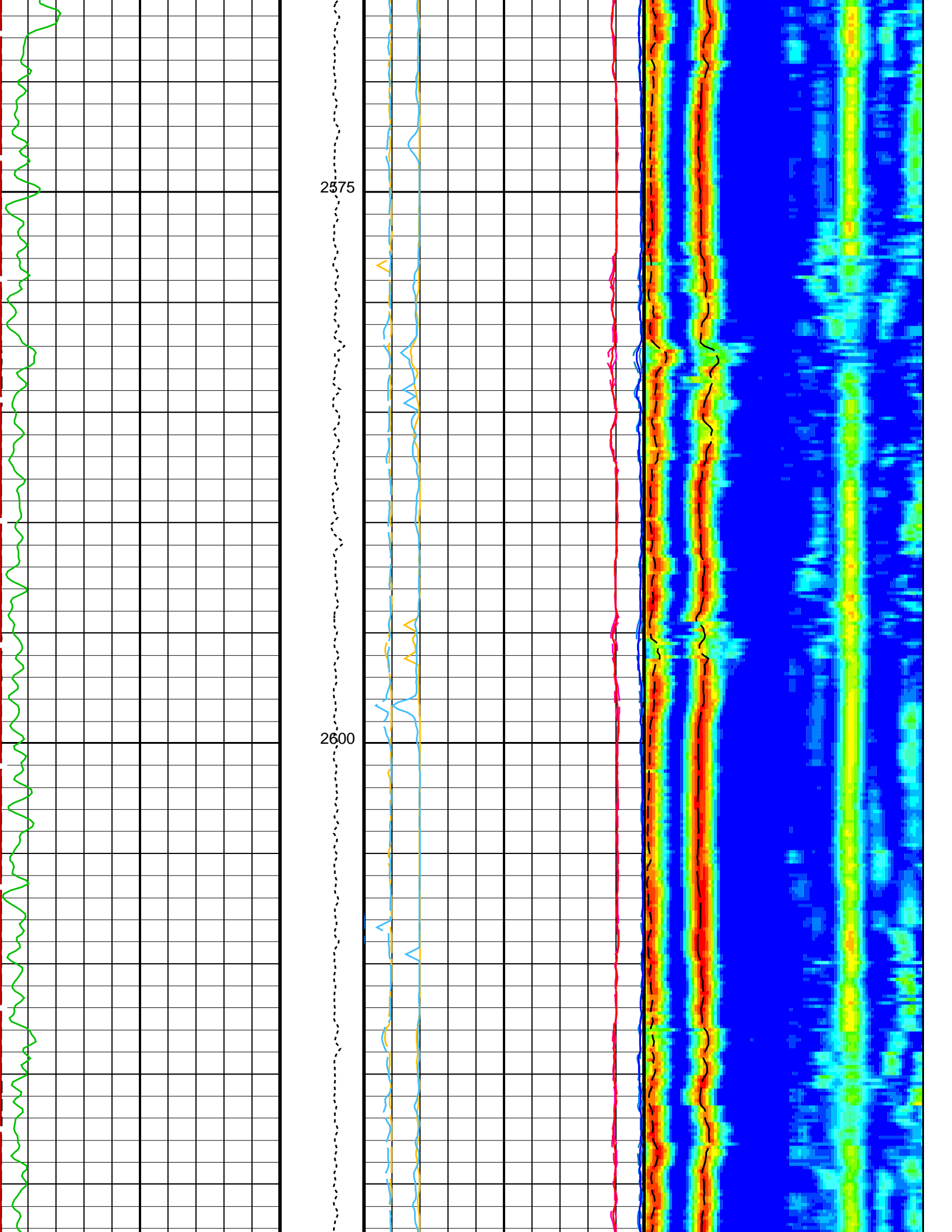


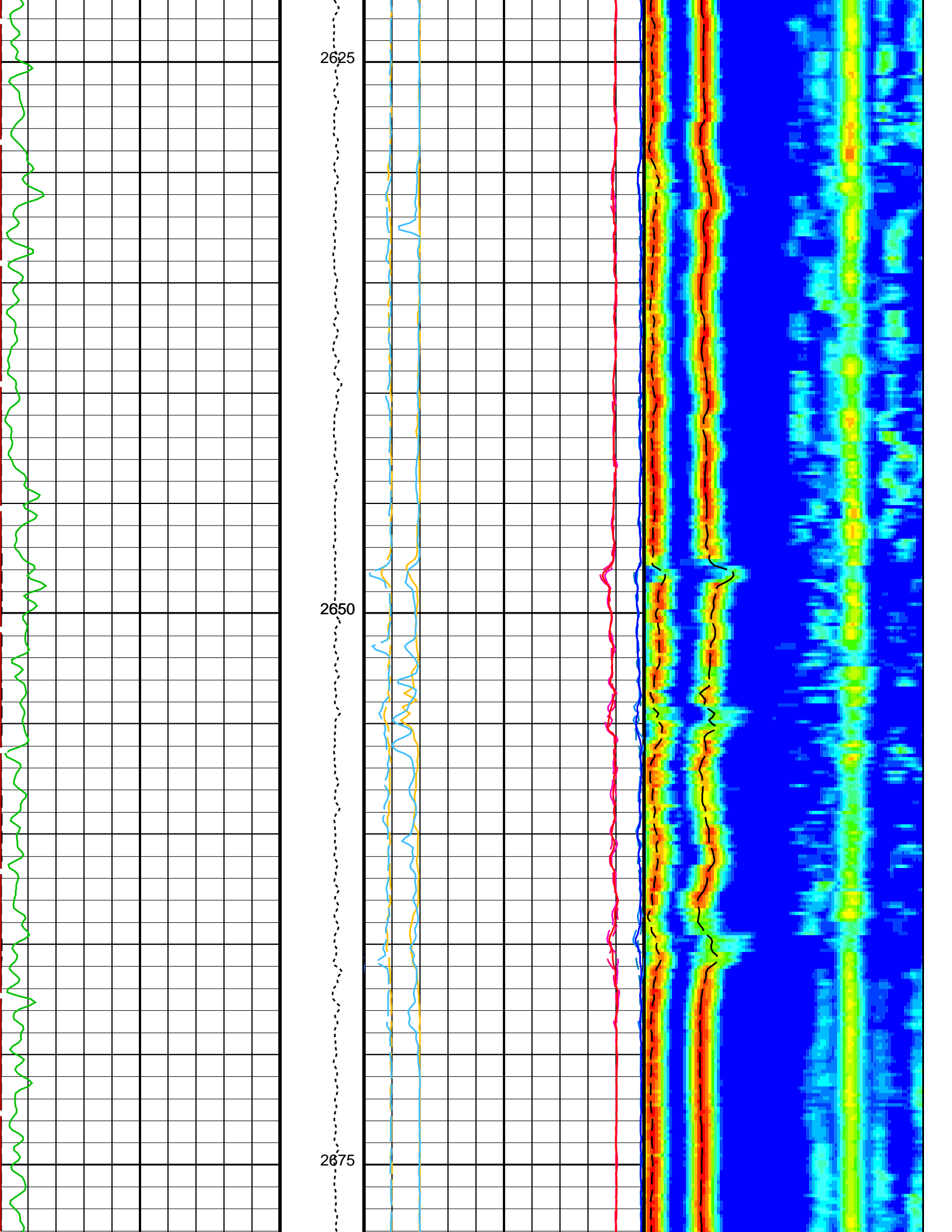


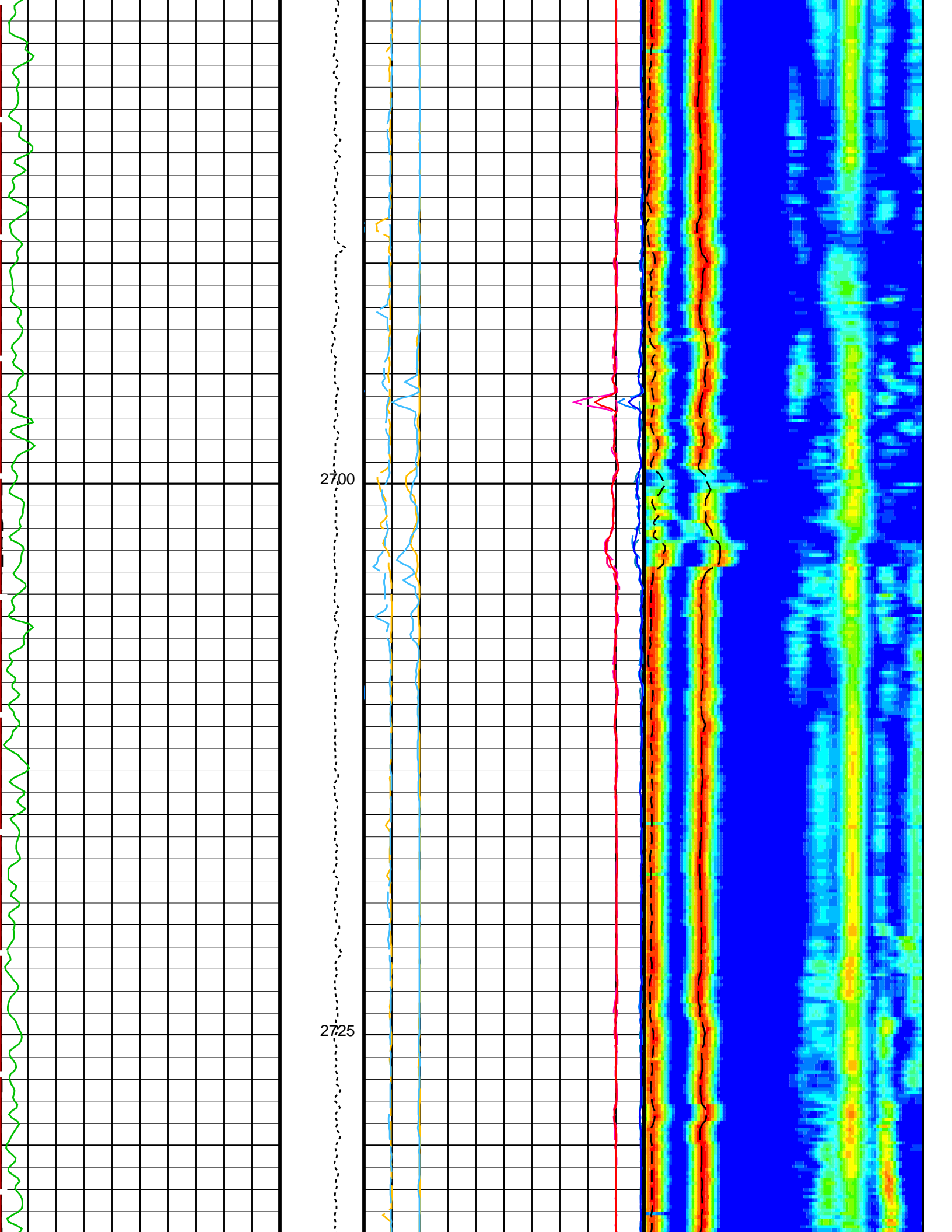


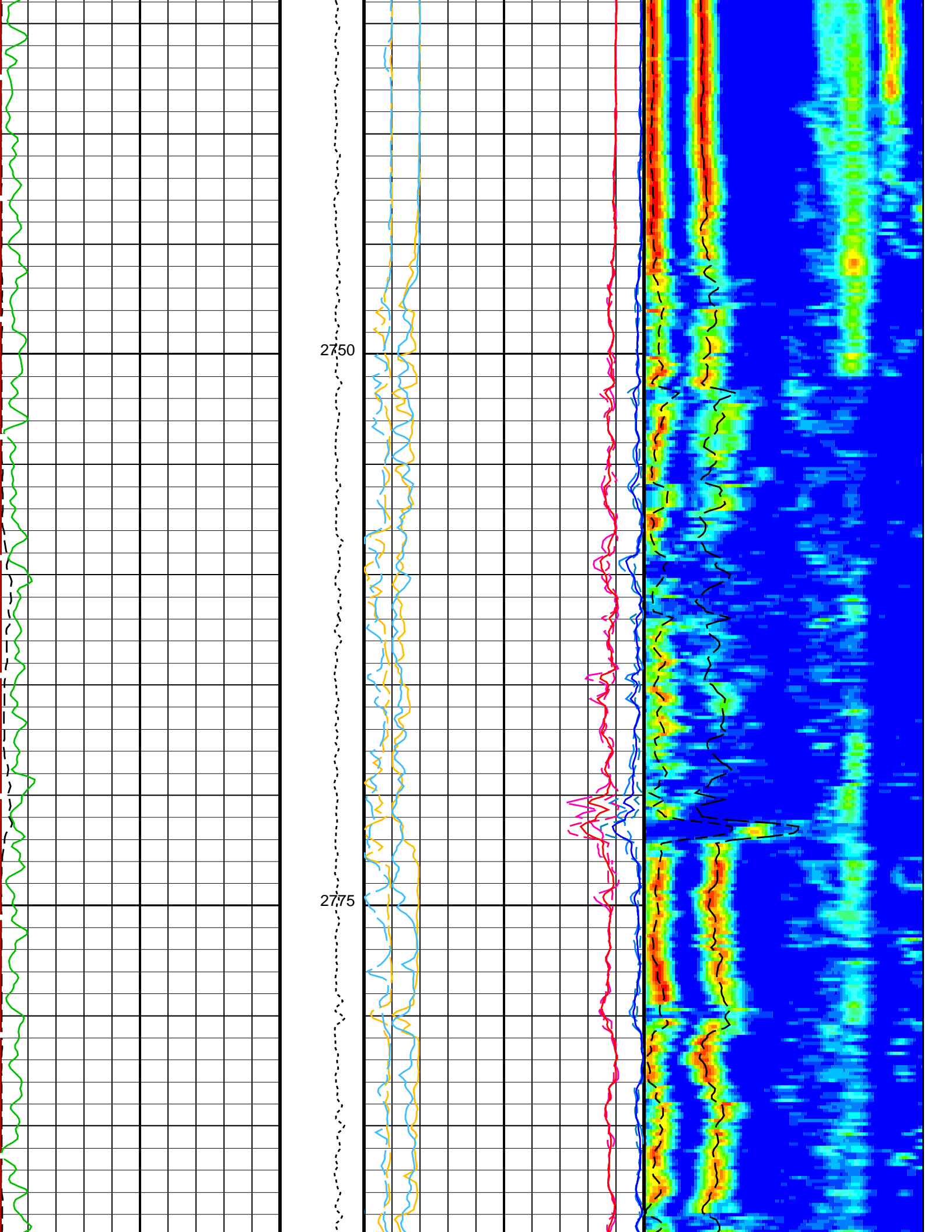


