Schlumberger

Company: **International Ocean Discovery Program**

Well: **Expedition 369, Site U1513D**
Field: **Australia Cretaceous Climate & Tectonics**
Rig: **JOIDES Resolution** Ocean: **Indian**

Rig: JOIDES Resolution
Field: Australia Cretaceous Climate & T
Location: Latitude: S 33* 47.6196'
Well: Expedition 369, Site U1513D
Company: International Ocean Discovery Pr

High Resolution Laterolog Array (HRLA)
Natural Gamma Ray, Density (HNGS, HLDS)
Dipole Shear Sonic (DSI), DOWNLOGS

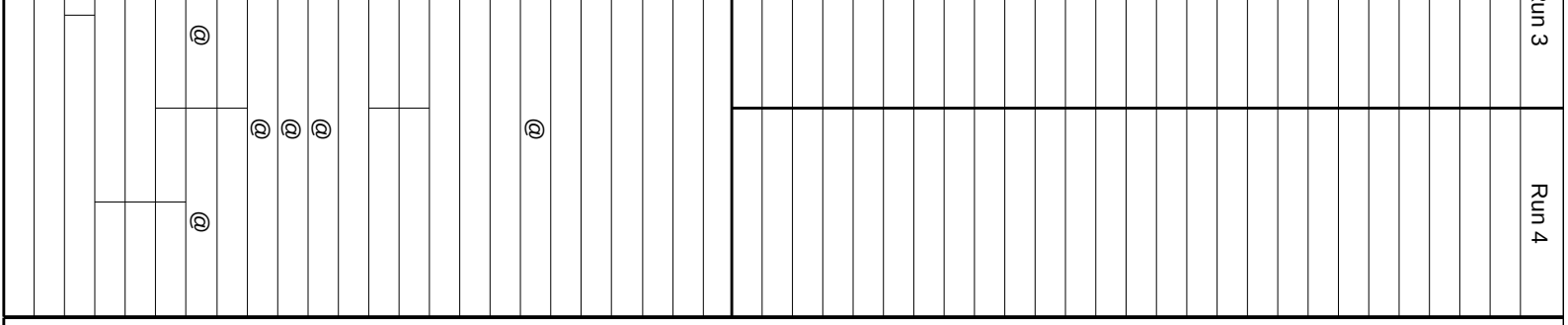
LOCATION

Latitude: S 33* 47.6196'	Elev.: K.B.	0.00 m
Longitude: E 112* 29.1339'	G.L.	−2800.00 m
	D.F.	0.00 m
Permanent Datum: Sea Floor	Elev.:	−2800.00 m
Log Measured From: Rig Floor	2800.00 m above Perm. Datum	
Drilling Measured From: Rig Floor		

API Serial No.	Max. Hole Devi. 0 deg	Longitude E 112.48556	Latitude S 33.79347

	Run 1	Run 2	R
Logging Date	1−Nov−2017		
Run Number	1		
Depth Driller	3557 m		
Schlumberger Depth	3143 m		
Bottom Log Interval	3143 m		
Top Log Interval	2800 m		
Casing Driller Size @ Depth	5.500 in @ 2957.4 m	@	
Casing Schlumberger	2952 m		
Bit Size	9.875 in		
Type Fluid In Hole	Sepiolite		
MUD Density / Viscosity	1.258 g/cm3		
MUD Fluid Loss / PH		8.07	
MUD Source Of Sample	Mudpit		
RM @ Measured Temperature	@	@	
RMF @ Measured Temperature	@	@	
RMC @ Measured Temperature	@	@	
Source RMF / RMC	N/A	N/A	
RM @ MRT / RMF @ MRT	@ 12	@ 12	@ @
Maximum Recorded Temperatures	12 degC		
Circulation Stopped / Time	1−Nov−2017	20:00	
Logger On Bottom / Time	1−Nov−2017	04:20	
Unit Number / Location	627314	Larose, LA	
Recorded By	K. Swain		
Witnessed By	M. Jones, Z. Mateo		

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



DISCLAIMER

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

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Hole drilled with RCB bottom hole assembly (BHA) at 9−7/8" BS	
Bit dropped using Mechanical Bit Release (MBR) prior to logging.	
Drilled TD was 3557.4 mbrf.	
Drill pipe set at 2957.4 mbrf.	
Tcombo run with upper part eccentralized, lower centralized with MCD tools. See toolsketch.	
Fluid type was Sepeolite mud weighted with Barite to a density of ppg (g/cc)	
Depth recorded from drill floor; logs presented as−logged without depth corrections or shifts, as per client instructions.	
All logs presented in wireline measured depth below rig floor (MDBRF).	
Caliper opened during upward passes; closed inside pipe.	
Hole size corrections made using caliper measurements for upward passes.	
DSI run with P&S Mode in standard frequency, DDBHC mode; LD run in low−freq, UD run in std. freq.	
AHC used from TD then switched off to facilitate pipe entry.	
10.5 lb/gal mud pumped in hole prior to logging.	
Bridge at 3149−3137mbrf. Made multiple attempts but no success.	
2nd run of tools utilized hole finder on bottom with no success.	
2nd run of tools only made downlog and MSS removed from string to avoid damage	
to MSS housing with holefinder.	

RUN 1

SERVICE ORDER #:
PROGRAM VERSION: 19C0−187
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

SURFACE EQUIPMENT

GSR−U 6098
WITM (EDTS)−A

DOWNHOLE EQUIPMENT

LEH−QT
AH−369
EDTC−B
EDTH−B 8303

MDSB_EDTC
Mud Tempe
CTEM
Gamma Ray
EFTB DIAG
TelStatus
EDTCB Ele

47.09
46.02
45.45
45.11

48.41
47.52
47.09

RUN 2

SURFACE EQUIPMENT

GSR−U 6098
WITM (EDTS)−A 1

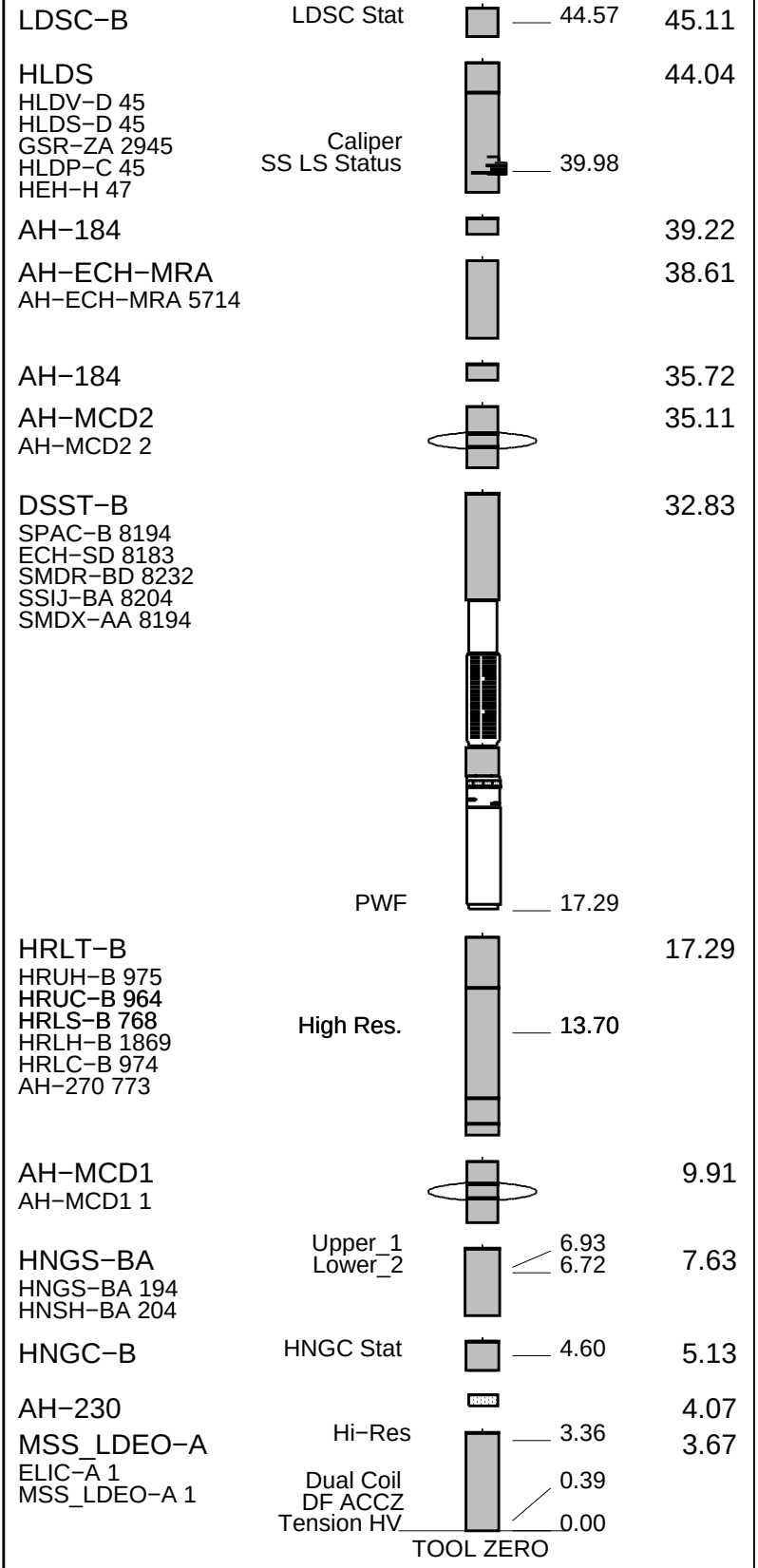
DOWNHOLE EQUIPMENT

LEH−QT
AH−369
EDTC−B
EDTH−B 8303
EDTC−B 8317

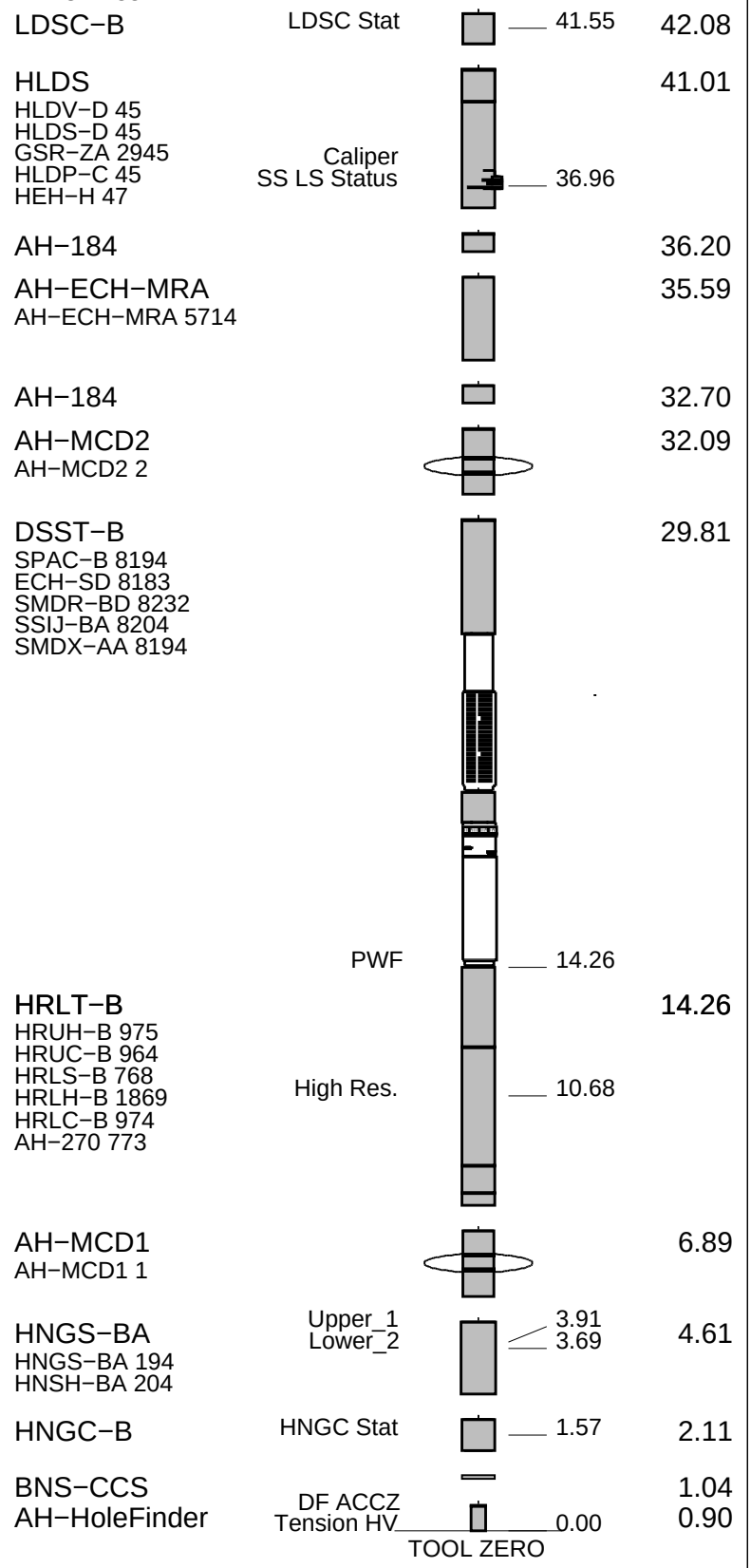
MDSB_EDTC
Mud Tempe
CTEM
Gamma Ray
EFTB DIAG
TelStatus
EDTCB Ele

44.06
43.00
42.43
42.08

45.39
44.50
44.06



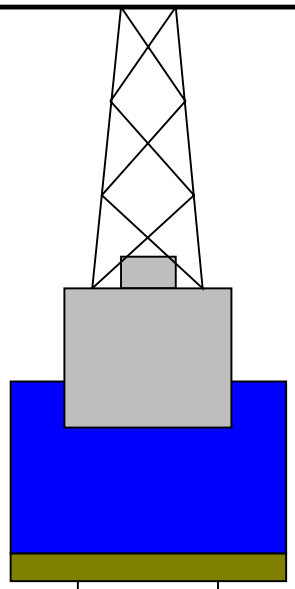
MAXIMUM STRING DIAMETER 3.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS



MAXIMUM STRING DIAMETER 3.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Production String	(in) OD	(in) ID	(M) MD	Well Schematic	(M) MD	(in) OD	(in) ID	Casing String

	OD	ID	MD
Kelly Bushing Elevation			0
Derrick Floor Elevation			0
Mean Sea Level			11



MD	OD	ID	
	4.1		
2800	4.1		Sea Floor
2957.4		9.875	Open Hole
3557.4			Total Depth

Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36	2729.5 M	3152.7 M
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36	2729.5 M	3152.7 M

Output DLIS Files

LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

Time Mark Every 60 S

PIP SUMMARY

0	(GAPI) (HSGR)	100
HNGS Spectroscopy Gamma Ray		
−1	(−−−−) (CHTS)	9
Peak Coherence / TA − P & S Shear		
−1	(−−−−) (CHRS)	9
Peak Coherence / RA − P & S Shear		

0 (----) 10
(CHTP)
Peak Coherence / TA − P & S Comp

0 (----) 10
(CHRP)
Peak Coherence / RA − P & S Comp

0 (----) 10
Monopole P&S (WCI4)
Waveform Data Copy Indicator 4 −

40 (US/F) 240
Tr.Array P&S Slow Proj. CVDL (SPT4)
Min Amplitude Max

40 (US/F) 240
Rec.Array P&S Slow Proj. CVDL (SPR4)
Min Amplitude Max

0 (----) 1000
SAM4 Waveform Gain (WFG4)

40 (US/F) 240
Delta−T Shear / TA − P & S (DTTS)

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

0 (IN) 20
Bit Size (BS)

10000 0
(LBF)
(TENS)
Tension

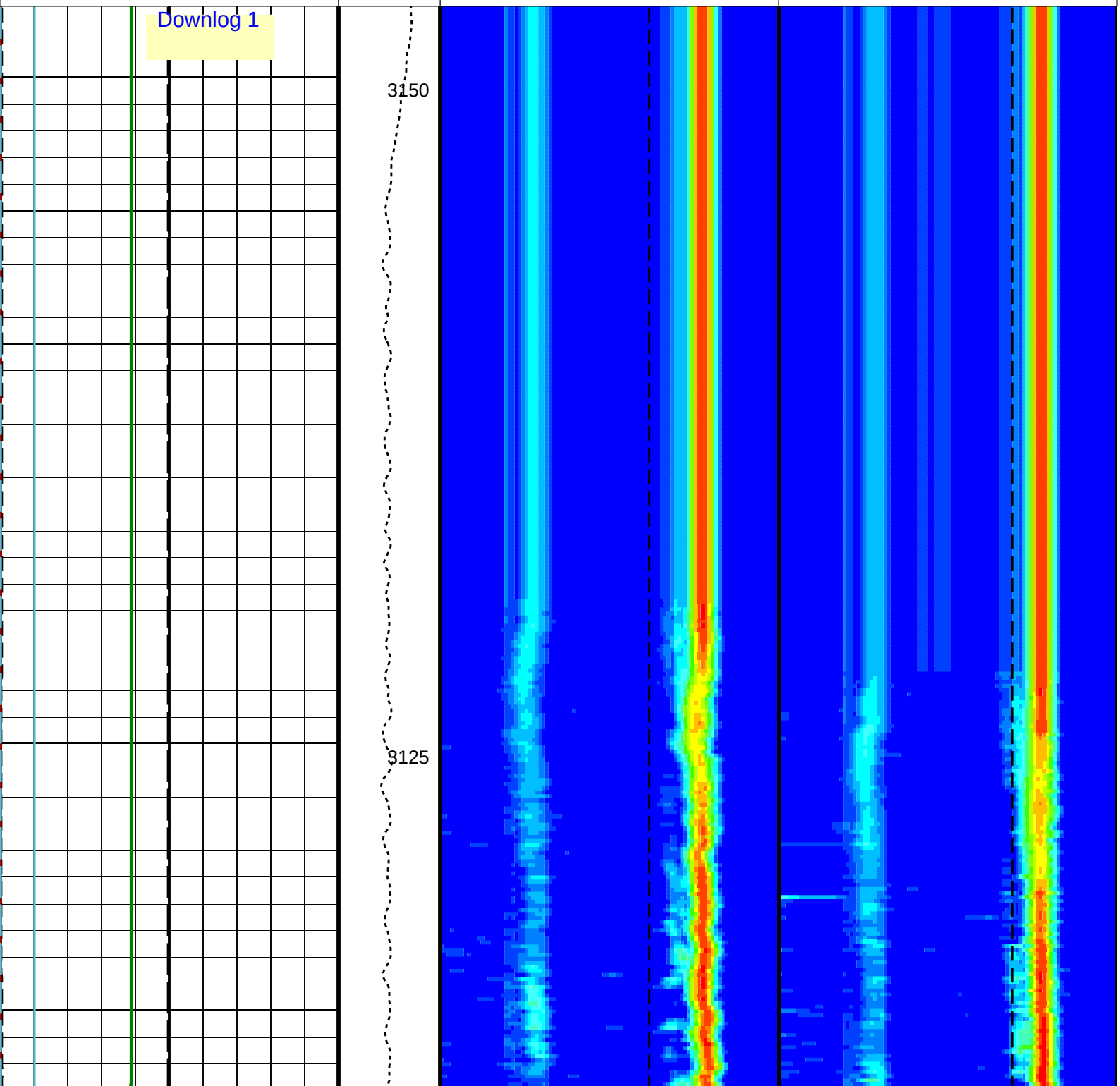
40 (US/F) 240
Delta−T Comp / TA − P & S (DTTP)

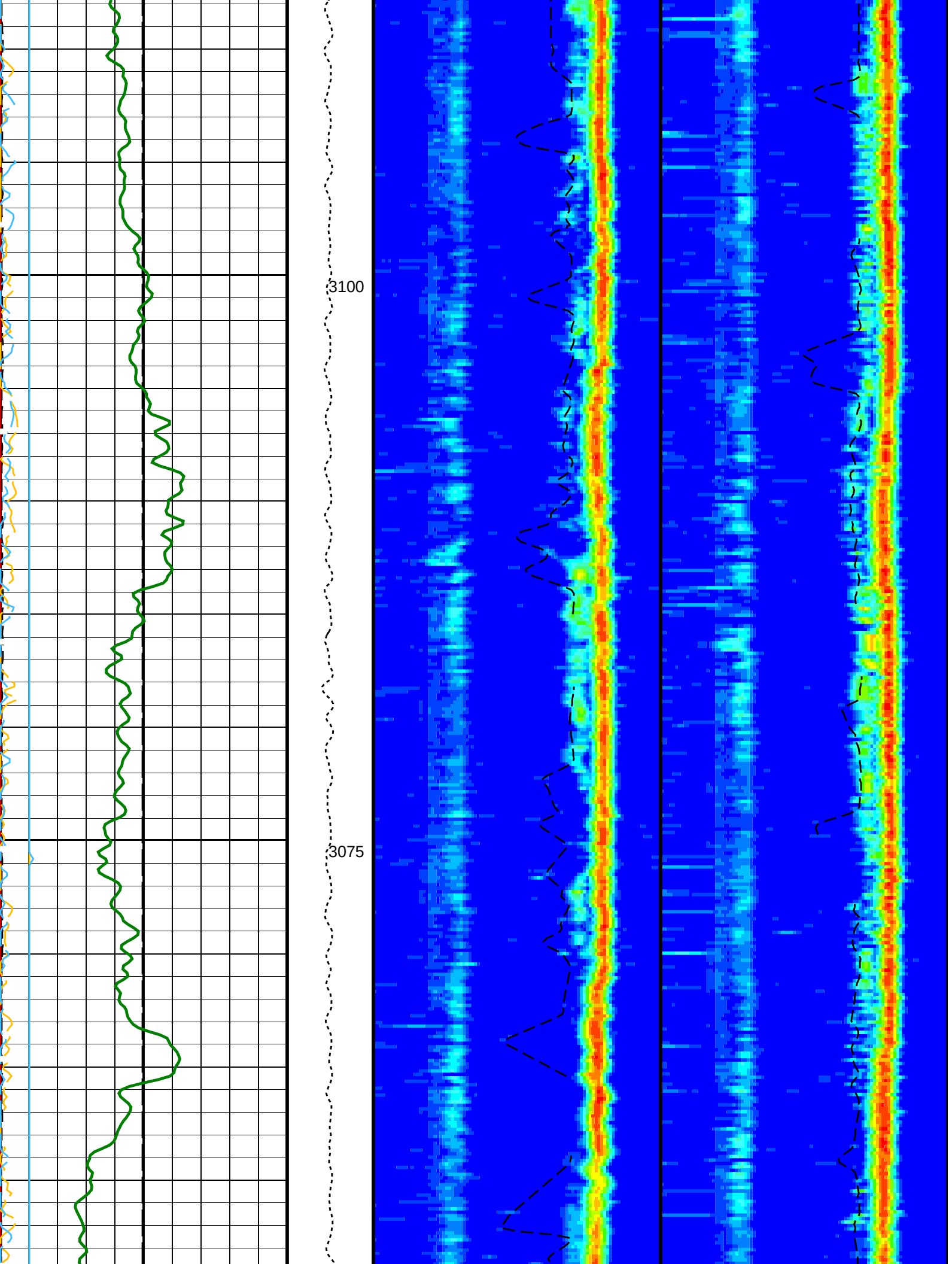
40 (US/F) 240
Delta−T Comp / RA − P & S (DTRP)

Downlog 1

3150

3125

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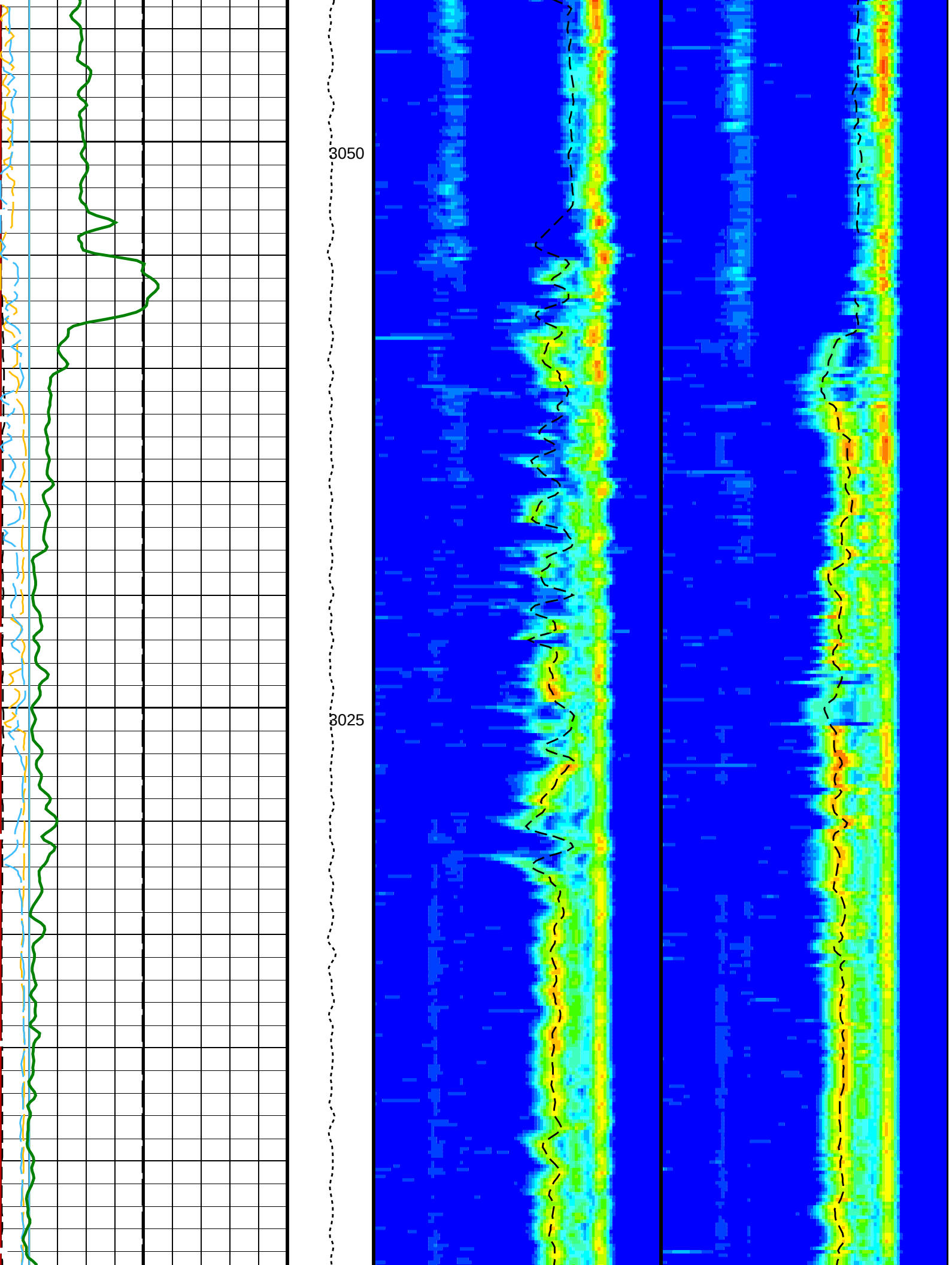
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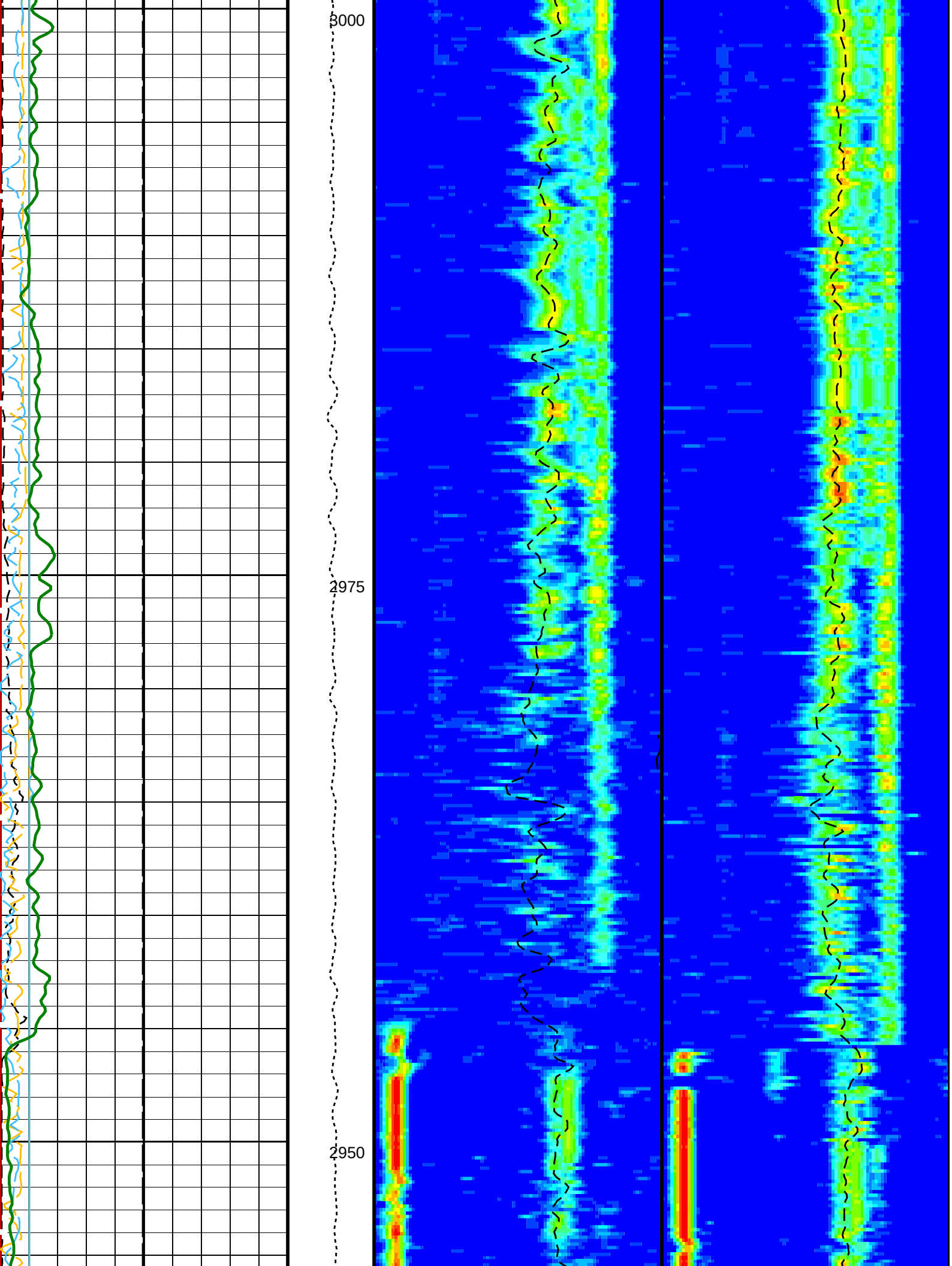
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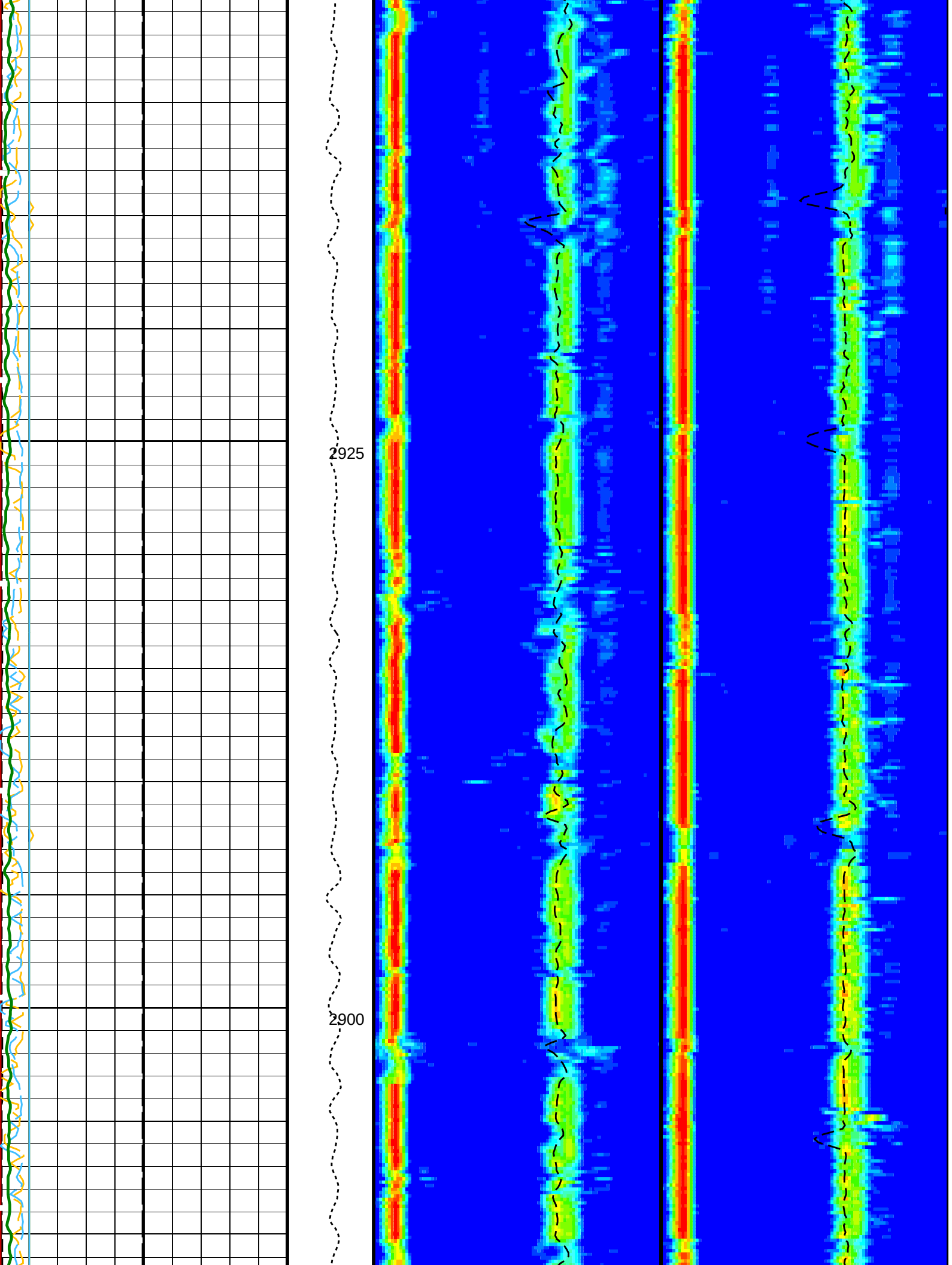
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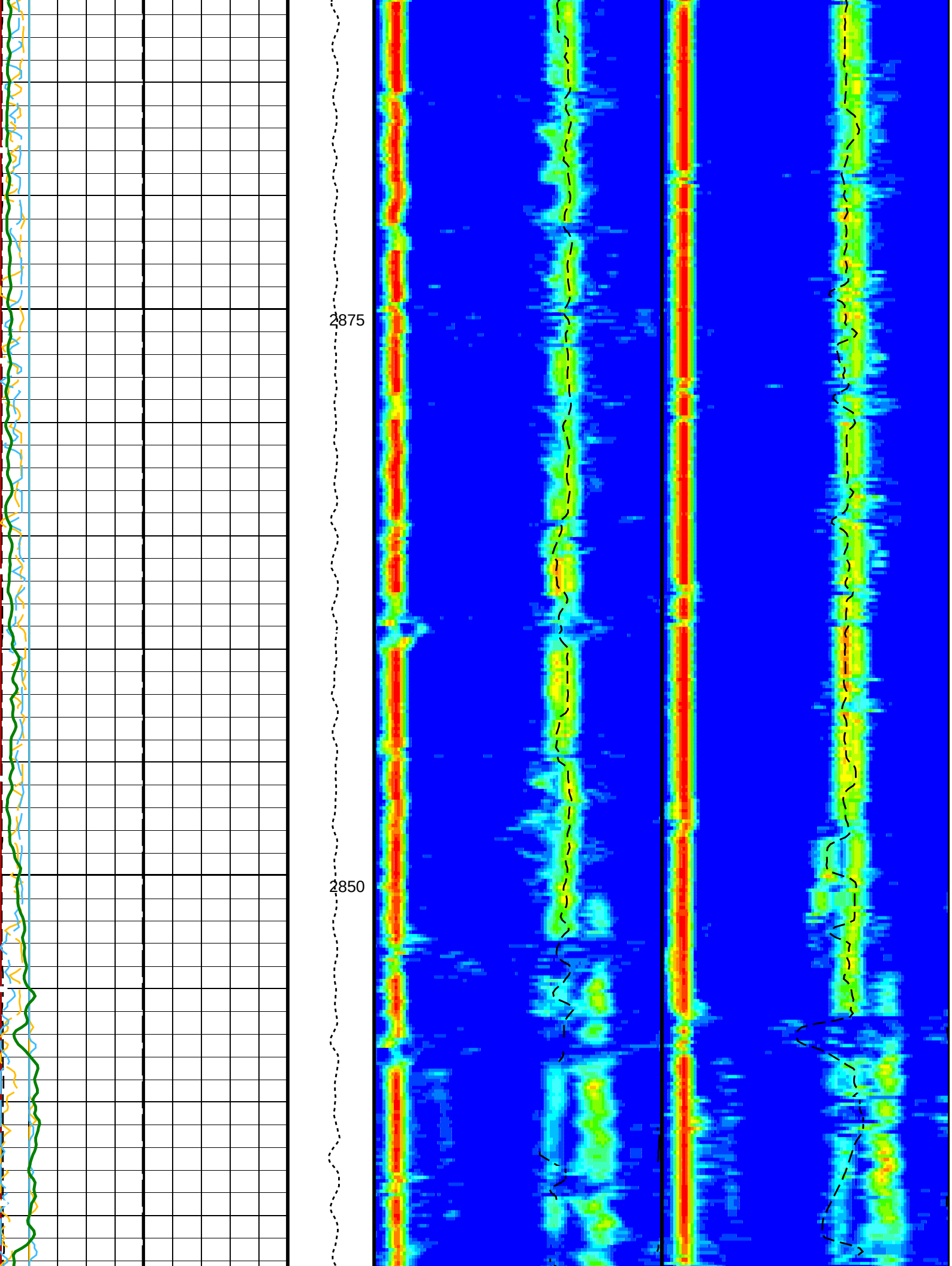
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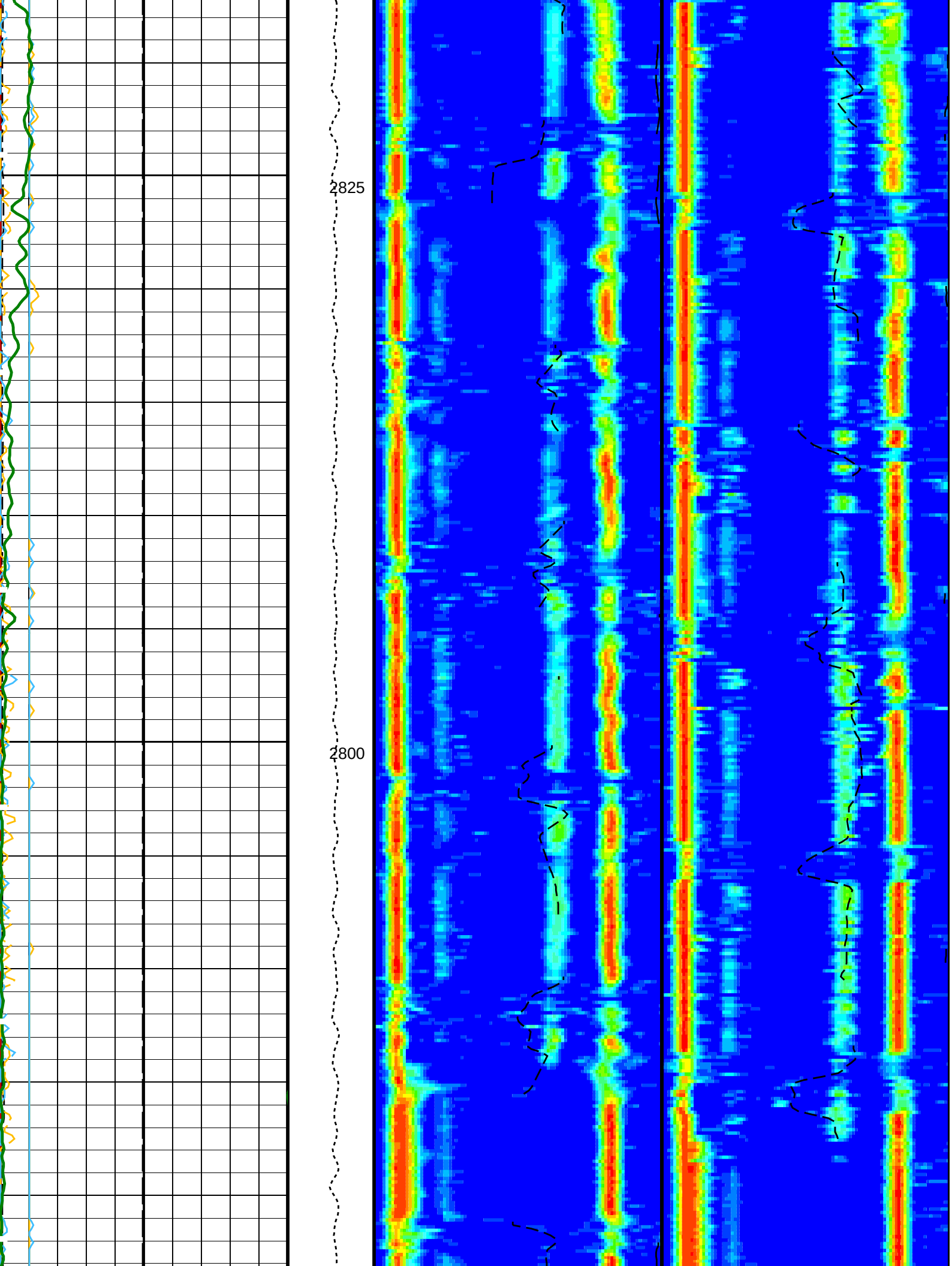
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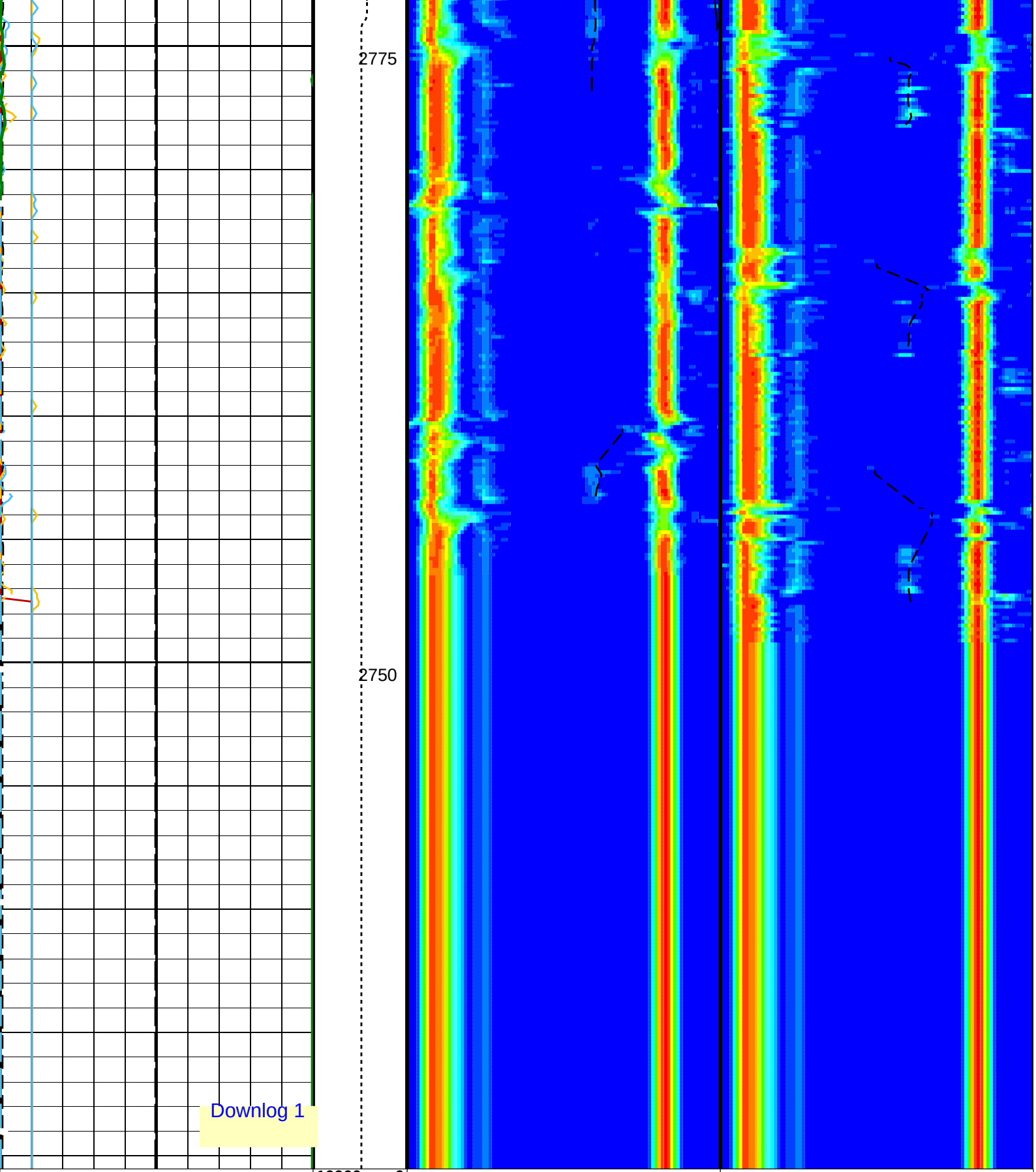
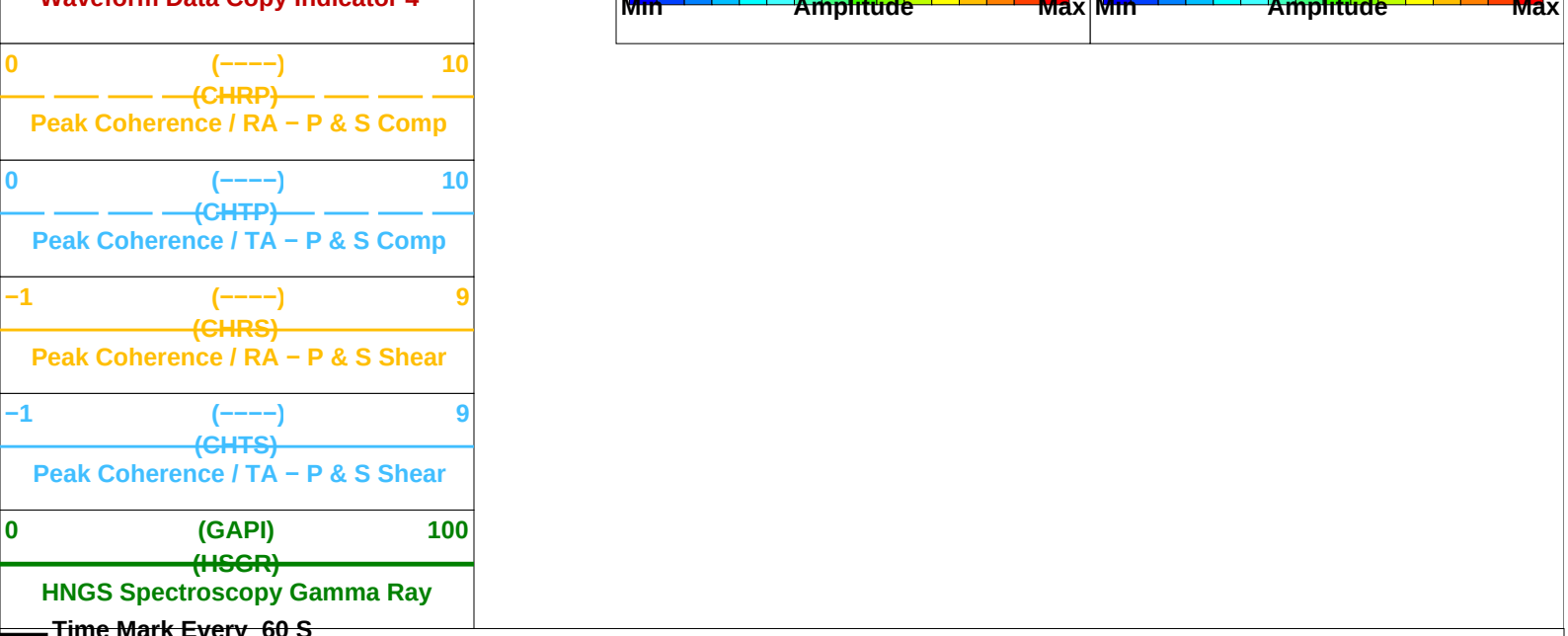
2800



0 (IN) 20 Bit Size (BS)	10000 0 (LBF) (TENS) Tension	40 (US/F) 240 Delta-T Comp / TA - P & S (DTTP)	40 (US/F) 240 Delta-T Comp / RA - P & S (DTRP)
0 (----) 1000 SAM4 Waveform Gain (WFG4)		40 (US/F) 240 Delta-T Shear / TA - P & S (DTTS)	40 (US/F) 240 Delta-T Shear / RA - P & S (DTRS)
0 (----) 10 Monopole P&S (WCI4) Waveform Data Copy Indicator 4 =		40 (US/F) 240 Tr.Array P&S Slow Proj. CVDL (SPT4)	40 (US/F) 240 Rec.Array P&S Slow Proj. CVDL (SPR4)



PIP SUMMARY

	System and Miscellaneous		
GCSE	Generalized Caliper Selection	BS	
BHS	Borehole Status	OPEN	
	EDTC−B: Enhanced DTS Cartridge		
WFM4	Waveform Mode 4	W1	
TWSX	Transmitter Waveform Select X	0	
TWI4	STC Integration Time Window − Monopole P&S	500	US
TWD4	STC Time Width − Monopole P&S	1000	US
TUL4	STC Time Upper Limit − Monopole P&S	3660	US
TST4	STC Time Step − Monopole P&S	50	US
TLL4	STC Time Lower Limit − Monopole P&S	150	US
TBF4	STC Time for Baseline Fill − Monopole P&S	300	US
SWD4	STC Slowness Width − Monopole P&S	10	US/F
SUL4	STC Slowness Upper Limit − Monopole P&S	240	US/F
STUL	Label Slowness Upper Limit − Monopole Stoneley	780	US/F
STLL	Label Slowness Lower Limit − Monopole Stoneley	180	US/F
SSW4	STC Source Waveform − Monopole P&S	WF_SAM4	
SST4	STC Slowness Step − Monopole P&S	2	US/F
SLL4	STC Slowness Lower Limit − Monopole P&S	40	US/F
SHUL	Label Slowness Upper Limit − Monopole P&S Shear	240	US/F
SHLL	Label Slowness Lower Limit − Monopole P&S Shear	235	US/F
SFM4	STC Filter − Monopole P&S	B3−20K	
SFC4	STC Formation Character − Monopole P&S	SELECTABLE	
SBW4	STC Search Bandwidth − Monopole P&S	2000	US
SBR4	STC Baseline Removal − Monopole P&S	ON	
SBO4	STC Search Band Offset − Monopole P&S	500	US
SAS4	STC Sonic Array Status − Monopole P&S	255	
		OFF	
SAMX	DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert		
SAM4	DSST Sonic Acquisition Mode 4 − Monopole Mode for P&S	EVEN	
RX8G	Receiver 8 Geometry	336	IN
RX7G	Receiver 7 Geometry	330	IN
RX6G	Receiver 6 Geometry	324	IN
RX5G	Receiver 5 Geometry	318	IN
RX4G	Receiver 4 Geometry	312	IN
RX3G	Receiver 3 Geometry	306	IN
RX2G	Receiver 2 Geometry	300	IN
RX1G	Receiver 1 Geometry	294	IN
RSMX	Label Shear/Compressional Maximum Ratio − Monopole P&S	2.12	
RSMN	Label Shear/Compressional Minimum Ratio − Monopole P&S	1.4	
NWIX	Number Waveform Items X	0	
NWI4	Number Waveform Items 4	8	
MTXG	Monopole Transmitter Geometry	186	IN
MCS	Mean Casing Slowness	57	US/F
LFC	Label Formation Character − Monopole P&S	DYNAMIC	
GCSE	Generalized Caliper Selection	BS	
FILG	Label Fill Gap Control − Monopole P&S	COMP_SHEAR	
DWCX	Digitizer Word Count X	512	
DWC4	Digitizer Word Count 4	512	
DTF	Delta−T Fluid	193	US/F
DSIX	Digitizer Sample Interval X	40	US
DSI4	Digitizer Sample Interval 4	10	US
DDEX	Digitizing Delay X	0	US
DDE4	Digitizing Delay 4	0	US
COUL	Label Slowness Upper Limit − Monopole P&S Compressional	180	US/F
COLL	Label Slowness Lower Limit − Monopole P&S Compressional	120	US/F

CASF	Label Casing Function − Monopole P&S	50	
BHS	Borehole Status	OPEN	
	DSST−B: Dipole Shear Imager − B		
GCSE	Generalized Caliper Selection	BS	
BHS	Borehole Status	OPEN	
	HRLT−B: High Resolution Laterolog Array − B		
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02109	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976854	
TPOS	Tool Position	CENT	
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	−0.00151551	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	
	HNGS−BA: Hostile Natural Gamma Ray Sonde		

DLIS Name	Description	Value

Parameters

~~Format: DSST_P_S_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 06:36~~

LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36		
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36		

Output DLIS Files

~~Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D~~

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36	2729.5 M	3105.9 M
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36	2729.5 M	3105.9 M

Output DLIS Files

LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

~~Time Mark Every 60 S~~

PIP SUMMARY

0	(GAPI) (HSGR)	100
HNGS Spectroscopy Gamma Ray		
−2	(−−−−)	8

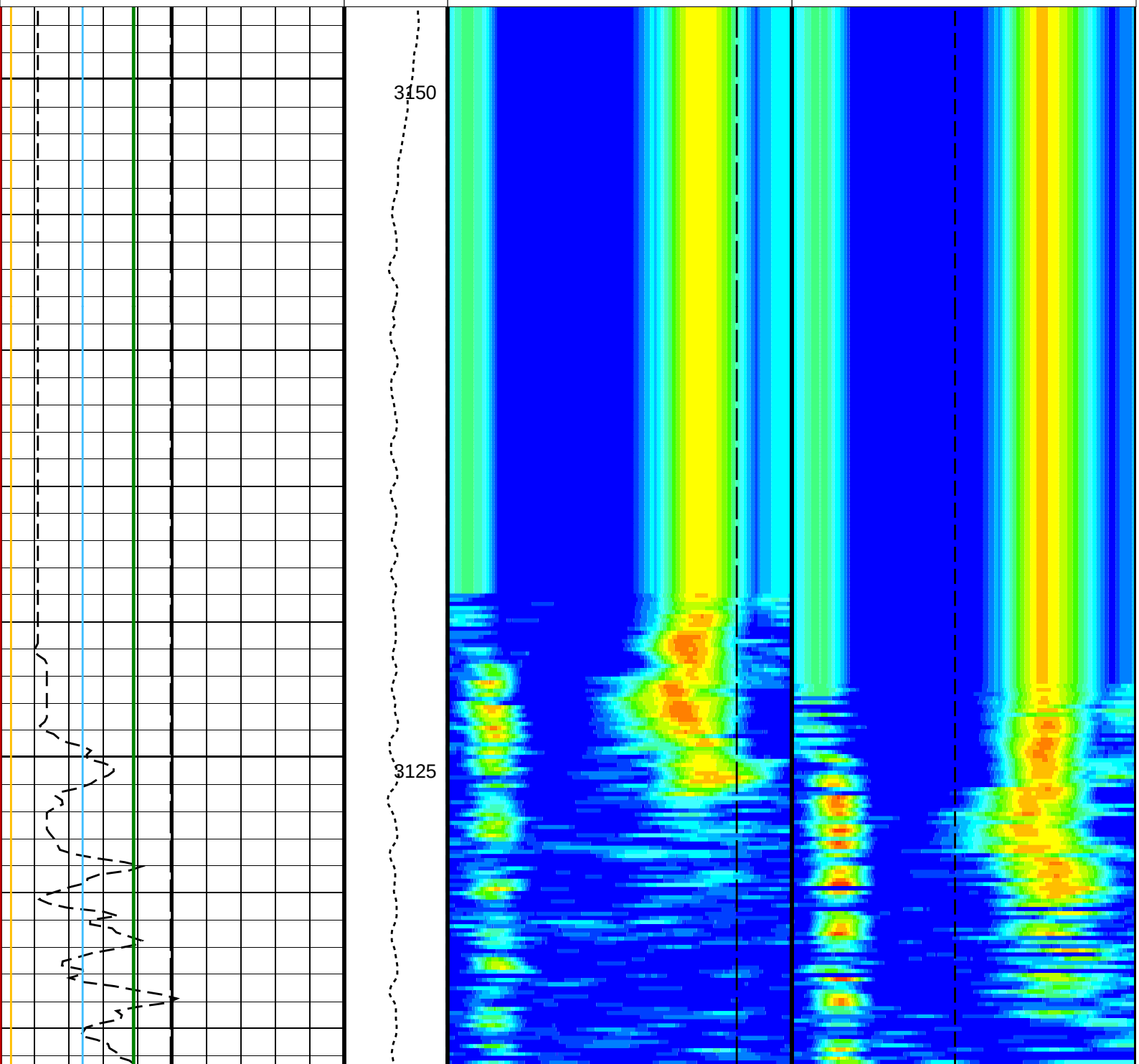
(CHT2)
Peak Coherence / TA − Upper Dipole

