



# RESERVOIR PERFORMANCE MONITOR

## Baker Atlas

File No:	Company		WARRATHON OIL COMPANY
1711	Well		697-12A-16
API No:	Field		GRAND VALLEY
06-045-15034-00	County		CARFIELD
	State		COLORADO
Location		Other Services	
NE/4 1536' NUL & 1934' FEL		3.781" GAUGE BOND	
SEC 12 TWP 6S RGE 97E			
Permanent Datum	G.L.	Elevation	8300 ft
Log Measured From	K.B.	24 ft	Above P. D.
Drill Measured From	KELLY BUSHING		
		Elevations	
		KB 8322 ft	
		DF 8321 ft	
		GL 8300 ft	

Date	06-JAN-2009	
Run	ONE	
Service Order	547430	
Depth Driller	9644 ft	
Depth Logger	9636 ft	
Bottom Logged Interval	9636 ft	
Top Logged Interval	4200 ft	
Time Started	06:00	
Time Finished	14:00	
Operator Rig Time	9 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	PULL	
Logged Cement Top	2940 ft	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	N/A	
Reference Log	BY/BOND	
Reference Log Date	6-14-08	
Equipment No.	8054	GRAND JCT., CO.
Recorded By	TIM KAUFF	
Witnessed By	MR. BILL ARENT	

- 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
24 in	SURFACE	146 ft
17.5 in	SURFACE	2789 ft
8.75 in		

Casing Record				
Size	Weight	Grade	From	To
20 in	84 lbm/ft	N/A	SURFACE	146 ft
9.825 in	38 lbm/ft	J-55	SURFACE	2789 ft
4.5 in	11.6 lbm/ft	P-110	SURFACE	9830 ft

Remarks
THE CREW OF 8054 THANKS YOU.

Equipment Data				
Run	Trip	Tool	Series Number	Serial Number

1	1	RPM	B291FA	10159554	FREE
1	1	RPM	B291FA	10304614	FREE
1	1	RPM	B291EA	1017016	FREE
1	1	GAMMA RAY	B262XA	655	FREE
1	1	GCL	B248EA	120483	FREE
1	1	PCM	B250EA	150702	FREE

## MAIN SECTION IN PNC 3-D MODE

### SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		4193.275	5057.878
PNC Porosity	Borehole Size	8.750	inch	4193.275	5057.878
PNC Porosity	Casing Size	4.500	inch	4193.275	5057.878
PNC Porosity	Gas Filled	Non Gas Filled		4193.275	5057.878
PNC Porosity	Matrix	Sandstone		4193.275	5057.878

### DEPTH OFFSETS (for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
B248EA	-15.470	FLTM					
B248EA	-13.470	GCL CHV					
B262XA	-10.189	GR					
B281XA	-0.662	HVC3Q0	SEQ3	AMA3	AMB3	BKX	CXS
		CPT3Q0	CPT3Q2	CPT3Q3	CPT3Q4	ET3	IXS
		MCS3	MCS3Q0	QCAL3	RGN3	RICK	SDA3
		SDL3	SGA3	SGL3	STA3	XS	ASPEC3
		AMB3	AMF3	CHF3	IXSC	IXSN	RAT023
		RICKC	RIN13C	RIN23	RIN23C	SD3D	SG3D
		SGB3	SGF3	WDTH3	CXSR	IXSR	XSR
		RICKR					
B281XA	-0.250	HVC2Q0	SEQ2	AMA2	AMB2	AMF2	AML2
		BKL	CHF2	CLS	CPT2Q0	CPT2Q2	CPT2Q3
		CPT2Q4	ET2	ILS	LS	MCS2	MCS2Q0
		QCAL2	RGN2	RIN2	RIN2C2	RIN2C3	SDA2

8281XA

0.000

QCAL2	RGN2	RTCL	RONE23	RTW023	SDA2
SDL2	SGA2	SGB2	SGF2	SGK2	SGL2
STA2	ASPEC2	ILSC	ILSN	WDTH2	RICLC
CLSR	ILSR	LSR	RICLR		
CPRS	HVC1Q0	WV	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	0.000	TEN	TTEN		

Created by : MIXED

Plotted by : PlotMgr, v5.4.504

Company : MARATHON OIL COMPANY

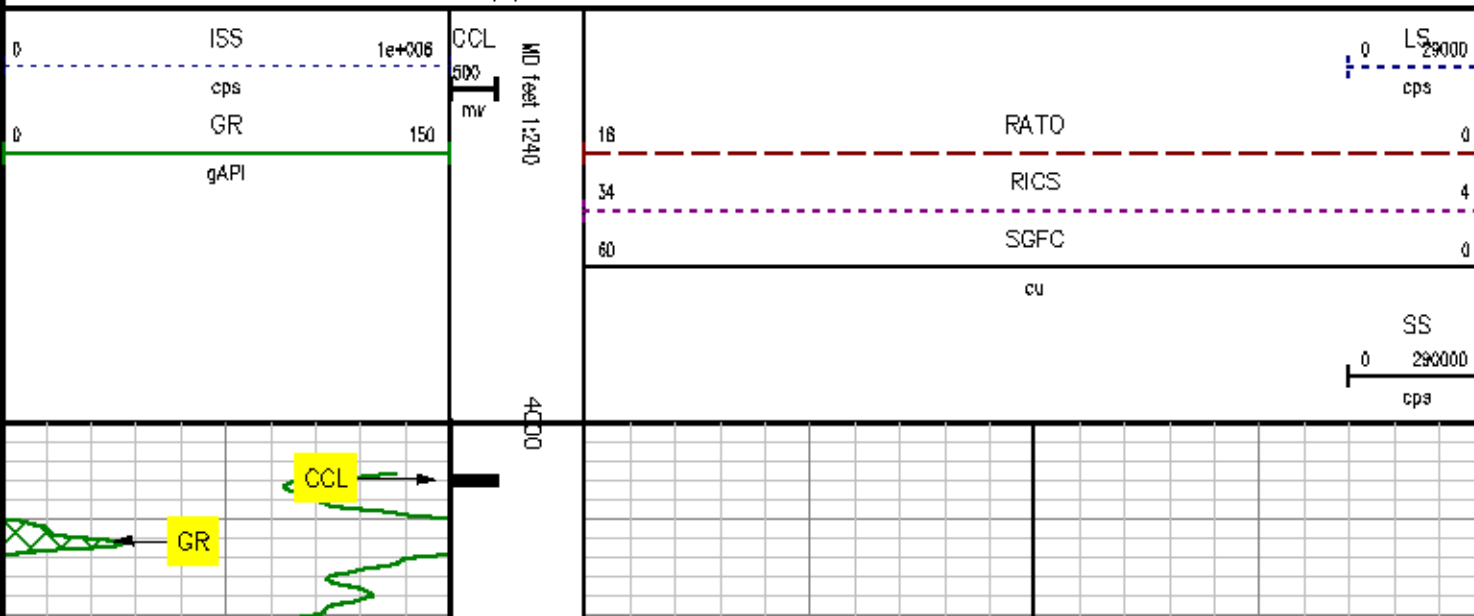
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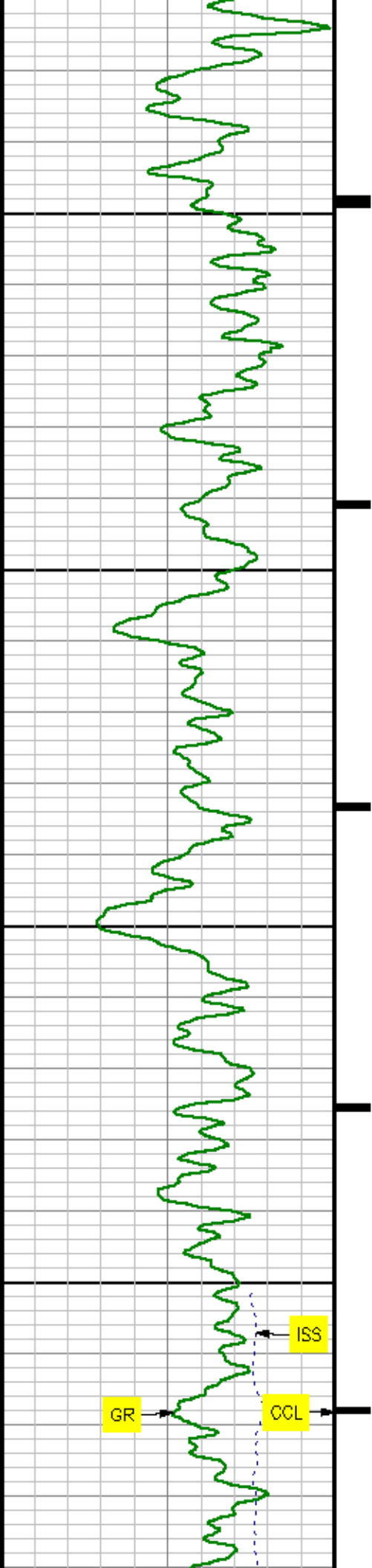
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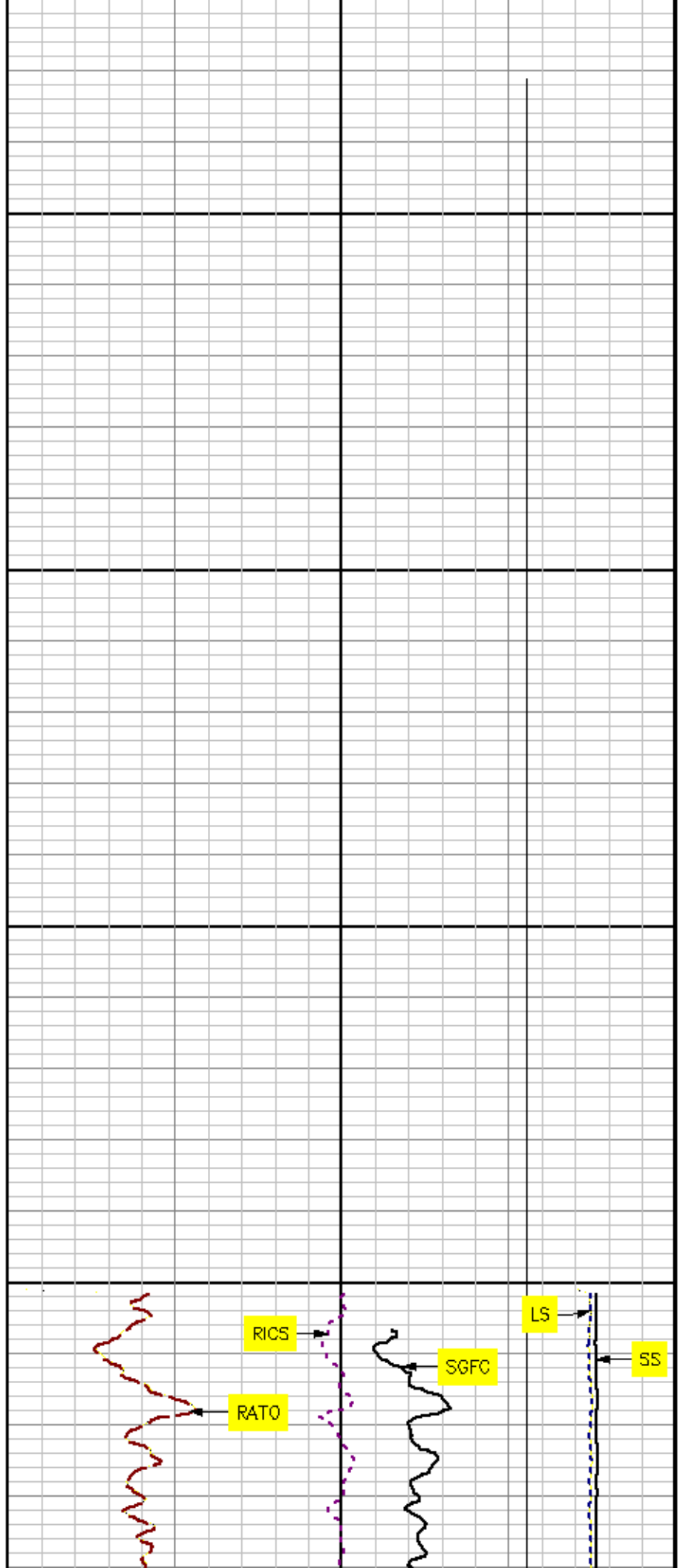
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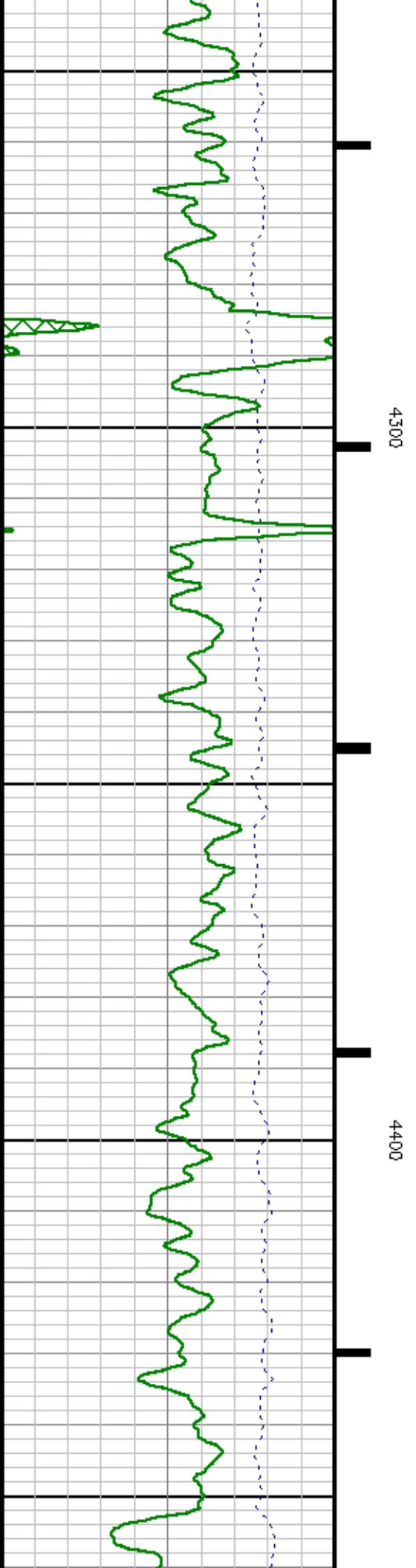
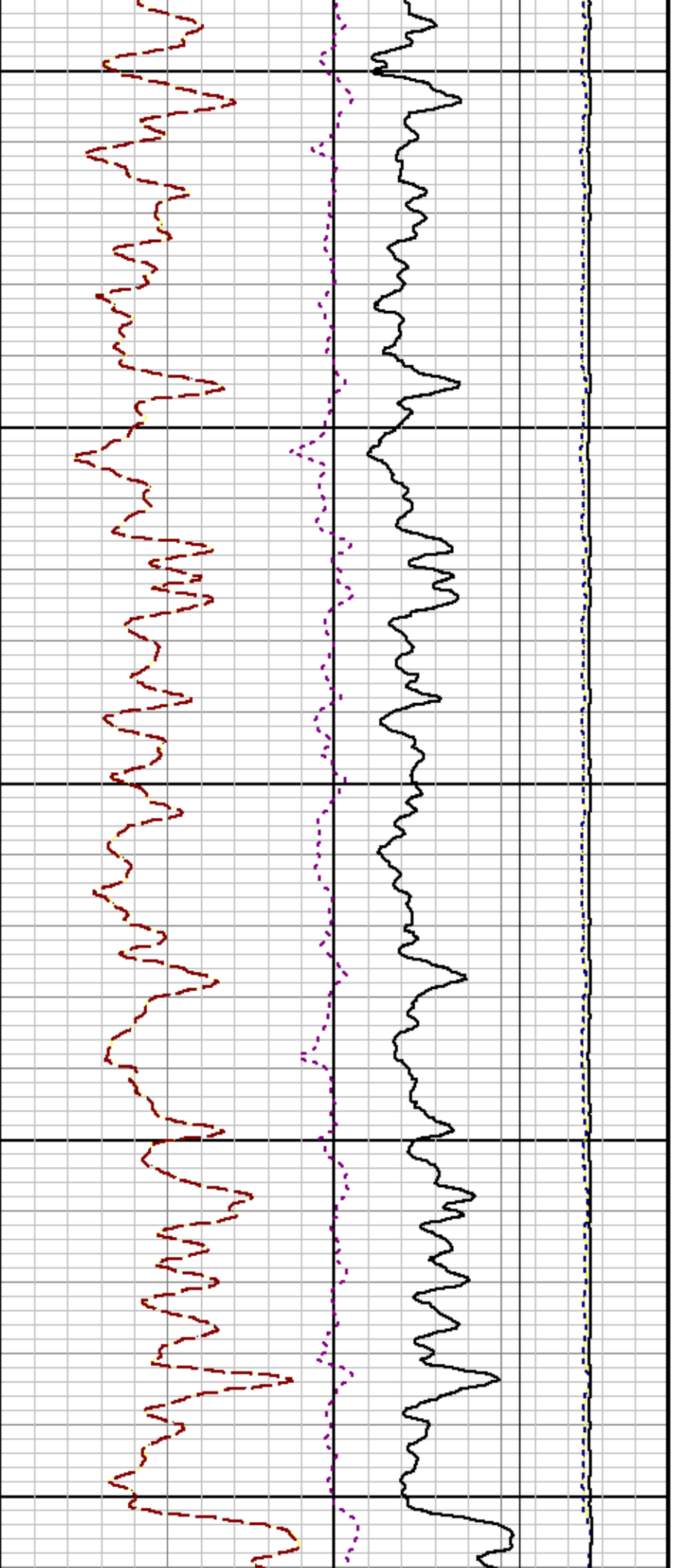
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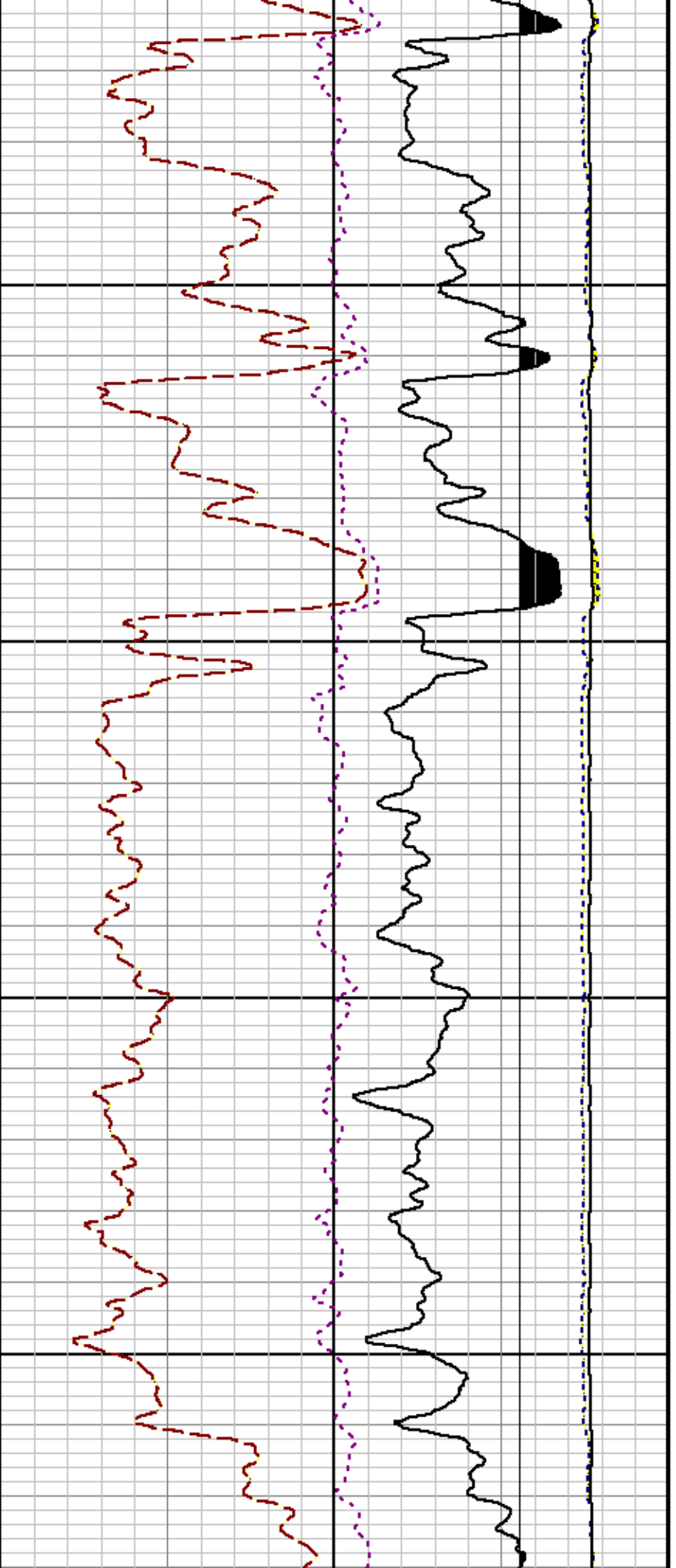
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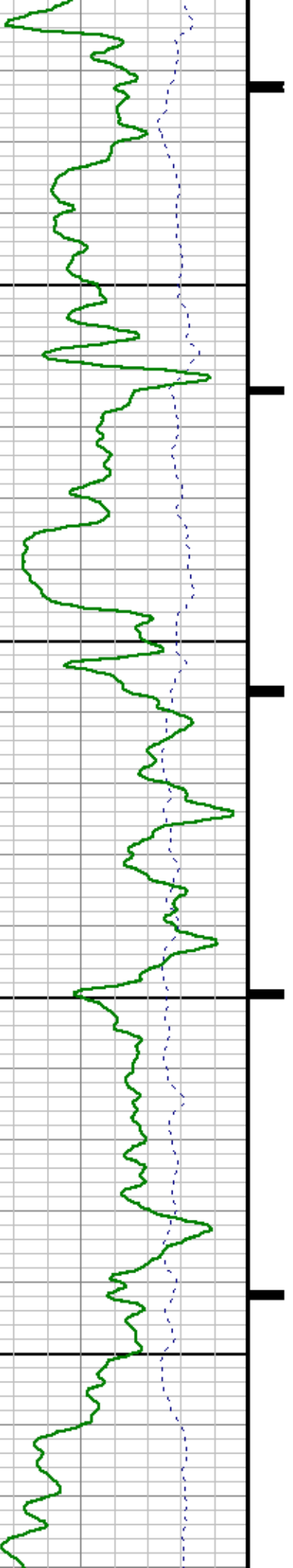
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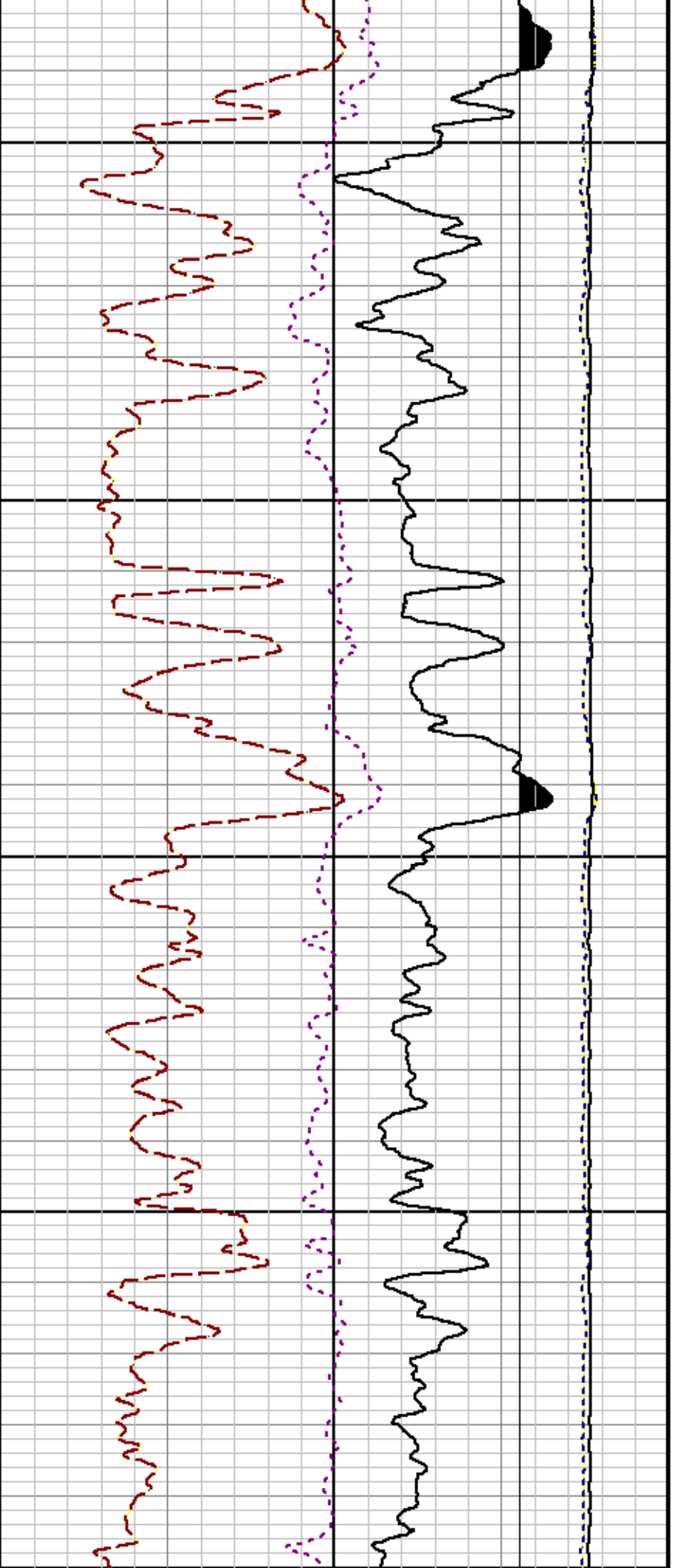