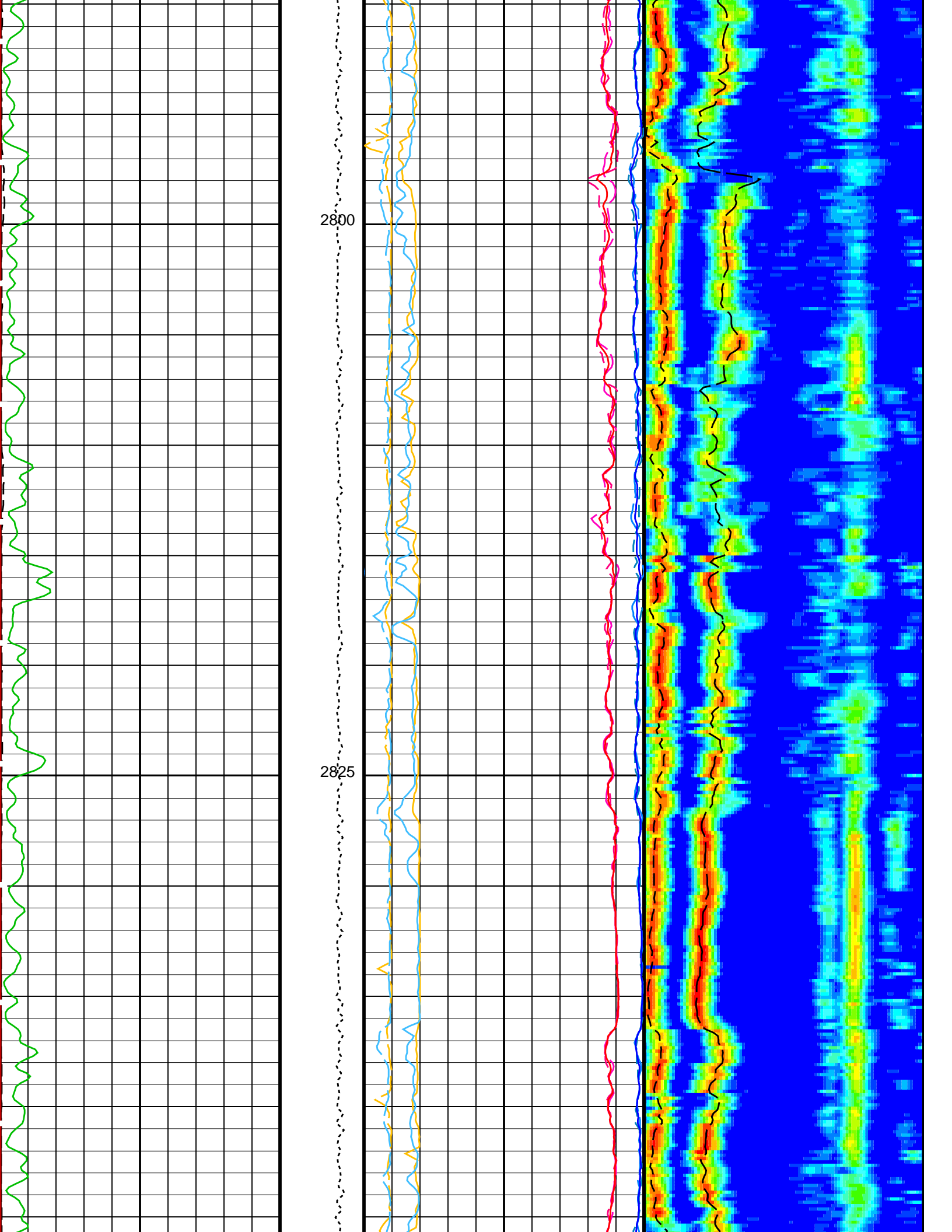




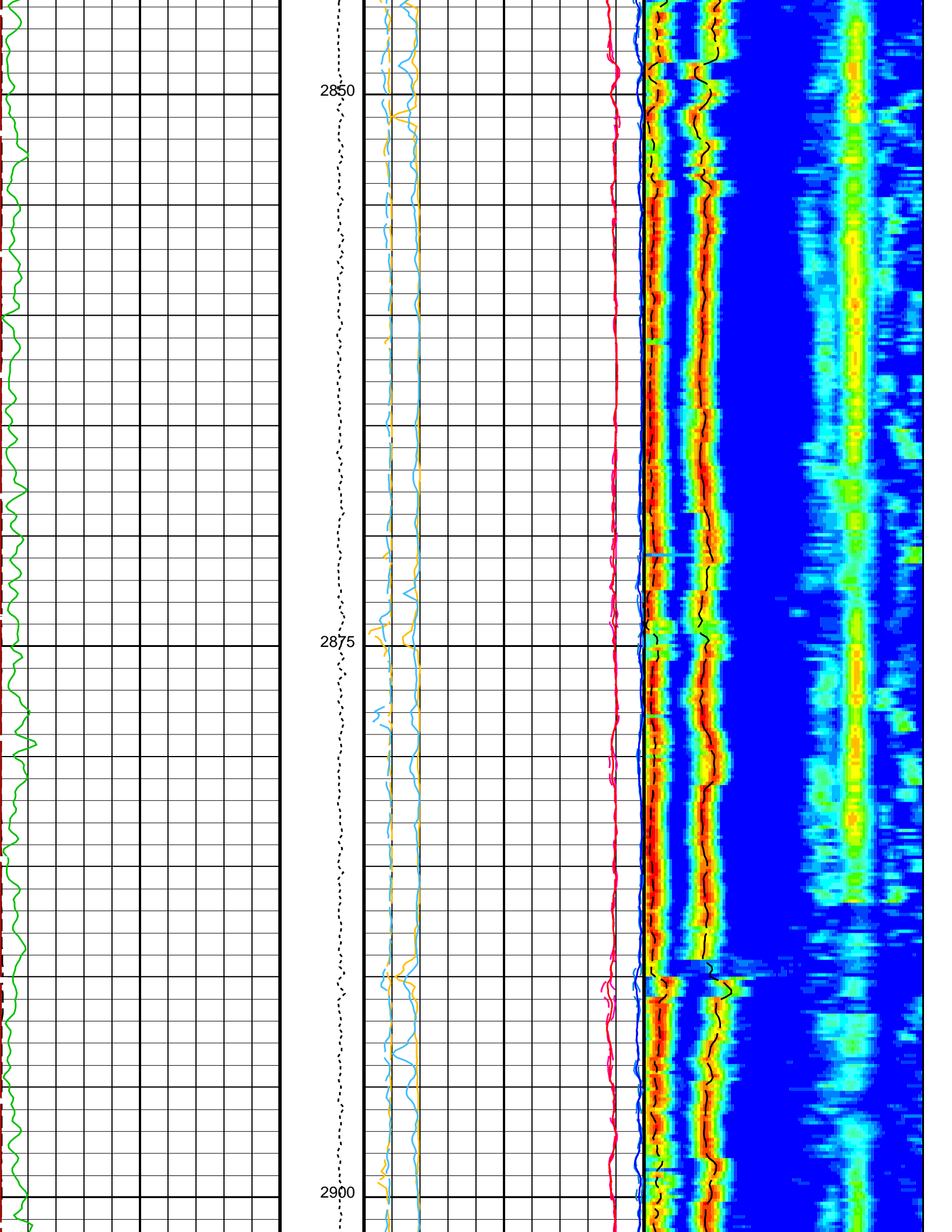


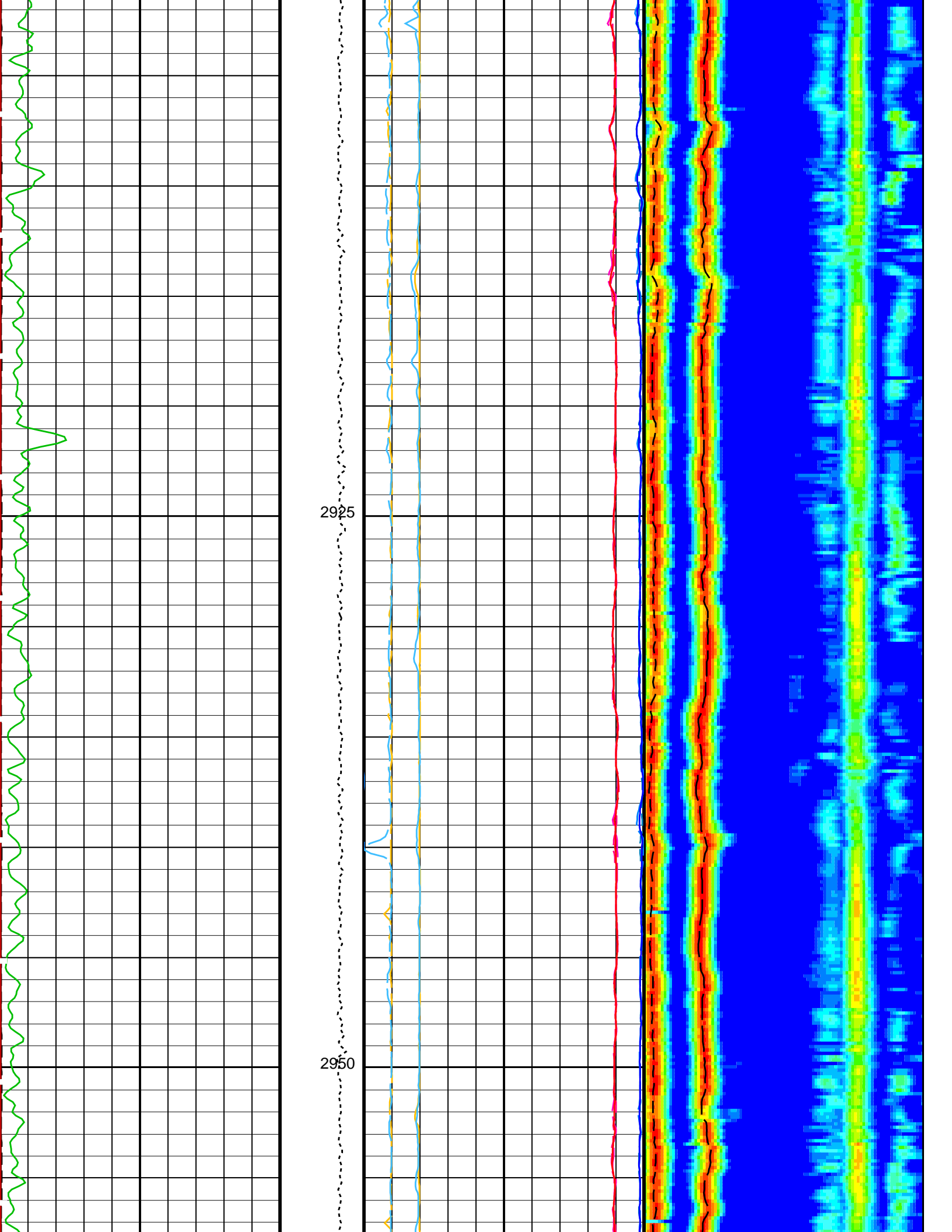


