



RESERVOIR PERFORMANCE MONITOR

FILE NO: CH140252J	COMPANY LARAMIE ENERGY LLC
API NO: 05045238070000	WELL CC FEDERAL 0697-03-08E
	FIELD GRAND VALLEY
	COUNTY GARFIELD STATE COLORADO

Ver. 4.11	LOCATION: SHL: 1776.0' FWL & 1224.0' FEL SHL: 1776.0' FWL & 1224.0' FEL SEC 3 TWP 6S RGE 97W	OTHER SERVICES RAL
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PERMANENT DATUM LOG MEASURED FROM DRILL MEAS. FROM	GL KB KB KB	ELEVATION 30 FT ABOVE P.D.	ELEVATIONS: KB 8458 FT DF GL 8428 FT
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DATE	RUN	TRIP	
02-Sep-2018	2	2	
SERVICE ORDER	US140252J		
DEPTH DRILLER	9716 FT		
DEPTH LOGGER	9664 FT		
BOTTOM LOGGED INTERVAL	9664 FT		
TOP LOGGED INTERVAL	4620 FT		
TIME STARTED	09:30		
TIME FINISHED	16:00		
OPERATOR RIG TIME	6.5 HOURS		
TYPE OF FLUID IN HOLE	WATER		
FLUID DENSITY	NA		
FLUID SALINITY	NA		
FLUID LEVEL	62 FT		
LOGGED CEMENT TOP	2276 FT		
WELLHEAD PRESSURE	0 PSI		
MAXIMUM HOLE DEVIATION	NA		
NOMINAL LOGGING SPEED	10 FMIN		
MAX. RECORDED TEMP.	258 DEGF		
REFERENCE LOG	BAKER HUGHES RAL		
REFERENCE LOG DATE	01-Sep-2018		
EQUIP. NO.	LOCATION		
RECORDED BY	M. BAUKA	GRAND JCT.	
WITNESSED BY	NA		

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 2 TRIP 2: *2 OPERATIONS IN WELLBORE*

OPERATION 1: RAL/GR/CCL RUN CENTRALIZED

OPERATION 2: RPM/GR/CCL RUN IN PNC-3D MODE - GASVIEW

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 7566' - 7586'

SJ: 9098' - 9118'

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
2	2	PCM	8250EA	Z166326	FREE
2	2	TEL/CCL	8248ED	10387150	FREE
2	2	GR	2812LA	11608516	FREE
2	2	RPM	8281EA	10190985	FREE
2	2	RPM	8283PA	10068031	FREE

2	2	RPM	8281FA	10076673	FREE
2	2	TEMP	8255XA	166341	FREE

RPM MAIN PASS G-SAND

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

Updates: 1

Plotted: Sun Sep 2 16:09:25 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/p354h03.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 4611.015 ft BOTTOM DEPTH: 5250.631 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	7.87	in	" "
	LARGEST CASING OD	4.50	in	" "
	MATRIX	SANDSTONE		" "

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Sep 2 15:01:49 2018	CASING COLLAR LOCATOR
F1:GR	Sep 2 15:01:49 2018	GAMMA RAY
F1:ISS	Sep 2 15:01:49 2018	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Sep 2 15:01:49 2018	LONG SPACE COUNT RATE
F1:RATO	Sep 2 15:01:49 2018	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Sep 2 15:01:49 2018	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Sep 2 15:01:49 2018	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS	Sep 2 15:01:49 2018	SHORT SPACE COUNT RATE

CURVE MEASURE POINT OFFSET

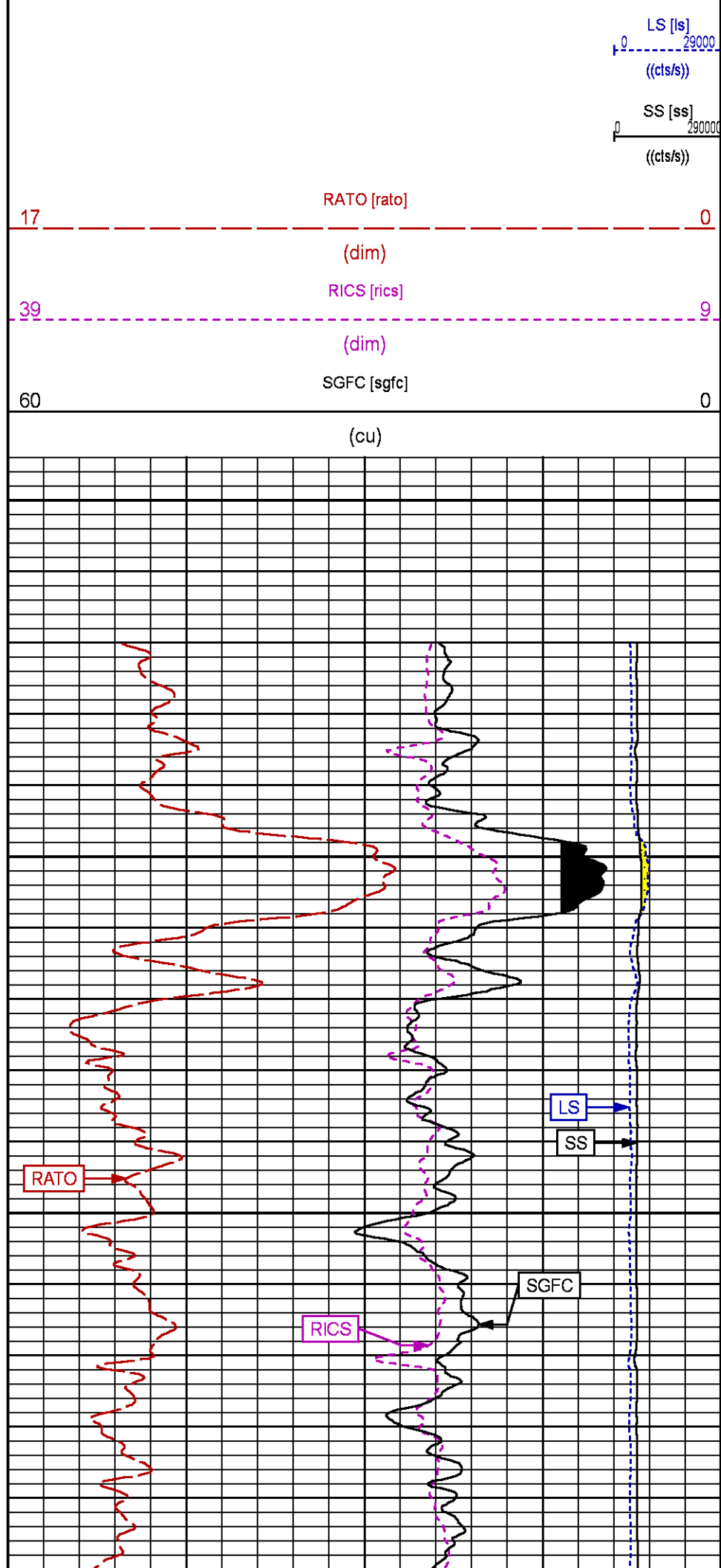
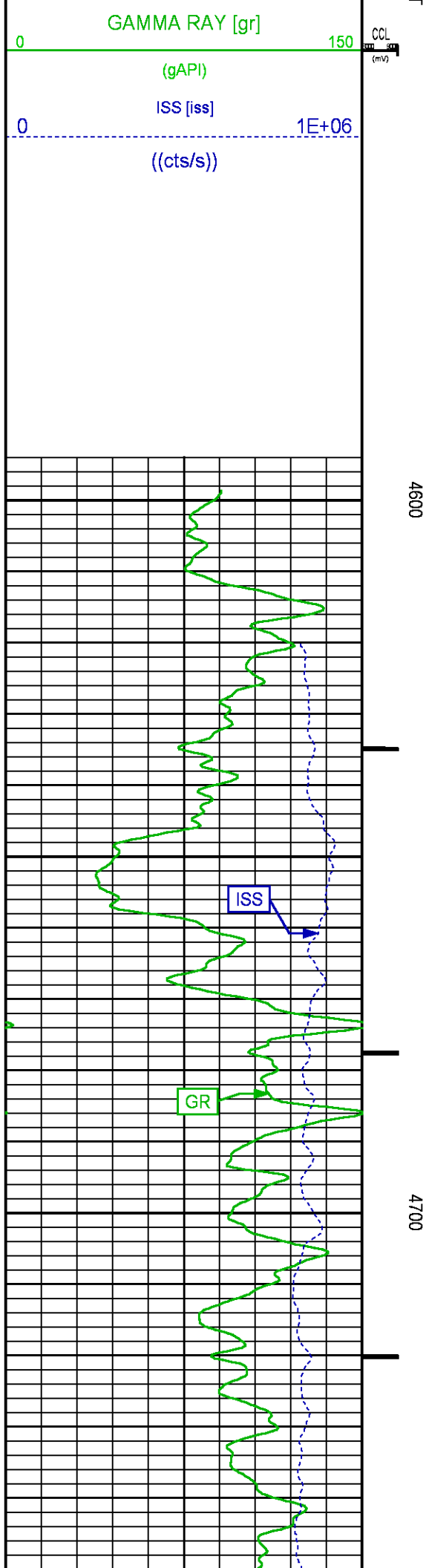
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-25.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-22.75	LS	-12.75	RICS	-12.75	SS	-12.75

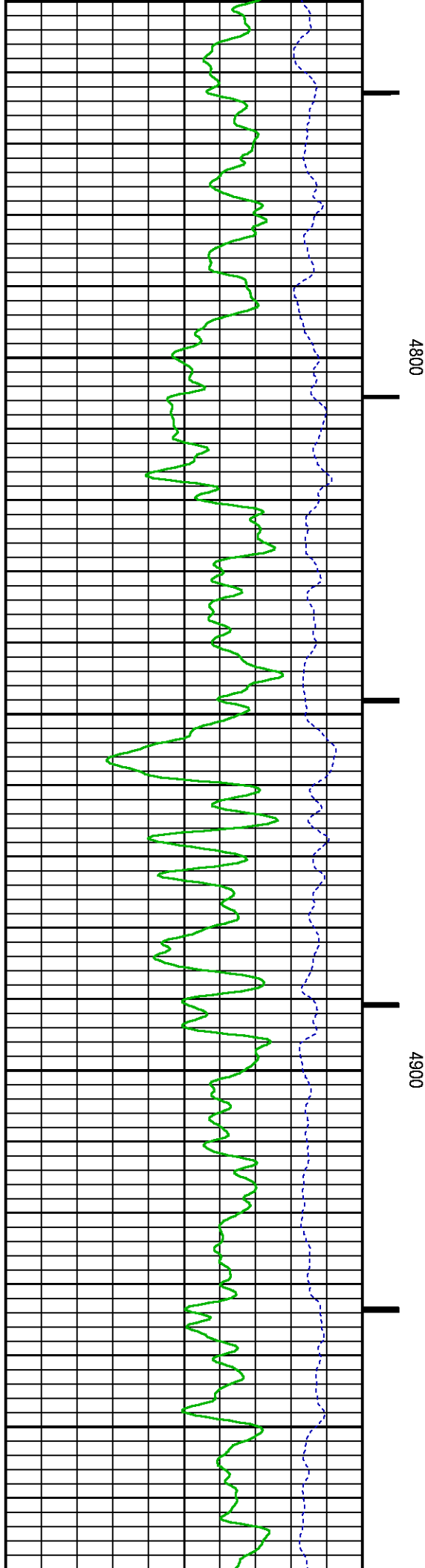
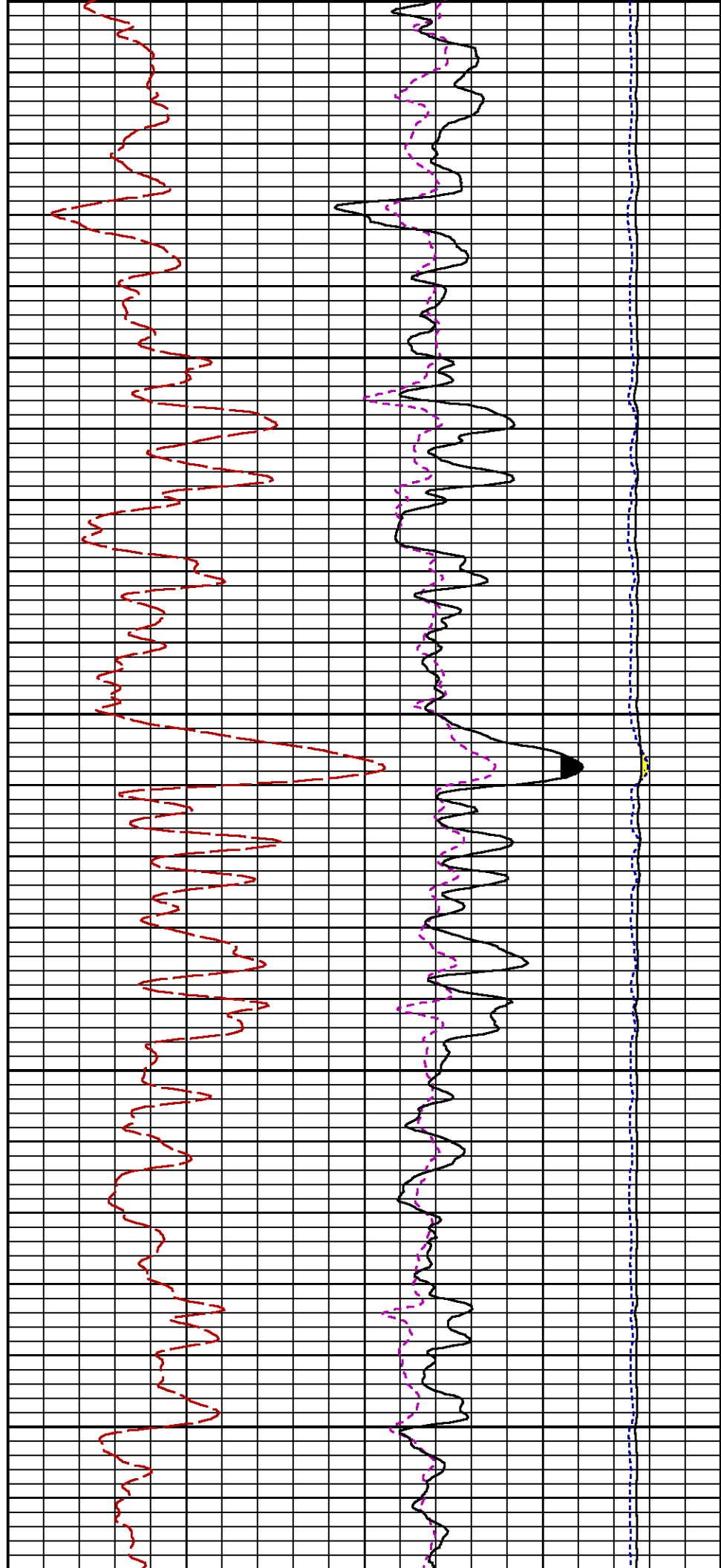
Presentation : SysA:/dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/CC_FEDERAL_0697-03-08E_RPM_GS.fvpdf [5"/100' Scale]
Plot Interval : 4595.25 - 5257 Feet

