

Company: QUICKSILVER RESOURCES INC

Well: K Diamond Ranch 32 10

Field: WILDCAT

County: MOFFAT State: COLORADO

SLIM CEMENT MAPPING LOG
CBL-VDL
GAMMA RAY-CCL

County: MOFFAT
Field: WILDCAT
Location: 2211 FNL & 1700 FEL
Well: K Diamond Ranch 32 10
Company: QUICKSILVER RESOURCES INC

LOCATION

2211 FNL & 1700 FEL

Elev.: K.B. 6283.00 ft
G.L. 6257.00 ft
D.F. 6282.00 ft

Permanent Datum: _____
Log Measured From: KELLY BUSHING
Drilling Measured From: KELLY BUSHING

Elev.: 6257.00 ft
26.00 ft above Perm. Datum

API Serial No.
05081076920000

Section
10

Township
6N

Range
93W

Logging Date 5-Nov-2012

Run Number 2

Depth Driller 9122 ft

Schlumberger Depth 9040 ft

Bottom Log Interval 9031 ft

Top Log Interval 5400 ft

Casing Fluid Type FRESH WATER

Salinity

Density 8.32 lbm/gal

Fluid Level 3750 ft

BIT/CASING/TUBING STRING

Bit Size 7.875 in

From 6412 ft

To 9122 ft

Casing/Tubing Size 5.500 in

Weight 17 lbm/ft

Grade P-110

From 6412 ft

To 9122 ft

Maximum Recorded Temperatures 222 degF

Logger On Bottom 5-Nov-2012 10:00

Unit Number 391 Location GRAND JUNCTION CO

Recorded By KIRSTIE BUNTING

Witnessed By SCOTT LATKA

Free Pipe Amp= 77.5mV / CBAF= 1

PVT DATA				Run 1	Run 2	Run 3
Oil Density						
Water Salinity						
Gas Gravity						
Bo						
Bw						
1/Bq						
Bubble Point Pressure						
Bubble Point Temperature						
Solution GOR						
Maximum Deviation						
CEMENTING DATA						
Primary/Squeeze	Primary					
Casing String No						
Lead Cement Type						
Volume						
Density						
Water Loss						
Additives						
Tail Cement Type						
Volume						
Density						
Water Loss						
Additives						
Expected Cement Top						
Logging Date						
Run Number						
Depth Driller						
Schlumberger Depth						
Bottom Log Interval						
Top Log Interval						
Casing Fluid Type						
Salinity						
Density						
Fluid Level						
BIT/CASING/TUBING STRING						
Bit Size						
From						
To						
Casing/Tubing Size						
Weight						
Grade						
From						
To						
Maximum Recorded Temperatures						
Logger On Bottom						
Unit Number						
Recorded By						
Witnessed By						

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

STOP

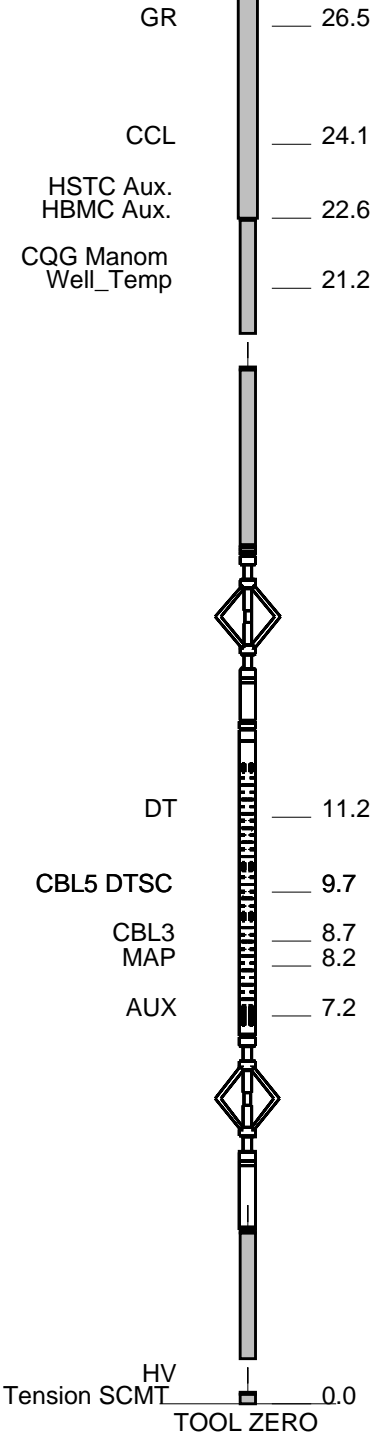
HBMS-B

31.4

PSC-A
HUDH-A
HSTC-A
HBMC-A
GR
CCL
HBMC
HTPS-A 2880
HCQG_E_Mano
RTD_Thermometer

SCMT-CA
SCMC-CA 8120
SECH-CA
SCME-K
SCMS-CA 8143
SCMX-CA

AH-BN



20.3

0.2

MAXIMUM STRING DIAMETER 2.07 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Schlumberger

Main Pass

MAXIS Field Log

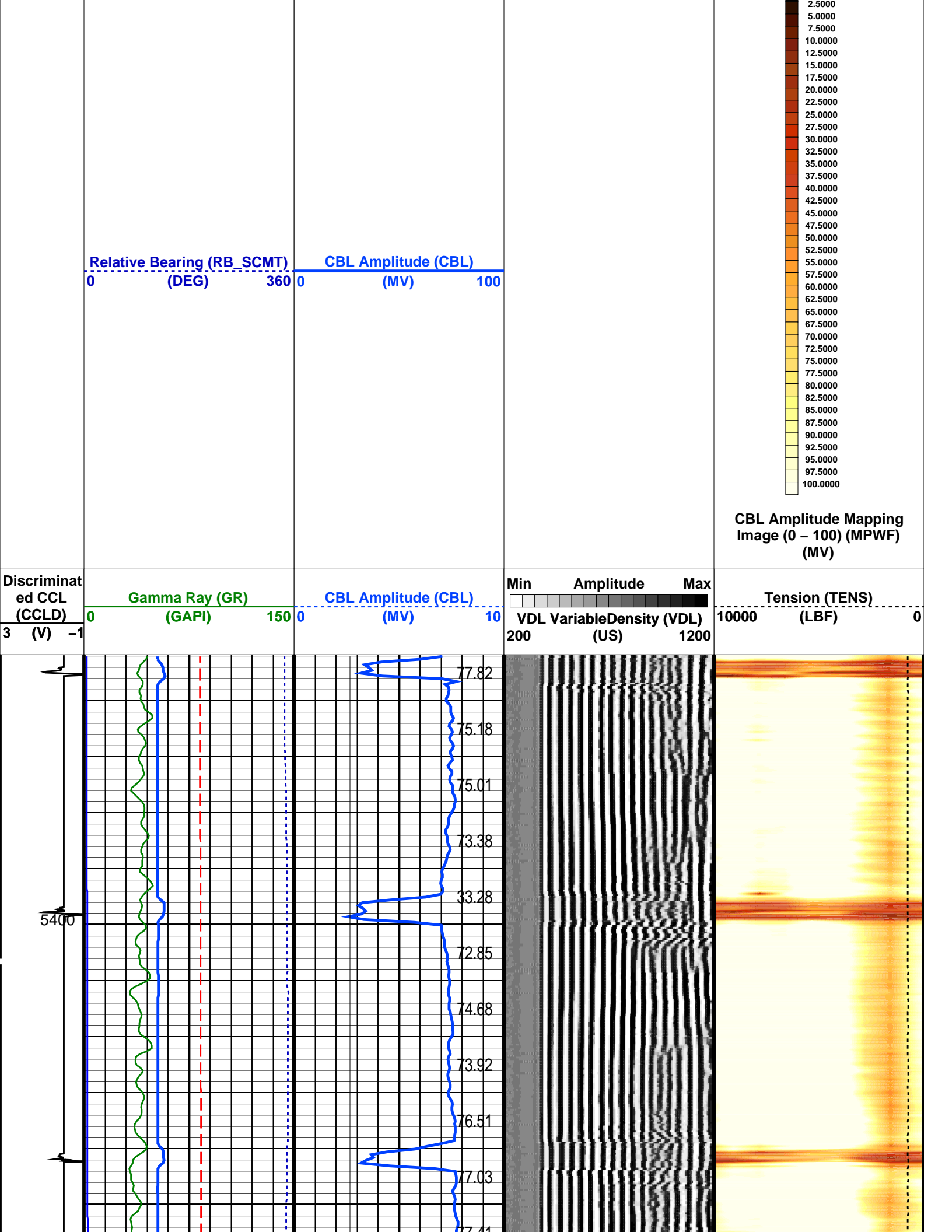
Company: QUICKSILVER RESOURCES INCWell: K Diamond Ranch 32 10

