



FILE NO: CH092545	COMPANY WELL FIELD COUNTY	WPX ENERGY GM 642-12 GRAND VALLEY GARFIELD	STATE CO
API NO: 05045224690000			

Ver. 3.87 12 7S 96W GM 21-12 PAD NABORS 573	LOCATION: SHL: 1201' FNL & 1935' FWL BHL: 2189' FNL & 822' FEL SEC 12 TWP 7S RGE 96W	OTHER SERVICES BOND LOG
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PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB KB GL	ELEVATION 26 FT ABOVE P.D. 5125 FT
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DATE	20-Nov-2014
RUN	1
SERVICE ORDER	US092545
DEPTH DRILLER	7245 FT
DEPTH LOGGER	7203 FT
BOTTOM LOGGED INTERVAL	7193 FT
TOP LOGGED INTERVAL	3898 FT
TIME STARTED	06:00
TIME FINISHED	10:00
OPERATOR RIG TIME	5 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	73 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	206 DEGF
REFERENCE LOG	BAKER HUGHES BOND LOG
REFERENCE LOG DATE	19-NOV-2014
EQUIP. NO.	HL-6670
LOCATION	GRAND JCT.
RECORDED BY	RENEAU
WITNESSED BY	ORAN JACOBS

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	1625 FT
8.75 IN	1625 FT	7246 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN			0 FT	1625 FT
4.5 IN	11.6 LB/F	I-80	0 FT	7246 FT

REMARKS

RUN 1 TRIP 1: All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 19/NOV/2014 at the client's request.

The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.

The amount of linear shift is 2 feet.

Logged in PNC-3D mode.

BHT = 206 degF

SJ = 3597' - 3619'

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	TEMP	8255XA	11774586	FREE
1	1	RPM	8281FA	10307727	FREE
1	1	RPM	8283PA	10160383	FREE
1	1	RPM	8281EA	10190984	FREE
1	1	GR	2812LA	11701636	FREE
1	1	TEL/CCL	8248EA	10590814	FREE
1	1	PCM	8250EA	10408796	FREE

MAIN SECTION PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 4

Plotted: Thu Nov 20 12:39:54 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH092545/n354h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 3868.250 ft BOTTOM DEPTH: 7202.750 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER (1)	medium (1)		TOP	BOTTOM

RPM PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP	BOTTOM
	OPEN/CASED HOLE	CASED HOLE		"	"
	BOREHOLE SIZE	8.75	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

CURVE DESCRIPTION REPORT

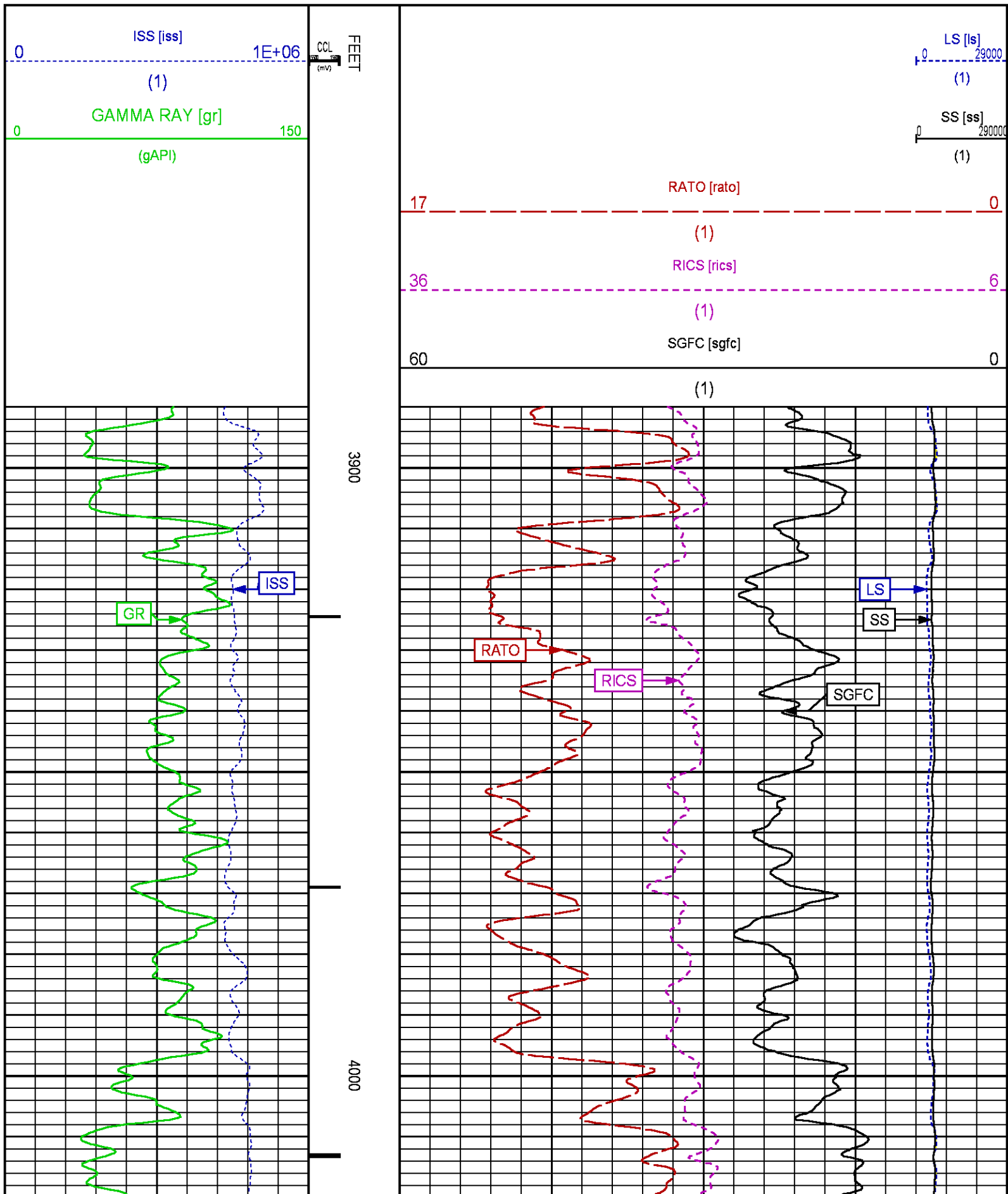
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Nov 20 12:07:41 2014	CASING COLLAR LOCATOR
F1:GR	Nov 20 12:08:48 2014	GAMMA RAY
F1:ISS	Nov 20 12:08:48 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Nov 20 12:08:48 2014	LONG SPACE COUNT RATE
F1:RATO	Nov 20 12:09:10 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Nov 20 12:09:10 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Nov 20 12:09:11 2014	CORRECTED FORMATION SIGMA
F1:SS	Nov 20 12:09:11 2014	SHORT SPACE COUNT RATE

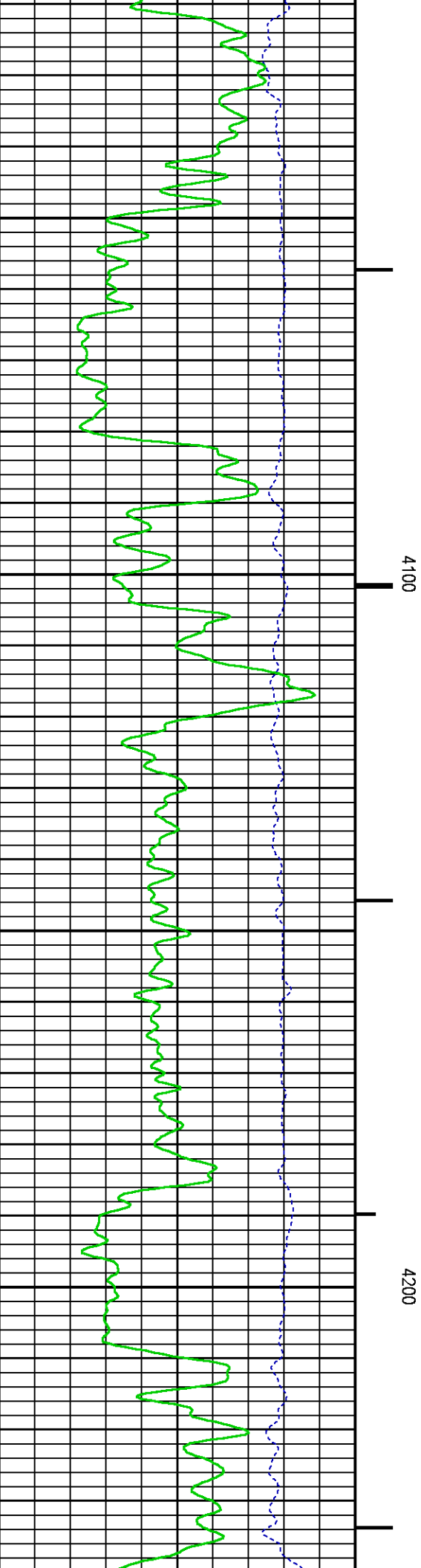
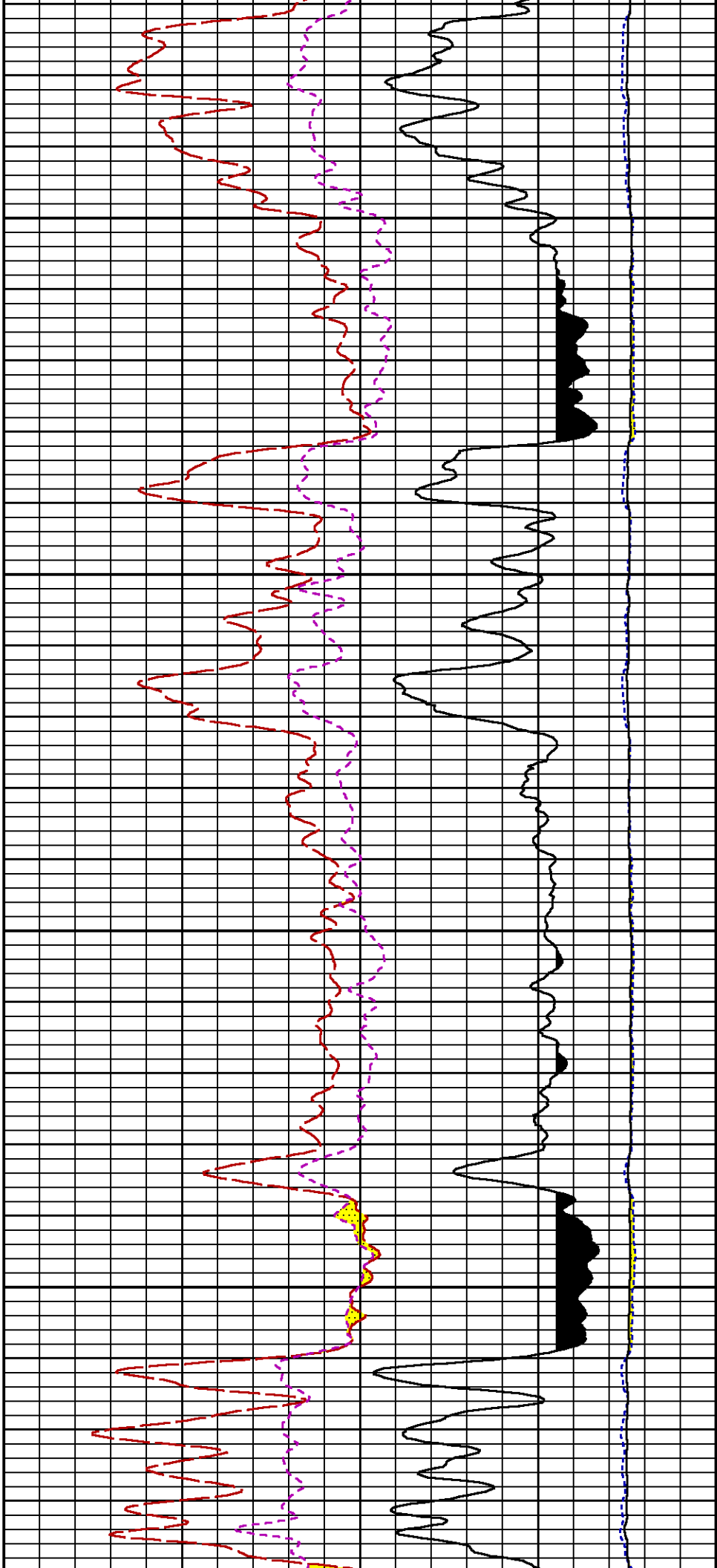
CURVE MEASURE POINT OFFSET

