



# RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No: CH089882

Company Well WPX ENERGY SAVAGE RWF 533-25

API No: Field RULISON

County GARFIELD State COLORADO

05045219930000

Location

SHL: 1154' FSL & 1391' FEL

RWF 43-25 PAD BHL: 1465' FSL & 1679' FEL (NWSE)

25 6S 94W SEC 25 TWP 6S RGE 94S

NABORS 677

Other Services

BOND LOG

Permanent Datum GL Elevation 6234 ft

Log Measured From KB 26 ft Above P. D.

Drill Measured From KELLY BUSHING

Elevations

KB 6260 ft

DF

GL 6234 ft

Date	31/AUG/14	
Run	ONE	
Service Order	US089882J	
Depth Driller	8771 ft	
Depth Logger	8731 ft	
Bottom Logged Interval	8721 ft	
Top Logged Interval	4551 ft	
Time Started	1200	
Time Finished	1730	
Operator Rig Time	5.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	74 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	244 degF	
Reference Log	BAKER HUGHES BOND LOG	
Reference Log Date	31/AUG/14	
Equipment No.	4271	GRAND UCTION
Recorded By	FLOYD RENEAU	
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	1102 ft
8.75 in	1102 ft	8771 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			26 ft	1102 ft
4.5 in	11.6 lbm/ft	1-80	26 ft	8771 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 8/31/2014 at the client's request.
The amount of linear shift is 4.5 feet.
Logged in PNC-3D mode.
BHT = 244°F
SJ = 5111'-5131'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	TEMP	8255XA	Z120516	FREE
1	1	RPM	8281FA	10401926	FREE
1	1	RPM	8281PA	10414345	FREE
1	1	RPM	8281EA	10190984	FREE
1	1	GR	2812LA	10274382	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		4529.812	8732.999
PNC Porosity	Borehole Size	8.750	inch	4529.812	8732.999
PNC Porosity	Casing Size	4.500	inch	4529.812	8732.999
PNC Porosity	Gas Filled	Non Gas Filled		4529.812	8732.999
PNC Porosity	Matrix	Sandstone		4529.812	8732.999
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	4529.812	8732.999

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	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					
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 533-25

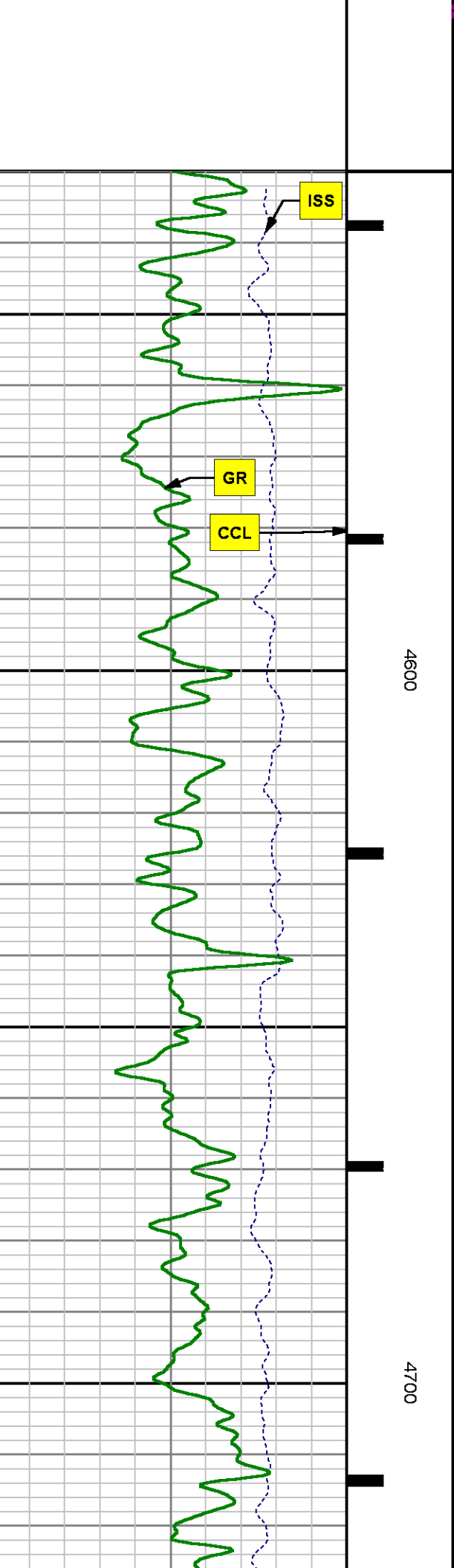
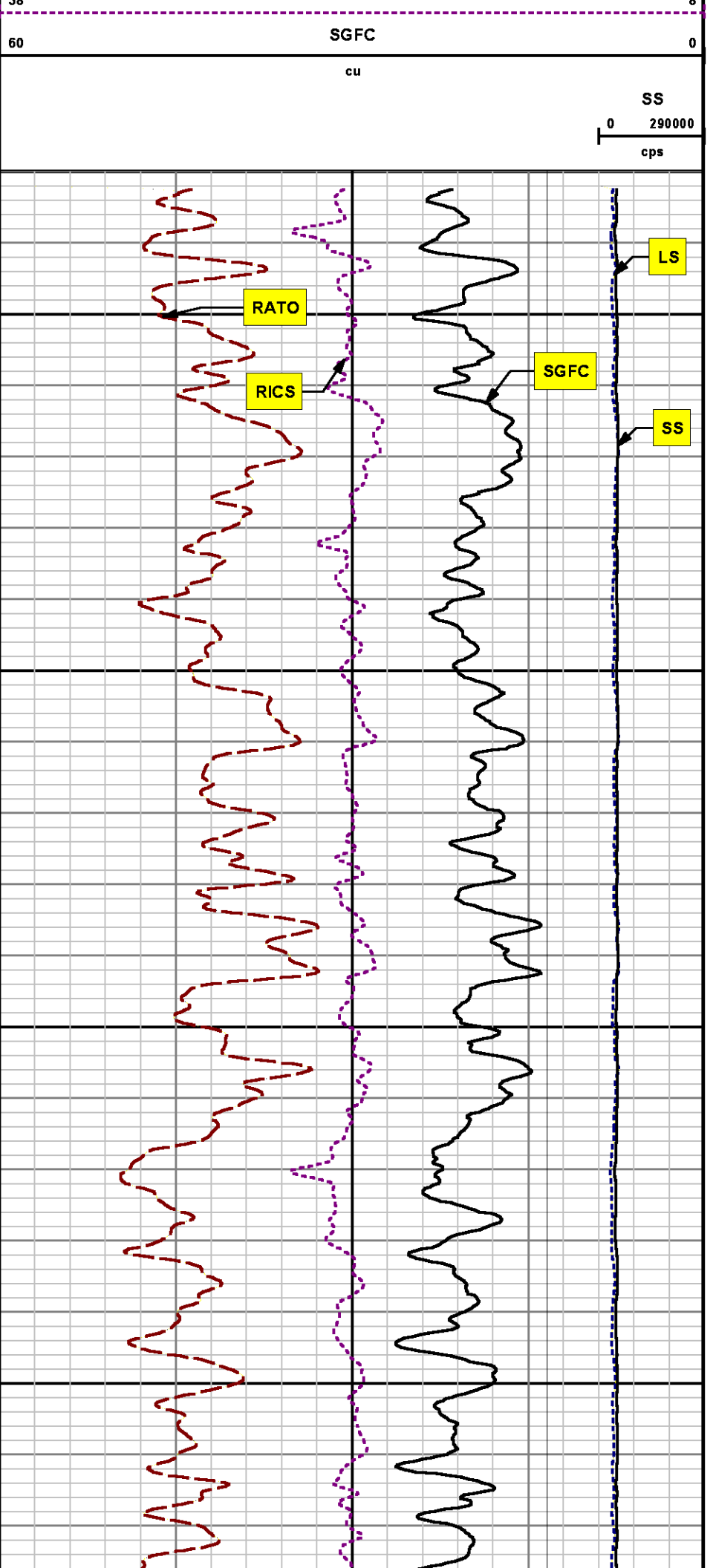
File Name : d:\welldata\wpx\rwf 533-25\rpm533\main.xtf

