

Schlumberger	
Company:	Lakes Oil N.L.
Well:	Wombat-4
Field:	Wombat
Rig:	Hunt #2
Country:	Australia

Well: **Wombat-4**
Field: **Wombat**
Rig: **Hunt #2**

[illegible][illegible]

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				
Density	Viscosity			
Fluid Loss	PH			
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				

EMI logged with Auto Emex and Auto Gain High

Bottom section logged with different mud parameters:
Drilling Fluid Density: 10.8lbm/gal, Fluid Loss: 14cm3, Viscosity: 42s,PH: 8,
FMI suffers from 'stick and slip' in poor hole conditions, data quality effected.
Magnetic Field Intensity: 47.8177 A/M
Magnetic Field Parameters:
Magnetic Field Declination: 12.6726 deg
Magnetic Field Inclination: -68.9552 deg
Toolstring run as per tool sketch.
After Calibrations and Repeat Pass not requested by client due to well conditions.

RUN 1			RUN 2		
SERVICE ORDER #:		B6PE-00025	SERVICE ORDER #:		
PROGRAM VERSION:		17C0-154	PROGRAM VERSION:		
FLUID LEVEL:		0 m	FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

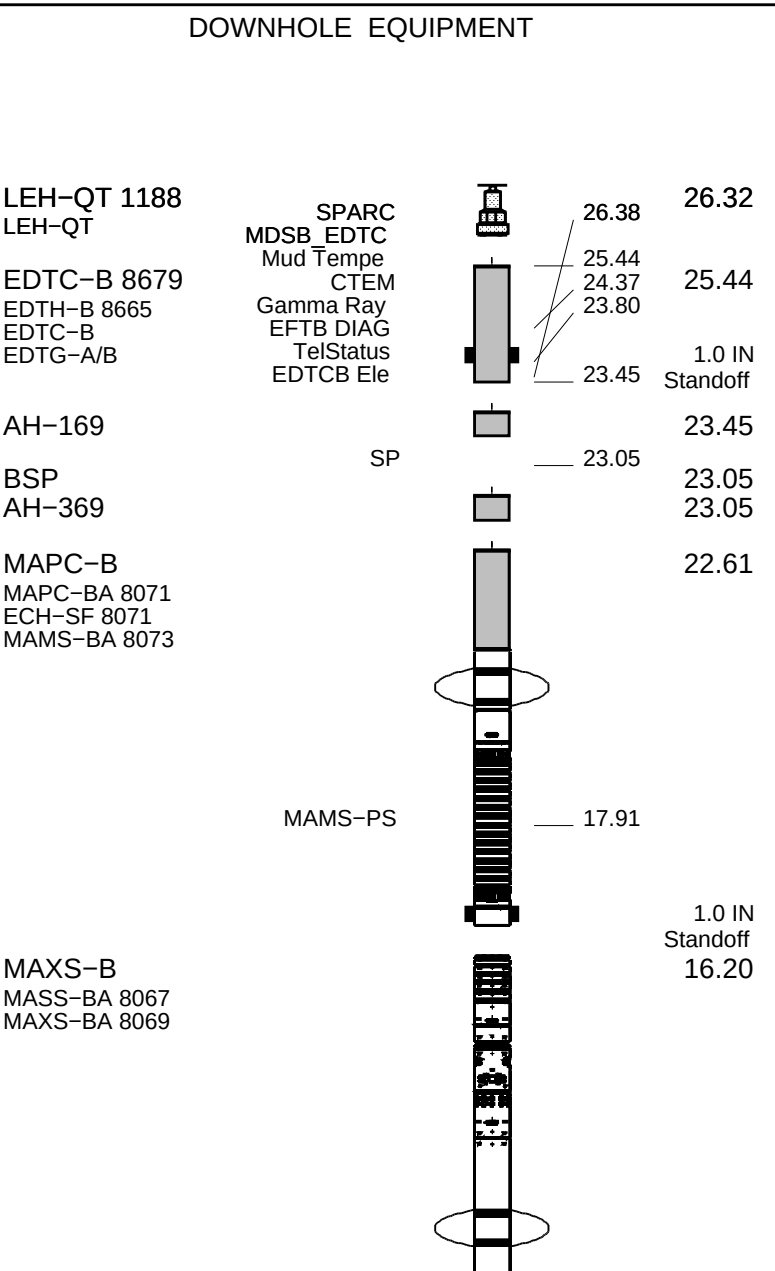
EQUIPMENT DESCRIPTION

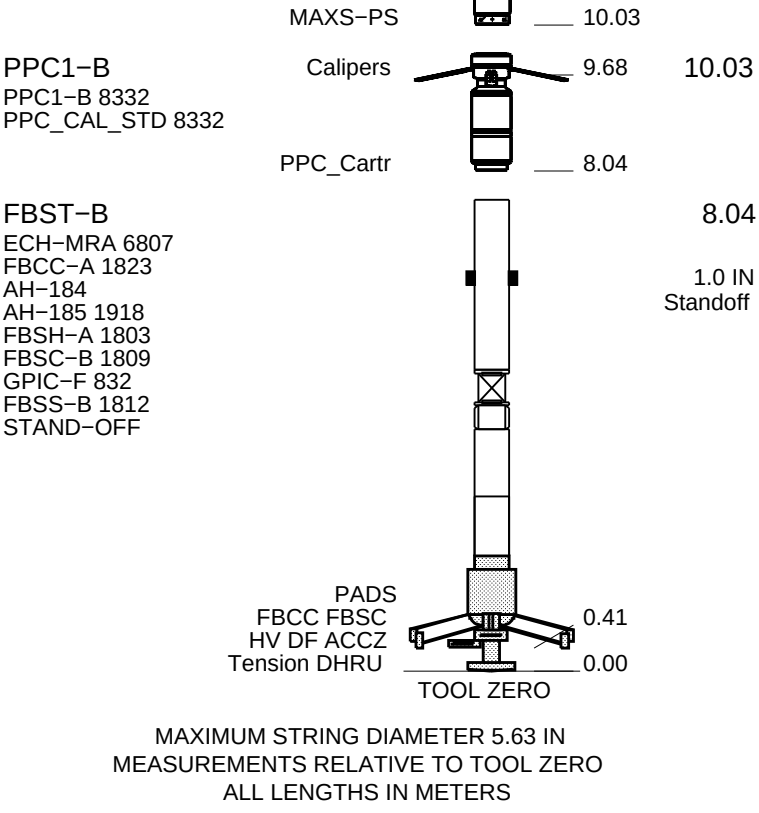
RUN 1

RUN 2

SURFACE EQUIPMENT

WITM (EDTS)-A





Client: Lakes Oil

Well: Wombat 4

Field: Wombat

State: Victoria

Country: Australia

Rig Name: Hunt 2

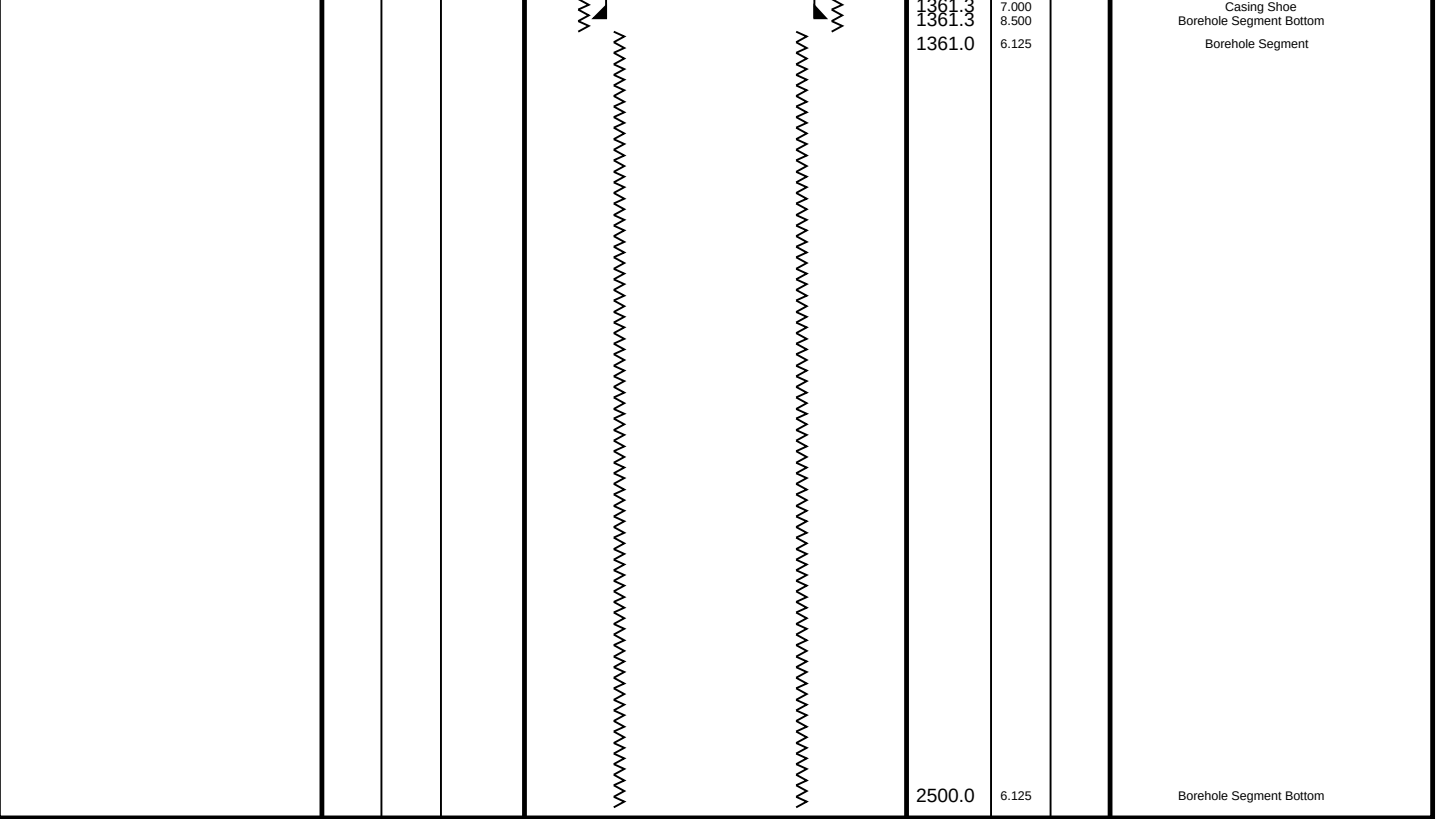
Reference Datum: Derrick Floor

Elevation: 26.6 m

Drawing Date: 11/12/2009

API #:

Production String	(in) (m)			Well Schematic	(m) (in)			Casing String
	OD	ID	MD		MD	OD	ID	
					0.0	7.000		Casing String
					0.0	9.625		Casing String
					299.0	9.625		Casing Shoe
					299.0	8.500		Borehole Segment



All Depths are drillers
depths



Main Pass
Top Section

MAXIS Field Log

Company: Lakes Oil N.L. Well: Wombat-4

Input DLIS Files

Splice_FMI_CAL_MAXS_027CUP FN:1 13-Nov-2009 17:59 1602.0 M 1401.6 M

Output DLIS Files

DEFAULT FMI_CAL_MAXS_MAPC_034PUP FN:51 PRODUCER 14-Nov-2009 12:04
CUSTOMER FMI_CAL_MAXS_MAPC_034PUC FN:52 CUSTOMER 14-Nov-2009 12:04

