



FILE NO: CH093851
API NO: 05045224620000
COMPANY **WPX ENERGY**
WELL **GM 411-12**
FIELD **GRAND VALLEY**
COUNTY **GARFIELD** STATE **COLORADO**

Version 12 7S 96W
GM 21-12 PAD
NABORS 573
LOCATION: SHL: 1179' FNL & 1894' FWL
BHL: 220' FNL & 1209' FWL (SWNE)
SEC 12 TWP 7S RGE 96W
OTHER SERVICES
BOND LOG

PERMANENT DATUM GL ELEVATION 5125 FT
LOG MEASURED FROM KB 26 FT ABOVE P.D.
DRILL. MEAS. FROM KB
ELEVATIONS:
KB 5151 FT
DF
GL 5125 FT

DATE	31-Dec-2014	
RUN	TRIP	1
SERVICE ORDER	US093851	
DEPTH DRILLER	6436 FT	
DEPTH LOGGER	6406 FT	
BOTTOM LOGGED INTERVAL	6396 FT	
TOP LOGGED INTERVAL	3120 FT	
TIME STARTED	1130	
TIME FINISHED	1700	
OPERATOR RIG TIME	5.5 HOURS	
TYPE OF FLUID IN HOLE	WATER	
FLUID DENSITY	NA	
FLUID SALINITY	NA	
FLUID LEVEL	60 FT	
LOGGED CEMENT TOP	NA	
WELLHEAD PRESSURE	0 PSI	
MAXIMUM HOLE DEVIATION	NA	
NOMINAL LOGGING SPEED	10 FMIN	
MAX. RECORDED TEMP.	213 DEGF	
REFERENCE LOG	BAKER HUGHES BOND LOG	
REFERENCE LOG DATE	31-Dec-2014	
EQUIP. NO.	LOCATION	
4271	GRAND JCT.	
RECORDED BY	FLOYD RENEAU	
WITNESSED BY	O. 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	1563 FT
8.75 IN	1563 FT	6436 FT

CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN			0 FT	1563 FT
4.5 IN	11.6 LB/F	I-80	0 FT	6436 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 12/31/2014 at the client's request.

The amount of linear shift is -2 feet.

Logged in PNC-3D mode.

BHT = 213 degF

SJ = 2910'-2932'

Thanks you for choosing Baker-Hughes.

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	10397894	FREE
1	1	TEL/CCL	8248ED	10387150	FREE
1	1	GR	2812LA	10274382	FREE
1	1	RPM	8281EA	10423671	FREE
1	1	RPM	8283PA	10585555	FREE
1	1	RPM	8281FA	10460082	FREE
1	1	TEMP	8255XA	Z120516	FREE

MAIN SECTION PNC-3D MODE

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014
Updates: 46 Patches: 5

Plotted: Wed Dec 31 16:37:49 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\411-12\354h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 3095.750 ft BOTTOM DEPTH: 6409.000 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	TOP 5776.000
		8.50	in	BOTTOM 5775.000
	CASING SIZE	4.50	in	TOP 5775.000
		7.00	in	BOTTOM 5775.000
	MATRIX	SANDSTONE		TOP BOTTOM
	CORRECTION BUFFER	11		" "

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Dec 31 16:29:57 2014	CASING COLLAR LOCATOR
F1:GR	Dec 31 16:29:58 2014	GAMMA RAY
F1:ISS	Dec 31 16:29:58 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Dec 31 16:29:58 2014	LONG SPACE COUNT RATE
F1:RATO	Dec 31 16:29:58 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Dec 31 16:29:58 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Dec 31 16:29:58 2014	CORRECTED FORMATION SIGMA
F1:SS	Dec 31 16:29:58 2014	SHORT SPACE COUNT RATE

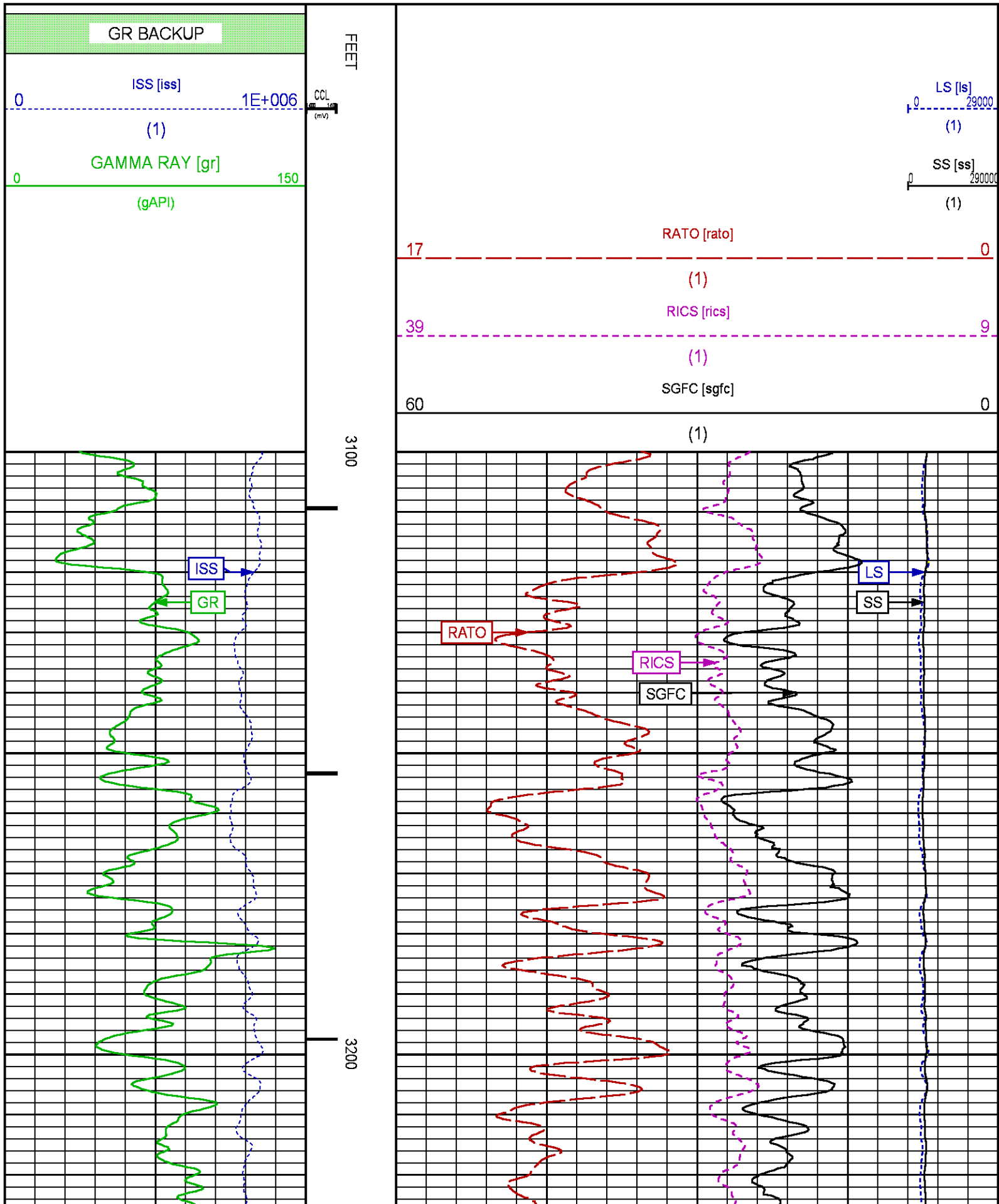
CURVE MEASURE POINT OFFSET

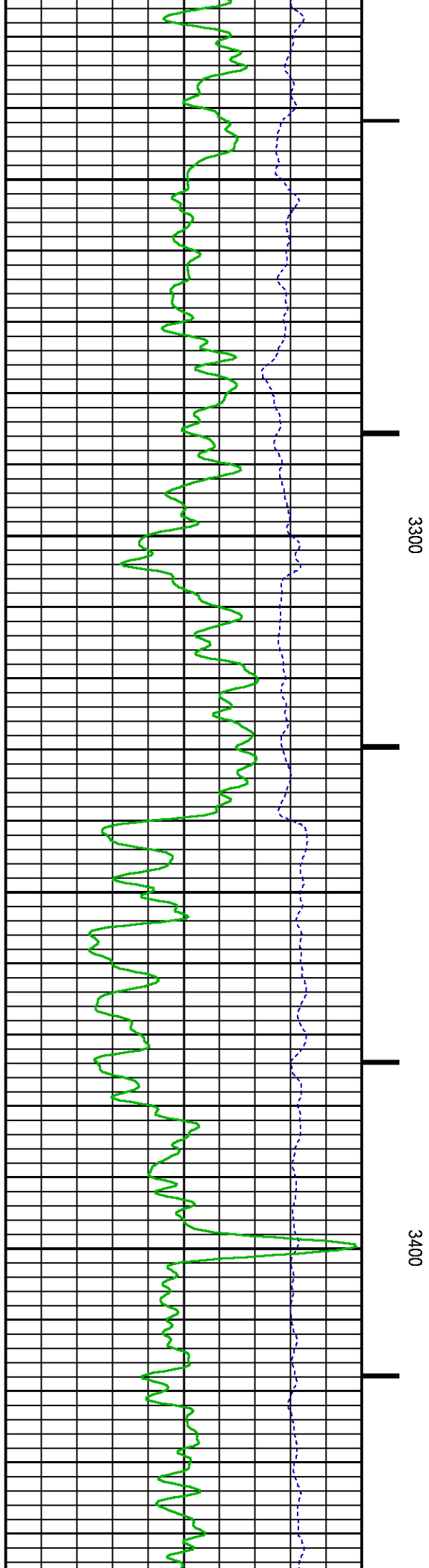
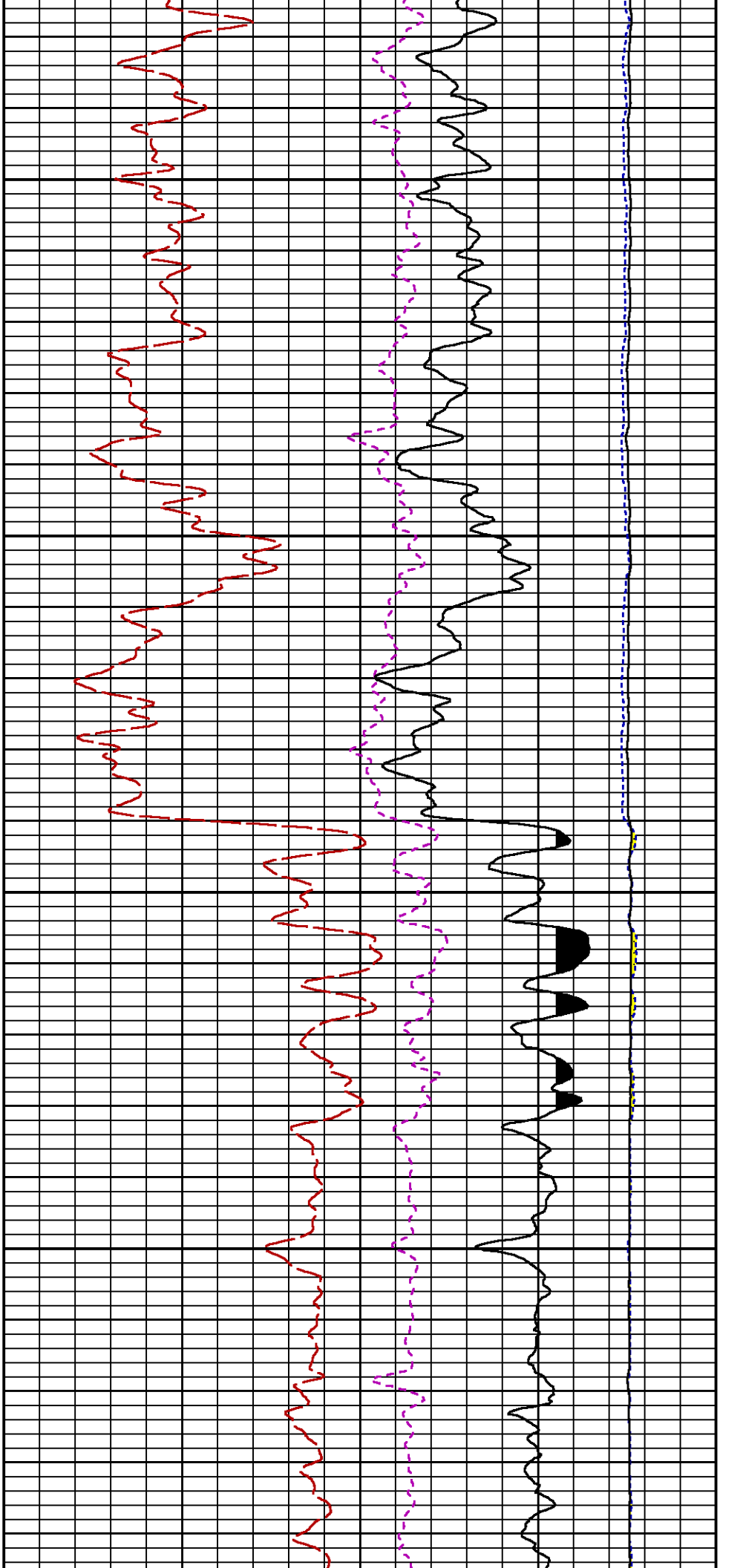
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