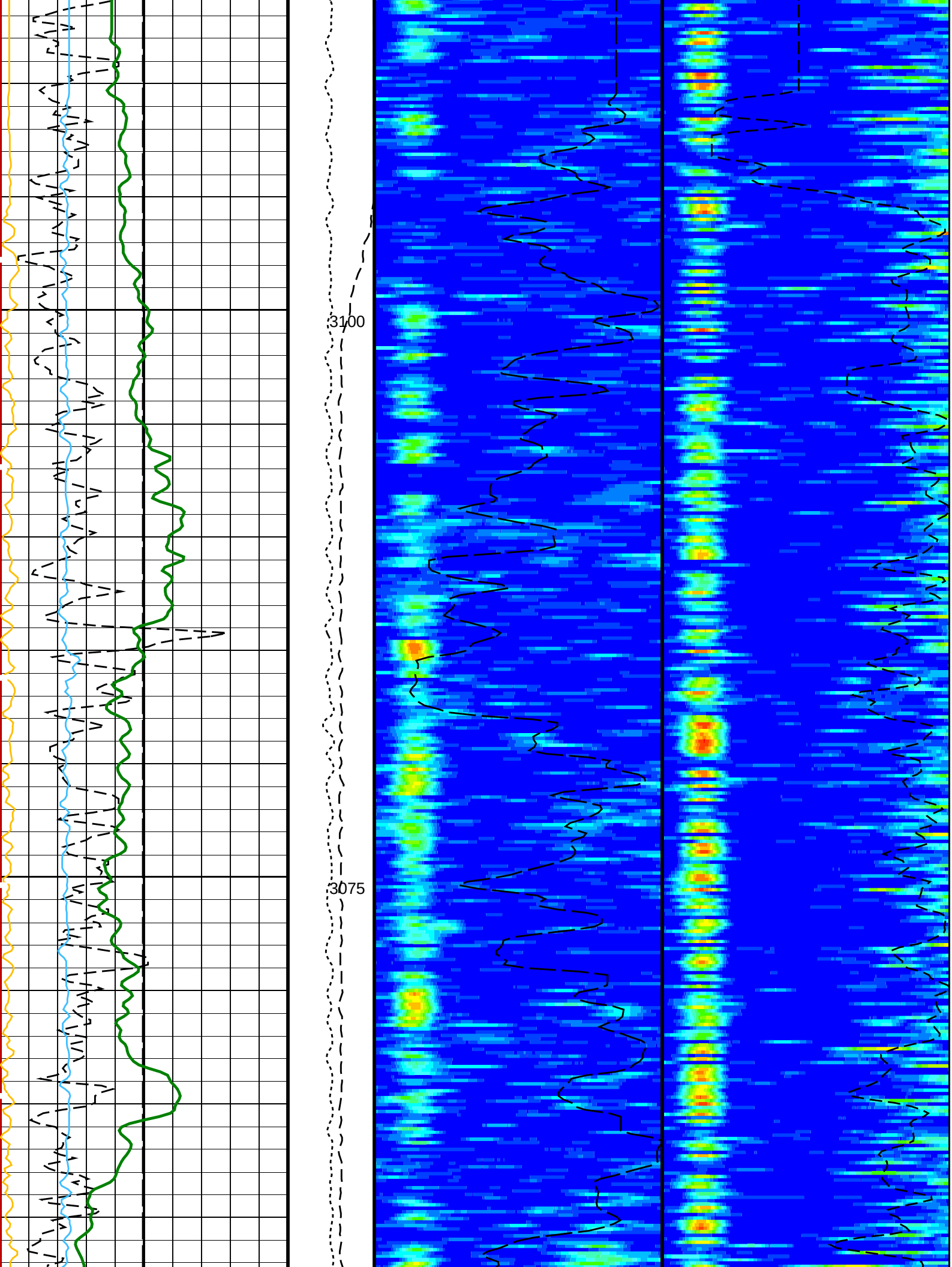
0 (−−−−) 10
(CHR2)
Peak Coherence / RA − Upper Dipole

0 (−−−−) 10
Upper Dipole (WCI2)
Waveform Data Copy Indicator 2 −

Downlog 1

0 (−−−−) 1000 SAM2 Waveform Gain (WFG2)	5000 0 (LBF) (CDF) Force Downhole Calibrated	40 (US/F) 1040 (SPT2) Tr.Array U.Dipole Slow Proj. CVDL Min Amplitude Max	40 (US/F) 1040 (SPR2) Rec.Array U.Dipole Slow Proj. CVDL Min Amplitude Max
0 (IN) 20 Bit Size (BS)	10000 0 (LBF) (TENS) Tension	40 (US/F) 1040 (DT2T) Delta−T Shear / TA − Upper Dipole	40 (US/F) 1040 (DT2R) Delta−T Shear / RA − Upper Dipole

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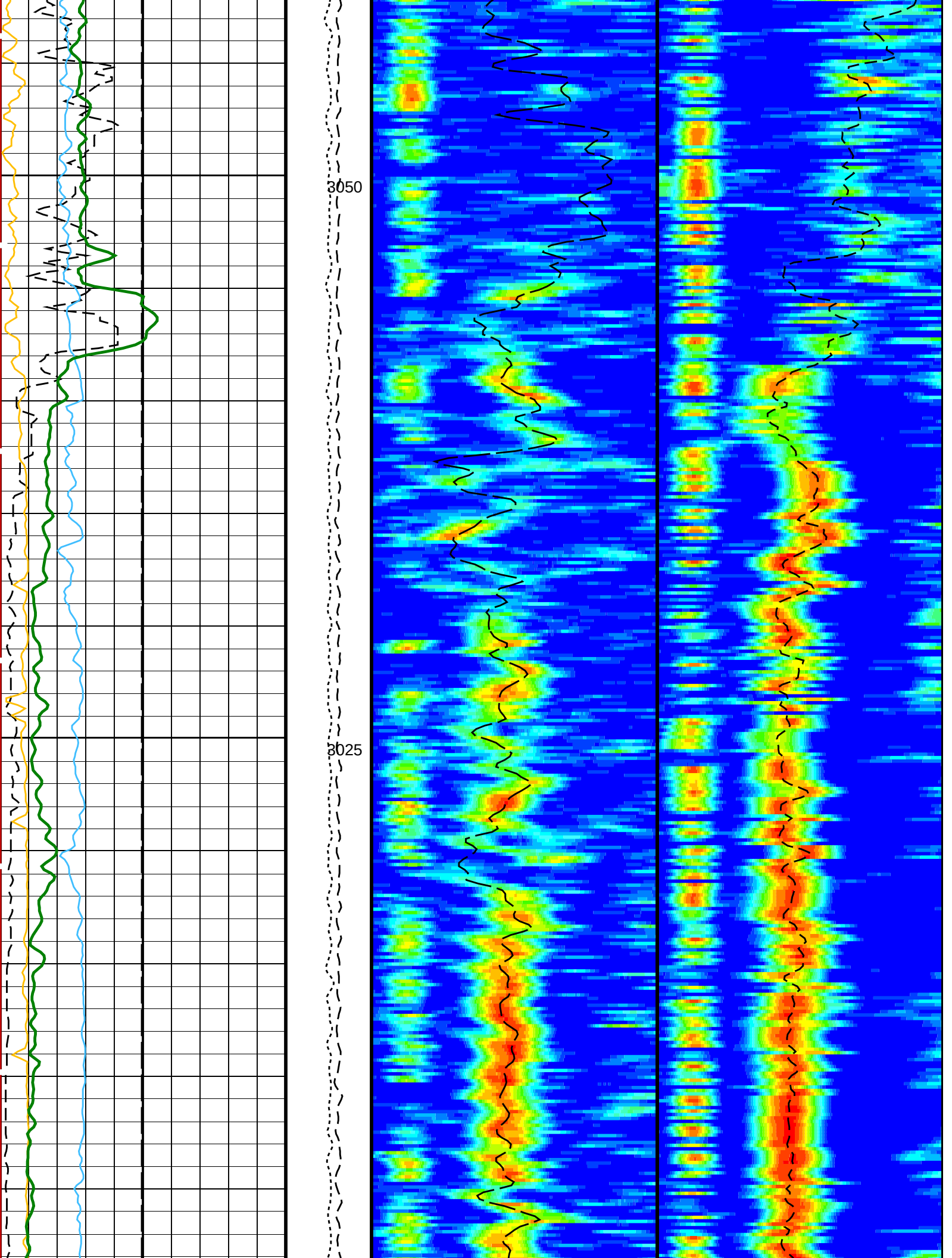
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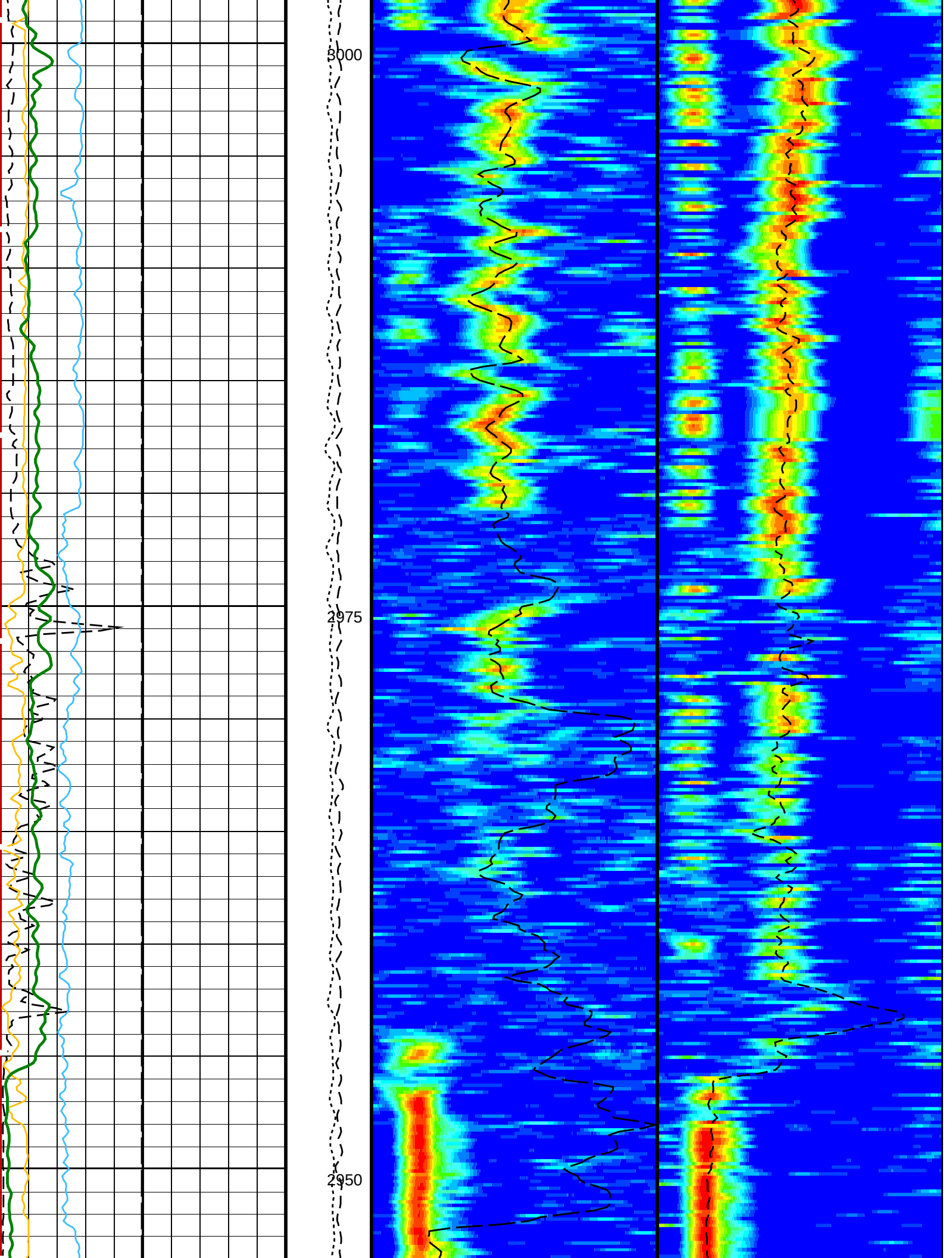
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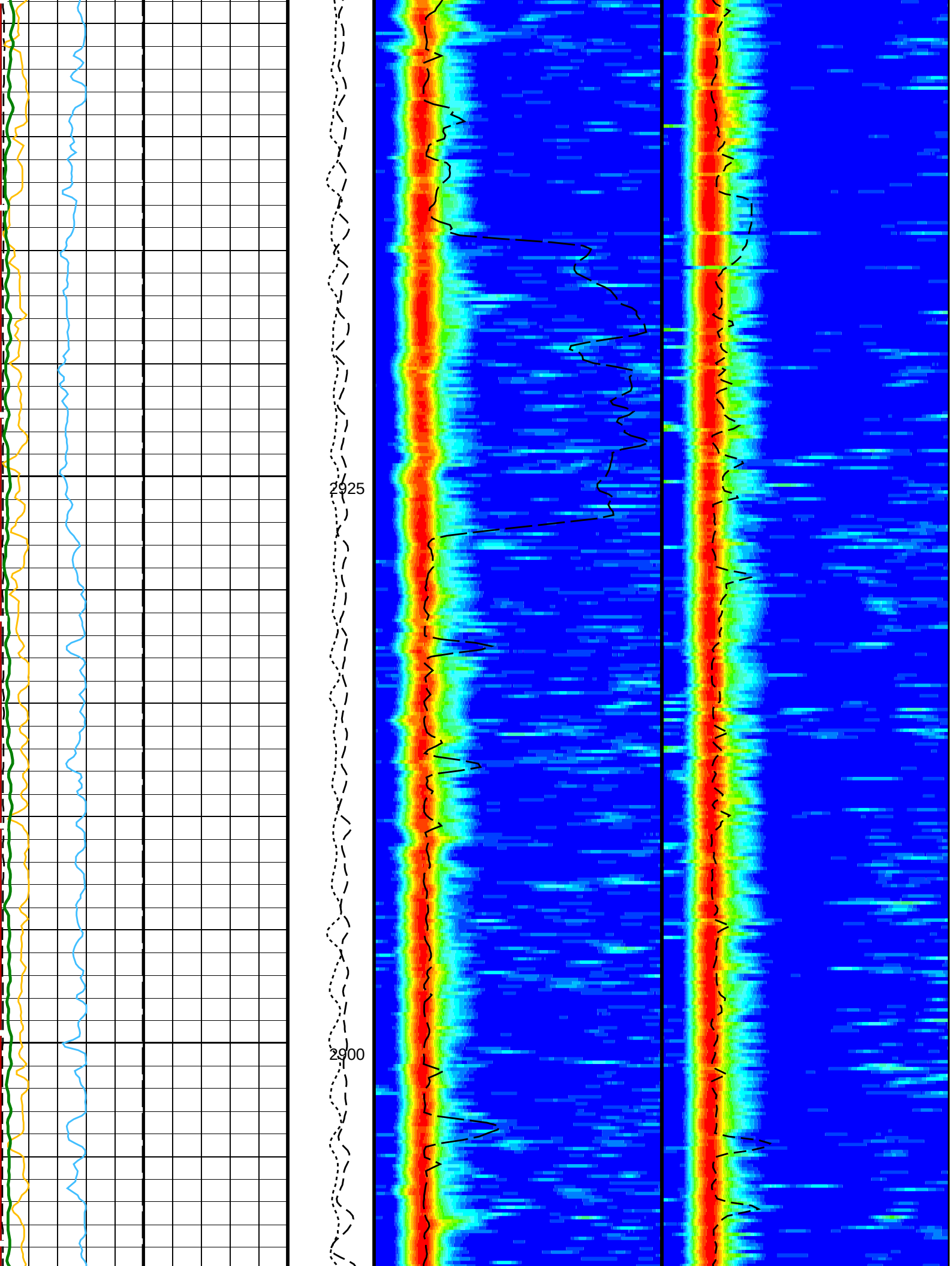
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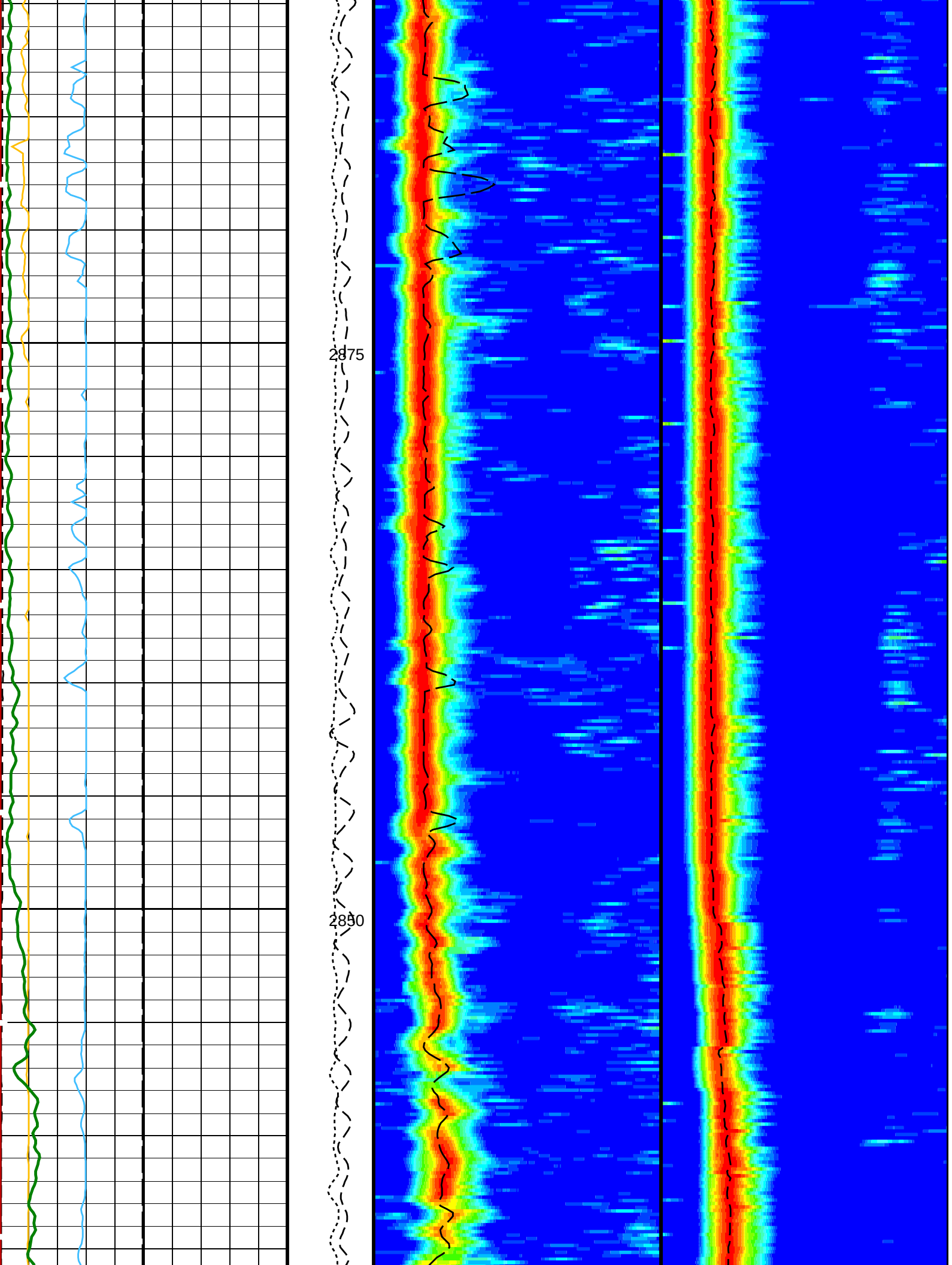
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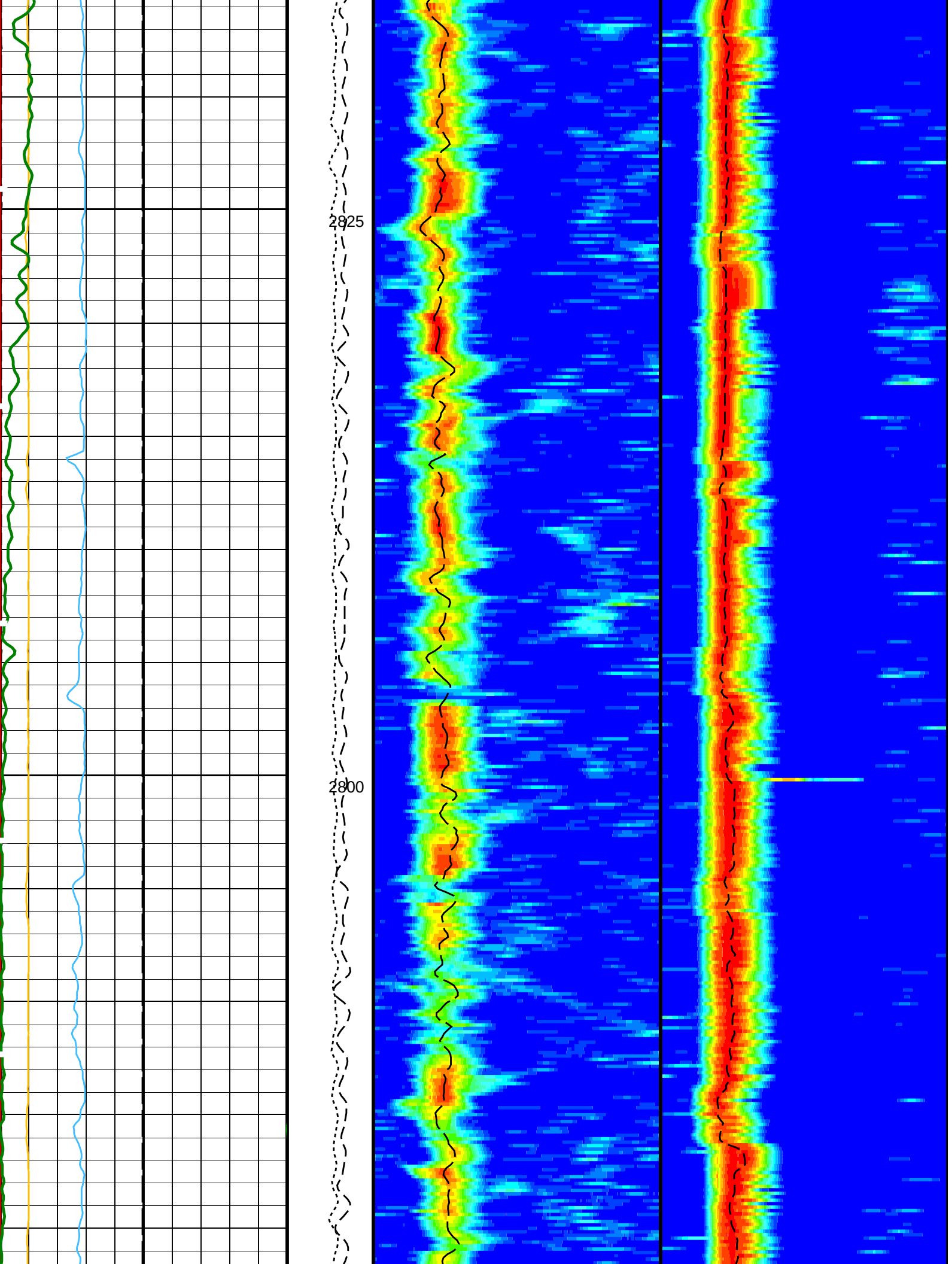
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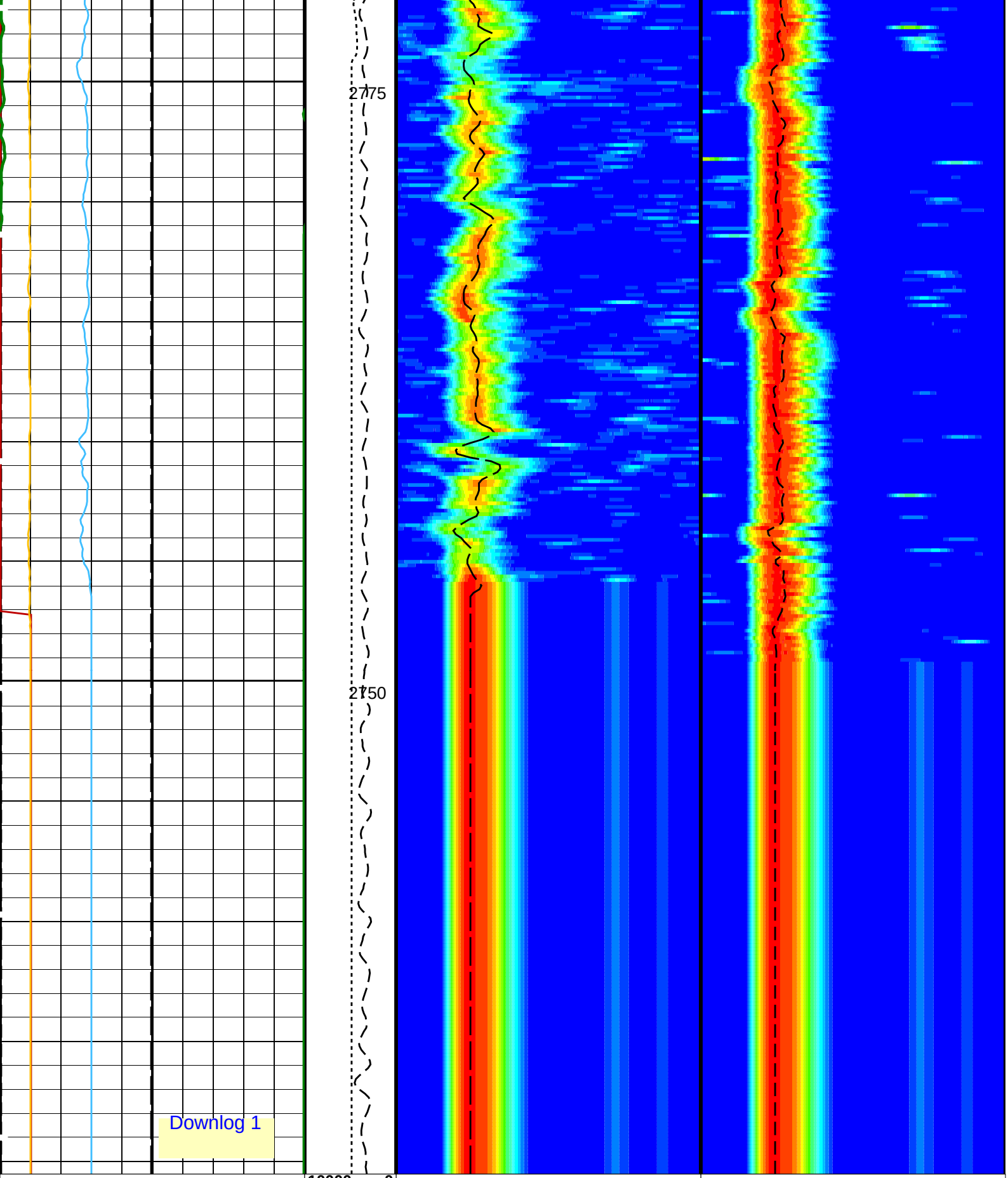
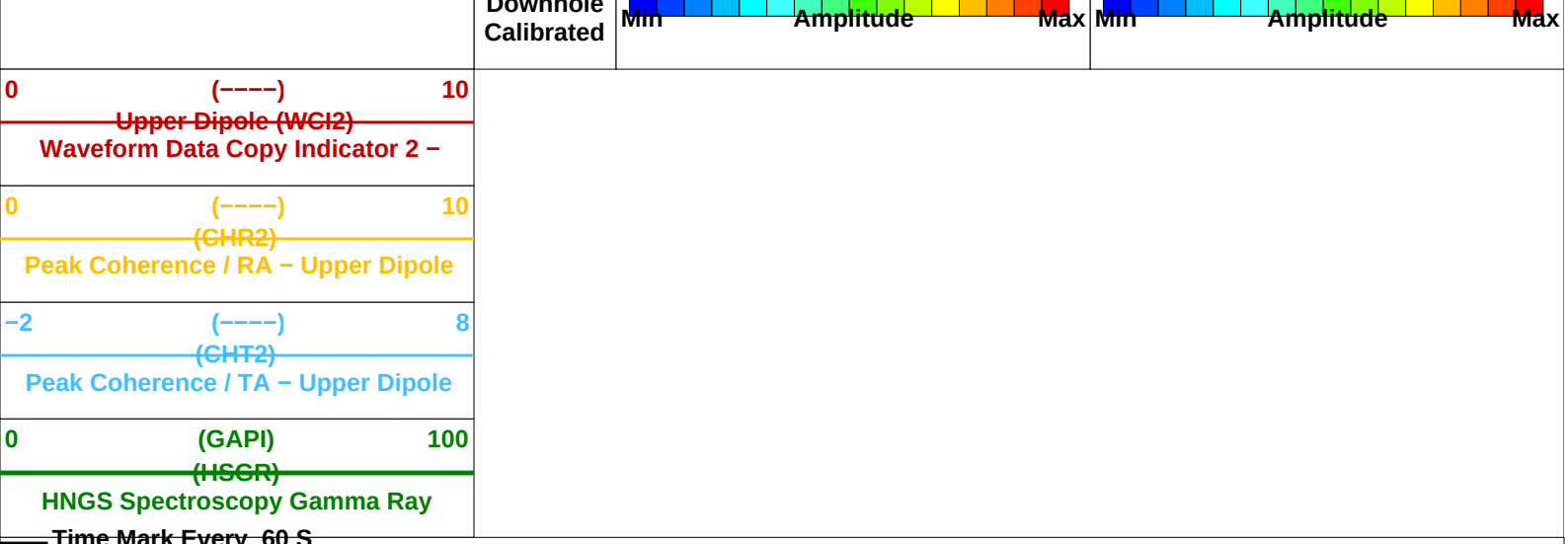


0 (IN) 20	10000 0	40 (US/F) 1040	40 (US/F) 1040
Bit Size (BS)	(LBF) (TENS) Tension	(DT2T) Delta−T Shear / TA − Upper Dipole	(DT2R) Delta−T Shear / RA − Upper Dipole
0 (−−−−) 1000	5000 0	40 (US/F) 1040	40 (US/F) 1040
SAM2 Waveform Gain (WFG2)	(LBF) (CDF) Force Downhole	(SPT2) Tr.Array U.Dipole Slow Proj. CVDL	(SPR2) Rec.Array U.Dipole Slow Proj. CVDL



PIP SUMMARY

	System and Miscellaneous		
GCSE	Generalized Caliper Selection	BS	
BHS	Borehole Status	OPEN	
	EDTC-B: Enhanced DTS Cartridge		
WFM2	Waveform Mode 2	W1	
UTXG	Upper Dipole Transmitter Geometry	162	IN
TWSX	Transmitter Waveform Select X	0	
TWI2	STC Integration Time Window - Upper Dipole	1600	US
TWD2	STC Time Width - Upper Dipole	2000	US
TUL2	STC Time Upper Limit - Upper Dipole	18440	US
TST2	STC Time Step - Upper Dipole	200	US
TLL2	STC Time Lower Limit - Upper Dipole	600	US
TBF2	STC Time for Baseline Fill - Upper Dipole	0	US
SWD2	STC Slowness Width - Upper Dipole	40	US/F
SUL2	STC Slowness Upper Limit - Upper Dipole	1040	US/F
SSW2	STC Source Waveform - Upper Dipole	WF_SAM2	
SST2	STC Slowness Step - Upper Dipole	4	US/F
SLL2	STC Slowness Lower Limit - Upper Dipole	40	US/F
SFM2	STC Filter - Upper Dipole	B1-2K	
SFC2	STC Formation Character - Upper Dipole	SELECTABLE	
SBW2	STC Search Bandwidth - Upper Dipole	8000	US
SBO2	STC Search Band Offset - Upper Dipole	3000	US
SAS2	STC Sonic Array Status - Upper Dipole	255	
		OFF	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert		
SAM2	DSST Sonic Acquisition Mode 2 - Upper Dipole Mode	ODD	
RX8G	Receiver 8 Geometry	336	IN
RX7G	Receiver 7 Geometry	330	IN
RX6G	Receiver 6 Geometry	324	IN
RX5G	Receiver 5 Geometry	318	IN
RX4G	Receiver 4 Geometry	312	IN
RX3G	Receiver 3 Geometry	306	IN
RX2G	Receiver 2 Geometry	300	IN
RX1G	Receiver 1 Geometry	294	IN
NWIX	Number Waveform Items X	0	
NWI2	Number Waveform Items 2	8	
GCSE	Generalized Caliper Selection	BS	
DWCX	Digitizer Word Count X	512	
DWC2	Digitizer Word Count 2	512	
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP	
DSIX	Digitizer Sample Interval X	40	US
DSI2	Digitizer Sample Interval 2	40	US
DSHU	Label Slowness Upper Limit - Dipole Shear	1040	US/F
DSHL	Label Slowness Lower Limit - Dipole Shear	40	US/F
DLCS	Label Compressional Source - Dipole Shear	USE	
DDEX	Digitizing Delay X	0	US
DDE2	Digitizing Delay 2	0	US
BHS	Borehole Status	OPEN	
	DSST-B: Dipole Shear Imager - B		
GCSE	Generalized Caliper Selection	BS	
BHS	Borehole Status	OPEN	
	HRLT-B: High Resolution Laterolog Array - B		
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02109	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976854	
TPOS	Tool Position	CENT	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE	HNGS Processing Enable	YES	

HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	−0.00151551	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	

HNGS−BA: Hostile Natural Gamma Ray Sonde

DLIS Name	Description	Value

Parameters

Format: DSST_UPPER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 06:36

LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36		
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36		

Output DLIS Files

Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36	2729.5 M	3152.7 M
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36	2729.5 M	3152.7 M

Output DLIS Files

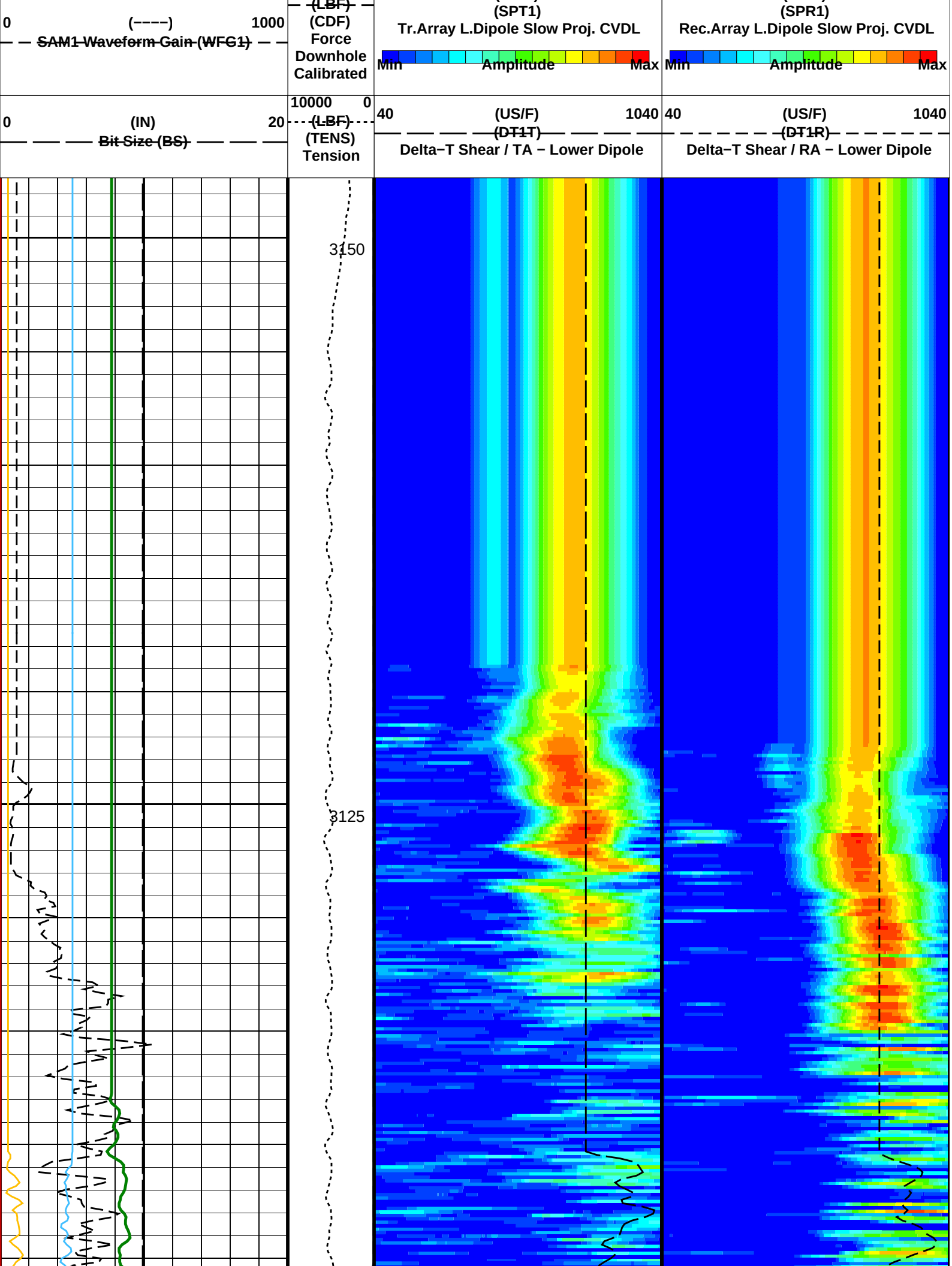
LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

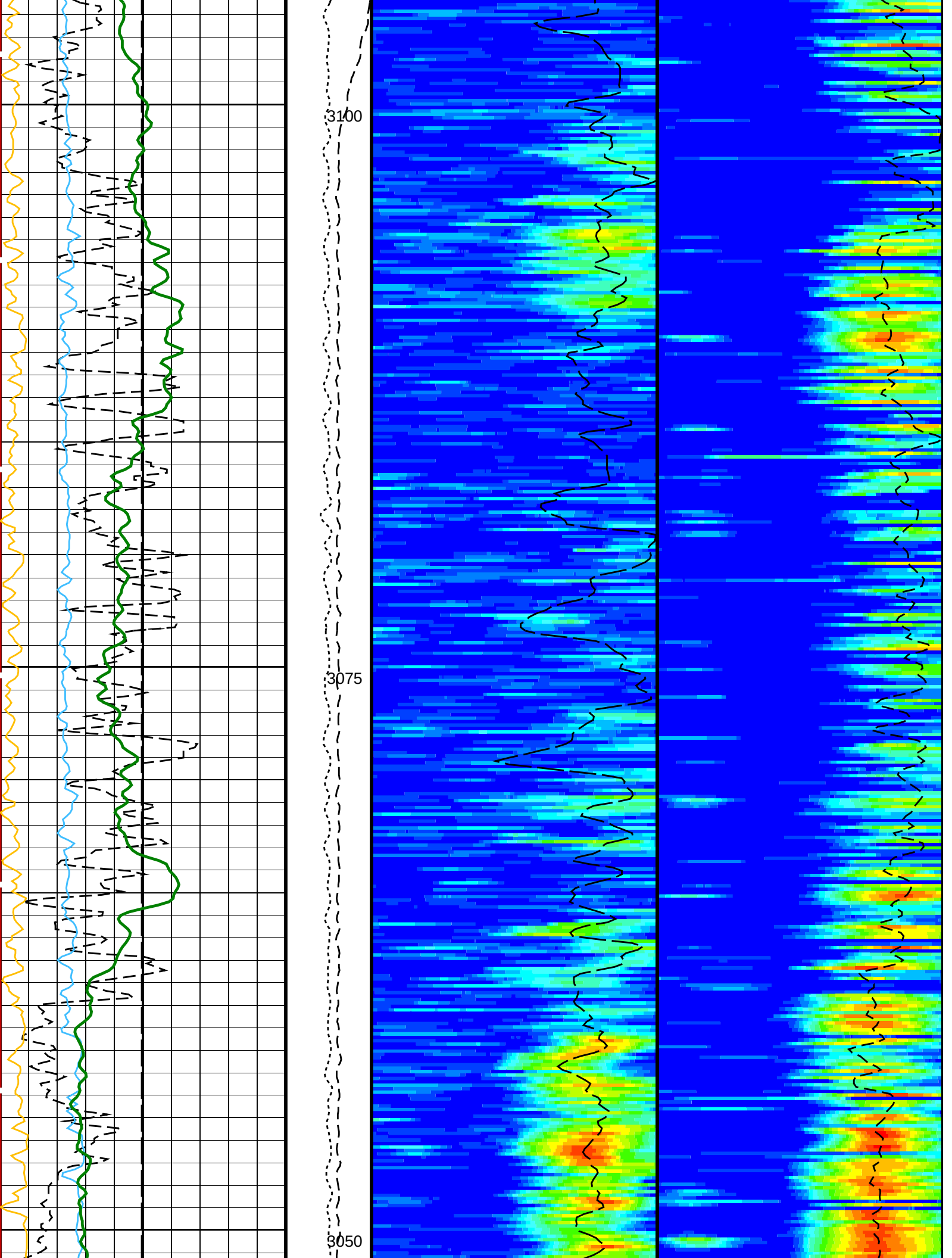
OP System Version: 19C0−187

Time Mark Every 60 S

PIP SUMMARY

0 (GAPI) 100 (HSGR) HNGS Spectroscopy Gamma Ray		
−2 (−−−−) 8 (CHT1) Peak Coherence / TA − Lower Dipole		
0 (−−−−) 10 (CHR1) Peak Coherence / RA − Lower Dipole		
0 (−−−−) 10 Lower Dipole (WCI1) Waveform Data Copy Indicator 1 −	Downlog 1	
	5000 0 (LBF)	40 (US/F) 1040 | 40 (US/F) 1040


0
(----)
1000
SAM1 Waveform Gain (WFG1)
(LBF)
(CDF)
Force
Downhole
Calibrated
(SPT1)
Tr.Array L.Dipole Slow Proj. CVDL
Min
Amplitude
Max
(SPR1)
Rec.Array L.Dipole Slow Proj. CVDL
Min
Amplitude
Max
0
(IN)
20
Bit Size (BS)
10000
0
(LBF)
(TENS)
Tension
40
(US/F)
1040
(DT1T)
Delta−T Shear / TA − Lower Dipole
40
(US/F)
1040
(DT1R)
Delta−T Shear / RA − Lower Dipole
3150
3125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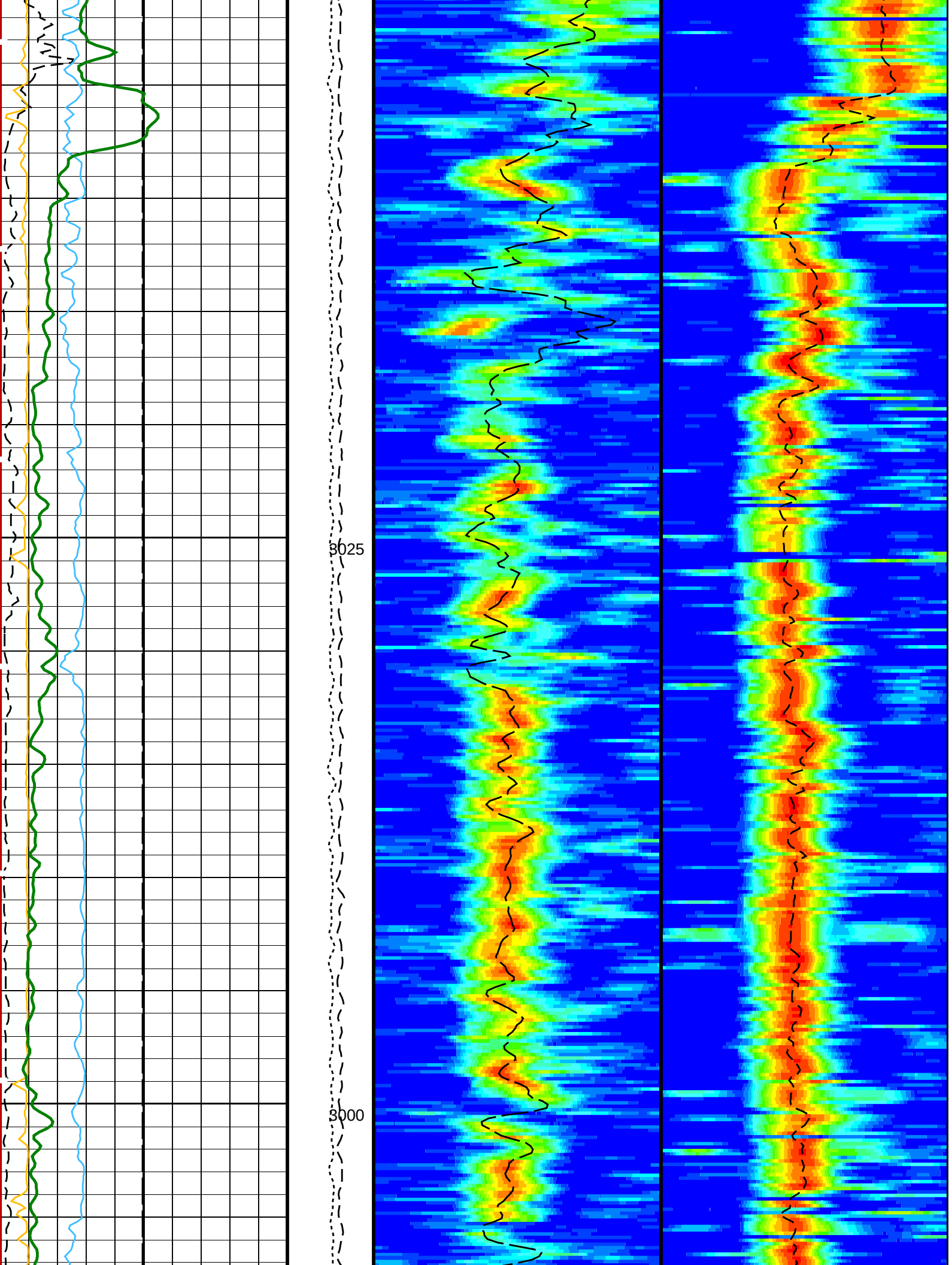
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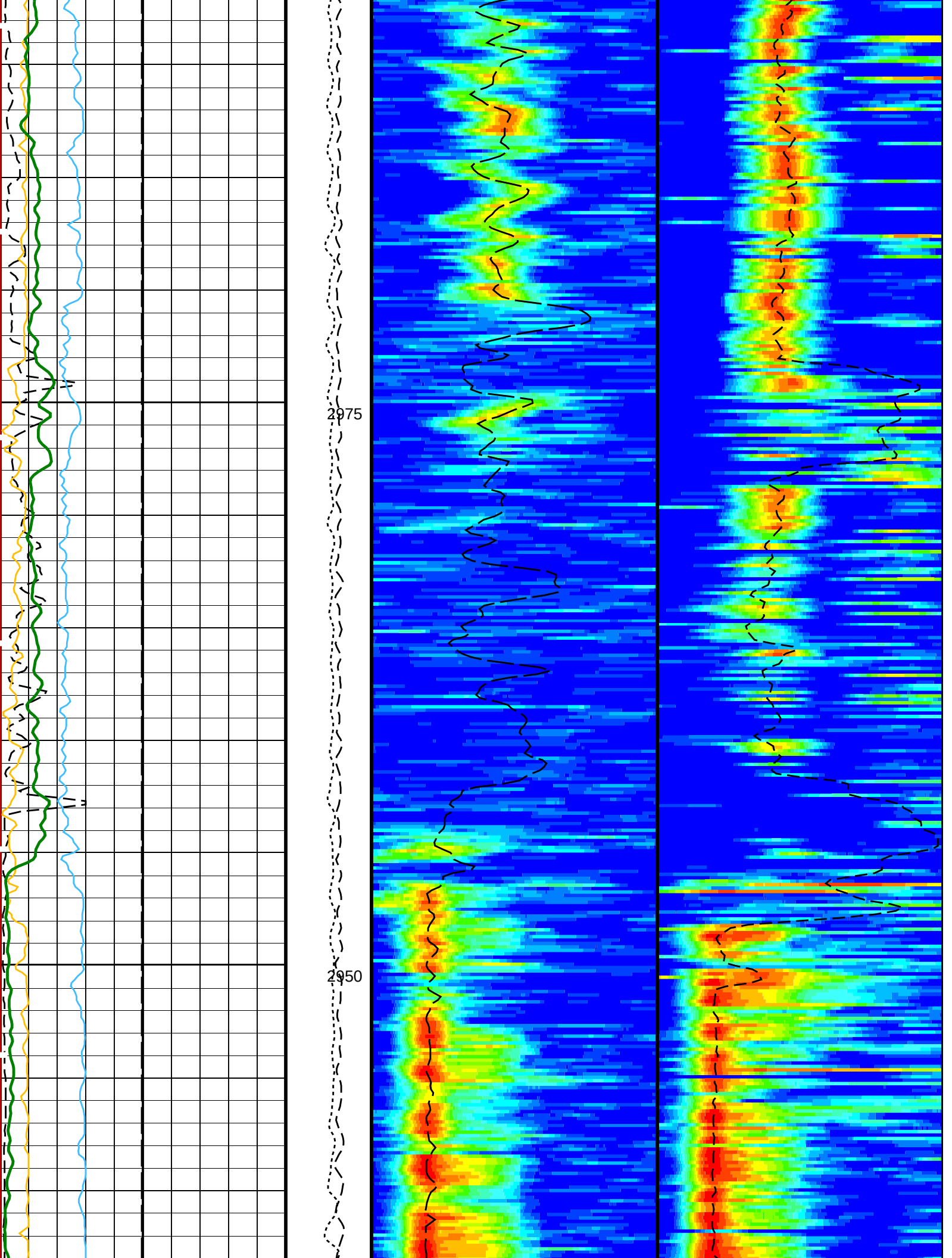
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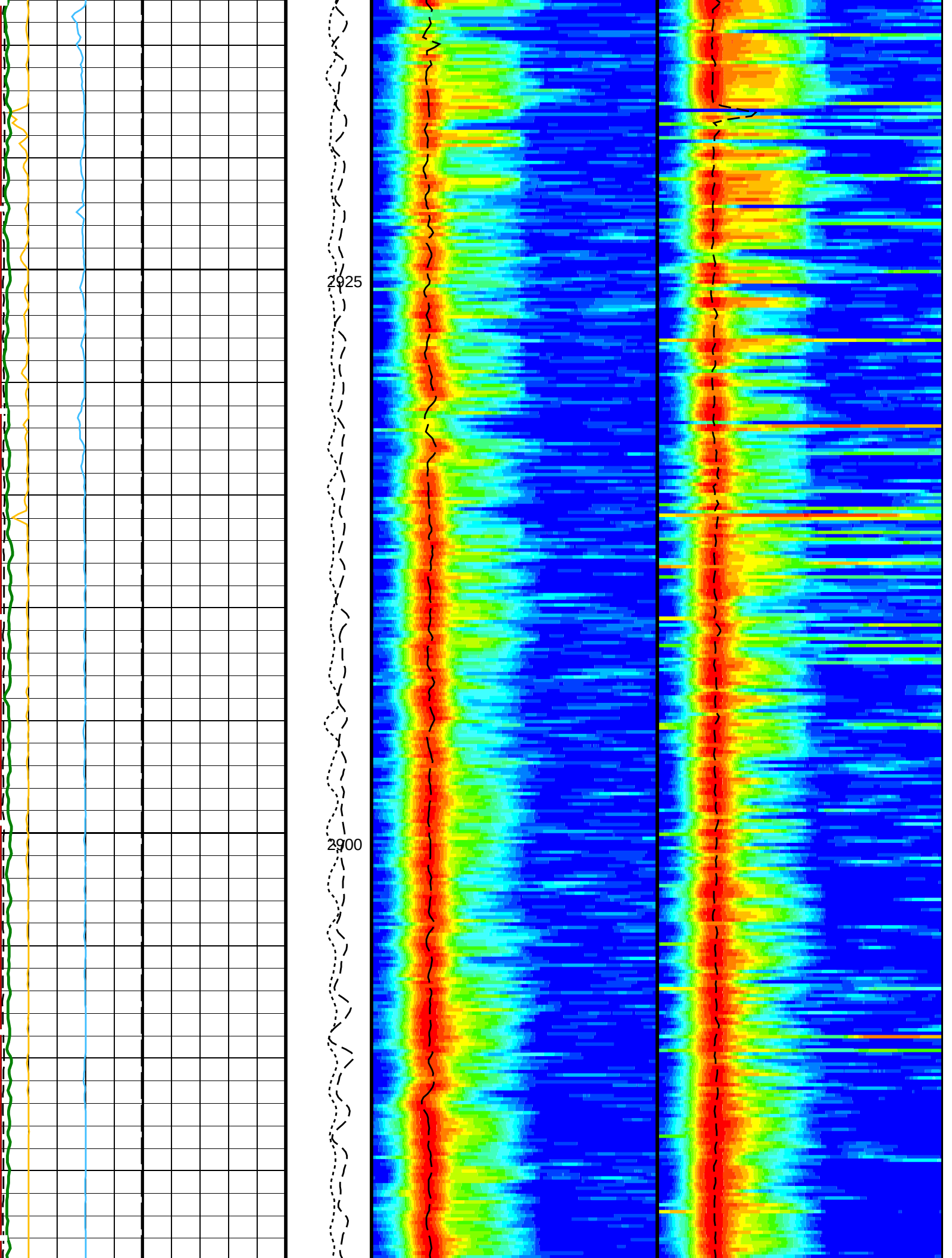
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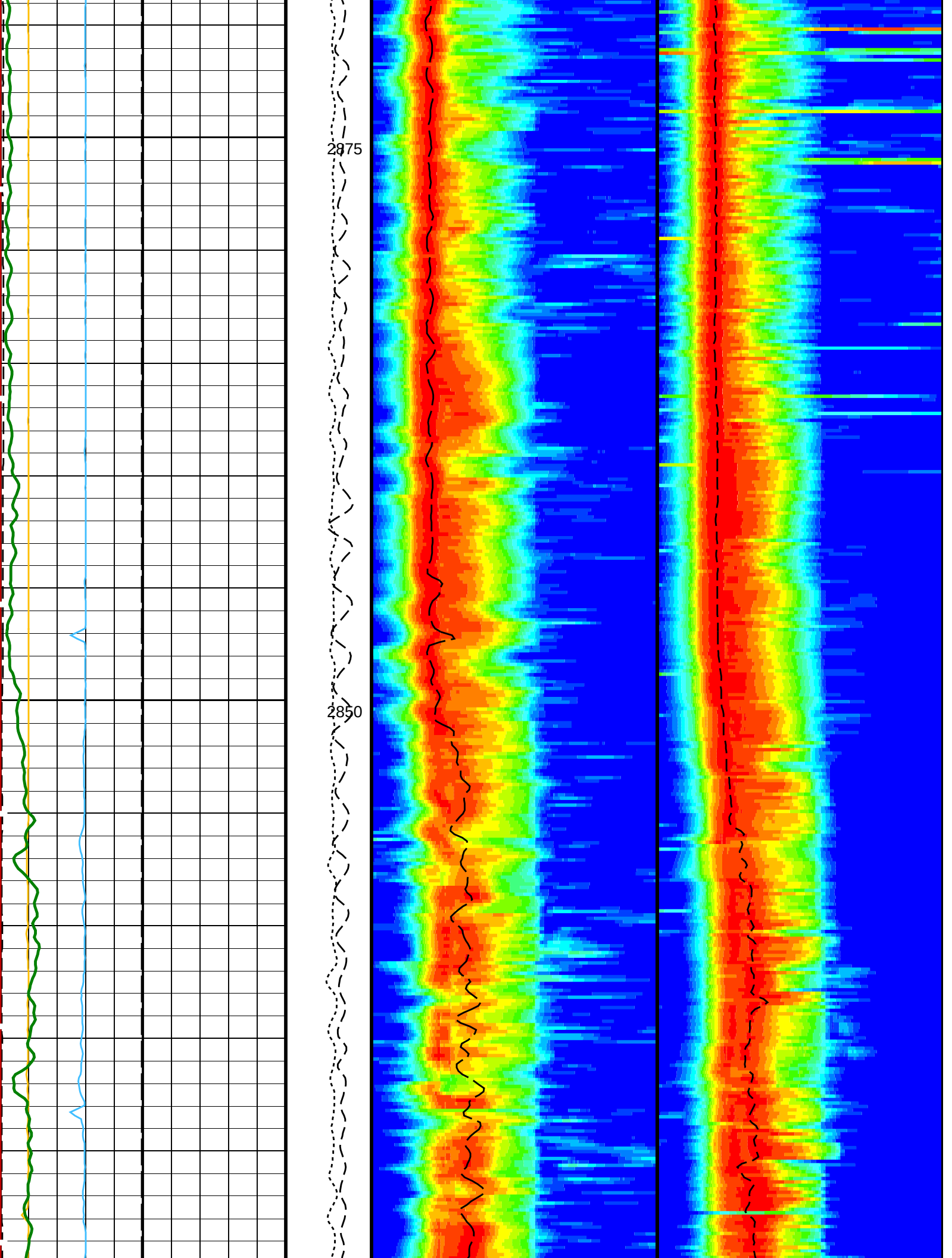
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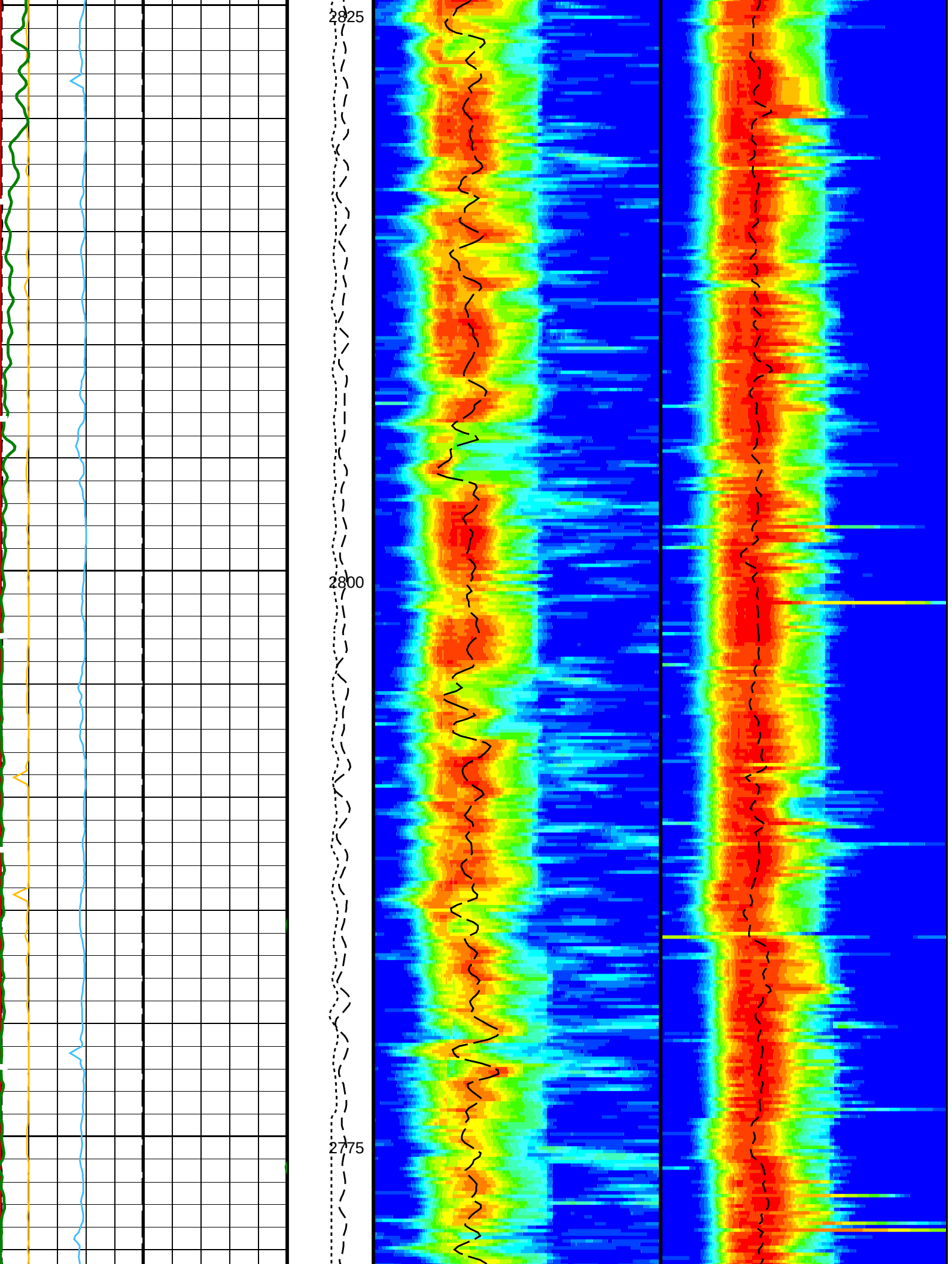
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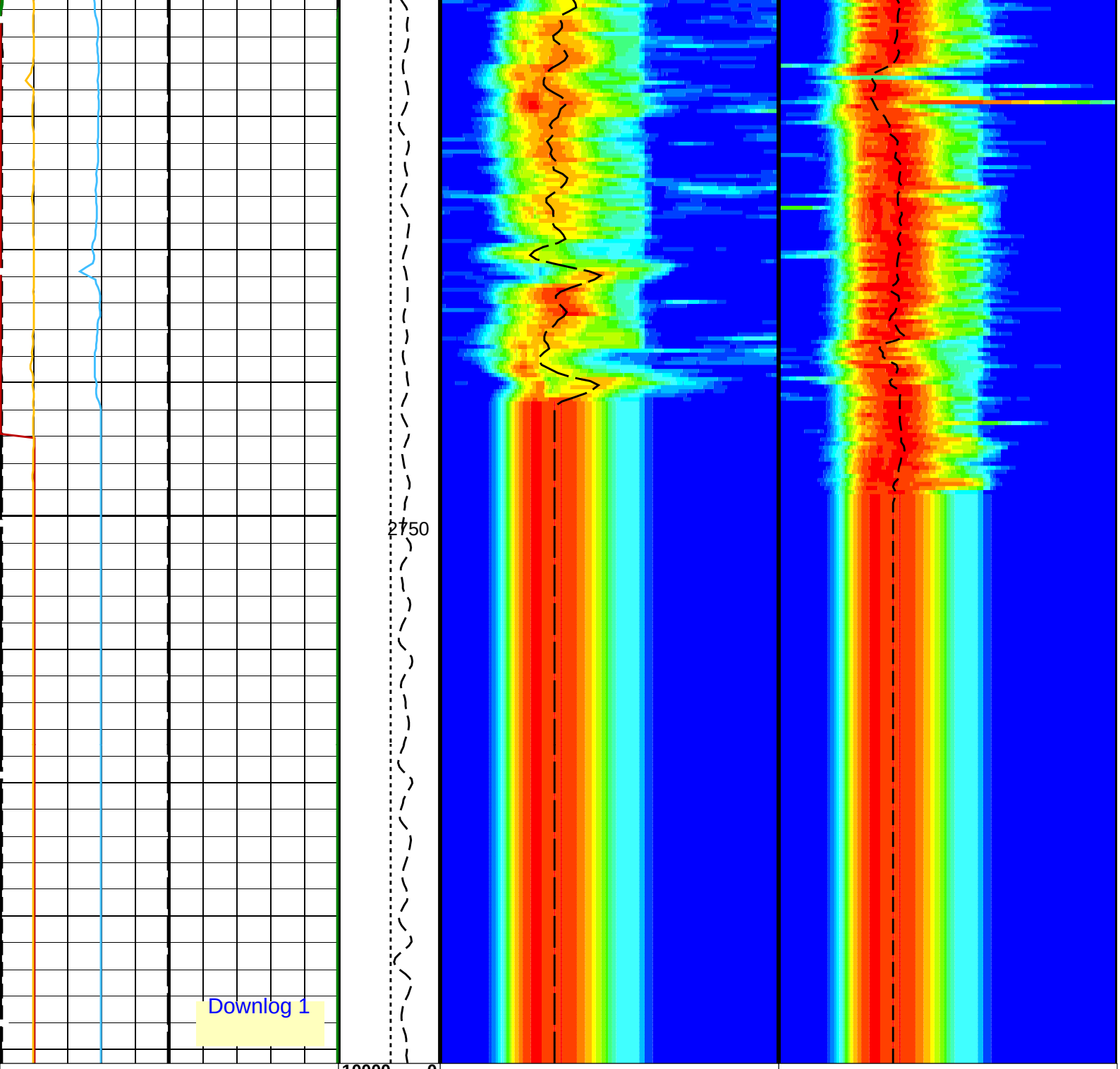