OP System Version: 17C0-154

FBST-B 17C0-154 PPC1-B 17C0-154
MAXS-B SKK-3853-MAST MAPC-B SKK-3853-MAST
BSP 17C0-154 EDTC-B SKK-3882-EDTCB

PIP SUMMARY

Time Mark Every 60 S

FMI Correlation Resistance
(LOG) (FBCR)
2 (KOHM) 2000

Pad One Azimuth (P1AZ_
FBST)
-40 (DEG) 360

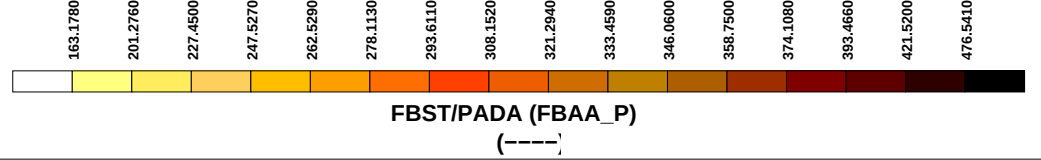
Hole Azimuth (HAZIM)
-40 (DEG) 360

Gamma Ray (GR_EDTC)
0 (GAPI) 150

Deviation (DEVIM)
0 (DEG) 10

Tension (TENS)
5000 (LBF) 0

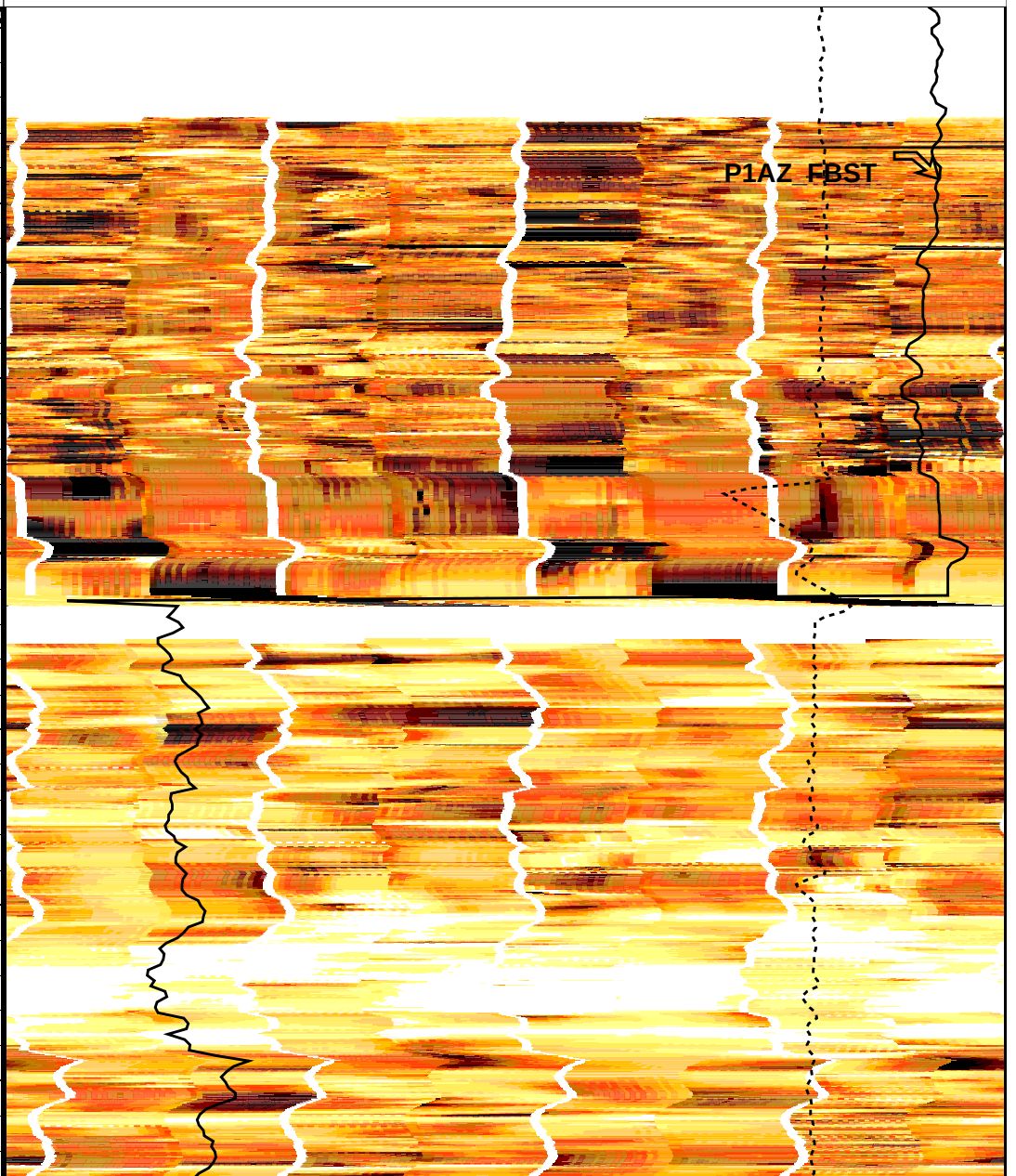
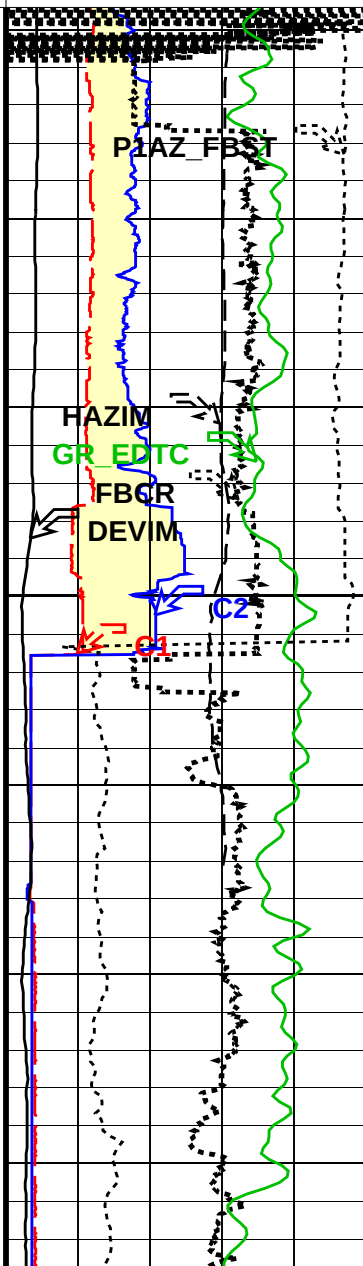
Caliper 2 (C2)
4 (IN) 14



Caliper 1 (C1)
4 (IN) 14

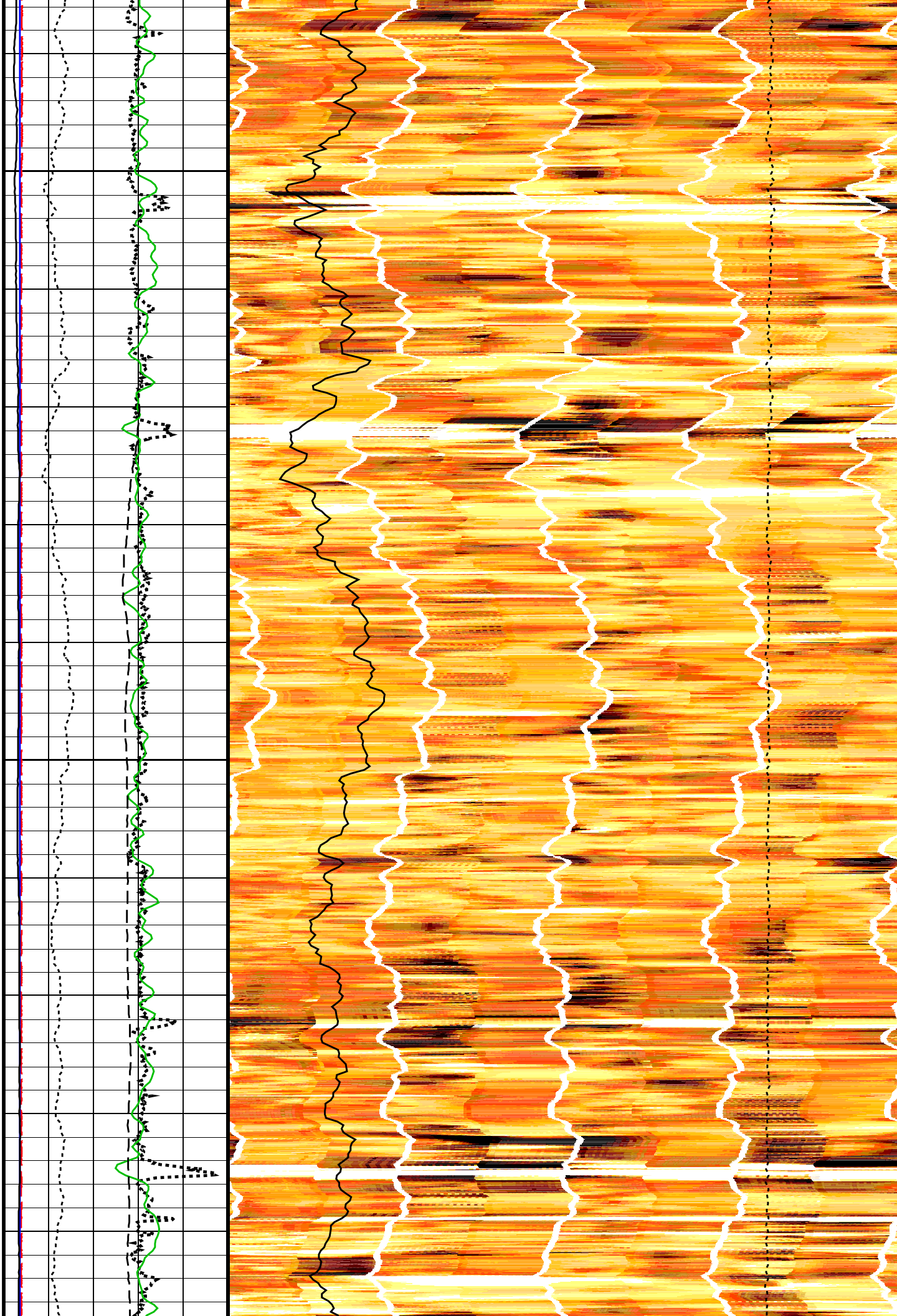
Image Orientation (P1AZ_FBST)
0 (DEG) 360

