



Baker Atlas

RESERVOIR PERFORMANCE MONITOR

File No: CH084708	Company Well	WPX ENERGY SAVAGE RWF 321-25
API No: 05045219700000	Field County	RULISON GARFIELD
	State CO	
25 2S 94W RWf 22-25 PAD CYCLONE 17	Location SHL: 2437' FNL & 1436' FWL BHL: 132' FNL & 2005' FWL SEC 25 TWP 6S RGE 94W	Other Services BOND LOG
Permanent Datum Log Measured From Drill Measured From	GL KB KB Elevation 21 ft Above P. D.	Elevations KB 6058 ft DF GL 6057 ft

Date	20/APR/14	
Run	ONE	
Service Order	US625369	
Depth Driller	9183 ft	
Depth Logger	9099 ft	
Bottom Logged Interval	9089 ft	
Top Logged Interval	4992 ft	
Time Started	11:00	
Time Finished	17:00	
Operator Rig Time	6 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	71 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	235 degF	
Reference Log	BAKER HUGHES BOND LOG	
Reference Log Date	20/APR/14	
Equipment No.	4271	GRAND JCT.
Recorded By	NEWELL	
Witnessed By	COLE APPLGATE	

- 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	0 ft	1170 ft
8.75 In	1170 ft	9239 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In			0 ft	1170 ft
4.5 In	11.6 lbm/ft	1-80	0 ft	9239 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 4/20/2014 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 11 feet.

Logged In PNC-3D mode.

BHT = 236 °F

SJ = 5636' -5660'

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	10190984	FREE
1	1	RPM	8283PA	10414345	FREE
1	1	RPM	8281FA	10307727	FREE
1	1	TEMP	8255XA	11774568	FREE

MAIN SECTION
PNC 3-D MODE

SPL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		4969.500	9089.750
PNC Porosity	Borehole Size	8.750	inch	4969.500	9089.750
PNC Porosity	Casing Size	4.500	inch	4969.500	9089.750
PNC Porosity	Gas Filled	Non Gas Filled		4969.500	9089.750
PNC Porosity	Matrix	Sandstone		4969.500	9089.750
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	4969.500	9089.750

DEPTH OFFSETS		
(for Acquired Curves)		
SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-26.519	FLTM
8248ED	-24.519	CCL CHV
2812LA	21.250	GR

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	RAT023
		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	RTW023	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	RAT0	RAT013
		RBOR	RGN1	RICS	RIN	RONE	RPOR
		RTW0	RIN13	RONE13	RTW013	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	HOC	FE2XC	ISSC	RINC
		ISSN	RDEN	WDTH1	RICSC	CSSR	G1R
		G2R	ISSR	SSR	SS2R	RATOR	RAT013R
		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

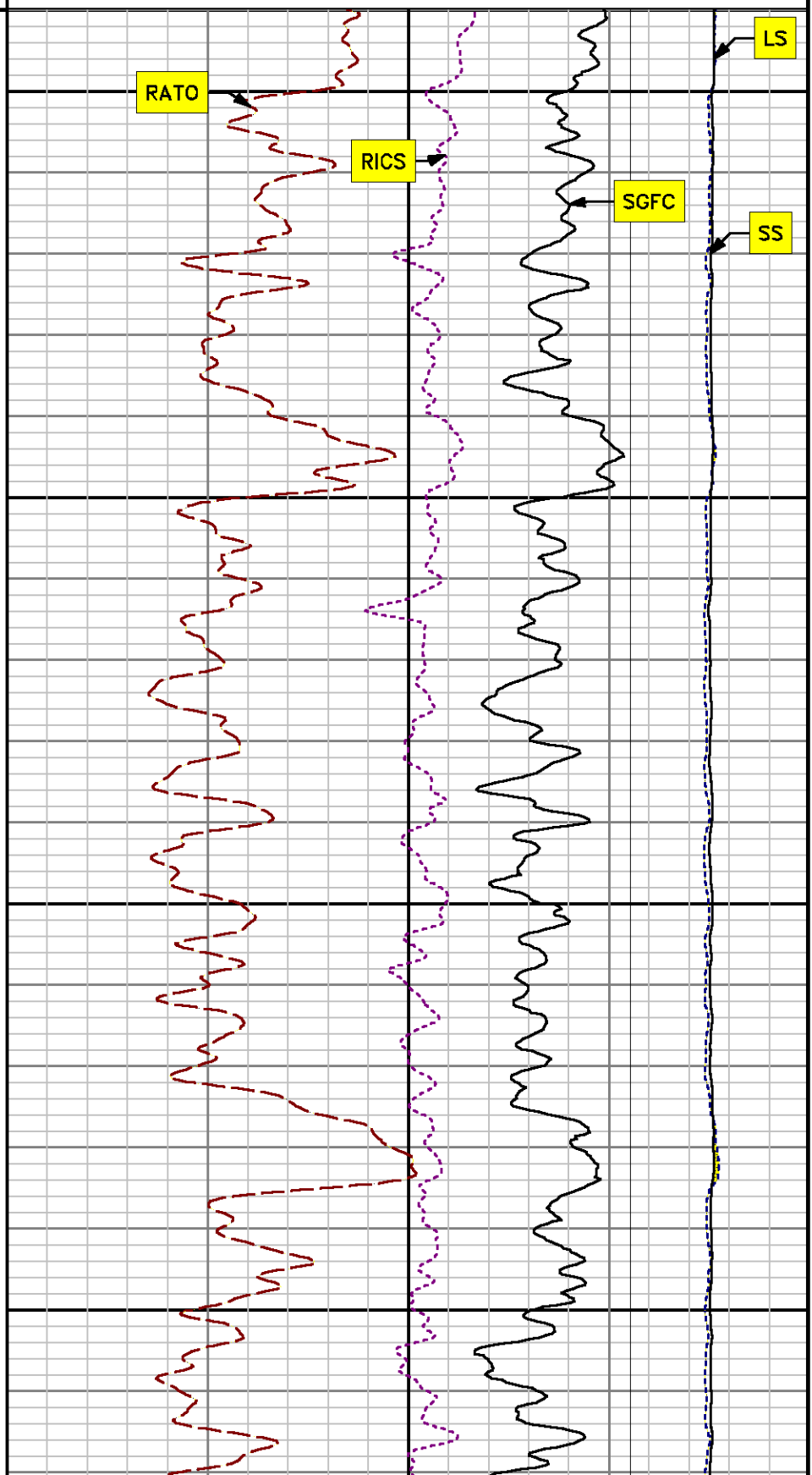
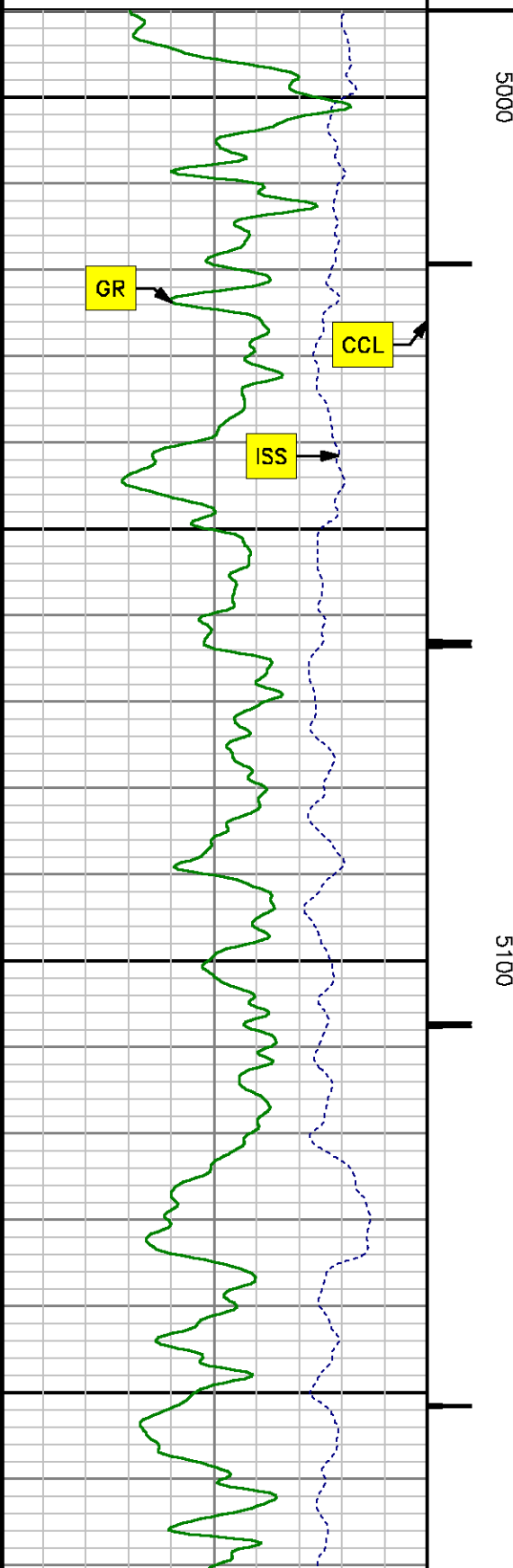
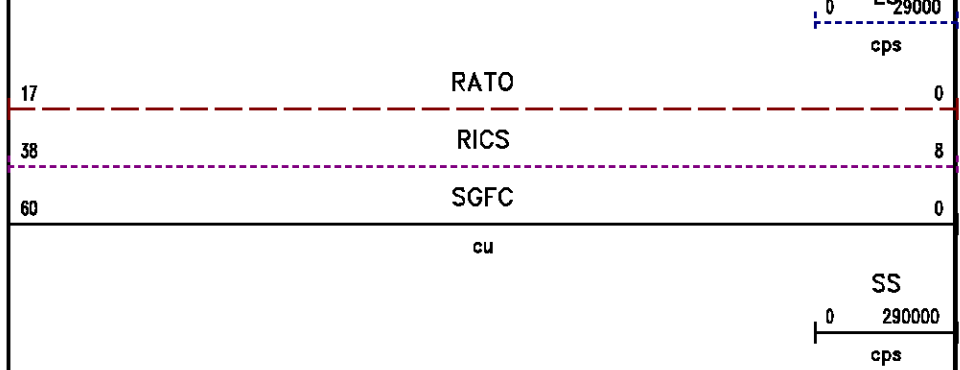
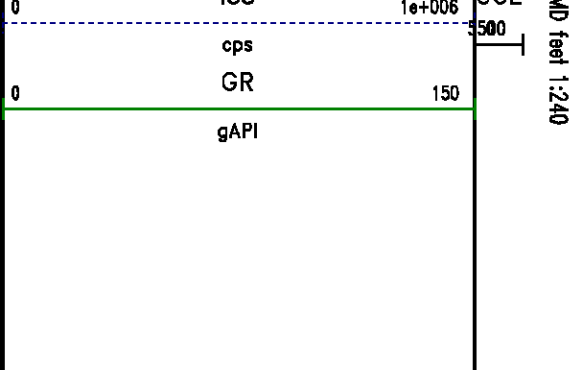
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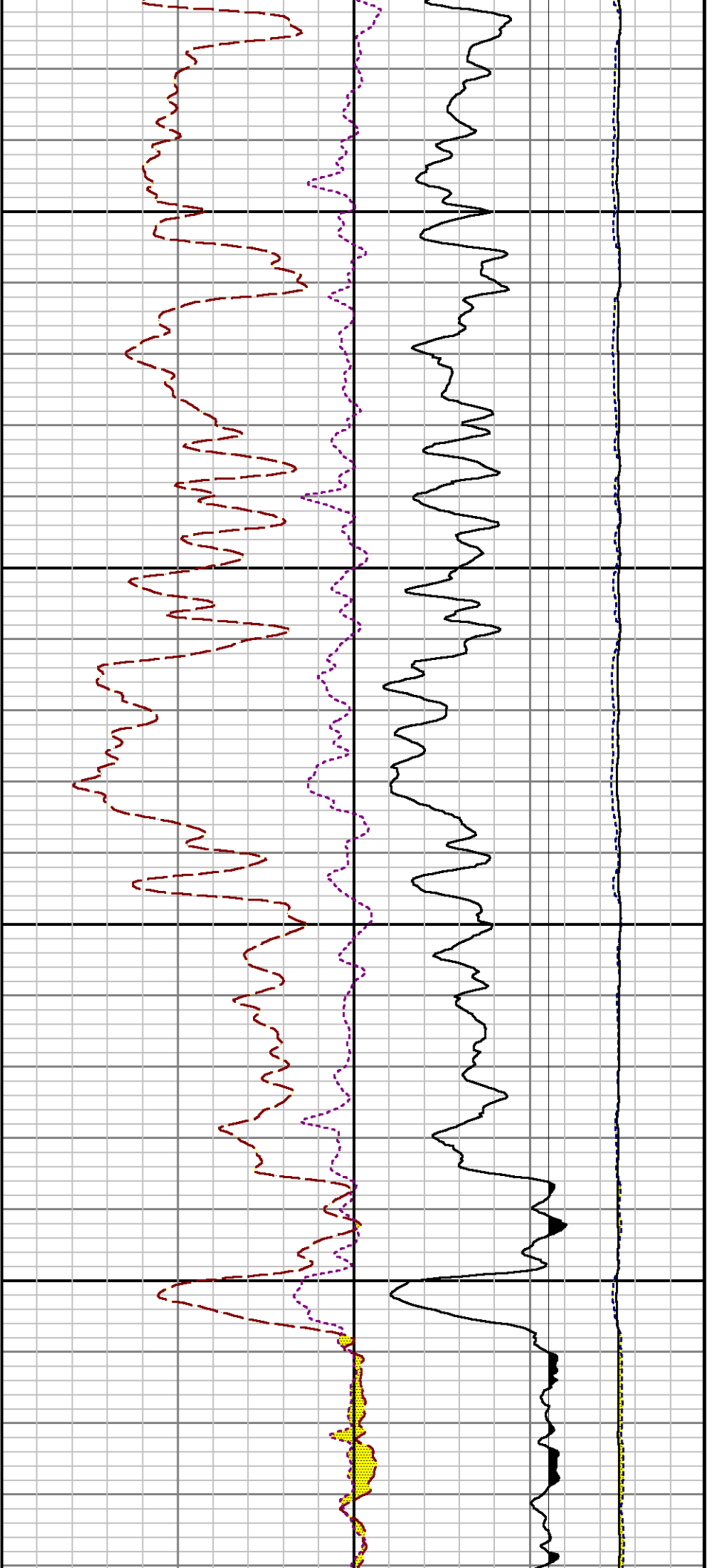
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Mode : PlotMgr 5.4.504

