



Baker Atlas

RESERVOIR PERFORMANCE MONITOR

File No:

Company

EXXONMOBIL PRODUCTION COMPANY

API No:

Well

FRU 197-35B5

05103114330000

Field

FREEDOM UNIT

County

RIO BLANCO

State

COLORADO

Location

2393' FNL & 1395' FEL

Other Services

BOND

SEC 33 TWP 15 RGE 97W

G.L. Elevation 6446 ft

K.B. 30 ft Above P. D.

Drill Measured From

KELLY BUSHING

Elevations

KB 6476 ft

DF 6475 ft

GL 6446 ft

Date 15/SEP/10

Run ONE

Service Order 567932

Depth Driller 12614 ft

Depth Logger 12538 ft

Bottom Logged Interval 12538 ft

Top Logged Interval 6980 ft

Time Started 1:30

Time Finished 11:00

Operator Rig Time 9.5 hrs

Type of Fluid in Hole WATER

Fluid Density N/A

Salinity N/A

Fluid Level FULL

Logged Cement Top N/A

Wellhead Pressure 0 psi

Maximum Hole Deviation N/A

Nominal Logging Speed 10 fpm

Maximum Recorded Temperature N/A

Reference Log BAKER ATLAS RADIAL ANALYSIS BOND LOG

Reference Log Date 15/SEP/10

Equipment No. 4271

Location GRAND JUNCTION

Recorded By J. WIESER

Witnessed By MR. JIM JONES

- 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

Table with 3 columns: Bit Size, From, To. Rows: 14.75 In SURFACE 4550 ft, 8.75 In 4550 ft 9857 ft, 7.875 In 9857 ft 12614 ft

Casing Record

Table with 5 columns: Size, Weight, Grade, From, To. Rows: 10.75 In 45 lbm/ft J-55 SURFACE 4550 ft, 4.5 In 15.1 lbm/ft P-110 SURFACE 9857 ft, 4.5 In 15.1 lbm/ft P-110 9857 ft 12614 ft

Remarks

LOG WAS TIED IN THE BAKER ATLAS RADIAL ANALYSIS BOND LOG. WELL WAS LOGGED IN PNC 3D MODE.

Equipment Data

Table with 4 columns: Run, Trip, Tool, Series Number, Serial Number, Position

Run	Trp	Tool	Series Number	Serial Number	Position
1	1	RPM	8281FA	10179238	FREE
1	1	RPM	8281PA	10184883	FREE
1	1	RPM	8281EA	10179238	FREE
1	1	GAMMA RAY	8262XA	10367217	FREE
1	1	TEL/CCL	8248EA	10387250	FREE
1	1	PCM	8250EA	151000	FREE

***MAIN SECTION  
IN PNC 3D MODE***

**SPL PROCESSING**

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		6977.312	12574.905
PNC Porosity	Borehole Size	8.750	inch	6977.312	9857.000
PNC Porosity	Borehole Size	7.875	inch	9857.000	12574.905
PNC Porosity	Casing Size	4.500	inch	6977.312	12574.905
PNC Porosity	Gas Filled	Non Gas Filled		6977.312	9857.000
PNC Porosity	Gas Filled	Non Gas Filled		9857.000	12574.905
PNC Porosity	Matrix	Sandstone		6977.312	12574.905

**DEPTH OFFSETS**

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248EA	-15.470	FLTM
8248EA	-13.470	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 RAT023 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	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	0.000	TEN	TTEN				

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : EXXONMOBIL PRODUCTION COMPANY

