



FILE NO:	COMPANY	LARAMIE ENERGY LLC
API NO:	WELL	NICHOLS 0994-24-09E
05077104100000	FIELD	VEGA
	COUNTY	MESA
	STATE	COLORADO

Ver. 4.10	LOCATION:	OTHER SERVICES
	SHL: 39.264445 N; 107.830731 W	RAL
	BHL: 39.264072 N; 107.826023 W	
	SEC 24 TWP 9 S RGE 94 W	

PERMANENT DATUM	GL	ELEVATION	7137 FT
LOG MEASURED FROM	KB	24 FT	ABOVE P.D.
DRILL. MEAS. FROM	KB		

ELEVATIONS:
KB 7161 FT
DF 7160 FT
GL 7137 FT

DATE	23-Jan-2018
RUN	1
TRIP	2
SERVICE ORDER	US131991
DEPTH DRILLER	7621 FT
DEPTH LOGGER	7378 FT
BOTTOM LOGGED INTERVAL	7378 FT
TOP LOGGED INTERVAL	2280 FT
TIME STARTED	17:00
TIME FINISHED	23:00
OPERATOR RIG TIME	6 HRS
TYPE OF FLUID IN HOLE	FRESH WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	48 FT
LOGGED CEMENT TOP	2608
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	235 DEGF
REFERENCE LOG	NA
REFERENCE LOG DATE	NA
EQUIP. NO.	ML-4291
LOCATION	GRAND JUNCT
RECORDED BY	M.MENTZER
WITNESSED BY	MR. MATT SETTLES

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.

REMARKS

RUN 1 TRIP 2: *2 OPERATIONS IN WELLBORE*

OPERATION 2: TEMP/RPM/GR/CCL RUN IN COMBINATION

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 5723' - 5746'

SJ: 6647' - 6668'

CREW: J.PENA, C.GOLOBY, A.SHAHNOOSHI

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	2	TELEMETRY	8248 EA/8250 ED	111745584/10193585	FREE
1	2	GR	8262 XA	10317216	FREE
1	2	RPM ELEC	8281 EA	10179238	FREE
1	2	RPM	8283 PA/8281 FA	10190200/10318654	FREE
1	2	TEMP	8255 XA	11774568	FREE

MAIN PASS GRAND SANDS PNC 3D MODE

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017

Patches: 2

Plotted: Tue Jan 23 23:06:57 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_NICHOLAS_0994_24_09E/p353h03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2281.250 ft BOTTOM DEPTH: 2926.500 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	7.88	in	" "
	LARGEST CASING OD	7.00	in	" "
	MATRIX	SANDSTONE		" "

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS	N/A	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

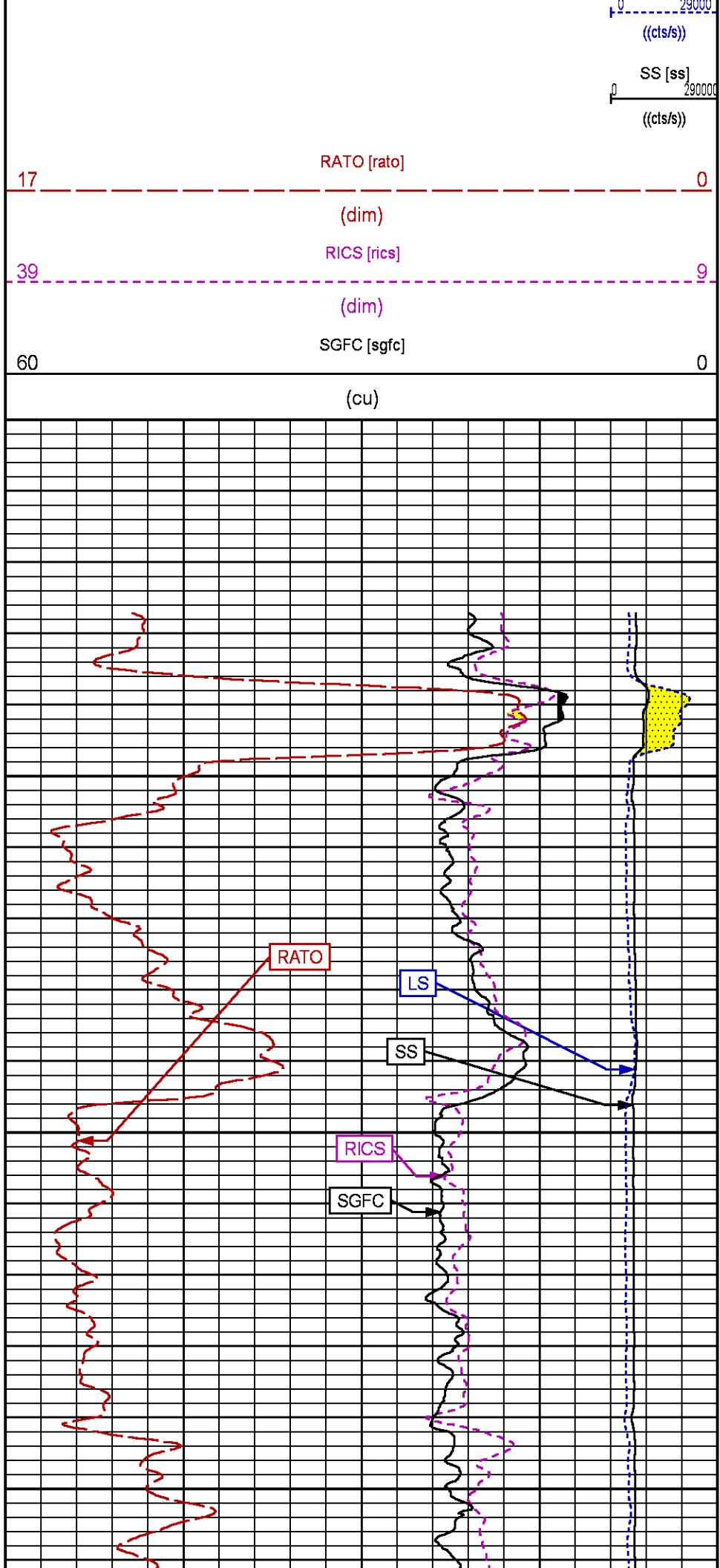
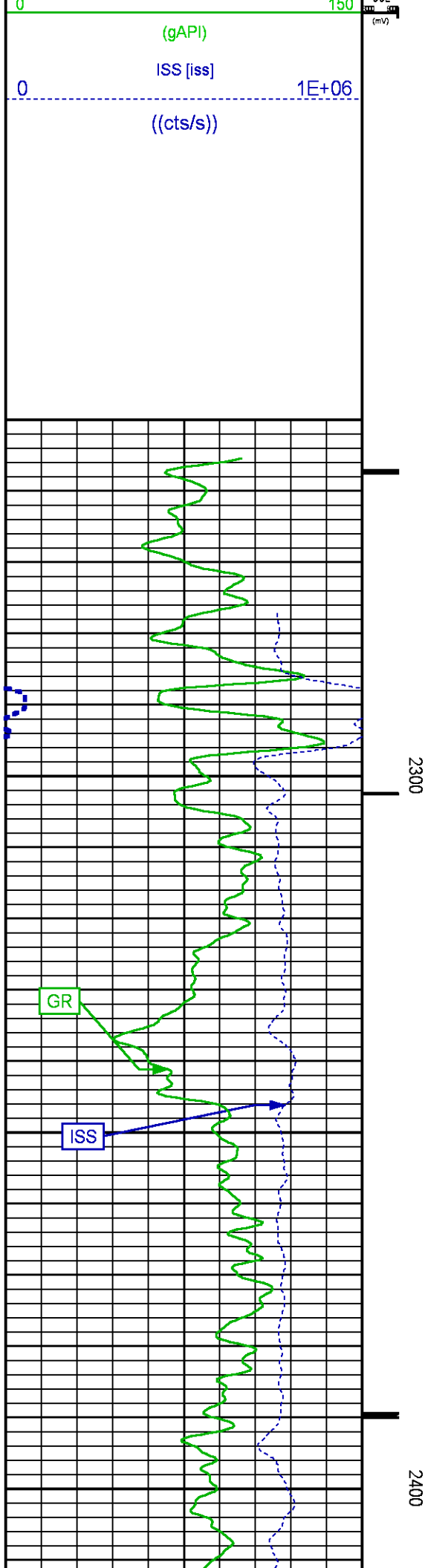
Presentation	: SysA:/dat1a/LARAMIE_NICHOLAS_0994_24_09E/ LARAMIE_RPM+01-MAIN-RPM_MN_GS_09E-5.fvpdf [5"/100' Scale]
Plot Interval	: 2251.25 - 2912.5 Feet
Data File 1	: F1 : SysA:/dat1a/LARAMIE_NICHOLAS_0994_24_09E/RPM_MN_GS_09E.xtf
Created On	: N/A
Company	: LARAMIE ENERGY LLC
Well	: NICHOLS 0994-24-09E
Field	: VEGA
File Interval	: 2250.5 - 2926.5 Feet
OCT	: p353h

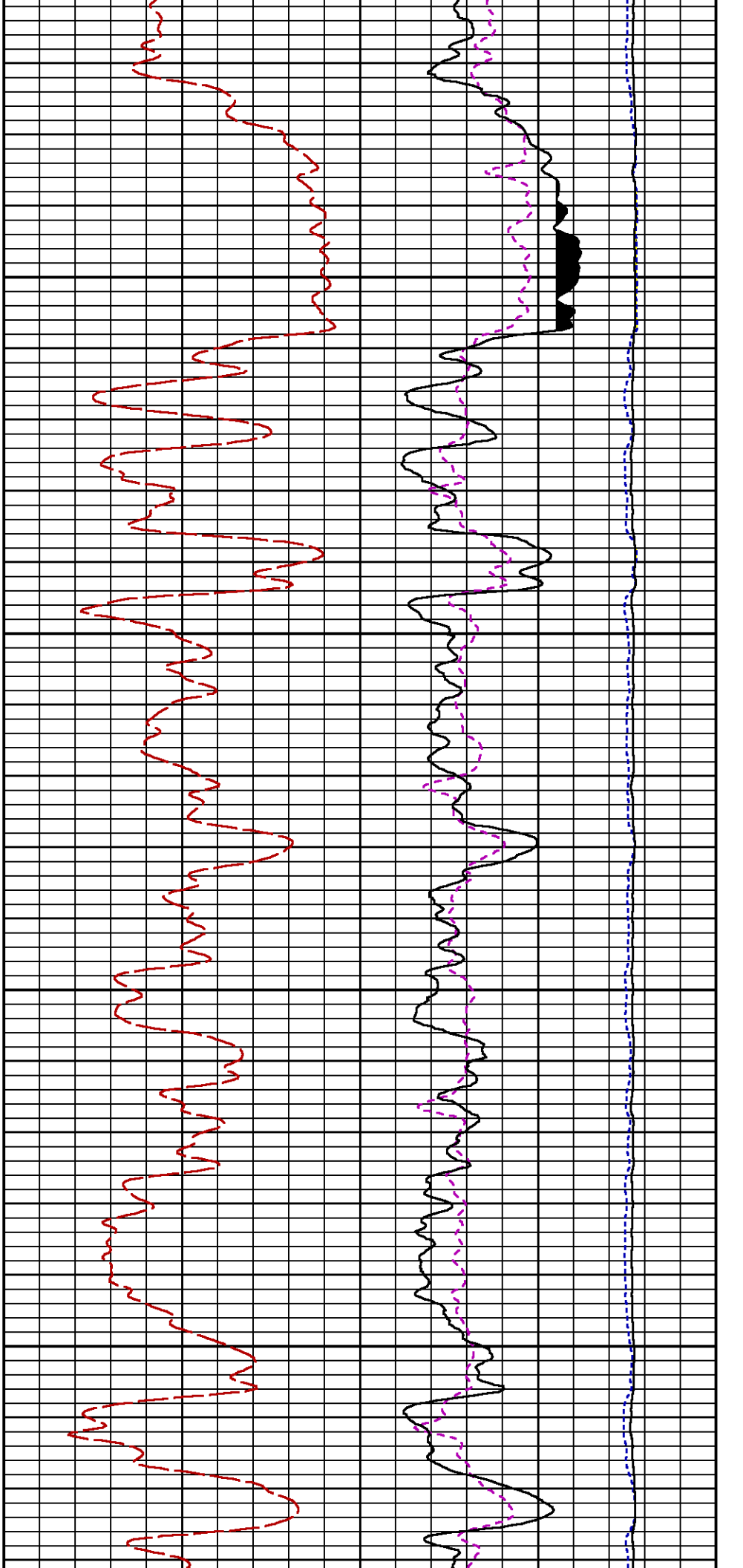
GR BACKUP

GAMMA RAY [gr]