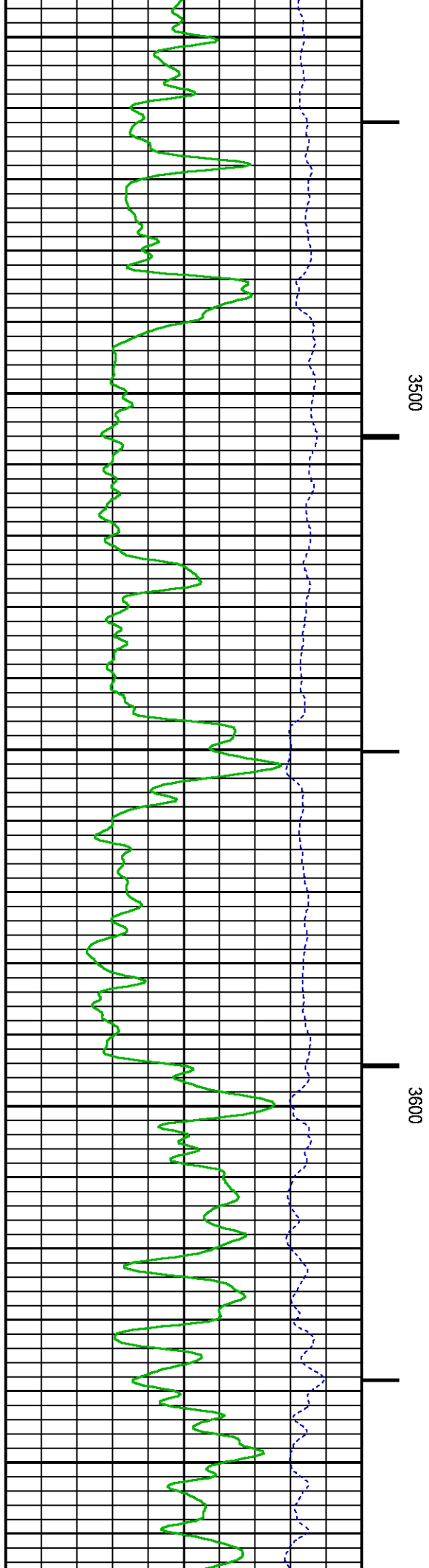
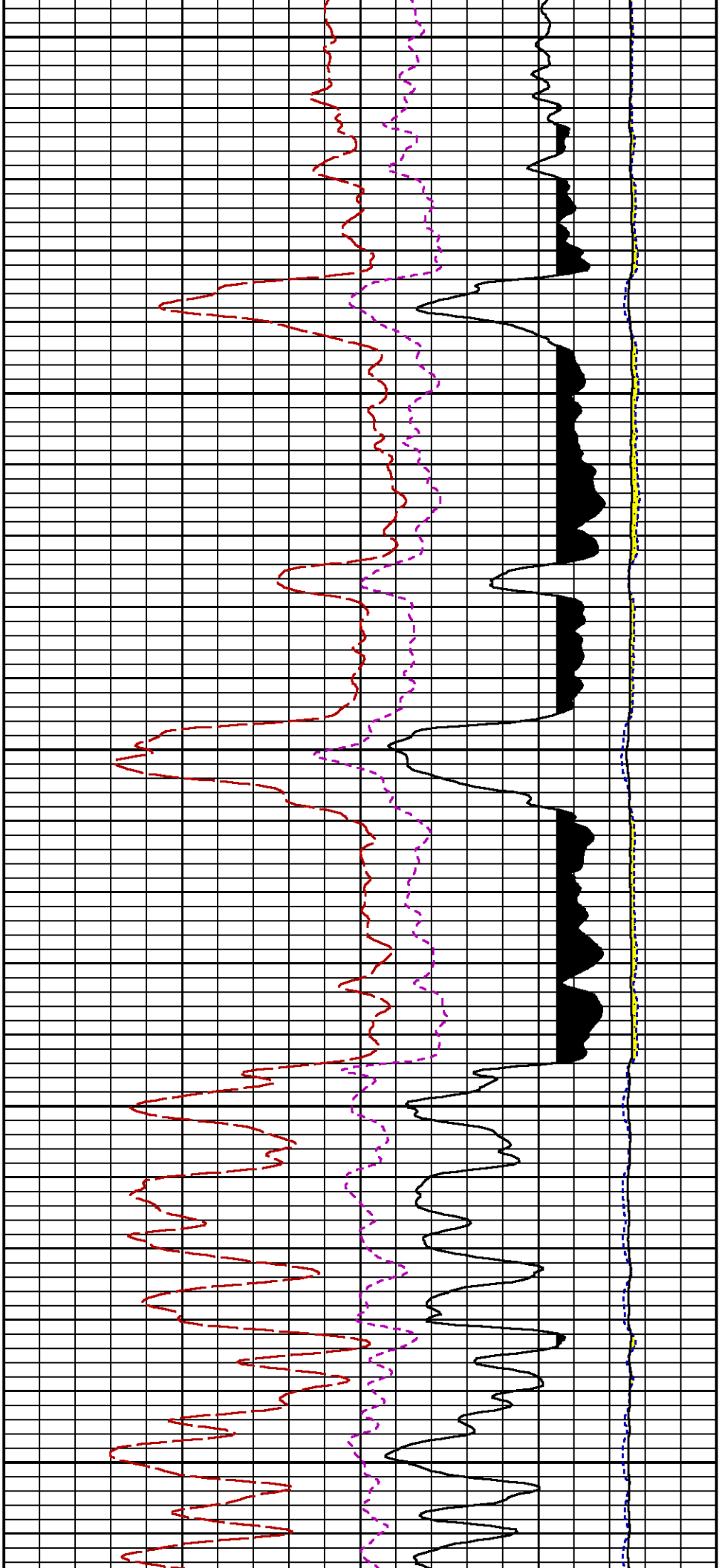
Presentation : BHUGHES-06627:C:\dat1a\411-12\411_RPM_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 3100 - 6392.75 Feet

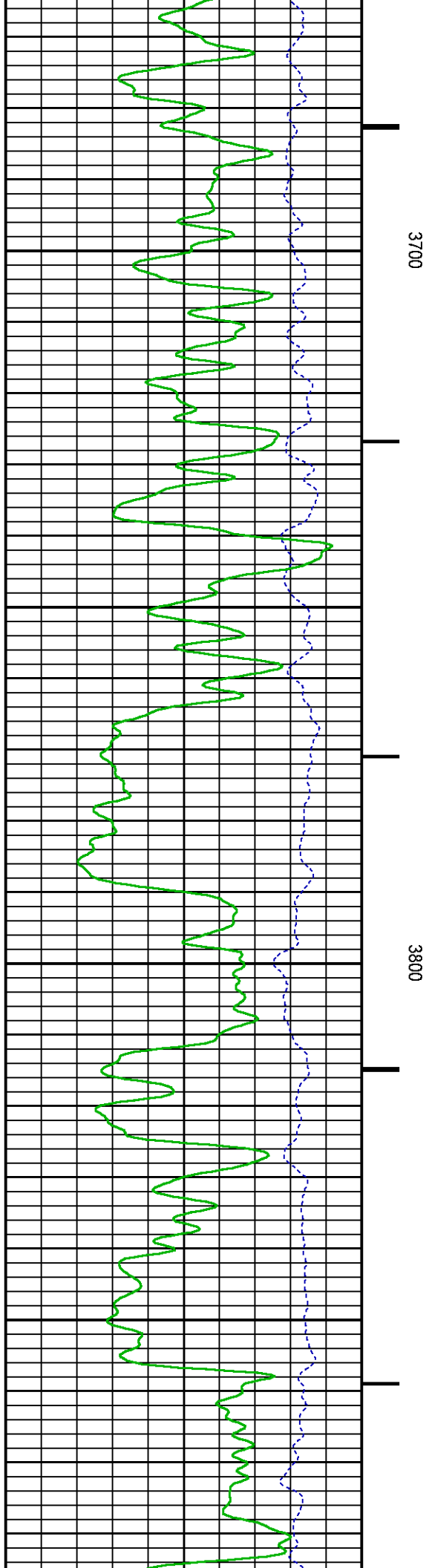
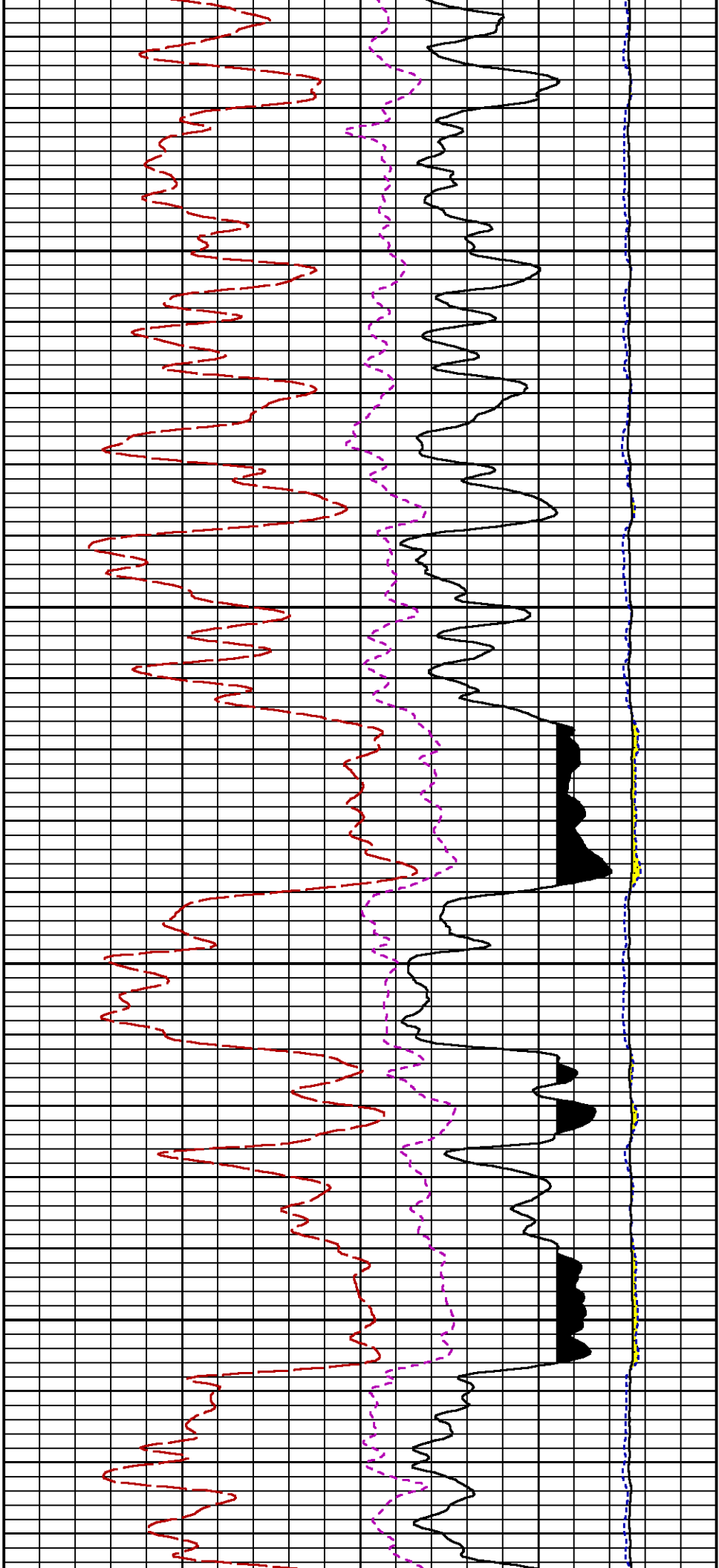
Data File 1 : F1 : BHUGHES-06627:C:\dat1a\411-12\411 RPM MAIN.xtf

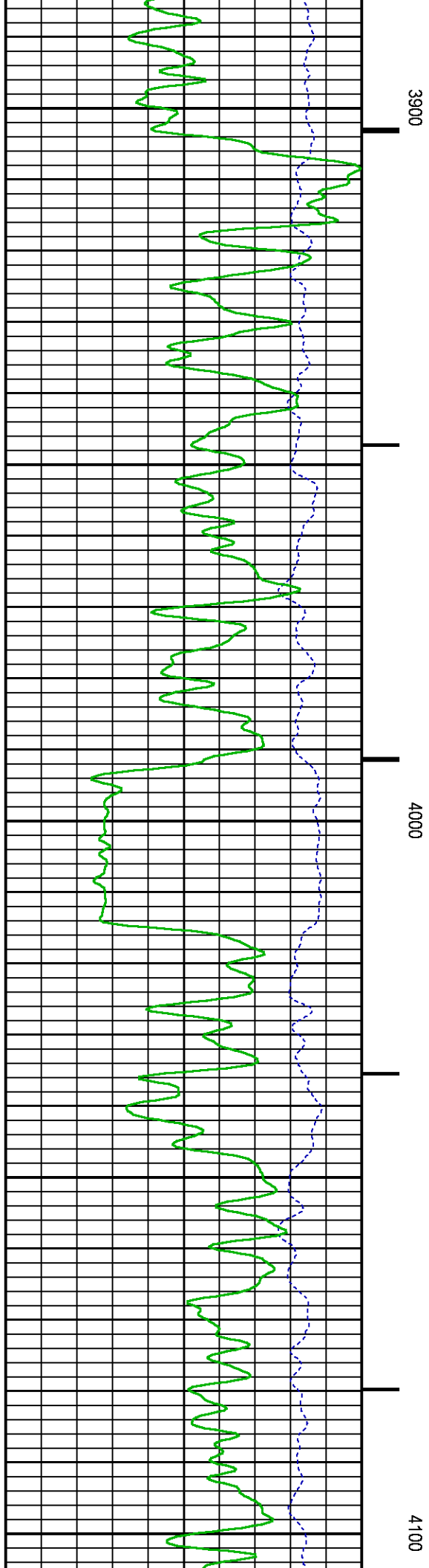
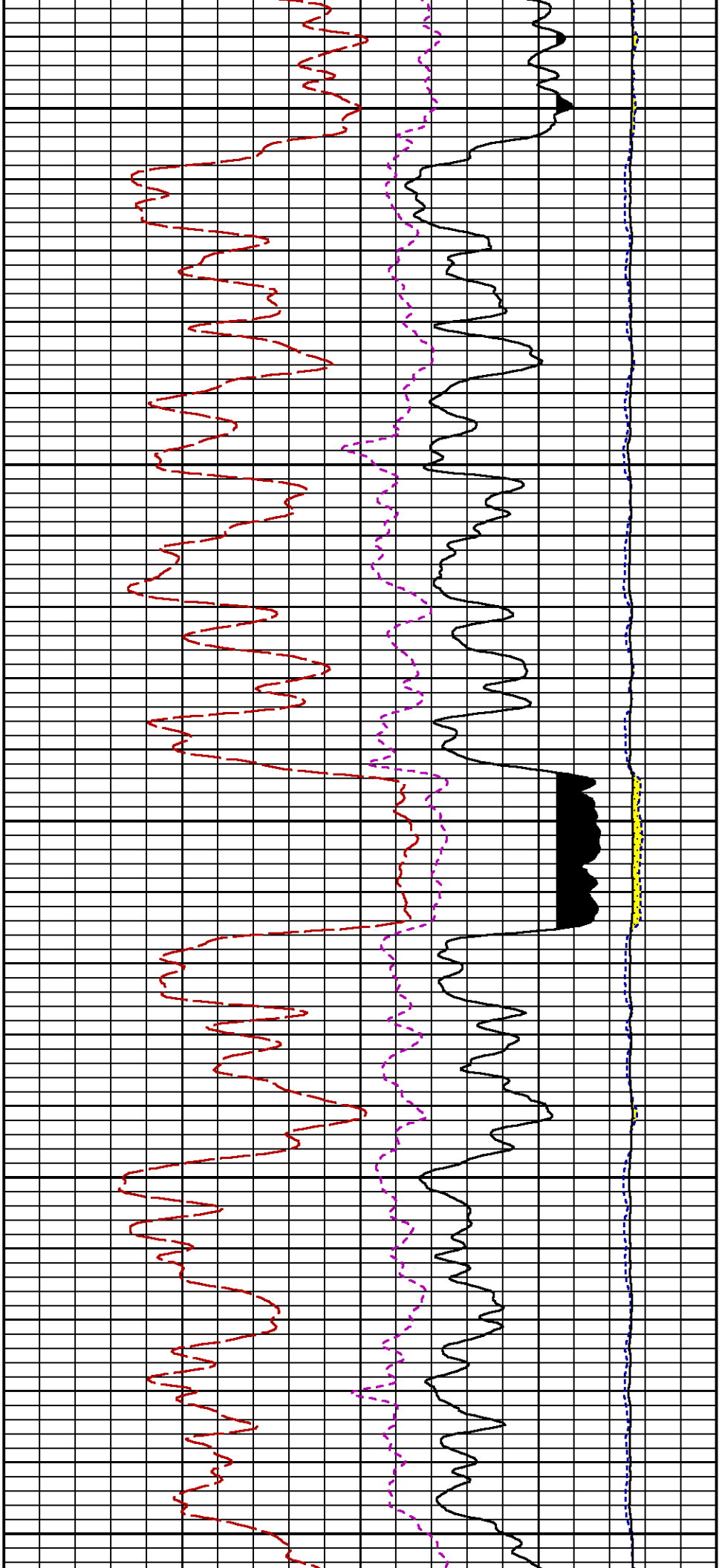
Created On : Dec 31 16:29:57 2014
Company : WPX ENERGY
Well : GM 411-12
Field : GRAND VALLEY
File Interval : 30.25 - 6409 Feet
OCT : n354h

