



RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No: CH091479	Company Well Field County	WPX ENERGY CHEVRON GM 512-21 GRAND VALLEY GARFIELD	State CO
API No: 050452235650000	Location SHL: 2067' FNL & 704' FWL (20 6S 96W) BHL: 2277' FNL & 1004' FWL (21 6S 96W) CYCLONE 17		Other Services BOND LOG
21 6S 96W GM 442-20 PAD CYCLONE 17	SEC 21 TWP 6S RGE 96W	Elevations KB 5596 ft DF GL 5575 ft	
Permanent Datum Log Measured From Drill Measured From	GL KB KB	Elevation 21 ft Above P. D.	

Date	11/OCT/14	
Run	ONE	
Service Order	US091479	
Depth Driller	7302 ft	
Depth Logger	7269 ft	
Bottom Logged Interval	7269 ft	
Top Logged Interval	21 ft	
Time Started	0430	
Time Finished	0930	
Operator Rig Time	5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	60 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	10/OCT/14	
Equipment No.	44271	GRAND JUNCTION
Recorded By	NEWELL	
Witnessed By	COLE APPLIGATE	

- 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	1186 ft
8.75 in	1186 ft	7385 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1186 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	7385 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 10/10/2014 at the client's request.
The amount of linear shift is 1 feet.
Logged in PNC-3D mode.
BHT = 238°F
SJ = 3786'-3808'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	TEMP	8255XA	Z120516	FREE
1	1	RPM	8281FA	10191667	FREE
1	1	RPM	8281PA	10585555	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	GR	2812LA	10274382	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		3969.750	5810.000
PNC Porosity	Borehole Size	8.750	inch	3969.750	5810.000
PNC Porosity	Casing Size	4.500	inch	3969.750	5810.000
PNC Porosity	Gas Filled	Non Gas Filled		3969.750	5810.000
PNC Porosity	Matrix	Sandstone		3969.750	5810.000
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	3969.750	5810.000
PNC Porosity	Borehole	Cased		5810.000	7268.754
PNC Porosity	Borehole Size	8.750	inch	5810.000	7268.754
PNC Porosity	Casing Size	4.500	inch	5810.000	7268.754
PNC Porosity	Gas Filled	Non Gas Filled		5810.000	7268.754
PNC Porosity	Matrix	Sandstone		5810.000	7268.754
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	5810.000	7268.754

DEPTH OFFSETS

(for Acquired Curves)

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 WDT3 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 WDT3 RICL
		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 SGB1 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 WDT1 RICSC CSSR G1R
		G2R ISSR SSR SS2R RATOR RATO13R
		RBORR RICSR RINR RIN13R RONE 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

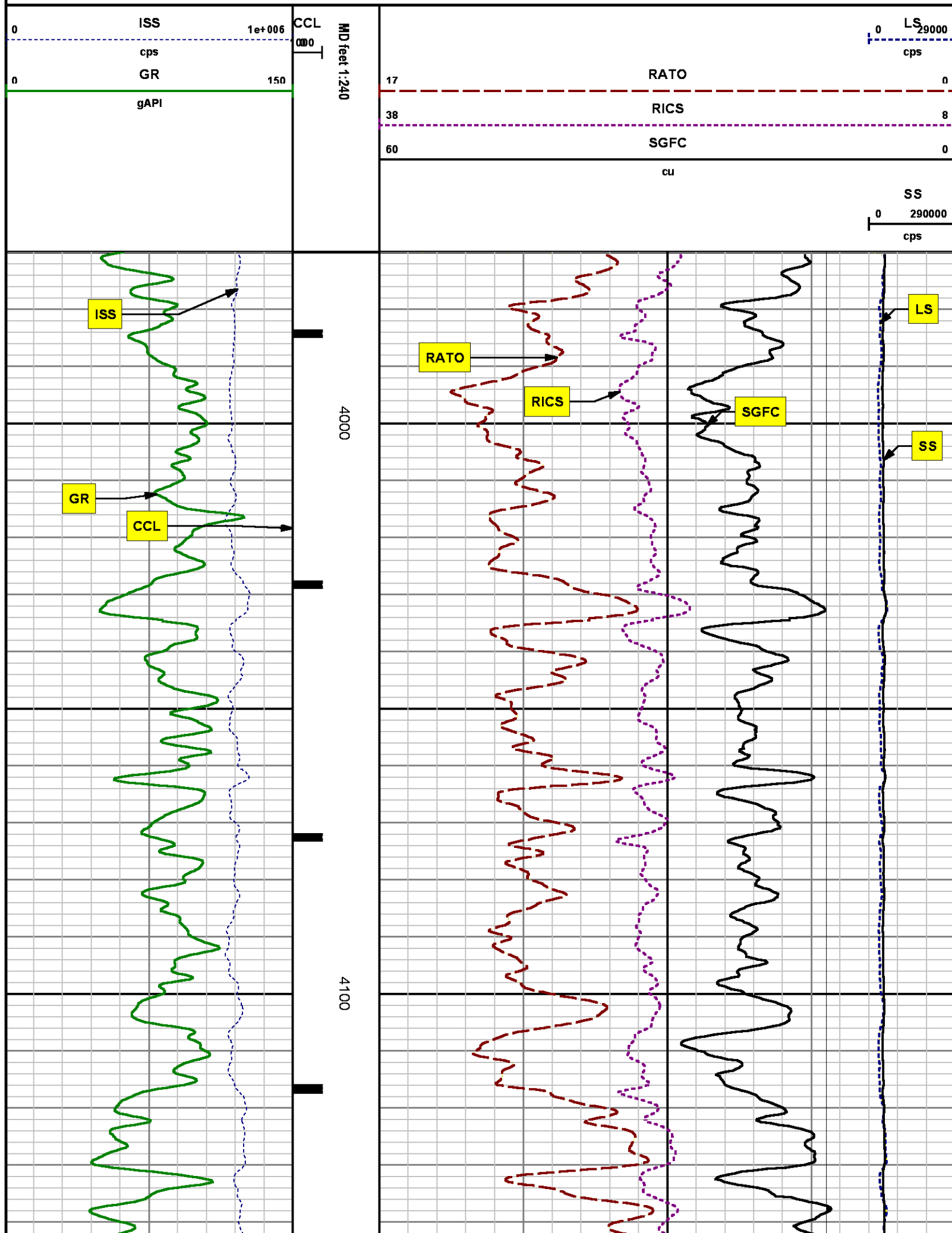
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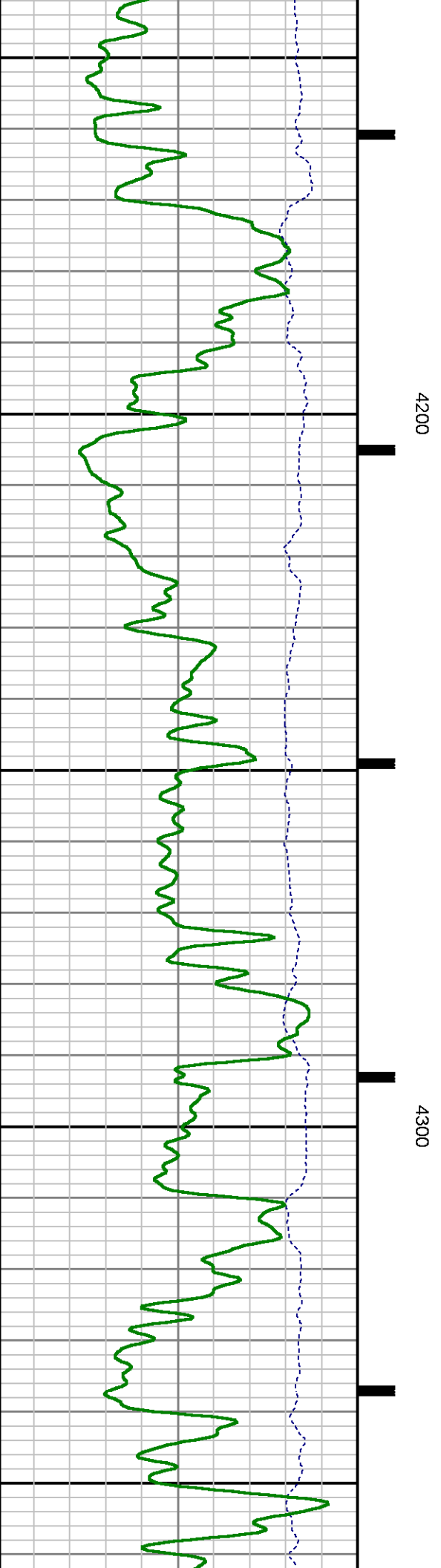
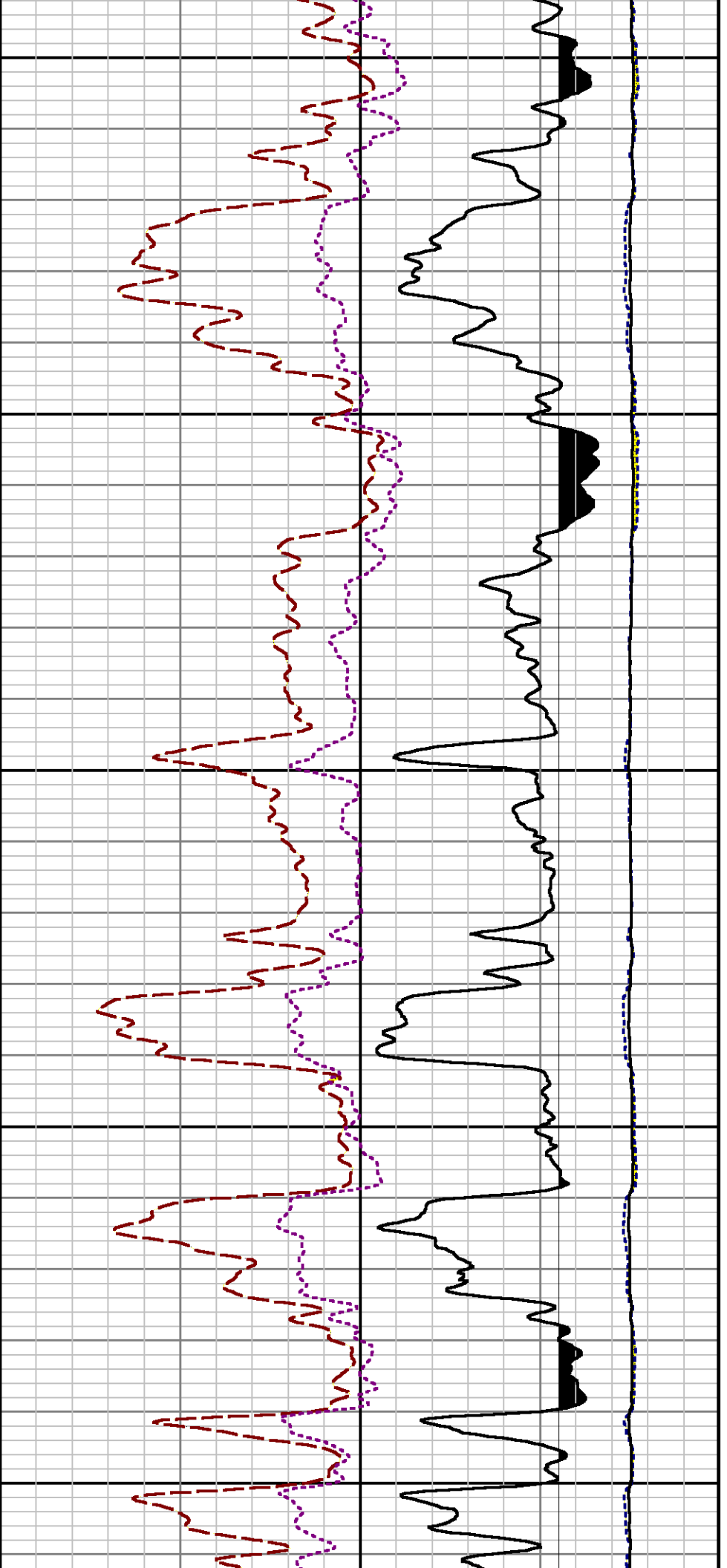
Well : CHEVRON GM 512-21