0 (IN) 20 Bit Size (BS)	10000 0 (LBF) (TENS) Tension	40 (US/F) 1040 (DT1T) Delta−T Shear / TA − Lower Dipole	40 (US/F) 1040 (DT1R) Delta−T Shear / RA − Lower Dipole
0 (−−−−) 1000 SAM1 Waveform Gain (WFG1)	5000 0 (LBF) (CDF) Force Downhole Calibrated	40 (US/F) 1040 (SPT1) Tr.Array L.Dipole Slow Proj. CVDL Min Amplitude Max	40 (US/F) 1040 (SPR1) Rec.Array L.Dipole Slow Proj. CVDL Min Amplitude Max
0 (−−−−) 10 Lower Dipole (WCI1) Waveform Data Copy Indicator 1 −			
0 (−−−−) 10 (CHR1) Peak Coherence / RA − Lower Dipole			
−2 (−−−−) 8			

(CHT1)
Peak Coherence / TA − Lower Dipole

0 (GAPI) 100

(HSGR)
HNGS Spectroscopy Gamma Ray

Time Mark Every 60 S

PIP SUMMARY

	System and Miscellaneous		
GCSE	Generalized Caliper Selection	BS	
BHS	Borehole Status	OPEN	
	EDTC−B: Enhanced DTS Cartridge		
WFM1	Waveform Mode 1	W1	
TWSX	Transmitter Waveform Select X	0	
TWI1	STC Integration Time Window − Lower Dipole	1600	US
TWD1	STC Time Width − Lower Dipole	2000	US
TUL1	STC Time Upper Limit − Lower Dipole	18960	US
TST1	STC Time Step − Lower Dipole	200	US
TLL1	STC Time Lower Limit − Lower Dipole	600	US
TBF1	STC Time for Baseline Fill − Lower Dipole	0	US
SWD1	STC Slowness Width − Lower Dipole	40	US/F
SUL1	STC Slowness Upper Limit − Lower Dipole	1040	US/F
SSW1	STC Source Waveform − Lower Dipole	WF_SAM1	
SST1	STC Slowness Step − Lower Dipole	4	US/F
SLL1	STC Slowness Lower Limit − Lower Dipole	40	US/F
SFM1	STC Filter − Lower Dipole	B.3−1.5K	
SFC1	STC Formation Character − Lower Dipole	SELECTABLE	
SBW1	STC Search Bandwidth − Lower Dipole	8000	US
SBO1	STC Search Band Offset − Lower Dipole	3000	US
SAS1	STC Sonic Array Status − Lower Dipole	255	
		OFF	
SAMX	DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert		
SAM1	DSST Sonic Acquisition Mode 1 − Lower Dipole Mode	LFD_EVEN	
RX8G	Receiver 8 Geometry	336	IN
RX7G	Receiver 7 Geometry	330	IN
RX6G	Receiver 6 Geometry	324	IN
RX5G	Receiver 5 Geometry	318	IN
RX4G	Receiver 4 Geometry	312	IN
RX3G	Receiver 3 Geometry	306	IN
RX2G	Receiver 2 Geometry	300	IN
RX1G	Receiver 1 Geometry	294	IN
NWIX	Number Waveform Items X	0	
NWI1	Number Waveform Items 1	8	
LTXG	Lower Dipole Transmitter Geometry	156	IN
GCSE	Generalized Caliper Selection	BS	
DWCX	Digitizer Word Count X	512	
DWC1	Digitizer Word Count 1	512	
DTCS	Compressional Delta−T Source for DTCO Channel	PS_COMP	
DSIX	Digitizer Sample Interval X	40	US
DSI1	Digitizer Sample Interval 1	40	US
DSHU	Label Slowness Upper Limit − Dipole Shear	1040	US/F
DSHL	Label Slowness Lower Limit − Dipole Shear	40	US/F
DLCS	Label Compressional Source − Dipole Shear	USE	
DDEX	Digitizing Delay X	0	US
DDE1	Digitizing Delay 1	0	US
BHS	Borehole Status	OPEN	
	DSST−B: Dipole Shear Imager − B		
GCSE	Generalized Caliper Selection	BS	
BHS	Borehole Status	OPEN	
	HRLT−B: High Resolution Laterolog Array − B		
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02109	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976854	
TPOS	Tool Position	CENT	
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	−0.00151551	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	

BAR2	HNGS Detector 2 Barite Constant	1
BAR1	HNGS Detector 1 Barite Constant	1

HNGS−BA: Hostile Natural Gamma Ray Sonde

DLIS Name	Description	Value

Parameters

Format: DSST_LOWER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 06:36

LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36		
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36		

Output DLIS Files

Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36	2729.5 M	3105.9 M
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36	2729.5 M	3105.9 M

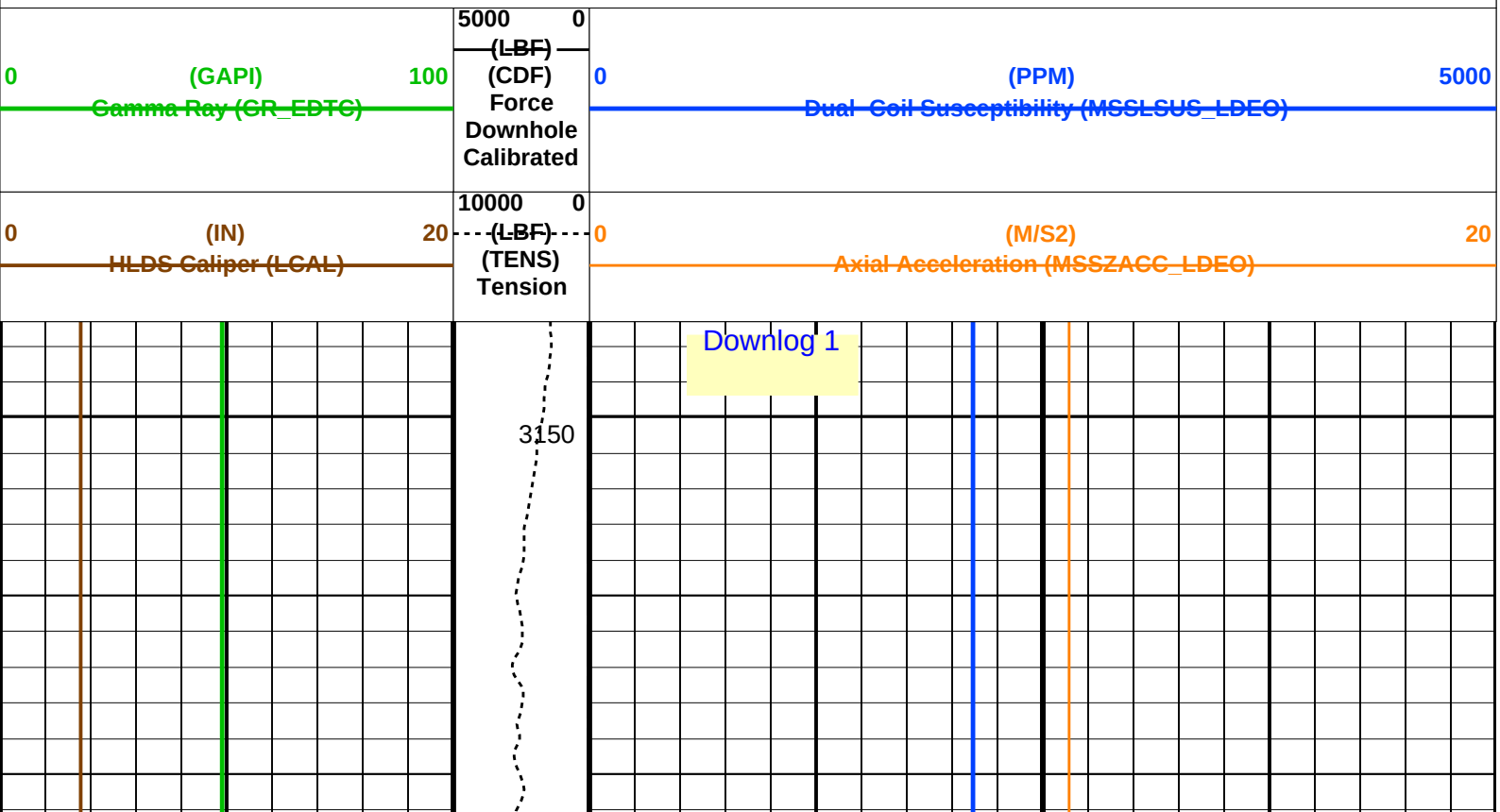
Output DLIS Files

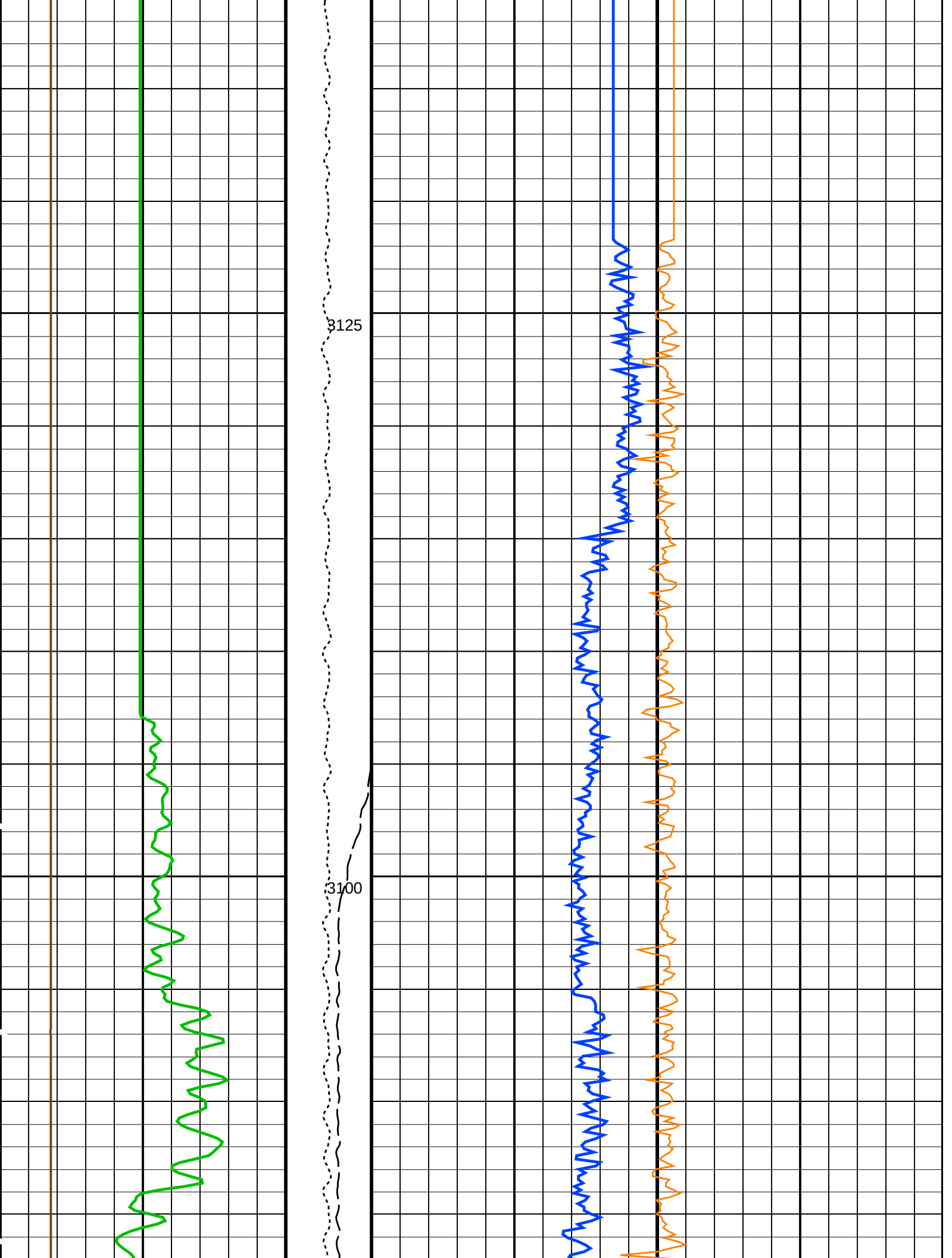
LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

Time Mark Every 60 S

PIP SUMMARY

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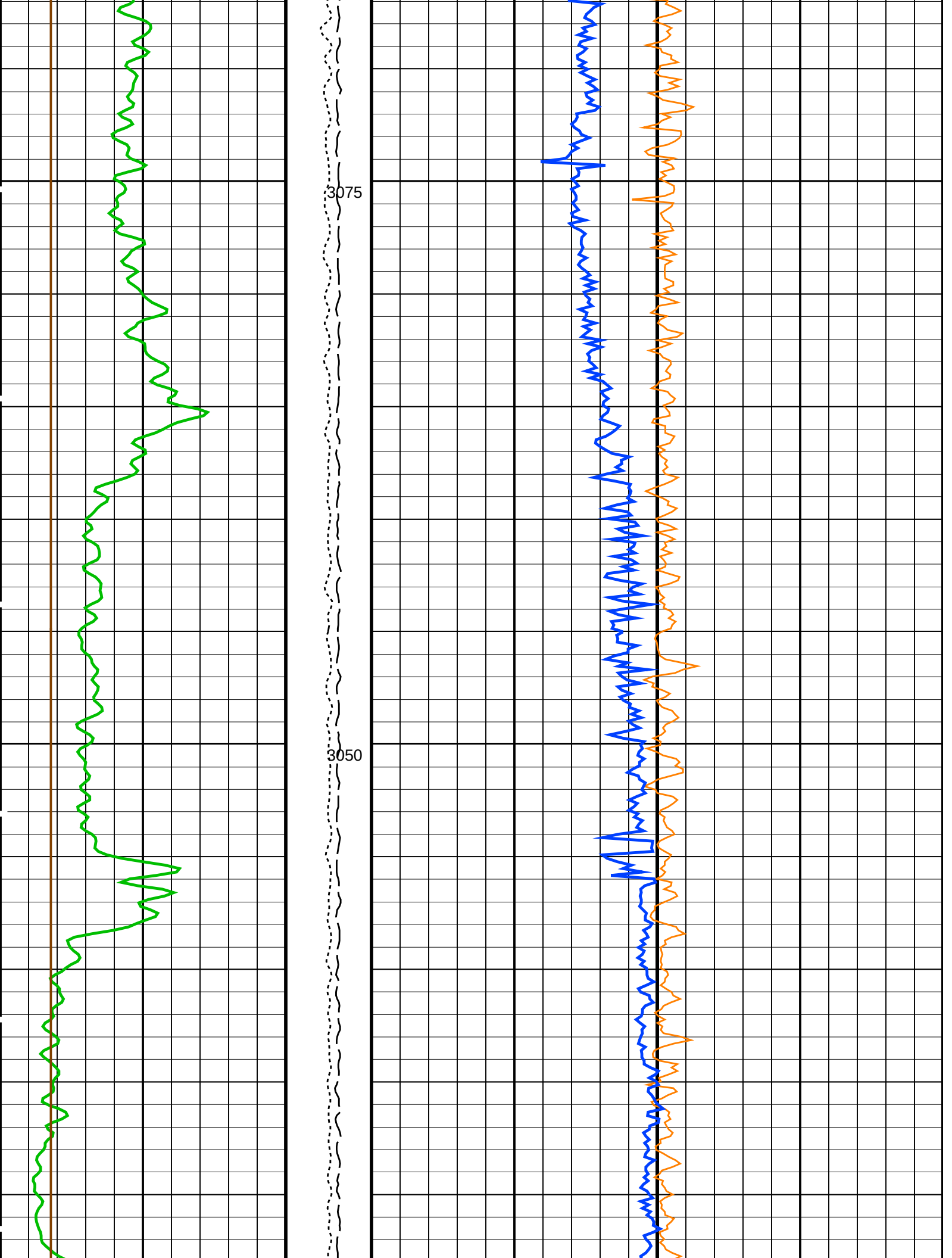
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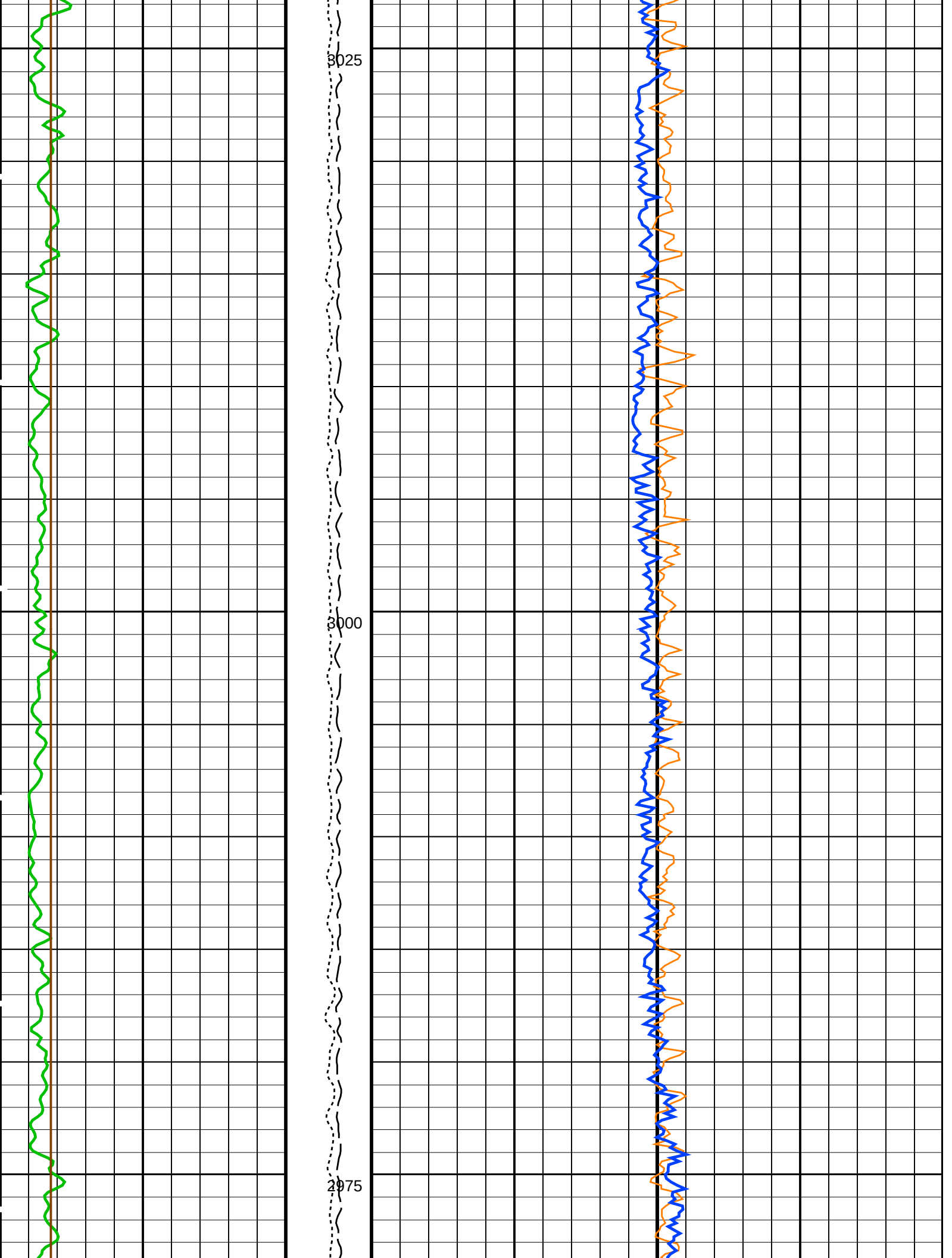
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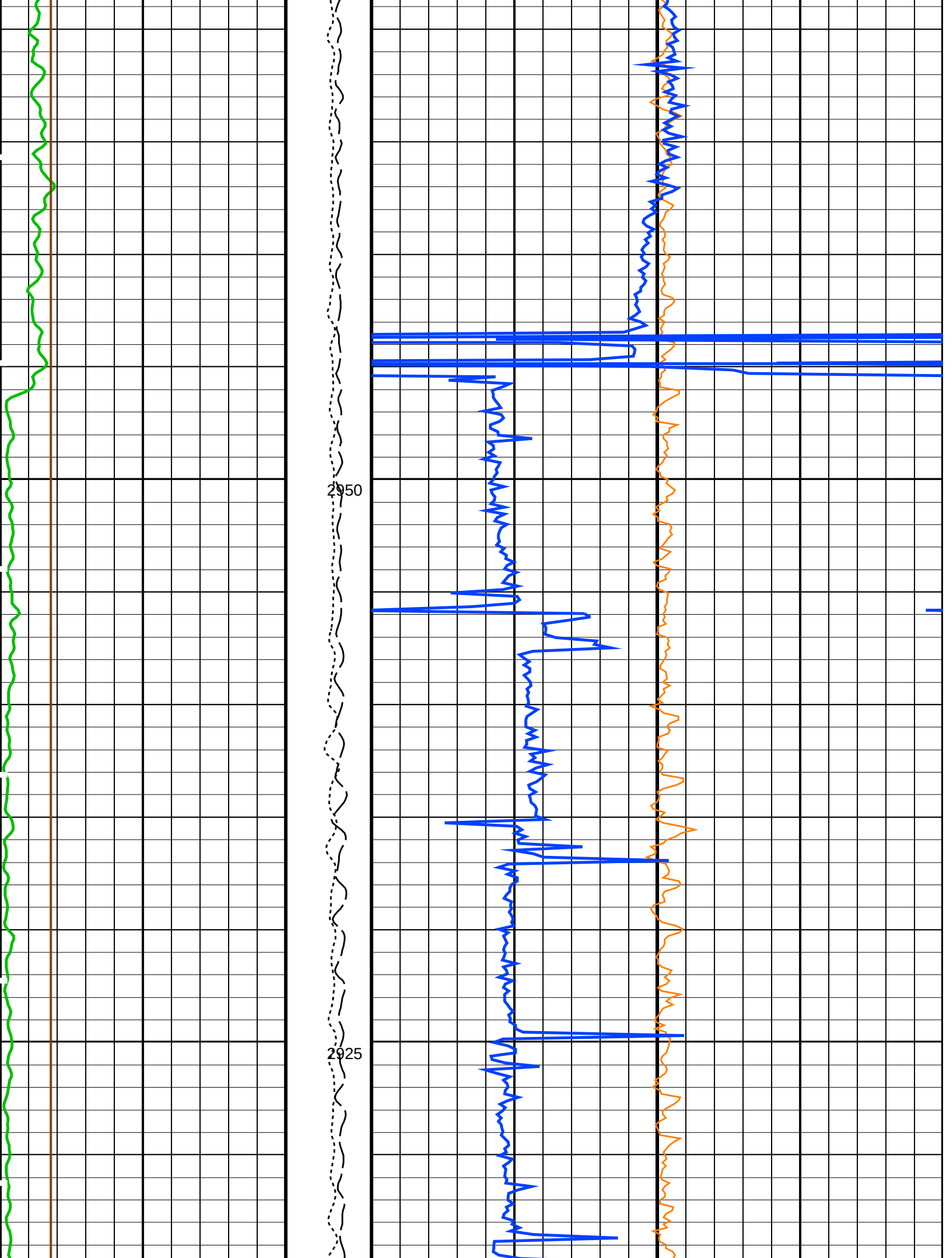
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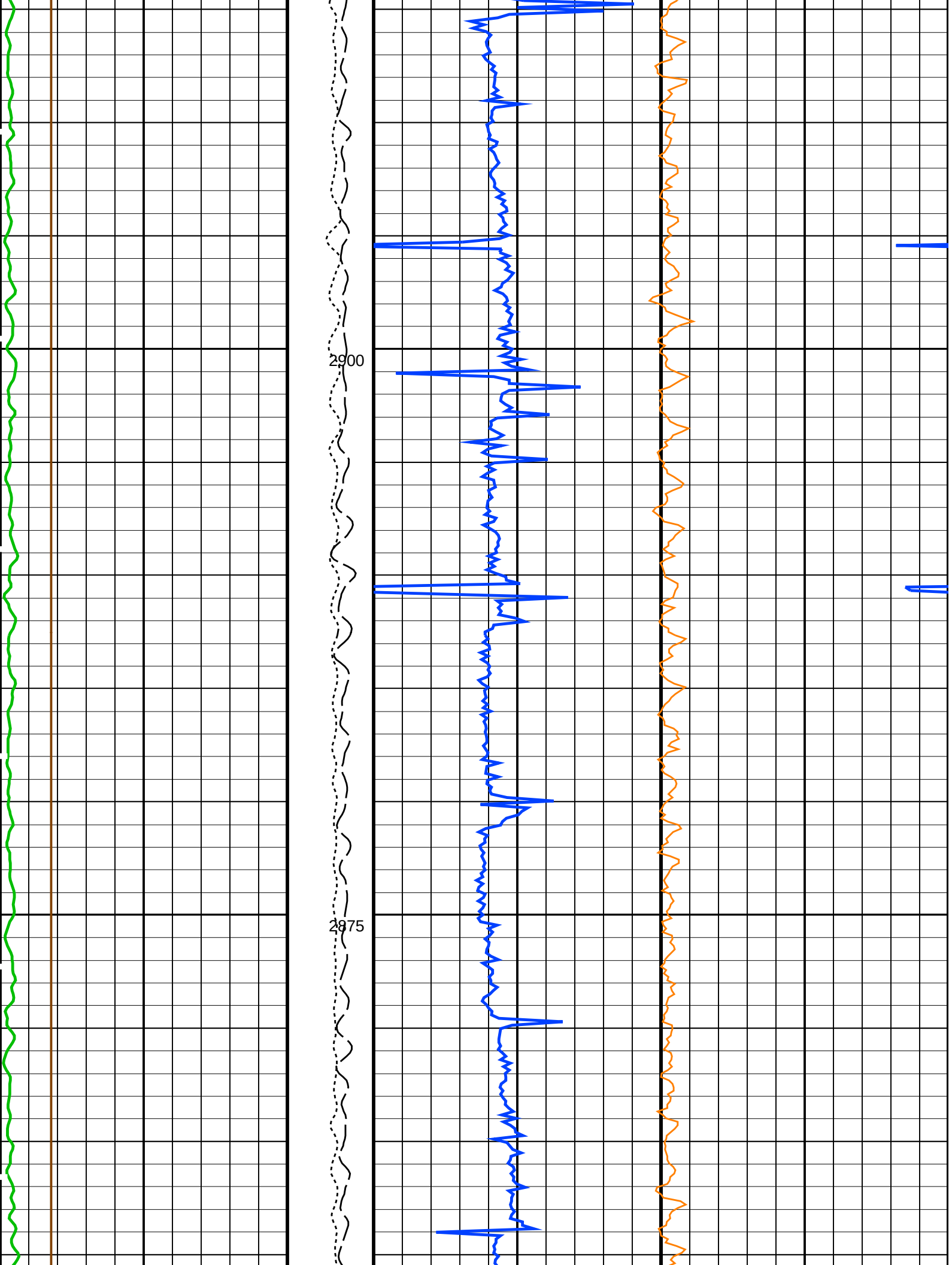
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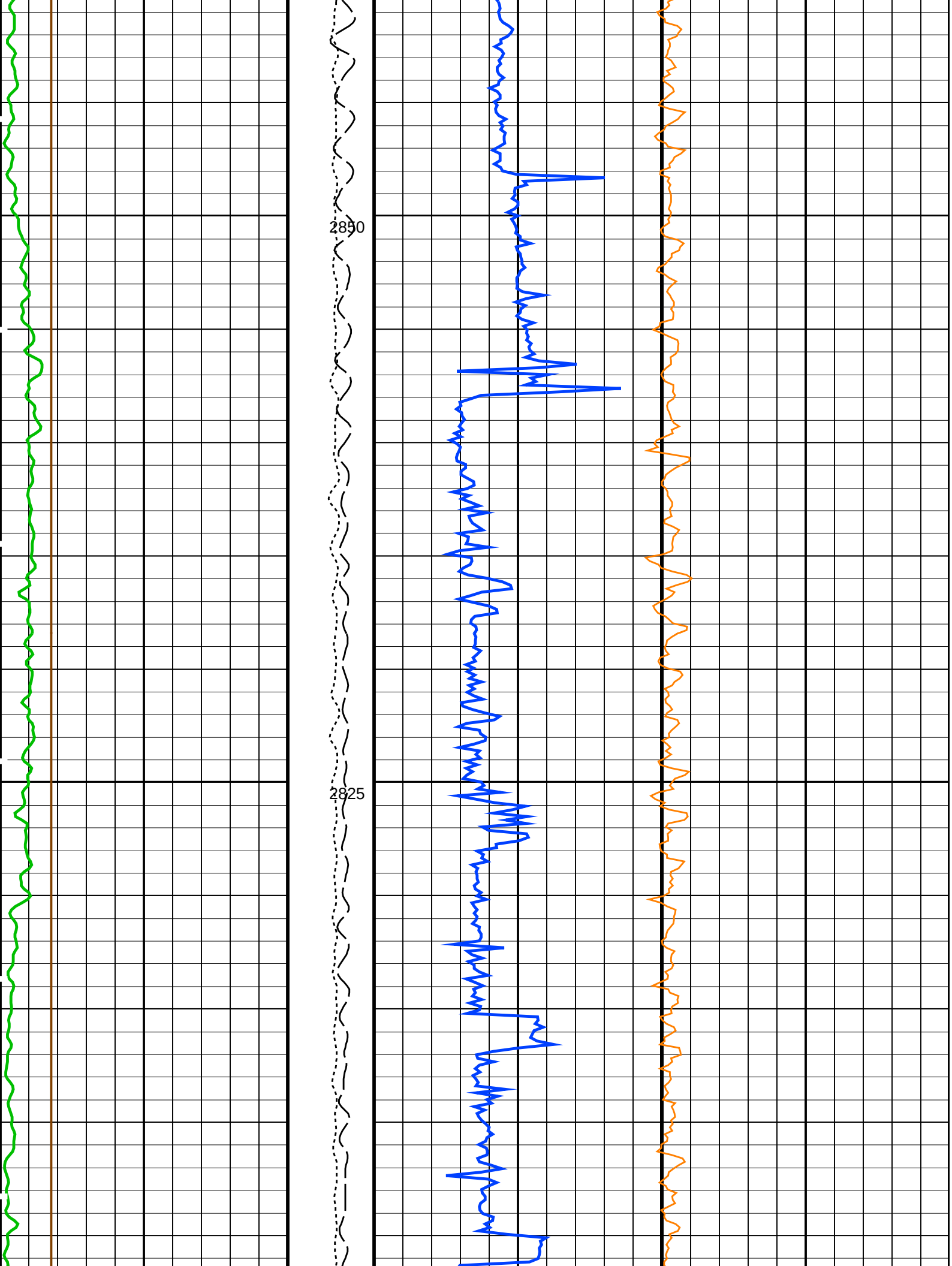
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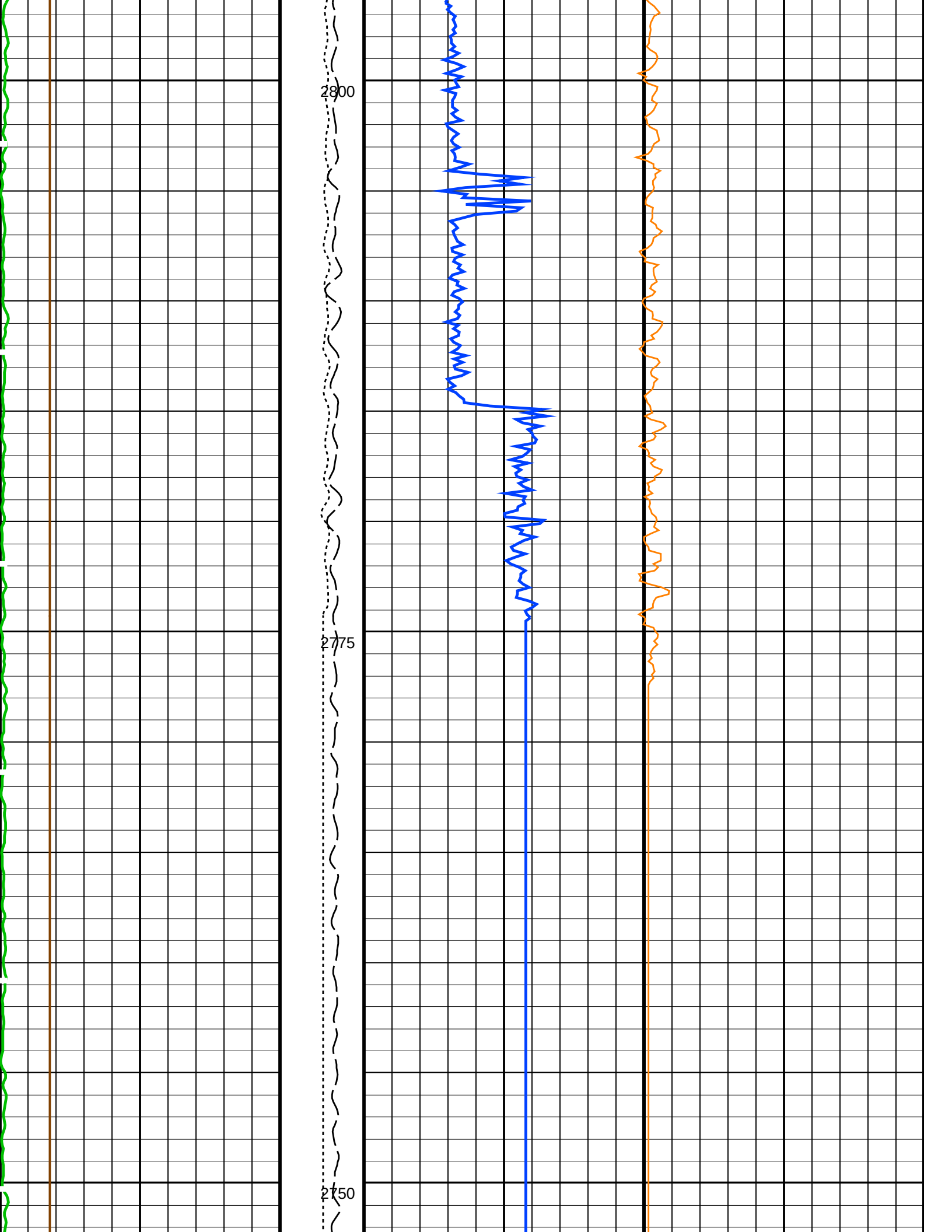
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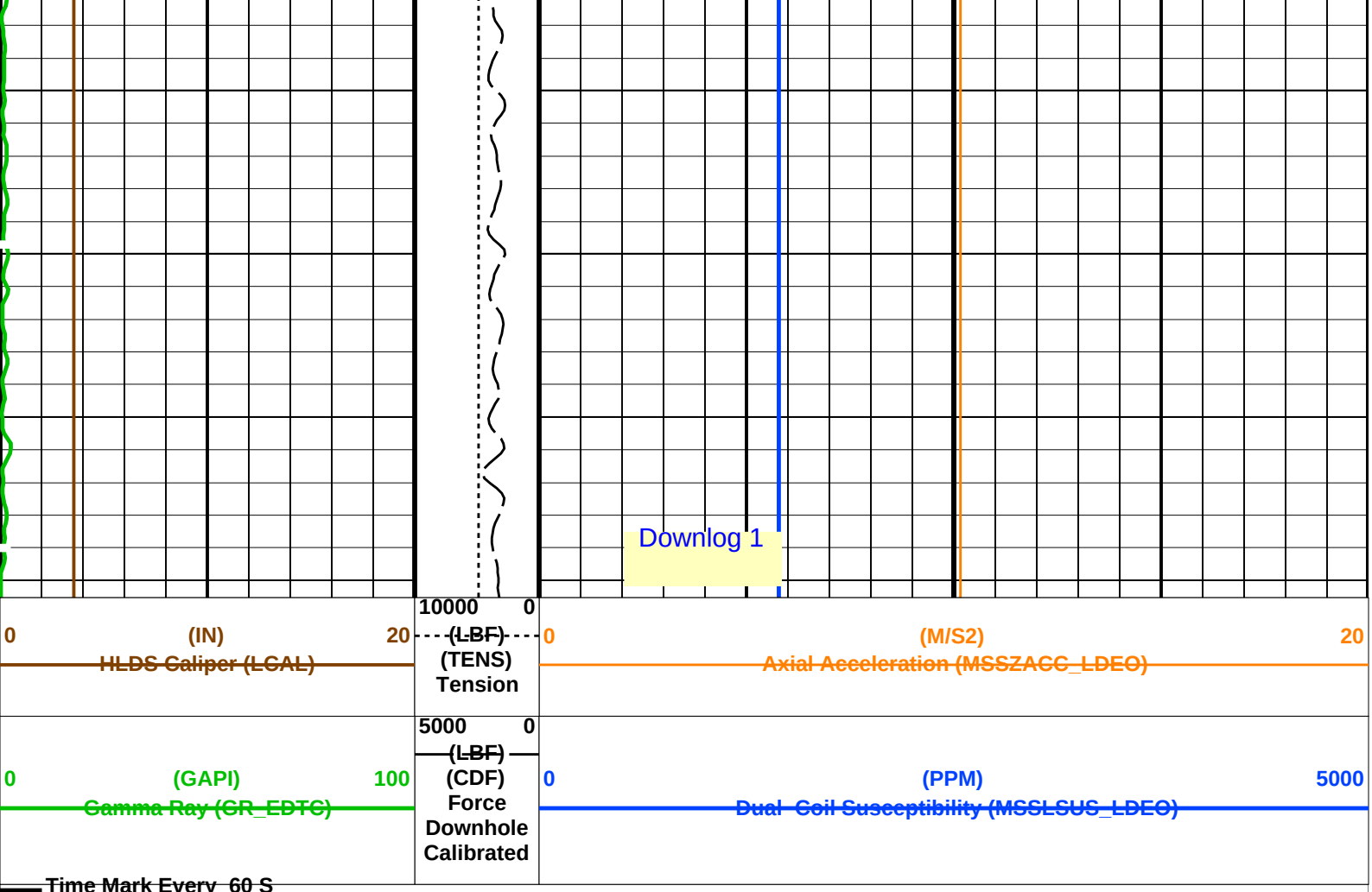


PIP SUMMARY

TDL	Total Depth − Logger	3560.00	M
TDD	Total Depth − Driller	3092.70	M
TD	Total Depth	12409.8	FT
RW	Resistivity of Connate Water	1.0000	OHMM
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
PBVSADP	Use alternate depth channel for playback	NO	
MST	Mud Sample Temperature	23.00	DEGC
FLEV	Fluid Level	−50000.00	M
DFD	Drilling Fluid Density	1.26	G/C3
CWEI	Casing Weight	168.00	LB/F
CSIZ	Current Casing Size	5.500	IN
BSAL	Borehole Salinity	38000.00	PPM
BS	Bit Size	9.875	IN
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
System and Miscellaneous			
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
SOCO	Standoff Correction Option	NO	
SOCN	Standoff Distance	0.5	IN
SHT	Surface Hole Temperature	55	DEGF
SDAT	Standoff Data Source	SOCN	
PTCO	Pressure/Temperature Correction Option	NO	
MWCO	Mud Weight Correction Option	YES	
MCOR	Mud Correction	BARI	
MCCO	Mud Cake Correction Option	NO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
ISSBAR	Barite Mud Switch	BARITE	
HSCO	Hole Size Correction Option	YES	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.01	DF/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
FSCO	Formation Salinity Correction Option	NO	
FSAL	Formation Salinity	−50000	PPM
DPPM	Density Porosity Processing Mode	HIRS	
CCCO	Casing & Cement Thickness Correction Option	NO	
BSCO	Borehole Salinity Correction Option	NO	

BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
BHFL	Borehole Fluid Type	WATER	
EDTC−B: Enhanced DTS Cartridge			
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
MDEN	Matrix Density	2.6	G/C3
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LATC	HLDS Activation Correction	OFF	
FD	Fluid Density	1	G/C3
DPPM	Density Porosity Processing Mode	HIRS	
DHC	Density Hole Correction	BS	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
HLDS: Hostile Litho−Density Sonde			
XMTX	Transmitter Select X	DUP	
XMT5	Transmitter Select 5	MONO	
XMT4	Transmitter Select 4	MONO	
XMT3	Transmitter Select 3	MONO	
XMT2	Transmitter Select 2	DUP	
XMT1	Transmitter Select 1	DLO	
WFULSPX	SAMX Waveform Upper Limit for Spectrum	20000	US
WFULSP4	SAM4 Waveform Upper Limit for Spectrum	5000	US
WFULSP3	SAM3 Waveform Upper Limit for Spectrum	20000	US
WFULSP2	SAM2 Waveform Upper Limit for Spectrum	20000	US
WFULSP1	SAM1 Waveform Upper Limit for Spectrum	20000	US
WFMX	Waveform Mode X	W1	
WFM5	Waveform Mode 5	W1	
WFM4	Waveform Mode 4	W1	
WFM3	Waveform Mode 3	W1	
WFM2	Waveform Mode 2	W1	
WFM1	Waveform Mode 1	W1	
WFLLSPX	SAMX Waveform Lower Limit for Spectrum	0	US
WFLLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFDTSPX	SAMX Waveform Delta for Spectrum	0	US/F
WFDTSP4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSP3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTSP2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTSP1	SAM1 Waveform Delta for Spectrum	0	US/F
UTXG	Upper Dipole Transmitter Geometry	162	IN
TWSX	Transmitter Waveform Select X	0	
TWS5	Transmitter Waveform Select 5	6	
TWS4	Transmitter Waveform Select 4	6	
TWS3	Transmitter Waveform Select 3	4	
TWS2	Transmitter Waveform Select 2	0	
TWS1	Transmitter Waveform Select 1	2	
TWRX	Transmitter Waveform Sample Rate X	5	US
TWR5	Transmitter Waveform Sample Rate 5	5	US
TWR4	Transmitter Waveform Sample Rate 4	5	US
TWR3	Transmitter Waveform Sample Rate 3	5	US
TWR2	Transmitter Waveform Sample Rate 2	5	US
TWR1	Transmitter Waveform Sample Rate 1	20	US
TWI4	STC Integration Time Window − Monopole P&S	500	US
TWI3	STC Integration Time Window − Monopole Stoneley	2400	US
TWI2	STC Integration Time Window − Upper Dipole	1600	US
TWI1	STC Integration Time Window − Lower Dipole	1600	US
TWD4	STC Time Width − Monopole P&S	1000	US
TWD3	STC Time Width − Monopole Stoneley	2000	US
TWD2	STC Time Width − Upper Dipole	2000	US
TWD1	STC Time Width − Lower Dipole	2000	US
TWAX	Transmitter Waveform Amplitude X	179	
TWA5	Transmitter Waveform Amplitude 5	150	
TWA4	Transmitter Waveform Amplitude 4	150	
TWA3	Transmitter Waveform Amplitude 3	166	
TWA2	Transmitter Waveform Amplitude 2	179	
TWA1	Transmitter Waveform Amplitude 1	179	
TUL4	STC Time Upper Limit − Monopole P&S	3660	US
TUL3	STC Time Upper Limit − Monopole Stoneley	12000	US
TUL2	STC Time Upper Limit − Upper Dipole	18440	US
TUL1	STC Time Upper Limit − Lower Dipole	18960	US
TTDB	Tool String Top to DSST Bottom	1225.31	IN
TST4	STC Time Step − Monopole P&S	50	US
TST3	STC Time Step − Monopole Stoneley	200	US

TST2	STC Time Step − Upper Dipole	200	US
TST1	STC Time Step − Lower Dipole	200	US
TLL4	STC Time Lower Limit − Monopole P&S	150	US
TLL3	STC Time Lower Limit − Monopole Stoneley	600	US
TLL2	STC Time Lower Limit − Upper Dipole	600	US
TLL1	STC Time Lower Limit − Lower Dipole	600	US
TBF4	STC Time for Baseline Fill − Monopole P&S	300	US
TBF3	STC Time for Baseline Fill − Monopole Stoneley	0	US
TBF2	STC Time for Baseline Fill − Upper Dipole	0	US
TBF1	STC Time for Baseline Fill − Lower Dipole	0	US
TBDB	Tool String Bottom to DSST Bottom	680.708	IN
SWD4	STC Slowness Width − Monopole P&S	10	US/F
SWD3	STC Slowness Width − Monopole Stoneley	40	US/F
SWD2	STC Slowness Width − Upper Dipole	40	US/F
SWD1	STC Slowness Width − Lower Dipole	40	US/F
SUL4	STC Slowness Upper Limit − Monopole P&S	240	US/F
SUL3	STC Slowness Upper Limit − Monopole Stoneley	780	US/F
SUL2	STC Slowness Upper Limit − Upper Dipole	1040	US/F
SUL1	STC Slowness Upper Limit − Lower Dipole	1040	US/F
STUL	Label Slowness Upper Limit − Monopole Stoneley	780	US/F
STLL	Label Slowness Lower Limit − Monopole Stoneley	180	US/F
SSW4	STC Source Waveform − Monopole P&S	WF_SAM4	
SSW3	STC Source Waveform − Monopole Stoneley	WF_SAM3	
SSW2	STC Source Waveform − Upper Dipole	WF_SAM2	
SSW1	STC Source Waveform − Lower Dipole	WF_SAM1	
SST4	STC Slowness Step − Monopole P&S	2	US/F
SST3	STC Slowness Step − Monopole Stoneley	4	US/F
SST2	STC Slowness Step − Upper Dipole	4	US/F
SST1	STC Slowness Step − Lower Dipole	4	US/F
SPSO	Sonic Porosity Source	DTCO	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SLL4	STC Slowness Lower Limit − Monopole P&S	40	US/F
SLL3	STC Slowness Lower Limit − Monopole Stoneley	180	US/F
SLL2	STC Slowness Lower Limit − Upper Dipole	40	US/F
SLL1	STC Slowness Lower Limit − Lower Dipole	40	US/F
SHUL	Label Slowness Upper Limit − Monopole P&S Shear	240	US/F
SHT	Surface Hole Temperature	55	DEGF
SHLL	Label Slowness Lower Limit − Monopole P&S Shear	235	US/F
SFM4	STC Filter − Monopole P&S	B3−20K	
SFM3	STC Filter − Monopole Stoneley	B.5−1.5K	
SFM2	STC Filter − Upper Dipole	B1−2K	
SFM1	STC Filter − Lower Dipole	B.3−1.5K	
SFC4	STC Formation Character − Monopole P&S	SELECTABLE	
SFC3	STC Formation Character − Monopole Stoneley	SELECTABLE	
SFC2	STC Formation Character − Upper Dipole	SELECTABLE	
SFC1	STC Formation Character − Lower Dipole	SELECTABLE	
SBW4	STC Search Bandwidth − Monopole P&S	2000	US
SBW3	STC Search Bandwidth − Monopole Stoneley	8000	US
SBW2	STC Search Bandwidth − Upper Dipole	8000	US
SBW1	STC Search Bandwidth − Lower Dipole	8000	US
SBR4	STC Baseline Removal − Monopole P&S	ON	
SBO4	STC Search Band Offset − Monopole P&S	500	US
SBO3	STC Search Band Offset − Monopole Stoneley	3000	US
SBO2	STC Search Band Offset − Upper Dipole	3000	US
SBO1	STC Search Band Offset − Lower Dipole	3000	US
SAS5	Sonic Array Status − FMD	255	
SAS4	STC Sonic Array Status − Monopole P&S	255	
SAS3	STC Sonic Array Status − Monopole Stoneley	255	
SAS2	STC Sonic Array Status − Upper Dipole	255	
SAS1	STC Sonic Array Status − Lower Dipole	255	
		OFF	
SAMX	DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert		
SAM5	DSST Sonic Acquisition Mode 5 − Monopole Mode for FMD	OFF	
SAM4	DSST Sonic Acquisition Mode 4 − Monopole Mode for P&S	EVEN	
SAM3	DSST Sonic Acquisition Mode 3 − Monopole Mode for Stoneley	OFF	
SAM2	DSST Sonic Acquisition Mode 2 − Upper Dipole Mode	ODD	
SAM1	DSST Sonic Acquisition Mode 1 − Lower Dipole Mode	LFD_EVEN	
RX8G	Receiver 8 Geometry	336	IN
RX7G	Receiver 7 Geometry	330	IN
RX6G	Receiver 6 Geometry	324	IN
RX5G	Receiver 5 Geometry	318	IN
RX4G	Receiver 4 Geometry	312	IN
RX3G	Receiver 3 Geometry	306	IN
RX2G	Receiver 2 Geometry	300	IN
RX1G	Receiver 1 Geometry	294	IN
RSMX	Label Shear/Compressional Maximum Ratio − Monopole P&S	2.12	
RSMN	Label Shear/Compressional Minimum Ratio − Monopole P&S	1.4	
RATE	Firing Rate	R7	
NWSX	Number Waveforms Stacked X	1	
NWS5	Number Waveforms Stacked 5	1	
NWS4	Number Waveforms Stacked 4	1	
NWS3	Number Waveforms Stacked 3	1	
NWS2	Number Waveforms Stacked 2	1	
NWS1	Number Waveforms Stacked 1	1	
NWIX	Number Waveform Items X	9	

