



FILE NO: CH095909	COMPANY LARAMIE ENERGY
API NO: 05077099420000	WELL PICEANCE 28-21M
	FIELD VEGA
	COUNTY MESA
	STATE COLORADO

Ver. 4.01	LOCATION:	OTHER SERVICES
SEC 28 T9S R93W	SHL: 2433' FSL 1596' FWL	BOND LOG
PAD 28-11	BHL: 125' FSL 2588' FWL	
PATTERSON 306	SEC 28 TWP 9S RGE 93W	

PERMANENT DATUM	GL	ELEVATION	7580 FT	KB	7602 FT
LOG MEASURED FROM	KB	22 FT	ABOVE P.D.	DF	
DRILL. MEAS. FROM	KB			GL	7580 FT

DATE	24-Apr-2015
RUN	1
TRIP	1
SERVICE ORDER	US095909
DEPTH DRILLER	8406 FT
DEPTH LOGGER	8268 FT
BOTTOM LOGGED INTERVAL	8258 FT
TOP LOGGED INTERVAL	4952 FT
TIME STARTED	16:00
TIME FINISHED	21:00
OPERATOR RIG TIME	5 HRS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	126 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	251 DEGF
REFERENCE LOG	BAKER HUGHES BOND LOG
REFERENCE LOG DATE	23-APR-2015
EQUIP. NO.	6685
LOCATION	GRAND JCT
RECORDED BY	P. EDWARDS
WITNESSED BY	MR. JOHN GRUBICH

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
7.875 IN	0 FT	8406 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
4.5 IN	11.6 LB/F		0 FT	8395 FT

REMARKS

RUN 1 TRIP 1: LOG CORRELATED TO BAKER HUGHES BOND LOG DATED 23-APR-2015

G-SAND ZONE NOT LOGGED DUE TO NO CEMENT BOND

LOGGED IN PNC 3D-MODE

LOGGED WITH ZERO PSI AT WELLHEAD

BHT = 251 degF

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES

RIG: PATTERSON 306

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	Z151000	FREE
1	1	TEL/CCL	8248EA	Z150623	FREE
1	1	GR	2812LA	10274385	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	RPM	8283PA	10160383	FREE
1	1	RPM	8281FA	10460082	FREE
1	1	TEMP	8255XA	Z120516	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: 6

Plotted: Fri Apr 24 20:18:14 2015

PARAMETER AND FILTER SUMMARY REPORT					
<div> <div>FILE: /dat1a/CH095909/n354h03.prm</div> <div>LOGGING MODE: DEPTH DIRECTION: UP</div> <div>TOP DEPTH: 4950.500 ft BOTTOM DEPTH: 5436.877 ft</div> </div>					
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	7.88	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Apr 24 19:36:49 2015	CASING COLLAR LOCATOR
F1:GR	Apr 24 19:36:49 2015	GAMMA RAY
F1:ISS	Apr 24 19:36:49 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Apr 24 19:36:49 2015	LONG SPACE COUNT RATE
F1:RATO	Apr 24 19:36:49 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Apr 24 19:36:49 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Apr 24 19:36:49 2015	CORRECTED FORMATION SIGMA
F1:SS	Apr 24 19:36:49 2015	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 : cas6685:/dat1a/CH095909/RPM_21M_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 4924.75 - 8273 Feet

Data File 1 : F1 : cas6685:/dat1a/CH095909/RPM21MMAINSP.xtf
Created On : Apr 24 19:36:49 2015
Company : LARAMIE ENERGY
Well : PICEANCE 28-21M
Field : VEGA

Field : VEGA
File Interval : 4924.75 - 8267.75 Feet
OCT : n354h

GR BACKUP

ISS [iss]

(1)

GAMMA RAY [gr]

(gAPI)

FEET

CCL
(mV)

5000

GR

ISS

LS [ls]

(1)

SS [ss]

(1)

RATO [rato]

(1)

RICS [rics]

(1)

SGFC [sgfc]

(1)

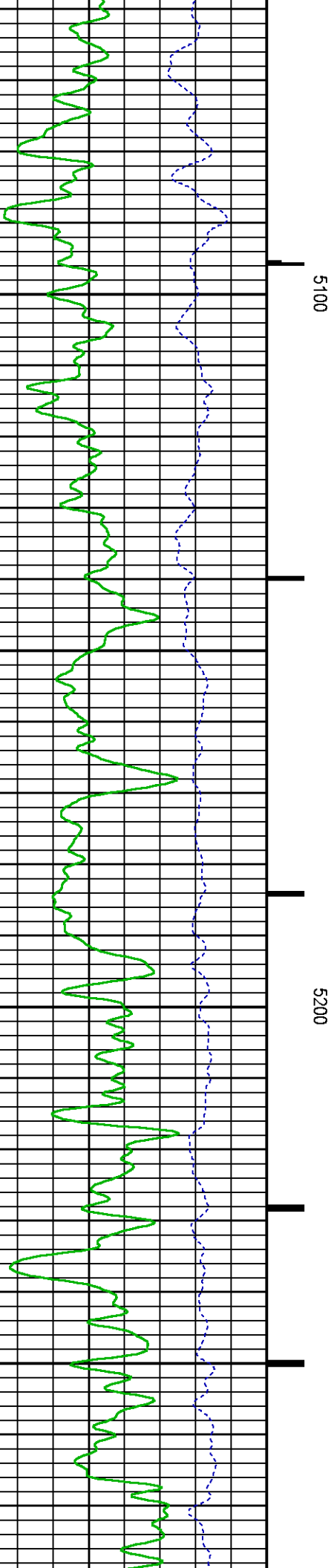
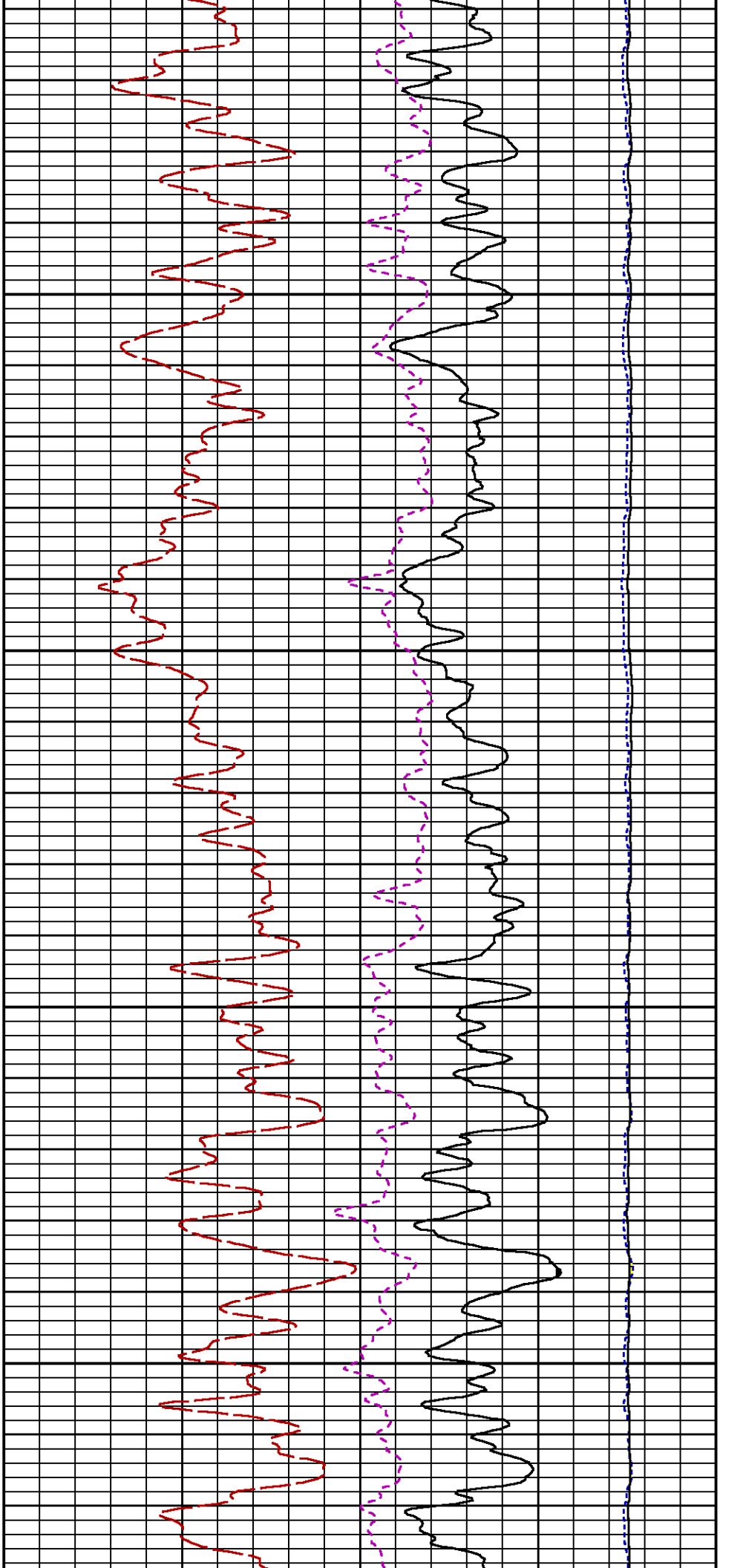
RATO