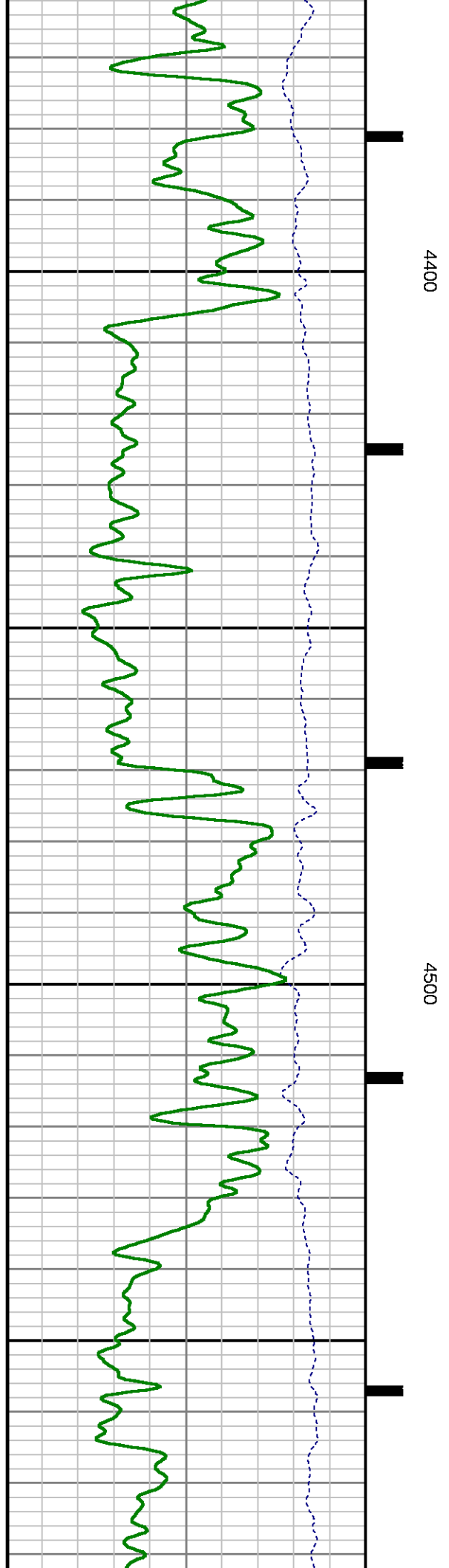
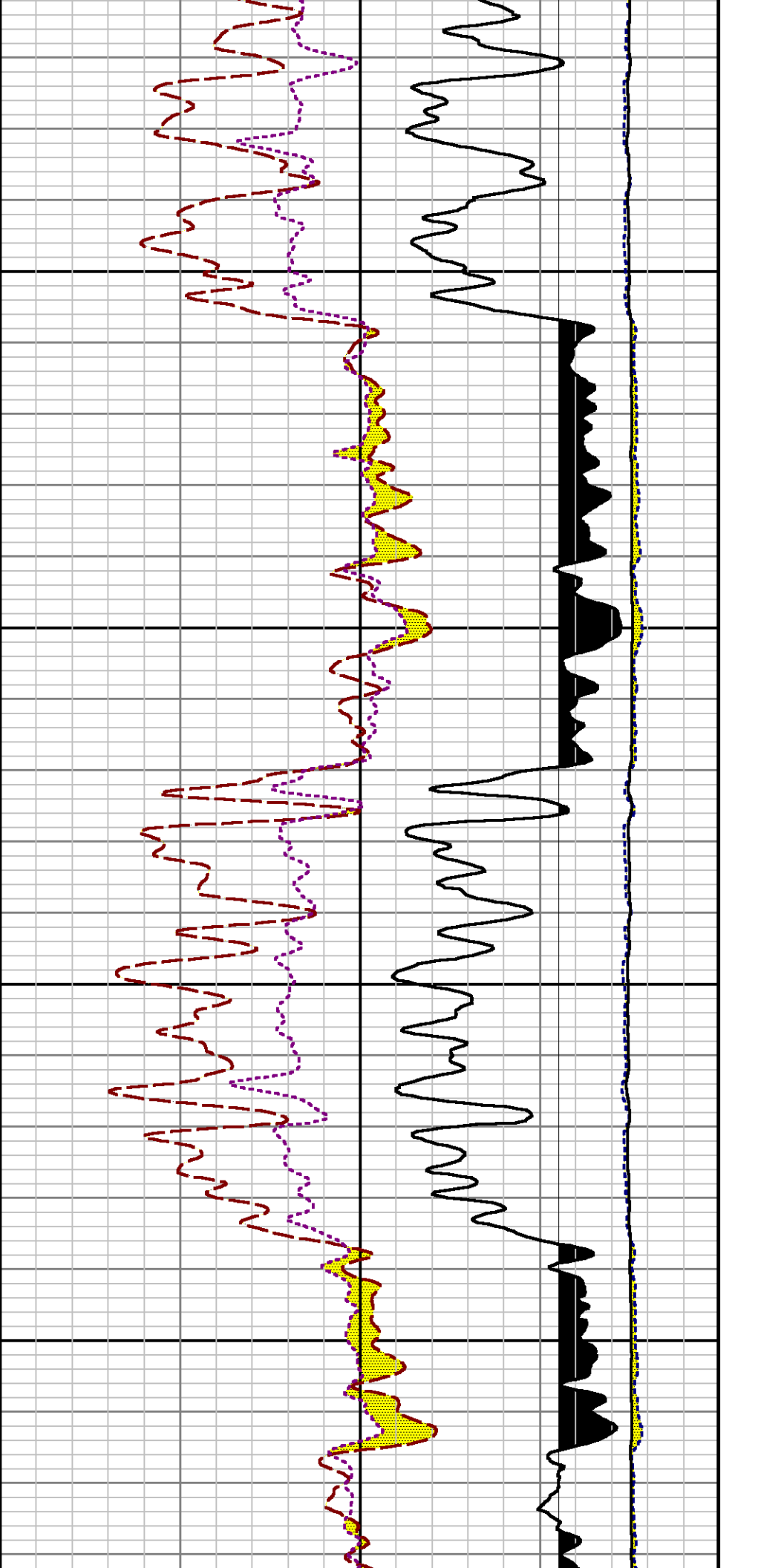
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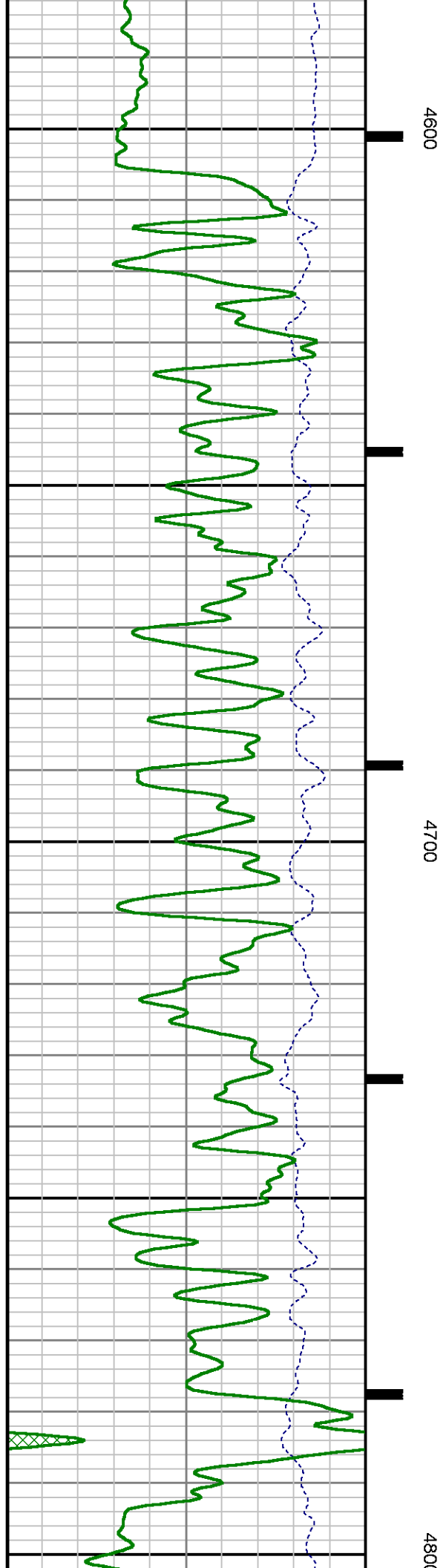
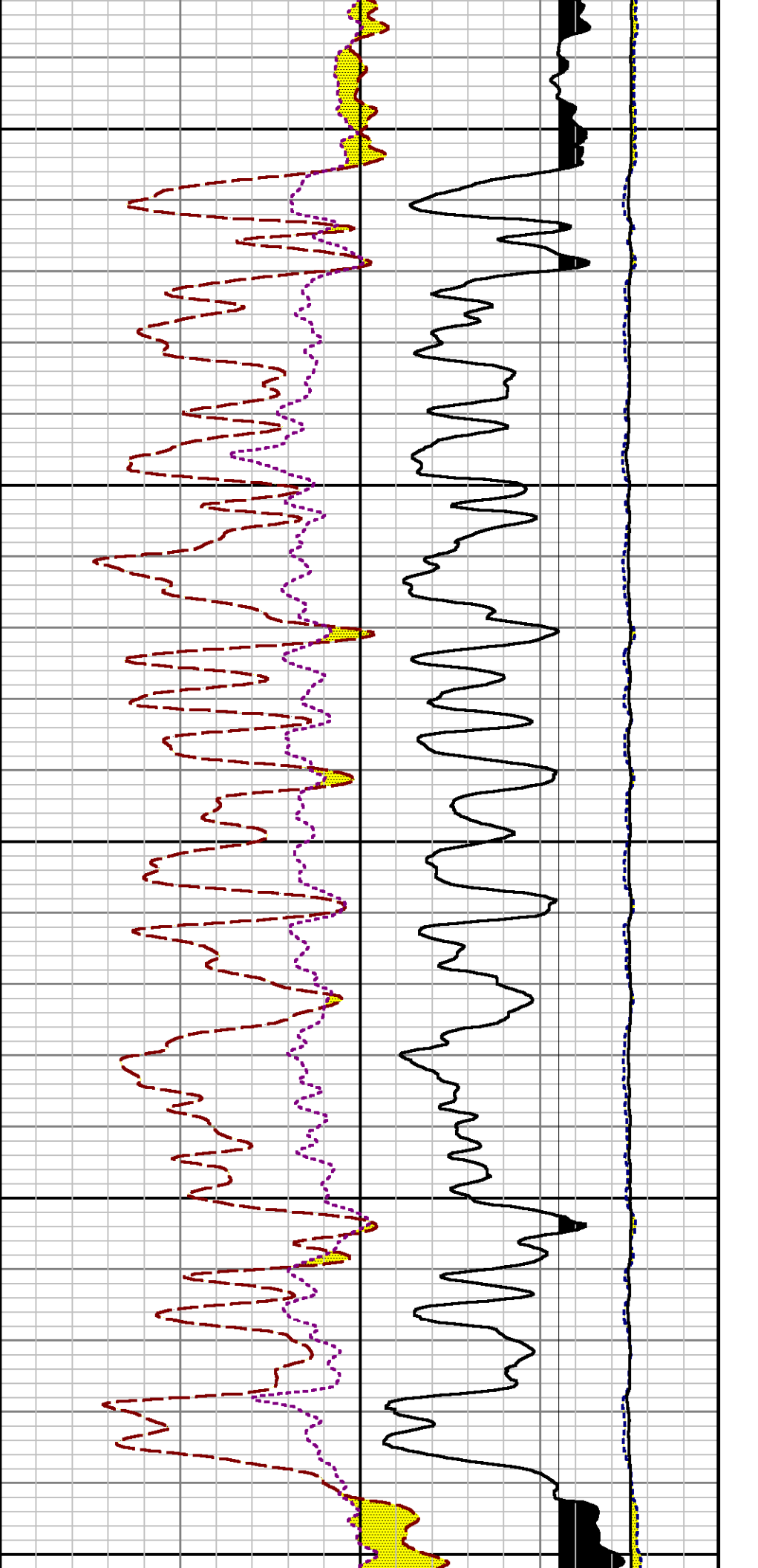
