



SEGMENTED BOND LOG

Baker Atlas

File No: EXXONMOBIL PRODUCTION COMPANY

CH042237 Well PCU 296-6B7

API No: PICEANCE CREEK

05103115310000 County RIO BLANCO State COLORADO

Location

SHL: W108° 12' 15.90" N59° 54' 19.31"
BHL: W108° 11' 48.96" N59° 54' 12.15"

Other Services

SEC 8 TWP 25 RGE 96W

KELLY BUSHING Elevation 26.1 ft

GL 7367 ft Above P. D.

KELLY BUSHING

Elevations

KB 7393.1 ft

DF 7394.1 ft

GL 7367 ft

Date 08 SEPT 2011

Run ONE

Service Order 575268

Depth Driller 10062 ft

Depth Logger 10024 ft

Bottom Logged Interval 10024 ft

Top Logged Interval 4726 ft

Time Started 05:30

Time Finished 13:30

Operator Rig Time 10 hrs

Type of Fluid in Hole DRILLING MUD

Fluid Density 8.65 lbm/gal

Salinity N/A

Fluid Level FULL

Logged Cement Top N/A

Wellhead Pressure 0 psi

Maximum Hole Deviation N/A

Nominal Logging Speed 35 fpm

Maximum Recorded Temperature N/A

Reference Log NONE

Reference Log Date N/A

Equipment No. Location HL 4214 G.J., COLORADO

Recorded By STALEY/OSTLER

Witnessed By MR. ANDY PERDYEA

In making interpretations of logs, our employees will give the customer the benefit of their best judgement. But since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

Borehole Record

Bit Size	From	To
9.625 In	SURFACE	10179 ft

Casing Record

Size	Weight	Grade	From	To
7 In	28 lbm/ft	P-110	0 ft	10179 ft

Remarks

WELL WAS LOGGED WITH 0 PSI AT THE WELL HEAD.

TIGHT SPOT AT 6500' TO 7200'.

Equipment Data

Run	Trip	Tool	Series Number	Serial Number	Position

1	1	GR	1339XA	10470489	CENTRALIZED
1	1	ACC. ELEC.	1633EA	121955	CENTRALIZED
1	1	CENT	4341XA	119379	CENTRALIZED
1	1	SBT	1424PA	10489618	PAD DEVICE
1	1	VDL	1424XB	10459380	CENTRALIZED
1	1	CENT	4341XA	10346981	CENTRALIZED

SBT NORMALIZATION RESULTS

SBT PROCESSING

comr	compress	1700.000	psi	4658.212	10065.000
CN	Bit Size	7.875	inches	4669.212	10065.931
CN	Casing Thickness	0.361	inches	4658.212	10065.000
CN	Casing/Cement Correction	No		4669.212	10065.931
CN	CN Chism	No		4669.212	10065.931
CN	Matrix	Limestone		4669.212	10065.931
CN	Salinity	0.000	ppm	4669.212	10065.931

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
2346XA	-46.500	CCL					
1309XA	-36.750	GR					
2435XA	-30.250	LSN					
2435XA	-29.750	NEU	SSN				
1424XA	-11.000	ATC1	ATC2	ATC3	ATC4	ATC5	ATC6
		ATAV	ATMN	ATMX	AMAV	DEV	DTMN
		DTMX	RB	XATT	YATT		
1424PA	0.000	CHV	CYQ	SIG			