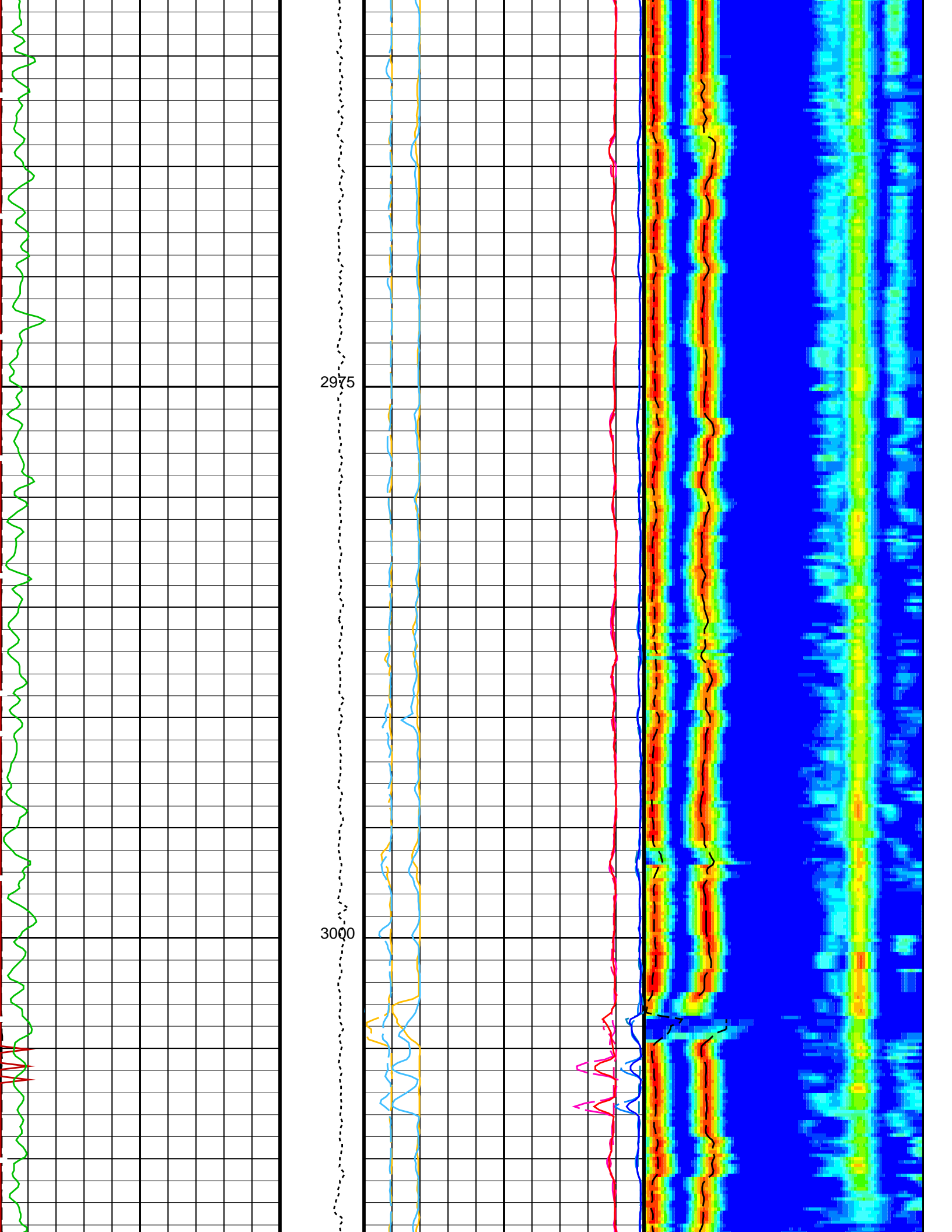


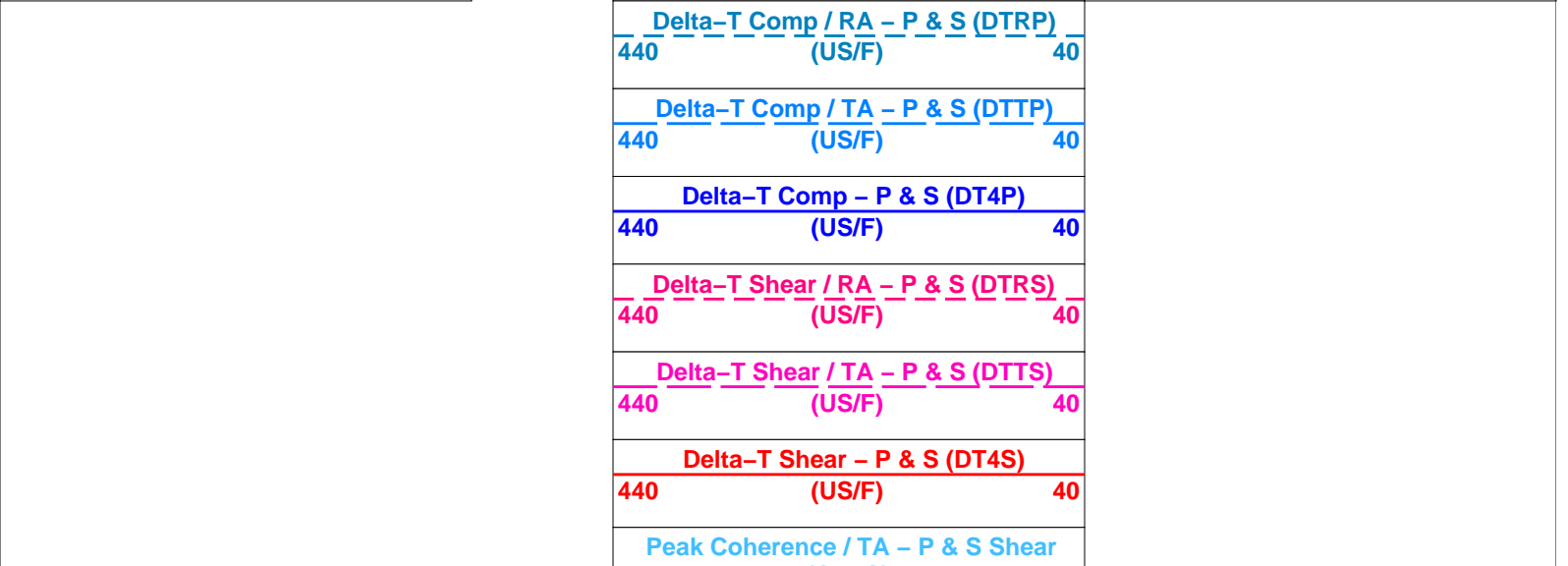
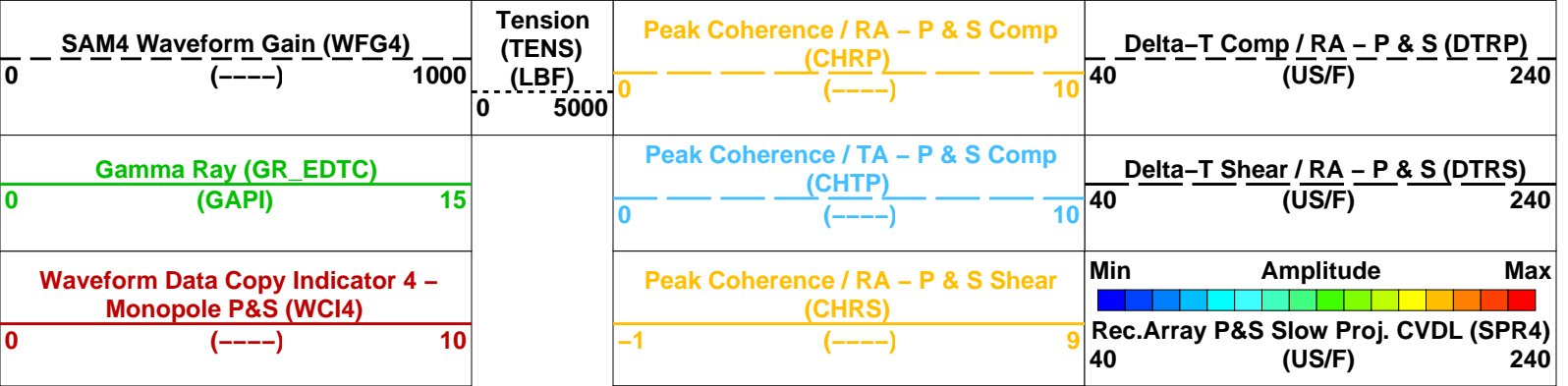
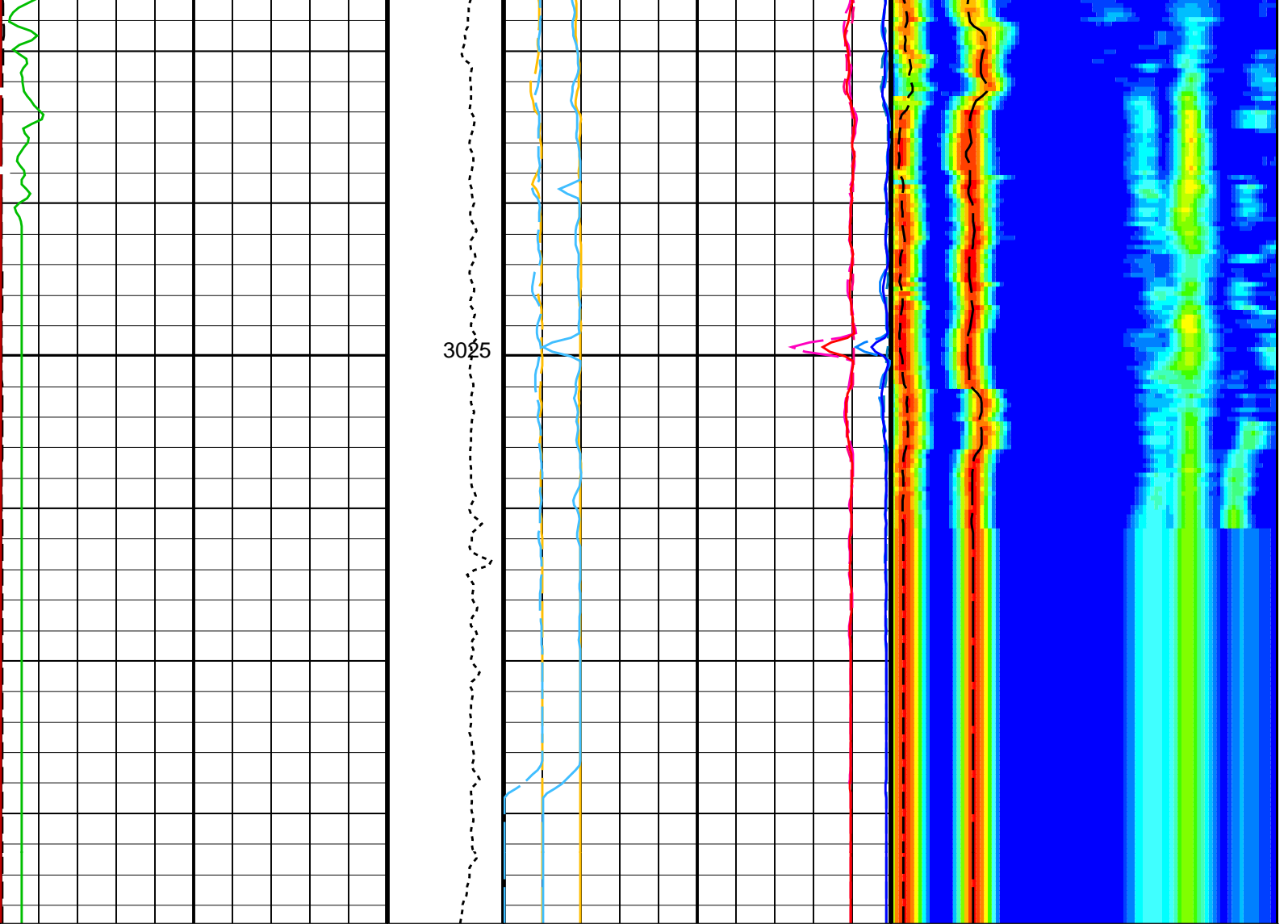












