



# RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No: \_\_\_\_\_ Company **WPX ENERGY**

CH091651 Well **FEDERAL SG 532-28**

API No: \_\_\_\_\_ Field **GRAND VALLEY**

05045219560000 County **GARFIELD** State **CO**

Location

SHL: 2273' FSL & 495' FEL

BHL: 2630' FNL & 2302' FEL

SEC 28 TWP 7S RGE 96W

Other Services

BOND LOG

Permanent Datum GL \_\_\_\_\_ Elevation **5119**

Log Measured From KB \_\_\_\_\_ 24 Above P. D.

Drill Measured From KB \_\_\_\_\_ Elevations KB **5143** DF **5119** GL **5119**

Date	25/OCT/14	
Run	ONE	
Service Order	US091651	
Depth Driller	5634	
Depth Logger	5603	
Bottom Logged Interval	5593	
Top Logged Interval	2325	
Time Started	12:30	
Time Finished	17:30	
Operator Rig Time	5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	56	
Logged Cement Top	NA	
Wellhead Pressure	0	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10	
Maximum Recorded Temperature	192	
Reference Log	BAKER HUGHES BOND LOG	
Reference Log Date	25/OCT/14	
Equipment No.	Location	GRAND JUNCTION
Recorded By	NEMELL	
Witnessed By	JEFF BRADY	

- 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	0	1743
8.75	1743	5655

Casing Record				
Size	Weight	Grade	From	To
9.625			0	1743
4.5	11.6	1-80	0	5655

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 25/OCT/2014 at the client's request.
The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.
The amount of linear shift is 2 feet.

BHT = 192 °F

SJ = 3478' - 2500'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	PCM	8250EA	10397894	FREE
1	1	TEL/CCL	8248ED	10296408	FREE
1	1	GR	2812LA	10274382	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	RPM	8283PA	10585555	FREE
1	1	RPM	8281FA	10191667	FREE
1	1	TEMP	8255XA	2120516	FREE

MAIN SECTION  
PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		2310.000	5603.500
PNC Porosity	Borehole Size	8.750	inch	2310.000	5603.500
PNC Porosity	Casing Size	4.500	inch	2310.000	5603.500
PNC Porosity	Gas Filled	Non Gas Filled		2310.000	5603.500
PNC Porosity	Matrix	Sandstone		2310.000	5603.500
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	2310.000	5603.500

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 SGB1 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 WDT1 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

