



FILE NO:	COMPANY
API NO:	WELL
05077103650000	FIELD
	COUNTY
	VEGA
	MESA
	STATE
	COLORADO

Ver. 4.06	LOCATION:	OTHER SERVICES
	SHL: LAT:39.255232N; LONG:107.806537W	RAL
	BHL: LAT:39.262132N; LONG:107.806985W	
	SEC 19	TWP 9S
		RGE 93W

PERMANENT DATUM	GL	ELEVATION	7425 FT
LOG MEASURED FROM	KB	24 FT	ABOVE P.D.
DRILL. MEAS. FROM	KB		
		ELEVATIONS:	
		KB	7449 FT
		DF	7448 FT
		GL	7425 FT

DATE	30-AUG-2017
RUN	1
TRIP	2
SERVICE ORDER	US126724
DEPTH DRILLER	8194 FT
DEPTH LOGGER	8205 FT
BOTTOM LOGGED INTERVAL	8205 FT
TOP LOGGED INTERVAL	2570 FT
TIME STARTED	16:00
TIME FINISHED	22:00
OPERATOR RIG TIME	6 HRS
TYPE OF FLUID IN HOLE	FRESH WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	68 FT
LOGGED CEMENT TOP	2248 FT
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	15 FMIN
MAX. RECORDED TEMP.	239 DEGF
REFERENCE LOG	NA
REFERENCE LOG DATE	NA
EQUIP. NO.	HL-6670
LOCATION	WOODWARD
RECORDED BY	M.MENTZER
WITNESSED BY	MR. CHUCK MALLARY

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 WELL*

OPERATION 2: TEMP/RPM/GR RUN IN COMBINATION

LOGGED WITH 0 PSI AT THE WELLHEAD

SJ: 7352' - 7371'

SJ: 6353' - 6373'

BHT: 239 DEGF

CREW: J.PENA, G.SUAREZ

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	2	TELEMETRY	8250 EA/8248 EA	10185091/10323398	FREE
1	2	GAMMA RAY	8262 XA	10485470	FREE
1	2	RPM ELEC	8281 EA	10309427	FREE
1	2	RPM	8283 PA/8281 FA	10414345/10401926	FREE

1

2

TEMP

8255XA

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: Wed Aug 30 23:13:29 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_19_12E/RPM3D03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2536.750 ft BOTTOM DEPTH: 3241.500 ft

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

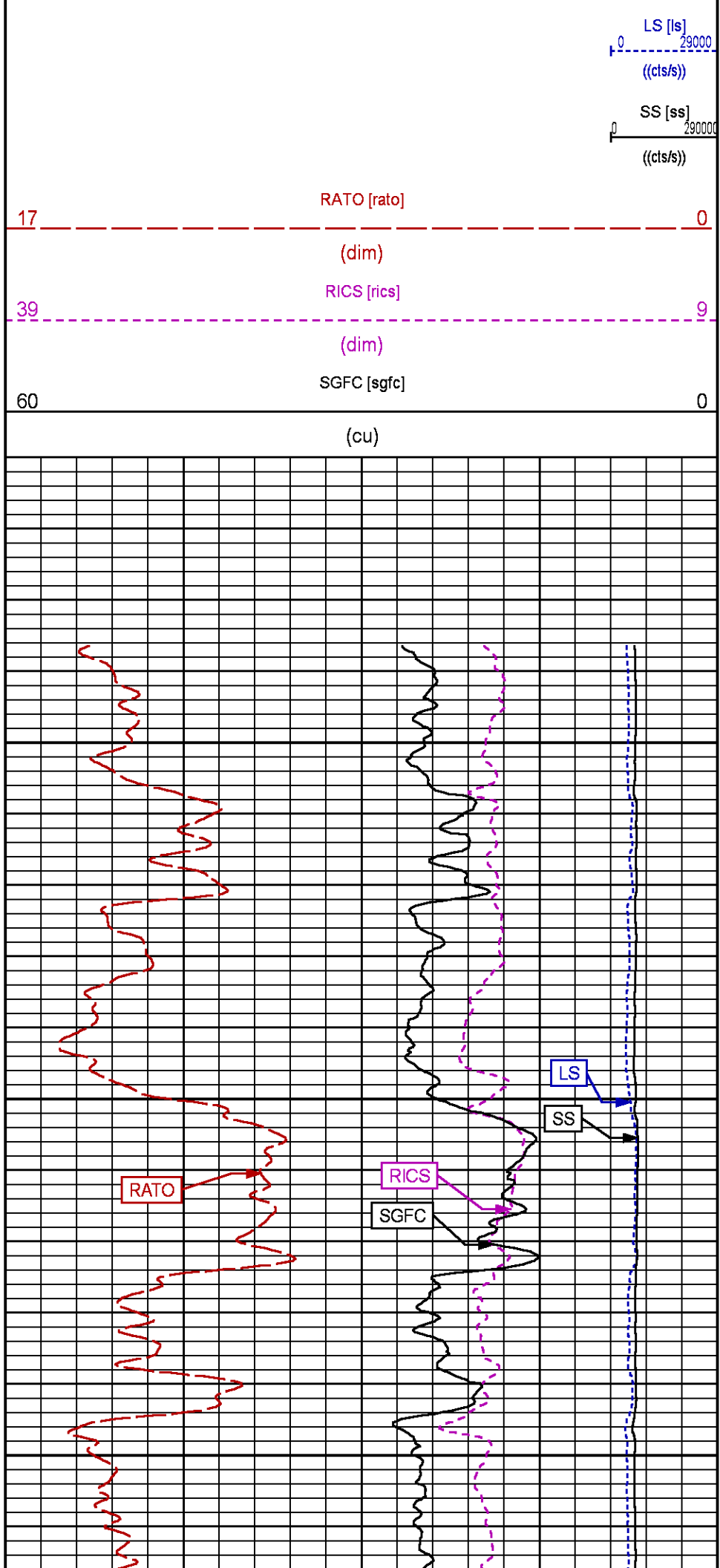
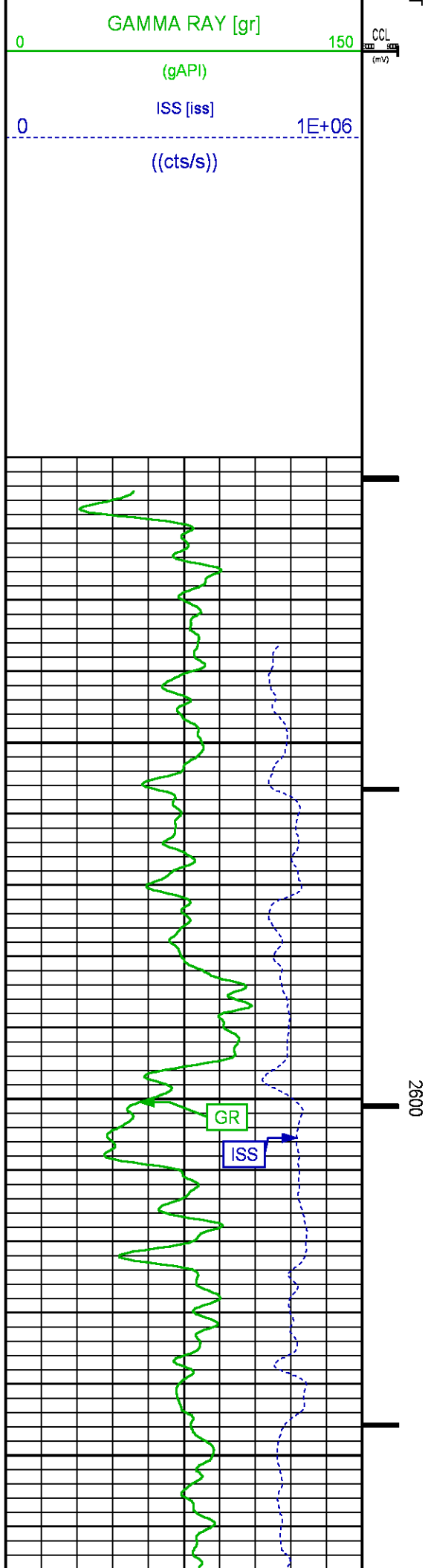
RPM PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP BOTTOM
	OPEN/CASED HOLE	CASED HOLE		" "
	BOREHOLE SIZE	7.75	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

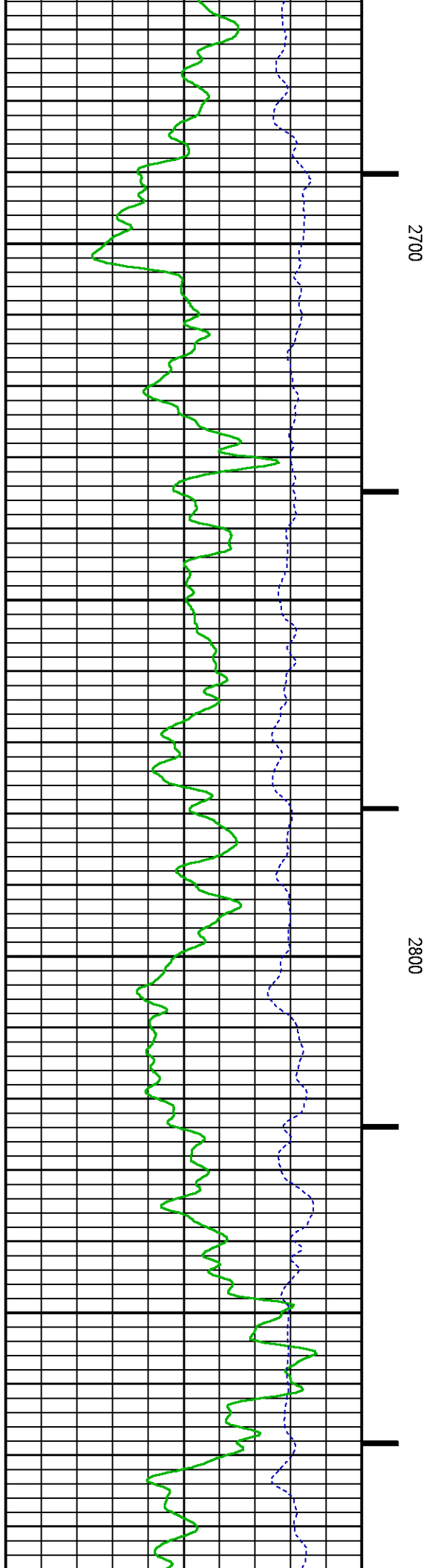
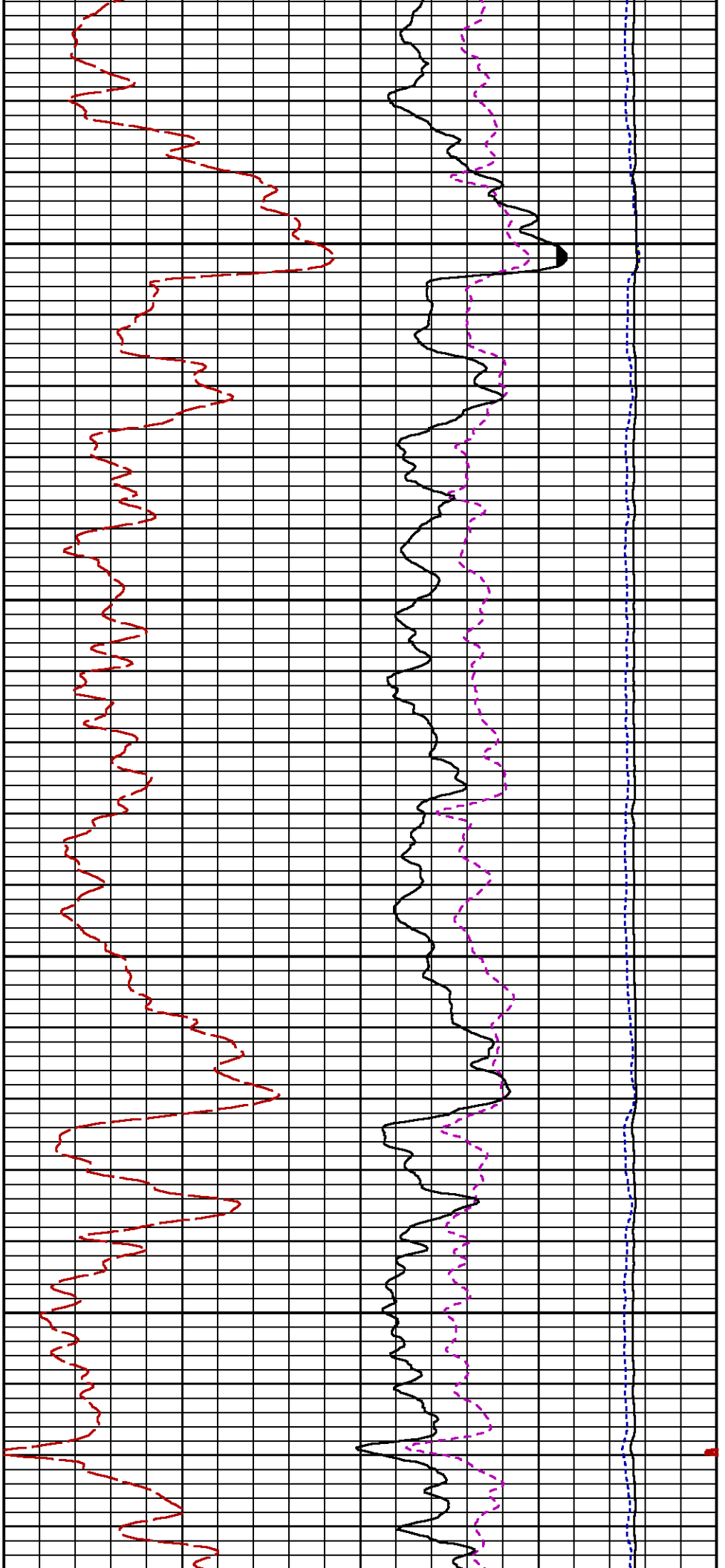
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Aug 30 22:24:30 2017	CASING COLLAR LOCATOR
F1:GR	Aug 30 22:24:30 2017	GAMMA RAY
F1:ISS	Aug 30 22:24:30 2017	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Aug 30 22:24:30 2017	LONG SPACE COUNT RATE
F1:RATO	Aug 30 22:24:30 2017	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Aug 30 22:24:30 2017	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Aug 30 22:24:30 2017	CORRECTED FORMATION SIGMA
F1:SS	Aug 30 22:24:30 2017	SHORT SPACE COUNT RATE

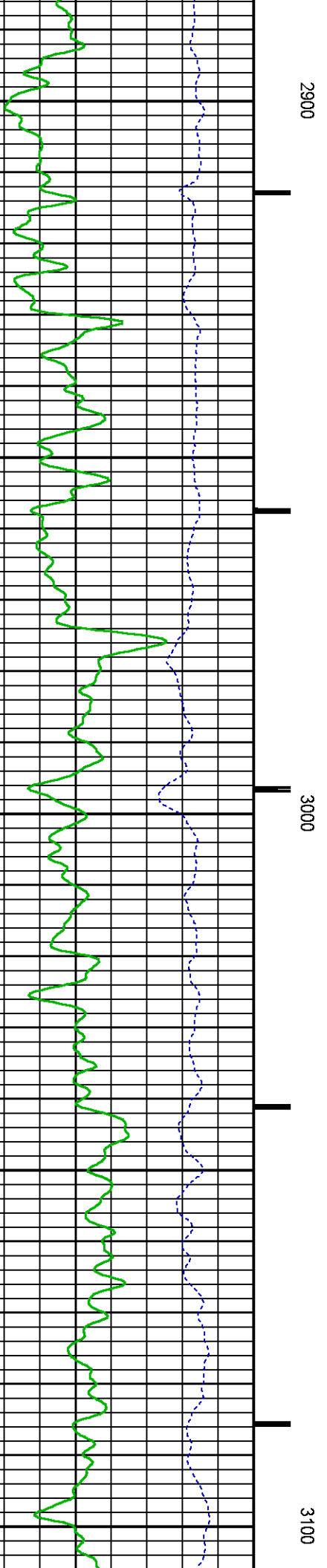
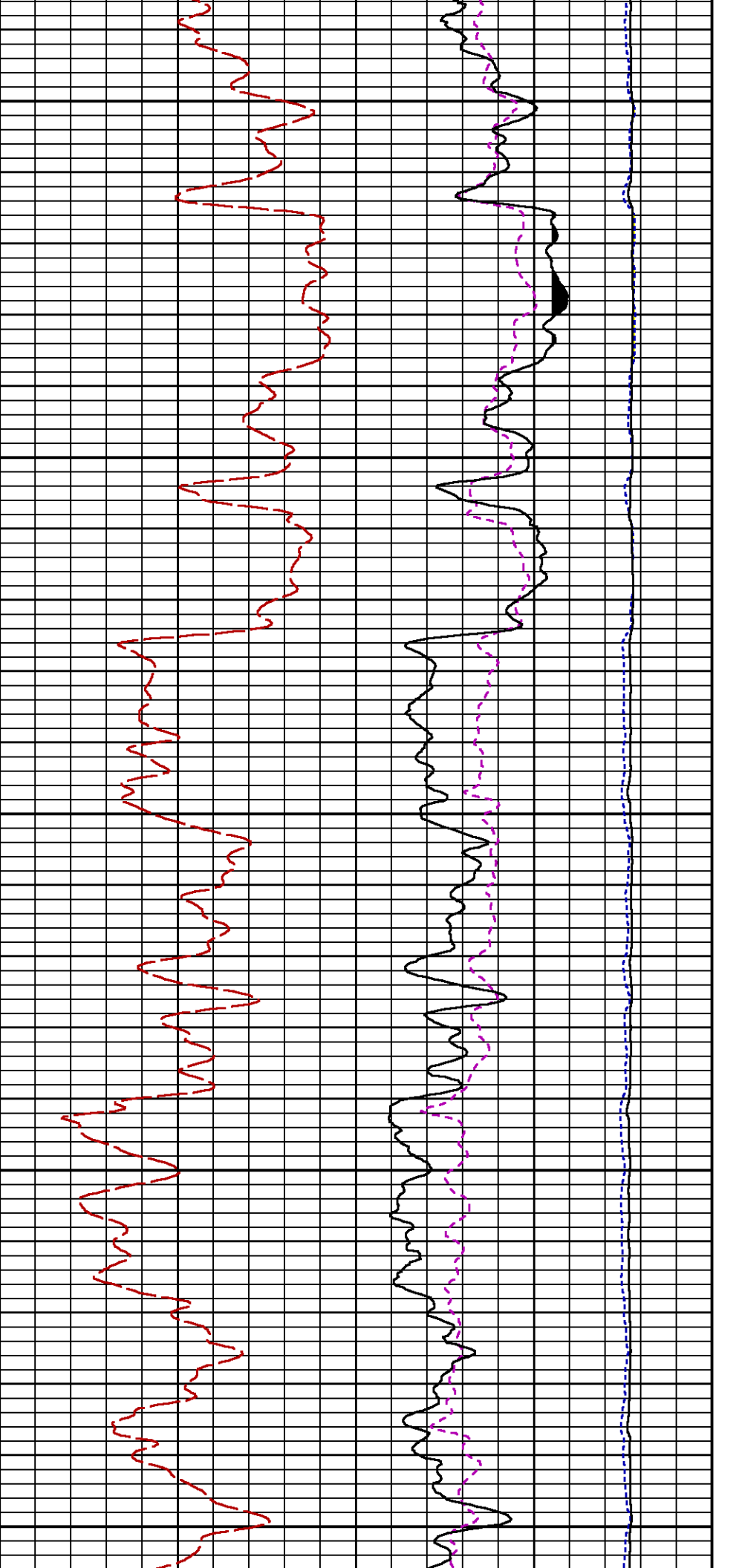
CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	26.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