1400



1425

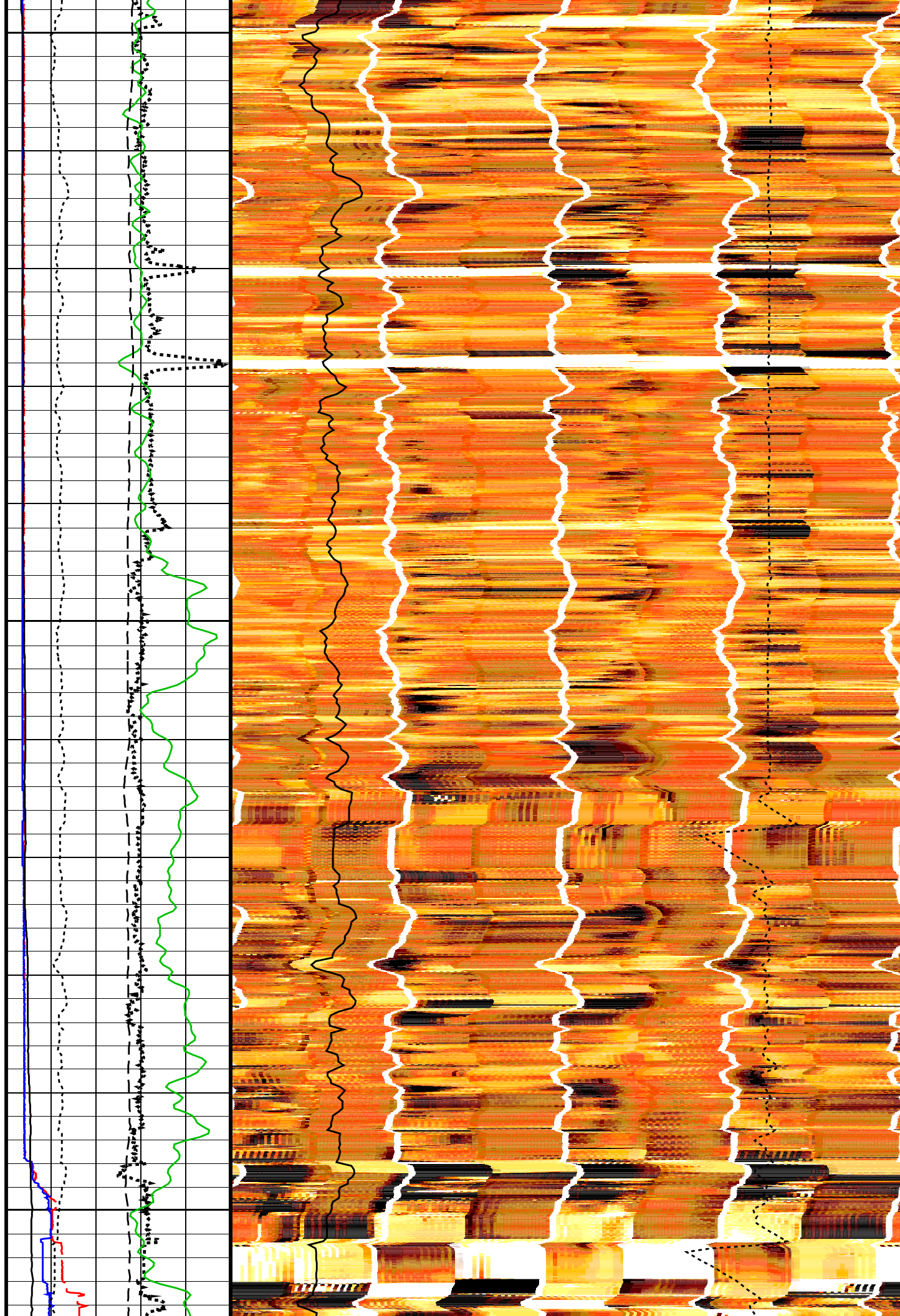
1450



1475

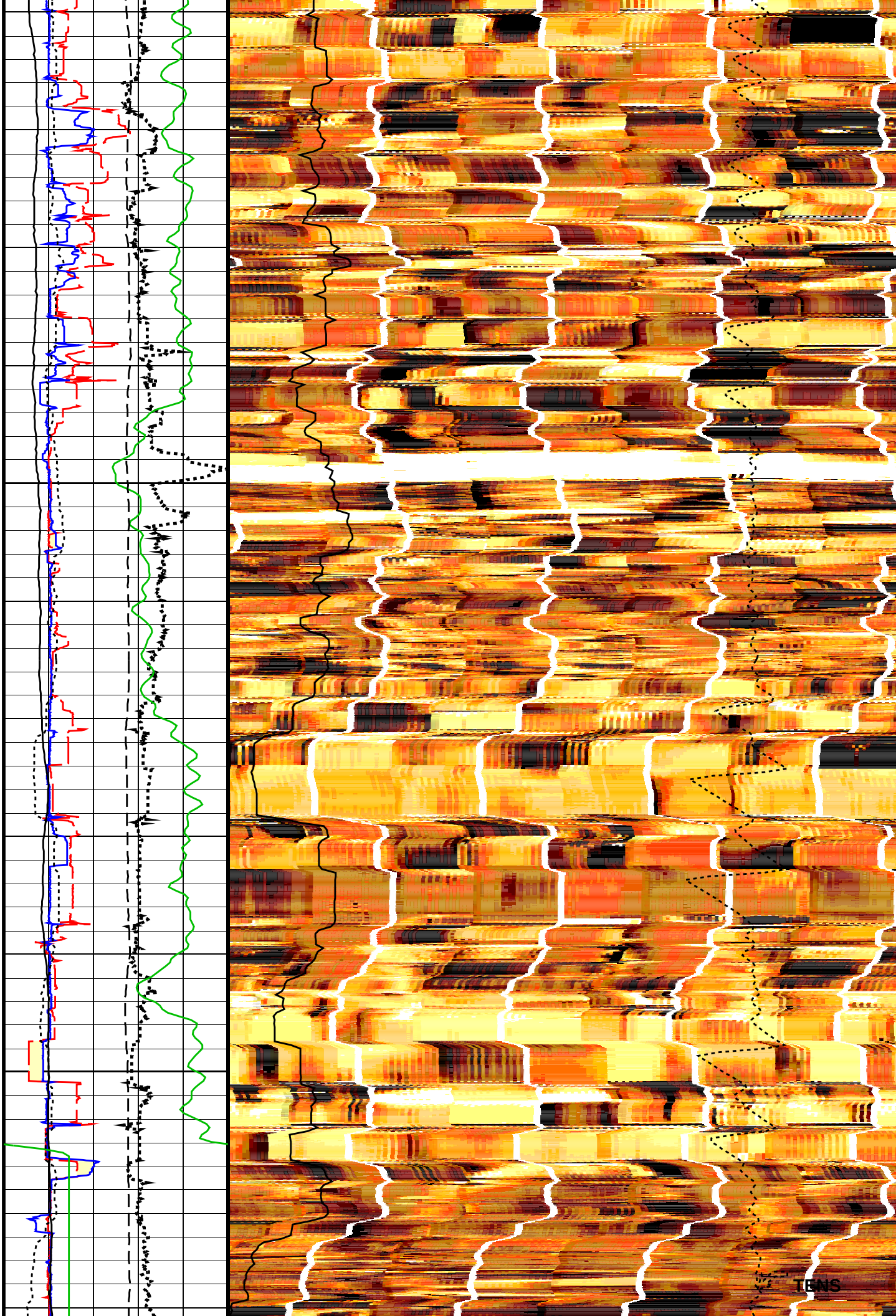
1500

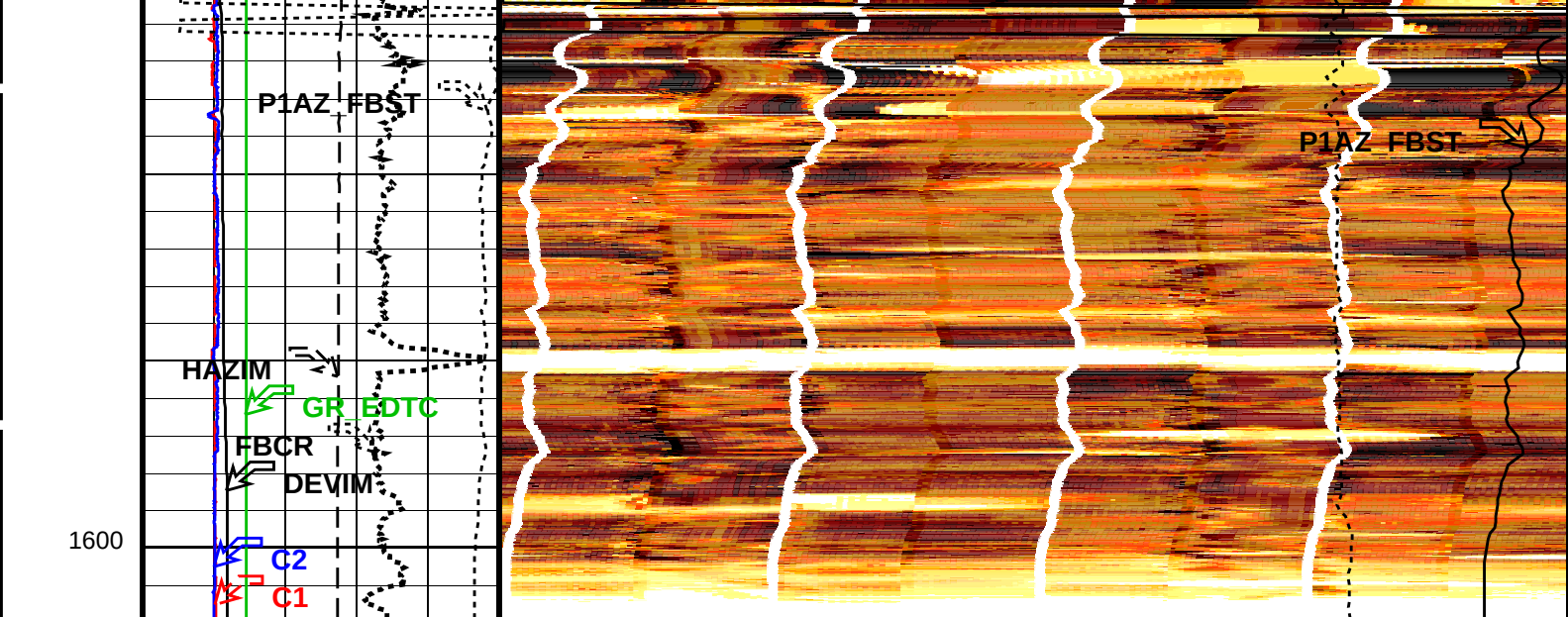
1525



1550

1575





Caliper 1 (C1) 4 (IN) 14			Image Orientation (P1AZ_FBST) (DEG) 0360															
Caliper 2 (C2) 4 (IN) 14			163.1780201.2760227.4500247.5270262.5290278.1130293.6110308.1520321.2940333.4590346.0600358.7500374.1080393.4660421.5200476.5410 FBST/PADA (FBAA_P) (----															
Deviation (DEVIM) 0 (DEG) 10															Tension (TENS) 5000 (LBF) 0			
Gamma Ray (GR_EDTC) 0 (GAPI) 150																		
Hole Azimuth (HAZIM) -40 (DEG) 360																		
Pad One Azimuth (P1AZ_FBST) -40 (DEG) 360																		
FMI Correlation Resistance (LOG) (FBCR) 2 (KOHM) 2000																		

FDBP	FMI Dead Buttons Patching	OFF	
FIEQ	FMI Image Equalisation	ON	
FLM	FMI Logging Mode	8PAD	
FPSA	FMI Peak Signal Amplitude for Required Servo Level	ON	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MDEC	Magnetic Field Declination	12.6725	DEG
SOFF	Standoff	0.975	IN
XGAI_FBST	Gain Value in Manual Mode	0_dB	
XGMO	EMEX & Gain Modes	EmexAuto_GainAutoHighRange	
XVOL	EMEX Voltage	0	V
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
DO	Depth Offset for Playback	-0.1	M
PBVSDAP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	

Input DLIS Files					
	Splice_FMI_CAL_MAXS_027CUP	FN:1		13-Nov-2009 17:59	1602.0 M 1401.6 M
Output DLIS Files					
DEFAULT	FMI_CAL_MAXS_MAPC_034PUP	FN:51	PRODUCER	14-Nov-2009 12:04	
CUSTOMER	FMI_CAL_MAXS_MAPC_034PUC	FN:52	CUSTOMER	14-Nov-2009 12:04	

Schlumberger

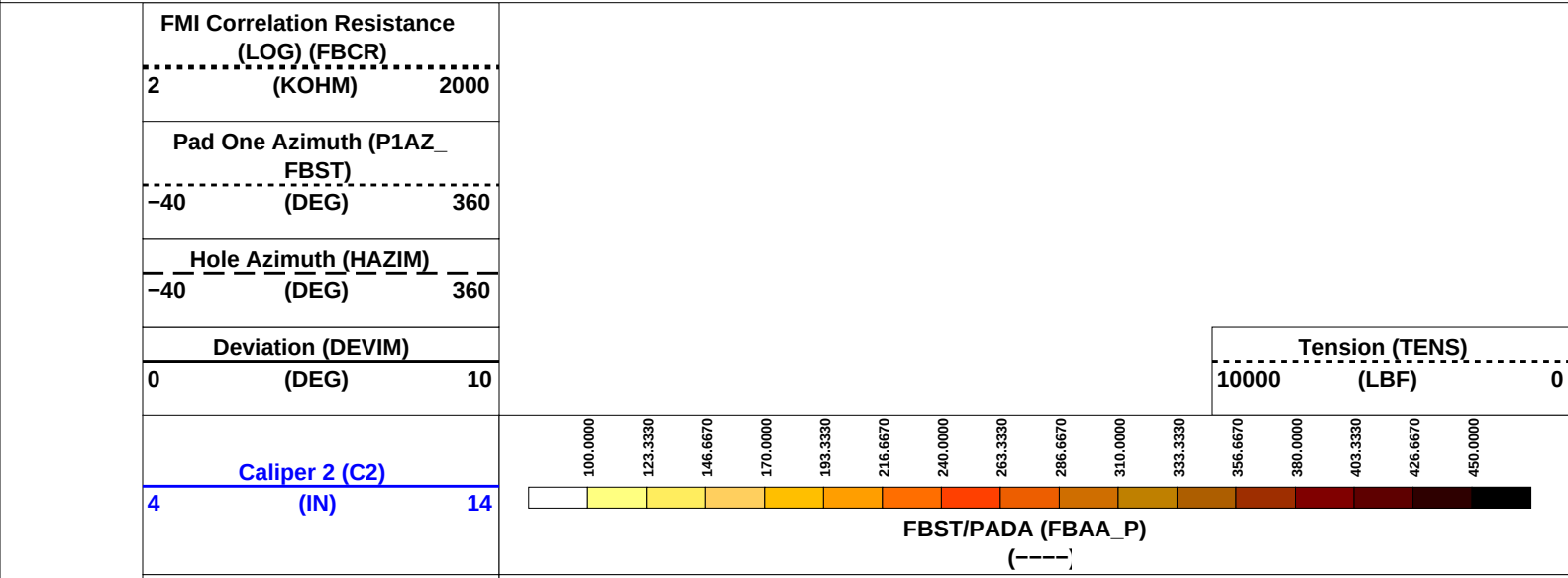
Main Pass
Bottom Section

MAXIS Field Log

Company: Lakes Oil N.L.	Well: Wombat-4
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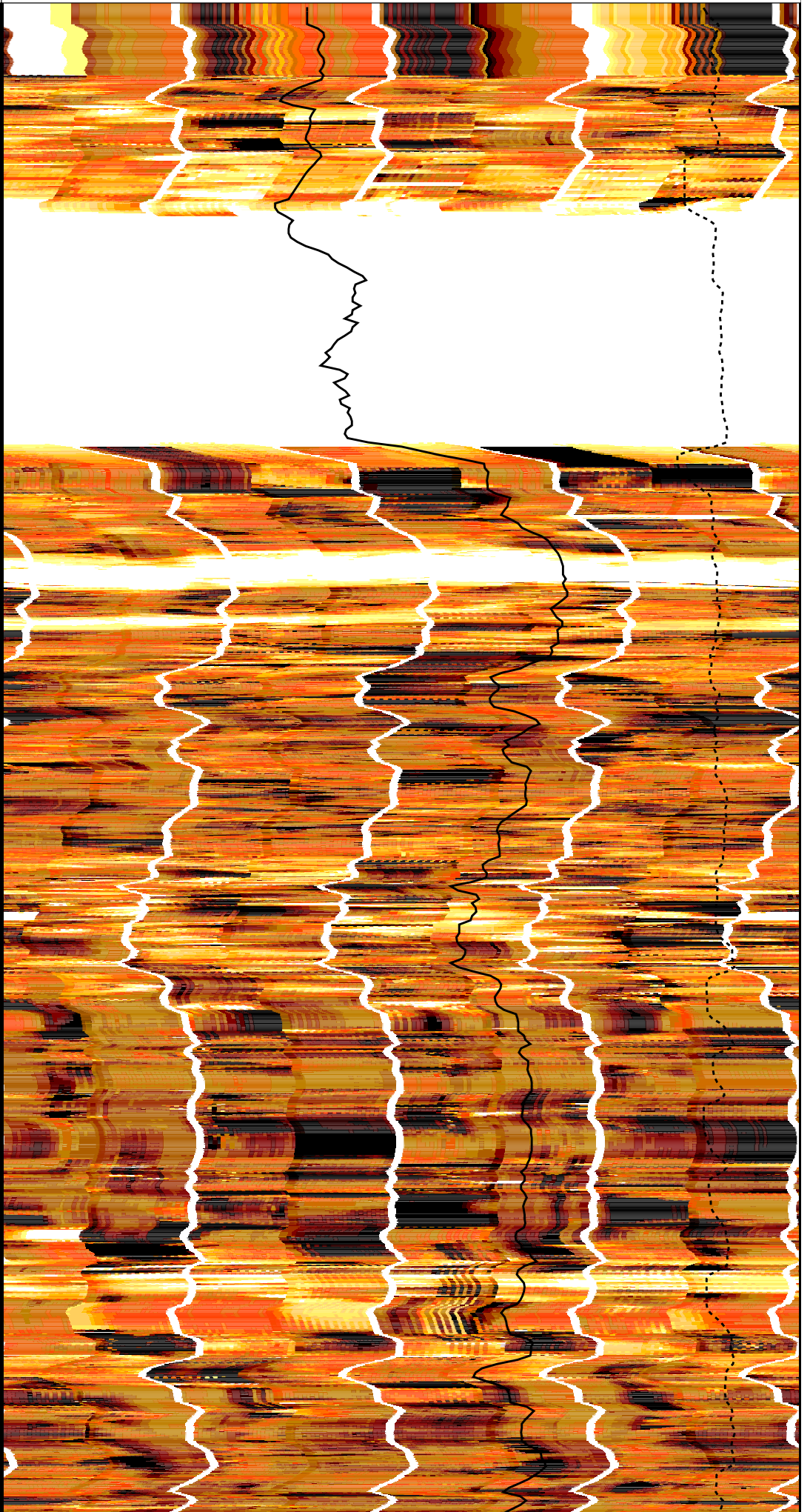
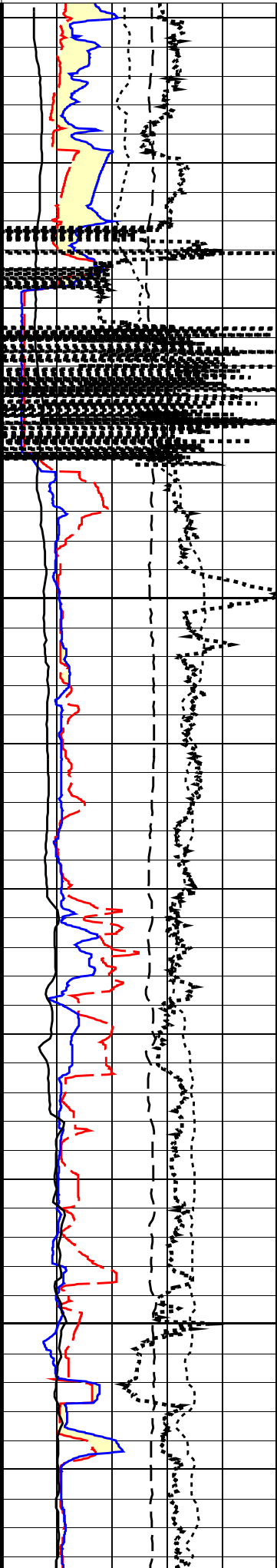
Input DLIS Files					
	FMI_CAL_MAXS_MAPC_027PUP	FN:24		16-Nov-2009 11:01	2471.0 M 1528.1 M
OP System Version: 17C0-154					
FBST-B	17C0-154	PPC1-B	17C0-154		
BSP	17C0-154	EDTC-B	SKK-3882-EDTCB		

