



RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No: CH090703	Company Well Field County	WPX ENERGY FEDERAL NER 523-32 RULISON GARFIELD	State COLORADO
API No: 05045217760000	Location SHL: 113' FWL x 257' FWL SEC 5 7S 93W BHL: 1756' FSL x 1906' FWL SEC 32 6S 93		Other Services BOND LOG
32 6S 93W RU 23-5 PAD NABORS 676	SEC 32 TWP 6S RGE 93W		
Permanent Datum Log Measured From Drill Measured From	GL KB KELLY BUSHING	Elevation 26 ft Above P. D.	Elevations KB 7629 ft DF GL 7603 ft

Date	23/SEP/14	
Run	ONE	
Service Order	US090703	
Depth Driller	10386 ft	
Depth Logger	10296 ft	
Bottom Logged Interval	10286 ft	
Top Logged Interval	26 ft	
Time Started	1600	
Time Finished	2100	
Operator Rig Time	6 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	97 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	249 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	44271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	JEFF DUCY	

- 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	1131 ft
8.75 in	1106 ft	10386 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			26 ft	1131 ft
4.5 in	11.6 lbm/ft	P-110	26 ft	10386 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 9/23/2014 at the client's request.
Logged in PNC-3D mode.
The amount of linear shift is 0 feet.
BHT 249°F
SHORT JOINT 6931' - 6954'

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	8281PA	10169251	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	GR	2812LA	10274385	FREE