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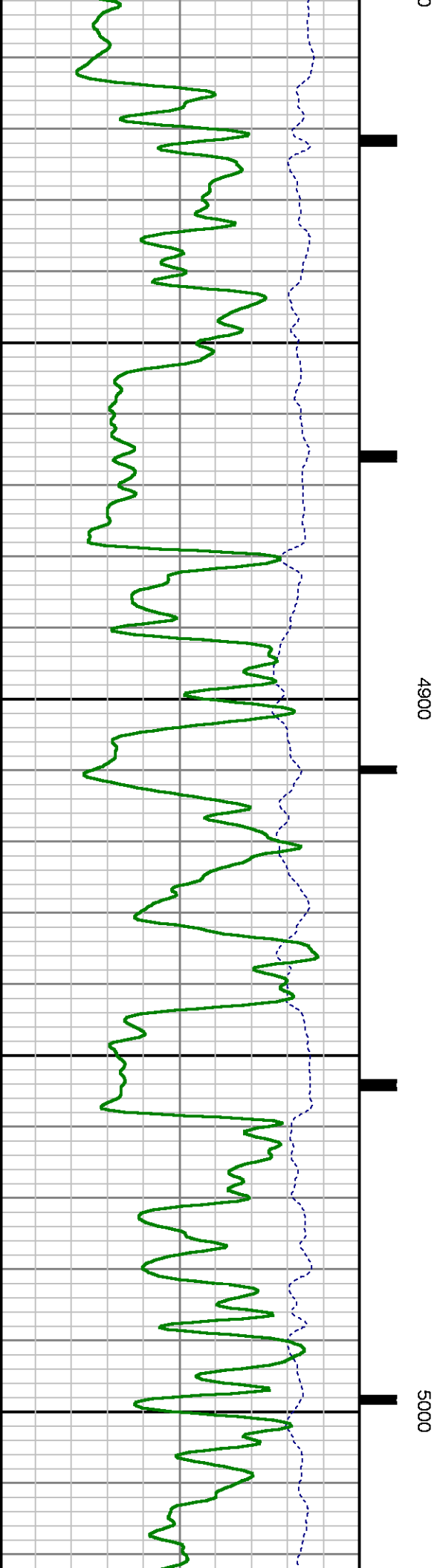
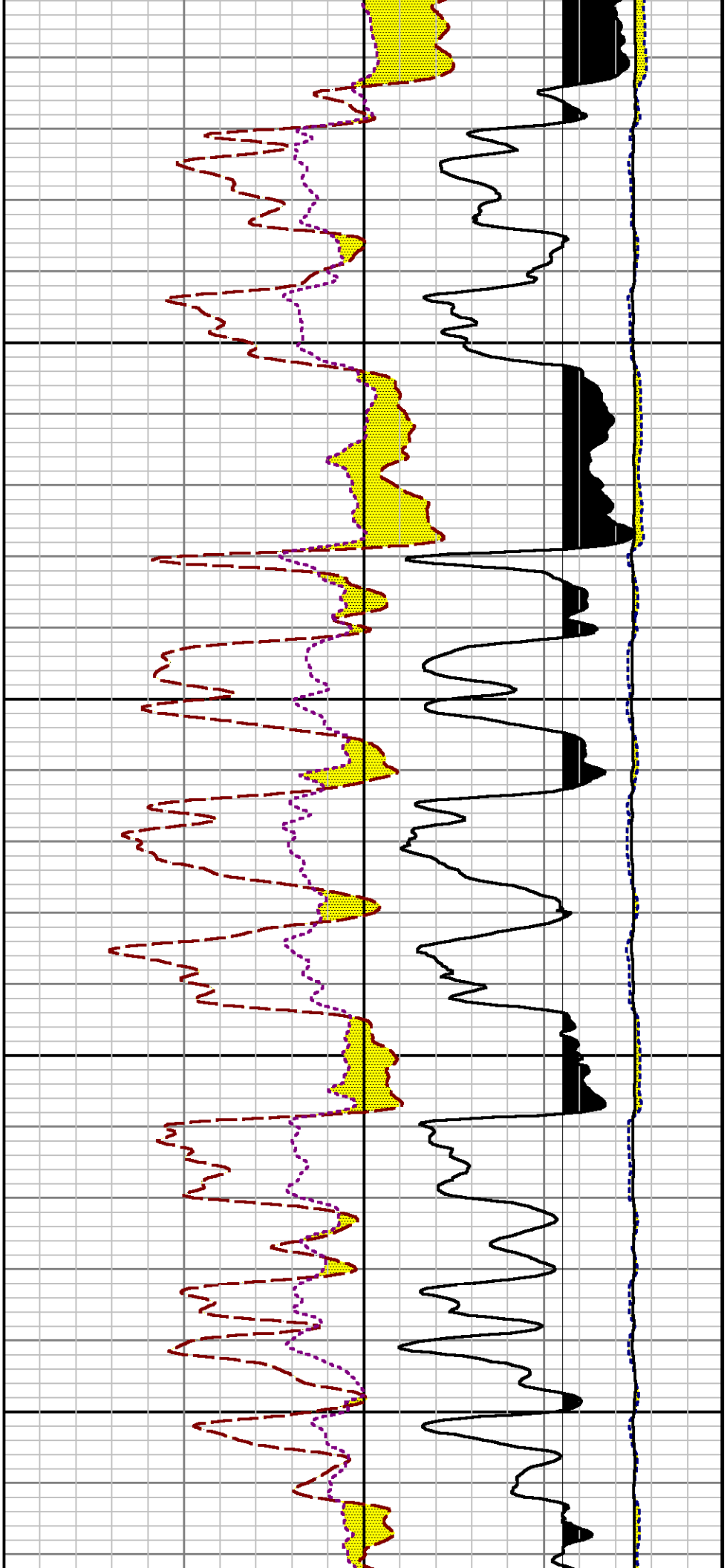
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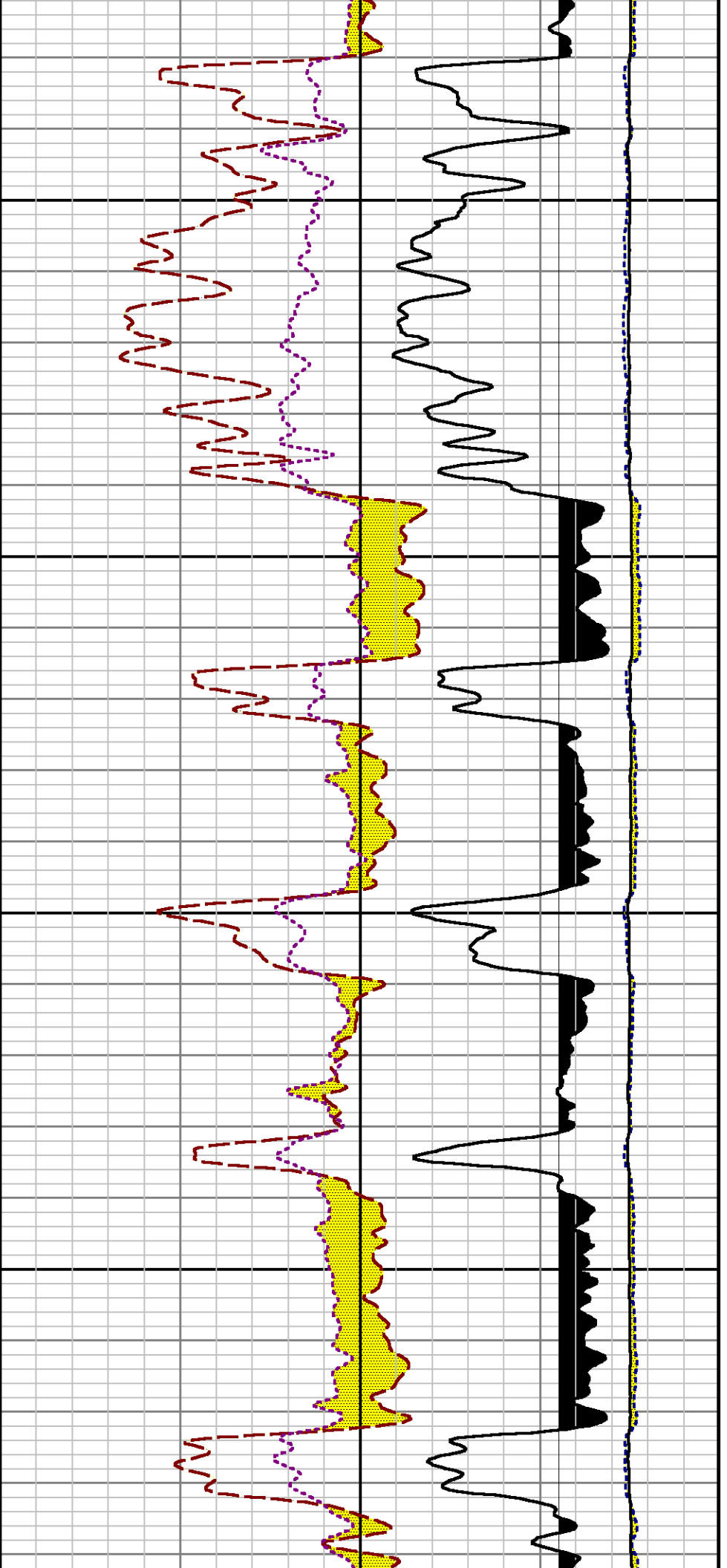






