



Baker Atlas

# RESERVOIR PERFORMANCE MONITOR

File No: CH79535	Company Well Field County	WPX ENERGY FEDERAL PA 414-12 PARACHUTE GARFIELD	State CO
API No: 05045206680000			
12 7S 9SW PA 23-12 PAD MABORS 577	Location SHL: 2577' FSL & 1724' FWL BHL: 522' FSL & 267' FWL SEC 12 TWP 7S RGE 9SW	Other Services BOND LOG	
Permanent Datum Log Measured From Drill Measured From	GL KB KB	Elevation 26 ft Above P. D.	Elevations KB 6533 ft DF GL 6507 ft

Date	22/NOV/13	
Run	ONE	
Service Order	US625035	
Depth Driller	8631 ft	
Depth Logger	6528 ft	
Bottom Logged Interval	6518 ft	
Top Logged Interval	5018 ft	
Time Started	13:30	
Time Finished	19:00	
Operator Rig Time	5.5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	70 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	238 degF	
Reference Log	BAKER HUGHES BOND LOG	
Reference Log Date	22/NOV/13	
Equipment No.	4271	GRAND JCT.
Recorded By	TIM NEWELL	
Witnessed By	BILL 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	1030 ft
7.875 In	1030 ft	8689 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In			0 ft	1030 ft
4.5 In	11.5 lbm/ft	1-80	0 ft	8689 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 11/22/2013 at the client's request.
The amount of linear shift is 5 feet.
Logged in PNC-3D mode.
BHT = 238 °F

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
2	1		8250EA	10408796	FREE
2	1		8248ED	10590814	FREE
2	1		2812LA	11701636	FREE
2	1		8281EA	10169250	FREE
2	1		8283PA	10203151	FREE
2	1		8281FA	10191667	FREE

*MAIN SECTION*  
*PNC 3-D MODE*

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		4999.750	8545.000
PNC Porosity	Borehole Size	8.750	inch	4999.750	8545.000
PNC Porosity	Casing Size	4.500	inch	4999.750	8545.000
PNC Porosity	Gas Filled	Non Gas Filled		4999.750	8545.000
PNC Porosity	Matrix	Sandstone		4999.750	8545.000

DEPTH OFFSETS  
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
8248ED	-14.478	FLTM					
8248ED	-12.478	CCL CHV					
2812LA	-9.928	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	RAT023
		DLOYO	DUN3Q	DUNQ3	DUNQ3Q	GR3D	SO3D

8281XA

-0.250

RTXC	RTN13C	RTN23	RTN23C	SD3D	SG3D
SGB3	SGF3	WDTH3	CXSR	IXSR	XSR
RICXR					
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

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	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	MM	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	RAT0R	RAT013R
RBORR	RICSR	RINR	RIN13R	RONER	RPORR

SYSTEM

0.000

RTWOR	TEN	TTEN
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Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