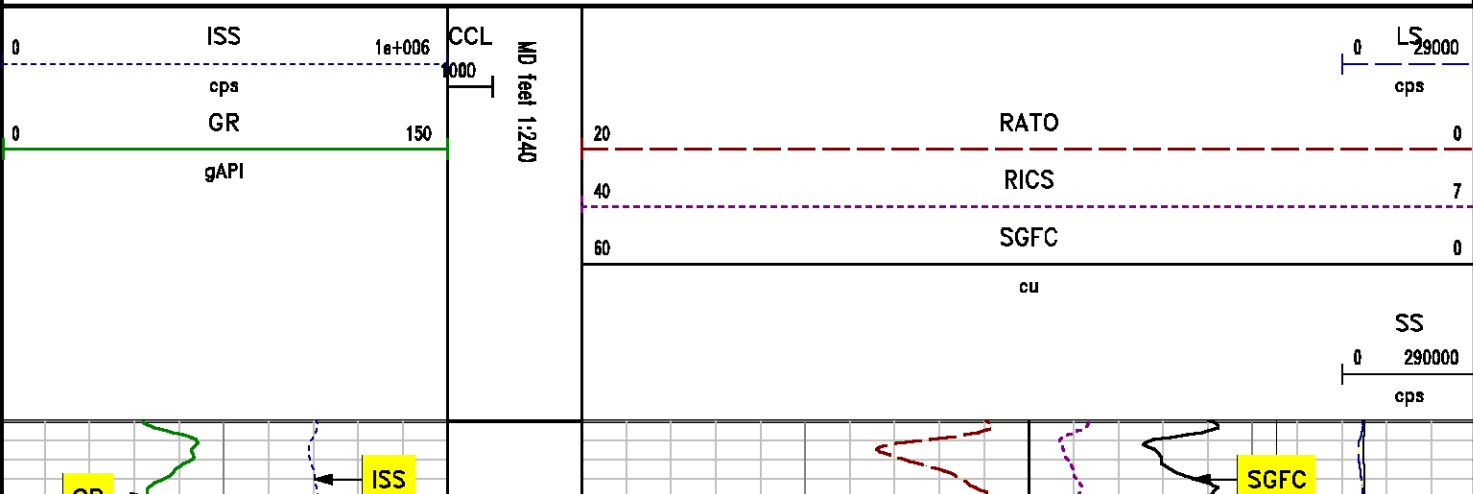
Well : FRU 197-33B3

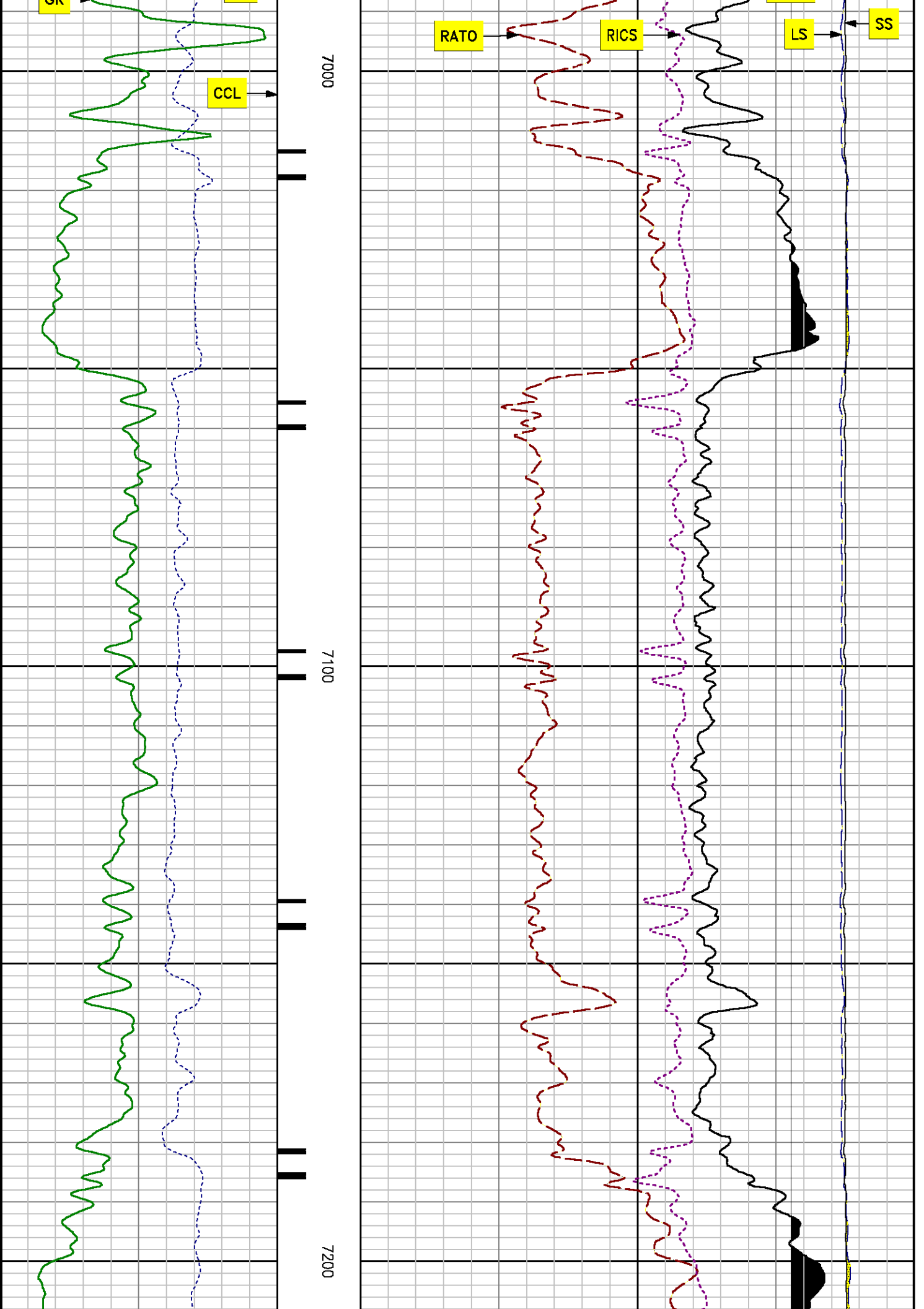
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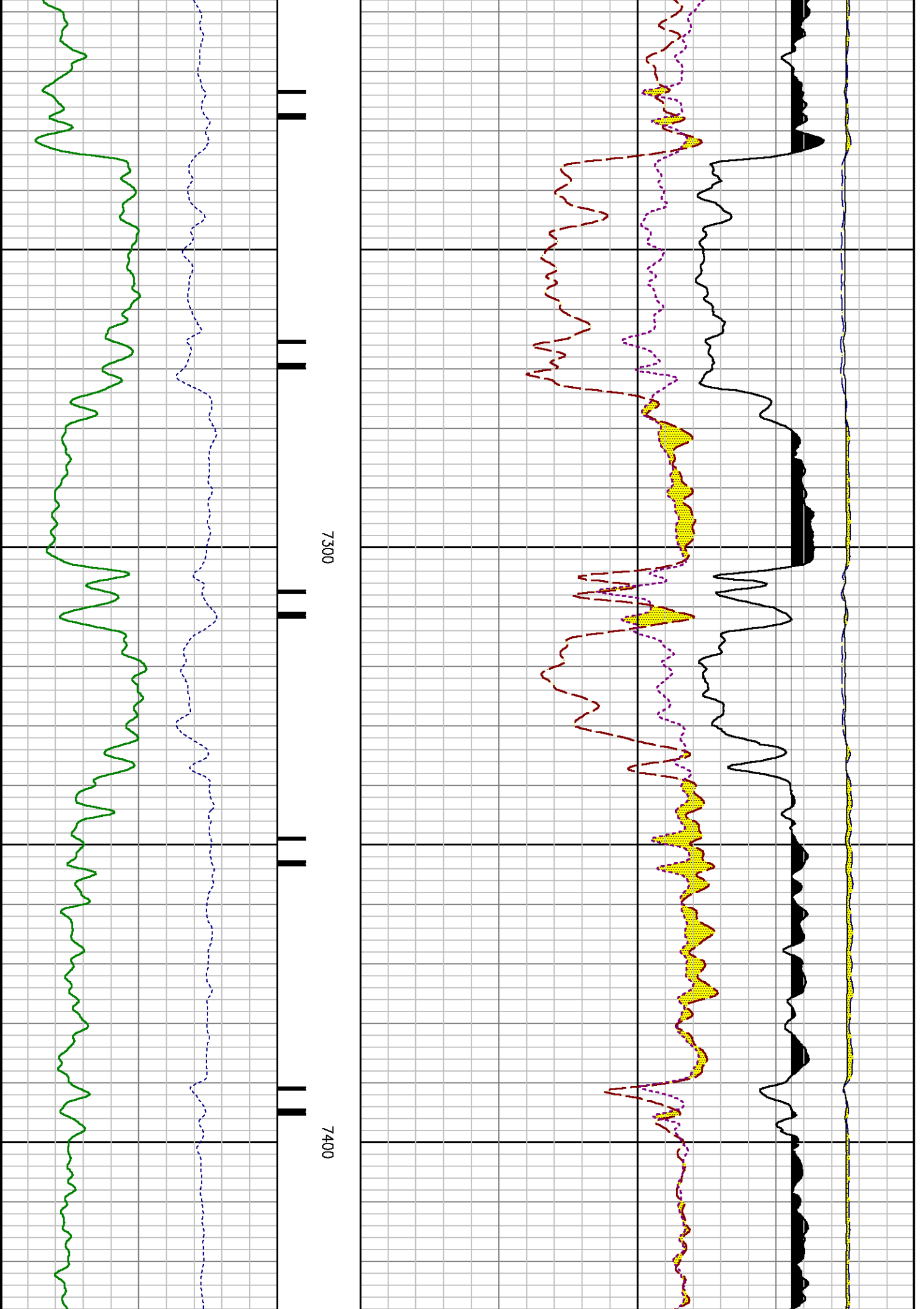
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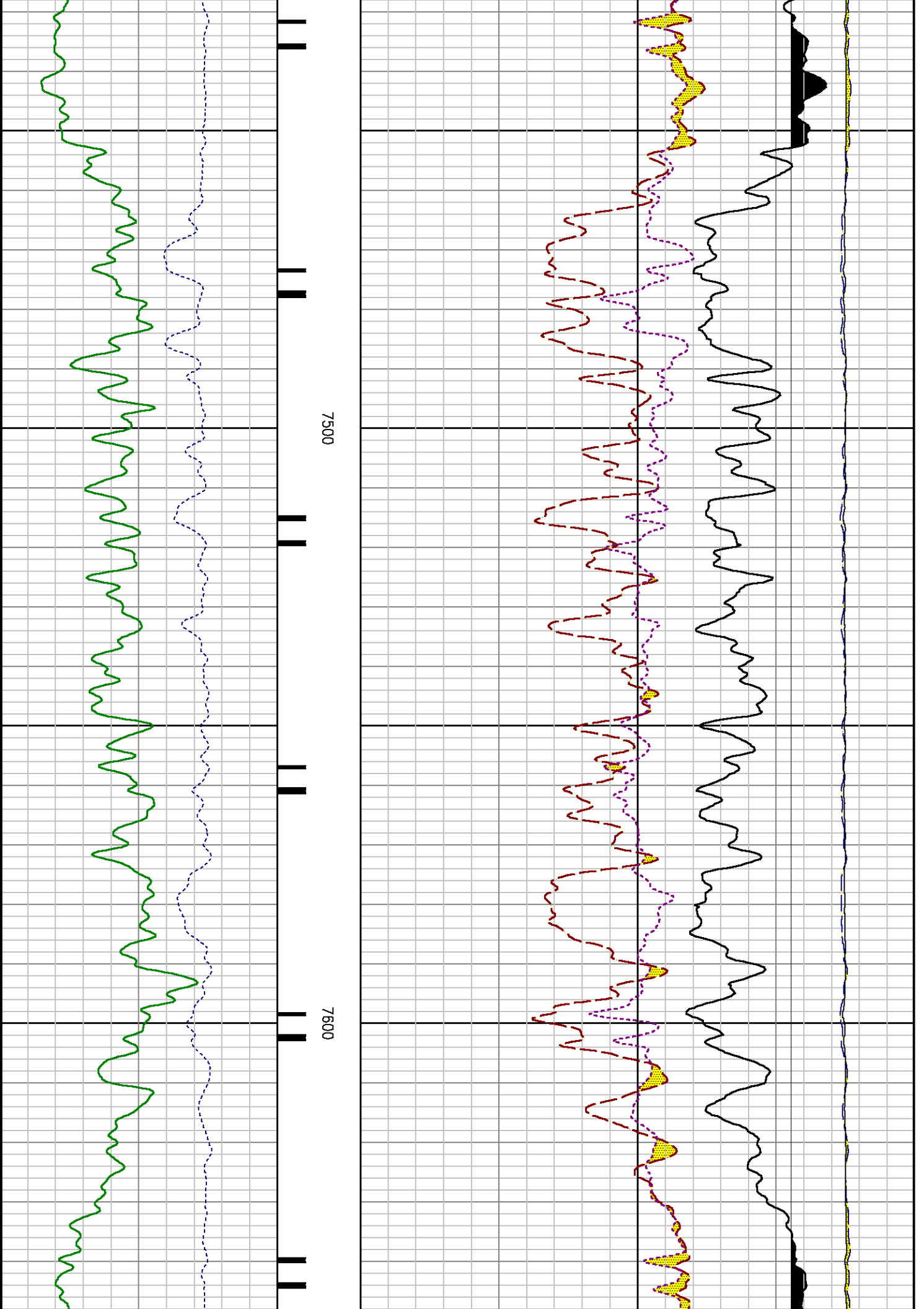
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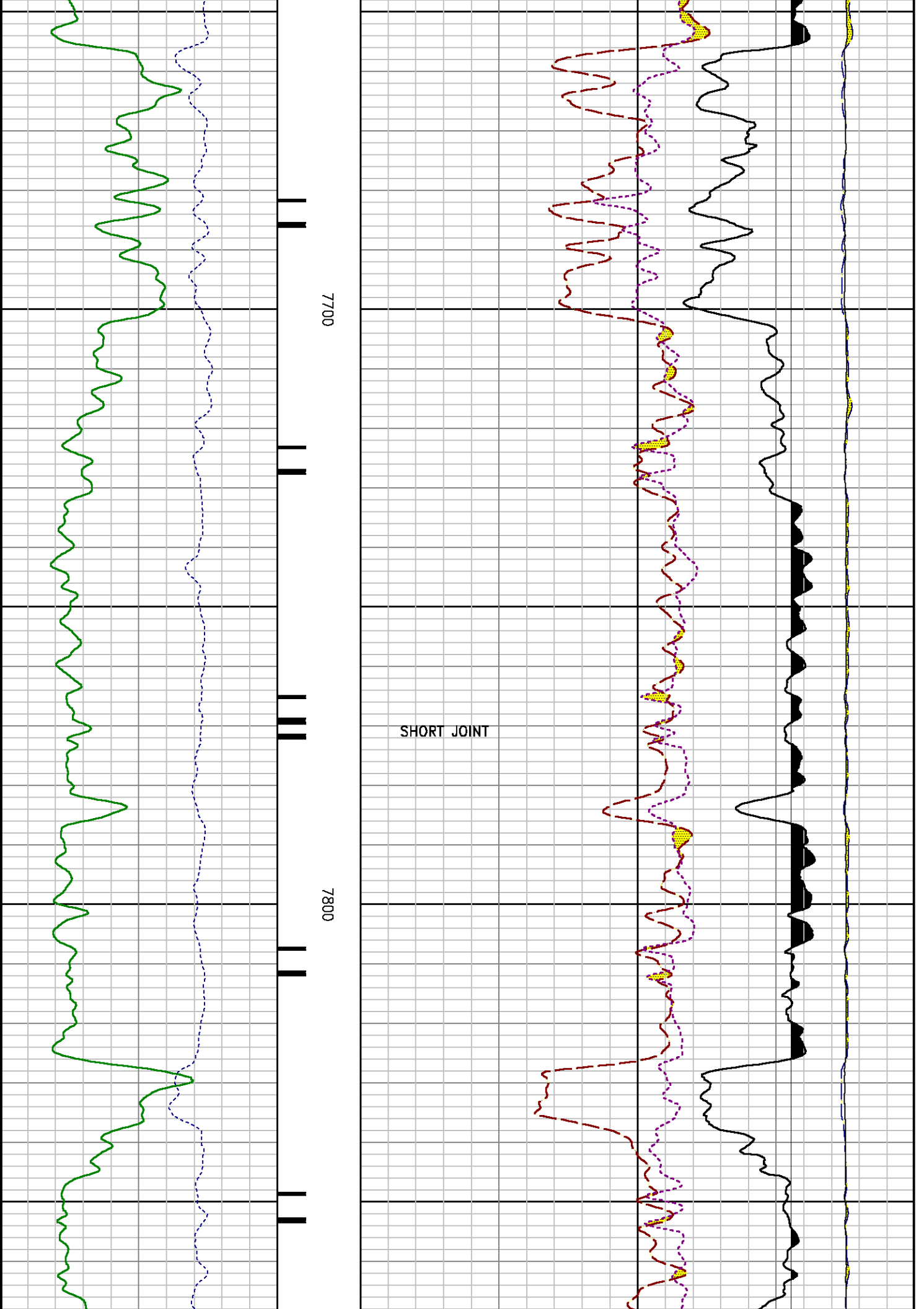
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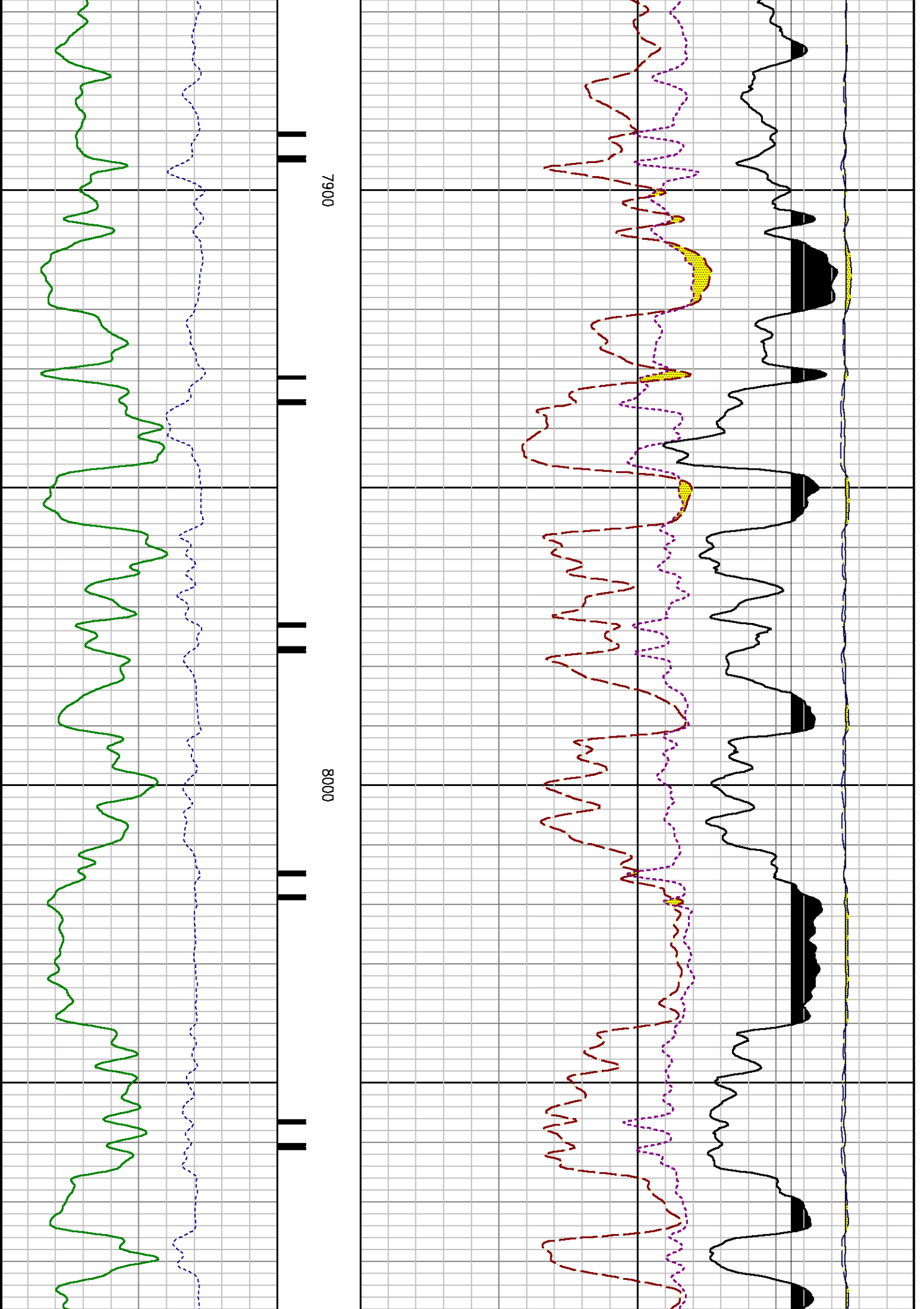


