



FILE NO:	COMPANY
API NO: 05077104790000	WELL FIELD COUNTY
	LARAMIE ENERGY LLC BRUTON 30-16E VEGA MESA STATE COLORADO

Ver. 4.10	LOCATION:	OTHER SERVICES
	SHL: 2623' FNL & 1864' FEL BHL: 1367' FSL & 1338' FEL 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	TRIP	
11-Feb-2018	1	2
SERVICE ORDER	US132070	
DEPTH DRILLER	7850 FT	
DEPTH LOGGER	7784 FT	
BOTTOM LOGGED INTERVAL	7784 FT	
TOP LOGGED INTERVAL	2536 FT	
TIME STARTED	8:00	
TIME FINISHED	14:30	
OPERATOR RIG TIME	6.5 HRS	
TYPE OF FLUID IN HOLE	WATER	
FLUID DENSITY	NA	
FLUID SALINITY	NA	
FLUID LEVEL	56 FT	
LOGGED CEMENT TOP	1040 FT	
WELLHEAD PRESSURE	0 PSI	
MAXIMUM HOLE DEVIATION	NA	
NOMINAL LOGGING SPEED	10 FMIN	
MAX. RECORDED TEMP.	240 DEGF	
REFERENCE LOG	NA	
REFERENCE LOG DATE	NA	
EQUIP. NO.	ML-4291	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: 5789' - 5809'

SJ: 6905' - 6925'

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 15:27:05 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_16E/p353h03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2533.500 ft BOTTOM DEPTH: 3182.250 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_16E/LARAMIE_RPM+01-MAIN-RPM_MN_GS_16E-5.fvpdf [5"/100' Scale]
Plot Interval : 2507.5 - 3172.25 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_BRUTON_30_16E/RPM_MN_GS_16E.xtf
Created On : N/A
Company : LARAMIE ENERGY LLC
Well : BRUTON 30-16E
Field : VEGA
File Interval : 2506.75 - 3182.25 Feet
OCT : p353h

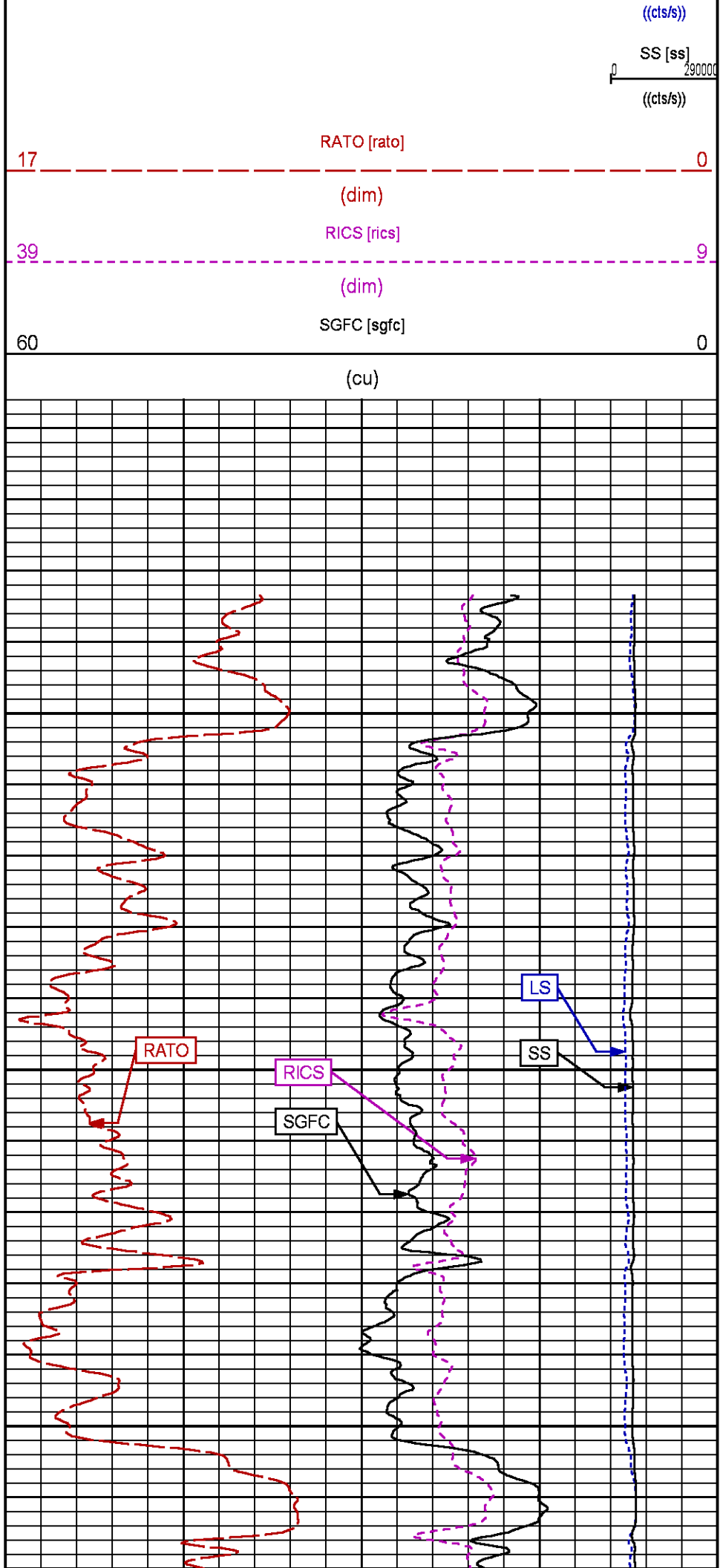
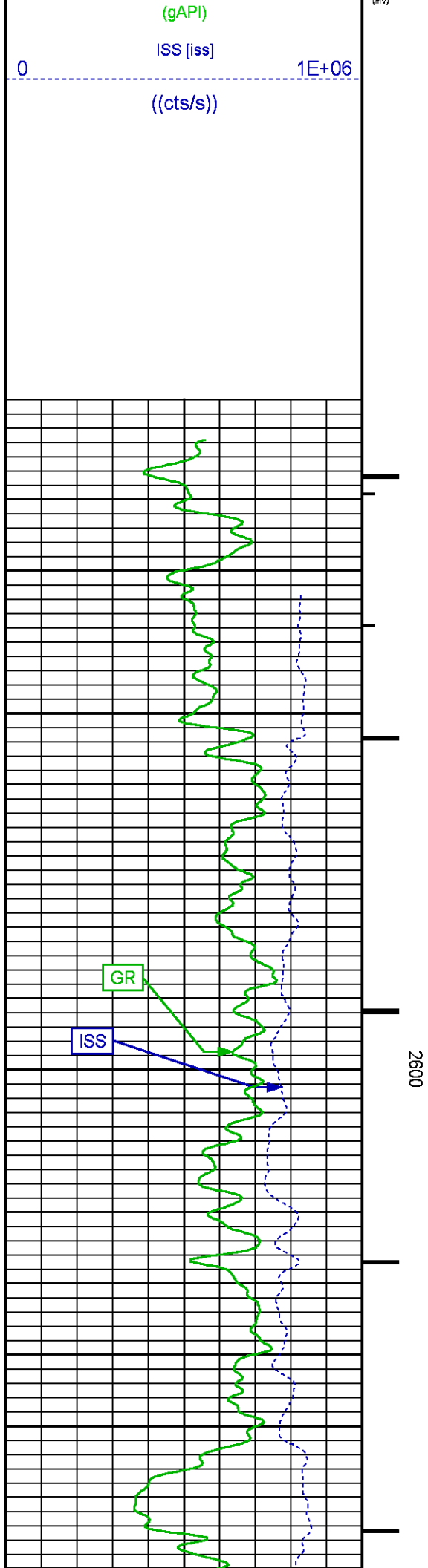
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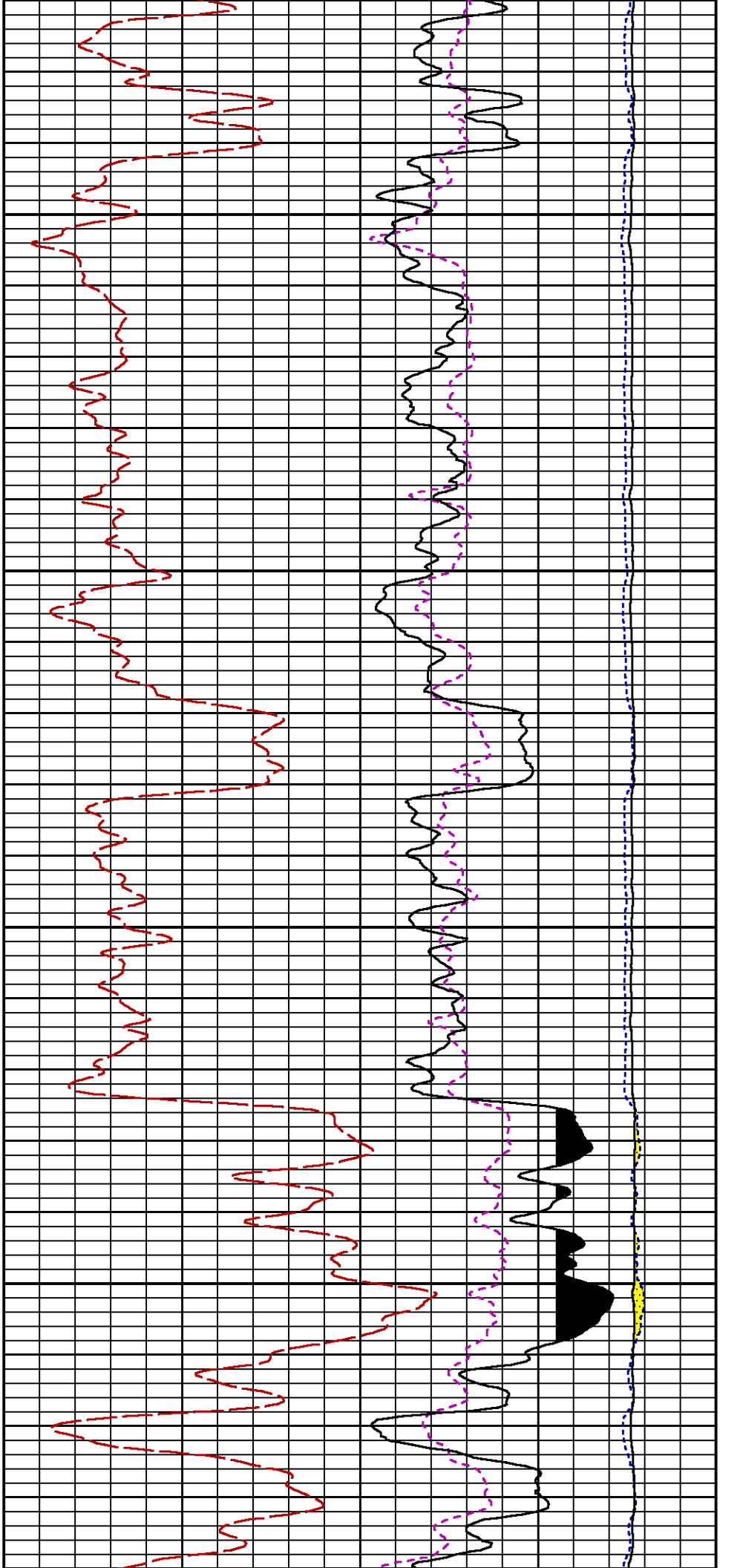
GAMMA RAY [gr]

FEET

LS [ls]

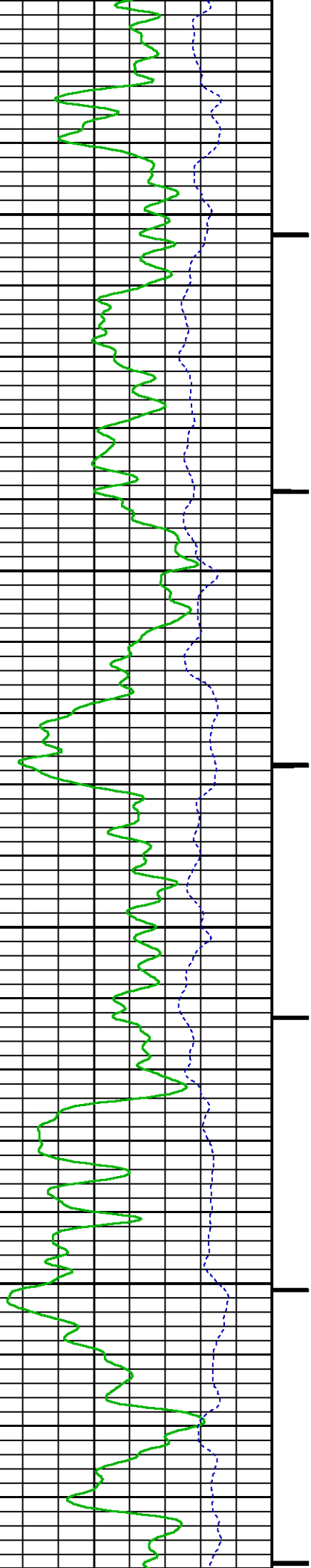
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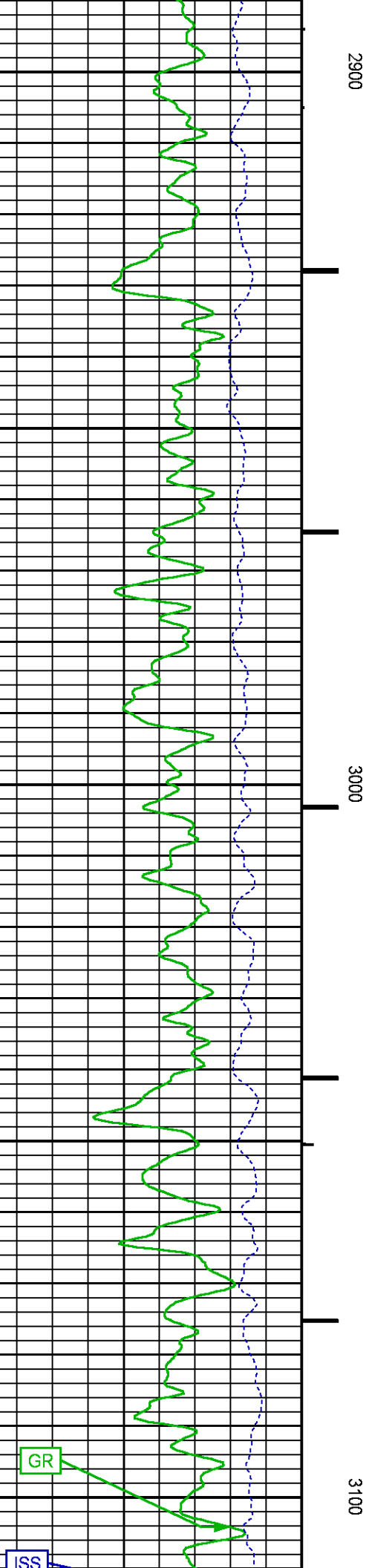
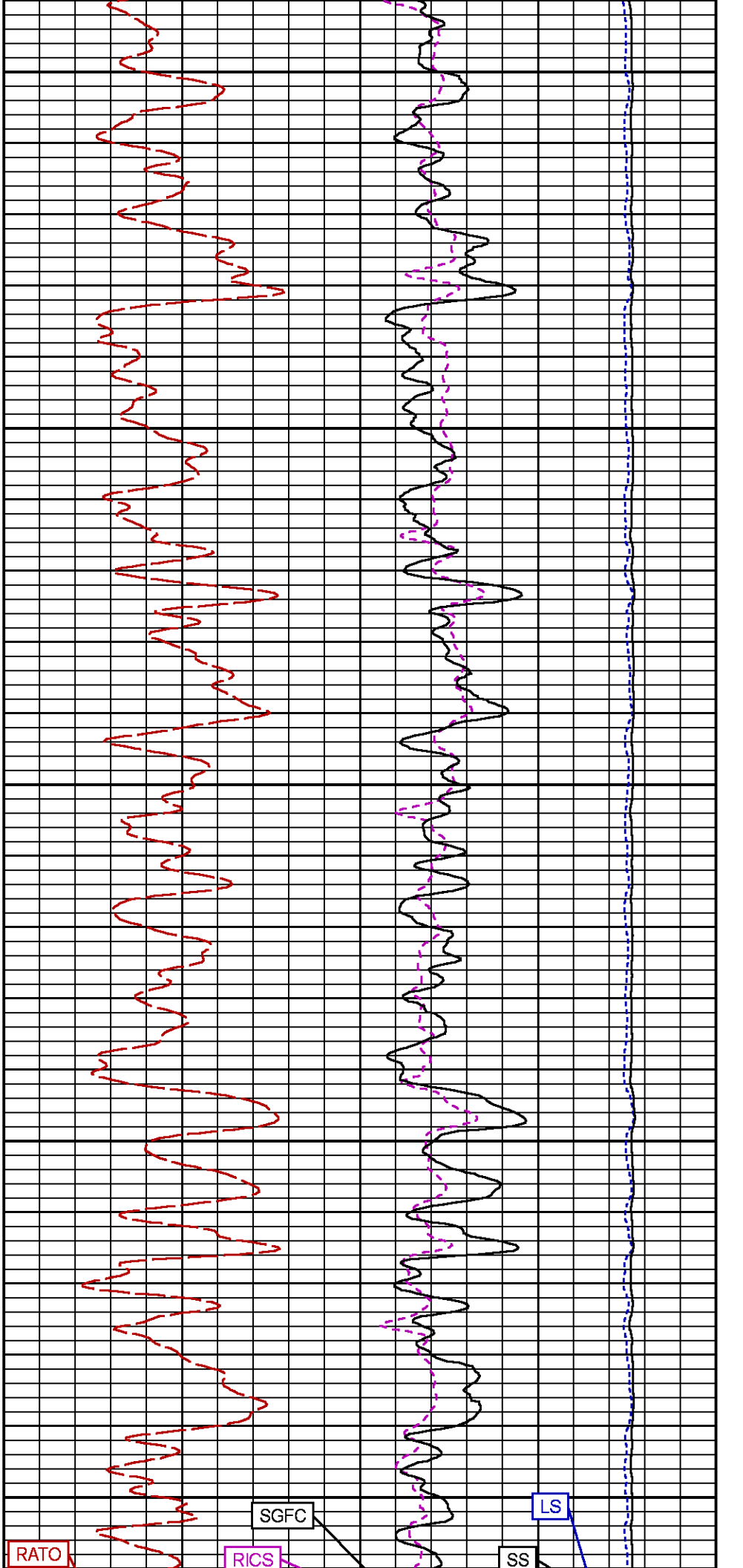