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

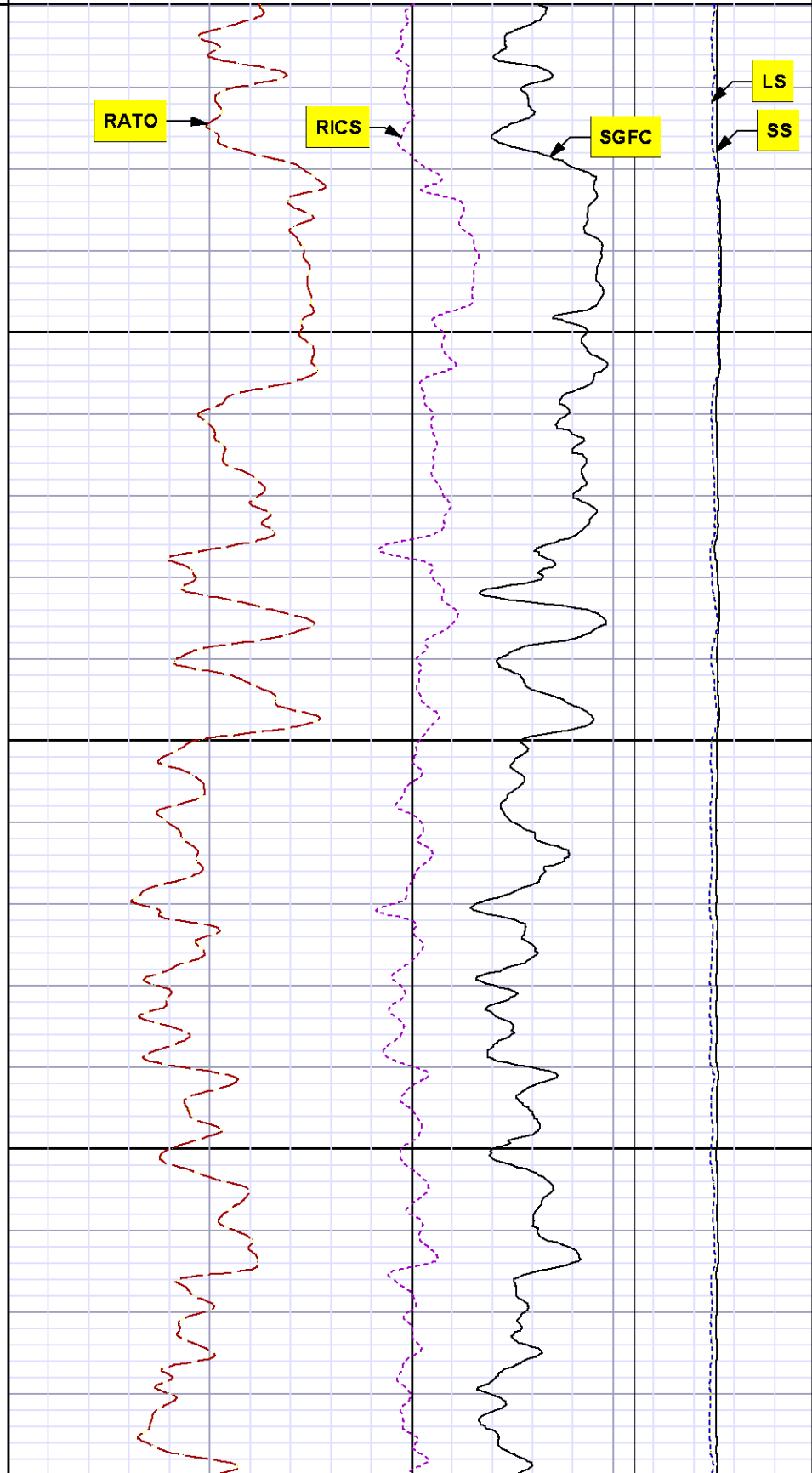
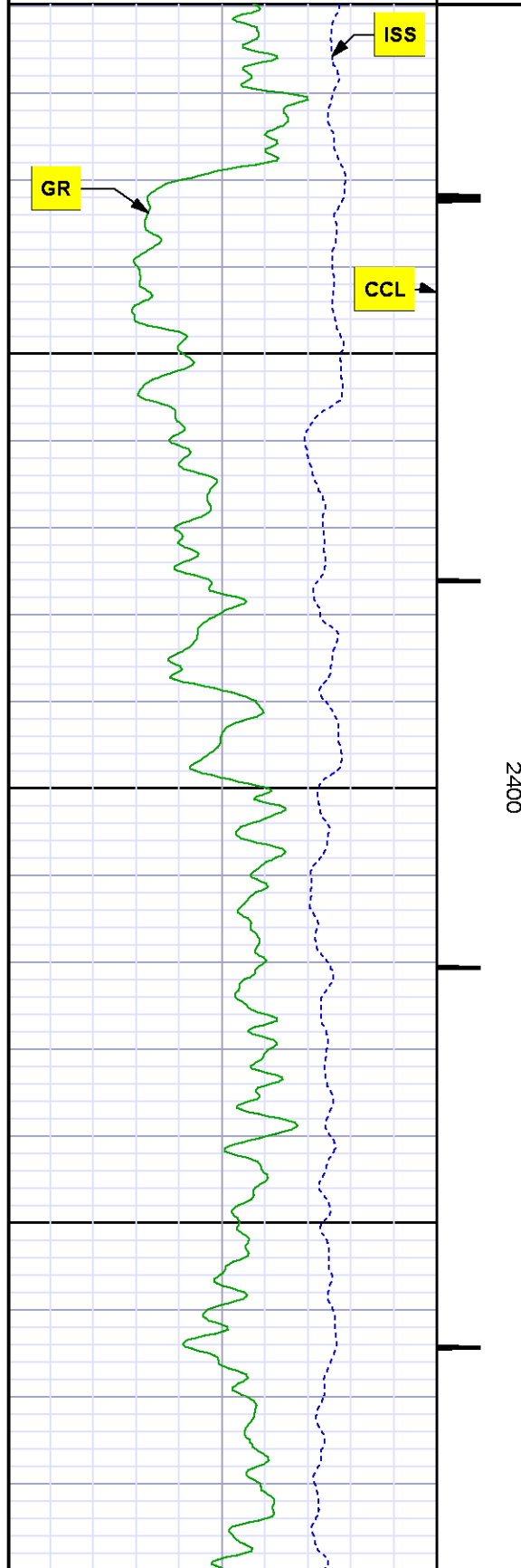
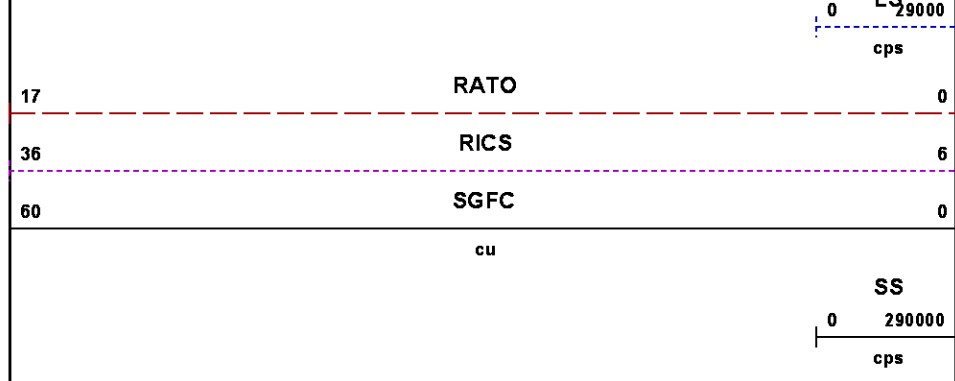
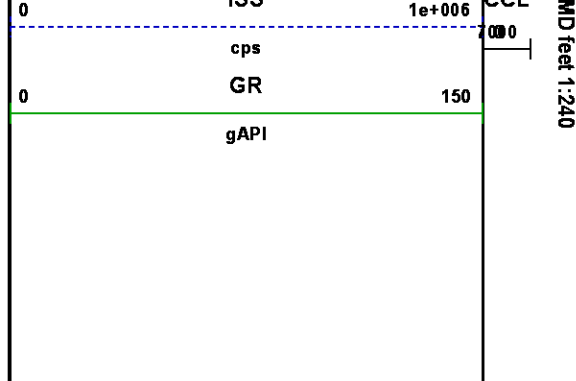
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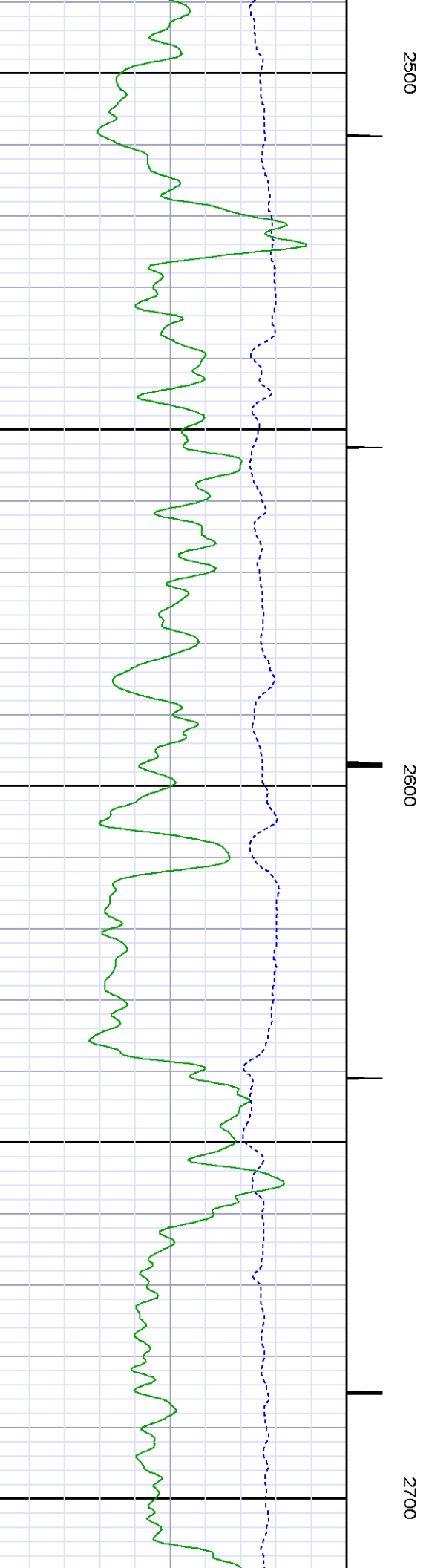
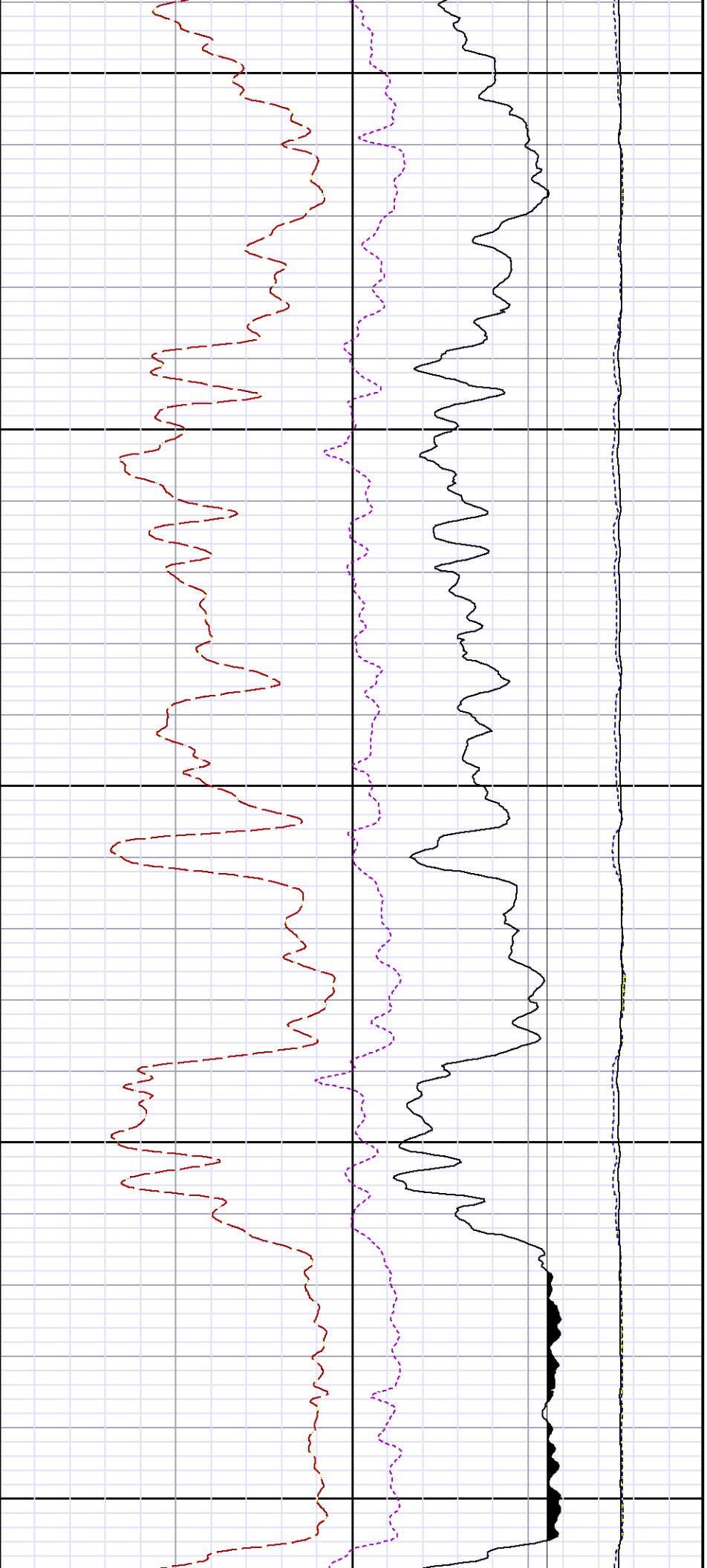
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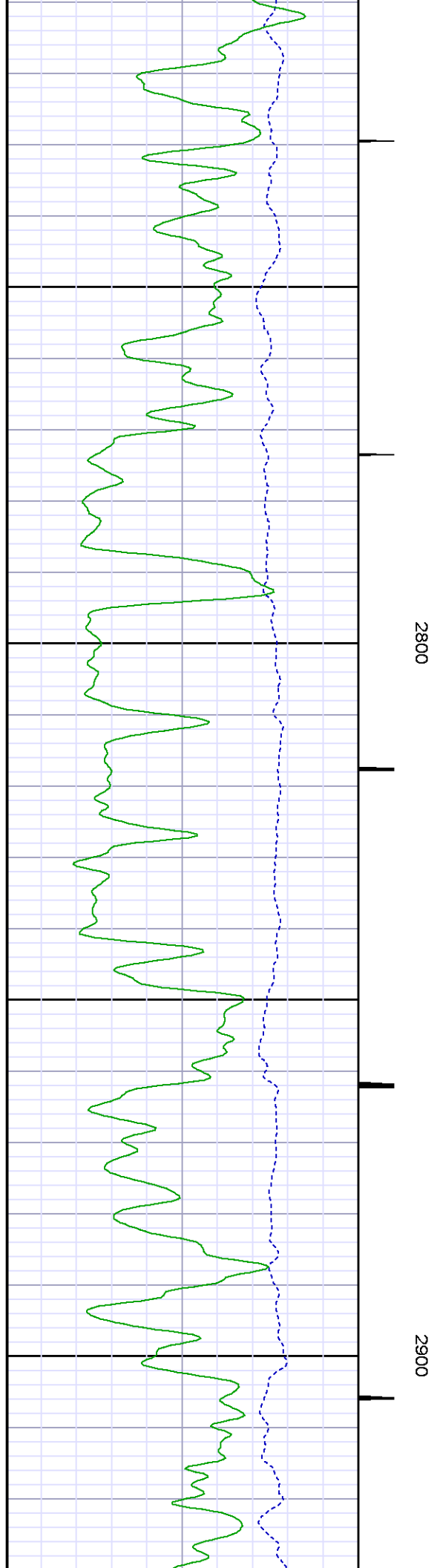
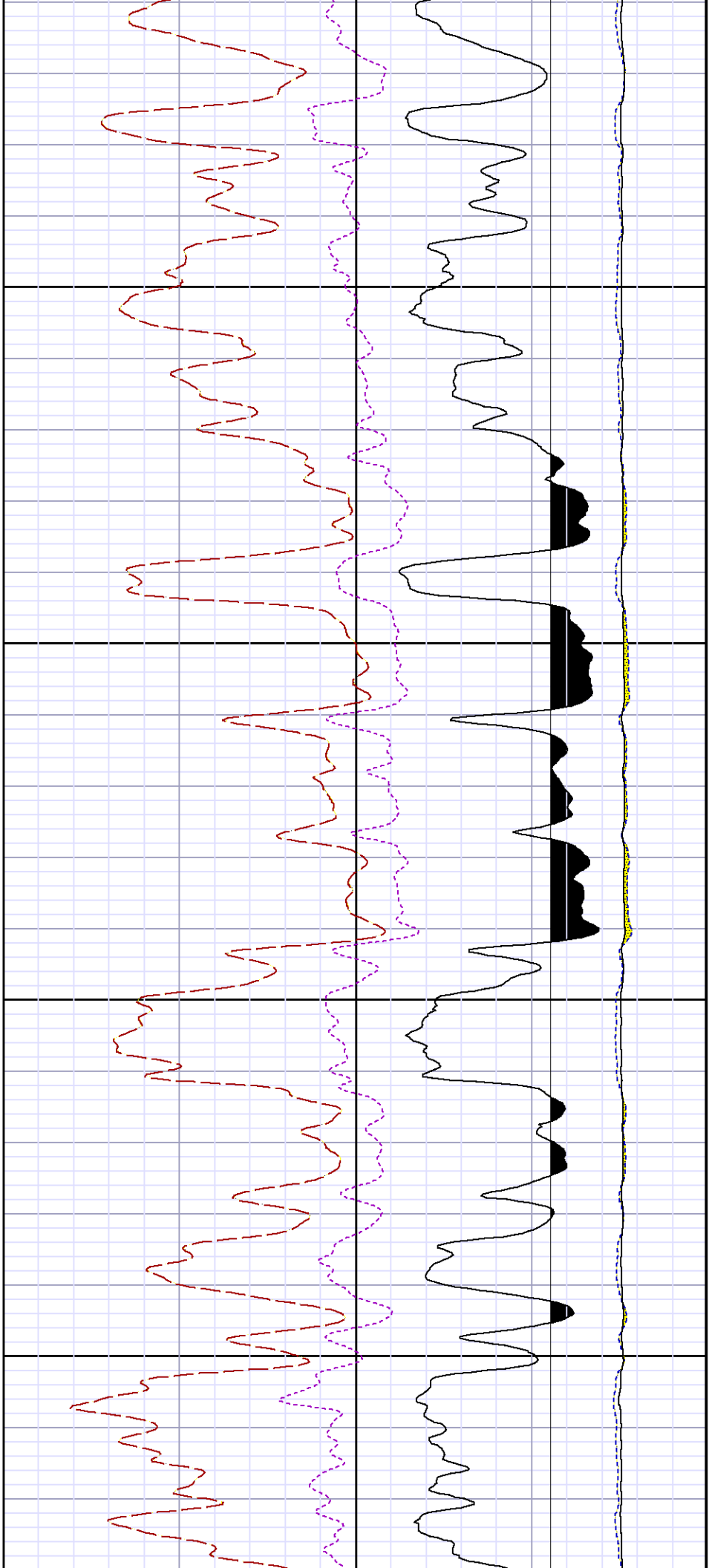
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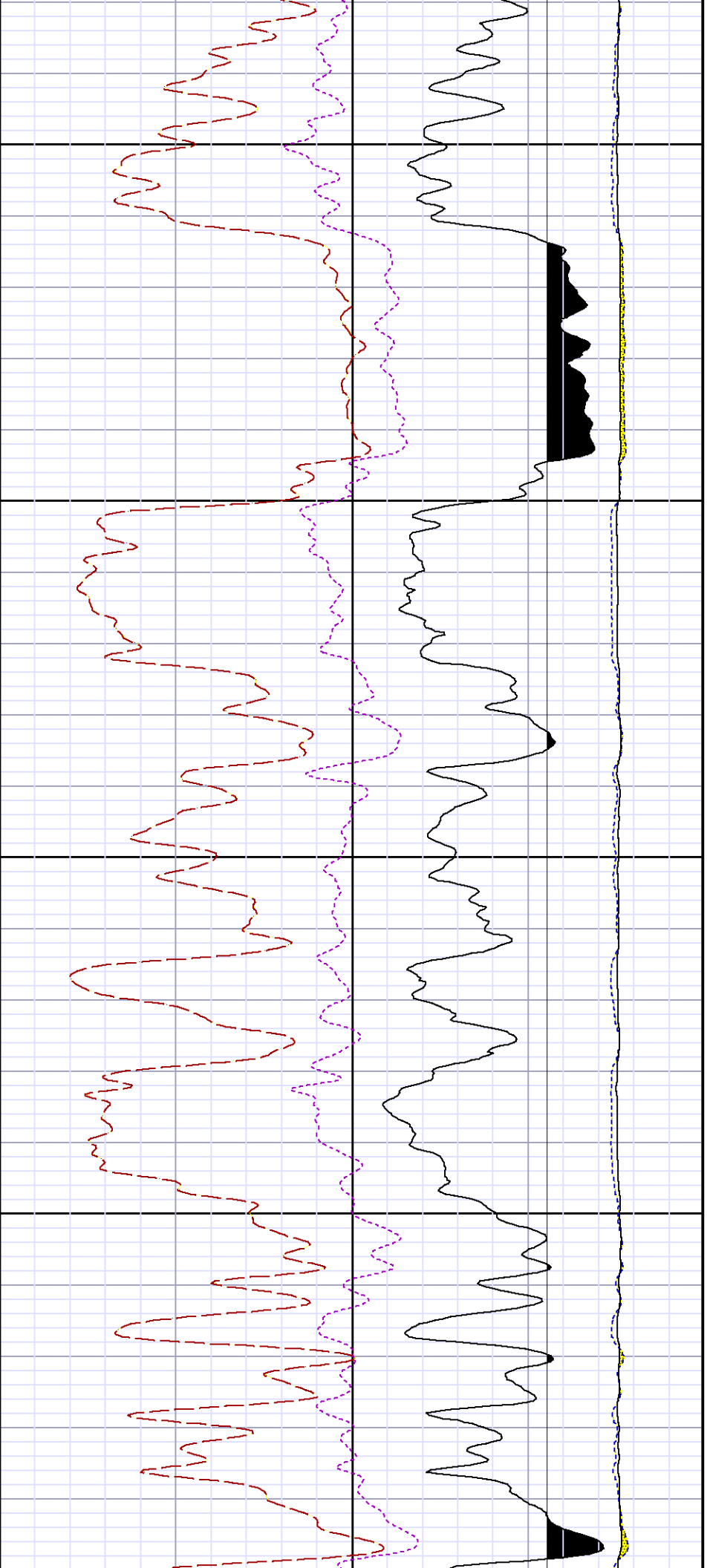
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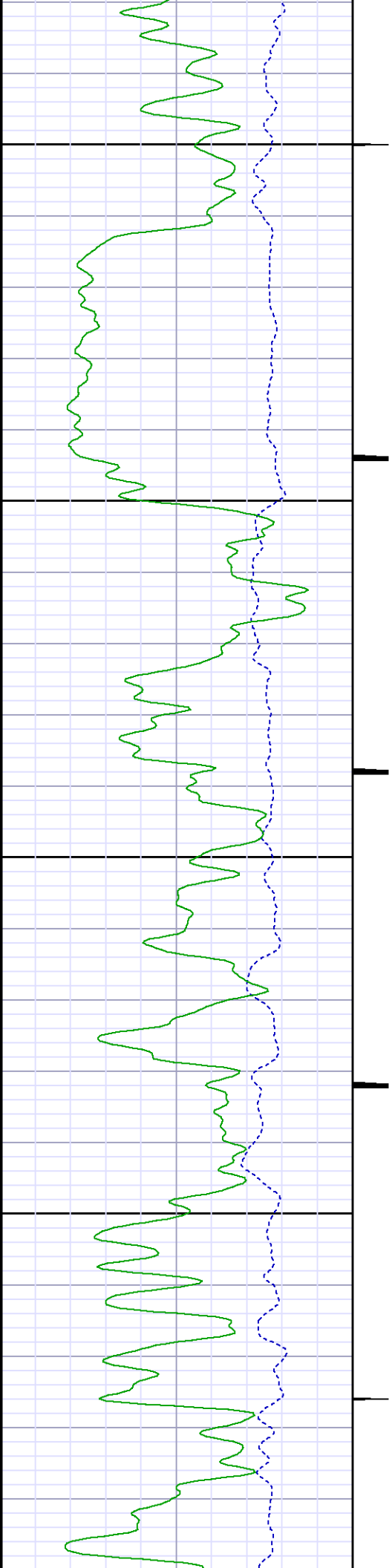