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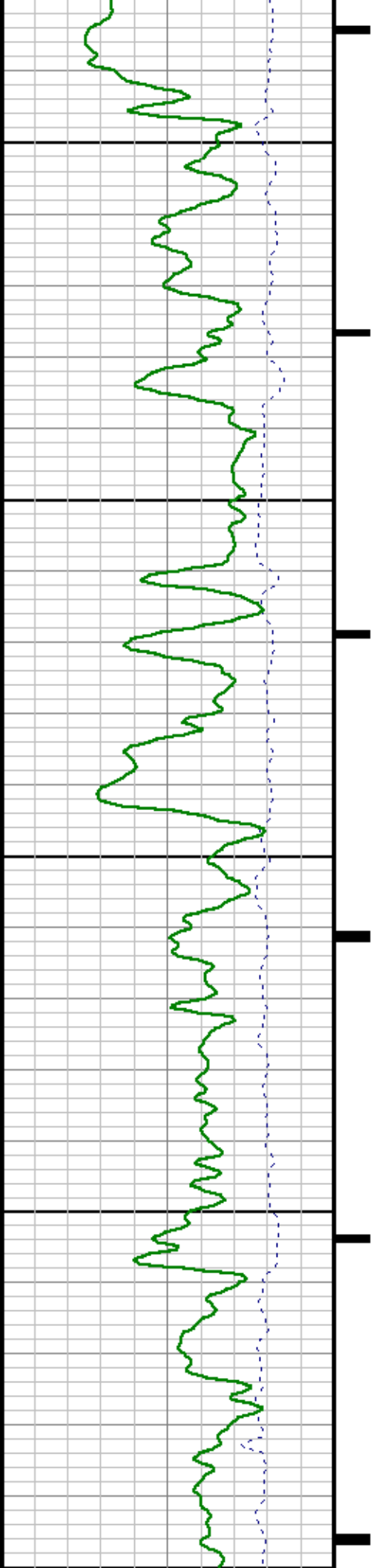


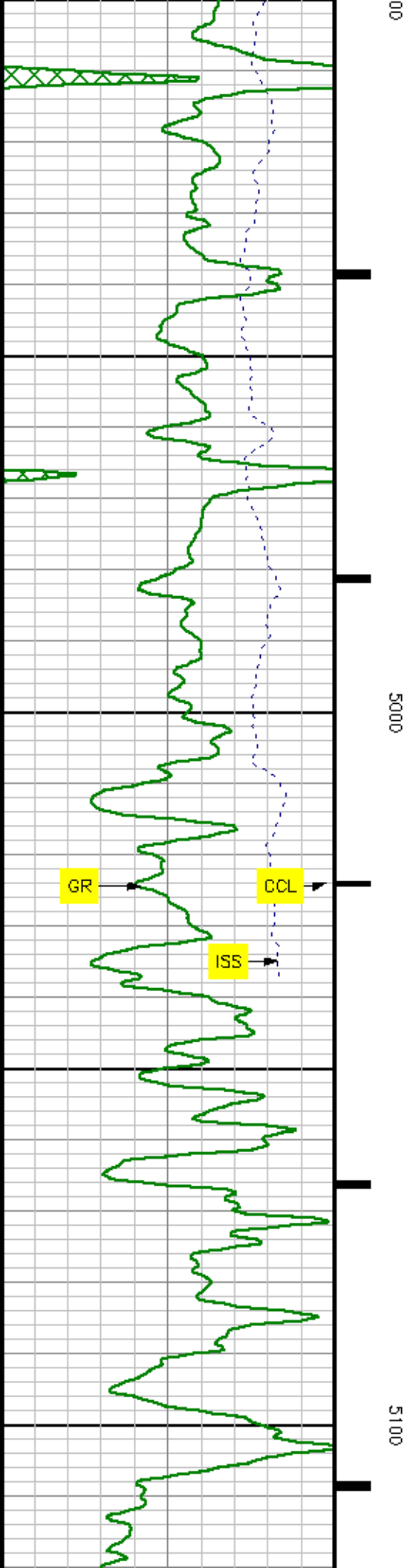
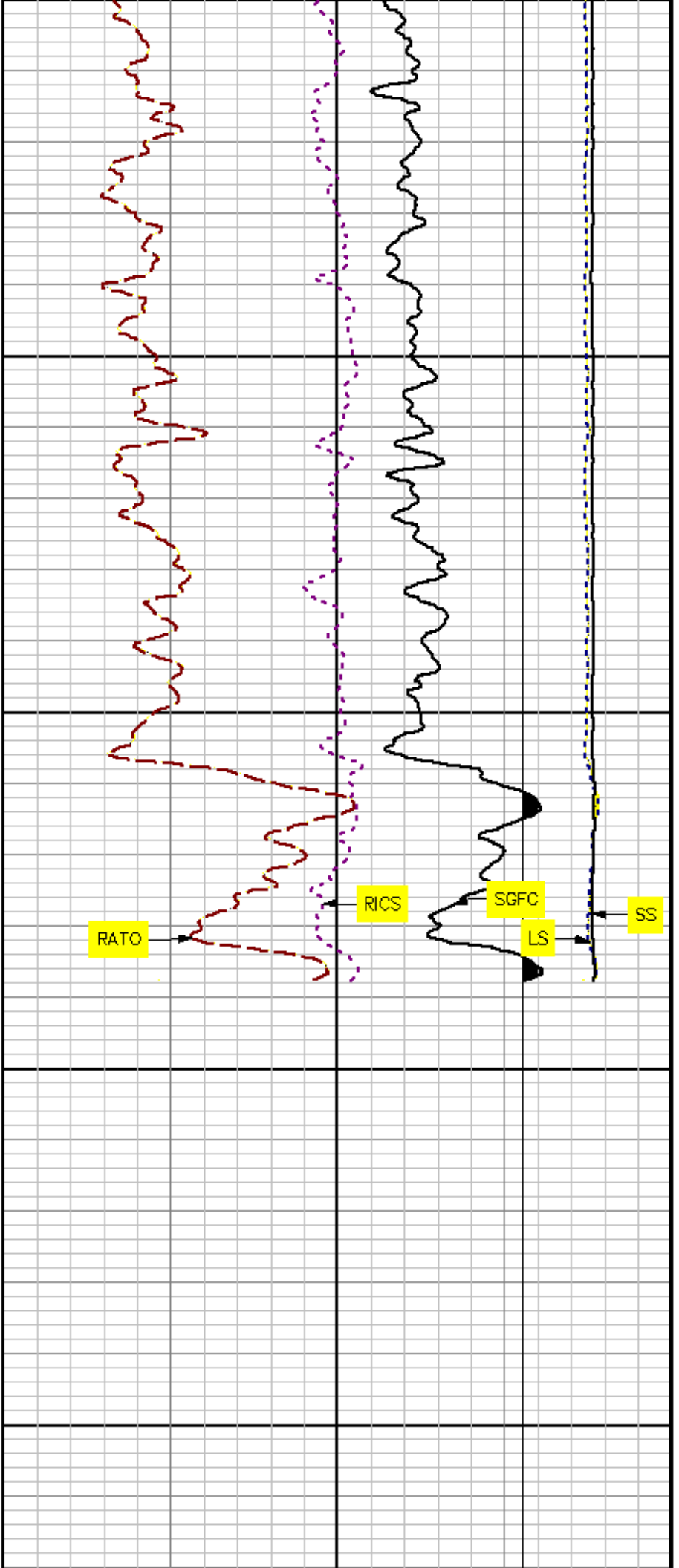