Interval : 4990.00 - 9104.00 feet UP

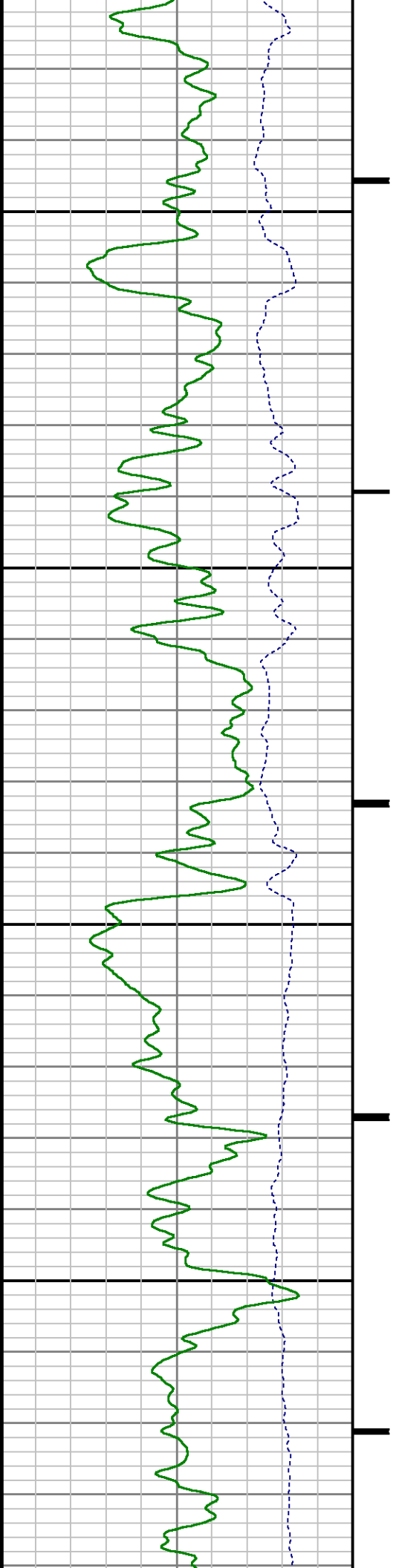
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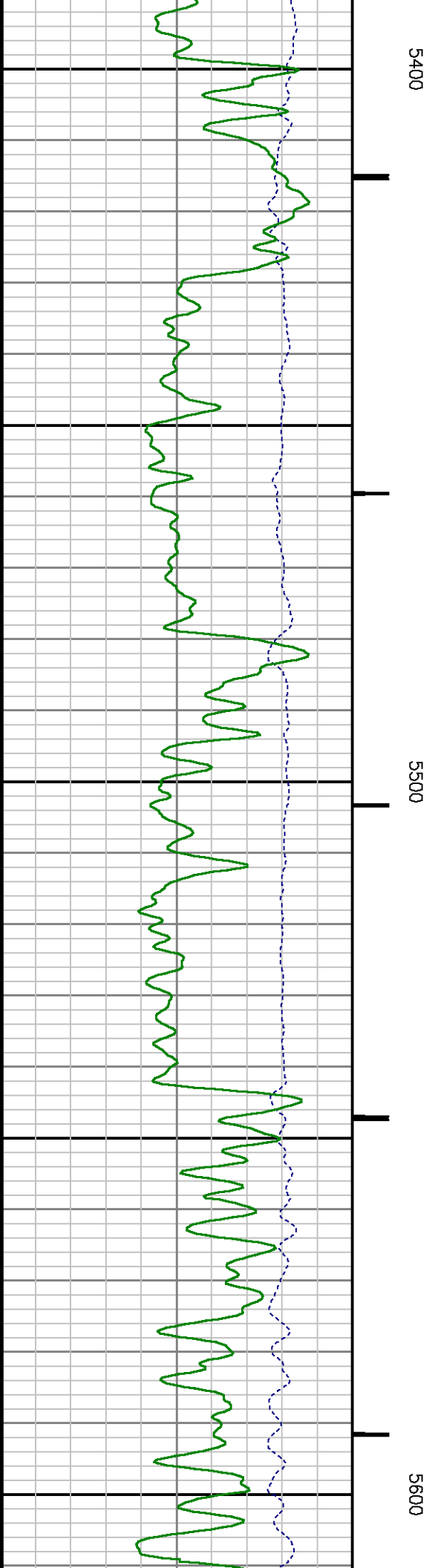
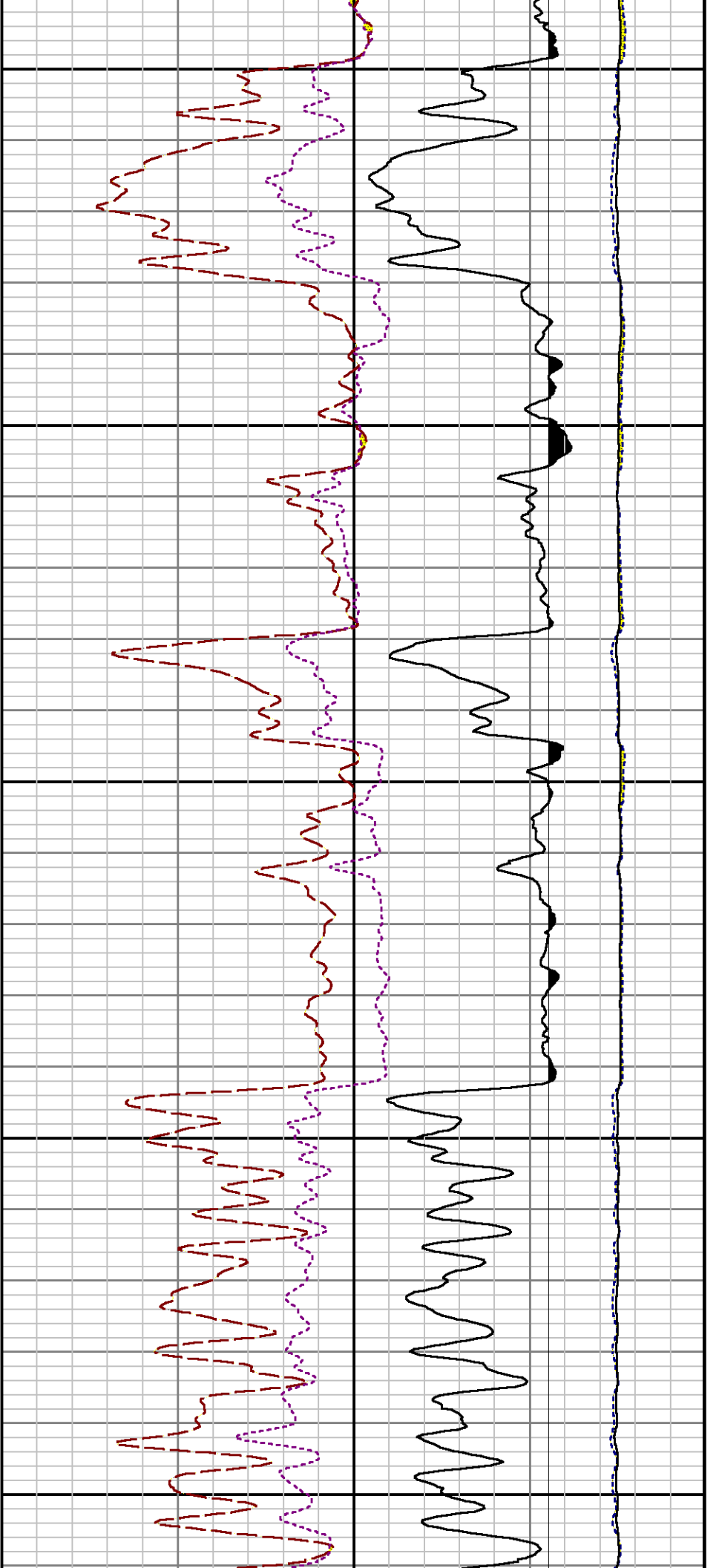