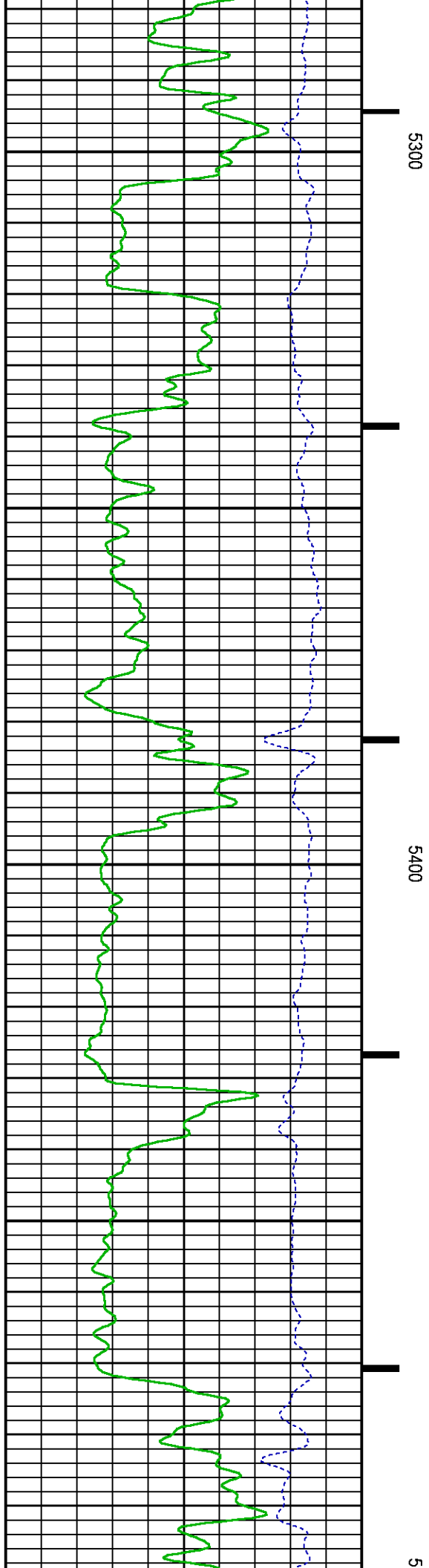
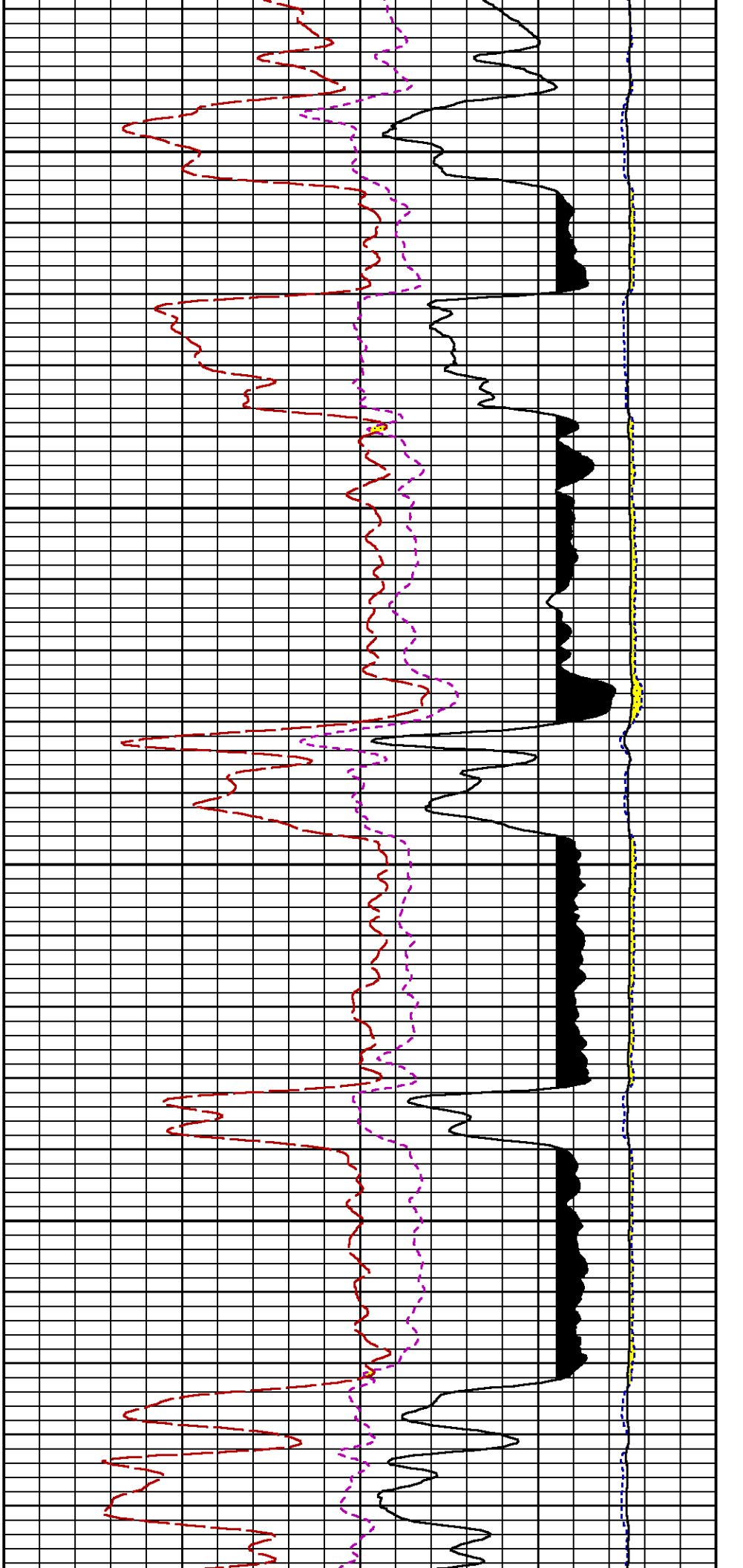
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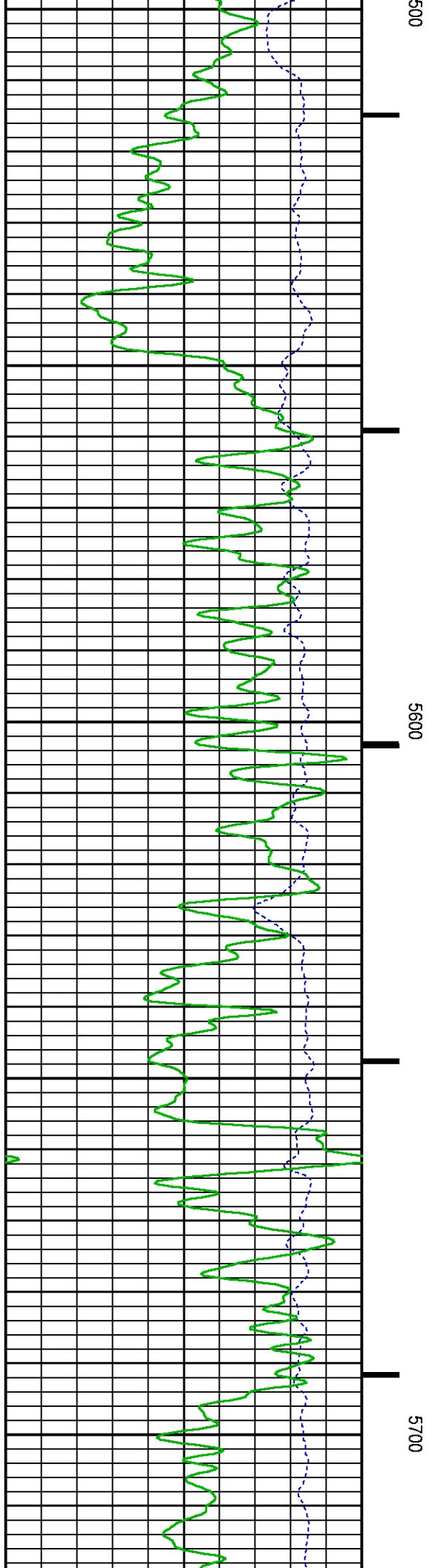
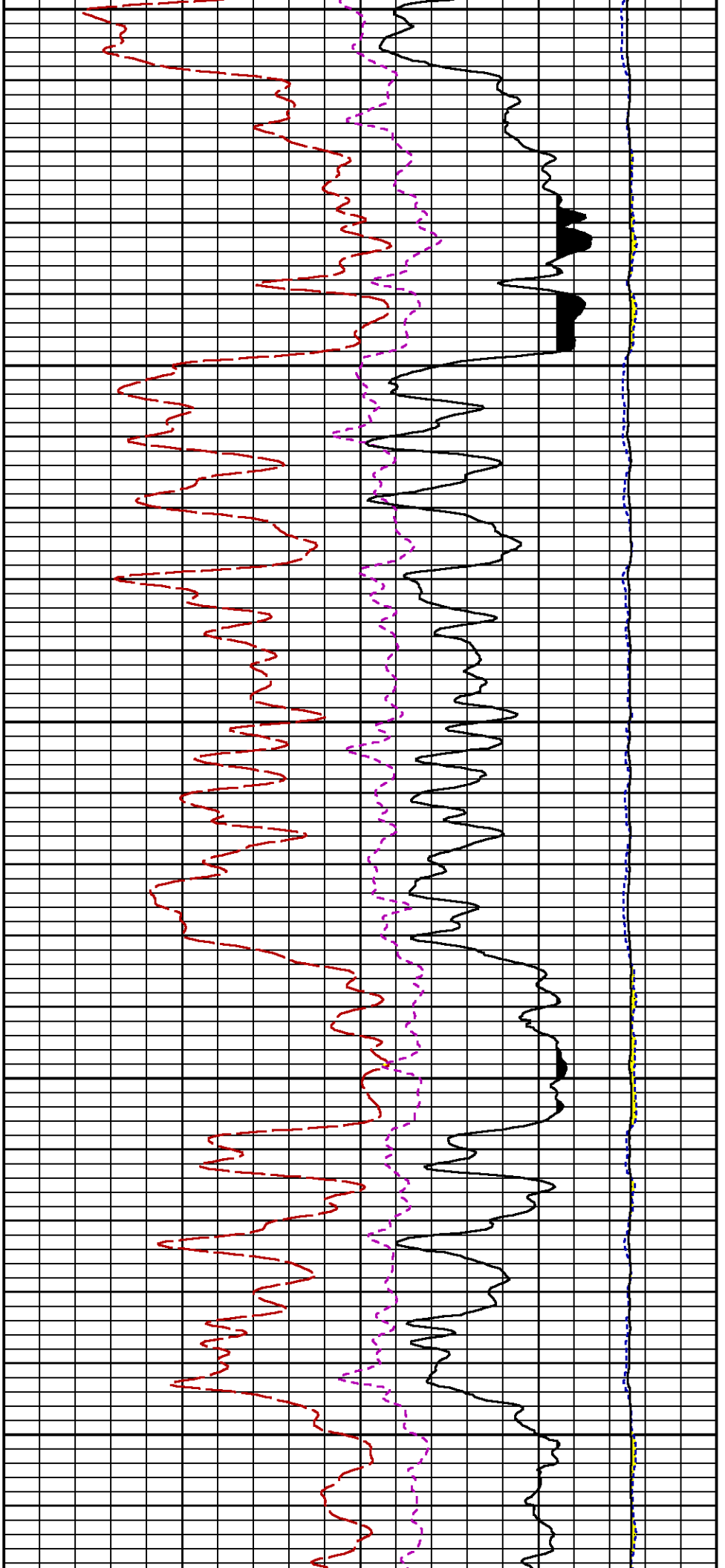
LS

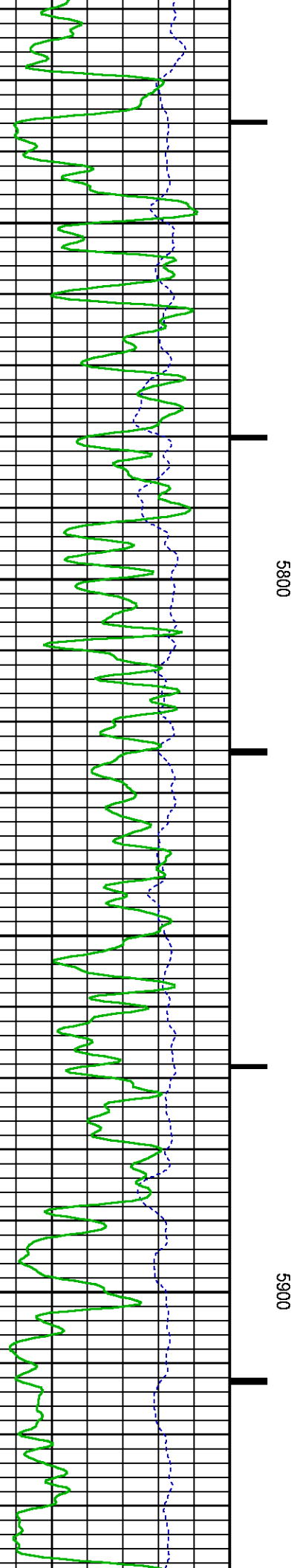
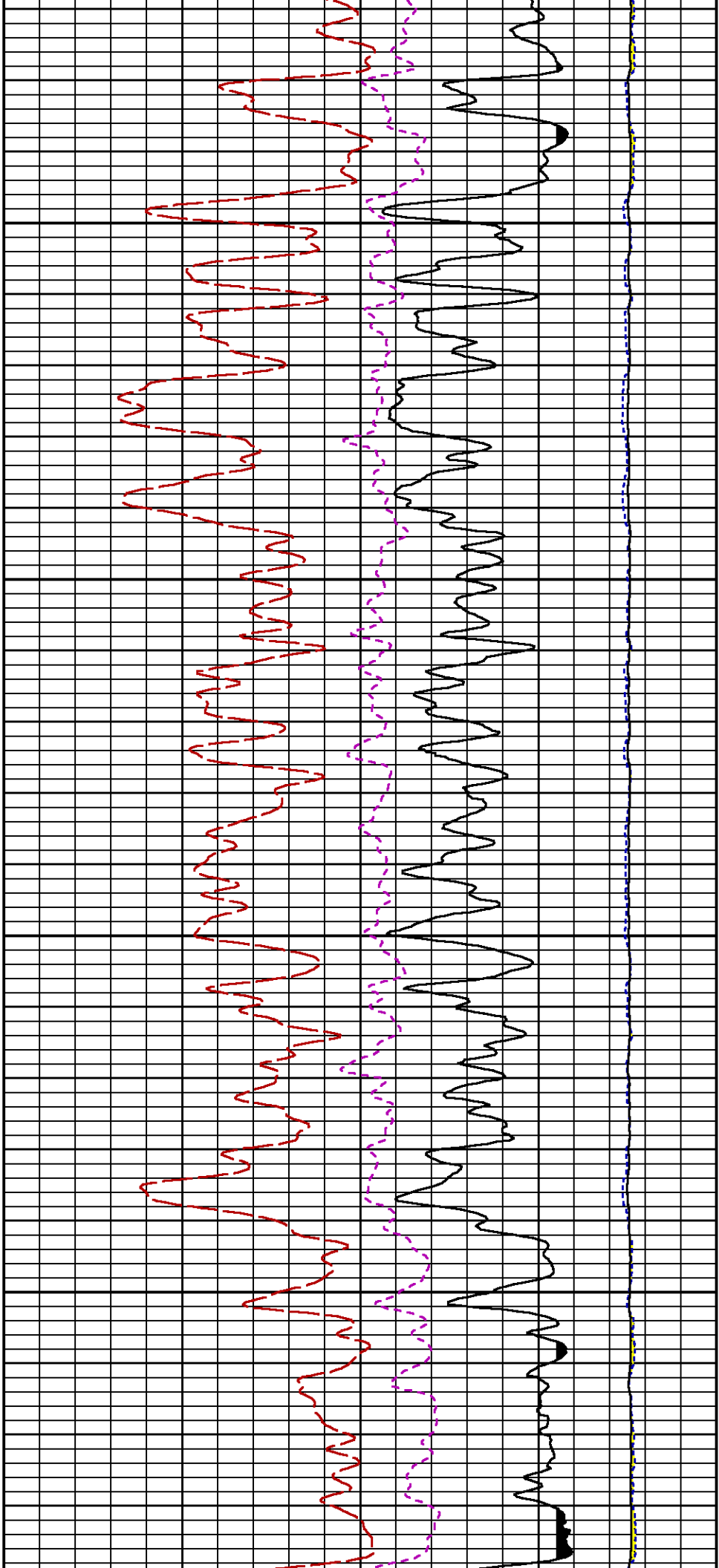
SS

