



FILE NO:	COMPANY	LARAMIE ENERGY
API NO:	WELL	PICEANCE FEDERAL 29-18W
05-077-10358-0000	FIELD	VEGA
	COUNTY	MESA
	STATE	COLORADO
Ver. 4.06	LOCATION:	OTHER SERVICES
	SHL: LAT:39.248633N; LONG:107.788204W	RAL
	BHL: LAT:39.243491N; LONG:107.796581W	
	SEC 29 TWP 09 S RGE 93 W	
PERMANENT DATUM	GL	ELEVATION 7631 FT
LOG MEASURED FROM	KB	30 FT ABOVE P.D.
DRILL MEAS. FROM	KB	ELEVATIONS: KB 7661 FT DF GL 7631 FT

DATE	26-MAY-2017
RUN	2
TRIP	1
SERVICE ORDER	US123643J
DEPTH DRILLER	8477 FT
DEPTH LOGGER	8333 FT
BOTTOM LOGGED INTERVAL	8333 FT
TOP LOGGED INTERVAL	2600 FT
TIME STARTED	07:00
TIME FINISHED	13:00
OPERATOR RIG TIME	6 HRS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	54 FT
LOGGED CEMENT TOP	1300 FT
WELLHEAD PRESSURE	1300 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	15 FMN
MAX. RECORDED TEMP.	238 DEGF
REFERENCE LOG	BAKER HUGHES GR/CBL
REFERENCE LOG DATE	25-MAY-2017
EQUIP. NO.	HL-6670
LOCATION	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	8467 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: 7499' - 7477'
SJ2: 6612' - 6590'
CREW: D.HUTCHISON, S.AKKOUCH

EQUIPMENT DATA				
RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.
2	1	TELEMETRIC	0255 FA12212 57	151222261412222261

2	1	TELEMETRY	8250 EA/8248 ED	1510000/11908681	FREE
2	1	GAMMA RAY	8262 XA	10485470	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 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014
Patches: 9

Plotted: Sat May 27 22:25:46 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\Users\samiyas\Desktop\LARMIE_RPM\LARAMIE_PICEANCE_FEDERAL_29_18W\RPM_PNC3D03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2599.750 ft BOTTOM DEPTH: 3271.000 ft

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

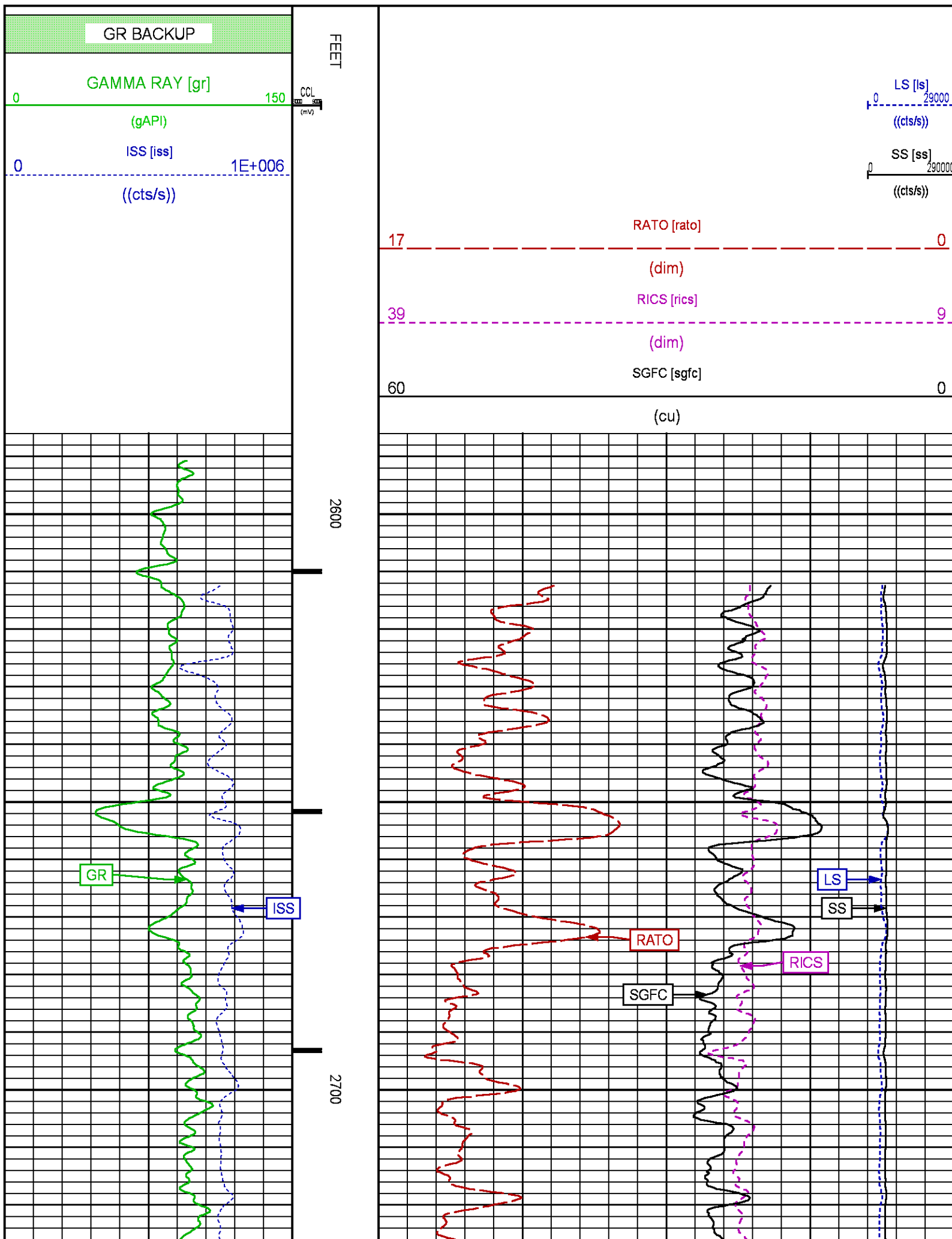
RPM PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP BOTTOM
	OPEN/CASED HOLE	CASED HOLE		" "
	BOREHOLE SIZE	8.75	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

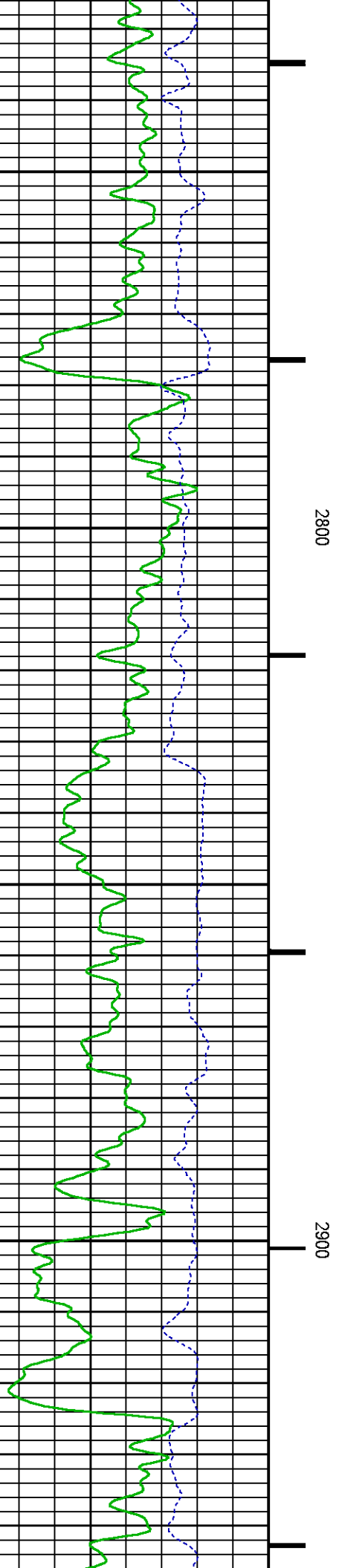
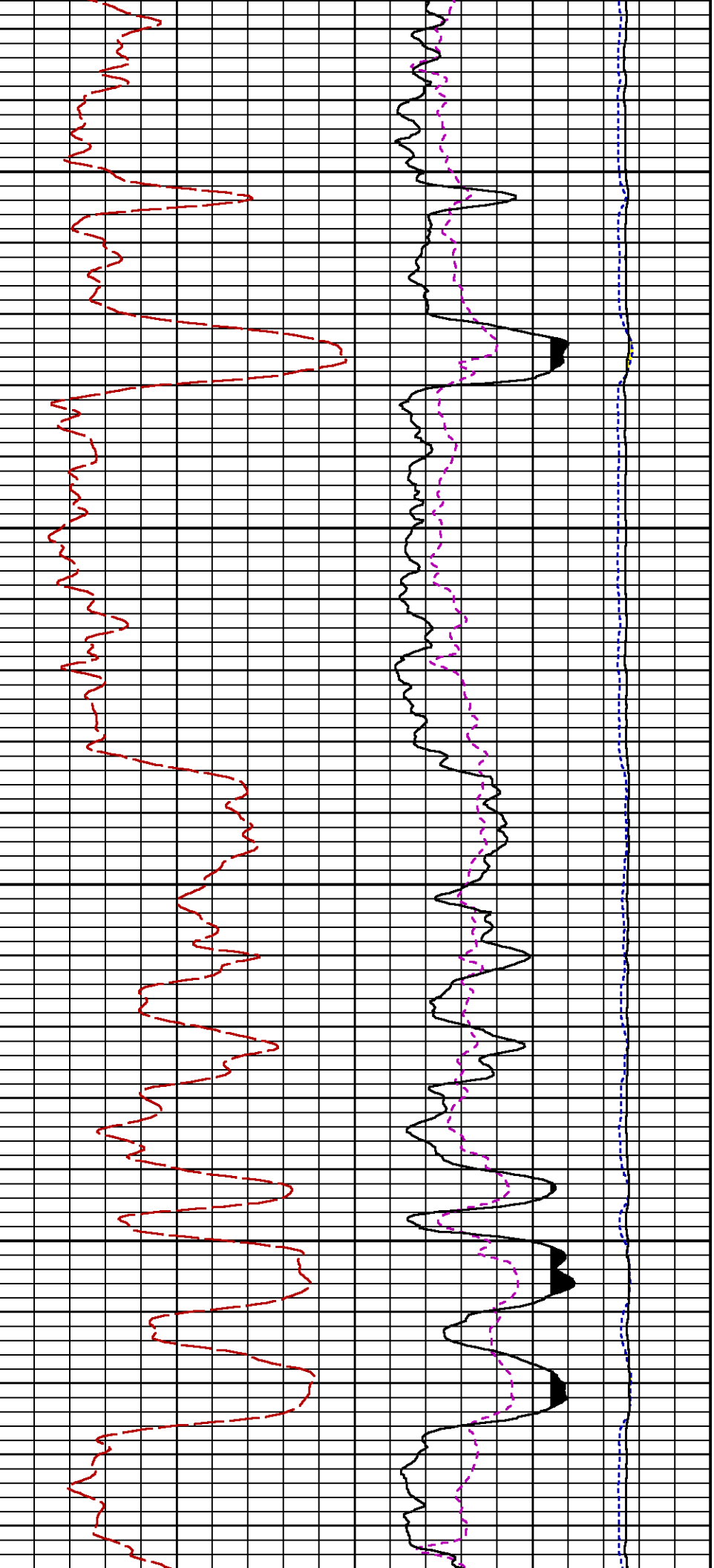
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	May 25 15:15:04 2017	CASING COLLAR LOCATOR
F1:GR	May 25 15:15:04 2017	GAMMA RAY
F1:ISS	May 25 15:15:04 2017	INELASTIC SHORT SPACE COUNT RATE
F1:LS	May 25 15:15:04 2017	LONG SPACE COUNT RATE
F1:RATO	May 25 15:15:04 2017	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	May 25 15:15:04 2017	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	May 25 15:15:04 2017	CORRECTED FORMATION SIGMA
F1:SS	May 25 15:15:04 2017	SHORT SPACE COUNT RATE

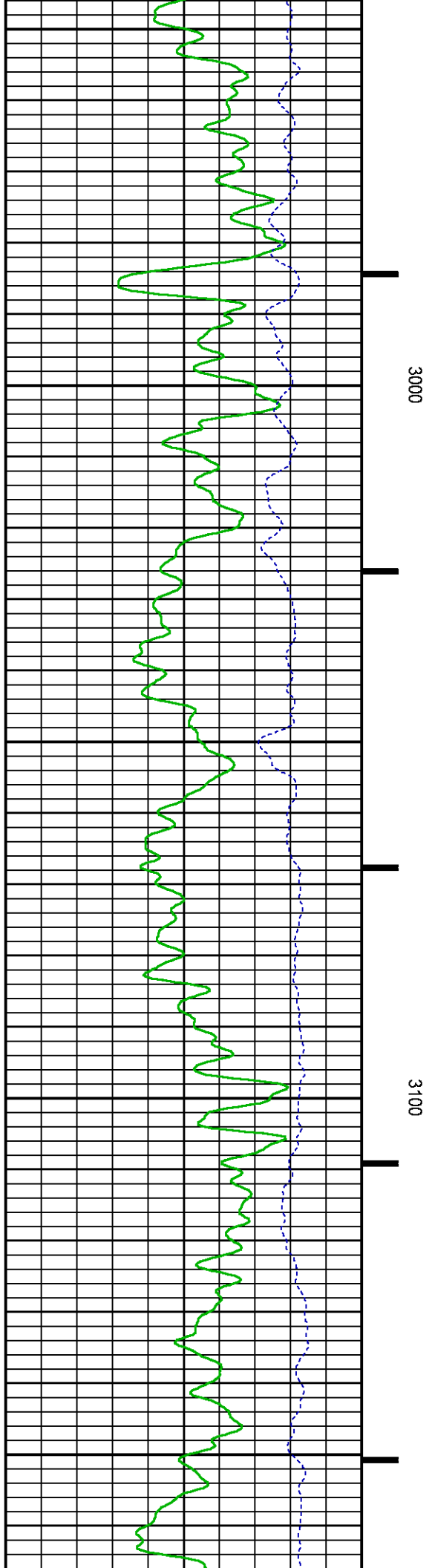
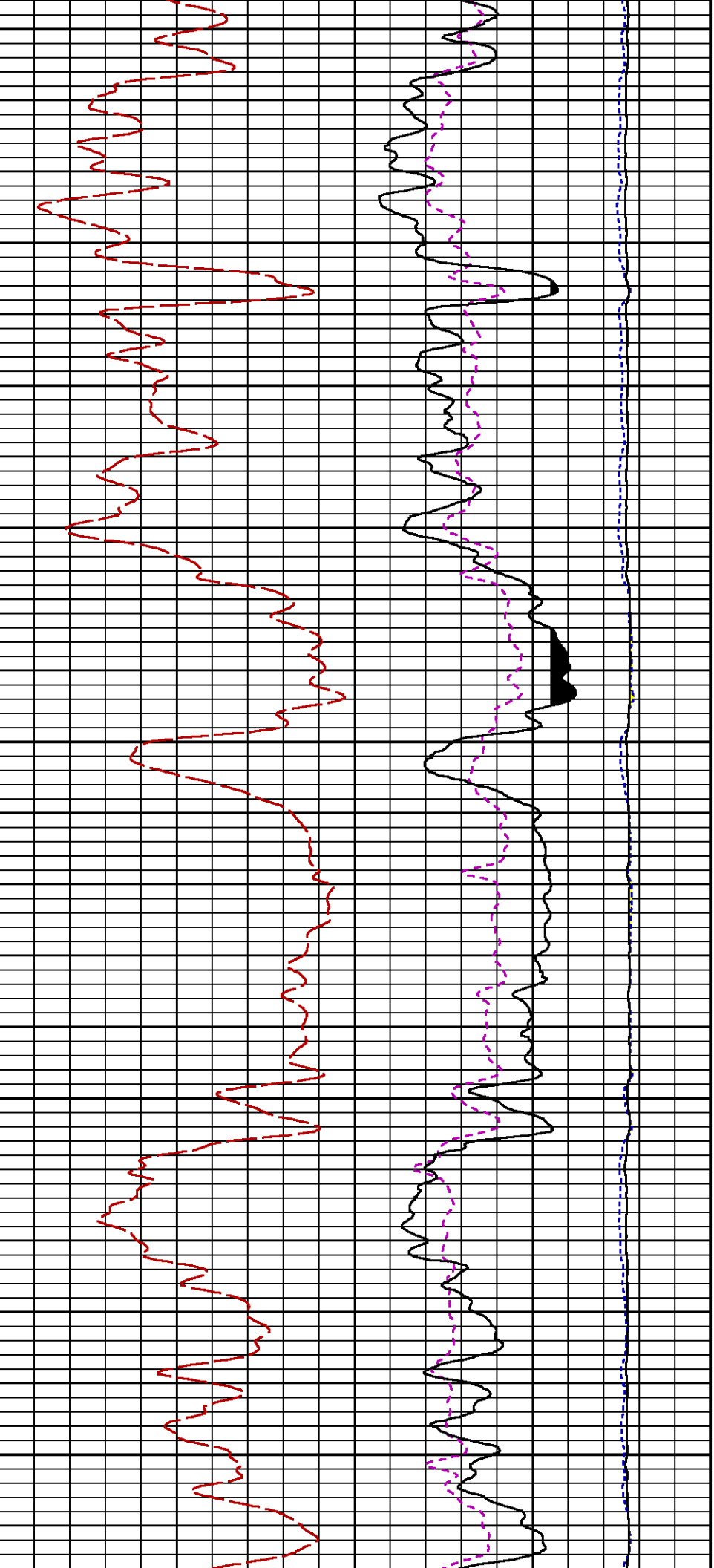
CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	26.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

