



FILE NO:	COMPANY	LARAMIE ENERGY LLC
API NO: 05077104720000	WELL FIELD COUNTY	BRUTON 30-16W VEGA MESA STATE COLORADO

Ver. 4.10	LOCATION:	OTHER SERVICES
	SHL: 2648' FSL & 1873' FEL BHL: 1431' FSL & 1305' FWL SEC 30 TWP 9S RGE 93W	RAL

PERMANENT DATUM	GL	ELEVATION	7643 FT
LOG MEASURED FROM	KB	30 FT	ABOVE P.D.
DRILL. MEAS. FROM	KB		

ELEVATIONS:	KB	7673 FT
	DF	7672 FT
	GL	7643 FT

DATE	11-Feb-2018
RUN	1
TRIP	2
SERVICE ORDER	US132068
DEPTH DRILLER	8093 FT
DEPTH LOGGER	8009 FT
BOTTOM LOGGED INTERVAL	8009 FT
TOP LOGGED INTERVAL	2704 FT
TIME STARTED	14:30
TIME FINISHED	20:30
OPERATOR RIG TIME	6 HRS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	402 FT
LOGGED CEMENT TOP	1063 FT
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	237 DEGF
REFERENCE LOG	NA
REFERENCE LOG DATE	NA
EQUIP. NO.	ML-4291
LOCATION	GRAND JCT.
RECORDED BY	M.MENTZER
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 1 TRIP 2: *2 OPERATIONS IN WELLBORE*

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

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 6061' - 6080'

SJ: 7111' - 7131'

CREW: A.SHAHNOOSHI, C.GOLOBY

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 PNC 3D MODE GRAND SANDS SECTION

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

Patches: 2

Plotted: Sun Feb 11 20:45:41 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_16W/p353h03.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 2701.500 ft BOTTOM DEPTH: 3344.000 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	" "
	LARGEST CASING OD	4.50	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_BRUTON_30_16W/LARAMIE_RPM+01-MAIN-RPM_MN_GS_16W-5.fvpdf [5"/100' Scale]
 Plot Interval : 2675.5 - 3334 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_BRUTON_30_16W/RPM_MN_GS_16W.xtf
 Created On : N/A
 Company : LARAMIE ENERGY LLC
 Well : BRUTON 30-16W
 Field : VEGA
 File Interval : 2674.75 - 3344 Feet
 OCT : p353h

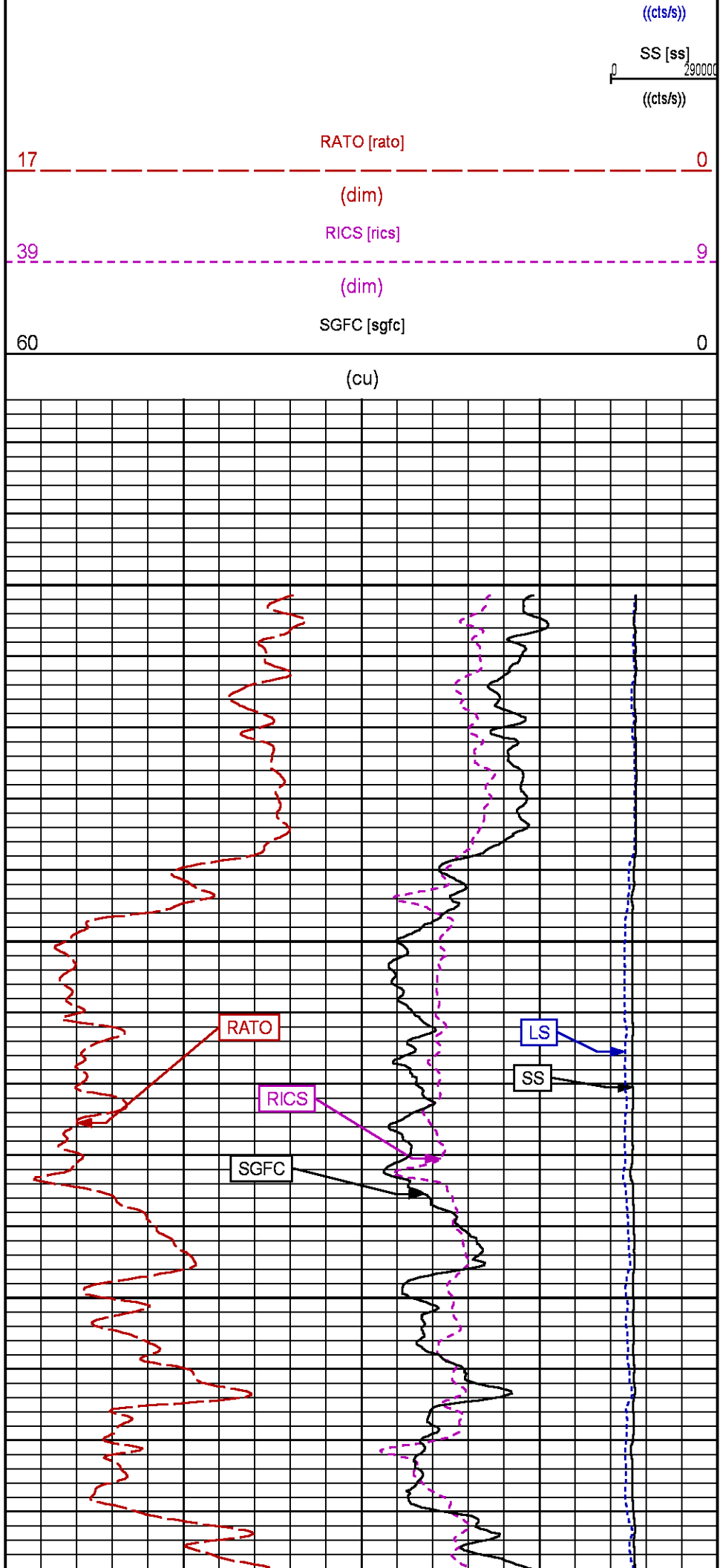
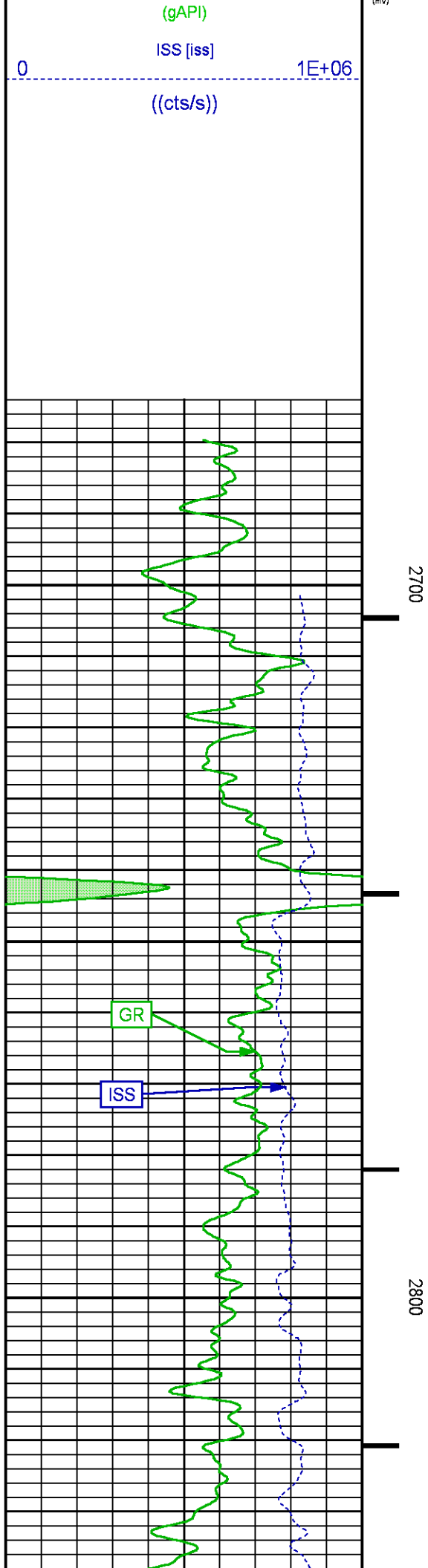
GR BACKUP

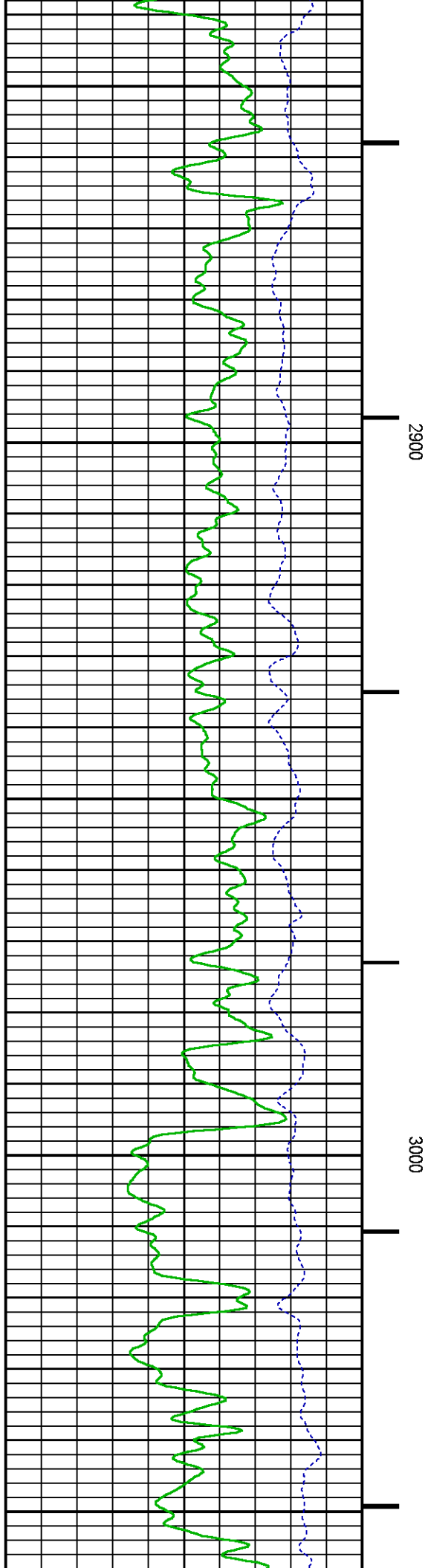
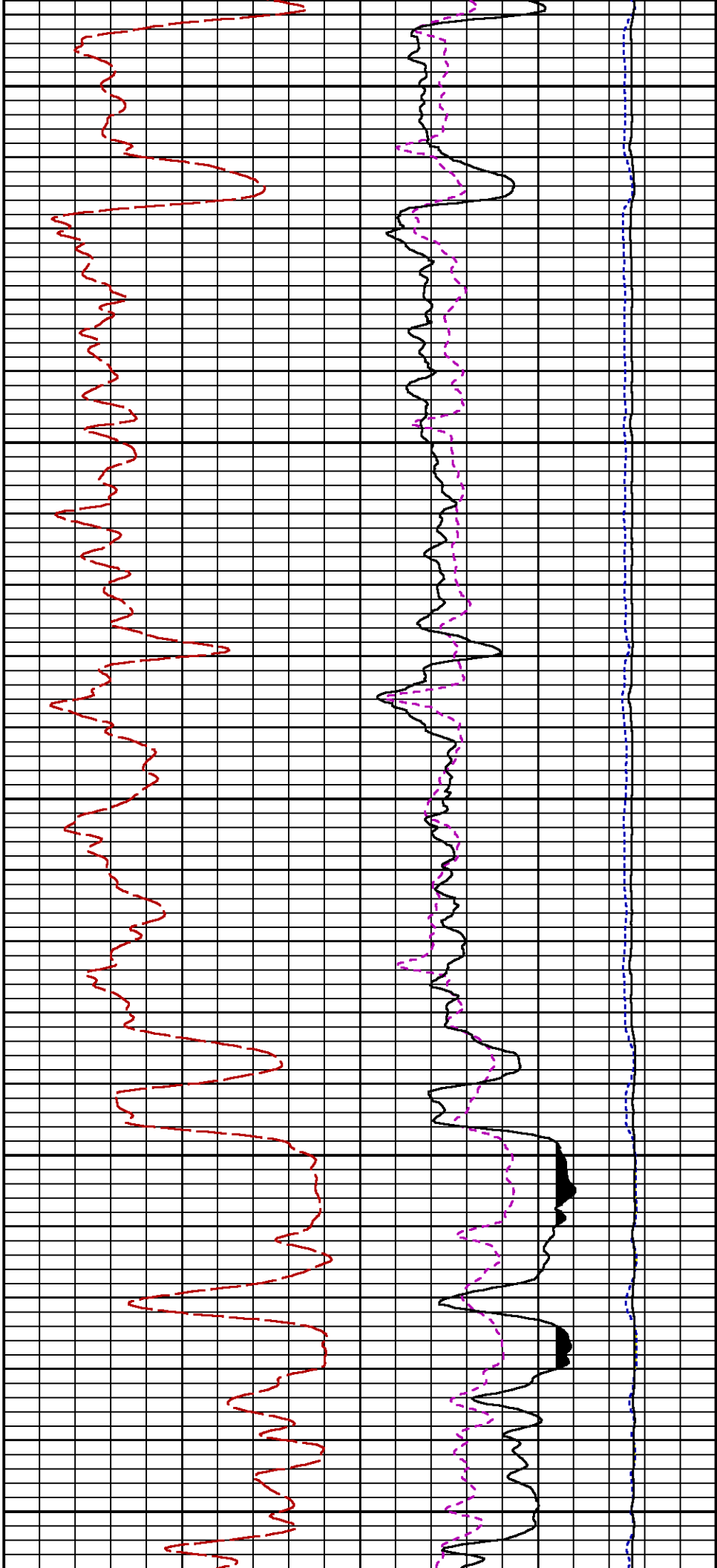
GAMMA RAY [gr]