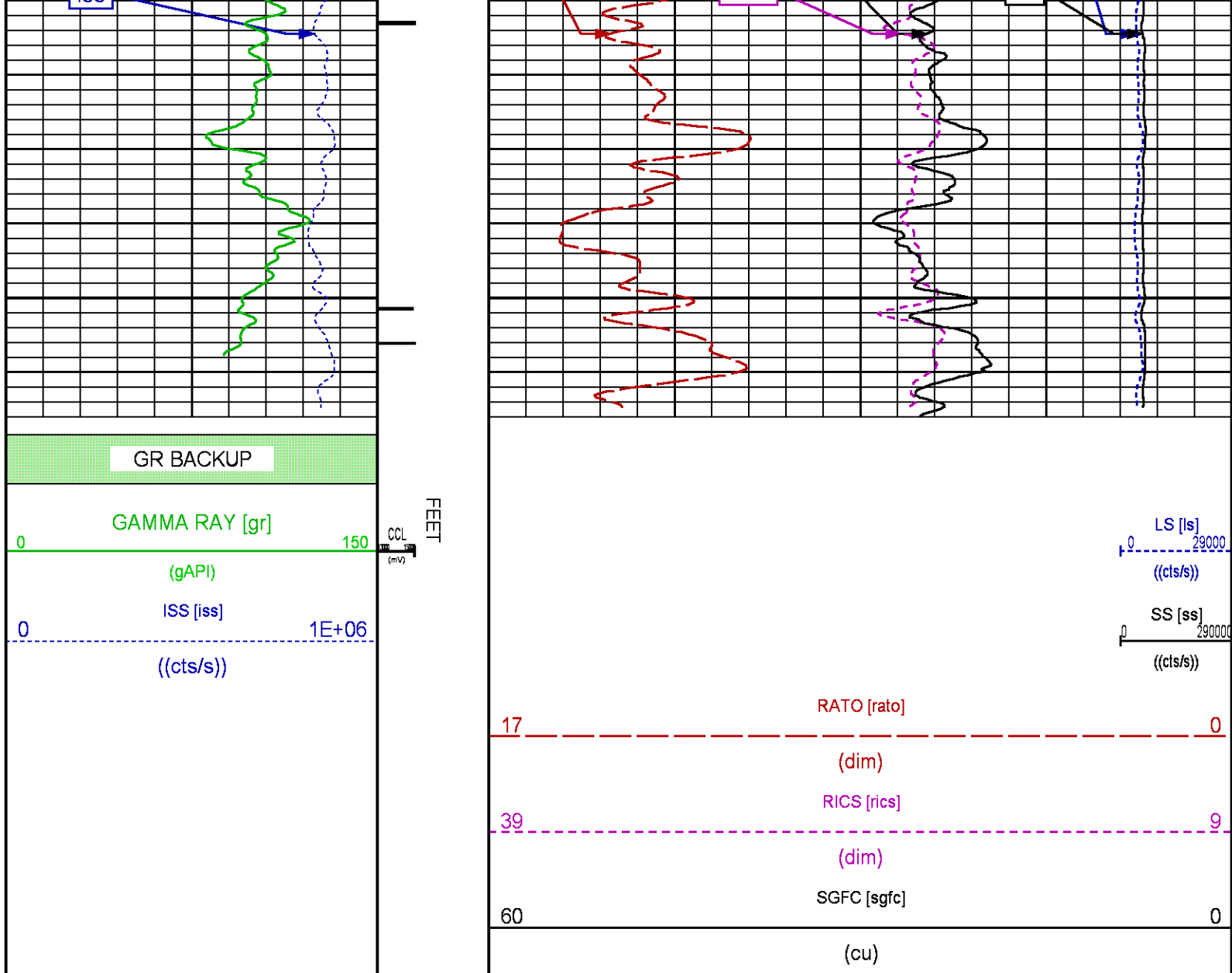


2700

2800







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 14:51:06 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_16E/p353h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4544.000 ft BOTTOM DEPTH: 7789.000 ft

SYMMETRIC FILTER

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

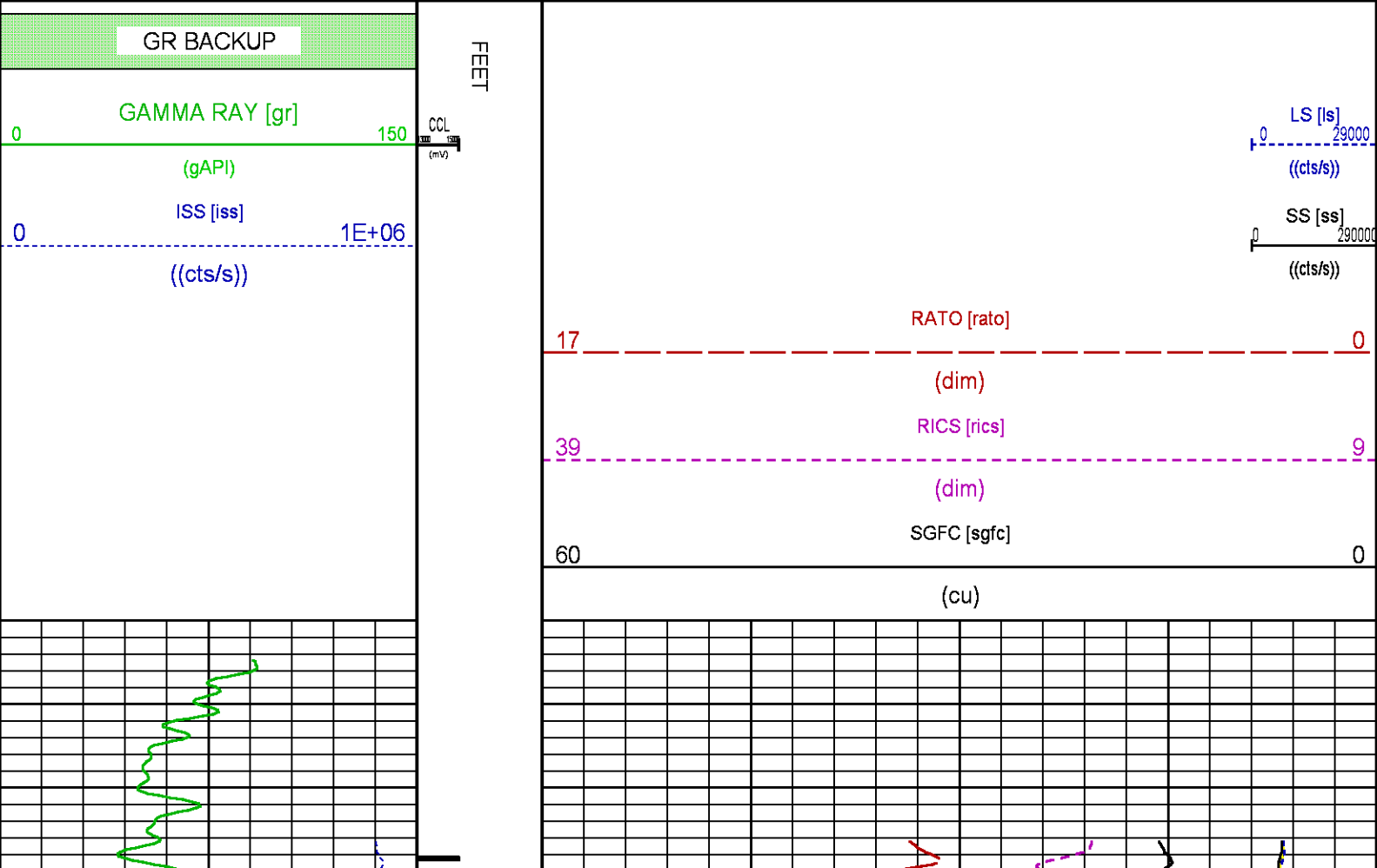
RPM PROCESSING

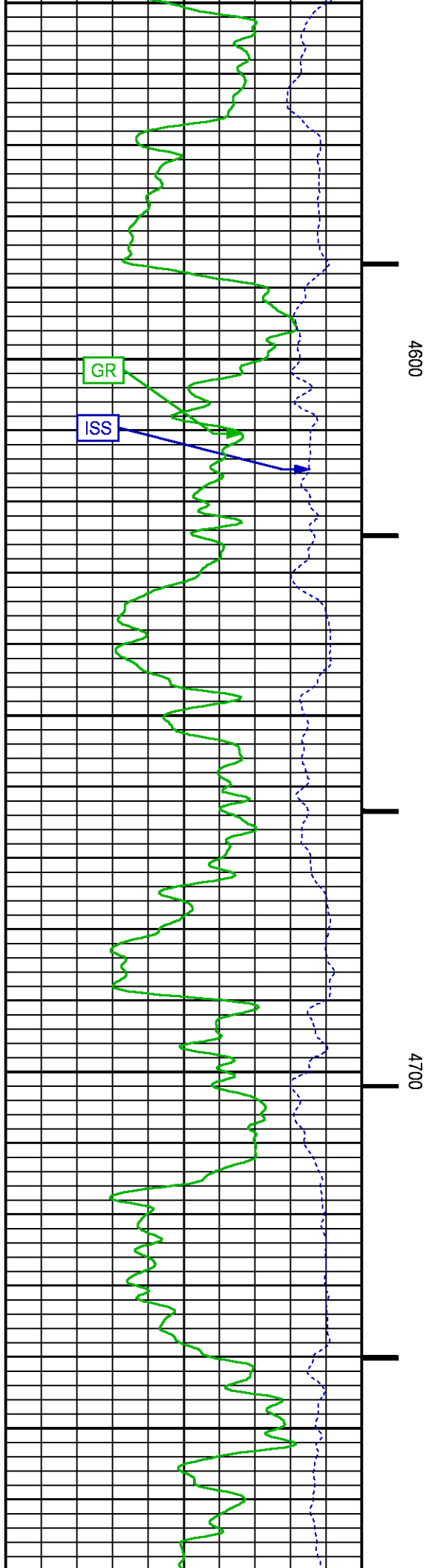
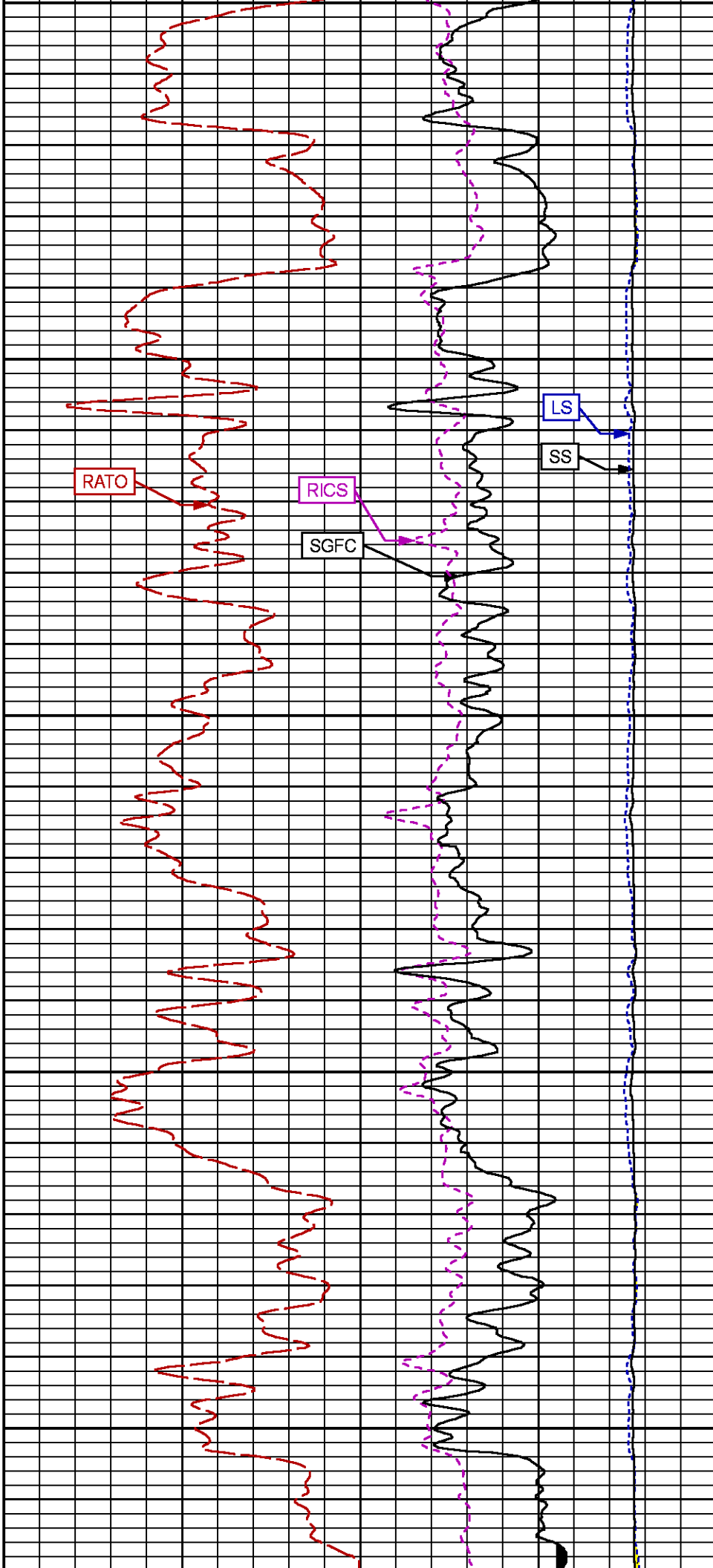
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP	BOTTOM
	OPEN/CASED HOLE	CASED HOLE		"	"
	BOREHOLE SIZE	7.88	in	"	"
	LARGEST CASING OD	4.50	in	"	"
	MATRIX	SANDSTONE		"	"