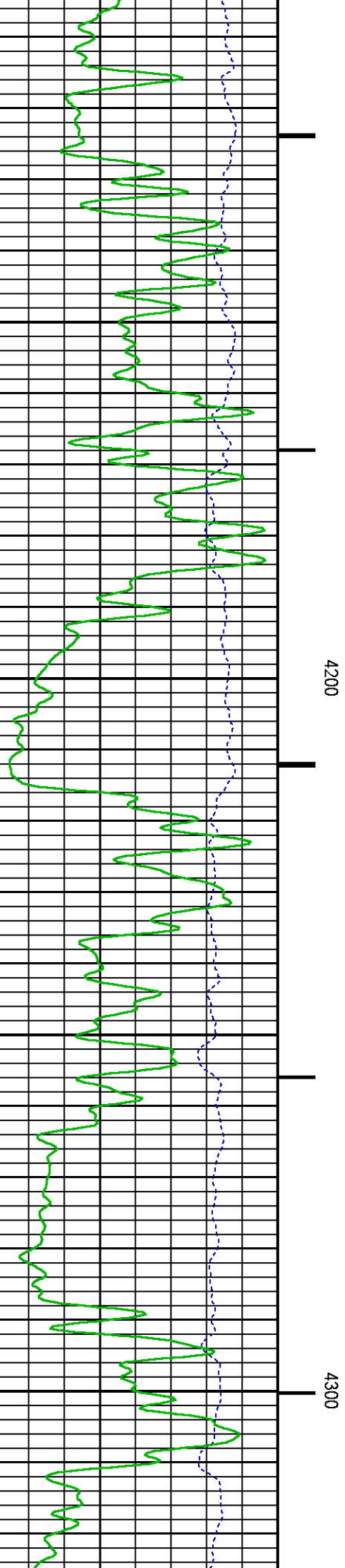
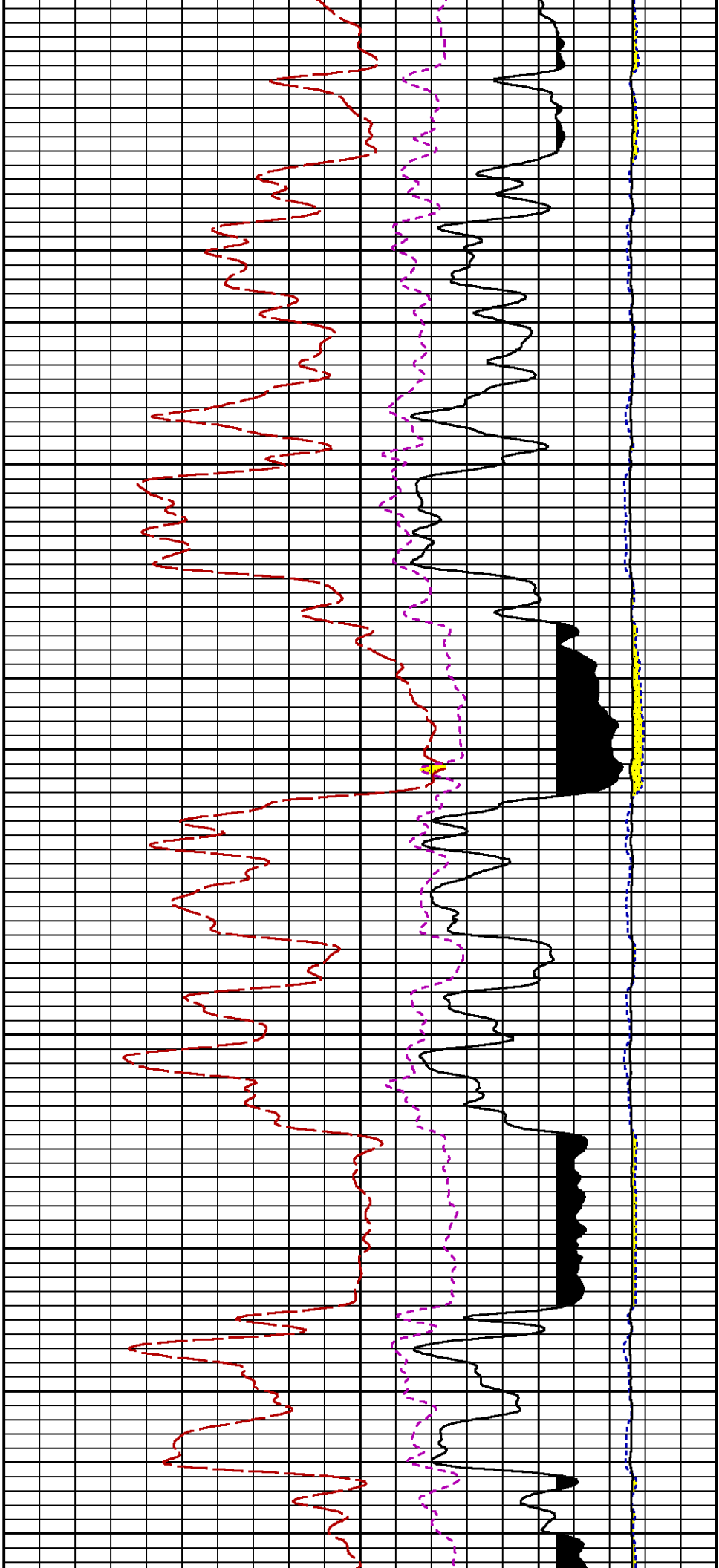


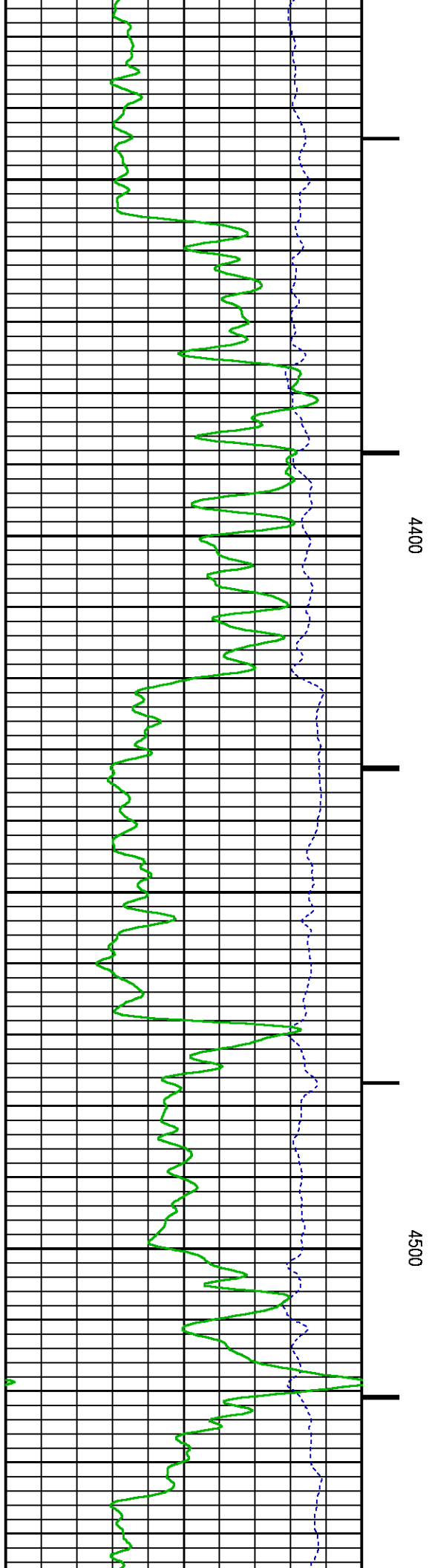
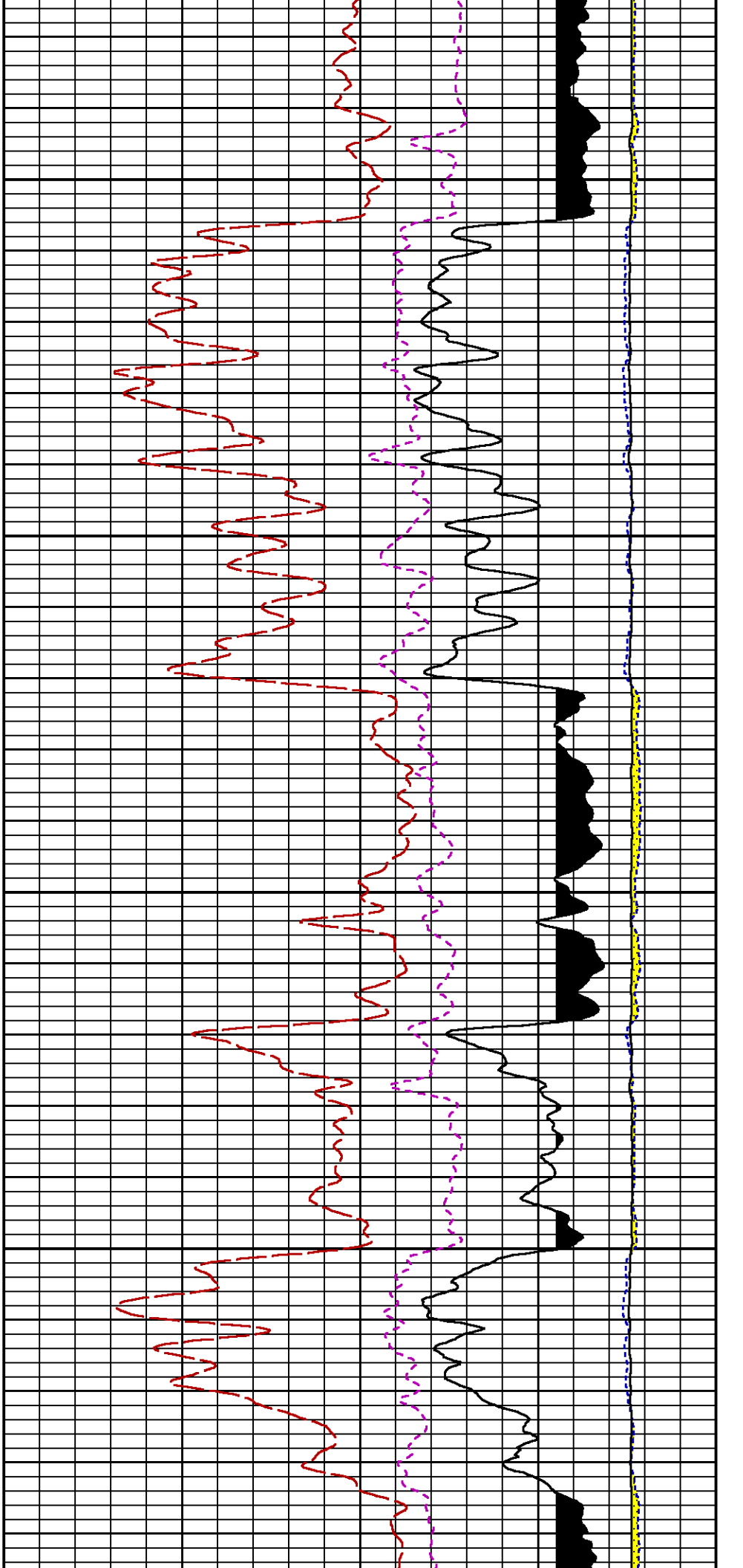