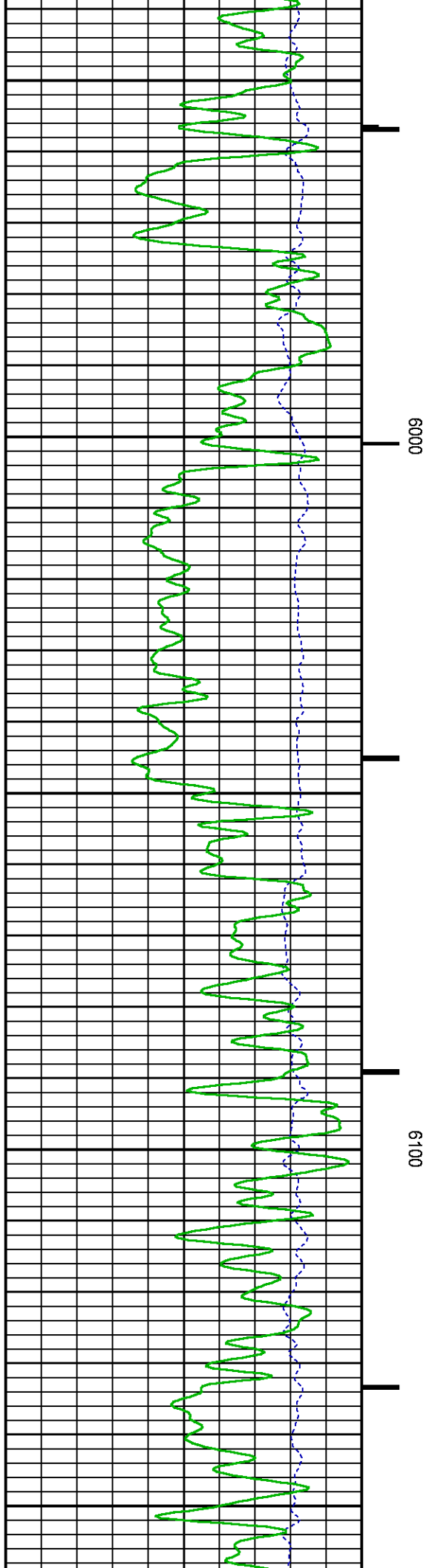
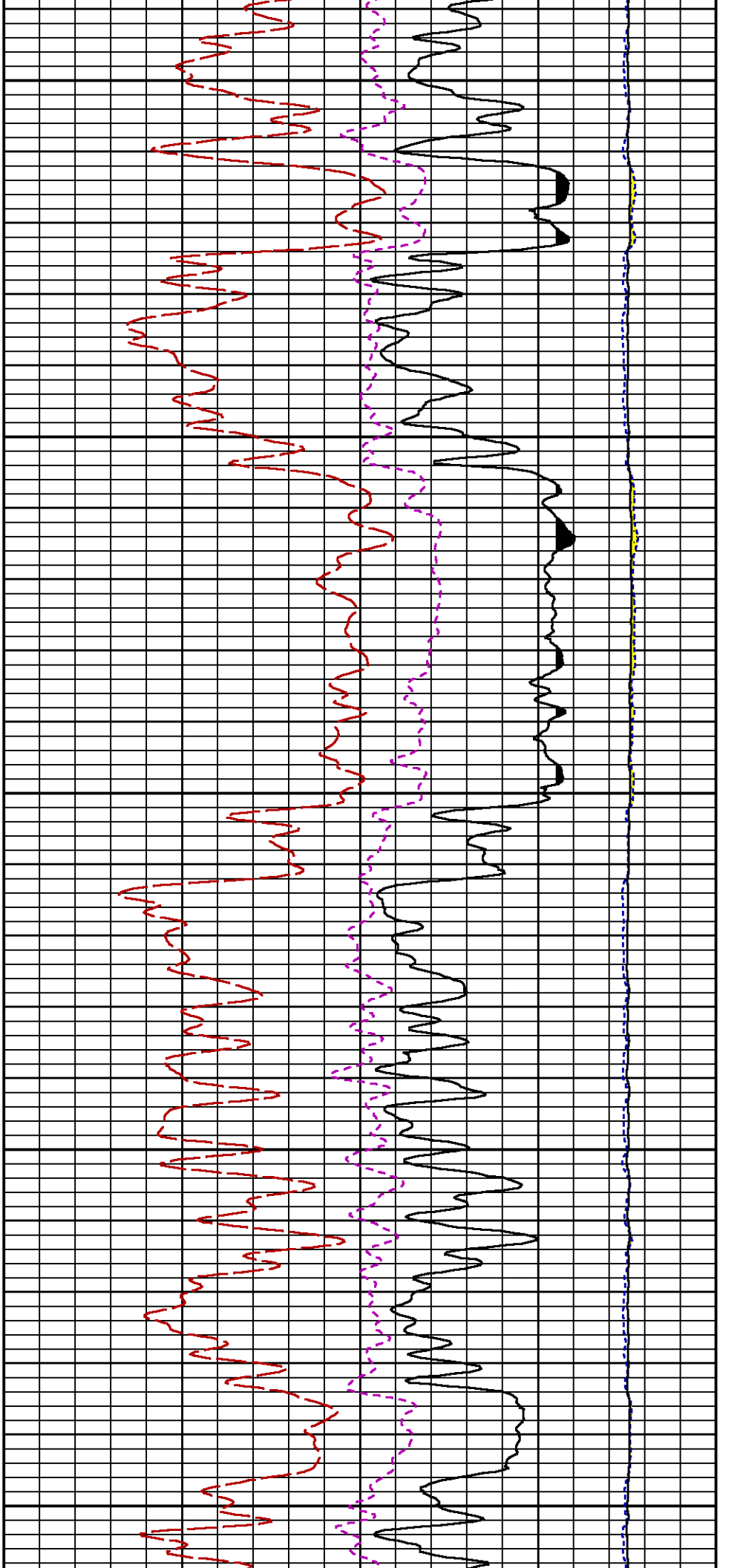
SGFC

