



RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No: CH091511	Company Well Field County	WPX ENERGY SAVAGE RWF 444-25 RULISON GARFIELD	State COLORADO
API No: 05045219990000	Location SHL: 1126' FSL x 1381' FEL (SESE) BHL: 398' FSL x 716' FEL SEC 25 TWP 6 S RGE 94W		Other Services BOND LOG
25 6S 94W RWF 43-25 PAD NABORS 677	Permanent Datum Log Measured From Drill Measured From		Elevations KB 6260 ft DF GL 6234 ft
GROUND LEVEL KB 26 ft		Above P. D. KB	

Date	14/OCT/14	
Run	1	
Service Order	US091511	
Depth Driller	8858 ft	
Depth Logger	8812 ft	
Bottom Logged Interval	8802 ft	
Top Logged Interval	4593 ft	
Time Started	1130	
Time Finished	1830	
Operator Rig Time	7 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	NA	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	245 degF	
Reference Log	BAKER HUGHES BOND LOG	
Reference Log Date	14/OCT/14	
Equipment No.	44271	GRAND JCT.
Recorded By	P. EDWARDS	
Witnessed By	BOB CADY	

- FOLD HERE

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
13.5 in	26 ft	1111 ft
8.75 in	1111 ft	8858 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			26 ft	1111 ft
4.5 in	11.6 lbm/ft	I-80	26 ft	8858 ft

Remarks
All data on this log is shifted and depth matched using the CCL curve to the Baker Hughes bond log dated 10/14/2014 at the client's request.
The amount of linear shift is -3.5 feet.
Logged in PNC-3D mode.
BHT = 245°F
SJ = 5327'-5348'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	TEMP	8255XA	Z120516	FREE
1	1	RPM	8281FA	10191667	FREE
1	1	RPM	8283PA	10585555	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	GR	2812LA	10274382	FREE
1	1	TEL/CCL	8248EA	10296408	FREE
1	1	PCM	8250EA	10586851	FREE

MAIN SECTION
PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		4567.350	5820.000
PNC Porosity	Borehole Size	8.750	inch	4567.350	5820.000
PNC Porosity	Casing Size	4.500	inch	4567.350	5820.000
PNC Porosity	Gas Filled	Non Gas Filled		4567.350	5820.000
PNC Porosity	Matrix	Sandstone		4567.350	5820.000
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	4567.350	5820.000
PNC Porosity	Borehole	Cased		5820.000	6408.000
PNC Porosity	Borehole Size	8.750	inch	5820.000	6408.000
PNC Porosity	Casing Size	4.500	inch	5820.000	6408.000
PNC Porosity	Gas Filled	Non Gas Filled		5820.000	6408.000
PNC Porosity	Matrix	Sandstone		5820.000	6408.000
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	5820.000	6408.000
PNC Porosity	Borehole	Cased		6430.223	8820.004
PNC Porosity	Borehole Size	8.750	inch	6430.223	8820.004
PNC Porosity	Casing Size	4.500	inch	6430.223	8820.004
PNC Porosity	Gas Filled	Non Gas Filled		6430.223	8820.004
PNC Porosity	Matrix	Sandstone		6430.223	8820.004
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	6430.223	8820.004

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-26.519	FLTM
8248ED	-24.519	CCL CHV
2812LA	-21.969	GR
8281XA	-12.702	HVC3Q0 SEQ3 AMA3 AML3 BKX CXS CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS MCS3 MCS3Q0 QCAL3 RGN3 RICX SDA3 SDL3 SGA3 SGL3 STA3 XS ASPEC3 AMB3 AMF3 CHF3 IXSC IXSN RATO23 RICXC RIN13C RIN23 RIN23C SD3D SG3D SGB3 SGF3 WIDTH3 CXSR IXSR XSR RICXR
8281XA	-12.291	HVC2Q0 SEQ2 AMA2 AMB2 AMF2 AML2 BKL CHF2 CLS CPT2Q0 CPT2Q2 CPT2Q3 CPT2Q4 ET2 ILS LS MCS2 MCS2Q0 QCAL2 RGN2 RICL RONE23 RTWO23 SDA2 SDL2 SGA2 SGB2 SGF2 SGK2 SGL2 STA2 ASPEC2 ILSC ILSN WIDTH2 RICLC CLSR ILSR LSR RICLR
8281XA	-12.041	CPRS HVC1Q0 MV SEQ SEQ1 AMA1 AMB1 AME1 AMF1 AML1 BKS CHF1 CSS CORB CORF CPT1Q0 CPT1Q2 CPT1Q2A CPT1Q2B CPT1Q2C CPT1Q3 CPT1Q4 CPT1Q5 ET1 G1 G2 GE1S GE2S ISS MCS1 MCS1Q0 QA1 QCAL1 QM1 RATO RATO13 RBOR RGN1 RICS RIN RONE RPOR RTWO RIN13 RONE13 RTWO13 SALB SC1 SDA1 SDL1 SGA1 SGB1 SGBC SGE1 SGF1 SGFC SGK1 SGL1 SS SS2 STA1 PD1S PD2S PD3S MD1S MD2S MD3S DG1S DG2S DG3S PD1M PD2M PD3M MD1M MD2M MD3M DG1M DG2M DG3M MVS MA MVM FILV IAM TA PVM PVS IAS SSTAT QPD1 QPD2 QPD3 QMD1 QMD2 QMD3 QDG1 QDG2 QDG3 QMA QTA QFILV QMV QPV QIA DERR DCNT QPK1 QSA1 PKS1 ASPEC1 H0C FE2XC ISSC RINC ISSN RDEN WIDTH1 RICSC CSSR G1R G2R ISSR SSR SS2R RATOR RATO13R RBORR RICSR RINR RIN13R RONE RPORR RTWOR
8255XA	-0.792	PTFS PTMS
8255XA	-0.775	SPF1 SPFQ TSCP TSDP
8255XA	0.000	DTEM TEMP TNF
SYSTEM	0.000	TEN TTEN

Company : WPX ENERGY

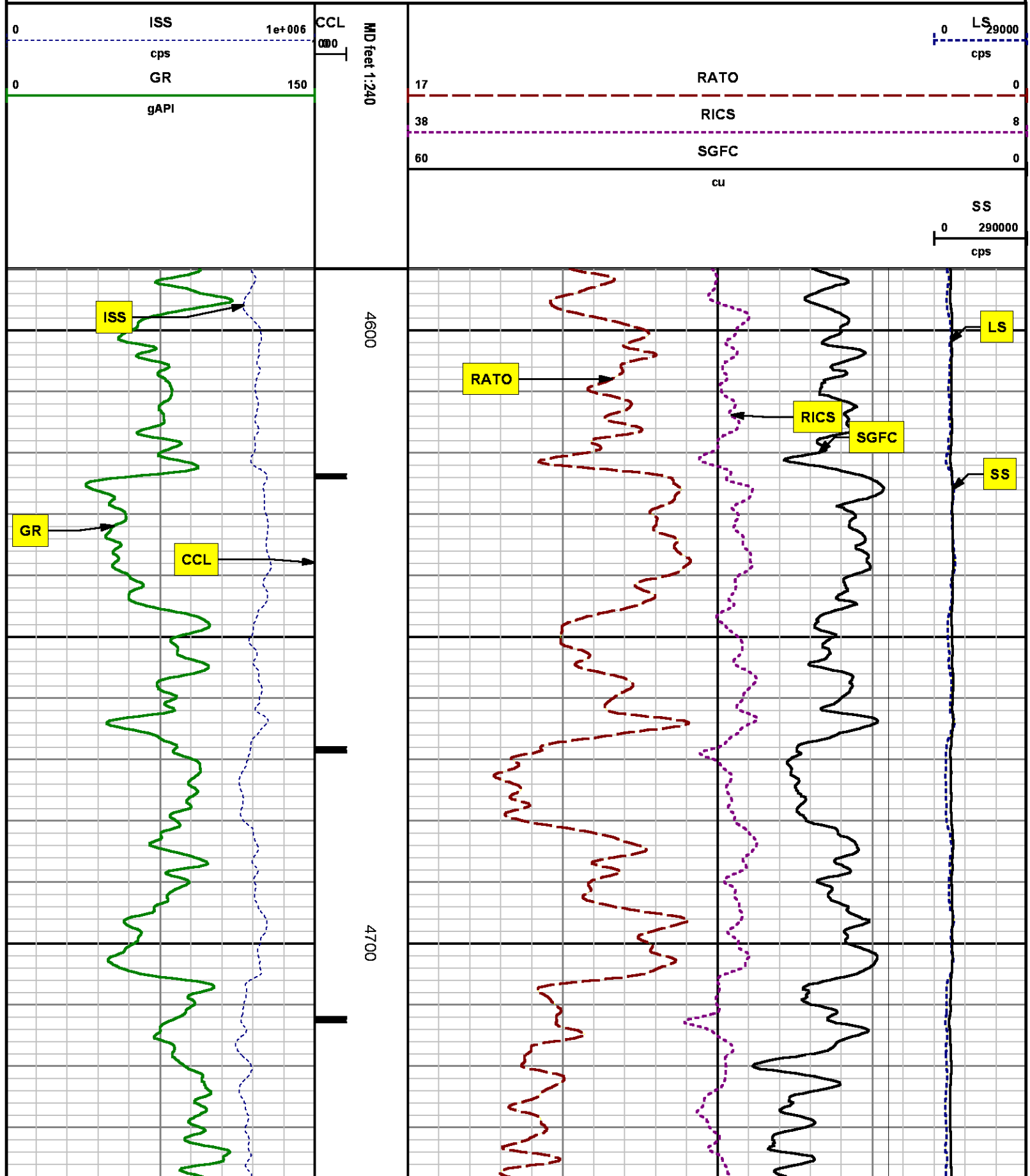
Well : SAVAGE RWF 444-25

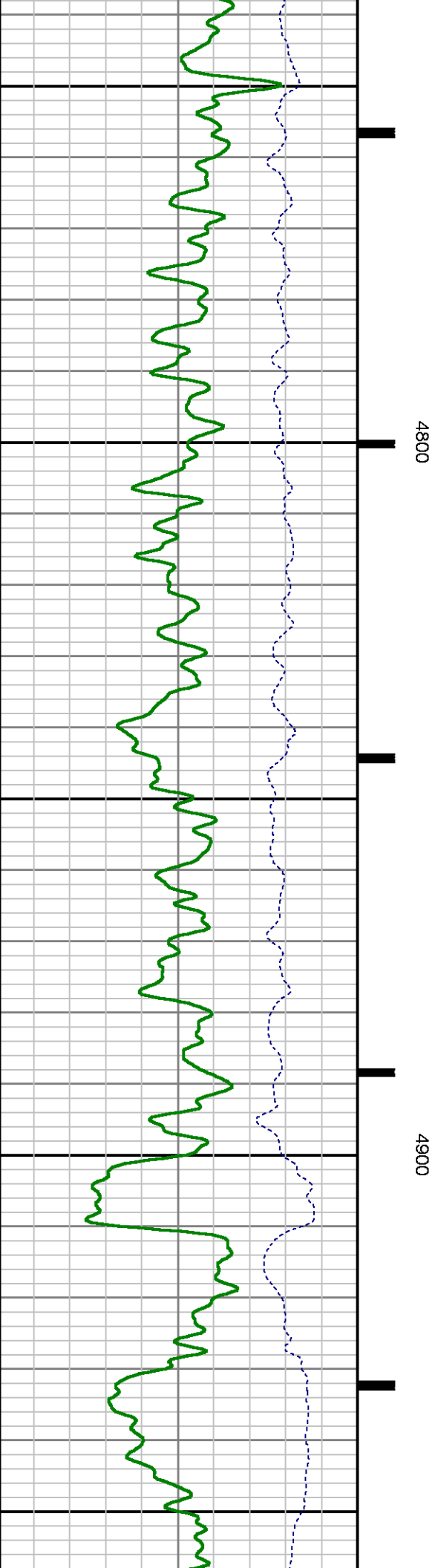
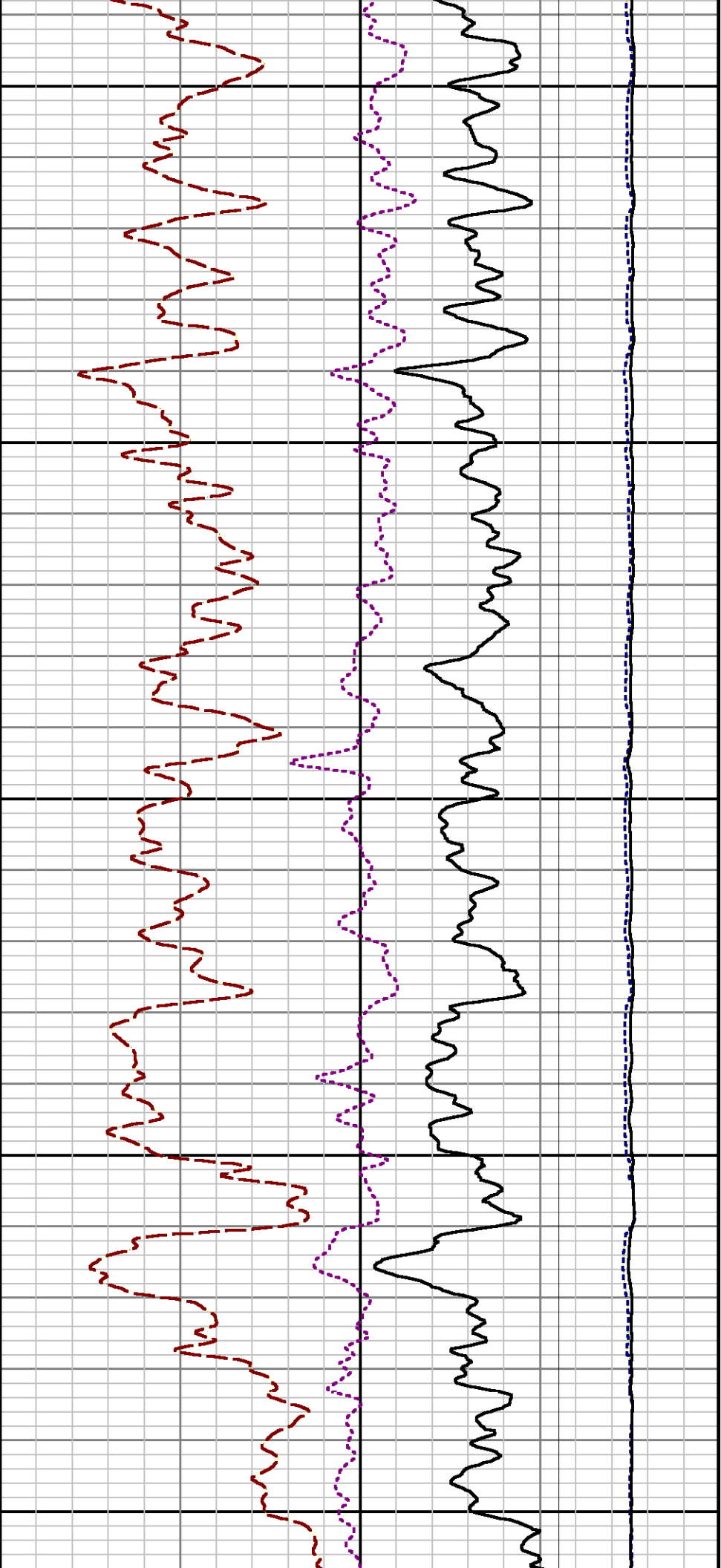
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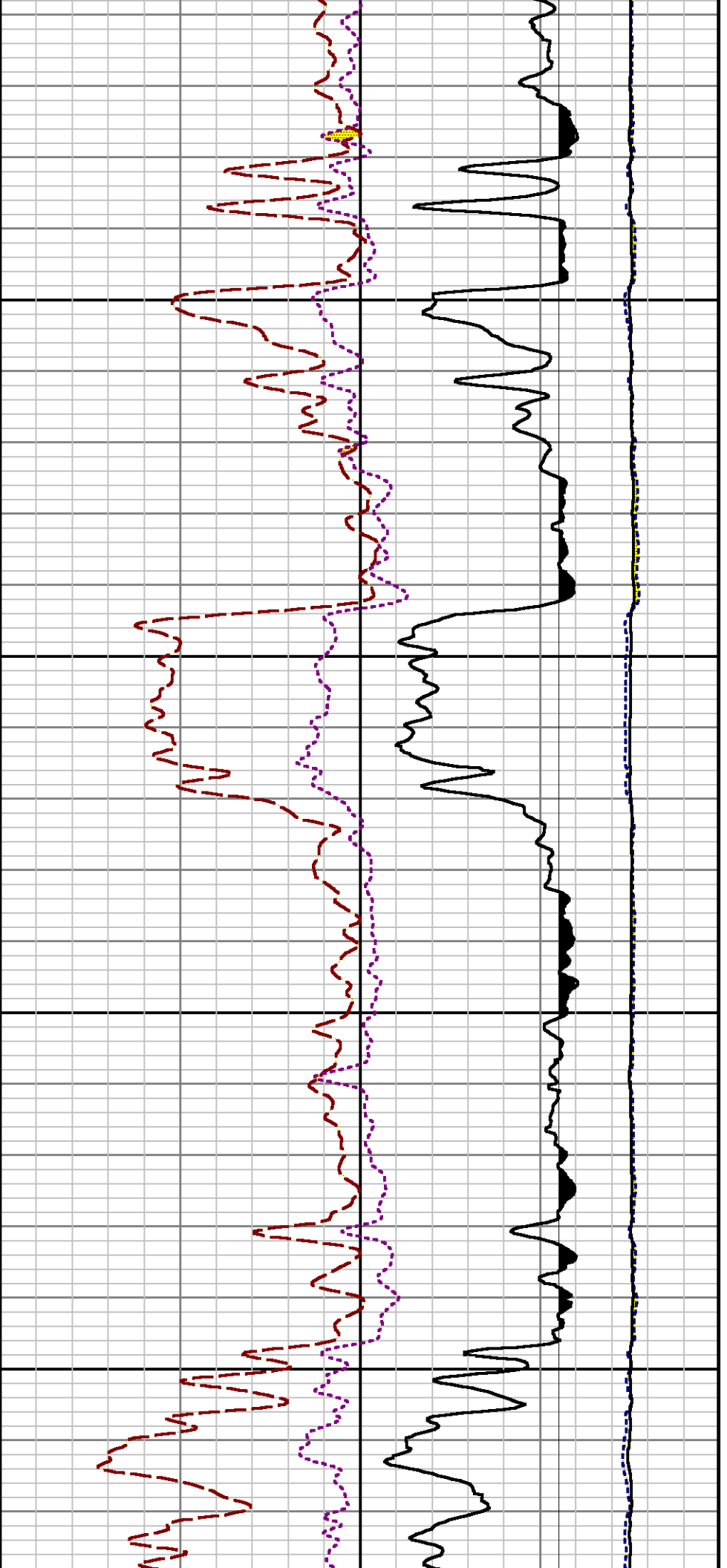
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Interval : 4590.00 - 8817.50 feet UP