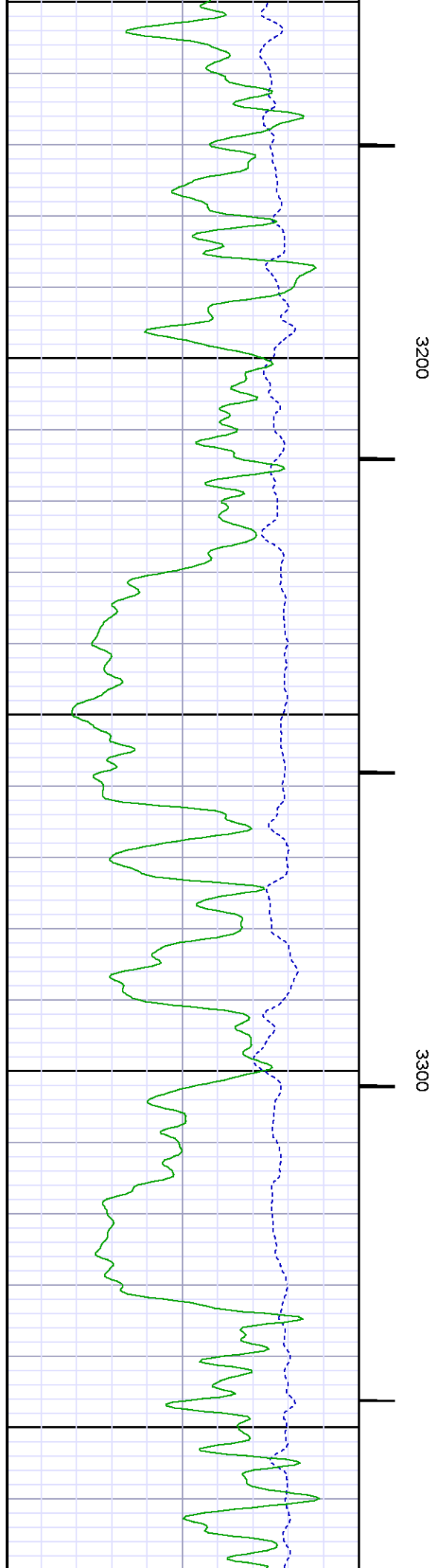
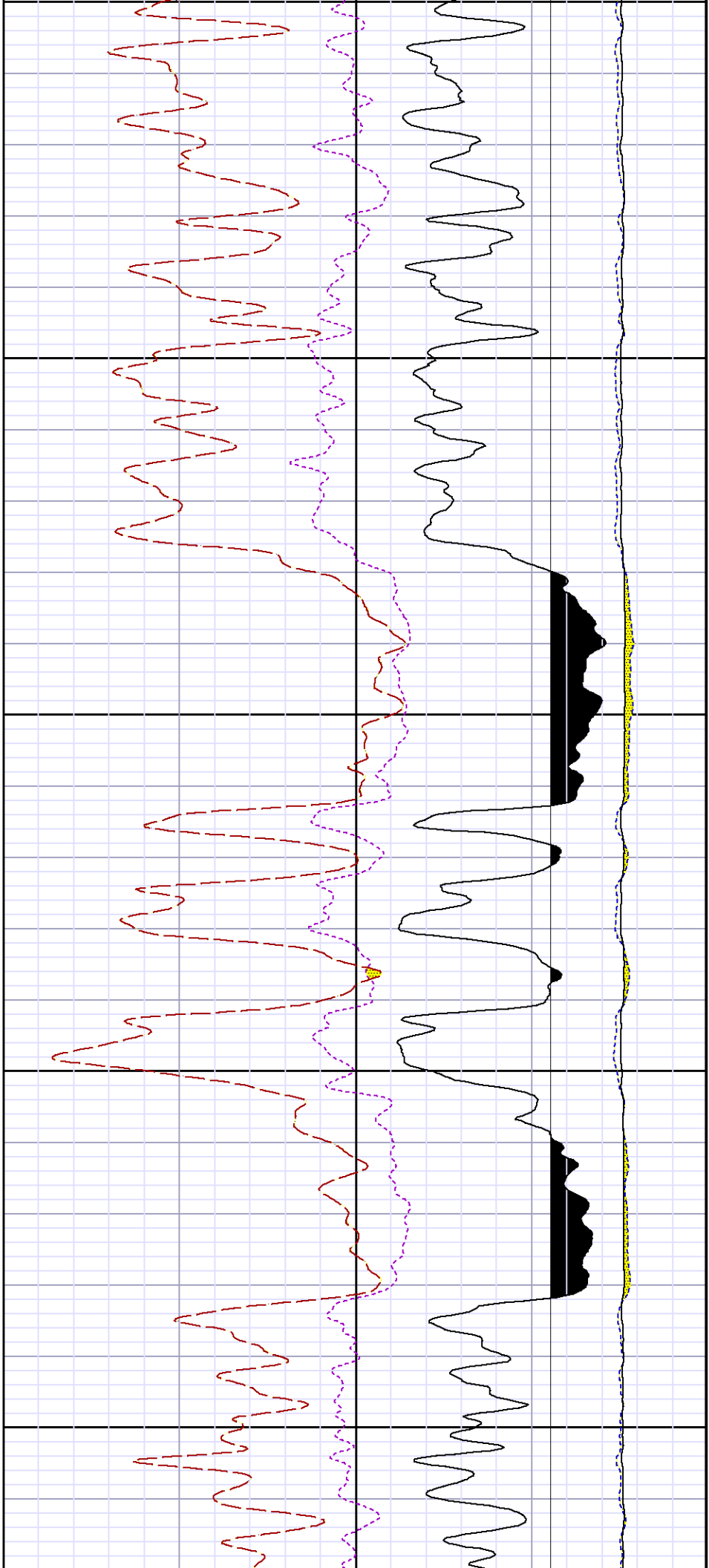