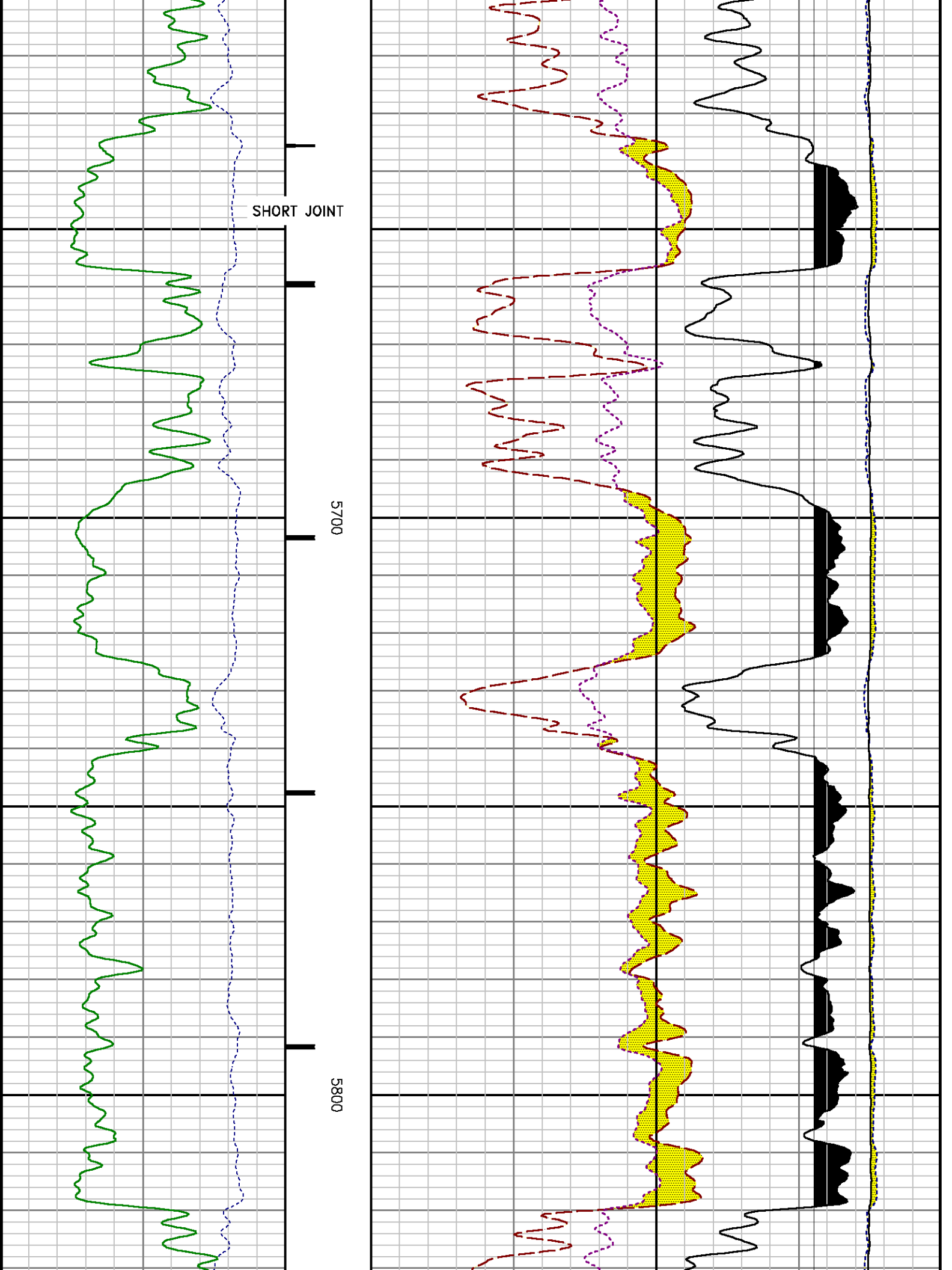


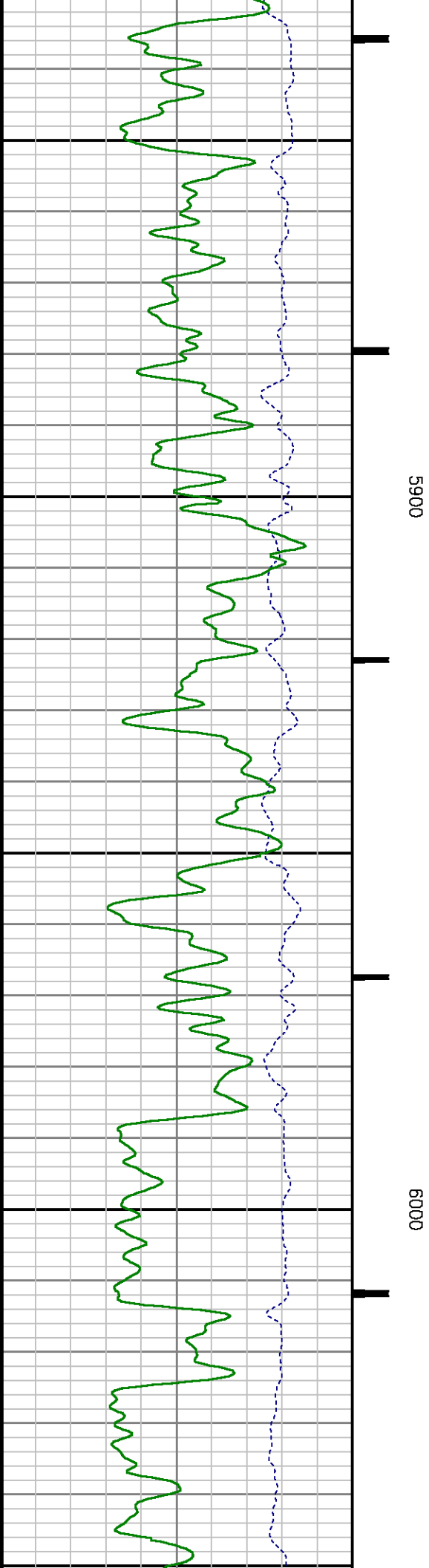
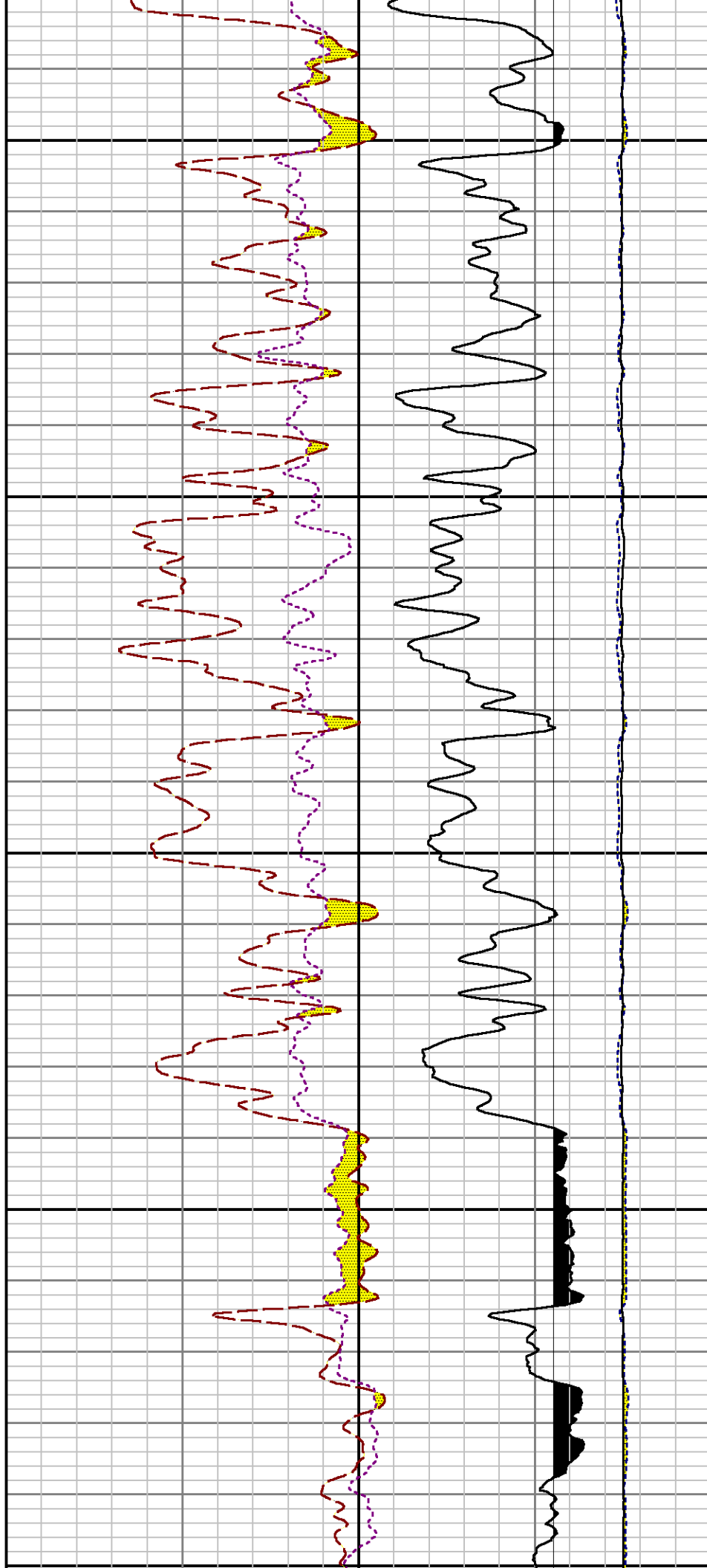
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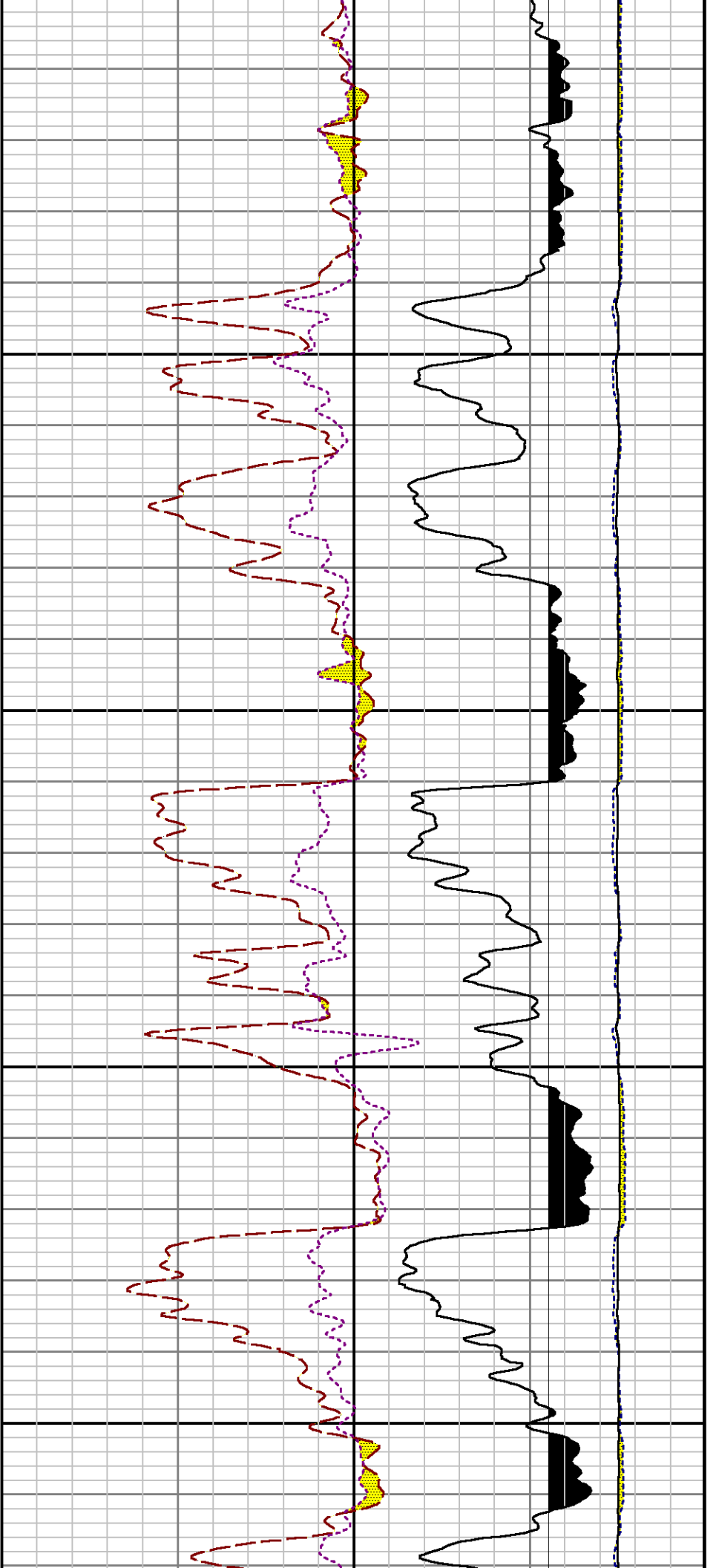
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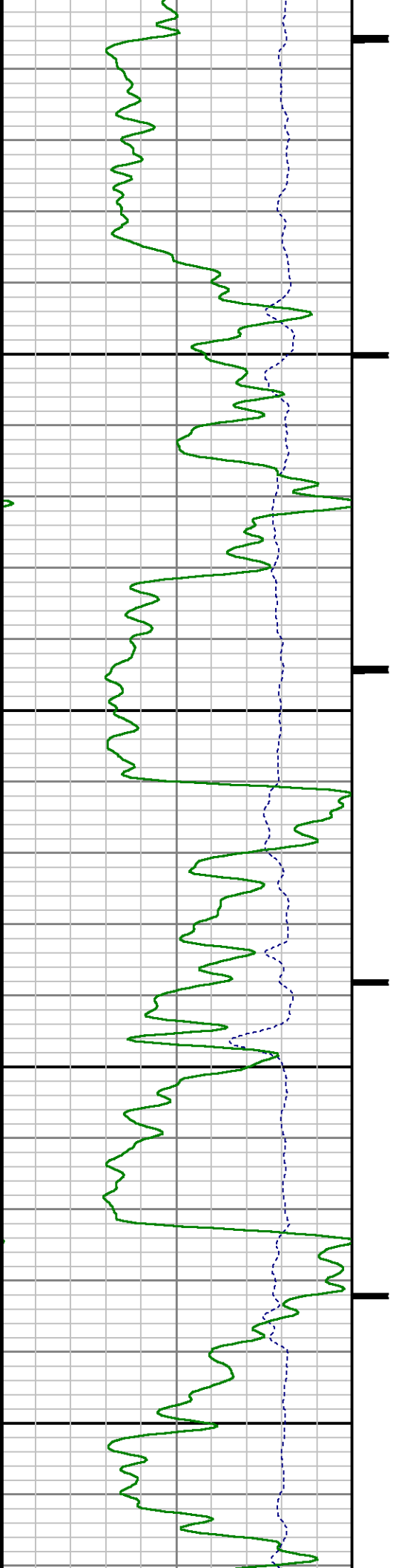


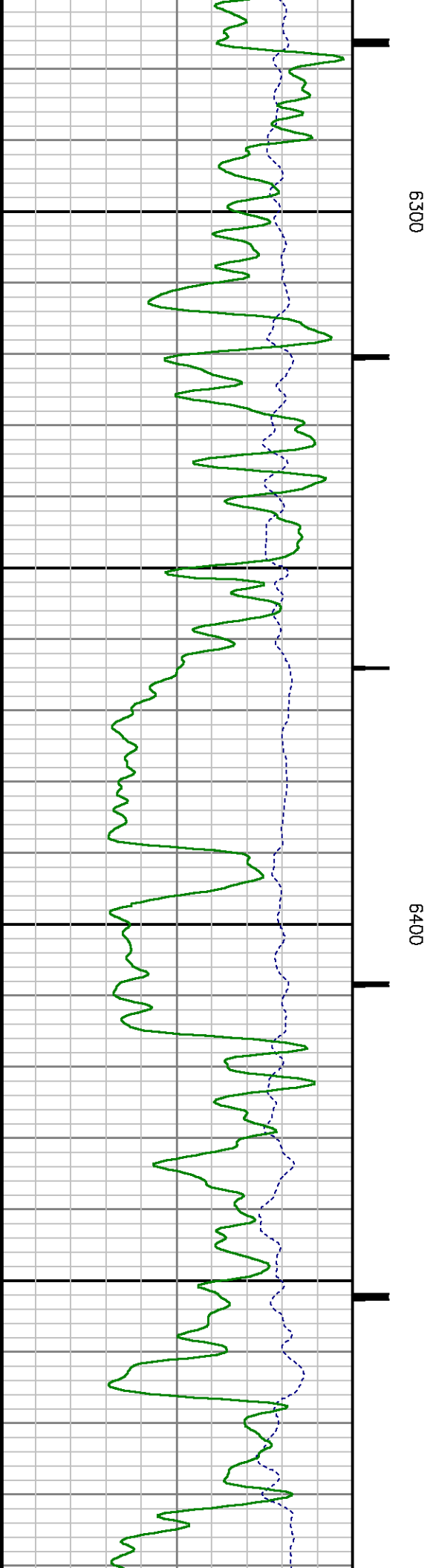
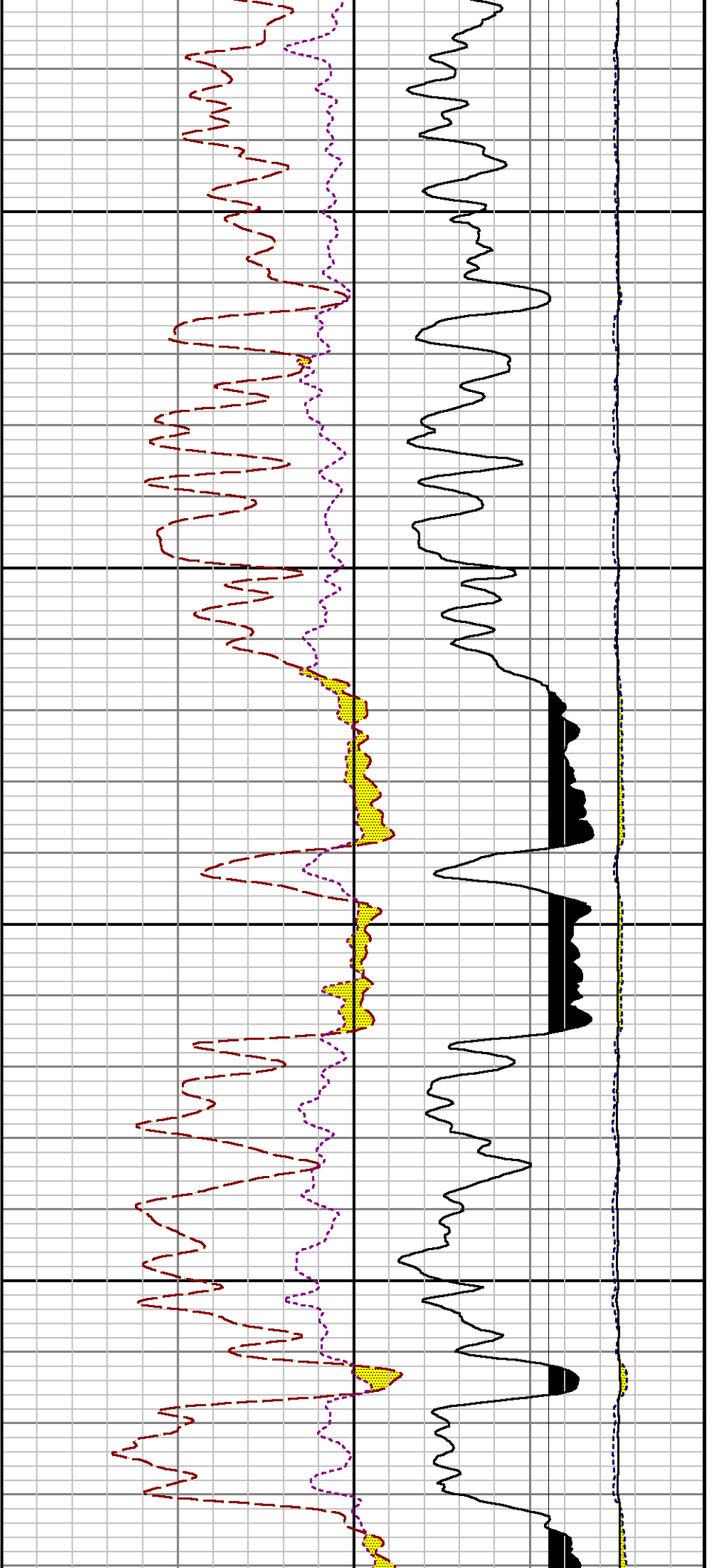


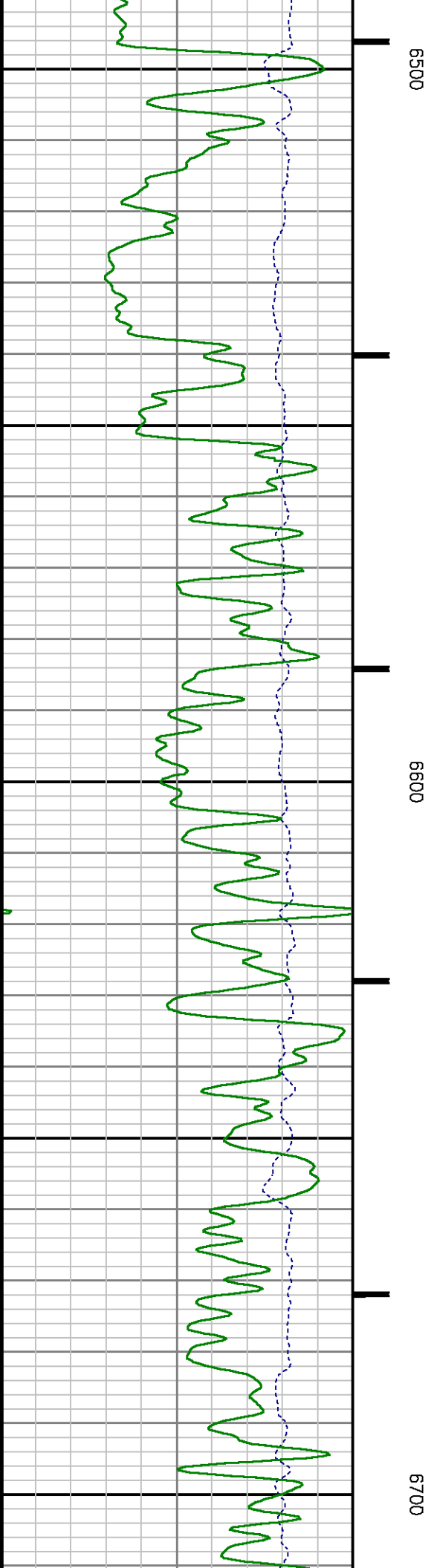
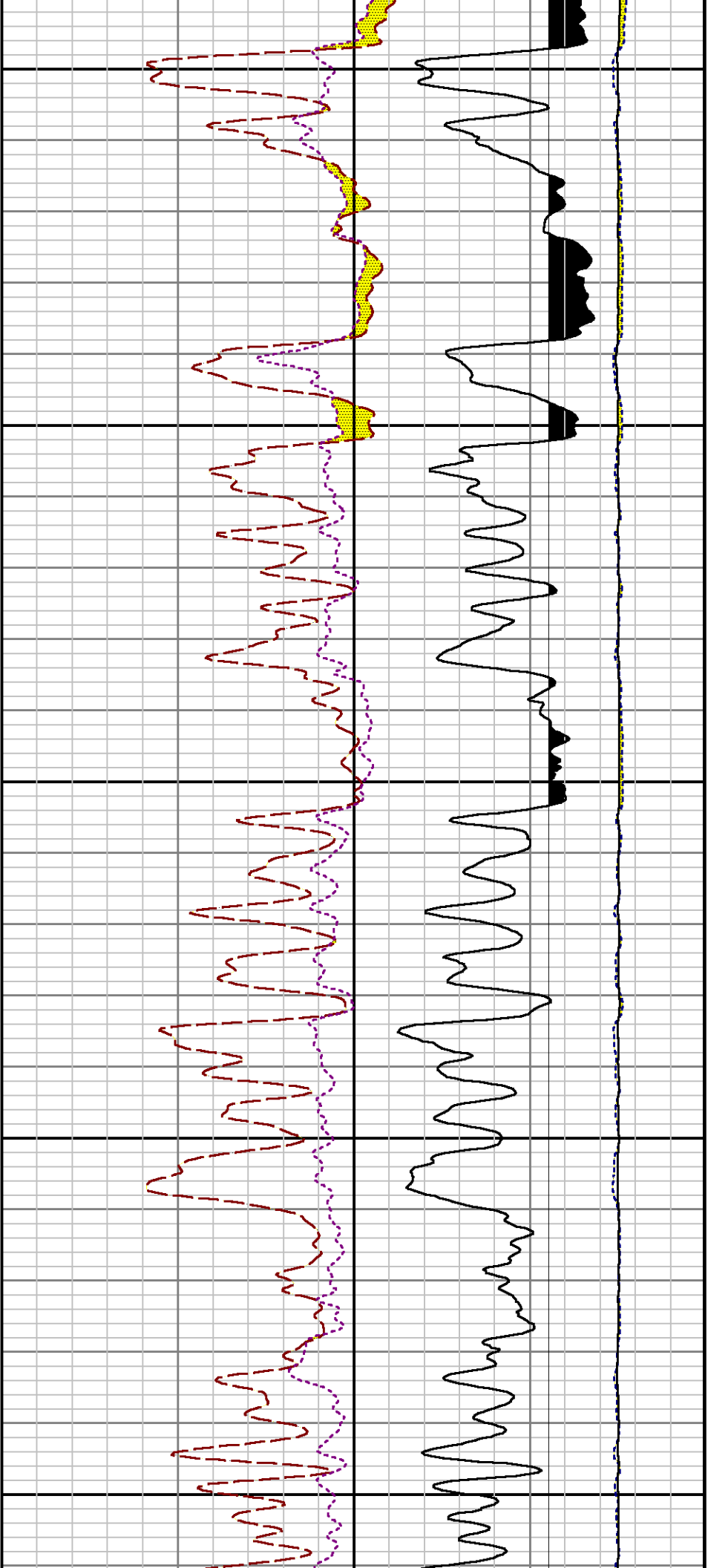