PIP SUMMARY	
	Time Mark Every 60 S



1550
SC

1575
SC



1600
SC

PLAZ FBST

HAZIM

FBCR

DEVIM

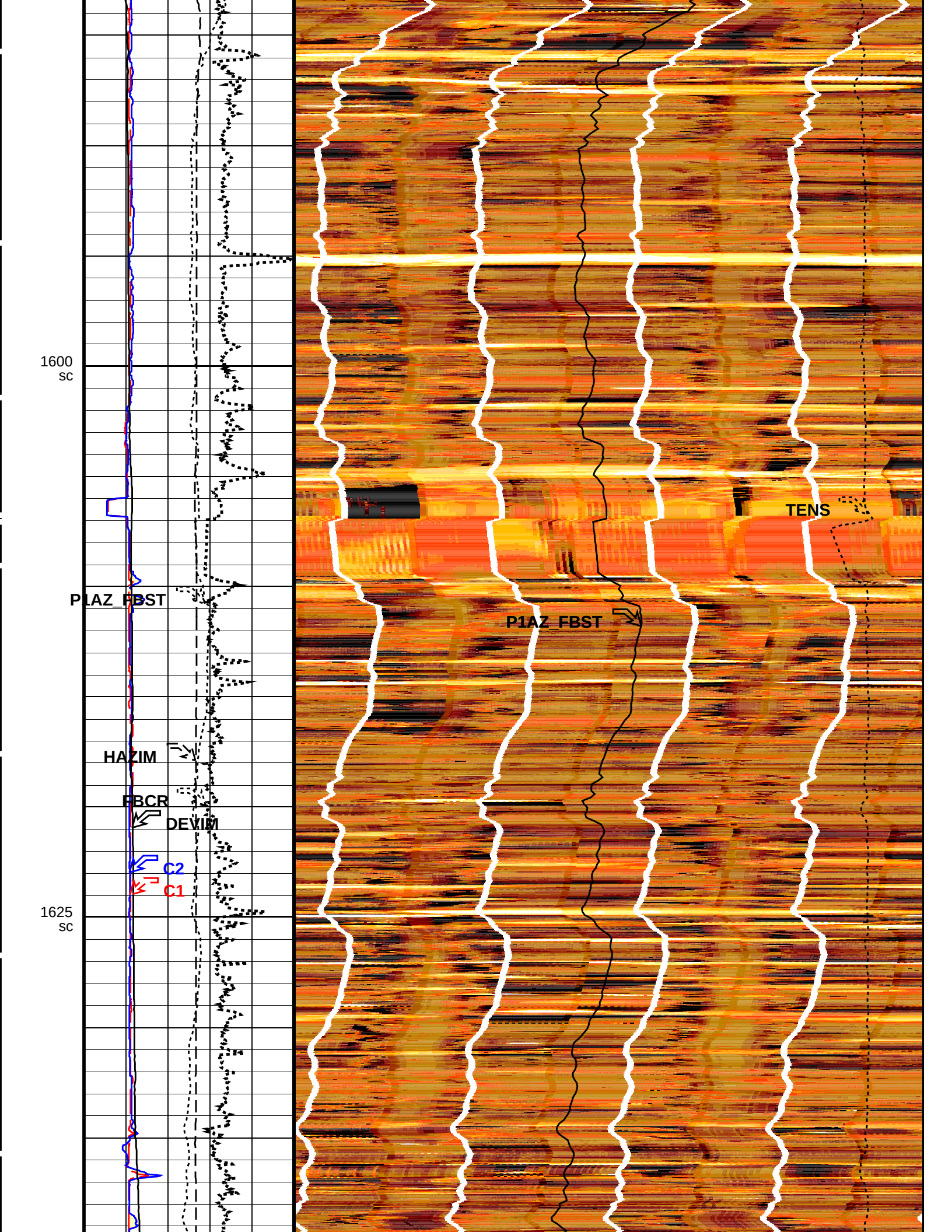
C2

C1

1625
SC

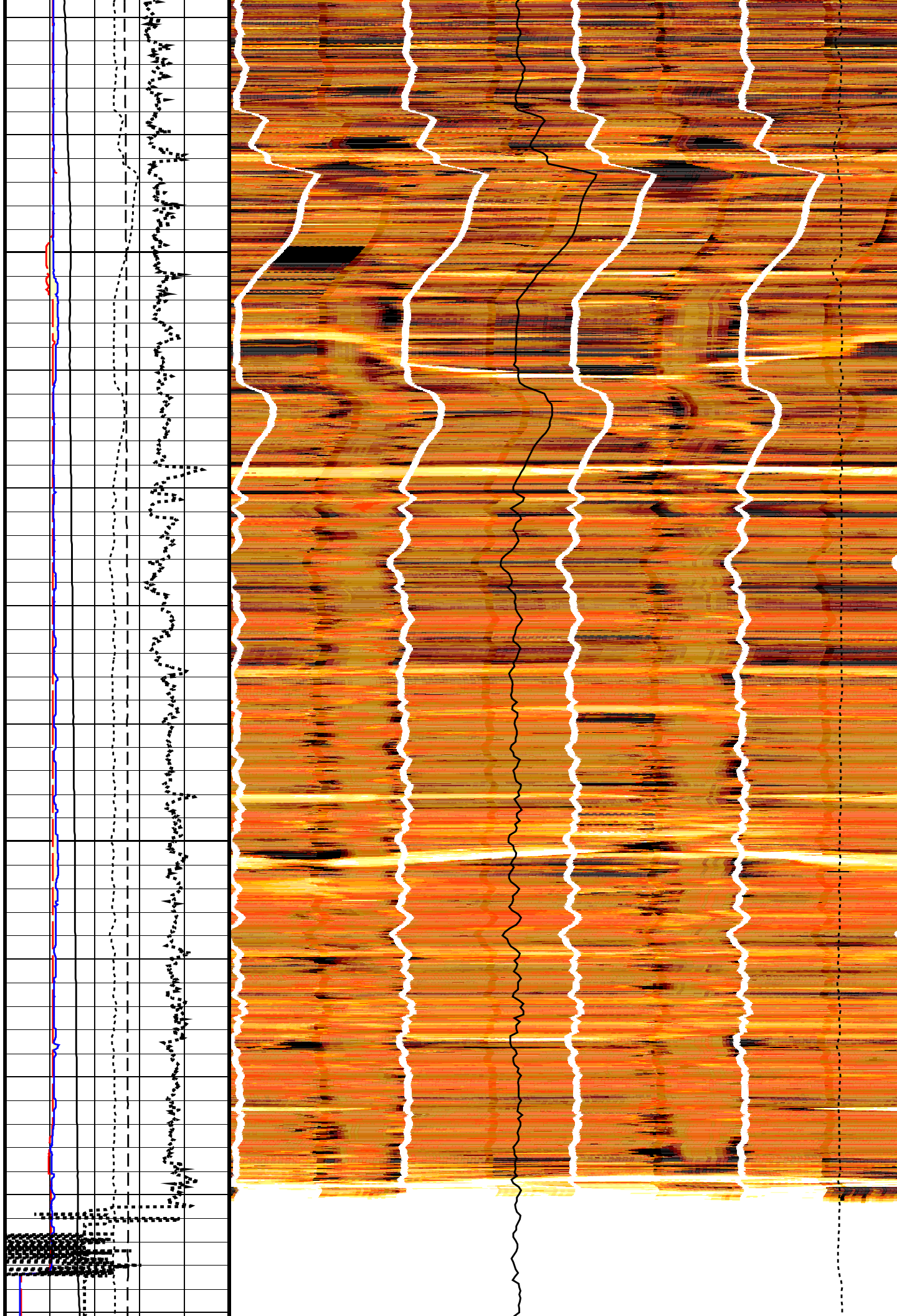
P1AZ FBST

TENS



1650
SC

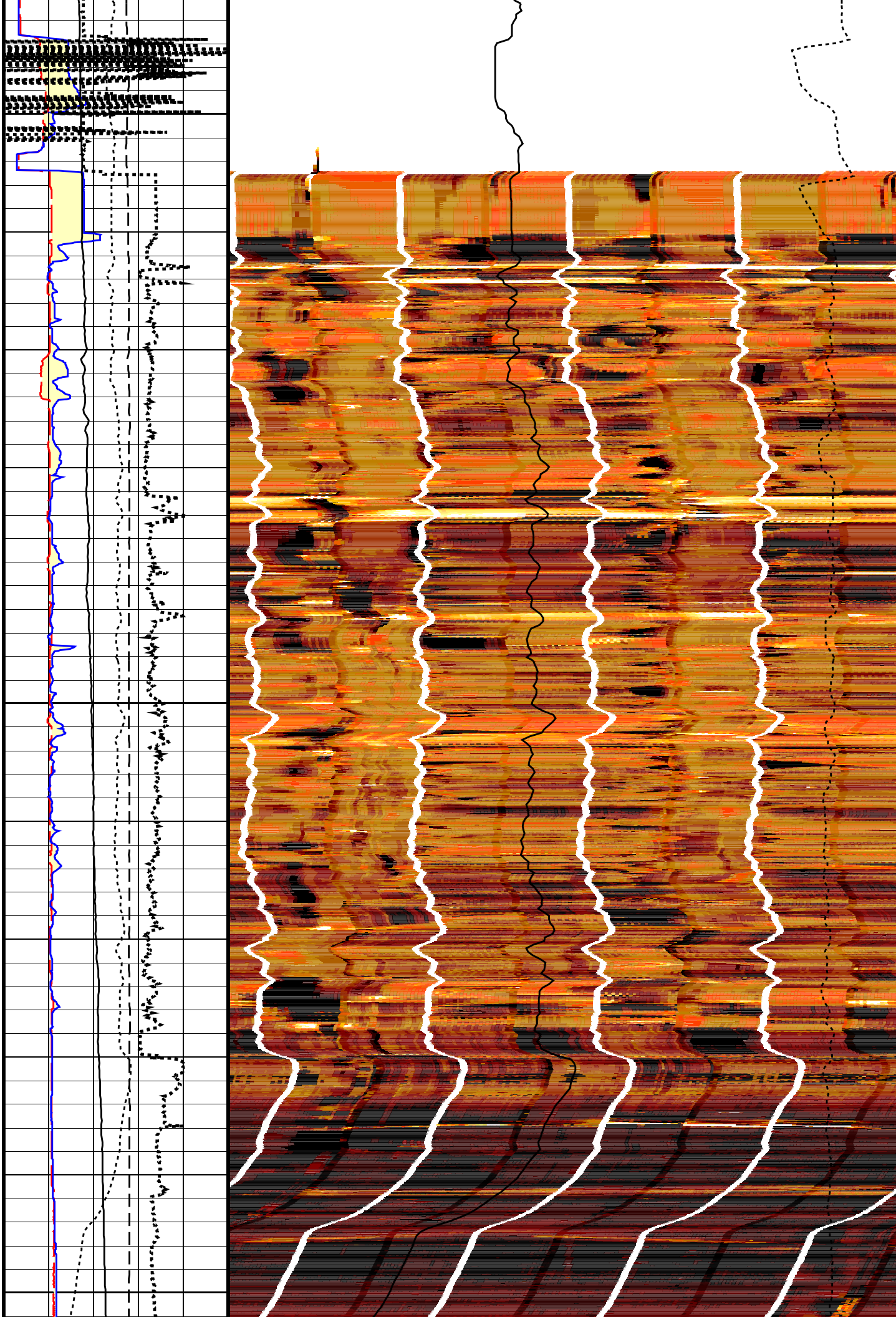
1675
SC



1700
SC

1725
SC

1750
SC



1775
SC

1800
SC

TENS



1825
SC

1850
SC

P1AZ FBST

HAZIM

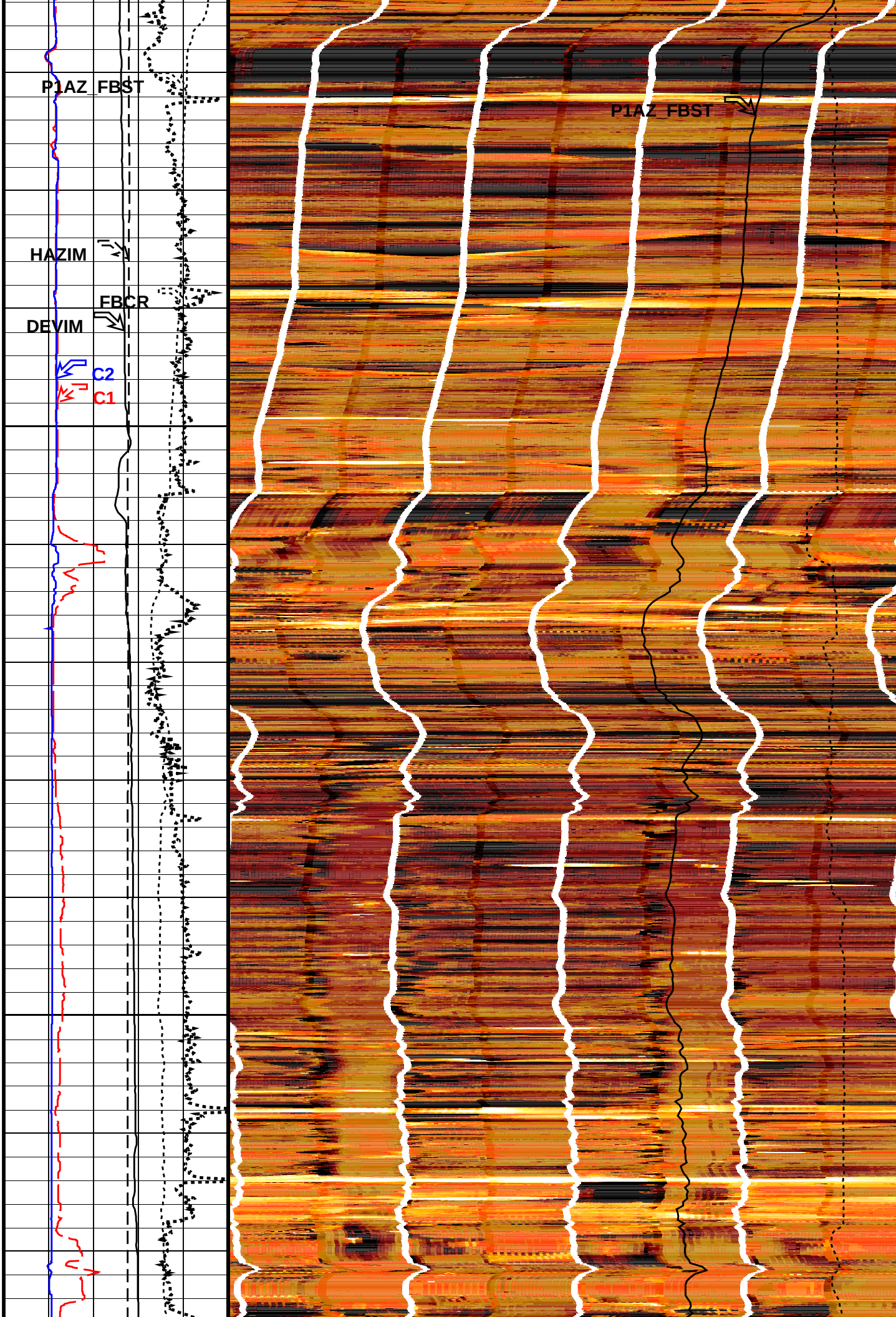
FBCR

DEVIM

C2

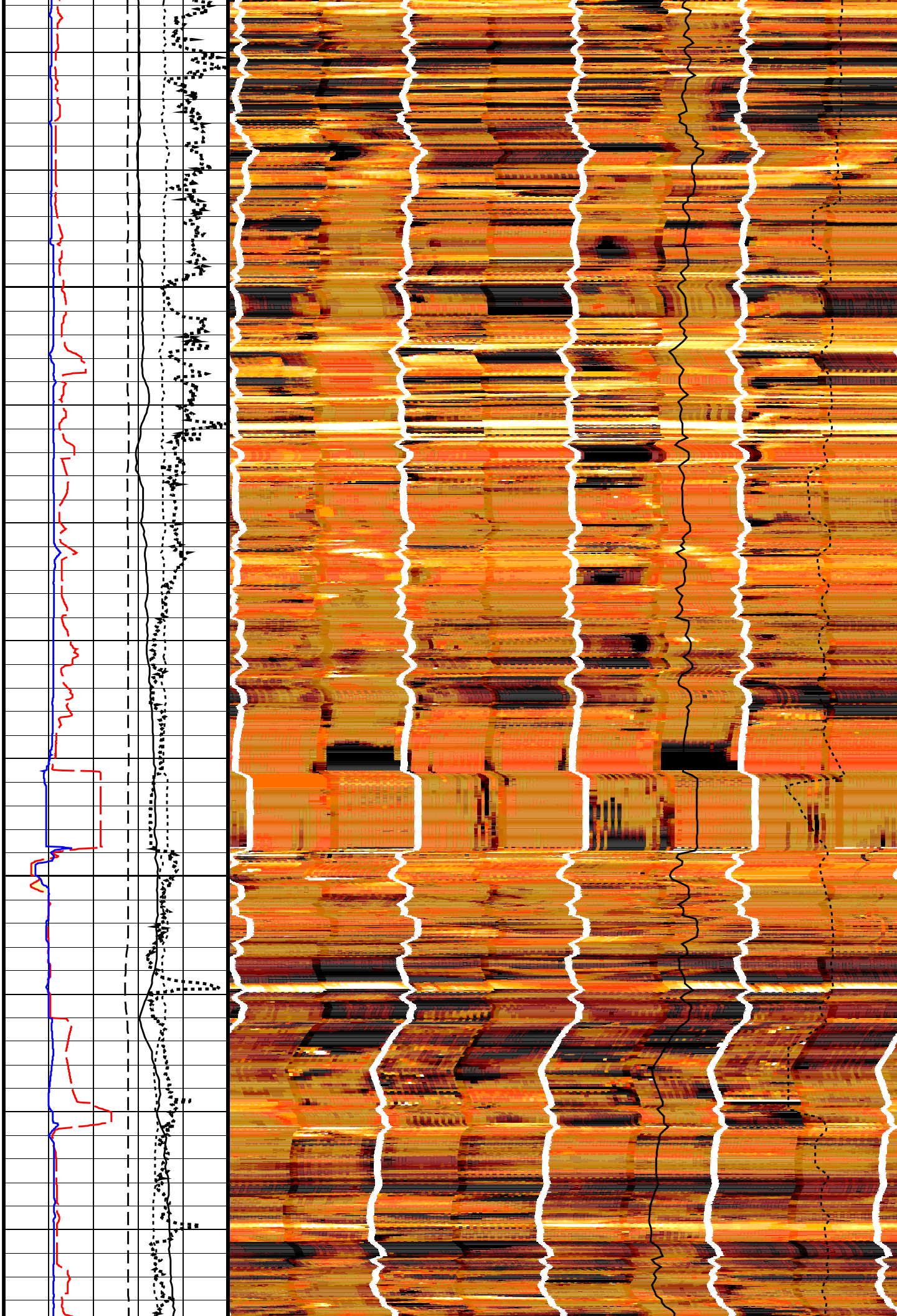
C1

P1AZ FBST



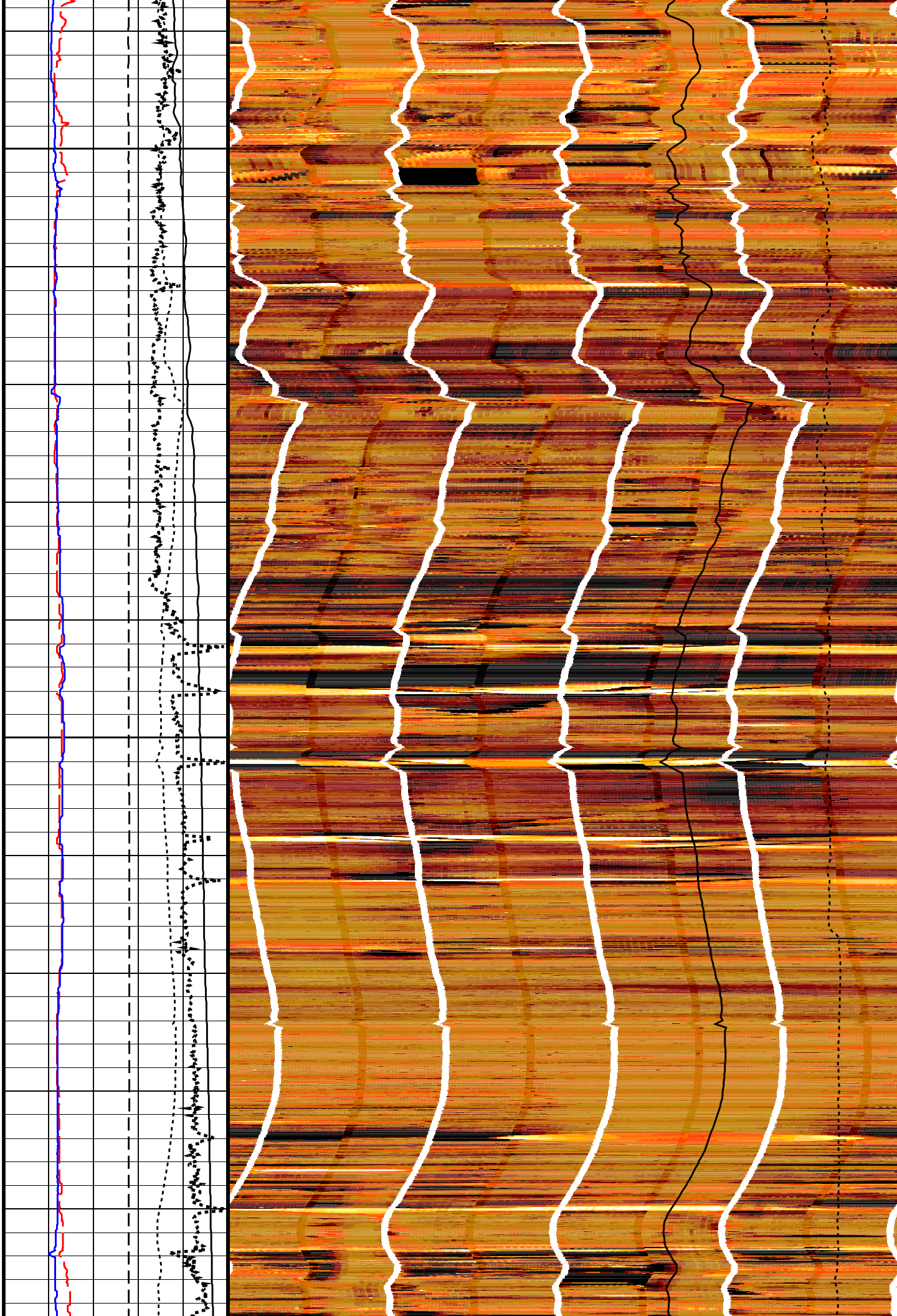
1875
SC

1900
SC



1925
SC

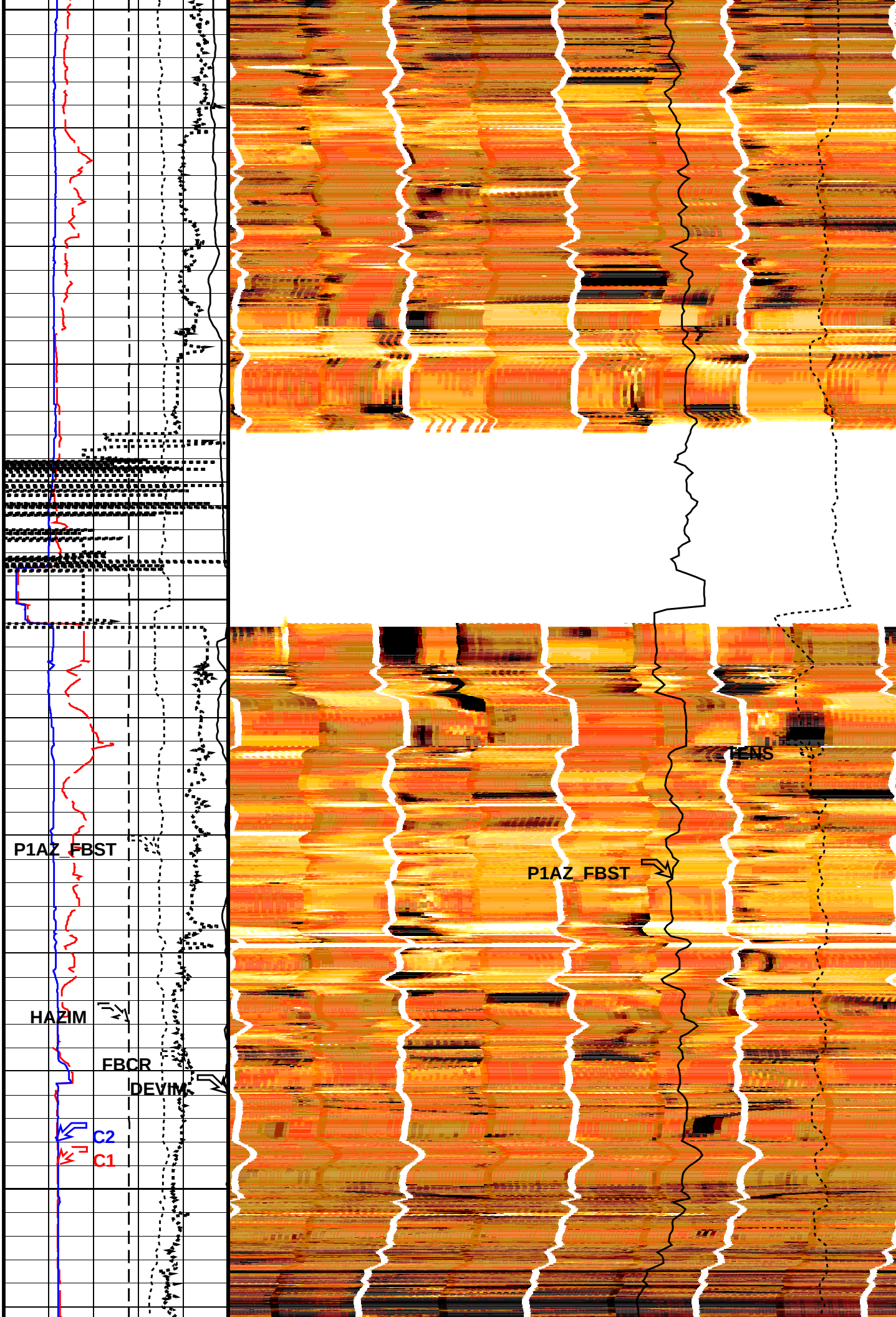
1950
SC



1975
SC

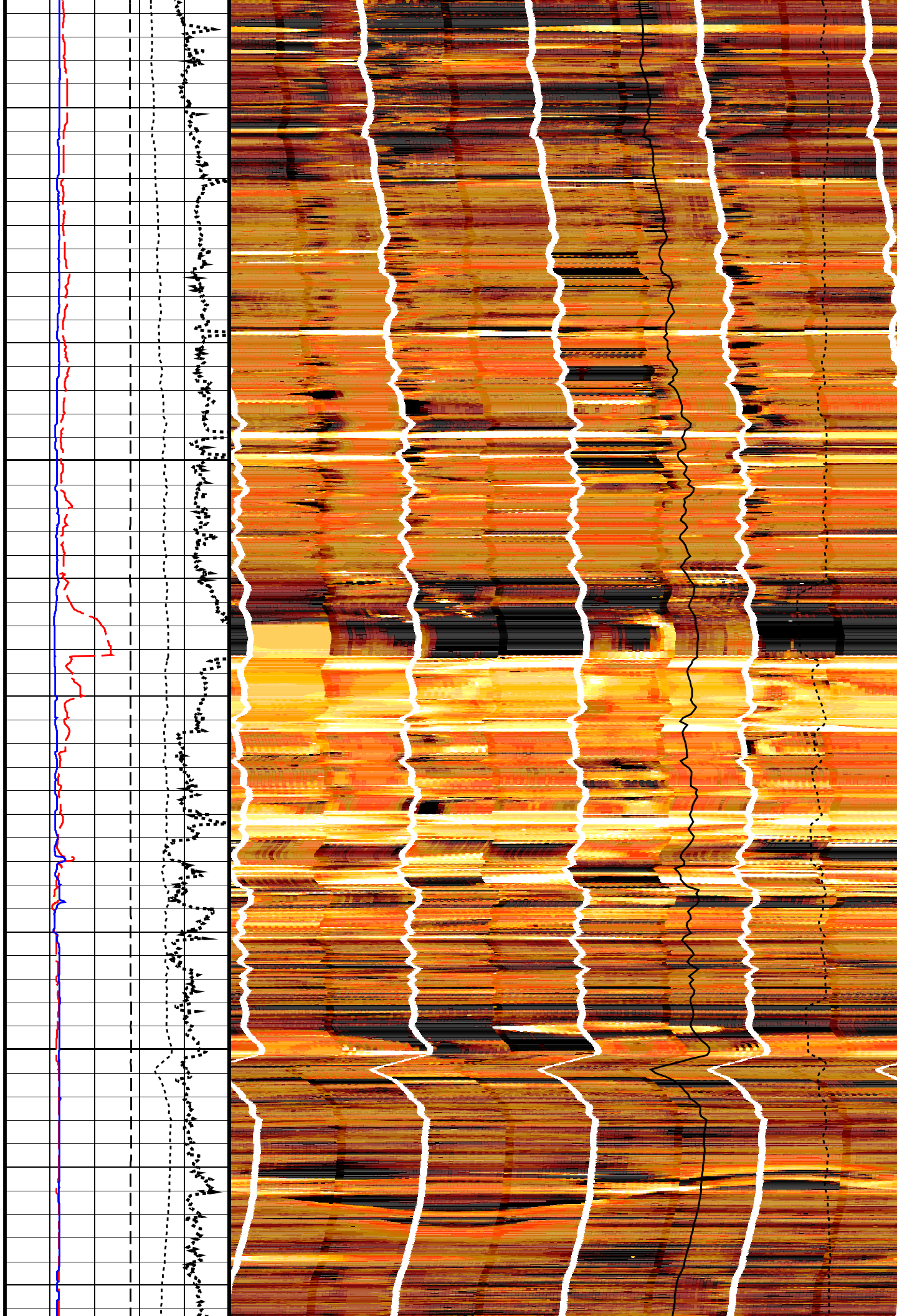
2000
SC

2025
SC



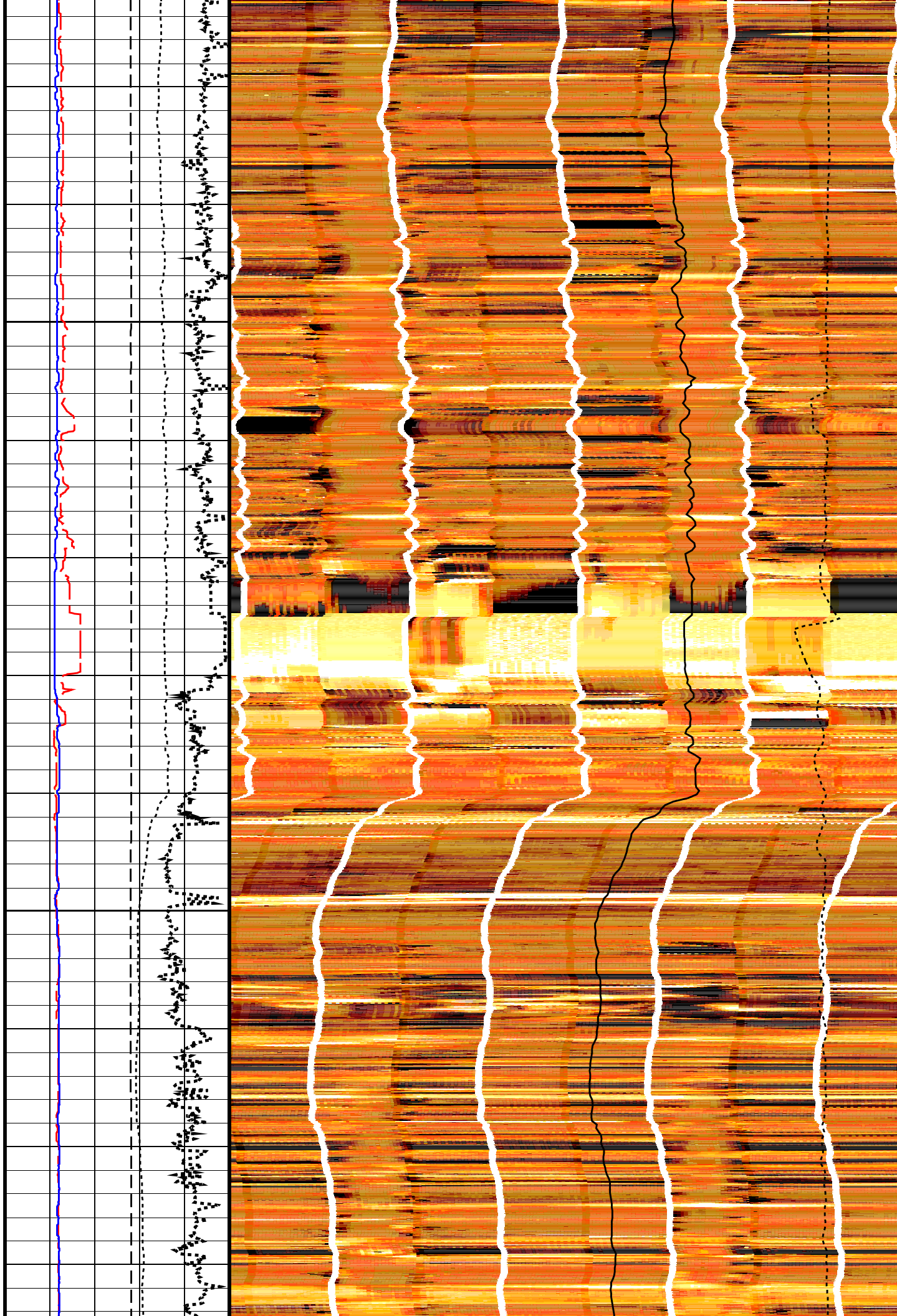
2050
SC

2075
SC



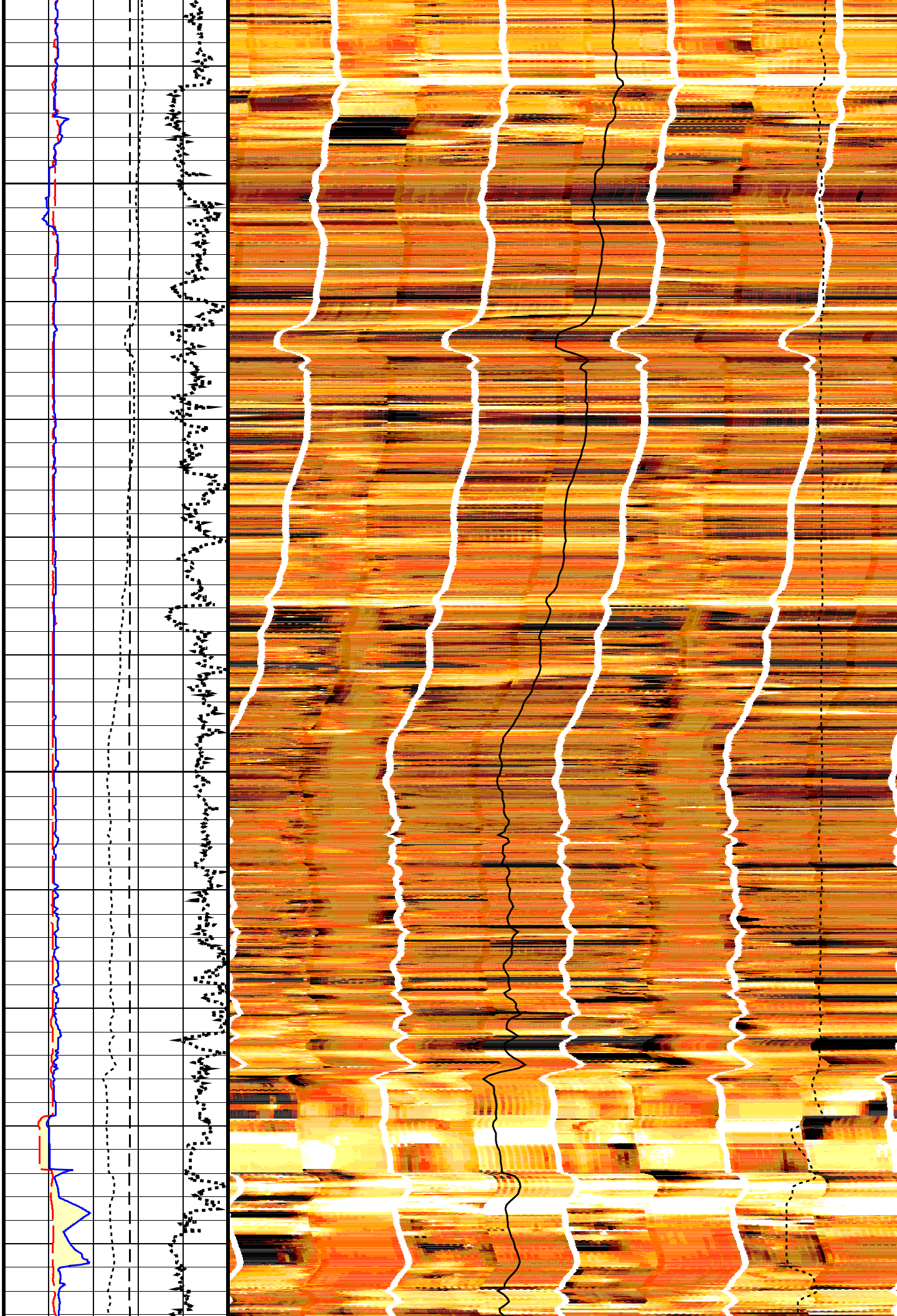
2100
SC

2125
SC



2150
SC

2175
SC



2200
SC

PLAZ FBST

HAZIM

FBCR

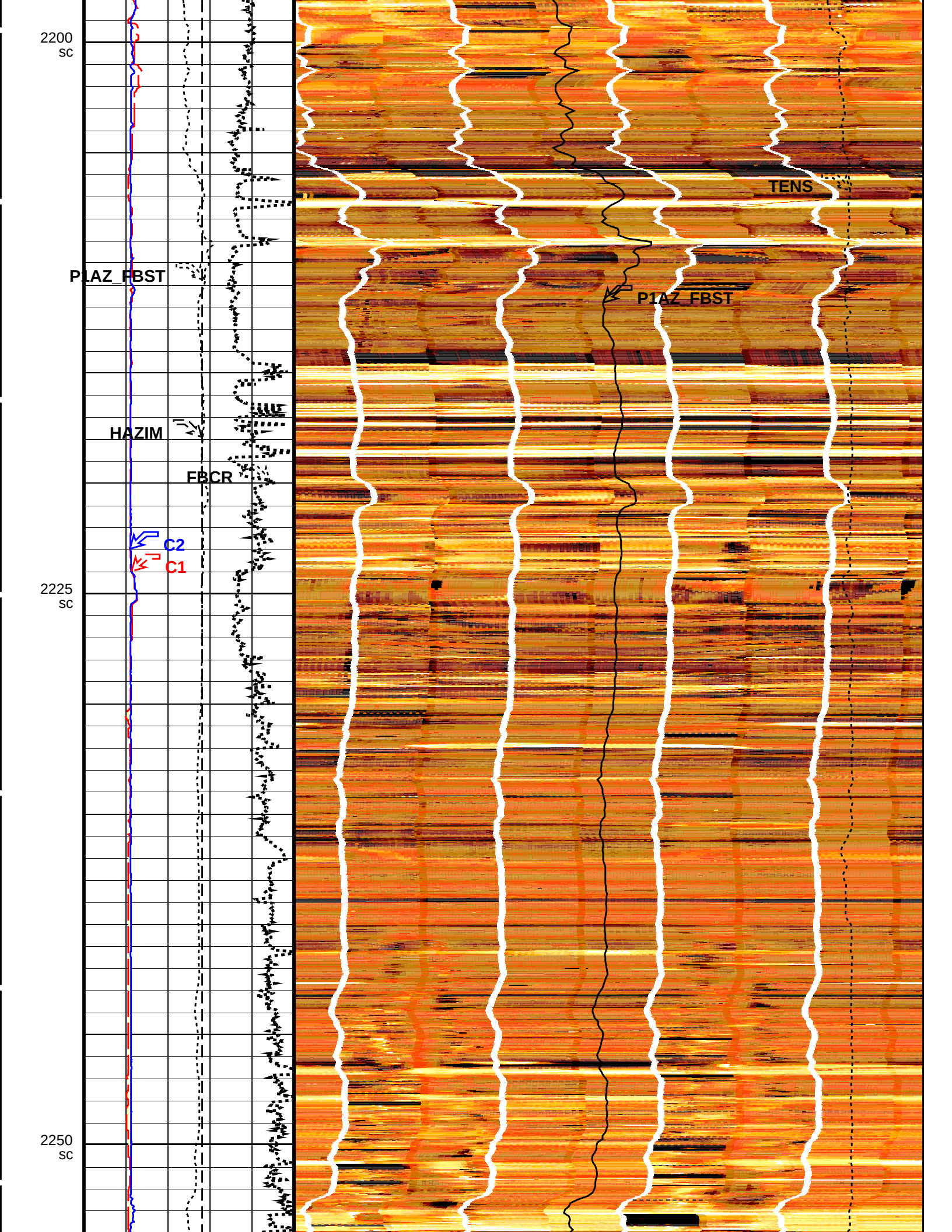
C2
C1

2225
SC

2250
SC

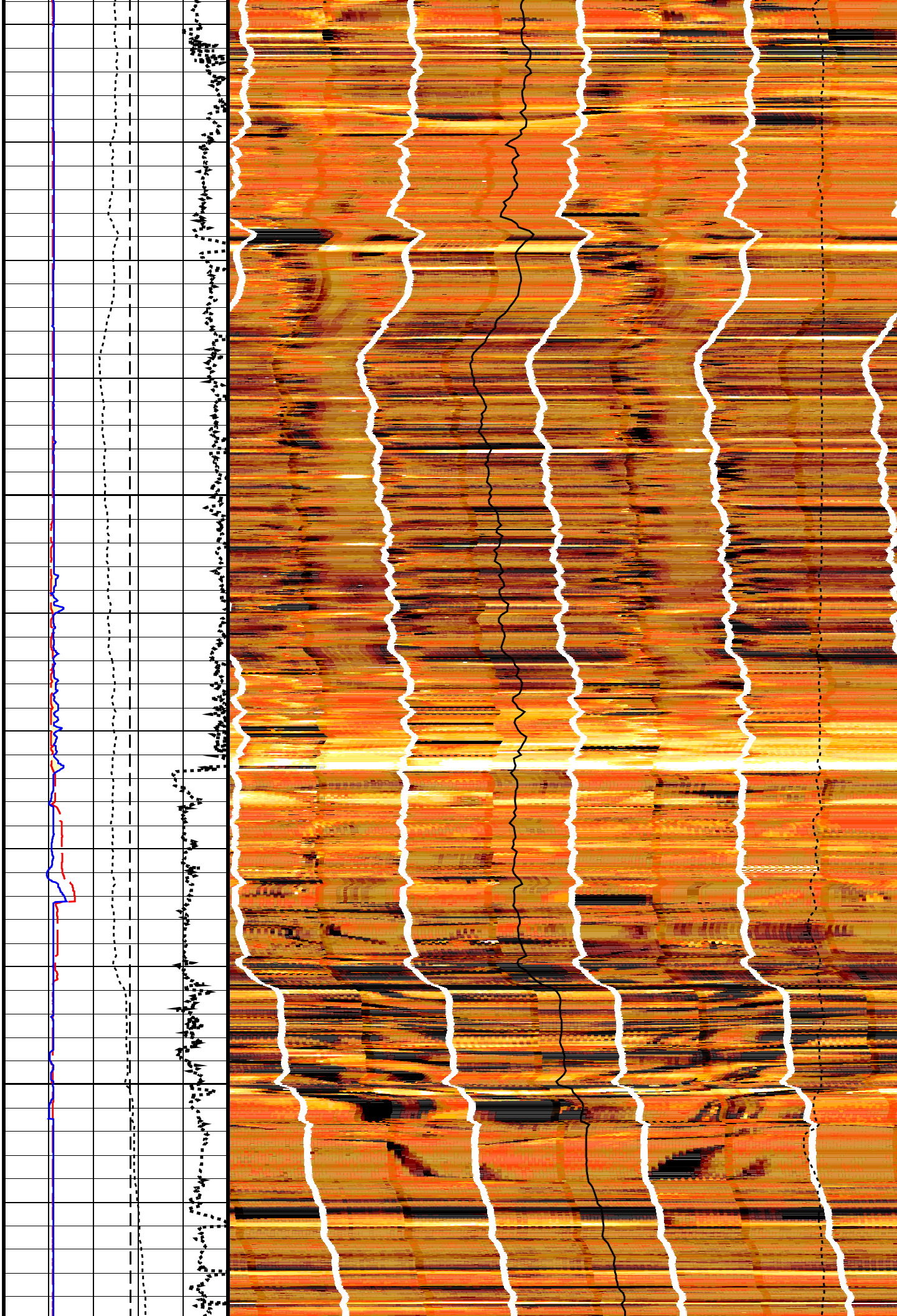
TENS

PLAZ FBST



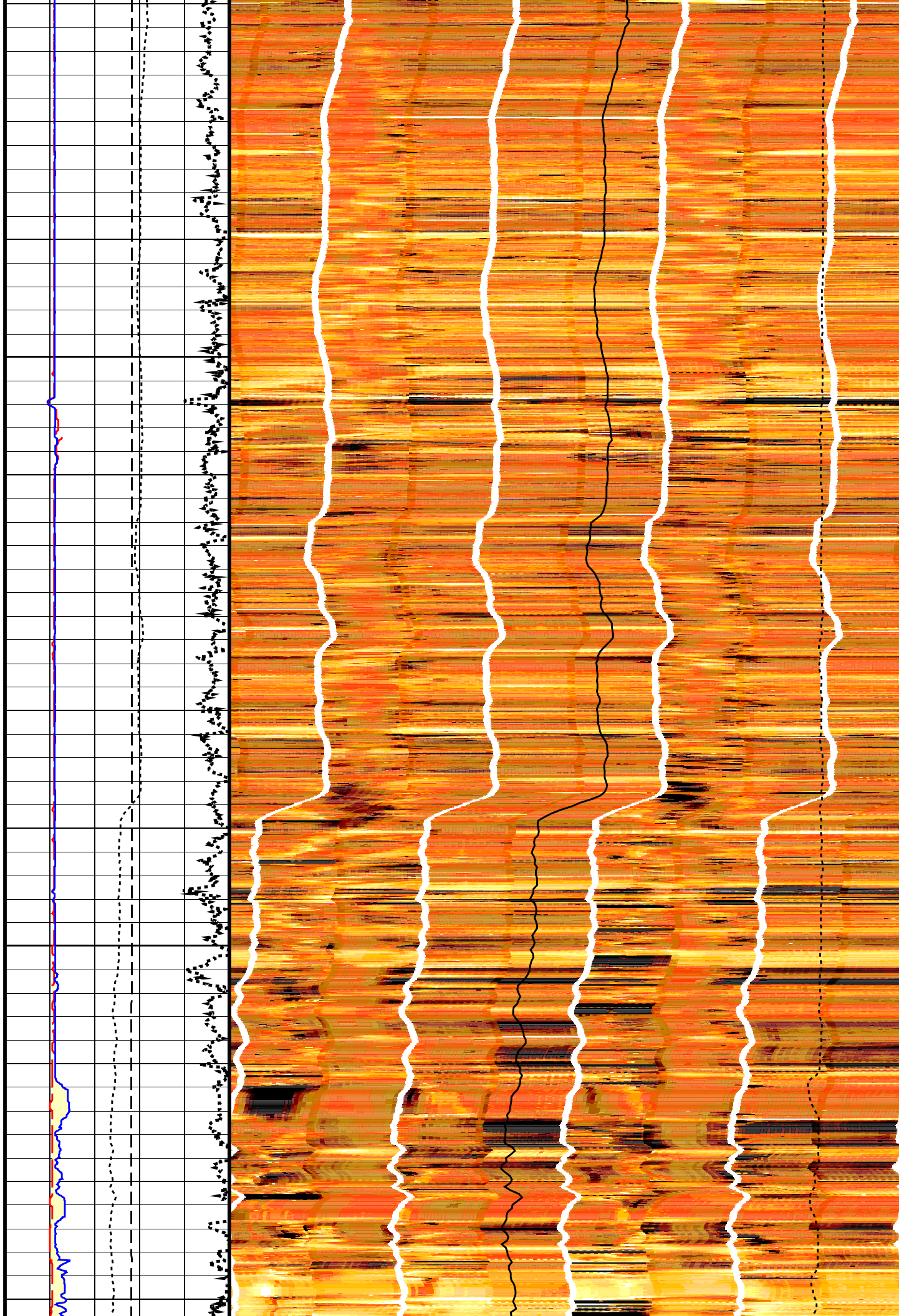
2275
SC

2300
SC



2325
SC

2350
SC



2375
SC

2400
SC

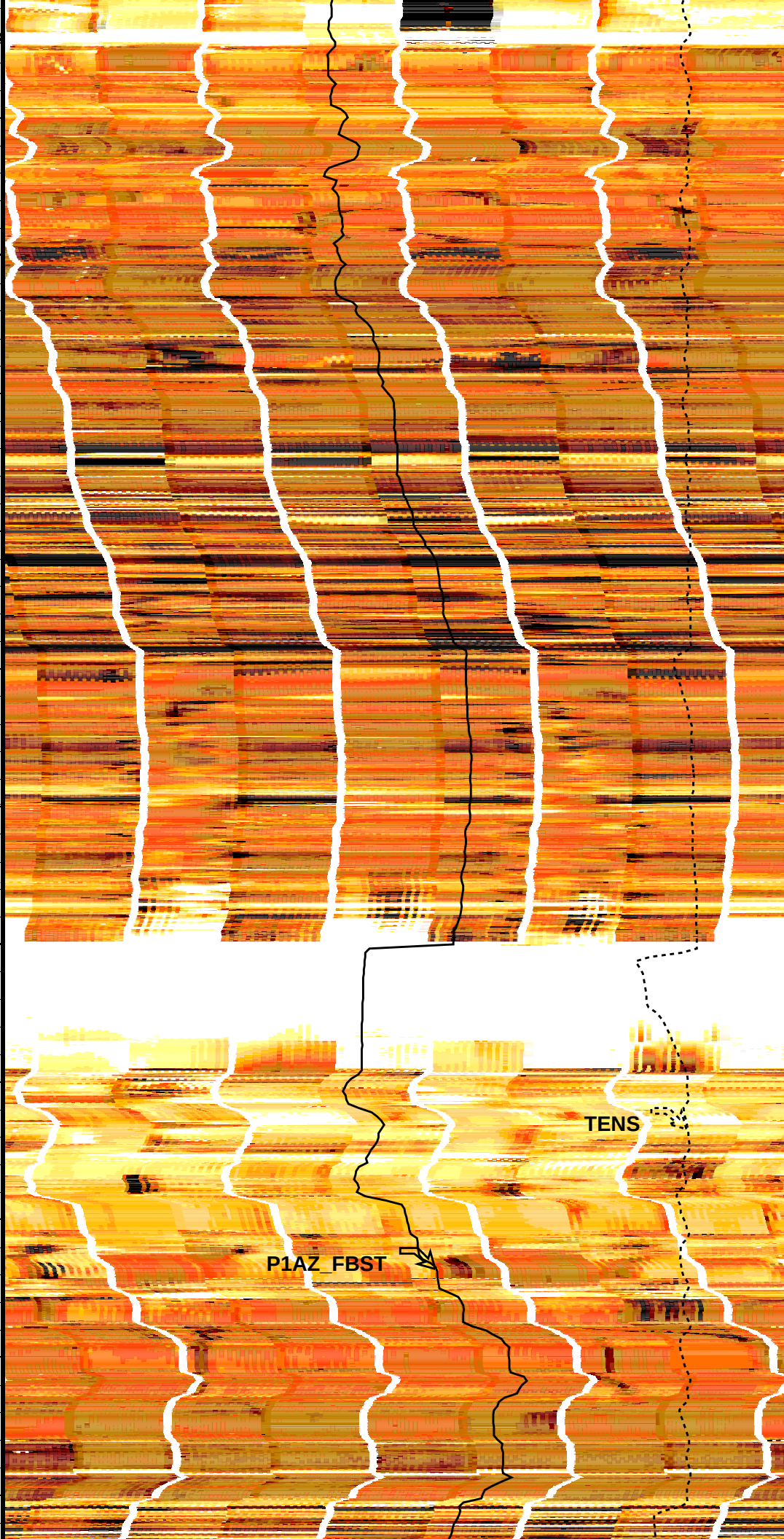
PLAZ FBST

HAZIM

FBCR

TENS

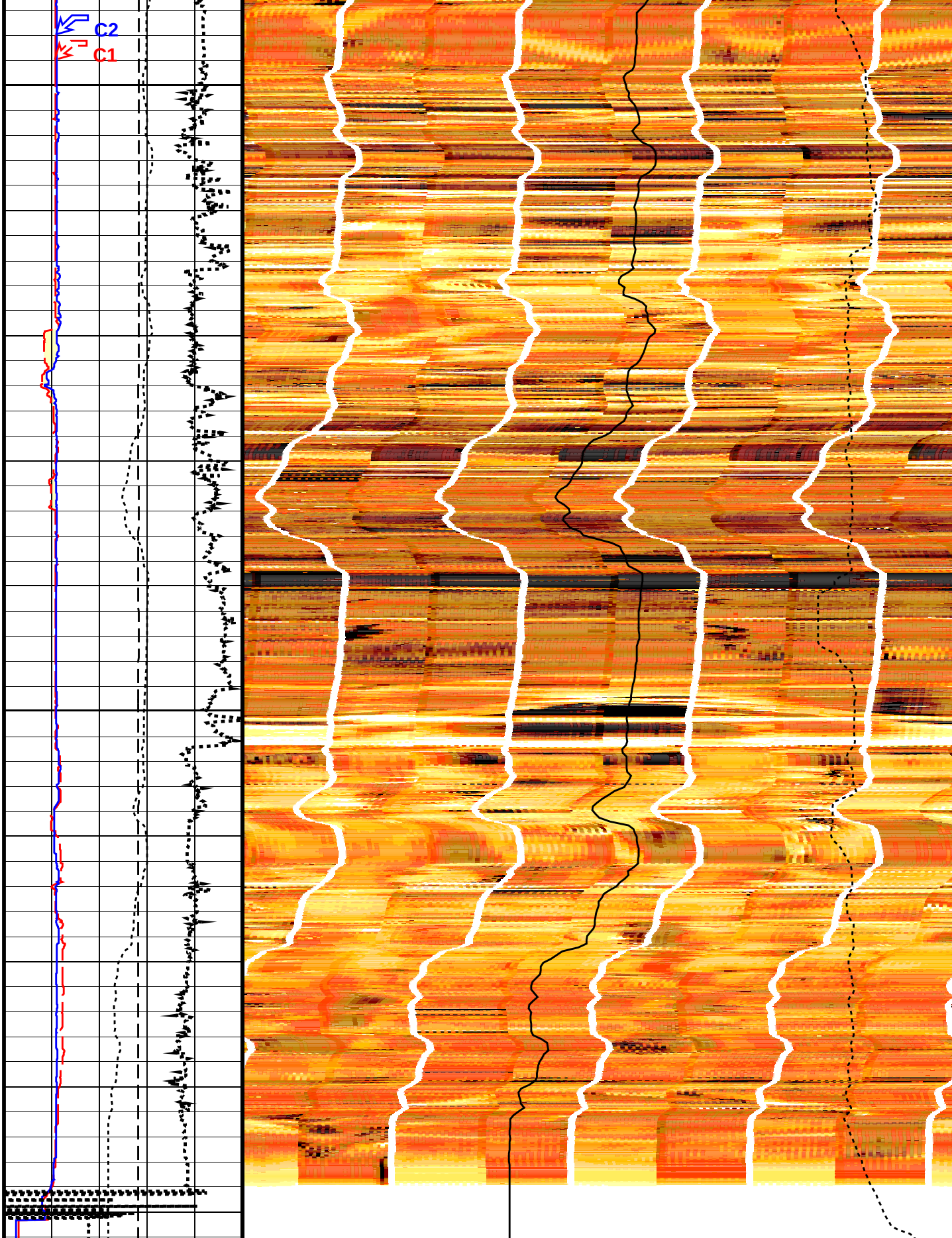
P1AZ_FBST



2425
SC

2450
SC

C2
C1



Caliper 1 (C1)
(IN) 4 14

Caliper 2 (C2)
(IN) 4 14

Image Orientation (P1AZ_FBST)
(DEG) 0 360

100.0000 123.3330 146.6670 170.0000 193.3330 216.6670 240.0000 263.3330 286.6670 310.0000 333.3330 356.6670 380.0000 403.3330 426.6670 450.0000

FBST/PADA (FBAA_P)
(---)

	Deviation (DEVIM)		Tension (TENS)	
	0	(DEG)	10	10000
	Hole Azimuth (HAZIM)		(LBF)	
	-40	(DEG)	360	0
	Pad One Azimuth (P1AZ_FBST)			
	-40	(DEG)	360	
	FMI Correlation Resistance (LOG) (FBCR)			
	2	(KOHM)	2000	

PIP SUMMARY

Time Mark Every 60 S

FMI Image Equalised , Patched.

Resistive (White) to Conductive (Black)

