



Baker Atlas

RESERVOIR
PERFORMANCE
MONITOR

File No: CH071663	Company Well Field County	WPX ENERGY HOEPPL RWF 43-36 RULISON GARFIELD	State COLORADO
API No: 05045215540000	Location SHL: 2578' FNL, 2577' FEL (SWNE) BHL: 1990' FSL, 735' FEL (NESE)		
36 6S 94W RWF 33-36 EAST PAD NABORS 676	SEC 36 TWP 6S RGE 94W	Other Services BOND LOG	
Permanent Datum Log Measured From Drill Measured From	GL KB KELLY BUSHING	Elevation 6528 ft Above P. D.	Elevations KB 6554 ft DF GL 6528 ft

Date	07/MAY/13		
Run	ONE		
Service Order	575121		
Depth Driller	9207 ft		
Depth Logger	9153 ft		
Bottom Logged Interval	9143 ft		
Top Logged Interval	5052 ft		
Time Started	1600		
Time Finished	2200		
Operator Rig Time	6 HRS		
Type of Fluid in Hole	WATER		
Fluid Density	NA		
Salinity	NA		
Fluid Level	82 ft		
Logged Cement Top	NA		
Wellhead Pressure	0 psi		
Maximum Hole Deviation	NA		
Nominal Logging Speed	10 fpm		
Maximum Recorded Temperature	233 degF		
Reference Log	BAKER HUGHES BOND LOG		
Reference Log Date	06/MAY/13		
Equipment No.	Location		
Recorded By	FL OYD RENEAU	GRAND JCT	
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	0 ft	1133 ft
8.75 in	1133 ft	9207 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in	32 lbm/ft		0 ft	1133 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	9207 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 5/6/2013 at the client's request.
The amount of linear shift is 1 foot.
Logged in PNC-3D mode.
BHT = 234°F
SJ = 5832'-5853'

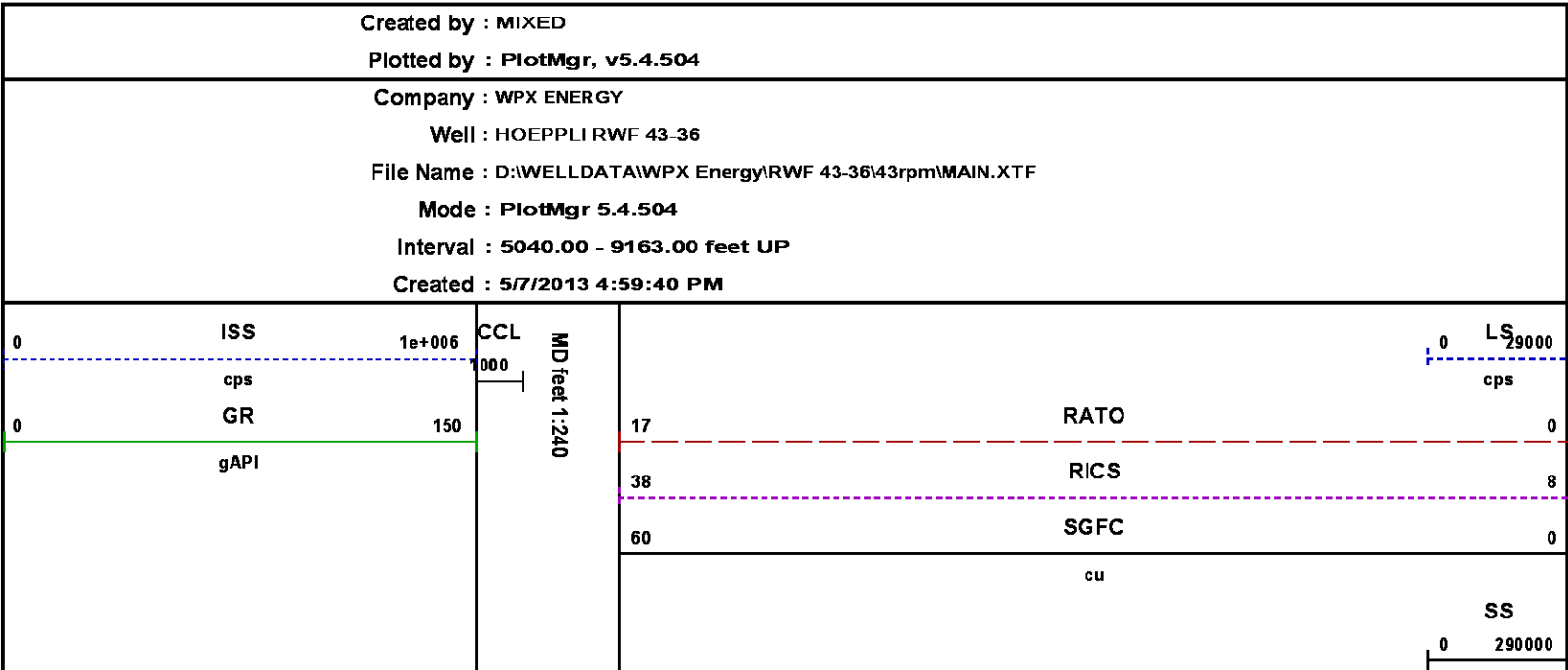
Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	RPM	8281FA	10307727	FREE
1	1	RPM	8281PA	10203151	FREE
1	1	RPM	8281EA	10303640	FREE
1	1	GR	8262XA	10076055	FREE
1	1	TEL/CCL	8248ED	10296408	FREE
1	1	PCM	8250EA	10397894	FREE

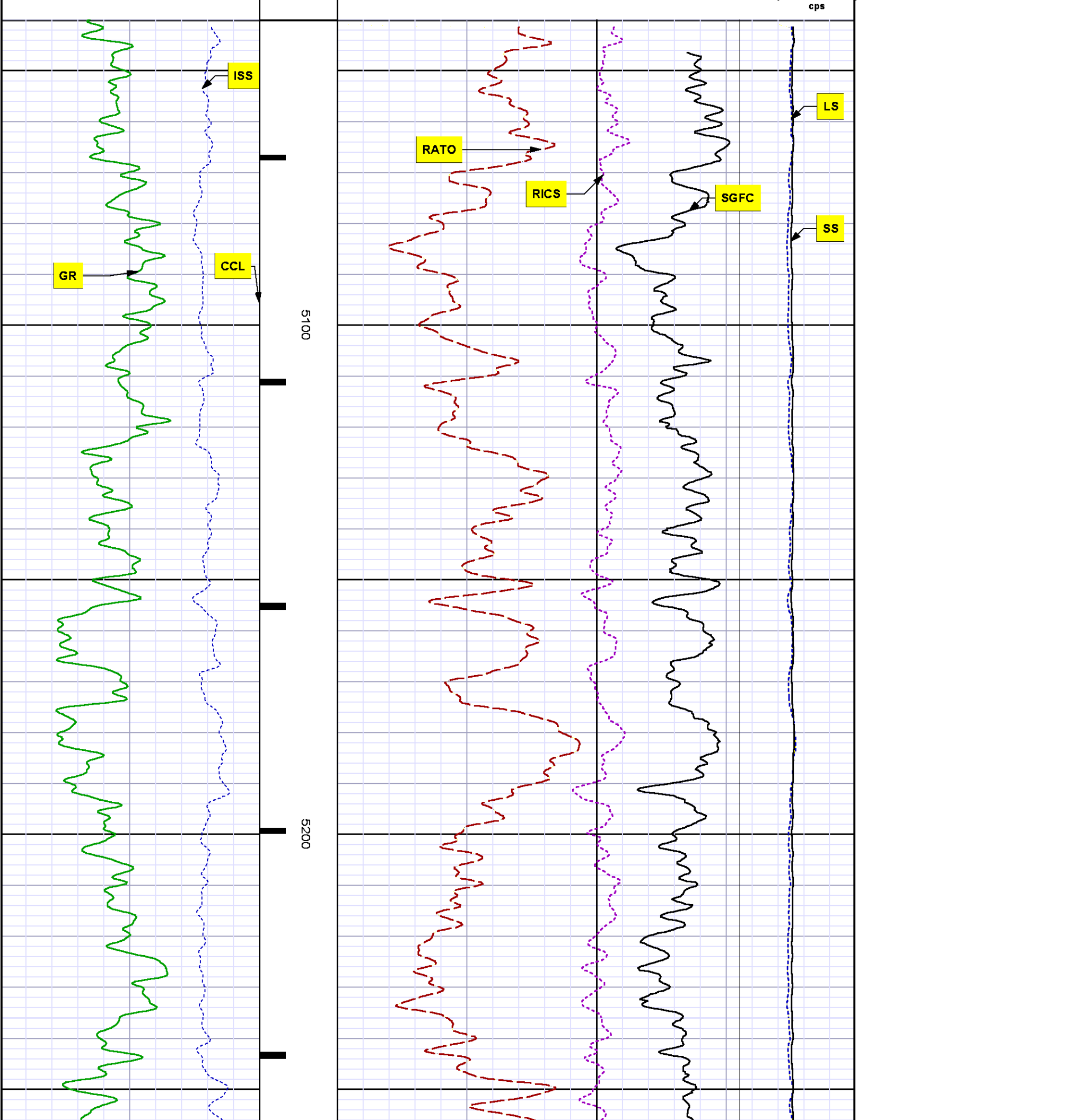
MAIN SECTION
PNC 3-D MODE

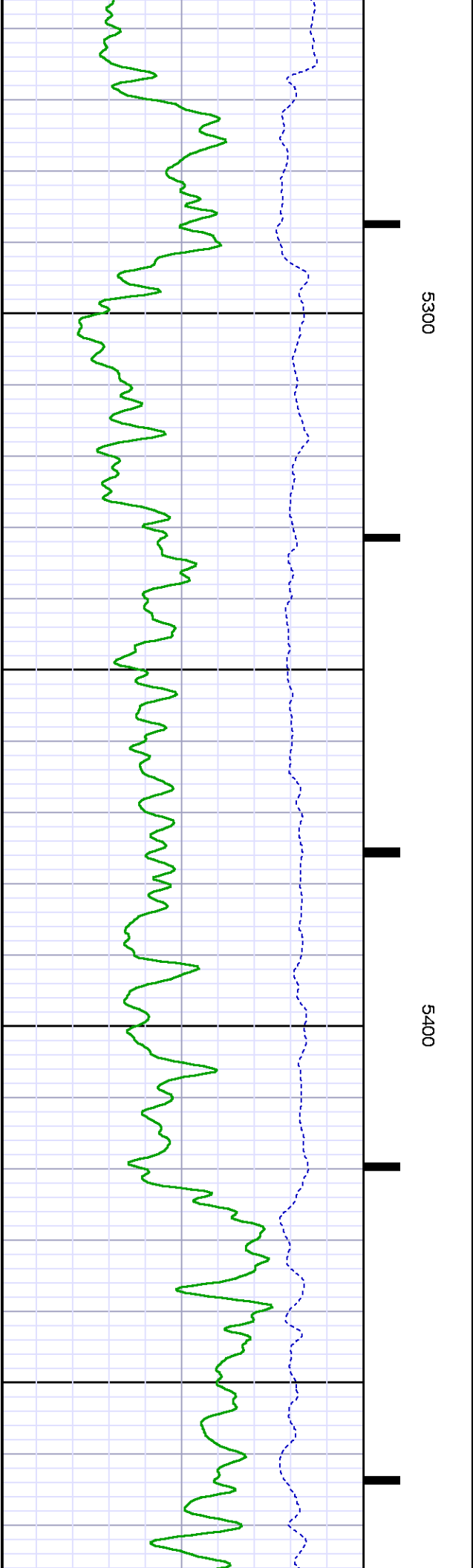
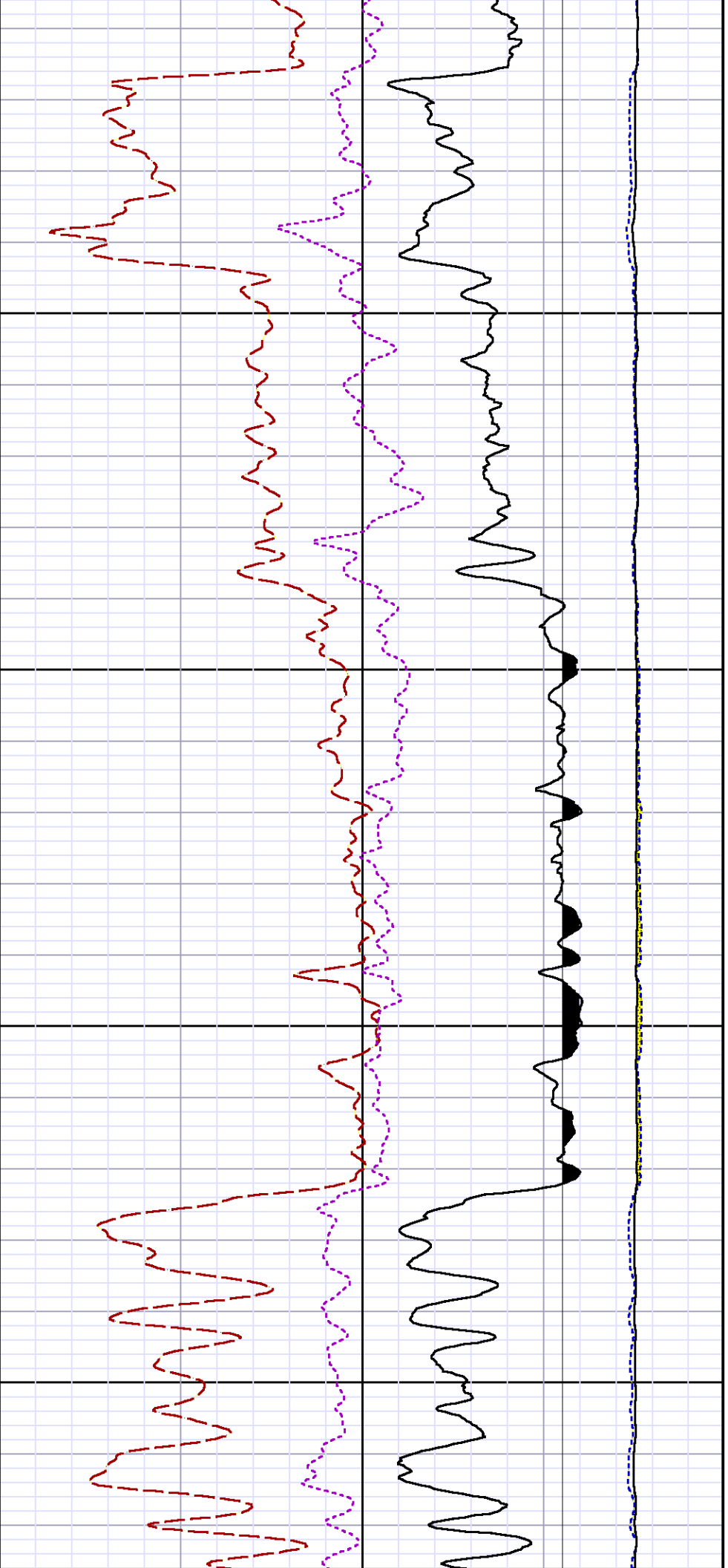
SPL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		5039.750	9162.687
PNC Porosity	Borehole Size	8.750	inch	5039.750	9162.687
PNC Porosity	Casing Size	4.500	inch	5039.750	9162.687
PNC Porosity	Gas Filled	Non Gas Filled		5039.750	9162.687
PNC Porosity	Matrix	Sandstone		5039.750	9162.687