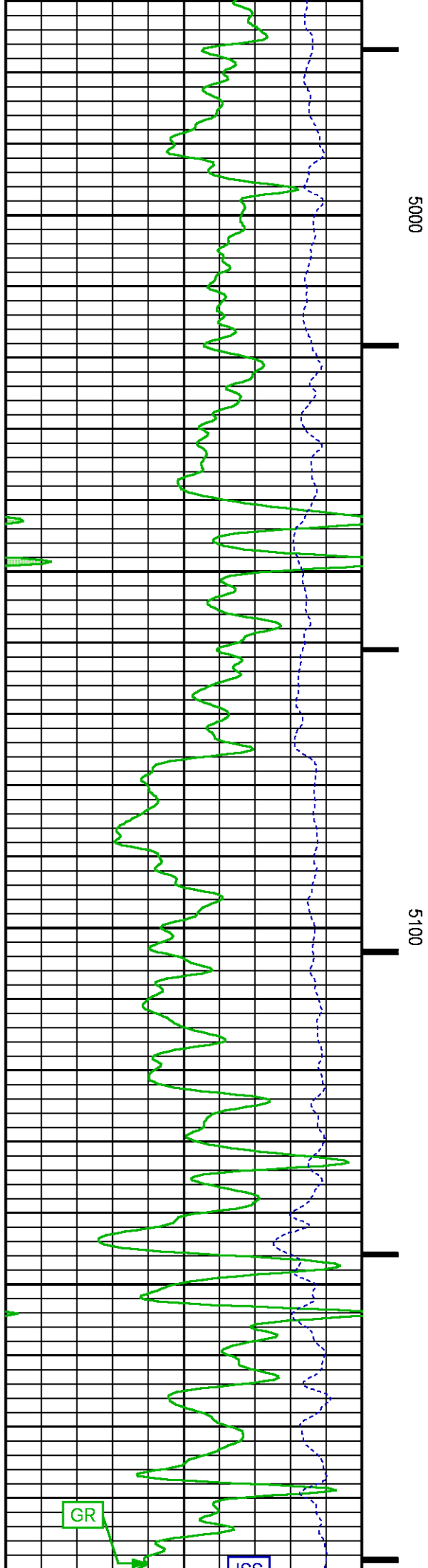
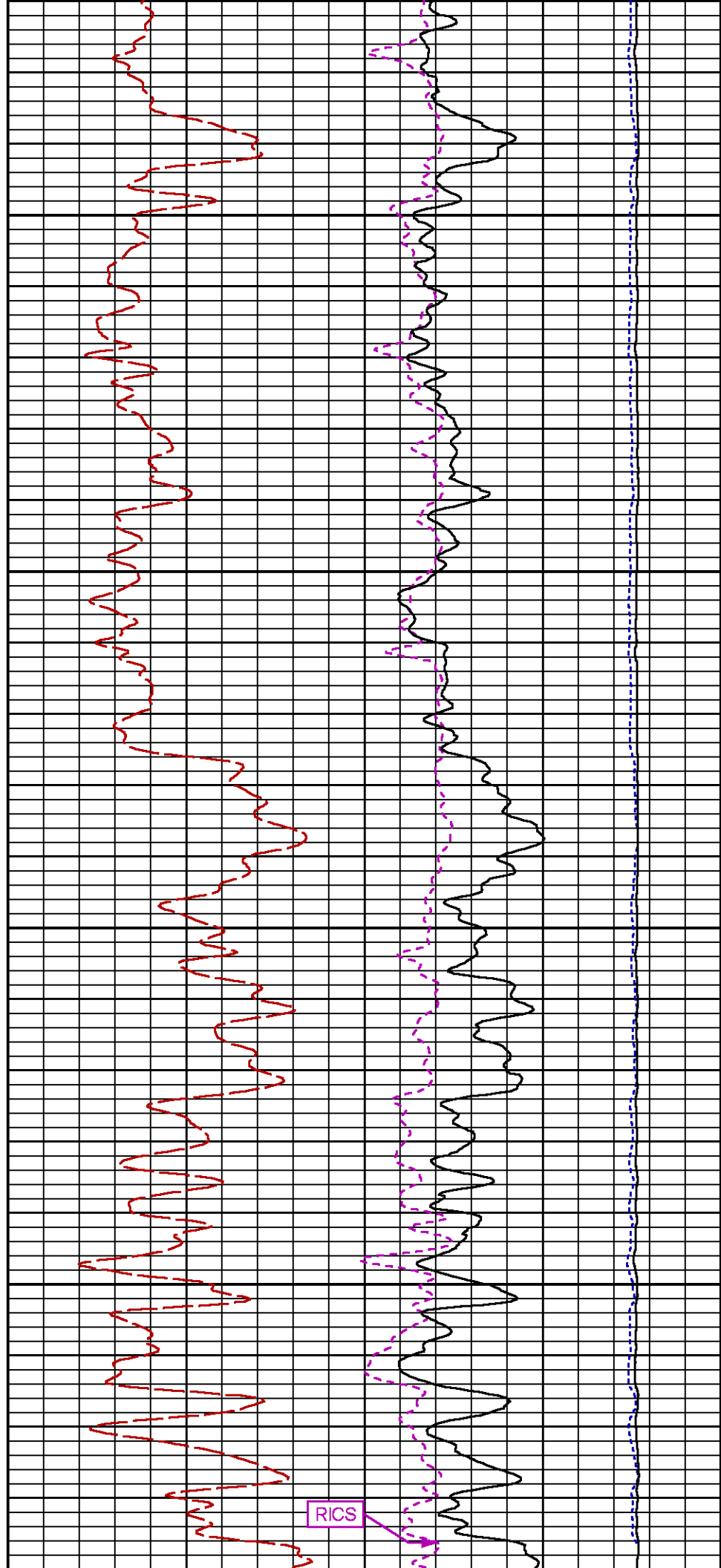
Data File 1 : F1 : SysA:/dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/45_LARAMIE_CC_FEDERAL_0697-03-08E_RPM_MAIN_GS.ktf
Created On : Sep 2 15:01:49 2018
Company : LARAMIE ENERGY LLC
Well : CC_FEDERAL_0697-03-08E
Field : GRAND VALLEY
File Interval : 4594.5 - 5257.25 Feet
OCT : p354h

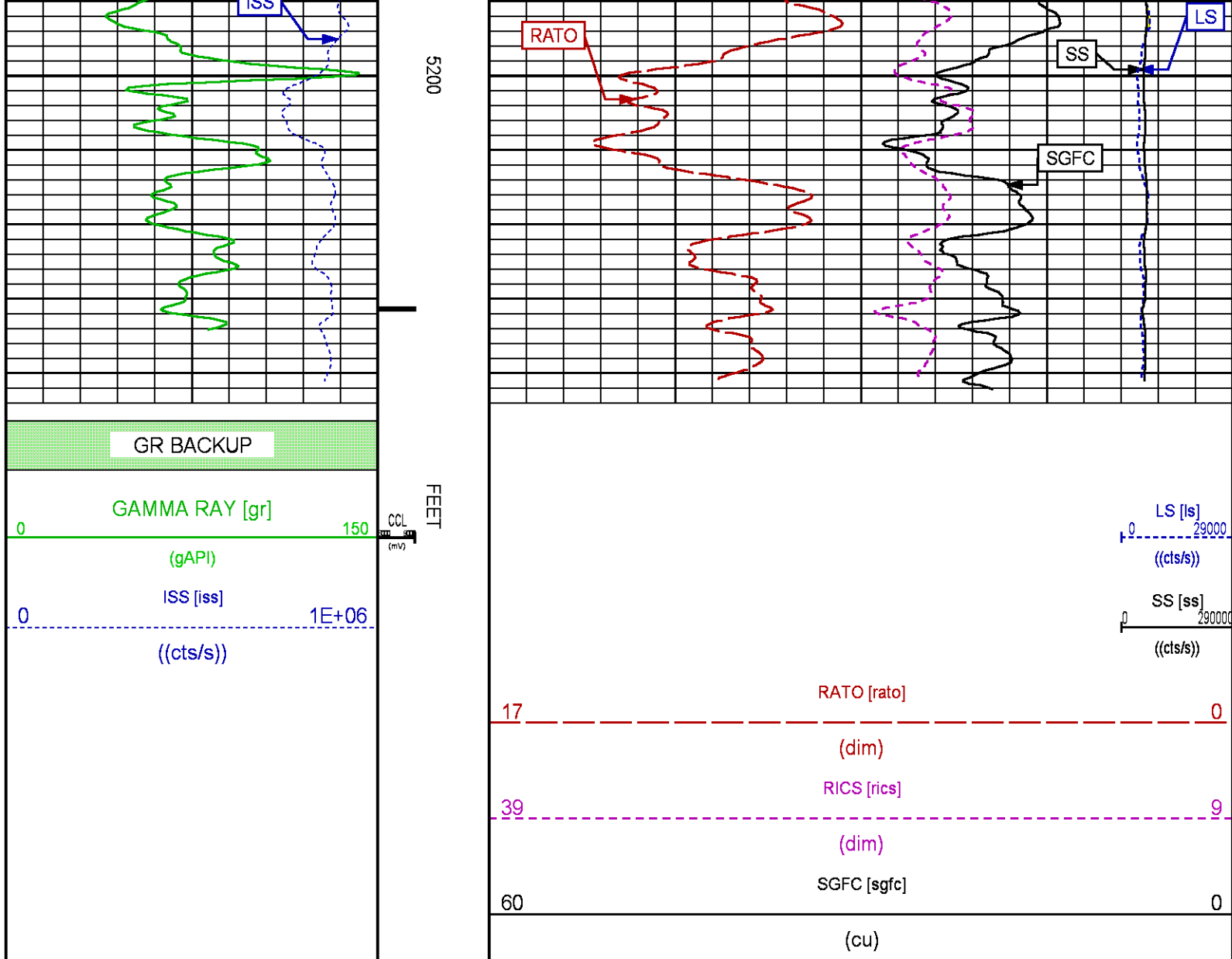
GR BACKUP

FEET









RPM MAIN PASS WILLIAMS FORK

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Updates: 1

Plotted: Sun Sep 2 15:21:34 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/p354h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 6369.835 ft BOTTOM DEPTH: 9685.642 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	7.87	in	"	"
	LARGEST CASING OD	4.50	in	"	"
	MATRIX	SANDSTONE		"	"

CURVE DESCRIPTION REPORT

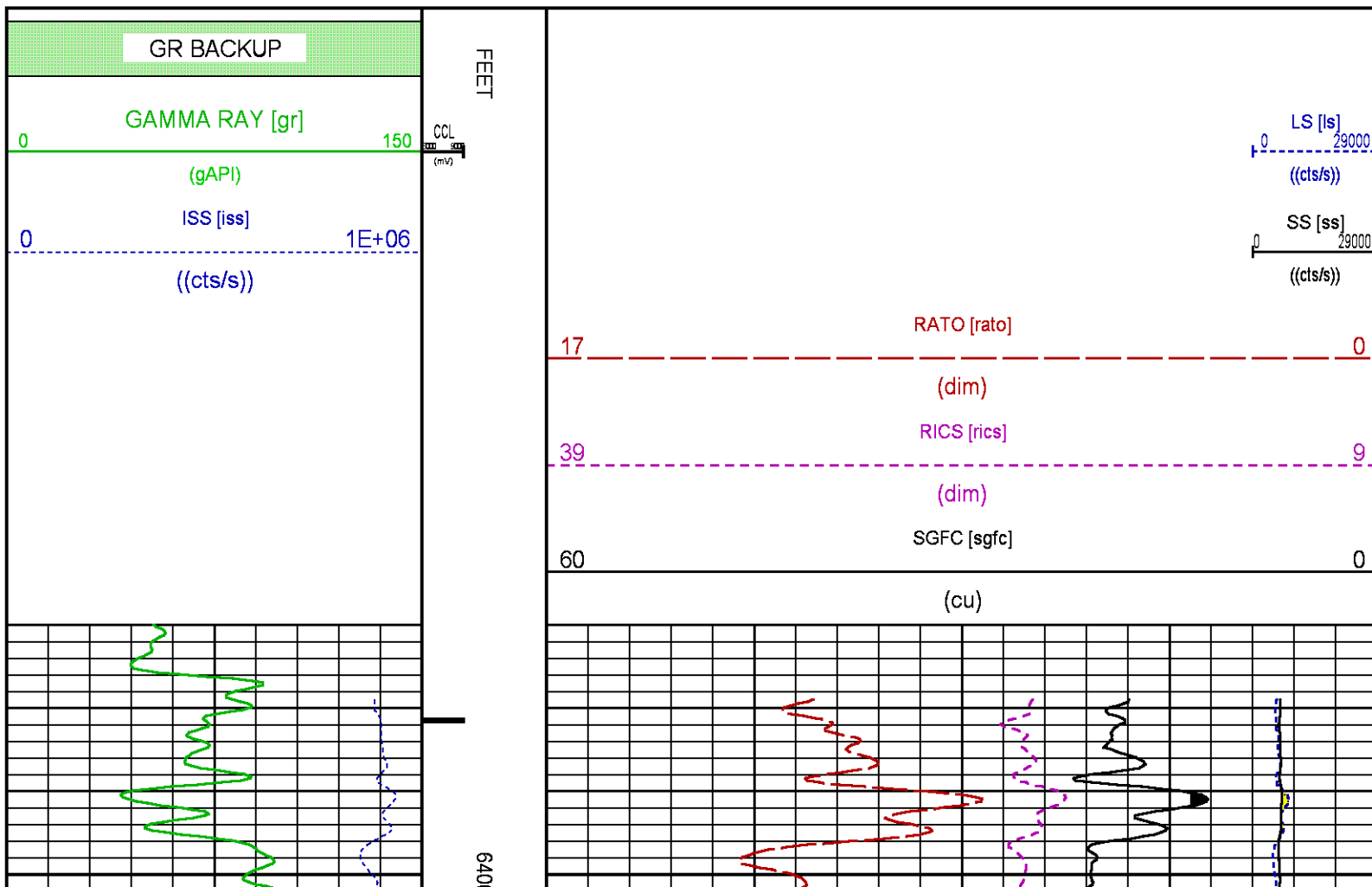
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Sep 2 10:23:11 2018	CASING COLLAR LOCATOR
F1:GR	Sep 2 10:23:11 2018	GAMMA RAY
F1:ISS	Sep 2 10:23:11 2018	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Sep 2 10:23:11 2018	LONG SPACE COUNT RATE
F1:RATO	Sep 2 10:23:11 2018	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Sep 2 10:23:11 2018	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Sep 2 10:23:11 2018	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS	Sep 2 10:23:11 2018	SHORT SPACE COUNT RATE

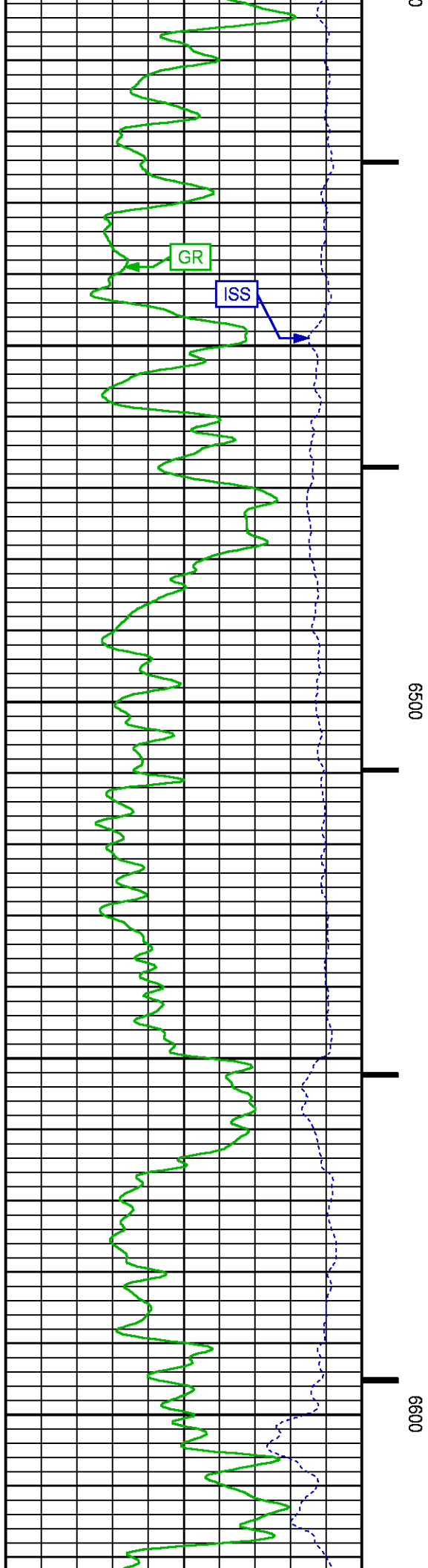
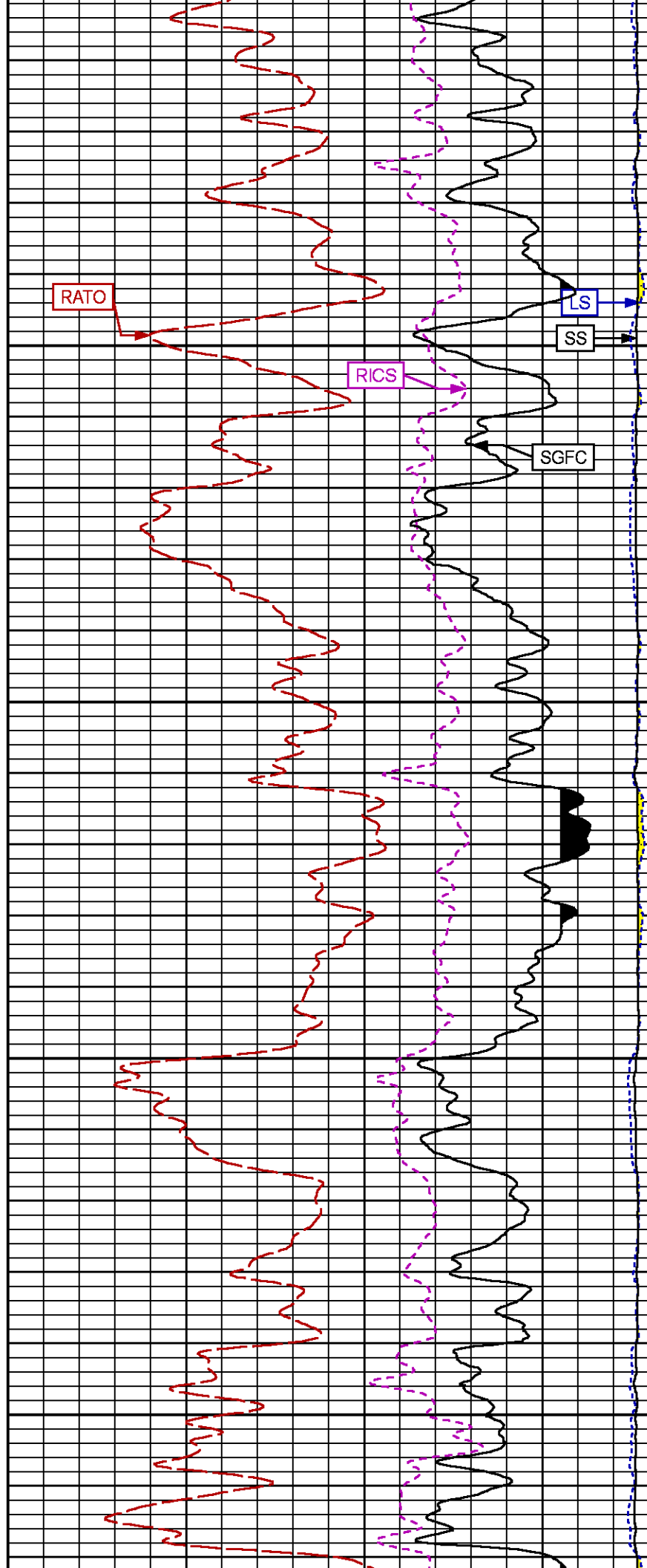
CURVE MEASURE POINT OFFSET