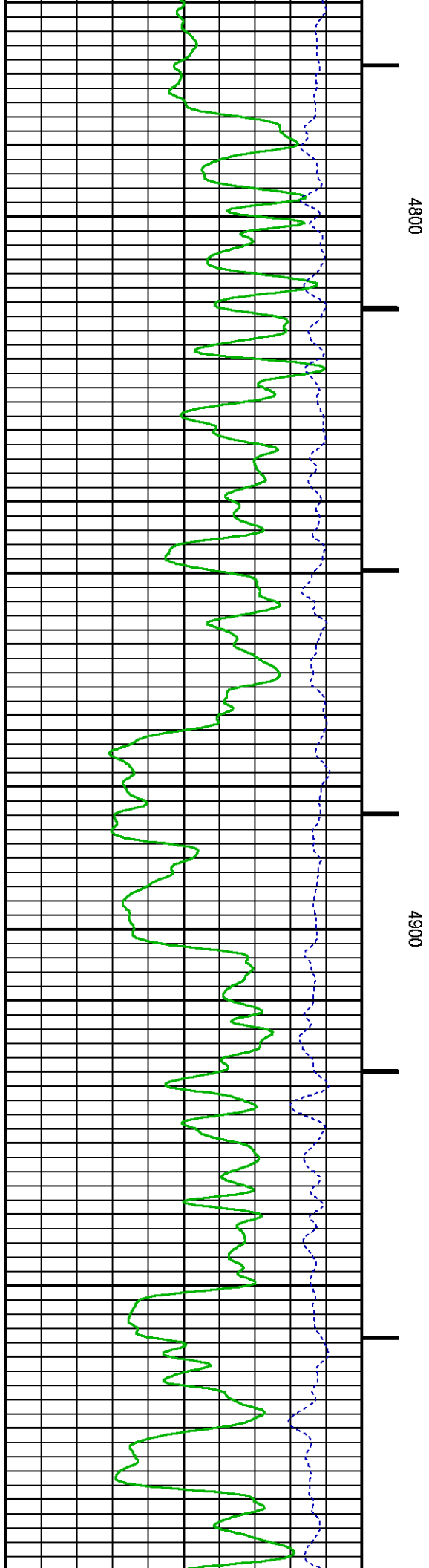
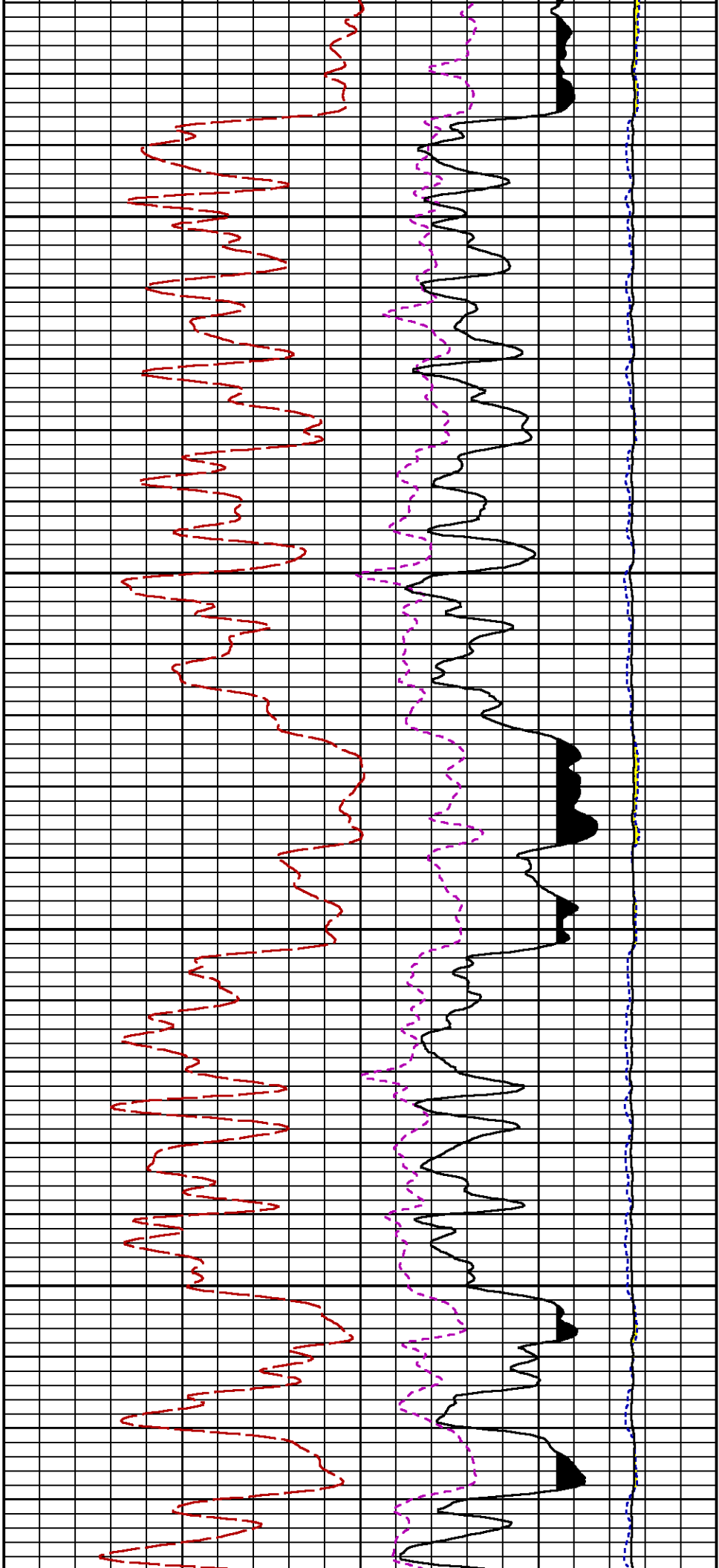
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE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

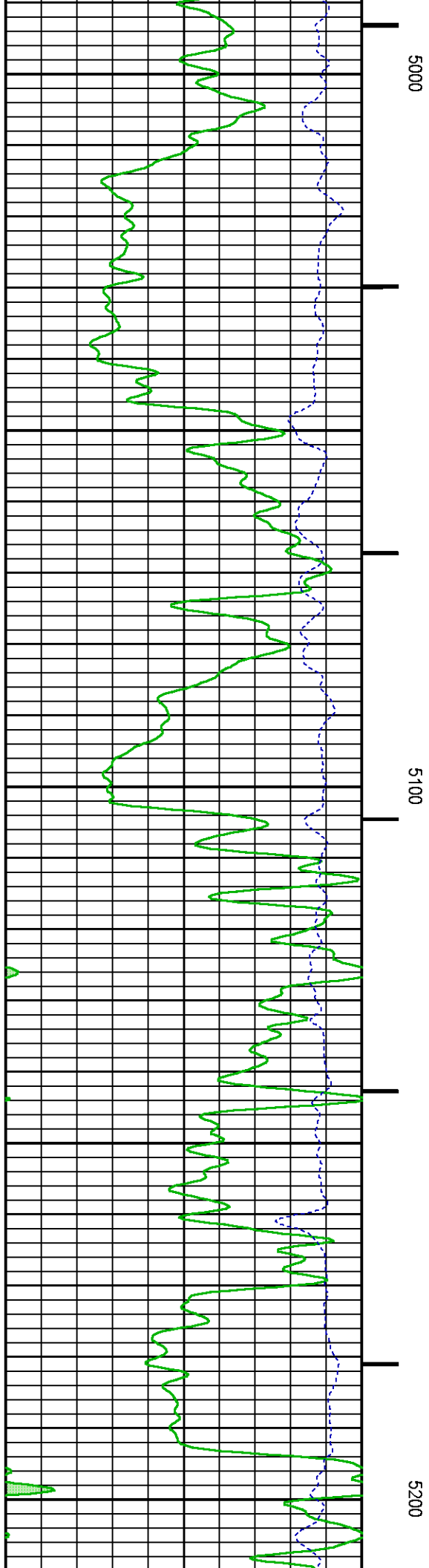
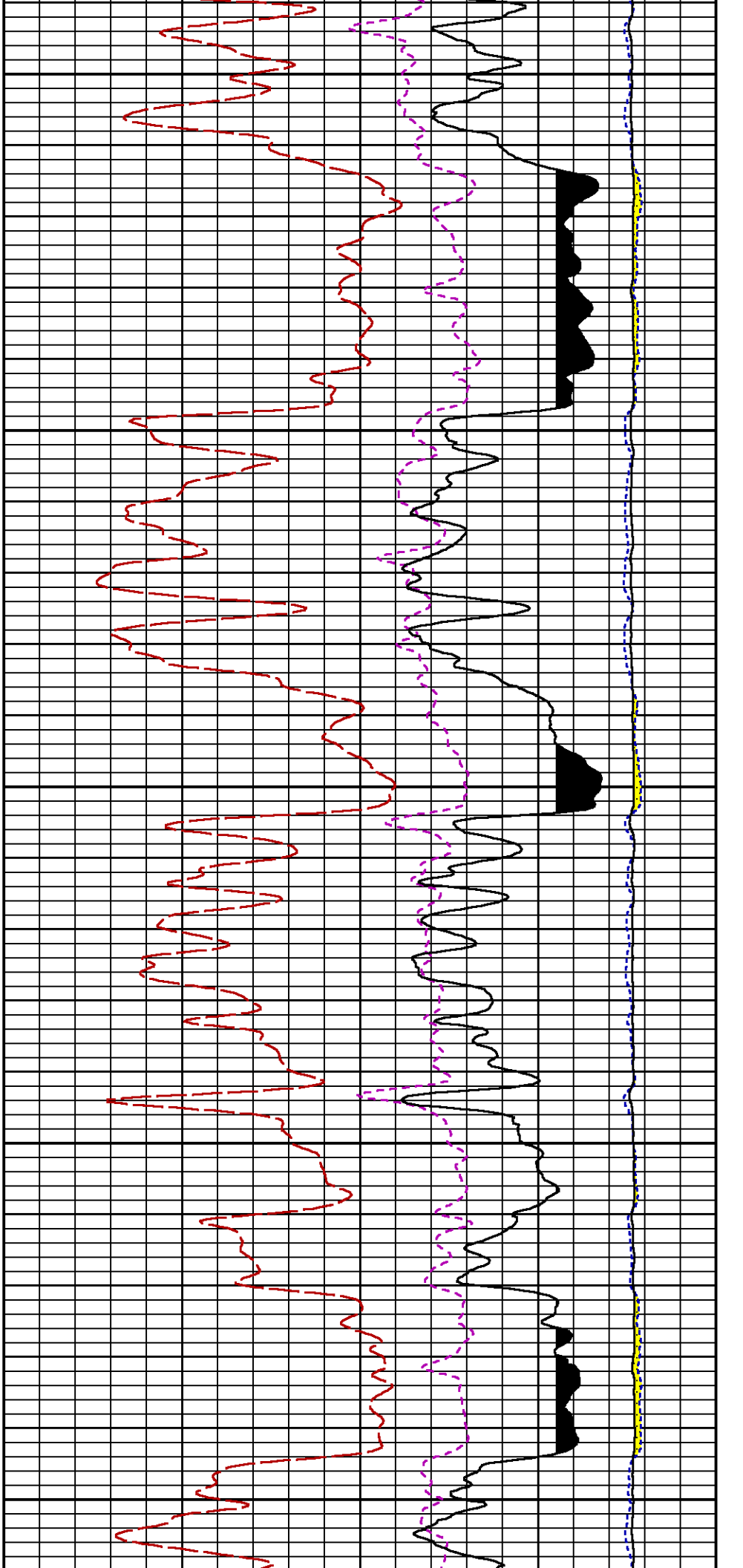
CURVE MEASURE POINT OFFSET					
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75
				SS	-12.75

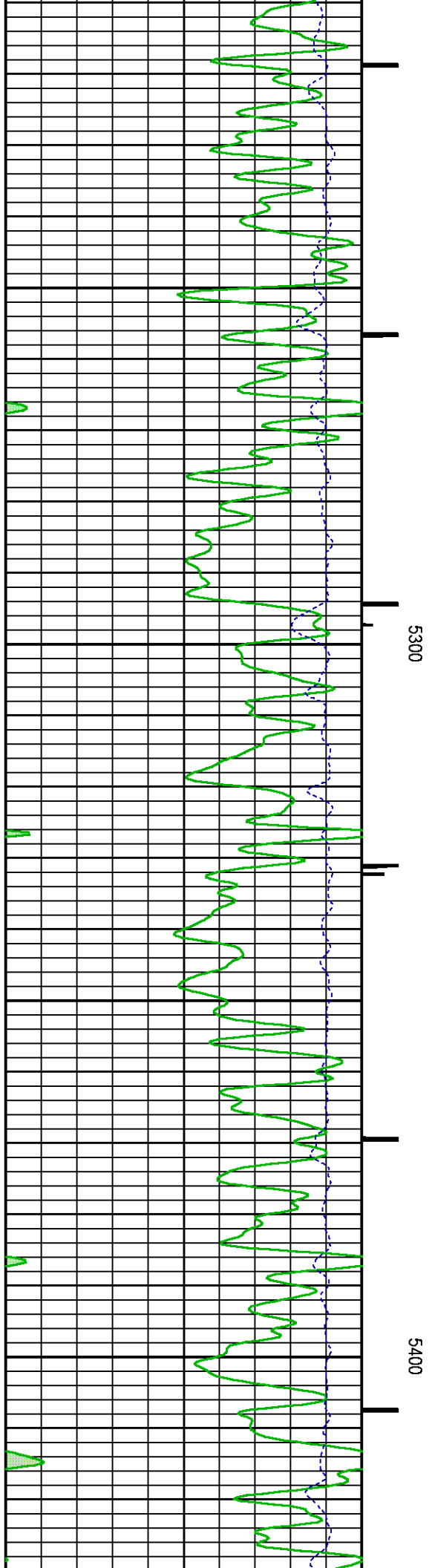
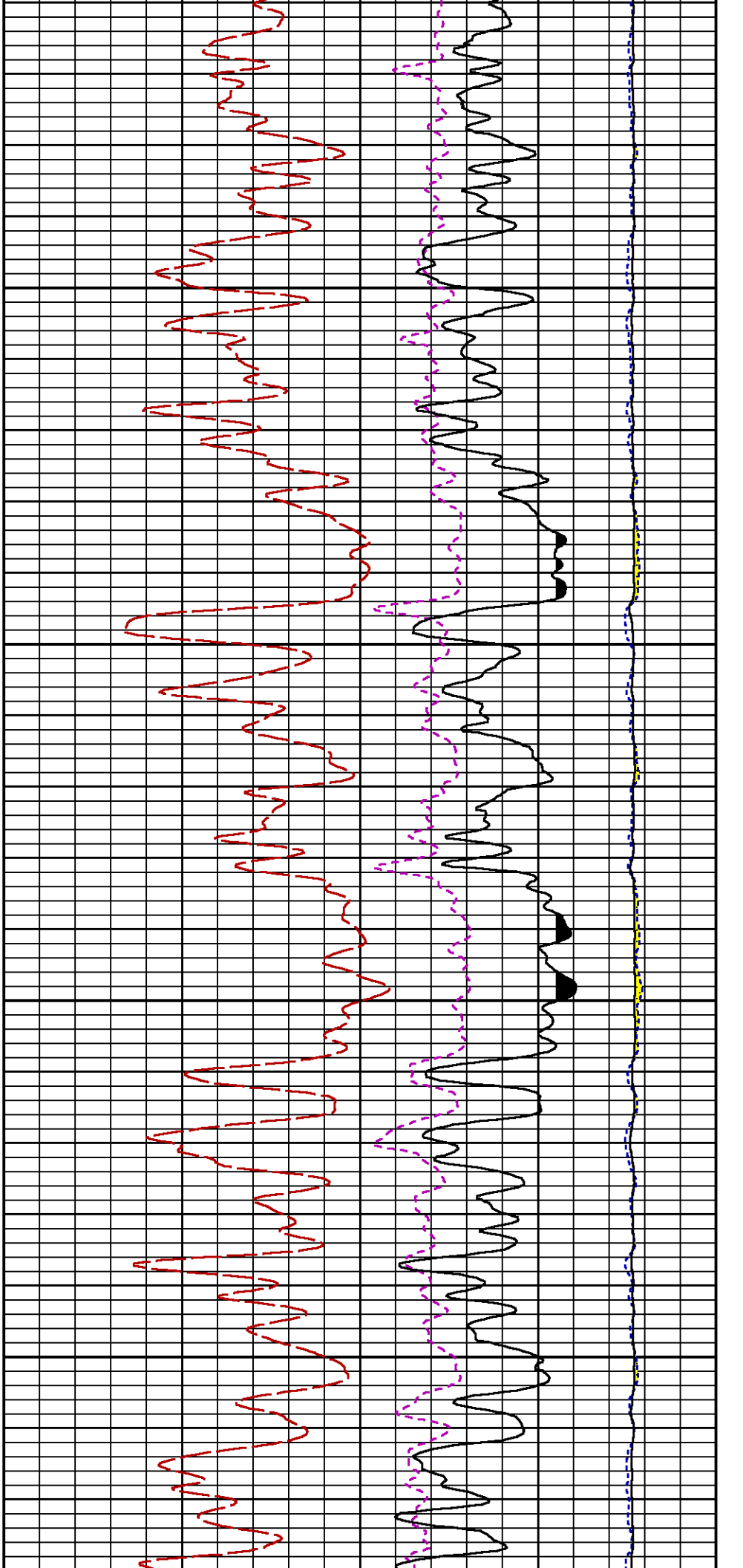
Presentation	: SysA:/dat1a/LARAMIE_BRUTON_30_16E/LARAMIE_RPM+01-MAIN-RPM_MN_WF_16E-5.fvpdf [5"/100' Scale]
Plot Interval	: 4520.5 - 7781.5 Feet
Data File 1	: F1 : SysA:/dat1a/LARAMIE_BRUTON_30_16E/RPM_MN_WF_16E.xtf
Created On	: N/A
Company	: LARAMIE ENERGY LLC
Well	: BRUTON 30-16E
Field	: VEGA
File Interval	: 4519.75 - 7790.25 Feet
OCT	: p353h

