



FILE NO:	COMPANY
CH100229	LARAMIE ENERGY
API NO:	WELL
05077097700000	PICEANCE 28-02W
	FIELD
	VEGA
	COUNTY
	MESA
	STATE
	COLORADO

Ver. 4.05	LOCATION:	OTHER SERVICES
28 9S 93W	SHL: LAT 39.251167, LONG -107.779619	CBL
28-05 PAD	BHL: LAT 39.254325, LONG -107.780731	
PATTERSON 308	SEC 28 TWP 9S RGE 93W	

PERMANENT DATUM	G.L.	ELEVATION	7556 FT
LOG MEASURED FROM	K.B.	22 FT	ABOVE P.D.
DRILL. MEAS. FROM	K.B.		
		ELEVATIONS:	
		KB	7578 FT
		DF	
		GL	7556 FT

DATE	23-Oct-2015		
RUN	TRIP	1	1
SERVICE ORDER	US100229J		
DEPTH DRILLER	7990 FT		
DEPTH LOGGER	7926 FT		
BOTTOM LOGGED INTERVAL	7915 FT		
TOP LOGGED INTERVAL	2611 FT		
TIME STARTED	10:00		
TIME FINISHED	16:00		
OPERATOR RIG TIME	6 HOURS		
TYPE OF FLUID IN HOLE	WATER		
FLUID DENSITY	NA		
FLUID SALINITY	NA		
FLUID LEVEL	44 FT		
LOGGED CEMENT TOP	SEE LOG		
WELLHEAD PRESSURE	0 PSI		
MAXIMUM HOLE DEVIATION	NA		
NOMINAL LOGGING SPEED	15 FMN		
MAX. RECORDED TEMP.	10 DEGF		
REFERENCE LOG	NA		
REFERENCE LOG DATE	NA		
EQUIP. NO.	LOCATION	HL-6685	GRAND JCT.
RECORDED BY	SPENCER		
WITNESSED BY	JOHN GRUBICH		

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
7.875 IN	0 FT	7990 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
4.5 IN	11.6 LB/F		0 FT	7990 FT

REMARKS
RUN 1 TRIP 1: ALL DATA ON THIS LOG HAS BEEN DEPTH SHIFTED TO MATCH THE GAMMA RAY CURVE TO THE BAKER HUGHES BOND LOG DATED 23-OCT-2015 AT THE CLIENT'S REQUEST
THE AMOUNT OF LINEAR SHIFT IS 0 FEET
LOGGED WITH 0 PSI AT SURFACE
SJ = 6371' - 6392'
SJ = 7174' - 7196'
THANKS FOR CHOOSING BAKER HUGHES...THE BEST CHOICE CREW: COATE / SPENCE

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250XA	10586851	FREE
1	1	TEL / CCL	8248ED	10460262	FREE
1	1	GAMMA RAY	8262XA	10485470	FREE
1	1	RPM ELEC	8281EA	10294755	FREE
1	1	RPM SOURCE	8283PA	10414345	FREE
1	1	RPM TRANSMT	8281FA	10460082	FREE
1	1	TEMP	8255XA	Z176973	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: 8

Plotted: Fri Oct 23 15:08:18 2015

PARAMETER AND FILTER SUMMARY REPORT					
FILE: /dat1a/CH100229/n353h03.prm LOGGING MODE: DEPTH DIRECTION: UP TOP DEPTH: 2609.250 ft BOTTOM DEPTH: 3208.500 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	7.88	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Oct 23 14:27:12 2015	CASING COLLAR LOCATOR
F1:GR	Oct 23 14:27:12 2015	GAMMA RAY
F1:ISS	Oct 23 14:27:12 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Oct 23 14:27:12 2015	LONG SPACE COUNT RATE
F1:RATO	Oct 23 14:27:12 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Oct 23 14:27:12 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Oct 23 14:27:12 2015	CORRECTED FORMATION SIGMA
F1:SS	Oct 23 14:27:12 2015	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 : cas6685:/dat1a/CH100229/RPM_GSAND.fvpdf [5"/100' Scale]
 Plot Interval : 2583 - 3192.25 Feet

Data File 1 : F1 : cas6685:/dat1a/CH100229/n353h03.xtf
 Created On : Oct 23 14:27:12 2015
 Company : LARAMIE ENERGY
 Well : Piceance 28-02W
 Field : Mesa

Field : vega
File Interval : 2582.25 - 3208.5 Feet
OCT : n353h

GR BACKUP

FEET

ISS [iss]

1E+06

(cts/s)

GAMMA RAY [gr]

150

(gAPI)

CCL
(mV)

2600

2700

LS [ls]

29000

(cts/s)

SS [ss]

290000

(cts/s)

RATO [rato]

17

0

(dim)

RICS [rics]

39

9

(dim)

SGFC [sgfc]

60

0

(cu)

GR

ISS

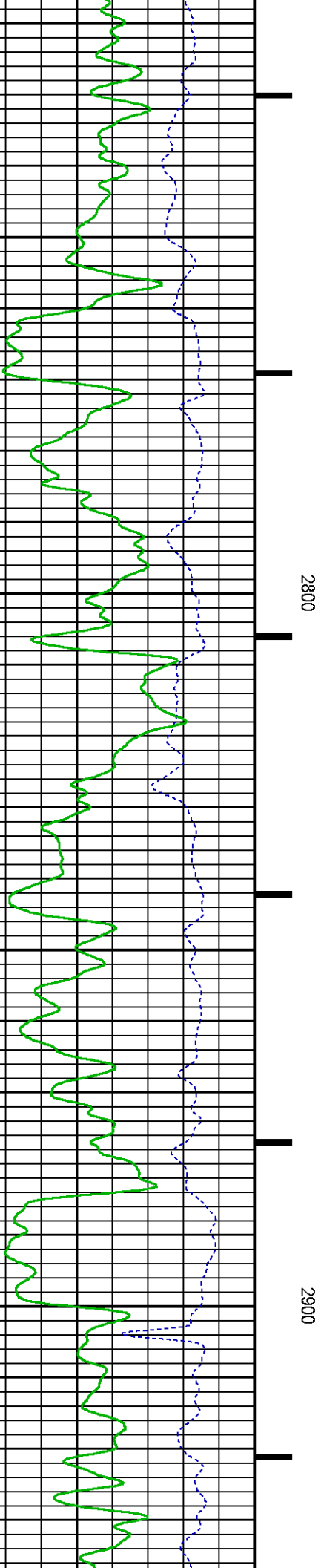
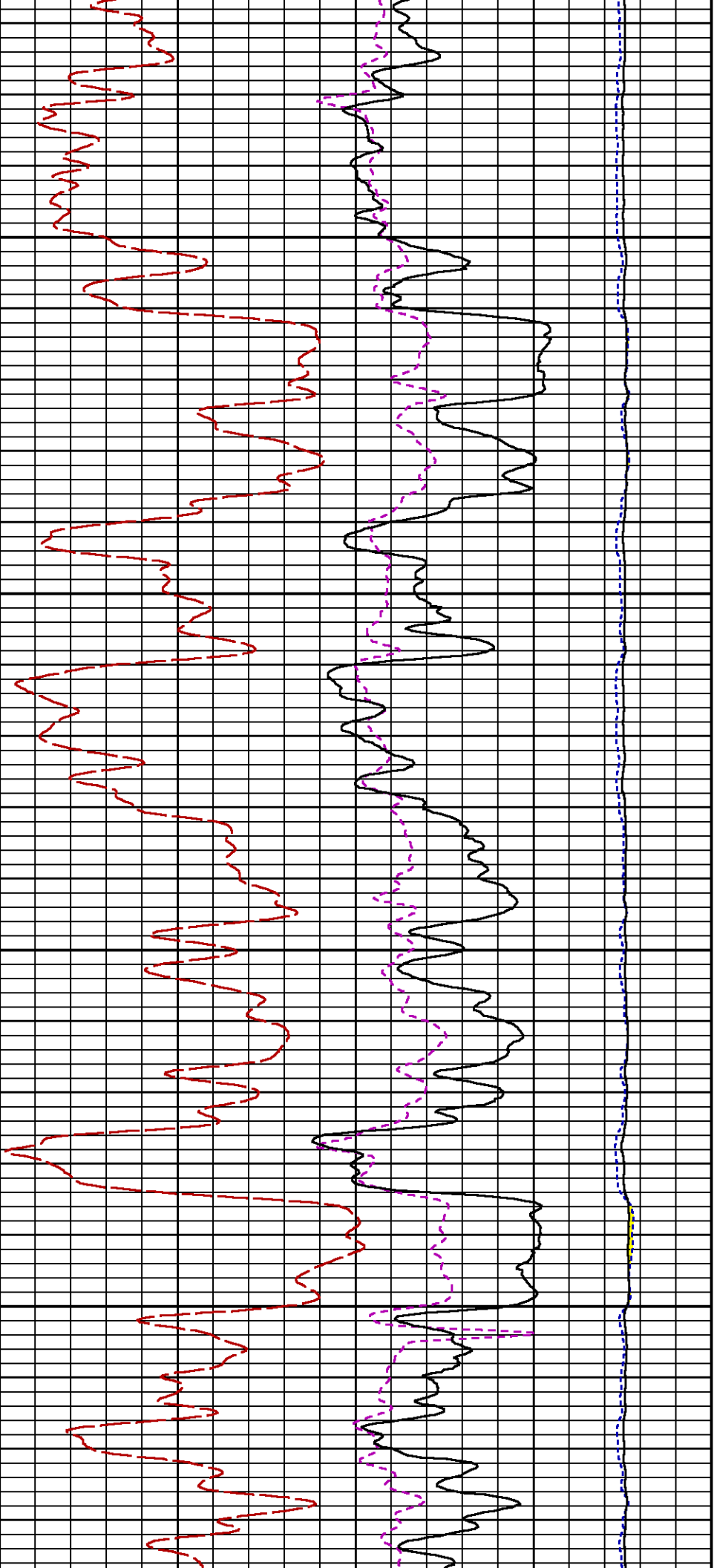
RATO

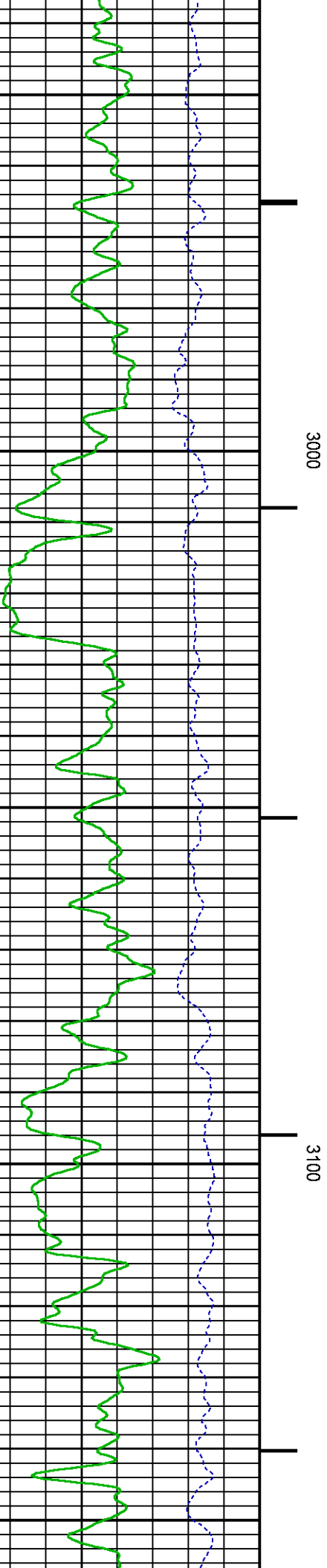
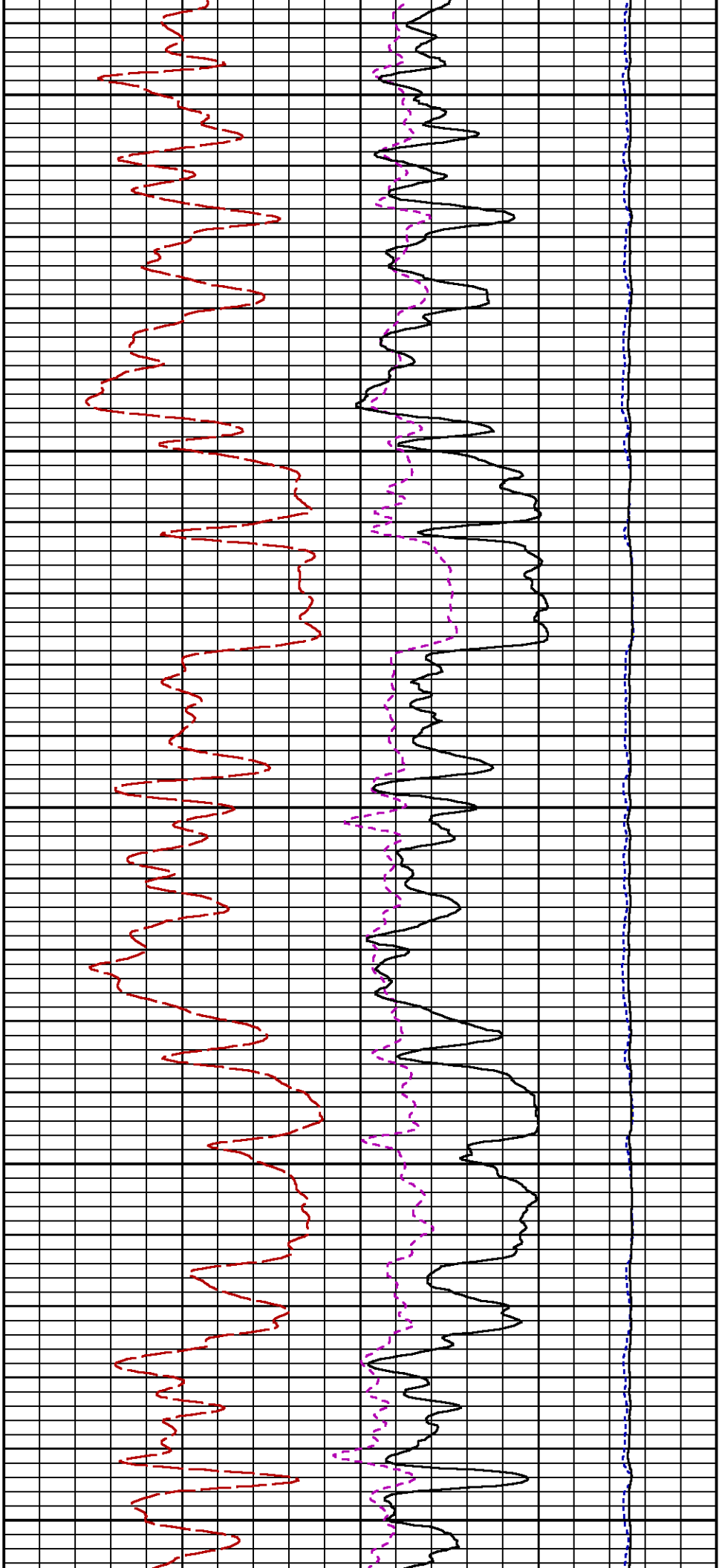
RICS