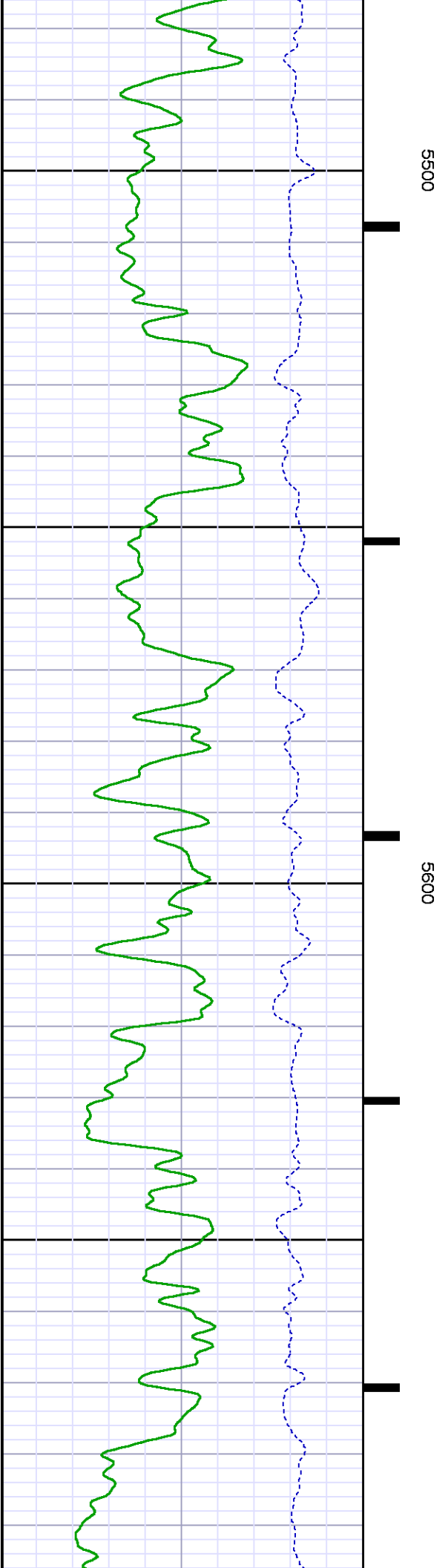
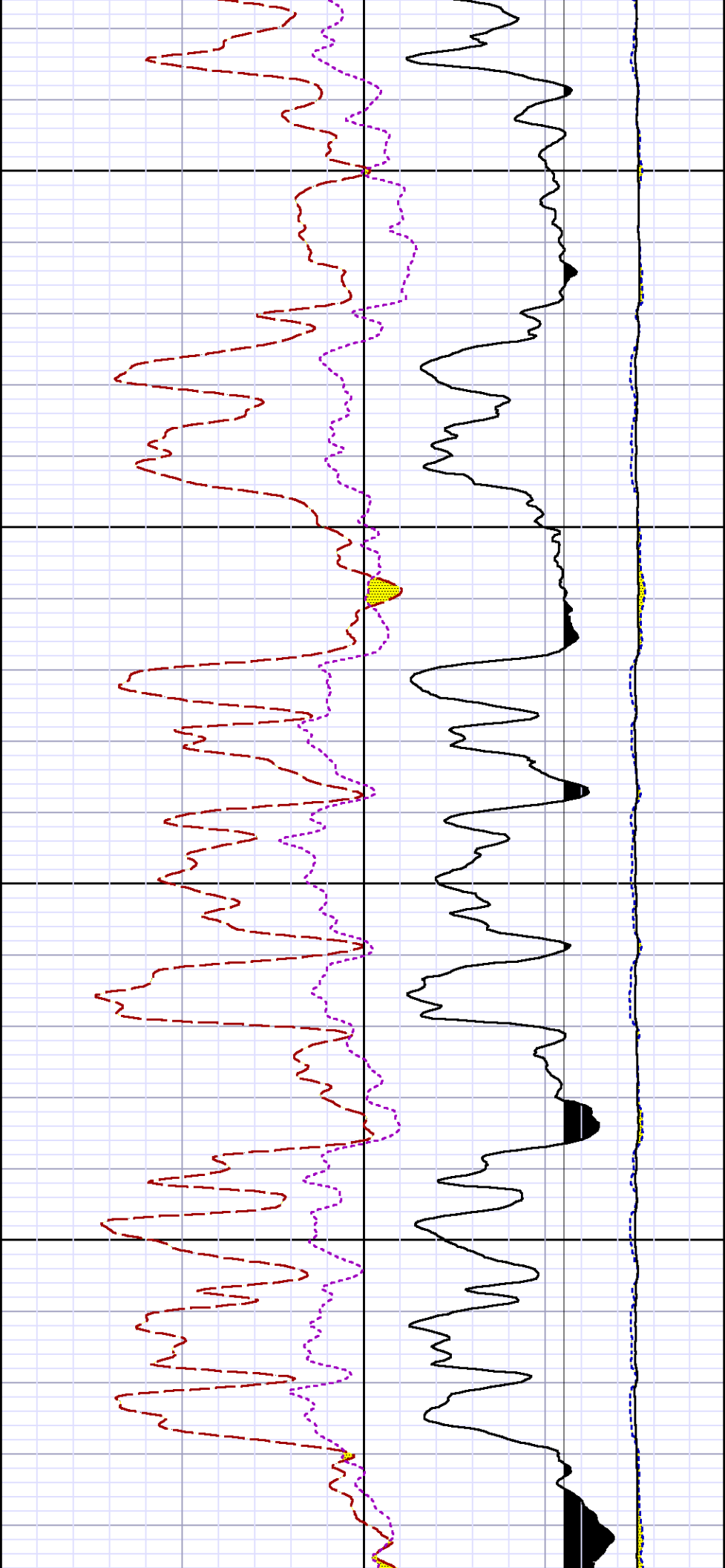
DEPTH OFFSETS (for Acquired Curves)						
SERIES	DEPTH OFFSET	ACQUIRED CURVES				
8248ED	-15.320	FLTM				
8248ED	-13.320	CCL	CHV			
8262XA	-10.189	GR				
8281XA	-0.662	HVC3Q0	SEQ3	AMA3	AML3	BKX
		CPT3Q0	CPT3Q2	CPT3Q3	CPT3Q4	ET3
		MCS3	MCS3Q0	QCAL3	RGN3	RICX
		SDL3	SGA3	SGL3	STA3	XS
		AMB3	AMF3	CHF3	IXSC	IXSN
		FIG3C	FIG3D	FIG3E	FIG3F	FIG3G
		SDA3	ASPEC3	RATO23		

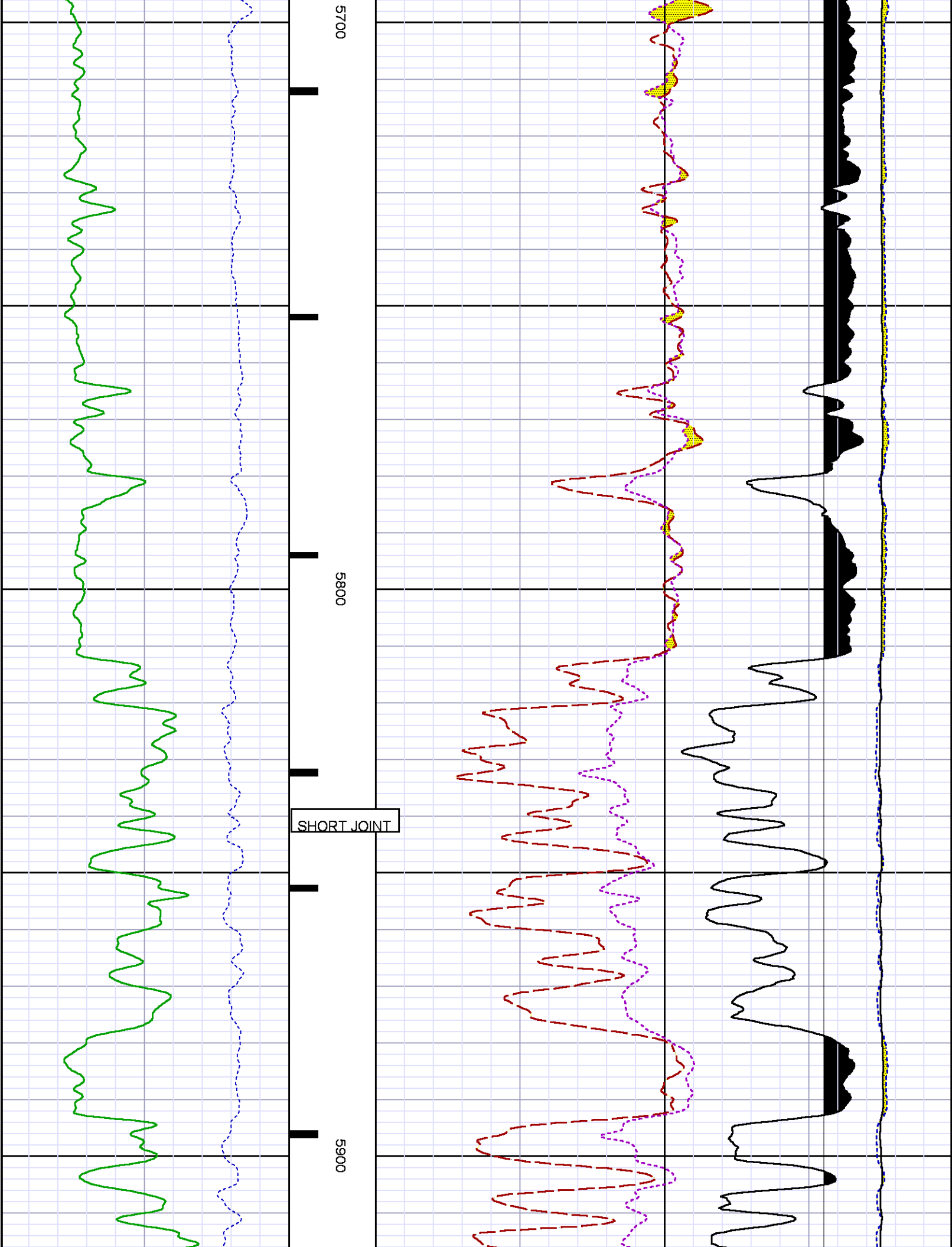
			RICXC	RIN13C	RIN23	RIN23C	SD3D	SG3D
			SGB3	SGF3	WDTH3	CXSR	IXSR	XSR
			RICXR					
8281XA	-0.250		HVC2Q0	SEQ2	AMA2	AMB2	AMF2	AML2
			BKL	CHF2	CLS	CPT2Q0	CPT2Q2	CPT2Q3
			CPT2Q4	ET2	ILS	LS	MCS2	MCS2Q0
			QCAL2	RGN2	RICL	RONE23	RTWO23	SDA2
			SDL2	SGA2	SGB2	SGF2	SGK2	SGL2
			STA2	ASPEC2	ILSC	ILSN	WDTH2	RICLC
			CLSR	ILSR	LSR	RICLR		
8281XA	0.000		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					
SYSTEM	0.000		TEN	TTEN				