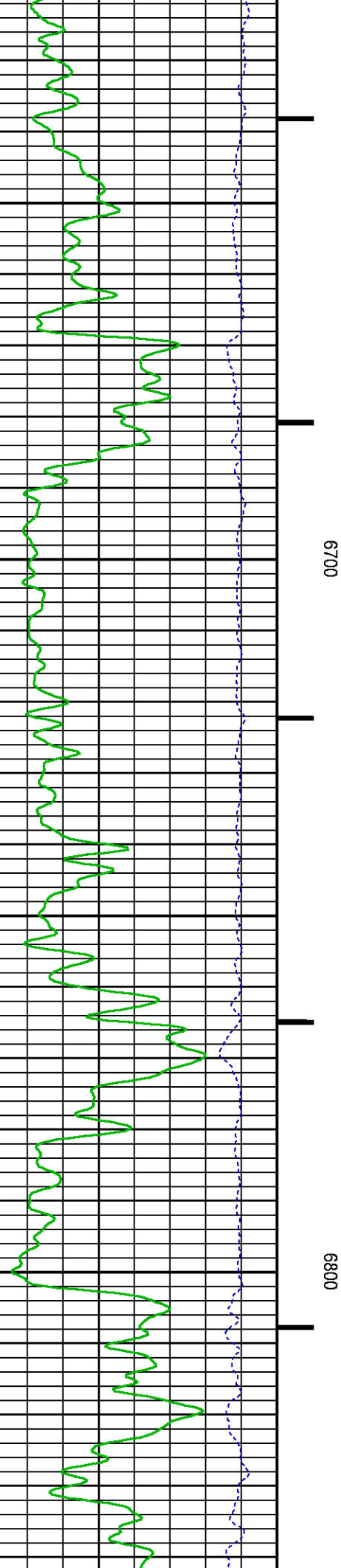
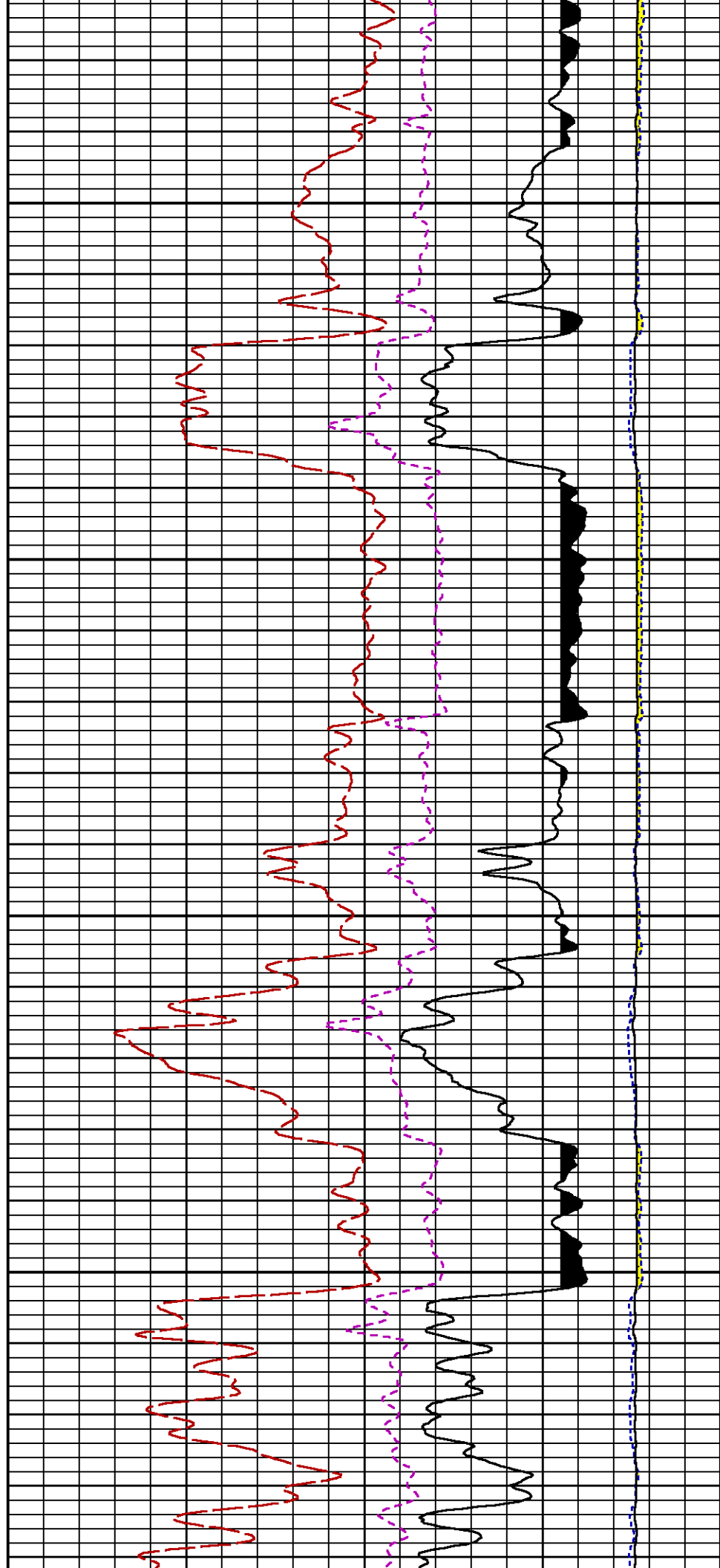
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-25.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-22.75	LS	-12.75	RICS	-12.75	SS	-12.75

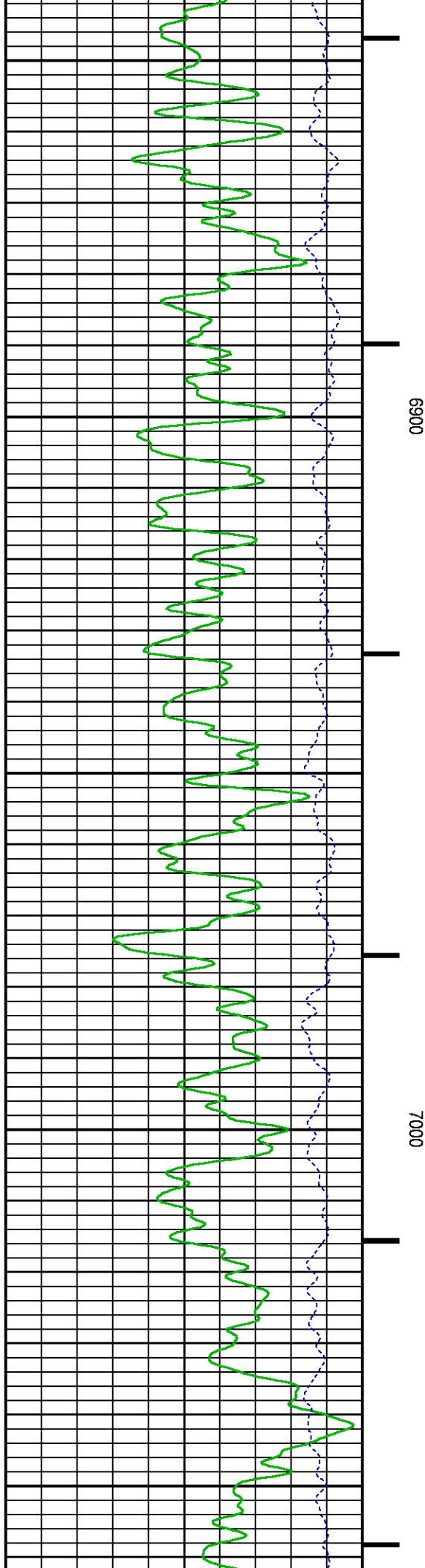
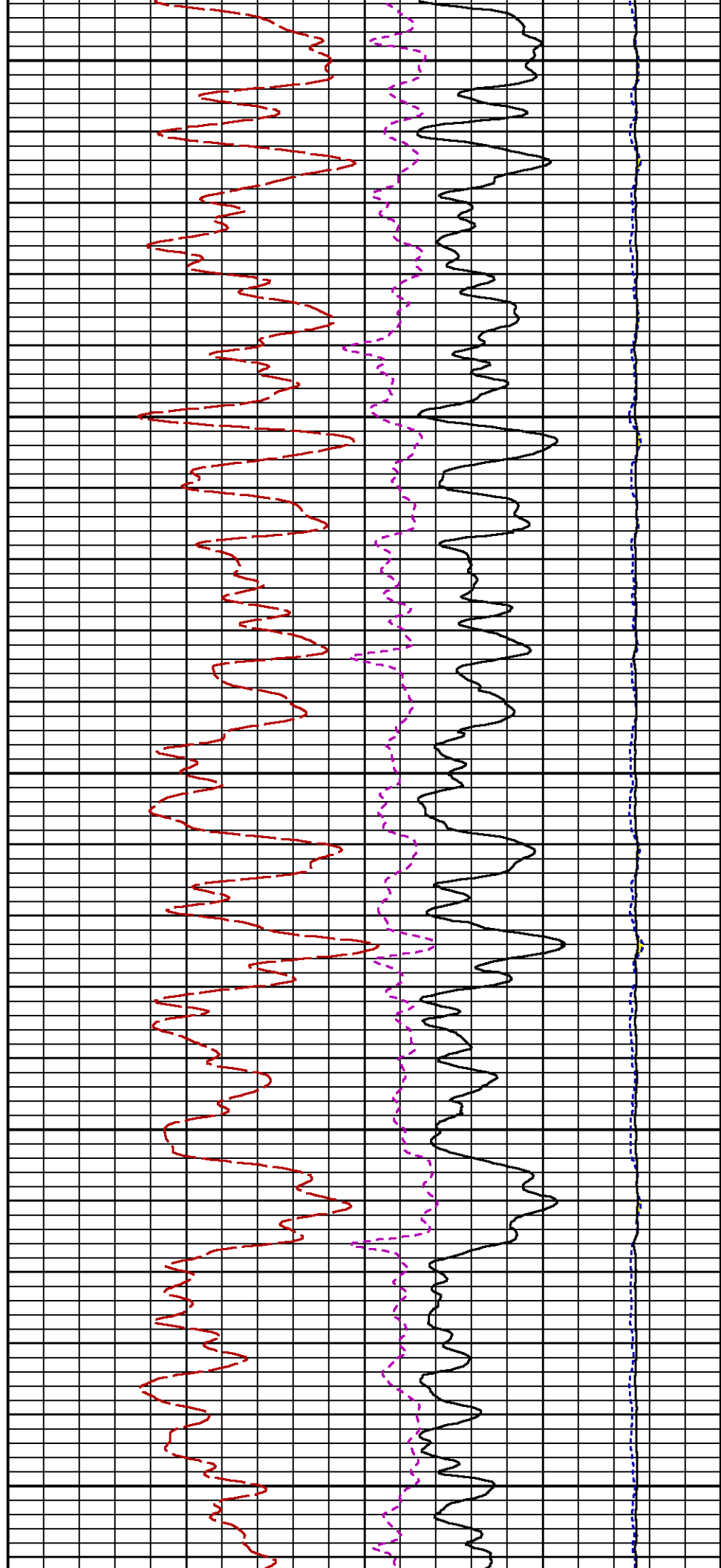
Presentation : SysA:/dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/CC_FEDERAL_0697-03-08E_RPM_WF.fvpdf [5"/100' Scale]
Plot Interval : 6370 - 9689.25 Feet