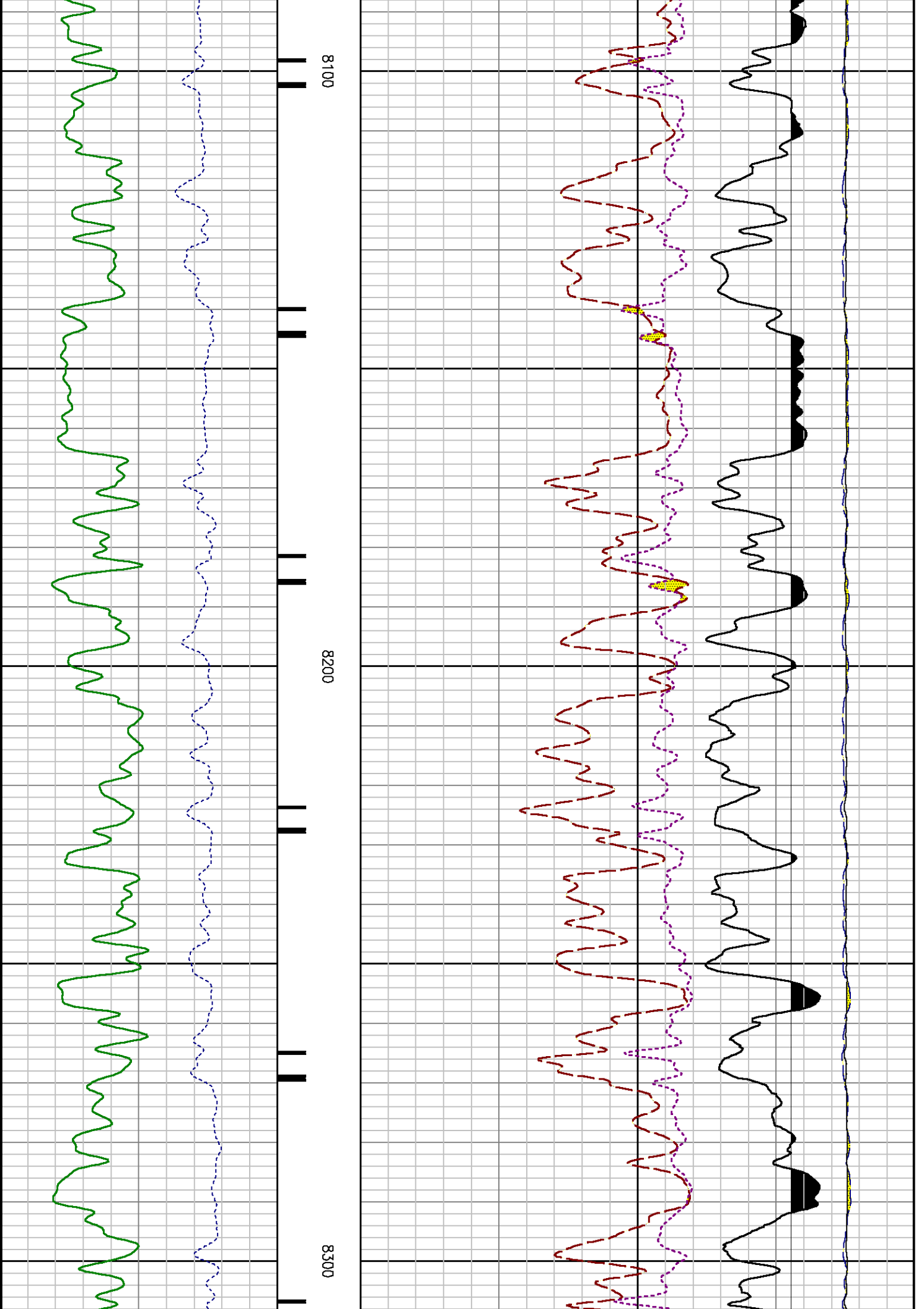


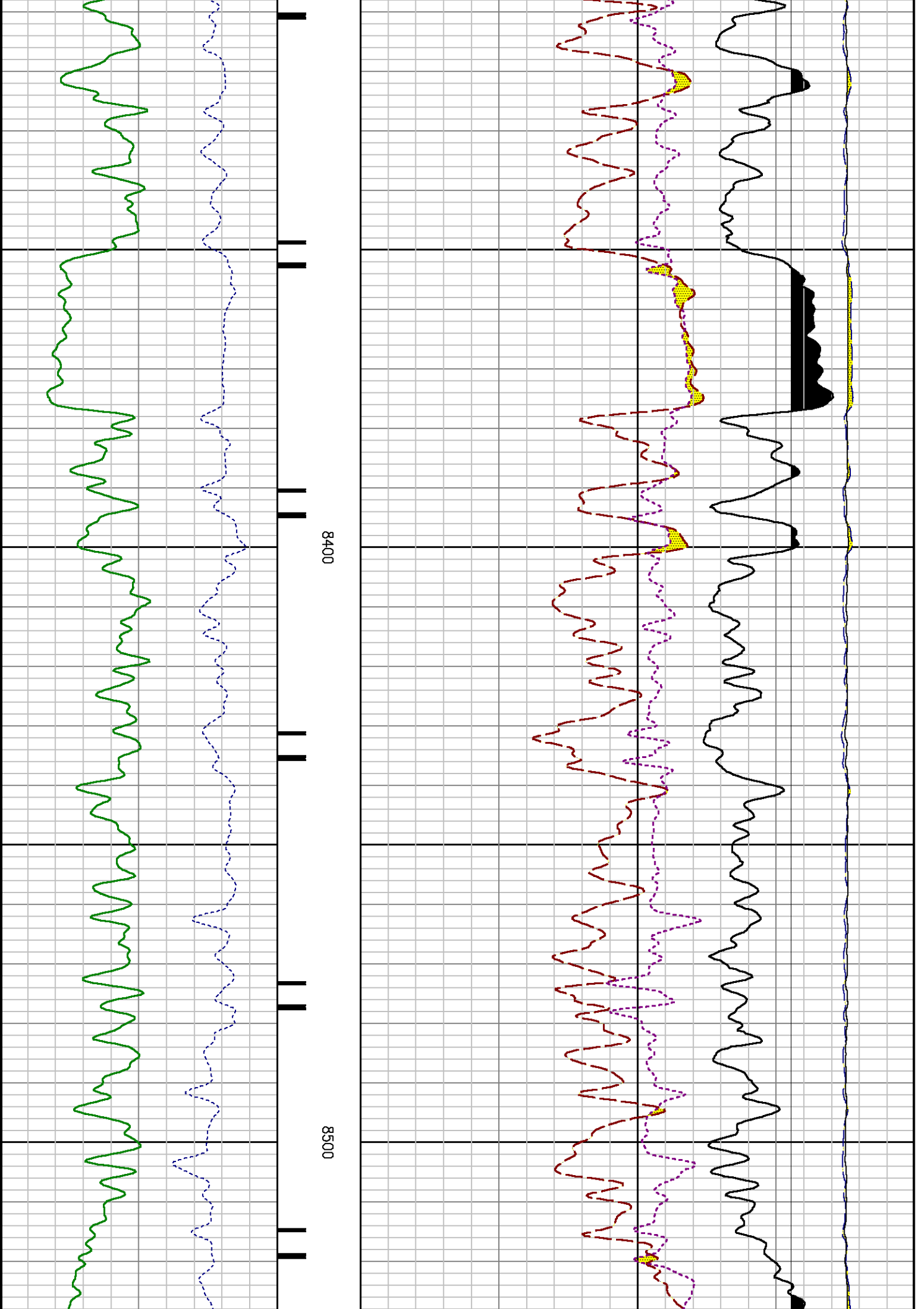


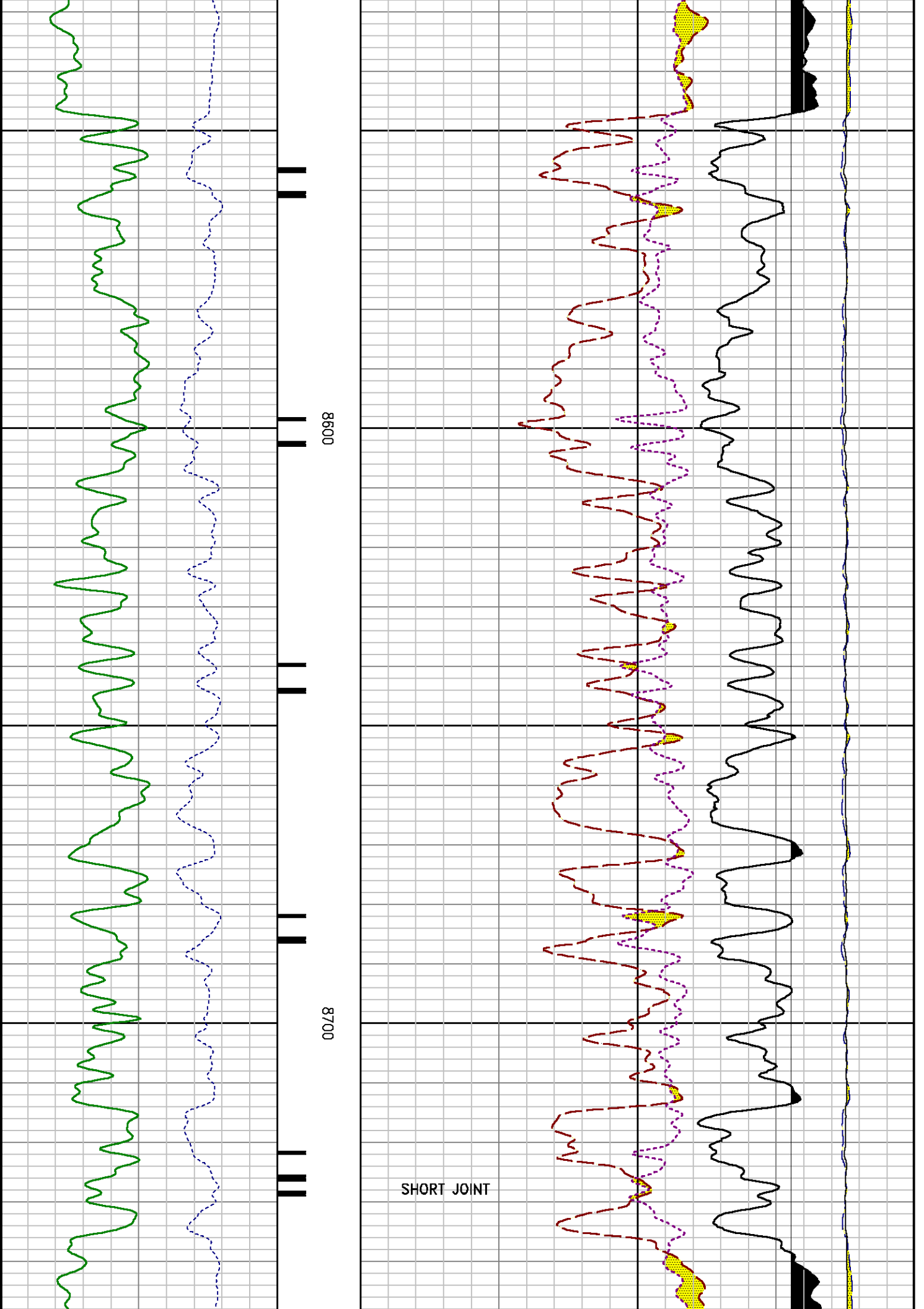


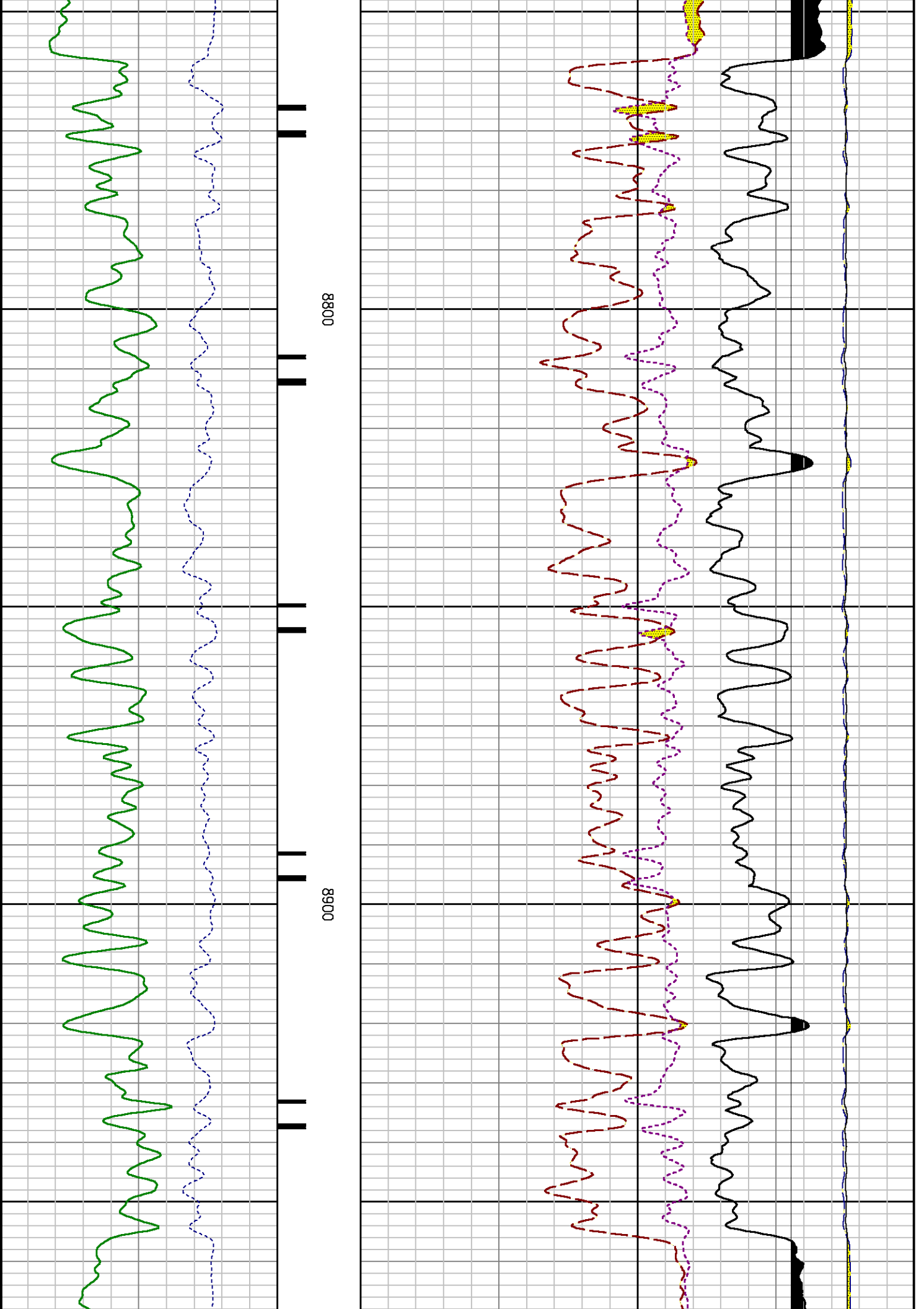


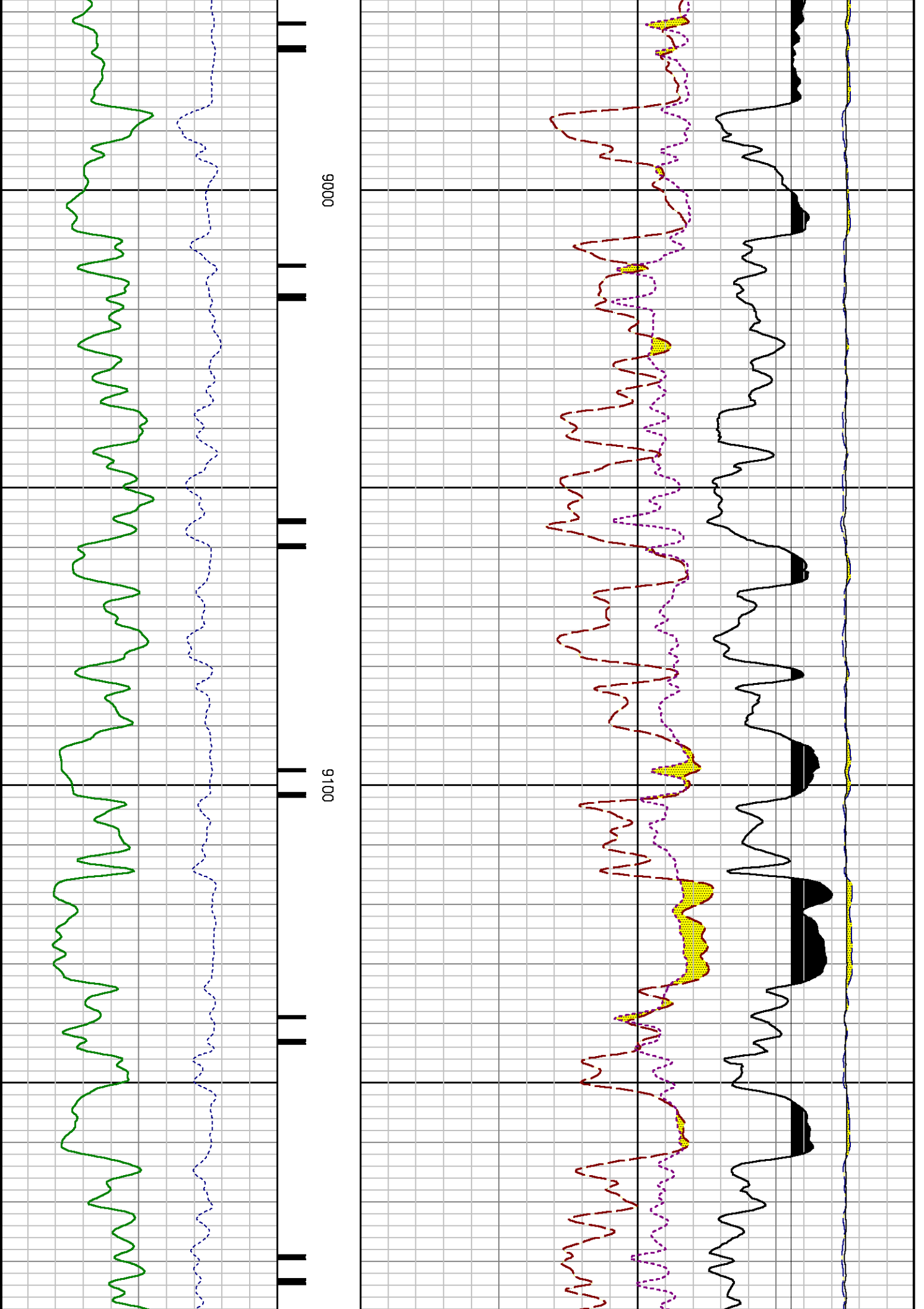


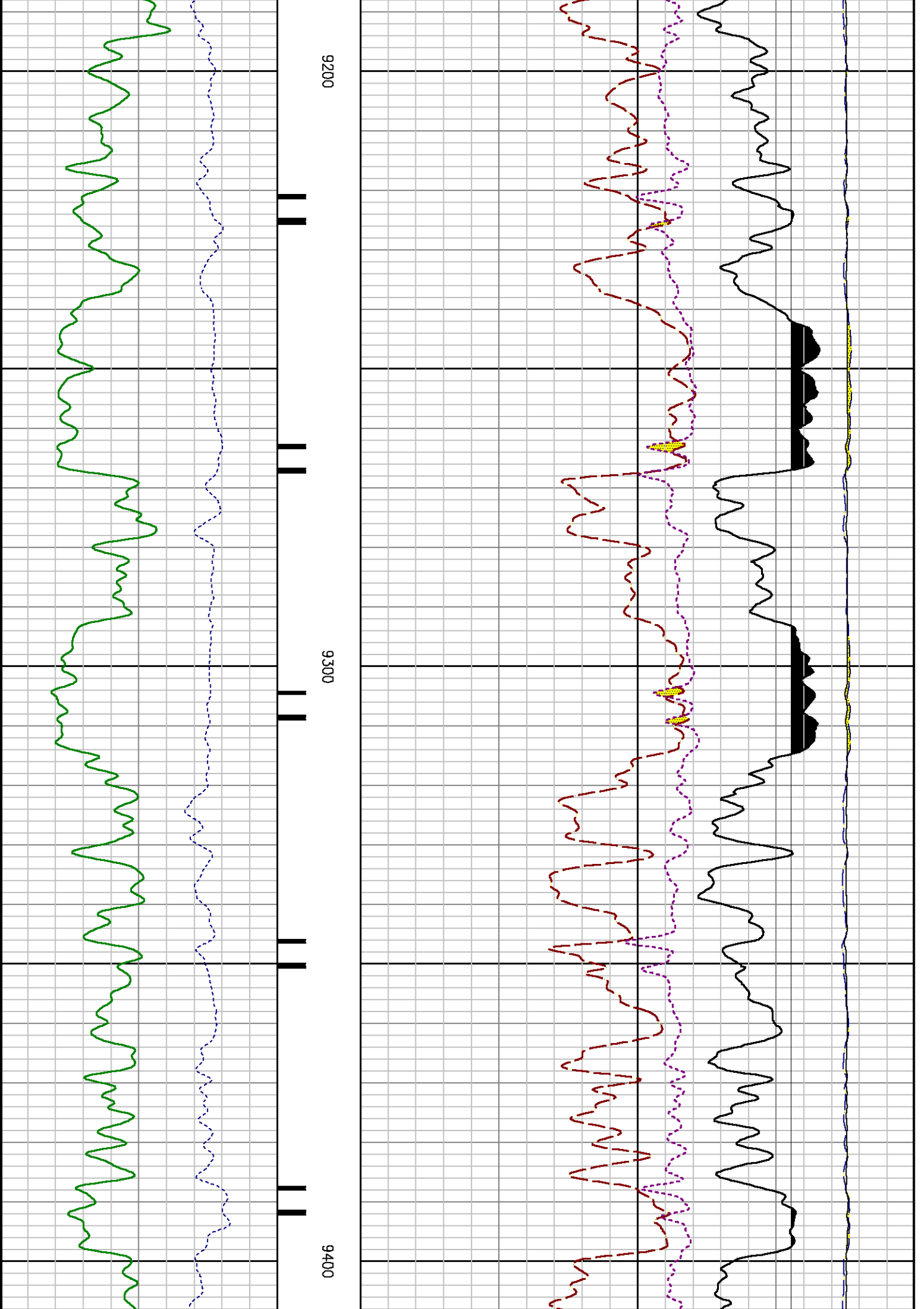