Presentation : BHI868FXZ1:C:\Users\samiyas\Desktop\LARMIE_RPM\LARAMIE_PICEANCE_FEDERAL_29_18W
rpm_pnc3d+01-GSAND-29_18W-5-10620.fvpdf [5"/100' Scale]
Plot Interval : 2586.5 - 3274 Feet

Data File 1 : F1 : BHI868FXZ1:C:\Users\samiyas\Desktop\LARMIE_RPM\LARAMIE_PICEANCE_FEDERAL_29_18W
RPM_GSAND_18W.xtf
Created On : May 25 15:15:04 2017
Company : LARAMIE ENERGY
Well : PICEANCE 29-18W
Field : VEGA
File Interval : 2585.75 - 3282.75 Feet







PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_PICEANCE_FEDERAL_29_18W/RPM_PNC3D02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4876.000 ft BOTTOM DEPTH: 8326.750 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	8.75	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

CURVE DESCRIPTION REPORT

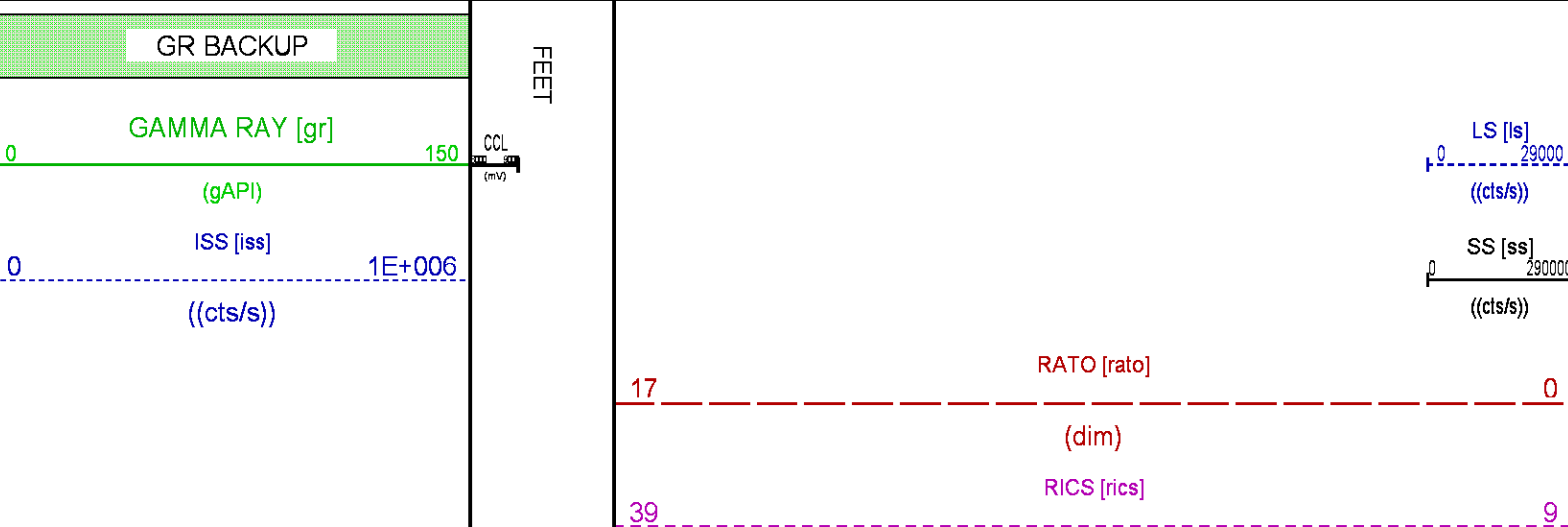
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	May 25 11:26:58 2017	CASING COLLAR LOCATOR
F1:GR	May 25 11:26:58 2017	GAMMA RAY
F1:ISS	May 25 11:26:58 2017	INELASTIC SHORT SPACE COUNT RATE
F1:LS	May 25 11:26:58 2017	LONG SPACE COUNT RATE
F1:RATO	May 25 11:26:58 2017	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	May 25 11:26:58 2017	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	May 25 11:26:58 2017	CORRECTED FORMATION SIGMA
F1:SS	May 25 11:26:58 2017	SHORT SPACE COUNT RATE

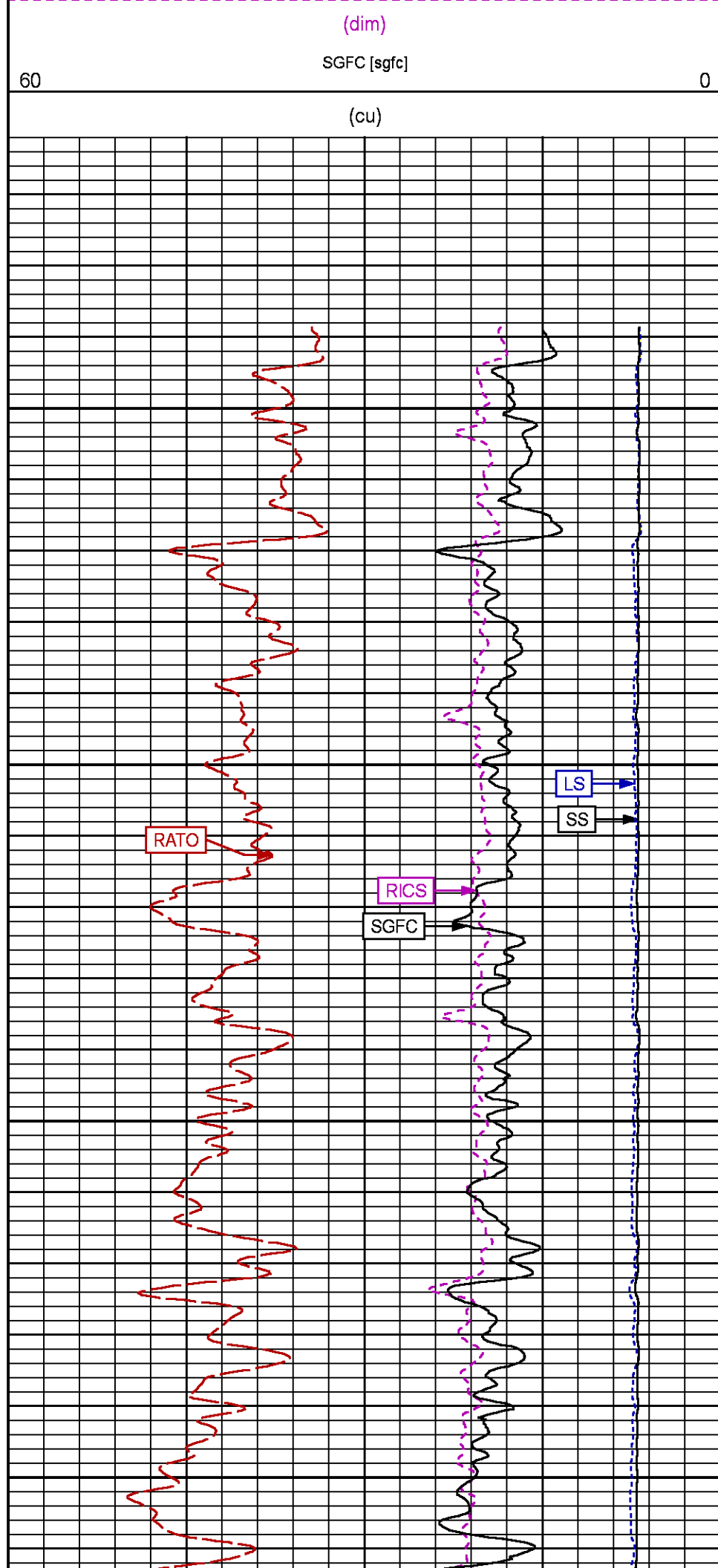
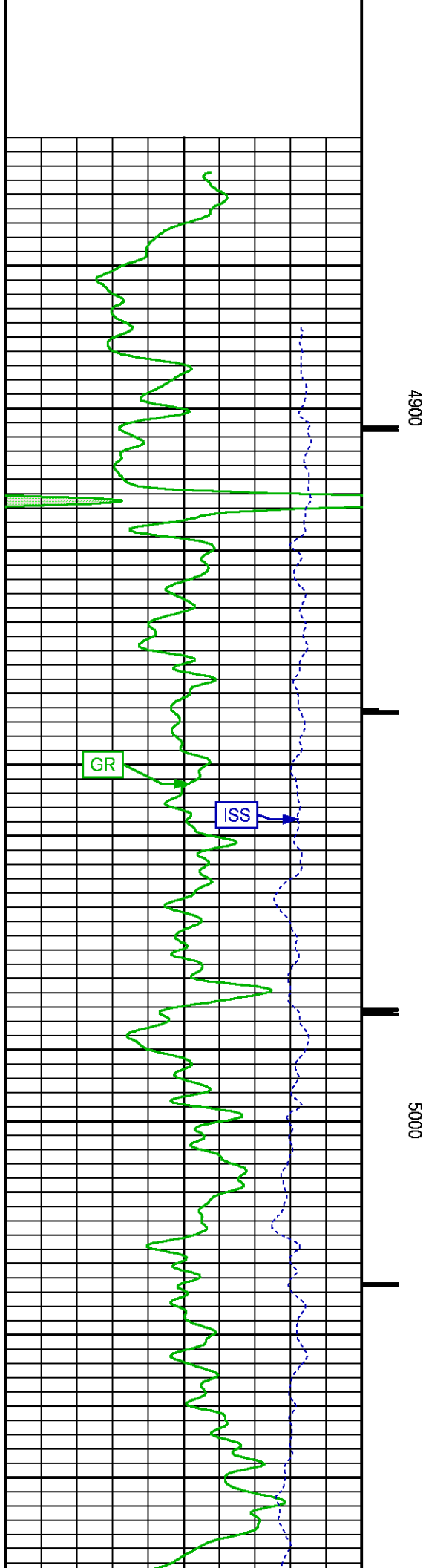
CURVE MEASURE POINT OFFSET

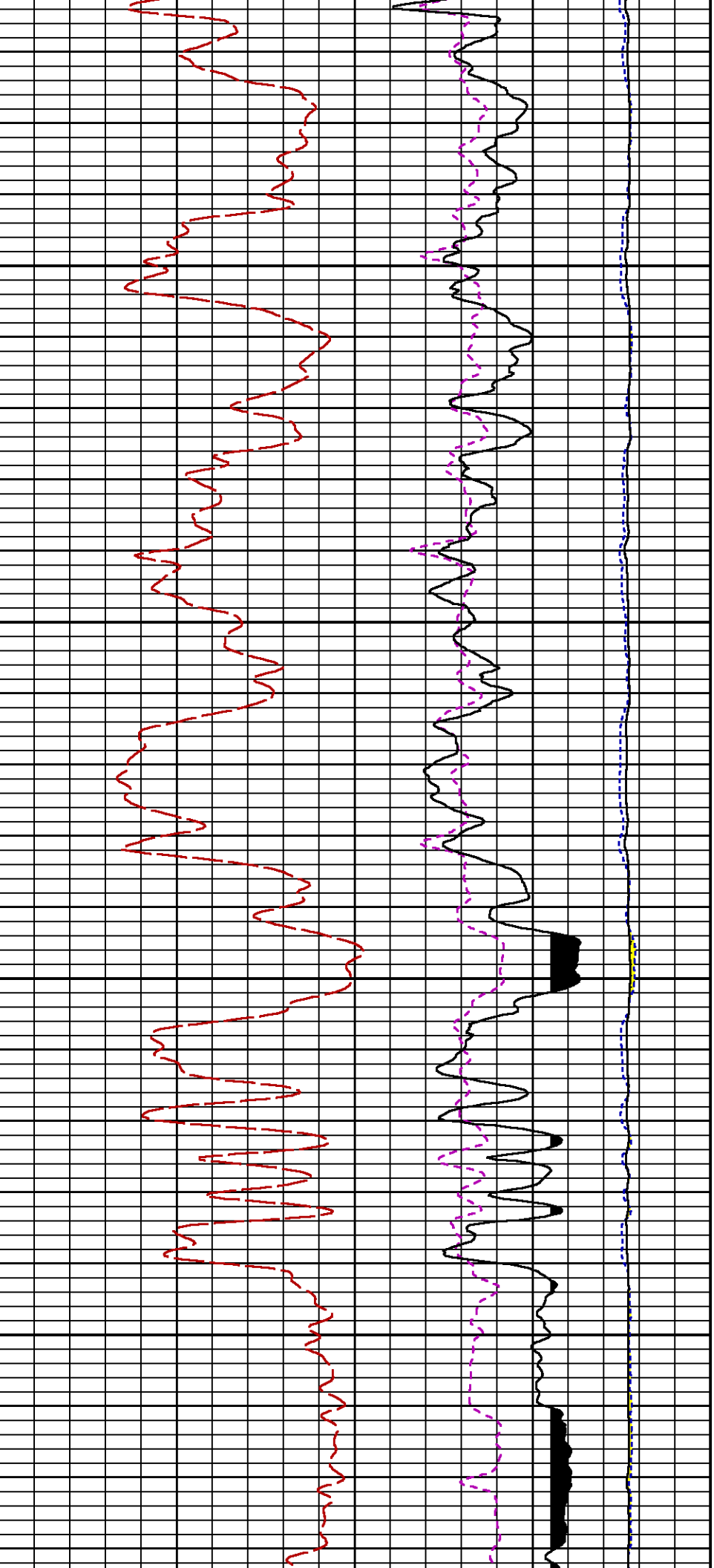
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	26.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

Presentation : cpu100:/dat1a/LARAMIE_PICEANCE_FEDERAL_29_18W/rpm_pnc3d+01-MAIN-29_18W_5.fvpdf [5"/100' Scale]
Plot Interval : 4862.75 - 8340 Feet