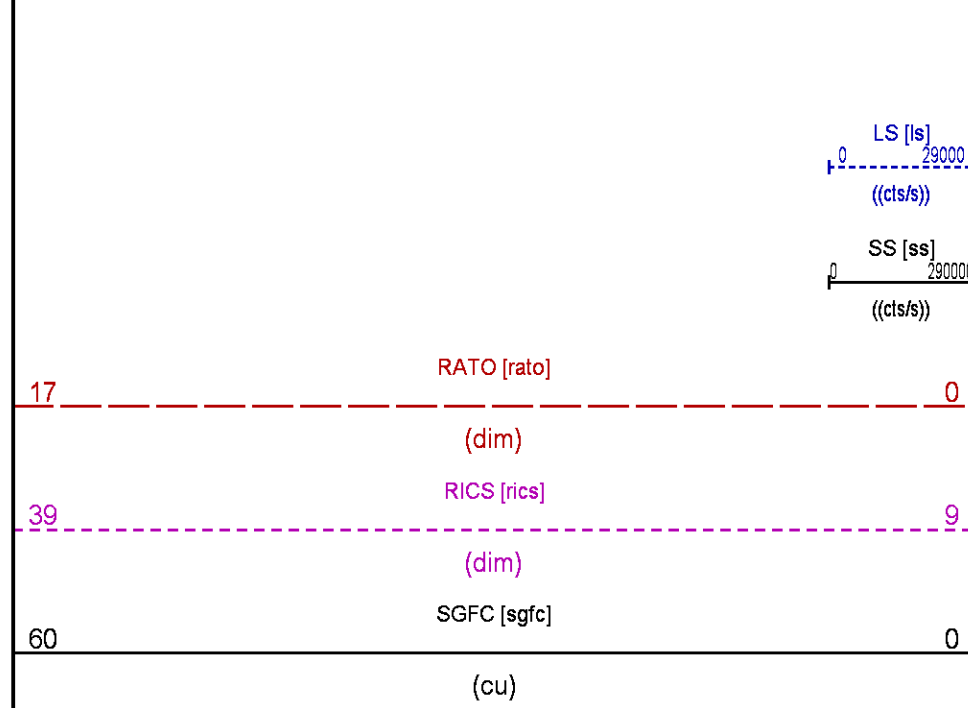
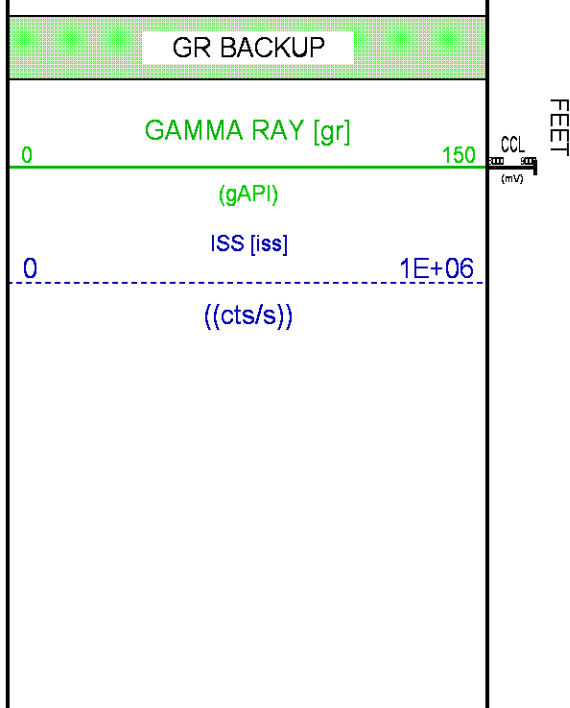
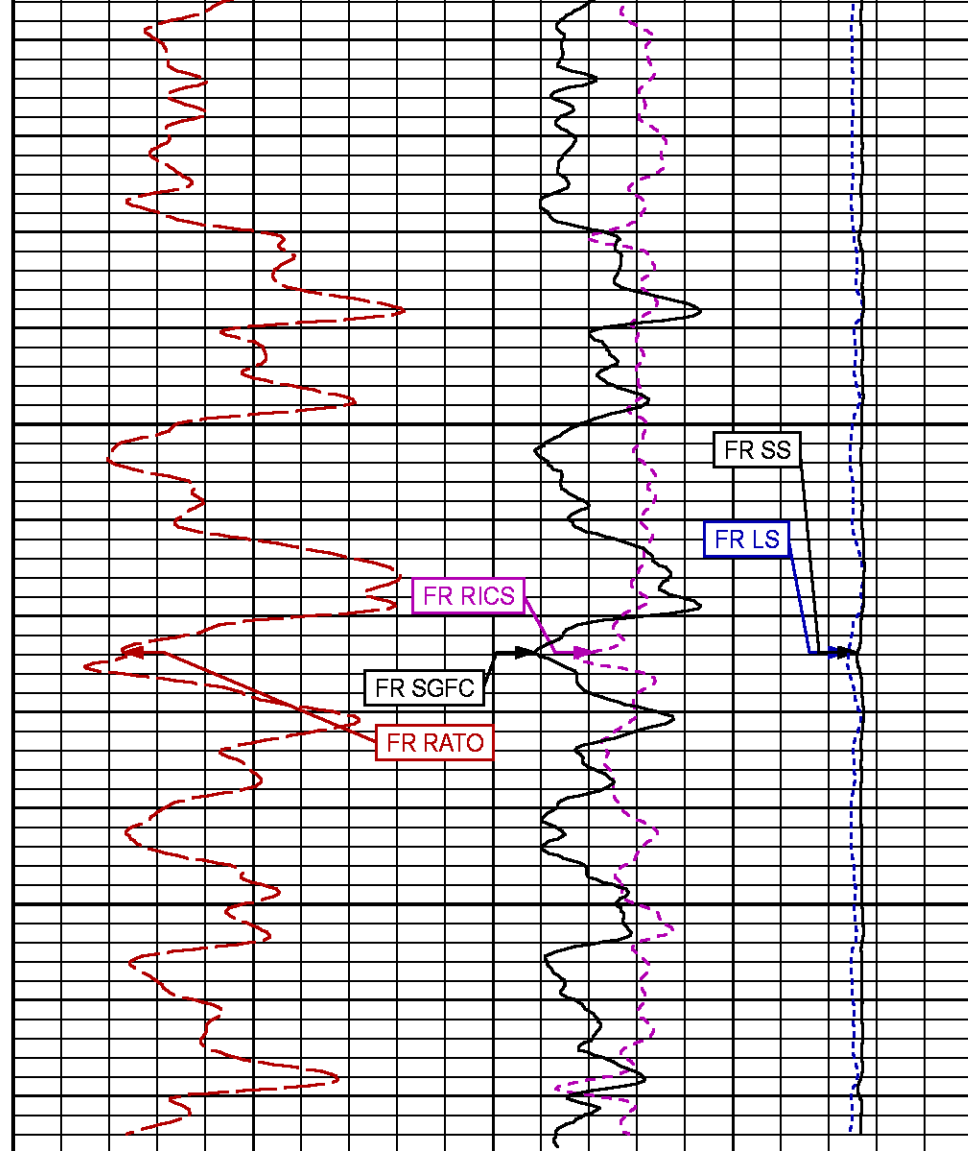
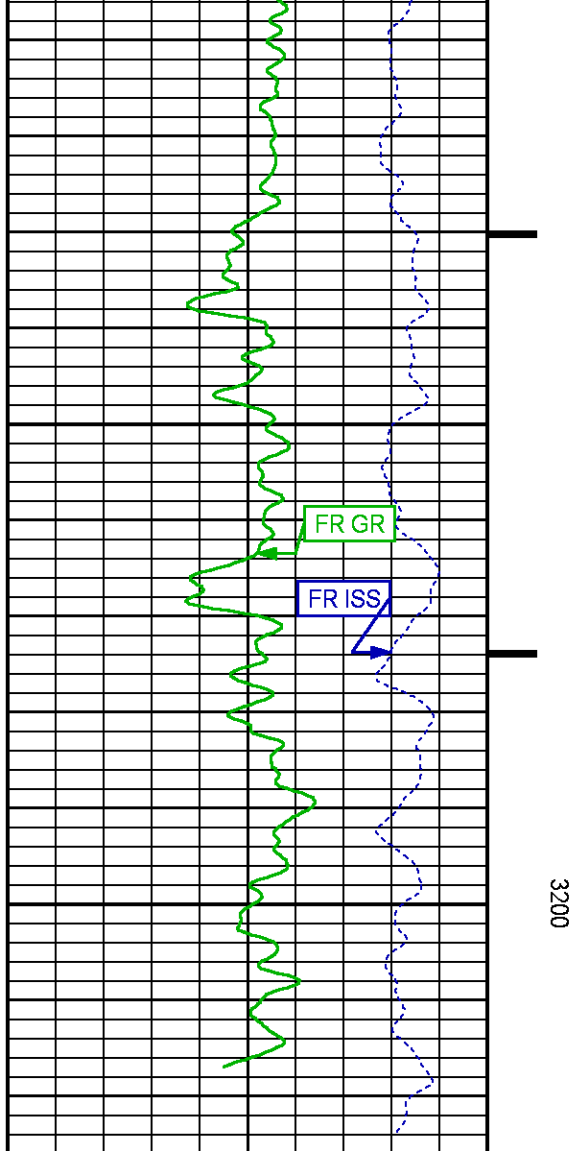
Presentation : cpu100:BRUTON_19_01W_RPM_GSAND+01-G-SAND-BRUTON_19_12E_GSAND-5.fvpdf [5"/100' Scale]
Plot Interval : 2510.5 - 3231.5 Feet

Data File 1 : F1 : cpu100:/dat1a/LARAMIE_BRUTON_19_12E/BRUTON_19_12E_GSAND.xtf
Created On : Aug 30 22:24:30 2017
Company : LARAMIE ENERGY
Well : BRUTON 19-12E
Field : VEGA
File Interval : 2509.75 - 3241.5 Feet
OCT : RPM3D









Plotted: Wed Aug 30 22:22:16 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_19_12E/RPM3D02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4492.500 ft BOTTOM DEPTH: 8225.000 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	7.75	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

CURVE DESCRIPTION REPORT

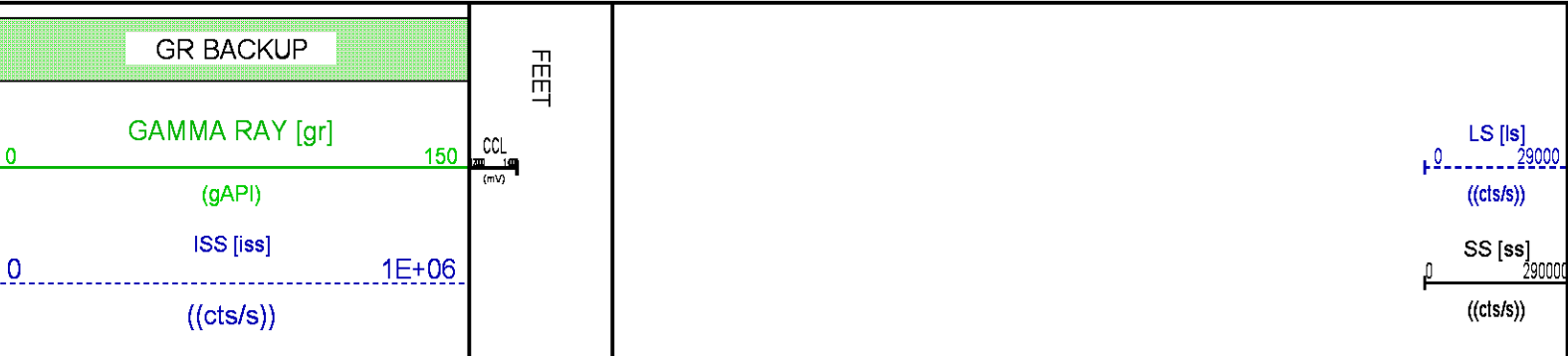
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Aug 30 18:18:52 2017	CASING COLLAR LOCATOR
F1:GR	Aug 30 18:18:52 2017	GAMMA RAY
F1:ISS	Aug 30 18:18:52 2017	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Aug 30 18:18:52 2017	LONG SPACE COUNT RATE
F1:RATO	Aug 30 18:18:52 2017	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Aug 30 18:18:52 2017	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Aug 30 18:18:52 2017	CORRECTED FORMATION SIGMA
F1:SS	Aug 30 18:18:52 2017	SHORT SPACE COUNT RATE