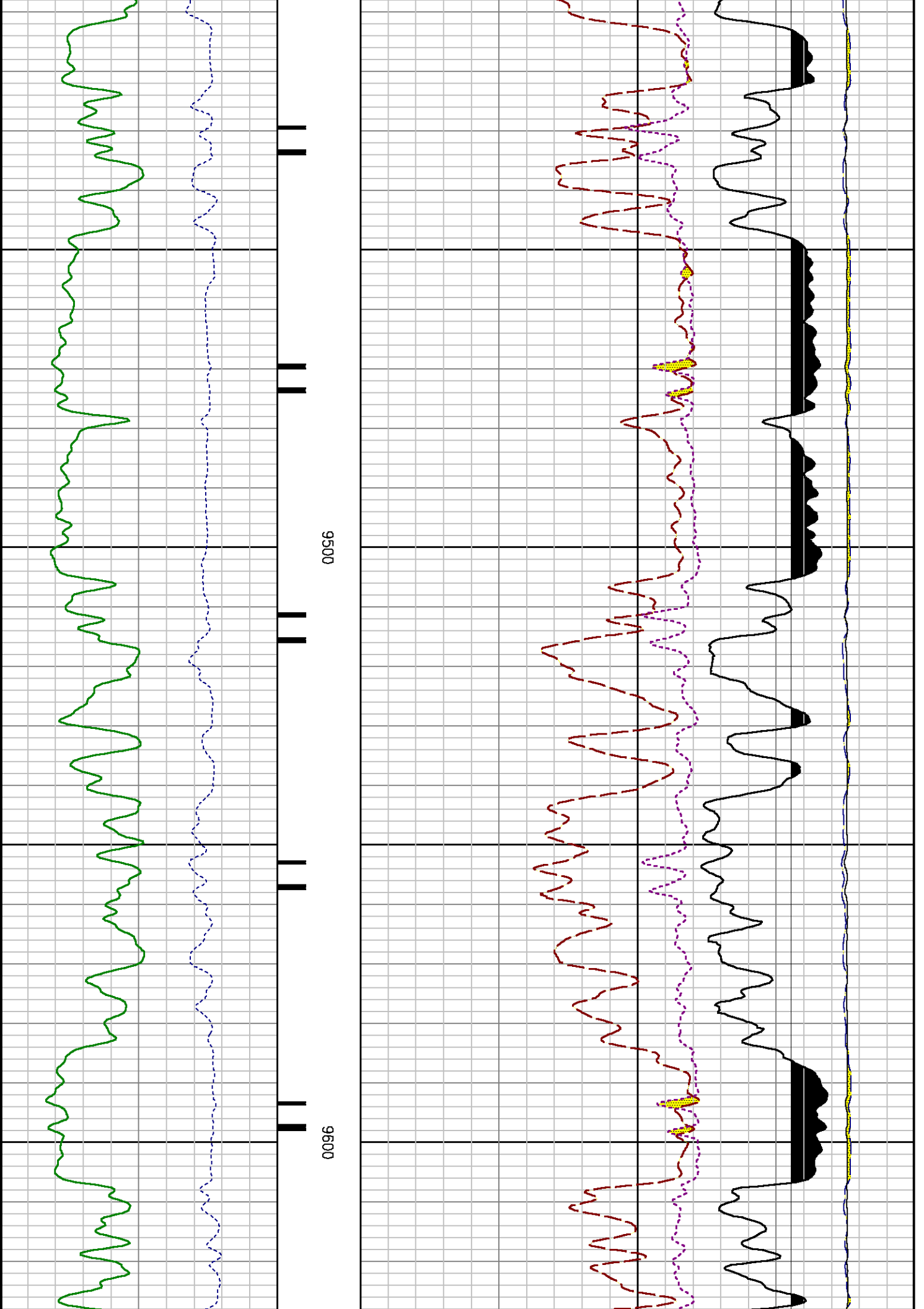


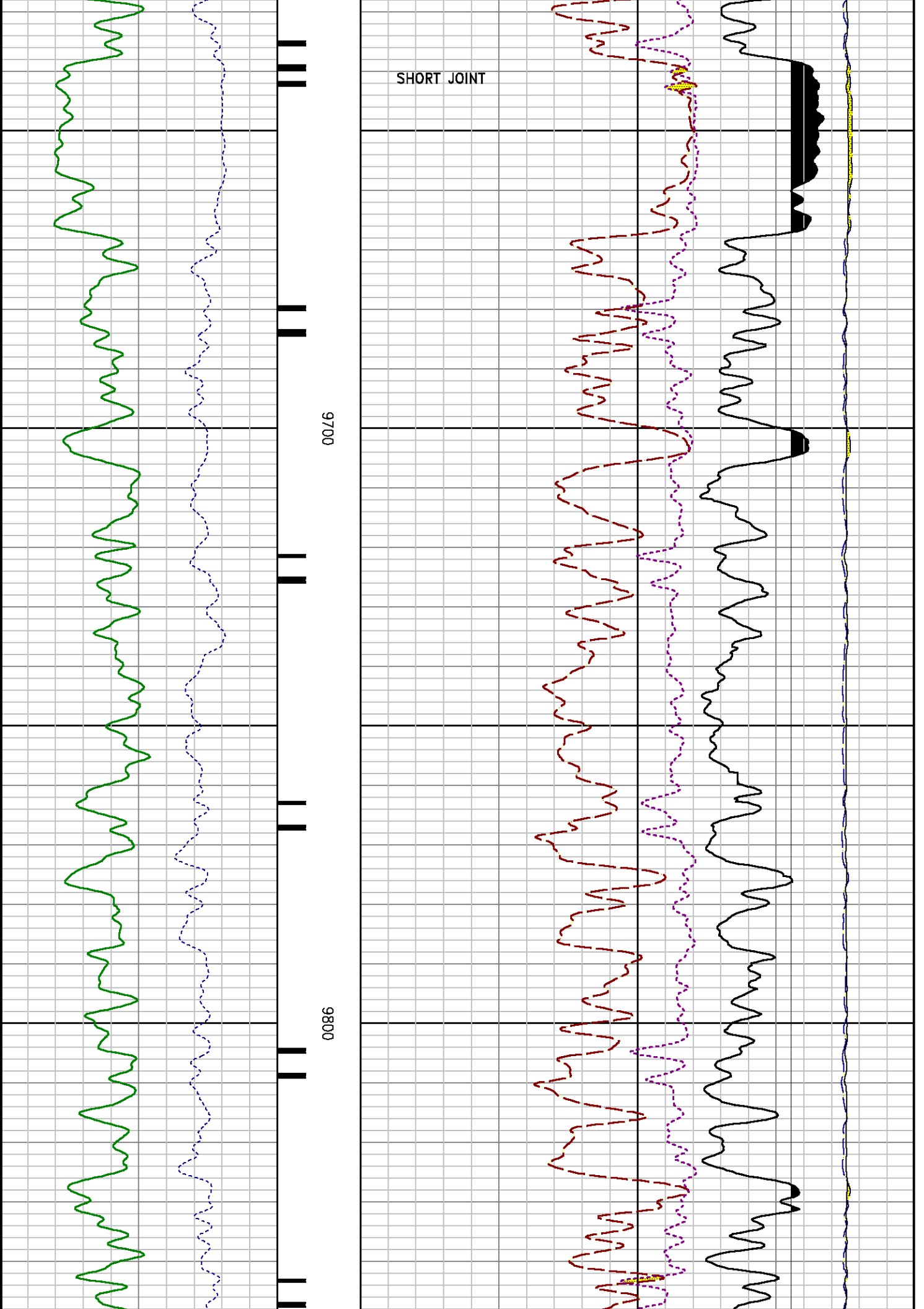


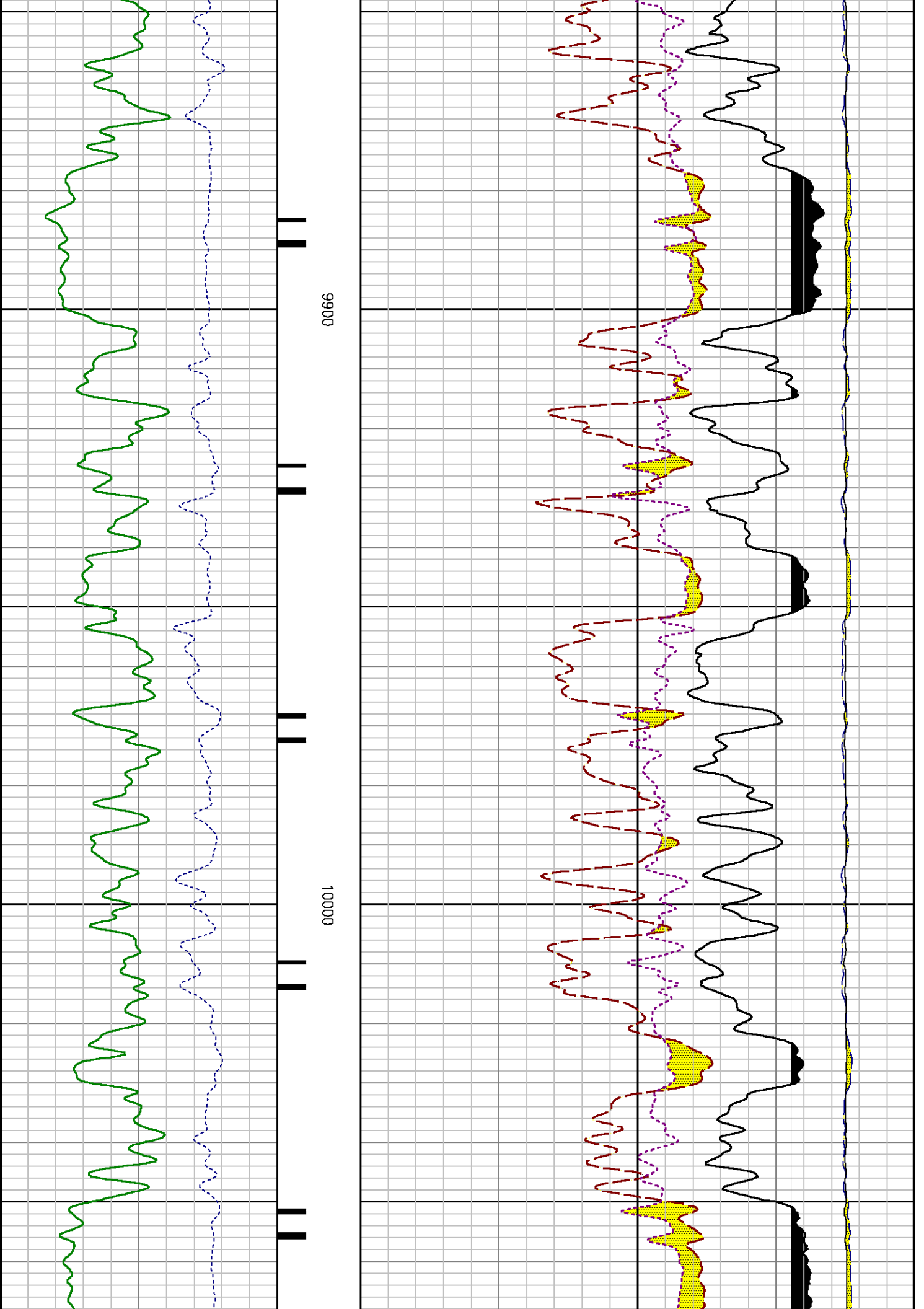


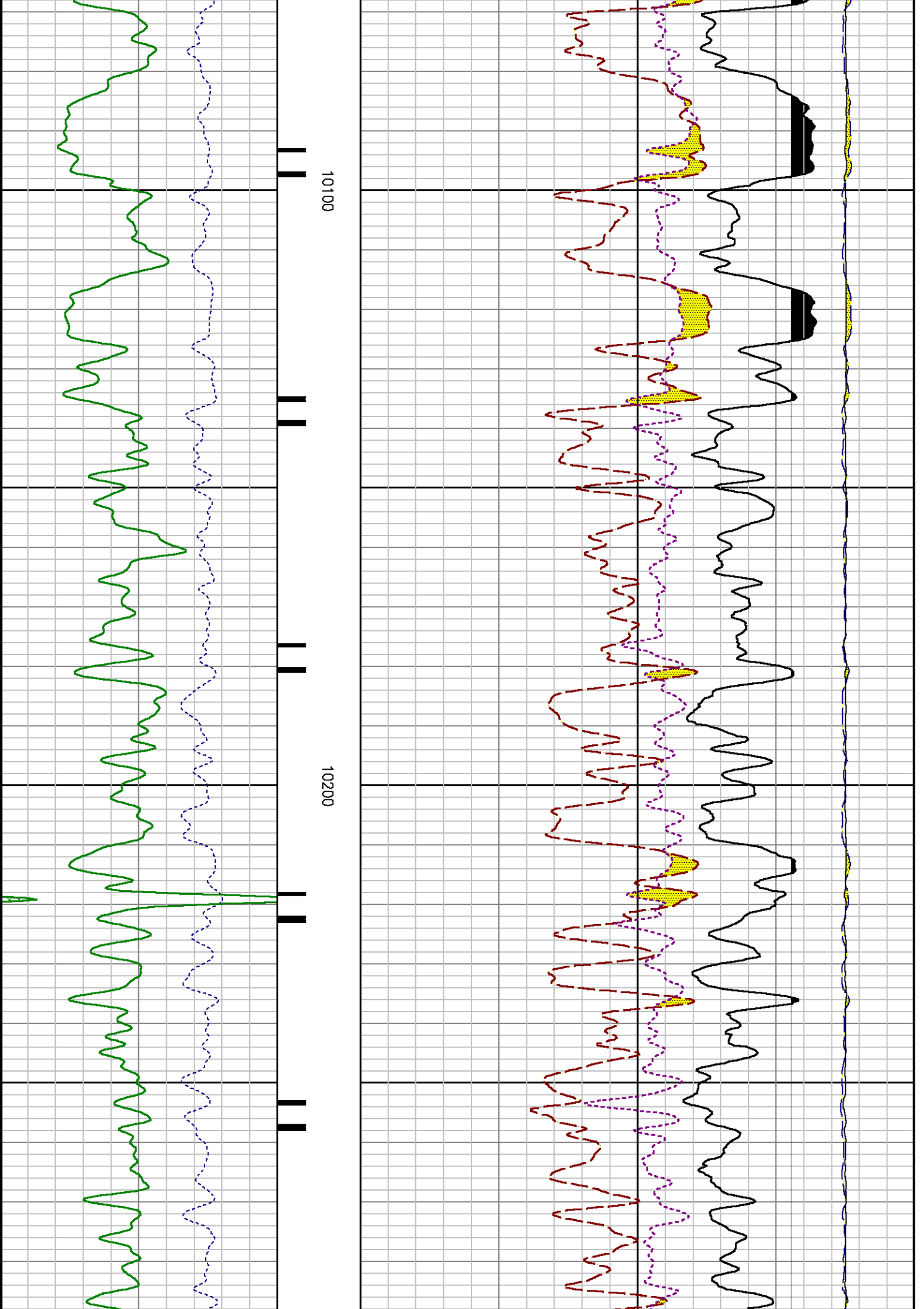


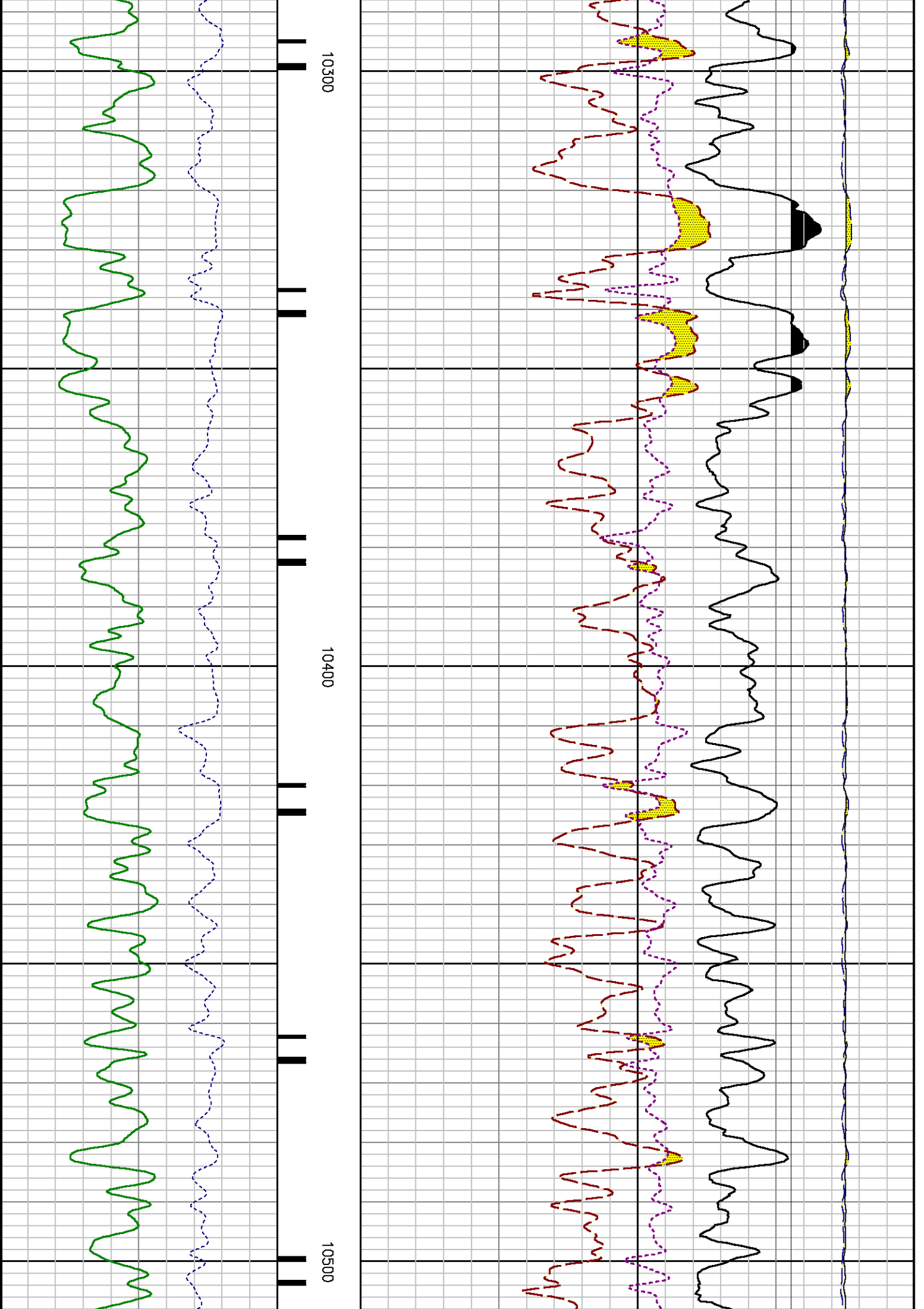


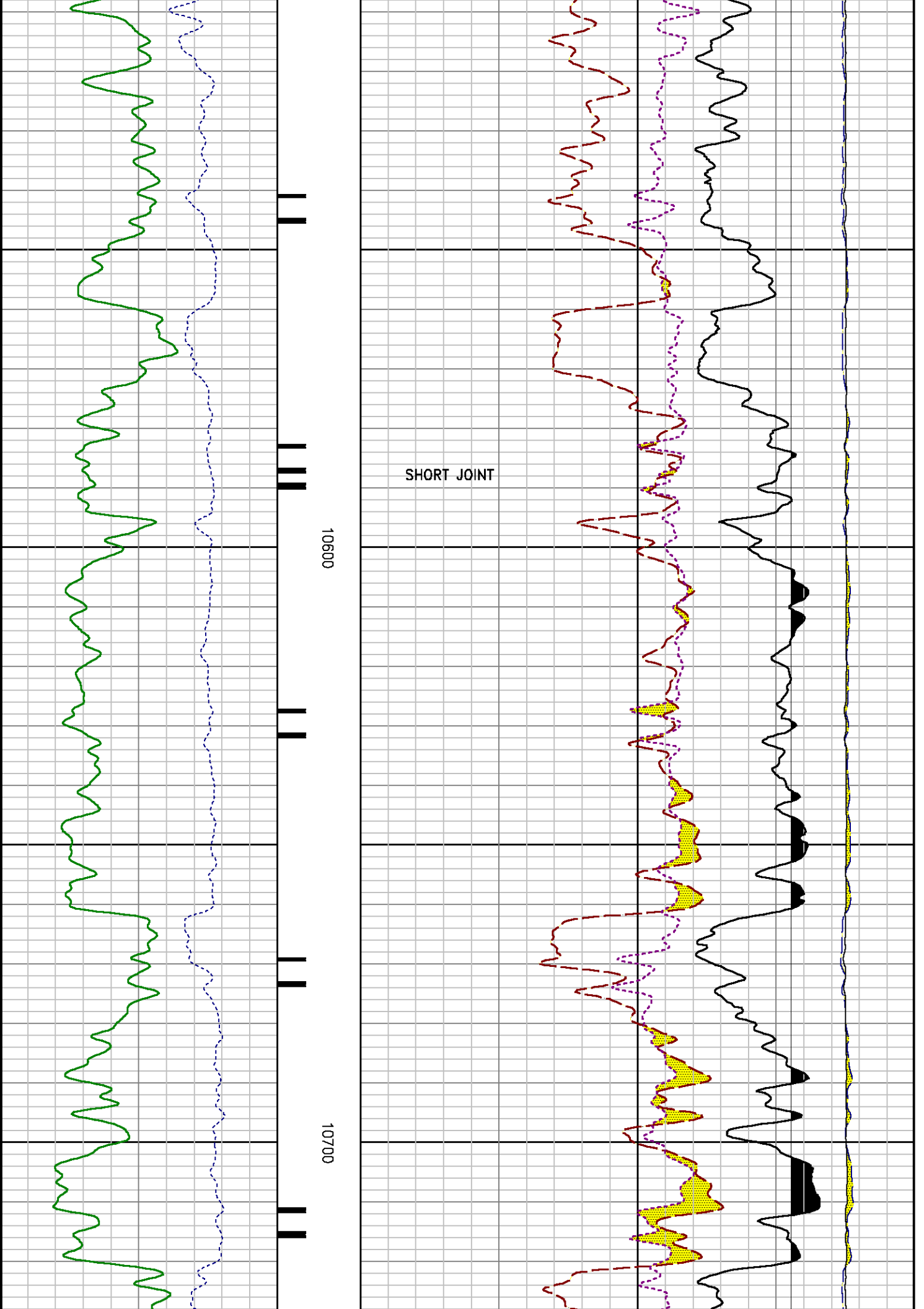