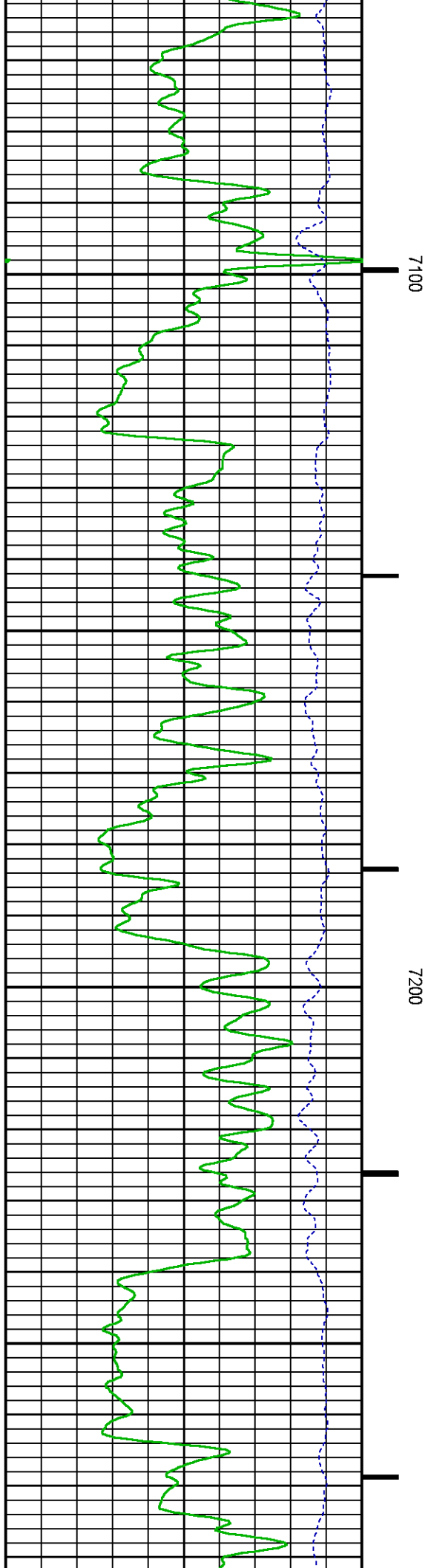
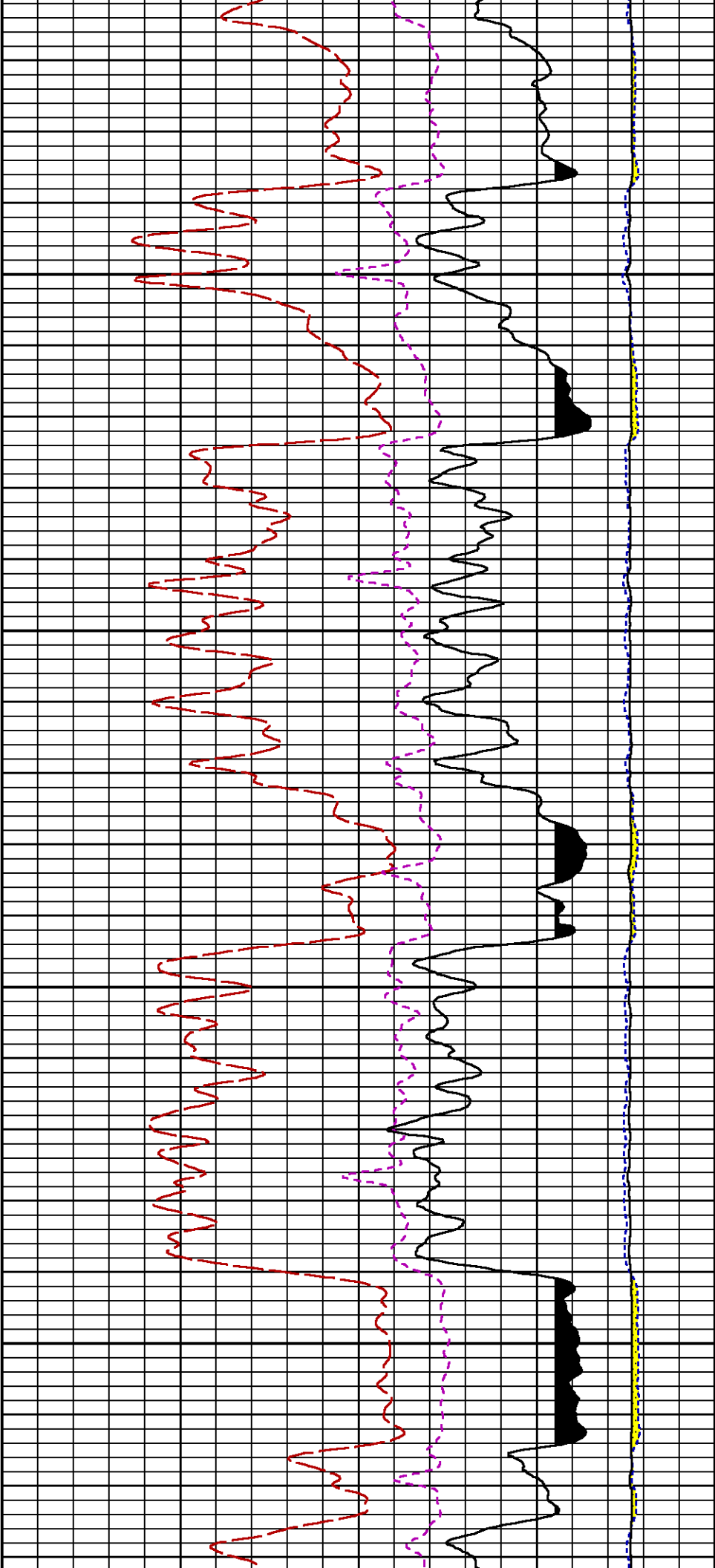
Data File 1 : F1 : SysA:/dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/45_LARAMIE_CC_FEDERAL_0697-03-08E_RPM_MAIN_WF.xtf
Created On : Sep 2 10:23:11 2018
Company : LARAMIE ENERGY LLC
Well : CC_FEDERAL_0697-03-08E
Field : GRAND VALLEY
File Interval : 6353.25 - 9689.5 Feet
OCT : p354h

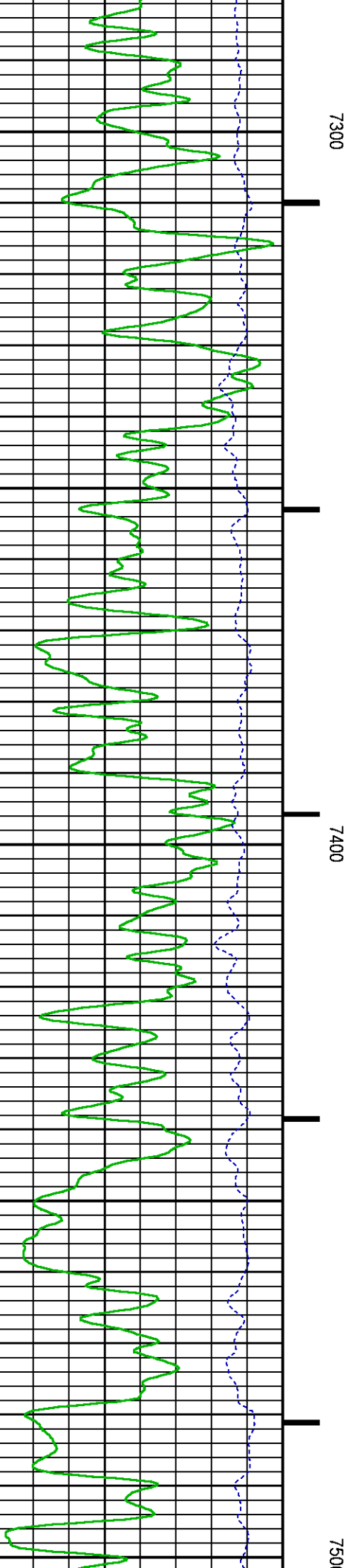
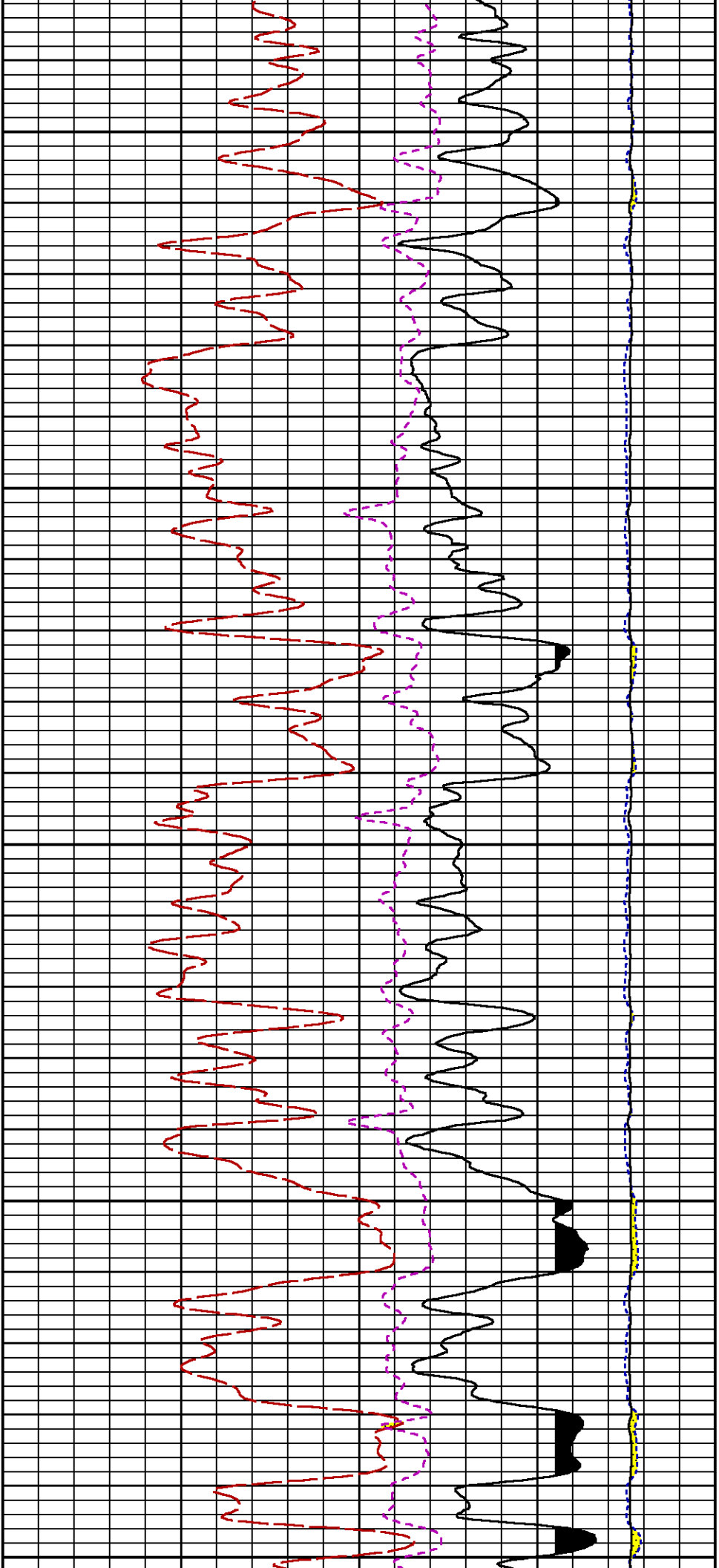


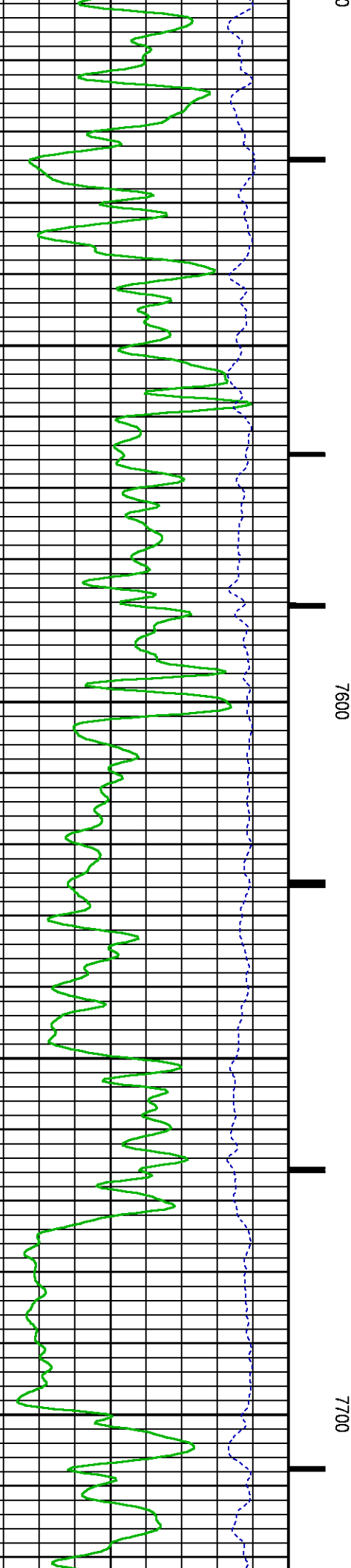
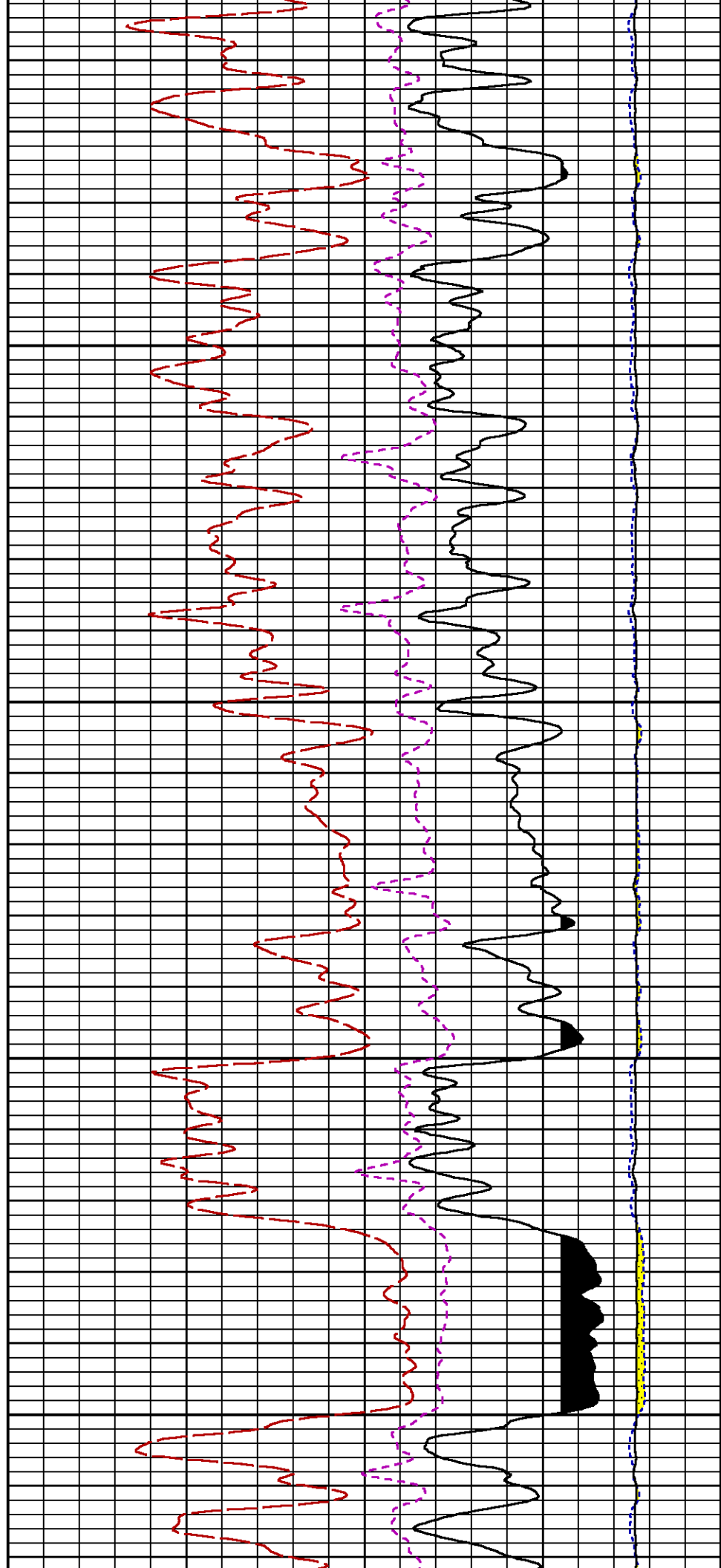