**PIP SUMMARY**

Time Mark Every 60 S

**Parameters**

DLIS Name	Description	Value
<b>DSST-B: Dipole Shear Imager - B</b>		
BHS	Borehole Status	OPEN
CASF	Label Casing Function - Monopole P&S	50
COLL	Label Slowness Lower Limit - Monopole P&S Compressional	40 US/F
COUL	Label Slowness Upper Limit - Monopole P&S Compressional	180 US/F
DDE4	Digitizing Delay 4	0 US
DDEX	Digitizing Delay X	0 US
DSI4	Digitizer Sample Interval 4	10 US
DSIX	Digitizer Sample Interval X	40 US
DTF	Delta-T Fluid	189 US/F
DWC4	Digitizer Word Count 4	512
DWCX	Digitizer Word Count X	512
FILG	Label Fill Gap Control - Monopole P&S	COMP_SHEAR
LFC	Label Formation Character - Monopole P&S	DYNAMIC
MCS	Mean Casing Slowness	57 US/F
MTXG	Monopole Transmitter Geometry	186 IN
NWI4	Number Waveform Items 4	8
NWIX	Number Waveform Items X	32
RSMN	Label Shear/Compressional Minimum Ratio - Monopole P&S	1.4
RSMX	Label Shear/Compressional Maximum Ratio - Monopole P&S	2.12
RX1G	Receiver 1 Geometry	294 IN
RX2G	Receiver 2 Geometry	300 IN
RX3G	Receiver 3 Geometry	306 IN
RX4G	Receiver 4 Geometry	312 IN
RX5G	Receiver 5 Geometry	318 IN
RX6G	Receiver 6 Geometry	324 IN
RX7G	Receiver 7 Geometry	330 IN
RX8G	Receiver 8 Geometry	336 IN
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	ODD
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	BCR
SAS4	STC Sonic Array Status - Monopole P&S	255
SBO4	STC Search Band Offset - Monopole P&S	500 US
SBR4	STC Baseline Removal - Monopole P&S	ON
SBW4	STC Search Bandwidth - Monopole P&S	2000 US
SFC4	STC Formation Character - Monopole P&S	SELECTABLE
SFM4	STC Filter - Monopole P&S	B3-20K
SHLL	Label Slowness Lower Limit - Monopole P&S Shear	75 US/F
SHUL	Label Slowness Upper Limit - Monopole P&S Shear	180 US/F
SLL4	STC Slowness Lower Limit - Monopole P&S	40 US/F
SST4	STC Slowness Step - Monopole P&S	2 US/F
SSW4	STC Source Waveform - Monopole P&S	WF_SAM4
STLL	Label Slowness Lower Limit - Monopole Stoneley	180 US/F
STUL	Label Slowness Upper Limit - Monopole Stoneley	780 US/F
SUL4	STC Slowness Upper Limit - Monopole P&S	240 US/F
SWD4	STC Slowness Width - Monopole P&S	10 US/F
TBF4	STC Time for Baseline Fill - Monopole P&S	300 US
TLL4	STC Time Lower Limit - Monopole P&S	150 US
TST4	STC Time Step - Monopole P&S	50 US
TUL4	STC Time Upper Limit - Monopole P&S	3660 US
TWD4	STC Time Width - Monopole P&S	1000 US
TWI4	STC Integration Time Window - Monopole P&S	500 US
TWSX	Transmitter Waveform Select X	0
WFM4	Waveform Mode 4	W1
<b>EDTC-B: Enhanced DTS Cartridge</b>		
BHS	Borehole Status	OPEN
<b>System and Miscellaneous</b>		
DO	Depth Offset for Playback	3.0 M
PP	Playback Processing	RECOMPUTE

Format: DSST\_P\_S\_VDL\_COLOR    Vertical Scale: 1:200    Graphics File Created: 25-Feb-2012 06:14

**OP System Version: 19C0-187**

GPIT-A/B	19C0-187	DTA-A	19C0-187
DSST-B	19C0-187	EDTC-B	19C0-187

**Input DLIS Files**

DEFAULT	Flip_DSI_026LUP	PRODUCER	25-Feb-2012 06:12	3040.5 M	2308.7 M
---------	-----------------	----------	-------------------	----------	----------