1	1	TEL/CCL	8248ED	10460262	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		6159.750	10294.000
PNC Porosity	Borehole Size	8.750	inch	6159.750	10294.000
PNC Porosity	Casing Size	4.500	inch	6159.750	10294.000
PNC Porosity	Gas Filled	Non Gas Filled		6159.750	10294.000
PNC Porosity	Matrix	Sandstone		6159.750	10294.000
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	6159.750	10294.000

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	WDTH3	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	WDTH2	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	SGB1C	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					
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

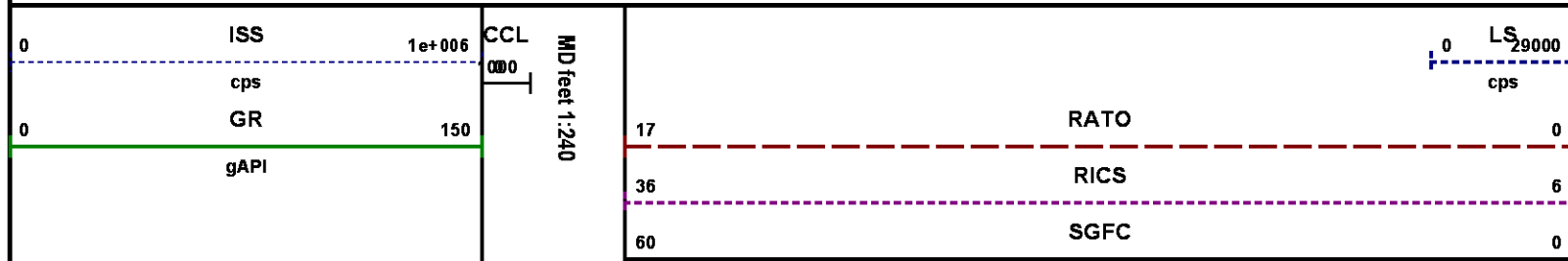
Well : FEDERAL NER 523-32

File Name : d:\welldata\wpx\ner 523-32\p523\main.xtf

Mode : PlotMgr 5.4.504

Interval : 6160.00 - 10300.00 feet UP

Created : 9/23/2014 4:29:58 PM



SS
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cps

cu

LS

SS

SGFC

RICS

RATO

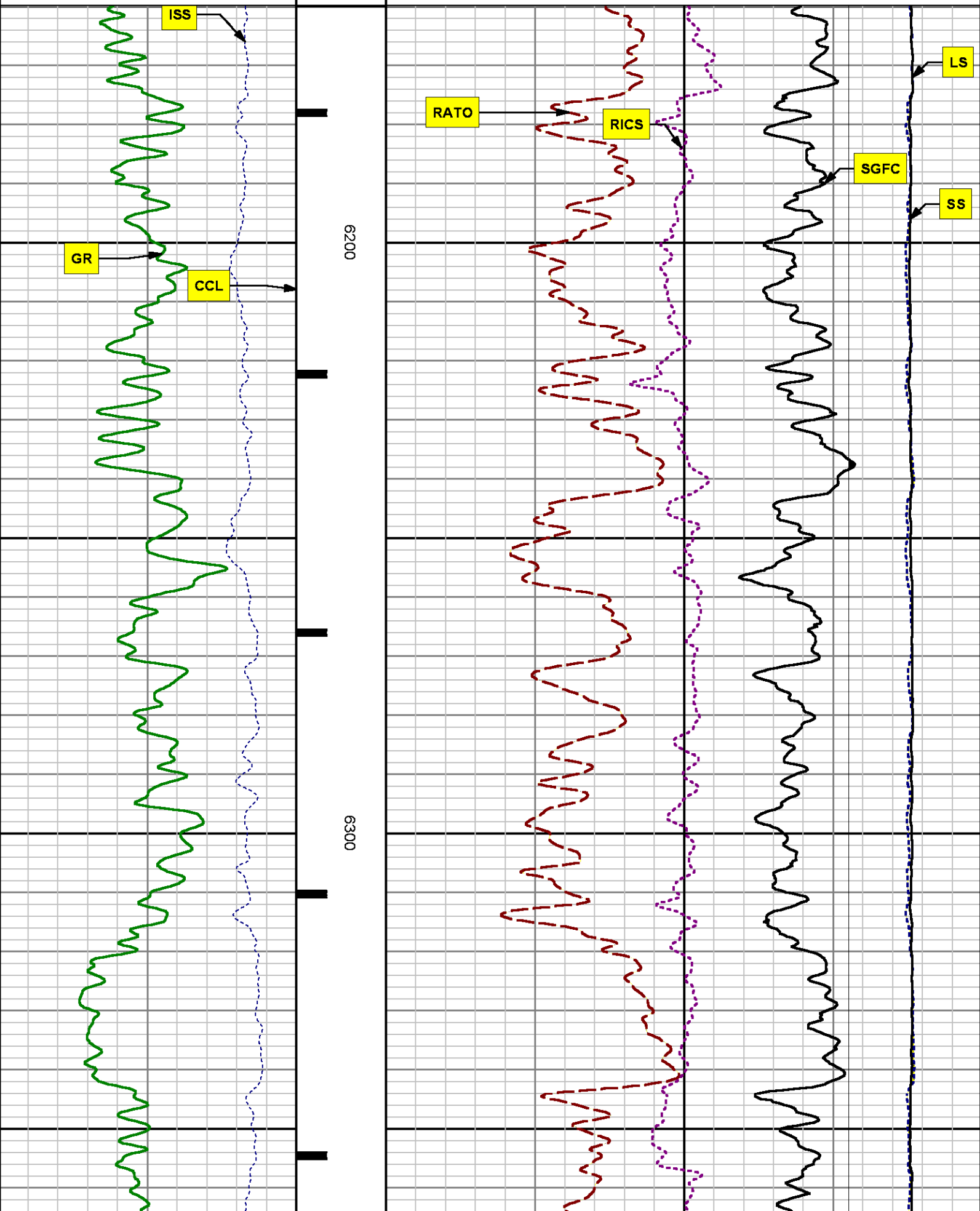
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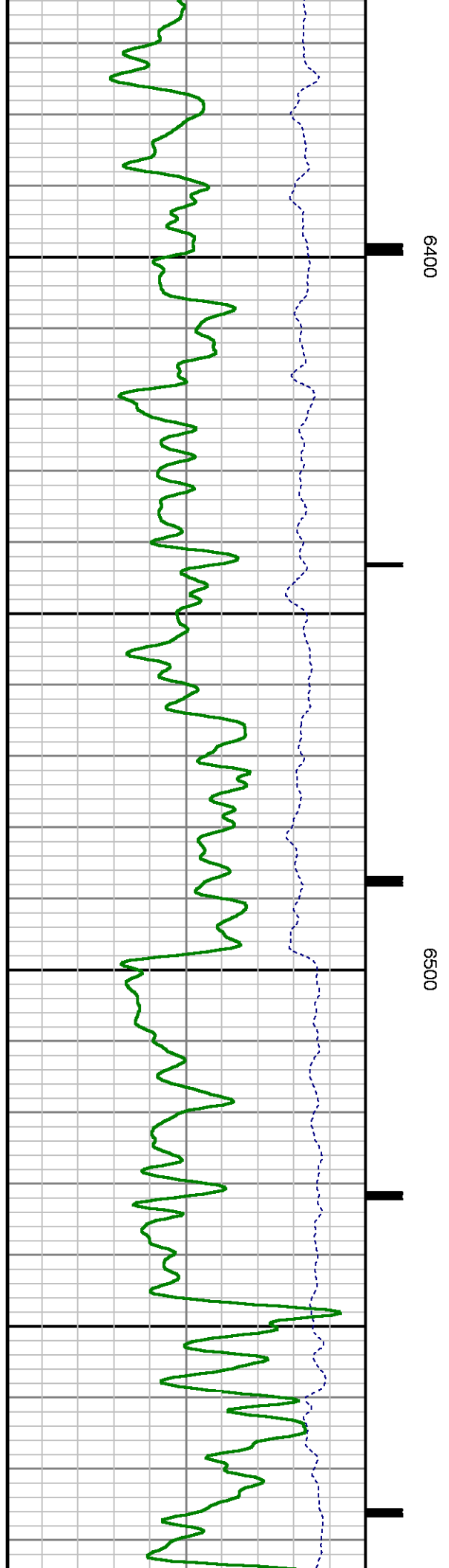
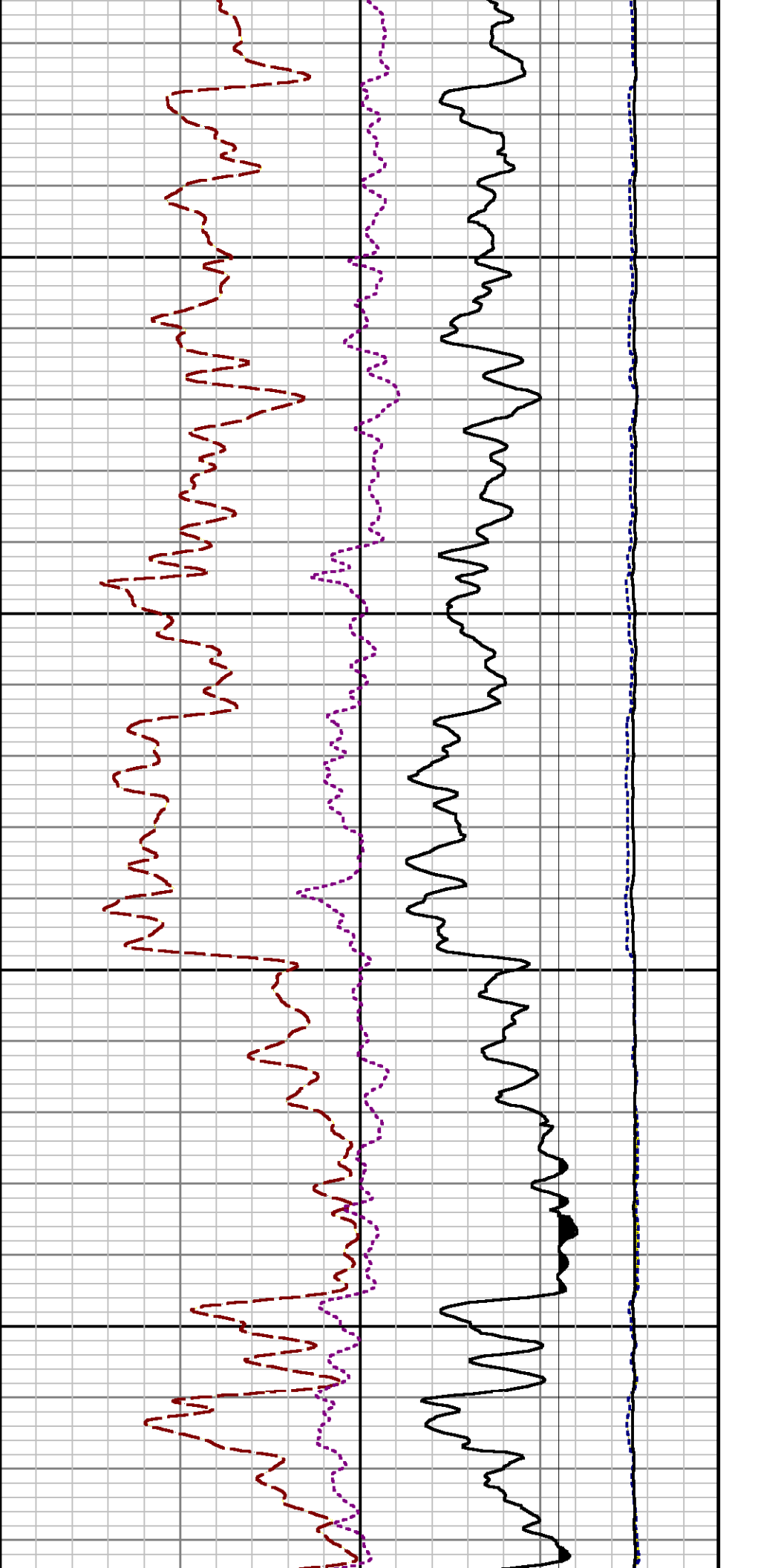
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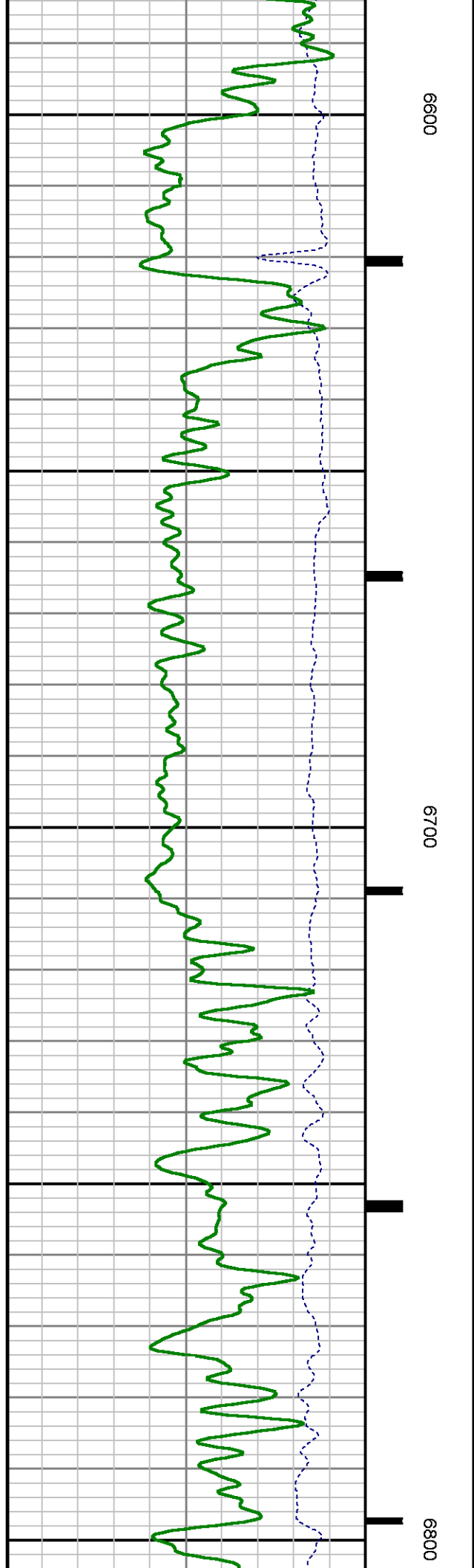
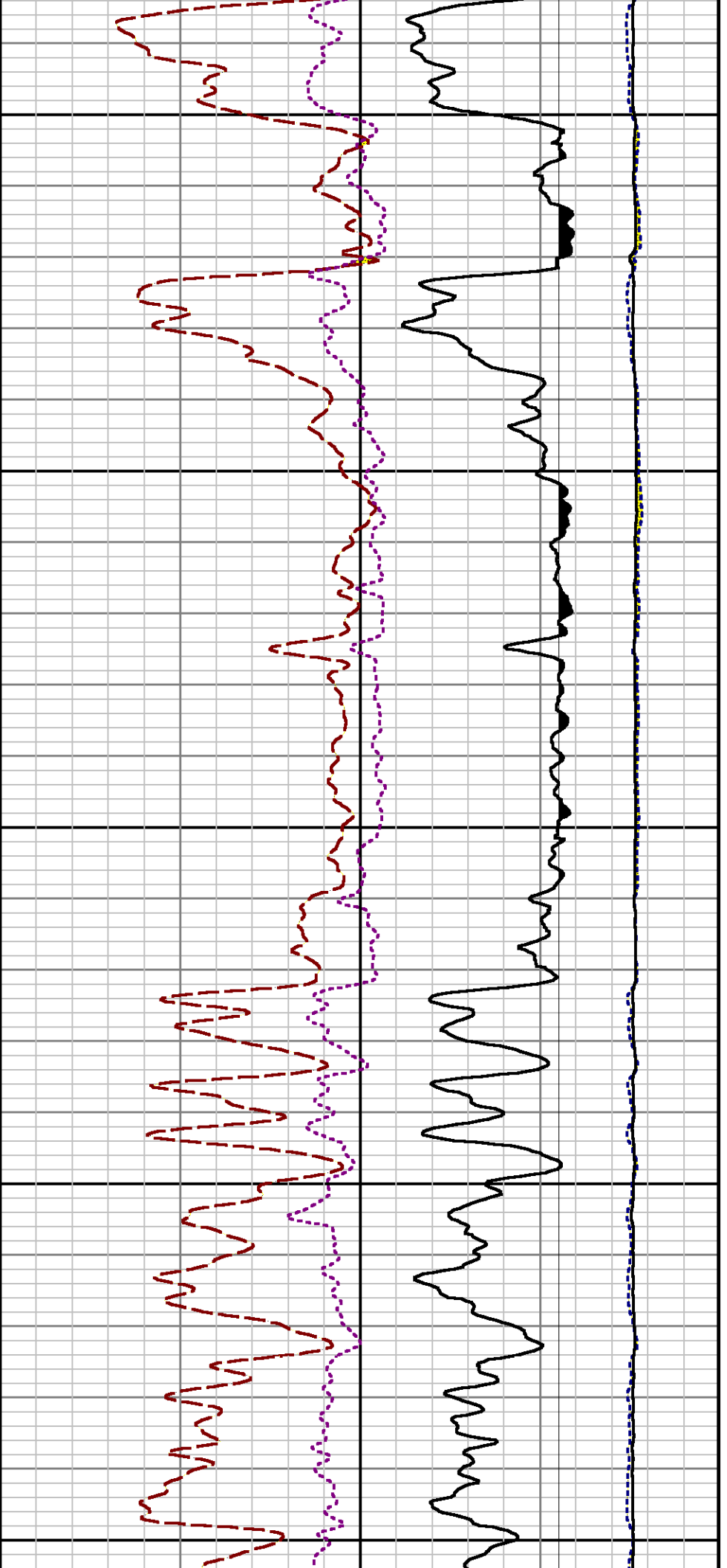
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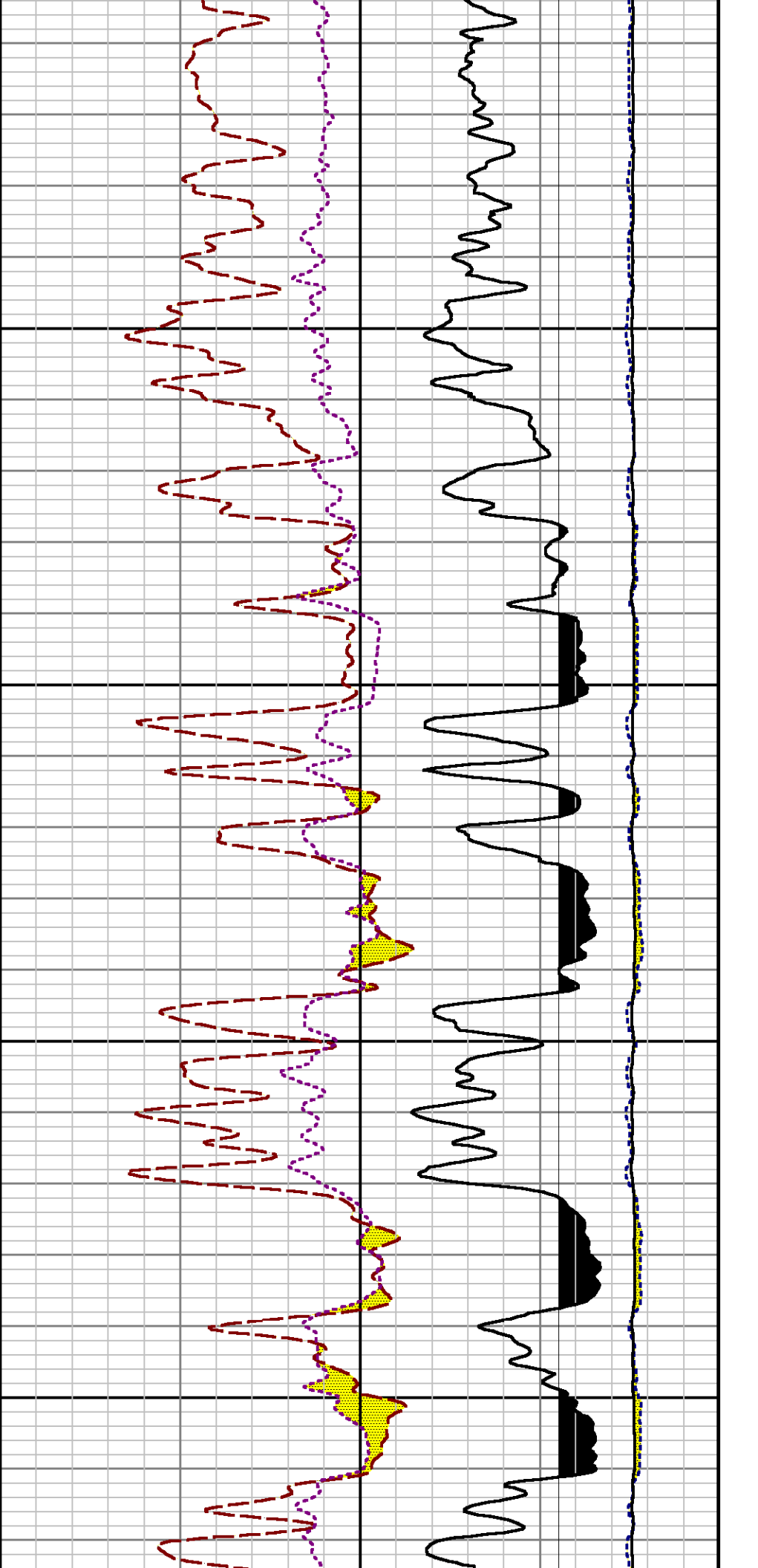
CCL