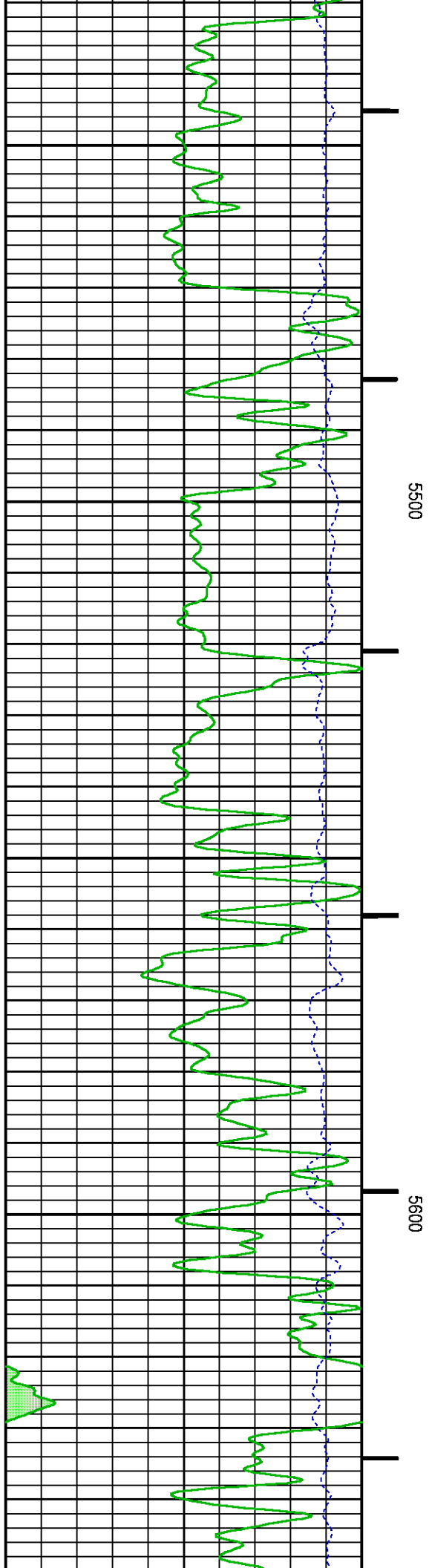
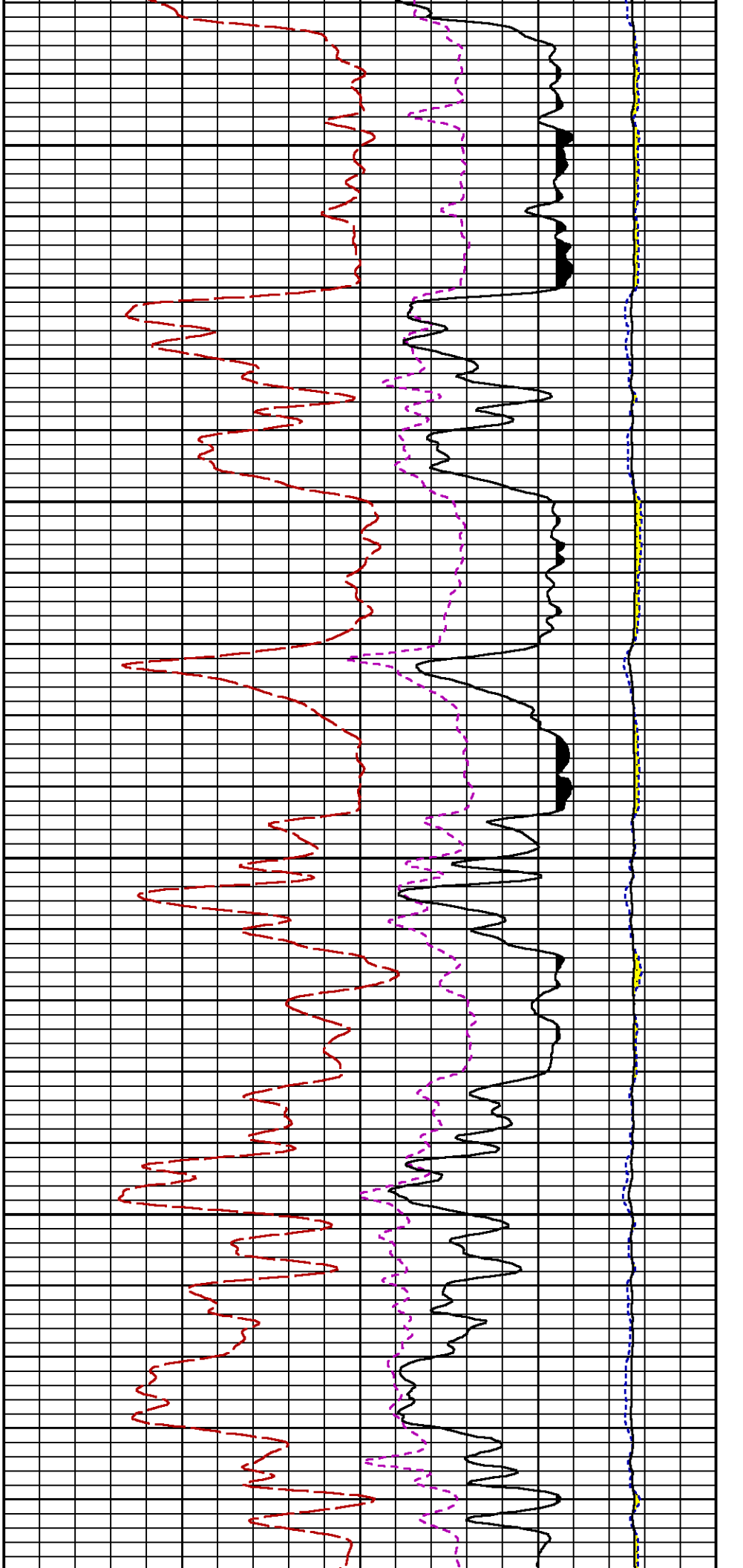


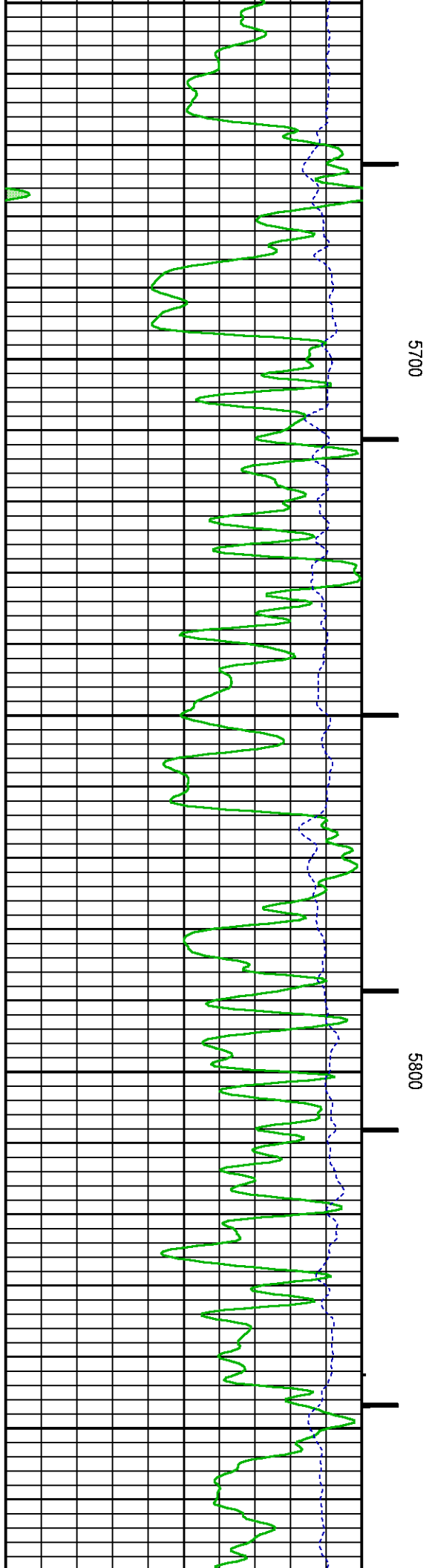
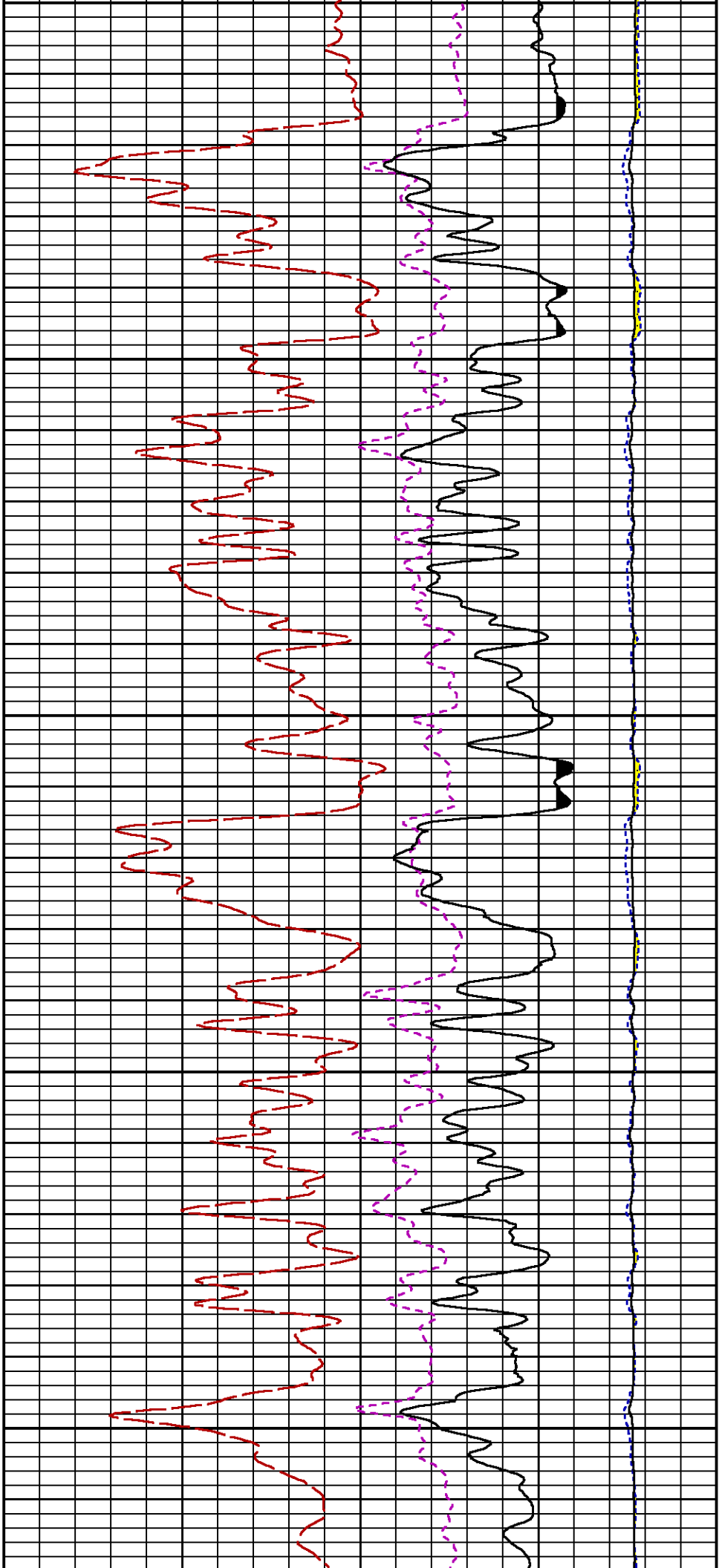