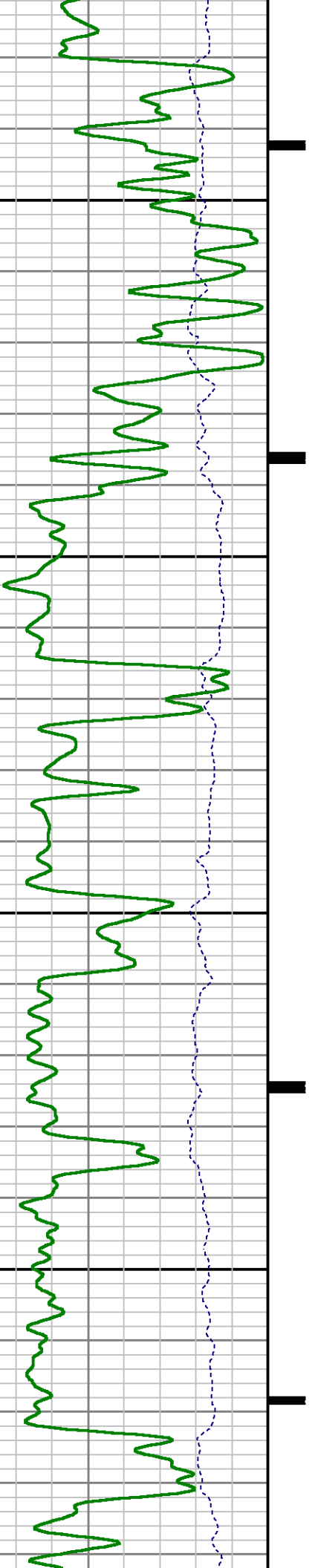


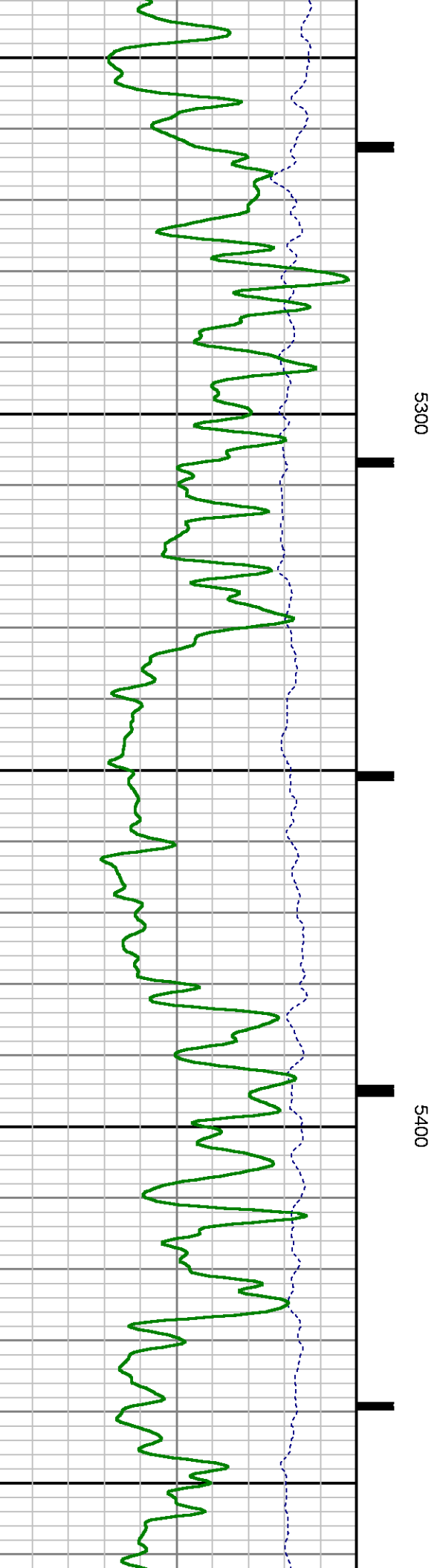
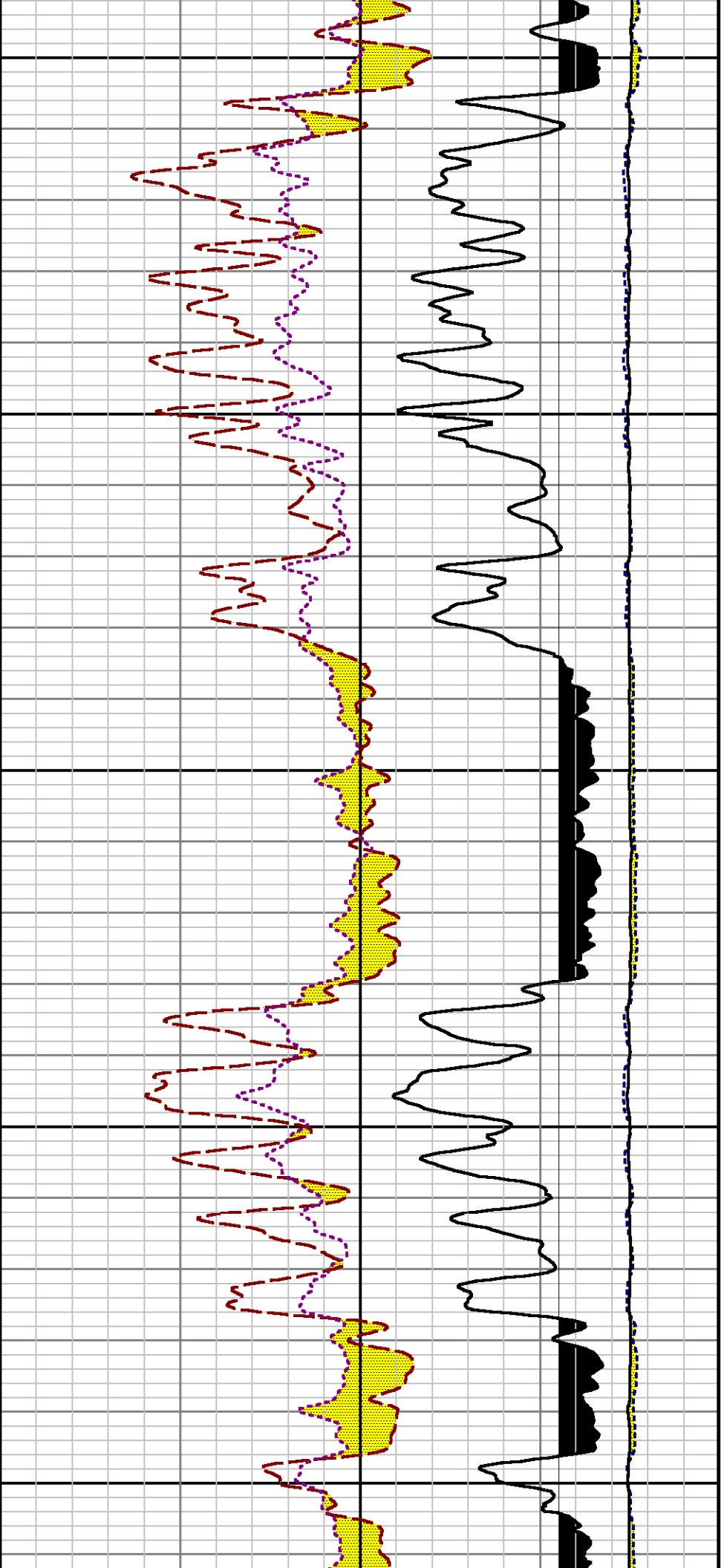


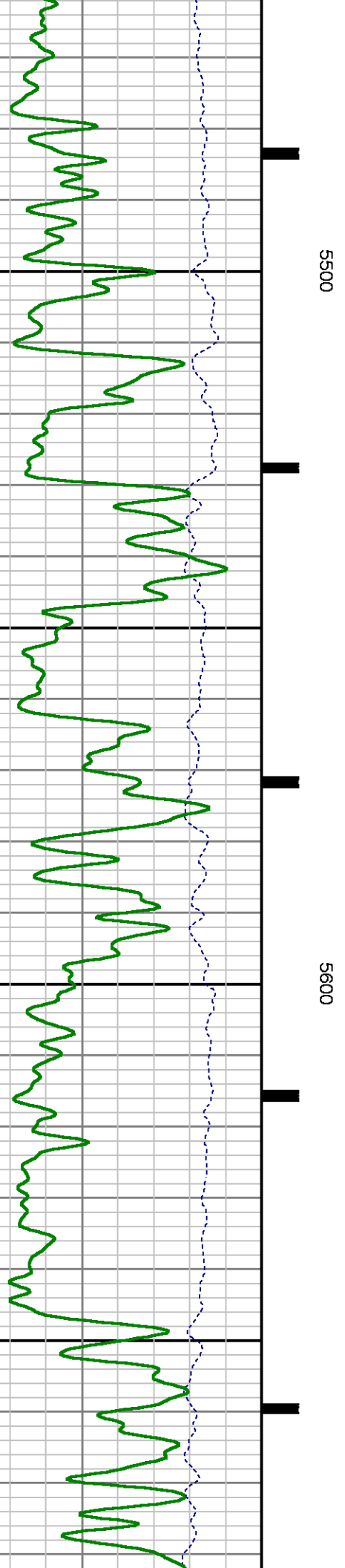
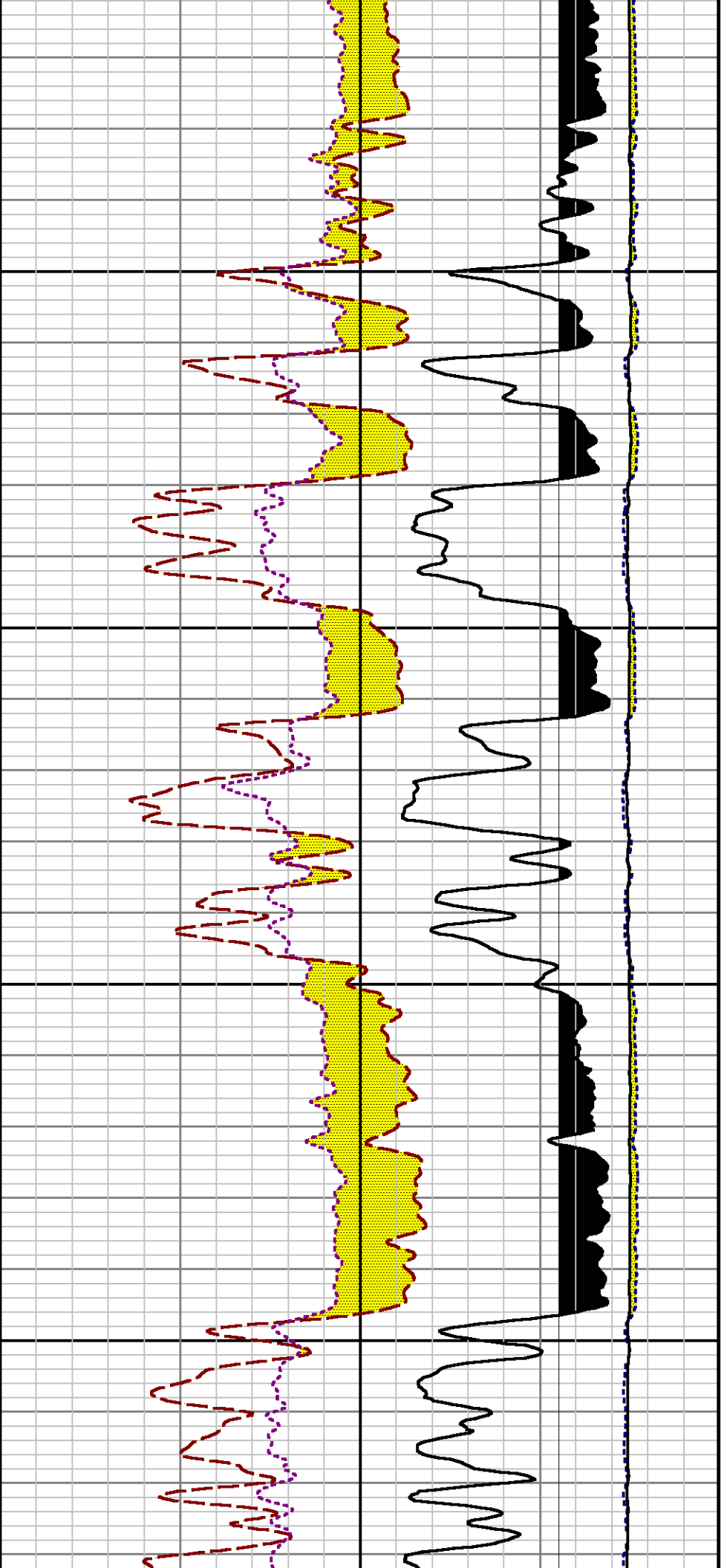