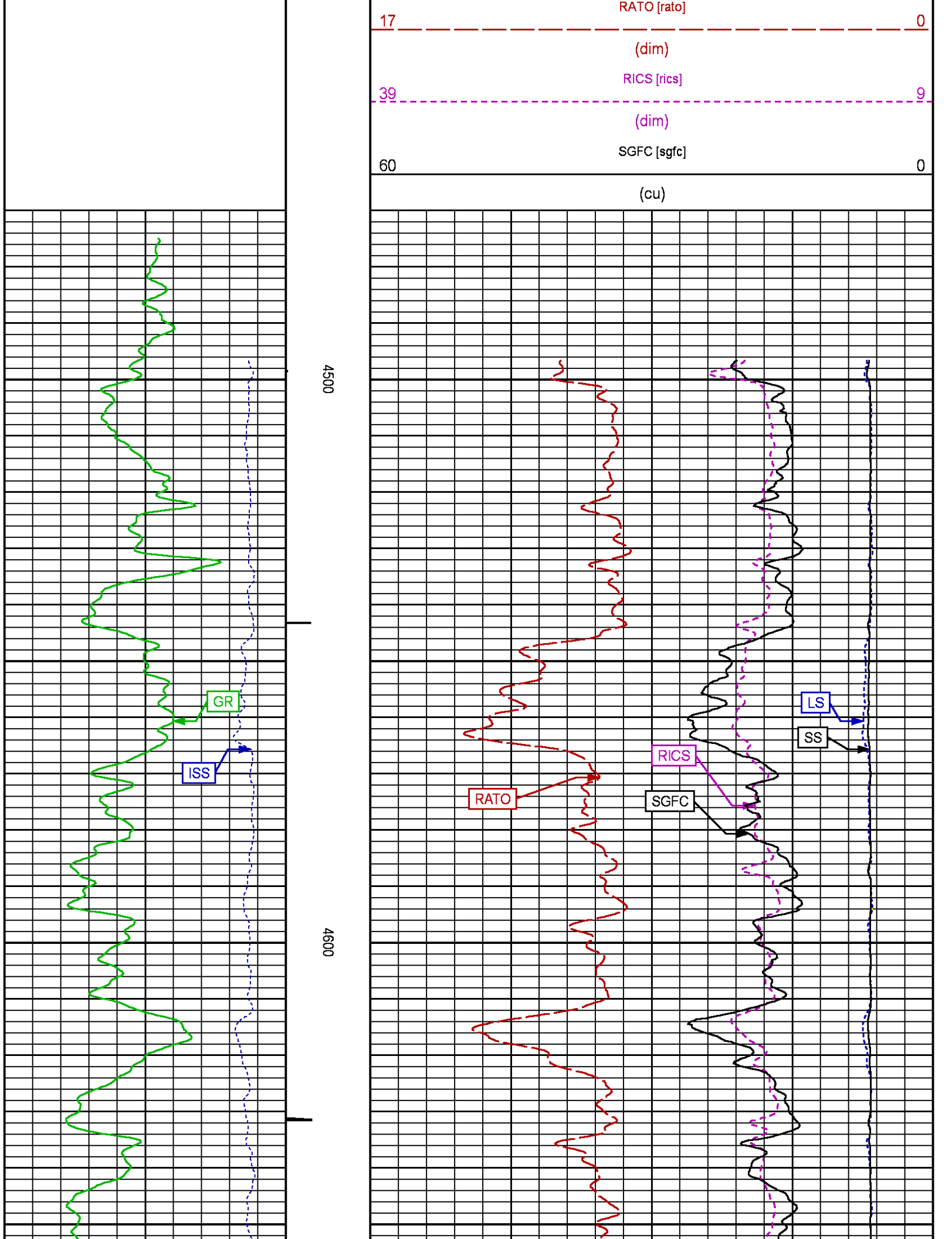
CURVE MEASURE POINT OFFSET

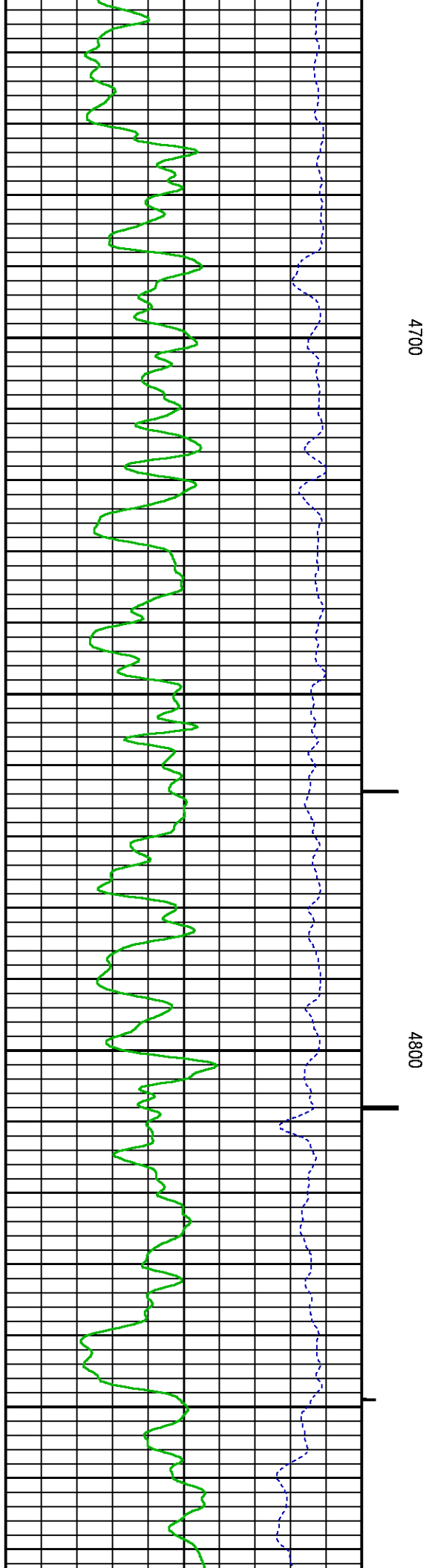
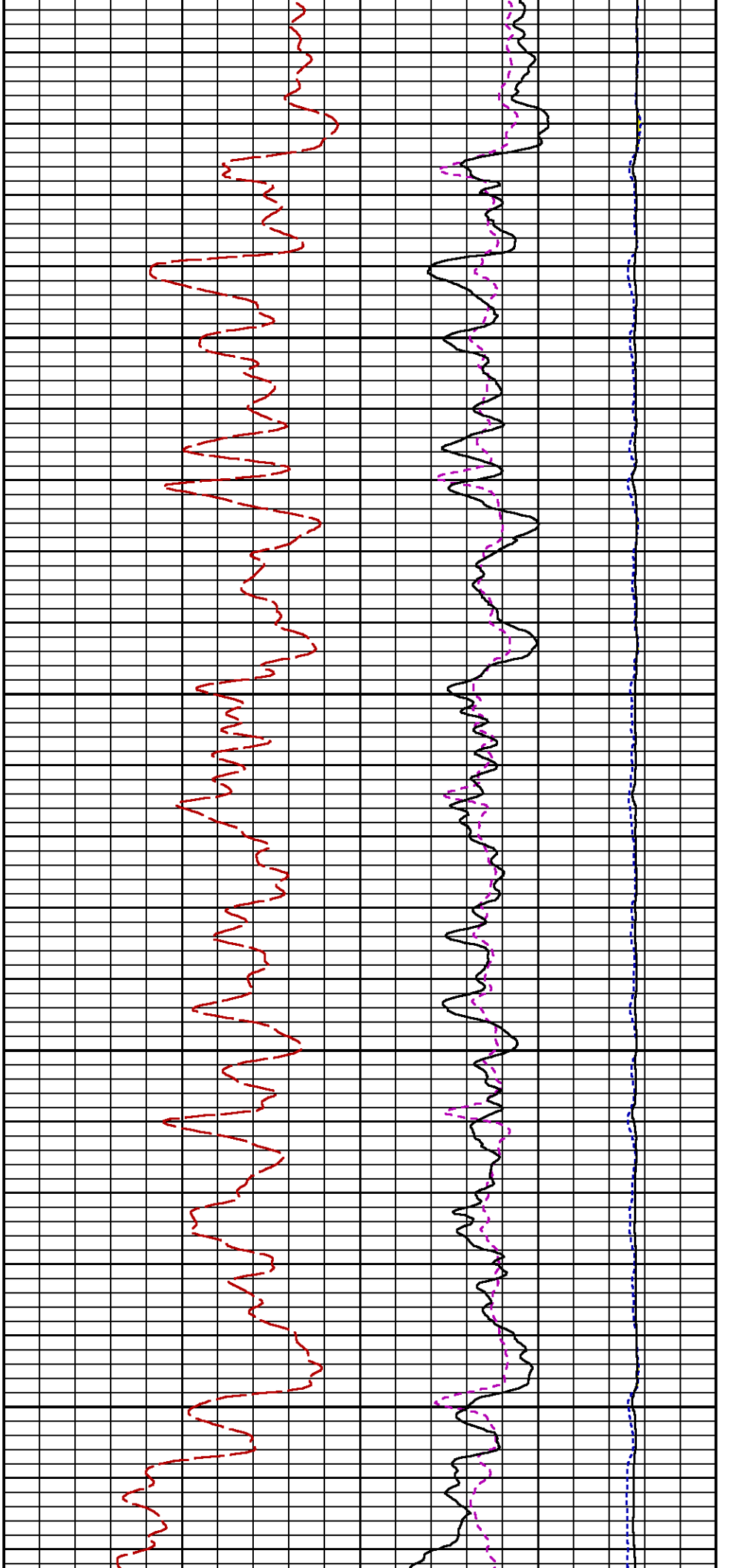
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	26.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

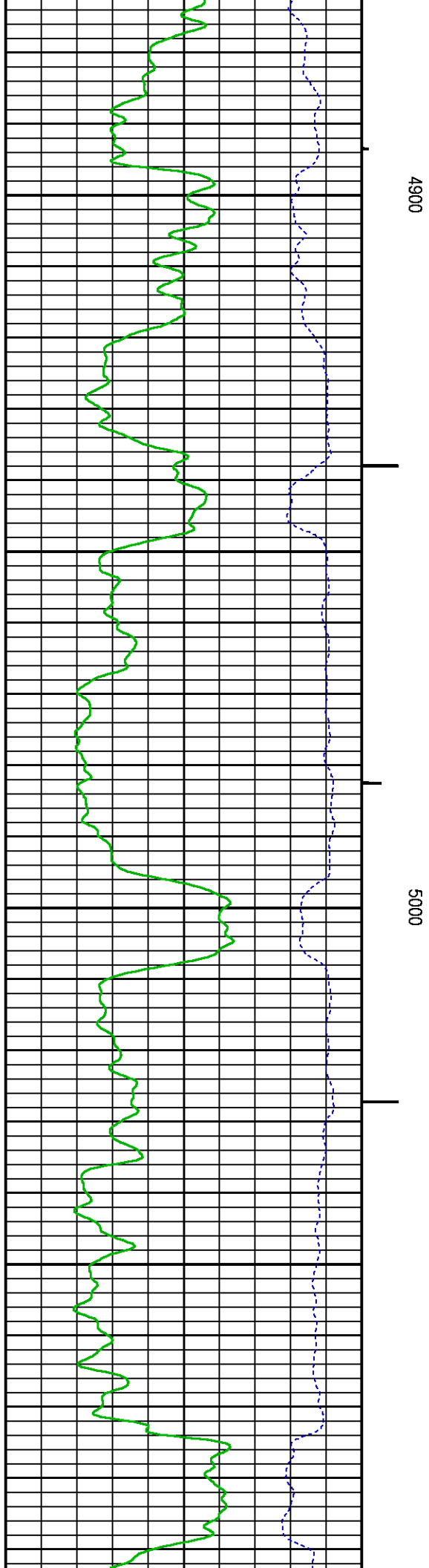
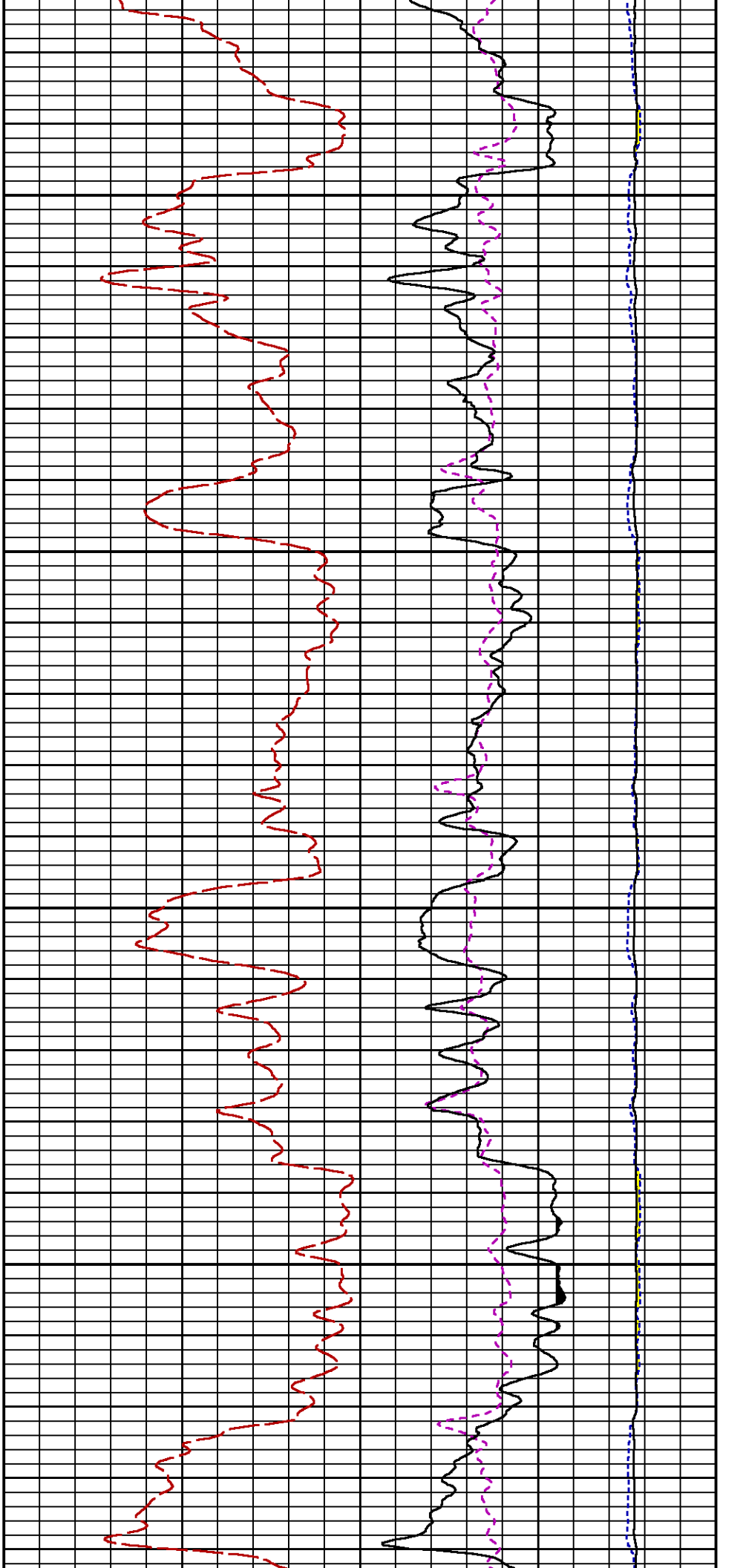
Presentation : cpu100:BRUTON_19_01W_RPM_MAIN+01-MAIN-BRUTON_19_12E_RPM_MN-5.fvpdf [5"/100' Scale]
Plot Interval : 4470.75 - 8219.5 Feet

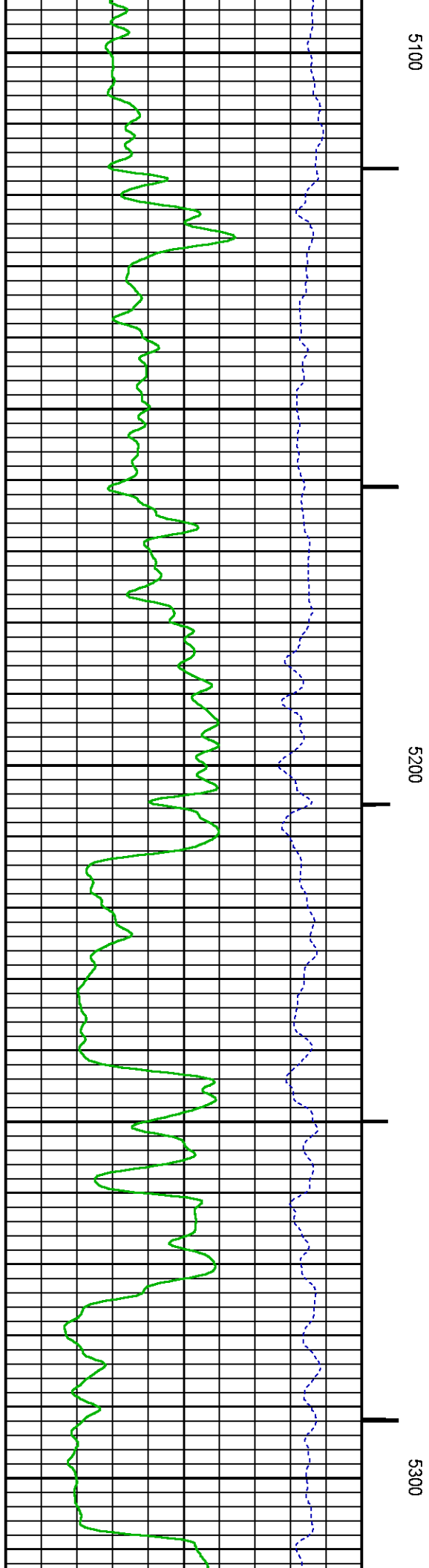
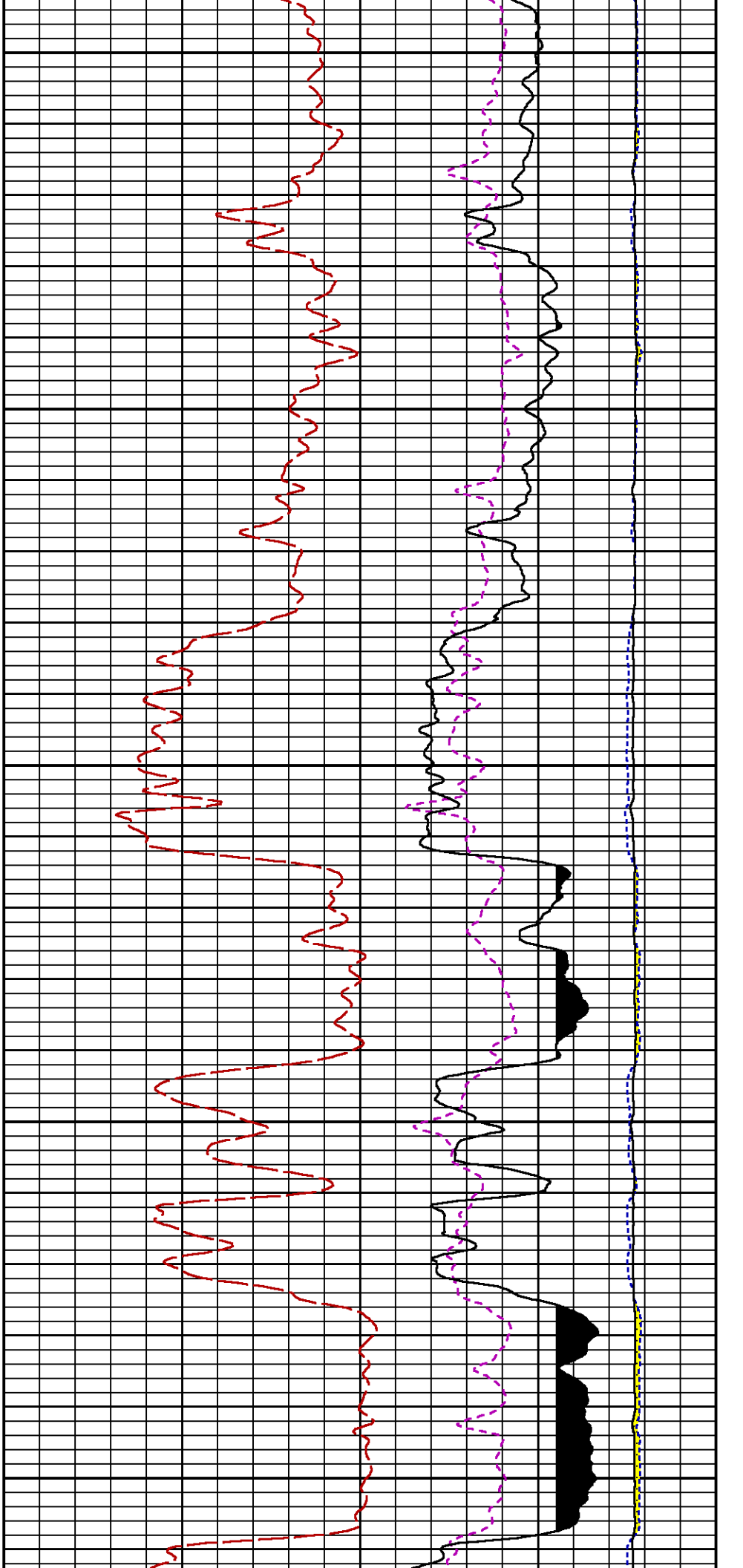
Data File 1 : F1 : cpu100:/dat1a/LARAMIE_BRUTON_19_12E/BRUTON_19_12E_RPM_MN.xtf
Created On : Aug 30 18:18:52 2017
Company : LARAMIE ENERGY
Well : BRUTON 19-12E
Field : VEGA
File Interval : 4470 - 8228.25 Feet
OCT : RPM3D