Data File 1 : F1 : cpu100:C:\Users\samiyas\Desktop\LARMIE_RPM\LARAMIE_PICEANCE_FEDERAL_29_18W\RPM_MAIN_18W.xtf
Created On : May 25 11:26:58 2017
Company : LARAMIE ENERGY
Well : PICEANCE 29-18W
Field : VEGA
File Interval : 4862 - 8338.5 Feet
OCT : RPM_PNC3

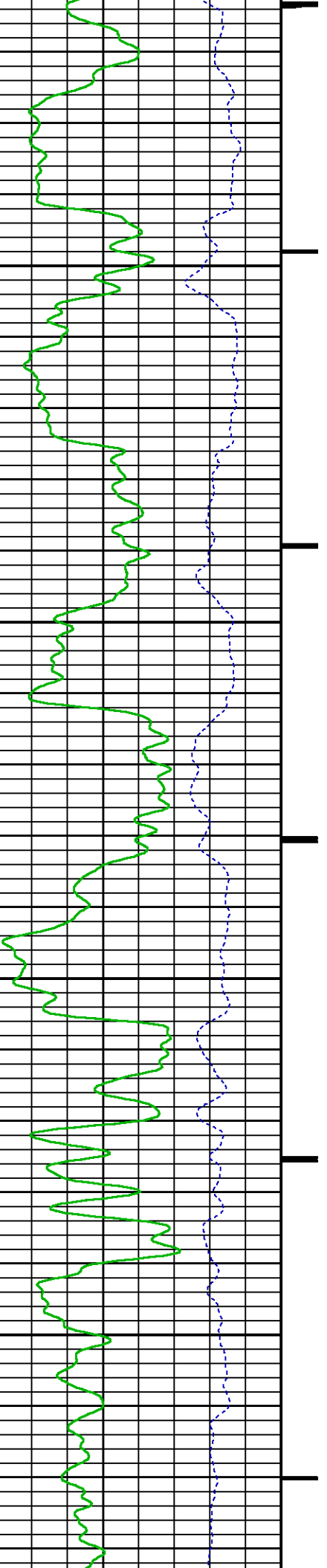


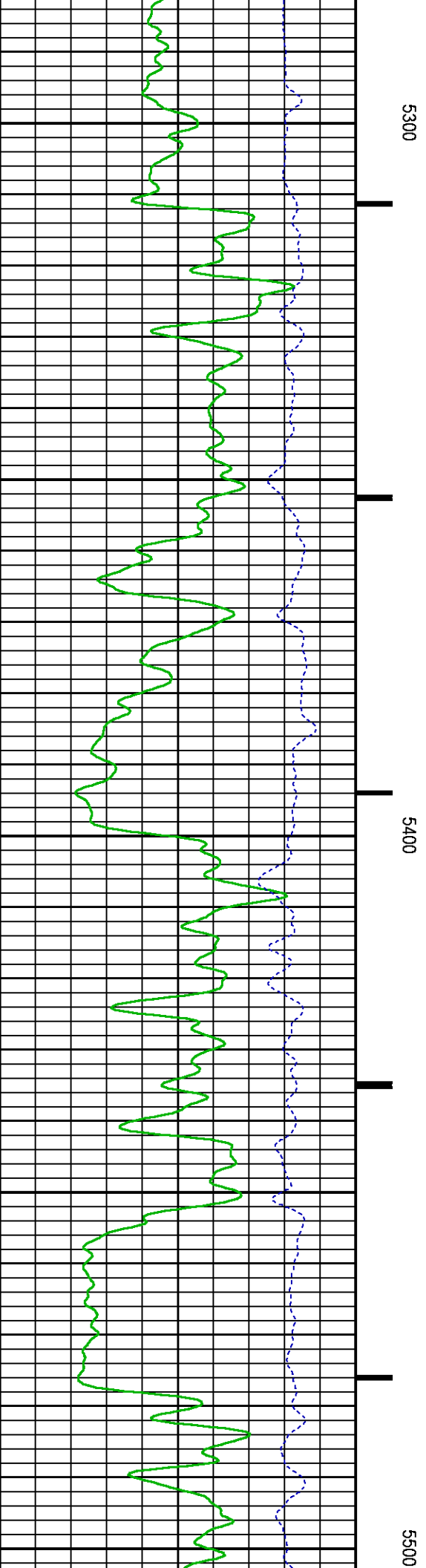
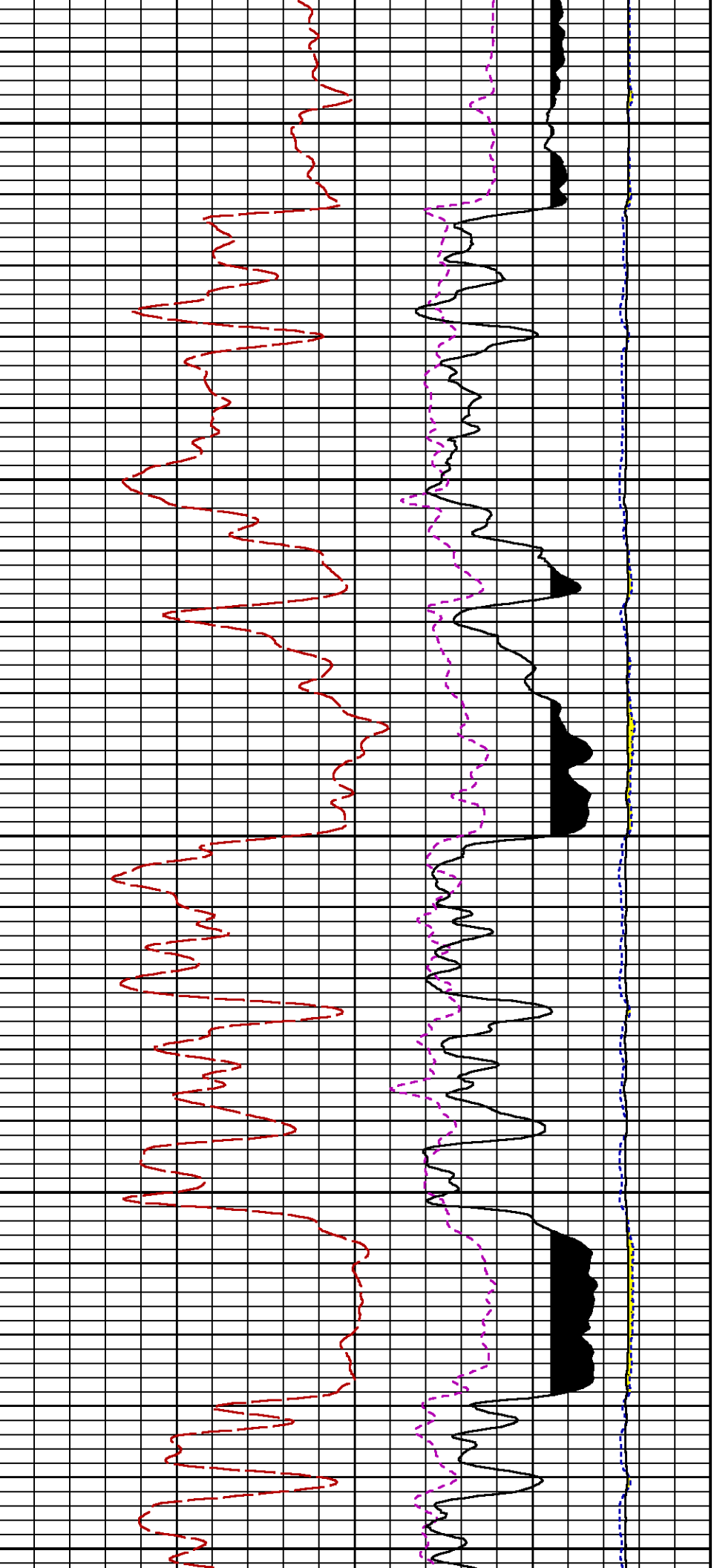


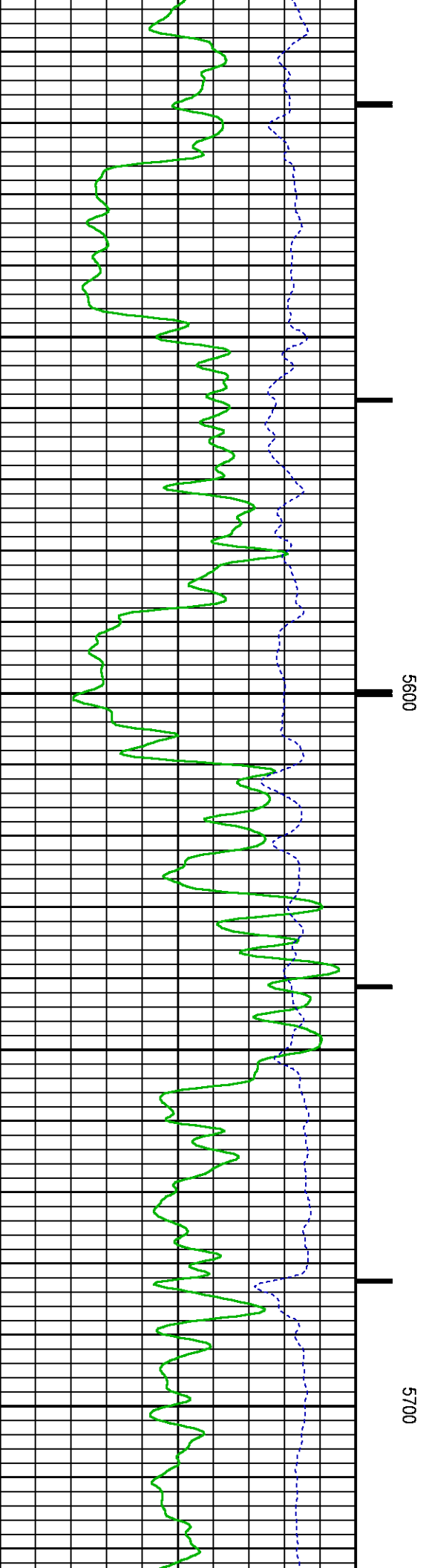
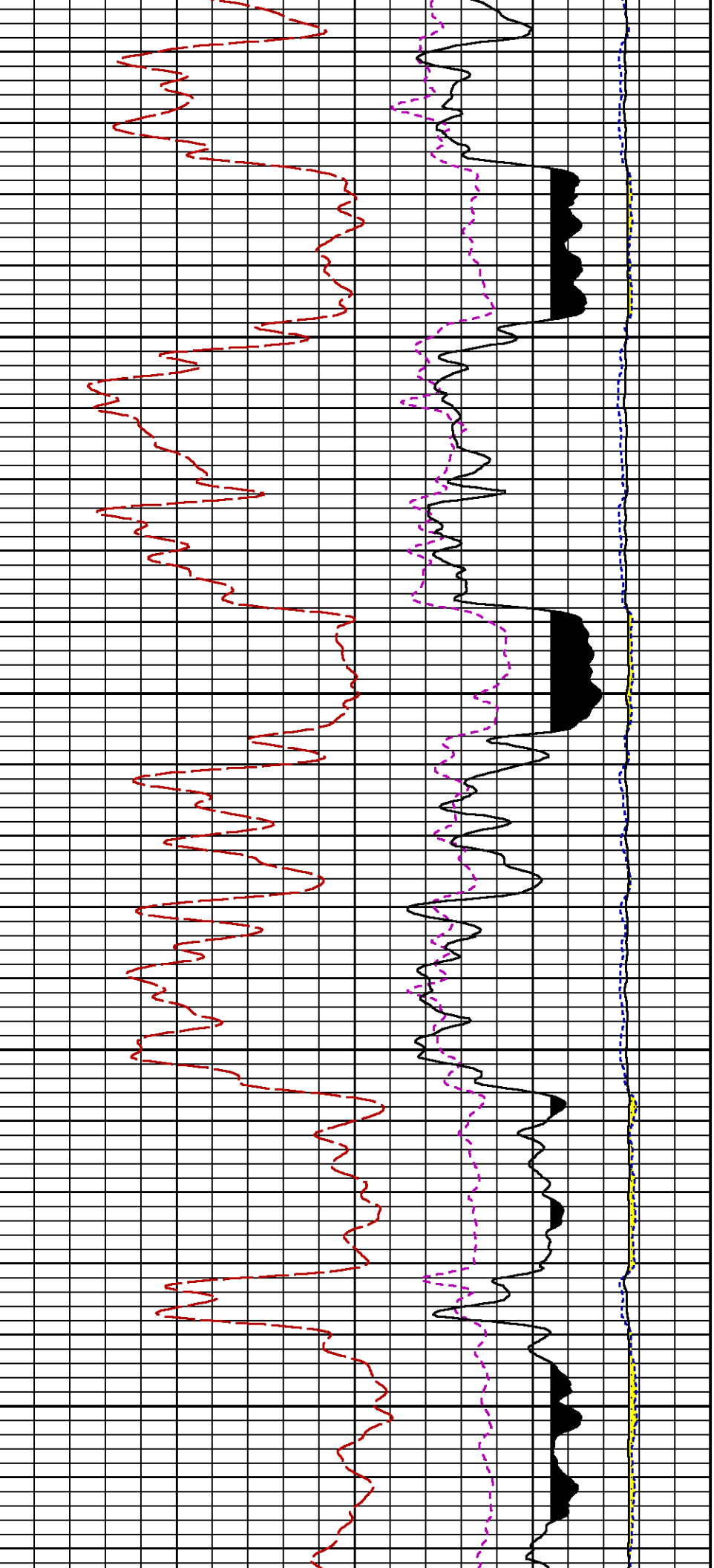


