



FILE NO: CH107930  
API NO: 05045225260000  
COMPANY: WPX ENERGY  
WELL: FEDERAL GM 43-8  
FIELD: GRAND VALLEY  
COUNTY: GARFIELD  
STATE: COLORADO

Ver. 4.06  
SEC8 T.7S R.96W  
PAD: MV 16-9  
RIG: H&P 318  
LOCATION: SHL:676FNL&545FWL SEC9 T7S R96W  
BHL:24111FSL&648FEL SEC8 T7S R96W  
NE/SE  
SEC 8 TWP 7S RGE 96W  
OTHER SERVICES: CBL

PERMANENT DATUM: G.L. ELEVATION 6087 FT  
LOG MEASURED FROM: K.B. 24 FT ABOVE P.D.  
DRILL. MEAS. FROM: K.B.  
ELEVATIONS: KB 6111 FT  
DF  
GL 6087 FT

DATE	20-Jun-2016
RUN	2
TRIP	1
SERVICE ORDER	US107930
DEPTH DRILLER	7208 FT
DEPTH LOGGER	7180 FT
BOTTOM LOGGED INTERVAL	7150 FT
TOP LOGGED INTERVAL	3965 FT
TIME STARTED	05:00
TIME FINISHED	10:00
OPERATOR RIG TIME	5 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	50 FT
LOGGED CEMENT TOP	SEE LOG
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMN
MAX. RECORDED TEMP.	206.5 DEGF
REFERENCE LOG	BAKER HUGHES BOND LOG
REFERENCE LOG DATE	19-JUN-2016
EQUIP. NO.	HL-6685
LOCATION	W. QUIGLEY
RECORDED BY	T.RAGSDALE
WITNESSED BY	

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	24 FT	1358 FT
8.75 IN	1358 FT	7223 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN			24 FT	1358 FT
4.5 IN	11.6 LB/F		24 FT	7208 FT

## REMARKS

RUN 2 TRIP 1: ALL DATA ON THIS LOG IS DEPTH SHIFTED AND CORRELATED TO THE GAMMA-RAY CURVE ON BAKER HUGHES BOND LOG DATED 19-JUN-2016

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

DID NOT TAG TD THIS RUN DUE TO RESIDUAL CEMENT/STICKINESS OBSERVED ON BOND LOG

LOGGED WITH 0 PSI AT SURFACE

SJ = 3950' - 3972'  
BHT = 206.5 DEGF

### EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	10408796	FREE
1	1	TEL/CCL	8248ED	10590814	FREE
1	1	GR	8262XA	10485470	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	RPM	8281PA	10169251	FREE
1	1	RPM	8281FA	10401926	FREE
1	1	TEMP	8255XA	116341	FREE

## MAIN SECTION PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1,36 Patches: 9

Plotted: Mon Jun 20 09:35:55 2016

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH107930/n353hx02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 3916.000 ft BOTTOM DEPTH: 7168.500 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	Jun 20 09:33:25 2016	CASING COLLAR LOCATOR
F1:GR	Jun 20 09:33:54 2016	GAMMA RAY
F1:ISS	Jun 20 09:33:54 2016	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Jun 20 09:33:54 2016	LONG SPACE COUNT RATE
F1:RATO	Jun 20 09:33:58 2016	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Jun 20 09:33:58 2016	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Jun 20 09:33:59 2016	CORRECTED FORMATION SIGMA
F1:SS	Jun 20 09:33:59 2016	SHORT SPACE COUNT RATE

### CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	26.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

Plot Interval : 3888.5 - 7153 Feet

Data File 1 : F1 : cas6685:/dat1a/CH107930/n353hx02\_MAIN.xtf  
Created On : Jun 20 09:33:15 2016  
Company : WPX ENERGY  
Well : FEDERAL GM 43-8  
Field : GRAND VALLEY  
File Interval : 3887.75 - 7169.25 Feet  
OCT : n353hx

GR BACKUP

ISS [iss]  
(cts/s)  
GAMMA RAY [gr]  
(gAPI)

FEET

CCL  
(mV)

3900

4000

LS [ls]  
(cts/s)

SS [ss]  
(cts/s)

RATO [rato]

(dim)

RICS [rics]

(dim)

SGFC [sgfc]

(cu)

RATO

RICS

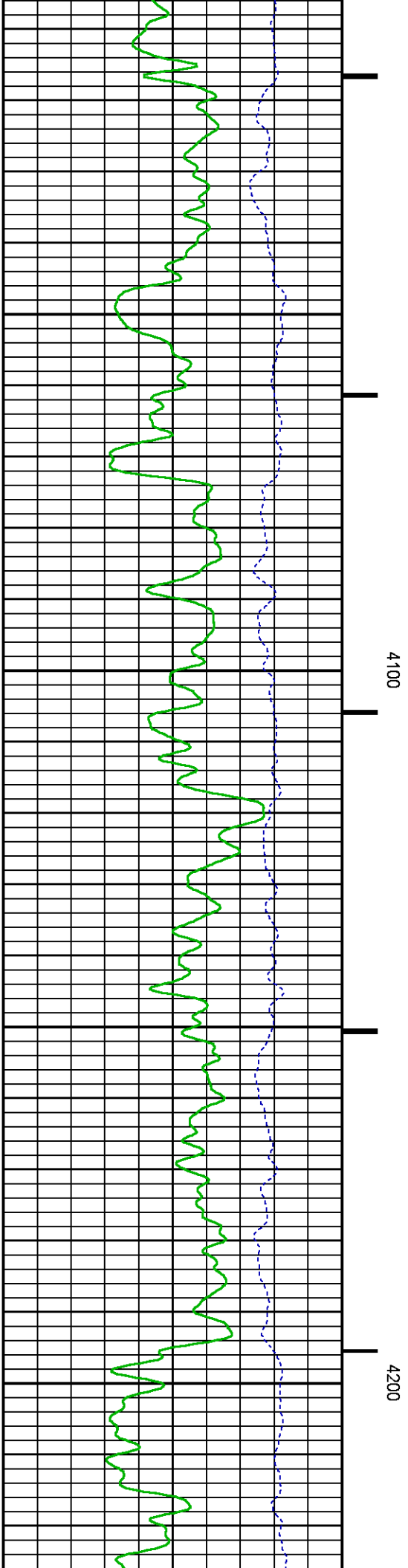
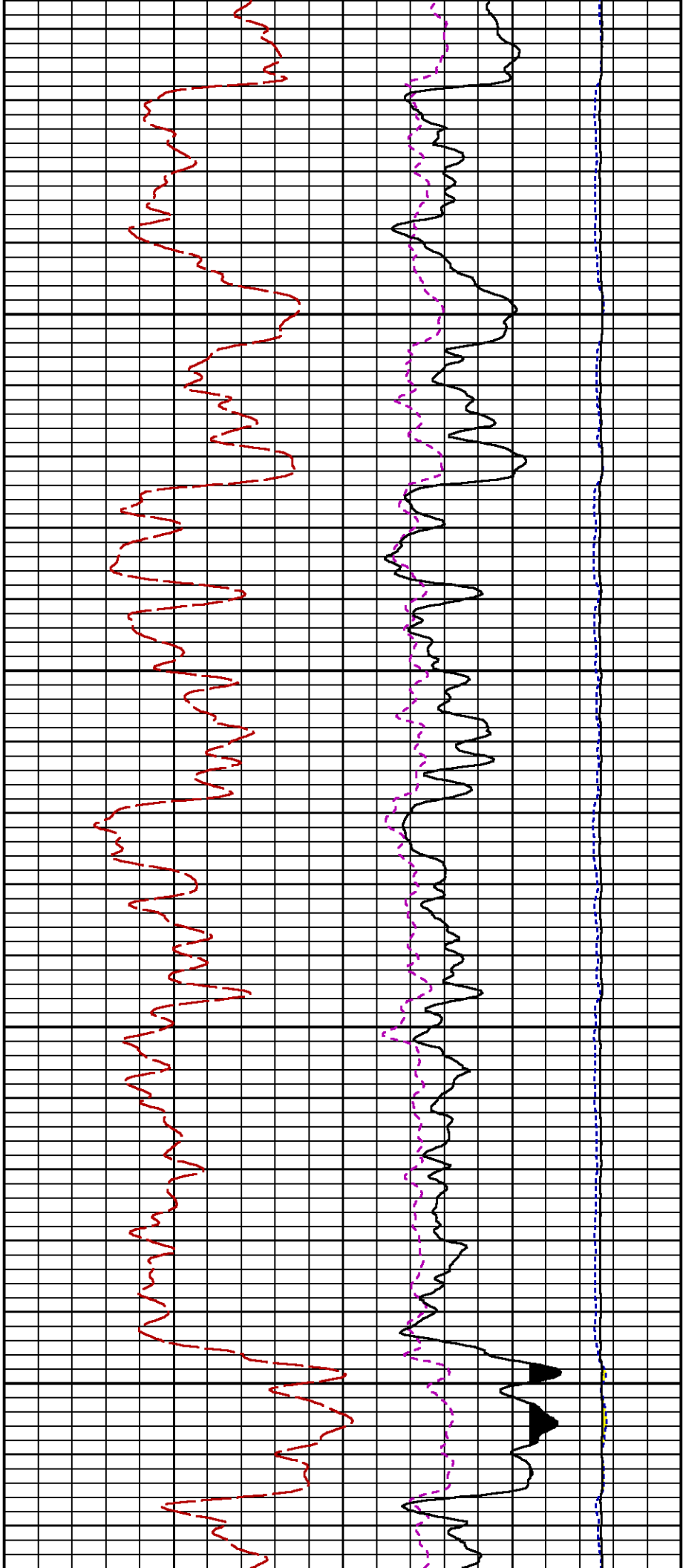
SGFC

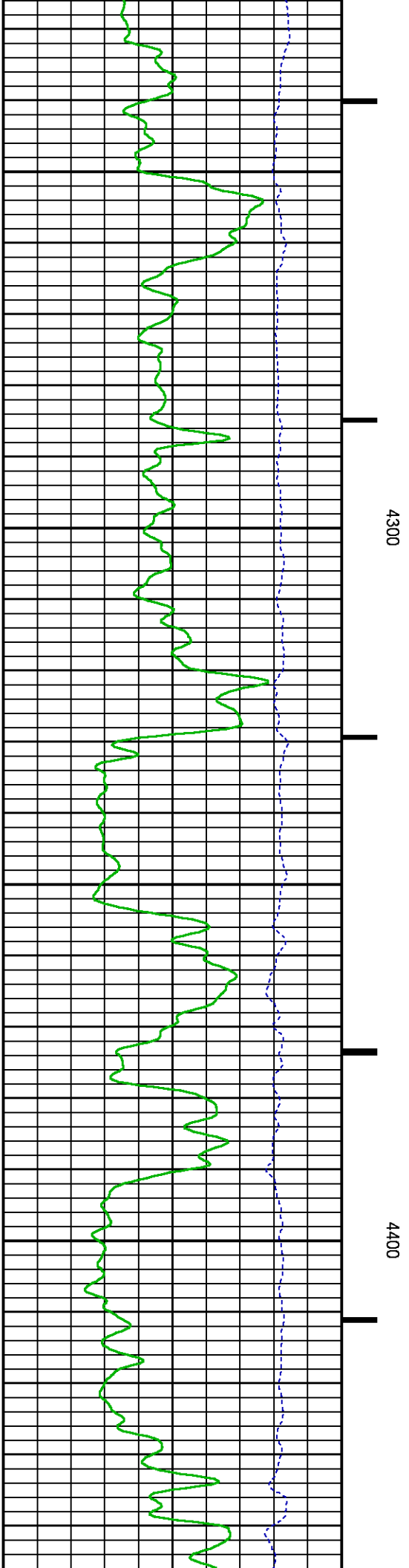
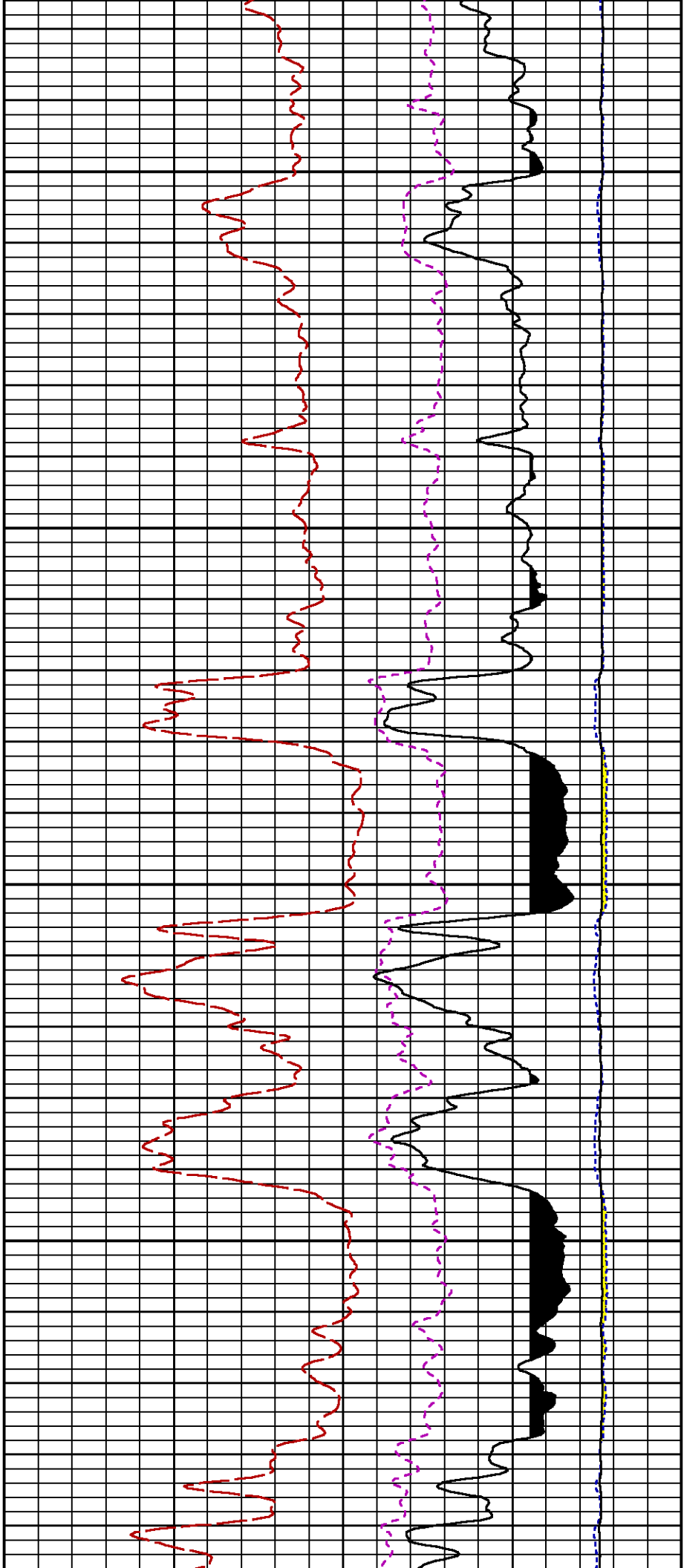
LS