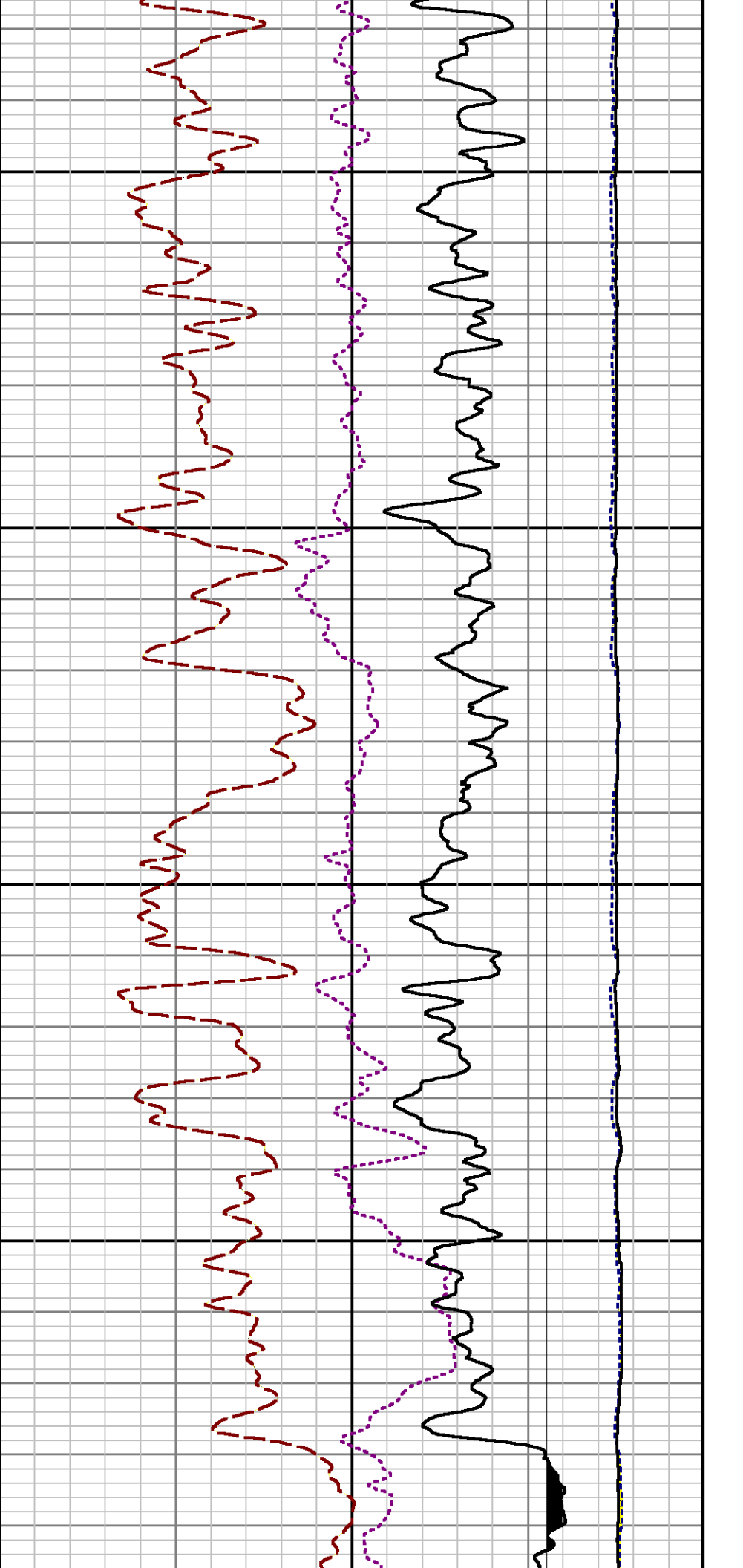
Mode : PlotMgr 5.4.504

Interval : 4530.00 - 8734.00 feet UP

Created : 8/31/2014 12:16:59 PM

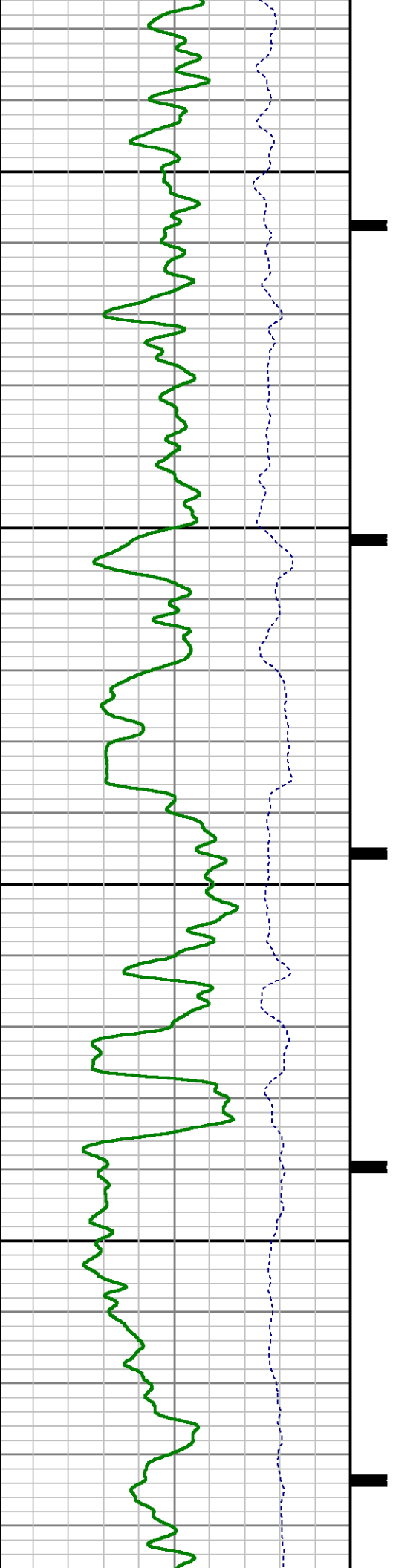


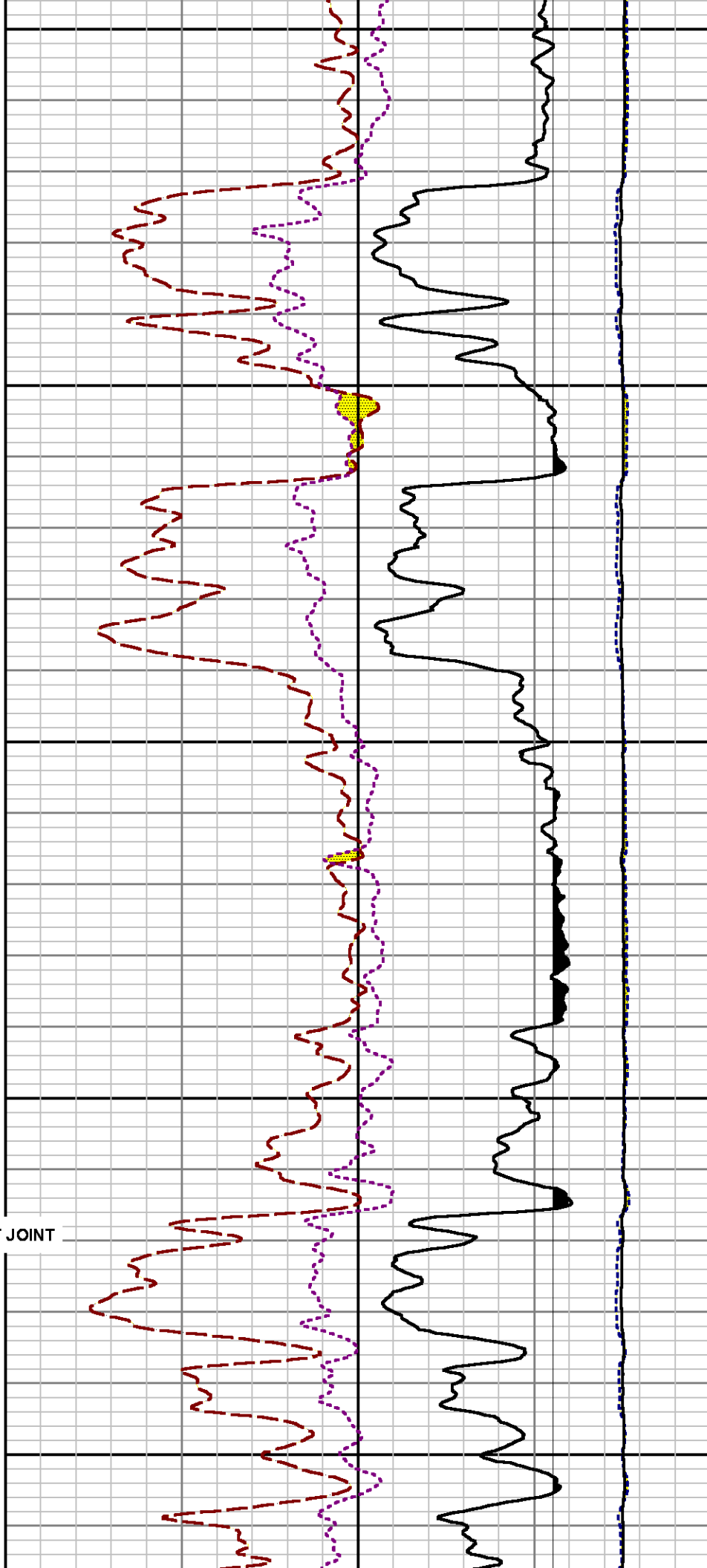




4800

4900

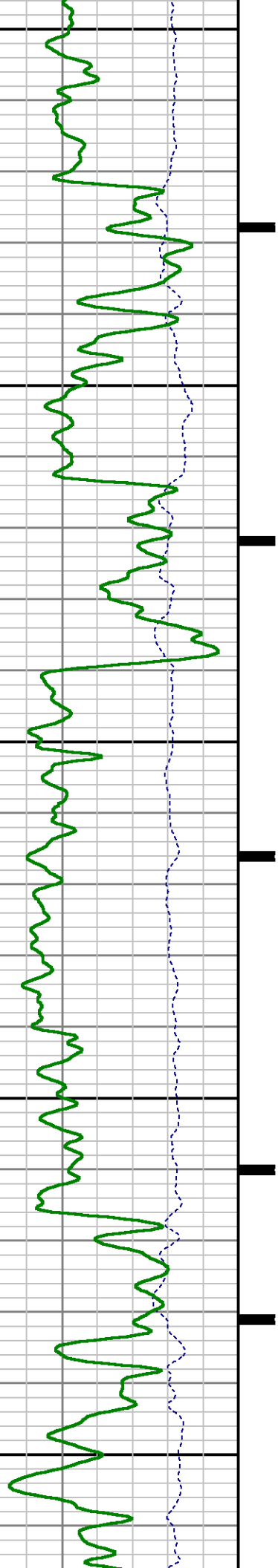


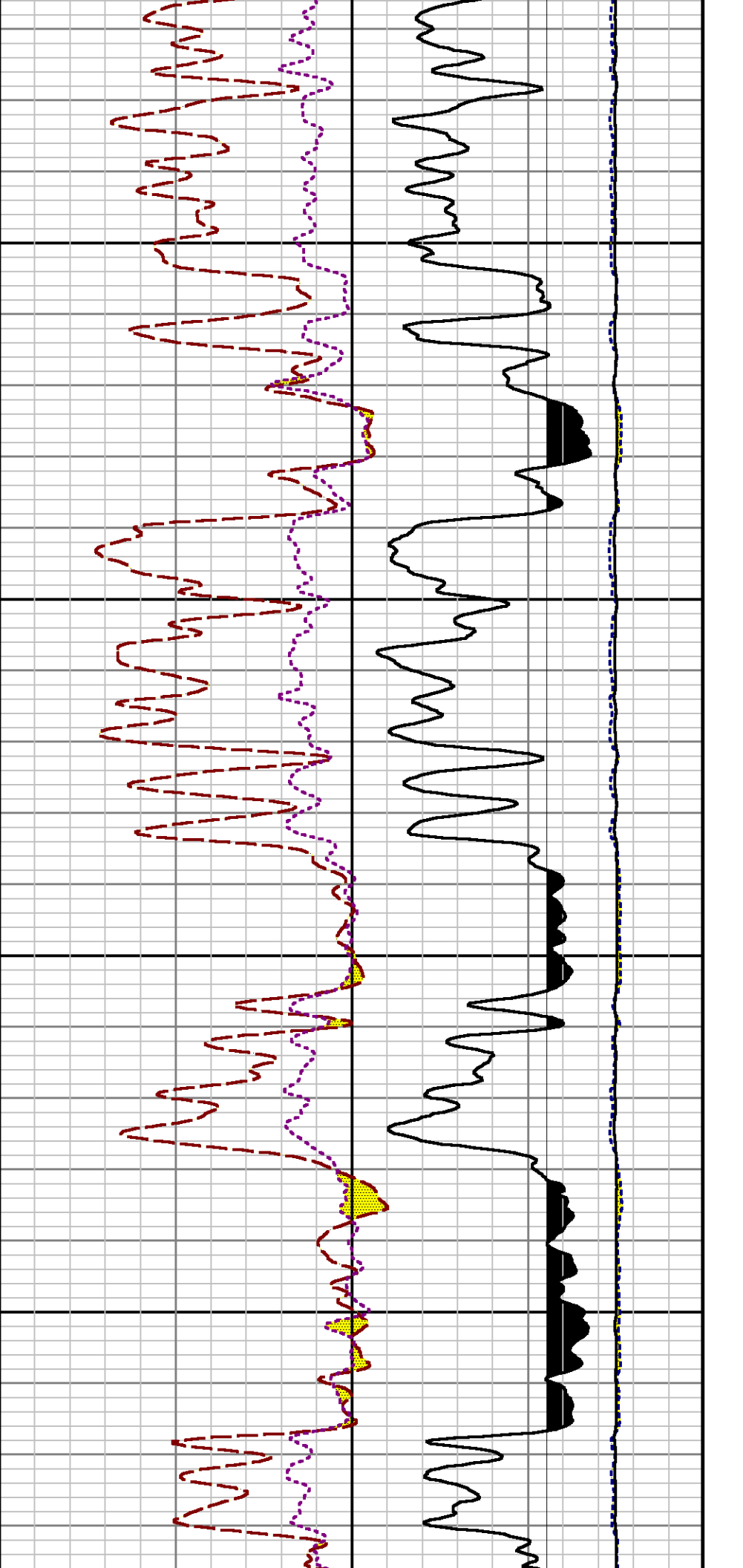


5000

5100

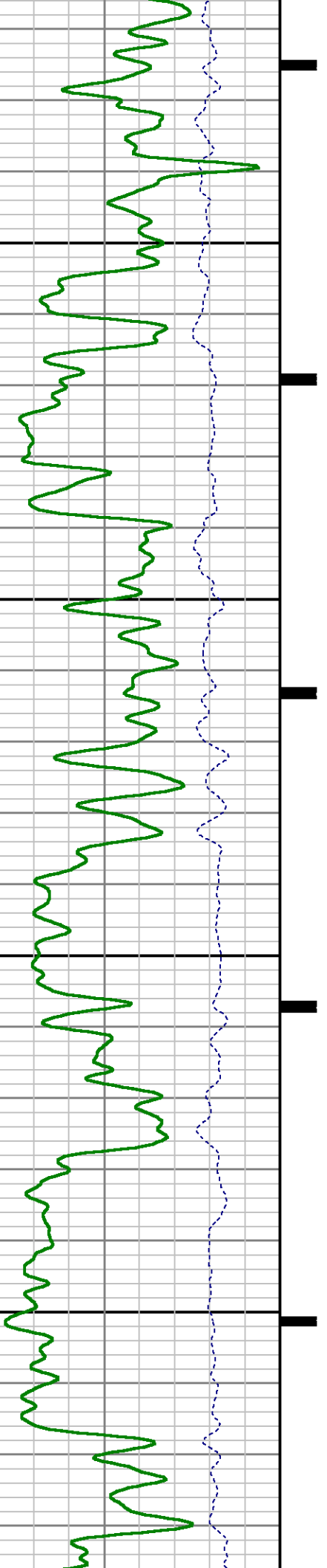
SHORT JOINT

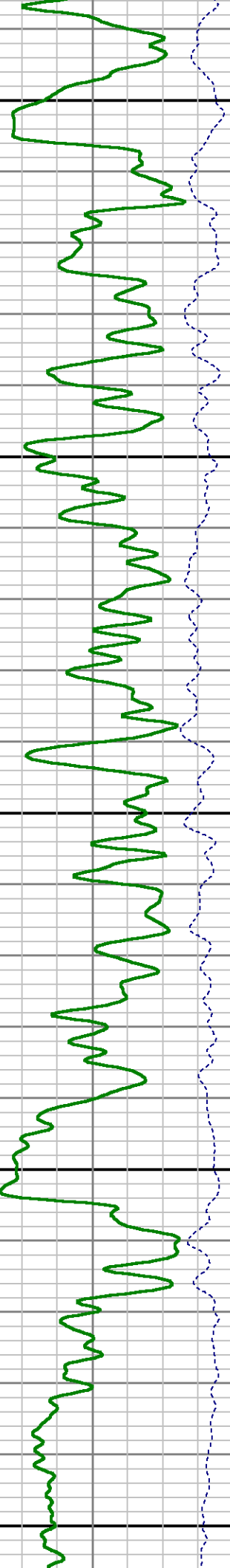
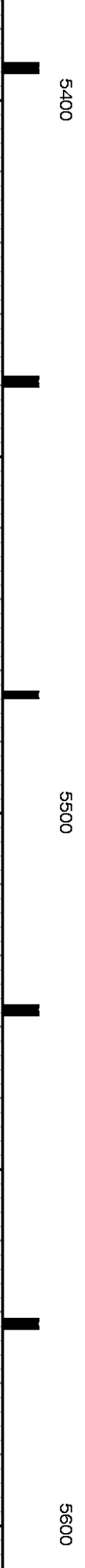
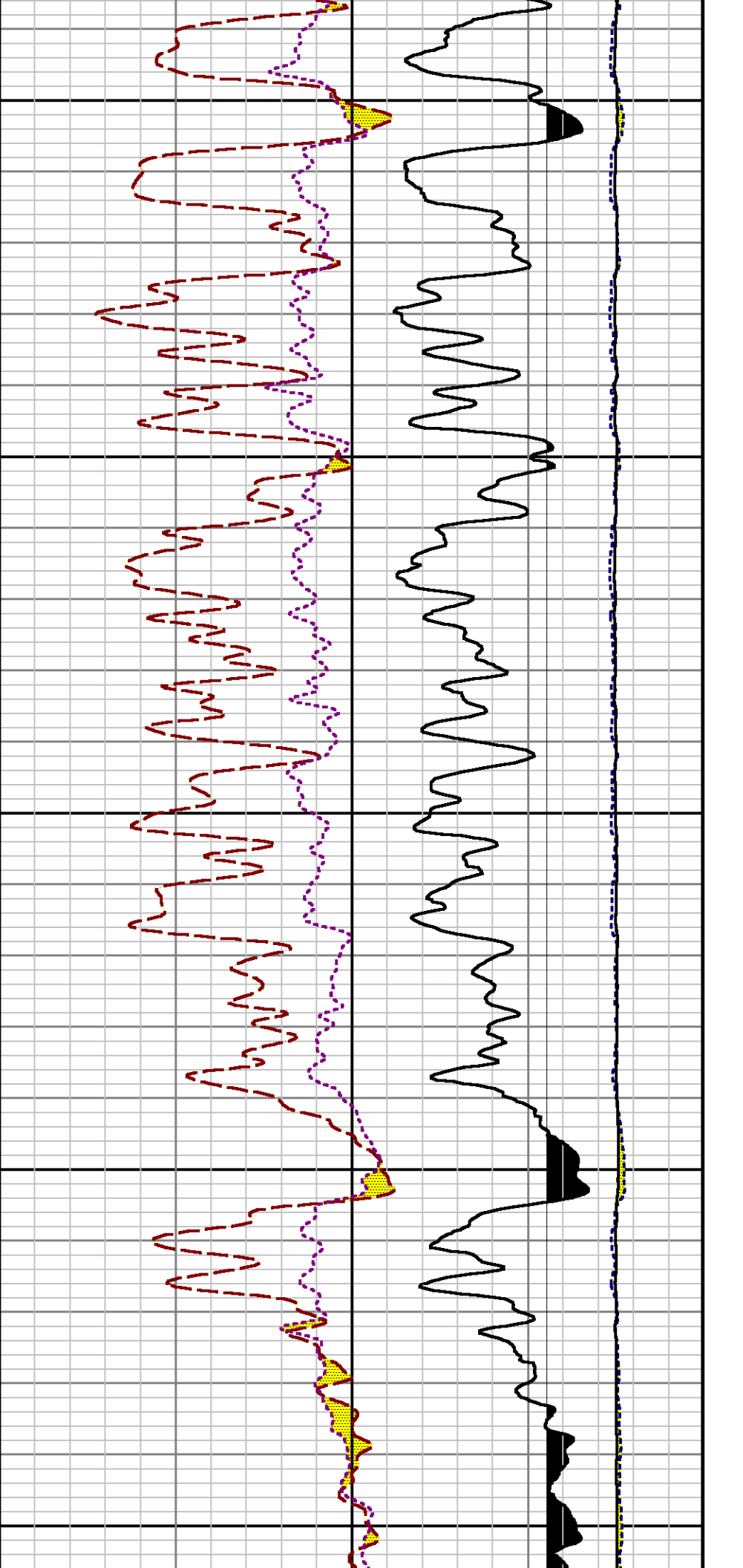