Created by : SBT, v5.0.003

Plotted by : PlotMgr, v5.4.504

Company : EXXONMOBIL PRODUCTION COMPANY

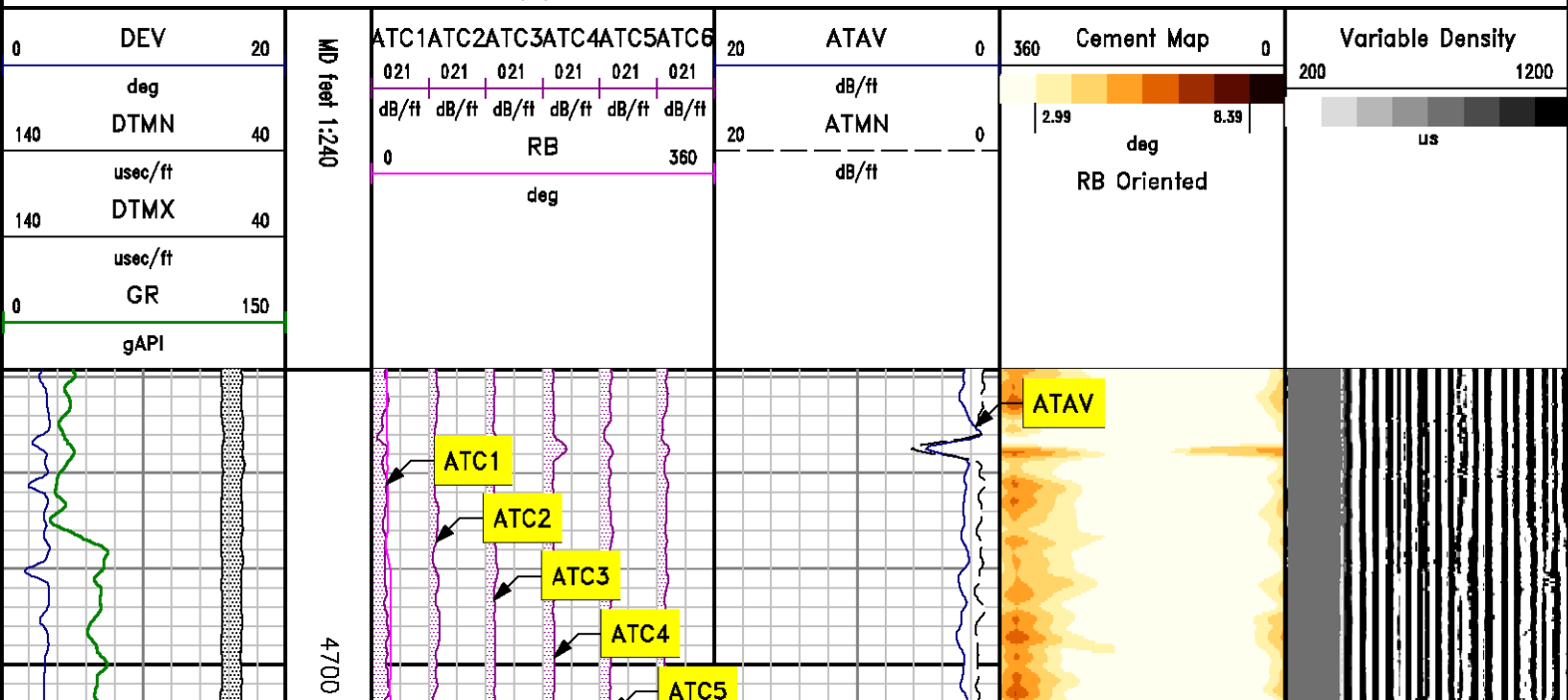
Well : PCU 296-6B7

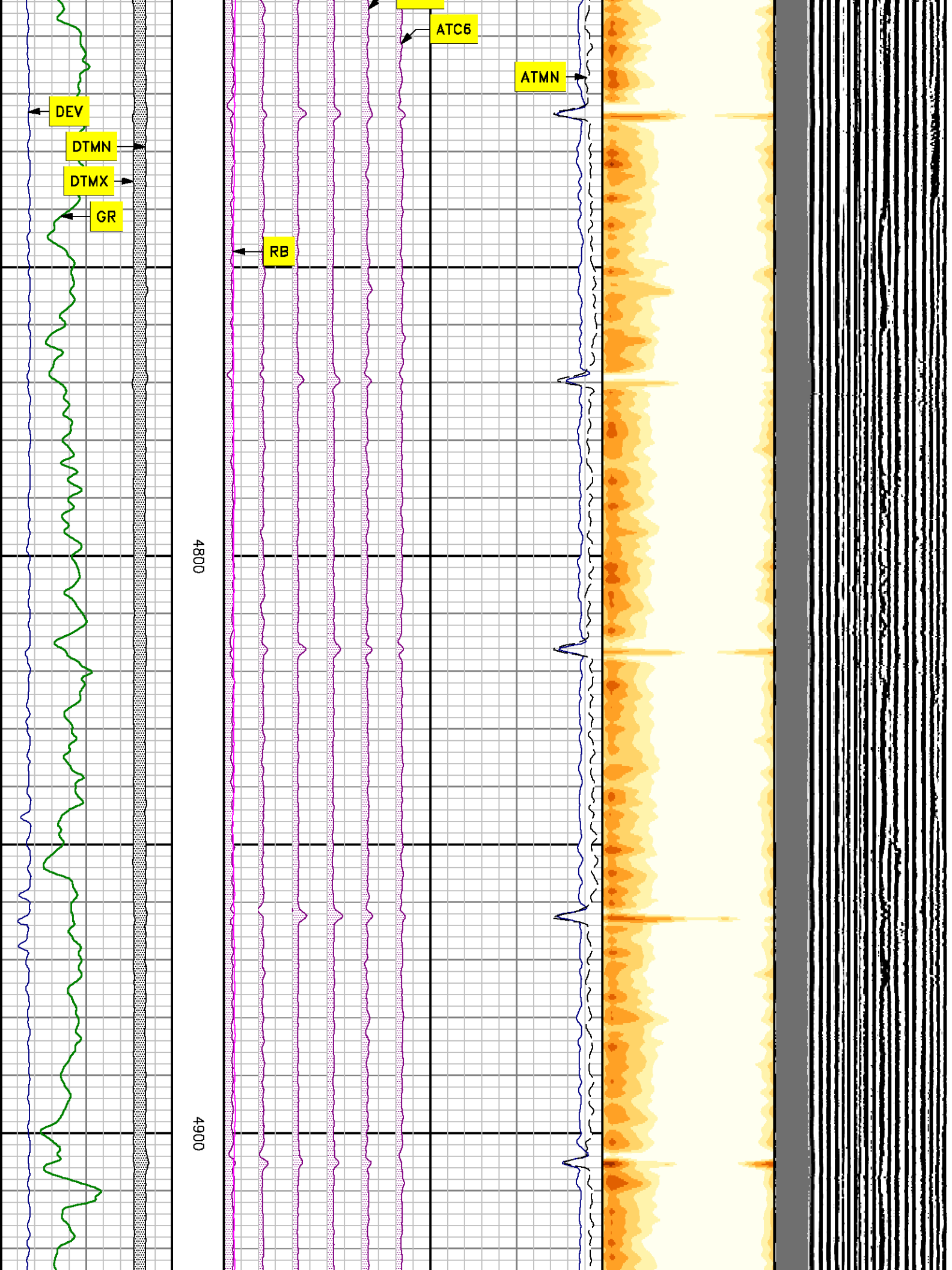
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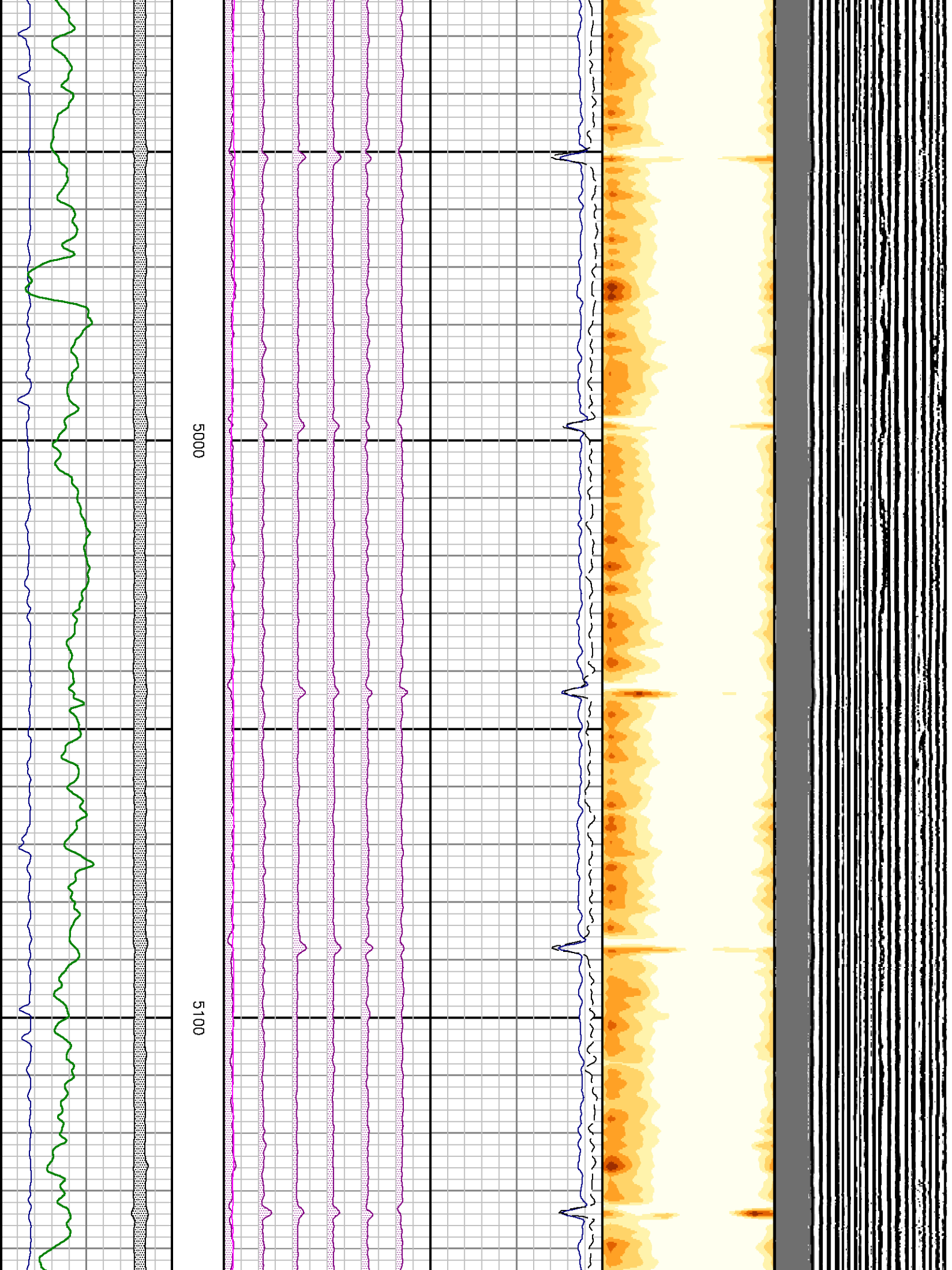
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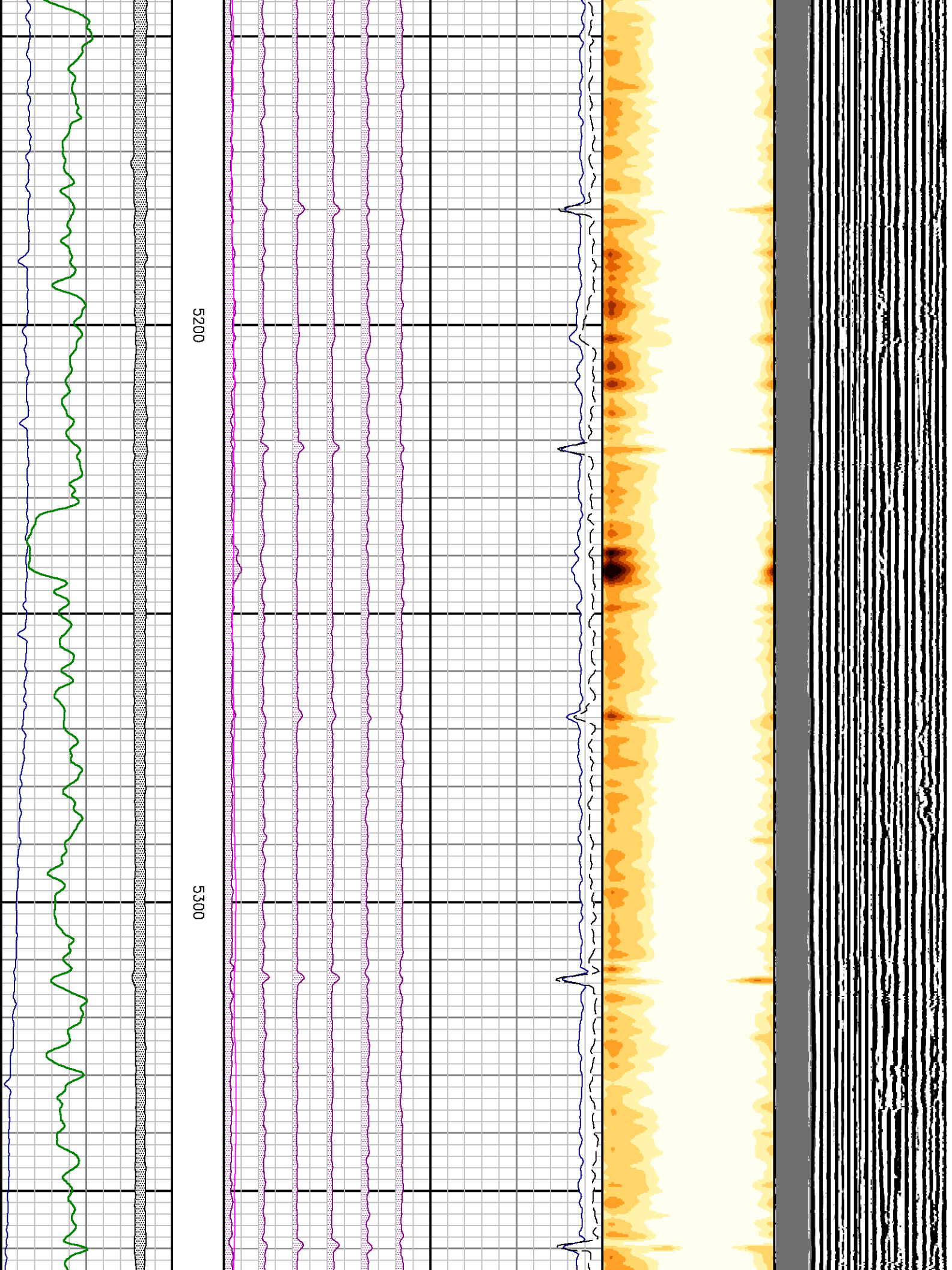
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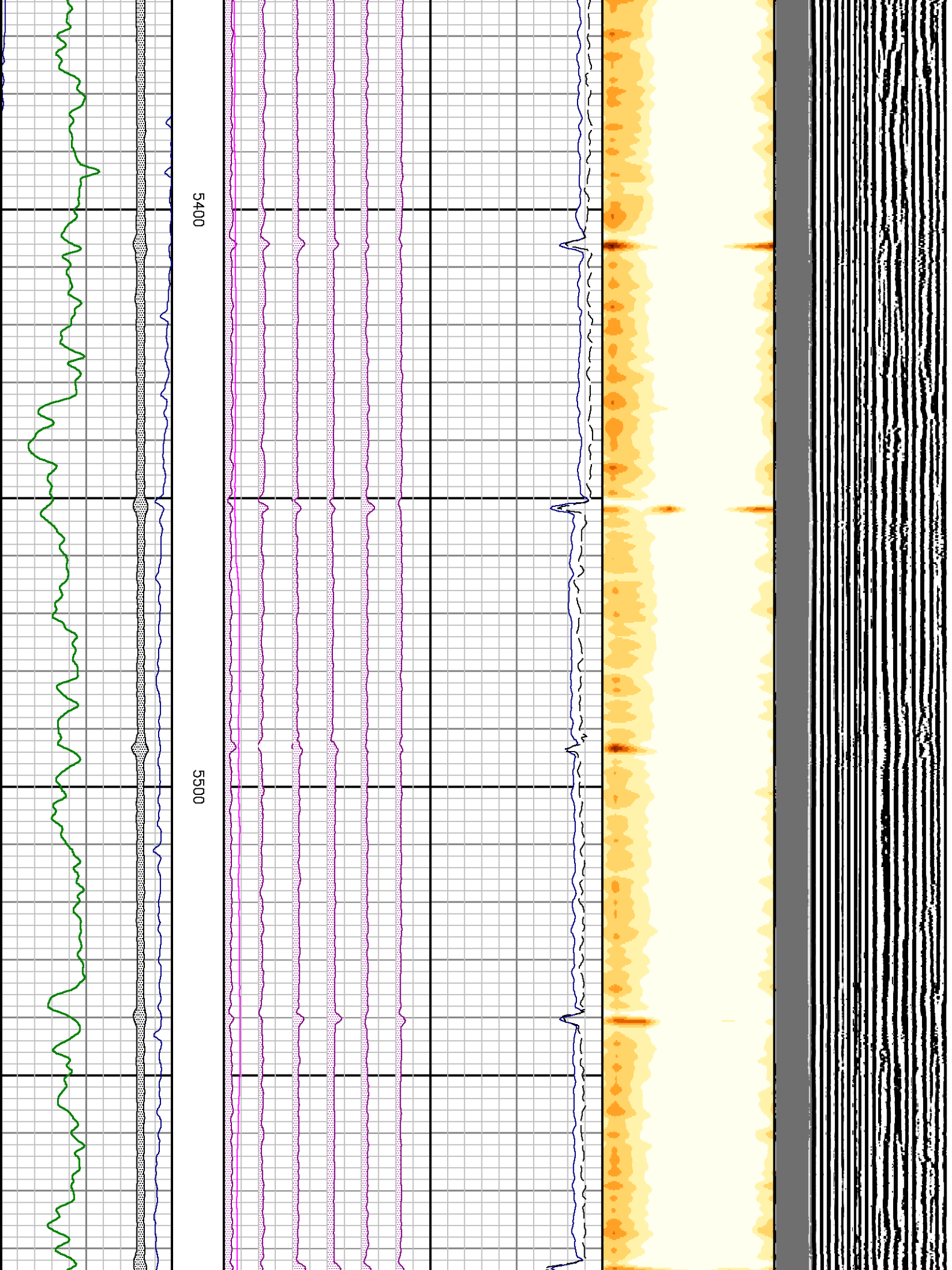
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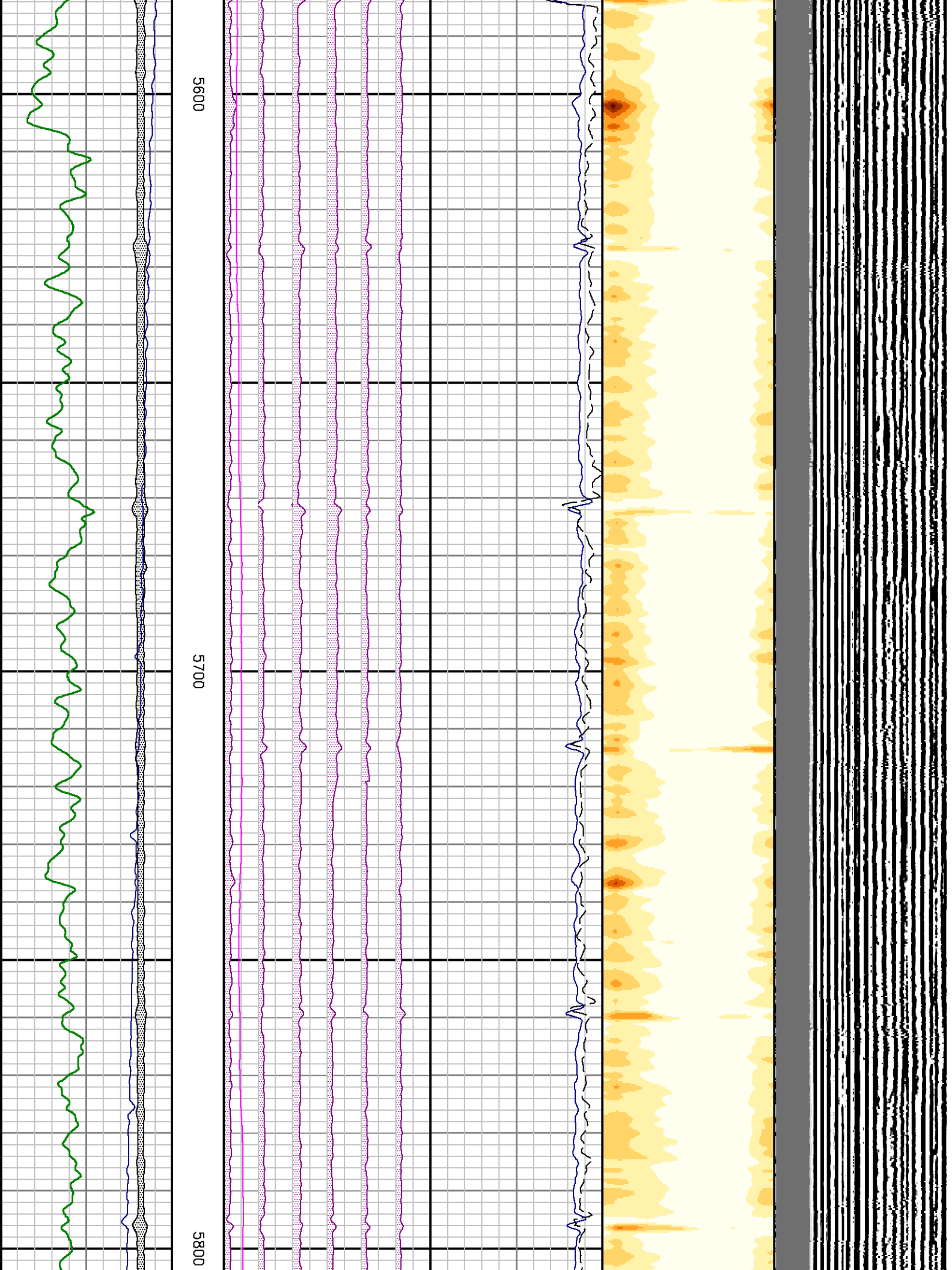