FEET

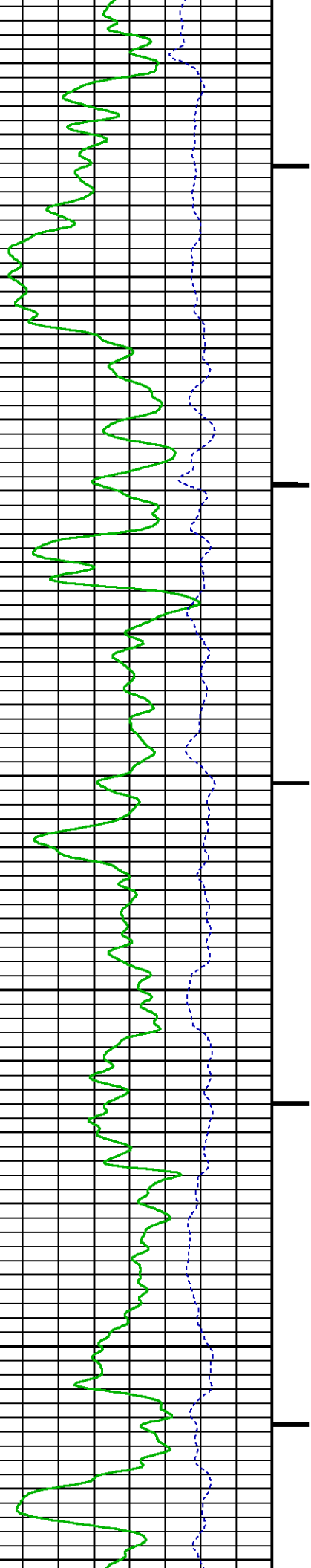
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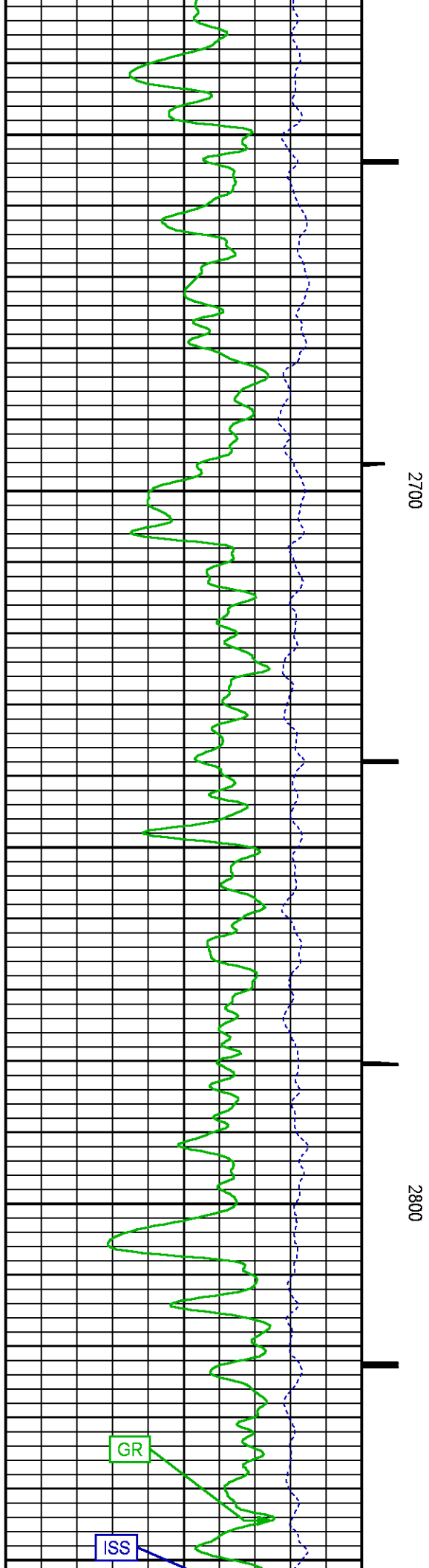
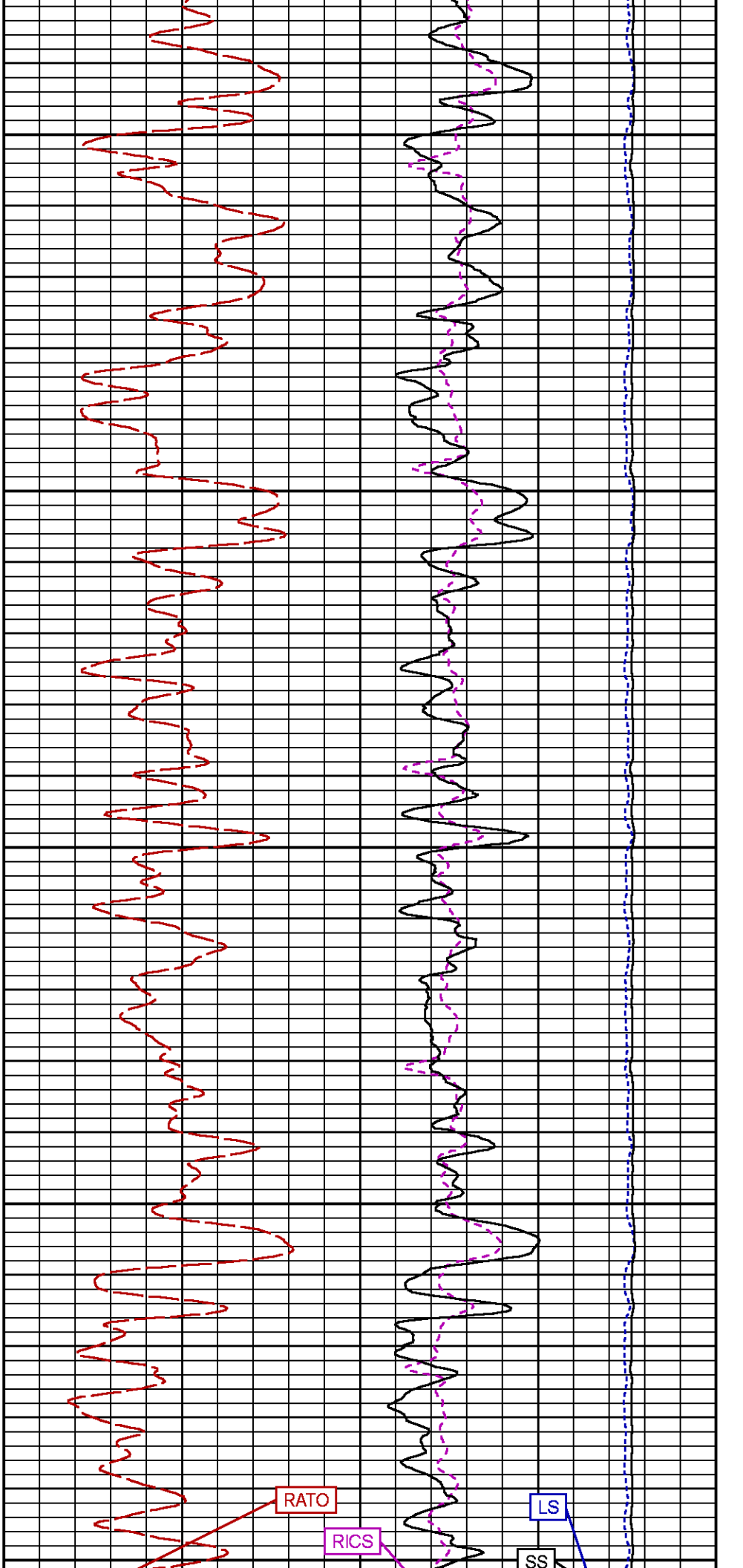


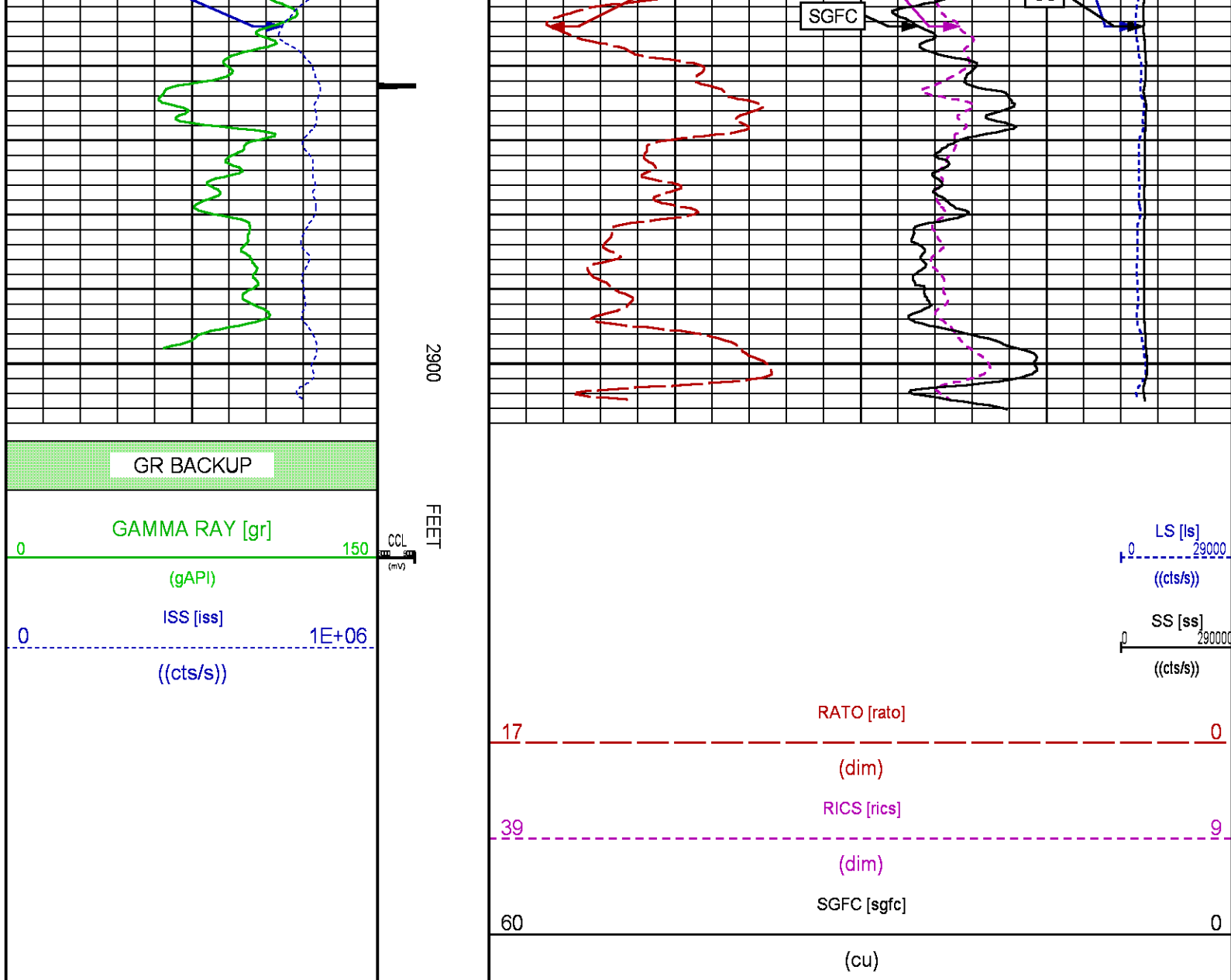


2500

2600







MAIN PASS WILLIAMS FORK PNC 3D MODE

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Patches: 2

Plotted: Tue Jan 23 22:20:04 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_NICHOLAS_0994_24_09E/p353h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4141.500 ft BOTTOM DEPTH: 7401.500 ft

SYMMETRIC FILTER

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

RPM PROCESSING

RFM 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	"	"
	LARGEST CASING OD	7.00	in	"	"
	MATRIX	SANDSTONE		"	"

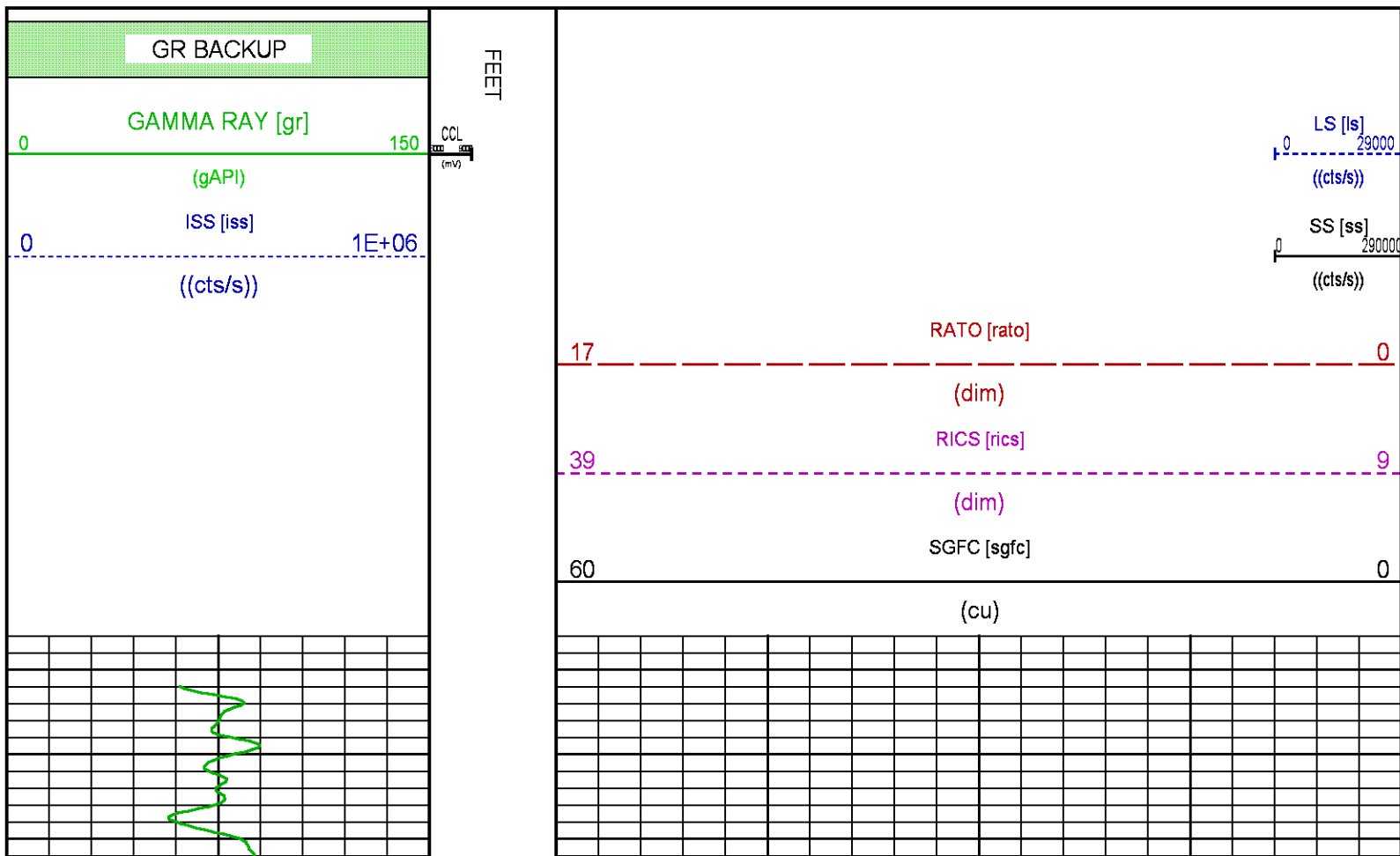
CURVE DESCRIPTION REPORT

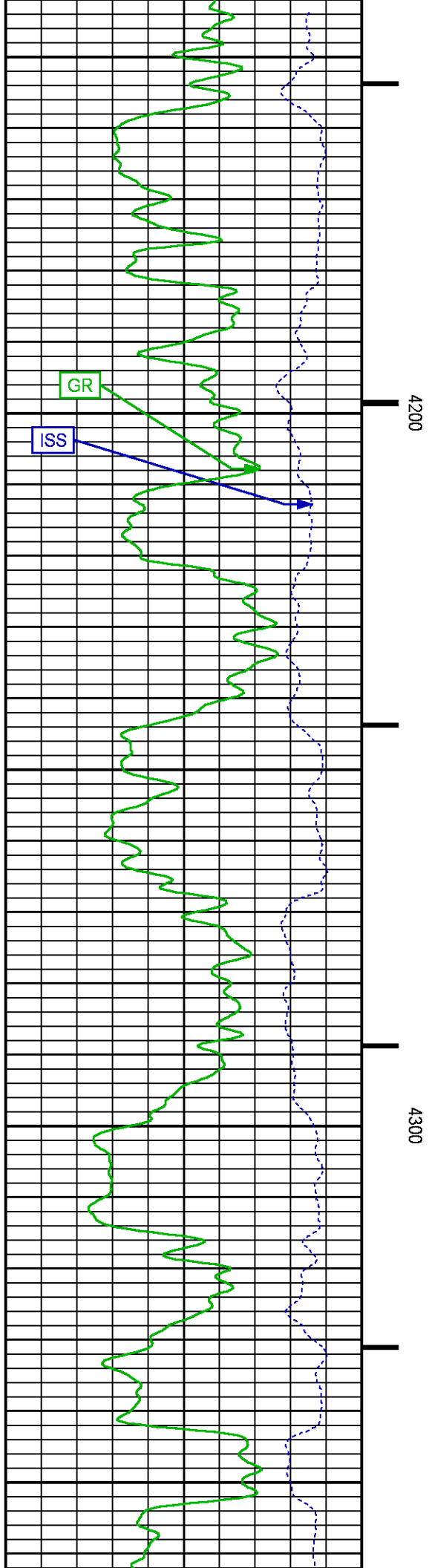
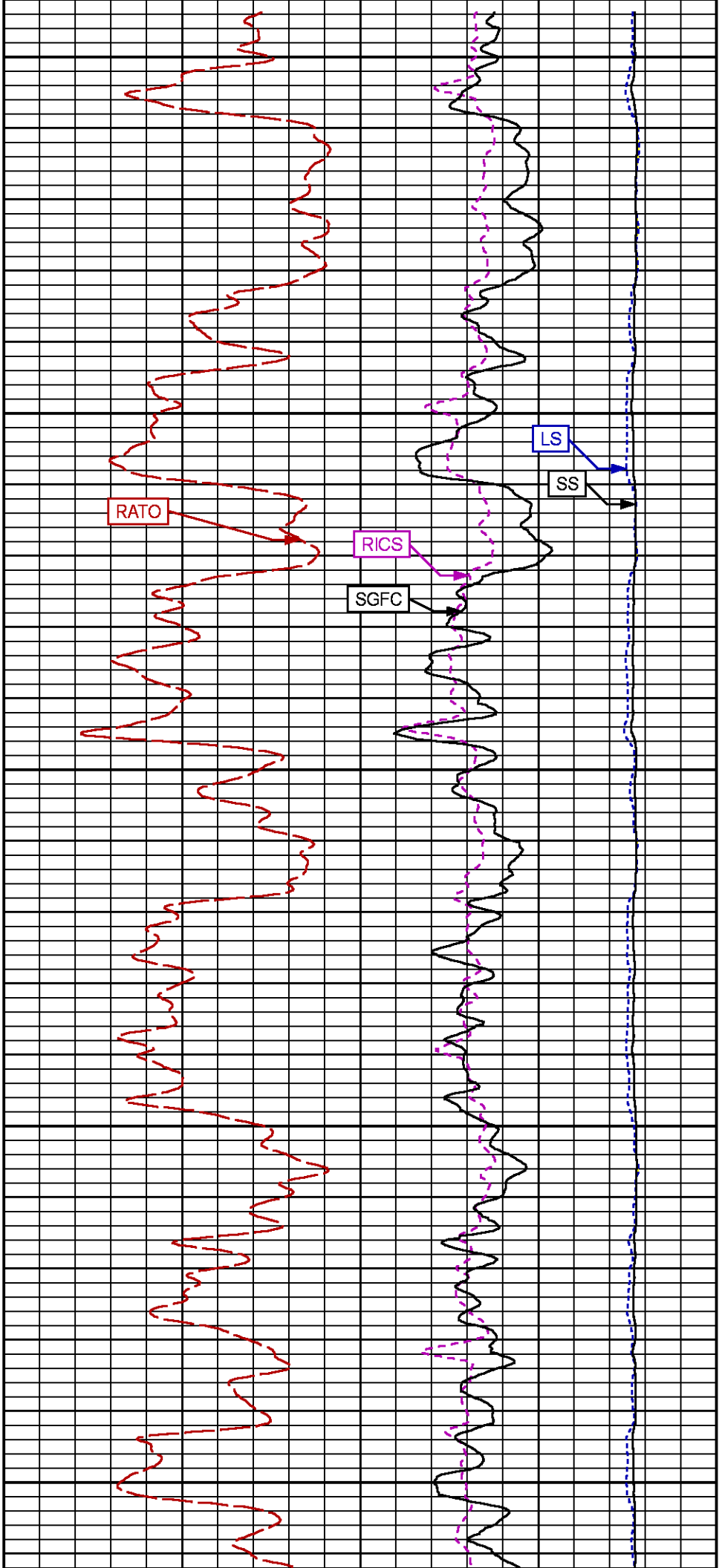
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS	N/A	SHORT SPACE COUNT RATE