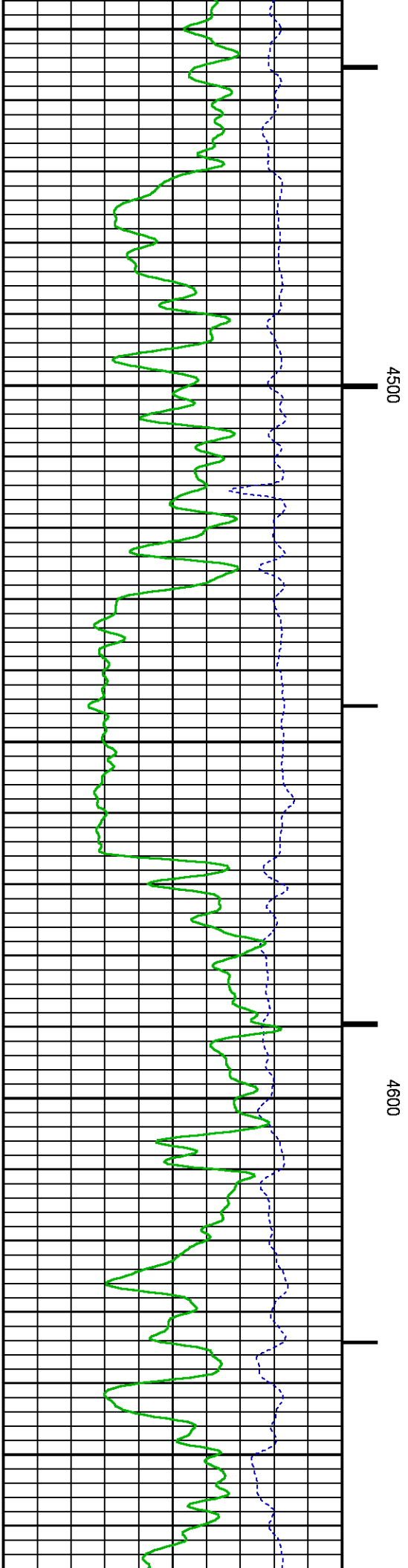
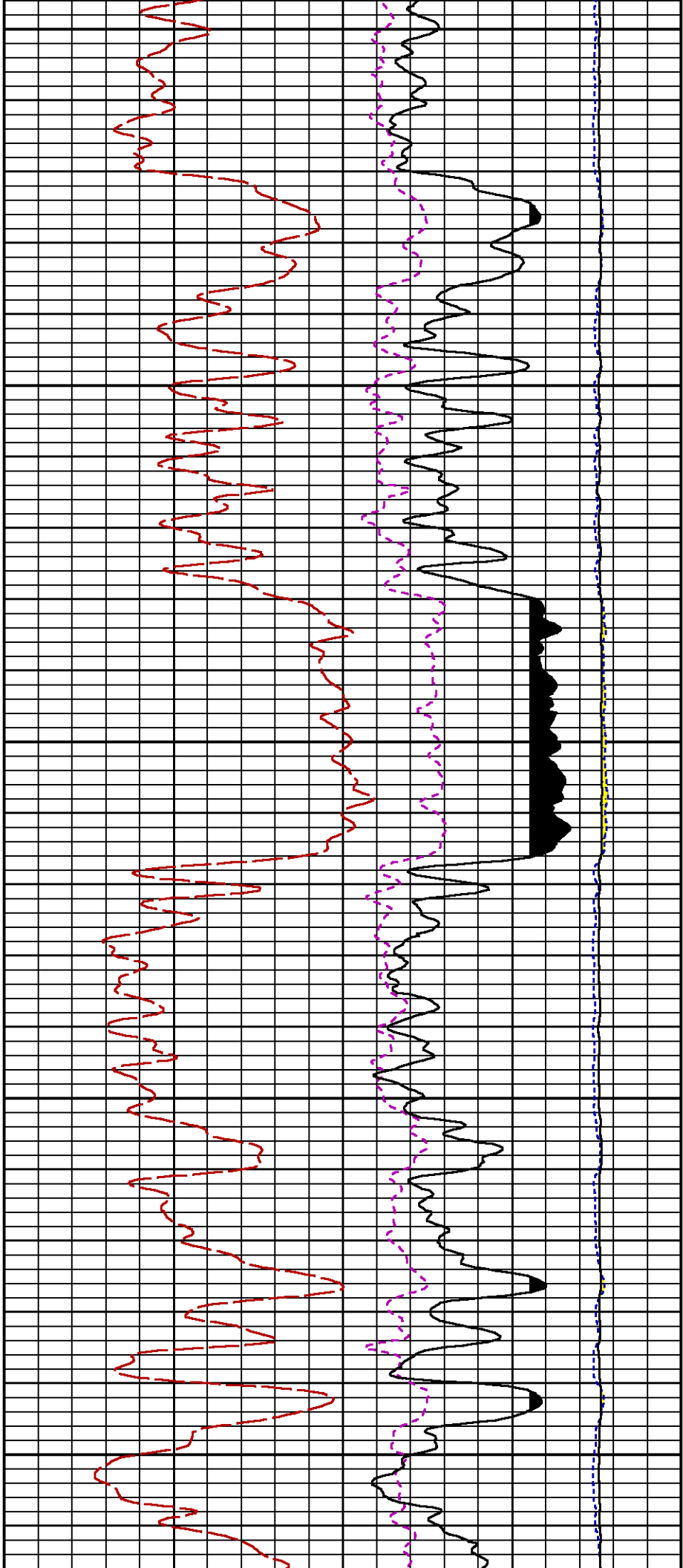
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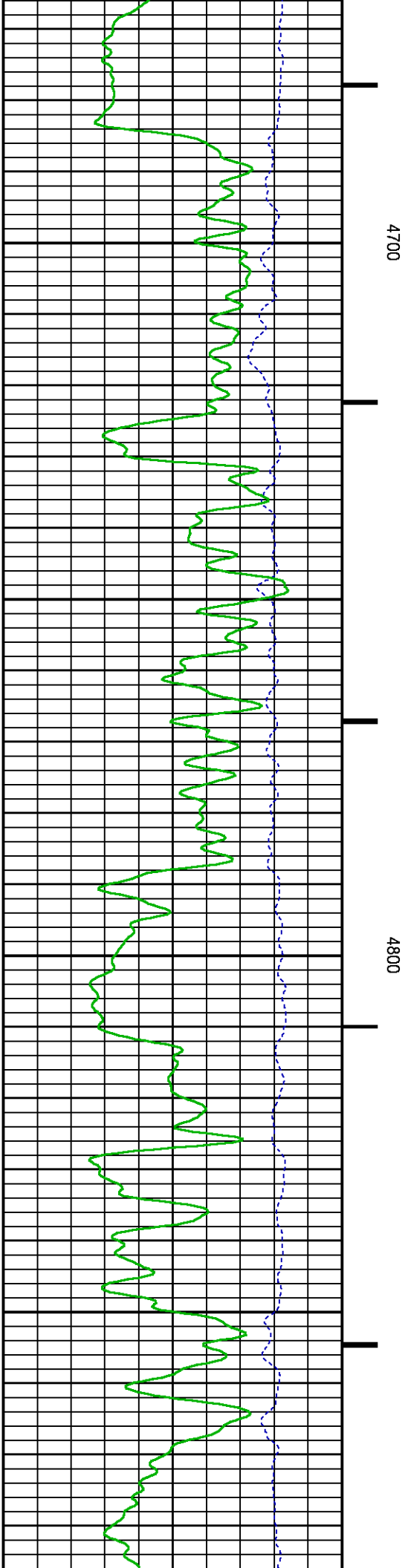
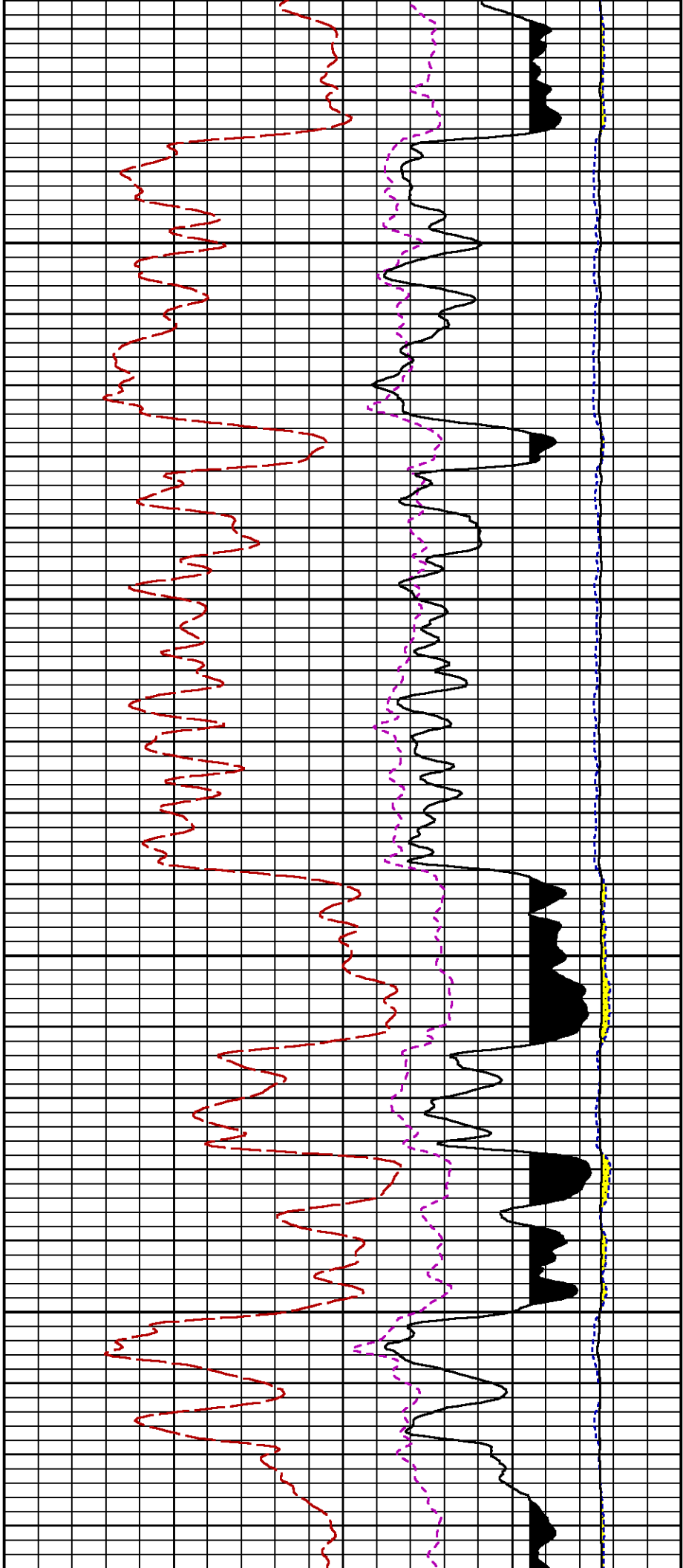
ISS

