



FILE NO:

COMPANY

LARAMIE ENERGY

WELL

PICEANCE FEDERAL 29-19E

FIELD

VEGA

API NO:
05-077-10359-0000

COUNTY

MESA

STATE COLORADO

Ver. 4.06

LOCATION:

SHL: LAT:39.248795N; LONG:107.788006W
BHL: LAT:39.243004N; LONG:107.788353W

OTHER SERVICES

SEC 29 TWP 09 S RGE 93 W

PERMANENT DATUM GL ELEVATION 7531 FT
LOG MEASURED FROM KB 30 FT ABOVE P.D.
DRILL. MEAS. FROM KBELEVATIONS:
KB 7561 FT
DF
GL 7531 FT

DATE 29-MAY-2017

RUN TRIP

2 1

SERVICE ORDER

US123646J

DEPTH DRILLER

8054 FT

DEPTH LOGGER

7920 FT

BOTTOM LOGGED INTERVAL

7920 FT

TOP LOGGED INTERVAL

2450 FT

TIME STARTED

13:00

TIME FINISHED

19:00

OPERATOR RIG TIME

9 HRS

TYPE OF FLUID IN HOLE

WATER

FLUID DENSITY

NA

FLUID SALINITY

NA

FLUID LEVEL

54 FT

LOGGED CEMENT TOP

NA

WELLHEAD PRESSURE

0 PSI

MAXIMUM HOLE DEVIATION

NA

NOMINAL LOGGING SPEED

15 FMIN

MAX. RECORDED TEMP.

243 DEGF

REFERENCE LOG

BAKER HUGHES GR/CBL

REFERENCE LOG DATE

29-MAY-2017

EQUIP. NO. LOCATION

HL-6670

WOODWARD

RECORDED BY

S.YASSA

WITNESSED BY

R.CATES/A.MCCARTHY

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

CASING RECORD

SIZE WEIGHT GRADE FROM TO
4.5 IN 11.6 LB/F - 0 FT 8054 FT

REMARKS

RUN 2 TRIP 1: *2 OPERATIONS IN WELL*

OPERATION 2: CCL/GR/RPM RUN IN COMBINATION

LOGGED WITH 0 PSI AT THE WELLHEAD

SJ1: 7096'-7074'

SJ2: 6248' - 6226'

CREW: JOE.PENA , S.AKKOUCH

EQUIPMENT DATA

RUN TRIP TOOL SERIES NO. SERIAL NO. POSITION

2	1	TELEMETRY	8250 EA/8248 ED	1510000/11908681	FREE
2	1	GAMMA RAY	8262 XA	10317216	FREE
2	1	RPM ELEC	8281 EA	10309421	FREE
2	1	RPM	8283 PA/8281 FA	10414345/10401926	FREE
2	1	TEMP	8255 XA	120516	FREE

G-SAND SECTION PNC 3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 9

Plotted: Mon May 29 17:57:37 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/RPM_PNC3D03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2471.500 ft BOTTOM DEPTH: 3119.189 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	May 29 17:14:57 2017	CASING COLLAR LOCATOR
F1:GR	May 29 17:14:57 2017	GAMMA RAY
F1:ISS	May 29 17:14:57 2017	INELASTIC SHORT SPACE COUNT RATE
F1:LS	May 29 17:14:57 2017	LONG SPACE COUNT RATE
F1:RATO	May 29 17:14:57 2017	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	May 29 17:14:57 2017	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	May 29 17:14:57 2017	CORRECTED FORMATION SIGMA
F1:SS	May 29 17:14:57 2017	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 : cpu100:/dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/rpm_pnc3d+01-GSAND-29_19E-5.fvpdf [5"/100' Scale]
Plot Interval : 2445.5 - 3106.75 Feet

Data File 1 : F1 : cpu100:/dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/RPM_GSAND_19E.xtf
Created On : May 29 17:14:57 2017
Company : LARAMIE ENERGY
Well : PICEANCE 29-19E
Field : VEGA
File Interval : 2444.75 - 3116.75 Feet
OCT : RPM_PNC3

GR BACKUP

GAMMA RAY [gr]

(gAPI)

ISS [iss]

((cts/s))

FEET

CCL
(mV)

2500

GR

ISS

RATO [rato]

(dim)

RICS [rics]

(dim)

SGFC [sgfc]

(cu)

LS [ls]

((cts/s))

SS [ss]

((cts/s))