GR



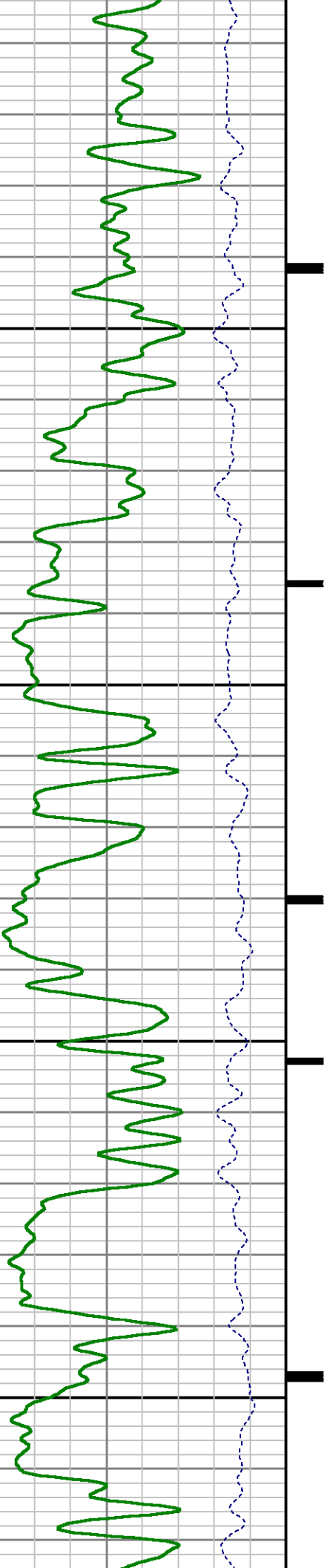


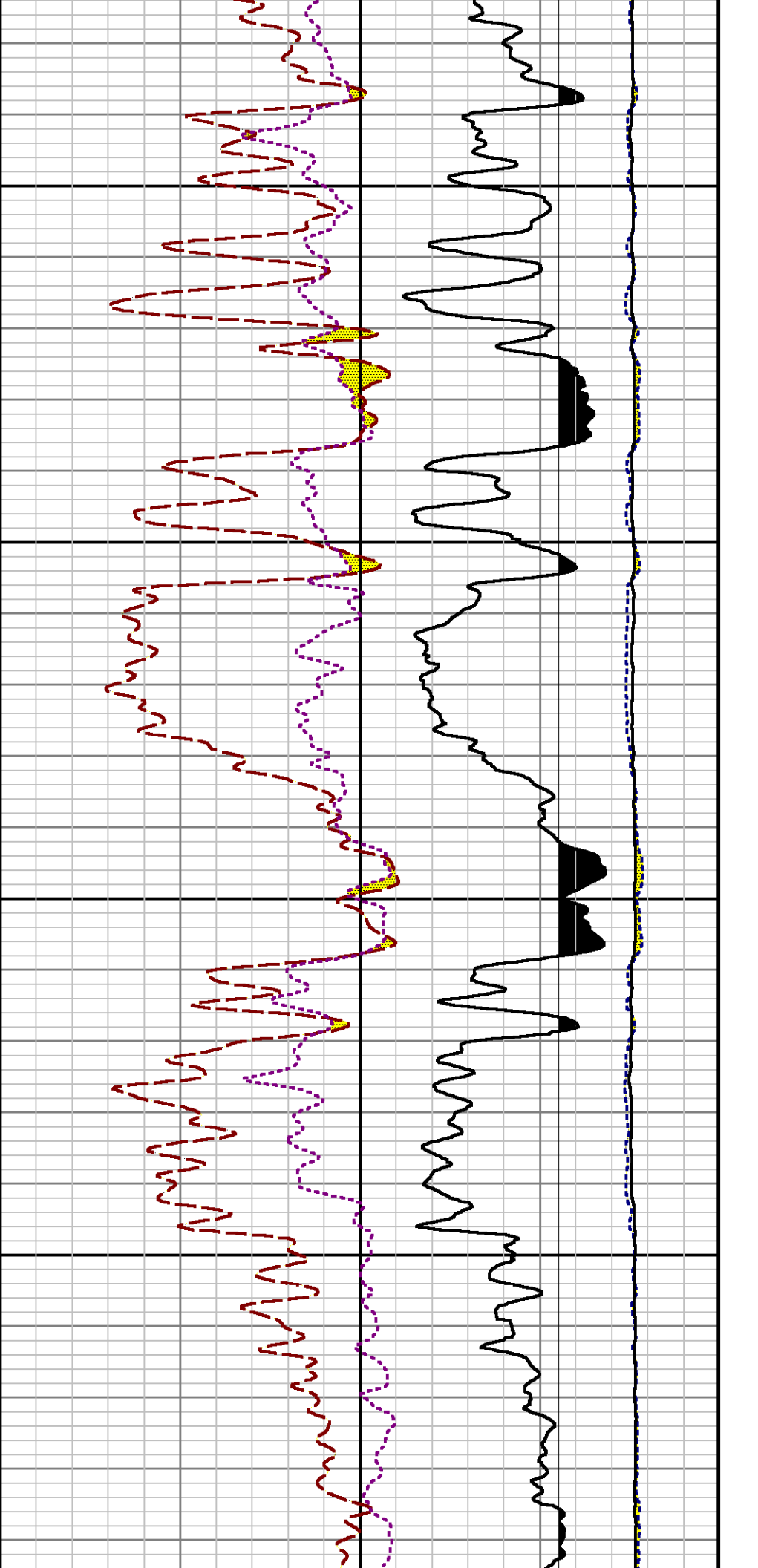




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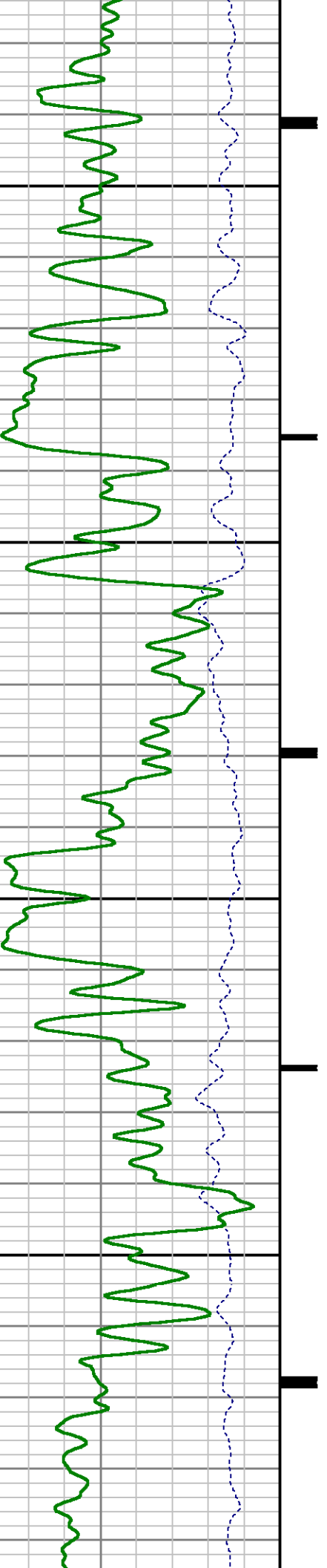
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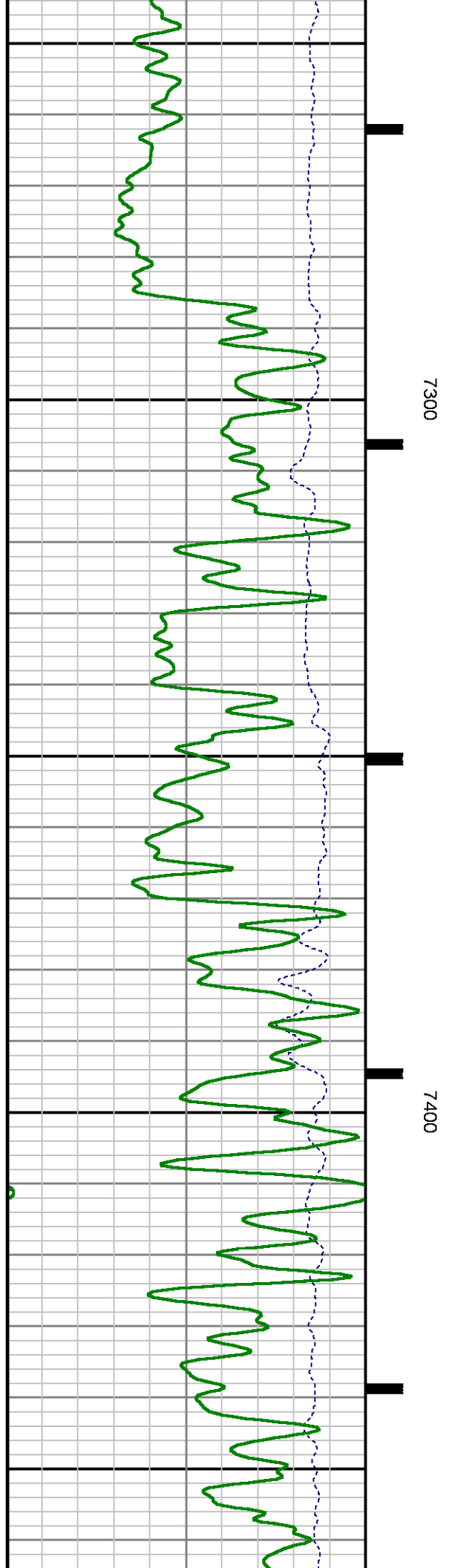
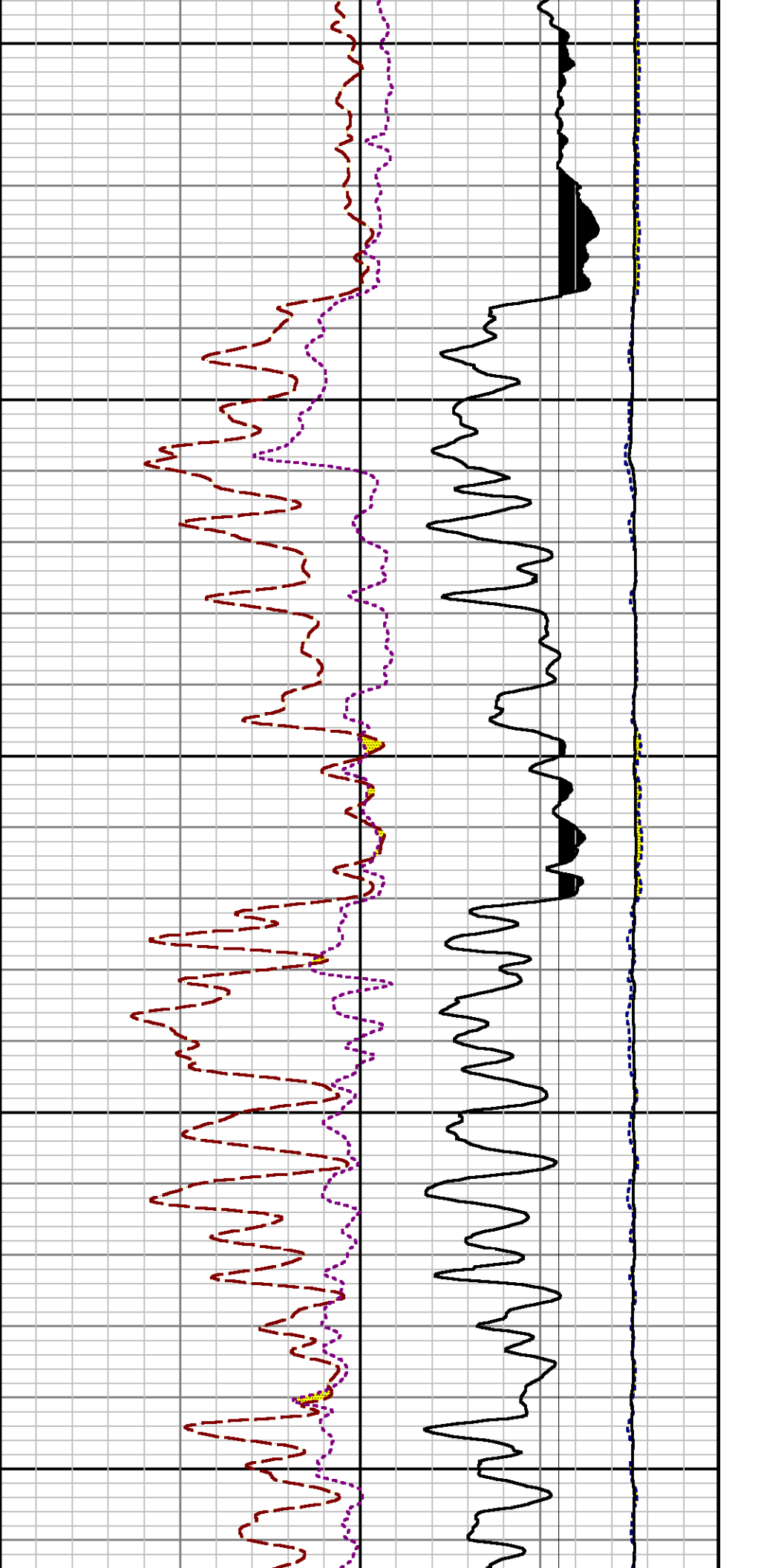


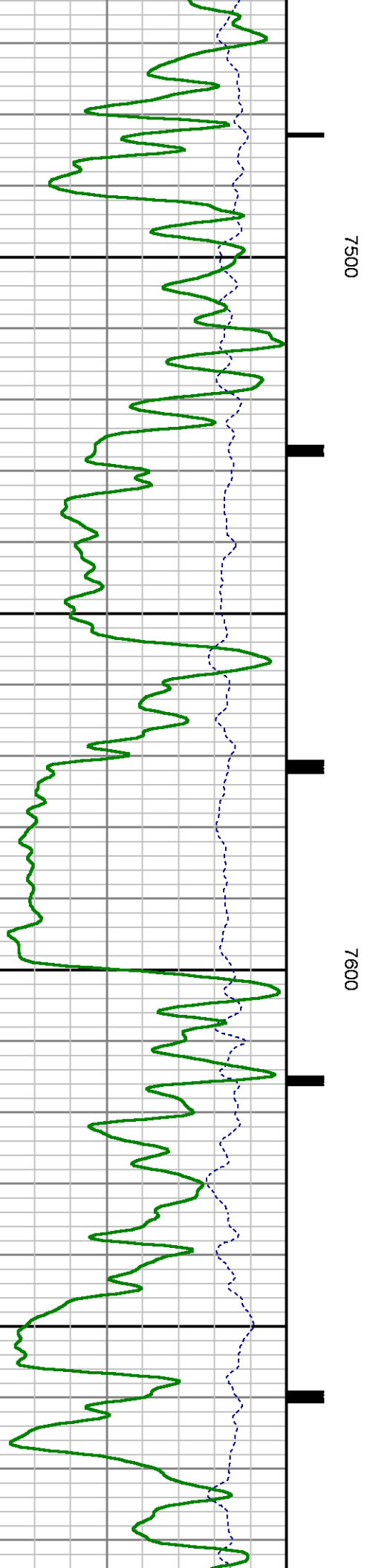
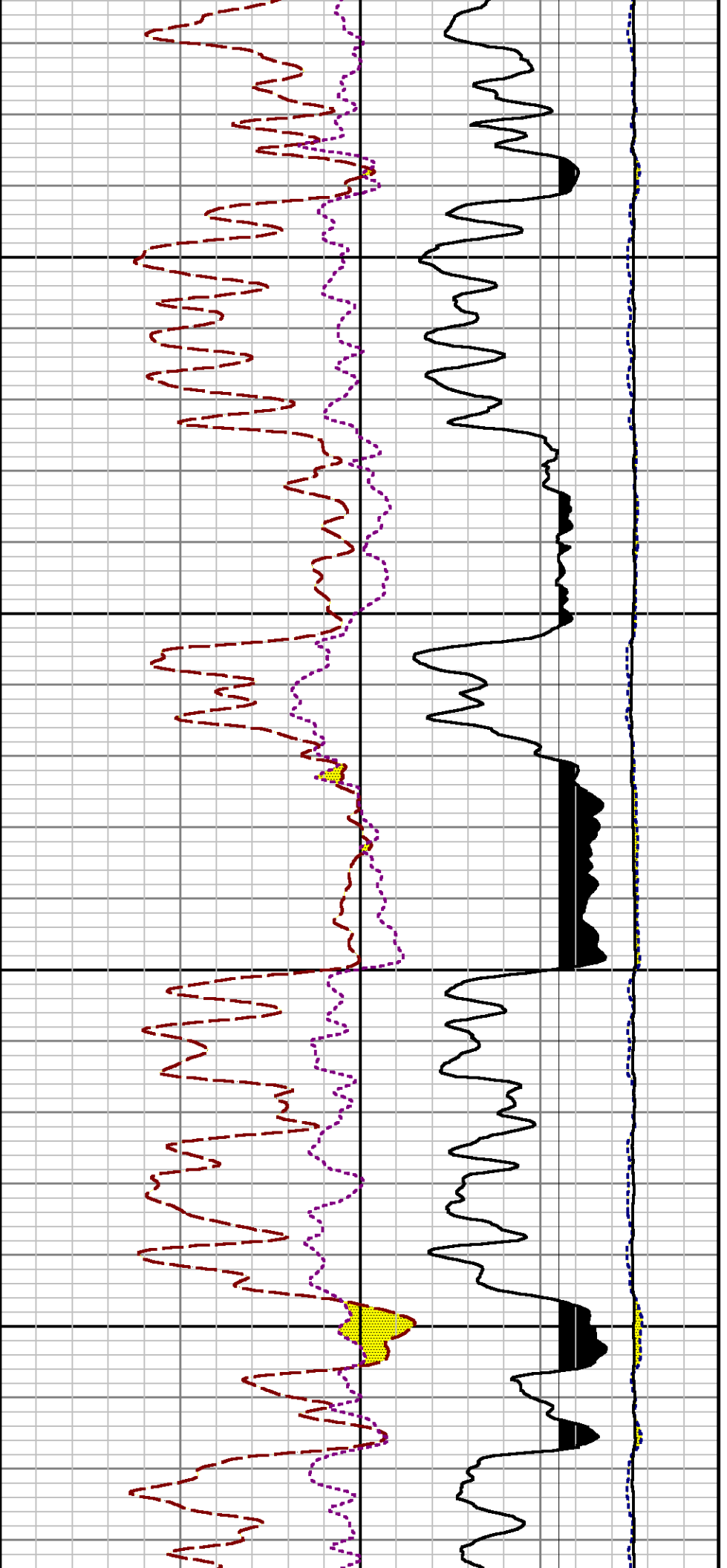