Created : 10/14/2014 4:13:07 PM

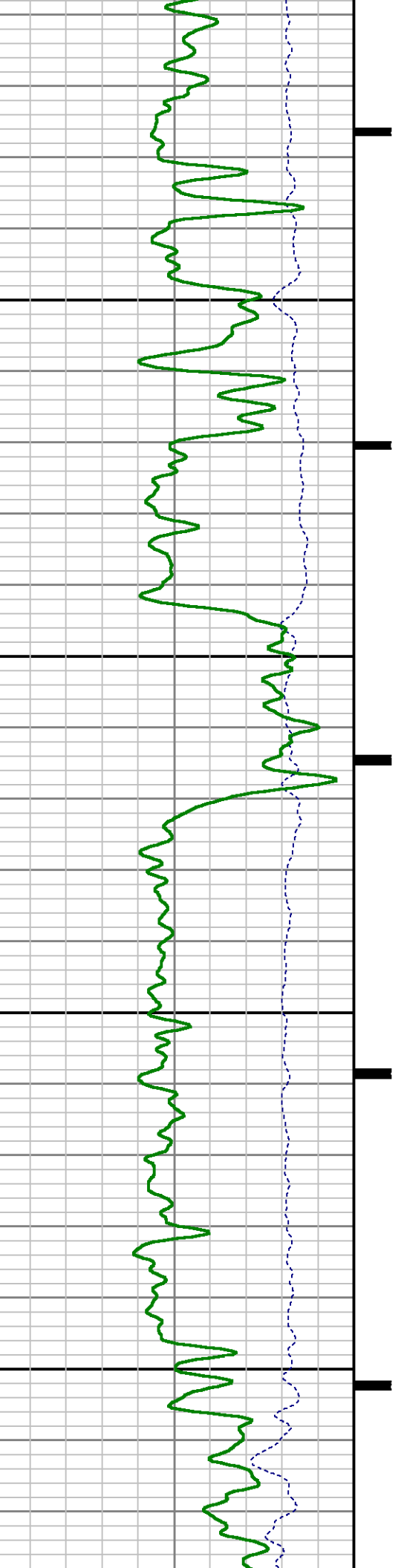


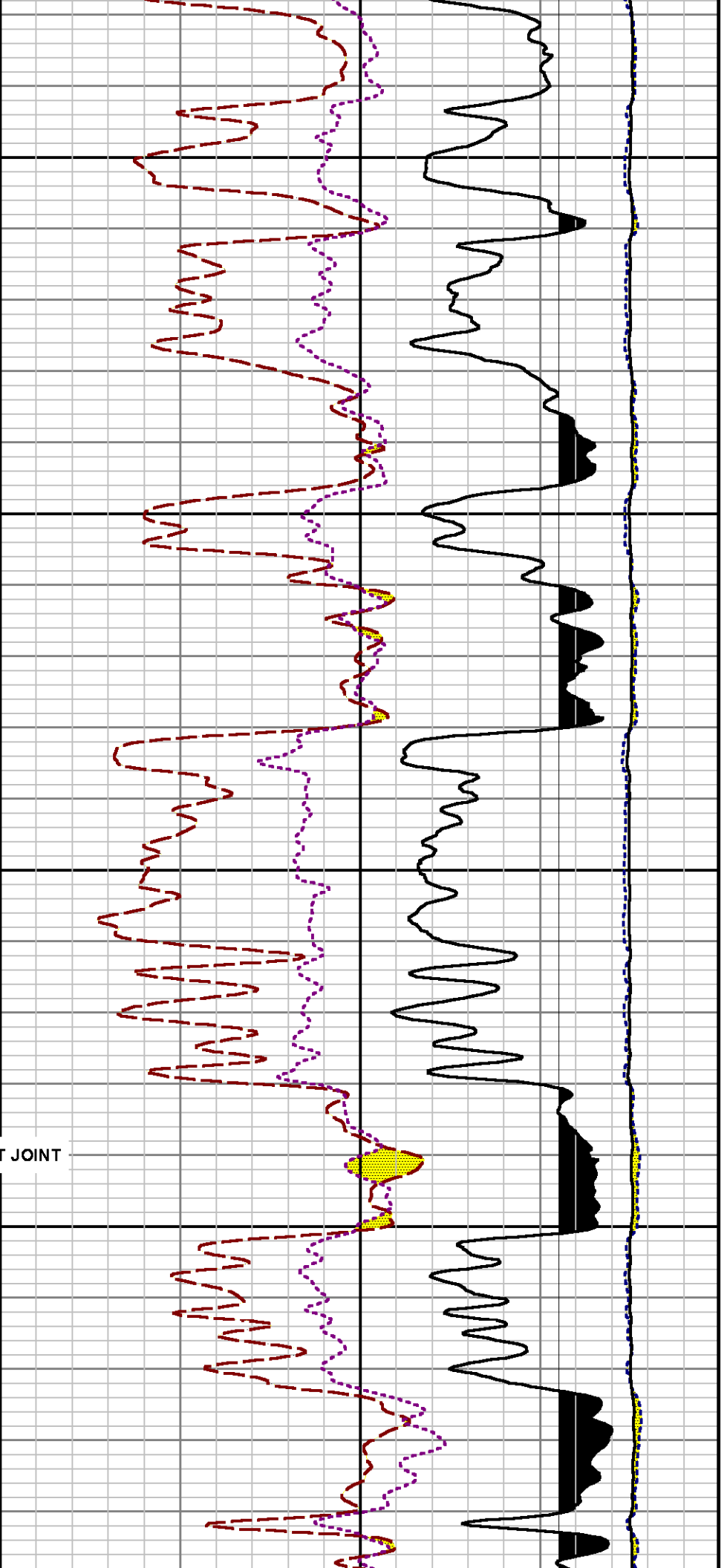




5000

5100



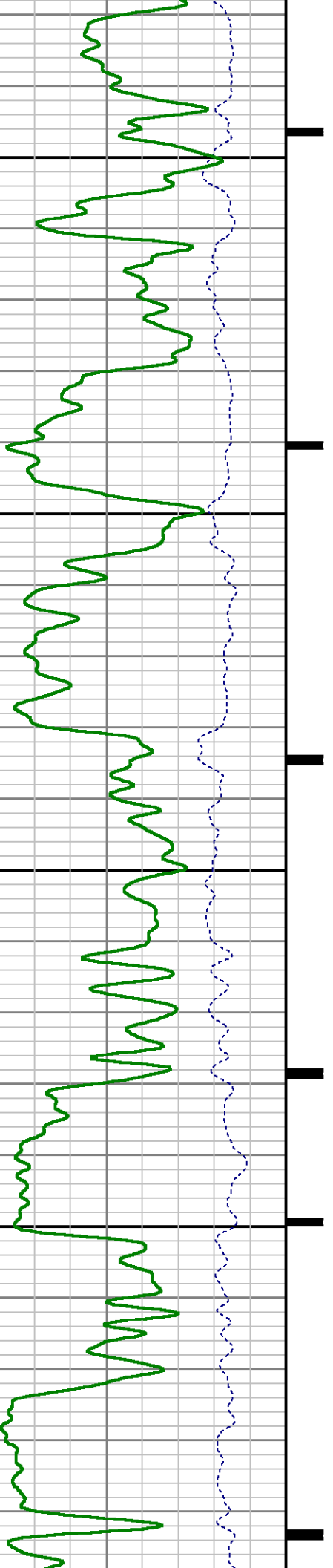


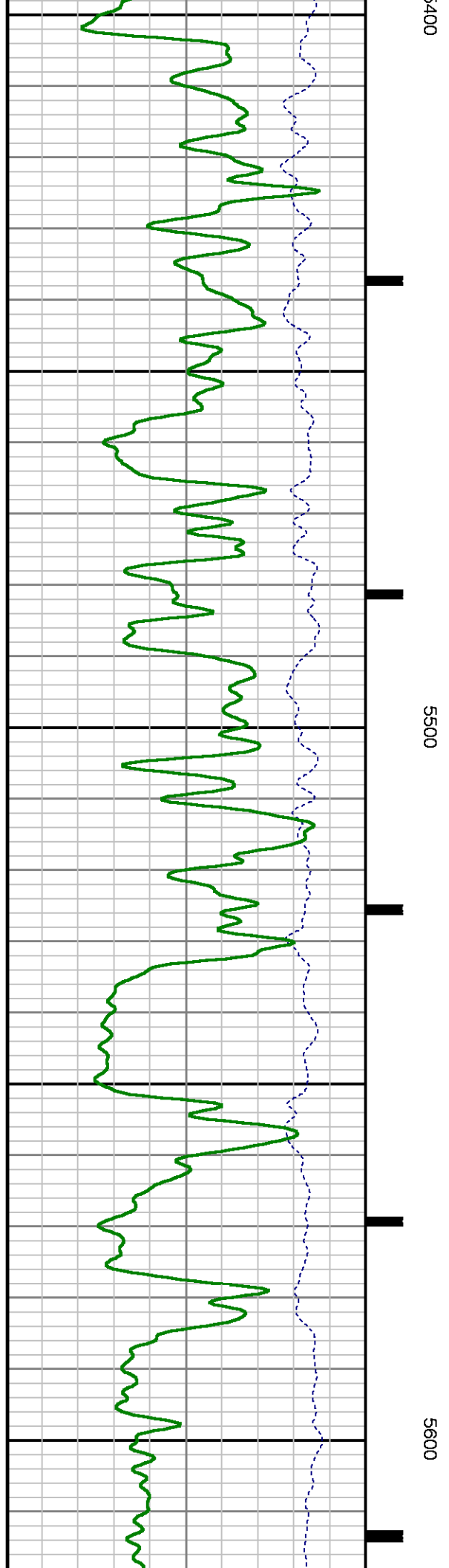
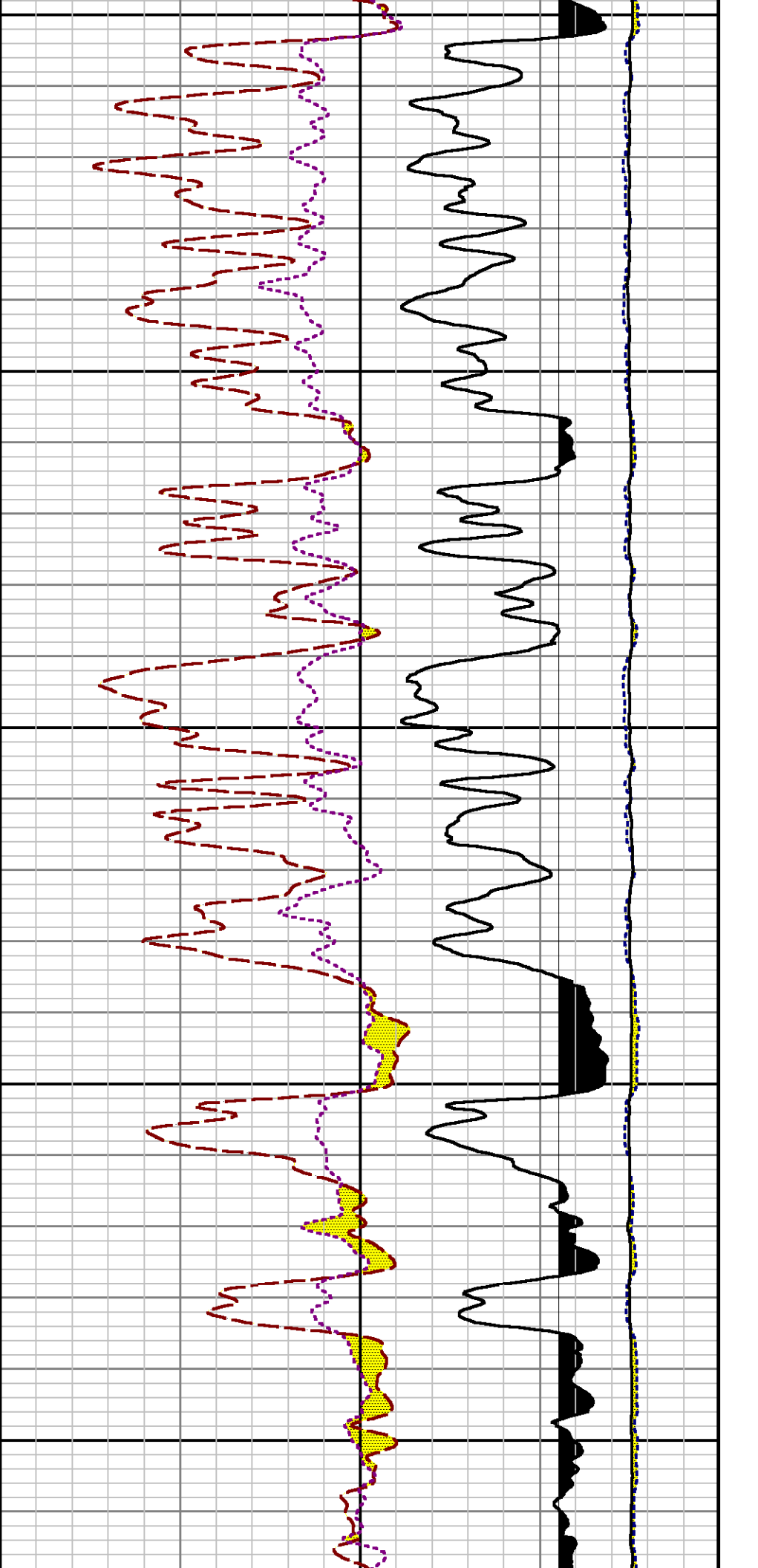
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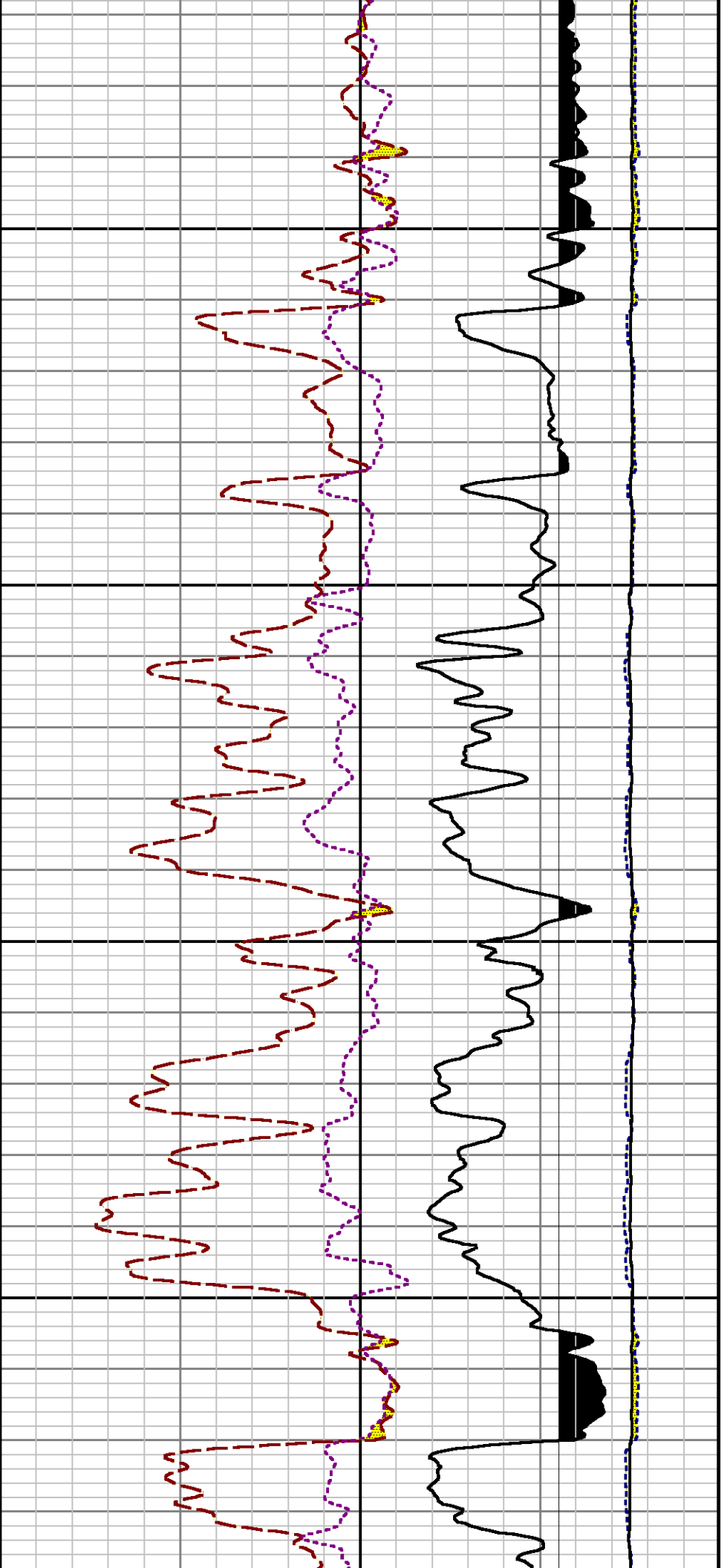
5300