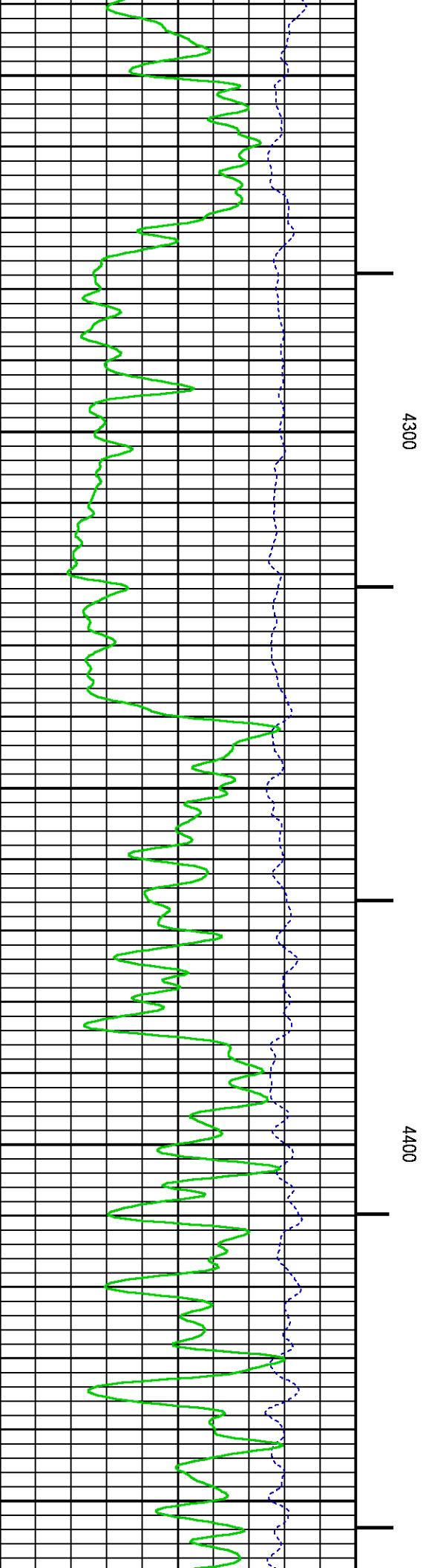
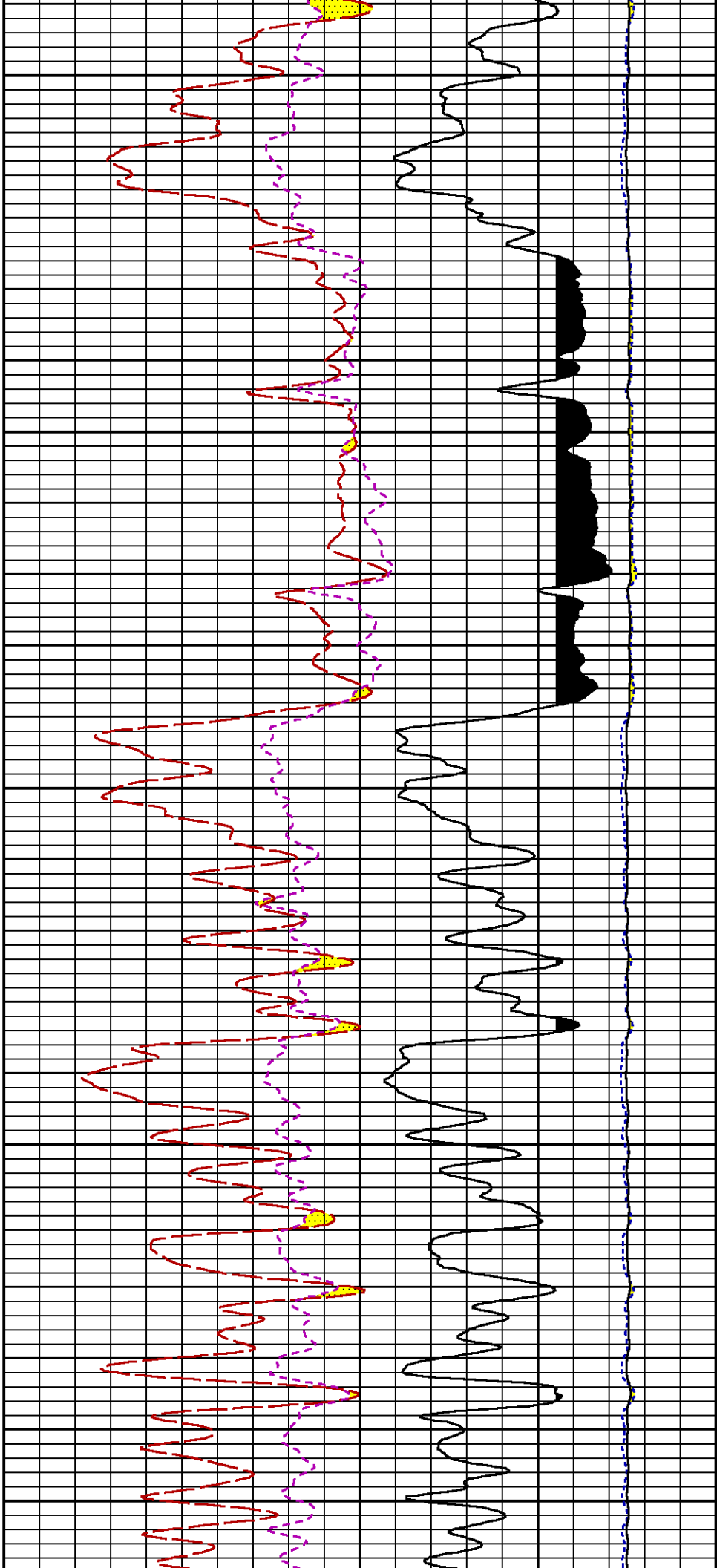
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

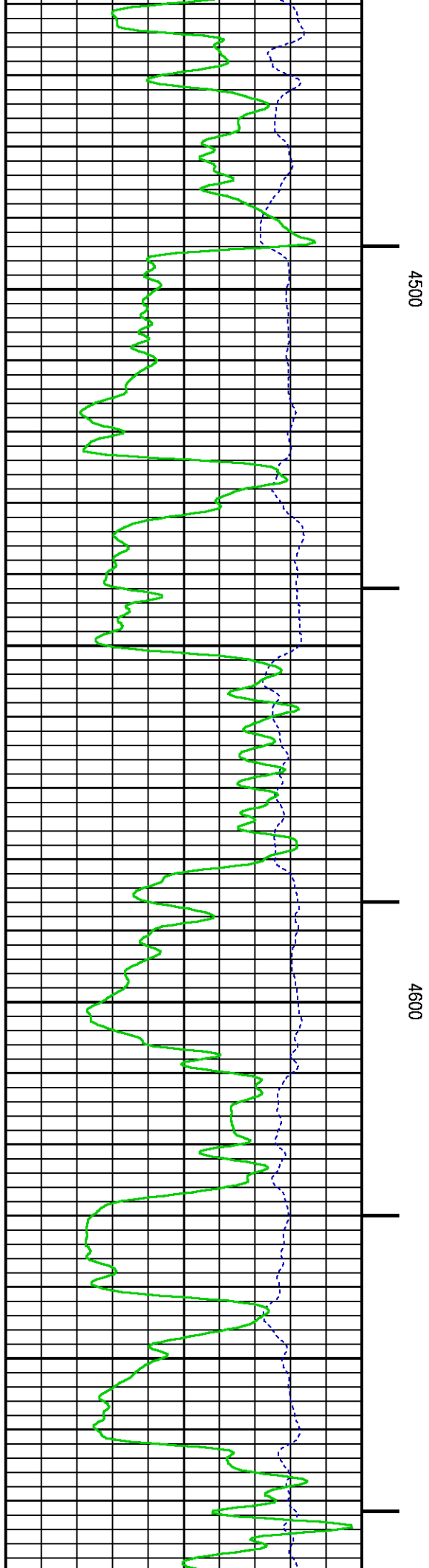
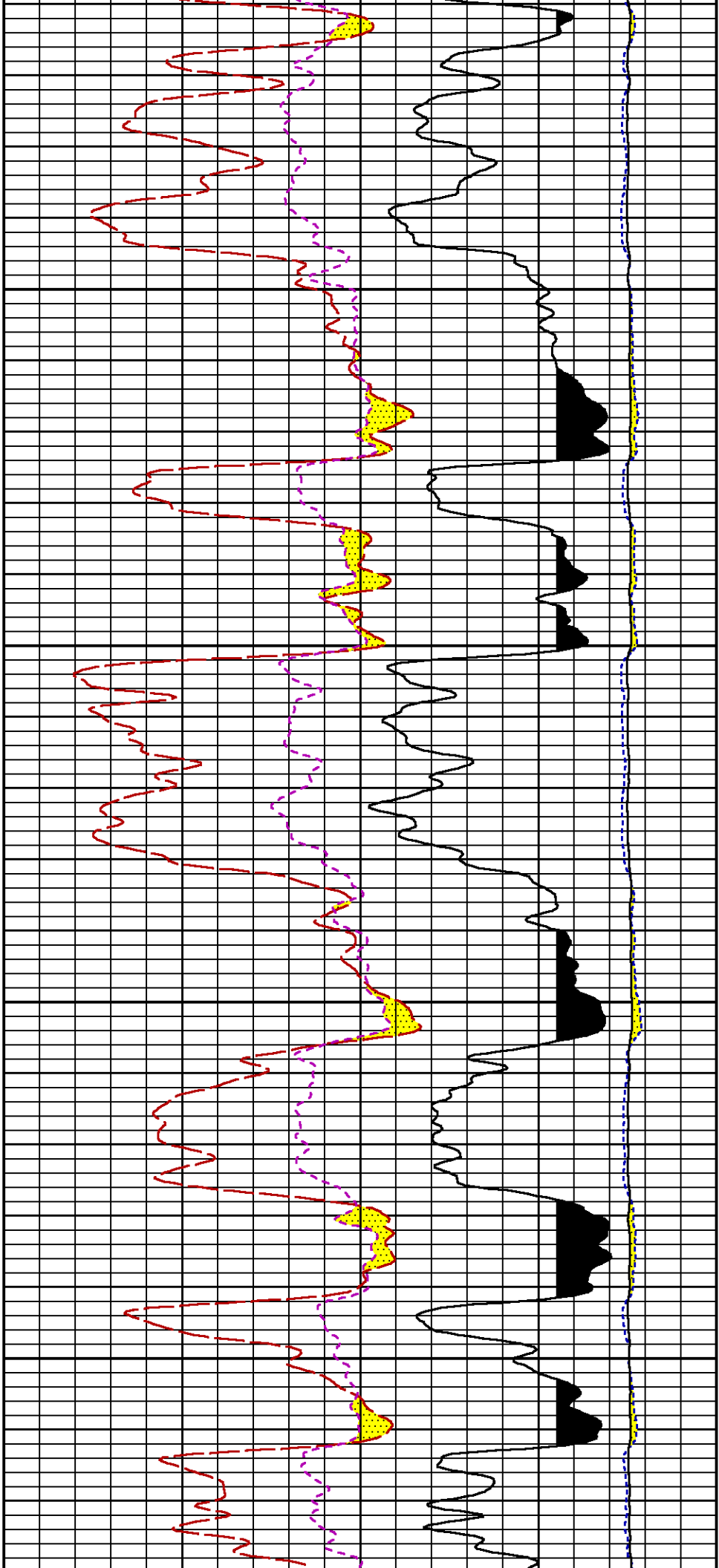
Presentation : HL6670:/dat1a/CH092545/542RPM_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 3890 - 7208 Feet

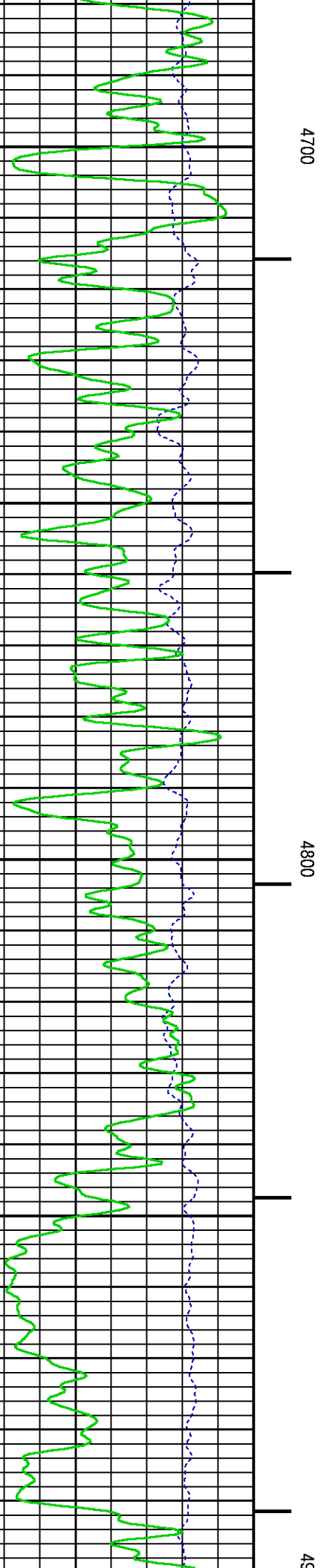
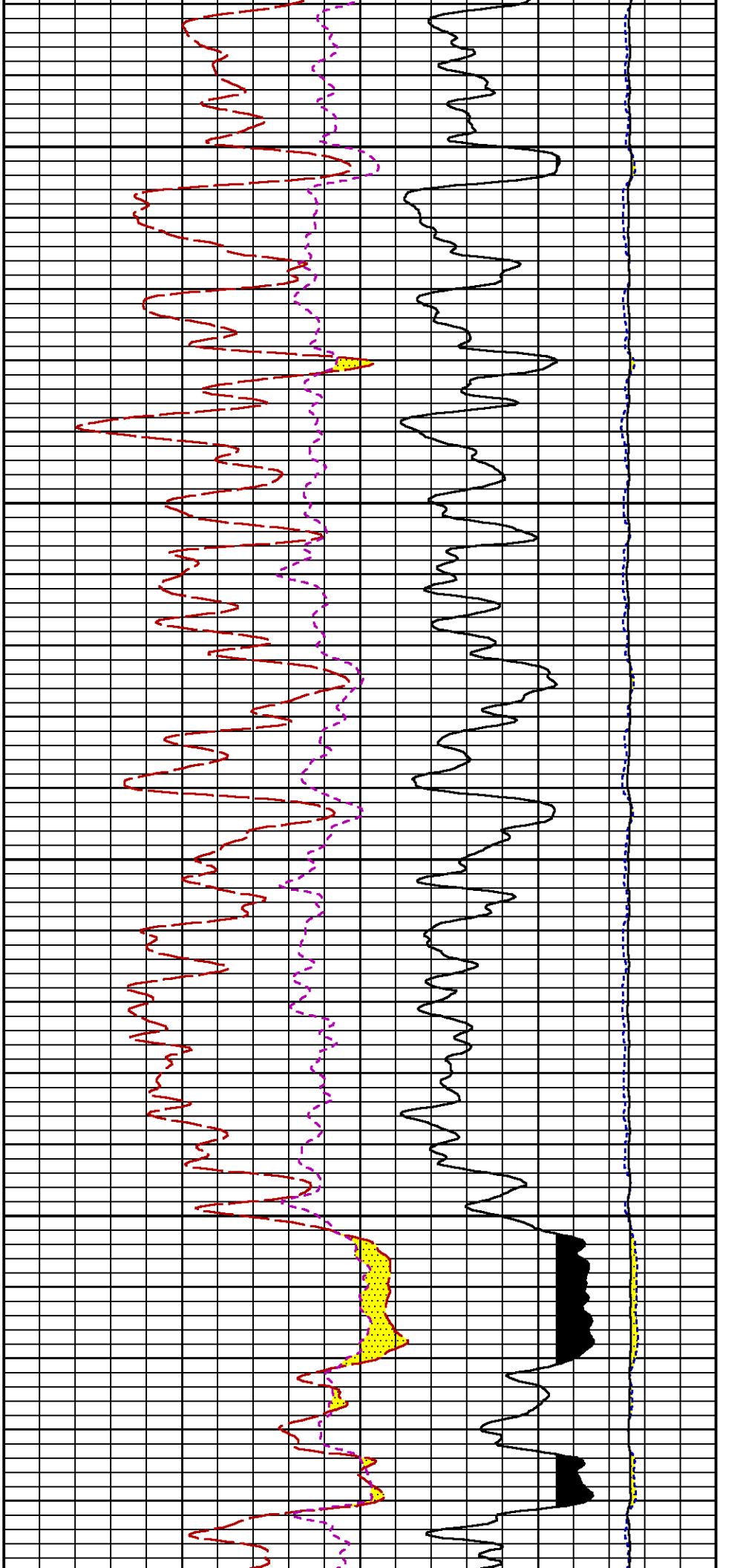
Data File 1 : F1 : HL6670:/dat1a/CH092545/542RPM_MAIN.xtf
Created On : Nov 20 12:07:20 2014
Company : WPX ENERGY
Well : GM 542-12
Field : GRAND VALLEY
File Interval : 27 - 7202.75 Feet
OCT : n354h