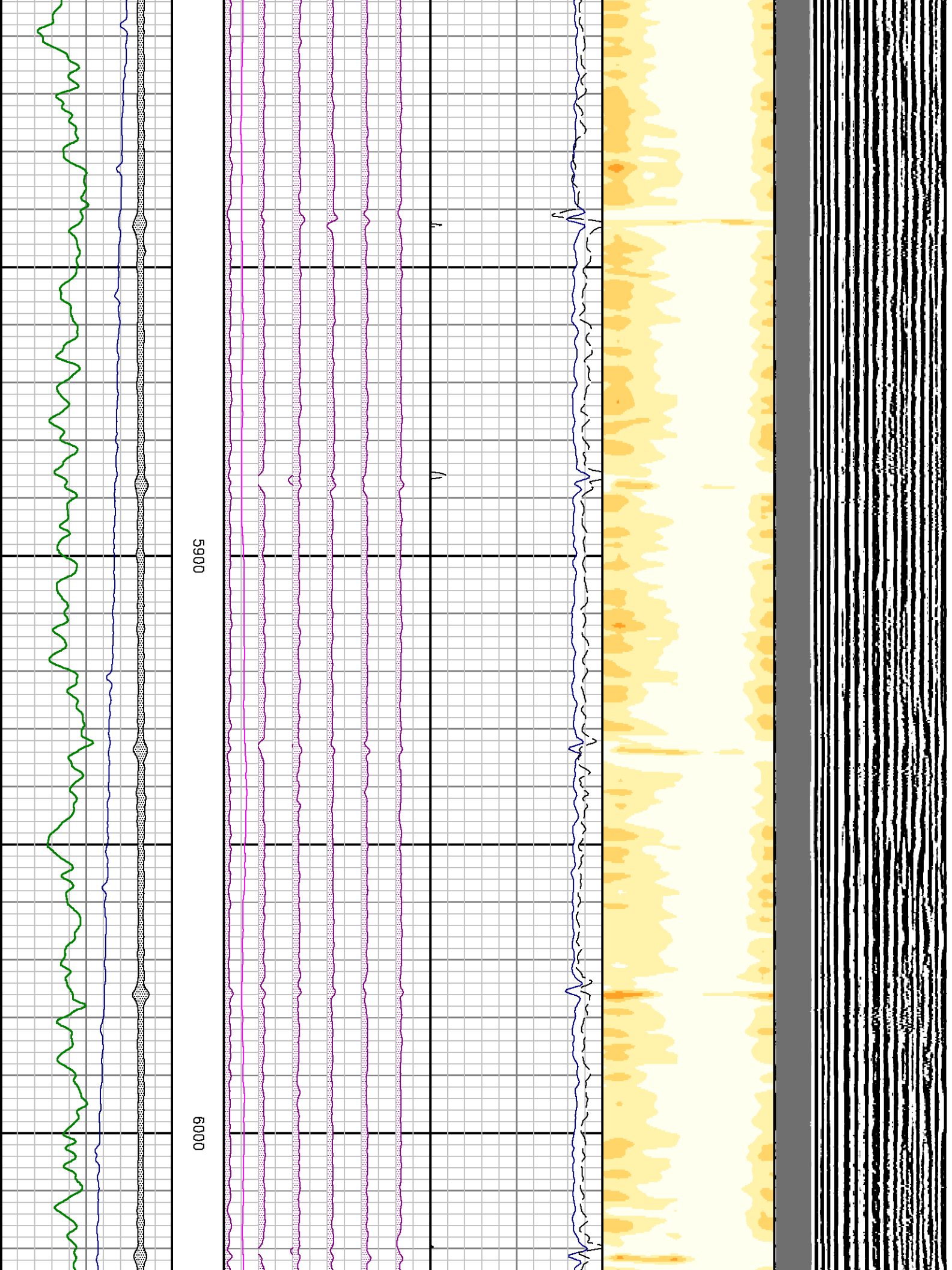


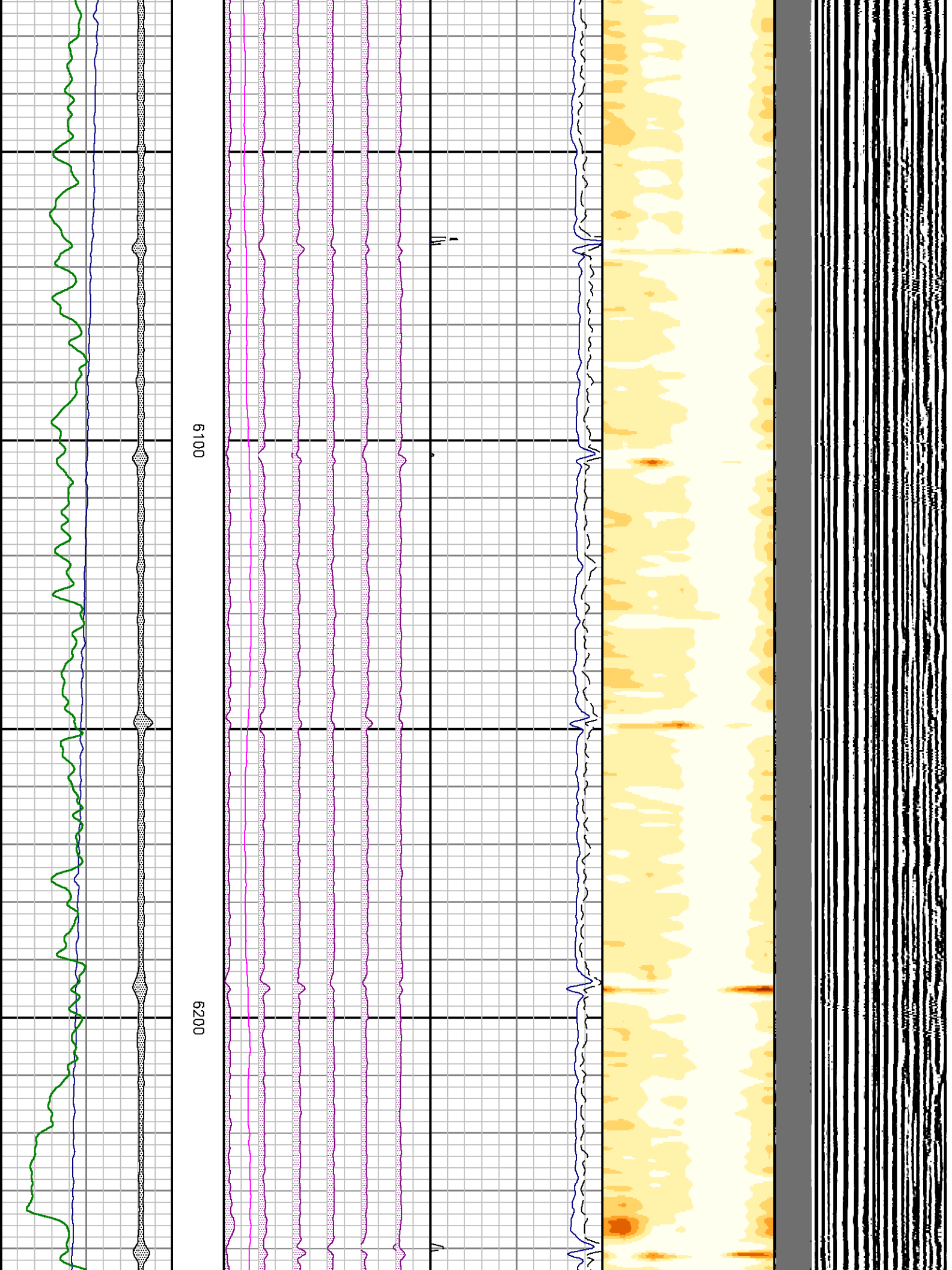


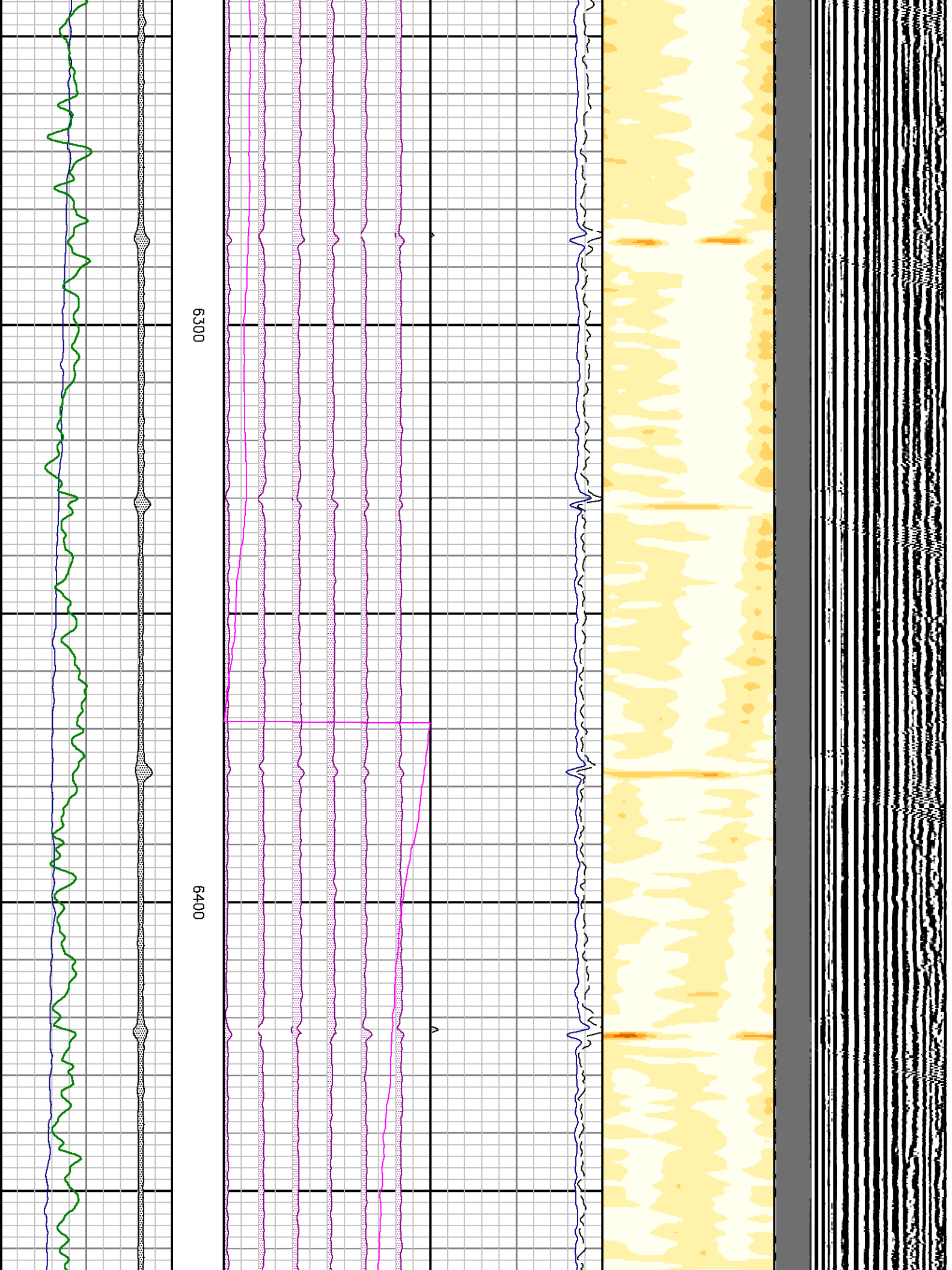


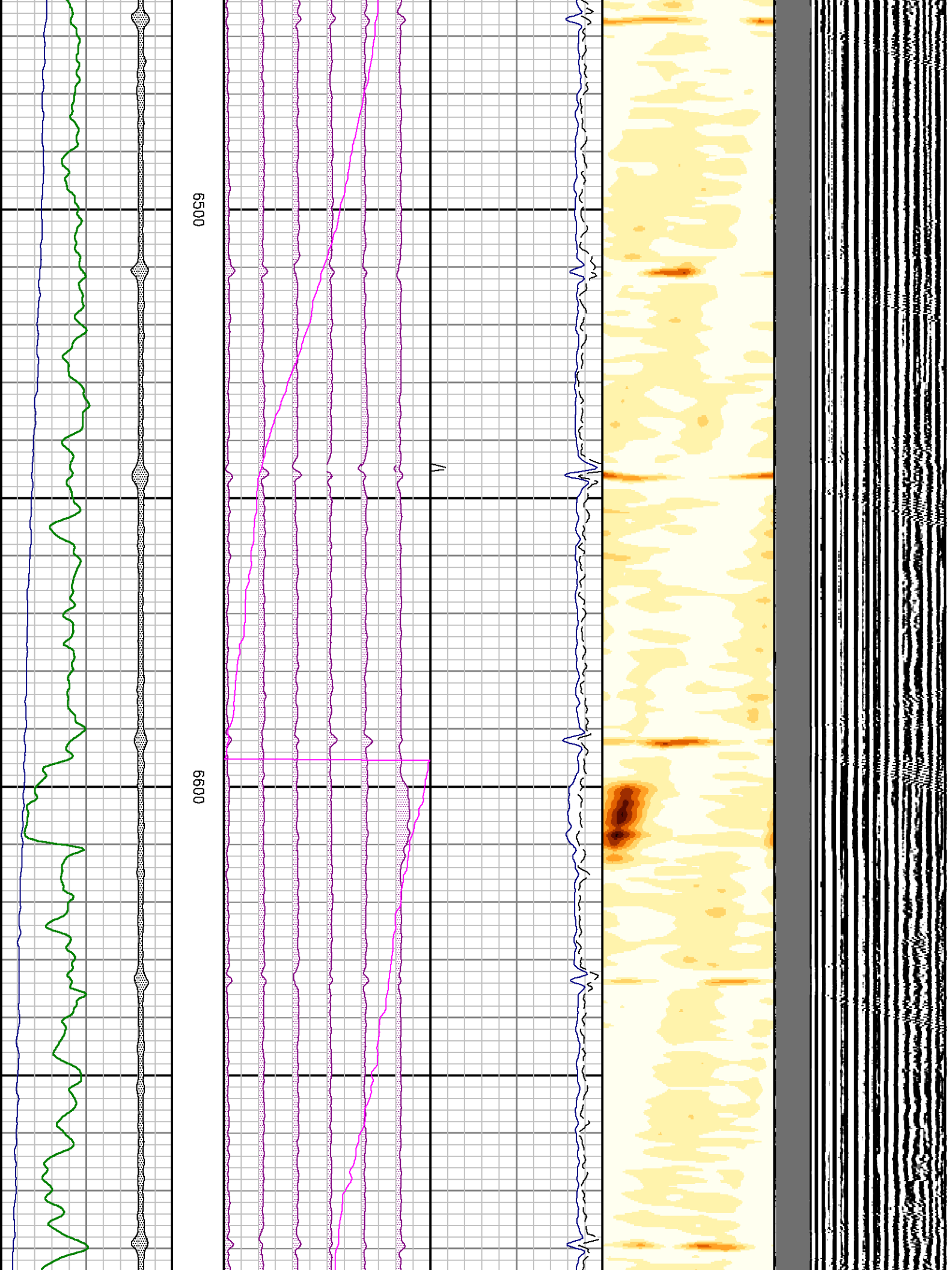


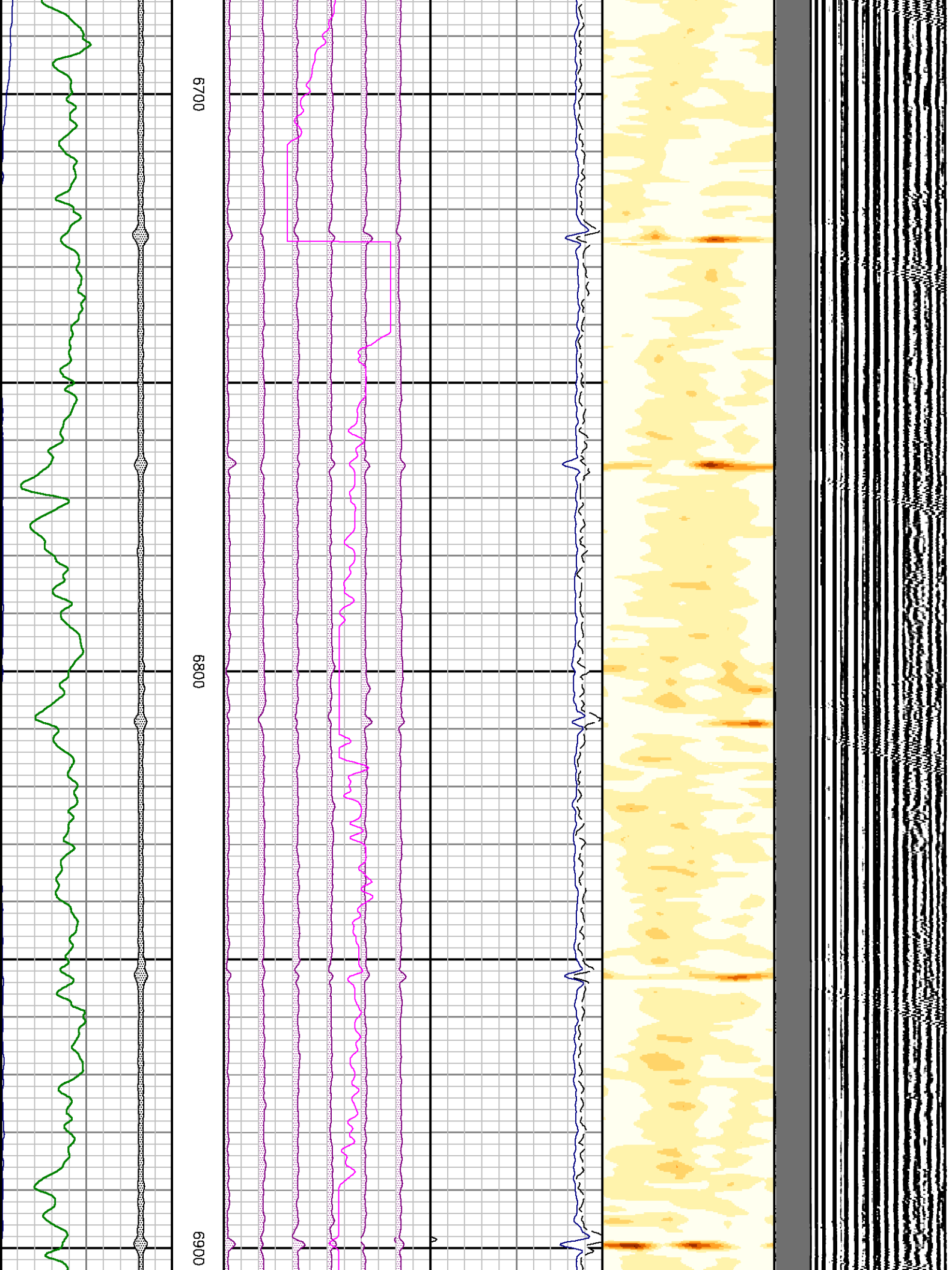


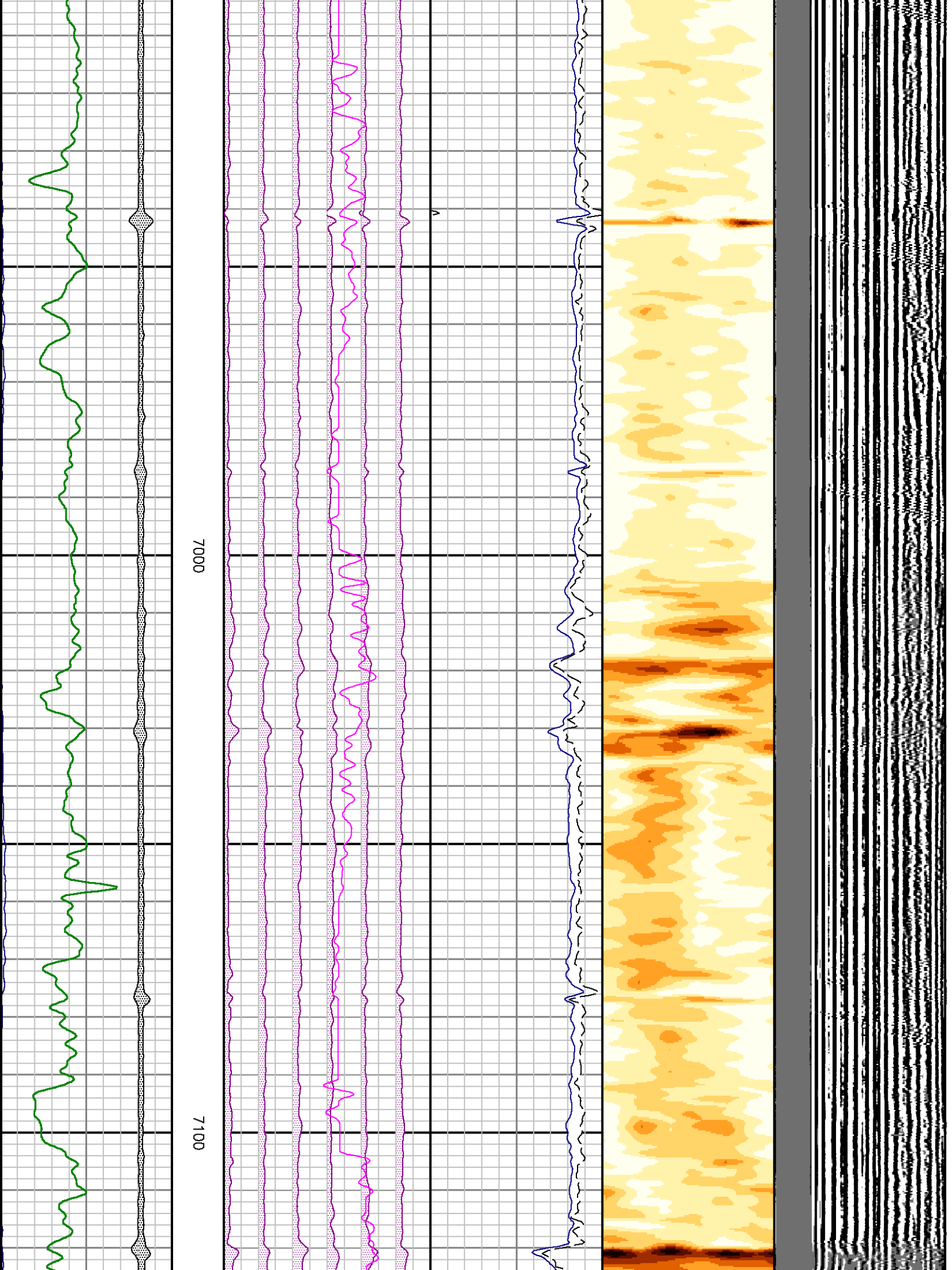


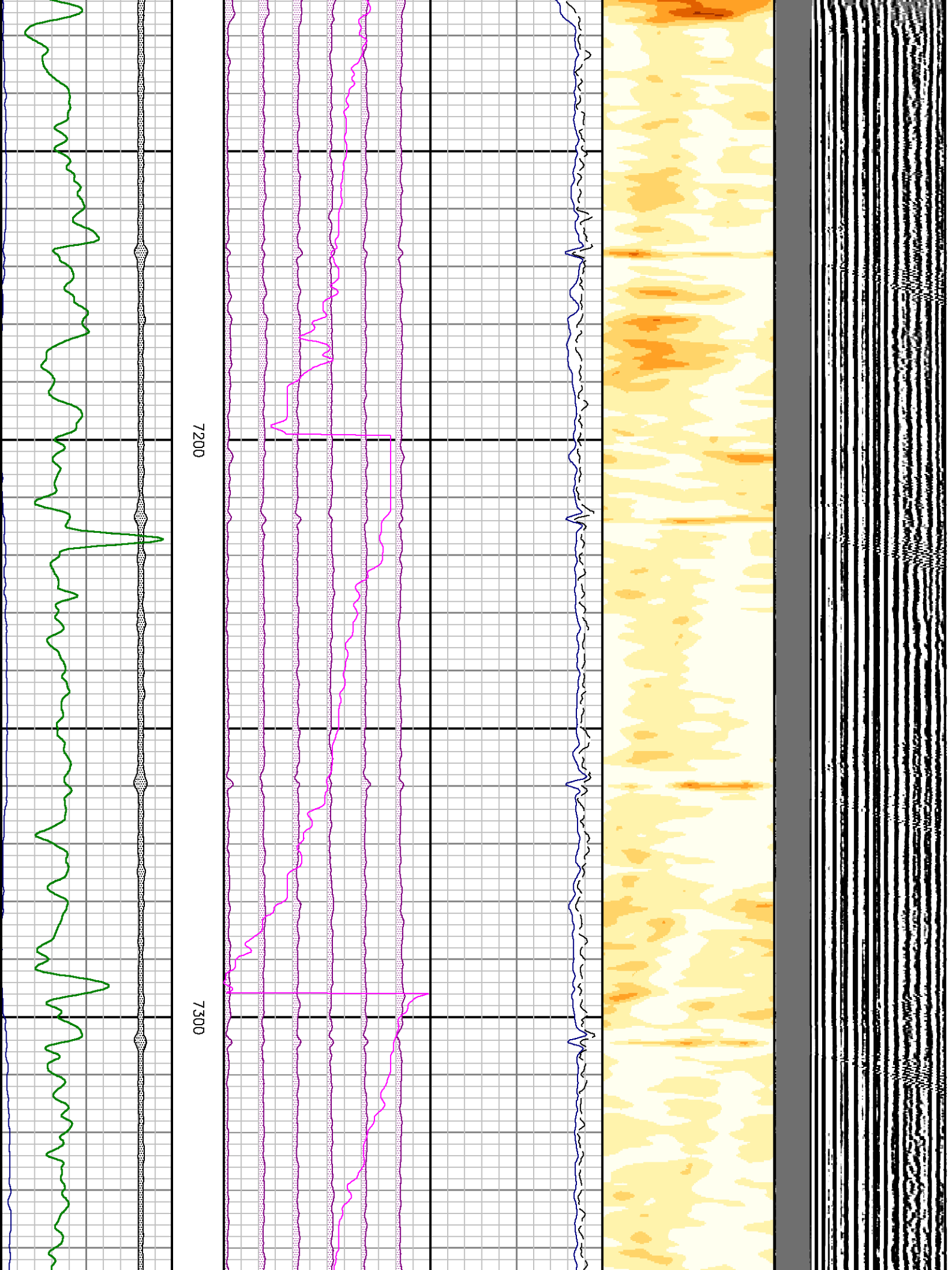


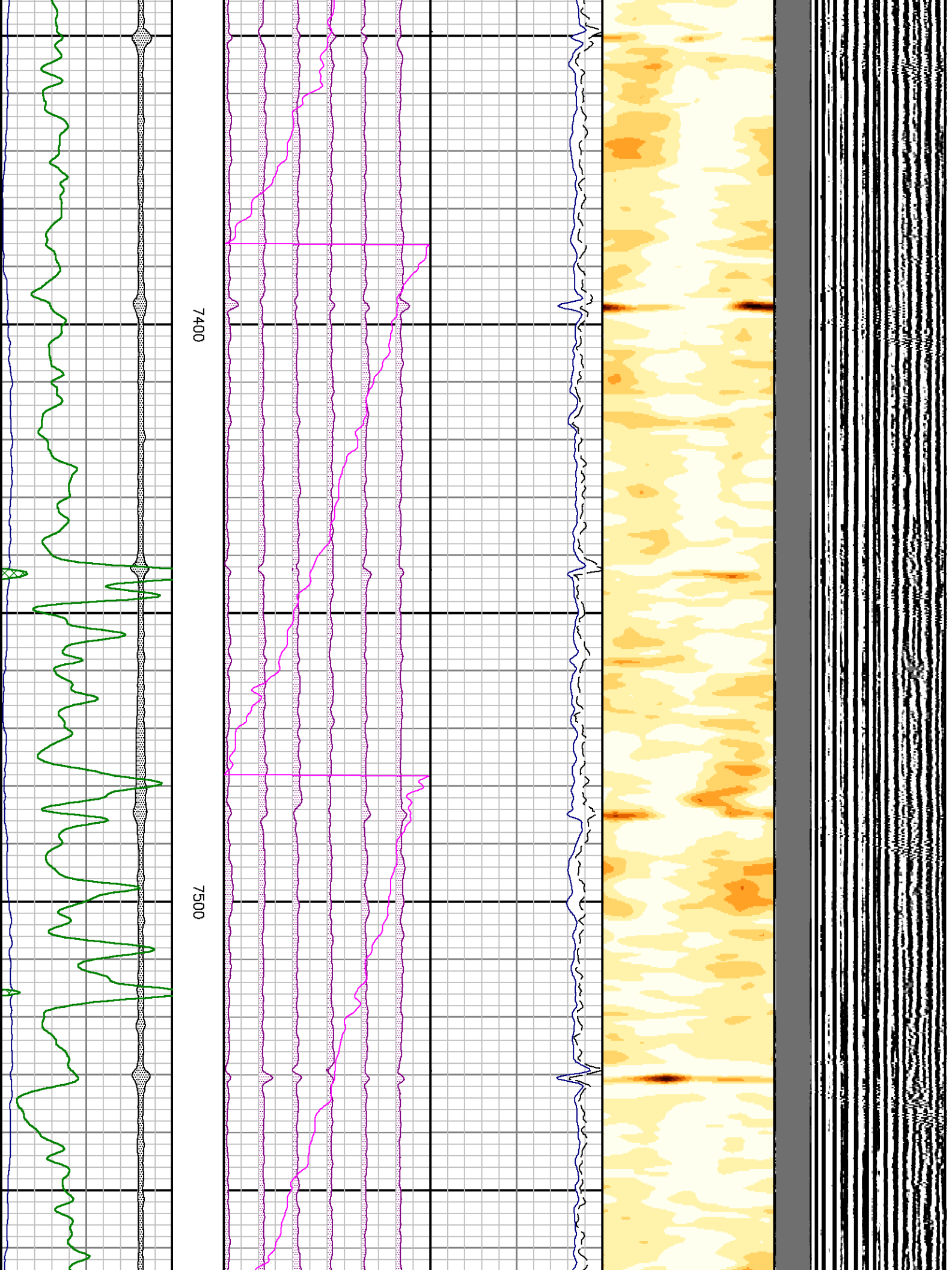


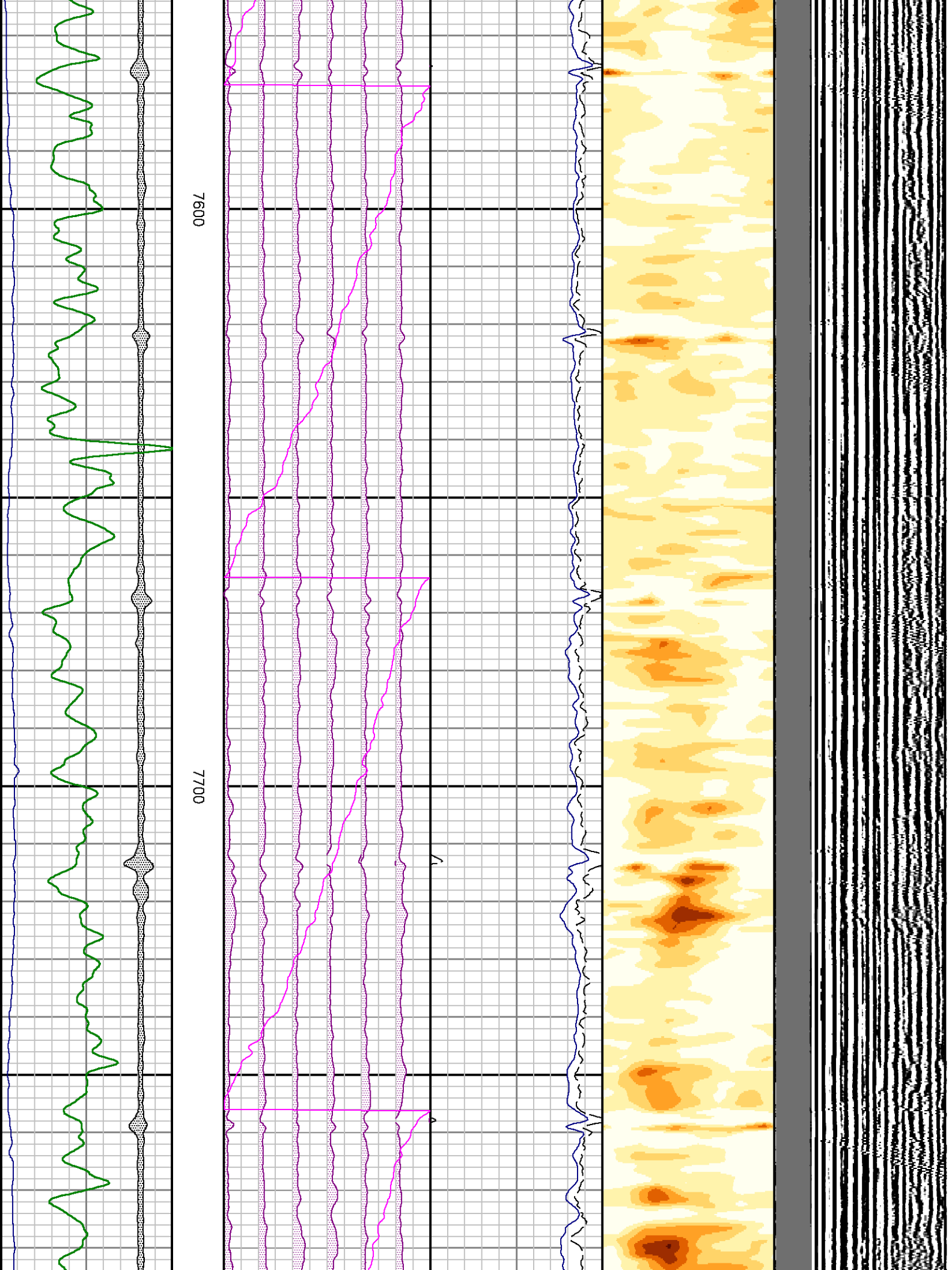


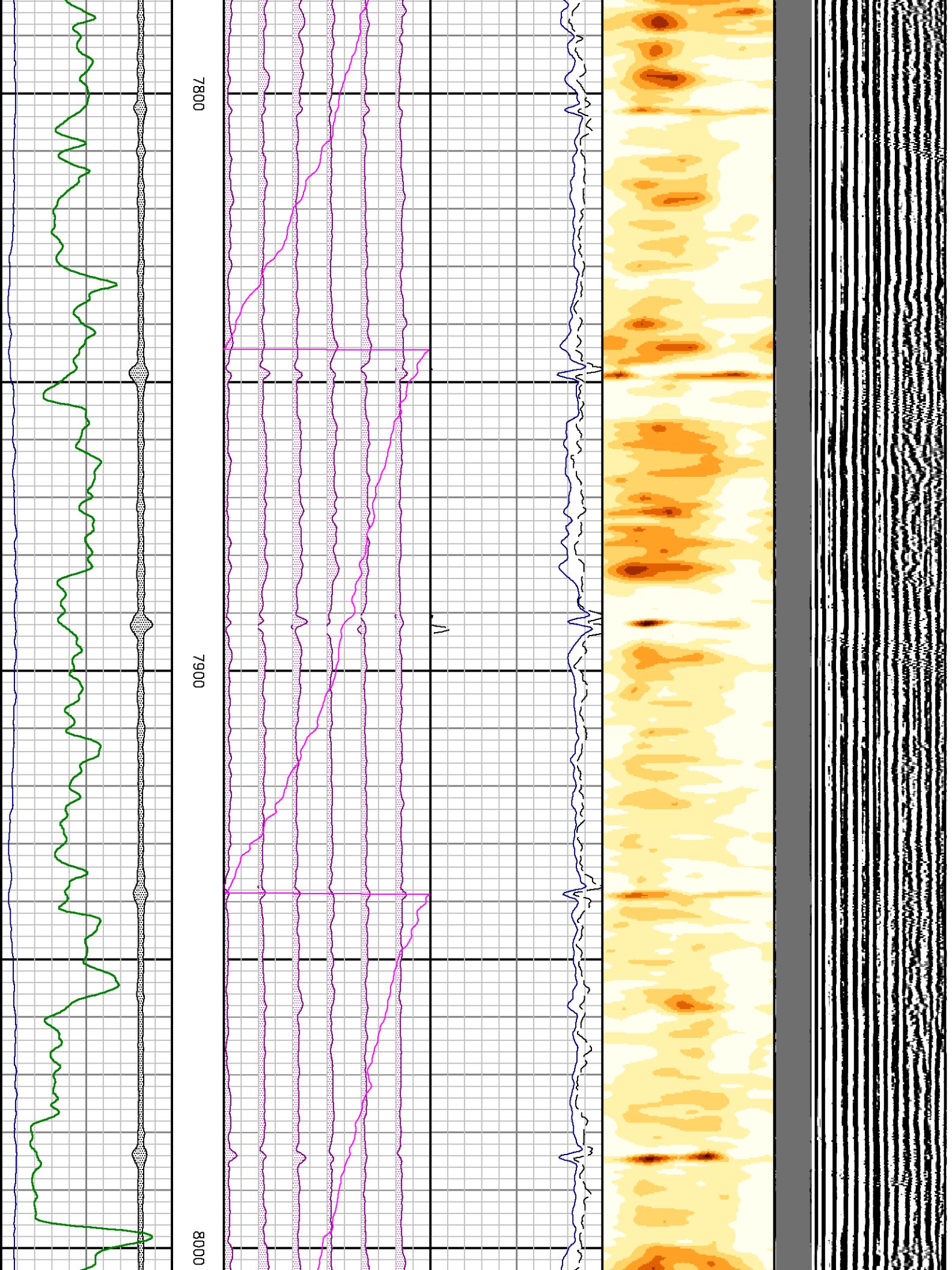


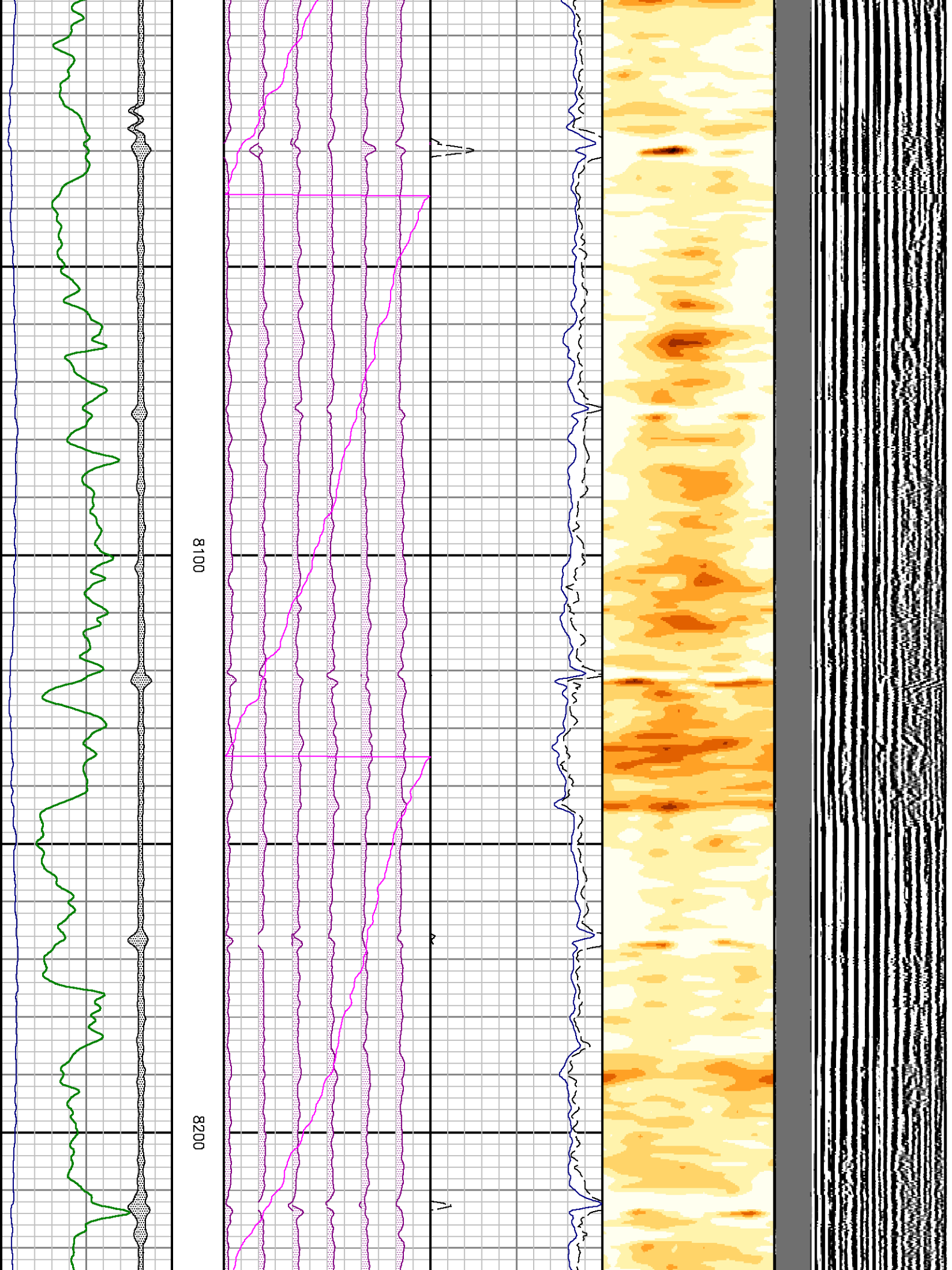


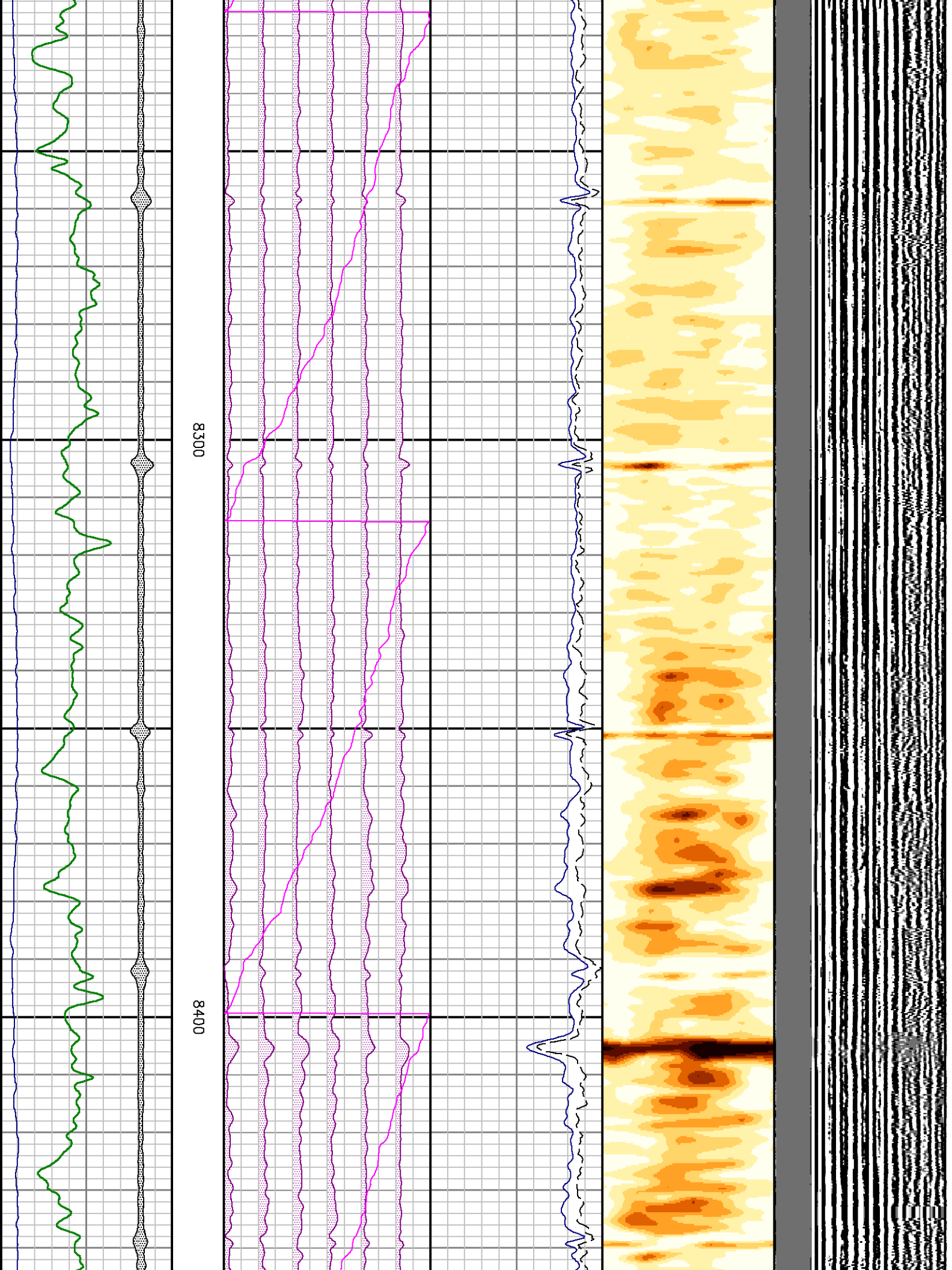