SHORT JOINT

5

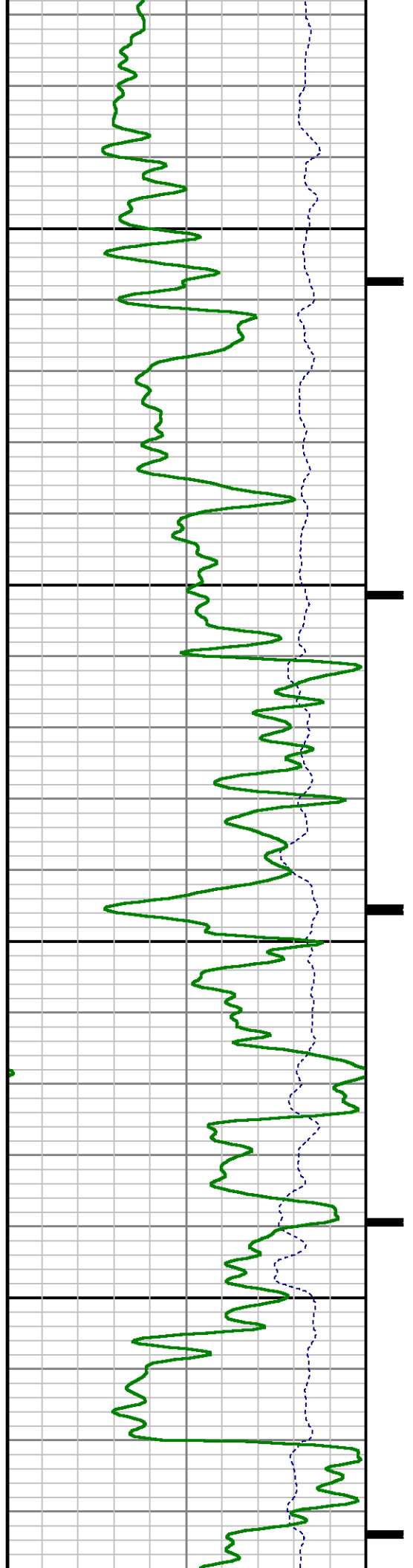


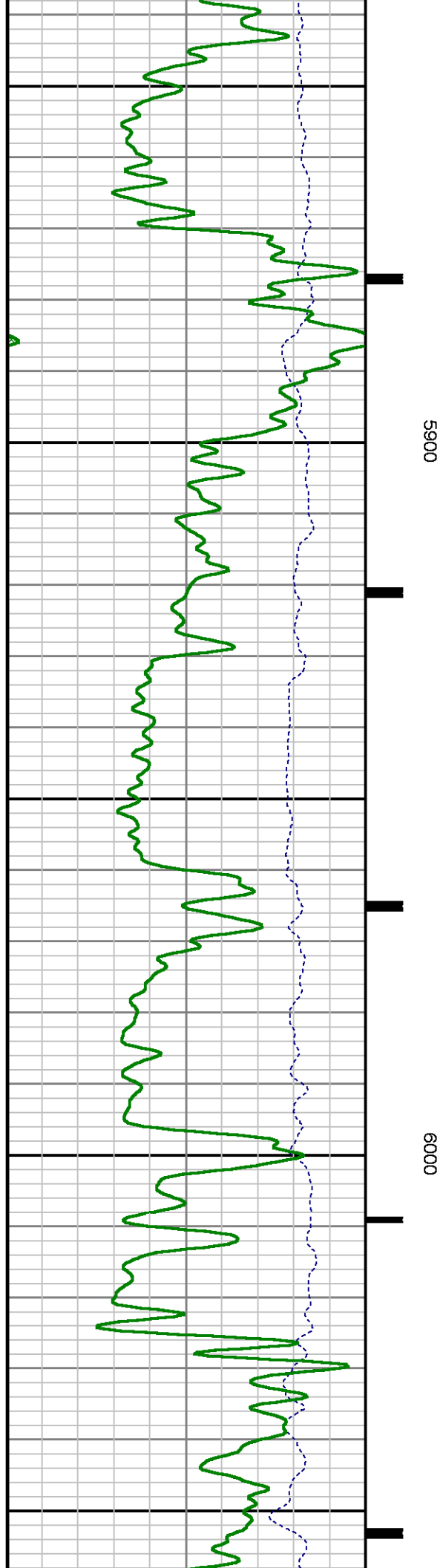
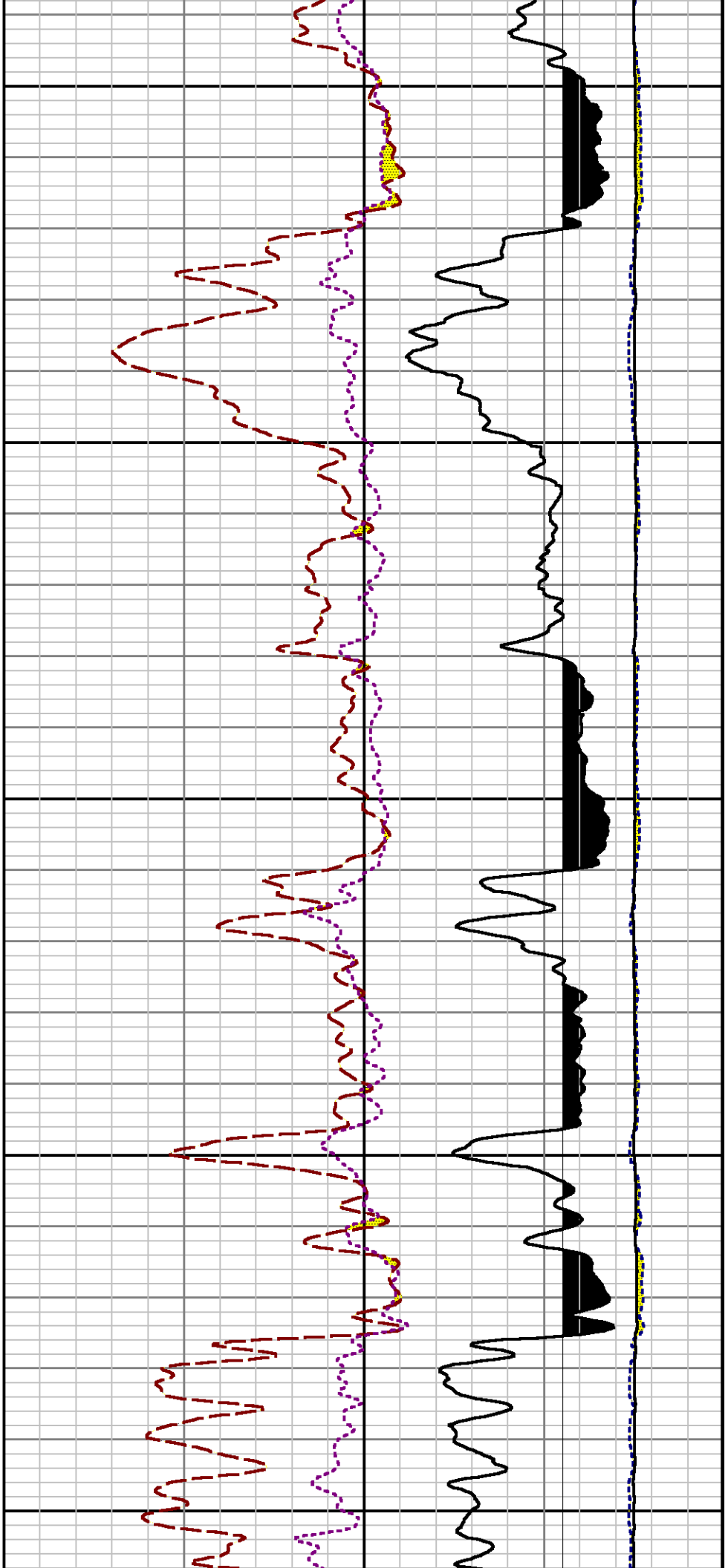