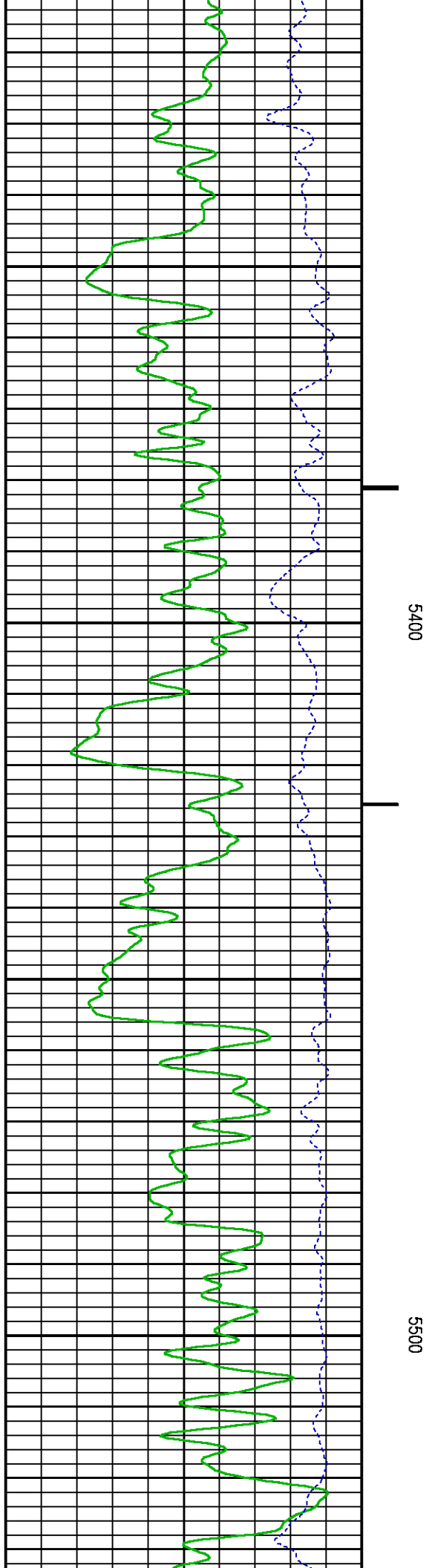
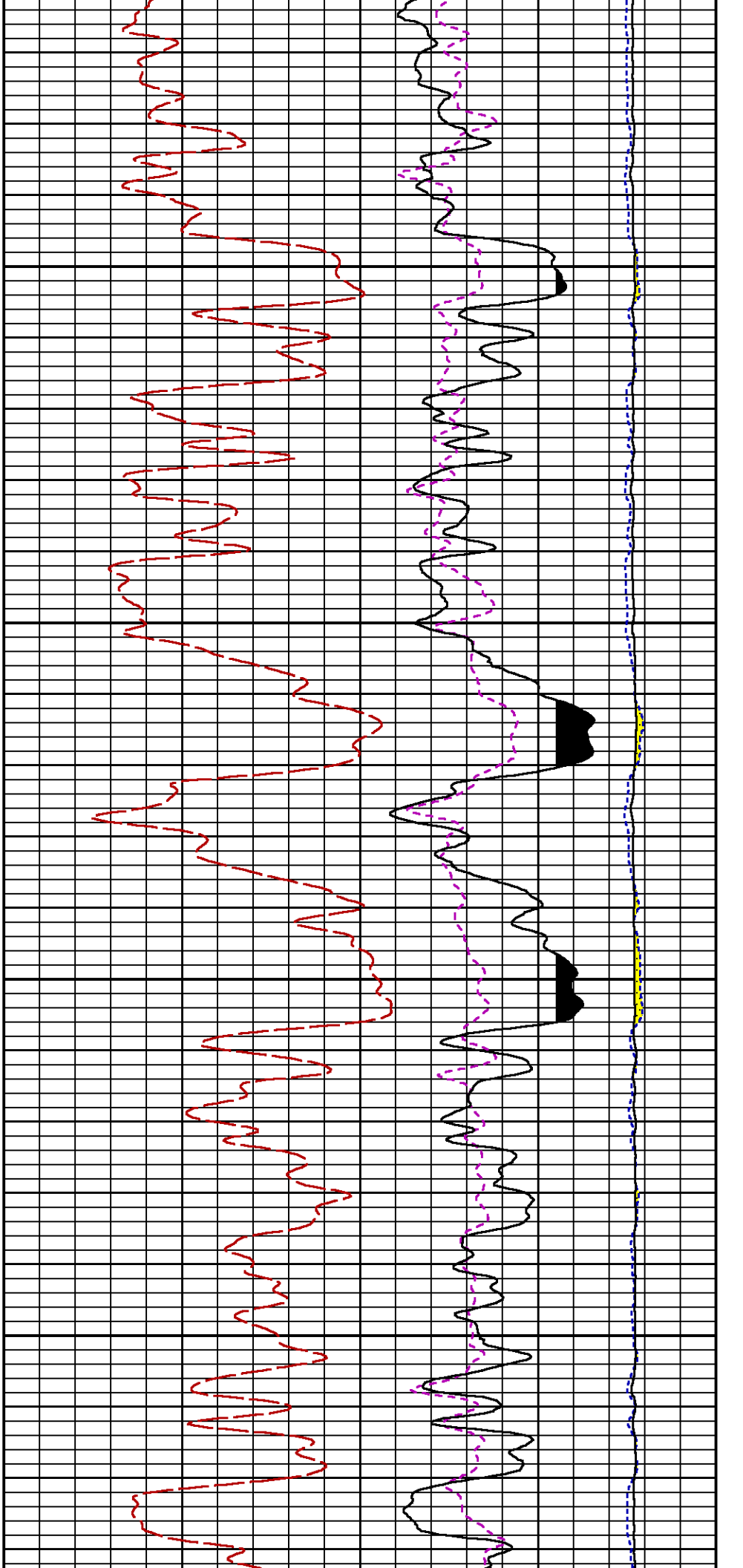


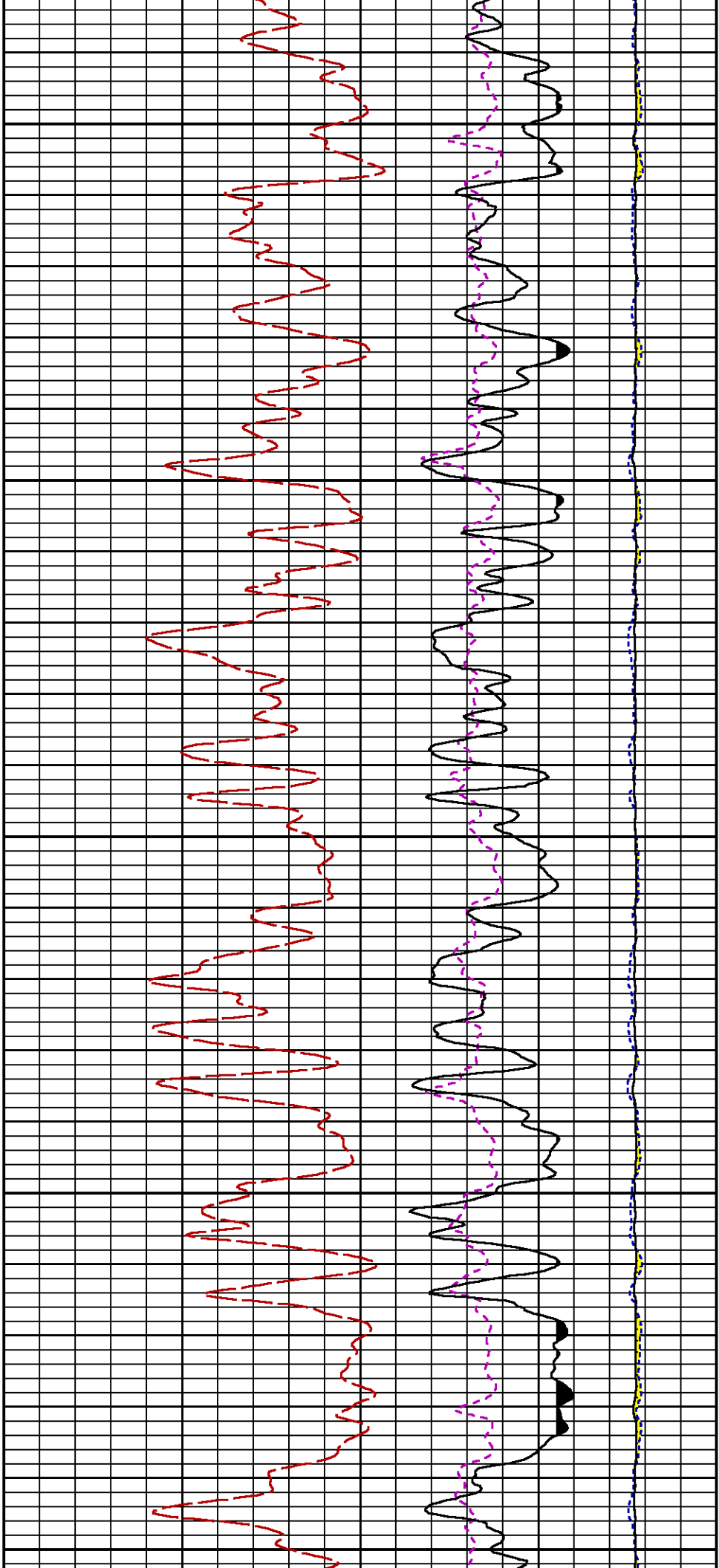






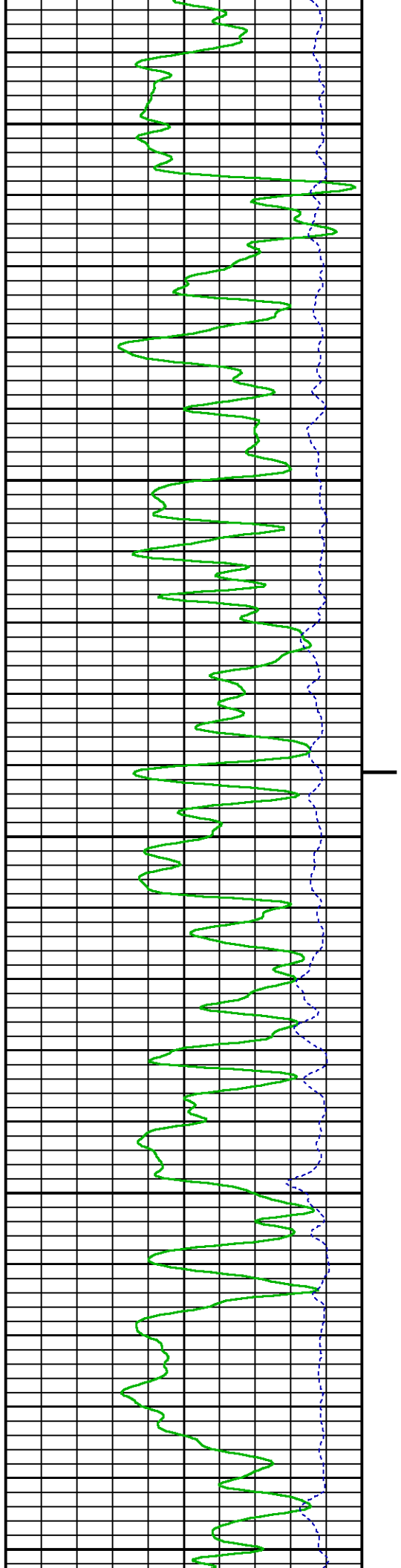


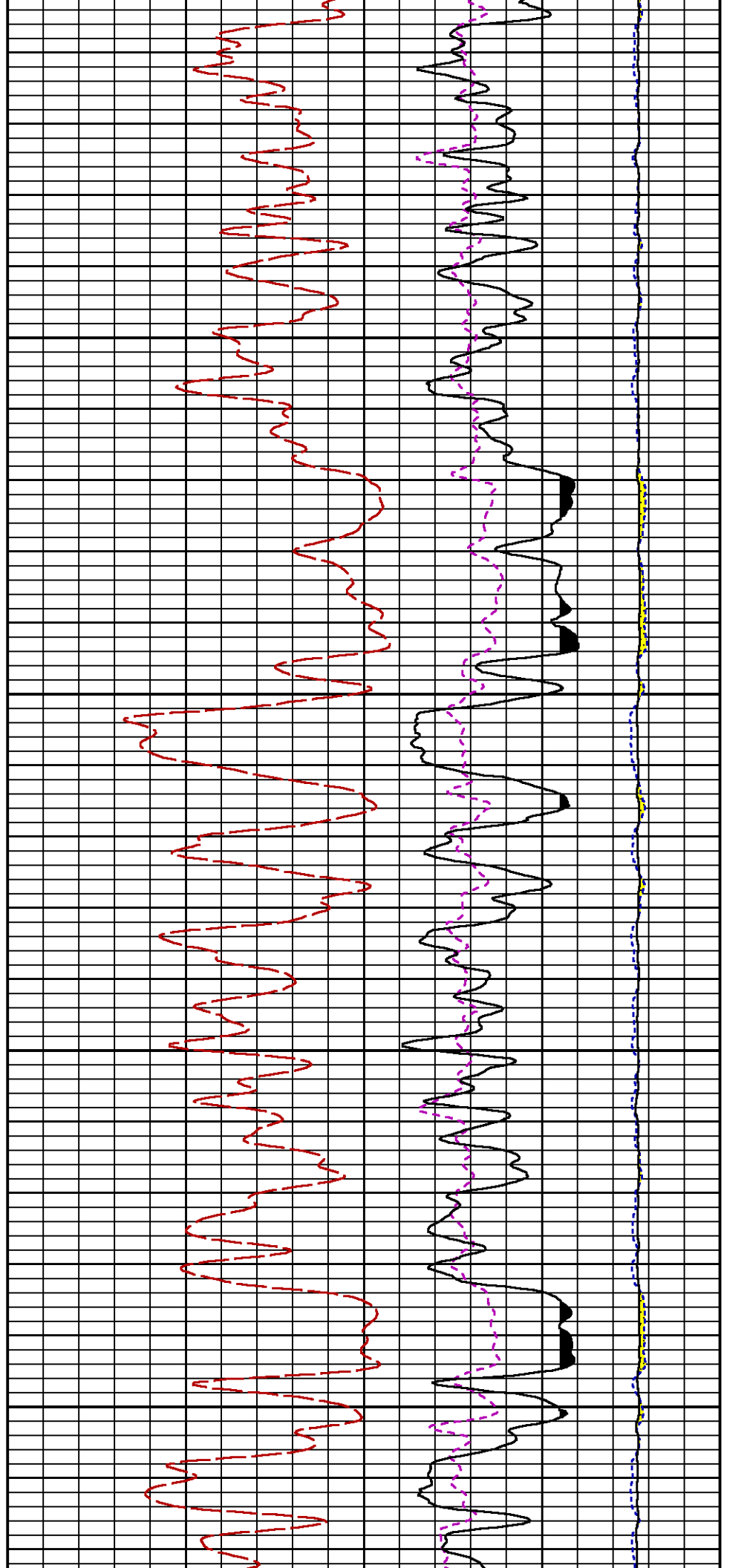
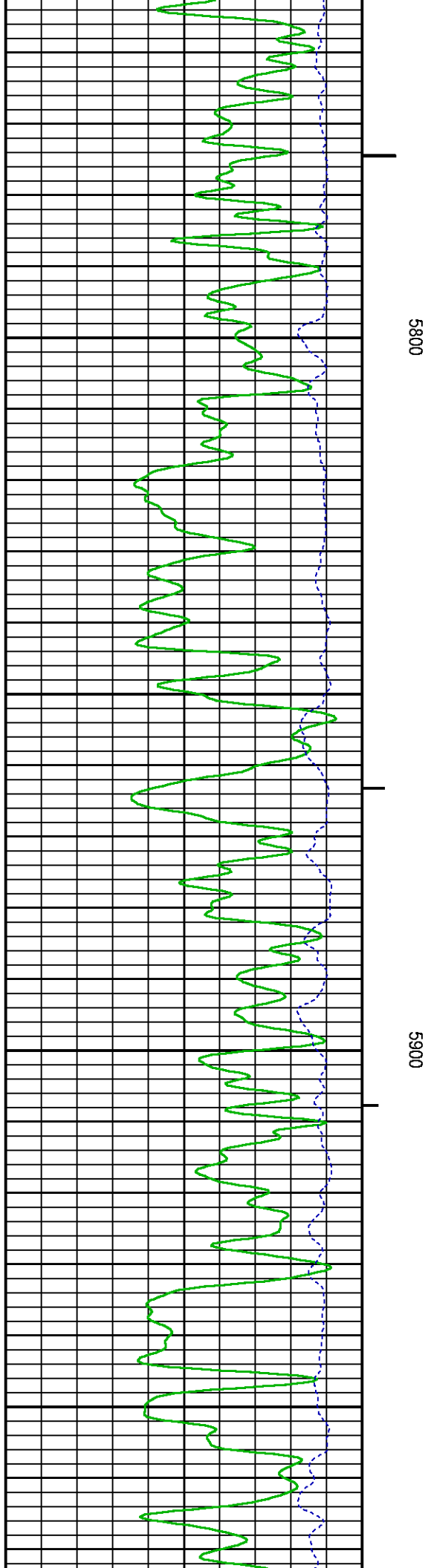