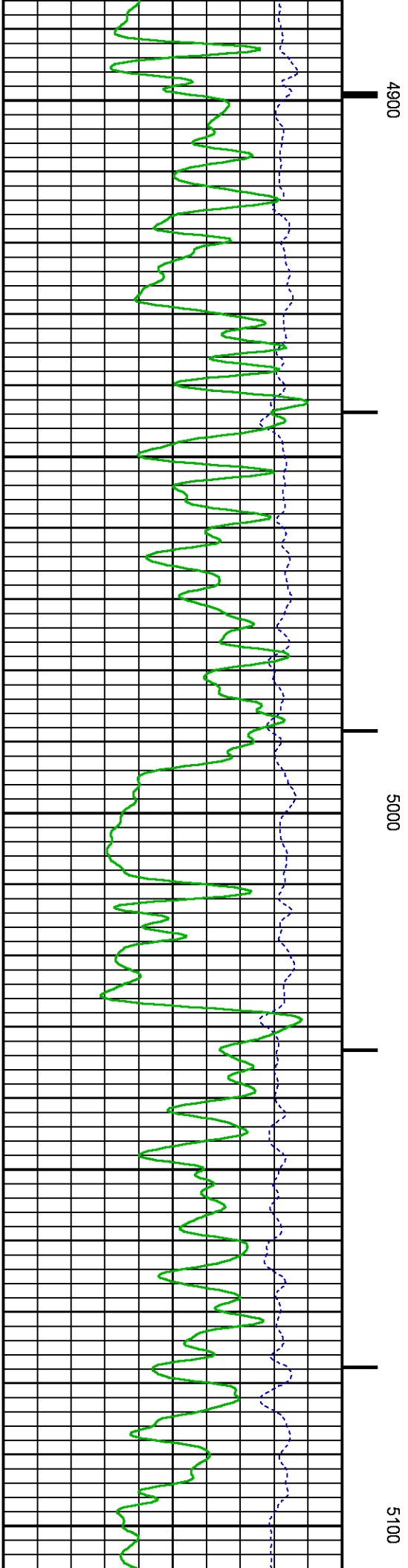
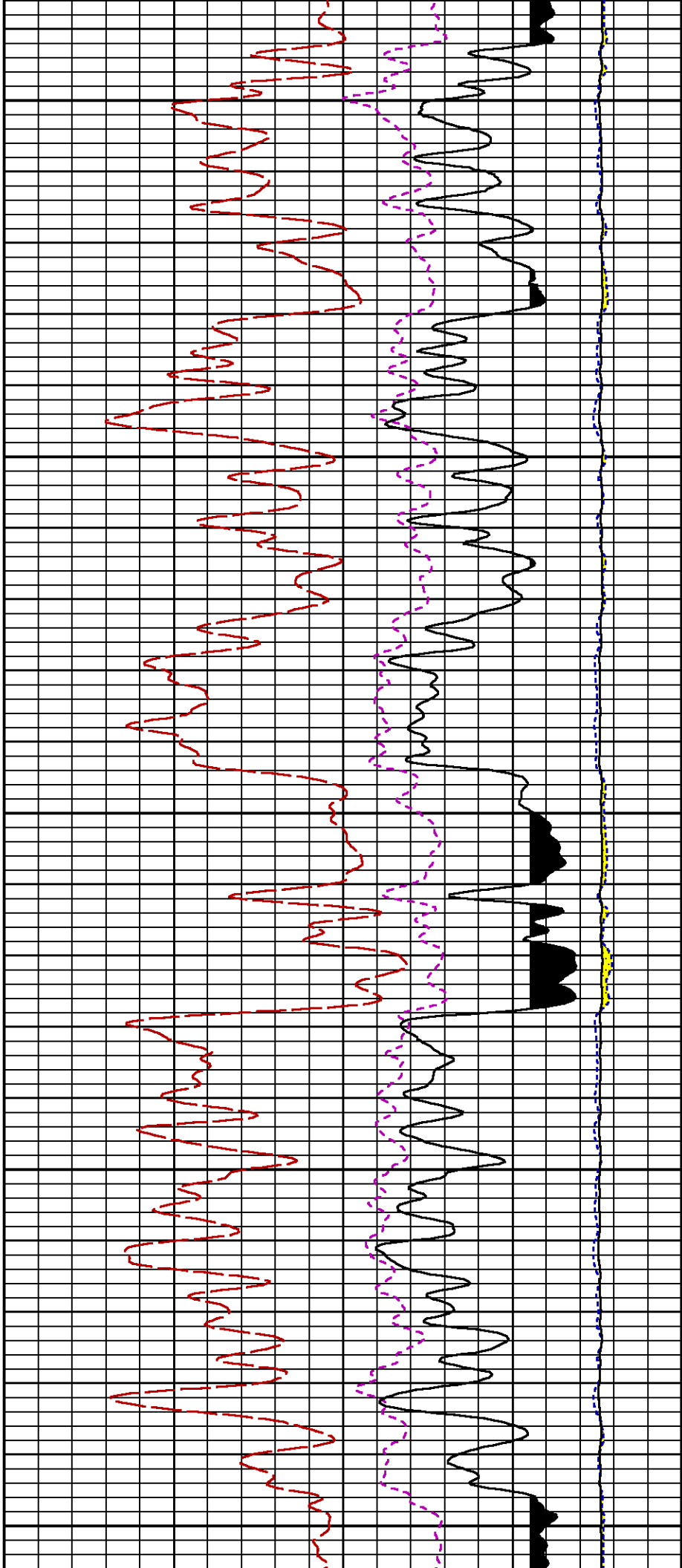
GR



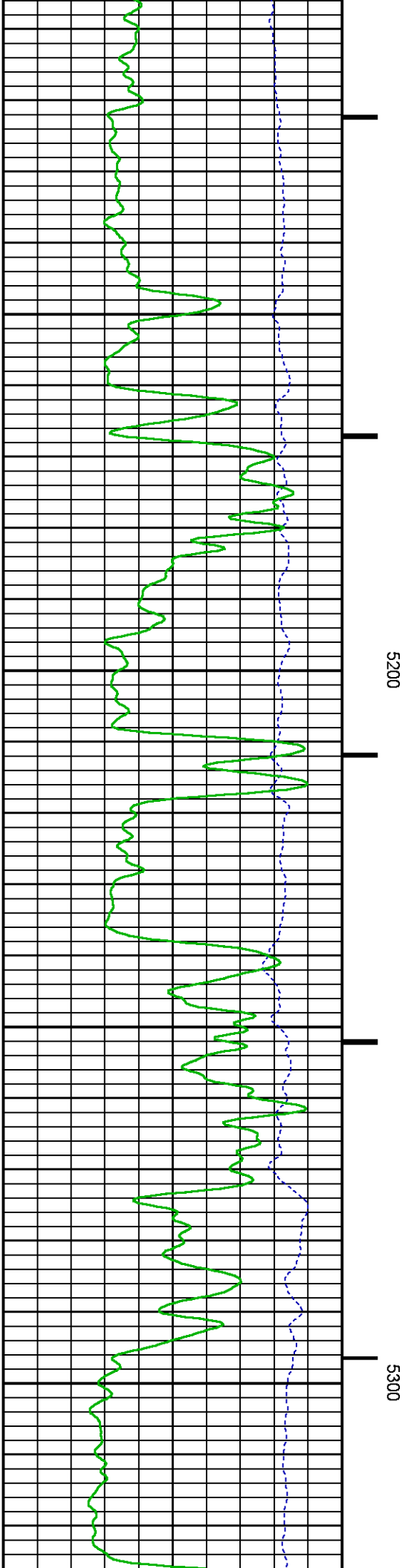
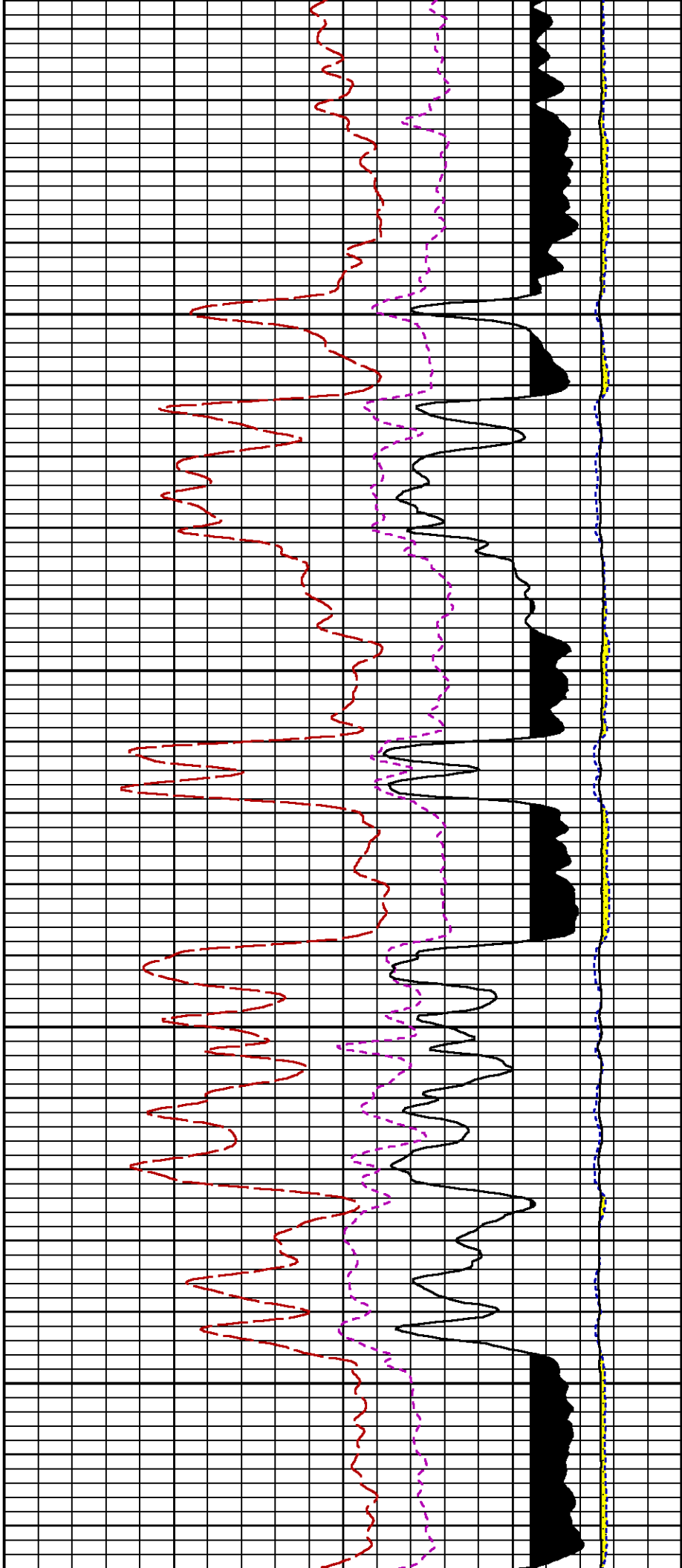