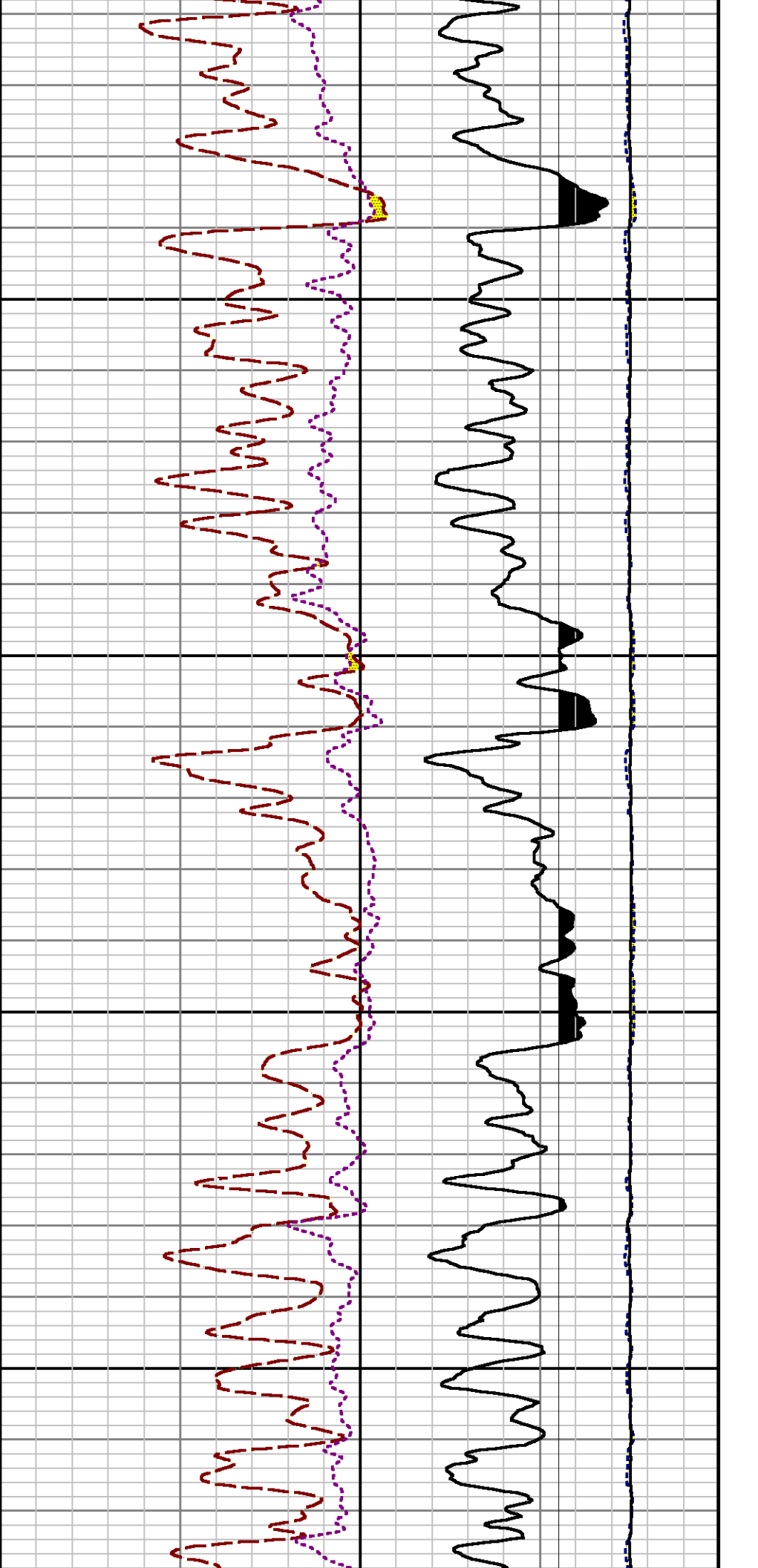


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5800

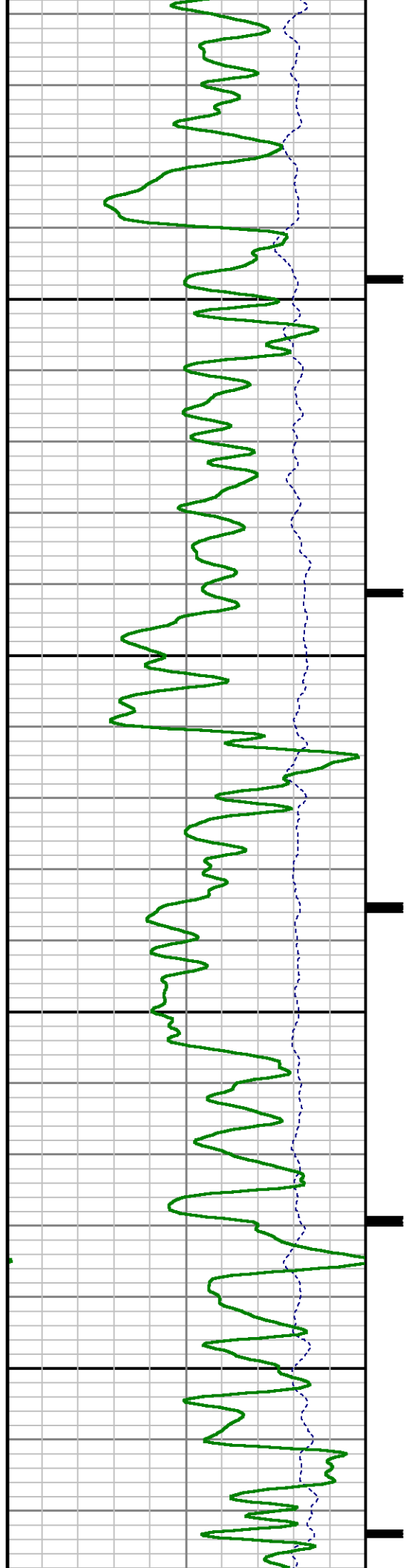


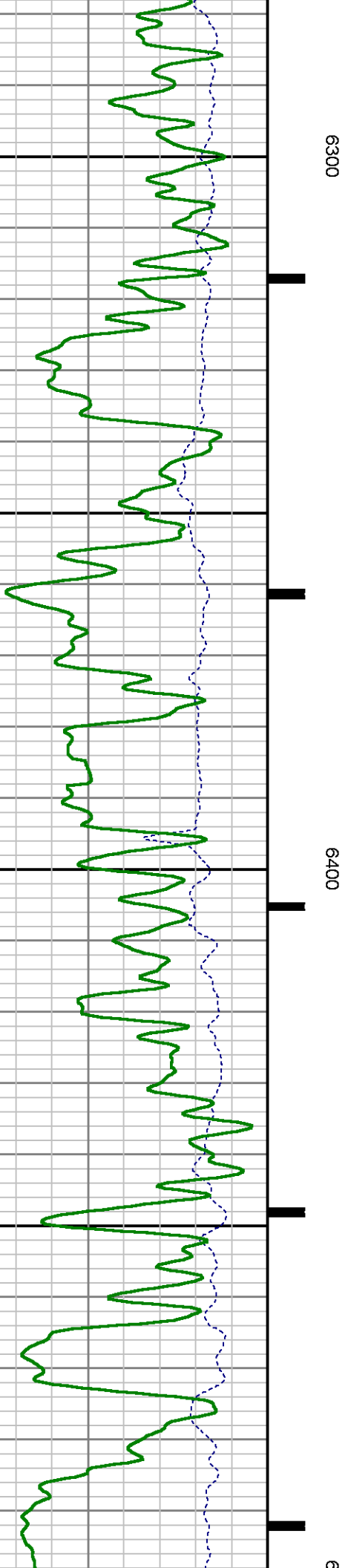
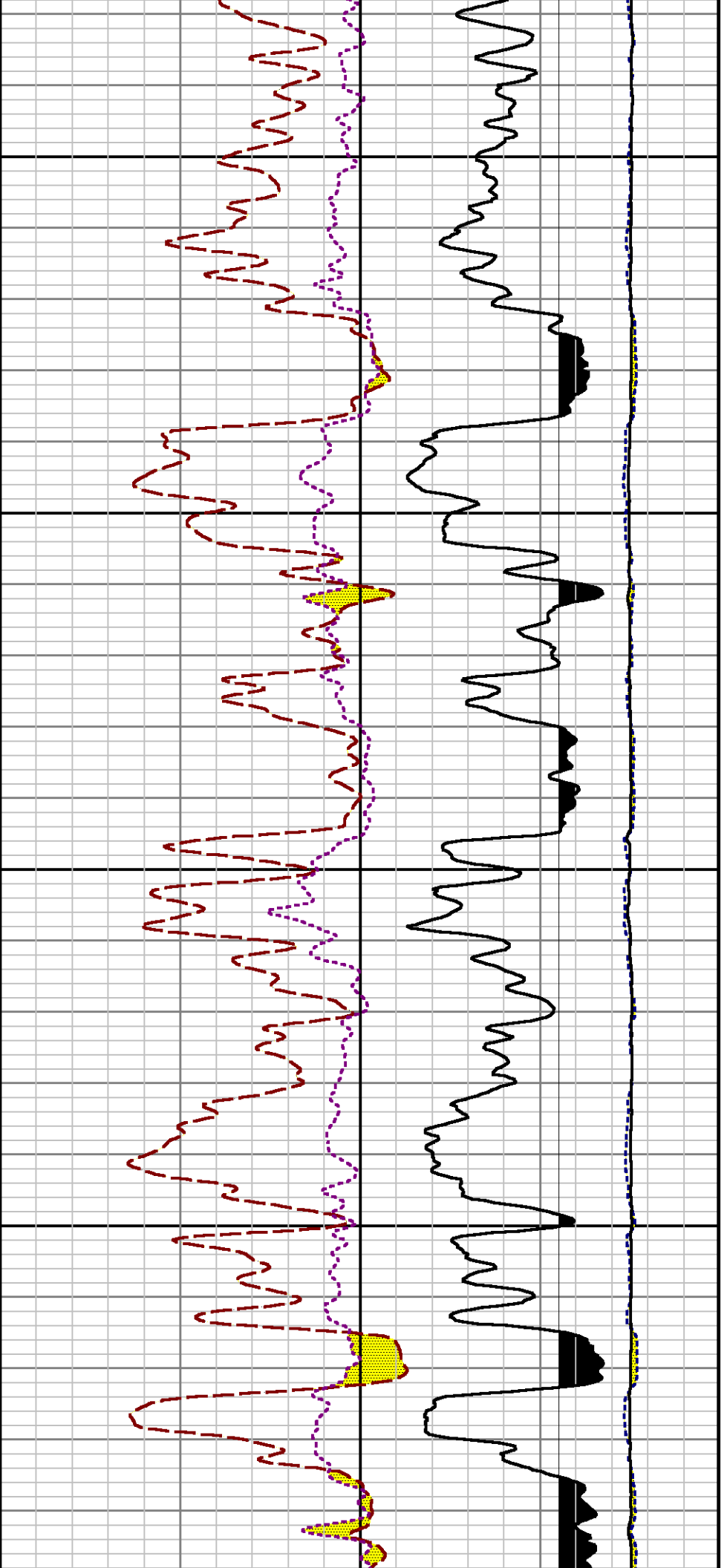


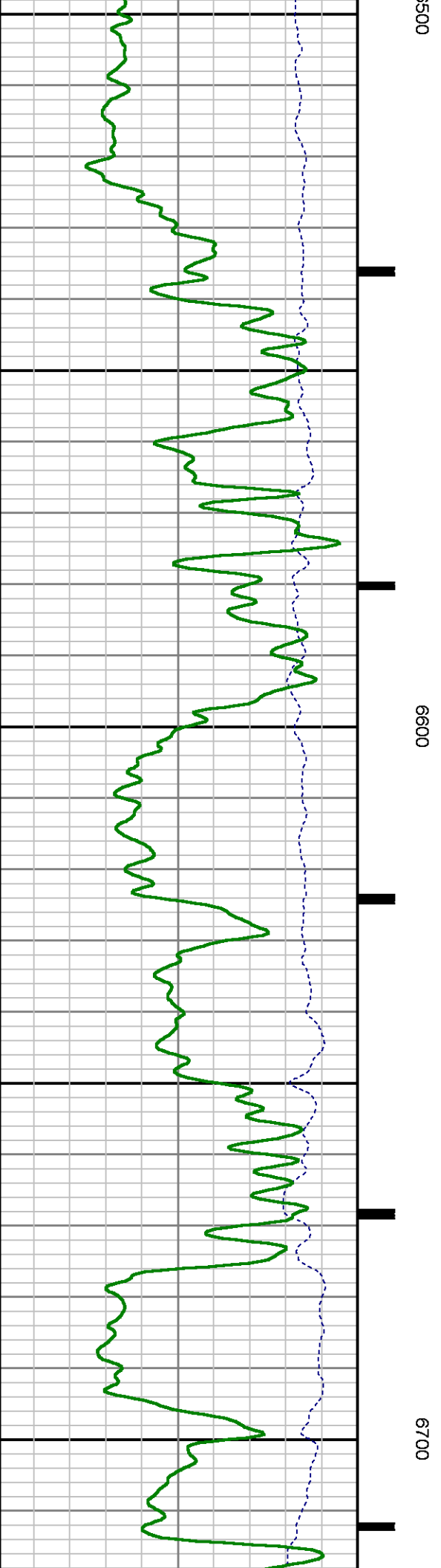
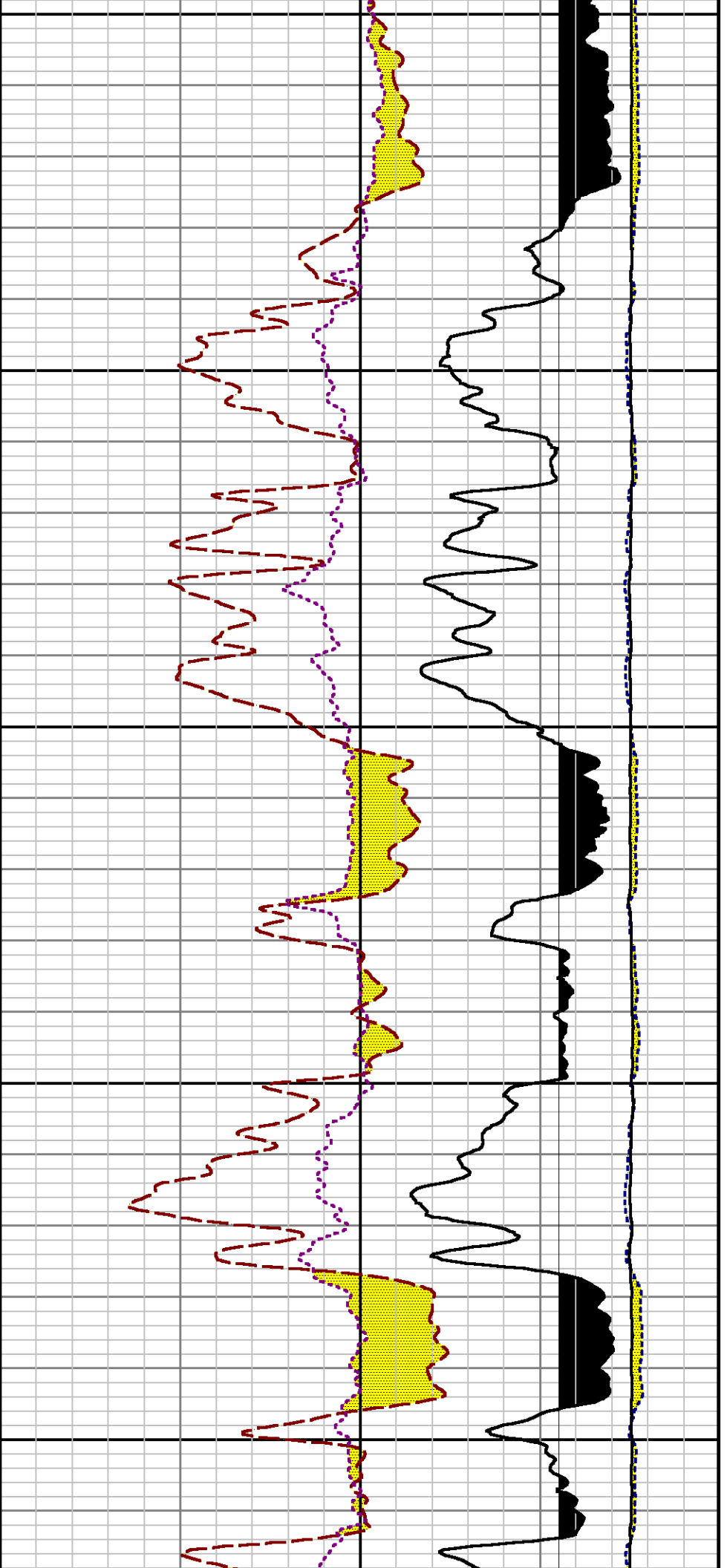


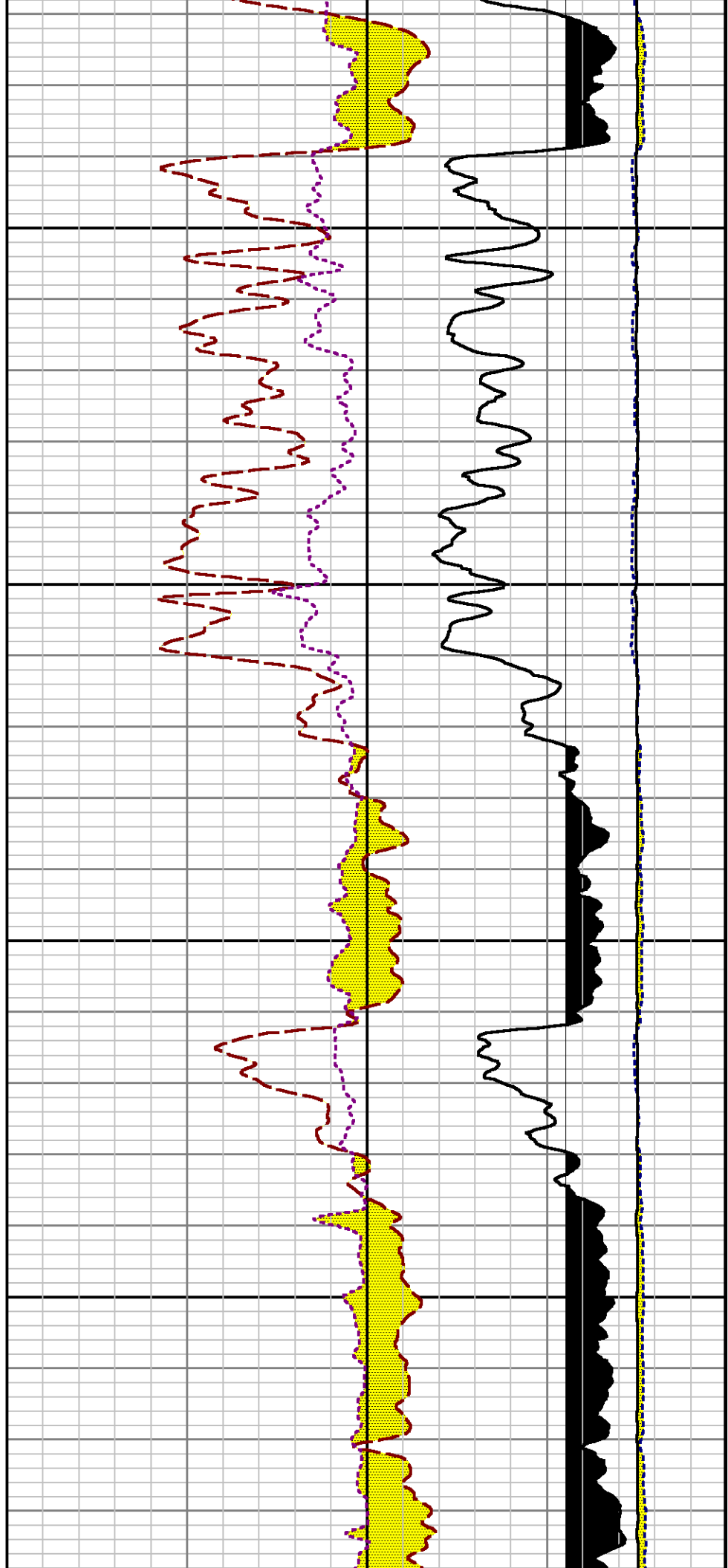
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6200



