



FILE NO: CH100232	COMPANY WELL FIELD COUNTY	LARAMIE ENERGY PICEANCE 28-04W VEGA MESA	STATE COLORADO
API NO: 05077097720000	LOCATION: SHL: LAT 39.251150, LONG -107.779647 BHL: LAT 39.252950, LONG -107.780719 SEC 28 TWP 9S RGE 93W		
Ver. 4.05 28-9S 93W 28-05 PAD PATTERSON 308	OTHER SERVICES CBL		ELEVATIONS: KB 7578 FT DF GL 7556 FT
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	G.L. ELEVATION 7556 FT K.B. 22 FT ABOVE P.D. K.B.		

DATE	24-Oct-2015
RUN	1
SERVICE ORDER	US100232J
DEPTH DRILLER	7853 FT
DEPTH LOGGER	7790 FT
BOTTOM LOGGED INTERVAL	7788 FT
TOP LOGGED INTERVAL	0 FT
TIME STARTED	11:30
TIME FINISHED	17:30
OPERATOR RIG TIME	6 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	48 FT
LOGGED CEMENT TOP	SEE LOG
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	100 F/MN
MAX. RECORDED TEMP.	242 DEGF
REFERENCE LOG	NA
REFERENCE LOG DATE	NA
EQUIP. NO.	HL-6685
LOCATION	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	7973 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
4.5 IN	11.6 LB/F		0 FT	7973 FT

REMARKS
RUN 1 TRIP 1: ALL DATA ON THIS LOG HAS BEEN DEPTH SHIFTED TO MATCH THE GAMMA RAY CURVE OF THE BAKER HUGHES BOND LOG DATED 24-OCT-2015
THE AMOUNT OF LINEAR SHIFT IS -3 FEET
LOGGED WITH 0 PSI AT SURFACE
SJ = 5905' - 5918'
SL = 6971' 6994'
THANKS FOR CHOOSING BAKER HUGHES...THE BEST CHOICE!
CREW: COATE

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 TNSMIT	8281FA	10460082	FREE
1	1	TEMP	8255XA	Z176973	FREE

G - SAND 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: Sat Oct 24 16:28:08 2015

PARAMETER AND FILTER SUMMARY REPORT					
FILE:		/dat1a/CH100232/n353h03.prm			
LOGGING MODE:		DEPTH	DIRECTION:	UP	
TOP DEPTH:		2554.000 ft	BOTTOM DEPTH:	3162.750 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		7.87	in	" "
	CASING SIZE		4.50	in	" "
	MATRIX		SANDSTONE		" "
	CORRECTION BUFFER		11		" "

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Oct 24 15:46:29 2015	CASING COLLAR LOCATOR
F1:GR	Oct 24 15:46:29 2015	GAMMA RAY
F1:ISS	Oct 24 15:46:29 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Oct 24 15:46:29 2015	LONG SPACE COUNT RATE
F1:RATO	Oct 24 15:46:29 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Oct 24 15:46:29 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Oct 24 15:46:29 2015	CORRECTED FORMATION SIGMA
F1:SS	Oct 24 15:46:29 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/CH100232/RPM_GSAND.fvpdf [5"/100' Scale]
 Plot Interval : 2527.75 - 3146.5 Feet

Data File 1 : F1 : cas6685:/dat1a/CH100232/n353h03.xtf
 Created On : Oct 24 15:46:29 2015
 Company : LARAMIE ENERGY
 Well : PICEANCE 28-04W
 Field : VEGA

Field : VEGA
File Interval : 2527 - 3162.75 Feet
OCT : n353h

GR BACKUP

FEET

ISS [iss]

1E+06

(cts/s)

GAMMA RAY [gr]

150

(gAPI)

CCL
(mV)

2600

RATO [rato]

17

0

(dim)

RICS [rics]

39

9

(dim)

SGFC [sgfc]

60

0

(cu)

LS [ls]

29000

(cts/s)

SS [ss]

290000

(cts/s)