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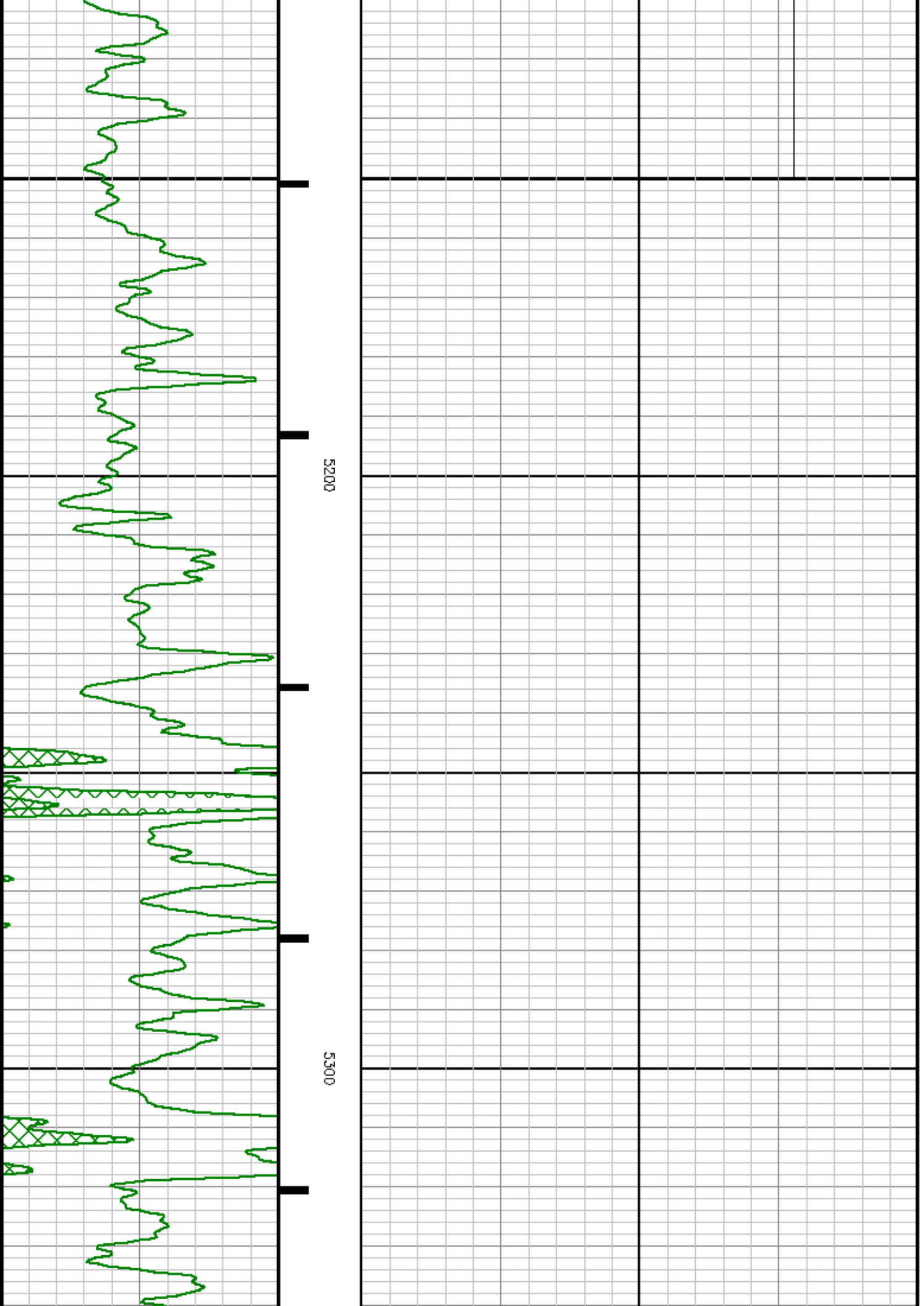
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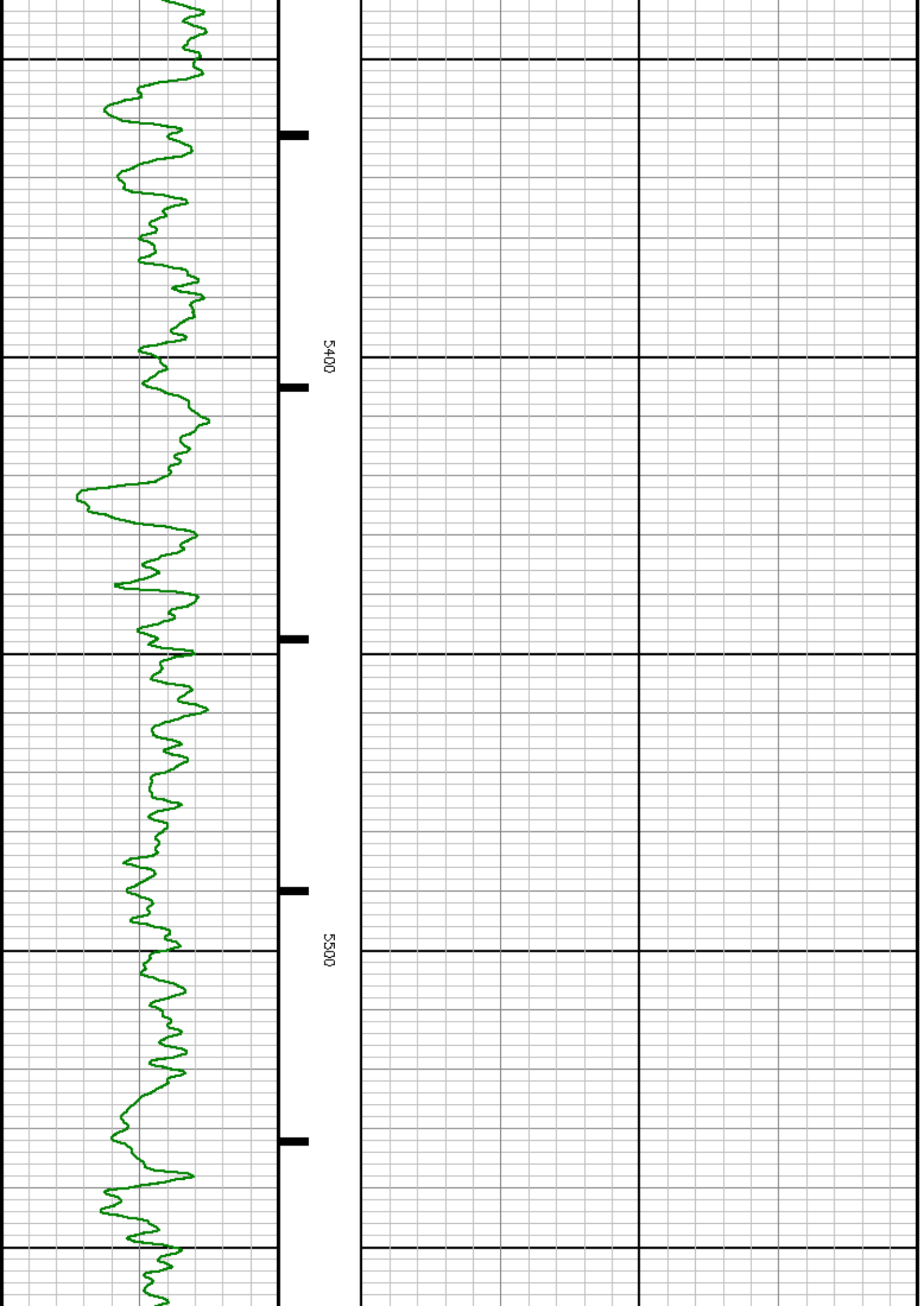
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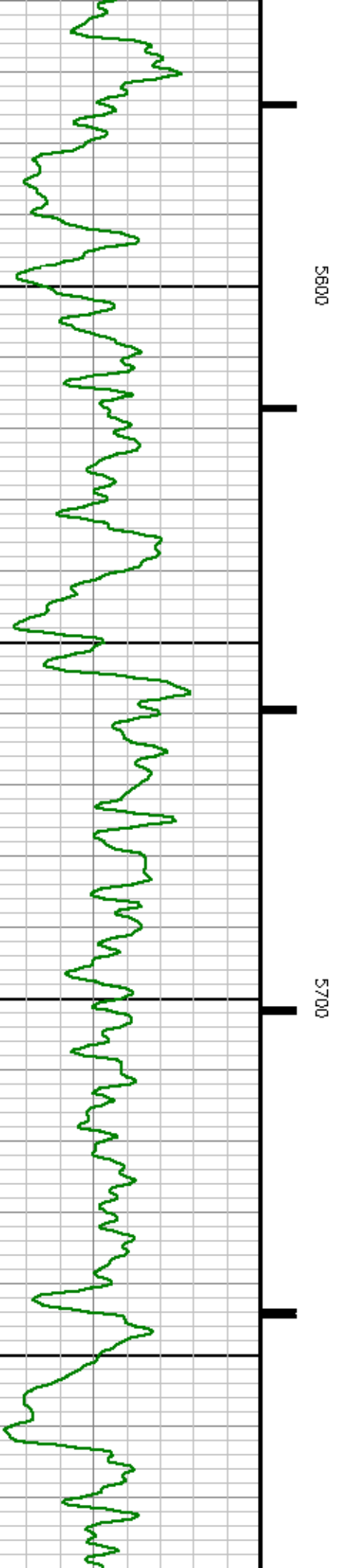


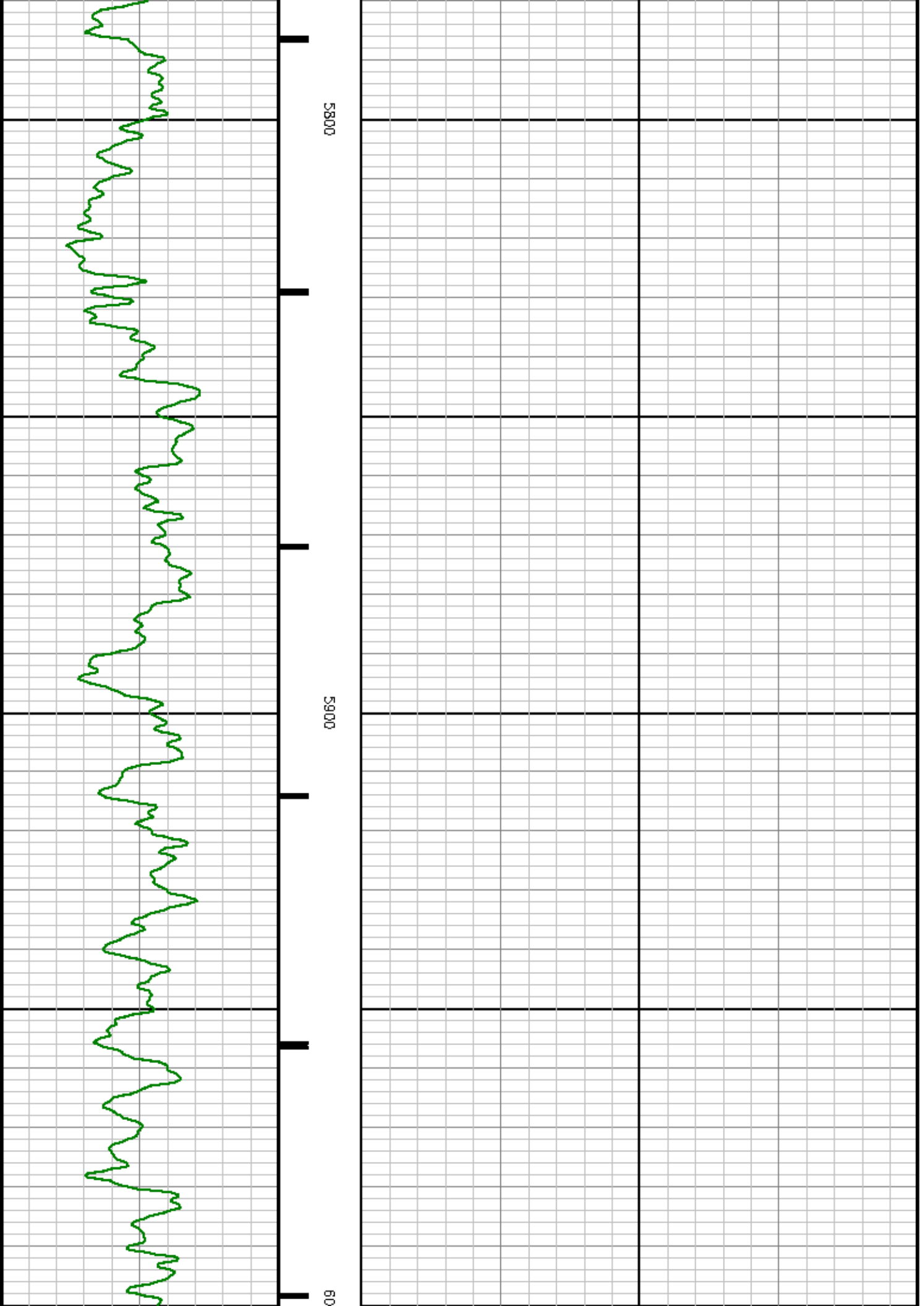


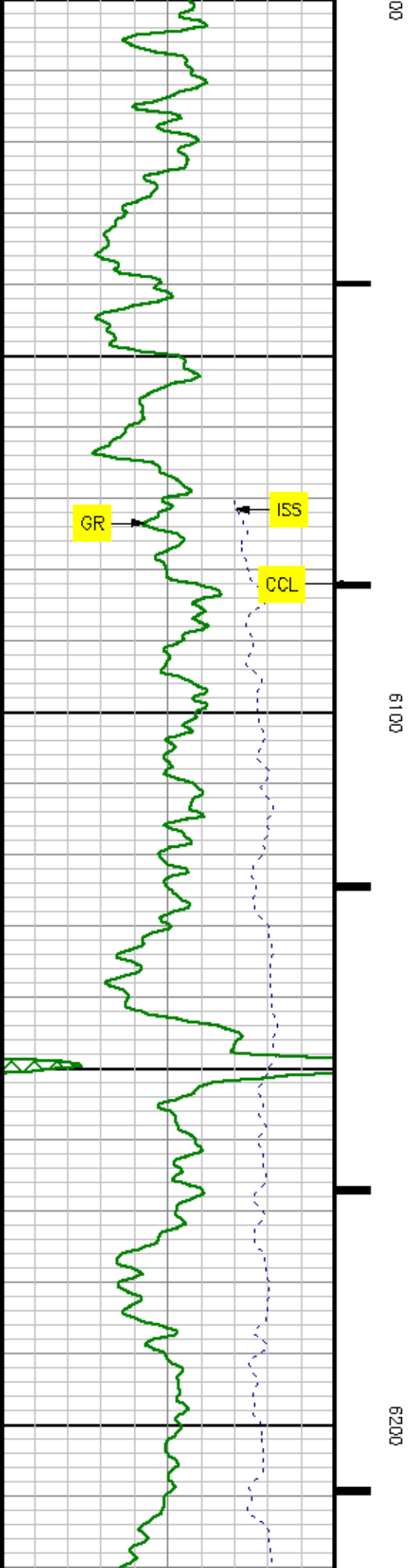
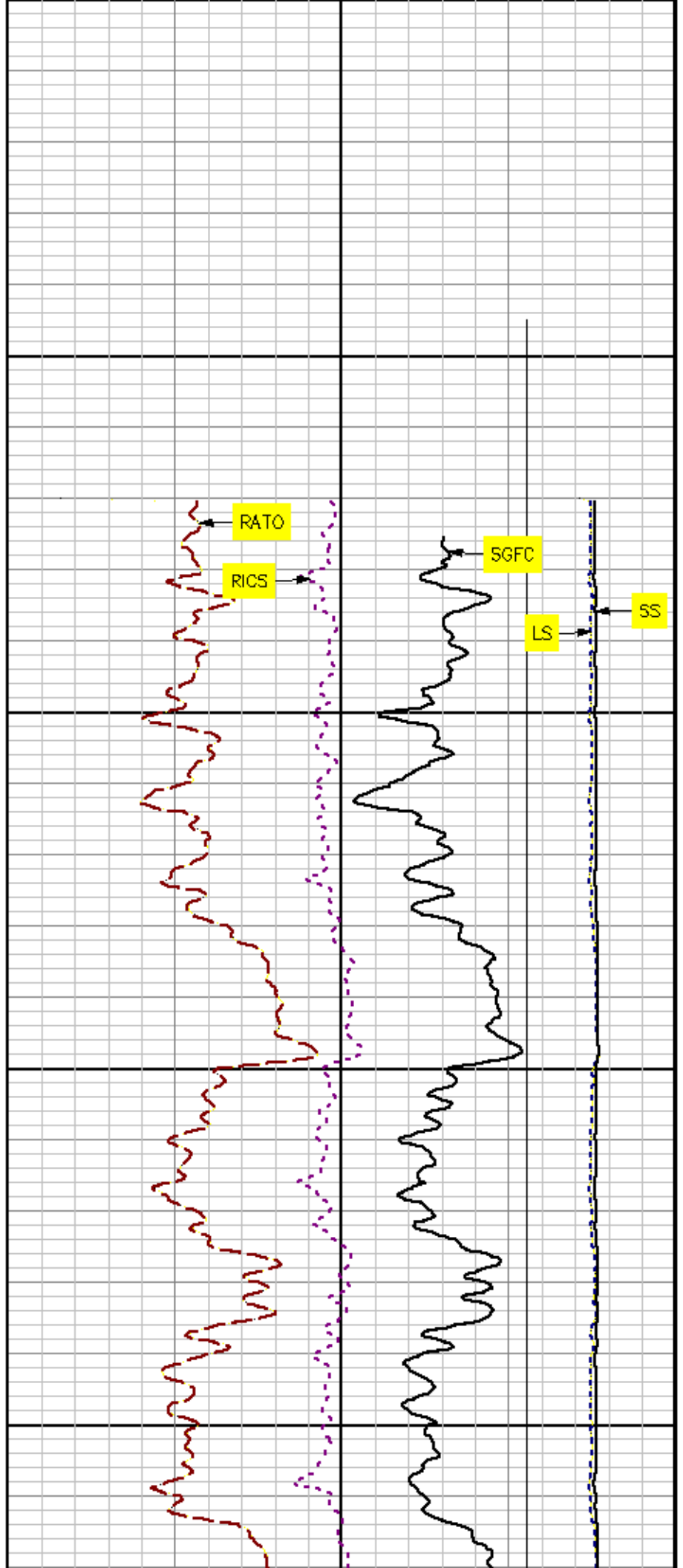