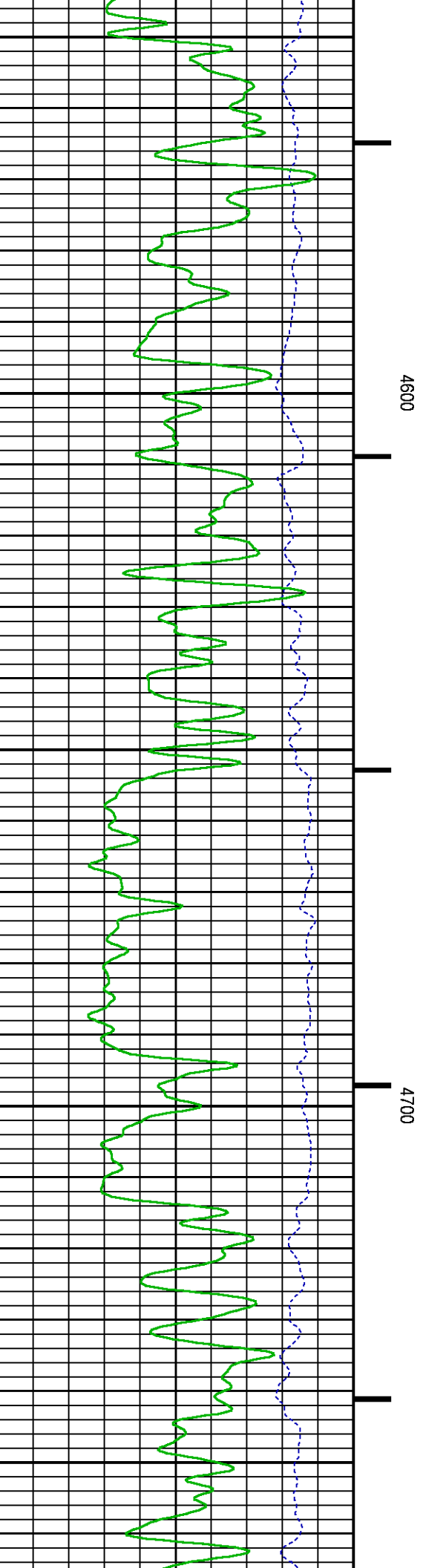
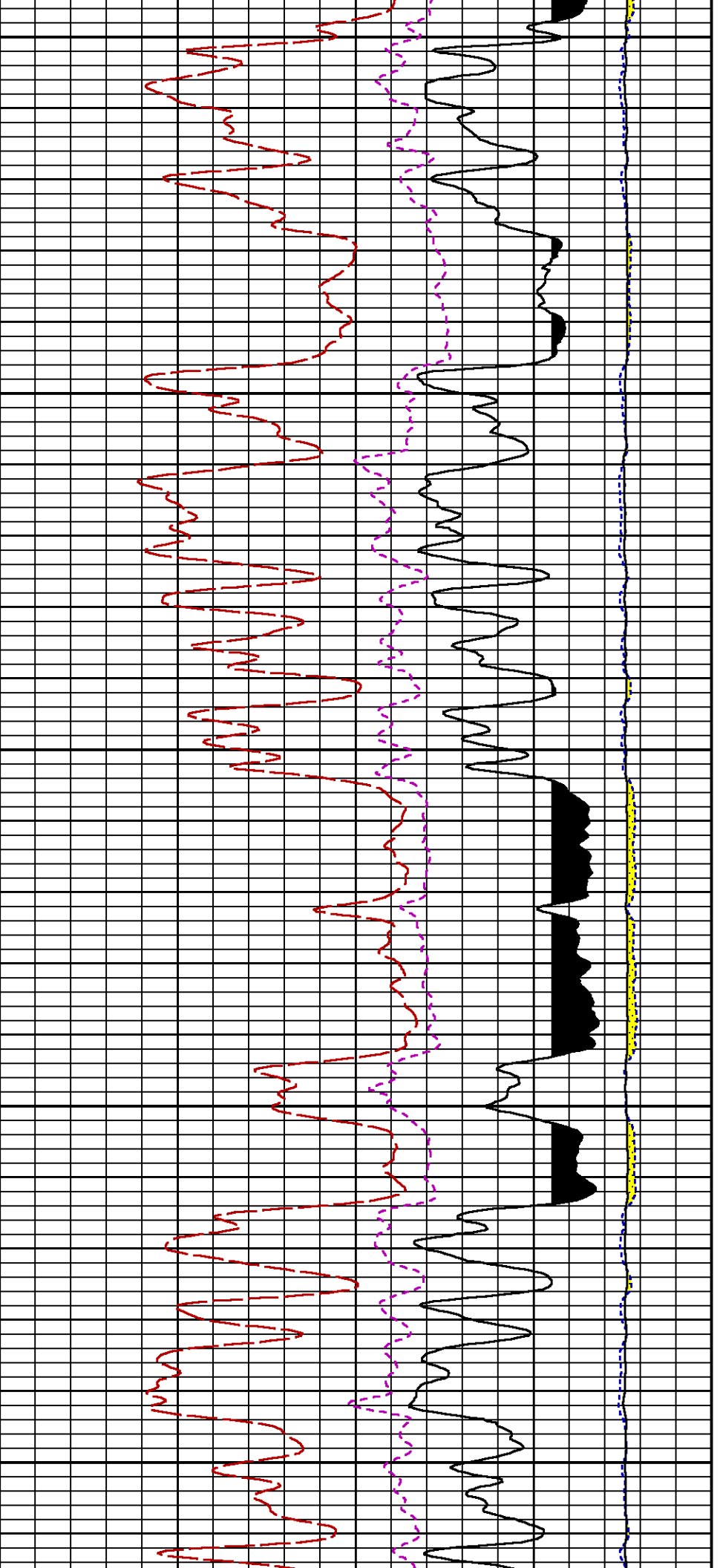


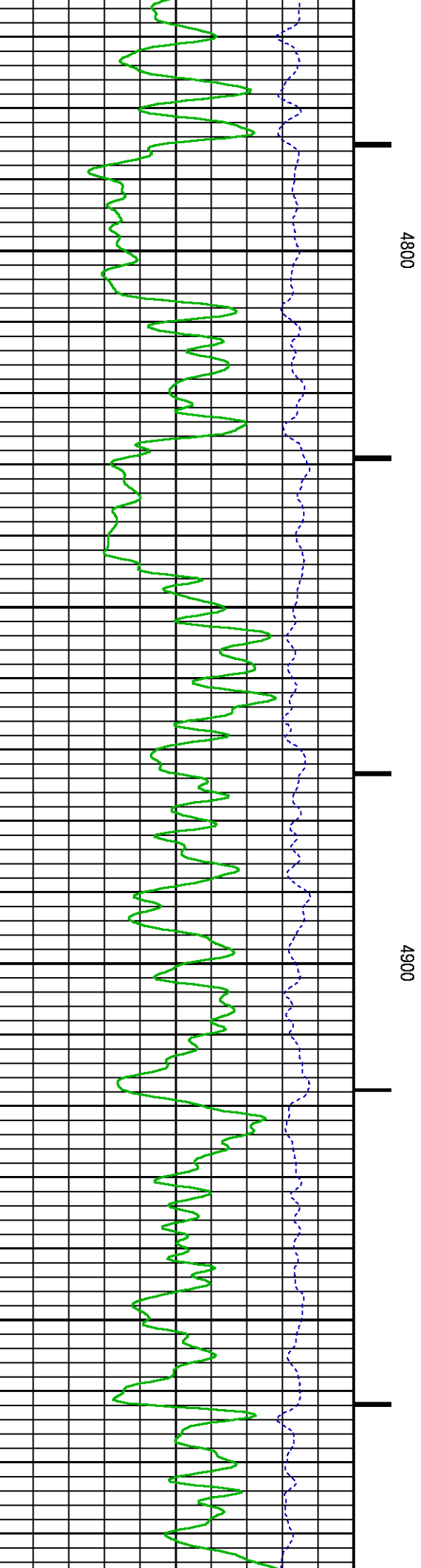
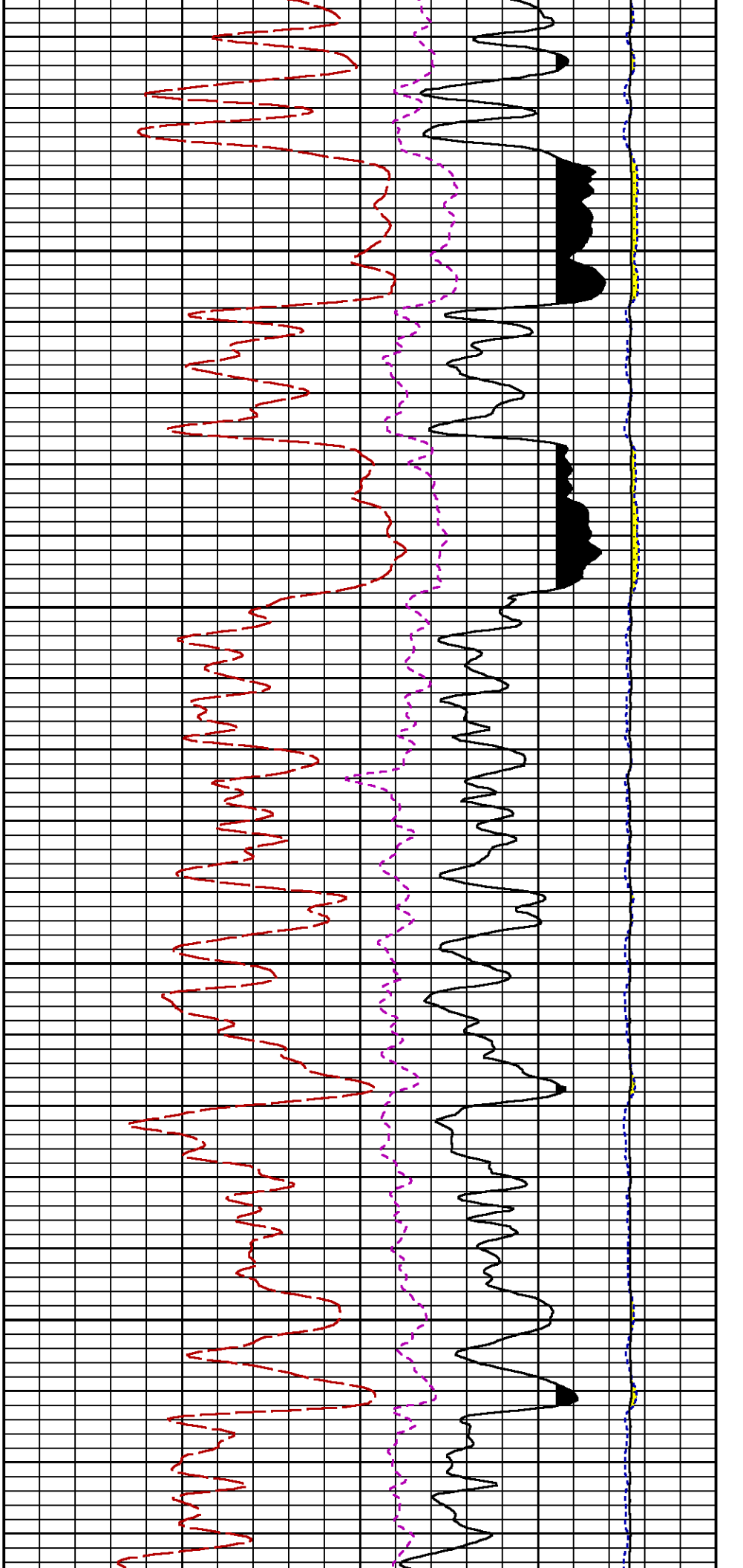


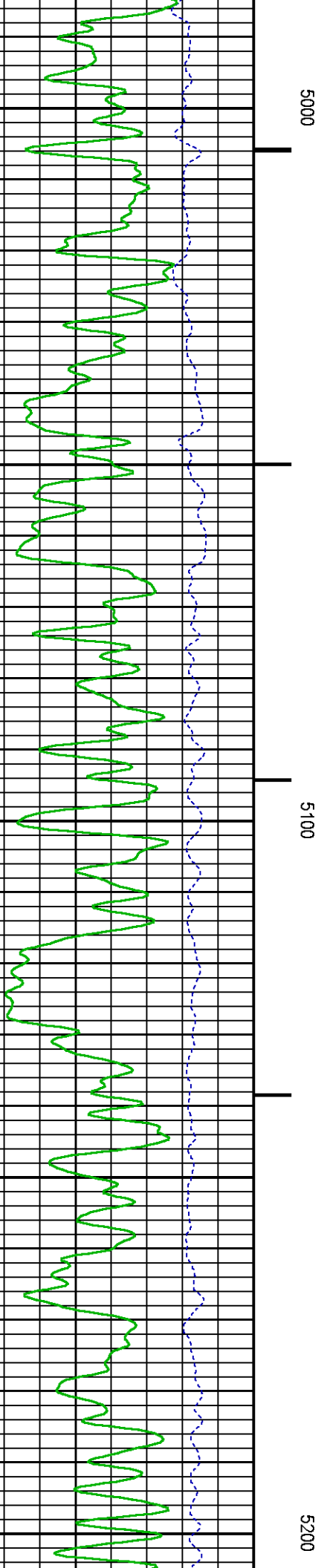
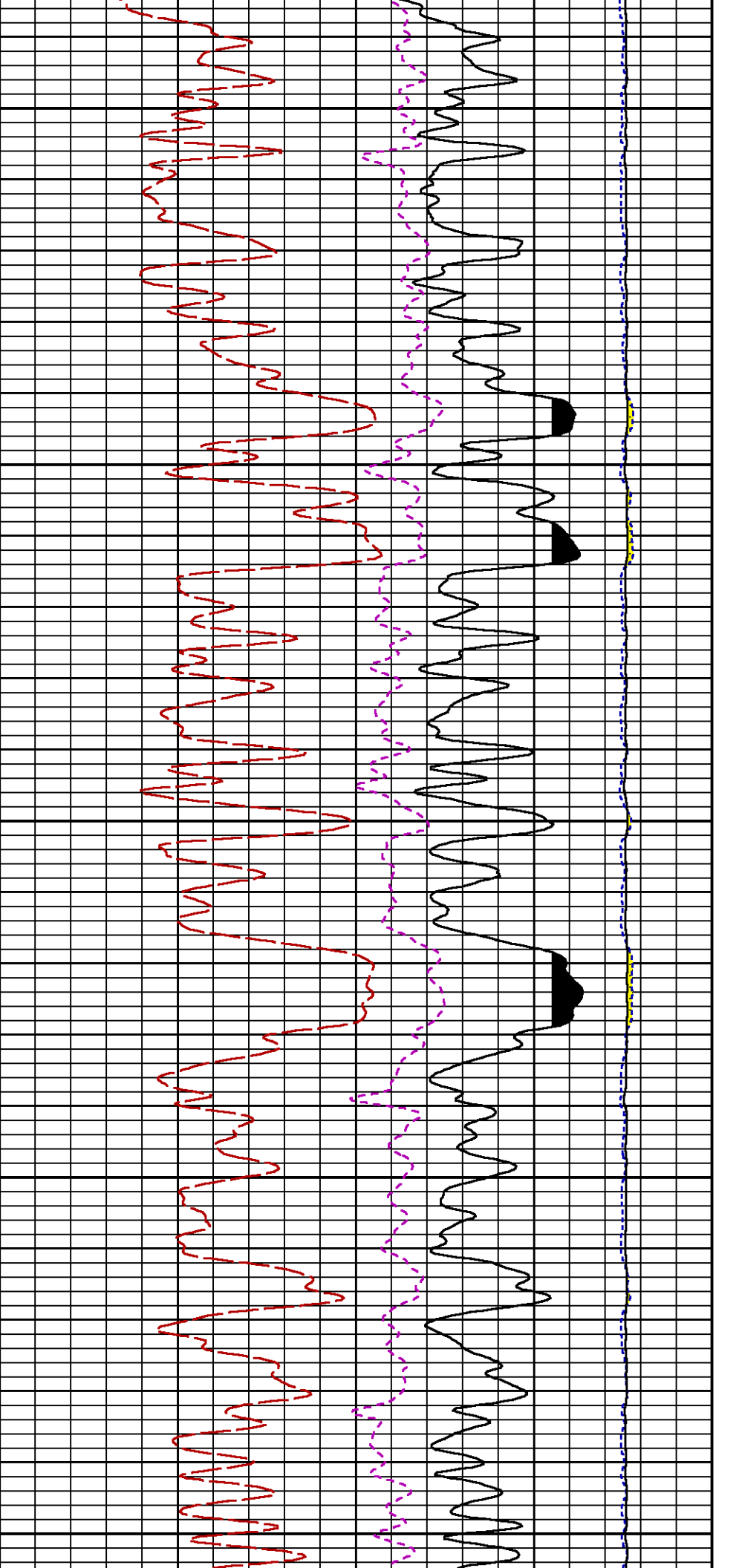