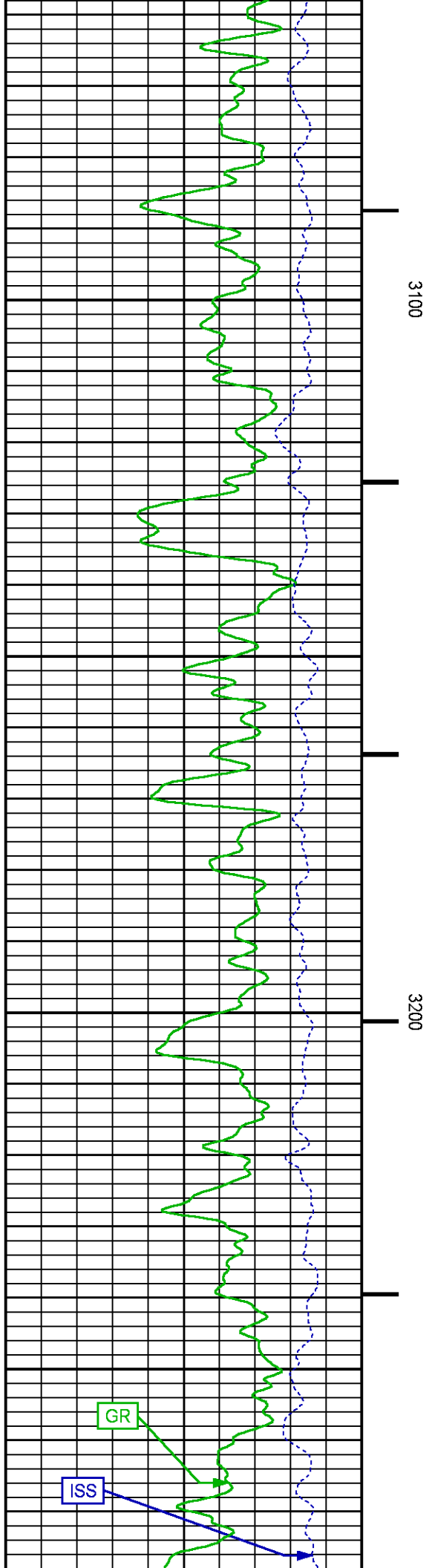
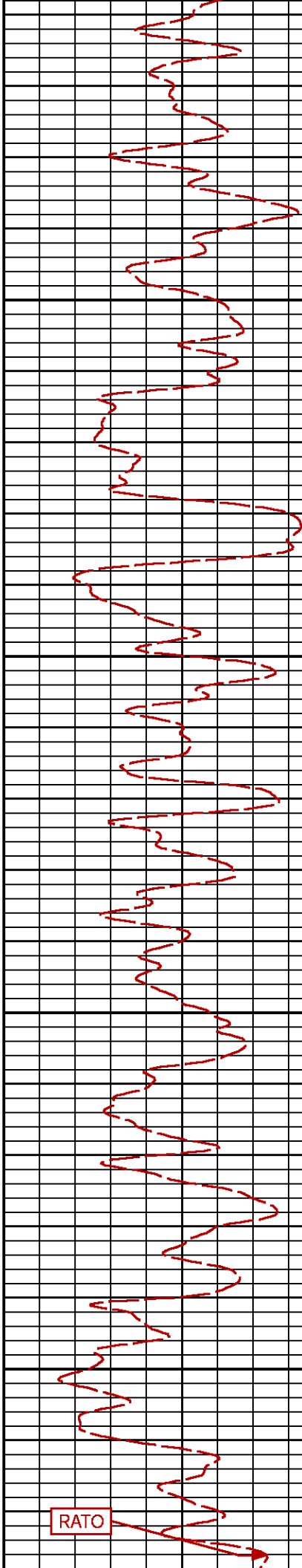
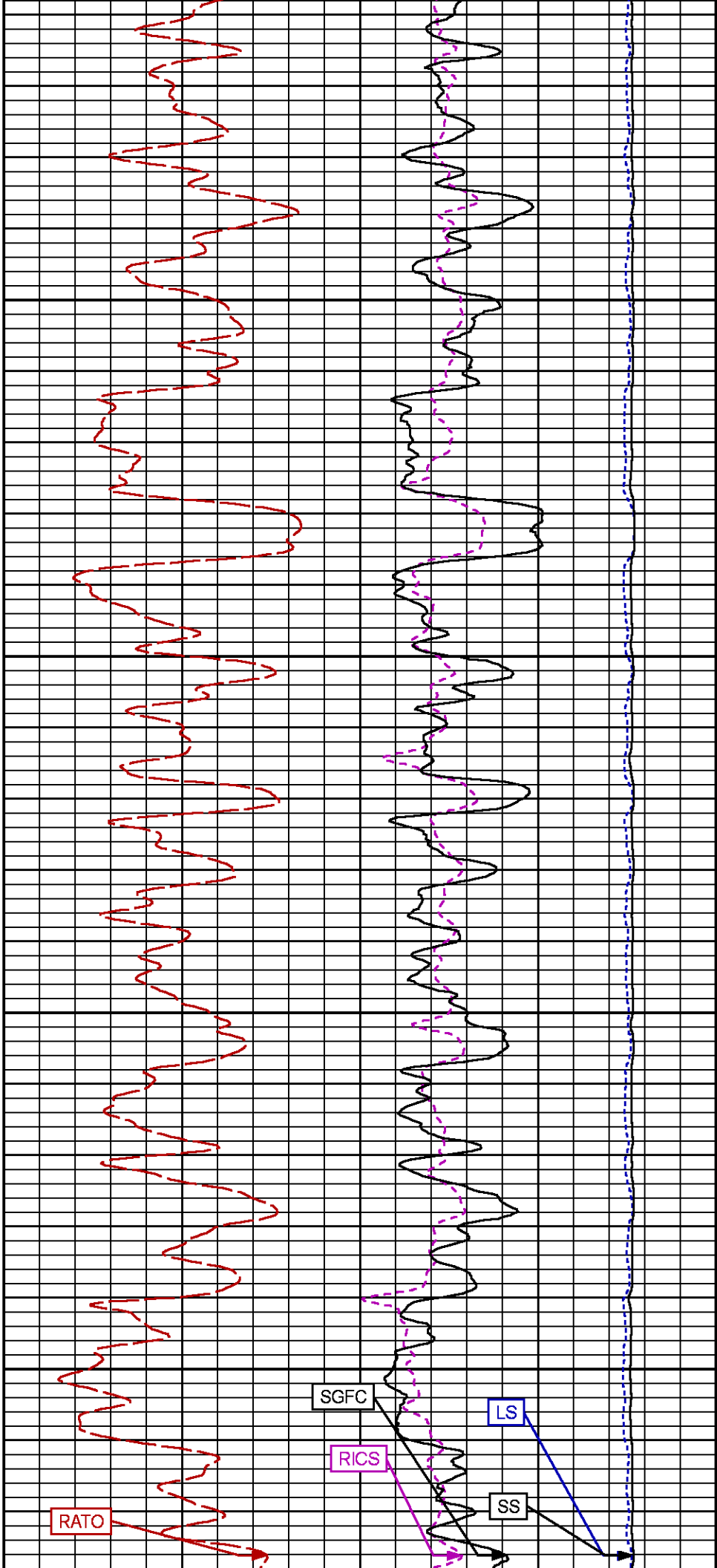
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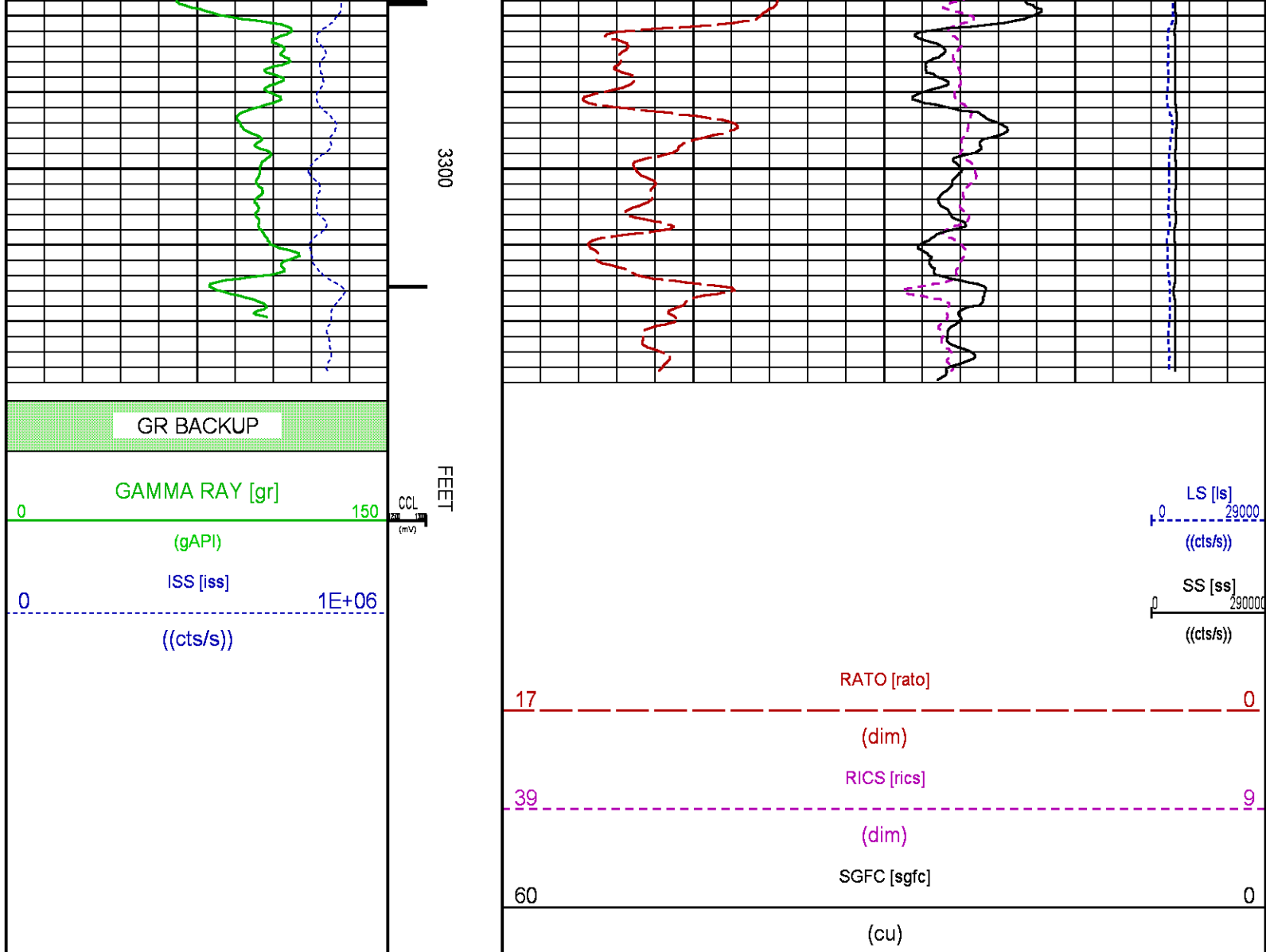
LS [ls]

29000









MAIN PASS PNC 3D MODE WILLIAMS FORK SECTION

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

Plotted: Sun Feb 11 20:23:51 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_16W/p353h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4779.000 ft BOTTOM DEPTH: 8013.750 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)
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PNC Parameters	BOREHOLE CONTENTS	FLUID	TOP	BOTTOM
	OPEN/CASED HOLE	CASED HOLE	"	"
	BOREHOLE SIZE	7.88	"	"
	LARGEST CASING OD	4.50	"	"
	MATRIX	SANDSTONE	"	"

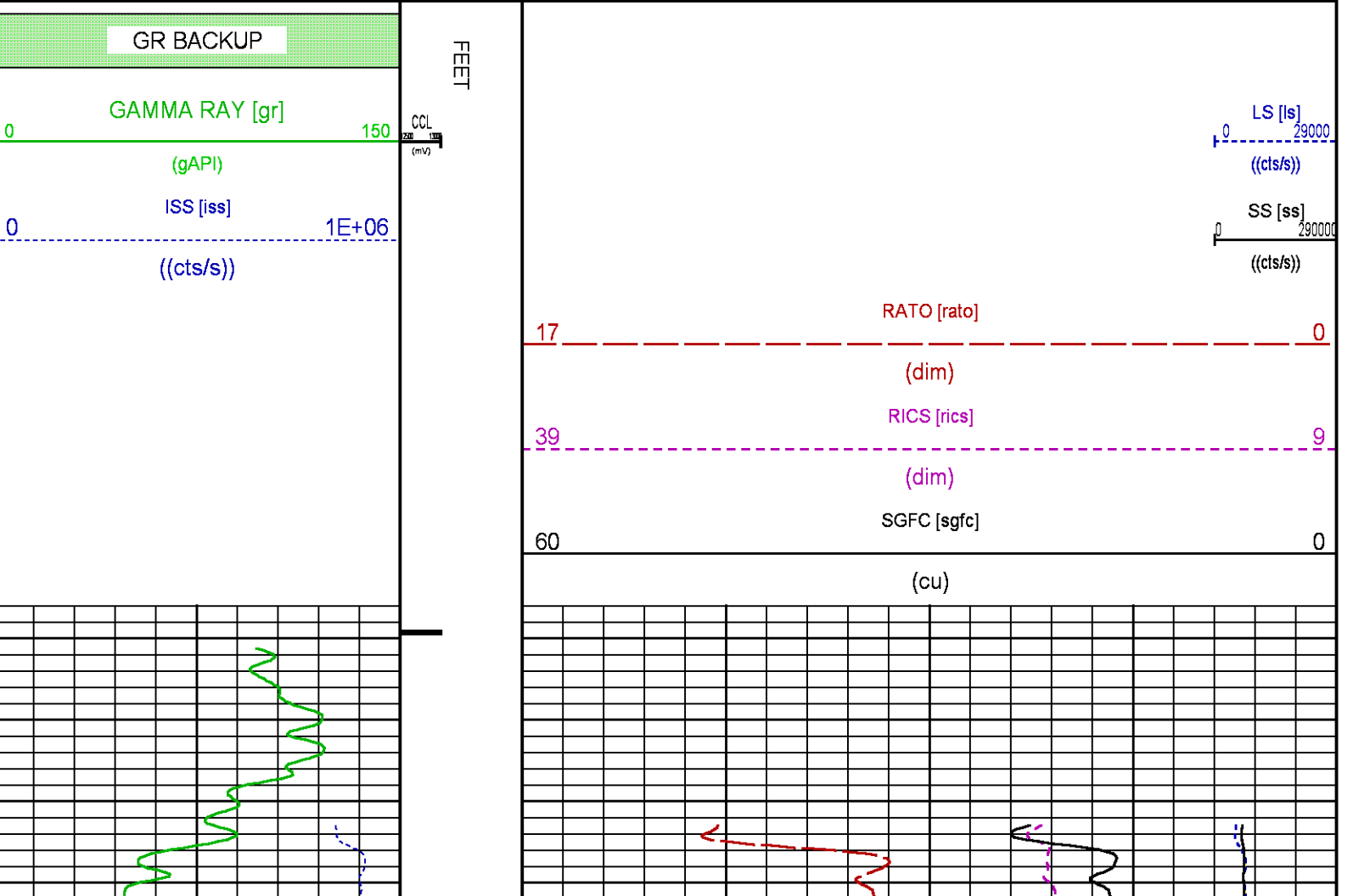
CURVE DESCRIPTION REPORT

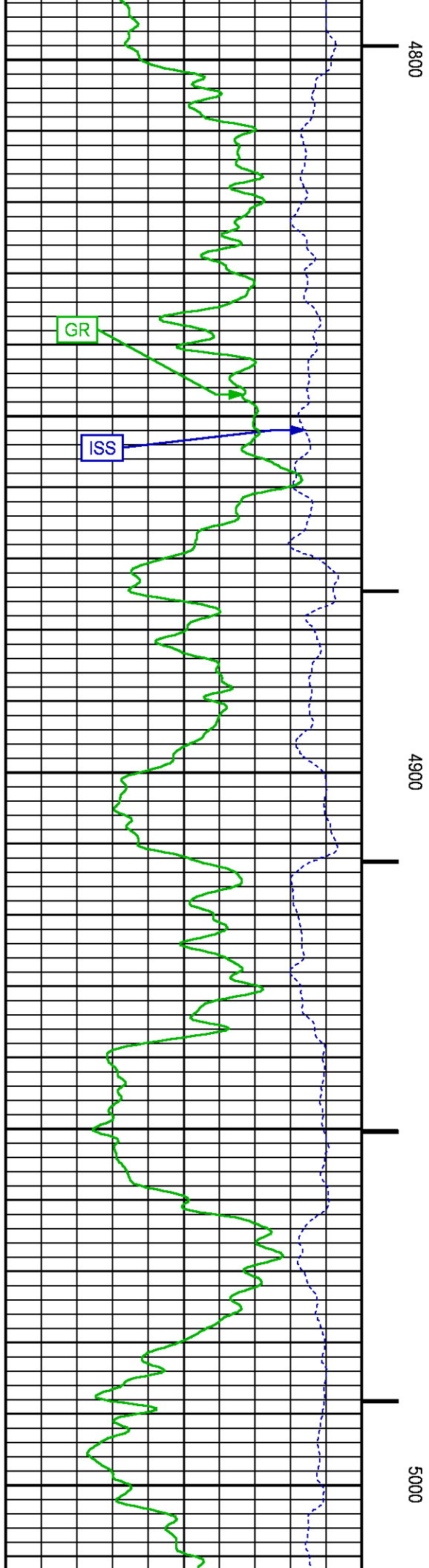
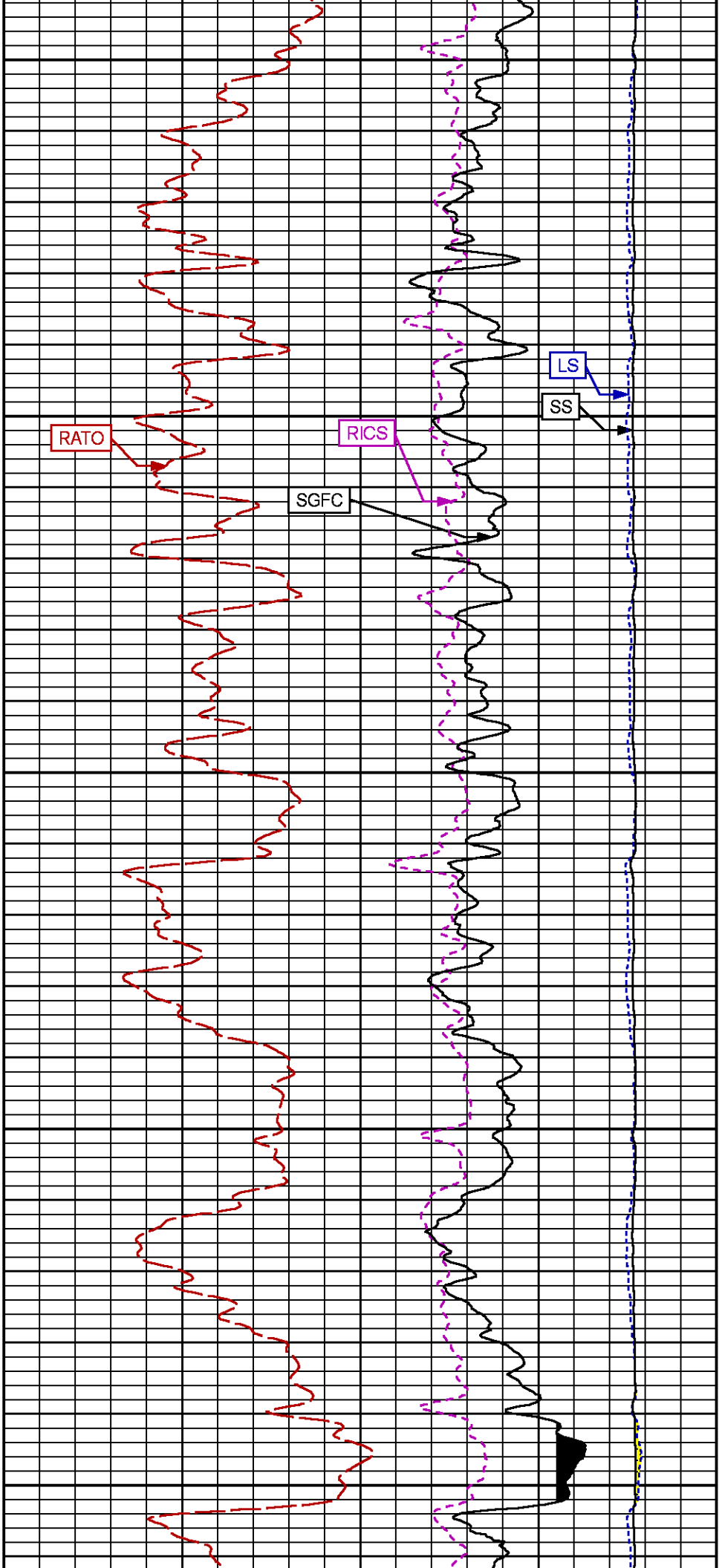
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A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