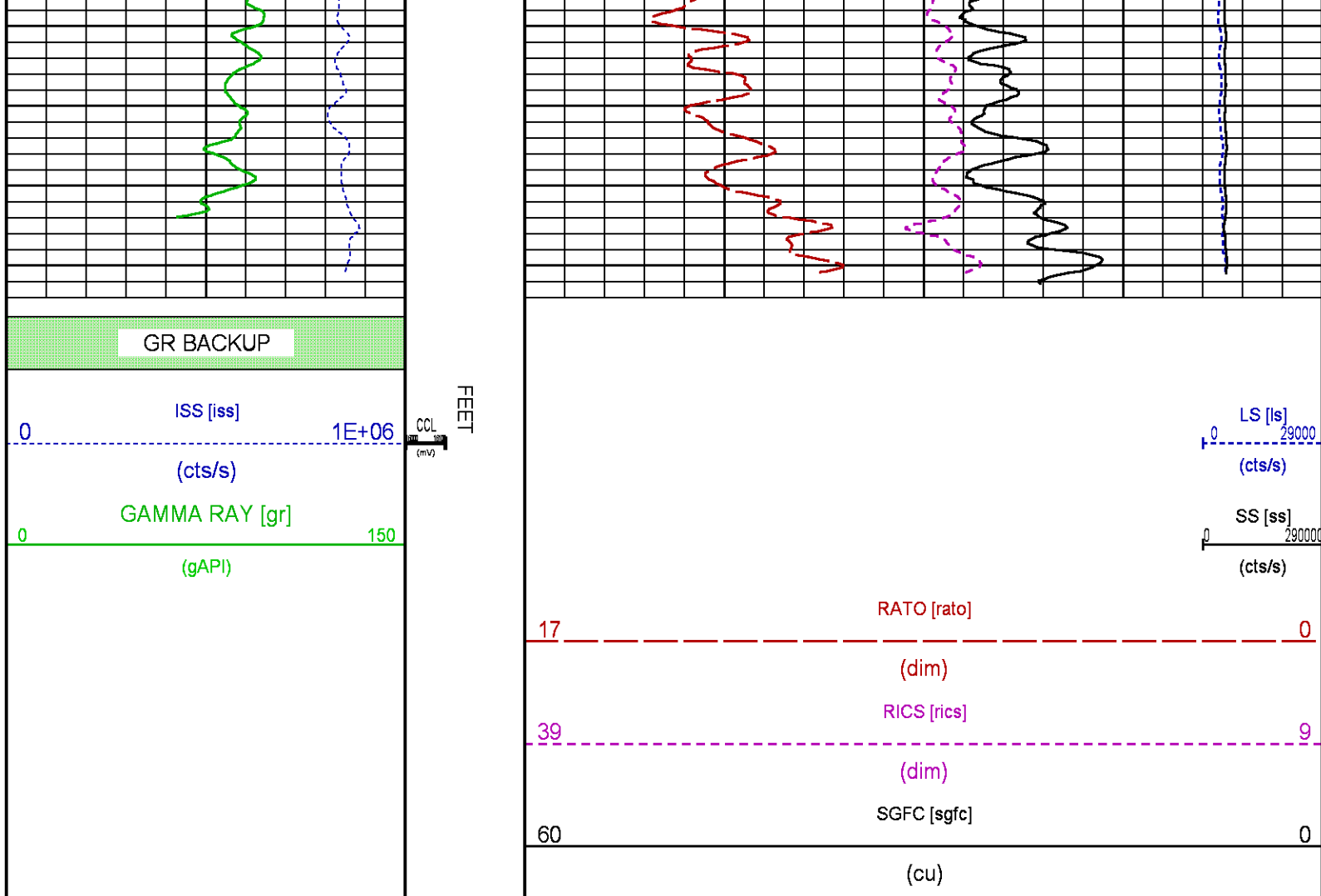
SGFC

LS

SS







MAIN LOG PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1 Patches: 8

Plotted: Fri Oct 23 14:45:48 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100229/n353h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4648.750 ft BOTTOM DEPTH: 7936.250 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	" "
	CASING SIZE	4.50	in	" "

CURVE DESCRIPTION REPORT

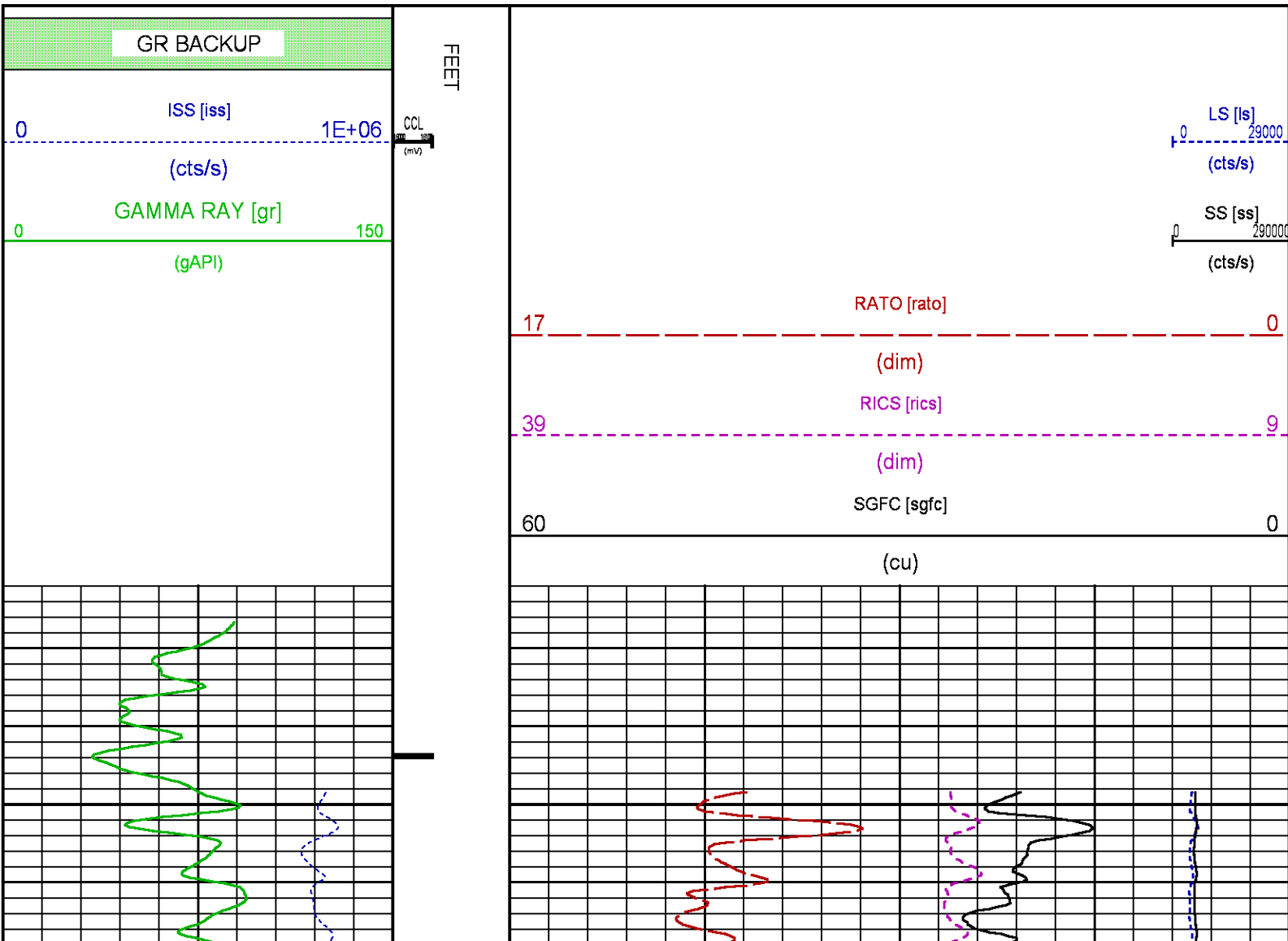
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Oct 23 11:02:29 2015	CASING COLLAR LOCATOR
F1:GR	Oct 23 11:02:29 2015	GAMMA RAY
F1:ISS	Oct 23 11:02:29 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Oct 23 11:02:29 2015	LONG SPACE COUNT RATE
F1:RATO	Oct 23 11:02:29 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Oct 23 11:02:29 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Oct 23 11:02:29 2015	CORRECTED FORMATION SIGMA
F1:SS	Oct 23 11:02:29 2015	SHORT SPACE COUNT RATE