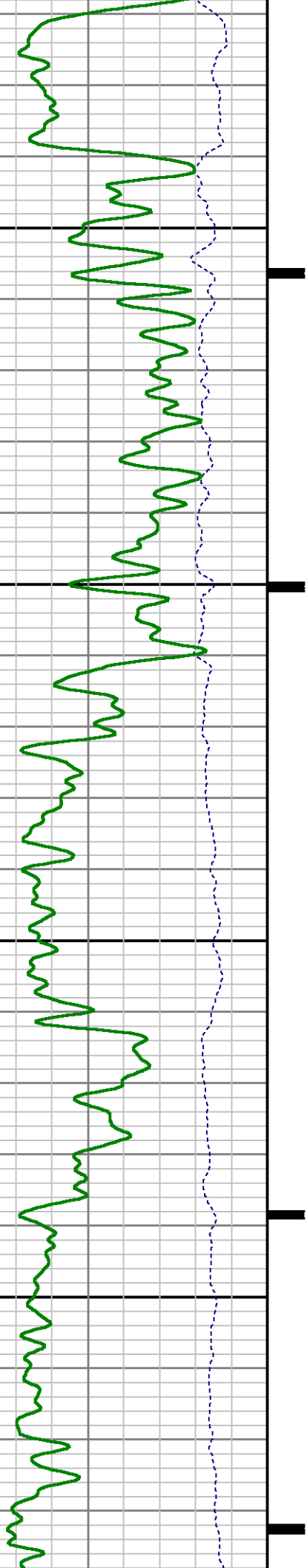


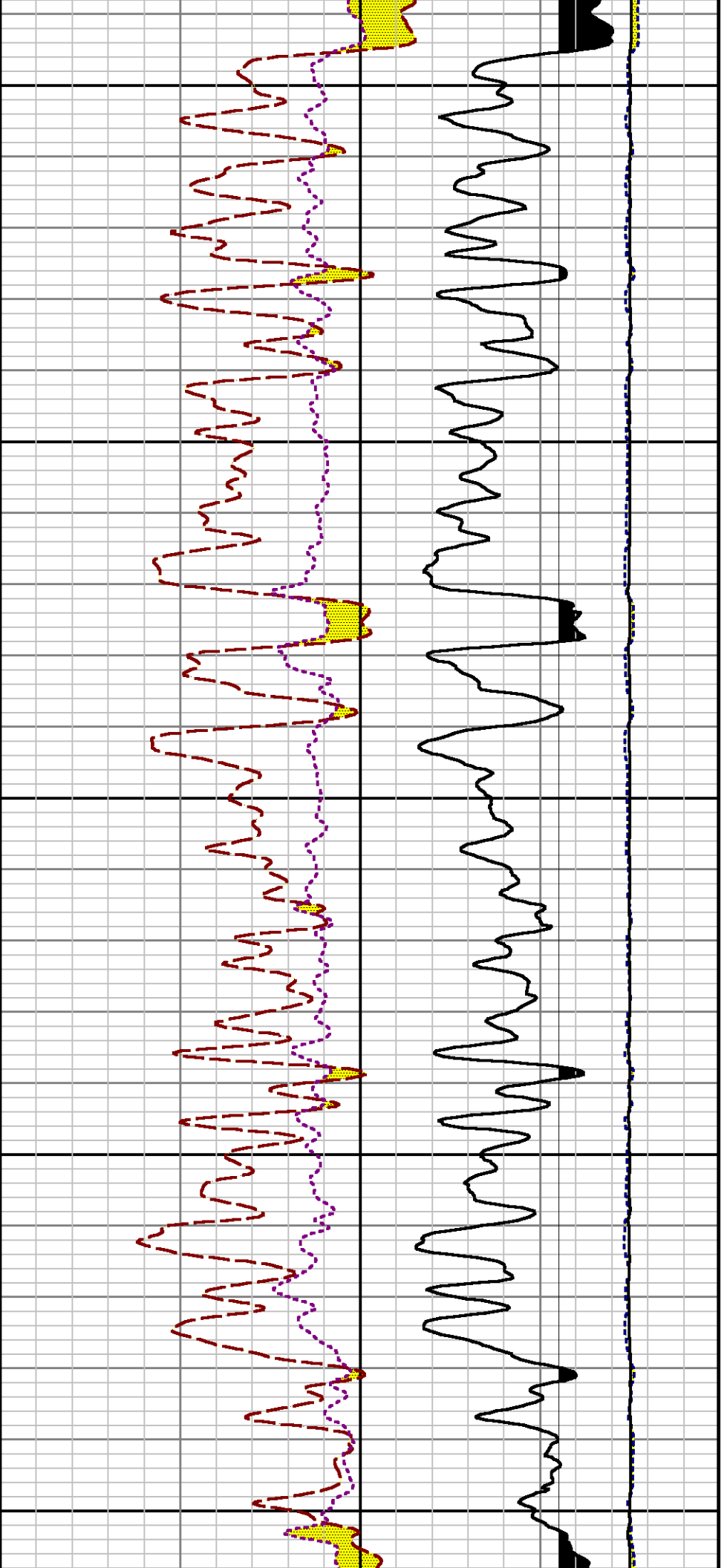




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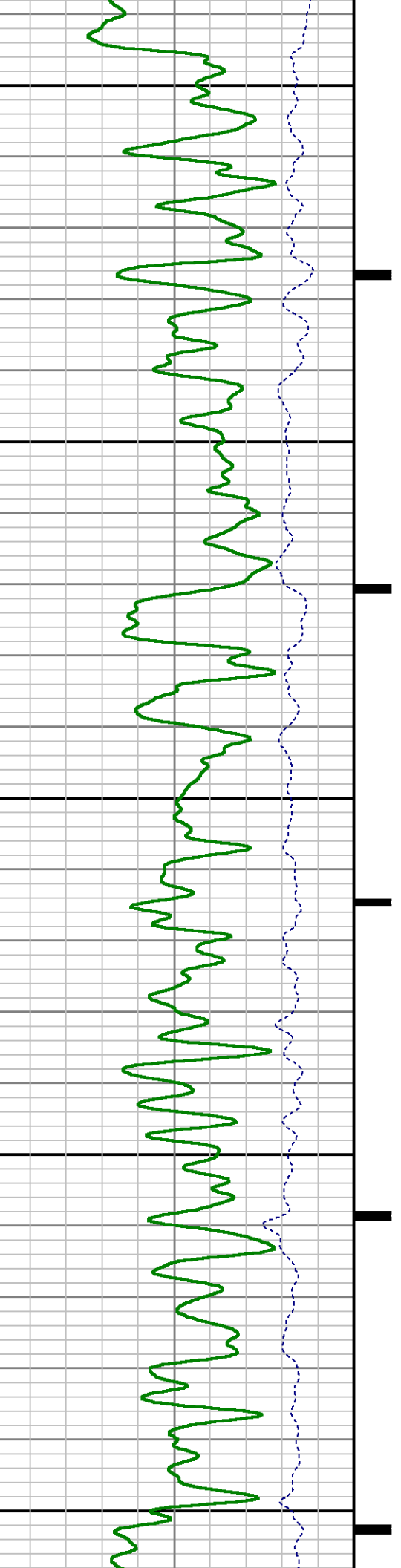
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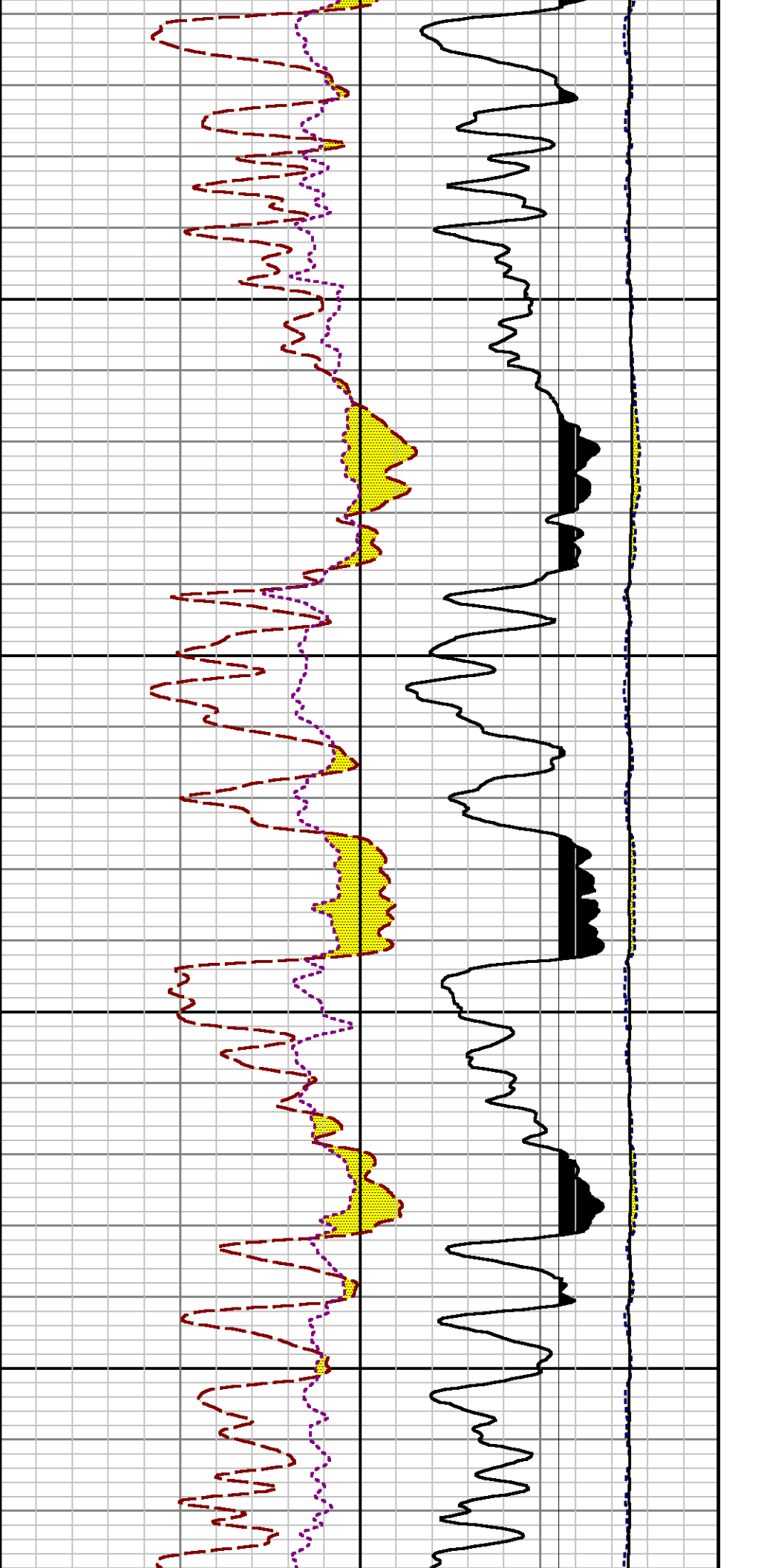




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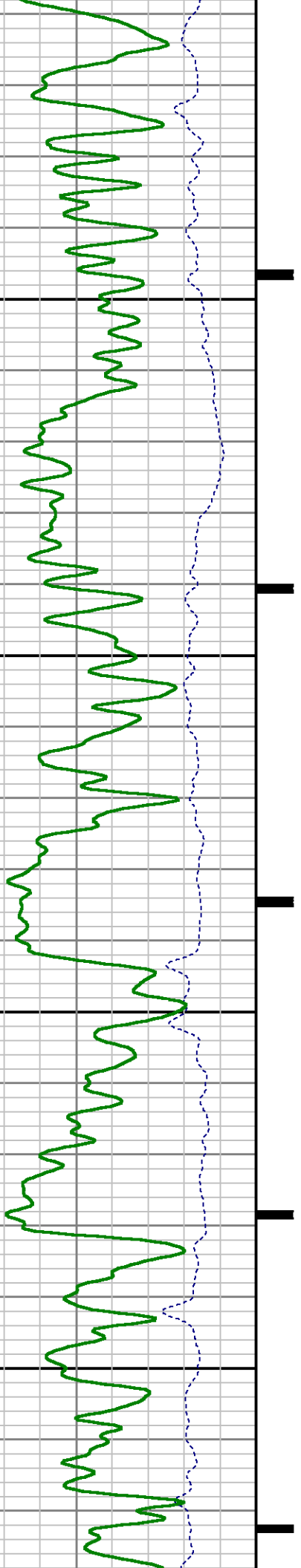
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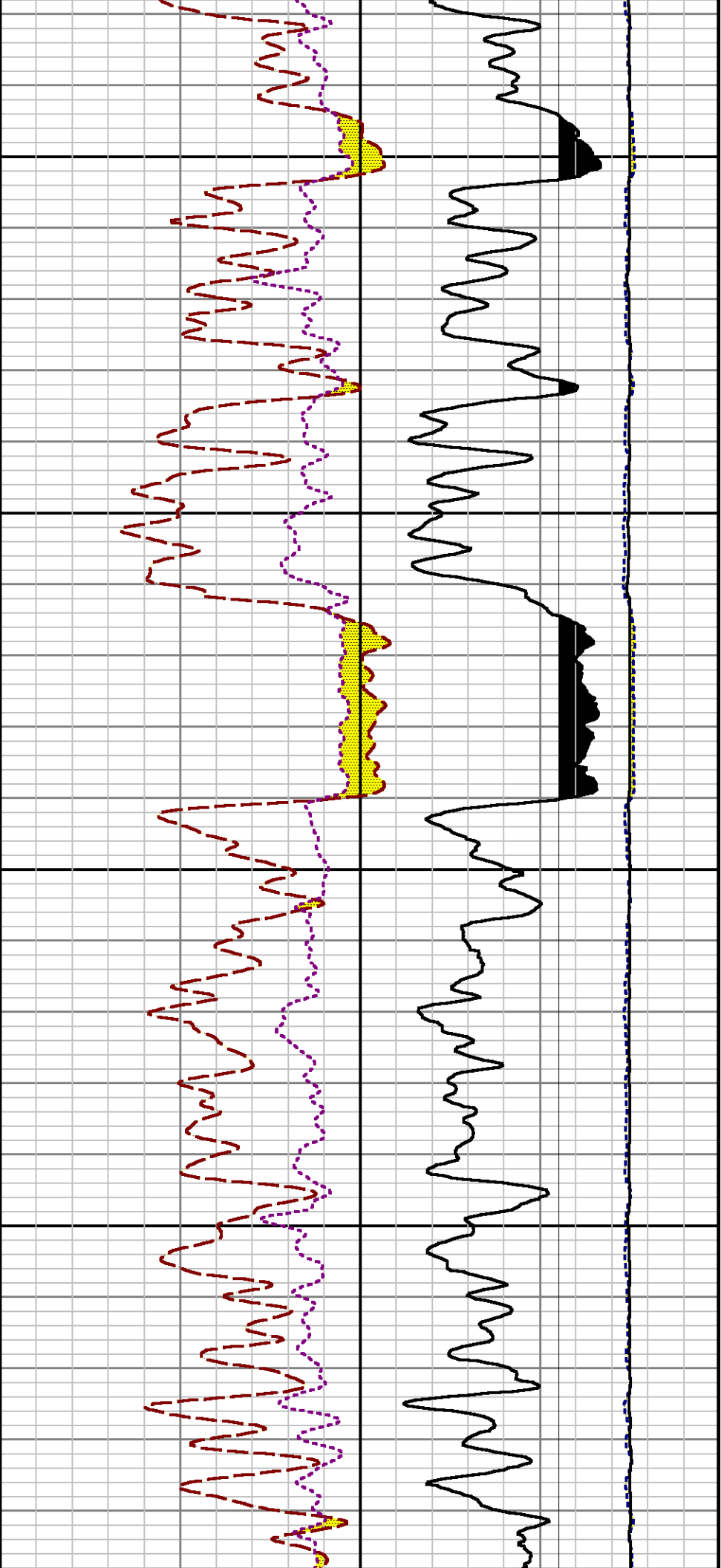