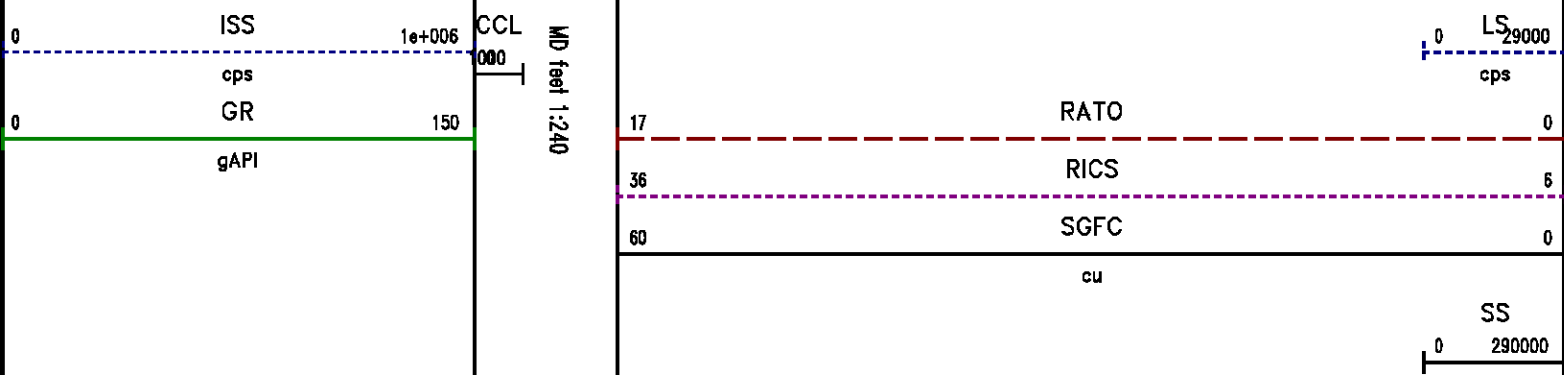
Well : FEDERAL PA 414-12

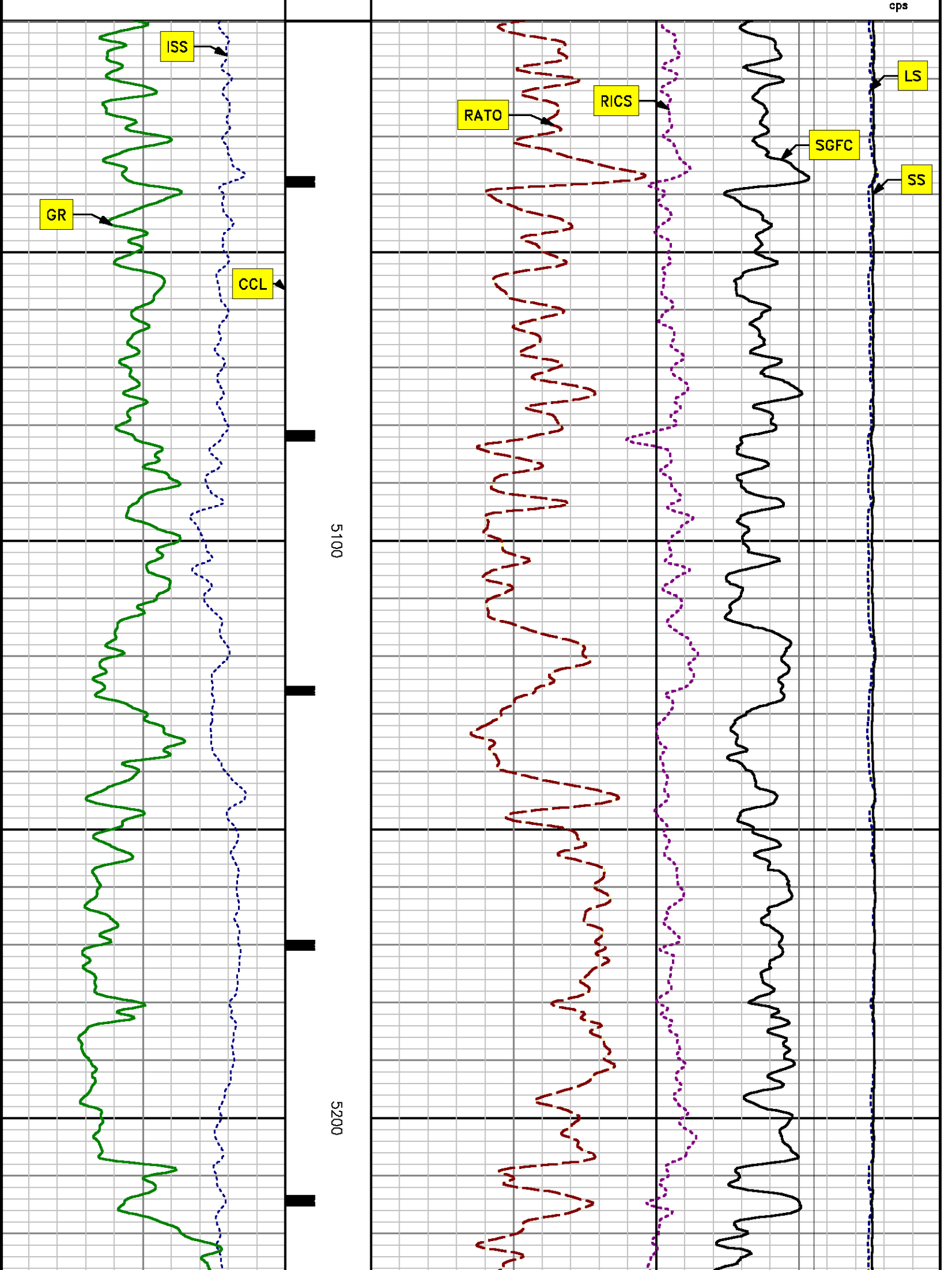
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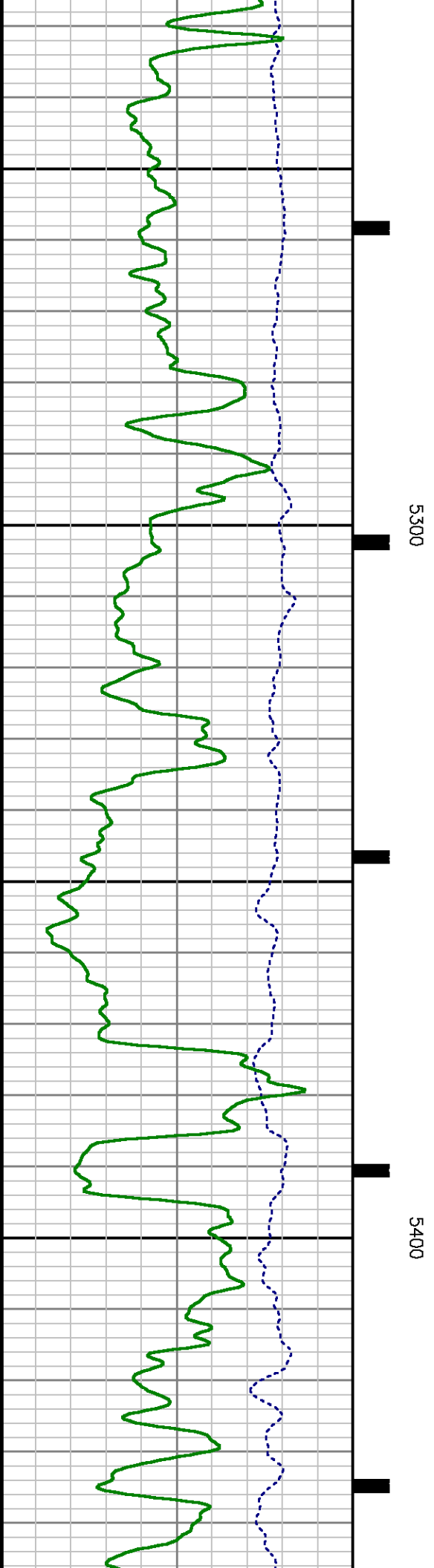
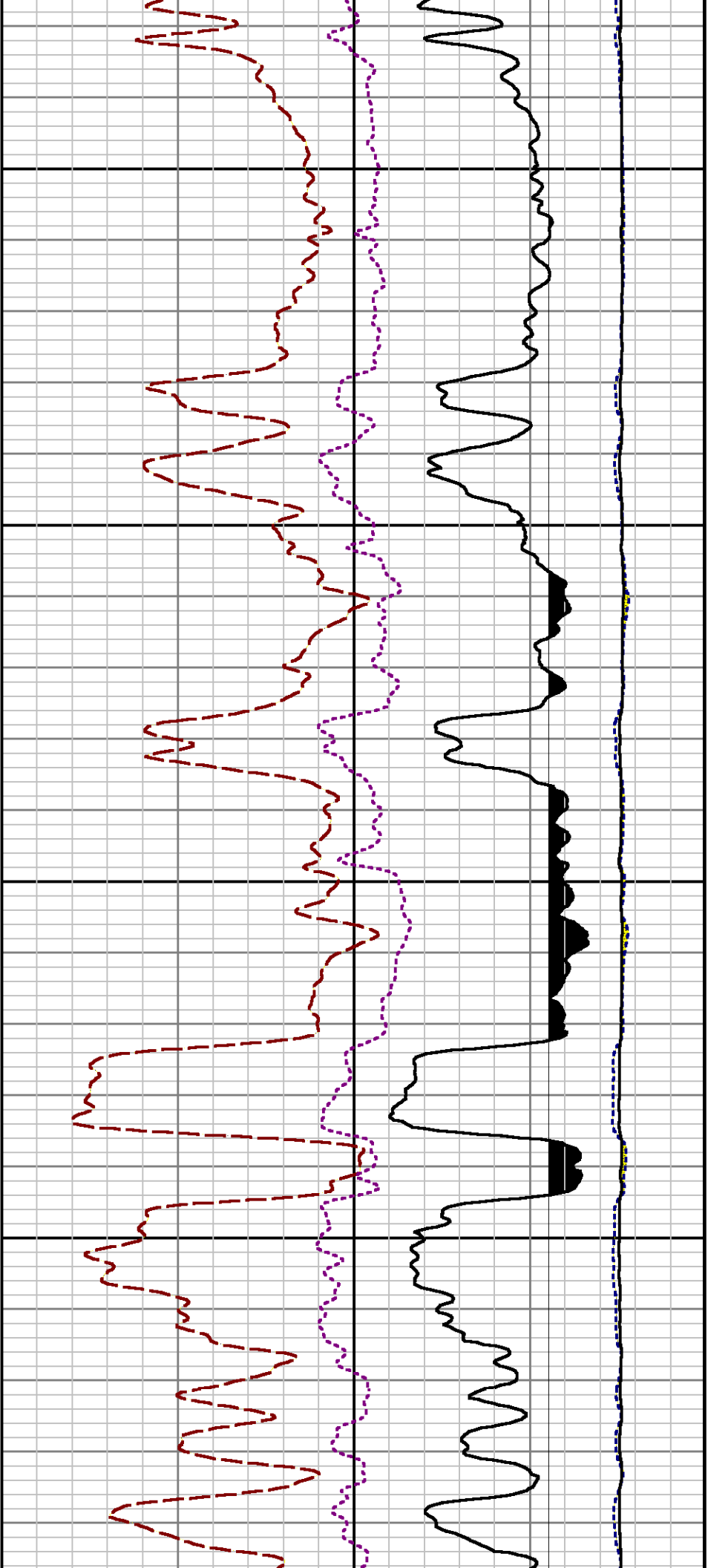
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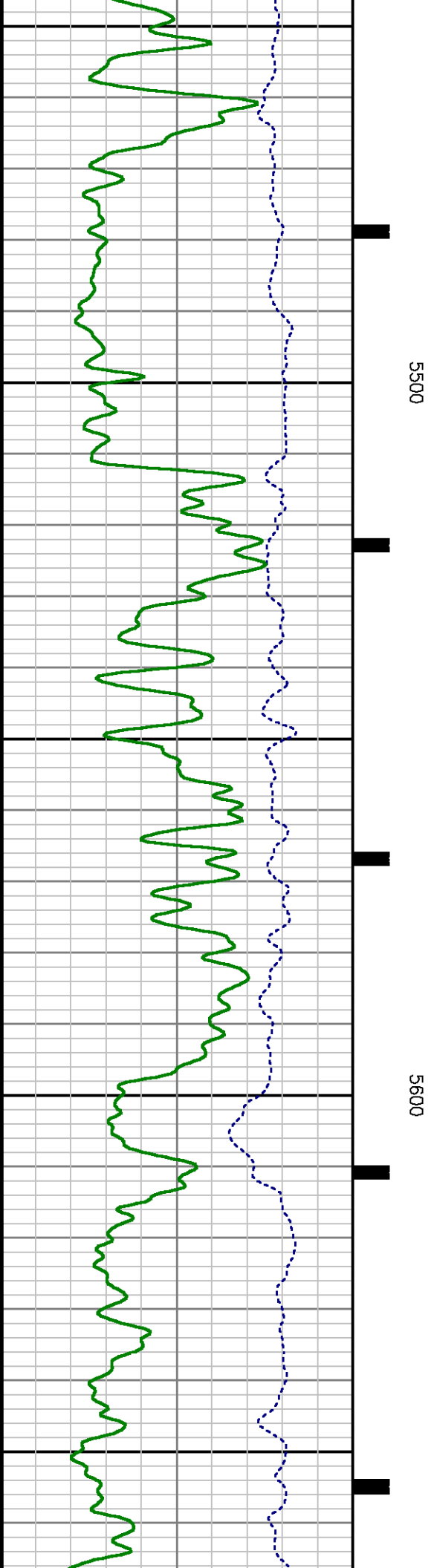
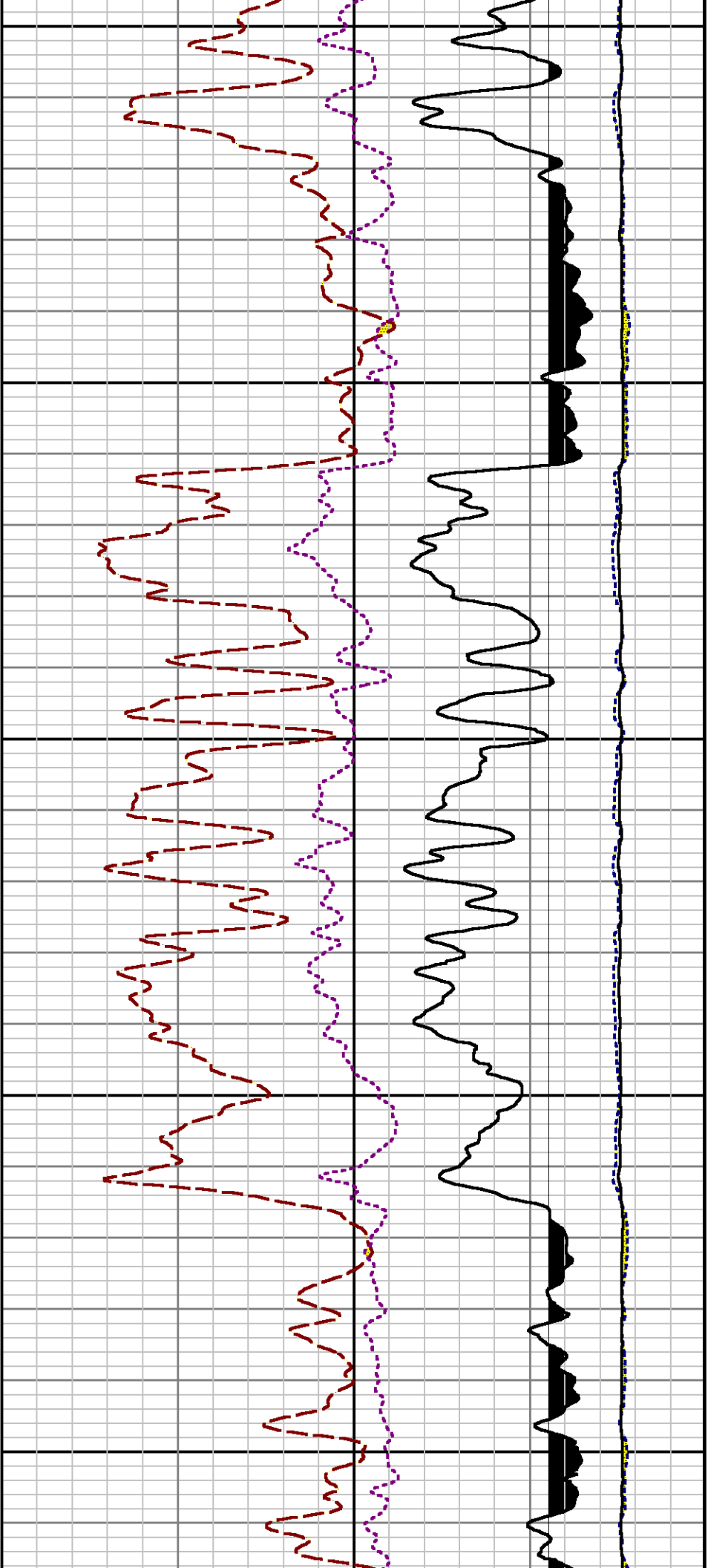
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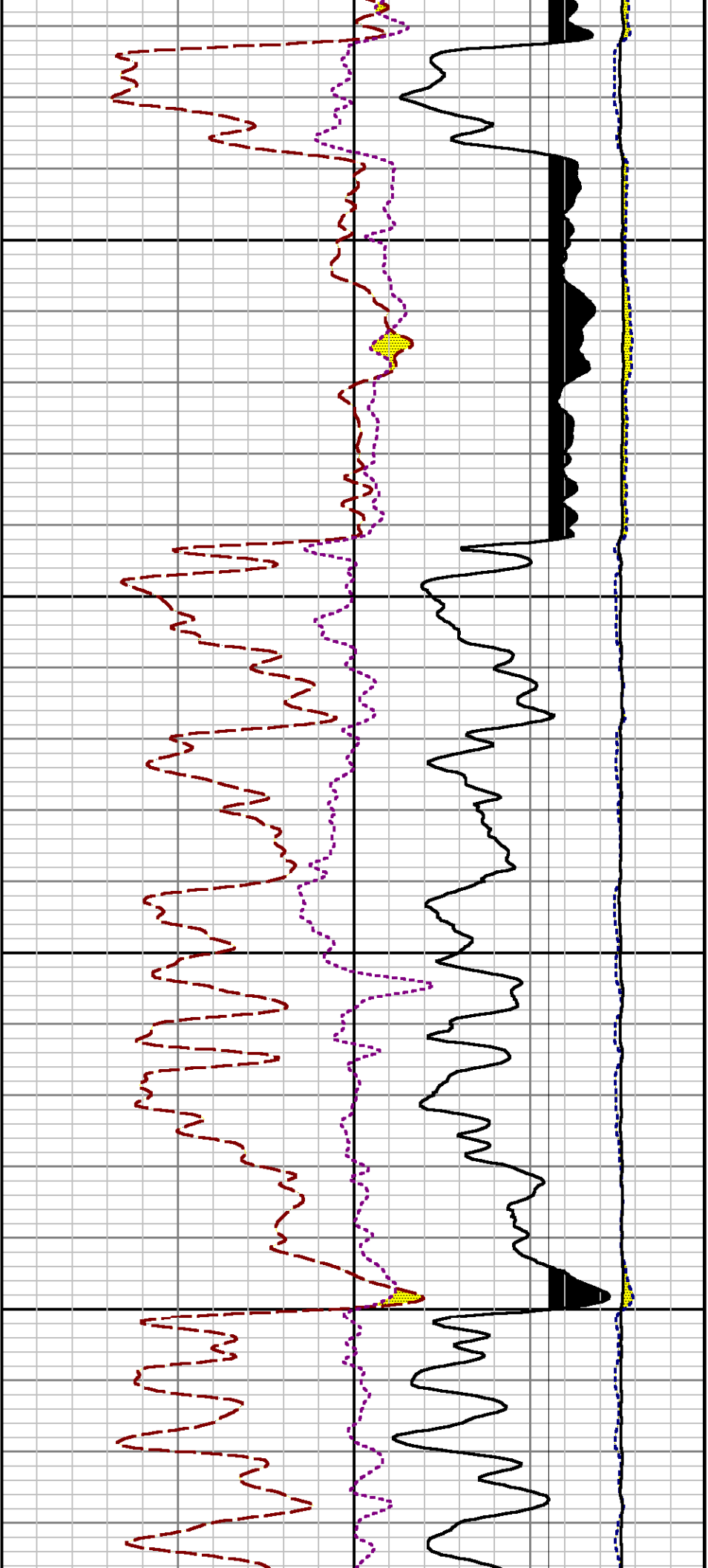
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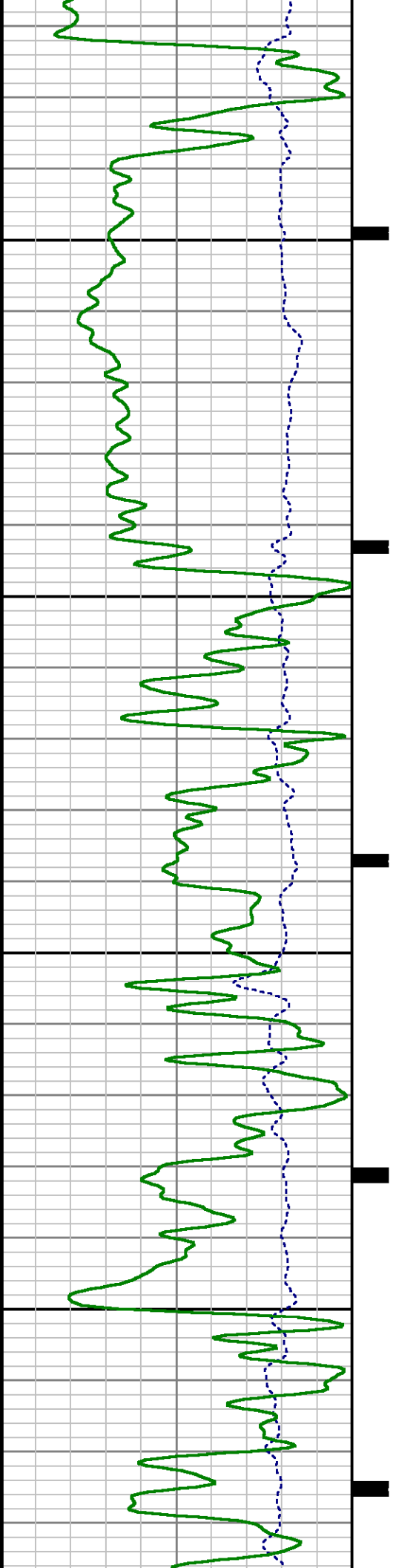