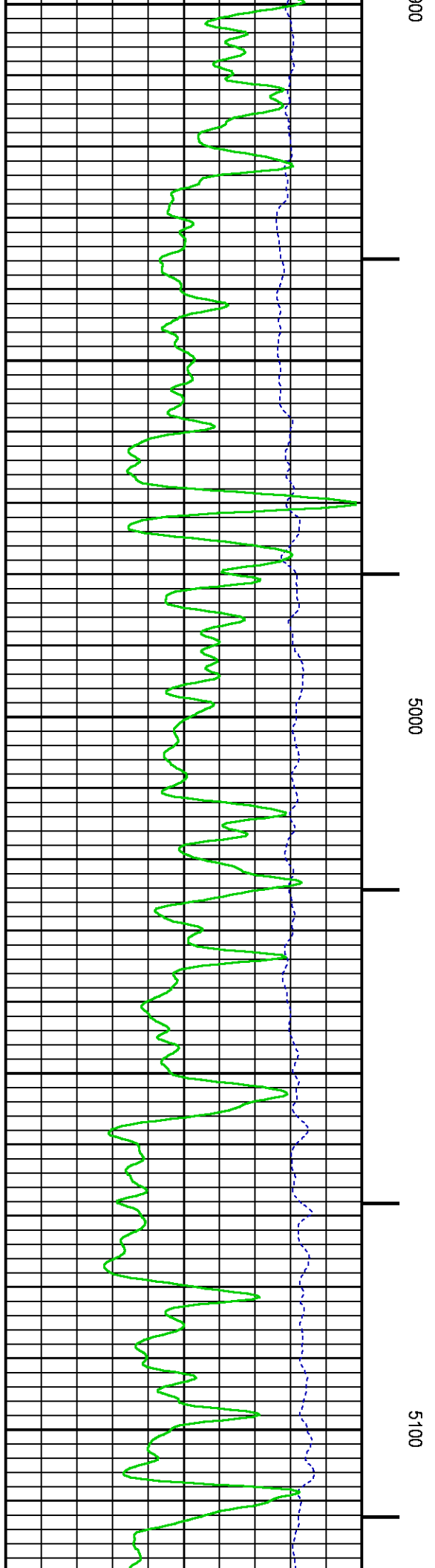
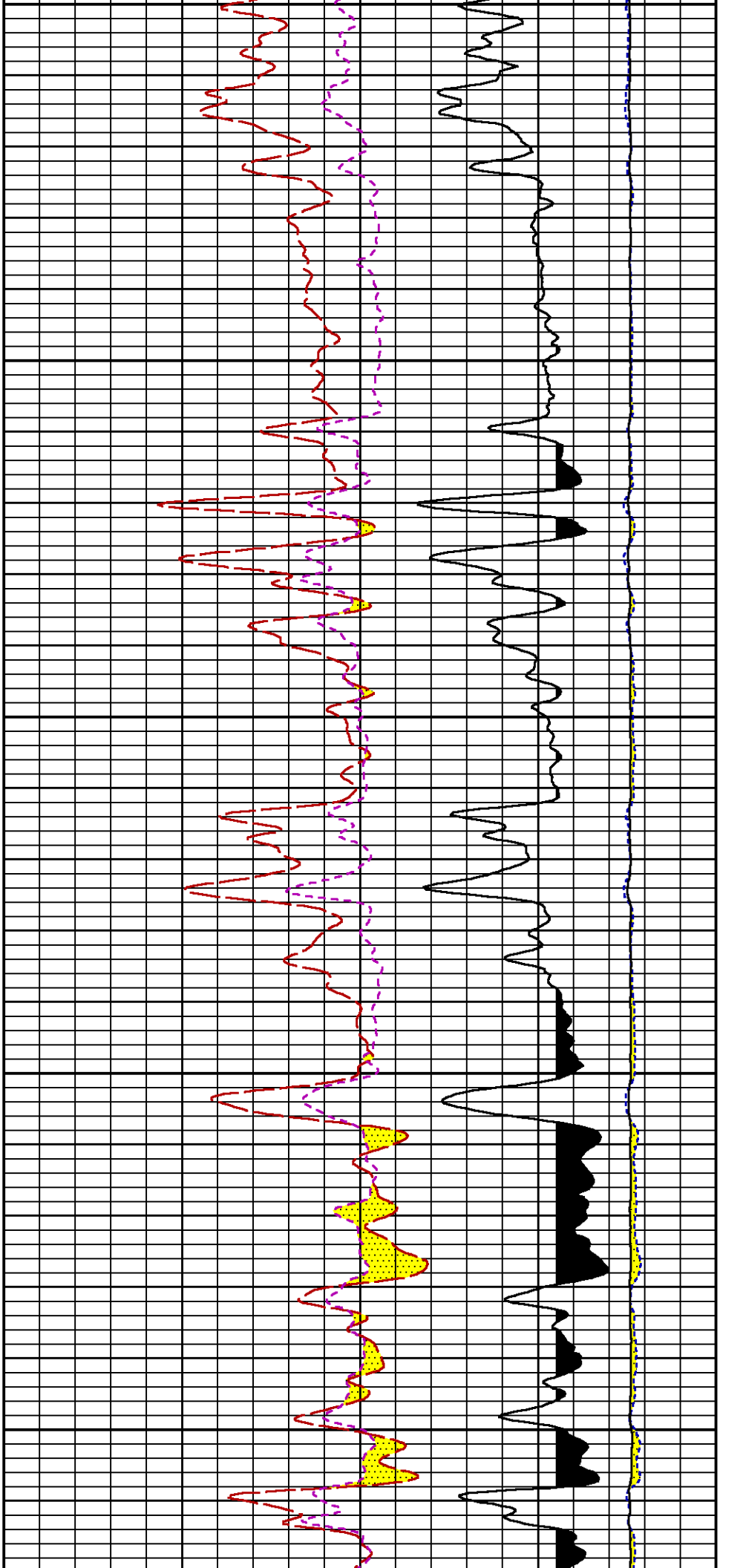


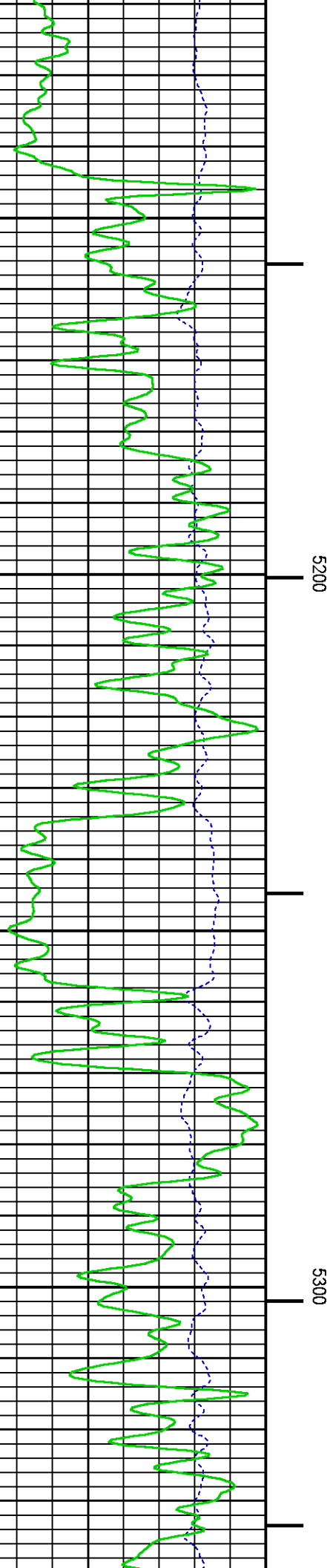
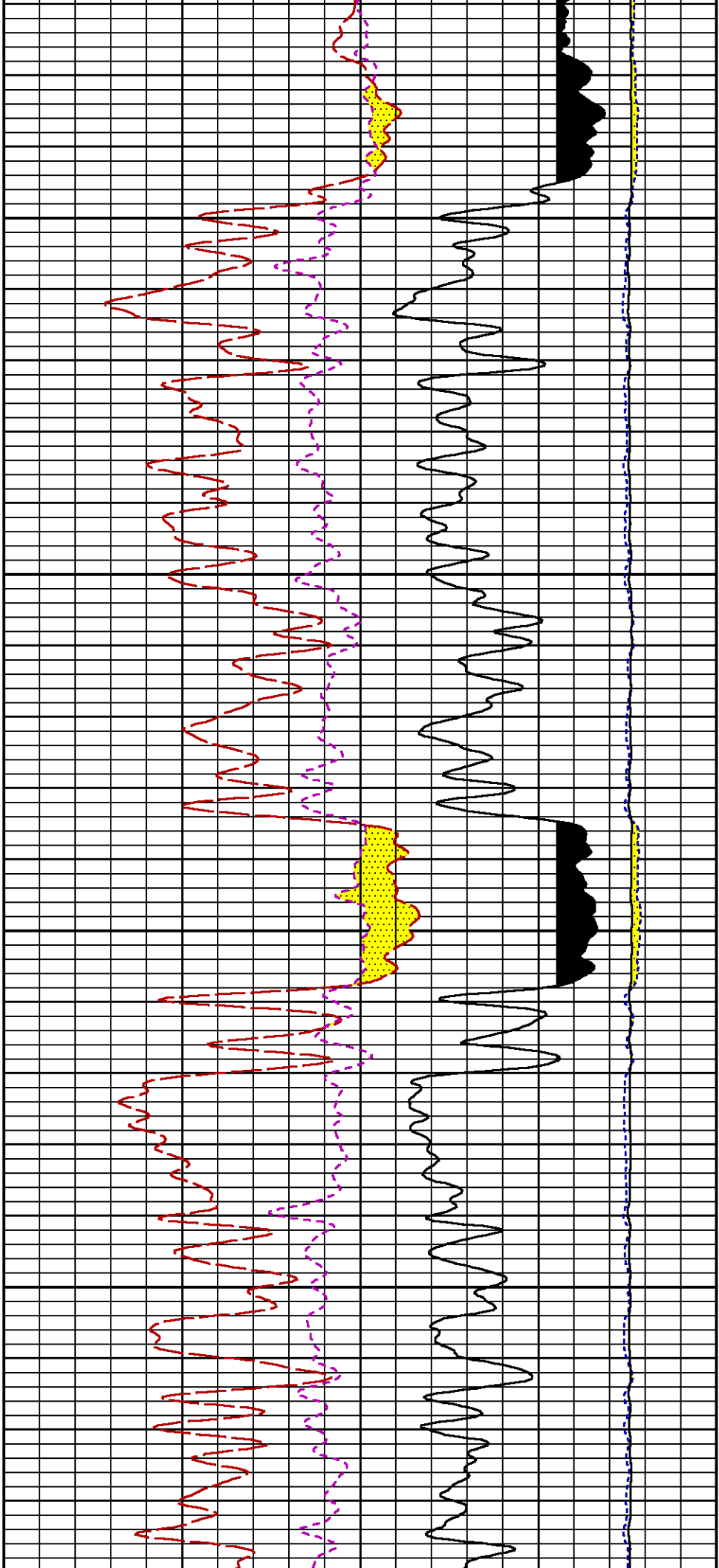