7200

7300

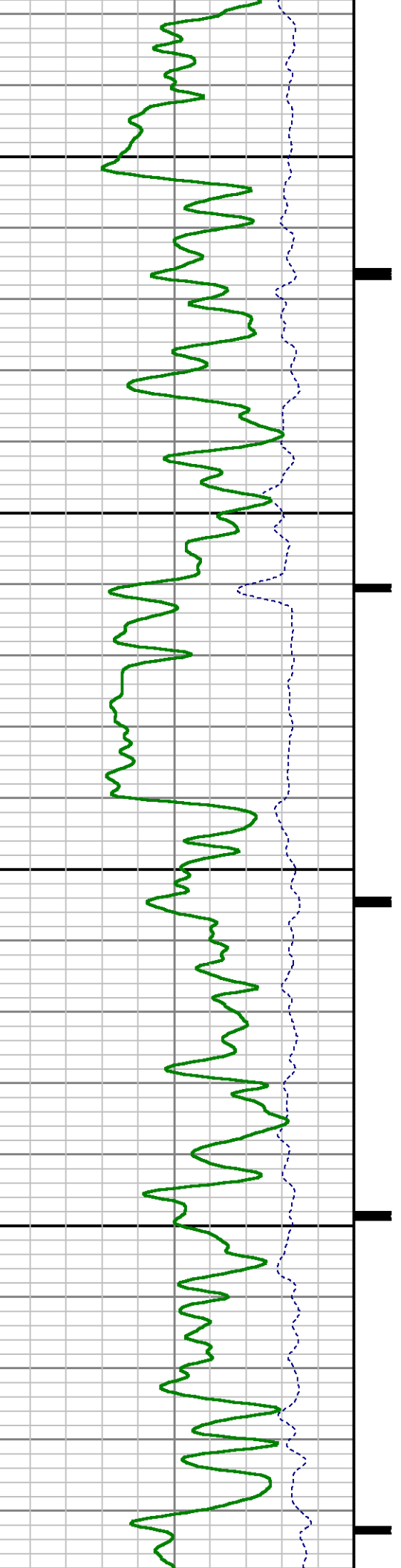


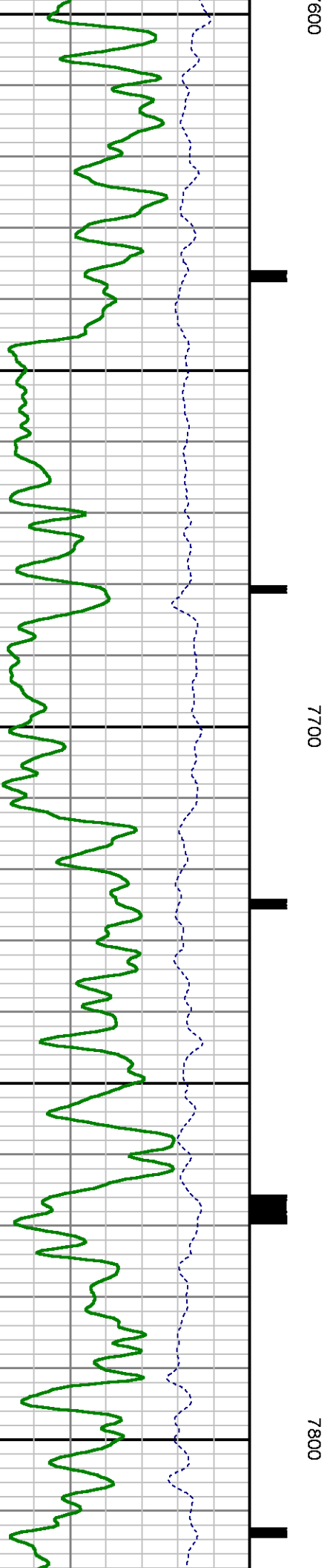
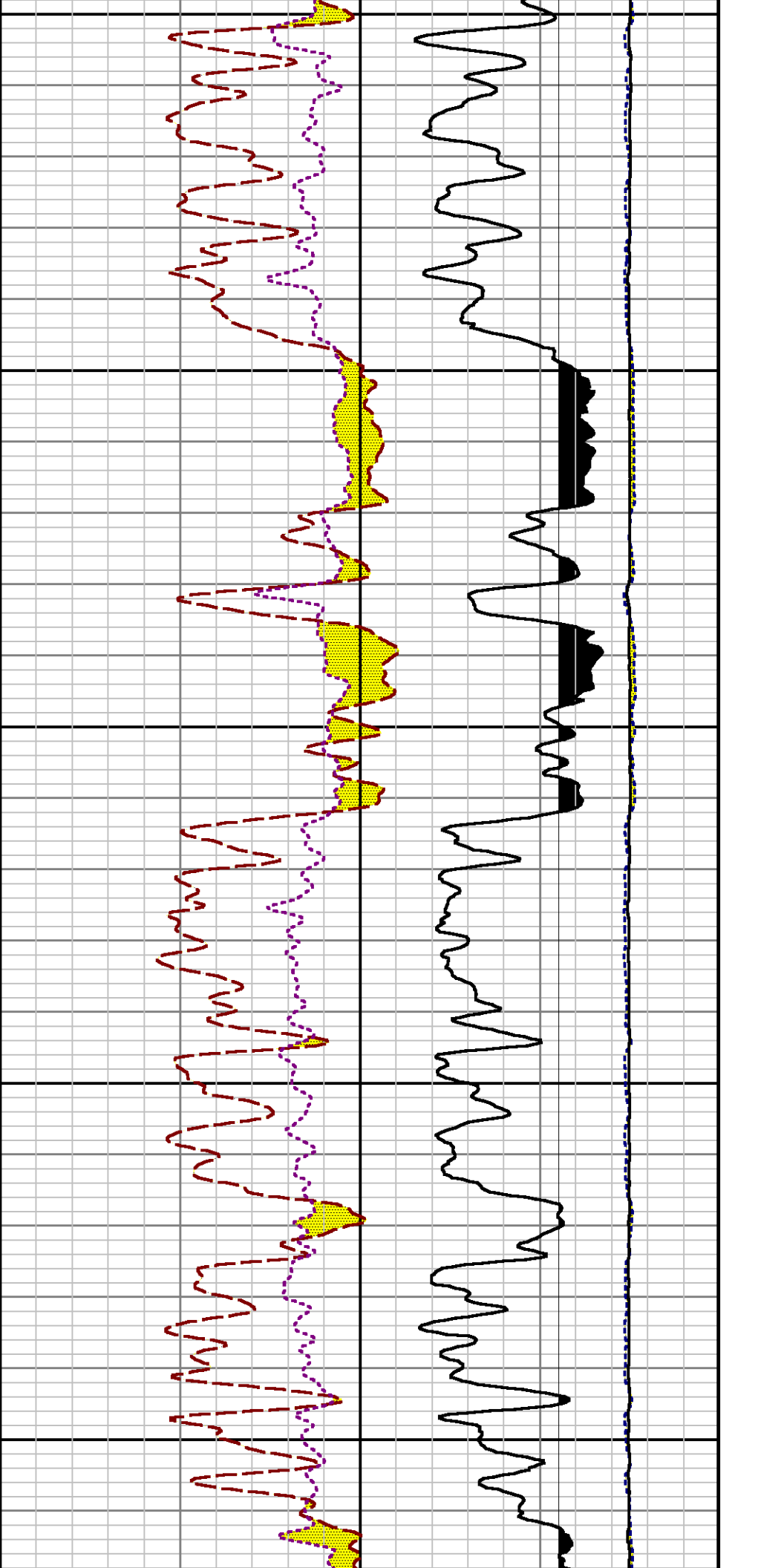