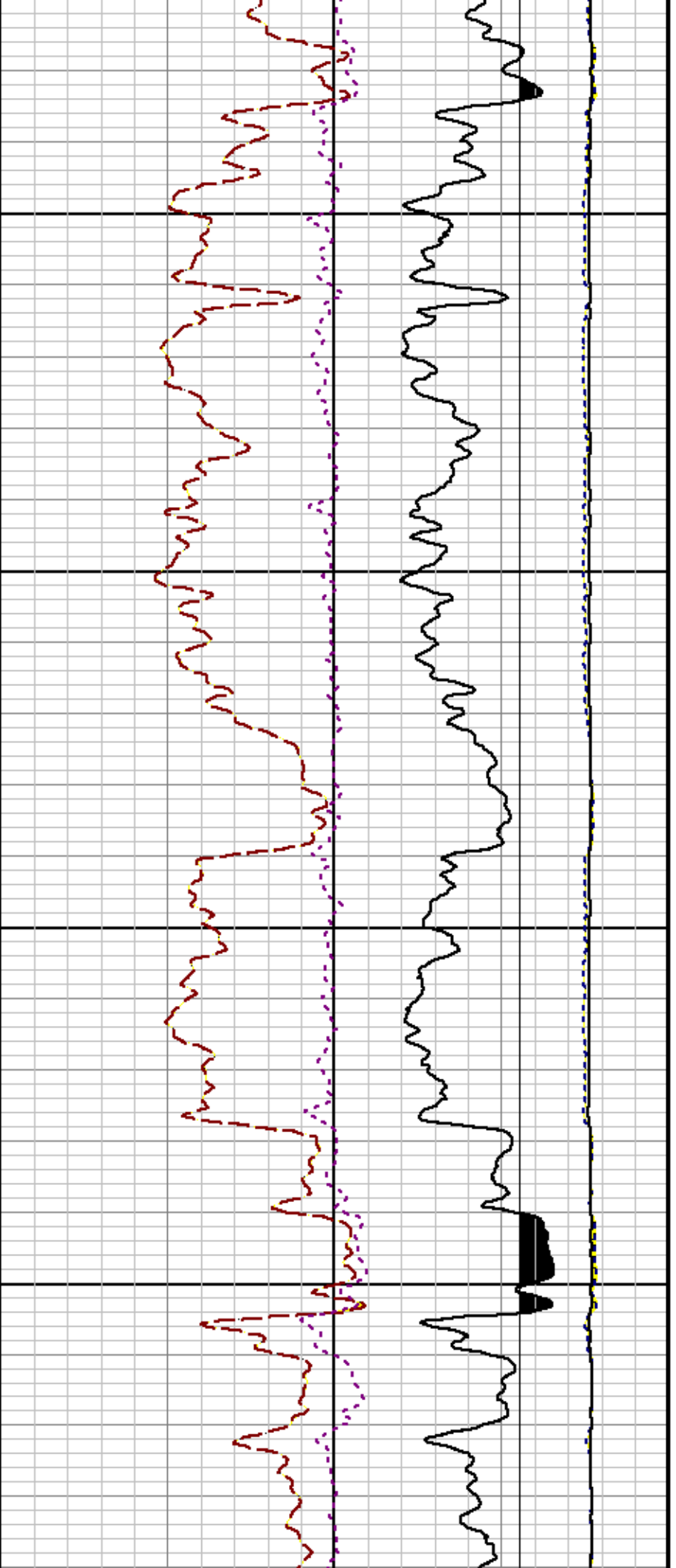






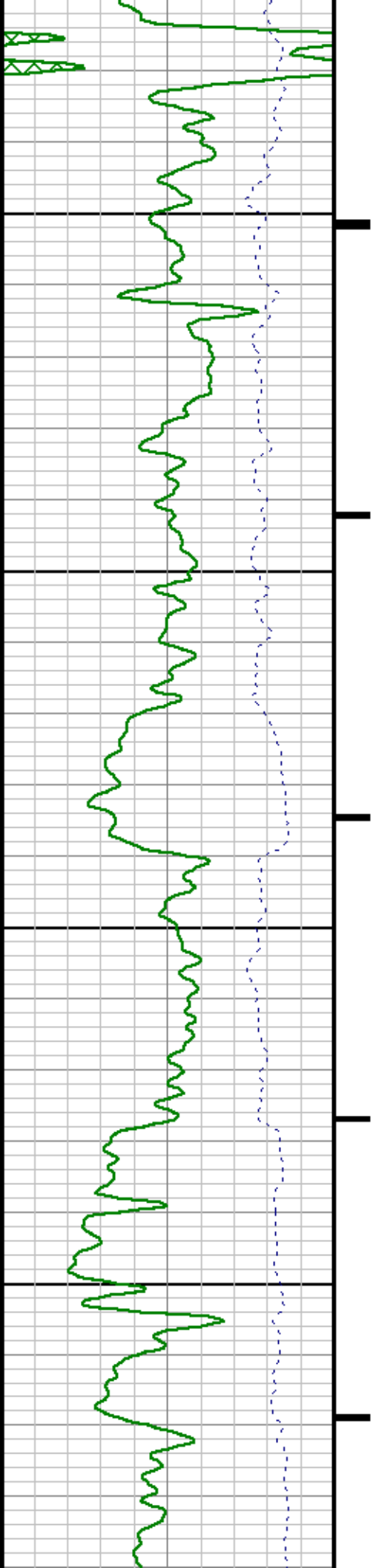


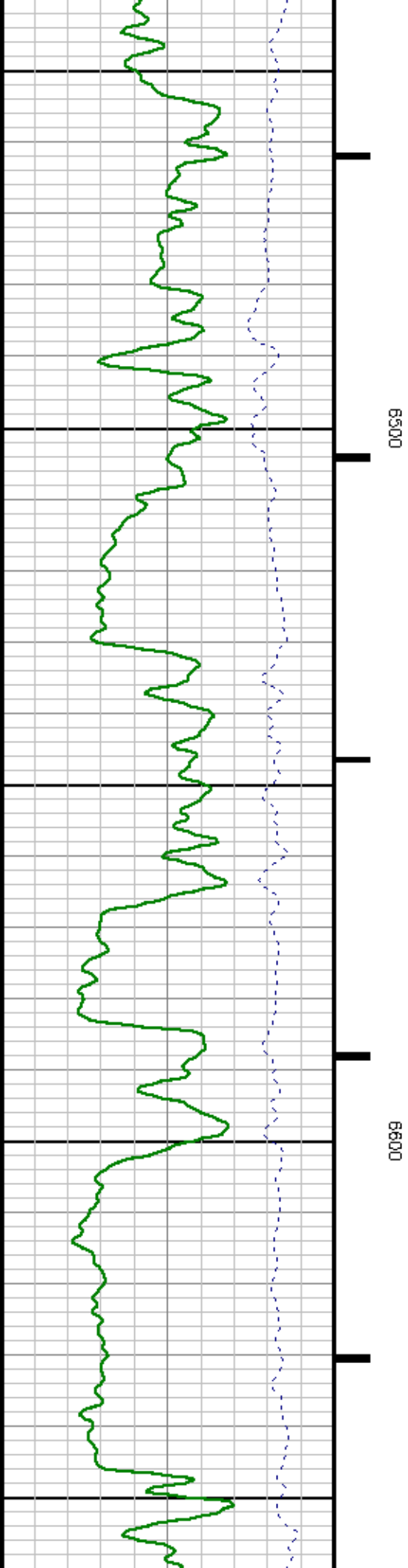
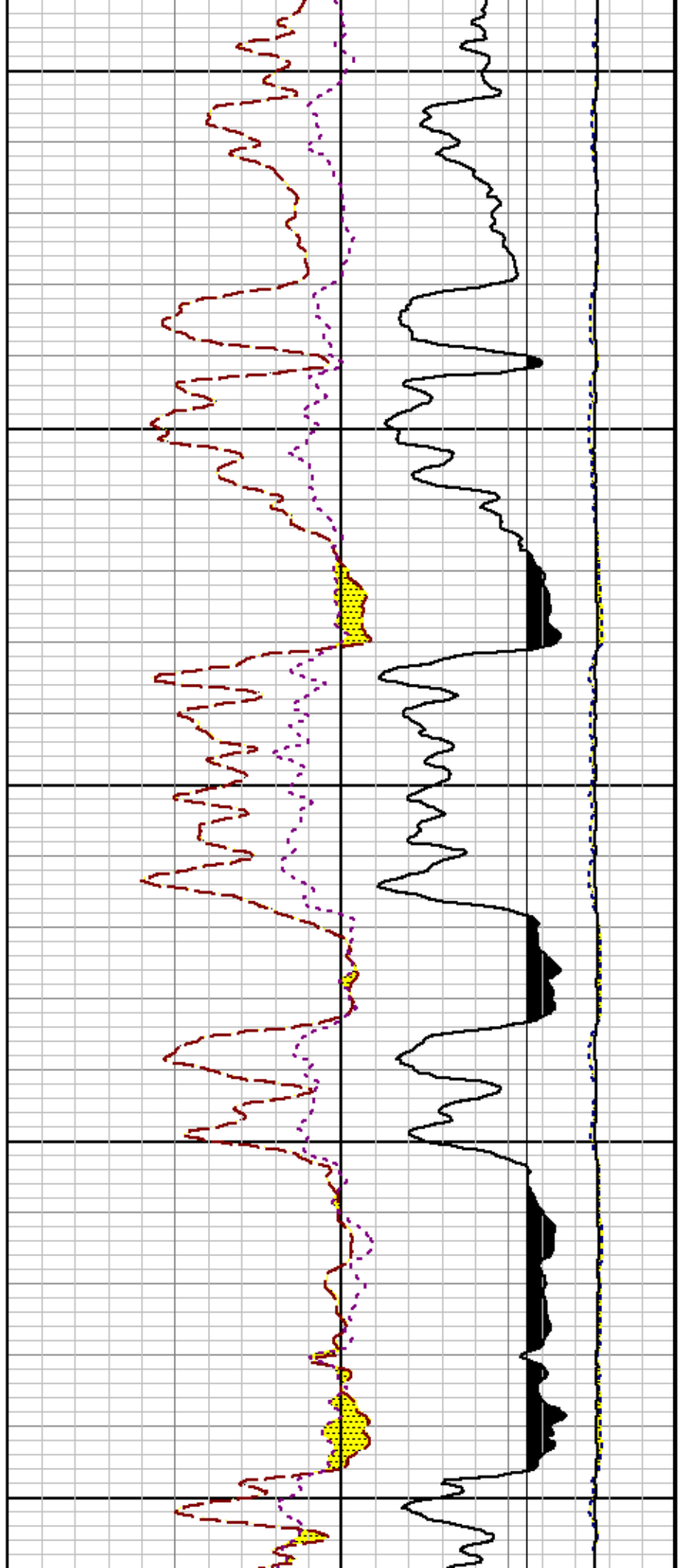


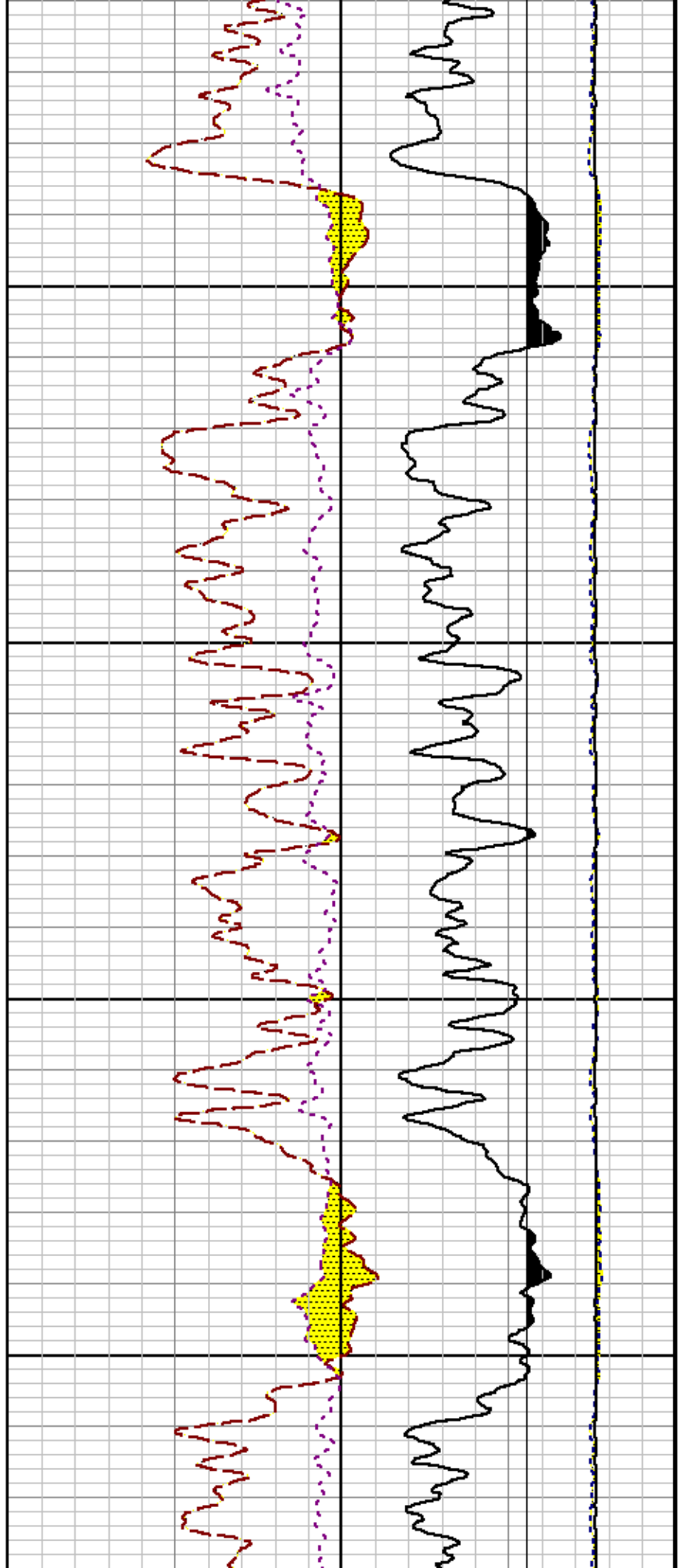


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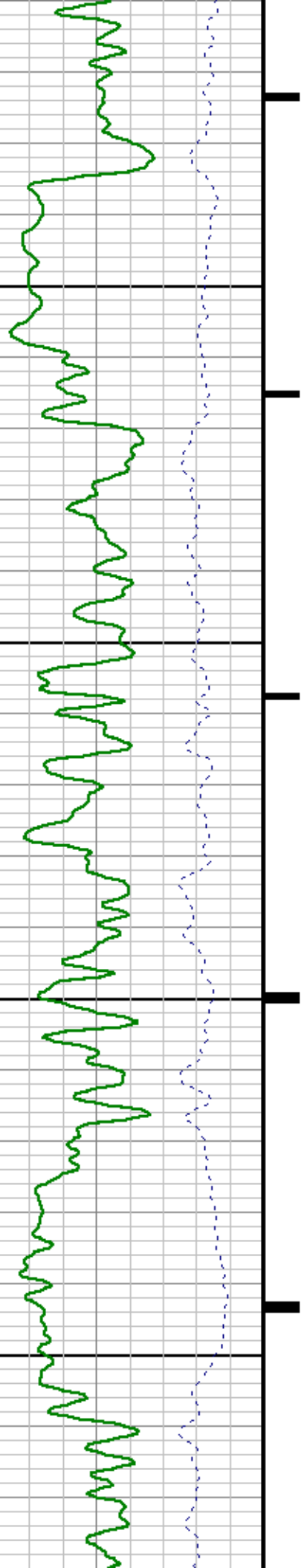




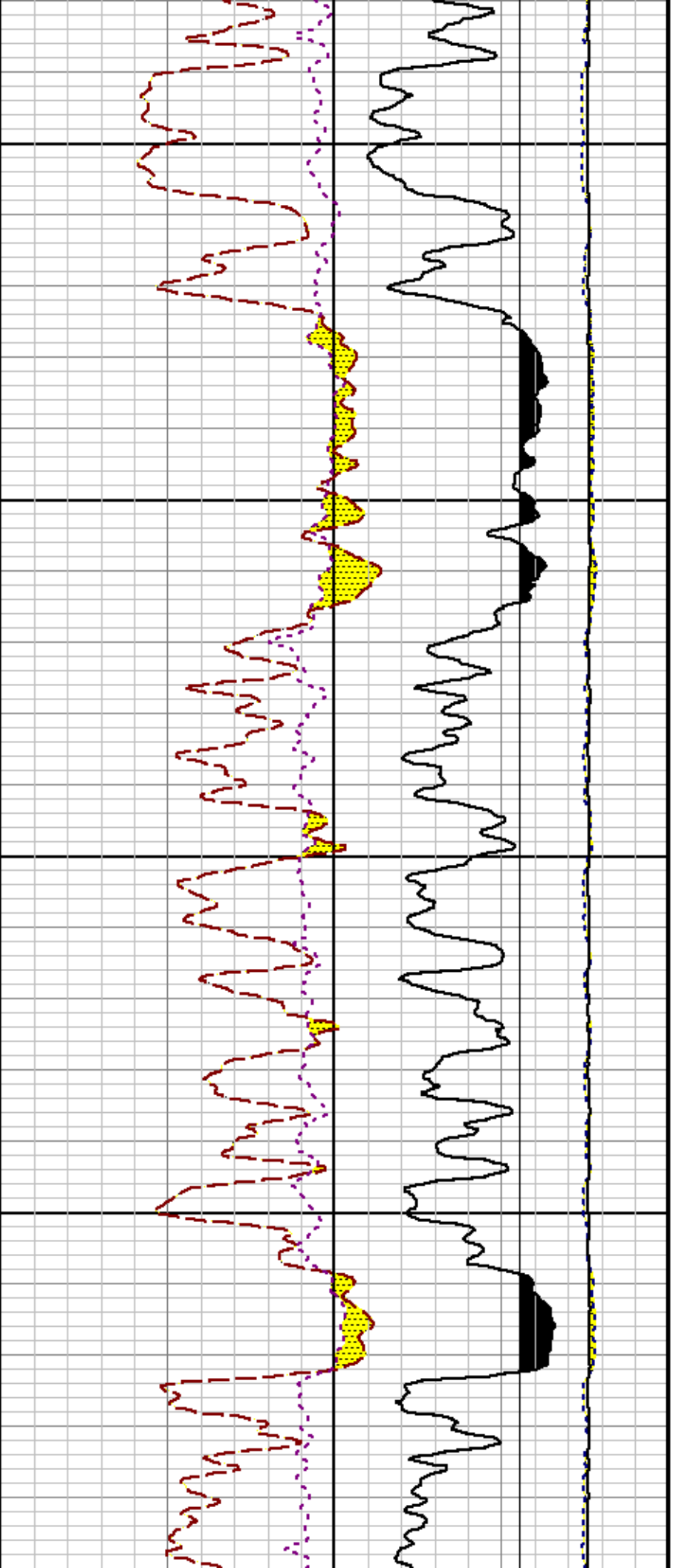


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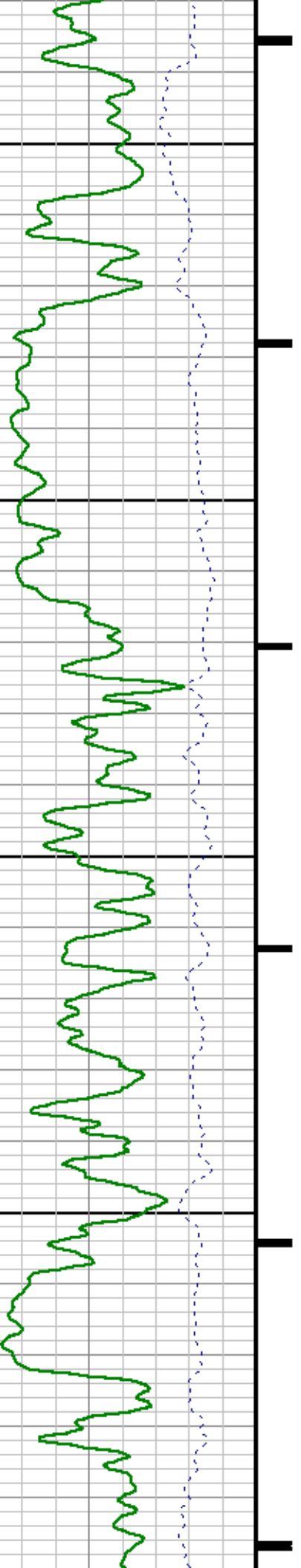