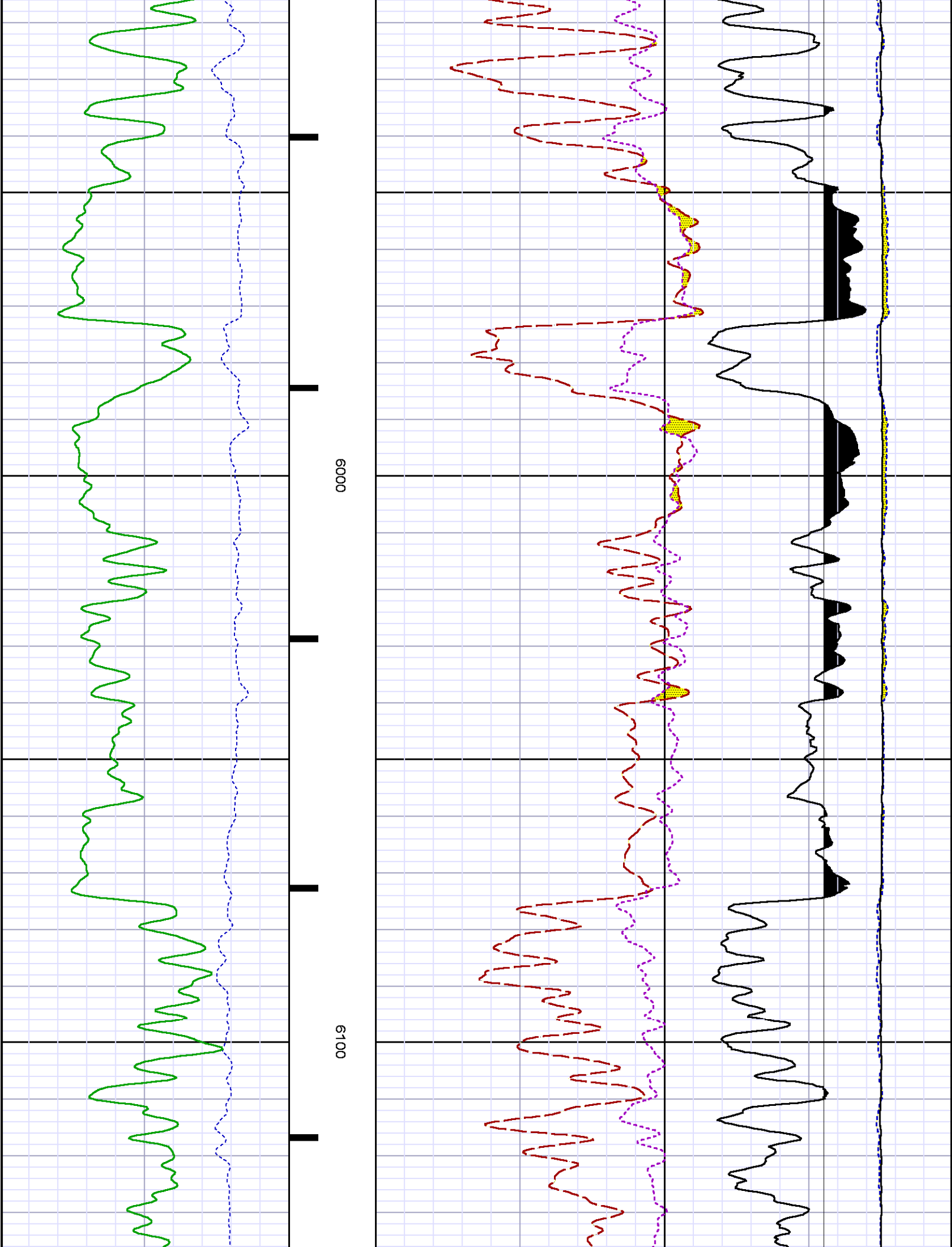


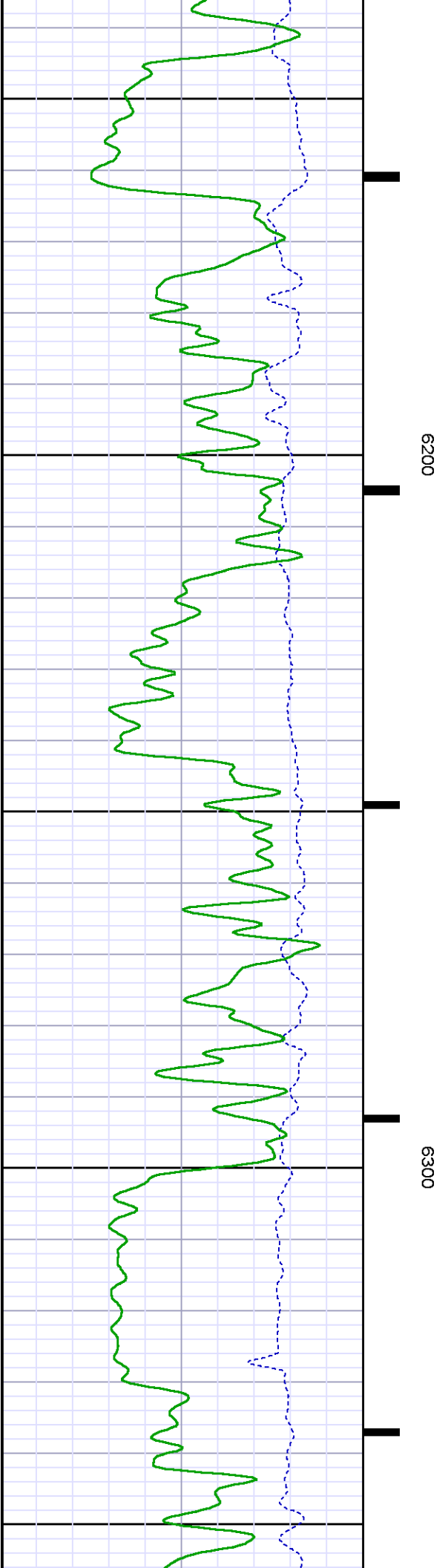
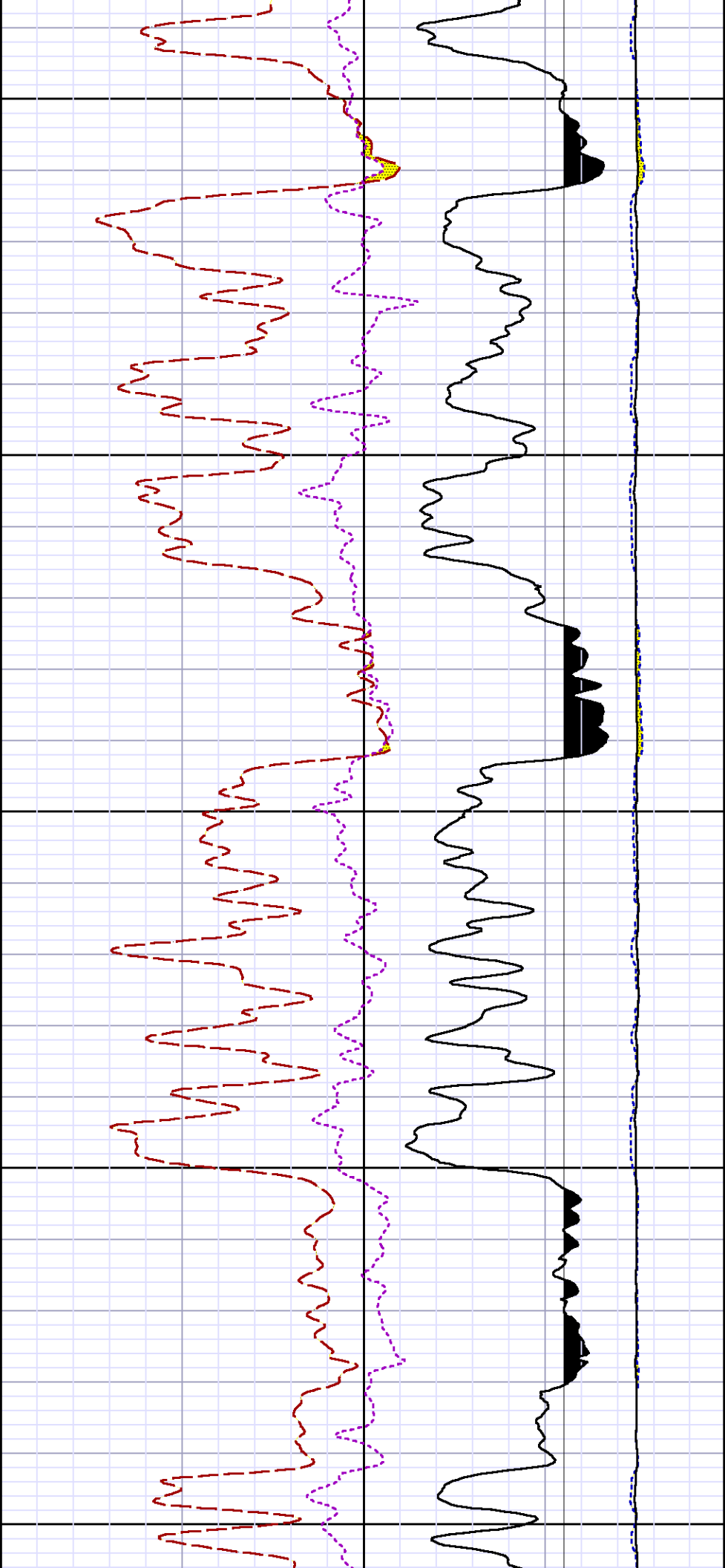


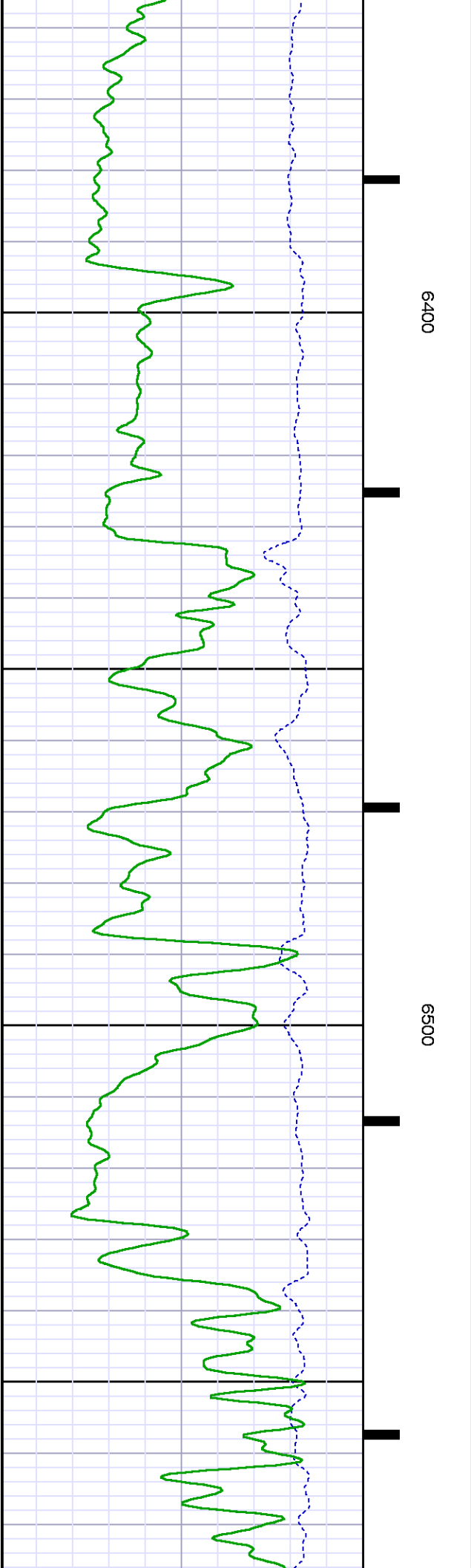
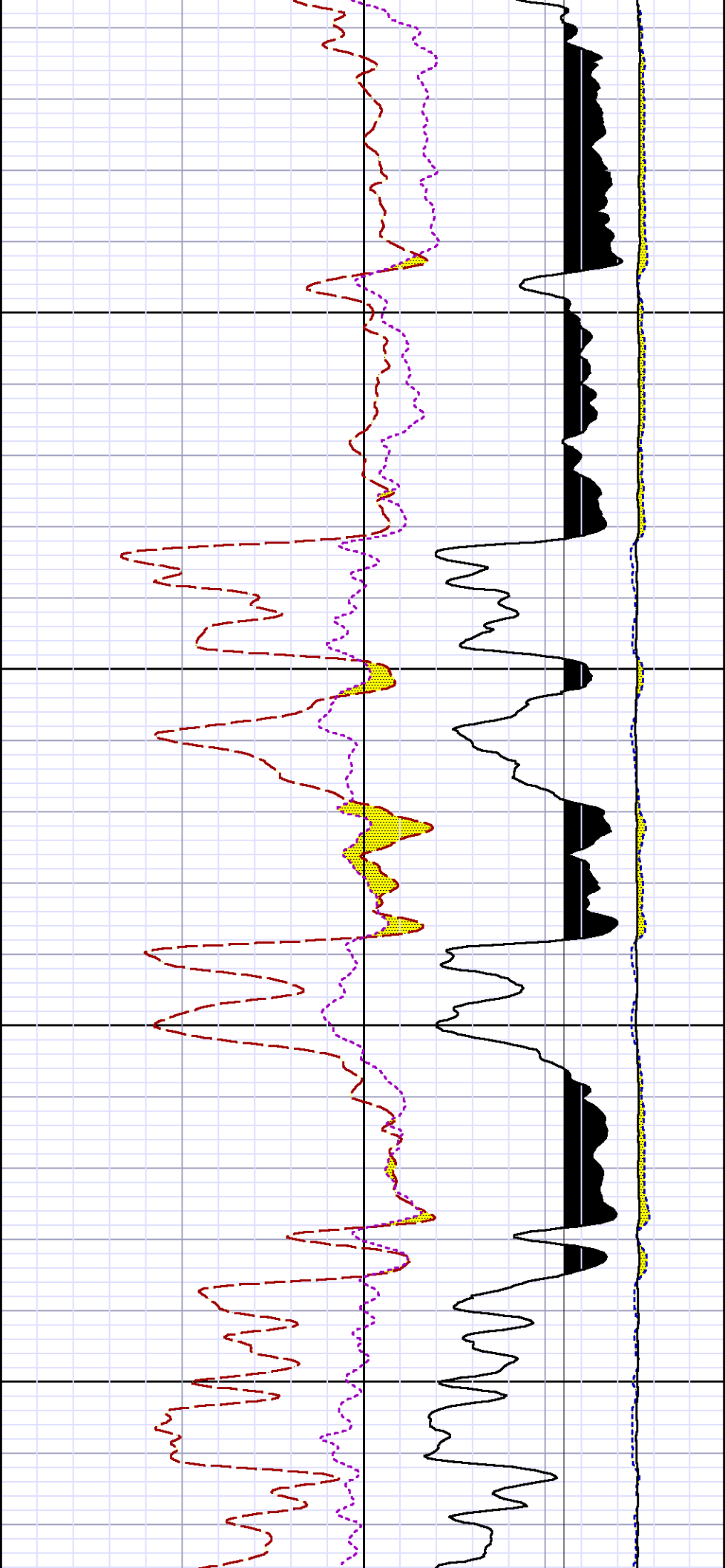