Format: FMI_BS_WRAP_BY_P1AZ_200 Vertical Scale: 1:200 Graphics File Created: 16-Nov-2009 11:39

OP System Version: 17C0-154

FBST-B	17C0-154	PPC1-B	17C0-154
BSP	17C0-154	EDTC-B	SKK-3882-EDTCB

Parameters

DLIS Name	Description	Value	
FBST-B: Full-Bore Scanner – B			
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
BOOTVN	Downhole Firmware Version	1.0	
EGCO	FMI EMEX and GAIN Correction	NO	
FBCD	Correct Dip Buttons Values by EMEX and Gain	OFF	
FBEF	FMI EMEX filtering activation	OFF	
FBMV	FMI EMEX maximum voltage calculation	OFF	
FDBD	FMI Dead Buttons detection	AUTO	
FDBP	FMI Dead Buttons Patching	ON	
FDFL	FMI DSP Filter Length	1	
FIEQ	FMI Image Equalisation	ON	
FIGA	FMI Image Gain	1	
FIOF	FMI Image Offset	0	
FLM	FMI Logging Mode	8PAD	
FPCO	FMI Target Phase to Compensate	0	DEG
FPSA	FMI Peak Signal Amplitude for Required Servo Level	ON	
FWVN	Downhole Firmware Version	1.0	
GMOD	Gain Mode	MANU	
GPITF_LOGGING_SPEED	Max Logging Speed	3600_FPH	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MDEC	Magnetic Field Declination	12.6725	DEG
RBS	Resistivity Button Selection	AUTO	
RBSI	Auto RBS Change Interval	10	
SOFF	Standoff	0.975	IN
XGAI_FBST	Gain Value in Manual Mode	0_dB	
XGMO	EMEX & Gain Modes	EmexManu_GainManu	
XMOD	EMEX Voltage Regulation Mode	MANU	
XVOL	EMEX Voltage	0	V
PPC1-B: Powered Positioning Device/Caliper 1			
	PPC1 Caliper Type	CAL_STD	
CLBD_PPC	PPC Calibration data selection	ROM	
PWEL_PPC	PPC Primary Tool for WellCAD	NONE	
SWEL_PPC	PPC Secondary Tool for WellCAD (45 Degrees Rotation PPC Tool)	NONE	
WRDR_PPC	PPC Rotation Direction for Secondary Tool	NONE	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	85	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	STAN	
ESAI	Formation Salinity	-50000	RPM

FSCAL	Formation Salinity	30000	PPM