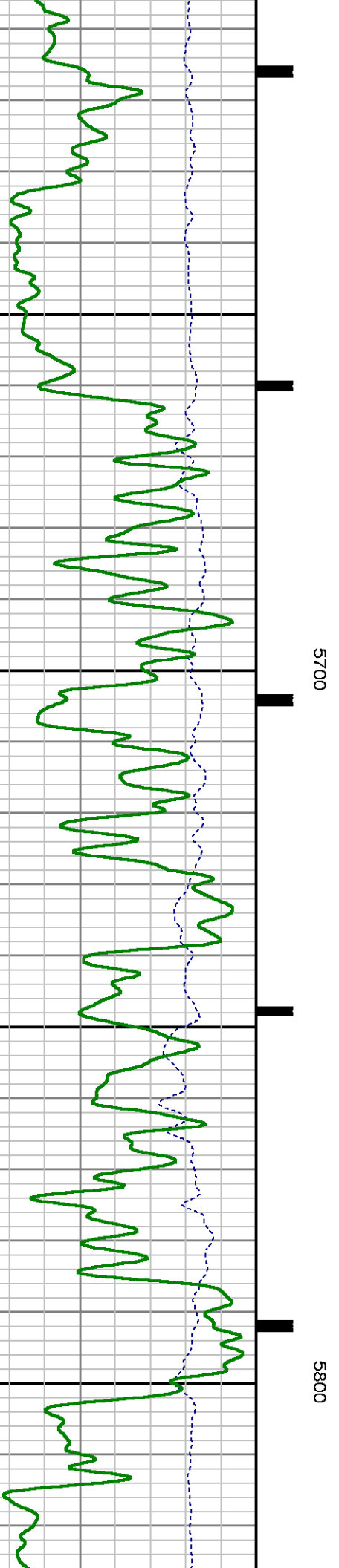
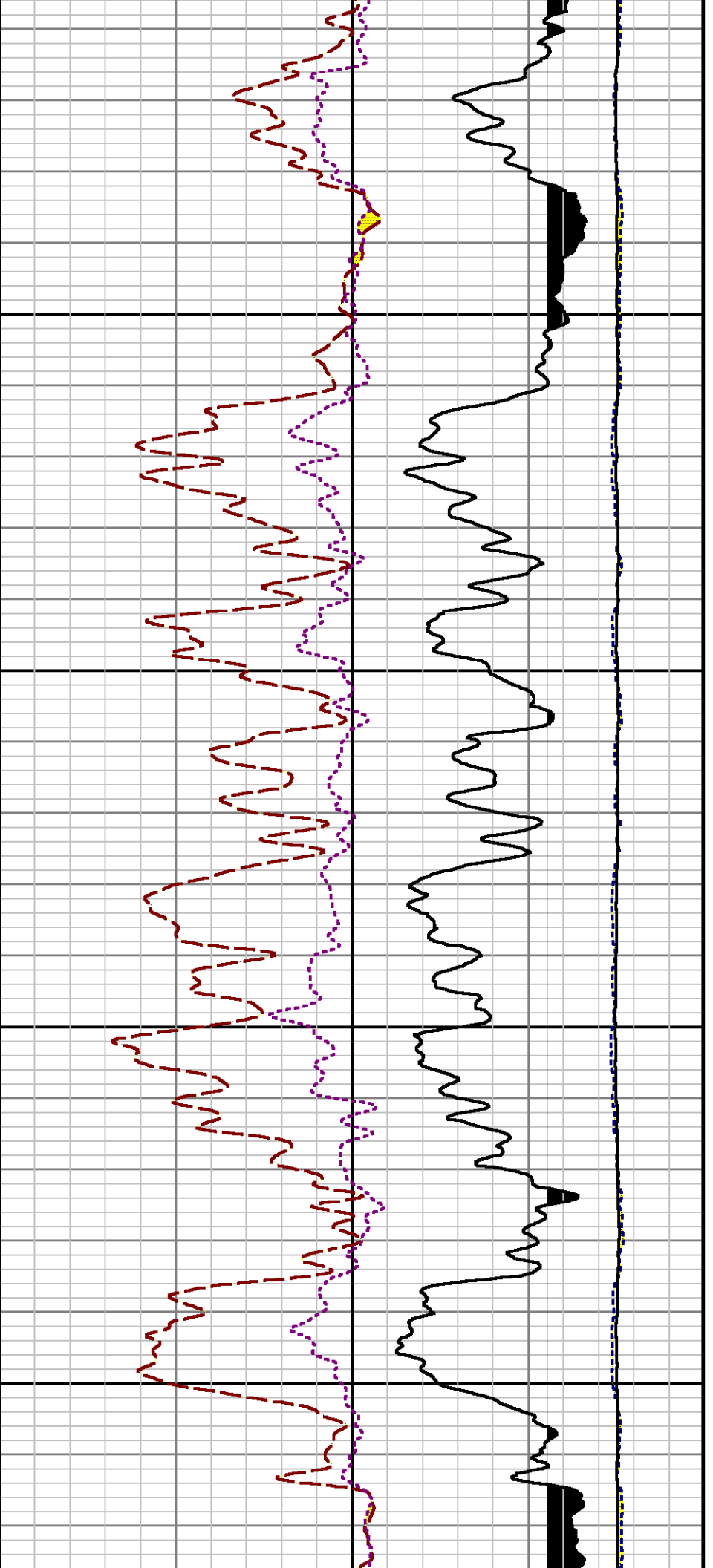
5200

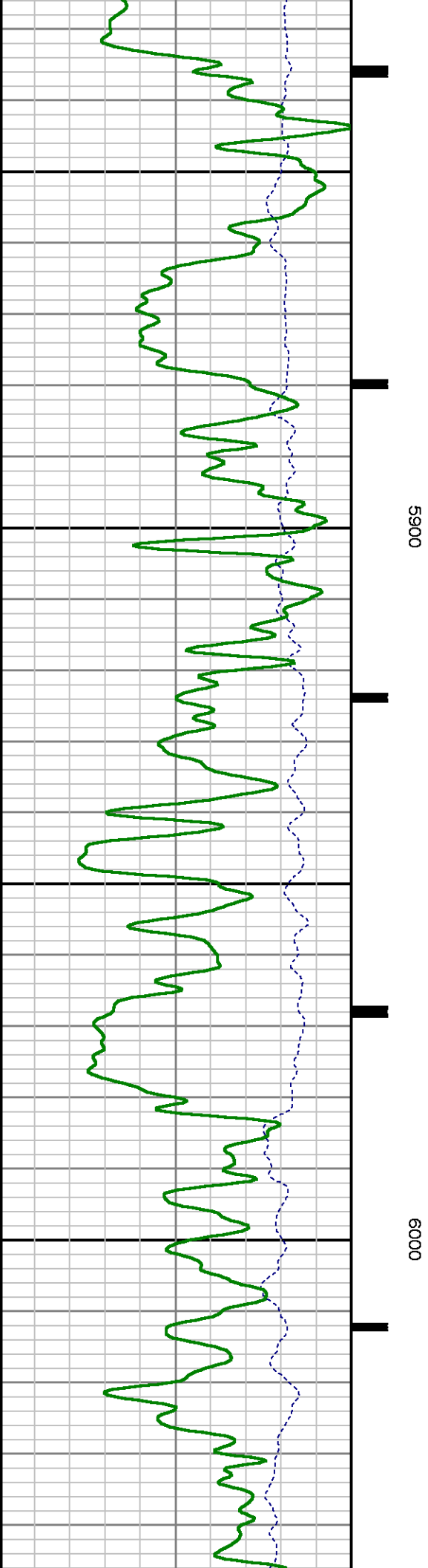
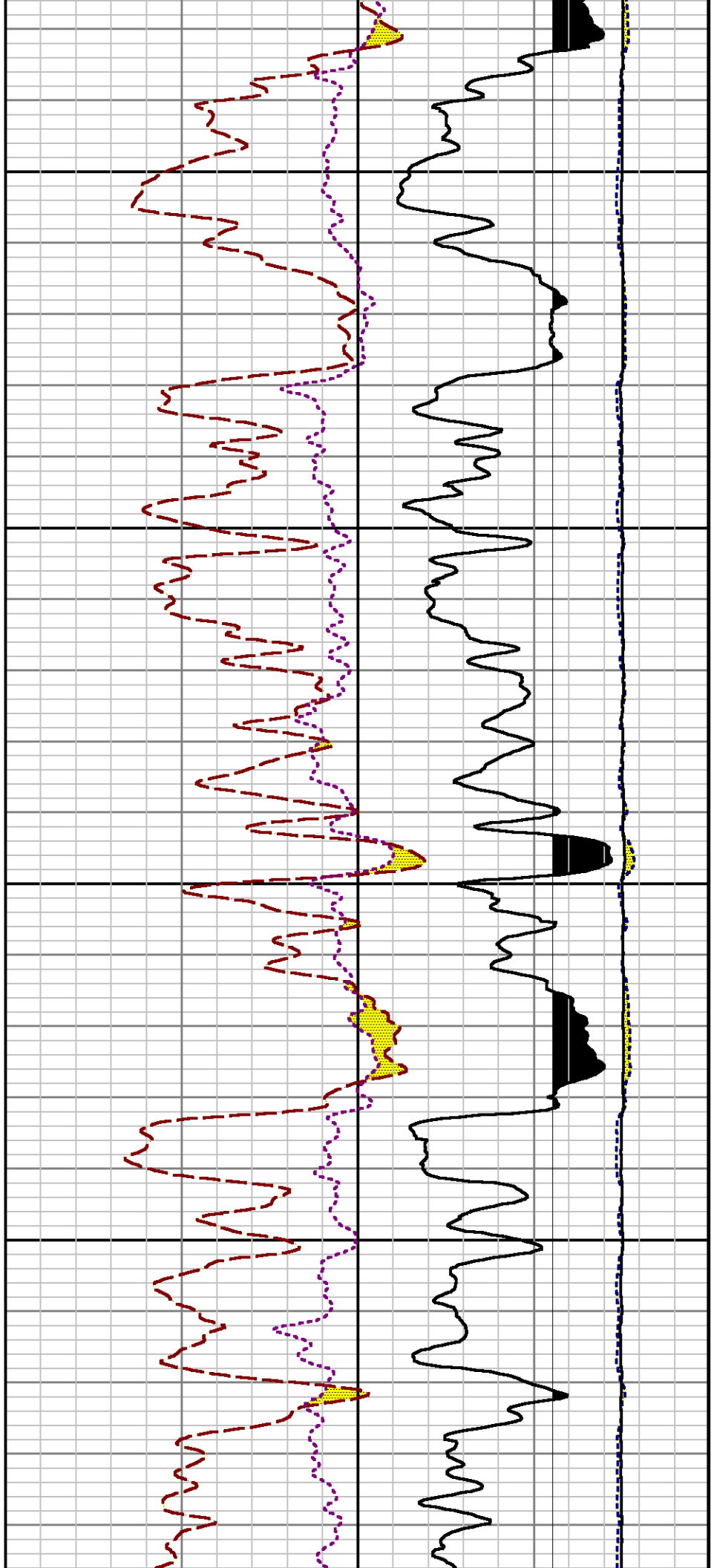
5300

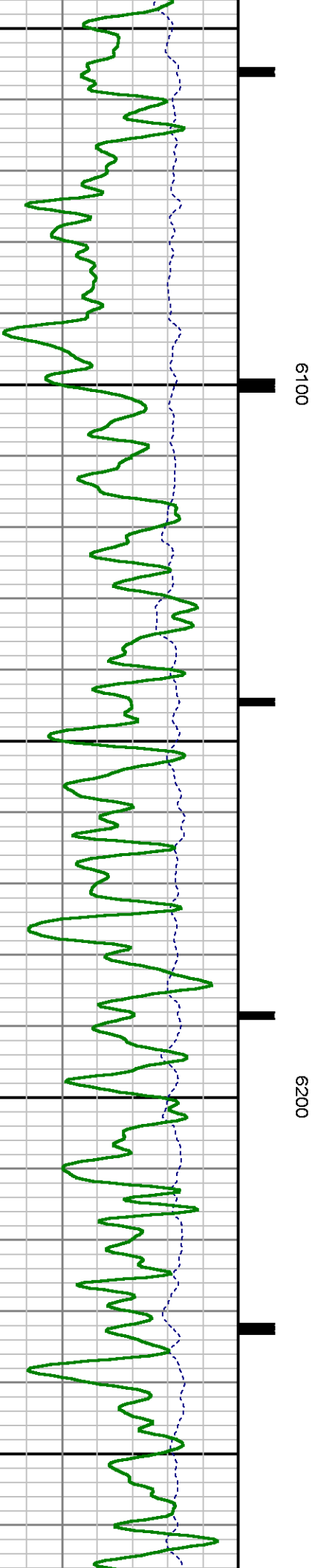
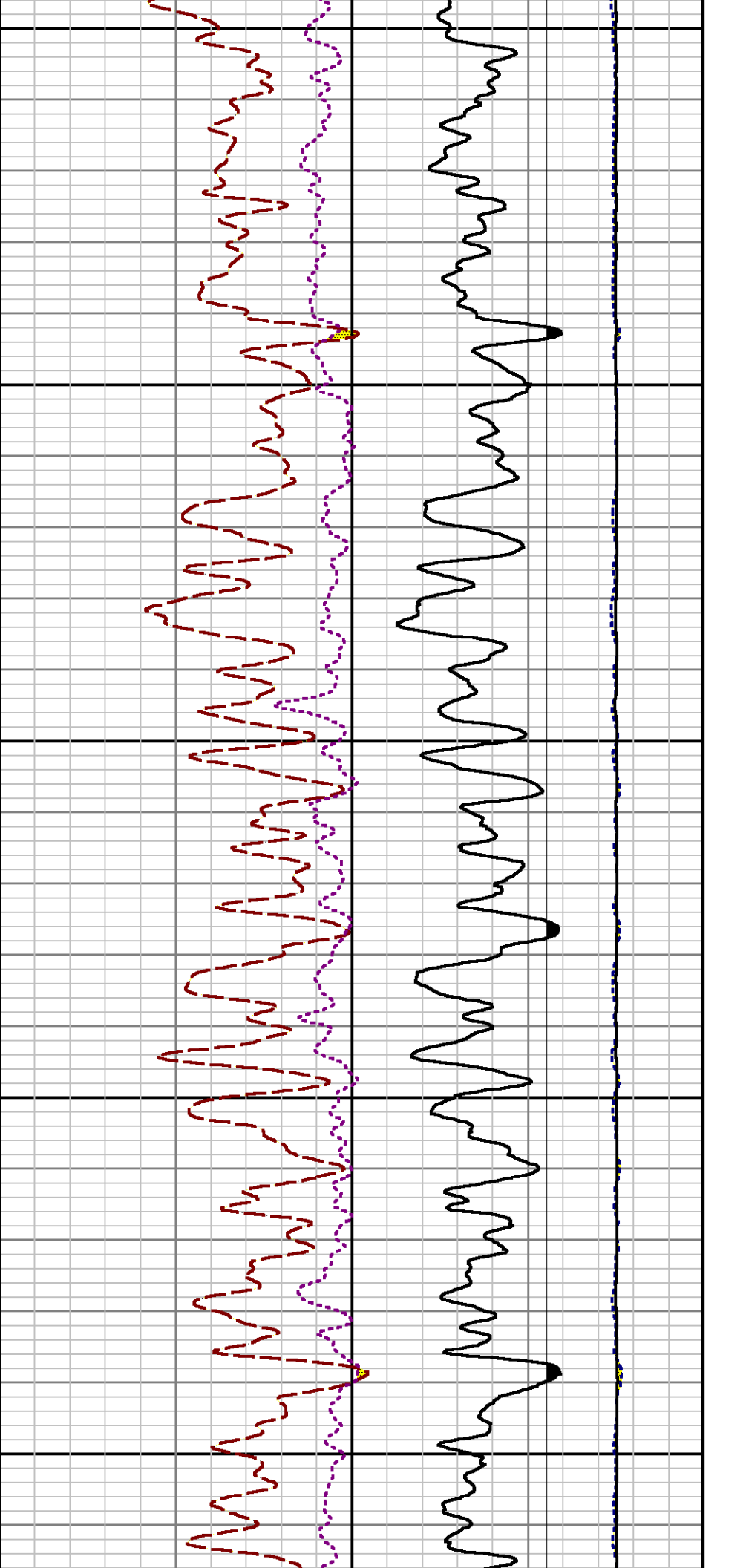