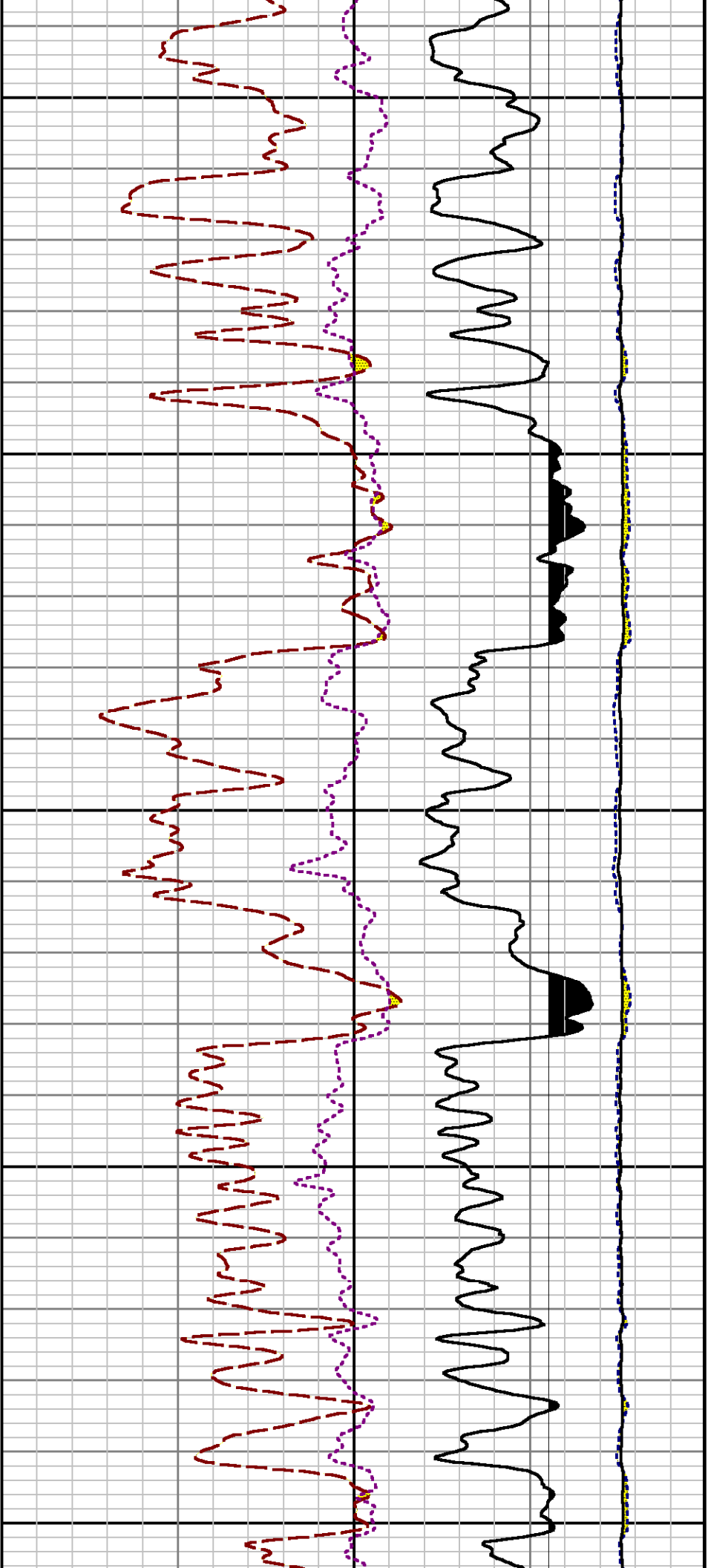




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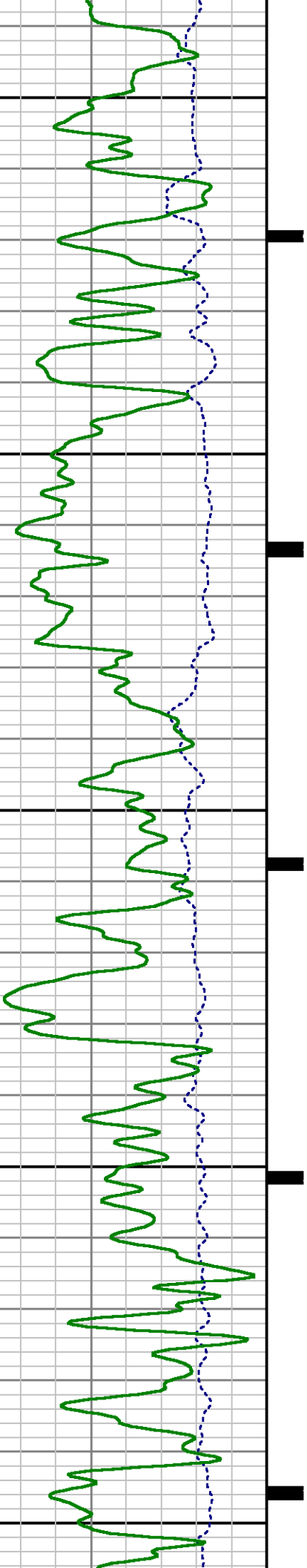




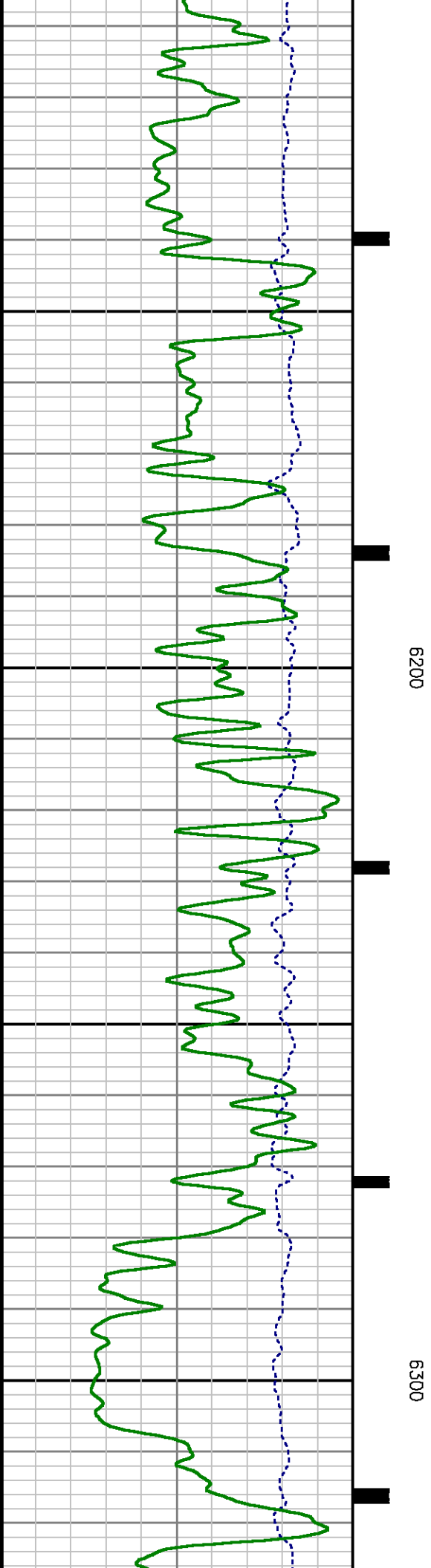
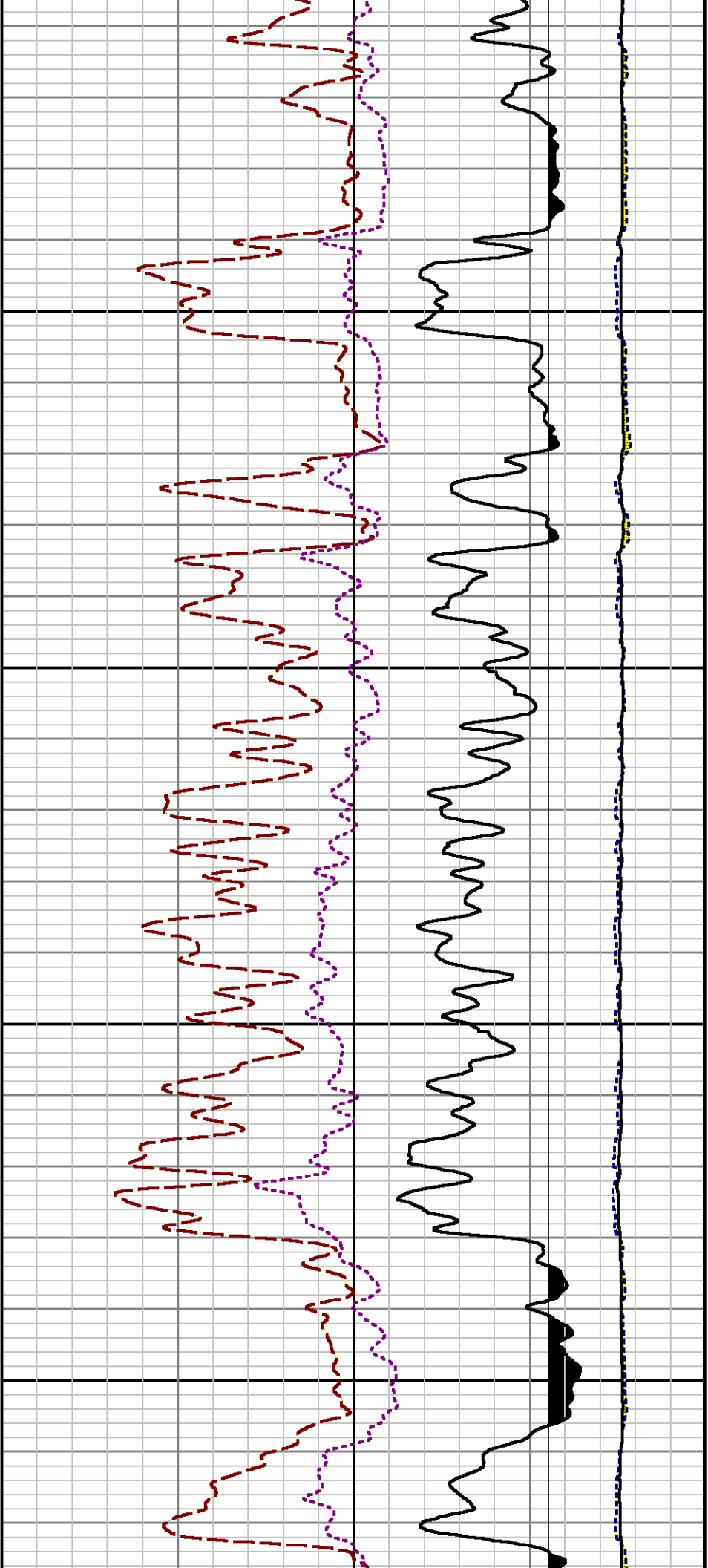
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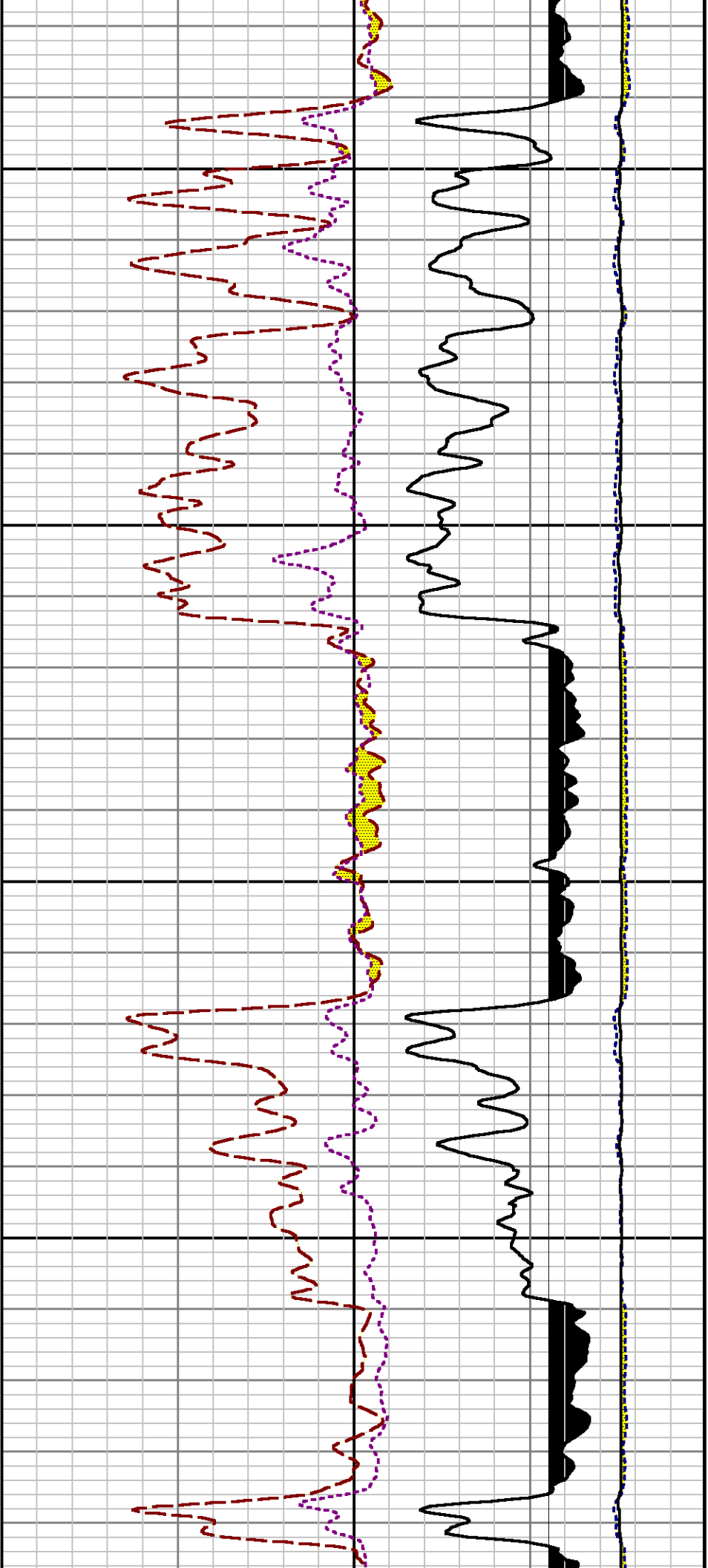
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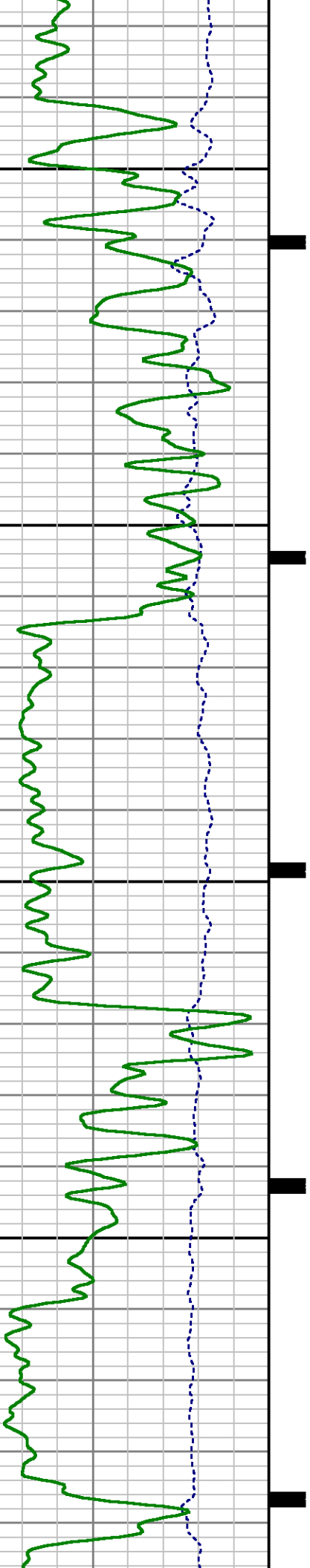