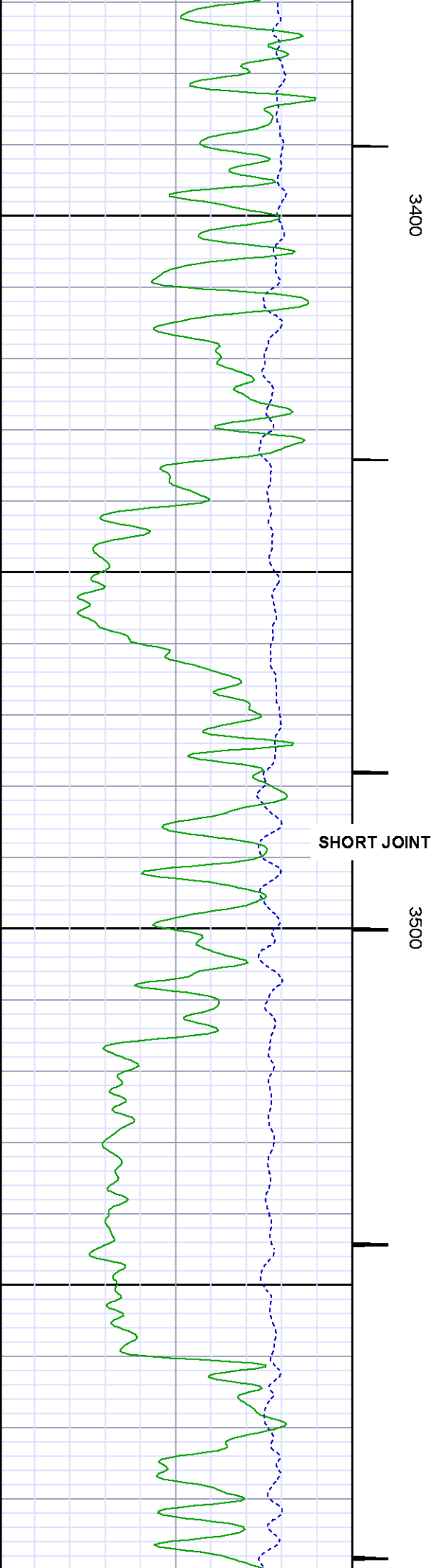
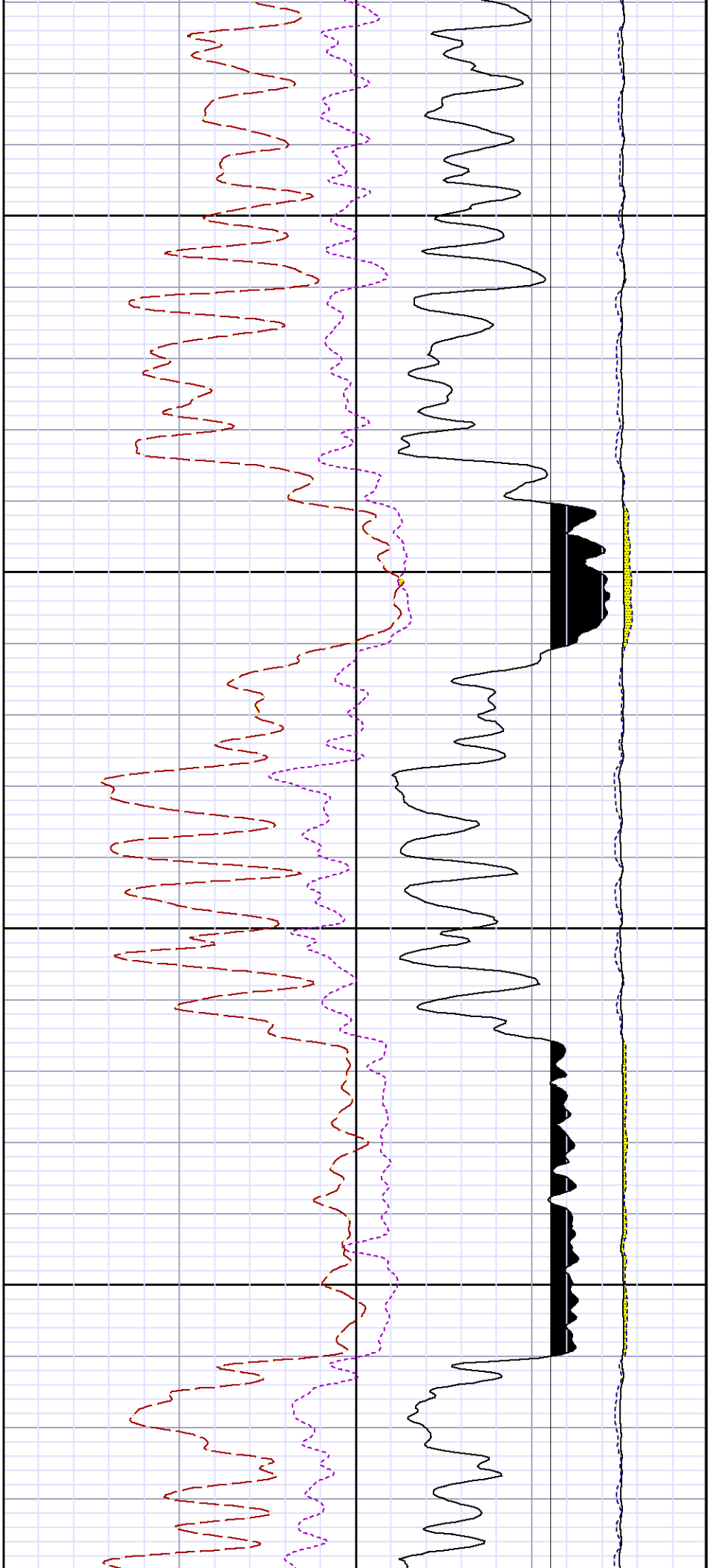
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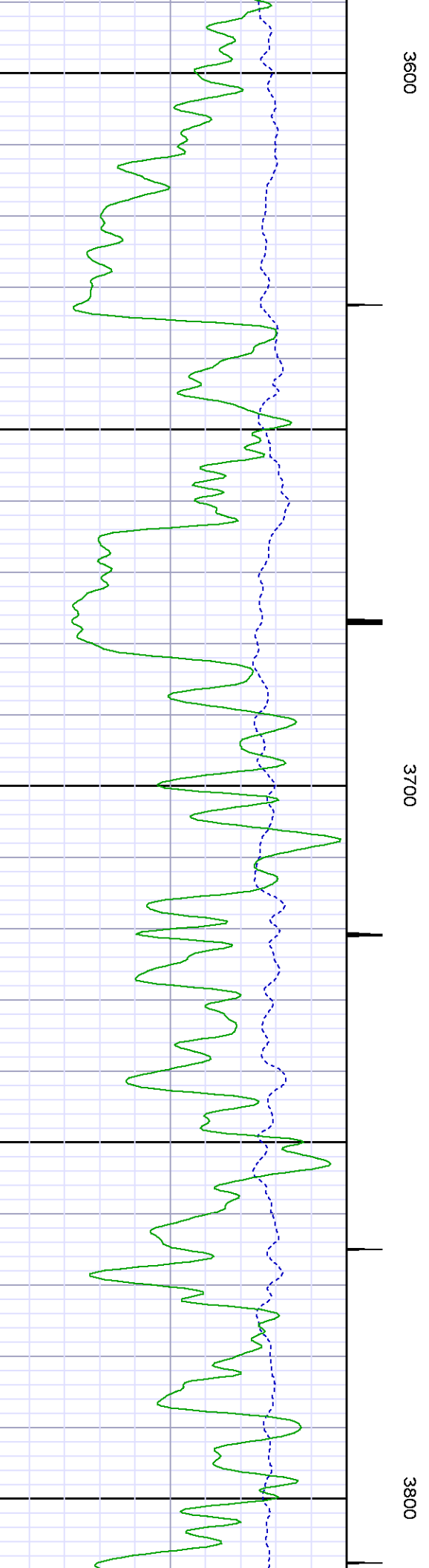
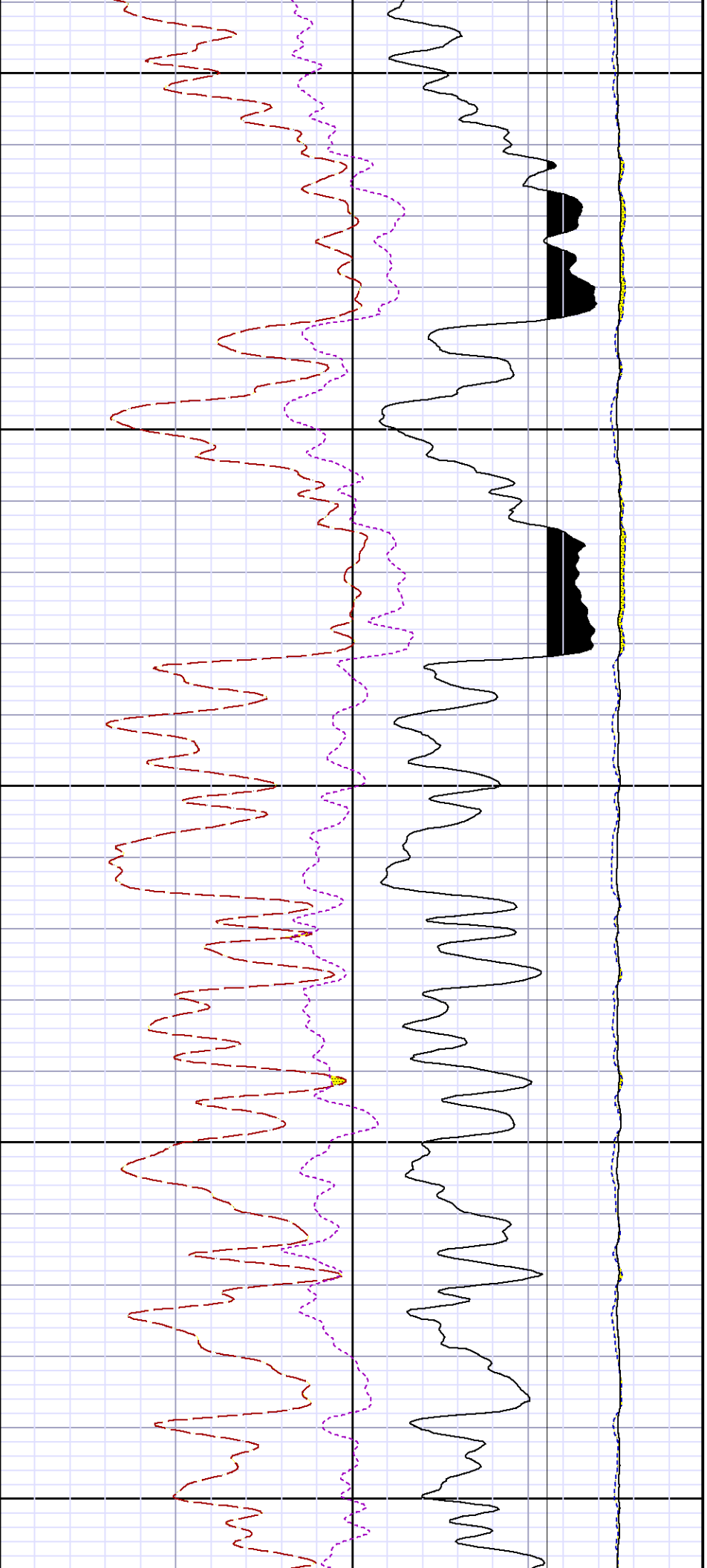
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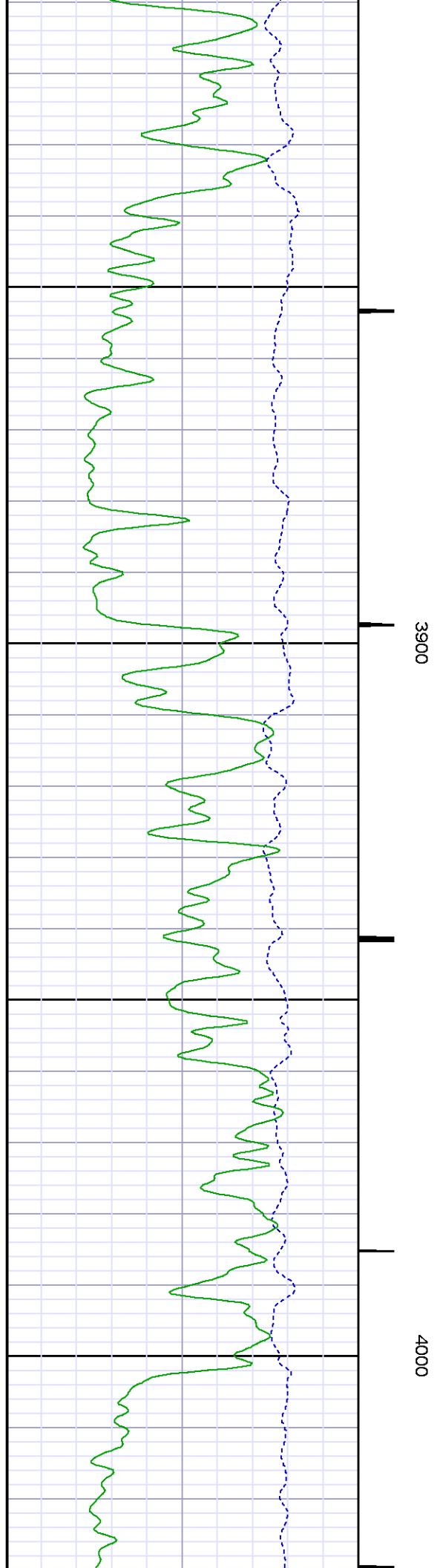
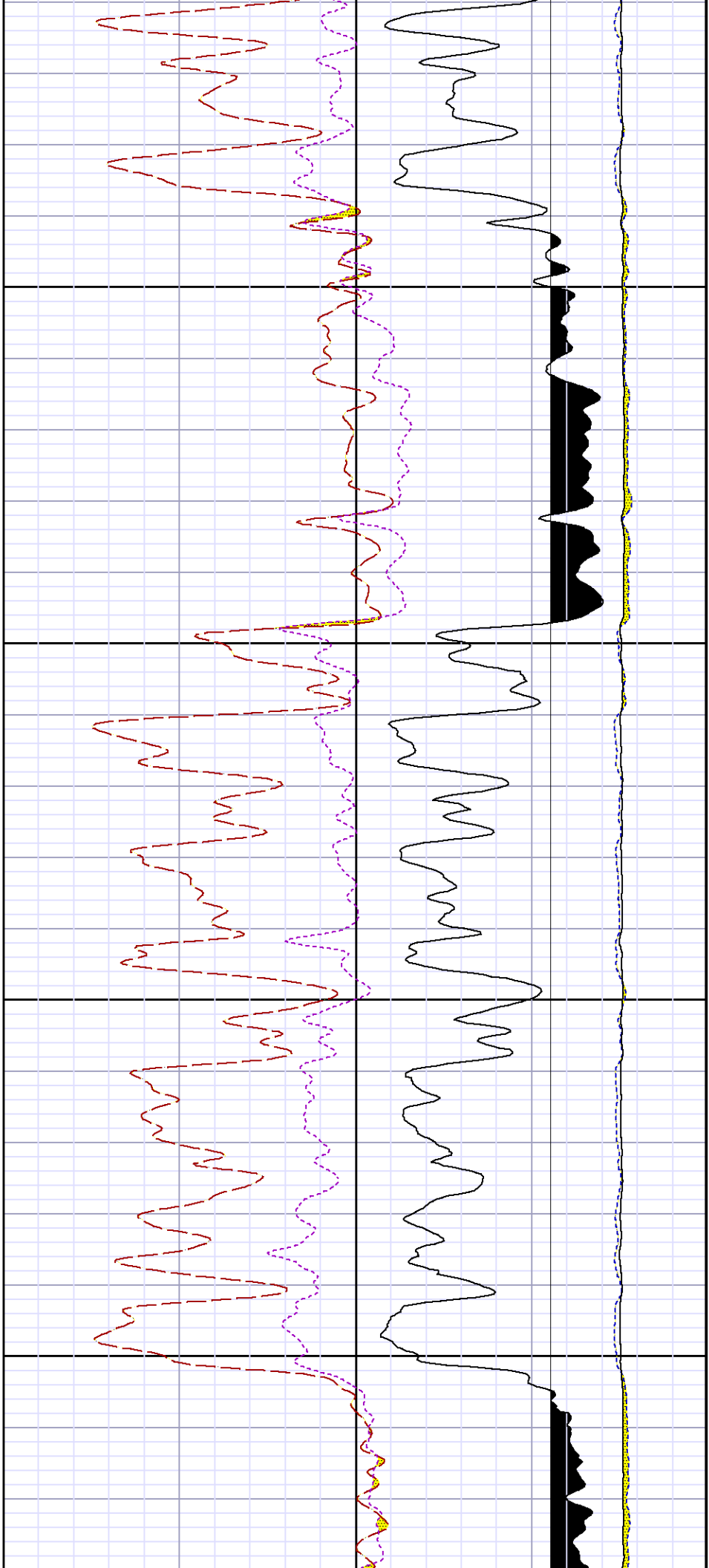