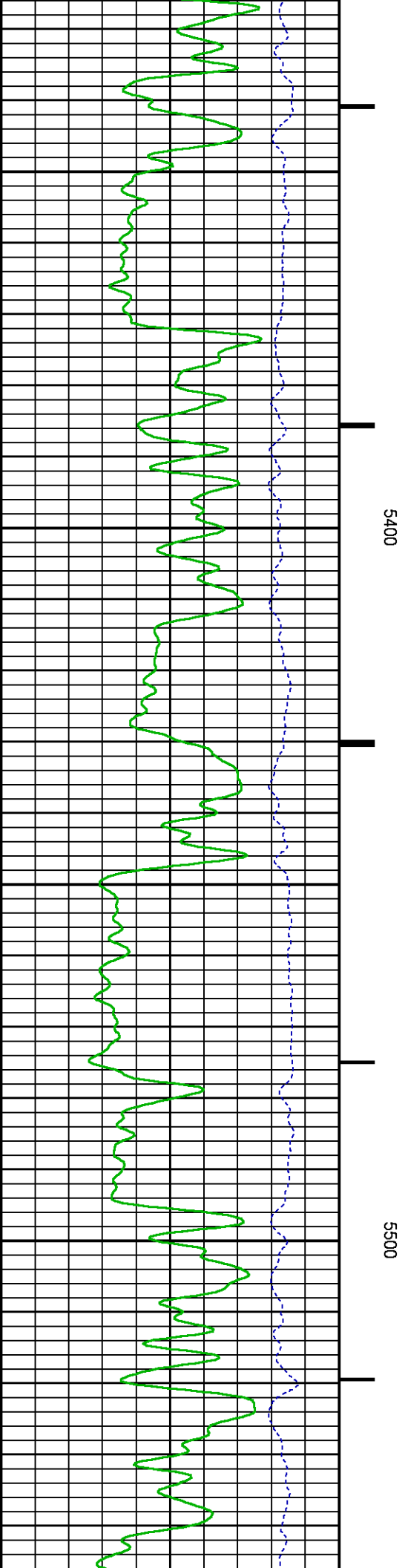
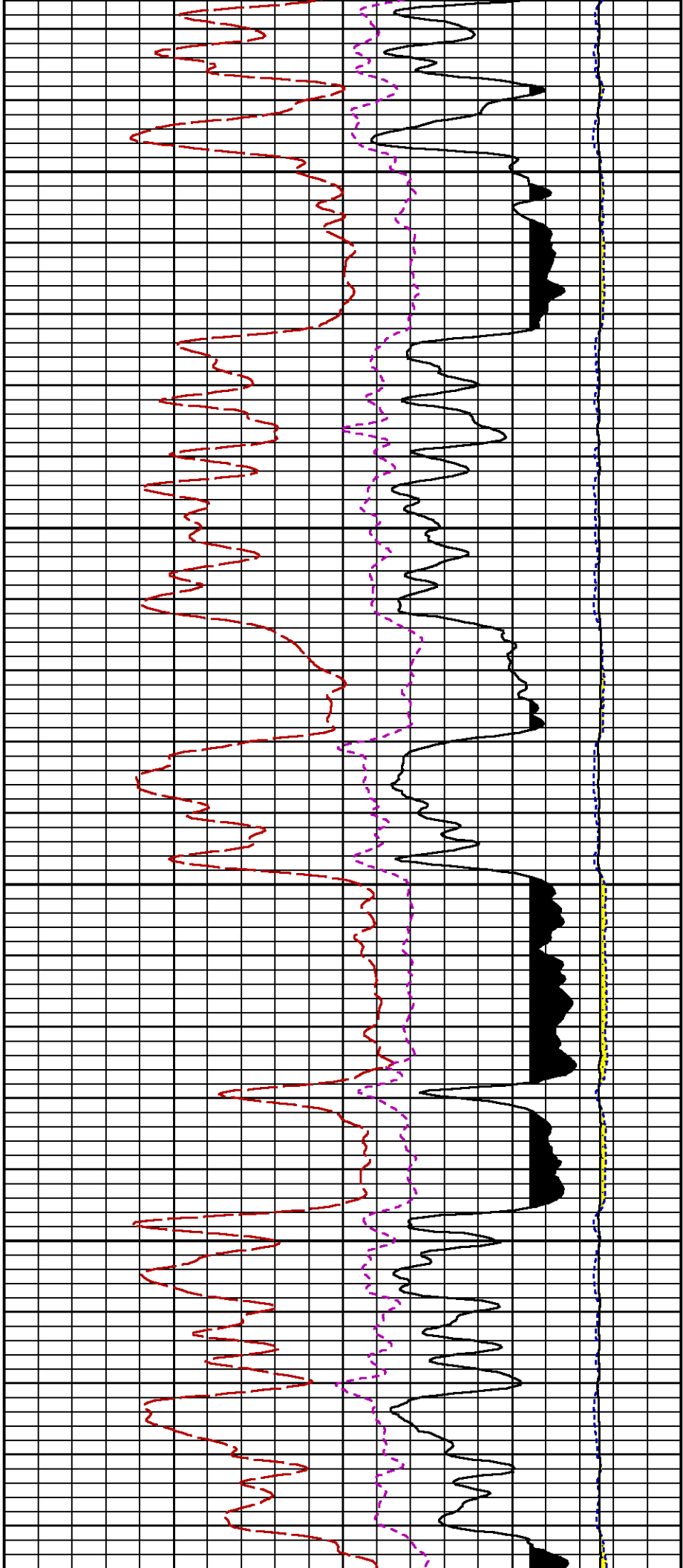


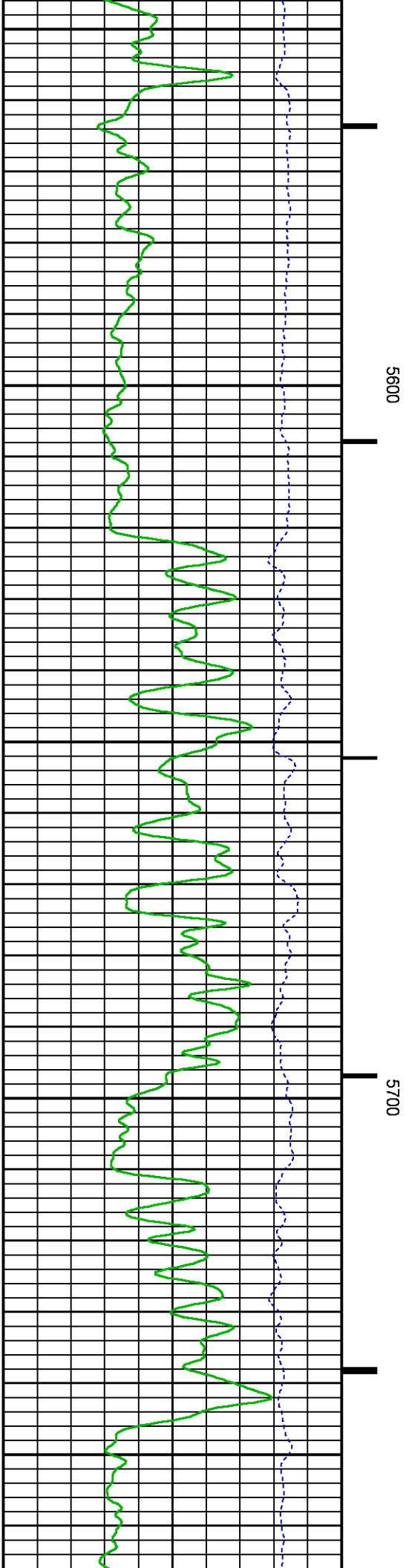
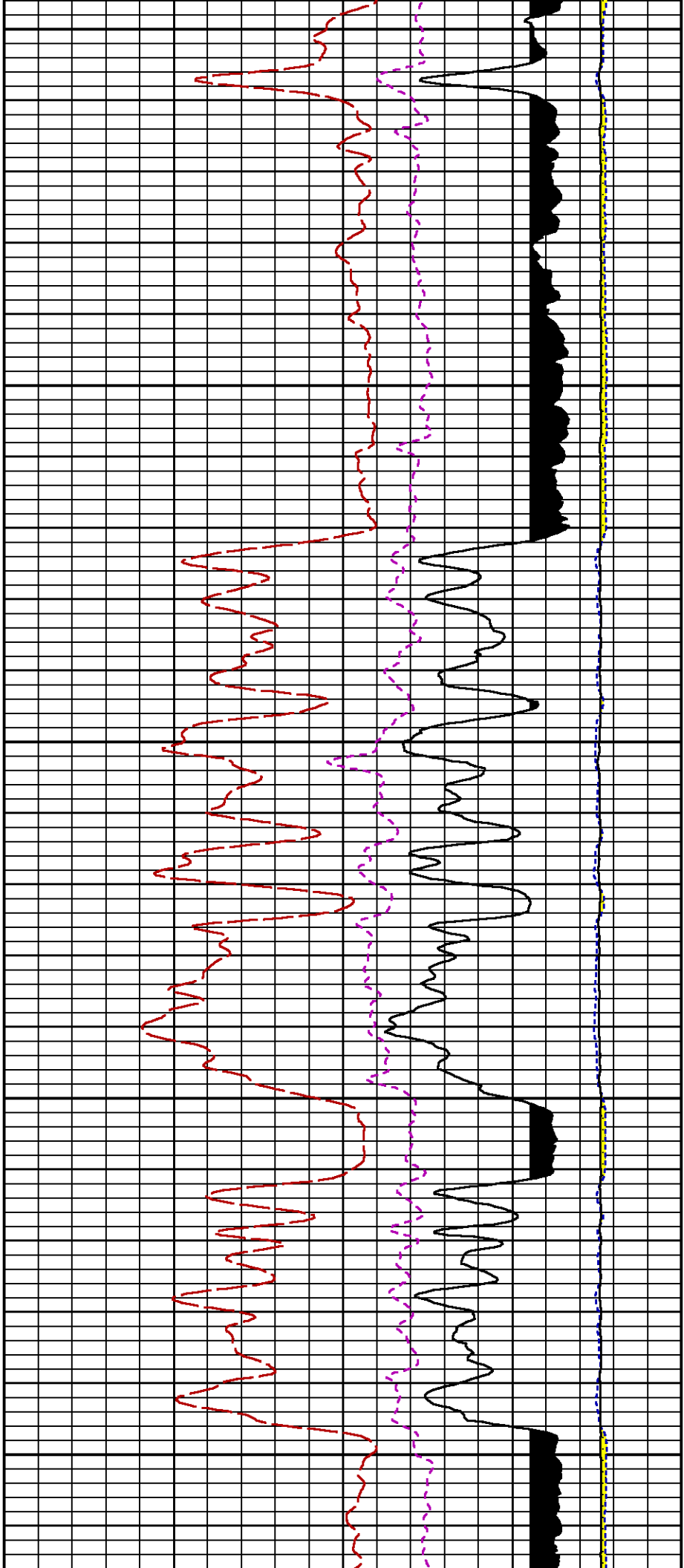