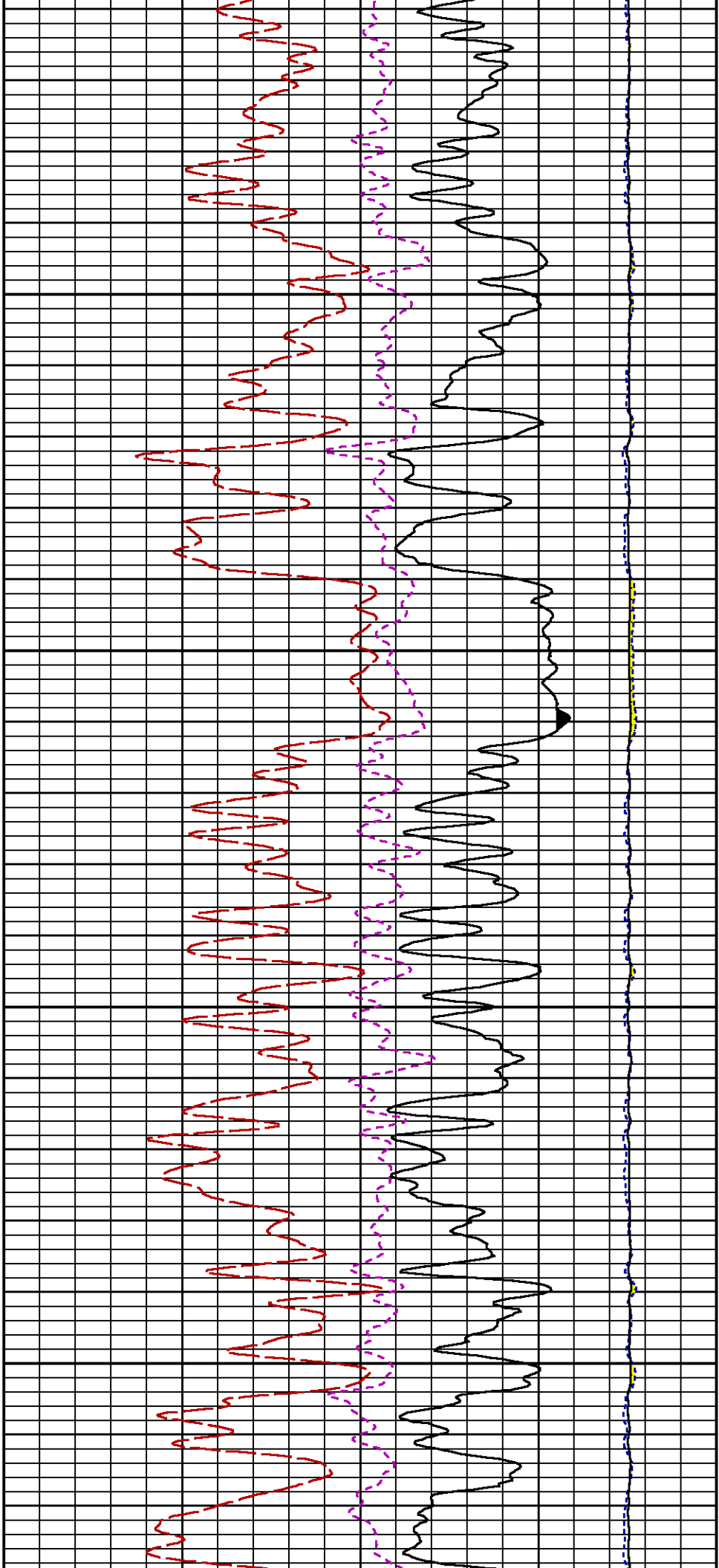






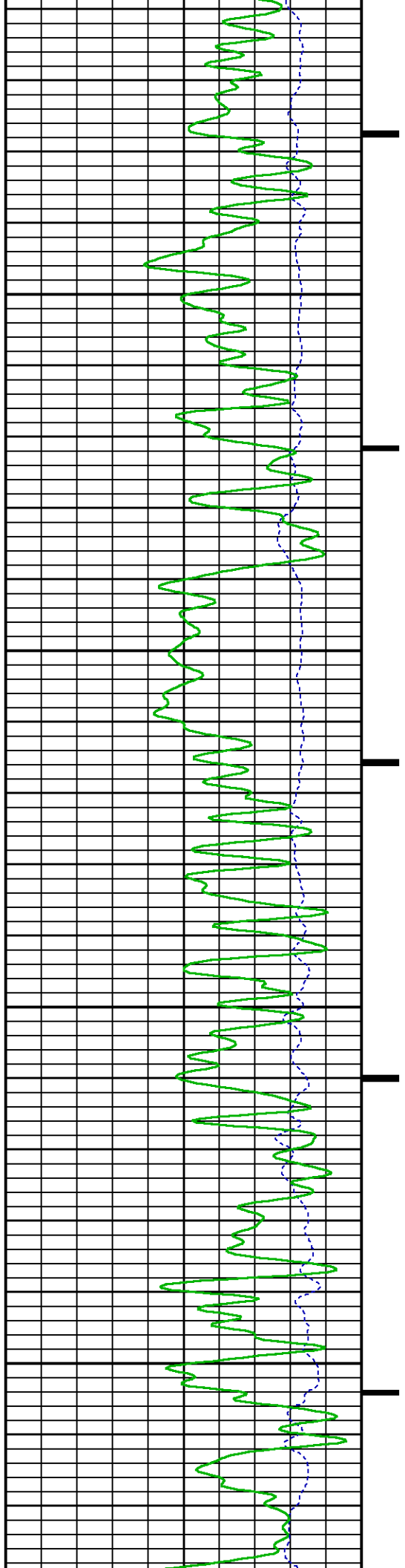


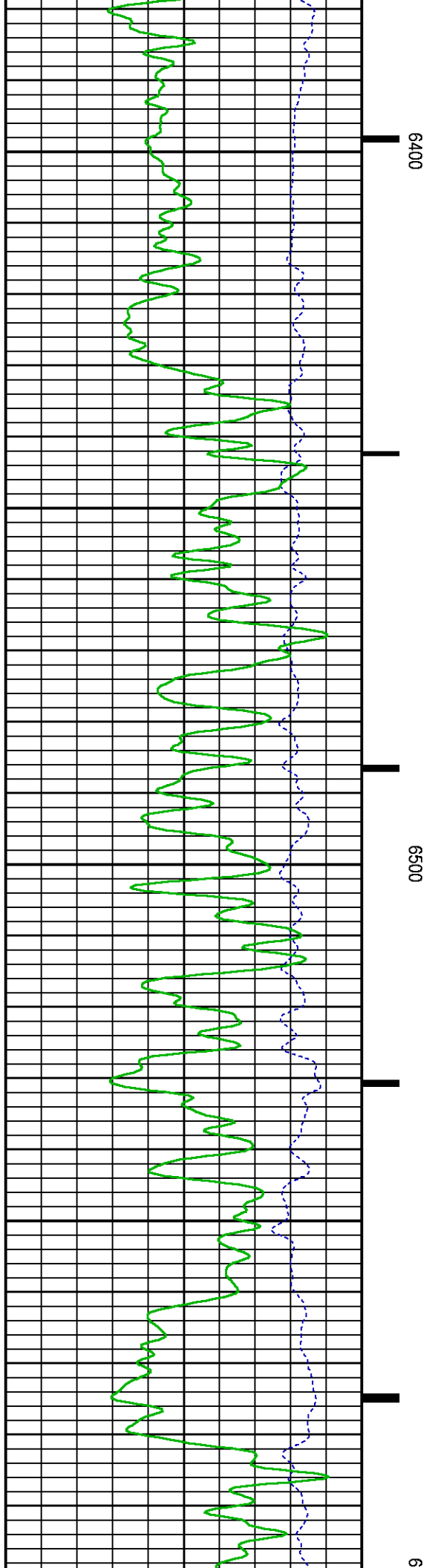
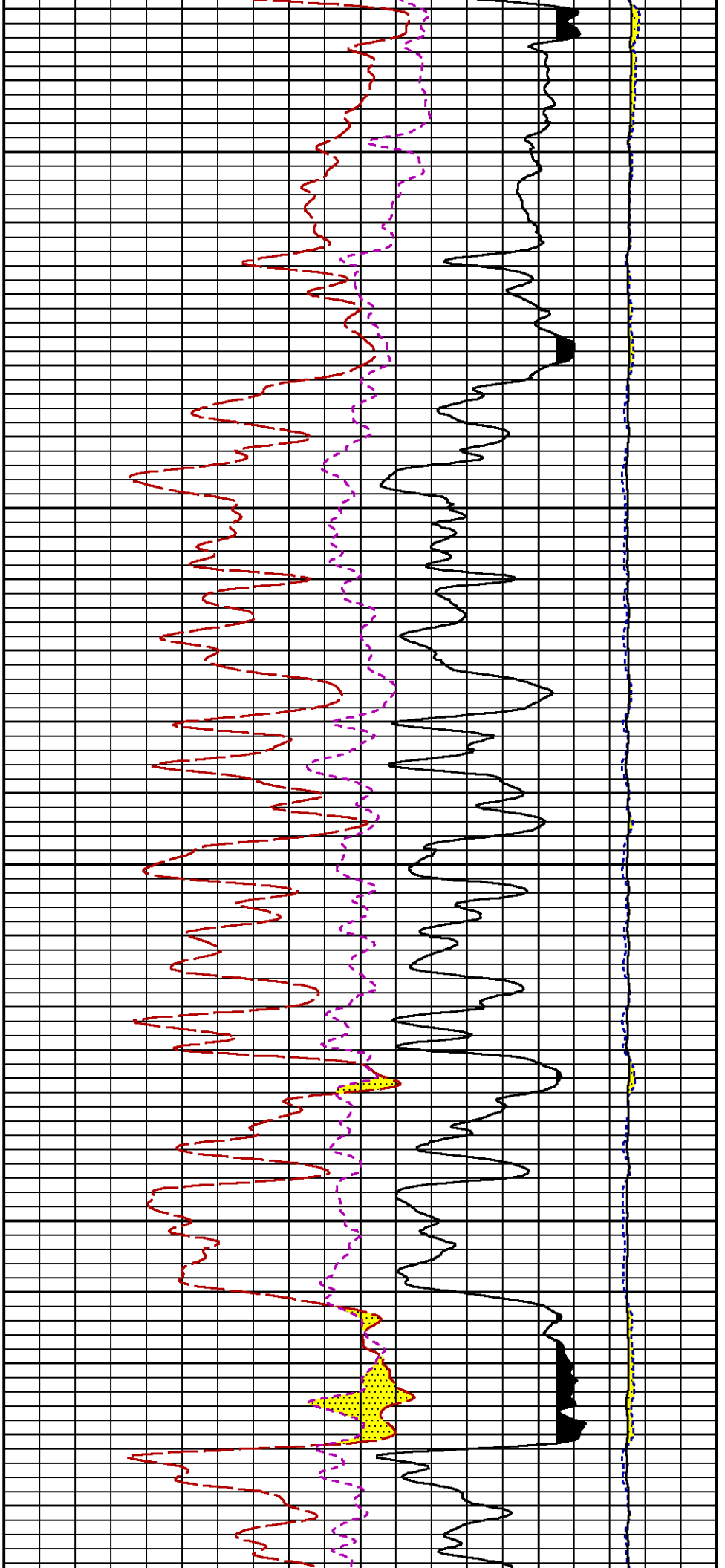


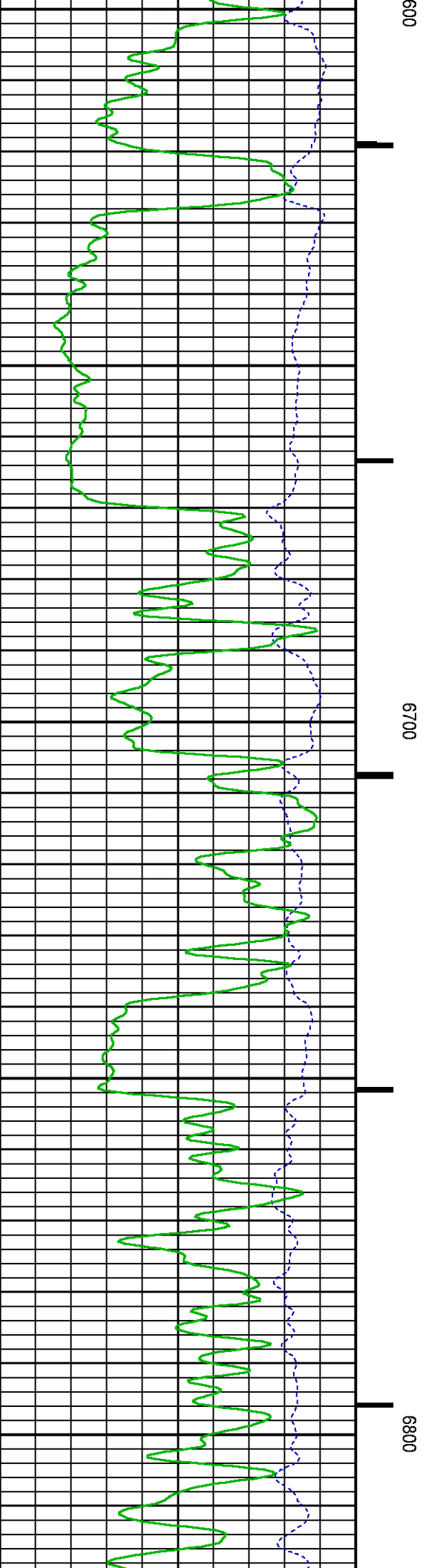
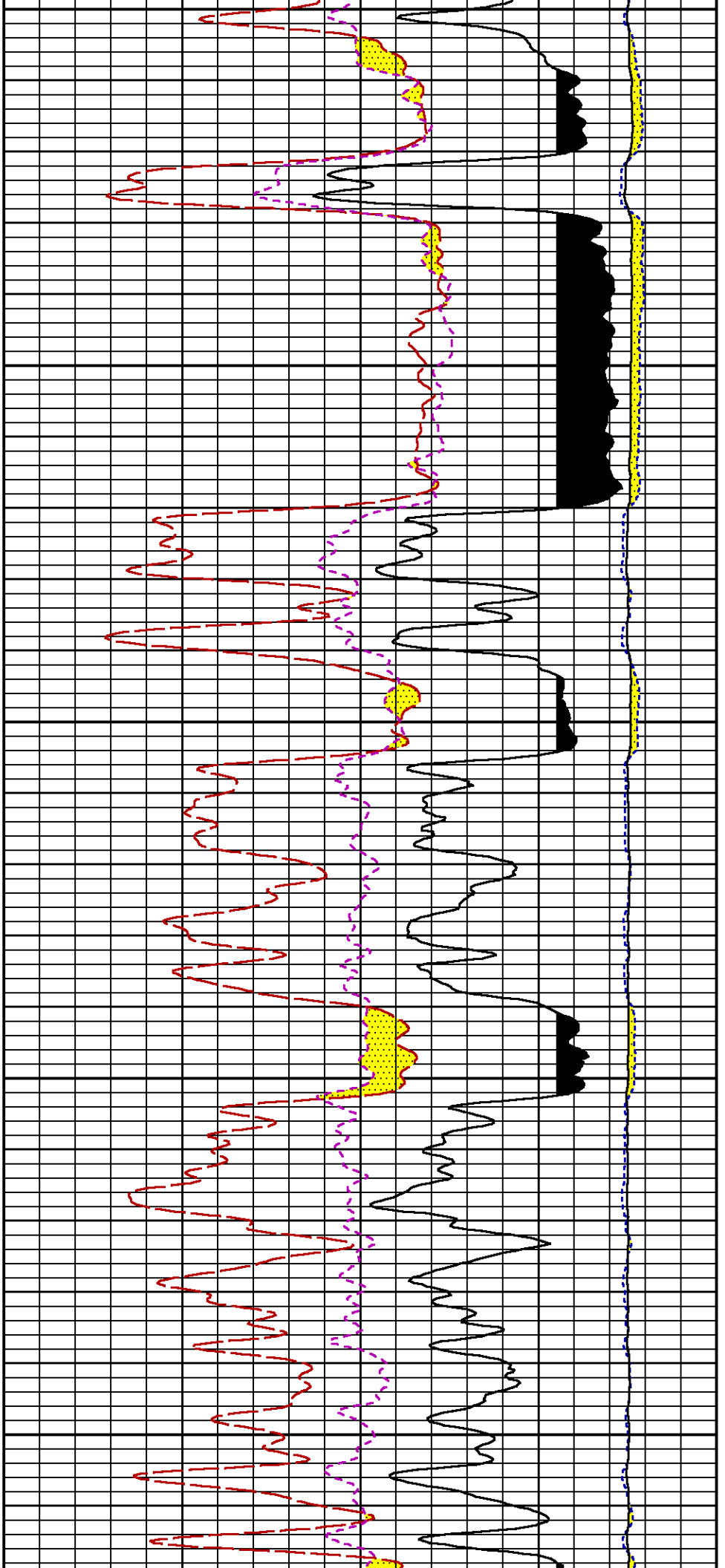


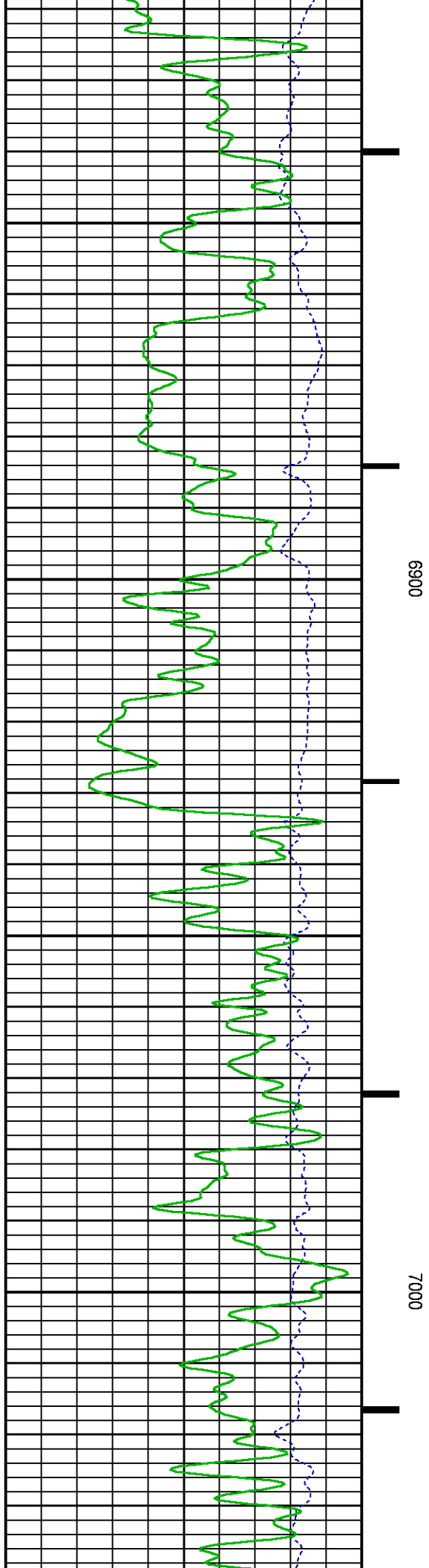
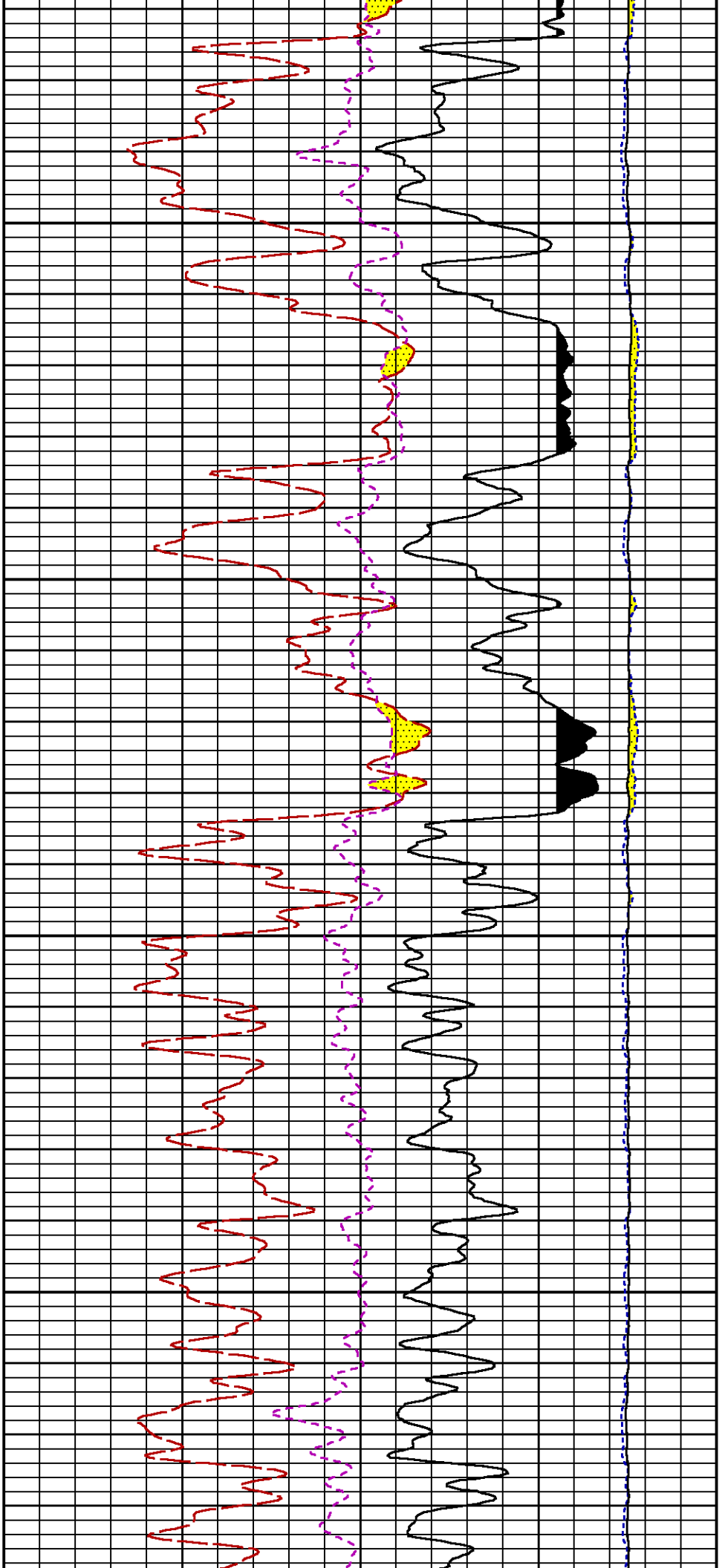
6200