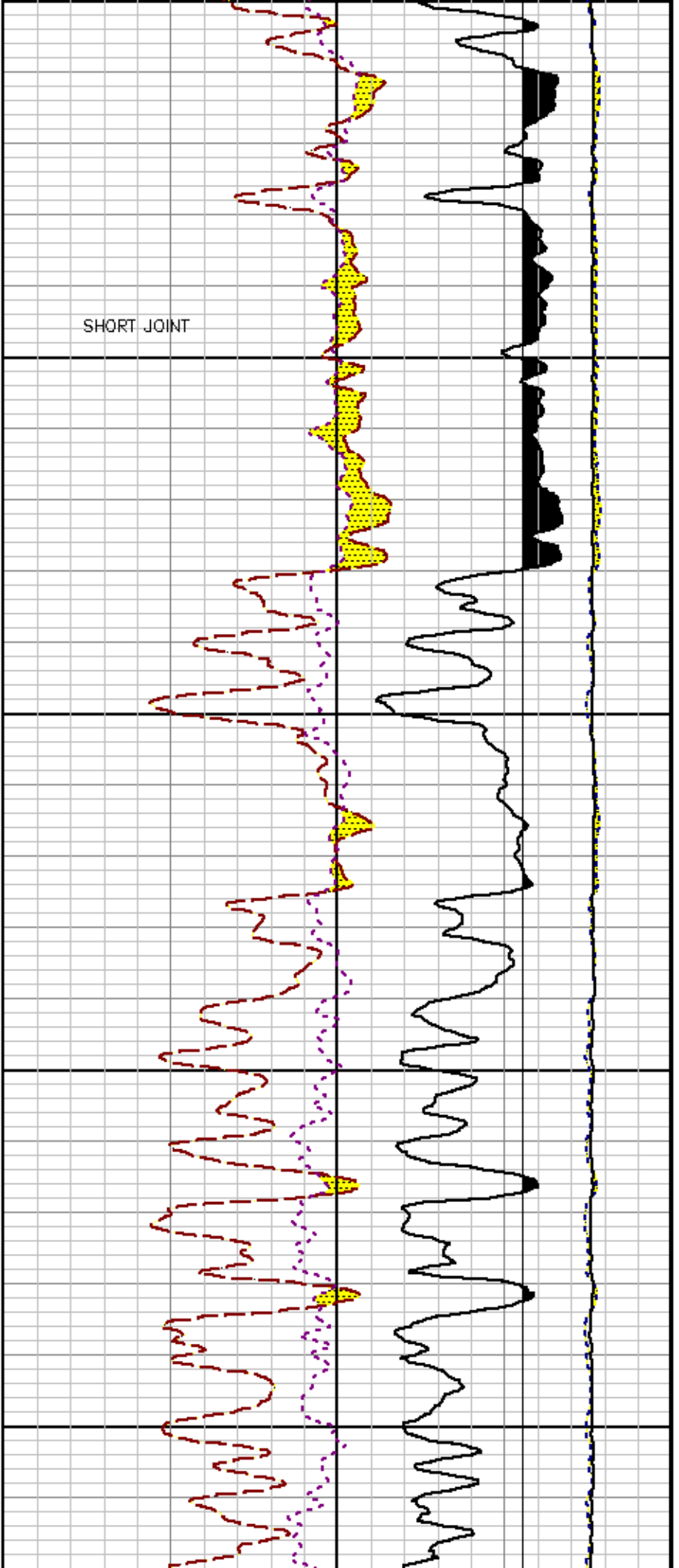


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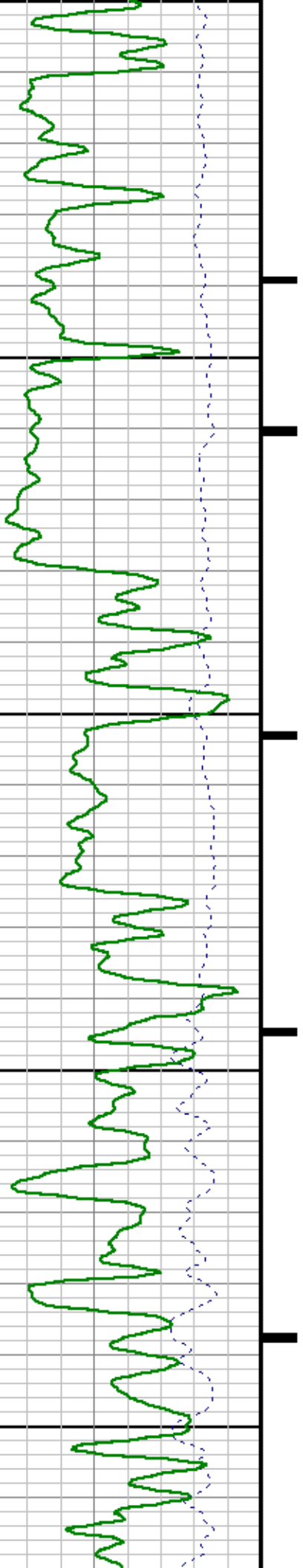


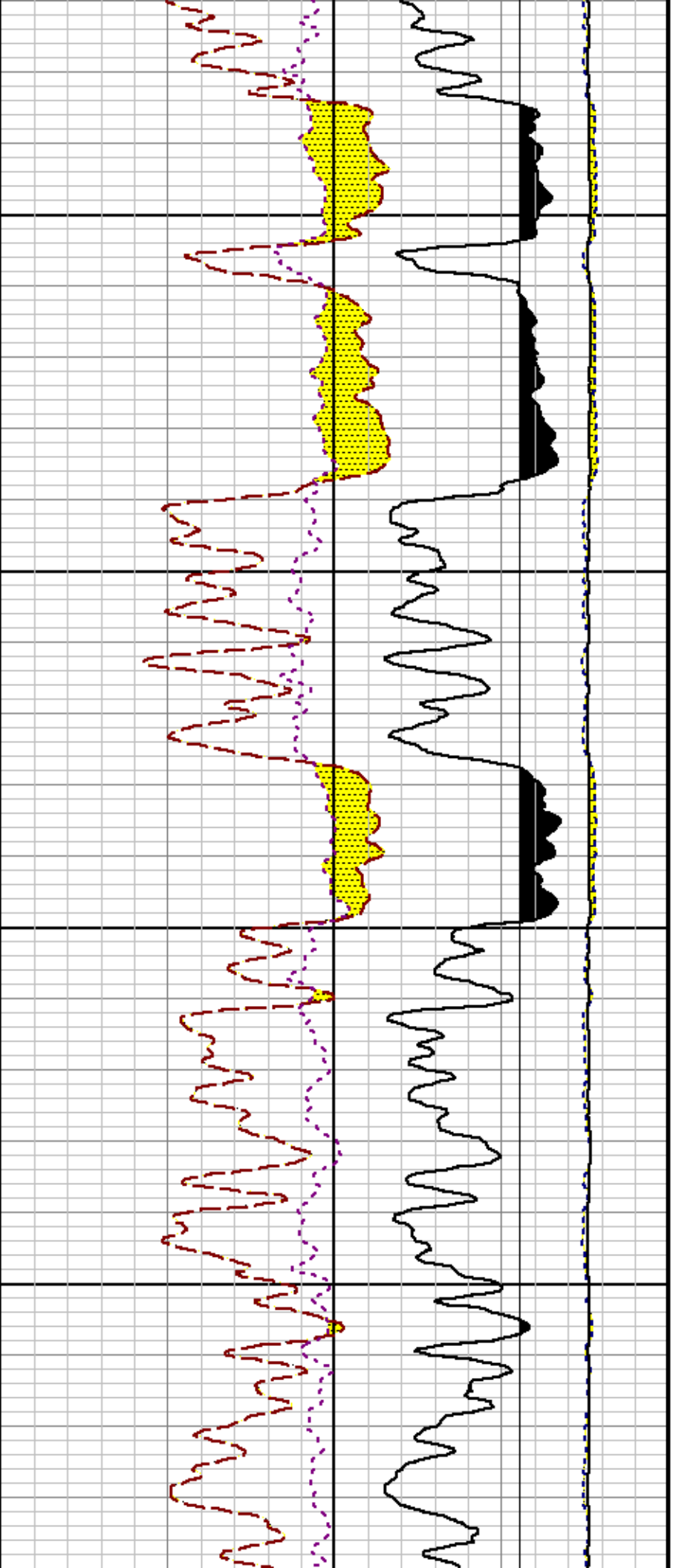


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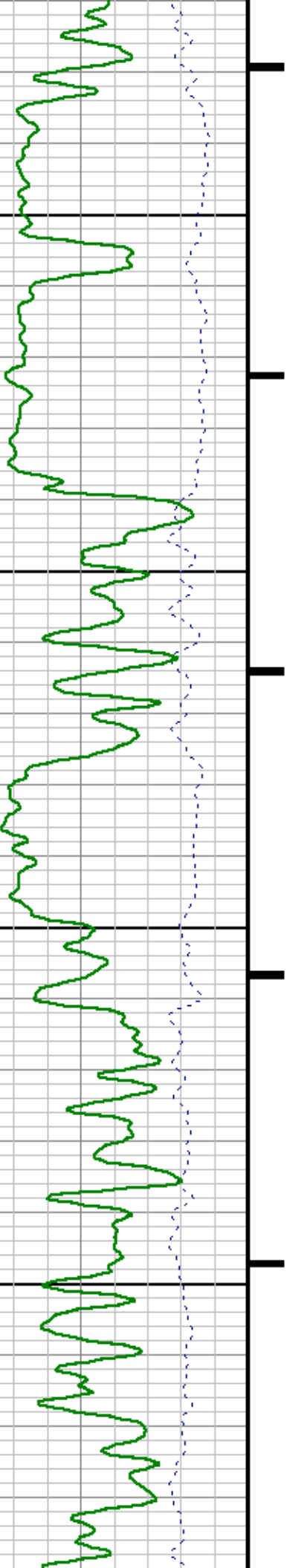
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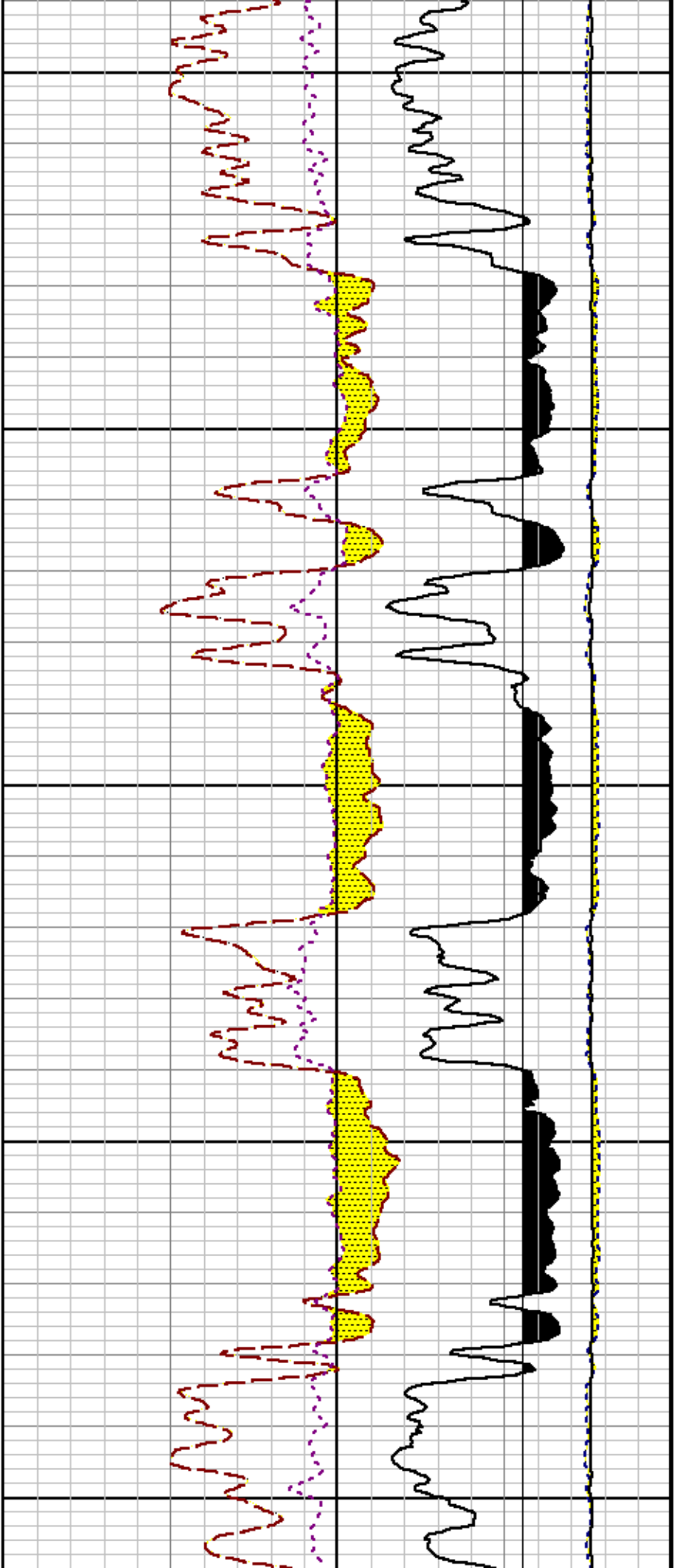




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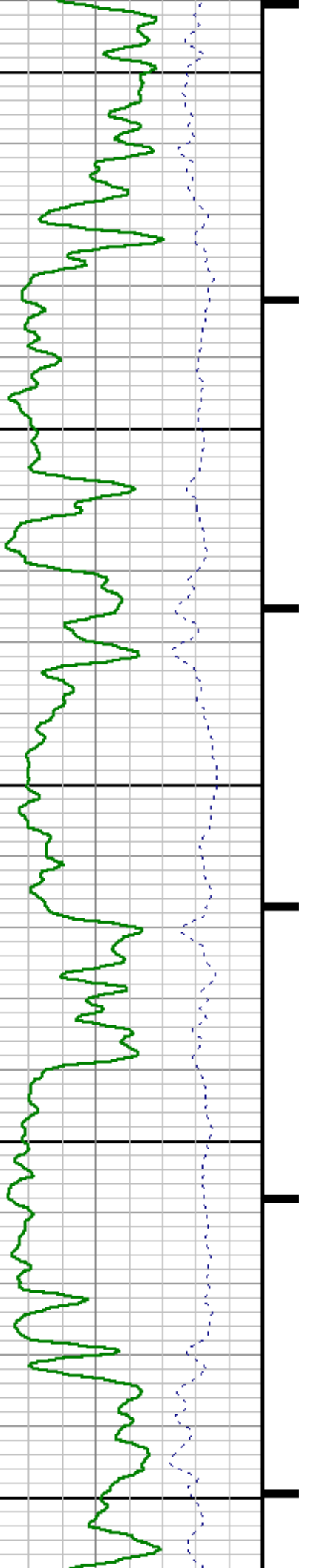
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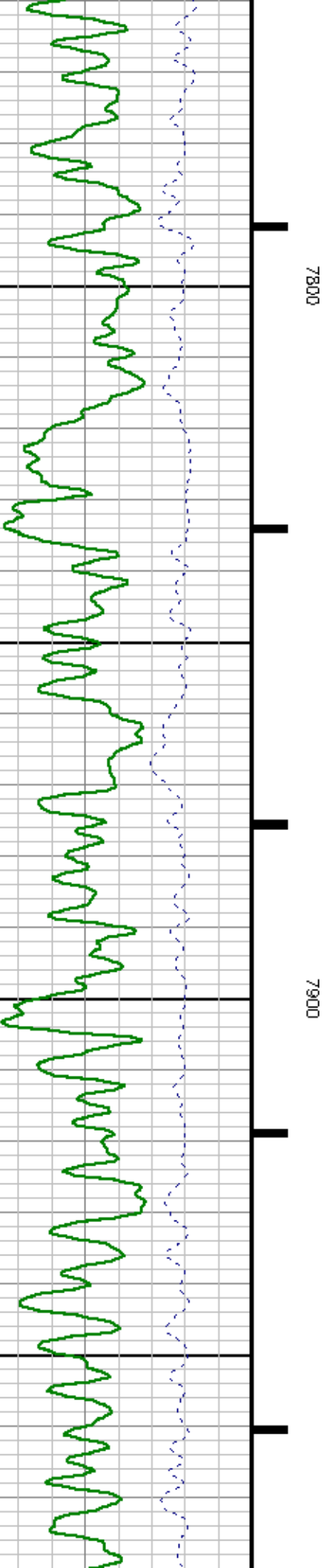
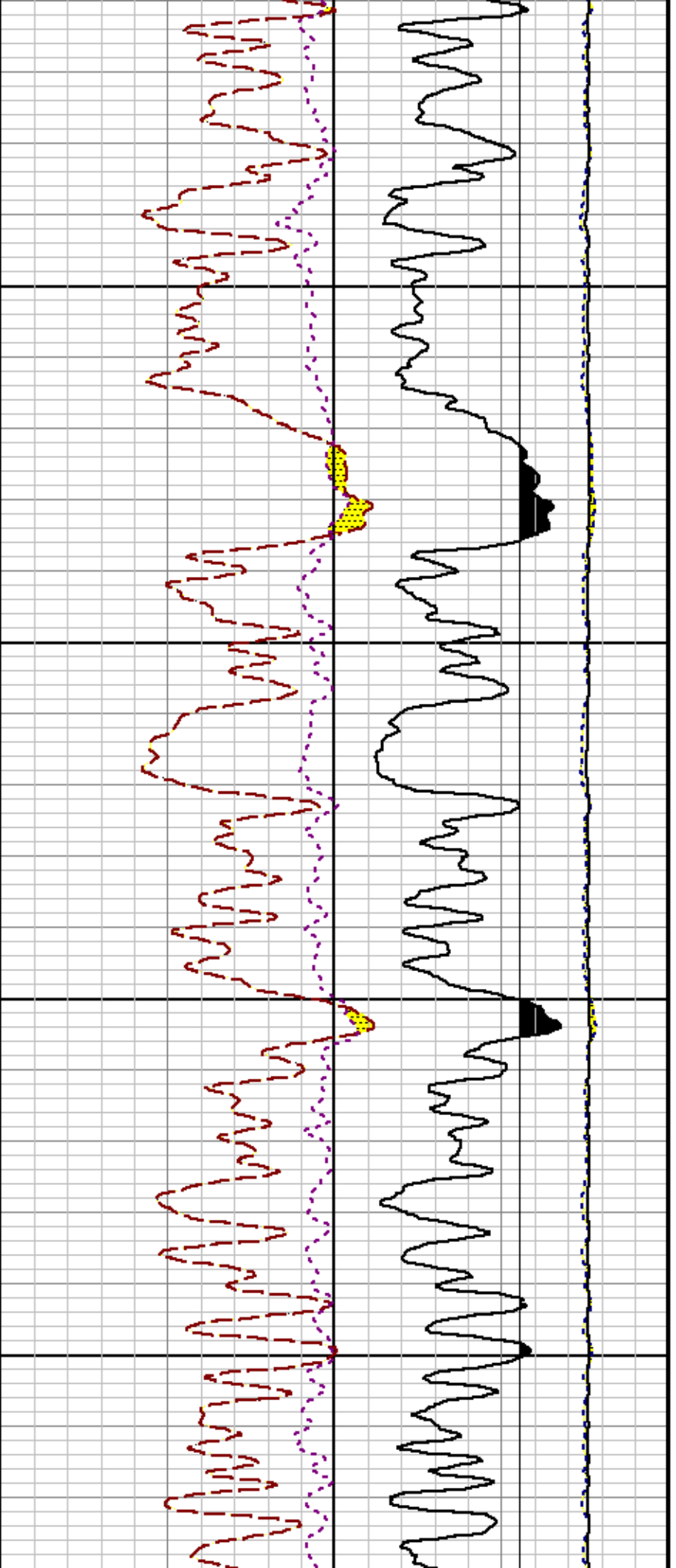