FSCOR	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	YES	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	6.125	IN
BSAL	Borehole Salinity	28000.00	PPM
CSIZ	Current Casing Size	7.000	IN
CWEI	Casing Weight	29.00	LB/F
DFD	Drilling Fluid Density	9.90	LB/G
DO	Depth Offset for Playback	0.0	M
FLEV	Fluid Level	0.00	M
MST	Mud Sample Temperature	29.70	DEGC
PBVSADP	Use alternate depth channel for playback	YES	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.2070	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2493.5	M
TDD	Total Depth - Driller	2500.00	M
TDL	Total Depth - Logger	2493.50	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Speed Corrected Depth Log

Input DLIS Files

FMI_CAL_MAXS_MAPC_027PUP FN:24 16-Nov-2009 11:01 2471.0 M 1528.1 M

Schlumberger

CALIBRATIONS

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Full-Bore Scanner - B Wellsite Calibration - Caliper Calibration							
Before: 6-Nov-2009 20:27							
Caliper 1 Small Jig	8.000	N/A	7.912	N/A	N/A	N/A	IN
Caliper 2 Small Jig	8.000	N/A	7.630	N/A	N/A	N/A	IN
Caliper 1 Large Jig	12.00	N/A	11.67	N/A	N/A	N/A	IN
Caliper 2 Large Jig	12.00	N/A	11.42	N/A	N/A	N/A	IN
Powered Positioning Device/Caliper 1 Master Calibration - PPC1 LVDT5 Master Calibration							
Master: Calibration not done							
LVDT5 Full Close Position	-1.510	N/A	--	--	--	--	IN
LVDT5 Powered 4 Position	1.410	N/A	--	--	--	--	IN

LVDT5 Full Open Position	-1.310	N/A	--	--	--	--	IN
Multimode Array Sonic Power Cartridge Master Calibration – SSCF Sensor Sensitivity Correction Factor							
Master: 16-Oct-2009 9:25							
SSCF Minimum	1.000	0.9234	--	--	--	--	---
SSCF Maximum	1.000	1.124	--	--	--	--	---
Multimode Array Sonic Power Cartridge Master Calibration – SSCR Sensor Sensitivity Correction Factor LF to HF Ratio							
Master: 16-Oct-2009 9:25							
SSCR Minimum	1.000	0.9249	--	--	--	--	---