17

0

39

9

60

0

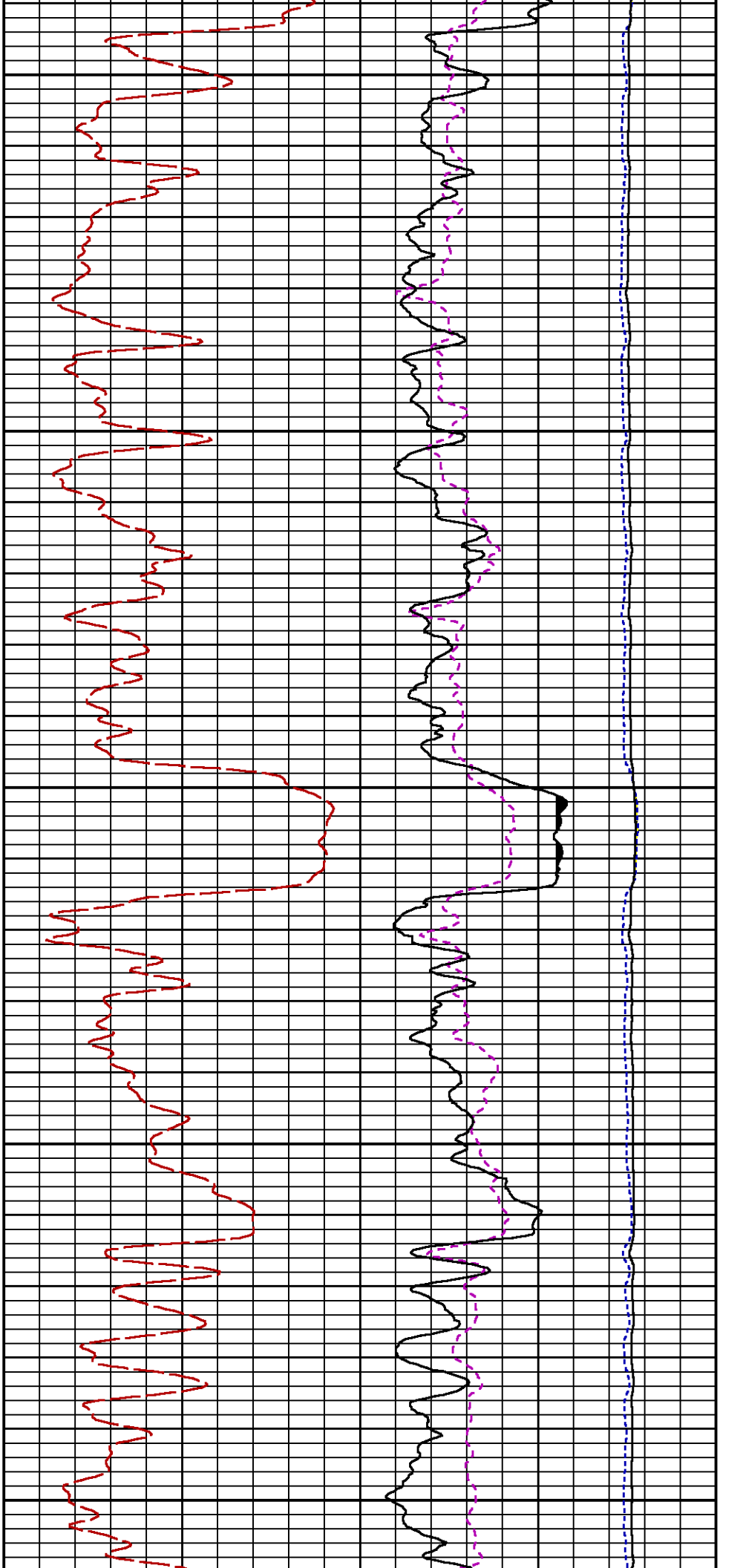
RATO

RICS

SGFC

LS

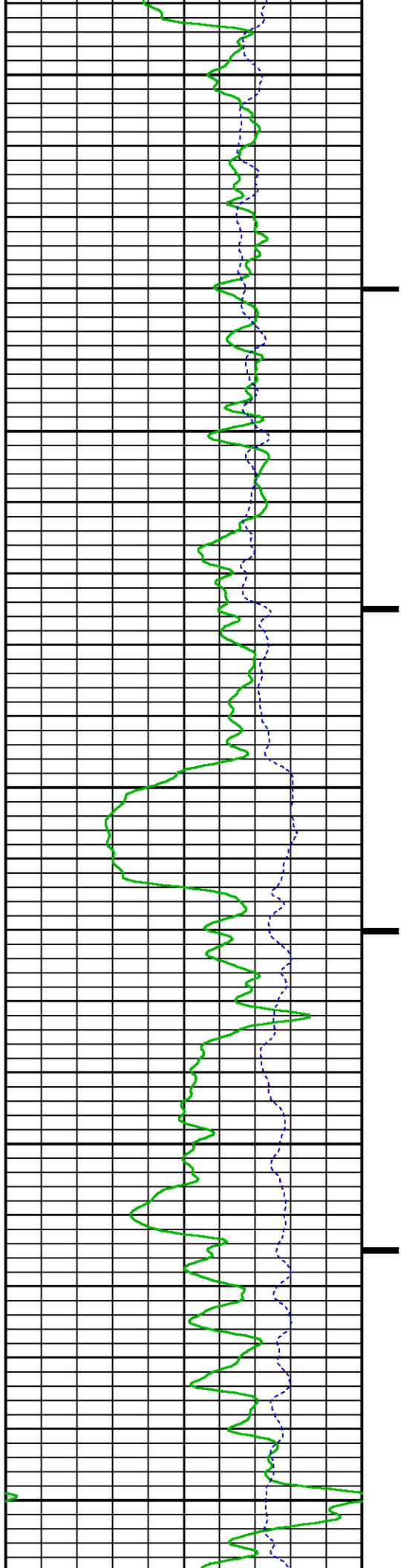
SS

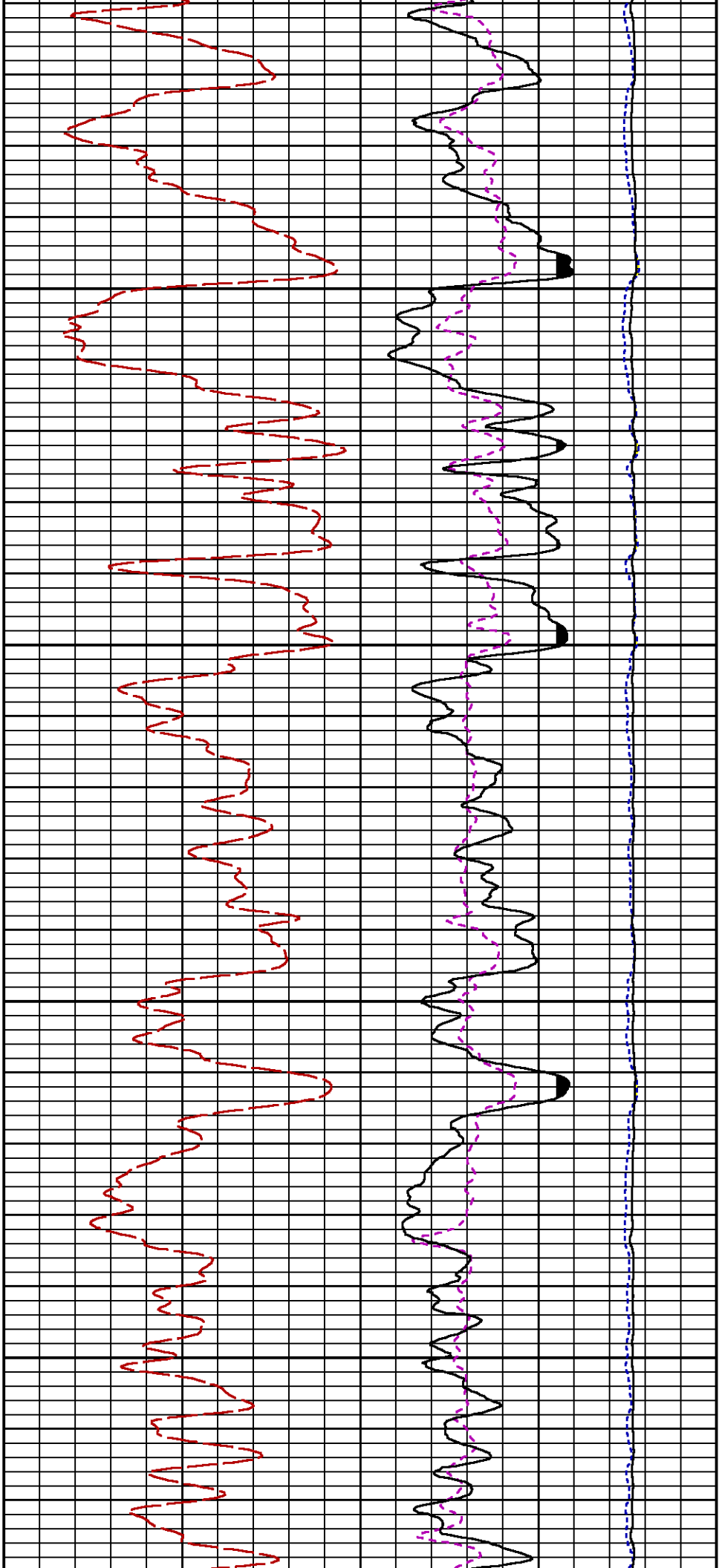


2600

2700

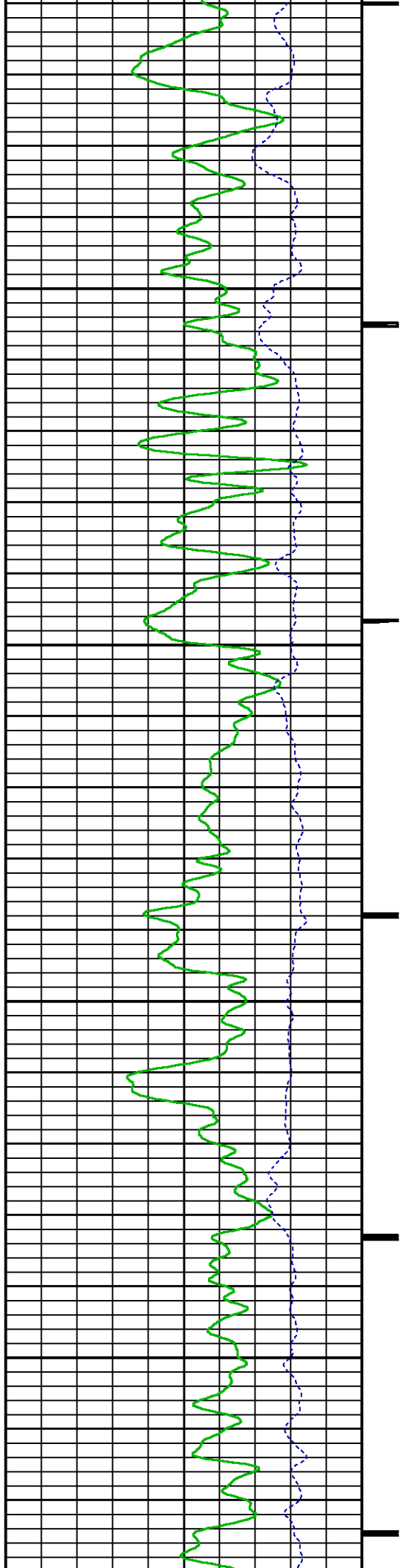
2800

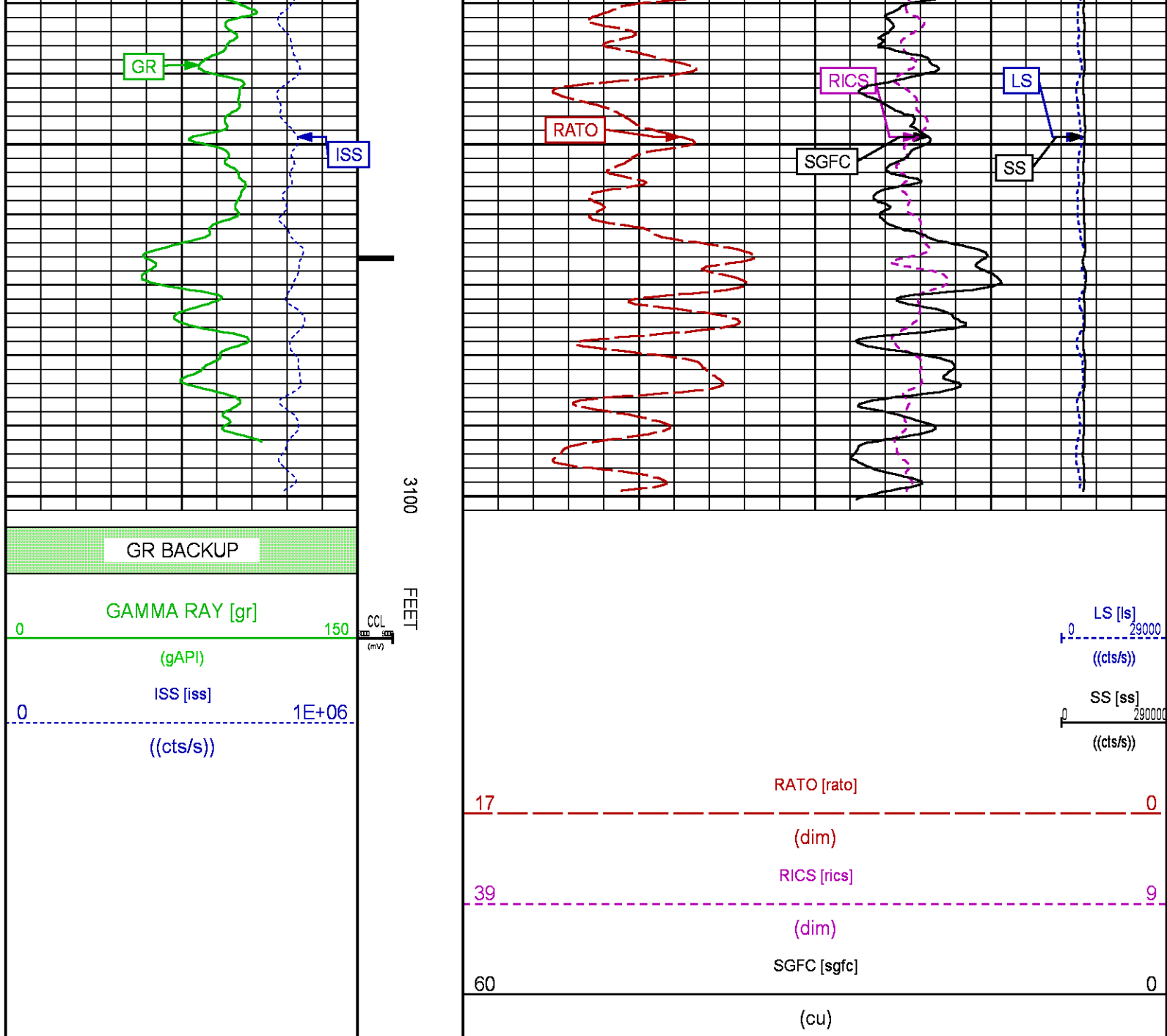




2900

3000





MAIN PNC 3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 9

Plotted: Mon May 29 17:19:56 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/RPM_PNC3D02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 0.000 ft BOTTOM DEPTH: 0.000 ft

SYMMETRIC FILTER

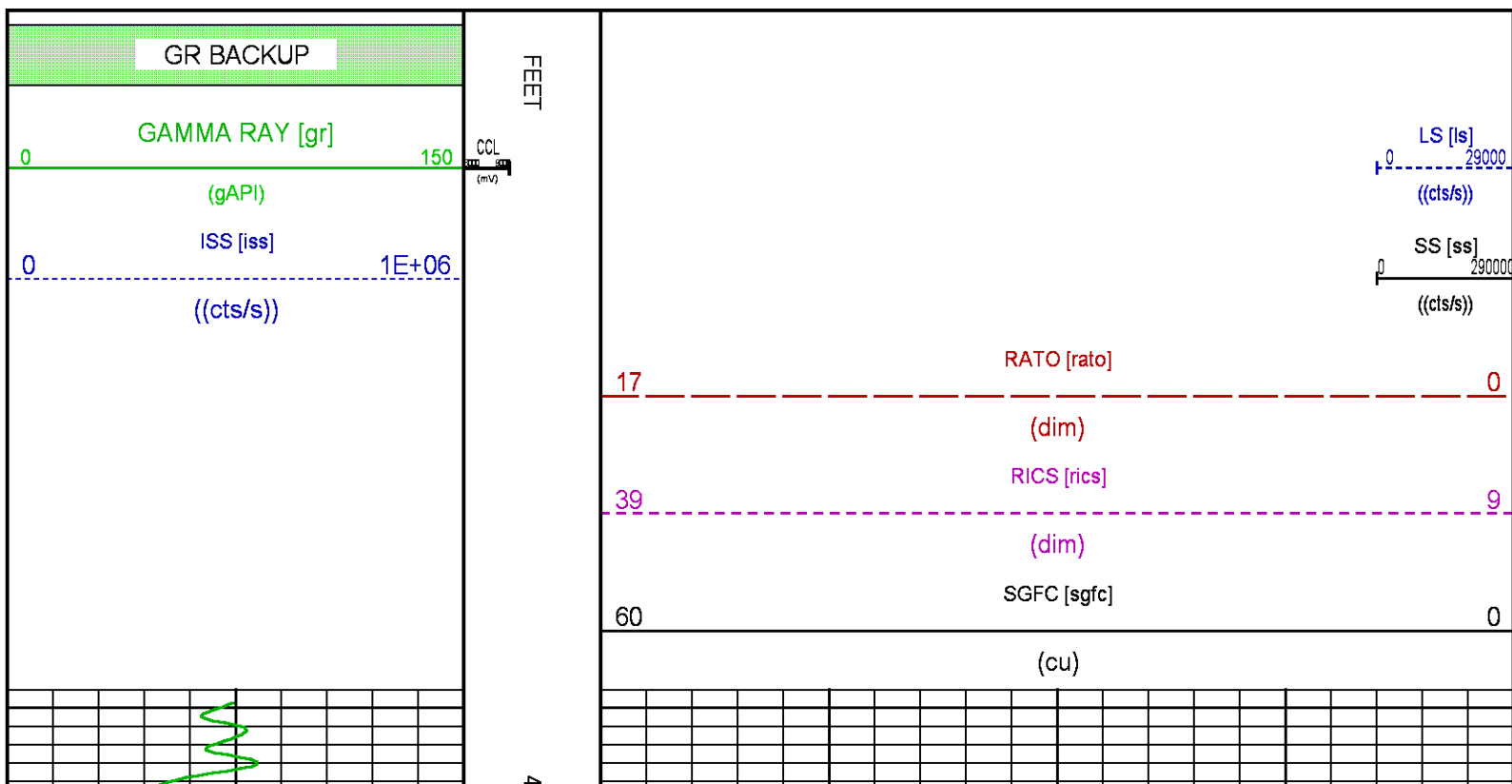
SYMMETRIC FILTER

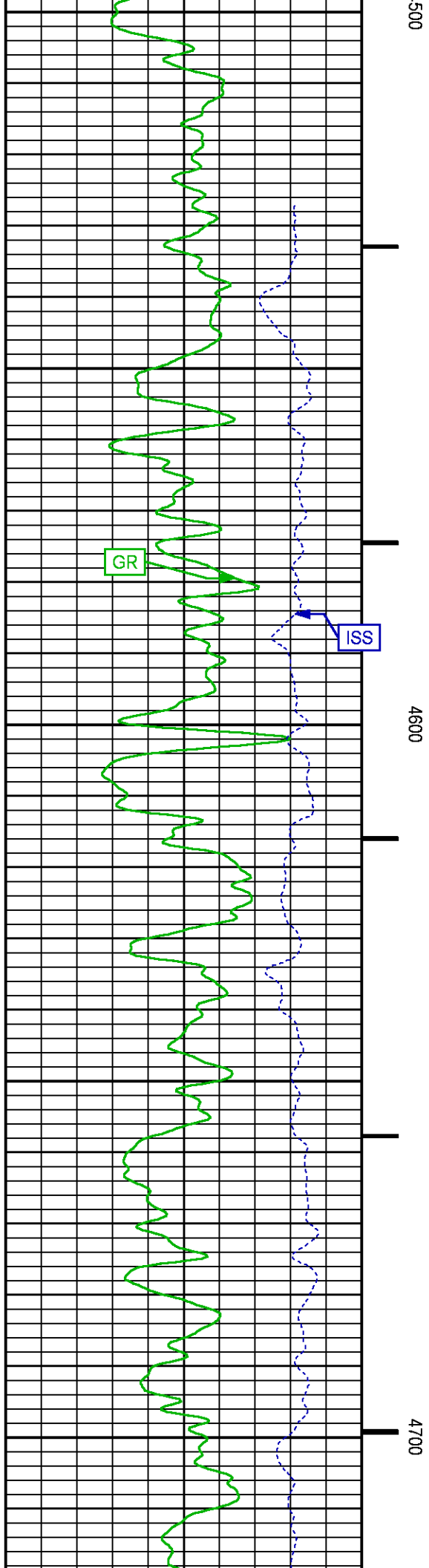
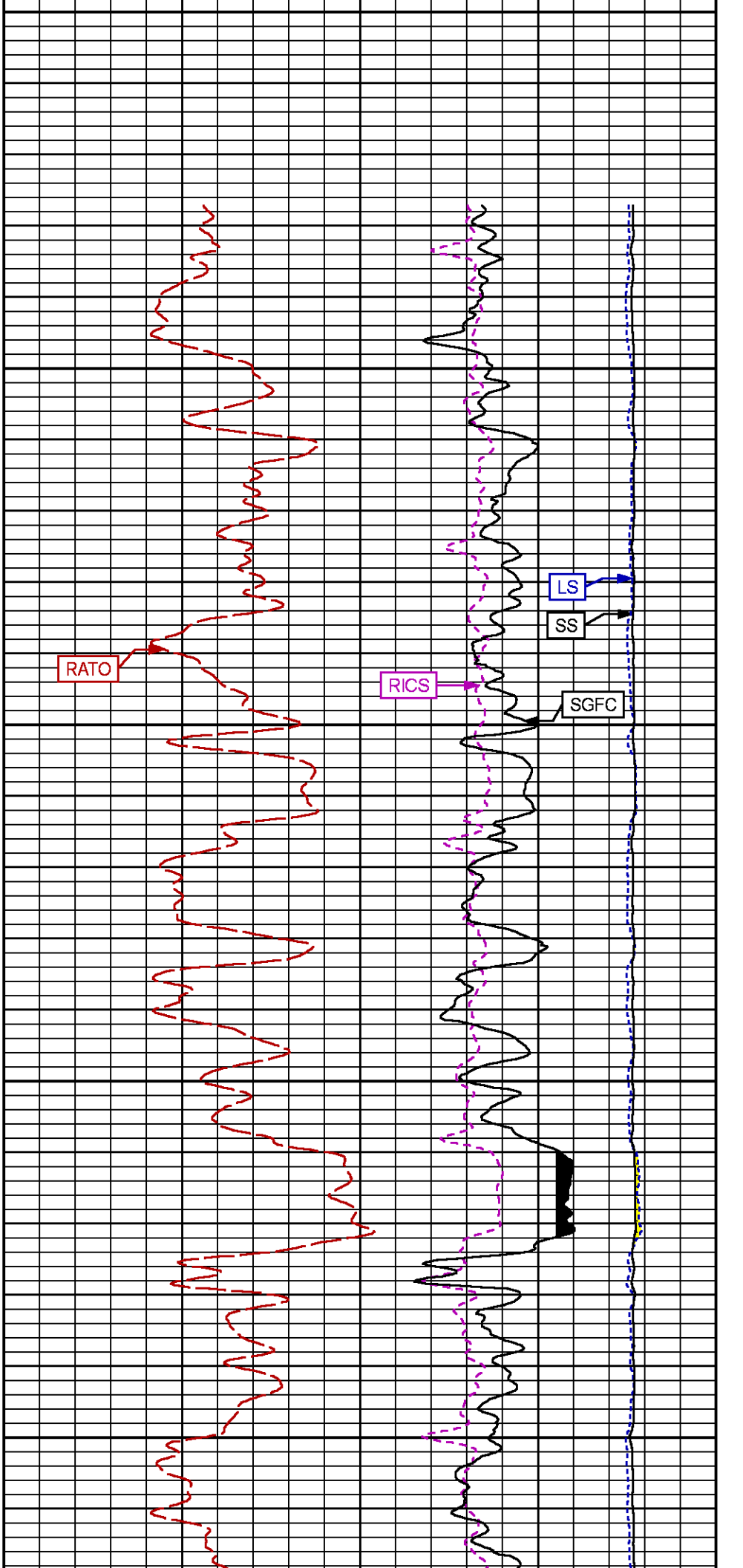
RPM PROCESSING

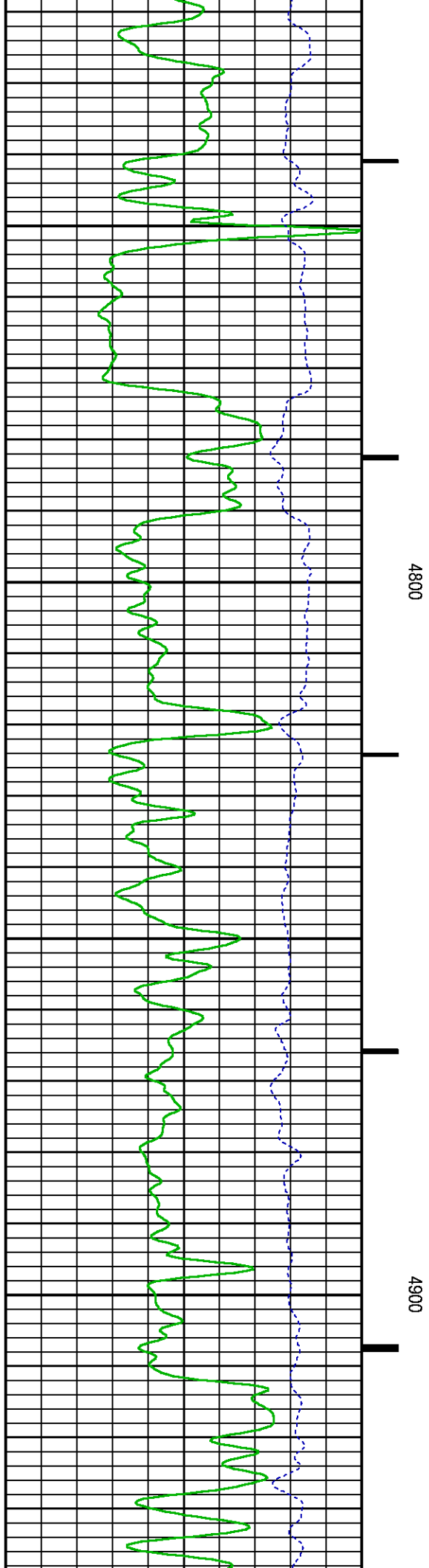
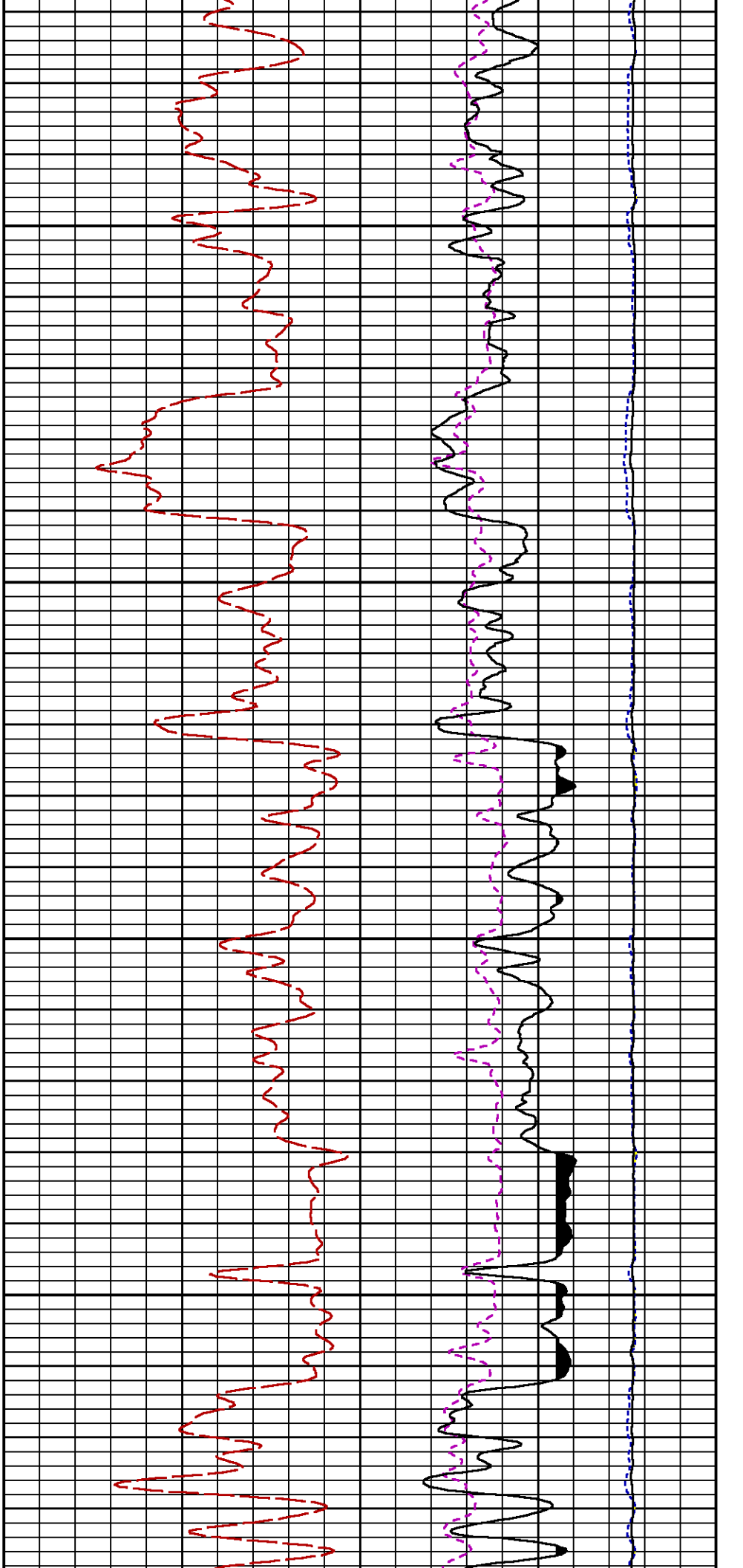
CURVE DESCRIPTION REPORT