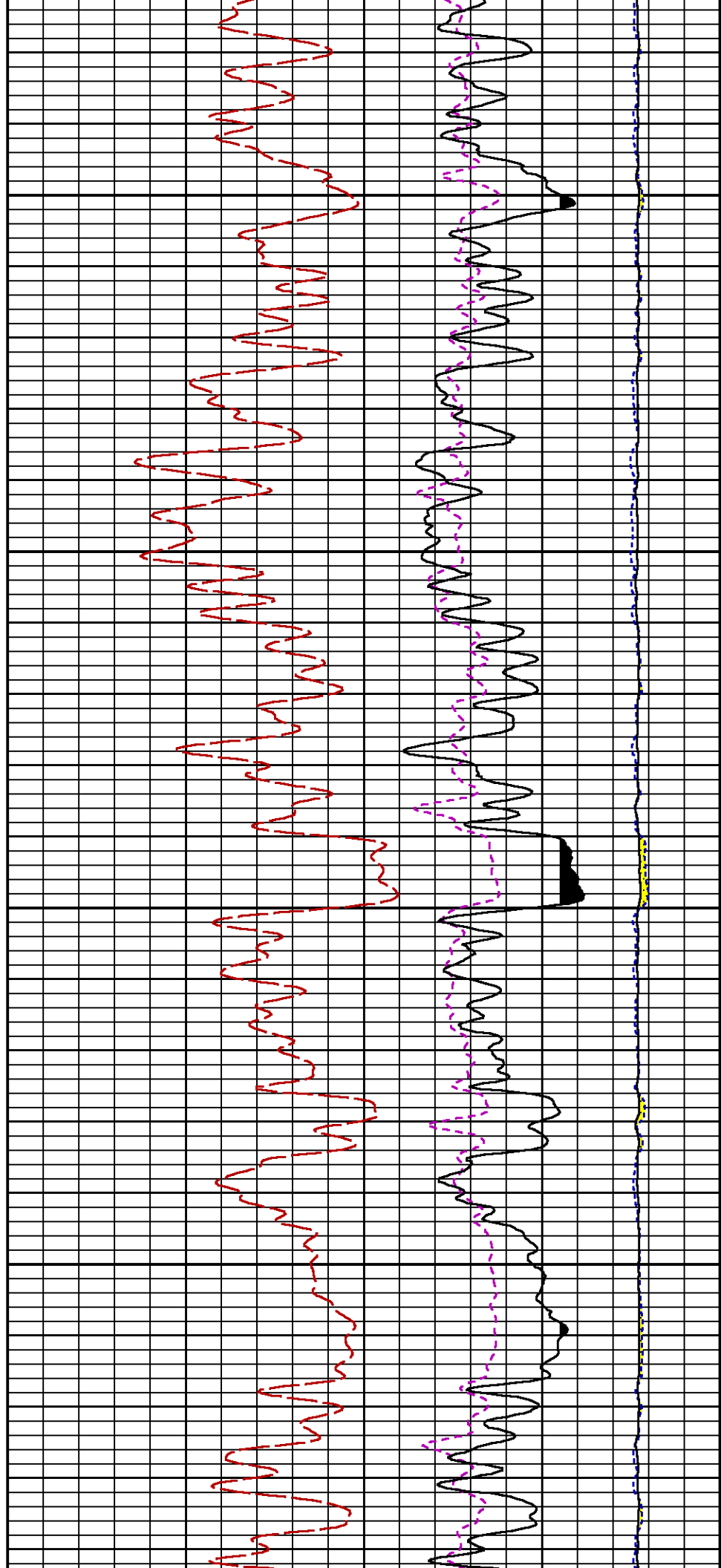
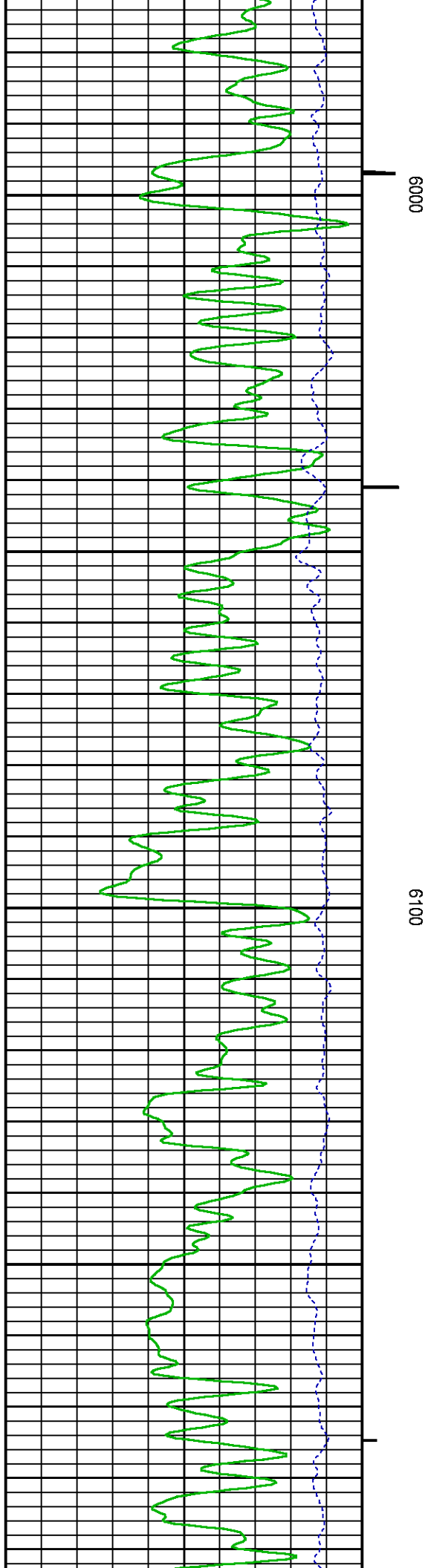


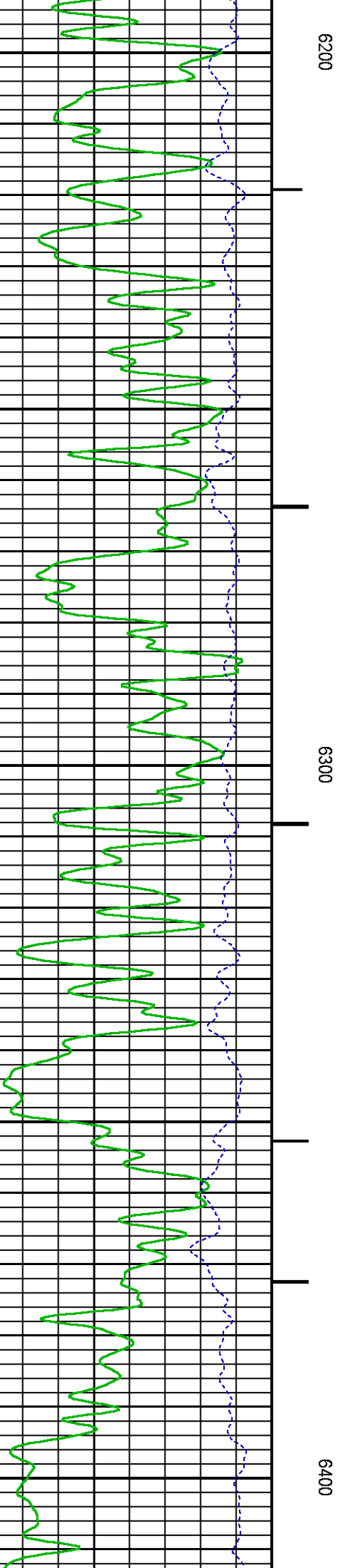
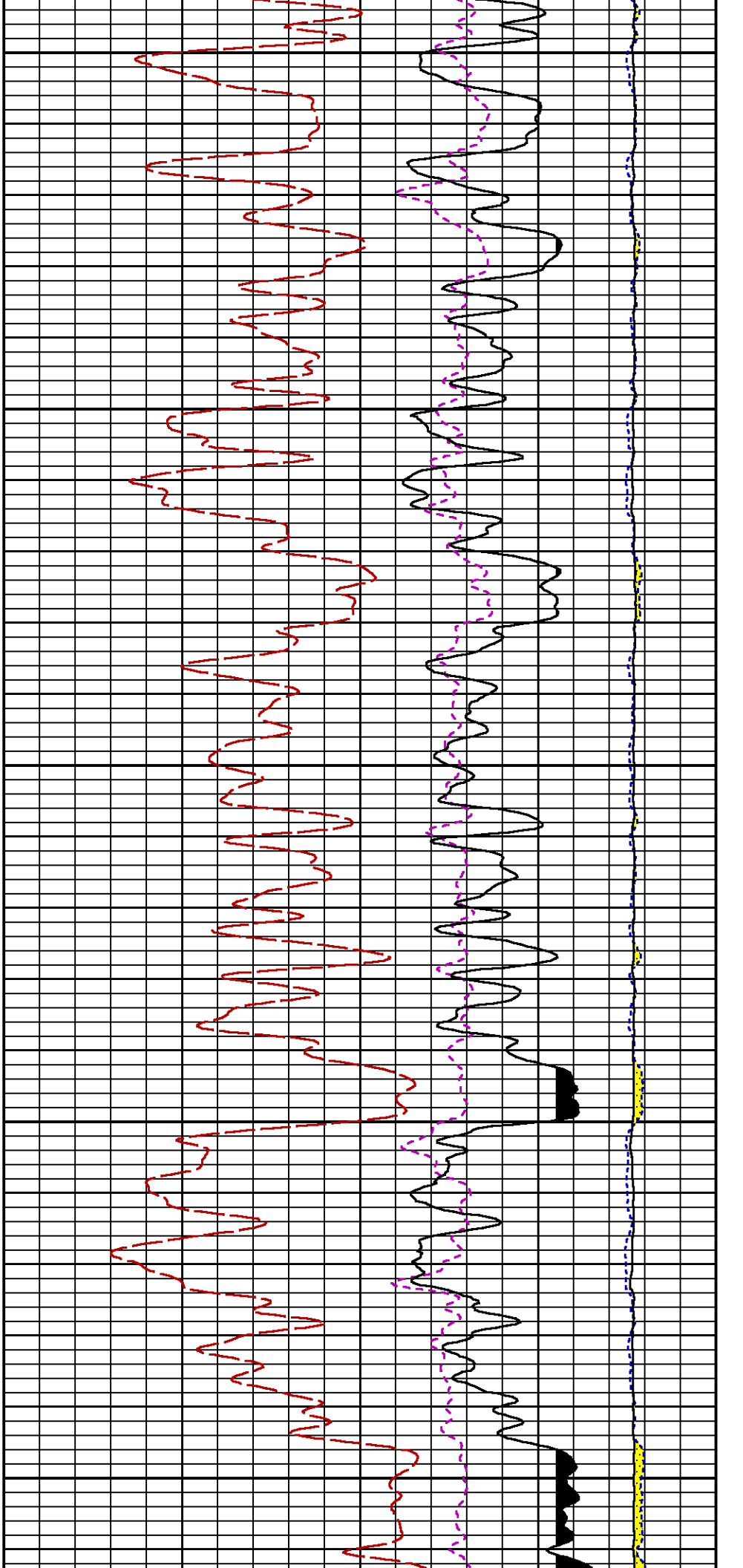
5600

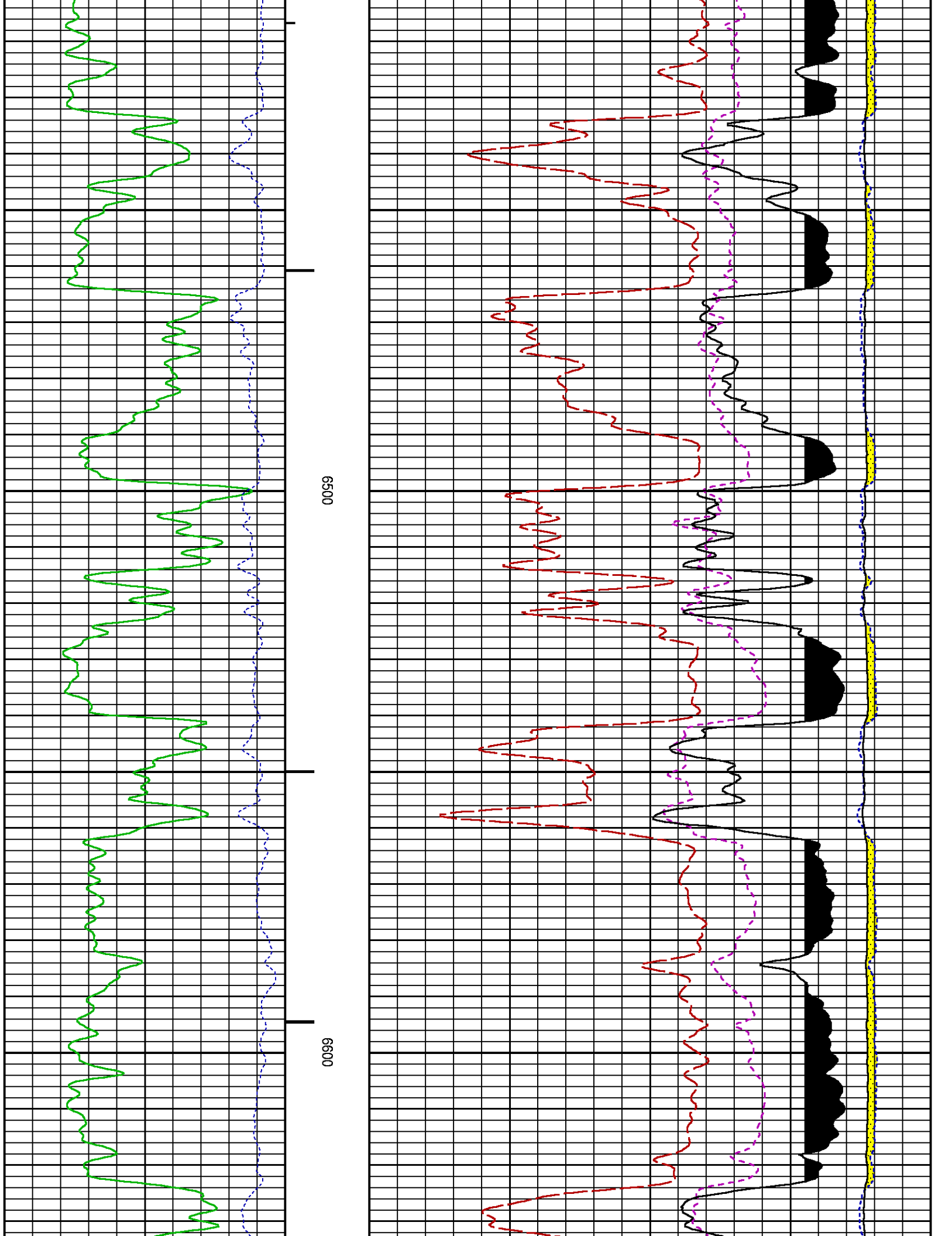
5700

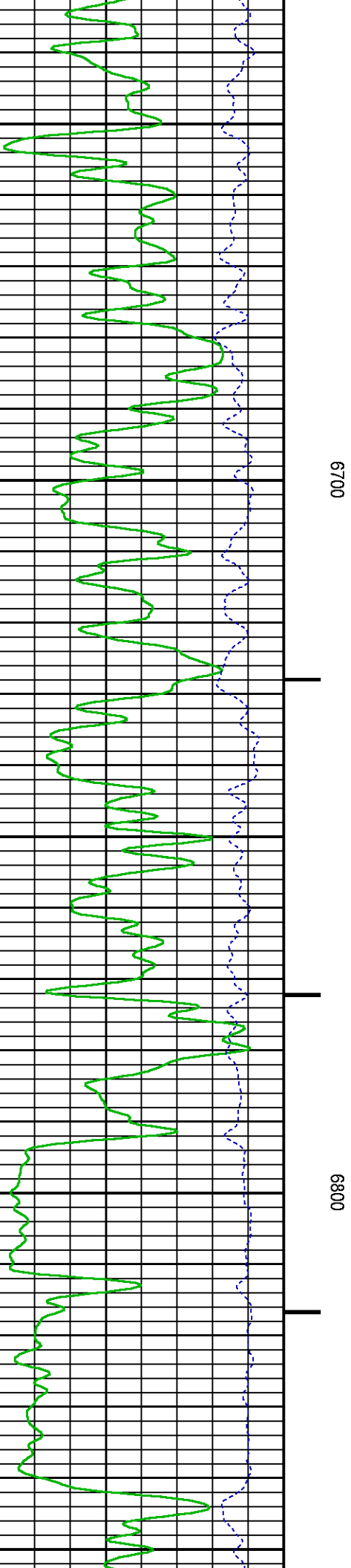
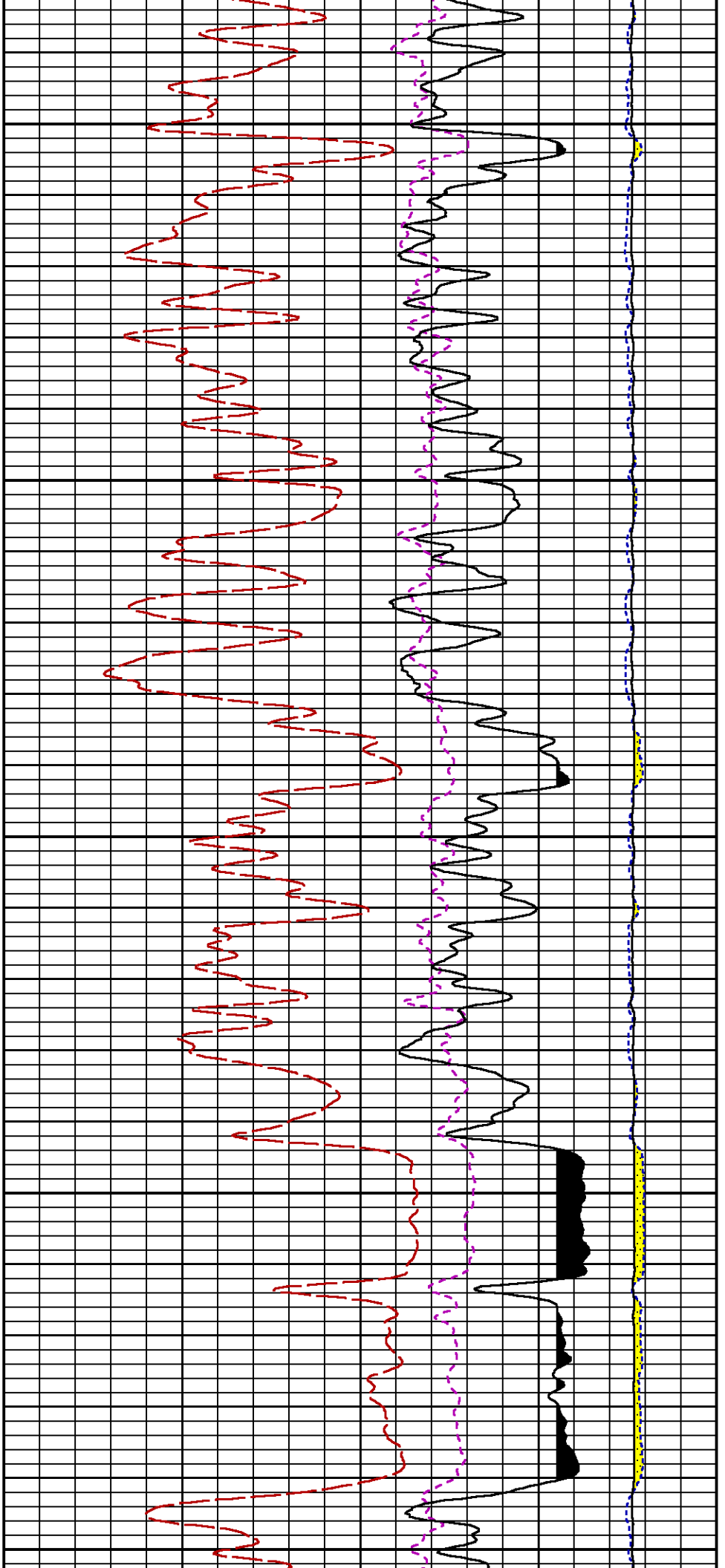