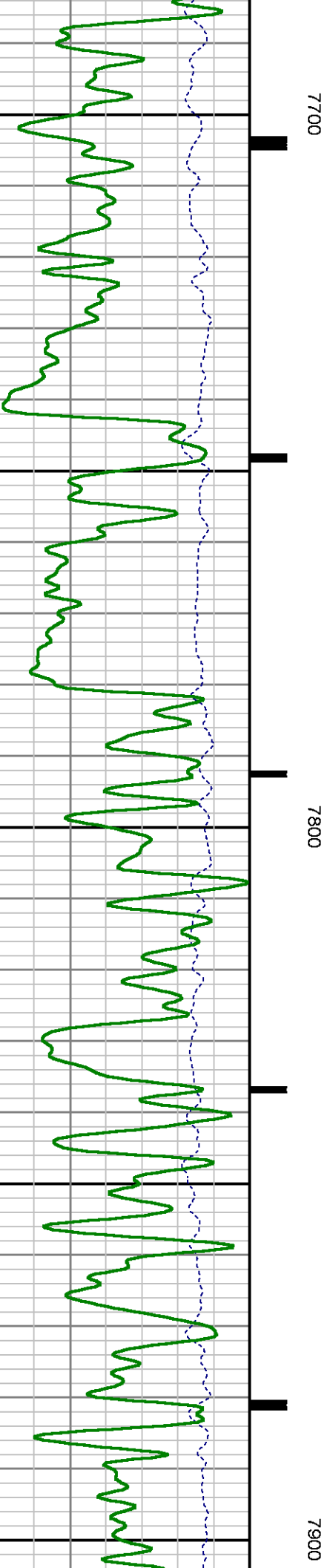
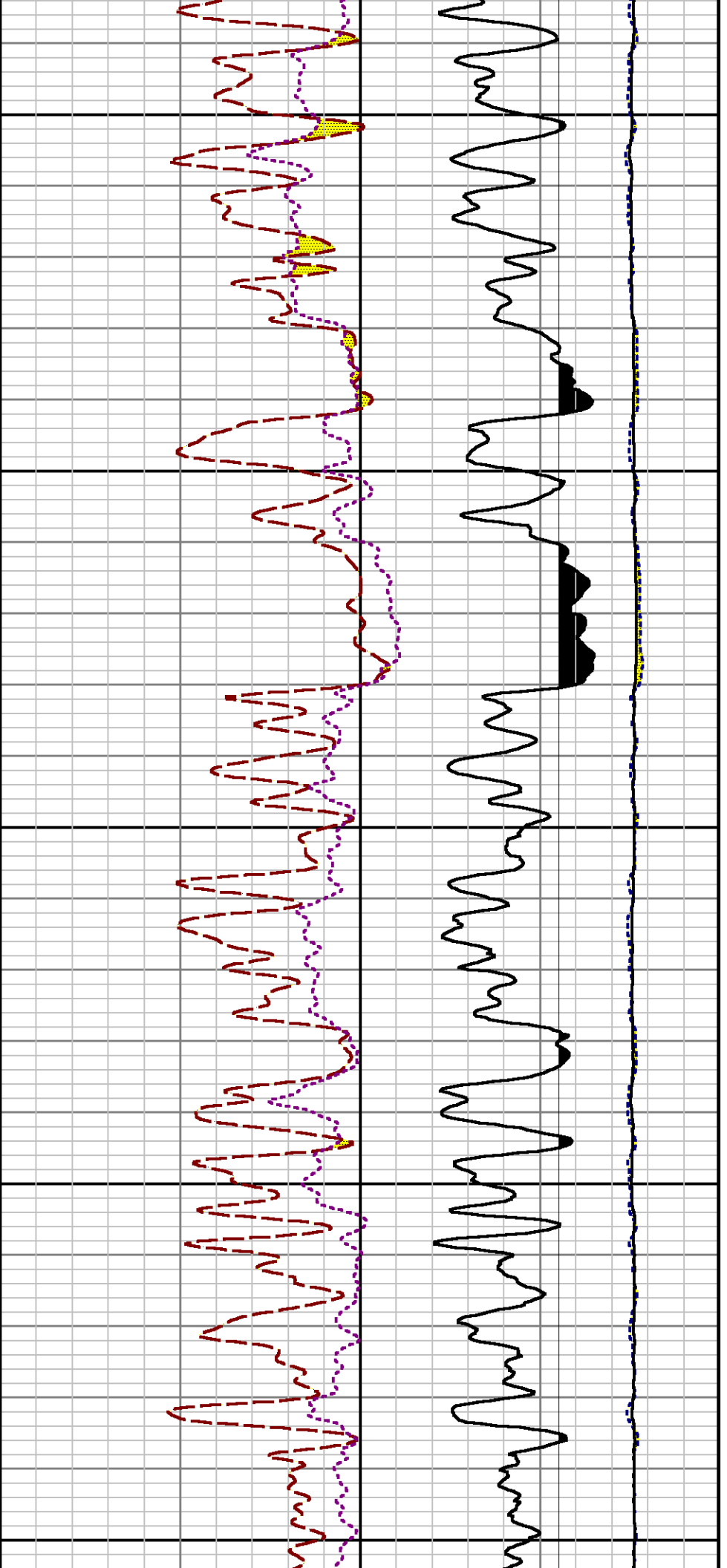
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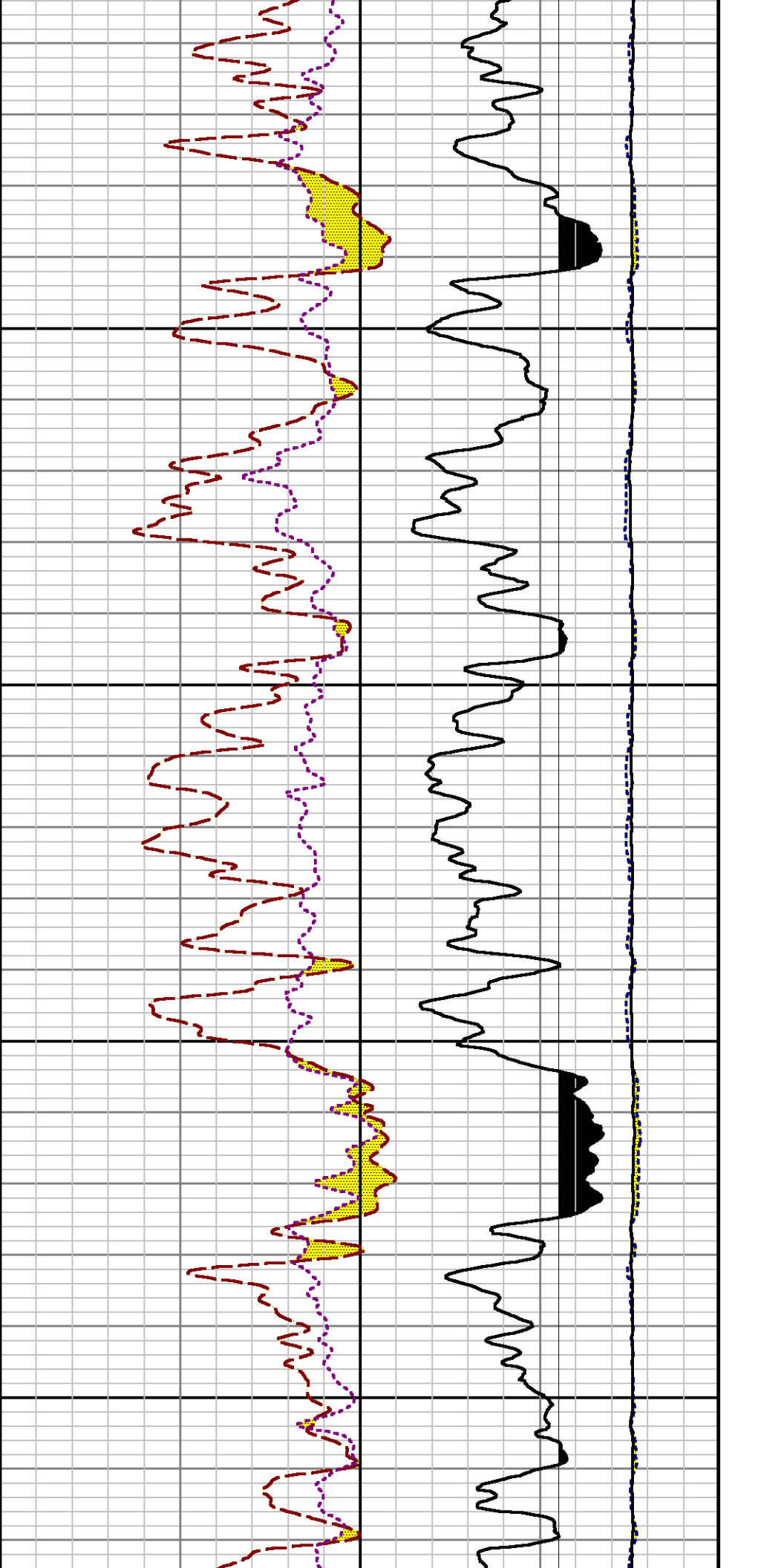
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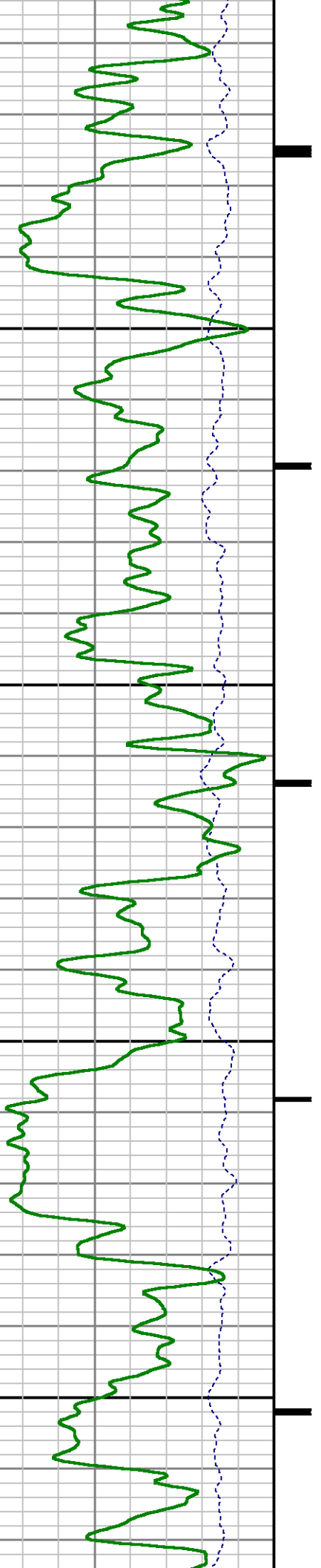


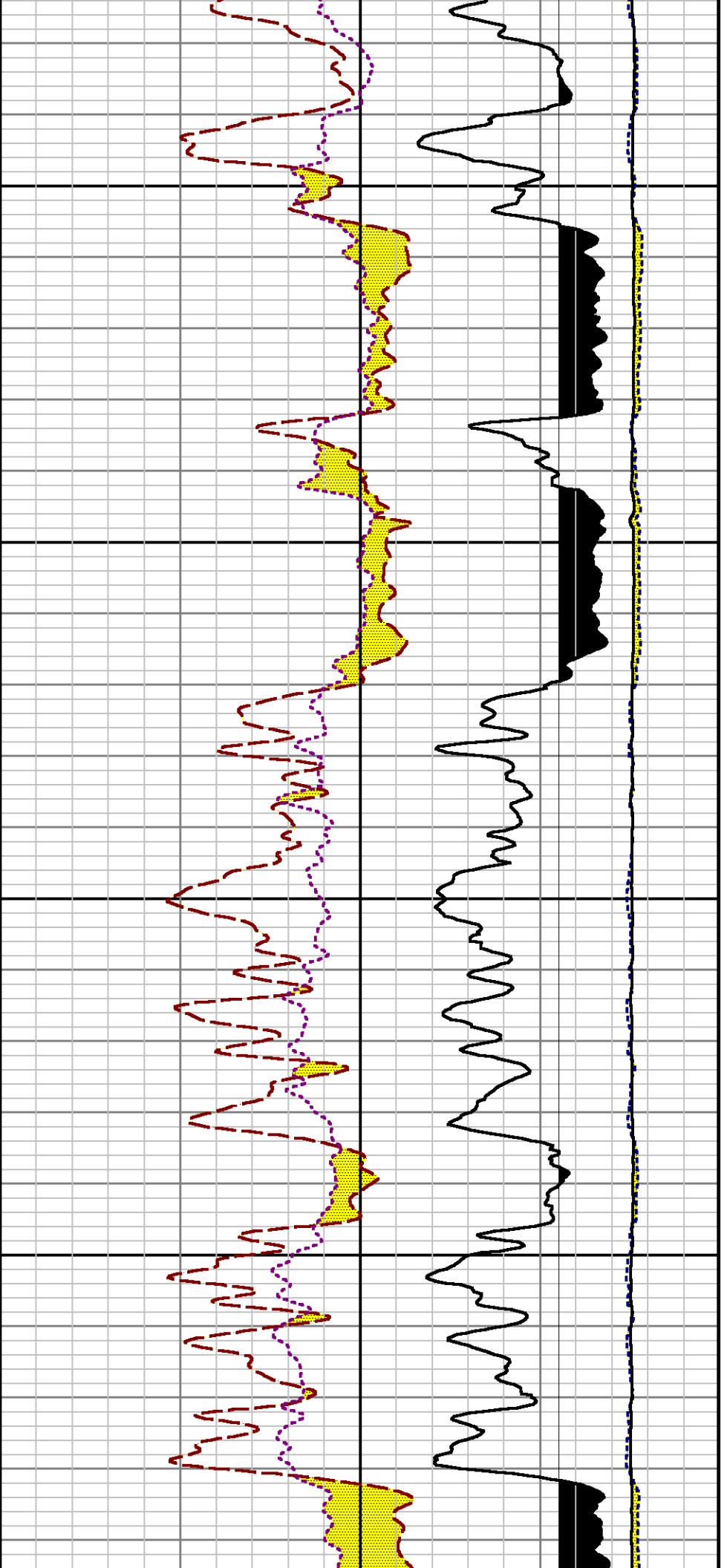




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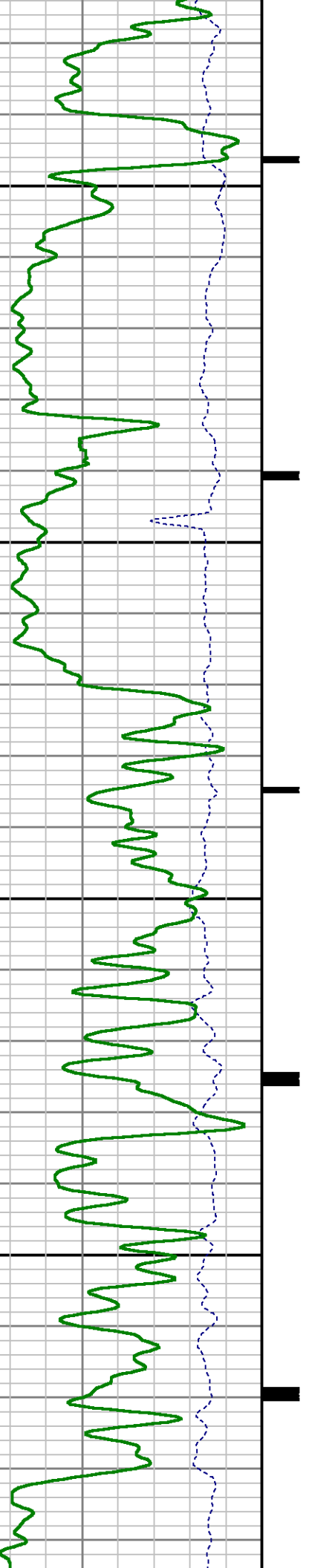
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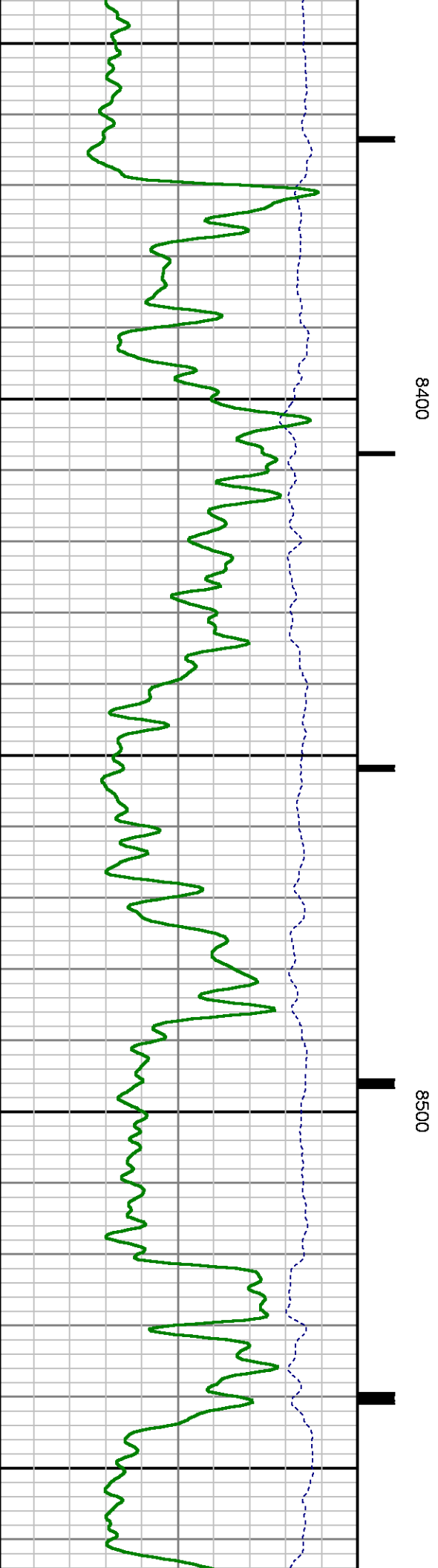
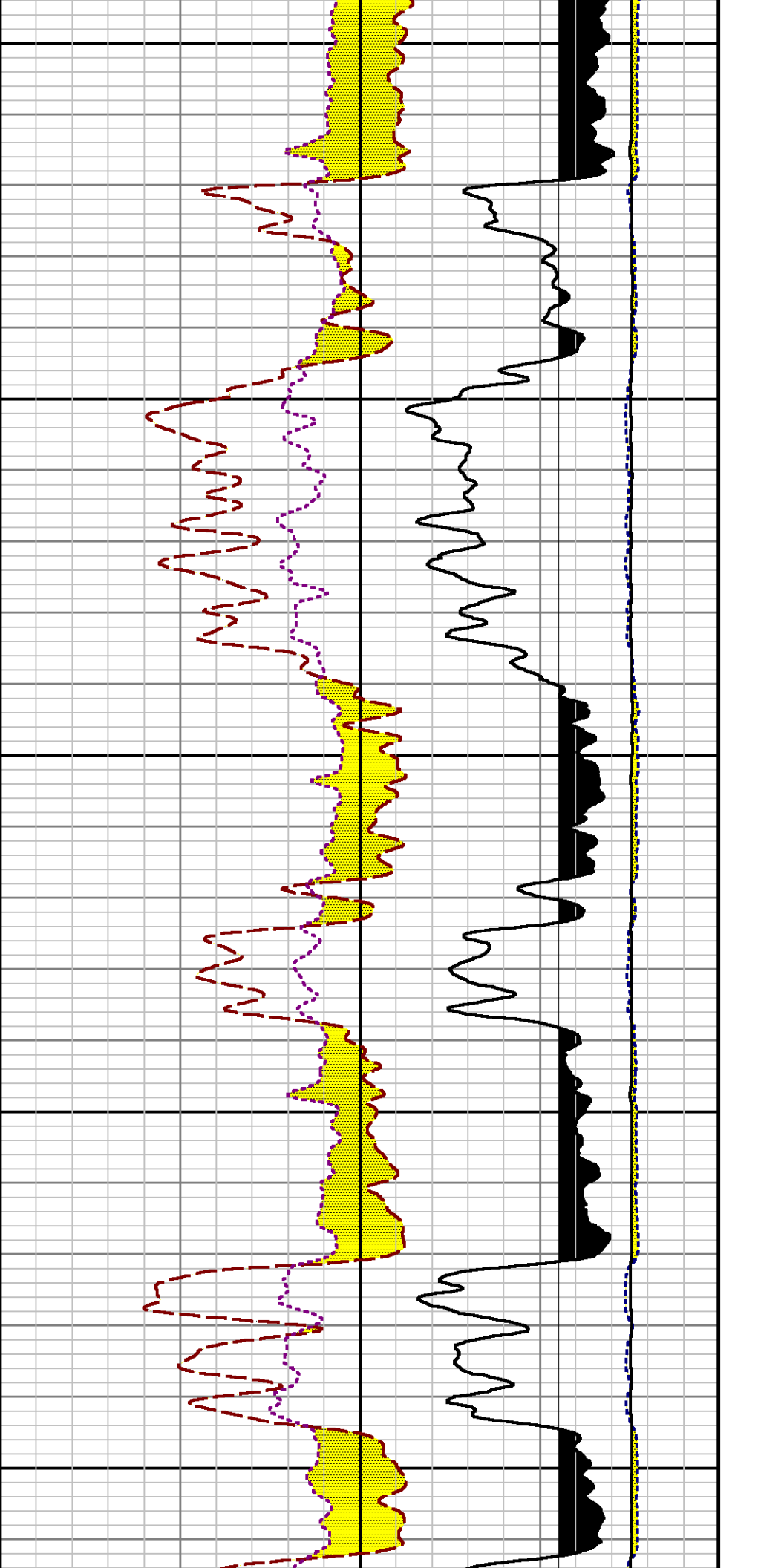