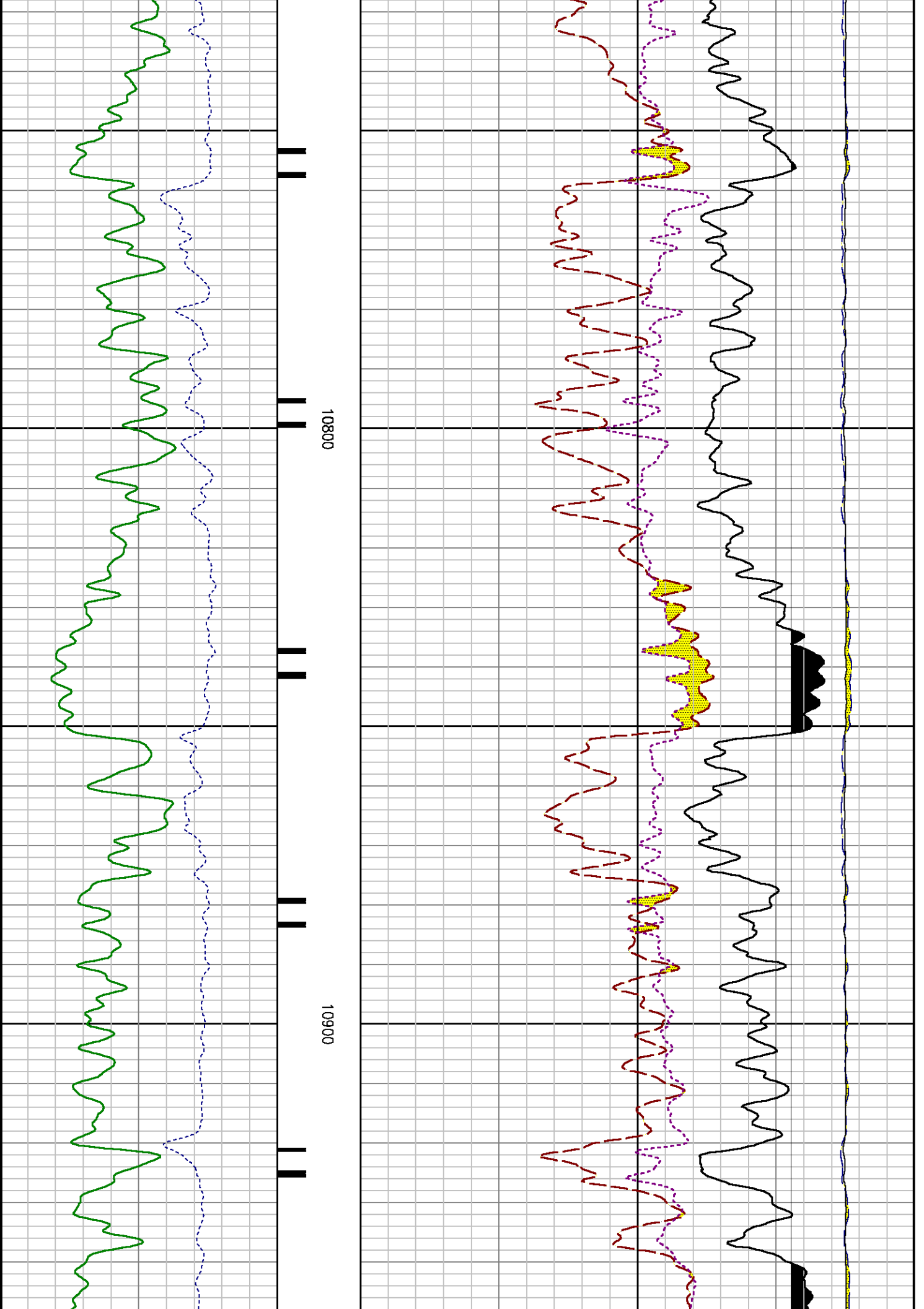


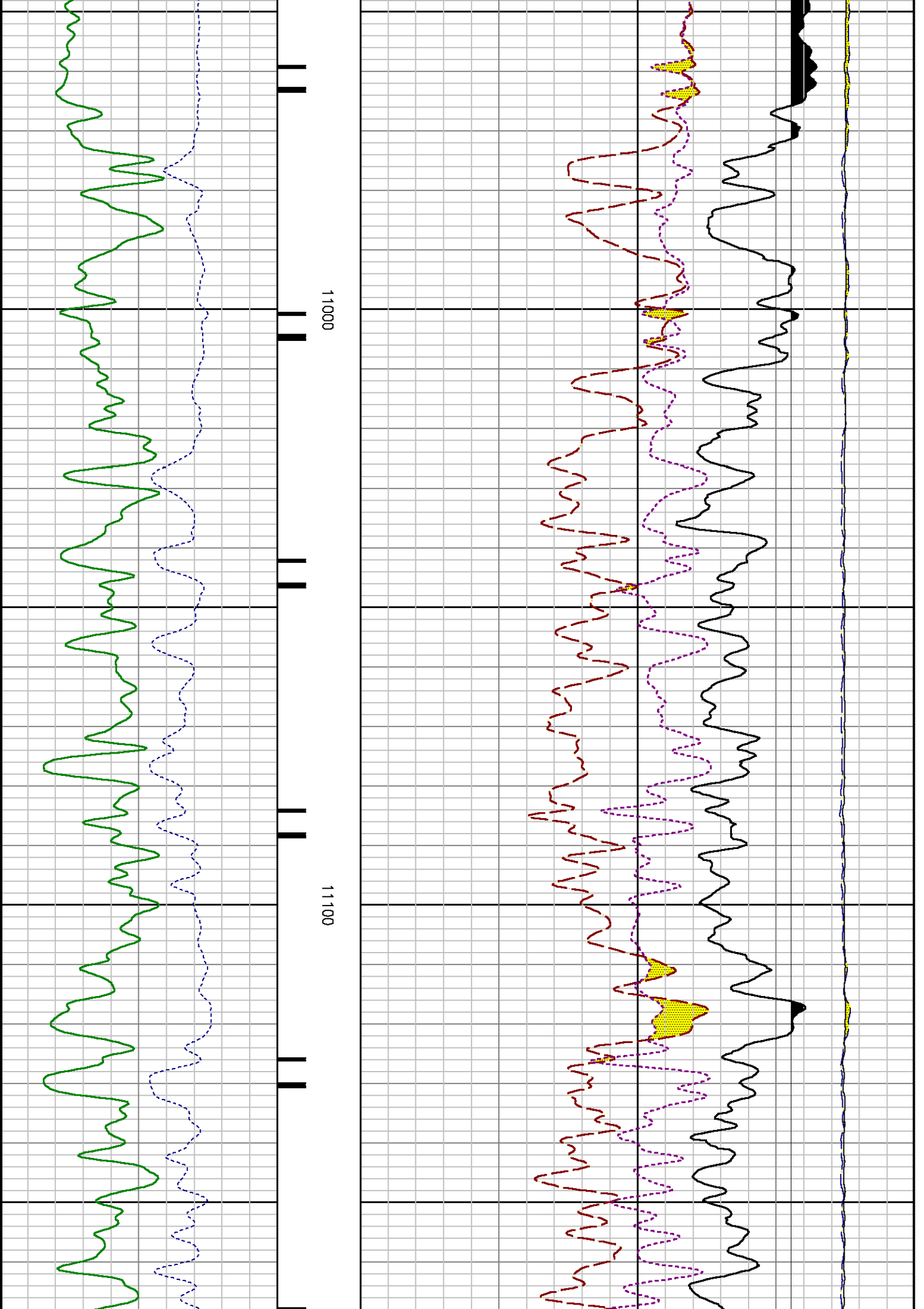


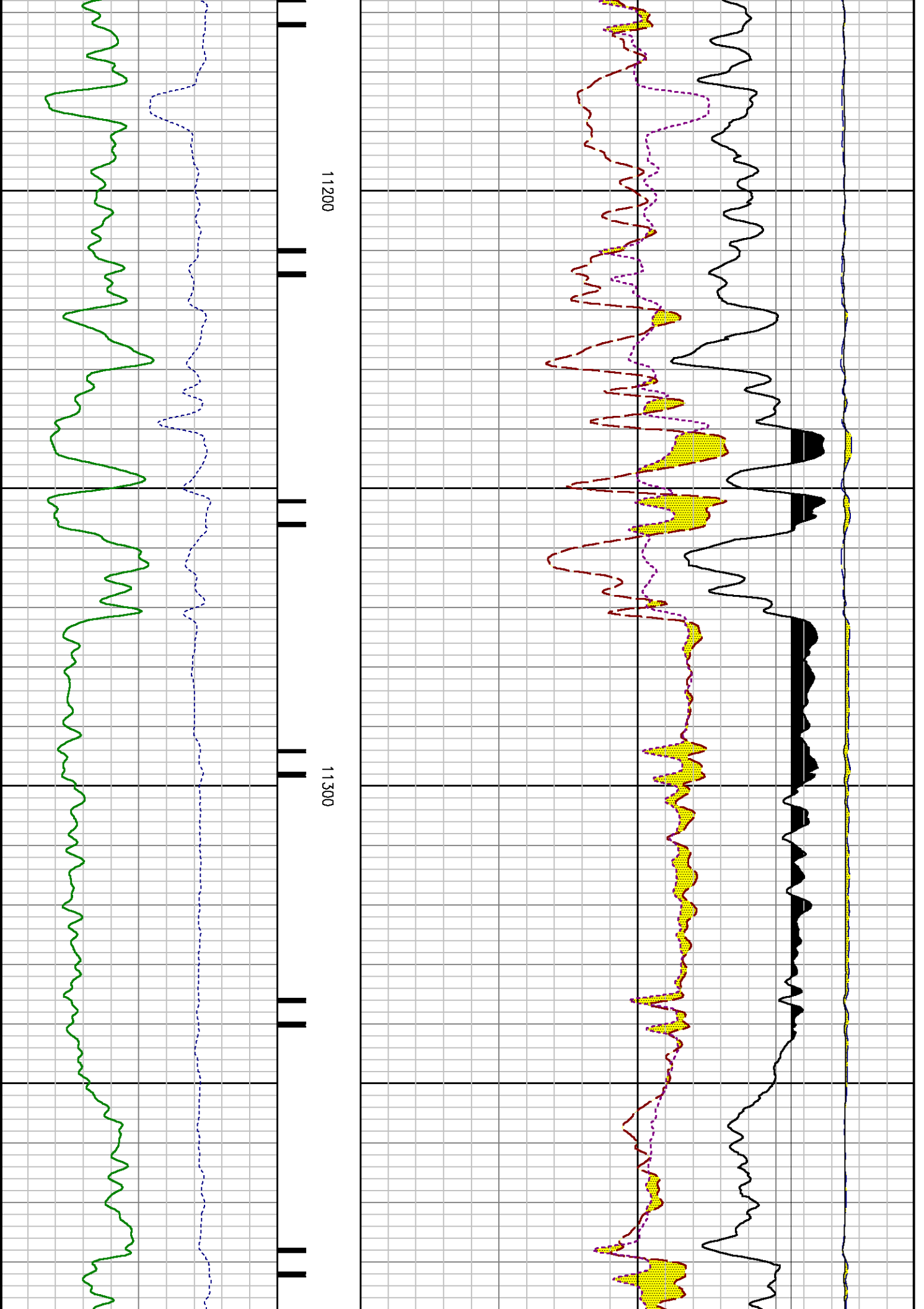


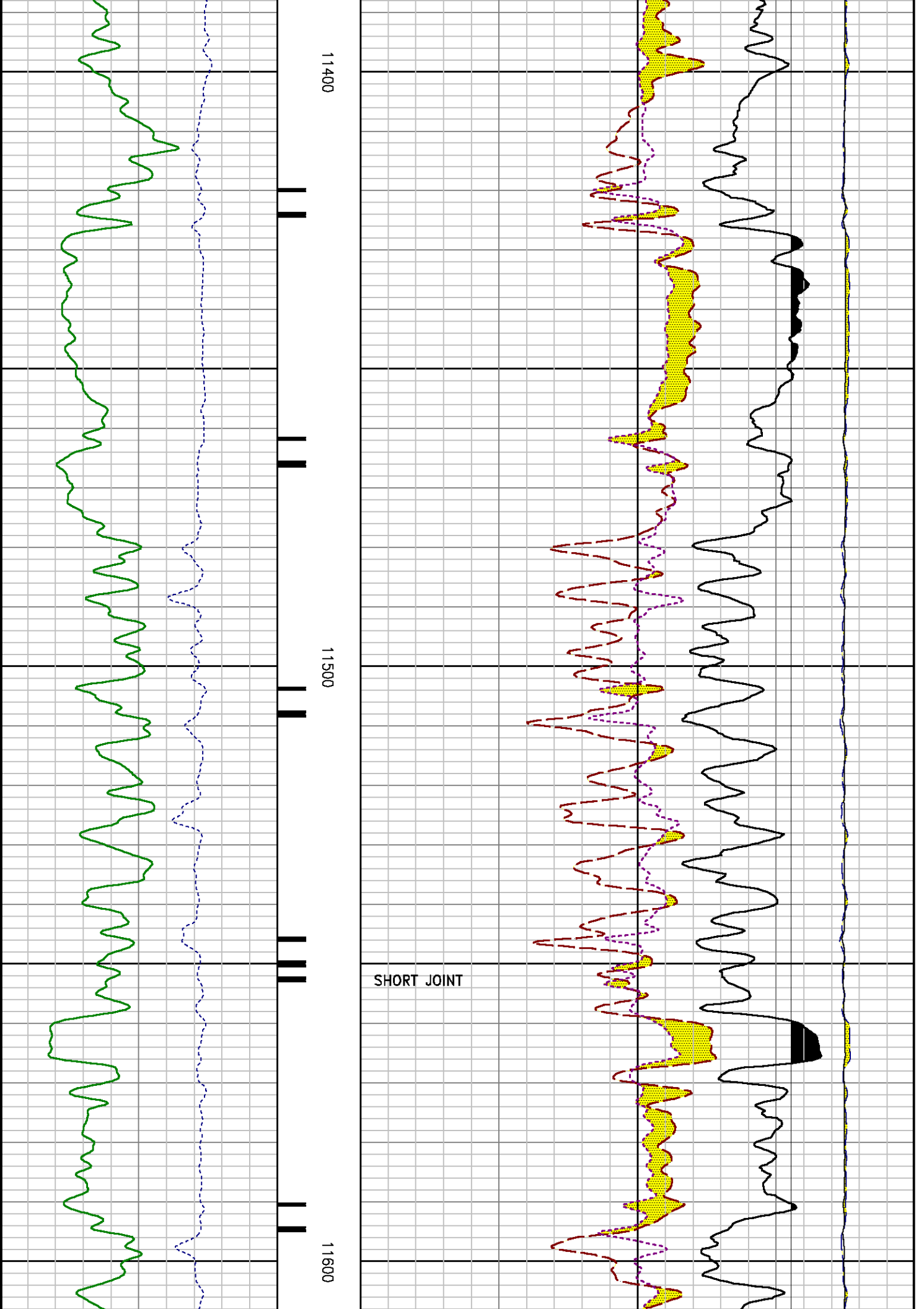


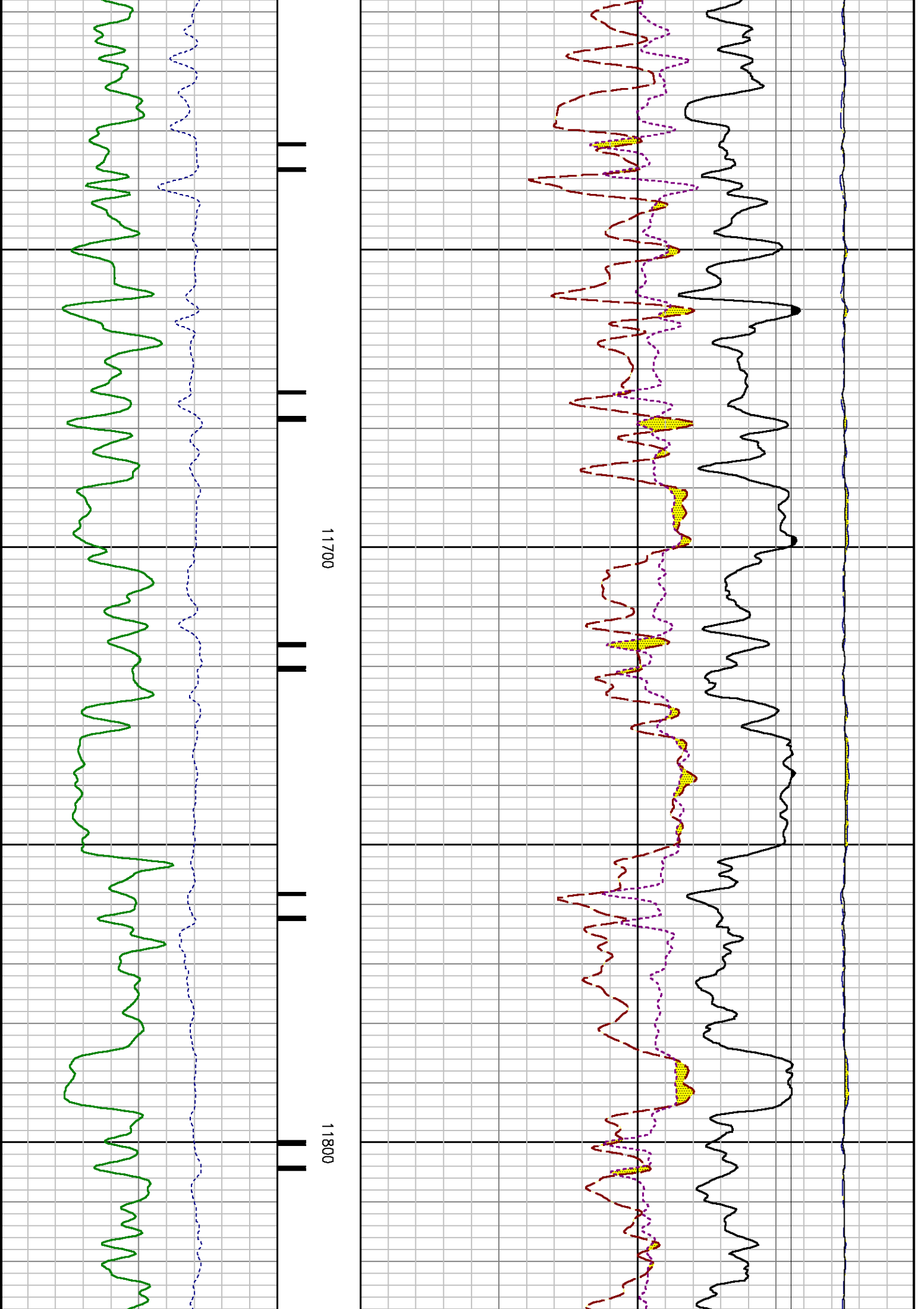