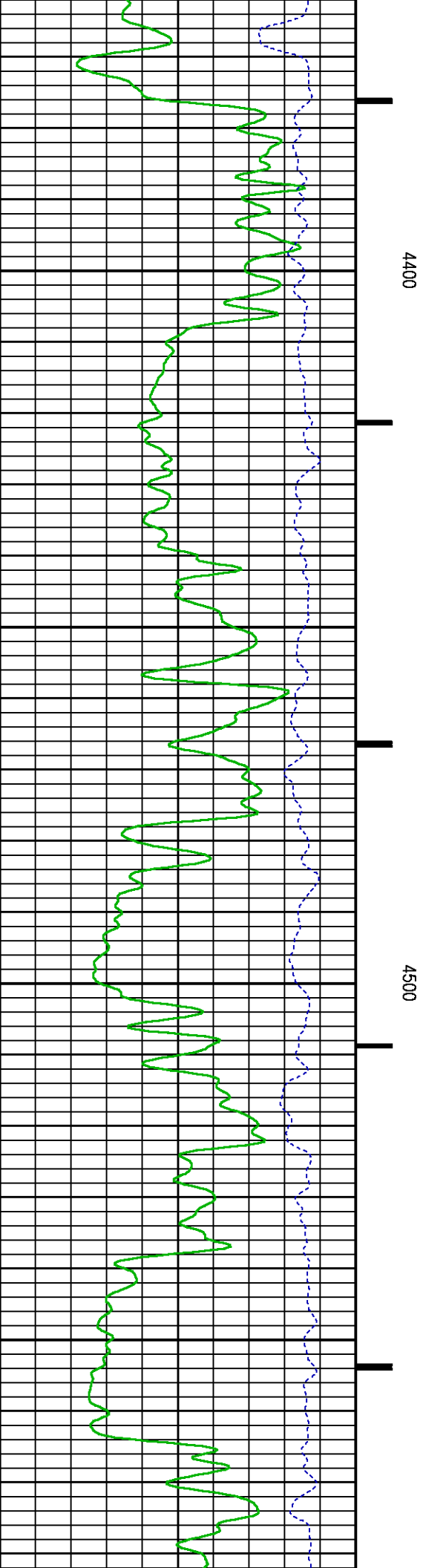
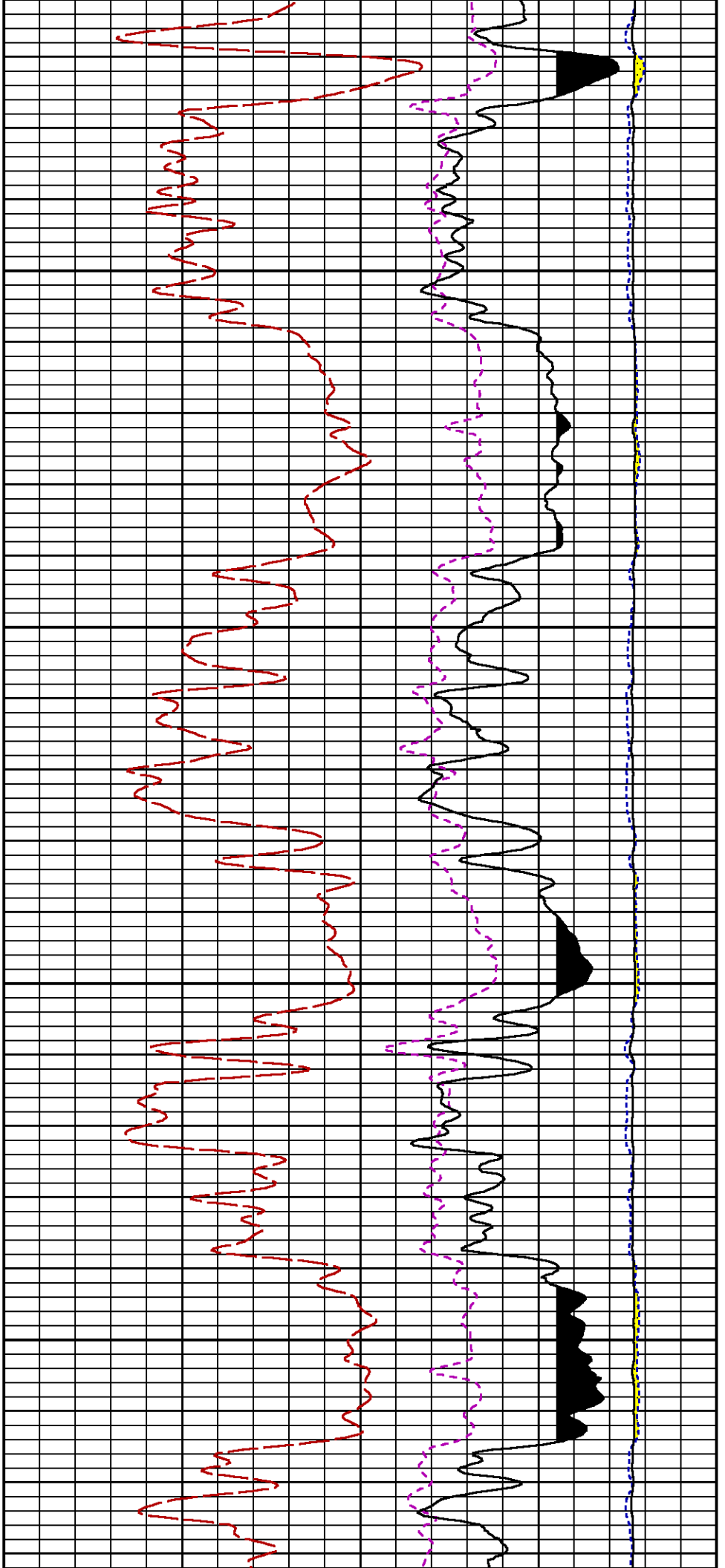
CURVE MEASURE POINT OFFSET

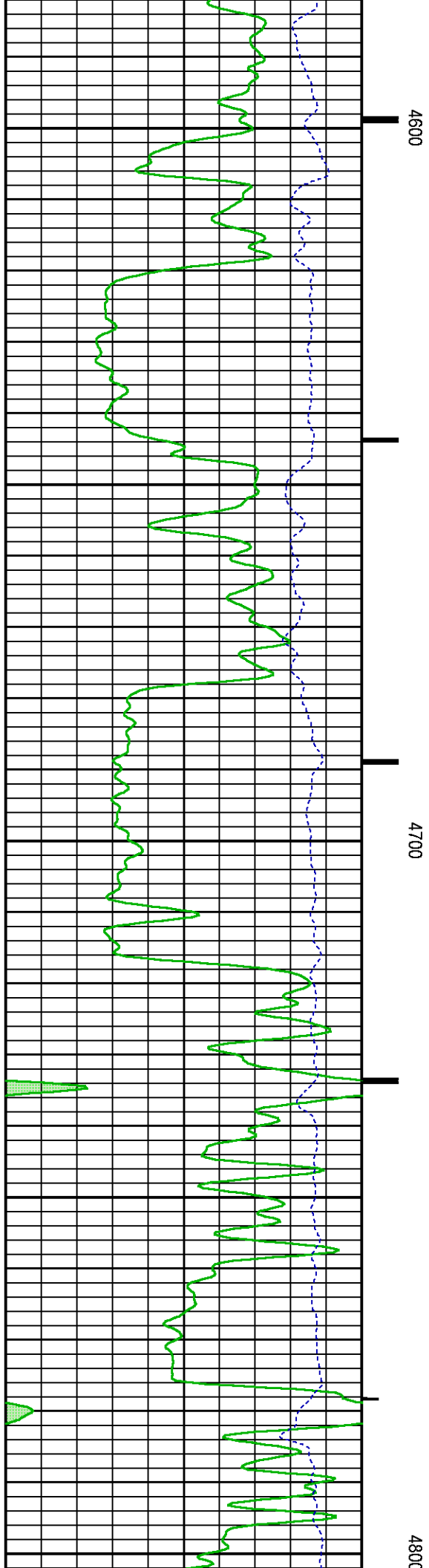
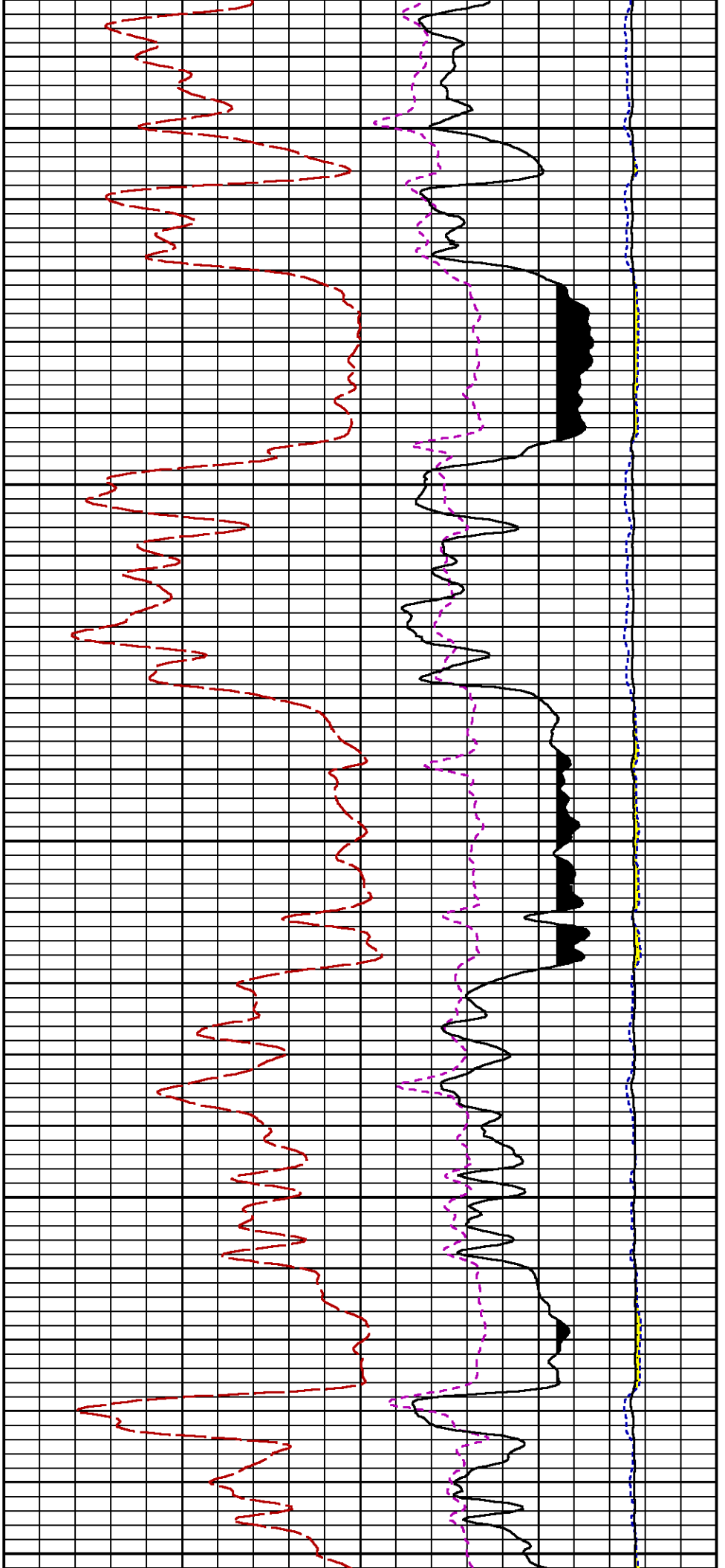
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