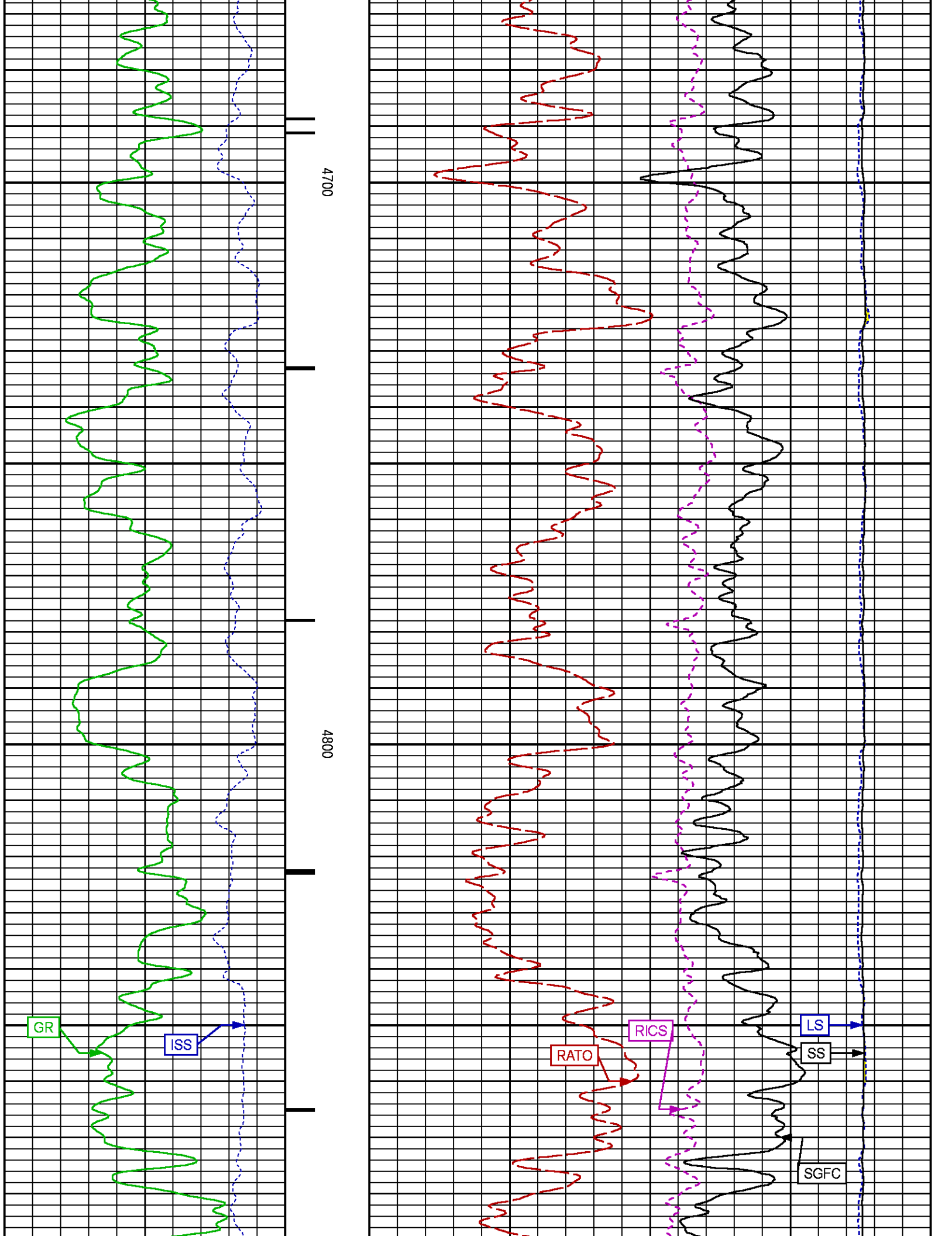
CURVE MEASURE POINT OFFSET

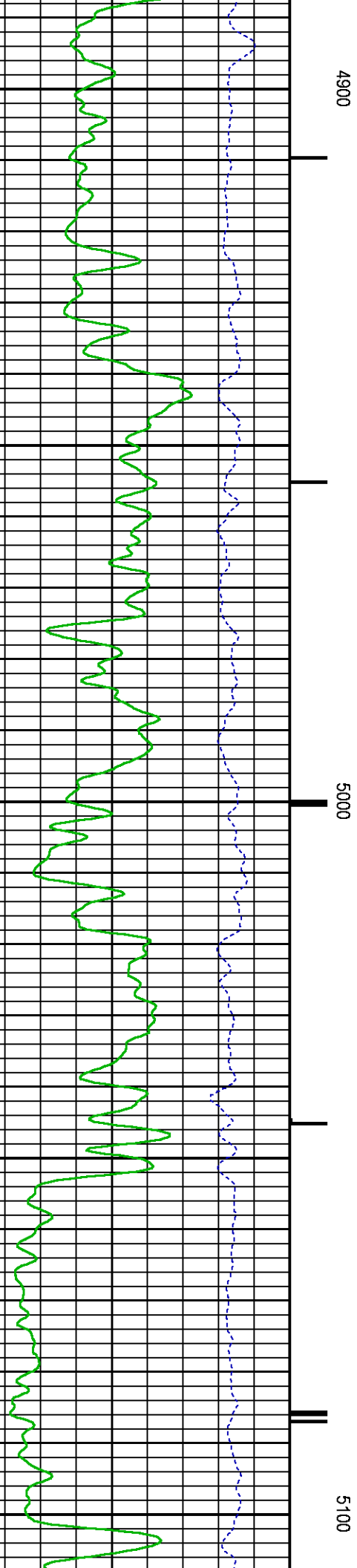
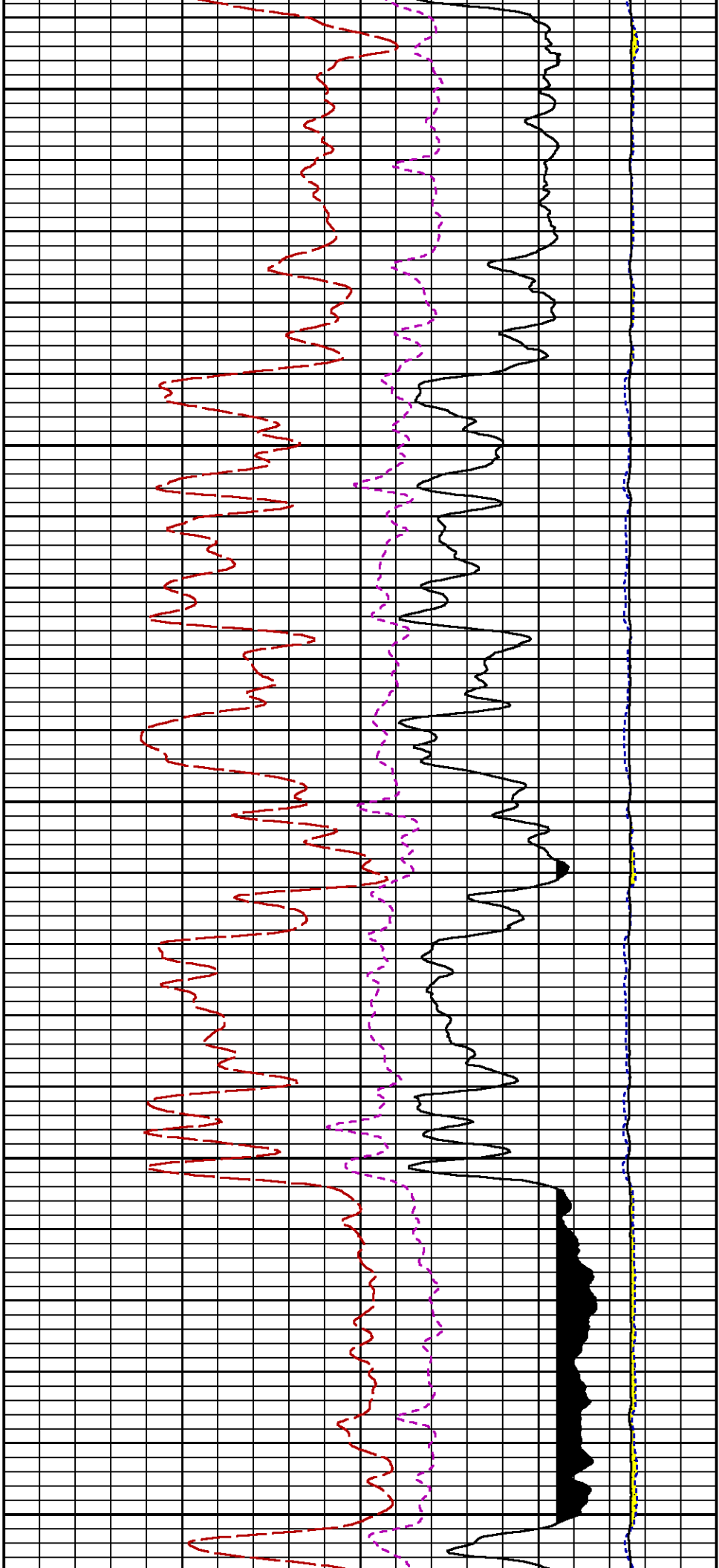
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	26.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

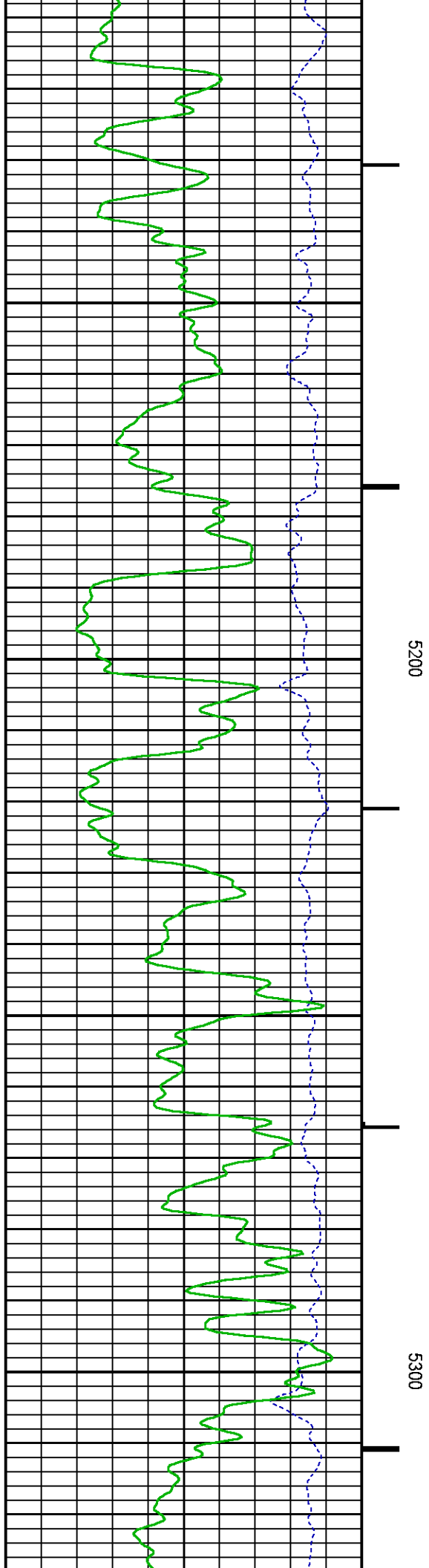
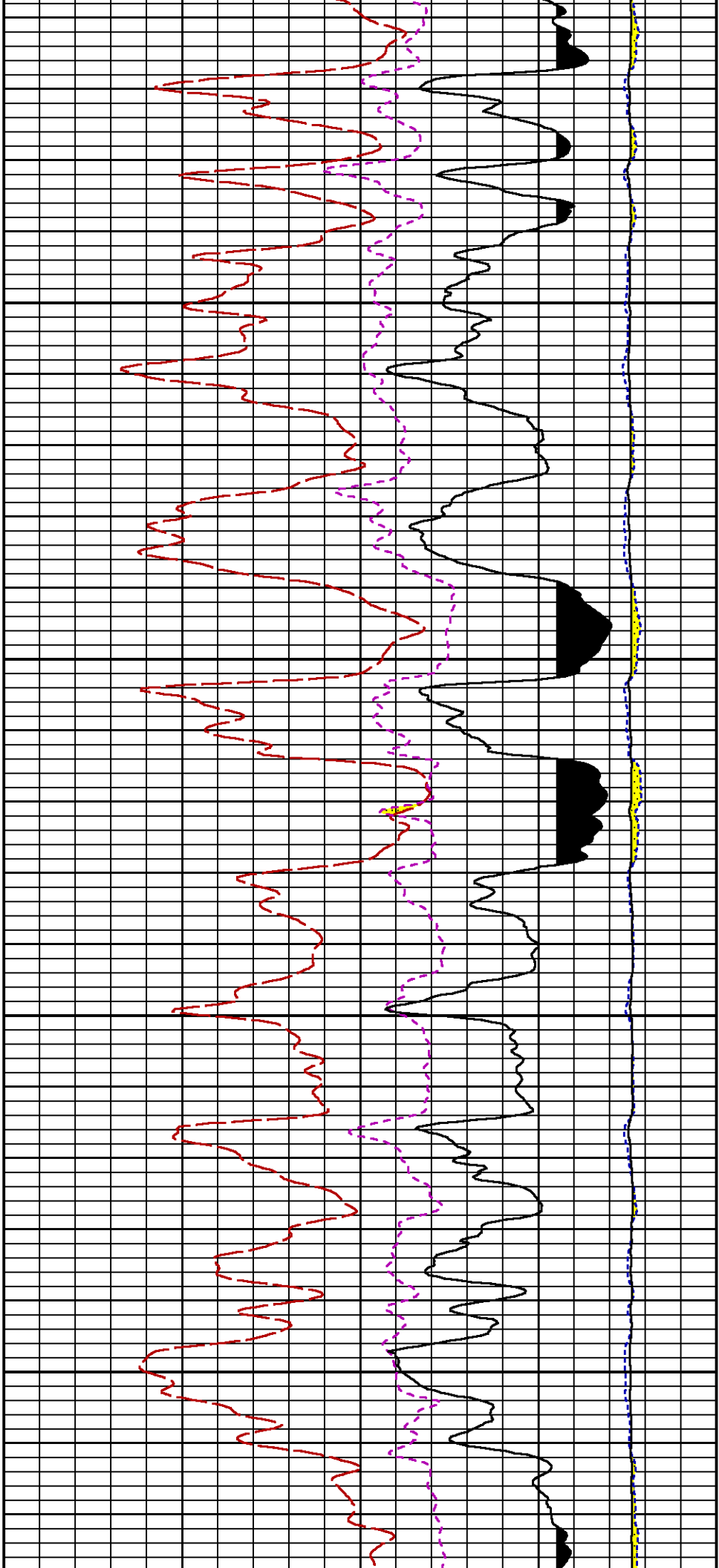
Presentation : cas6685:/dat1a/CH100229/RPM_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 4622.5 - 7920 Feet

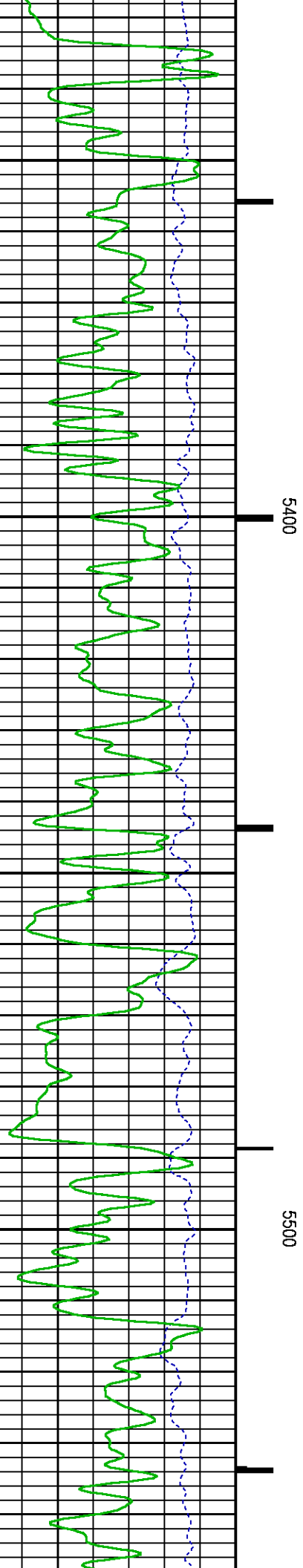
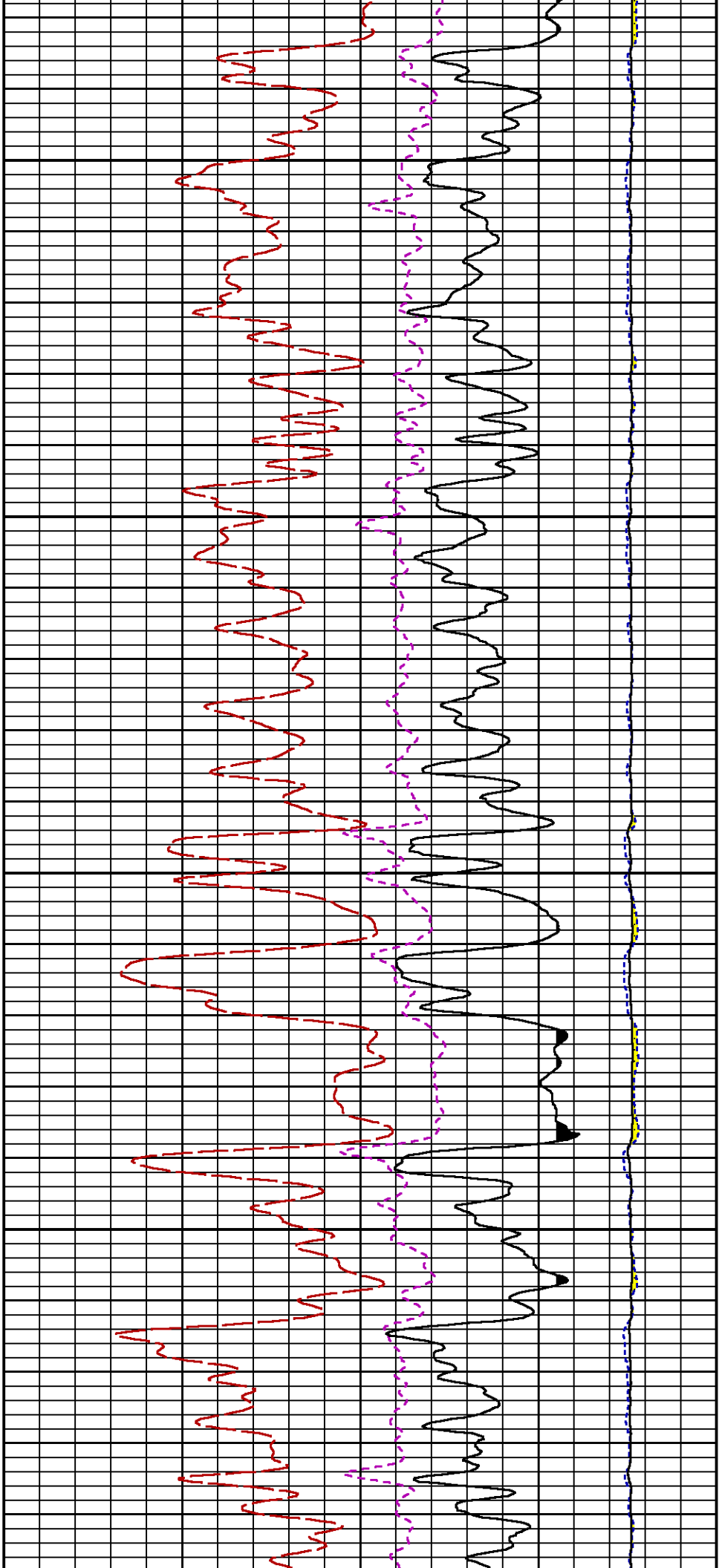
Data File 1 : F1 : cas6685:/dat1a/CH100229/n353h02.xtf
Created On : Oct 23 11:02:29 2015
Company : LARAMIE ENERGY
Well : Piceance 28-02W
Field : Vega
File Interval : 4621.75 - 7936.25 Feet
OCT : n353h