NWIX	Number Waveform Items X	0	
NWI5	Number Waveform Items 5	0	
NWI4	Number Waveform Items 4	8	
NWI3	Number Waveform Items 3	0	
NWI2	Number Waveform Items 2	8	
NWI1	Number Waveform Items 1	8	
NTIX	Number Threshold Items X	0	
NTI5	Number Threshold Items 5	0	
MUXX	Sum Difference Multiplexor Input X	RR	
MUX5	Sum Difference Multiplexor Input 5	RR	
MUX4	Sum Difference Multiplexor Input 4	RR	
MUX3	Sum Difference Multiplexor Input 3	RR	
MUX2	Sum Difference Multiplexor Input 2	RR	
MUX1	Sum Difference Multiplexor Input 1	RR	
MTXG	Monopole Transmitter Geometry	186	IN
MDS5	Multishot Delta−T Scatter − FMD	20	US
MCS	Mean Casing Slowness	57	US/F
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MAI5	Slowness Averaging Interval − FMD	42	IN
LTXG	Lower Dipole Transmitter Geometry	156	IN
LPFX	Low Pass Filter X	F5K	
LPF5	Low Pass Filter 5	F30K	
LPF4	Low Pass Filter 4	F30K	
LPF3	Low Pass Filter 3	F5K	
LPF2	Low Pass Filter 2	F5K	
LPF1	Low Pass Filter 1	F5K	
LFC	Label Formation Character − Monopole P&S	DYNAMIC	
ITTS	Integrated Transit Time Source	DTCO	
ISSBAR	Barite Mud Switch	BARITE	
HPFX	High Pass Filter X	F80	
HPF5	High Pass Filter 5	F8K	
HPF4	High Pass Filter 4	F8K	
HPF3	High Pass Filter 3	F80	
HPF2	High Pass Filter 2	F80	
HPF1	High Pass Filter 1	F80	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GINX	Gain Interval X	15360	US
GIN5	Gain Interval 5	1600	US
GIN4	Gain Interval 4	2560	US
GIN3	Gain Interval 3	15360	US
GIN2	Gain Interval 2	15360	US
GIN1	Gain Interval 1	15360	US
GGRD	Geothermal Gradient	0.01	DF/F
GDTX	Gain Delta−T X	800	US/F
GDT5	Gain Delta−T 5	160	US/F
GDT4	Gain Delta−T 4	160	US/F
GDT3	Gain Delta−T 3	800	US/F
GDT2	Gain Delta−T 2	800	US/F
GDT1	Gain Delta−T 1	800	US/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
GAIX	Manual Gain X	10	
GAI5	Manual Gain 5	16	
GAI4	Manual Gain 4	16	
GAI3	Manual Gain 3	6	
GAI2	Manual Gain 2	10	
GAI1	Manual Gain 1	10	
FTDX	First Motion Threshold Direction X	UP	
FTD5	First Motion Threshold Direction 5	UP	
FPM	Processing Mode − FMD	NONE	
FNCX	First Motion Noise Counter Input X	ALO	
FNC5	First Motion Noise Counter Input 5	ALO	
FMUL	Slowness Upper Limit − FMD	180	US/F
FMTX	First Motion Threshold X	NONE	
FMT5	First Motion Threshold 5	UP	
FMRC	Restart Control − FMD	CONTINUE	
FMLL	Slowness Lower Limit − FMD	40	US/F
FMGX	First Motion Minimum Gate X	500	US
FMG5	First Motion Minimum Gate 5	500	US
FILG	Label Fill Gap Control − Monopole P&S	COMP_SHEAR	
FGMX	First Motion Gate Moveout X	40	US/F
FGM5	First Motion Gate Moveout 5	40	US/F
FDEX	Firing Delay X	0	
FDE5	Firing Delay 5	0	
FDE4	Firing Delay 4	0	
FDE3	Firing Delay 3	0	
FDE2	Firing Delay 2	0	
FDE1	Firing Delay 1	0	
DWCX	Digitizer Word Count X	512	
DWC5	Digitizer Word Count 5	512	
DWC4	Digitizer Word Count 4	512	
DWC3	Digitizer Word Count 3	512	
DWC2	Digitizer Word Count 2	512	
DWC1	Digitizer Word Count 1	512	

DTSS	Shear Delta−T Source for DTSM Channel	LOWER_DIPOLE	
DTM	Delta−T Matrix	56	US/F
DTF	Delta−T Fluid	193	US/F
DTCS	Compressional Delta−T Source for DTCO Channel	PS_COMP	
DSIX	Digitizer Sample Interval X	40	US
DSI5	Digitizer Sample Interval 5	10	US
DSI4	Digitizer Sample Interval 4	10	US
DSI3	Digitizer Sample Interval 3	40	US
DSI2	Digitizer Sample Interval 2	40	US
DSI1	Digitizer Sample Interval 1	40	US
DSHU	Label Slowness Upper Limit − Dipole Shear	1040	US/F
DSHL	Label Slowness Lower Limit − Dipole Shear	40	US/F
DLHS	Label Hole Diameter Source for SOBS Channel	AUTO	
DLCS	Label Compressional Source − Dipole Shear	USE	
DDEX	Digitizing Delay X	0	US
DDE5	Digitizing Delay 5	0	US
DDE4	Digitizing Delay 4	0	US
DDE3	Digitizing Delay 3	0	US
DDE2	Digitizing Delay 2	0	US
DDE1	Digitizing Delay 1	0	US
COUL	Label Slowness Upper Limit − Monopole P&S Compressional	180	US/F
COLL	Label Slowness Lower Limit − Monopole P&S Compressional	120	US/F
CDTS	C−Delta−T Shale	100	US/F
CASF	Label Casing Function − Monopole P&S	50	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
BARS_MTR1	Length for Monopole Transmitter to Receiver 1	2.7432	M
AGCX	Automatic Gain Control X	ON	
AGC5	Automatic Gain Control 5	ON	
AGC4	Automatic Gain Control 4	ON	
AGC3	Automatic Gain Control 3	ON	
AGC2	Automatic Gain Control 2	ON	
AGC1	Automatic Gain Control 1	ON	
DSST−B: Dipole Shear Imager − B			
SHT	Surface Hole Temperature	55	DEGF
PROCSPO	Sonde Position	Centered	
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCINV	Inversion Selection	ON	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
KFAC_HRLT	HRLT K Factor Option	SONDE	
ISSBAR	Barite Mud Switch	BARITE	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.01	DF/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
FREQ6	HRLT Frequency Index for Mode 6	116	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ0	HRLT Frequency Index for Mode 0	32	
CALTEMP	HRLTB Calibration Temperature	14.5979	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
HRLT−B: High Resolution Laterolog Array − B			
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02109	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976854	
TPOS	Tool Position	CENT	
SHT	Surface Hole Temperature	55	DEGF
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
ISSBAR	Barite Mud Switch	BARITE	
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	−0.00151551	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	

GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.01	DF/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	

HNGS−BA: Hostile Natural Gamma Ray Sonde

DLIS Name	Description	Value

Parameters

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 06:36

LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36		
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36		

Output DLIS Files

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36	2729.5 M	3105.9 M
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36	2729.5 M	3105.9 M

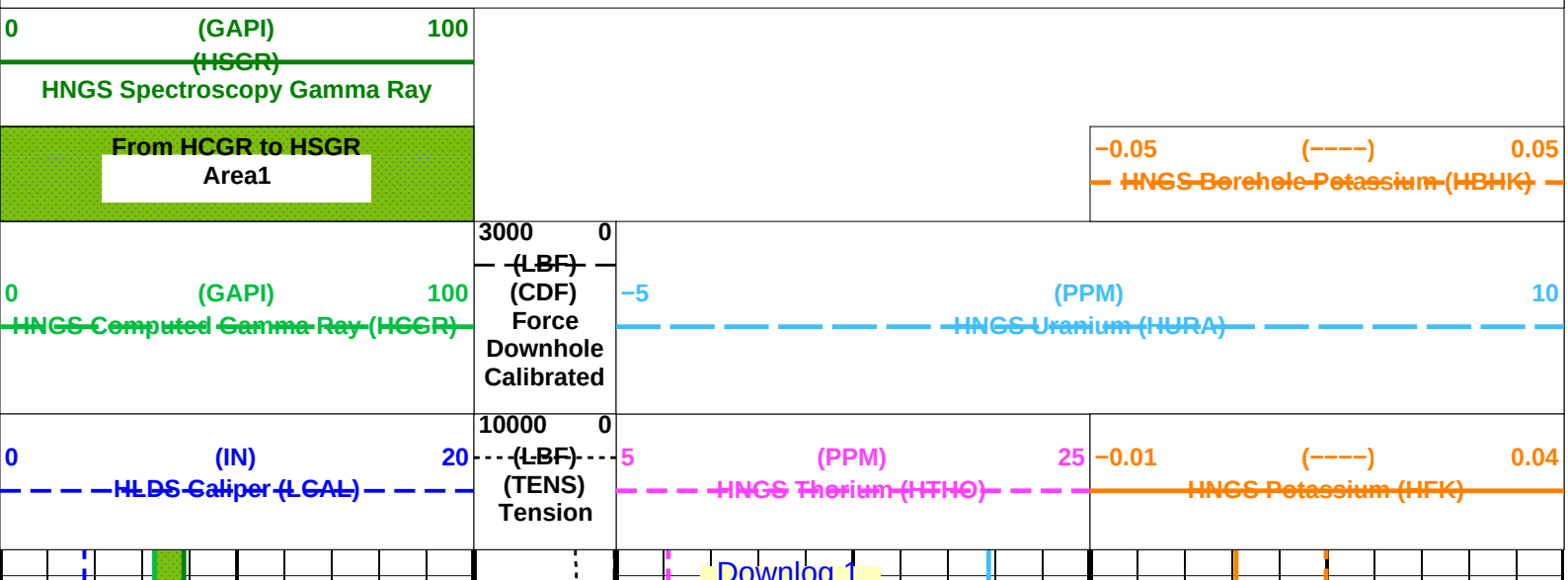
Output DLIS Files

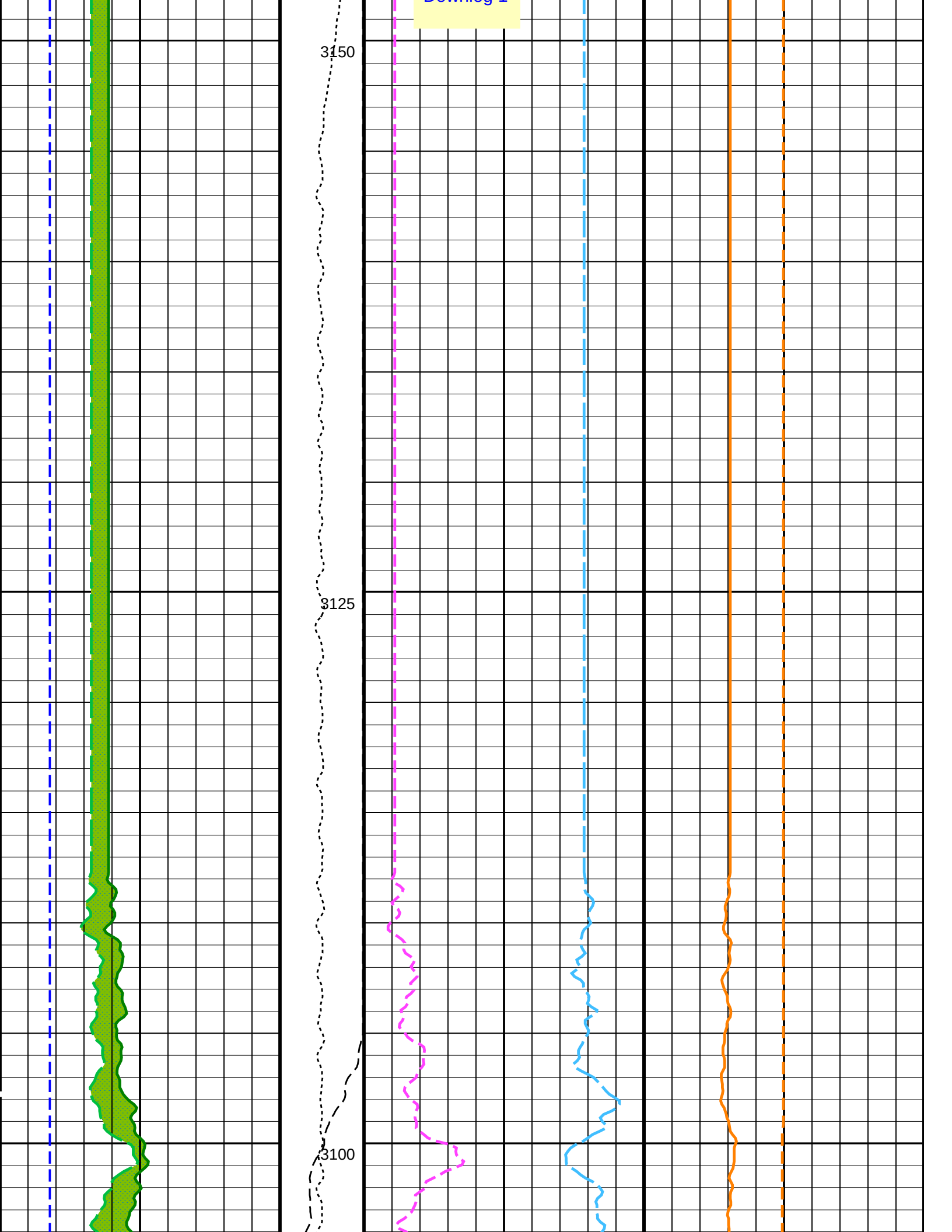
LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

Time Mark Every 60 S

PIP SUMMARY

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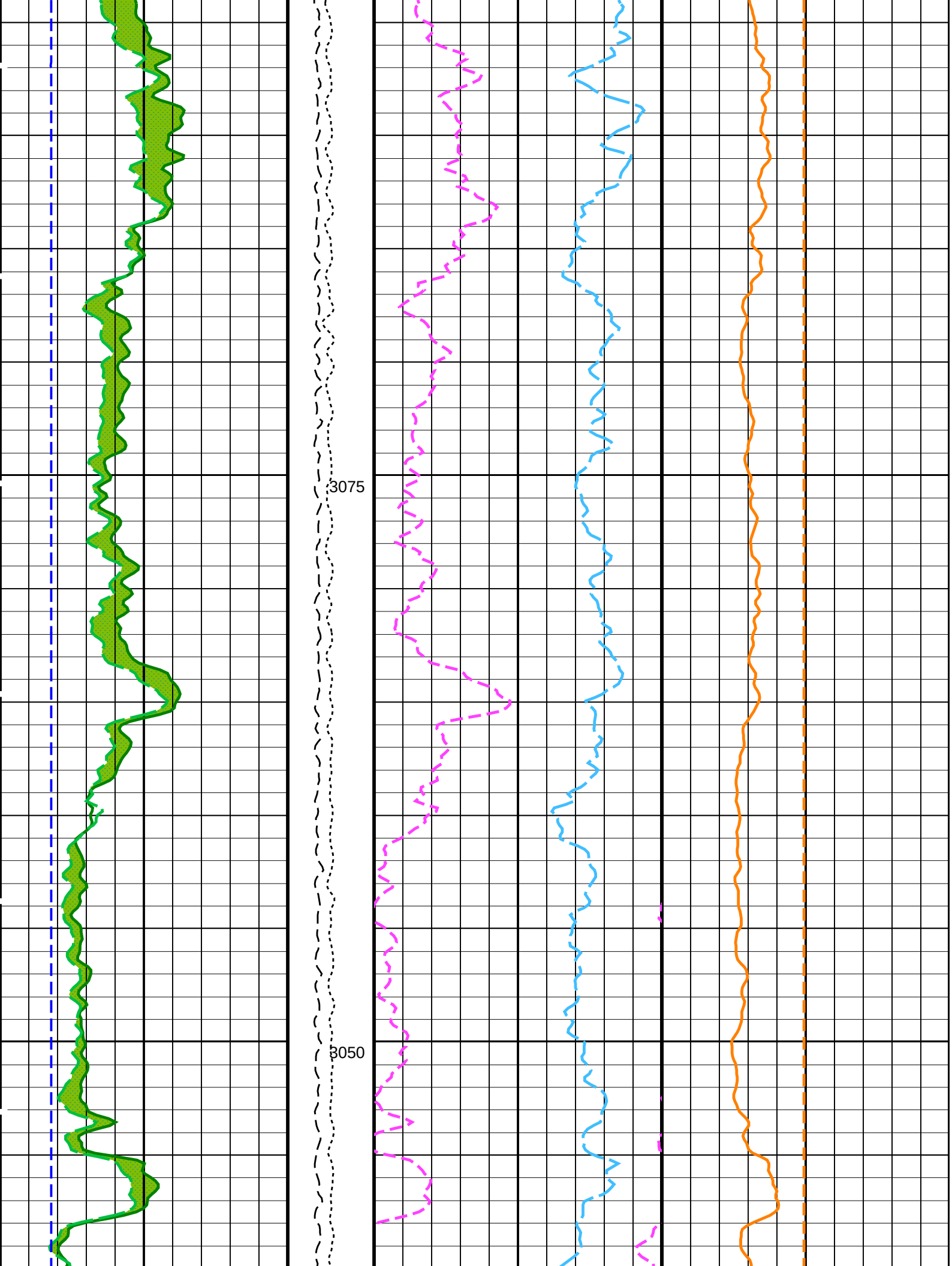
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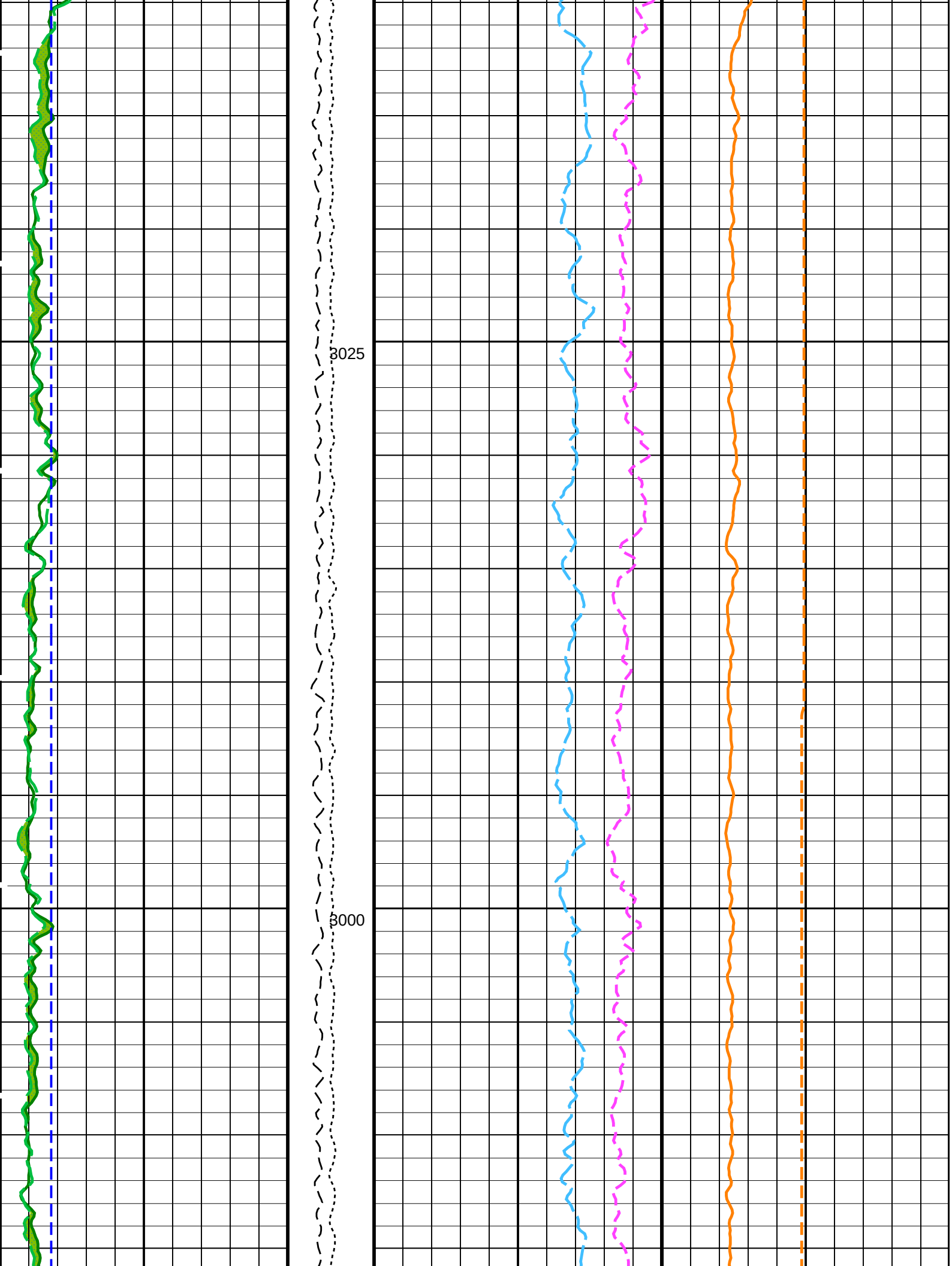
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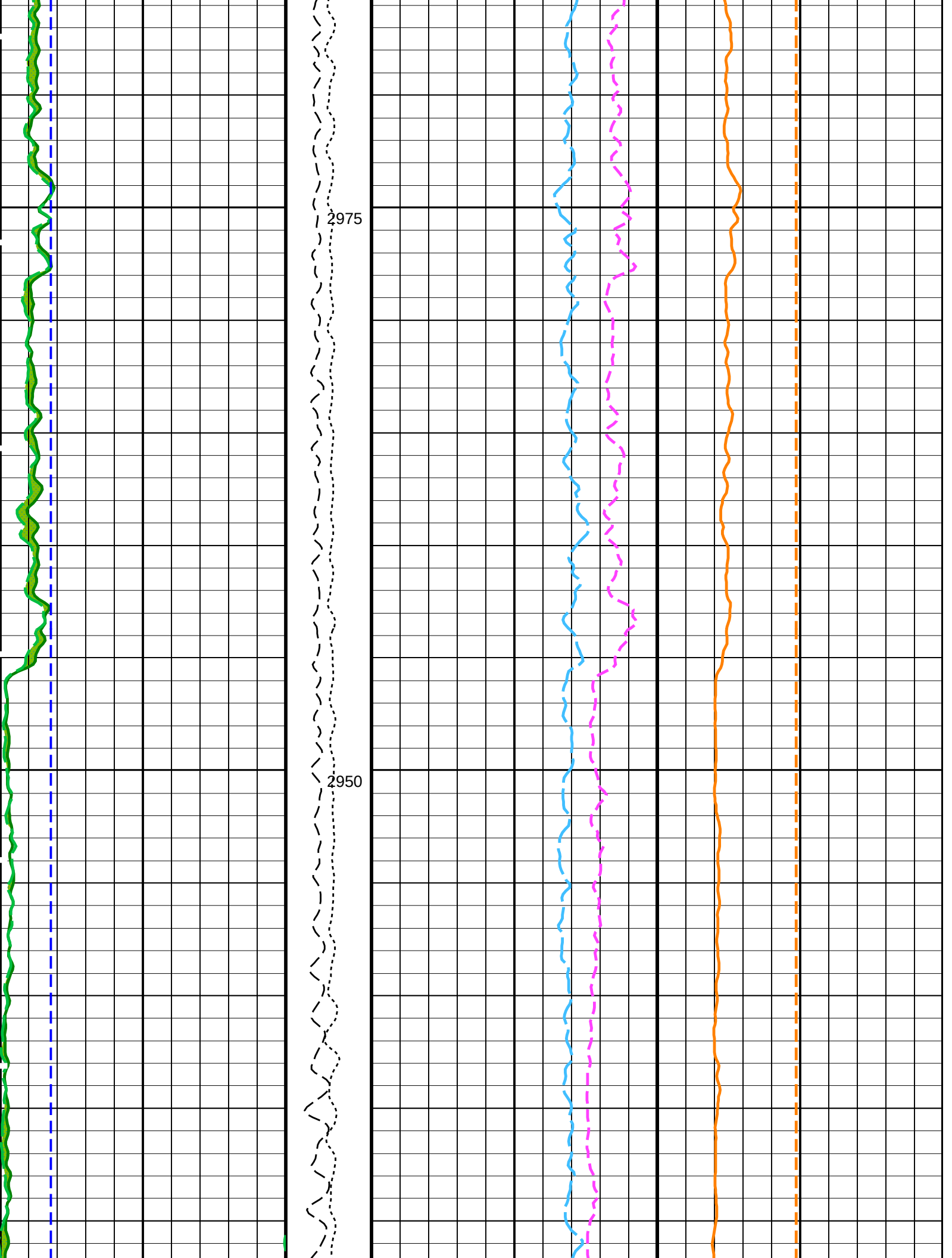
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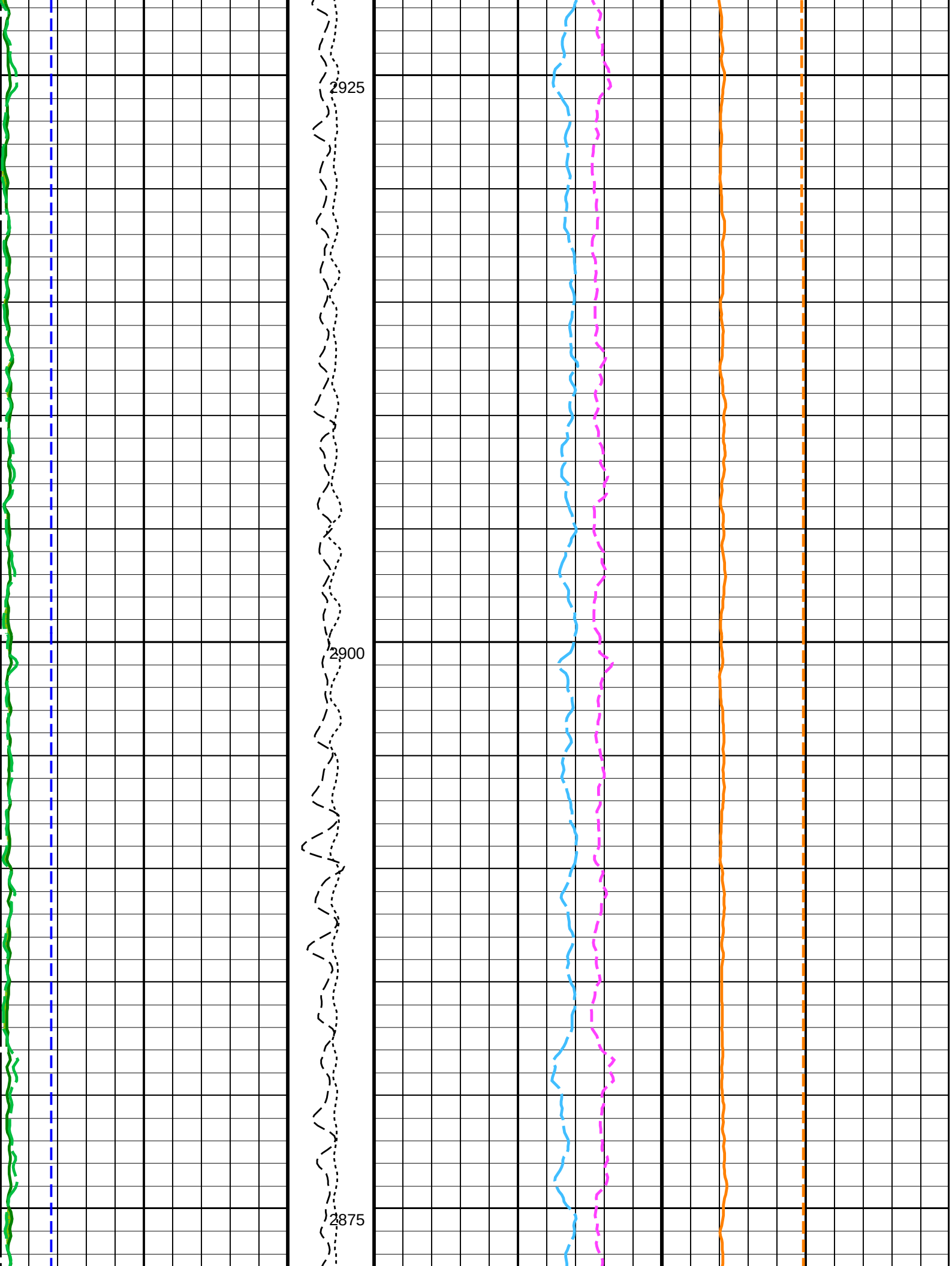
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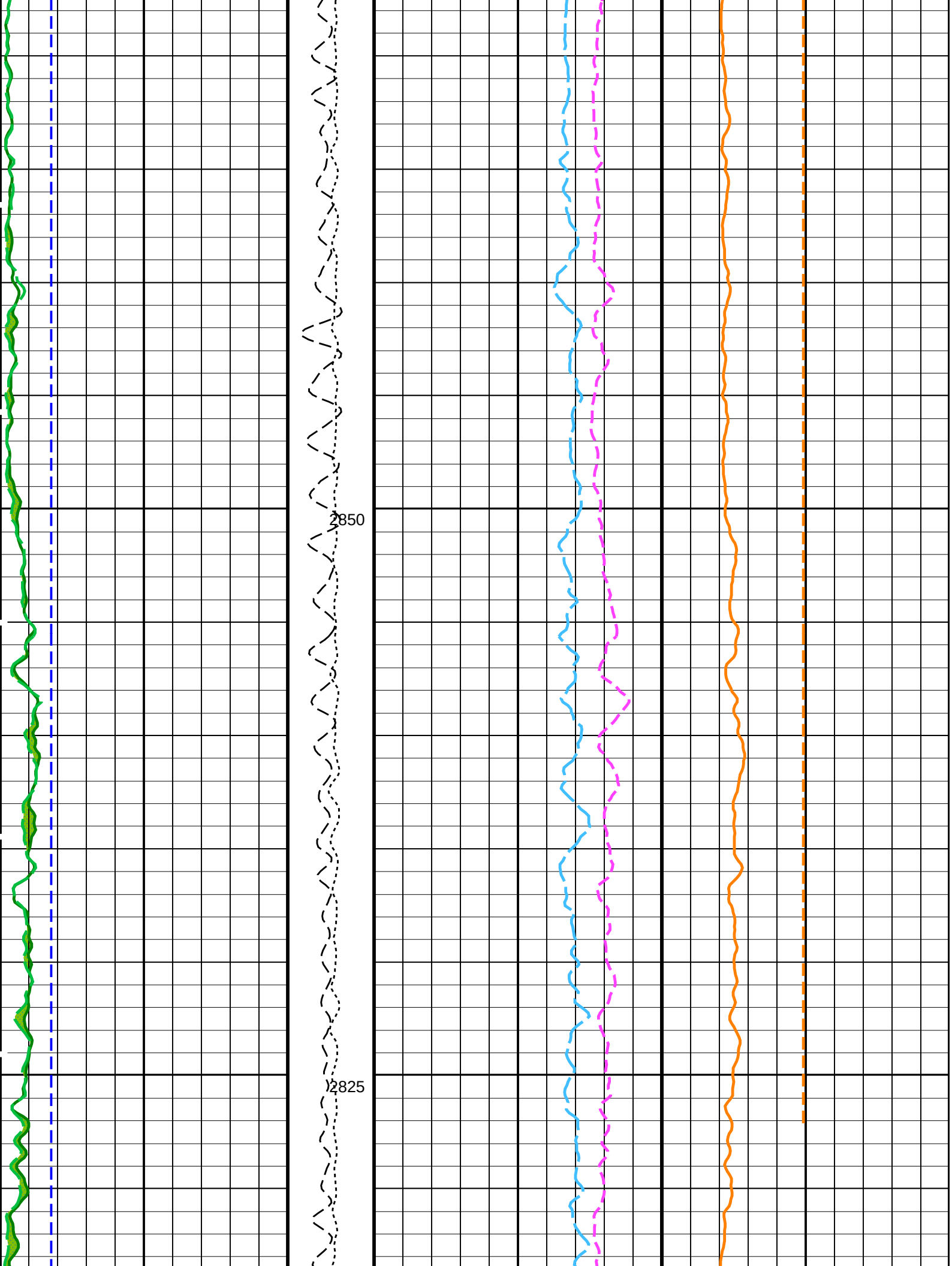
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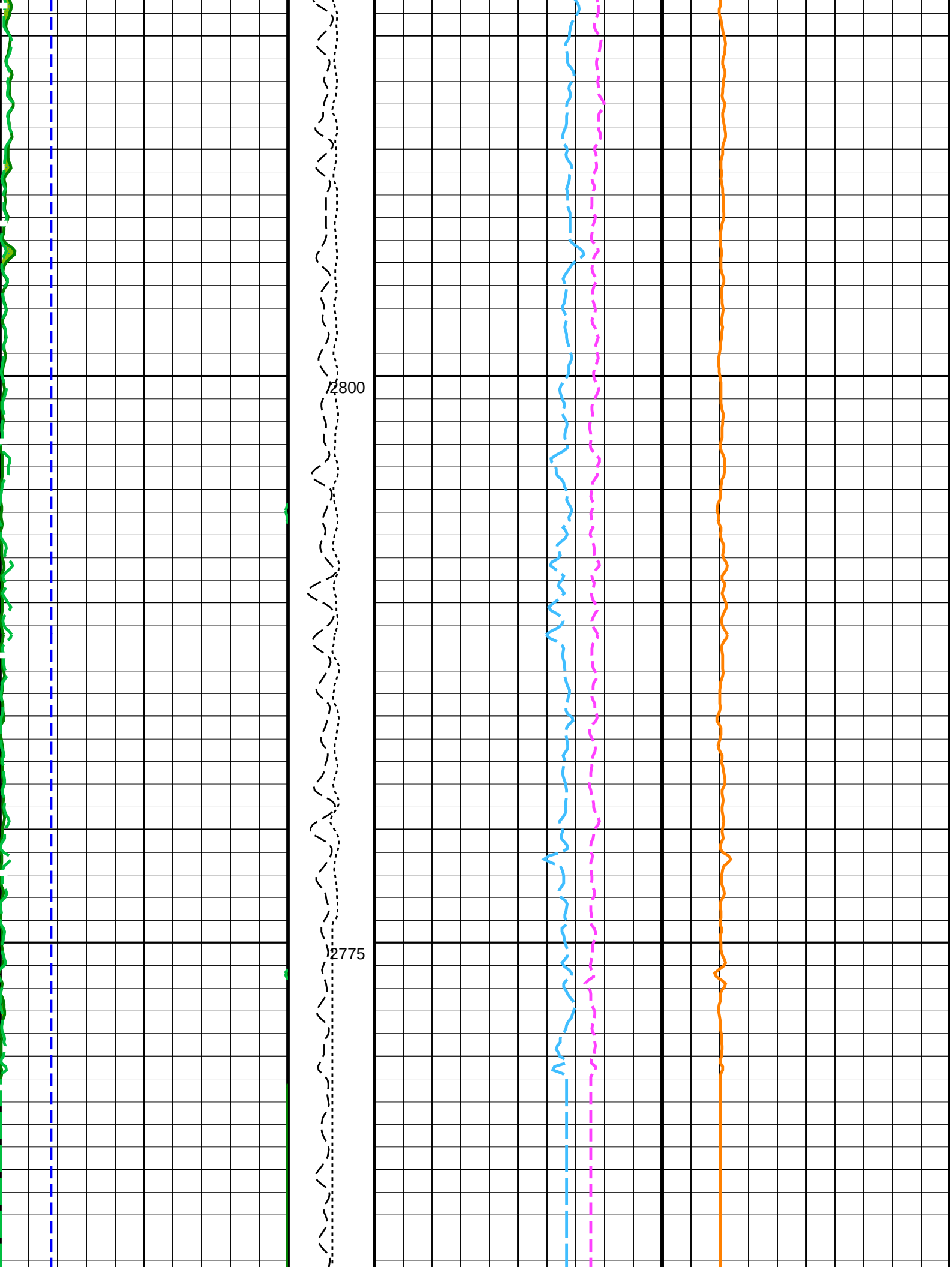
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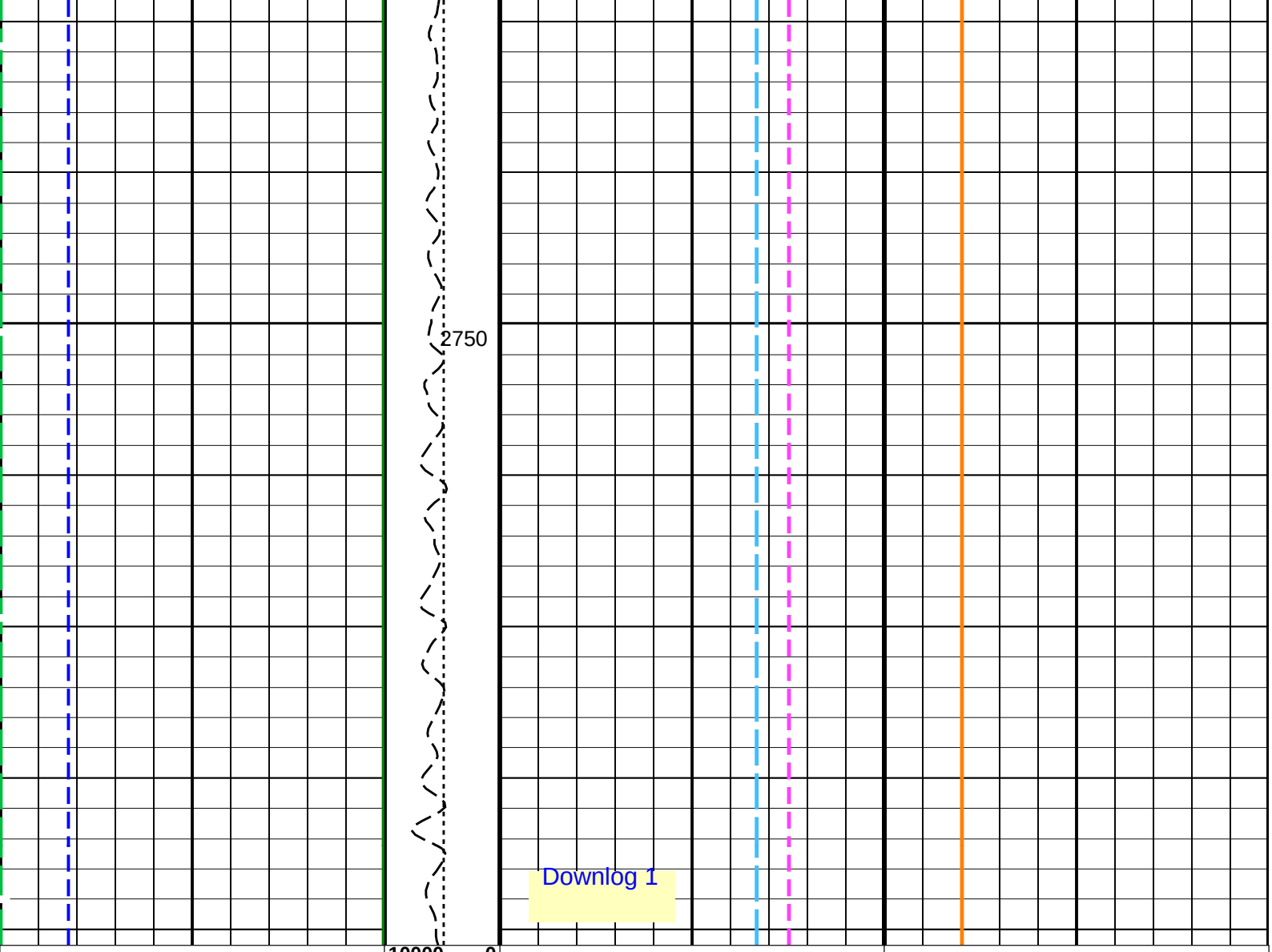


0 (IN) 20 HLDS Caliper (LCAL)	10000 0 (LBF) (TENS) Tension	5 (PPM) 25 HNGS Thorium (HTHO)	−0.01 (−−−−) 0.04 HNGS Potassium (HFK)
0 (GAPI) 100 HNGS Computed Gamma Ray (HCGR)	3000 0 (LBF) (CDF) Force Downhole Calibrated	−5 (PPM) 10 HNGS Uranium (HURA)	
From HCGR to HSGR Area1			−0.05 (−−−−) 0.05 HNGS Borehole Potassium (HBHK)
0 (GAPI) 100 (HSGR) HNGS Spectroscopy Gamma Ray			

Time Mark Every 60 S

PIP SUMMARY

	Bit Size	IN
	System and Miscellaneous	
GCSE	Generalized Caliper Selection	BS
BHS	Borehole Status	OPEN
	EDTC−B: Enhanced DTS Cartridge	
GCSE	Generalized Caliper Selection	BS
BHS	Borehole Status	OPEN
	DSST−B: Dipole Shear Imager − B	
GCSE	Generalized Caliper Selection	BS
BHS	Borehole Status	OPEN
	HRLT−B: High Resolution Laterolog Array − B	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02109
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976854

TPOS	Tool Position	CENT	
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	−0.00151551	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	

HNGS−BA: Hostile Natural Gamma Ray Sonde

DLIS Name	Description	Value

Parameters

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 06:36

LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36	
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36	

Output DLIS Files

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36	2729.5 M	3152.6 M
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36	2729.5 M	3128.3 M

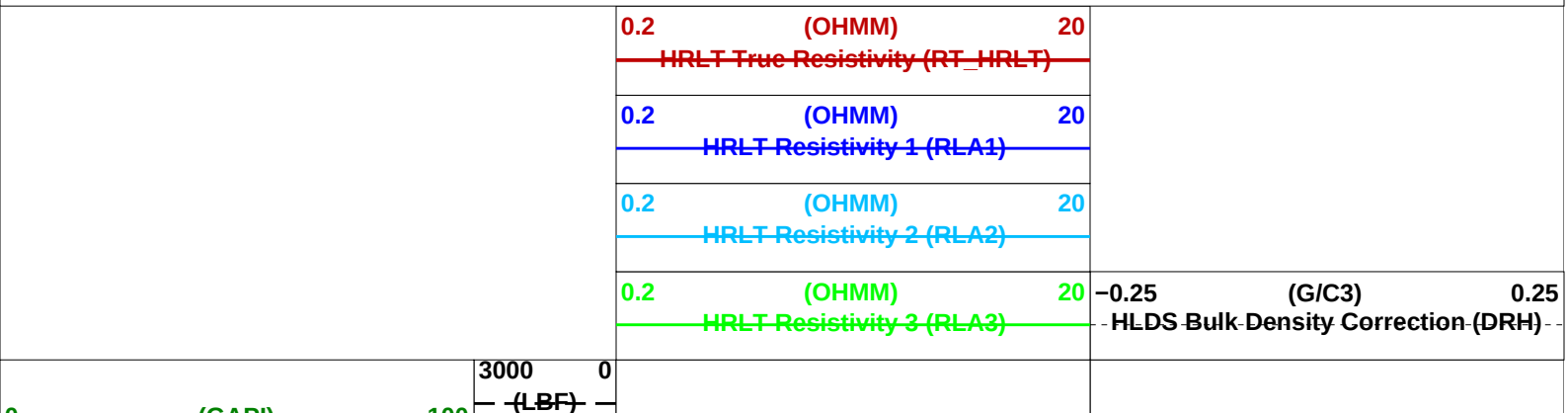
Output DLIS Files

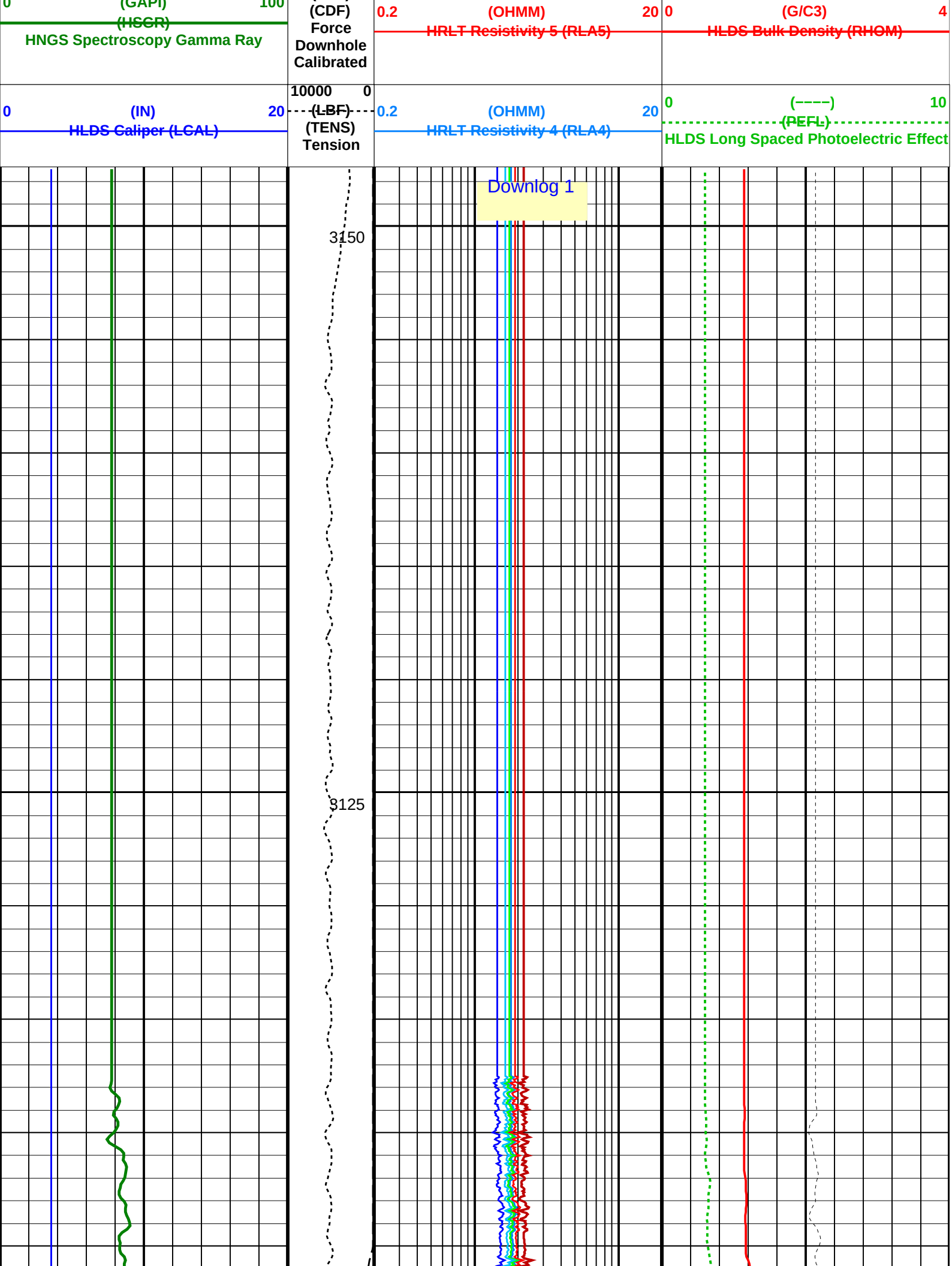
LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