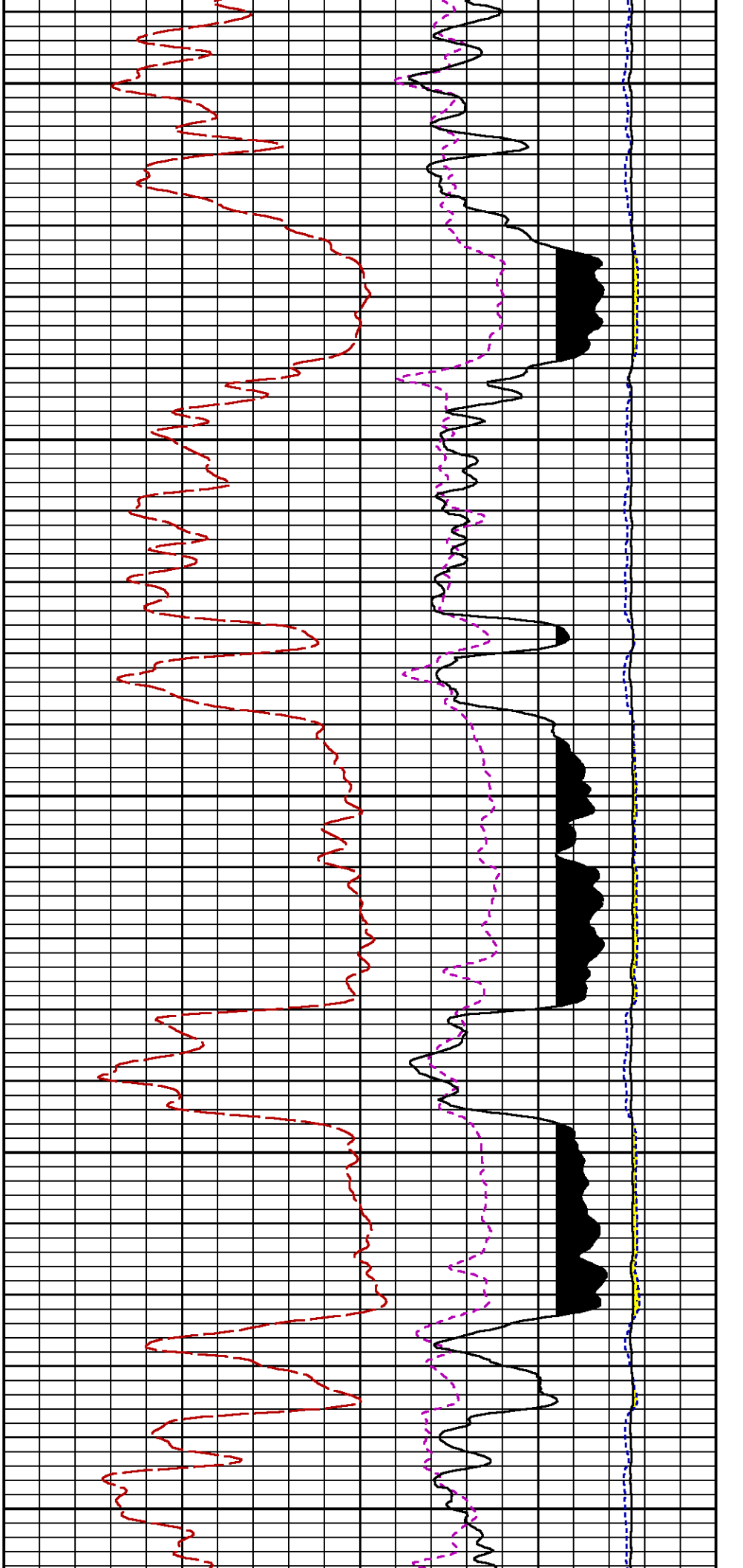
CURVE MEASURE POINT OFFSET

Presentation : cpu100:/dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/rpm_pnc3d+01-MAIN-29_19E_5.fvpdf [5"/100' Scale]
Plot Interval : 4489.5 - 7930 Feet

GR BACKUP

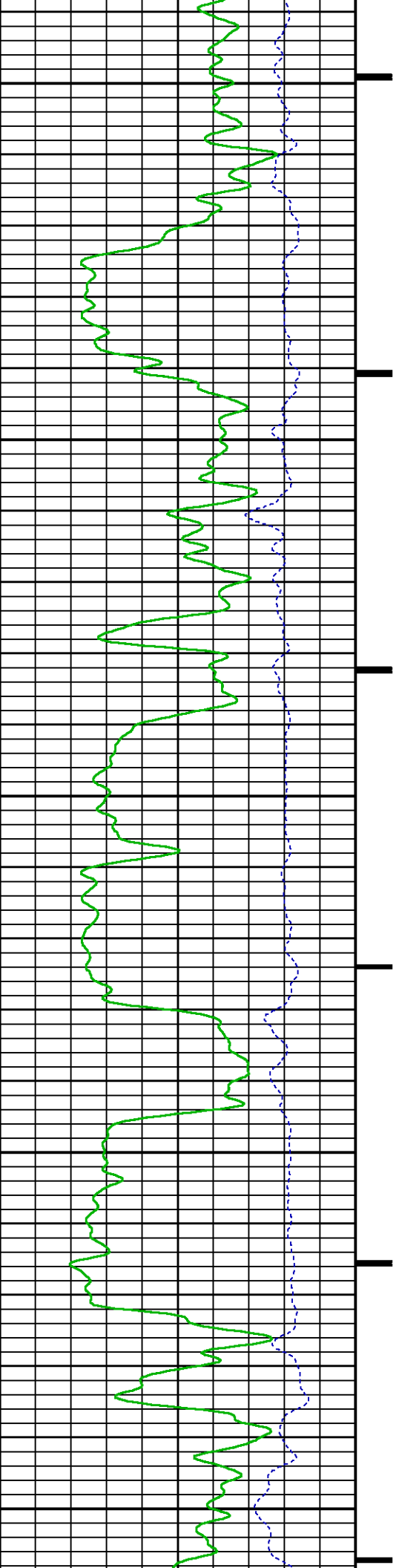


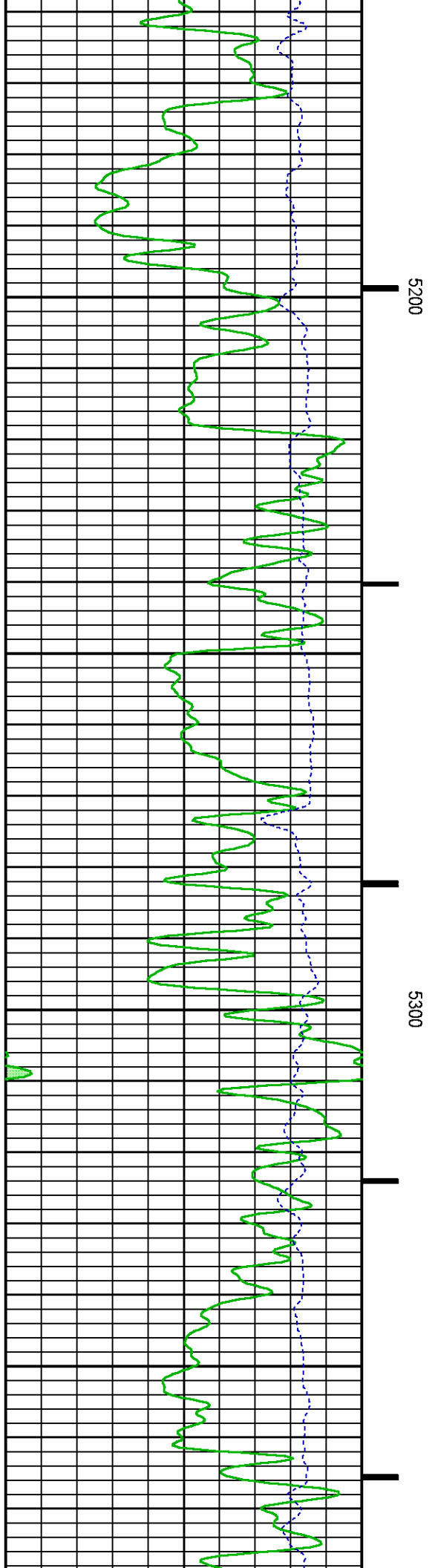
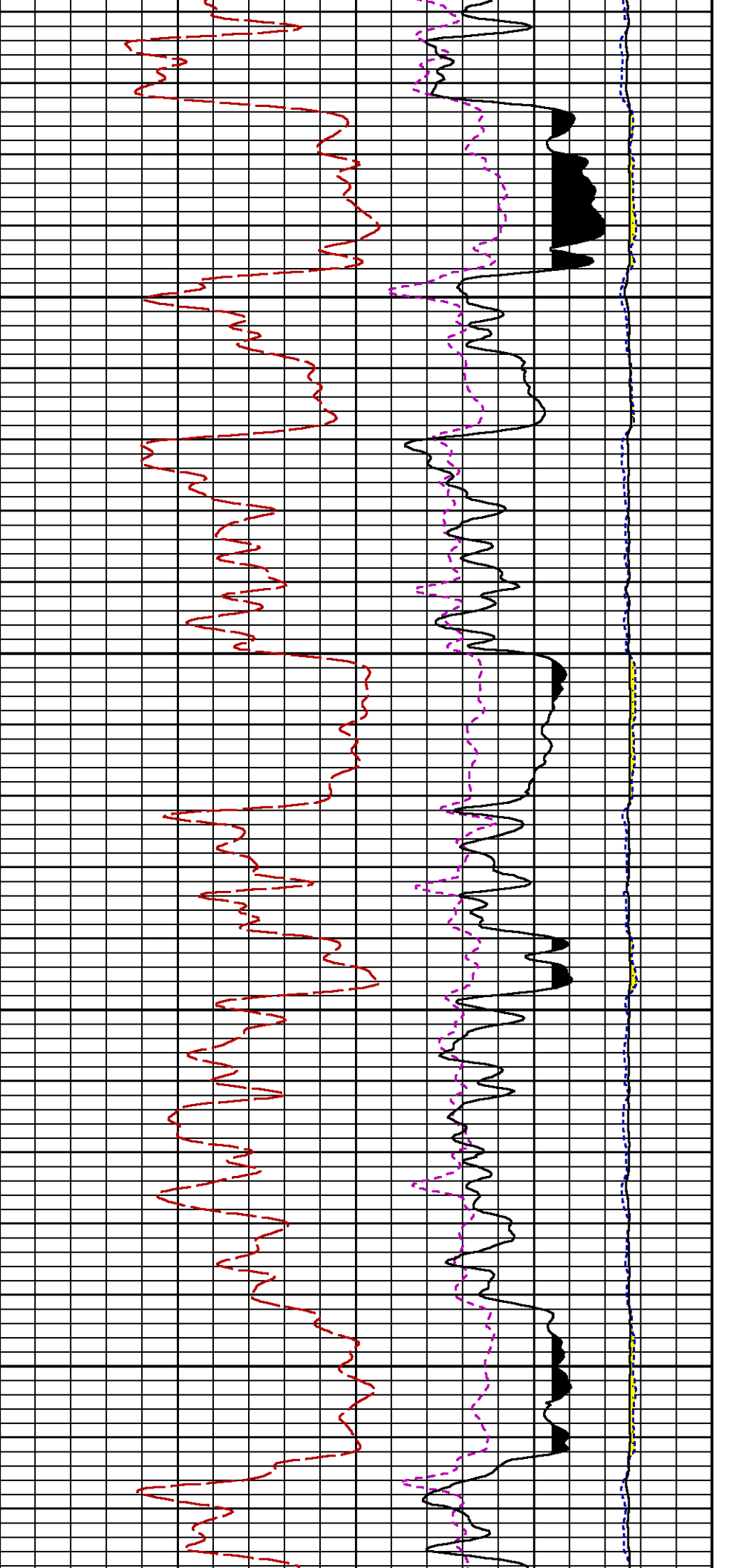


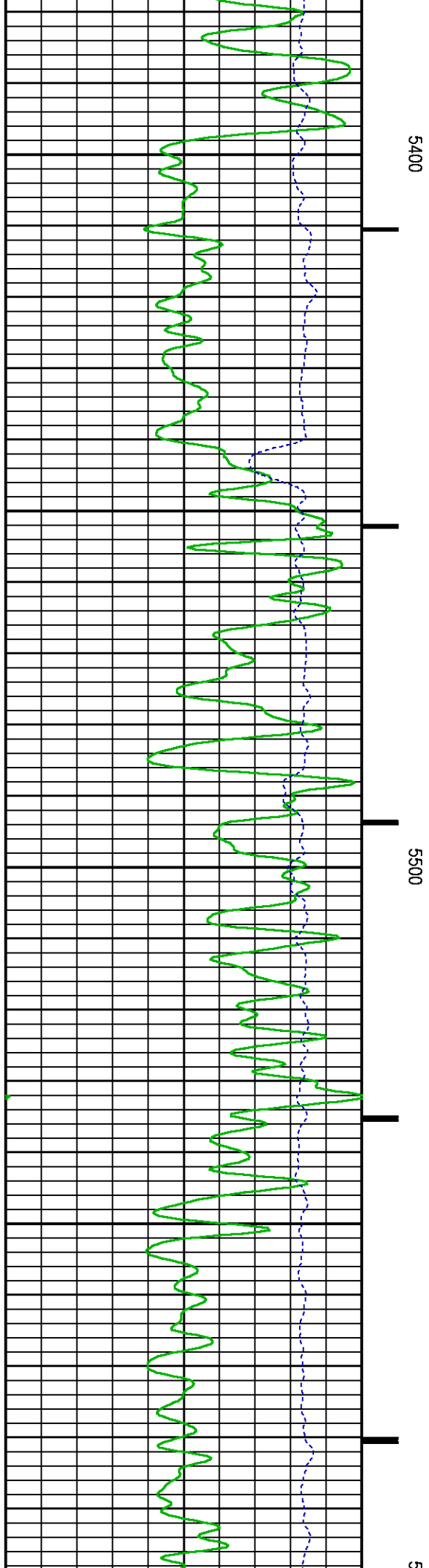
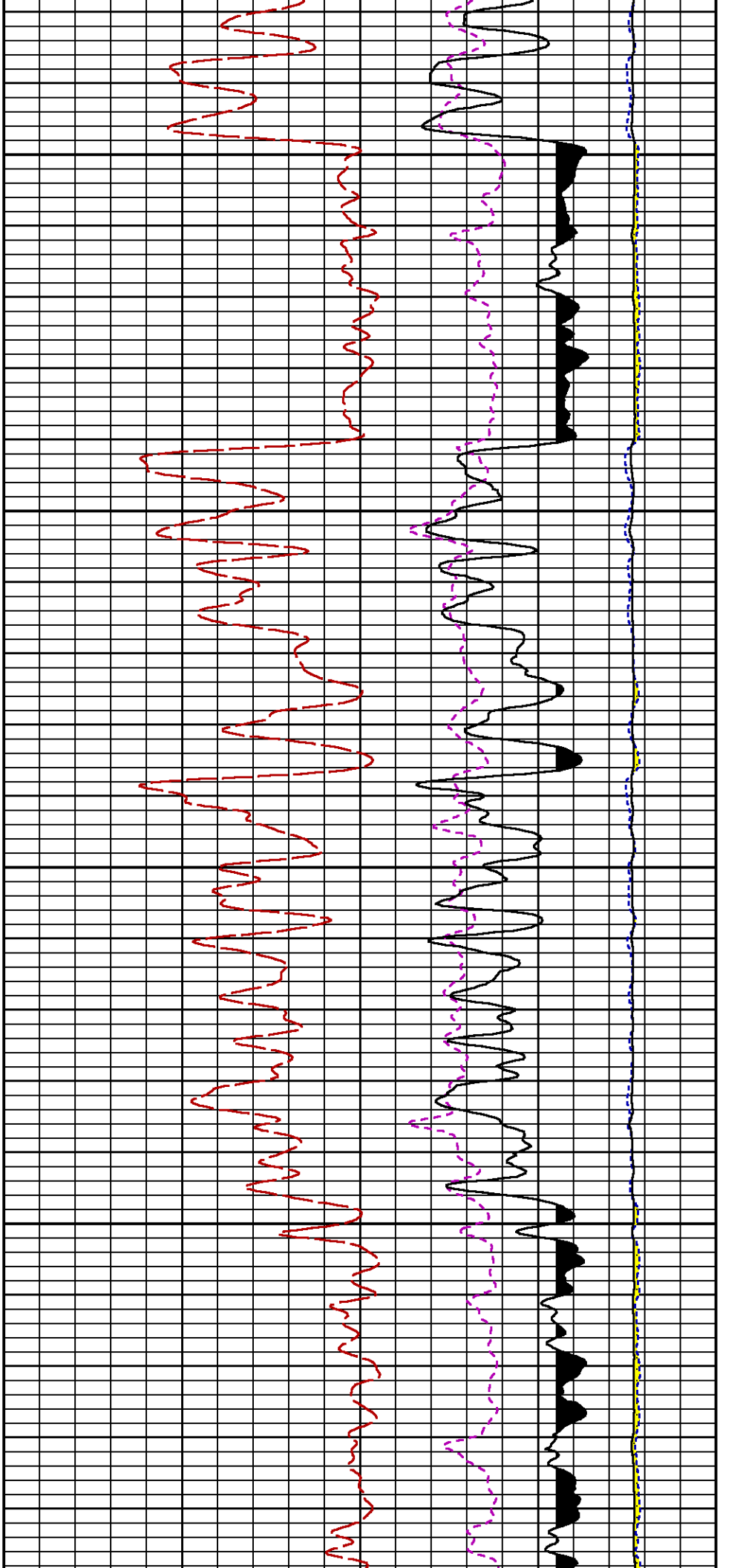