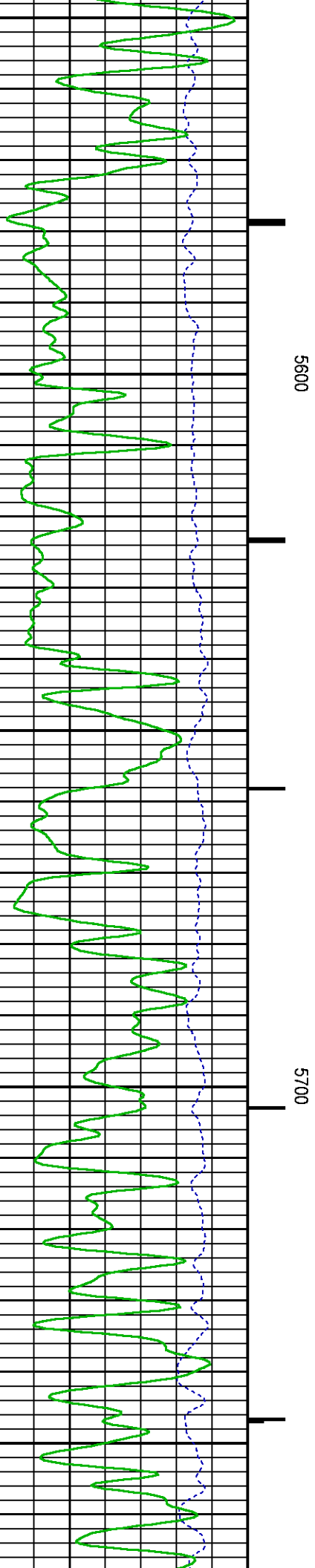
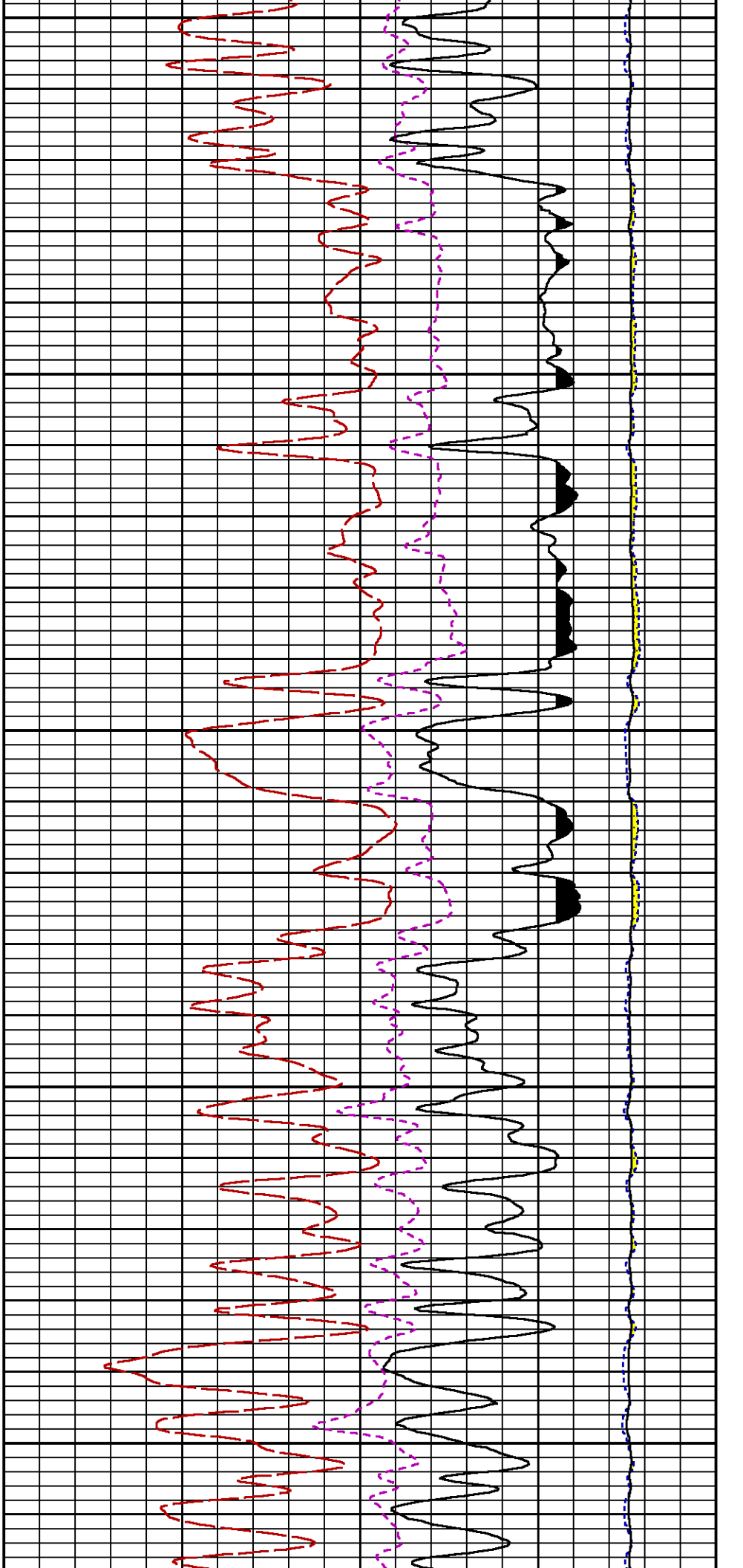


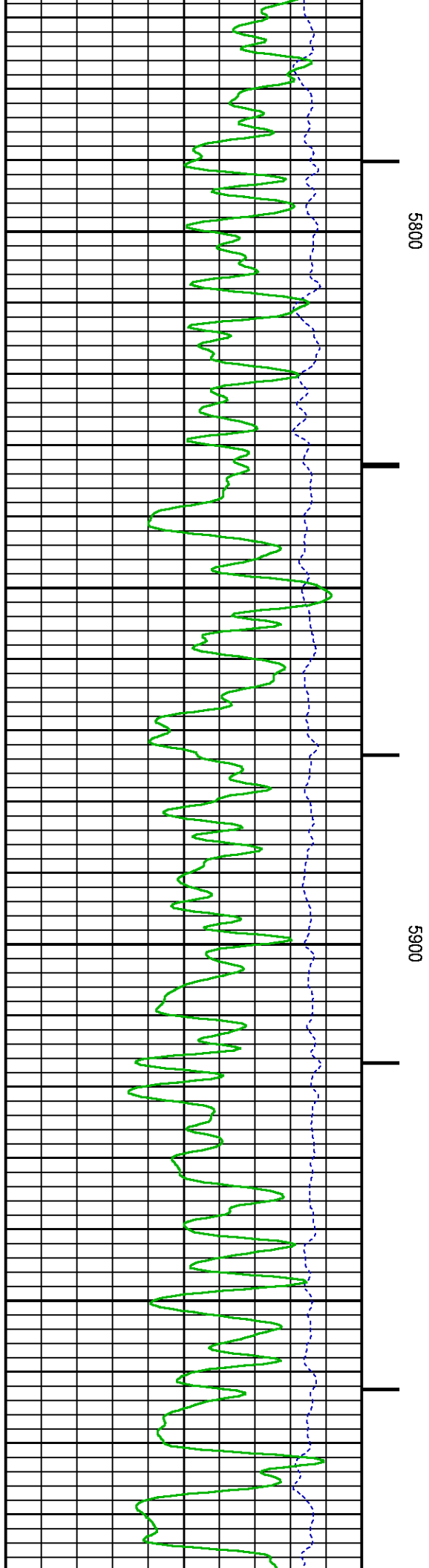
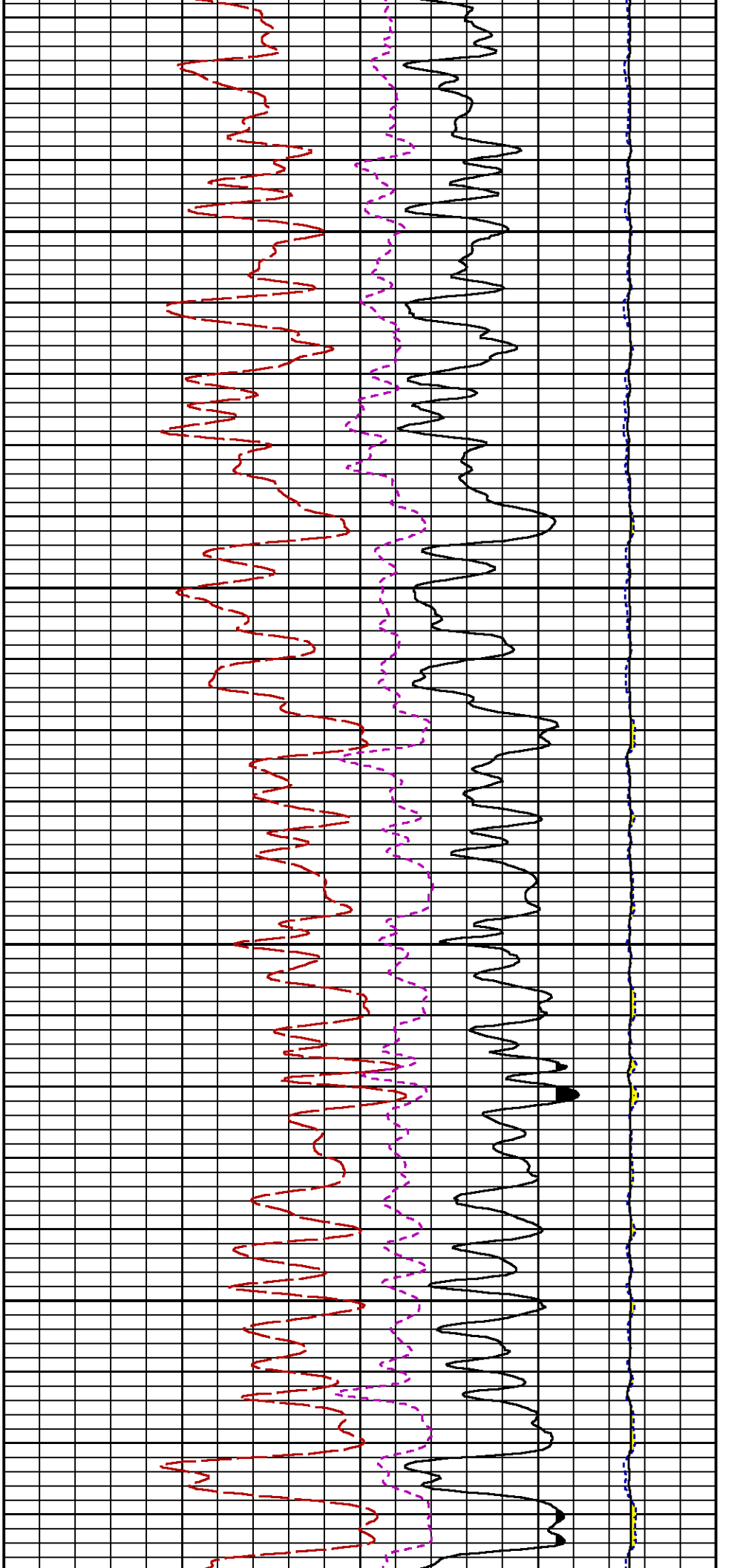


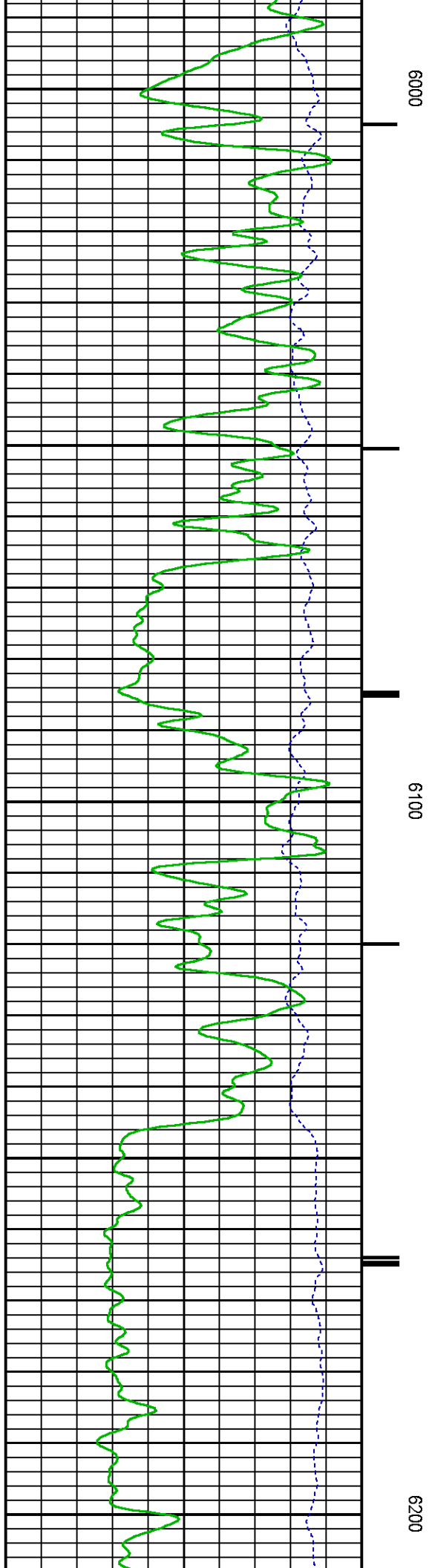
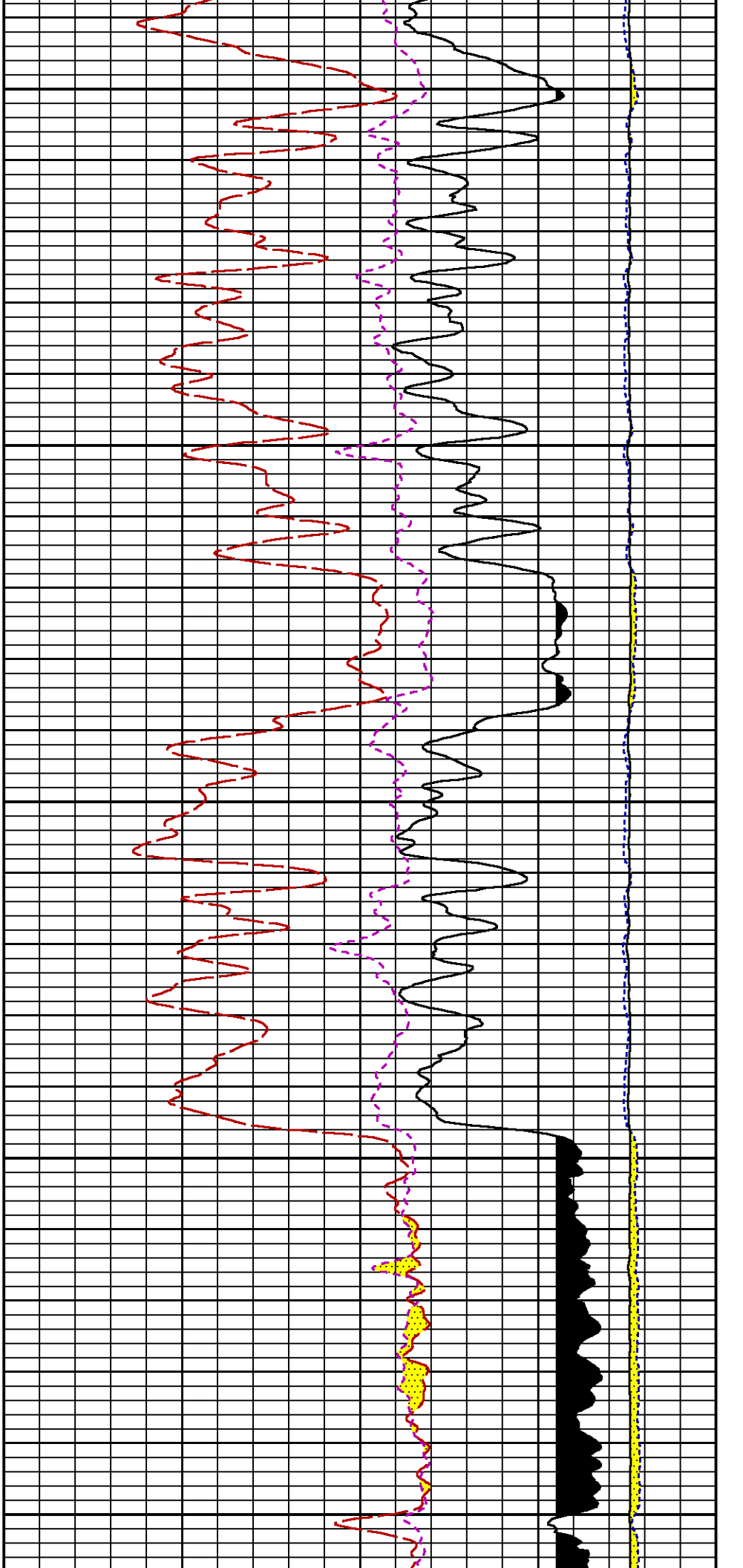