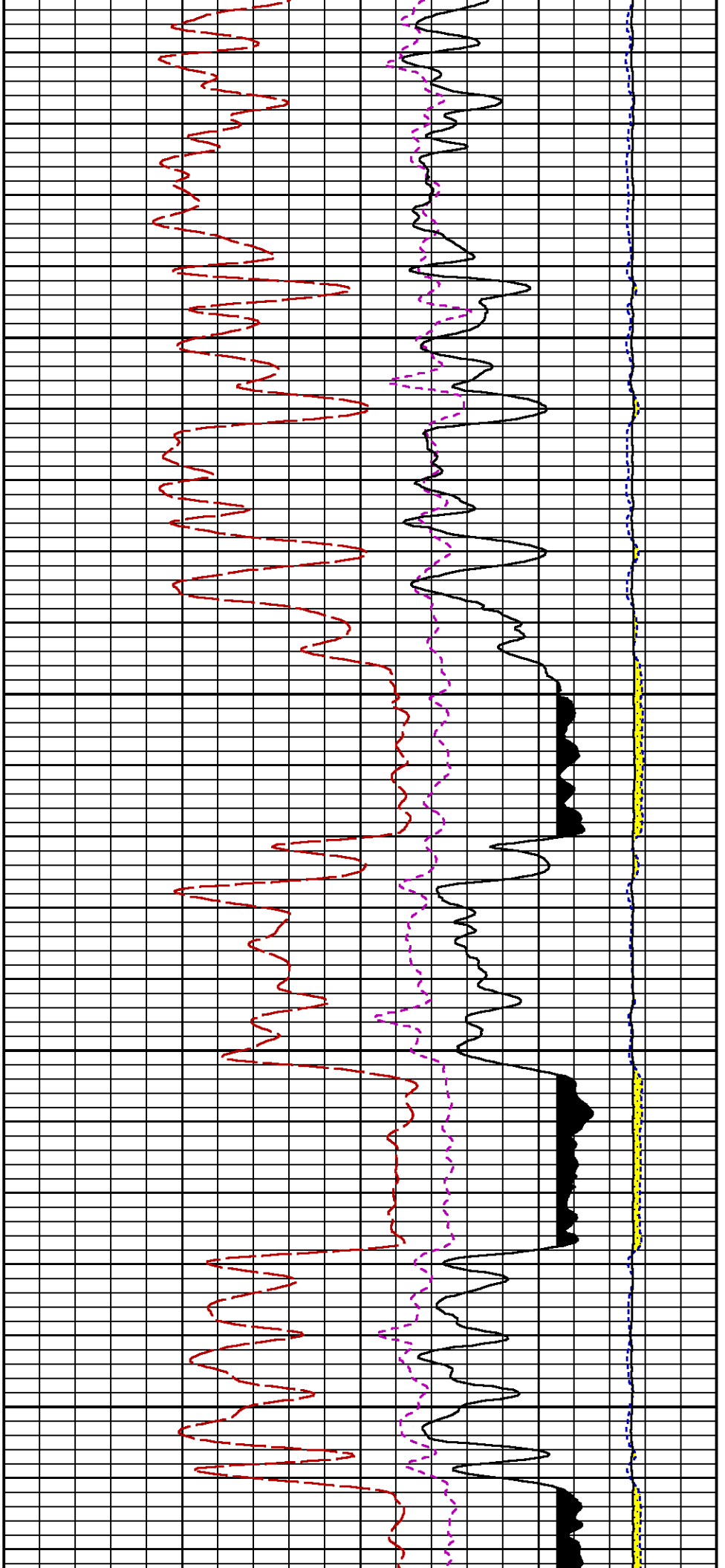






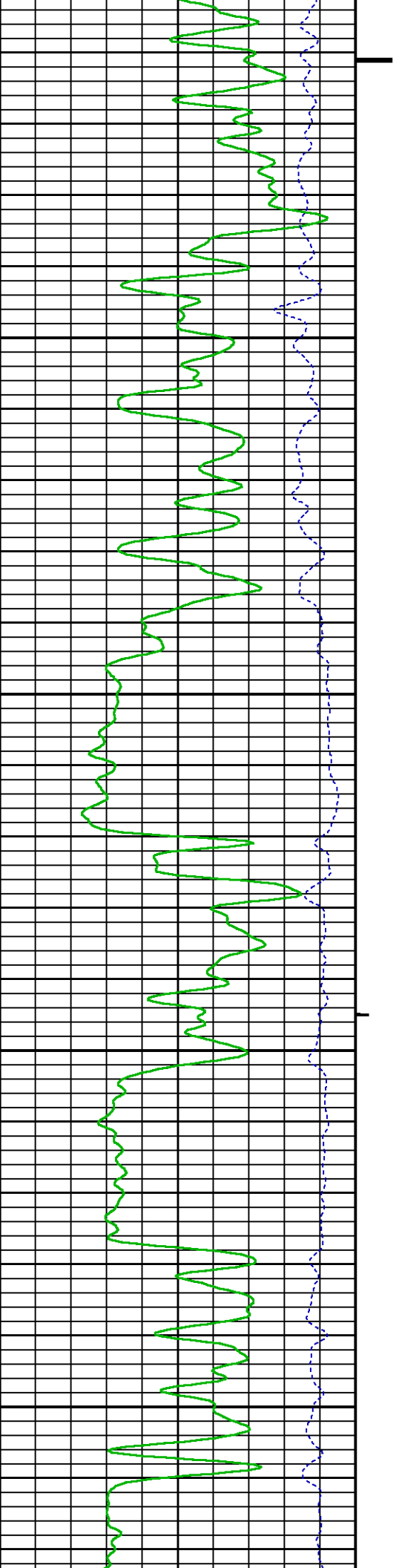


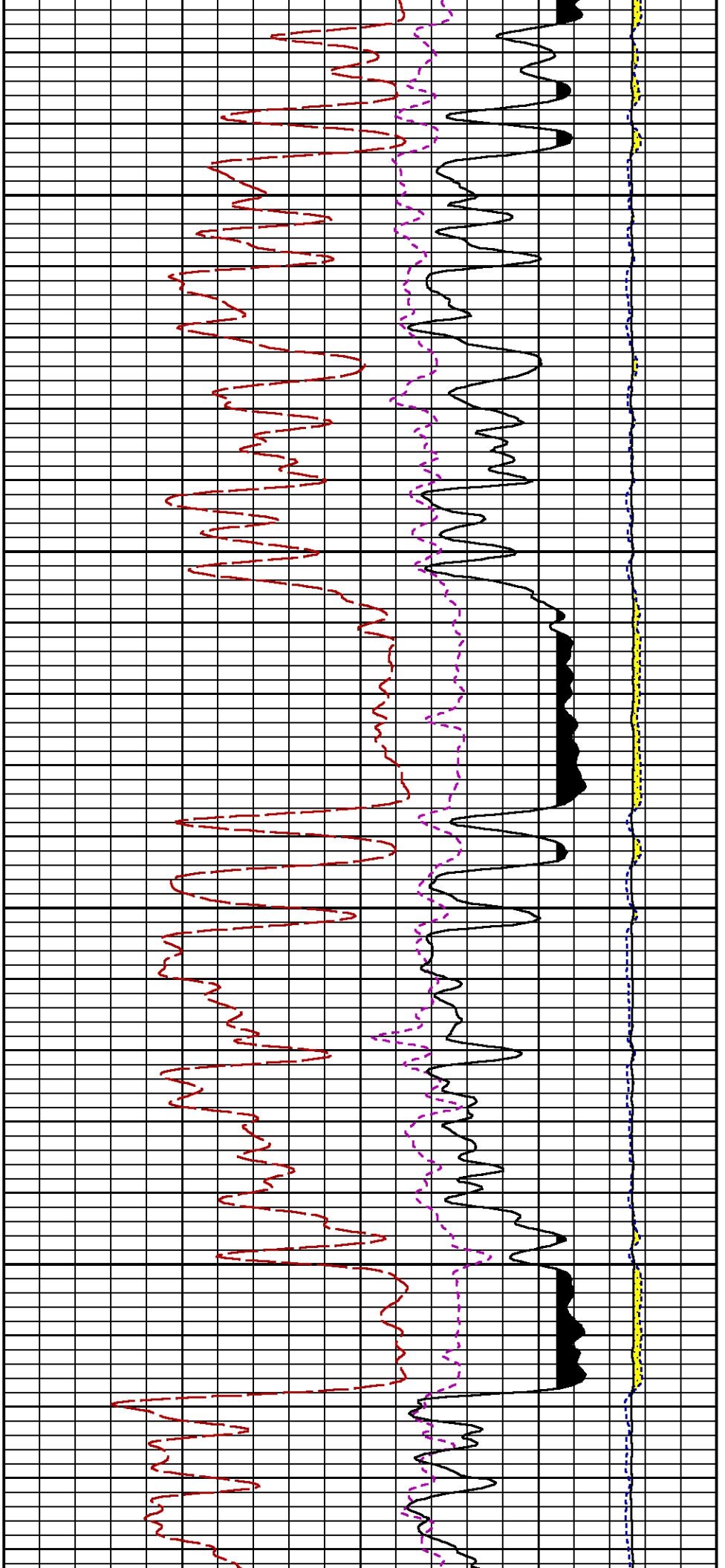




6900

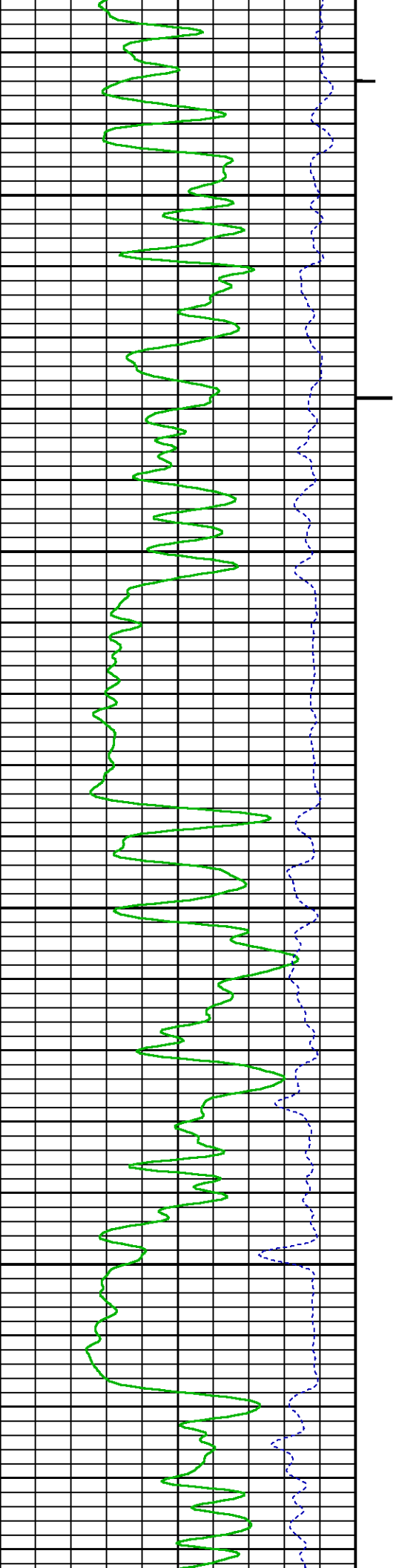
7000

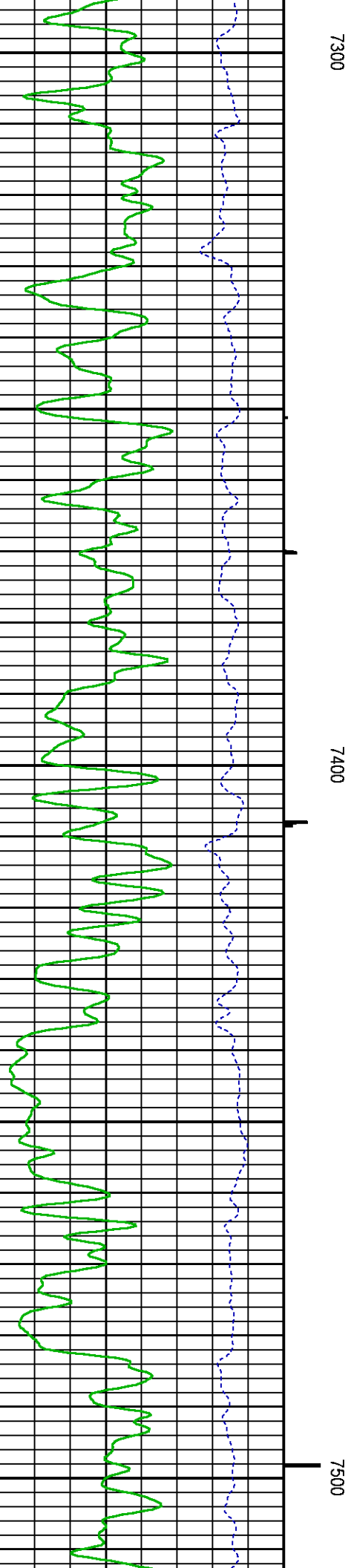
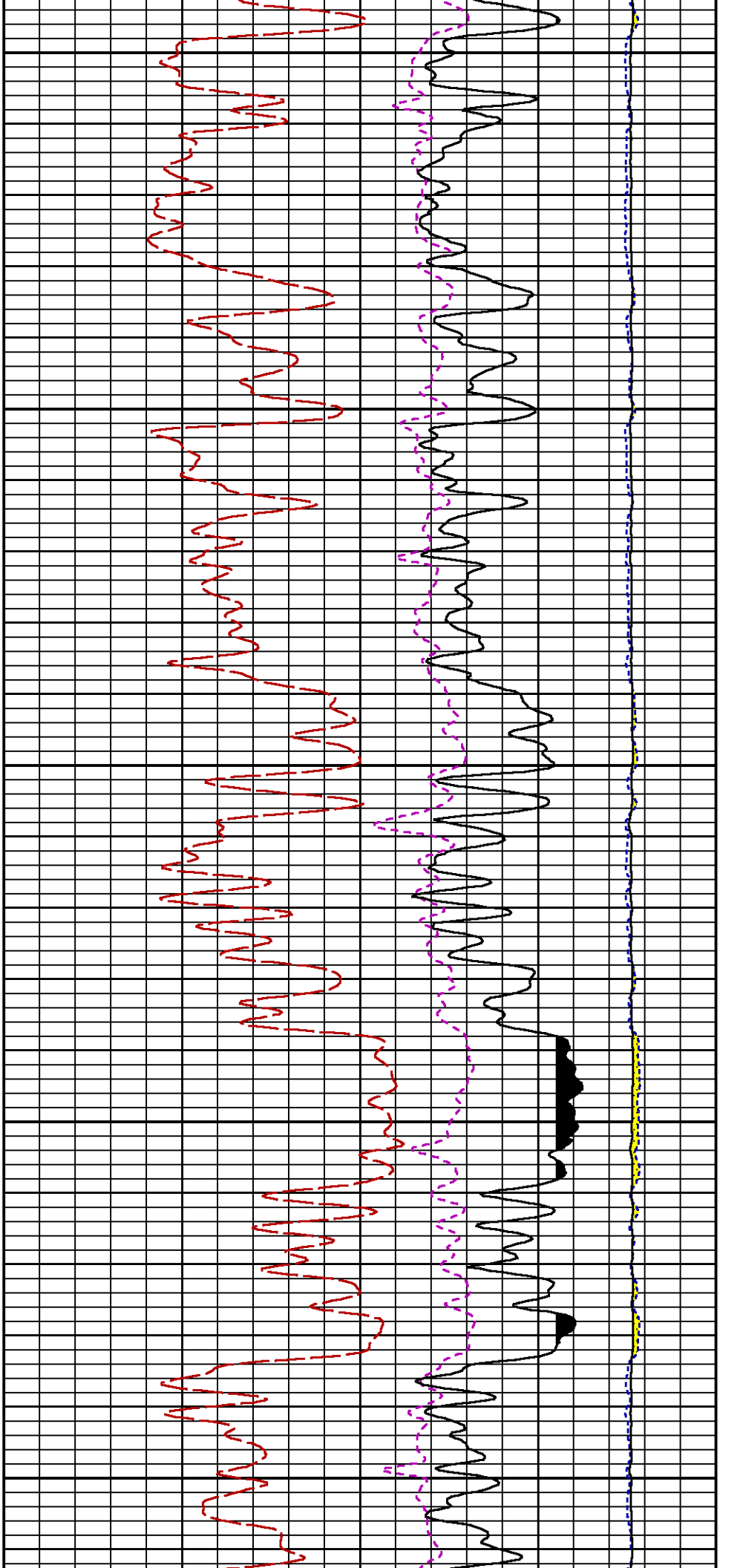