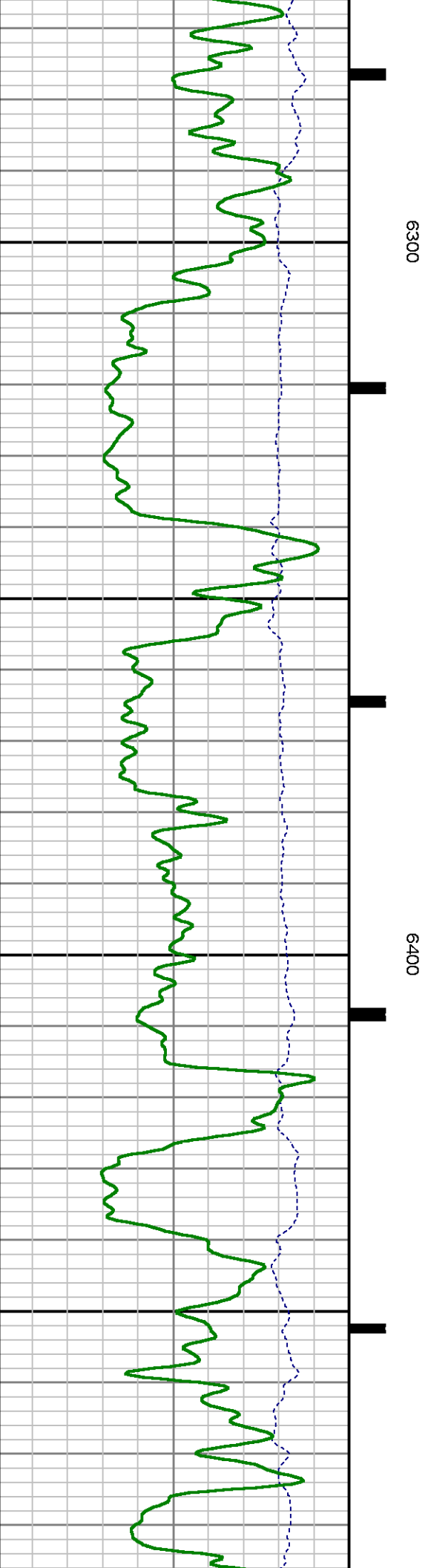
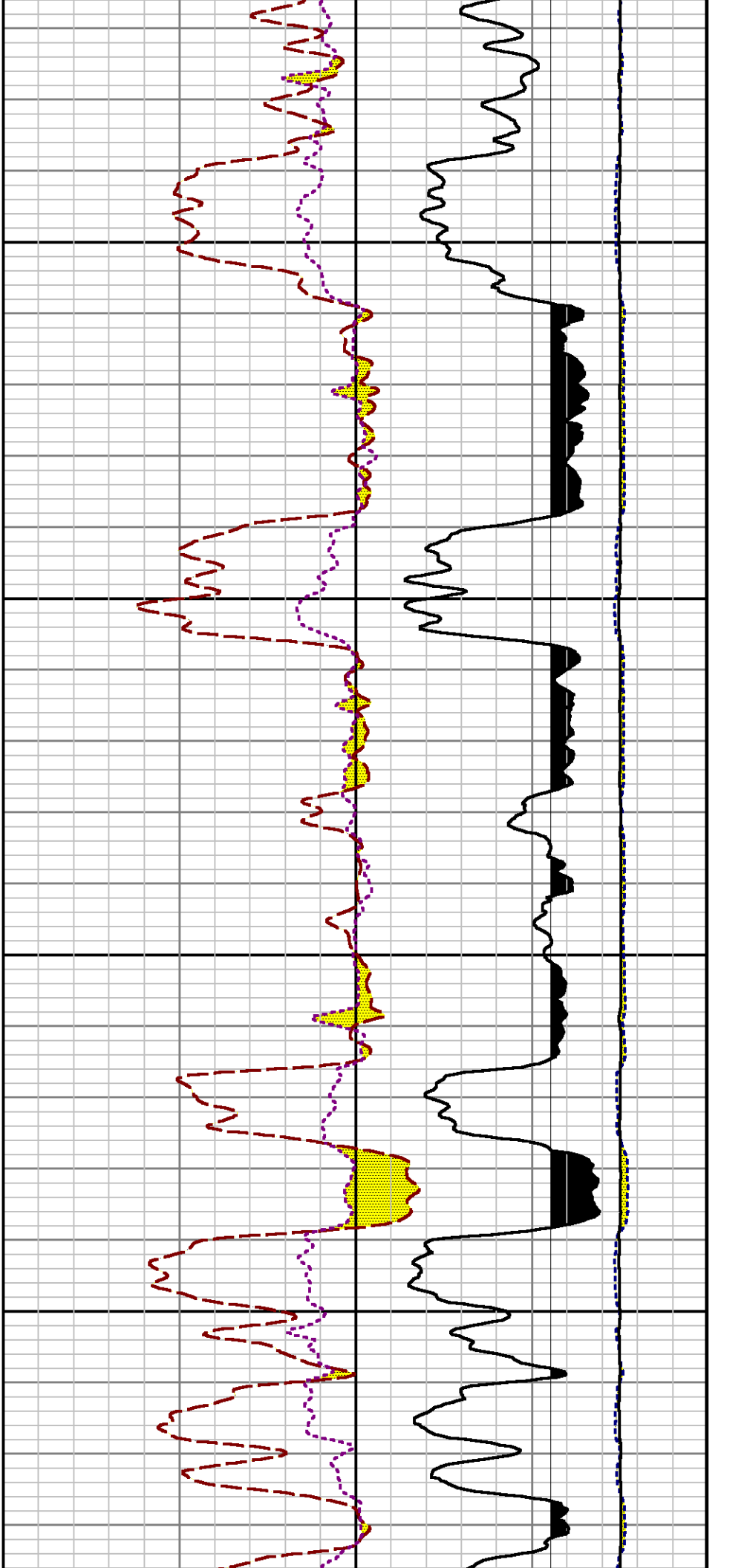


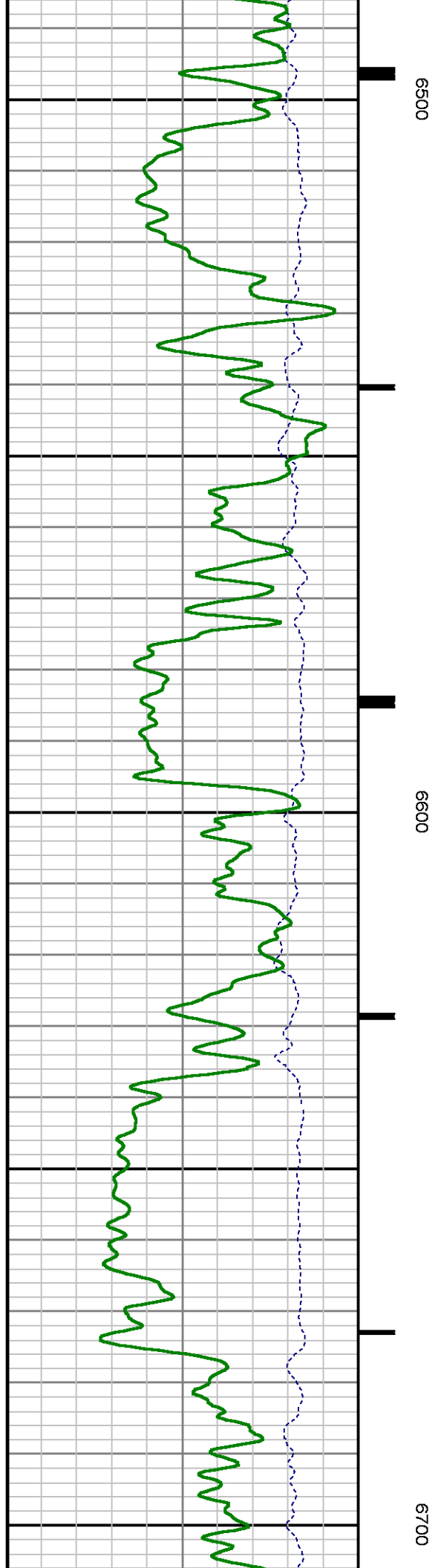
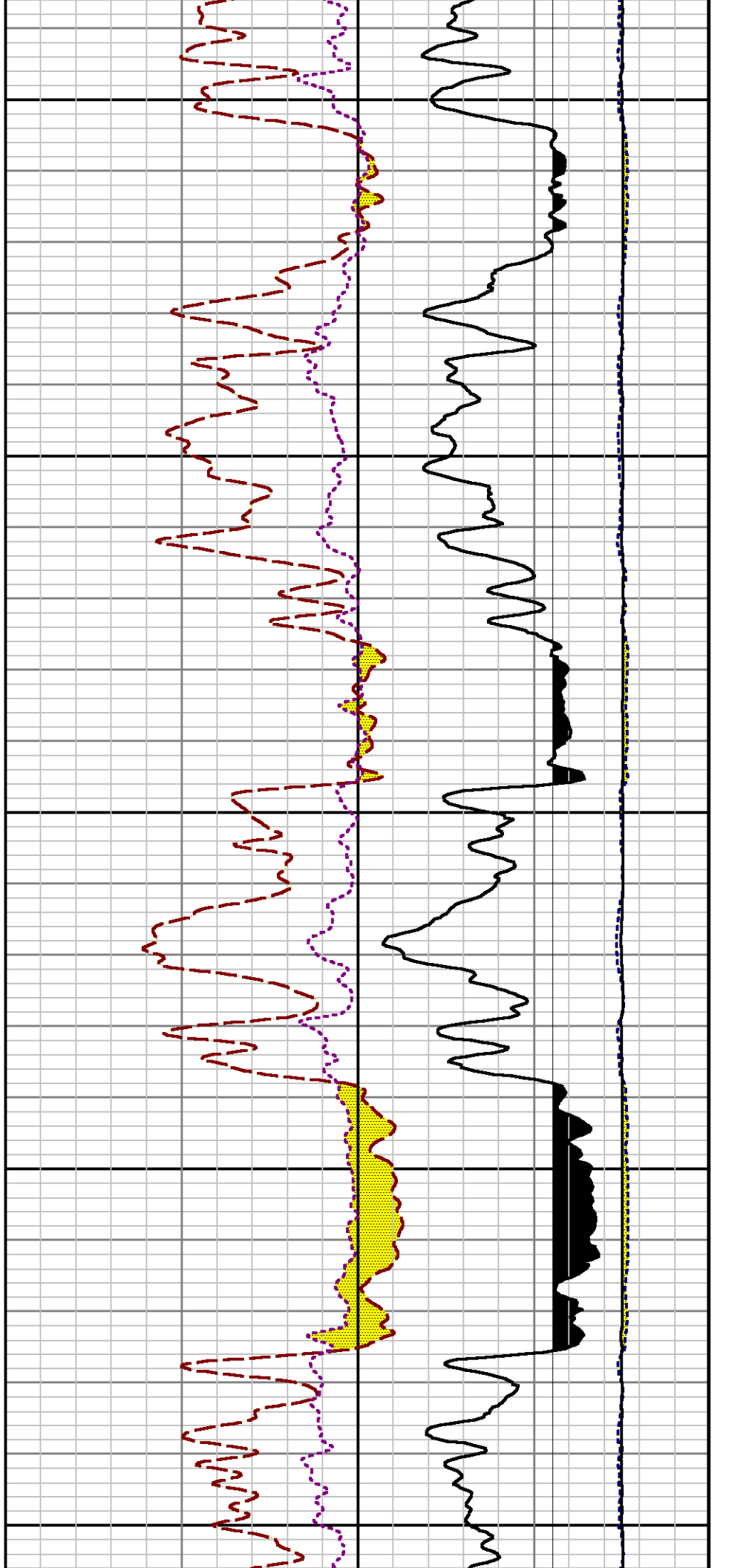


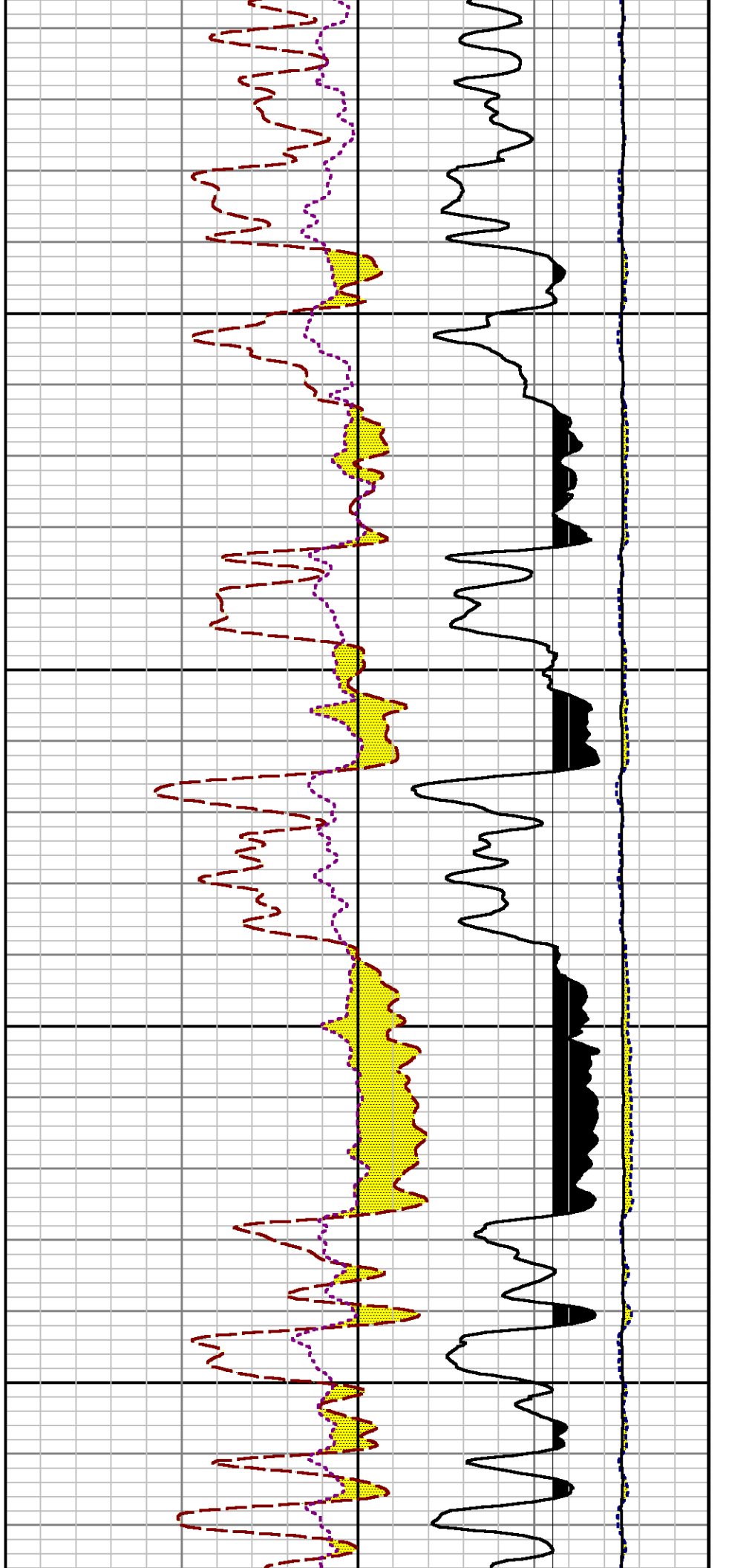
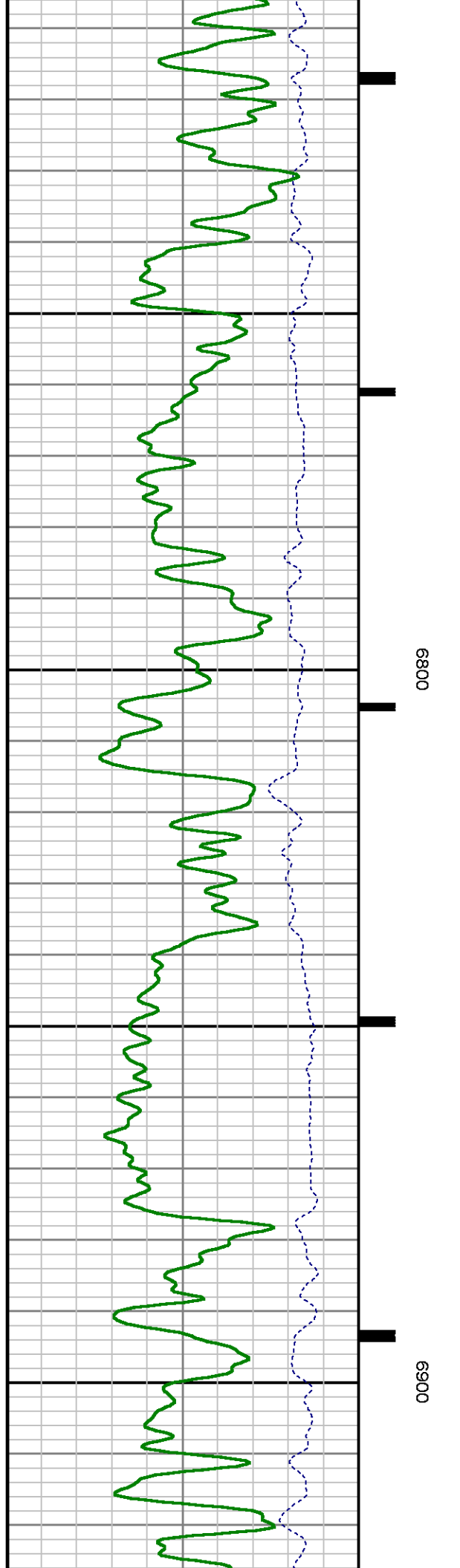