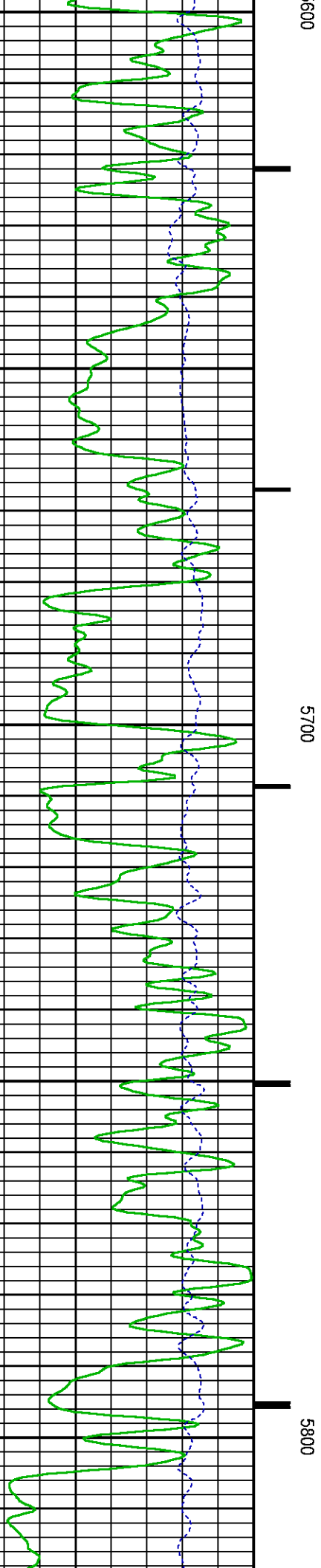
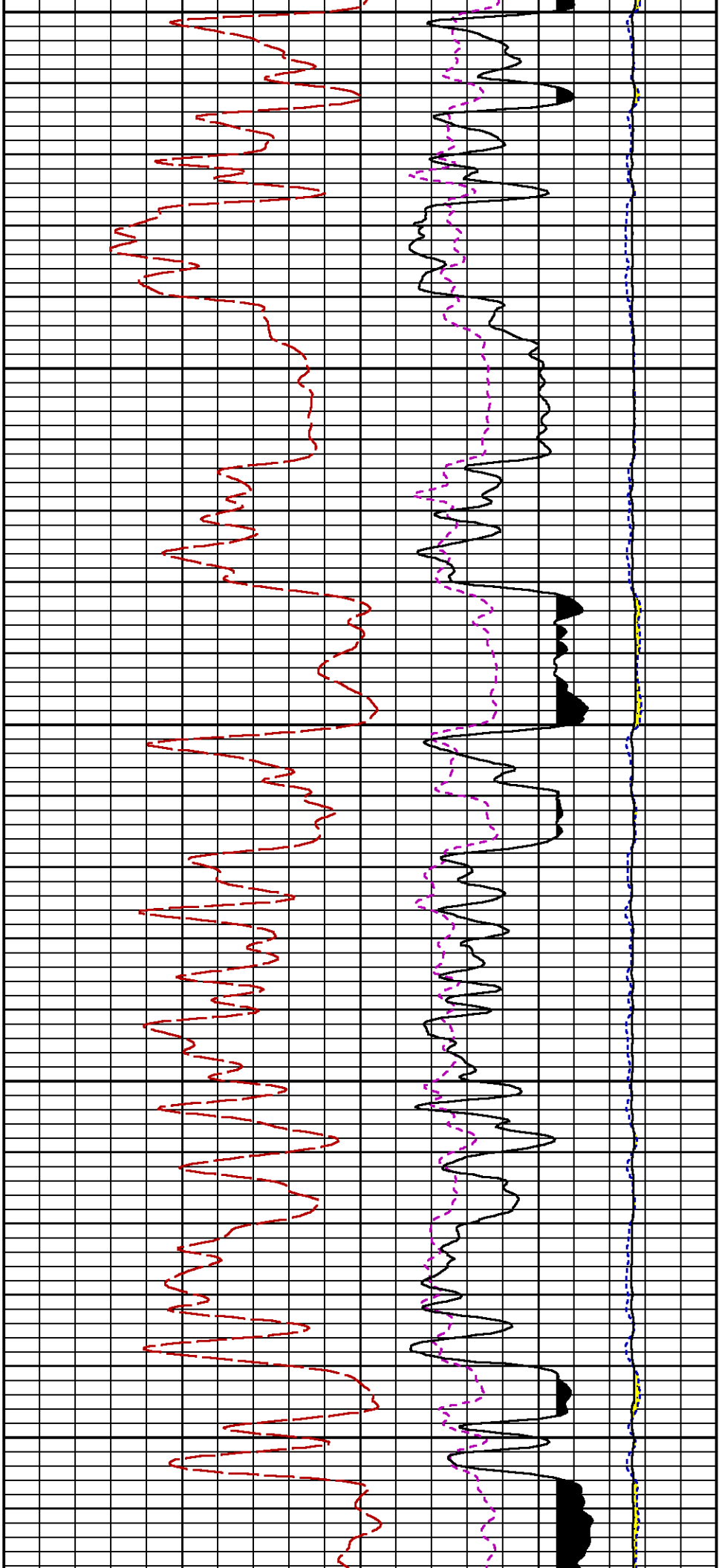
5000

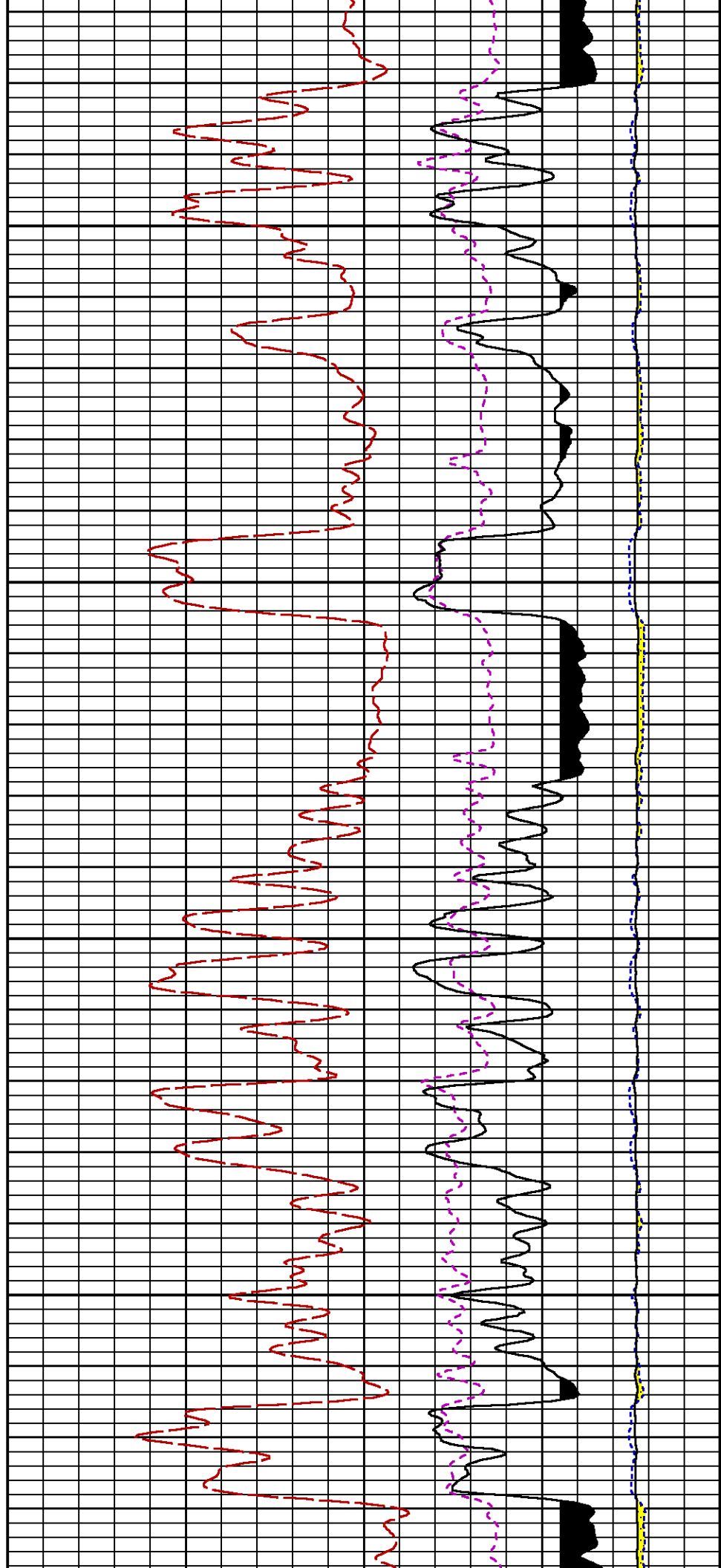
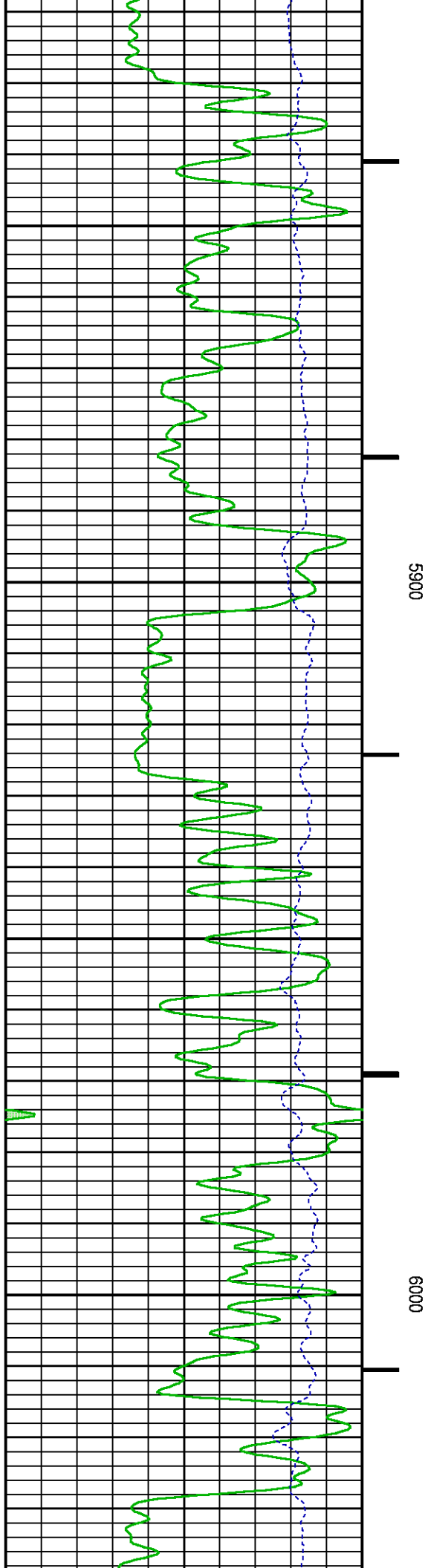
5100

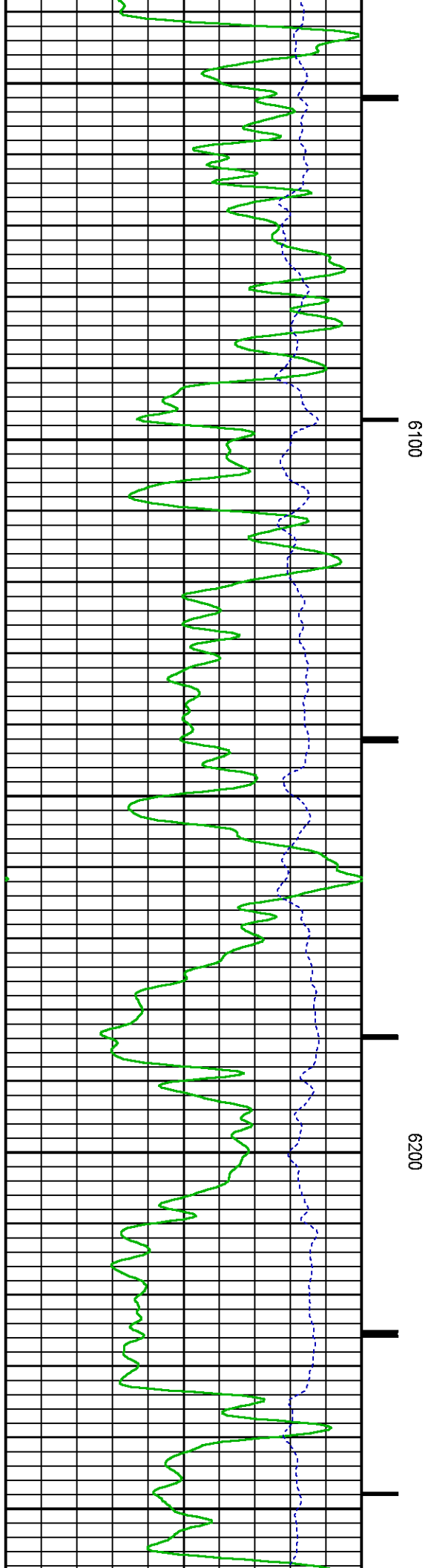
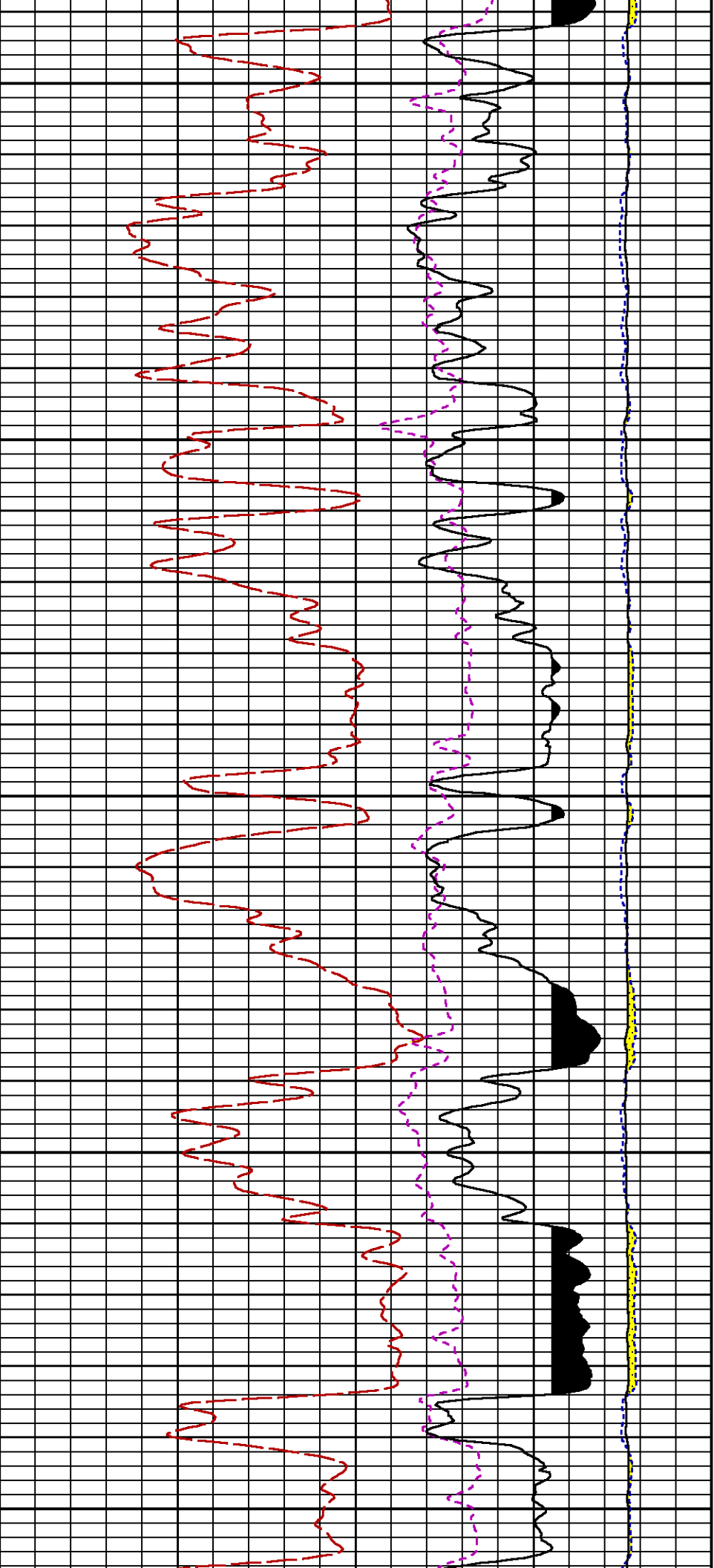