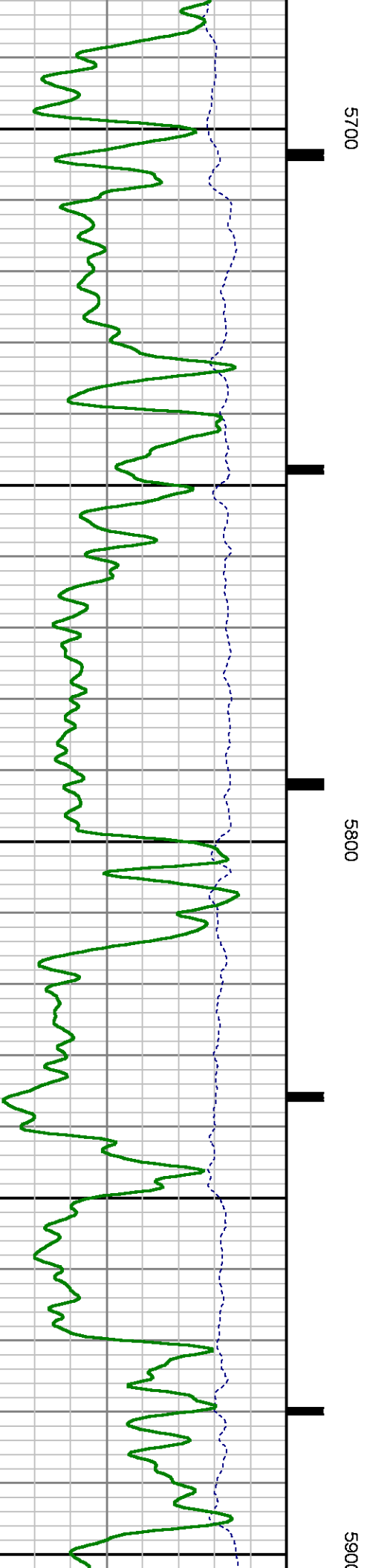
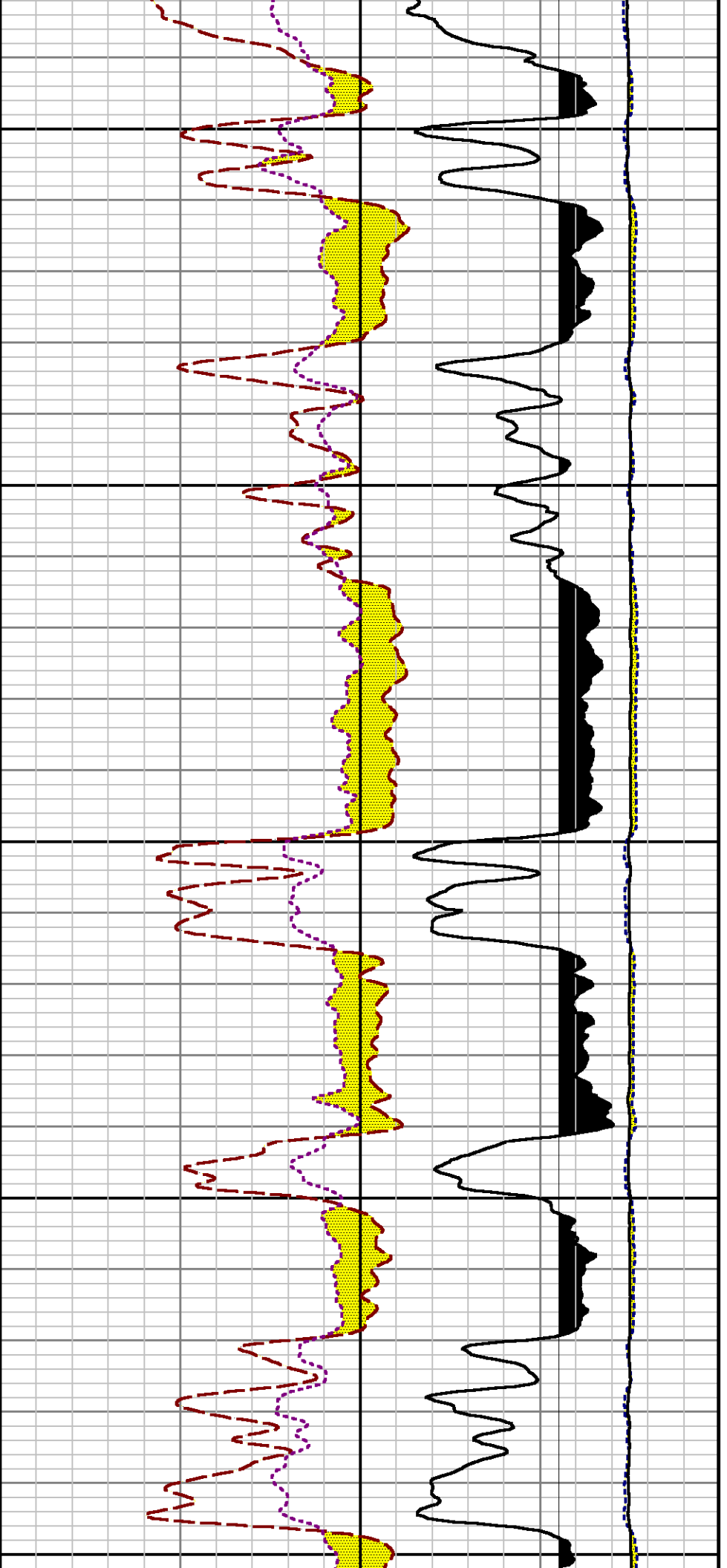
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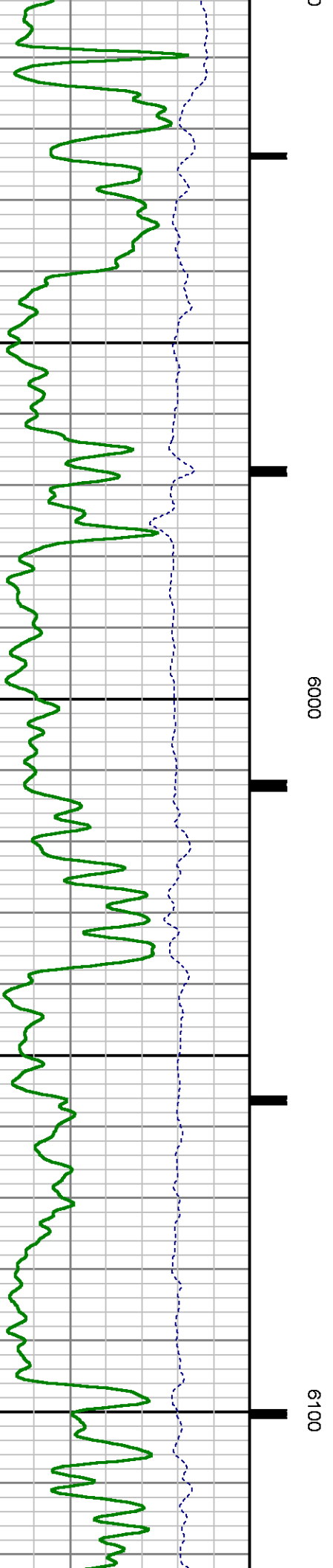
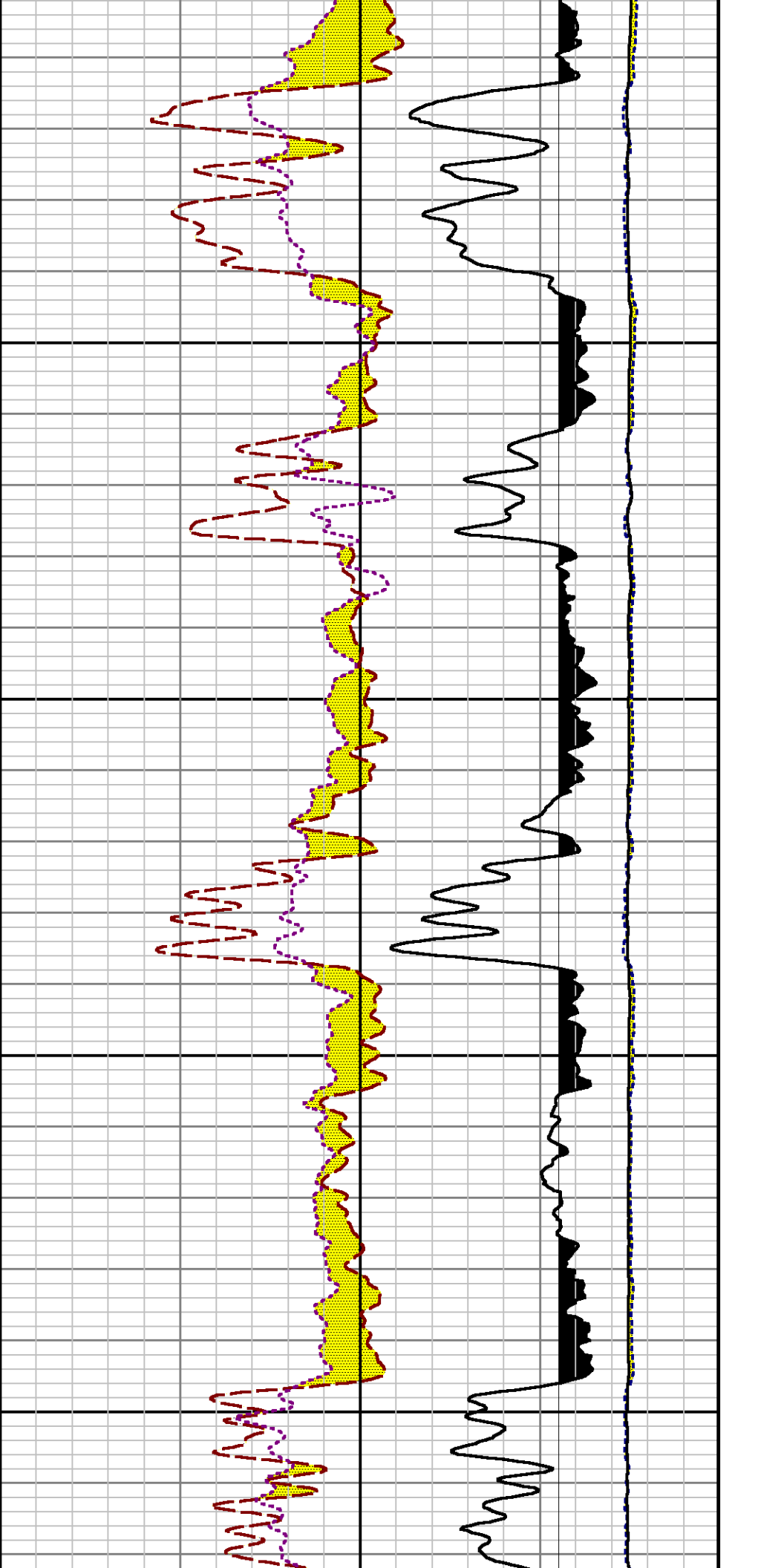
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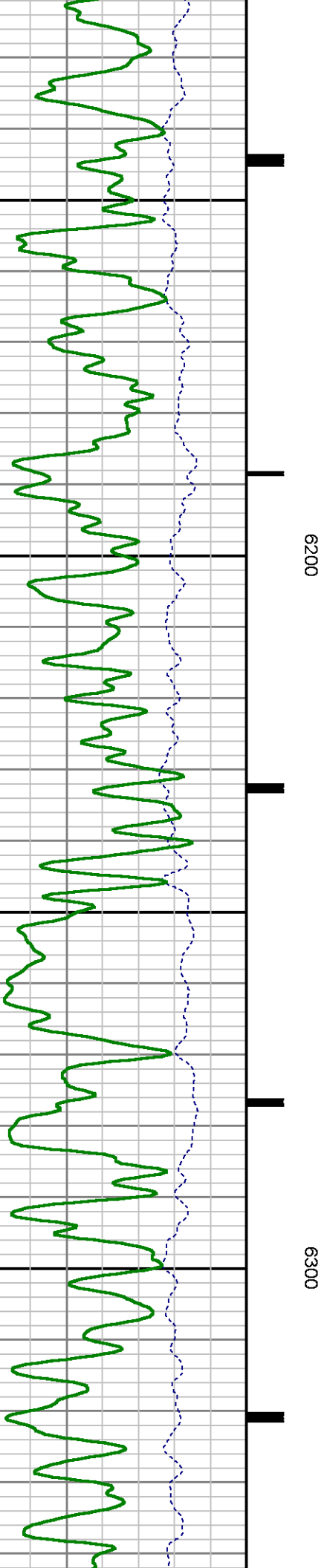
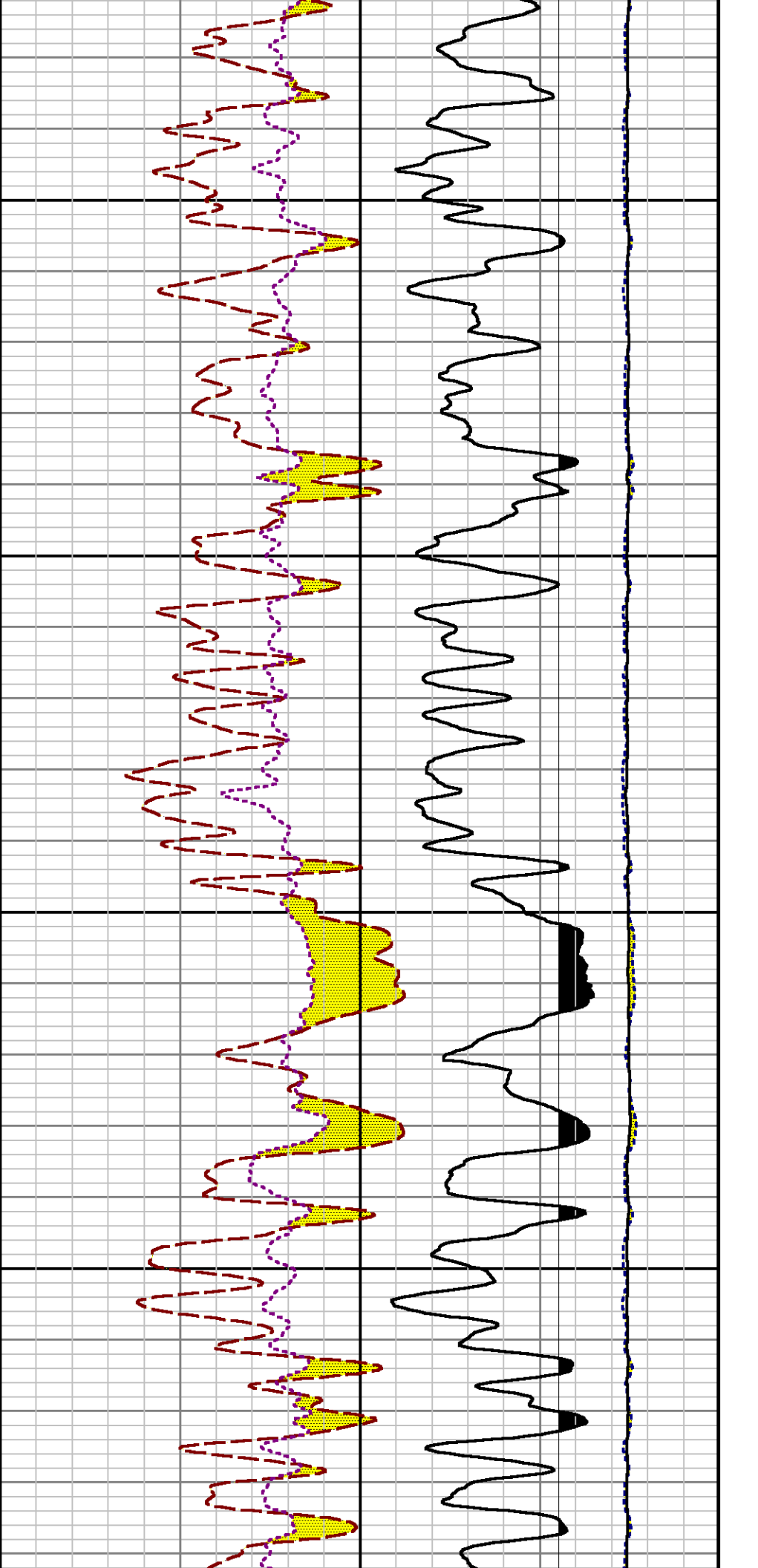