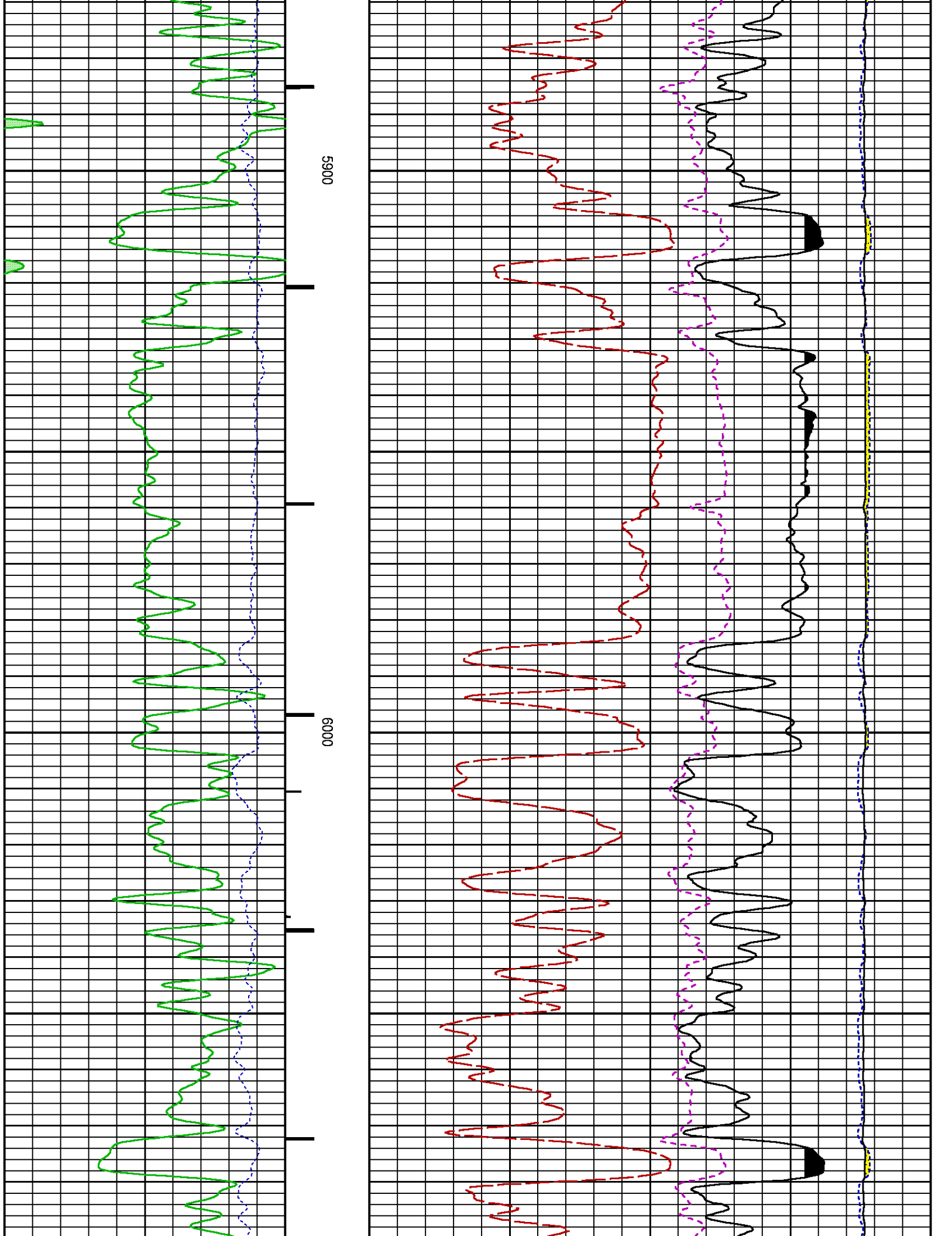


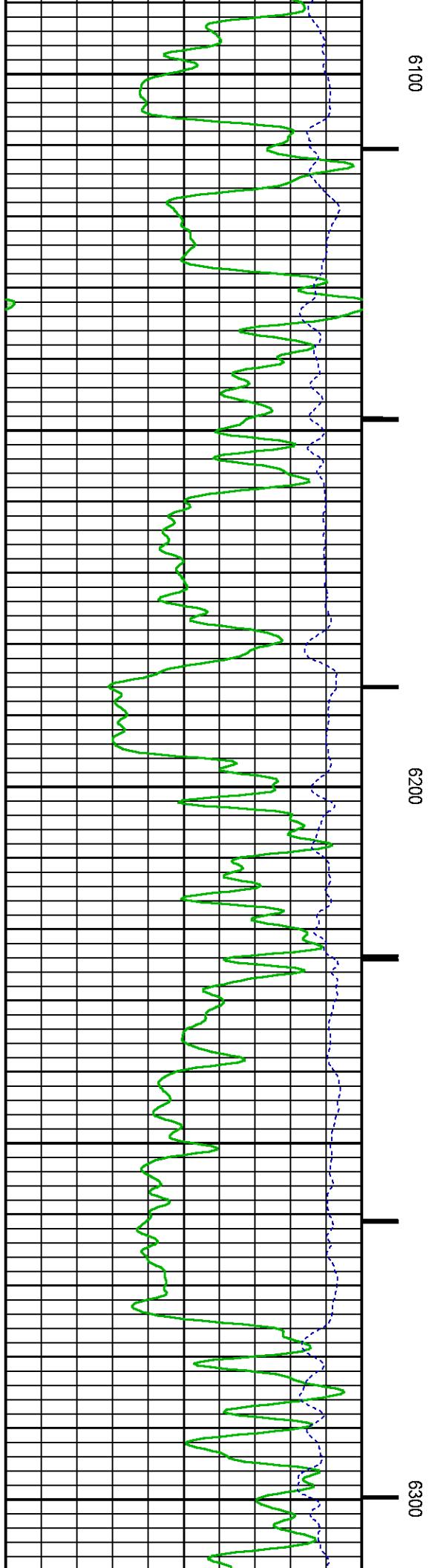
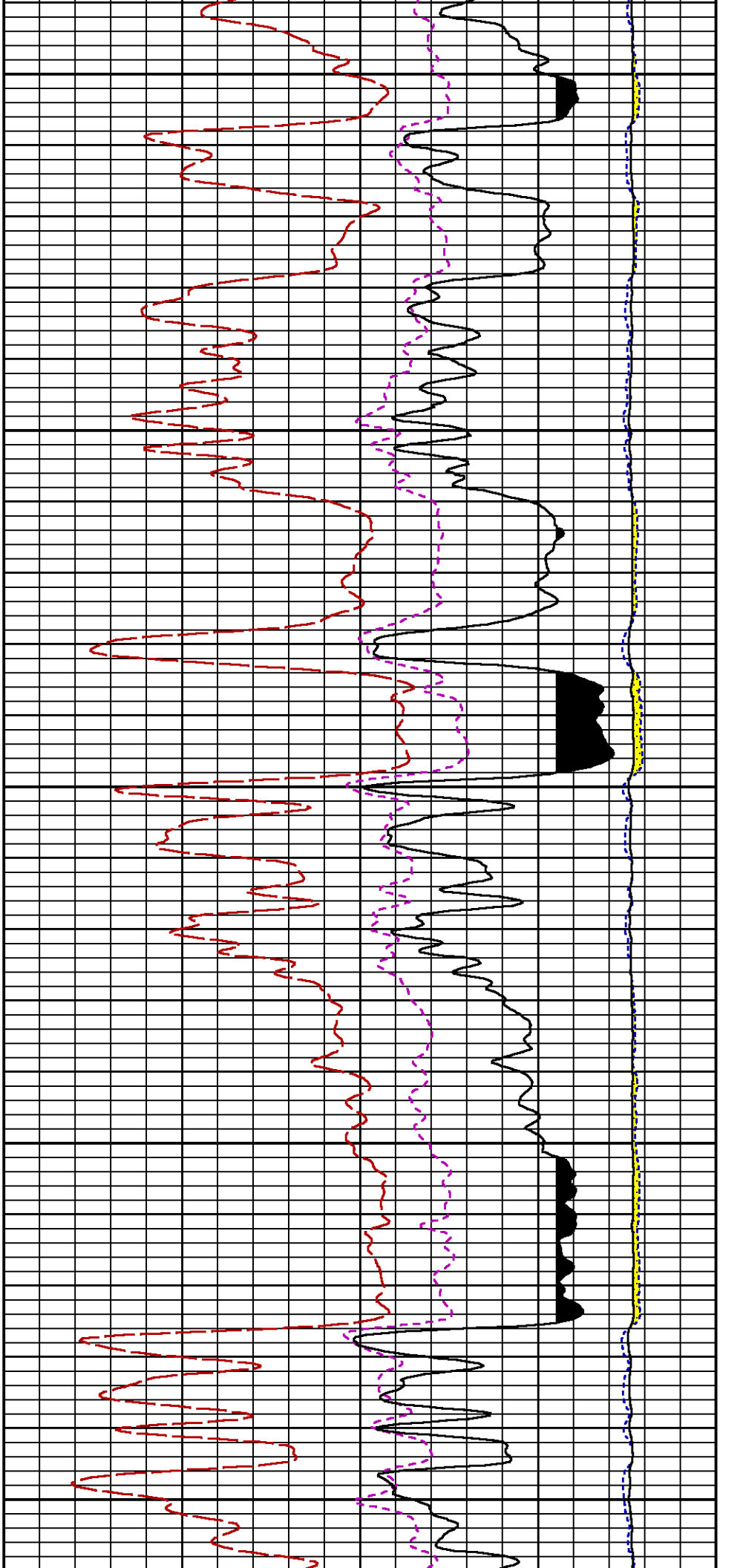


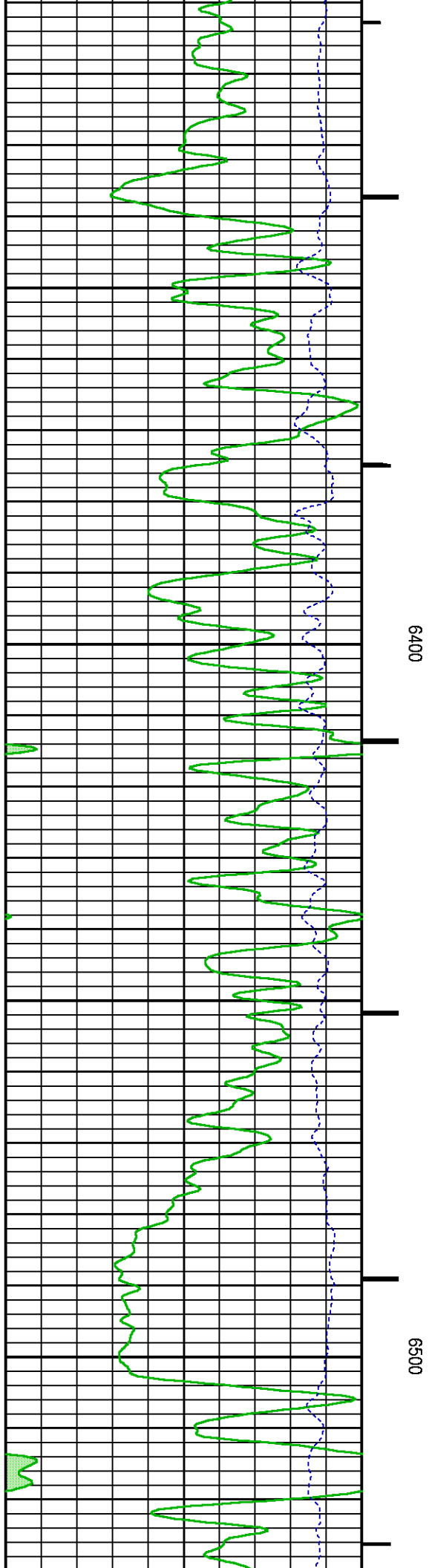
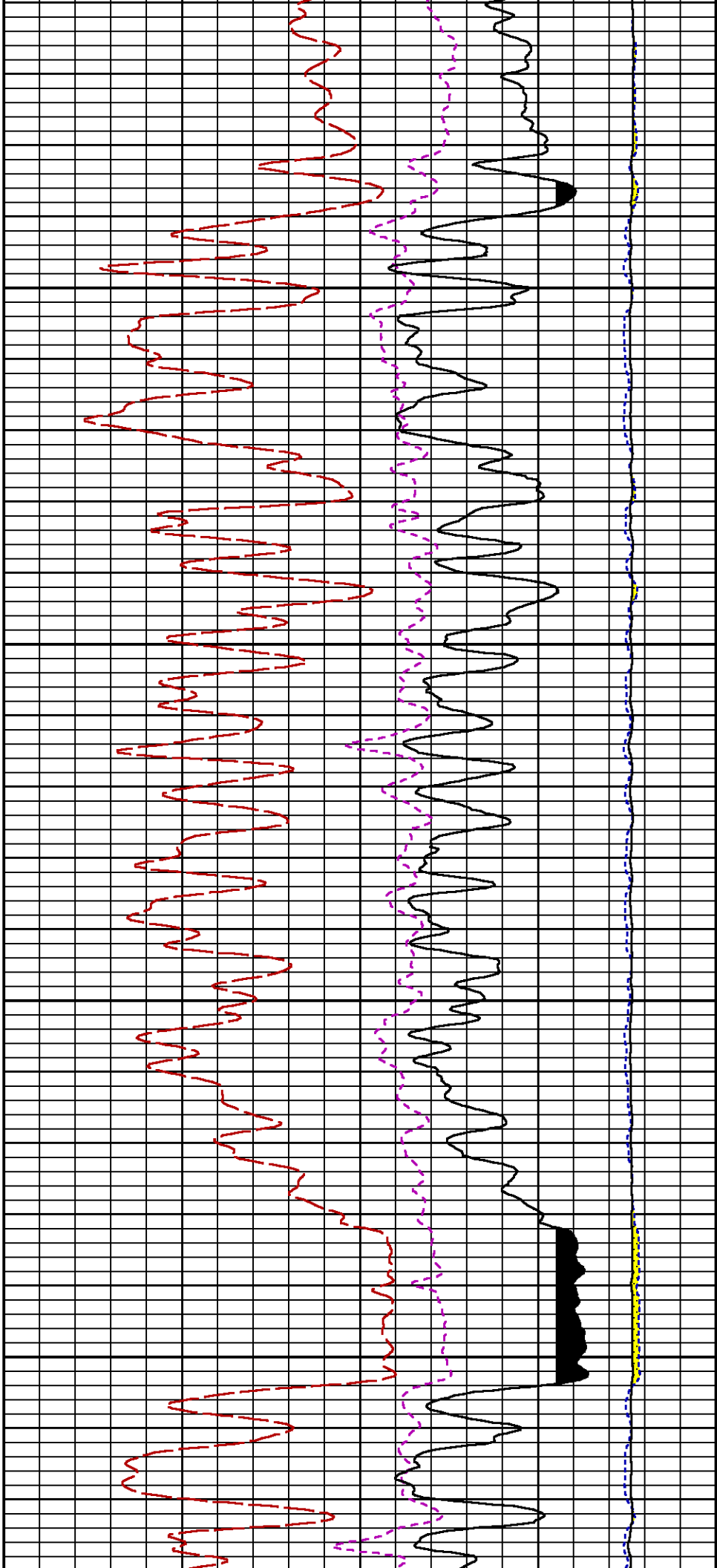


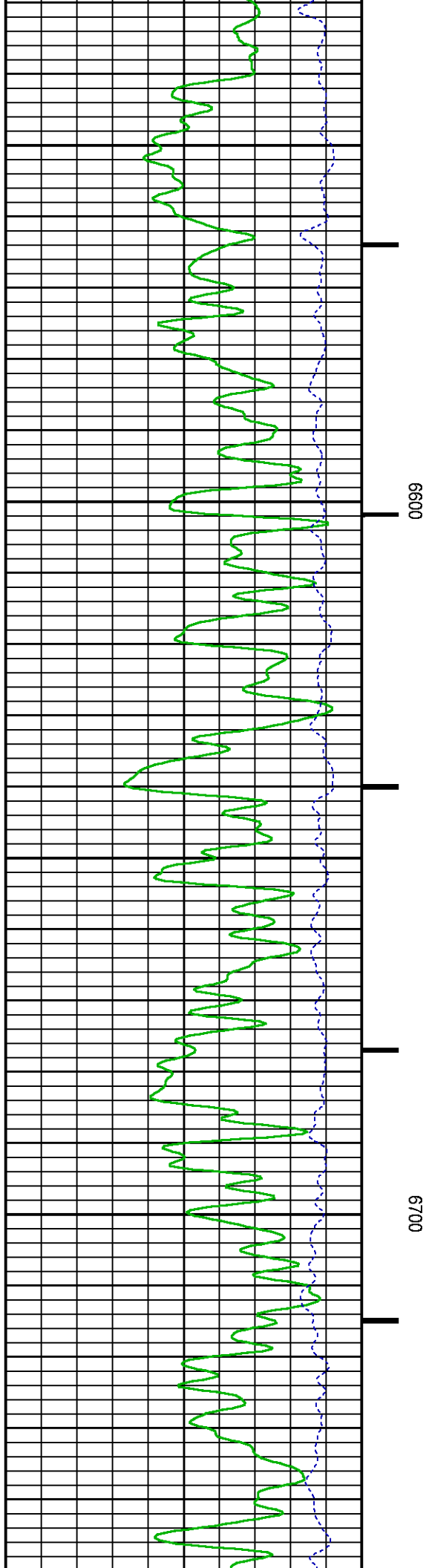
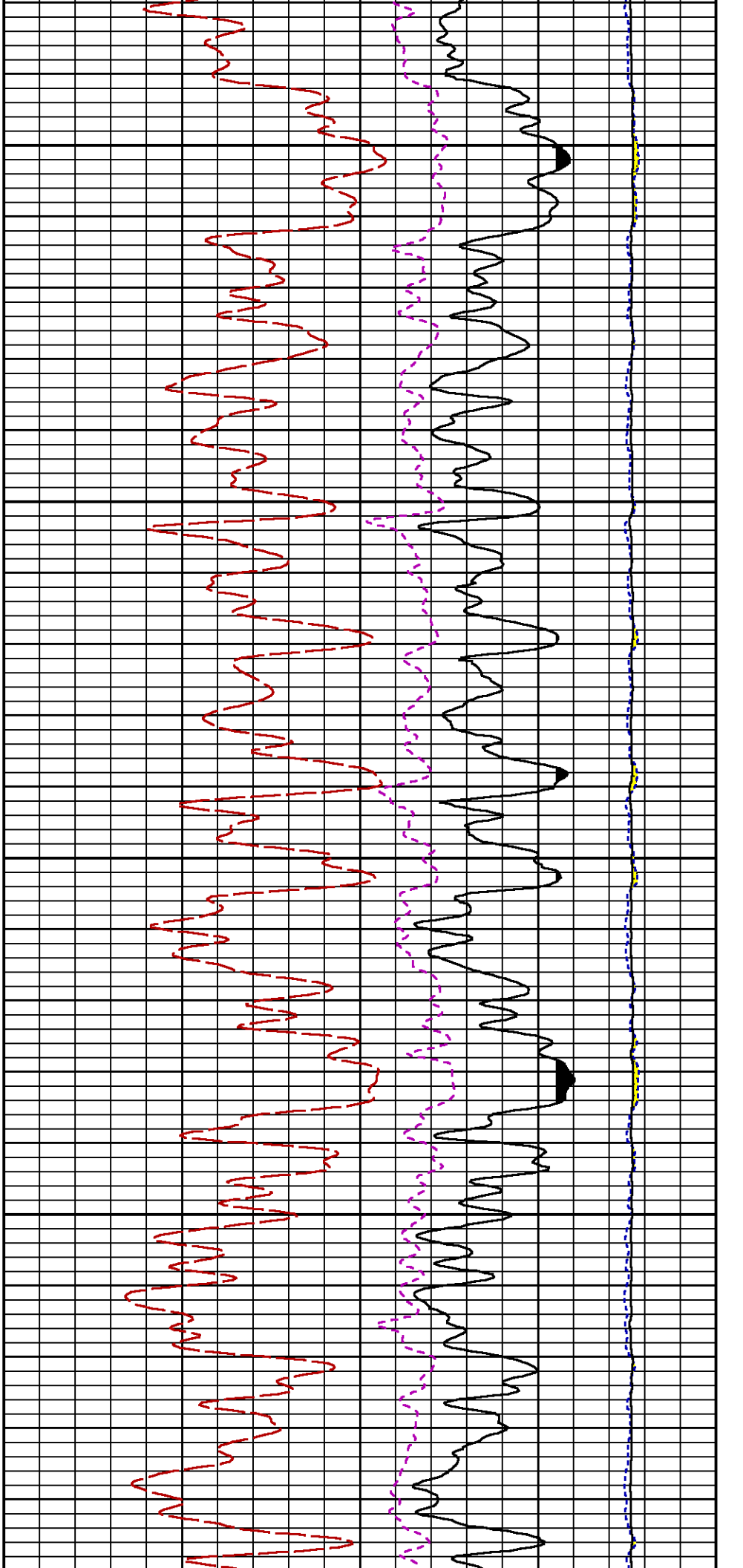