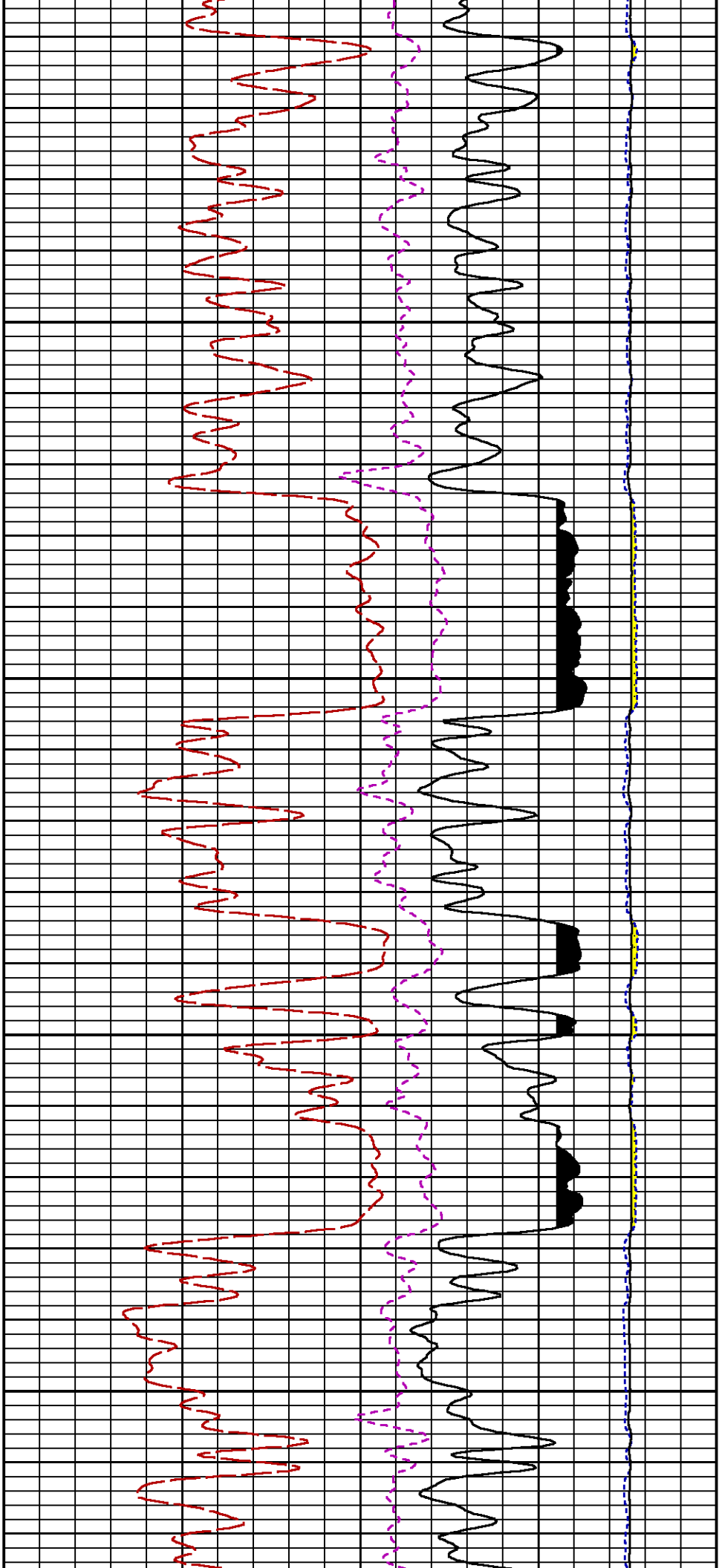






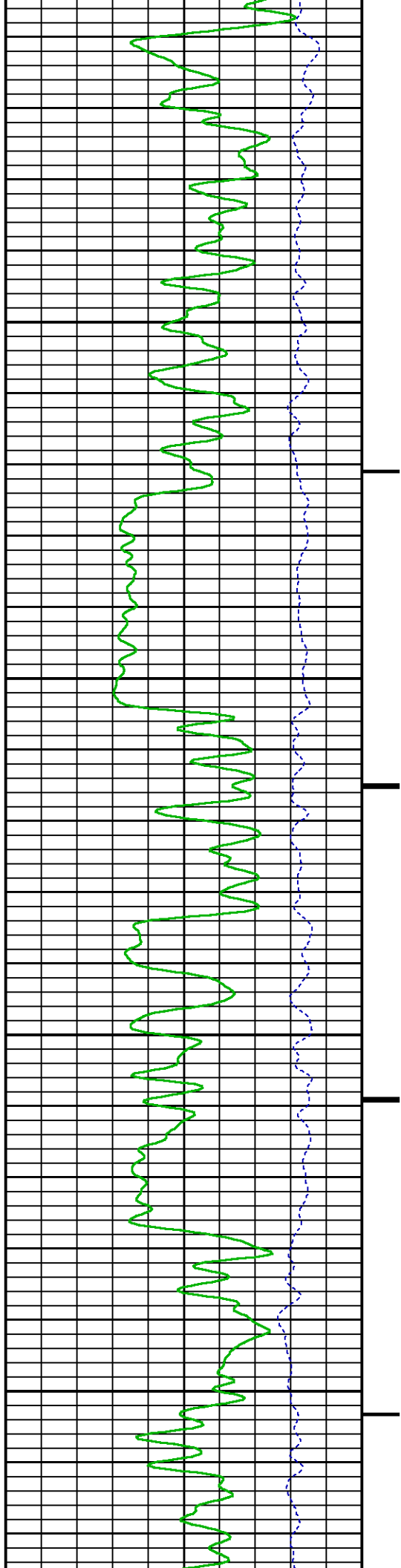


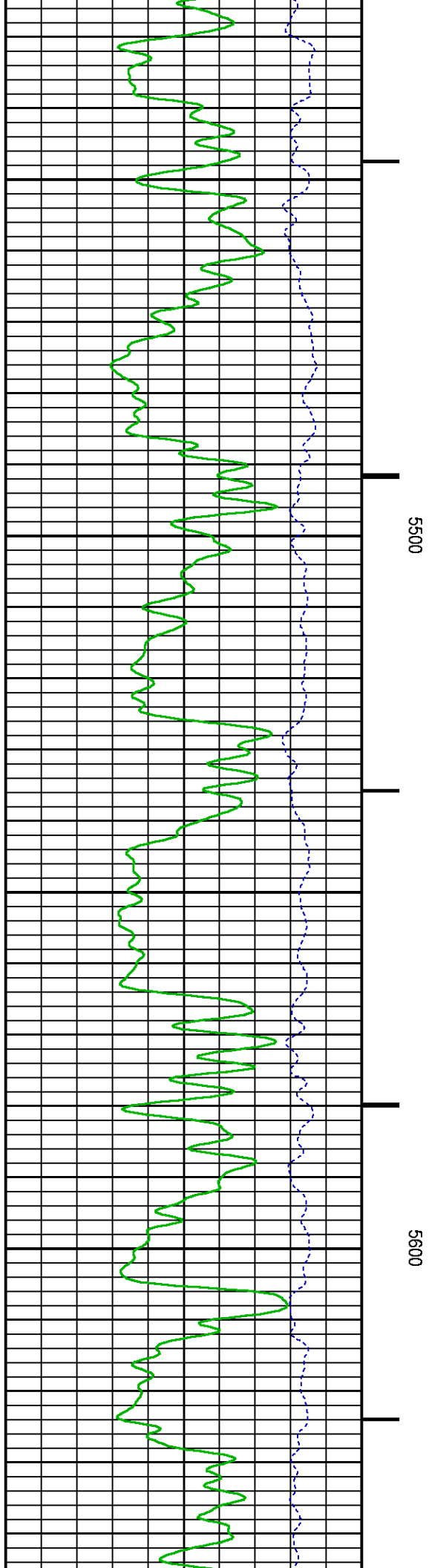
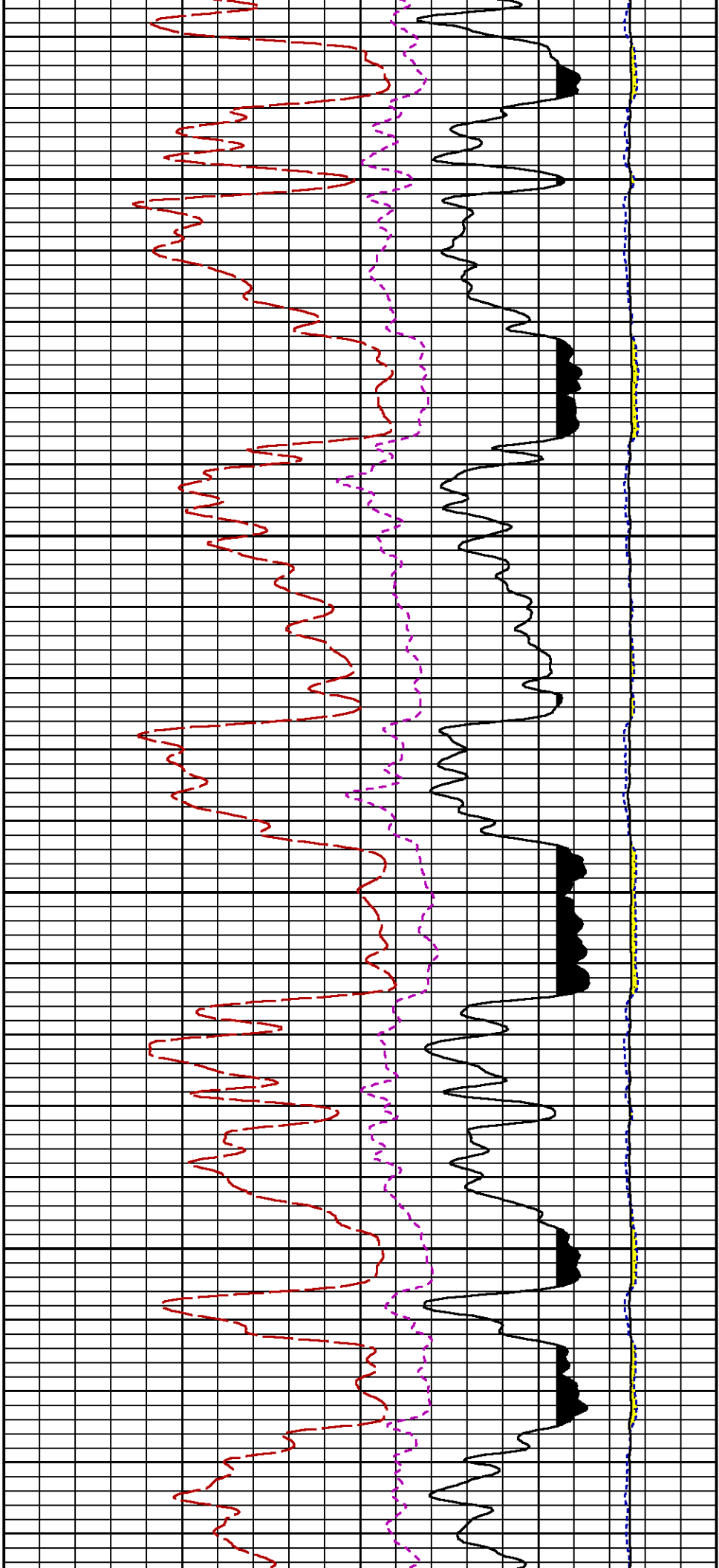