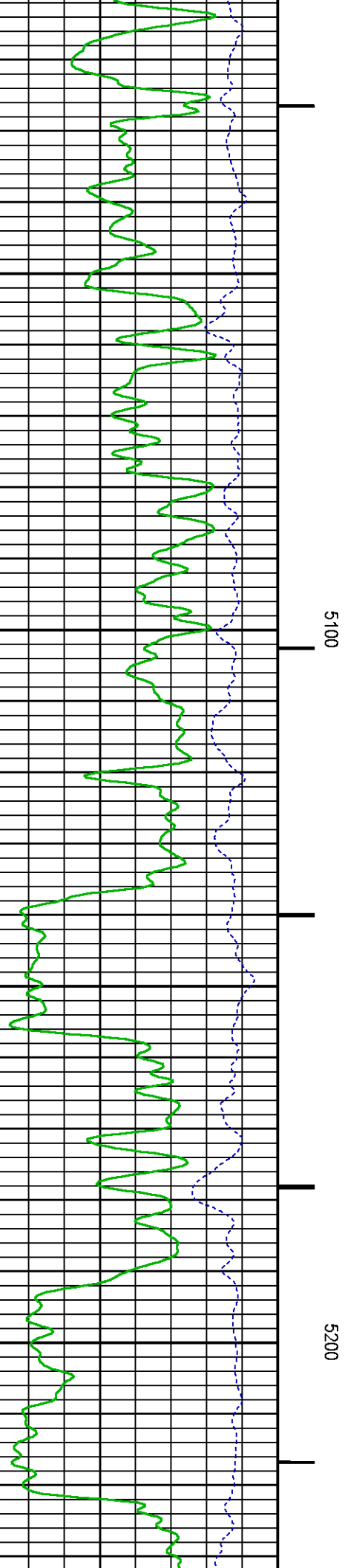
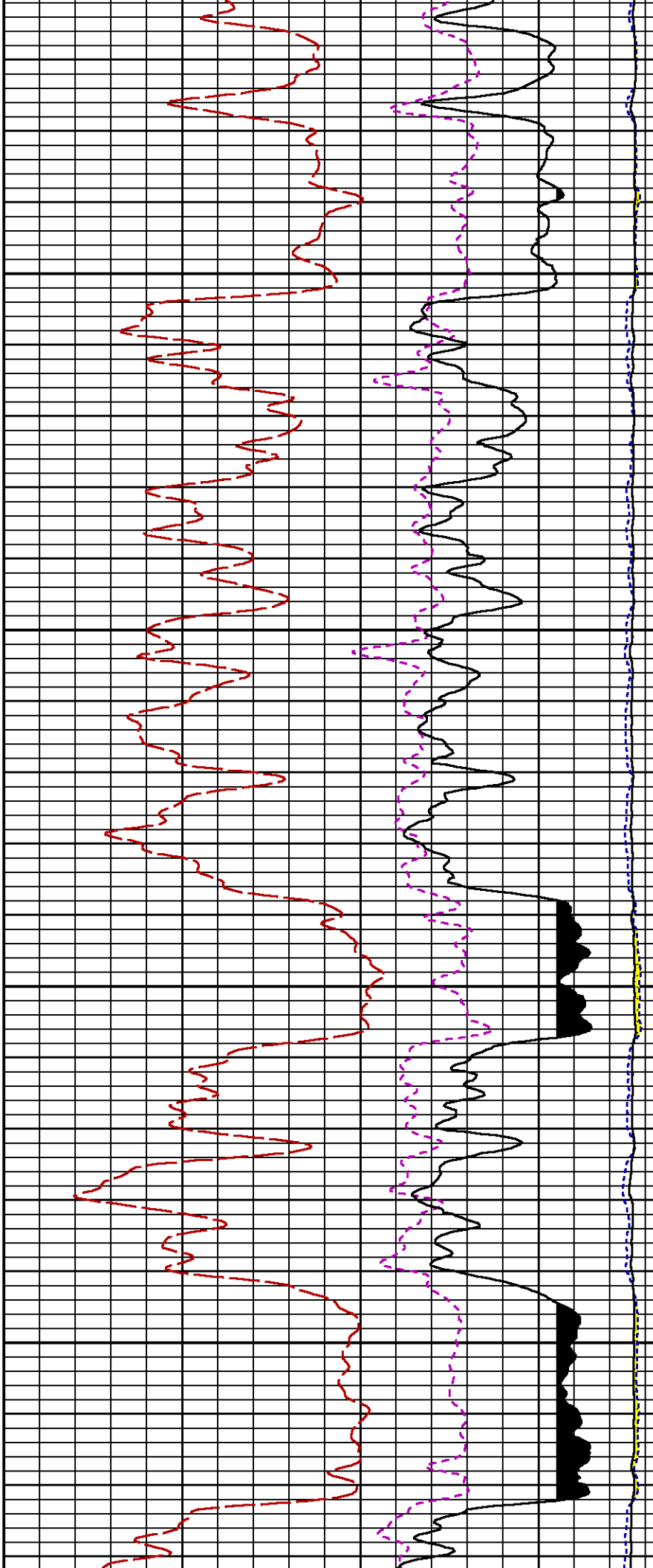
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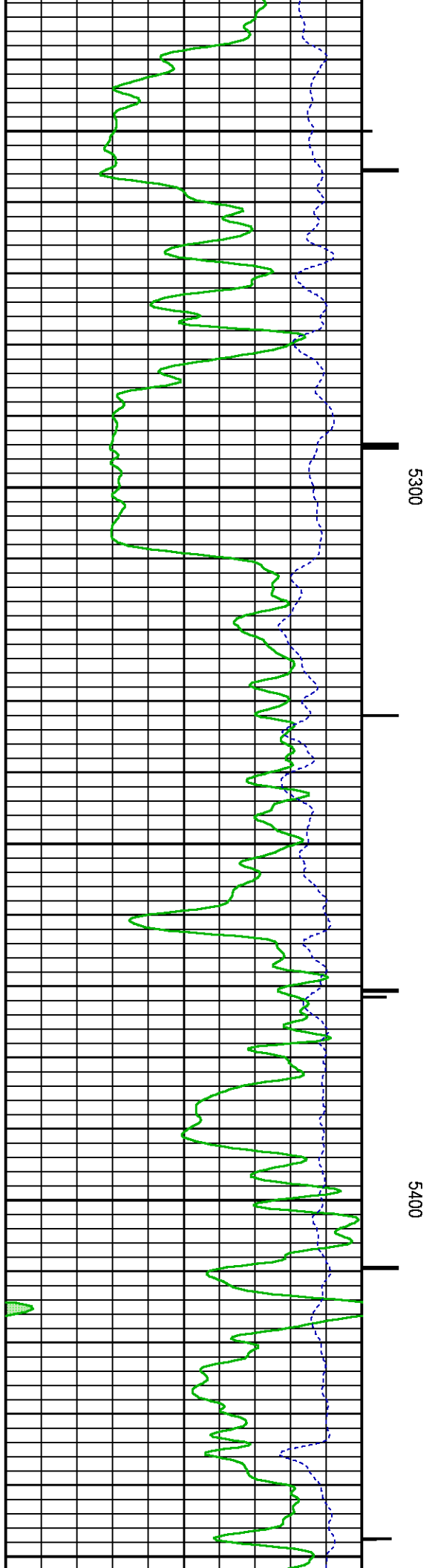
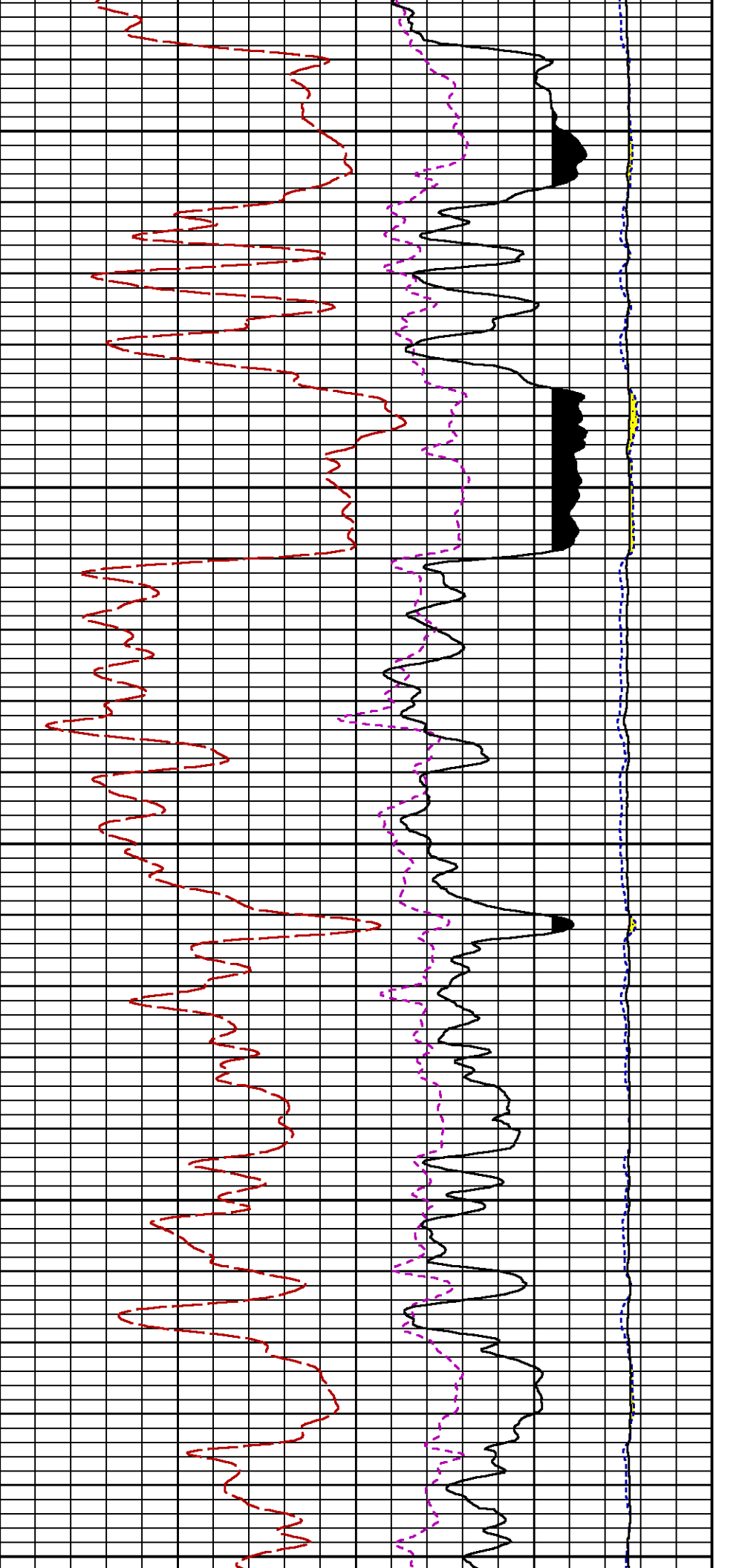
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

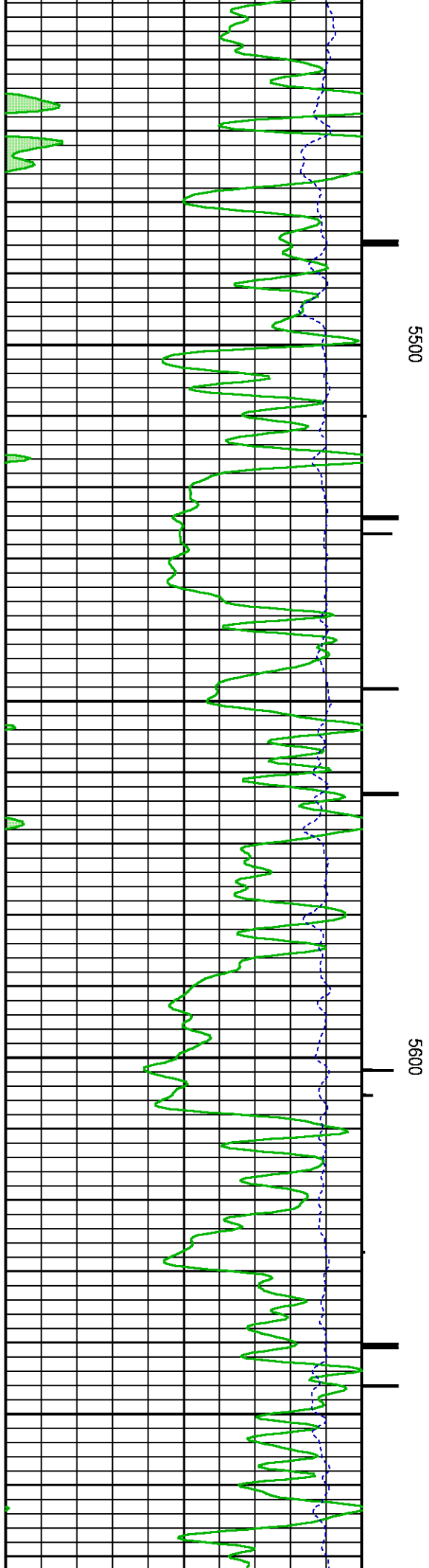
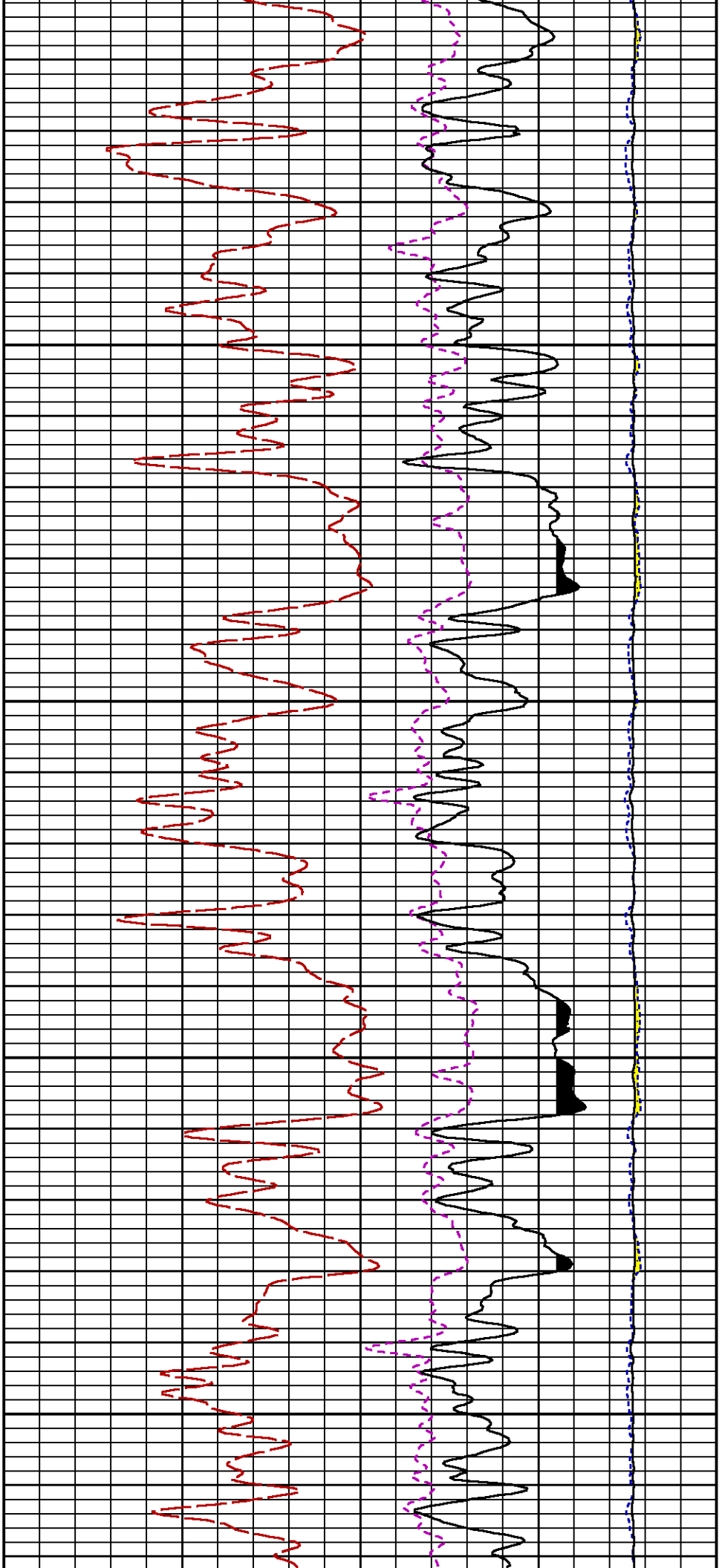
Presentation	: SysA:/dat1a/LARAMIE_BRUTON_30_16W/LARAMIE_RPM+01-MAIN-RPM_MN_WF_16W-5.fvpdf [5"/100' Scale]
Plot Interval	: 4757 - 8007.75 Feet
Data File 1	: F1 : SysA:/dat1a/LARAMIE_BRUTON_30_16W/RPM_MN_WF_16W.xtf
Created On	: N/A
Company	: LARAMIE ENERGY LLC
Well	: BRUTON 30-16W
Field	: VEGA
File Interval	: 4756.25 - 8016.5 Feet
OCT	: p353h