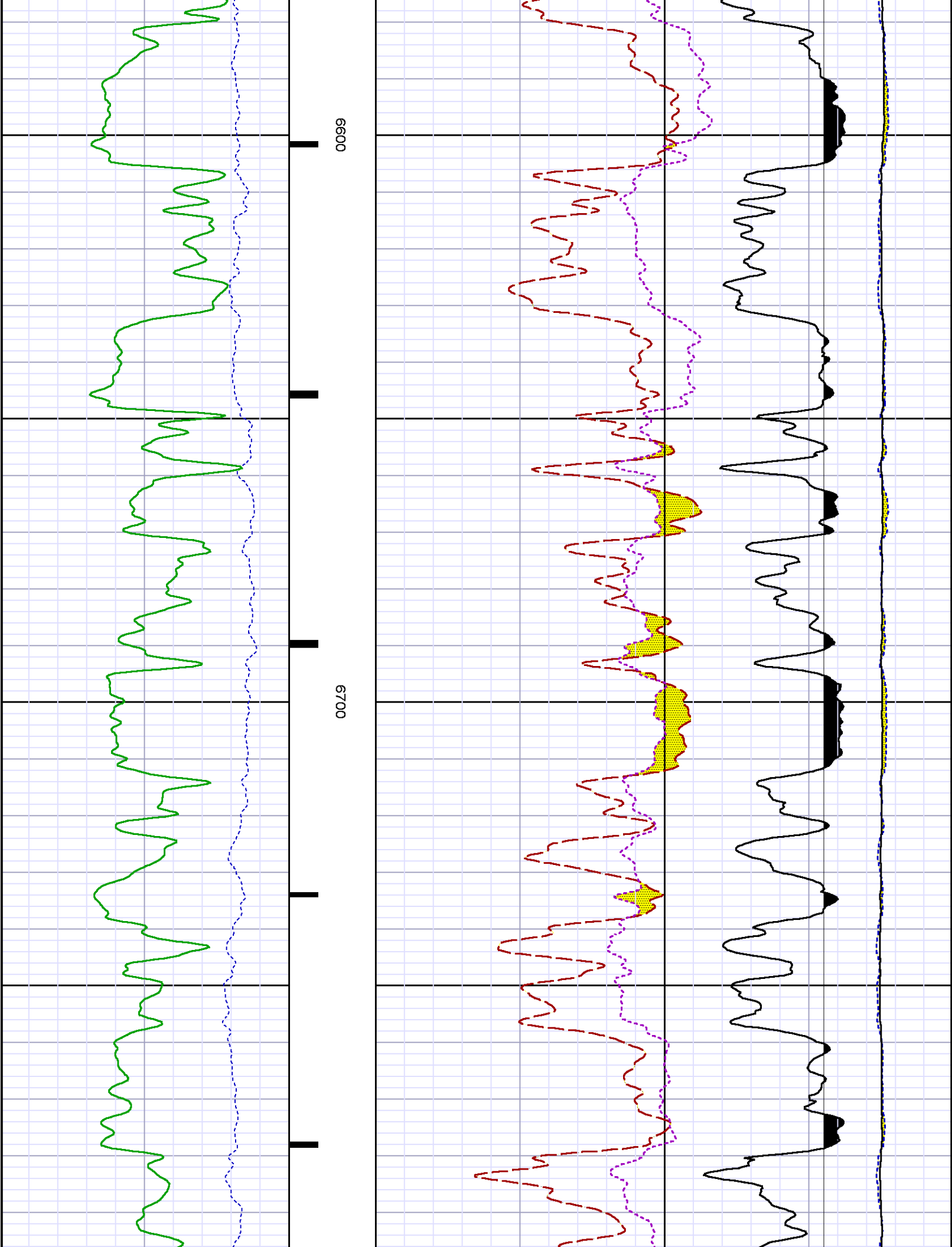


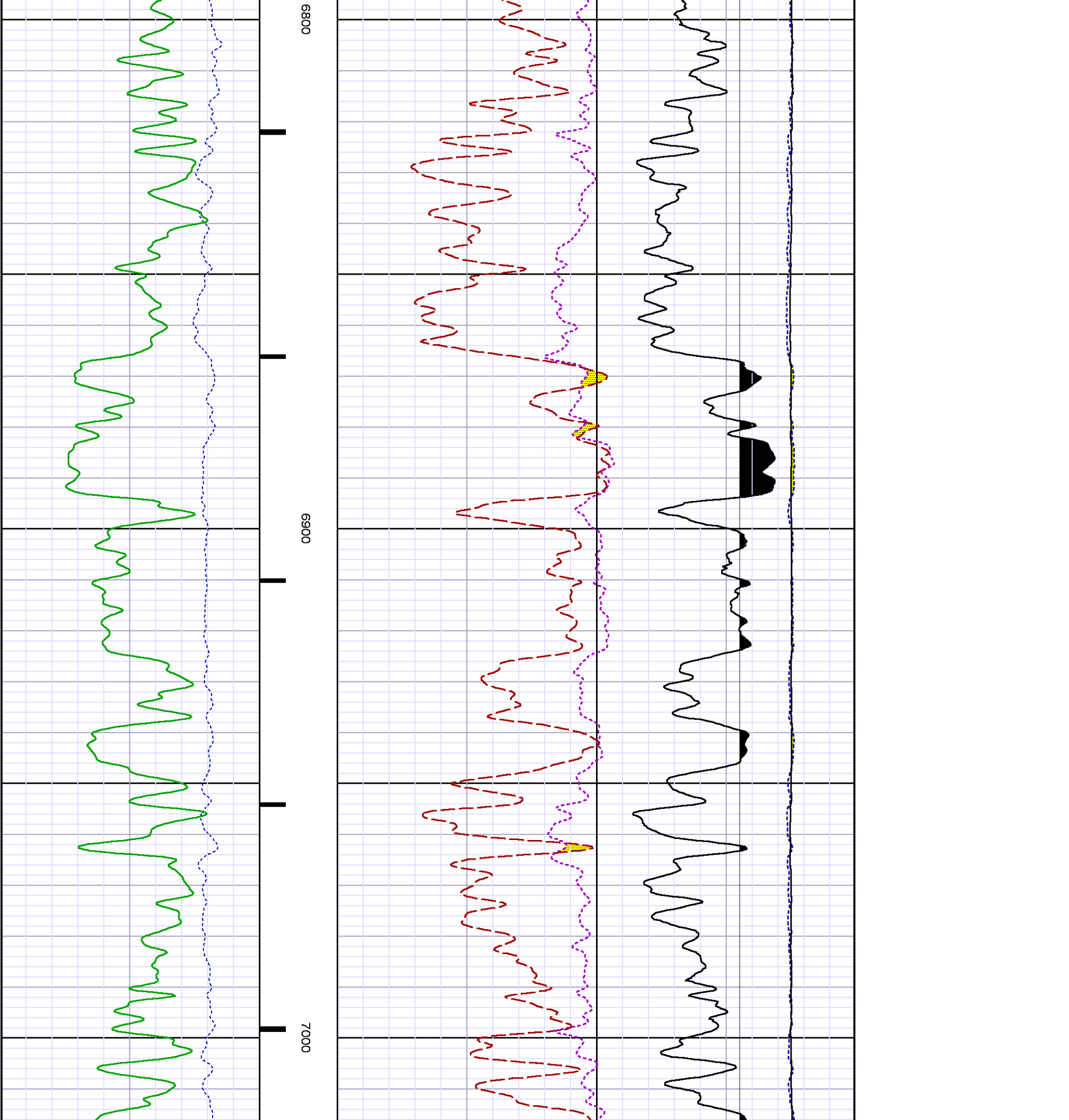


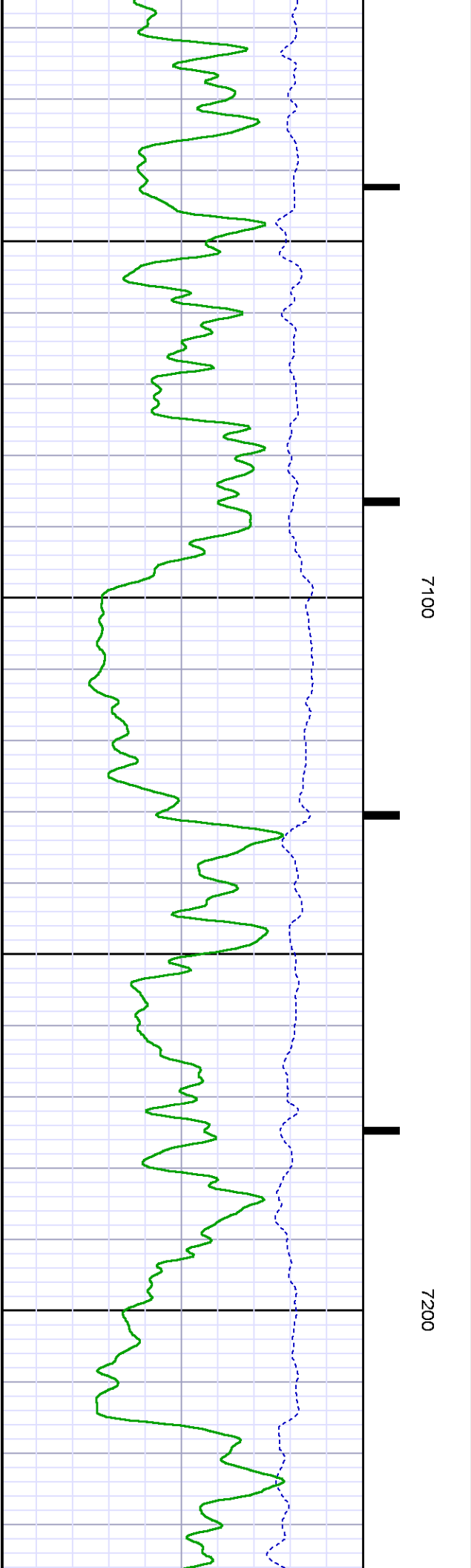
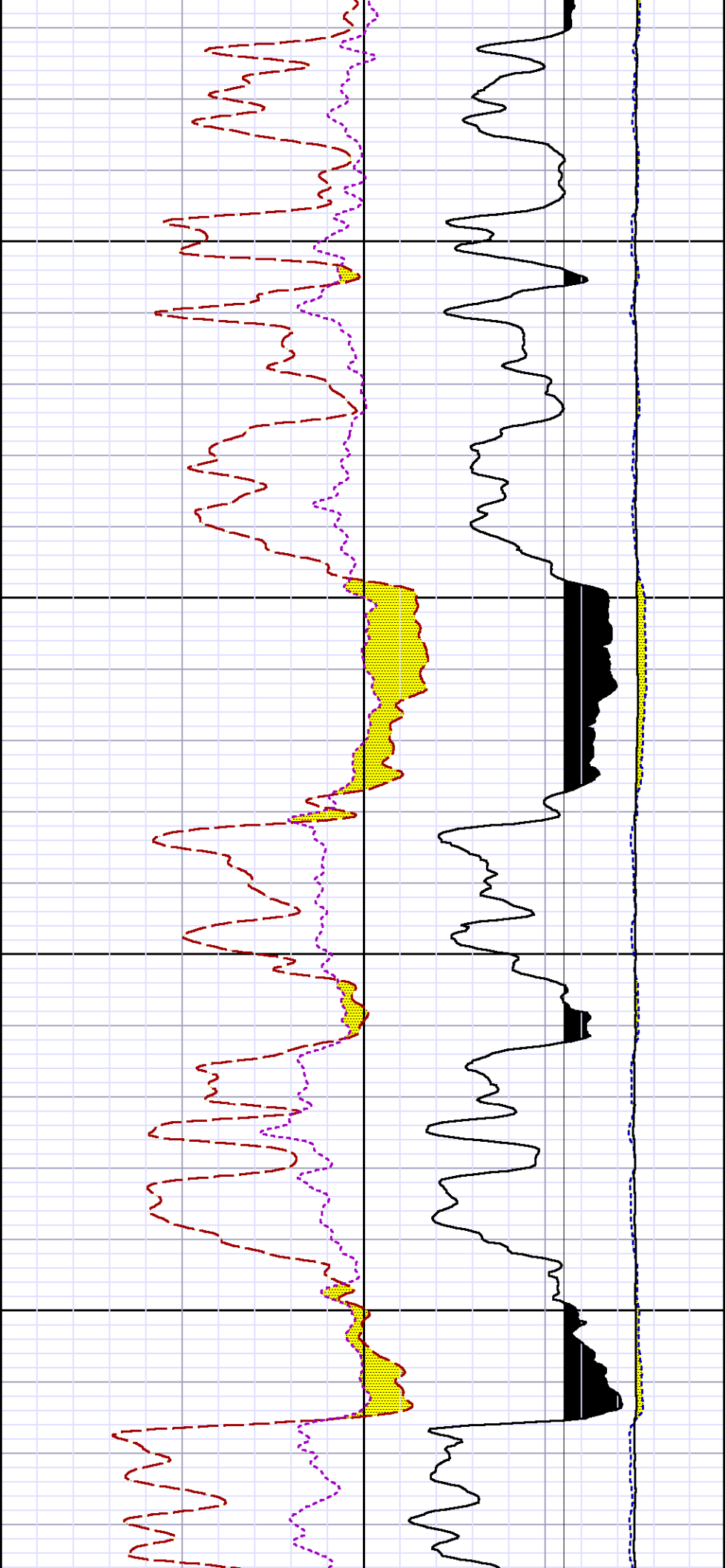