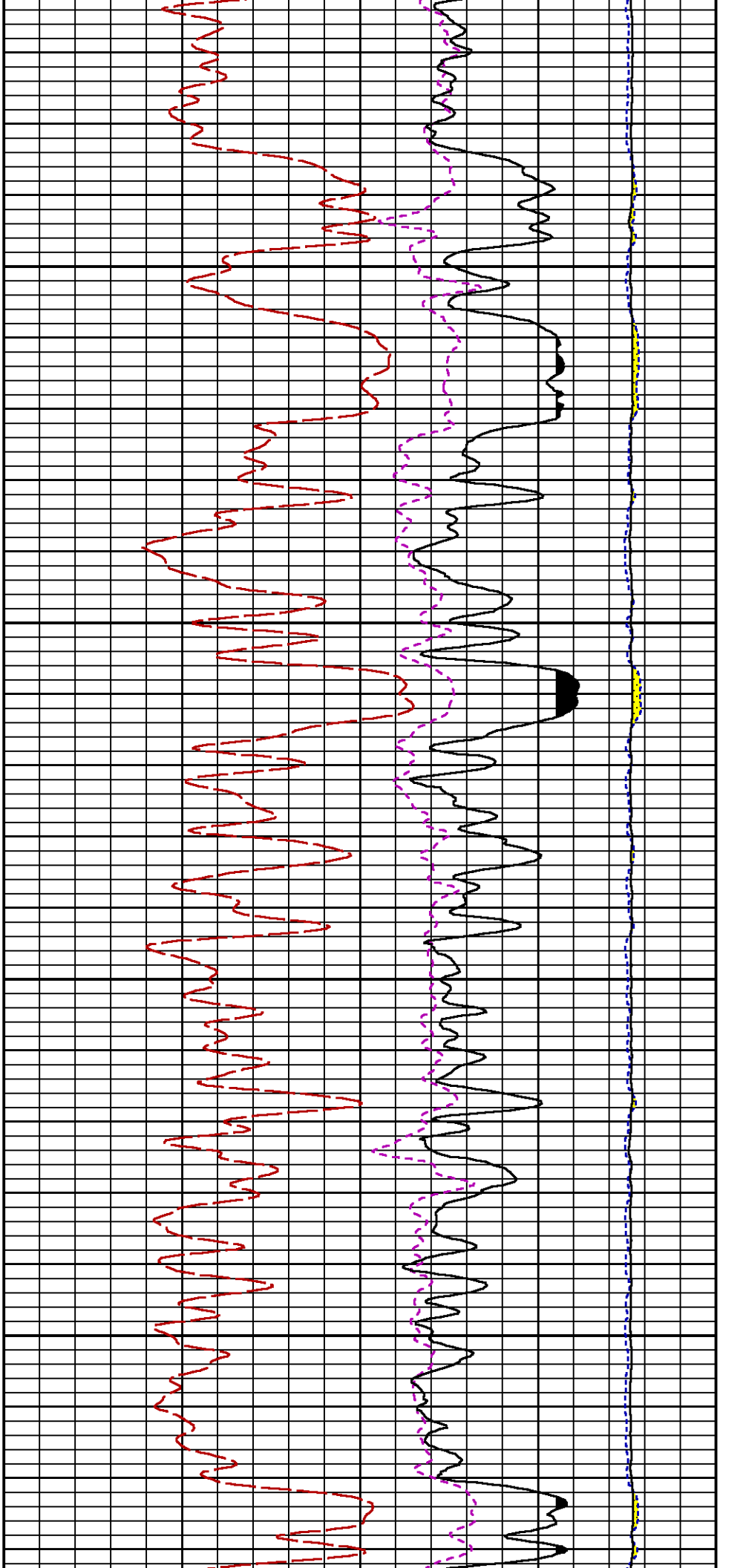


7100

7200

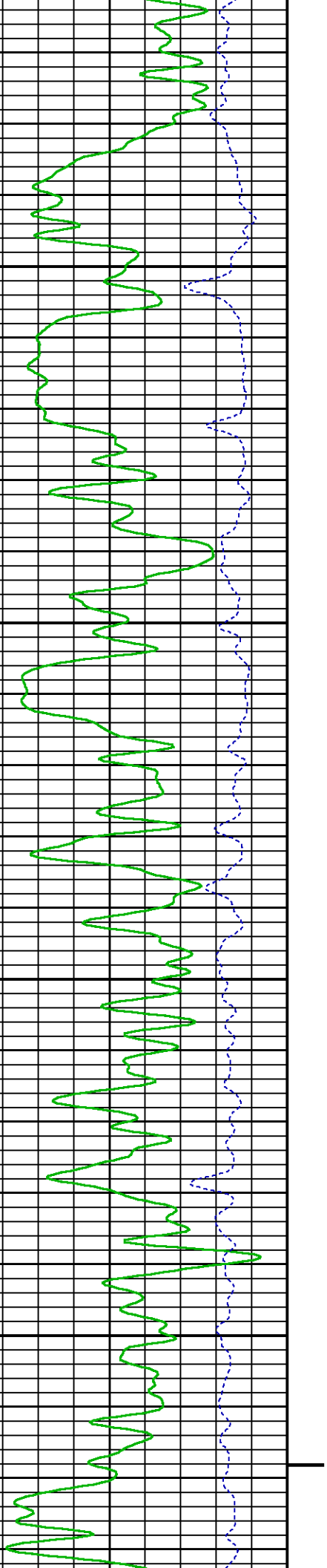


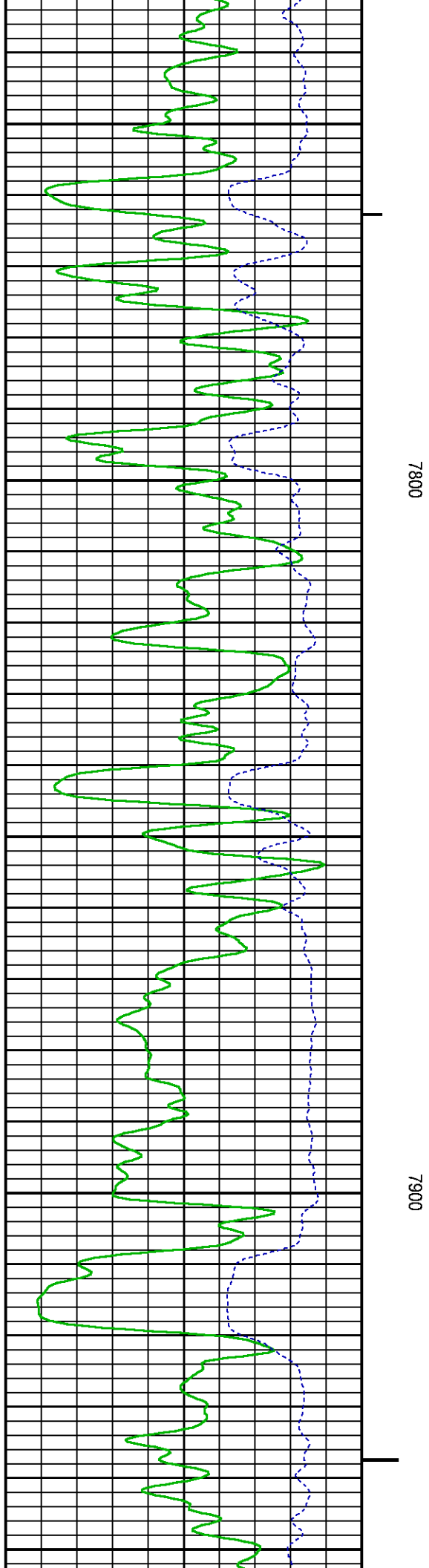
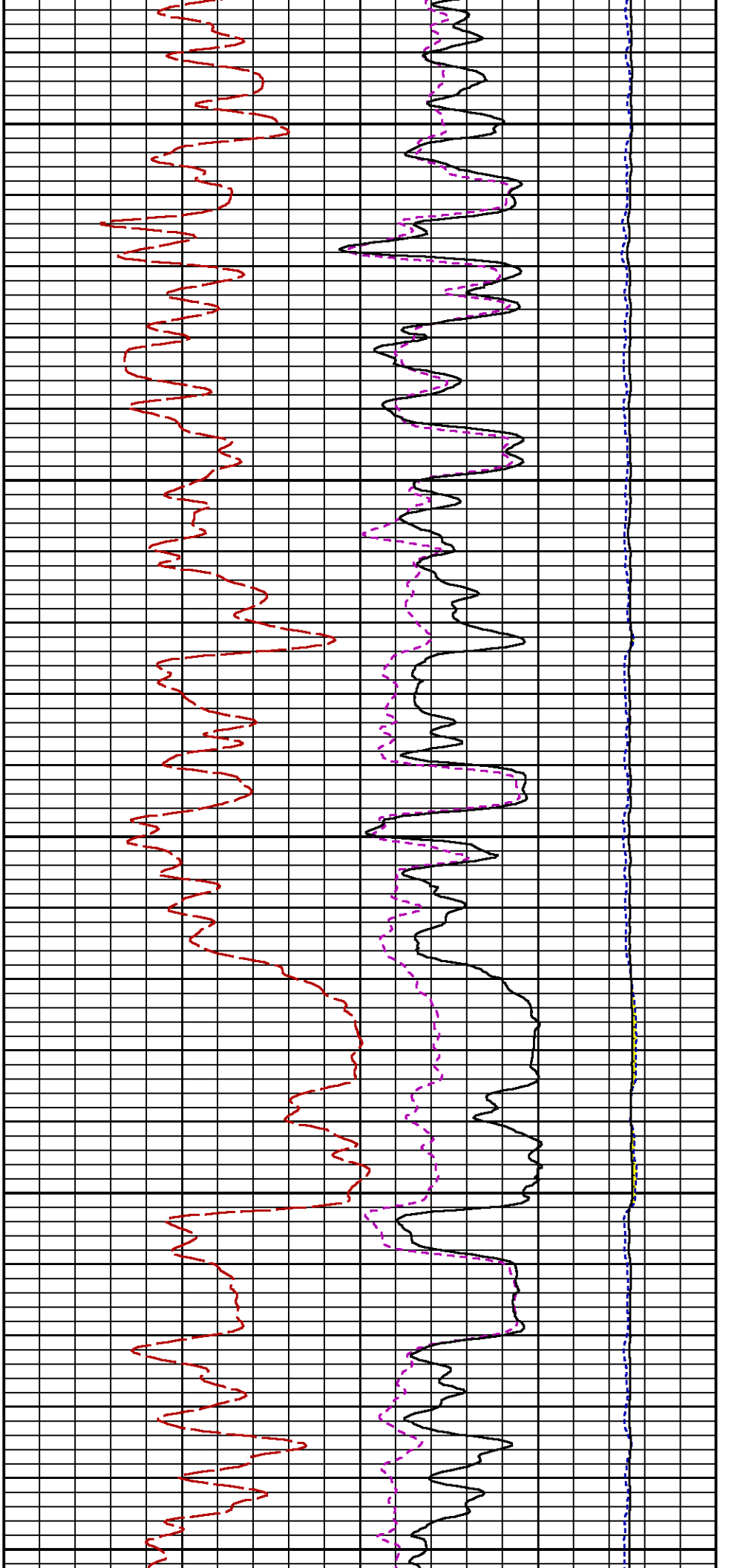


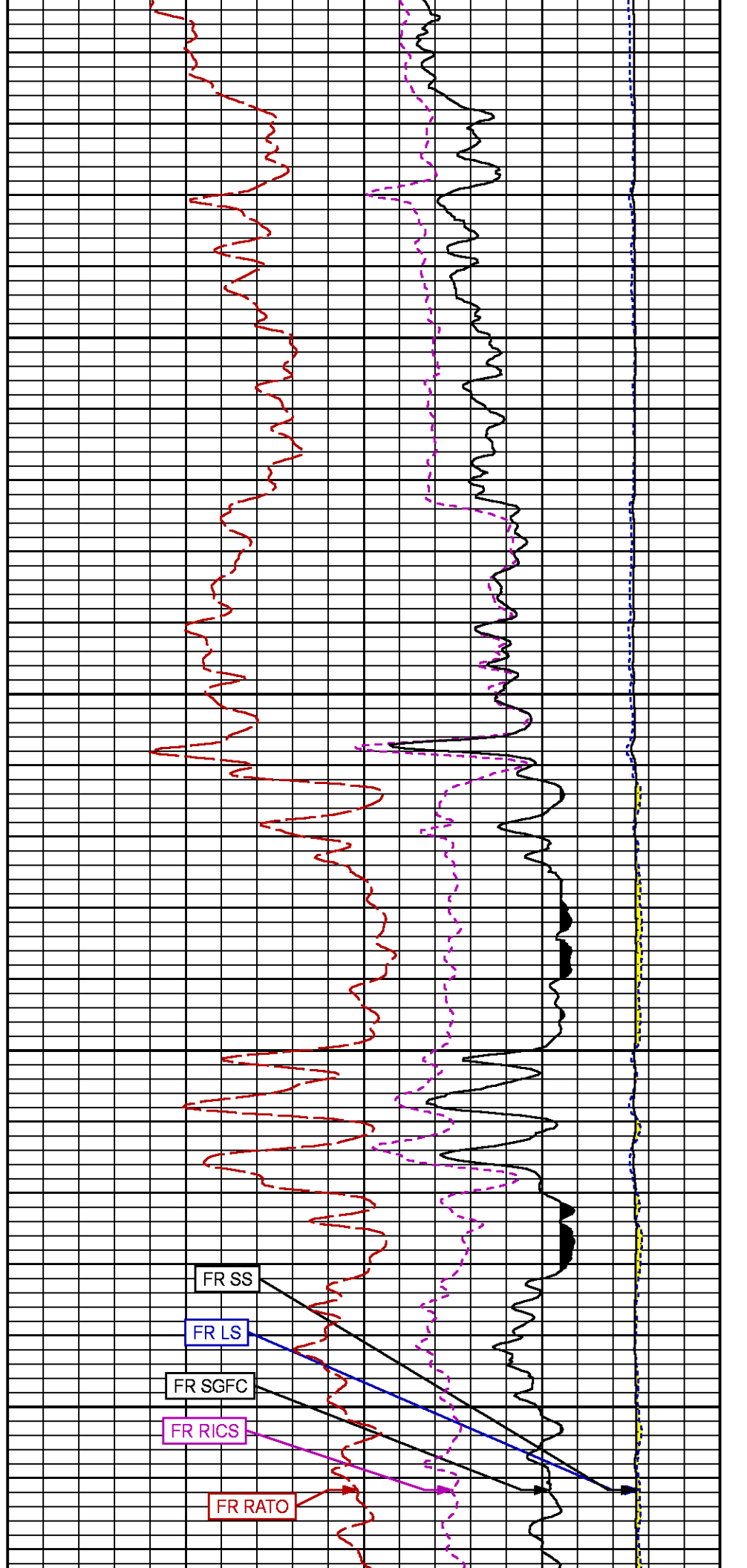
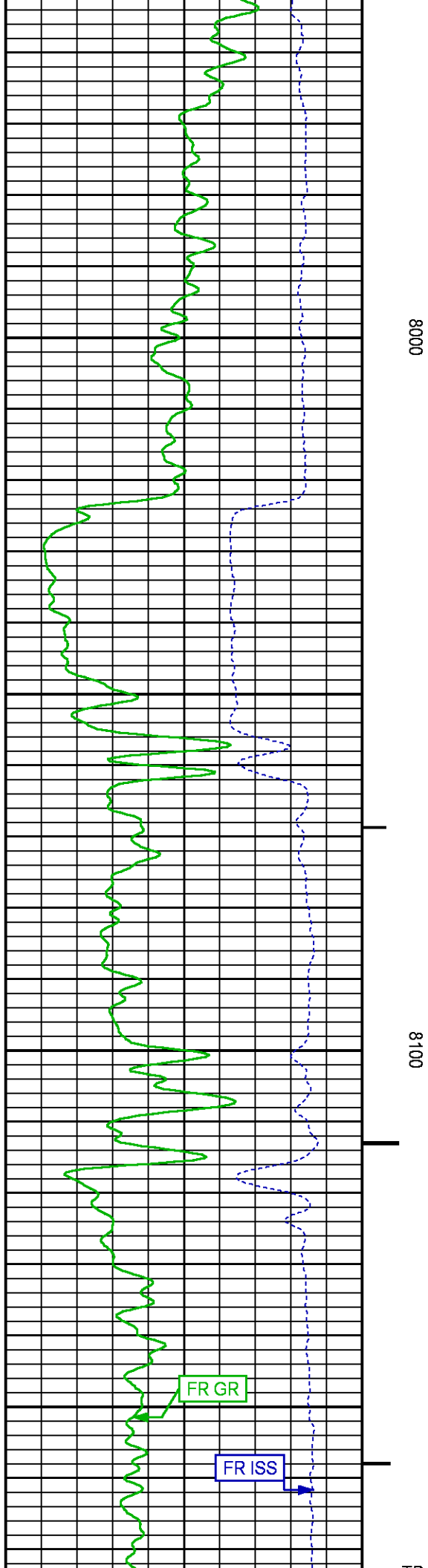