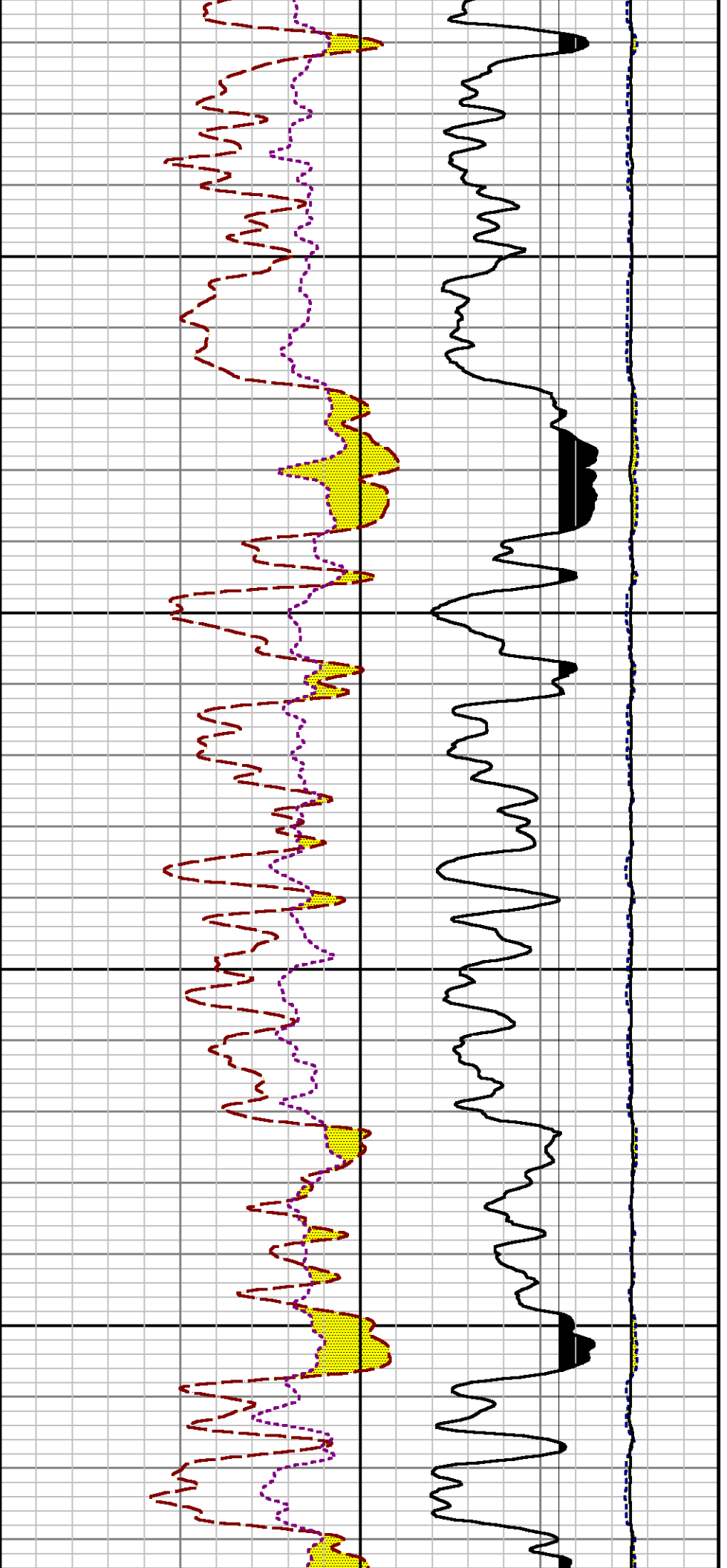


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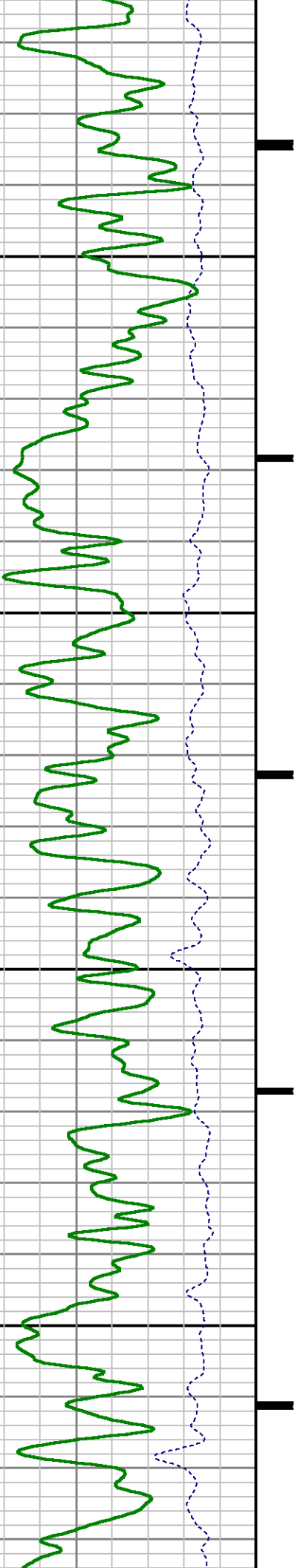