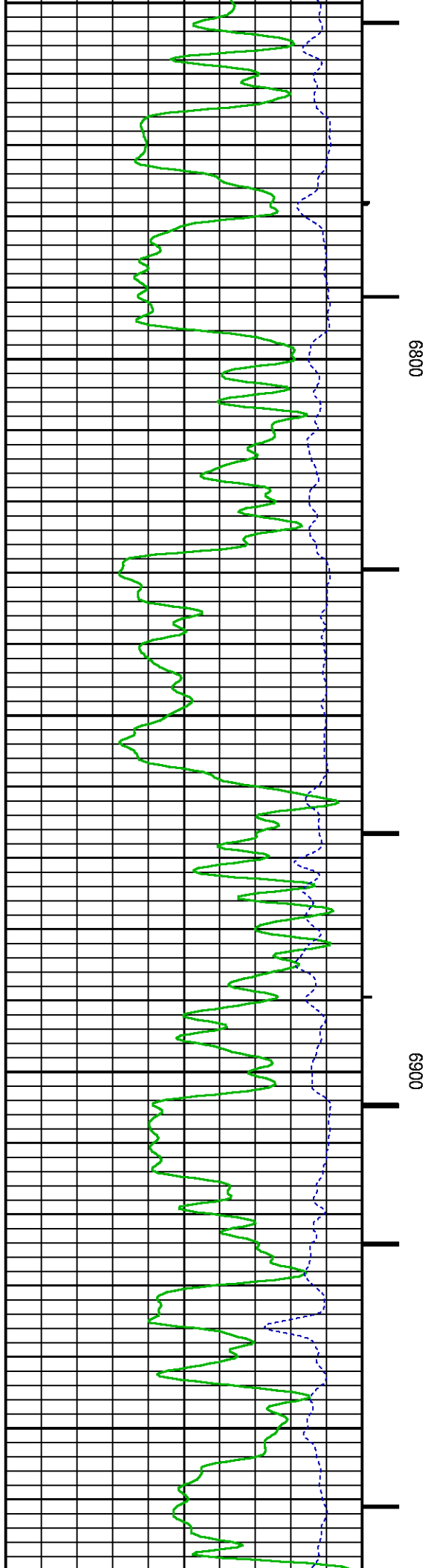
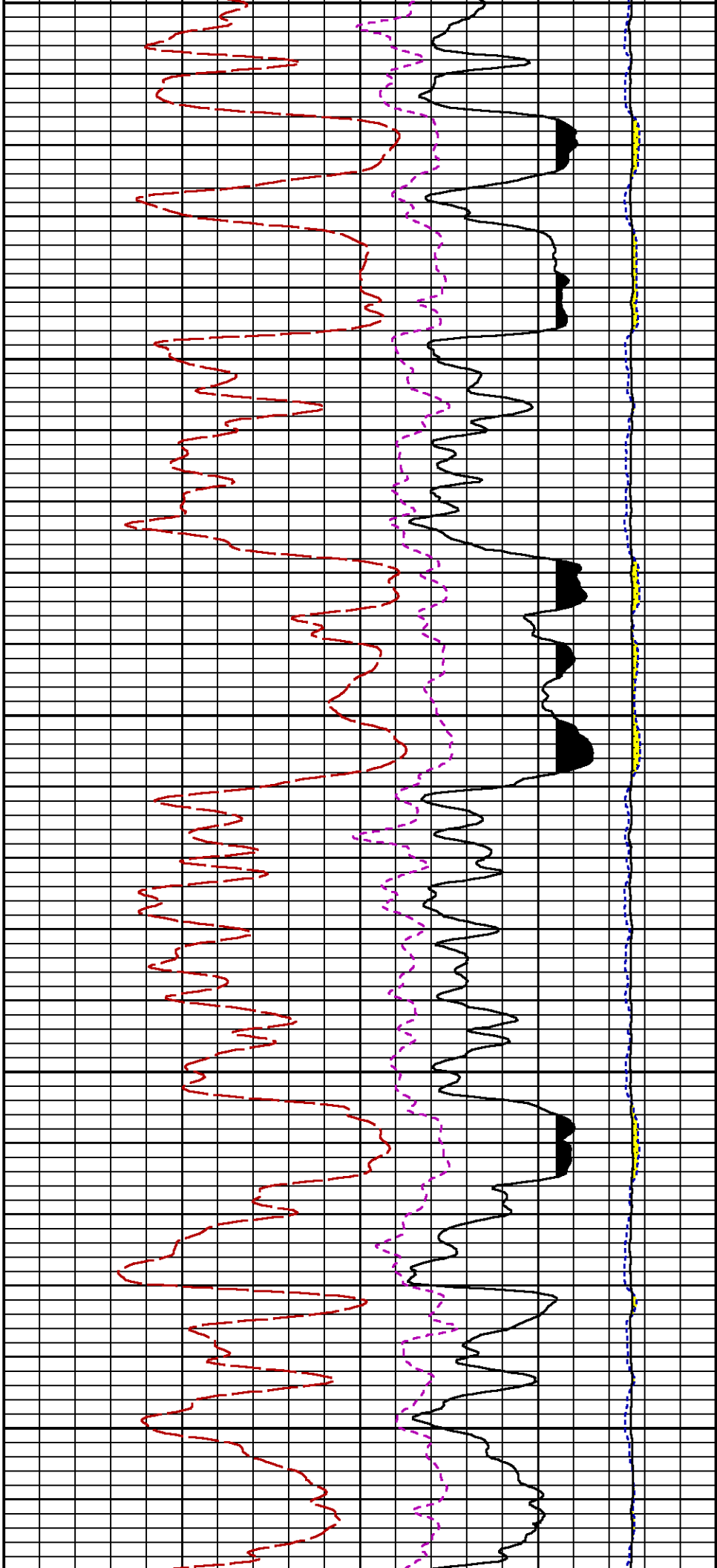


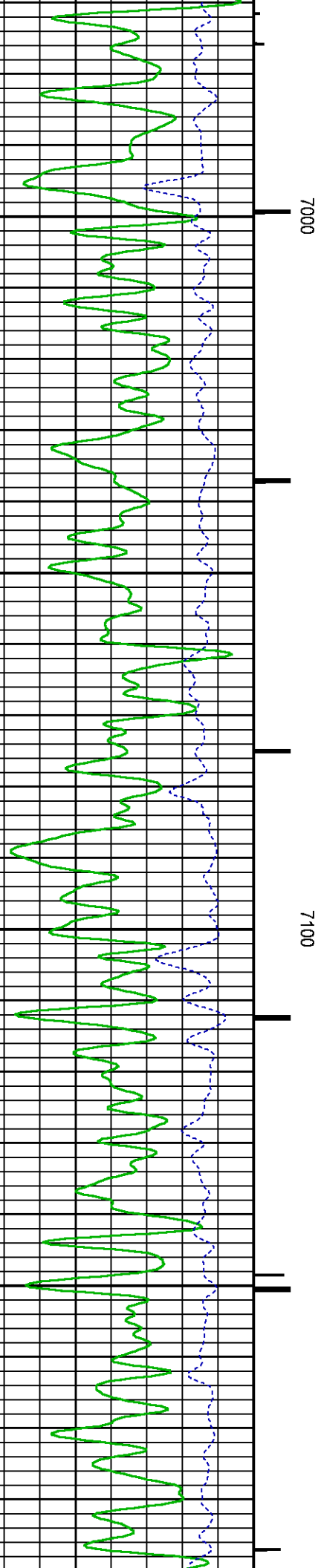
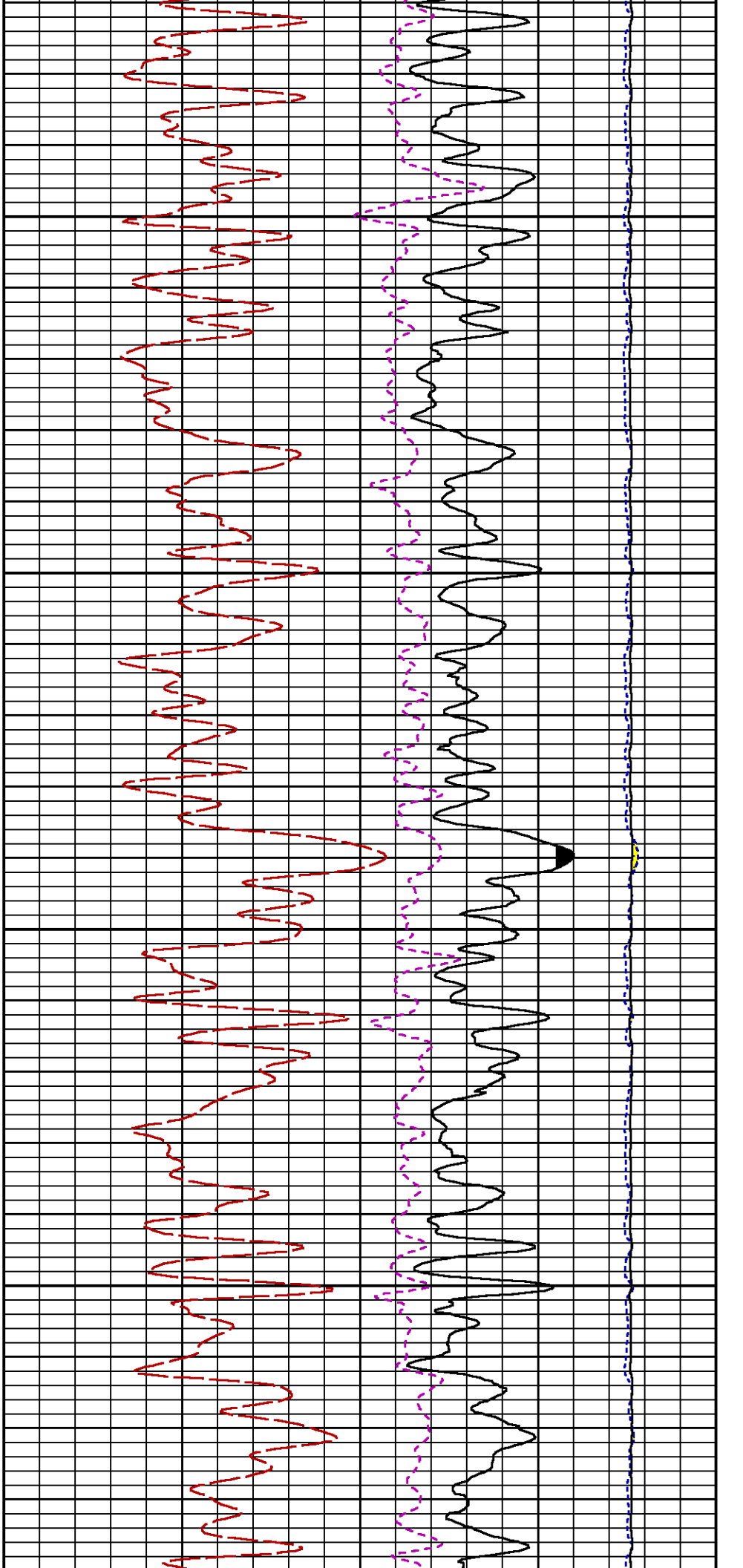


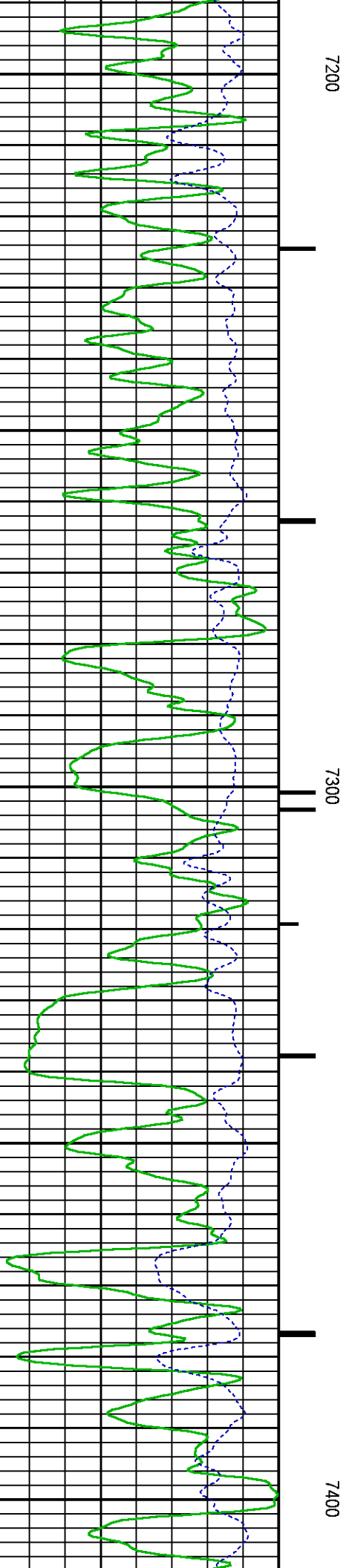
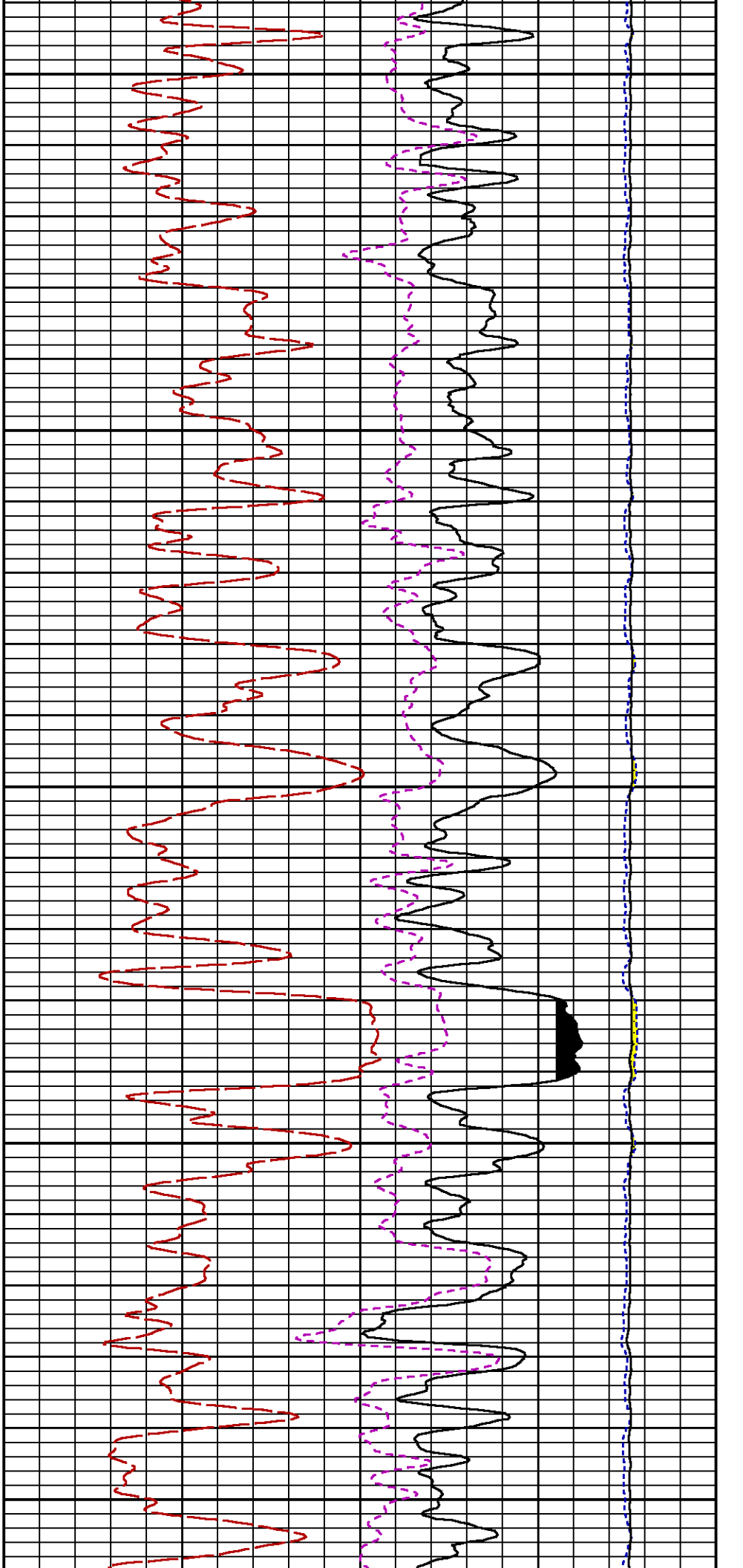