# Output DLIS Files

DEFAULT

DSI\_027PUP

FN:14

PRODUCER

25-Feb-2012 06:14



## Up Log

MAXIS Field Log

Company: Lamont Doherty

Well: Expedition 340T, Site U1309D

### Input DLIS Files

DEFAULT DSI\_037LUP FN:36 PRODUCER 25-Feb-2012 05:42 3040.5 M 2321.8 M

### Output DLIS Files

DEFAULT DSI\_028PUP FN:15 PRODUCER 25-Feb-2012 06:18 3045.0 M 2326.2 M

### OP System Version: 19C0-187

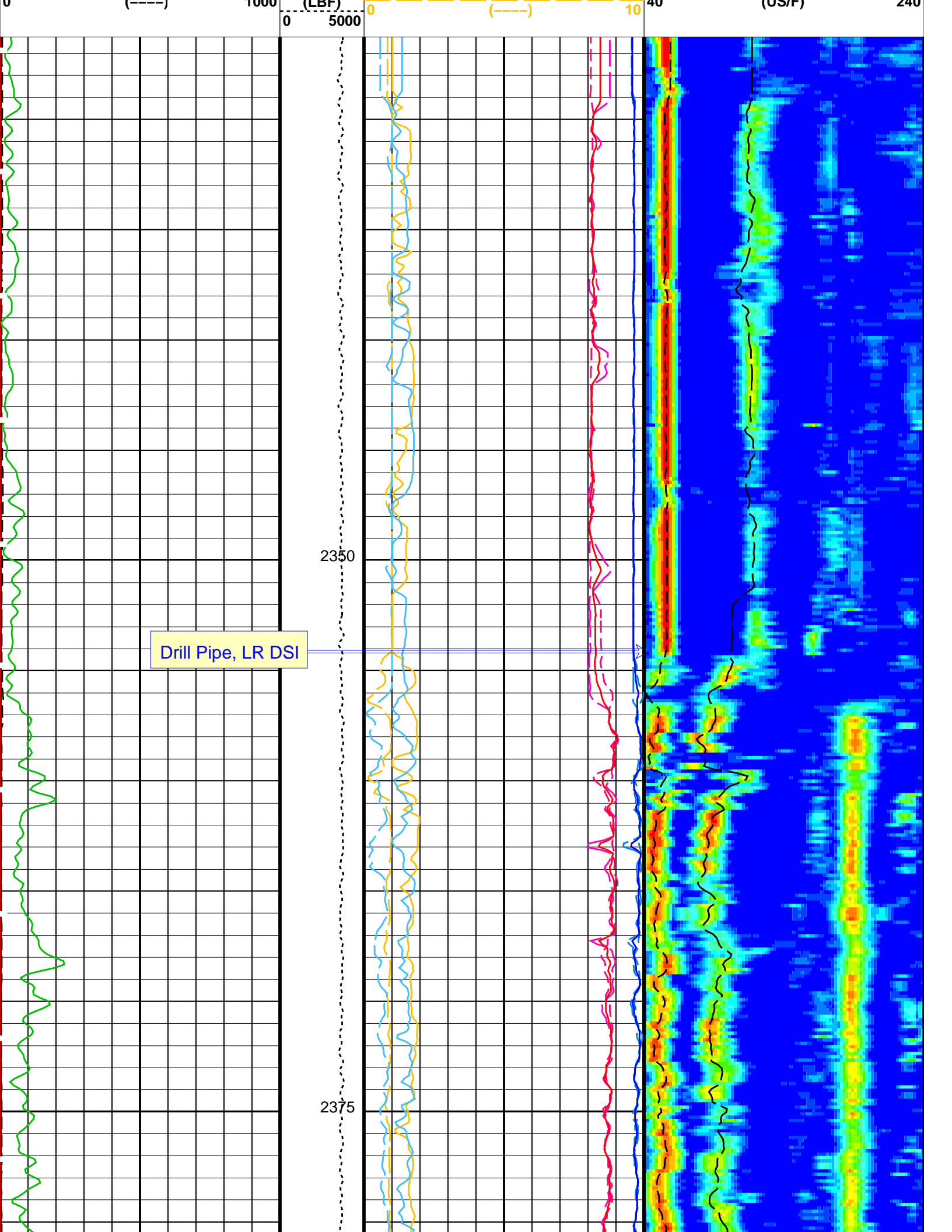
GPIT-A/B 19C0-187  
DSST-B 19C0-187

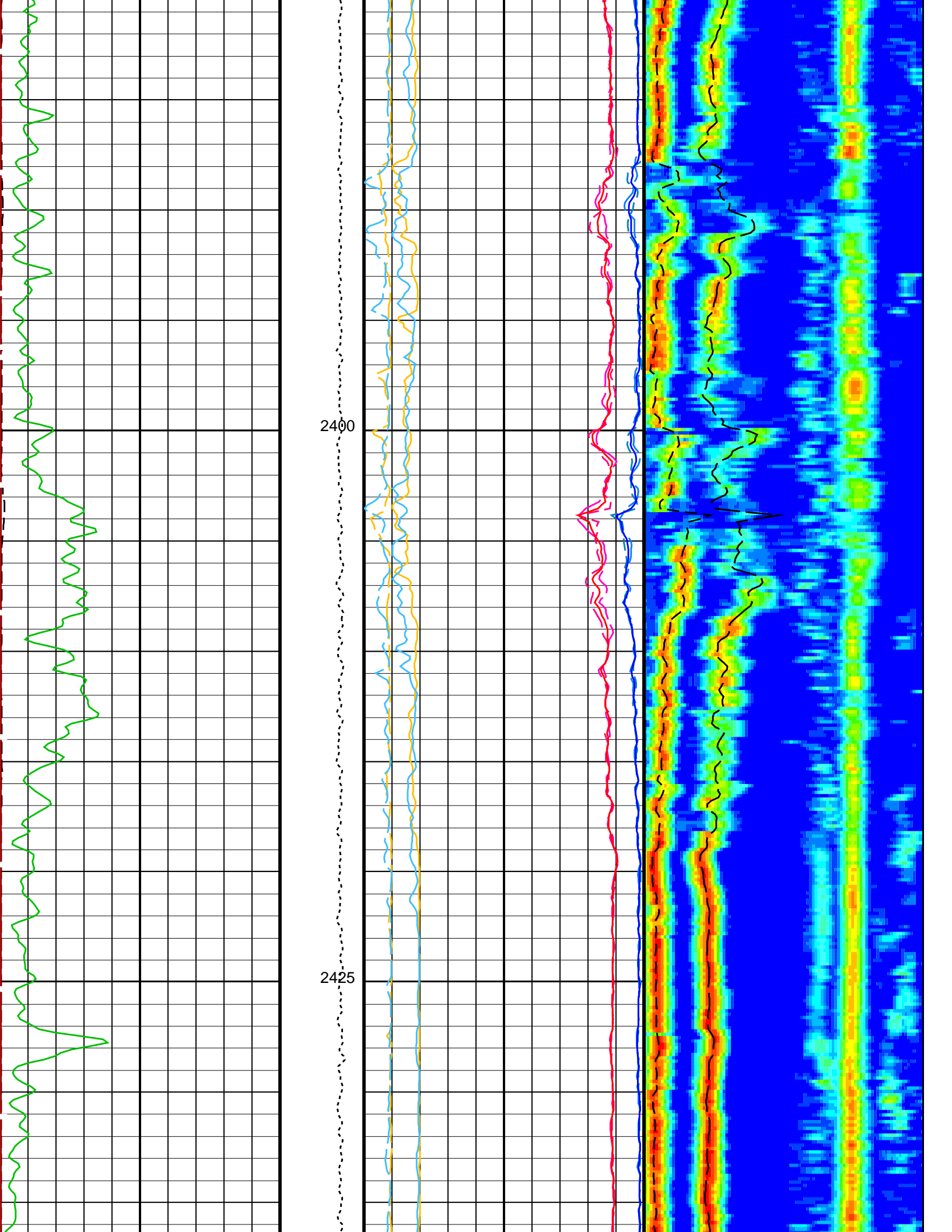
DTA-A 19C0-187  
EDTC-B 19C0-187

### PIP SUMMARY

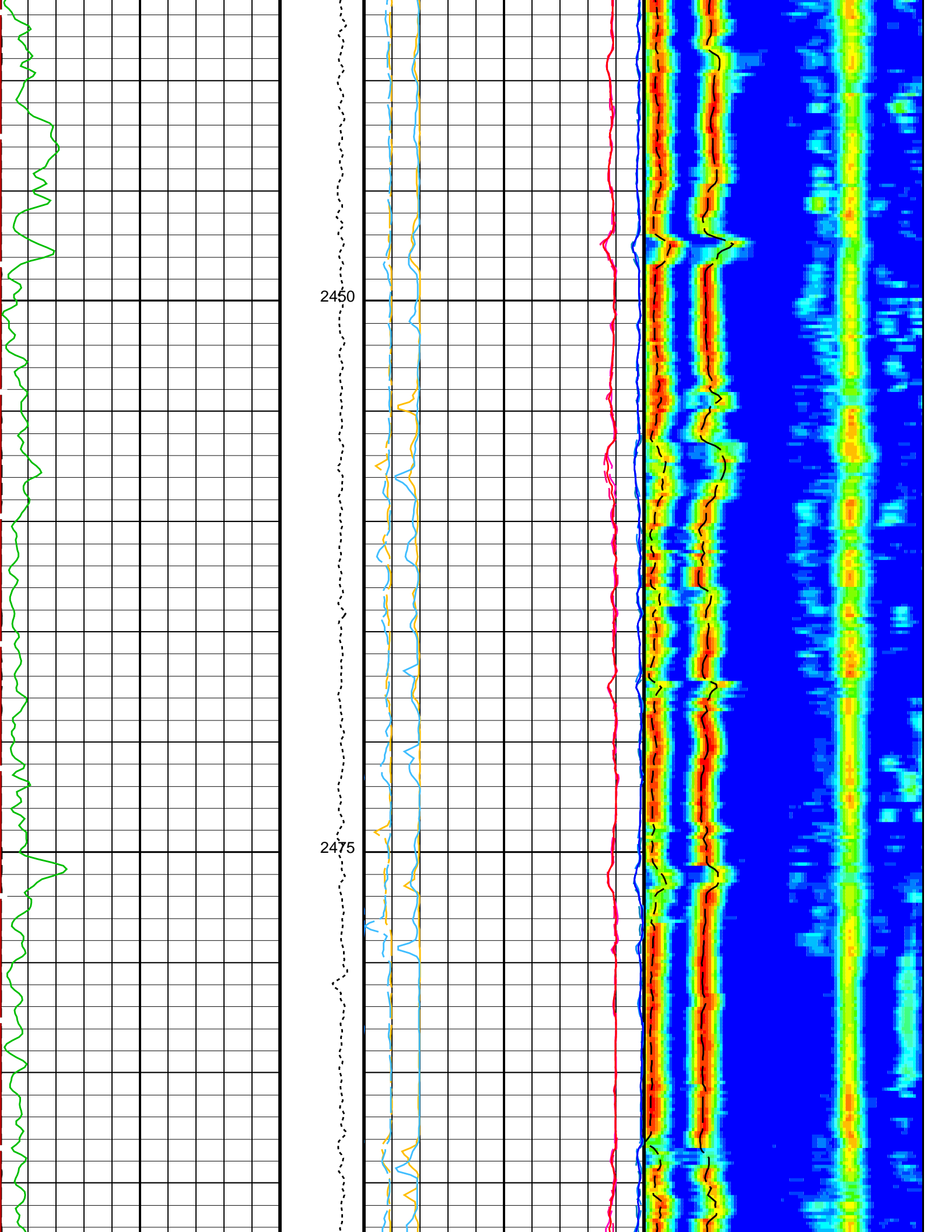
Time Mark Every 60 S

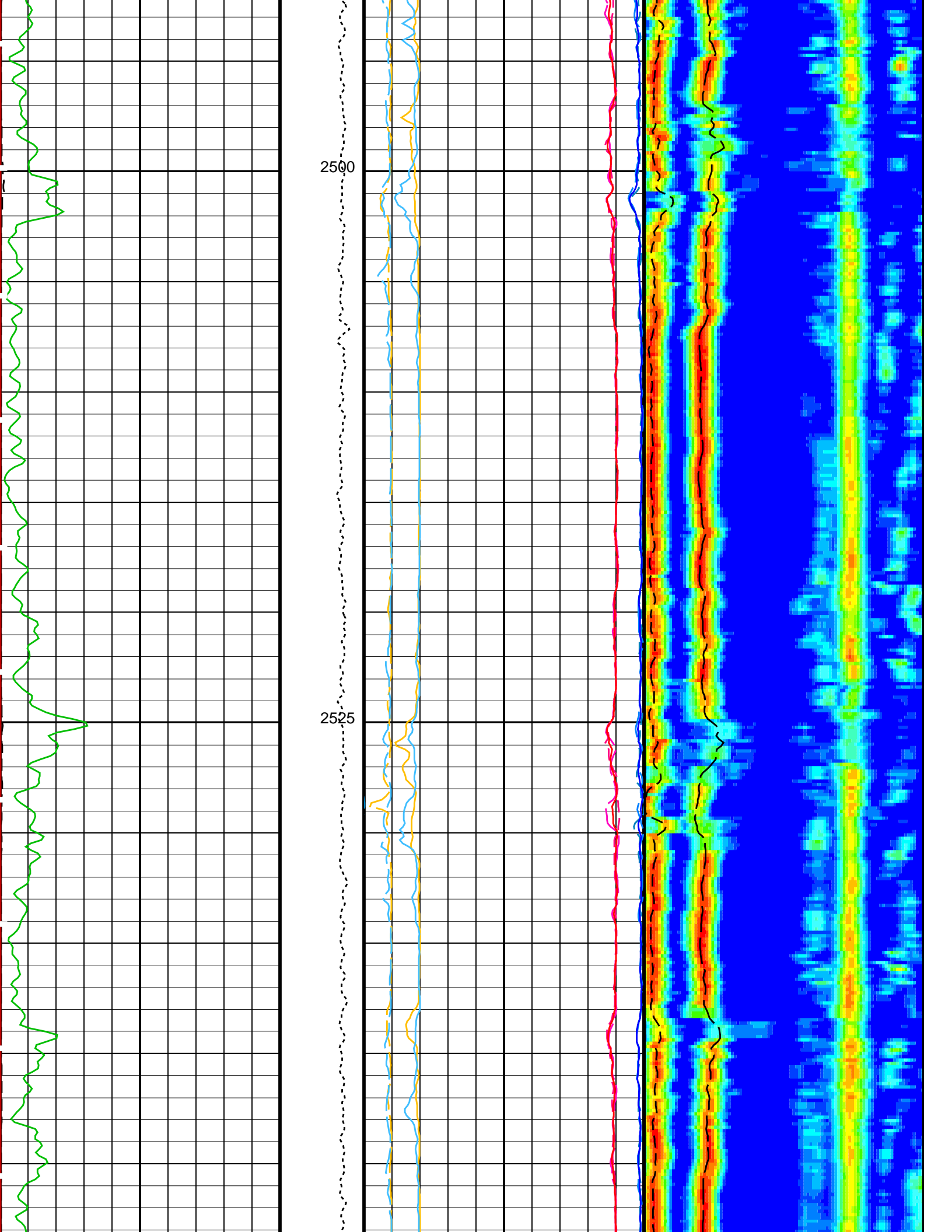
	<p><b>Peak Coherence / TA - P &amp; S Shear (CHTS)</b></p> <p>-1 (----) 9</p>	
	<p><b>Delta-T Shear - P &amp; S (DT4S)</b></p> <p>440 (US/F) 40</p>	
	<p><b>Delta-T Shear / TA - P &amp; S (DTTS)</b></p> <p>440 (US/F) 40</p>	
	<p><b>Delta-T Shear / RA - P &amp; S (DTRS)</b></p> <p>440 (US/F) 40</p>	
	<p><b>Delta-T Comp - P &amp; S (DT4P)</b></p> <p>440 (US/F) 40</p>	
	<p><b>Delta-T Comp / TA - P &amp; S (DTTP)</b></p> <p>440 (US/F) 40</p>	
	<p><b>Delta-T Comp / RA - P &amp; S (DTRP)</b></p> <p>440 (US/F) 40</p>	
<p><b>Waveform Data Copy Indicator 4 - Monopole P&amp;S (WCI4)</b></p> <p>0 (----) 10</p>	<p><b>Peak Coherence / RA - P &amp; S Shear (CHRS)</b></p> <p>-1 (----) 9</p>	<p>Min  Max</p> <p>Rec.Array P&amp;S Slow Proj. CVDL (SPR4)</p> <p>40 (US/F) 240</p>
<p><b>Gamma Ray (GR_EDTC)</b></p> <p>0 (GAPI) 15</p>	<p><b>Peak Coherence / TA - P &amp; S Comp (CHTP)</b></p> <p>0 (----) 10</p>	<p><b>Delta-T Shear / RA - P &amp; S (DTRS)</b></p> <p>40 (US/F) 240</p>
<p><b>SAM4 Waveform Gain (WFG4)</b></p> <p>0 (----) 1000</p>	<p><b>Peak Coherence / RA - P &amp; S Comp (CHRP)</b></p> <p>0 (----) 10</p>	<p><b>Delta-T Comp / RA - P &amp; S (DTRP)</b></p> <p>40 (US/F) 240</p>
	<p><b>Tension (TENS)</b></p> <p>0 (----) 1000</p>	