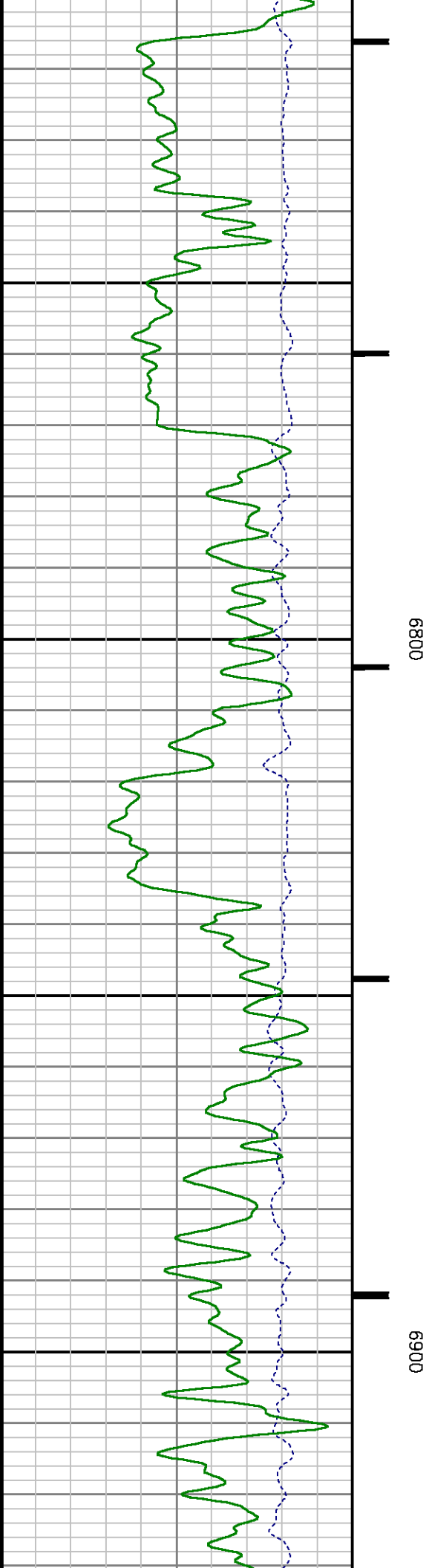
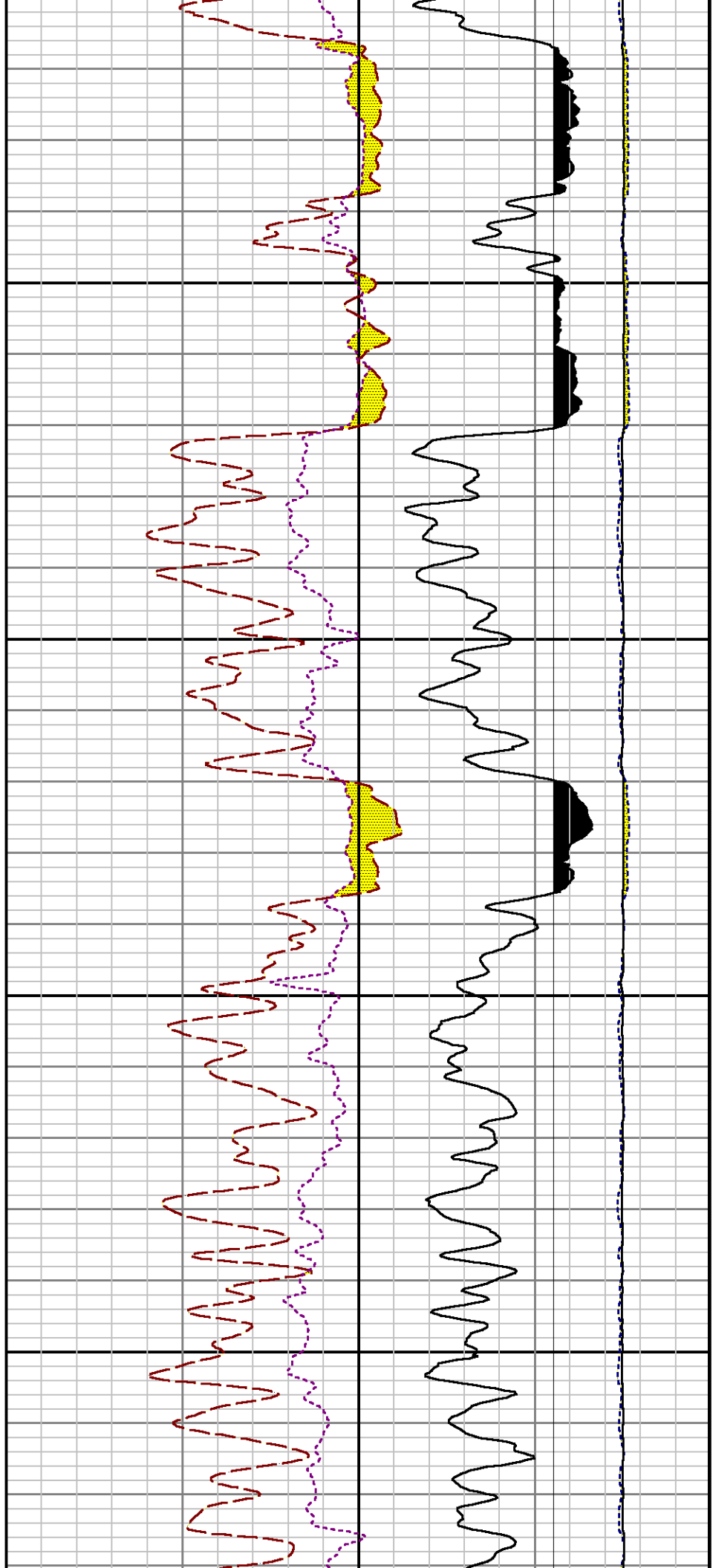
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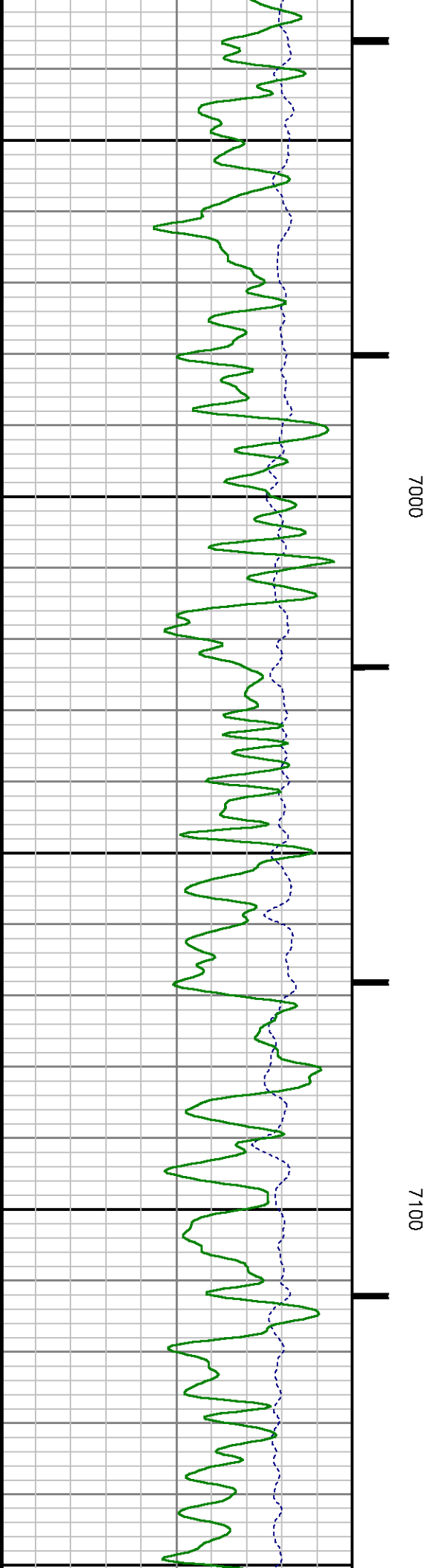
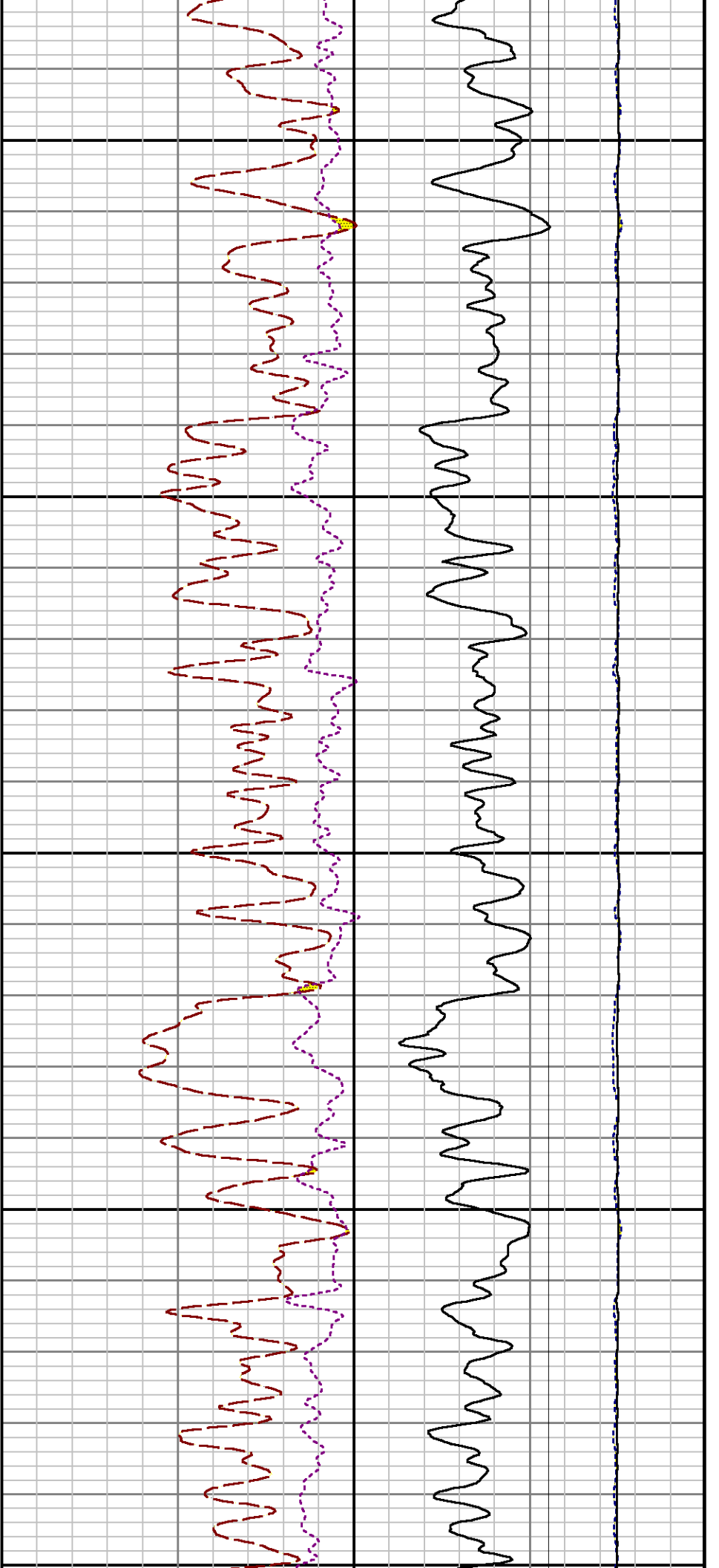
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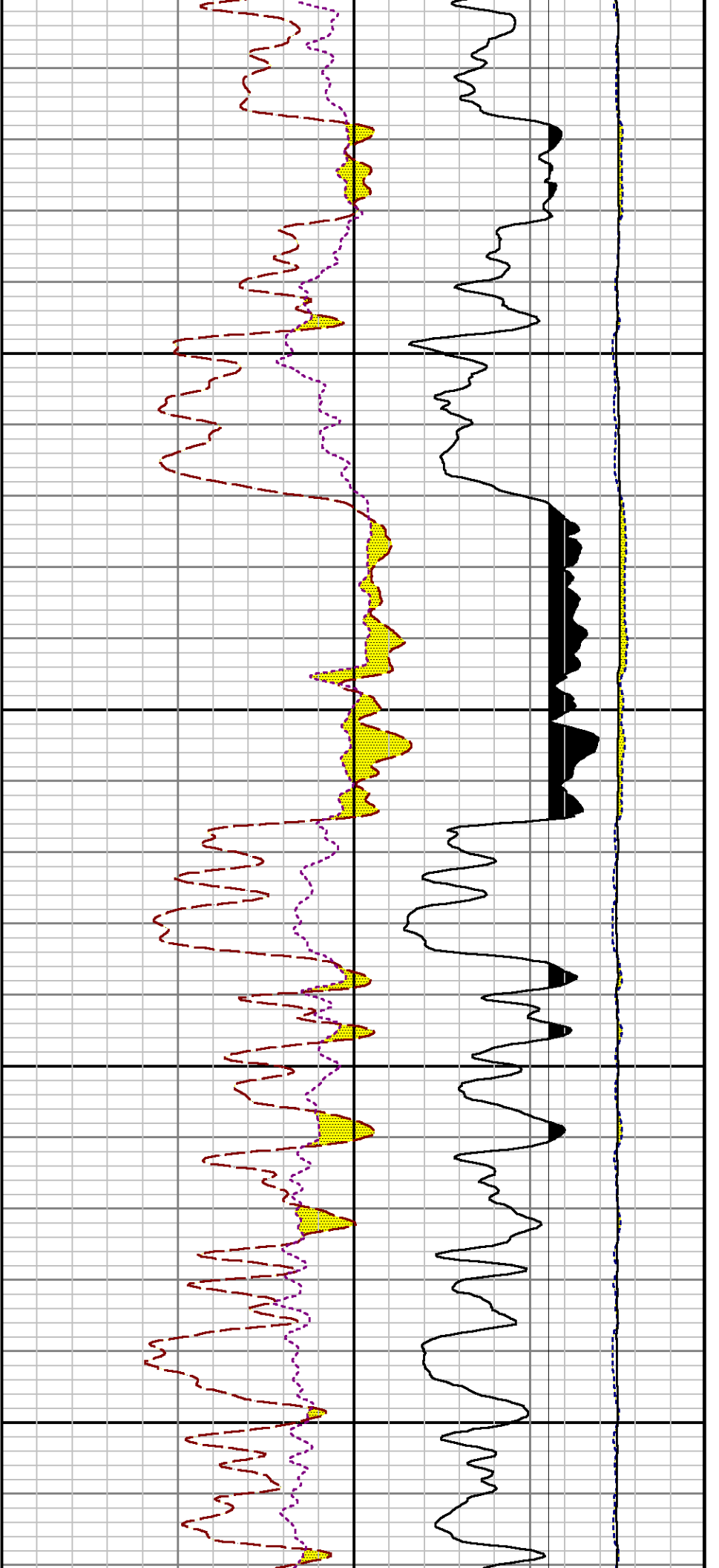