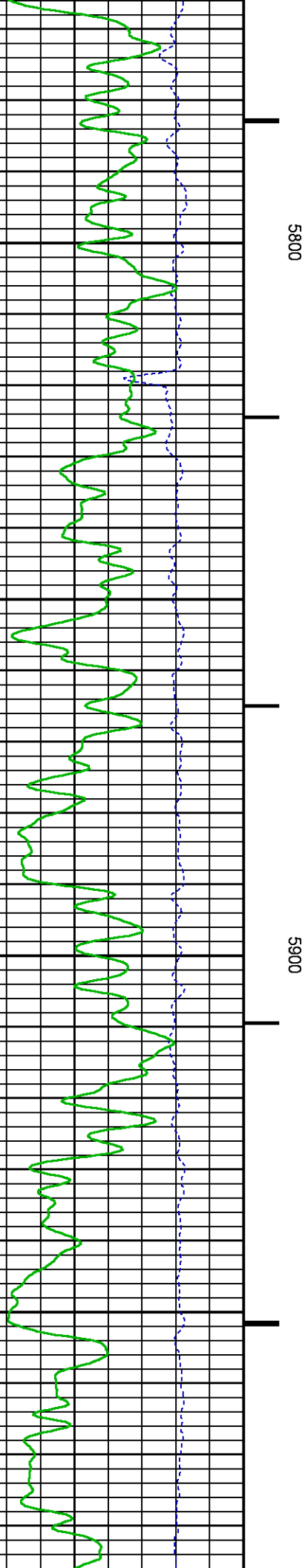
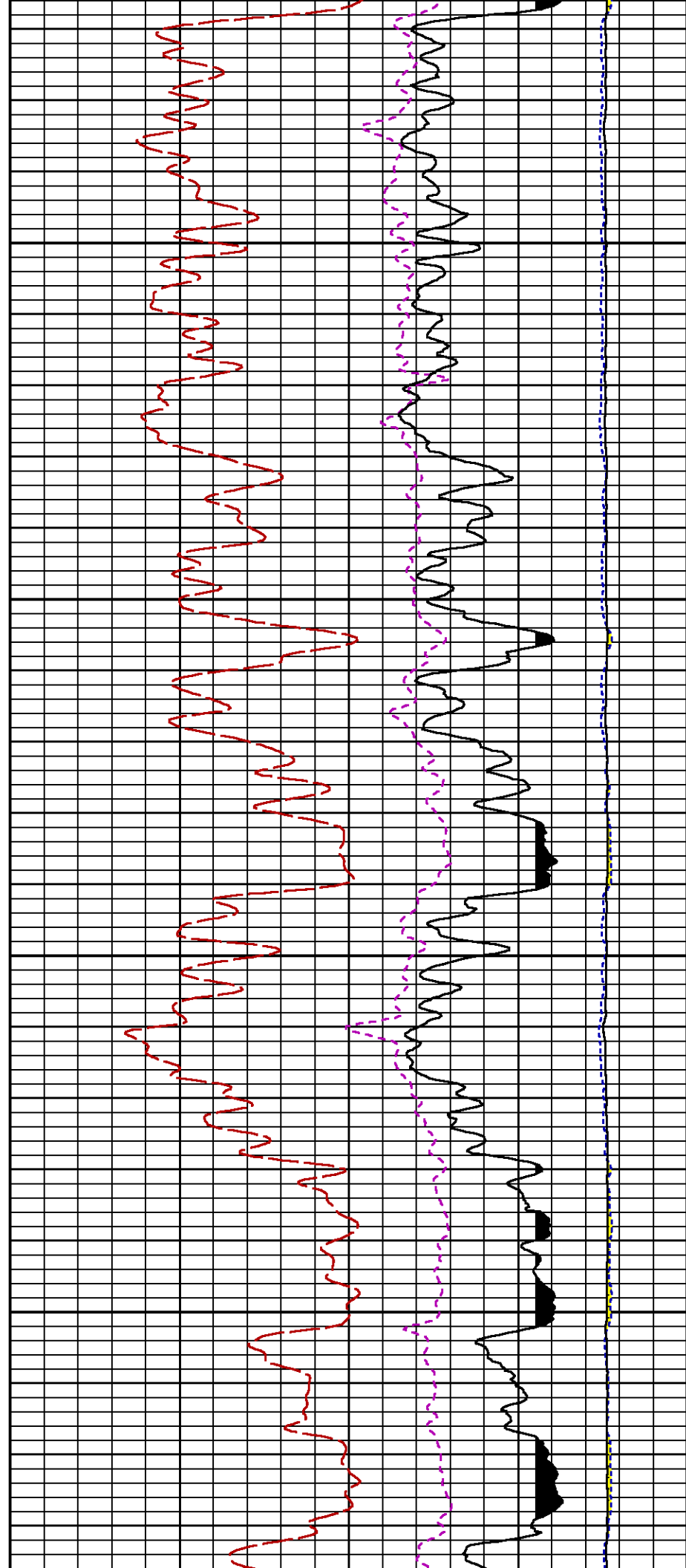


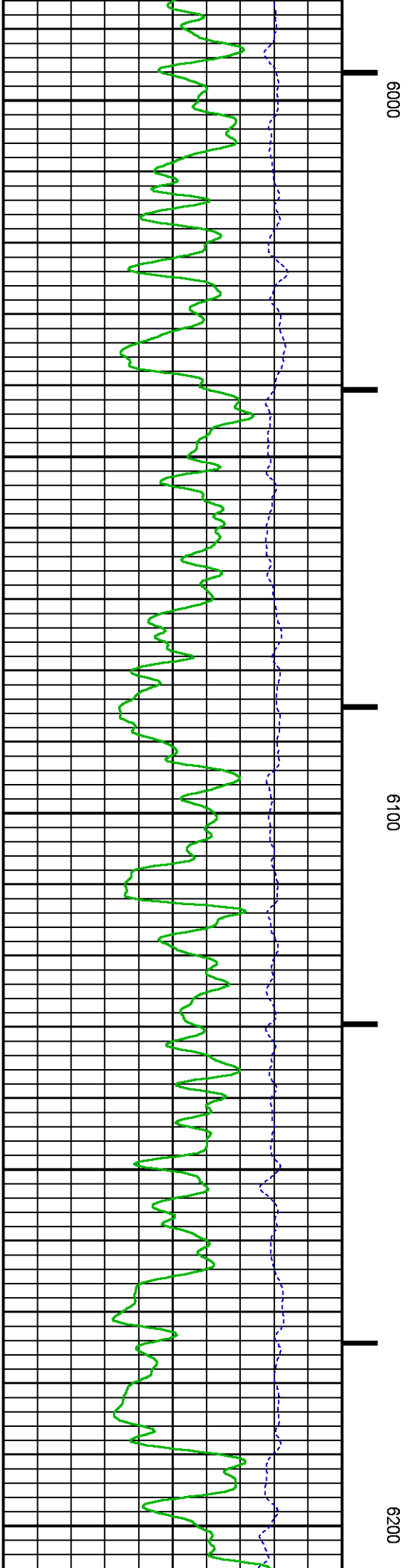
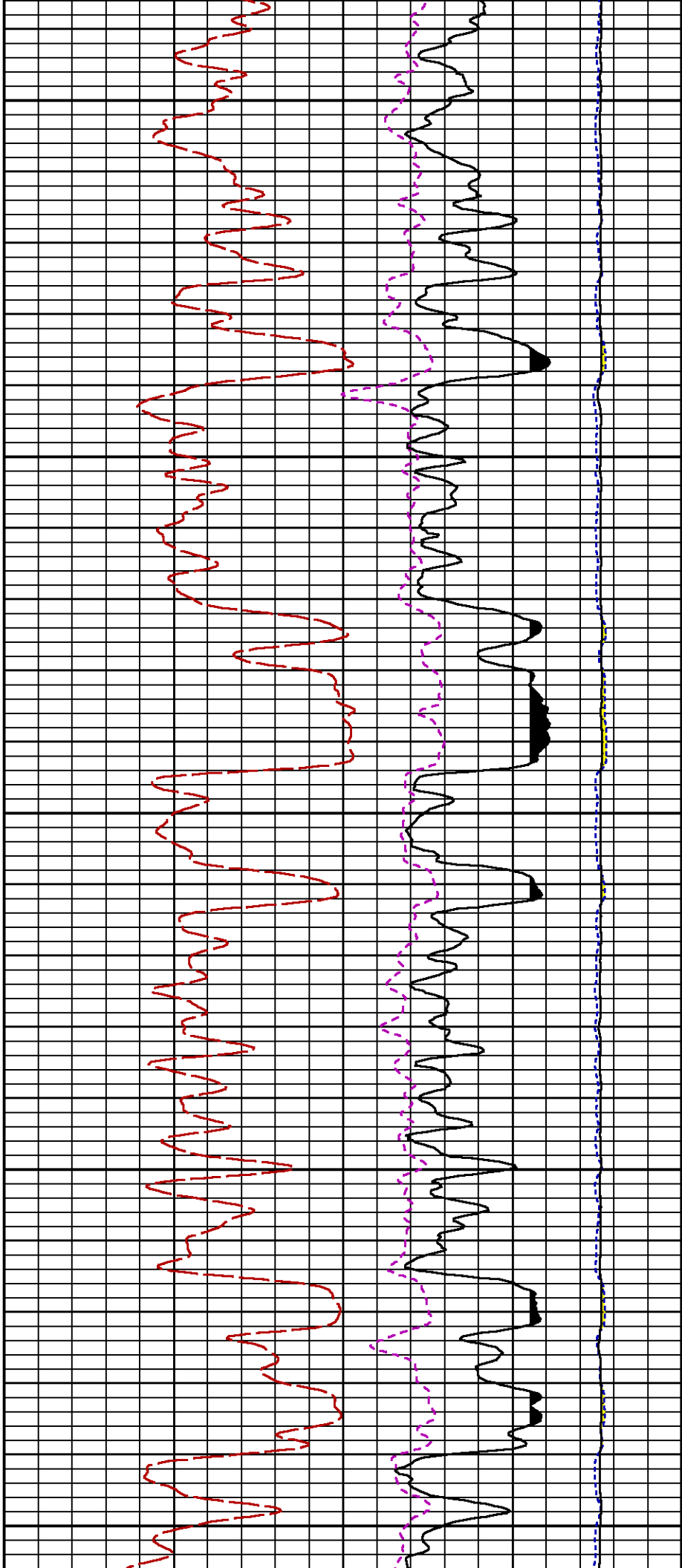


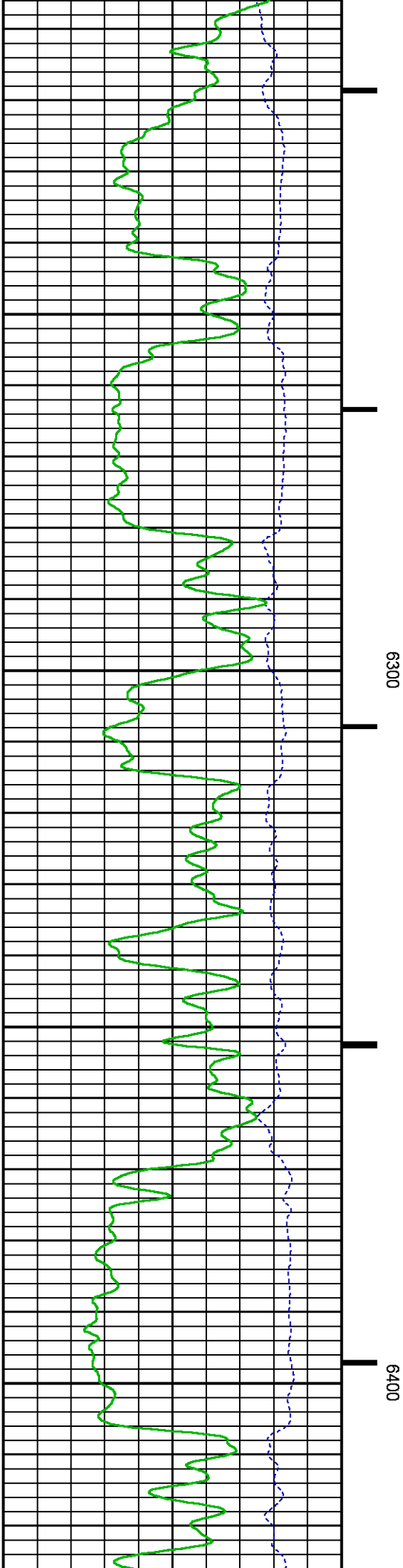
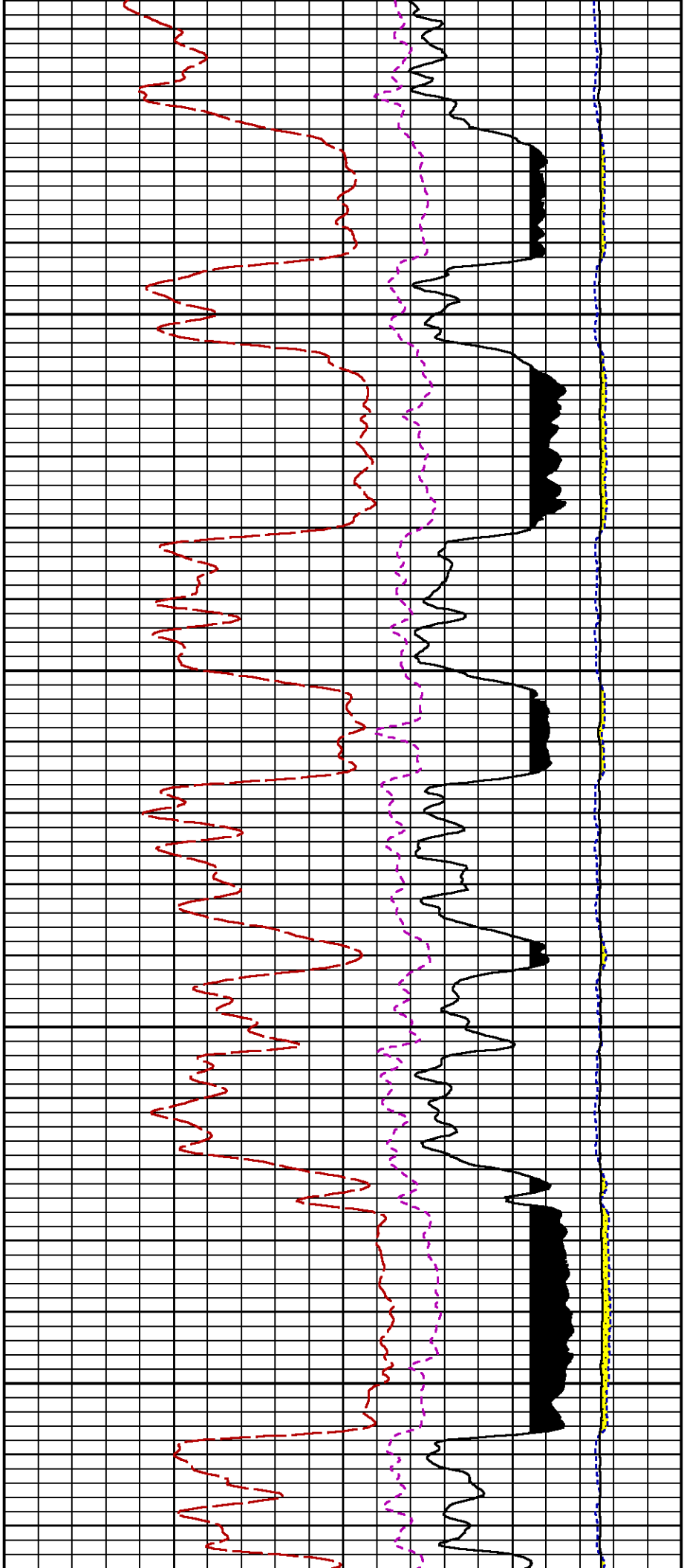