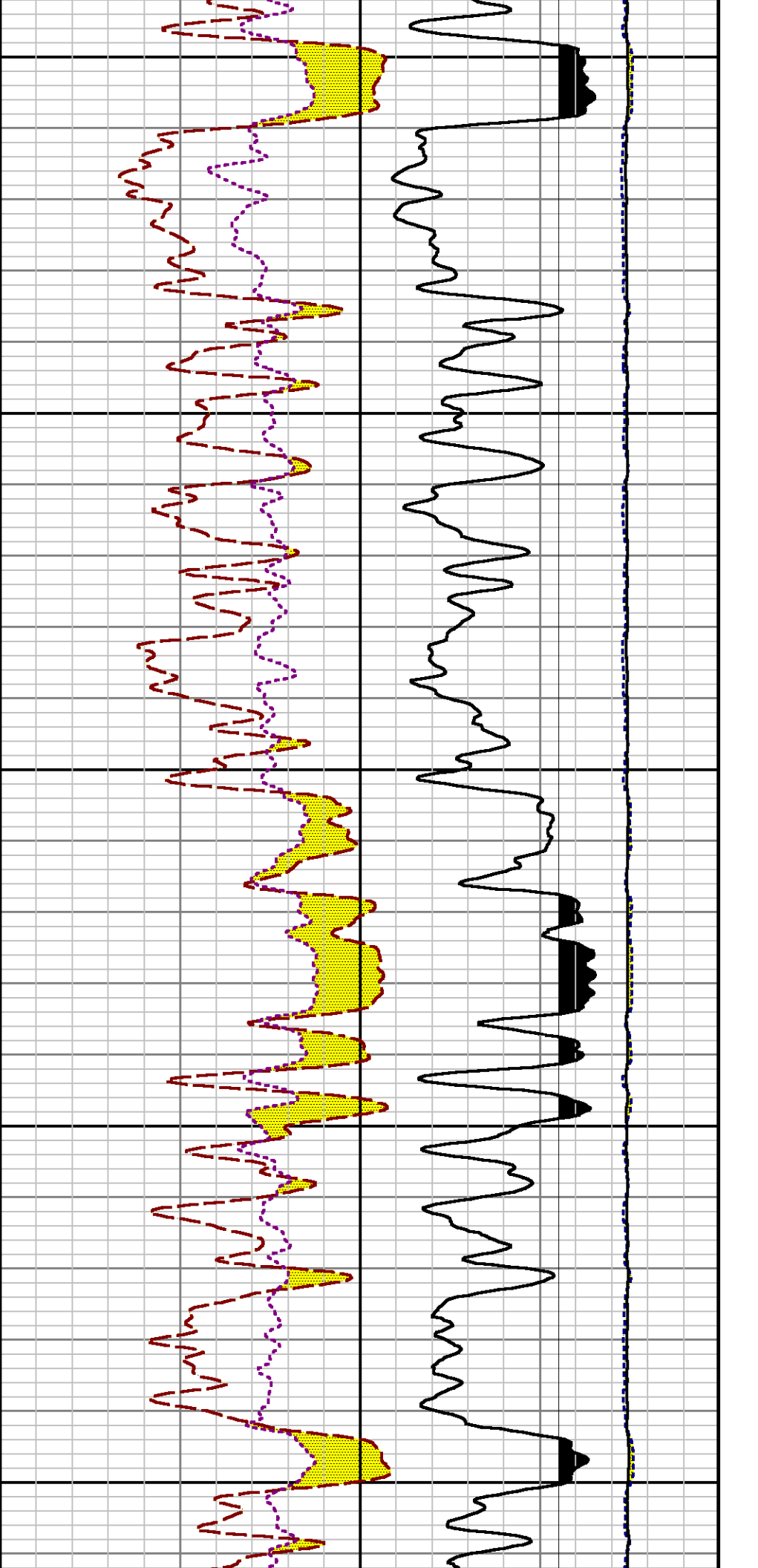






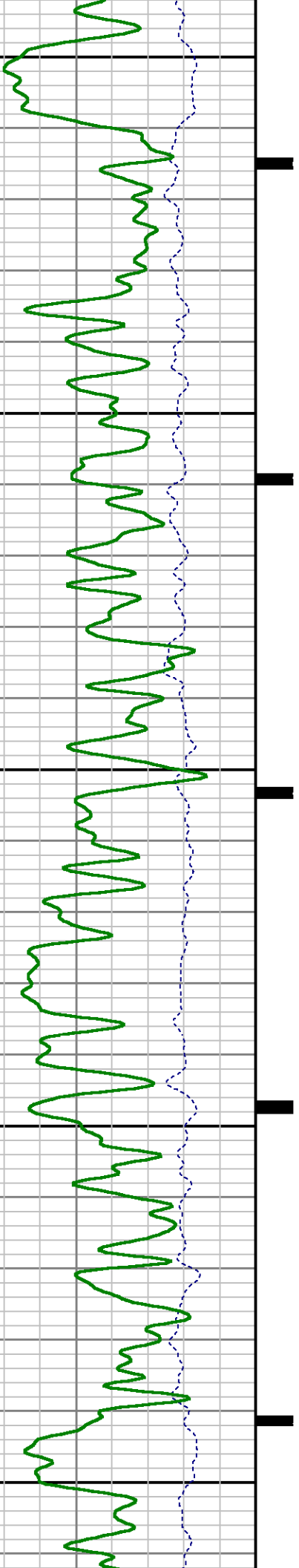


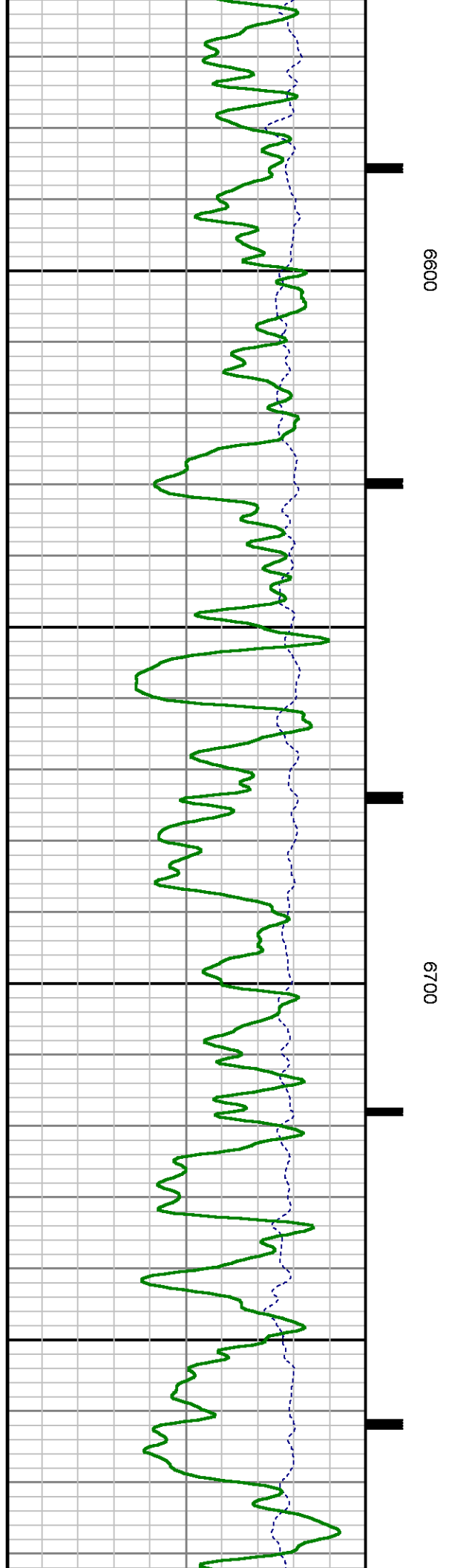
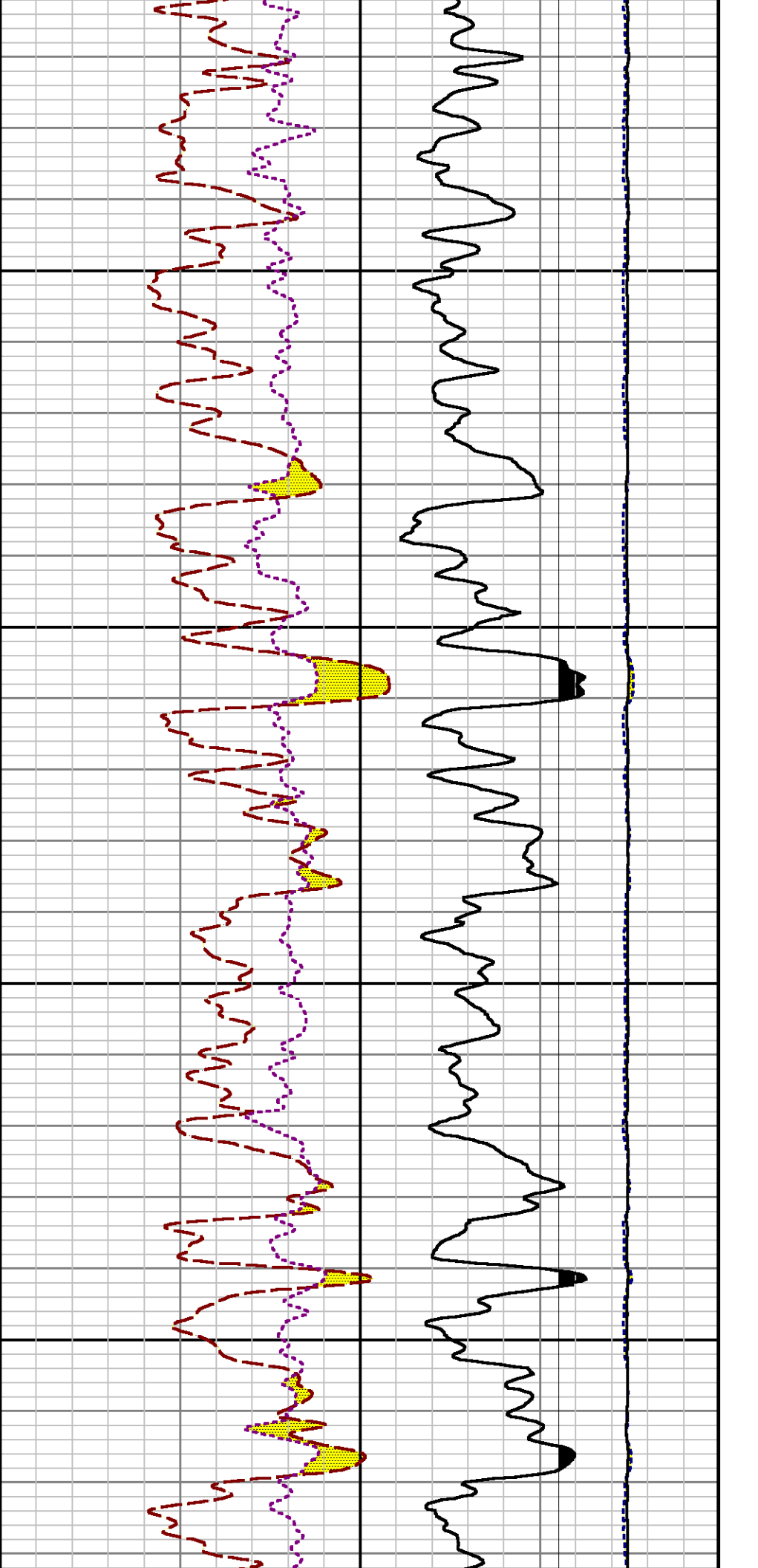