GR

ISS

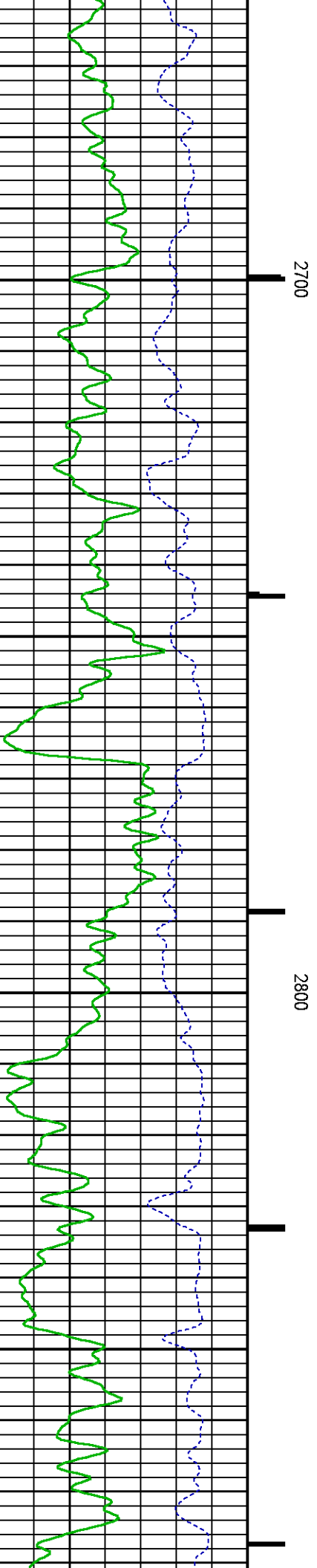
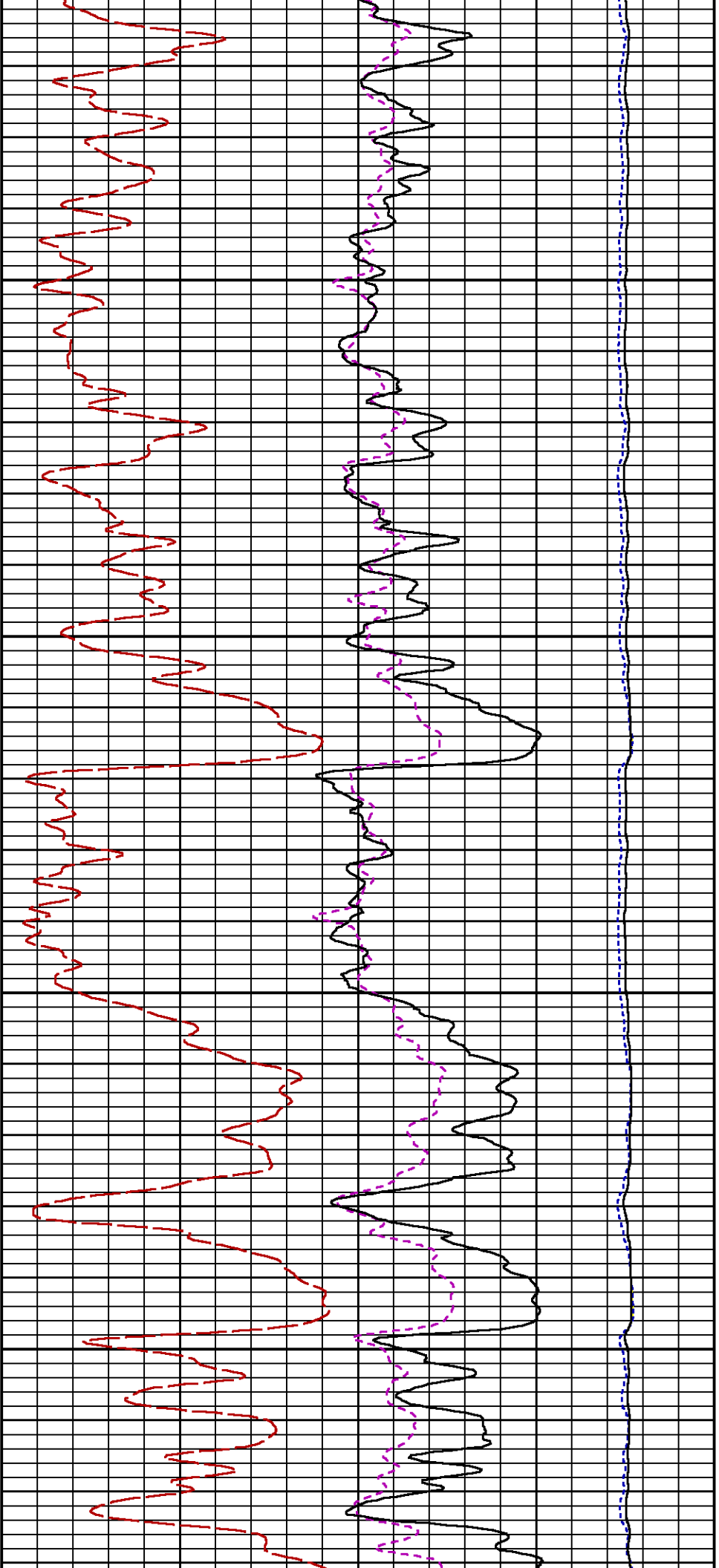
RATO