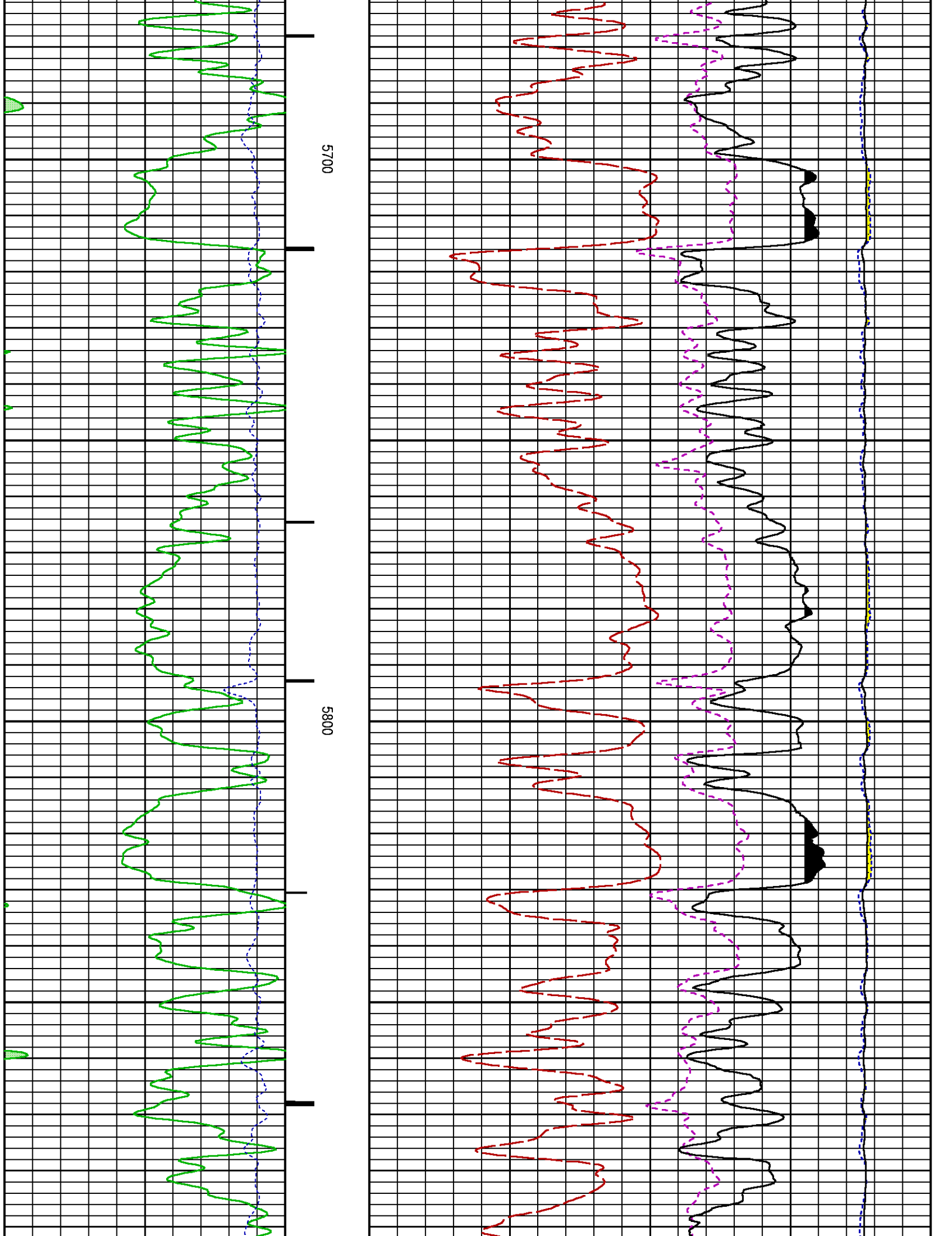


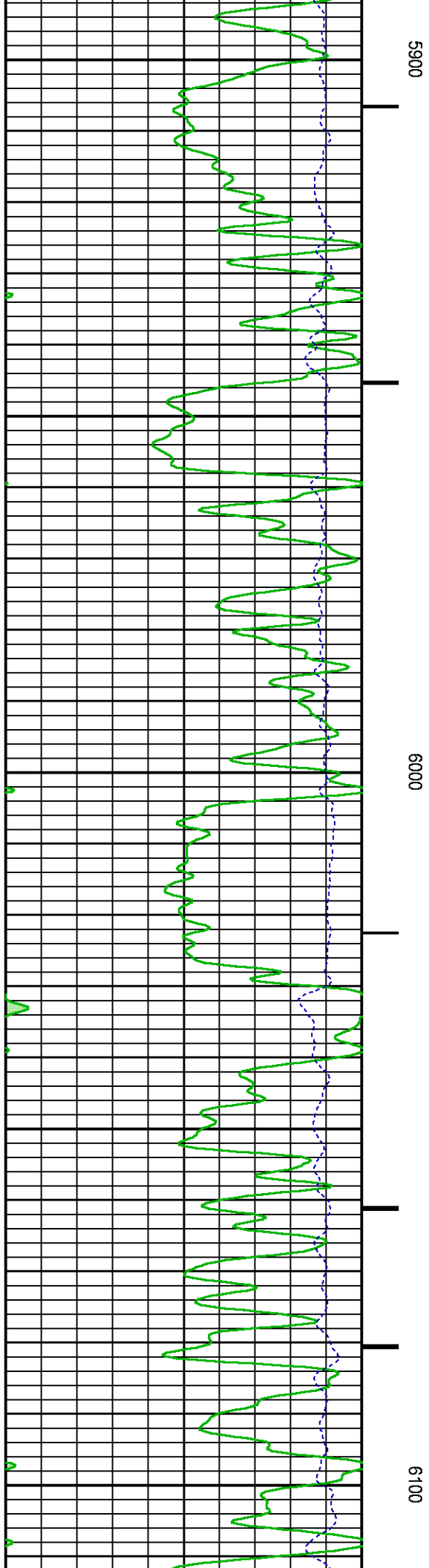
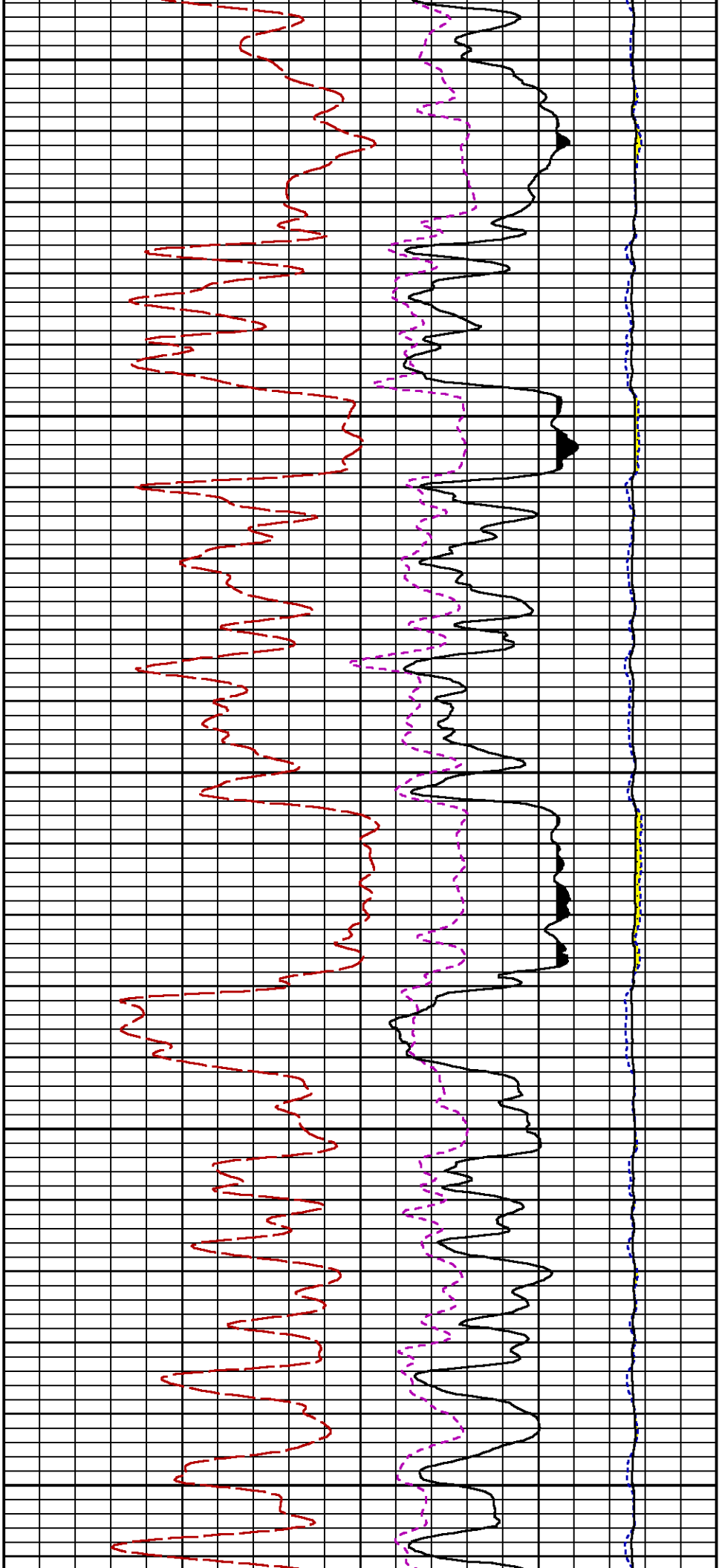


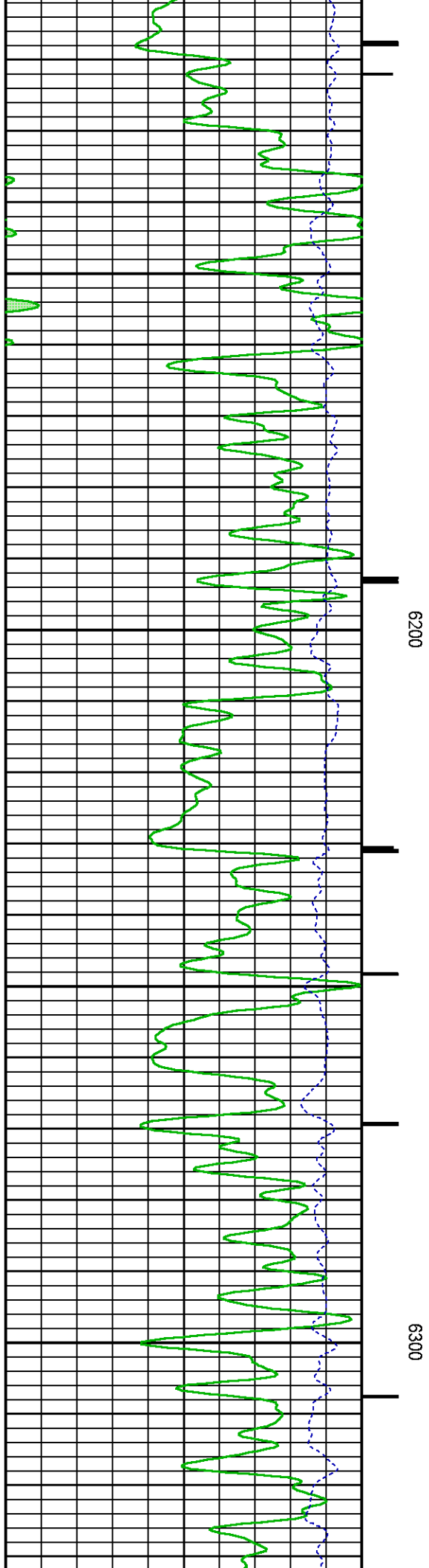
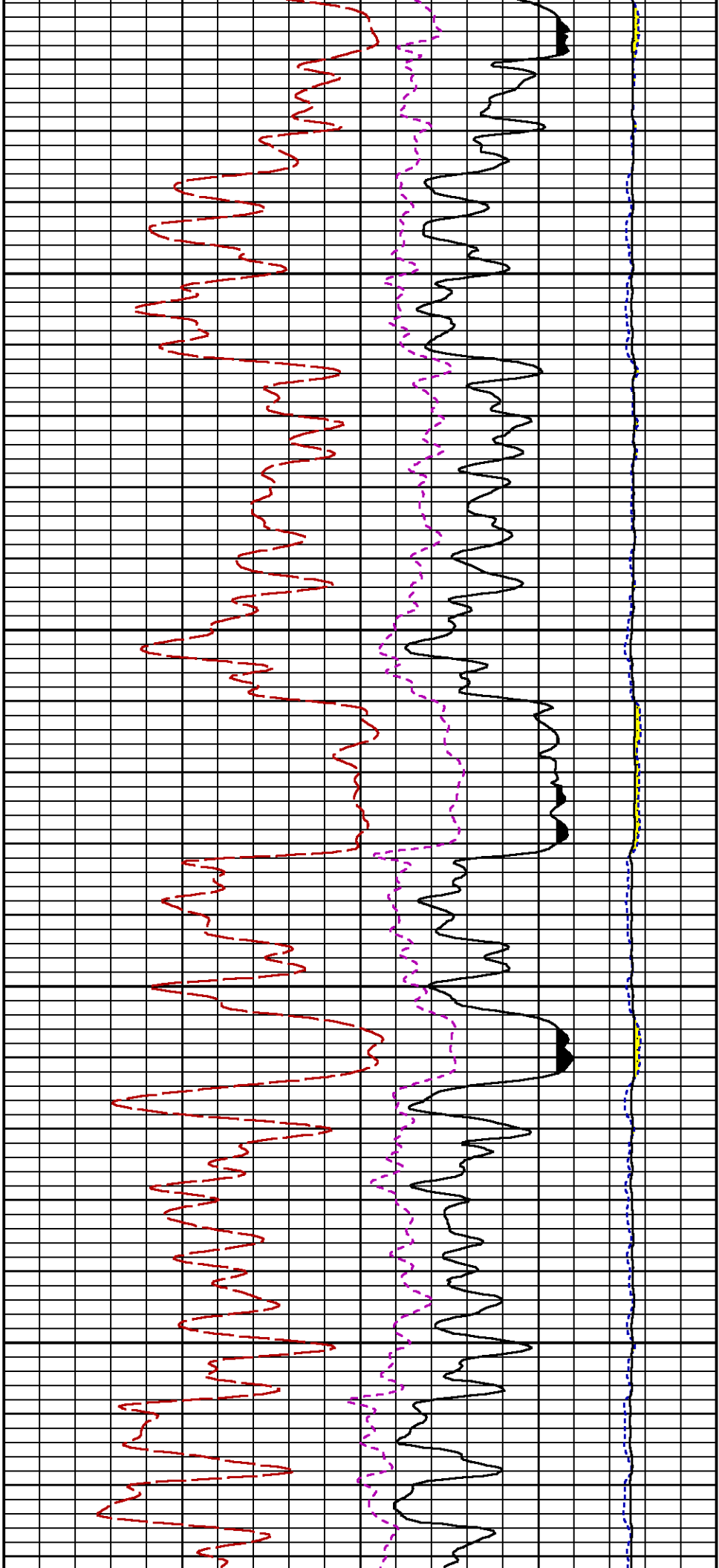