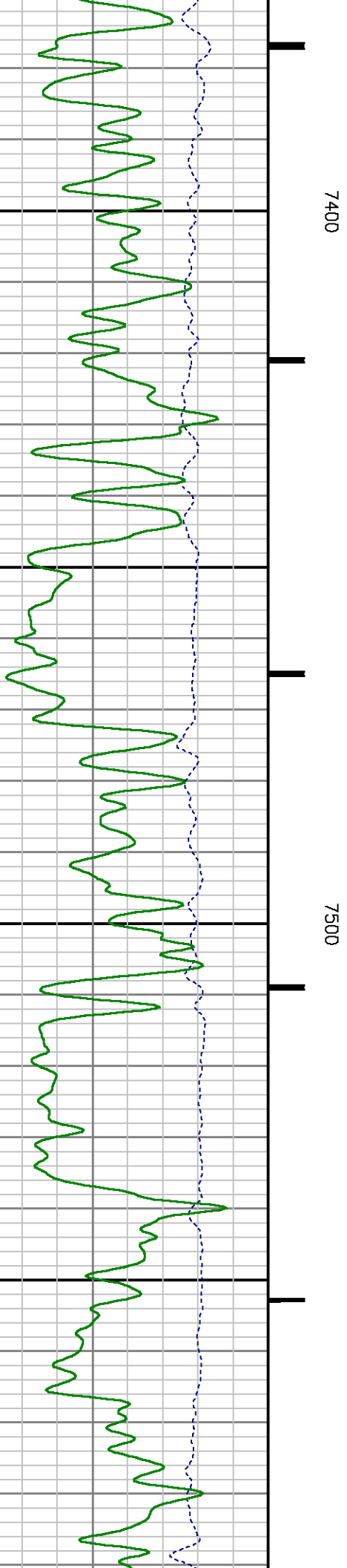
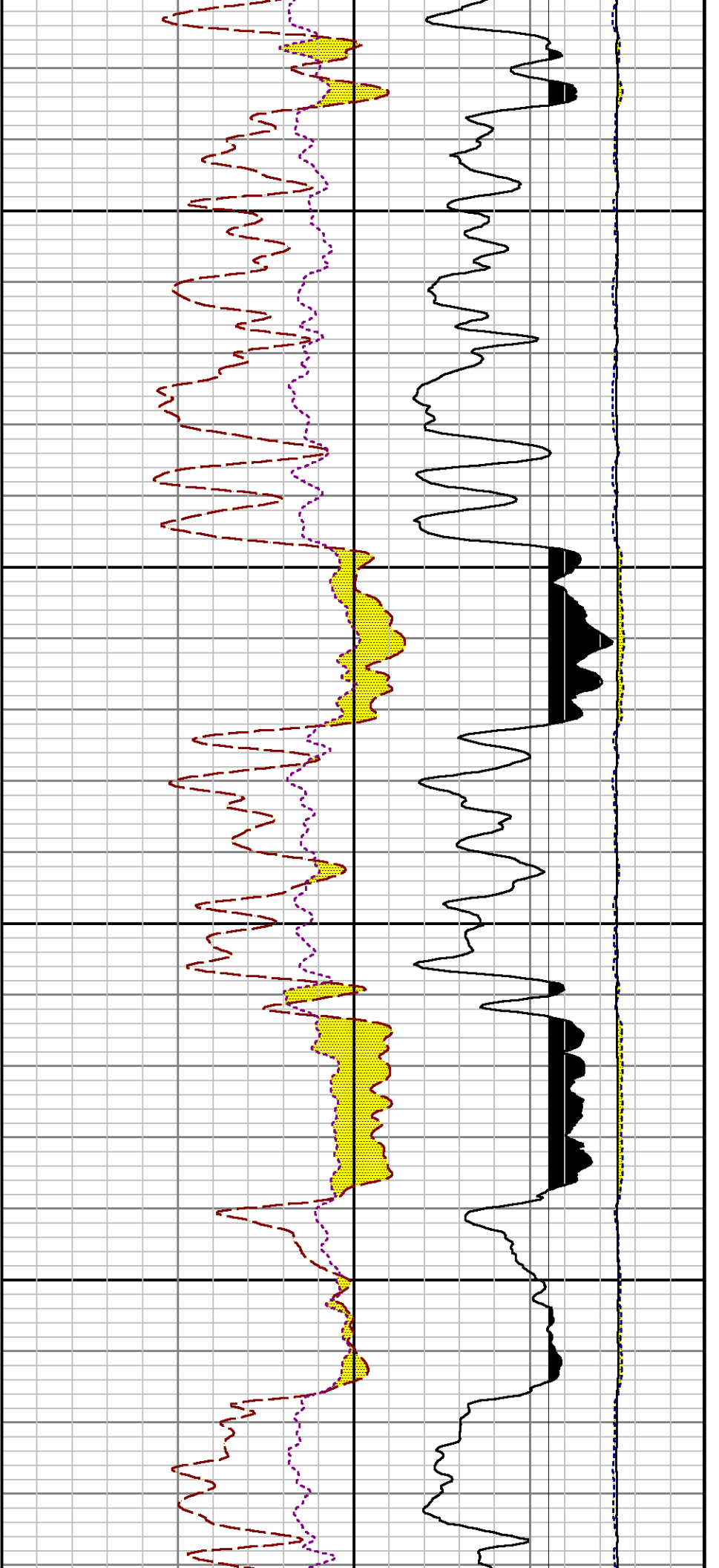


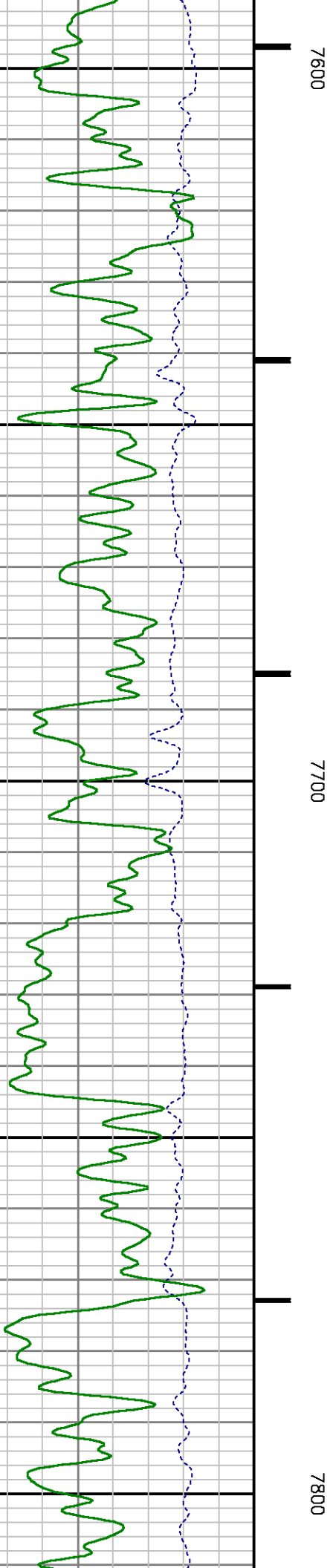
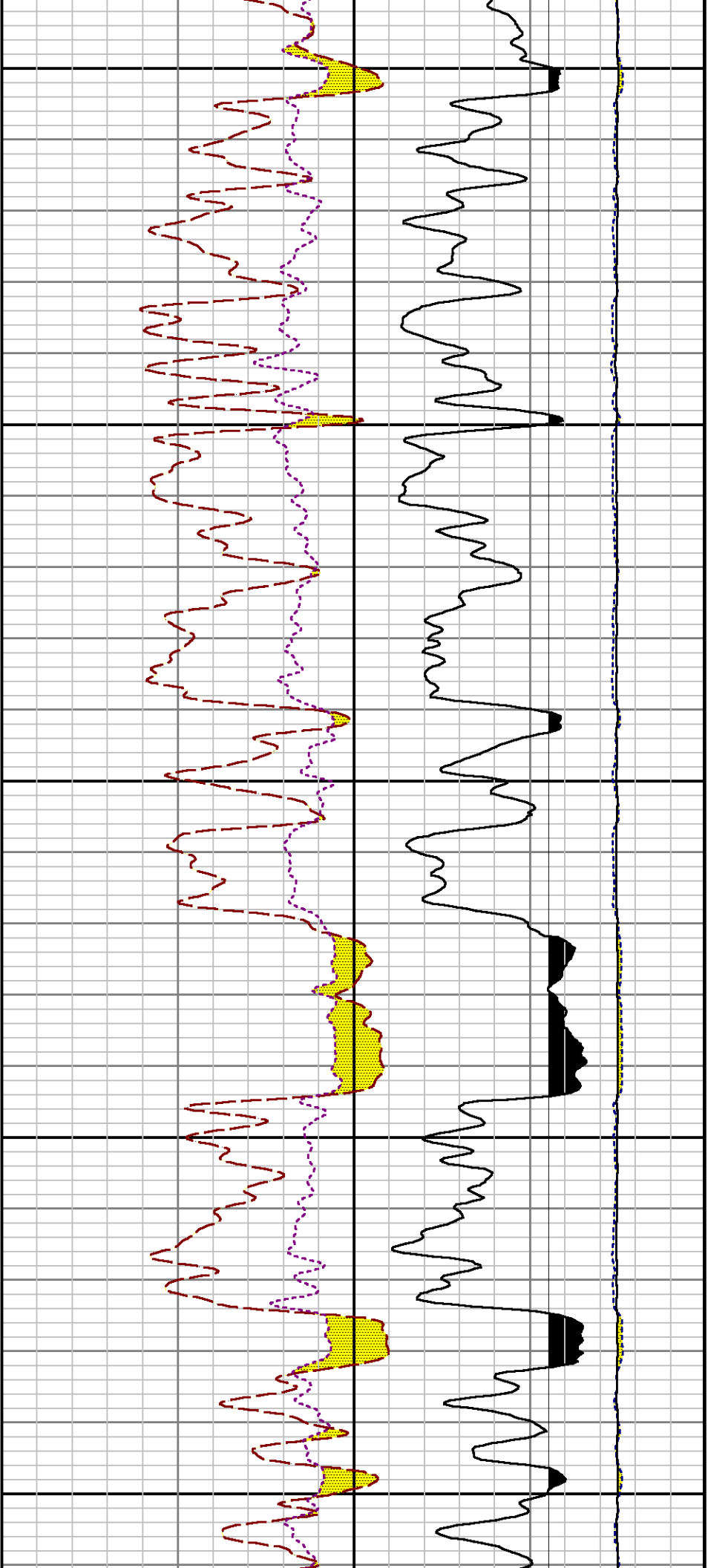


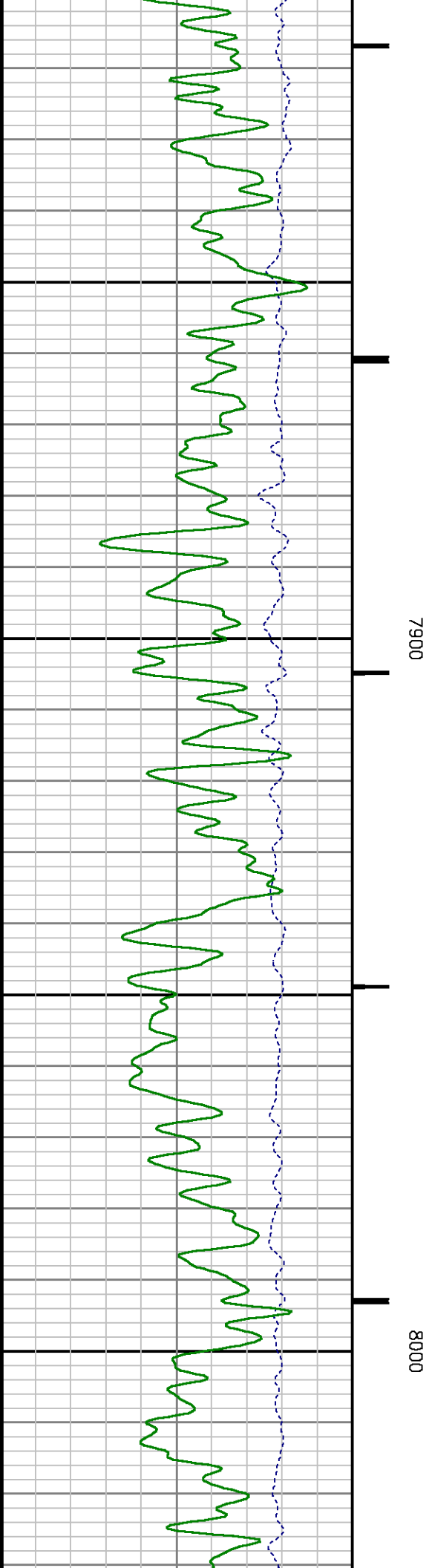
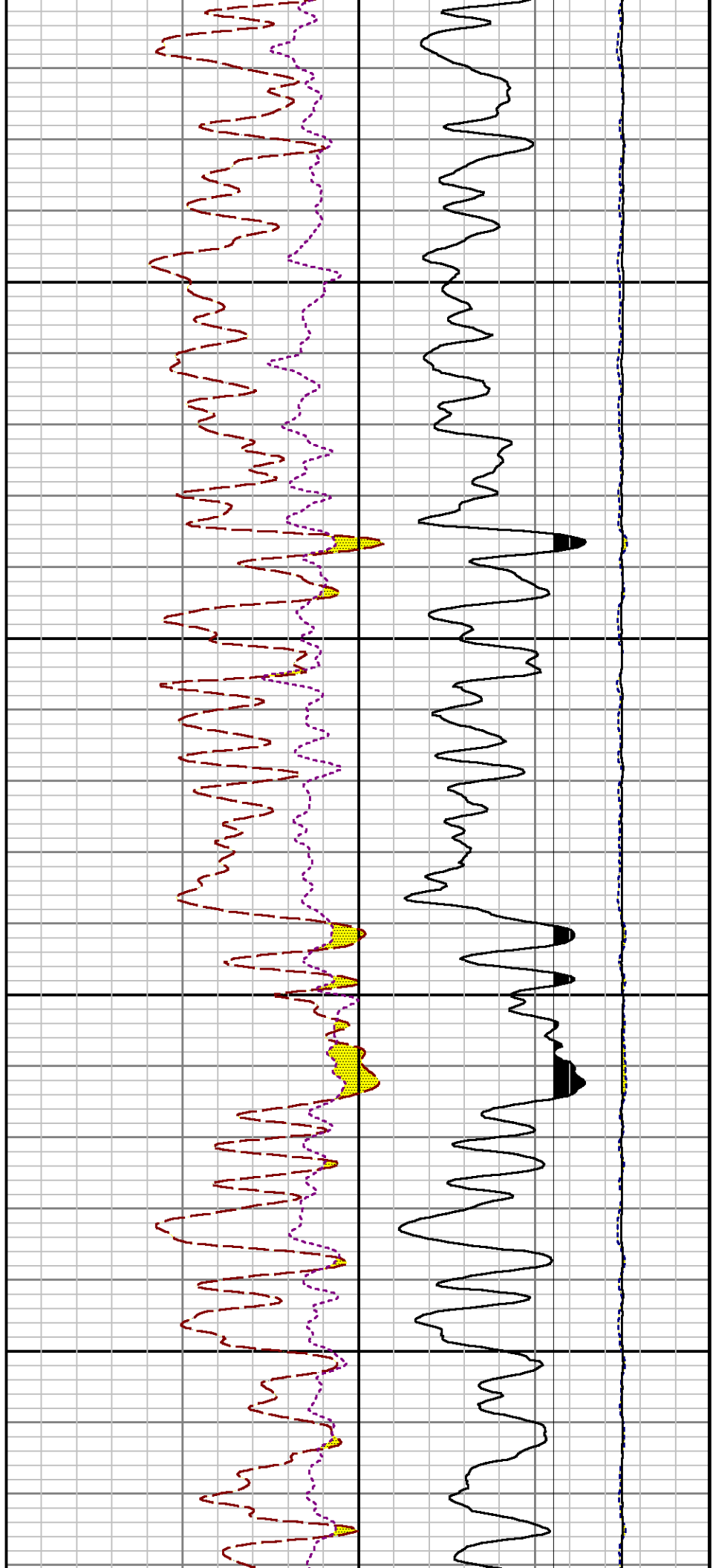