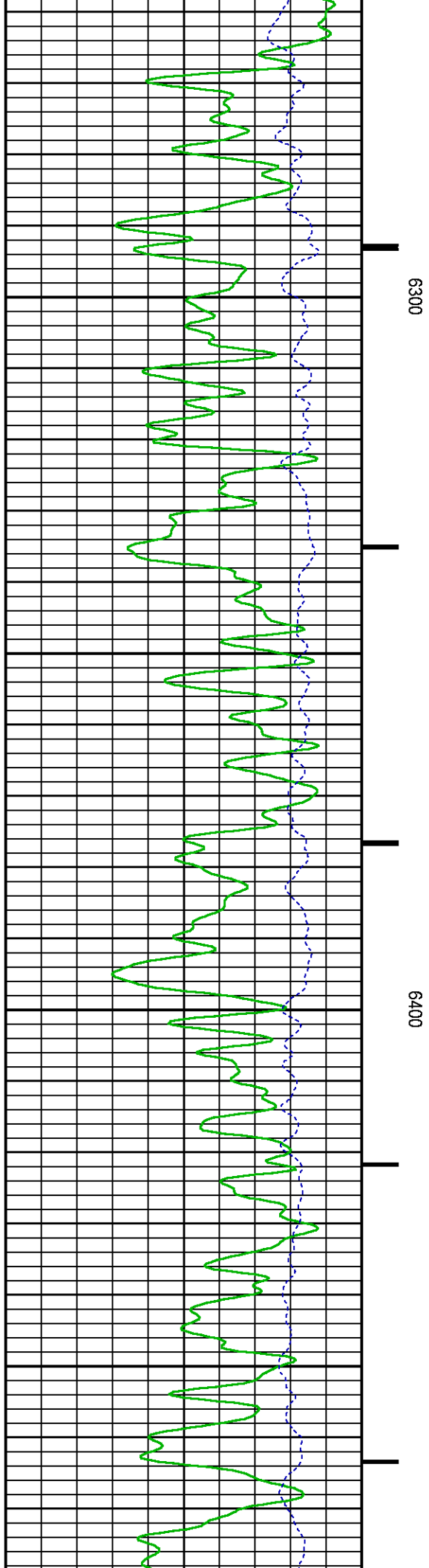
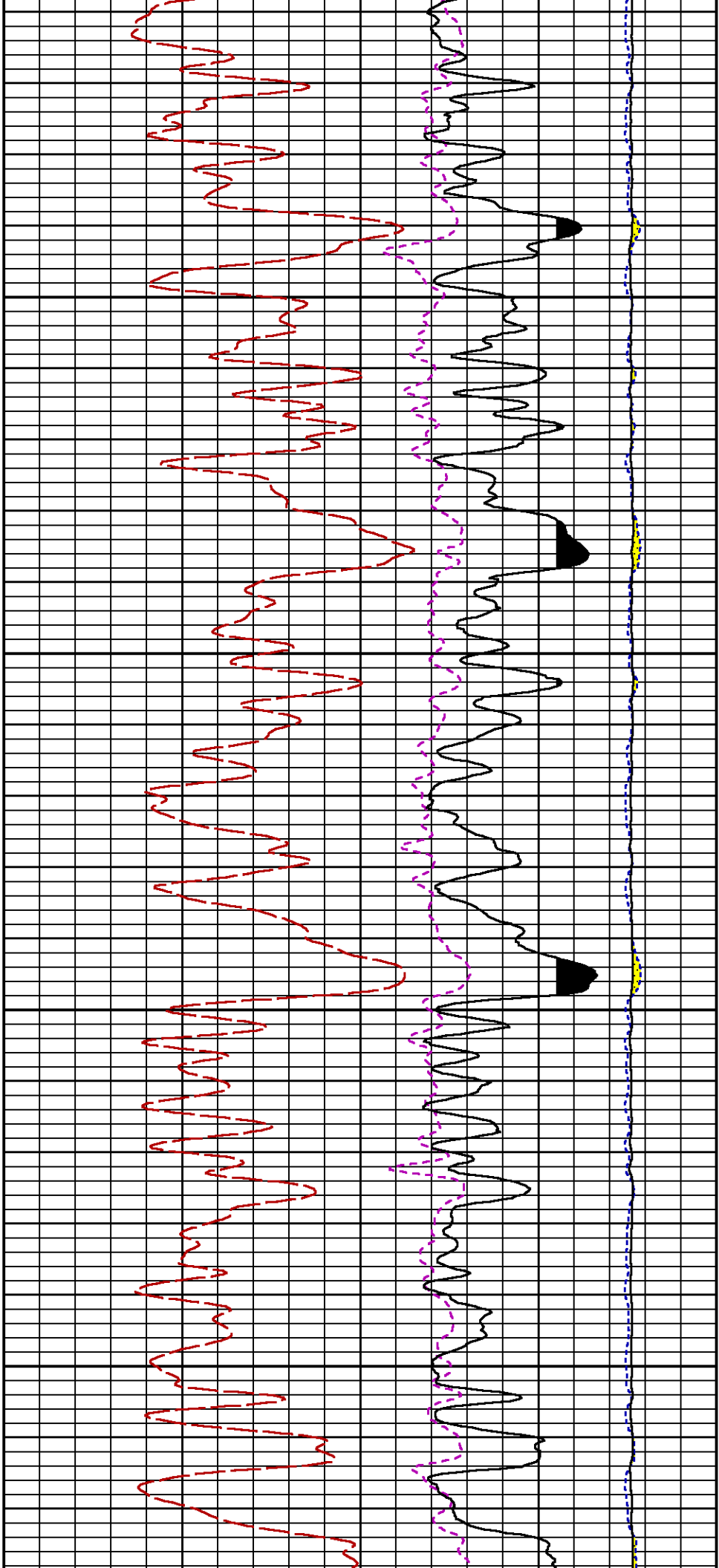


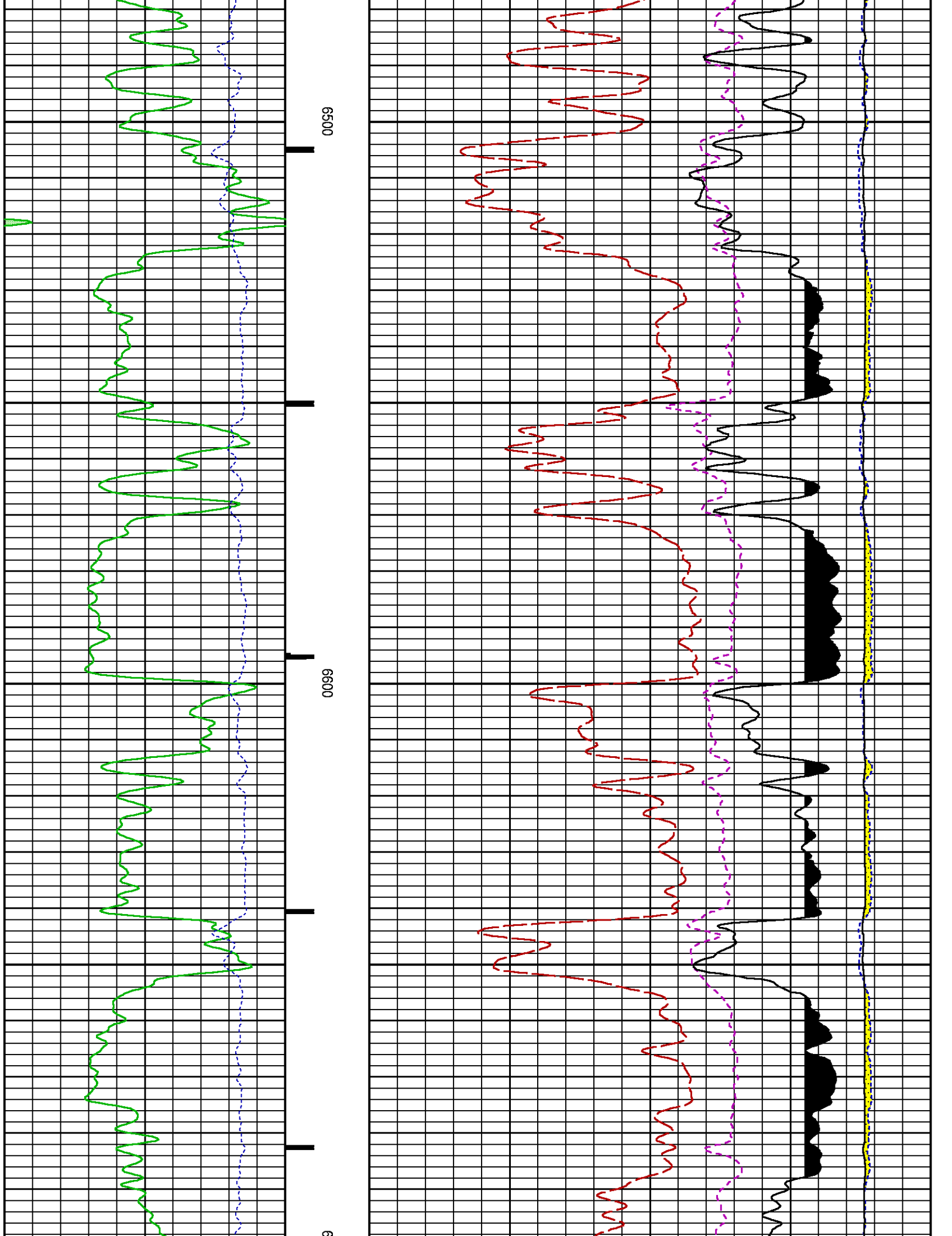


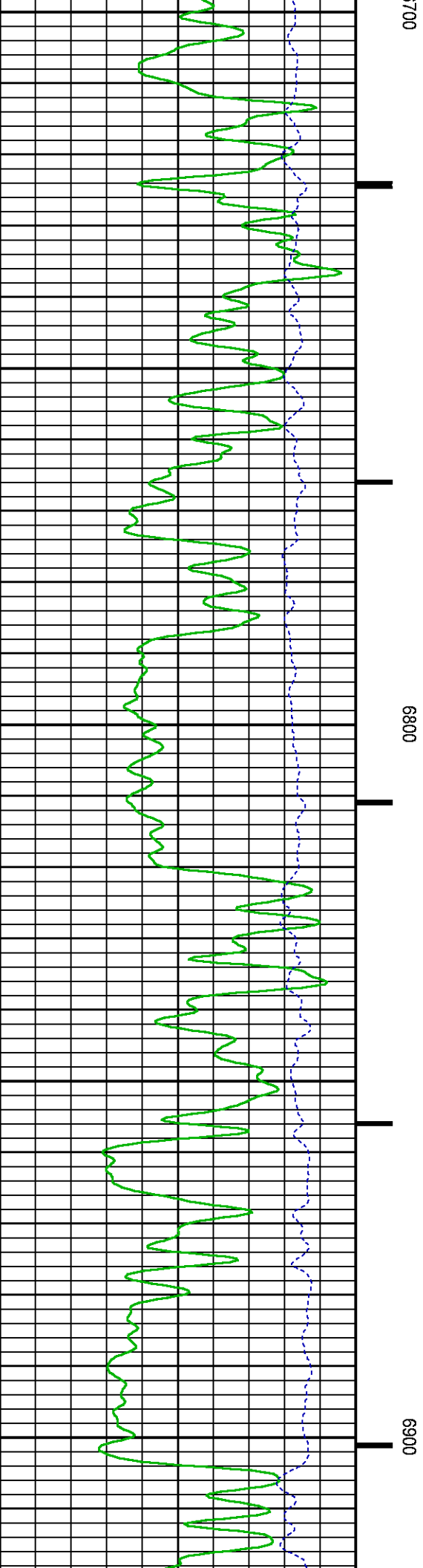
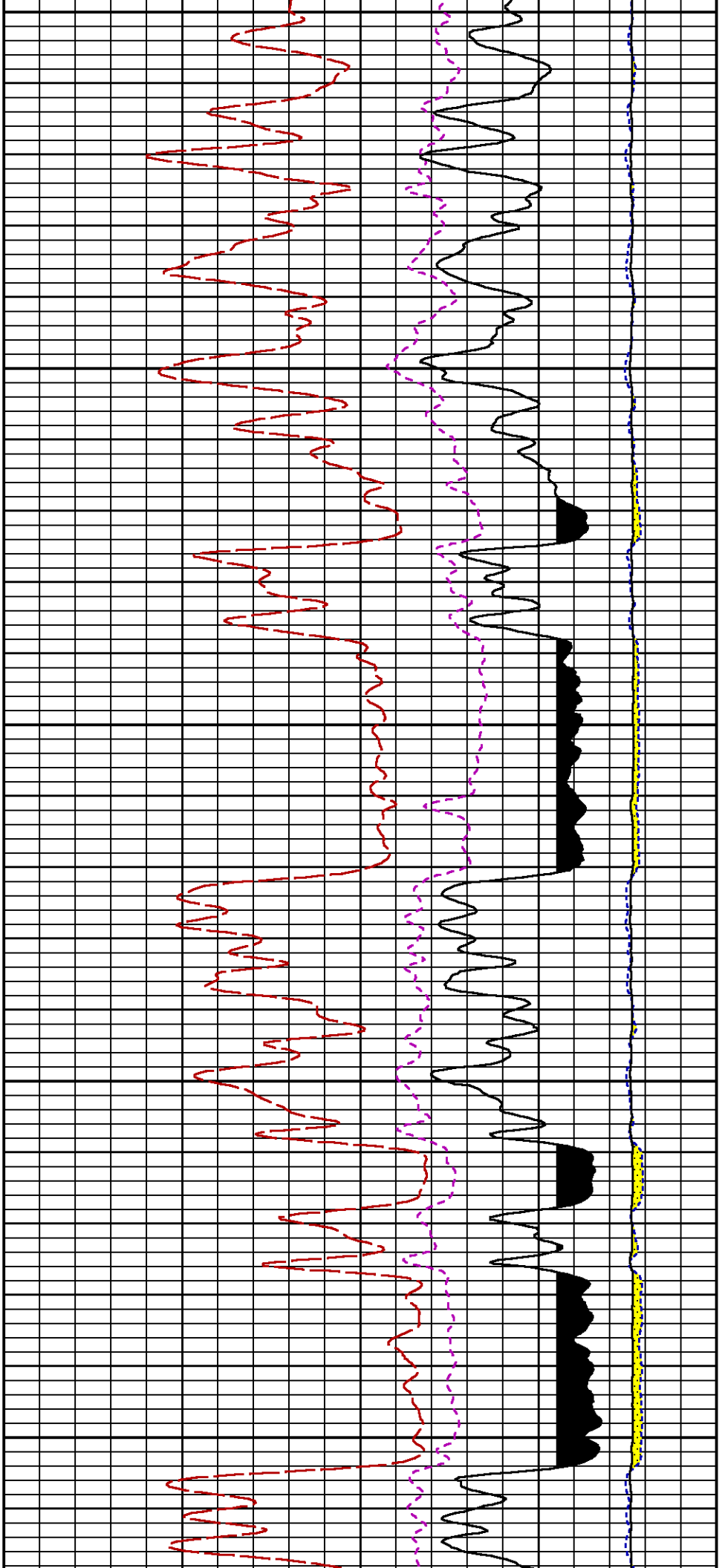