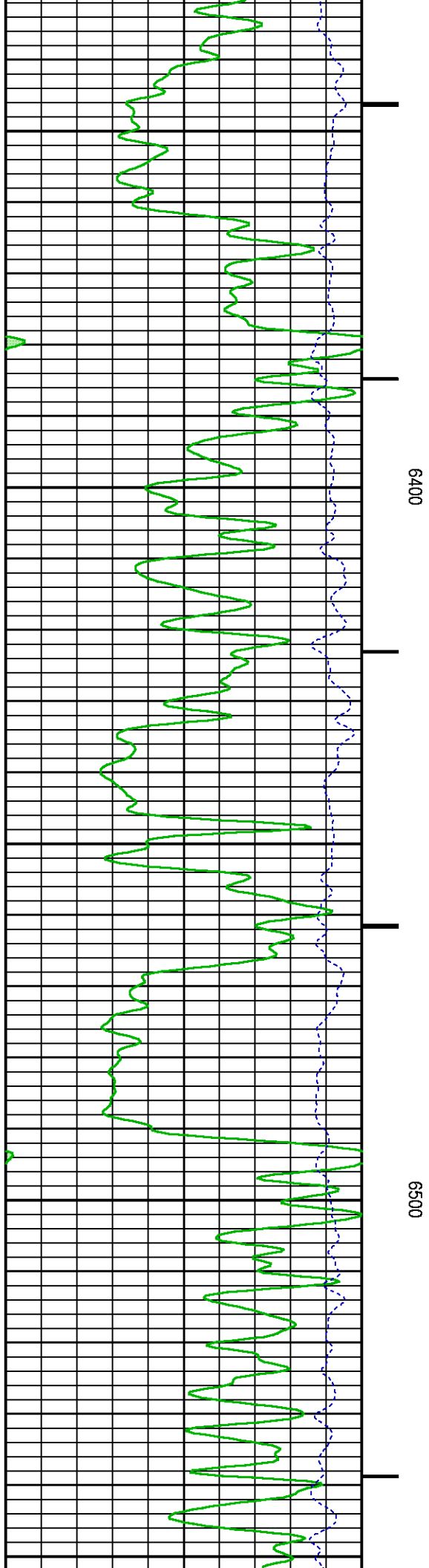
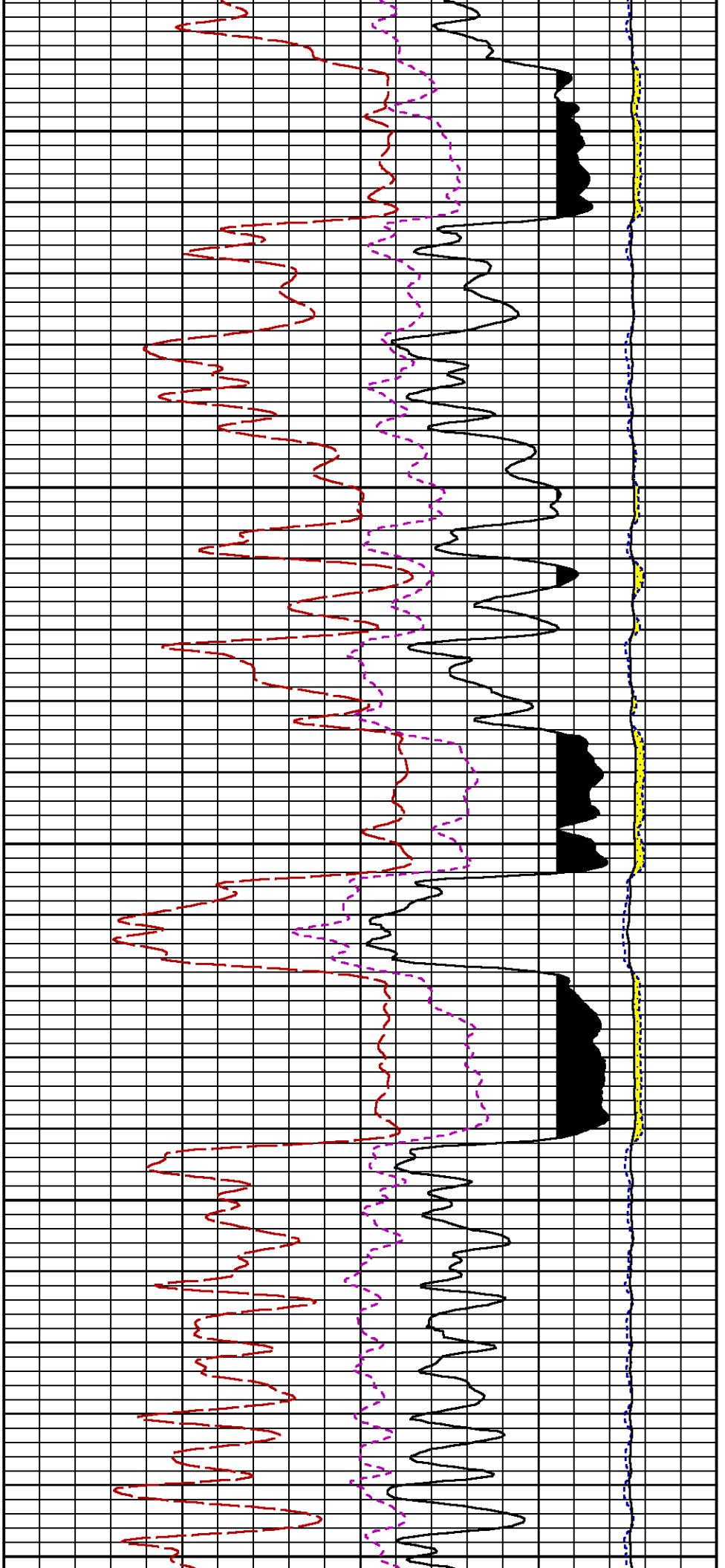


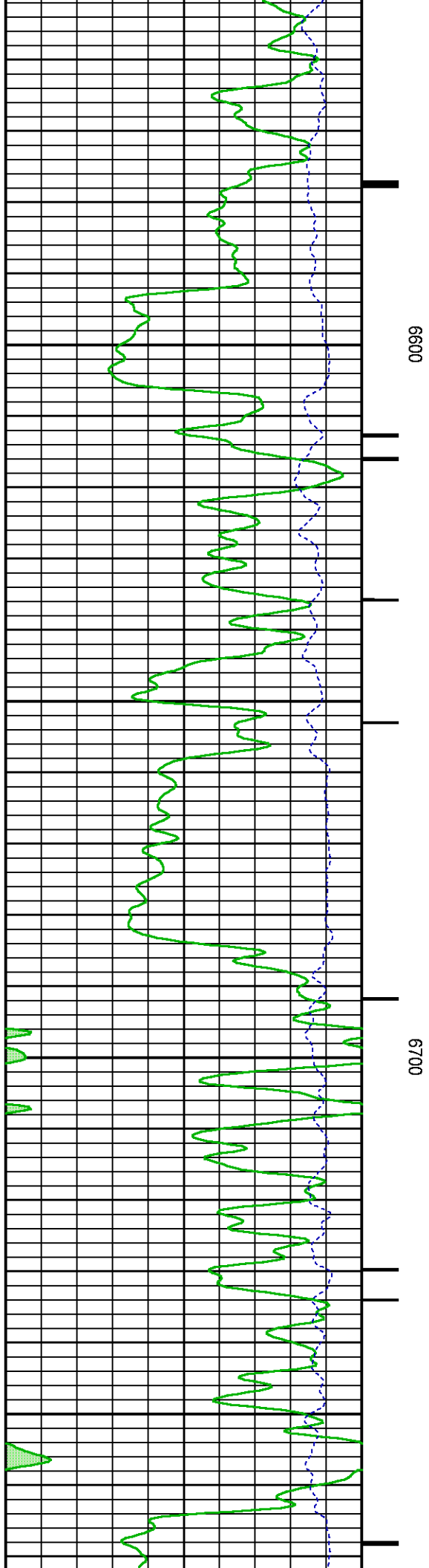
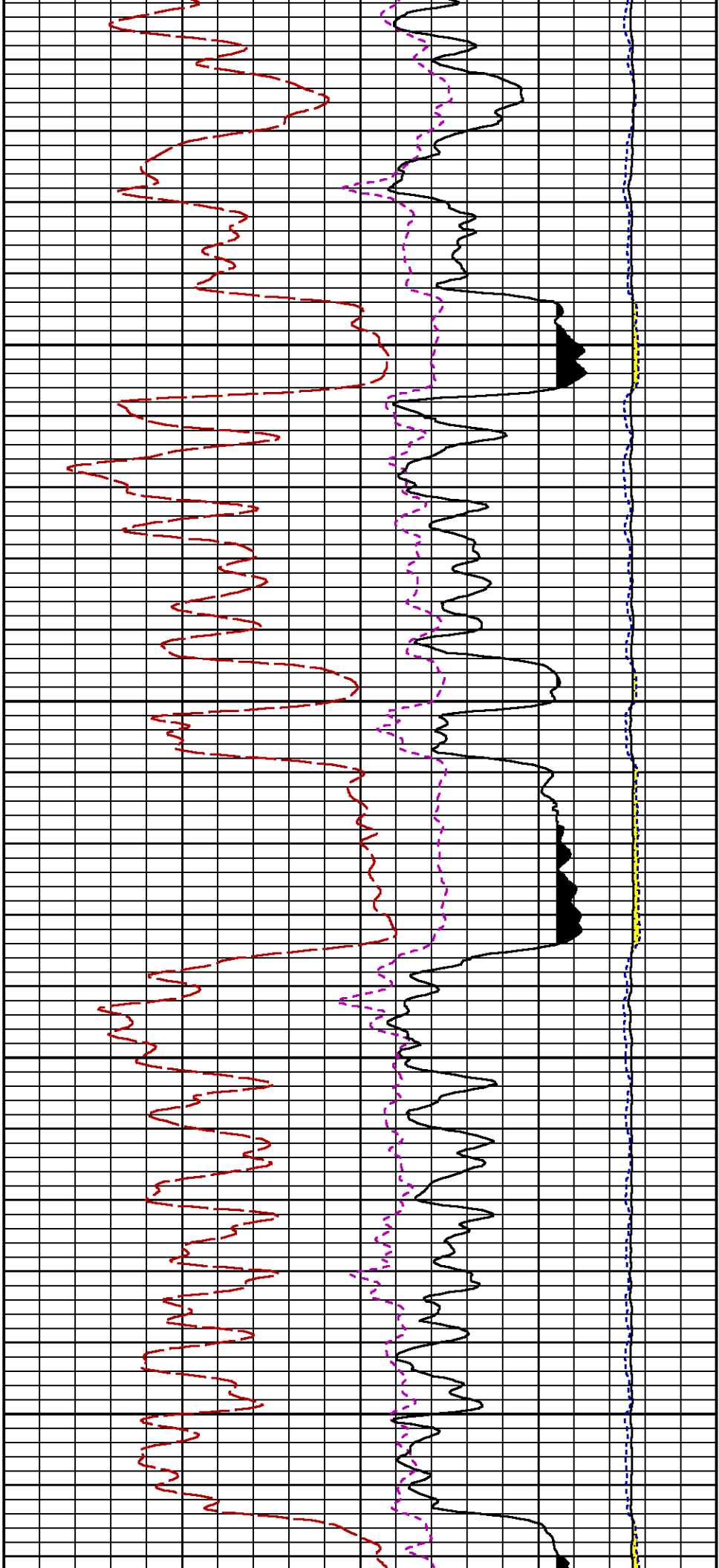


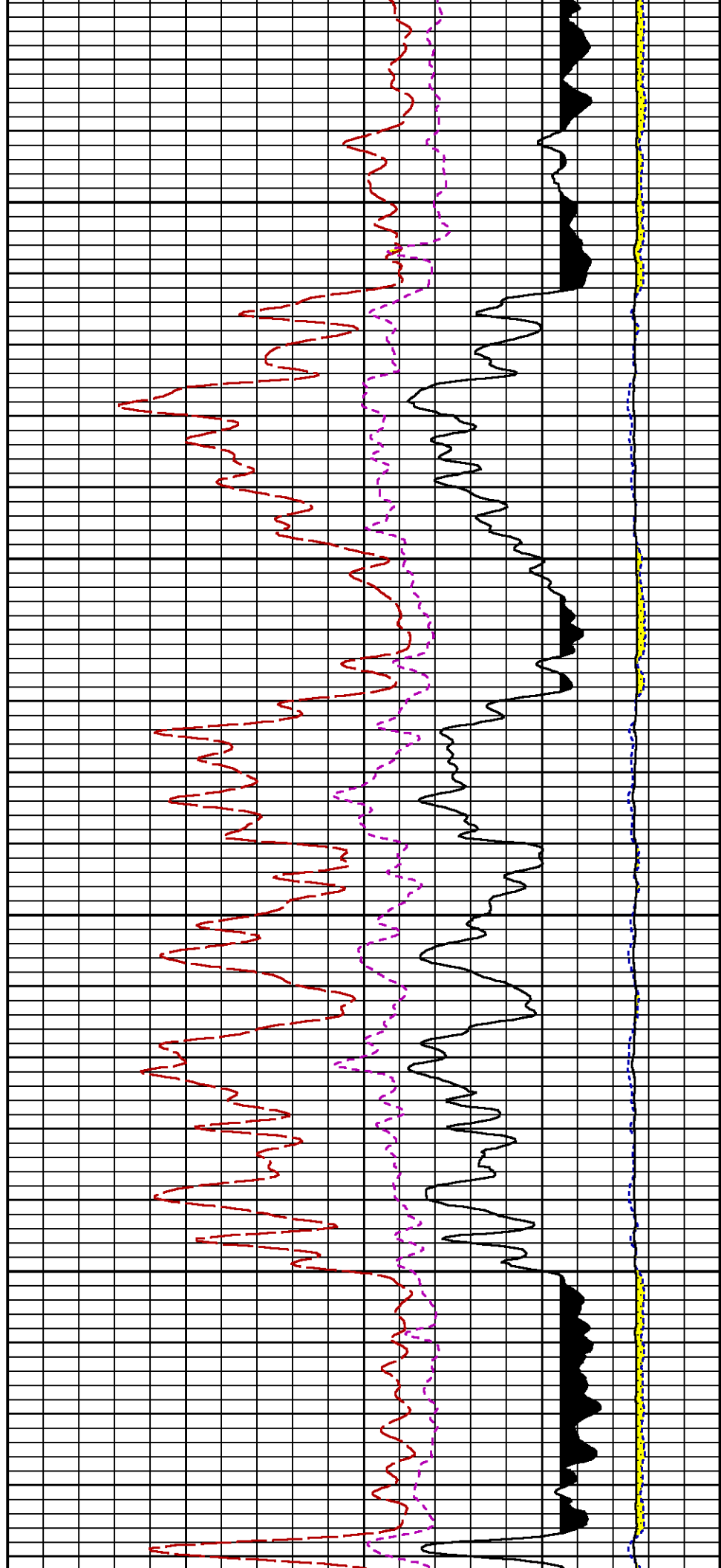
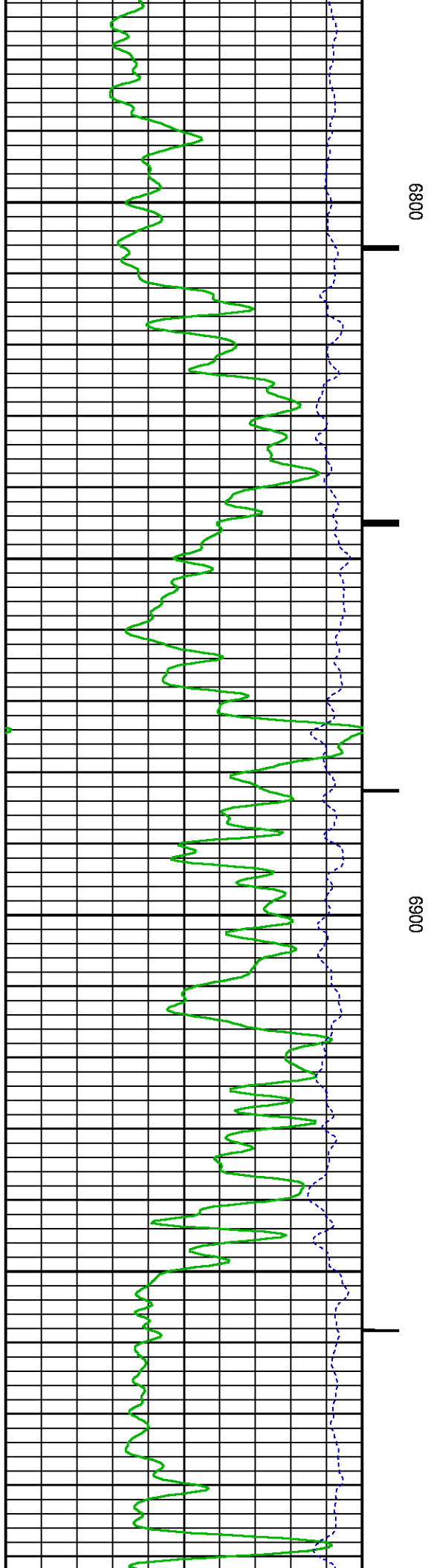