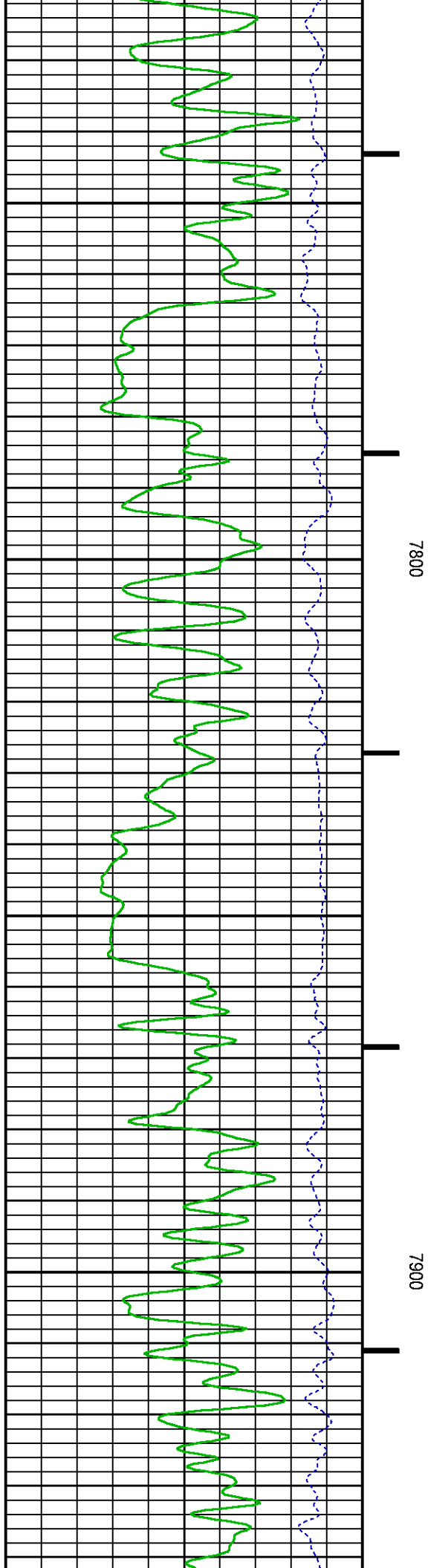
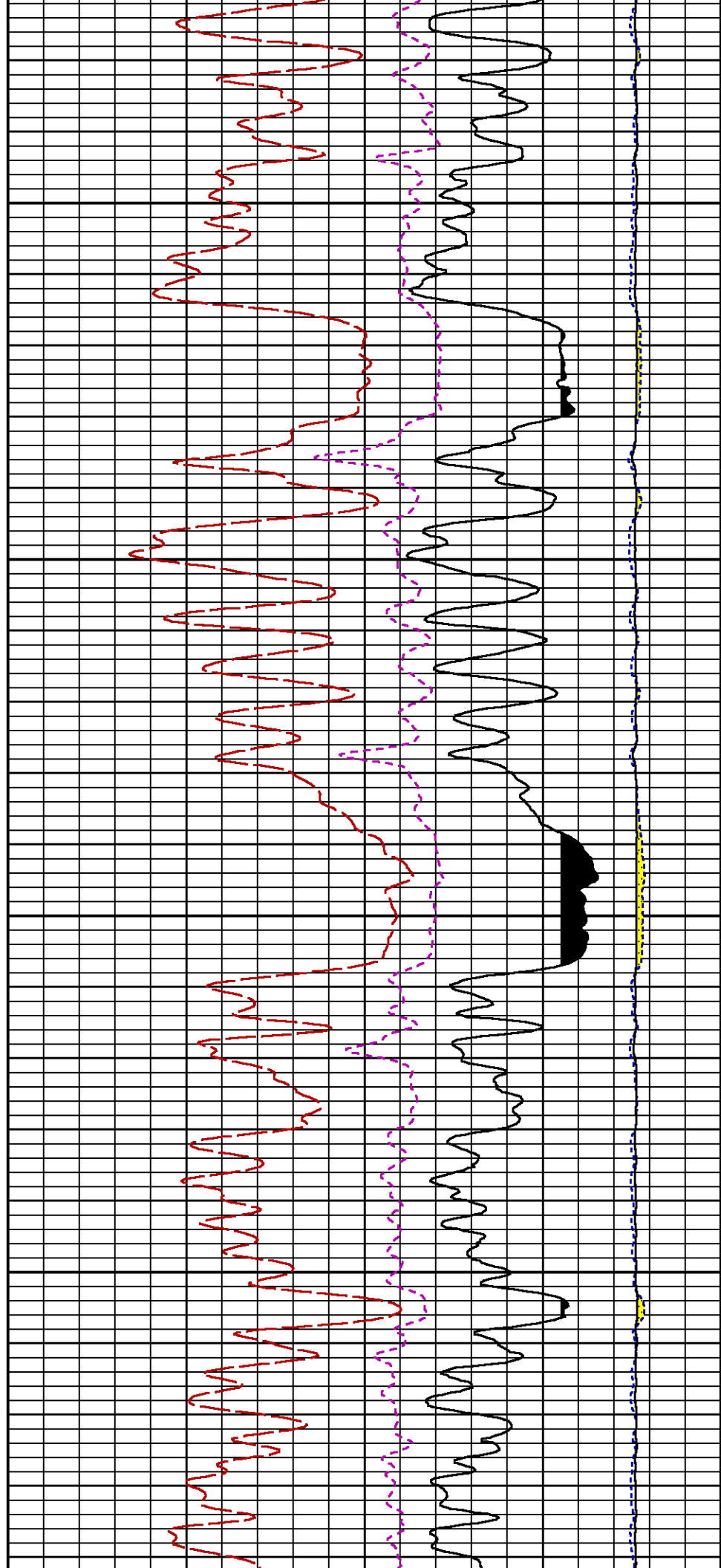


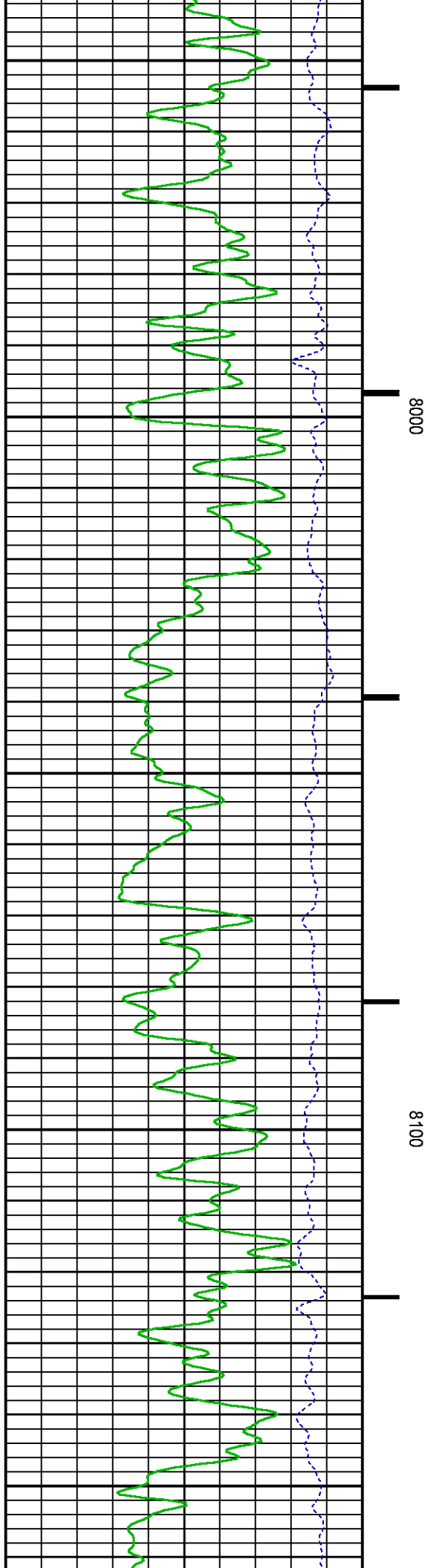
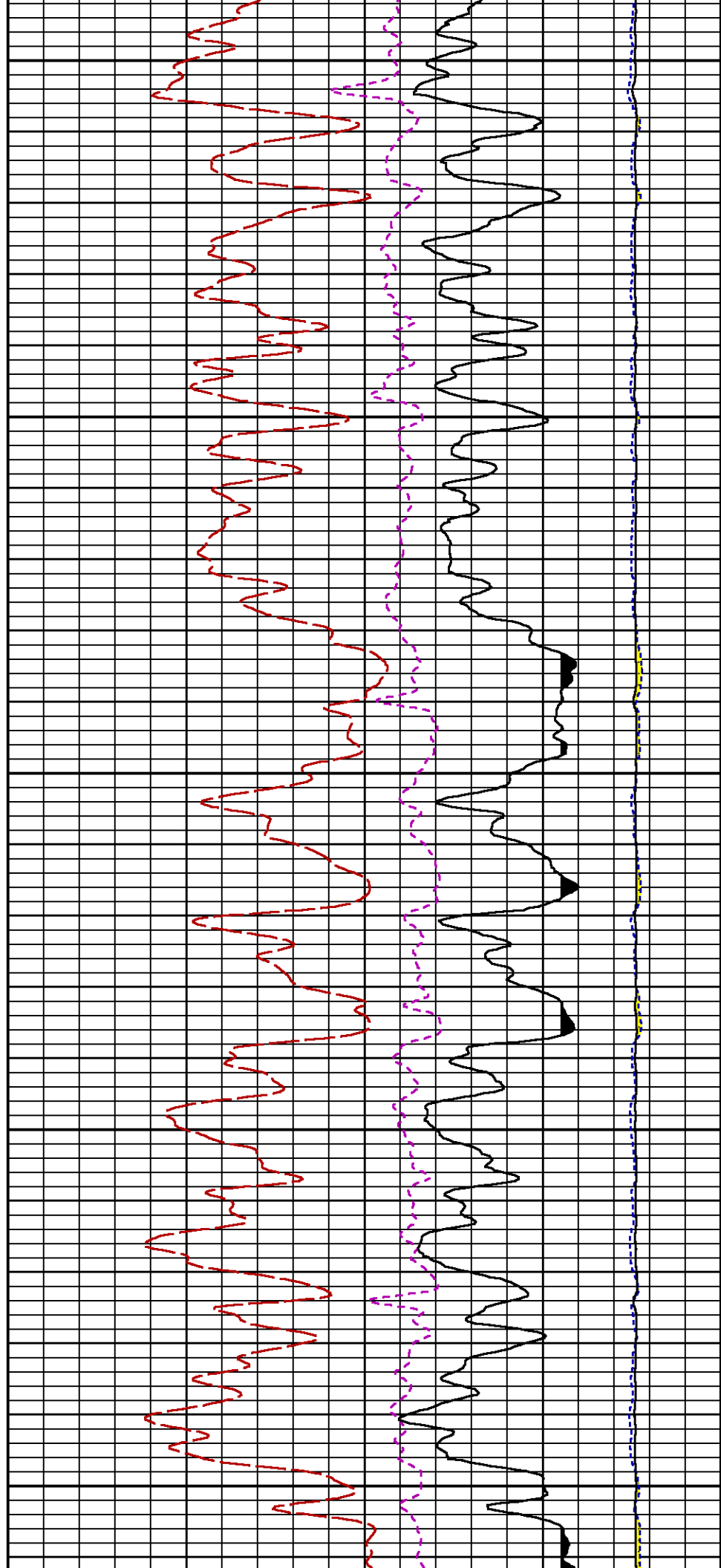


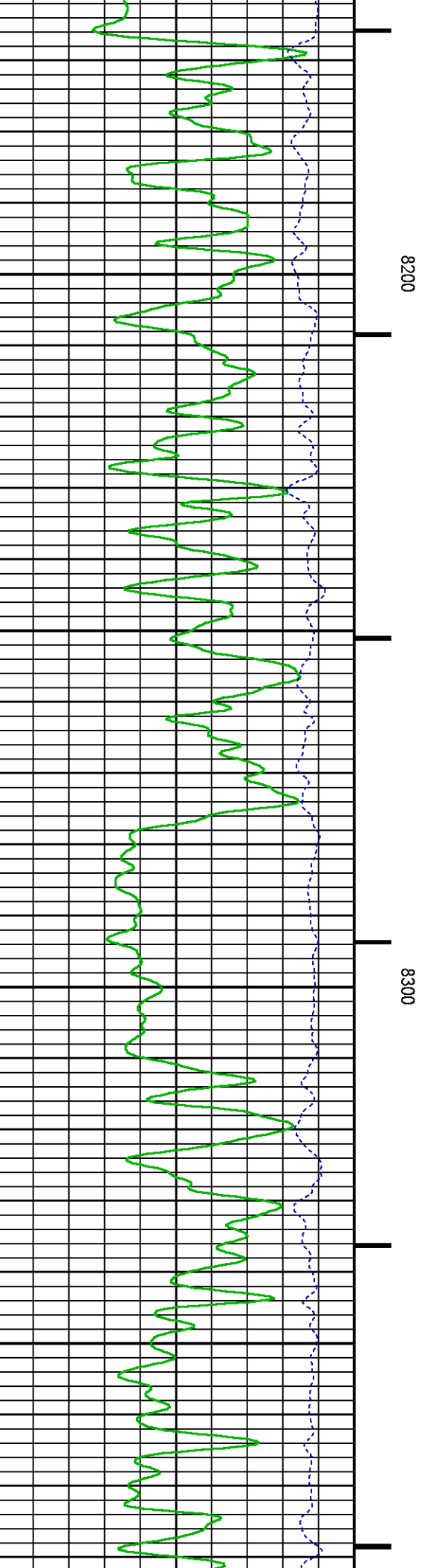
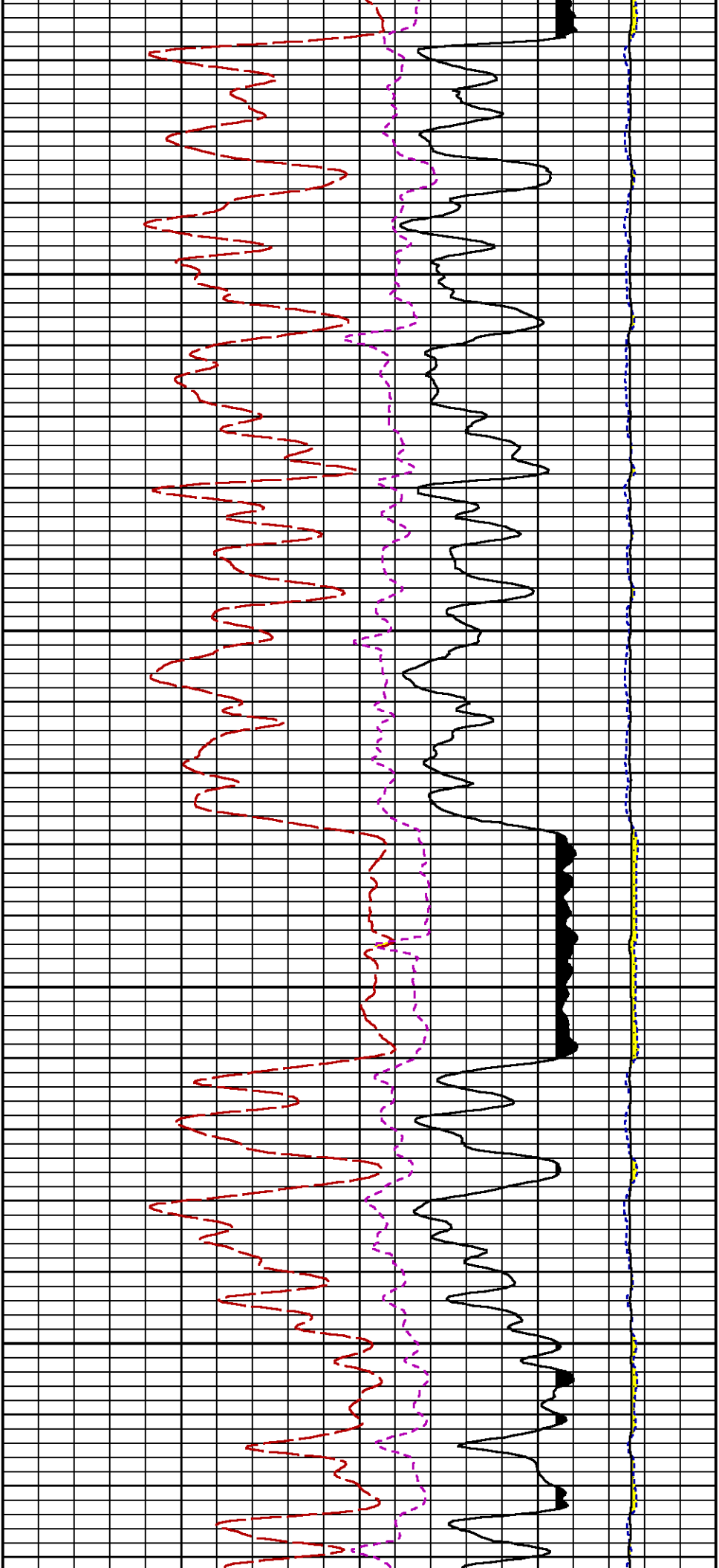