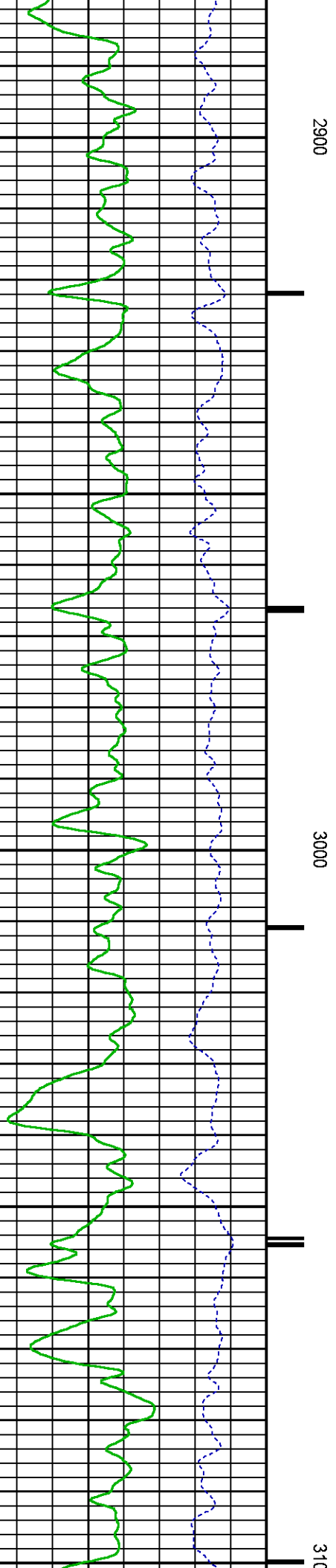
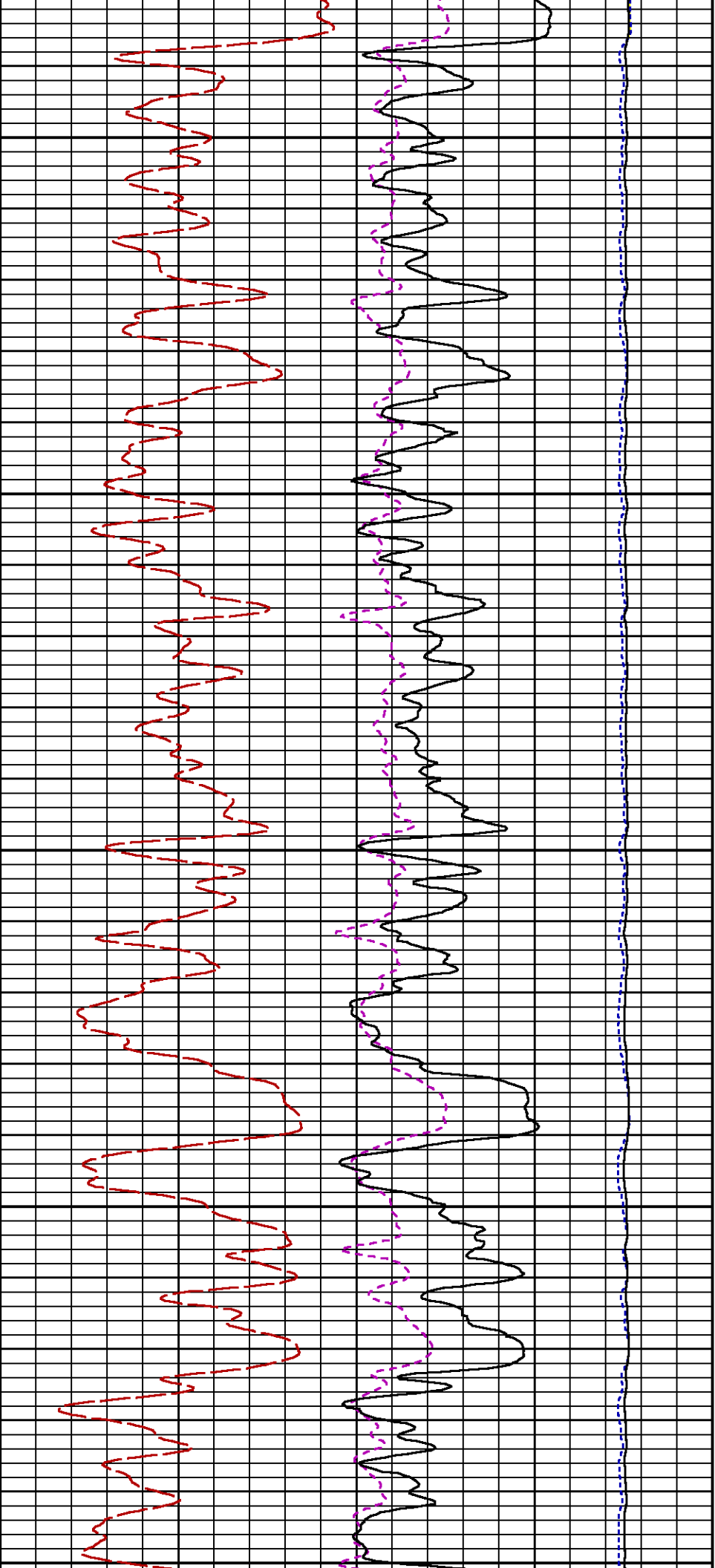
RICS