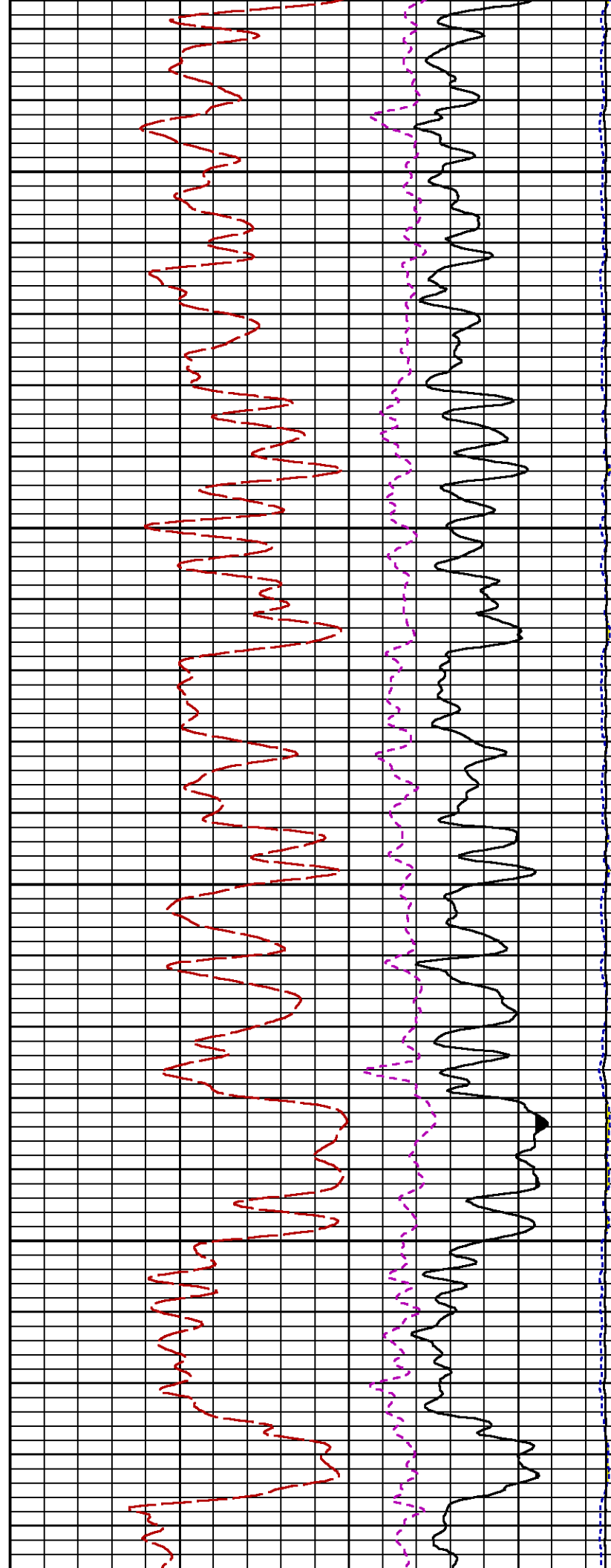
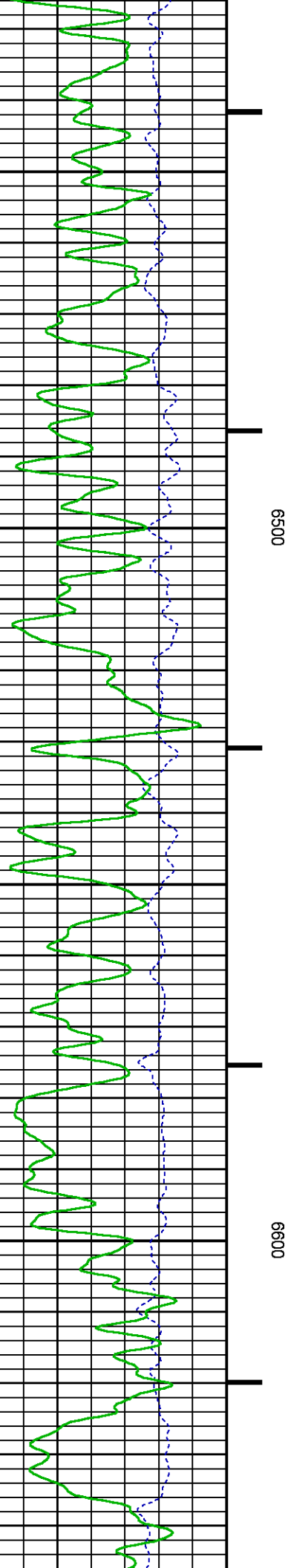


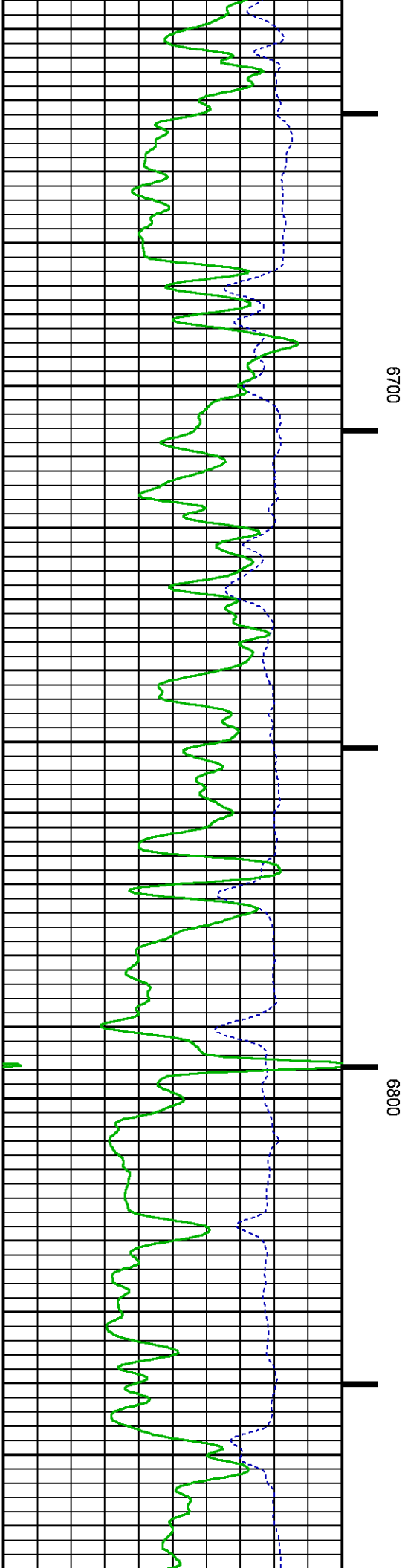
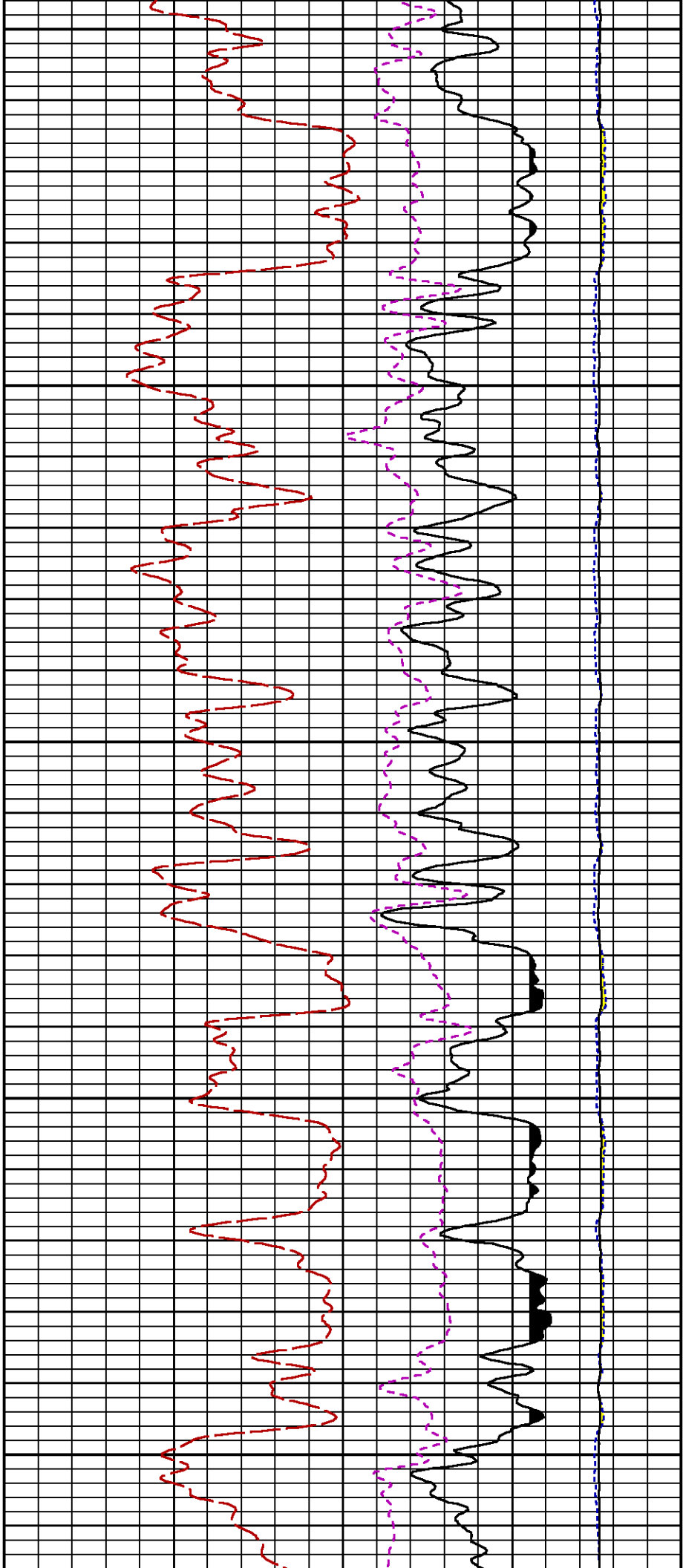