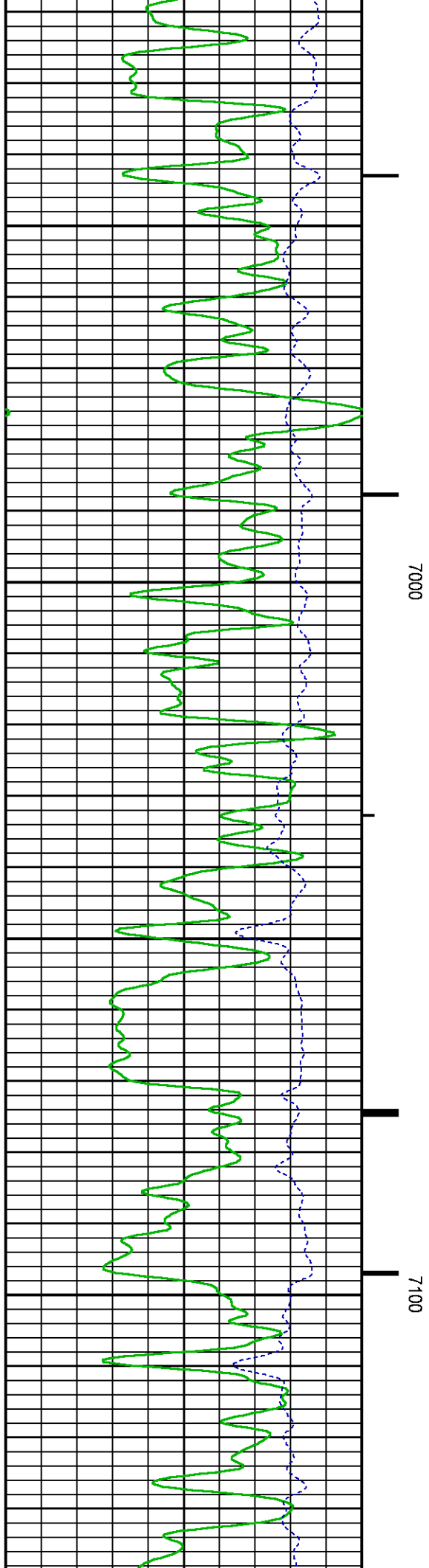
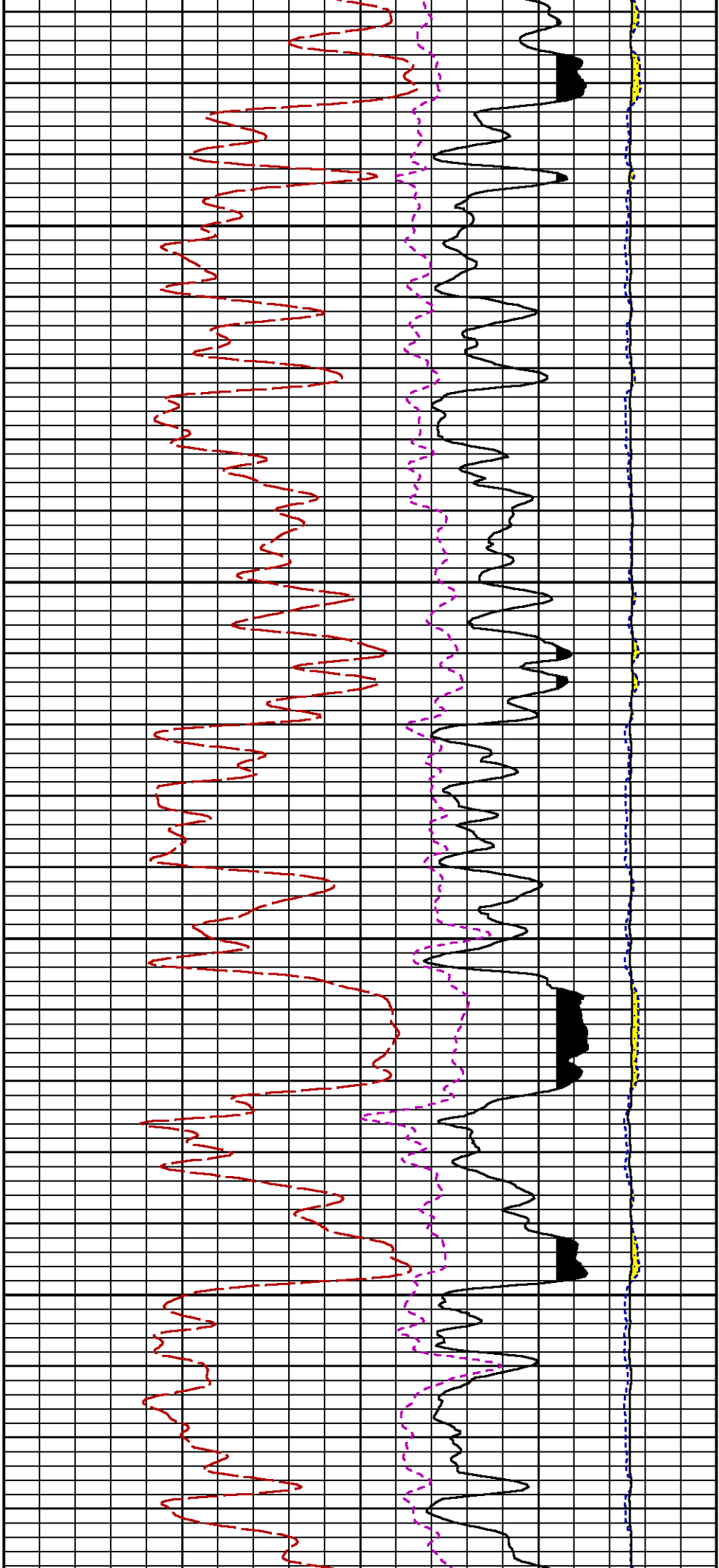


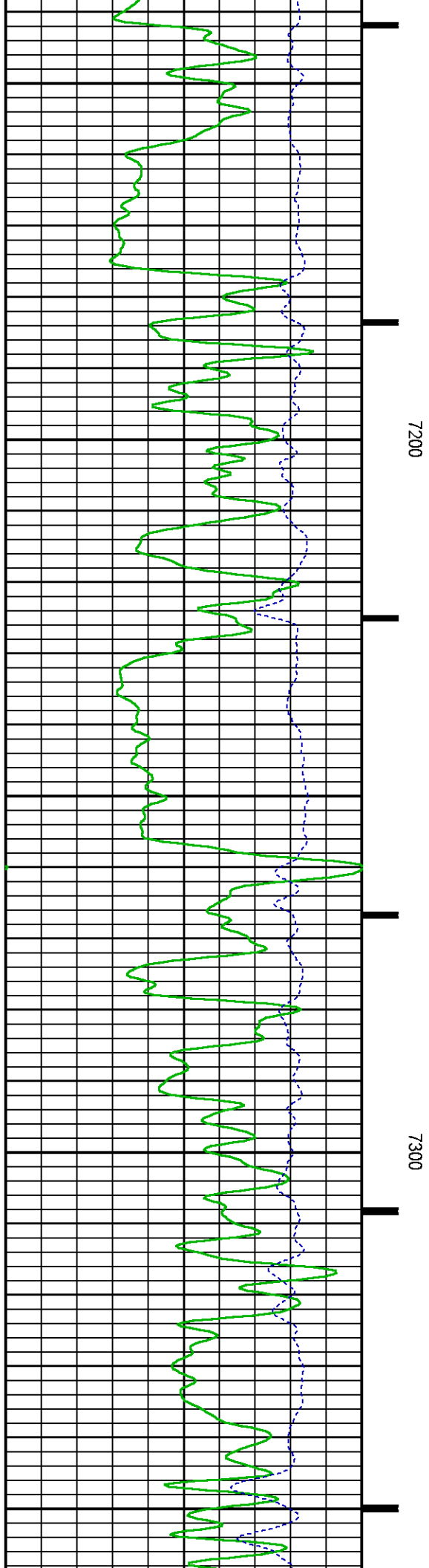
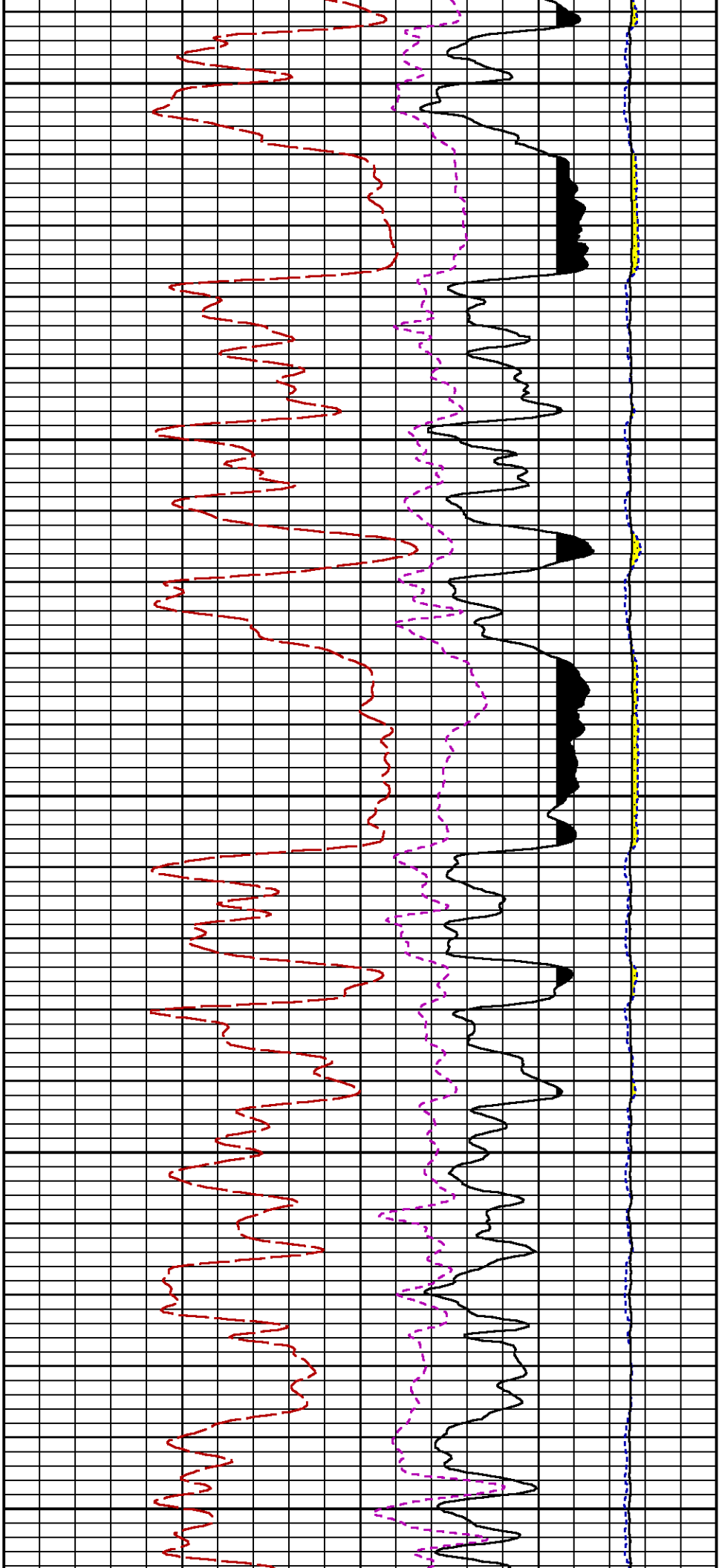


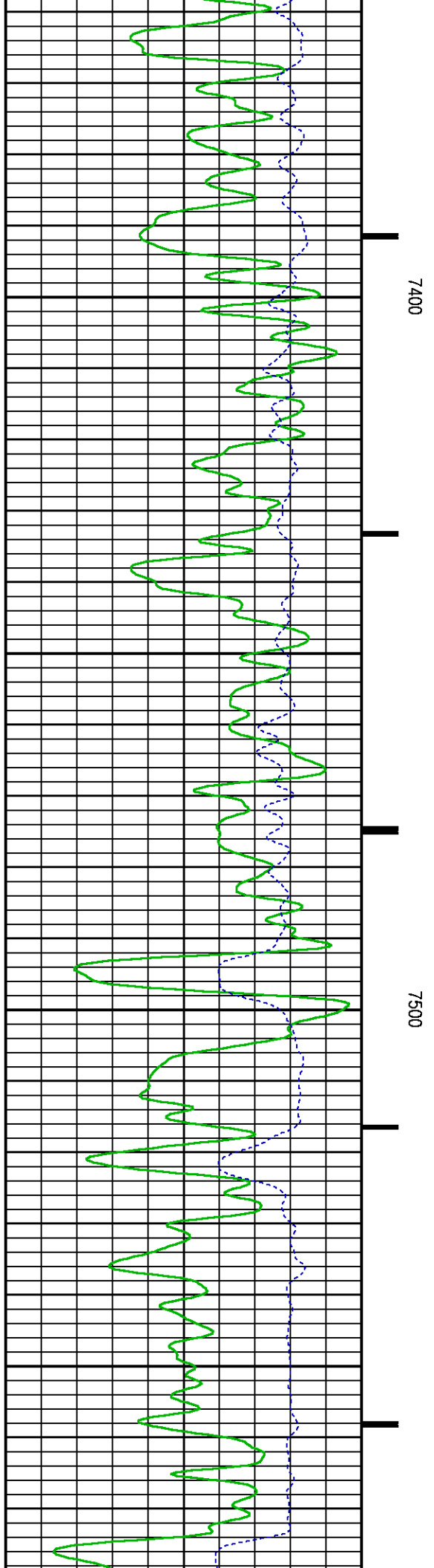
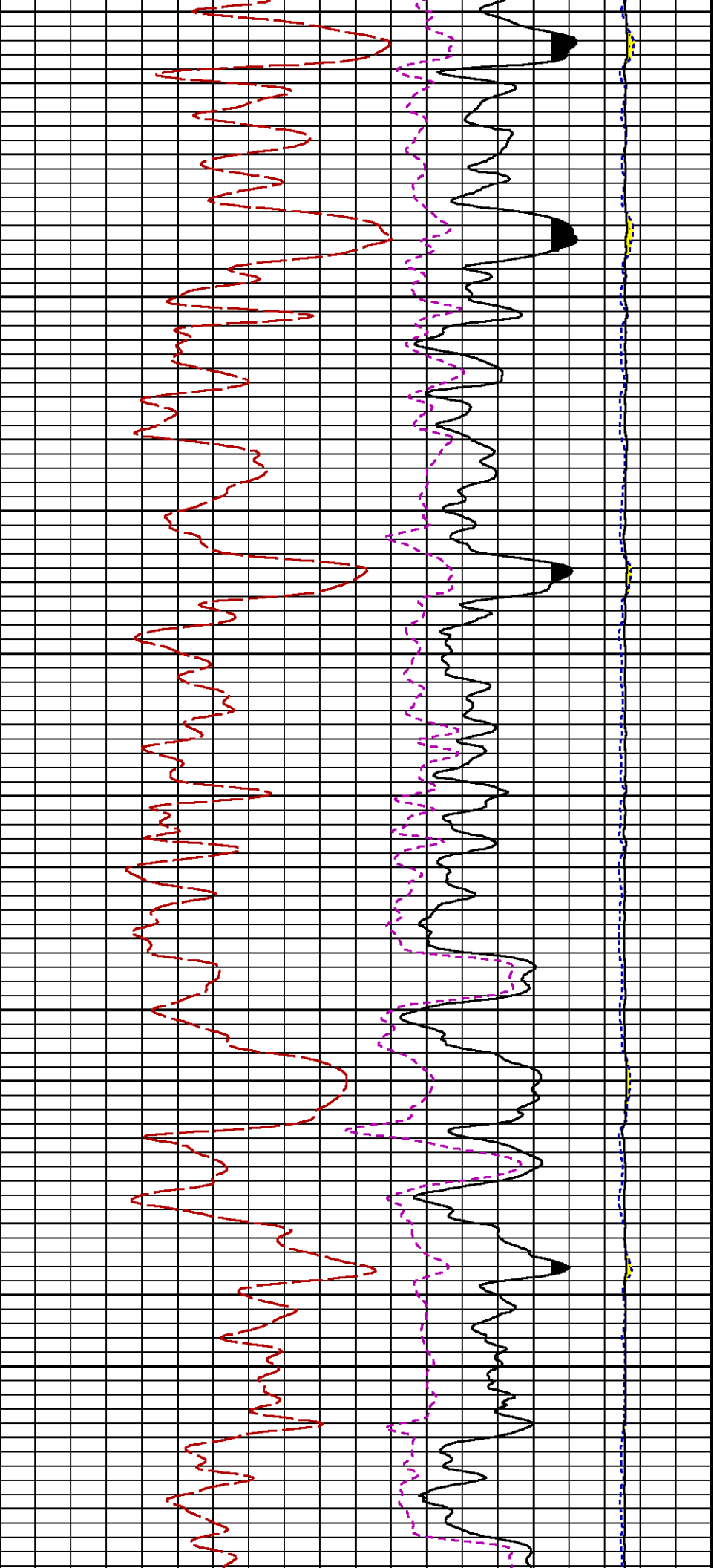