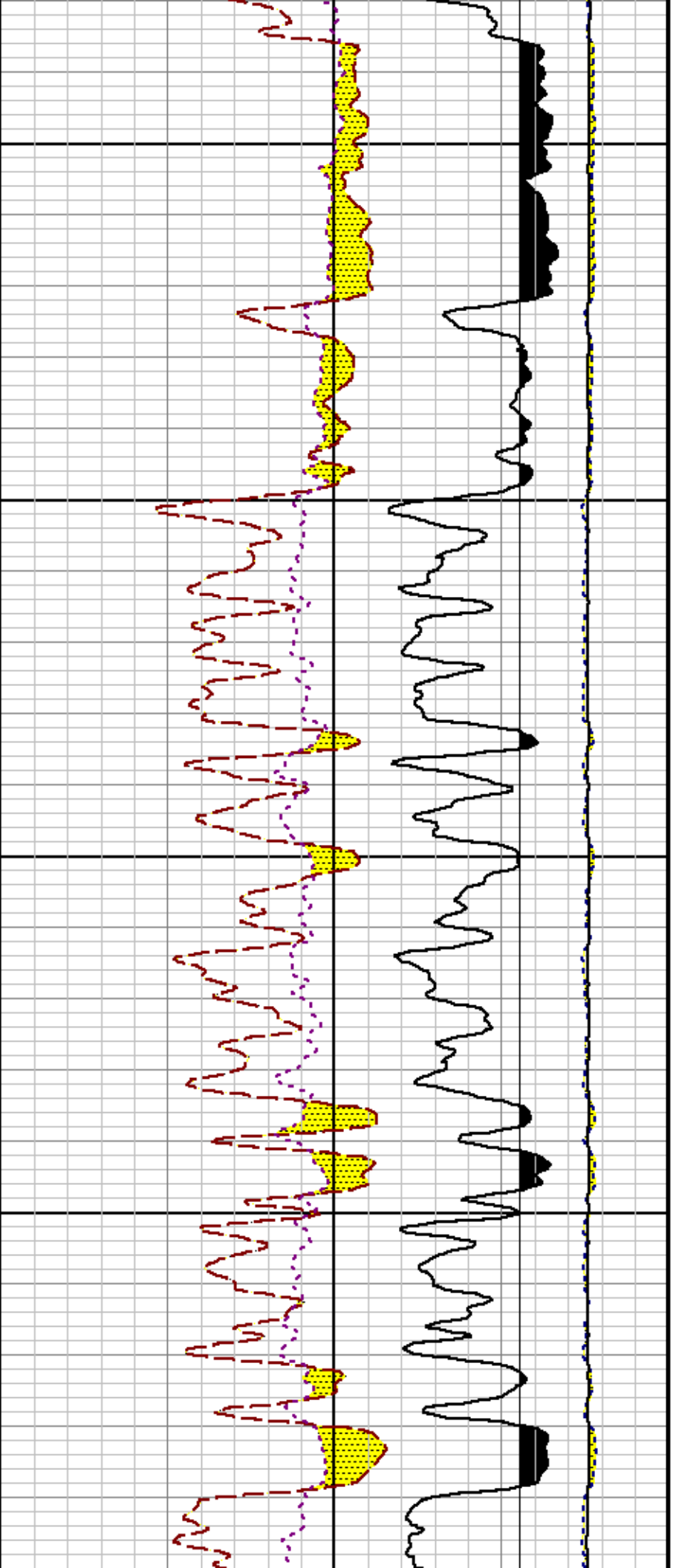


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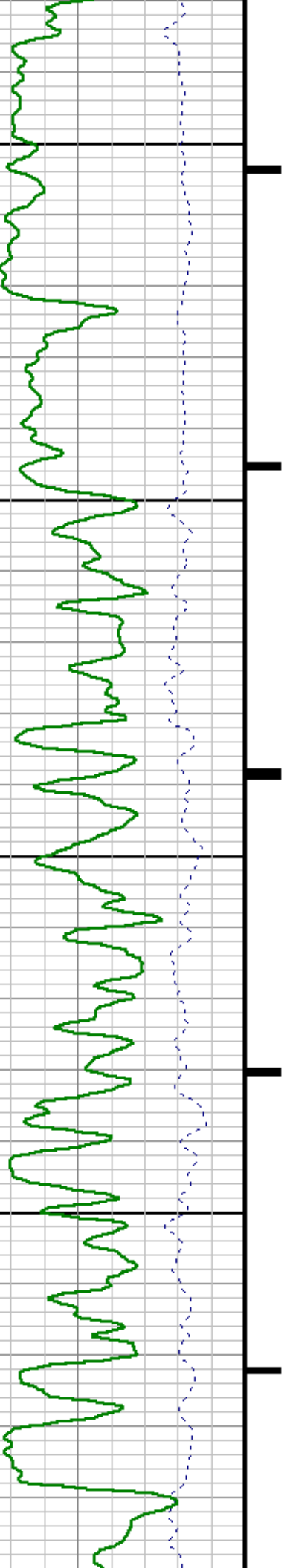


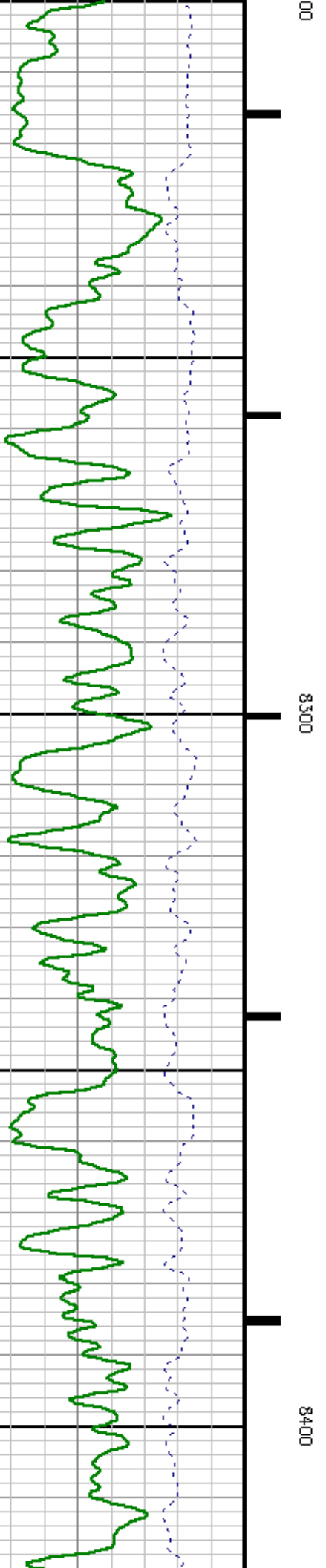
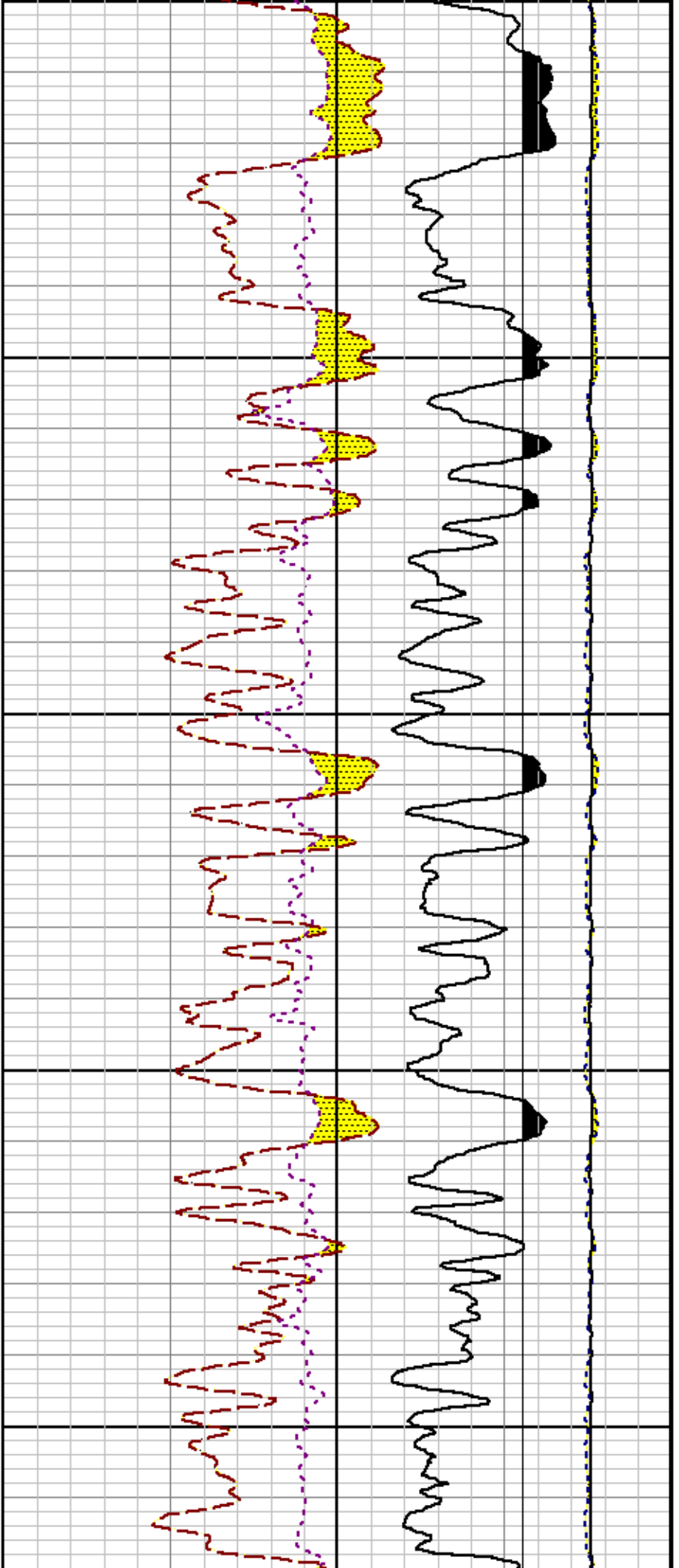


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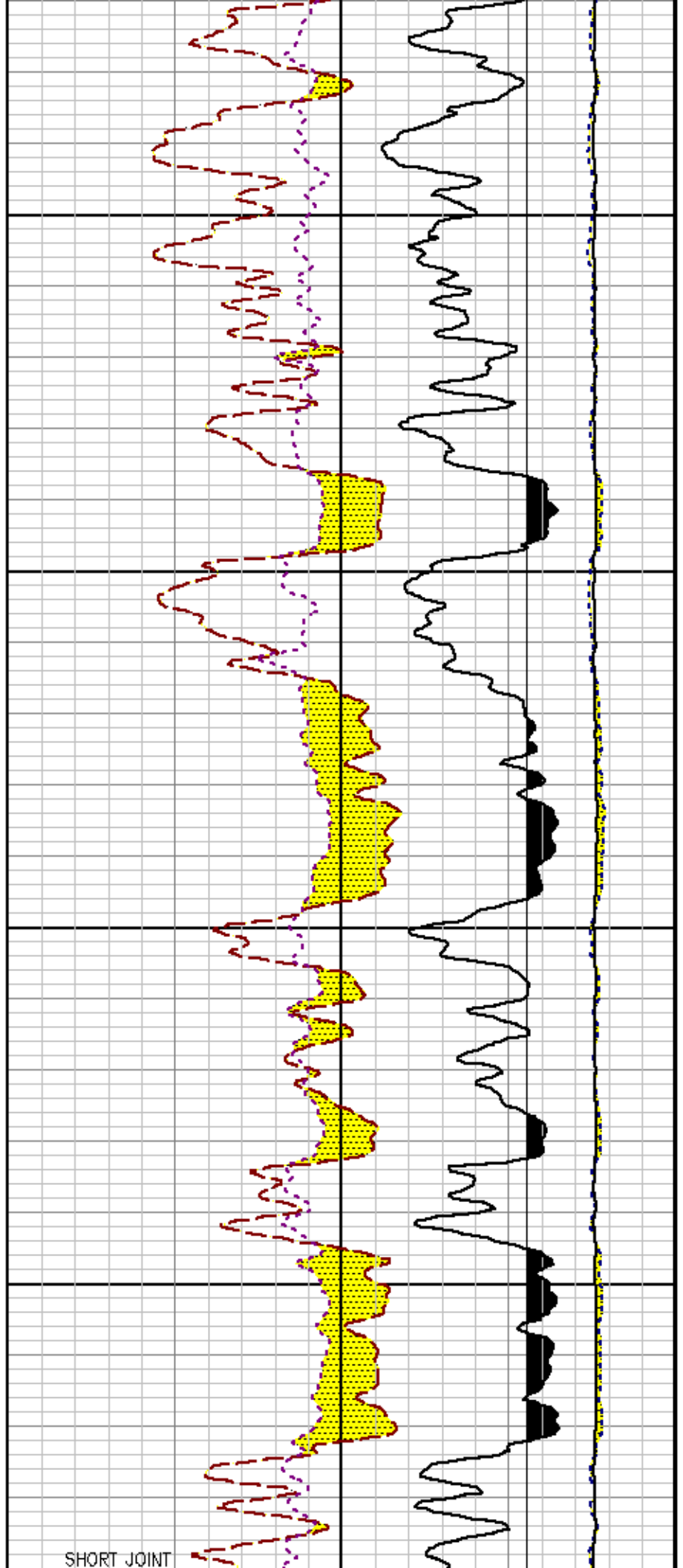
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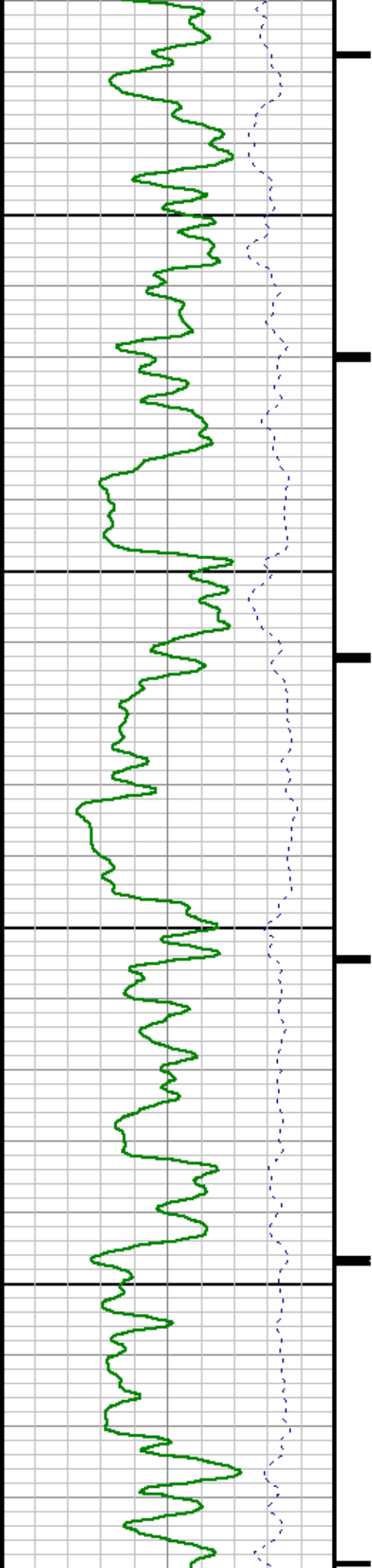




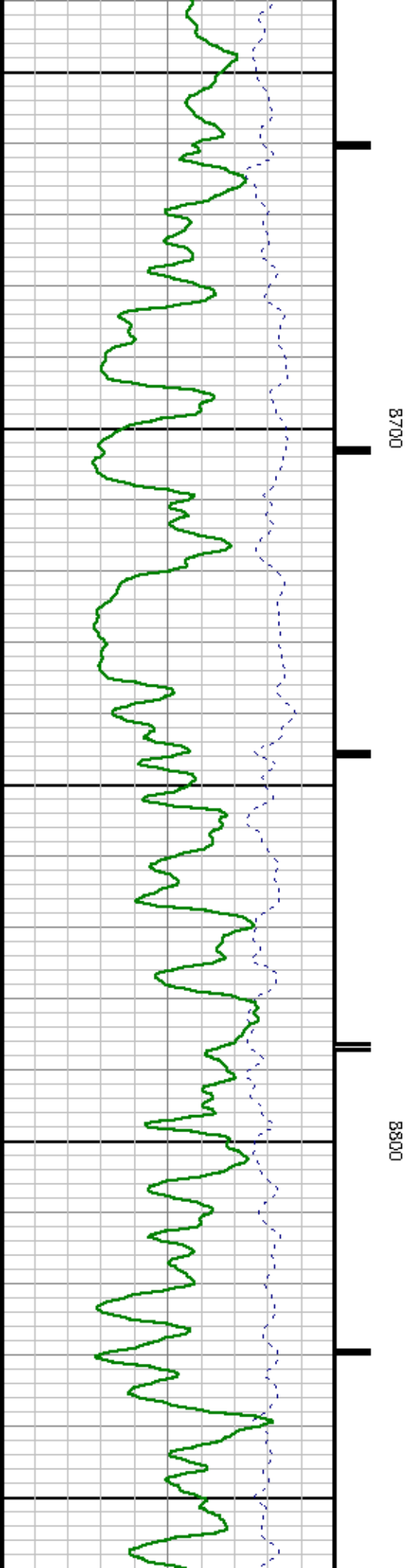
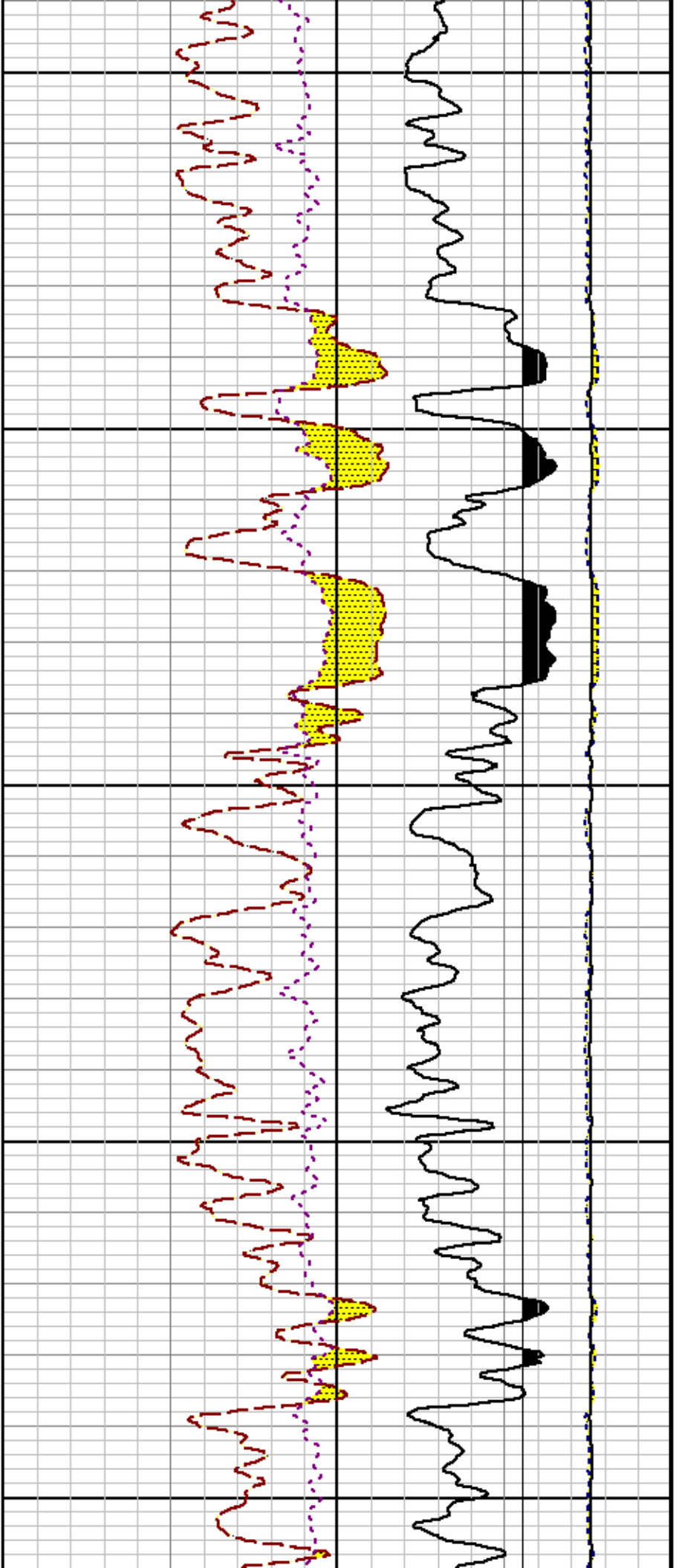