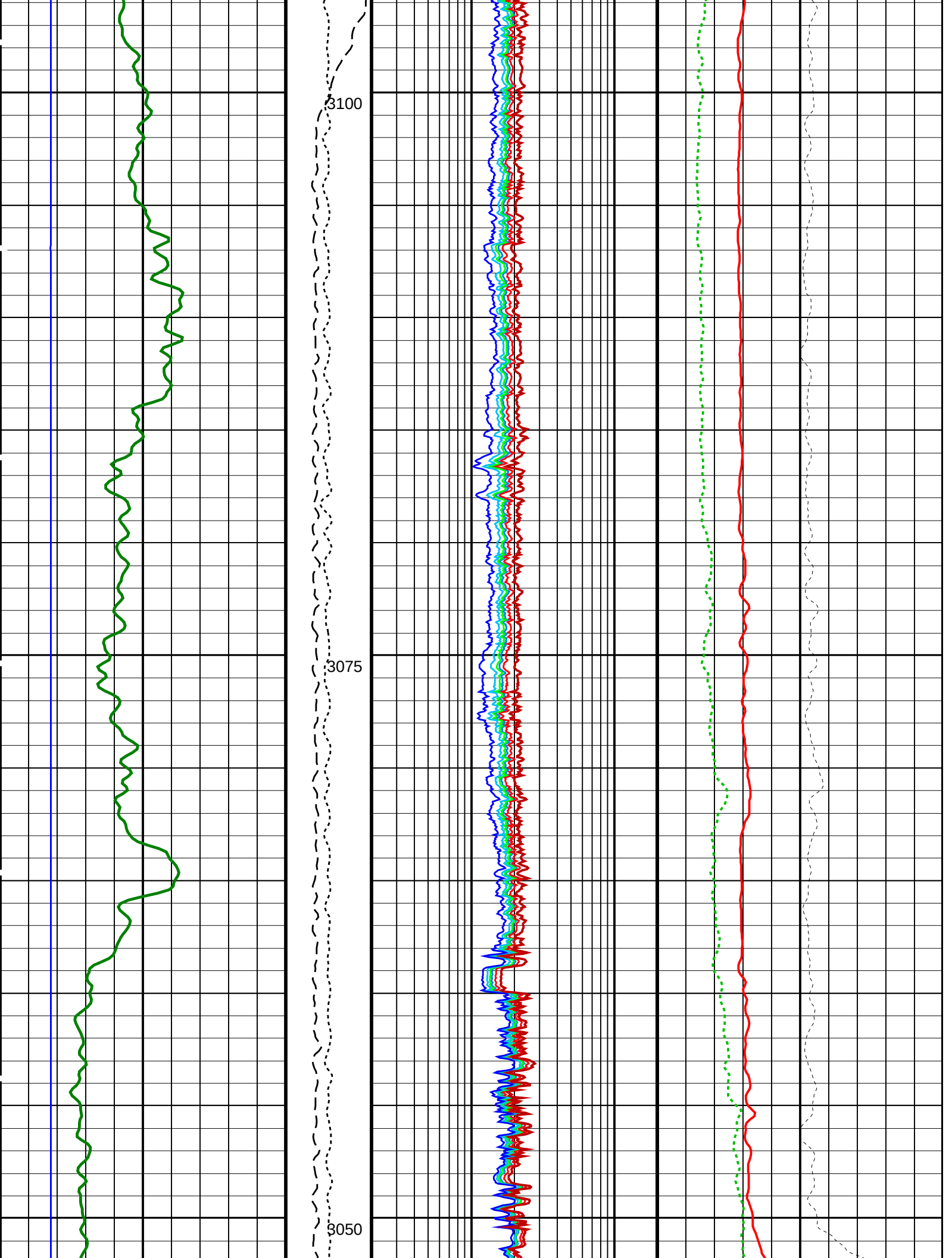
OP System Version: 19C0−187

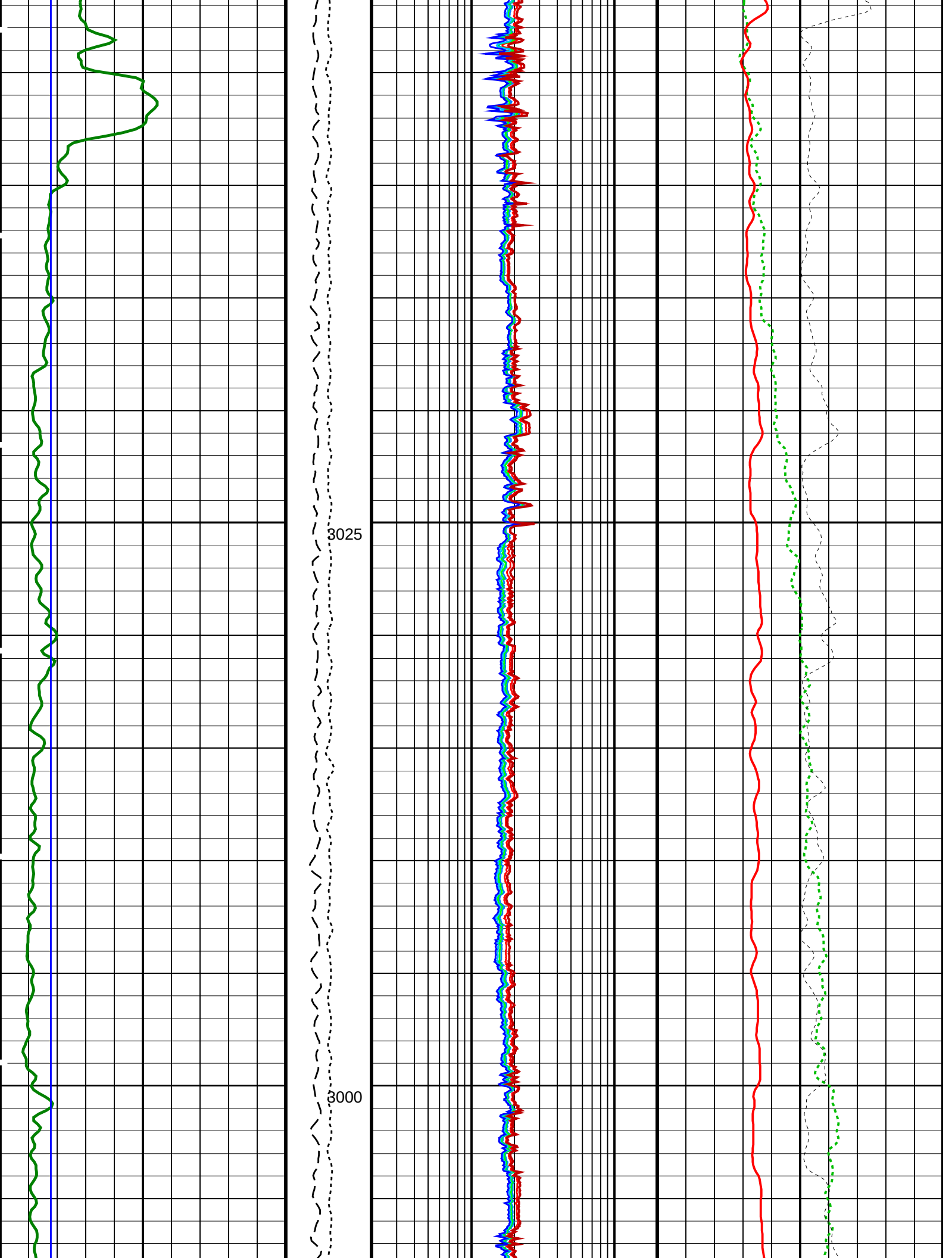
Time Mark Every 60 S

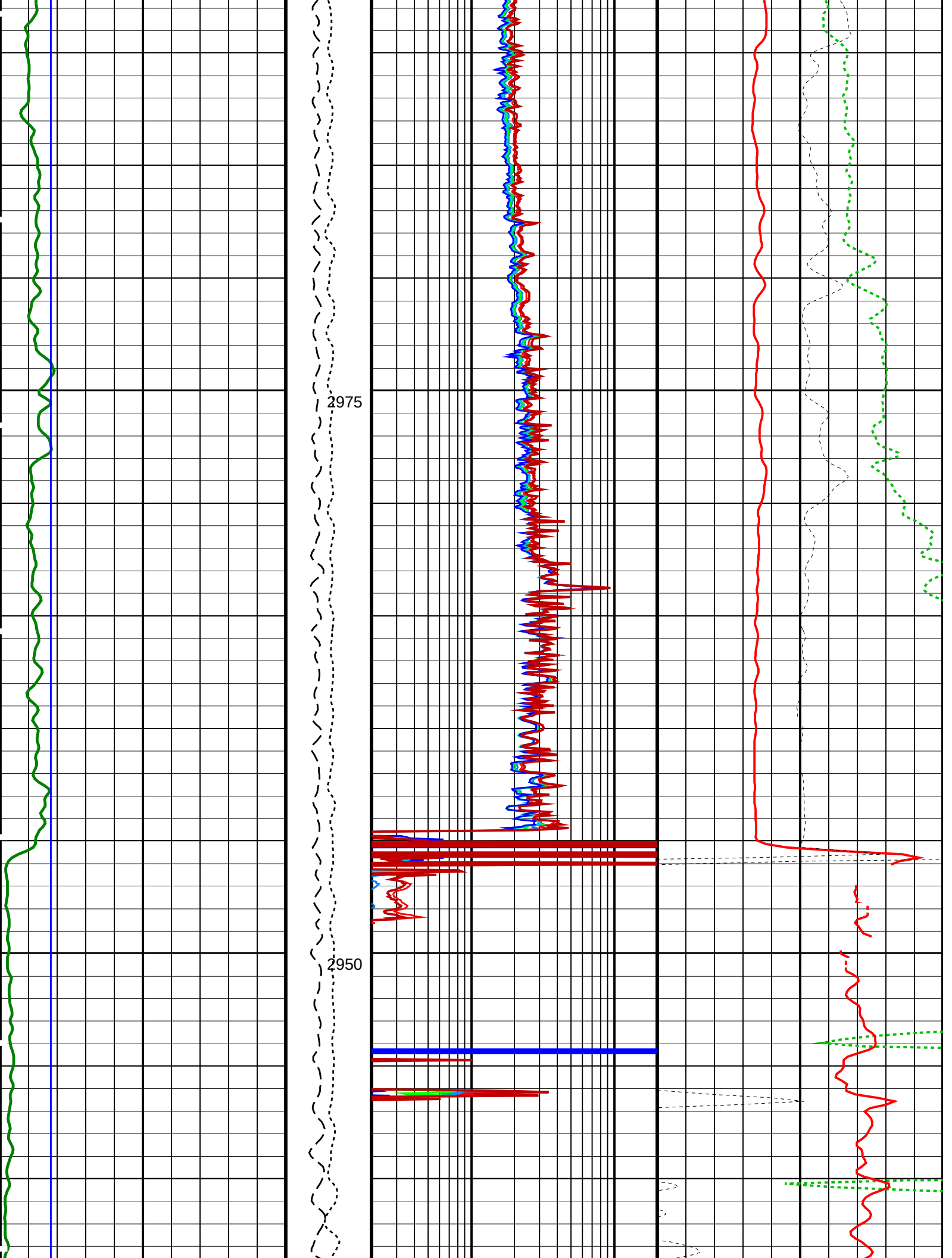
PIP SUMMARY

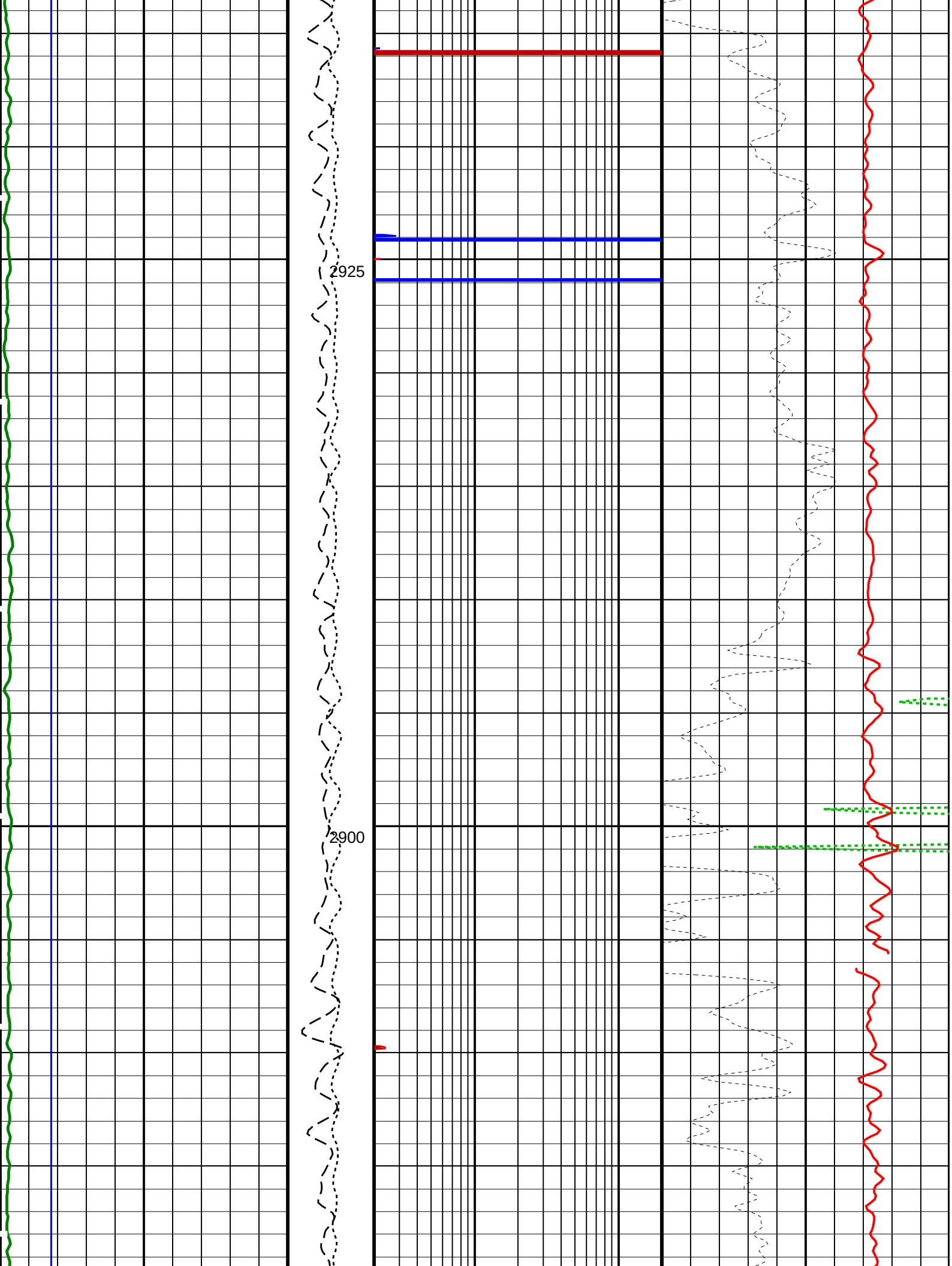


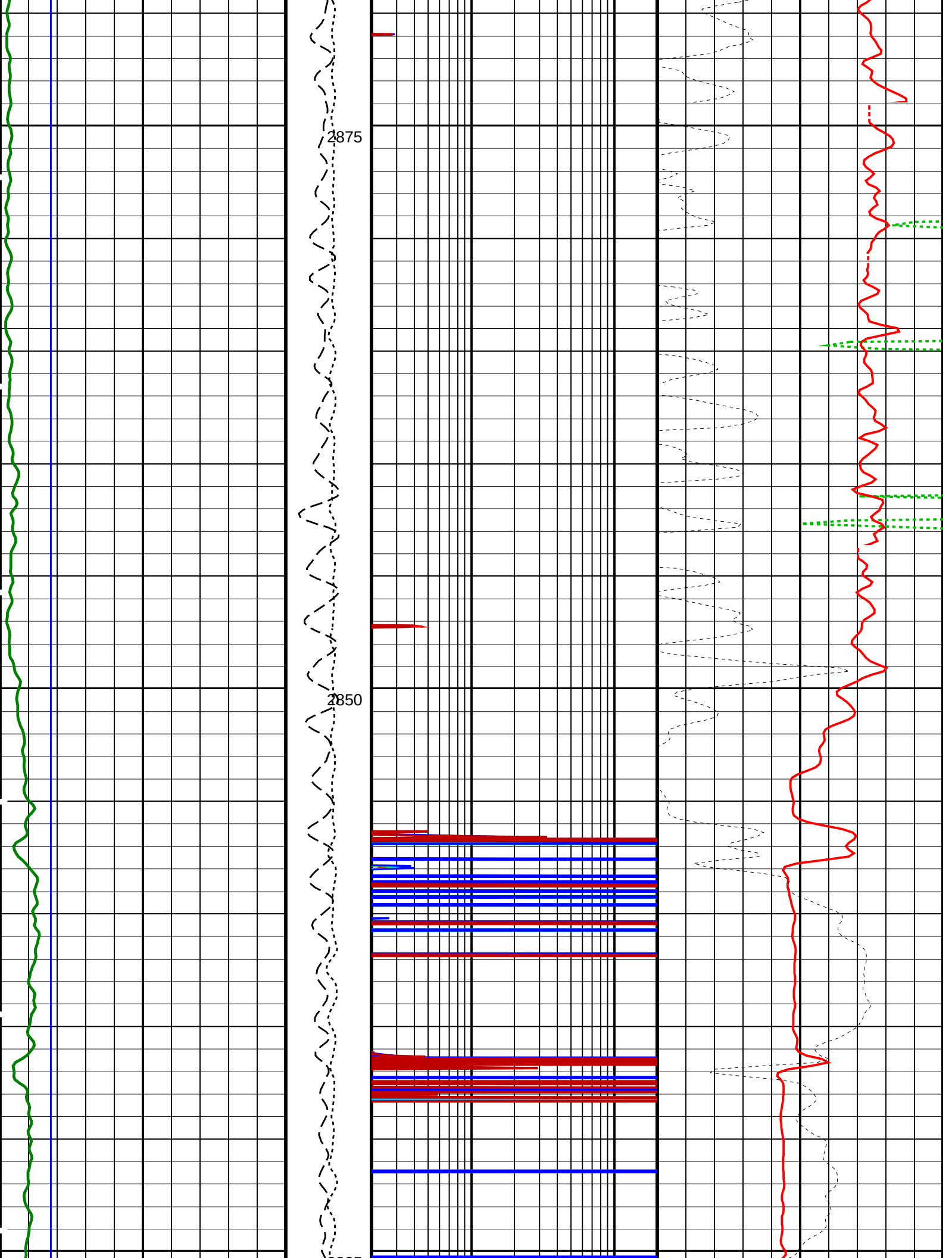

0
(GAPI)
100
(HSGR)
HNGS Spectroscopy Gamma Ray
(CDF)
Force
Downhole
Calibrated
0.2
(OHMM)
20
HRLT Resistivity 5 (RLA5)
0
(G/C3)
4
HLDS Bulk Density (RHOM)
0
(IN)
20
HLDS Caliper (LCAL)
10000
0
(LBF)
(TENS)
Tension
0.2
(OHMM)
20
HRLT Resistivity 4 (RLA4)
0
(----)
10
(PEFL)
HLDS Long Spaced Photoelectric Effect
Downlog 1
3150
3125


3100
3075
3050


3025
3000


2975
2950


2925
2900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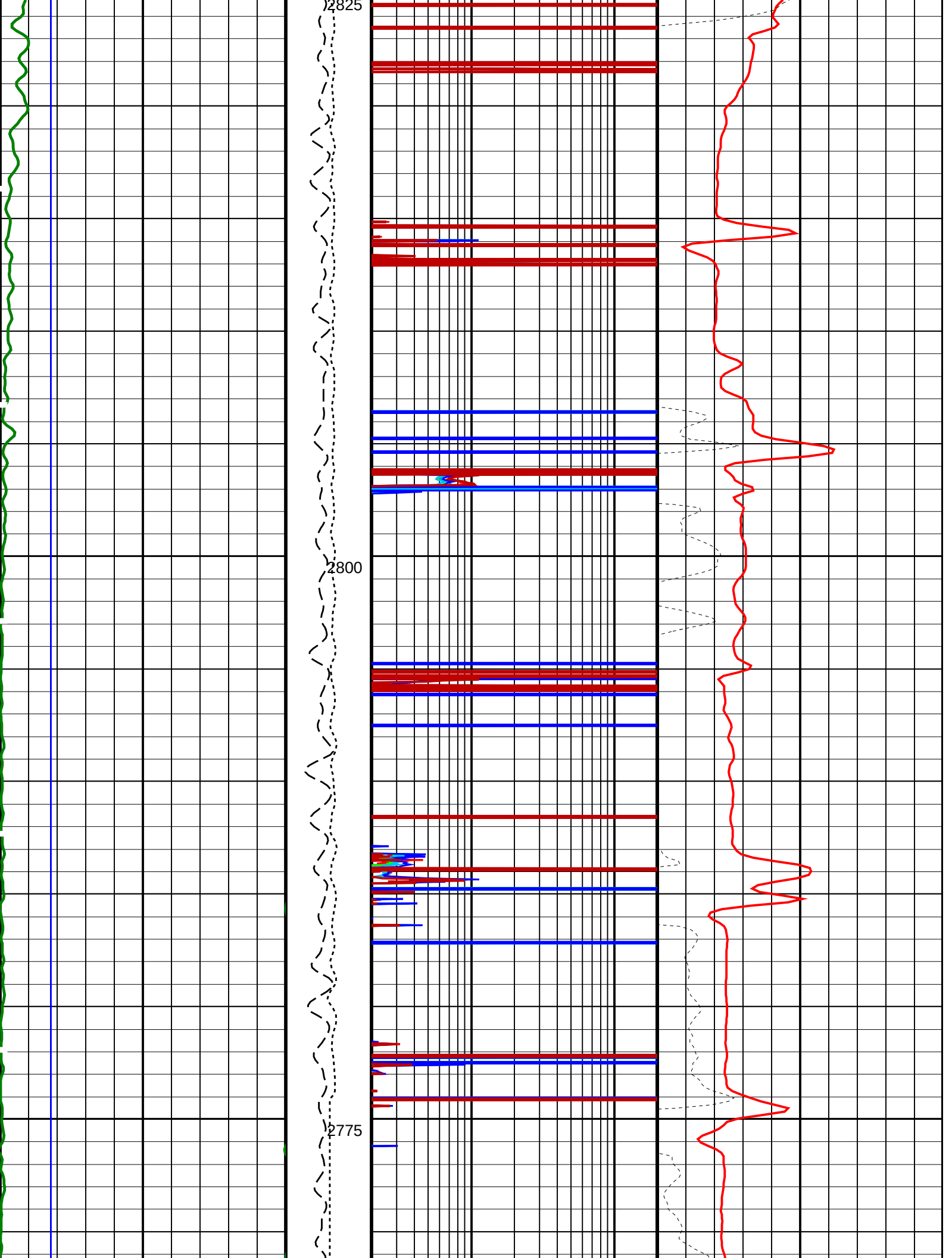
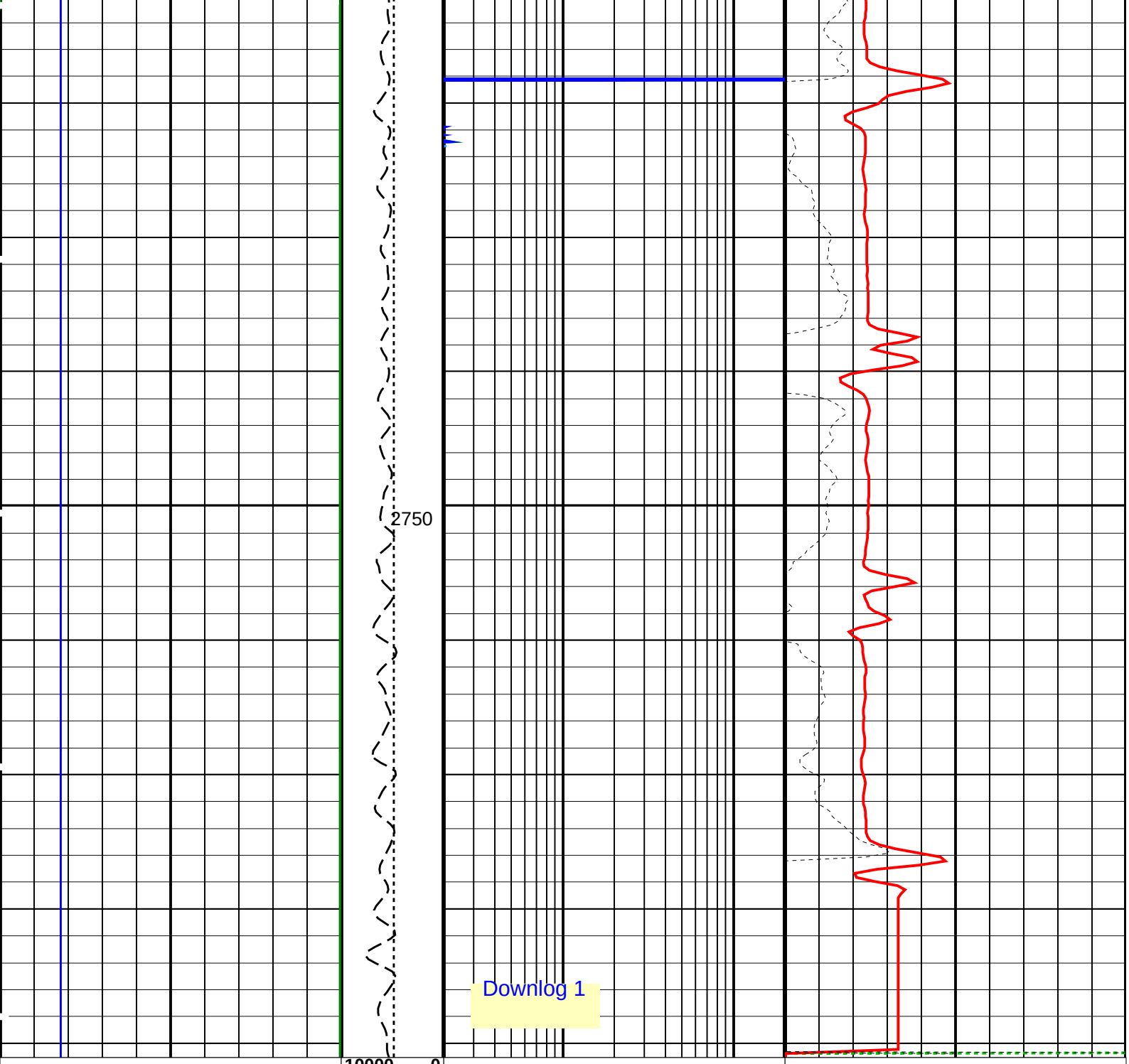

2825
2800
2775



0 (IN) 20 HLDS Caliper (LCAL)	10000 0 (LBF) (TENS) Tension	0.2 (OHMM) 20 HRLT Resistivity 4 (RLA4)
0 (GAPI) 100 (HSGR) HNGS Spectroscopy Gamma Ray	3000 0 (LBF) (CDF) Force Downhole Calibrated	0.2 (OHMM) 20 HRLT Resistivity 5 (RLA5)
		0.2 (OHMM) 20 HRLT Resistivity 3 (RLA3)
		0.2 (OHMM) 20 HRLT Resistivity 2 (RLA2)
		0.2 (OHMM) 20 HRLT Resistivity 1 (RLA1)
		0.2 (OHMM) 20

0 (----) 10 (PEFL) HLDS Long Spaced Photoelectric Effect	
0 (G/C3) 4 HLDS Bulk Density (RHOM)	
−0.25 (G/C3) 0.25 HLDS Bulk Density Correction (DRH)	

PIP SUMMARY

TWS	Temperature of Connate Water Sample	0.1778	DEGC
TDL	Total Depth − Logger	3560.00	M
TDD	Total Depth − Driller	3092.70	M
TD	Total Depth	12409.8	FT
RW	Resistivity of Connate Water	1.0000	OHMM
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
PBVSADP	Use alternate depth channel for playback	NO	
MST	Mud Sample Temperature	23.00	DEGC
FLEV	Fluid Level	−50000.00	M
DFD	Drilling Fluid Density	1.26	G/C3
CWEI	Casing Weight	168.00	LB/F
CSIZ	Current Casing Size	5.500	IN
BSAL	Borehole Salinity	38000.00	PPM
BS	Bit Size	9.875	IN
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
System and Miscellaneous			
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
SOCO	Standoff Correction Option	NO	
SOCN	Standoff Distance	0.5	IN
SHT	Surface Hole Temperature	55	DEGF
SDAT	Standoff Data Source	SOCN	
PTCO	Pressure/Temperature Correction Option	NO	
MWCO	Mud Weight Correction Option	YES	
MCOR	Mud Correction	BARI	
MCCO	Mud Cake Correction Option	NO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
ISSBAR	Barite Mud Switch	BARITE	
HSCO	Hole Size Correction Option	YES	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.01	DF/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
FSCO	Formation Salinity Correction Option	NO	
FSAL	Formation Salinity	−50000	PPM
DPPM	Density Porosity Processing Mode	HIRS	
CCCO	Casing & Cement Thickness Correction Option	NO	
BSCO	Borehole Salinity Correction Option	NO	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
BHFL	Borehole Fluid Type	WATER	
EDTC−B: Enhanced DTS Cartridge			
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
MDEN	Matrix Density	2.6	G/C3
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LATC	HLDS Activation Correction	OFF	
FD	Fluid Density	1	G/C3
DPPM	Density Porosity Processing Mode	HIRS	
DHC	Density Hole Correction	BS	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
HLDS: Hostile Litho−Density Sonde			
XMTX	Transmitter Select X	DUP	
XMT5	Transmitter Select 5	MONO	
XMT4	Transmitter Select 4	MONO	
XMT3	Transmitter Select 3	MONO	
XMT2	Transmitter Select 2	DUP	
XMT1	Transmitter Select 1	DLO	
WFULSPX	SAMX Waveform Upper Limit for Spectrum	20000	US
WFULSP4	SAM4 Waveform Upper Limit for Spectrum	5000	US
WFULSP3	SAM3 Waveform Upper Limit for Spectrum	20000	US
WFULSP2	SAM2 Waveform Upper Limit for Spectrum	20000	US
WFULSP1	SAM1 Waveform Upper Limit for Spectrum	20000	US
WFMX	Waveform Mode X	W1	
WFM5	Waveform Mode 5	W1	
WFM4	Waveform Mode 4	W1	
WFM3	Waveform Mode 3	W1	

WFM3	Waveform Mode 3	W1	
WFM2	Waveform Mode 2	W1	
WFM1	Waveform Mode 1	W1	
WFLLSPX	SAMX Waveform Lower Limit for Spectrum	0	US
WFLLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFDTSPX	SAMX Waveform Delta for Spectrum	0	US/F
WFDTSP4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSP3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTSP2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTSP1	SAM1 Waveform Delta for Spectrum	0	US/F
UTXG	Upper Dipole Transmitter Geometry	162	IN
TWSX	Transmitter Waveform Select X	0	
TWS5	Transmitter Waveform Select 5	6	
TWS4	Transmitter Waveform Select 4	6	
TWS3	Transmitter Waveform Select 3	4	
TWS2	Transmitter Waveform Select 2	0	
TWS1	Transmitter Waveform Select 1	2	
TWRX	Transmitter Waveform Sample Rate X	5	US
TWR5	Transmitter Waveform Sample Rate 5	5	US
TWR4	Transmitter Waveform Sample Rate 4	5	US
TWR3	Transmitter Waveform Sample Rate 3	5	US
TWR2	Transmitter Waveform Sample Rate 2	5	US
TWR1	Transmitter Waveform Sample Rate 1	20	US
TWI4	STC Integration Time Window − Monopole P&S	500	US
TWI3	STC Integration Time Window − Monopole Stoneley	2400	US
TWI2	STC Integration Time Window − Upper Dipole	1600	US
TWI1	STC Integration Time Window − Lower Dipole	1600	US
TWD4	STC Time Width − Monopole P&S	1000	US
TWD3	STC Time Width − Monopole Stoneley	2000	US
TWD2	STC Time Width − Upper Dipole	2000	US
TWD1	STC Time Width − Lower Dipole	2000	US
TWAX	Transmitter Waveform Amplitude X	179	
TWA5	Transmitter Waveform Amplitude 5	150	
TWA4	Transmitter Waveform Amplitude 4	150	
TWA3	Transmitter Waveform Amplitude 3	166	
TWA2	Transmitter Waveform Amplitude 2	179	
TWA1	Transmitter Waveform Amplitude 1	179	
TUL4	STC Time Upper Limit − Monopole P&S	3660	US
TUL3	STC Time Upper Limit − Monopole Stoneley	12000	US
TUL2	STC Time Upper Limit − Upper Dipole	18440	US
TUL1	STC Time Upper Limit − Lower Dipole	18960	US
TTDB	Tool String Top to DSST Bottom	1225.31	IN
TST4	STC Time Step − Monopole P&S	50	US
TST3	STC Time Step − Monopole Stoneley	200	US
TST2	STC Time Step − Upper Dipole	200	US
TST1	STC Time Step − Lower Dipole	200	US
TLL4	STC Time Lower Limit − Monopole P&S	150	US
TLL3	STC Time Lower Limit − Monopole Stoneley	600	US
TLL2	STC Time Lower Limit − Upper Dipole	600	US
TLL1	STC Time Lower Limit − Lower Dipole	600	US
TBF4	STC Time for Baseline Fill − Monopole P&S	300	US
TBF3	STC Time for Baseline Fill − Monopole Stoneley	0	US
TBF2	STC Time for Baseline Fill − Upper Dipole	0	US
TBF1	STC Time for Baseline Fill − Lower Dipole	0	US
TBDB	Tool String Bottom to DSST Bottom	680.708	IN
SWD4	STC Slowness Width − Monopole P&S	10	US/F
SWD3	STC Slowness Width − Monopole Stoneley	40	US/F
SWD2	STC Slowness Width − Upper Dipole	40	US/F
SWD1	STC Slowness Width − Lower Dipole	40	US/F
SUL4	STC Slowness Upper Limit − Monopole P&S	240	US/F
SUL3	STC Slowness Upper Limit − Monopole Stoneley	780	US/F
SUL2	STC Slowness Upper Limit − Upper Dipole	1040	US/F
SUL1	STC Slowness Upper Limit − Lower Dipole	1040	US/F
STUL	Label Slowness Upper Limit − Monopole Stoneley	780	US/F
STLL	Label Slowness Lower Limit − Monopole Stoneley	180	US/F
SSW4	STC Source Waveform − Monopole P&S	WF_SAM4	
SSW3	STC Source Waveform − Monopole Stoneley	WF_SAM3	
SSW2	STC Source Waveform − Upper Dipole	WF_SAM2	
SSW1	STC Source Waveform − Lower Dipole	WF_SAM1	
SST4	STC Slowness Step − Monopole P&S	2	US/F
SST3	STC Slowness Step − Monopole Stoneley	4	US/F
SST2	STC Slowness Step − Upper Dipole	4	US/F
SST1	STC Slowness Step − Lower Dipole	4	US/F
SPSO	Sonic Porosity Source	DTCO	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SLL4	STC Slowness Lower Limit − Monopole P&S	40	US/F
SLL3	STC Slowness Lower Limit − Monopole Stoneley	180	US/F
SLL2	STC Slowness Lower Limit − Upper Dipole	40	US/F
SLL1	STC Slowness Lower Limit − Lower Dipole	40	US/F
SHUL	Label Slowness Upper Limit − Monopole P&S Shear	240	US/F
SHT	Surface Hole Temperature	55	DEGF
SHLL	Label Slowness Lower Limit − Monopole P&S Shear	235	US/F

SFM4	STC Filter − Monopole P&S	B3−20K	
SFM3	STC Filter − Monopole Stoneley	B.5−1.5K	
SFM2	STC Filter − Upper Dipole	B1−2K	
SFM1	STC Filter − Lower Dipole	B.3−1.5K	
SFC4	STC Formation Character − Monopole P&S	SELECTABLE	
SFC3	STC Formation Character − Monopole Stoneley	SELECTABLE	
SFC2	STC Formation Character − Upper Dipole	SELECTABLE	
SFC1	STC Formation Character − Lower Dipole	SELECTABLE	
SBW4	STC Search Bandwidth − Monopole P&S	2000	US
SBW3	STC Search Bandwidth − Monopole Stoneley	8000	US
SBW2	STC Search Bandwidth − Upper Dipole	8000	US
SBW1	STC Search Bandwidth − Lower Dipole	8000	US
SBR4	STC Baseline Removal − Monopole P&S	ON	
SBO4	STC Search Band Offset − Monopole P&S	500	US
SBO3	STC Search Band Offset − Monopole Stoneley	3000	US
SBO2	STC Search Band Offset − Upper Dipole	3000	US
SBO1	STC Search Band Offset − Lower Dipole	3000	US
SAS5	Sonic Array Status − FMD	255	
SAS4	STC Sonic Array Status − Monopole P&S	255	
SAS3	STC Sonic Array Status − Monopole Stoneley	255	
SAS2	STC Sonic Array Status − Upper Dipole	255	
SAS1	STC Sonic Array Status − Lower Dipole	255	
		OFF	
SAMX	DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert		
SAM5	DSST Sonic Acquisition Mode 5 − Monopole Mode for FMD	OFF	
SAM4	DSST Sonic Acquisition Mode 4 − Monopole Mode for P&S	EVEN	
SAM3	DSST Sonic Acquisition Mode 3 − Monopole Mode for Stoneley	OFF	
SAM2	DSST Sonic Acquisition Mode 2 − Upper Dipole Mode	ODD	
SAM1	DSST Sonic Acquisition Mode 1 − Lower Dipole Mode	LFD_EVEN	
RX8G	Receiver 8 Geometry	336	IN
RX7G	Receiver 7 Geometry	330	IN
RX6G	Receiver 6 Geometry	324	IN
RX5G	Receiver 5 Geometry	318	IN
RX4G	Receiver 4 Geometry	312	IN
RX3G	Receiver 3 Geometry	306	IN
RX2G	Receiver 2 Geometry	300	IN
RX1G	Receiver 1 Geometry	294	IN
RSMX	Label Shear/Compressional Maximum Ratio − Monopole P&S	2.12	
RSMN	Label Shear/Compressional Minimum Ratio − Monopole P&S	1.4	
RATE	Firing Rate	R7	
NWSX	Number Waveforms Stacked X	1	
NWS5	Number Waveforms Stacked 5	1	
NWS4	Number Waveforms Stacked 4	1	
NWS3	Number Waveforms Stacked 3	1	
NWS2	Number Waveforms Stacked 2	1	
NWS1	Number Waveforms Stacked 1	1	
NWIX	Number Waveform Items X	0	
NWI5	Number Waveform Items 5	0	
NWI4	Number Waveform Items 4	8	
NWI3	Number Waveform Items 3	0	
NWI2	Number Waveform Items 2	8	
NWI1	Number Waveform Items 1	8	
NTIX	Number Threshold Items X	0	
NTI5	Number Threshold Items 5	0	
MUXX	Sum Difference Multiplexor Input X	RR	
MUX5	Sum Difference Multiplexor Input 5	RR	
MUX4	Sum Difference Multiplexor Input 4	RR	
MUX3	Sum Difference Multiplexor Input 3	RR	
MUX2	Sum Difference Multiplexor Input 2	RR	
MUX1	Sum Difference Multiplexor Input 1	RR	
MTXG	Monopole Transmitter Geometry	186	IN
MDS5	Multishot Delta−T Scatter − FMD	20	US
MCS	Mean Casing Slowness	57	US/F
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MAI5	Slowness Averaging Interval − FMD	42	IN
LTXG	Lower Dipole Transmitter Geometry	156	IN
LPFX	Low Pass Filter X	F5K	
LPF5	Low Pass Filter 5	F30K	
LPF4	Low Pass Filter 4	F30K	
LPF3	Low Pass Filter 3	F5K	
LPF2	Low Pass Filter 2	F5K	
LPF1	Low Pass Filter 1	F5K	
LFC	Label Formation Character − Monopole P&S	DYNAMIC	
ITTS	Integrated Transit Time Source	DTCO	
ISSBAR	Barite Mud Switch	BARITE	
HPFX	High Pass Filter X	F80	
HPF5	High Pass Filter 5	F8K	
HPF4	High Pass Filter 4	F8K	
HPF3	High Pass Filter 3	F80	
HPF2	High Pass Filter 2	F80	
HPF1	High Pass Filter 1	F80	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GINX	Gain Interval X	15360	US
GIN5	Gain Interval 5	1600	US

GIN4	Gain Interval 4	2560	US
GIN3	Gain Interval 3	15360	US
GIN2	Gain Interval 2	15360	US
GIN1	Gain Interval 1	15360	US
GGRD	Geothermal Gradient	0.01	DF/F
GDTX	Gain Delta−T X	800	US/F
GDT5	Gain Delta−T 5	160	US/F
GDT4	Gain Delta−T 4	160	US/F
GDT3	Gain Delta−T 3	800	US/F
GDT2	Gain Delta−T 2	800	US/F
GDT1	Gain Delta−T 1	800	US/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
GAIX	Manual Gain X	10	
GAI5	Manual Gain 5	16	
GAI4	Manual Gain 4	16	
GAI3	Manual Gain 3	6	
GAI2	Manual Gain 2	10	
GAI1	Manual Gain 1	10	
FTDX	First Motion Threshold Direction X	UP	
FTD5	First Motion Threshold Direction 5	UP	
FPM	Processing Mode − FMD	NONE	
FNCX	First Motion Noise Counter Input X	ALO	
FNC5	First Motion Noise Counter Input 5	ALO	
FMUL	Slowness Upper Limit − FMD	180	US/F
FMTX	First Motion Threshold X	NONE	
FMT5	First Motion Threshold 5	UP	
FMRC	Restart Control − FMD	CONTINUE	
FMLL	Slowness Lower Limit − FMD	40	US/F
FMGX	First Motion Minimum Gate X	500	US
FMG5	First Motion Minimum Gate 5	500	US
FILG	Label Fill Gap Control − Monopole P&S	COMP_SHEAR	
FGMX	First Motion Gate Moveout X	40	US/F
FGM5	First Motion Gate Moveout 5	40	US/F
FDEX	Firing Delay X	0	
FDE5	Firing Delay 5	0	
FDE4	Firing Delay 4	0	
FDE3	Firing Delay 3	0	
FDE2	Firing Delay 2	0	
FDE1	Firing Delay 1	0	
DWCX	Digitizer Word Count X	512	
DWC5	Digitizer Word Count 5	512	
DWC4	Digitizer Word Count 4	512	
DWC3	Digitizer Word Count 3	512	
DWC2	Digitizer Word Count 2	512	
DWC1	Digitizer Word Count 1	512	
DTSS	Shear Delta−T Source for DTSM Channel	LOWER_DIPOLE	
DTM	Delta−T Matrix	56	US/F
DTF	Delta−T Fluid	193	US/F
DTCS	Compressional Delta−T Source for DTCO Channel	PS_COMP	
DSIX	Digitizer Sample Interval X	40	US
DSI5	Digitizer Sample Interval 5	10	US
DSI4	Digitizer Sample Interval 4	10	US
DSI3	Digitizer Sample Interval 3	40	US
DSI2	Digitizer Sample Interval 2	40	US
DSI1	Digitizer Sample Interval 1	40	US
DSHU	Label Slowness Upper Limit − Dipole Shear	1040	US/F
DSHL	Label Slowness Lower Limit − Dipole Shear	40	US/F
DLHS	Label Hole Diameter Source for SOBS Channel	AUTO	
DLCS	Label Compressional Source − Dipole Shear	USE	
DDEX	Digitizing Delay X	0	US
DDE5	Digitizing Delay 5	0	US
DDE4	Digitizing Delay 4	0	US
DDE3	Digitizing Delay 3	0	US
DDE2	Digitizing Delay 2	0	US
DDE1	Digitizing Delay 1	0	US
COUL	Label Slowness Upper Limit − Monopole P&S Compressional	180	US/F
COLL	Label Slowness Lower Limit − Monopole P&S Compressional	120	US/F
CDTS	C−Delta−T Shale	100	US/F
CASF	Label Casing Function − Monopole P&S	50	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
BARS_MTR1	Length for Monopole Transmitter to Receiver 1	2.7432	M
AGCX	Automatic Gain Control X	ON	
AGC5	Automatic Gain Control 5	ON	
AGC4	Automatic Gain Control 4	ON	
AGC3	Automatic Gain Control 3	ON	
AGC2	Automatic Gain Control 2	ON	
AGC1	Automatic Gain Control 1	ON	
DSST−B: Dipole Shear Imager − B			
SHT	Surface Hole Temperature	55	DEGF
PROCSPO	Sonde Position	Centered	
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCMFI	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	

PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCINV	Inversion Selection	ON	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
KFAC_HRLT	HRLT K Factor Option	SONDE	
ISSBAR	Barite Mud Switch	BARITE	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.01	DF/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
FREQ6	HRLT Frequency Index for Mode 6	116	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ0	HRLT Frequency Index for Mode 0	32	
CALTEMP	HRLTB Calibration Temperature	14.5979	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
HRLT−B: High Resolution Laterolog Array − B			
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02109	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976854	
TPOS	Tool Position	CENT	
SHT	Surface Hole Temperature	55	DEGF
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
ISSBAR	Barite Mud Switch	BARITE	
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	−0.00151551	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.01	DF/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	
HNGS−BA: Hostile Natural Gamma Ray Sonde			

DLIS Name	Description	Value

Parameters

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 06:36

LDSC−B	19C0−187	EDTC−B	SKK−5169−EDTCB
DSST−B	19C0−187	HLDS	19C0−187
HNGS−BA	19C0−187	HRLT−B	19C0−187
MSS_LDEO−A	19C0−187	HNGC−B	19C0−187

OP System Version: 19C0−187

BACKUP	MSS_LDEO_NGS_HRLA_013LDP	FN:18	PRODUCER	01−Nov−2017 06:36
DEFAULT	MSS_LDEO_NGS_HRLA_013LDP	FN:17	PRODUCER	01−Nov−2017 06:36

Output DLIS Files

Company: International Ocean Discovery Program | Well: Expedition 369, Site U1513D

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M

Output DLIS Files

EDTC−B	SKK−5169−EDTCB		
HLDS	19C0−187	LDSC−B	19C0−187
HRLT−B	19C0−187	DSST−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

OP System Version: 19C0−187

Time Mark Every 60 S

PIP SUMMARY

0 (GAPI) 100
(HSGR)
HNGS Spectroscopy Gamma Ray

−2 (−−−−) 8
(CHT1)
Peak Coherence / TA − Lower Dipole

0 (−−−−) 10
(CHR1)
Peak Coherence / RA − Lower Dipole

0 (−−−−) 10
Lower Dipole (WCl1)
Waveform Data Copy Indicator 1 −

Downlog 2

0 (−−−−) 1000
SAM1 Waveform Gain (WFG1)

5000 0
(LBF)
(CDF)
Force
Downhole
Calibrated

40 (US/F) 1040
(SPT1)
Tr.Array L.Dipole Slow Proj. CVDL
Min Amplitude Max

40 (US/F) 1040
(SPR1)
Rec.Array L.Dipole Slow Proj. CVDL
Min Amplitude Max

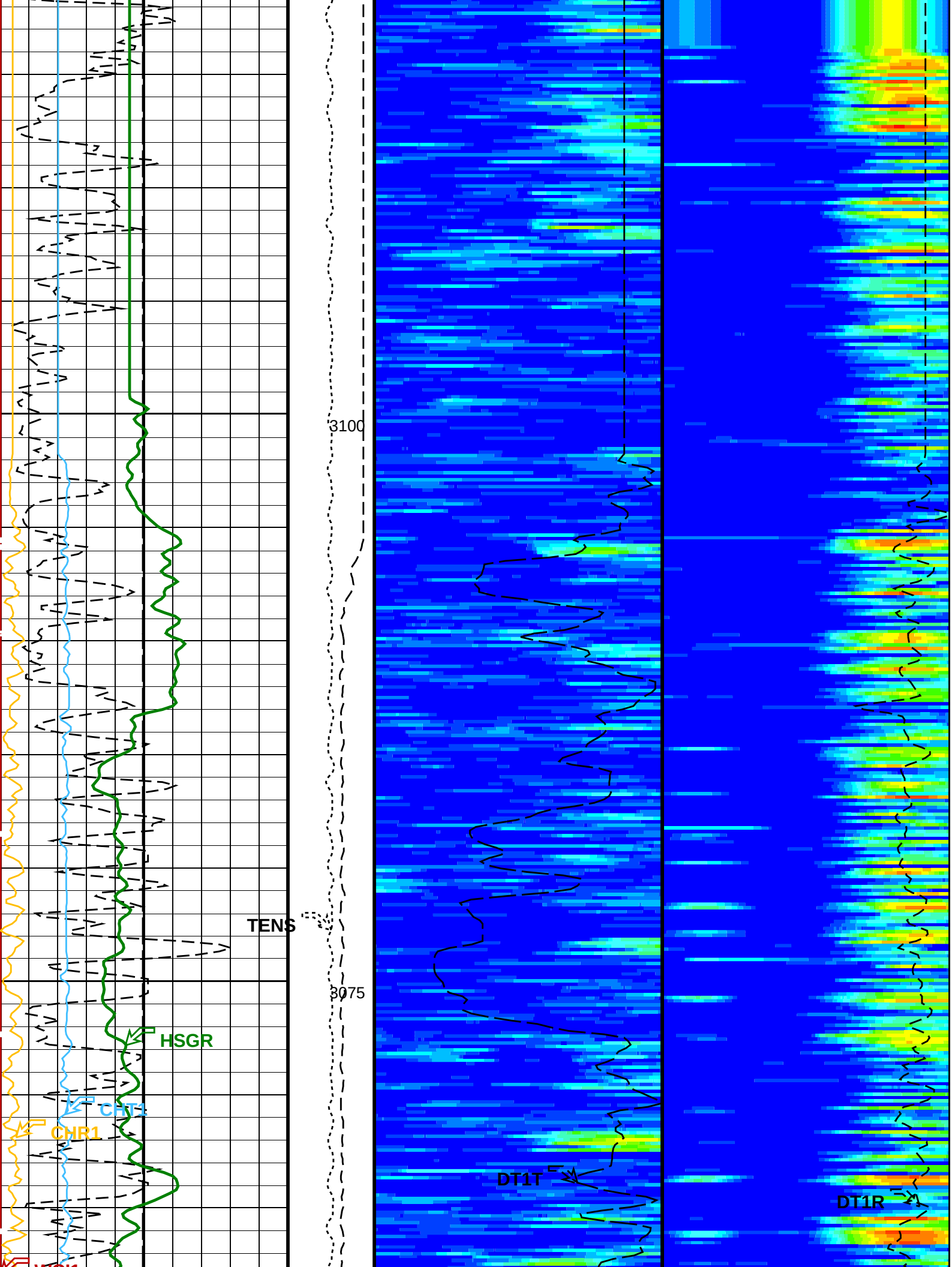
0 (IN) 20
Bit Size (BS)

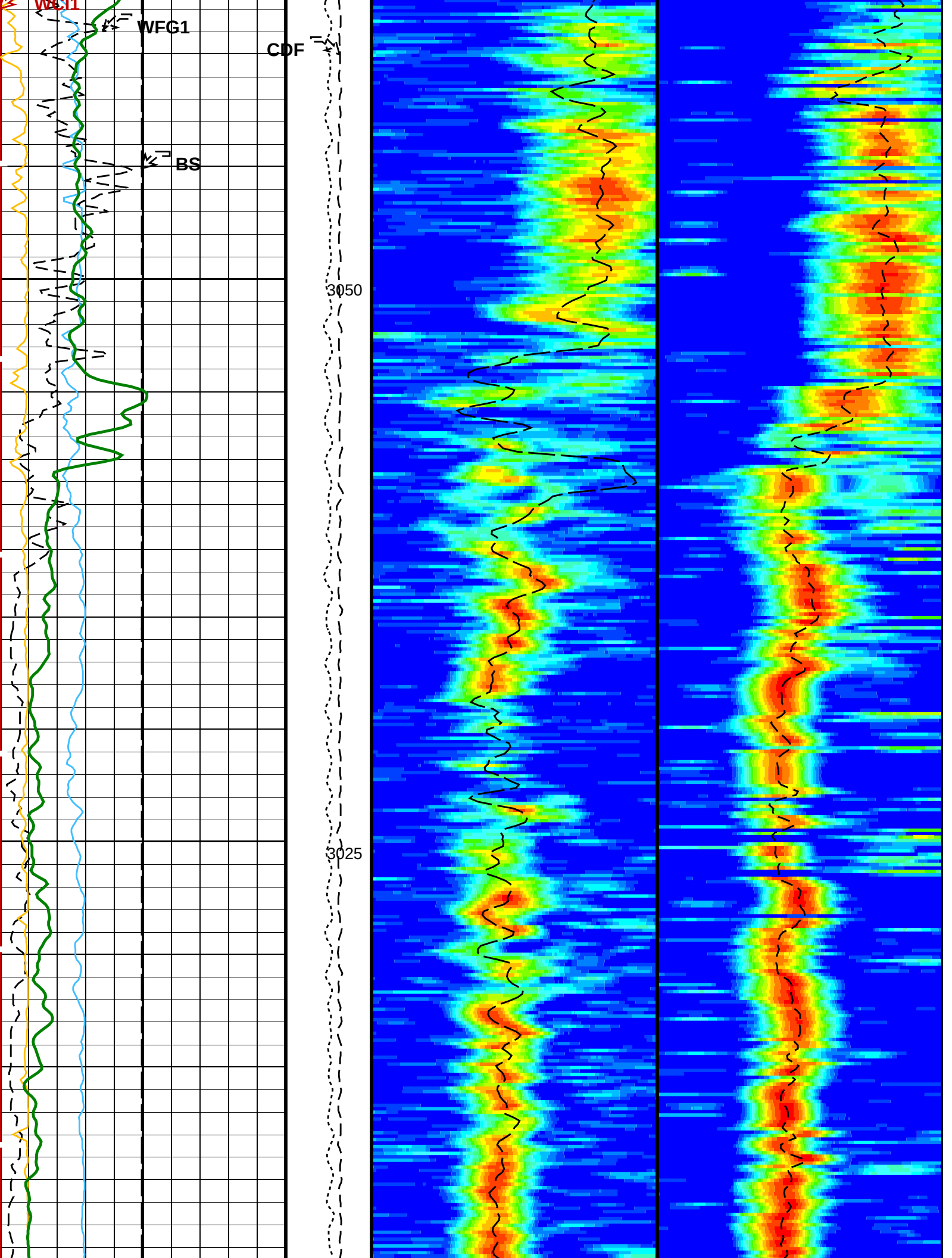
10000 0
(LBF)
(TENS)
Tension

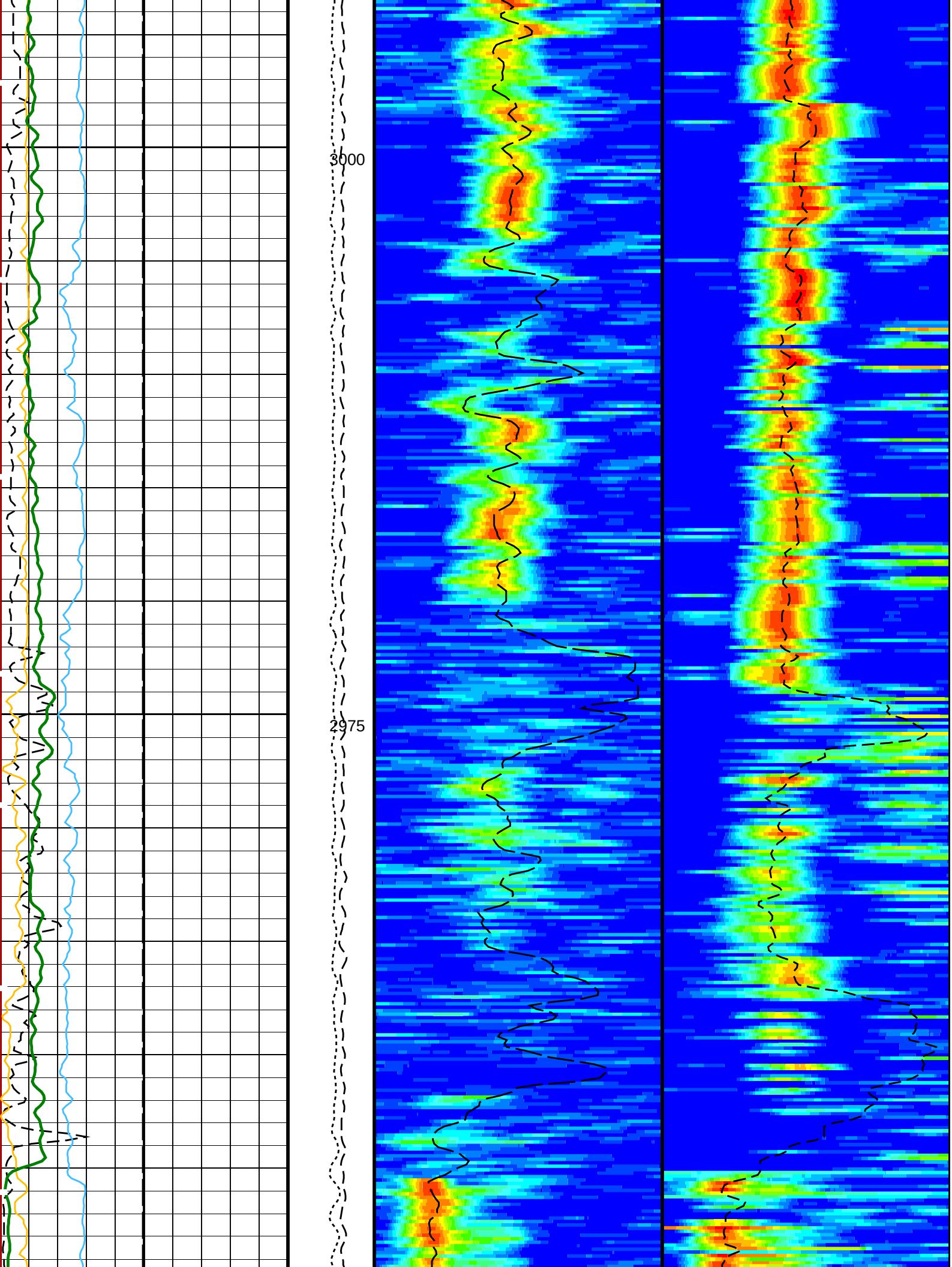
40 (US/F) 1040
(DT1T)
Delta−T Shear / TA − Lower Dipole