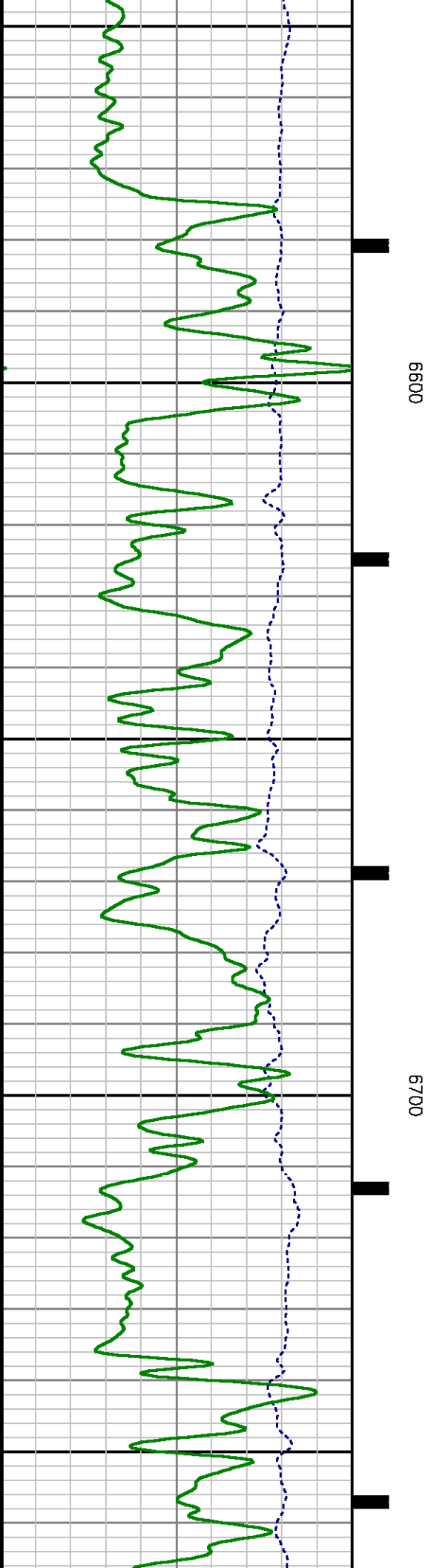
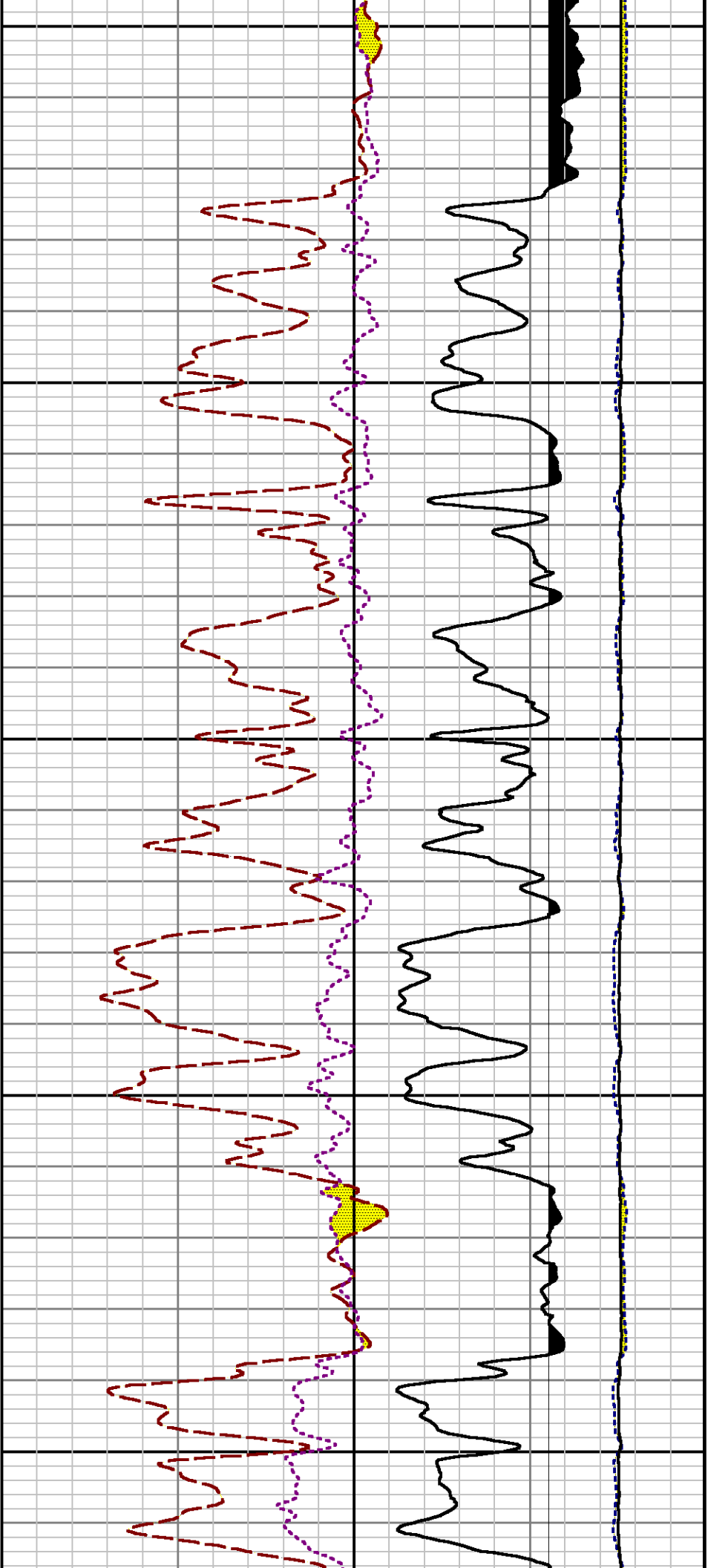


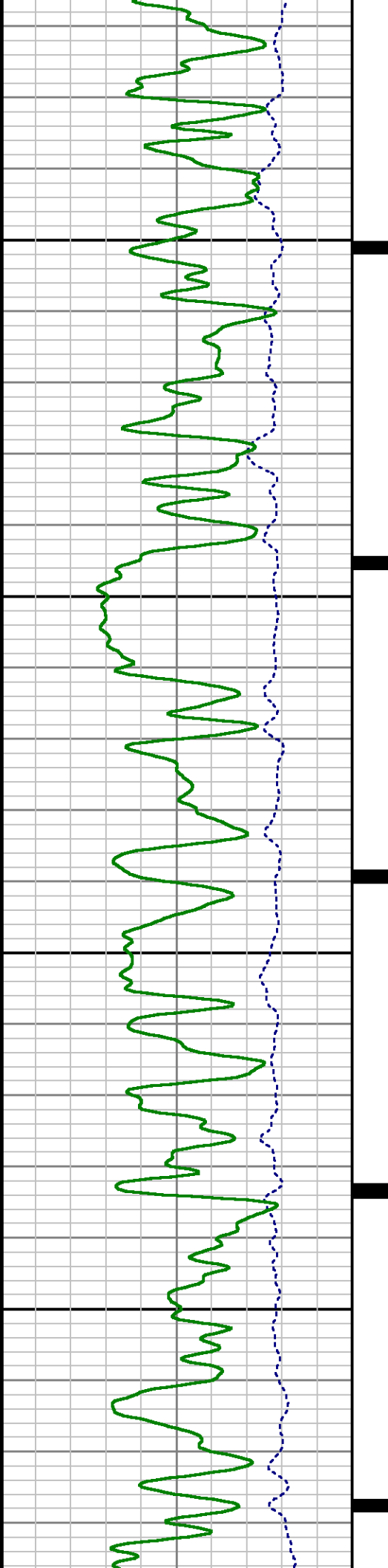


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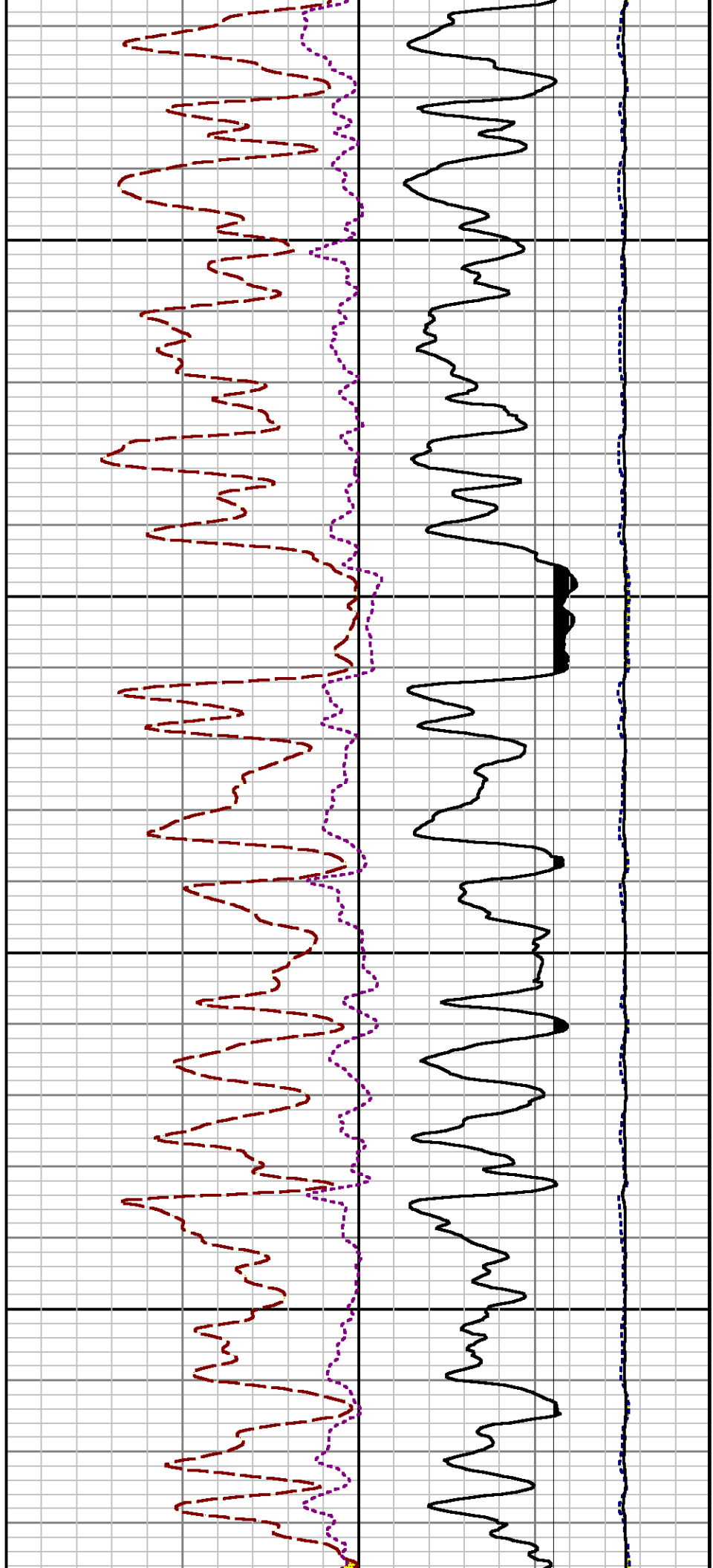