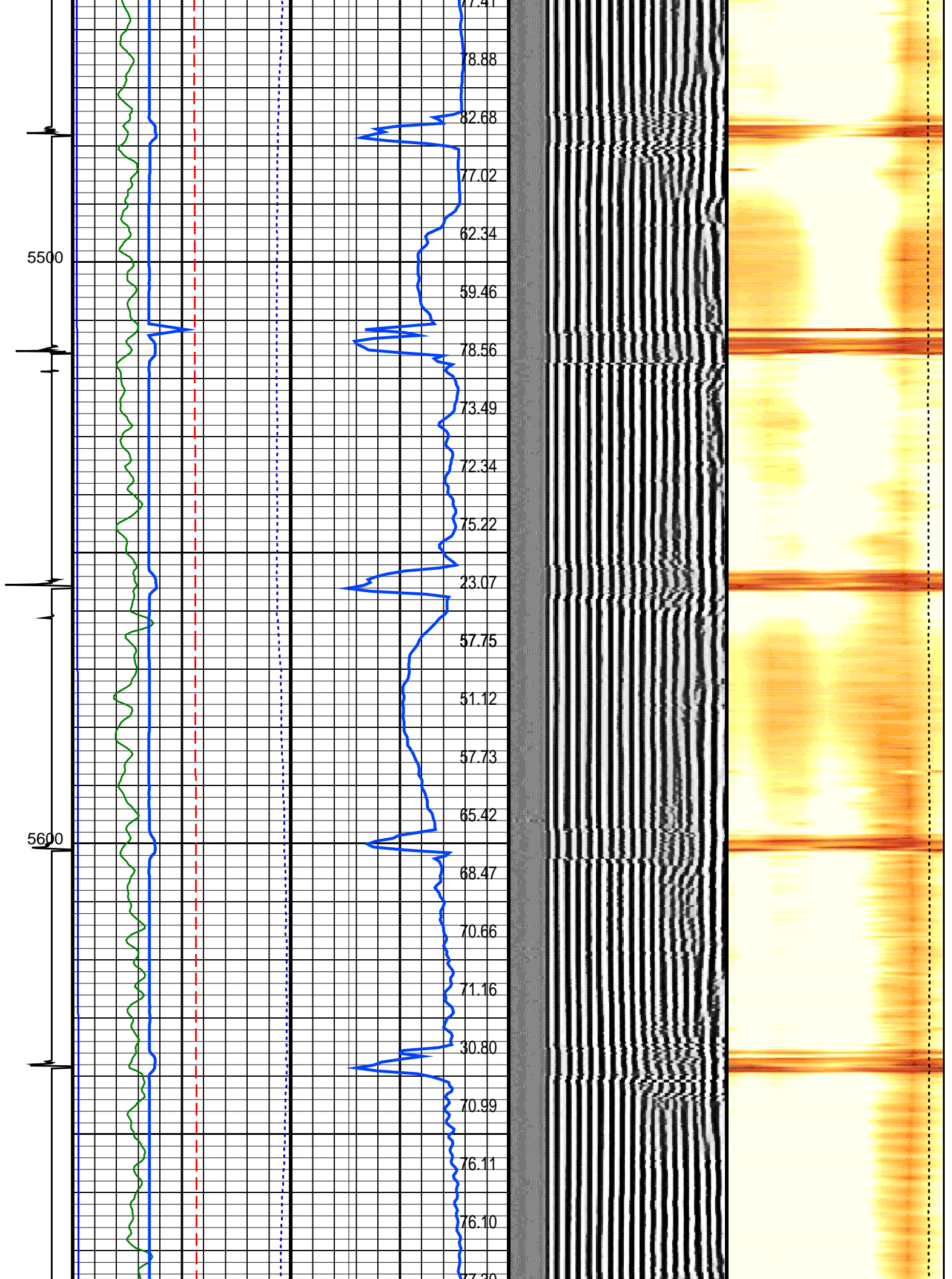
Input DLIS Files					
SCMT_HBMS_014PUP	FN:13	05-Nov-2012 23:16	9076.0 FT	5351.5 FT	
Output DLIS Files					
DEFAULT	SCMT_HBMS_012PUP	FN:11	PRODUCER	06-Nov-2012 14:51	9076.0 FT 5351.5 FT

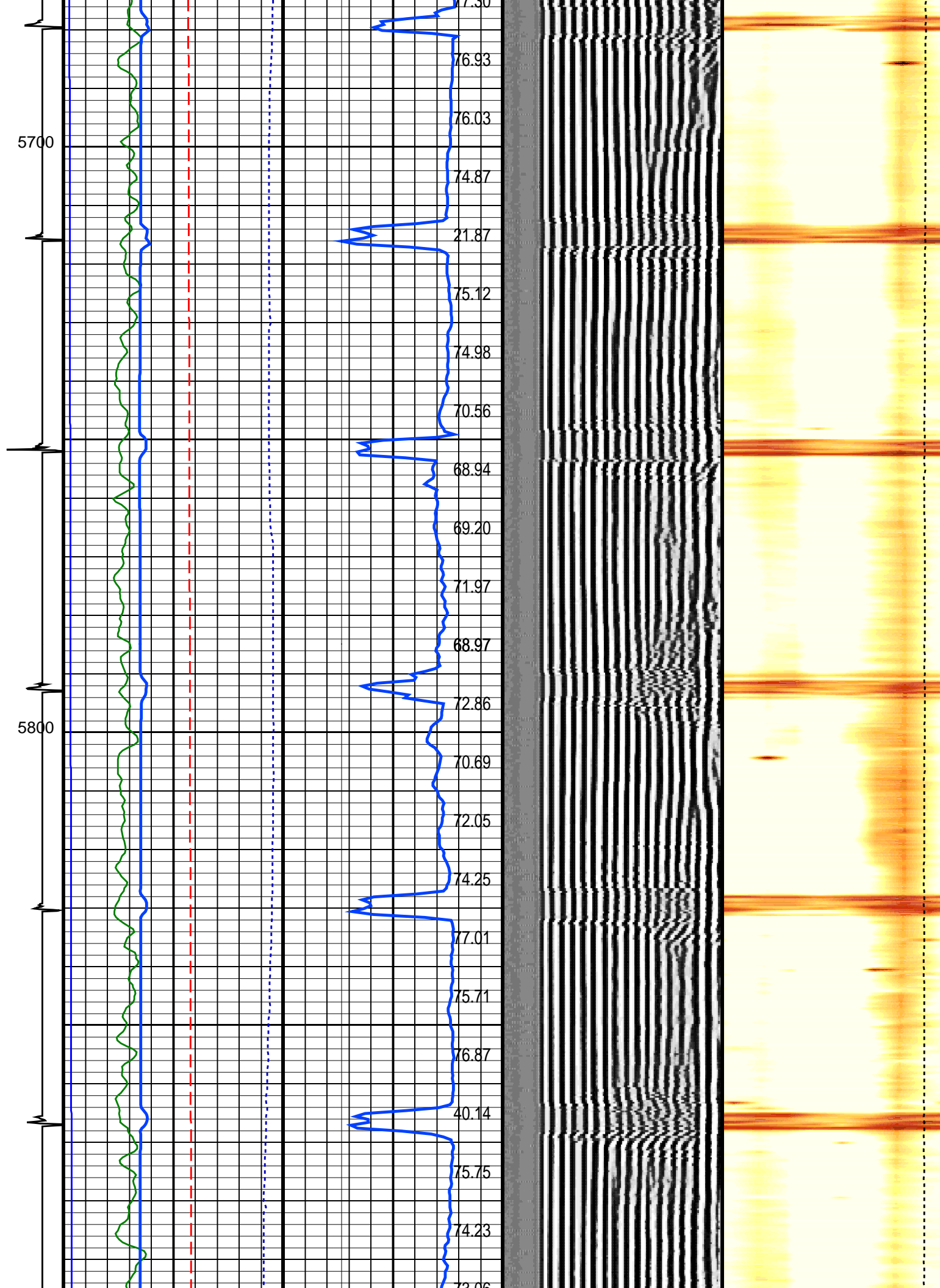
OP System Version: 19C0-187					
SCMT-CA	19C0-187	HBMS-B	19C0-187		