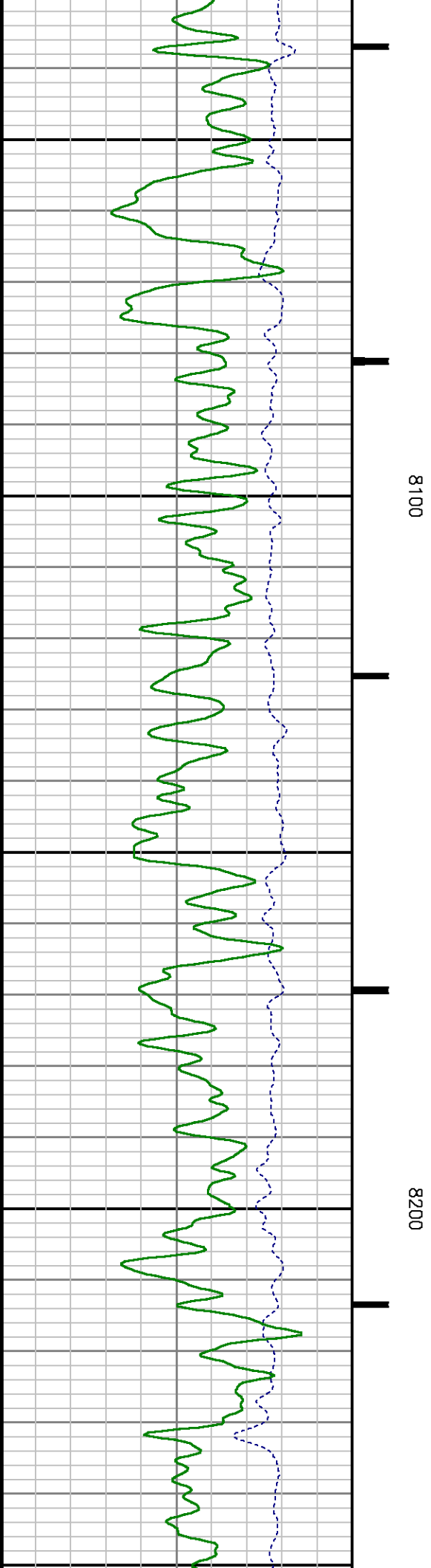
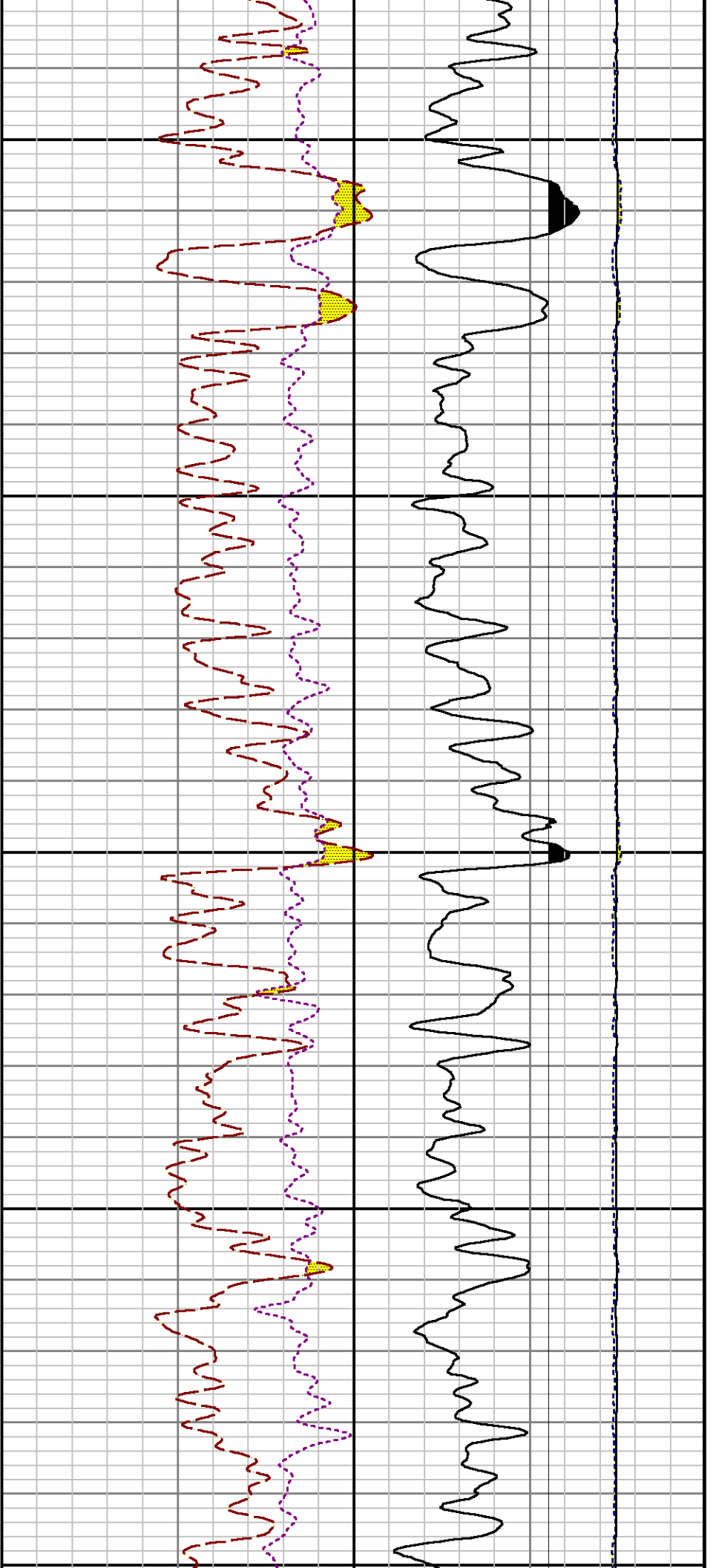
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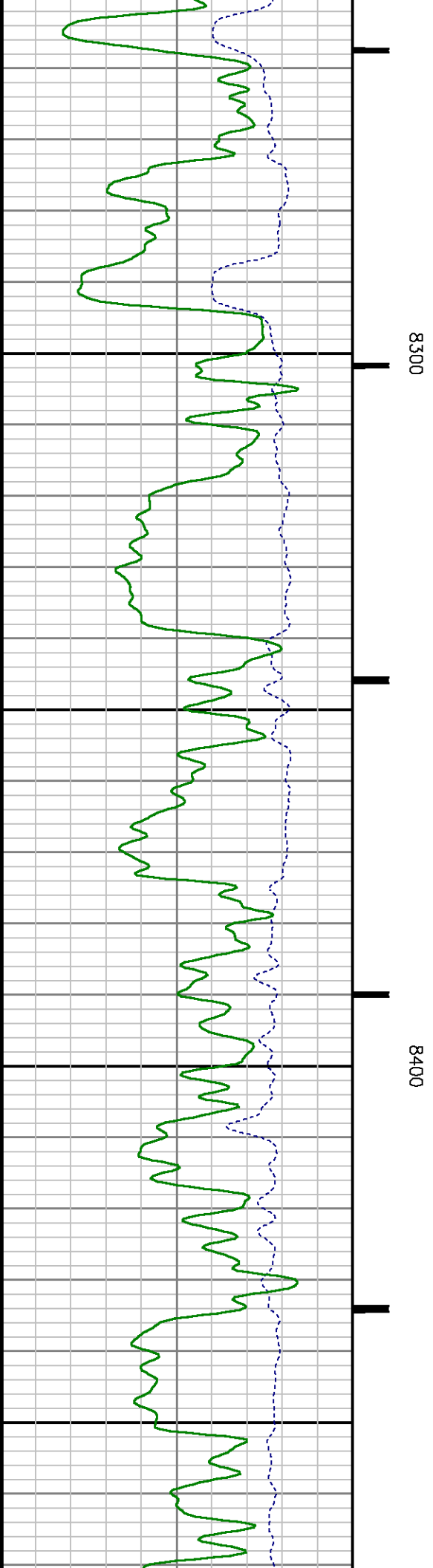
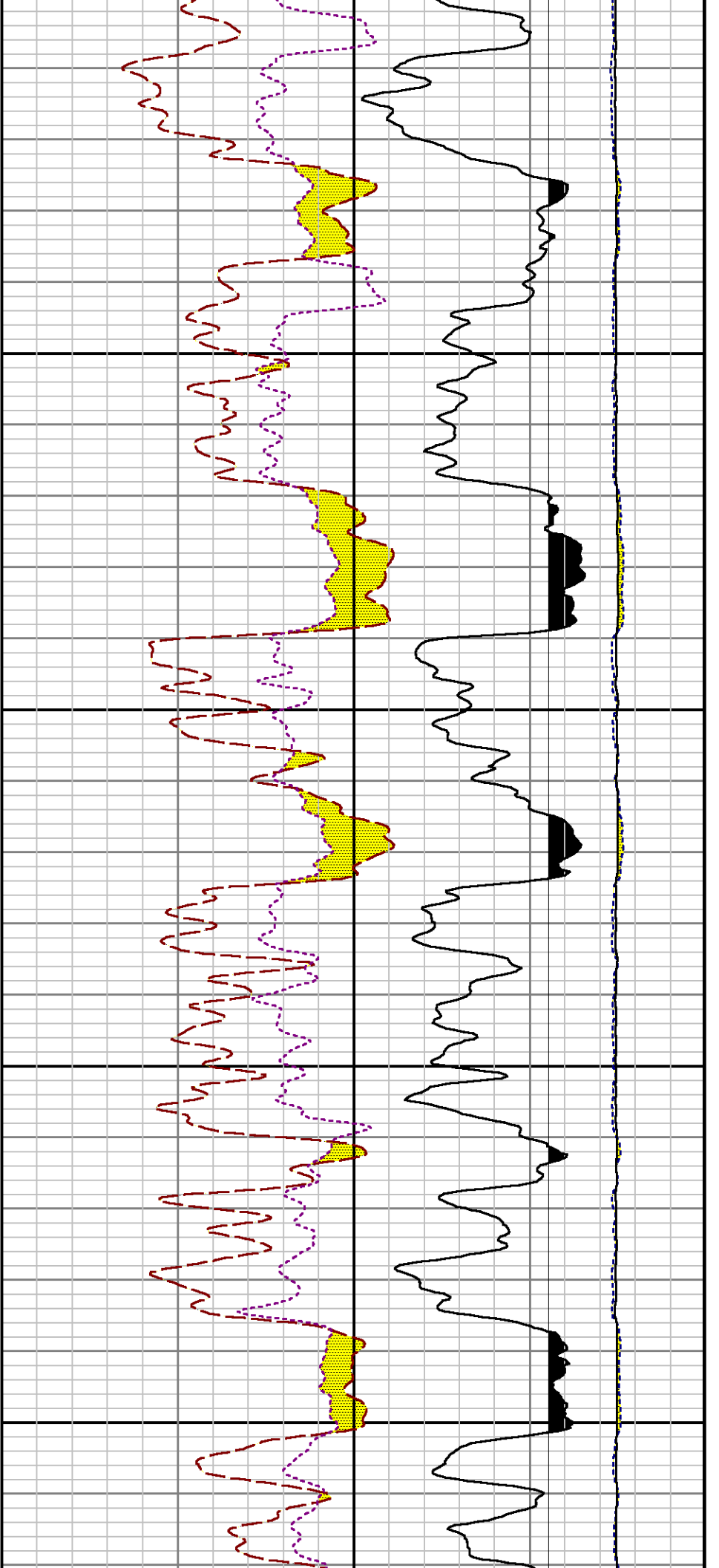
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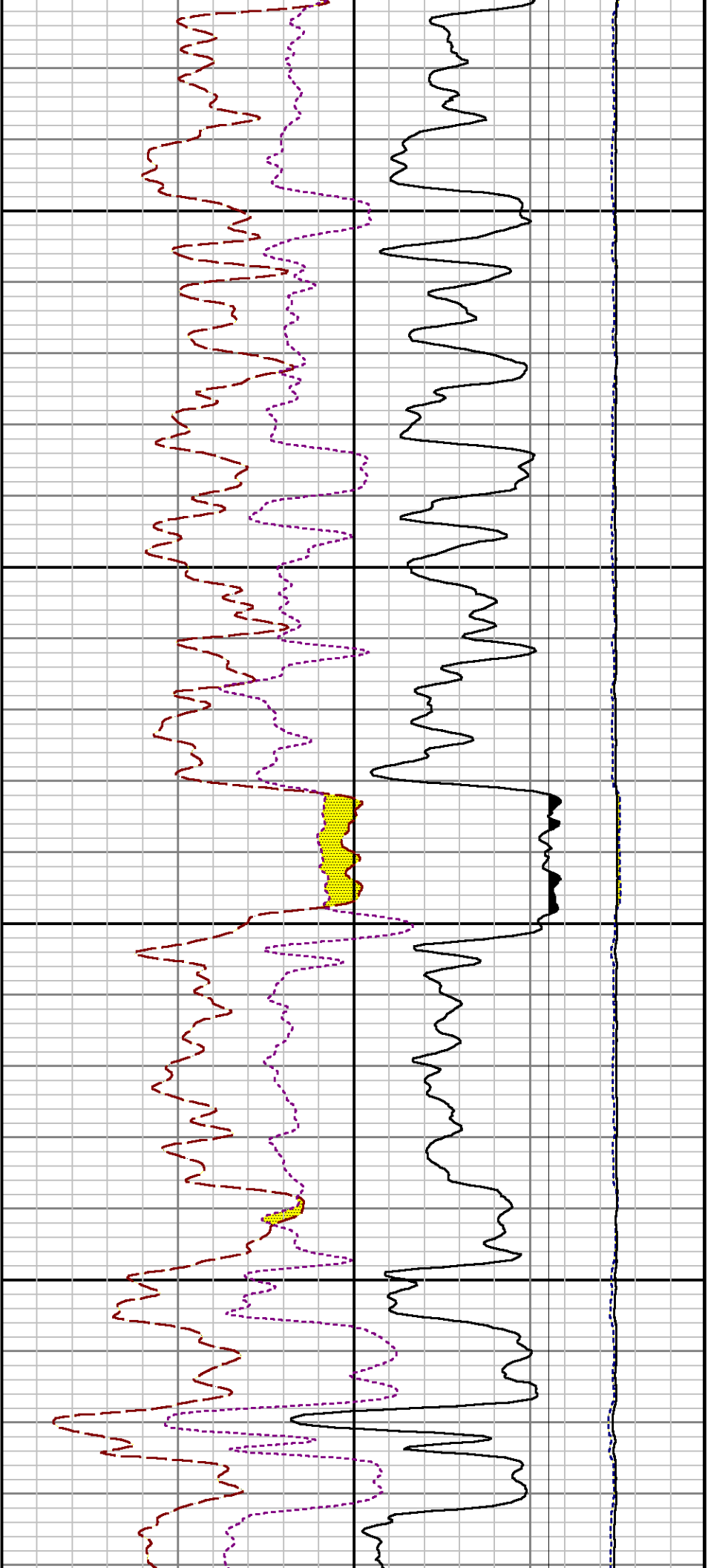