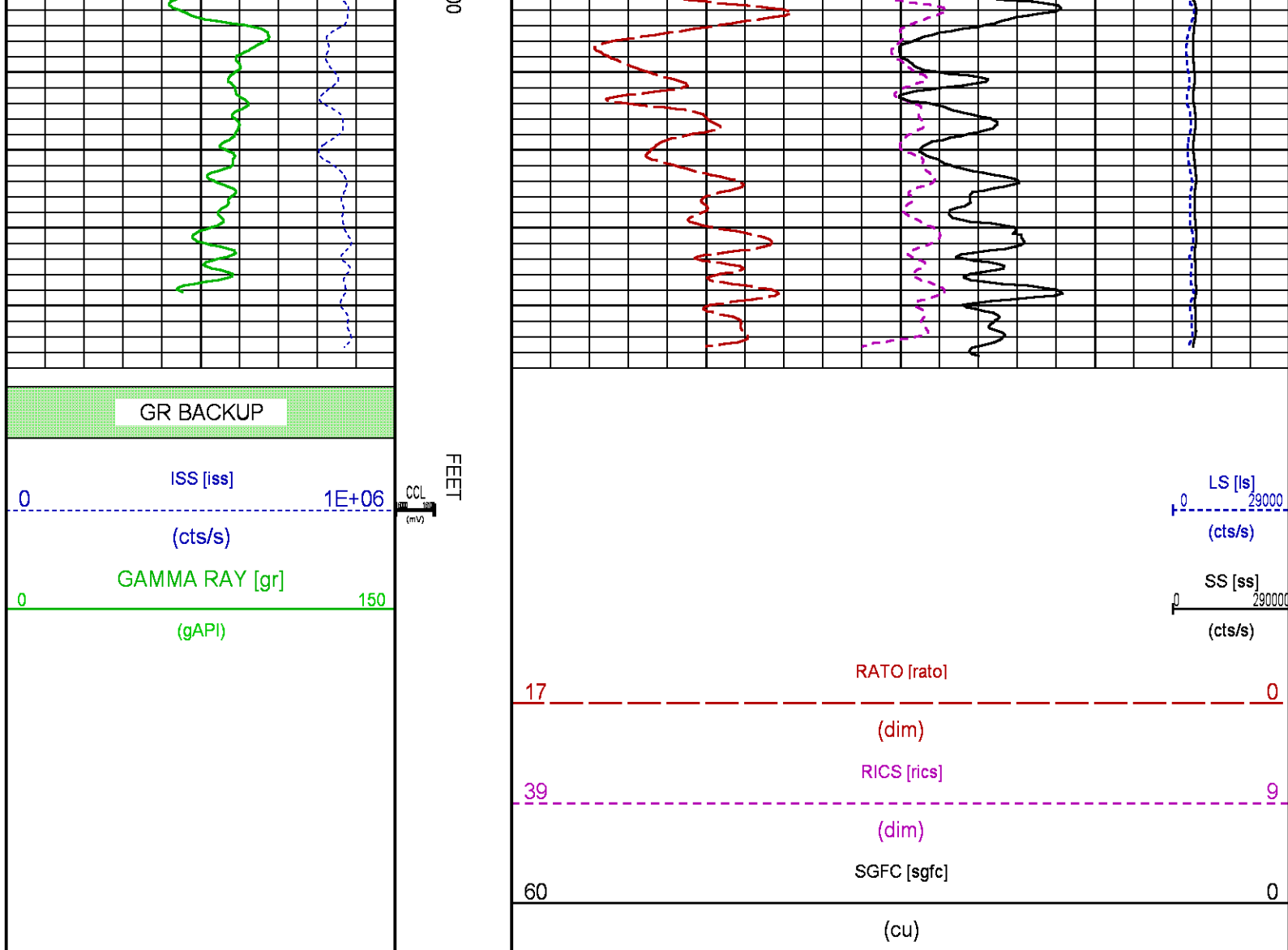
SGFC

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: Sat Oct 24 16:05:25 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100232/n353h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4553.500 ft BOTTOM DEPTH: 7798.500 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