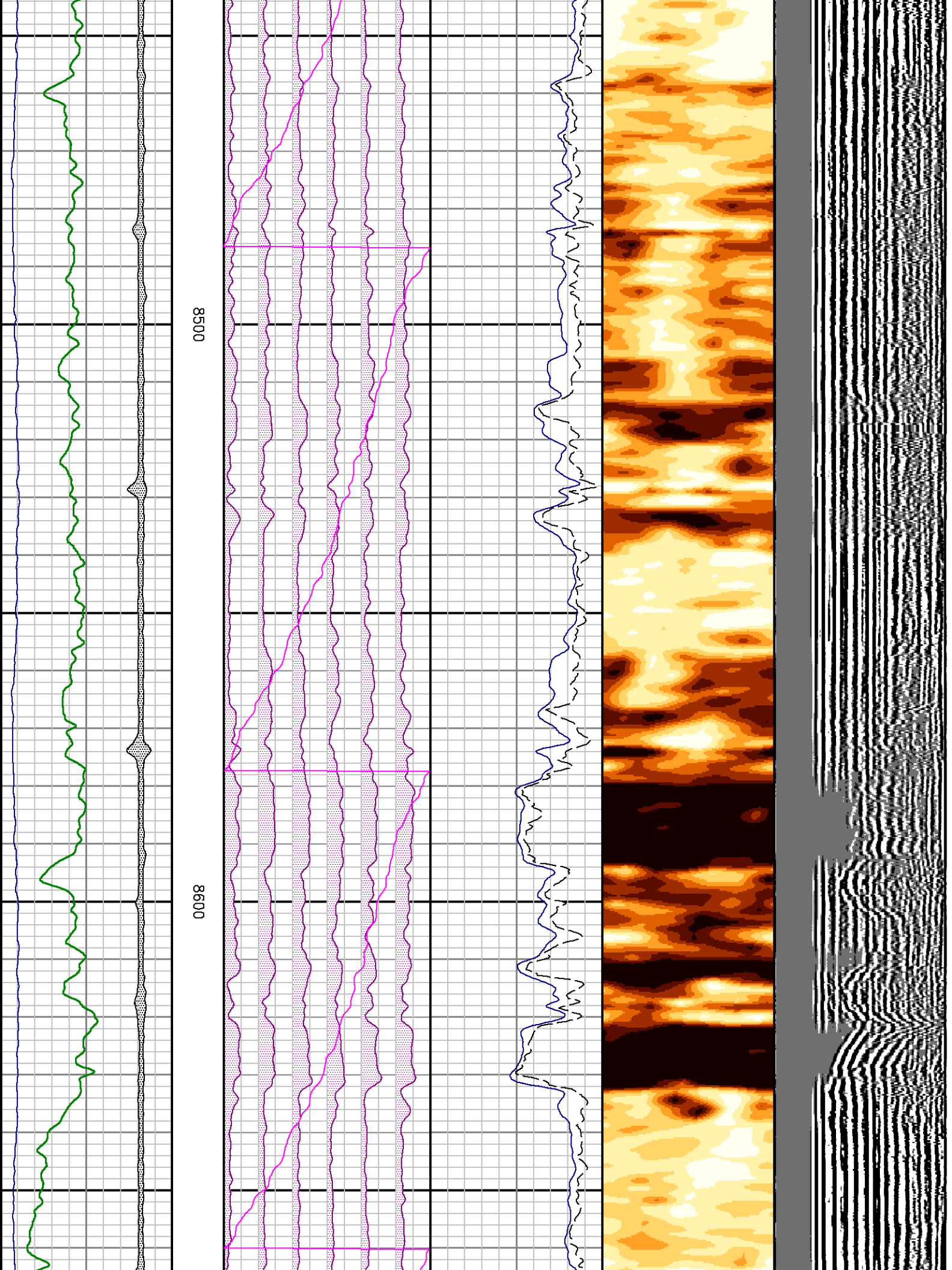


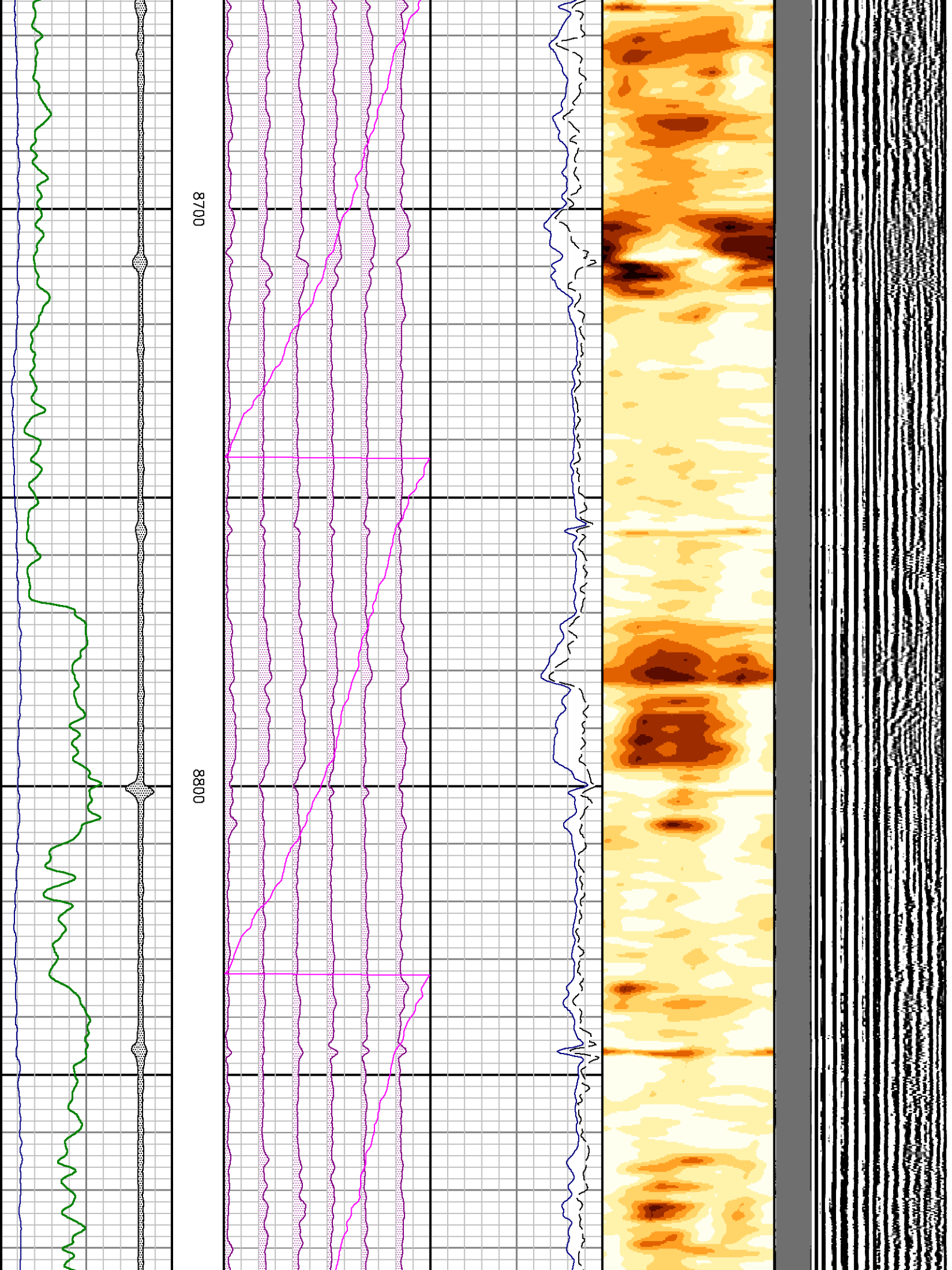


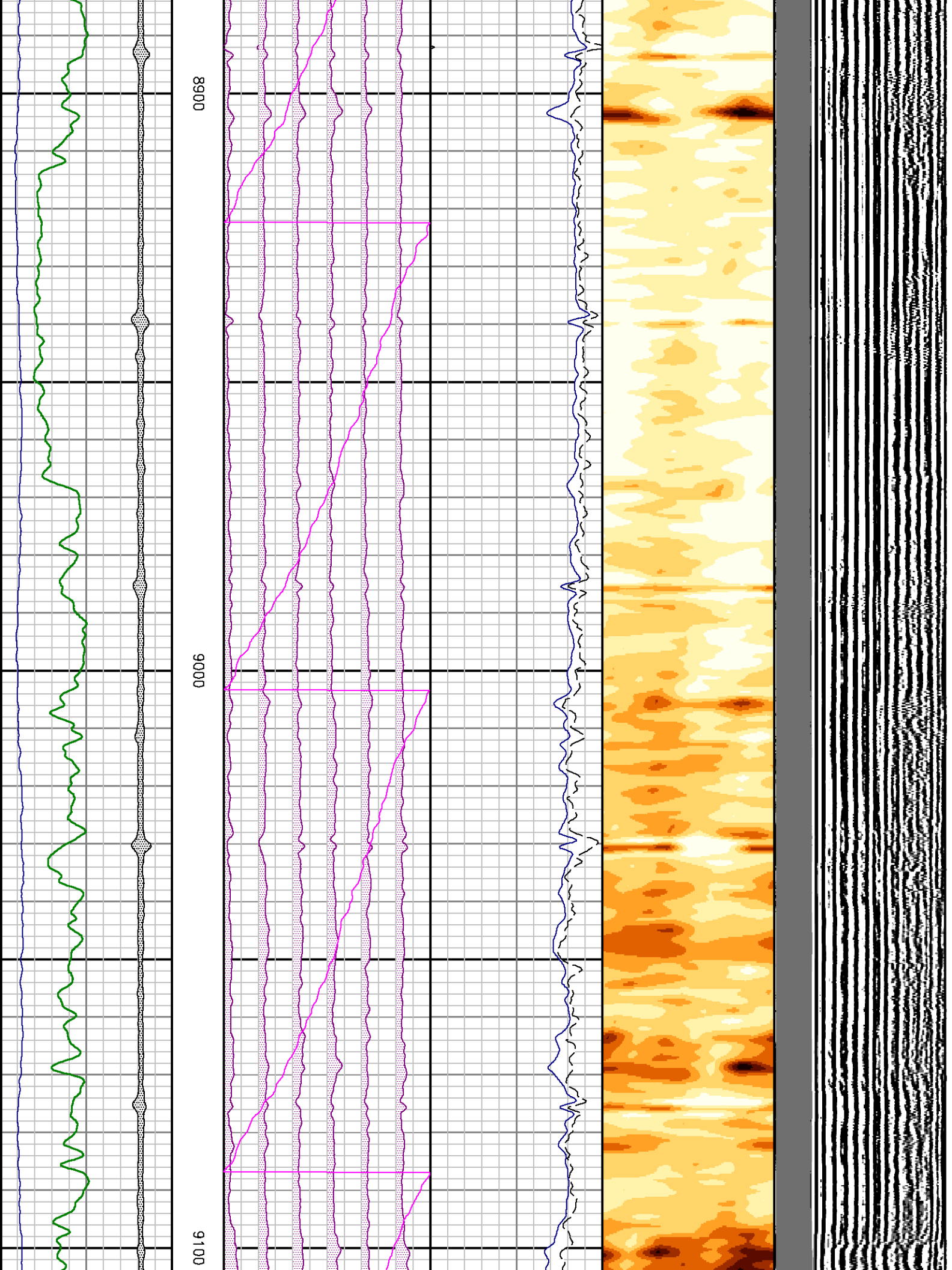


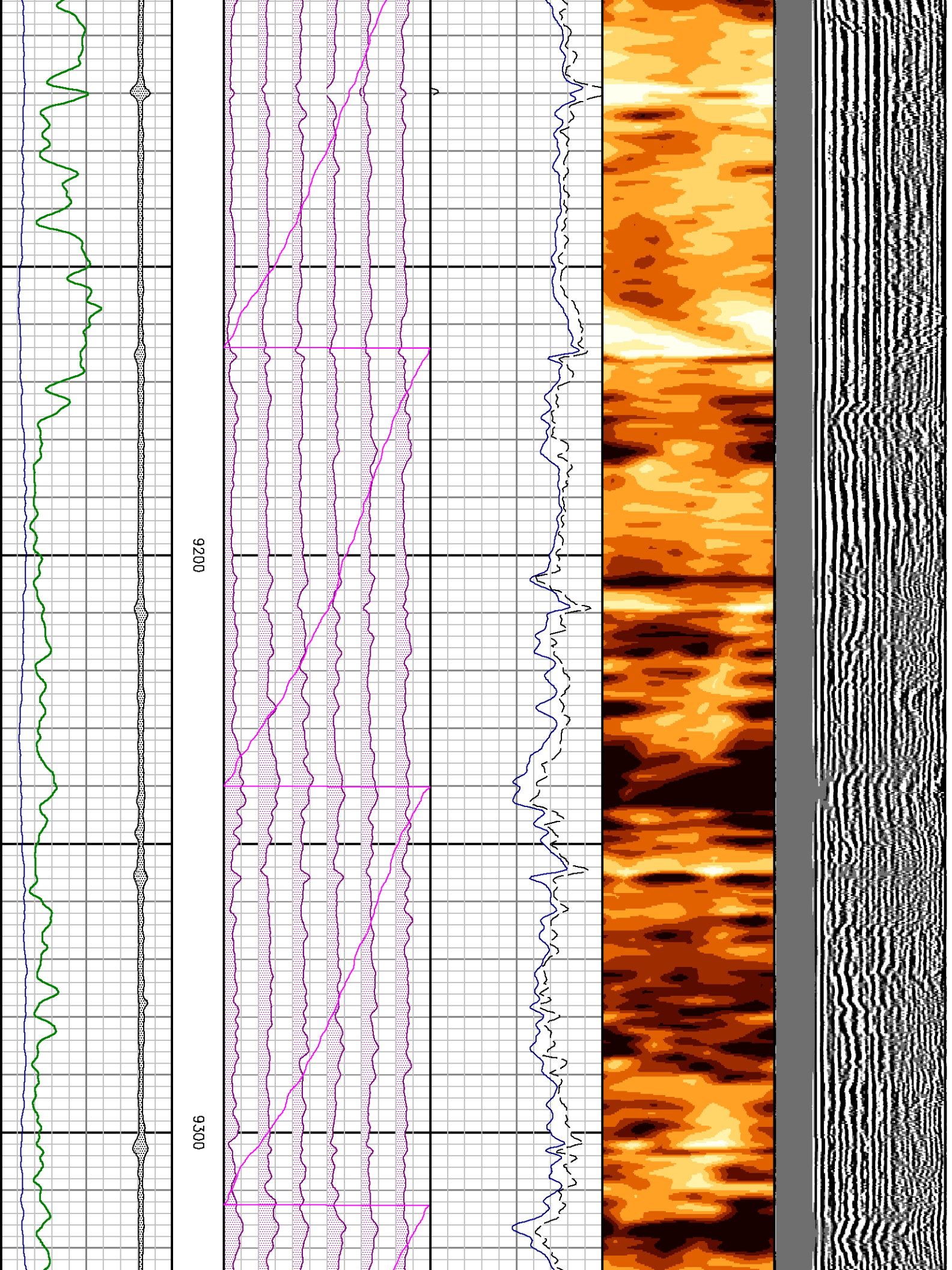


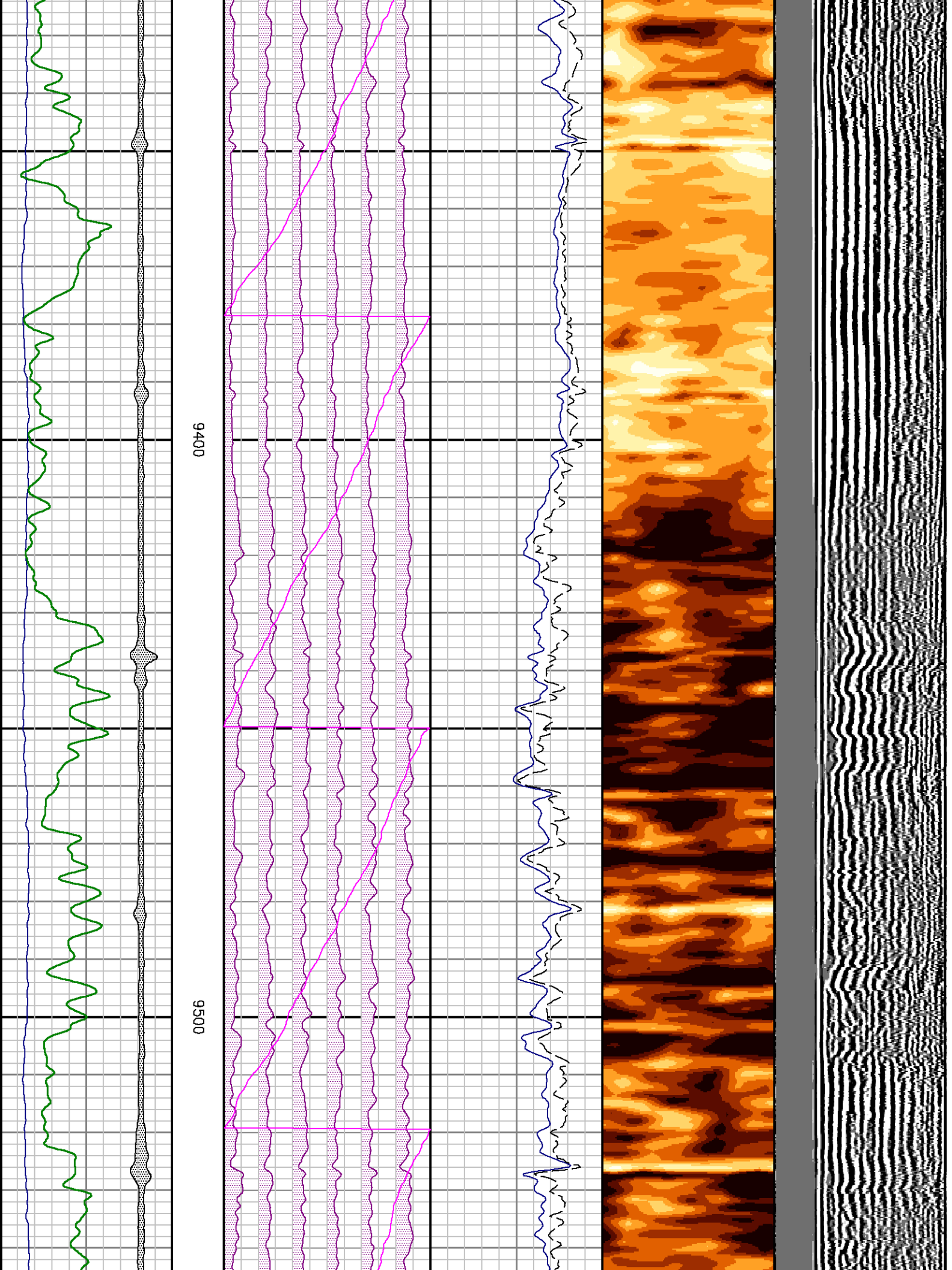


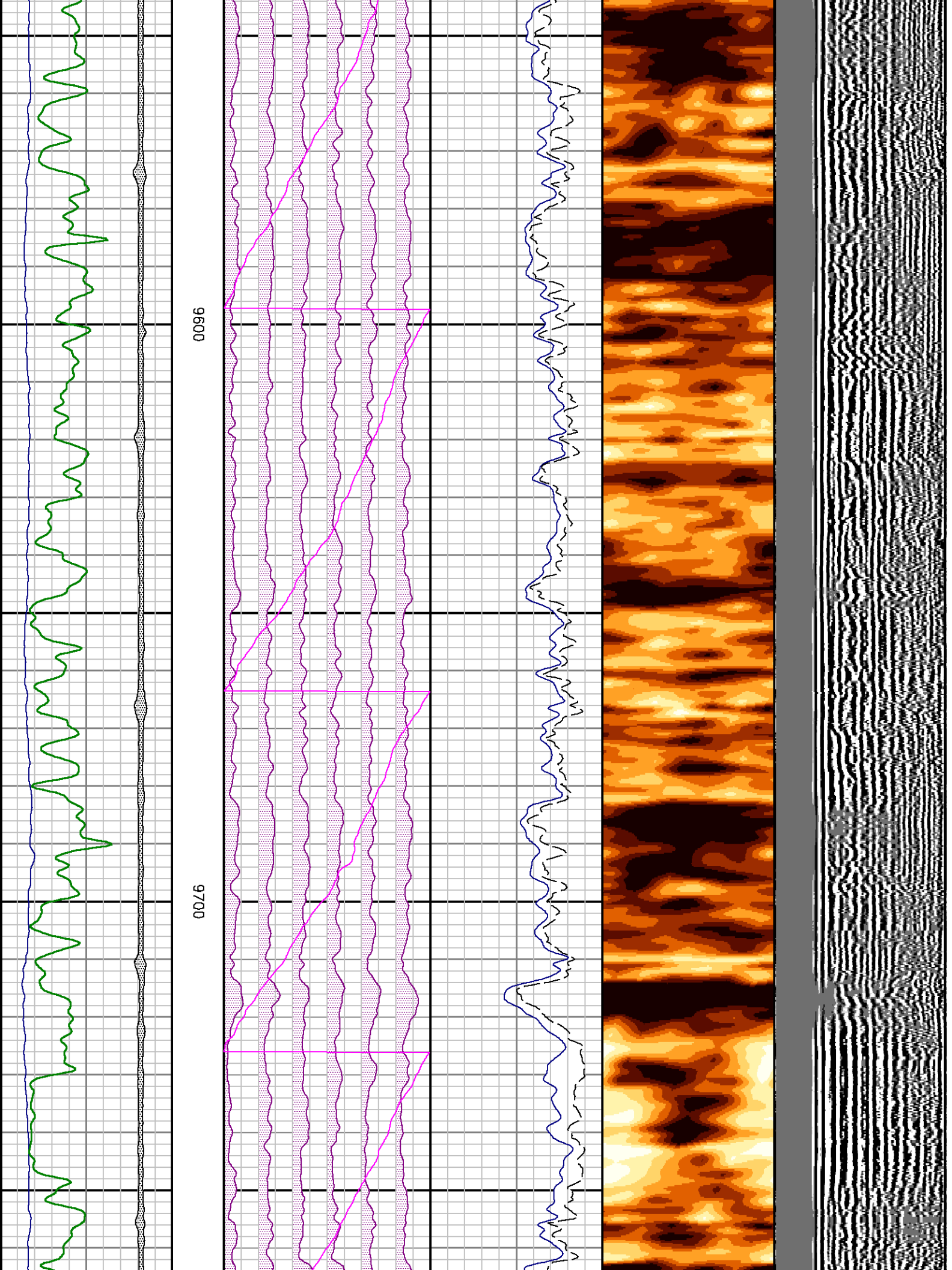


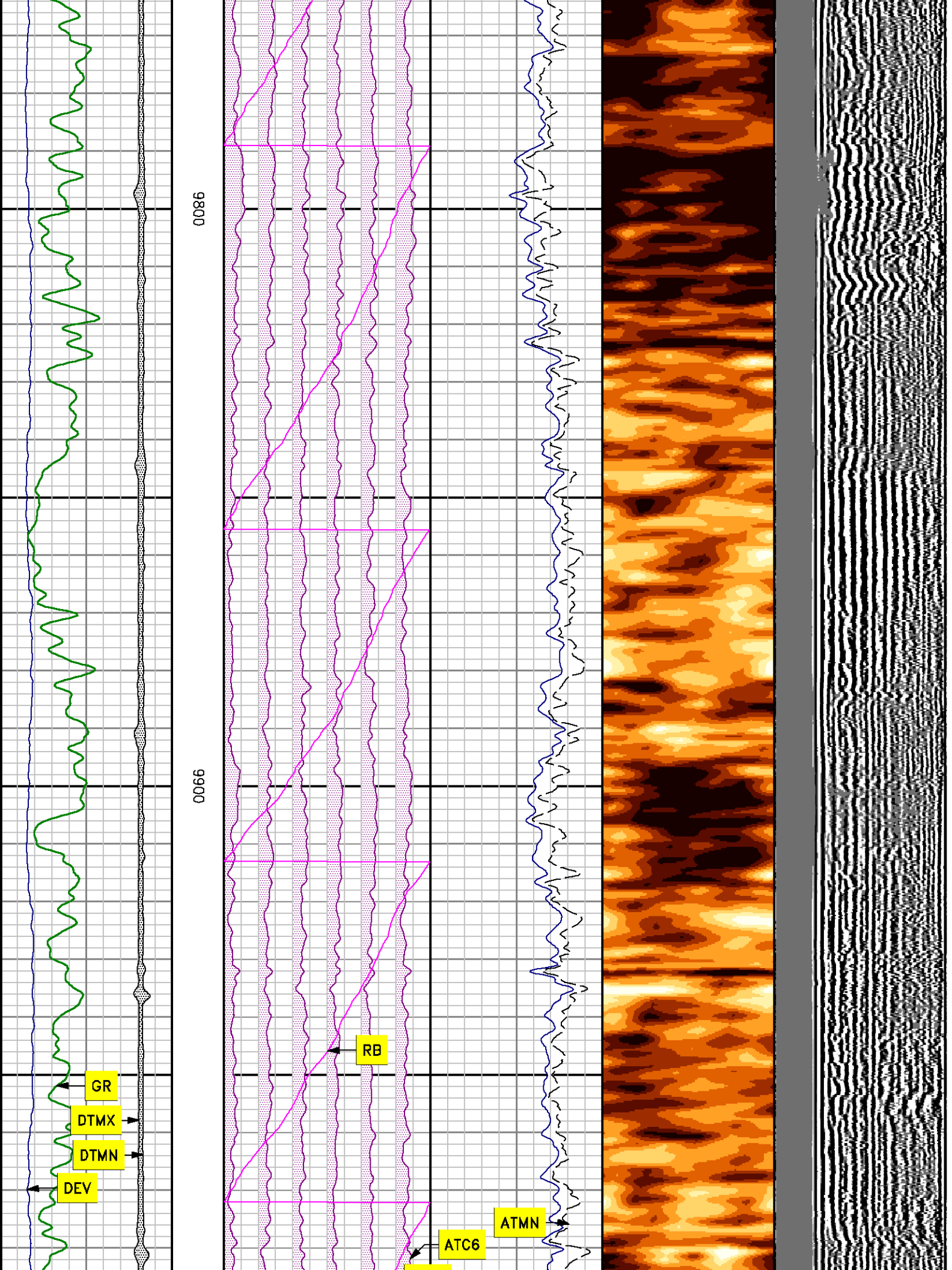


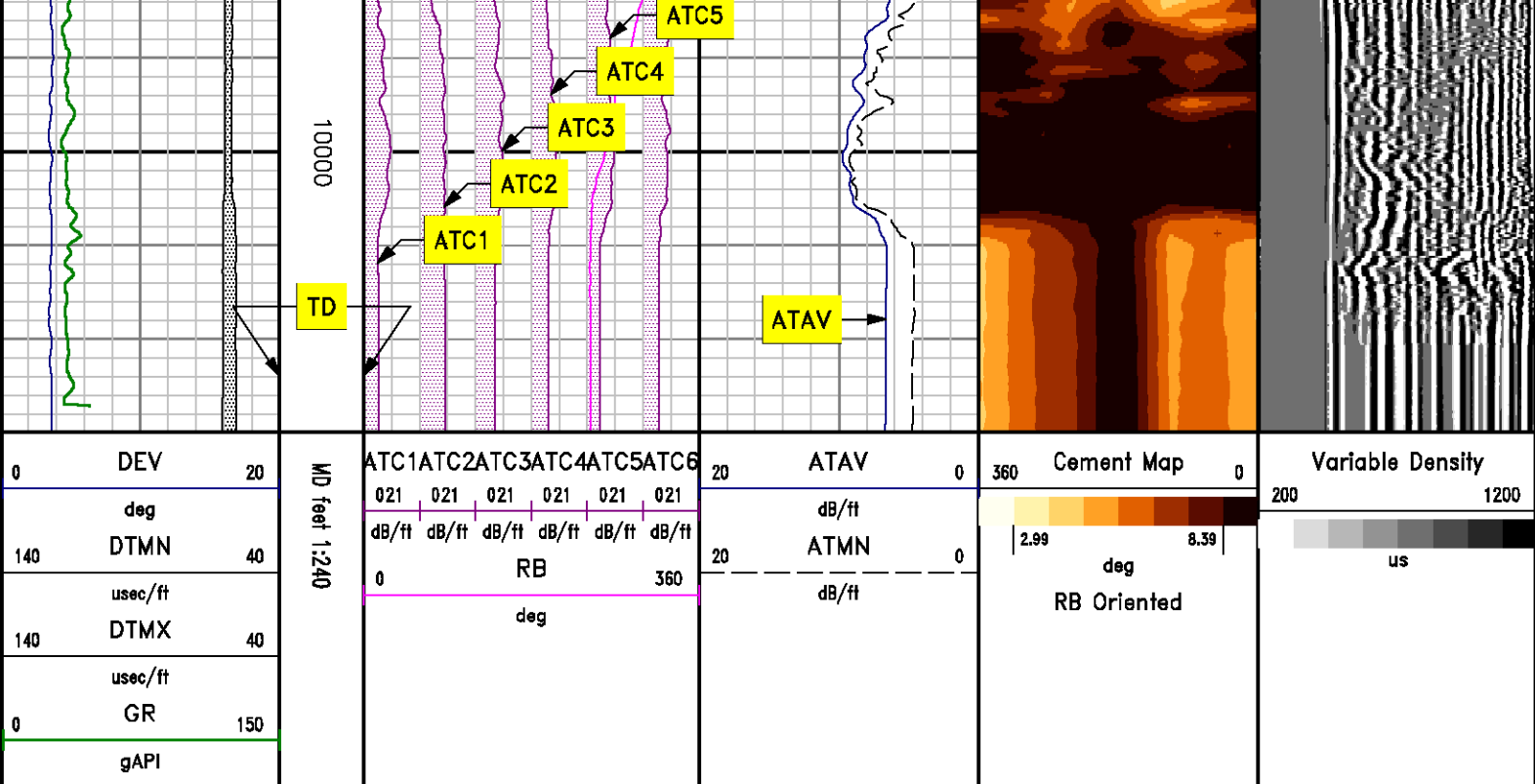












REPEAT LOG
0 PSI

SBT NORMALIZATION RESULTS

CURVE	PARAMETER	VALUE	UNITS	TOP	BOTTOM	COMMENT
ATC1	seg1 cnormf1	0.847	db/ft	9650.000	10080.524	