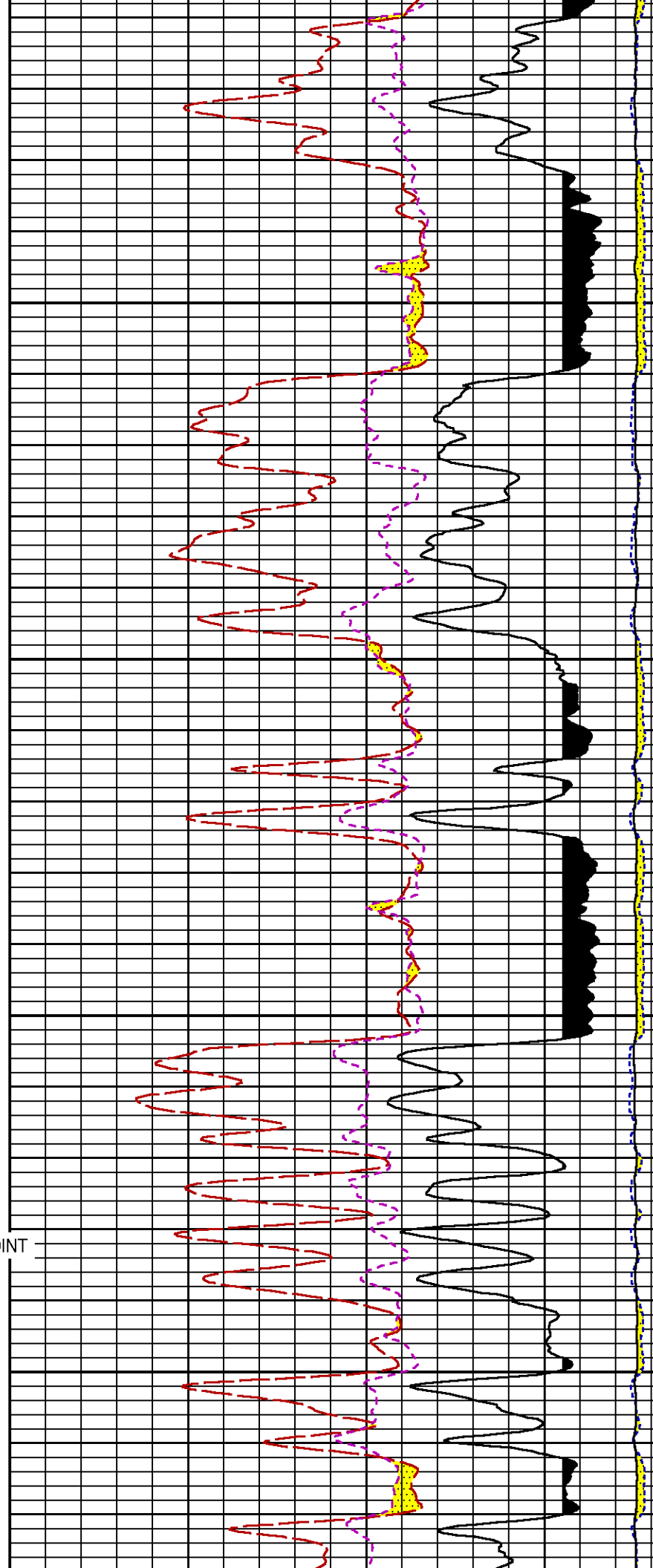




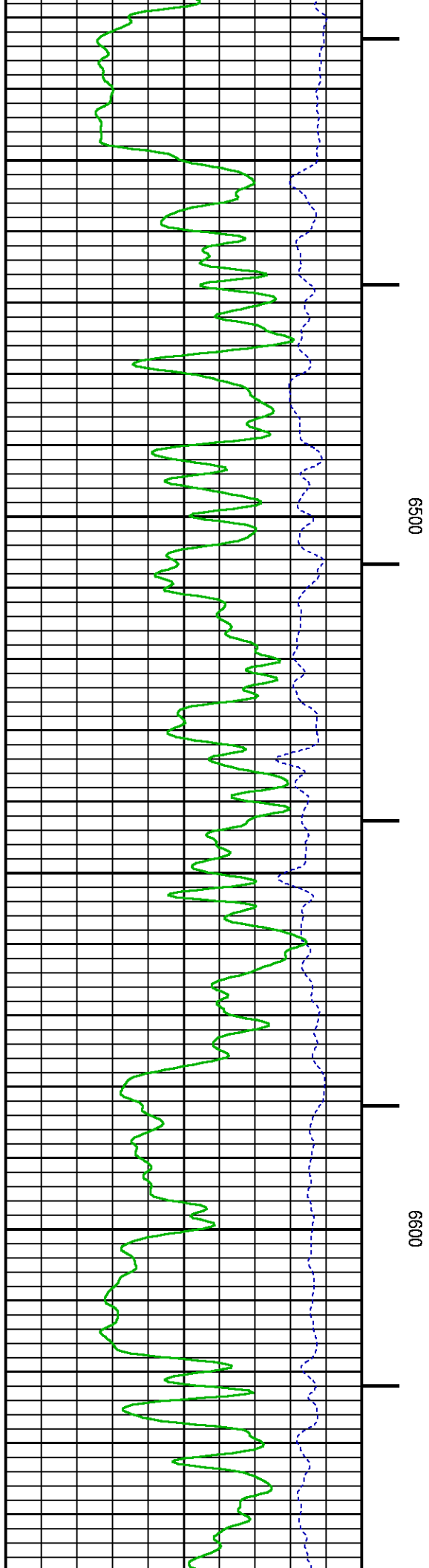
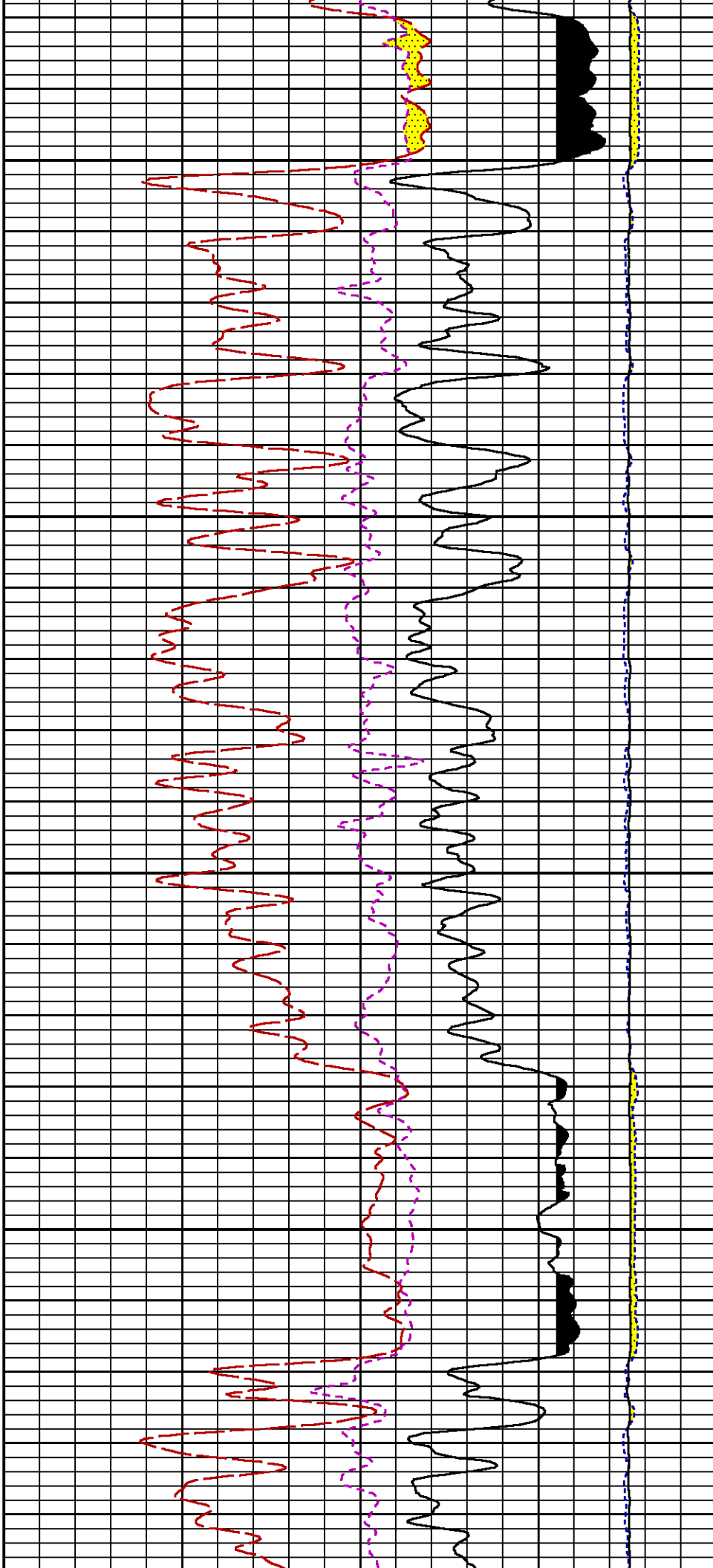


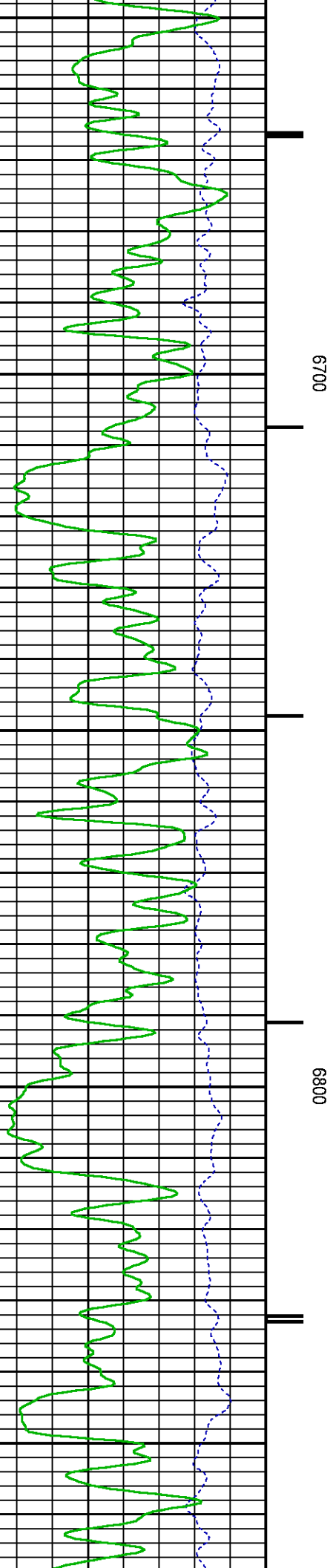
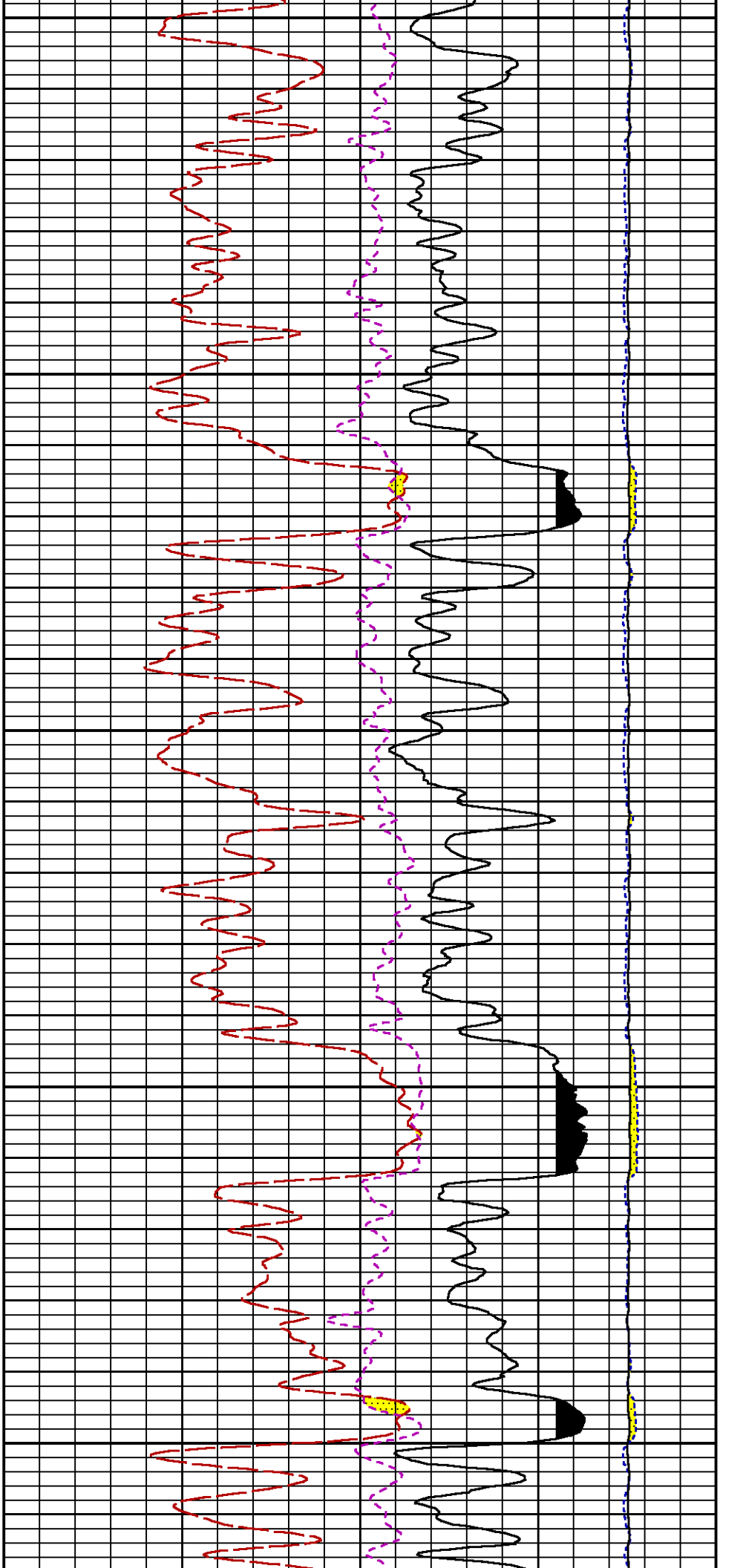