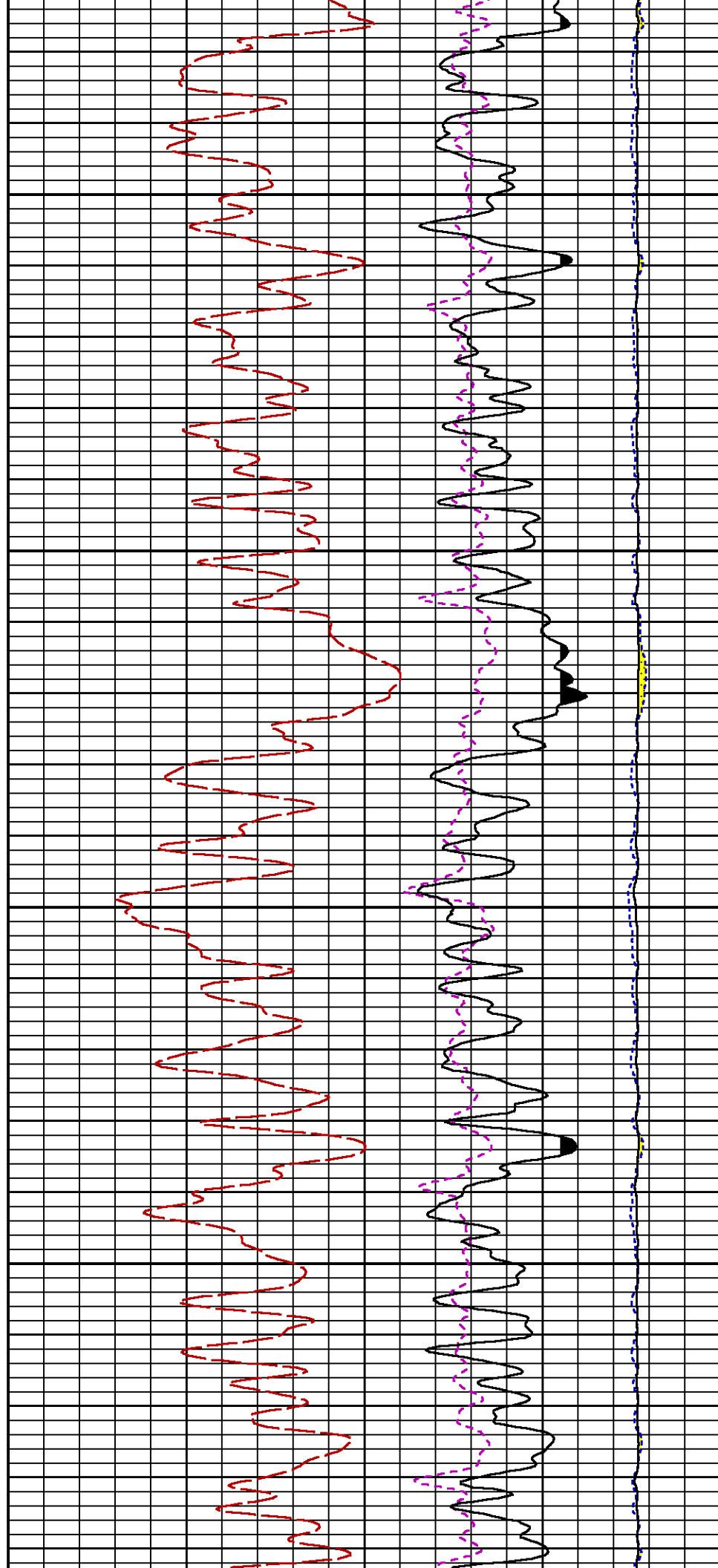
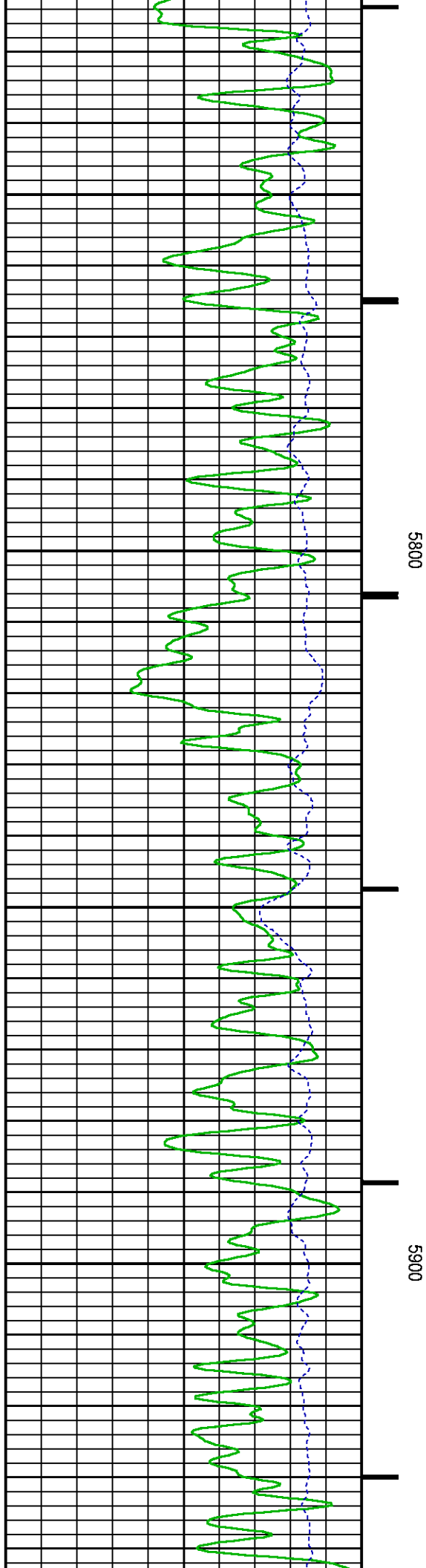
5100

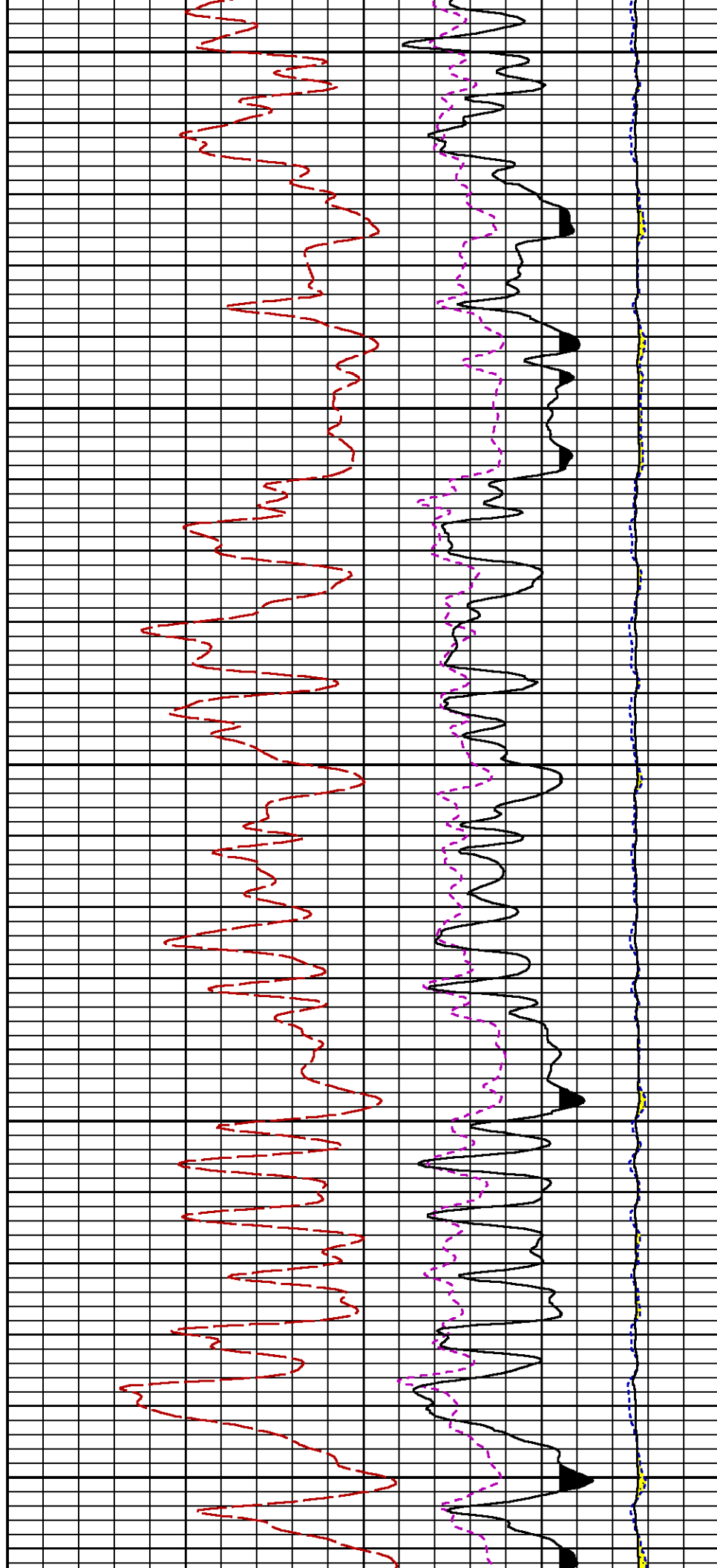
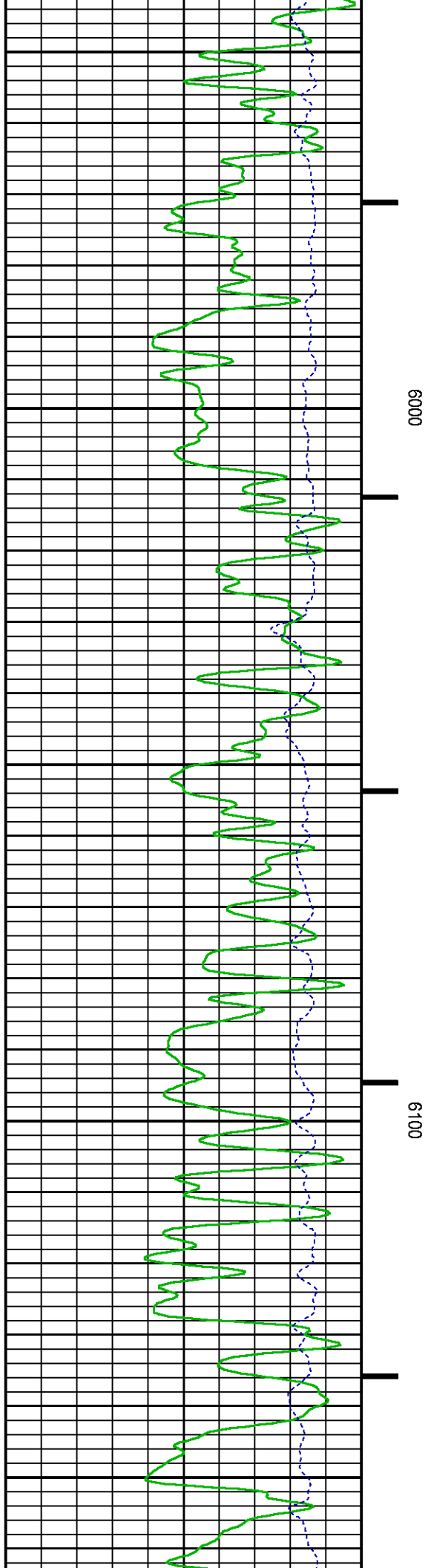
5200

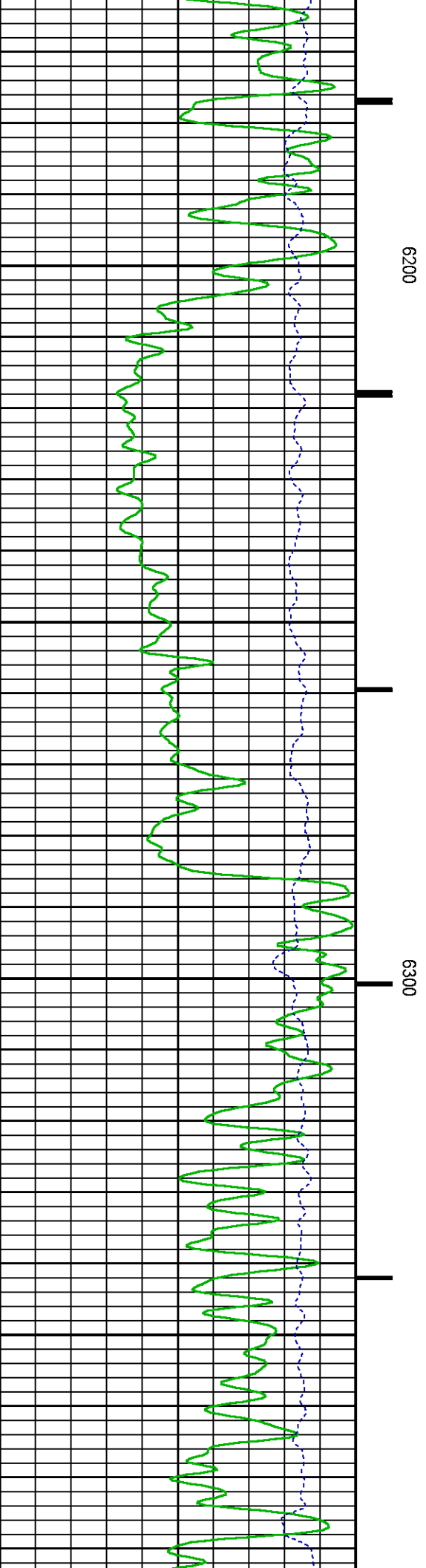
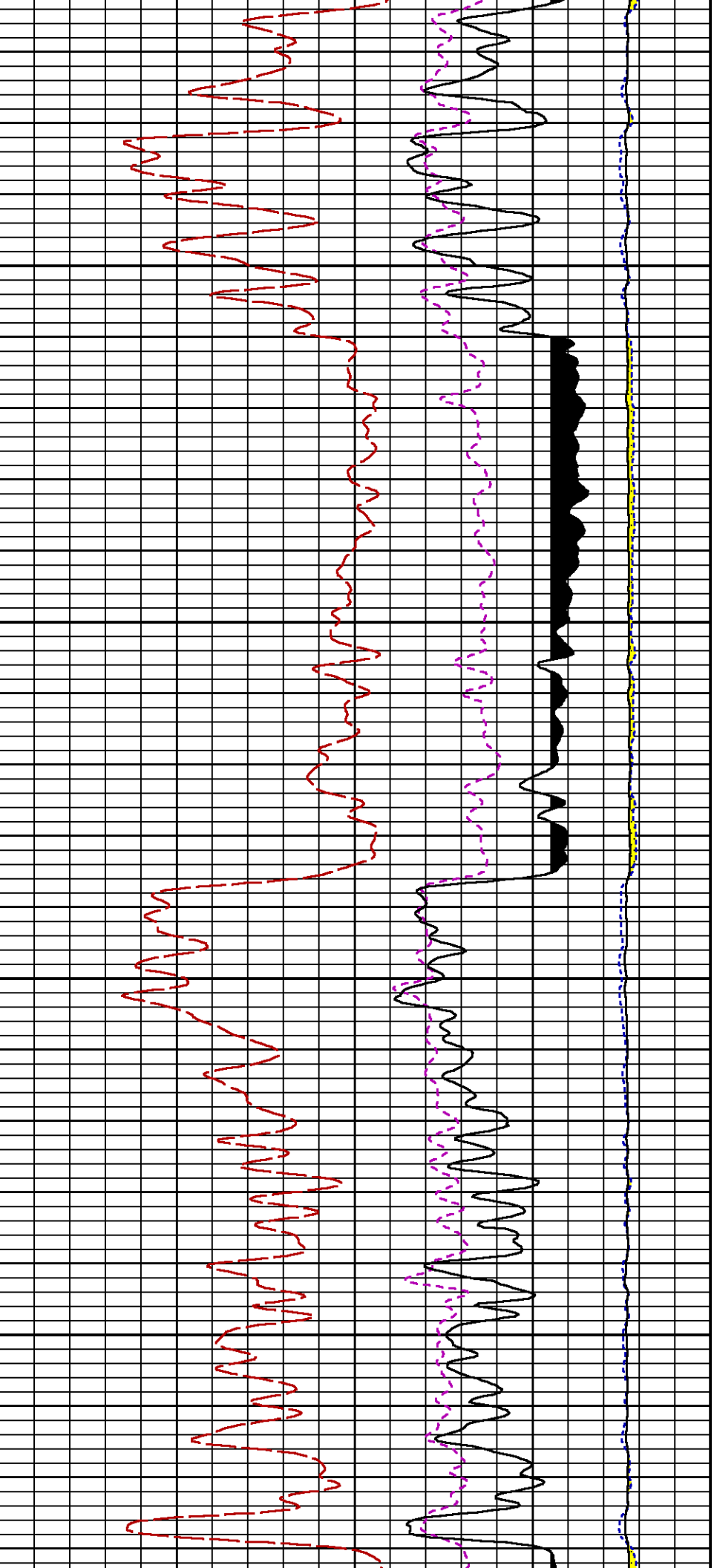