RO Parameters	BOREHOLE CONTENTS	FLUID	TOI	BOTTOM
	OPEN/CASED HOLE	CASED HOLE	"	"
	BOREHOLE SIZE	7.87	in	"
	CASING SIZE	4.50	in	"
	MATRIX	SANDSTONE	"	"
	CORRECTION BUFFER	11	"	"

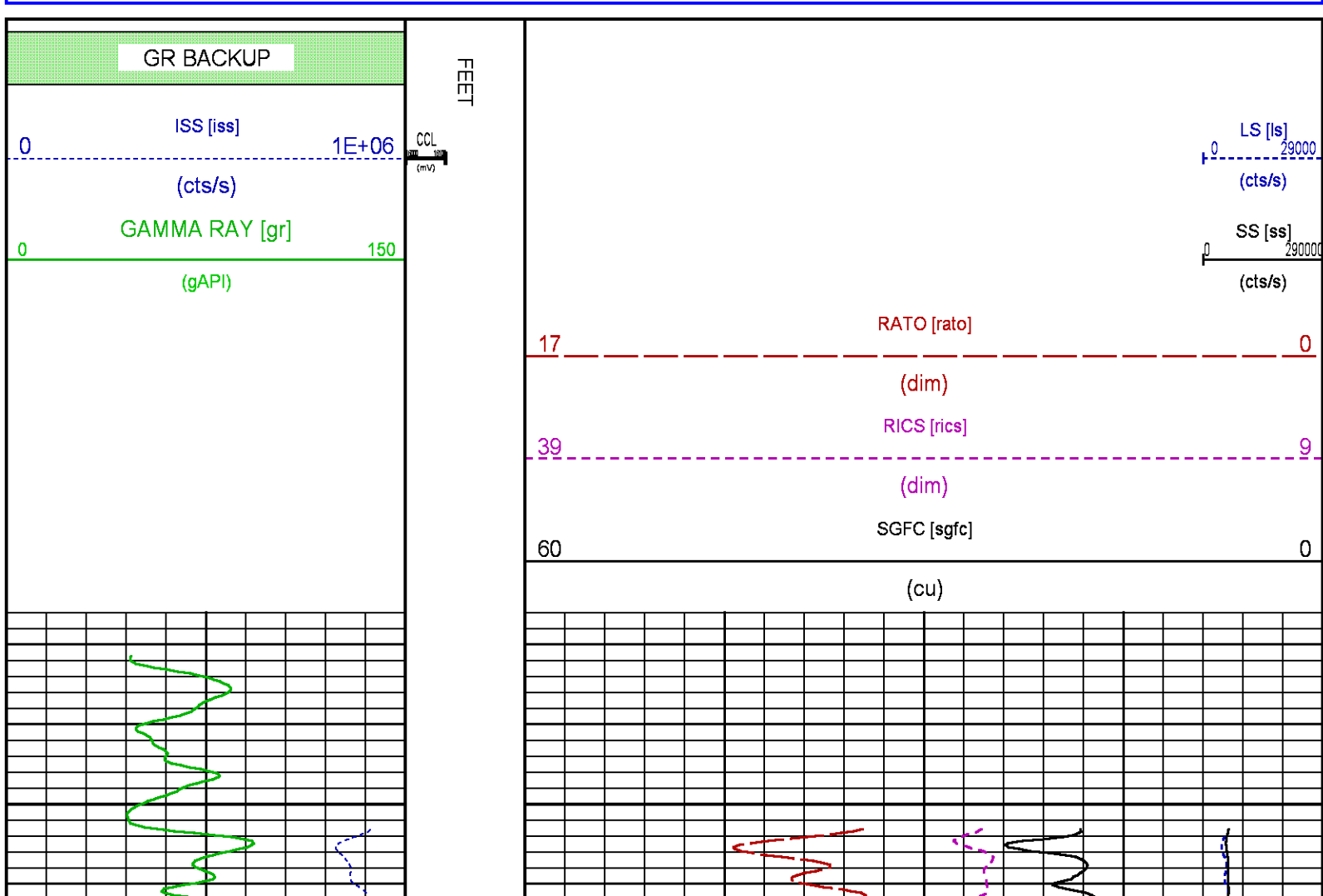
CURVE DESCRIPTION REPORT

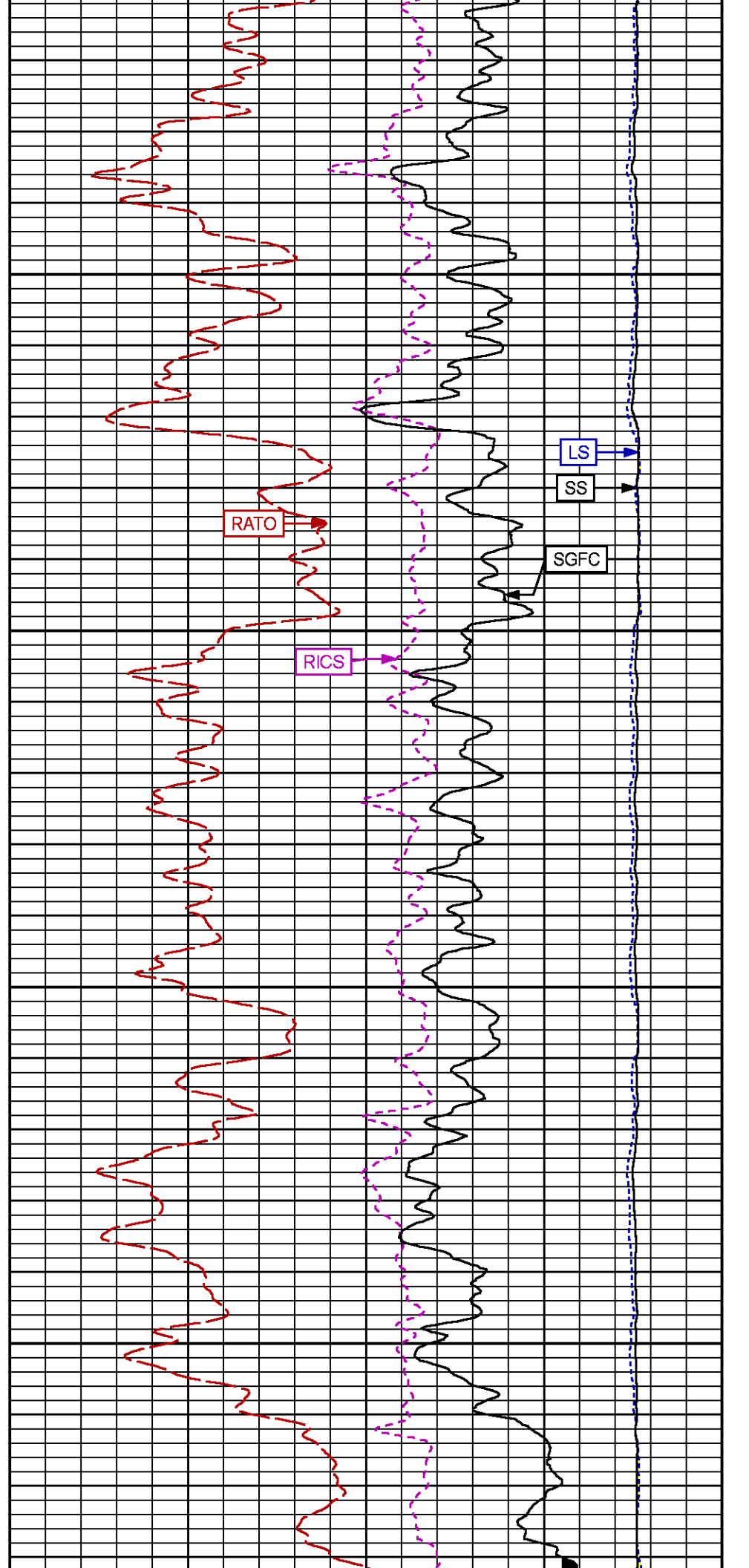
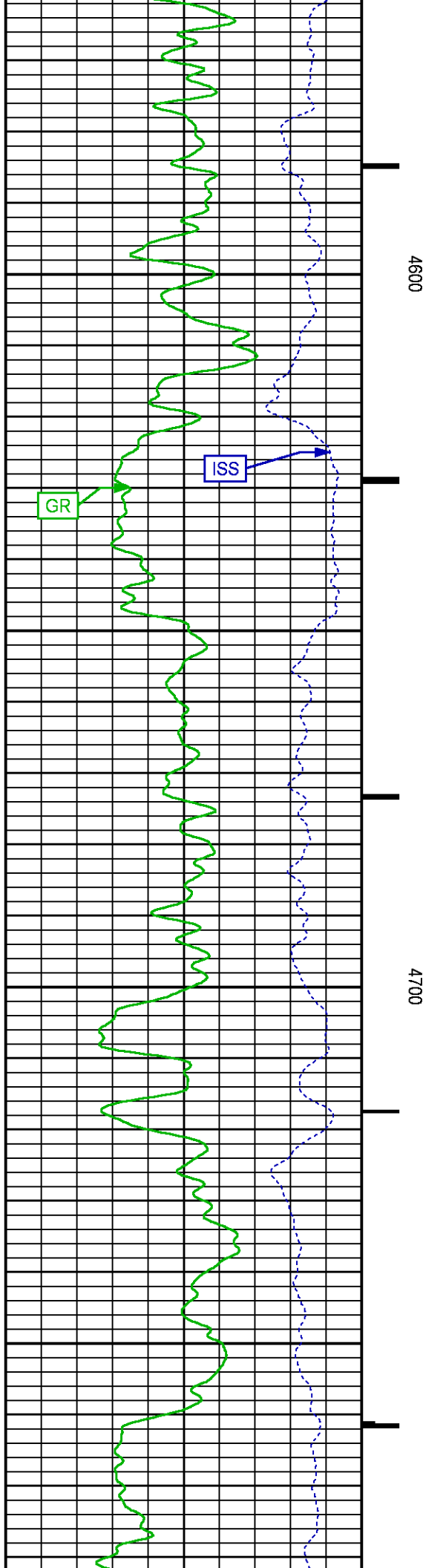
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Oct 24 12:25:22 2015	CASING COLLAR LOCATOR
F1:GR	Oct 24 12:25:22 2015	GAMMA RAY
F1:ISS	Oct 24 12:25:22 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Oct 24 12:25:22 2015	LONG SPACE COUNT RATE
F1:RATO	Oct 24 12:25:22 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Oct 24 12:25:22 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Oct 24 12:25:22 2015	CORRECTED FORMATION SIGMA
F1:SS	Oct 24 12:25:22 2015	SHORT SPACE COUNT RATE