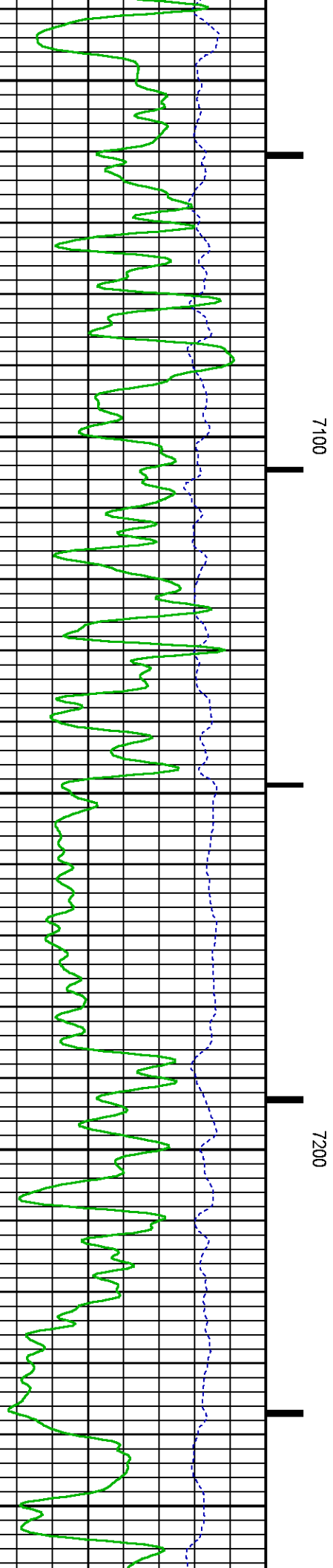
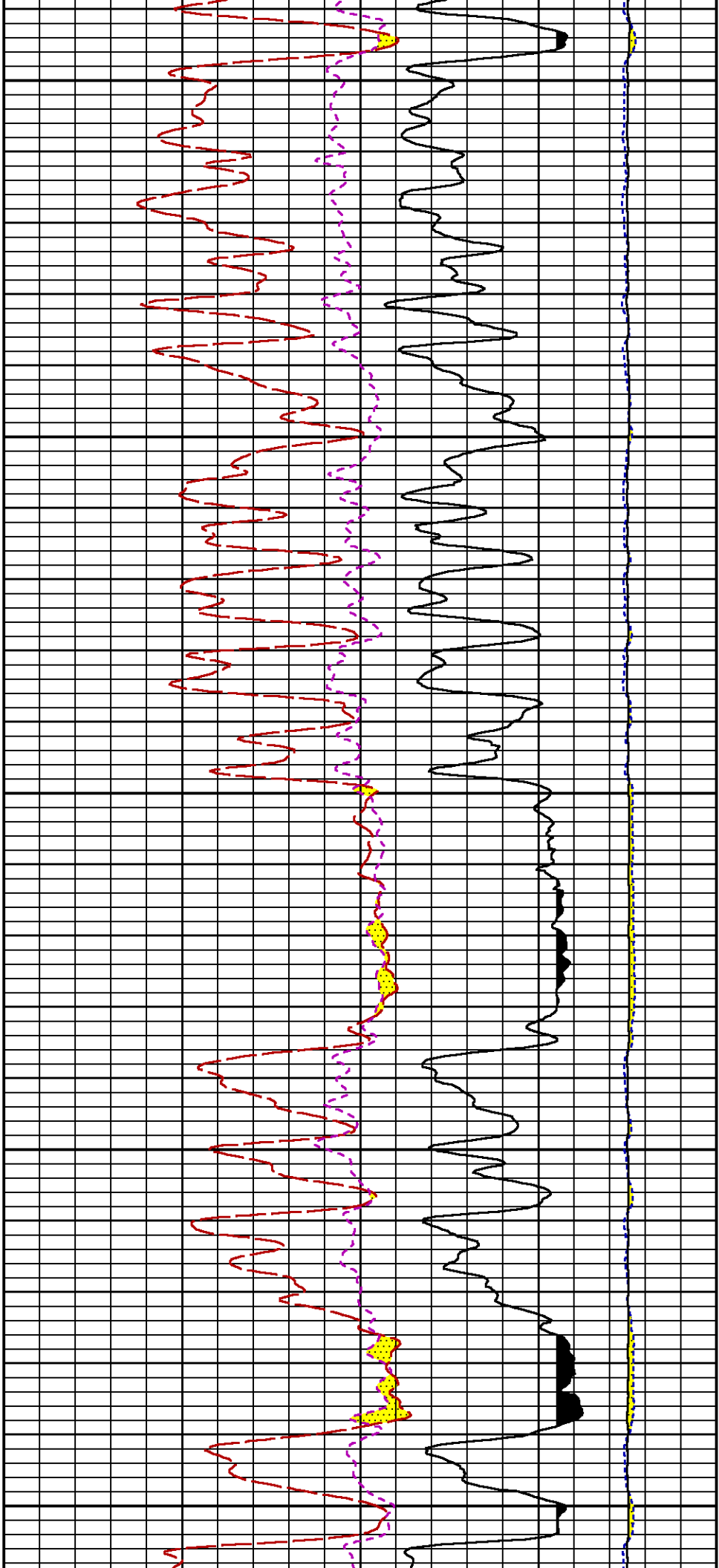
6300

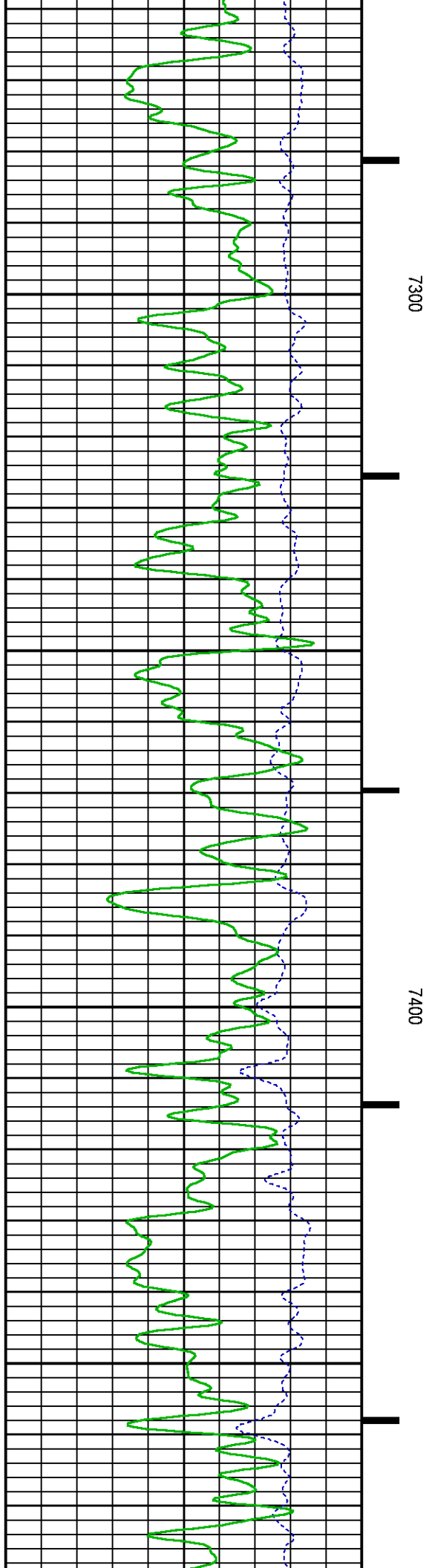
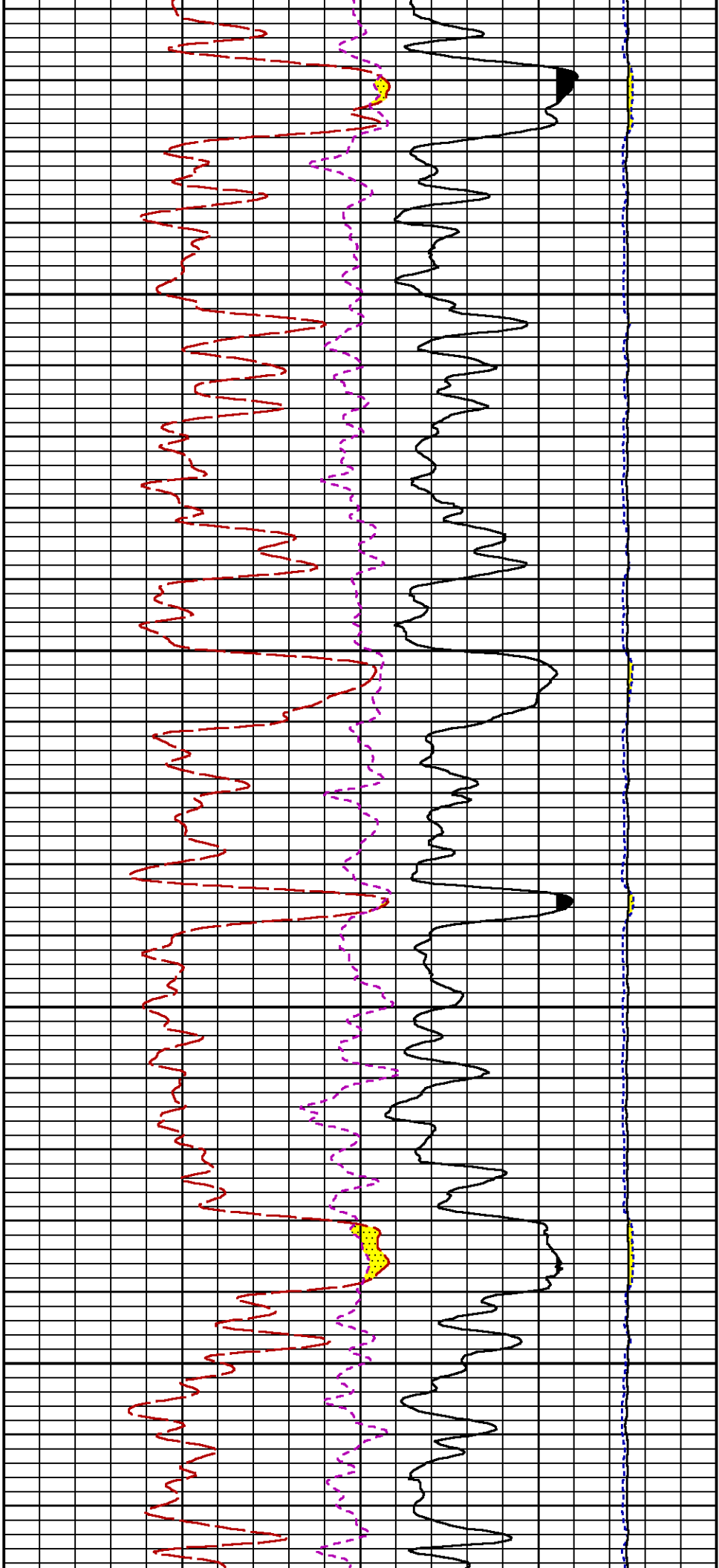