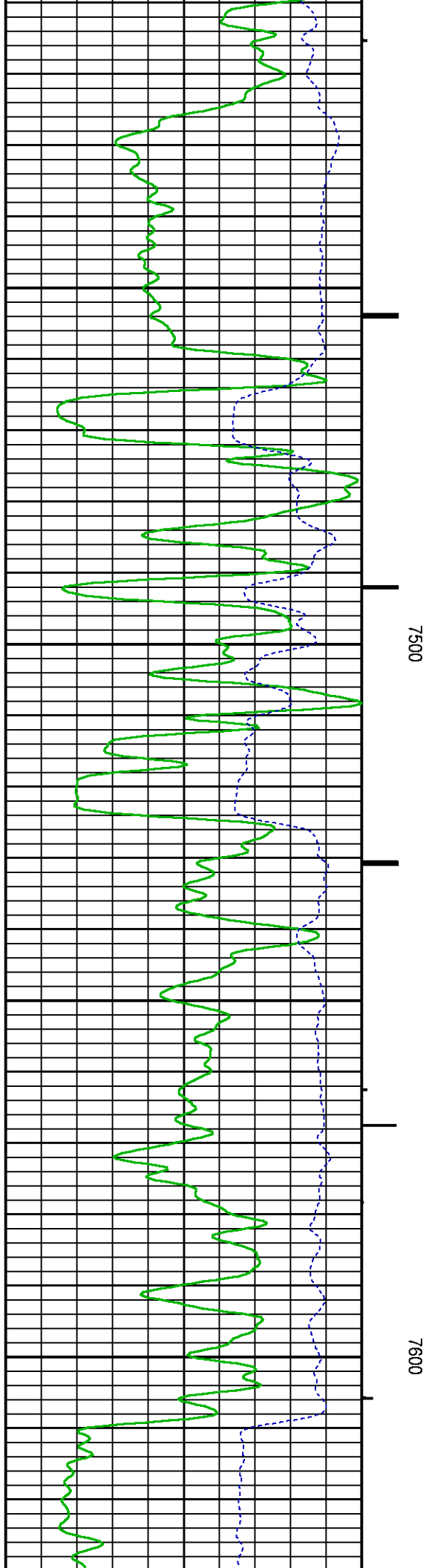
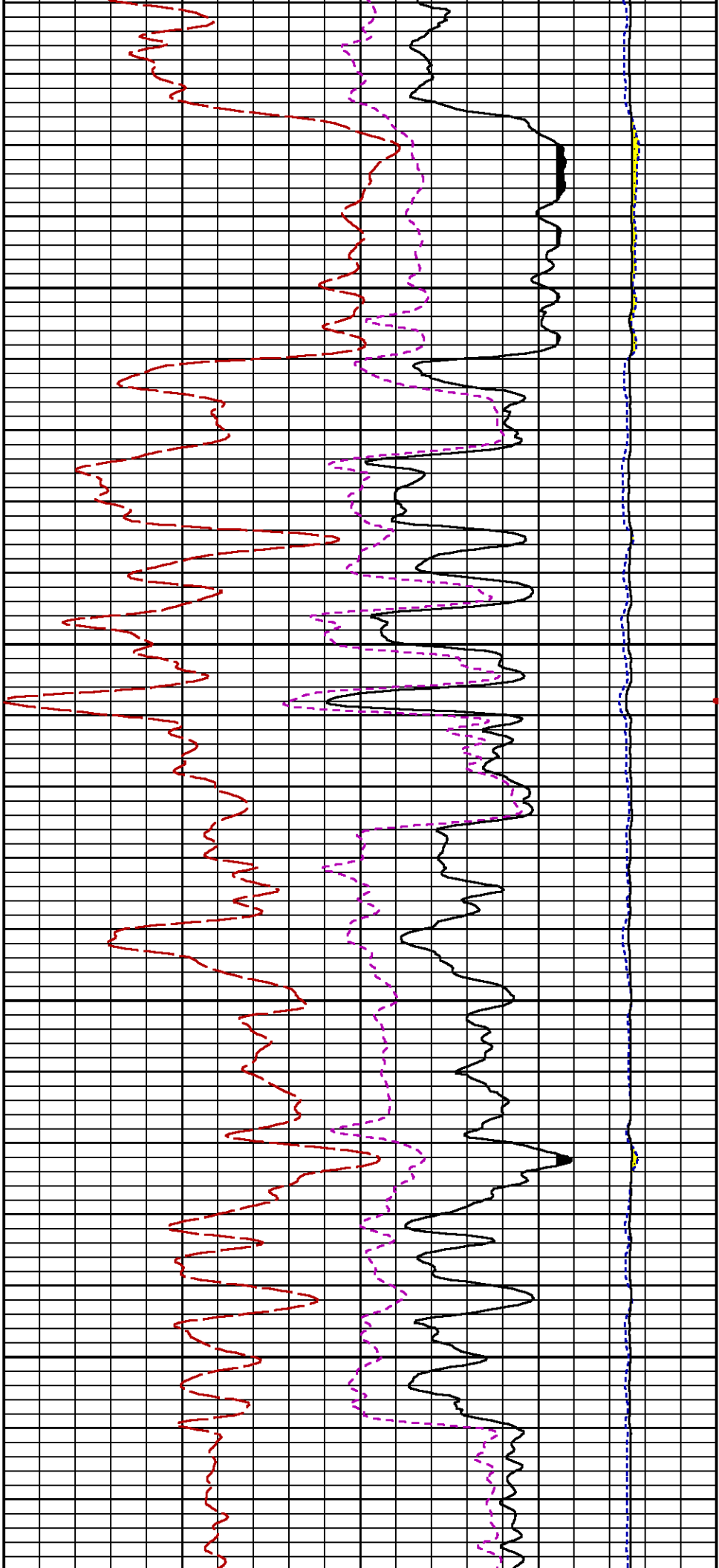


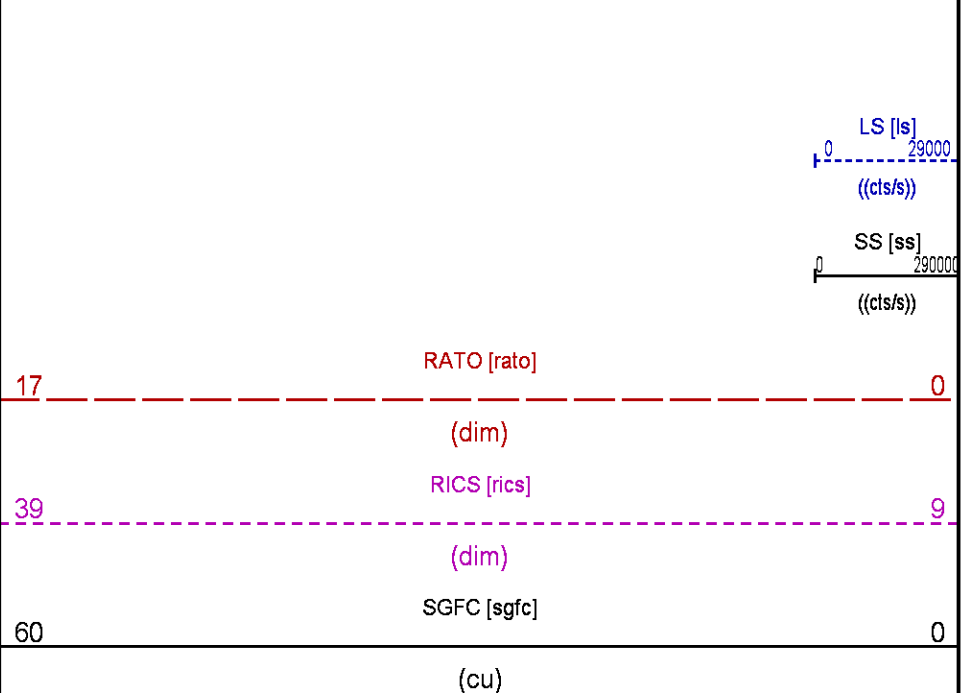
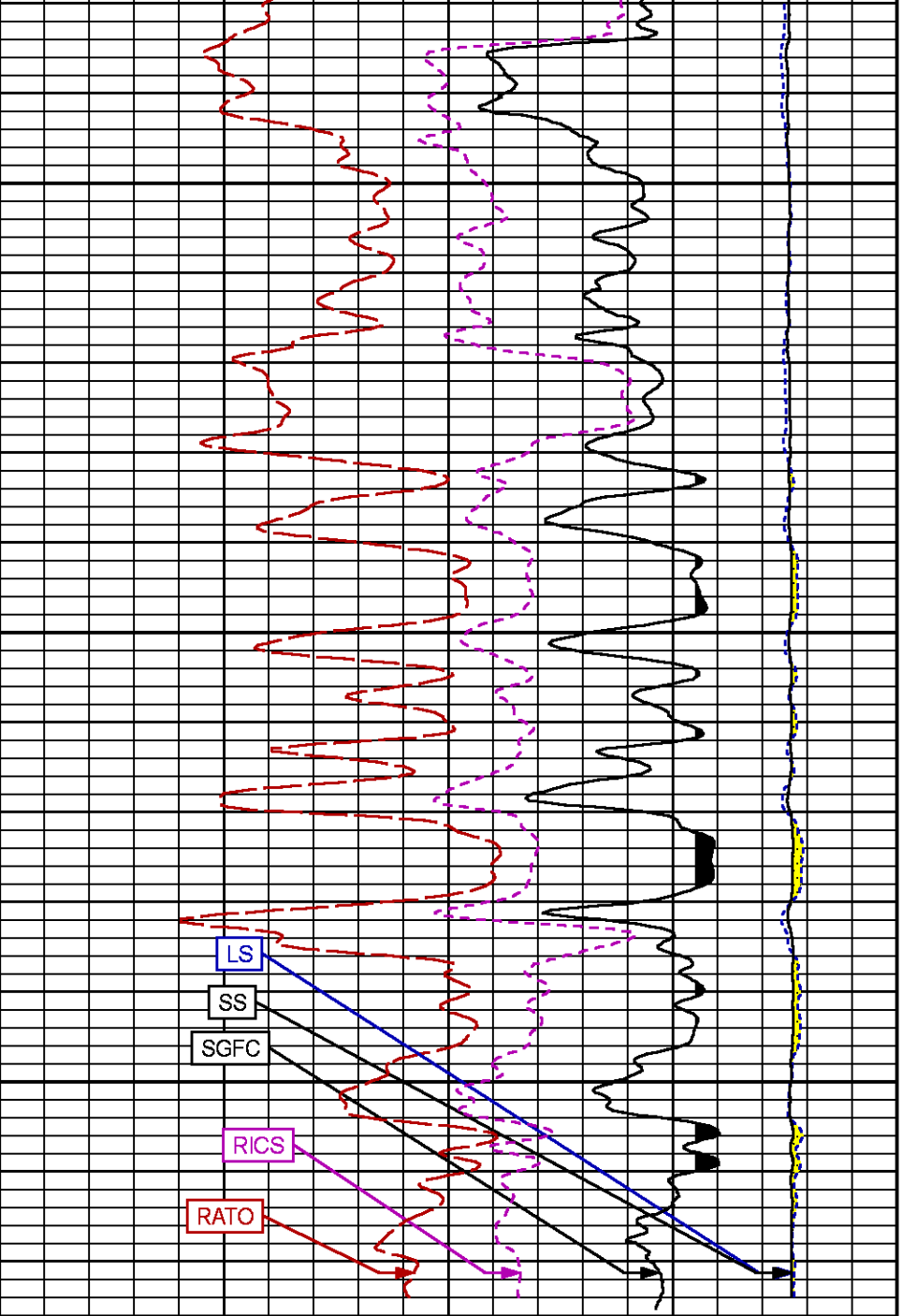
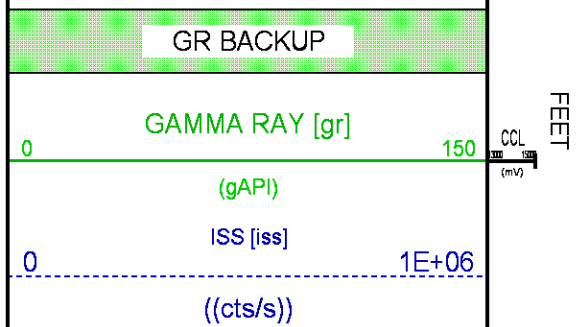
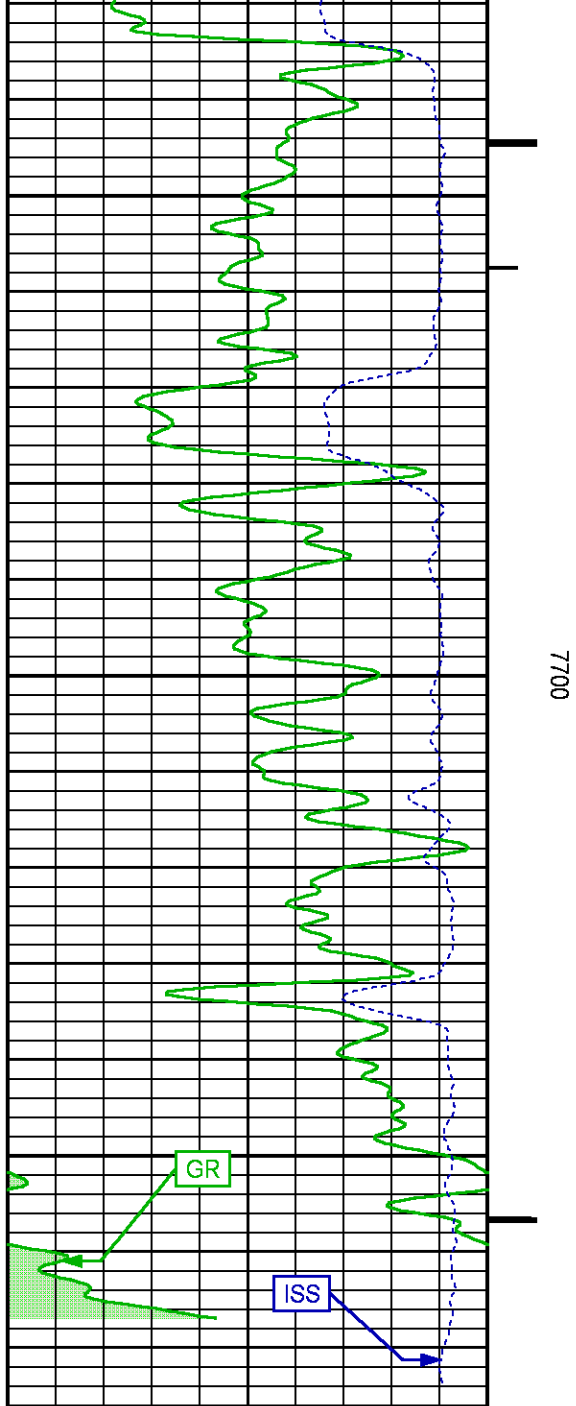