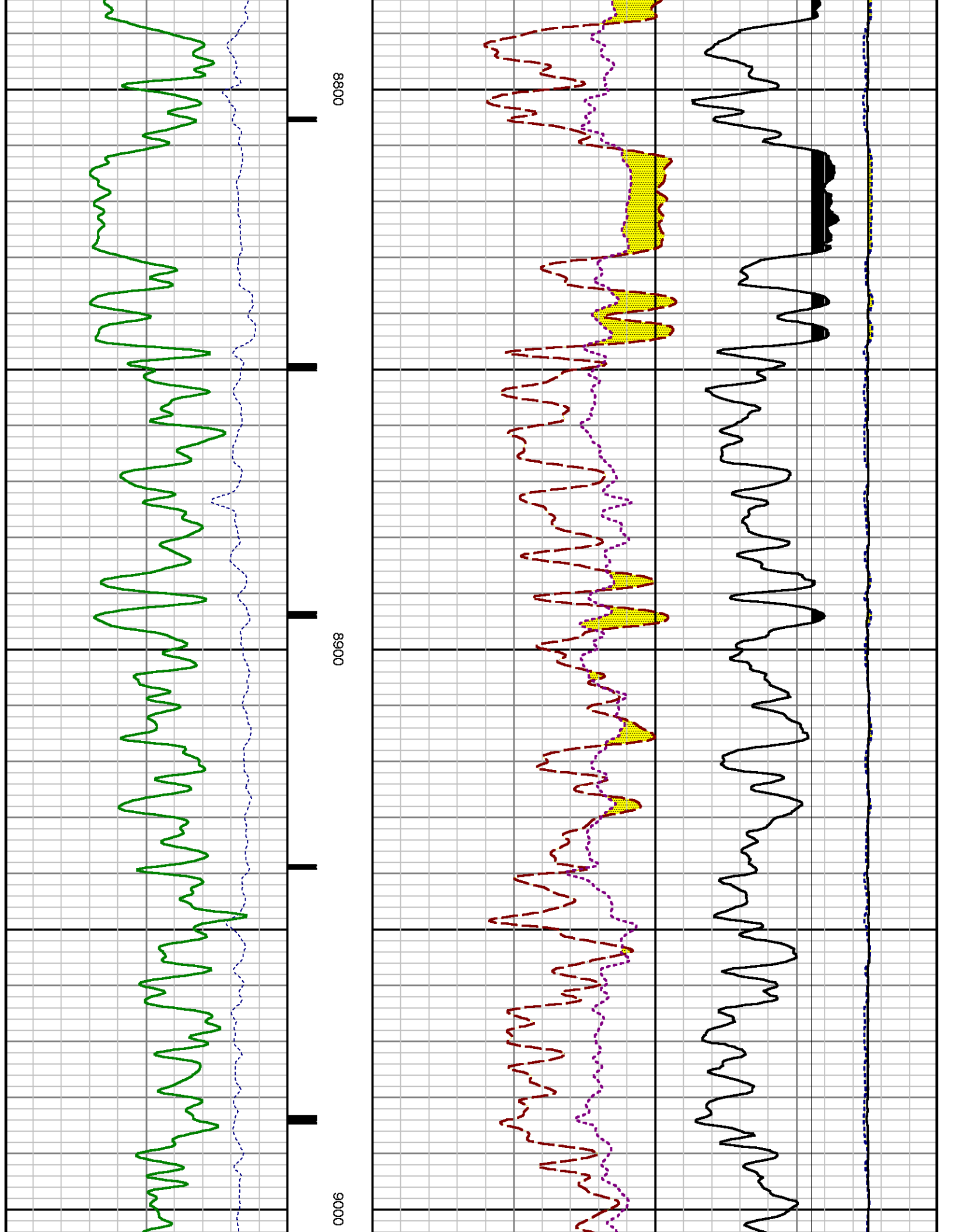


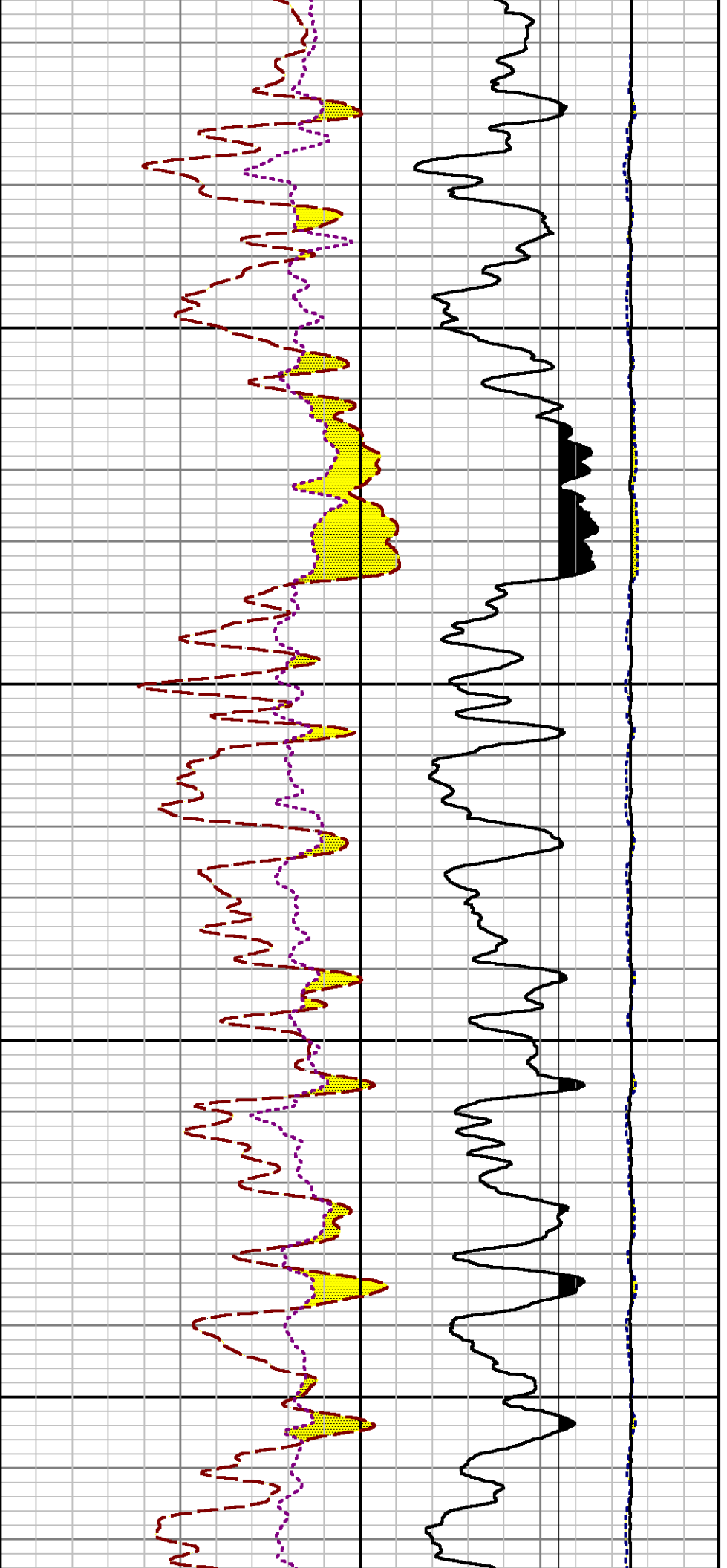


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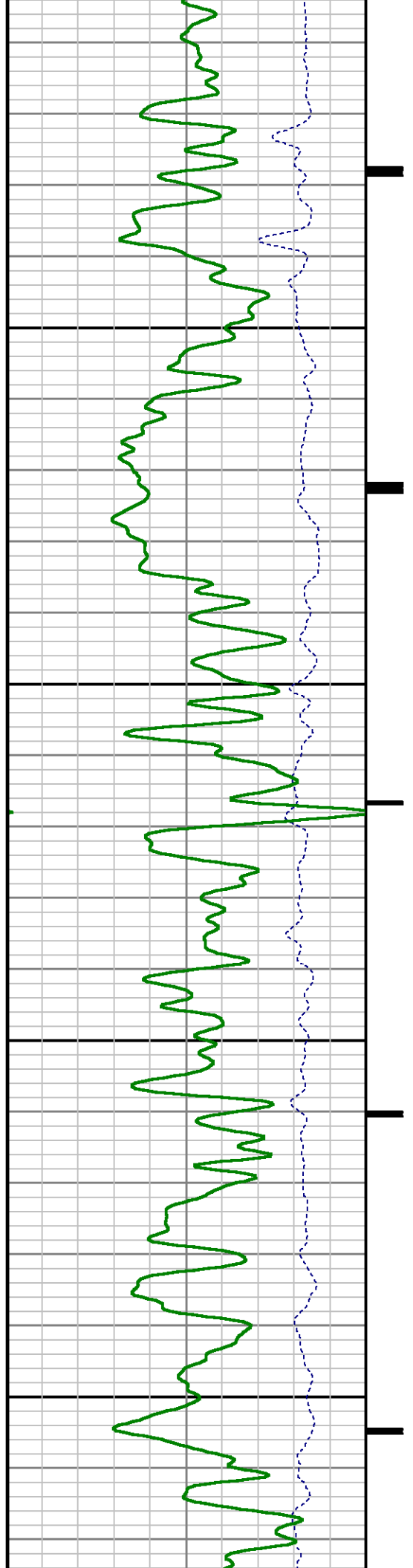


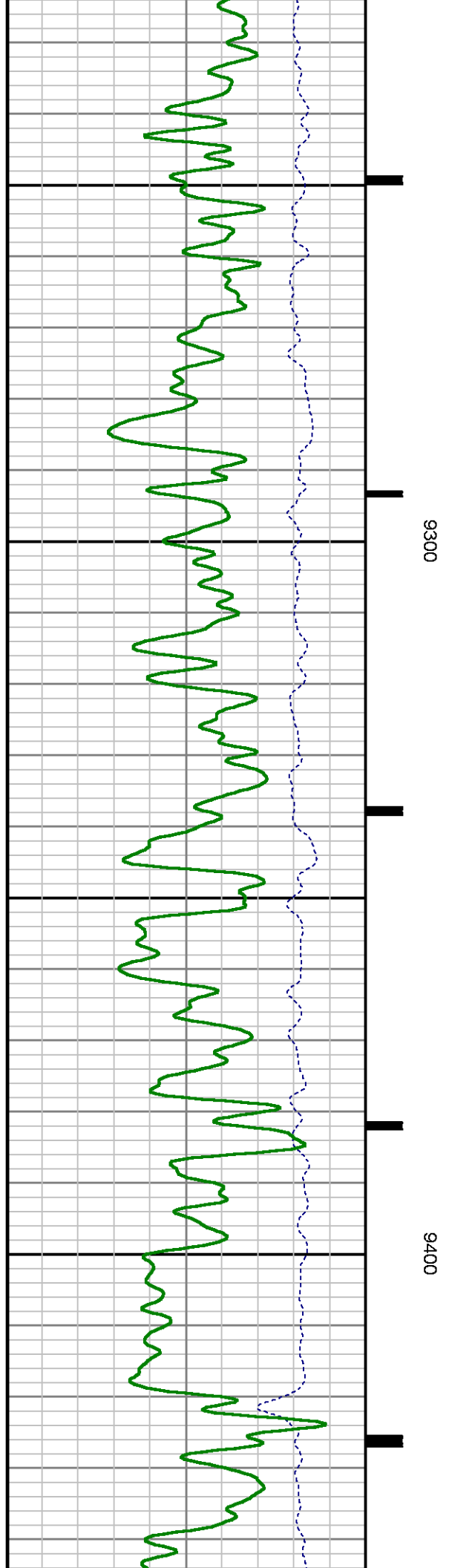
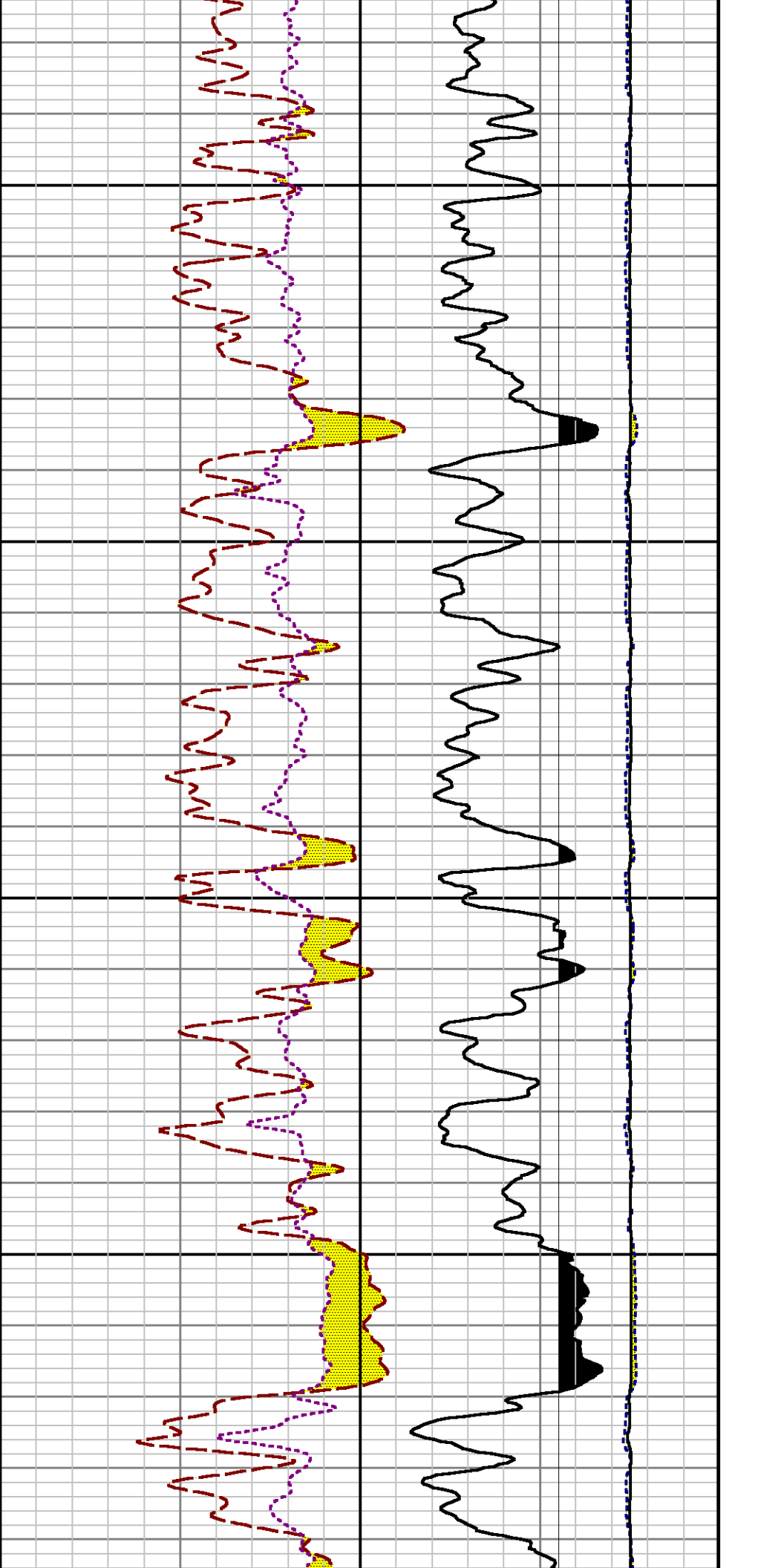


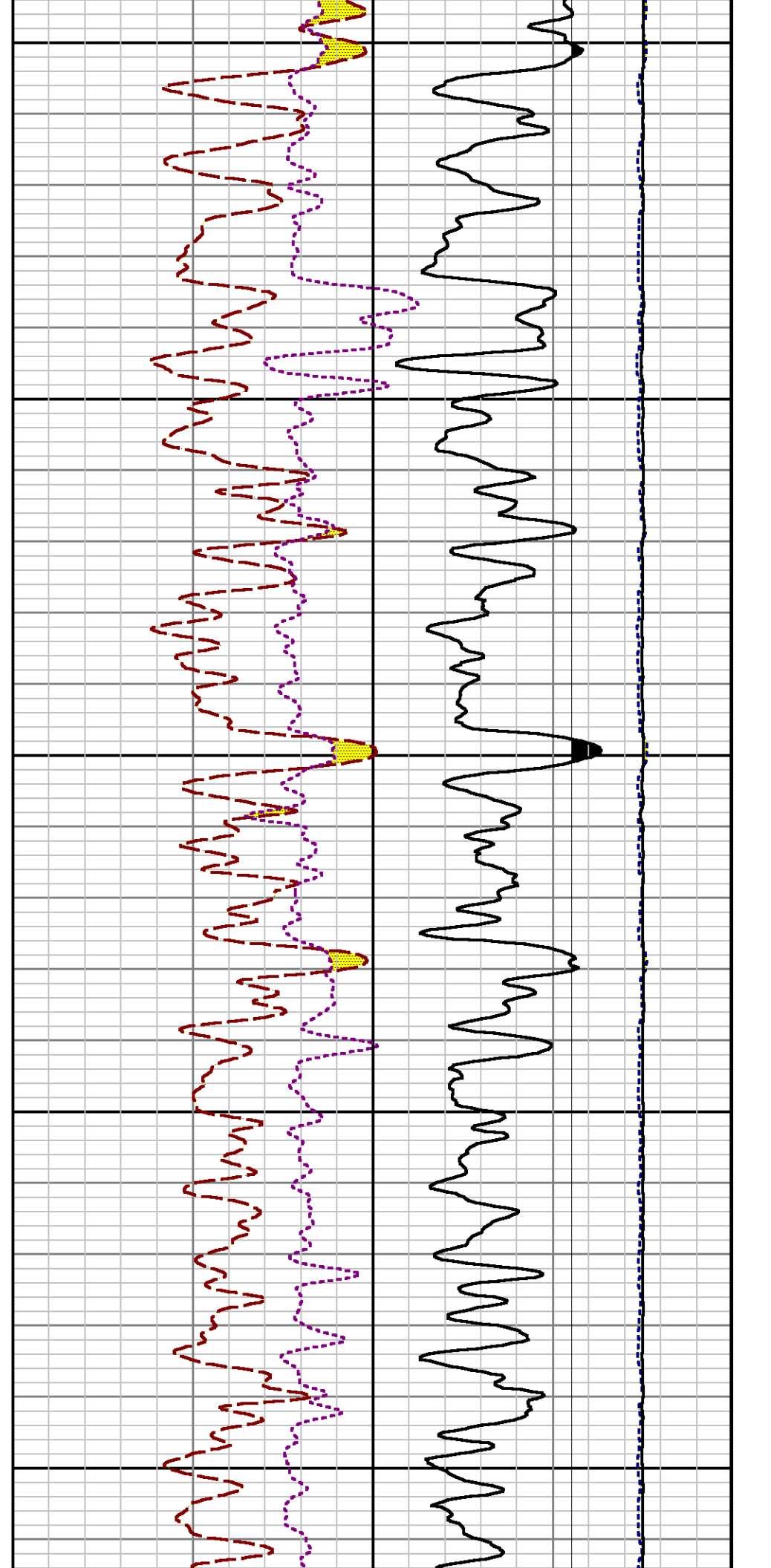
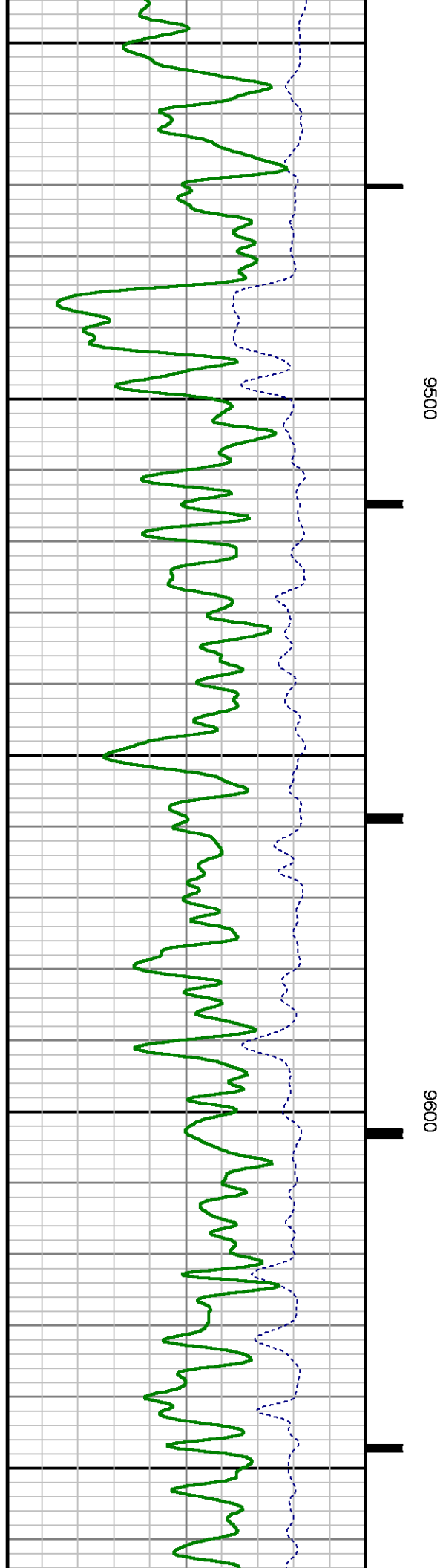