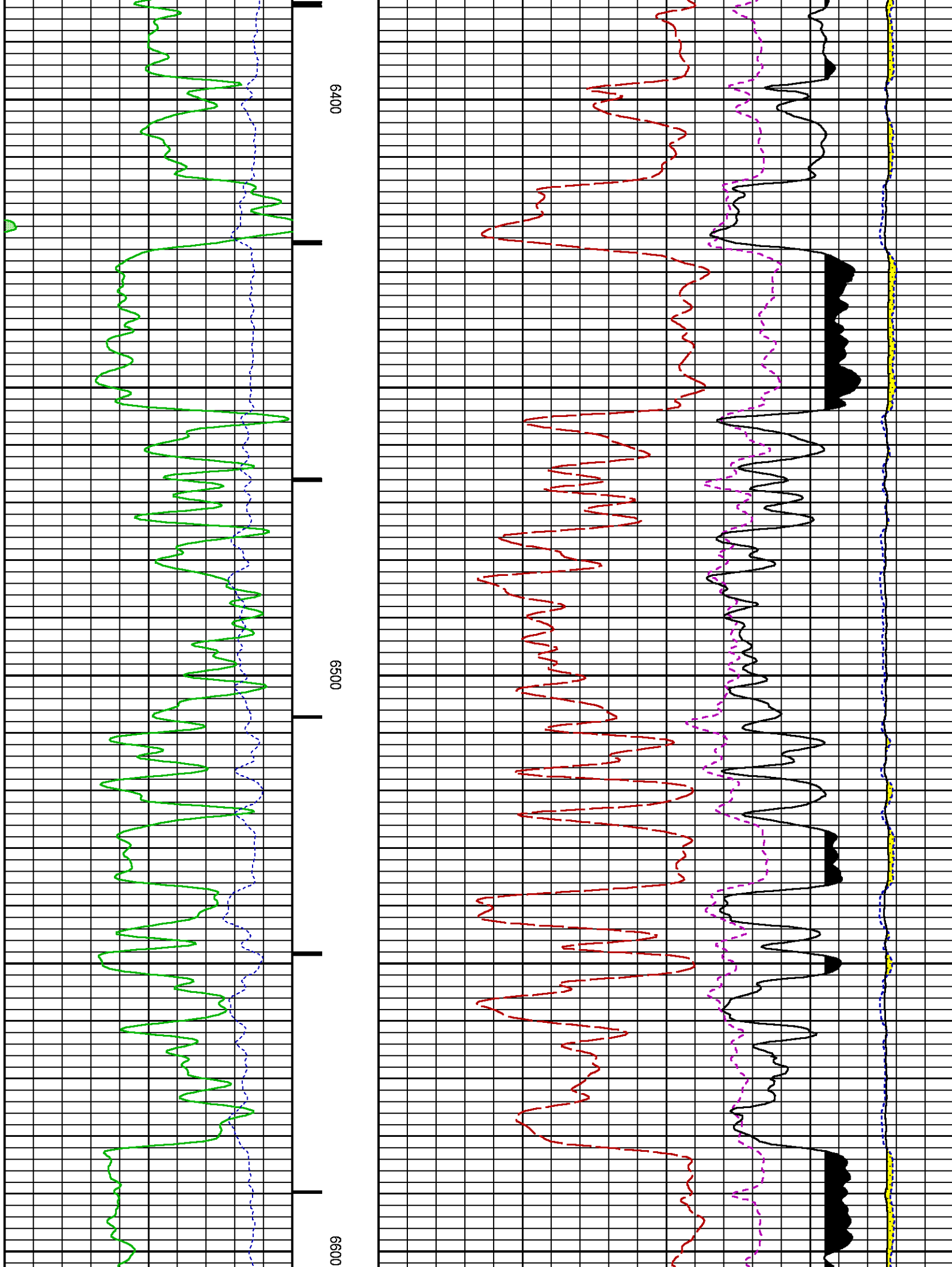


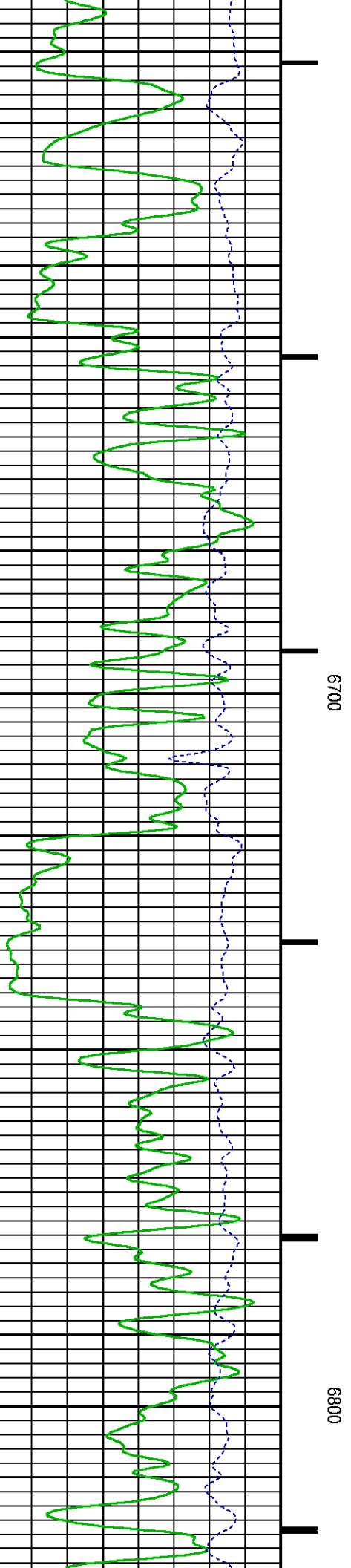
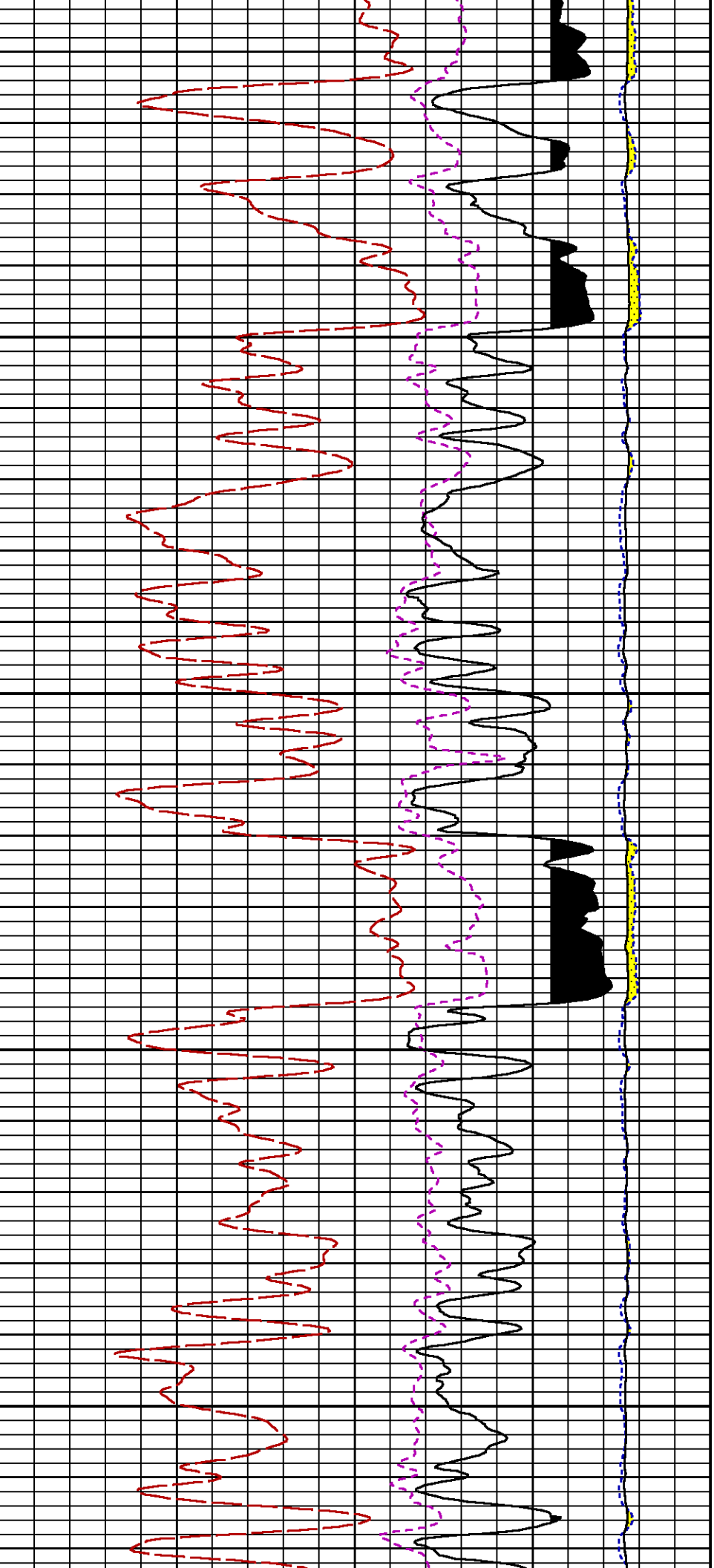


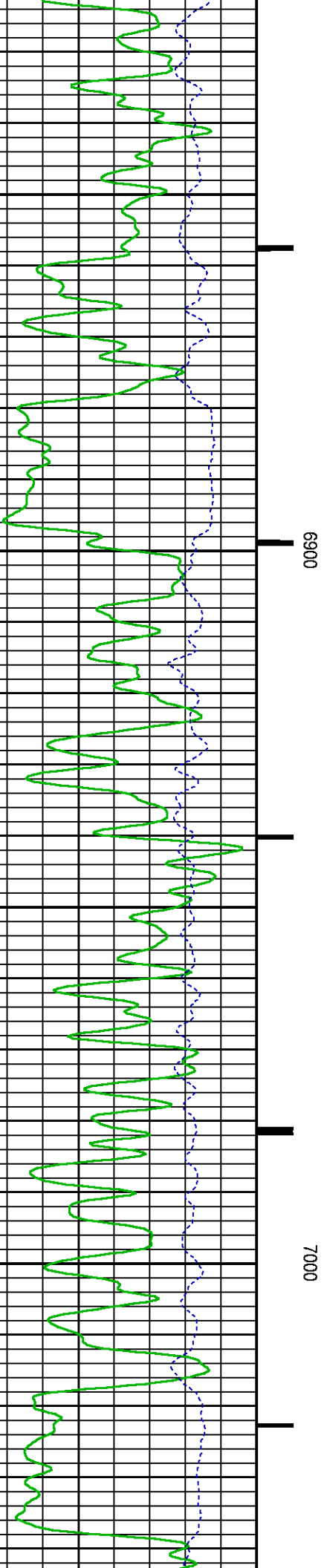
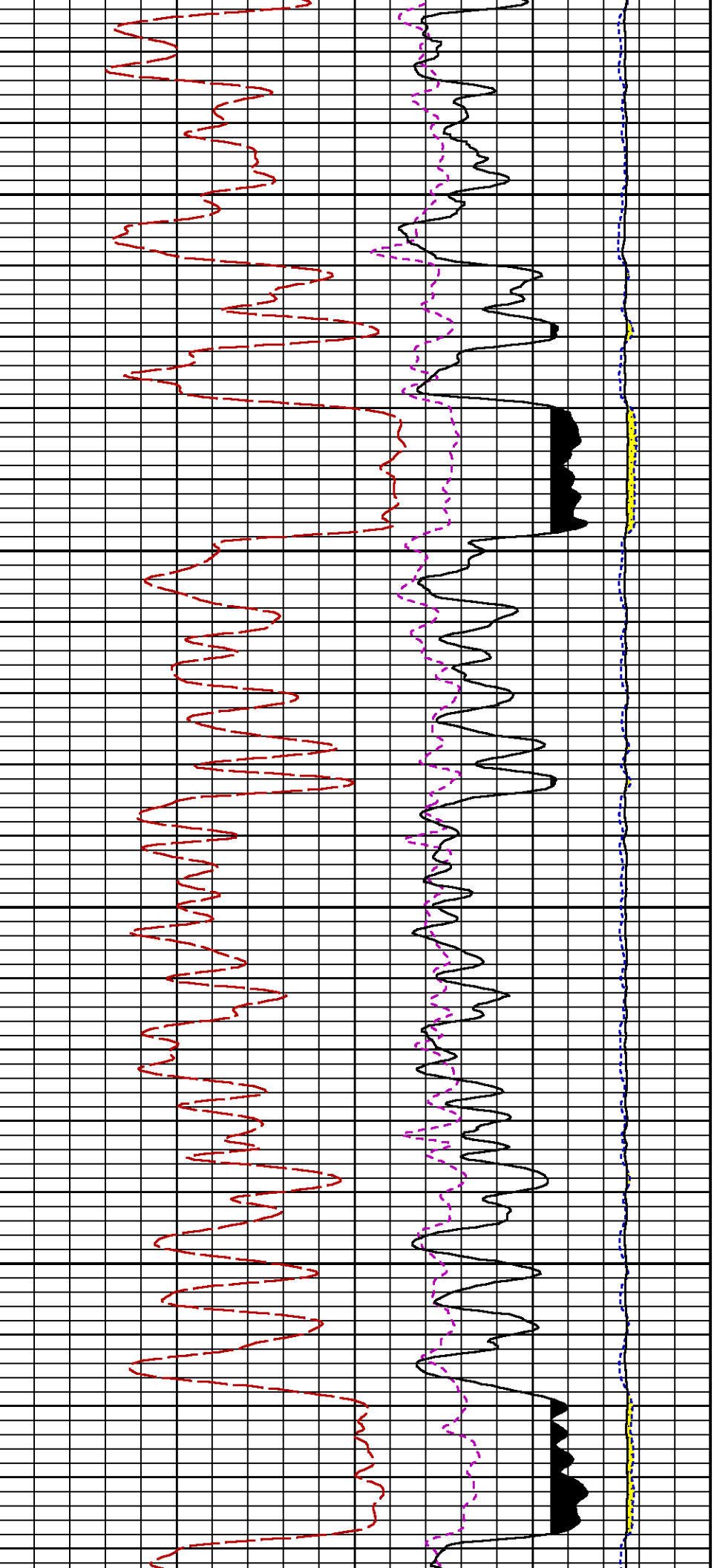