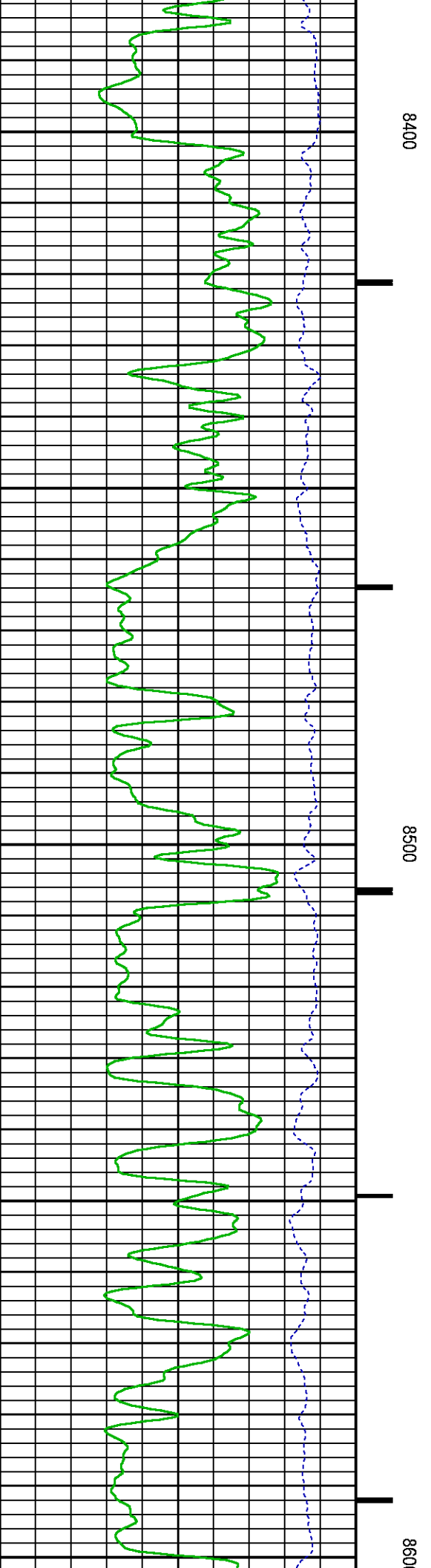
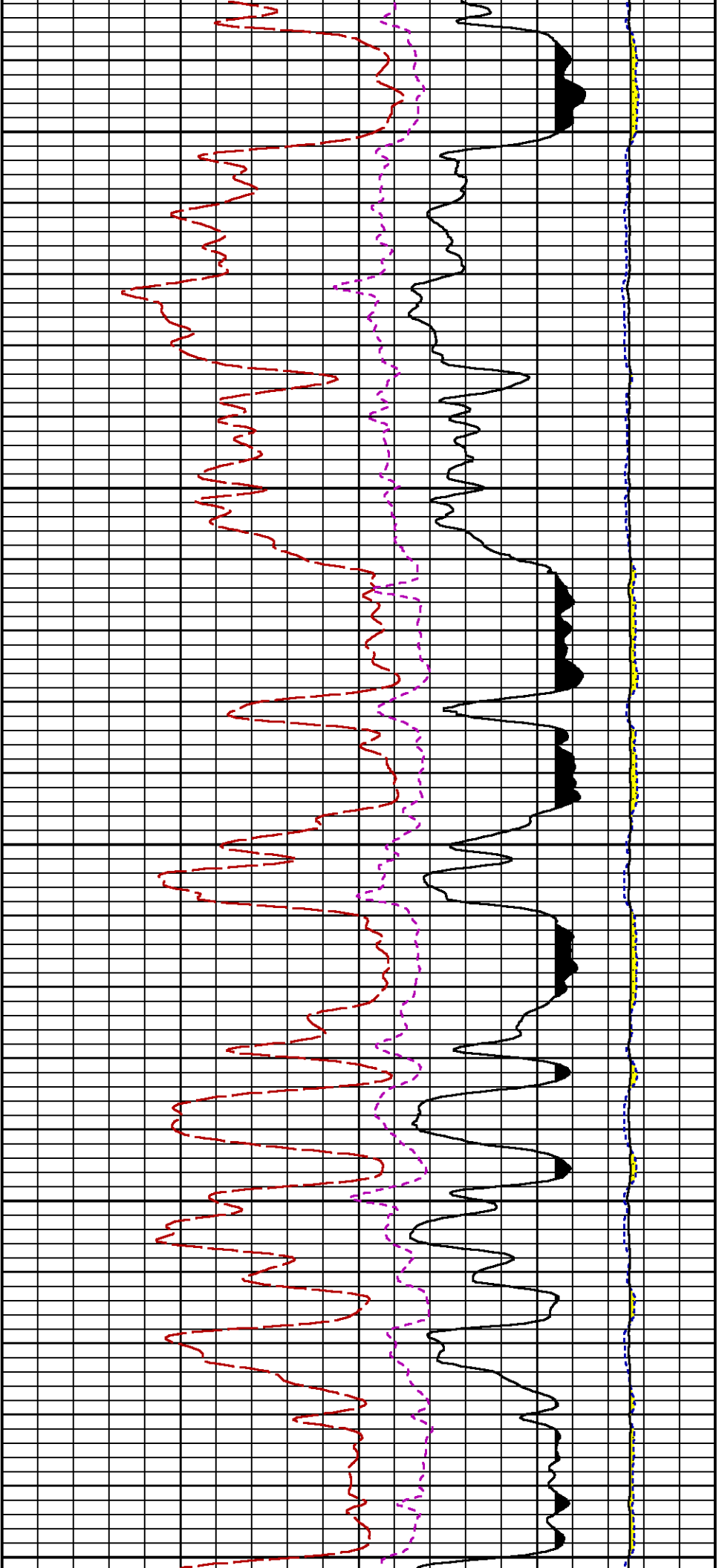


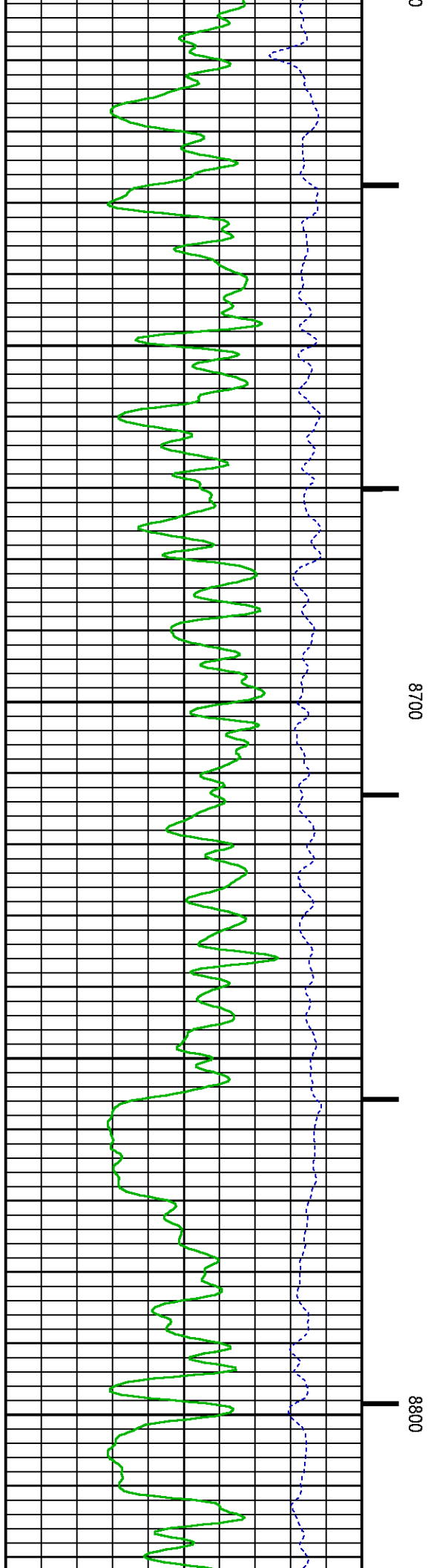
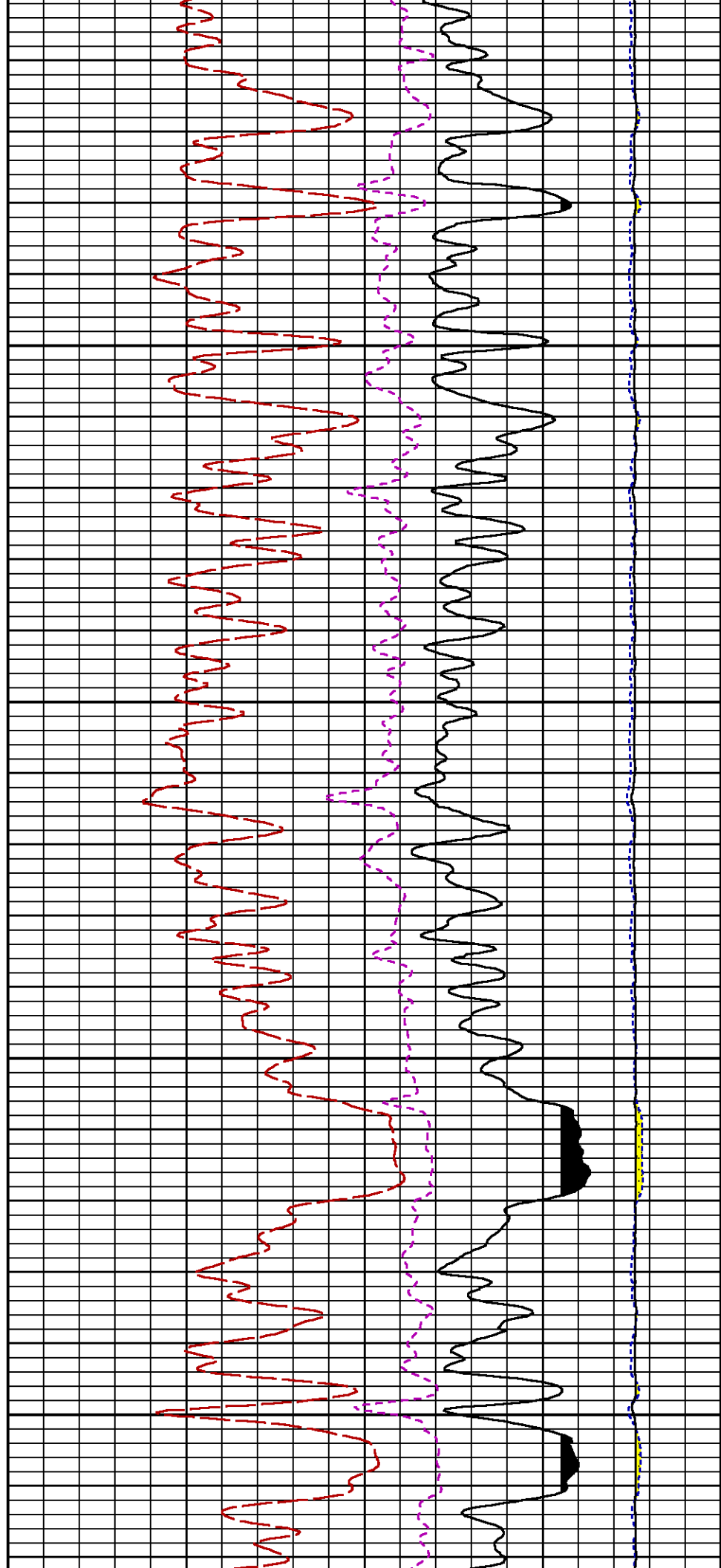


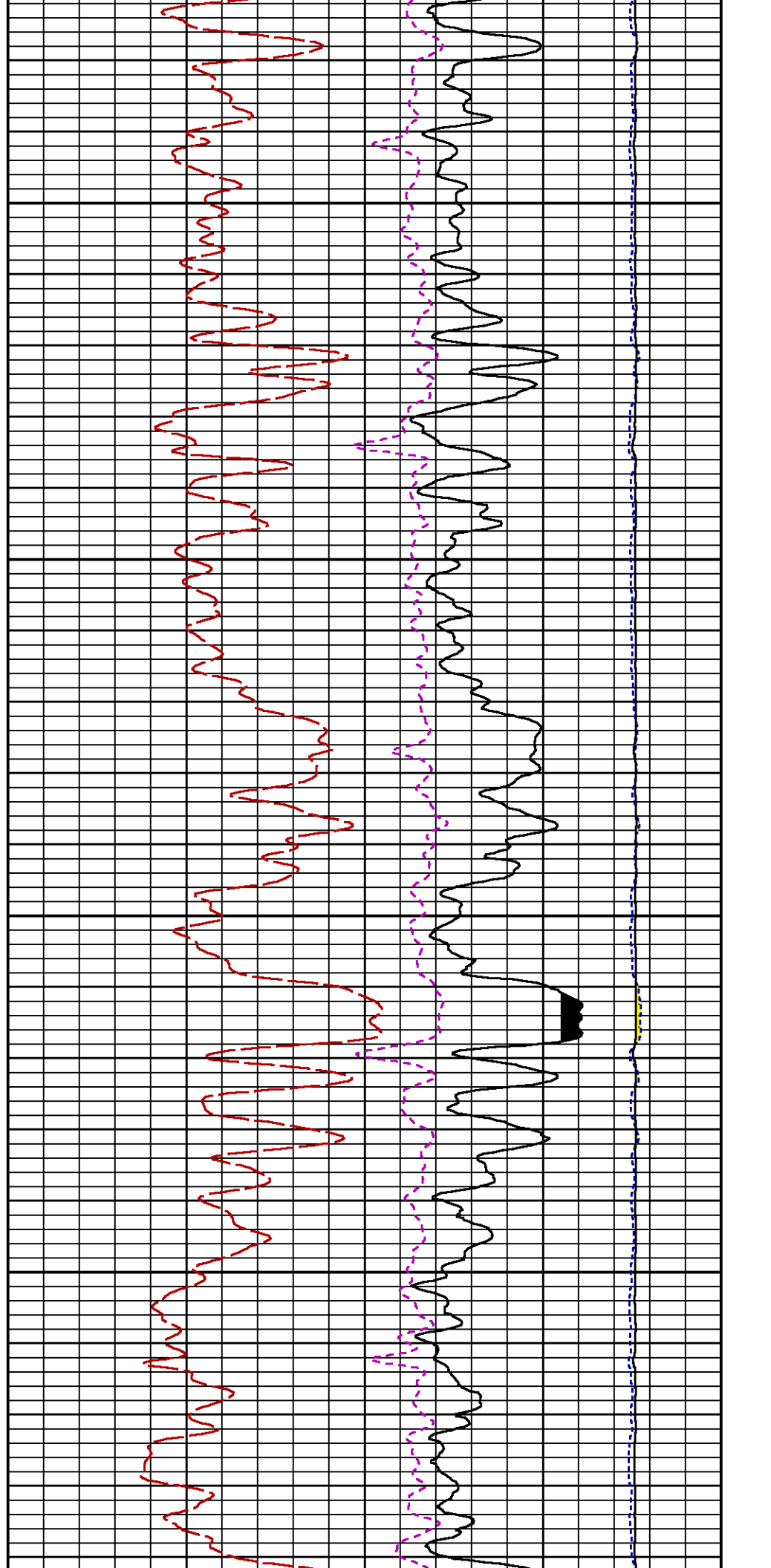
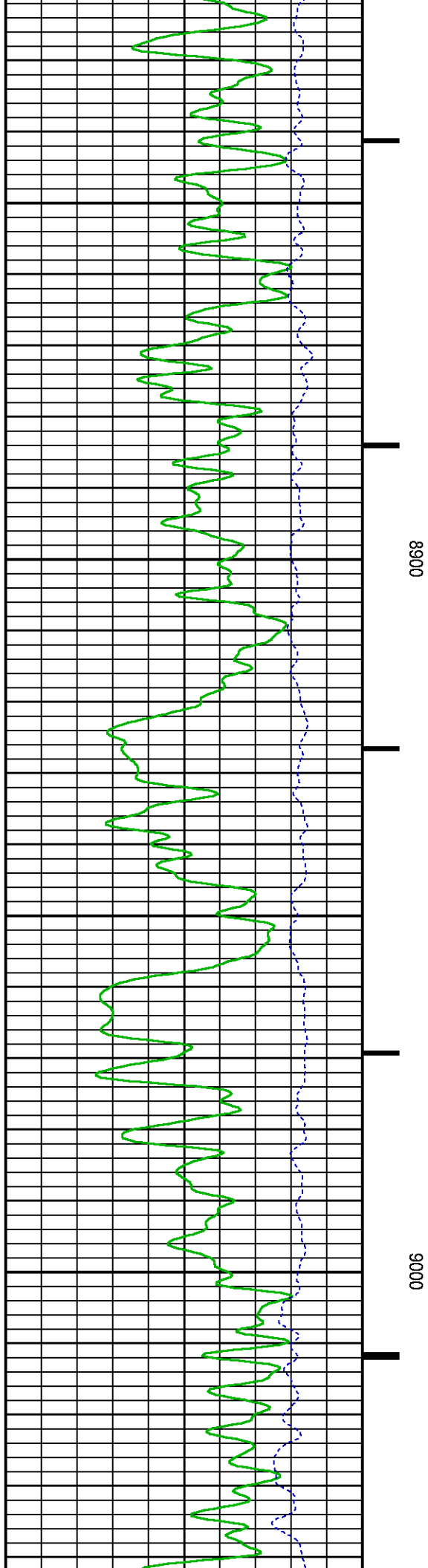