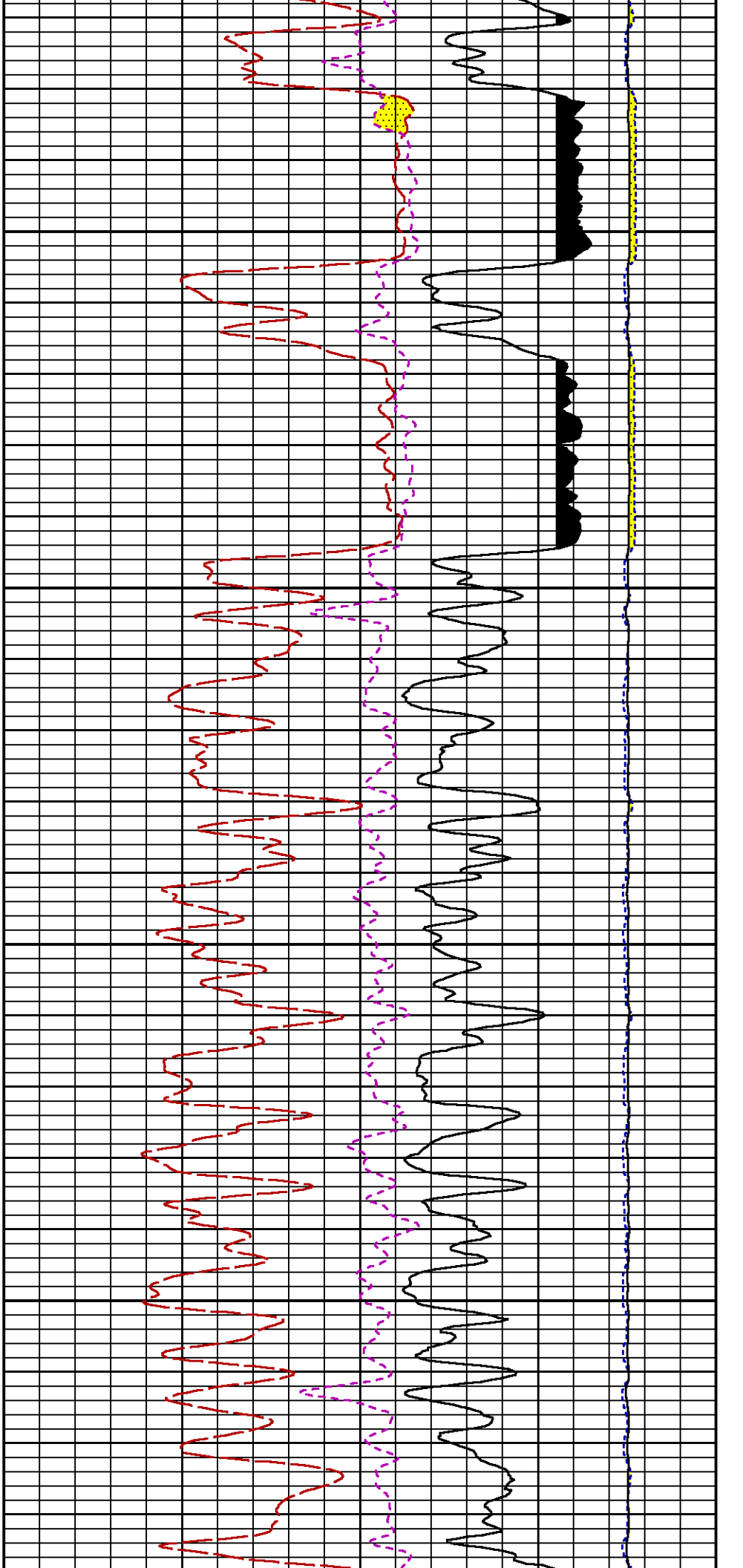




SHORT JOINT

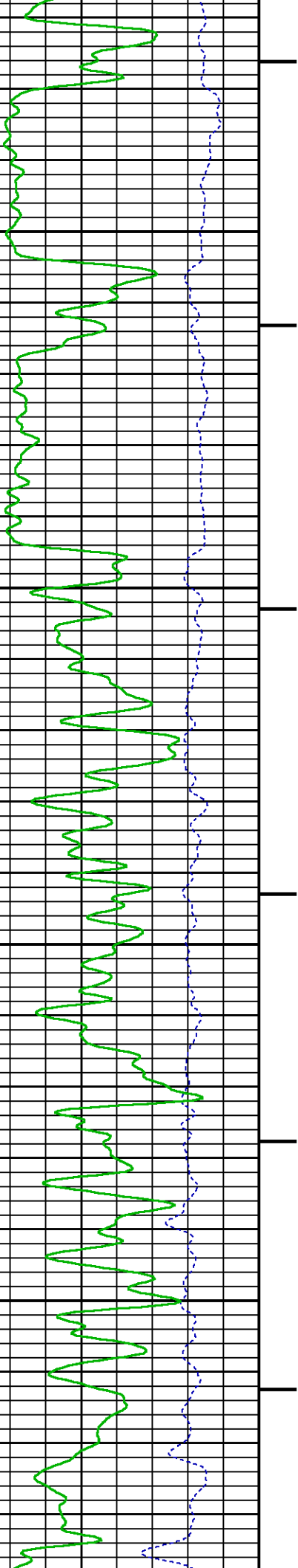


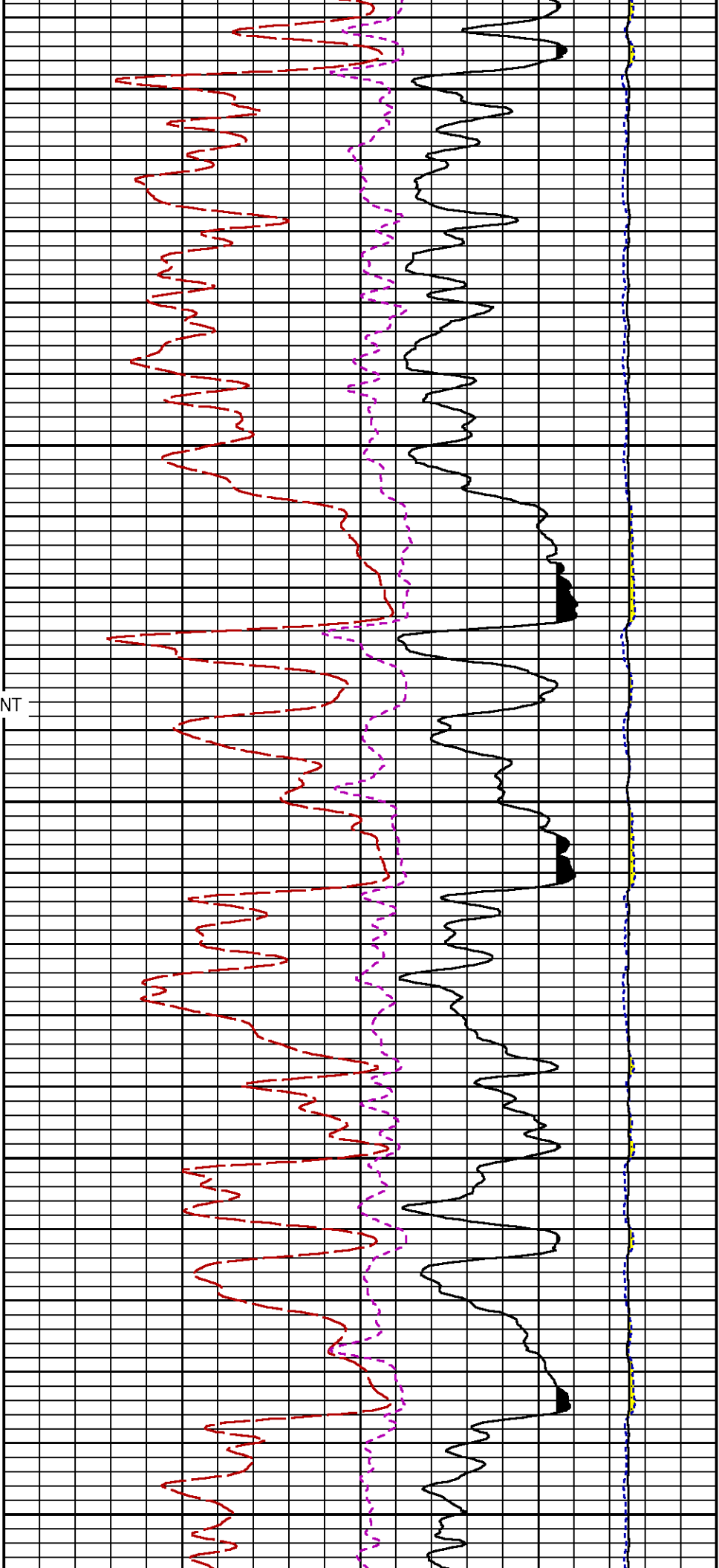




6900

7000



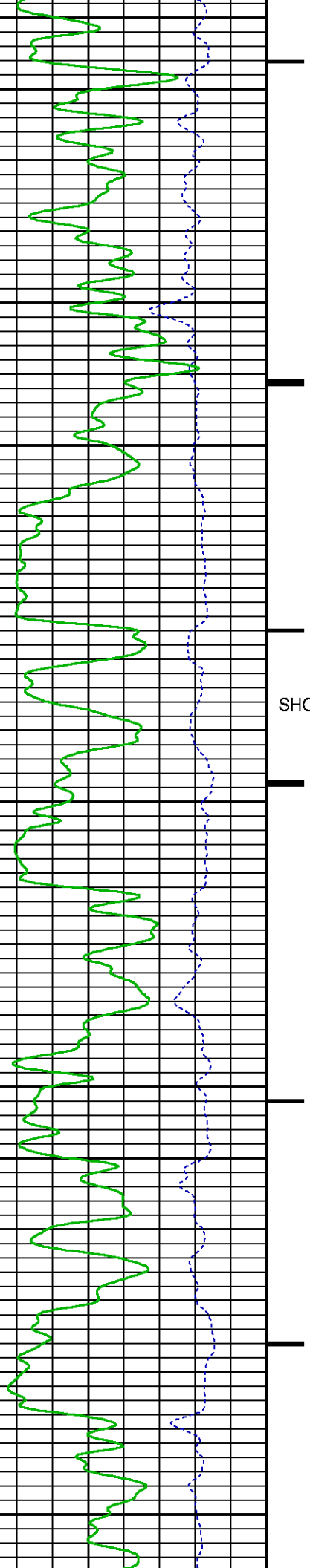


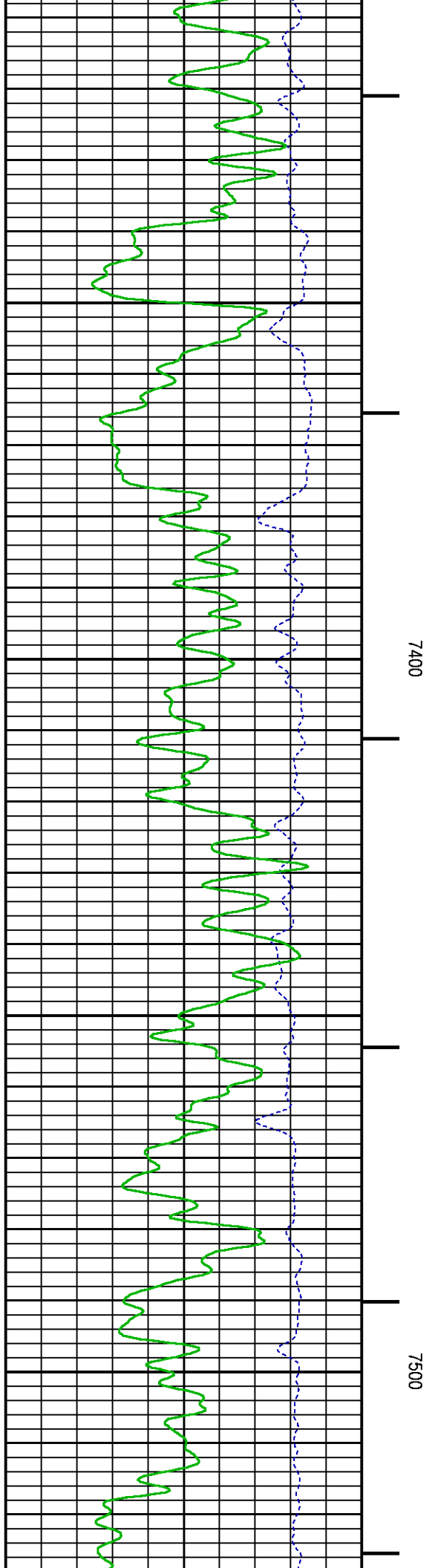
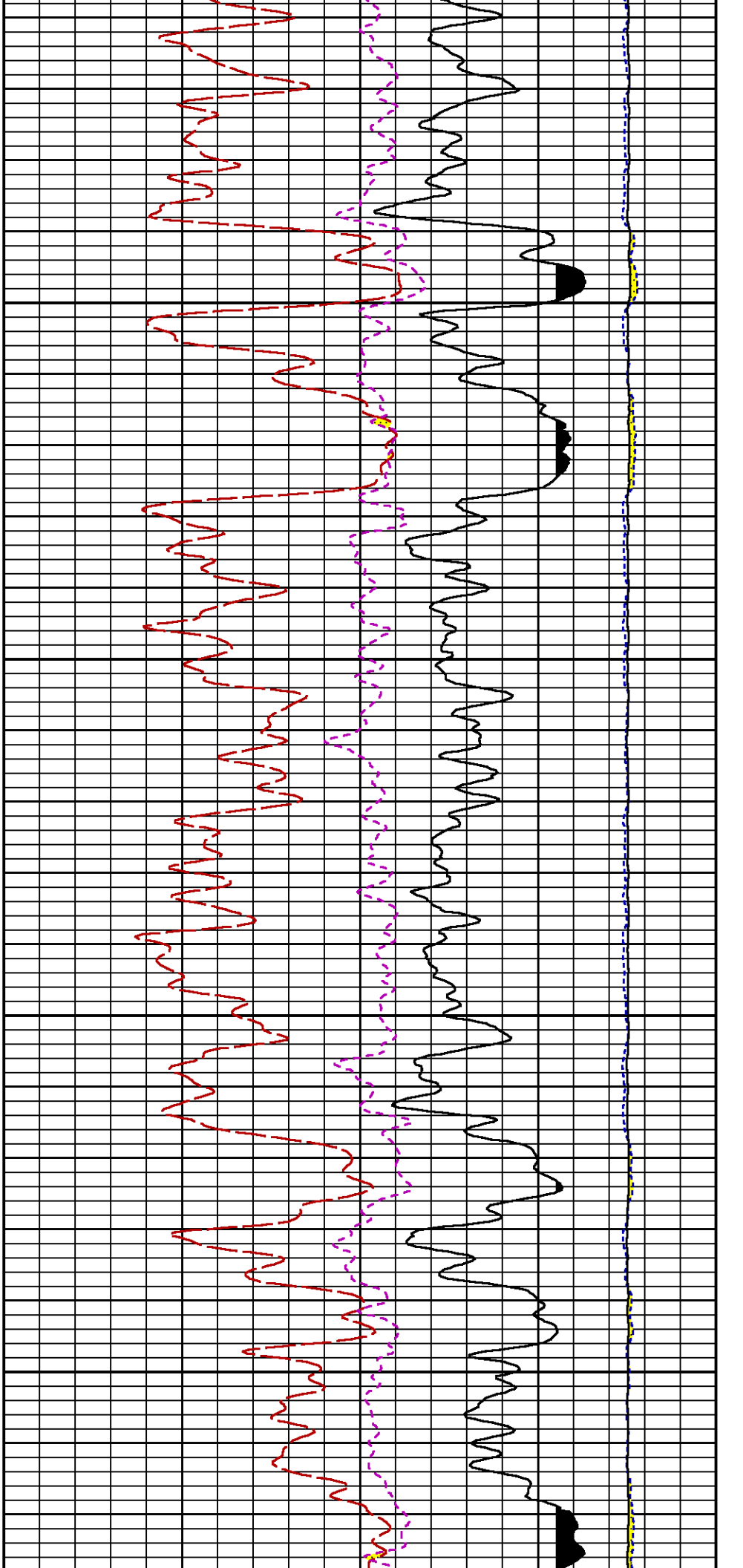
7100