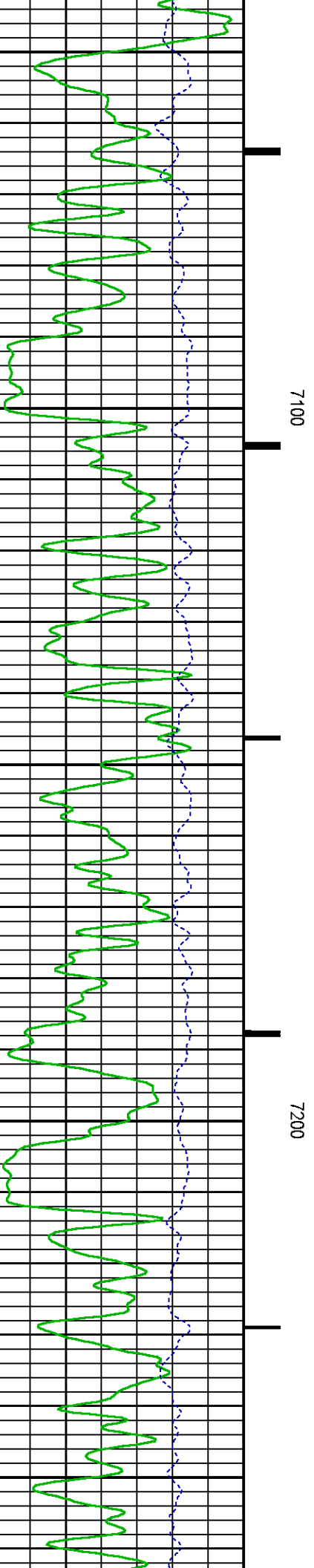
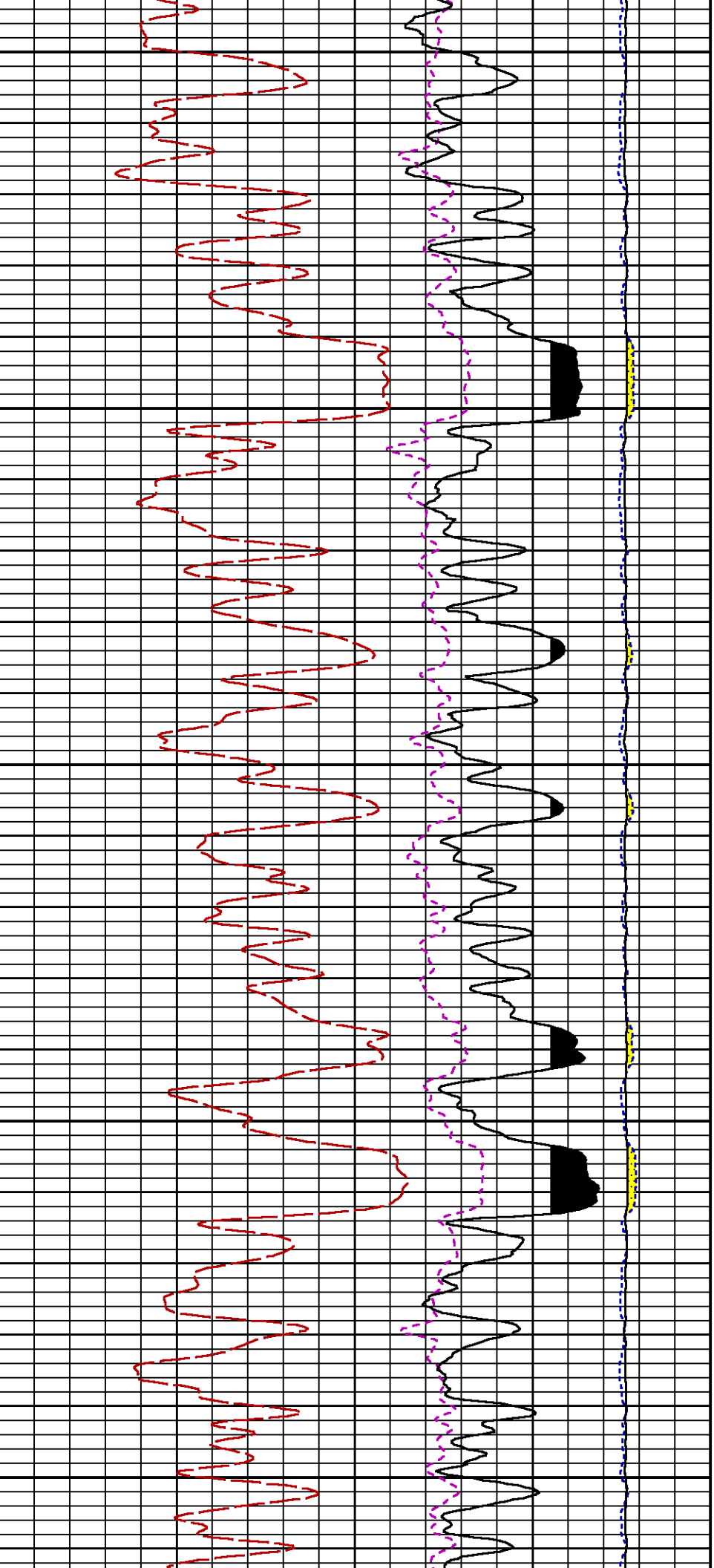






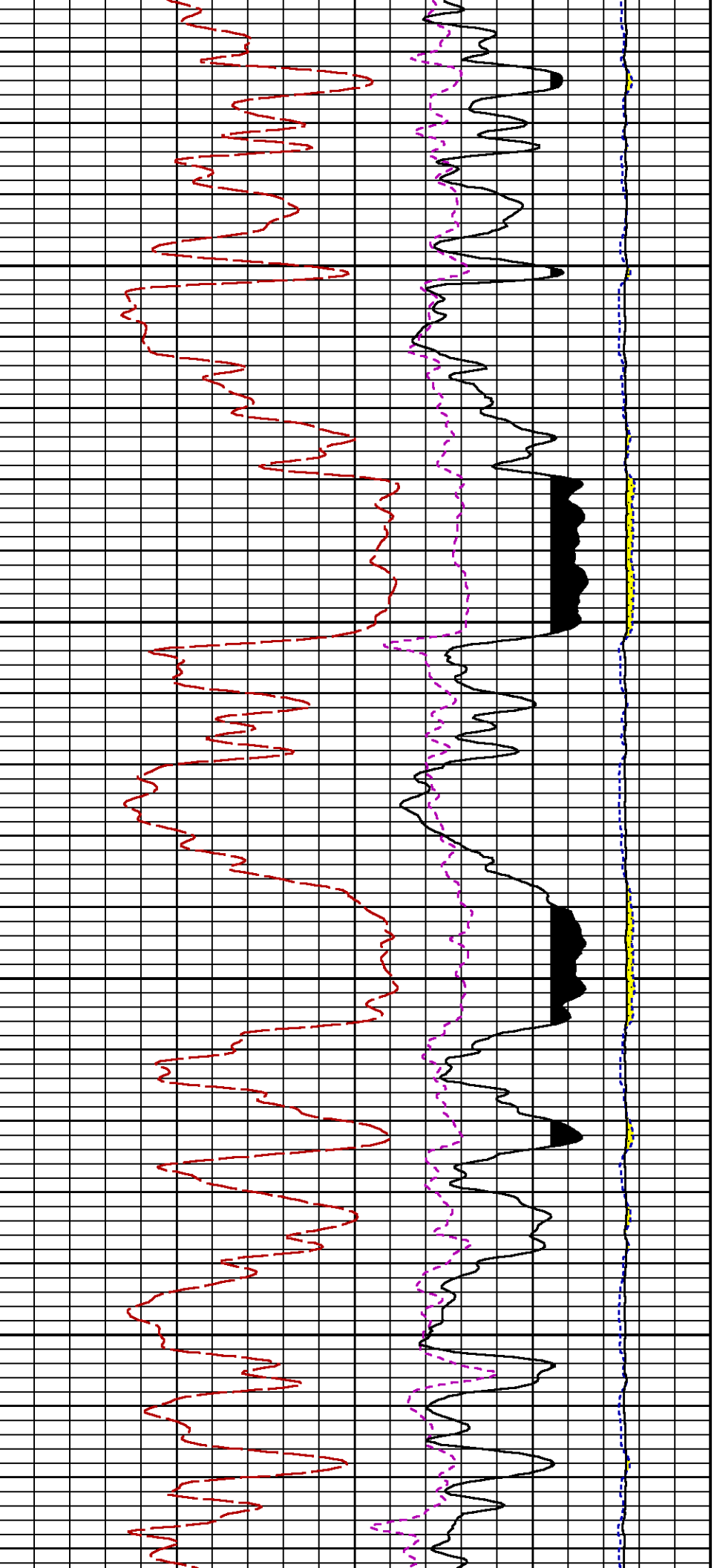






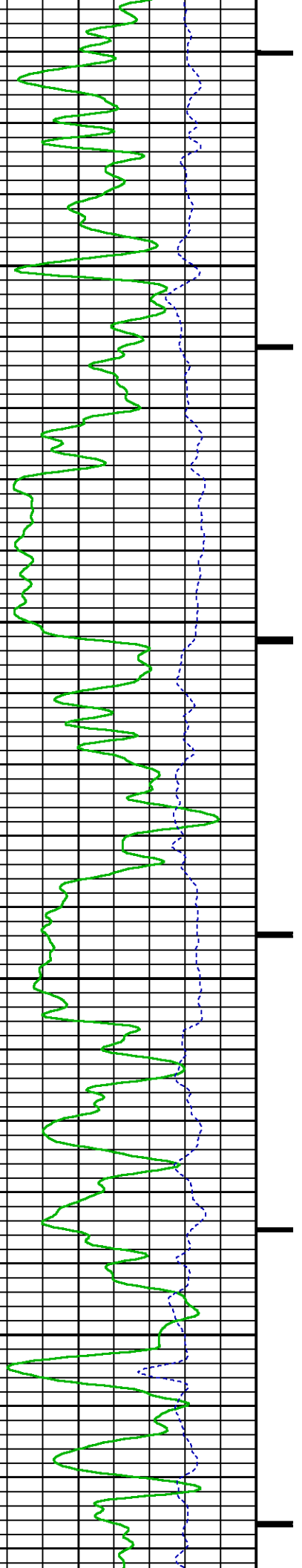
7100

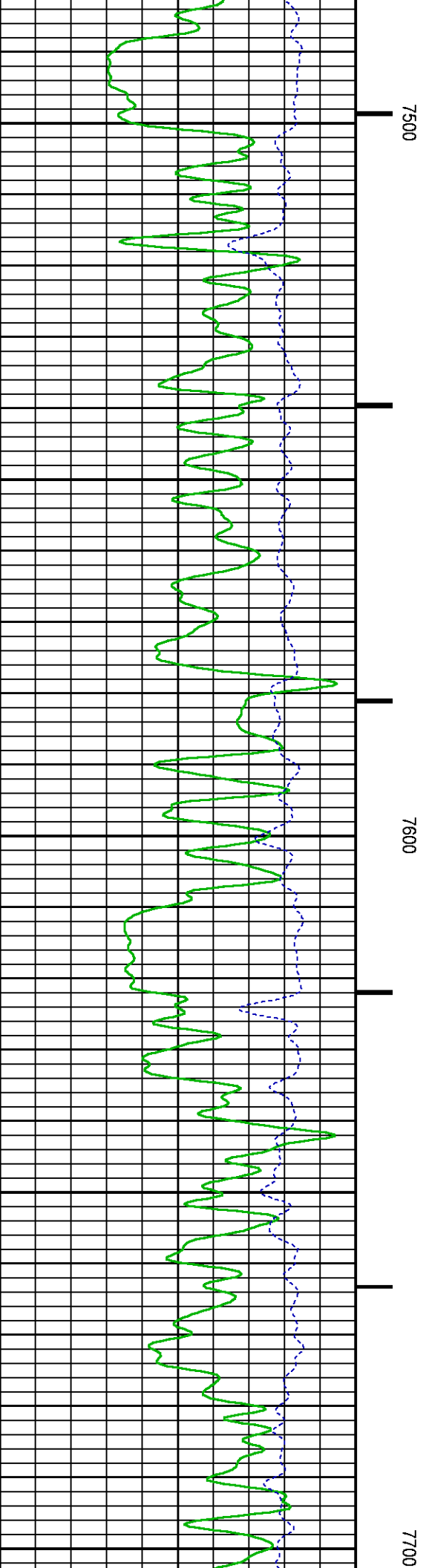
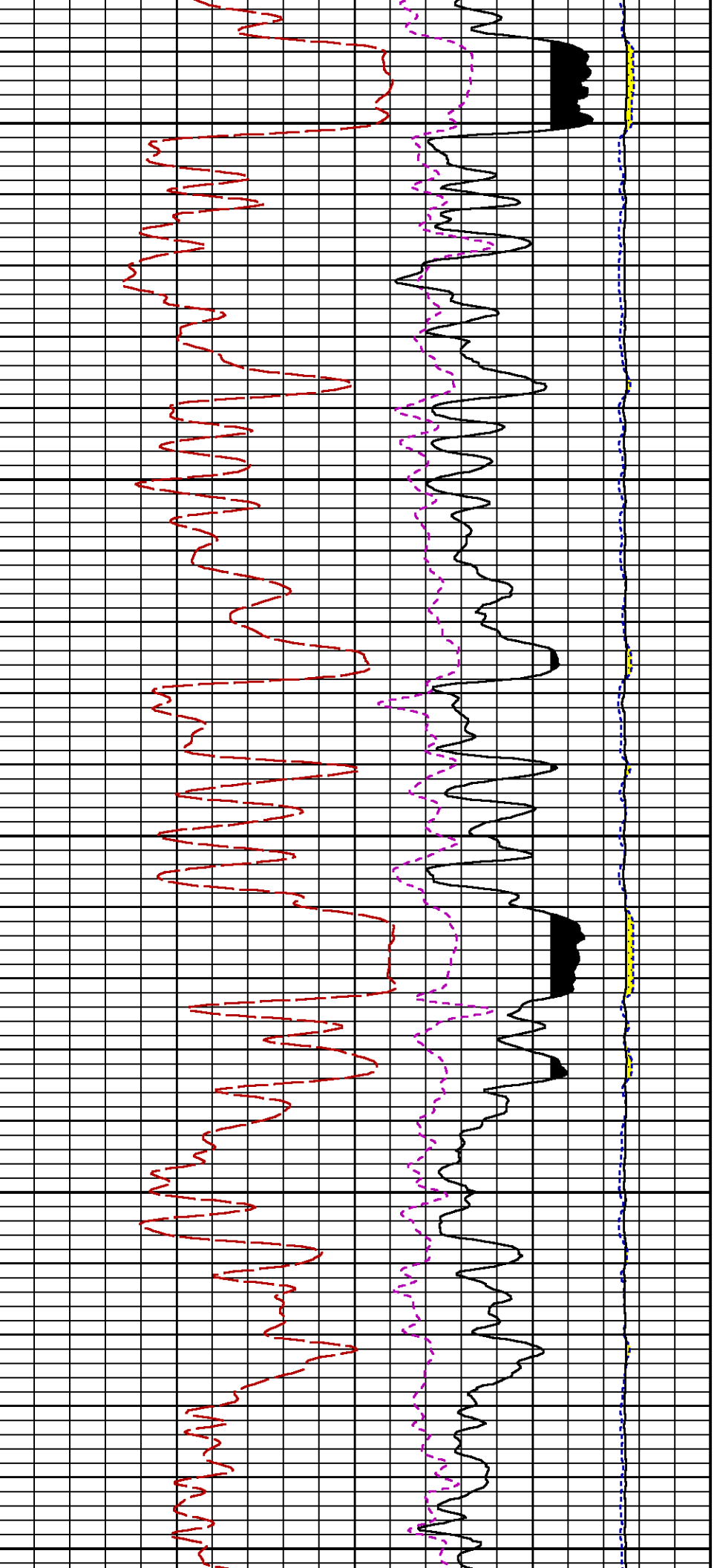
7200