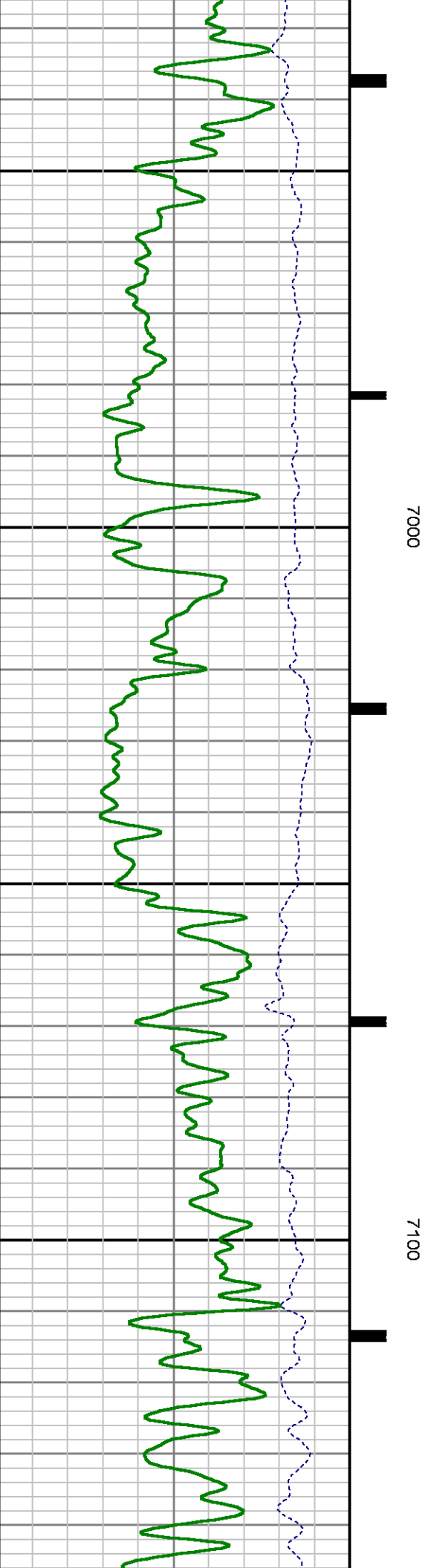
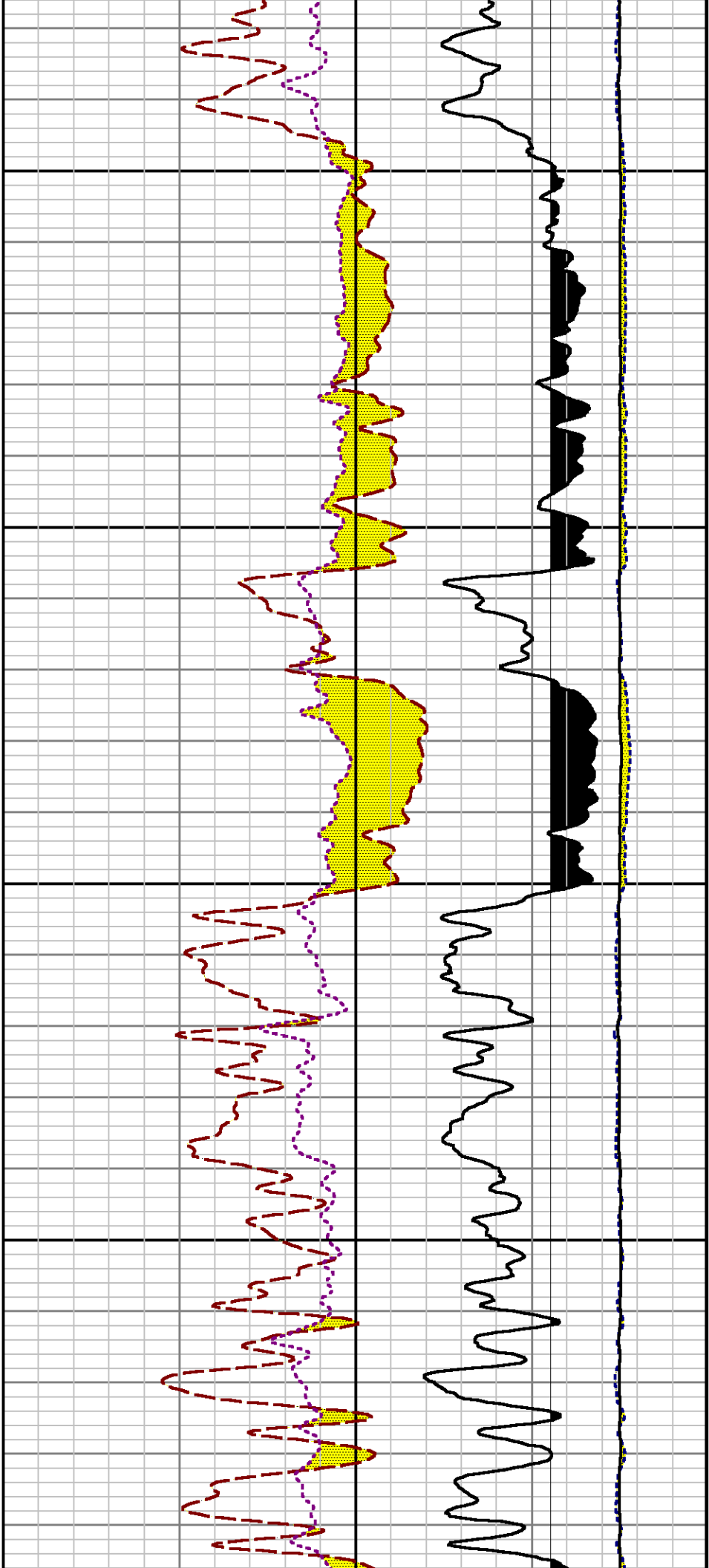


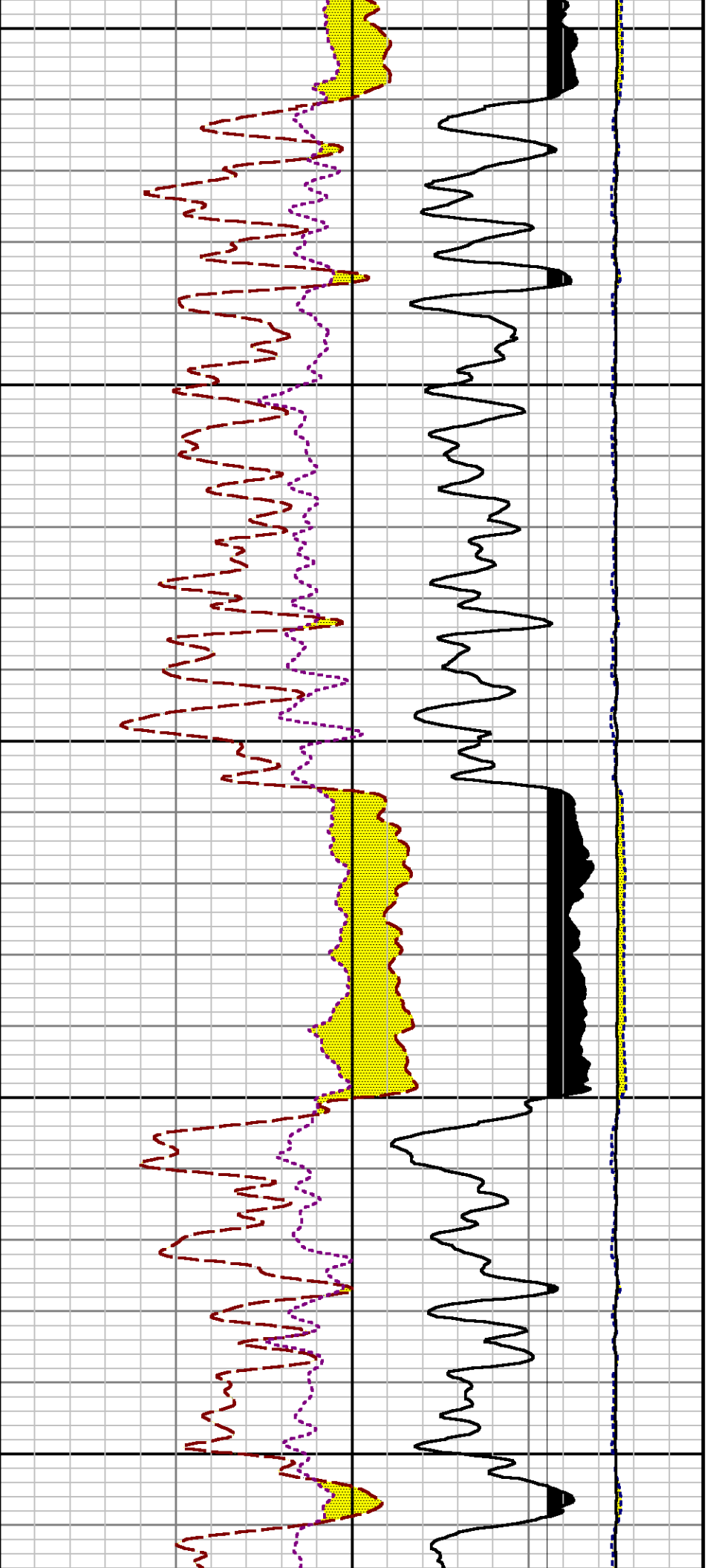






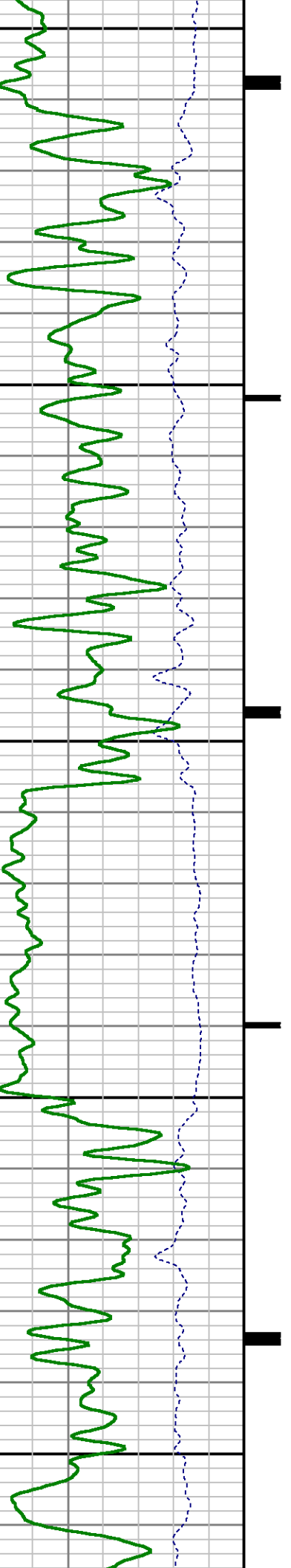




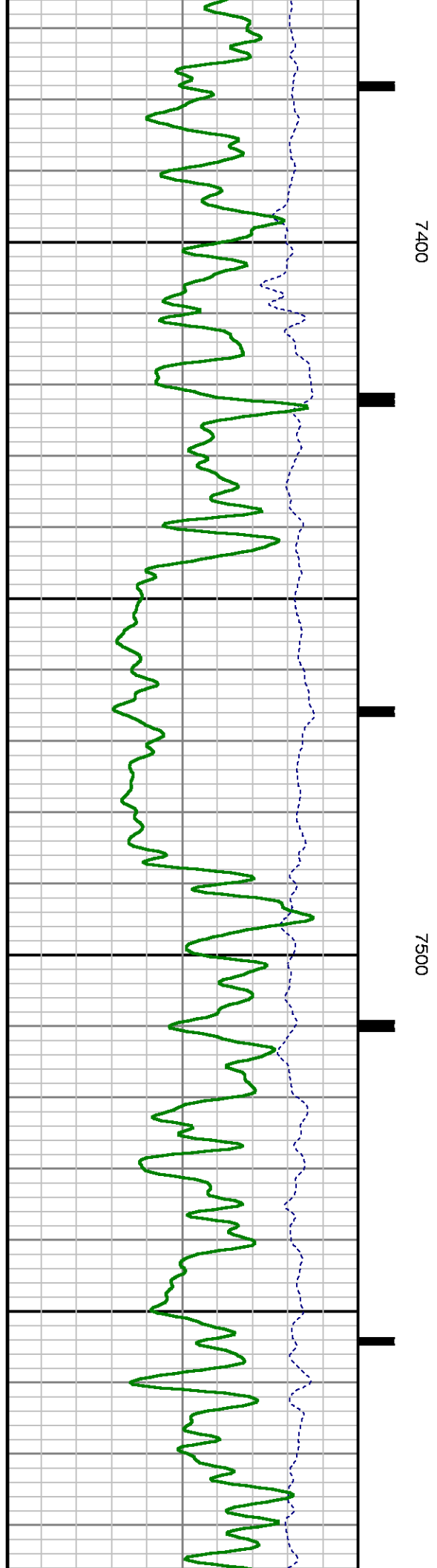
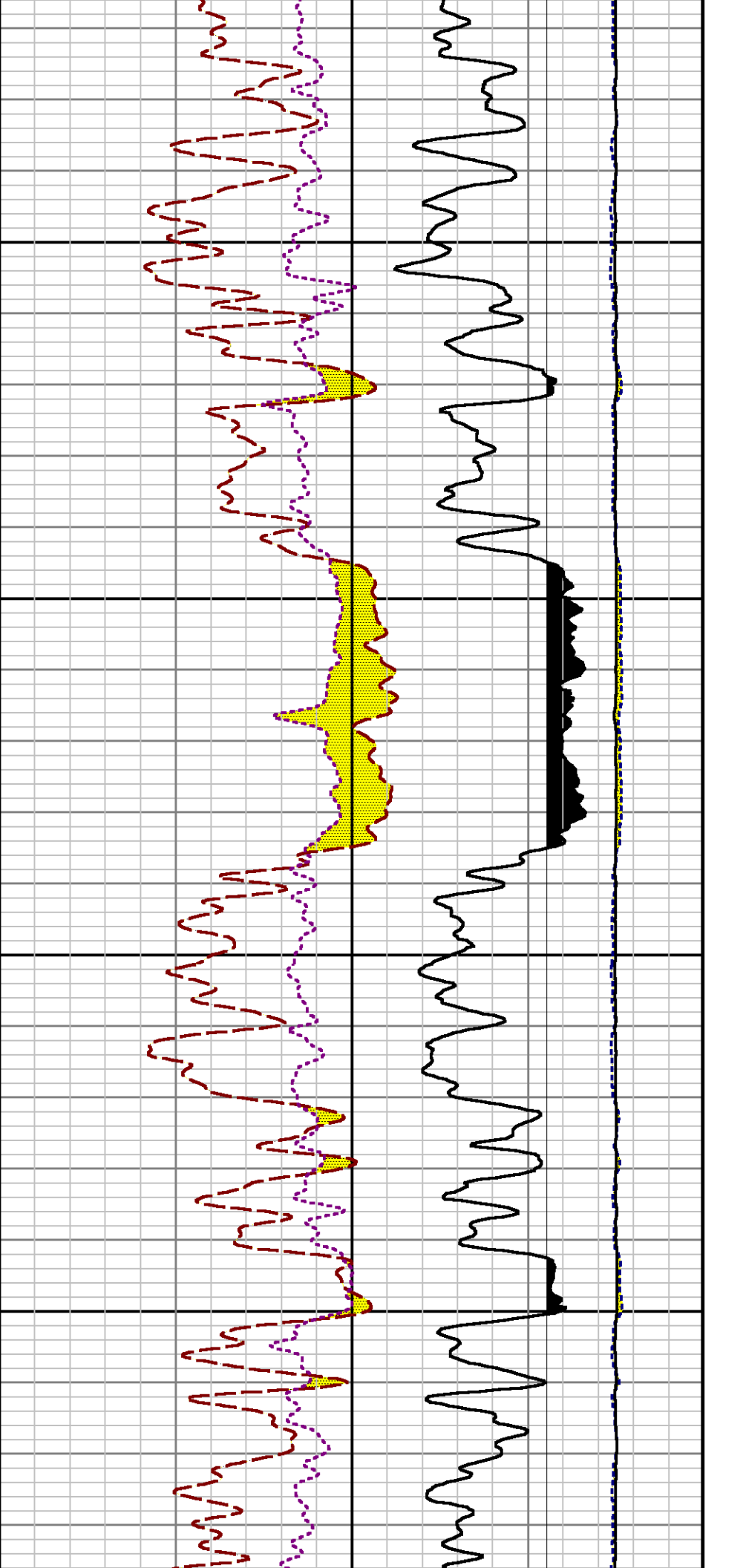