40 (US/F) 1040
(DT1R)
Delta−T Shear / RA − Lower Dipole

3125


3100
TENS
3075
HSGR
CHT1
CHR1
DT1T
DT1R


WFG1
CDF
BS
3050
3025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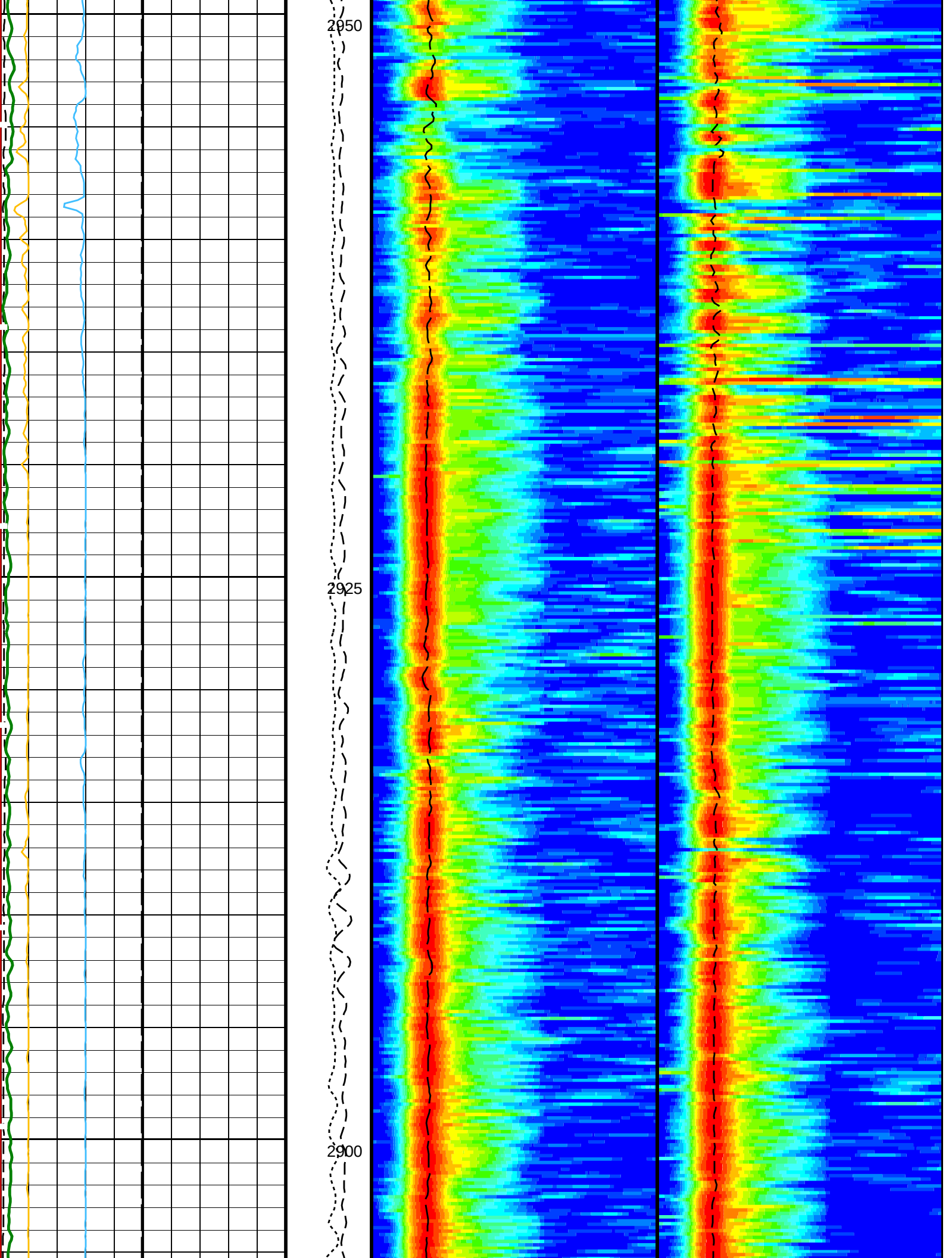
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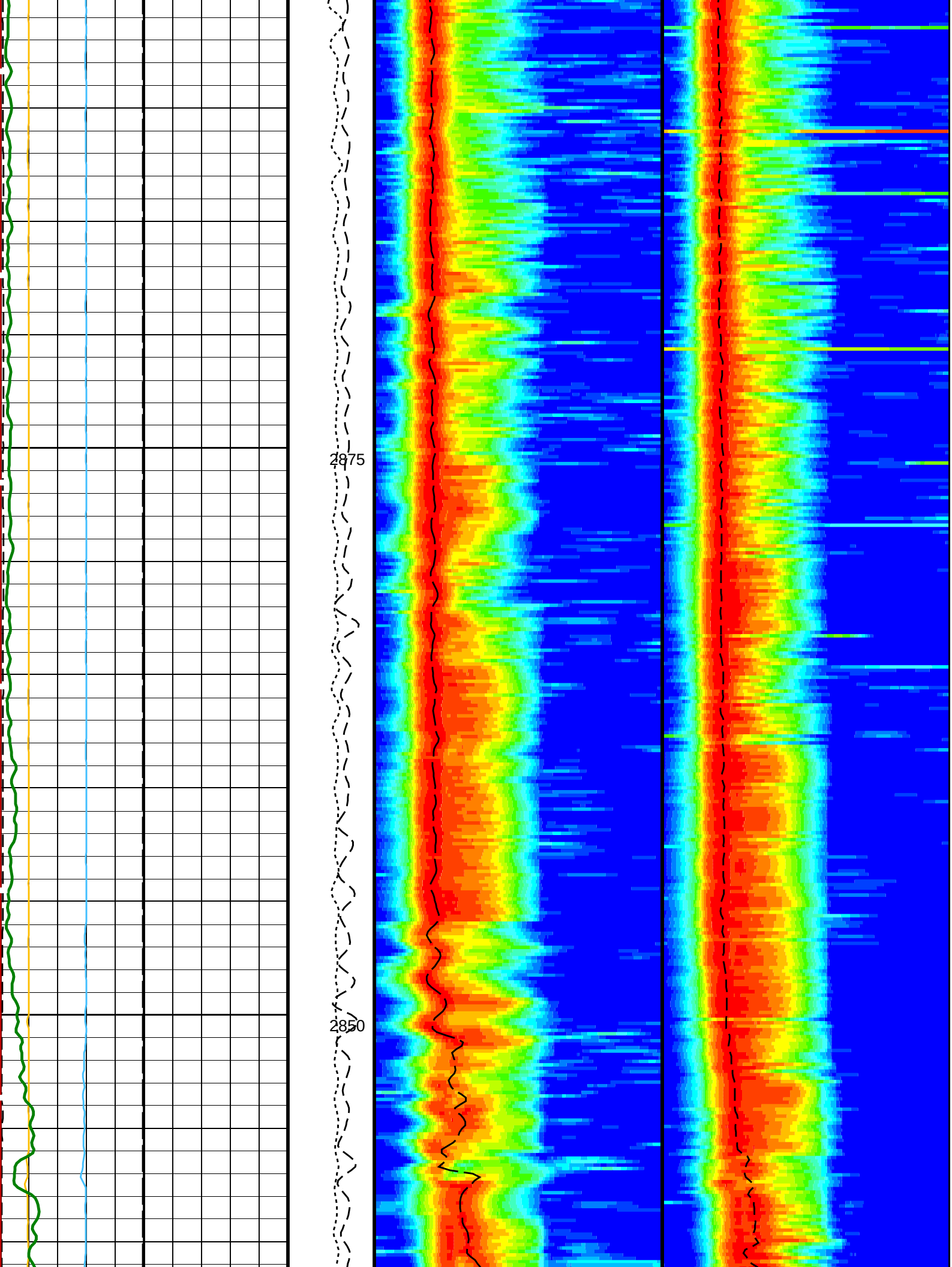
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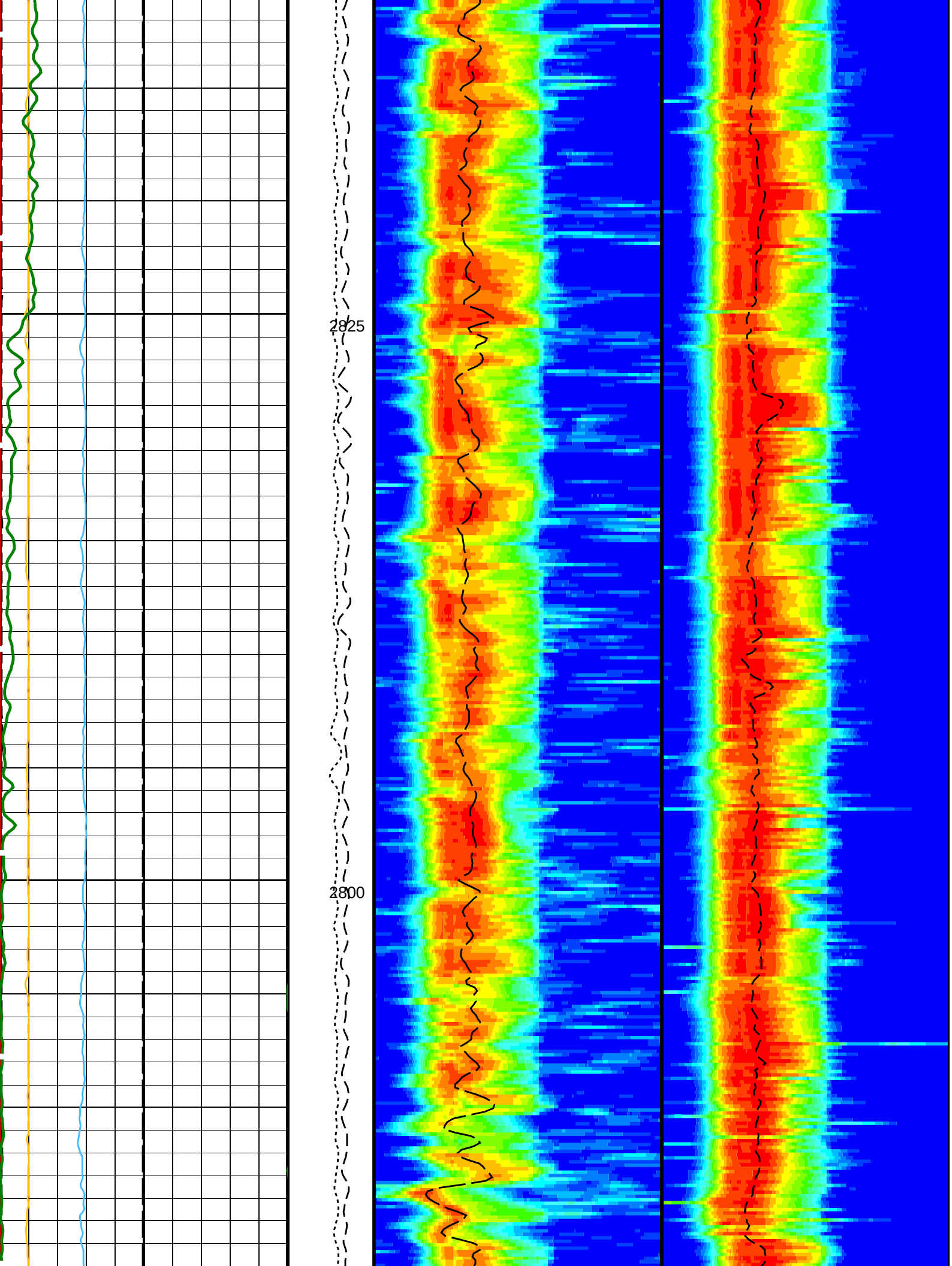
2850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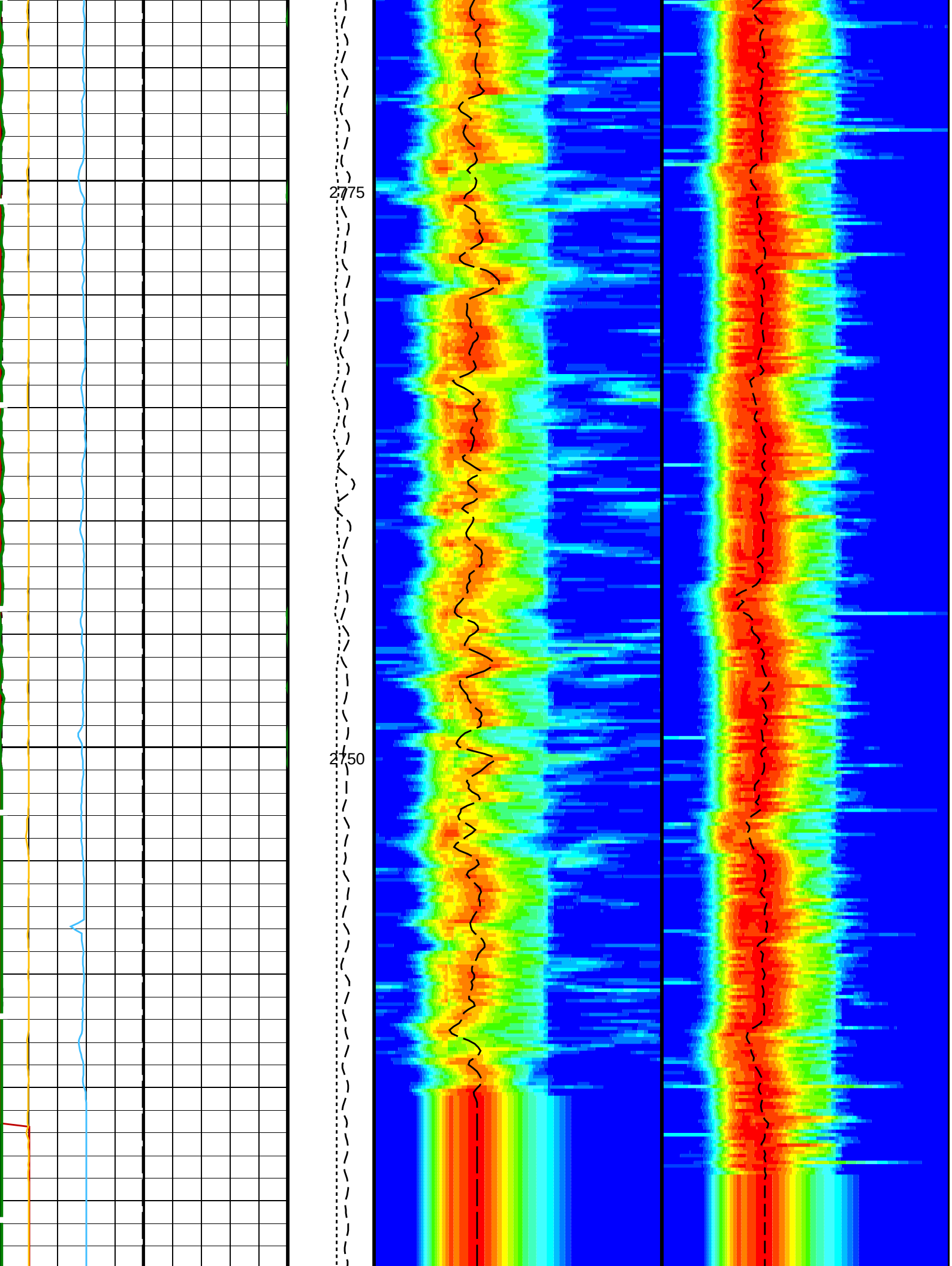
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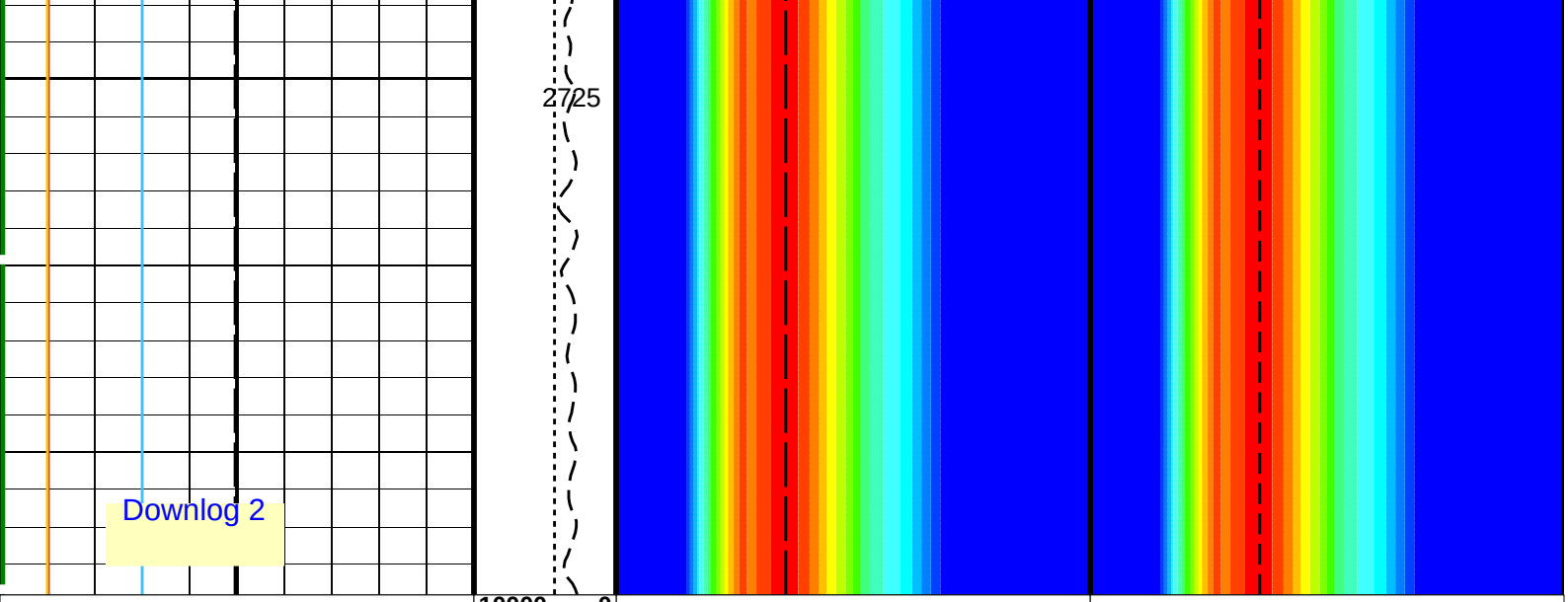


0 (IN) 20 Bit Size (BS)	10000 0 (LBF) (TENS) Tension	40 (US/F) 1040 (DT1T) Delta−T Shear / TA − Lower Dipole	40 (US/F) 1040 (DT1R) Delta−T Shear / RA − Lower Dipole
0 (−−−−) 1000 SAM1 Waveform Gain (WFG1)	5000 0 (LBF) (CDF) Force Downhole Calibrated	40 (US/F) 1040 (SPT1) Tr.Array L.Dipole Slow Proj. CVDL Min Amplitude Max	40 (US/F) 1040 (SPR1) Rec.Array L.Dipole Slow Proj. CVDL Min Amplitude Max
0 (−−−−) 10 Lower Dipole (WCI1) Waveform Data Copy Indicator 1 −			
0 (−−−−) 10 (CHR1) Peak Coherence / RA − Lower Dipole			
−2 (−−−−) 8 (CHT1) Peak Coherence / TA − Lower Dipole			
0 (GAPI) 100 (HSGR) HNGS Spectroscopy Gamma Ray			

Time Mark Every 60 S

PIP SUMMARY

	System and Miscellaneous			
GCSE		Generalized Caliper Selection	BS	
BHS		Borehole Status	OPEN	
	EDTC−B: Enhanced DTS Cartridge			
WFM1		Waveform Mode 1	W1	
TWSX		Transmitter Waveform Select X	0	
TWI1		STC Integration Time Window − Lower Dipole	1600	US
TWD1		STC Time Width − Lower Dipole	2000	US
TUL1		STC Time Upper Limit − Lower Dipole	18960	US
TST1		STC Time Step − Lower Dipole	200	US
TLL1		STC Time Lower Limit − Lower Dipole	600	US
TBF1		STC Time for Baseline Fill − Lower Dipole	0	US
SWD1		STC Slowness Width − Lower Dipole	40	US/F
SUL1		STC Slowness Upper Limit − Lower Dipole	1040	US/F
SSW1		STC Source Waveform − Lower Dipole	WF_SAM1	
SST1		STC Slowness Step − Lower Dipole	4	US/F
SLL1		STC Slowness Lower Limit − Lower Dipole	40	US/F
SFM1		STC Filter − Lower Dipole	B.3−1.5K	
SFC1		STC Formation Character − Lower Dipole	SELECTABLE	
SBW1		STC Search Bandwidth − Lower Dipole	8000	US
SBO1		STC Search Band Offset − Lower Dipole	3000	US
SAS1		STC Sonic Array Status − Lower Dipole	255 OFF	
SAMX		DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert		
SAM1		DSST Sonic Acquisition Mode 1 − Lower Dipole Mode	LED_EVEN	

RX8G	Receiver 8 Geometry	336	IN
RX7G	Receiver 7 Geometry	330	IN
RX6G	Receiver 6 Geometry	324	IN
RX5G	Receiver 5 Geometry	318	IN
RX4G	Receiver 4 Geometry	312	IN
RX3G	Receiver 3 Geometry	306	IN
RX2G	Receiver 2 Geometry	300	IN
RX1G	Receiver 1 Geometry	294	IN
NWIX	Number Waveform Items X	0	
NWI1	Number Waveform Items 1	8	
LTXG	Lower Dipole Transmitter Geometry	156	IN
GCSE	Generalized Caliper Selection	BS	
DWCX	Digitizer Word Count X	512	
DWC1	Digitizer Word Count 1	512	
DTCS	Compressional Delta−T Source for DTCO Channel	PS_COMP	
DSIX	Digitizer Sample Interval X	40	US
DSI1	Digitizer Sample Interval 1	40	US
DSHU	Label Slowness Upper Limit − Dipole Shear	1040	US/F
DSHL	Label Slowness Lower Limit − Dipole Shear	40	US/F
DLCS	Label Compressional Source − Dipole Shear	USE	
DDEX	Digitizing Delay X	0	US
DDE1	Digitizing Delay 1	0	US
BHS	Borehole Status	OPEN	
DSST−B: Dipole Shear Imager − B			
GCSE	Generalized Caliper Selection	BS	
BHS	Borehole Status	OPEN	
HRLT−B: High Resolution Laterolog Array − B			
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.04802	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976891	
TPOS	Tool Position	CENT	
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	−0.002819	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	
HNGS−BA: Hostile Natural Gamma Ray Sonde			

DLIS Name	Description	Value

Parameters

EDTC−B	SKK−5169−EDTCB		
HLDS	19C0−187	LDSC−B	19C0−187
HRLT−B	19C0−187	DSST−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

OP System Version: 19C0−187

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33		
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33		

Output DLIS Files

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M

Output DLIS Files

EDTC-B	SKK-5169-EDTCB		
HLDS	19C0-187	LDSC-B	19C0-187
HRLT-B	19C0-187	DSST-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187

OP System Version: 19C0-187

Time Mark Every 60 S

PIP SUMMARY

0 (GAPI) 100
(HSGR)
HNGS Spectroscopy Gamma Ray

-1 (----) 9
(CHTS)
Peak Coherence / TA - P & S Shear

-1 (----) 9
(CHRS)
Peak Coherence / RA - P & S Shear

0 (----) 10
(CHTP)
Peak Coherence / TA - P & S Comp

0 (----) 10
(CHRP)
Peak Coherence / RA - P & S Comp

Downlog 2

0 (----) 10
Monopole P&S (WCI4)
Waveform Data Copy Indicator 4 -

40 (US/F) 240
Tr.Array P&S Slow Proj. CVDL (SPT4)
Min Amplitude Max

40 (US/F) 240
Rec.Array P&S Slow Proj. CVDL (SPR4)
Min Amplitude Max

0 (----) 1000
SAM4 Waveform Gain (WFG4)

40 (US/F) 240
Delta-T Shear / TA - P & S (DTTS)

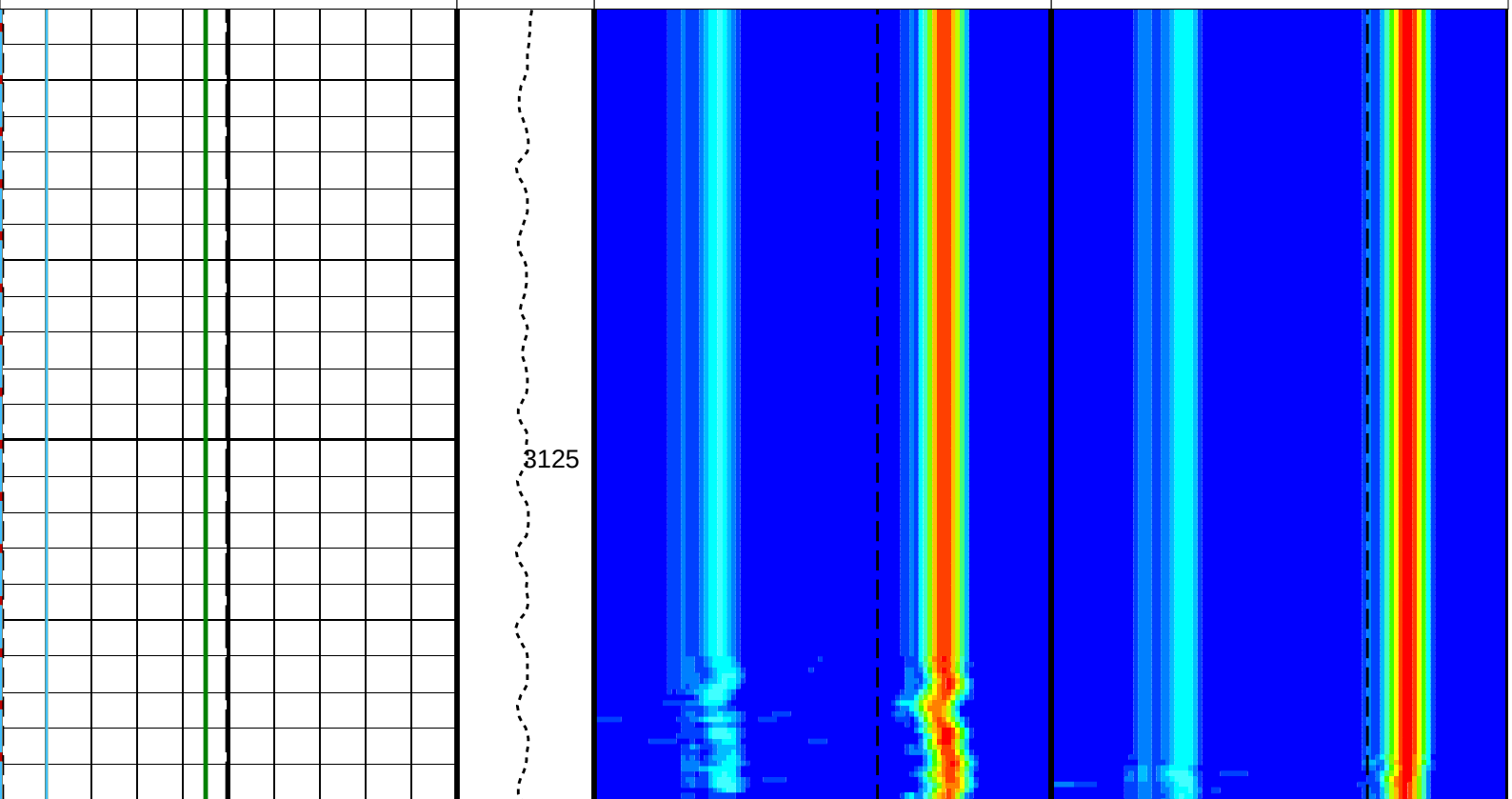
40 (US/F) 240
Delta-T Shear / RA - P & S (DTRS)

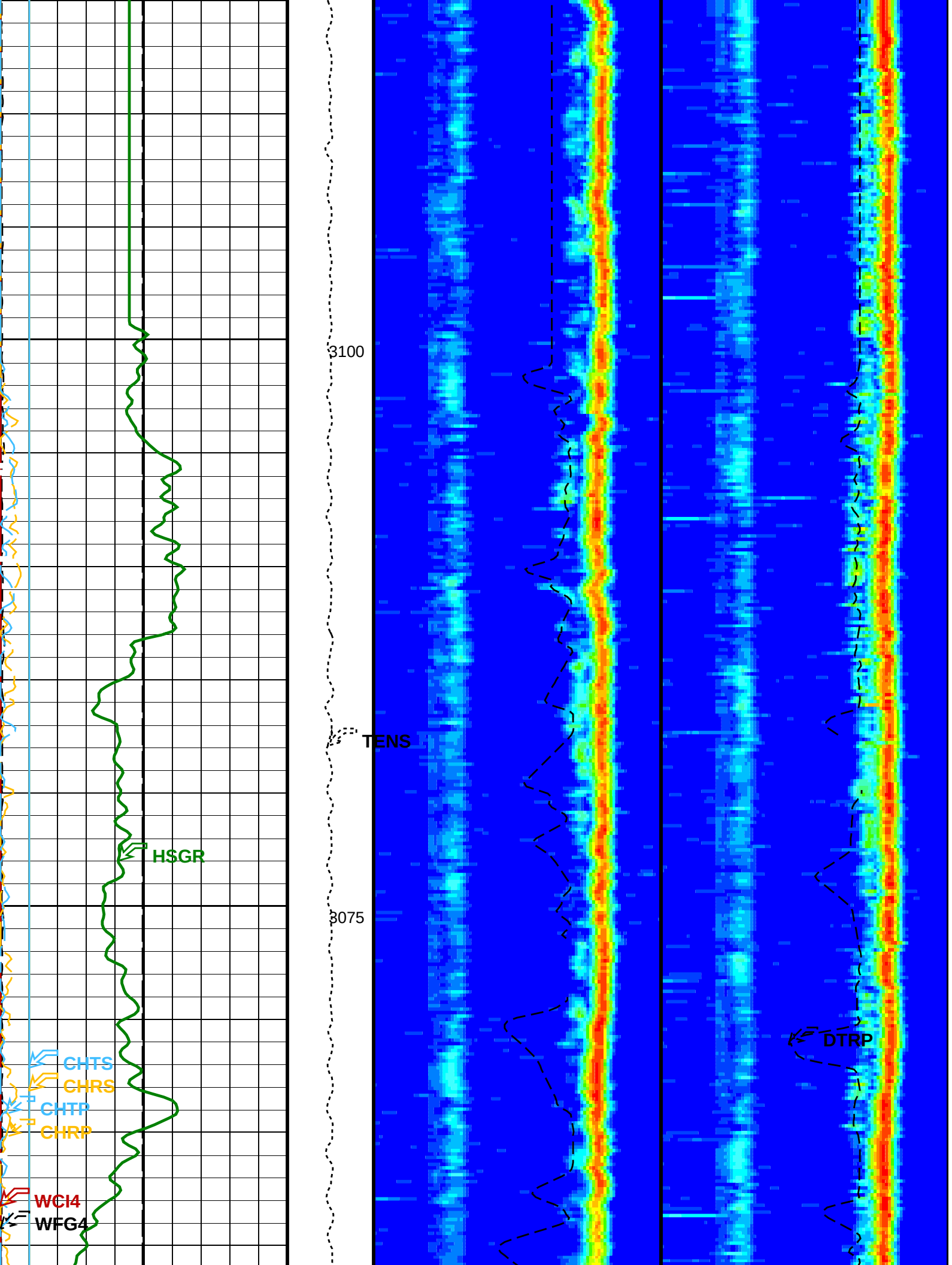
0 (IN) 20
Bit Size (BS)

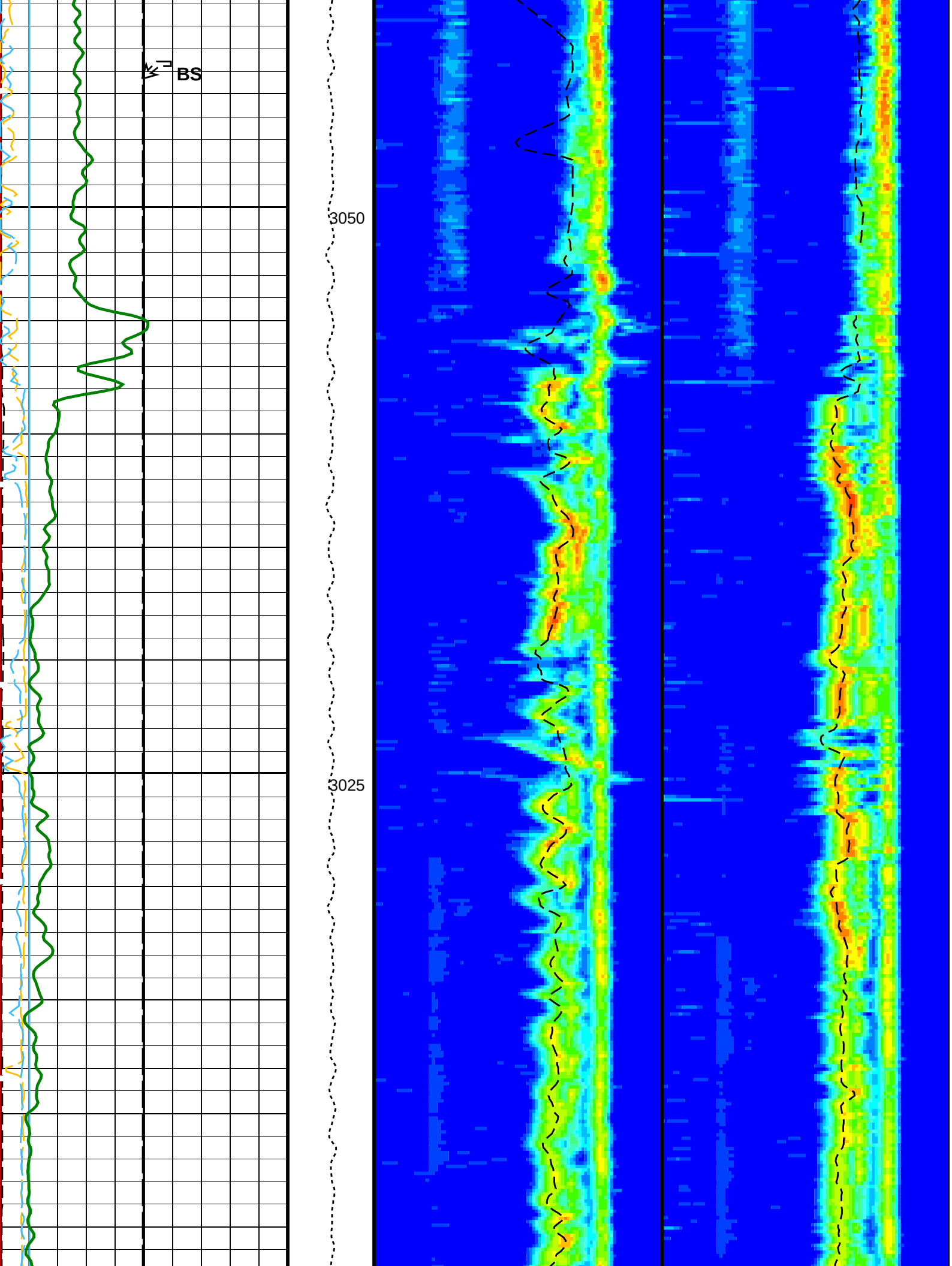
10000 (LBF) 0
(TENS)
Tension

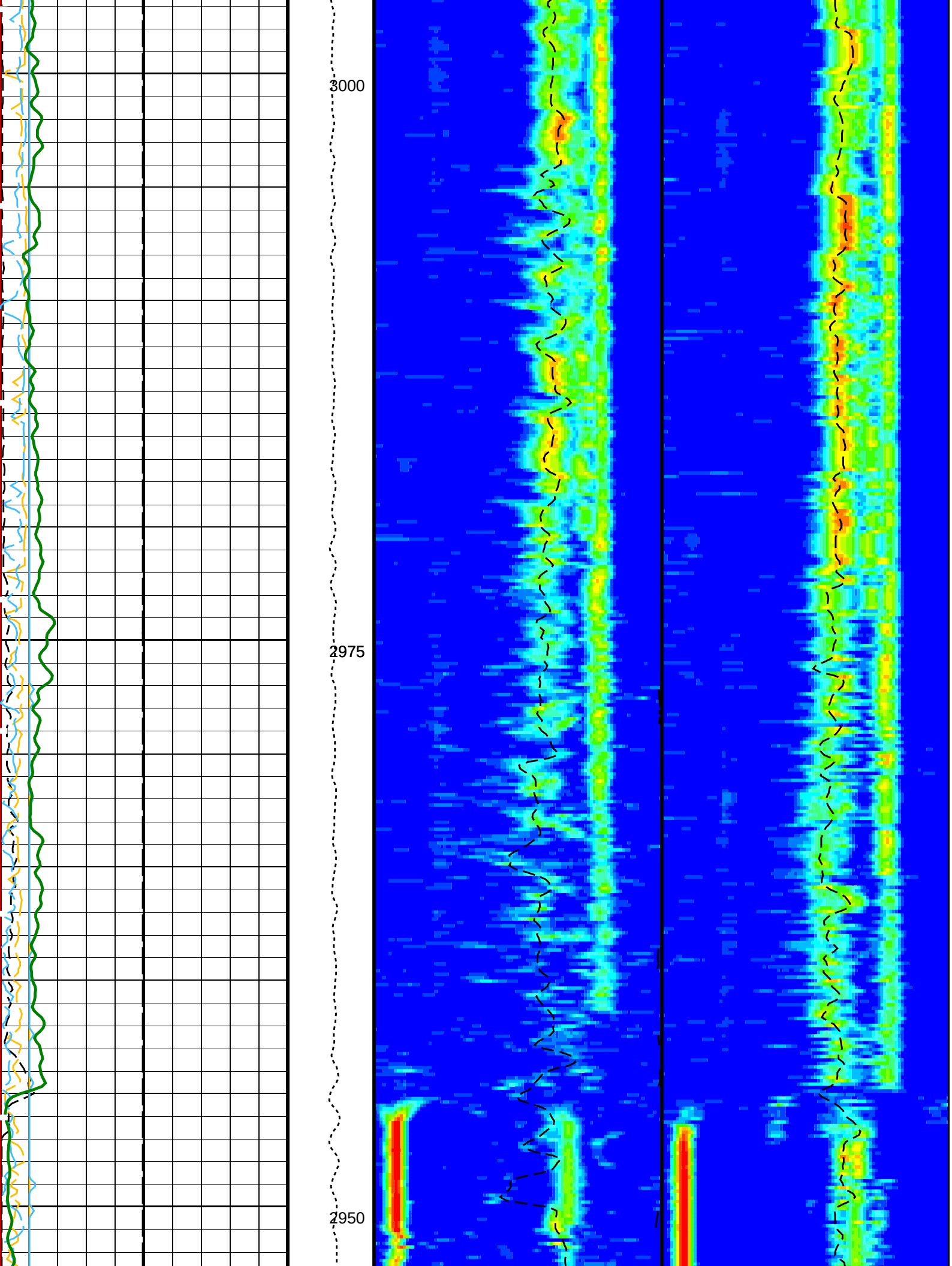
40 (US/F) 240
Delta-T Comp / TA - P & S (DTTP)

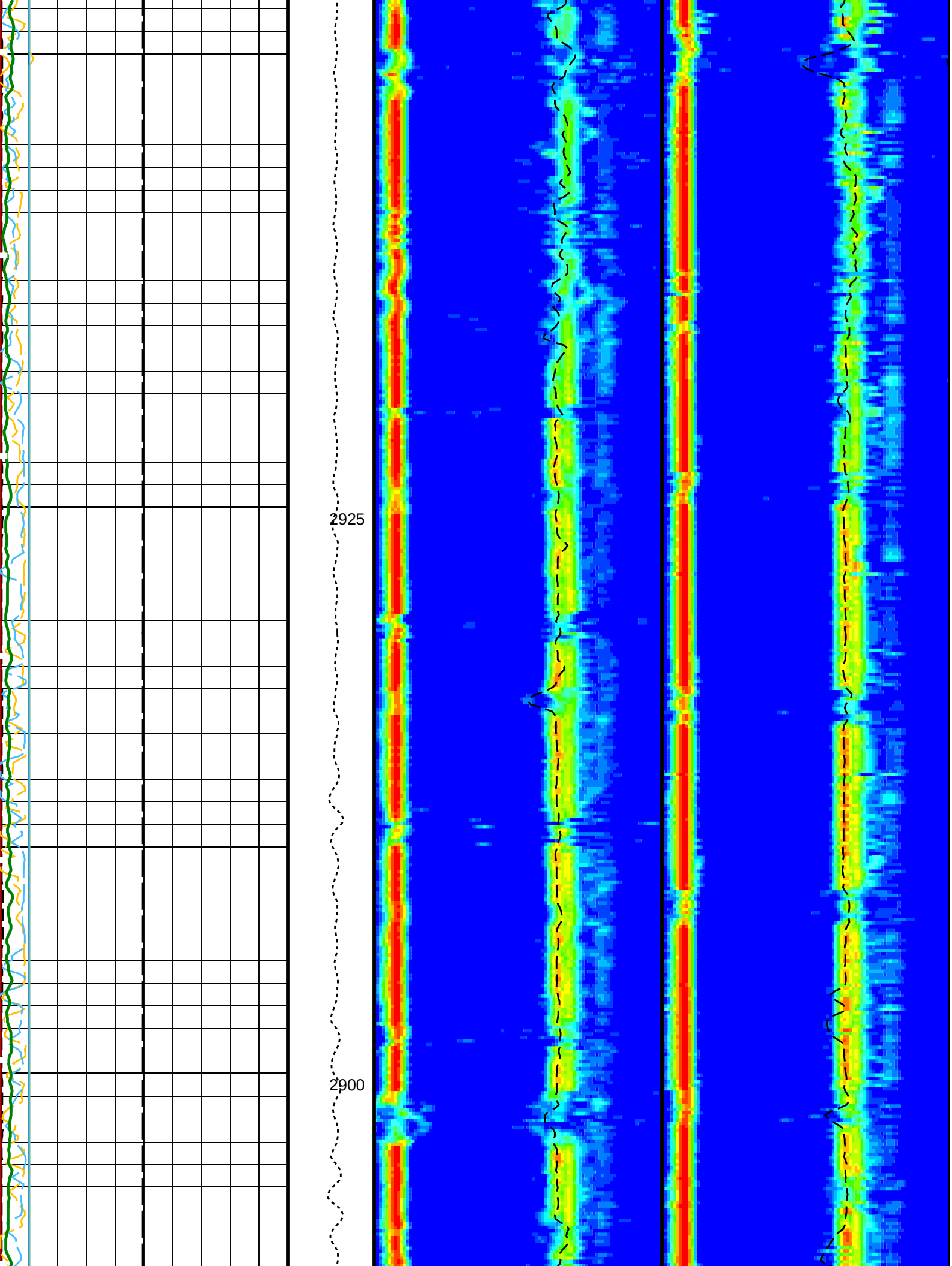
40 (US/F) 240
Delta-T Comp / RA - P & S (DTRP)




3100
TENS
HSGR
3075
DTRP
CHTS
CHRS
CHTP
CHRP
WCI4
WFG4


BS
3050
3025


3000
2975
2950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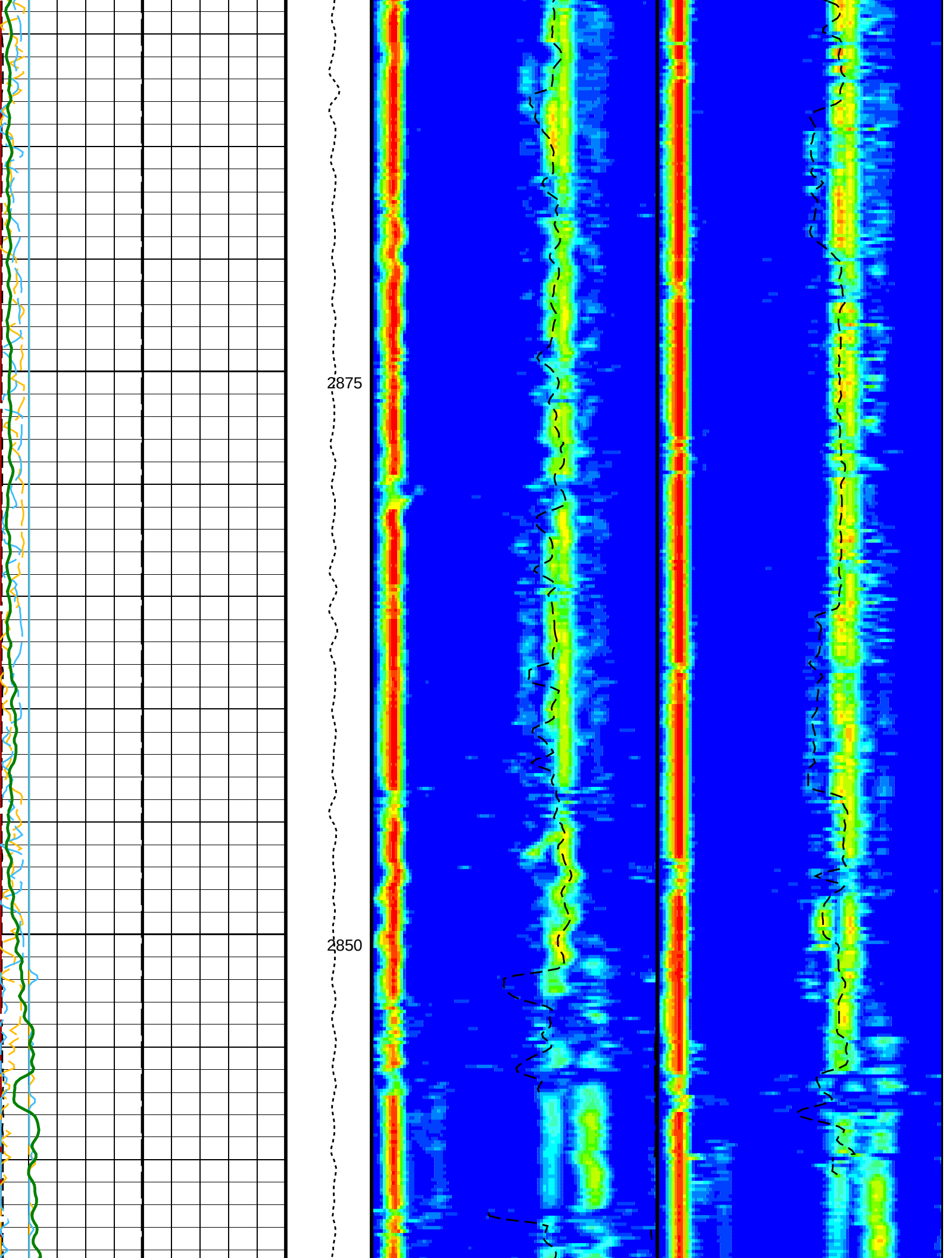
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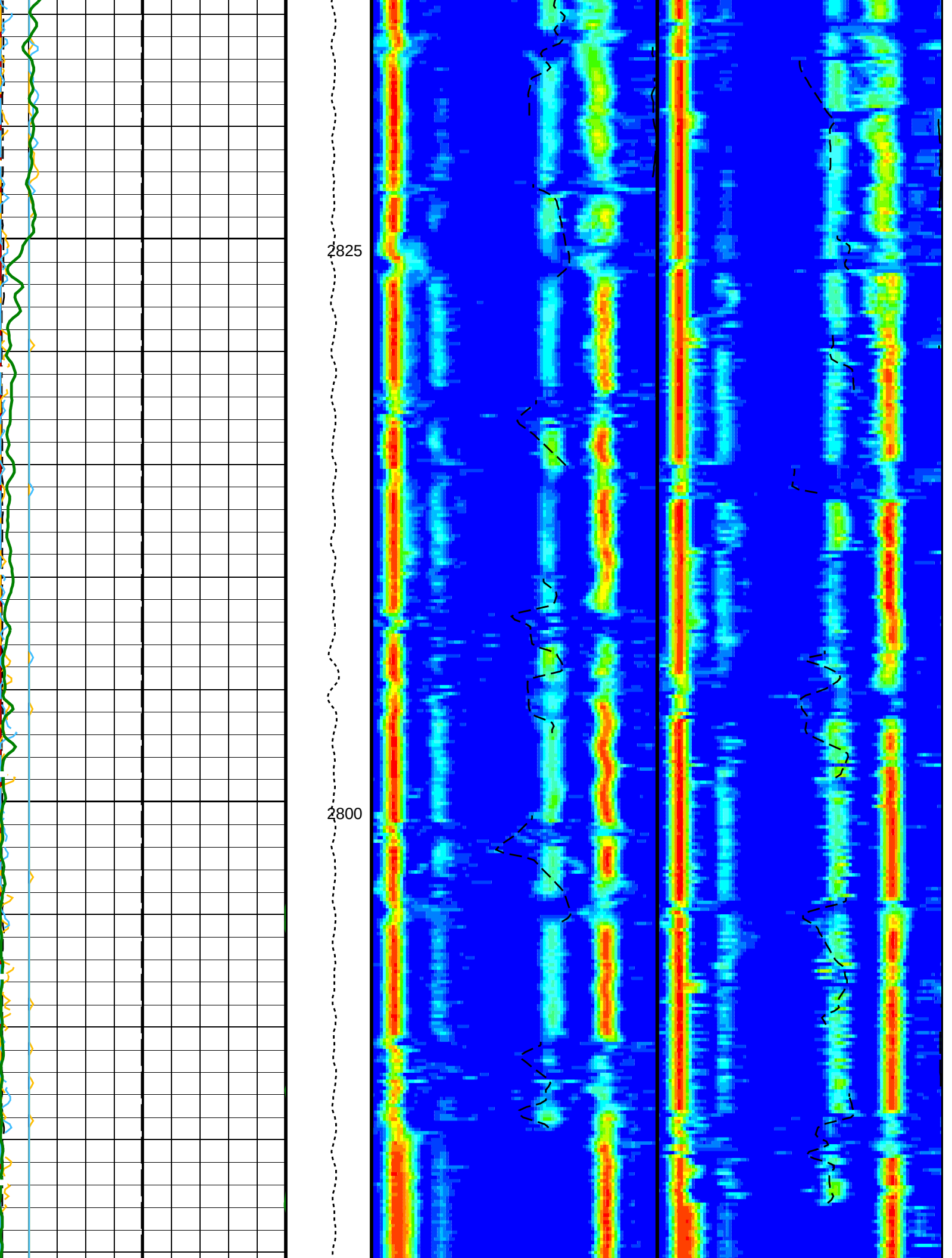
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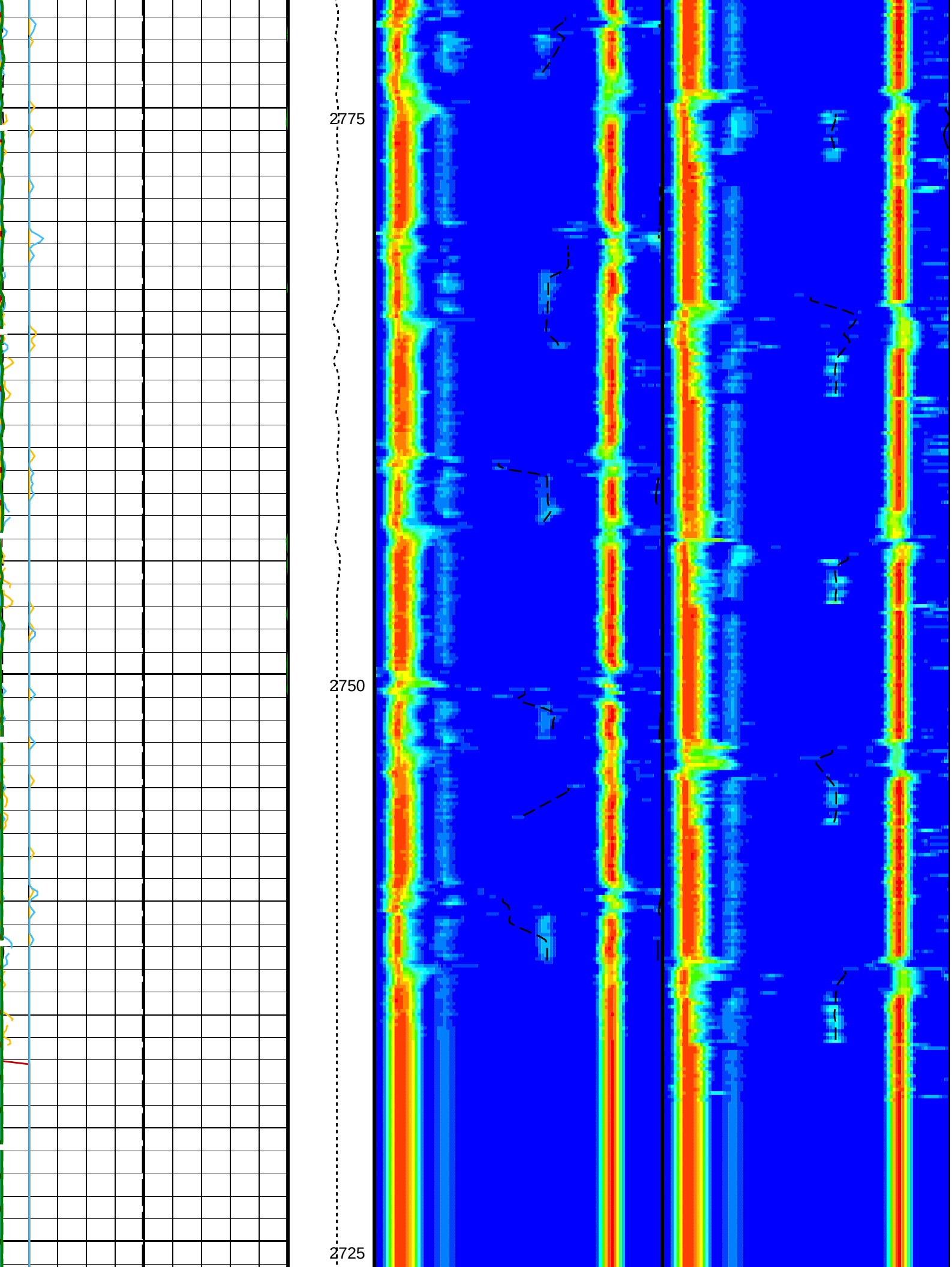
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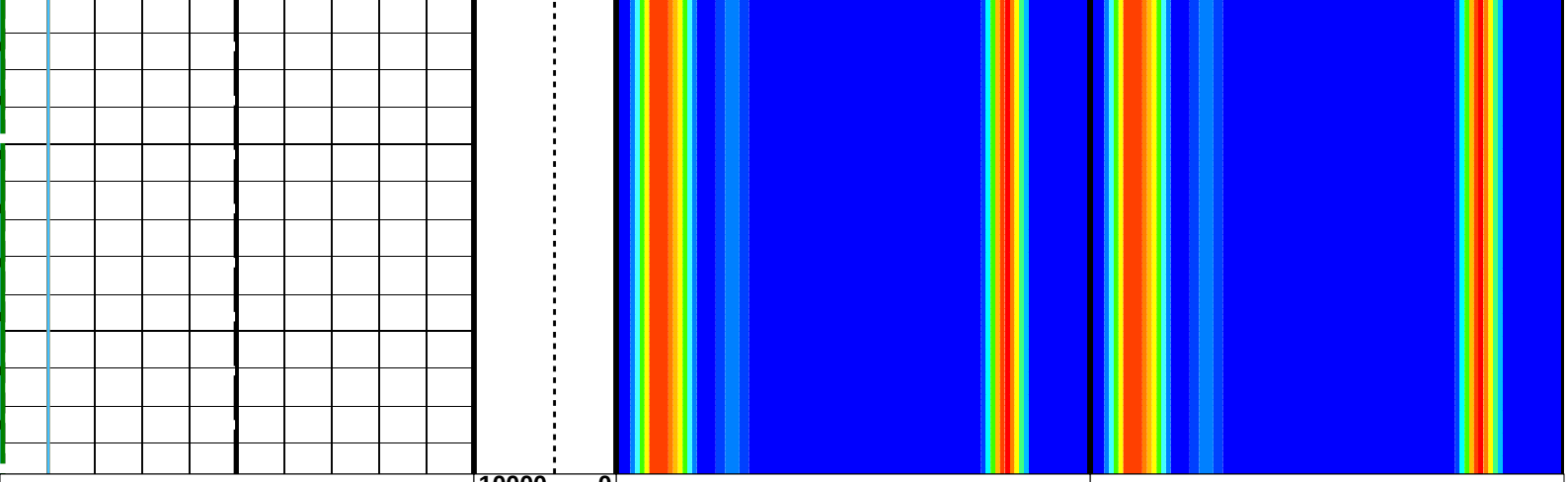


0 (IN) 20 Bit Size (BS)	10000 0 (LBF) (TENS) Tension	40 (US/F) 240 Delta-T Comp / TA - P & S (DTTP)	40 (US/F) 240 Delta-T Comp / RA - P & S (DTRP)
0 (----) 1000 SAM4 Waveform Gain (WFG4)		40 (US/F) 240 Delta-T Shear / TA - P & S (DTTS)	40 (US/F) 240 Delta-T Shear / RA - P & S (DTRS)
0 (----) 10 Monopole P&S (WCI4) Waveform Data Copy Indicator 4 -		40 (US/F) 240 Tr.Array P&S Slow Proj. CVDL (SPT4) Min Amplitude Max	40 (US/F) 240 Rec.Array P&S Slow Proj. CVDL (SPR4) Min Amplitude Max
0 (----) 10 (CHRP) Peak Coherence / RA - P & S Comp			
0 (----) 10 (CHTP) Peak Coherence / TA - P & S Comp			
-1 (----) 9 (CHRS) Peak Coherence / RA - P & S Shear			
-1 (----) 9 (CHTS) Peak Coherence / TA - P & S Shear			
0 (GAPI) 100 (HSGR) HNGS Spectroscopy Gamma Ray			
Time Mark Every 60 S			

Downlog 2

PIP SUMMARY

BS		Bit Size	8.500	IN
	System and Miscellaneous			
GCSE		Generalized Caliper Selection	BS	
BHS		Borehole Status	OPEN	
	EDTC-B: Enhanced DTS Cartridge			
WFM4		Waveform Mode 4	W1	
TWSX		Transmitter Waveform Select X	0	
TWI4		STC Integration Time Window - Monopole P&S	500	US
TWD4		STC Time Width - Monopole P&S	1000	US
TUL4		STC Time Upper Limit - Monopole P&S	3660	US
TST4		STC Time Step - Monopole P&S	50	US
TLL4		STC Time Lower Limit - Monopole P&S	150	US
TBF4		STC Time for Baseline Fill - Monopole P&S	300	US
SWD4		STC Slowness Width - Monopole P&S	10	US/F
SUL4		STC Slowness Upper Limit - Monopole P&S	240	US/F
STUL		Label Slowness Upper Limit - Monopole Stoneley	780	US/F
STLL		Label Slowness Lower Limit - Monopole Stoneley	180	US/F
SSW4		STC Source Waveform - Monopole P&S	WF_SAM4	
SST4		STC Slowness Step - Monopole P&S	2	US/F
SLL4		STC Slowness Lower Limit - Monopole P&S	40	US/F
SHUL		Label Slowness Upper Limit - Monopole P&S Shear	240	US/F
SHLL		Label Slowness Lower Limit - Monopole P&S Shear	235	US/F
SFM4		STC Filter - Monopole P&S	B3-20K	
SFC4		STC Formation Character - Monopole P&S	SELECTABLE	
SBW4		STC Search Bandwidth - Monopole P&S	2000	US

SBW4	STC Search Bandwidth − Monopole P&S	2000	US
SBR4	STC Baseline Removal − Monopole P&S	ON	
SBO4	STC Search Band Offset − Monopole P&S	500	US
SAS4	STC Sonic Array Status − Monopole P&S	255	
		OFF	
SAMX	DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert		
SAM4	DSST Sonic Acquisition Mode 4 − Monopole Mode for P&S	EVEN	
RX8G	Receiver 8 Geometry	336	IN
RX7G	Receiver 7 Geometry	330	IN
RX6G	Receiver 6 Geometry	324	IN
RX5G	Receiver 5 Geometry	318	IN
RX4G	Receiver 4 Geometry	312	IN
RX3G	Receiver 3 Geometry	306	IN
RX2G	Receiver 2 Geometry	300	IN
RX1G	Receiver 1 Geometry	294	IN
RSMX	Label Shear/Compressional Maximum Ratio − Monopole P&S	2.12	
RSMN	Label Shear/Compressional Minimum Ratio − Monopole P&S	1.4	
NWIX	Number Waveform Items X	0	
NWI4	Number Waveform Items 4	8	
MTXG	Monopole Transmitter Geometry	186	IN
MCS	Mean Casing Slowness	57	US/F
LFC	Label Formation Character − Monopole P&S	DYNAMIC	
GCSE	Generalized Caliper Selection	BS	
FILG	Label Fill Gap Control − Monopole P&S	COMP_SHEAR	
DWCX	Digitizer Word Count X	512	
DWC4	Digitizer Word Count 4	512	
DTF	Delta−T Fluid	193	US/F
DSIX	Digitizer Sample Interval X	40	US
DSI4	Digitizer Sample Interval 4	10	US
DDEX	Digitizing Delay X	0	US
DDE4	Digitizing Delay 4	0	US
COUL	Label Slowness Upper Limit − Monopole P&S Compressional	180	US/F
COLL	Label Slowness Lower Limit − Monopole P&S Compressional	120	US/F
CASF	Label Casing Function − Monopole P&S	50	
BHS	Borehole Status	OPEN	
DSST−B: Dipole Shear Imager − B			
GCSE	Generalized Caliper Selection	BS	
BHS	Borehole Status	OPEN	
HRLT−B: High Resolution Laterolog Array − B			
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.04802	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976891	
TPOS	Tool Position	CENT	
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	−0.002819	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	
HNGS−BA: Hostile Natural Gamma Ray Sonde			

DLIS Name	Description	Value

Parameters

Format: DSST_P_3_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 14:33

EDTC−B	SKK−5169−EDTCB		
HLDS	19C0−187	LDSC−B	19C0−187
HRLT−B	19C0−187	DSST−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

OP System Version: 19C0−187

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33

Output DLIS Files

Company: International Ocean Discovery Program | Well: Expedition 369, Site U1513D

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M

Output DLIS Files

EDTC−B	SKK−5169−EDTCB		
HLDS	19C0−187	LDSC−B	19C0−187
HRLT−B	19C0−187	DSST−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

OP System Version: 19C0−187

Time Mark Every 60 S

PIP SUMMARY

0 (GAPI) 100
(HSGR)
HNGS Spectroscopy Gamma Ray

−2 (−−−−) 8
(CHT2)
Peak Coherence / TA − Upper Dipole

0 (−−−−) 10
(CHR2)
Peak Coherence / RA − Upper Dipole

0 (−−−−) 10
Upper Dipole (WCI2)
Waveform Data Copy Indicator 2 −

Downlog 2

0 (−−−−) 1000
SAM2 Waveform Gain (WFG2)

5000 0
(LBF)
(CDF)
Force
Downhole
Calibrated

40 (US/F) 1040
(SPT2)
Tr.Array U.Dipole Slow Proj. CVDL
Min Amplitude Max

40 (US/F) 1040
(SPR2)
Rec.Array U.Dipole Slow Proj. CVDL
Min Amplitude Max

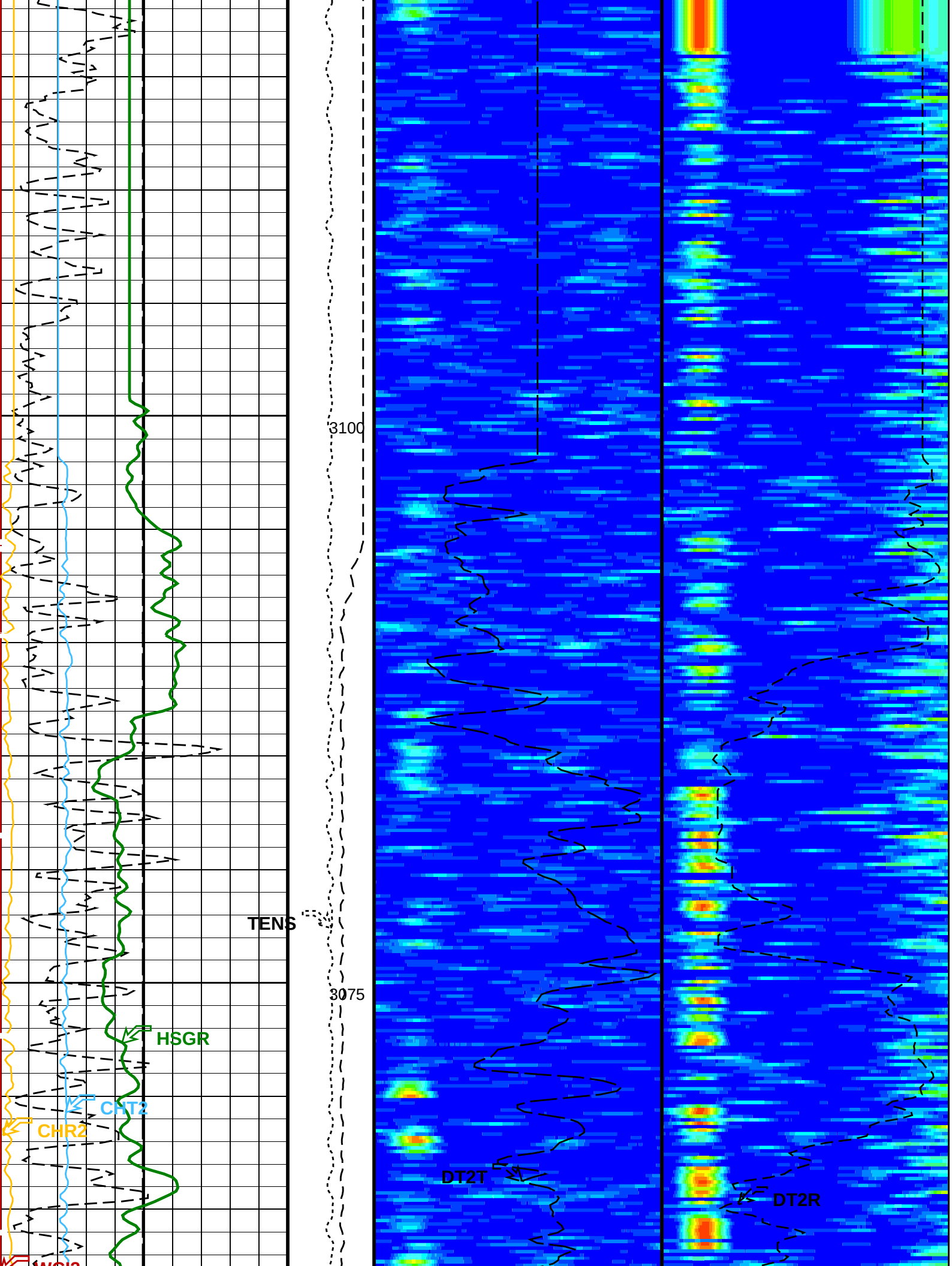
0 (IN) 20
Bit Size (BS)