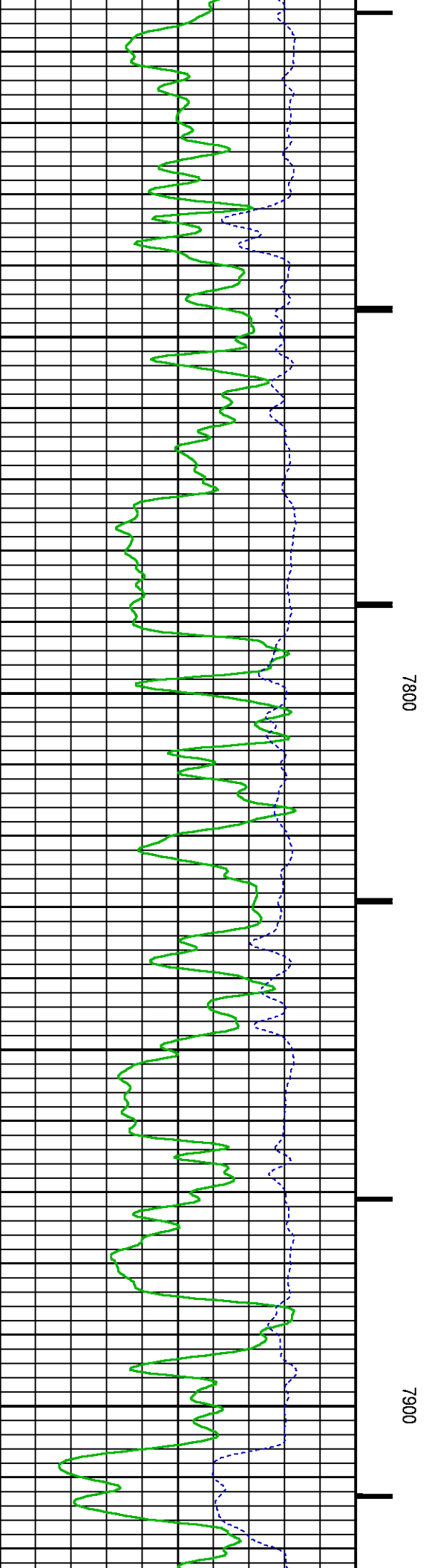
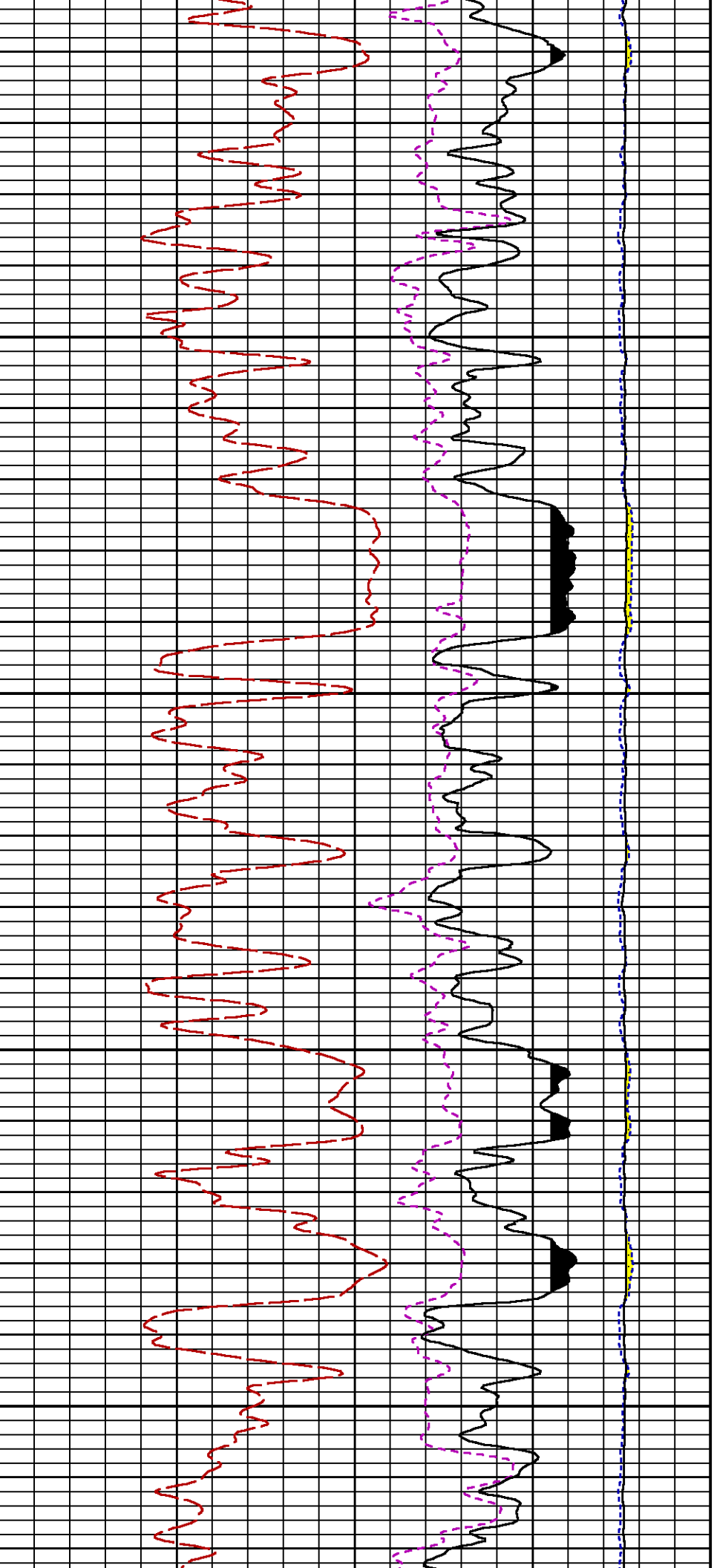


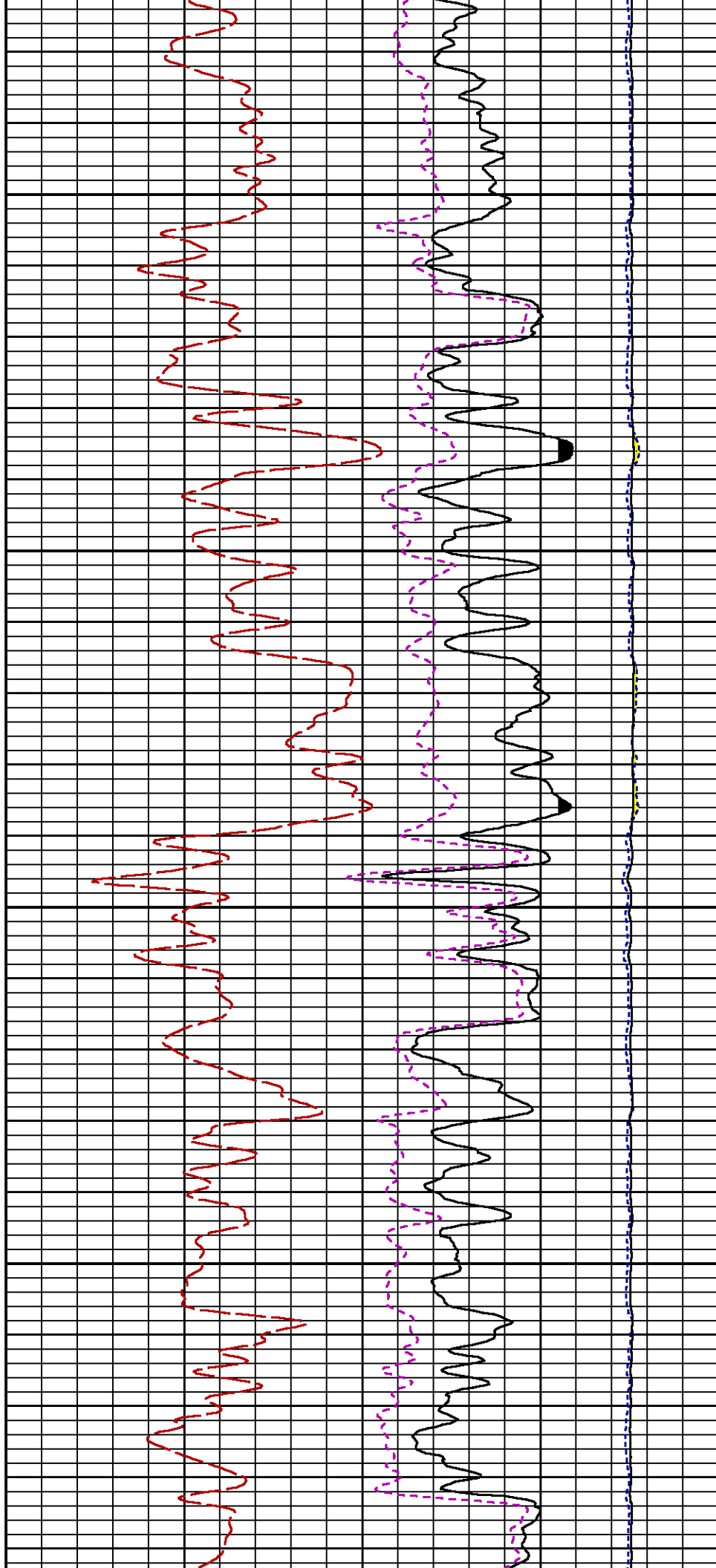
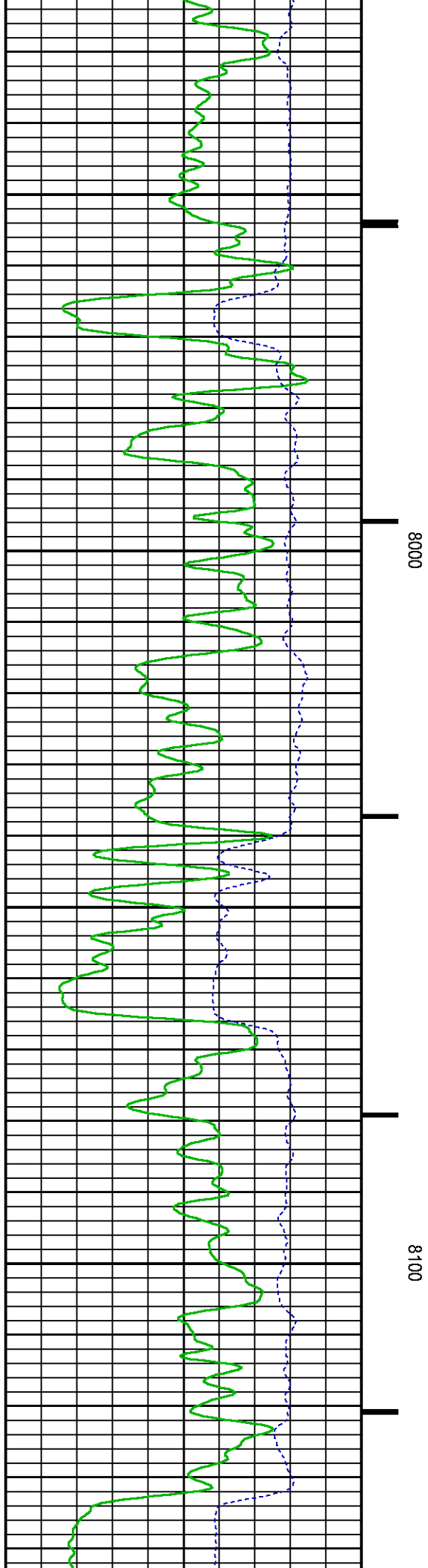
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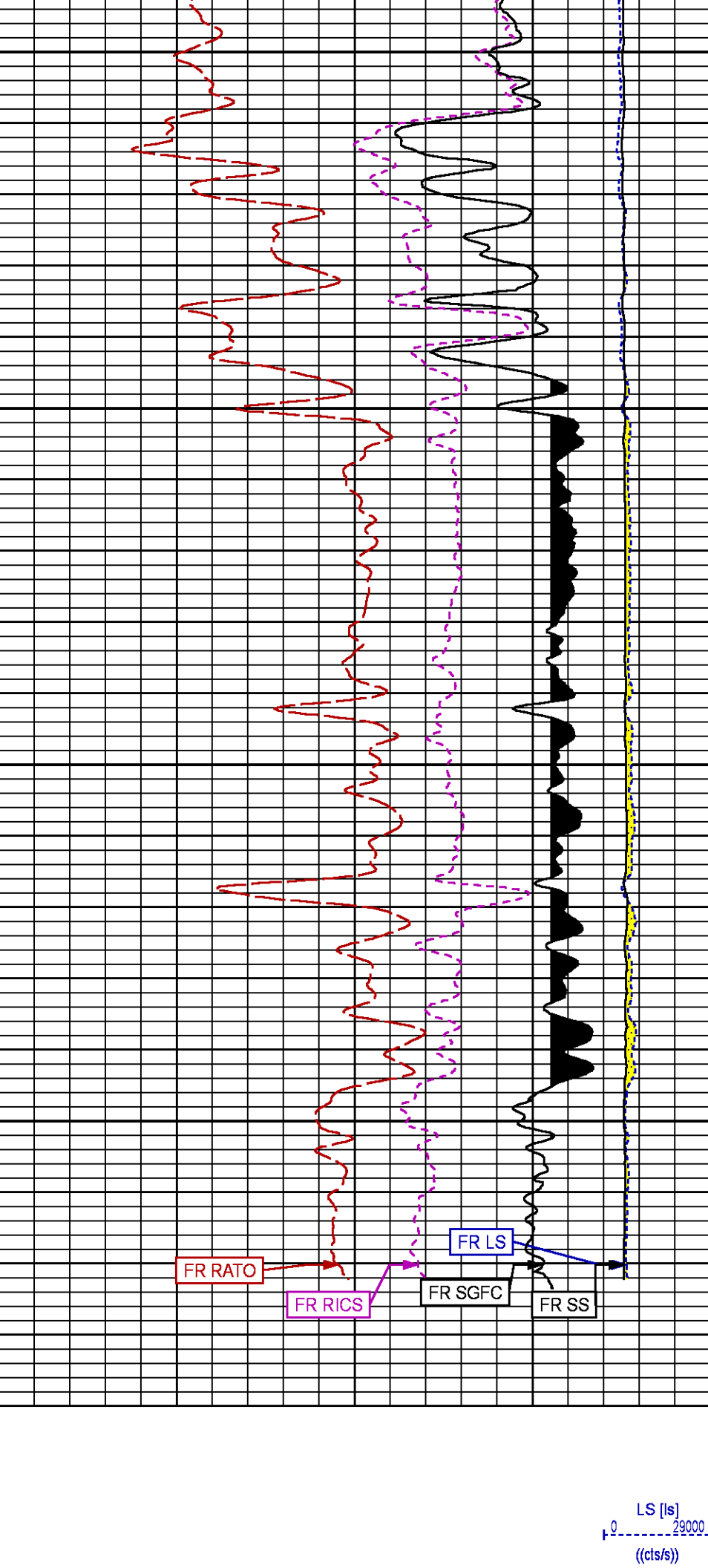
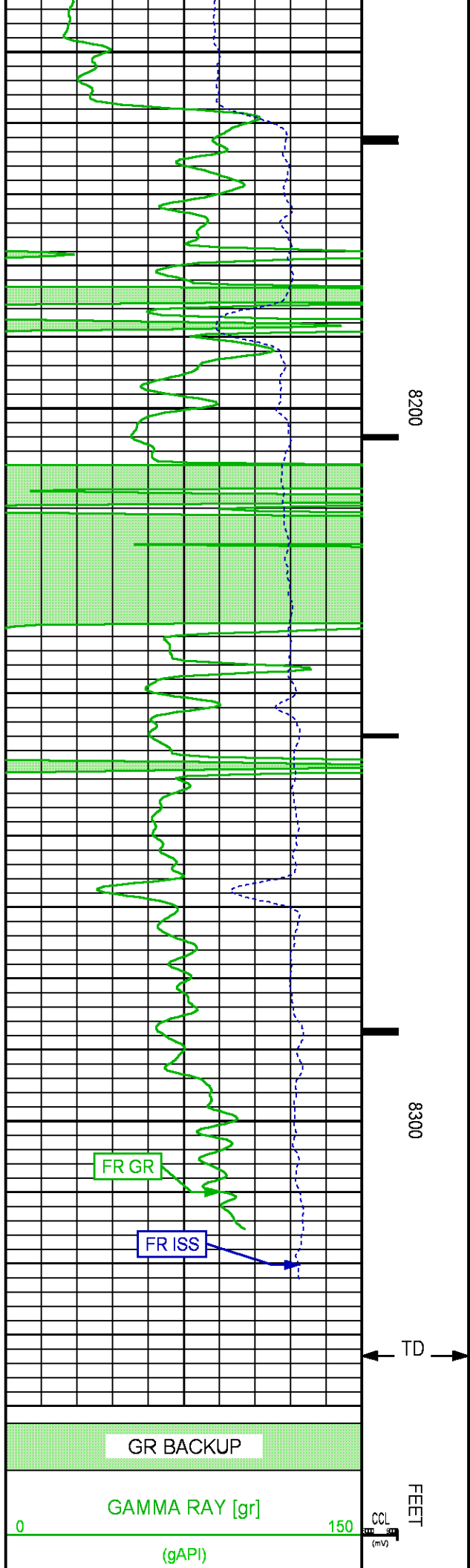
7400