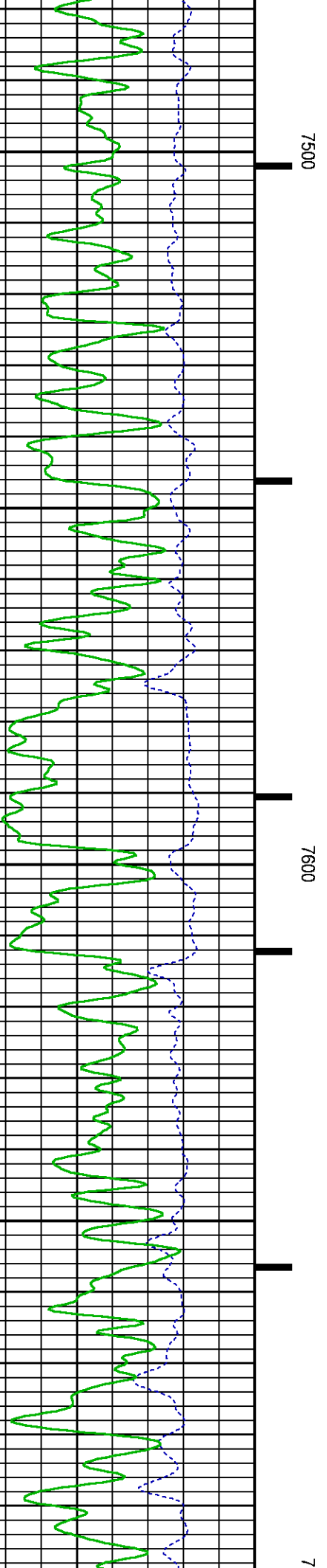
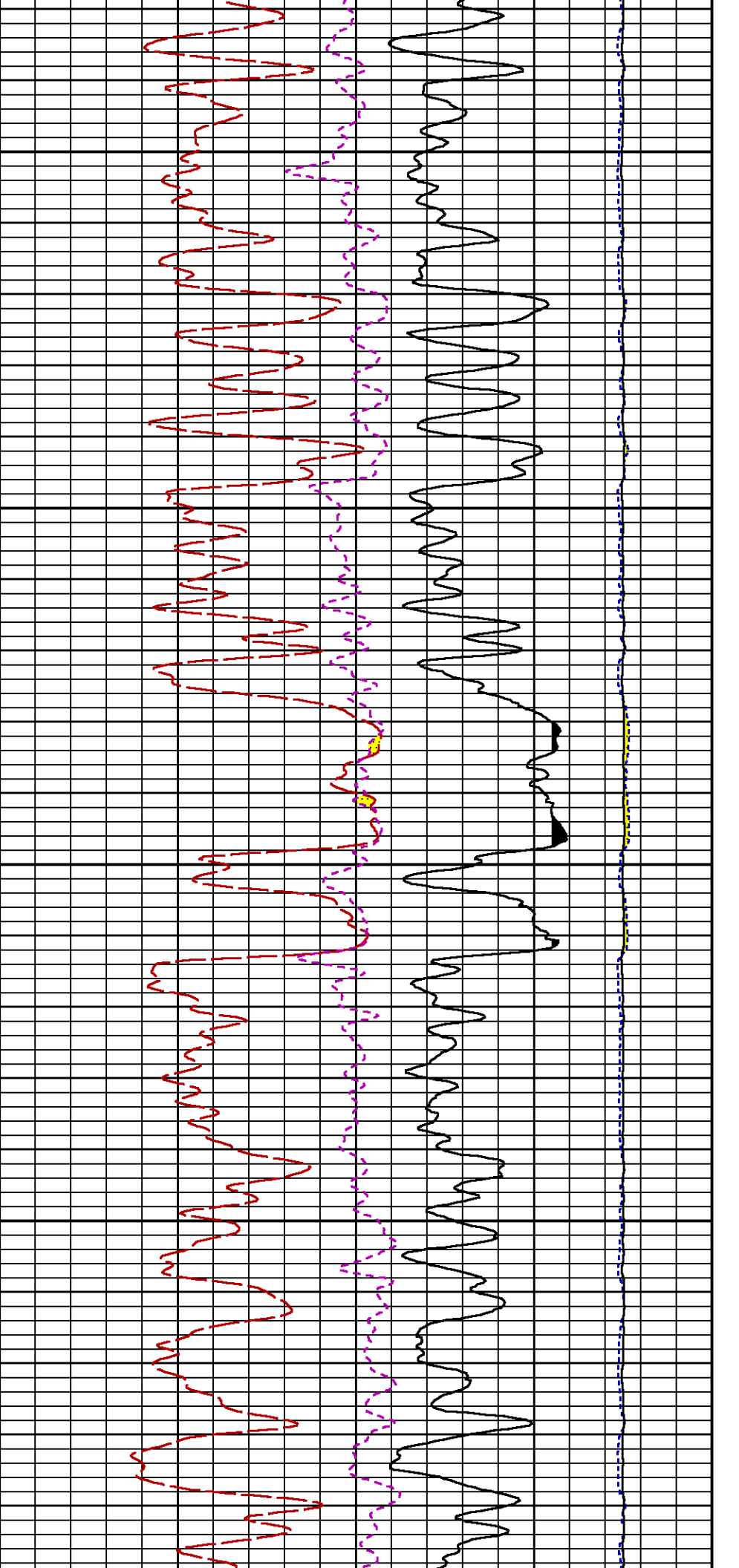


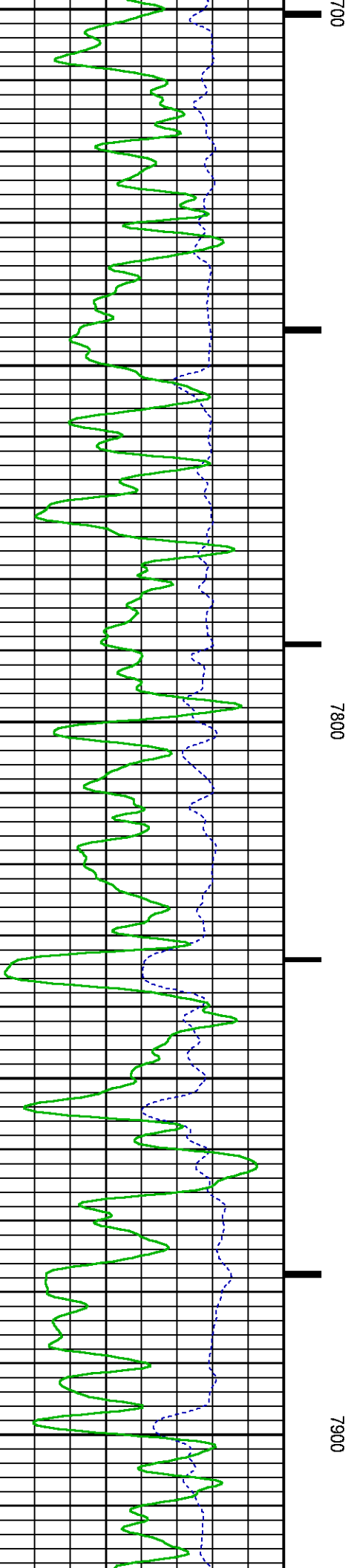
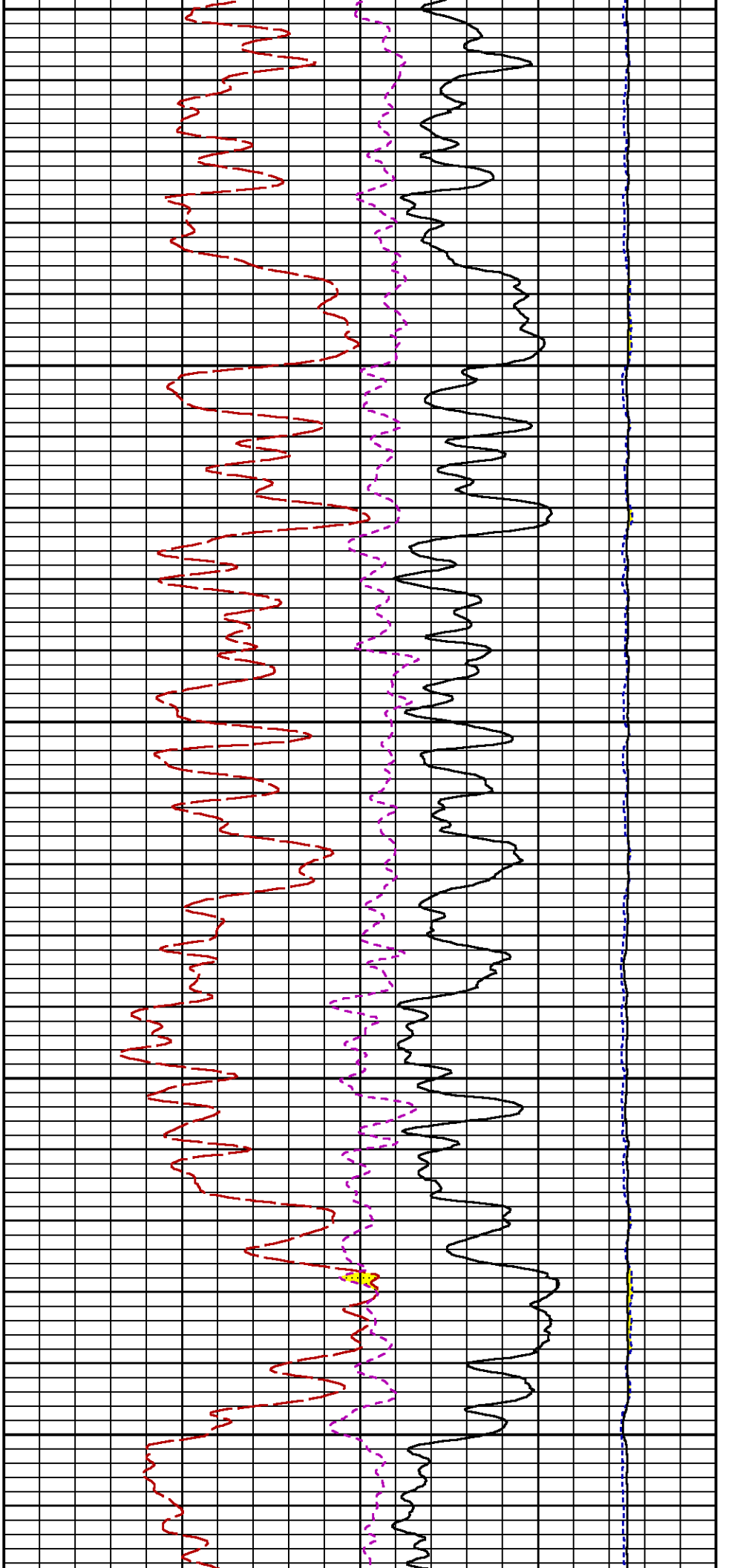