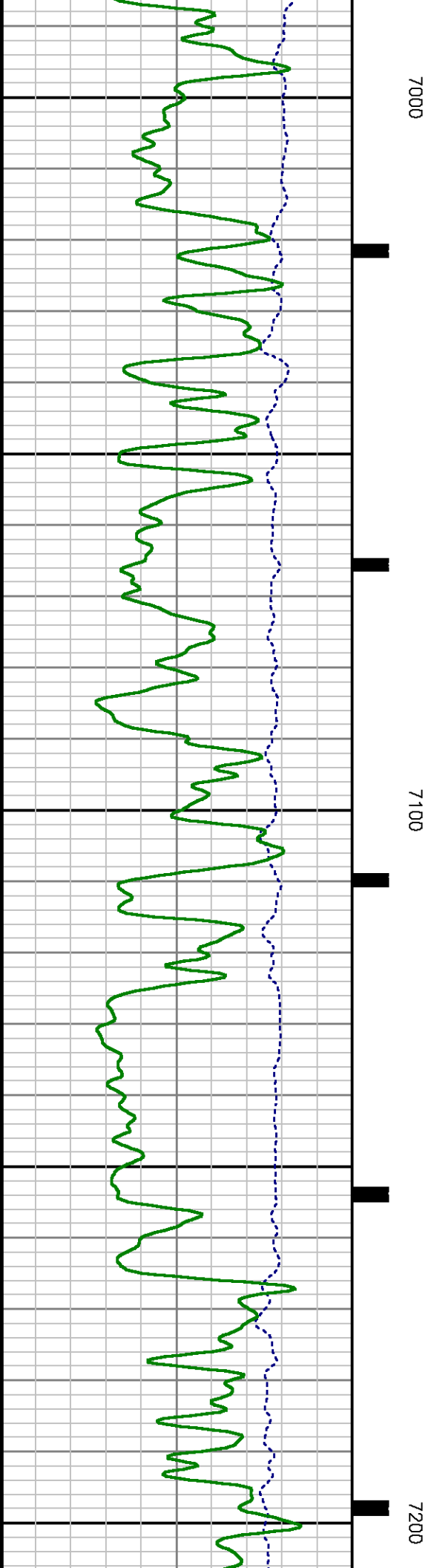
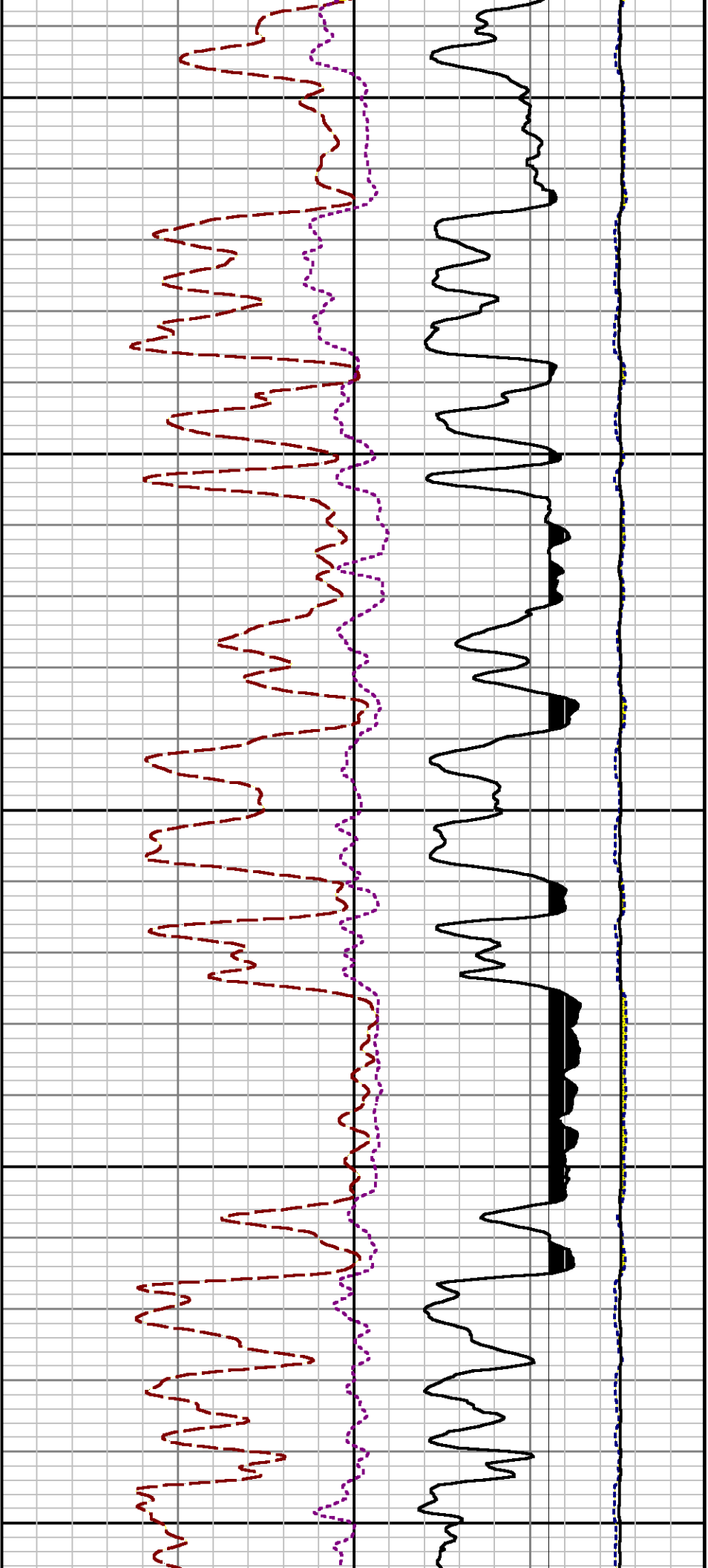


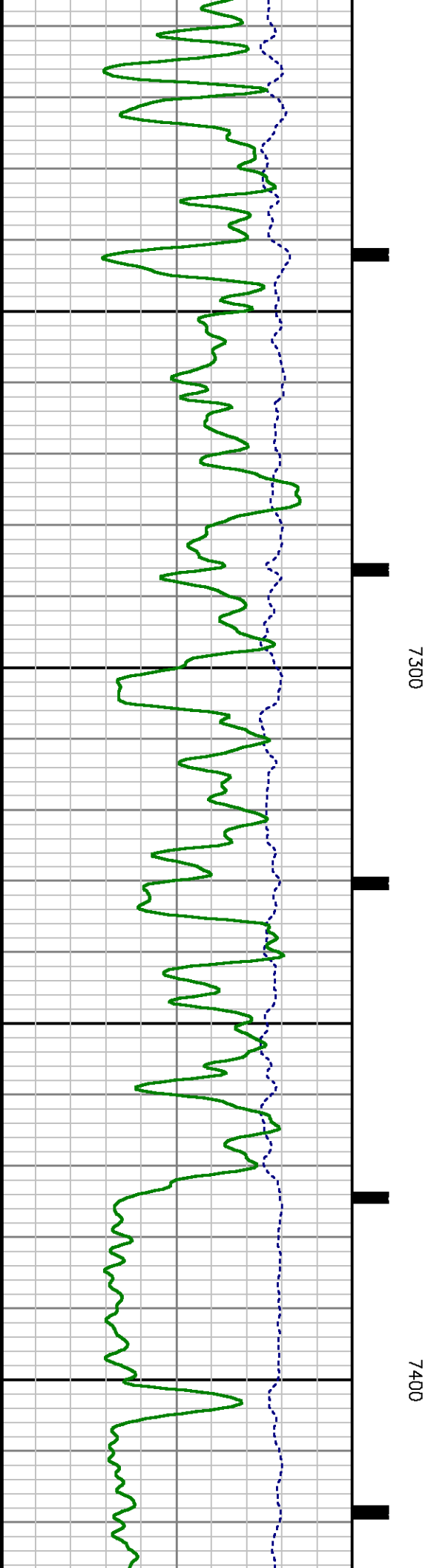
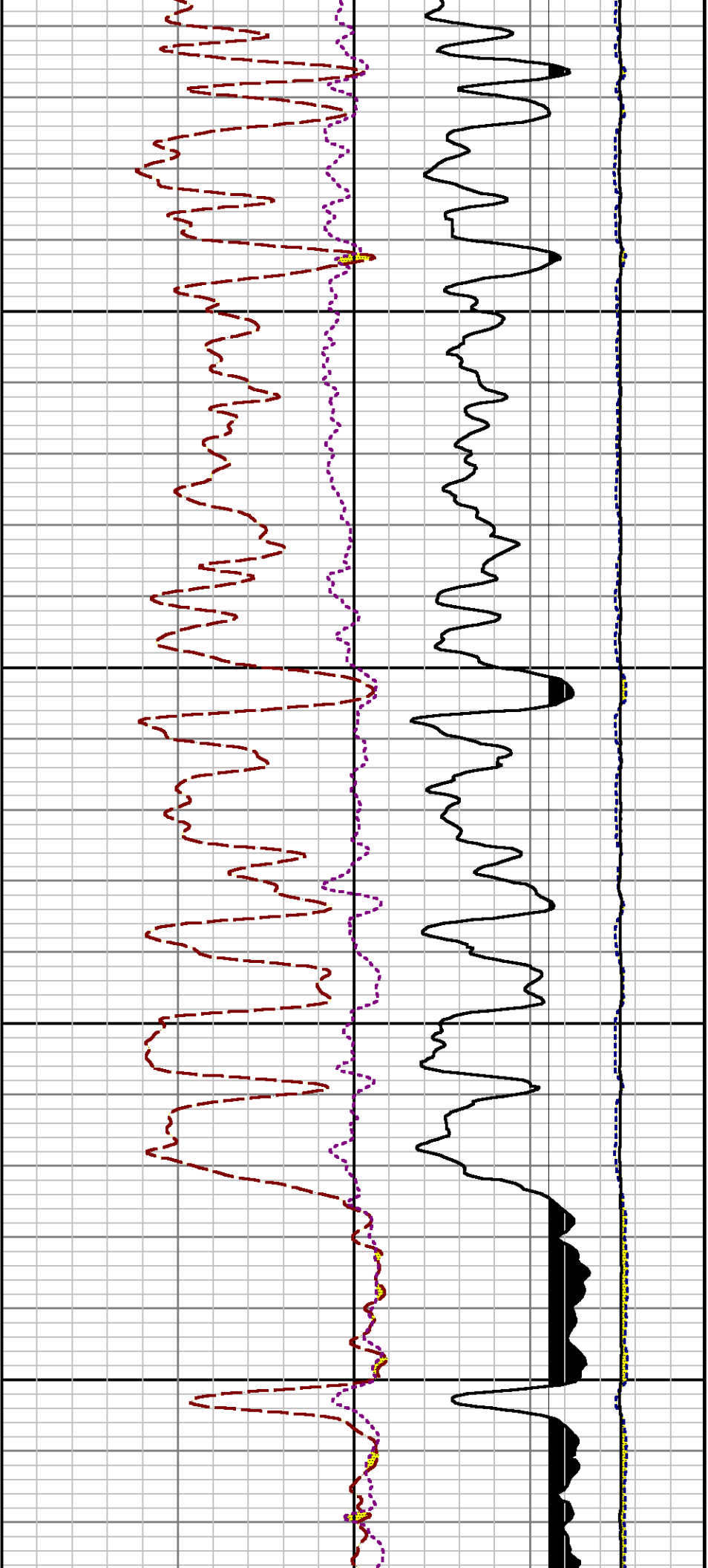