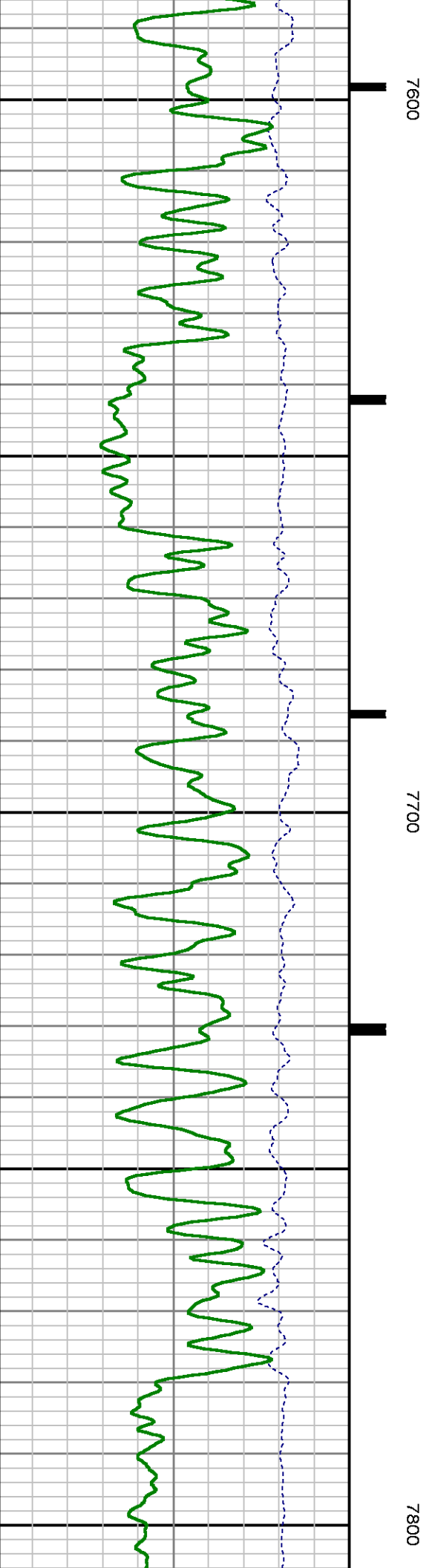
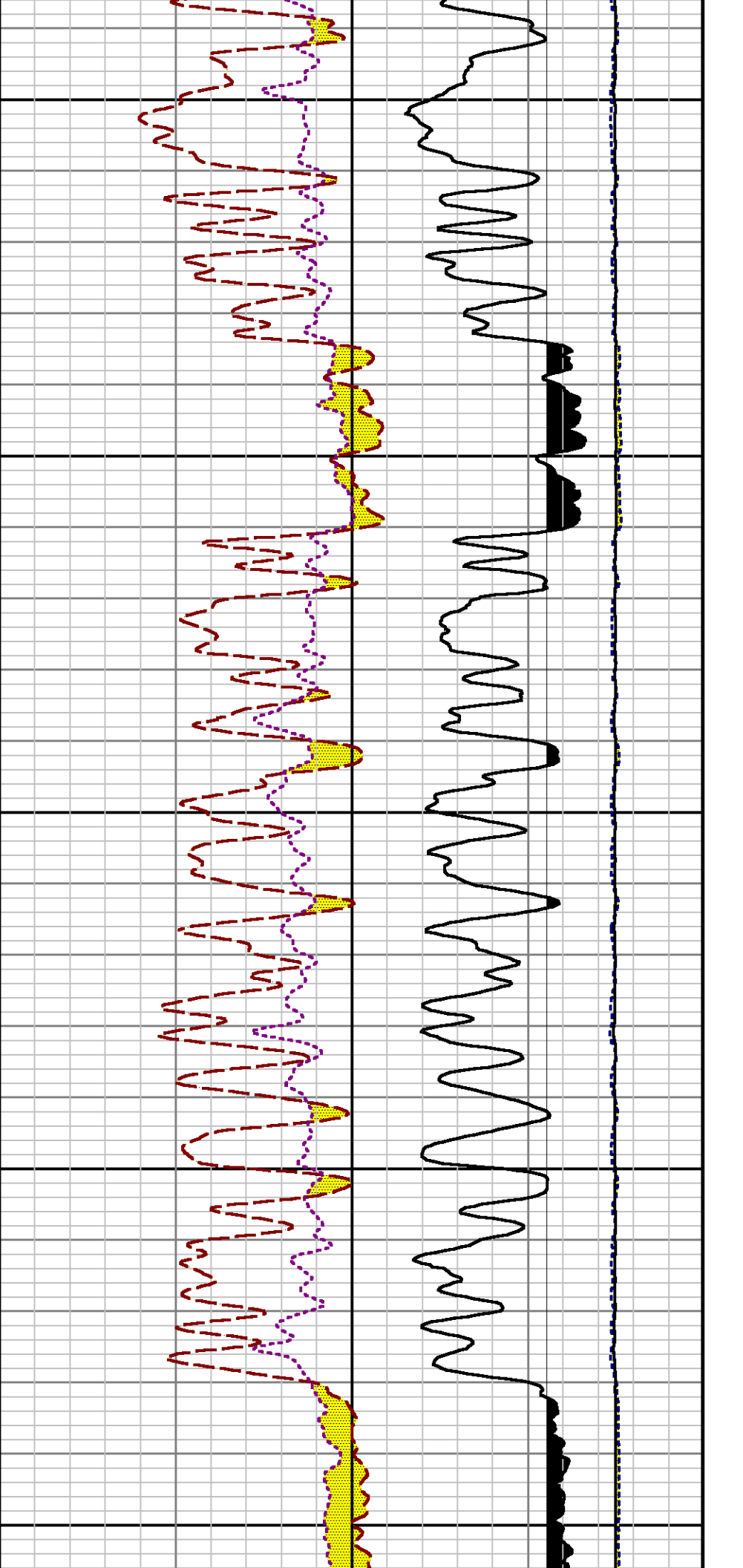
7200

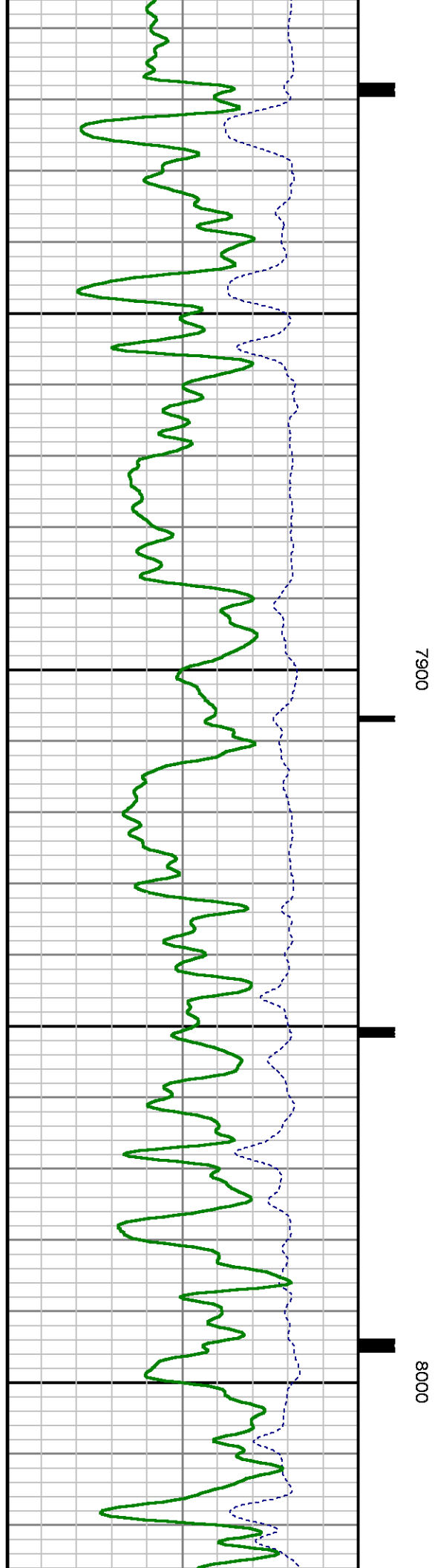
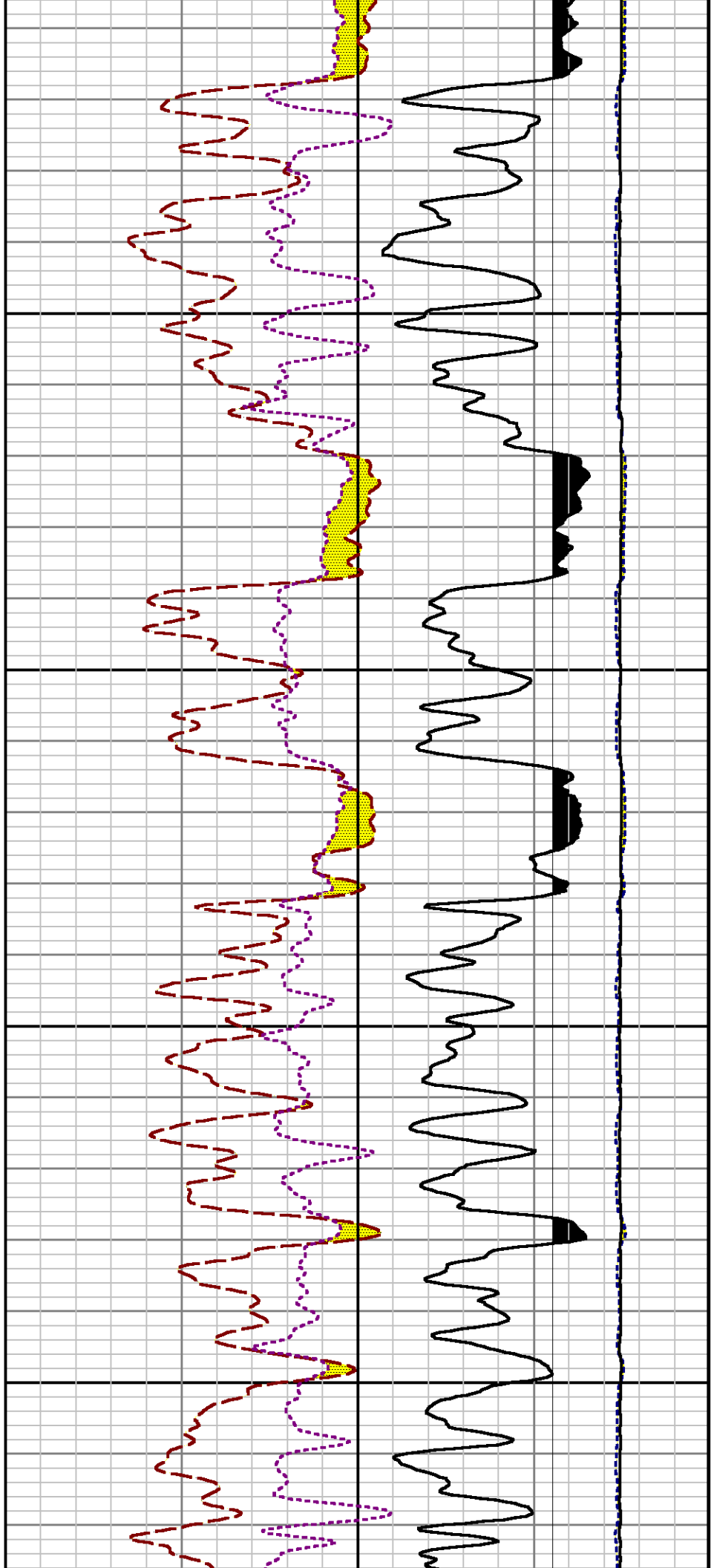
7300