ATC2	seg2 cnormf2	-0.428	db/ft	9650.000	10080.524	
ATC3	seg3 cnormf3	0.784	db/ft	9650.000	10080.524	
ATC4	seg4 cnormf4	-0.153	db/ft	9650.000	10080.524	
ATC5	seg5 cnormf5	-0.364	db/ft	9650.000	10080.524	
ATC6	seg6 cnormf6	-0.685	db/ft	9650.000	10080.524	
ATC1	seg1 dnormf1	1.561	db/ft	9650.000	10080.524	Good Confidence
ATC2	seg2 dnormf2	0.036	db/ft	9650.000	10080.524	Good Confidence
ATC3	seg3 dnormf3	0.381	db/ft	9650.000	10080.524	Good Confidence
ATC4	seg4 dnormf4	-1.168	db/ft	9650.000	10080.524	Good Confidence
ATC5	seg5 dnormf5	-0.611	db/ft	9650.000	10080.524	Good Confidence
ATC6	seg6 dnormf6	-0.199	db/ft	9650.000	10080.524	Good Confidence

SBT PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
amp	fpamp	69.513	mv	9639.000	10080.000
amp	fpattn	1.193	dB/ft	9639.000	10080.000
atc	dbspread	4.589	dB/ft	9639.000	10080.000
atc	spacing	0.654	feet	9639.000	10080.000
cemr	casing od	7.000	inches	9639.000	10080.000
cemr	casing wt	26.000	lbm/ft	9639.000	10080.000
cemr	compress	1700.000	psi	9639.000	10080.000
CN	Bit Size	7.875	inches	9650.000	10080.524
CN	Casing Thickness	0.361	inches	9639.000	10080.000
CN	Casing/Cement Correction	No		9650.000	10080.524
CN	CN Chism	No		9650.000	10080.524
CN	Matrix	Limestone		9650.000	10080.524
CN	Salinity	0.000	ppm	9650.000	10080.524

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
2346XA	-46.500	CCL					
1309XA	-36.750	GR					
2435XA	-30.250	LSN					
2435XA	-29.750	NEU	SSN				
1424XA	-11.000	ATC1	ATC2	ATC3	ATC4	ATC5	ATC6
		ATAV	ATMN	ATMX	AMAV	DEV	DTMN
		DTMX	RB	XATT	YATT		
1424PA	0.000	CHV	CYQ	SIG			