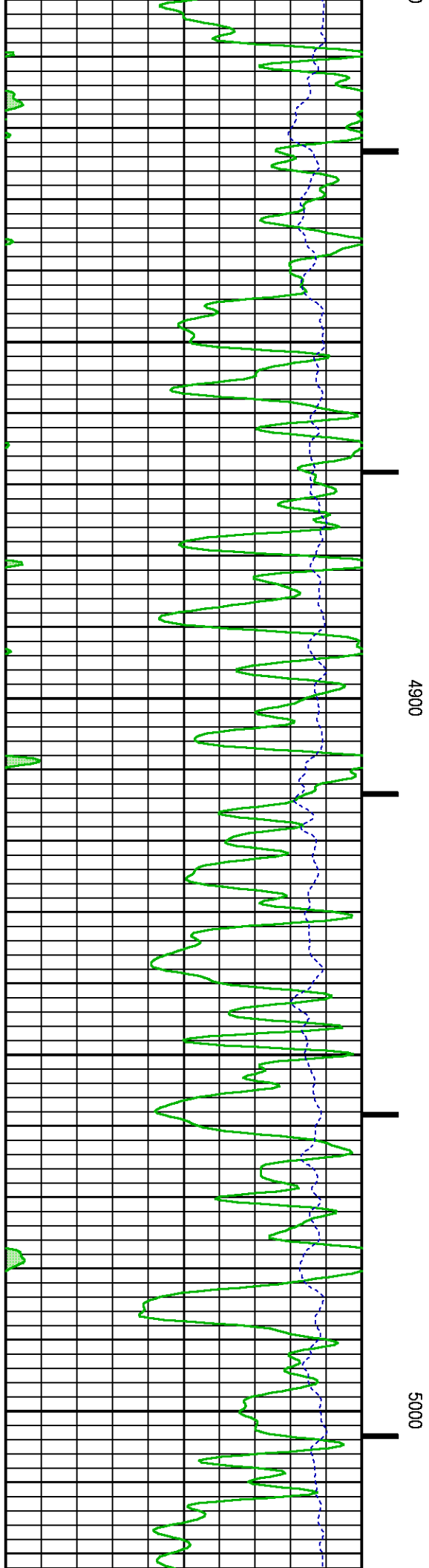
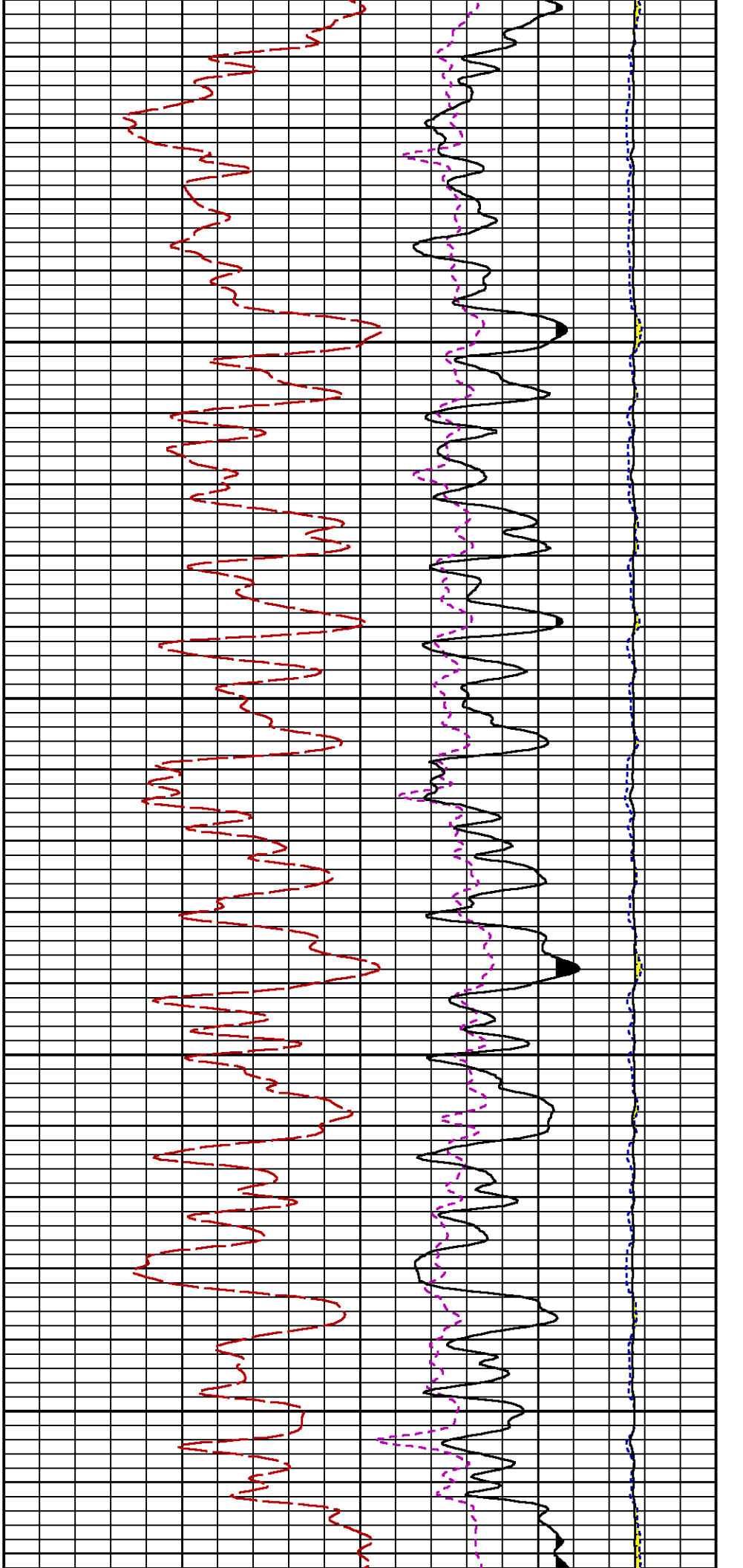
Presentation	: SysA:/dat1a/LARAMIE_NICHOLAS_0994_24_09E/ LARAMIE_RPM+01-MAIN-RPM_MN_WF_09E-5.fvpdf [5"/100' Scale]
Plot Interval	: 4117.75 - 7394 Feet
Data File 1	: F1 : SysA:/dat1a/LARAMIE_NICHOLAS_0994_24_09E/RPM_MN_WF_09E.tif
Created On	: N/A
Company	: LARAMIE ENERGY LLC
Well	: NICHOLS 0994-24-09E
Field	: VEGA
File Interval	: 4117 - 7402.75 Feet
OCT	: p353h

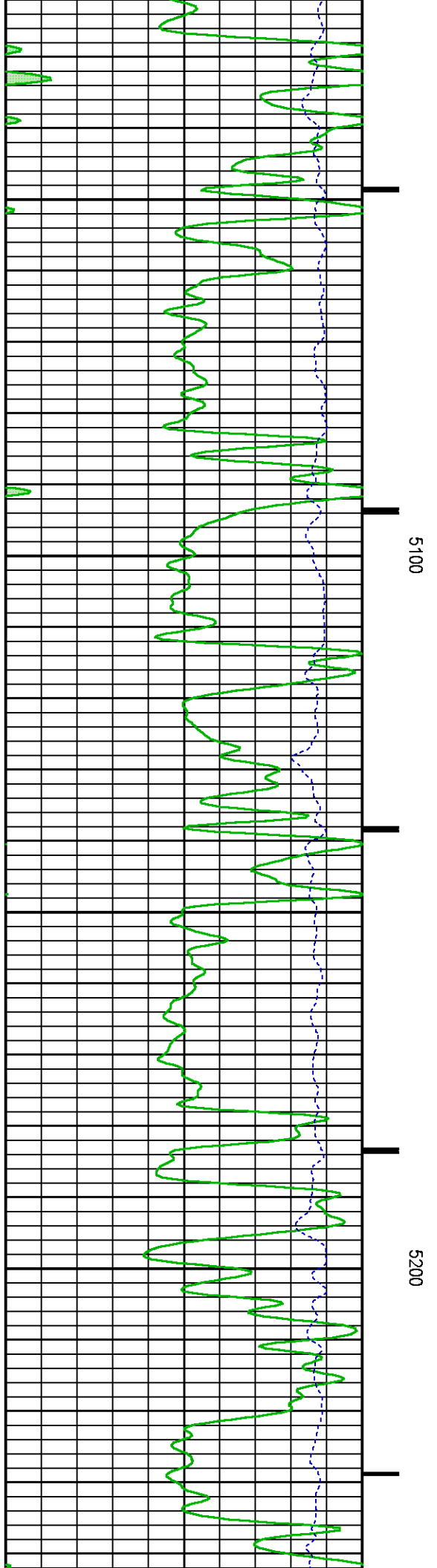
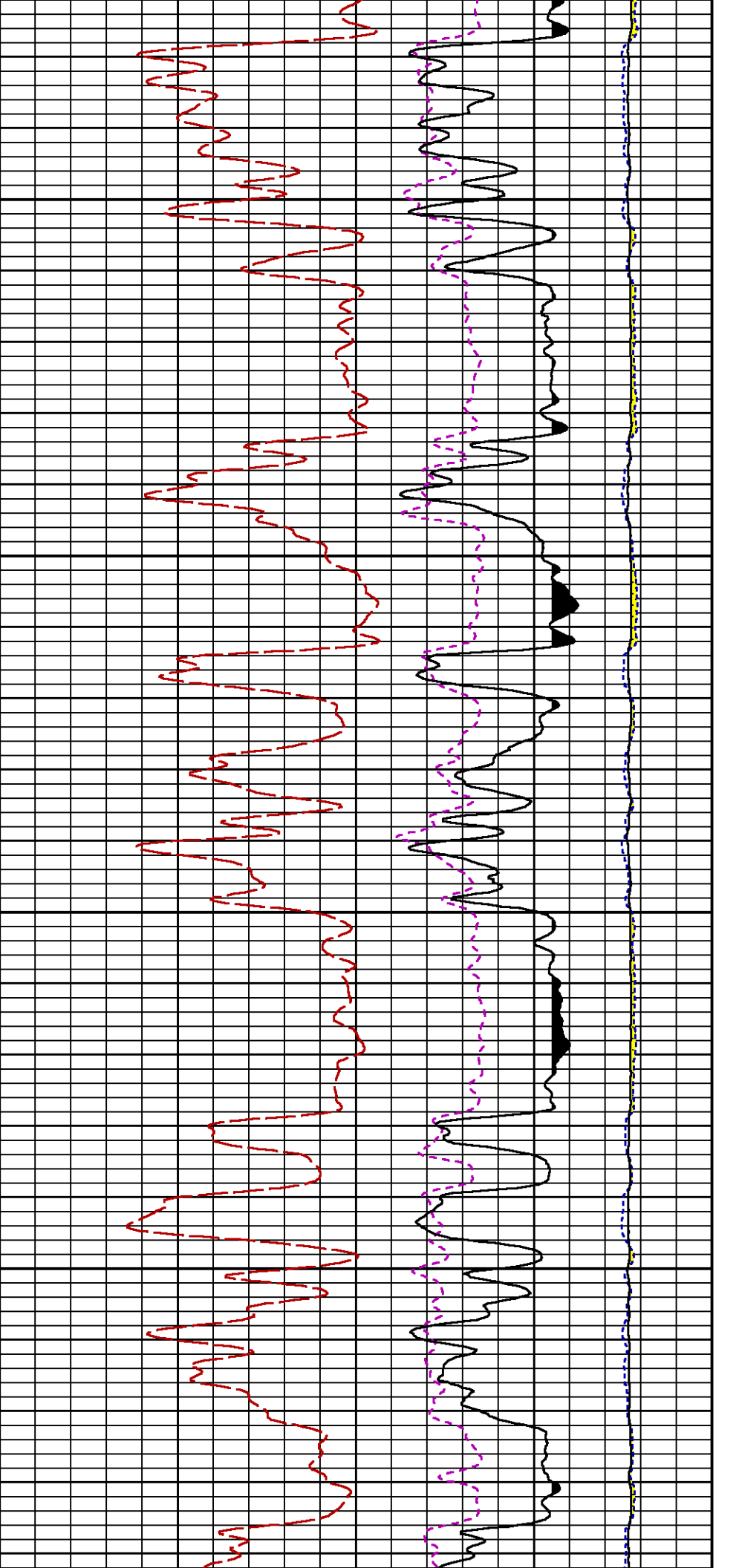


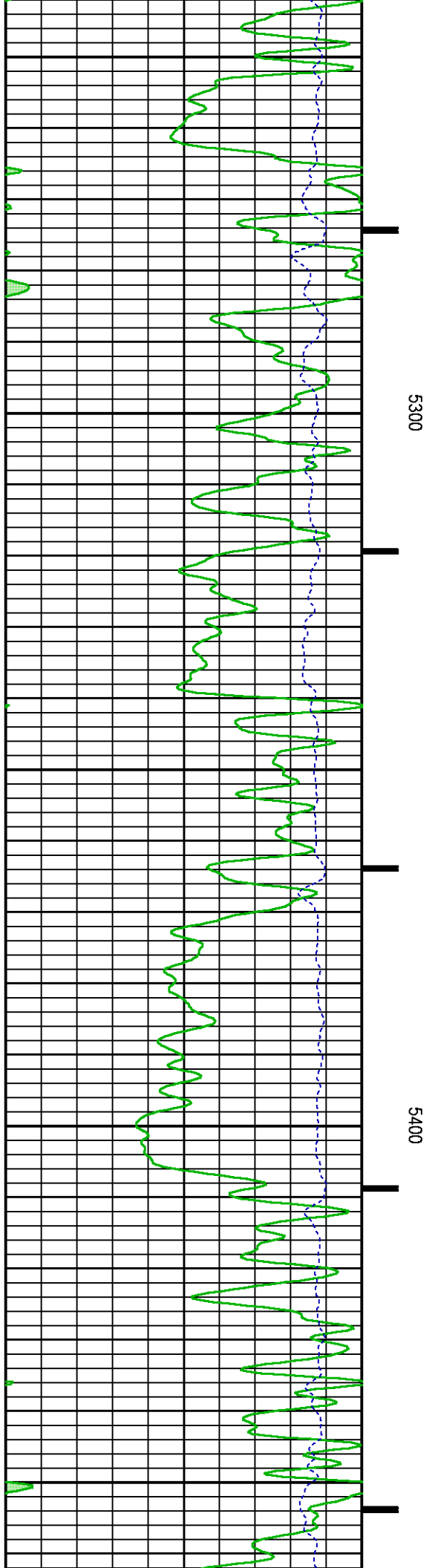
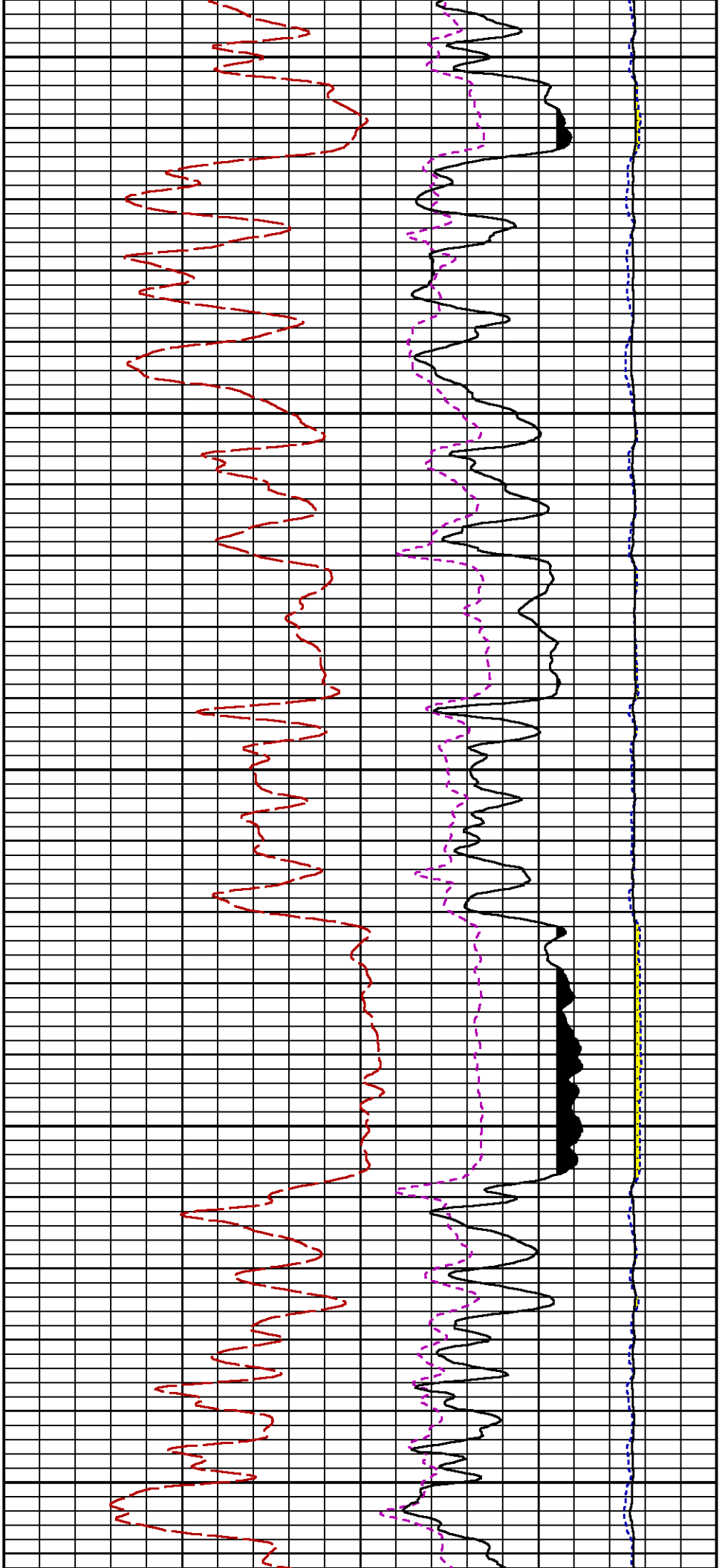