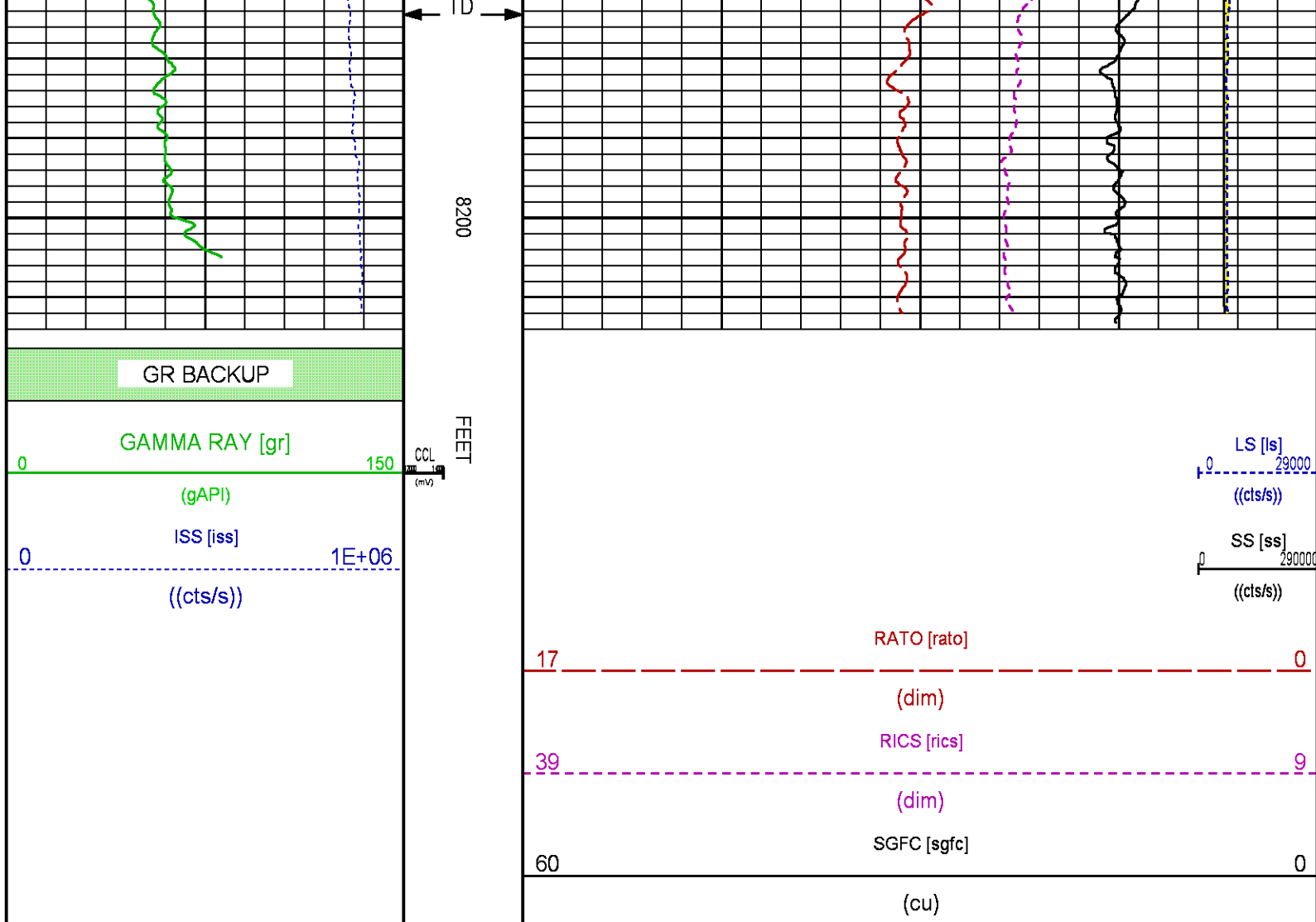
7600

7700









REPEAT PASS 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: Wed Aug 30 20:15:09 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_19_12E/RPM3D01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5746.000 ft BOTTOM DEPTH: 5981.000 ft

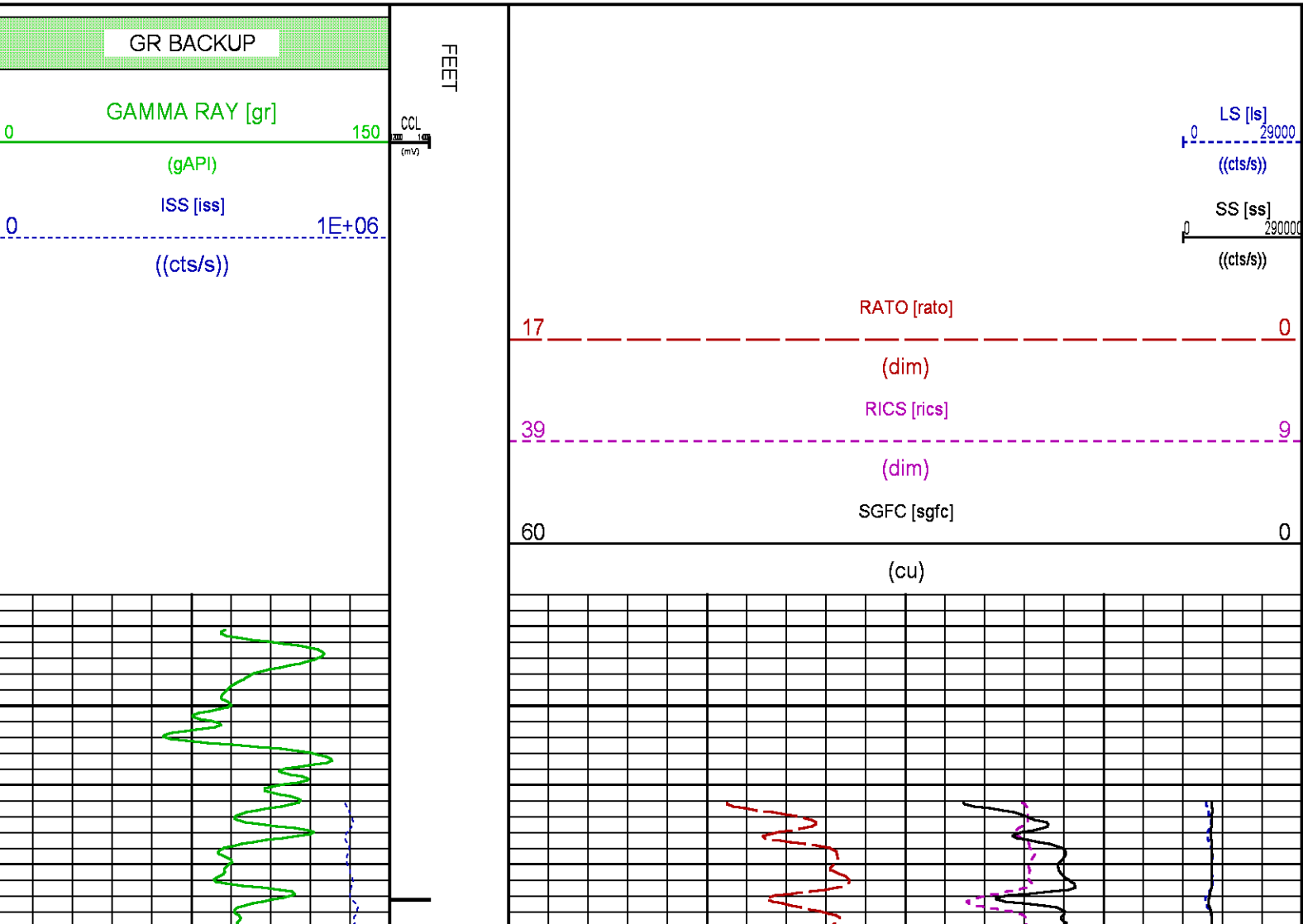
SYMMETRIC FILTER

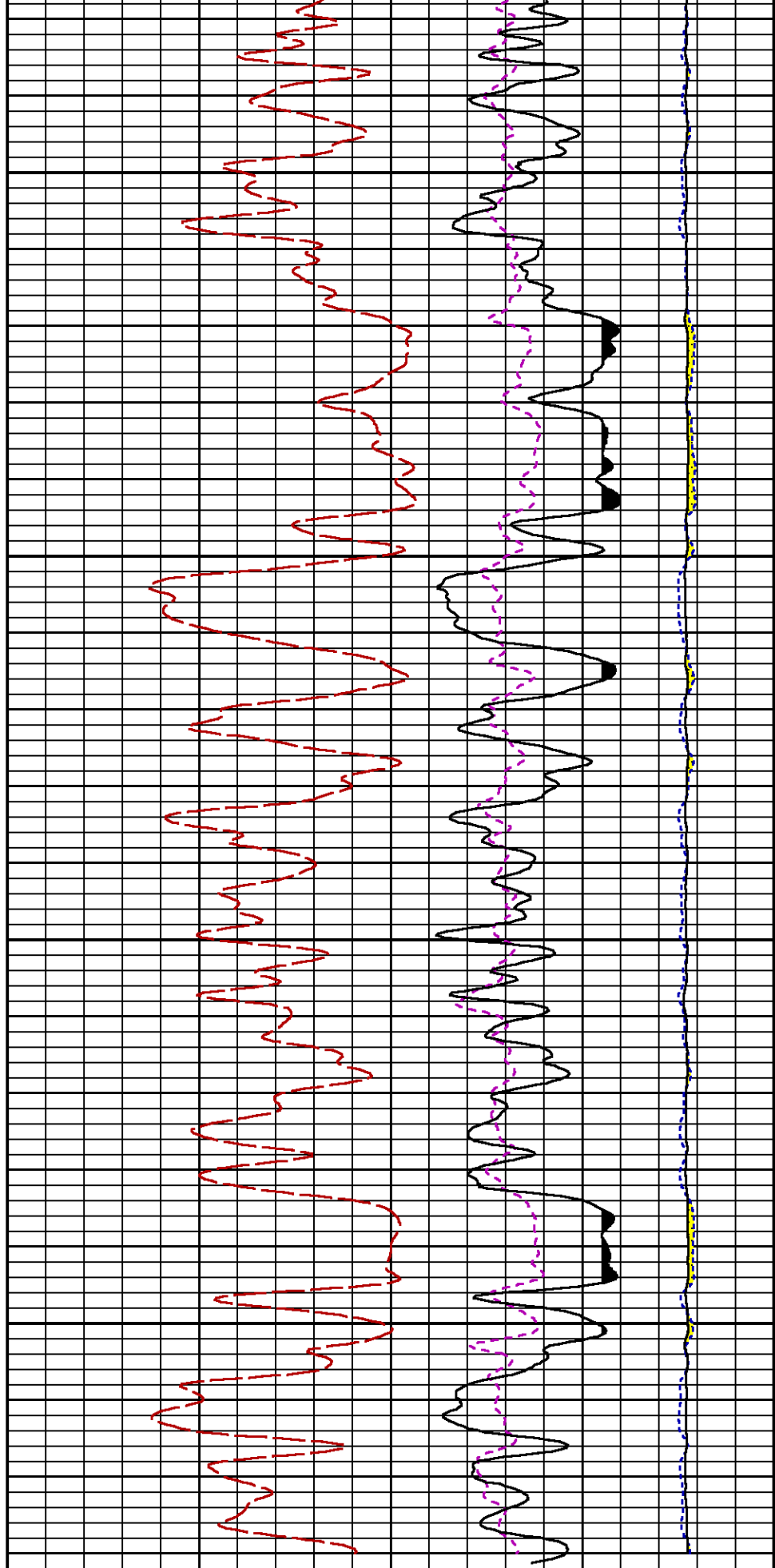
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
GR	FILTER ()	medium (1)		TOP BOTTOM

RPM PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP BOTTOM
	OPEN/CASED HOLE	CASED HOLE		" "
	BOREHOLE SIZE	7.75	in	" "

11

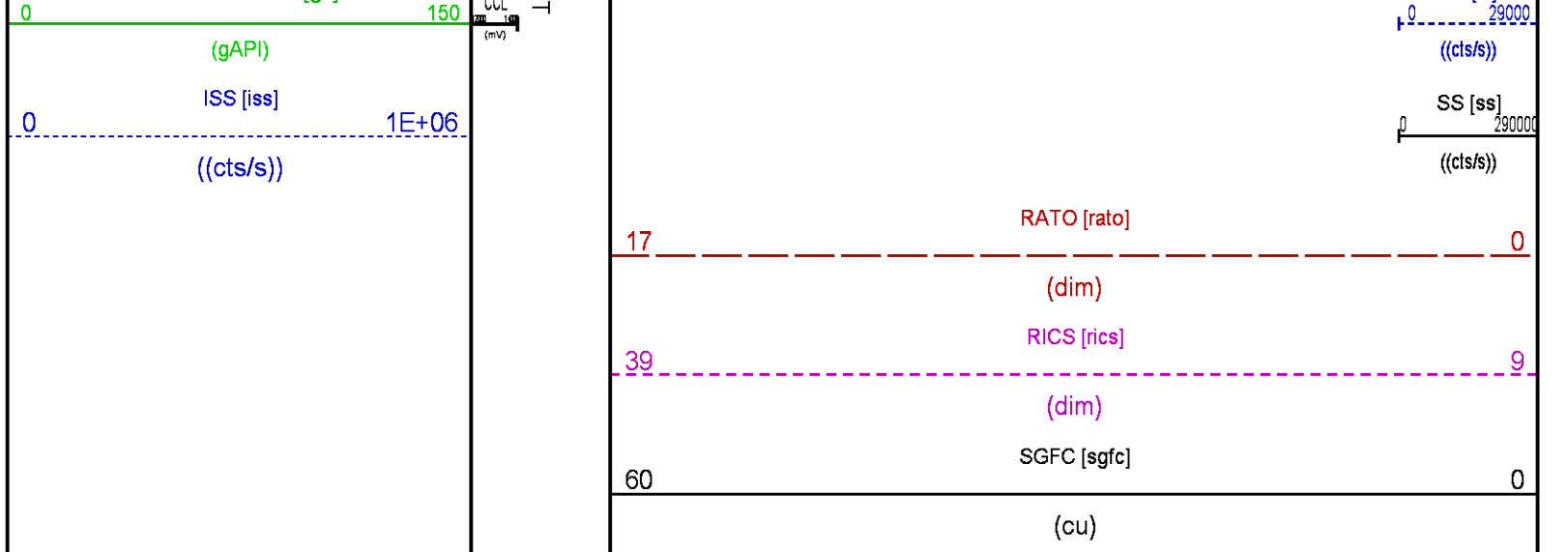




5800

5900

GR BACKUP



CALIBRATION / VERIFICATION SUMMARY

Source File: Adat1aA.ARAMIE_BRUTON_19_12E/RPM3D1p1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA10485470 DATE/TIME PERFORMED: Tue Jan 17 13:32:11 2017

UNIT #: 3882ML 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	63.76	399.13	335.4	0.552	35.17	220.17	185

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA10485470 DATE/TIME PERFORMED: Tue Jan 17 13:34:45 2017

UNIT #: 3882ML ML4352 VERI JIG #: 4702NK DA_228

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	63.44	394.18	0.552	35.00	217.44	182.44
						115.03 195.03

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA10414345 DATE/TIME PERFORMED: Thu Jul 13 12:34:15 2017

UNIT: 3882TD HL6728 CALIBRATOR: 2437XB 120057 SOURCE: 8281AA10160601 HOURS: 8281AA 704

	ISS	Mr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	790764	126	2358	2261	2241	134	10.0	0.9777
Interpolated	1300000	148	2343	2251	2237			

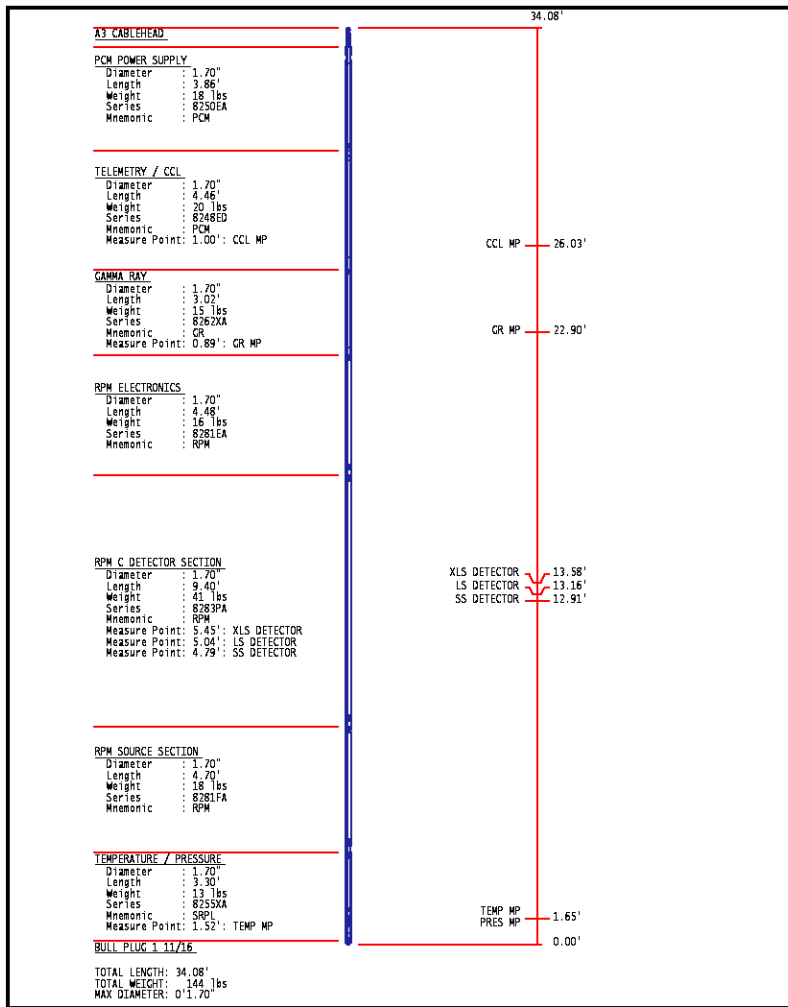
	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	790764	6044	978	134	26.03	0.15	24.26	0.33
					26.76 26.40	0.03 0.03	23.40 24.80	0.03 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	790764	160255	24559	87267	31044	8098	53011	12993
Fit Quality %		0.611	0.587	0.523	0.528	0.538	0.527	0.577

	ISS	RBOR	RIN ISS/LS	RIN13 ISS/XS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	790764	1.44	4.93	32.21	14.92	10.78	3.84	4.08
		1.42 1.45	4.93 5.92	22.00 32.70	10.99 16.76	10.06 11.10	3.59 3.96	3.76 4.20
Fit Quality %		0.047	0.027	0.046	0.063	0.079	0.082	0.072
Reduced	1372844	1.44	4.93	32.15	14.90	10.77	3.83	4.08
		1.42 1.45	4.93 5.92	27.40 32.70	13.70 16.76	10.06 11.10	3.52 3.96	3.76 4.20

INSTRUMENT CONFIGURATION

Source File: ddat1a1_LARAMIE_BRUTON_19_12E/RPM_PNC30--ldg



COMPANY WELL FIELD COUNTY	LARAMIE ENERGY BRUTON 19-12E VEGA MESA		STATE COLORADO	FILE NO:
				API NO: 05077103650000
LOCATION:	SHL: LAT:39.255232N; LONG:107.806537W BHL: LAT:39.262132N; LONG:107.806985W		ELEVATIONS: KB 7449 FT DF 7448 FT GL 7425 FT	
SEC 19 TWP 9S RGE 93W	DATE 30-AUG-2017			