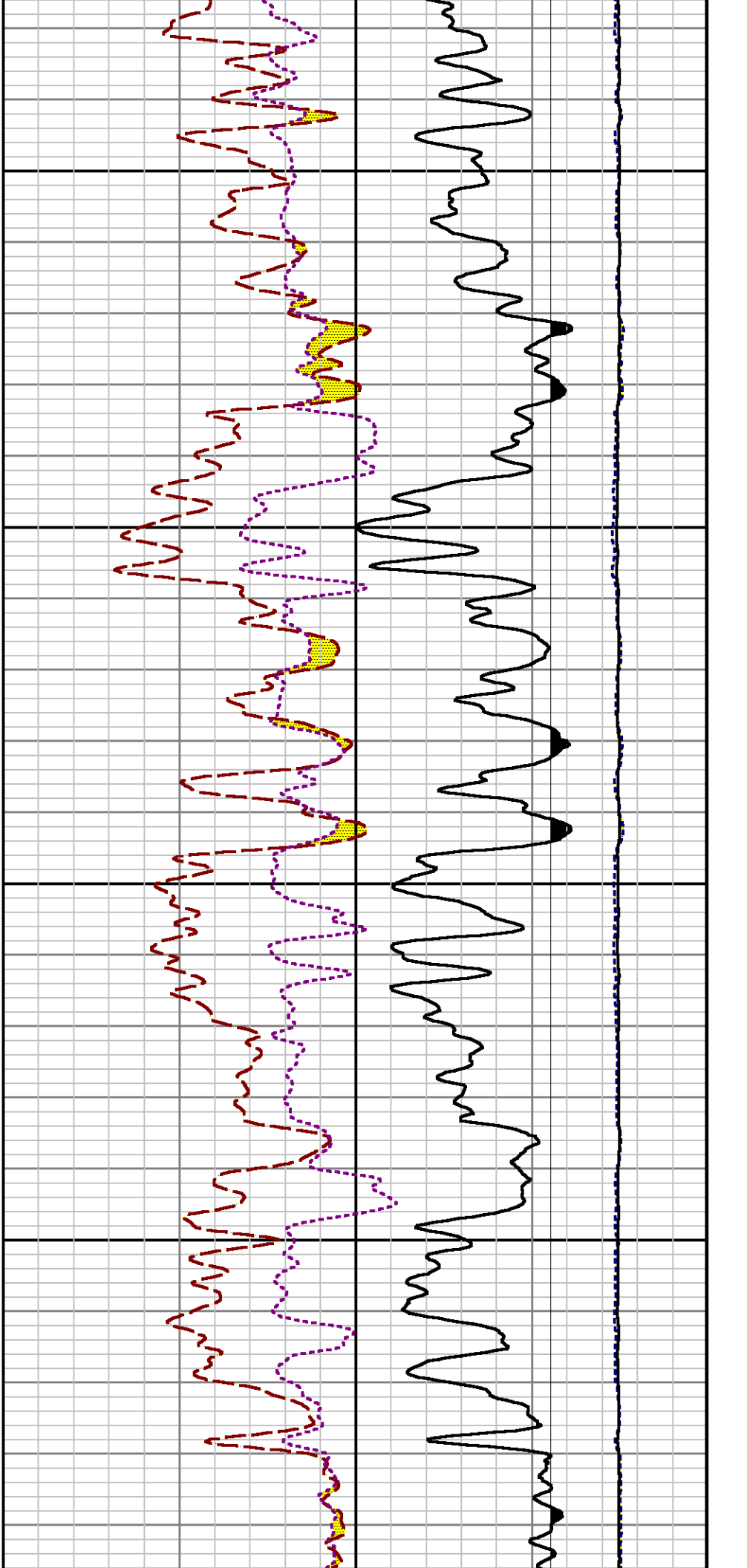






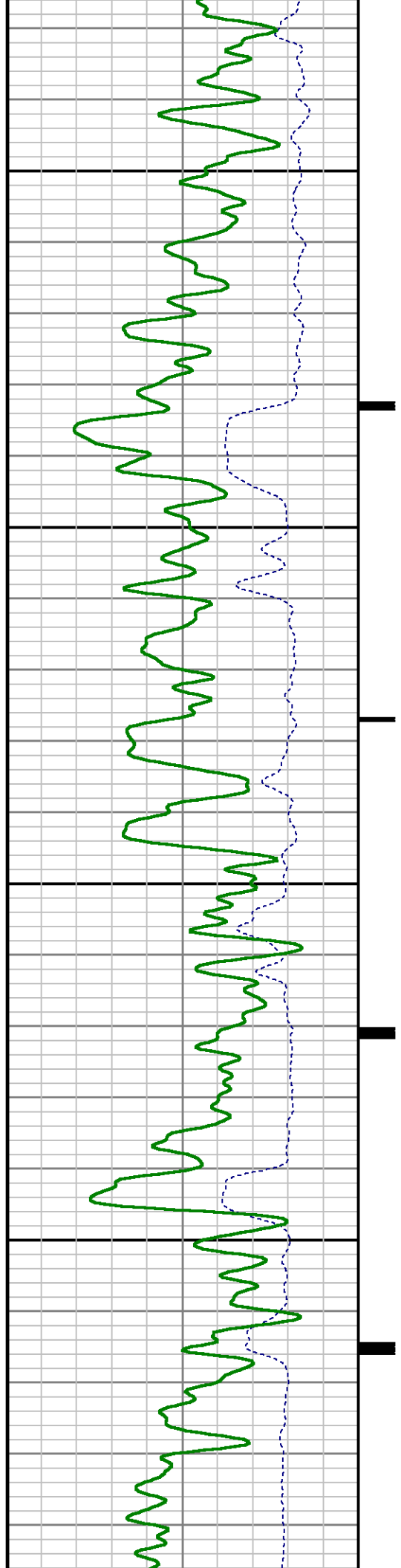


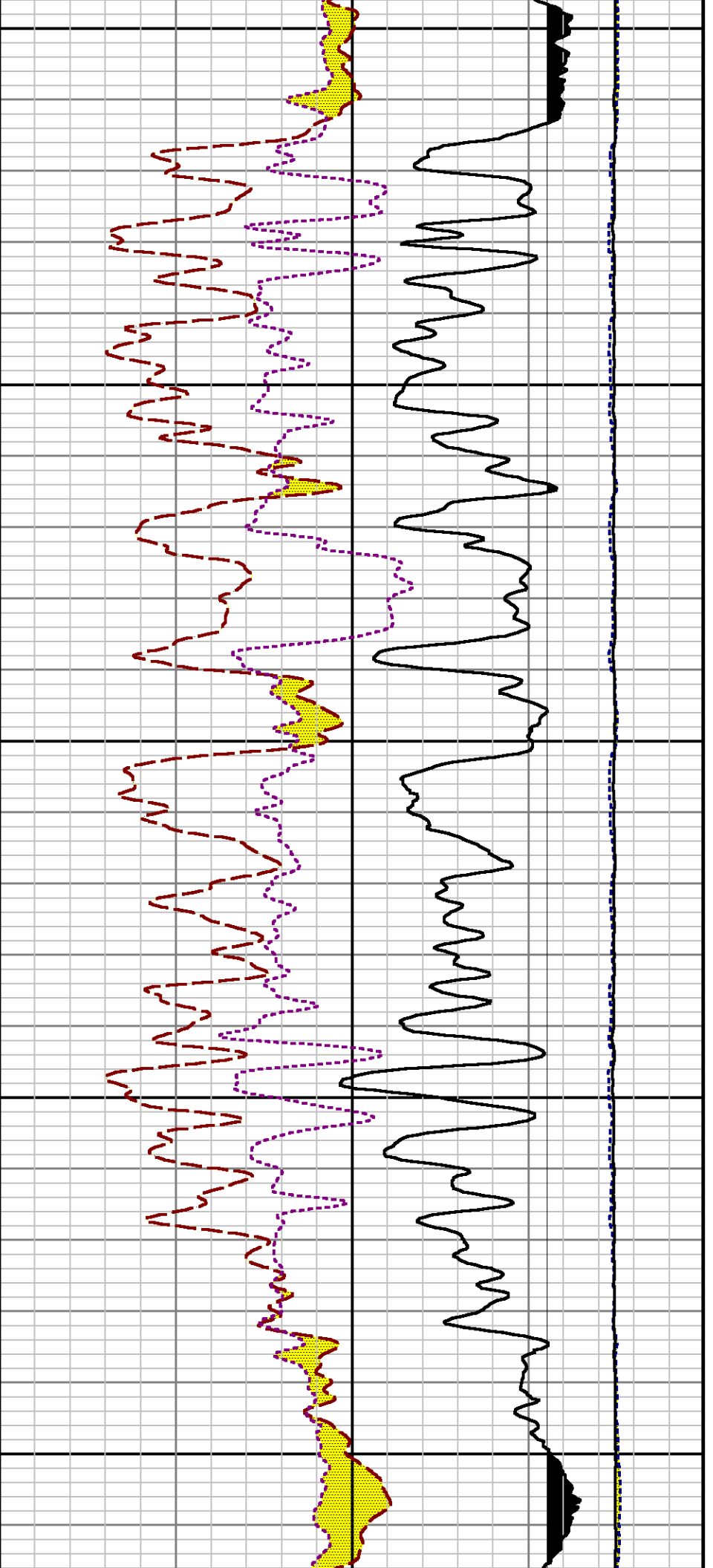




8100

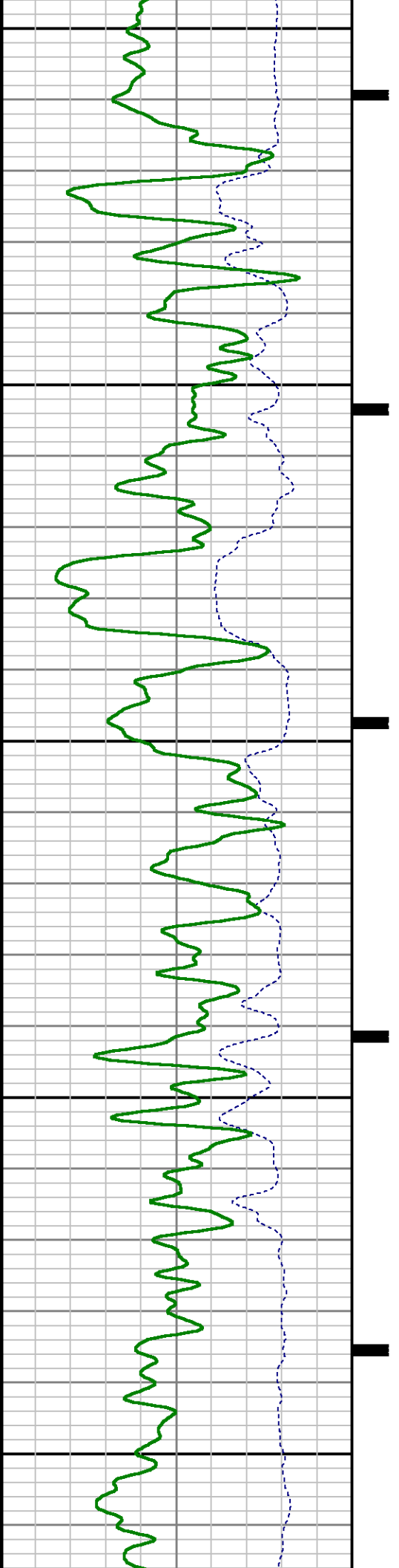
8200

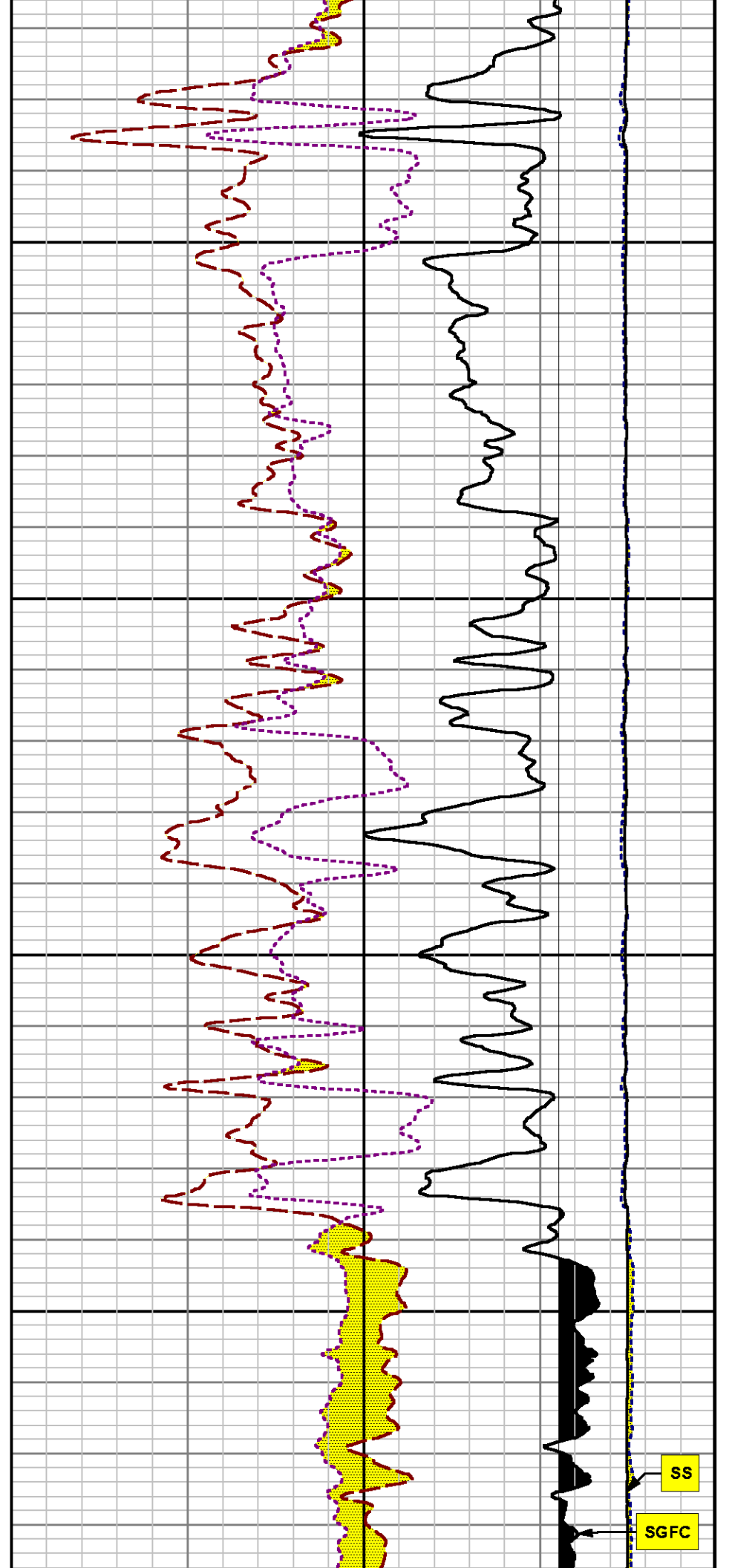
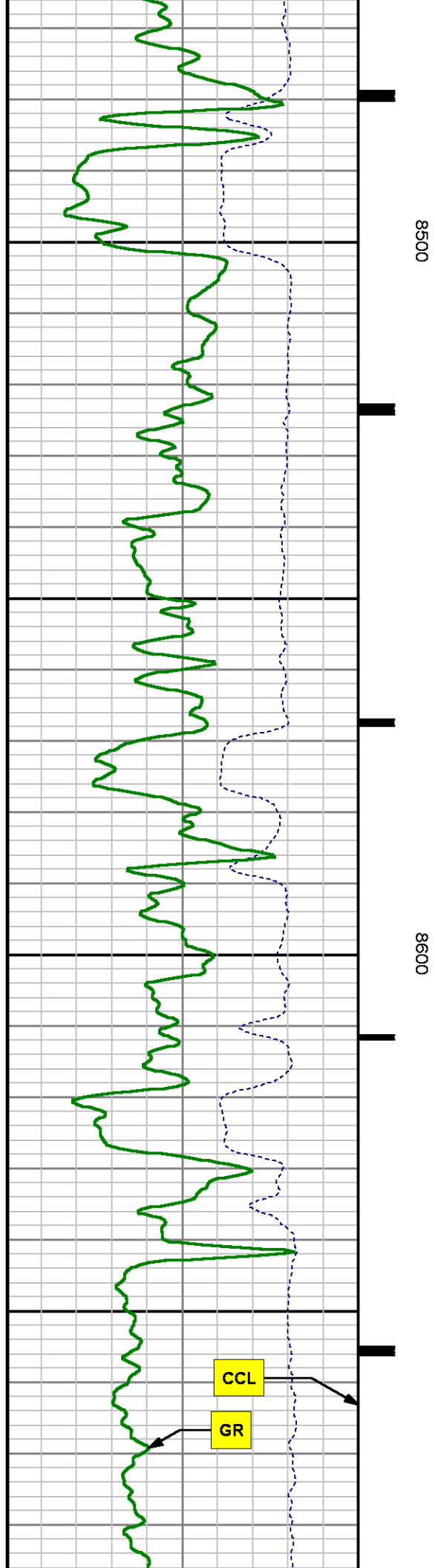