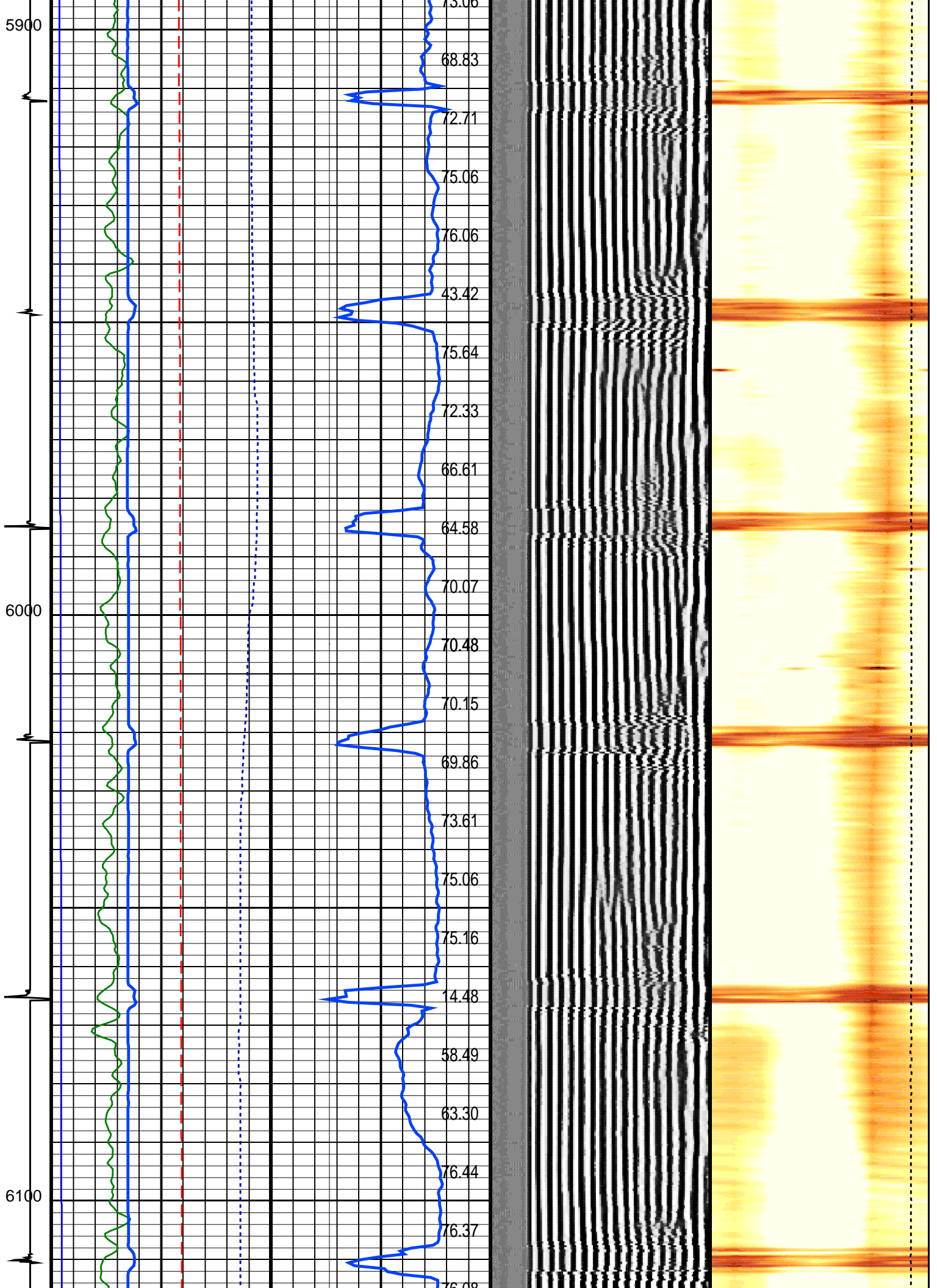
PIP SUMMARY					
Time Mark Every 60 S					

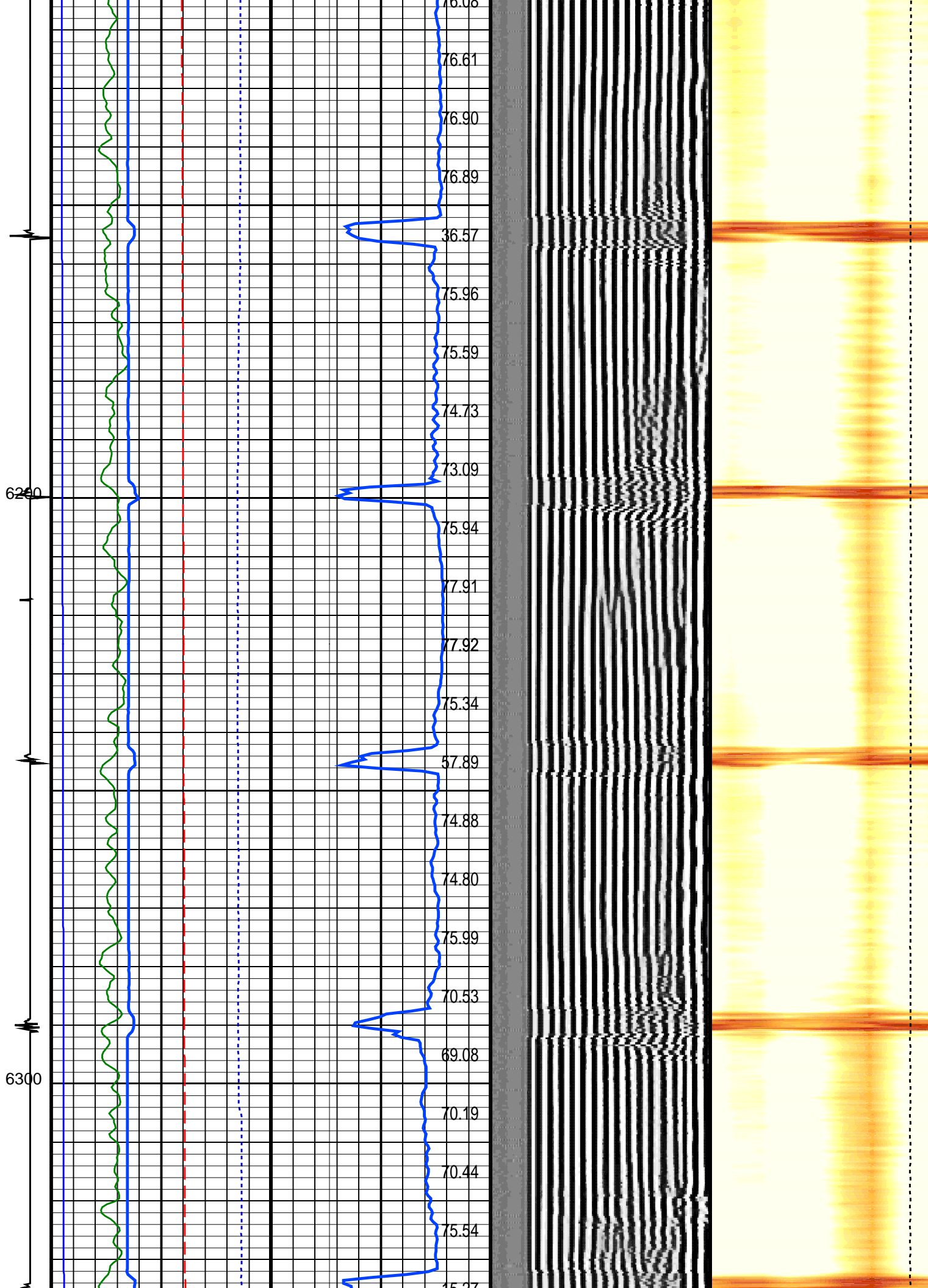
Cbl 3.ft Transit Time (TT)			GoodBond	
200	(US)	400	From ACBL to GOBO	
Well Pressure (WPRE)			CBL Values in mV (CBL)	
0	(PSIA)	10000	(----	
Well Temperature (WTEP)			Good Bond (GOBO)	
0	(DEGF)	300	0	(MV) 10