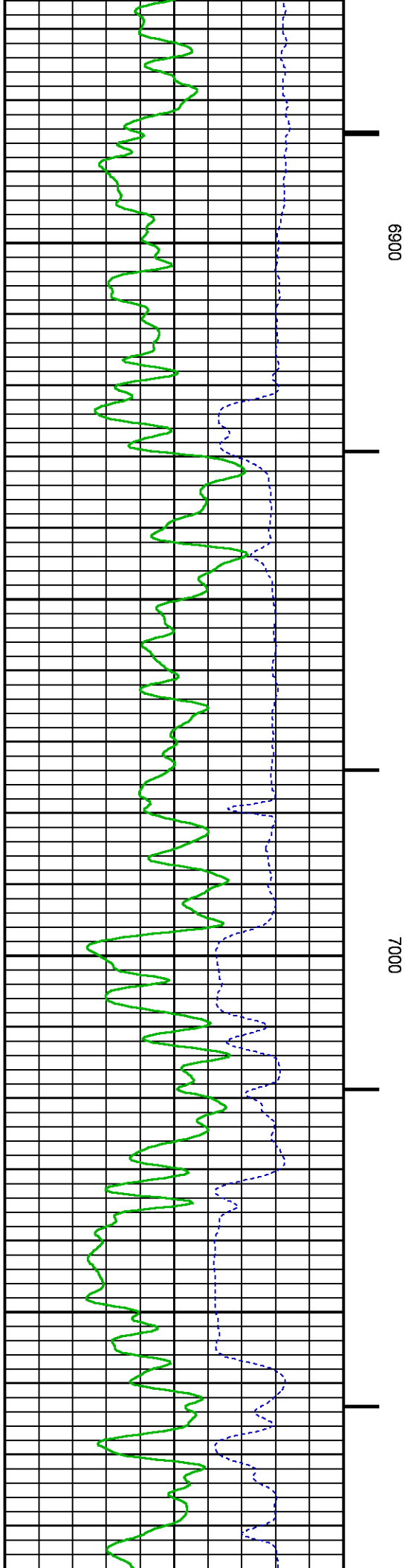
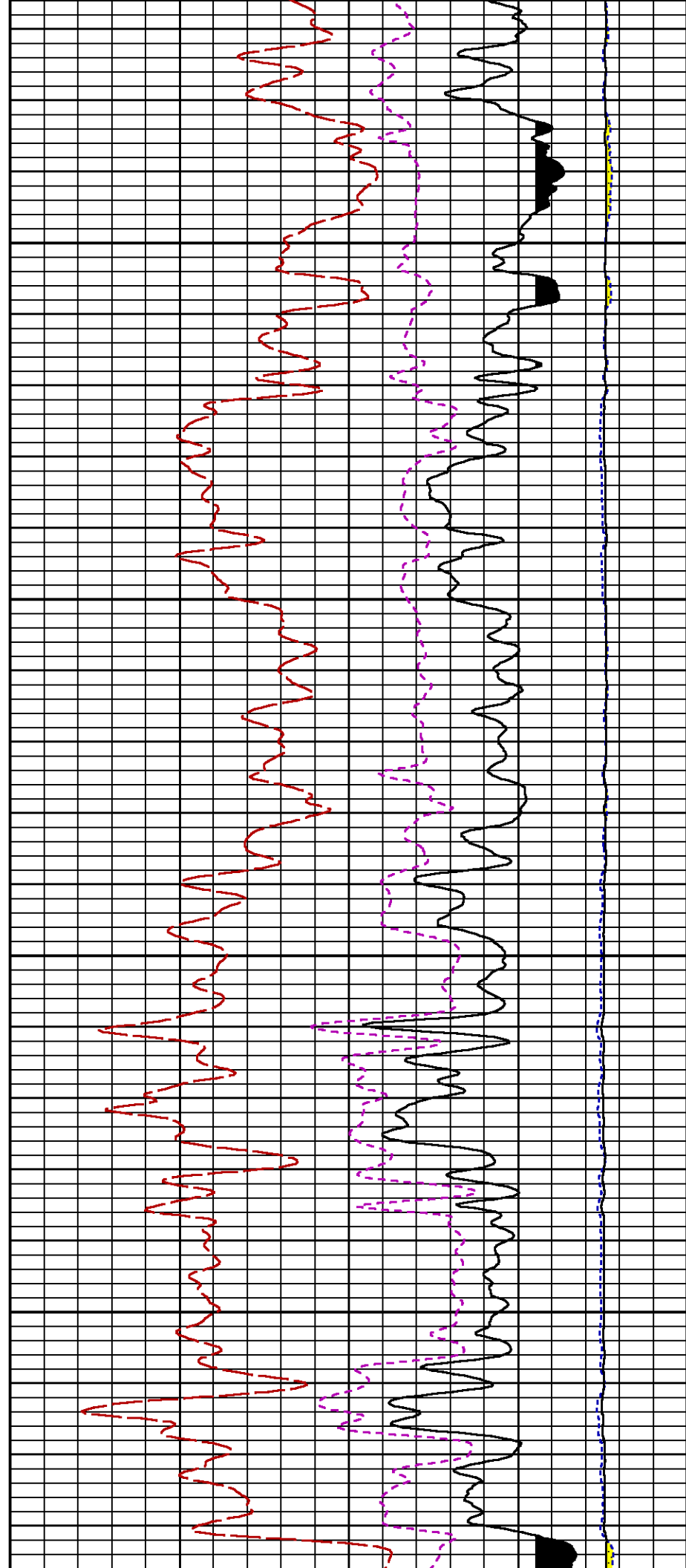


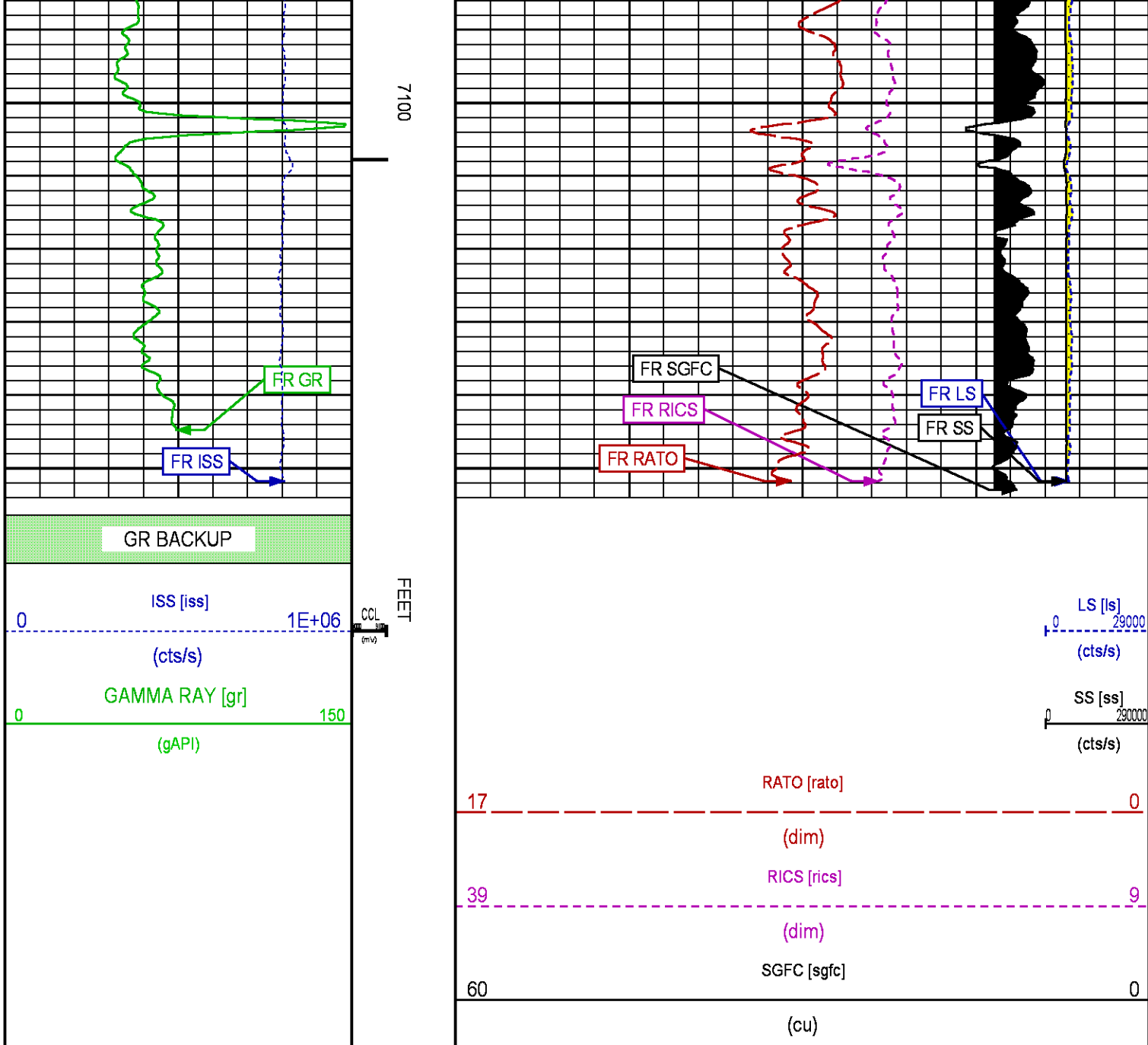












REPEAT SECTION PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1,36 Patches: 9

Plotted: Mon Jun 20 09:36:34 2016

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH107930/n353hx01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 6578.500 ft BOTTOM DEPTH: 6797.750 ft