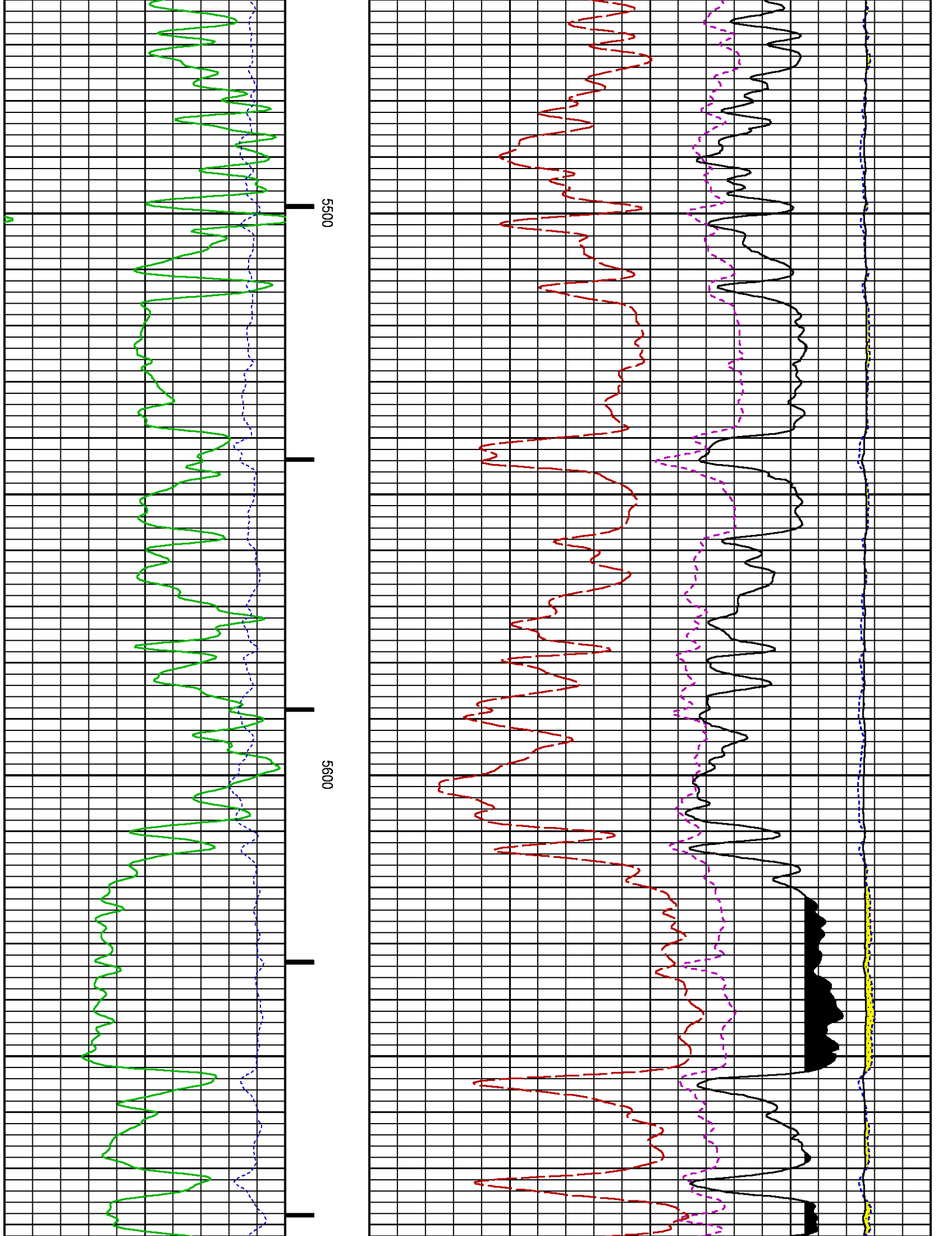


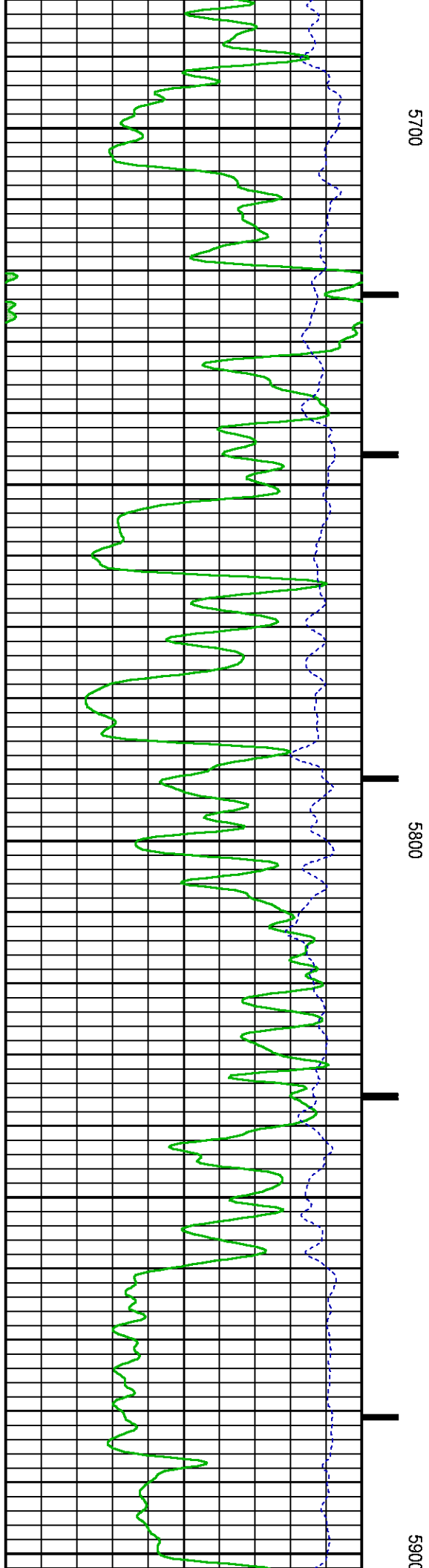
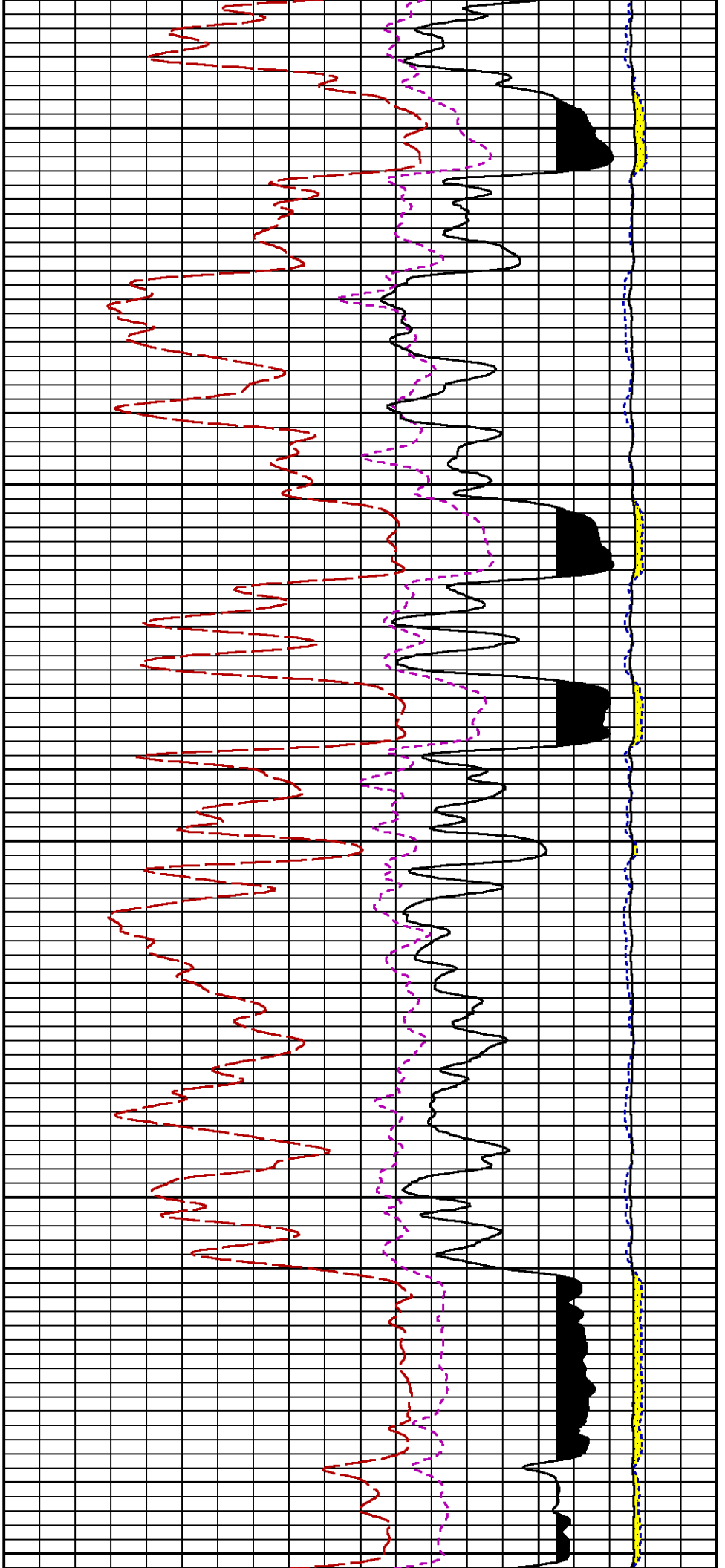


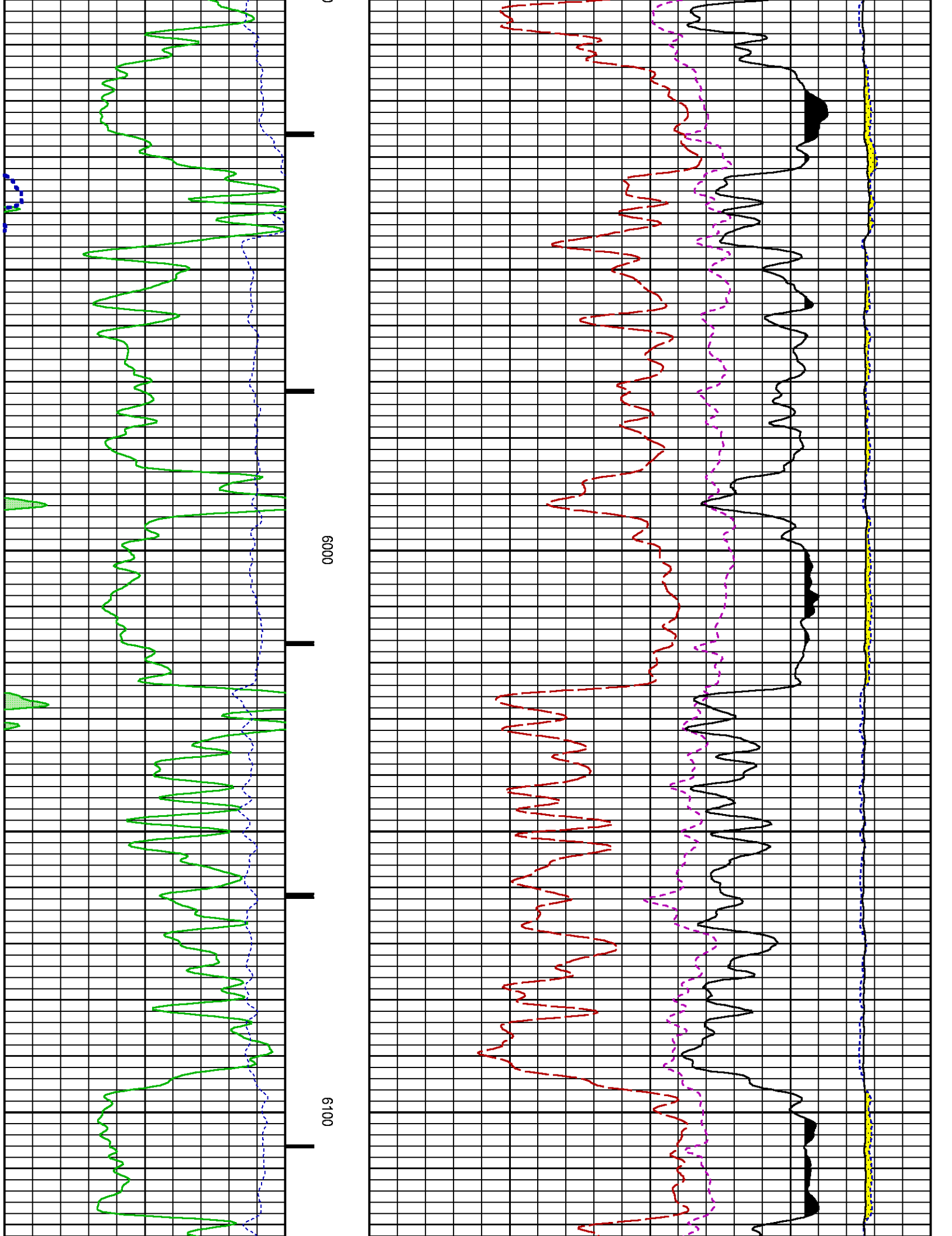


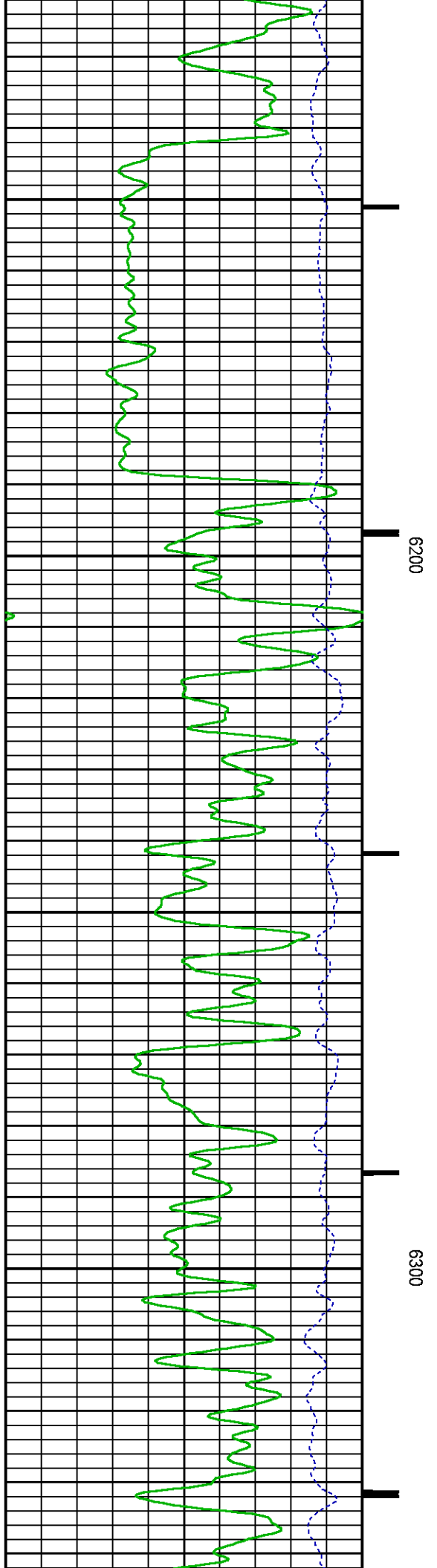
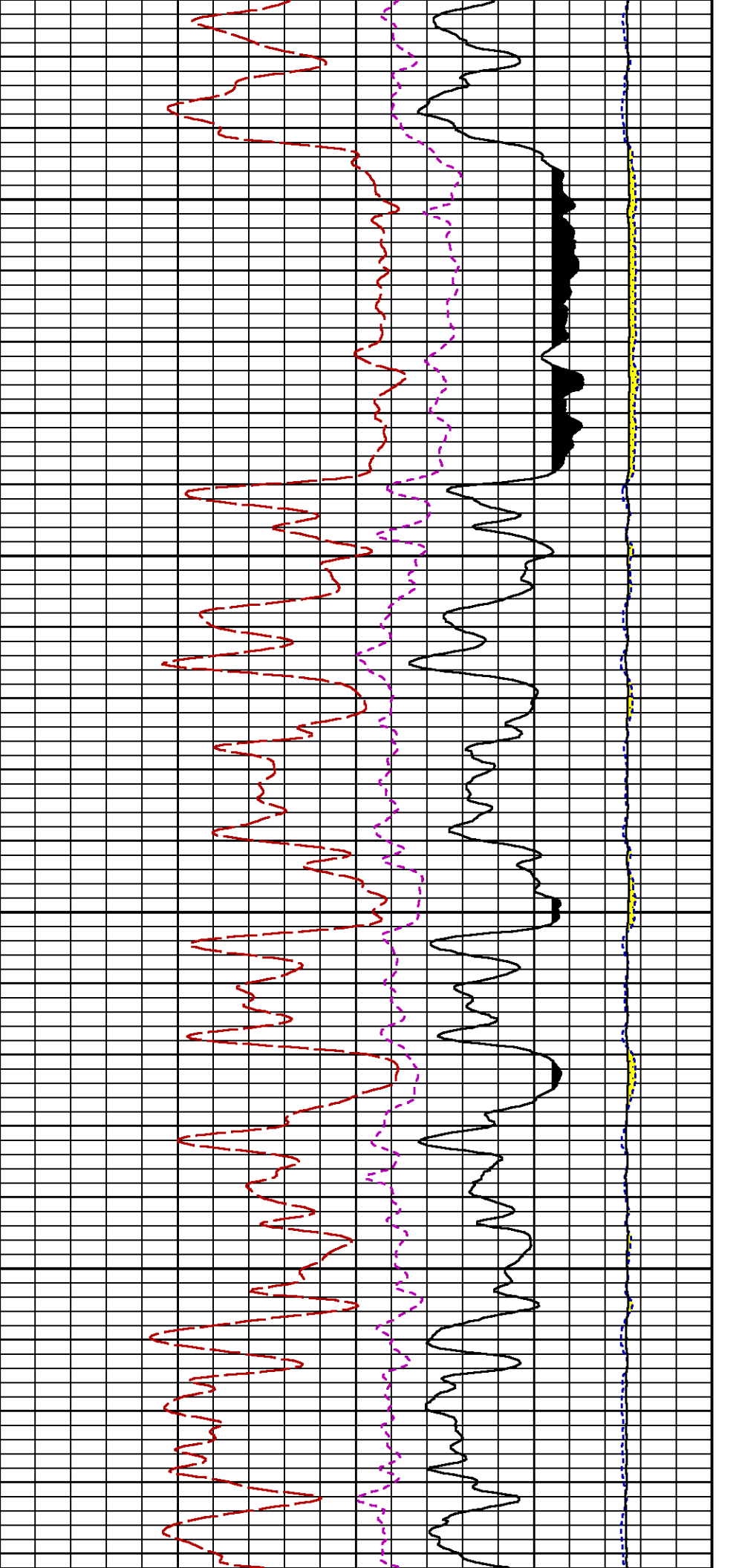