REPEAT PASS PNC 3D MODE

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

Patches: 2

Plotted: Sun Feb 11 10:42:46 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_16E/p353h01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 4769.000 ft BOTTOM DEPTH: 4990.000 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_16E/LARAMIE_RPM+01-REPEAT-RPM_RPT_16E-5.fvpdf [5"/100' Scale]
Plot Interval : 4748 - 4985 Feet

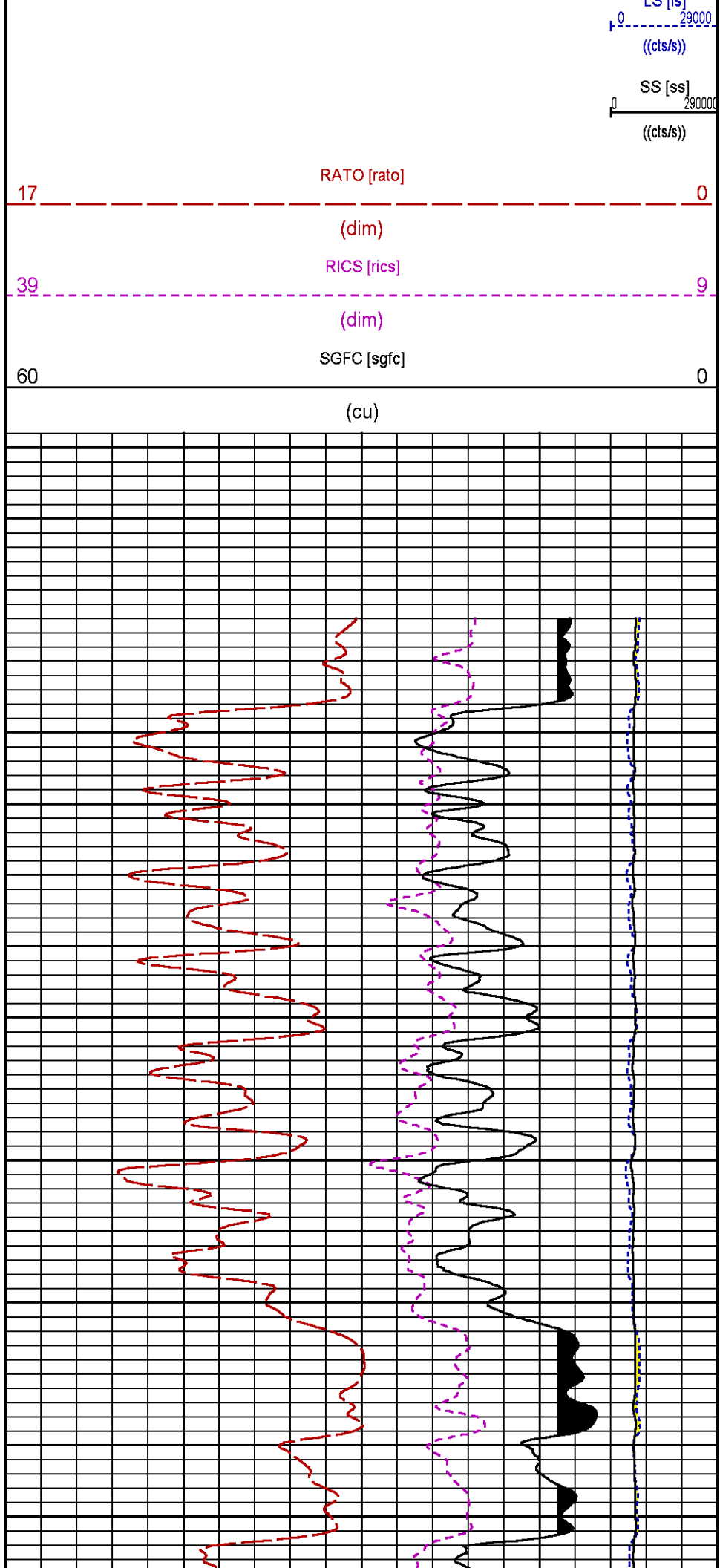
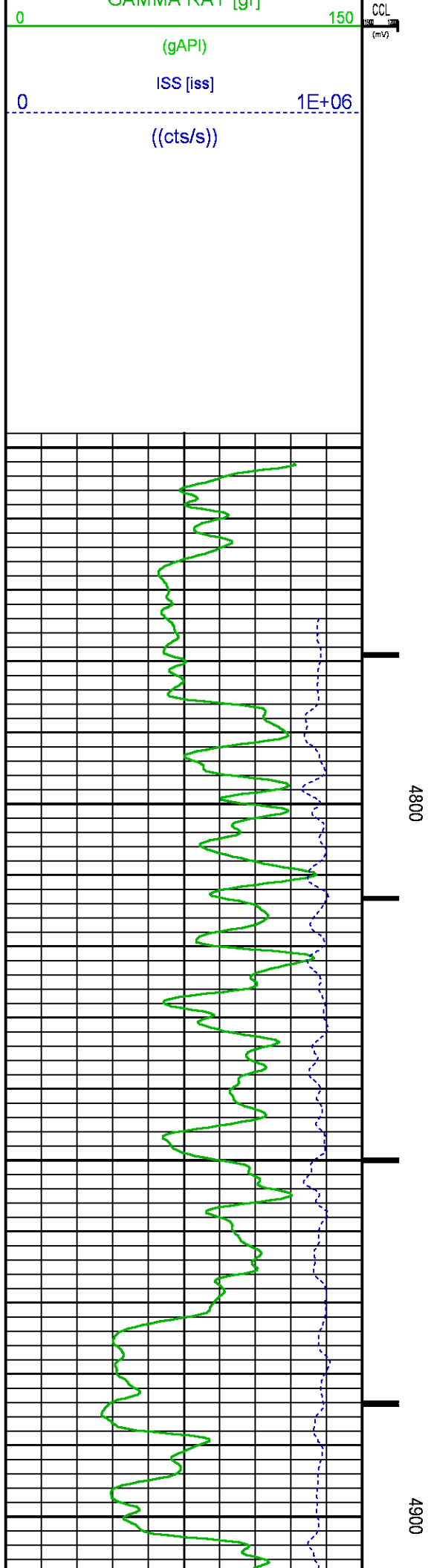
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Created On : N/A
Company : LARAMIE ENERGY LLC
Well : BRUTON 30-16E
Field : VEGA
File Interval : 4747.25 - 4993.75 Feet
OCT : p353h

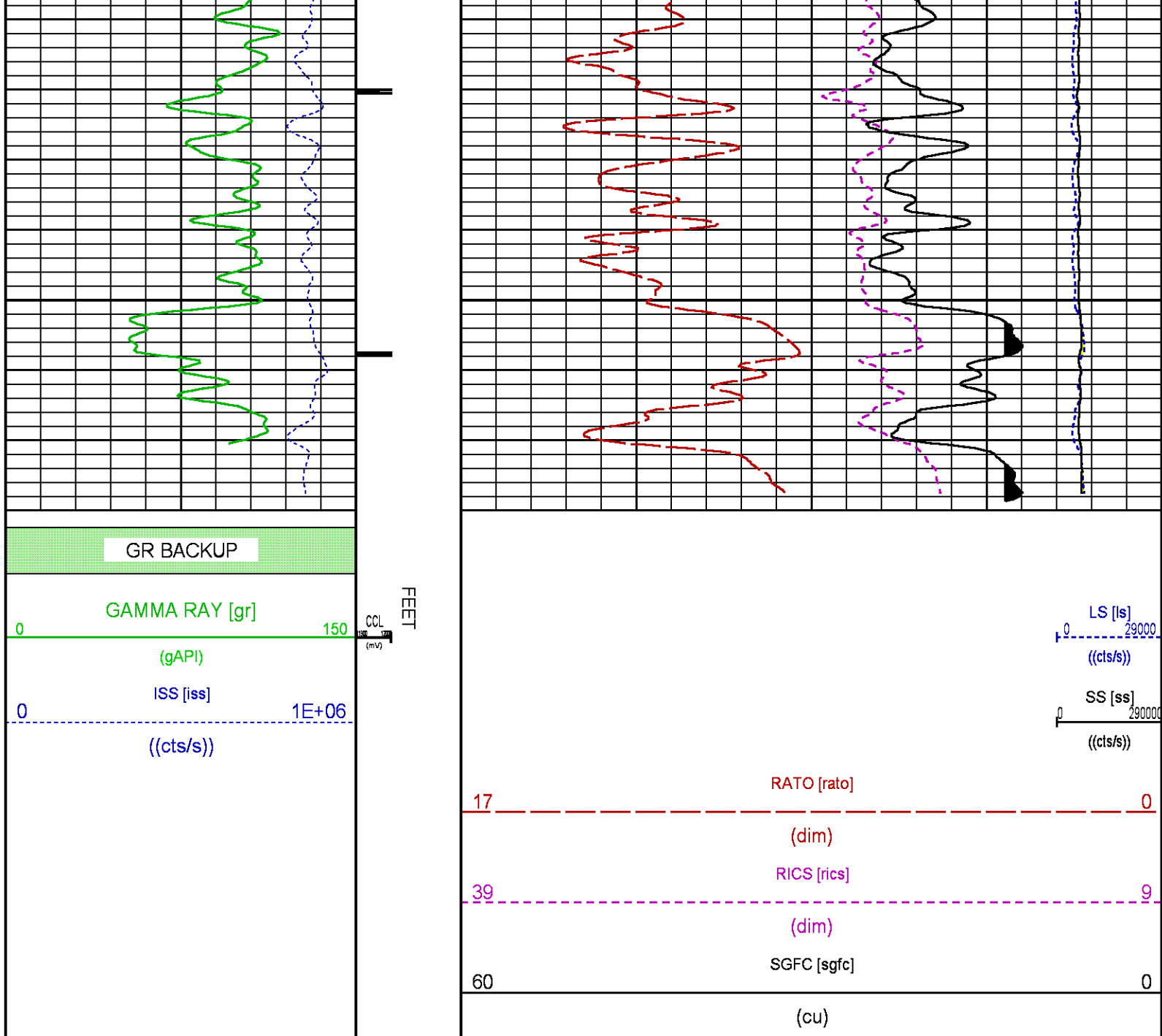
GR BACKUP

FEET

GAMMA RAY [gr]

LS [ft]





CALIBRATION / VERIFICATION SUMMARY

Source File: data1a1_ARAMIS_BRUTON_30_16E.p353h.tp1

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)	CALBTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBTR ON (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)	CALBTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBTR ON (gAPI)	DIFF. (gAPI)
GR	59.02	336.93	0.664	39.20	223.79	184.59

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8263PA10190200

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

UNIT: 3882TD HL6728

CALIBRATOR: 2437XB 120052

SOURCE: 8281AA10408960

HOURS: 8281AA 98

	ISS	Mr Vits (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	0.03	0.03
					27.40	21.40	0.03	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	RIN13	RICS	RATO	RTWO	RONE
			ISS/LS	ISS/XS	ISS/CSS	SS/LS	SS/LS	CSS/CLS
Raw Data	809388	1.43	4.61	29.33	13.85	11.03	3.92	4.15
		1.42	1.45	3.65	5.92	22.00	32.70	10.06
					16.76	10.06	11.03	3.92
							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	4.33	5.92	27.40	32.70	10.06
						16.76	11.03	3.92
							3.96	3.76
								4.22

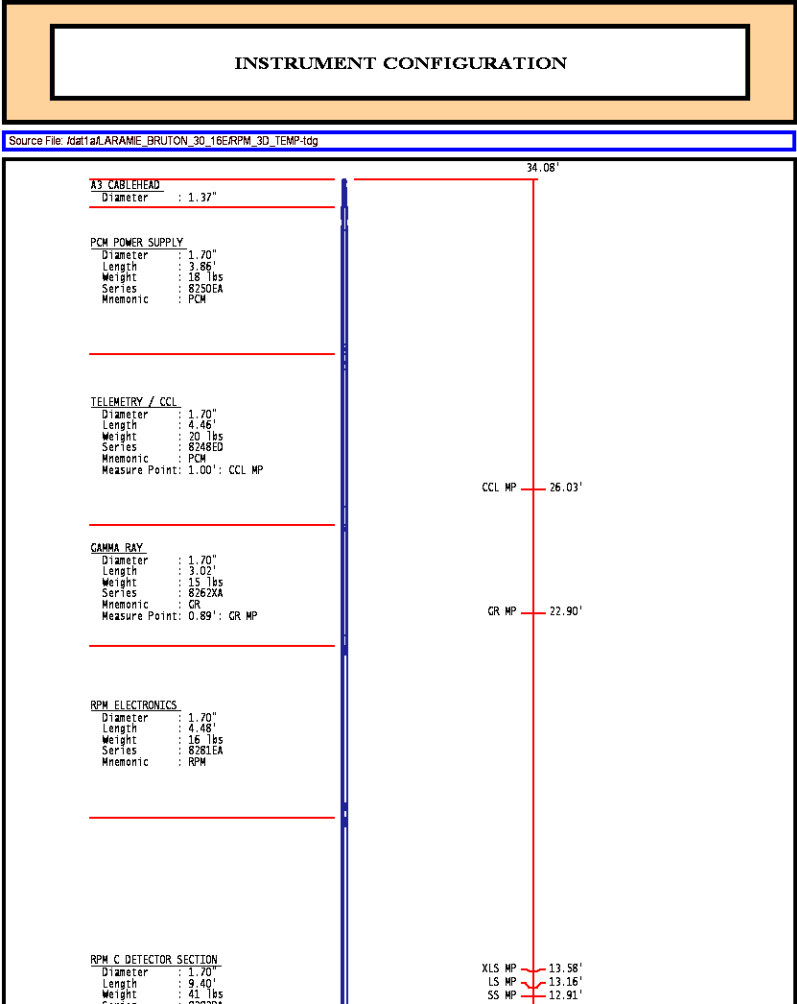
TPSETEMP PRIMARY CALIBRATION SUMMARY

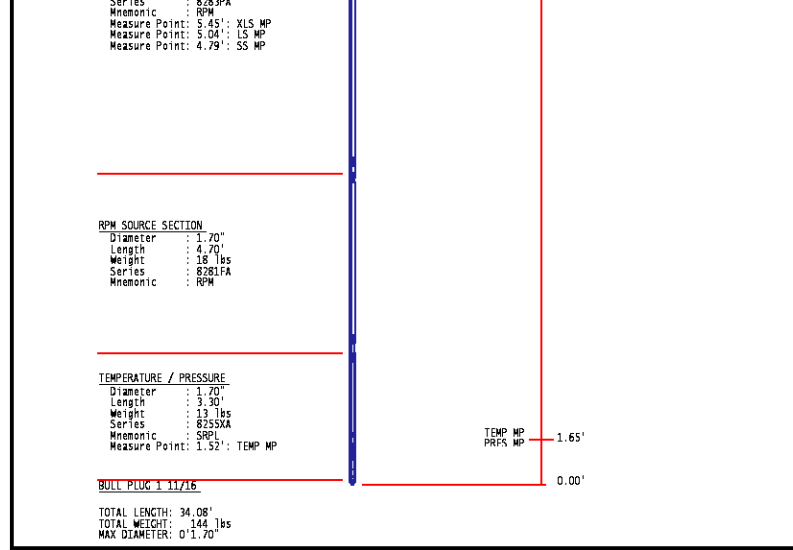
TOOL #: 8255XA11774568

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





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

FILE NO: _____
 API NO: 05077104790000

LOCATION:
 SHL: 2623' FNL & 1864' FEL
 BHL: 1367' FSL & 1338' FEL
 SEC 30 TWP 9S RGE 93W

ELEVATIONS:
 KB 7673 FT
 DF 7672 FT
 GL 7643 FT
 DATE 11-Feb-2018