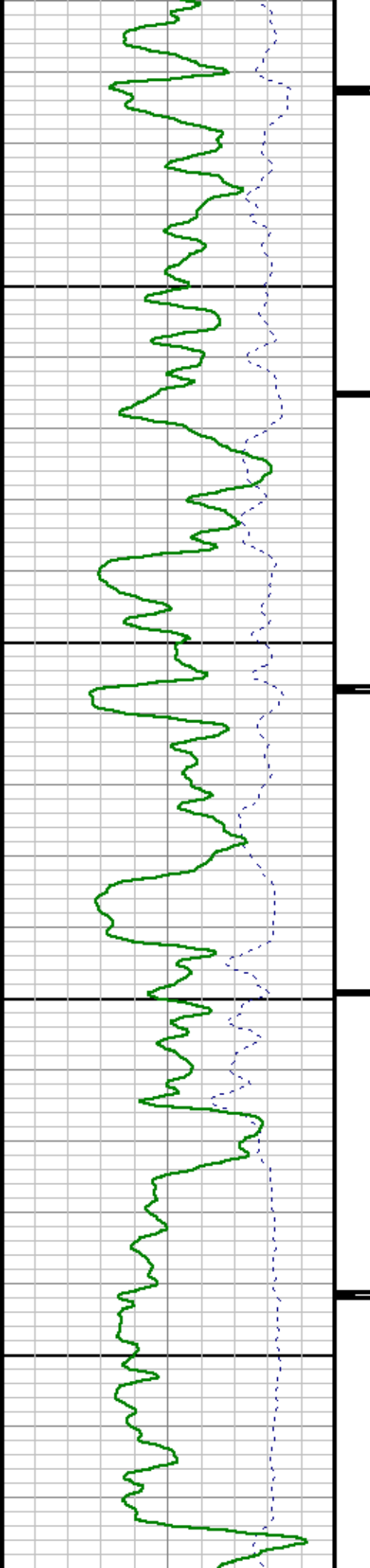
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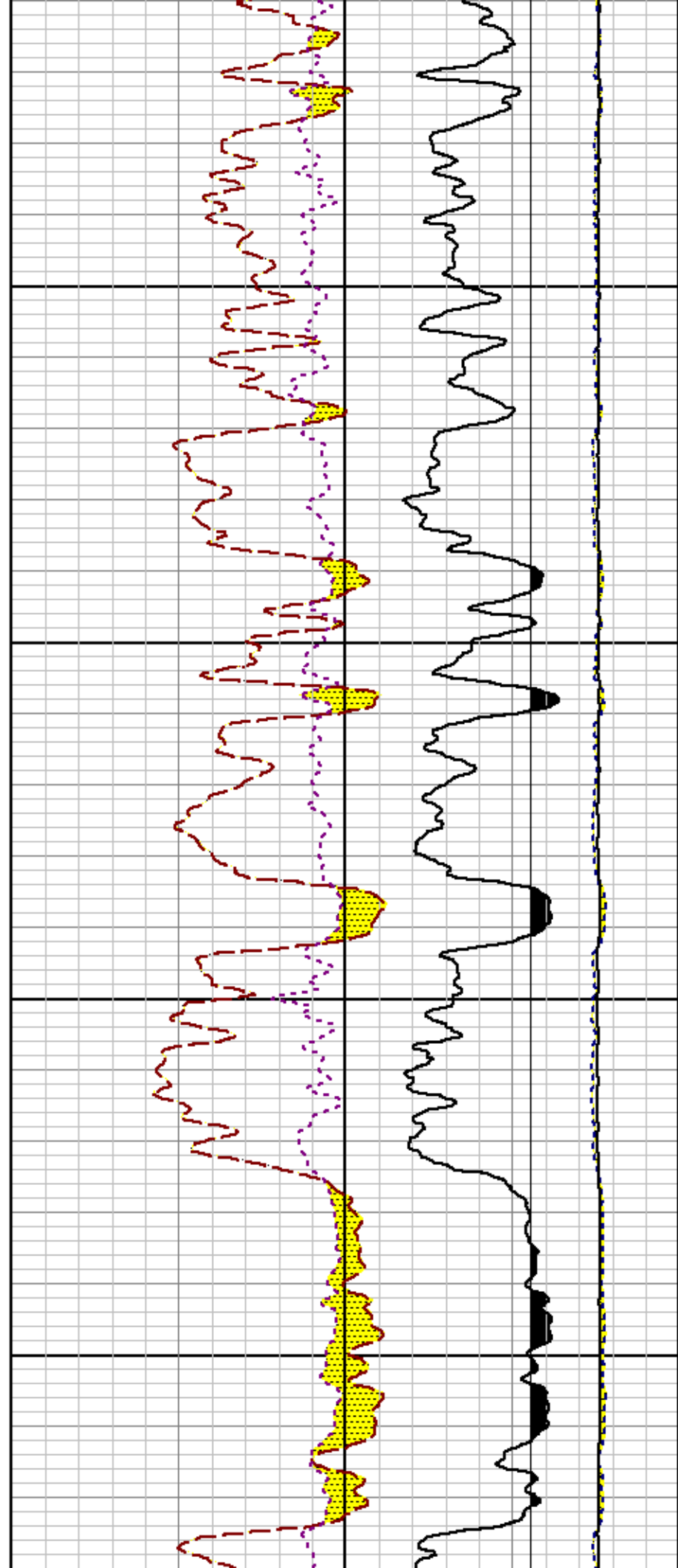


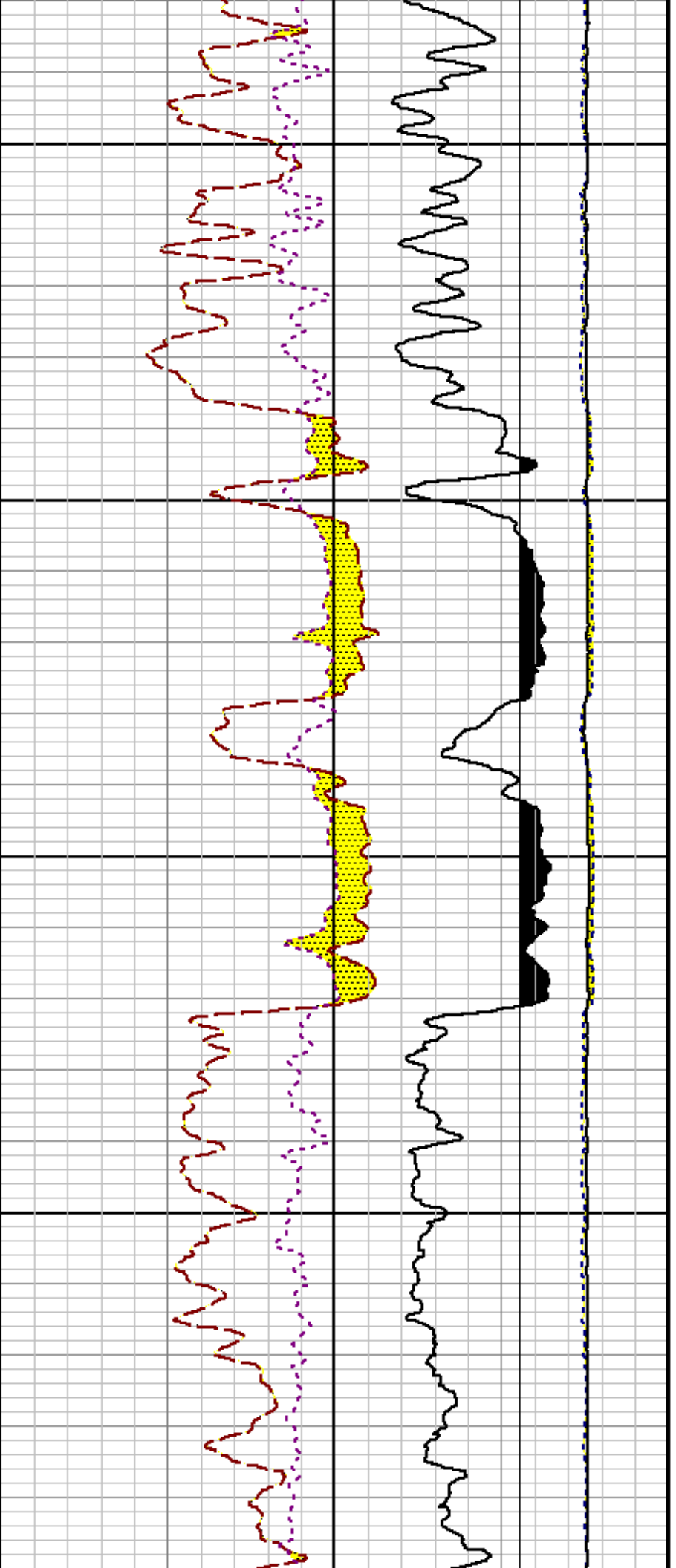




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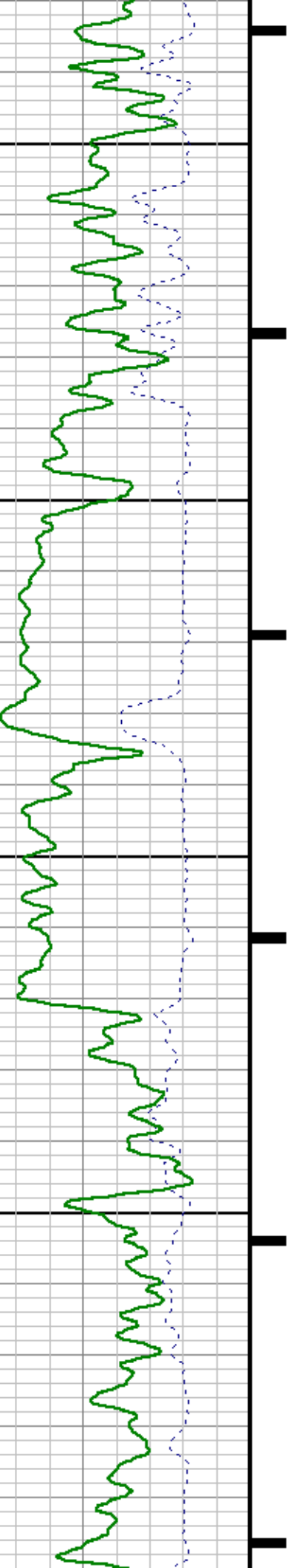


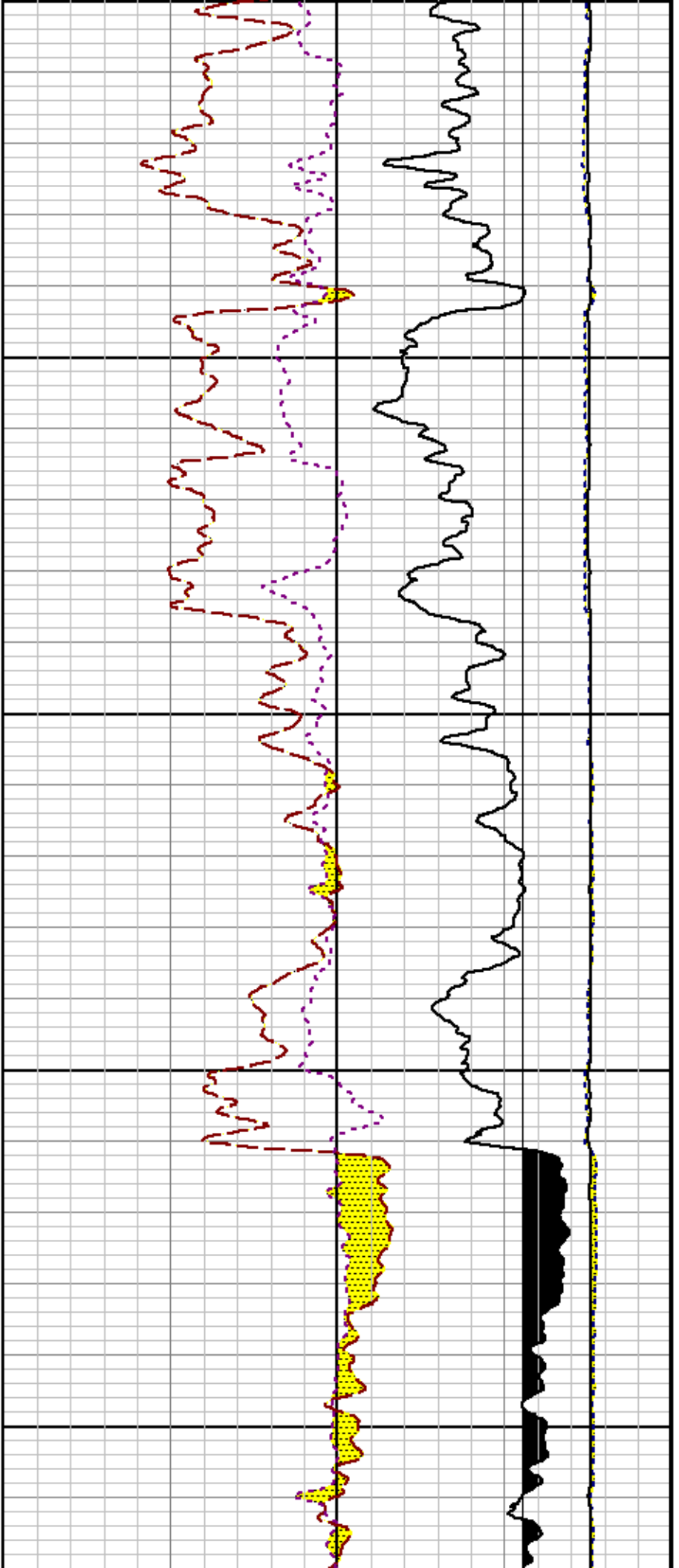


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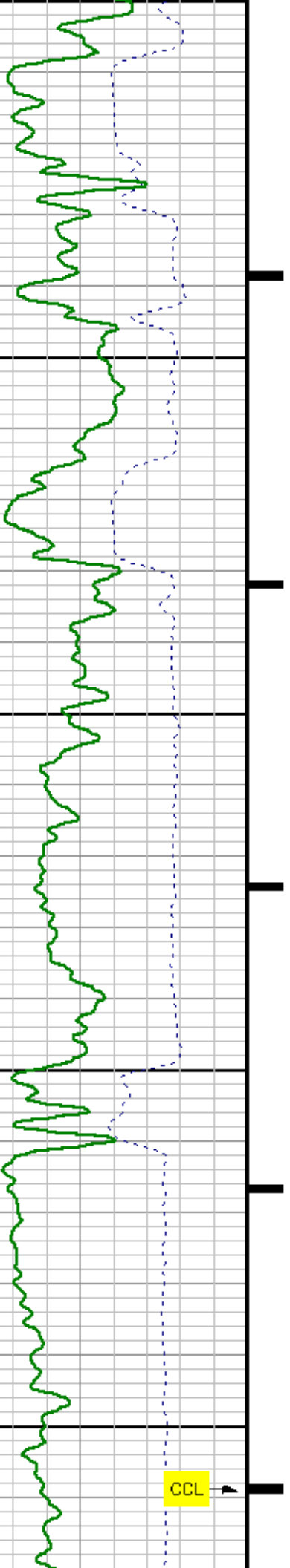


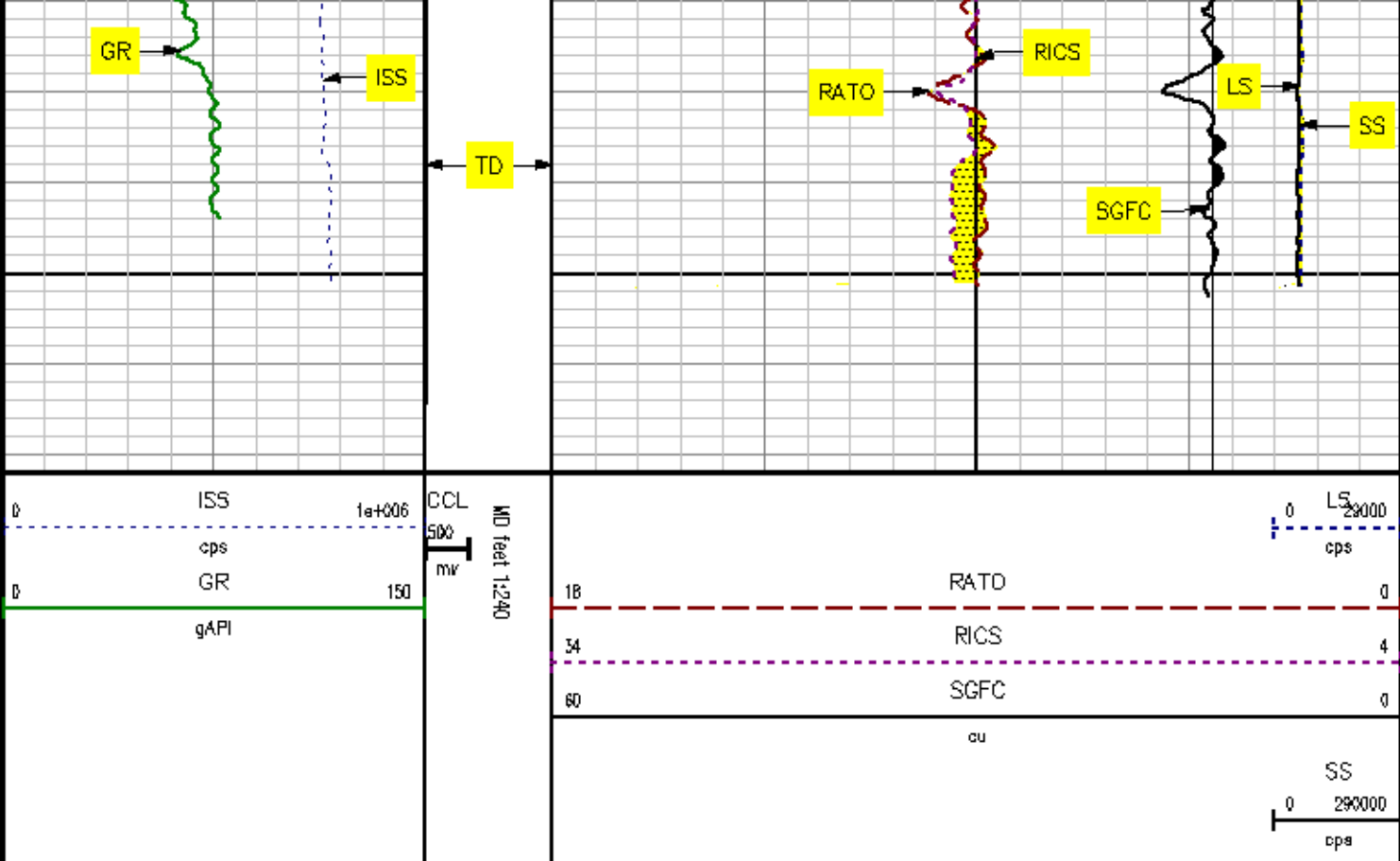
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CCL