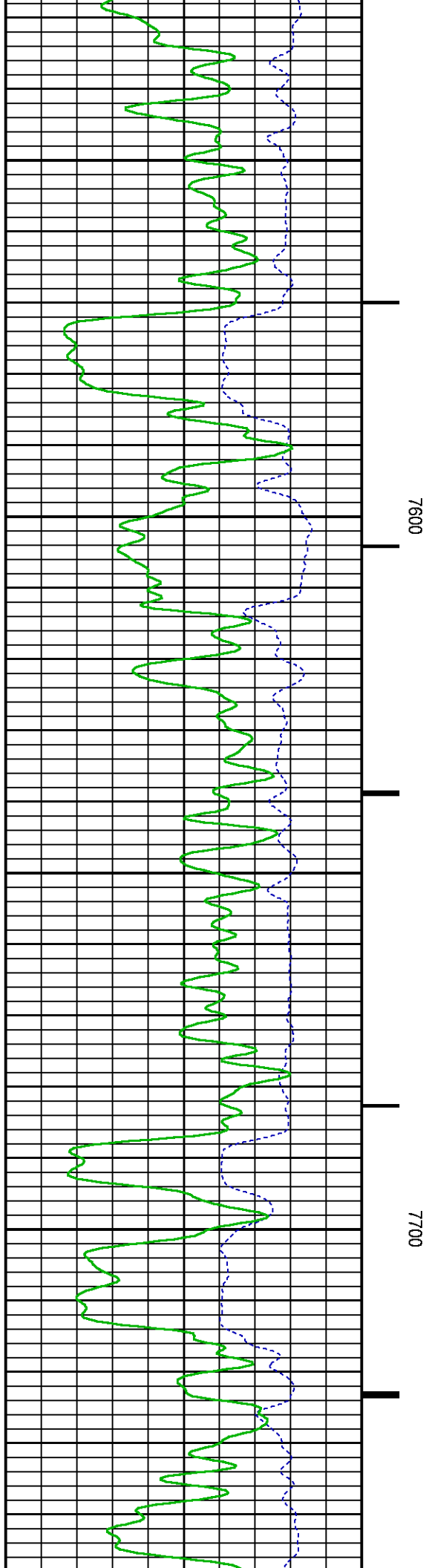
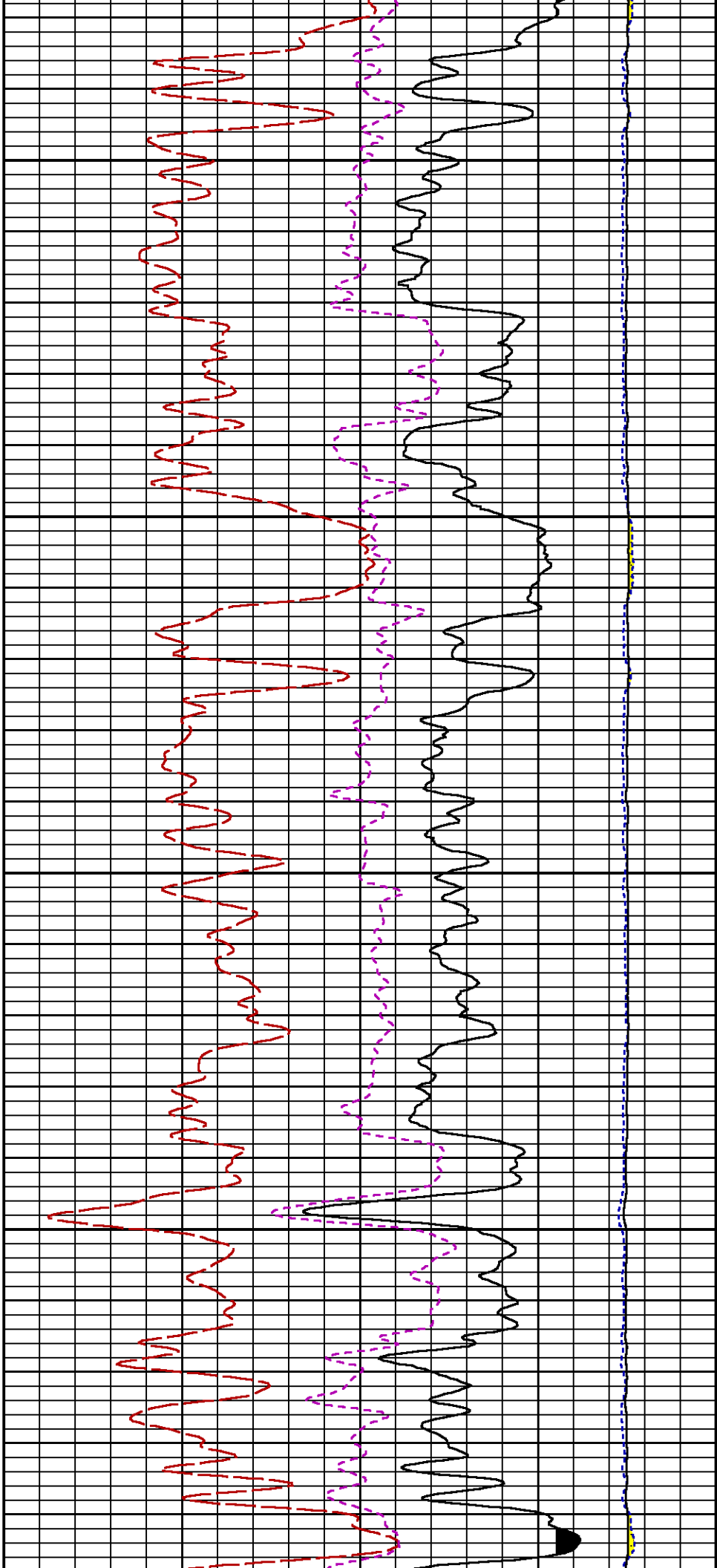
SHORT JOINT

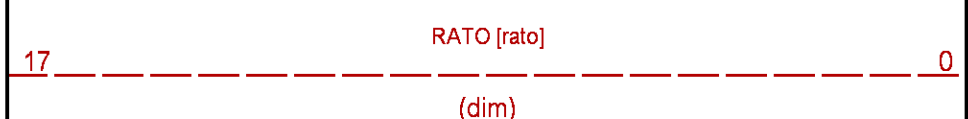
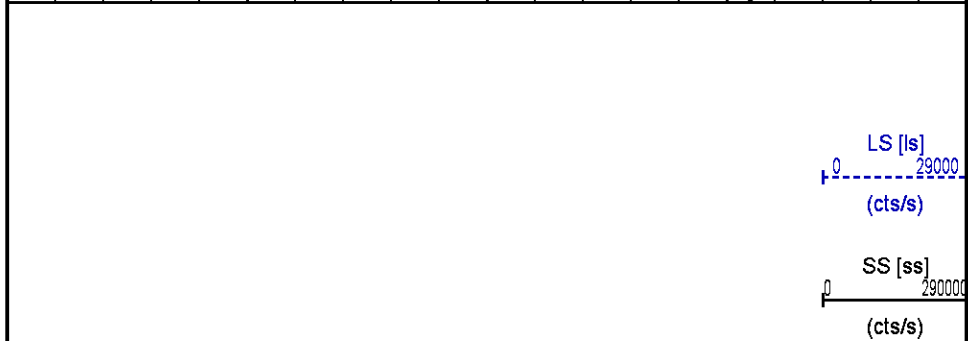
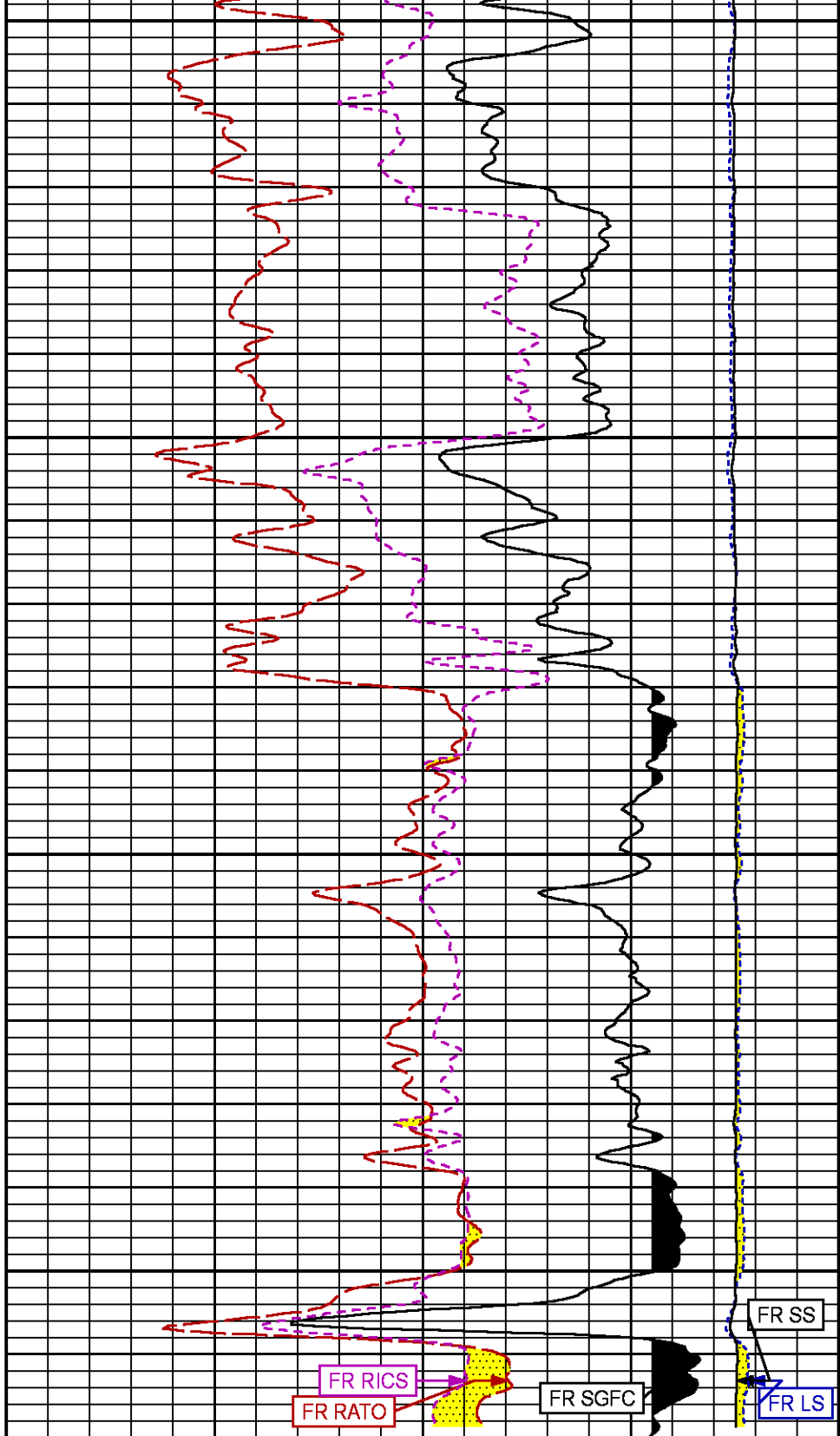
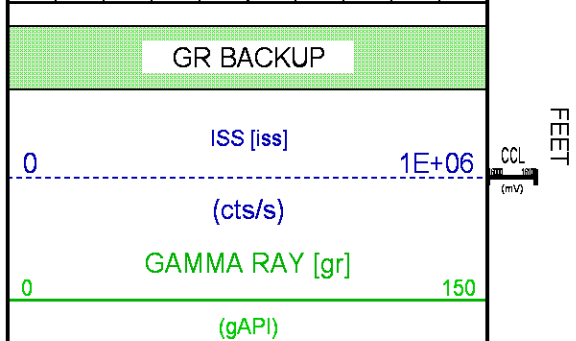
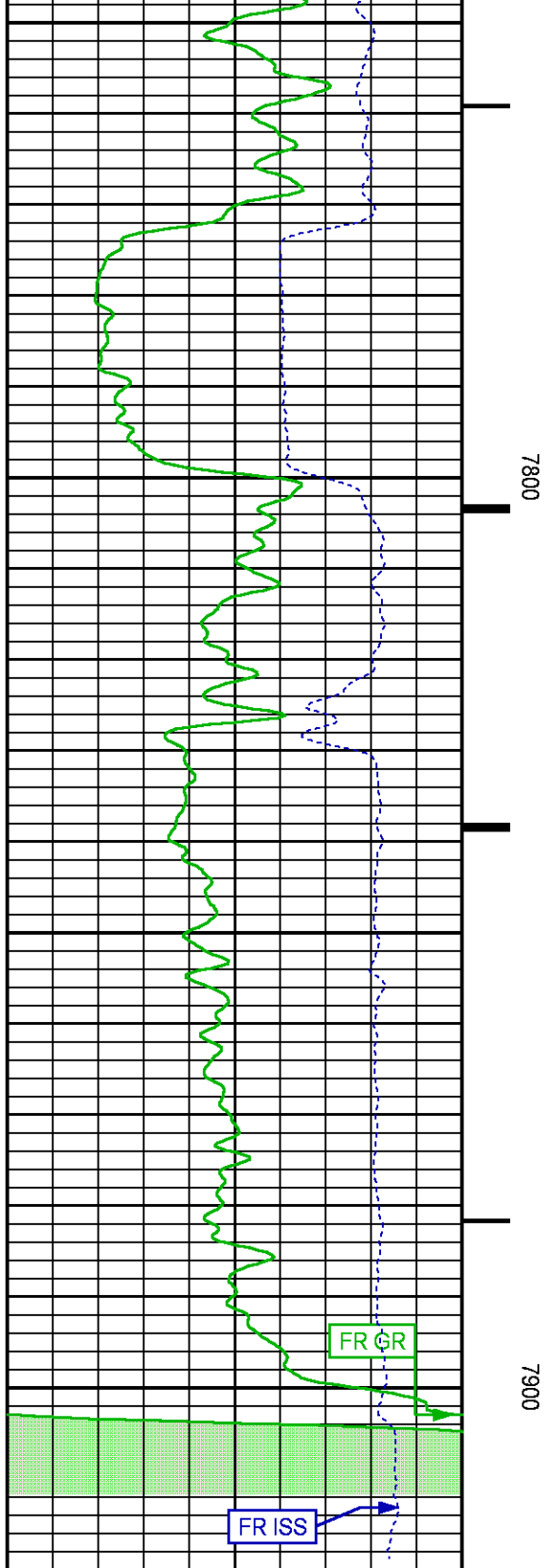
7200