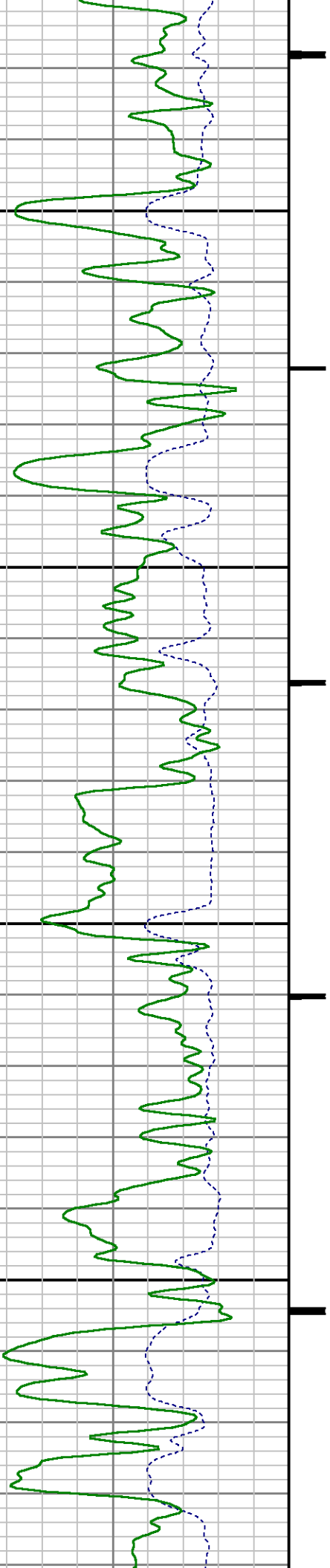


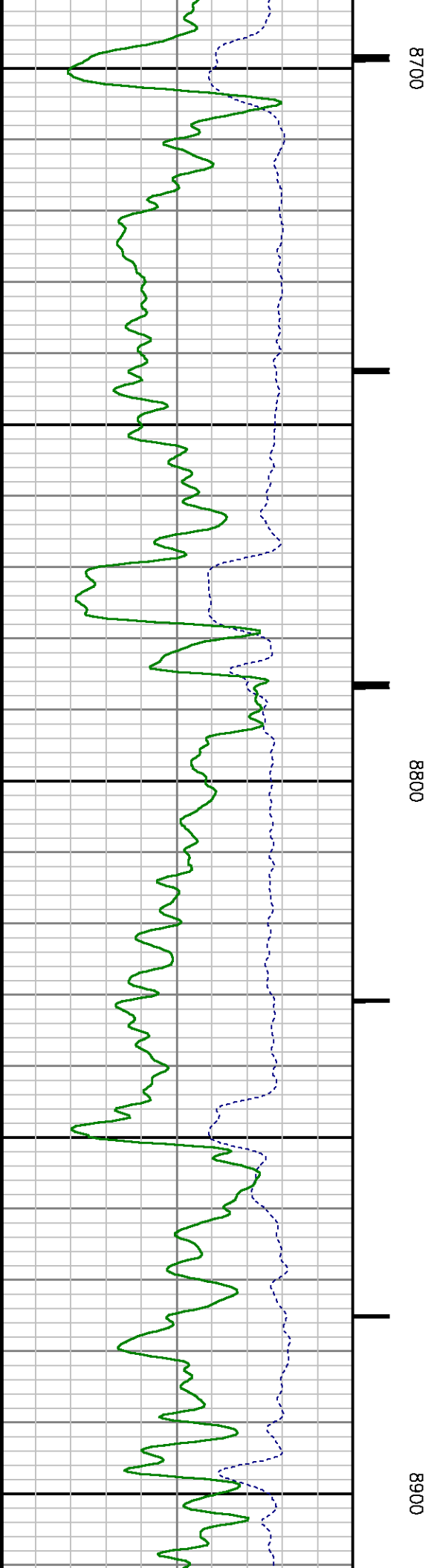
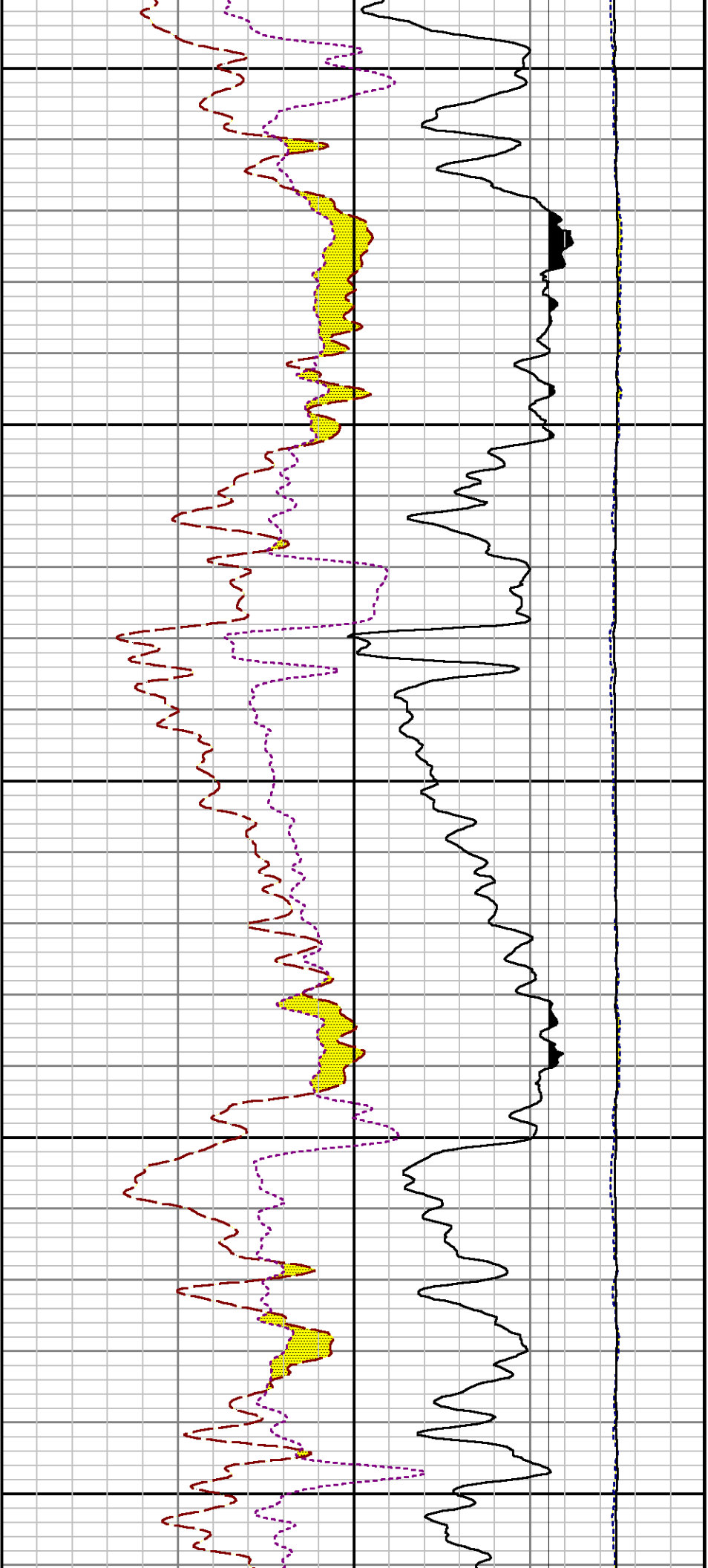


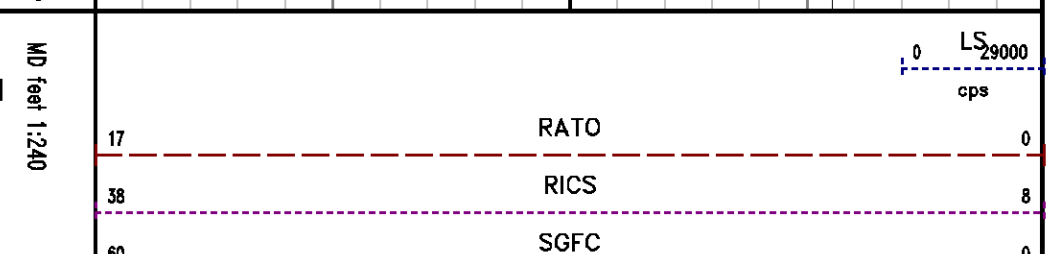
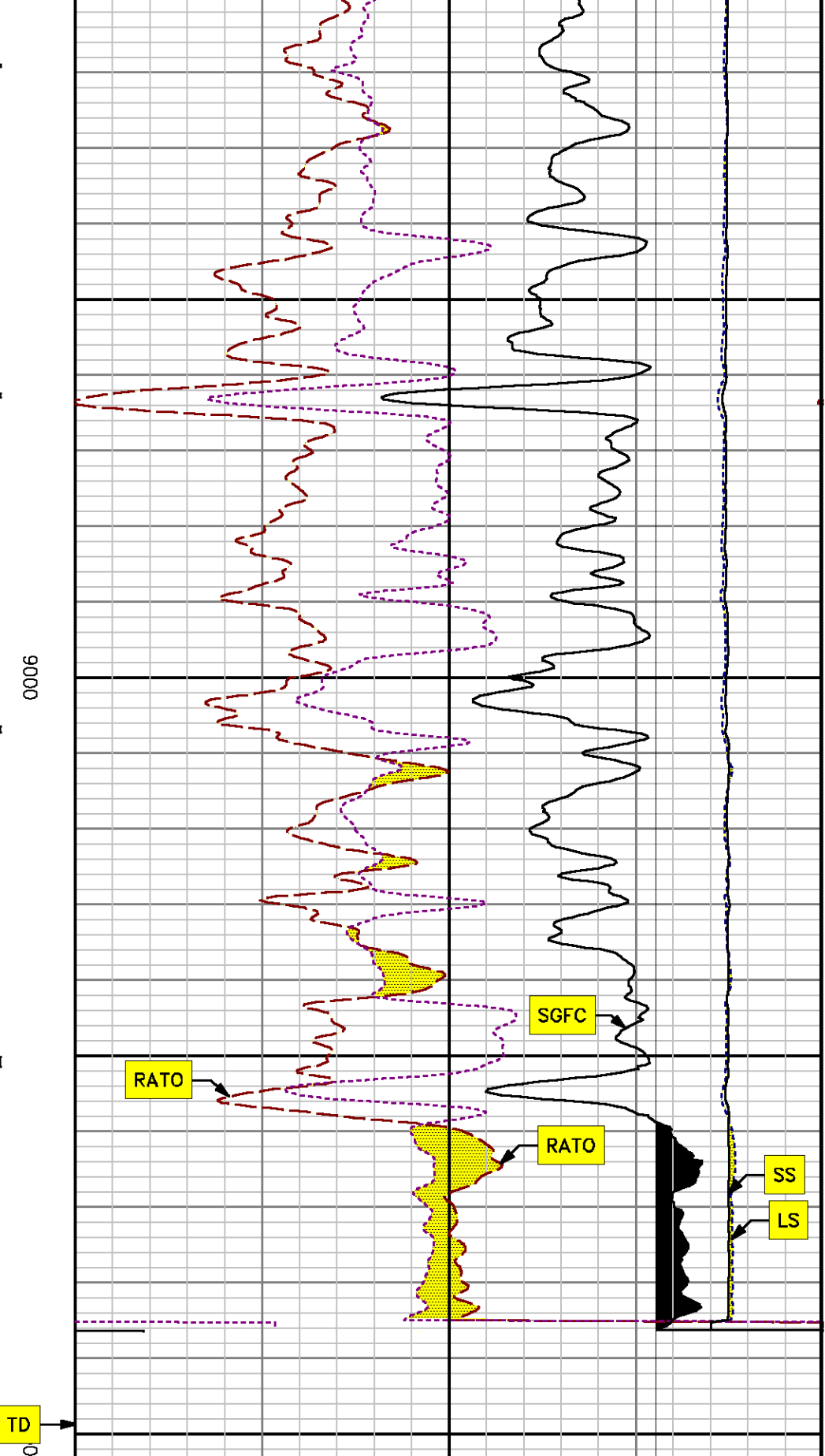
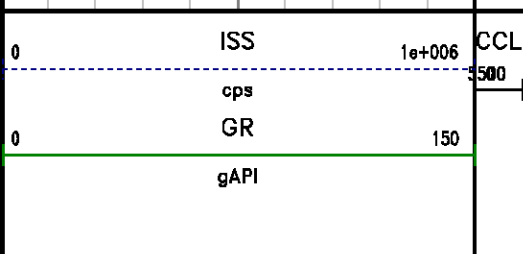
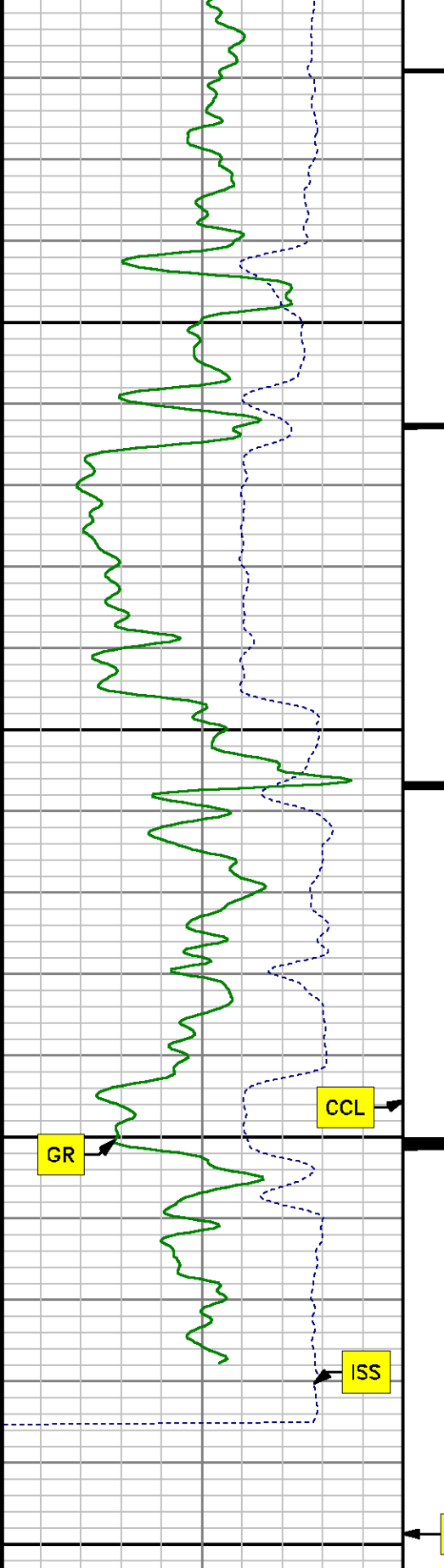


8500

8600







REPEAT SECTION

PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		8270.320	8598.570
PNC Porosity	Borehole Size	8.750	inch	8270.320	8598.570
PNC Porosity	Casing Size	4.500	inch	8270.320	8598.570
PNC Porosity	Gas Filled	Non Gas Filled		8270.320	8598.570
PNC Porosity	Matrix	Sandstone		8270.320	8598.570
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	8270.320	8598.570