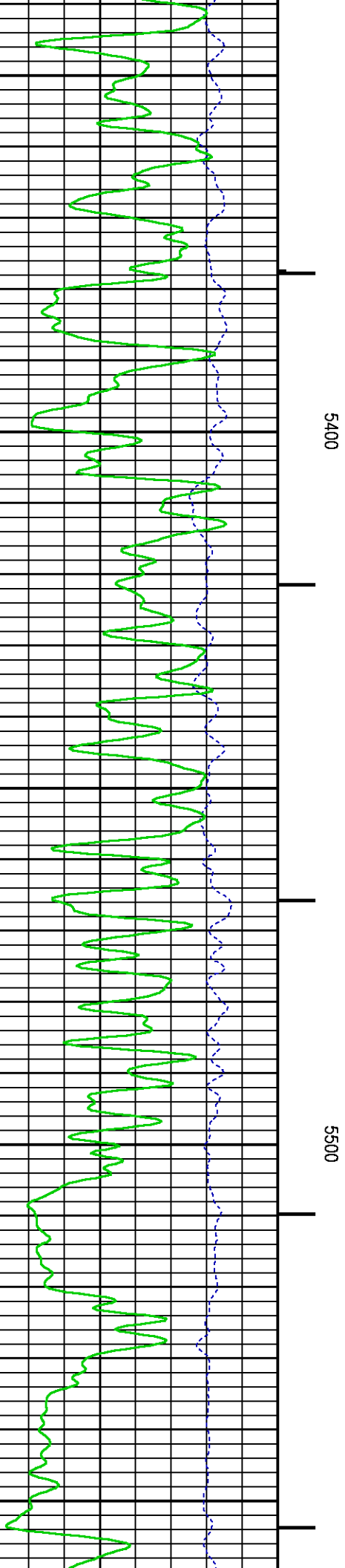
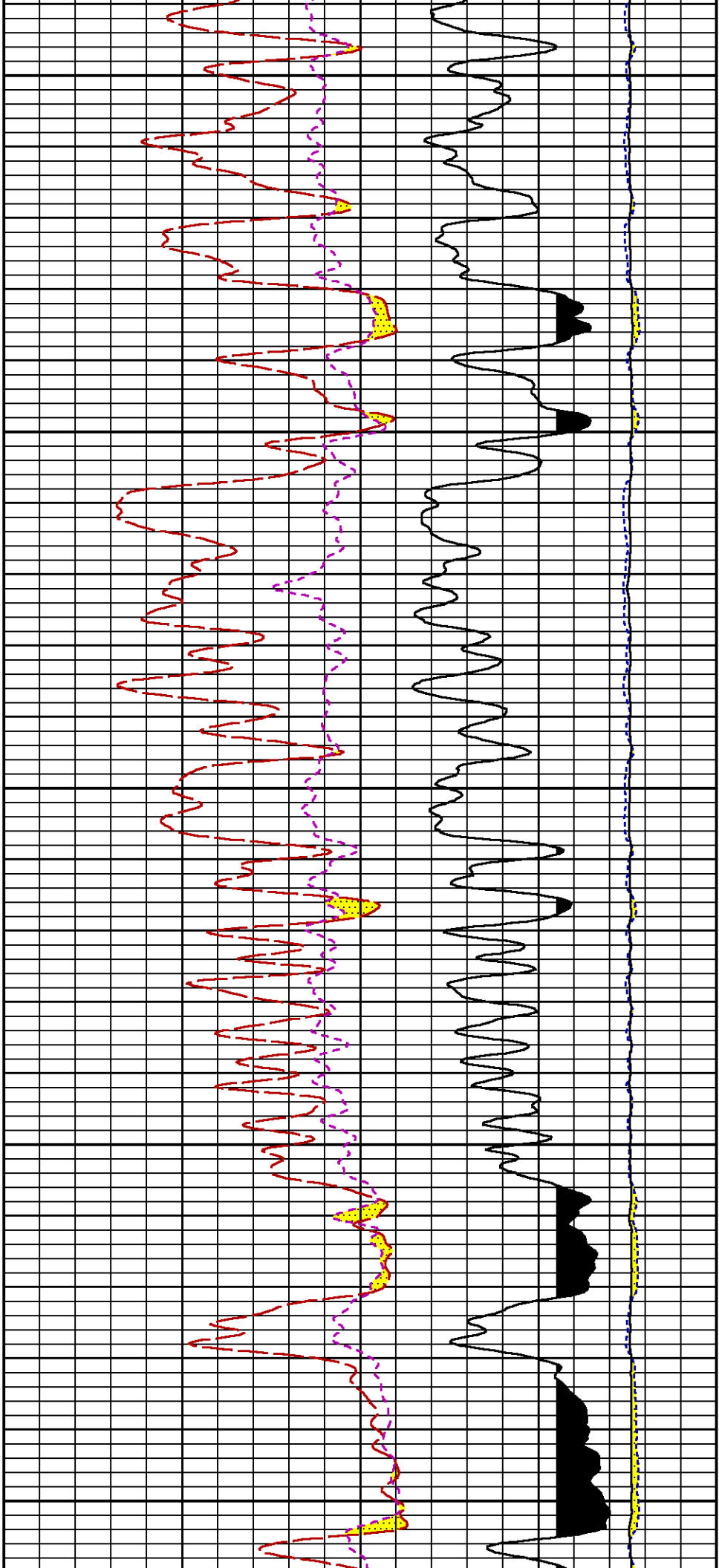


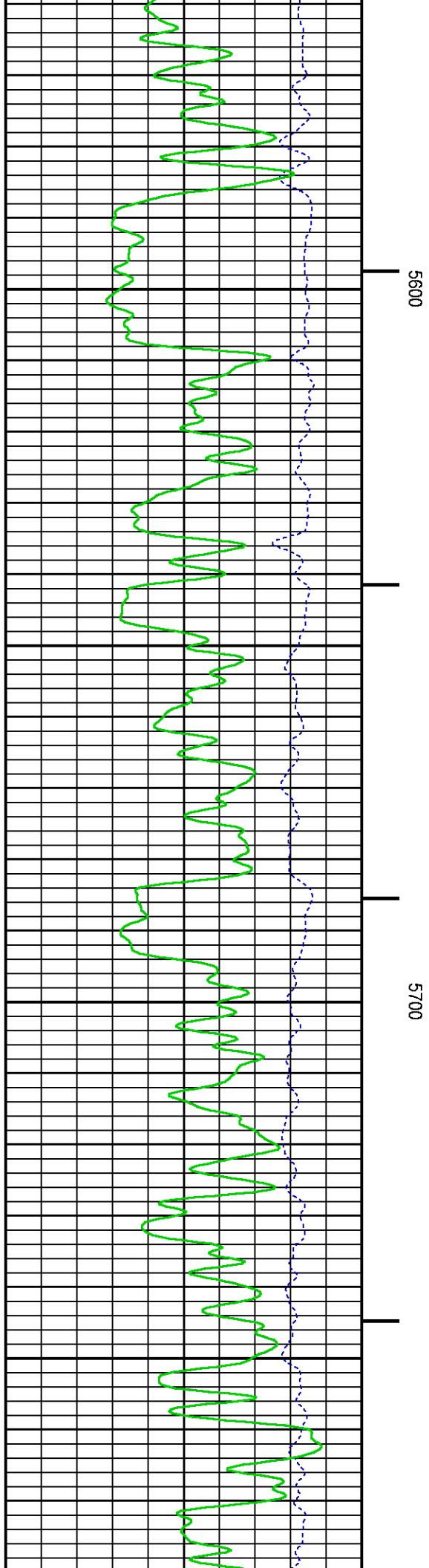
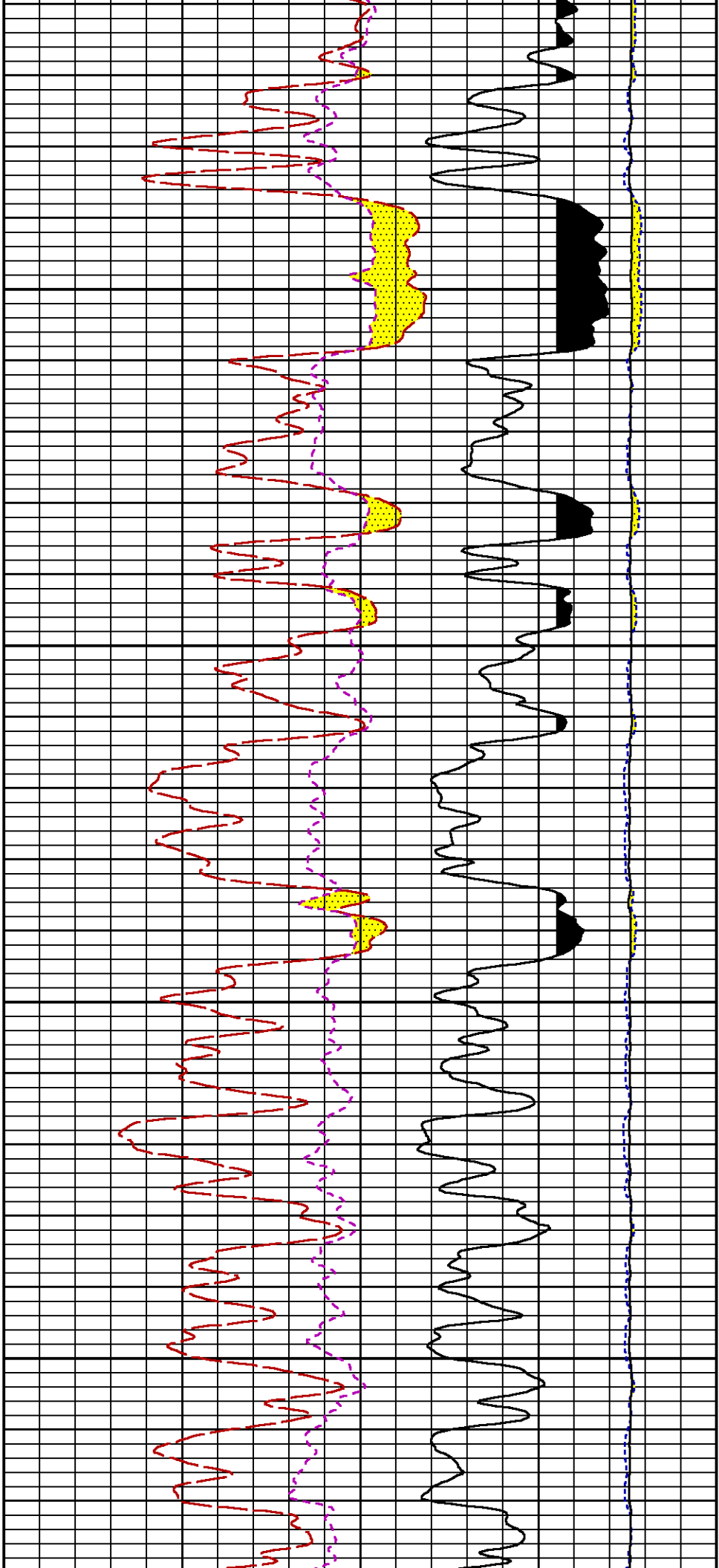