SSCR Maximum	1.000	1.049	--	--	--	--	---
Multimode Array Sonic Power Cartridge Master Calibration – STDF Sensor Time Delay Factor							
Master: 16-Oct-2009 9:25							
STDF Minimum	0	-0.6627	--	--	--	--	US
STDF Maximum	0	0.7072	--	--	--	--	US

Full-Bore Scanner – B / Equipment Identification

Primary Equipment:

FullBore Scanner Sonde	FBSS – B	1812
FullBore Scanner Sonde Upper part	FBSH – A	1803
GPIT Cartridge – F	GPIC – F	832
FullBore Scanner Sonde Cartridge	FBSC – B	1809
Insulating Sub	AH – 185	1918
Flex Joint	AH – 184	
FullBore Scanner Control Cartridge	FBCC – A	1823

Auxiliary Equipment:

Electronics Cartridge Housing	ECH – MRA	6807
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Full-Bore Scanner – B Wellsite Calibration							
Caliper Calibration							
Phase	Caliper 1 Small Jig IN		Value	Phase	Caliper 2 Small Jig IN		Value
Before			7.912	Before			7.630
	6.800 (Minimum)	8.000 (Nominal)	9.200 (Maximum)		6.800 (Minimum)	8.000 (Nominal)	9.200 (Maximum)
Phase	Caliper 1 Large Jig IN		Value	Phase	Caliper 2 Large Jig IN		Value
Before			11.67	Before			11.42
	10.20 (Minimum)	12.00 (Nominal)	13.80 (Maximum)		10.20 (Minimum)	12.00 (Nominal)	13.80 (Maximum)
Before: 6-Nov-2009 20:27							

Powered Positioning Device/Caliper 1 / Equipment Identification

Primary Equipment:

PPC Powered Positioning Device/Caliper	PPC1 – B	8332
PPC1 Caliper Standard	PPC_ –	8332

Auxiliary Equipment:

Powered Positioning Device/Caliper 1 Master Calibration											
PPC1 LVDT5 Master Calibration											
Phase	LVDT5 Full Close Position IN		Value	Phase	LVDT5 Full Open Position IN		Value	Phase	LVDT5 Powered 4 Position IN		Value
Master	NOT DONE		N/A	Master	NOT DONE		N/A	Master	NOT DONE		N/A
	-1.710 (Minimum)	-1.510 (Nominal)	-1.310 (Maximum)		-1.550 (Minimum)	-1.310 (Nominal)	-1.070 (Maximum)		1.200 (Minimum)	1.410 (Nominal)	1.610 (Maximum)