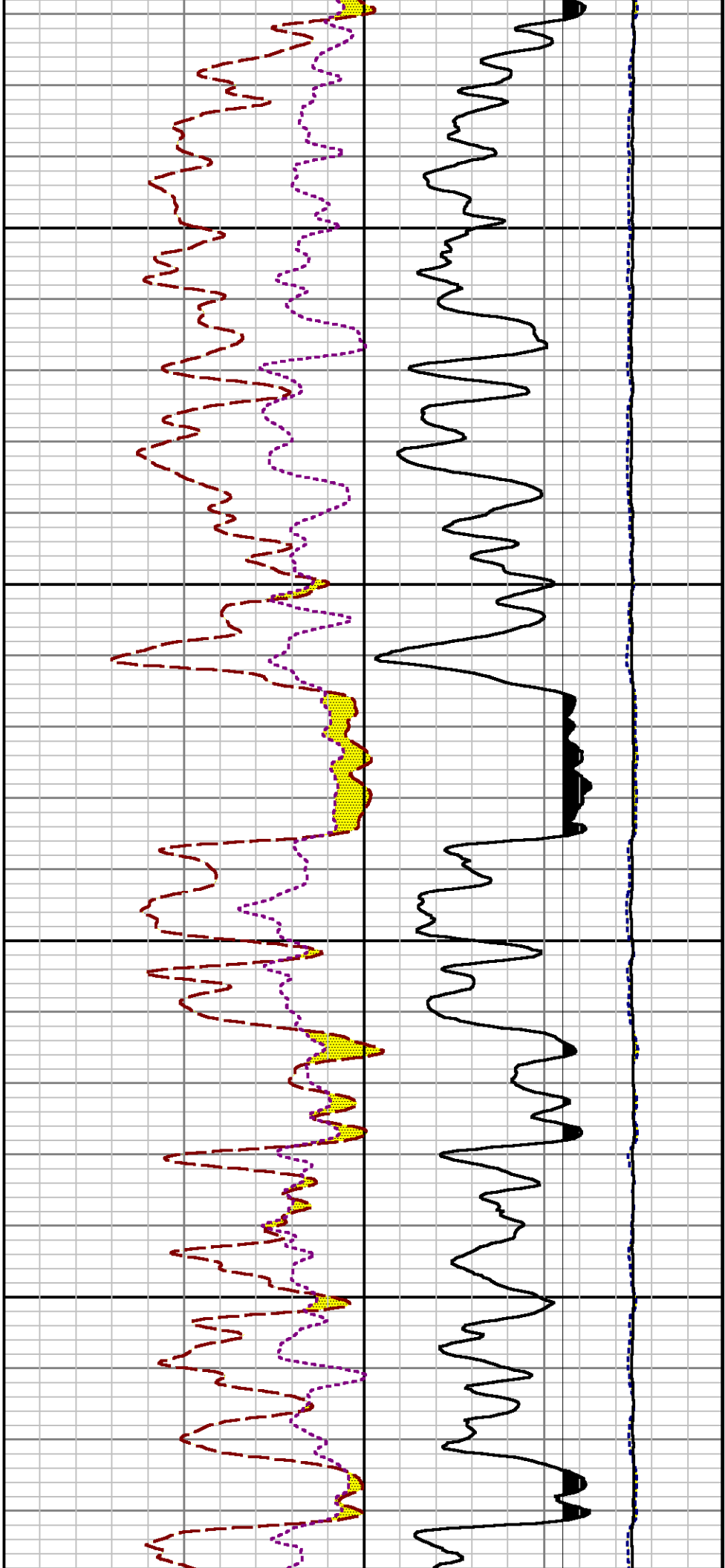
7400

7500

7

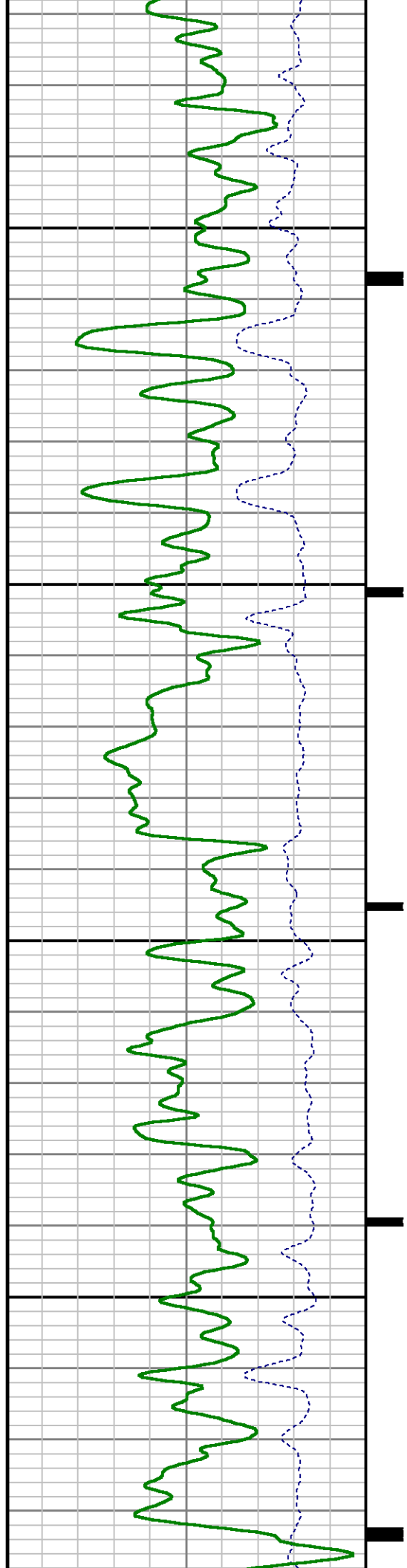


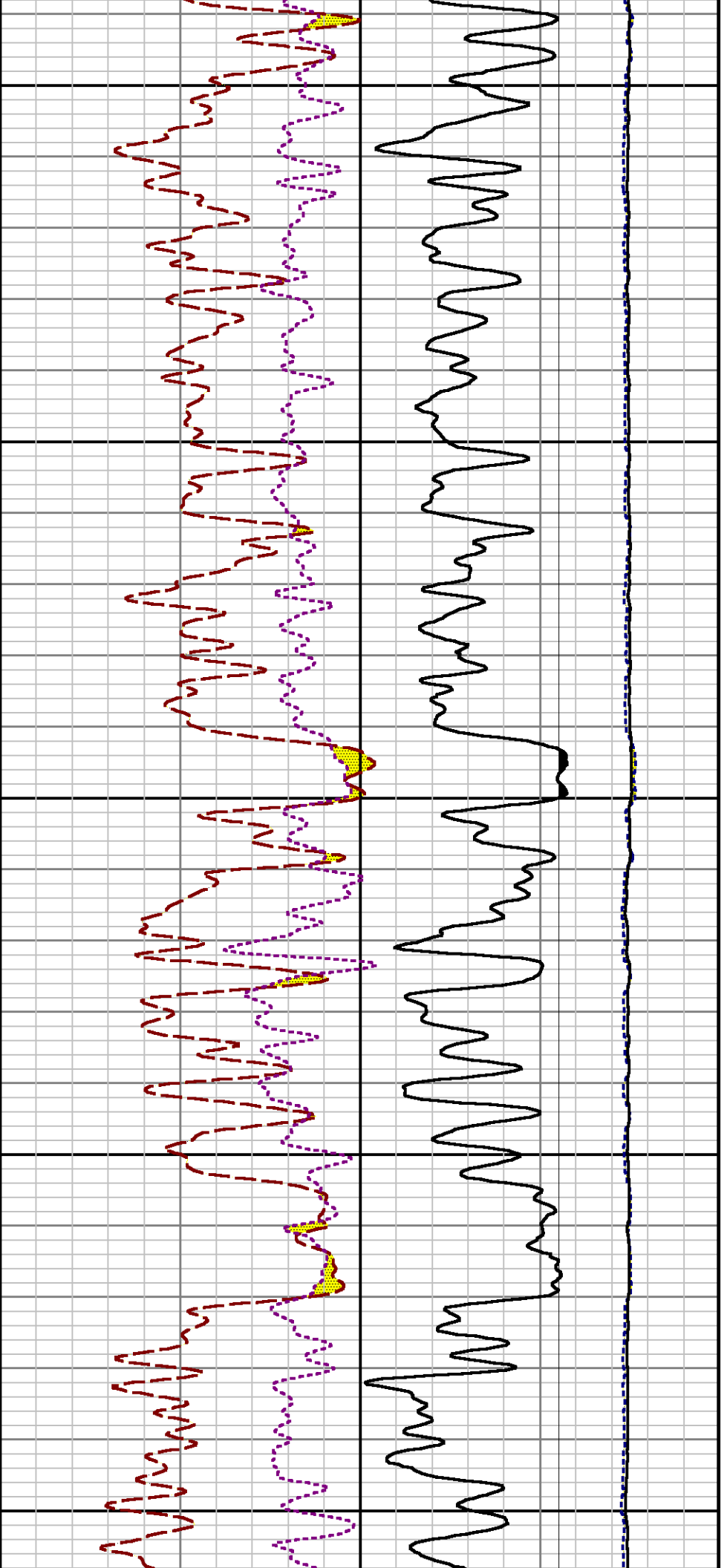




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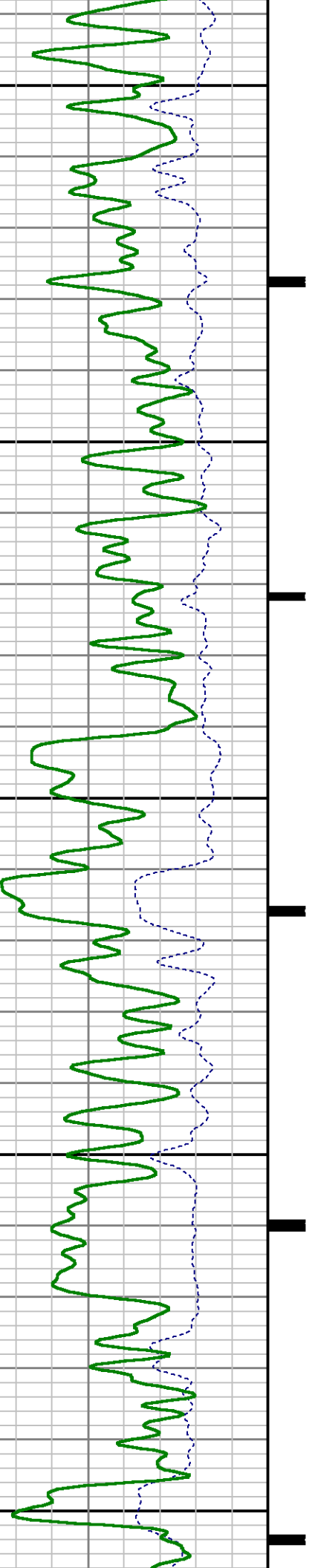
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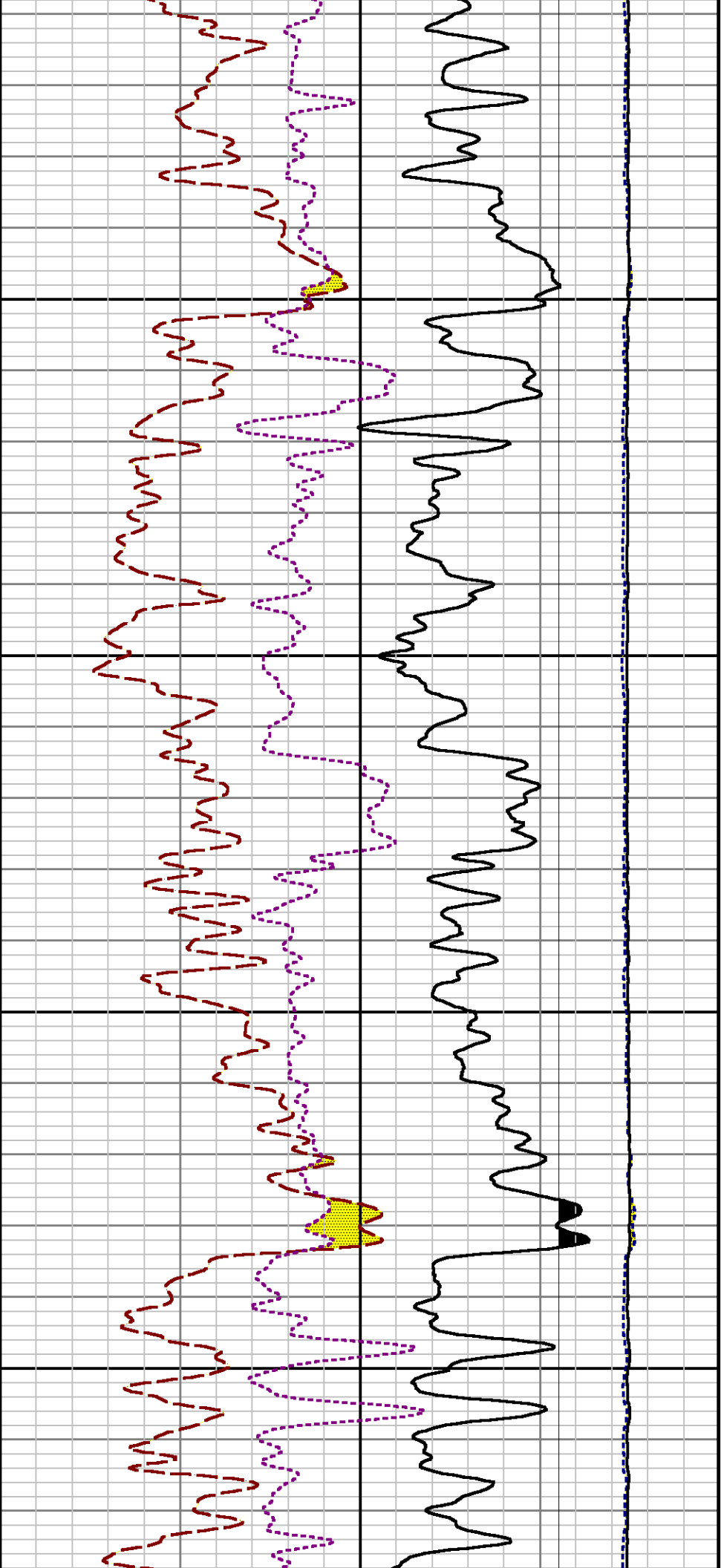




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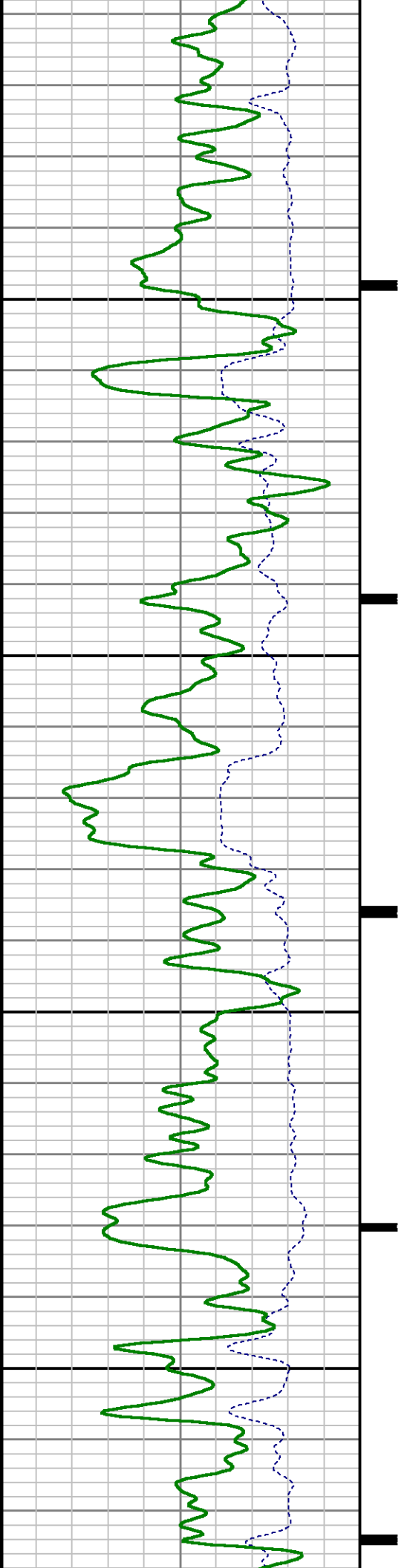
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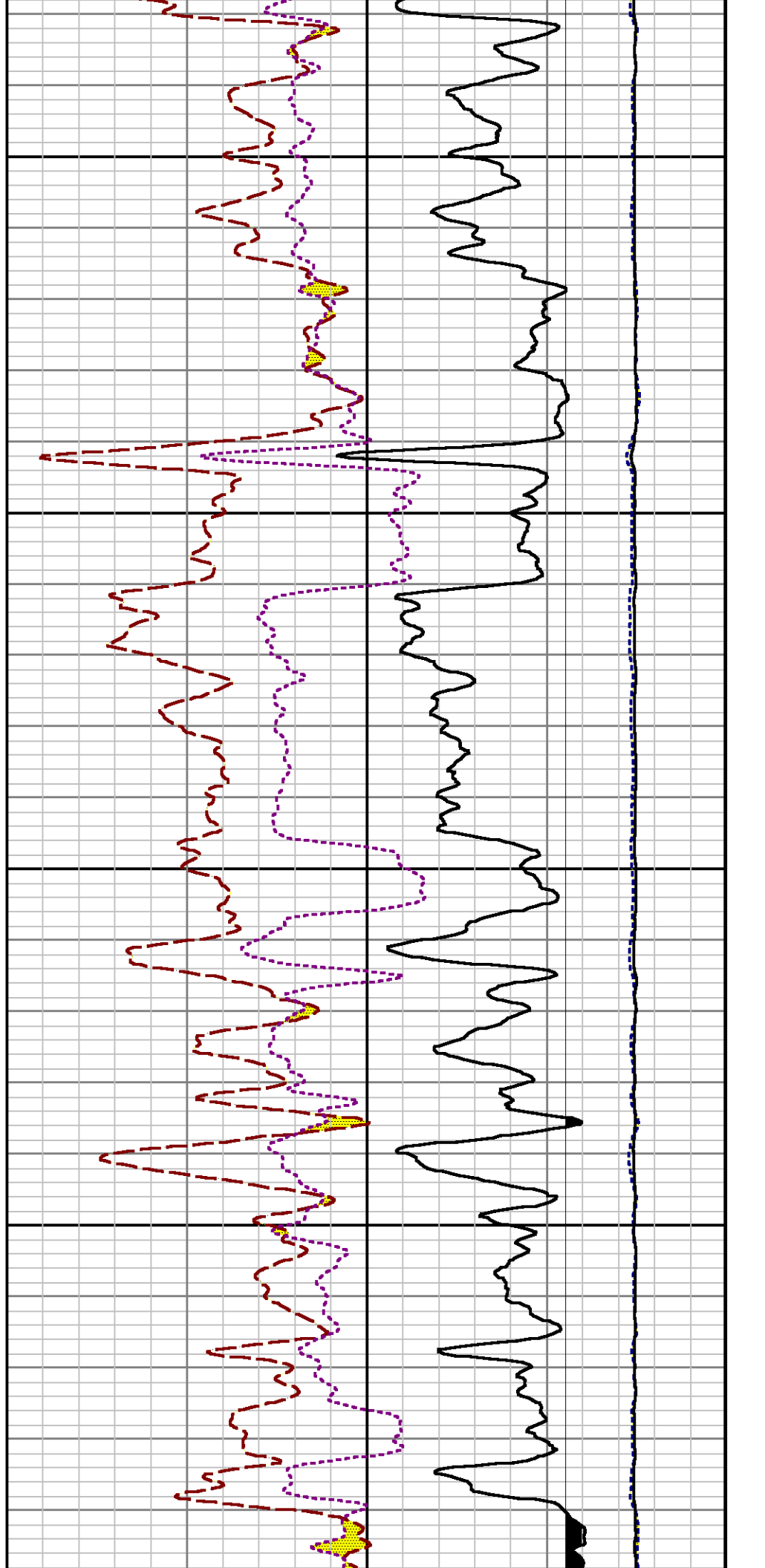
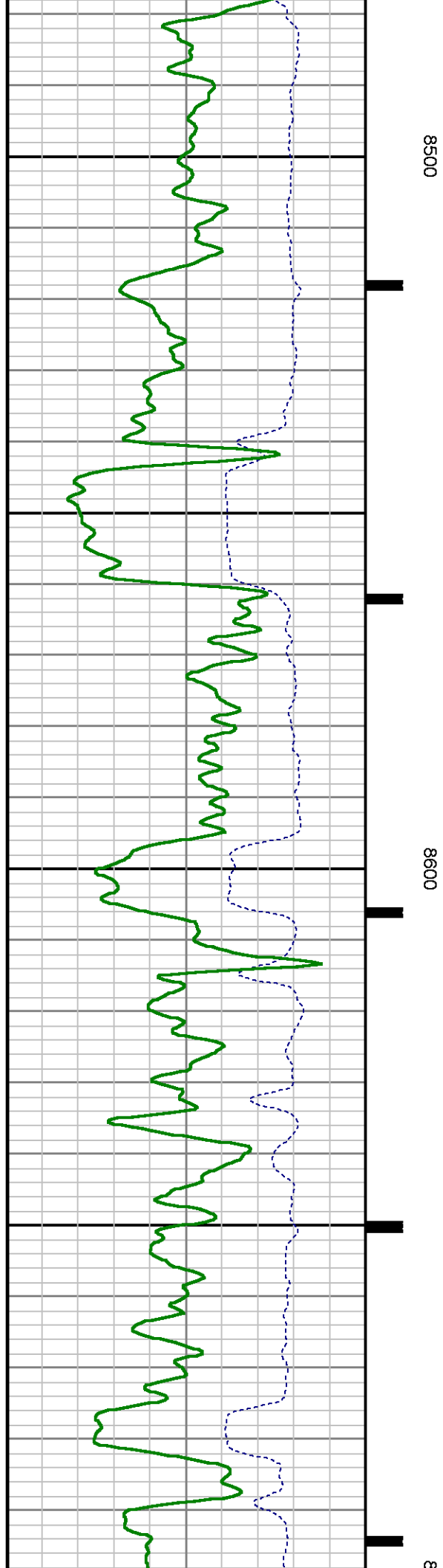


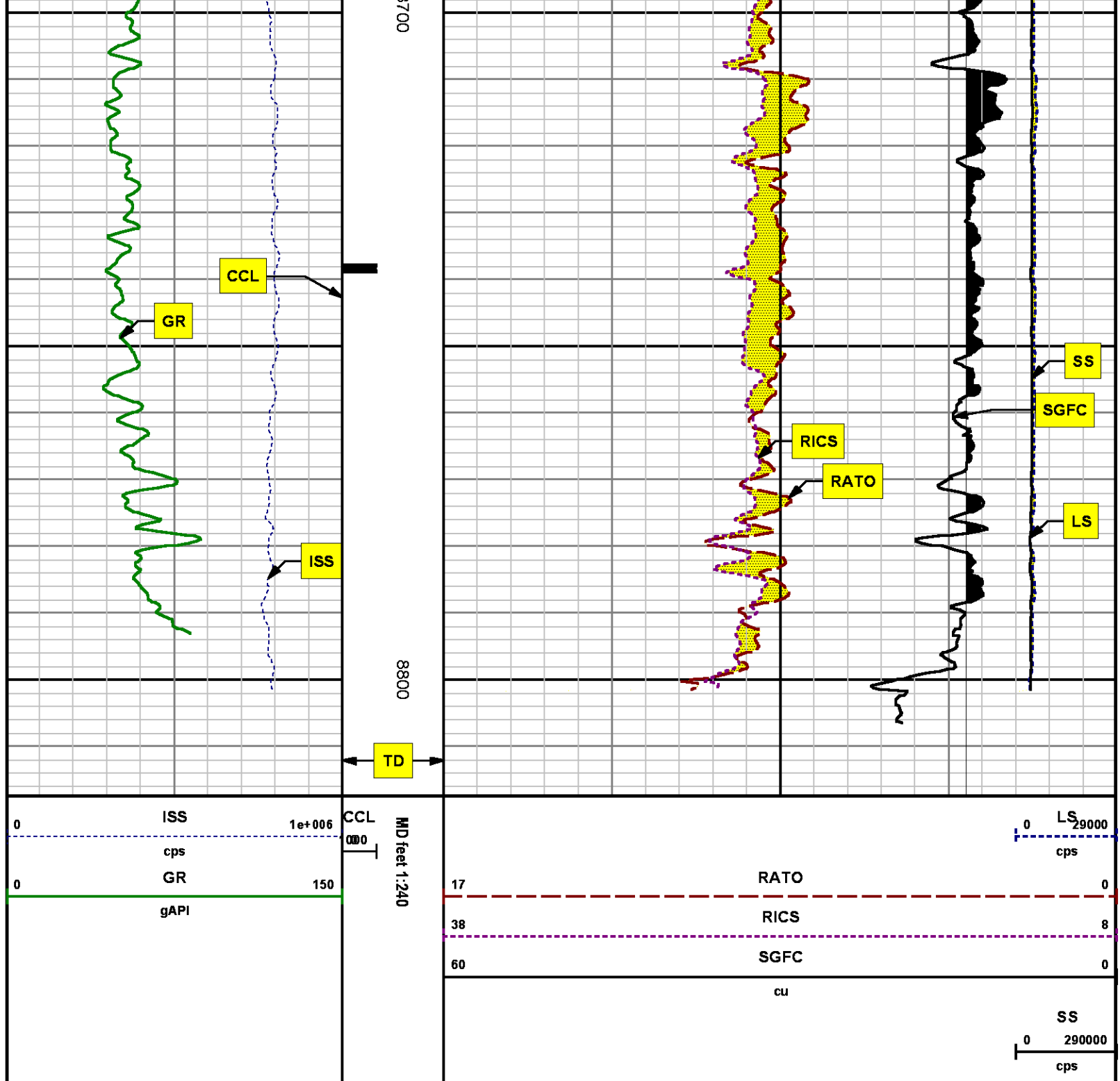


8300

8400







REPEAT SECTION
PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		7997.180	8309.930
PNC Porosity	Borehole Size	8.750	inch	7997.180	8309.930
PNC Porosity	Casing Size	4.500	inch	7997.180	8309.930
PNC Porosity	Gas Filled	Non Gas Filled		7997.180	8309.930
PNC Porosity	Matrix	Sandstone		7997.180	8309.930
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	7997.180	8309.930