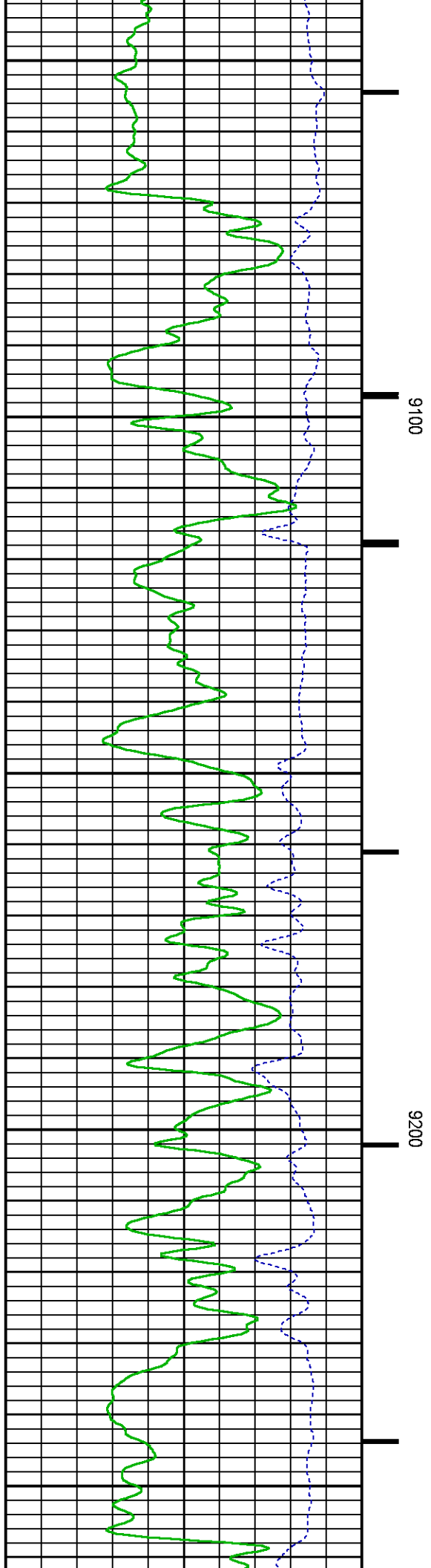
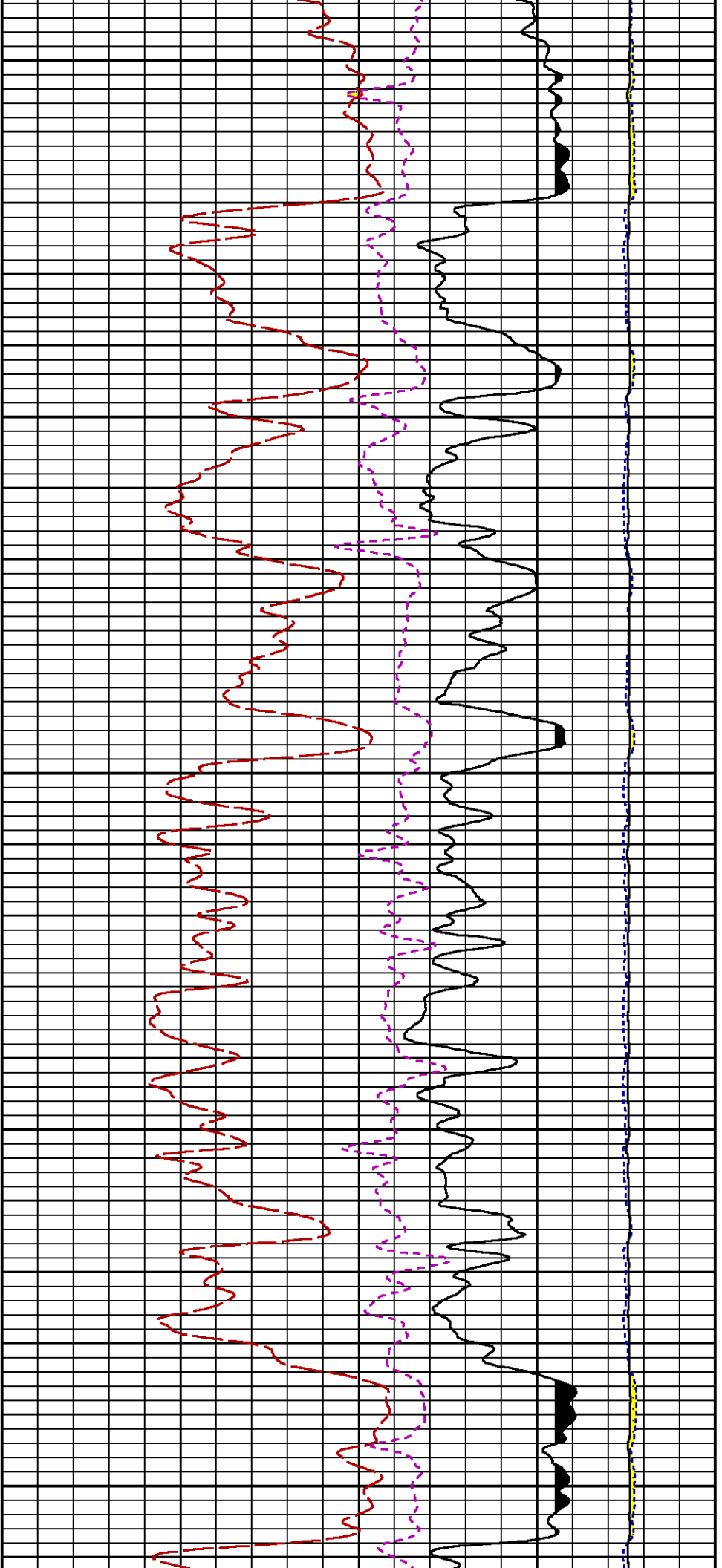


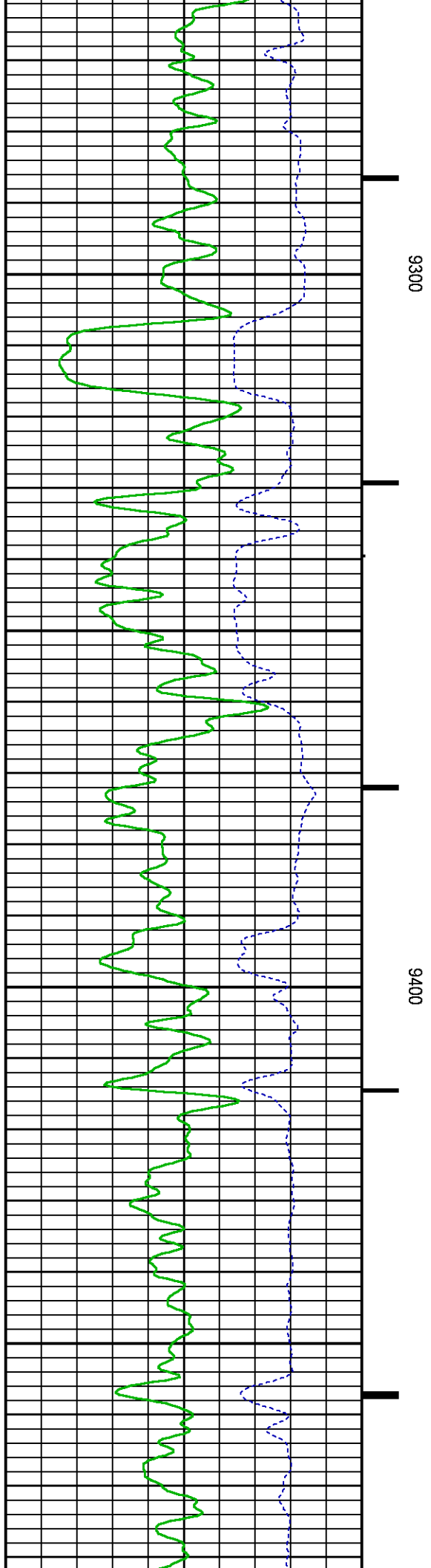
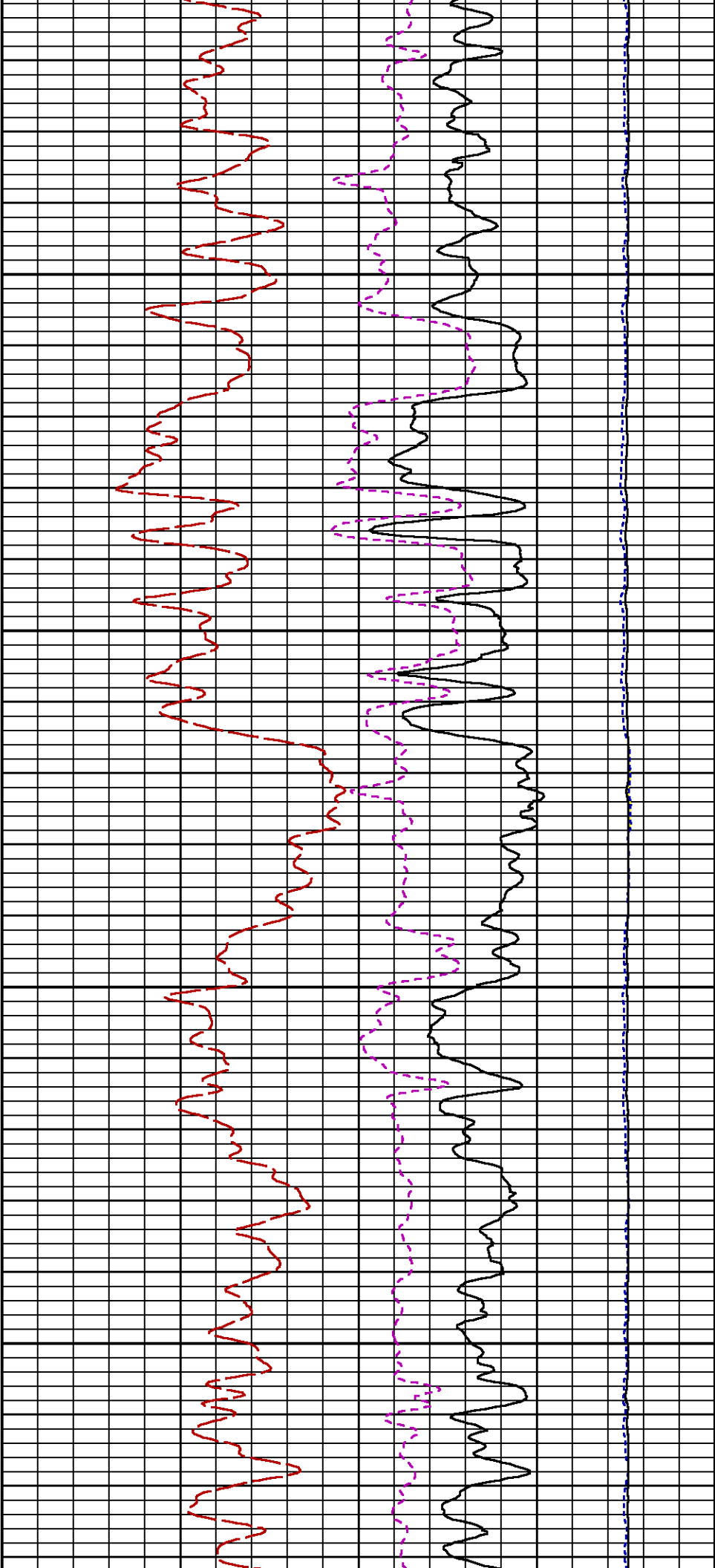


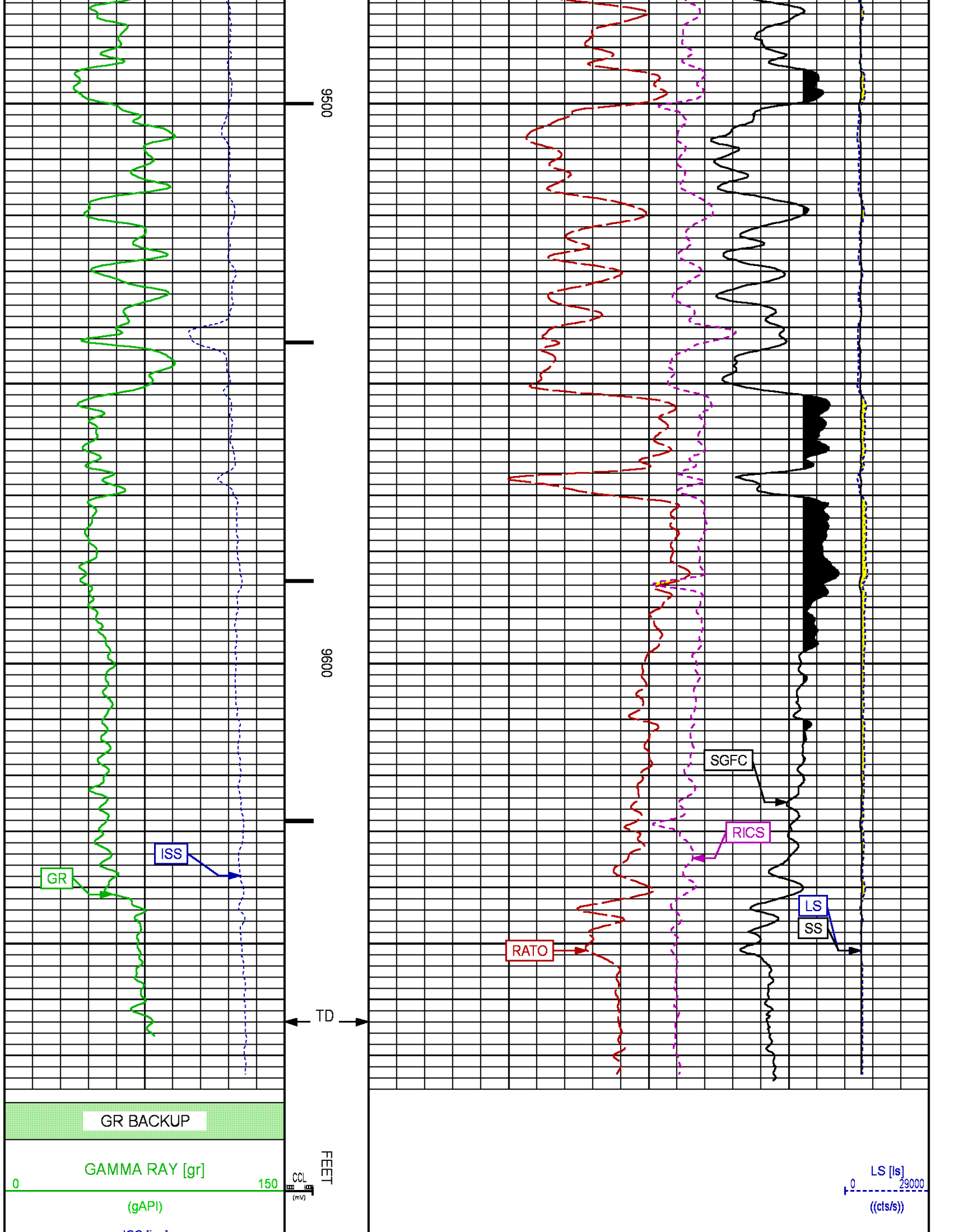












0	ISS [iss]	1E+06			SS [ss]	290000
	((cts/s))				((cts/s))	
				RATO [rato]		0
			17	(dim)		
				RICS [rics]		9
			39	(dim)		
				SGFC [sgfc]		0
			60	(cu)		

REPEAT PASS

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Updates: 1

Plotted: Sun Sep 2 11:01:26 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/p354h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 6862.558 ft BOTTOM DEPTH: 7105.751 ft