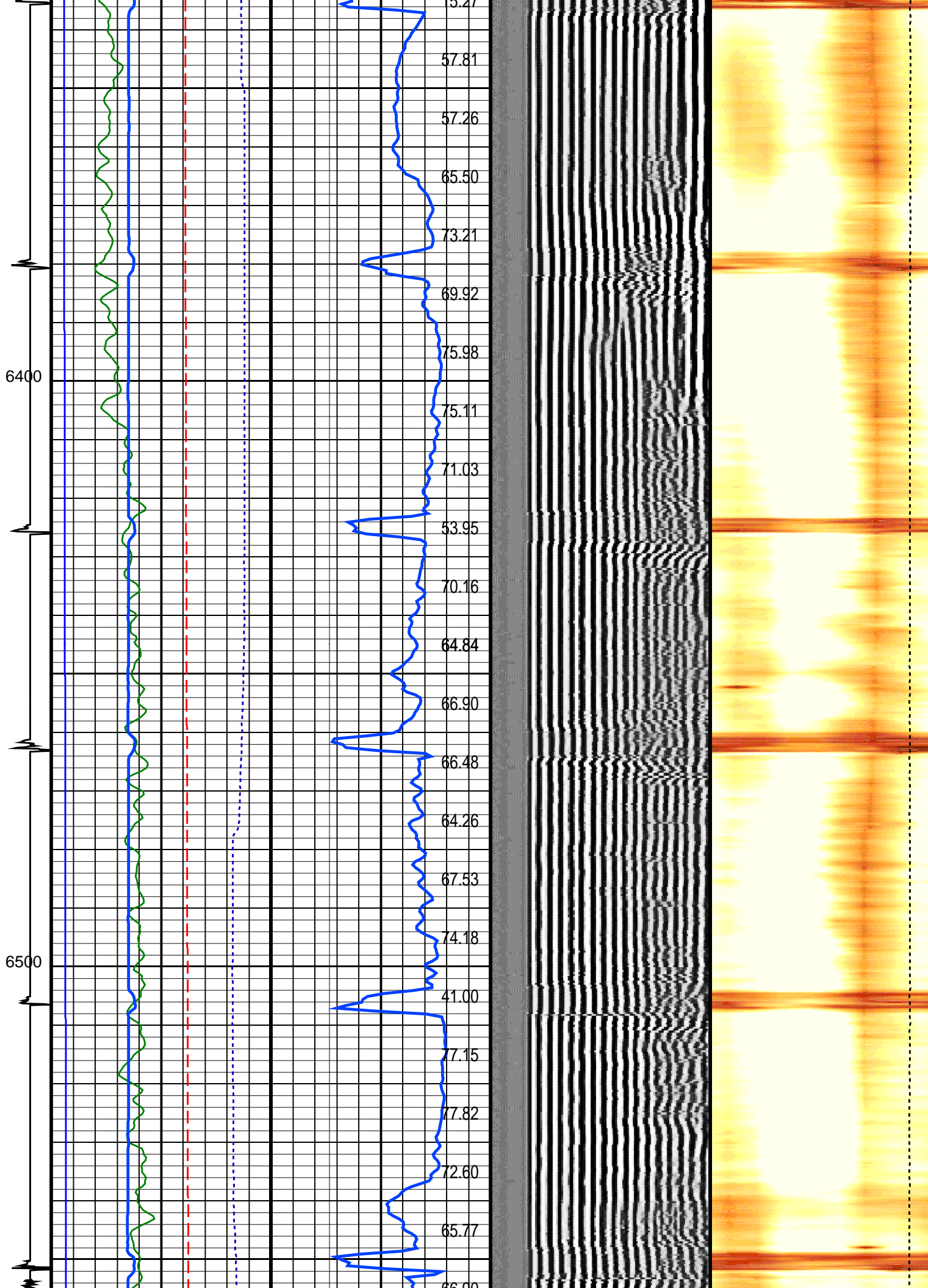


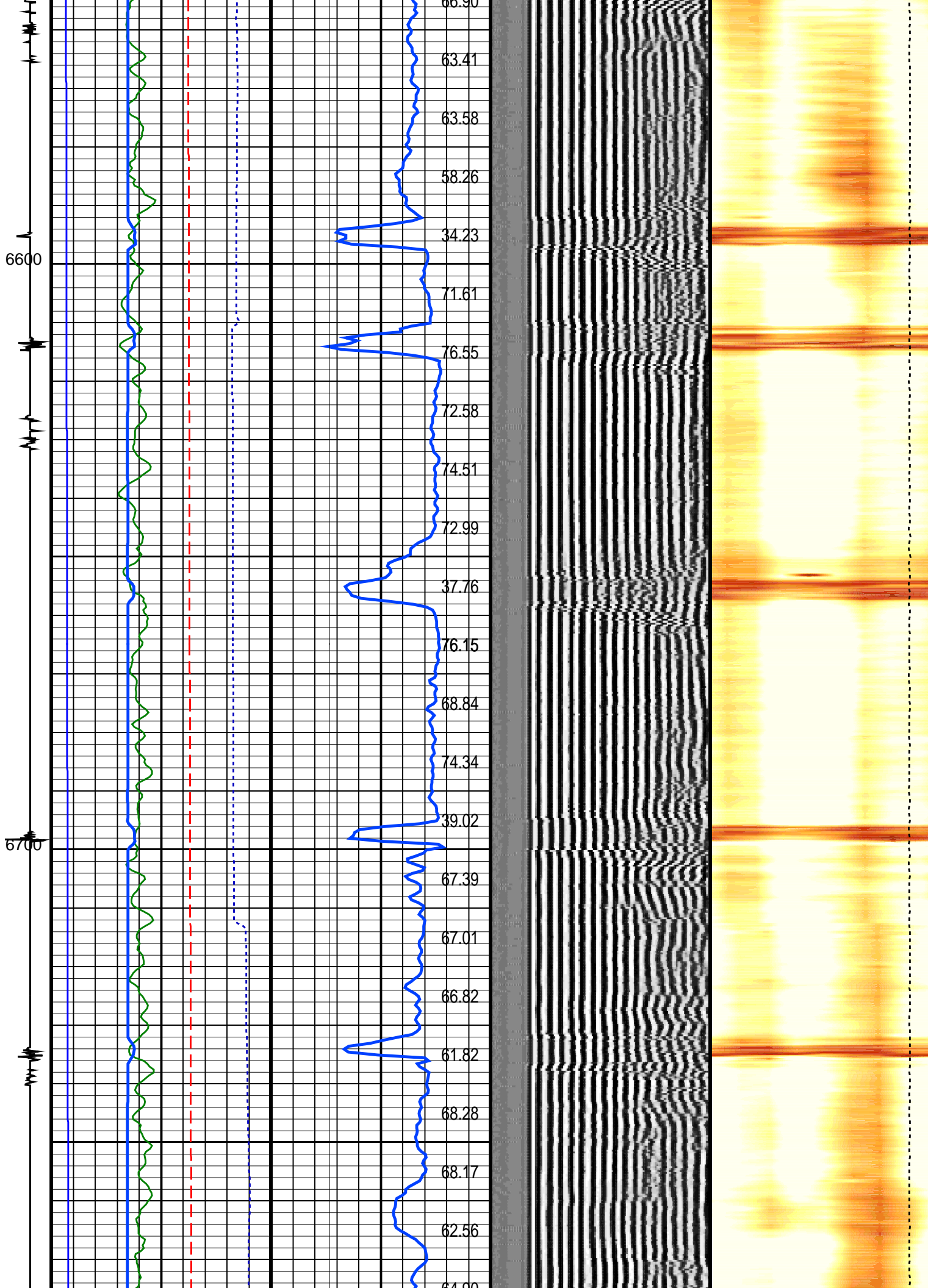


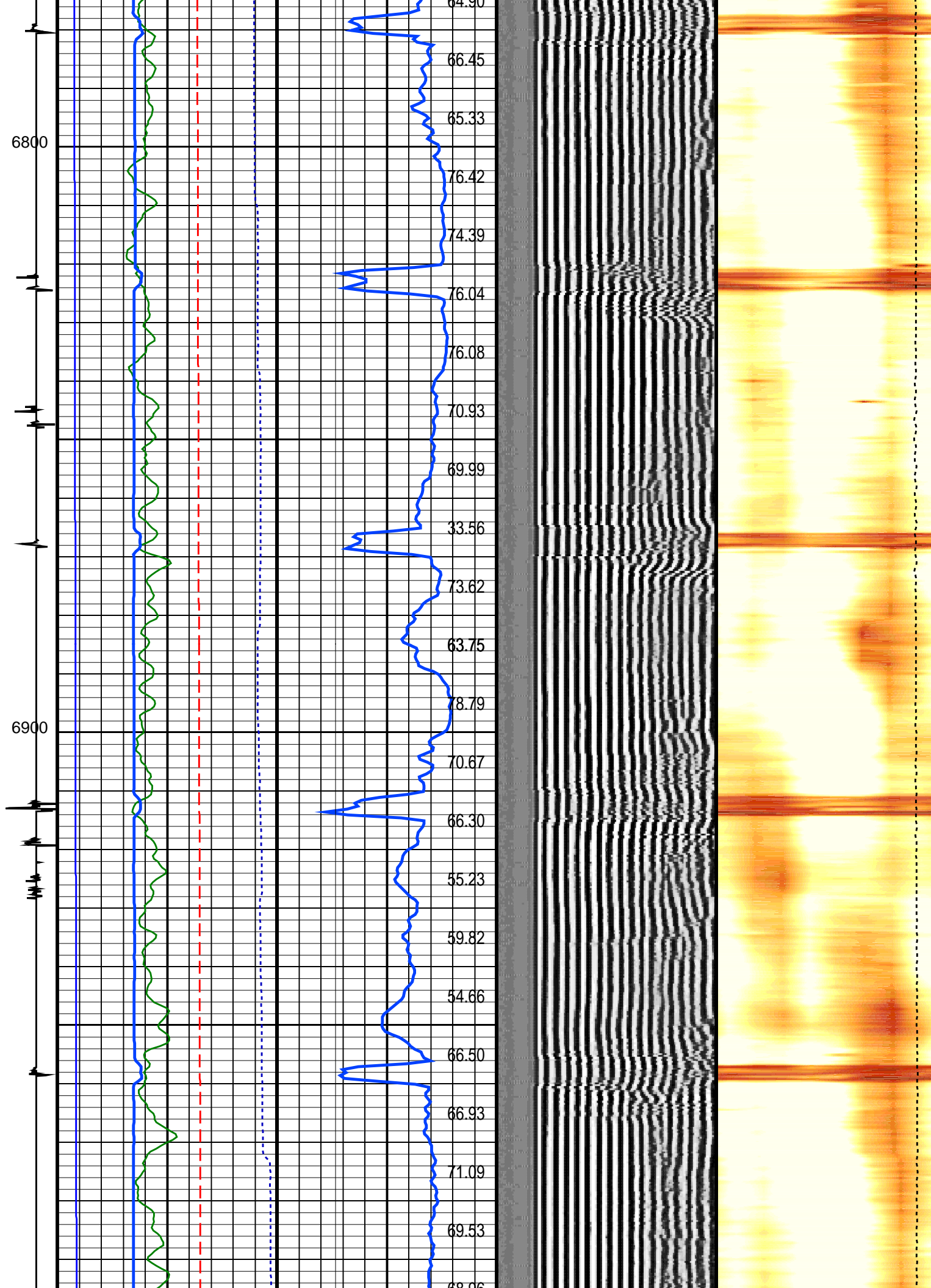


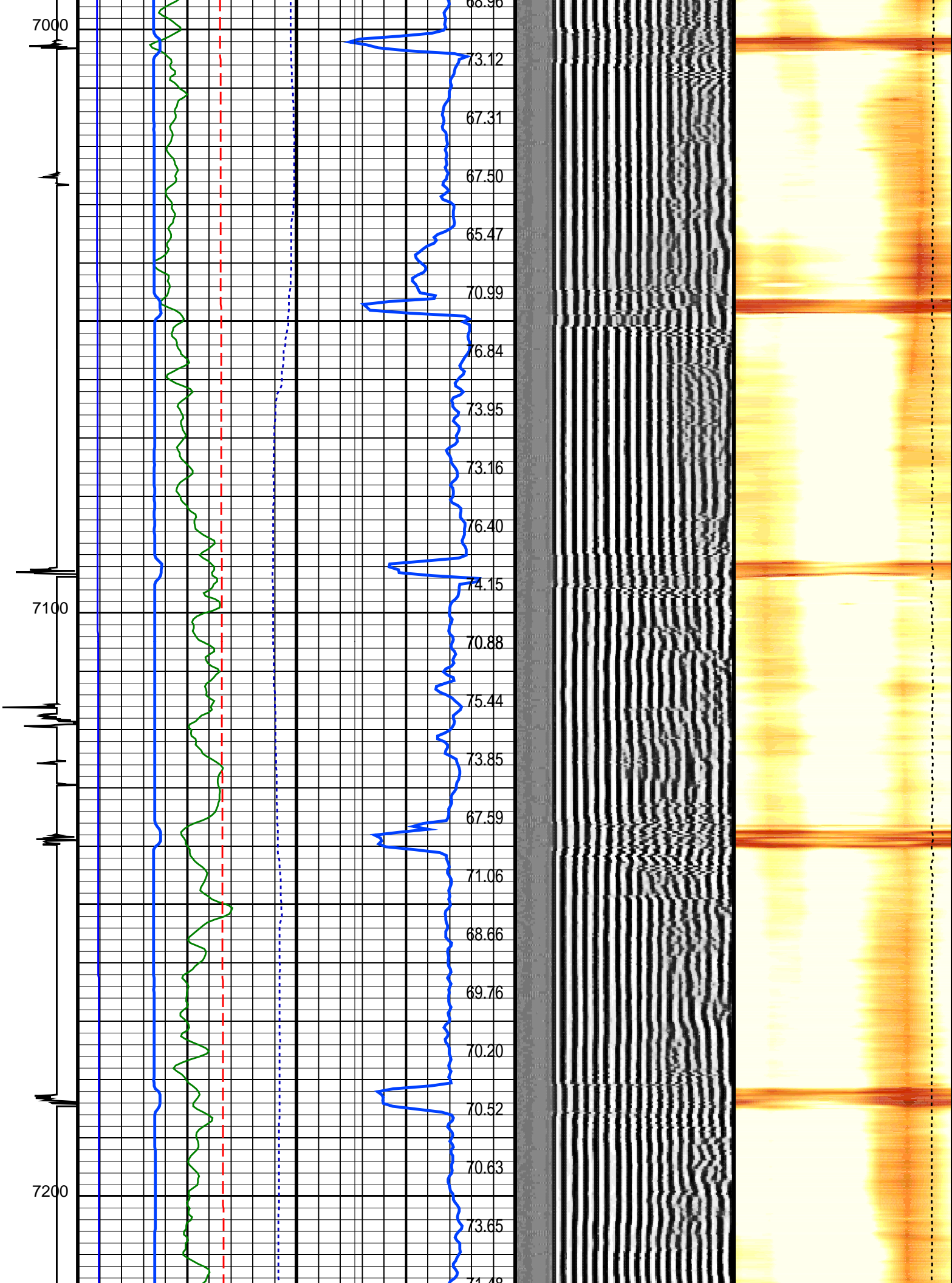


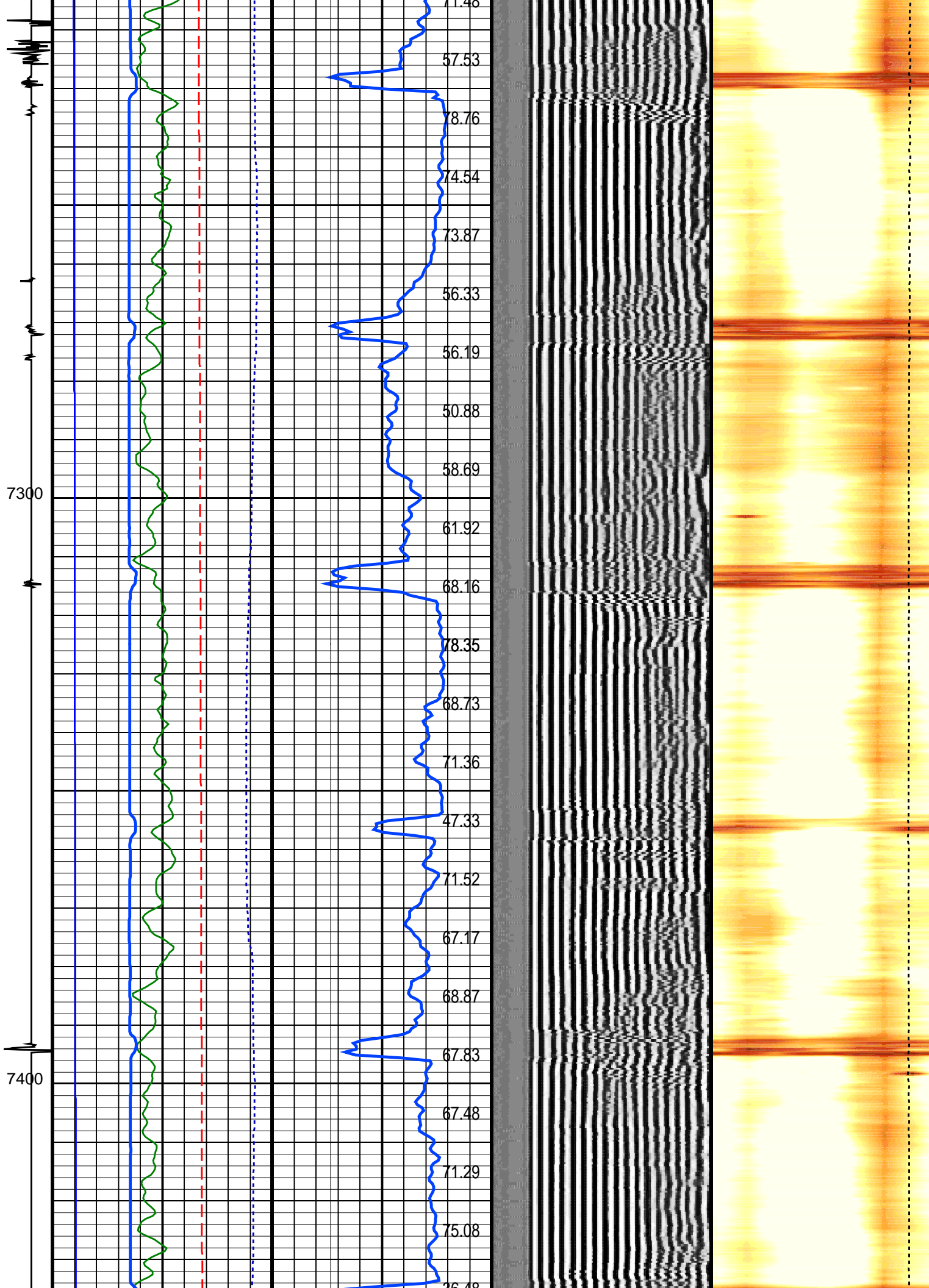


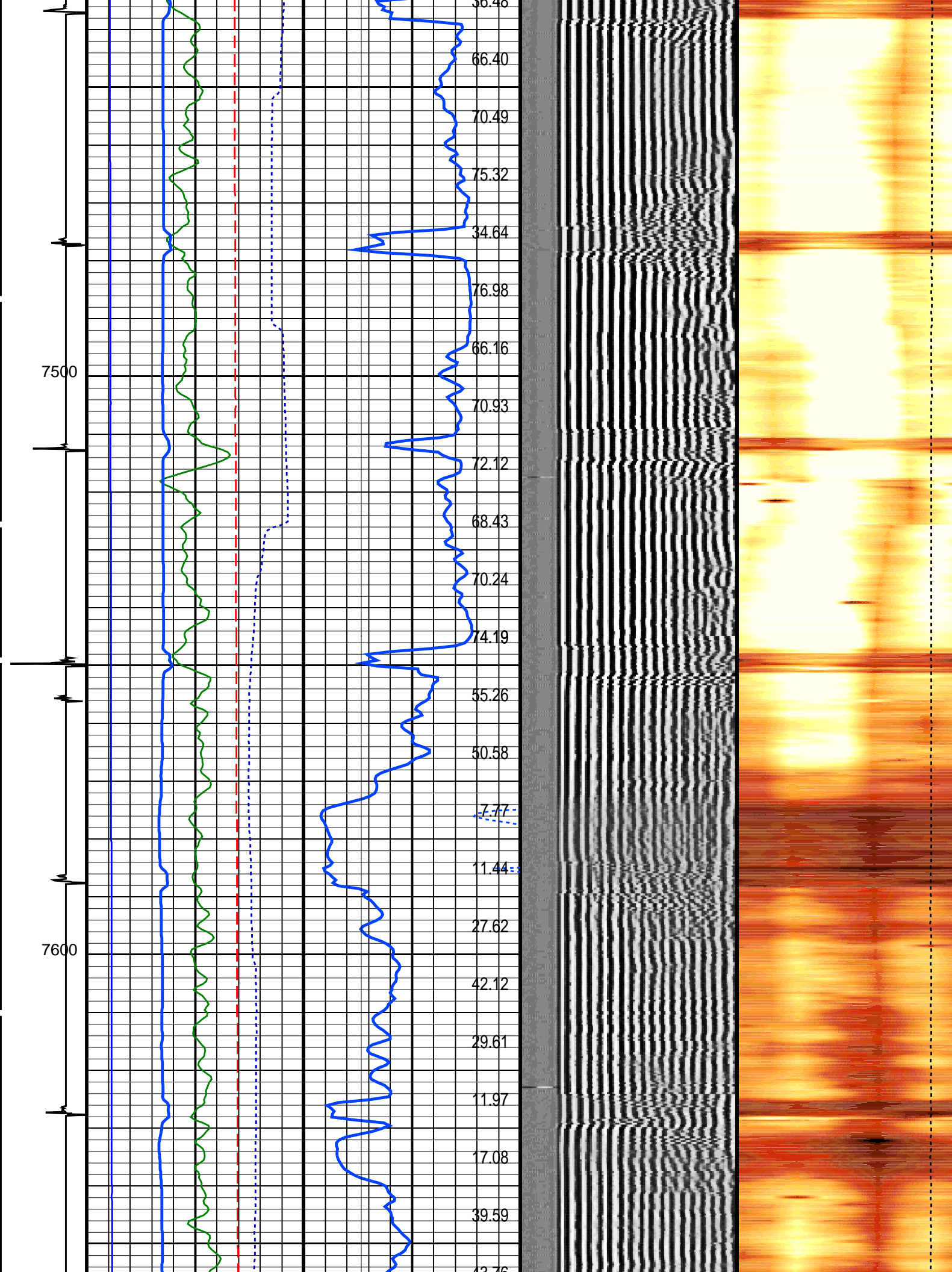


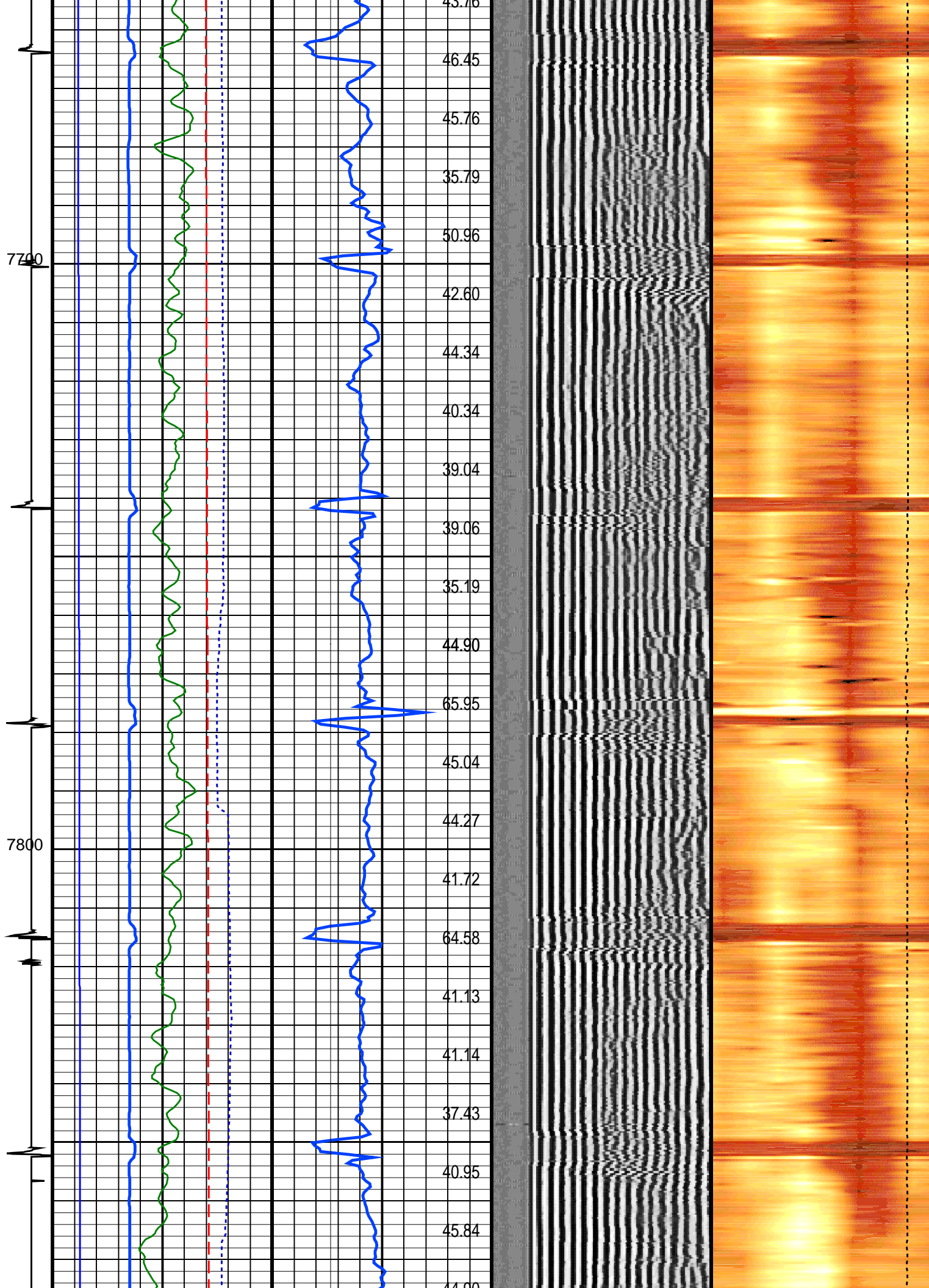


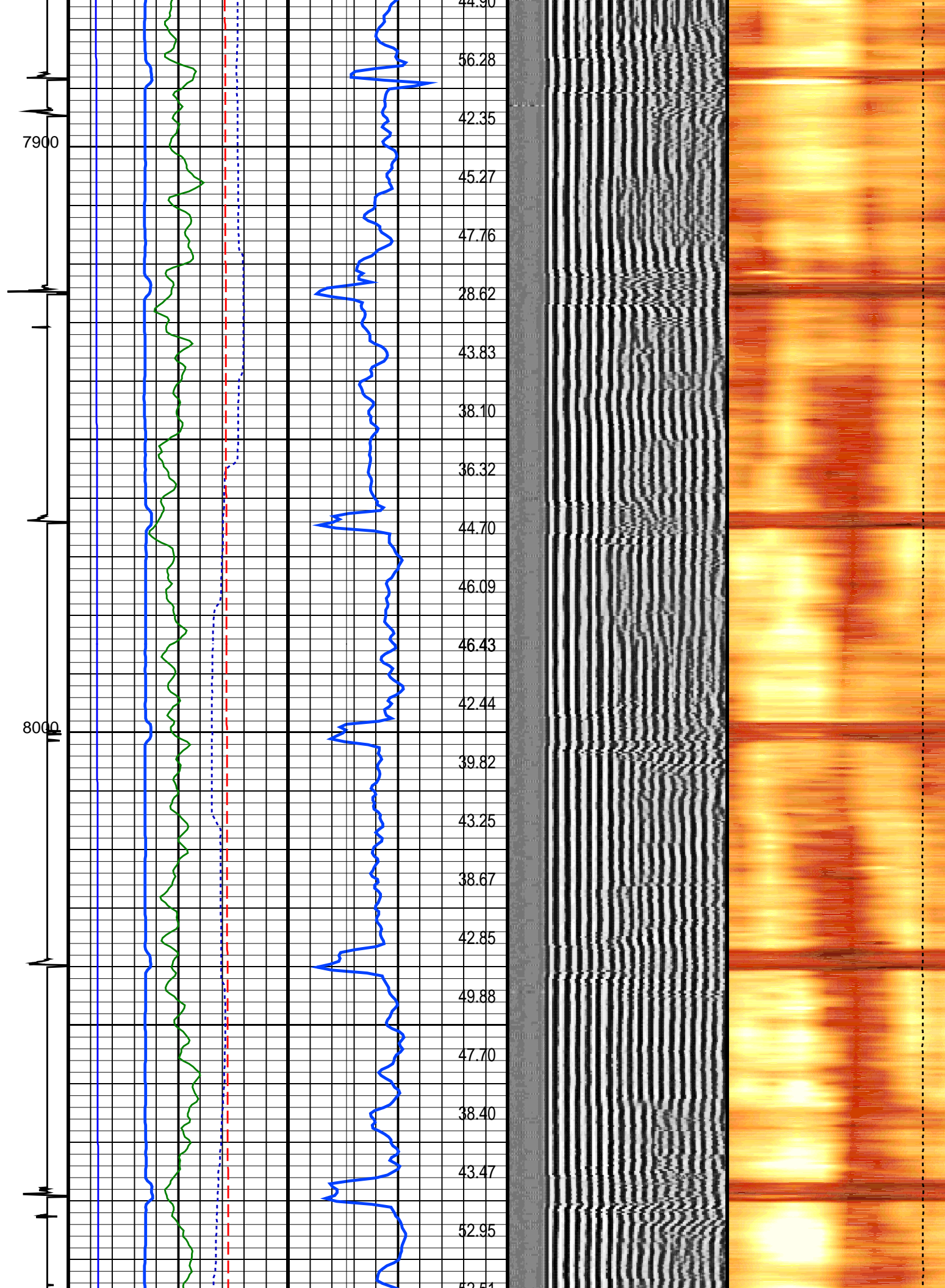


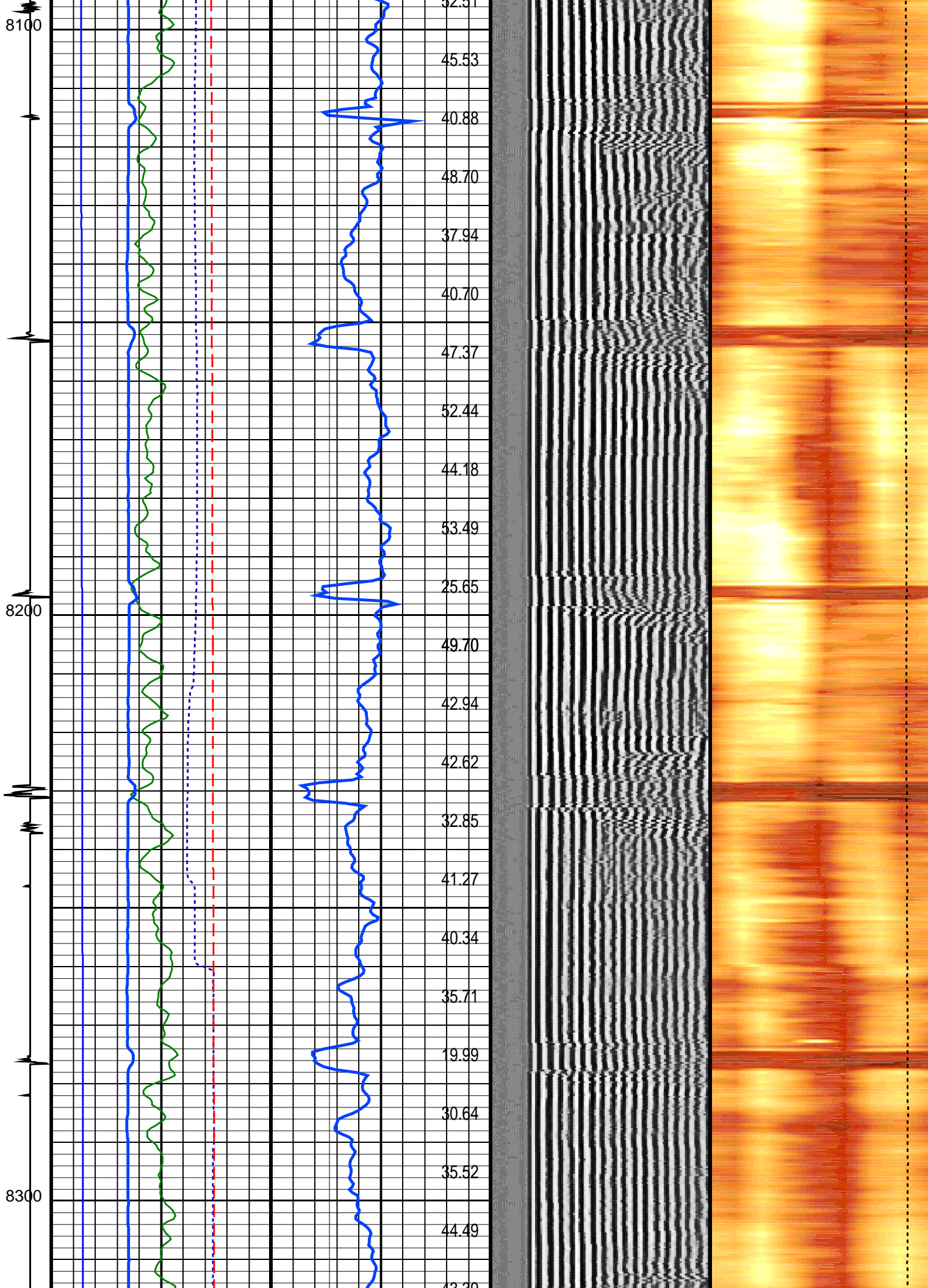


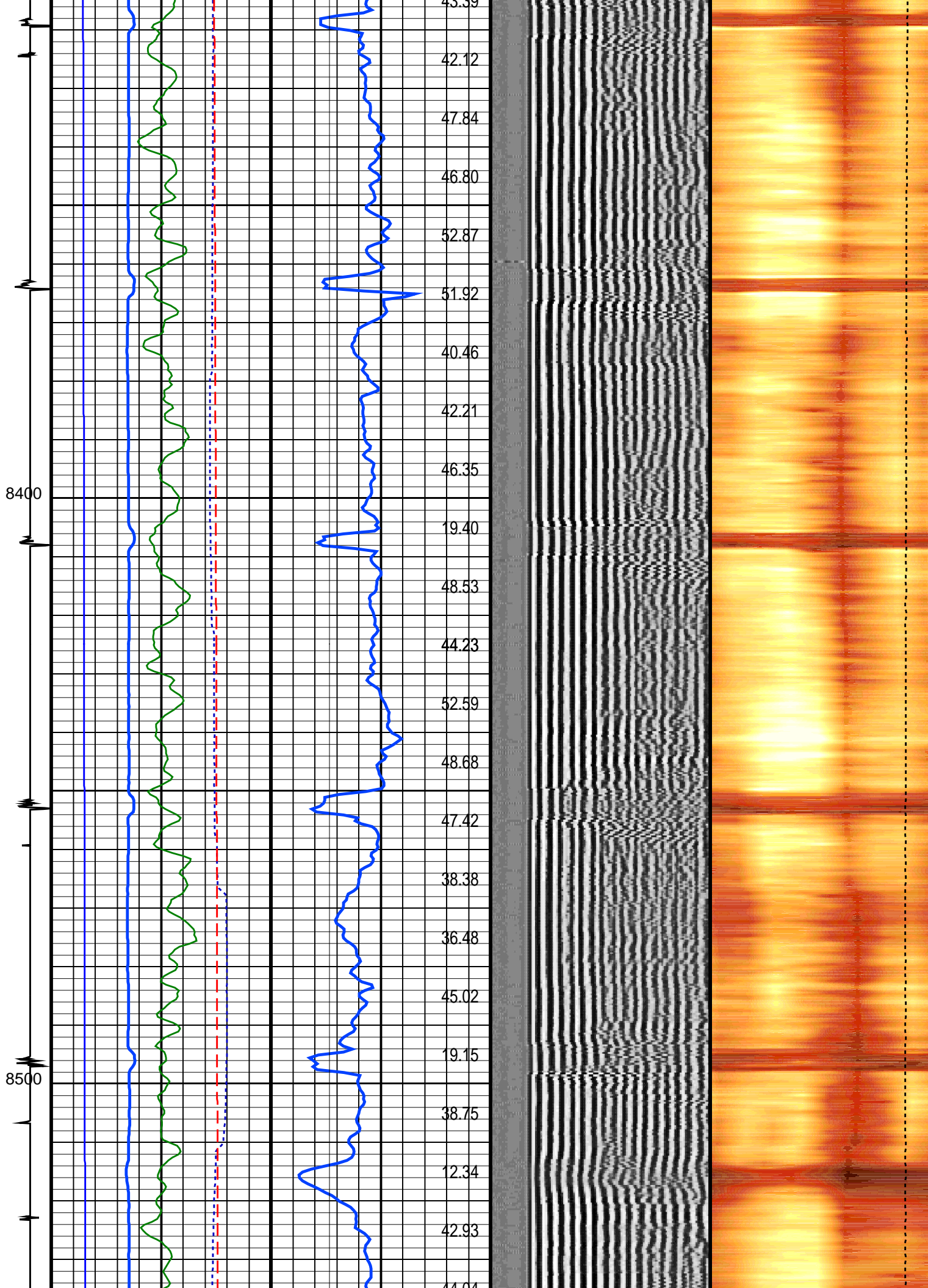


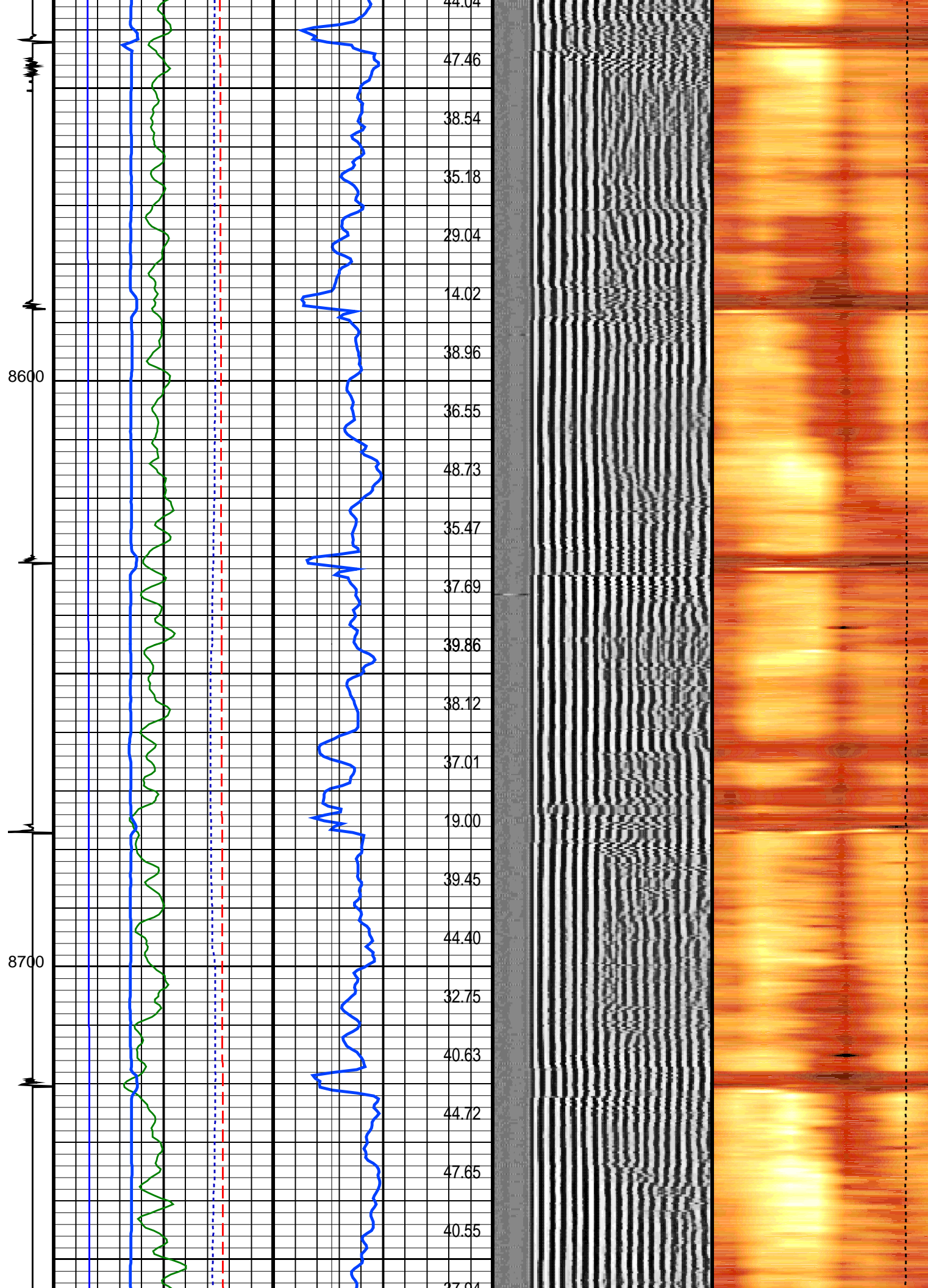


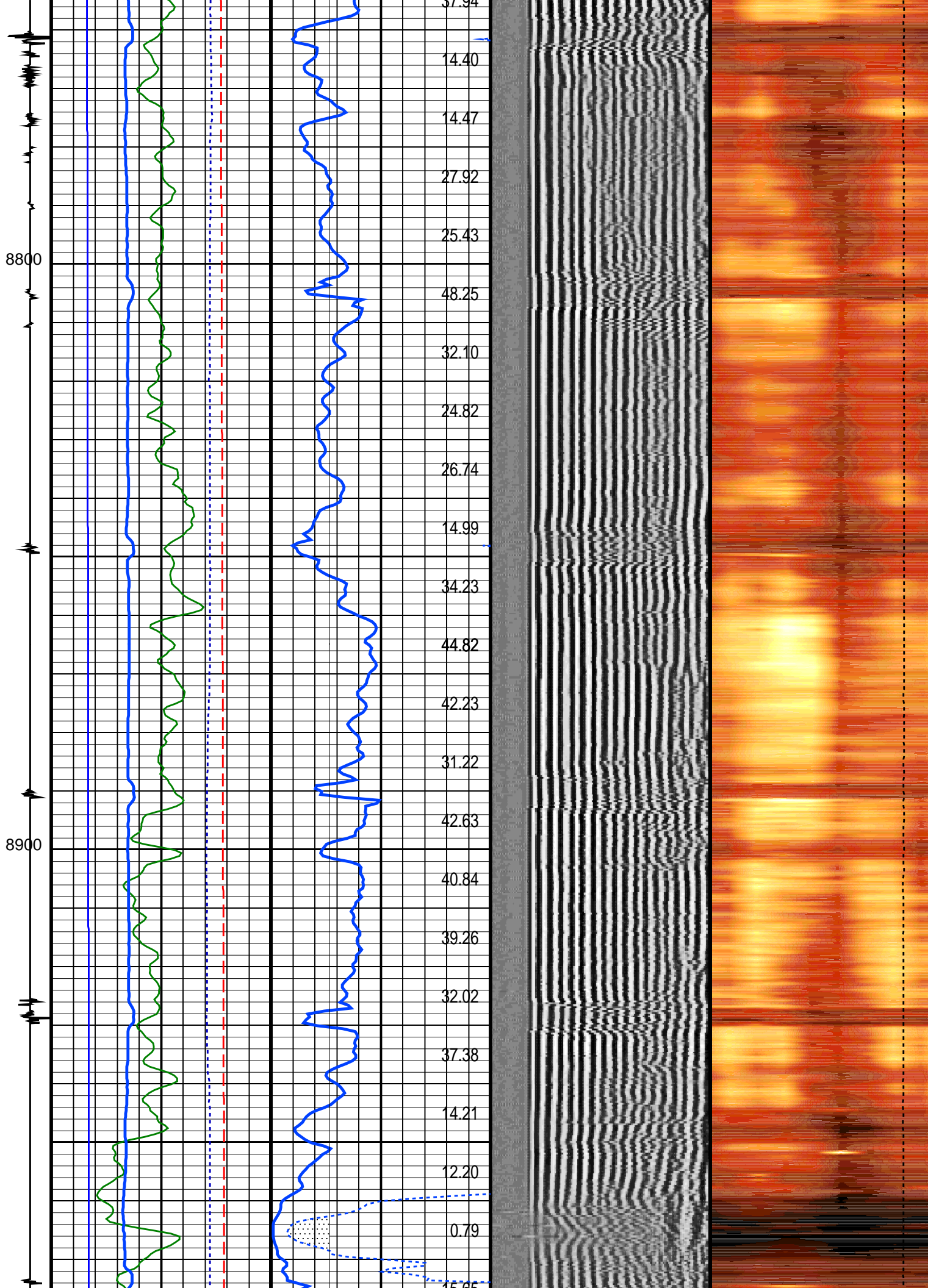


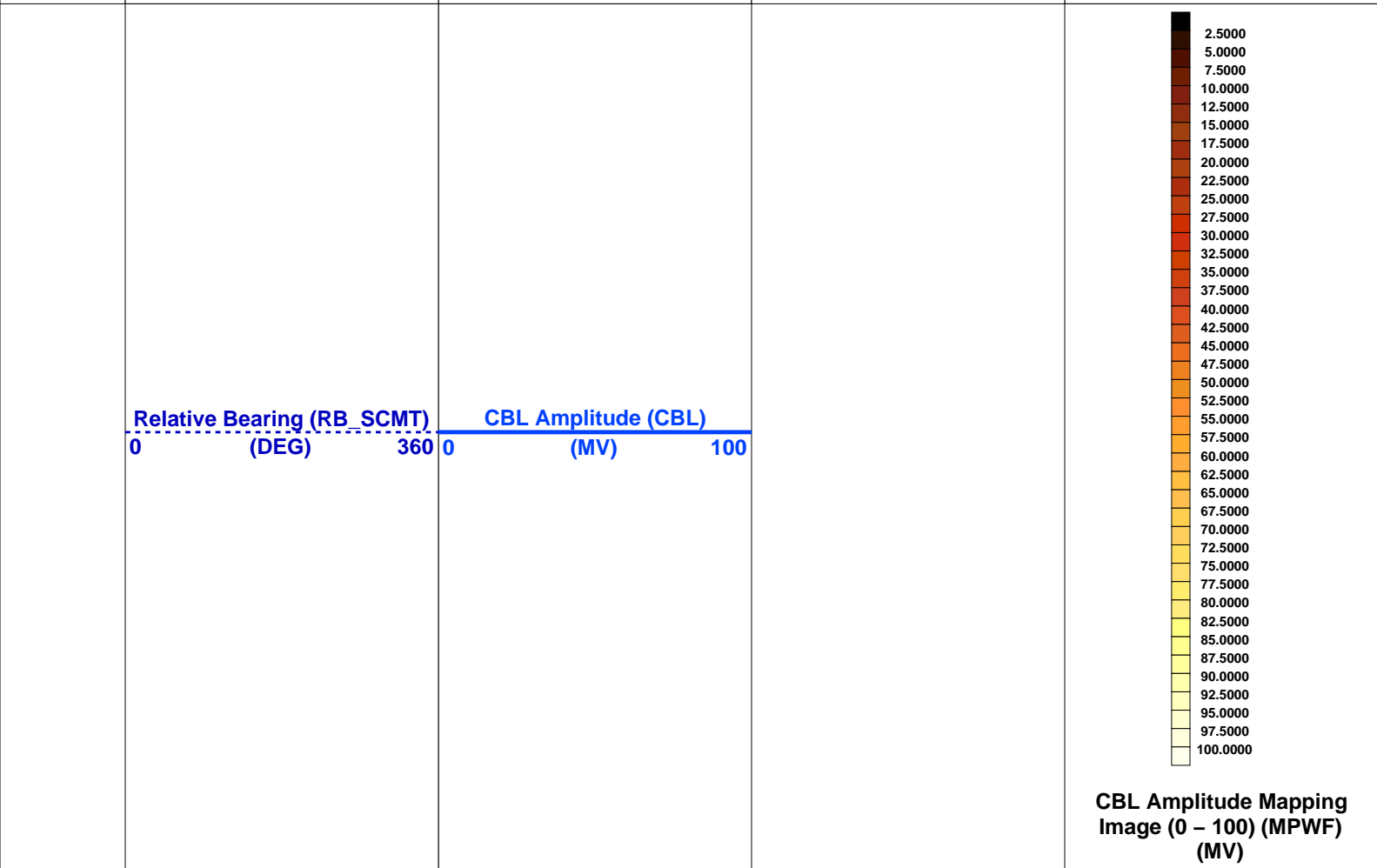
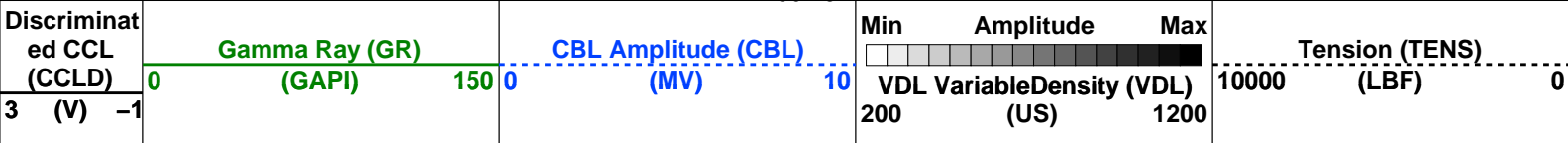
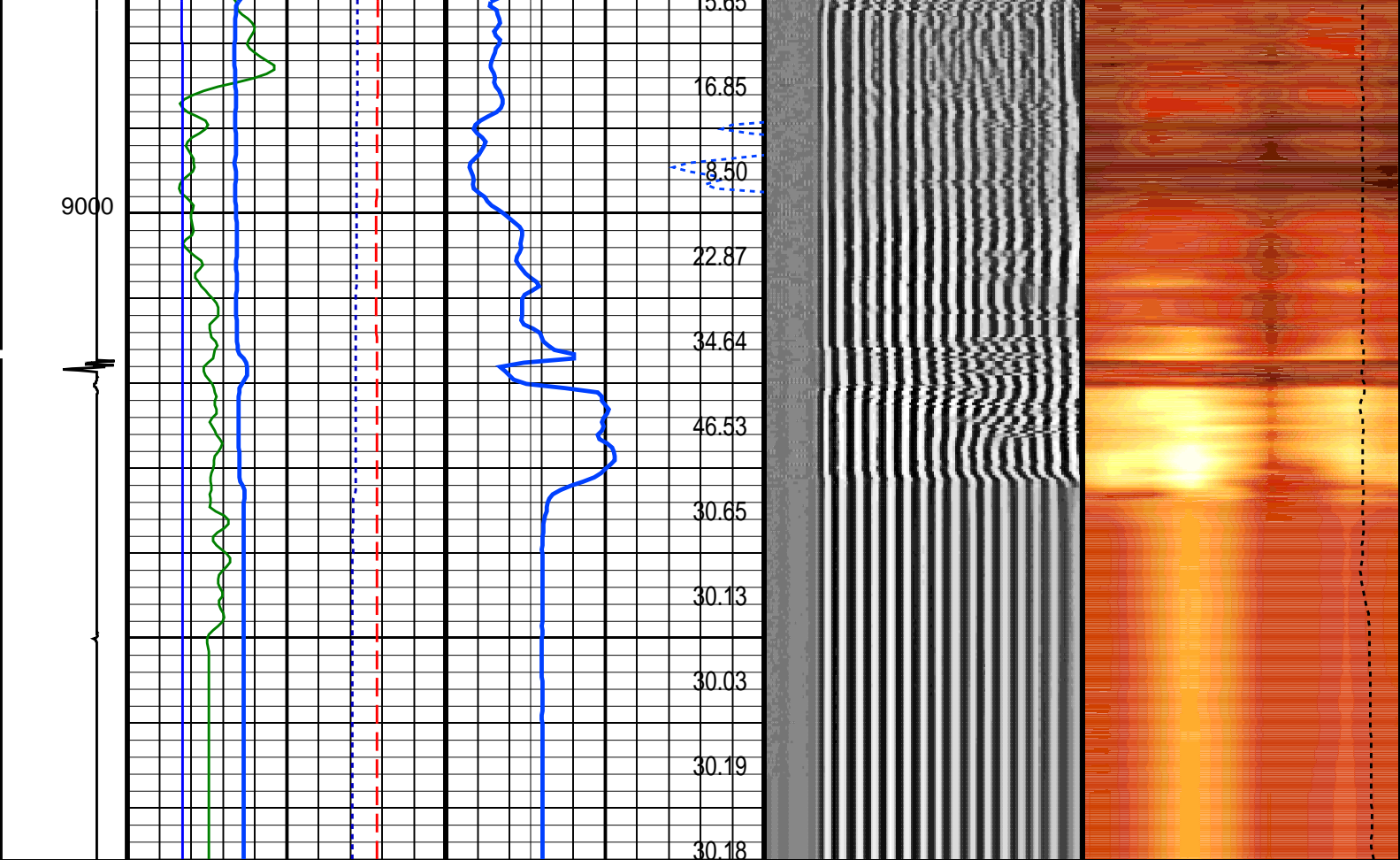













<u>Well Temperature (WTEP)</u> 0 (DEGF) 300	Good Bond (GOBO) (MV) 10