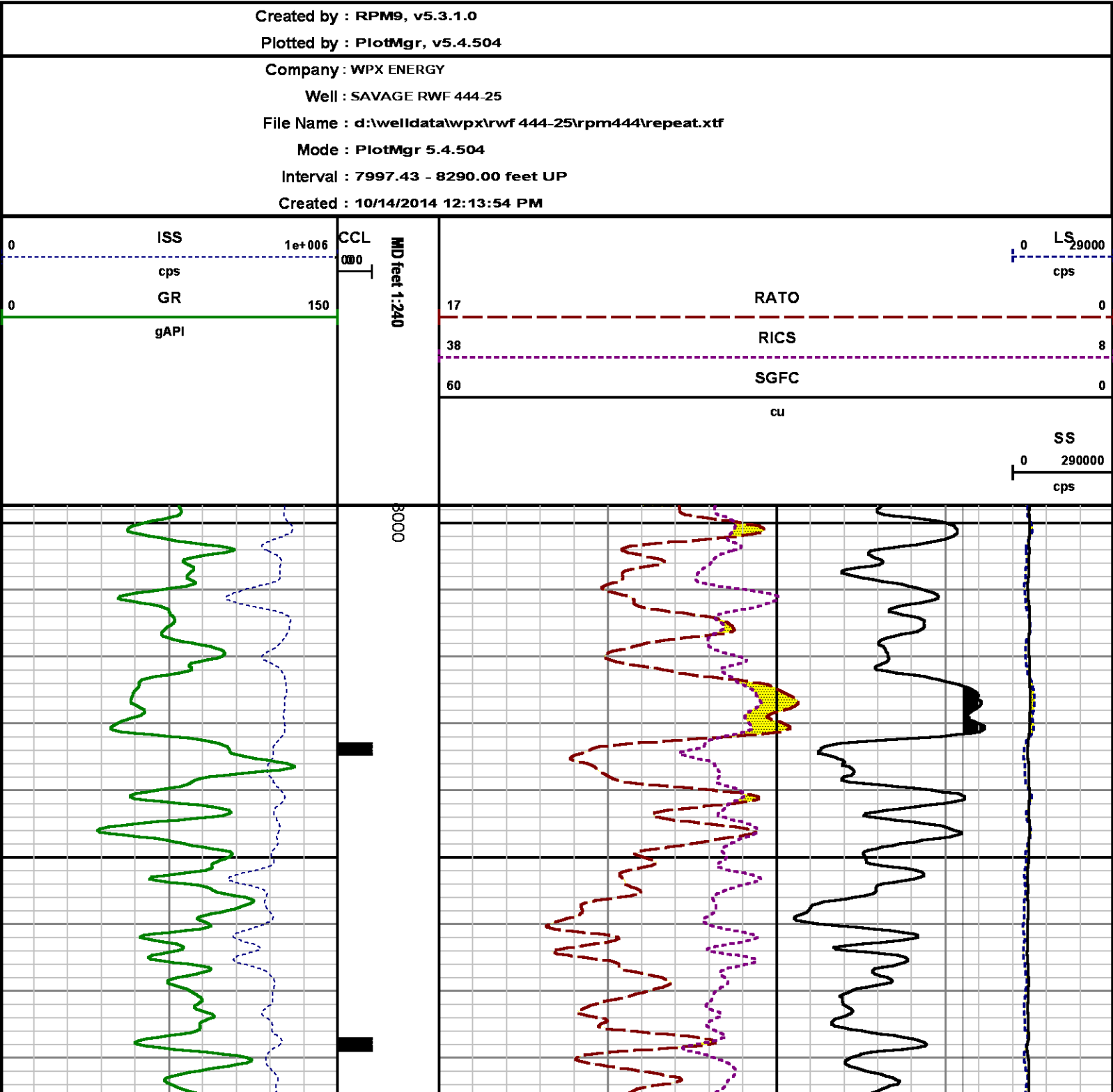
DEPTH OFFSETS

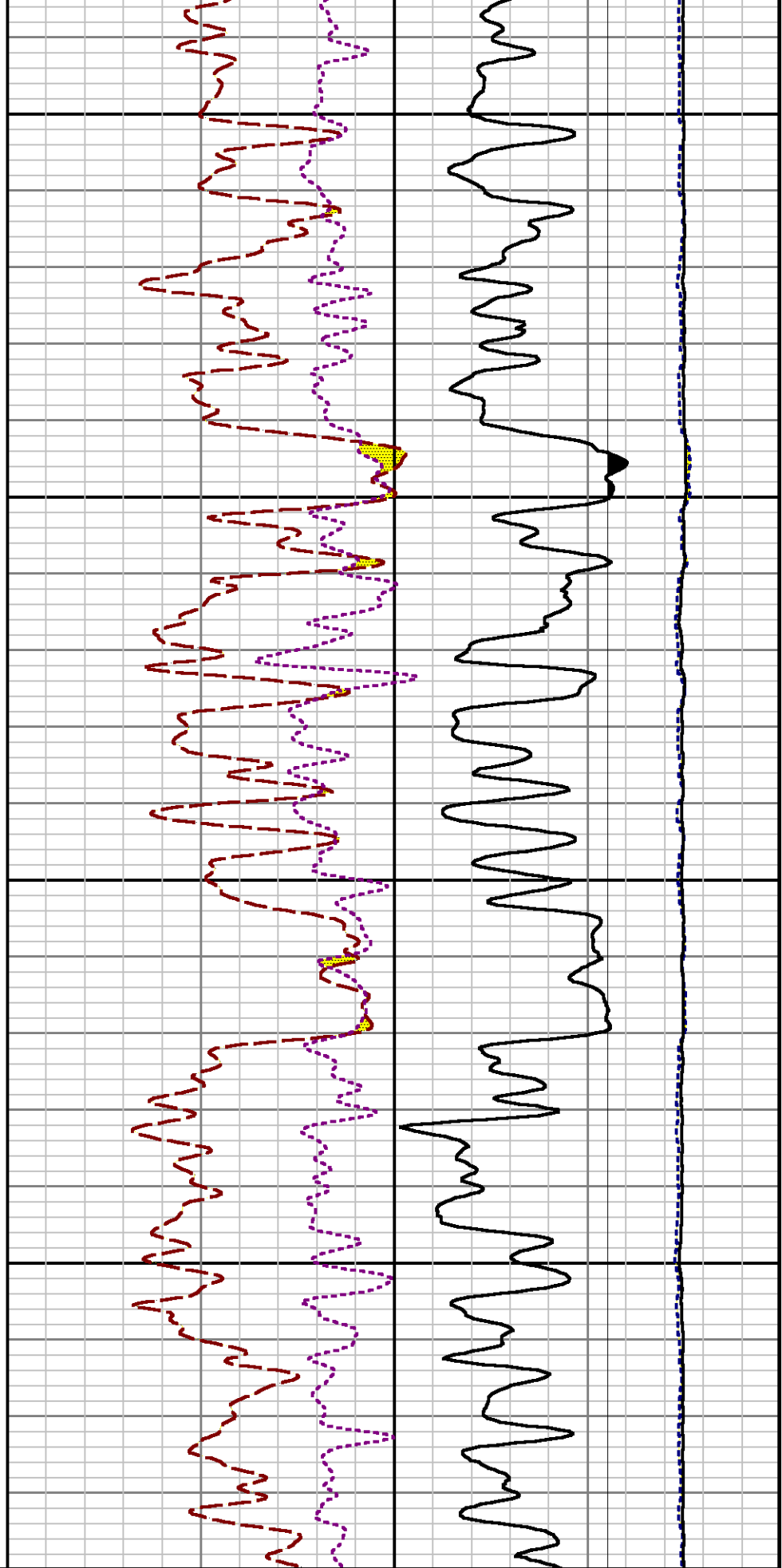
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-26.519	FLTM
8248ED	-24.519	CCL CHV
2812LA	-21.969	GR
8281XA	-12.702	HVC3Q0 SEQ3 AMA3 AML3 BKX CXS CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS MCS3 MCS3Q0 QCAL3 RGN3 RICX SDA3 SDL3 SGA3 SGL3 STA3 XS ASPEC3 AMB3 AMF3 CHF3 IXSC IXSN RATO23 RICXC RIN13C RIN23 RIN23C SD3D SG3D SGB3 SGF3 WDT3 CXSR IXSR XSR RICXR
8281XA	-12.291	HVC2Q0 SEQ2 AMA2 AMB2 AMF2 AML2 BKL CHF2 CLS CPT2Q0 CPT2Q2 CPT2Q3 CPT2Q4 ET2 ILS LS MCS2 MCS2Q0 QCAL2 RGN2 RICL RONE23 RTWO23 SDA2 SDL2 SGA2 SGB2 SGF2 SGK2 SGL2 STA2 ASPEC2 ILSC ILSN WDT2 RICLC CLSR ILSR LSR RICLR
8281XA	-12.041	CPRS HVC1Q0 MV SEQ SEQ1 AMA1 AMB1 AME1 AMF1 AML1 BKS CHF1 CSS CORB CORF CPT1Q0 CPT1Q2 CPT1Q2A CPT1Q2B CPT1Q2C CPT1Q3 CPT1Q4 CPT1Q5 ET1 G1 G2 GE1S GE2S ISS MCS1 MCS1Q0 QA1 QCAL1 QM1 RATO RATO13 RBOR RGN1 RICS RIN RONE RPOR RTWO RIN13 RONE13 RTWO13 SALB SC1 SDA1 SDL1 SGA1 SGB1 SGBC SGE1 SGF1 SGFC SGK1 SGL1 SS SS2 STA1 PD1S PD2S PD3S MD1S MD2S MD3S DG1S DG2S DG3S PD1M PD2M PD3M MD1M MD2M MD3M DG1M DG2M DG3M MVS MA MVM FILV IAM TA PVM PVS IAS SSTAT QPD1 QPD2 QPD3 QMD1 QMD2 QMD3 QDG1

QDG2	QDG3	QMA	QTA	QFILV	QMV
QPV	QIA	DERR	DCNT	QPK1	QSA1
PKS1	ASPEC1	H0C	FE2XC	ISSC	RINC
ISSN	RDEN	WDTH1	RICSC	CSSR	G1R
G2R	ISSR	SSR	SS2R	RATOR	RATO13R
RBORR	RICSR	RINR	RIN13R	RONER	RPORR
RTWOR					
PTFS	PTMS				
SPF1	SPFQ	TSCP	TSDP		
DTEM	TEMP	TNF			
TEN	TTEN				

8255XA	-0.792
8255XA	-0.775
8255XA	0.000
SYSTEM	0.000





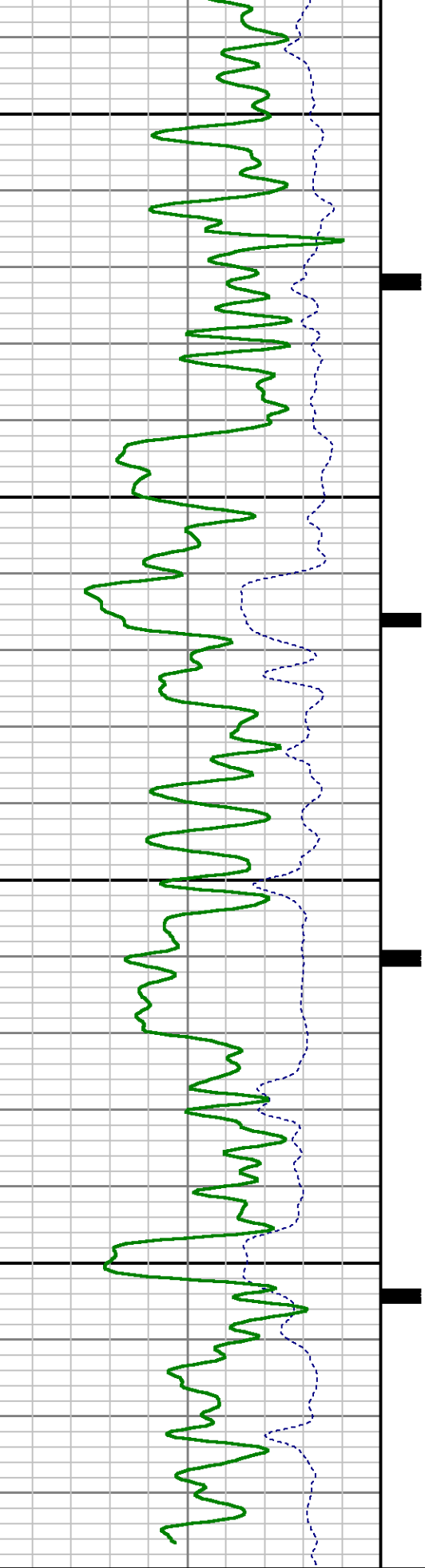
LS₂₉₀₀₀
cps

17

RATO

8100

8200



CCL
000

MD feet 1:24

ISS

1e+006

cps

GR

150

0

0

0

gAPI

6

38

RICS

8

60

SGFC

0

cu

SS

0 290000

cps

CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\382O1.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Oct 10 20:18:37 2014

TOOL SERIES: 2812LA

ASSET: 382

SEQ: O1

Calibrator #

Background

Calibrator On

Multiplicative

Background

Calibrator On

Differential

[cps]

[cps]

[api]

[api]

[api]

S2K WA612

67.31

273.64

1.018

68.51

278.51

210.00

Verification File: C:\case\calver\GR\382O1.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Fri Oct 10 20:21:02 2014

TOOL SERIES: 2812LA

ASSET: 382

SEQ: O1

Calibrator #

Background

Calibrator On

Multiplicative

Background

Calibrator On

Differential

[cps]

[cps]

[api]

[api]

[api]

S2K WA612

64.02

275.47

1.018

65.16

280.36

215.20

PNC

Calibration File: C:\case\calver\PNC\555S7.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Sep 17 10:41:50 2014

TOOL SERIES: 8281XA

ASSET: 555

SEQ: S7

Calibrator #

Source #

GJ SHOP

8281AA 11765054

ISS

Mtr VIts
(V)

SS Gain

LS Gain

XLS Gain

EA Temp
(degF)Sync Delay
(usec)

RCAL

Raw Data

810519

123.00

2328.00

2274.00

2230.00

98.97

7.00

0.9839

Interpolated

1300000

144.15

2313.58

2271.51

2227.05

Raw Data

ISS

BKS

BKL

BKX

SGA1

SDA1

SGA2

SDA2

810519

7904.47

1481.33

242.23

25.73

0.14

24.23

0.28

25.35 26.40

0.00 0.20

23.60 24.80

0.00 0.40

Raw Data

ISS

ILS

IXS

SS

SS2

LS

CSS

CLS

810519

169037.59

26667.59

88216.89

31442.44

8261.72

53409.88

13185.37

Fit Quality %

0.36

0.48

0.36

0.36

0.45

0.35

0.37

Raw Data

ISS

RBOR

RIN

RIN13

RICS

RATO

RTWO

RONE

ISS/ILS

ISS/IXS

ISS/CSS

SS/LS

SS2/LS

CSS/CLS

810519

1.43

4.79

30.40

15.18

10.68

3.81

4.05

1.42 1.45

3.55 5.52

22.20 32.70

10.99 16.34

10.06 11.10

3.57 3.95

3.76 4.22

Fit Quality %

0.03

0.16

0.08

0.13

0.13

0.15

0.07

Reduced

1411256

1.43

4.82

30.51

15.22

10.70

3.81

4.05

1.42 1.45

4.33 5.52

27.60 32.70

13.70 16.34

10.06 11.10

3.57 3.95

3.76 4.22

TEMPERATURE

Calibration File: C:\case\calver\TEMP\120516AU.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: 09 AUG 2010

TOOL SERIES: 8255XA ASSET: 120516 SEQ: AU

	T(0)	T(1)	T(2)	T(3)	T(4)	T(5)
Coefficients	-8.673169e+000	9.576065e-002	6.395448e-006	-9.461013e-010	0.000000e+000	0.000000e+000

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PCM POWER SUPPLY

Series 8250FA

33.24'

Series	8250EA
Mnemonic	PCM
Diameter	1.70"
Weight	18.00 lb
Length	3.86'
Temp Rating	350.00 °F

TELEMETRY / CCL

Series	8248EA
Mnemonic	PCM
Diameter	1.70"
Weight	20.00 lb
Length	4.46'
Measure Point	1.00' CCL MP
Temp Rating	350.00 °F
Press Rating	15000.00 PSI

SONDEX GAMMA RAY

Series	2812LA
Mnemonic	SNDX
Diameter	1.69"

RESERVOIR PERFORMANCE MONITOR

Series	8281XA
Mnemonic	RPM
Diameter	1.70"
Weight	75.00 lb
Length	18.58'
Measure Point	9.49' SS DETECTOR
Measure Point	9.72' LS DETECTOR
Measure Point	12.69' XLS DETECTOR
Temp Rating	350.00 °F
Press Rating	20000.00 PSI

TEMPERATURE / PRESSURE

Series	8255XA
Mnemonic	SRPL
Diameter	1.70"
Weight	13.00 lb
Length	3.30'

CCL MP — 25.15'

MP — 22.70'

XLS DETECTOR — 16.08'

LS DETECTOR — 13.10'
SS DETECTOR — 12.88'

PRES MP — 1.61'

— 0.00'

Total Length: 33.24'
Total Weight: Not Available
Max Diameter: 0' 1.70"

**Baker Atlas****Company**

WPX ENERGY

Well

SAVAGE RWF 444-25

Field

RULISON

County

GARFIELD

State

COLORADO

Location

SHL: 1125' FSL x 1381' FEL (SESE)

BHL: 398' FSL x 716' FEL

Elevations

KB 6260 ft

DF

File No:

CH091511

API No:

05045219990000

25 6S 94W

RWF 43-25 PAD

CH22

SEC

25

TWP

6 S

RGE

94W

GL 6234 ft

NABORS 577