### SYMMETRIC FILTER

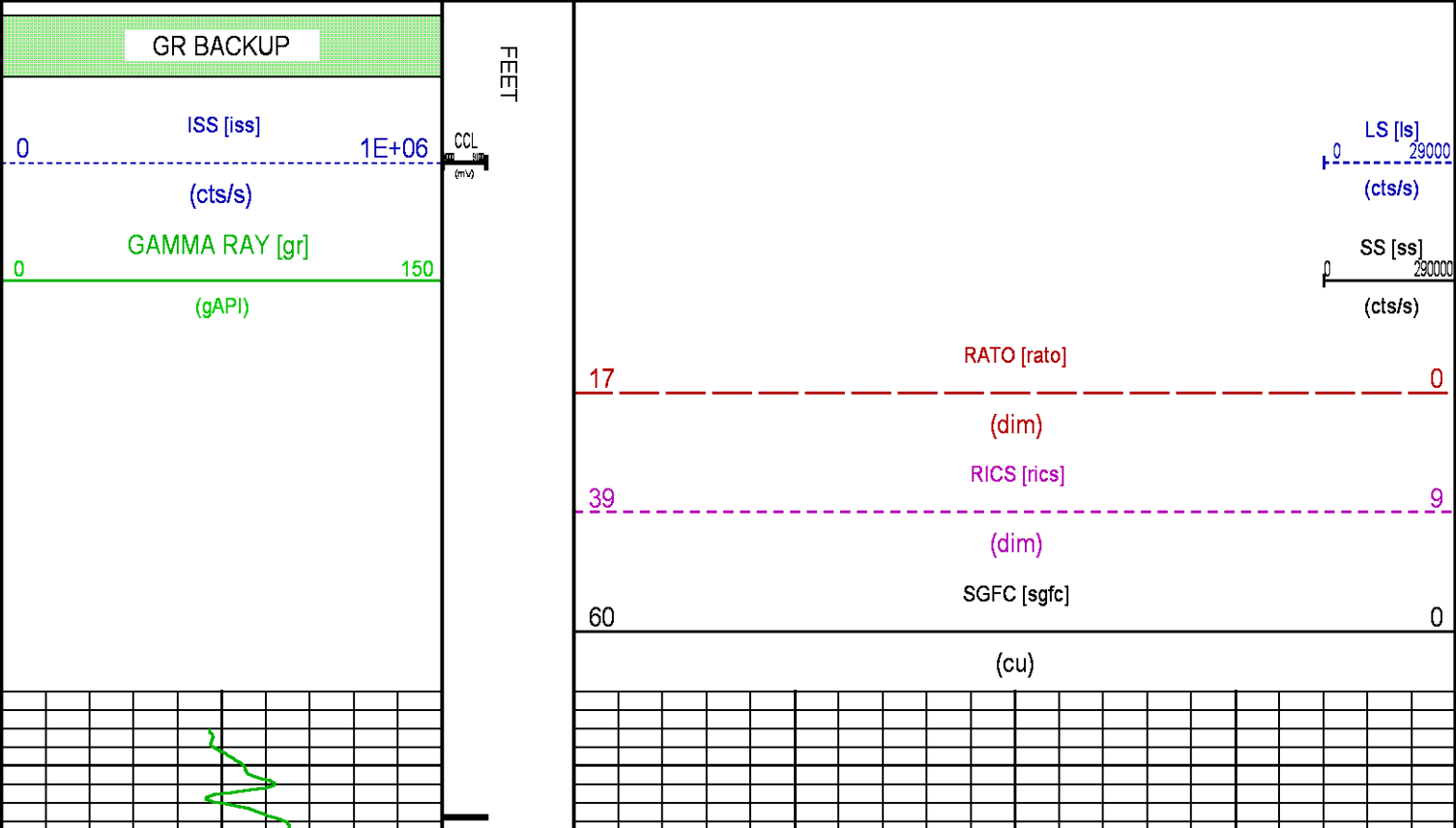
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (#)
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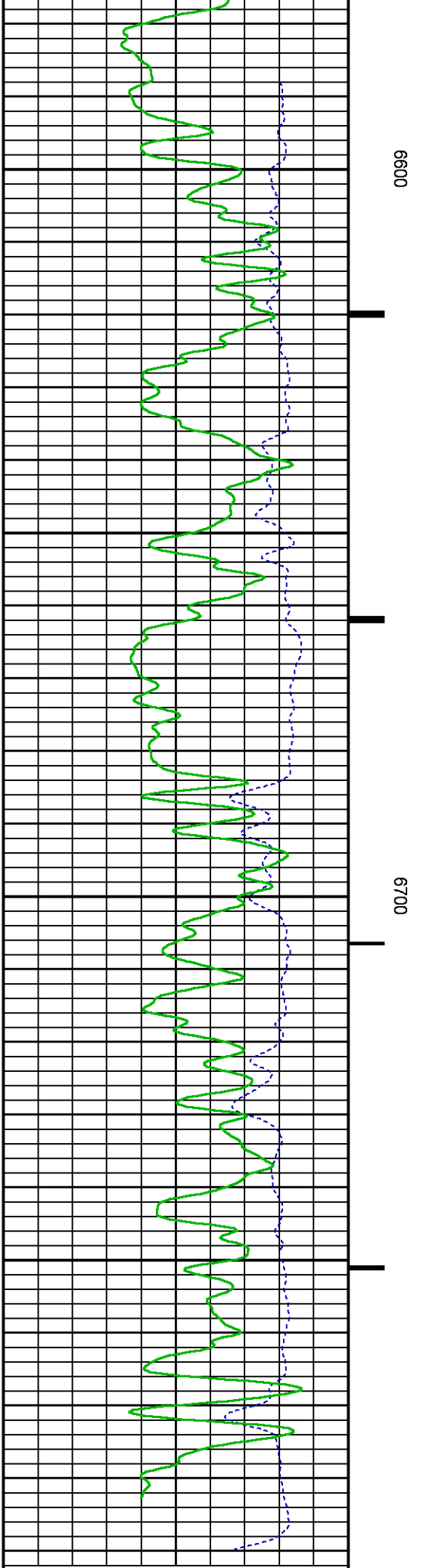
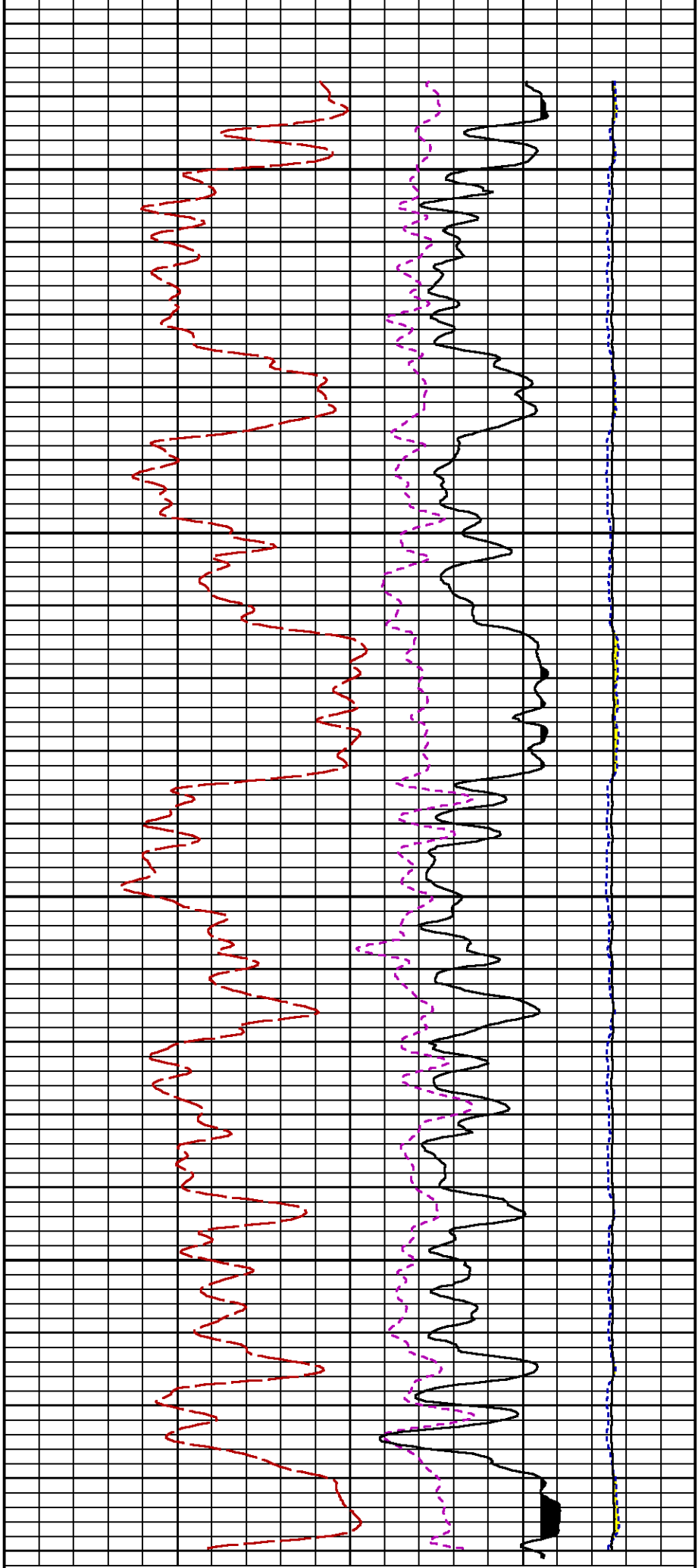
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
RPM PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP	BOTTOM
	OPEN/CASED HOLE	CASED HOLE		"	"
	BOREHOLE SIZE	8.75	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Jun 20 05:48:17 2016	CASING COLLAR LOCATOR
F1:GR	Jun 20 05:48:17 2016	GAMMA RAY
F1:ISS	Jun 20 05:48:17 2016	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Jun 20 05:48:17 2016	LONG SPACE COUNT RATE
F1:RATO	Jun 20 05:48:17 2016	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Jun 20 05:48:17 2016	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Jun 20 05:48:17 2016	CORRECTED FORMATION SIGMA
F1:SS	Jun 20 05:48:17 2016	SHORT SPACE COUNT RATE

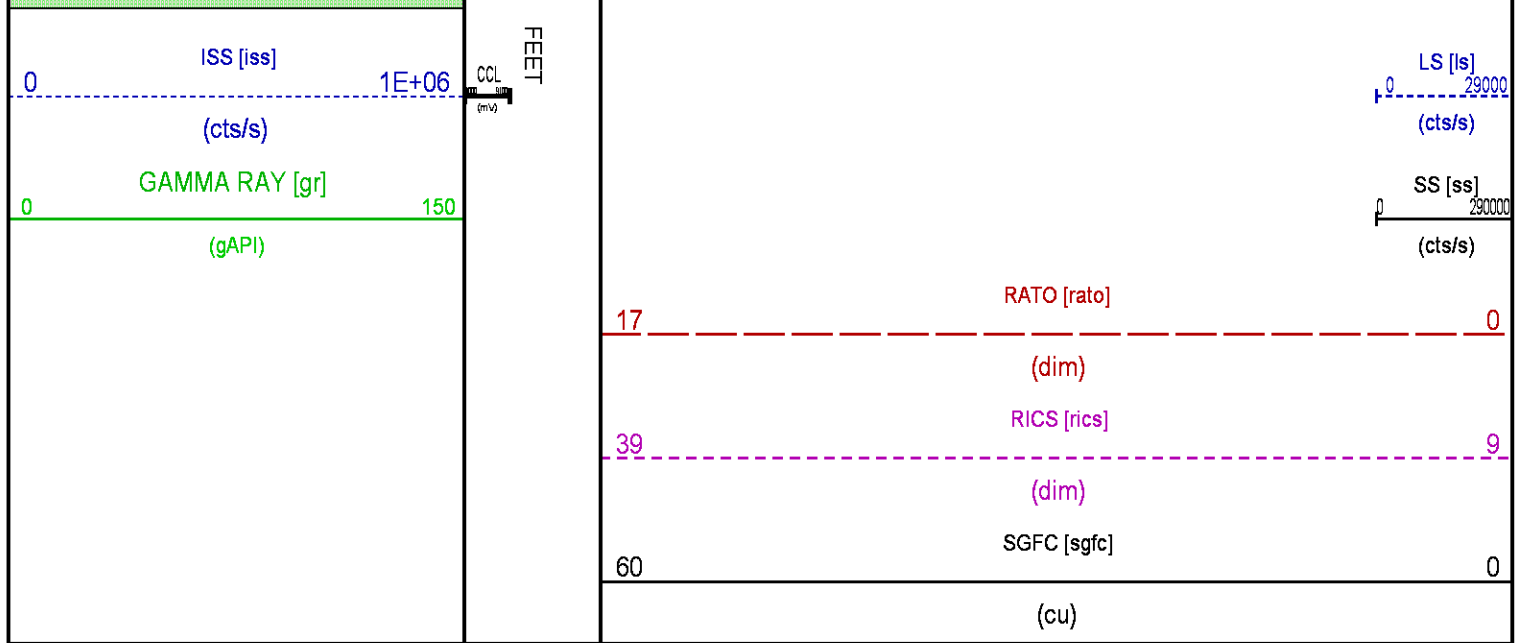
CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	26.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

Presentation	: cas6685:/dat1a/CH107930/WPX_RPM_RPT.fvpdf [5"/100' Scale]
Plot Interval	: 6562 - 6791 Feet
Data File 1	: F1 : cas6685:/dat1a/CH107930/n353hx01_RPT.xtf
Created On	: Jun 20 06:34:45 2016
Company	: WPX ENERGY
Well	: FEDERAL GM 43-8
Field	: GRAND VALLEY
File Interval	: 6561.25 - 6806 Feet
OCT	: n353hx





## GR BACKUP



## CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH107930/n353hx.tp1

### GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA 10485470

DATE/TIME PERFORMED: Fri Jun 17 11:22:43 2016

UNIT #: 3885TC 6685

CALB JIG #: 4702NK BA-905

	BACKGROUND CALBRTR ON		CR DIFF	MULT	BACKGROUND CALBRTR ON		CALBRTR
	(cts/s)	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	106.31	456.42	350.1	0.514	54.66	234.66	180

### GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10485470

DATE/TIME PERFORMED: Fri Jun 17 11:24:51 2016

UNIT #: 3885TC 6685

VERI JIG #: 4702NK BA-905

	BACKGROUND CALBRTR ON		MULT	BACKGROUND CALBRTR ON		DIFF.
	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	104.33	455.69	0.514	53.64	234.28	180.64
						170.00 190.00

## RPM\_PNC\_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10169251

DATE/TIME PERFORMED: Fri Jun 17 11:17:30 2016

UNIT: 3885TC 6685

CALIBRATOR: 2437XB GJ\_SHOP

SOURCE: 8281AA 11765055

HOURS: 8281AA 202

	ISS	Mtr Vlt (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	809107	120	2330	2299	2351	132	7.0	0.9797

Interpolated	1300000	140	2308	2293	2348
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	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	809107	7256	1203	154	25.99	0.15	24.02	0.34
					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	809107	166665	26353	87355	31074	8120	52945	13003
Fit Quality %		0.718	0.914	0.858	0.879	0.823	0.834	0.791

	ISS	RBOR	RIN ISS/LS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	809107	1.43	4.86	30.72	15.28	10.76	3.83	4.07
		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 %		0.093	0.239	0.137	0.092	0.055	0.061	0.073
Reduced	1386218	1.43	4.86	30.72	15.30	10.75	3.83	4.07
		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 Z166341

DATE/TIME PERFORMED: Wed Oct 21 14:25:56 2015

UNIT #: 3885TC 6685

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	-1.828341E+01	9.988427E-02	8.122243E-07	-3.138442E-11

**INSTRUMENT CONFIGURATION**

A3 CABLEHEADPCM 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

GAMMA RAY

Diameter : 1.70"  
 Length : 3.02'  
 Weight : 15 lbs  
 Series : 8262XA  
 Mnemonic : GR  
 Measure Point: 0.89': GR MP

RPM ELECTRONICS

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

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

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

BULL PLUG 1 11/16

TOTAL LENGTH: 34.08'  
 TOTAL WEIGHT: 144 lbs  
 MAX DIAMETER: 0'1.70'

34.08'

CCL MP 26.03'

GR MP 22.90'

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

TEMP MP 1.65'  
PRES MP

0.00'



COMPANY  
WELL  
FIELD  
COUNTY

WPX ENERGYFEDERAL GM 43-8GRAND VALLEYGARFIELDSTATE COLORADO

LOCATION:

SHL:676'FNL&amp;545'FWL SEC9 T7S R96W

BHL:2411'FSL&amp;648'FEL SEC8 T7S R96W

NE/SE

SEC 8 TWP 7S RGE 96W

ELEVATIONS:

KB 6111 FT

DF

GL 6087 FT

DATE 20-Jun-2016

FILE NO:

CH107930

API NO:

05045225260000

SEC8 T.7S R.96W

PAD: MV 16-9

RIG: H&amp;P 318