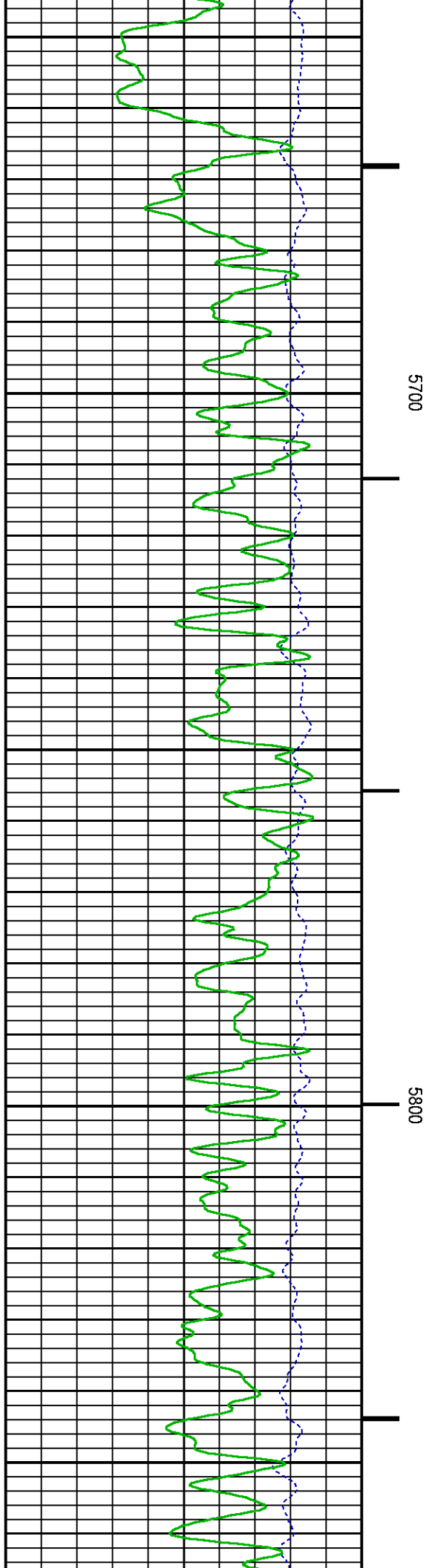
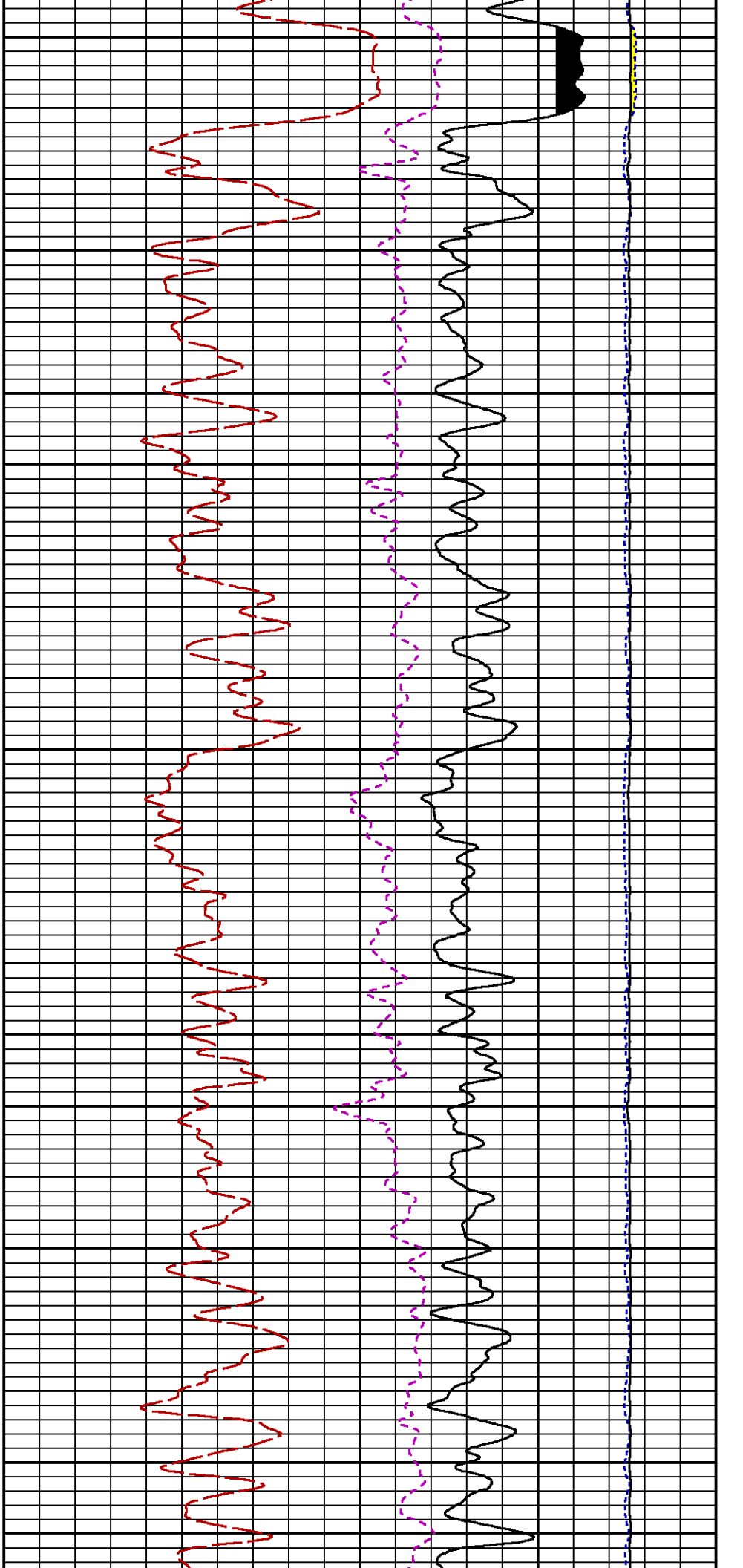


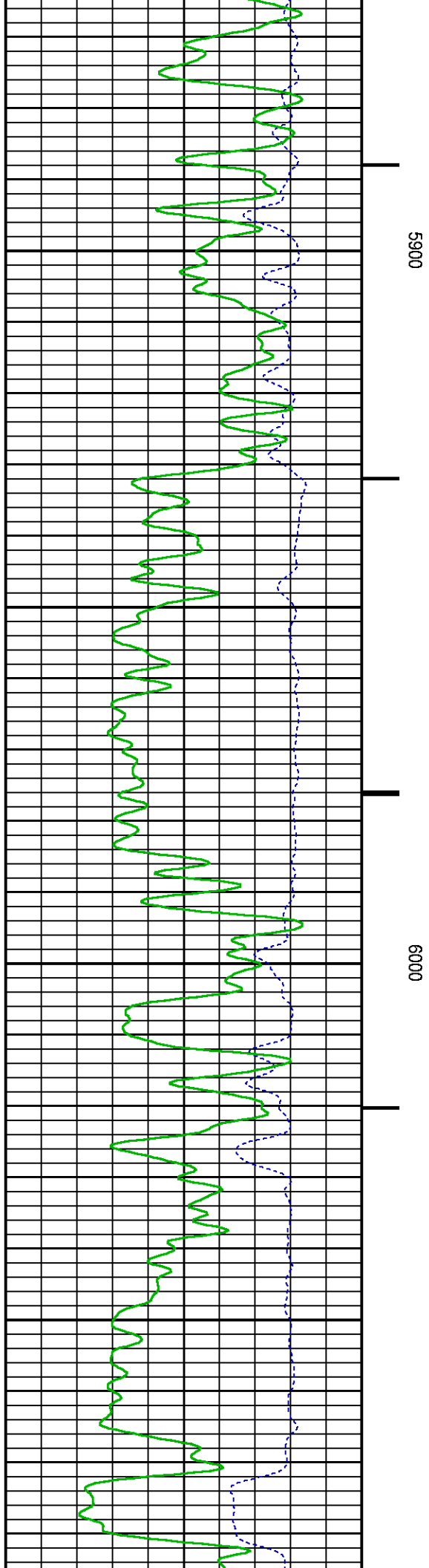
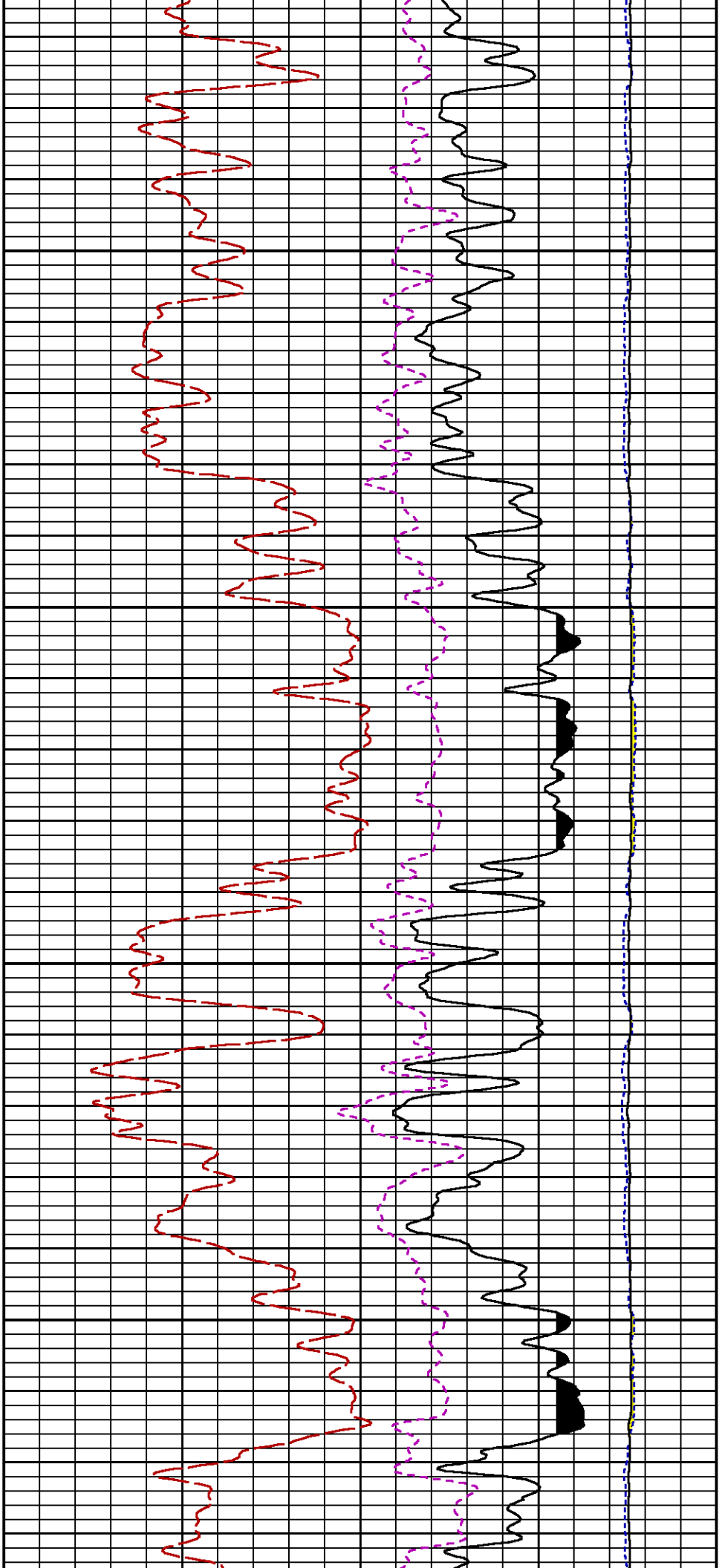
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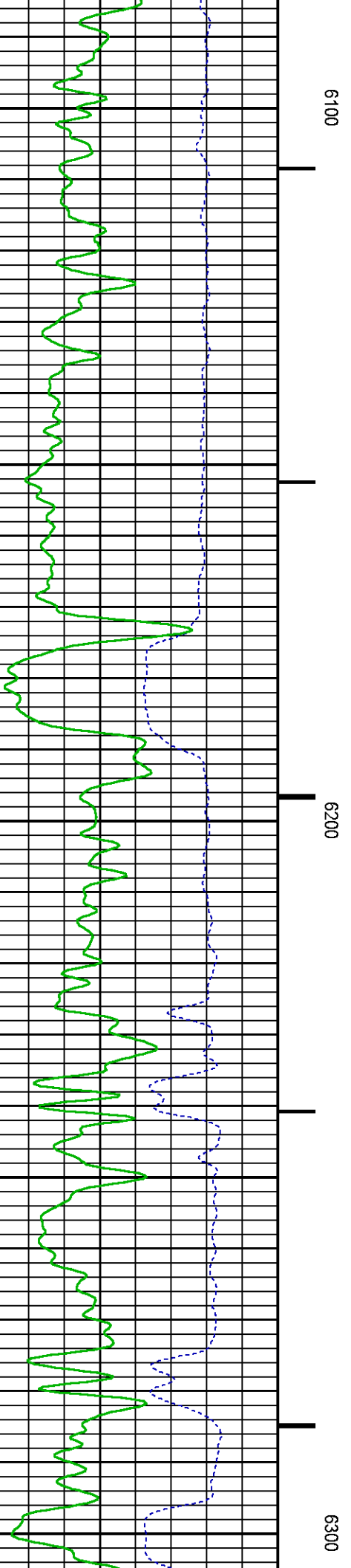
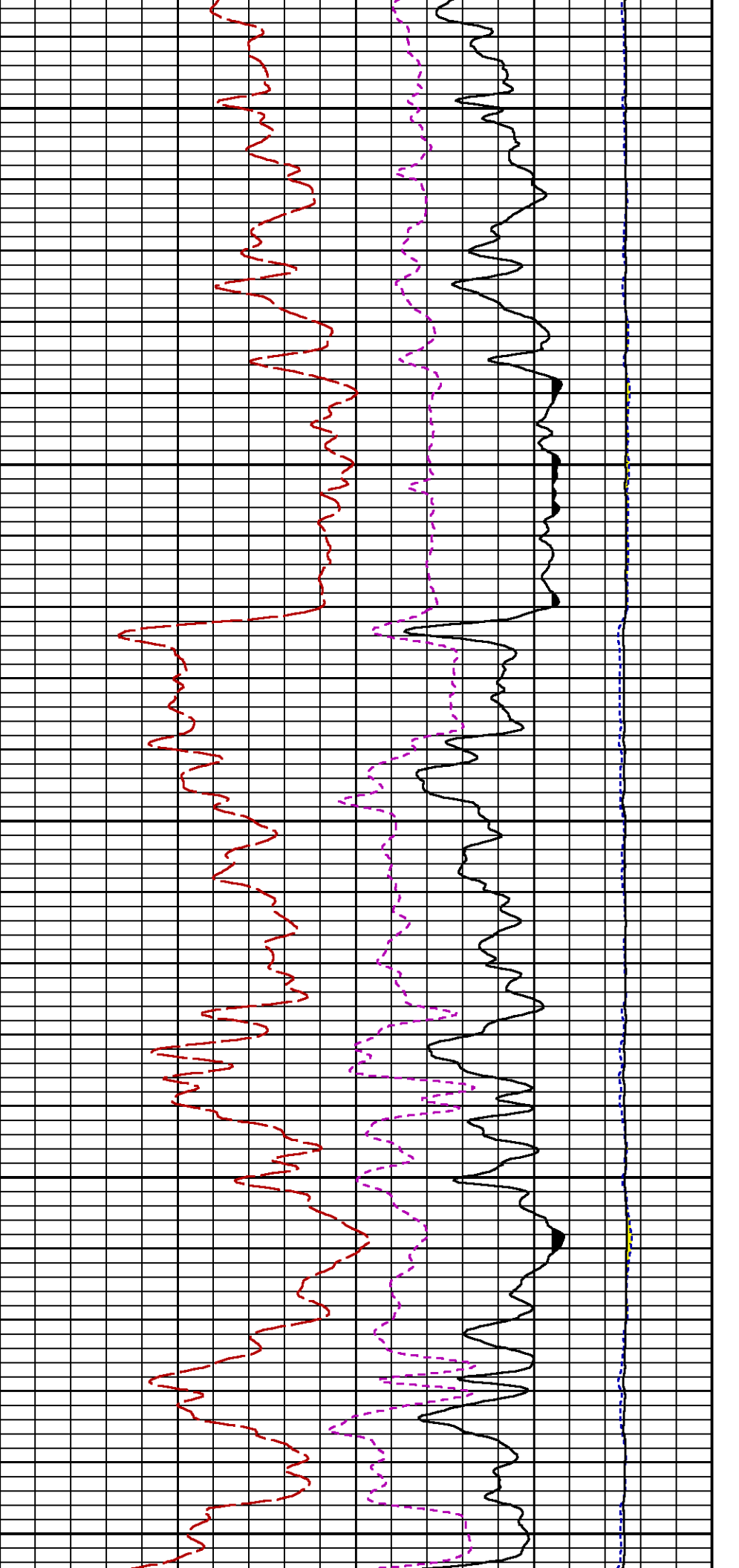
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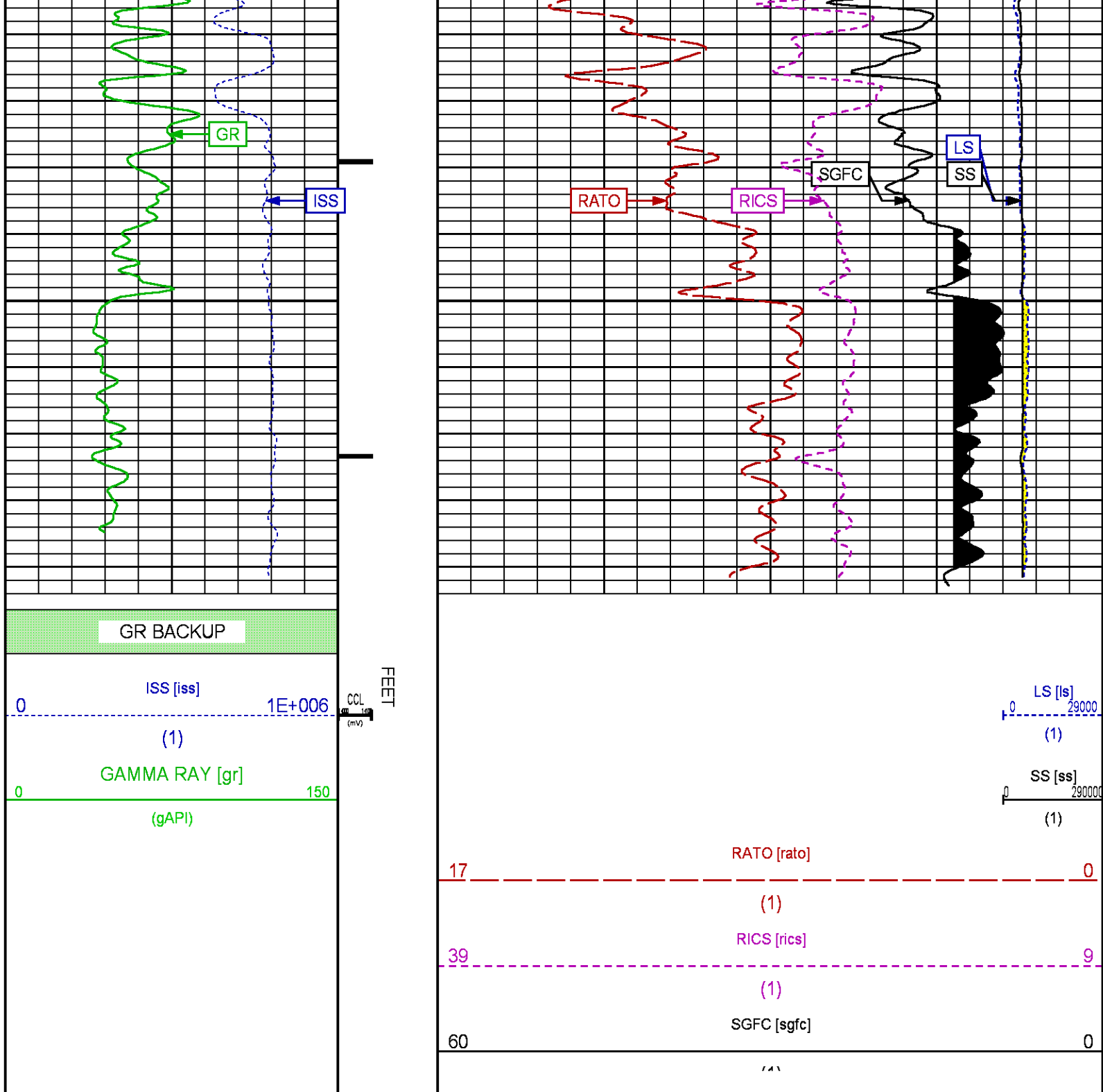