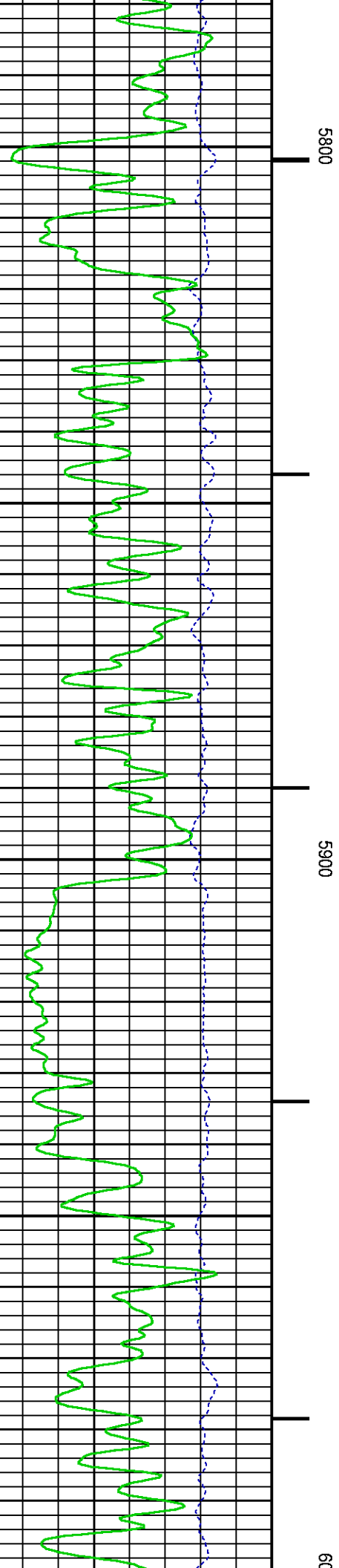
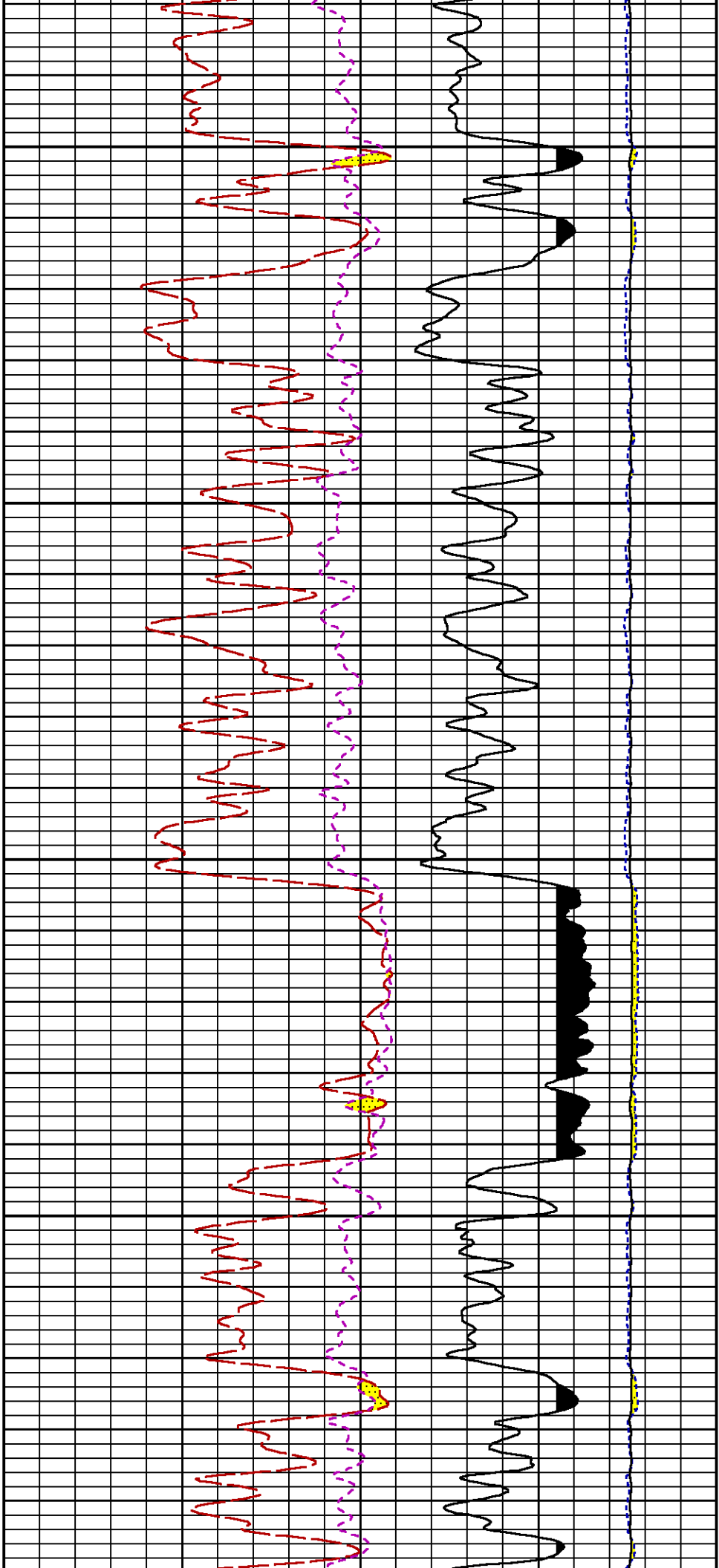


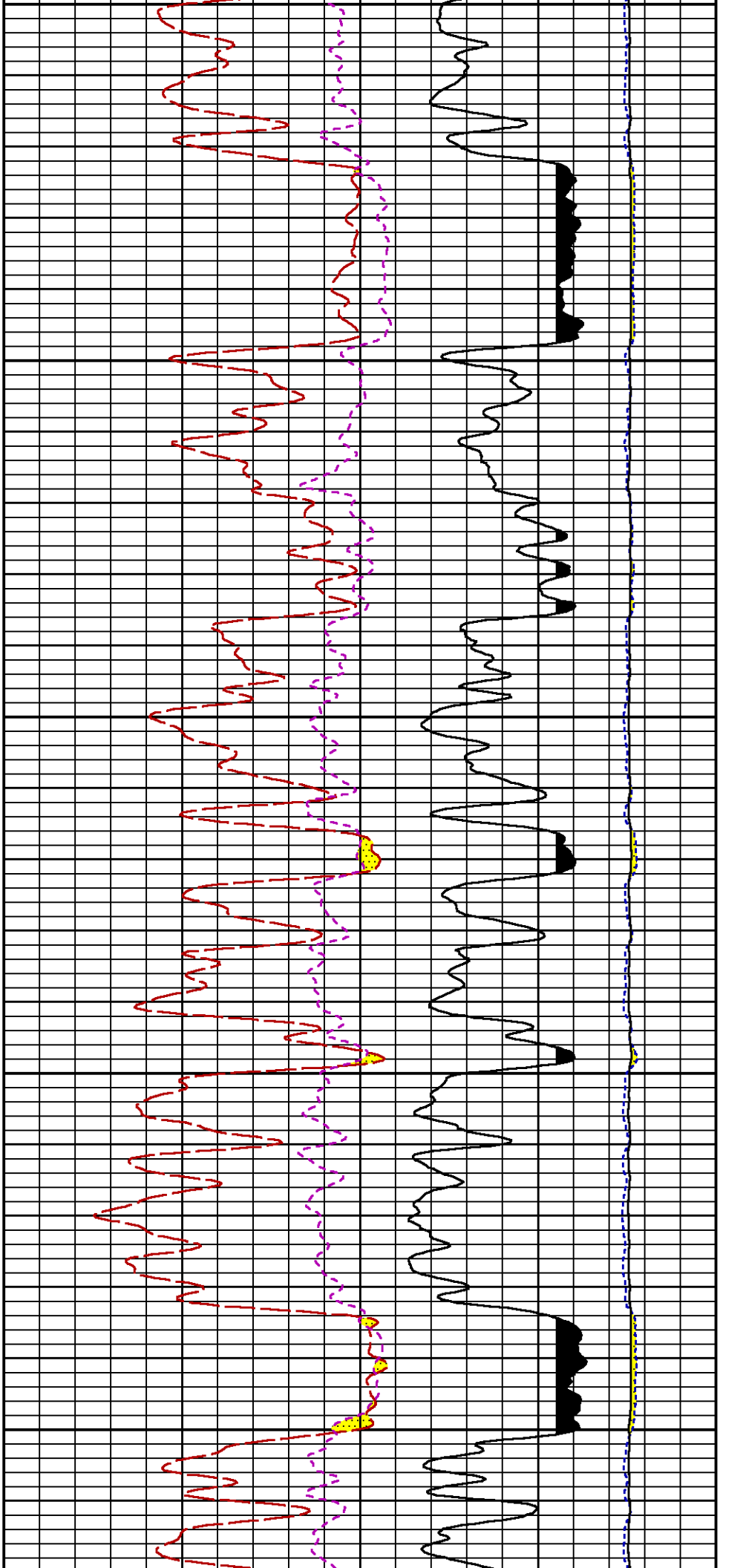








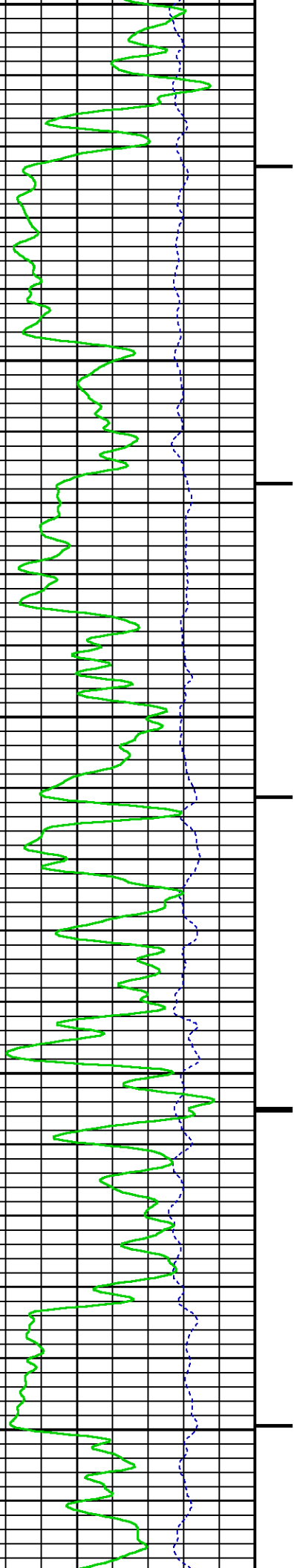


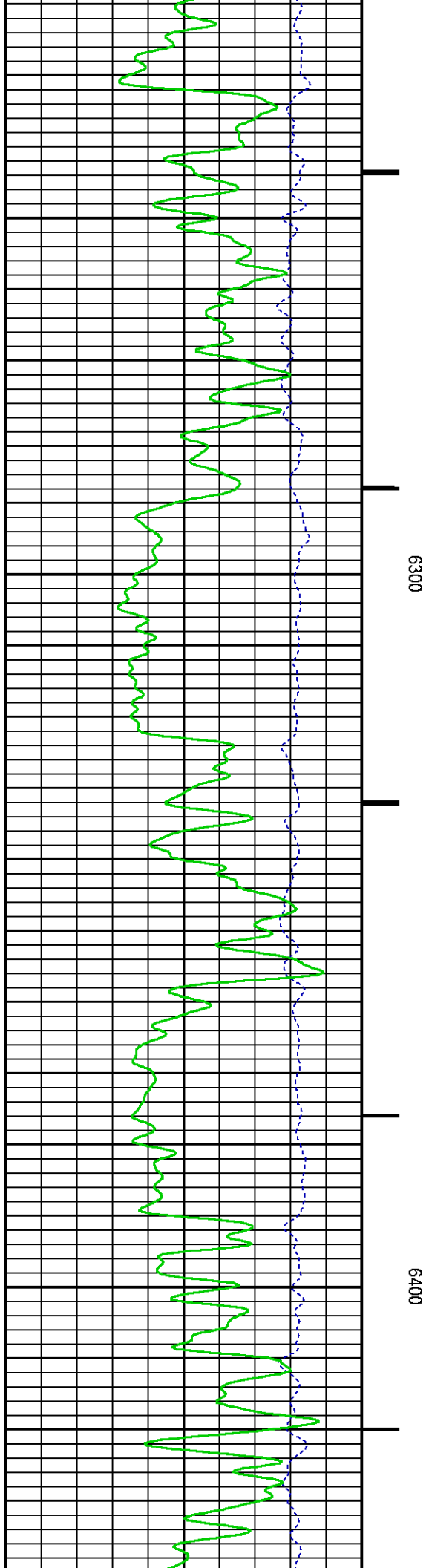
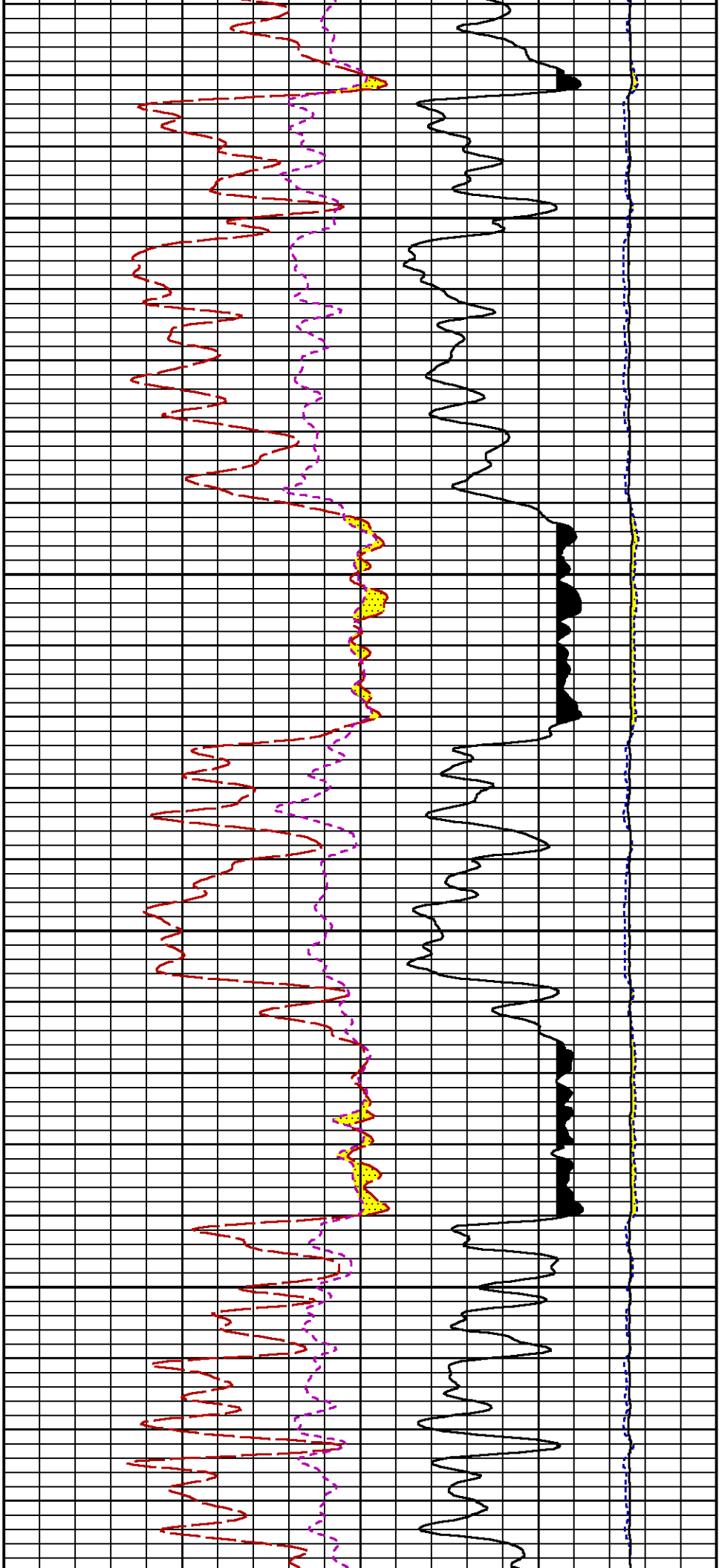