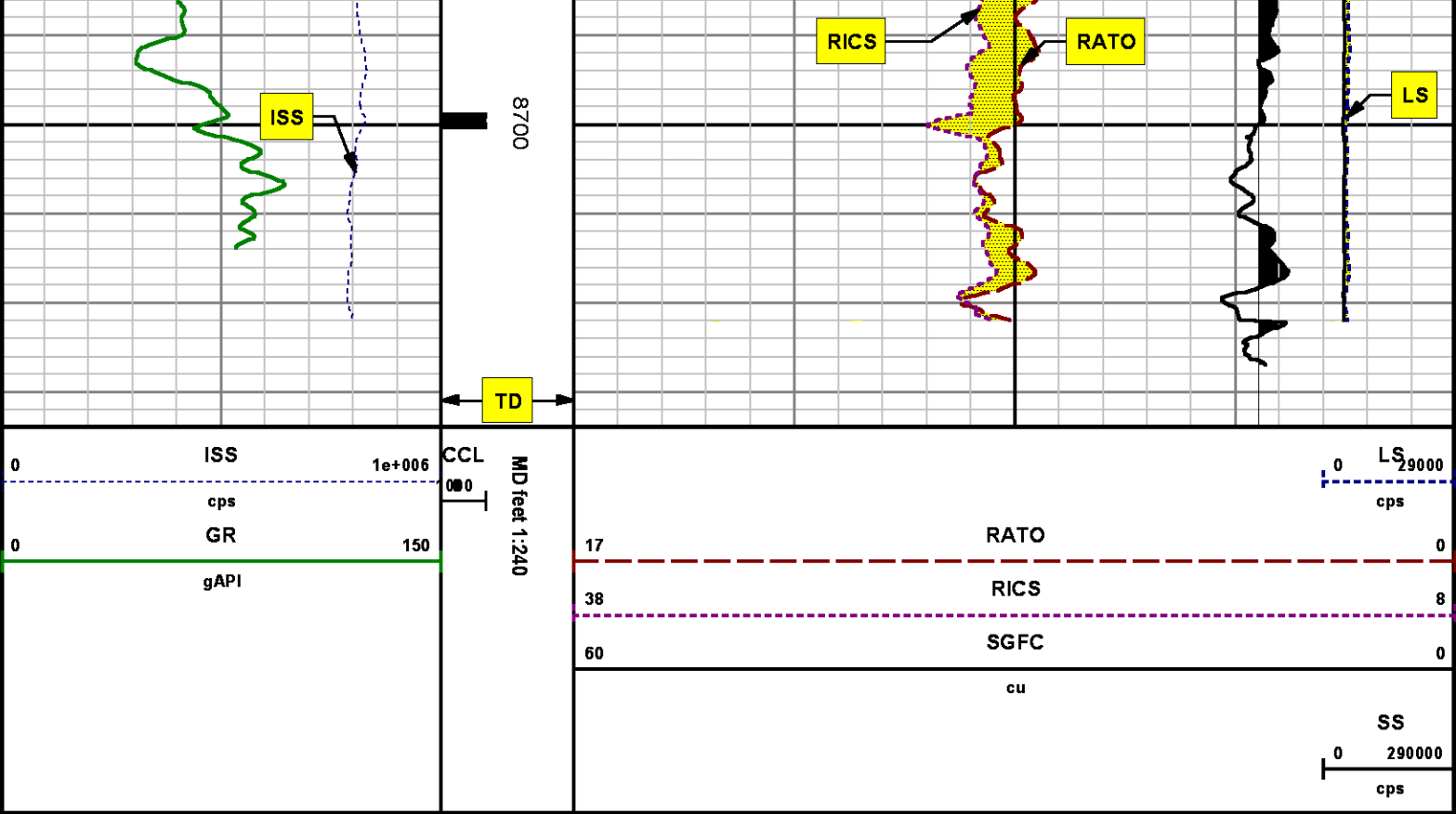


8300

8400







*REPEAT SECTION  
PNC 3-D MODE*

**SPL PROCESSING**

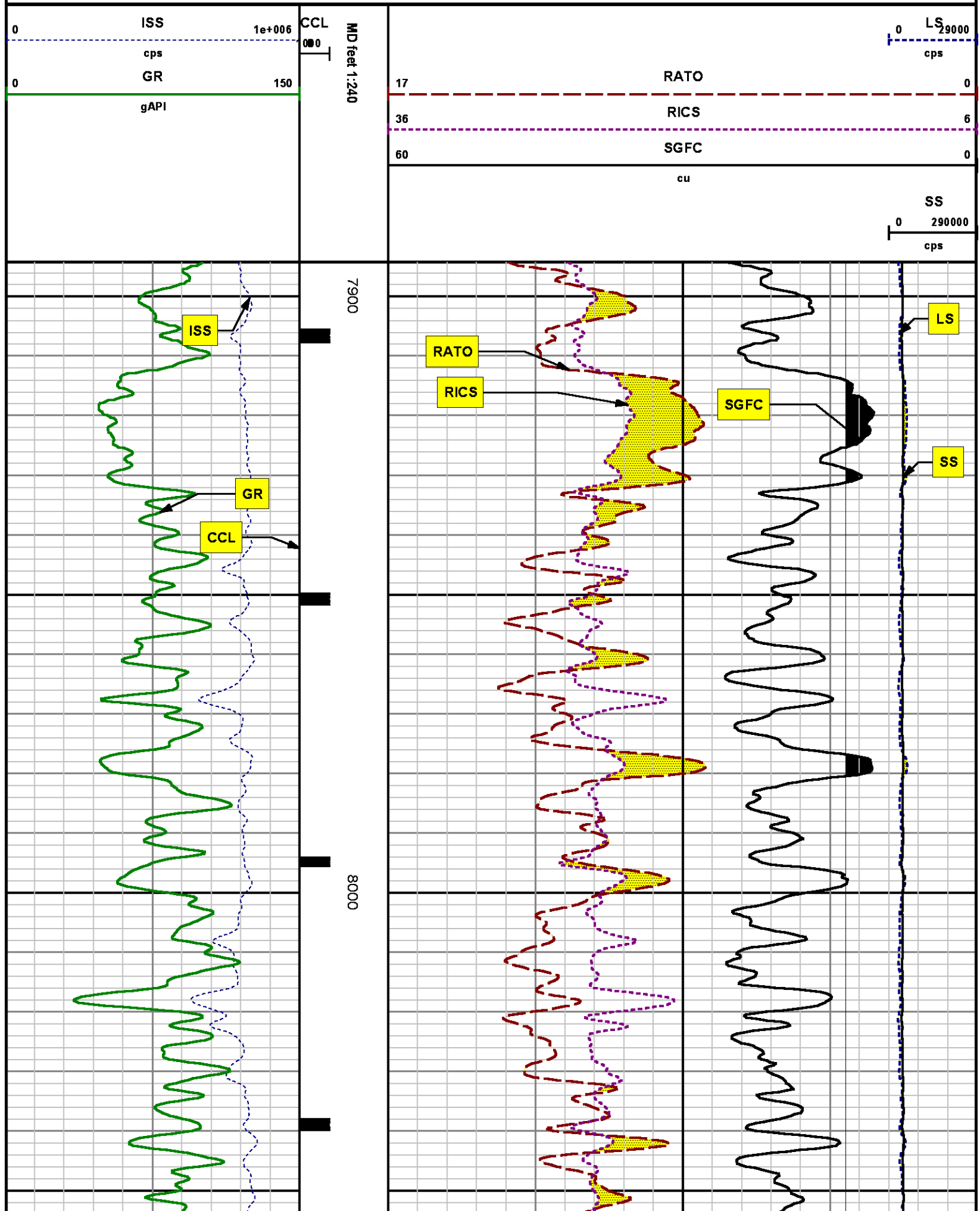
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		7894.000	8212.500
PNC Porosity	Borehole Size	8.750	inch	7894.000	8212.500
PNC Porosity	Casing Size	4.500	inch	7894.000	8212.500
PNC Porosity	Gas Filled	Non Gas Filled		7894.000	8212.500
PNC Porosity	Matrix	Sandstone		7894.000	8212.500
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	7894.000	8212.500

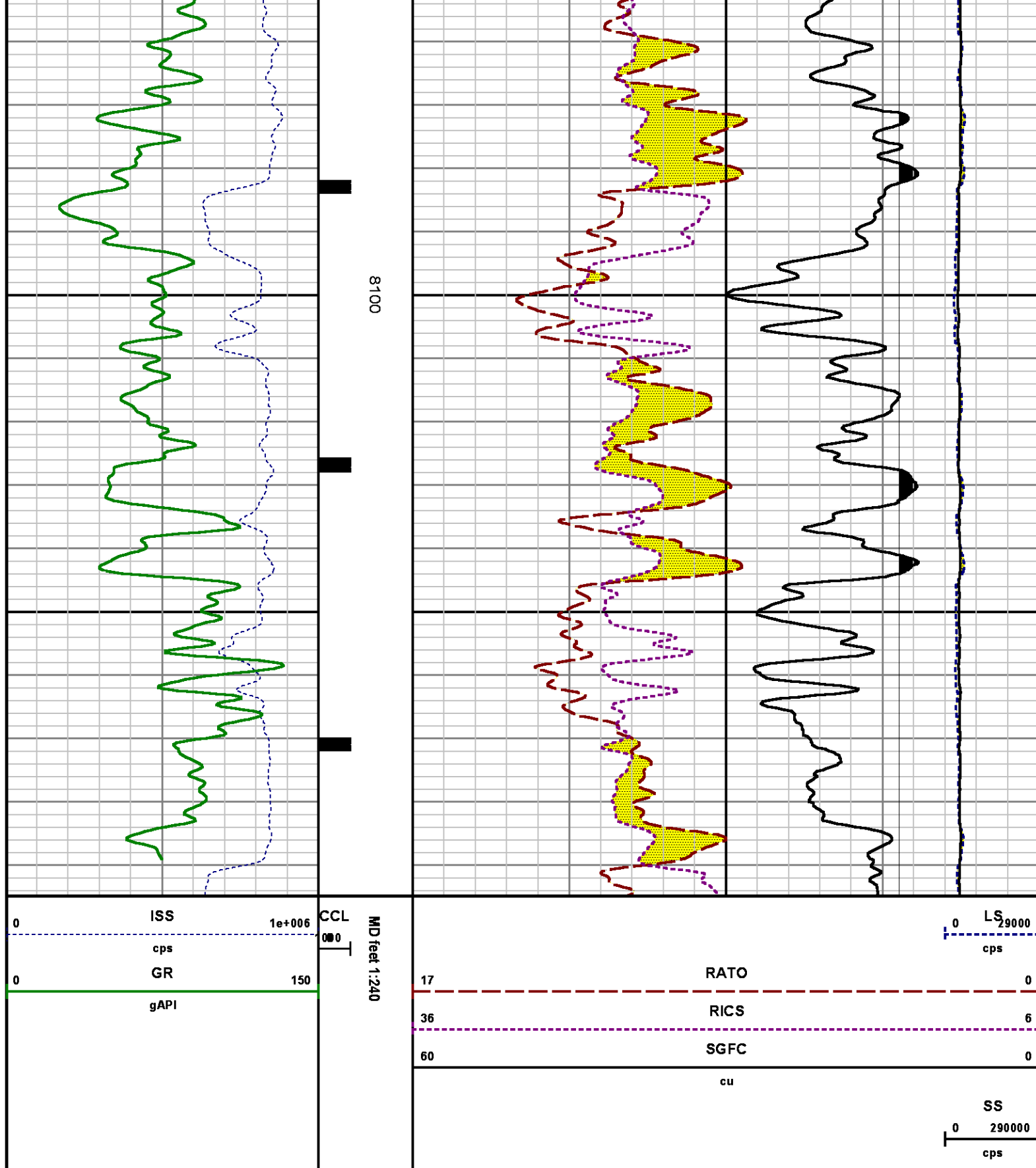
**DEPTH OFFSETS**

(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	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	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					
8255XA	-0.792	PTFS	PTMS				
8255XA	-0.775	SPF1	SPFQ	TSCP	TSDP		
8255XA	0.000	DTEM	TEMP	TNF			
SYSTEM	0.000	TEN	TTEN				







## CALIBRATION SUMMARY

# GAMMA RAY

Calibration File: C:\case\calver\GR\382A1.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Aug 17 18:00:30 2014 TOOL SERIES: 2812LA ASSET: 382 SEQ: A1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SK2 WA612	42.82	251.20	1.008	43.16	253.16	210.00

Verification File: C:\case\calver\GR\382A1.VP

## PRIMARY VERIFICATION

DATE/TIME PERFORMED: Sun Aug 17 18:03:34 2014 TOOL SERIES: 2812LA ASSET: 382 SEQ: A1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SK2 WA612	44.24	248.18	1.008	44.59	250.11	205.52

# PNC

Calibration File: C:\case\calver\PNC\34531.cal

## PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Jul 30 12:25:24 2014 TOOL SERIES: 8281XA ASSET: 345 SEQ: 31

Calibrator #

2437XB 112674

Source #

8281AA 10148476

	ISS	Mtr VIts (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	819245	119.00	2274.00	2251.00	2241.00	109.25	7.00	0.9808
Interpolated	1300000	140.97	2253.66	2240.93	2235.60			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	819245	5919.25	962.48	136.92	25.83	0.14	24.23	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	819245	168936.23	26190.87	88936.02	31684.52	8271.11	53822.45	13235.05
Fit Quality %		3.08	2.94	2.87	2.87	2.72	2.81	2.82

	ISS	RBOR		RIN ISS/ILS		RIN13 ISS/IXS		RICS ISS/CSS		RATO SS/LS		RTWO SS2/LS		RONE CSS/CLS	
Raw Data	819245	1.43		4.85		31.28		15.22		10.75		3.83		4.07	
		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 %		0.11		0.98		1.00		0.90		0.09		0.10		0.09	
Reduced	1262130	1.43		4.81		31.07		15.11		10.74		3.82		4.06	
		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

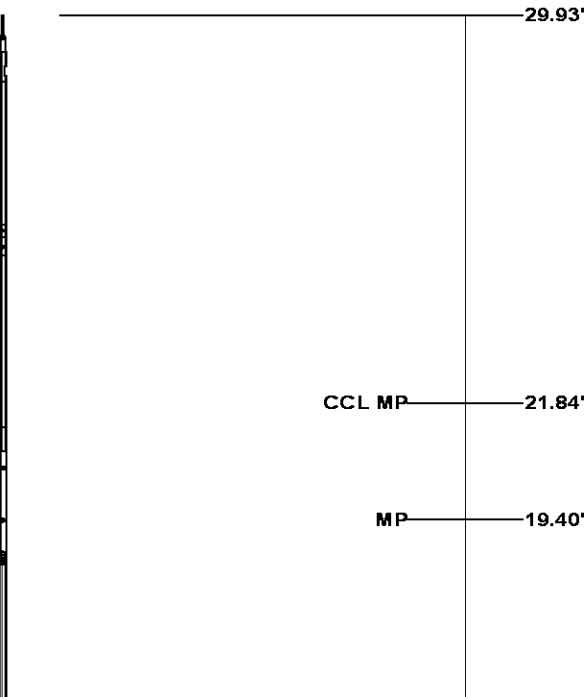
TEMPERATURE

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

CALIBRATION SUMMARY																	
DATE/TIME PERFORMED:				09 AUG 2010		TOOL SERIES:		8255XA		ASSET:		120516		SEQ:		AU	
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

XLS DETECTOR 12.78'

LS DETECTOR 9.80'

SS DETECTOR 9.58'

0.00'

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

**Baker Atlas***CASE***Company**

WPX ENERGY

**Well**

SAVAGE RWF 533-25

**Field**

RULISON

**County**

GARFIELD

**State**

COLORADO

**Location**

SHL: 1154' FSL &amp; 1391' FEL

BHL: 1455' FSL &amp; 1679' FEL (NWSE)

**Elevations**

KB 6260 ft

DF

GL 6234 ft

**File No:**

CH089582

**API No:**

05045219930000

25 6S 94W

RWF 43-25 PAD

NABORS 577

SEC 25 TWP 6S RGE 94S