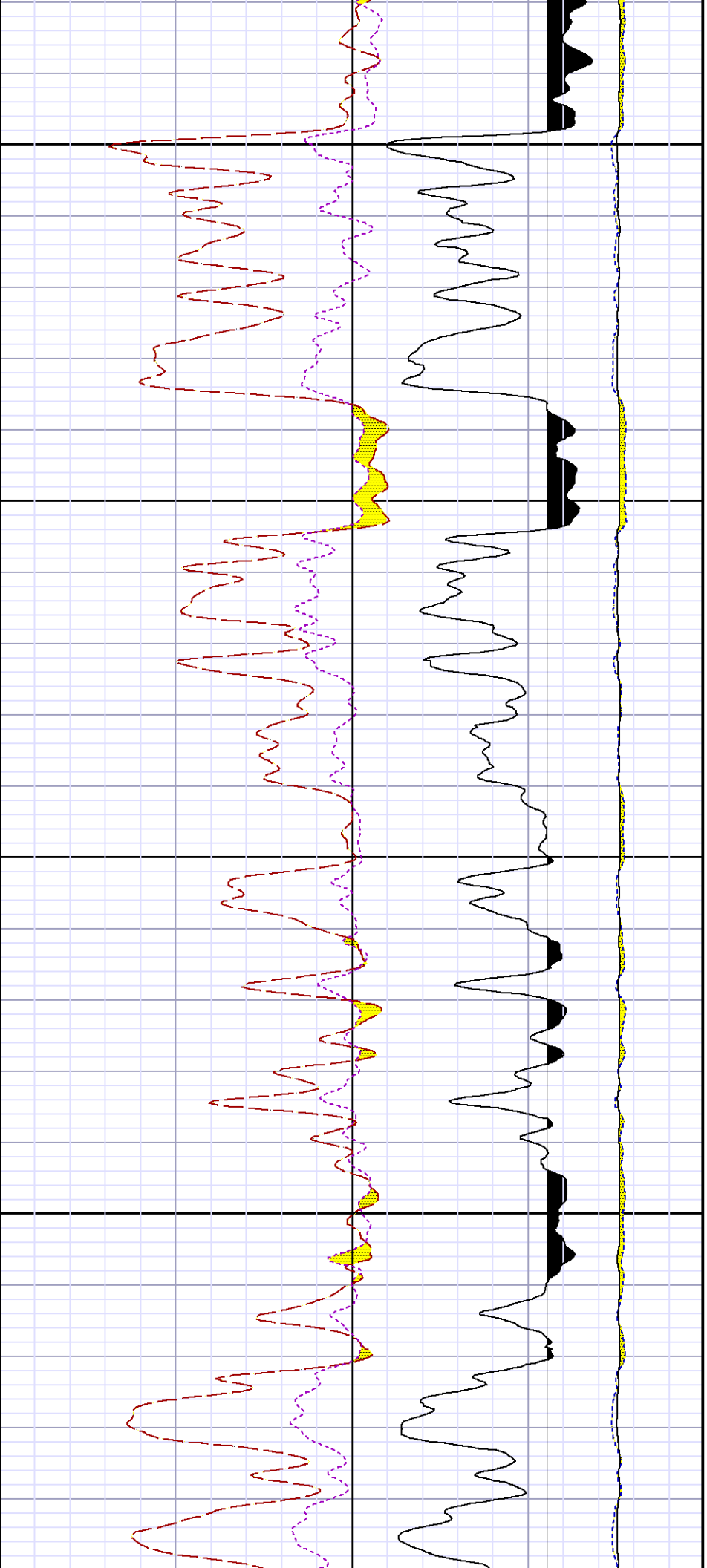






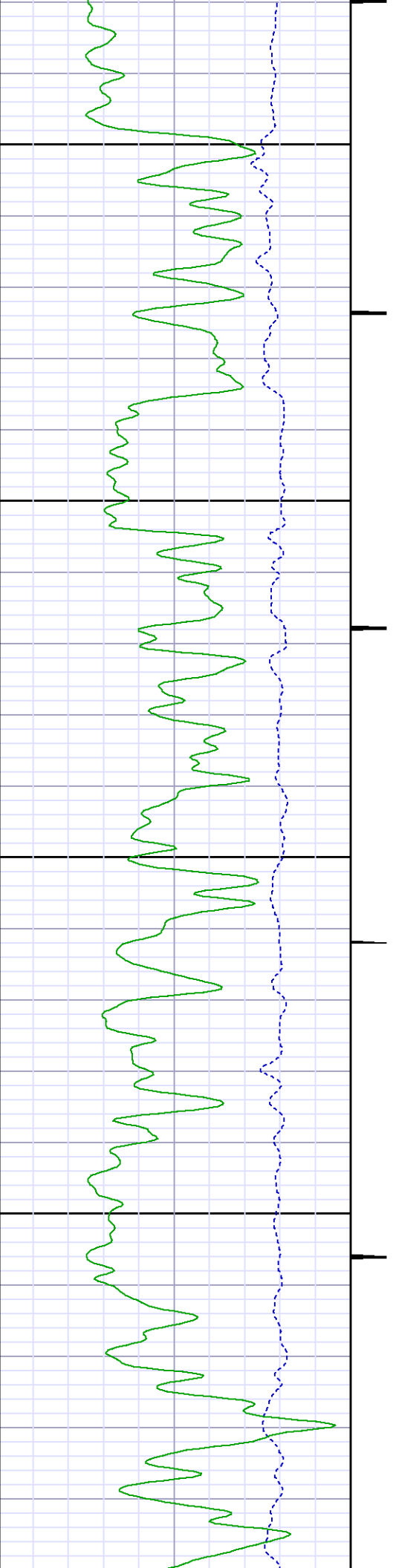


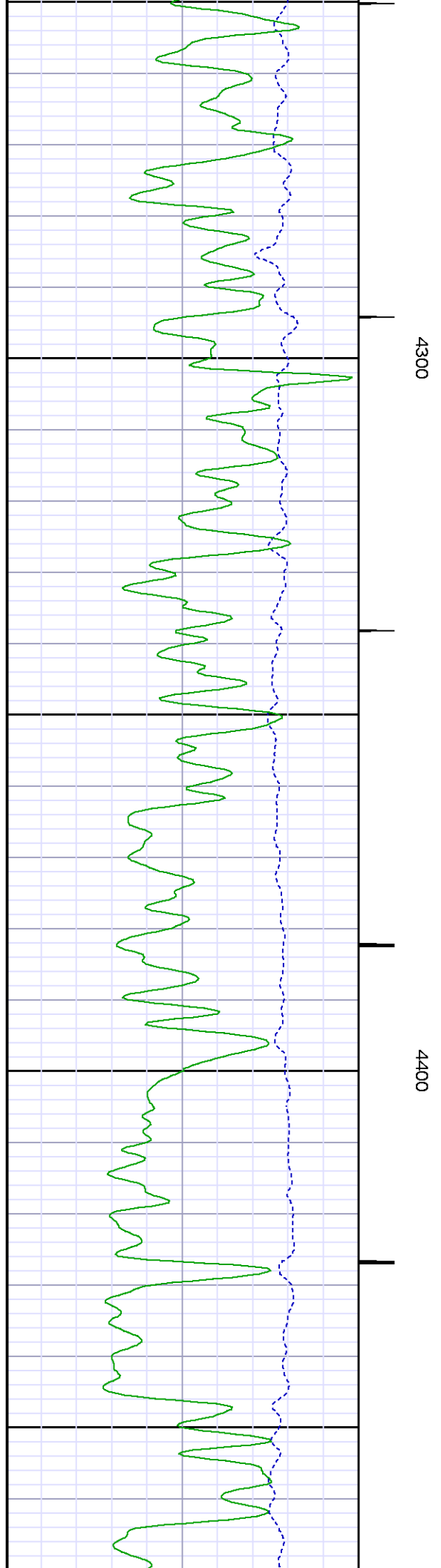
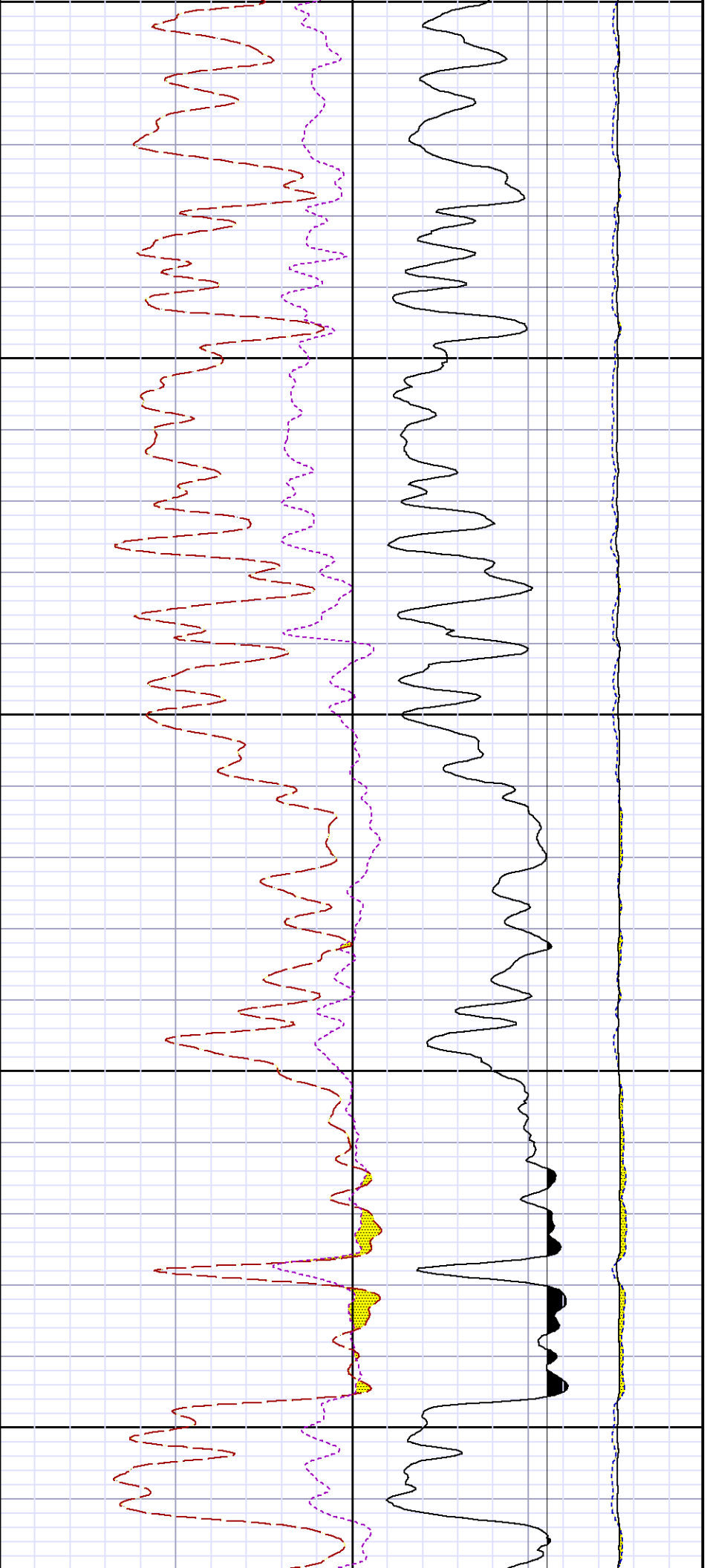


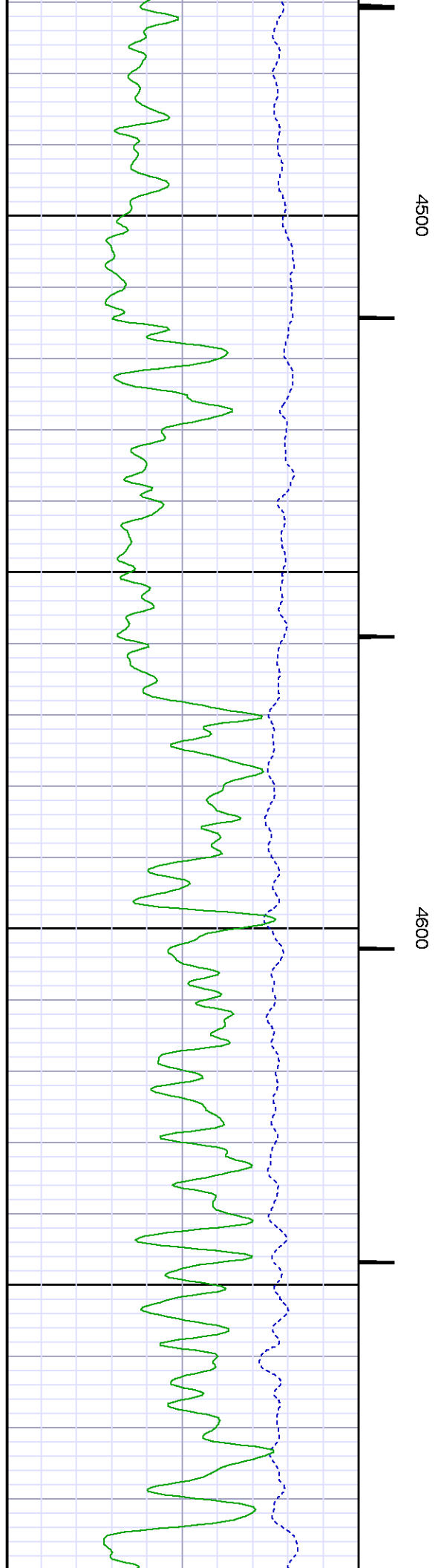
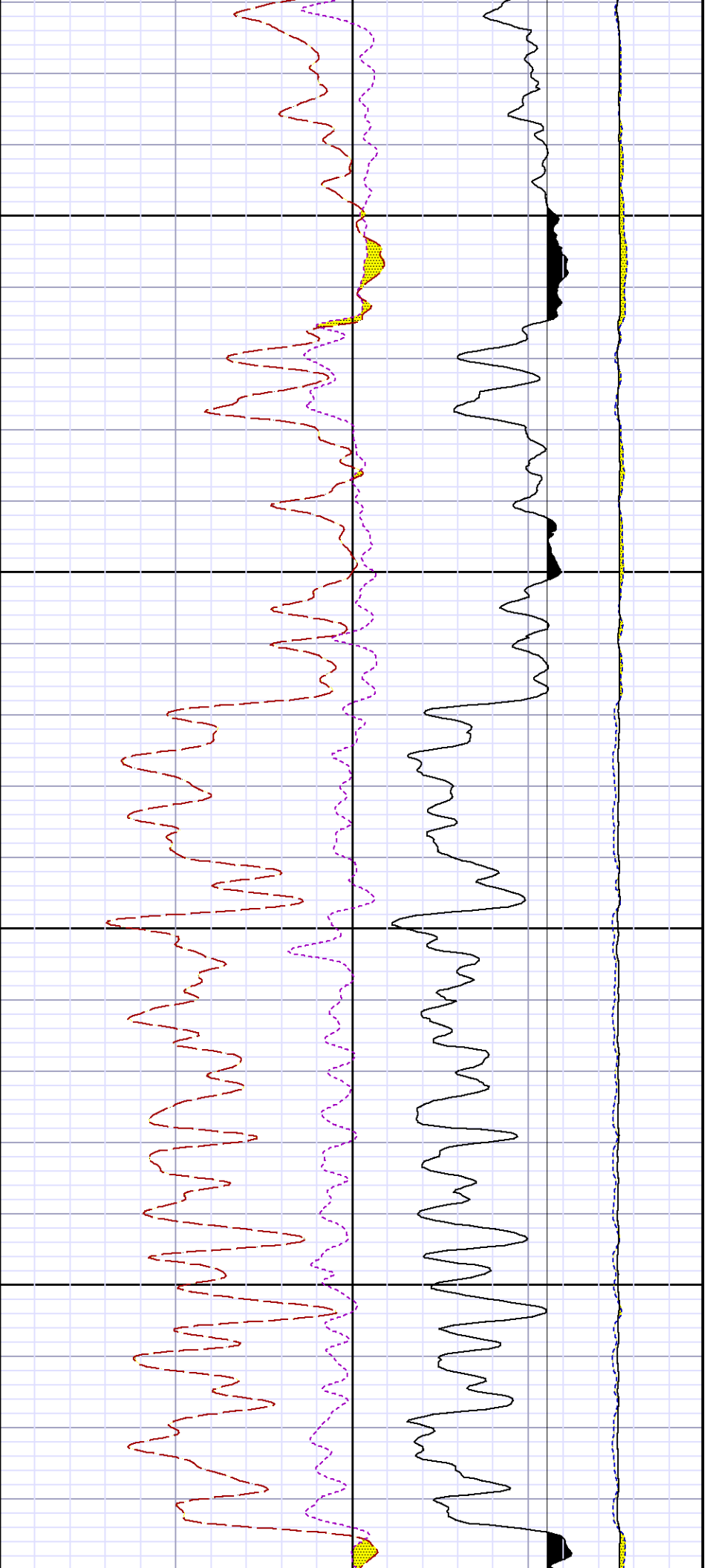