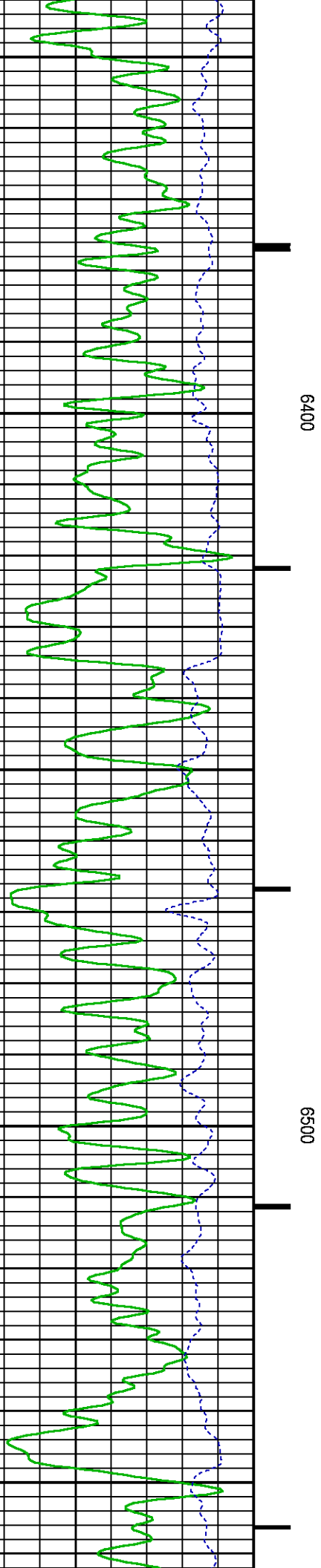
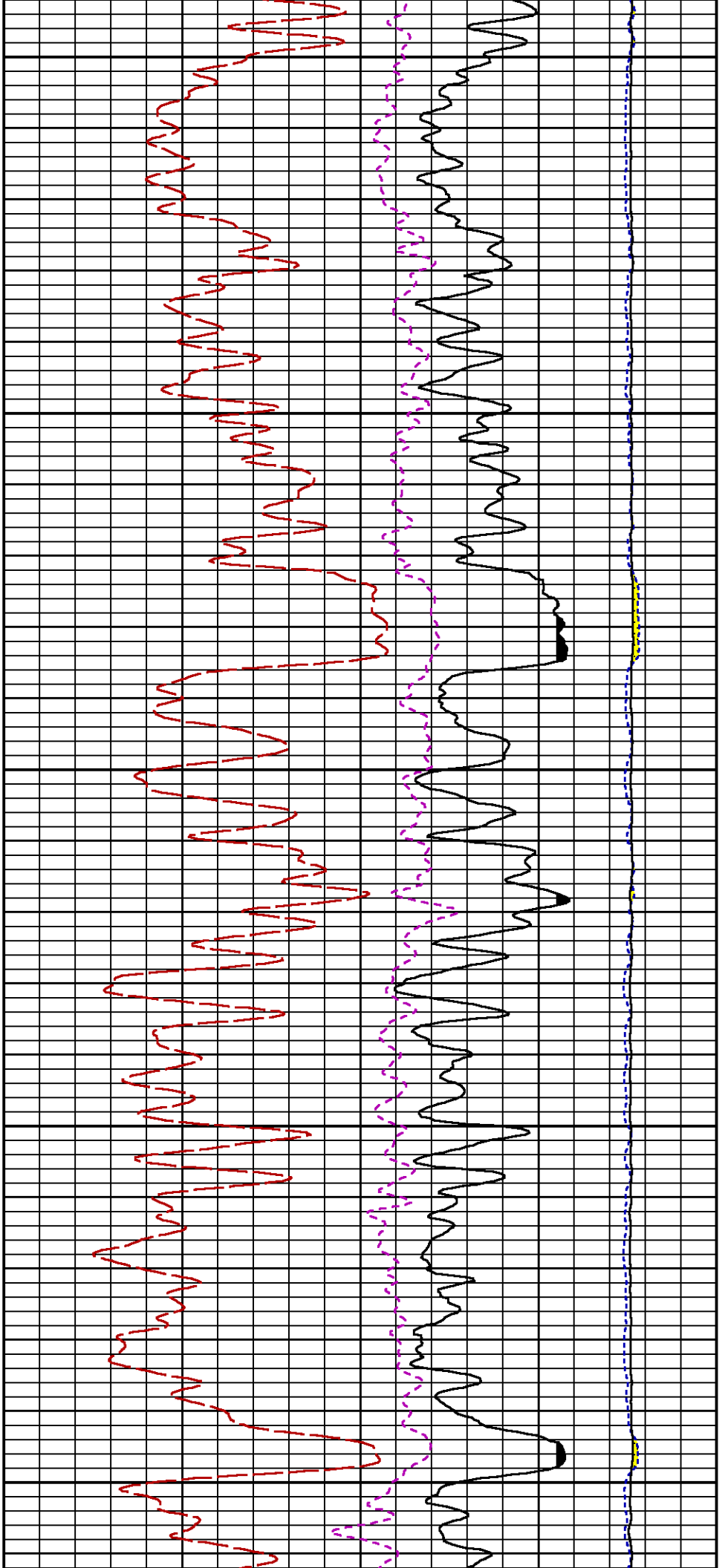


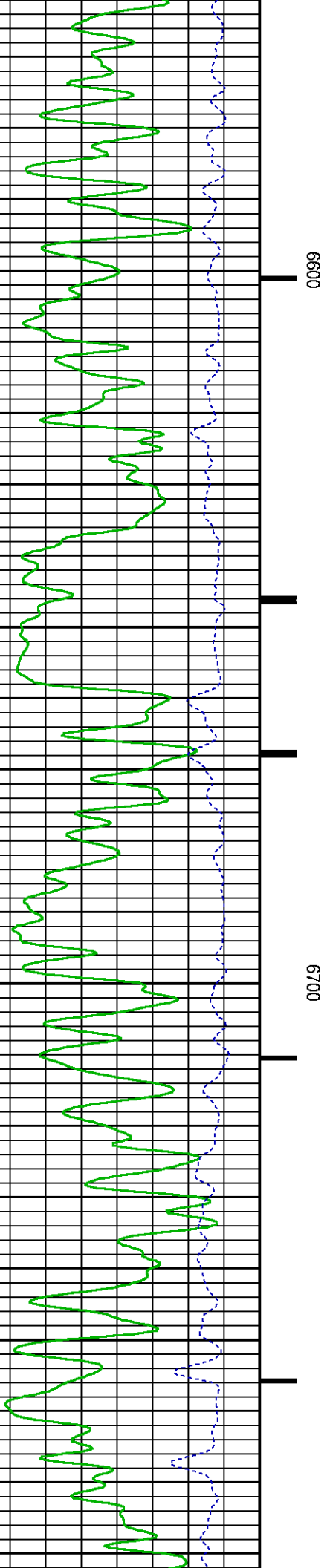
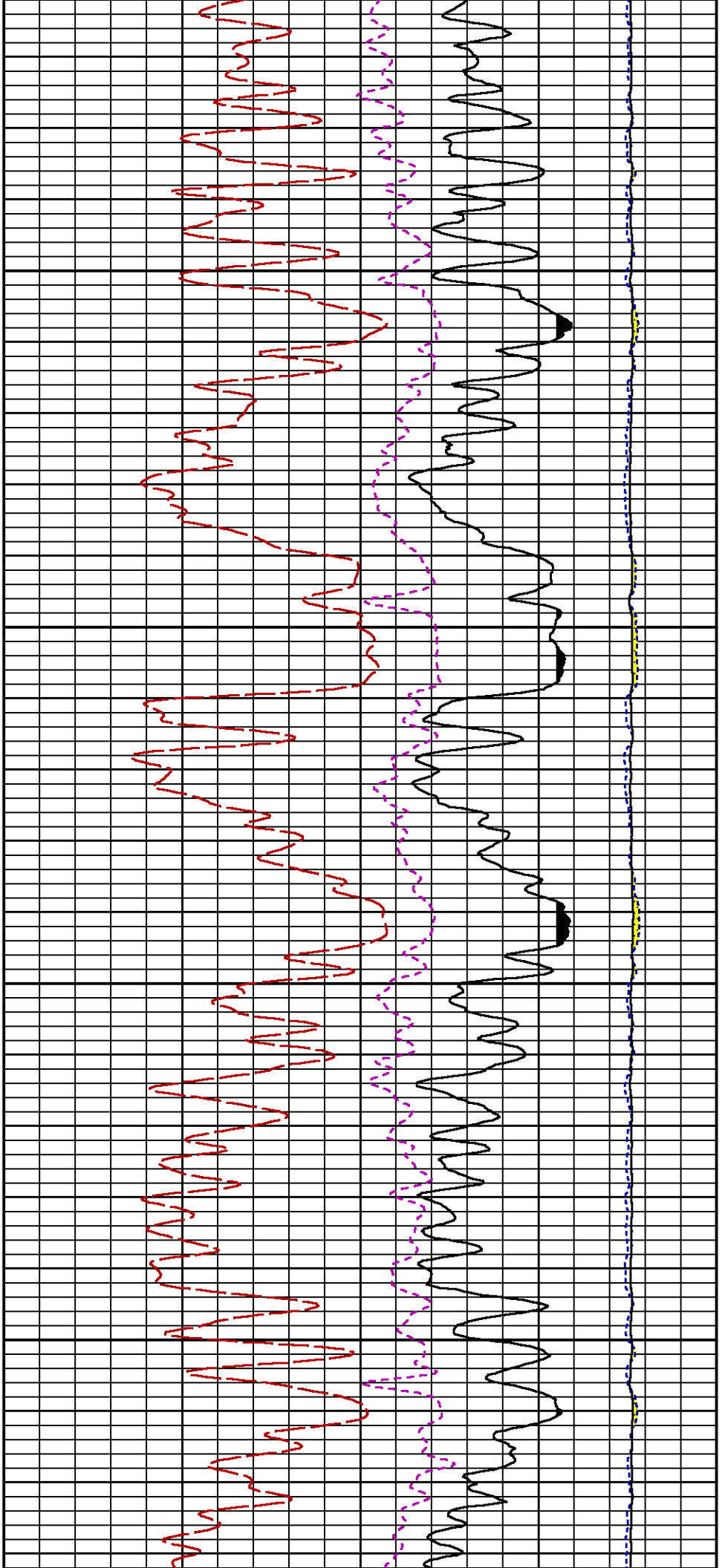


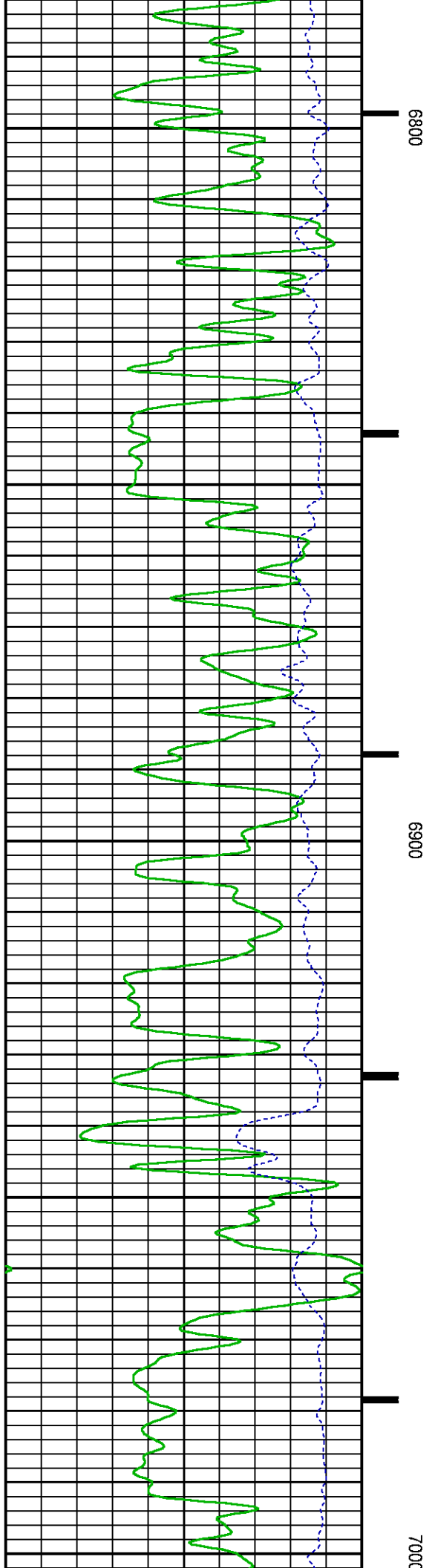
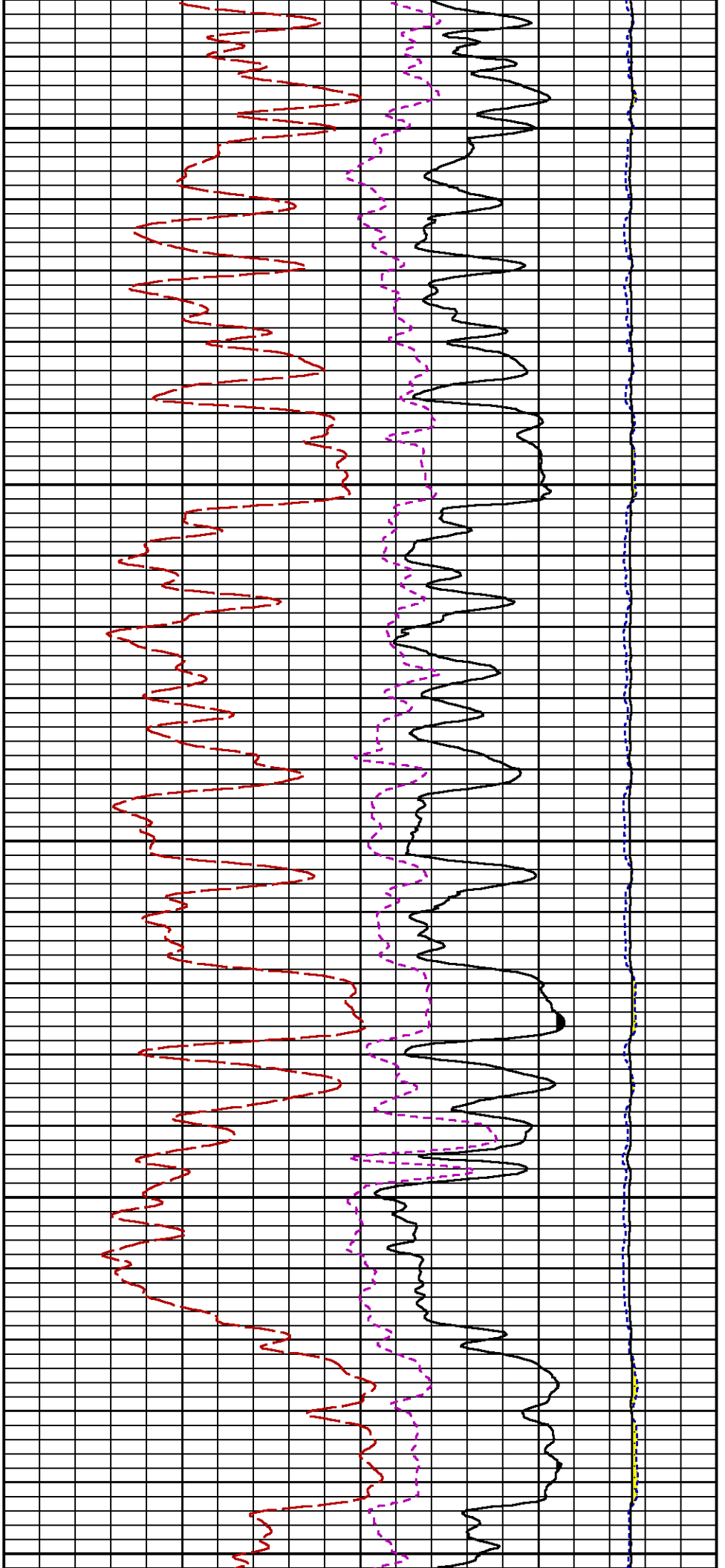