SYMMETRIC FILTER

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

RPM PROCESSING

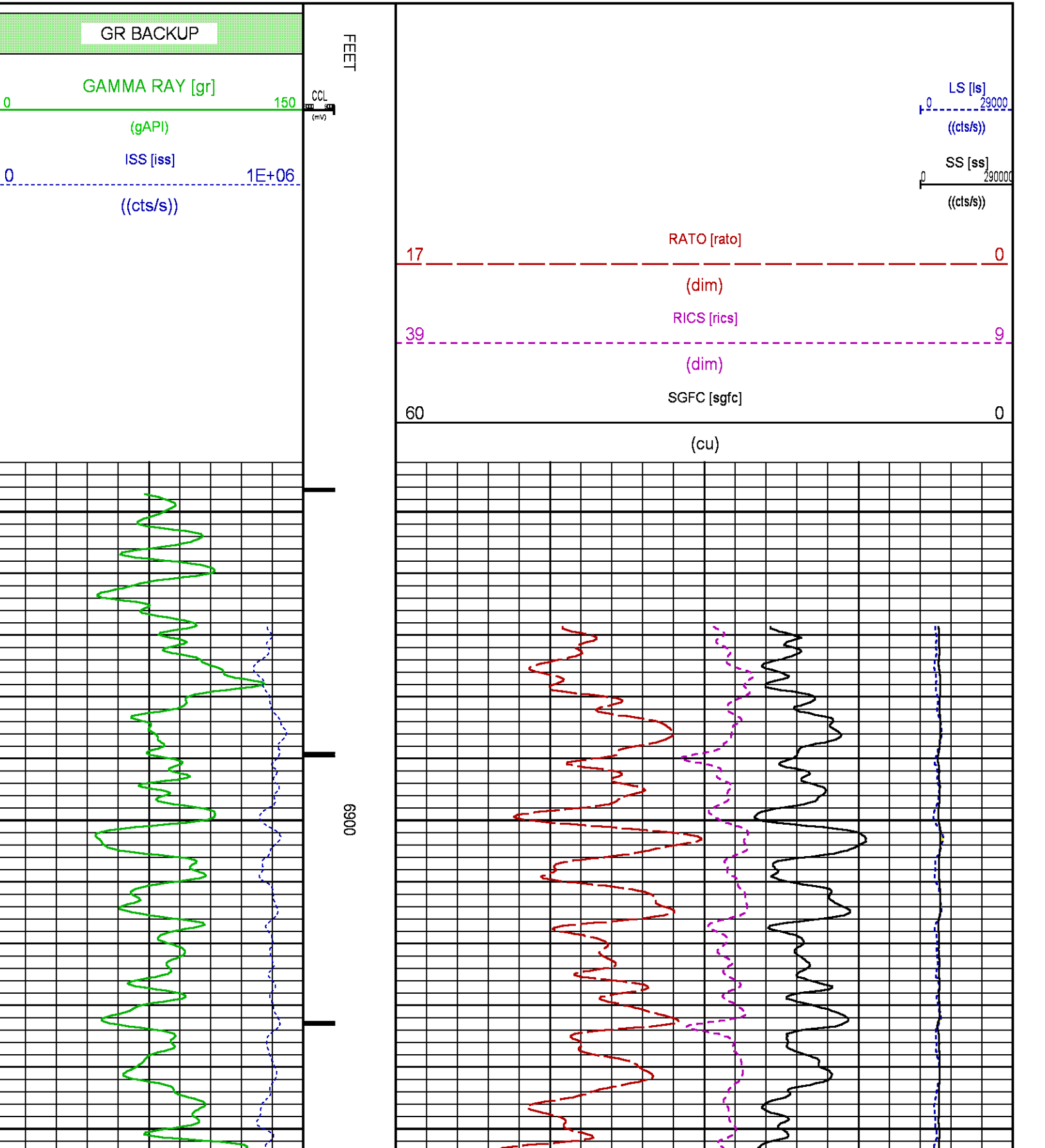
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP	BOTTOM
	OPEN/CASED HOLE	CASED HOLE		"	"
	BOREHOLE SIZE	7.87	in	"	"
	LARGEST CASING OD	4.50	in	"	"
	MATRIX	SANDSTONE		"	"

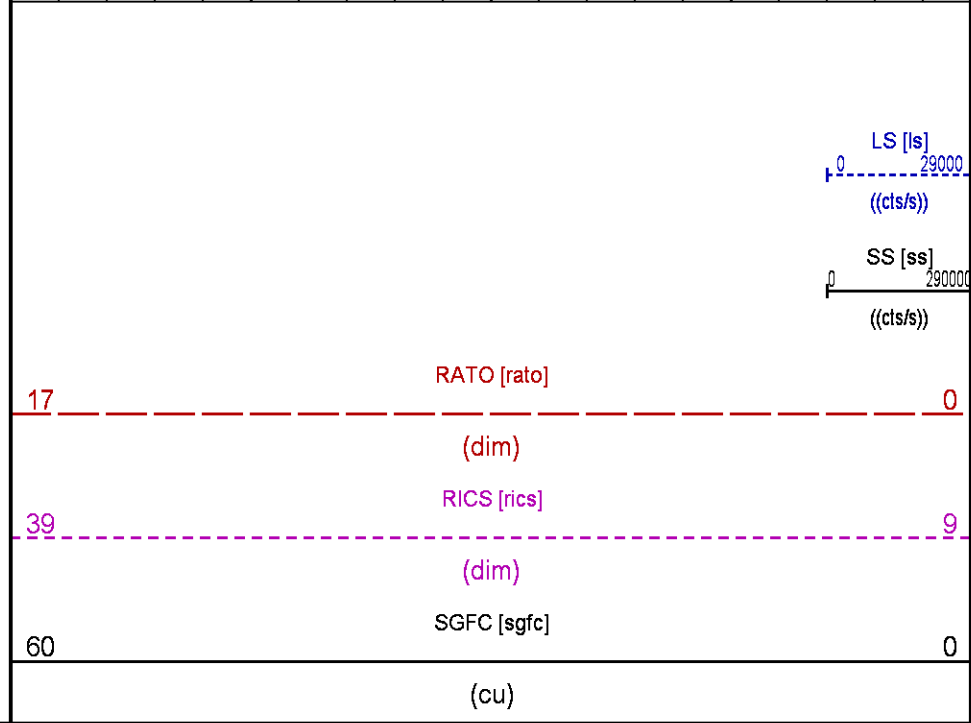
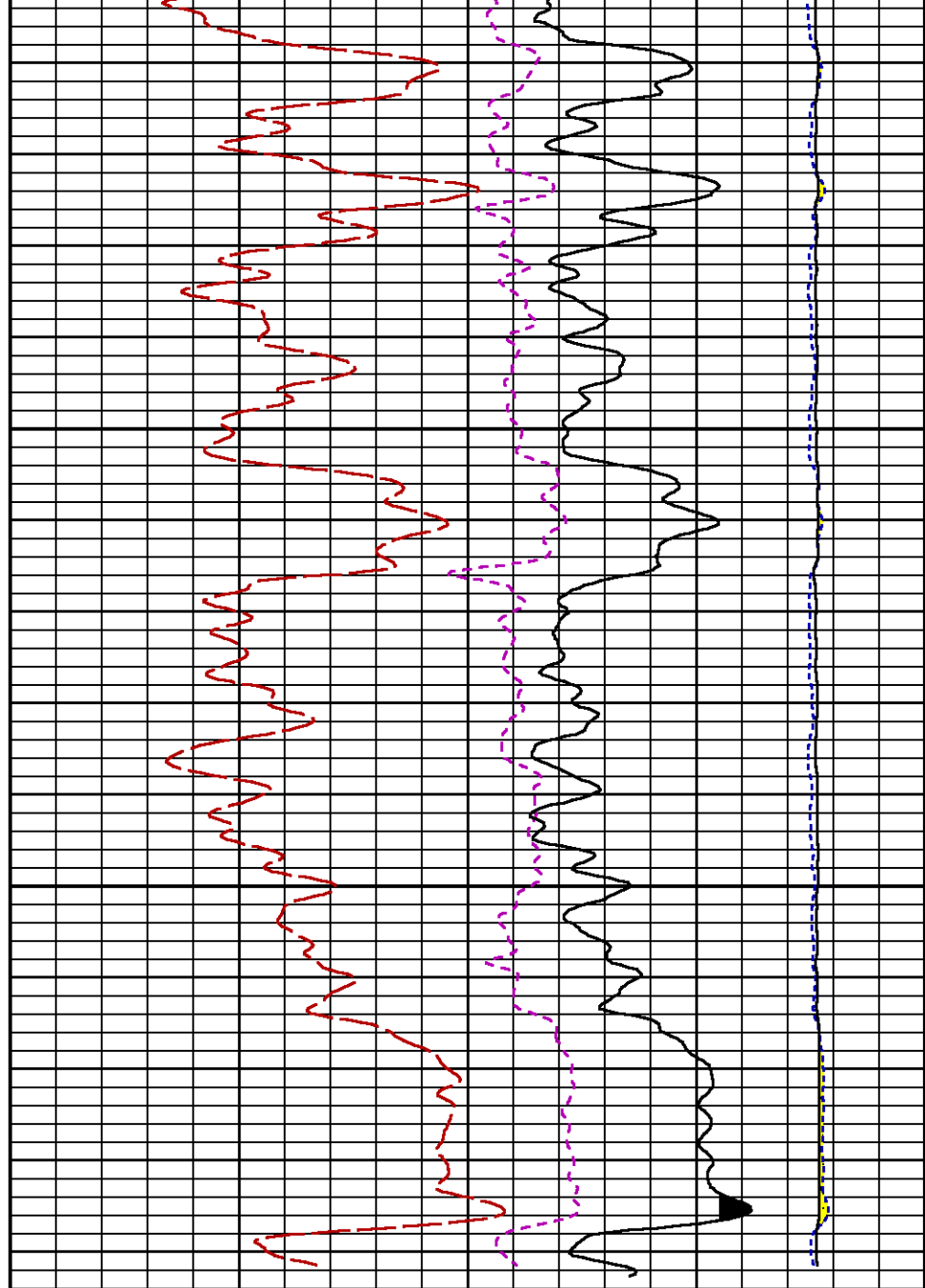
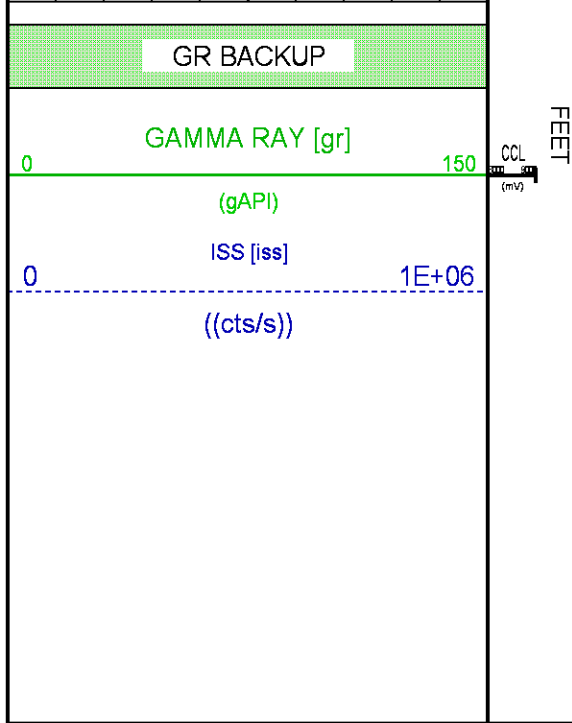
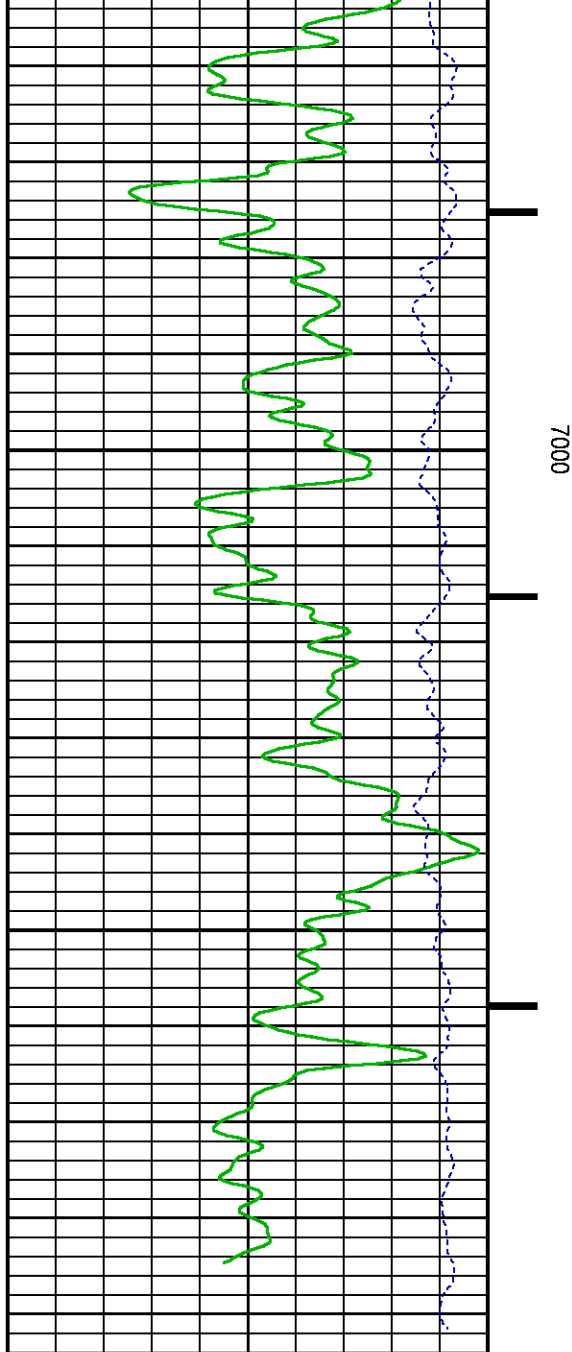
CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Sep 2 09:48:37 2018	CASING COLLAR LOCATOR
F1:GR	Sep 2 09:48:37 2018	GAMMA RAY
F1:ISS	Sep 2 09:48:37 2018	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Sep 2 09:48:37 2018	LONG SPACE COUNT RATE
F1:RATO	Sep 2 09:48:37 2018	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Sep 2 09:48:37 2018	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Sep 2 09:48:37 2018	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS	Sep 2 09:48:37 2018	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





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/p354h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2812LA 11608516 DATE/TIME PERFORMED: Fri Jul 27 12:13:28 2018

UNIT #: 5753XD 10412898 CALB JIG #: 4702NK BA_820

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	108.60	317.69	209.1	1.004	109.07	319.07	210

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2812LA 11608516 DATE/TIME PERFORMED: Fri Jul 27 12:15:52 2018

UNIT #: 5753XD 10412898 VERI JIG #: 4702NK BA_820

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	105.58	315.67	1.004	106.04	317.04	211.00
						200.00 220.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10068031 DATE/TIME PERFORMED: Fri Jul 20 13:10:46 2018

UNIT: 5753XD 10412898 CALIBRATOR: 2437XB 112674 SOURCE: 8281AA 10047980 HOURS: 8281AA 113

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	790366	118	2168	2162	2249	117	7.0	0.9778

Interpolated	1300000	138	2150	2155	2241			
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	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	790366	5846	959	130	25.92	0.15	24.08	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	790366	164656	25413	85377	30385	7913	51786	12693
Fit Quality %		0.660	0.561	0.640	0.651	0.713	0.642	0.721

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	790366	1.43	4.80	31.11	15.26	10.79	3.84	4.08
		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 %		0.041	0.070	0.118	0.054	0.071	0.063	0.062
Reduced	1393463	1.43	4.79	31.05	15.24	10.80	3.84	4.08
		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

INSTRUMENT CONFIGURATION

Source File: /dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/p354h~GR_SONDEX.tdg

A3 CABLEHEAD
Diameter : 1.37"

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 : 8248EA
Mnemonic : PCM
Measure Point: 1.00': CCL MP

GAMMA RAY, 1 11/16"
Diameter : 1.69"
Length : 2.17'
Weight : 10 lbs
Series : 2812LA
Mnemonic : GR
Measure Point: 0.62': 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 MP
Measure Point: 5.04': LS MP
Measure Point: 4.79': SS MP

33.24'

CCL MP 25.19'

GR MP 22.64'

XLS MP 13.58'
LS MP 13.16'
SS MP 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
PRES MP

1.65'

BULL PLUG 1 11/16

0.00'

TOTAL LENGTH: 33.24'
TOTAL WEIGHT: 140 lbs
MAX DIAMETER: 0"1.70"



COMPANY
WELL
FIELD
COUNTY

LARAMIE ENERGY LLC
CC FEDERAL 0697-03-08E
GRAND VALLEY
GARFIELD

STATE COLORADO

FILE NO:

CH140252J

API NO:

05045238070000

LOCATION:

SHL: 1776.0' FWL & 1224.0' FEL
SHL: 1776.0' FWL & 1224.0' FEL

ELEVATIONS:

KB 8458 FT
DF
GL 8428 FT

SEC 3 TWP 6S RGE 97W

DATE 02-Sep-2018