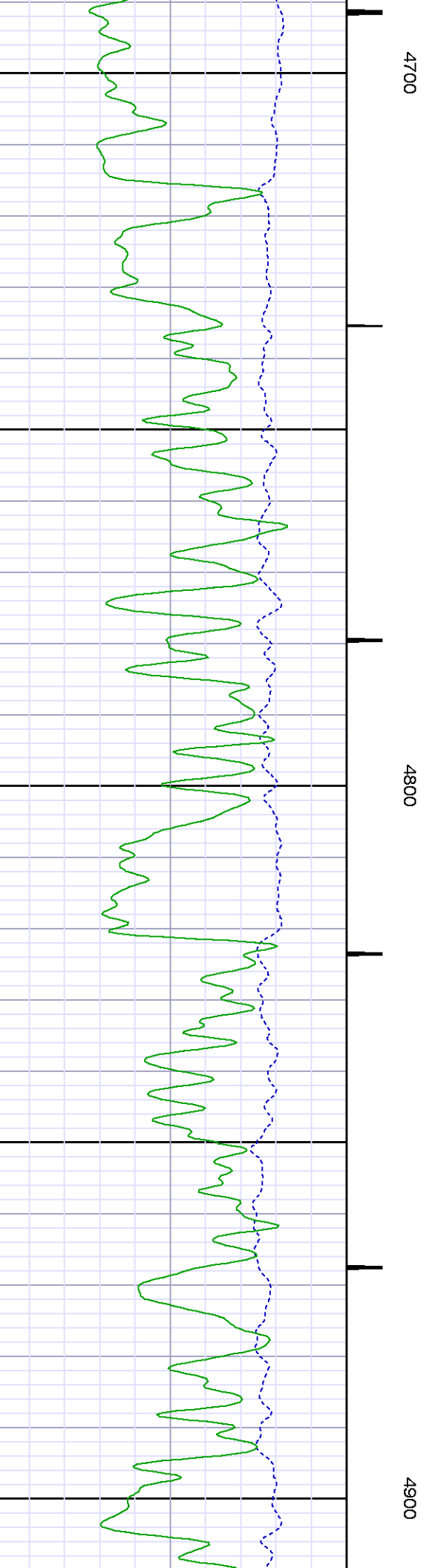
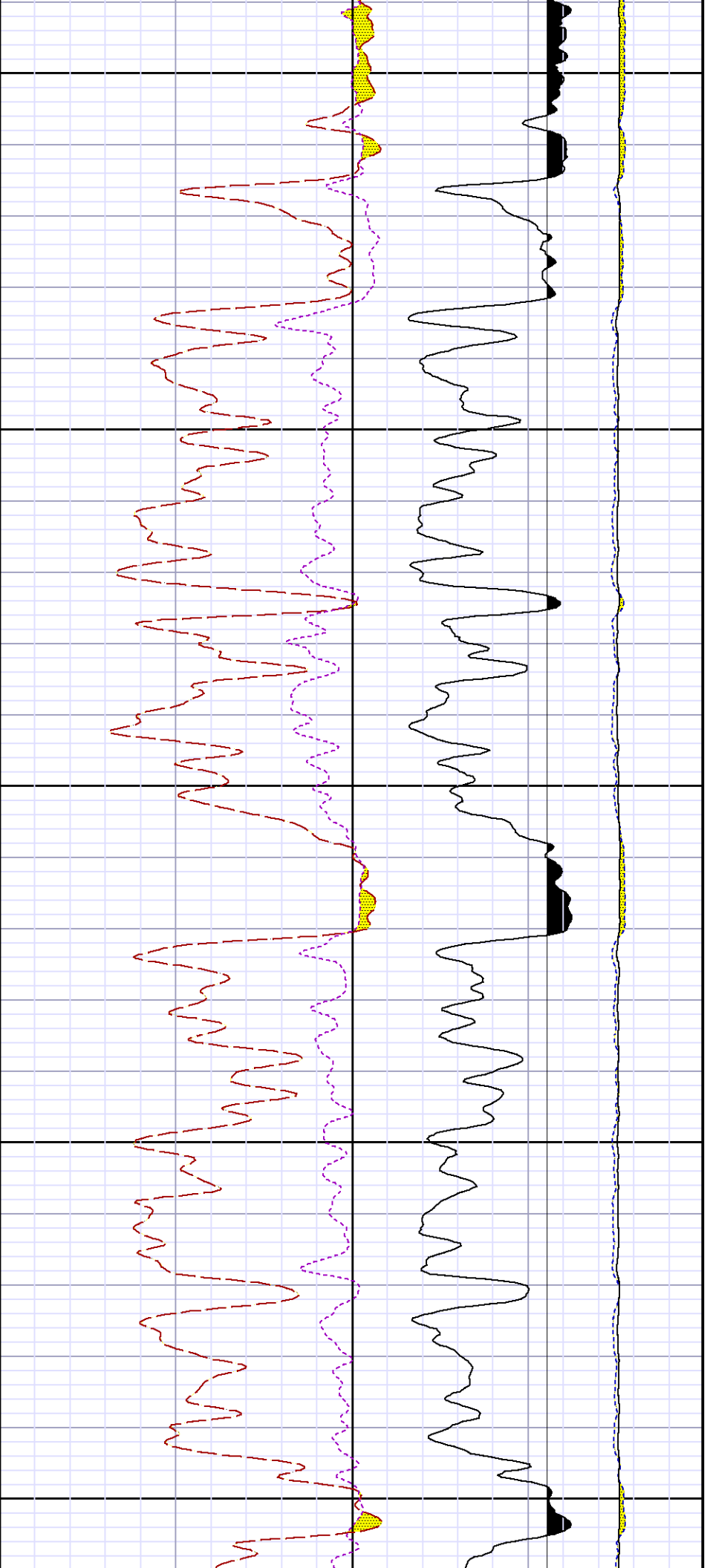
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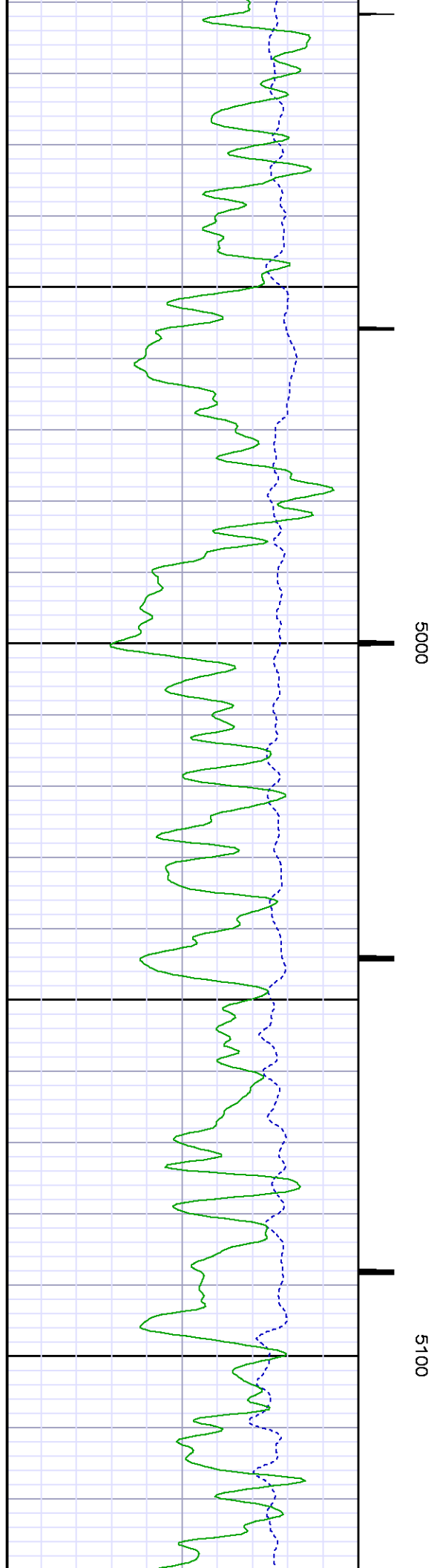
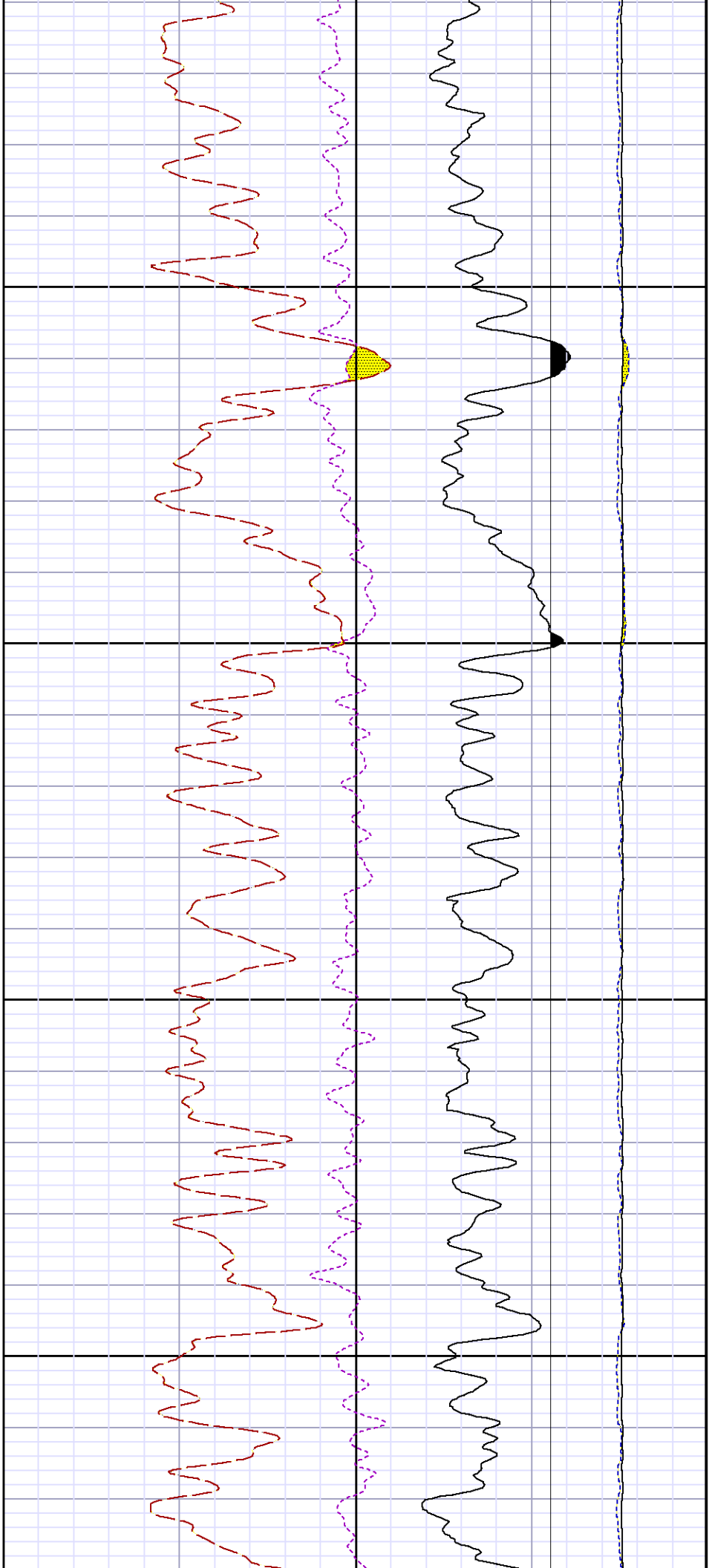
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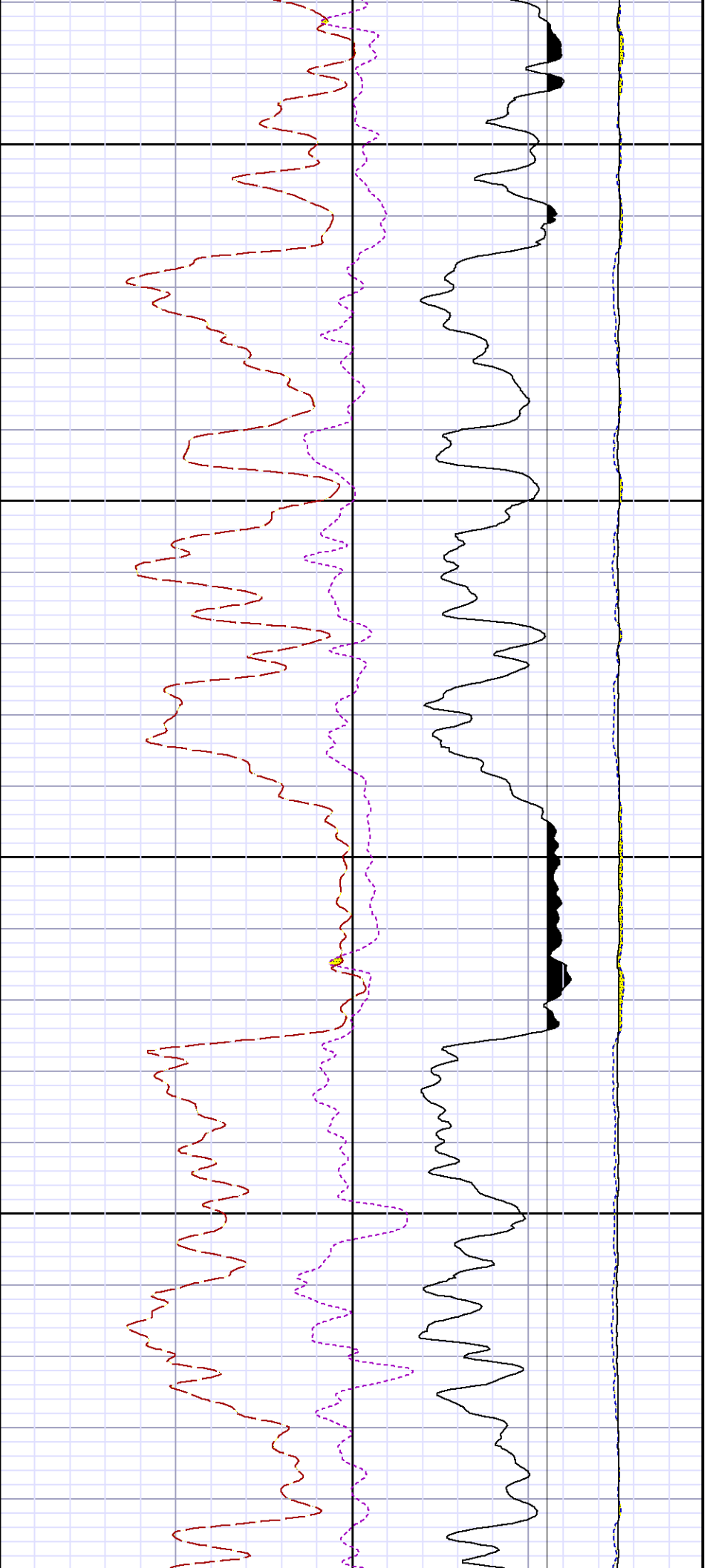