Created by : SBT, v5.0.003

Plotted by : PlotMgr, v5.4.504

Company : EXXONMOBIL PRODUCTION COMPANY

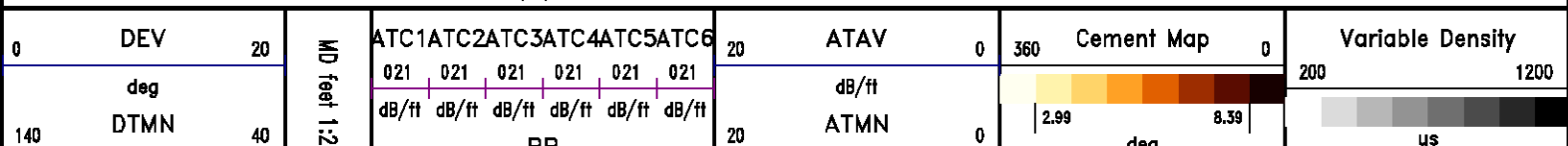
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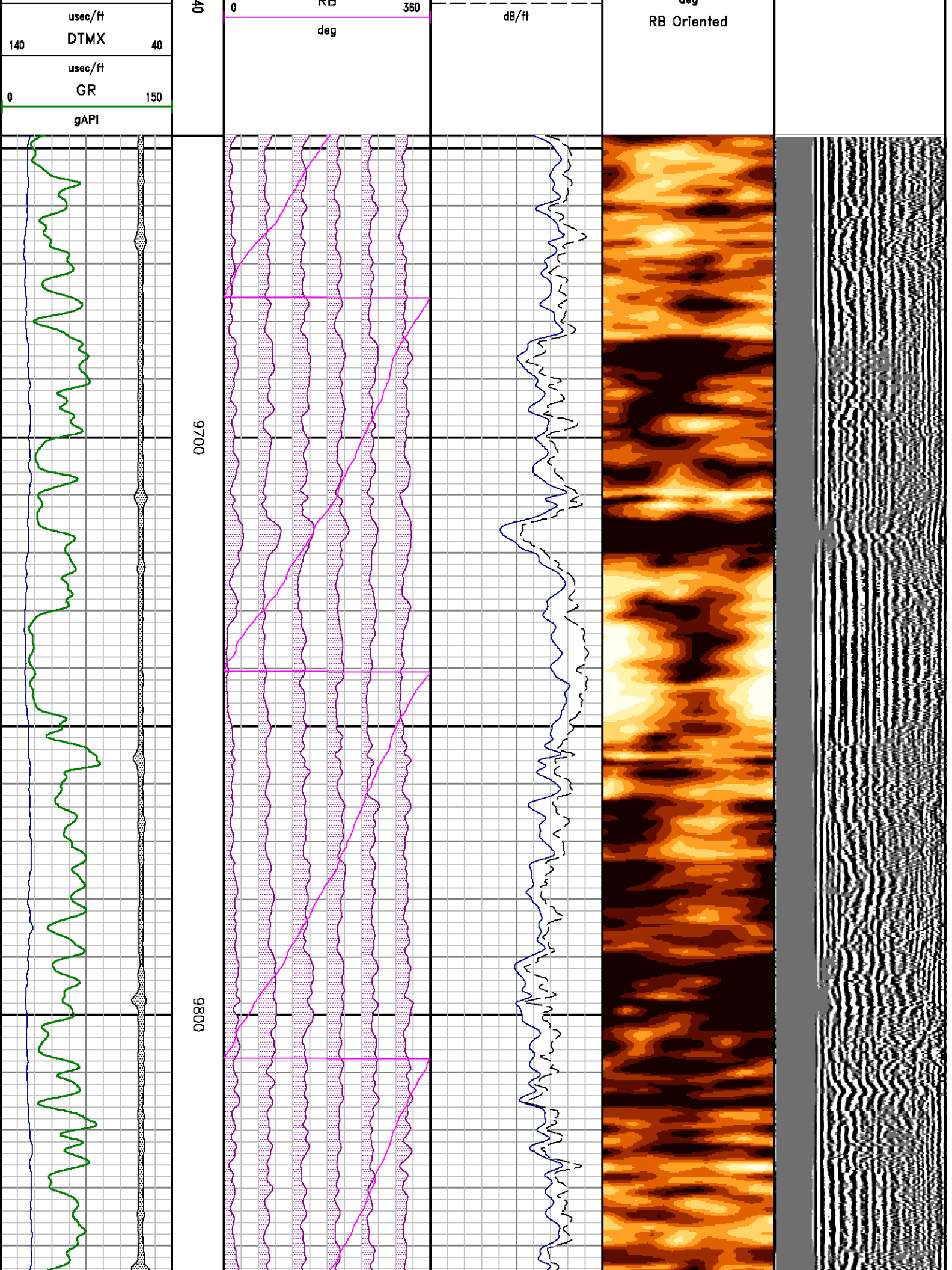
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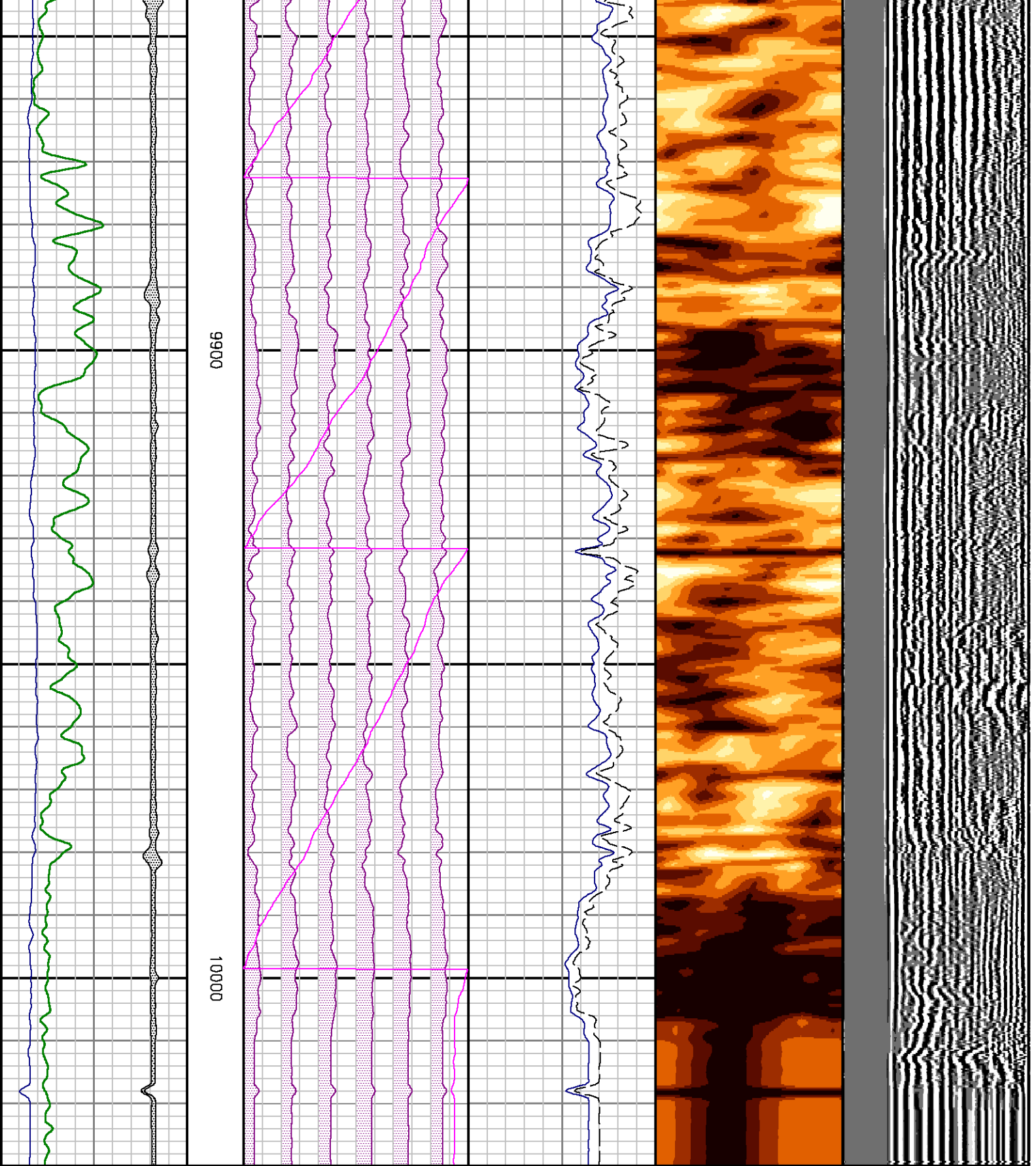
Mode : PlotMgr 5.4.504

Interval : 9647.75 - 10030.00 feet UP

Created : 9/8/2011 2:46:02 PM





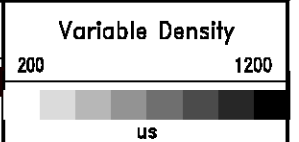
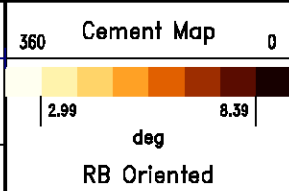


0	DEV	20
	deg	
140	DTMN	40
	usec/ft	
140	DTMX	40
	usec/ft	
0	GR	150

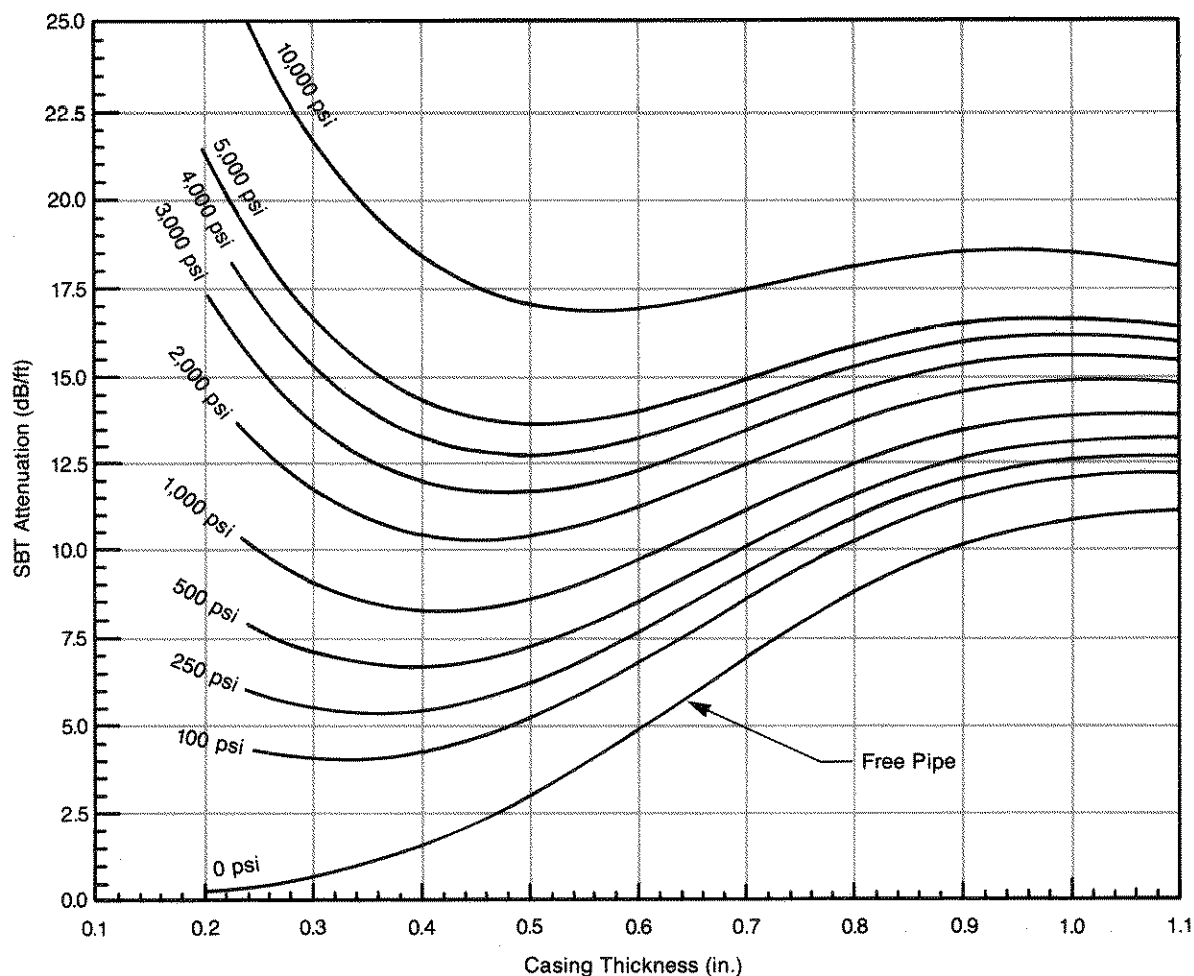
MD feet 1:240

ATC1	ATC2	ATC3	ATC4	ATC5	ATC6
021	021	021	021	021	021
dB/ft	dB/ft	dB/ft	dB/ft	dB/ft	dB/ft
0	RB				360
	deg				

20	ATAV	0
	dB/ft	
20	ATMN	0
	dB/ft	



Cement Compressive Strength from Segmented Bond Tool Log



This chart is intended to provide an estimate of the compressive strength of bonded cement using the attenuation readings from the Segmented Bond Tool (SBT™) log.

Enter the chart on the left with the attenuation in dB/ft, while at the same time entering the casing wall thickness (in.) from the bottom of the chart. The point at which the two lines intersect is the estimated compressive strength (psi) of the bonded cement.

CALIBRATION SUMMARY

GAMMA RAY

DATE/TIME PERFORMED: Mon Sep 05 14:14:25 2011

TOOL SERIES:

1339XA

ASSET:

489

SEQ: S6

Calibrator #

Background

Calibrator On

Multiplicative

Background

Calibrator On

Differential

[cps]

[cps]

[api]

[api]

[api]

S2K BA-905

58.91

260.64

0.744

43.80

193.80

150.00

Verification File: C:\case\calver\GR\489S6.vp

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Mon Sep 05 14:24:10 2011

TOOL SERIES:

1339XA

ASSET:

489

SEQ: S6

Calibrator #

Background

Calibrator On

Multiplicative

Background

Calibrator On

Differential

[cps]

[cps]

[api]

[api]

[api]

S2K BA-905

58.00

260.07

0.744

43.13

193.37

150.25

RB

Calibration File: C:\case\calver\RB\618S7.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Sep 05 14:29:19 2011

TOOL SERIES:

1424XA

ASSET:

618

SEQ: S7

X-Att

Y-Att

RB

X-Max

Y-Max

OFFSET

[raw]

[raw]

[deg]

[deg]

[deg]

[deg]

PAD 2

-130.00

384.60

0.00

PAD 3

232.70

304.60

59.73

-367.51

389.80

69.28

Verification File: C:\case\calver\RB\618S7.vp

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Mon Sep 05 14:30:22 2011

TOOL SERIES:

1424XA

ASSET:

618

SEQ: S7

Pad 1

Pad 2

Pad 3

Pad 4

Pad 5

Pad 6

RB [deg]

302.38

356.84

59.84

119.35

180.46

242.59

PAD

Verification File: C:\case\calver\PAD\618S7.VK

DATE/TIME PERFORMED: Mon Sep 05 14:32:04 2011

TOOL SERIES:

1424XA

ASSET:

618

SEQ: S7

Pad 1

Pad 2

Pad 3

Pad 4

Pad 5

Pad 6

Noise Level
PAD Sensitivity

2.00

2.35

2.35

2.75

1.90

2.50

341.80

337.00

291.80

330.20

296.00

296.20

TOOL DIAGRAM

HEADOH

Series	HEADOH
Mnemonic	CBLH
Diameter	3.38"
Length	2.65'

CCL

Series	2330NA
Mnemonic	CCL
Diameter	3.38"

GAMMA

Series	1339XA
Mnemonic	GR
Diameter	3.37"
Weight	110.00 lb
Length	5.49'
Measure Point	1.42' GR MP
Temp Rating	400.00 °F
Press Rating	20000.00 PSI

ACOUSTIC DIGITIZER

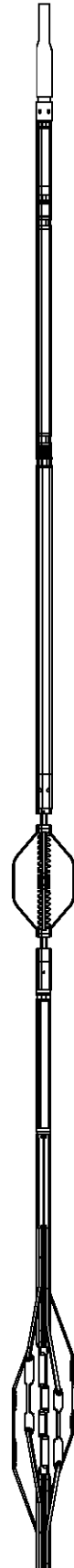
Series	1633EA
Mnemonic	AC
Diameter	3.38"
Weight	133.00 lb
Length	8.00'
Temp Rating	400.00 °F
Press Rating	20000.00 PSI

4 ARM BOW SPRING CENTRALIZER

Series	4341XA
Mnemonic	CENT
Diameter	3.38"
Weight	84.00 lb
Length	4.12'

SEGMENTED BOND TOOL

Series	1424XB
Mnemonic	SBT
Diameter	3.38"
Length	17.33'
Measure Point	7.11' PAD MP



51.87'

CCL MP 48.16'

GR MP 42.96'

PAD MP 19.20'

SEGMENTED BOND TOOL VDL SUB (1424PA)

4 ARM BOW SPRING CENTRALIZER

Series 4341XA
Mnemonic CENT
Diameter 3.38"
Weight 84.00 lb
Length 4.12'

VDL MP 8.20'

0.00'

Total Length: 51.87'
Total Weight: Not Available
Max Diameter: 0' 3.38"



Company

EXXONMOBIL PRODUCTION COMPANY

Well

PCU 296-6B7

Field

PICEANCE CREEK

County

RIO BLANCO

State

COLORADO

File No:

CH042237

API No:

05103115310000

Location

SHL: W108° 12' 15.90" N39° 54' 19.31"

BHL: W108° 11' 48.96" N39° 54' 12.15"

Elevations

KB 7393.1 ft

DF 7394.1 ft

GL 7367 ft

SEC 8

TWP 2S

RGE 96W

Baker Atlas