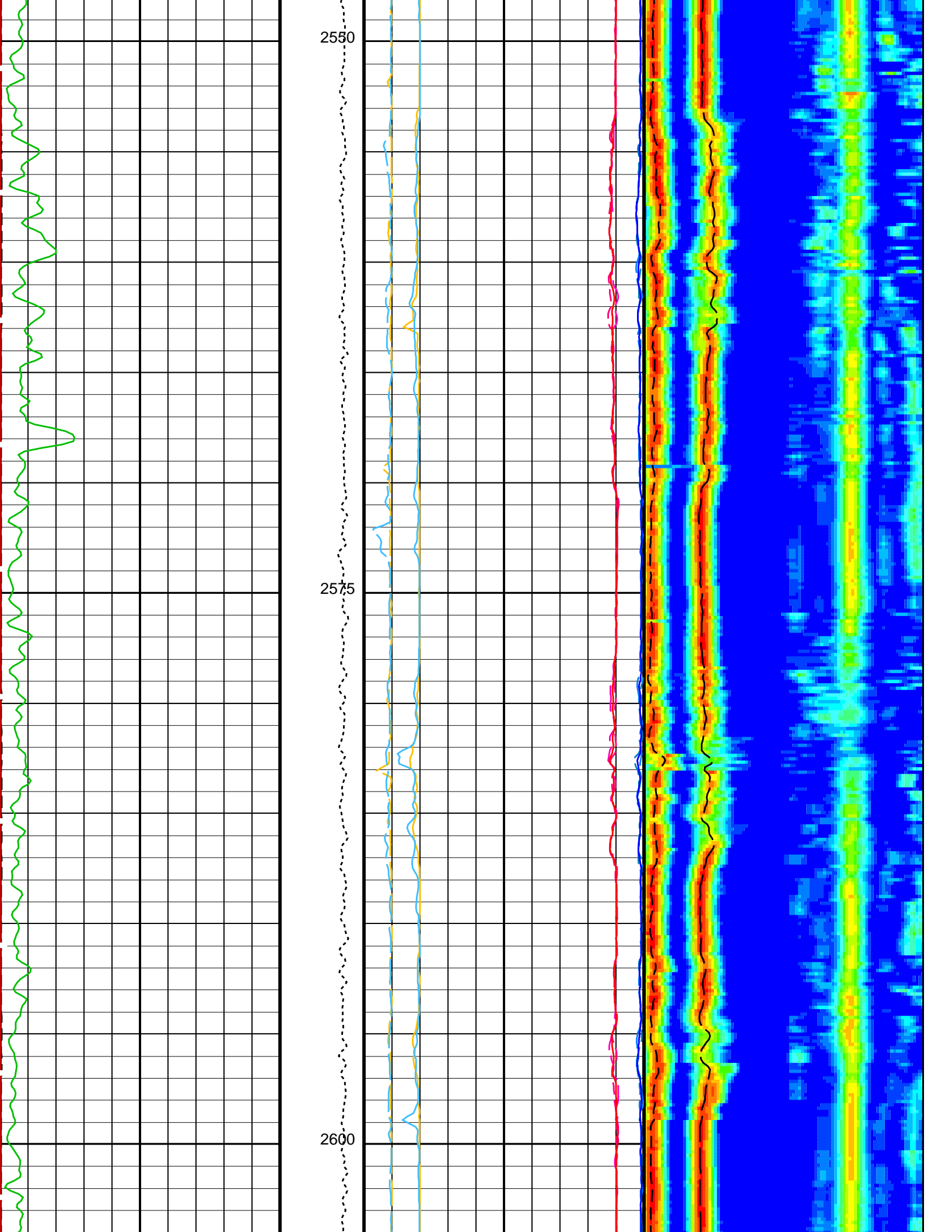


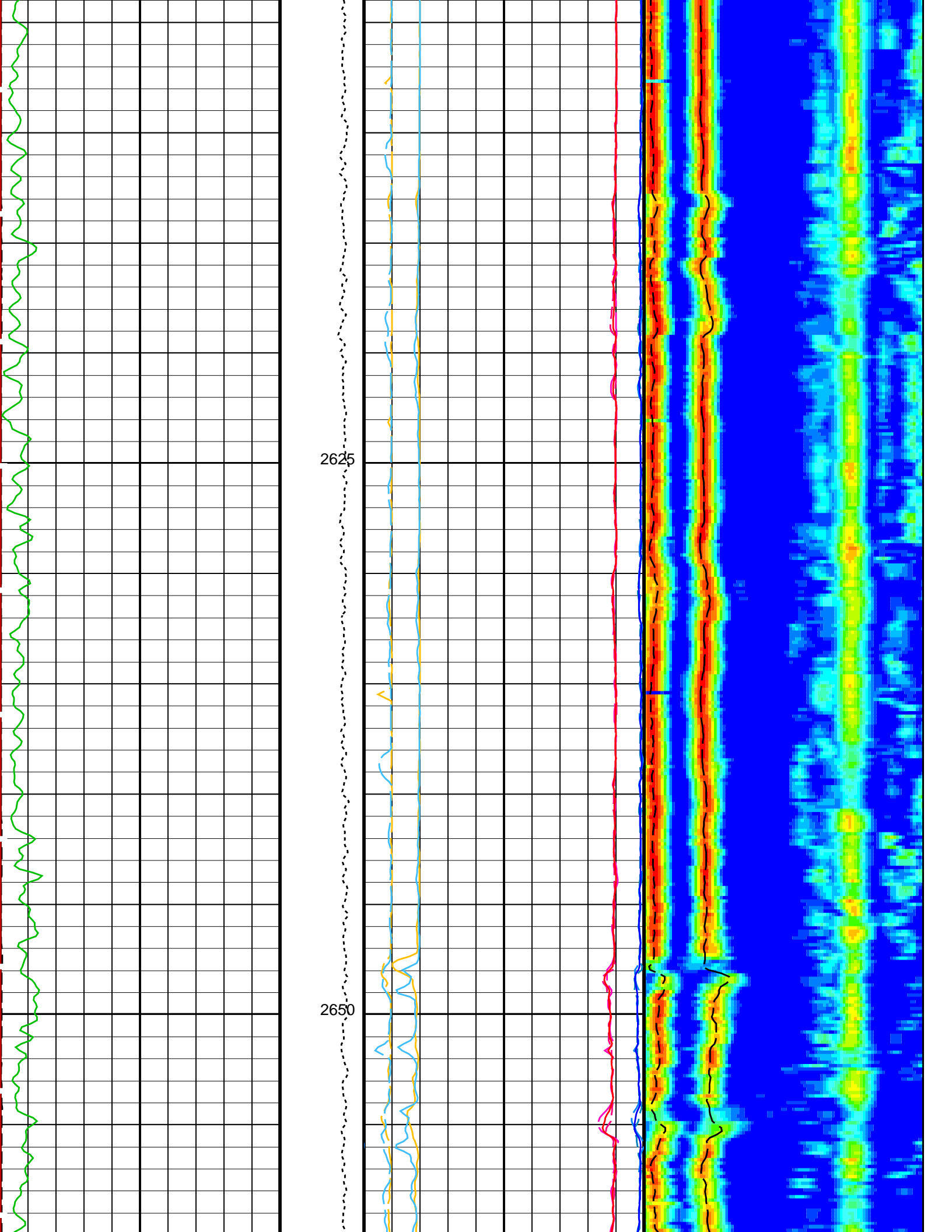


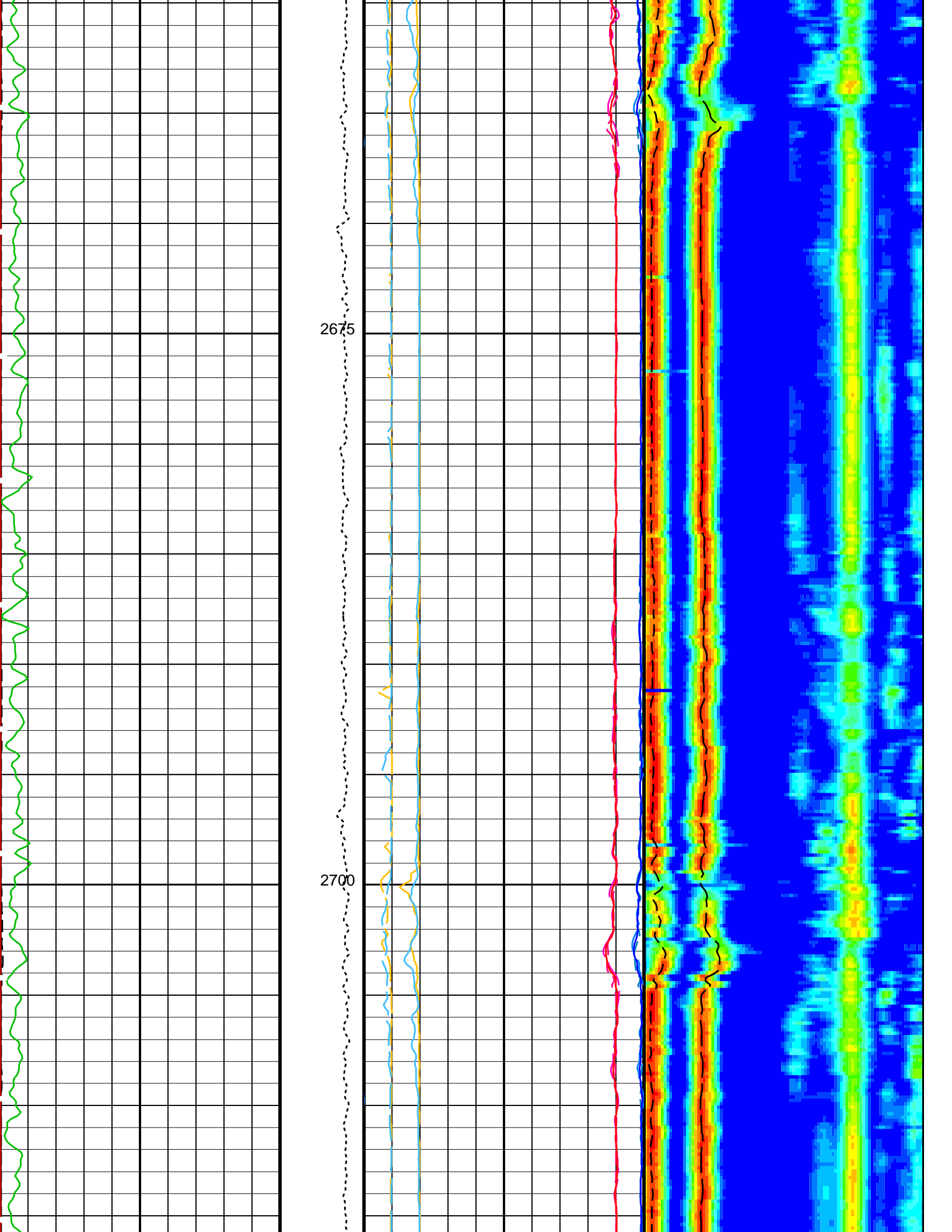


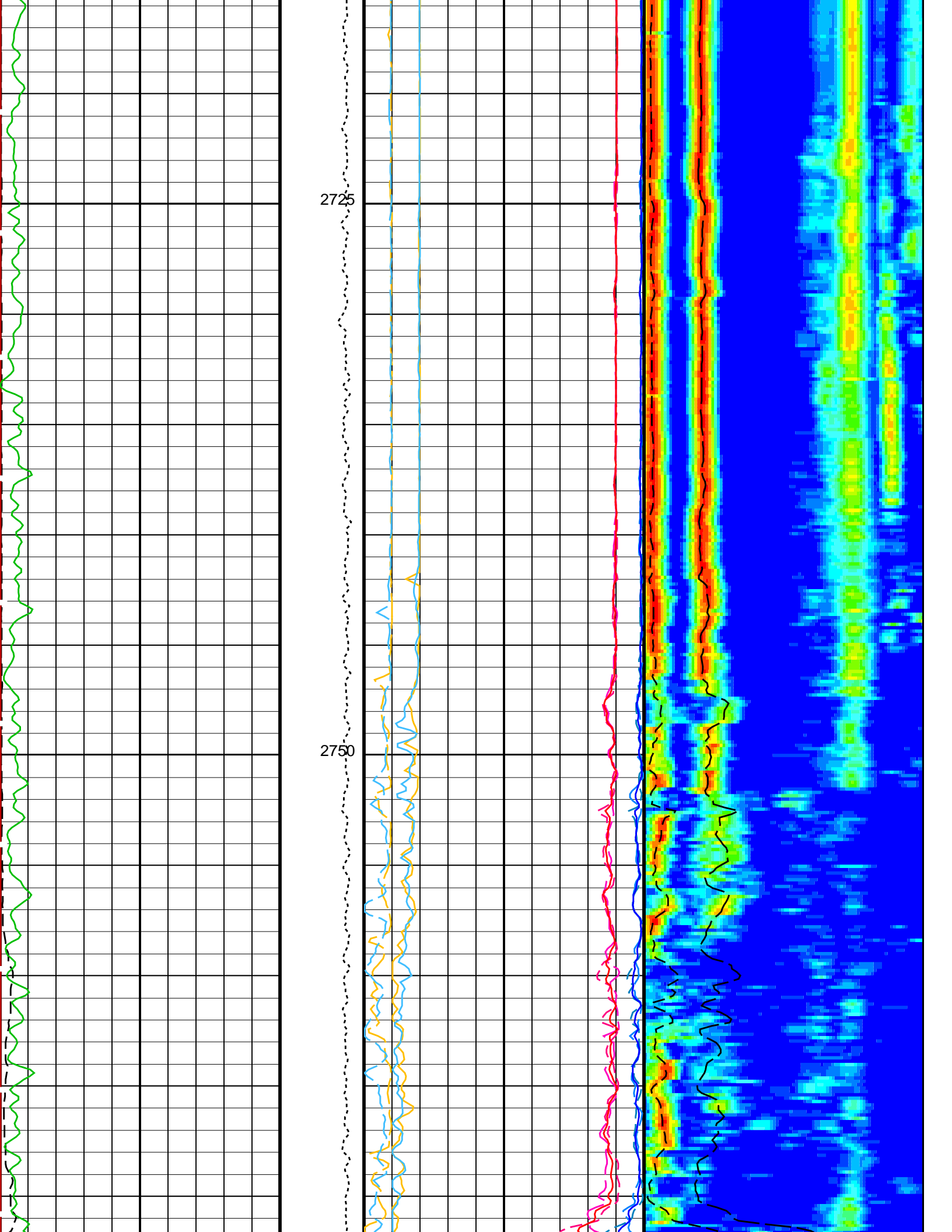


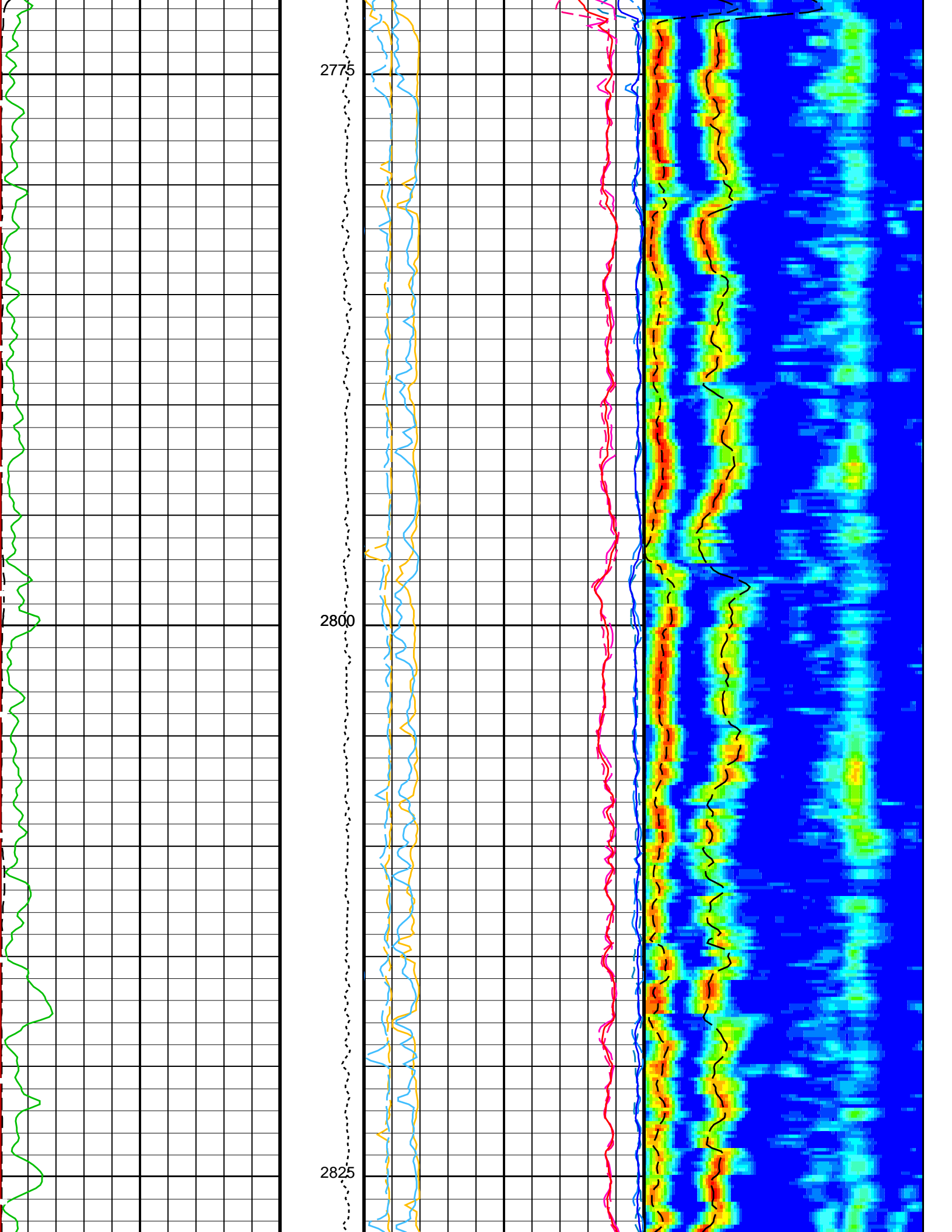


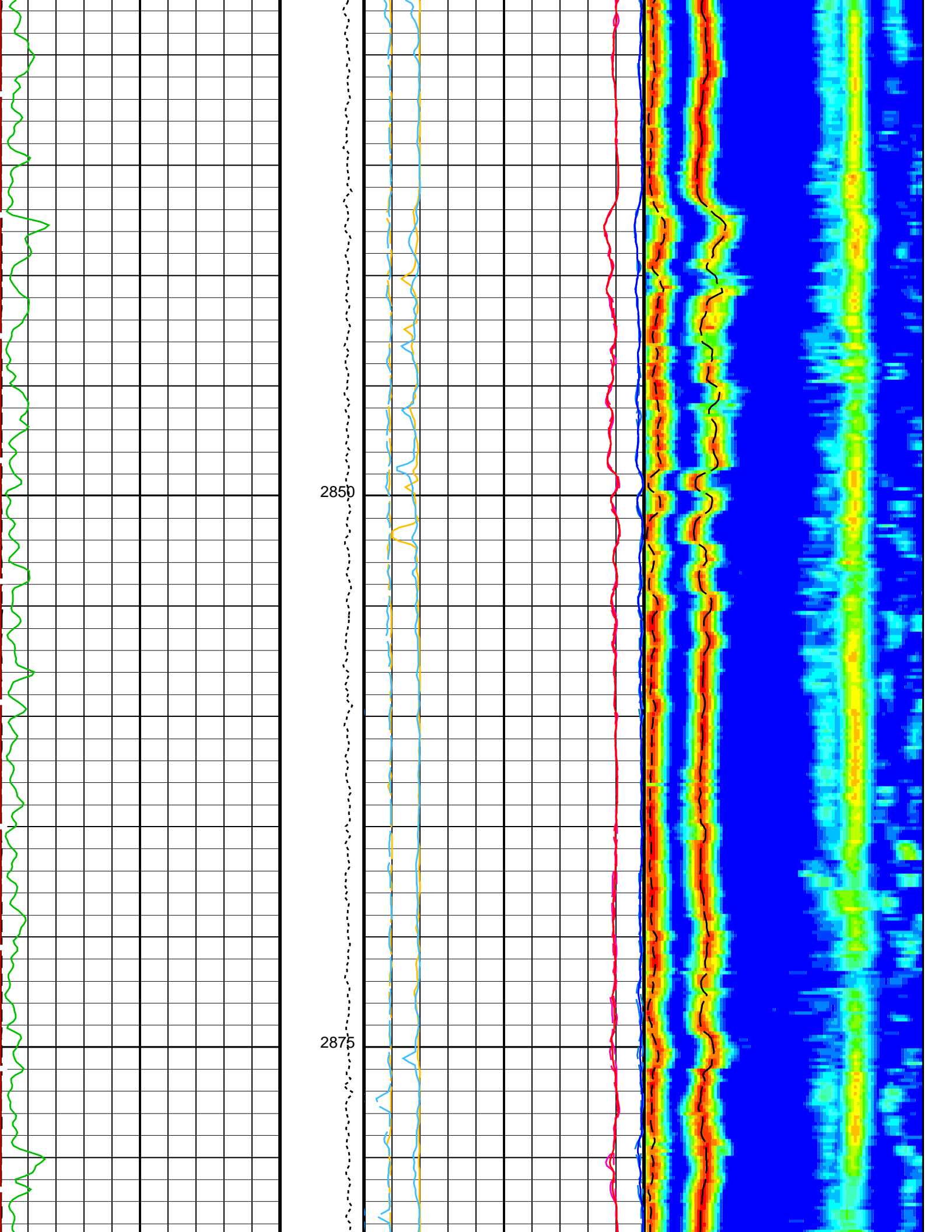




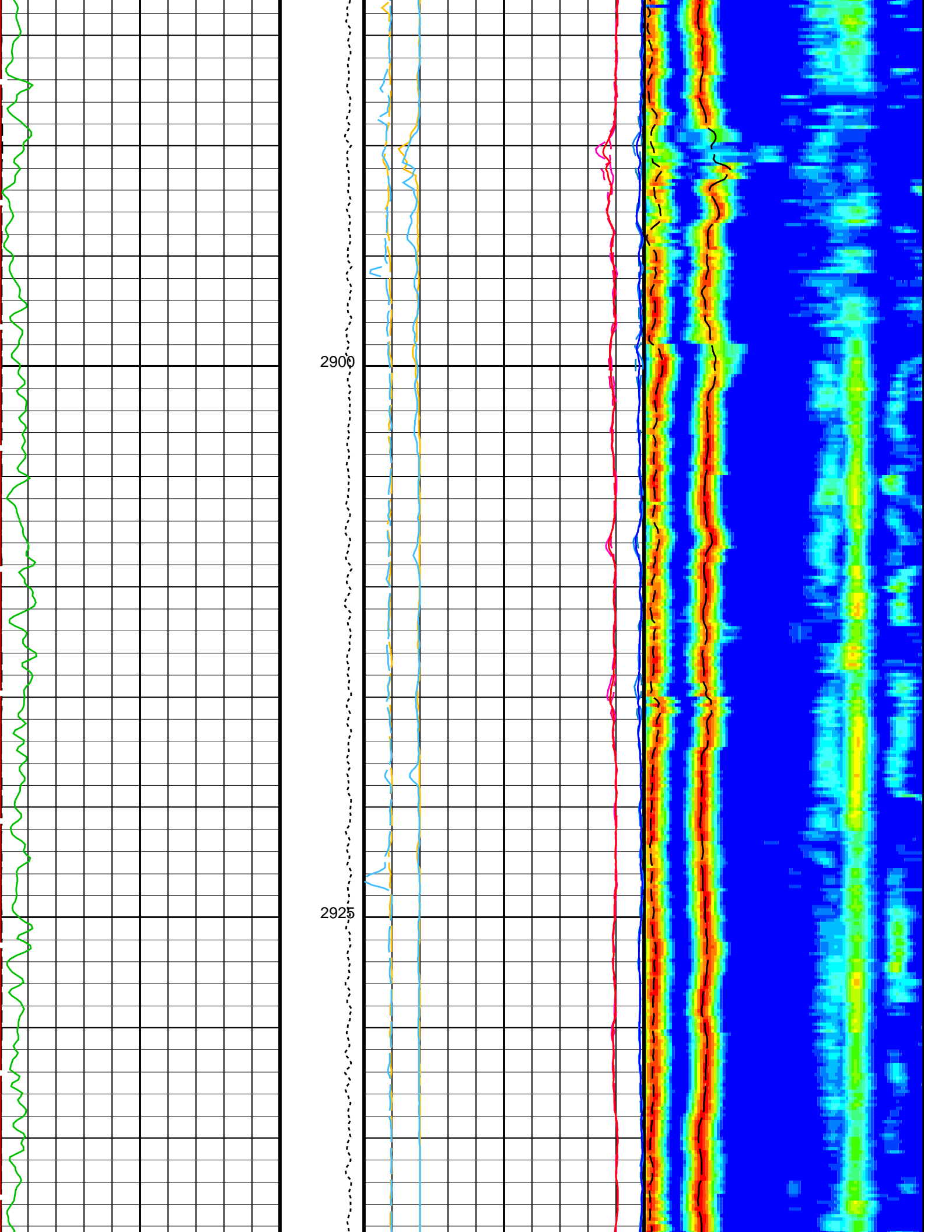


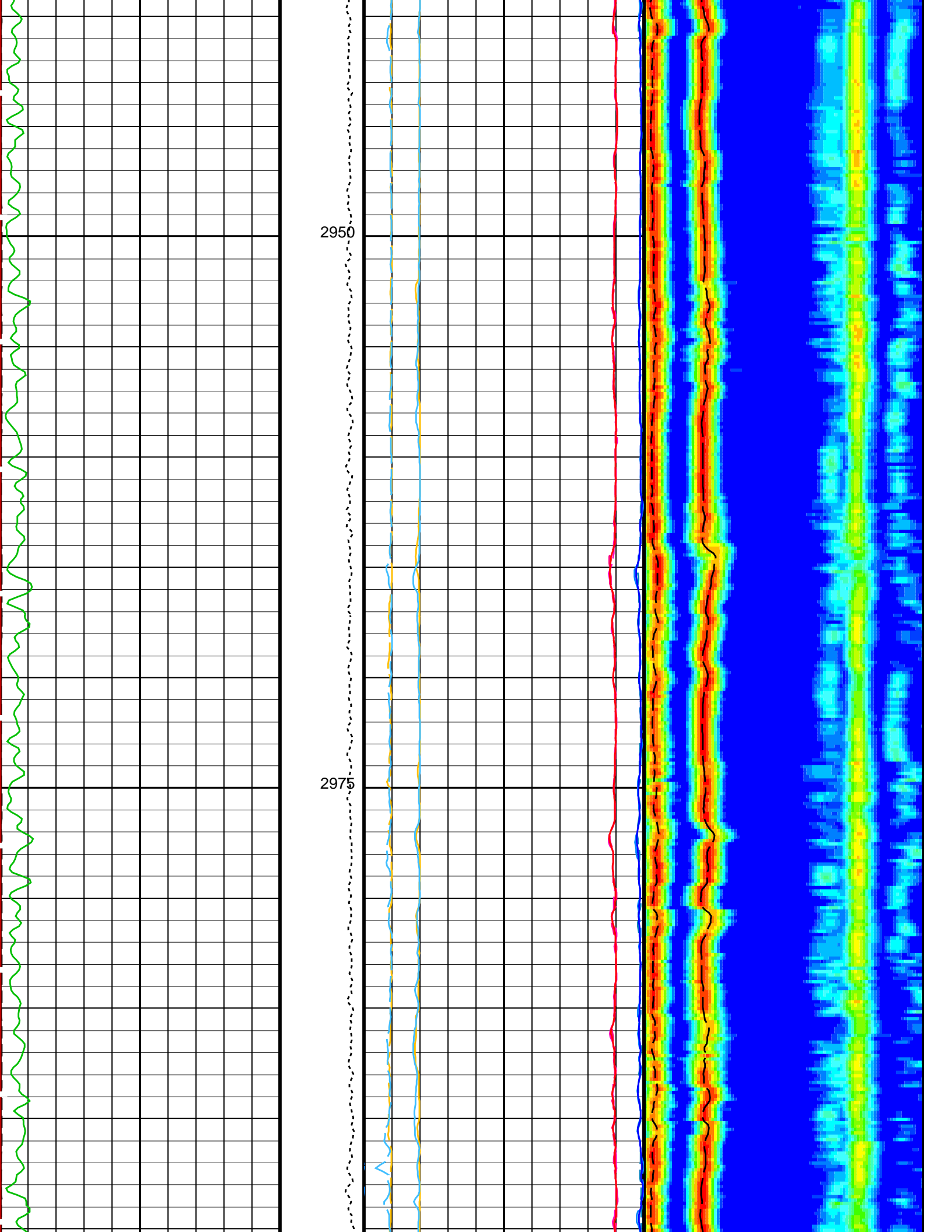


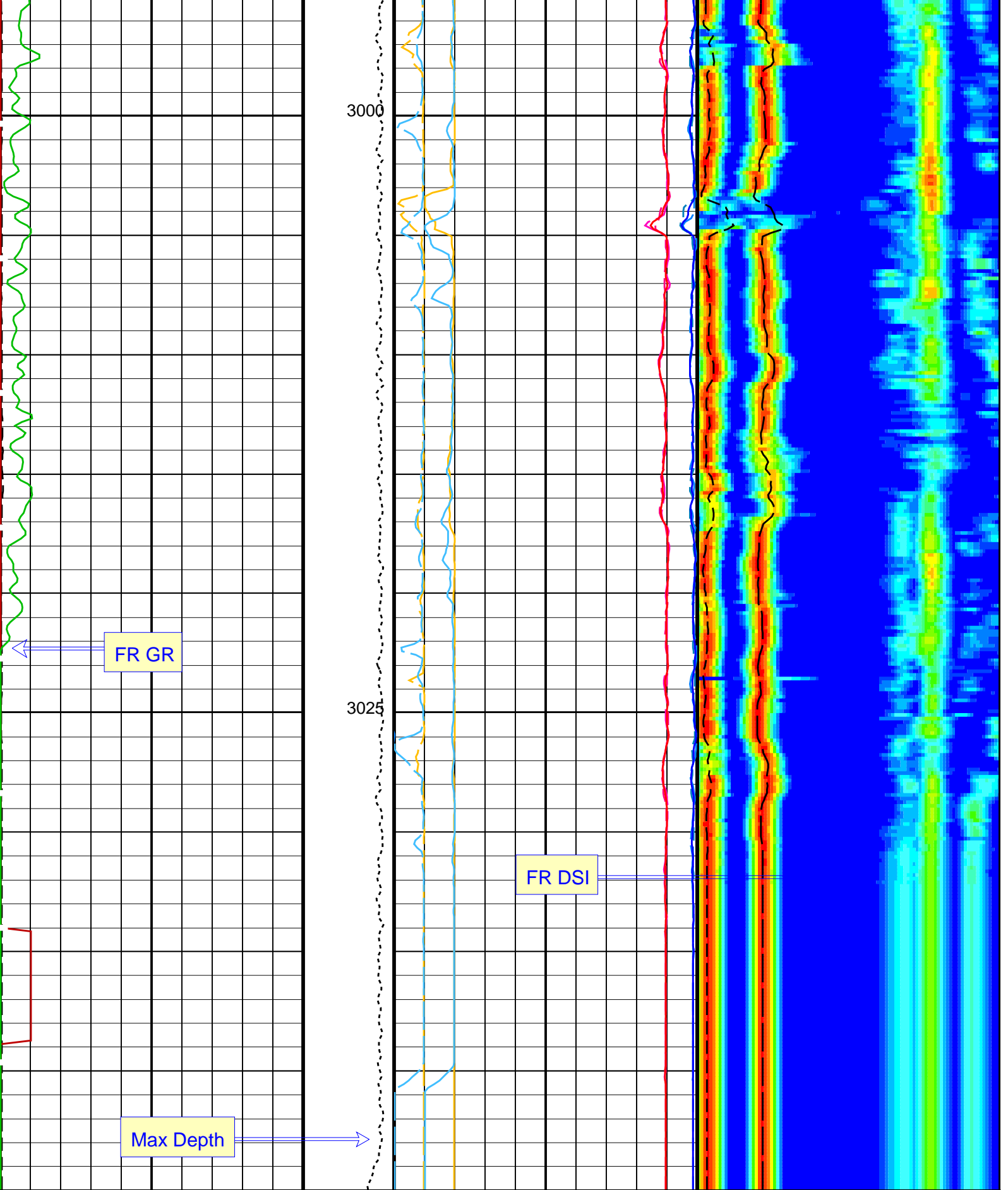












FR GR

Max Depth

FR DSI

SAM4 Waveform Gain (WFG4)  
(----) 1000

Gamma Ray (GR\_EDTC)  
(GAPI) 15

Tension  
(TENS)  
(LBF) 0 5000

Peak Coherence / RA - P & S Comp  
(CHRP)  
(----) 10

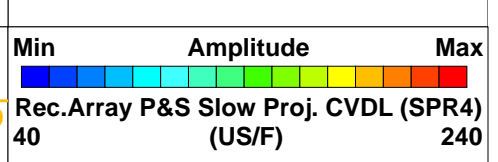
Peak Coherence / TA - P & S Comp  
(CHTP)  
(----) 10

Delta-T Comp / RA - P & S (DTRP)  
(US/F) 40 240

Delta-T Shear / RA - P & S (DTRS)  
(US/F) 40 240

<b>Waveform Data Copy Indicator 4 – Monopole P&amp;S (WCI4)</b>		
0	(-----)	10

<b>Peak Coherence / RA – P &amp; S Shear (CHRS)</b>		
-1	(-----)	9
<b>Delta-T Comp / RA – P &amp; S (DTRP)</b>		
440	(US/F)	40
<b>Delta-T Comp / TA – P &amp; S (DTTP)</b>		
440	(US/F)	40
<b>Delta-T Comp – P &amp; S (DT4P)</b>		
440	(US/F)	40
<b>Delta-T Shear / RA – P &amp; S (DTRS)</b>		
440	(US/F)	40
<b>Delta-T Shear / TA – P &amp; S (DTTS)</b>		
440	(US/F)	40
<b>Delta-T Shear – P &amp; S (DT4S)</b>		
440	(US/F)	40
<b>Peak Coherence / TA – P &amp; S Shear (CHTS)</b>		
-1	(-----)	9



**PIP SUMMARY**

Time Mark Every 60 S

**Parameters**

DLIS Name	Description	Value
DSST-B: Dipole Shear Imager – B		
BHS	Borehole Status	OPEN
CASF	Label Casing Function – Monopole P&S	50
COLL	Label Slowness Lower Limit – Monopole P&S Compressional	40 US/F
COUL	Label Slowness Upper Limit – Monopole P&S Compressional	180 US/F
DDE4	Digitizing Delay 4	0 US
DDEX	Digitizing Delay X	0 US
DSI4	Digitizer Sample Interval 4	10 US
DSIX	Digitizer Sample Interval X	40 US
DTF	Delta-T Fluid	189 US/F
DWC4	Digitizer Word Count 4	512
DWCX	Digitizer Word Count X	512
FILG	Label Fill Gap Control – Monopole P&S	COMP_SHEAR
LFC	Label Formation Character – Monopole P&S	DYNAMIC
MCS	Mean Casing Slowness	57 US/F