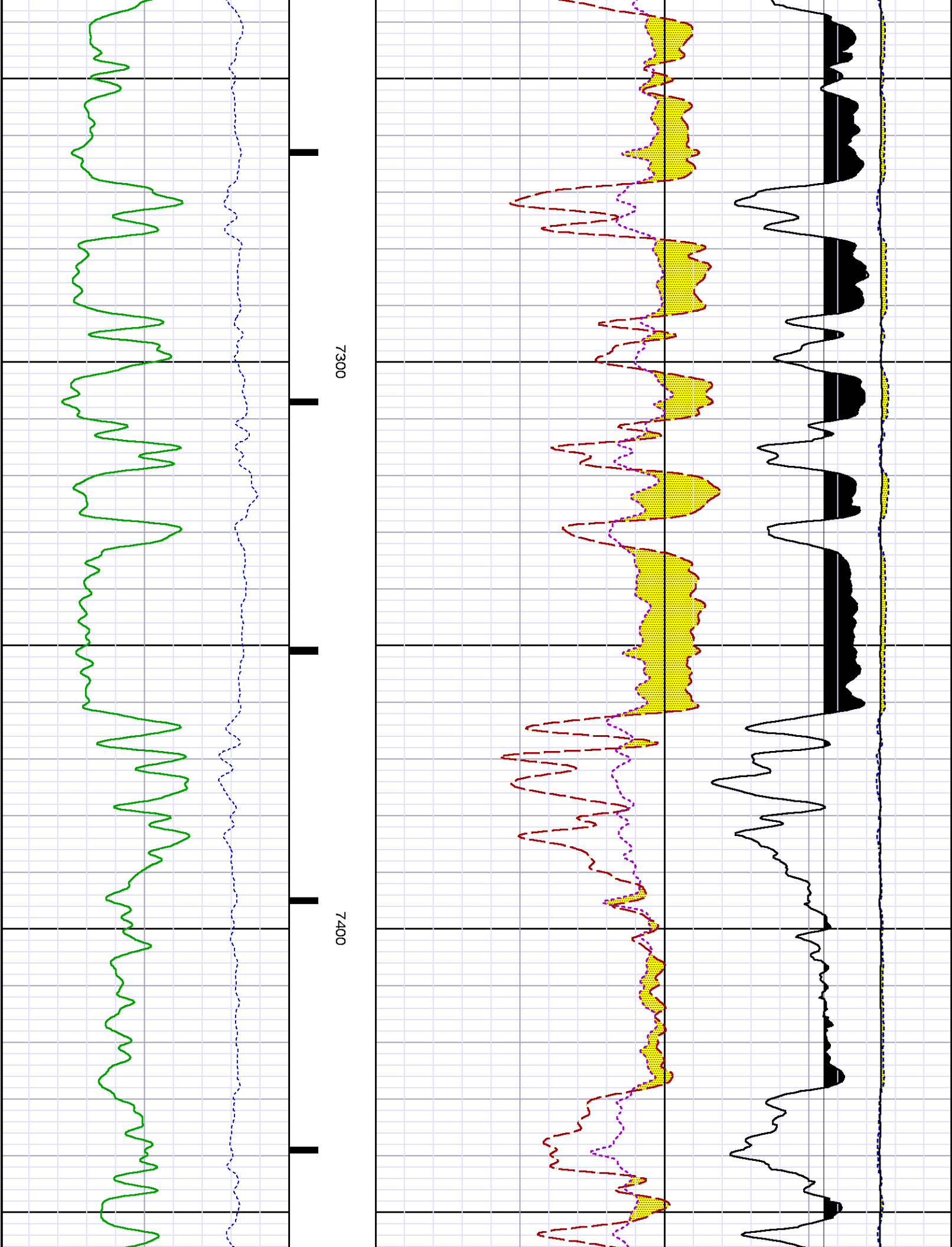


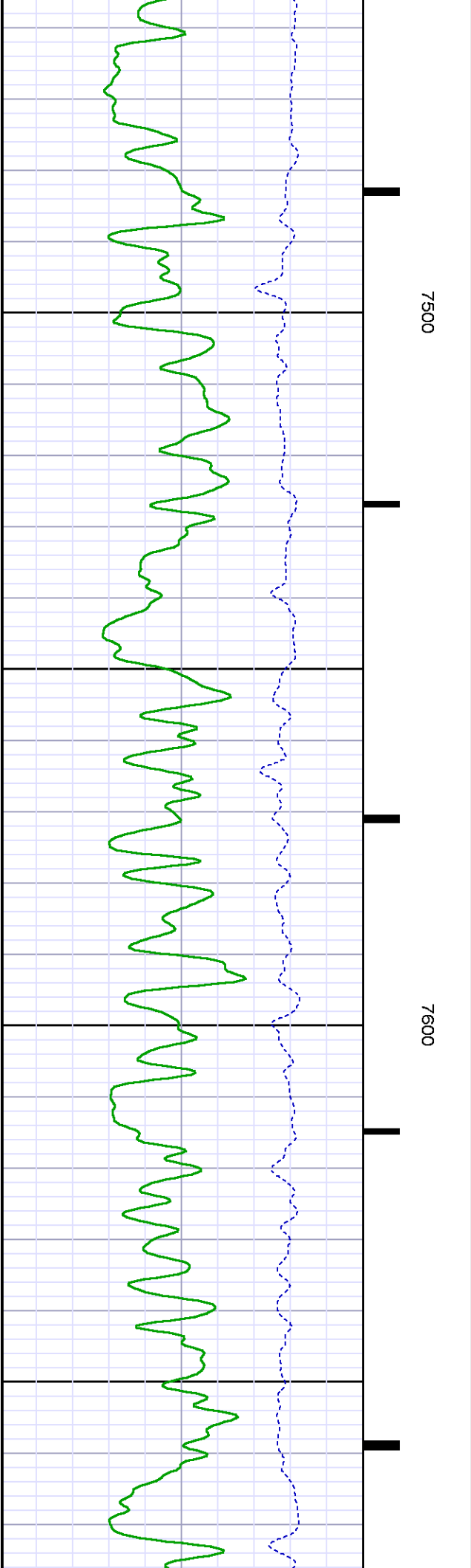
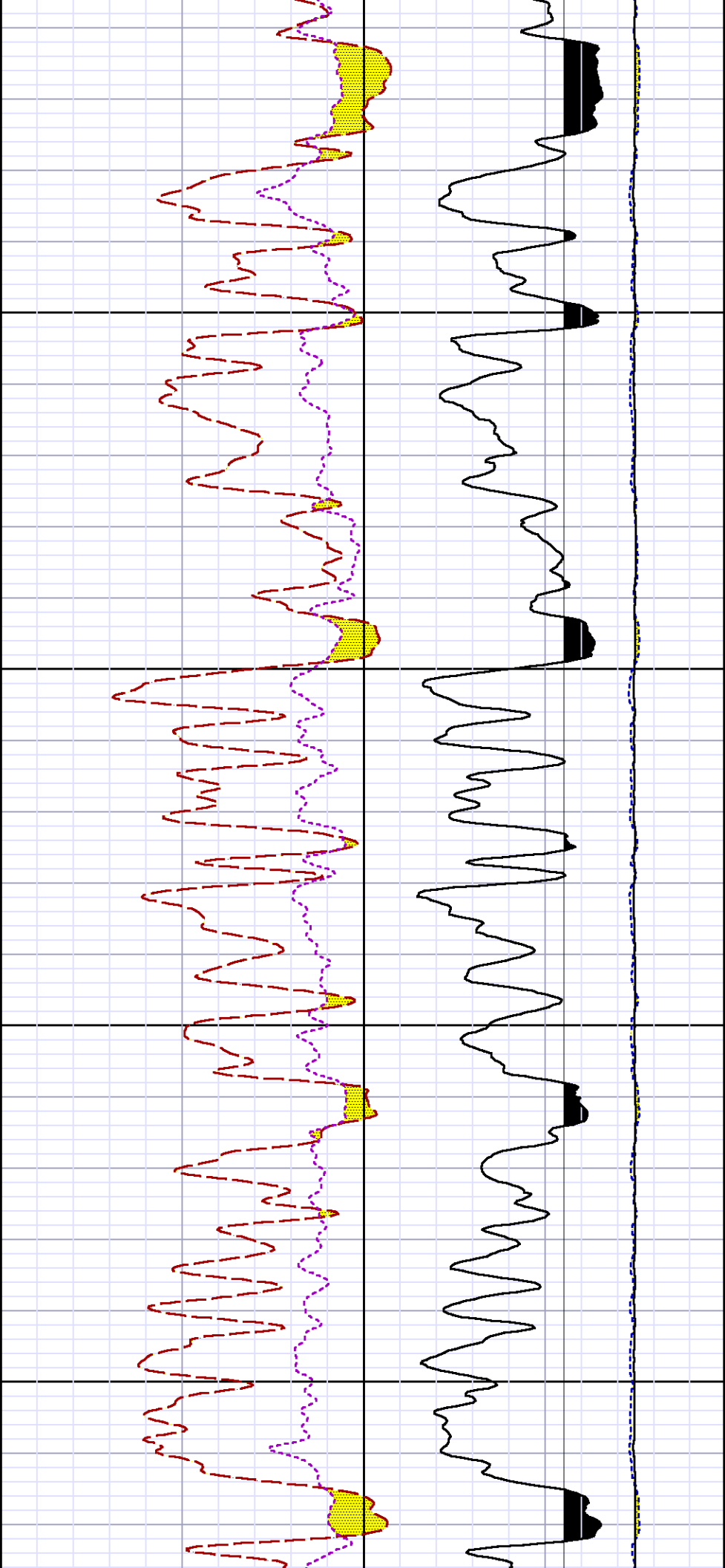


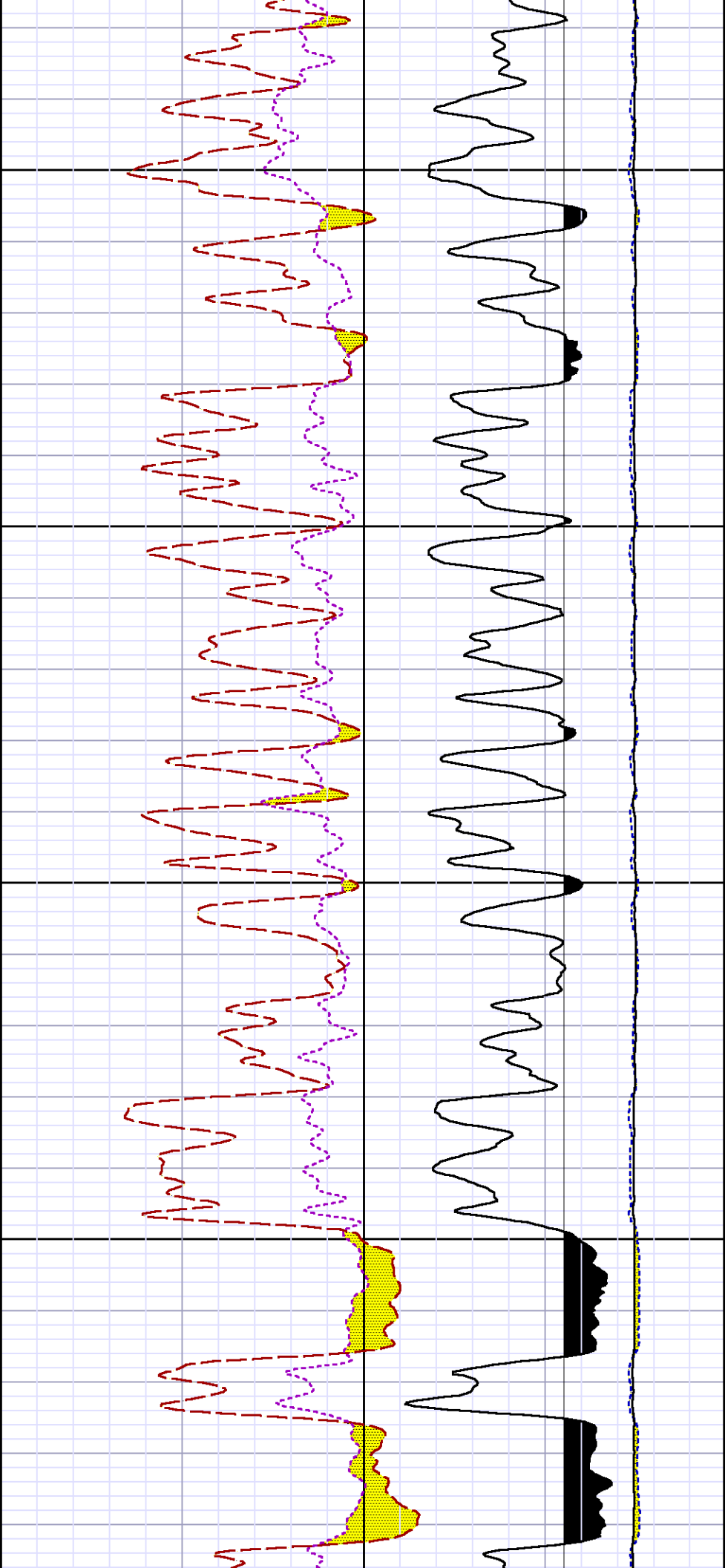






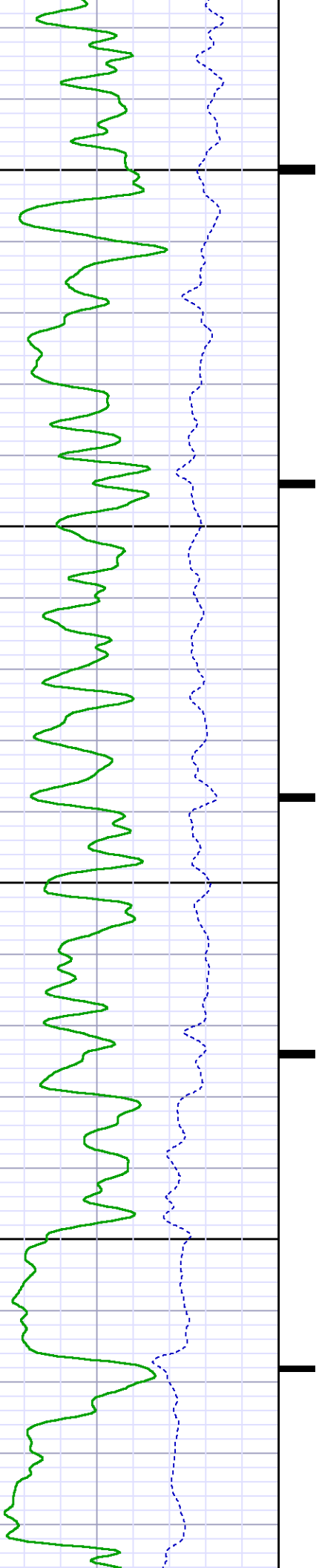


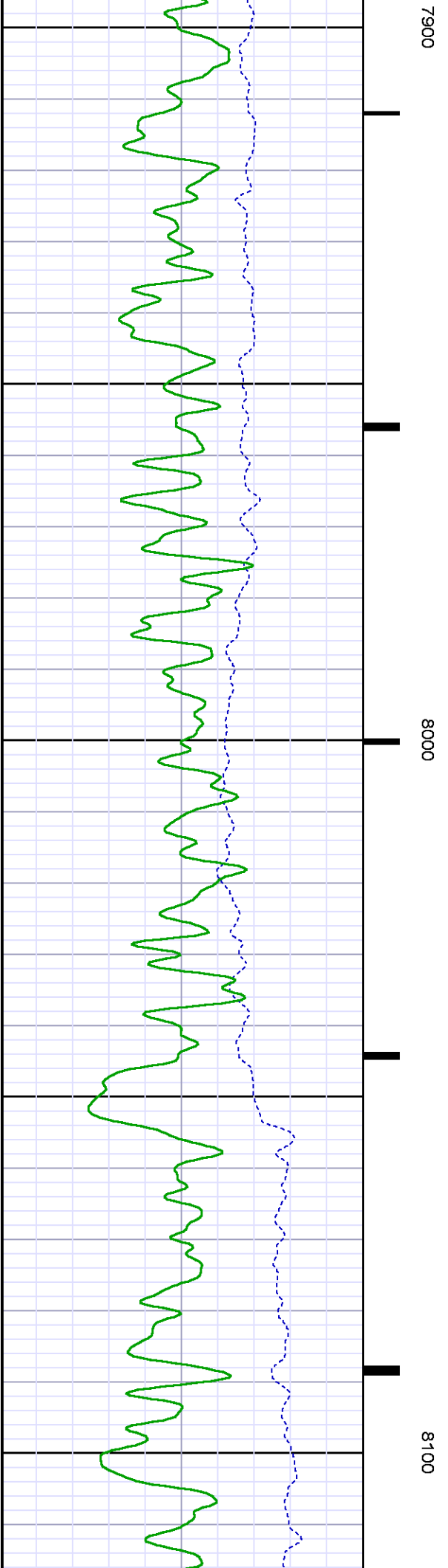
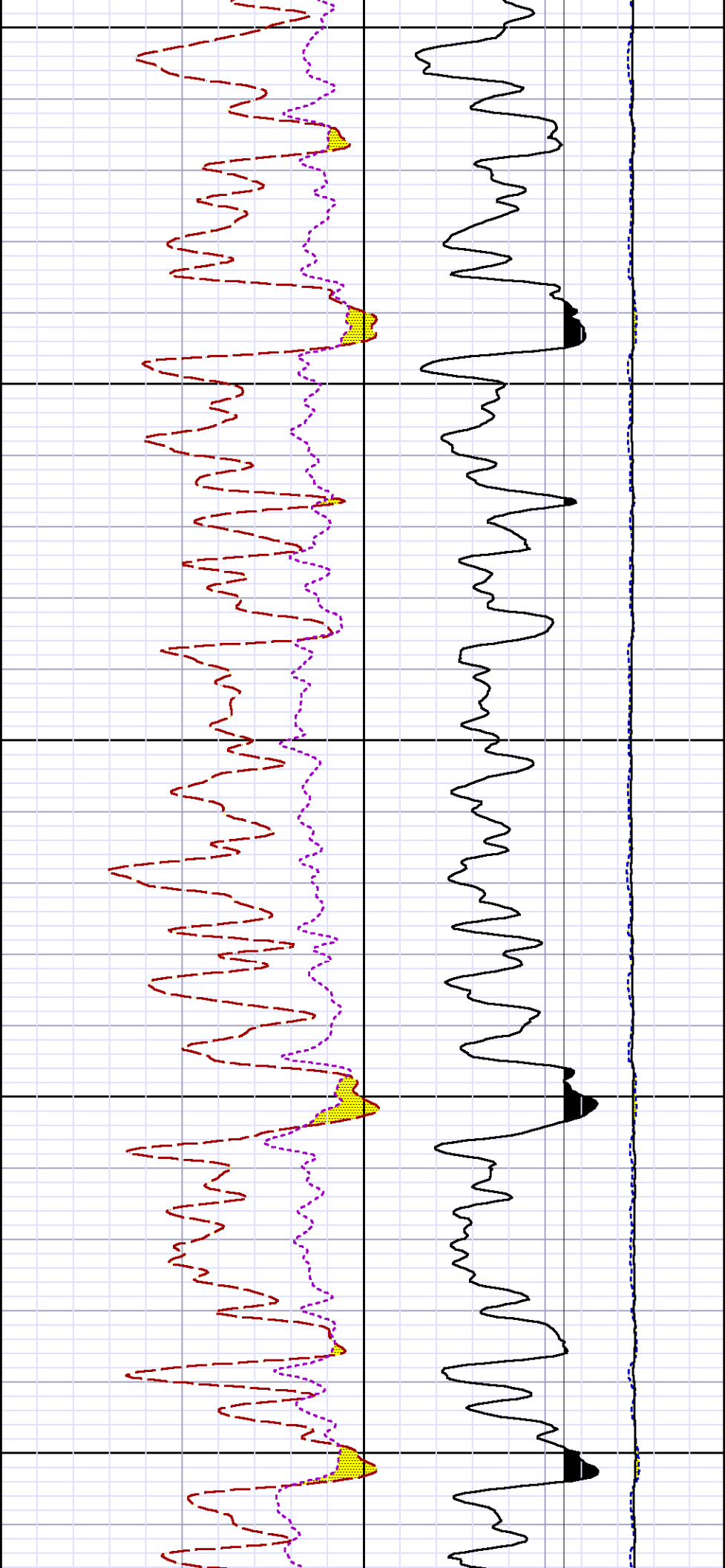