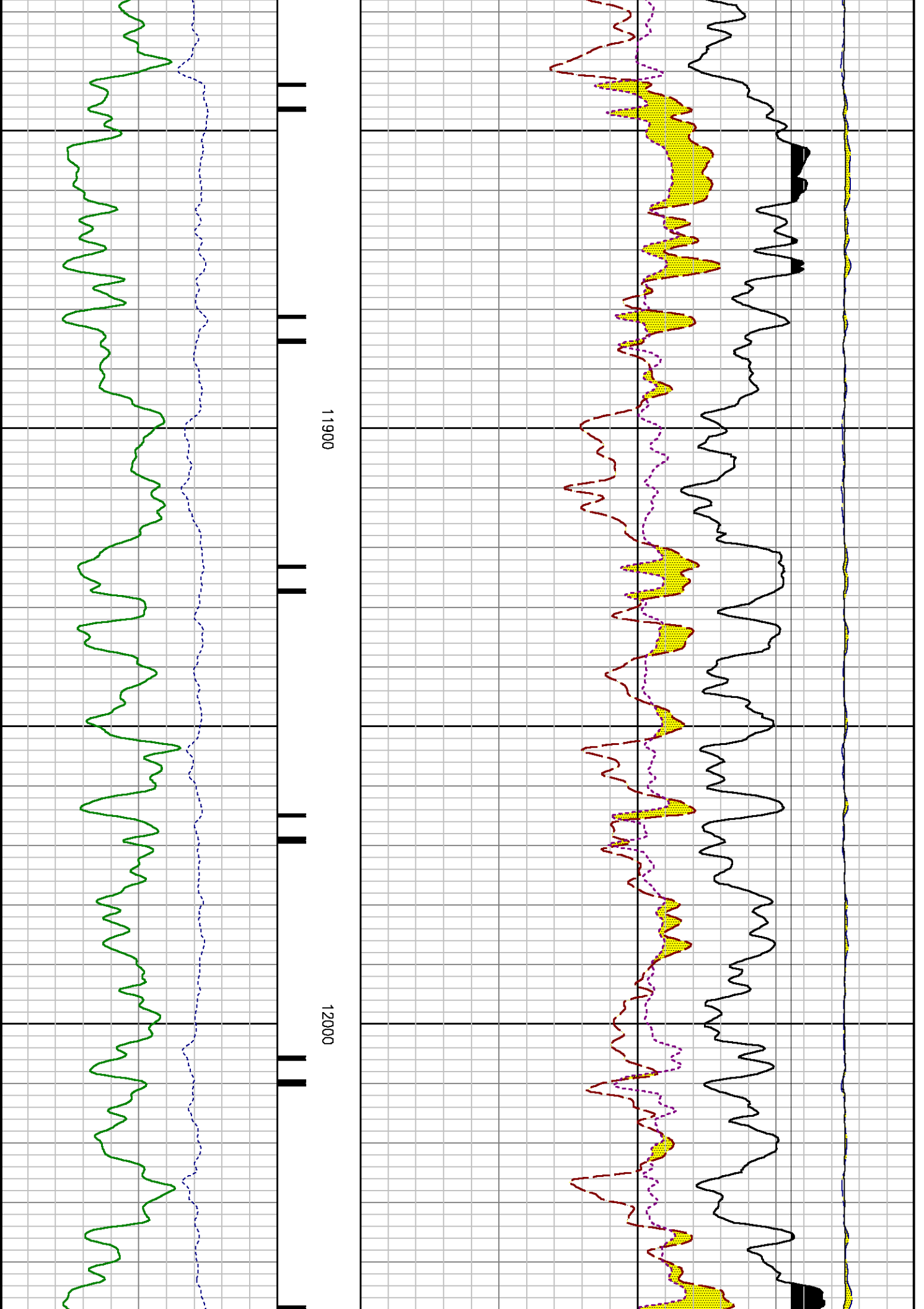


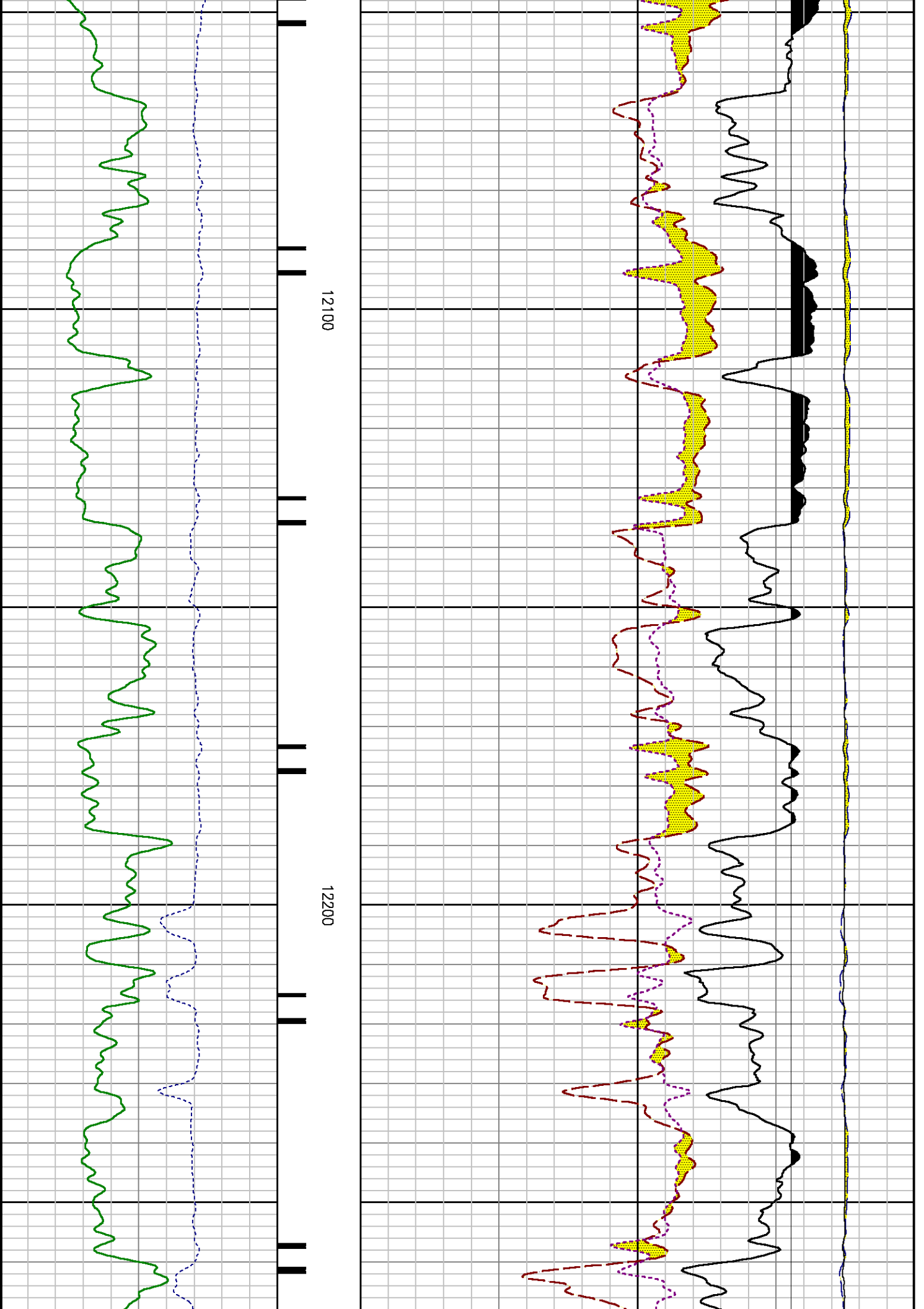


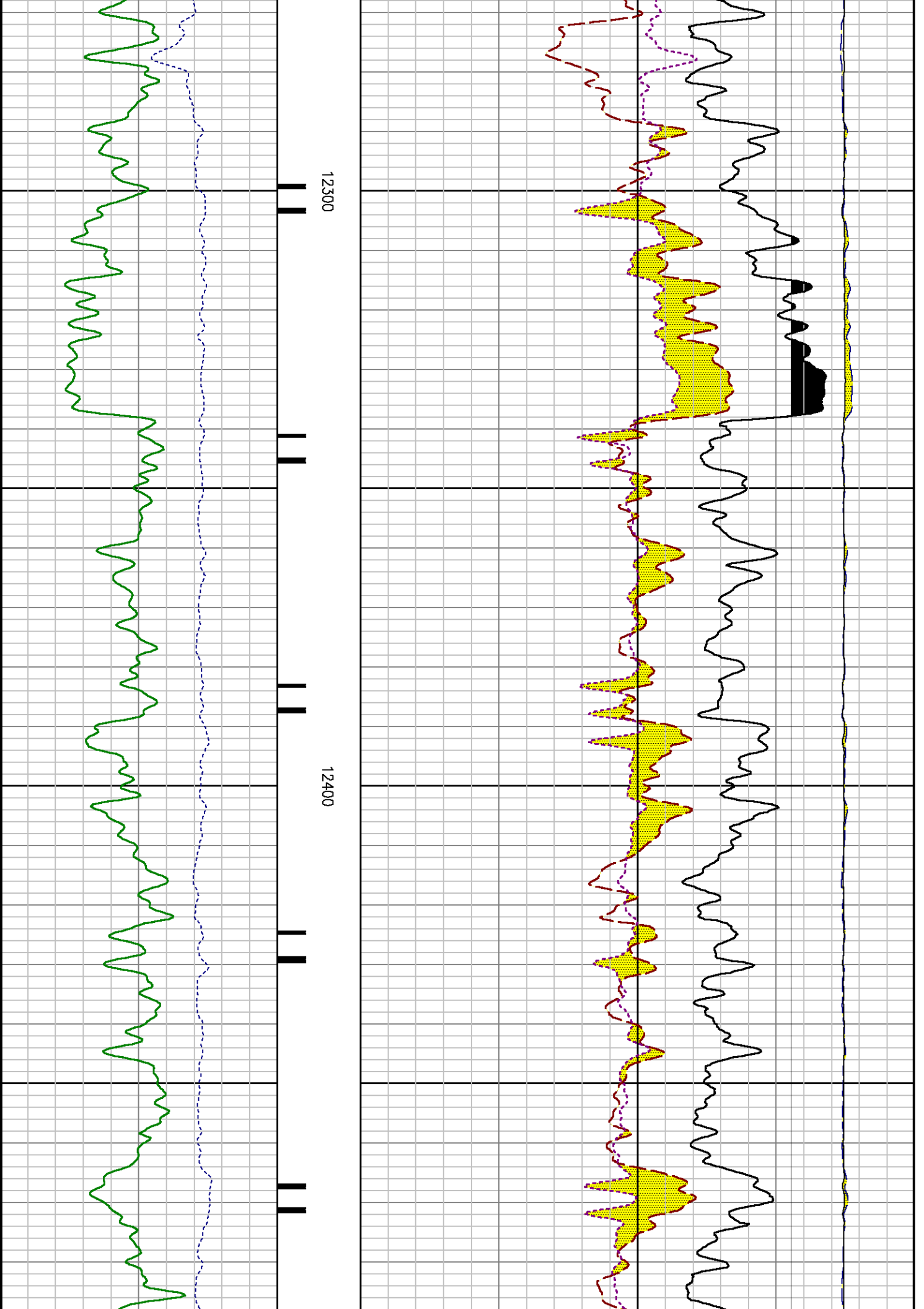


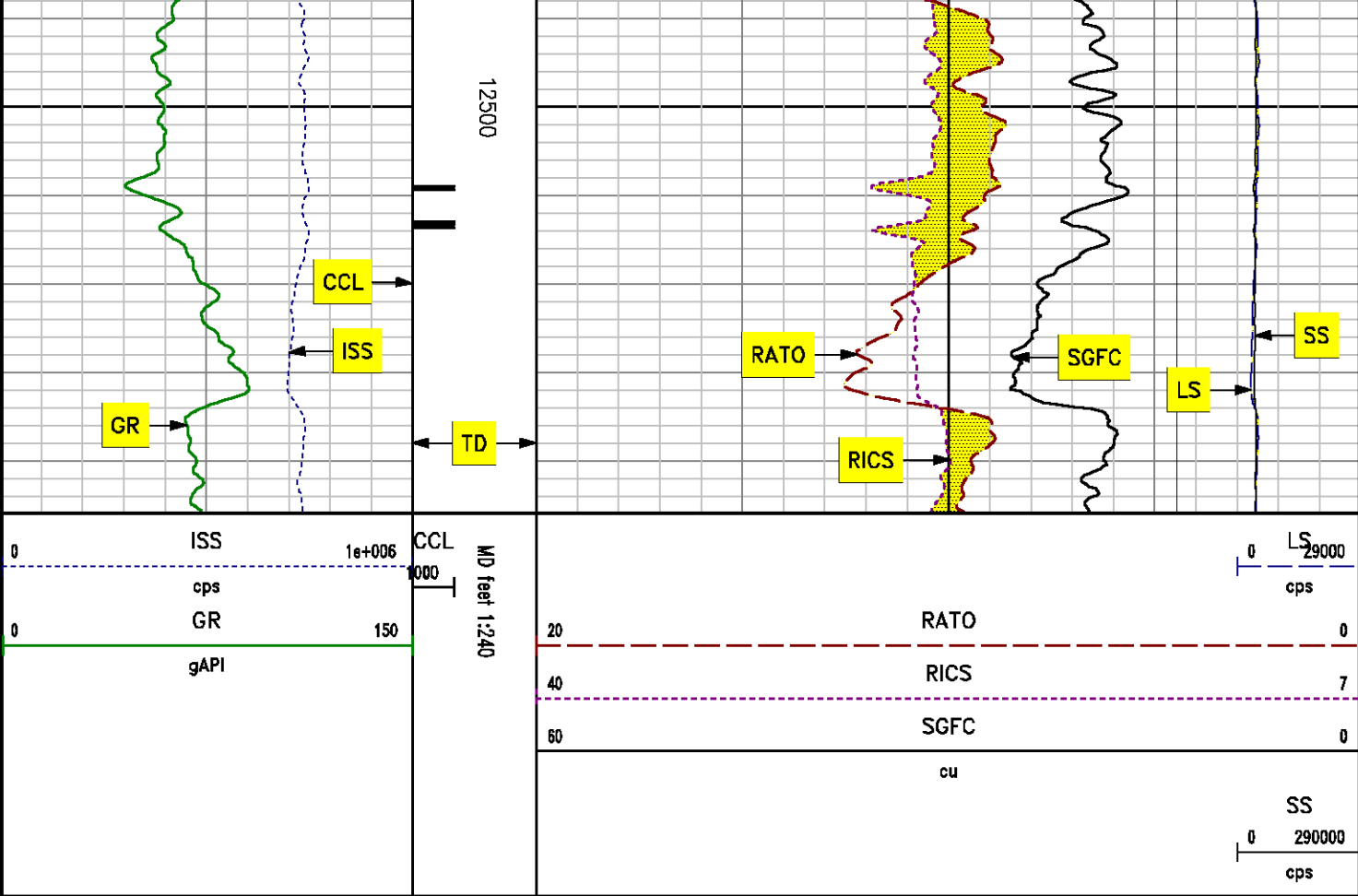












*REPEAT SECTION  
IN PNC 3D MODE*

### SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		11987.780	12488.000
PNC Porosity	Borehole Size	7.875	inch	11987.780	12488.000
PNC Porosity	Casing Size	4.500	inch	11987.780	12488.000
PNC Porosity	Gas Filled	Non Gas Filled		11987.780	12488.000
PNC Porosity	Matrix	Sandstone		11987.780	12488.000