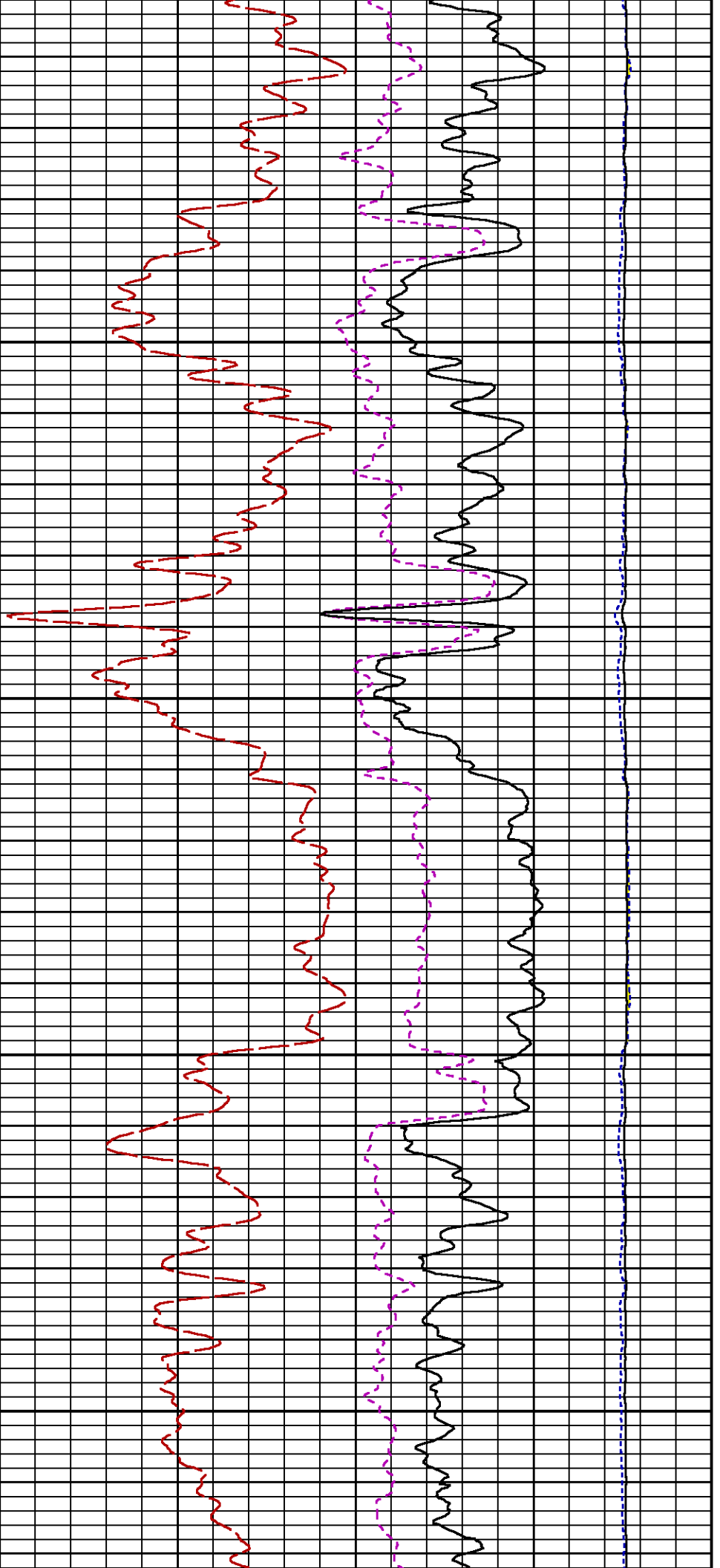






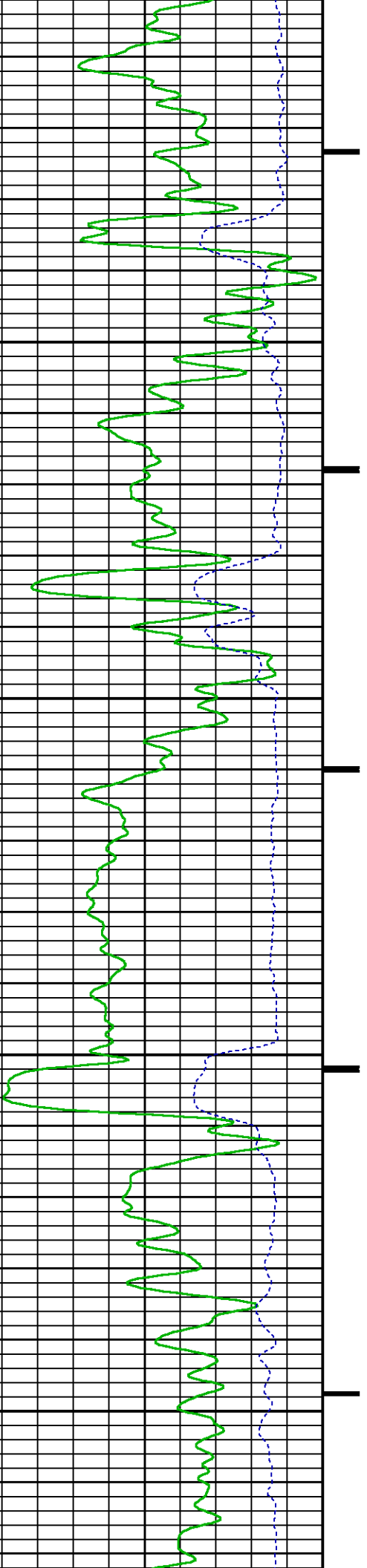


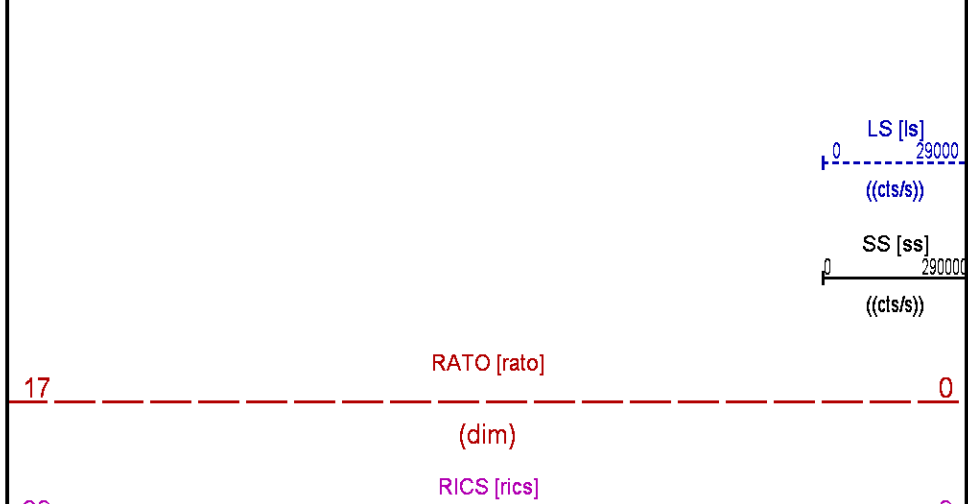
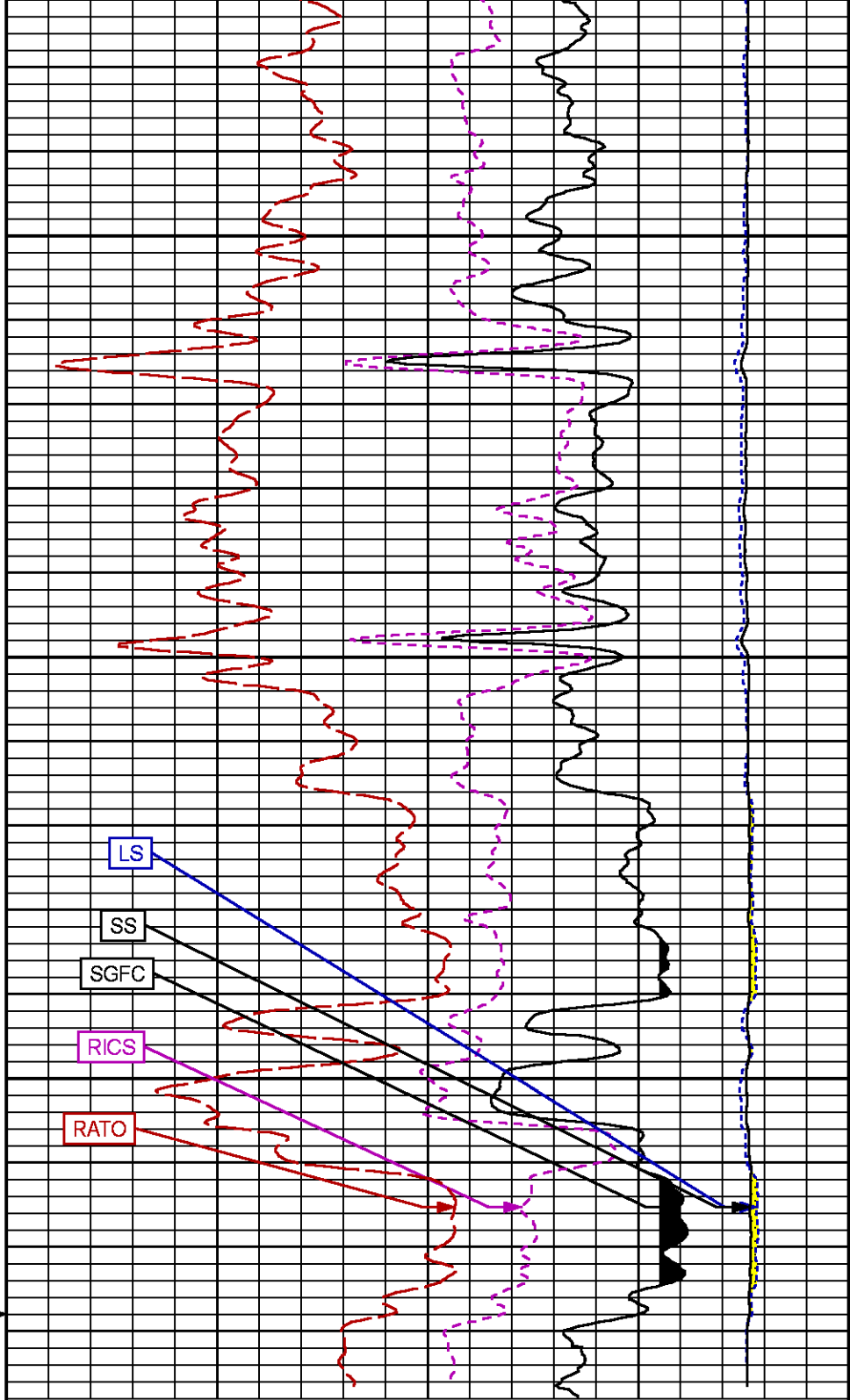
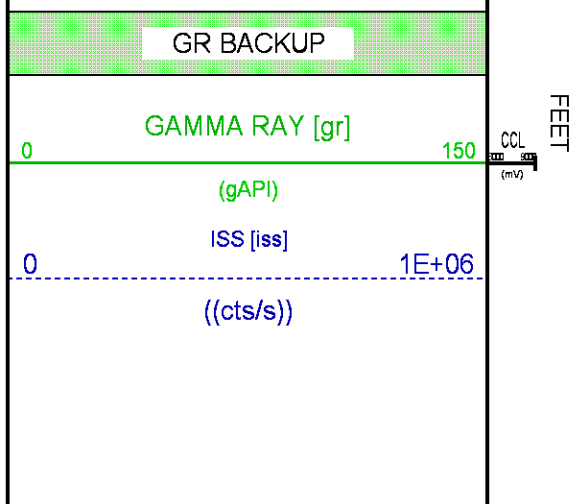
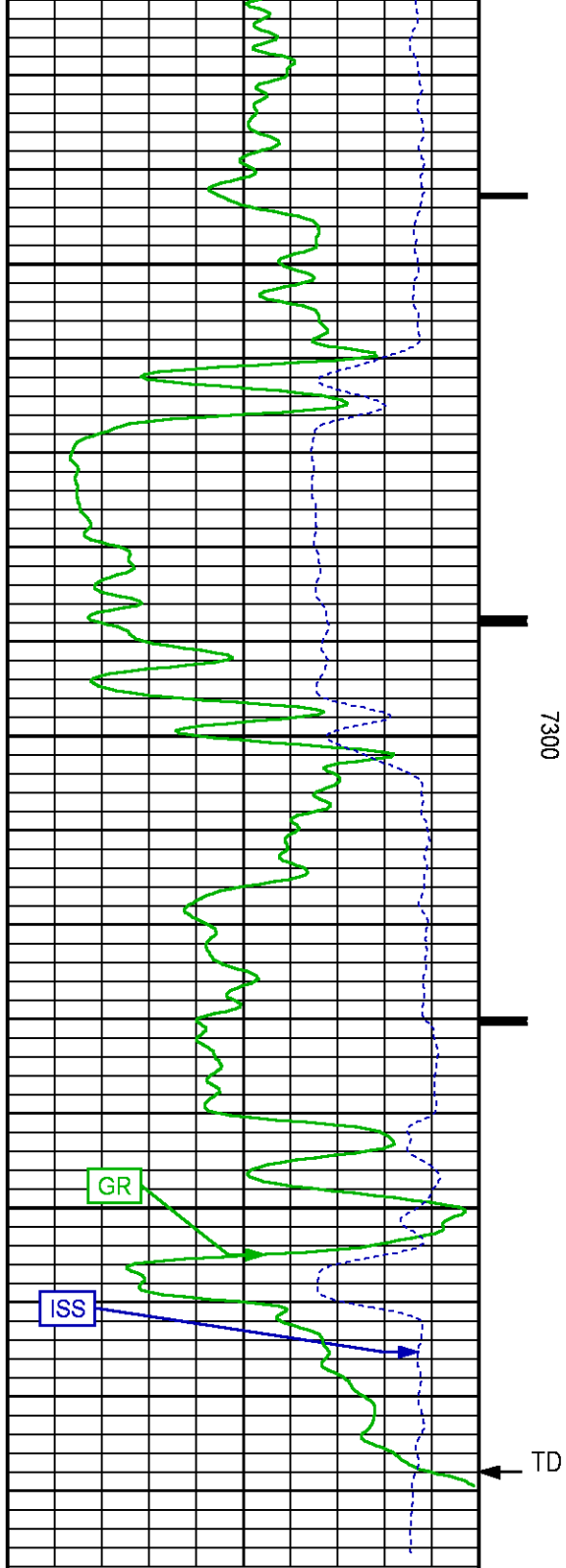