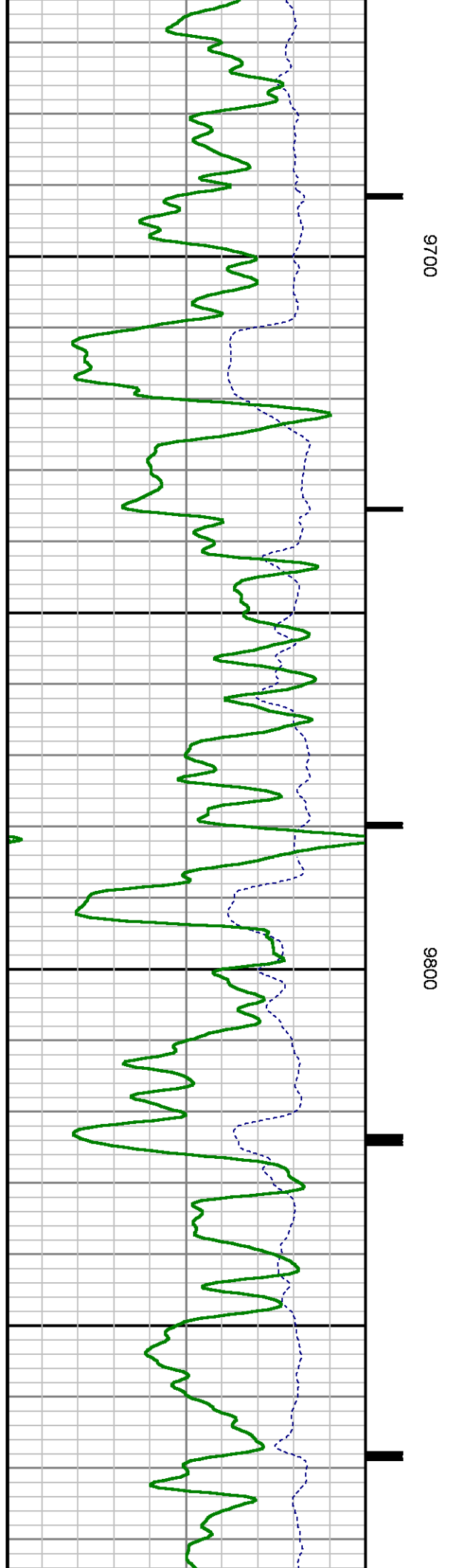
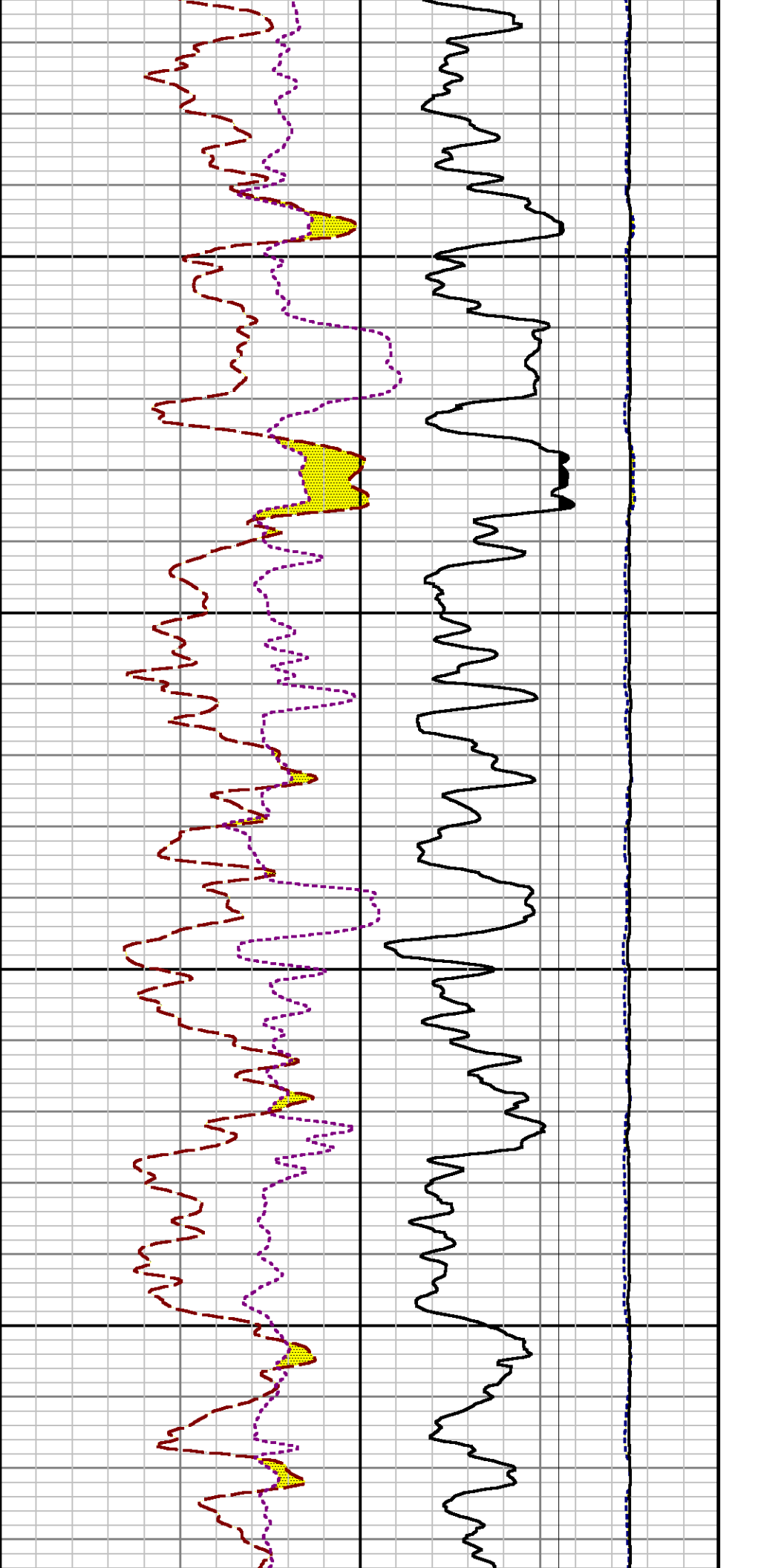
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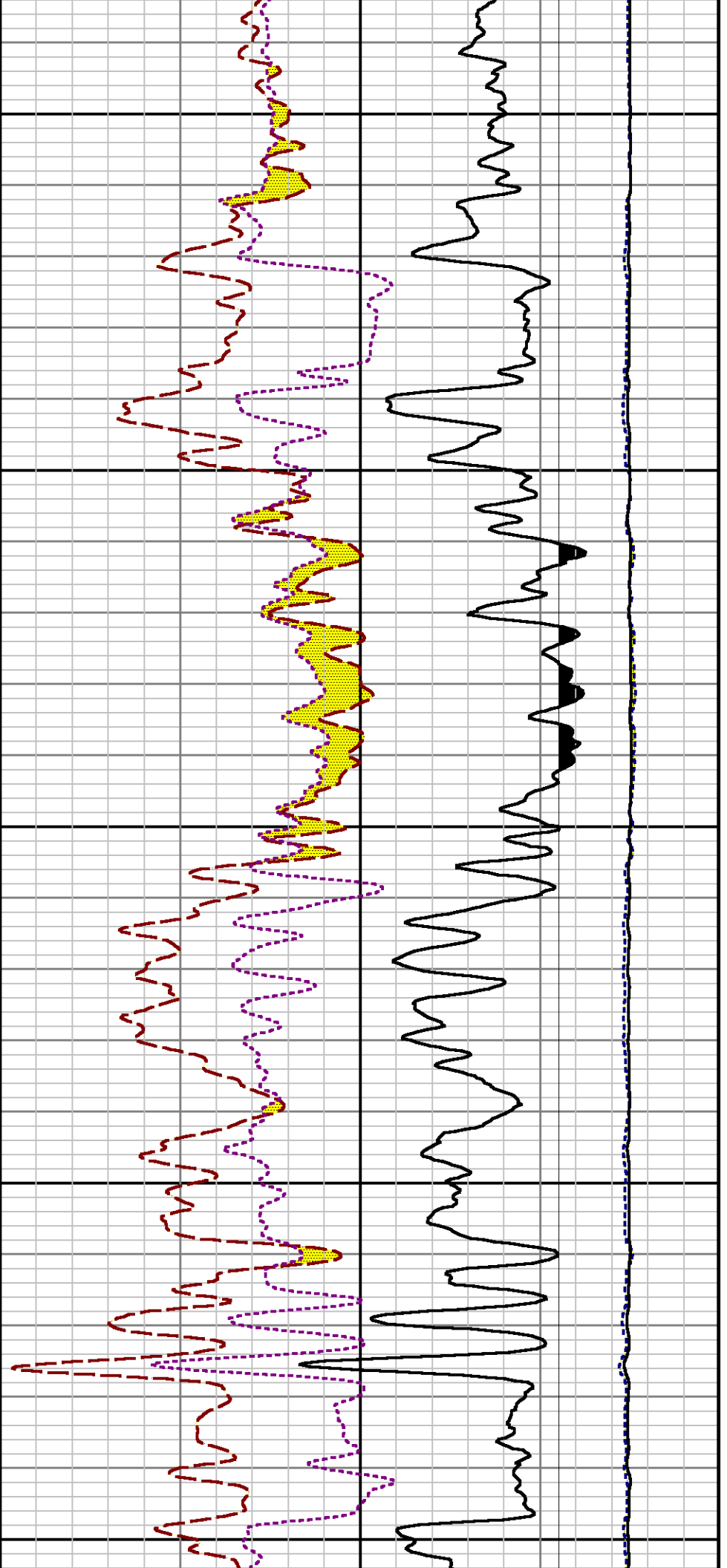
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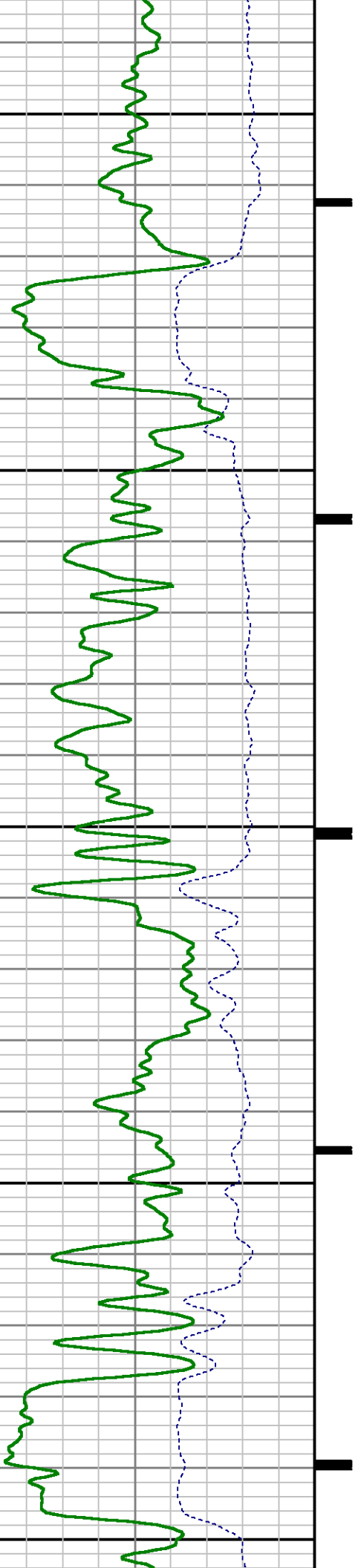


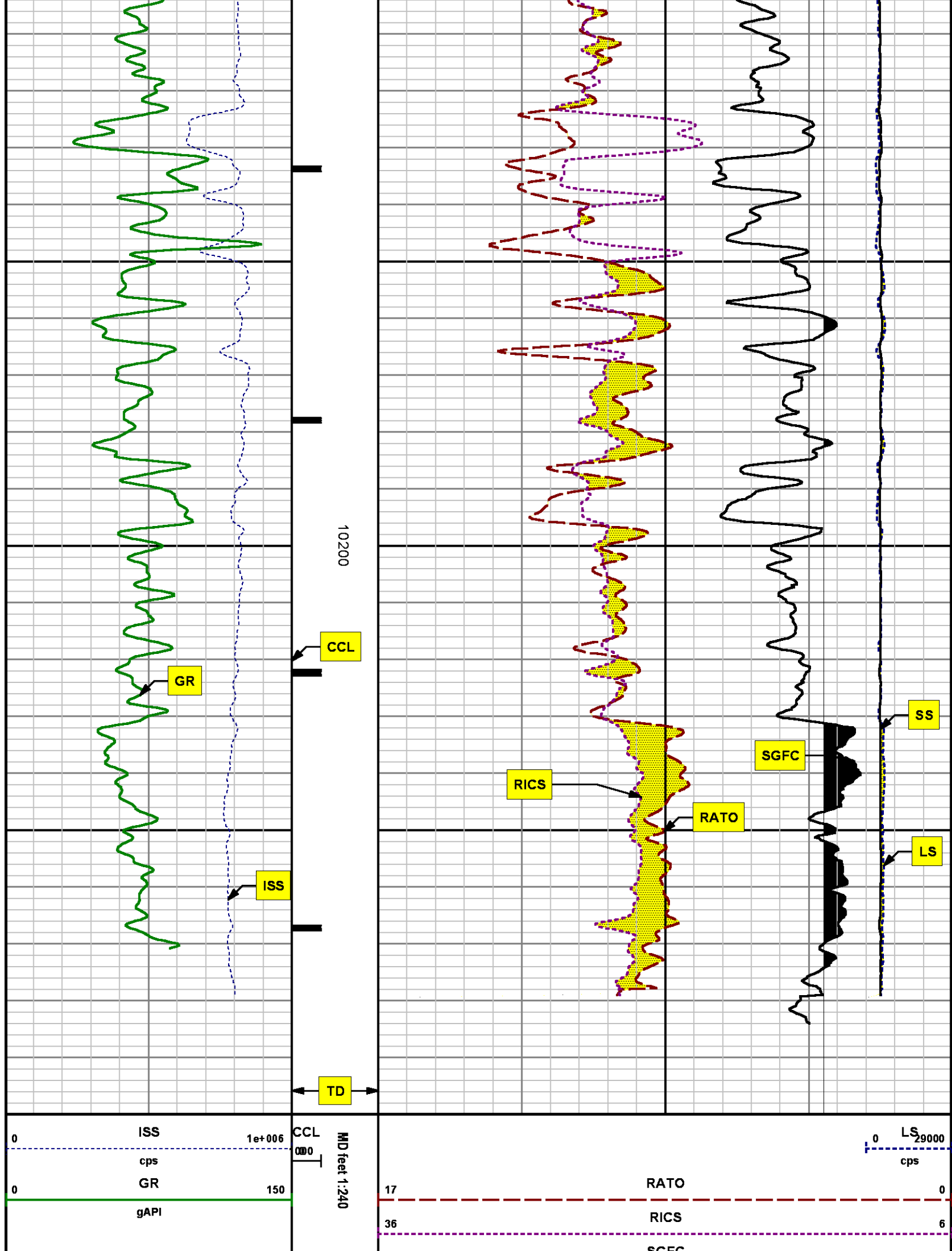


9900

10000

10100





60	SGFC	0
	cu	
		SS
		0 290000
		cps

REPEAT SECTION
PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		9409.750	9732.750
PNC Porosity	Borehole Size	8.750	inch	9409.750	9732.750
PNC Porosity	Casing Size	4.500	inch	9409.750	9732.750
PNC Porosity	Gas Filled	Non Gas Filled		9409.750	9732.750
PNC Porosity	Matrix	Sandstone		9409.750	9732.750
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	9409.750	9732.750