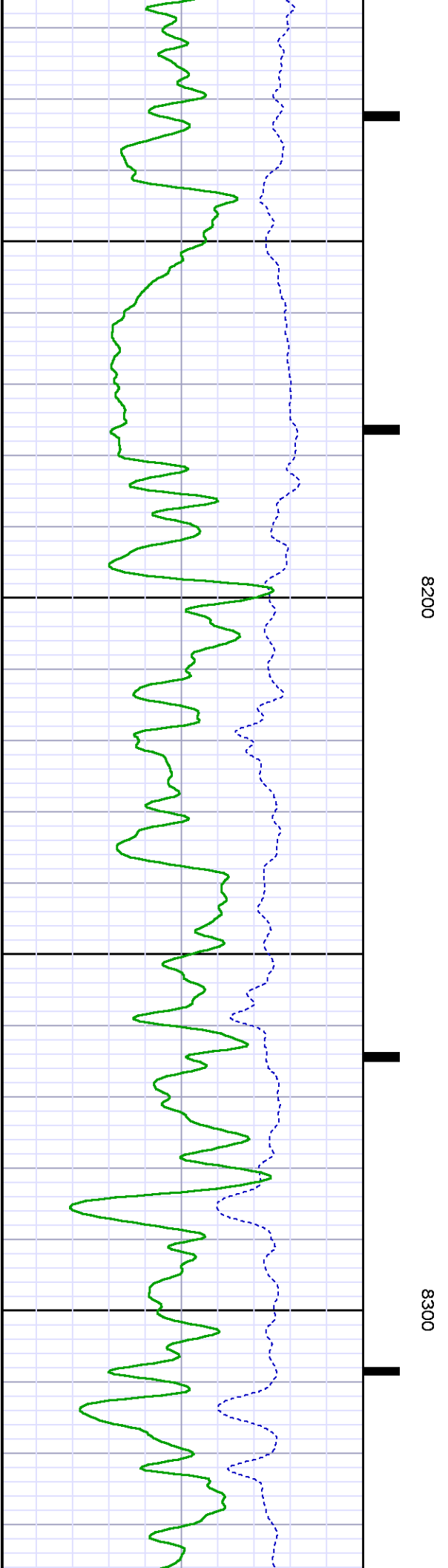
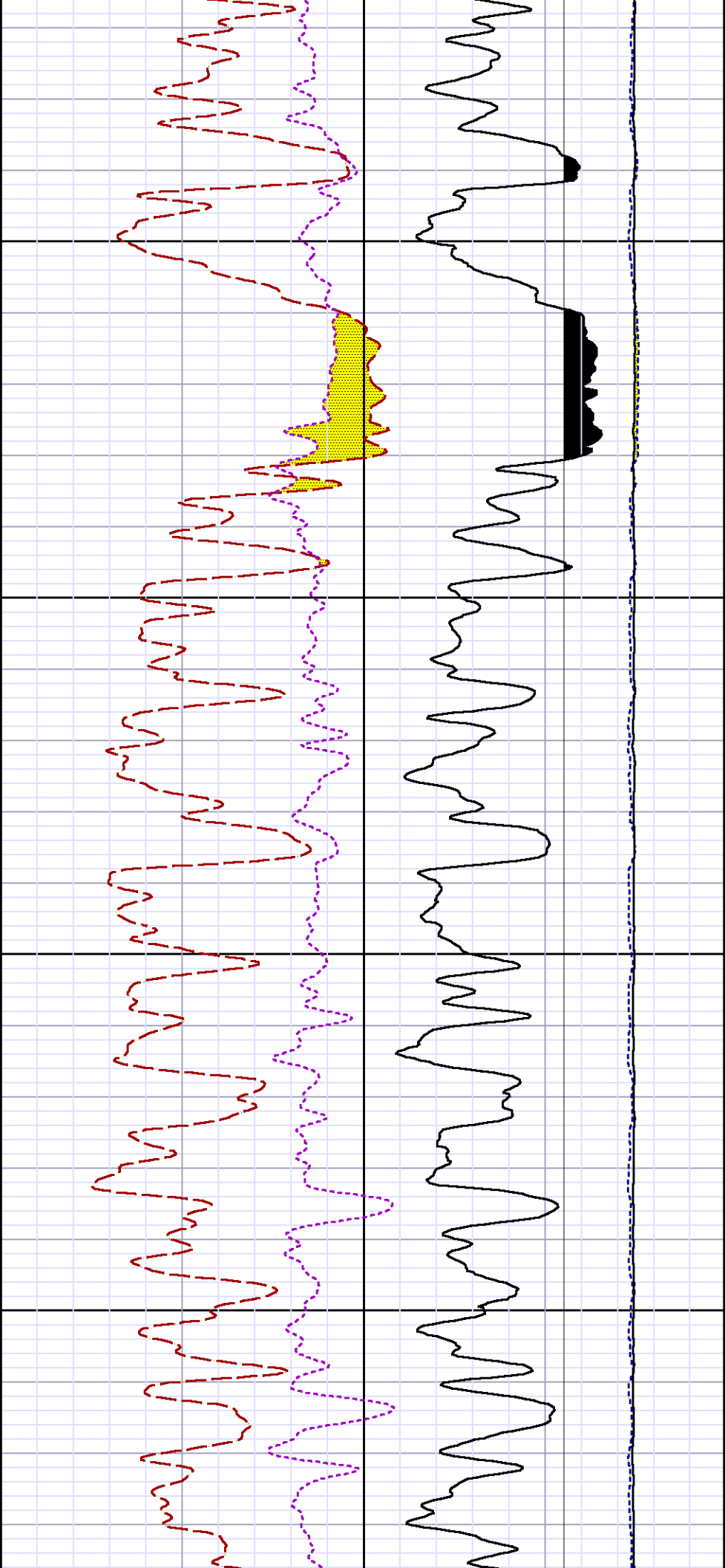


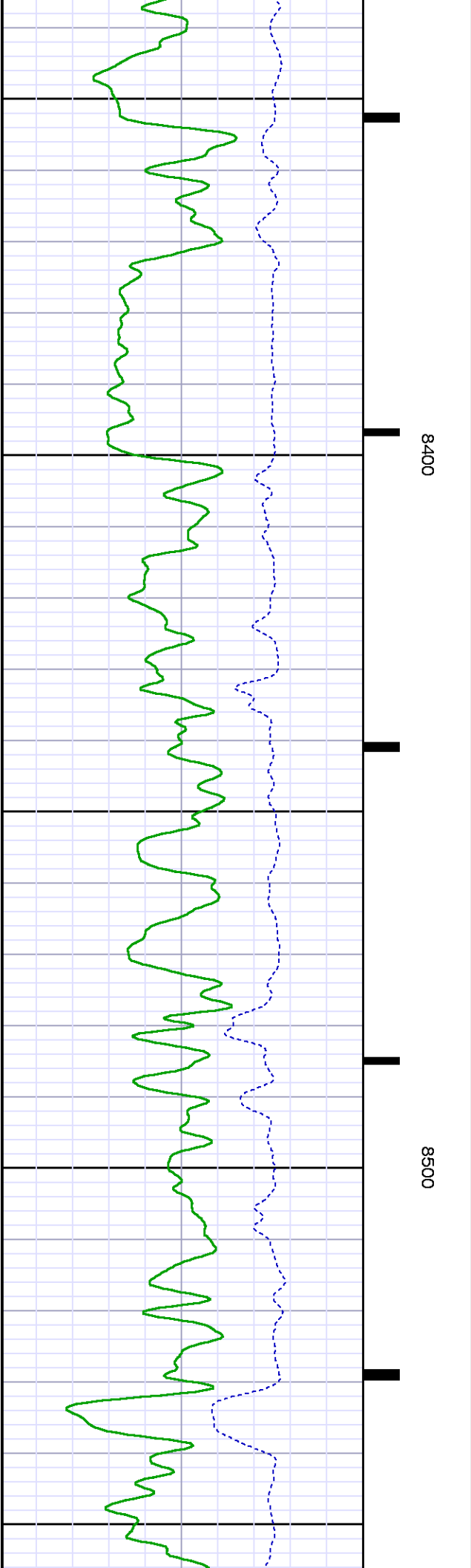
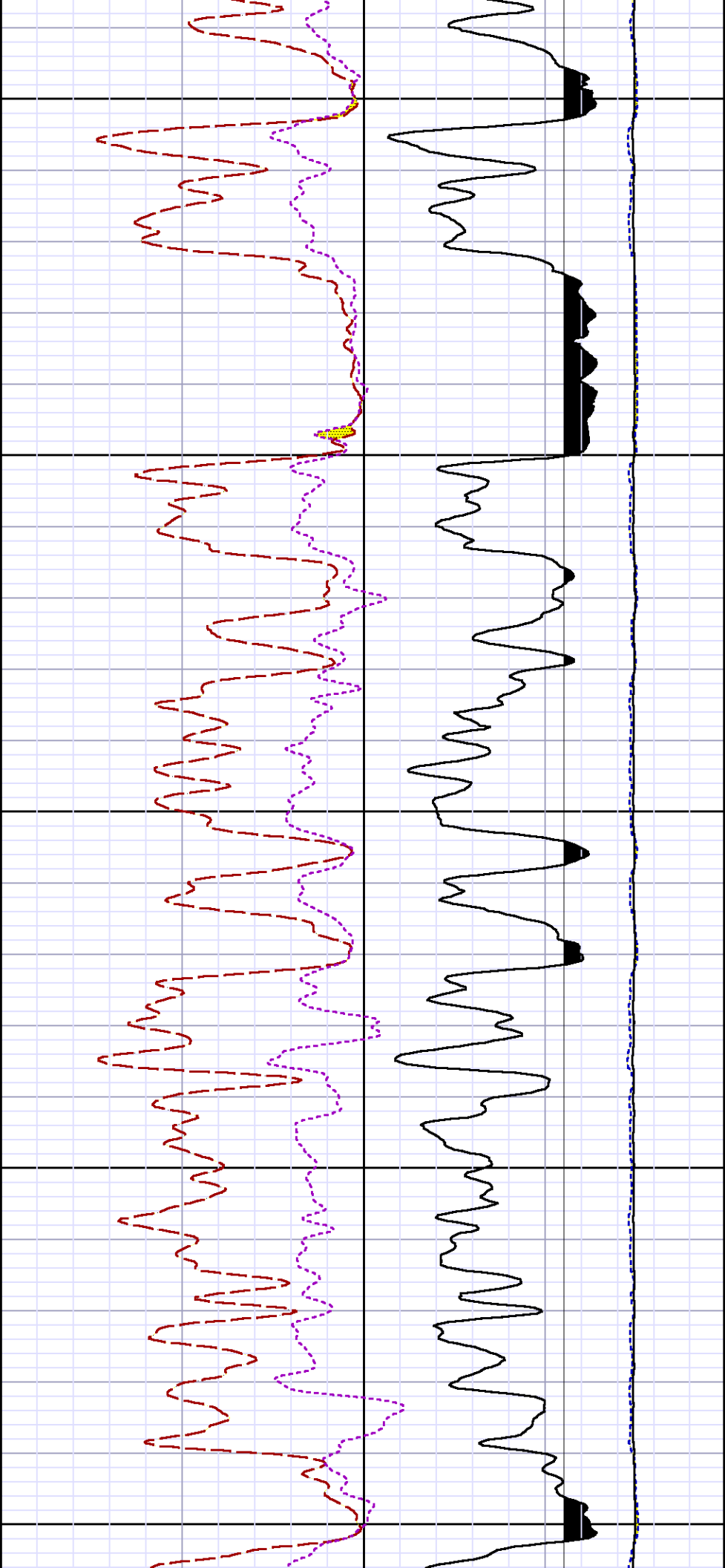
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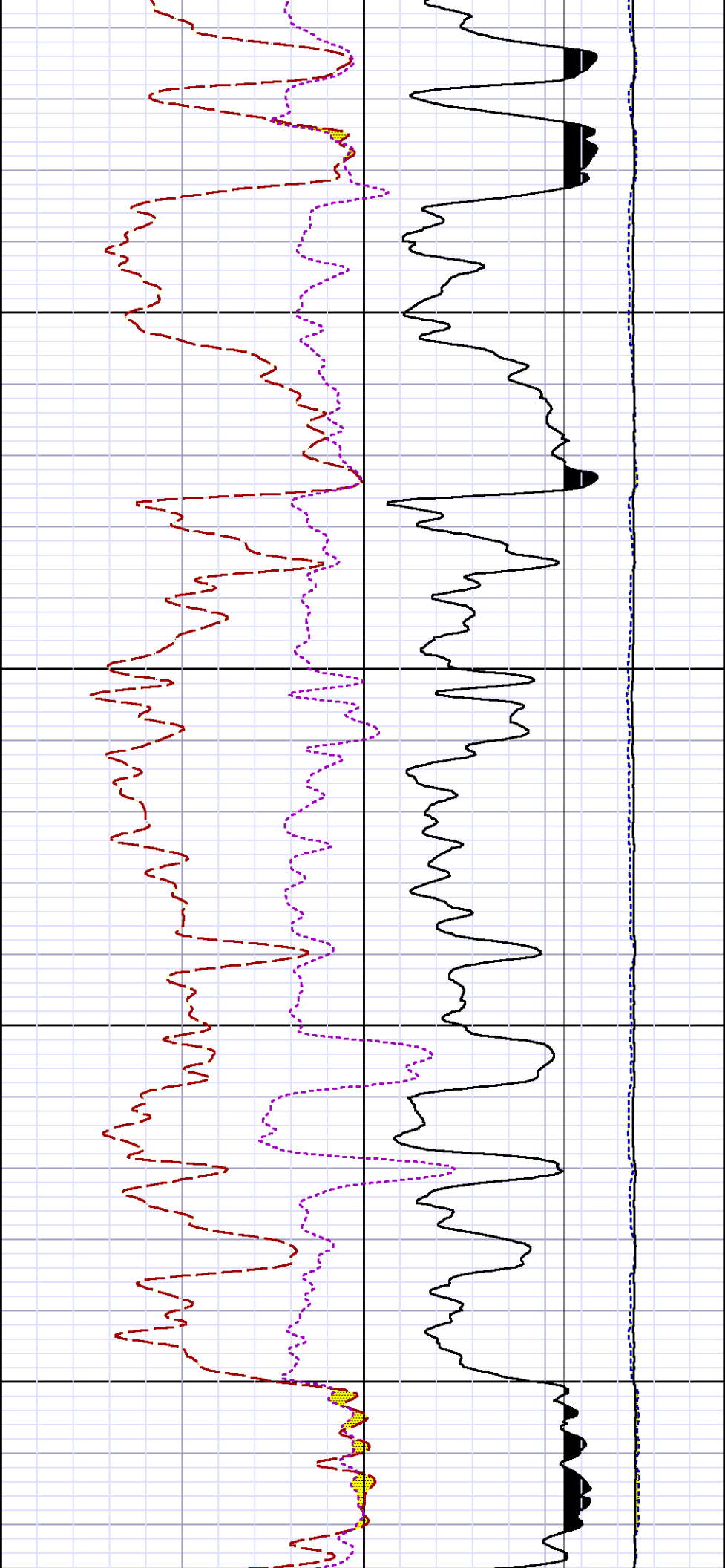
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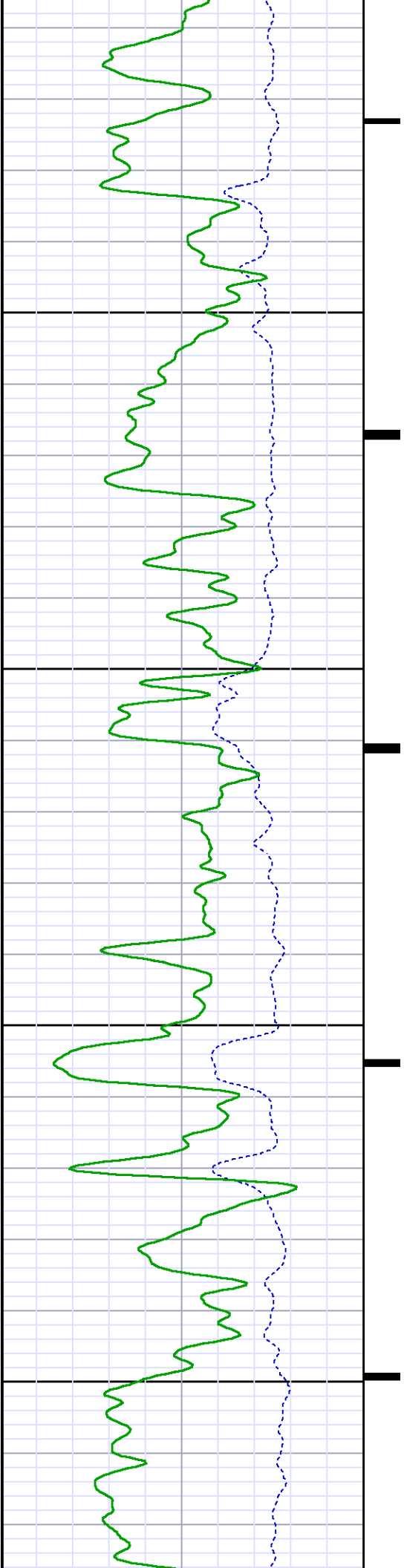