SPL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		9018.391	9574.719
PNC Porosity	Borehole Size	6.750	inch	9018.391	9574.719
PNC Porosity	Casing Size	4.500	inch	9018.391	9574.719
PNC Porosity	Gas Filled	Non Gas Filled		9018.391	9574.719
PNC Porosity	Matrix	Sandstone		9018.391	9574.719

DEPTH OFFSETS (for Acquired Curves)		
SERIES	DEPTH OFFSET	ACQUIRED CURVES

B24BEA	-15.470	FLTM						
B24BEA	-13.470	CCL	CHV					
B262XA	-10.189	GR						
B2B1XA	-0.862	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	
		RICX0	RIN130	RIN23	RIN230	SD3D	SG3D	
		SGB3	SGF3	WDTH3	CXSR	IXSR	XSR	
		RICXR						
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		BKL	CHF2	CLS	CPT200	CPT202	CPT203	
		CPT204	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			
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		AMB1	AME1	AMF1	AML1	BKS	CHF1	
		CSS	CORB	CORF	CPT100	CPT102	CPT102A	
		CPT102B	CPT102C	CPT103	CPT104	CPT105	ET1	
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		ISSN	RDEN	WDTH1	RICSC	CSSR	G1R	
		G2R	ISSR	SSR	SS2R	RAT0R	RAT013R	
		RBORR	RICSR	RINR	RIN13R	RONR	RPORR	
		RTWOR						
SYSTEM	0.000	TEN	TEN					

Created by : MIXED

Plotted by : PlotMgr, v5.4.504

Company : MARATHON OIL COMPANY

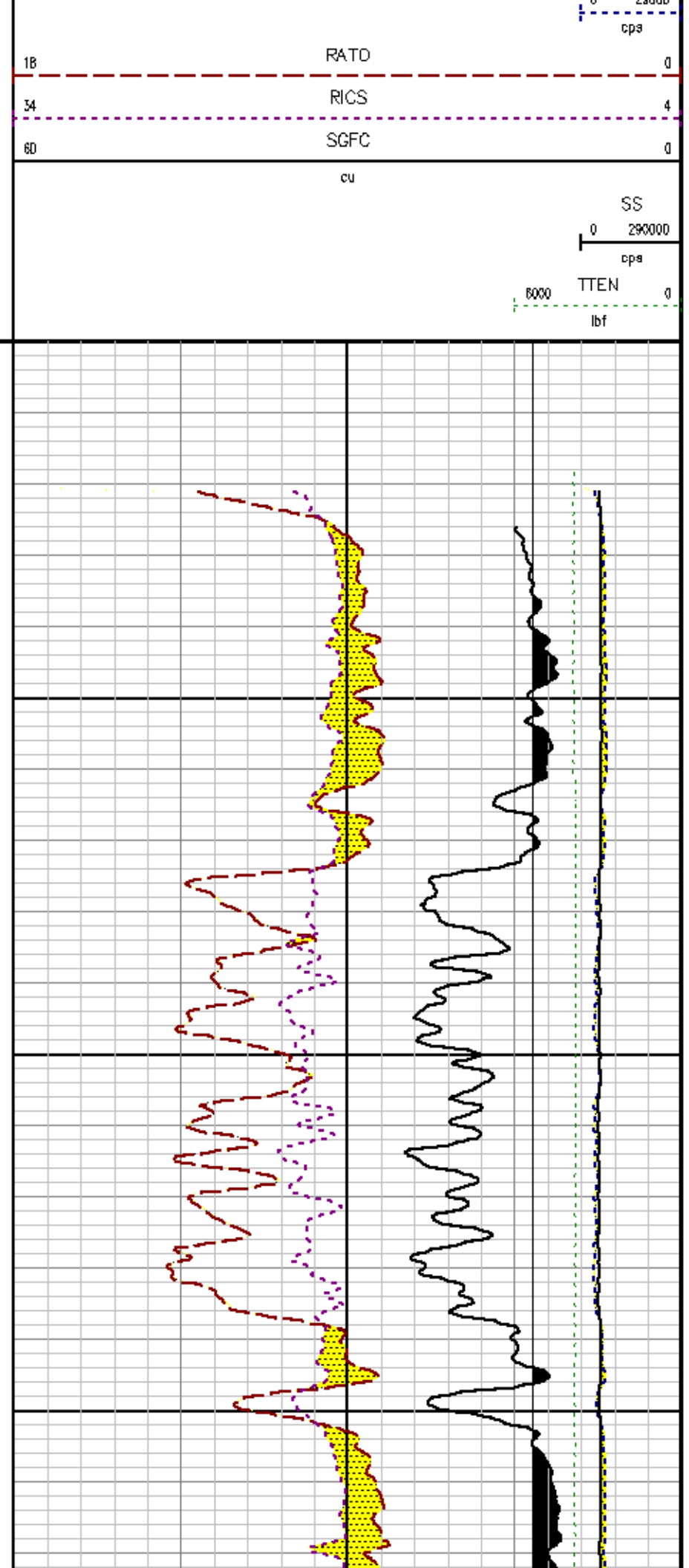
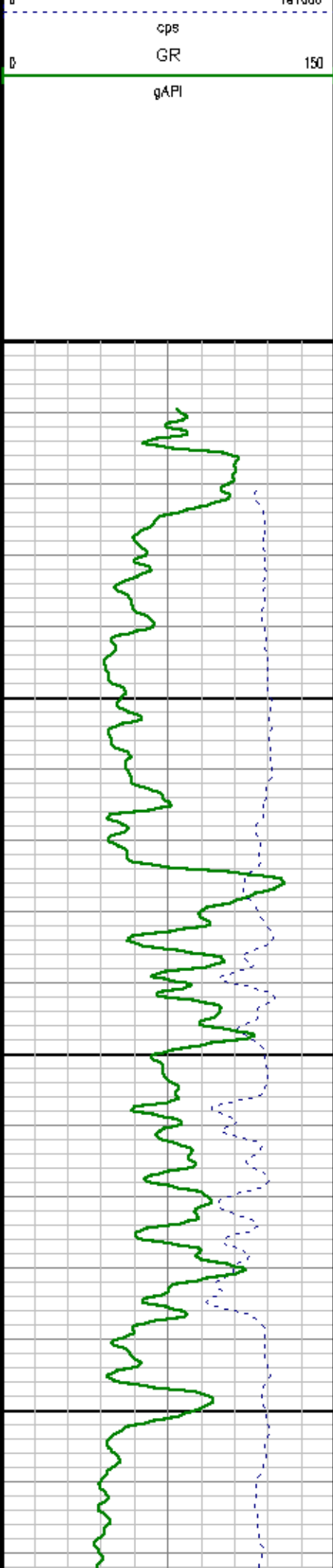
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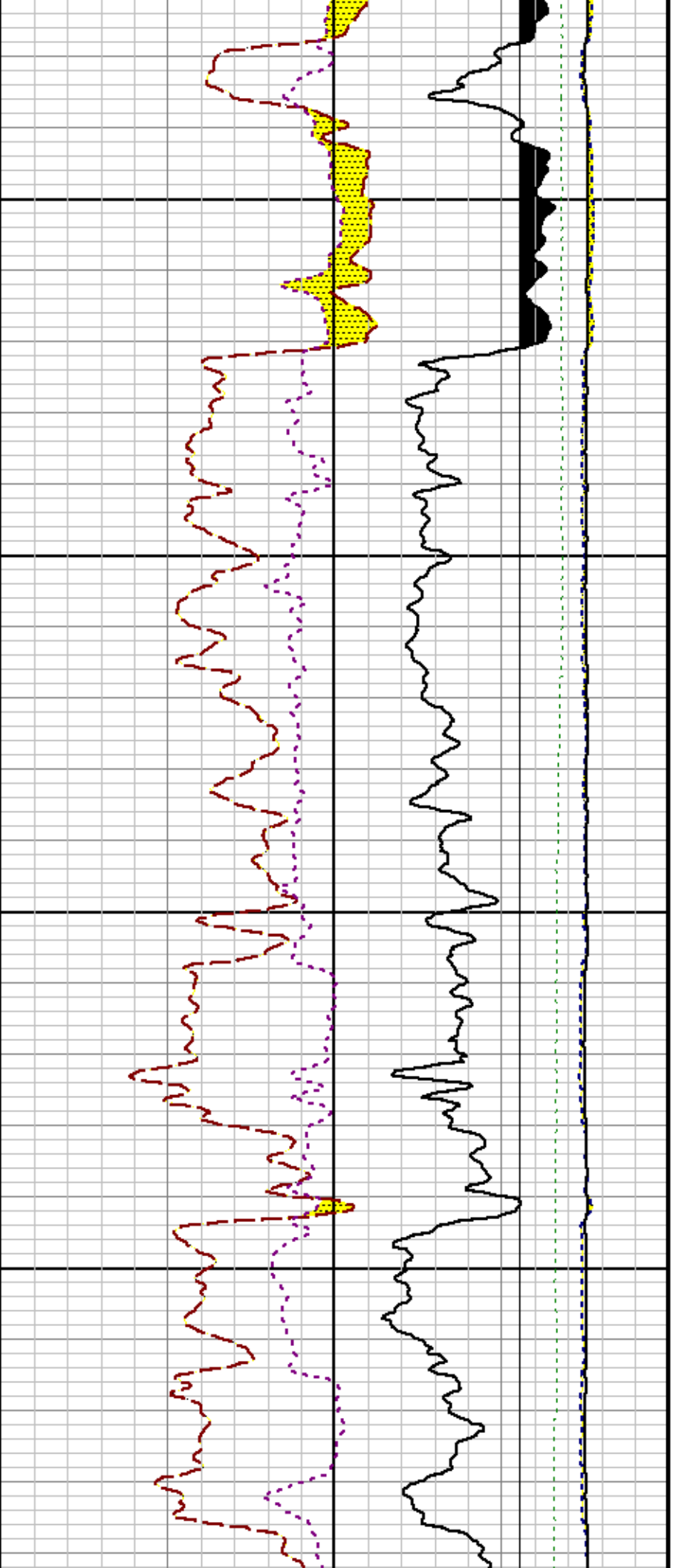
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Mode : PlotMgr 5.4.504

Interval : 9000.00 - 9575.00 feet UP

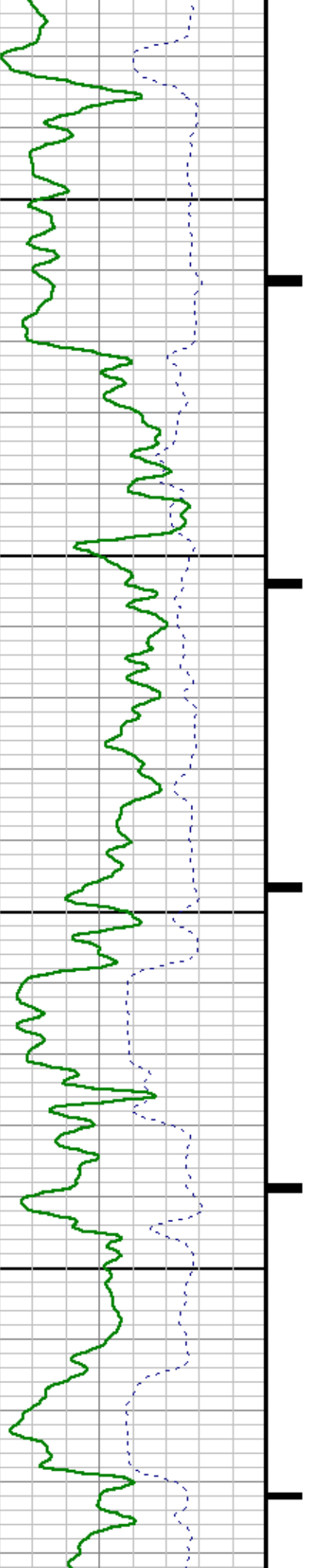
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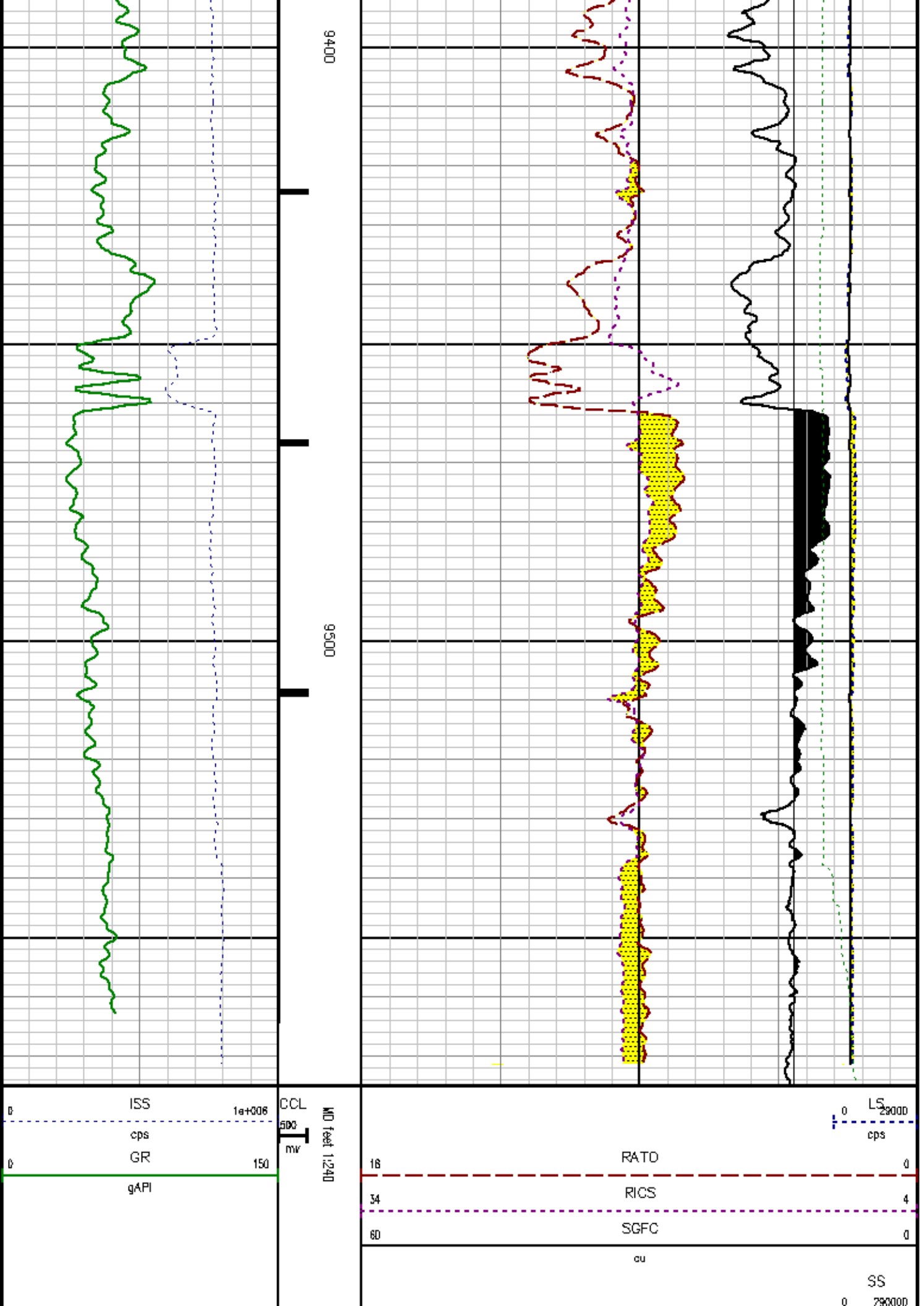


9200

9300









	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	810663	7592.27	1177.21	164.01	26.08	0.12	24.57	0.25
					26.35 26.15	0.00 0.20	23.60 24.80	0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	810663	189339.23	29748.37	109300.66	38764.82	10126.79	66062.70	16292.12
Fit Quality %		0.62	0.51	0.42	0.43	0.72	0.37	0.70

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	810663	1.43	4.28	27.25	12.27	10.79	3.83	4.05
		1.42 1.46	3.66 5.21	22.20 32.10	10.99 16.34	10.06 11.10	3.57 3.95	3.78 4.22
Fit Quality %		0.03	0.33	0.42	0.35	0.30	0.28	0.28
Reduced	1396272	1.43	4.32	27.45	12.34	10.84	3.84	4.07
		1.42 1.46	4.33 5.62	27.60 32.70	13.70 16.70	10.80 11.00	3.78 3.92	4.01 4.17

## TOOL DIAGRAM

OTA SHORT CABLE HEAD

PCM POWER SUPPLY (8250EA)

TELEMETRY / CCL (8248EA)

GAMMA RAY (8262XA)

30.84'

CCL MP 22.75'

GR MP 19.21'

RESERVOIR PERFORMANCE MONITOR (8281XA)

XLS DETECTOR 12.69'

LS DETECTOR 9.72'  
SS DETECTOR 9.49'

0.00'

Total Length: 30.84'  
Total Weight: Not Available  
Max Diameter: 0" 1.70"



Company MARATHON OIL COMPANY

Well 697-12A-16

Field GRAND VALLEY

County GARFIELD State COLORADO

File No:

1711

API No:

05-045-15034-00

Location

NE/4

1536' FNL & 1054' FEL

Elevations

KB 8322 ft

DF 8321 ft

GL 8300 ft

SEC 12 TWP 6S RGE 97W

Baker Atlas

CASE