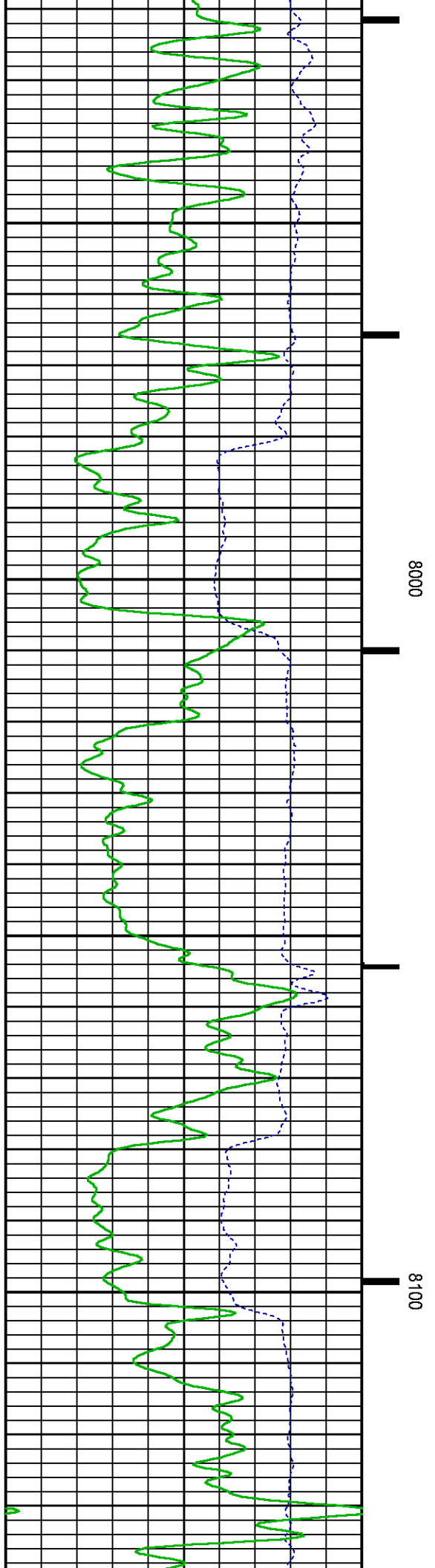
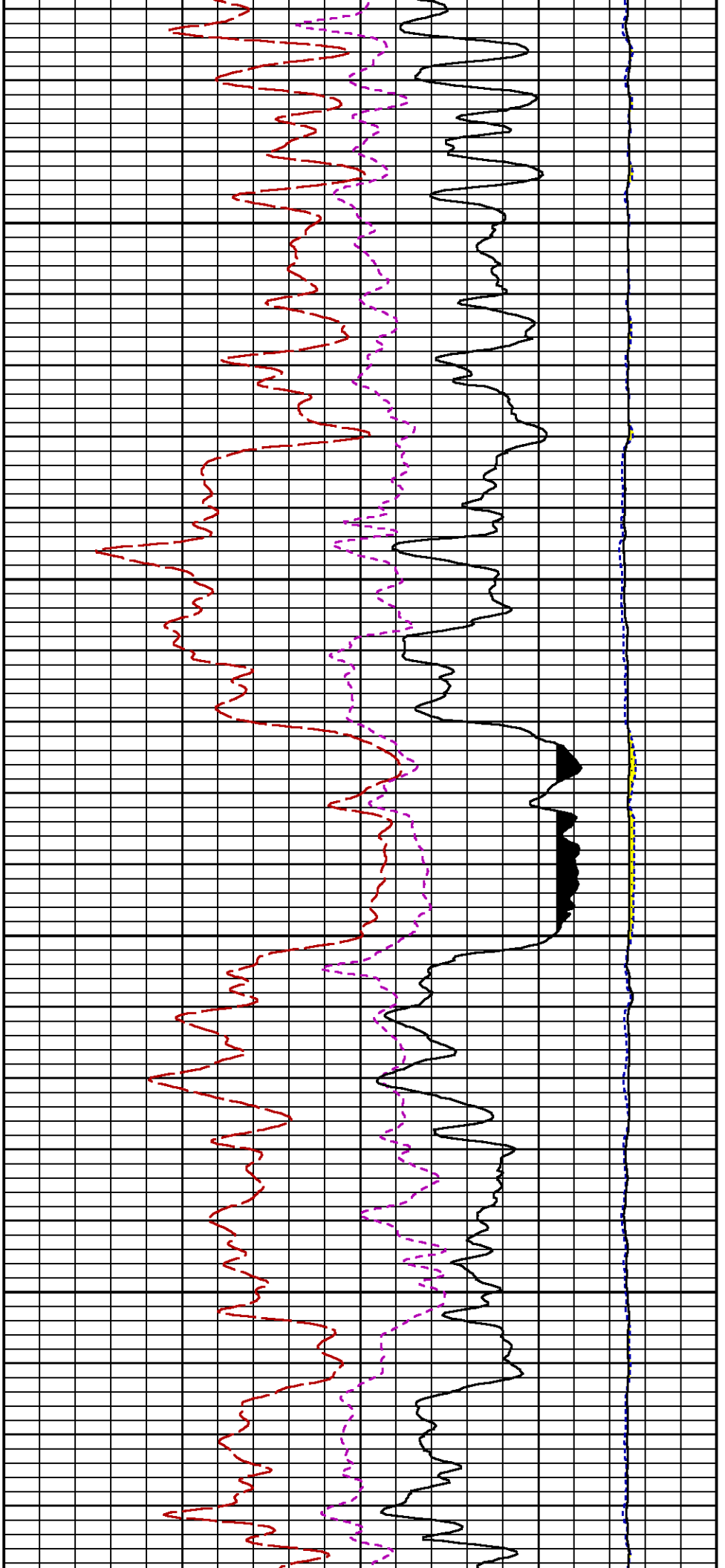


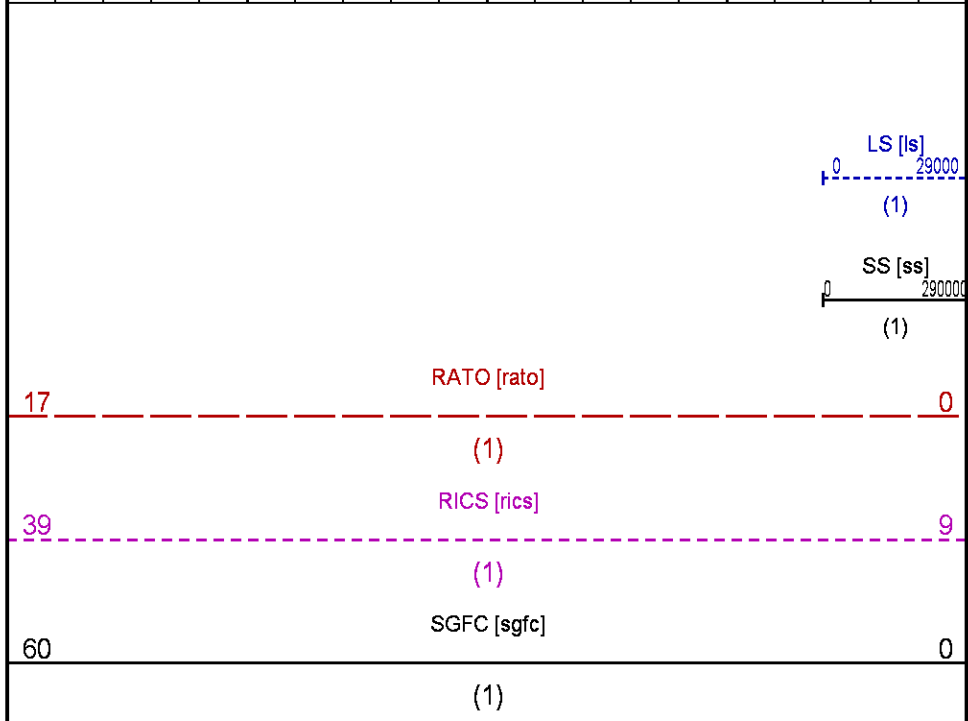
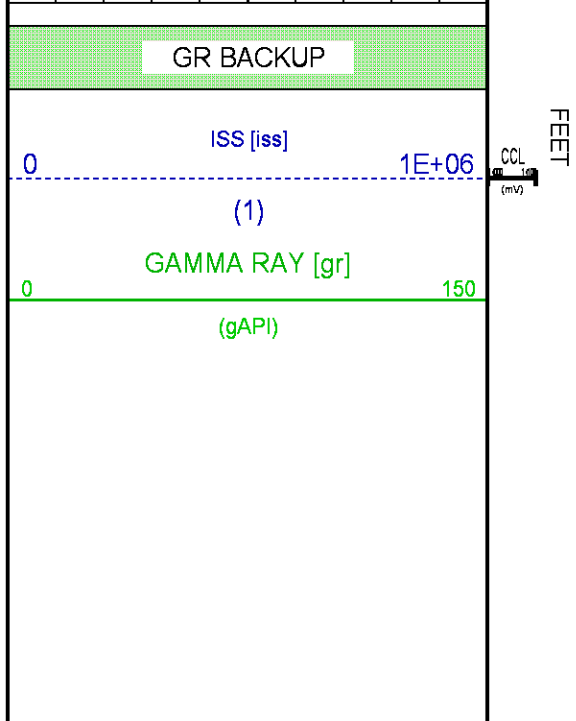
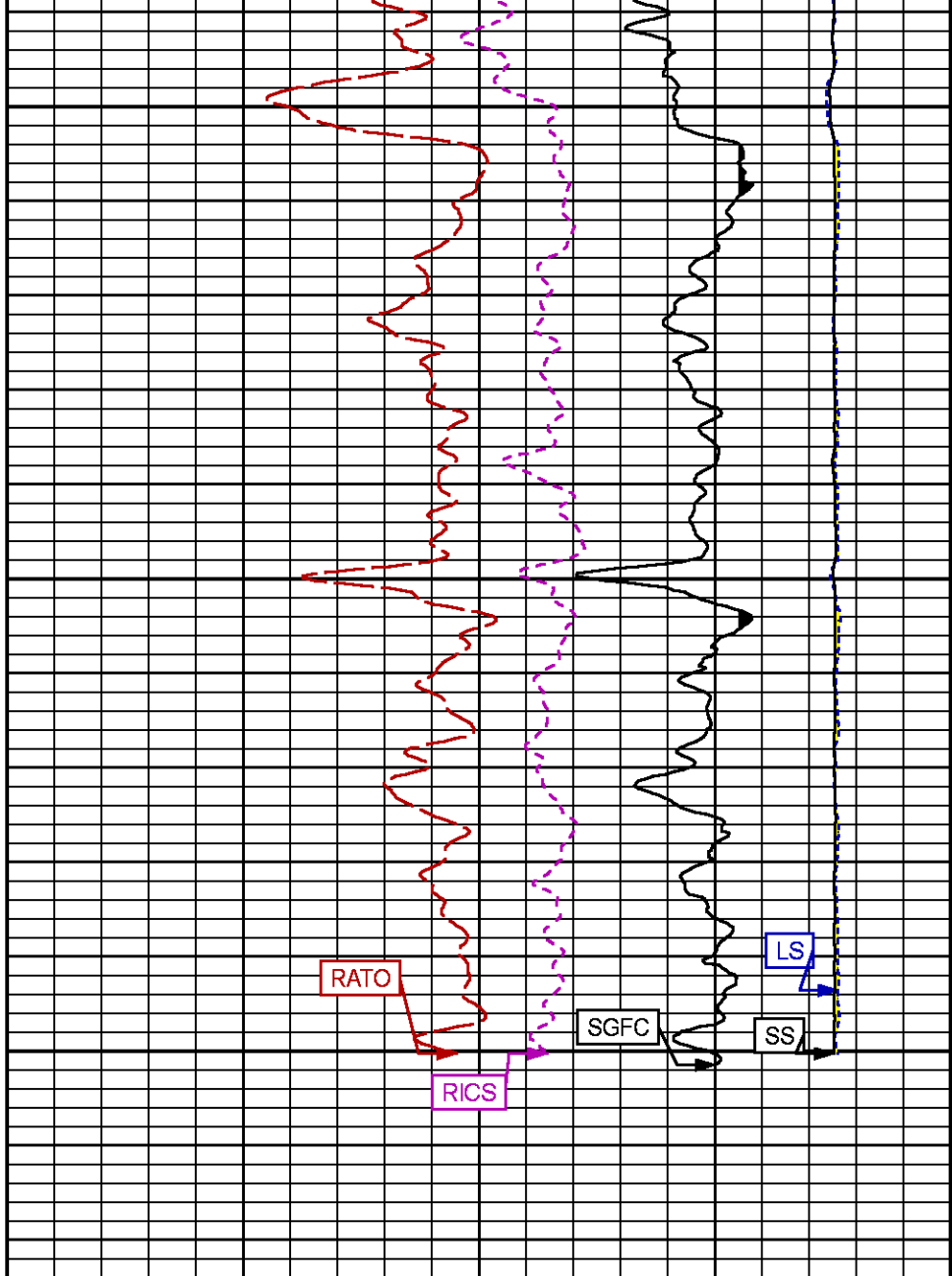
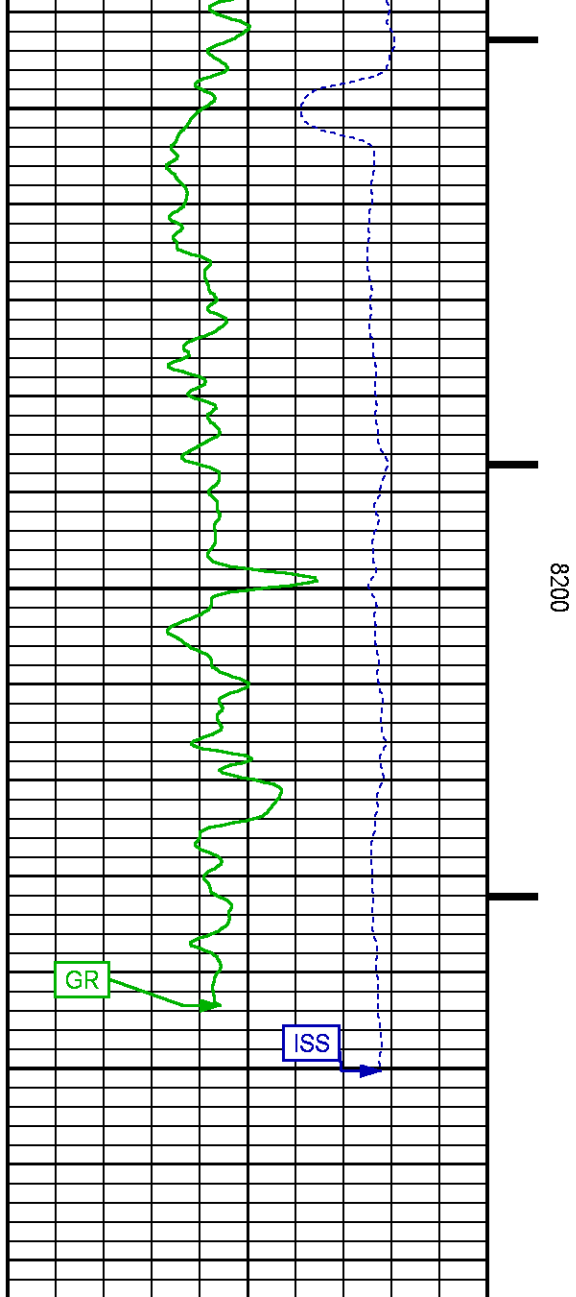