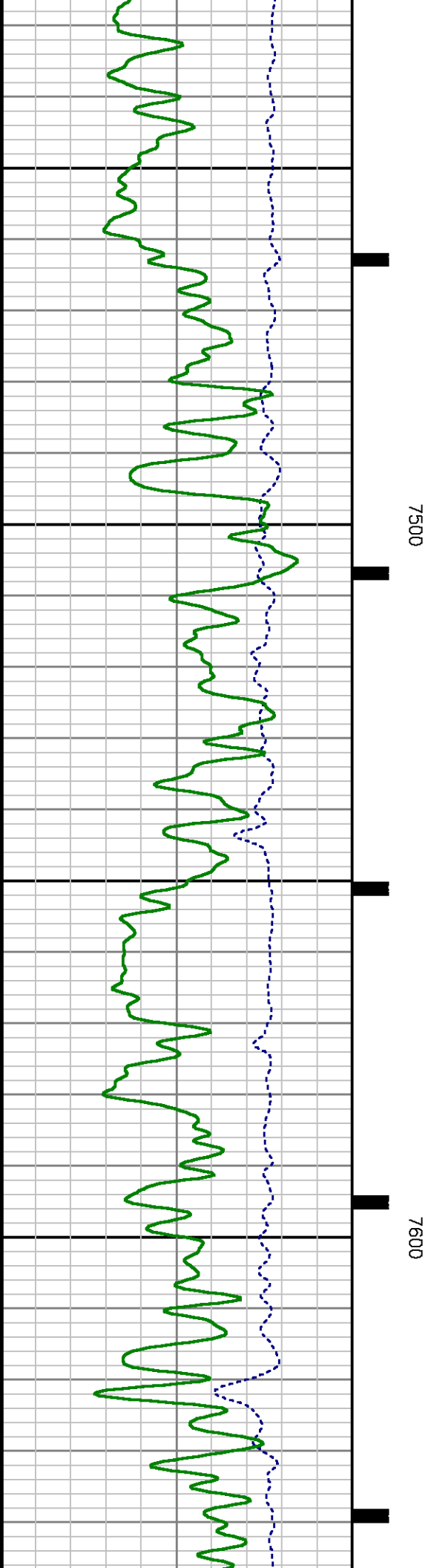
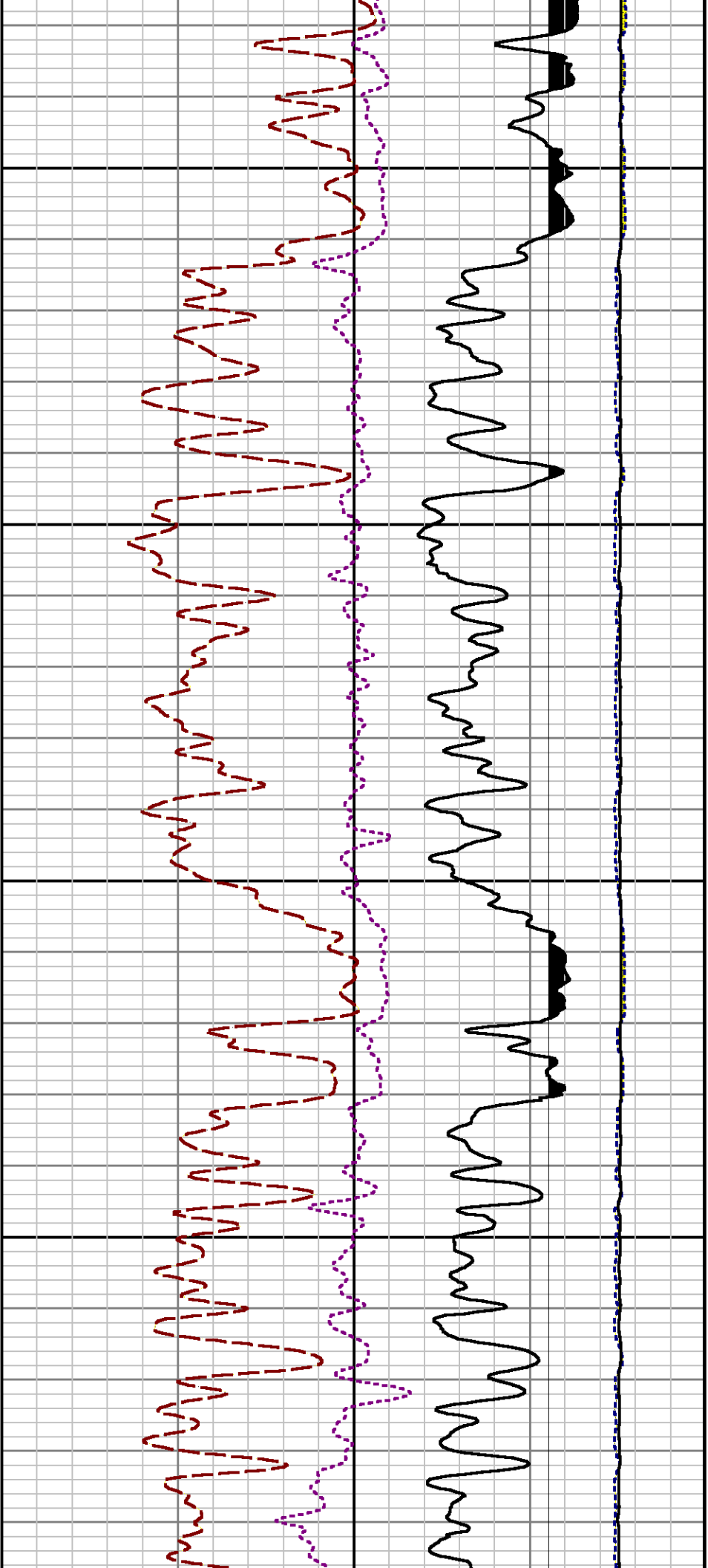
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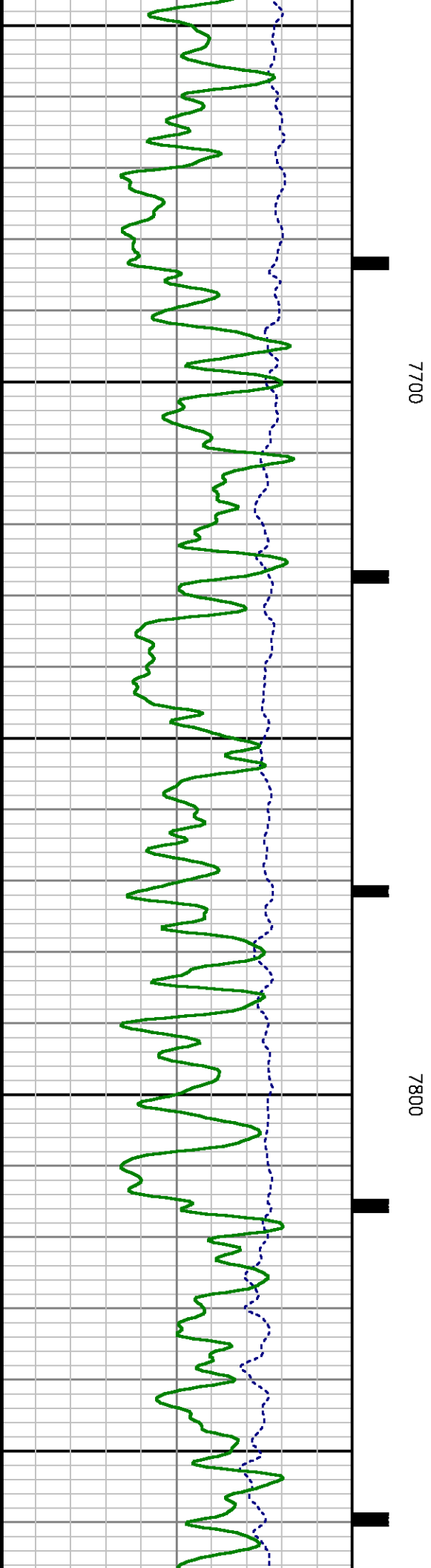
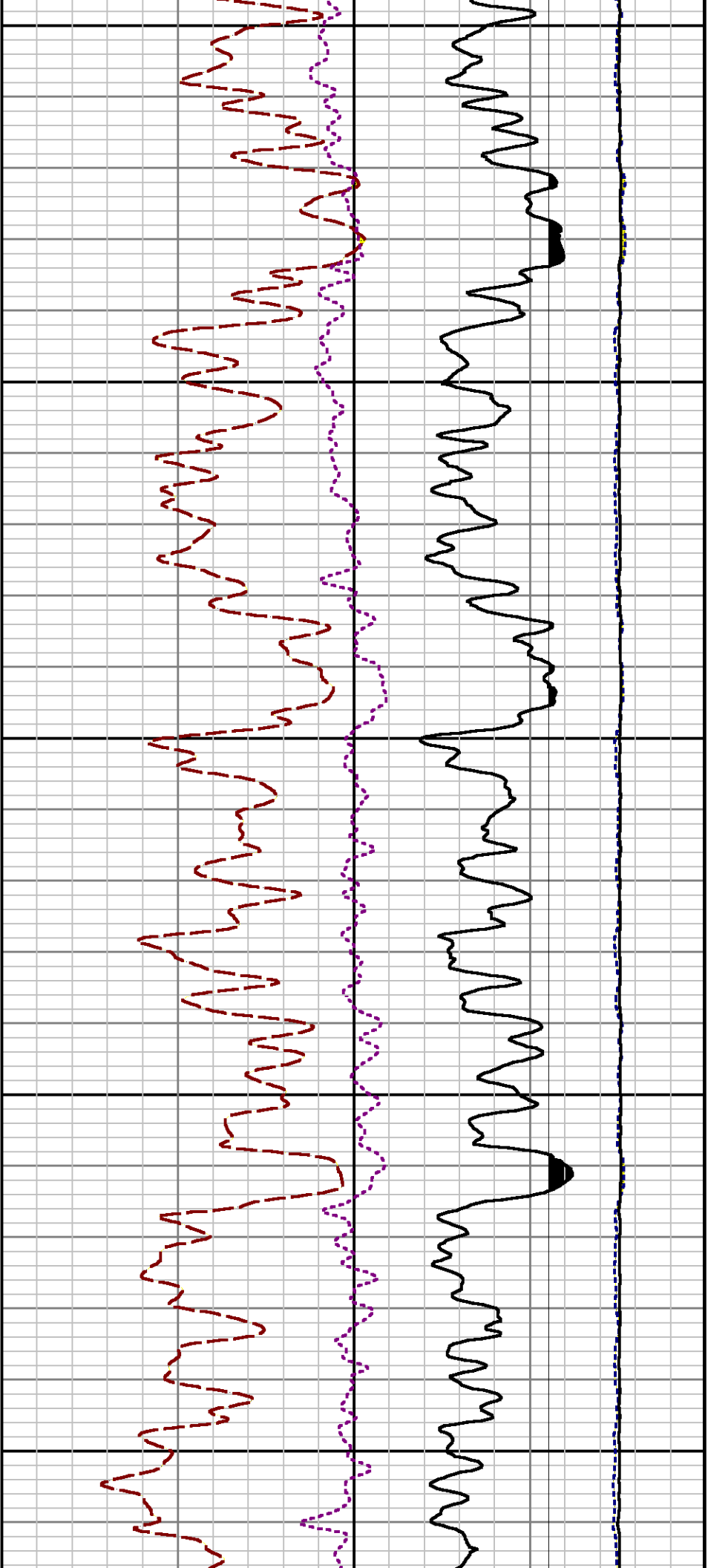
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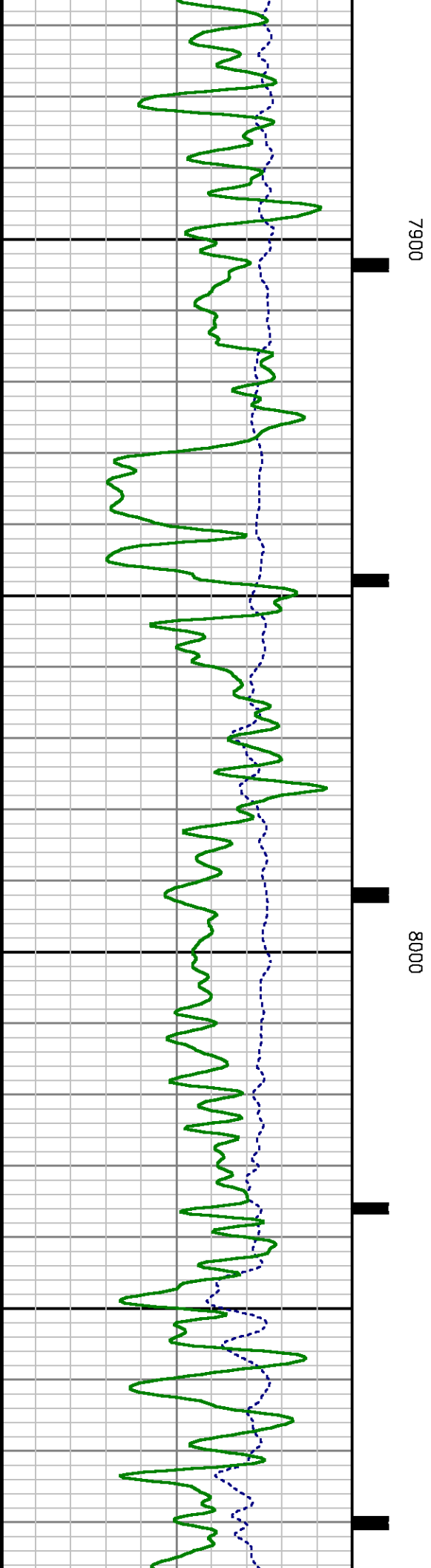
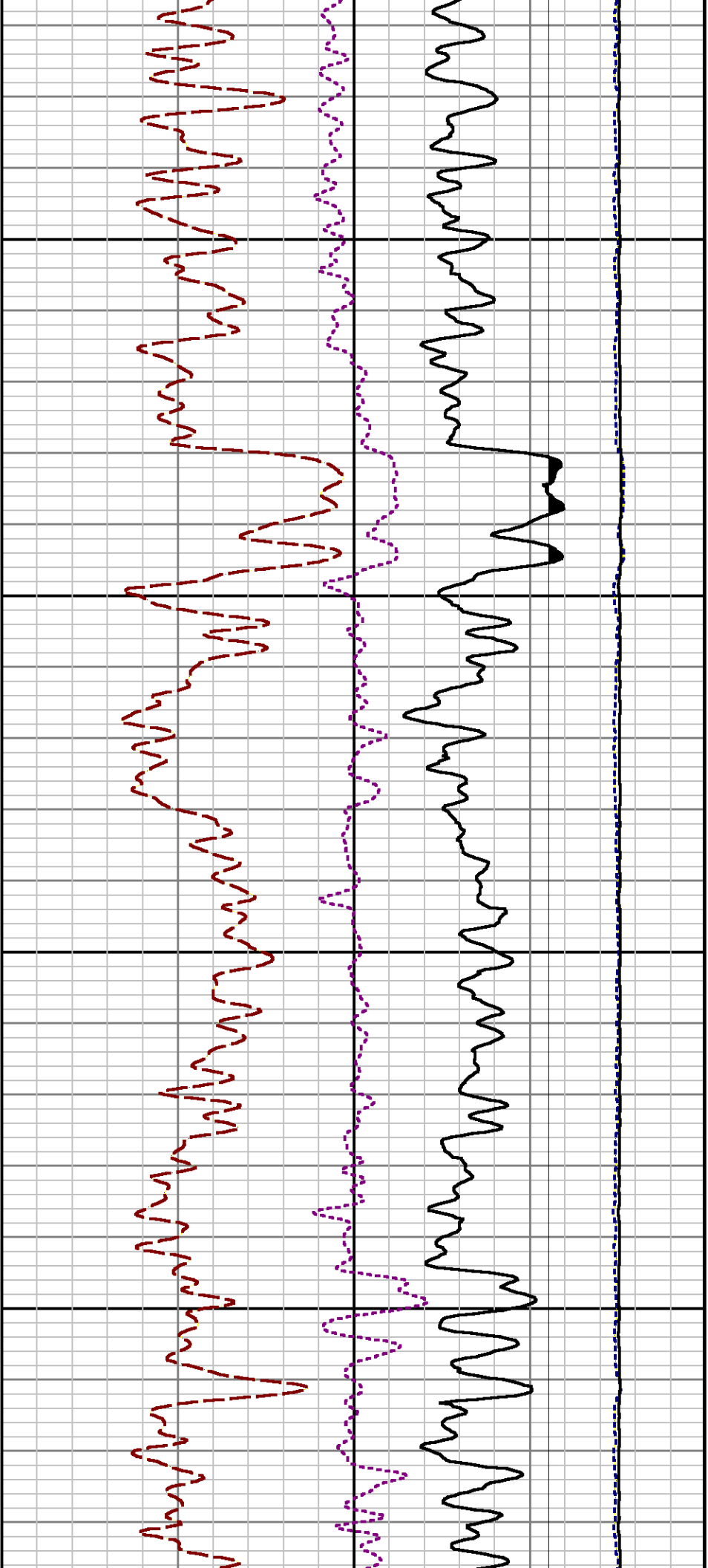