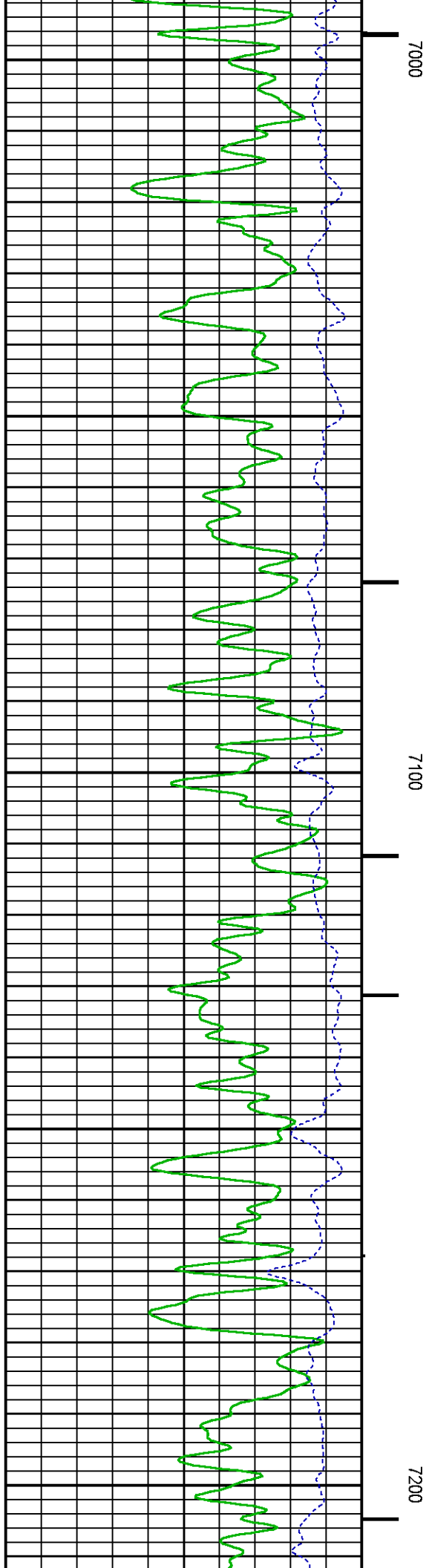
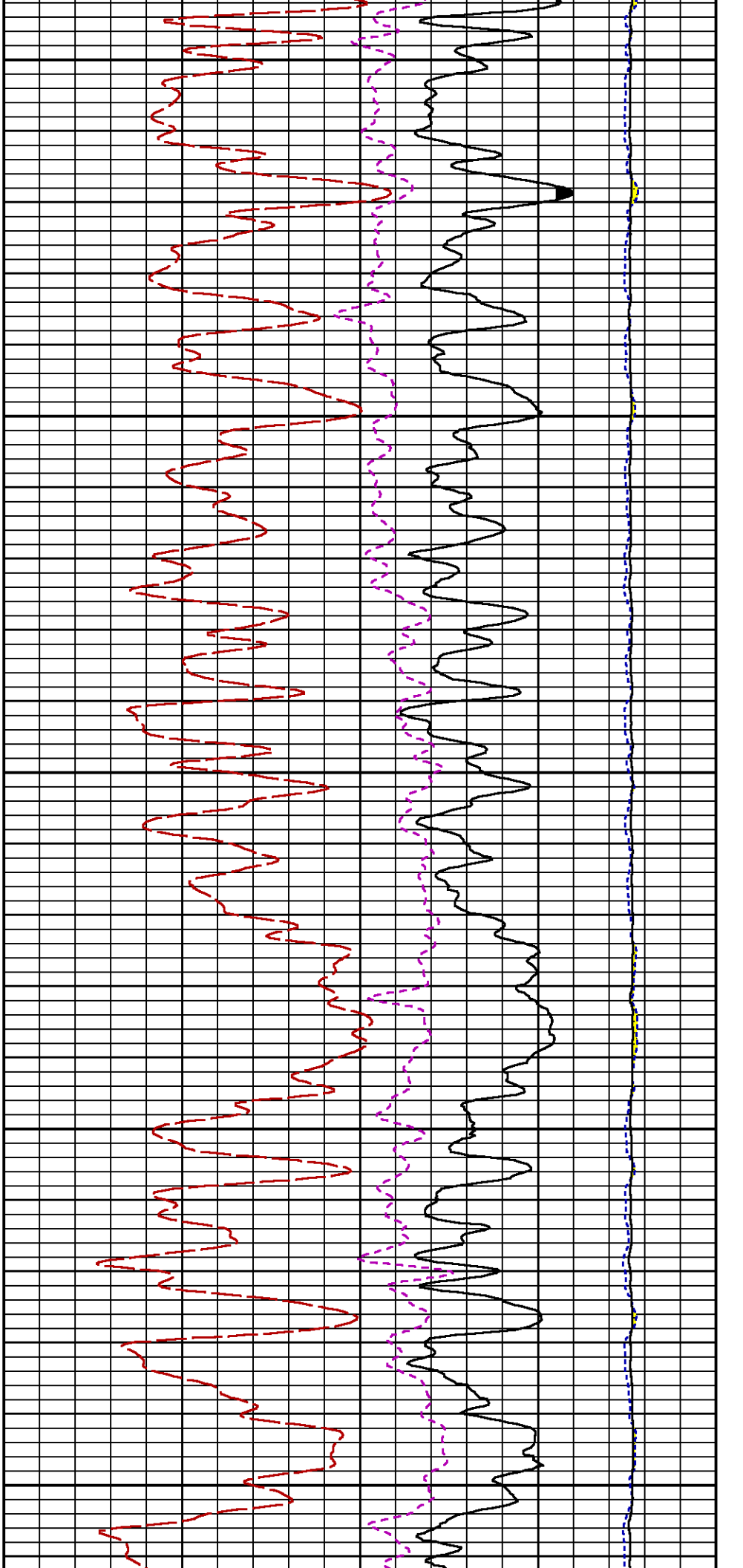


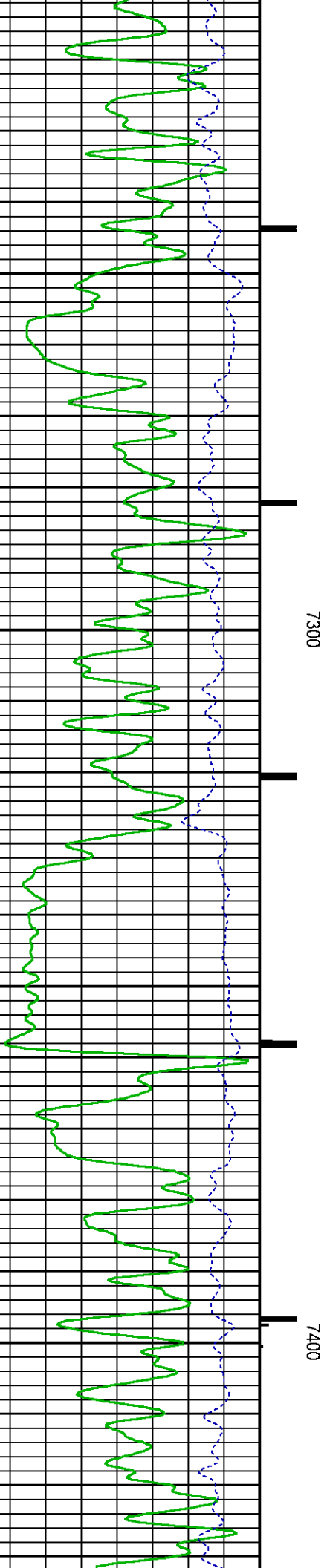
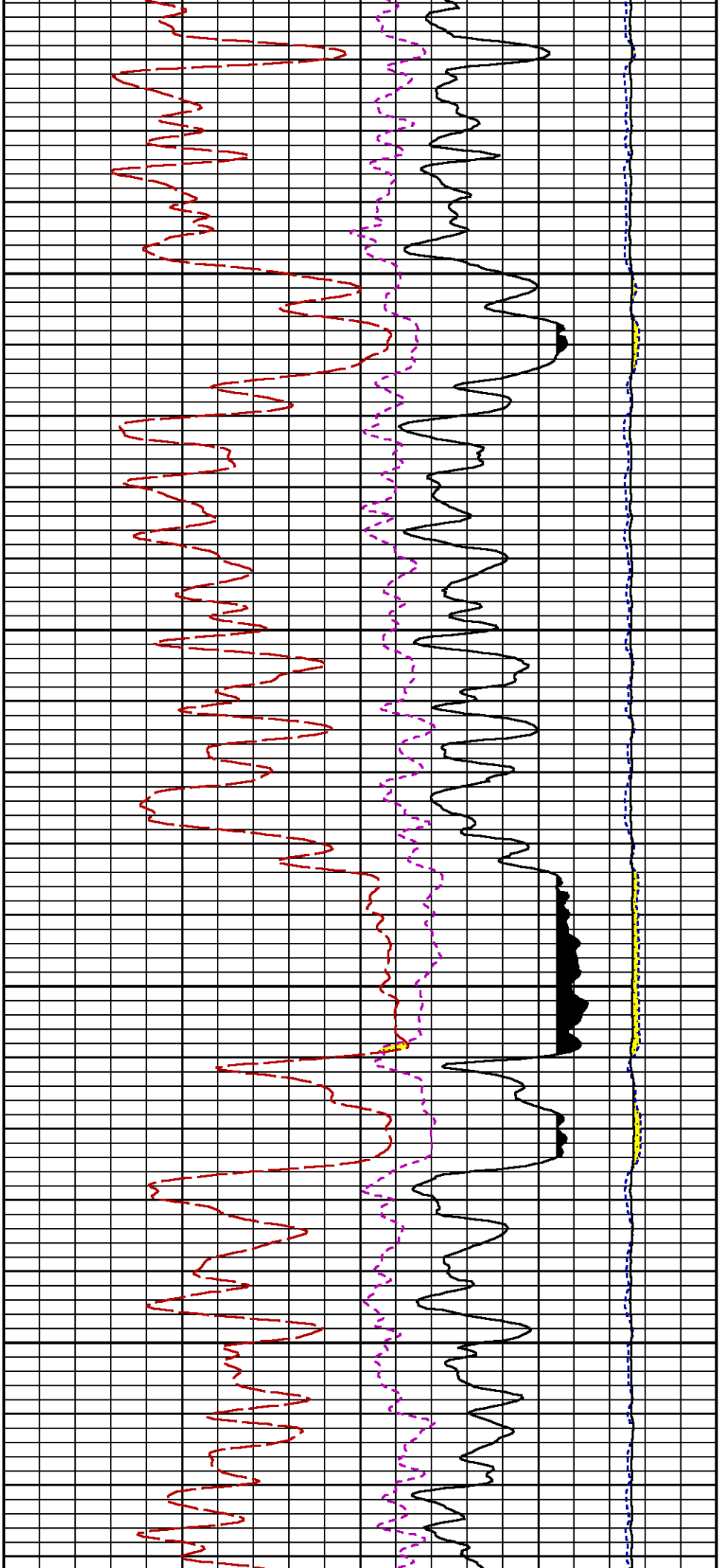


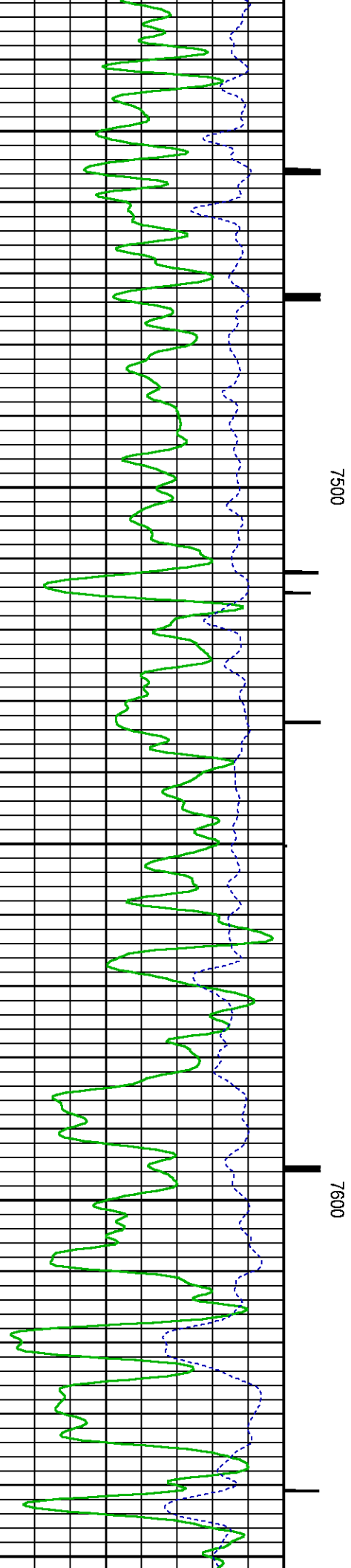
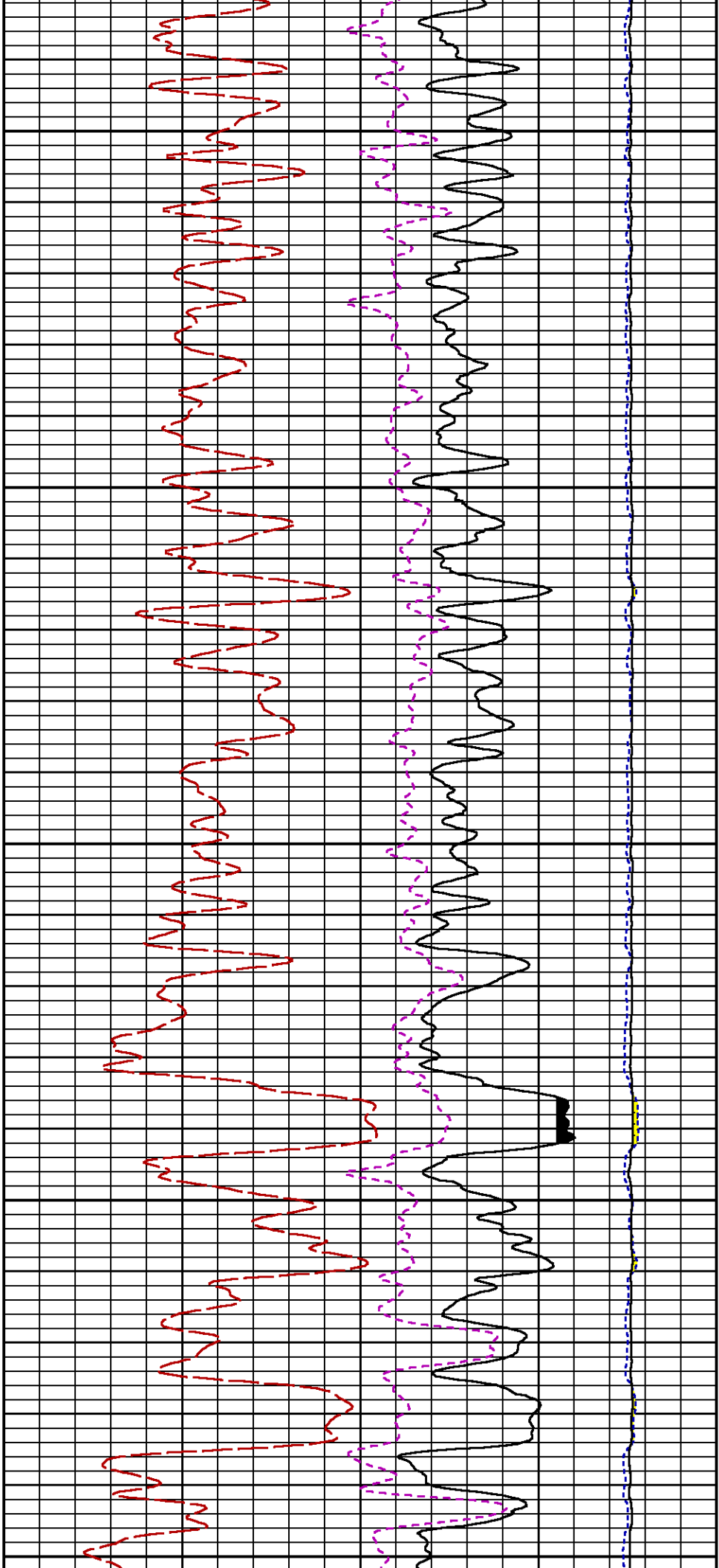