REPEAT SECTION PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
 Updates: 1 Patches: 6

Plotted: Fri Apr 24 19:43:58 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH095909/n354h01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 8049.000 ft BOTTOM DEPTH: 8271.000 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	7.88	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Apr 24 16:08:21 2015	CASING COLLAR LOCATOR
F1:GR	Apr 24 16:08:21 2015	GAMMA RAY
F1:ISS	Apr 24 16:08:21 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Apr 24 16:08:21 2015	LONG SPACE COUNT RATE
F1:RATO	Apr 24 16:08:21 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Apr 24 16:08:21 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Apr 24 16:08:21 2015	CORRECTED FORMATION SIGMA
F1:SS	Apr 24 16:08:21 2015	SHORT SPACE COUNT RATE

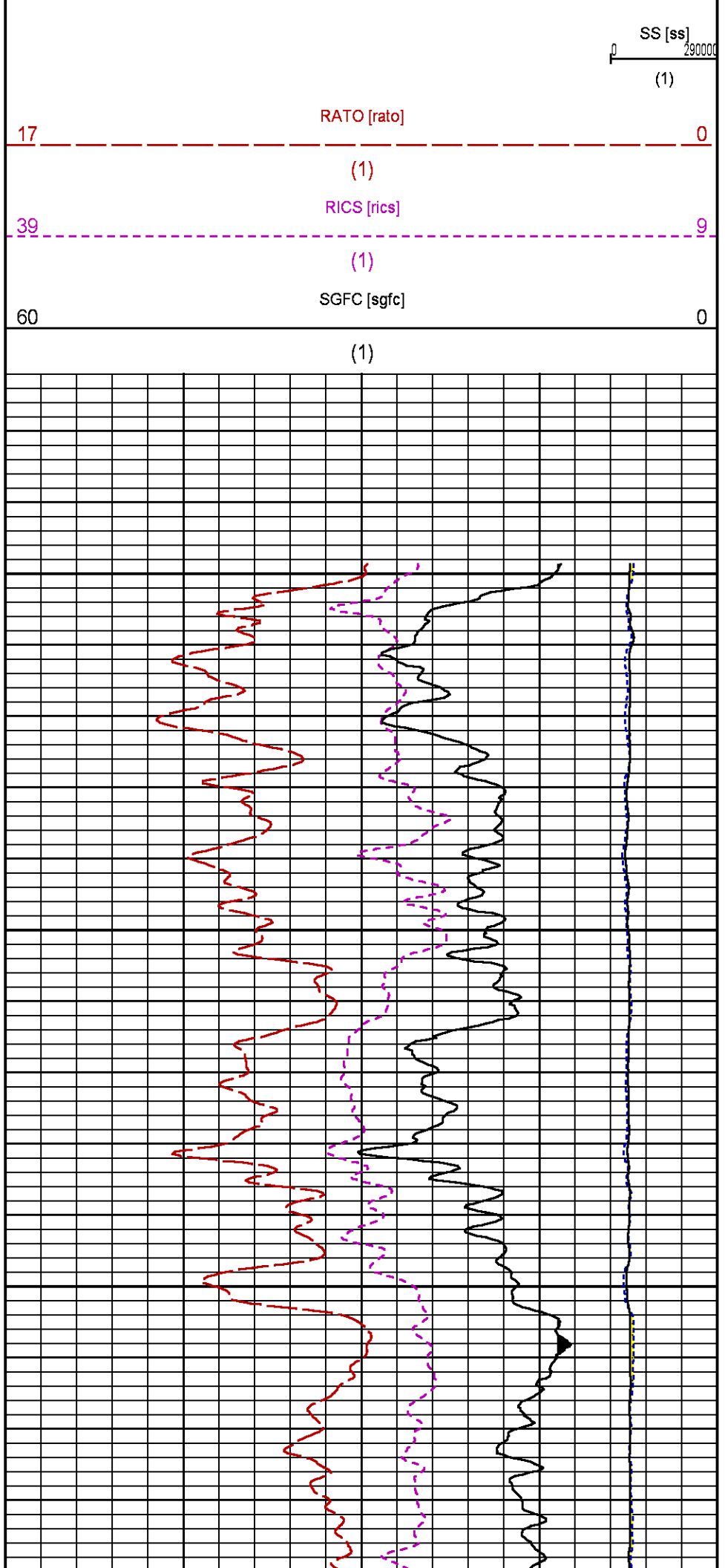
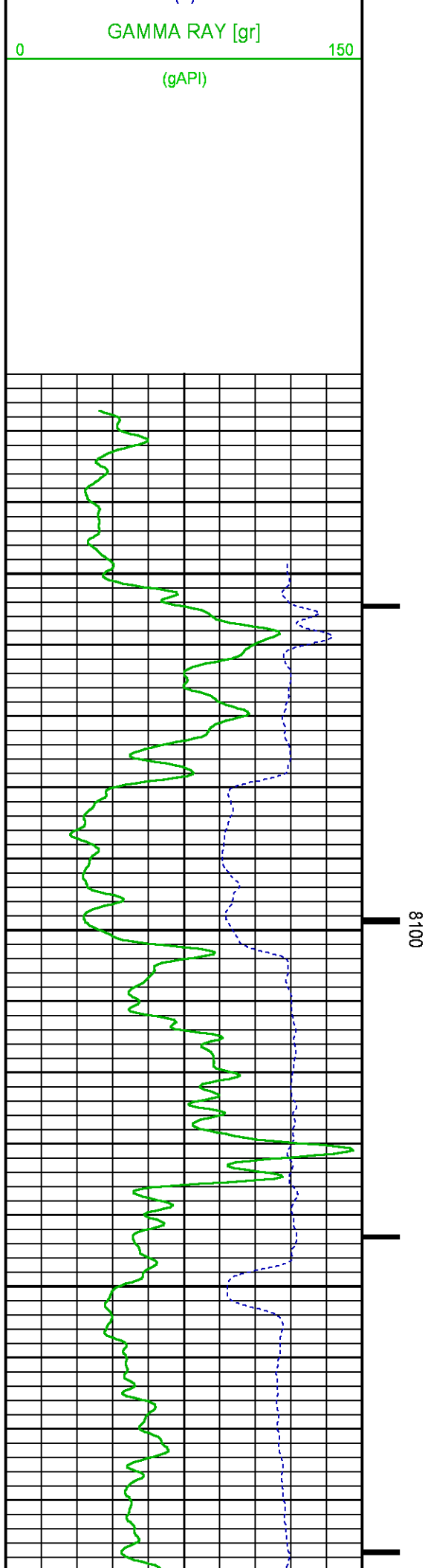
CURVE MEASURE POINT OFFSET

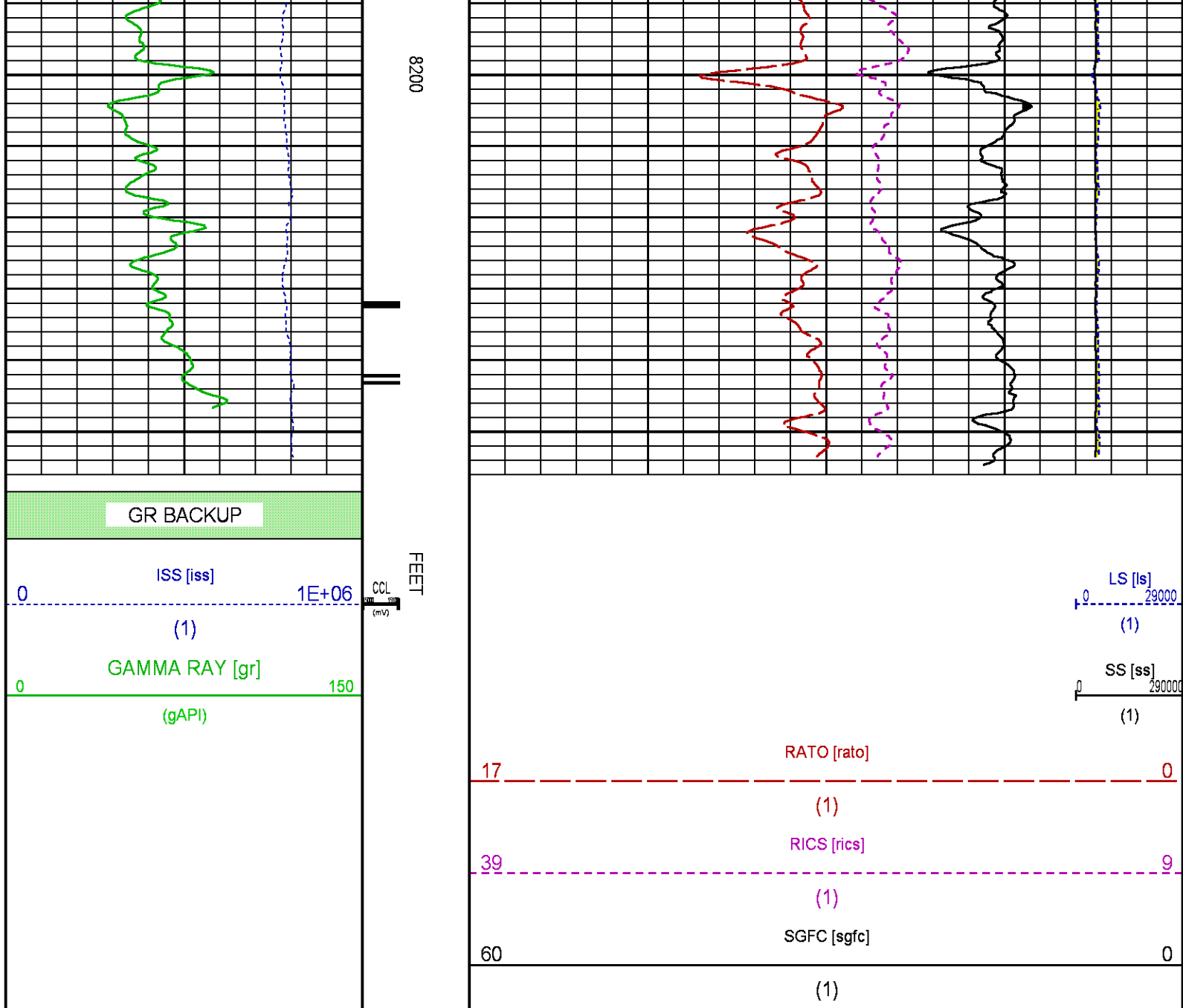
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

Presentation : cas6685:/dat1a/CH095909/RPM_21M_REPEAT.fvpdf [5"/100' Scale]
 Plot Interval : 8023.75 - 8254.75 Feet

Data File 1 : F1 : cas6685:/dat1a/CH095909/n354h01REPEAT21M.xtf
 Created On : Apr 24 16:08:21 2015
 Company : LARAMIE ENERGY
 Well : PICEANCE 28-21M
 Field : VEGA
 File Interval : 8023 - 8271 Feet
 OCT : n354h







CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH095909/n354h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2812LA 10274385

DATE/TIME PERFORMED: Wed Apr 1 10:54:22 2015

UNIT #: 3885TC 6685

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	62.04	281.09	219.0	0.959	59.48	269.48	210

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2812LA 10274385

DATE/TIME PERFORMED: Wed Apr 1 10:56:34 2015

UNIT #: 3885TC 6685

VERI JIG #: 4702NK WA-612

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	62.31	285.53	0.959	59.74	273.74	214.01
						200.00 220.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10160383

DATE/TIME PERFORMED: Thu Apr 16 17:17:09 2015

UNIT: 3885TD MI4230

CALIBRATOR: 2437XB 112674

SOURCE: 8281AA 10148476

HOURS: 8281AA 352

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	808189	123	2248	2260	2221	105	7	0.9735

Interpolated	1300000	147	2222	2251	2216
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	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	808189	6392	987	137	26.07	0.14	24.14	0.32
					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	808189	170423	26321	90948	32370	8396	55042	13432
Fit Quality %		0.268	0.414	0.453	0.447	0.417	0.522	0.378

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	808189	1.43	4.74	30.72	14.68	10.84	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 %		0.032	0.424	0.513	0.566	0.145	0.135	0.105
Reduced	1364470	1.43	4.76	30.83	14.73	10.85	3.86	4.10
		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 120516

DATE/TIME PERFORMED: Tue Nov 18 15:59:55 2014

UNIT #: 2570LE 4271

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	-8.673169E+00	9.576065E-02	6.395448E-06	-9.461013E-10

INSTRUMENT CONFIGURATION

33.24'

A3 CABLEHEAD



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

CCL MP — 25.19'

SONDEX GAMMA RAY

Diameter : 1.69"
Length : 2.17'
Weight : 10 lbs
Series : 2812LA

GR MP — 22.64'

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

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"



	WELL	PICEANCE 28-21M		CH095909
	FIELD	VEGA		API NO:
	COUNTY	MESA	STATE	COLORADO
	LOCATION:		ELEVATIONS:	SEC 28 T9S R93W
	SHL: 2433' FSL 1596' FWL		KB 7602 FT	PAD 28-11
	BHL: 125' FSL 2588' FWL		DF	PATTERSON 306
	GL 7580 FT			
	SEC 28	TWP 9S	RGE 93W	DATE 24-Apr-2015