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

8281XA

-12.041

SDL2 SGA2 SGB2 SGF2 SGK2 SGL2
 STA2 ASPEC2 ILSC ILSN WDH2 RICLC
 CLSR ILSR LSR RICLR
 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 WDH1 RICSC CSSR G1R
 G2R ISSR SSR SS2R RATOR RATO13R
 RBORR RICSR RINR RIN13R RONE13 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

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

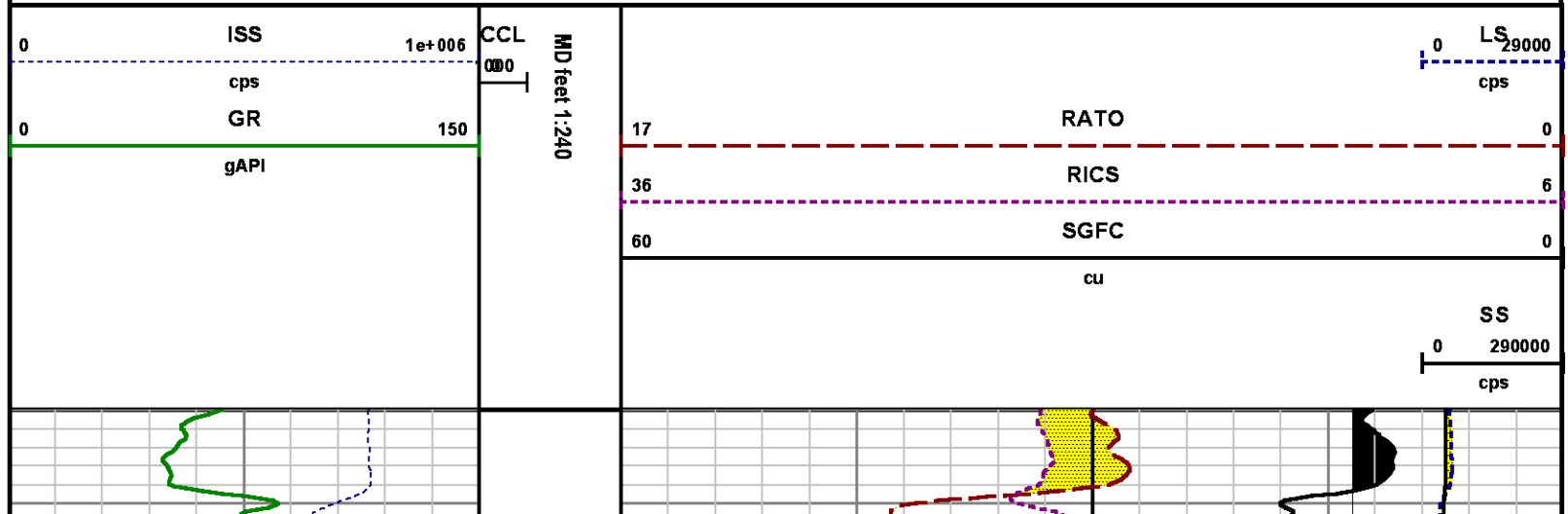
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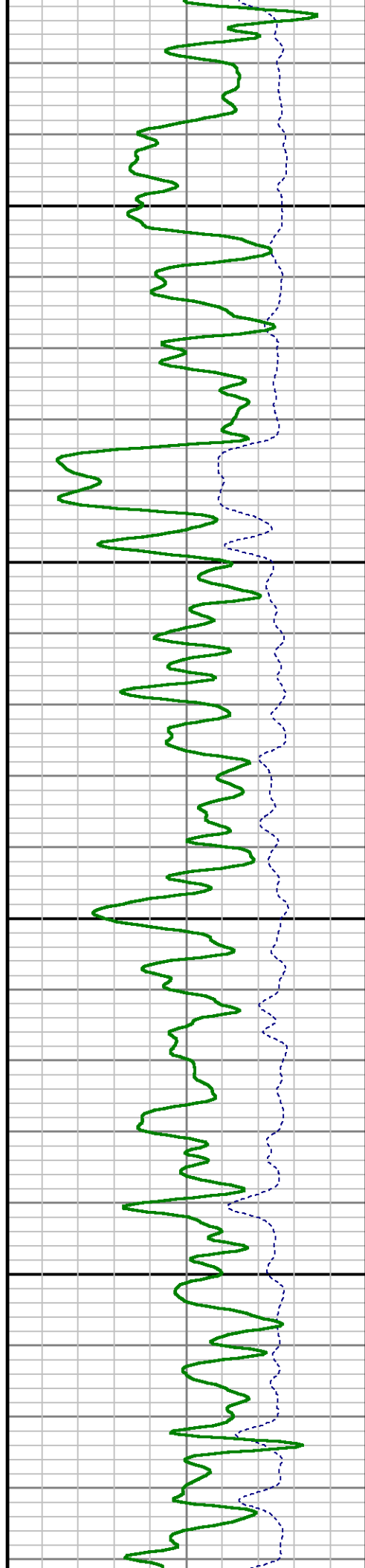
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Mode : PlotMgr 5.4.504

Interval : 9410.00 - 9738.00 feet UP

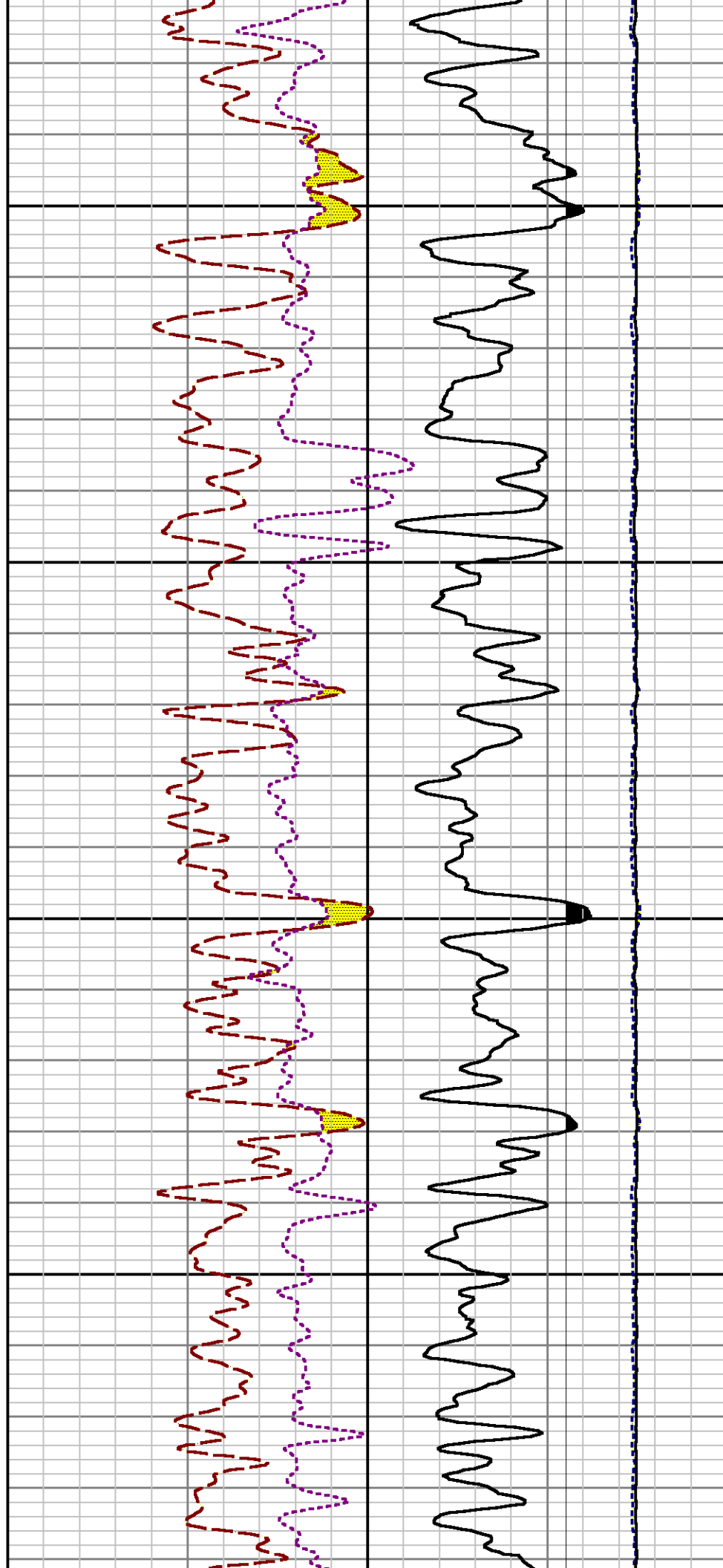
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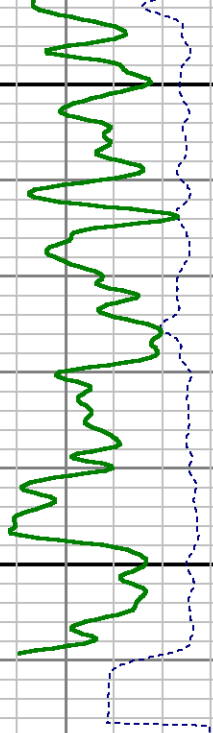




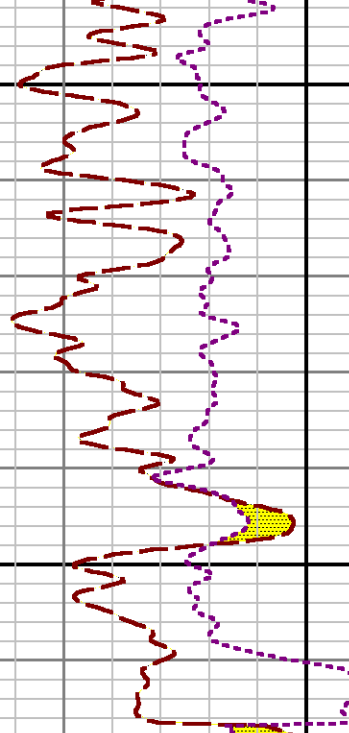
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9700



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0 GR 150
gAPI

CCL
MD feet 1:240

0 LS 29000
cps
17 RATO 0
36 RICS 6
60 SGFC 0
cu

SS
0 290000
cps

CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\38515.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Sep 15 07:23:36 2014 TOOL SERIES: 2812LA ASSET: 385 SEQ: 15

Calibrator # Background Calibrator On Multiplicative Background Calibrator On Differential

Calibrator #	Background	Calibrator On	Multiplicative	Background	Calibrator On	Differential
	[cps]	[cps]		[api]	[api]	[api]
S2K WA612	85.63	306.18	0.952	81.54	291.54	210.00

Verification File:

C:\case\calver\GR\38515.VP

PRIMARY VERIFICATION						
DATE/TIME PERFORMED: Mon Sep 15 07:27:22 2014			TOOL SERIES: 2812LA		ASSET: 385	SEQ: 15
Calibrator #	Background	Calibrator On	Multiplicative	Background	Calibrator On	Differential
	[cps]	[cps]		[api]	[api]	[api]
S2K WA612	85.13	310.48	0.952	81.06	295.63	214.57

PNC

Calibration File:

C:\case\calver\PNC\25117.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Sep 17 13:32:09 2014

TOOL SERIES: 8281XA

ASSET: 251

SEQ: 17

Calibrator #	Source #
2437XB 112674	8281AA 10220684

	ISS	Mtr VIts (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	816811	123.00	2297.00	2292.00	2306.00	108.96	7.00	0.9925
Interpolated	1300000	142.22	2278.61	2286.35	2301.44			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	816811	7824.32	1325.50	169.22	25.76	0.14	24.27	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	816811	169831.69	26829.93	88232.01	31440.33	8315.89	53438.83	13288.97
Fit Quality %		0.64	0.57	0.66	0.62	0.64	0.62	0.67

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	816811	1.43	4.81	30.45	15.28	10.61	3.78	4.02
		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 %		0.05	0.09	0.07	0.08	0.03	0.02	0.05
Reduced	1370106	1.43	4.83	30.56	15.35	10.60	3.78	4.02
		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 8250EA
Mnemonic PCM
Diameter 1.70"
Weight 18.00 lb
Length 3.86'
Temp Rating 350.00 °F

TELEMETRY / CCL

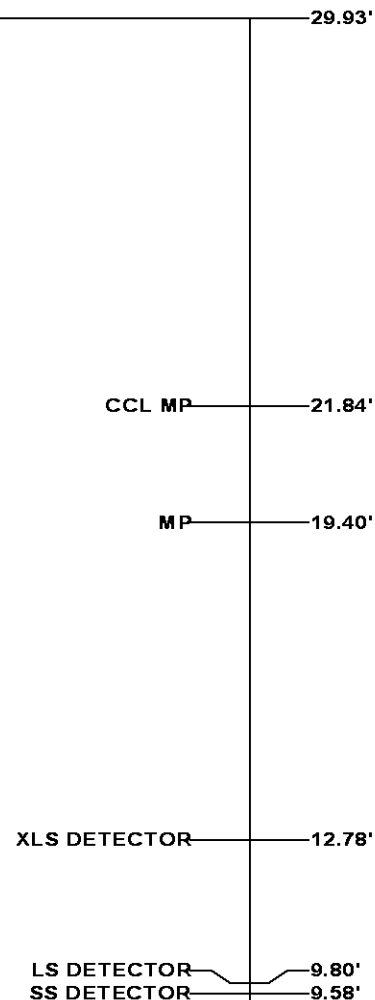
Series 8248EA
Mnemonic PCM
Diameter 1.70"
Weight 20.00 lb
Length 4.46'
Measure Point 1.00' CCL MP
Temp Rating 350.00 °F
Press Rating 15000.00 PSI

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



0.00'

Total Length: 29.93'
Total Weight: Not Available
Max Diameter: 0' 1.70"



Baker Atlas

CASE

Company	WPX ENERGY		
Well	FEDERAL NER 523-32		
Field	RULISON		
County	GARFIELD	State	COLORADO

File No:	CH090703
API No:	05045217760000

Location		Elevations	
SHL: 113' FNL x 2571' FWL SEC 5 7S 93W		KB 7629 ft	32 6S 93W
BHL: 1756' FSL x 1906' FWL SEC 32 6S 93		DF	RU 23-5 PAD
		GL 7603 ft	NABORS 576
SEC 32	TWP 6S	RGE 93W	