MTXG	Monopole Transmitter Geometry	186 IN
NWI4	Number Waveform Items 4	8
NWIX	Number Waveform Items X	32
RSMN	Label Shear/Compressional Minimum Ratio – Monopole P&S	1.4
RSMX	Label Shear/Compressional Maximum Ratio – Monopole P&S	2.12
RX1G	Receiver 1 Geometry	294 IN
RX2G	Receiver 2 Geometry	300 IN
RX3G	Receiver 3 Geometry	306 IN
RX4G	Receiver 4 Geometry	312 IN
RX5G	Receiver 5 Geometry	318 IN
RX6G	Receiver 6 Geometry	324 IN
RX7G	Receiver 7 Geometry	330 IN
RX8G	Receiver 8 Geometry	336 IN
SAM4	DSST Sonic Acquisition Mode 4 – Monopole Mode for P&S	ODD
SAMX	DSST Sonic Acquisition Mode X – Both Dipoles or Monopole Mode for Expert	BCR
SAS4	STC Sonic Array Status – Monopole P&S	255
SBO4	STC Search Band Offset – Monopole P&S	500 US
SBR4	STC Baseline Removal – Monopole P&S	ON
SBW4	STC Search Bandwidth – Monopole P&S	2000 US
SFC4	STC Formation Character – Monopole P&S	SELECTABLE
SFM4	STC Filter – Monopole P&S	B3-20K
SHLL	Label Slowness Lower Limit – Monopole P&S Shear	75 US/F
SHUL	Label Slowness Upper Limit – Monopole P&S Shear	180 US/F
SLL4	STC Slowness Lower Limit – Monopole P&S	40 US/F
SST4	STC Slowness Step – Monopole P&S	2 US/F
SSW4	STC Source Waveform – Monopole P&S	WF_SAM4
STLL	Label Slowness Lower Limit – Monopole Stoneley	180 US/F

STUL	Label Slowness Upper Limit – Monopole Stoneley	780	US/F
SUL4	STC Slowness Upper Limit – Monopole P&S	240	US/F
SWD4	STC Slowness Width – Monopole P&S	10	US/F
TBF4	STC Time for Baseline Fill – Monopole P&S	300	US
TLL4	STC Time Lower Limit – Monopole P&S	150	US
TST4	STC Time Step – Monopole P&S	50	US
TUL4	STC Time Upper Limit – Monopole P&S	3660	US
TWD4	STC Time Width – Monopole P&S	1000	US
TWI4	STC Integration Time Window – Monopole P&S	500	US
TWSX	Transmitter Waveform Select X	0	
WFM4	Waveform Mode 4	W1	
BHS	EDTC-B: Enhanced DTS Cartridge Borehole Status	OPEN	
DO	System and Miscellaneous		
PP	Depth Offset for Playback	4.4	M
	Playback Processing	NORMAL	

Format: DSST\_P\_S\_VDL\_COLOR    Vertical Scale: 1:200    Graphics File Created: 25-Feb-2012 06:18

### OP System Version: 19C0-187

GPIT-A/B	19C0-187	DTA-A	19C0-187