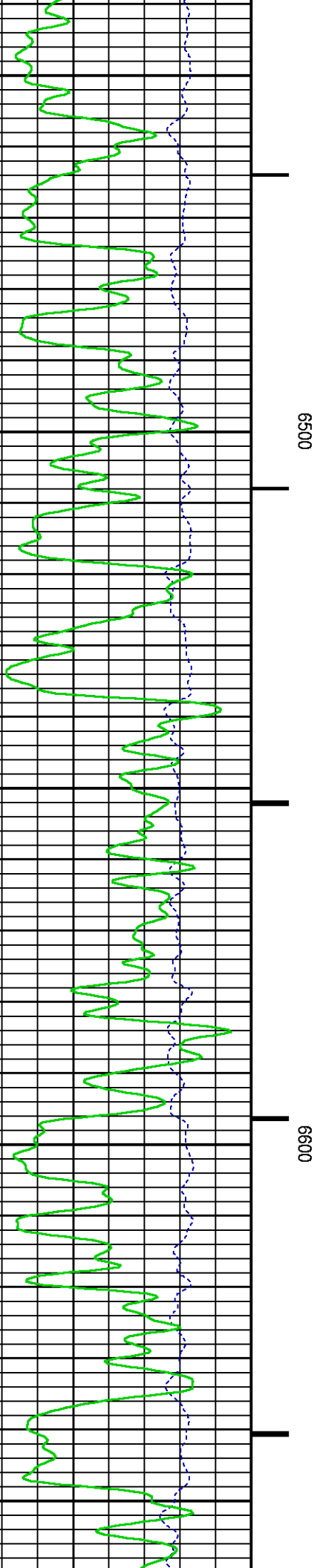
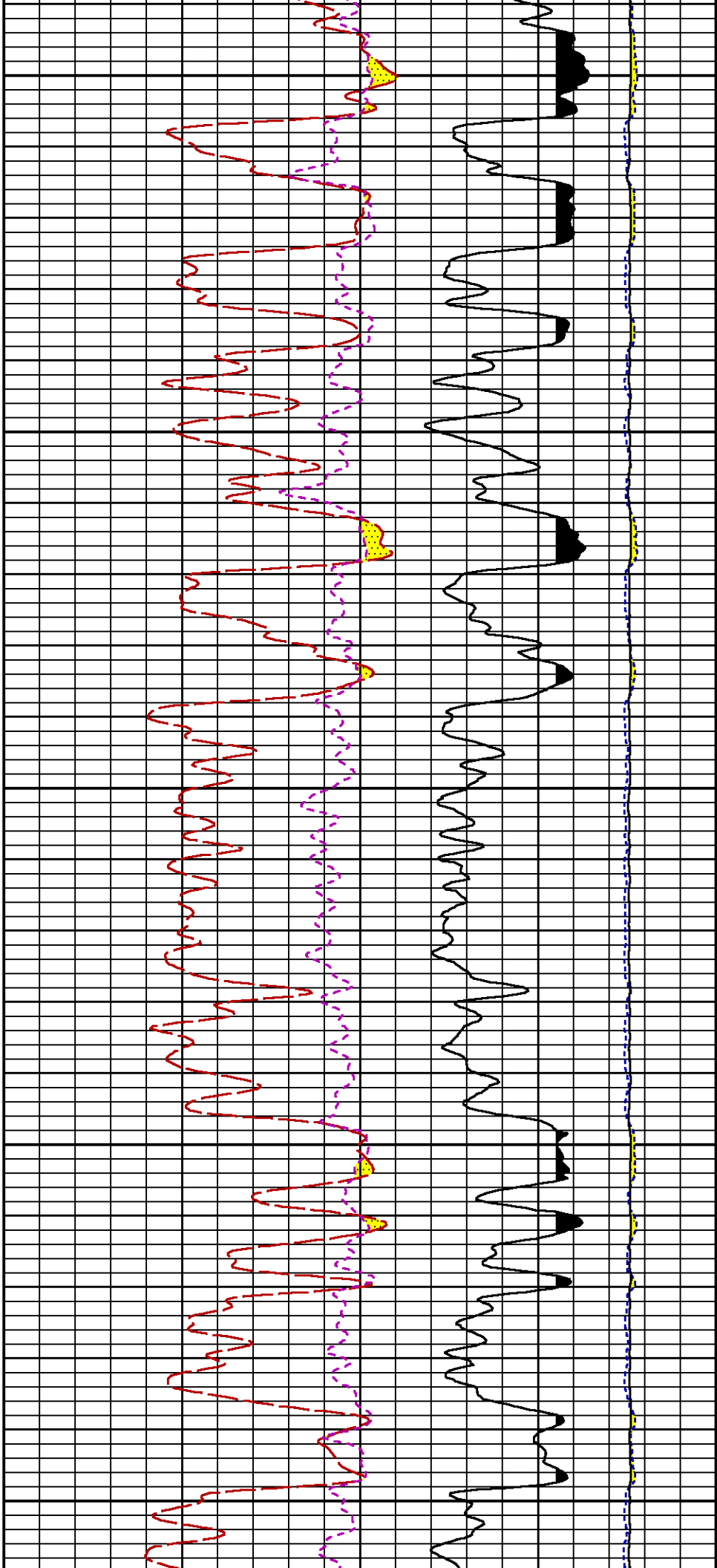
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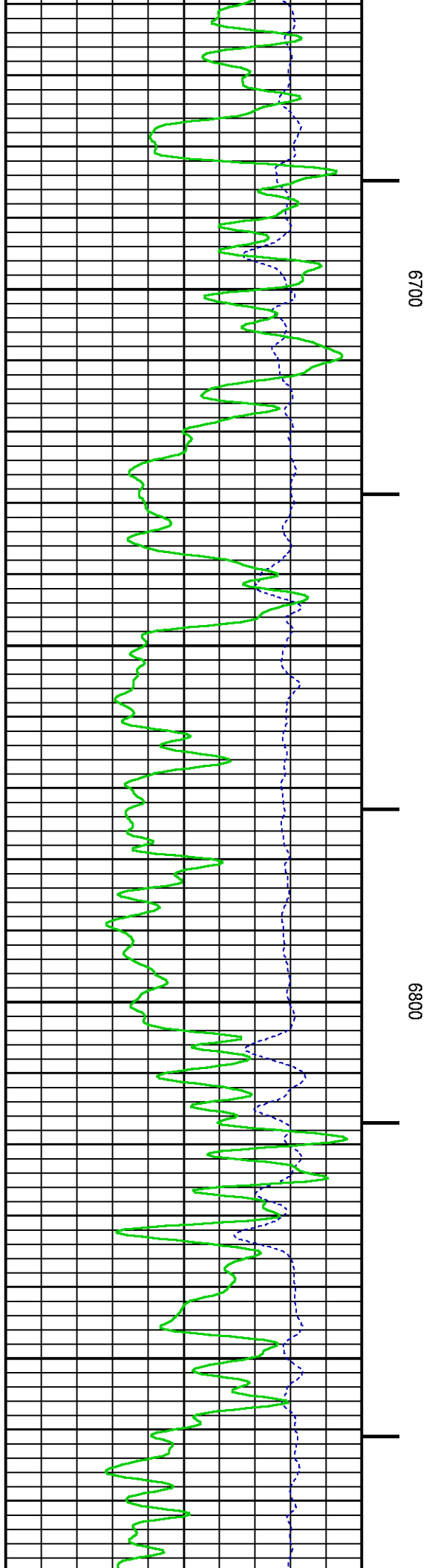
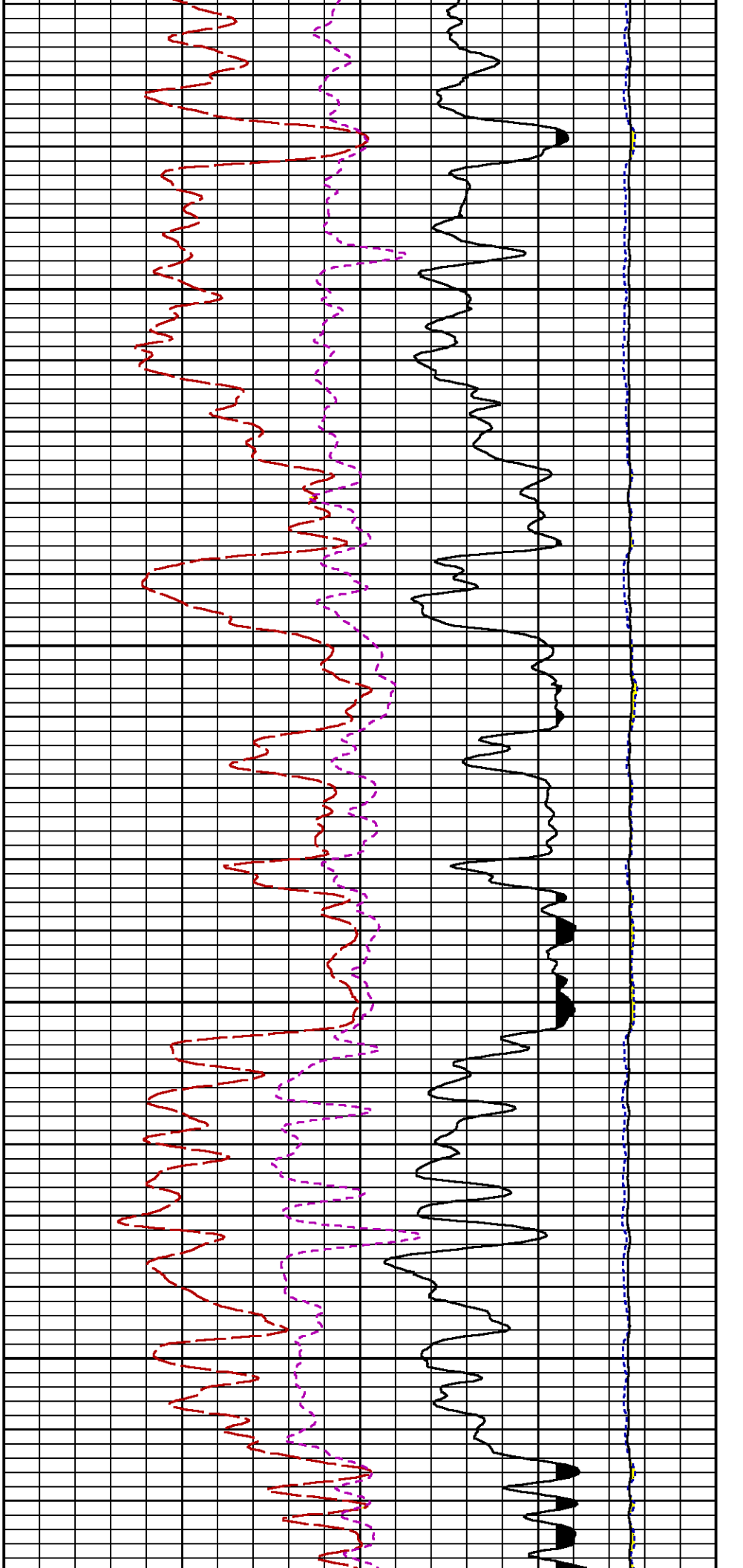
6100