<u>Well Pressure (WPRE)</u> 0 (PSIA) 10000	CBL Values in mV (CBL) (----
<u>Cbl 3.ft Transit Time (TT)</u> 200 (US) 400	GoodBond From ACBL to GOBO

PIP SUMMARY

 Time Mark Every 60 S	Format: Scmt_VDL_Image	Vertical Scale: 5" per 100'	Graphics File Created: 06-Nov-2012 14:51
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OP System Version: 19C0-187

SCMT-CA	19C0-187	HBMS-B	19C0-187
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<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number	SCMS-CA 8143		
Current Casing Size	5.50000 IN		
Casing Weight	17.0 LB/F		
Expected CBL Amplitude in Free Pipe Section	71 MV	Minimum Sonic Amplitude	1.15742 MV (100% Cement) 2.63660 MV (80% Cement)
		MAP Minimum Sonic Amplitude	7.34437 MV (100% Cement) 12.3812 MV (80% Cement)
Master Calibration (Normalization)	Before Calibration (Adjustment)		
Date of Master Calibration	24-OCT-2012		
CBL Correction Factor	0.0701427	CBL Adjustment Factor (CBAF)	1.0
MAP 1 Correction Factor	0.0955959	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.0858757		
MAP 3 Correction Factor	0.0930589		
MAP 4 Correction Factor	0.117487		
MAP 5 Correction Factor	0.135627		
MAP 6 Correction Factor	0.160488		
MAP 7 Correction Factor	0.156552		
MAP 8 Correction Factor	0.127840		

Parameters

DLIS Name	Description	Value	
SCMT-CA: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	238.388	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	352.388	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	50	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	71	MV