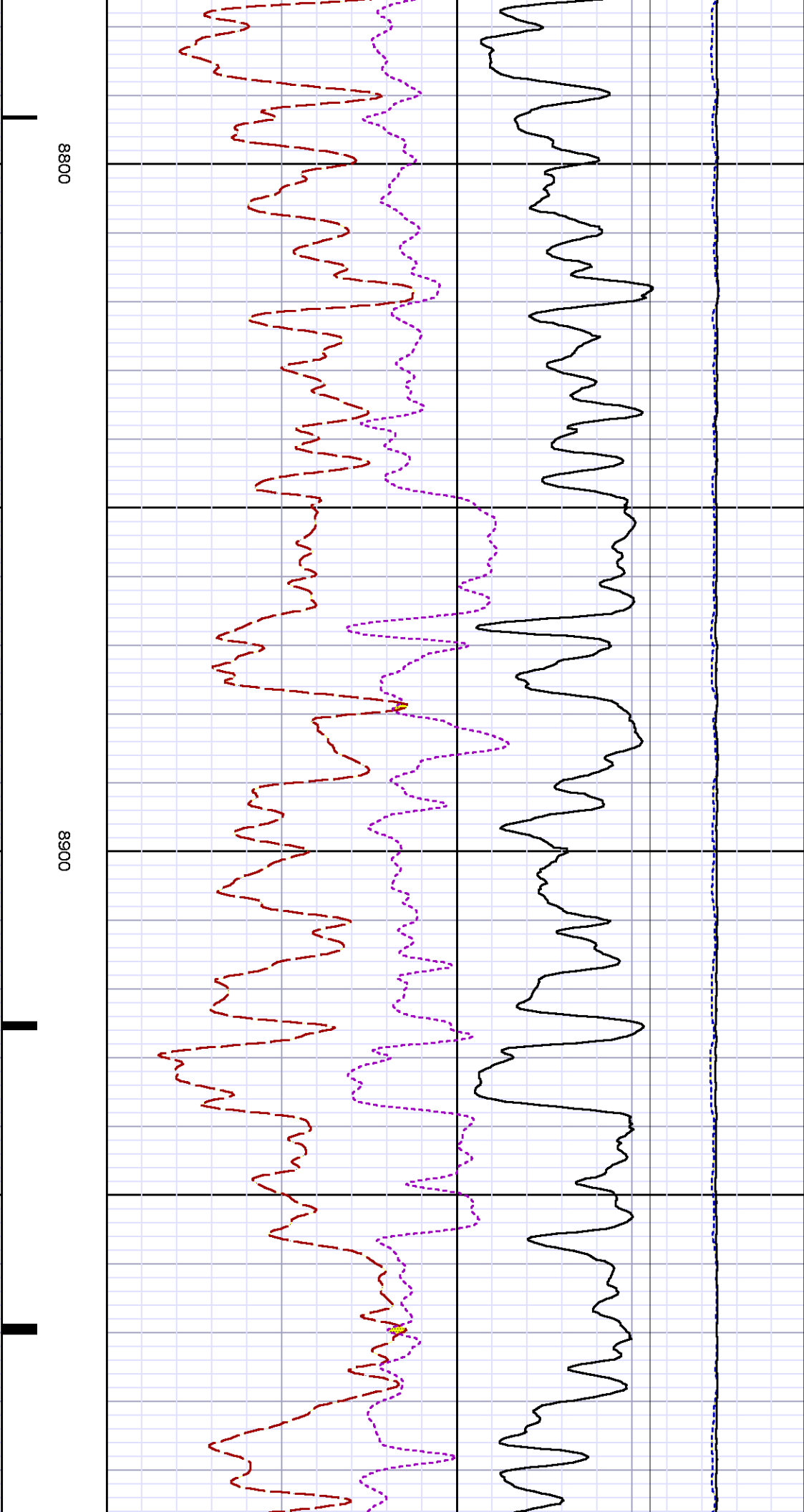
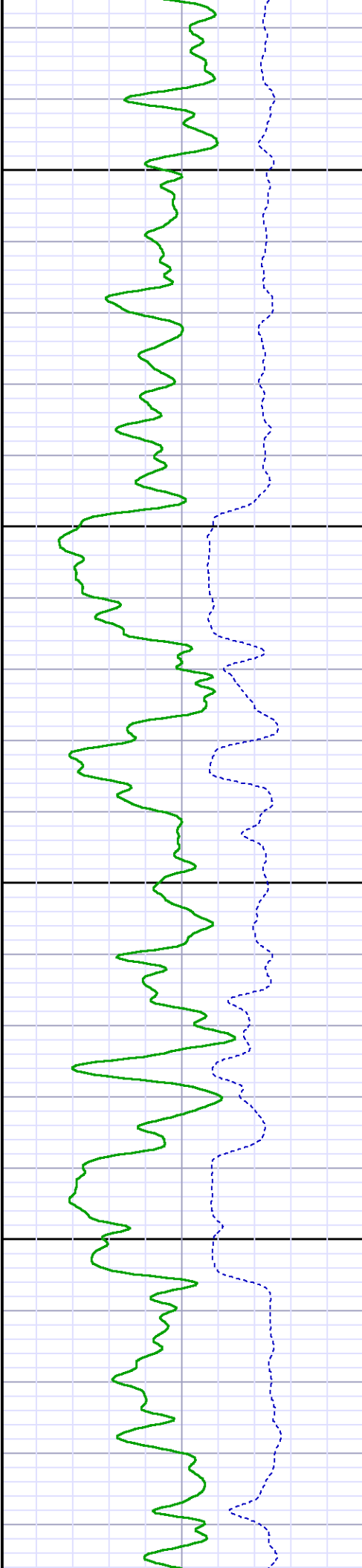