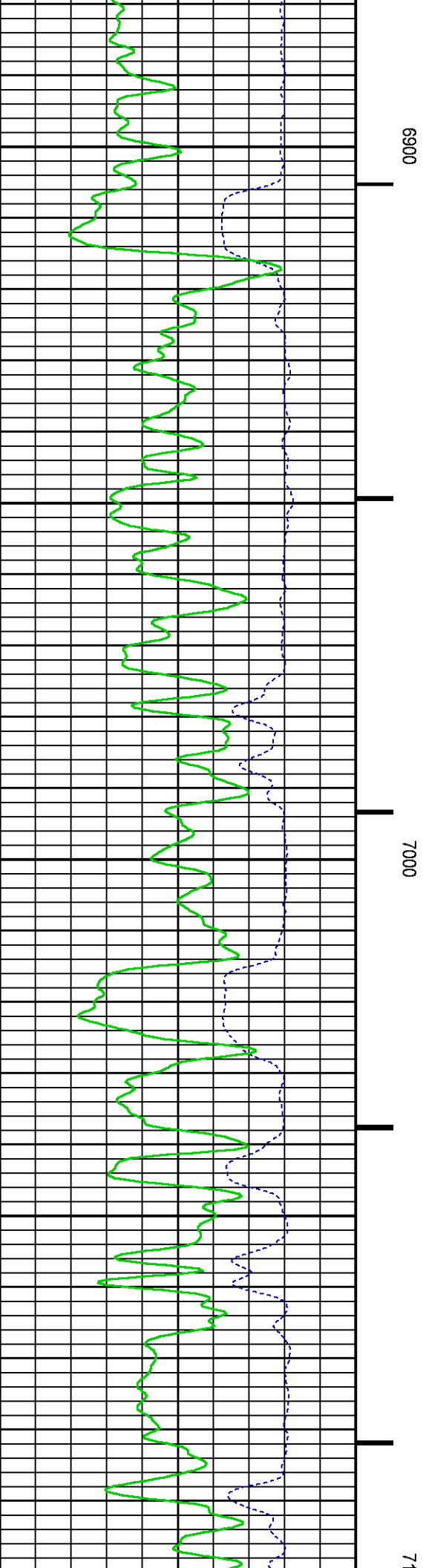
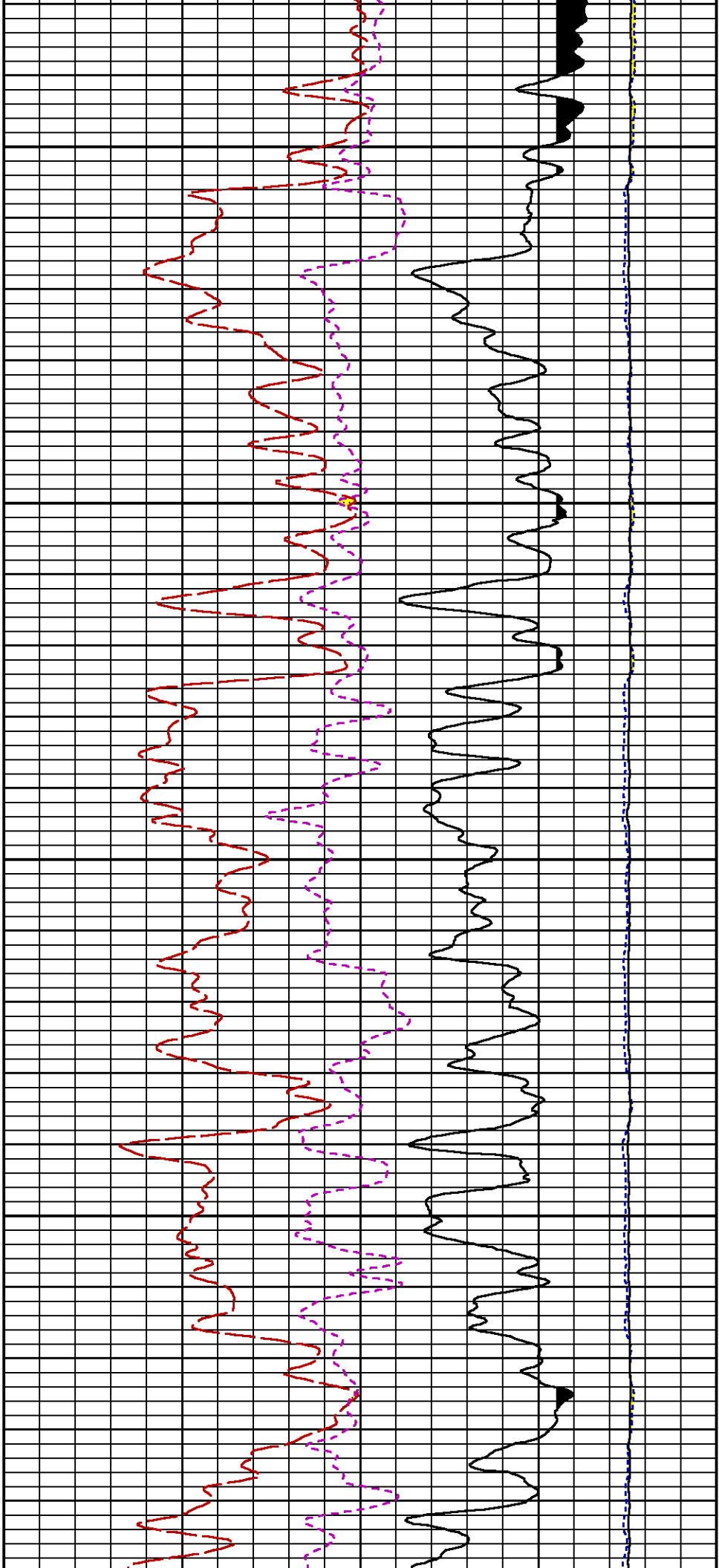
6200

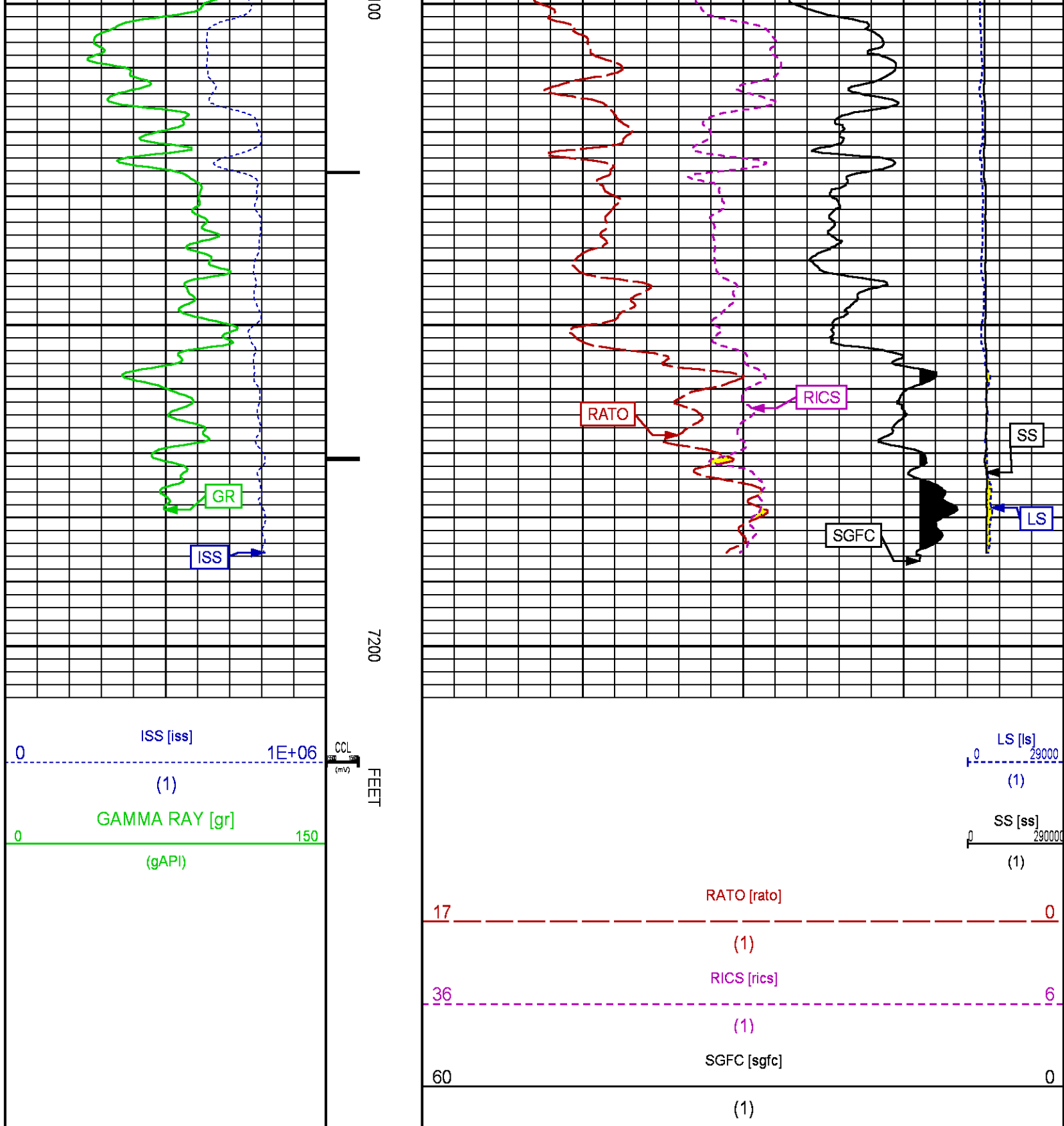












REPEAT SECTION PNC-3D MODE

PARAMETER AND FILTER SUMMARY REPORT				
FILE: /dat1a/CH092545/n354h01.prm LOGGING MODE: DEPTH DIRECTION: UP TOP DEPTH: 6367.500 ft BOTTOM DEPTH: 6709.953 ft				
SYMMETRIC FILTER				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
GR	FILTER ()	medium (1)		TOP BOTTOM
RPM PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP BOTTOM
	OPEN/CASED HOLE	CASED HOLE		" "
	BOREHOLE SIZE	8.75	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

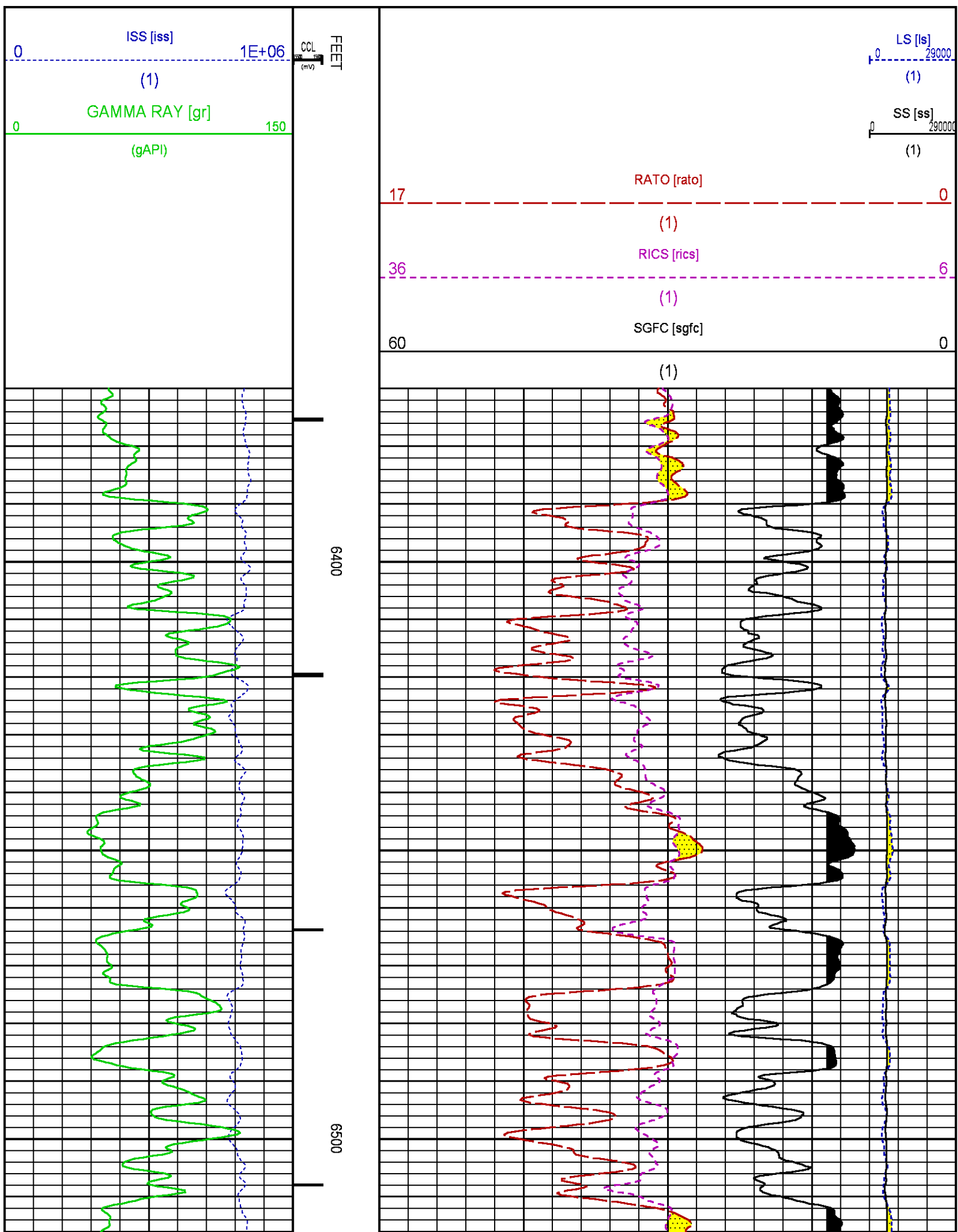
PARAMETER AND FILTER SUMMARY REPORT				
FILE: /dat1a/CH092545/n354hR01.prm LOGGING MODE: DEPTH DIRECTION: UP TOP DEPTH: 6367.250 ft BOTTOM DEPTH: 6706.000 ft				
SYMMETRIC FILTER				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
GR	FILTER ()	medium (1)		TOP BOTTOM
RPM PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP BOTTOM
	OPEN/CASED HOLE	CASED HOLE		" "
	BOREHOLE SIZE	8.75	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