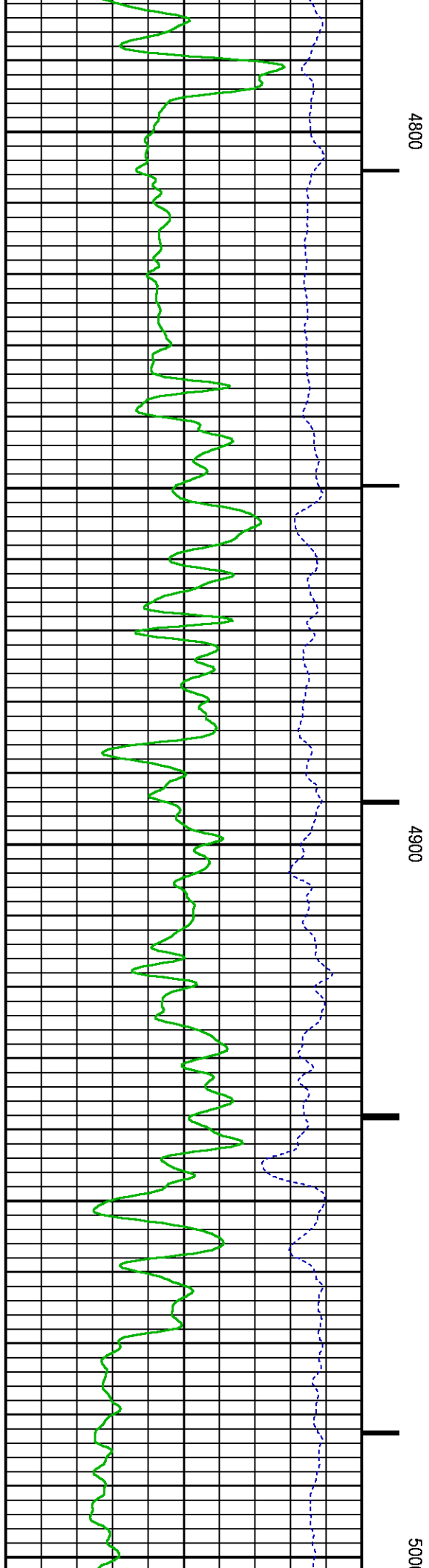
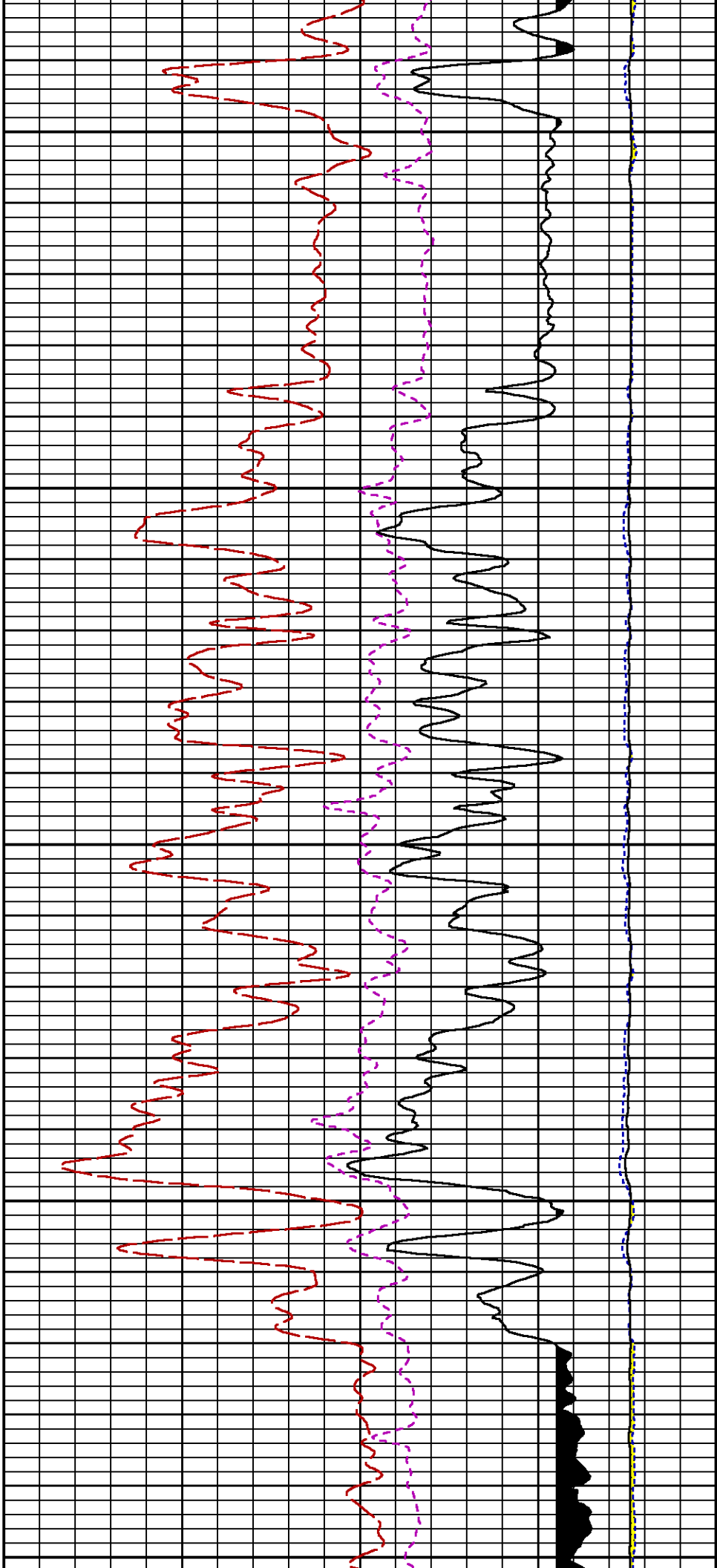
CURVE MEASURE POINT OFFSET