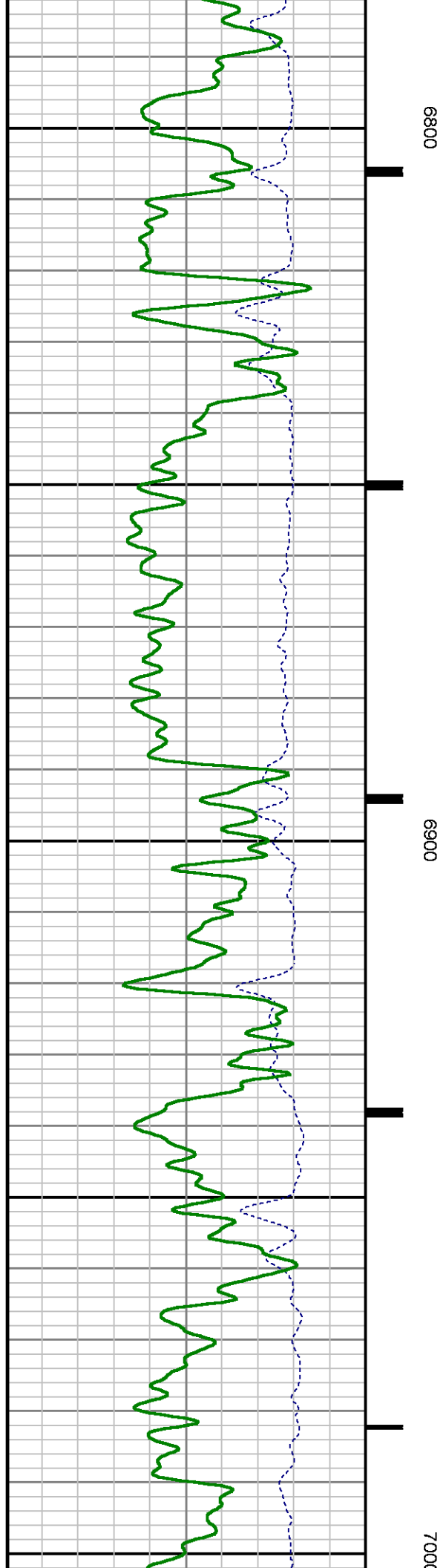
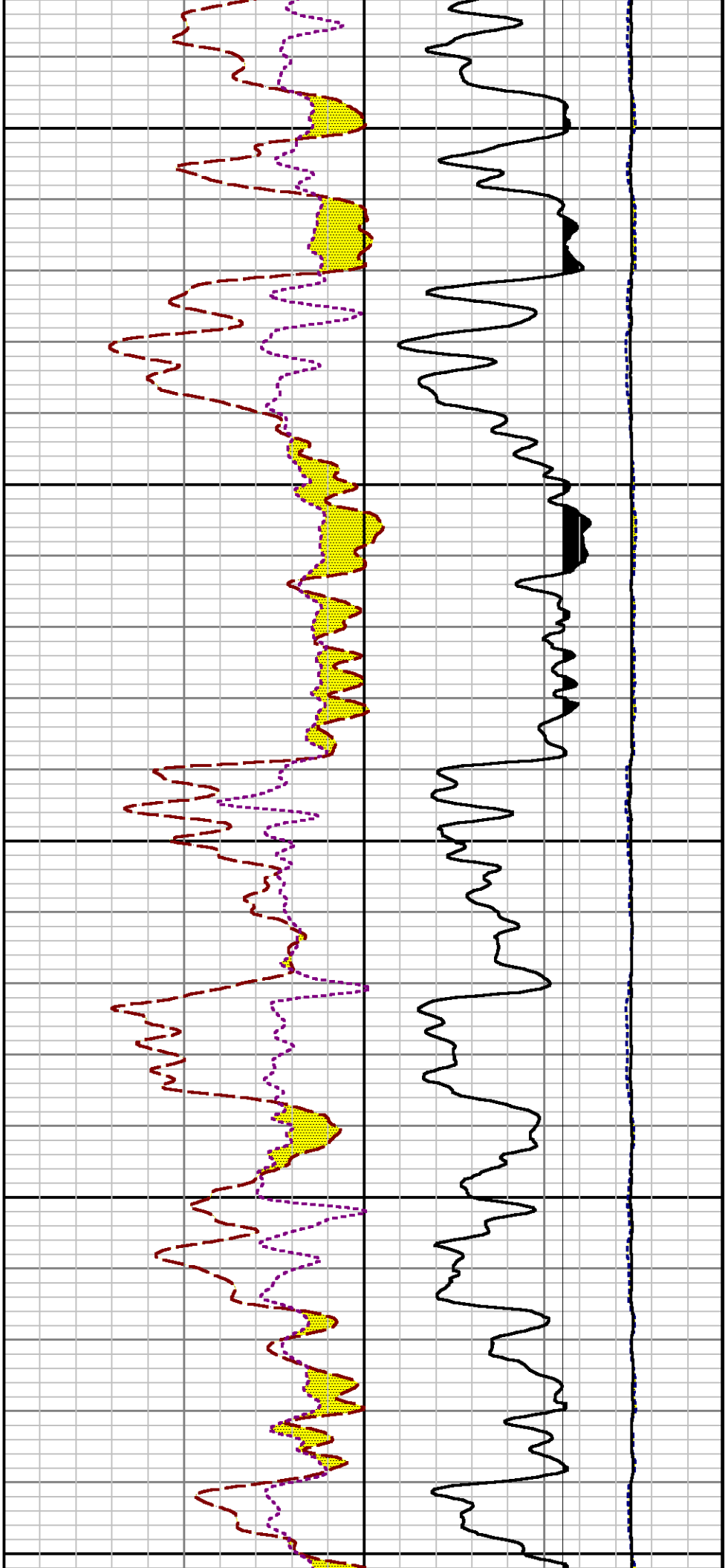


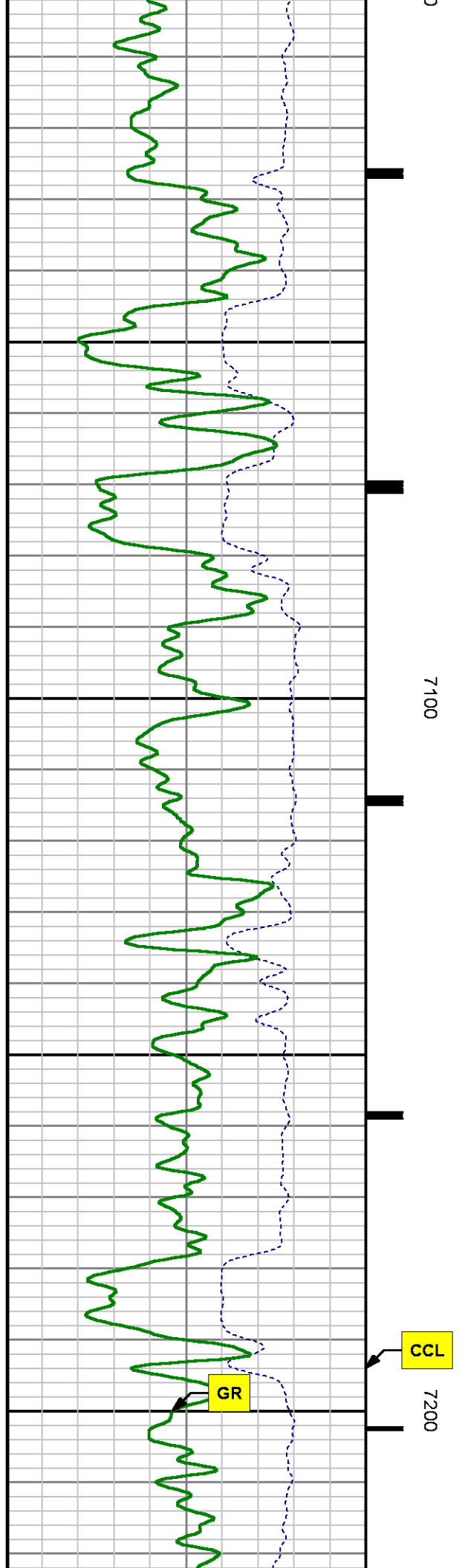
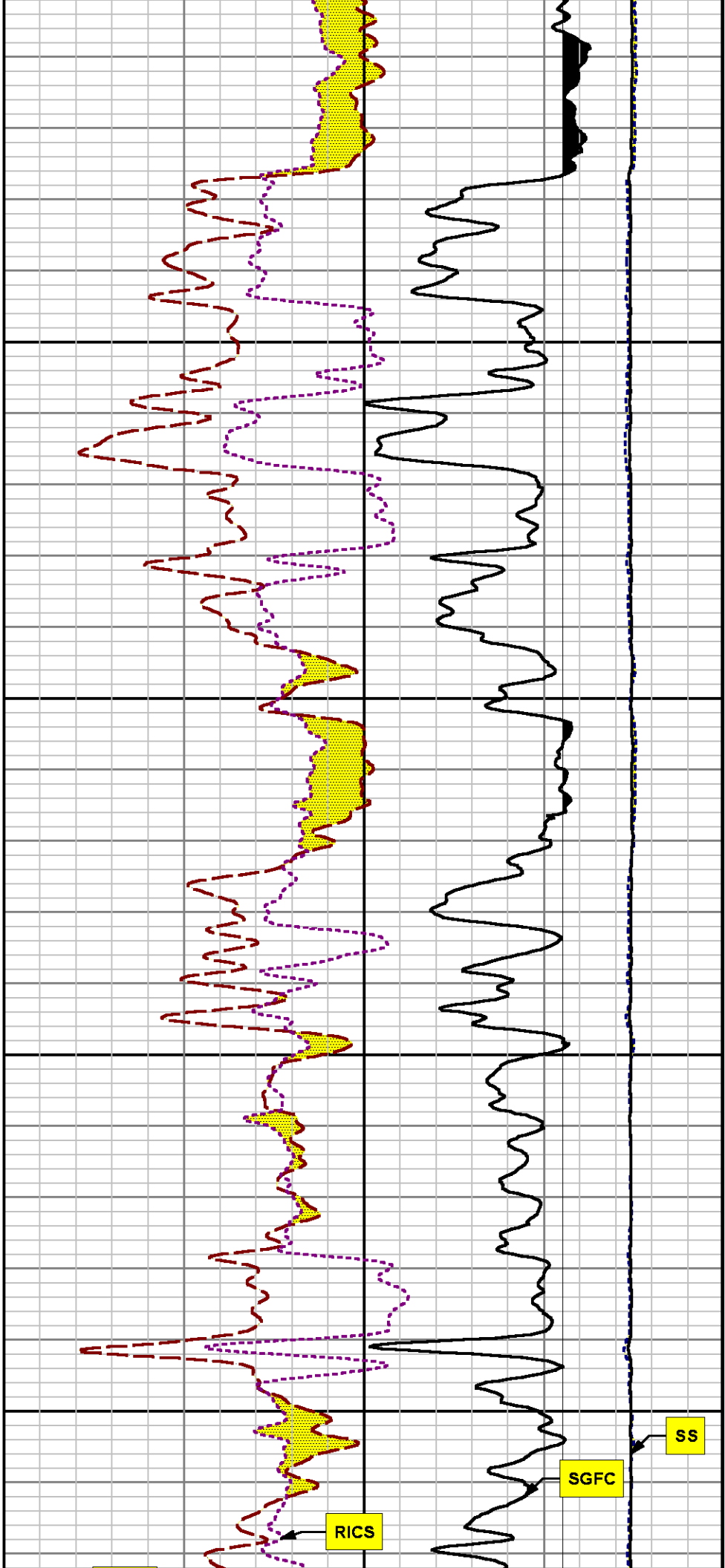
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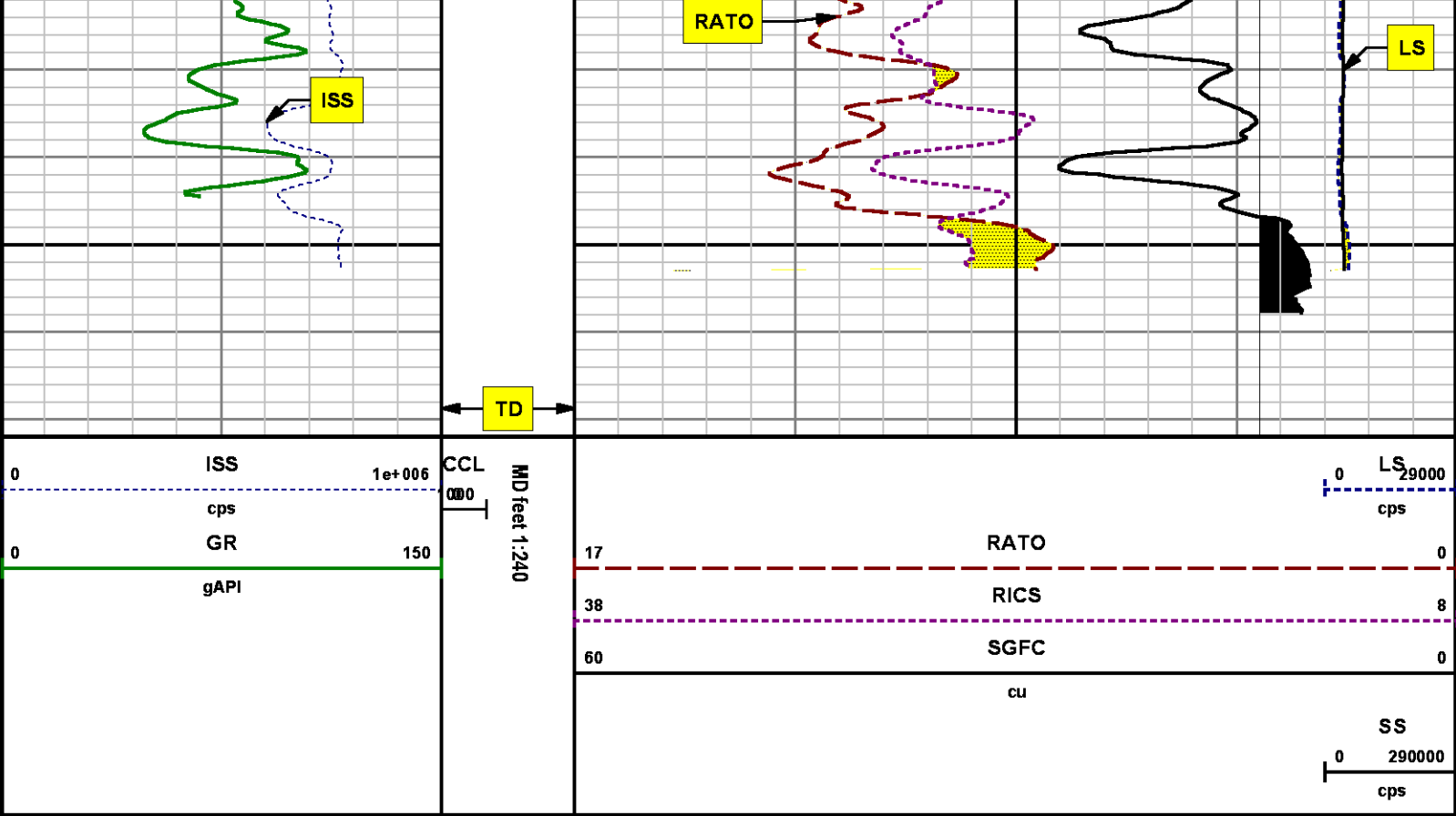
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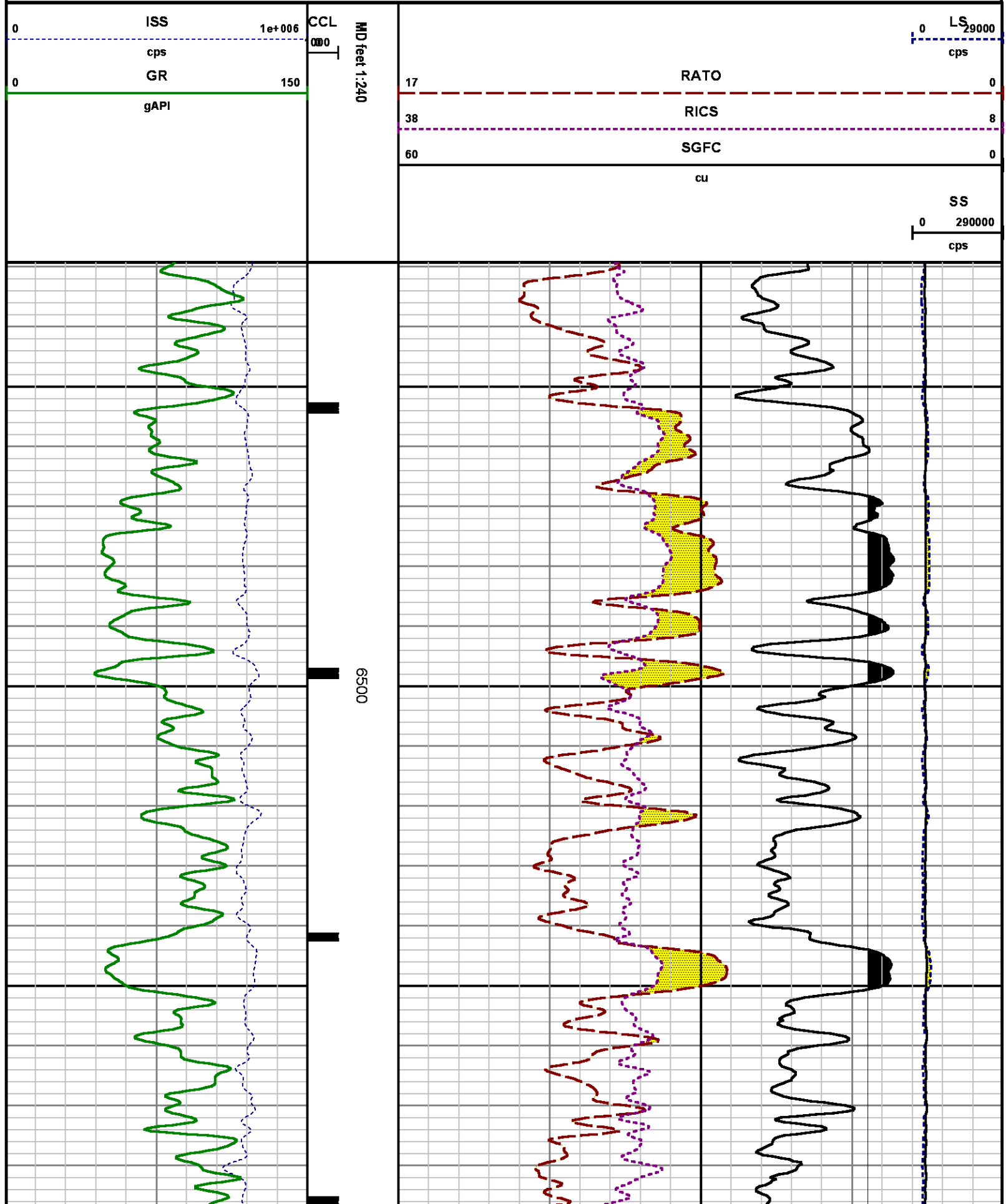
REPEAT SECTION
PNC 3-D MODE