REPEAT SECTION PNC-3D MODE

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\411-12\354h01.prm

LOGGING MODE: DEPTH DIRECTION: UP

TOP DEPTH: 5538.750 ft BOTTOM DEPTH: 5867.000 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	7.85	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Dec 31 12:20:35 2014	CASING COLLAR LOCATOR
F1:GR	Dec 31 12:20:35 2014	GAMMA RAY
F1:ISS	Dec 31 12:20:35 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Dec 31 12:20:35 2014	LONG SPACE COUNT RATE
F1:RATO	Dec 31 12:20:35 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Dec 31 12:20:35 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Dec 31 12:20:35 2014	CORRECTED FORMATION SIGMA
F1:SS	Dec 31 12:20:35 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 : BHUGHES-06627:C:\dat1a\411-12\41_1RPM_REPEAT.fvpdf [5"/100' Scale]

Plot Interval : 5511.75 - 5848.75 Feet

Data File 1 : F1 : BHUGHES-06627:C:\dat1a\411-12\411_RPM_REPEAT.xtf

Created On : Dec 31 12:20:35 2014

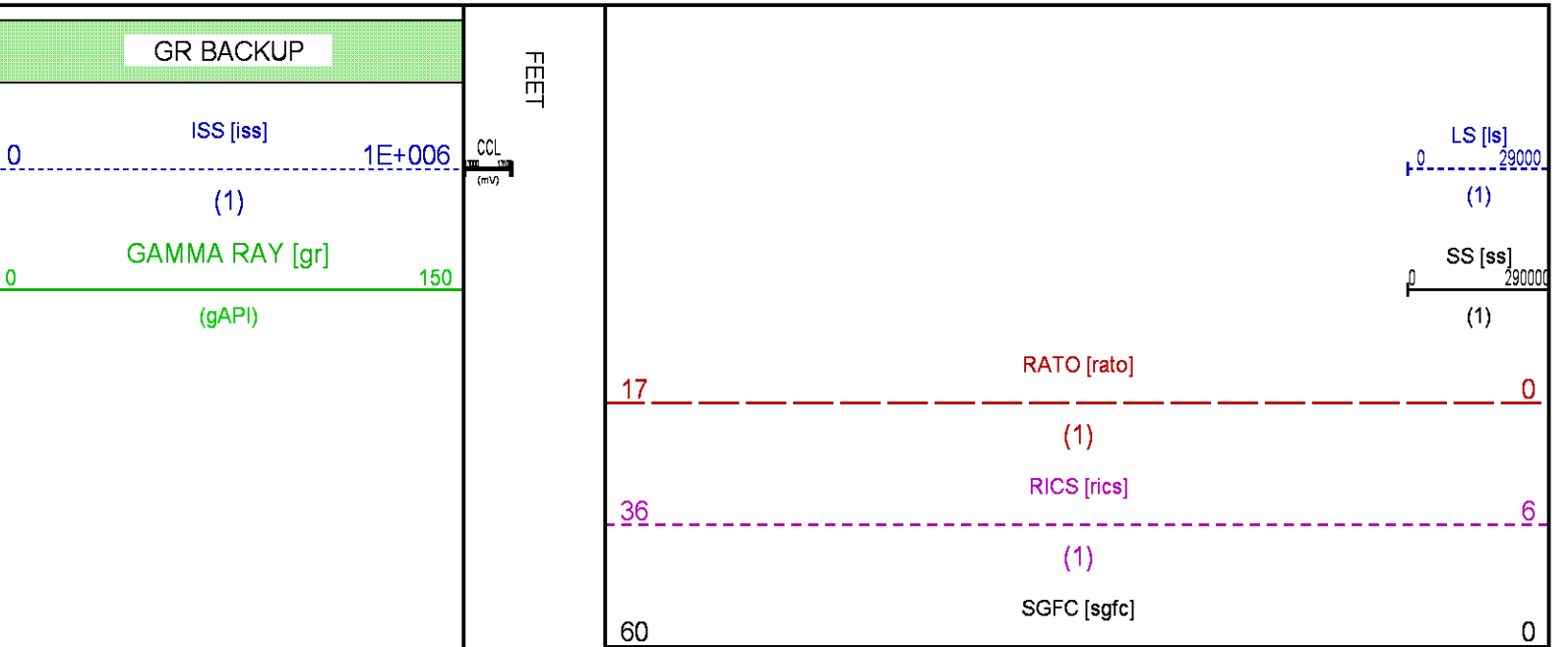
Company : WPX ENERGY

Well : GM 411-12

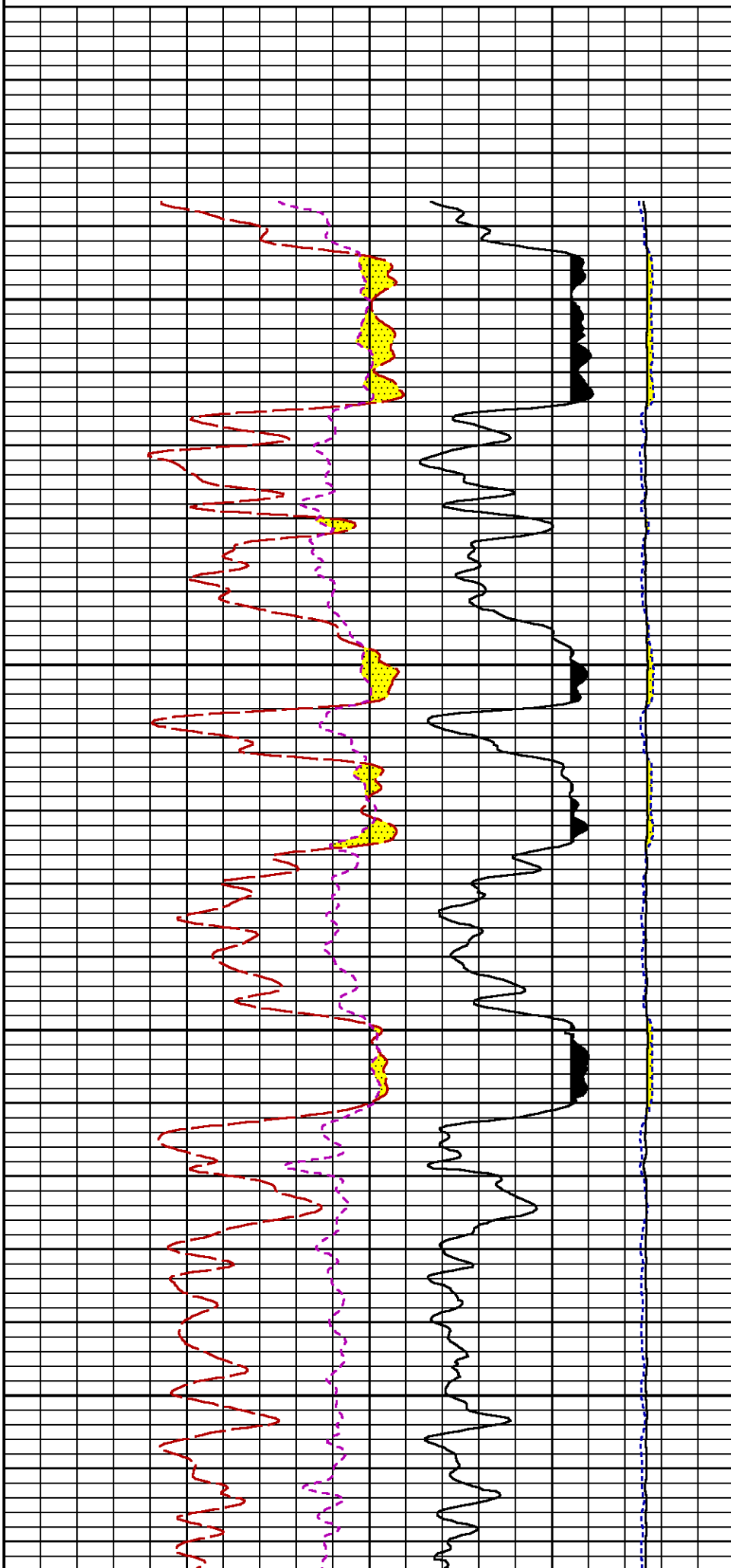
Field : GRAND VALLEY

File Interval : 5511 - 5863.5 Feet

OCT : n354h

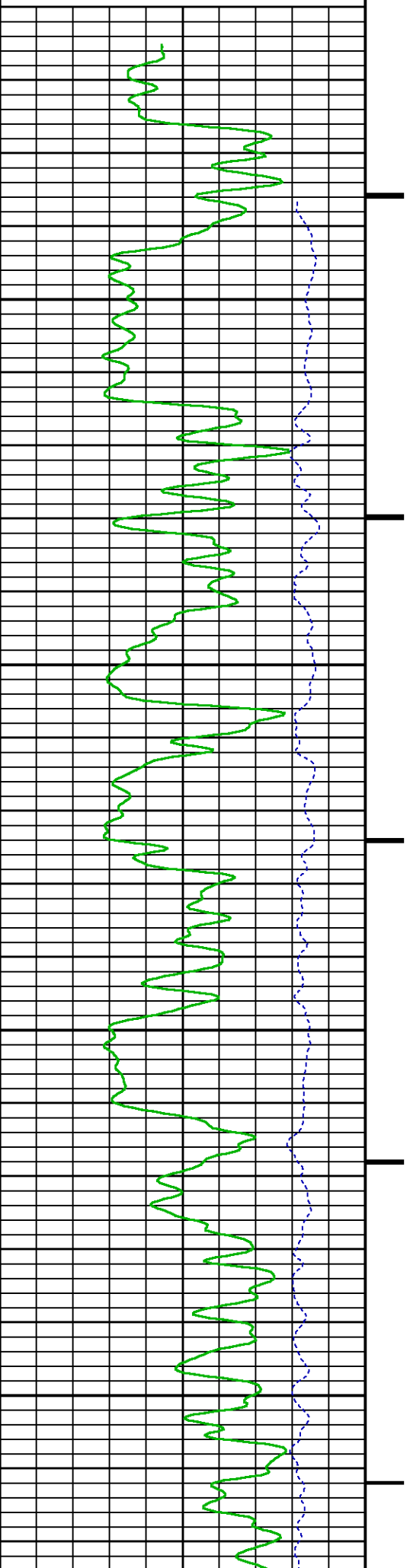


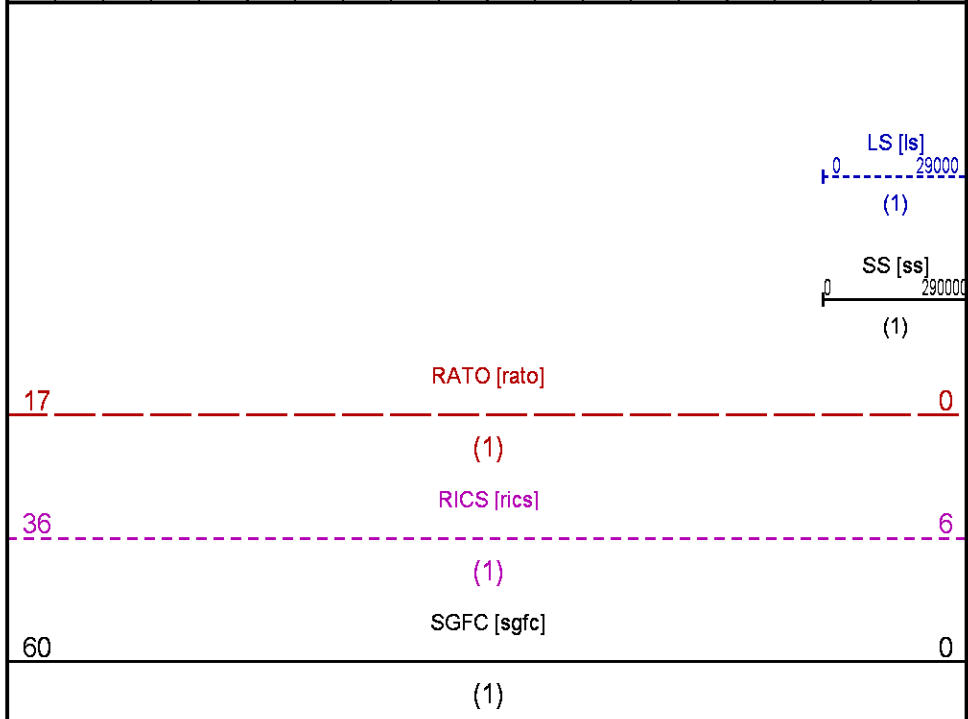
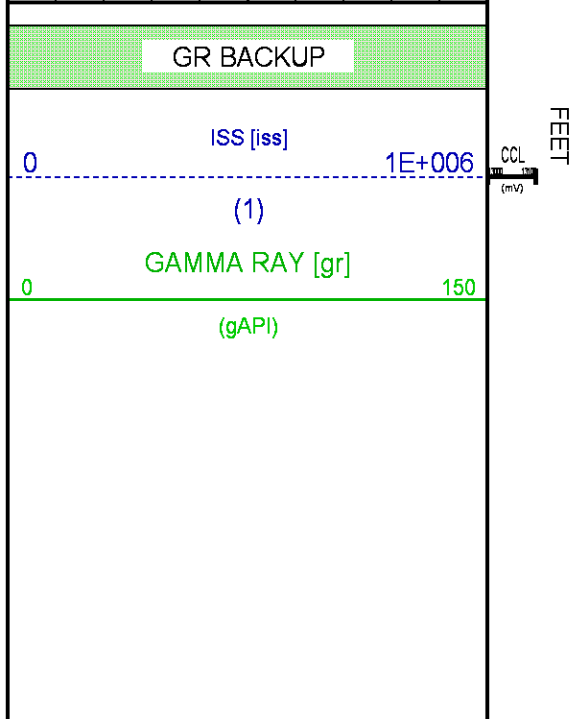
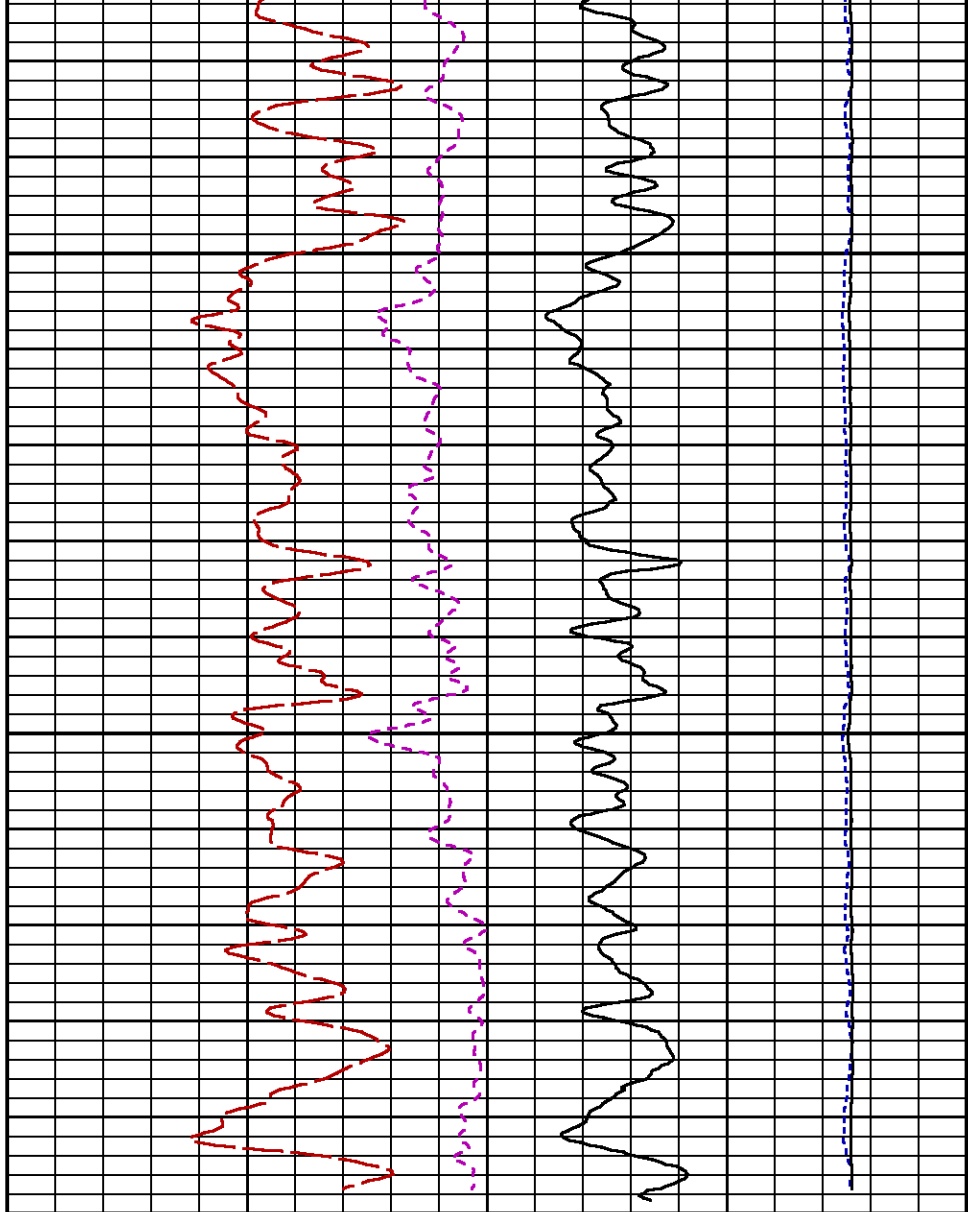
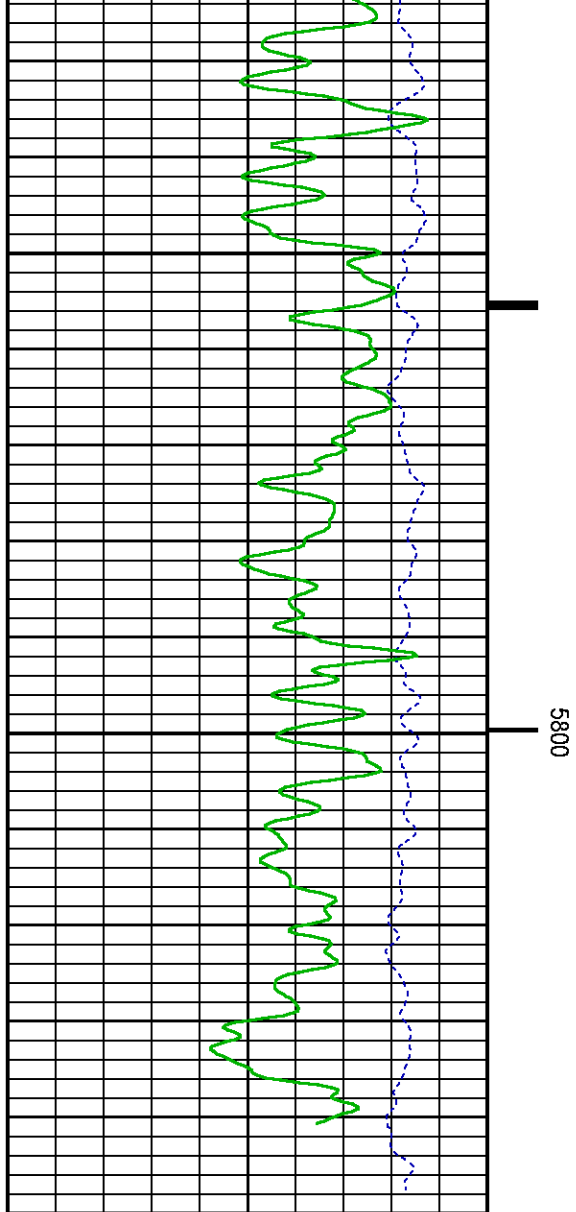
(1)



5600

5700





CALIBRATION / VERIFICATION SUMMARY

Source File: C:\dat1a\411-12\354h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2812LA 10274382

DATE/TIME PERFORMED: Tue Dec 09 14:04:49 2014

UNIT #: 3885TD Z004271

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	61.18	268.02	206.8	1.015	62.11	272.11	210