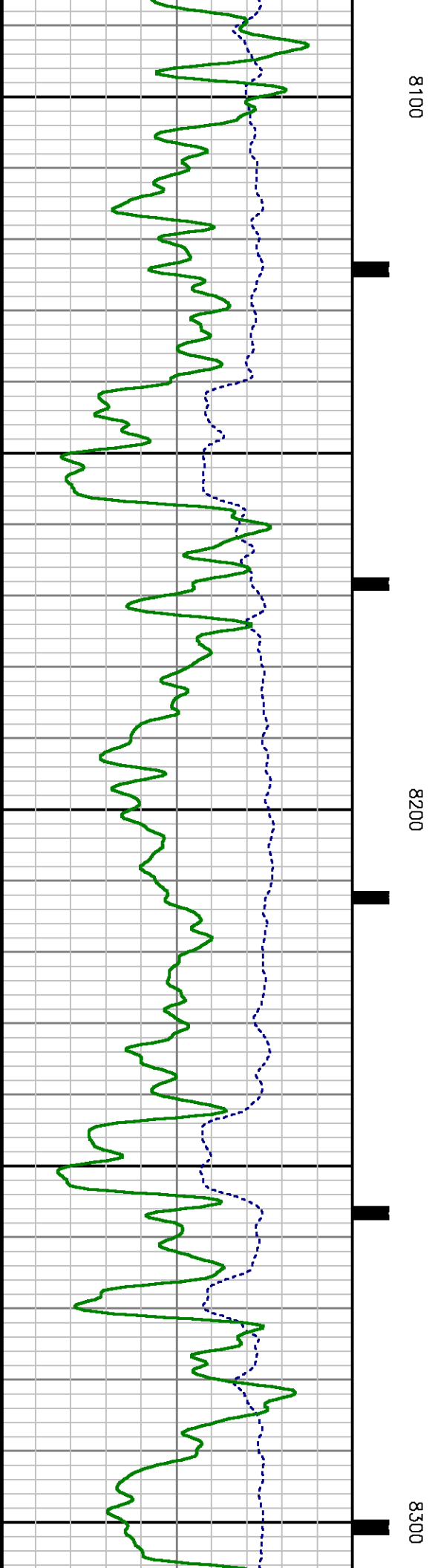
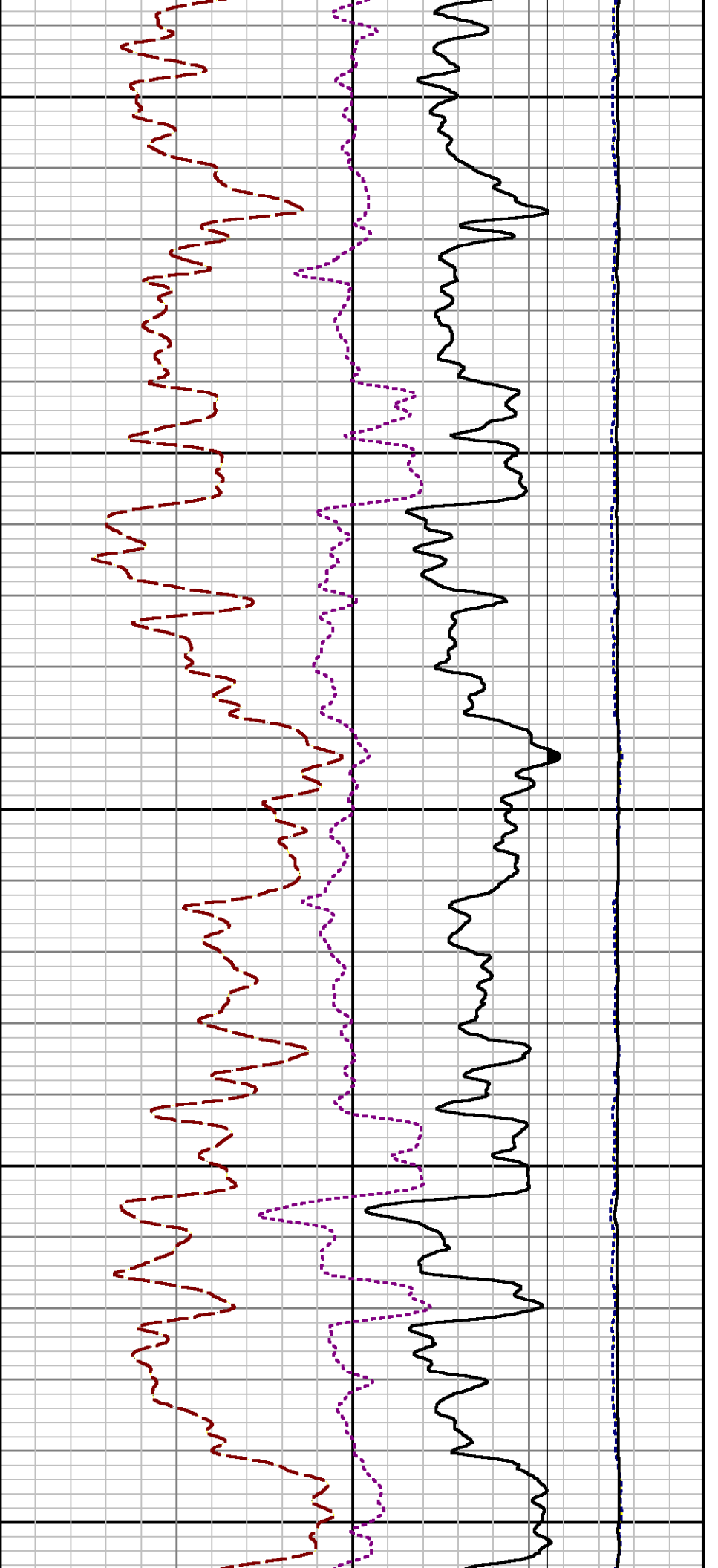


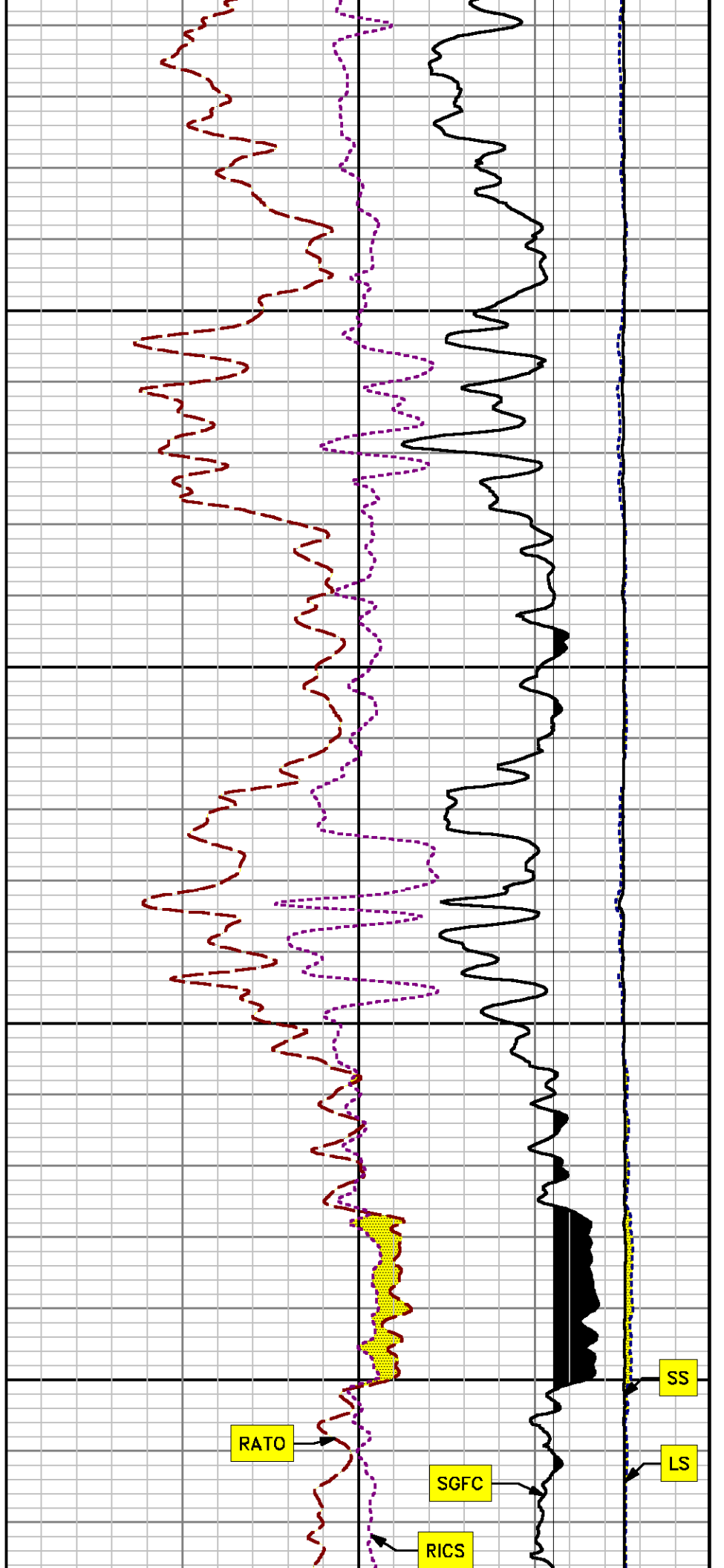
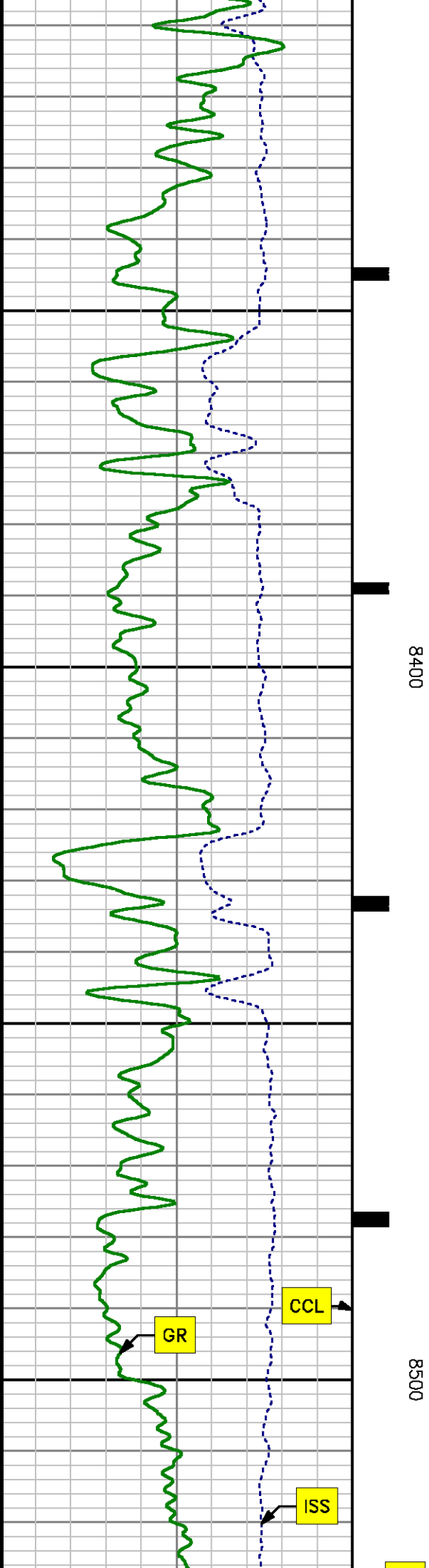


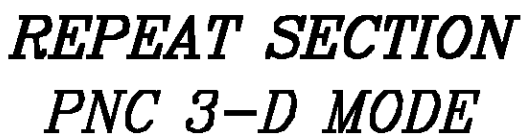












MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		7643.870	7955.683
PNC Porosity	Borehole Size	8.750	inch	7643.870	7955.683
PNC Porosity	Casing Size	4.500	inch	7643.870	7955.683
PNC Porosity	Gas Filled	Non Gas Filled		7643.870	7955.683
PNC Porosity	Matrix	Sandstone		7643.870	7955.683

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
8248ED	-14.478	FLTM					
8248ED	-12.478	CCL	CHV				
2812LA	-9.928	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	RAT023
		PLCYC	PLN13C	PLN23	PLN23C	SD3D	SC3D

8281XA

-0.250

RICXC	RIN1SC	RIN2S	RIN2SC	SDSD	SGSD
SGB3	SGF3	WDTH3	CXSR	IXSR	XSR
RICXR					
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

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	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					