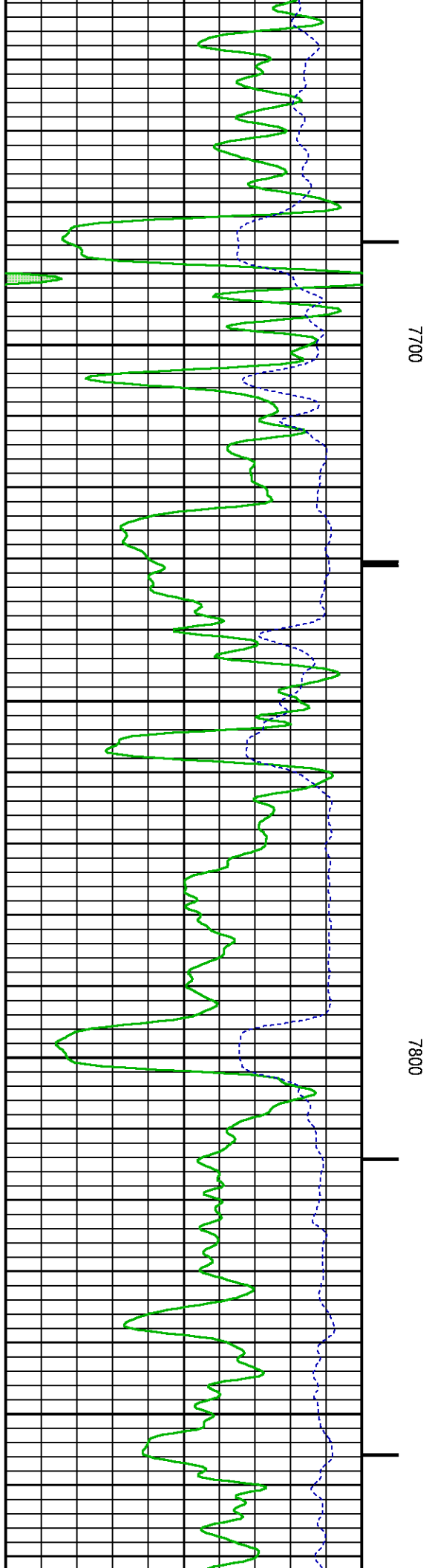
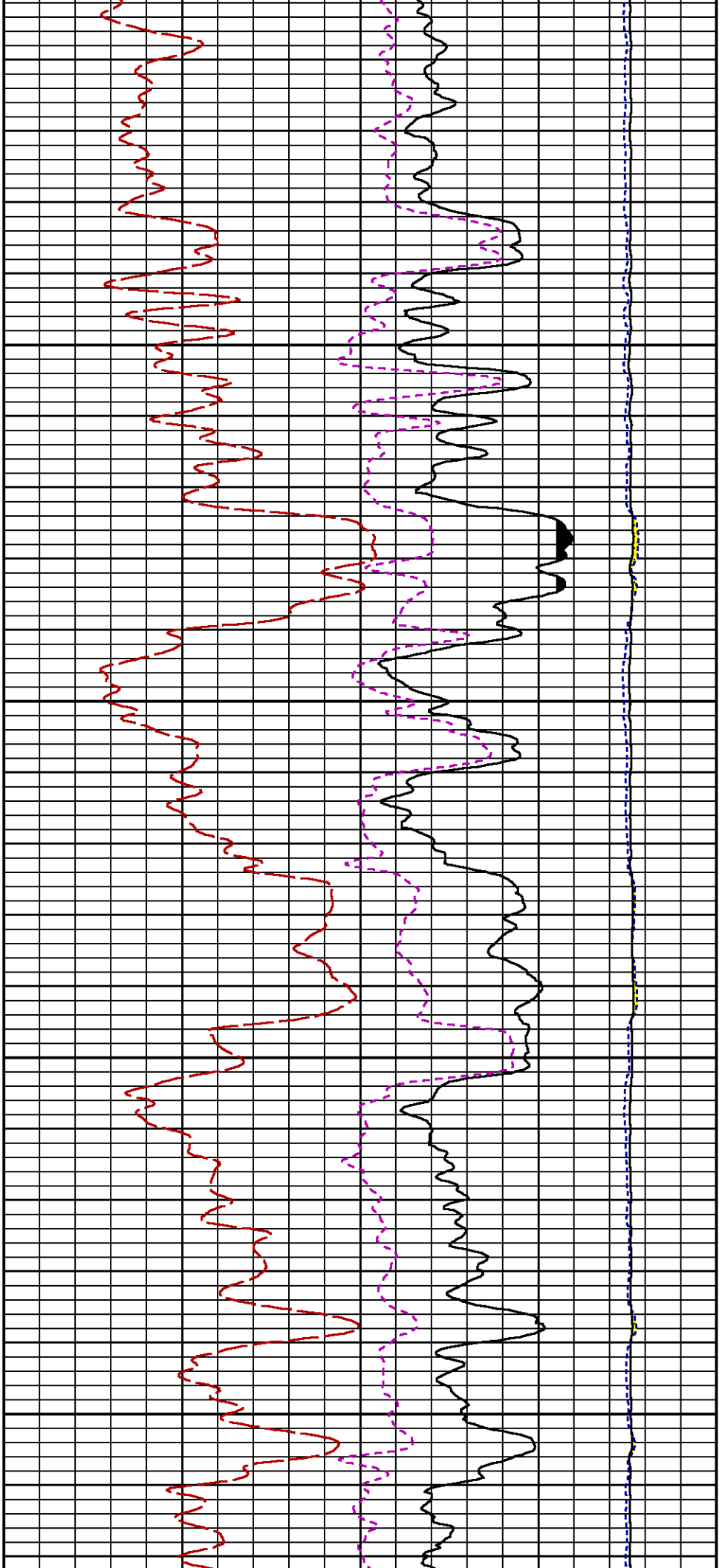


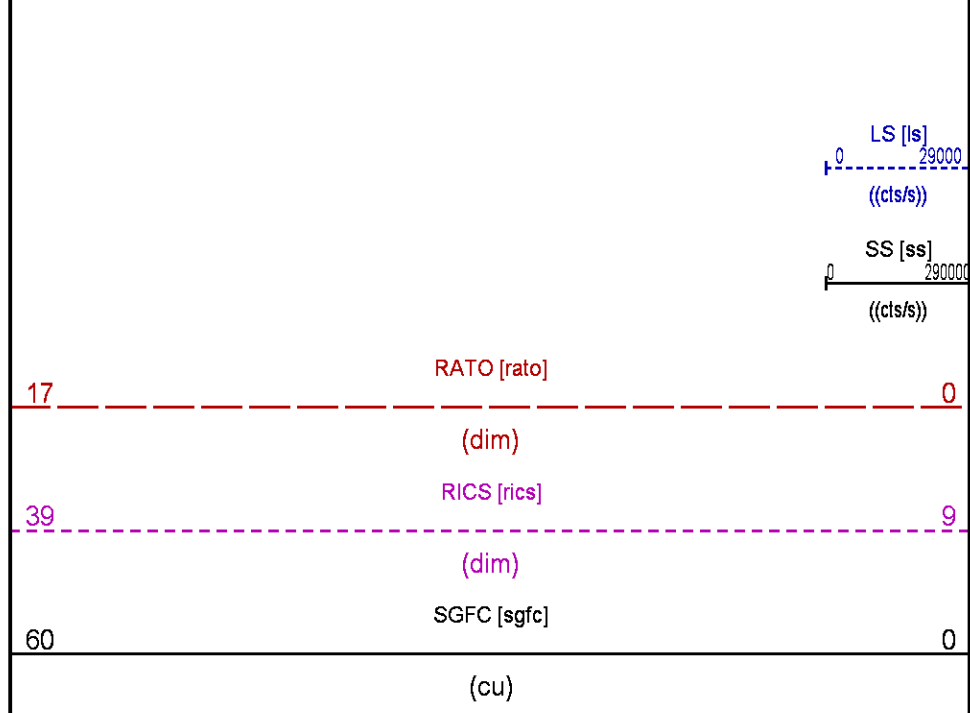
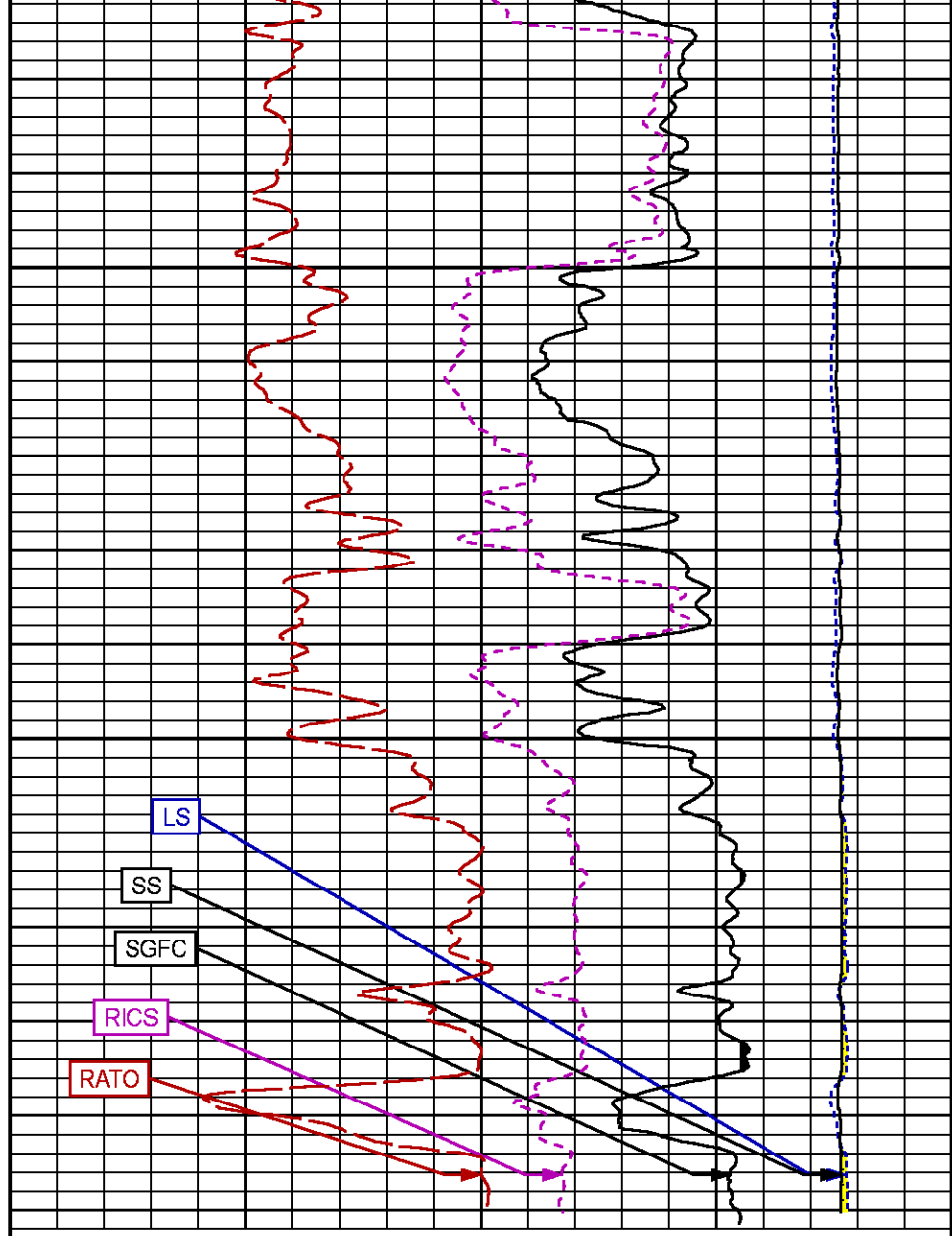
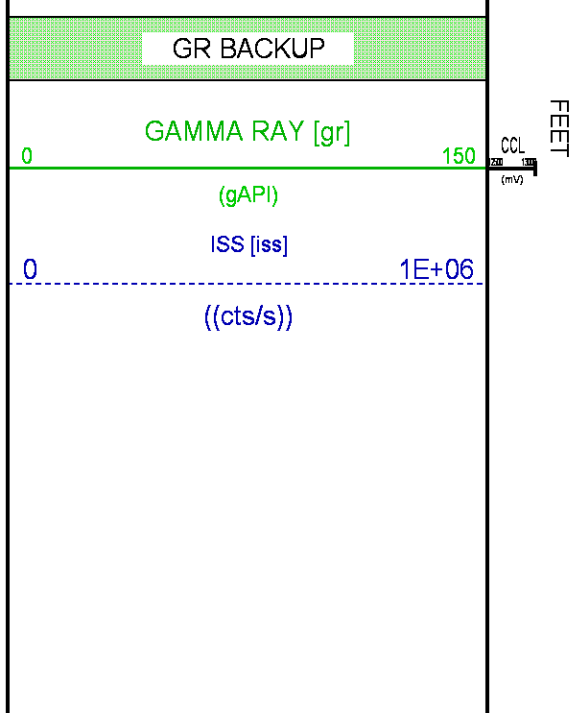
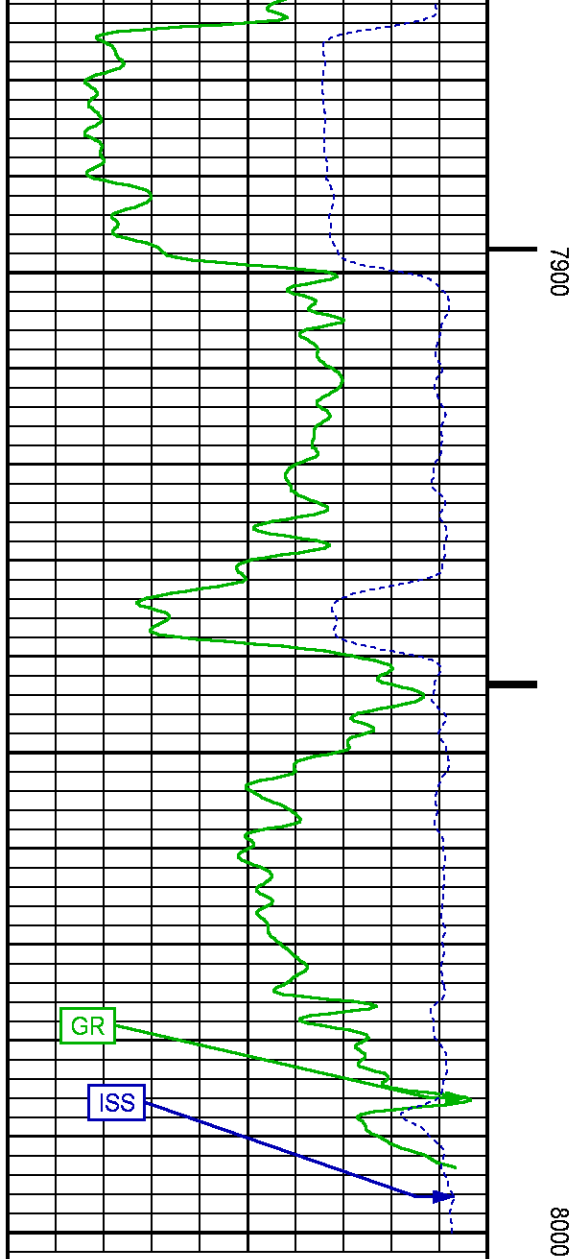