CMCF	CBL Cement Type Compensation Factor	0.175052	
CMTc	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.306128	IN
DTF	Delta-T Fluid	190	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.938101	
GOBO	Good Bond	2.6366	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	181.388	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	8.21207	DB/F

MATT	Maximum Attenuation	8.31507	DB/F
MCCF	MAP Cement Type Compensation Factor	0.331065	
MCI	Minimum Cemented Interval for Isolation	4.75	FT
MMSA	MAP Minimum Sonic Amplitude	7.34437	MV
MSA	Minimum Sonic Amplitude	1.15742	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
RBC	Relative Bearing Correction Allow/Disallow	ALLOW	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	3.5	MRAY
System and Miscellaneous			
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	17.00	LB/F
DFD	Drilling Fluid Density	8.32	LB/G
DO	Depth Offset for Playback	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	9040	FT

Input DLIS Files

SCMT_HBMS_014PUP FN:13 05-Nov-2012 23:16 9076.0 FT 5351.5 FT

Output DLIS Files

DEFAULT SCMT_HBMS_012PUP FN:11 PRODUCER 06-Nov-2012 14:51

Company: **QUICKSILVER RESOURCES INC**

Schlumberger

Well: **K Diamond Ranch 32 10**

Field: **WILDCAT**

County: **MOFFAT**

State: **COLORADO**

SLIM CEMENT MAPPING LOG

CBL-VDL

GAMMA RAY-CCL

Free Pipe Amp=77.5mV / CBAF=1