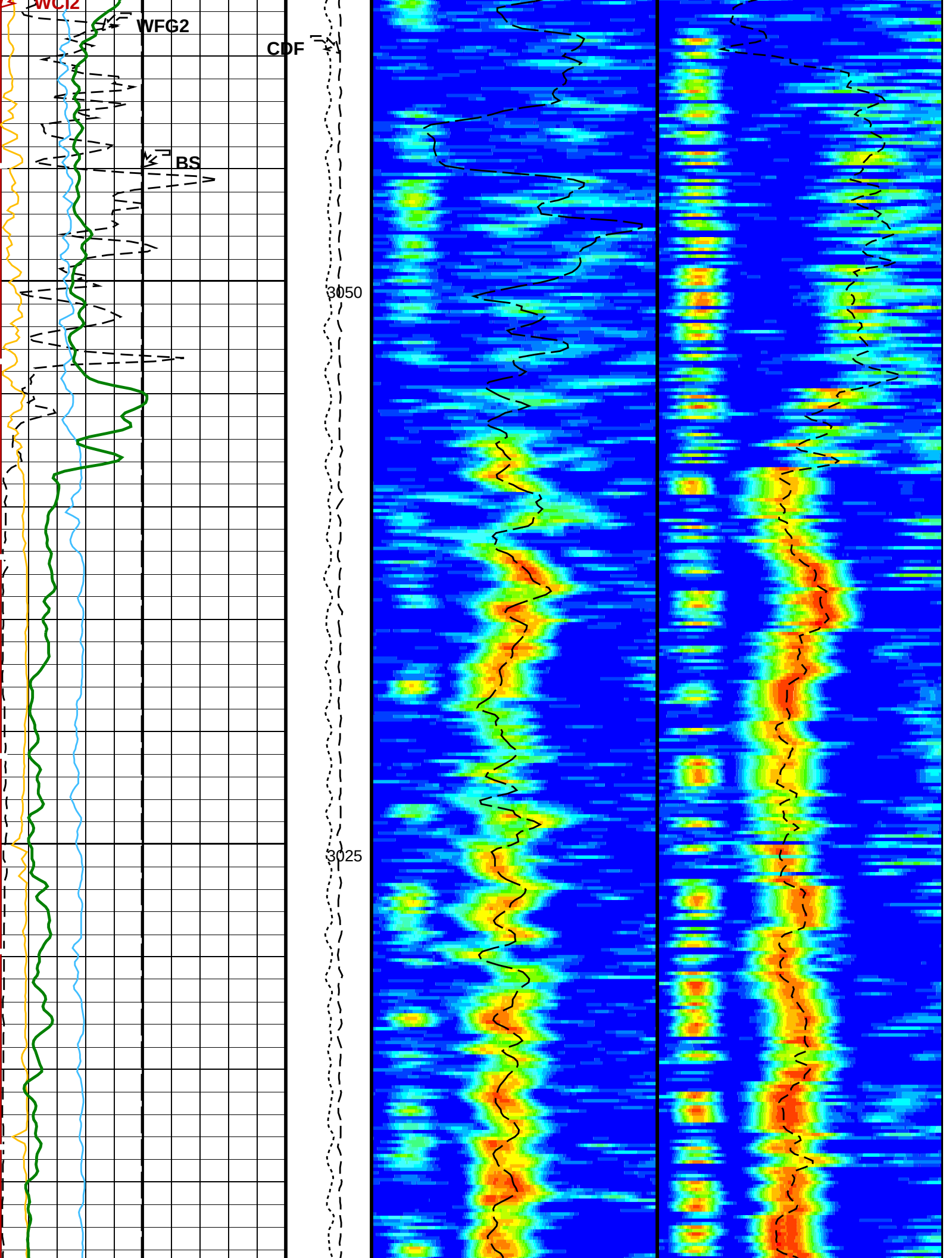
10000 0
(LBF)
(TENS)
Tension

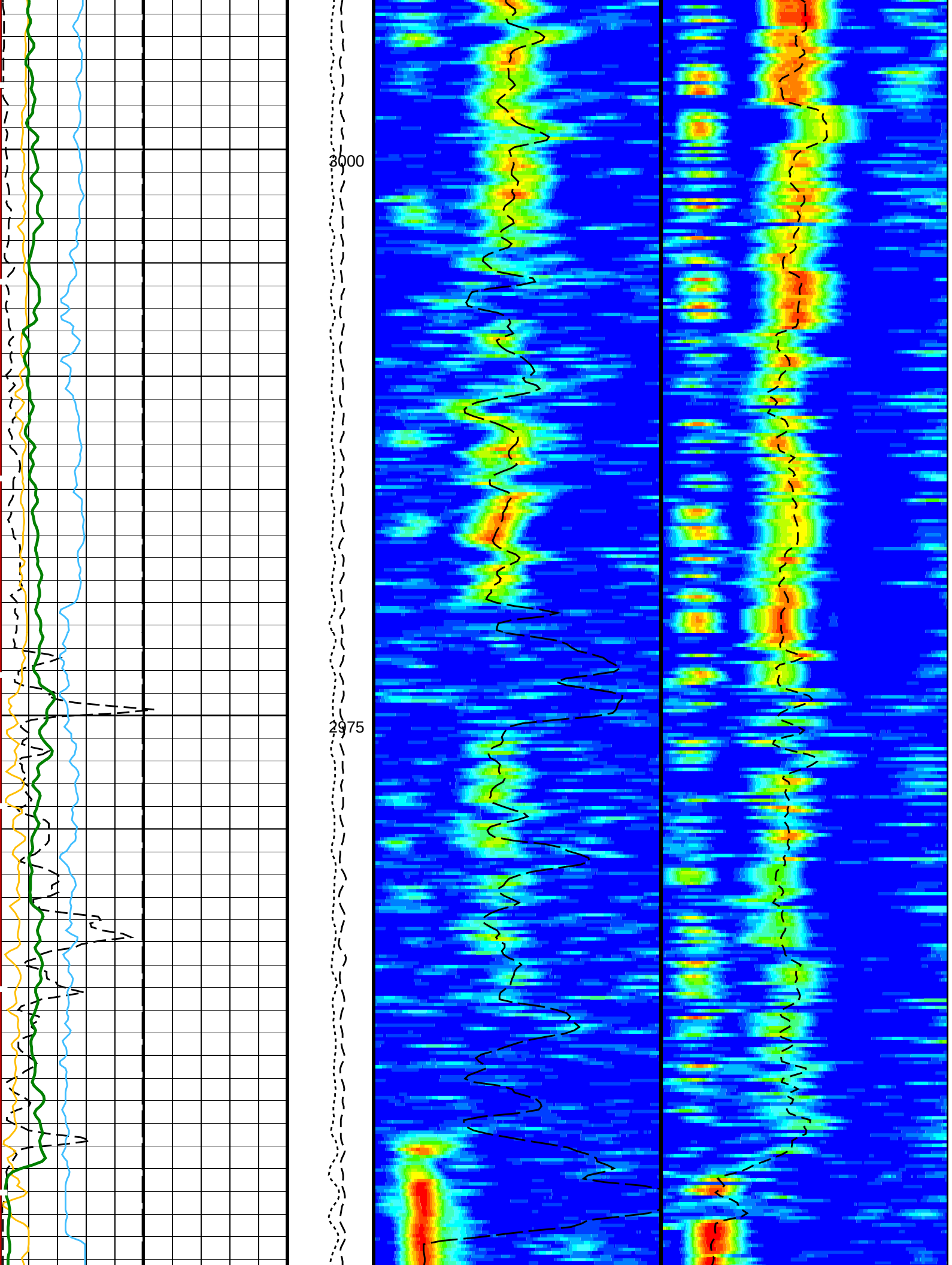
40 (US/F) 1040
(DT2T)
Delta−T Shear / TA − Upper Dipole

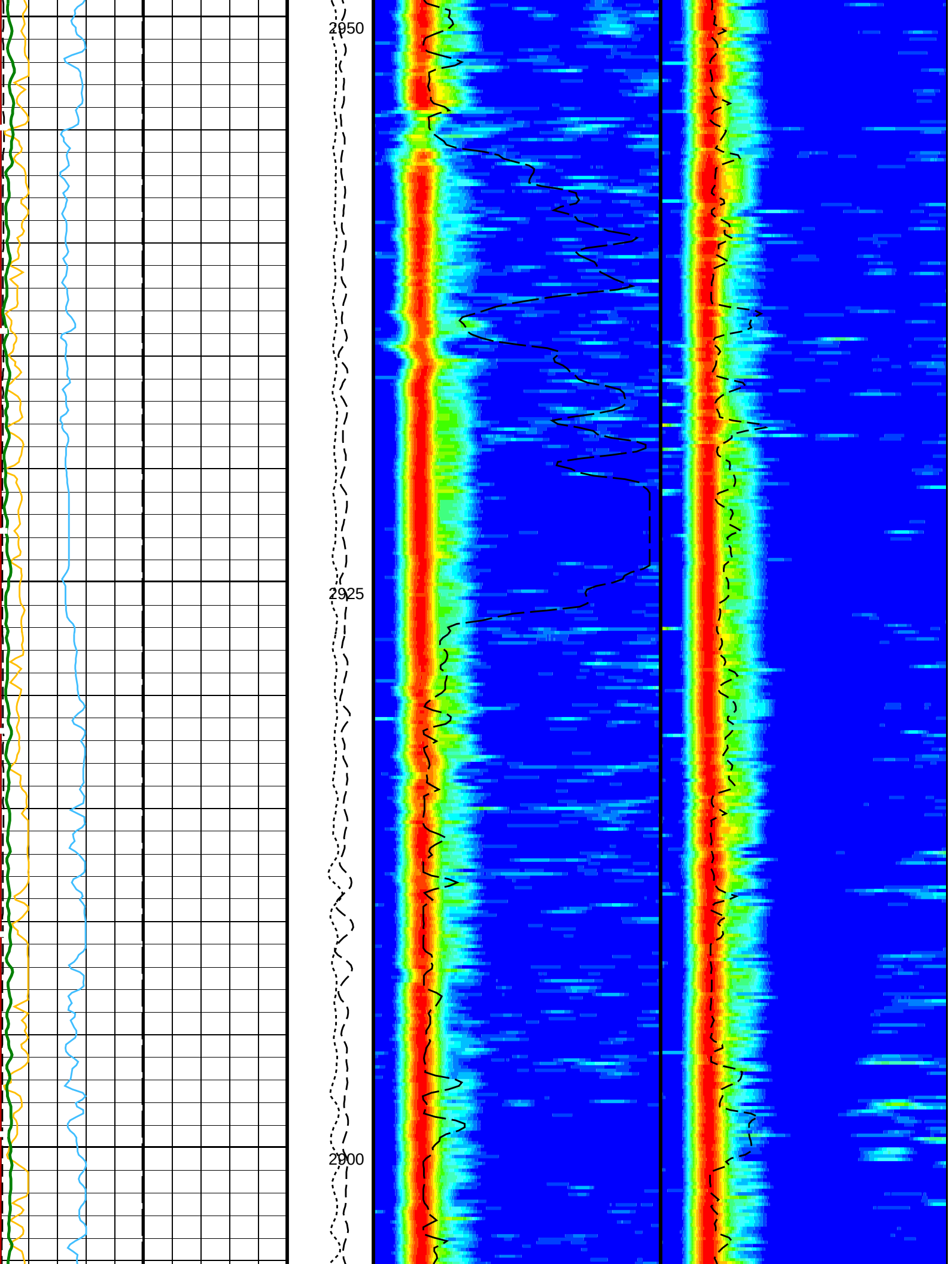
40 (US/F) 1040
(DT2R)
Delta−T Shear / RA − Upper Dipole

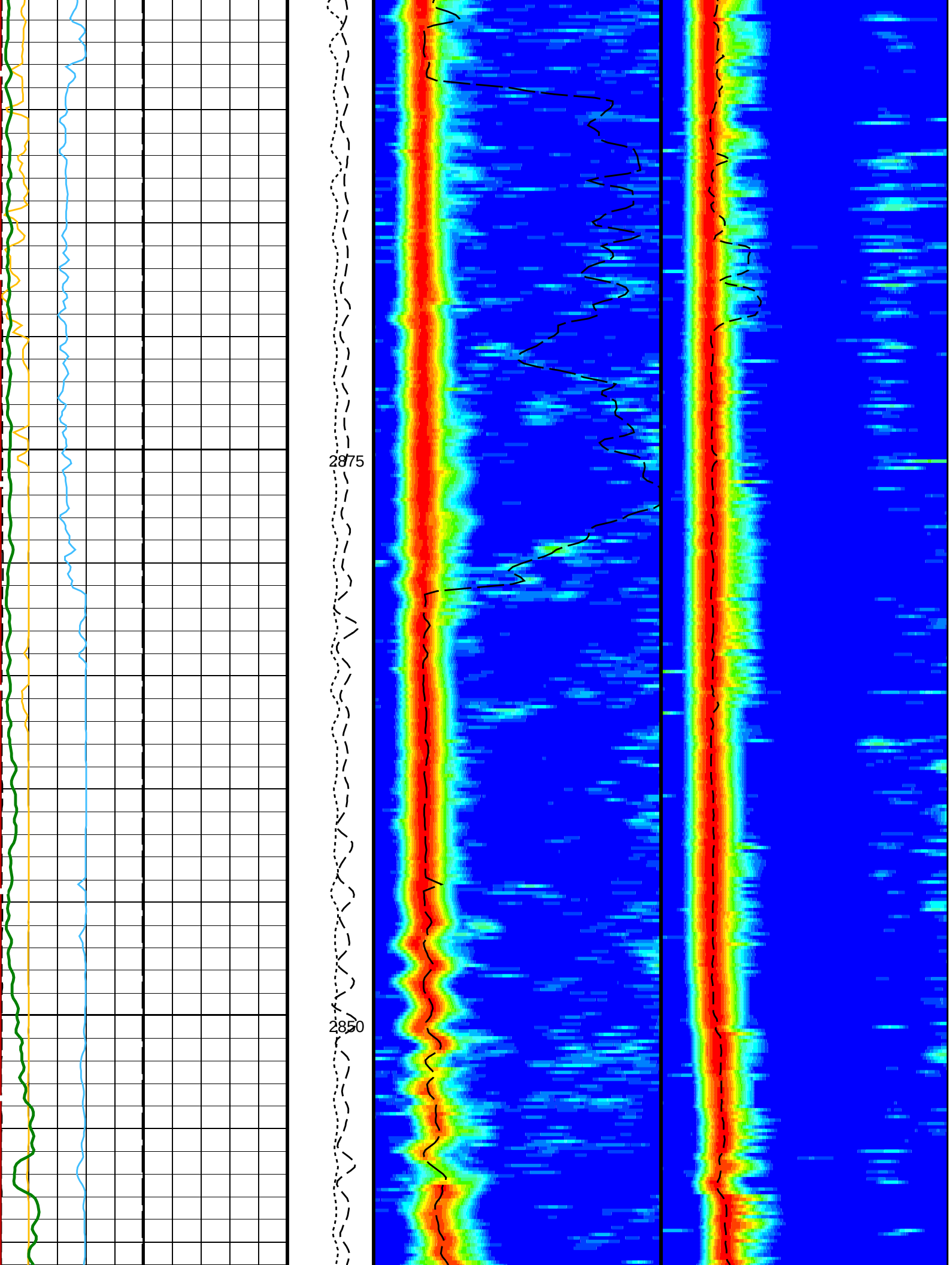
3125

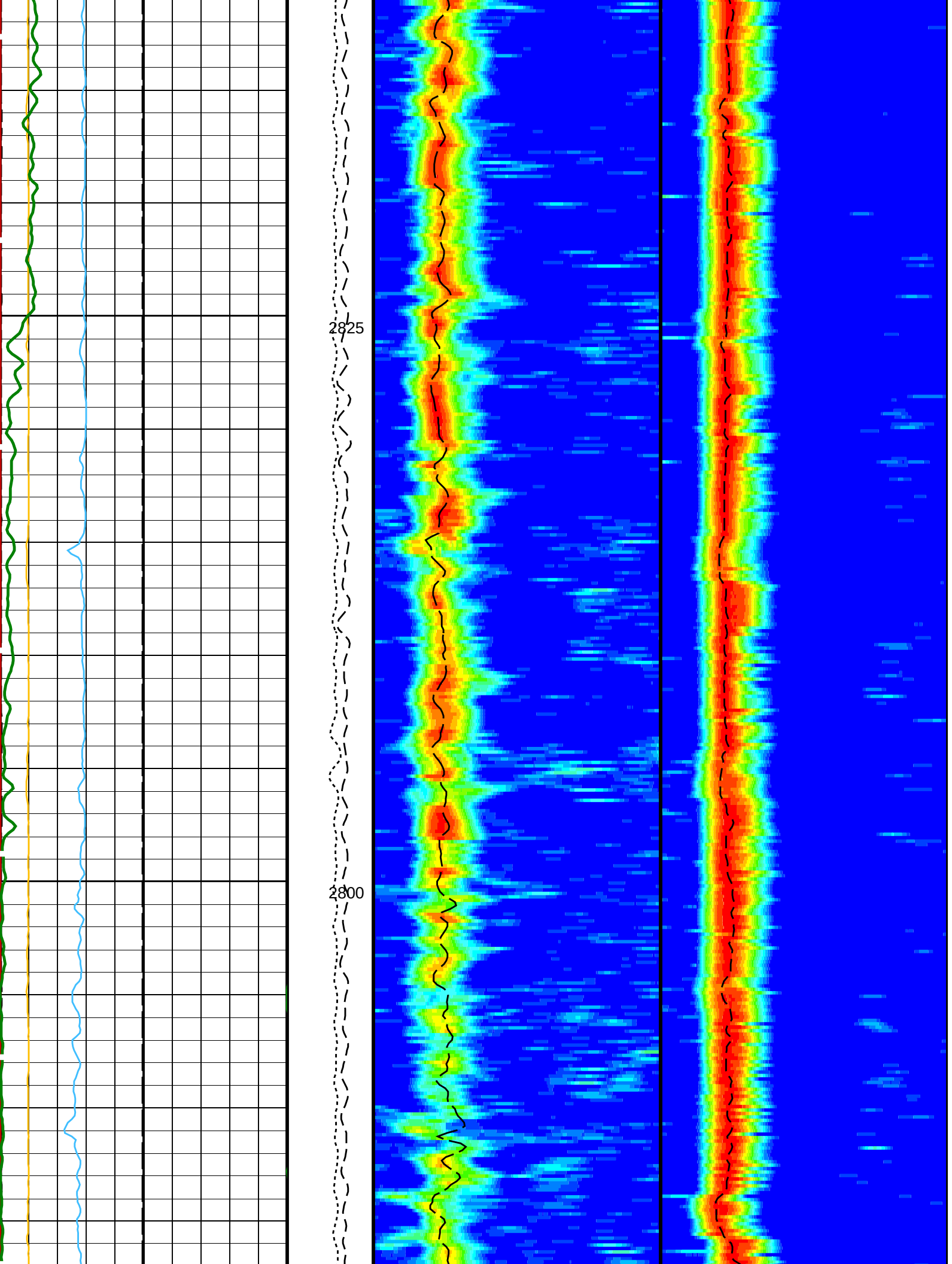

3100
TENS
3075
HSGR
CHT2
CHR2
DT2T
DT2R

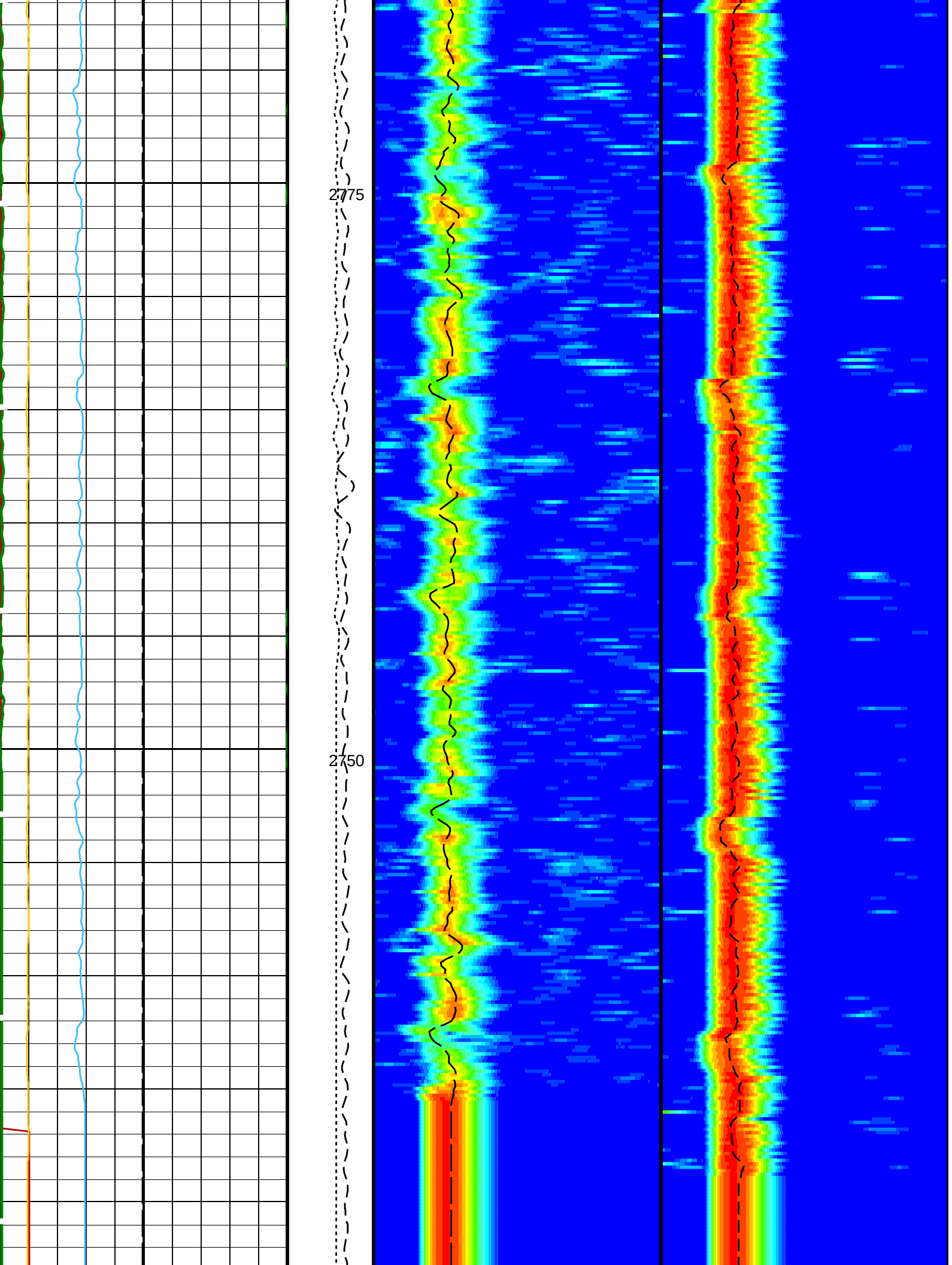

WCI2
WFG2
CDF
BS
3050
3025


3000
2975


2950
2925
2900


2875
2850


2825
2800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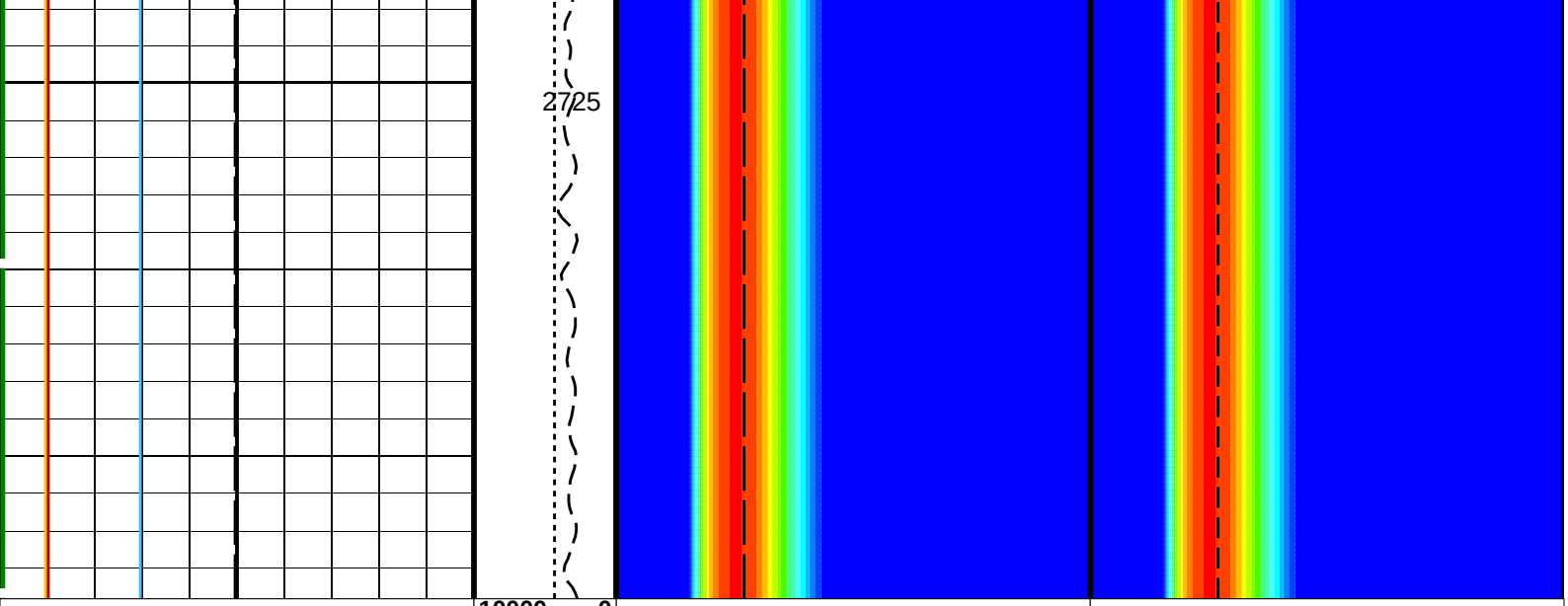
2750



0 (IN) 20 Bit Size (BS)	10000 0 (LBF) (TENS) Tension	40 (US/F) 1040 (DT2T) Delta−T Shear / TA − Upper Dipole	40 (US/F) 1040 (DT2R) Delta−T Shear / RA − Upper Dipole
0 (−−−−) 1000 SAM2 Waveform Gain (WFG2)	5000 0 (LBF) (CDF) Force Downhole Calibrated	40 (US/F) 1040 (SPT2) Tr.Array U.Dipole Slow Proj. CVDL Min Amplitude Max	40 (US/F) 1040 (SPR2) Rec.Array U.Dipole Slow Proj. CVDL Min Amplitude Max
0 (−−−−) 10 Upper Dipole (WCI2) Waveform Data Copy Indicator 2 −			
0 (−−−−) 10 (CHR2) Peak Coherence / RA − Upper Dipole			
−2 (−−−−) 8 (CHT2) Peak Coherence / TA − Upper Dipole			
0 (GAPI) 100 (HSGR) HNGS Spectroscopy Gamma Ray			
Time Mark Every 60 S			

Downlog 2

PIP SUMMARY

	System and Miscellaneous			
GCSE	Generalized Caliper Selection		BS	
BHS	Borehole Status		OPEN	
	EDTC−B: Enhanced DTS Cartridge			
WFM2	Waveform Mode 2		W1	
UTXG	Upper Dipole Transmitter Geometry		162	IN
TWSX	Transmitter Waveform Select X		0	
TWI2	STC Integration Time Window − Upper Dipole		1600	US
TWD2	STC Time Width − Upper Dipole		2000	US
TUL2	STC Time Upper Limit − Upper Dipole		18440	US
TST2	STC Time Step − Upper Dipole		200	US
TLL2	STC Time Lower Limit − Upper Dipole		600	US
TBF2	STC Time for Baseline Fill − Upper Dipole		0	US
SWD2	STC Slowness Width − Upper Dipole		40	US/F
SUL2	STC Slowness Upper Limit − Upper Dipole		1040	US/F
SSW2	STC Source Waveform − Upper Dipole		WF_SAM2	
SST2	STC Slowness Step − Upper Dipole		4	US/F
SLL2	STC Slowness Lower Limit − Upper Dipole		40	US/F
SFM2	STC Filter − Upper Dipole		B1−2K	
SFC2	STC Formation Character − Upper Dipole		SELECTABLE	
SBW2	STC Search Bandwidth − Upper Dipole		8000	US
SBO2	STC Search Band Offset − Upper Dipole		3000	US
SAS2	STC Sonic Array Status − Upper Dipole		255 OFF	
SAMX	DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert			

SAMX	DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert		
SAM2	DSST Sonic Acquisition Mode 2 − Upper Dipole Mode	ODD	
RX8G	Receiver 8 Geometry	336	IN
RX7G	Receiver 7 Geometry	330	IN
RX6G	Receiver 6 Geometry	324	IN
RX5G	Receiver 5 Geometry	318	IN
RX4G	Receiver 4 Geometry	312	IN
RX3G	Receiver 3 Geometry	306	IN
RX2G	Receiver 2 Geometry	300	IN
RX1G	Receiver 1 Geometry	294	IN
NWIX	Number Waveform Items X	0	
NWI2	Number Waveform Items 2	8	
GCSE	Generalized Caliper Selection	BS	
DWCX	Digitizer Word Count X	512	
DWC2	Digitizer Word Count 2	512	
DTCS	Compressional Delta−T Source for DTCO Channel	PS_COMP	
DSIX	Digitizer Sample Interval X	40	US
DSI2	Digitizer Sample Interval 2	40	US
DSHU	Label Slowness Upper Limit − Dipole Shear	1040	US/F
DSHL	Label Slowness Lower Limit − Dipole Shear	40	US/F
DLCS	Label Compressional Source − Dipole Shear	USE	
DDEX	Digitizing Delay X	0	US
DDE2	Digitizing Delay 2	0	US
BHS	Borehole Status	OPEN	
DSST−B: Dipole Shear Imager − B			
GCSE	Generalized Caliper Selection	BS	
BHS	Borehole Status	OPEN	
HRLT−B: High Resolution Laterolog Array − B			
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.04802	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976891	
TPOS	Tool Position	CENT	
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HABK	HNGS Borehole Potassium Running Average	−0.002819	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	
HNGS−BA: Hostile Natural Gamma Ray Sonde			

DLIS Name	Description	Value

Parameters

Format: DSST_UPPER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 14:33

EDTC−B	SKK−5169−EDTCB		
HLDS	19C0−187	LDSC−B	19C0−187
HRLT−B	19C0−187	DSST−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

OP System Version: 19C0−187

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33		
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33		

Output DLIS Files

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M

Output DLIS Files

EDTC−B	SKK−5169−EDTCB

HLDS	19C0−187	LDSC−B	19C0−187
HRLT−B	19C0−187	DSST−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

OP System Version: 19C0−187

Time Mark Every 60 S

PIP SUMMARY

0 (GAPI) 100
(HSGR)
HNGS Spectroscopy Gamma Ray

From HCGR to HSGR
Area1

−0.05 (−−−−) 0.05
HNGS Borehole Potassium (HBHK)

0 (GAPI) 100
HNGS Computed Gamma Ray (HCGR)

3000 0
(LBF)
(CDF)
Force
Downhole
Calibrated

−5 (PPM) 10
HNGS Uranium (HURA)

0 (IN) 20
HLDS Caliper (LCAL)

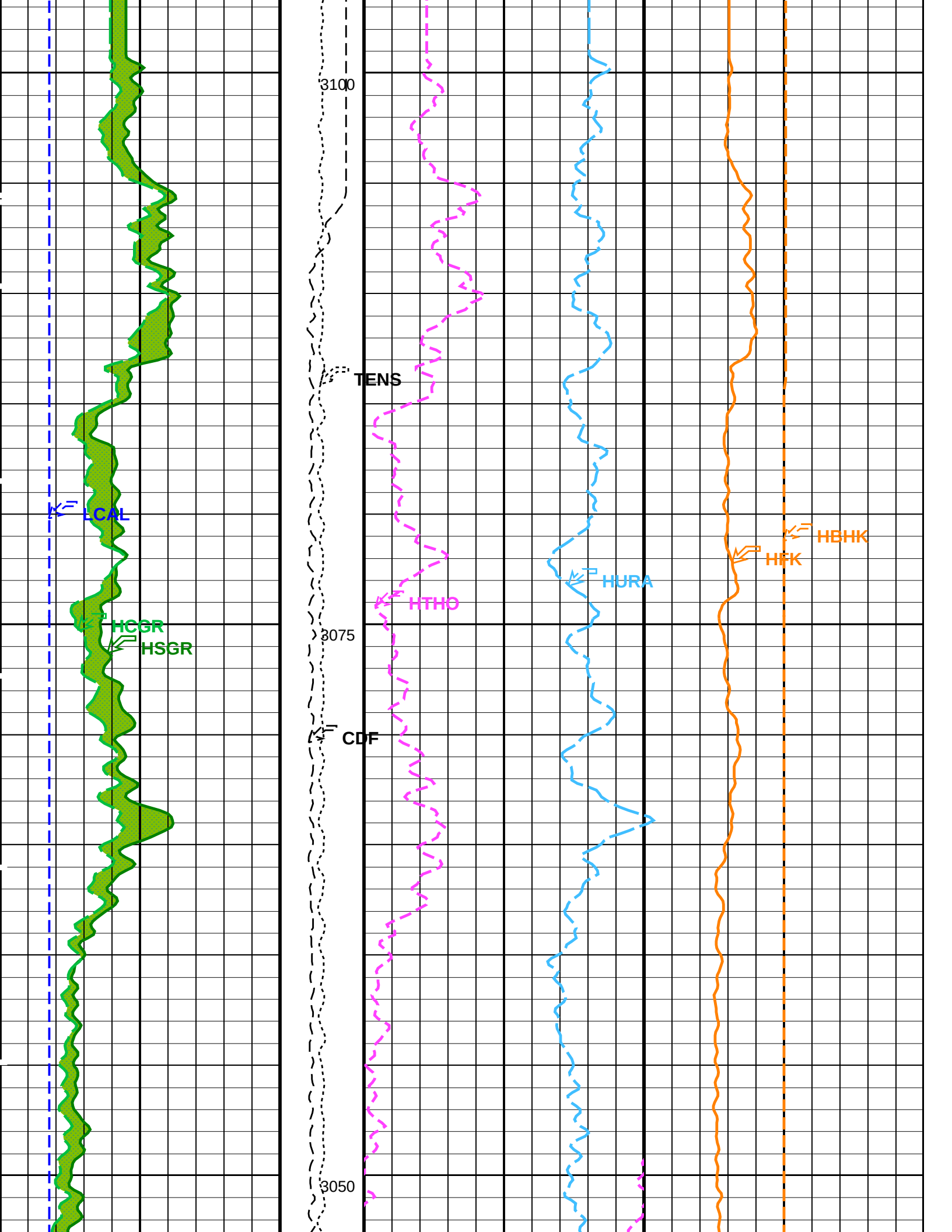
10000 0
(LBF)
(TENS)
Tension

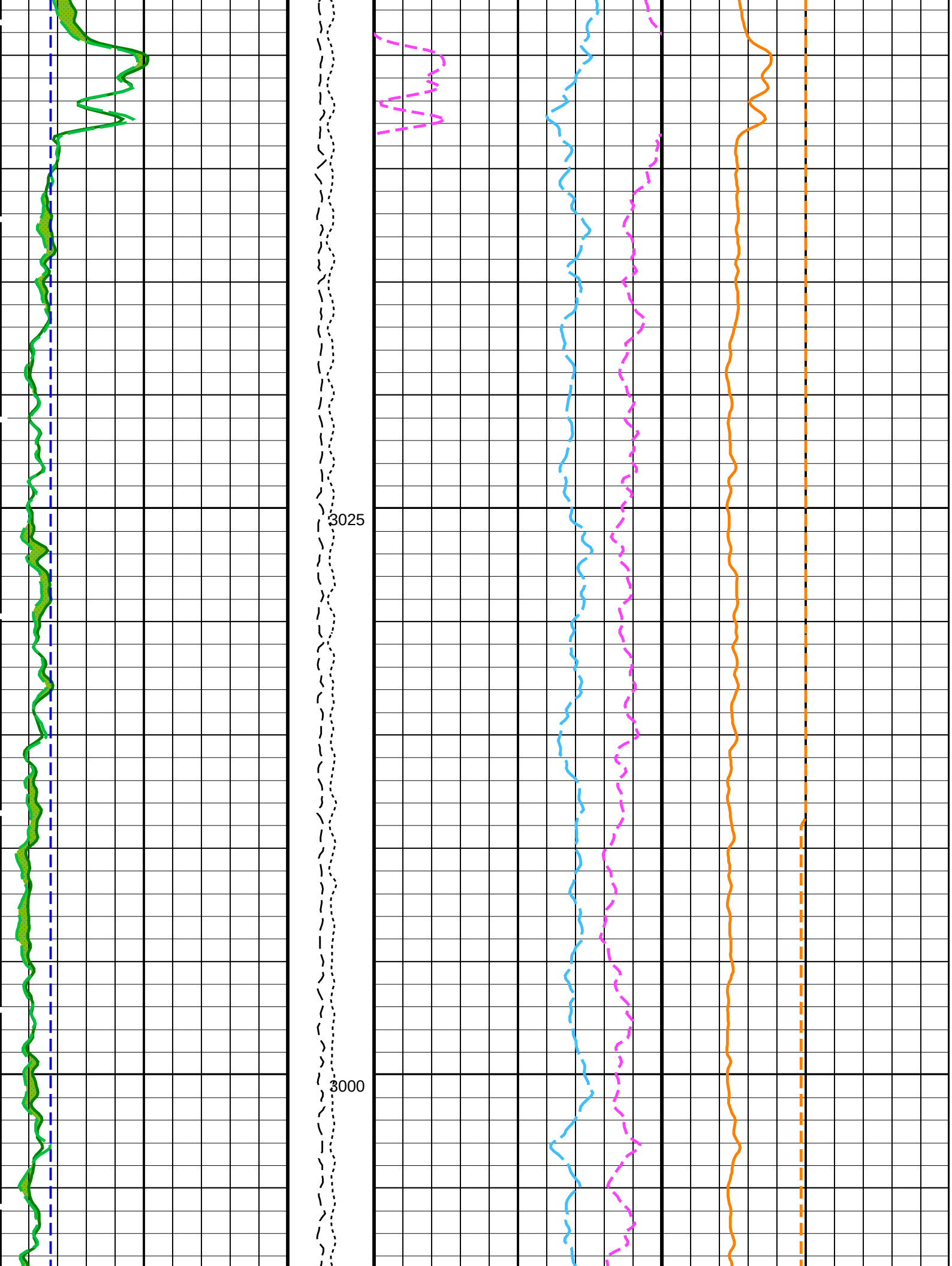
5 (PPM) 25
HNGS Thorium (HTHO)

−0.01 (−−−−) 0.04
HNGS Potassium (HFK)

Downlog 2

3125


3100
TENS
LCAL
HCGR
HSGR
3075
CDF
HTHO
HURA
HBHK
HFK
3050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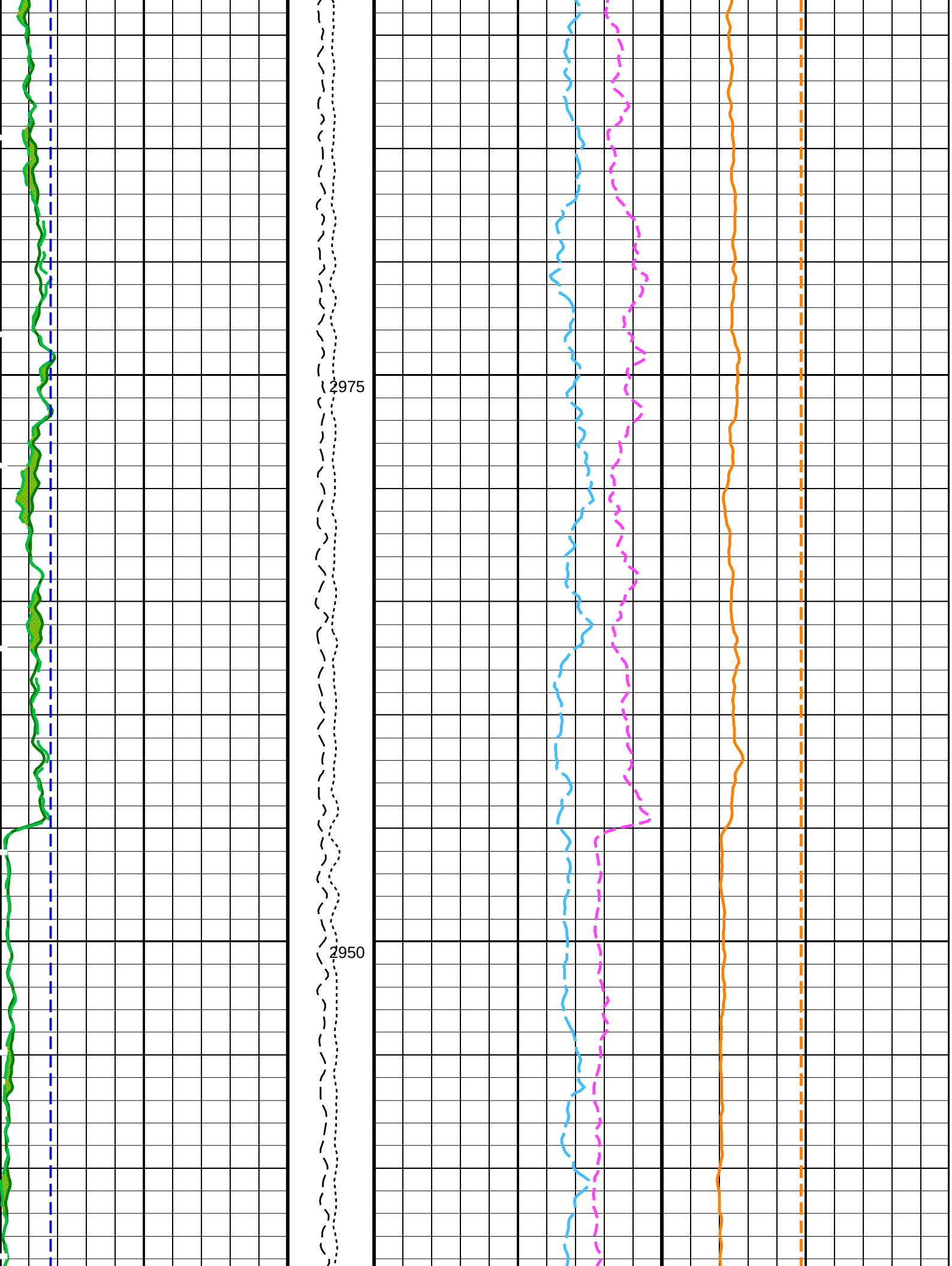
3000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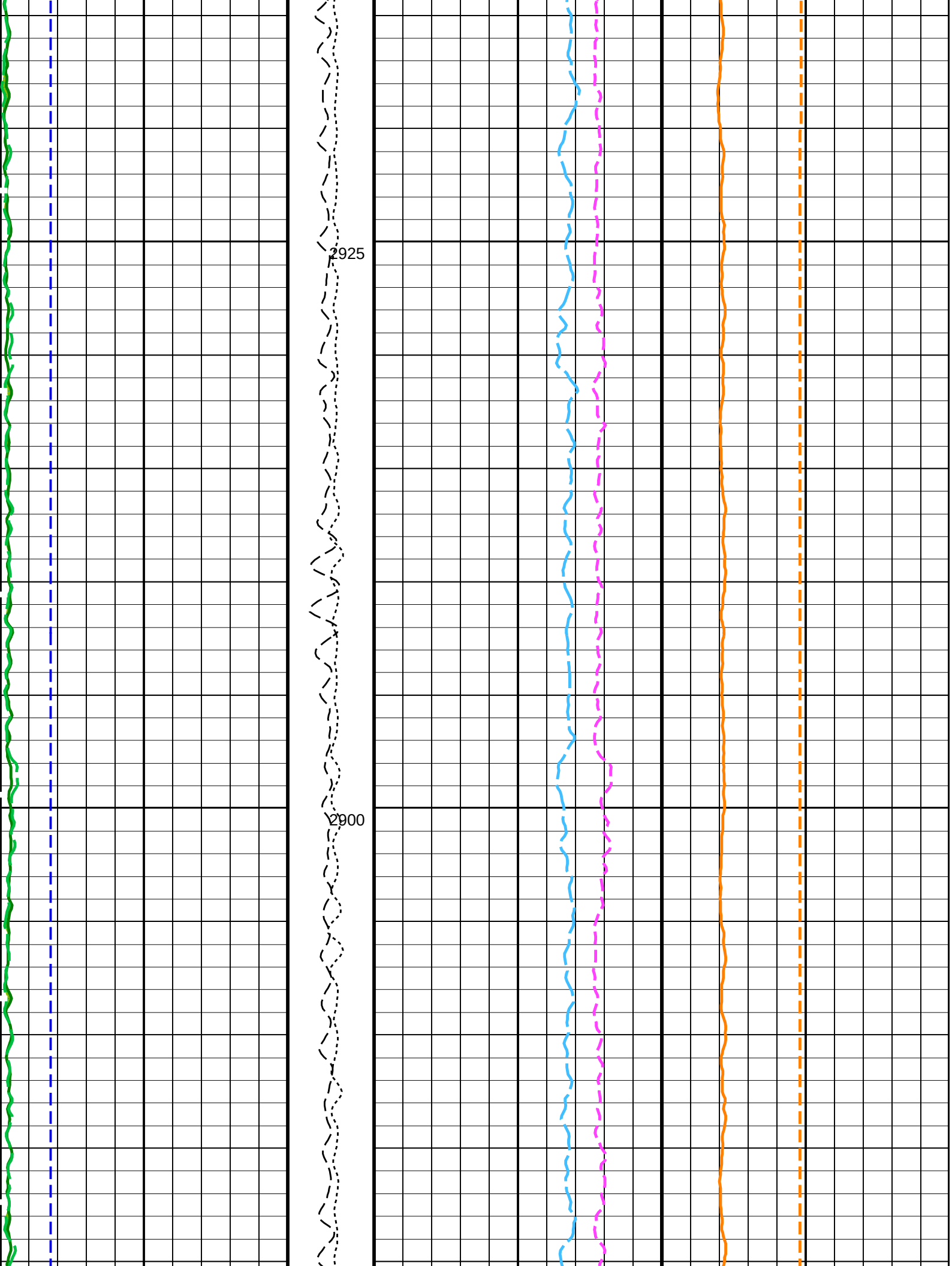
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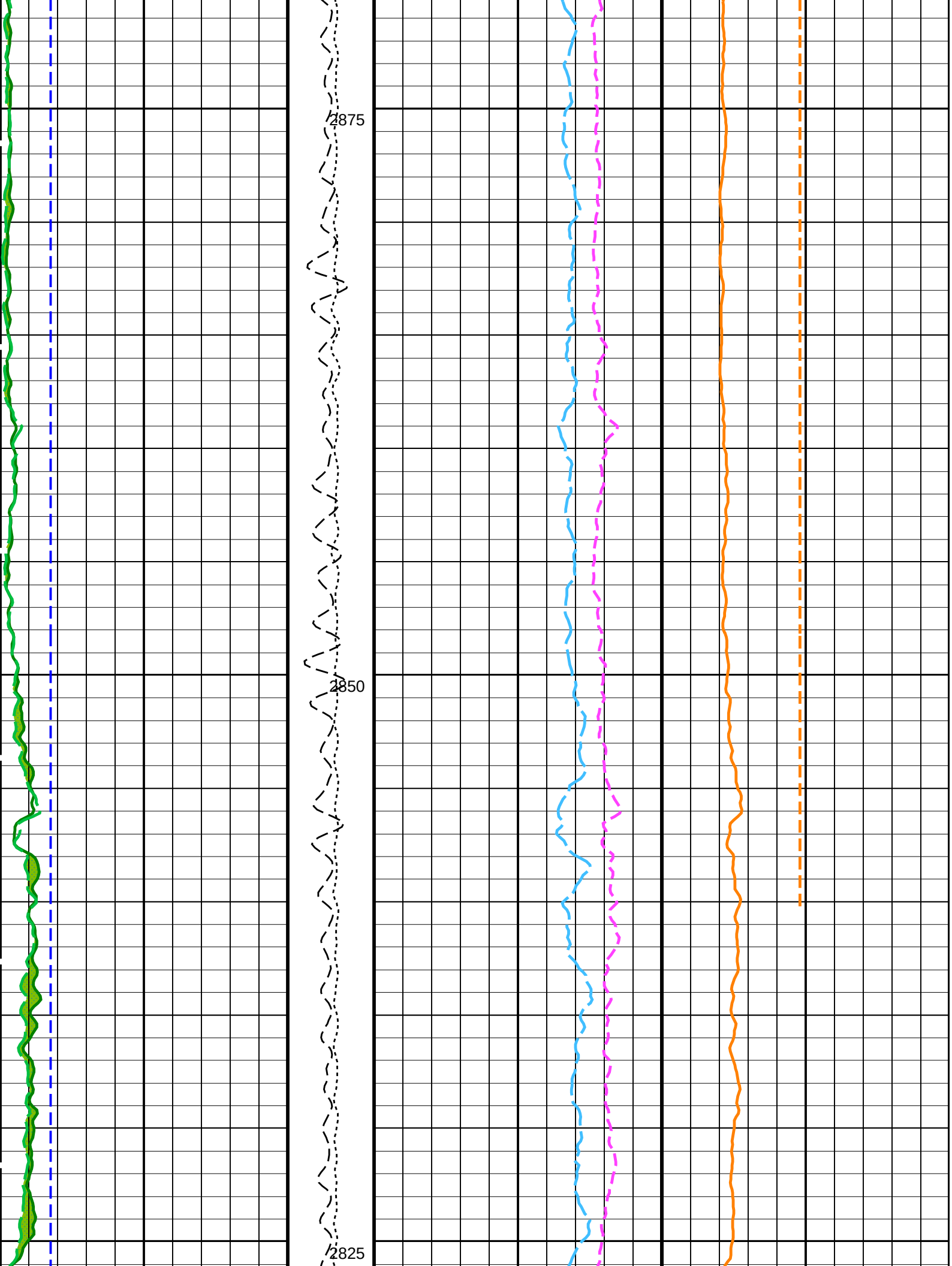
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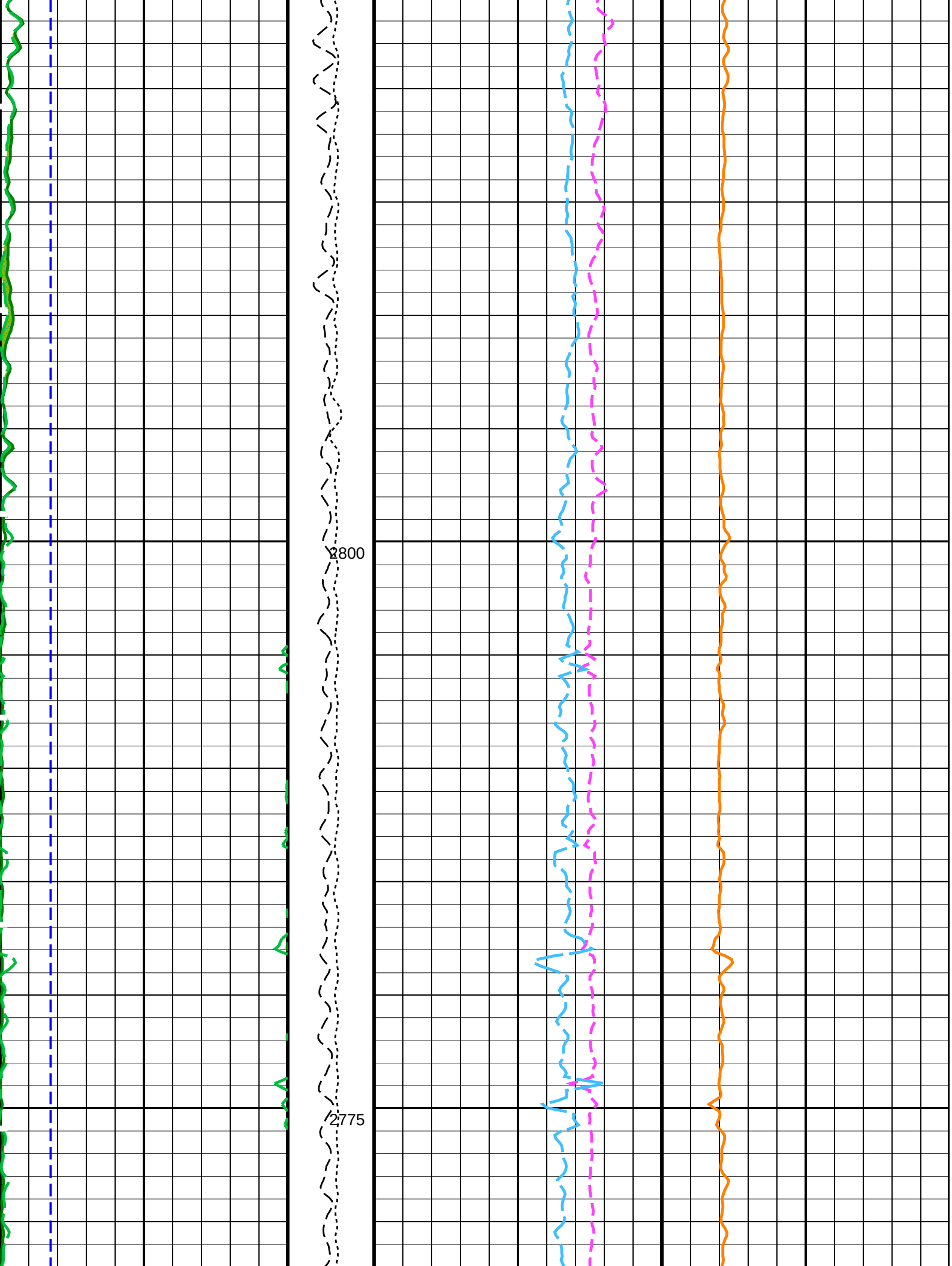
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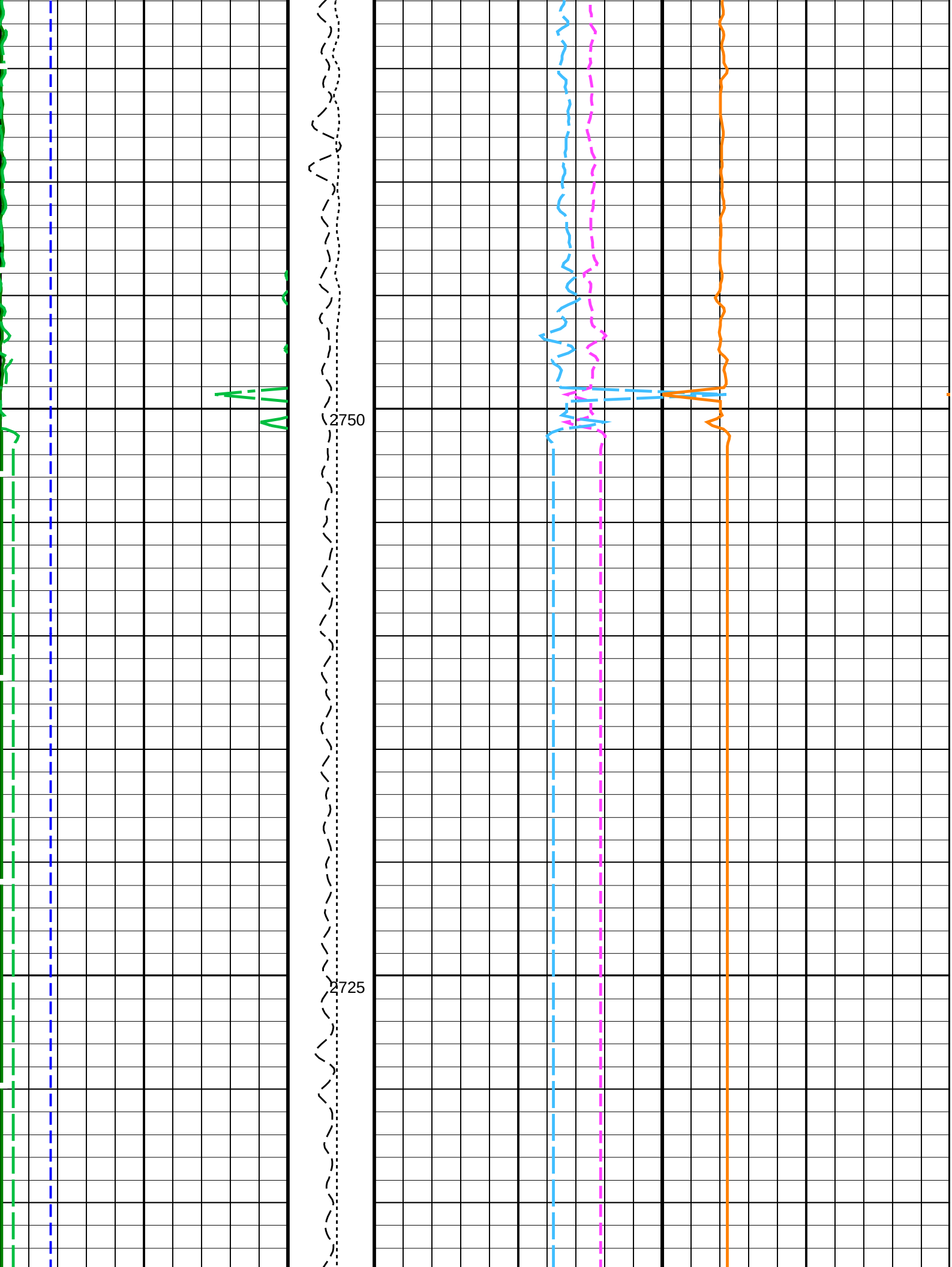
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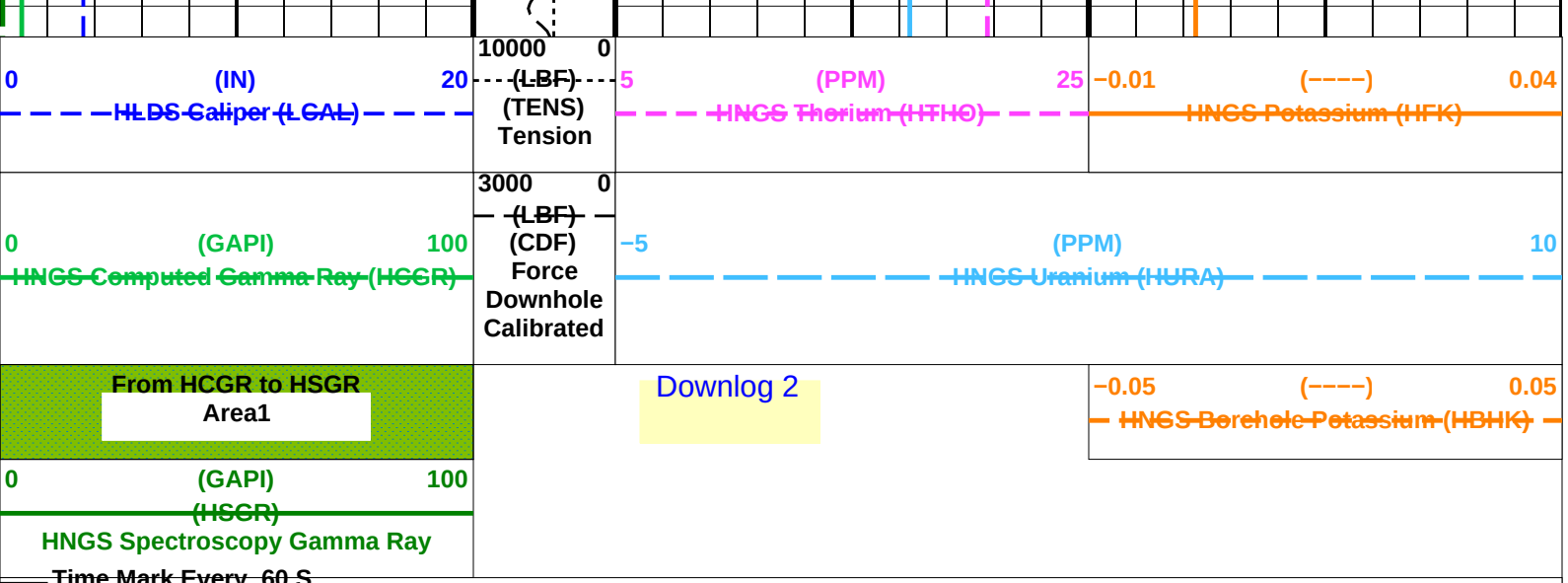
2725