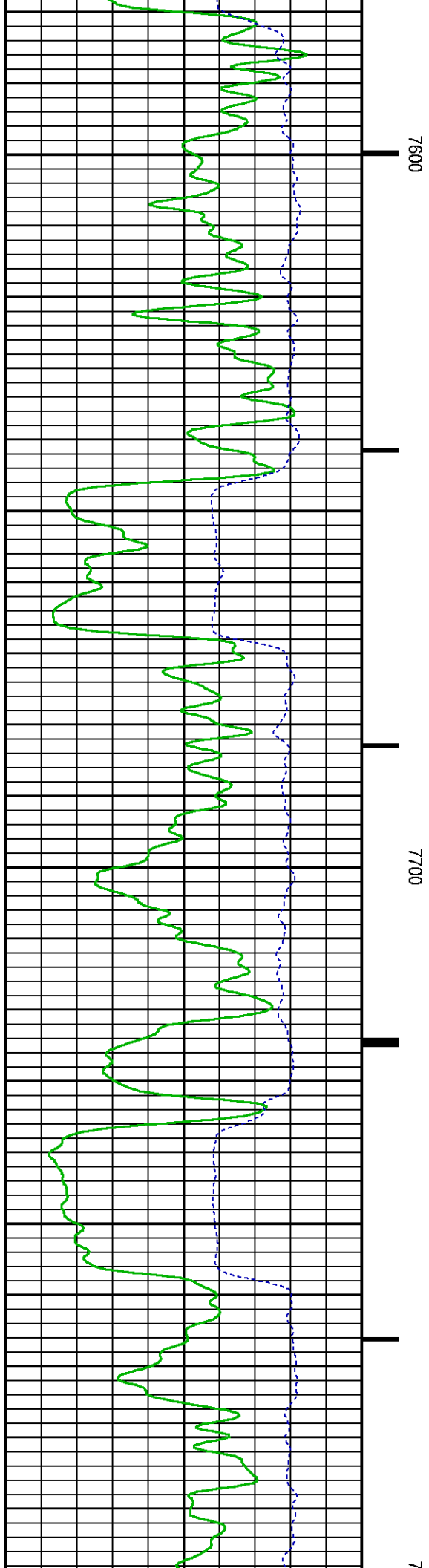
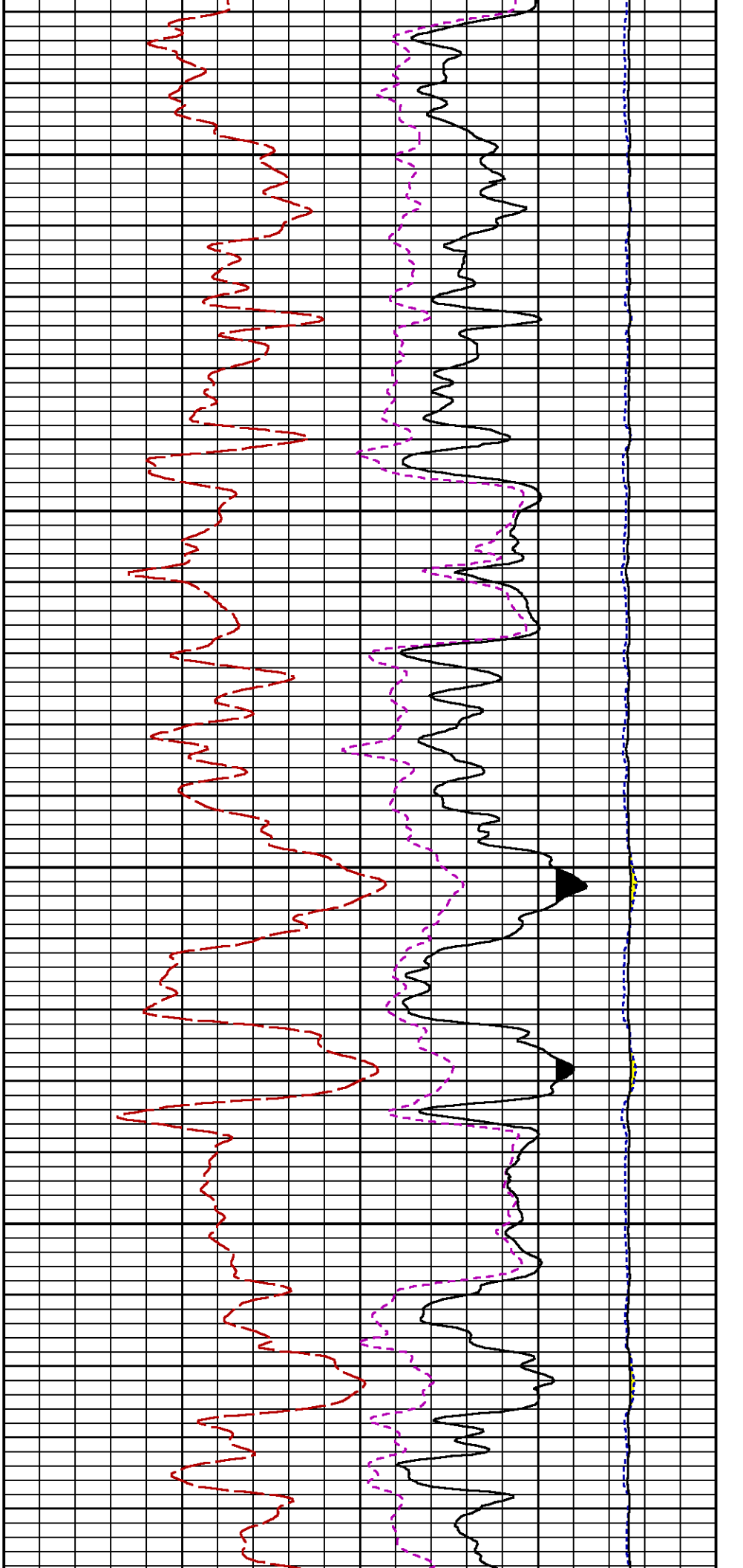


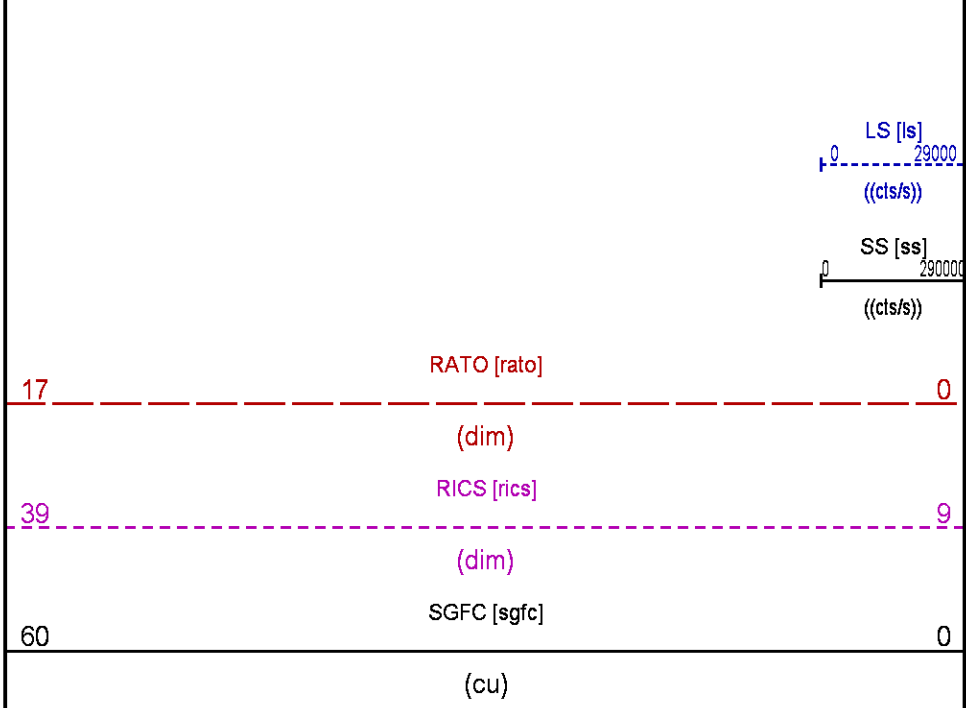
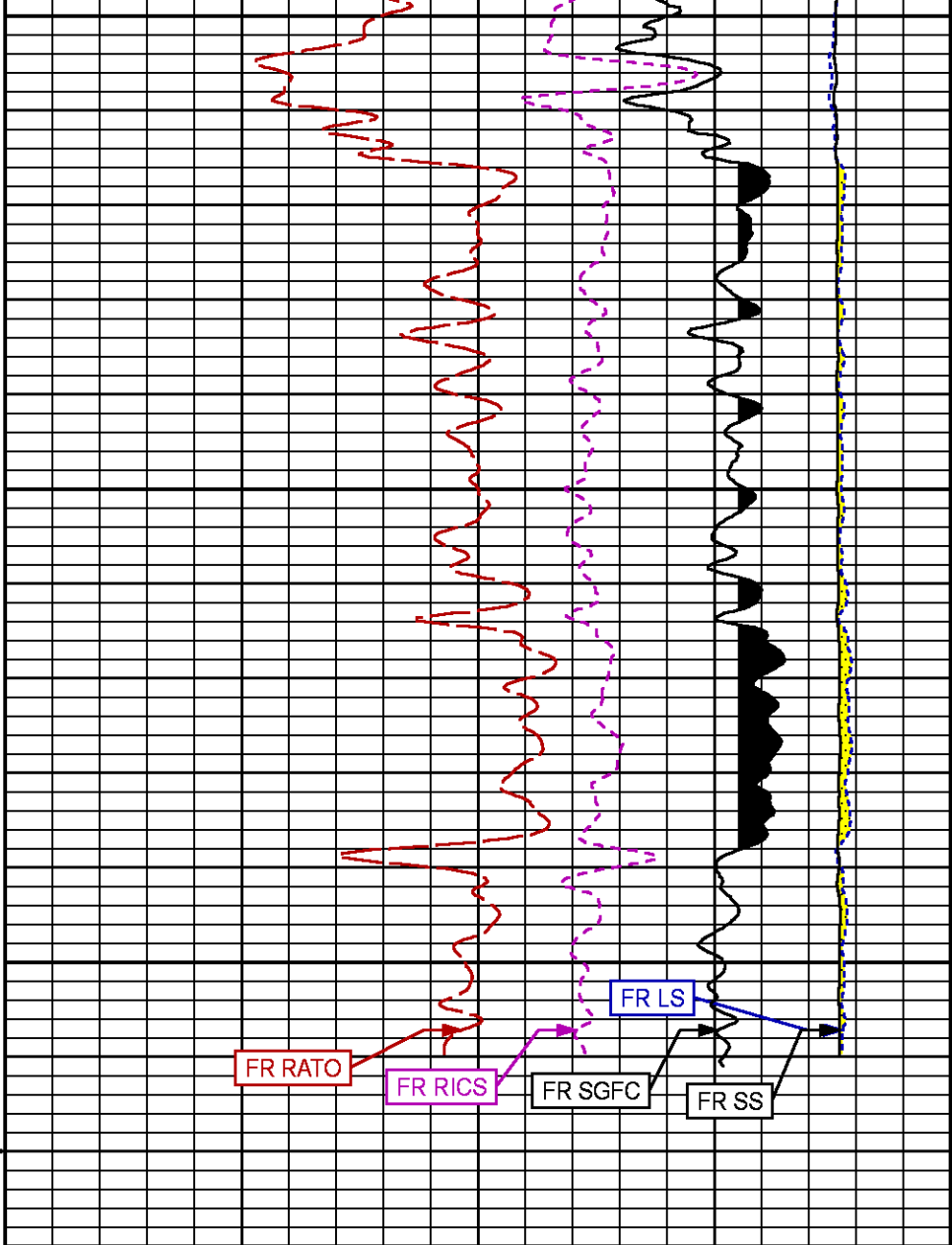
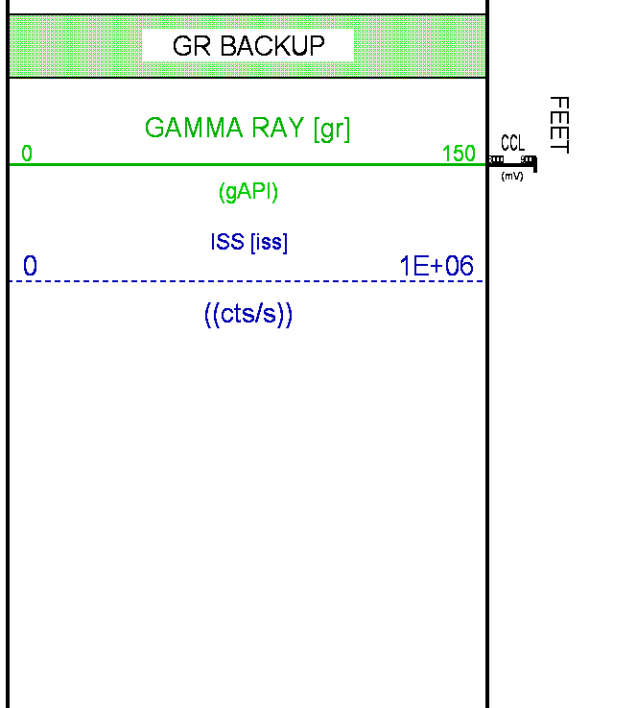
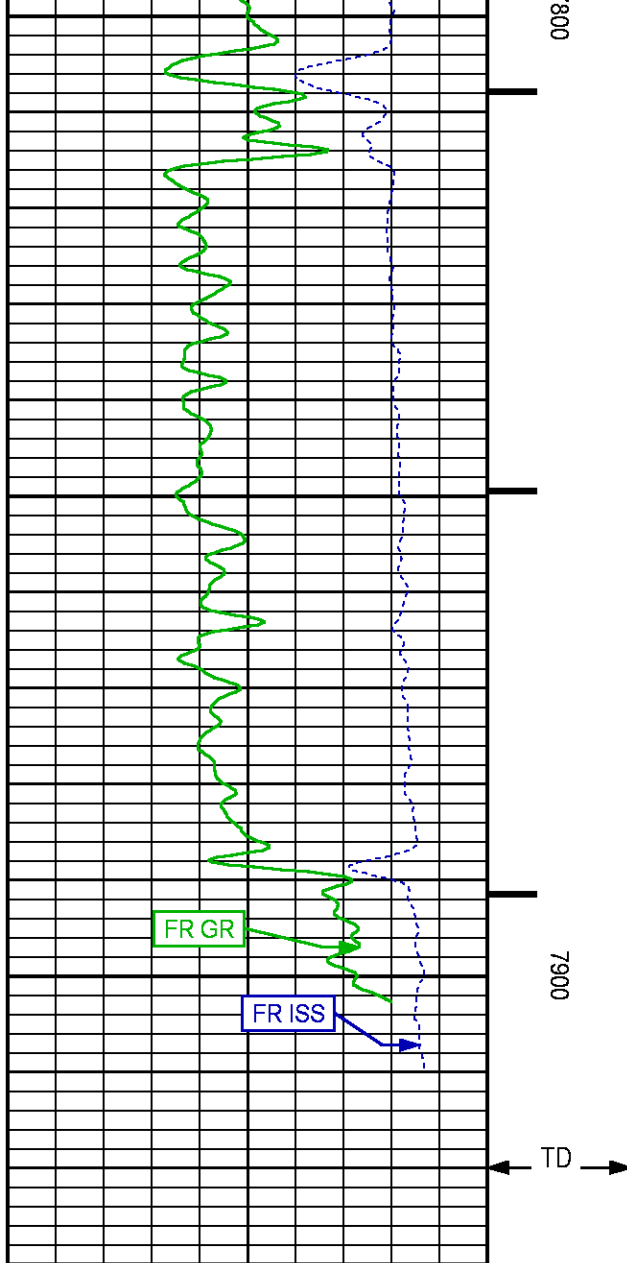












REPEAT PNC 3D MODE

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

Updates: 1 Patches: 9

Plotted: Mon May 29 13:42:21 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/RPM_PNC3D01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 7179.500 ft BOTTOM DEPTH: 7401.500 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