7100

7200





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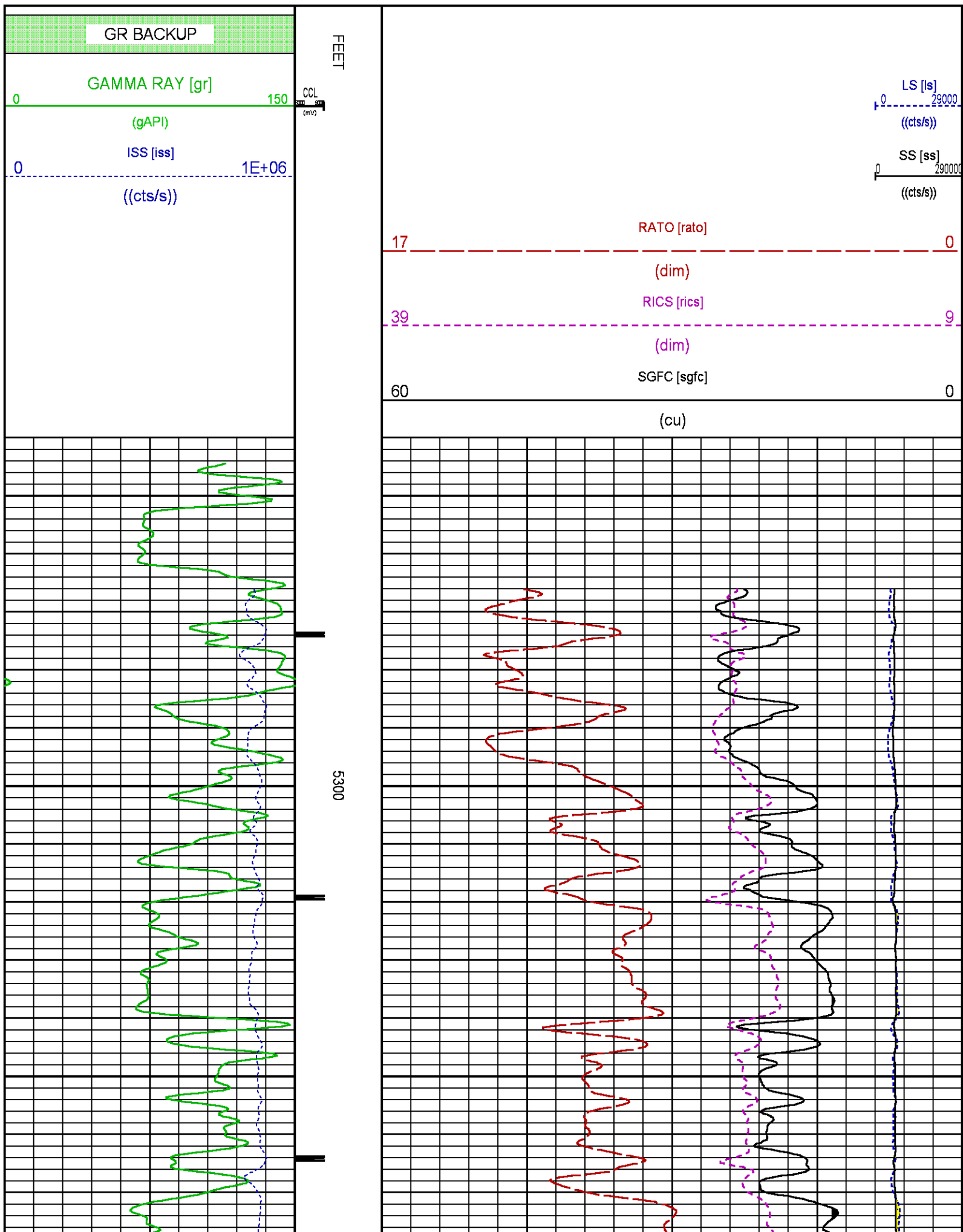
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INITIALIZE]
    Step1 --> Step2[STEP 2  
LOAD DATA]
    Step2 --> Step3[STEP 3  
ANALYZE DATA]
    Step3 --> Step4[STEP 4  
GENERATE REPORT]
    Step4 --> Step5[STEP 5  
SAVE REPORT]
    Step5 --> Step6[STEP 6  
CLOSE PROGRAM]
    Step6 --> End([END])

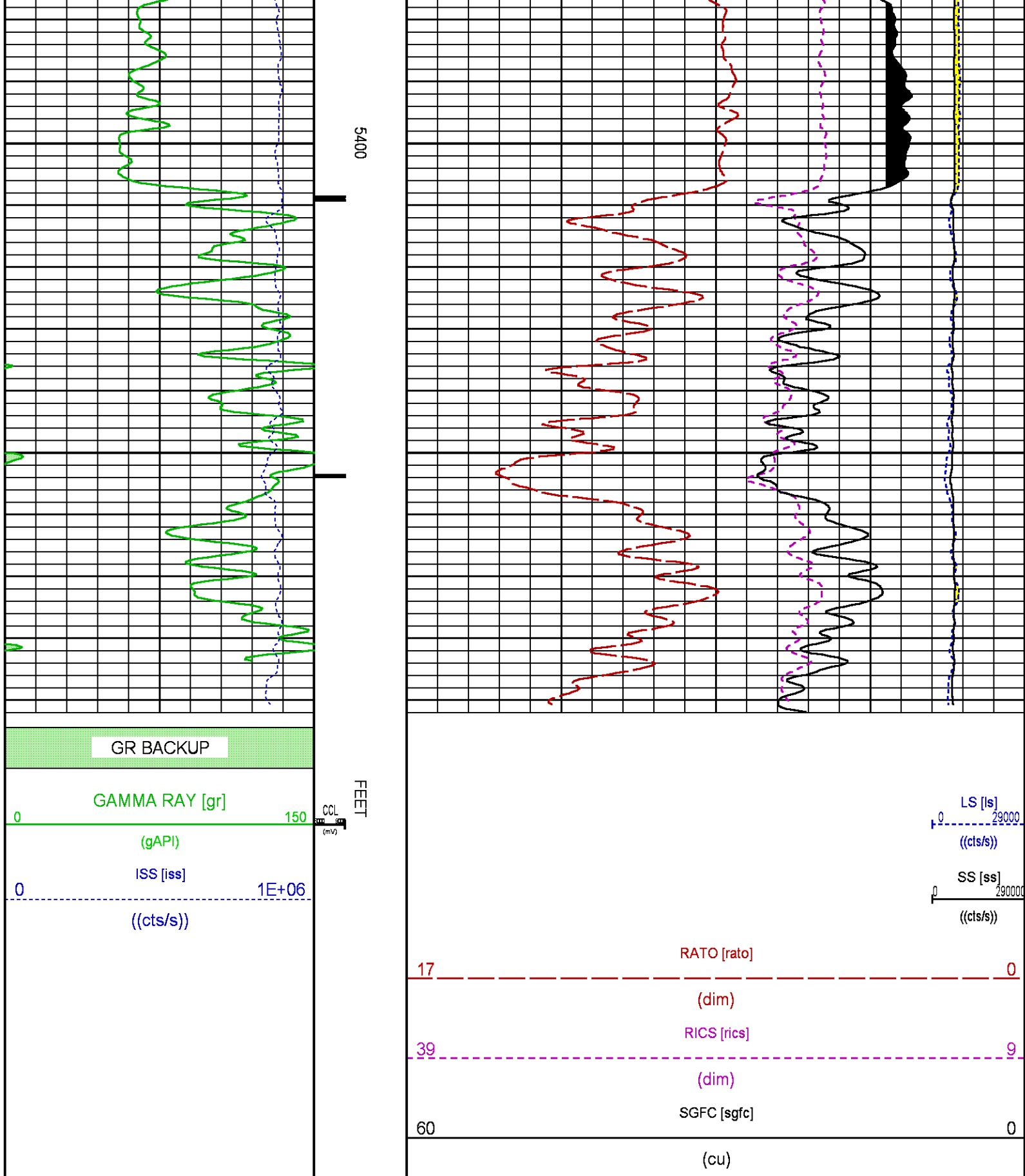
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Plotted: Tue Jan 23 18:35:14 2018

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS	N/A	SHORT SPACE COUNT RATE

Presentation	: SysA:/dat1a/LARAMIE_NICHOLAS_0994_24_09E/ LARAMIE_RPM+01-REPEAT-RPM_RPT_09E-5.fvpdf [5"/100' Scale]
Plot Interval	: 5240.25 - 5498.25 Feet
Data File 1	: F1 : SysA:/dat1a/LARAMIE_NICHOLAS_0994_24_09E/RPM_RPT_09E.xtf
Created On	: N/A
Company	: LARAMIE ENERGY LLC
Well	: NICHOLS 0994-24-09E
Field	: VEGA





CALIBRATION / VERIFICATION SUMMARY

Source File: A:\1st\ARAME_NICHOLAS_0994_24_09E.p353n1p1

GR PRIMARY CALIBRATION SUMMARY

GR PRIMARY CALIBRATION SUMMARY

TOOL # : 8262XA10317216

DATE/TIME PERFORMED: Sat Jan 20 08:55:31 2018

UNIT # : 4352 ML4352

CALB JIG # : 4702NKDA_228

BACKGROUND (cts/s)

CALBRTR ON (cts/s)

CR DIFF (cts/s)

MULT

BACKGROUND (gAPI)

CALBRTR ON (gAPI)

CALBRTR (gAPI)

GR

58.42

336.96

278.5

0.664

38.80

223.80

185

GR PRIMARY VERIFICATION SUMMARY

TOOL # : 8262XA10317216

DATE/TIME PERFORMED: Sat Jan 20 08:58:00 2018

UNIT # : 4352 ML4352

VERI JIG # : 4702NKDA_228

BACKGROUND (cts/s)

CALBRTR ON (cts/s)

MULT

BACKGROUND (gAPI)

CALBRTR ON (gAPI)

DIFF. (gAPI)

GR

59.02

336.93

0.664

39.20

223.79

184.59

195.00

196.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA10190200

DATE/TIME PERFORMED: Sat Jan 20 11:23:45 2018

UNIT: 3882TD HL6728

CALIBRATOR: 2437XB 120052

SOURCE: 8281AA10408960

HOURS: 8281AA 98

ISS

Mtr Vlts (V)

SS Gain

LS Gain

XLS Gain

EA Temp (degF)

Sync Delay (usec)

RCAL

Raw Data

809388

126

2266

2230

2285

93

9.5

0.9606

Interpolated

1300000

153

2243

2224

2277

ISS

BKS

BKL

BKX

SGA1

SDA1

SGA2

SDA2

Raw Data

809388

7357

1127

150

26.22

0.14

24.24

0.31

26.90

26.40

0.00

0.00

23.90

24.00

0.00

0.40

ISS

ILS

IKS

SS

SS2

LS

CSS

CLS

Raw Data

809388

175615

27609

96901

34428

8787

58424

14068

Fit Quality %

1.010

1.290

1.259

1.256

1.310

1.081

1.352

ISS

RBOR

RIN

RIN13

RIGS

RATO

RTWO

RONE

Raw Data

809388

1.43

4.61

29.33

13.85

11.03

3.92

4.15

1.42

1.45

3.55

5.92

22.20

32.70

10.96

16.34

10.06

11.10

3.59

3.96

3.96

4.22

Fit Quality %

0.057

0.296

0.312

0.307

0.010

0.041

0.063

Reduced

1401166

1.43

4.62

29.41

13.90

11.03

3.92

4.16

1.42

1.45

4.33

5.92

22.20

32.70

10.90

16.34

10.06

11.10

3.59

3.96

3.96

4.22

TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #: 8255XA11774568

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

UNIT #: 3880TA HL6670

T(0)

T(1)

T(2)

T(3)

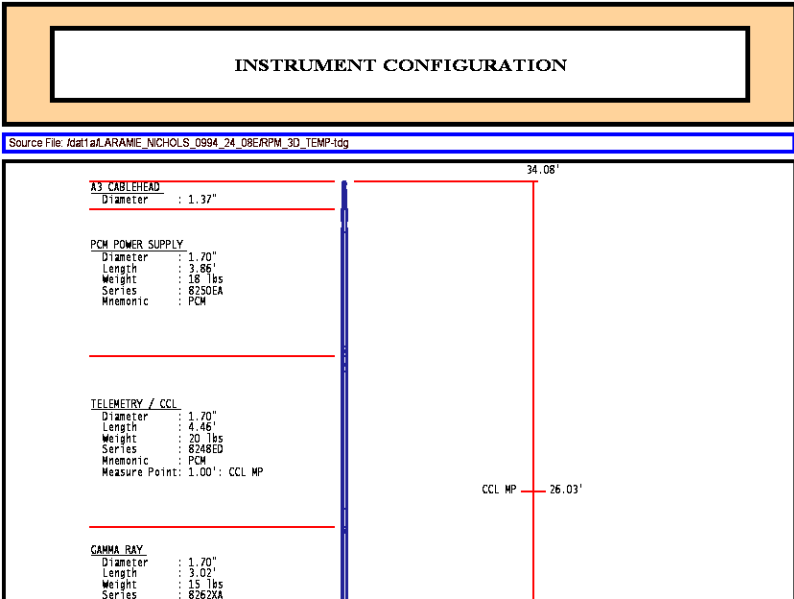
Corr Coeff for Temp

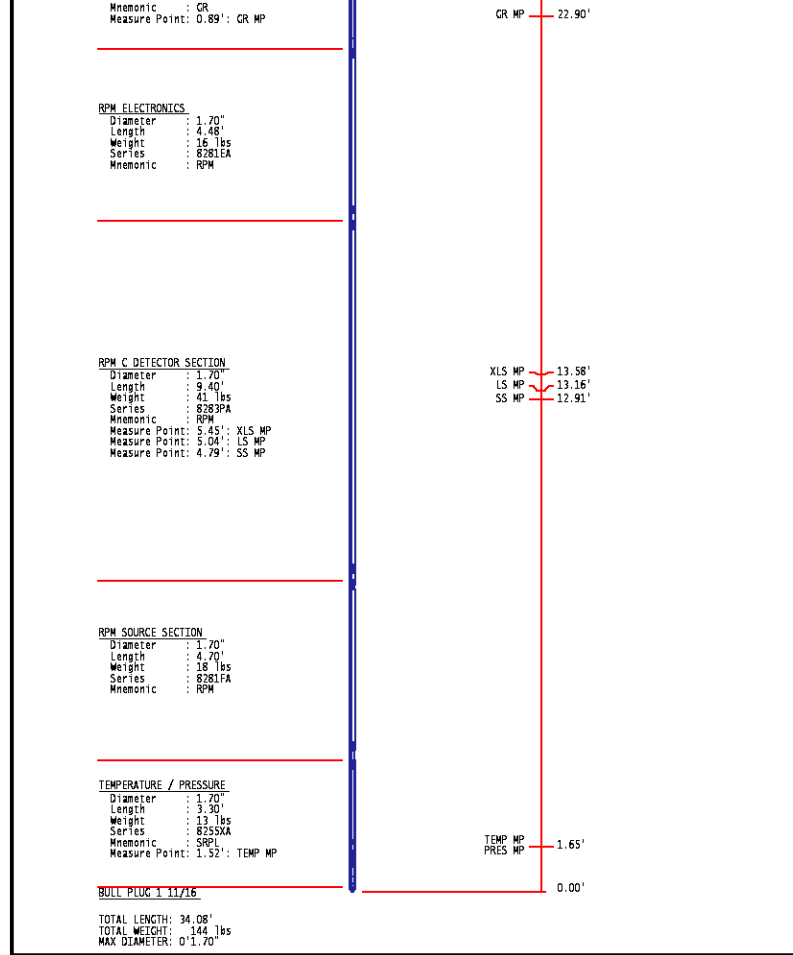
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1.055639E-01

2.143764E-06

-2.782846E-10





COMPANY **LARAMIE ENERGY LLC**
WELL **NICHOLS 0994-24-09E**
FIELD **VEGA**
COUNTY **MESA** STATE **COLORADO**

FILE NO:
API NO:
05077104100000

LOCATION:
SHL: 39.264445 N; 107.830731 W
BHL: 39.264072 N; 107.826023 W
SEC **24** TWP **9 S** RGE **94 W**

ELEVATIONS:
KB **7161 FT**
DF **7160 FT**
GL **7137 FT**

DATE **23-Jan-2018**