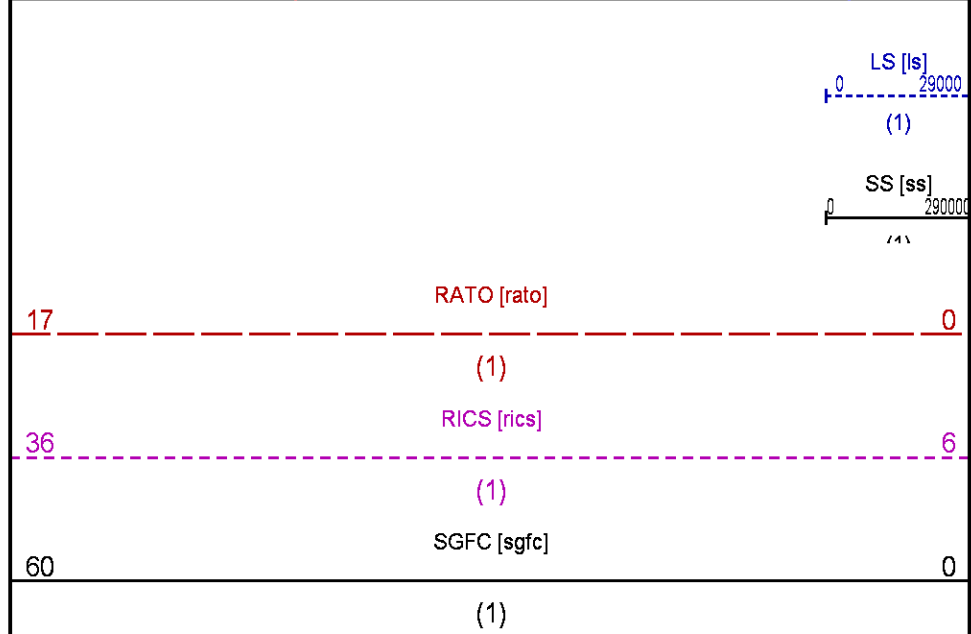
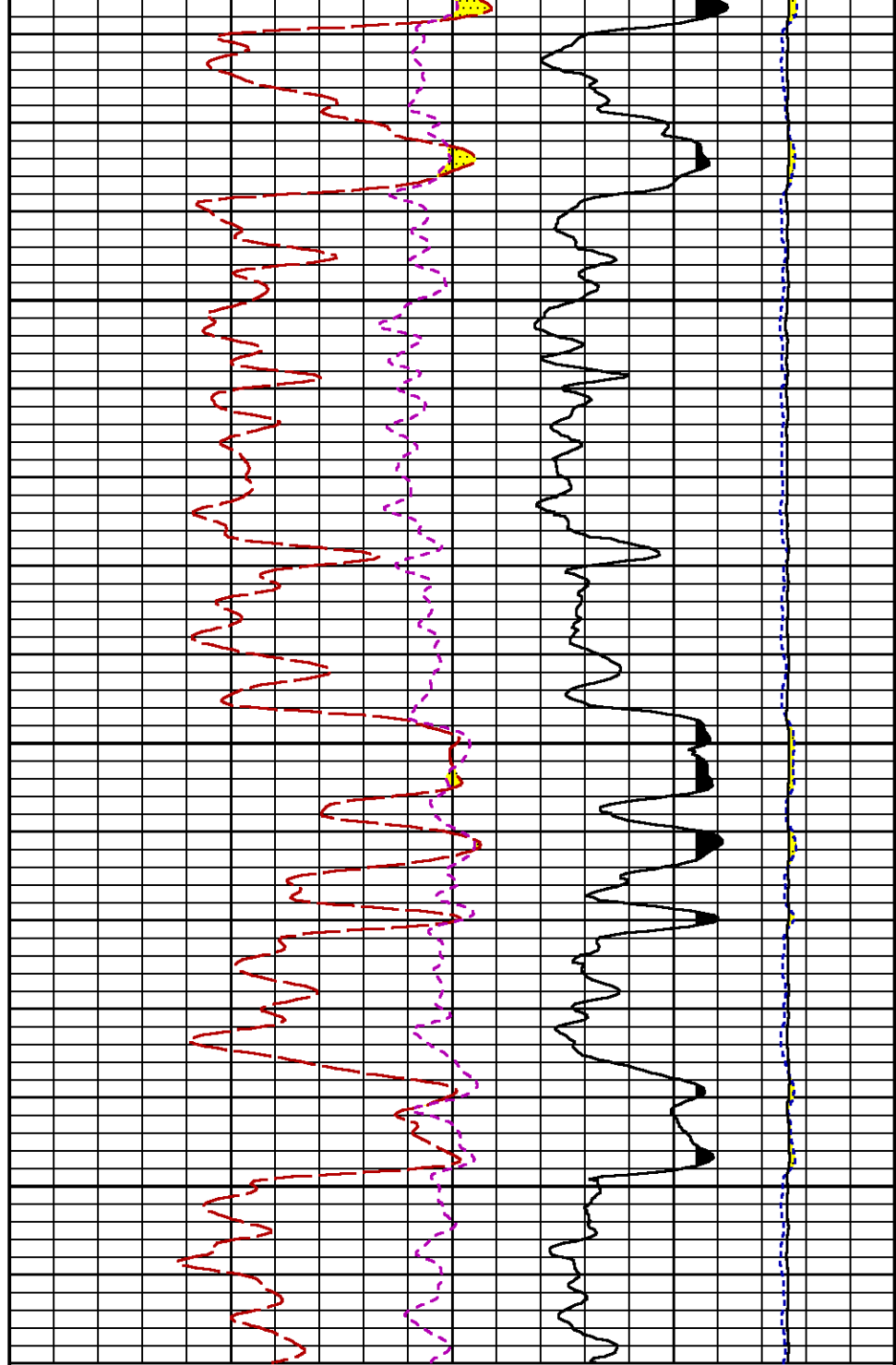
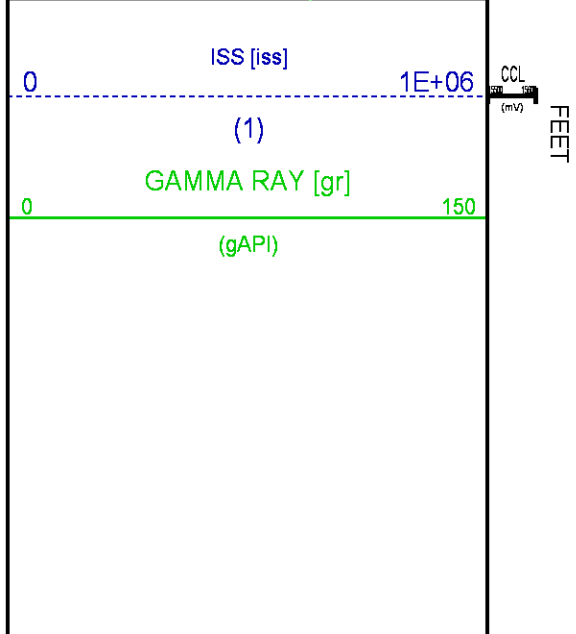
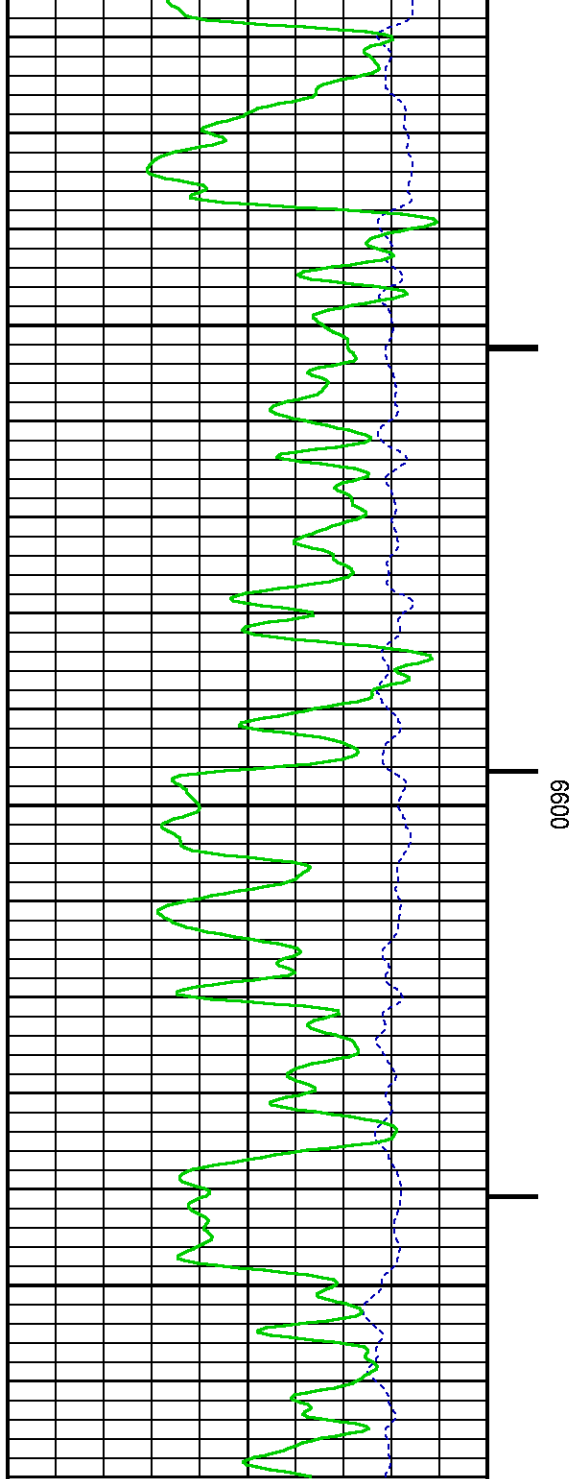
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Nov 20 06:26:50 2014	CASING COLLAR LOCATOR
F1:GR	Nov 20 06:26:50 2014	GAMMA RAY
F1:ISS	Nov 20 06:26:50 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Nov 20 06:26:50 2014	LONG SPACE COUNT RATE
F1:RATO	Nov 20 06:26:50 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Nov 20 06:26:50 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Nov 20 06:26:50 2014	CORRECTED FORMATION SIGMA
F1:SS	Nov 20 06:26:50 2014	SHORT SPACE COUNT RATE

CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

Presentation : HL6670:/dat1a/CH092545/542RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 6370 - 6670 Feet

Data File 1 : F1 : HL6670:/dat1a/CH092545/542RPM_REPEAT.xtf
Created On : Nov 20 06:26:50 2014
Company : WPX ENERGY
Well : GM 542-12
Field : GRAND VALLEY
File Interval : 6342.25 - 6705.25 Feet





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH092545/n354h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2812LA 11701636

DATE/TIME PERFORMED: Wed Nov 12 13:41:56 2014

UNIT #: 3880TA HL6670

CALB JIG #: 4702NK WA-612

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	59.84	276.27	216.4	0.970	58.07	268.07	210

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2812LA 11701636

DATE/TIME PERFORMED: Wed Nov 12 13:44:33 2014

UNIT #: 3880TA HL6670

VERI JIG #: 4702NK WA-612

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	56.98	275.16	0.970	55.29	266.99	211.70
						200.00 220.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10160383

DATE/TIME PERFORMED: Wed Nov 12 12:22:40 2014

UNIT: 3880TA HL6670

CALIBRATOR: 2437XB 112674

SOURCE: 8281AA 11765055

HOURS: 8281AA 36

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	799301	125	2276	2258	2216	100	7	0.9764
Interpolated	1300000	148	2255	2251	2211			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	799301	6536	1023	136	26.07	0.15	24.33	0.33
					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	799301	171372	25970	89191	31734	8236	53881	13187
Fit Quality %		0.646	0.555	0.505	0.529	0.631	0.451	0.602

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	799301	1.43	4.66	30.79	14.84	10.83	3.85	4.09
		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 %		0.058	0.340	0.278	0.287	0.114	0.083	0.098
Reduced	1373098	1.43	4.65	30.73	14.80	10.82	3.85	4.08
		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

TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #: 8255XA 11774568

DATE/TIME PERFORMED: Wed May 14 12:39:45 2014

TOOL #: 0255XA 11774500

DATE/TIME PERFORMED:

Wed May 14 12:55:45 2014

UNIT #: 3880TA HL6670

T(0)

T(1)

T(2)

T(3)

Corr Coeff for Temp

-9.274653E+00

1.055639E-01

2.143764E-06

-2.782846E-10

INSTRUMENT CONFIGURATION

Source File: /dat1a/CH092545/RPM-tdg

A3 CABLEHEAD

Diameter : 1.37"

PCM POWER SUPPLY

Diameter : 1.70"
Length : 3.86'
Weight : 18 lbs
Series : 8250EA
Mnemonic : PCM

TELEMETRY / CCL

Diameter : 1.70"
Length : 4.46'
Weight : 20 lbs
Series : 8248ED
Mnemonic : PCM
Measure Point: 1.00': CCL MP

SONDEX GAMMA RAY

Diameter : 1.69"
Length : 2.17'
Weight : 10 lbs
Series : 2812LA
Mnemonic : GR
Measure Point: 0.62': GR MP

RPM ELECTRONICS

Diameter : 1.70"
Length : 4.48'
Weight : 16 lbs
Series : 8281EA
Mnemonic : RPM

33.24'

CCL MP 25.19'

GR MP 22.64'

RPM C DETECTOR SECTION

Diameter : 1.70"
Length : 9.40'
Weight : 41 lbs
Series : 8283PA
Mnemonic : RPM
Measure Point: 5.45': XLS DETECTOR
Measure Point: 5.04': LS DETECTOR
Measure Point: 4.79': SS DETECTOR

XLS DETECTOR 13.58'
LS DETECTOR 13.16'
SS DETECTOR 12.91'

RPM SOURCE SECTION

Diameter : 1.70"
Length : 4.70'
Weight : 18 lbs
Series : 8281FA
Mnemonic : RPM

TEMPERATURE / PRESSURE


Diameter : 1.70"
Length : 3.30'
Weight : 13 lbs
Series : 8255XA
Mnemonic : SRPL
Measure Point: 1.52': TEMP MP

TEMP MP 1.65'
PRES MP

BULL PLUG 1 11/16

0.00'

TOTAL LENGTH: 33.24'
TOTAL WEIGHT: 140 lbs
MAX DIAMETER: 0'1.70"

	COMPANY	WPX ENERGY		FILE NO:	CH092545
	WELL	GM 542-12		API NO:	05045224690000
	FIELD	GRAND VALLEY			
	COUNTY	GARFIELD	STATE	CO	
	LOCATION:	SHL: 1201' FNL & 1935' FWL BHL: 2189' FNL & 822' FEL		ELEVATIONS:	12 7S 96W GM 21-12 PAD NABORS 573
	SEC 12	TWP 7S	RGE 96W	DATE	20-Nov-2014