Master: Calibration not done											

Multimode Array Sonic Power Cartridge / Equipment Identification

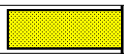
Primary Equipment:

Multimode Array Sonic Minimum Service So	MAMS – BA	8073
Multimode Array Sonic Control Cartridge	MAPC – BA	8071

Auxiliary Equipment:

Electronics Cartridge Housing	ECH – SF	8071
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Multimode Array Sonic Power Cartridge Master Calibration									
SSCF Sensor Sensitivity Correction Factor									
Phase	SSCF Minimum ---			Value	Phase	SSCF Maximum ---			Value
Master				0.9234	Master				1.124
0.5000 (Minimum)		1.000 (Nominal)		1.700 (Maximum)	0.5000 (Minimum)		1.000 (Nominal)		1.700 (Maximum)
Master: 16-Oct-2009 9:25									

Multimode Array Sonic Power Cartridge Master Calibration							
SSCR Sensor Sensitivity Correction Factor LF to HF Ratio							
Phase	SSCR Minimum ---		Value	Phase	SSCR Maximum ---		Value
Master			0.9249	Master			1.049
	0.9000 (Minimum)	1.000 (Nominal)	1.700 (Maximum)		0.9000 (Minimum)	1.000 (Nominal)	1.700 (Maximum)
Master: 16-Oct-2009 9:25							

Multimode Array Sonic Power Cartridge Master Calibration							
STDF Sensor Time Delay Factor							
Phase	STDF Minimum US		Value	Phase	STDF Maximum US		Value
Master			-0.6627	Master			0.7072
	-2.000 (Minimum)	0 (Nominal)	2.000 (Maximum)		-2.000 (Minimum)	0 (Nominal)	2.000 (Maximum)
Master: 16-Oct-2009 9:25							

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:

EDTC Gamma Ray Detector
Enhanced DTS Cartridge

EDTG - A/B
EDTC - B

Auxiliary Equipment:

EDTC Housing

EDTH - B

8665

Company: **Lakes Oil N.L.**

Schlumberger

Well: **Wombat-4**

Field: **Wombat**

Rig: **Hunt #2**

Country: **Australia**

FMI Image Log

Run 2 & 3

Scale: 1:200MD