**DEPTH OFFSETS**  
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
8248EA	-15.470	FLTM					
8248EA	-13.470	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	RAT023
		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	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	0.000	TEN	TTEN				

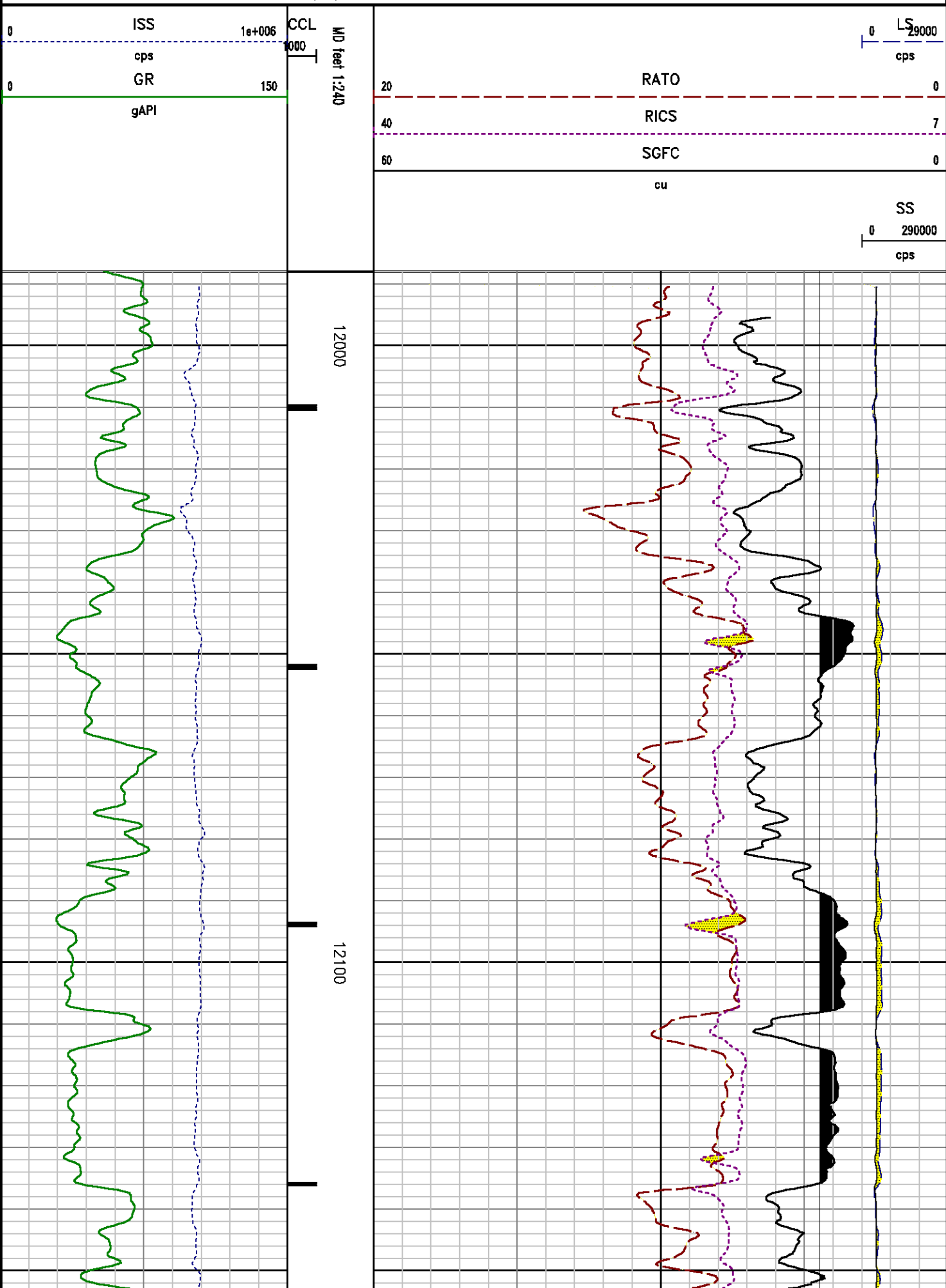
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Plotted by : PlotMgr, v5.4.504

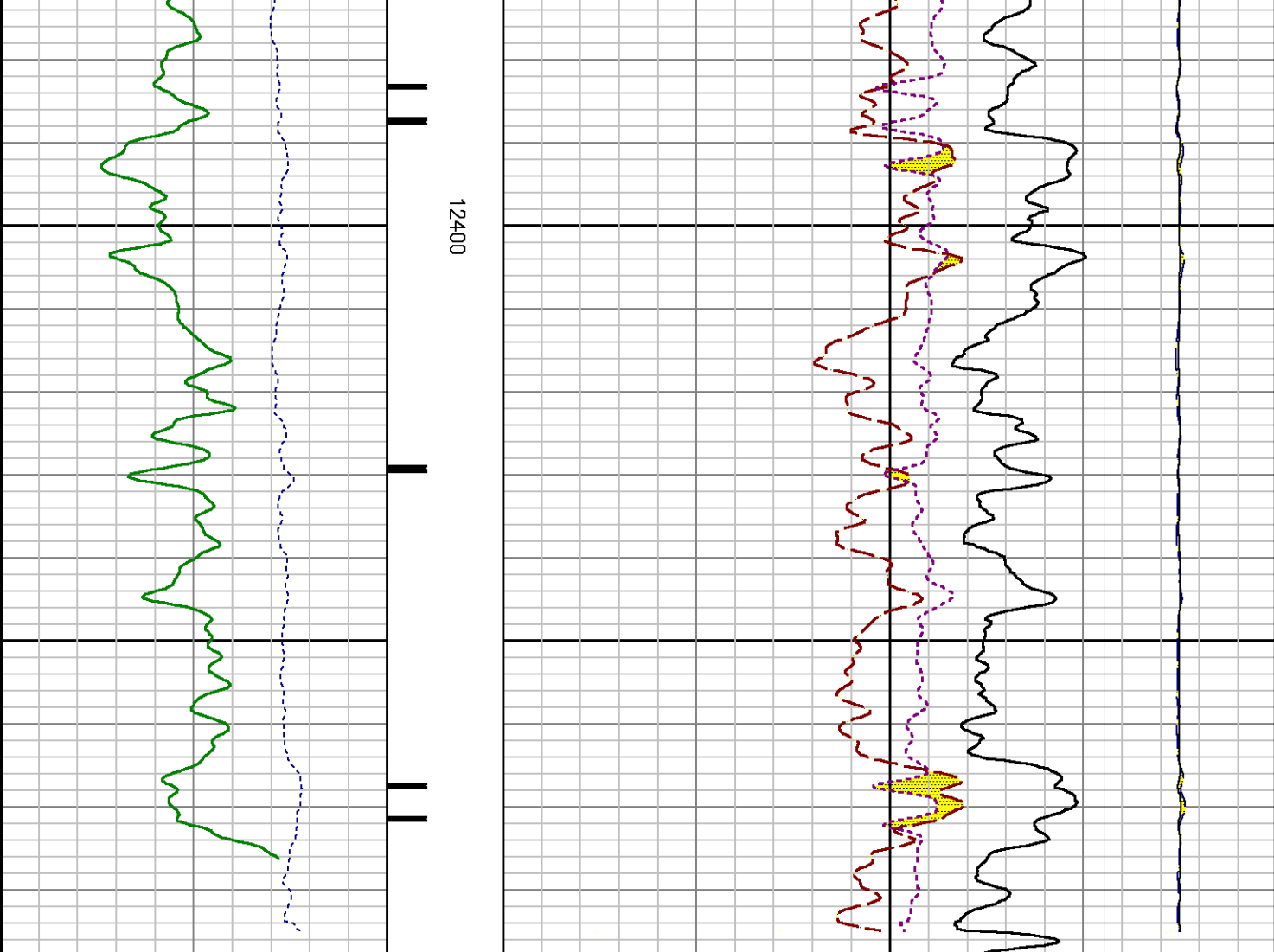
Company : EXXONMOBIL PRODUCTION COMPANY

Well : FRU 197-33B3

File Name : d:\well\data\b3rpm\rpm\_repeat.xtf







0	ISS	1e+006	CCL	0	LS	29000
	cps		0000		cps	
0	GR	150	MD feet 1:240	20	RATO	0
	gAPI			40	RICS	7
				60	SGFC	0
					cu	
						SS
						0 290000
						cps

## CALIBRATION SUMMARY

## GAMMA RAY

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Aug 22 11:07:56 2010 TOOL SERIES: 8262XA ASSET: 217 SEQ: AU

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
DAS2K DA612	141.82	489.20	0.518	73.49	253.49	180.00

Verification File: C:\case\calver\GR\217AU.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Sun Aug 22 11:10:06 2010 TOOL SERIES: 8262XA ASSET: 217 SEQ: AU

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
DAS2K DA612	142.02	479.71	0.518	73.59	248.57	174.98

**PNC**

Calibration File: C:\case\calver\PNC\883SE.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Sep 13 09:56:48 2010 TOOL SERIES: 8281XA ASSET: 883 SEQ: SE

Calibrator #

SHOP BARREL

Source #

8281AA 10160595

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	826716	132.00	2284.00	2261.00	2285.00	111.04	15.00	0.9957
Interpolated	1300000	155.37	2264.96	2250.38	2278.53			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	826716	7267.14	1177.32	186.78	25.87	0.14	24.38	0.27
					25.35 26.15	0.00 0.20	23.60 24.80	0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	826716	176961.20	27054.05	92561.12	32900.22	8697.30	56027.19	13944.88
Fit Quality %		0.93	0.89	1.00	0.94	0.81	0.90	0.84

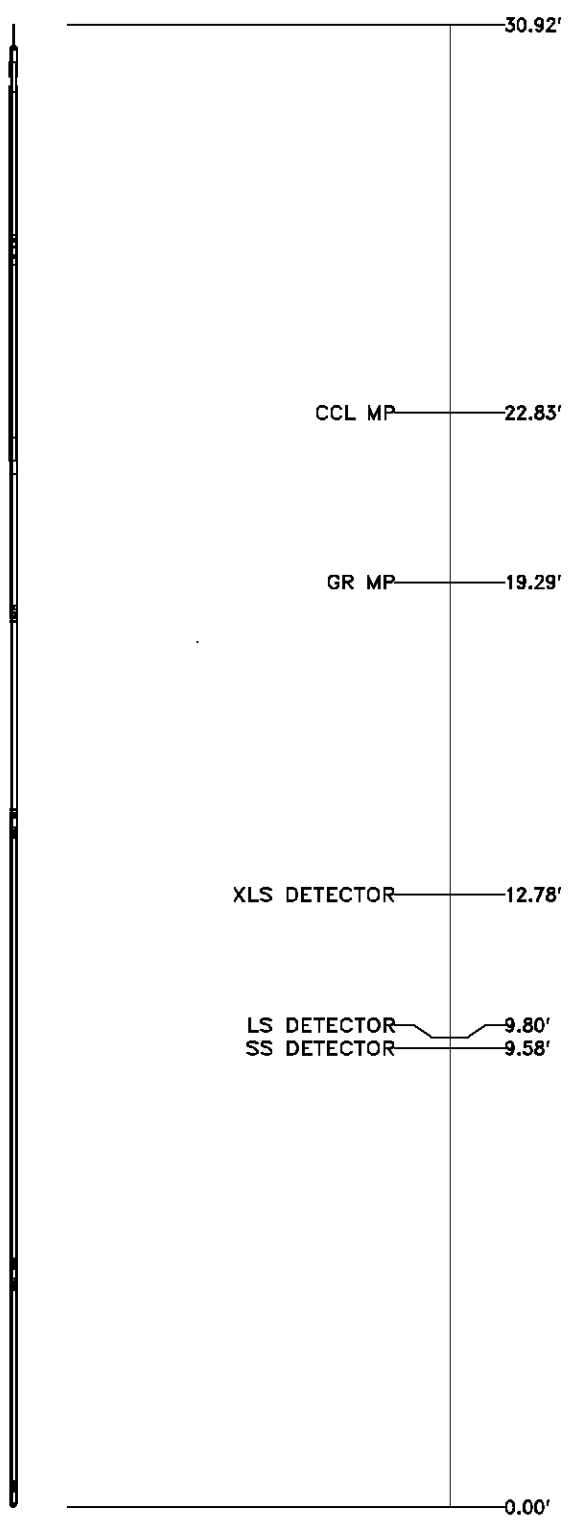
	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	826716	1.43	4.67	30.56	14.76	10.64	3.78	4.02
		1.42 1.45	3.55 5.21	22.20 32.10	10.99 16.34	10.06 11.10	3.57 3.95	3.76 4.22
Fit Quality %		0.04	0.27	0.32	0.16	0.18	0.12	0.13

1409115	1.43	4.69	30.54	14.84	10.61	3.78	4.01						
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'

<b>RESERVOIR PERFORMANCE MONITOR</b>	
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: 30.92'  
Total Weight: Not Available  
Max Diameter: 0' 1.70"



Baker Atlas



Company	EXXONMOBIL PRODUCTION COMPANY		
Well	FRU 197-33B3		
Field	FREEDOM UNIT		
County	RIO BLANCO	State	COLORADO

File No:	
API No:	05103114330000

Location
2393' FNL & 1395' FEL
SEC 33      TWP 1S      RGE 97W

Elevations
KB 6476 ft
DF 6475 ft
GL 6446 ft