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	RAT023
		RICXC	RIN13C	RIN23	RIN23C	SD3D	SG3D
		SGB3	SGF3	WDTH3	CXSR	IXSR	XSR
		RICXR					
		HVC2Q0	SEQ2	AMA2	AMB2	AMF2	AML2
		BKL	CHF2	CLS	CPT2Q0	CPT2Q2	CPT2Q3
8281XA	-12.291	CPT2Q4	ET2	ILS	LS	MCS2	MCS2Q0
		QCAL2	RGN2	RICL	RONE23	RTW023	SDA2
		SDL2	SGA2	SGB2	SGF2	SGK2	SGL2

8281XA

-12.041

STA2	ASPEC2	ILSC	ILSN	WDTH2	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	RAT0	RAT013
RBOR	RGN1	RICS	RIN	RONE	RPOR
RTW0	RIN13	RONE13	RTW013	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	HOC	FE2XC	ISSC	RINC
ISSN	RDEN	WDTH1	RICSC	CSSR	G1R
G2R	ISSR	SSR	SS2R	RATOR	RAT013R
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

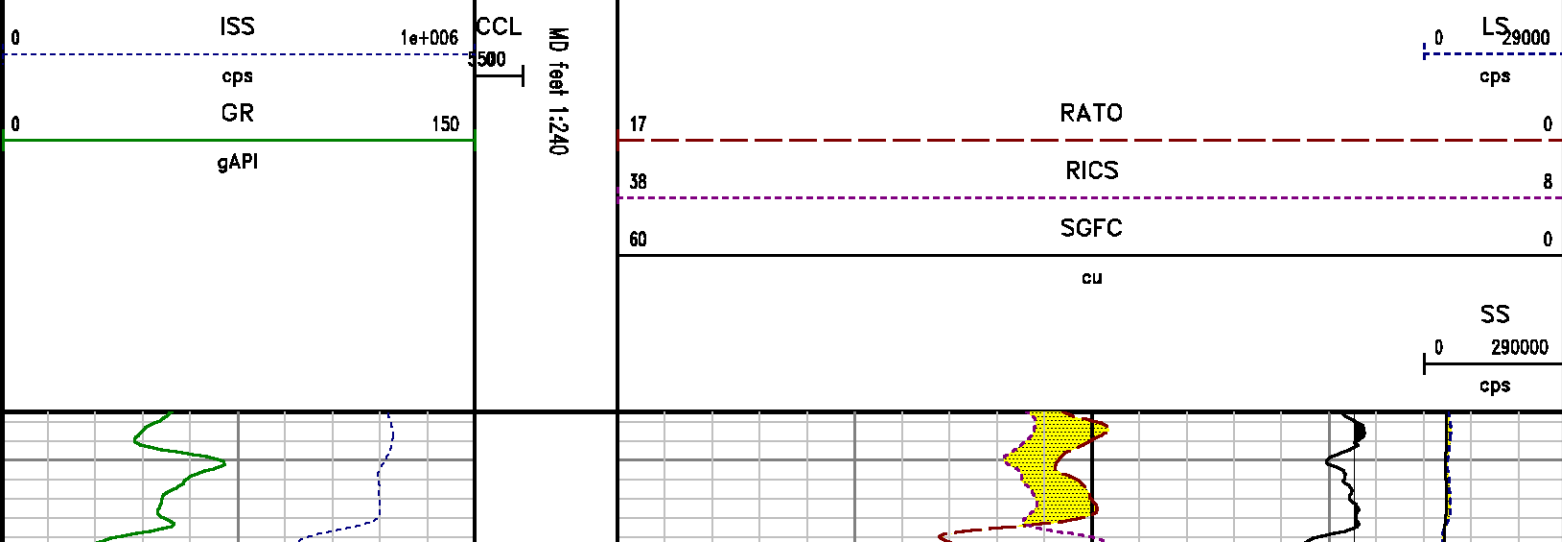
Well : SAVAGE RWF 321-25

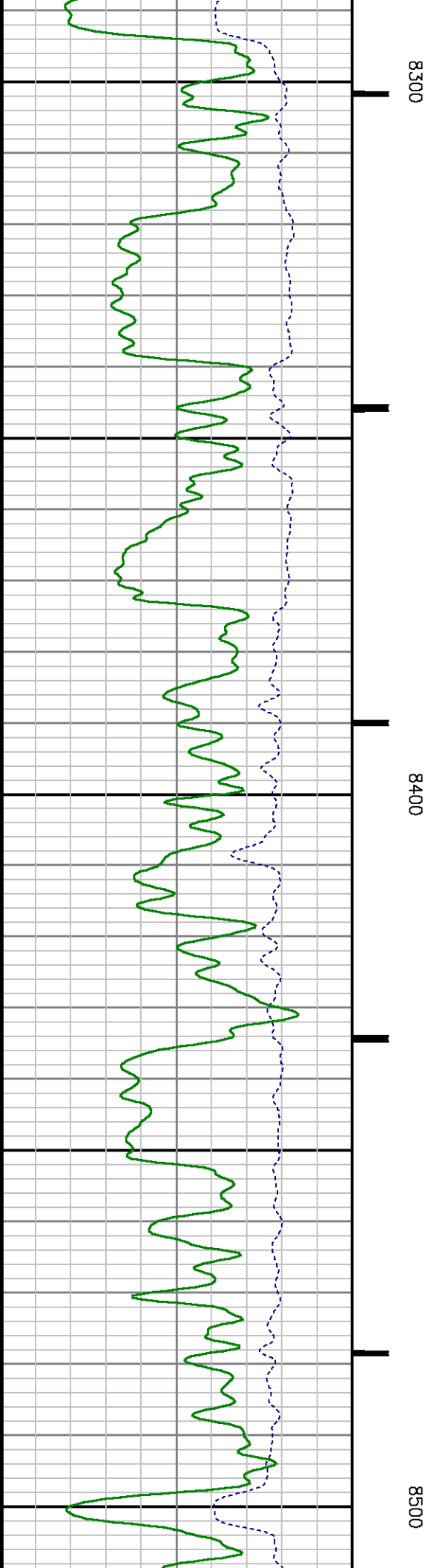
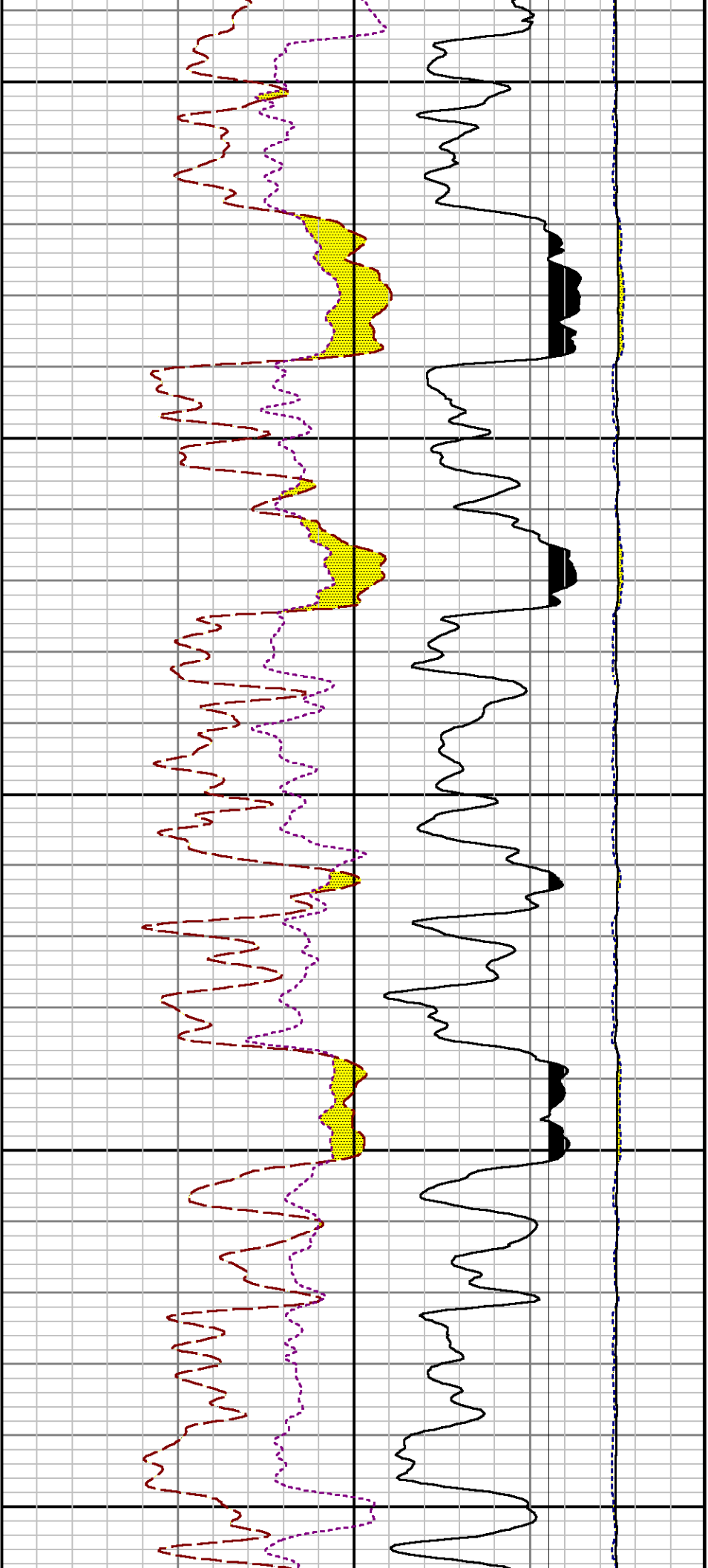
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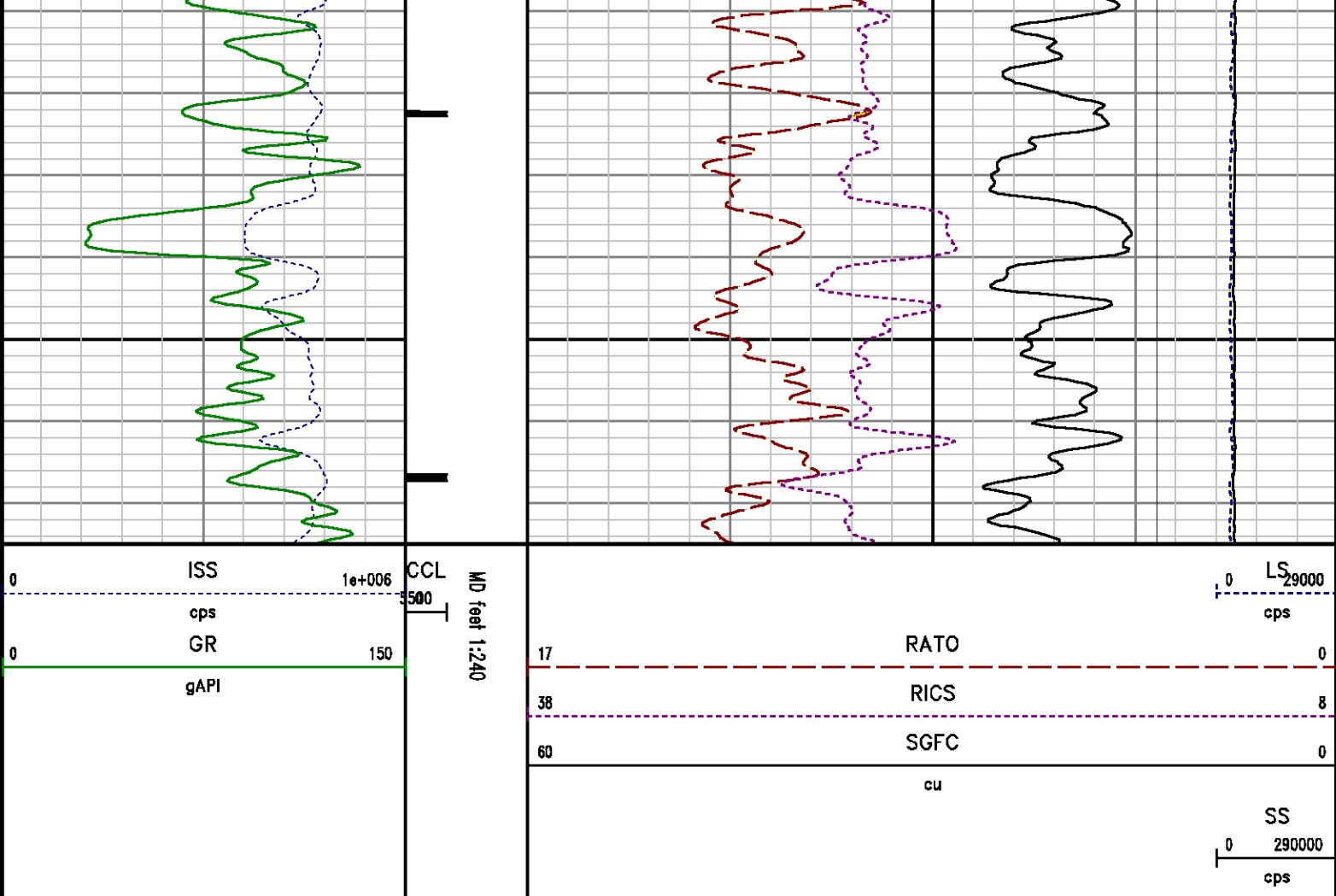
Mode : PlotMgr 5.4.504

Interval : 8275.00 - 8575.00 feet UP

Created : 4/20/2014 11:49:50 AM







CALIBRATION SUMMARY

PNC

Calibration File: C:\case\calver\PNC\3451B.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Apr 17 10:23:18 2014 TOOL SERIES: 8281XA ASSET: 345 SEQ: 18

Calibrator #

GJSHOP GJSHOP

Source #

8281AA 10148476

	ISS	Mtr Vlt's (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	812078	120.00	2283.00	2265.00	2258.00	107.37	7.00	0.9749
Interpolated	1300000	139.37	2267.43	2261.35	2253.50			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	812078	7021.53	1098.76	151.00	25.92	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	812078	168394.25	25960.87	88031.50	31323.65	8115.32	53237.23	12994.11
Fit Quality %		0.77	0.97	0.98	0.96	0.80	0.88	0.87

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	812078	1.43	4.82	31.28	15.25	10.85	3.86	4.10
		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 %		0.07	0.19	0.04	0.11	0.14	0.11	0.07
Reduced	1460010	1.43	4.83	31.37	15.29	10.82	3.85	4.09
		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\38219.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Apr 19 16:31:28 2014 TOOL SERIES: 2812LA ASSET: 382 SEQ: 19

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K	51.88	260.02	1.009	52.34	262.34	210.00

Verification File: C:\case\calver\GR\38219.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Sat Apr 19 16:38:08 2014 TOOL SERIES: 2812LA ASSET: 382 SEQ: 19

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	51.54	263.60	1.009	52.00	265.95	213.95

TEMPERATURE

Calibration File: C:\case\calver\TEMP\77456813.cal

CALIBRATION SUMMARY

	T(0)	T(1)	T(2)	T(3)	T(4)	T(5)
Coefficients	-9.274653e+000	1.055639e-001	2.143764e-006	-2.782846e-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

	33.24'
CCL MP	25.15'
MP	22.70'
XLS DETECTOR	16.08'
LS DETECTOR	13.10'
SS DETECTOR	12.88'

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



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

<div>  </div> <div> Baker Atlas </div> <div>  </div>	Company	WPX ENERGY		File No:	CH084708	
	Well	SAVAGE RWF 321-25				
	Field	RULISON		API No:	05045219700000	
	County	GARFIELD	State	CO		
Location			Elevations			
SHL: 2437' FNL & 1436' FWL			KB	6058 ft	25 6S 94W	
BHL: 132' FNL & 2005' FWL			DF		RWF 22-25 PAD	
			GL	6037 ft	CYCLONE 17	
SEC 25 TWP 6S RGE 94W						