SYSTEM

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TEN TTEN

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

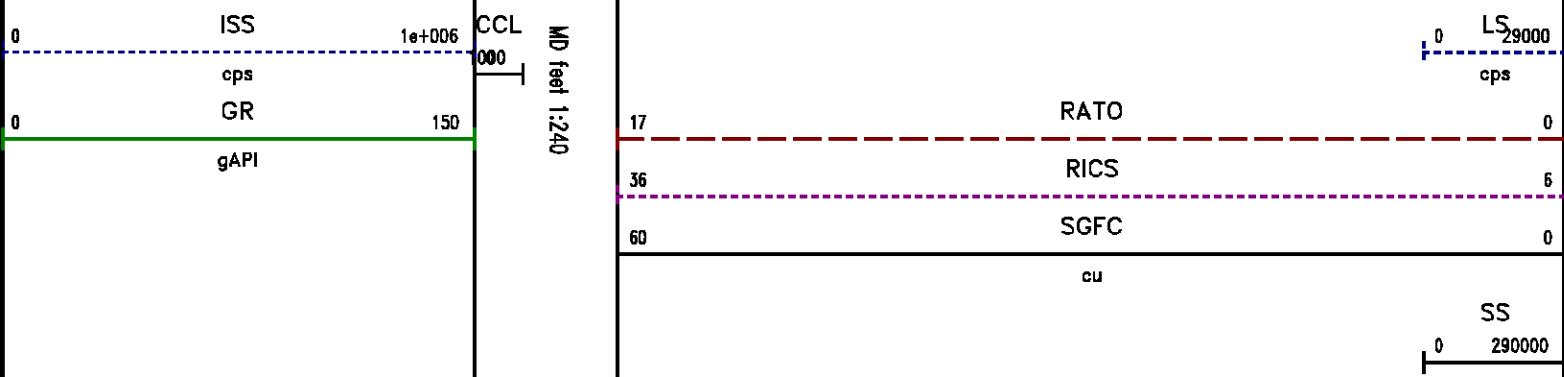
Well : FEDERAL PA 414-12

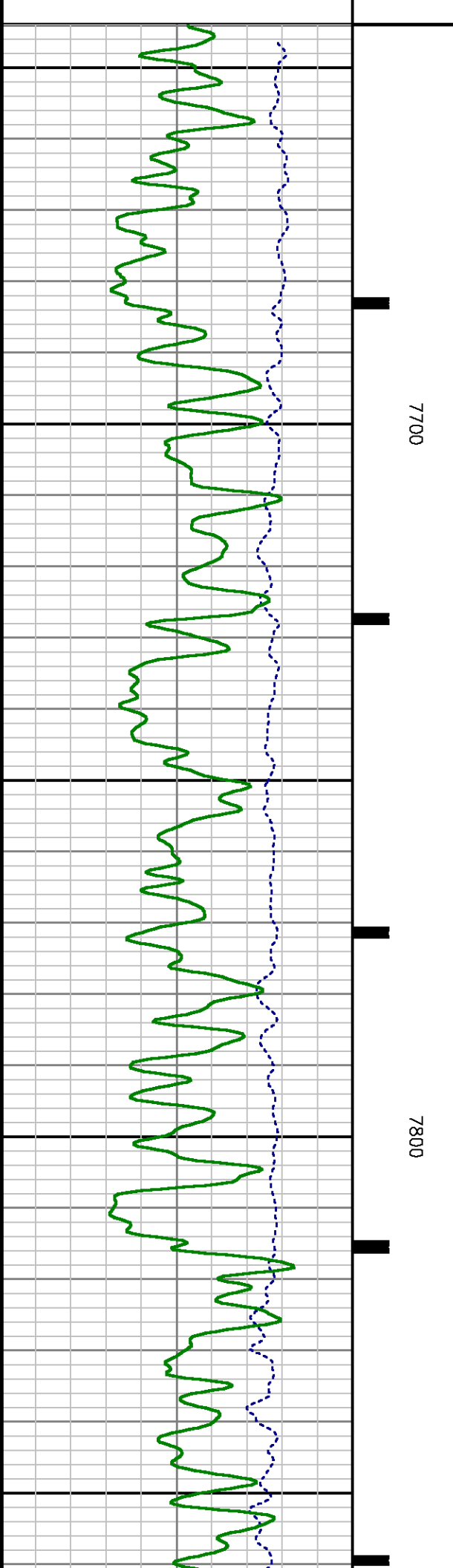
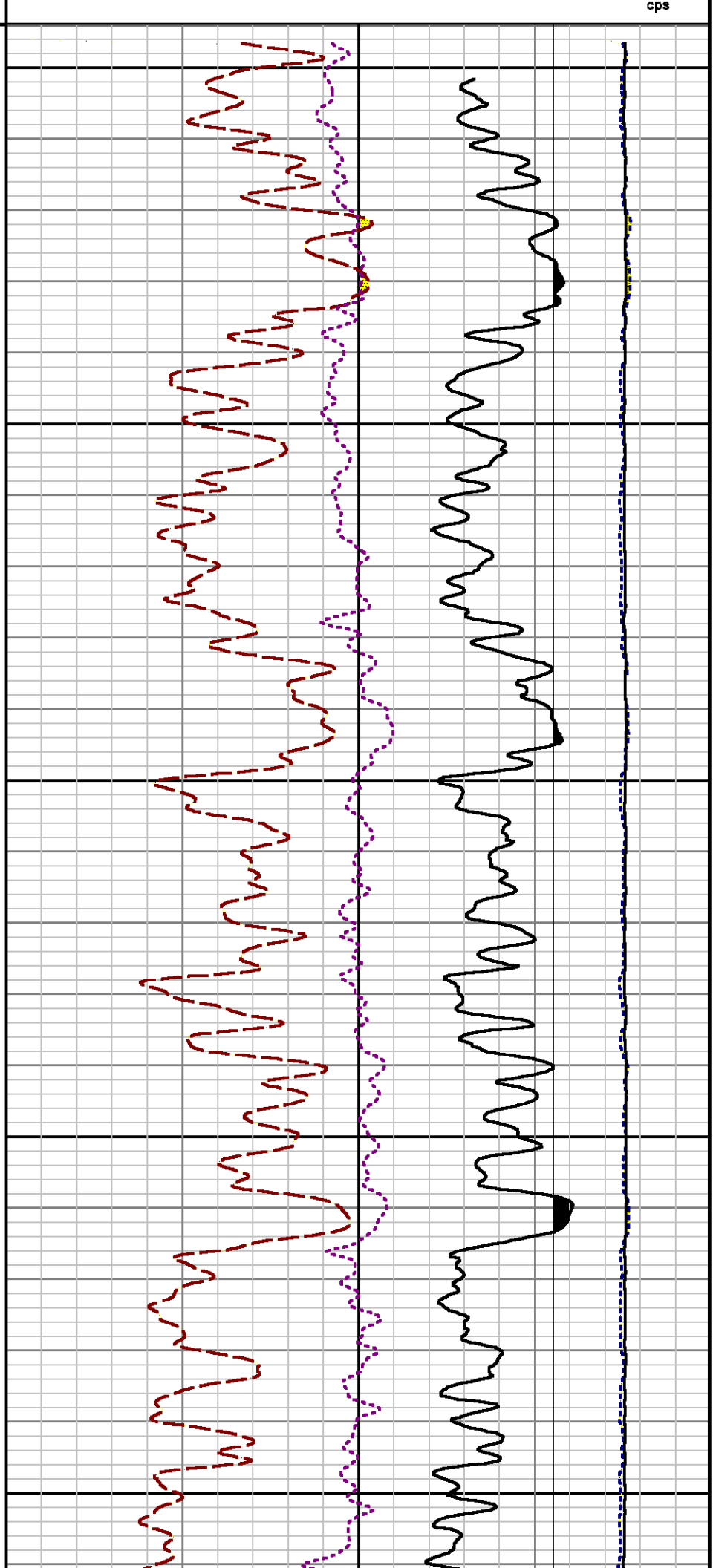
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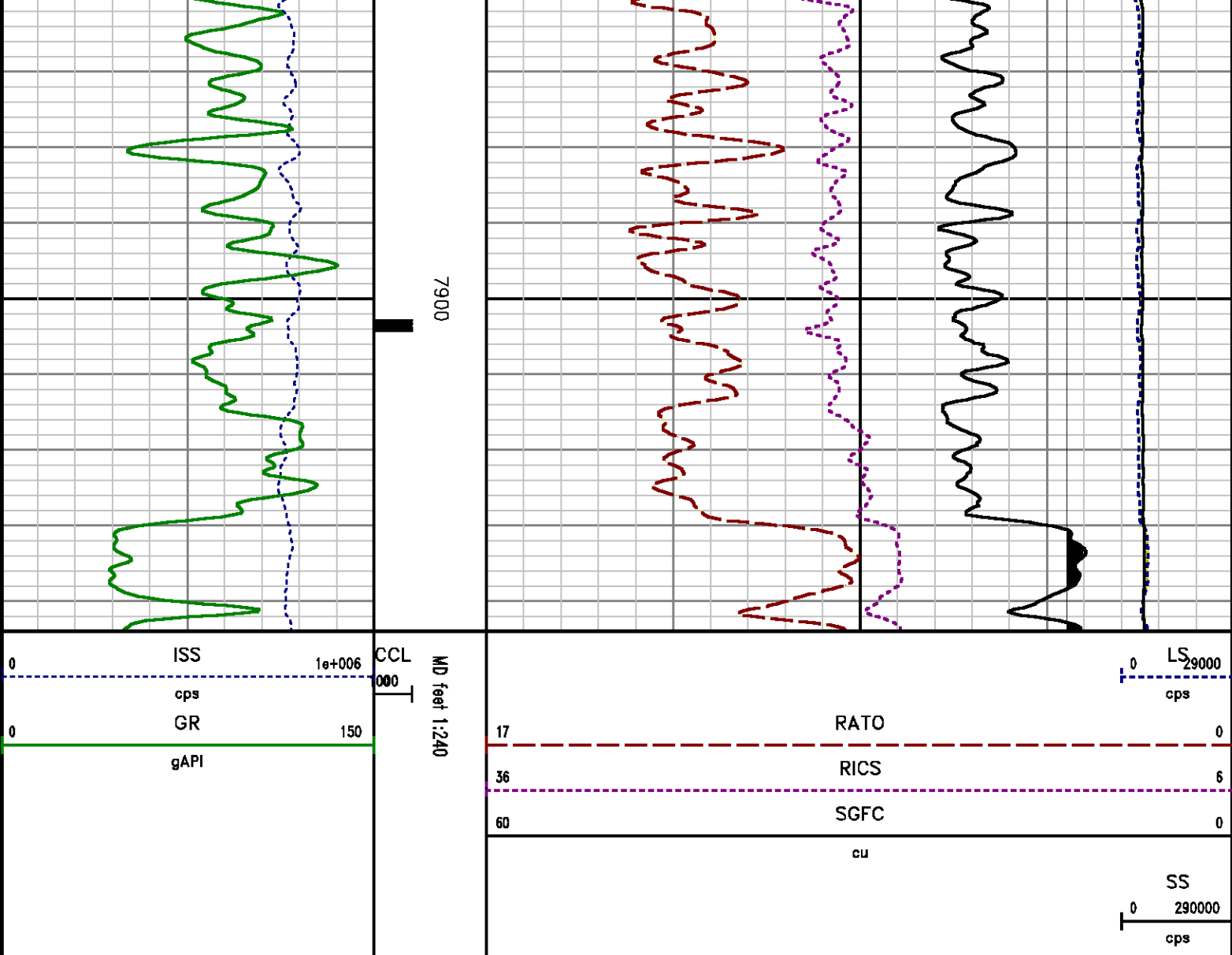
Mode : PlotMgr 5.4.504

Interval : 7644.00 - 7944.00 feet UP

Created : 11/22/2013 2:16:16 PM







## CALIBRATION SUMMARY

## GAMMA RAY

Calibration File: C:\case\calver\GR\163604.cal

### CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Nov 04 11:24:46 2013 TOOL SERIES: 2812LA ASSET: 1636 SEQ: 04

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	63.78	278.58	0.978	62.35	272.35	210.00

## PRIMARY VERIFICATION

DATE/TIME PERFORMED: Mon Nov 04 11:26:58 2013

TOOL SERIES: 2812LA ASSET: 1636 SEQ: 04

Calibrator #	Background [cps]	Calibrator On [cps]
S2K WA-612	64.11	280.20

Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
0.978	62.68	273.94	211.26

# PNC

## PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Nov 20 13:35:55 2013

TOOL SERIES: 8281XA ASSET: 151 SEQ: 20

Calibrator #

2437XB 112674

Source #

8281AA 11803641

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	803898	121.00	2268.00	2369.00	2456.00	102.22	7.00	0.9647
Interpolated	1300000	143.57	2249.93	2365.52	2438.67			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	803898	6755.55	1052.36	150.68	25.80	0.14	24.35	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	803898	168082.34	26594.72	89857.57	31999.20	8238.68	54362.27	13175.44
Fit Quality %		1.28	1.08	1.09	1.09	1.34	1.02	1.33

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	803898	1.43	4.78	30.23	14.79	10.91	3.88	4.13
		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 %		0.06	0.10	0.16	0.11	0.17	0.16	0.15
Reduced	1390956	1.43	4.80	30.27	14.81	10.93	3.89	4.13
		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

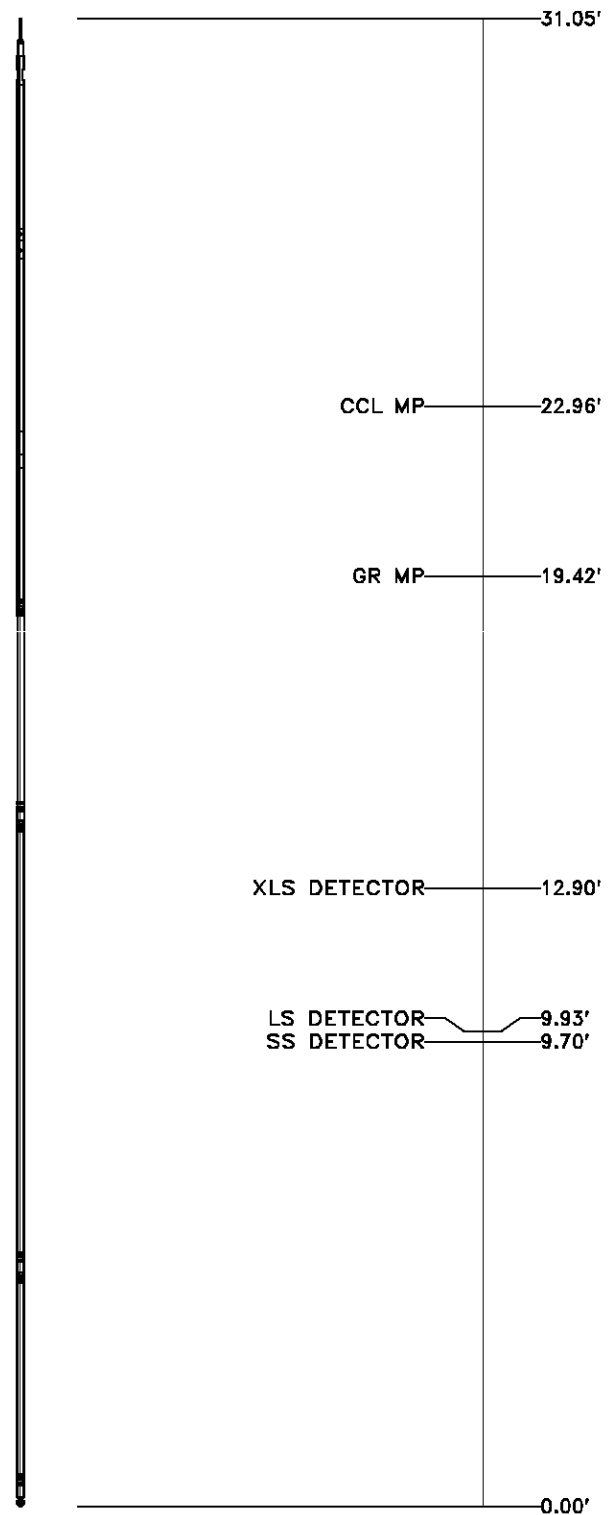


# TOOL DIAGRAM

<b>OTA SHORT CABLE HEAD</b>	
<b>PCM POWER SUPPLY</b>	
Series	8250EA
Mnemonic	PCM
Diameter	1.70"
Weight	18.00 lb
Length	3.86'
Temp Rating	350.00 °F
<b>TELEMETRY / CCL</b>	
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
<b>GAMMA RAY</b>	
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

CASE

Company	WPX ENERGY		File No:
Well	FEDERAL PA 414-12		CH79535
Field	PARACHUTE		API No:
County	GARFIELD	State CO	05045206660000
Location		Elevations	
SHL: 2577' FSL & 1724' FWL		KB 6533 ft	12 7S 95W
BHL: 522' FSL & 267' FWL		DF	PA 23-12 PAD
		GL 6507 ft	NABORS 577
SEC 12	TWP 7S	RGE 95W	