PIP SUMMARY

	System and Miscellaneous			
GCSE		Generalized Caliper Selection	BS	
BHS		Borehole Status	OPEN	
	EDTC−B: Enhanced DTS Cartridge			
GCSE		Generalized Caliper Selection	BS	
BHS		Borehole Status	OPEN	
	DSST−B: Dipole Shear Imager − B			
GCSE		Generalized Caliper Selection	BS	
BHS		Borehole Status	OPEN	
	HRLT−B: High Resolution Laterolog Array − B			
VBA2		HNGS Detector 2 Variable Barite Factor Running Average	1.04802	
VBA1		HNGS Detector 1 Variable Barite Factor Running Average	0.976891	
TPOS		Tool Position	CENT	
SGRC		HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI		HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI		HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
HNPE		HNGS Processing Enable	YES	
HMWM		Mud Weighting Material	BARI	
HCRB		HNGS Apply Borehole Potassium Correction	NONE	
HALF		HNGS Alpha Filter Length	60	IN
HABK		HNGS Borehole Potassium Running Average	−0.002819	
H2P		HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P		HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GCSE		Generalized Caliper Selection	BS	
DBCC		HNGS Barite Constant Correction Flag	NONE	
CSW2		Outer Casing Weight	0	LB/F
CSW1		Inner Casing Weight	0	LB/F
CSD2		Outer Casing Outer Diameter	0	IN
CSD1		Inner Casing Outer Diameter	0	IN
BHS		Borehole Status	OPEN	
BHK		HNGS Borehole Potassium Correction Concentration	0	
BAR2		HNGS Detector 2 Barite Constant	1	
BAR1		HNGS Detector 1 Barite Constant	1	
	HNGS−BA: Hostile Natural Gamma Ray Sonde			

DLIS Name	Description	Value

Parameters

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 14:33

EDTC−B	SKK−5169−EDTCB		
HLDS	19C0−187	LDSC−B	19C0−187
HRLT−B	19C0−187	DSST−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

OP System Version: 19C0−187

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33

Output DLIS Files

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33	2711.2 M	3137.0 M

Output DLIS Files

EDTC−B	SKK−5169−EDTCB		
HLDS	19C0−187	LDSC−B	19C0−187
HRLT−B	19C0−187	DSST−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

OP System Version: 19C0−187

Time Mark Every 60 S

PIP SUMMARY

0.2 (OHMM) 20
HRLT True Resistivity (RT_HRLT)

0.2 (OHMM) 20
HRLT Resistivity 1 (RLA1)

0.2 (OHMM) 20
HRLT Resistivity 2 (RLA2)

Downlog 2

0.2 (OHMM) 20
HRLT Resistivity 3 (RLA3)

−0.25 (G/C3) 0.25
HLDS Bulk Density Correction (DRH)

0 (GAPI) 100
(HSGR)
HNGS Spectroscopy Gamma Ray

3000 0
(LBF)
(CDF)
Force Downhole Calibrated

0.2 (OHMM) 20
HRLT Resistivity 5 (RLA5)

0 (G/C3) 4
HLDS Bulk Density (RHOM)

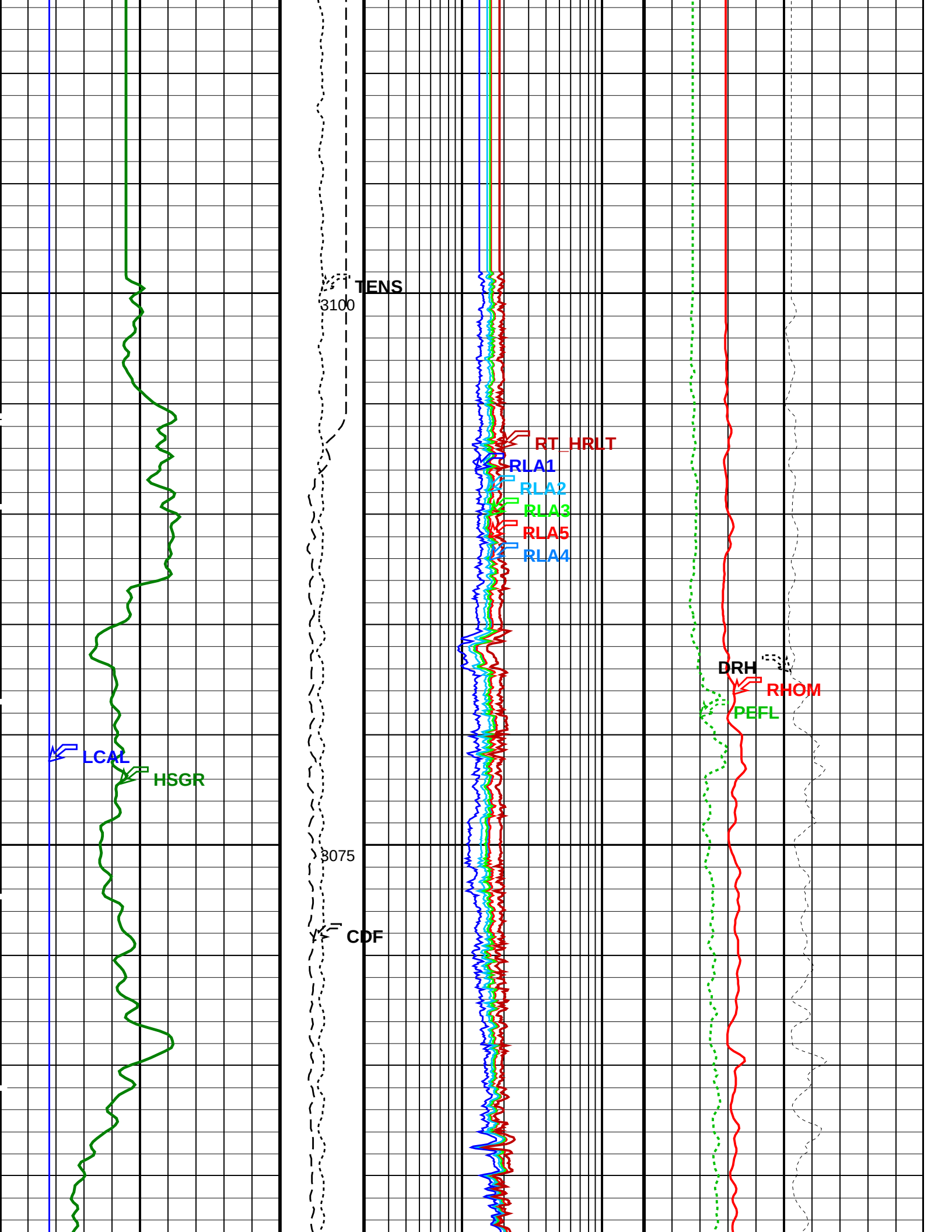
0 (IN) 20
HLDS Caliper (LCAL)

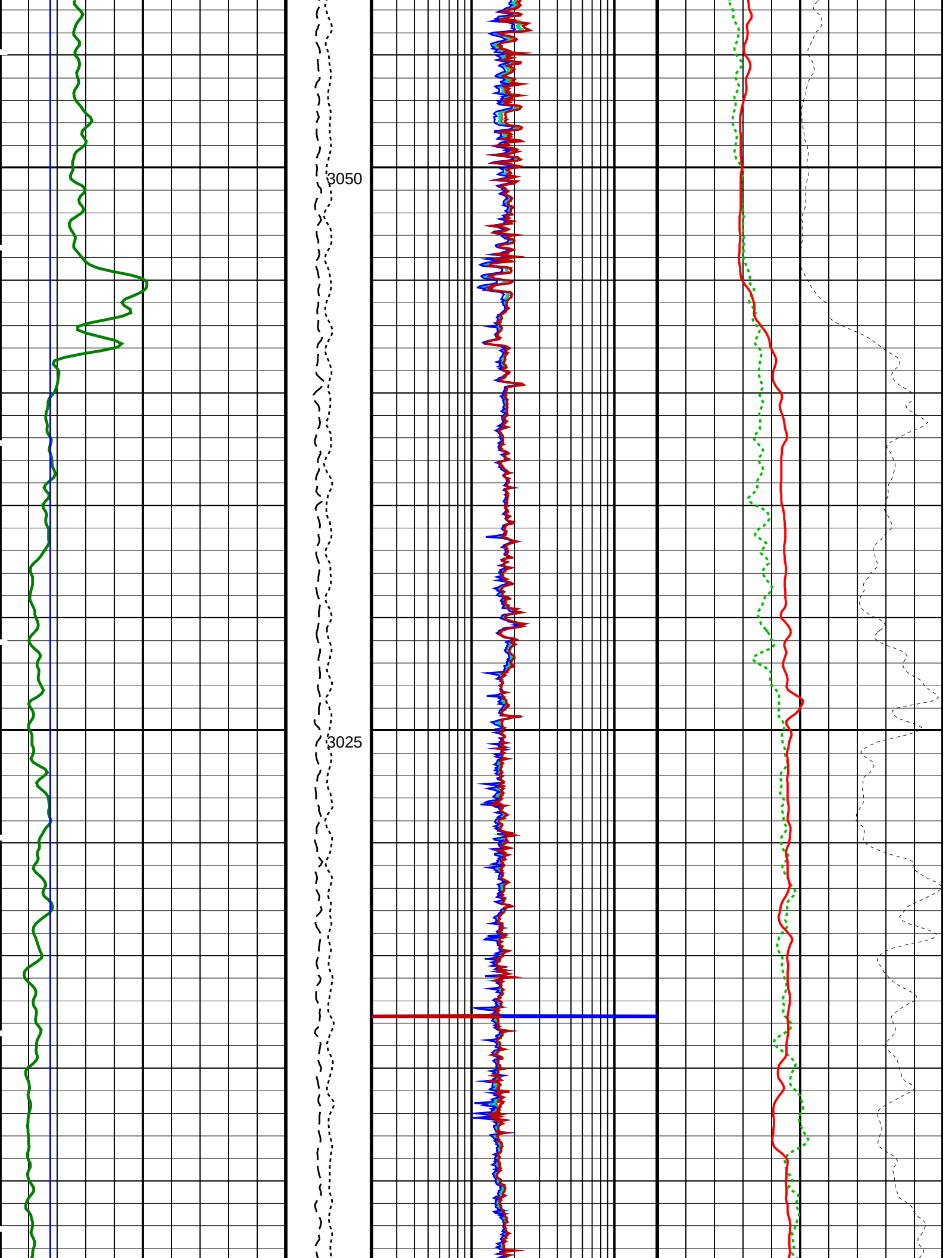
10000 0
(LBF)
(TENS)
Tension

0.2 (OHMM) 20
HRLT Resistivity 4 (RLA4)

0 (−−−−) 10
(PEFL)
HLDS Long Spaced Photoelectric Effect

3125


TENS
3100
RT_HRLT
RLA1
RLA2
RLA3
RLA5
RLA4
DRH
RHOM
PEFL
LCAL
HSGR
3075
CDF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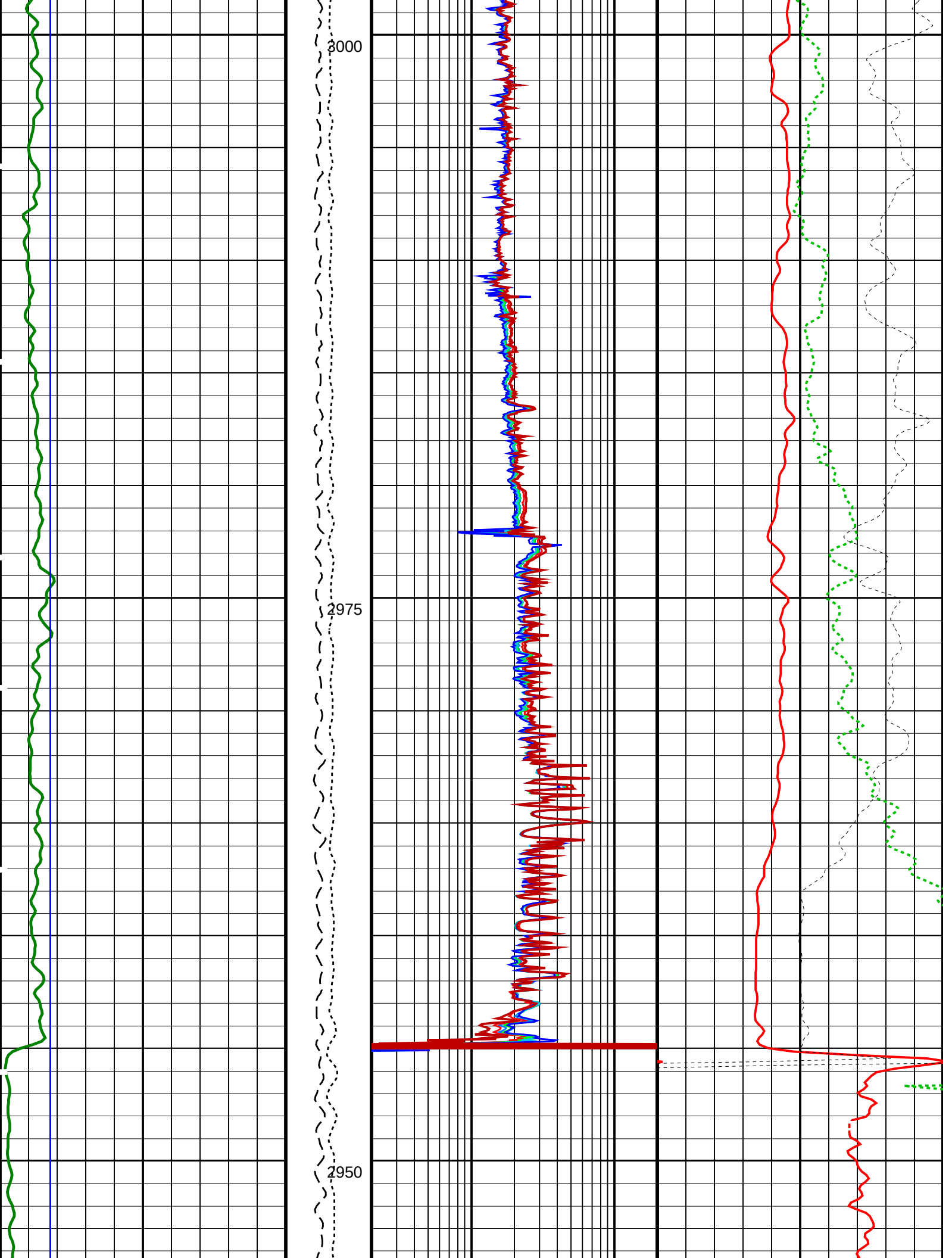
3025


3000
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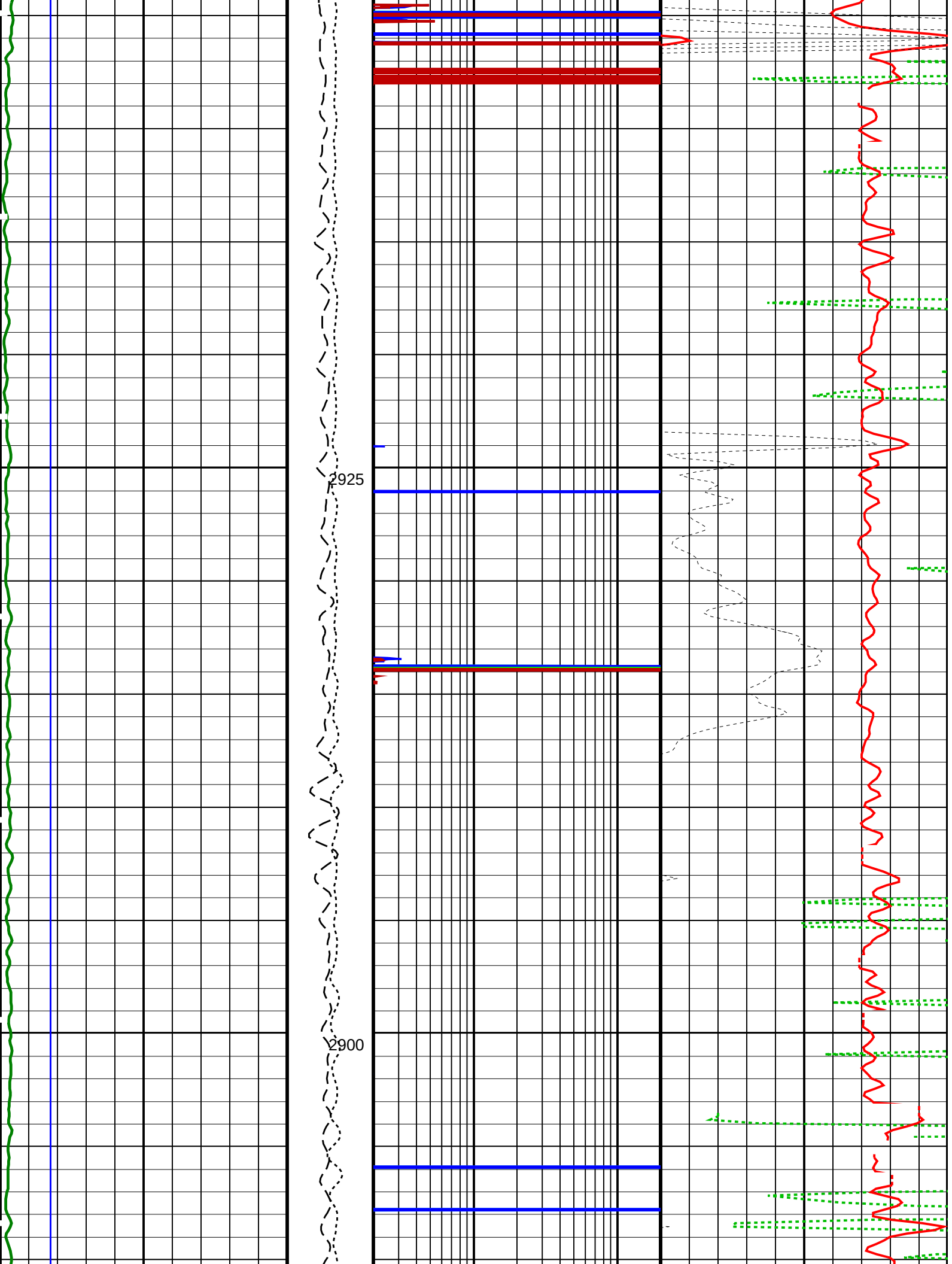
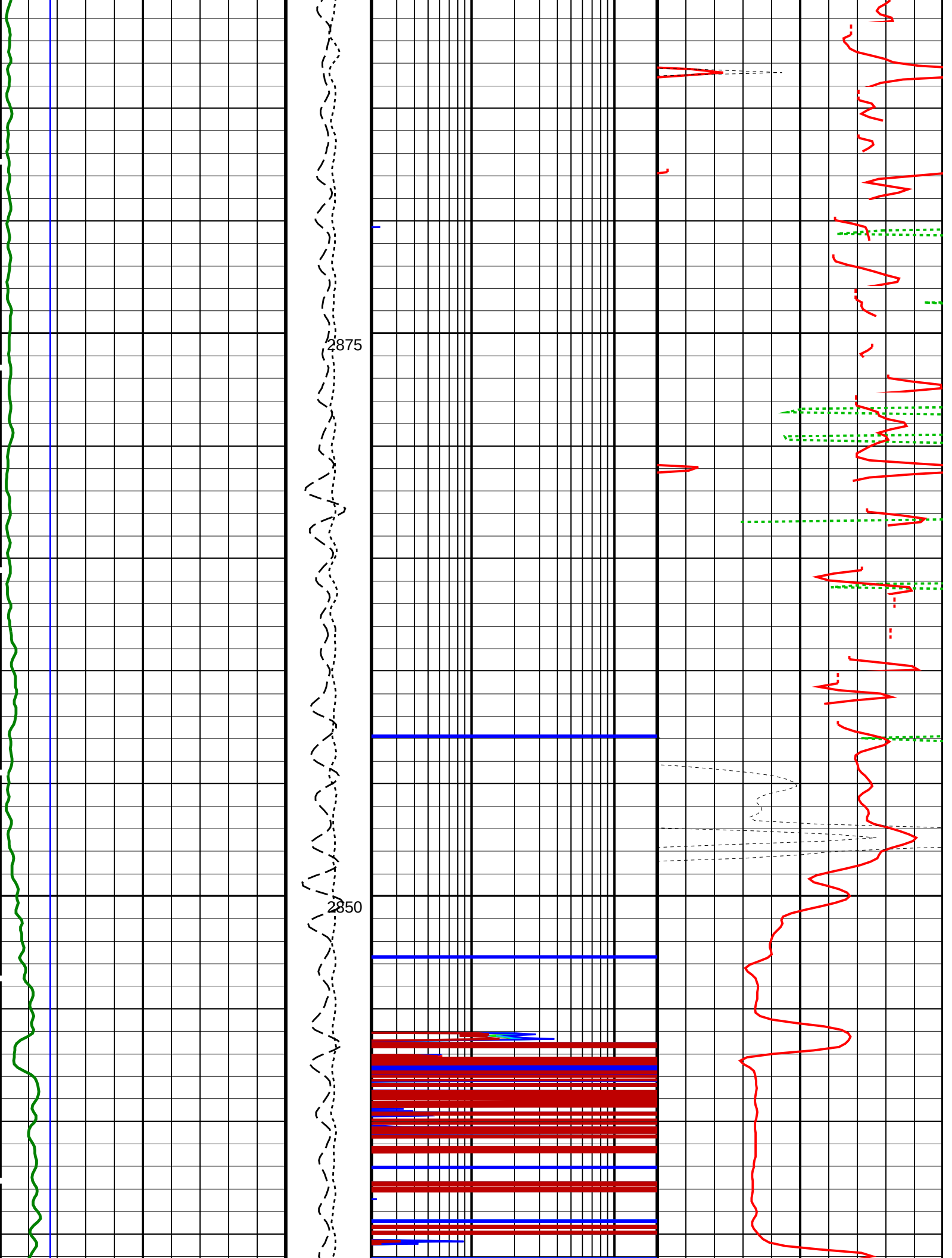

2925
2900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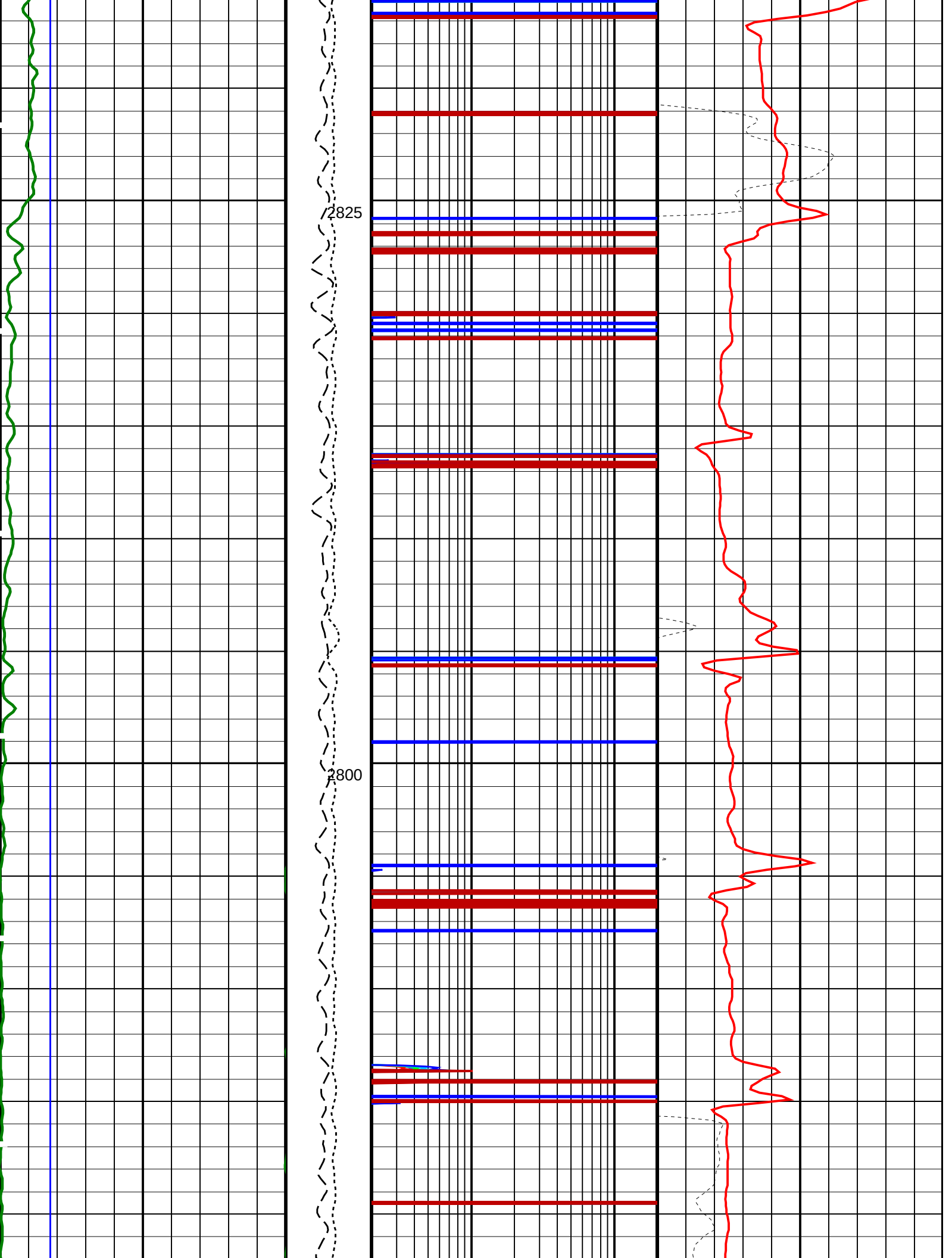
2850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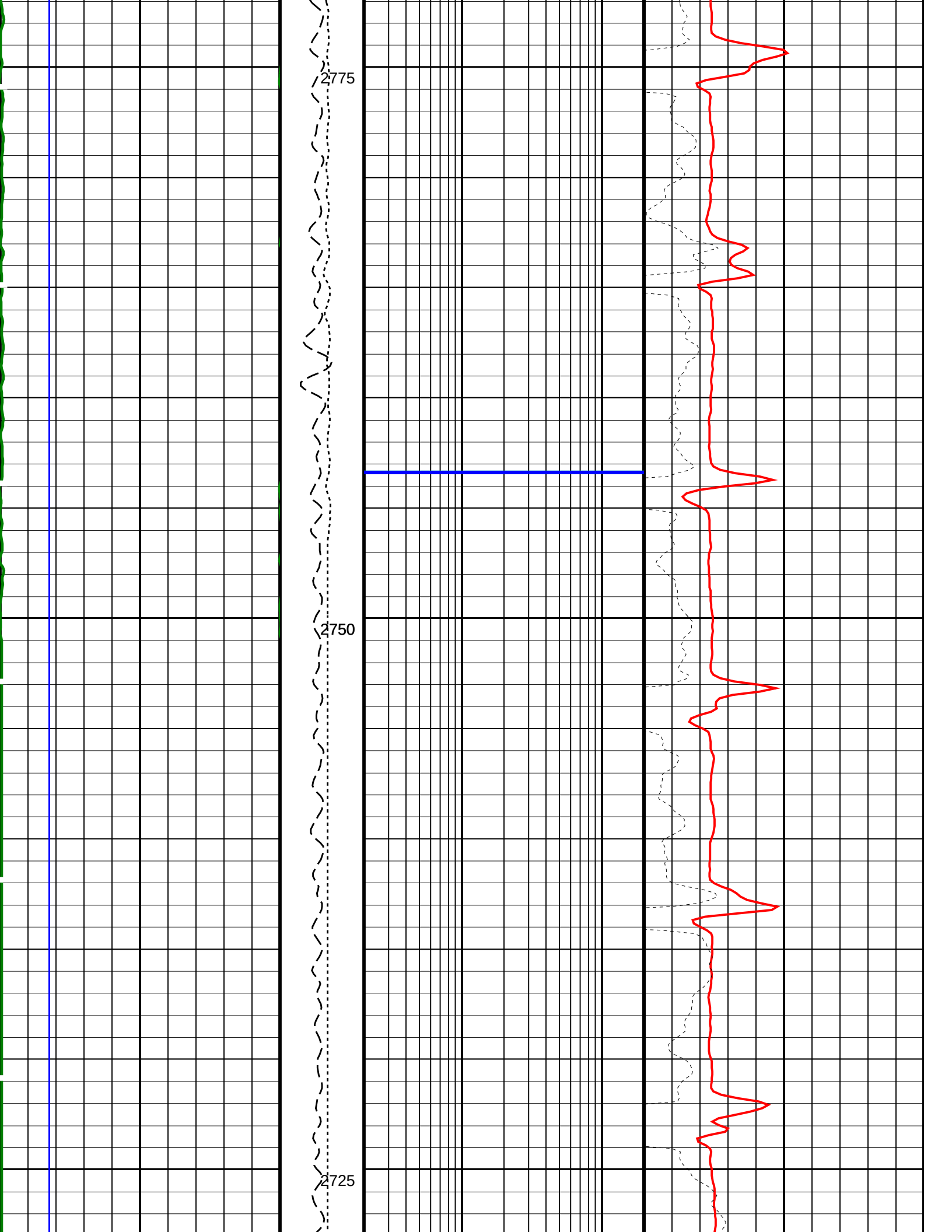
2800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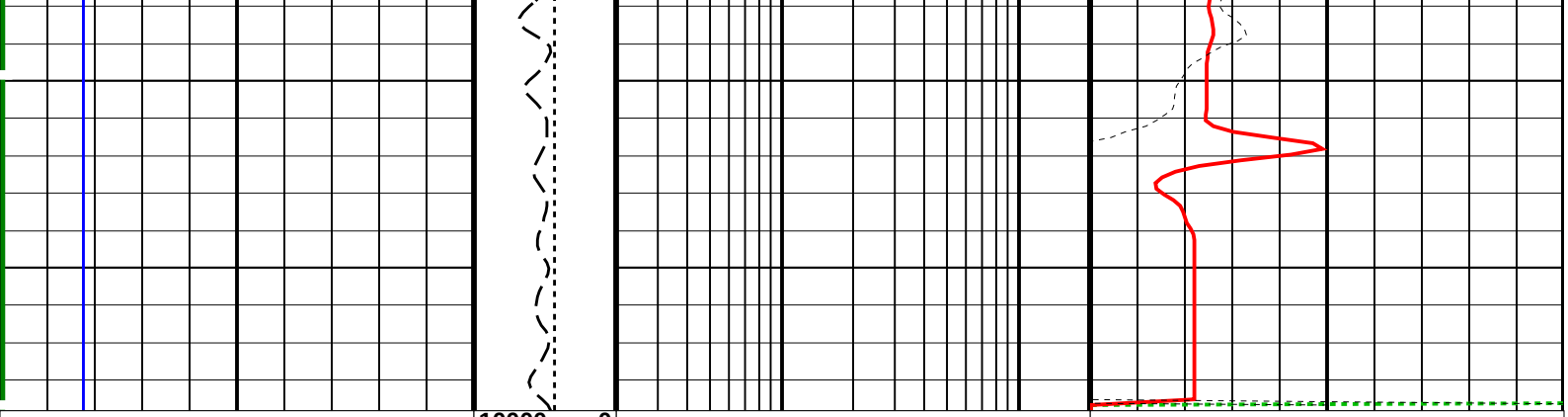
2750
2725



0 (IN) 20 HLDS Caliper (LCAL)	10000 0 (LBF) (TENS) Tension	0.2 (OHMM) 20 HRLT Resistivity 4 (RLA4)
0 (GAPI) 100 (HSGR) HNGS Spectroscopy Gamma Ray	3000 0 (LBF) (CDF) Force Downhole Calibrated	0.2 (OHMM) 20 HRLT Resistivity 5 (RLA5)
Downlog 2		0.2 (OHMM) 20 HRLT Resistivity 3 (RLA3)
		0.2 (OHMM) 20 HRLT Resistivity 2 (RLA2)
		0.2 (OHMM) 20 HRLT Resistivity 1 (RLA1)
		0.2 (OHMM) 20 HRLT True Resistivity (RT_HRLT)

0 (−−−−) 10 (PEFL) HLDS Long Spaced Photoelectric Effect	
0 (G/C3) 4 HLDS Bulk Density (RHOM)	
−0.25 (G/C3) 0.25 HLDS Bulk Density Correction (DRH)	

Time Mark Every 60 S

PIP SUMMARY

TDL	Total Depth − Logger	3560.00	M
TDD	Total Depth − Driller	3092.70	M
TD	Total Depth	12409.8	FT
RW	Resistivity of Connate Water	1.0000	OHMM
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
PBVSADP	Use alternate depth channel for playback	NO	
MST	Mud Sample Temperature	23.00	DEGC
FLEV	Fluid Level	−50000.00	M
DFD	Drilling Fluid Density	1.26	G/C3
CWEI	Casing Weight	168.00	LB/F
CSIZ	Current Casing Size	5.500	IN
BSAL	Borehole Salinity	38000.00	PPM
BS	Bit Size	9.875	IN
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
System and Miscellaneous			
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
SOCO	Standoff Correction Option	NO	
SOCN	Standoff Distance	0.5	IN
SHT	Surface Hole Temperature	55	DEGF
SDAT	Standoff Data Source	SOCN	
PTCO	Pressure/Temperature Correction Option	NO	
MWCO	Mud Weight Correction Option	YES	
MCOR	Mud Correction	BARI	
MCCO	Mud Cake Correction Option	NO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
ISSBAR	Barite Mud Switch	BARITE	
HSCO	Hole Size Correction Option	YES	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.01	DF/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
FSCO	Formation Salinity Correction Option	NO	
FSAL	Formation Salinity	−50000	PPM

DPPM	Density Porosity Processing Mode	HIRS	
CCCO	Casing & Cement Thickness Correction Option	NO	
BSCO	Borehole Salinity Correction Option	NO	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
BHFL	Borehole Fluid Type	WATER	
EDTC−B: Enhanced DTS Cartridge			
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
MDEN	Matrix Density	2.6	G/C3
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LATC	HLDS Activation Correction	OFF	
FD	Fluid Density	1	G/C3
DPPM	Density Porosity Processing Mode	HIRS	
DHC	Density Hole Correction	BS	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
HLDS: Hostile Litho−Density Sonde			
XMTX	Transmitter Select X	DUP	
XMT5	Transmitter Select 5	MONO	
XMT4	Transmitter Select 4	MONO	
XMT3	Transmitter Select 3	MONO	
XMT2	Transmitter Select 2	DUP	
XMT1	Transmitter Select 1	DLO	
WFULSPX	SAMX Waveform Upper Limit for Spectrum	20000	US
WFULSP4	SAM4 Waveform Upper Limit for Spectrum	5000	US
WFULSP3	SAM3 Waveform Upper Limit for Spectrum	20000	US
WFULSP2	SAM2 Waveform Upper Limit for Spectrum	20000	US
WFULSP1	SAM1 Waveform Upper Limit for Spectrum	20000	US
WFMX	Waveform Mode X	W1	
WFM5	Waveform Mode 5	W1	
WFM4	Waveform Mode 4	W1	
WFM3	Waveform Mode 3	W1	
WFM2	Waveform Mode 2	W1	
WFM1	Waveform Mode 1	W1	
WFLLSPX	SAMX Waveform Lower Limit for Spectrum	0	US
WFLLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFDTSPX	SAMX Waveform Delta for Spectrum	0	US/F
WFDTSP4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSP3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTSP2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTSP1	SAM1 Waveform Delta for Spectrum	0	US/F
UTXG	Upper Dipole Transmitter Geometry	162	IN
TWSX	Transmitter Waveform Select X	0	
TWS5	Transmitter Waveform Select 5	6	
TWS4	Transmitter Waveform Select 4	6	
TWS3	Transmitter Waveform Select 3	4	
TWS2	Transmitter Waveform Select 2	0	
TWS1	Transmitter Waveform Select 1	2	
TWRX	Transmitter Waveform Sample Rate X	5	US
TWR5	Transmitter Waveform Sample Rate 5	5	US
TWR4	Transmitter Waveform Sample Rate 4	5	US
TWR3	Transmitter Waveform Sample Rate 3	5	US
TWR2	Transmitter Waveform Sample Rate 2	5	US
TWR1	Transmitter Waveform Sample Rate 1	20	US
TWI4	STC Integration Time Window − Monopole P&S	500	US
TWI3	STC Integration Time Window − Monopole Stoneley	2400	US
TWI2	STC Integration Time Window − Upper Dipole	1600	US
TWI1	STC Integration Time Window − Lower Dipole	1600	US
TWD4	STC Time Width − Monopole P&S	1000	US
TWD3	STC Time Width − Monopole Stoneley	2000	US
TWD2	STC Time Width − Upper Dipole	2000	US
TWD1	STC Time Width − Lower Dipole	2000	US
TWAX	Transmitter Waveform Amplitude X	179	
TWA5	Transmitter Waveform Amplitude 5	150	
TWA4	Transmitter Waveform Amplitude 4	150	
TWA3	Transmitter Waveform Amplitude 3	166	
TWA2	Transmitter Waveform Amplitude 2	179	
TWA1	Transmitter Waveform Amplitude 1	179	
TUL4	STC Time Upper Limit − Monopole P&S	3660	US
TUL3	STC Time Upper Limit − Monopole Stoneley	12000	US
TUL2	STC Time Upper Limit − Upper Dipole	18440	US
TUL1	STC Time Upper Limit − Lower Dipole	18960	US

TUL1	STC Time Upper Limit − Lower Dipole	18960	US
TTDB	Tool String Top to DSST Bottom	1225.31	IN
TST4	STC Time Step − Monopole P&S	50	US
TST3	STC Time Step − Monopole Stoneley	200	US
TST2	STC Time Step − Upper Dipole	200	US
TST1	STC Time Step − Lower Dipole	200	US
TLL4	STC Time Lower Limit − Monopole P&S	150	US
TLL3	STC Time Lower Limit − Monopole Stoneley	600	US
TLL2	STC Time Lower Limit − Upper Dipole	600	US
TLL1	STC Time Lower Limit − Lower Dipole	600	US
TBF4	STC Time for Baseline Fill − Monopole P&S	300	US
TBF3	STC Time for Baseline Fill − Monopole Stoneley	0	US
TBF2	STC Time for Baseline Fill − Upper Dipole	0	US
TBF1	STC Time for Baseline Fill − Lower Dipole	0	US
TBDB	Tool String Bottom to DSST Bottom	561.55	IN
SWD4	STC Slowness Width − Monopole P&S	10	US/F
SWD3	STC Slowness Width − Monopole Stoneley	40	US/F
SWD2	STC Slowness Width − Upper Dipole	40	US/F
SWD1	STC Slowness Width − Lower Dipole	40	US/F
SUL4	STC Slowness Upper Limit − Monopole P&S	240	US/F
SUL3	STC Slowness Upper Limit − Monopole Stoneley	780	US/F
SUL2	STC Slowness Upper Limit − Upper Dipole	1040	US/F
SUL1	STC Slowness Upper Limit − Lower Dipole	1040	US/F
STUL	Label Slowness Upper Limit − Monopole Stoneley	780	US/F
STLL	Label Slowness Lower Limit − Monopole Stoneley	180	US/F
SSW4	STC Source Waveform − Monopole P&S	WF_SAM4	
SSW3	STC Source Waveform − Monopole Stoneley	WF_SAM3	
SSW2	STC Source Waveform − Upper Dipole	WF_SAM2	
SSW1	STC Source Waveform − Lower Dipole	WF_SAM1	
SST4	STC Slowness Step − Monopole P&S	2	US/F
SST3	STC Slowness Step − Monopole Stoneley	4	US/F
SST2	STC Slowness Step − Upper Dipole	4	US/F
SST1	STC Slowness Step − Lower Dipole	4	US/F
SPSO	Sonic Porosity Source	DTCO	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SLL4	STC Slowness Lower Limit − Monopole P&S	40	US/F
SLL3	STC Slowness Lower Limit − Monopole Stoneley	180	US/F
SLL2	STC Slowness Lower Limit − Upper Dipole	40	US/F
SLL1	STC Slowness Lower Limit − Lower Dipole	40	US/F
SHUL	Label Slowness Upper Limit − Monopole P&S Shear	240	US/F
SHT	Surface Hole Temperature	55	DEGF
SHLL	Label Slowness Lower Limit − Monopole P&S Shear	235	US/F
SFM4	STC Filter − Monopole P&S	B3−20K	
SFM3	STC Filter − Monopole Stoneley	B.5−1.5K	
SFM2	STC Filter − Upper Dipole	B1−2K	
SFM1	STC Filter − Lower Dipole	B.3−1.5K	
SFC4	STC Formation Character − Monopole P&S	SELECTABLE	
SFC3	STC Formation Character − Monopole Stoneley	SELECTABLE	
SFC2	STC Formation Character − Upper Dipole	SELECTABLE	
SFC1	STC Formation Character − Lower Dipole	SELECTABLE	
SBW4	STC Search Bandwidth − Monopole P&S	2000	US
SBW3	STC Search Bandwidth − Monopole Stoneley	8000	US
SBW2	STC Search Bandwidth − Upper Dipole	8000	US
SBW1	STC Search Bandwidth − Lower Dipole	8000	US
SBR4	STC Baseline Removal − Monopole P&S	ON	
SBO4	STC Search Band Offset − Monopole P&S	500	US
SBO3	STC Search Band Offset − Monopole Stoneley	3000	US
SBO2	STC Search Band Offset − Upper Dipole	3000	US
SBO1	STC Search Band Offset − Lower Dipole	3000	US
SAS5	Sonic Array Status − FMD	255	
SAS4	STC Sonic Array Status − Monopole P&S	255	
SAS3	STC Sonic Array Status − Monopole Stoneley	255	
SAS2	STC Sonic Array Status − Upper Dipole	255	
SAS1	STC Sonic Array Status − Lower Dipole	255	
		OFF	
SAMX	DSST Sonic Acquisition Mode X − Both Dipoles or Monopole Mode for Expert		
SAM5	DSST Sonic Acquisition Mode 5 − Monopole Mode for FMD	OFF	
SAM4	DSST Sonic Acquisition Mode 4 − Monopole Mode for P&S	EVEN	
SAM3	DSST Sonic Acquisition Mode 3 − Monopole Mode for Stoneley	OFF	
SAM2	DSST Sonic Acquisition Mode 2 − Upper Dipole Mode	ODD	
SAM1	DSST Sonic Acquisition Mode 1 − Lower Dipole Mode	LFD_EVEN	
RX8G	Receiver 8 Geometry	336	IN
RX7G	Receiver 7 Geometry	330	IN
RX6G	Receiver 6 Geometry	324	IN
RX5G	Receiver 5 Geometry	318	IN
RX4G	Receiver 4 Geometry	312	IN
RX3G	Receiver 3 Geometry	306	IN
RX2G	Receiver 2 Geometry	300	IN
RX1G	Receiver 1 Geometry	294	IN
RSMX	Label Shear/Compressional Maximum Ratio − Monopole P&S	2.12	
RSMN	Label Shear/Compressional Minimum Ratio − Monopole P&S	1.4	
RATE	Firing Rate	R7	
NWSX	Number Waveforms Stacked X	1	
NWS5	Number Waveforms Stacked 5	1	
NWS4	Number Waveforms Stacked 4	1	

NWS3	Number Waveforms Stacked 3	1	
NWS2	Number Waveforms Stacked 2	1	
NWS1	Number Waveforms Stacked 1	1	
NWIX	Number Waveform Items X	0	
NWI5	Number Waveform Items 5	0	
NWI4	Number Waveform Items 4	8	
NWI3	Number Waveform Items 3	0	
NWI2	Number Waveform Items 2	8	
NWI1	Number Waveform Items 1	8	
NTIX	Number Threshold Items X	0	
NTI5	Number Threshold Items 5	0	
MUXX	Sum Difference Multiplexor Input X	RR	
MUX5	Sum Difference Multiplexor Input 5	RR	
MUX4	Sum Difference Multiplexor Input 4	RR	
MUX3	Sum Difference Multiplexor Input 3	RR	
MUX2	Sum Difference Multiplexor Input 2	RR	
MUX1	Sum Difference Multiplexor Input 1	RR	
MTXG	Monopole Transmitter Geometry	186	IN
MDS5	Multishot Delta−T Scatter − FMD	20	US
MCS	Mean Casing Slowness	57	US/F
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MAI5	Slowness Averaging Interval − FMD	42	IN
LTXG	Lower Dipole Transmitter Geometry	156	IN
LPFX	Low Pass Filter X	F5K	
LPF5	Low Pass Filter 5	F30K	
LPF4	Low Pass Filter 4	F30K	
LPF3	Low Pass Filter 3	F5K	
LPF2	Low Pass Filter 2	F5K	
LPF1	Low Pass Filter 1	F5K	
LFC	Label Formation Character − Monopole P&S	DYNAMIC	
ITTS	Integrated Transit Time Source	DTCO	
ISSBAR	Barite Mud Switch	BARITE	
HPFX	High Pass Filter X	F80	
HPF5	High Pass Filter 5	F8K	
HPF4	High Pass Filter 4	F8K	
HPF3	High Pass Filter 3	F80	
HPF2	High Pass Filter 2	F80	
HPF1	High Pass Filter 1	F80	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GINX	Gain Interval X	15360	US
GIN5	Gain Interval 5	1600	US
GIN4	Gain Interval 4	2560	US
GIN3	Gain Interval 3	15360	US
GIN2	Gain Interval 2	15360	US
GIN1	Gain Interval 1	15360	US
GGRD	Geothermal Gradient	0.01	DF/F
GDTX	Gain Delta−T X	800	US/F
GDT5	Gain Delta−T 5	160	US/F
GDT4	Gain Delta−T 4	160	US/F
GDT3	Gain Delta−T 3	800	US/F
GDT2	Gain Delta−T 2	800	US/F
GDT1	Gain Delta−T 1	800	US/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
GAIX	Manual Gain X	10	
GAI5	Manual Gain 5	16	
GAI4	Manual Gain 4	16	
GAI3	Manual Gain 3	6	
GAI2	Manual Gain 2	10	
GAI1	Manual Gain 1	10	
FTDX	First Motion Threshold Direction X	UP	
FTD5	First Motion Threshold Direction 5	UP	
FPM	Processing Mode − FMD	NONE	
FNCX	First Motion Noise Counter Input X	ALO	
FNC5	First Motion Noise Counter Input 5	ALO	
FMUL	Slowness Upper Limit − FMD	180	US/F
FMTX	First Motion Threshold X	NONE	
FMT5	First Motion Threshold 5	UP	
FMRC	Restart Control − FMD	CONTINUE	
FMLL	Slowness Lower Limit − FMD	40	US/F
FMGX	First Motion Minimum Gate X	500	US
FMG5	First Motion Minimum Gate 5	500	US
FILG	Label Fill Gap Control − Monopole P&S	COMP_SHEAR	
FGMX	First Motion Gate Moveout X	40	US/F
FGM5	First Motion Gate Moveout 5	40	US/F
FDEX	Firing Delay X	0	
FDE5	Firing Delay 5	0	
FDE4	Firing Delay 4	0	
FDE3	Firing Delay 3	0	
FDE2	Firing Delay 2	0	
FDE1	Firing Delay 1	0	
DWCX	Digitizer Word Count X	512	
DWC5	Digitizer Word Count 5	512	
DWC4	Digitizer Word Count 4	512	

DWC4	Digitizer Word Count 4	512	
DWC3	Digitizer Word Count 3	512	
DWC2	Digitizer Word Count 2	512	
DWC1	Digitizer Word Count 1	512	
DTSS	Shear Delta−T Source for DTSM Channel	LOWER_DIPOLE	
DTM	Delta−T Matrix	56	US/F
DTF	Delta−T Fluid	193	US/F
DTCS	Compressional Delta−T Source for DTCO Channel	PS_COMP	
DSIX	Digitizer Sample Interval X	40	US
DSI5	Digitizer Sample Interval 5	10	US
DSI4	Digitizer Sample Interval 4	10	US
DSI3	Digitizer Sample Interval 3	40	US
DSI2	Digitizer Sample Interval 2	40	US
DSI1	Digitizer Sample Interval 1	40	US
DSHU	Label Slowness Upper Limit − Dipole Shear	1040	US/F
DSHL	Label Slowness Lower Limit − Dipole Shear	40	US/F
DLHS	Label Hole Diameter Source for SOBS Channel	AUTO	
DLCS	Label Compressional Source − Dipole Shear	USE	
DDEX	Digitizing Delay X	0	US
DDE5	Digitizing Delay 5	0	US
DDE4	Digitizing Delay 4	0	US
DDE3	Digitizing Delay 3	0	US
DDE2	Digitizing Delay 2	0	US
DDE1	Digitizing Delay 1	0	US
COUL	Label Slowness Upper Limit − Monopole P&S Compressional	180	US/F
COLL	Label Slowness Lower Limit − Monopole P&S Compressional	120	US/F
CDTS	C−Delta−T Shale	100	US/F
CASF	Label Casing Function − Monopole P&S	50	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
BARS_MTR1	Length for Monopole Transmitter to Receiver 1	2.7432	M
AGCX	Automatic Gain Control X	ON	
AGC5	Automatic Gain Control 5	ON	
AGC4	Automatic Gain Control 4	ON	
AGC3	Automatic Gain Control 3	ON	
AGC2	Automatic Gain Control 2	ON	
AGC1	Automatic Gain Control 1	ON	
DSST−B: Dipole Shear Imager − B			
SHT	Surface Hole Temperature	55	DEGF
PROCSPO	Sonde Position	Centered	
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCINV	Inversion Selection	ON	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
KFAC_HRLT	HRLT K Factor Option	SONDE	
ISSBAR	Barite Mud Switch	BARITE	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.01	DF/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
FREQ6	HRLT Frequency Index for Mode 6	116	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ0	HRLT Frequency Index for Mode 0	32	
CALTEMP	HRLTB Calibration Temperature	14.5979	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
HRLT−B: High Resolution Laterolog Array − B			
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.04802	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.976891	
TPOS	Tool Position	CENT	
SHT	Surface Hole Temperature	55	DEGF
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
ISSBAR	Barite Mud Switch	BARITE	
HNPE	HNGS Processing Enable	YES	
HMWM	Mud Weighting Material	BARI	
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HALF	HNGS Alpha Filter Length	60	IN
HARK	HNGS Borehole Potassium Running Average	0.002812	

HABK	HNGS Borehole Potassium Running Average	−0.002819	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GGRD	Geothermal Gradient	0.01	DF/F
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GCSE	Generalized Caliper Selection	BS	
DBCC	HNGS Barite Constant Correction Flag	NONE	
CSW2	Outer Casing Weight	0	LB/F
CSW1	Inner Casing Weight	0	LB/F
CSD2	Outer Casing Outer Diameter	0	IN
CSD1	Inner Casing Outer Diameter	0	IN
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BHS	Borehole Status	OPEN	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BAR2	HNGS Detector 2 Barite Constant	1	
BAR1	HNGS Detector 1 Barite Constant	1	

HNGS−BA: Hostile Natural Gamma Ray Sonde

DLIS Name	Description	Value

Parameters

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 01−Nov−2017 14:33

EDTC−B	SKK−5169−EDTCB		
HLDS	19C0−187	LDSC−B	19C0−187
HRLT−B	19C0−187	DSST−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187

OP System Version: 19C0−187

BACKUP	NGS_HRLA_DSI_LDL_018LDP	FN:28	PRODUCER	01−Nov−2017 14:33
DEFAULT	NGS_HRLA_DSI_LDL_018LDP	FN:27	PRODUCER	01−Nov−2017 14:33

Output DLIS Files

Company: **International Ocean Discovery Program**

Schlumberger

Well: **Expedition 369, Site U1513D**
Field: **Australia Cretaceous Climate & Tectonics**
Rig: **JOIDES Resolution**
Ocean: **Indian**

High Resolution Laterolog Array (HRLA)
Natural Gamma Ray, Density (HNGS, HLDS)
Dipole Shear Sonic (DSI), DOWNLOGS