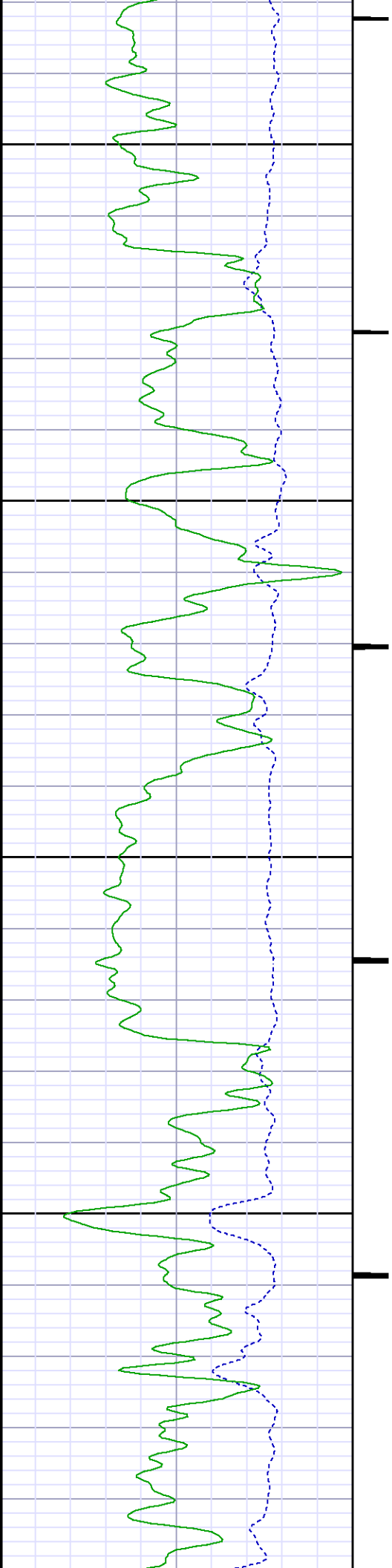


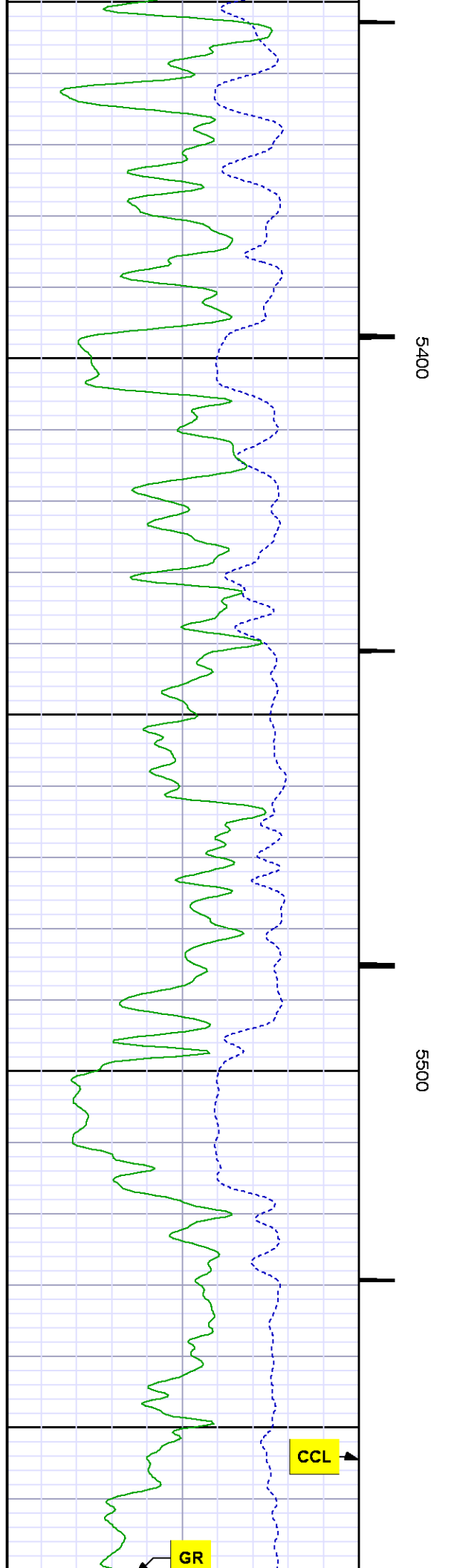
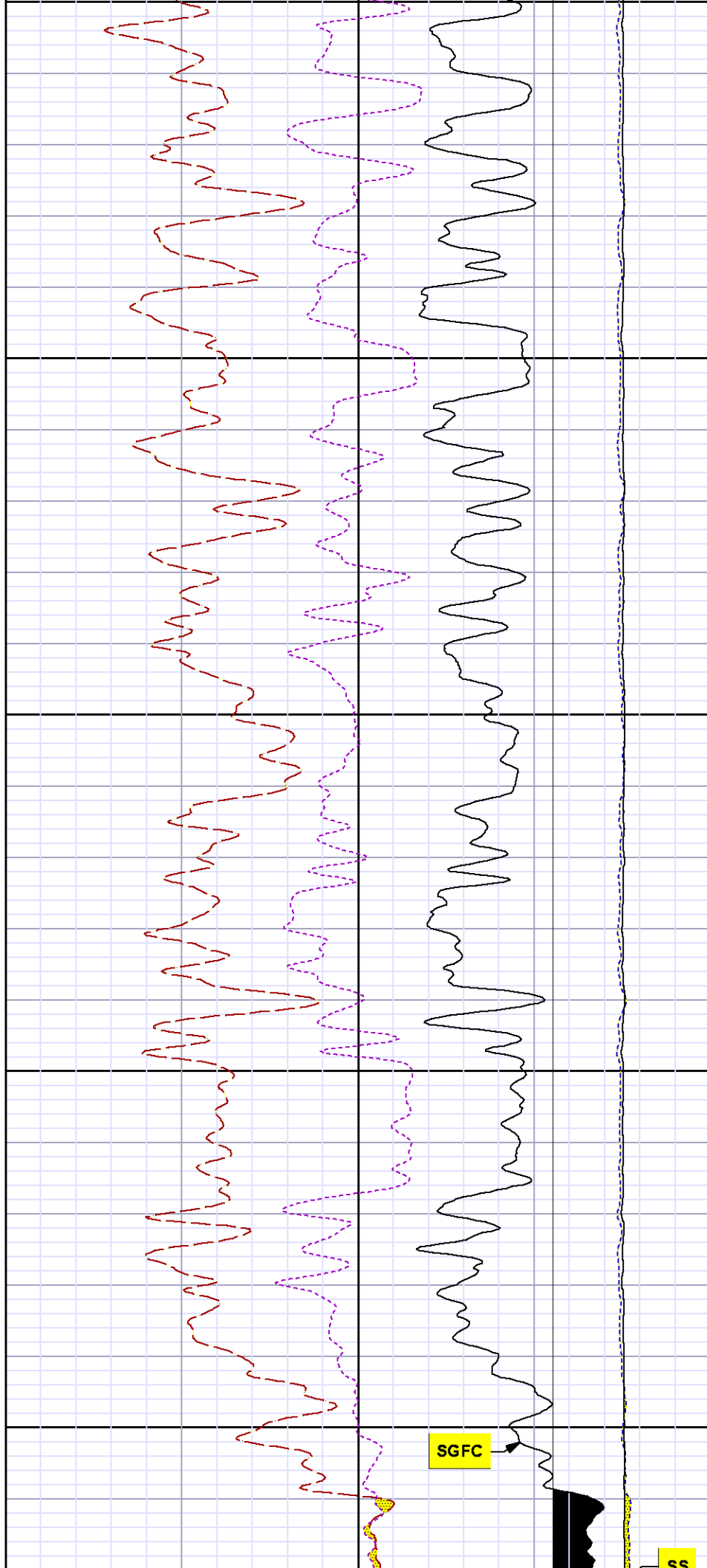