DSST-B	19C0-187	EDTC-B	19C0-187

### Input DLIS Files

DEFAULT	DSI_037LUP	FN:36	PRODUCER	25-Feb-2012 05:42	3040.5 M	2321.8 M
---------	------------	-------	----------	-------------------	----------	----------

### Output DLIS Files

DEFAULT	DSI_028PUP	FN:15	PRODUCER	25-Feb-2012 06:18		
---------	------------	-------	----------	-------------------	--	--



## Calibrations

### MAXIS Field Log

#### Calibration and Check Summary


Measurement	Nominal	Master	Before	After	Change	Limit	Units
Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration							
Before: 23-Feb-2012 11:41							
EDTC Z-Axis Acceleration	9.810	N/A	9.784	N/A	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration							
Before: 23-Feb-2012 11:36    After: 25-Feb-2012 12:59							
Gamma Ray (Jig – Bkg)	156.5	N/A	156.5	158.5	2.013	14.23	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	167.1	2.122	15.00	GAPI

#### Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:		
EDTC Gamma Ray Detector	EDTG – A/B	77693
Enhanced DTS Cartridge	EDTC – B	8529
Auxiliary Equipment:		
EDTC Housing	EDTH – B	8528

Enhanced DTS Cartridge Wellsite Calibration

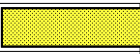


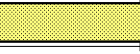


EDTC Accelerometer Calibration

Phase	EDTC Z-Axis Acceleration M/S2	Value
Before		9.784
	9.610 (Minimum)      9.810 (Nominal)      10.01 (Maximum)	

Before: 23-Feb-2012 11:41

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig - Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		3.372	Before		156.5	Before		165.0
After		2.808	After		158.5	After		167.1
	0 (Minimum)      30.00 (Nominal)      120.0 (Maximum)			142.3 (Minimum)      156.5 (Nominal)      170.8 (Maximum)			150.0 (Minimum)      165.0 (Nominal)      180.0 (Maximum)	

Before: 23-Feb-2012 11:36      After: 25-Feb-2012 12:59

Company: **Lamont Doherty Earth Observatory**

**Schlumberger**

Well: **Expedition 340T, Site U1309D**

Field: **Atlantis Massif**

Rig: **JOIDES Resolution**

Country: **USA**

Dipole Shear Sonic Tool  
Monopole P&S