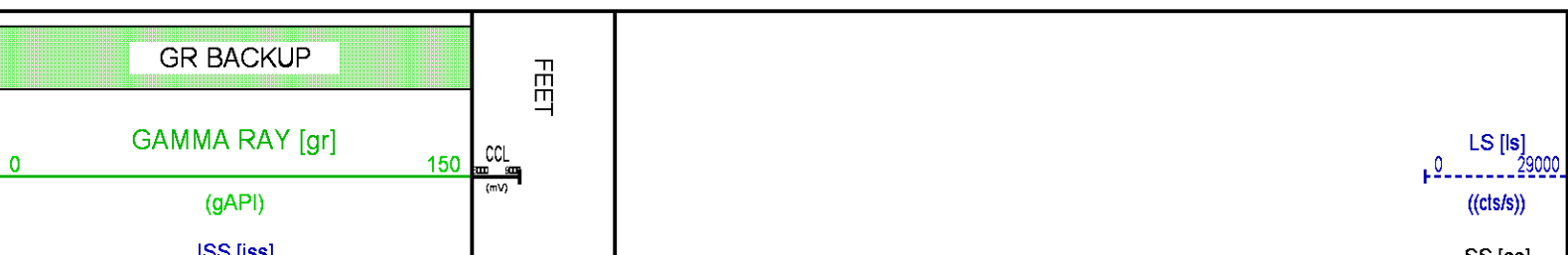
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	May 29 13:10:36 2017	CASING COLLAR LOCATOR
F1:GR	May 29 13:10:36 2017	GAMMA RAY
F1:ISS	May 29 13:10:36 2017	INELASTIC SHORT SPACE COUNT RATE
F1:LS	May 29 13:10:36 2017	LONG SPACE COUNT RATE
F1:RATO	May 29 13:10:36 2017	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	May 29 13:10:36 2017	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	May 29 13:10:36 2017	CORRECTED FORMATION SIGMA
F1:SS	May 29 13:10:36 2017	SHORT SPACE COUNT RATE

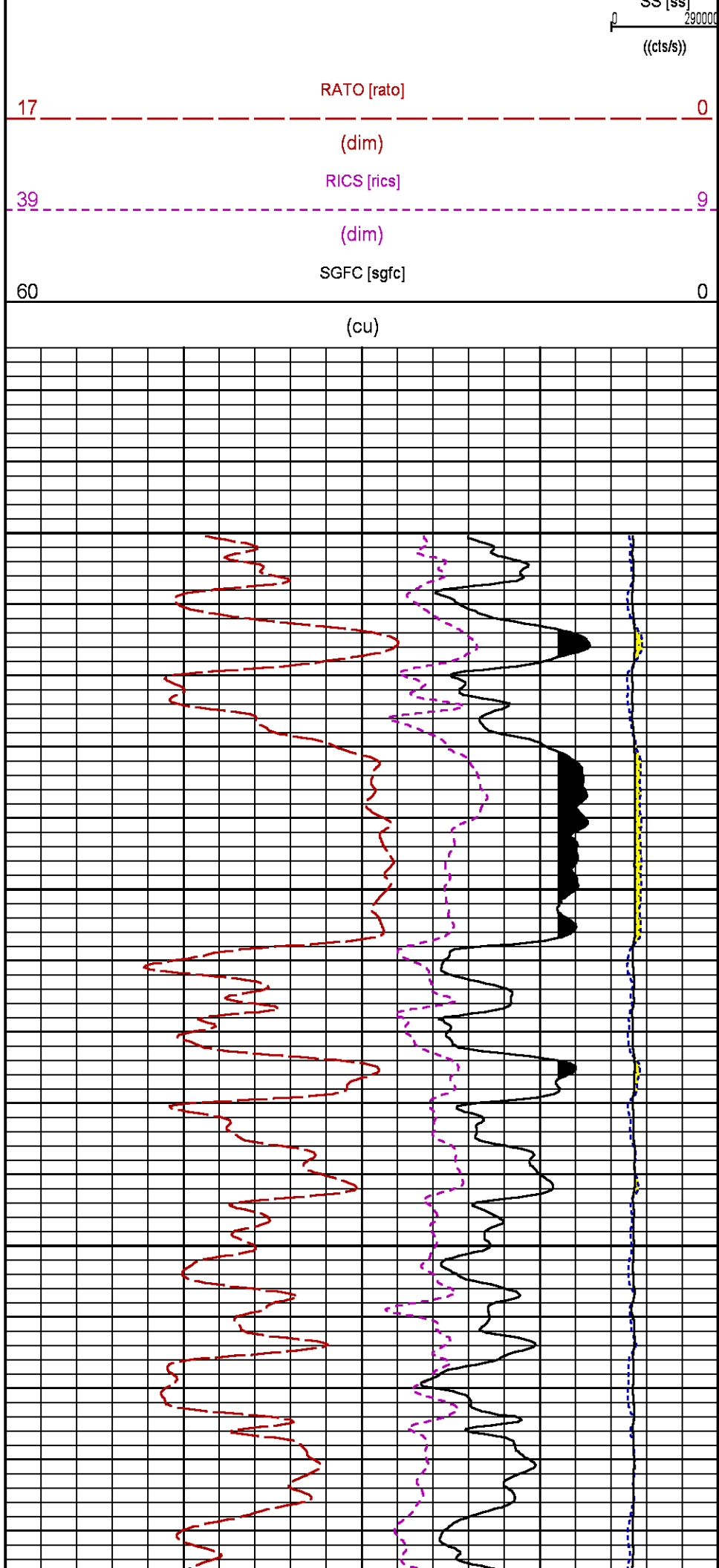
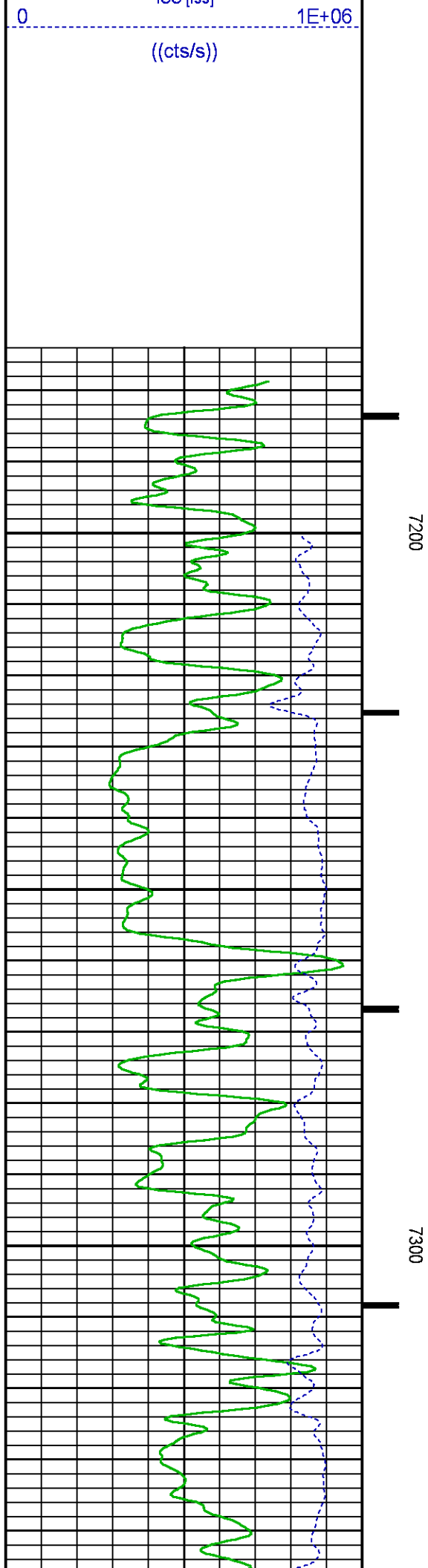
CURVE MEASURE POINT OFFSET

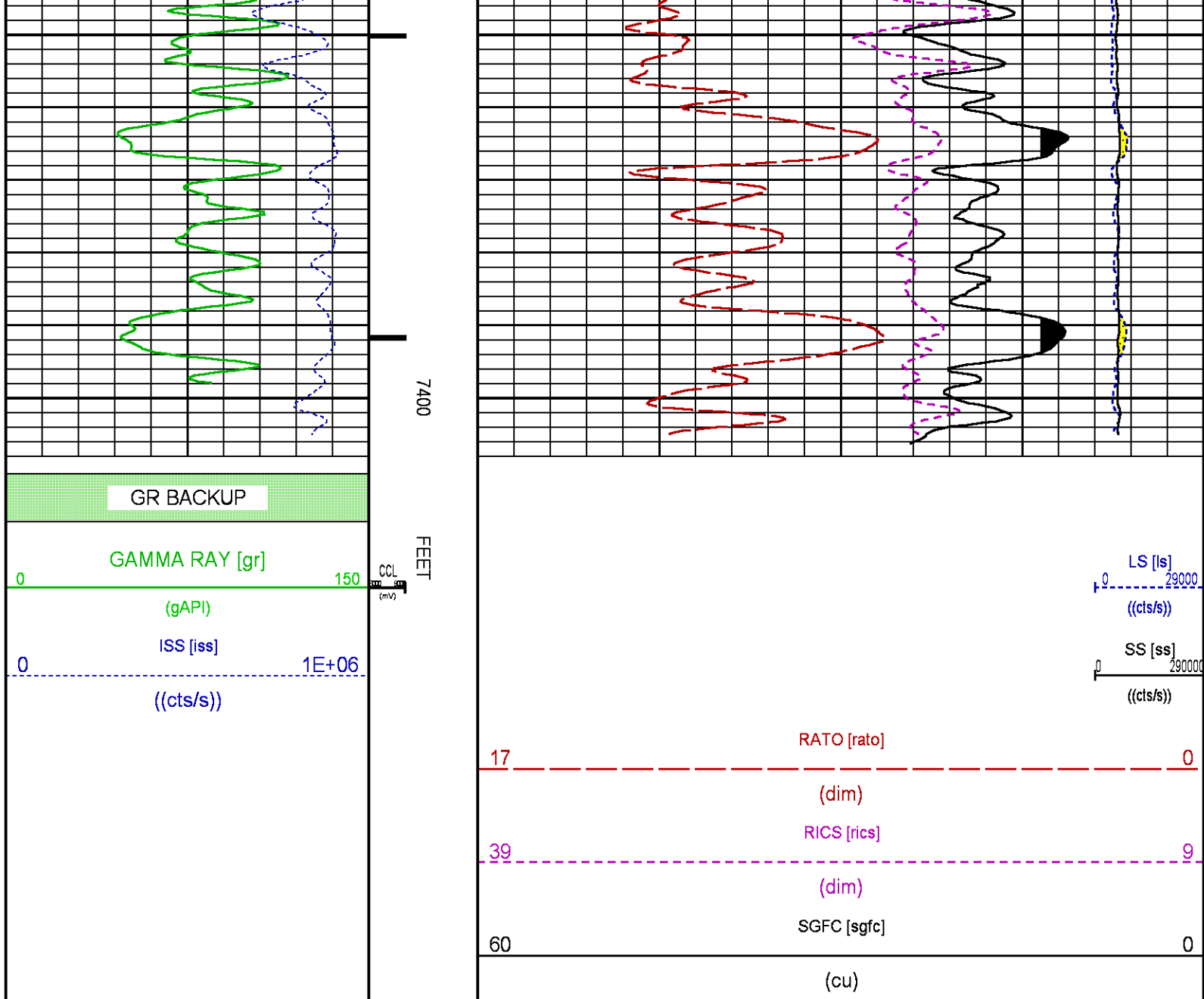
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	26.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

Presentation : cpu100:rpm_pnc3d+01-REPEAT-29_19E_5.fvpdf [5"/100' Scale]
Plot Interval : 7174.5 - 7412.5 Feet

Data File 1 : F1 : cpu100:/dat1a/LARAMIE_PICEANCE_FEDERAL_29_19E/RPM_REPT_19E.xtf
Created On : May 29 13:10:36 2017
Company : LARAMIE ENERGY
Well : PICEANCE 29-19E
Field : VEGA
File Interval : 7173.75 - 7421.25 Feet
OCT : RPM_PNC3







CALIBRATION / VERIFICATION SUMMARY

Source File: \data\at\ARAME_PICEANCE_FEDERAL_29_19\ERPM_PNC3D tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA10317216

DATE/TIME PERFORMED: Tue Jan 17 13:40:53 2017

UNIT #: 3882ML ML4352

CALB JIG #: 4702NK DA_228

	BACKGROUND (cts/s)	CALBTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBTR ON (gAPI)	CALBTR (gAPI)
GR	57.62	368.04	310.4	0.596	34.34	219.34	185

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA10317216

DATE/TIME PERFORMED: Tue Jan 17 13:43:12 2017

UNIT #: 3882ML ML4352

VERI JIG #: 4702NK DA_228

	BACKGROUND (cts/s)	CALBTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBTR ON (gAPI)	DIFF. (gAPI)
GR	59.60	386.49	0.596	35.52	230.33	194.81

115.00 190.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA10414345		DATE/TIME PERFORMED: Tue Jan 17 16:42:57 2017	
UNIT: 3882ML ML4352	CALIBRATOR: 2437XB 120052	SOURCE: 8281AA10160601	HOURS: 8281AA 434

	ISS	Mr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	804960	126	2324	2294	2282	87	10.0	0.9825
Interpolated	1300000	152	2301	2285	2279			

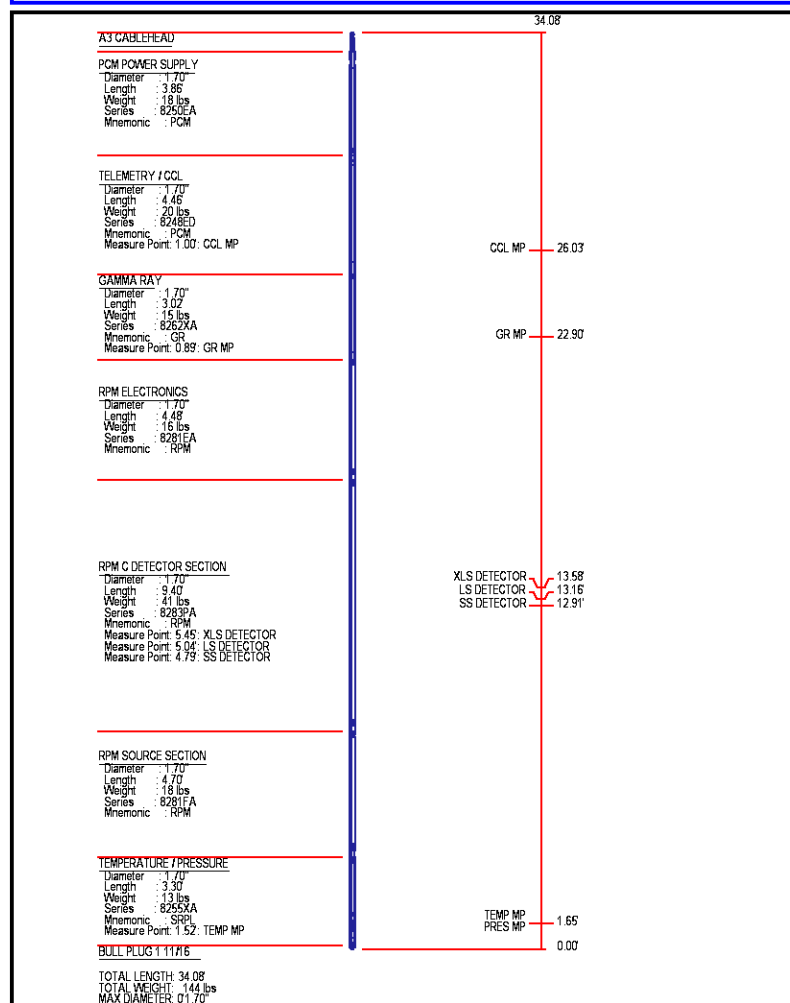
	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	804960	8856	1380	183	26.33	0.14	24.37	0.31
					26.76 26.40	0.00 0.00	23.40 24.00	0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	804960	178738	27937	96894	34373	8975	58559	14423
Fit Quality %		1.070	1.179	1.032	1.045	1.208	0.910	1.204

	ISS	RBOR	RIN	RIN13	RICS	RATO	RTWO	RONE
			ISS/ALS	ISS/AXS	ISS/ACS	SS/ALS	SS/ALS	CSS/CLS
Raw Data	804960	1.43	4.50	28.82	13.75	10.80	3.83	4.06
		1.42 1.45	3.55 5.02	22.00 30.00	10.99 16.74	10.06 11.10	3.59 3.96	3.76 4.22
Fit Quality %		0.089	0.129	0.161	0.220	0.140	0.141	0.129
Reduced	1379928	1.43	4.51	28.90	13.76	10.82	3.84	4.07
		1.42 1.45	3.53 5.02	22.40 30.00	10.93 16.74	10.06 11.10	3.59 3.96	3.76 4.22

INSTRUMENT CONFIGURATION

Source File: \data\at\ARAMIE_PICEANCE_FEDERAL_29_19\RPM_PNC30-1dg



COMPANY
WELL
FIELD

LARAMIE ENERGY
PICEANCE FEDERAL 29-19E
VEGA

FILE NO:

API NO:



COUNTY	<u>MESA</u>	STATE	<u>COLORADO</u>	<u>05-077-10359-0000</u>
LOCATION:	SHL: LAT:39.248795N; LONG:107.788006W BHL: LAT:39.243004N; LONG:107.788353W		ELEVATIONS:	
			KB 7561 FT DF GL 7531 FT	
SEC	<u>29</u>	TWP	<u>09 S</u>	RGE <u>93 W</u>
			DATE	<u>29-MAY-2017</u>