0	ISS [iss]	1E+006			SS [ss]	290000
	((cts/s))				((cts/s))	
			17		RATO [rato]	0
					(dim)	
			39		RICS [rics]	9
					(dim)	
			60		SGFC [sgfc]	0
					(cu)	

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: Fri May 26 14:58:51 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_PICEANCE_FEDERAL_29_18W/RPM_PNC3D01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 7388.500 ft BOTTOM DEPTH: 7644.250 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	8.75	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

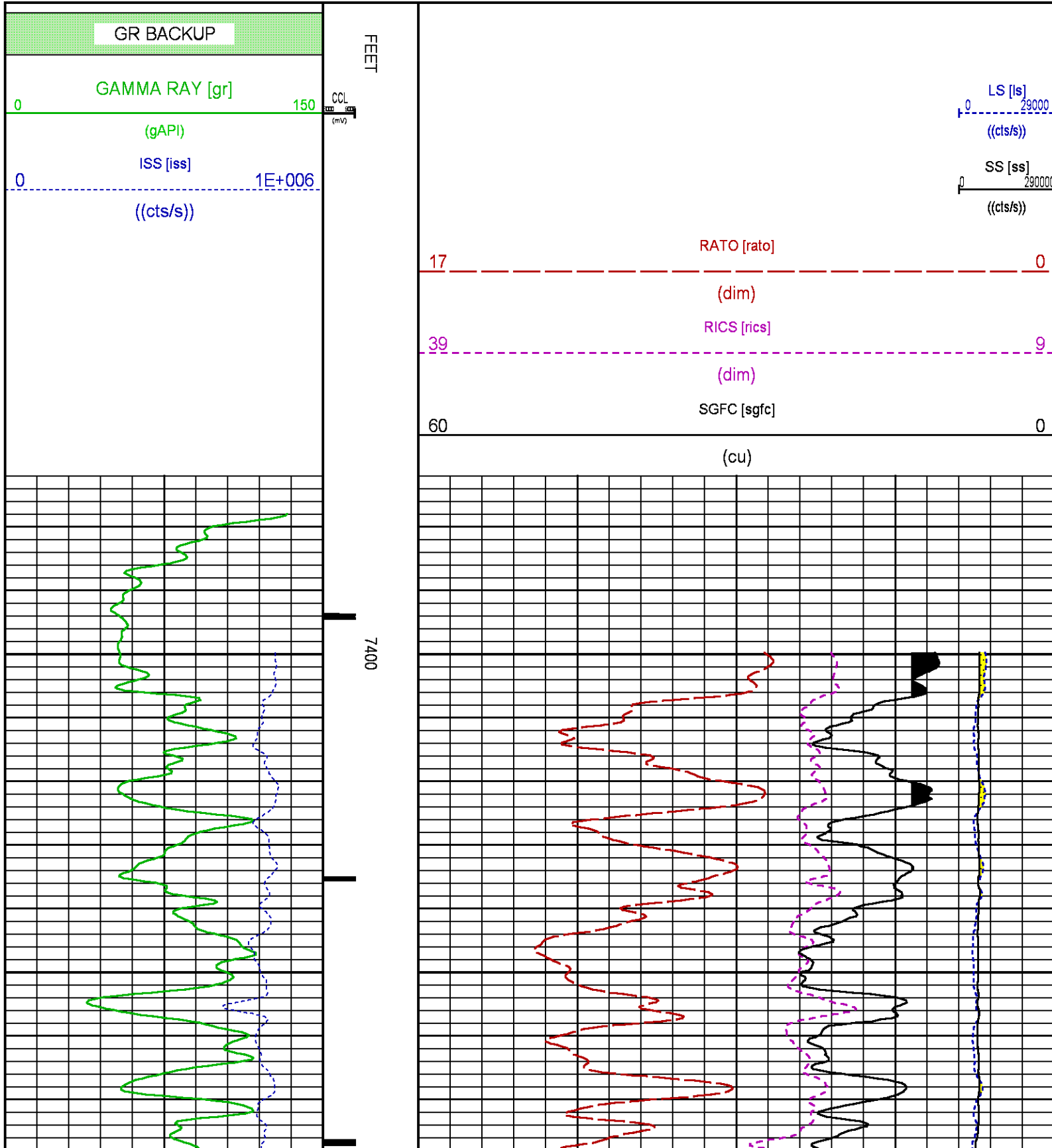
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	May 25 10:58:32 2017	CASING COLLAR LOCATOR
F1:GR	May 25 10:58:32 2017	GAMMA RAY
F1:ISS	May 25 10:58:32 2017	INELASTIC SHORT SPACE COUNT RATE
F1:LS	May 25 10:58:32 2017	LONG SPACE COUNT RATE
F1:RATO	May 25 10:58:32 2017	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	May 25 10:58:32 2017	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	May 25 10:58:32 2017	CORRECTED FORMATION SIGMA
F1:SS	May 25 10:58:32 2017	SHORT SPACE COUNT RATE

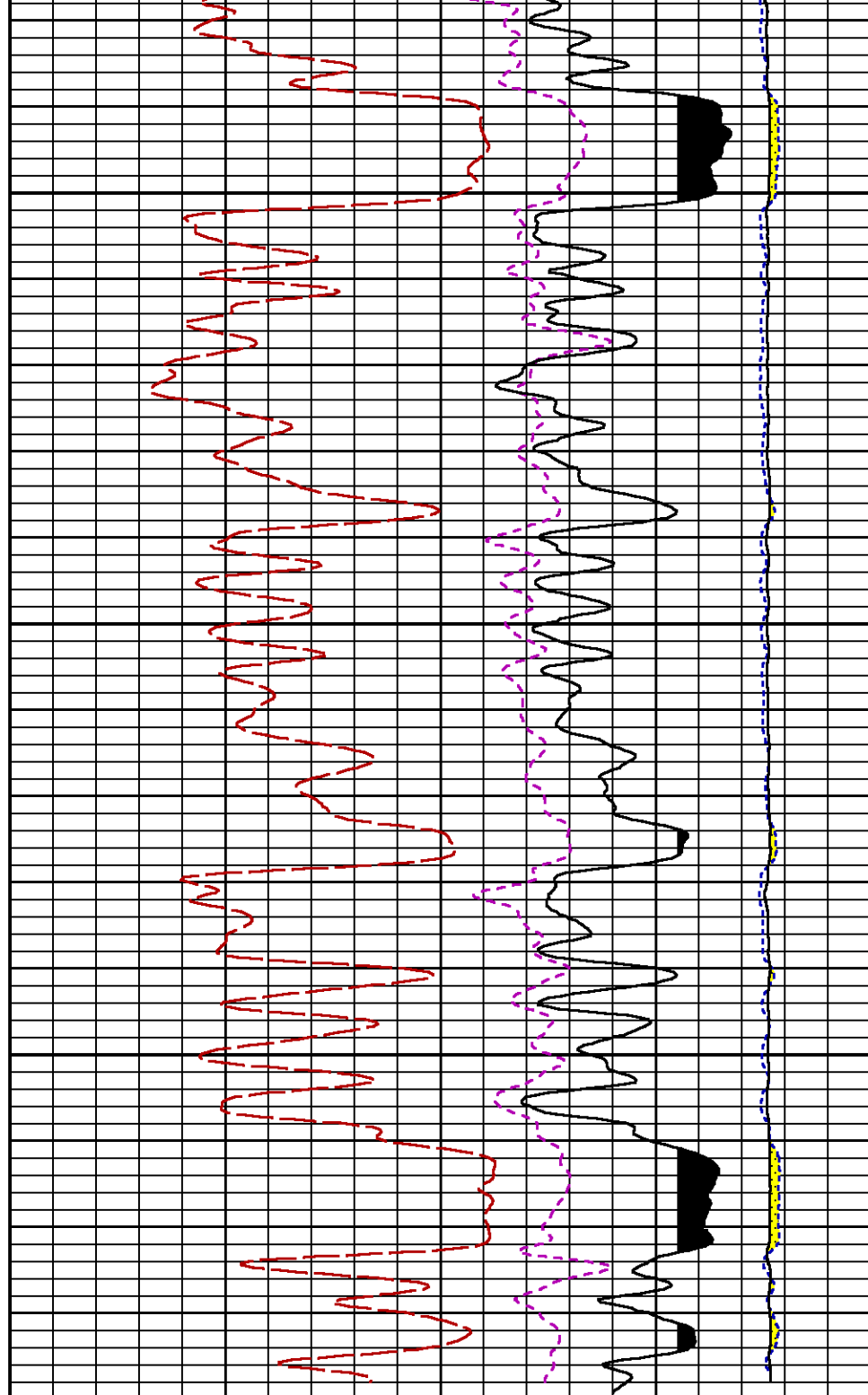
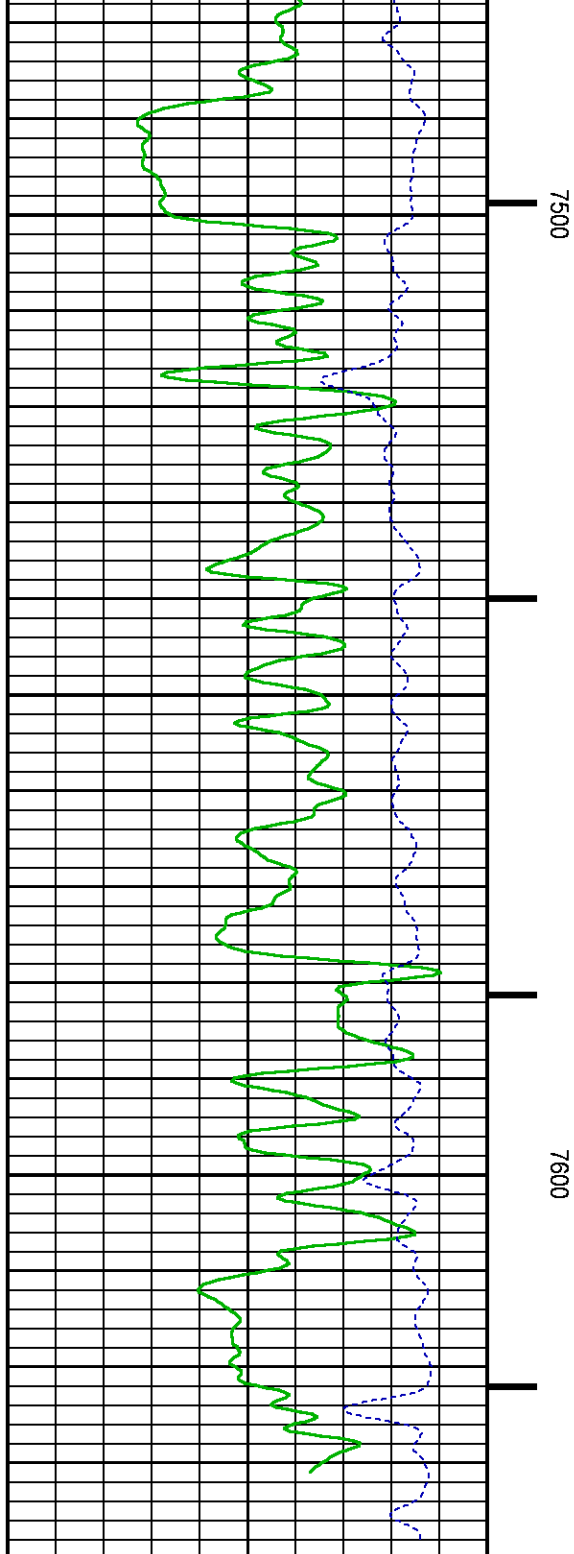
CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)

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_18W/rpm_pnc3d+01-REPEAT-29_18W_5.fvpdf [5"/100' Scale]
Plot Interval : 7373.75 - 7645.5 Feet

Data File 1 : F1 : cpu100:C:\Users\samiyas\Desktop\LARMIE_RPM\LARAMIE_PICEANCE_FEDERAL_29_18WRPM_REPEAT_18W.xtf
Created On : May 25 10:58:32 2017
Company : LARAMIE ENERGY
Well : PICEANCE FEDERAL 29-18W
Field : VEGA
File Interval : 7373 - 7654.25 Feet
OCT : RPM_PNC3





(dim)

SGFC [sgfc]

60

0

(cu)

CALIBRATION / VERIFICATION SUMMARY

Source File: C:\Users\samiyas\Desktop\LARME_RPMLARAME_PICEANCE_FEDERAL_29_18\VRPM_PNC3D.tpt

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA10485470 DATE/TIME PERFORMED: Tue Jan 17 13:32:11 2017
UNIT #: 3882ML ML4352 CALB JIG #: 4702NKG 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 #: 4702NKG 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
						195.00 196.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA10414345 DATE/TIME PERFORMED: Tue Jan 17 16:42:57 2017
UNIT: 3882ML ML4352 CALIBRATOR: 2437XB120052 SOURCE: 8281AA10160601 HOURS: 8281AA434

	ISS	Mr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (ussec)	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
					26.36 26.40	0.00 0.20	24.40 24.80	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/LS	ISS/XS	ISS/GSS	SS/LS	SS/LS	SS/LS	CSS/CLS
Raw Data	804960	1.43	4.50	28.82	13.75	10.80	3.83	4.06
		1.42 1.45	3.50 5.02	22.20 32.70	10.66 16.34	10.06 11.10	3.59 3.95	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	3.50 5.02	22.20 32.70	10.66 16.34	10.06 11.10	3.59 3.95	3.76 4.22

INSTRUMENT CONFIGURATION

Source File: C:\Users\samiyas\Desktop\LARME_RPMLARAME_PICEANCE_FEDERAL_29_18\VRPM_PNC3D--tdg.meta

A3 CABLEHEAD

PCM POWER SUPPLY
Diameter : 1.20"
Length : 3.86"
Weight : 18 lbs
Series : 8250EA
Mnemonic : PCM

TELEMETRY / CCL

Diameter : 1.20"
Length : 4.46"
Weight : 20 lbs
Series : 8248ED
Mnemonic : PCM
Measure Point: 1.00': CCL MP

34.08'

CCL MP 26.03'

CANNA RAY
Diameter : 1.70"
Length : 3.02'
Weight : 15 lbs
Series : 8282XA
Mnemonic : CR
Measure Point: 0.89': CR 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 DETECTOR
Measure Point: 5.04': LS DETECTOR
Measure Point: 4.79': SS DETECTOR

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


BULL PLUG 1 11/16

TOTAL LENGTH: 34.08'
TOTAL WEIGHT: 144 lbs
MAX DIAMETER: 0'1.70'

CR MP 22.90'

XLS DETECTOR 13.58'
LS DETECTOR 13.16'
SS DETECTOR 12.91'

TEMP MP 1.65'
PRES MP 0.00'

	COMPANY	<u>LARAMIE ENERGY</u>		FILE NO:	
	WELL	<u>PICEANCE FEDERAL 29-18W</u>			
	FIELD	<u>VEGA</u>		API NO:	
	COUNTY	<u>MESA</u>	STATE	<u>COLORADO</u>	<u>05-077-10358-0000</u>
LOCATION:		SHL: LAT:39.248633N; LONG:107.788204W BHL: LAT:39.243491N; LONG:107.796581W		ELEVATIONS:	
				KB 7561 FT	
				DF	
SEC <u>29</u>		TWP <u>09 S</u>	RGE <u>93 W</u>	GL 7531 FT	
			DATE	26-MAY-2017	