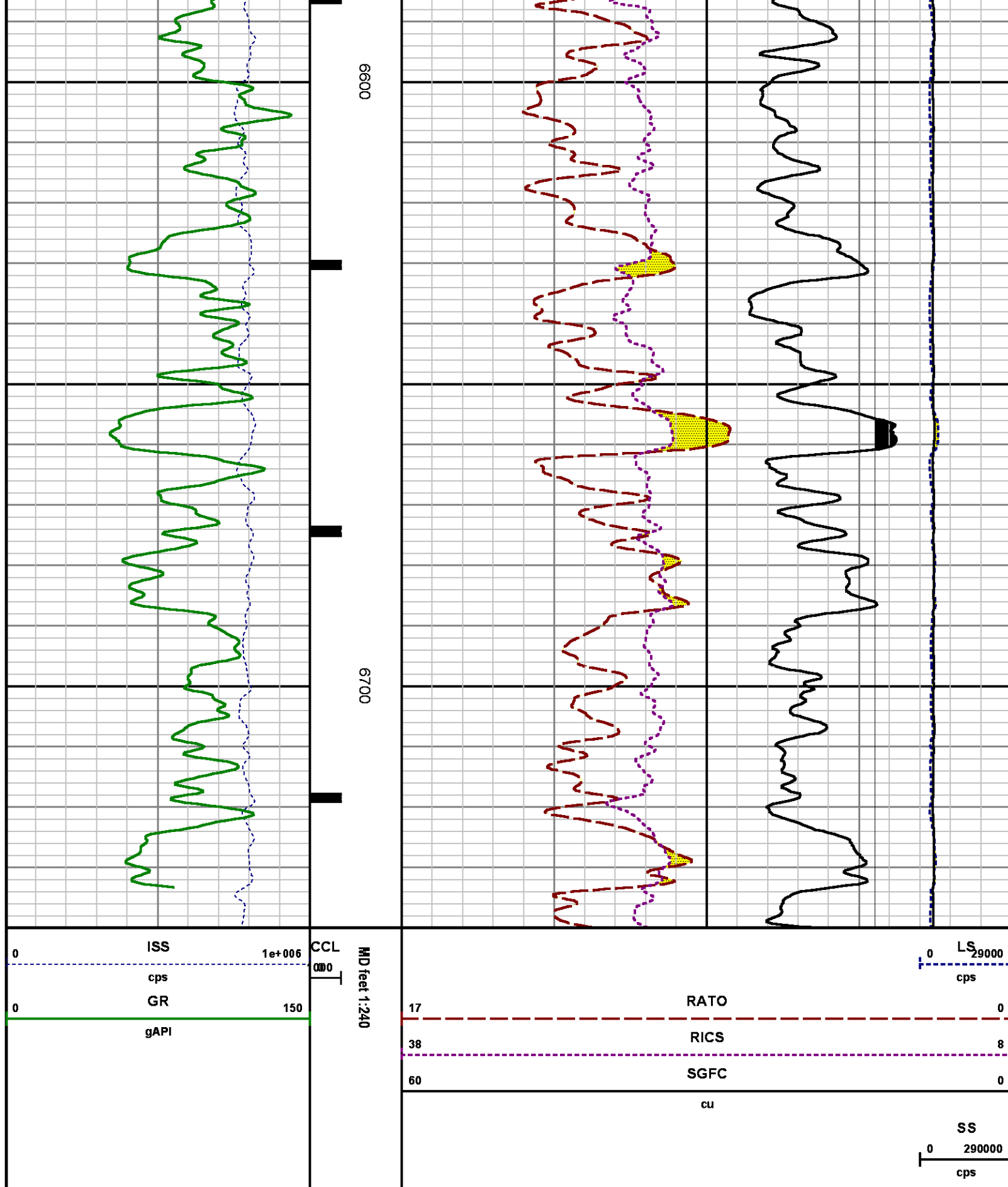
SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		6428.980	6756.730
PNC Porosity	Borehole Size	8.750	inch	6428.980	6756.730
PNC Porosity	Casing Size	4.500	inch	6428.980	6756.730
PNC Porosity	Gas Filled	Non Gas Filled		6428.980	6756.730
PNC Porosity	Matrix	Sandstone		6428.980	6756.730
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	6428.980	6756.730

DEPTH OFFSETS

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 WIDTH3 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 WIDTH2 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 SGB1 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 WIDTH1 RICSC CSSR G1R G2R ISSR SSR SS2R RATOR RATO13R RBORR RICSR RINR RIN13R RONE13 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

CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\382O1.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Oct 10 20:18:37 2014 TOOL SERIES: 2812LA ASSET: 382 SEQ: 01

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	67.31	273.64	1.018	68.51	278.51	210.00

Verification File: C:\case\calver\GR\382O1.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Fri Oct 10 20:21:02 2014 TOOL SERIES: 2812LA ASSET: 382 SEQ: 01

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	64.02	275.47	1.018	65.16	280.36	215.20

TEMPERATURE

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

CALIBRATION SUMMARY

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

	T(0)	T(1)	T(2)	T(3)	T(4)	T(5)
Coefficients	-8.673169e+000	9.576065e-002	6.395448e-006	-9.461013e-010	0.000000e+000	0.000000e+000

PNC

Calibration File: C:\case\calver\PNC\555S7.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Sep 17 10:41:50 2014 TOOL SERIES: 8281XA ASSET: 555 SEQ: S7

Calibrator #

GJ SHOP

Source #

8281AA 11765054

ISS Mtr Vltc SS Gain LS Gain XLS Gain EA Temp Sync Delay PCAL

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	810519	123.00	2328.00	2274.00	2230.00	98.97	7.00	0.9839
Interpolated	1300000	144.15	2313.58	2271.51	2227.05			

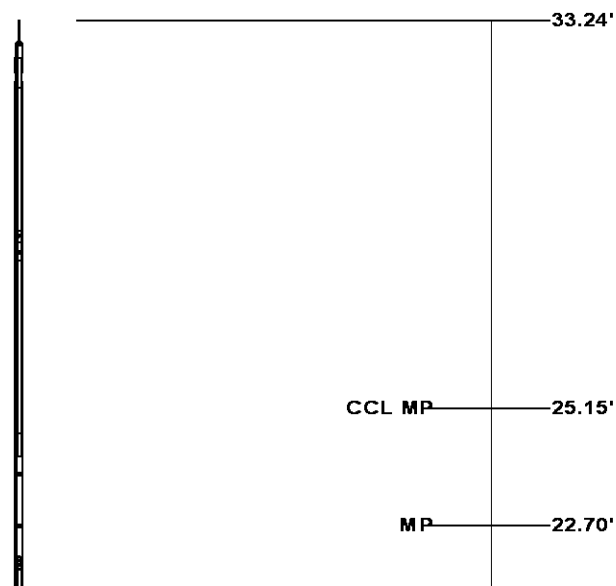
	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	810519	7904.47	1481.33	242.23	25.73	0.14	24.23	0.28
					25.35 26.40	0.00 0.20	23.60 24.80	0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	810519	169037.59	26667.59	88216.89	31442.44	8261.72	53409.88	13185.37
Fit Quality %		0.36	0.48	0.36	0.36	0.45	0.35	0.37

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	ROME CSS/CLS
Raw Data	810519	1.43	4.79	30.40	15.18	10.68	3.81	4.05
		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 %		0.03	0.16	0.08	0.13	0.13	0.15	0.07
Reduced	1411256	1.43	4.82	30.51	15.22	10.70	3.81	4.05
		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
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

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"

XLS DETECTOR 16.08'

LS DETECTOR 13.10'
SS DETECTOR 12.88'

PRES MP 1.61'

0.00'



Baker Atlas

CASE

Company

WPX ENERGY

Well

CHEVRON GM 512-21

Field

GRAND VALLEY

County

GARFIELD

State

CO

File No:

CH091479

API No:

05045223550000

Location

SHL: 2057' FNL & 704' FWL (20 6S 96W)

BHL: 2277' FNL & 1004' FWL (21 6S 96W)

Elevations

KB 5596 ft

DF

GL 5575 ft

21 6S 96W

GM 442-20 PAD

CYCLONE 17

SEC 21 TWP 6S RGE 96W