REPEAT PASS PNC 3D MODE

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

Plotted: Sun Feb 11 16:23:35 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_16W/p353h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5278.000 ft BOTTOM DEPTH: 5498.750 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	4.50	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_BRUTON_30_16W/LARAMIE_RPM+01-REPEAT-RPM_RPT_16W-5.fvpdf [5"/100' Scale]
Plot Interval : 5265 - 5501.75 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_BRUTON_30_16W/RPM_RPT_16W.xtf
Created On : N/A
Company : LARAMIE ENERGY LLC
Well : BRUTON 30-16W
Field : VEGA
File Interval : 5264.25 - 5510.5 Feet
OCT : p353h



((cts/s))

5300

5400

17

RATO [rato]

0

(dim)

39

RICS [rics]

9

(dim)

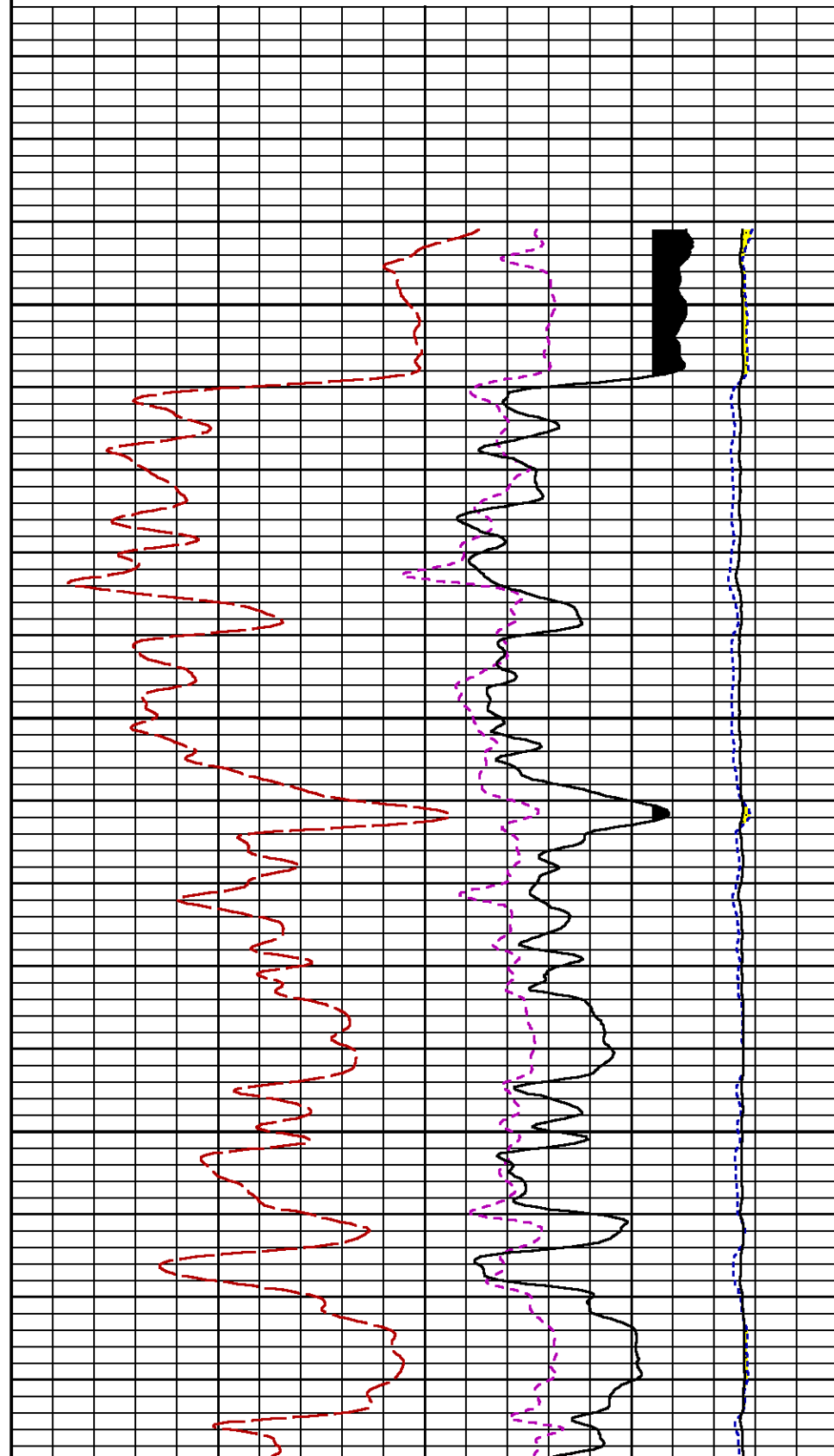
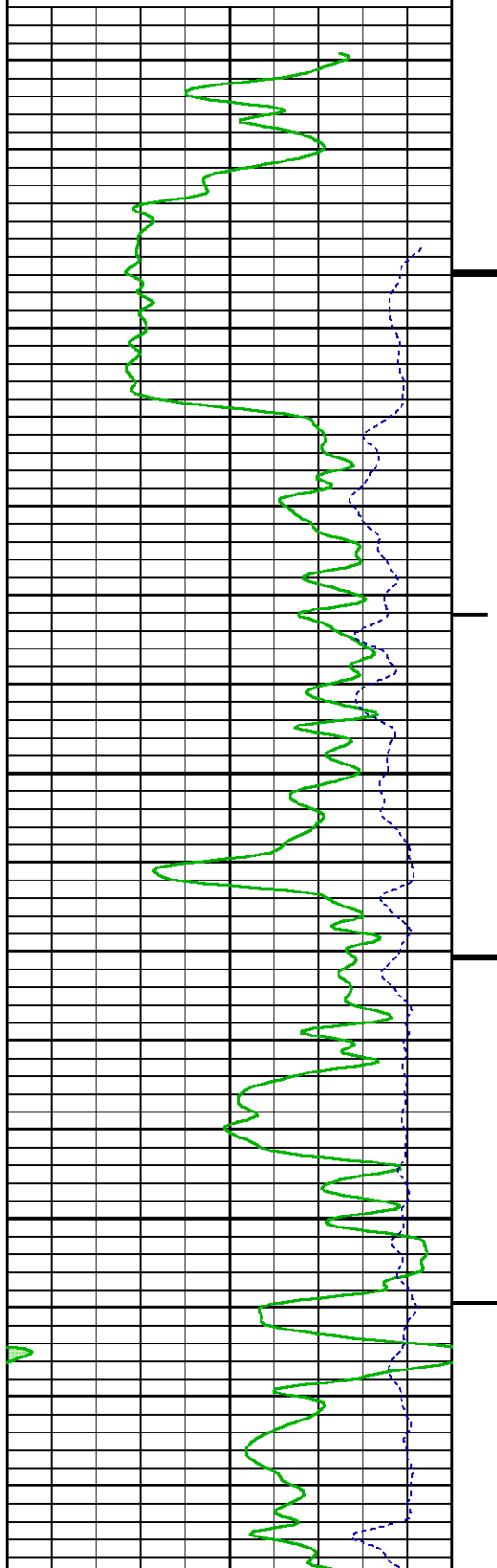
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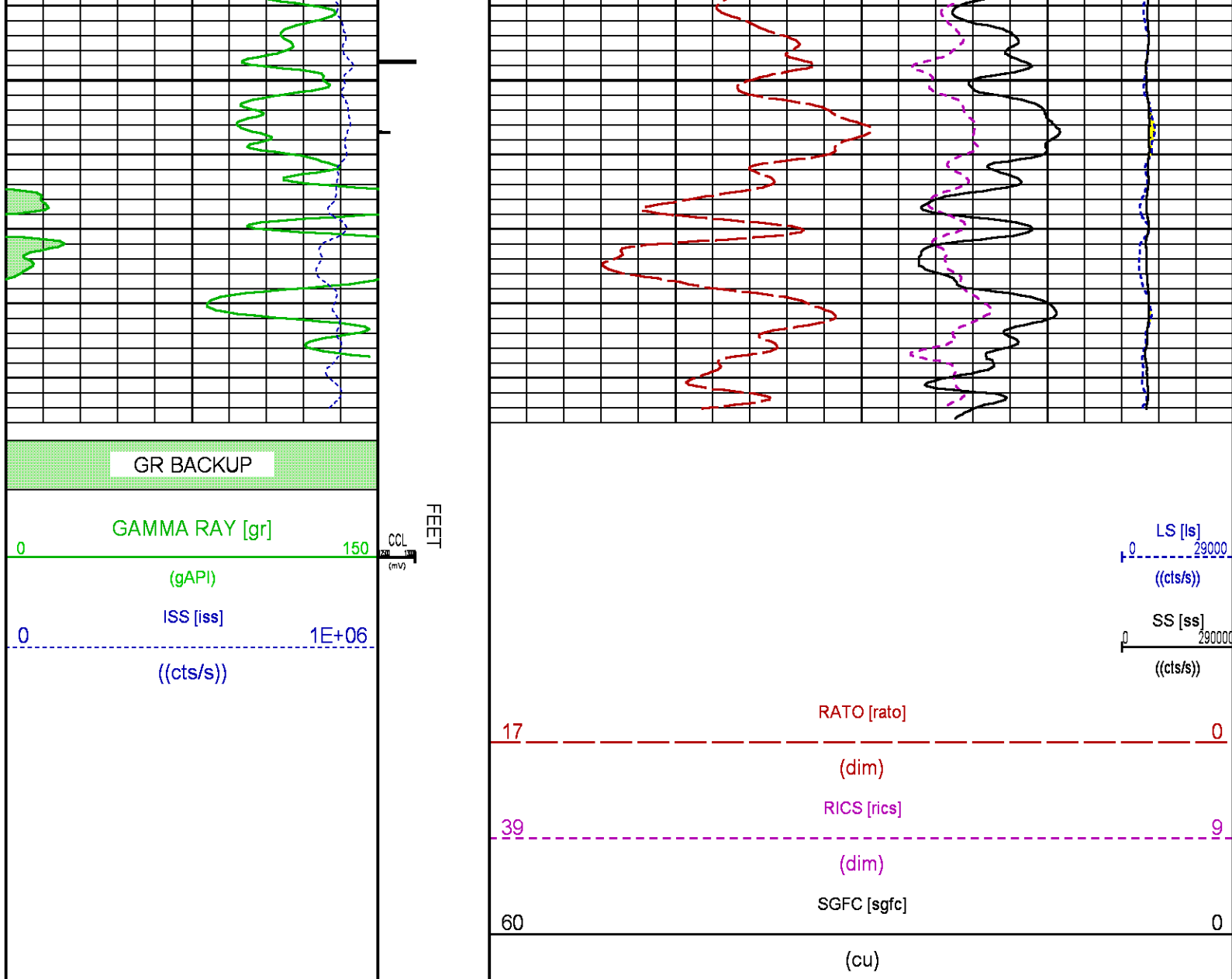
SGFC [sgfc]

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(cu)

((cts/s))





CALIBRATION / VERIFICATION SUMMARY						
Source File: ddat1ad.ARAMIE_BRUTON_3D_1Bvlp353h1p1						
GR PRIMARY CALIBRATION SUMMARY						
TOOL #: 8262XA10317216		DATE/TIME PERFORMED: Sat Jan 20 08:55:31 2018				
UNIT #: 4352 ML4352		CALB JIG #: 4702NK DA_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 #: 4702NK DA_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	
					115.00 115.00	
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: 8281AA 10408960

HOURS: 8281AA 98

	ISS	Mtr Vltz (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			

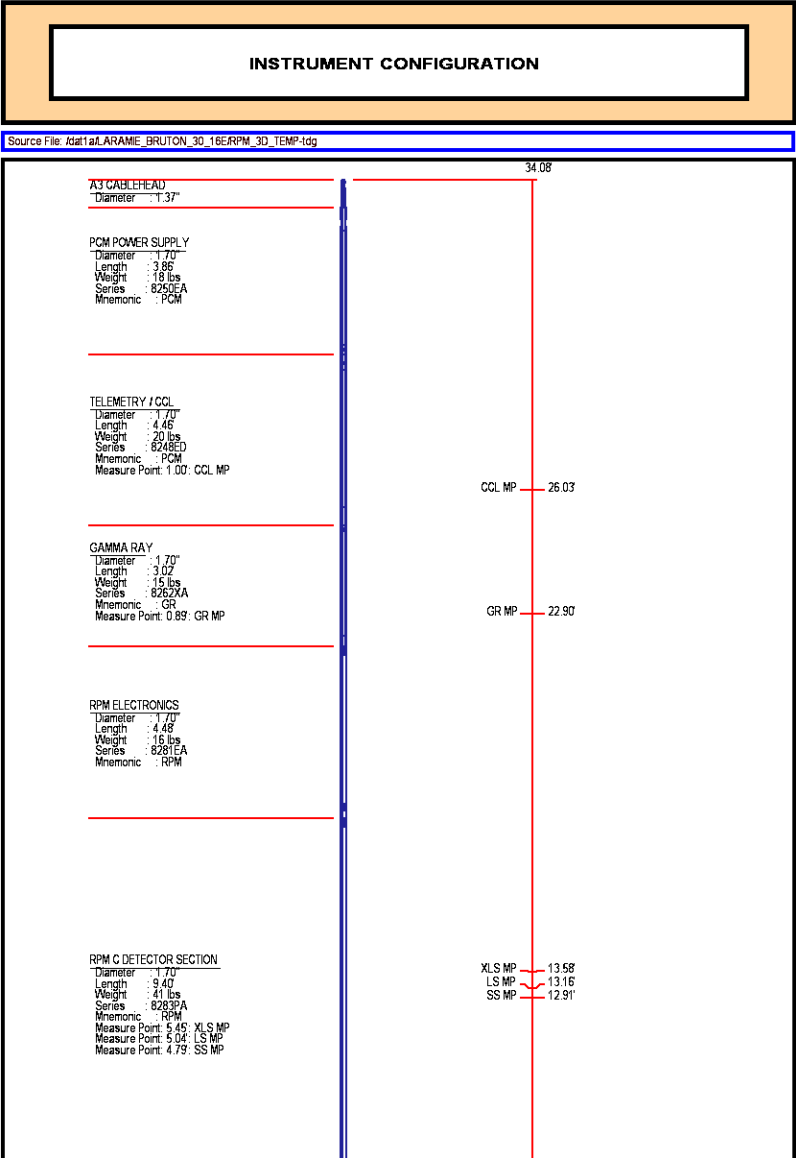
	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	809388	7357	1127	150	26.22	0.14	24.24	0.31
					26.76 26.40	0.00 0.00	23.90 24.00	0.00 0.40

	ISS	ILS	IXS	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 ISSALS	RIN13 ISS/XS	RICS ISS/CSS	RATO SSALS	RTWO SS2ALS	RONE CSS/CLS
Raw Data	809388	1.43	4.61	29.33	13.85	11.03	3.92	4.15
		1.42 1.45	3.05 5.02	22.00 30.70	10.96 16.74	10.06 11.03	3.59 3.96	3.76 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	1.35 5.02	29.00 30.70	10.70 16.74	10.06 11.03	3.59 3.96	3.76 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	-9.274653E+00	1.055639E-01	2.143764E-06	-2.782846E-10



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 : SRP
Measure Point: 1.52: TEMP MP

BULL-PLUG 1117/6

TOTAL LENGTH: 34.08'
TOTAL WEIGHT: 144 lbs
MAX DIAMETER: 01.70'

TEMP MP 1.65
PRES MP

0.00

**BAKER
HUGHES**
a GE company



ECLIPS

COMPANY LARAMIE ENERGY LLC
WELL BRUTON 30-16W
FIELD VEGA
COUNTY MESA **STATE** COLORADO

FILE NO:

API NO:

05077104720000

LOCATION:

SHL: 2648' FSL & 1873' FEL
BHL: 1431' FSL & 1305' FWL

ELEVATIONS:

KB 7673 FT
DF 7672 FT
GL 7643 FT

SEC 30 **TWP** 9S **RGE** 93W

DATE 11-Feb-2018