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2812LA 10274382

DATE/TIME PERFORMED: Tue Dec 09 14:07:05 2014

UNIT #: 3885TD Z004271

VERI JIG #: 4702NK WA-612

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	63.11	273.93	1.015	64.07	278.11	214.04
						200.00 220.00

GR BEFORE LOG VERIFICATION SUMMARY

NOT DONE

GR AFTER LOG VERIFICATION SUMMARY

NOT DONE

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10585555

DATE/TIME PERFORMED: Tue Dec 09 13:08:21 2014

UNIT: 3885TD Z004271

CALIBRATOR: 2437XB 112674

SOURCE: 8281AA 11765054


HOURS: 8281AA 670

	ISS	Mtr Vlt (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	801712	124	2342	2286	2235	111	7	0.9721
Interpolated	1300000	147	2317	2281	2228			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	801712	6404	989	140	26.08	0.15	24.23	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	801712	170477	26574	89502	31836	8242	54189	13205
Fit Quality %		0.952	0.776	0.752	0.741	1.017	0.683	0.990

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	801712	1.43	4.70	30.18	14.80	10.86	3.86	4.10
		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 %		0.051	0.164	0.223	0.184	0.174	0.189	0.168
Reduced	1392560	1.43	4.71	30.20	14.80	10.88	3.87	4.11
		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

	COMPANY	WPX ENERGY		FILE NO:	
	WELL	GM 411-12			CH093851
	FIELD	GRAND VALLEY		API NO:	
	COUNTY	GARFIELD	STATE	COLORADO	05045224620000
	LOCATION:	SHL: 1179' FNL & 1894' FWL BHL: 220' FNL & 1209' FWL (SWNE)		ELEVATIONS:	12 7S 96W GM 21-12 PAD NABORS 573
	SEC 12	TWP 7S	RGE 96W	KB 5151 FT DF GL 5125 FT	
				DATE	31-Dec-2014