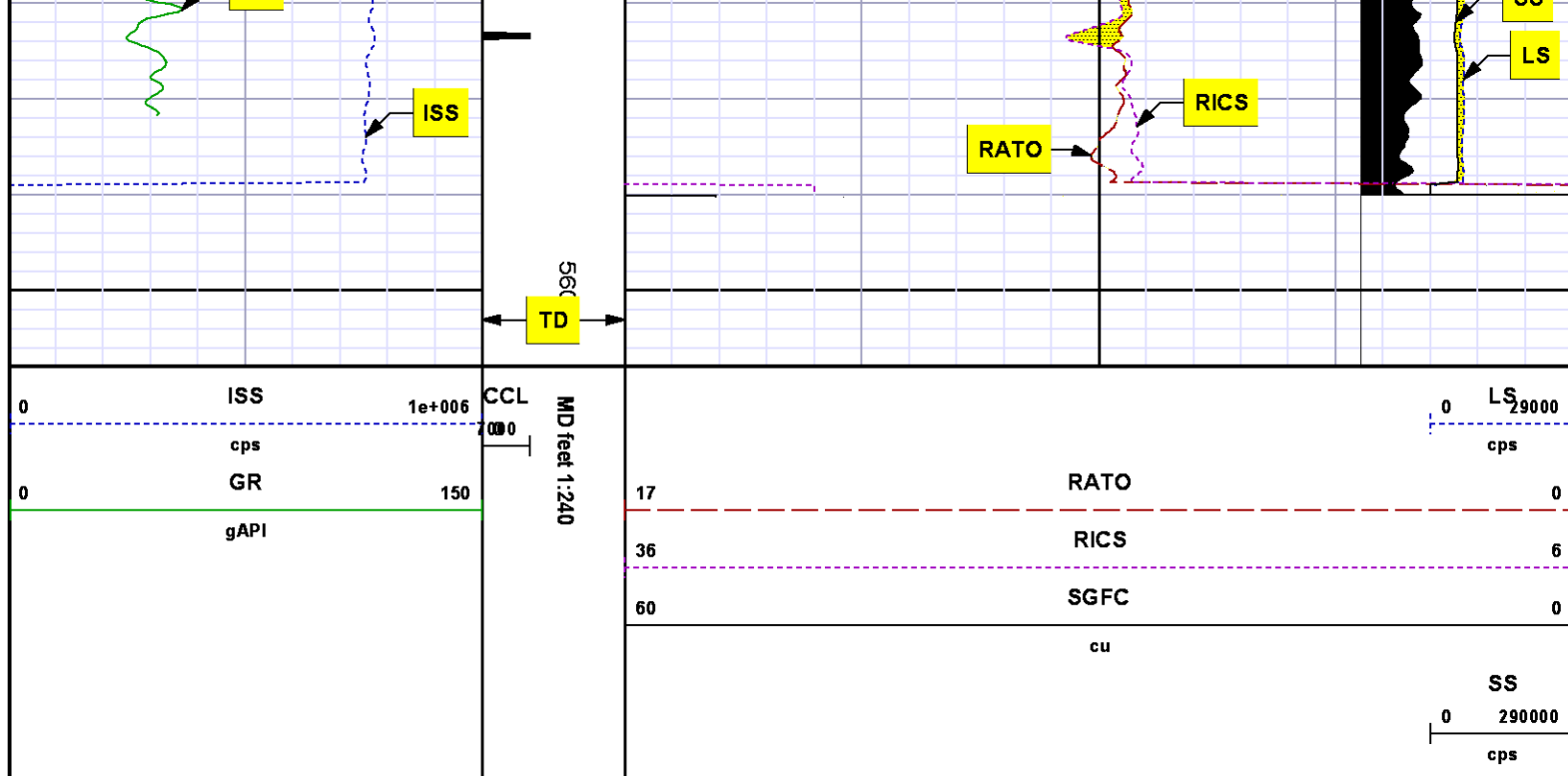


5200

5300







*REPEAT SECTION  
PNC 3-D MODE*

### SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		4811.903	4942.060
PNC Porosity	Borehole Size	8.750	inch	4811.903	4942.060
PNC Porosity	Casing Size	4.500	inch	4811.903	4942.060
PNC Porosity	Gas Filled	Non Gas Filled		4811.903	4942.060
PNC Porosity	Matrix	Sandstone		4811.903	4942.060
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	4811.903	4942.060
PNC Porosity	Borehole	Cased		4942.060	5108.685
PNC Porosity	Borehole Size	8.750	inch	4942.060	5108.685
PNC Porosity	Casing Size	4.500	inch	4942.060	5108.685
PNC Porosity	Gas Filled	Non Gas Filled		4942.060	5108.685
PNC Porosity	Matrix	Sandstone		4942.060	5108.685
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	4942.060	5108.685

# 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 WDT1 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

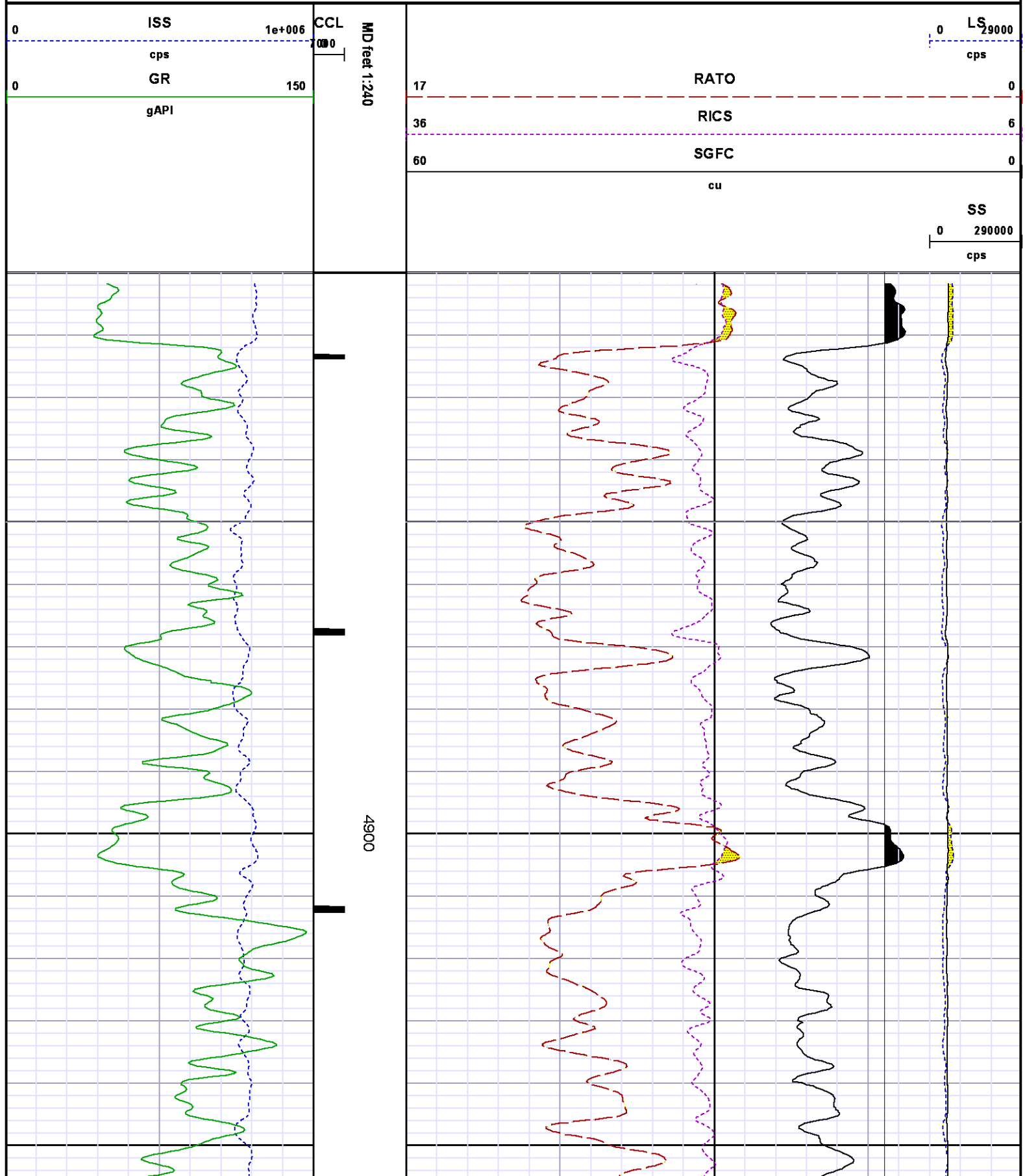
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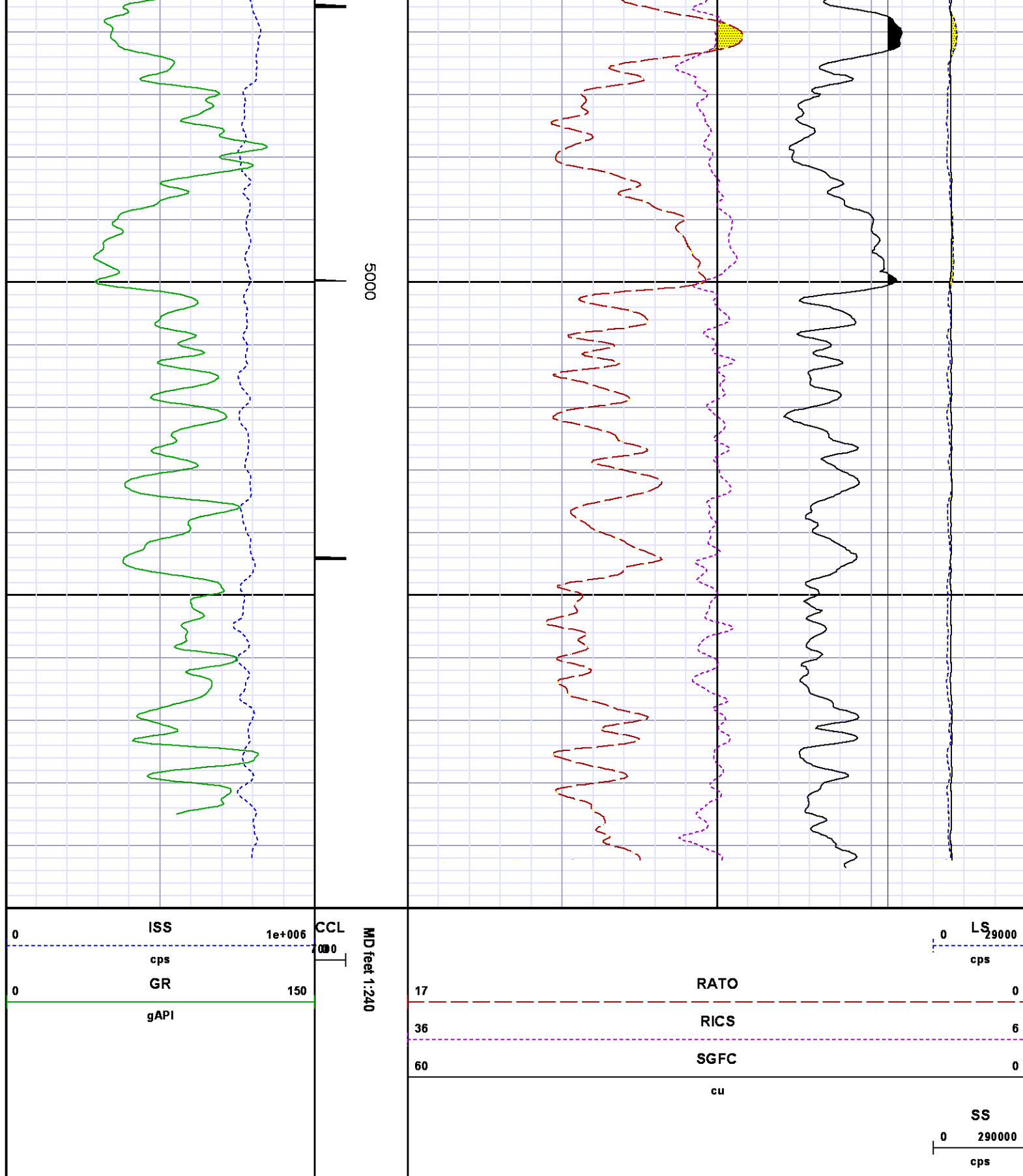
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Mode : PlotMgr 5.4.504

Interval : 4810.00 - 5100.00 feet UP

Created : 10/26/2014 9:18:49 AM





## CALIBRATION SUMMARY

# PNC

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

## PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Oct 23 16:35:53 2013 TOOL SERIES: 8281XA ASSET: 555 SEQ: TN

### Calibrator #

GJ SHOP

### Source #

8281AA 11765054

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	819615	121.00	2320.00	2269.00	2228.00	108.73	7.00	0.9791
Interpolated	1300000	141.91	2296.28	2266.45	2222.67			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	819615	7046.46	1091.56	150.16	25.80	0.14	24.31	0.28
					25.35 26.40	0.00 0.20	23.60 24.80	0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	819615	175573.81	26920.34	91684.47	32637.21	8509.07	55444.93	13599.47
Fit Quality %		0.42	0.41	0.51	0.50	0.44	0.45	0.38

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	819615	1.43	4.67	30.45	14.78	10.78	3.84	4.08
		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 %		0.08	0.34	0.28	0.24	0.21	0.20	0.15
Reduced	1394692	1.43	4.70	30.60	14.86	10.79	3.84	4.08
		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

# 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 [cps]	Calibrator On [cps]	Multiplicative	Background [apil]	Calibrator On [apil]	Differential [apil]
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S2K	WA612	67.31	273.64	1.018	68.51	278.51	210.00
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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
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S2K	WA612	64.02	1.018	65.16	280.36	215.20

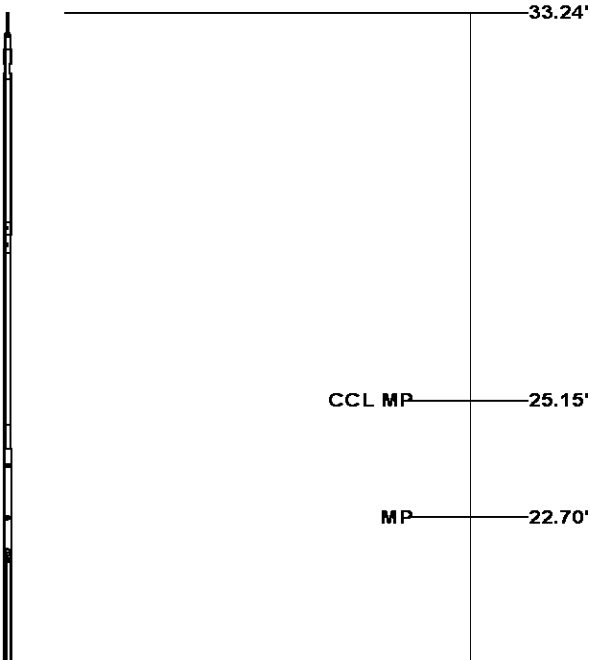
TEMPERATURE

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

CALIBRATION SUMMARY						
DATE/TIME PERFORMED:		09 AUG 2010		TOOL SERIES:	8255XA	ASSET: 120516 SEQ: AU
Coefficients	T(0)	T(1)	T(2)	T(3)	T(4)	T(5)
	-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	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'

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***CASE***Company**

WPX ENERGY

**Well**

FEDERAL SG 532-28

**Field**

GRAND VALLEY

**County**

GARFIELD

**State**

CO

**Location**

SHL: 2273' FSL &amp; 495' FEL

BHL: 2630' FNL &amp; 2302' FEL

**Elevations**

KB 5143

DF

GL 5119

**File No:**

CH091651

**API No:**

05045219560000

28 7S 96W

SG 43-28 PAD

H&amp;P 318

SEC 28 TWP 7S RGE 96W