7300









		RICS [rics]	9
	39	(dim)	
	60	SGFC [sgfc]	0
		(cu)	

REPEAT LOG PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 8

Plotted: Fri Oct 23 11:21:44 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100229/n353h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 7722.000 ft BOTTOM DEPTH: 7936.250 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	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Oct 23 10:47:06 2015	CASING COLLAR LOCATOR
F1:GR	Oct 23 10:47:06 2015	GAMMA RAY
F1:ISS	Oct 23 10:47:06 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Oct 23 10:47:06 2015	LONG SPACE COUNT RATE
F1:RATO	Oct 23 10:47:06 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Oct 23 10:47:06 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Oct 23 10:47:06 2015	CORRECTED FORMATION SIGMA
F1:SS	Oct 23 10:47:06 2015	SHORT SPACE COUNT RATE

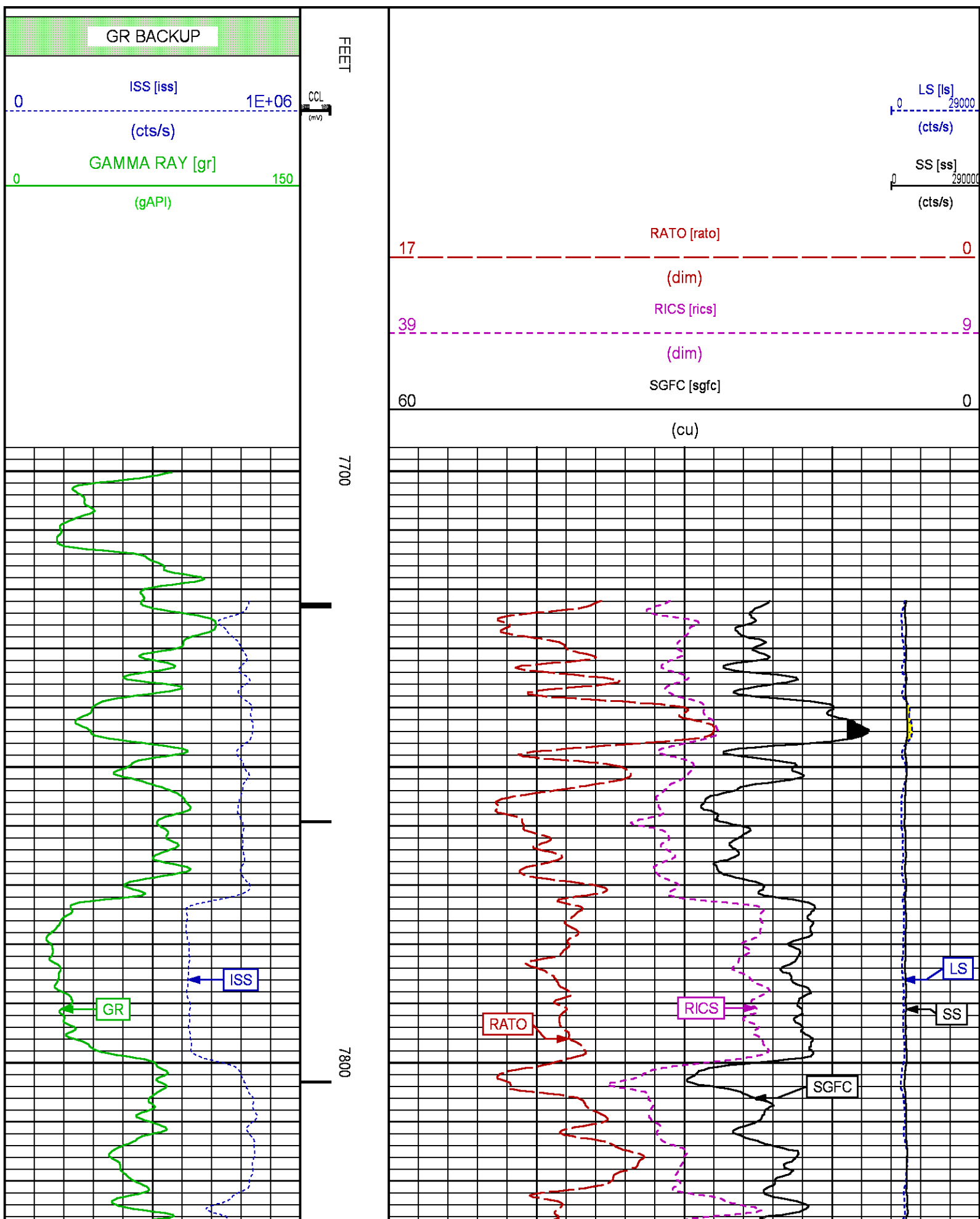
CURVE MEASURE POINT OFFSET

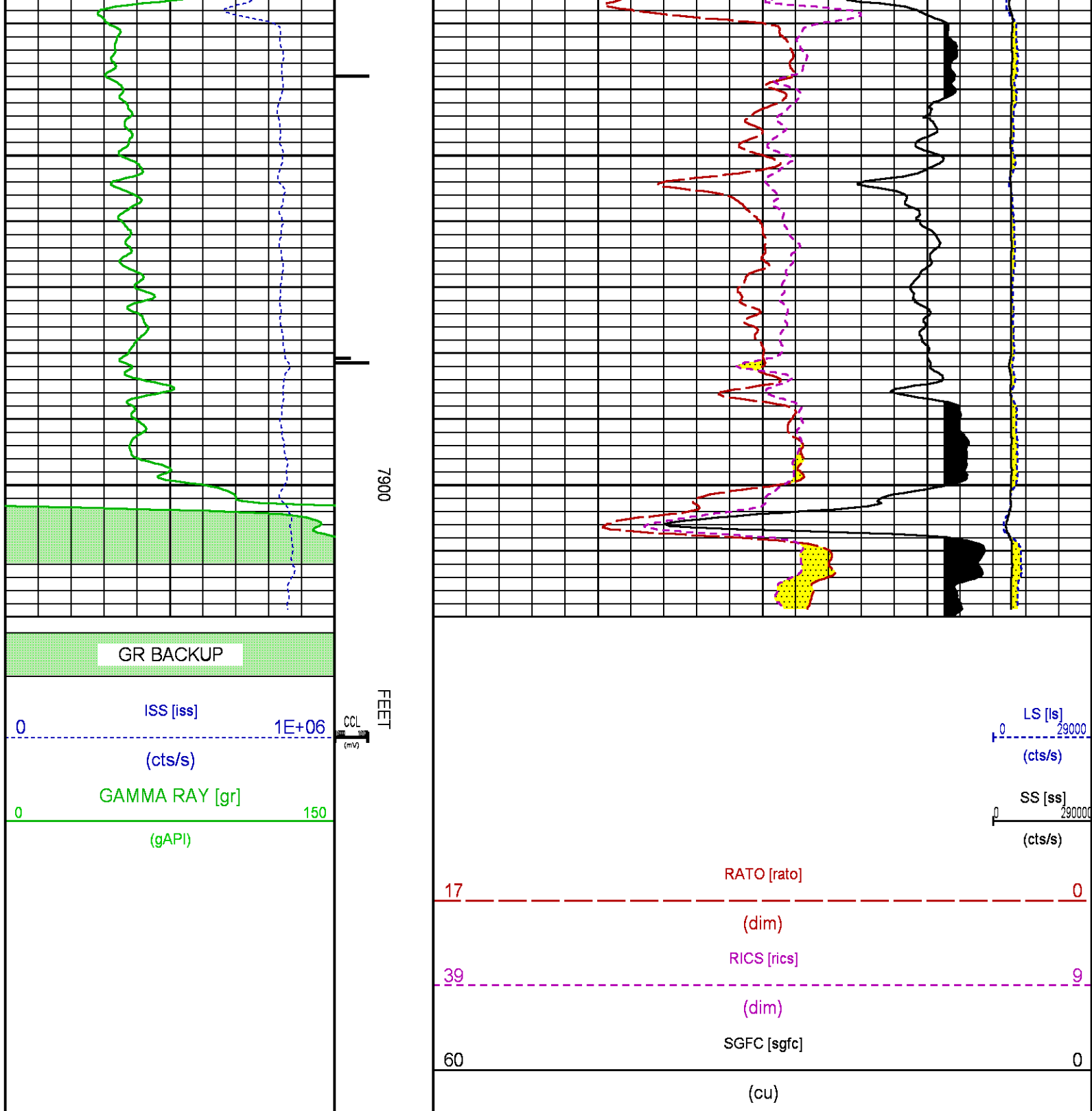
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	26.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

Presentation : cas6685:/dat1a/CH100229/RPM_RPT.fvpdf [5"/100' Scale]
Plot Interval : 7696 - 7920 Feet

Data File 1 : F1 : cas6685:/dat1a/CH100229/n353h01.xtf
Created On : Oct 23 10:47:06 2015
Company : LARAMIE ENERGY

Well : Piceance 28-02W
Field : Vega
File Interval : 7695.25 - 7936.25 Feet
OCT : n353h





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH100229/n353h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA 10485470

DATE/TIME PERFORMED: Fri Oct 23 10:03:02 2015

UNIT #: 3885TC 6685

CALB JIG #: 4702NK VBA-905

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	106.22	450.31	344.1	0.523	55.57	235.57	180

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10485470 DATE/TIME PERFORMED: Fri Oct 23 10:05:04 2015

UNIT #: 3885TC 6685 VERI JIG #: 4702NK VBA-905

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	107.36	458.00	0.523	56.16	239.59	183.43
						170.00 190.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10414345 DATE/TIME PERFORMED: Wed Oct 7 10:51:29 2015

UNIT: 3885TC 6685 CALIBRATOR: 2437XB 112674 SOURCE: 8281AA 10160601 HOURS: 8281AA 173

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	801603	121	2314	2275	2268	107	7.0	0.9797
Interpolated	1300000	142	2301	2270	2264			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	801603	7188	1125	148	25.95	0.15	24.16	0.33
					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	801603	167903	25988	88575	31568	8240	53636	13173
Fit Quality %		0.898	1.042	0.778	0.769	0.808	0.724	0.842

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	801603	1.43	4.77	30.86	14.95	10.75	3.83	4.07
		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 %		0.017	0.117	0.240	0.156	0.045	0.054	0.102
Reduced	1408581	1.43	4.78	30.98	14.95	10.76	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

TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #: 8255XA 176973 DATE/TIME PERFORMED: Thu Jun 19 09:53:23 2014

UNIT #: 3880TA HL6670

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	-1.889935E+01	1.004280E-01	1.215976E-06	-1.293045E-10

INSTRUMENT CONFIGURATION

A3 CABLEHEAD

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

GAMMA RAY

Diameter : 1.70"
Length : 3.02'
Weight : 15 lbs
Series : 8262XA
Mnemonic : GR
Measure Point: 0.89': 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 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

34.08'

CCL MP 26.03'

GR MP 22.90'

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

TEMP MP 1.65'
PRES MP


Measure Point: 1.52' TEMP MP

TEMP MP

BULL PLUG 1 11/16

0.00'

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

	COMPANY	LARAMIE ENERGY		FILE NO:	
	WELL	PICEANCE 28-02W			CH100229
	FIELD	VEGA		API NO:	
	COUNTY	MESA	STATE	COLORADO	05077097700000
LOCATION:		ELEVATIONS:		28 9S 93W	
SHL: LAT 39.251167, LONG -107.779619		KB 7578 FT		28-05 PAD	
BHL: LAT 39.254325, LONG -107.780731		DF		PATTERSON 308	
GL 7556 FT		DATE		23-Oct-2015	
SEC 28 TWP 9S RGE 93W					