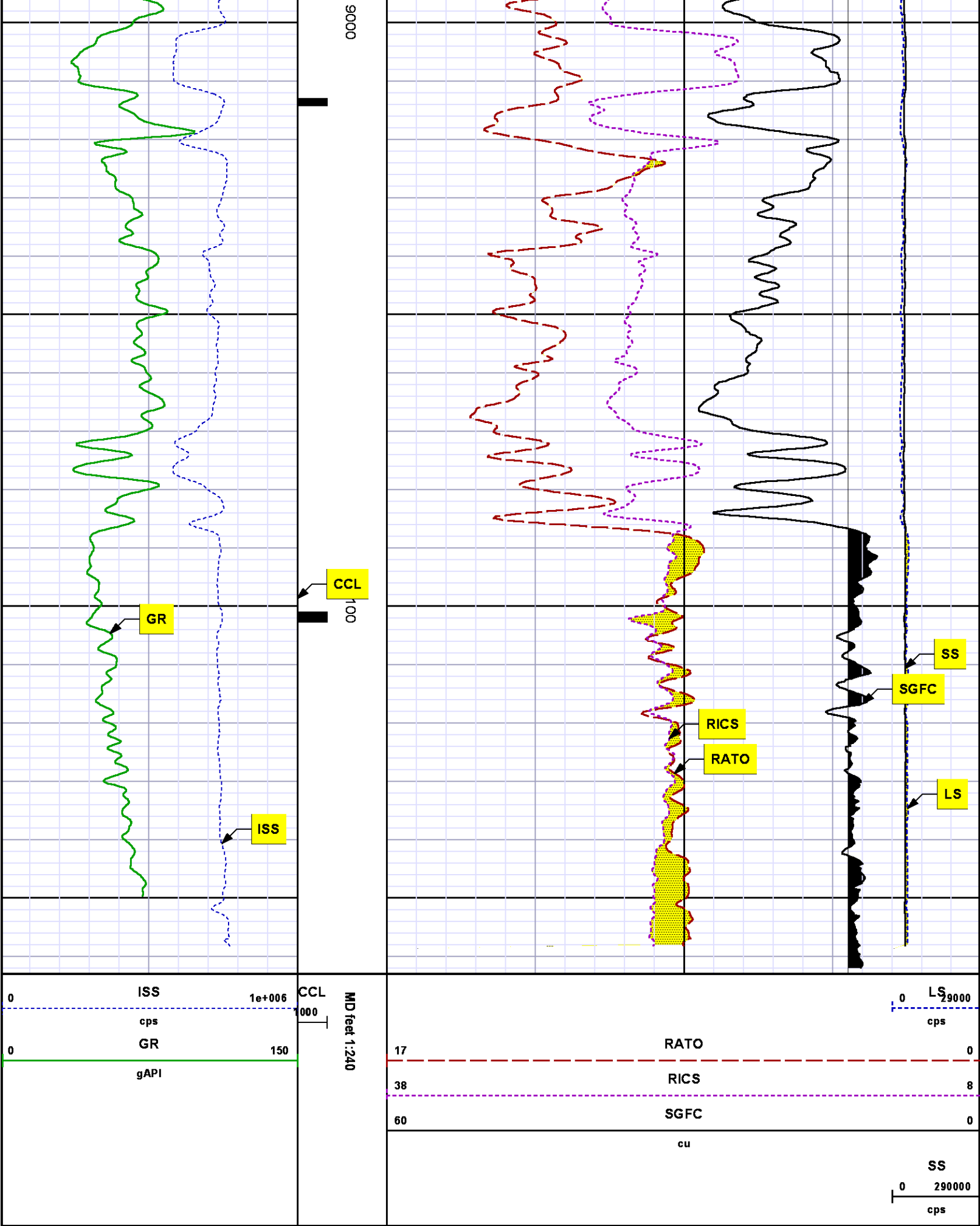


8600

8700







REPEAT SECTION
PNC 3-D MODE

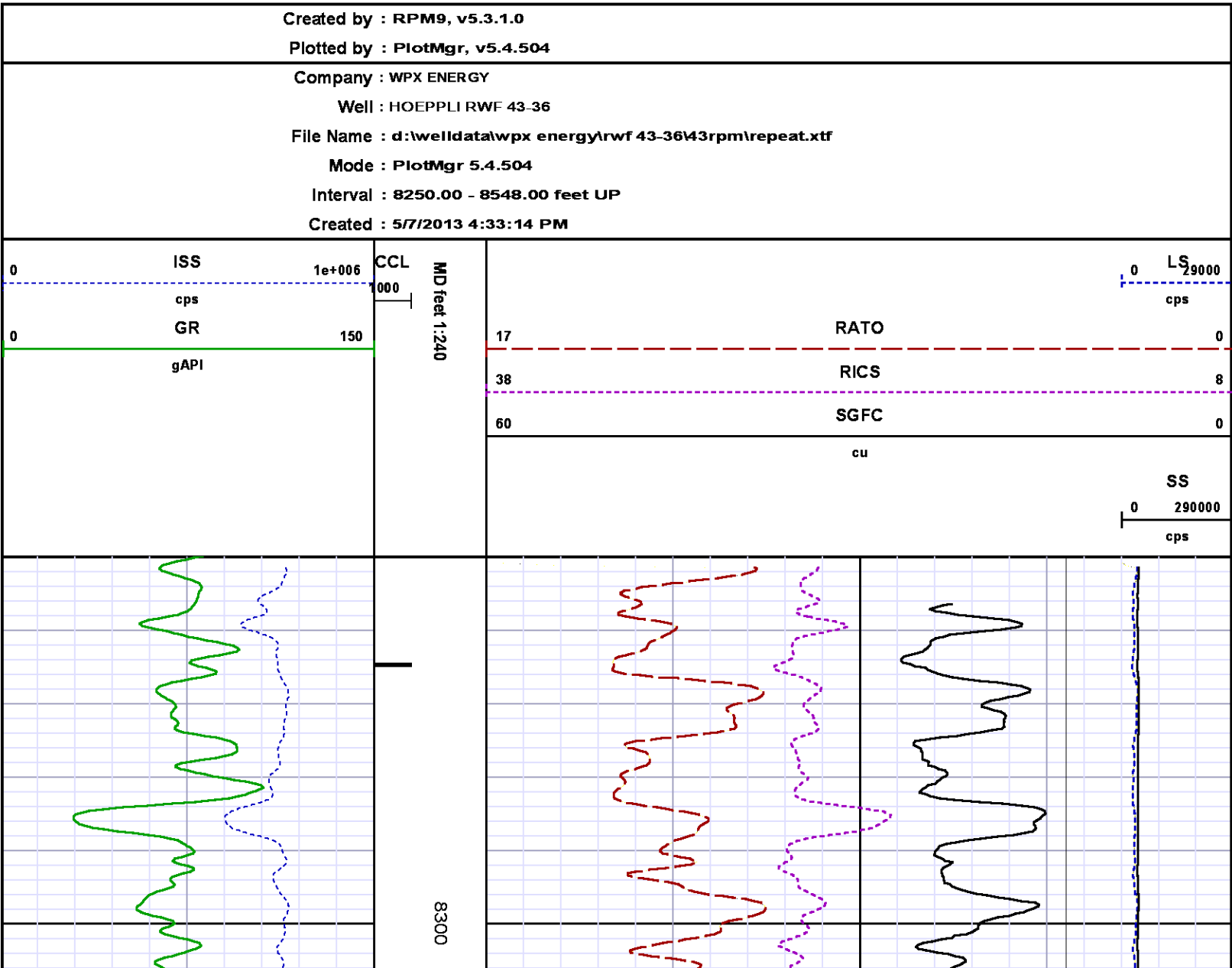
SPL PROCESSING

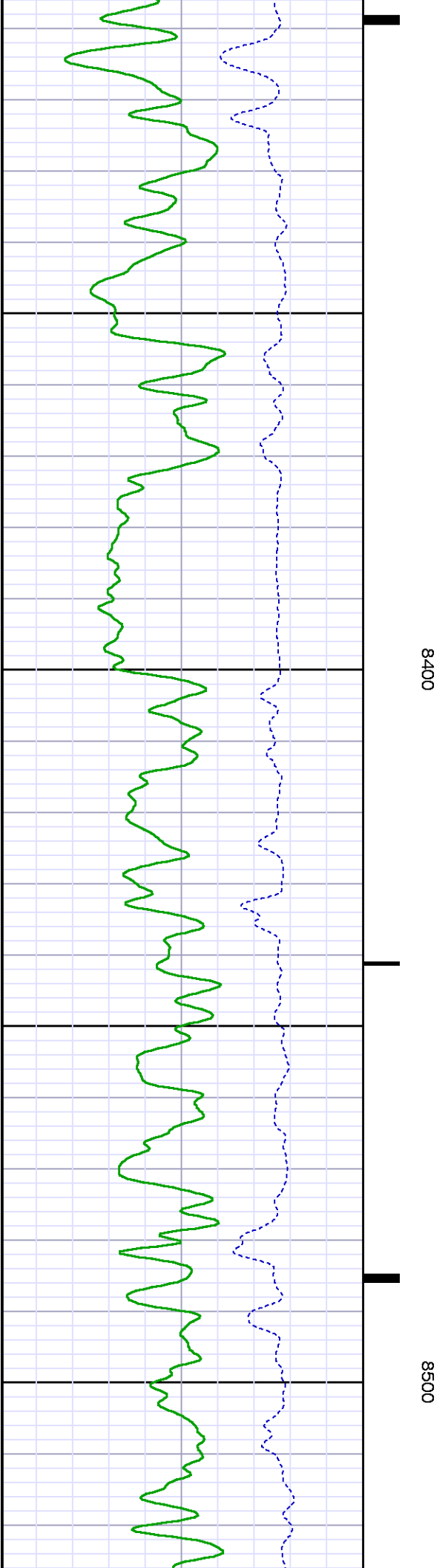
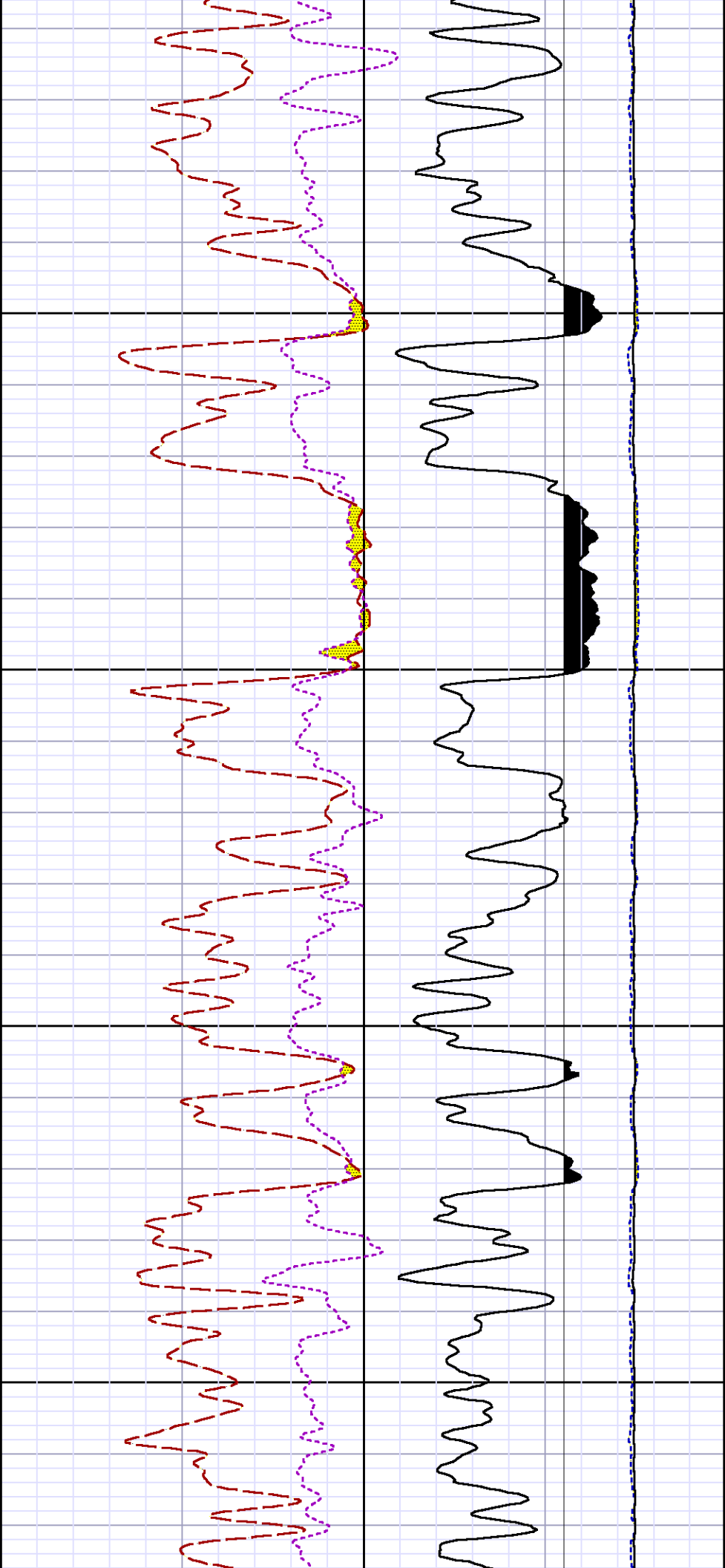
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		8249.750	8551.750
PNC Porosity	Borehole Size	8.750	inch	8249.750	8551.750
PNC Porosity	Casing Size	4.500	inch	8249.750	8551.750
PNC Porosity	Gas Filled	Non Gas Filled		8249.750	8551.750
PNC Porosity	Matrix	Sandstone		8249.750	8551.750

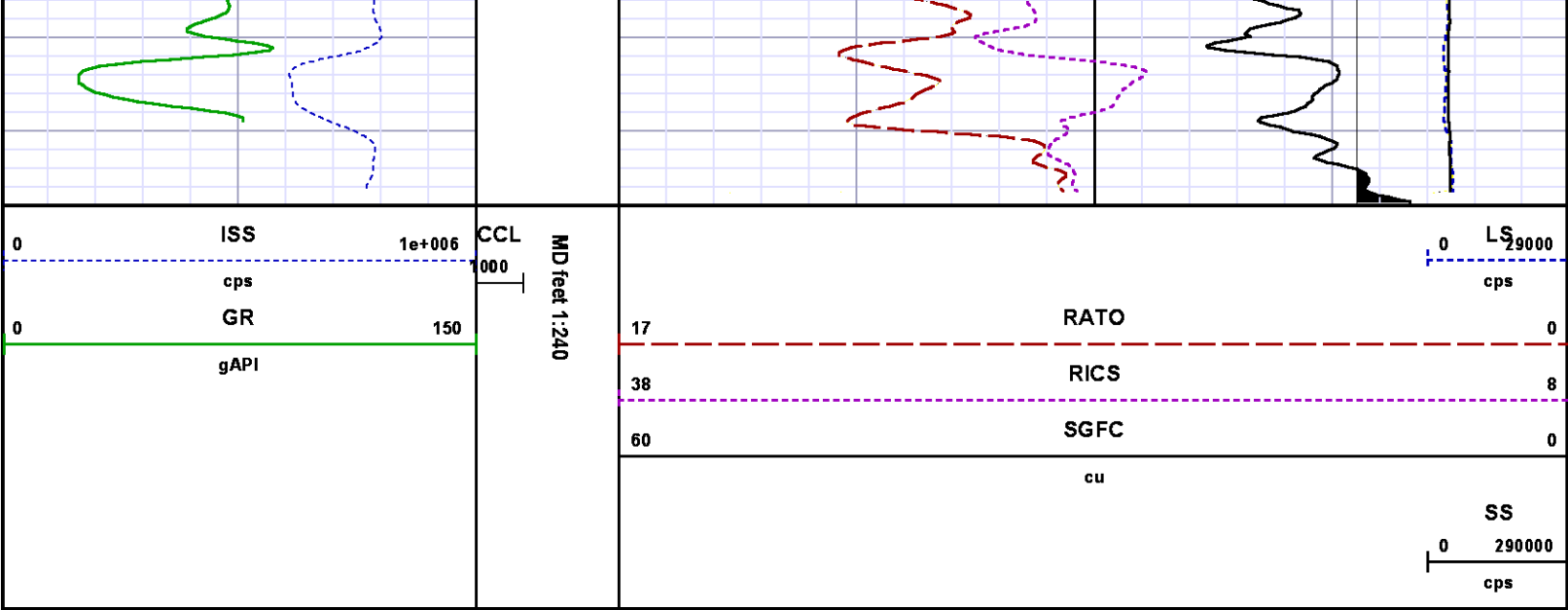
DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-15.320	FLTM
8248ED	-13.320	CCL CHV
8262XA	-10.189	GR
8281XA	-0.662	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	-0.250	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	0.000	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 HVC1Q0 QAL1 QAL1 QAL1 QAL1 QAL1 QAL1

		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					
SYSTEM	0.000	TEN	TTEN				







CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GRI055A2.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Apr 23 13:10:16 2013 TOOL SERIES: 8262XA ASSET: 055 SEQ: A2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	80.31	374.84	0.611	49.08	229.08	180.00

Verification File: C:\case\calver\GRI055A2.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Tue Apr 23 13:12:19 2013 TOOL SERIES: 8262XA ASSET: 055 SEQ: A2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	80.38	363.24	0.611	49.12	221.99	172.87

PNC

Calibration File: C:\case\calver\PNC\151A5.cal

DATE/TIME PERFORMED: Mon Apr 15 14:56:54 2013

TOOL SERIES: 8281XA

ASSET: 151

SEQ: A5

Calibrator #

SHOP BARREL

Source #

8281AA 11765055

	ISS	Mtr VIts (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	817644	131.00	2260.00	2361.00	2439.00	105.74	8.00	0.9649
Interpolated	1300000	154.27	2246.64	2357.92	2425.40			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	817644	6800.04	1052.78	145.31	25.86	0.14	24.24	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	817644	168063.84	26013.26	90652.30	32248.90	8276.82	54856.68	13245.76
Fit Quality %		0.92	0.89	1.08	1.06	0.97	0.98	0.94

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	817644	1.43	4.87	31.43	14.91	10.95	3.90	4.14
		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	0.19	0.20	0.10	0.10	0.11	0.09
Reduced	1413216	1.43	4.87	31.48	14.95	10.94	3.89	4.14
		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

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

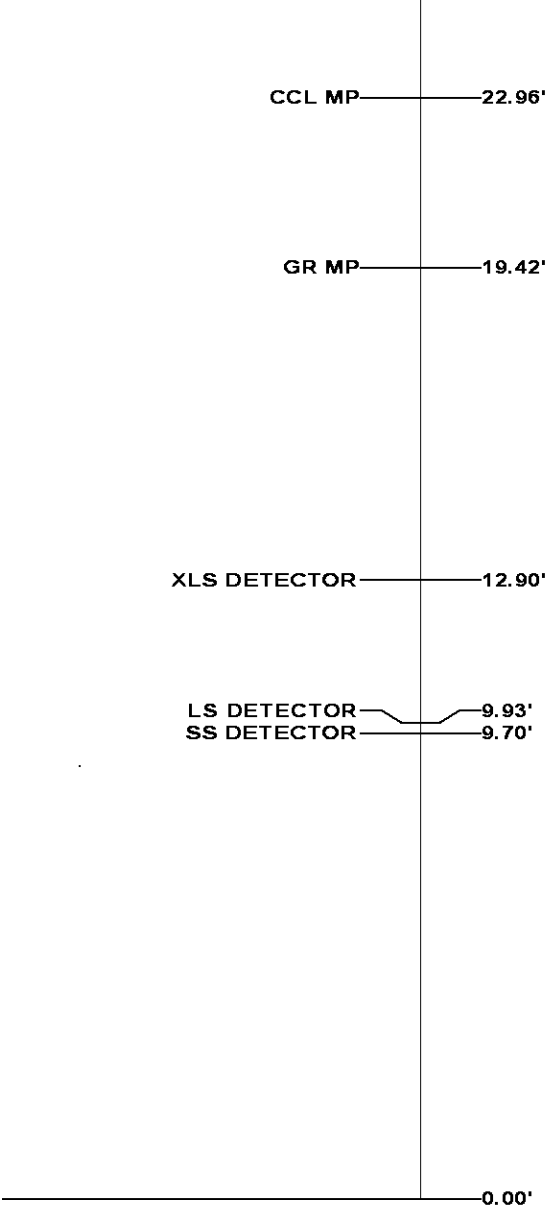
TELEMETRY / CCL

Series 8248EA
Mnemonic PCM



31.05'

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
GAMMA RAY	
Series	8262XA
Mnemonic	GR
Diameter	1.70"
Weight	15.00 lb
Length	3.17'

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



Total Length: 31.05'
Total Weight: Not Available
Max Diameter: 0' 1.70"

 Baker Atlas	Company WPX ENERGY		File No:	
	Well HOEPPLI RWF 43-36		CH071653	
	Field RULISON		API No:	
	County GARFIELD	State COLORADO	05045215540000	
	Location		Elevations	
	SHL: 2578' FNL, 2577' FEL (SWNE)		KB 6554 ft	36 6S 94W
	BHL: 1990' FSL, 735' FEL (NESE)		DF	RWF 33-36 EAST PAD
	SEC 36 TWP 6S RGE 94W		GL 6528 ft	NABORS 576