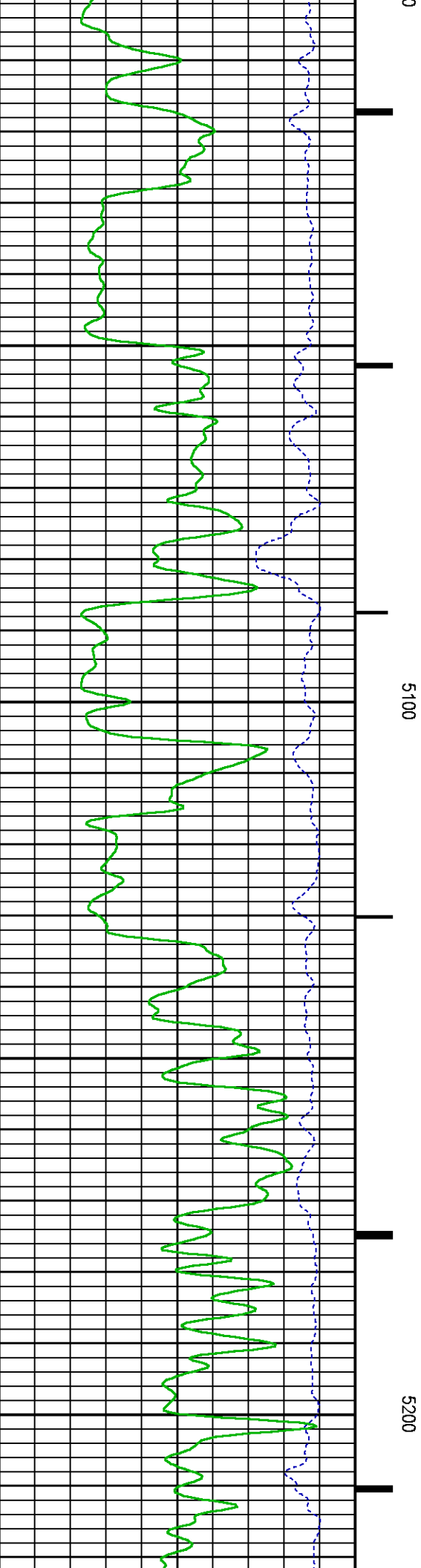
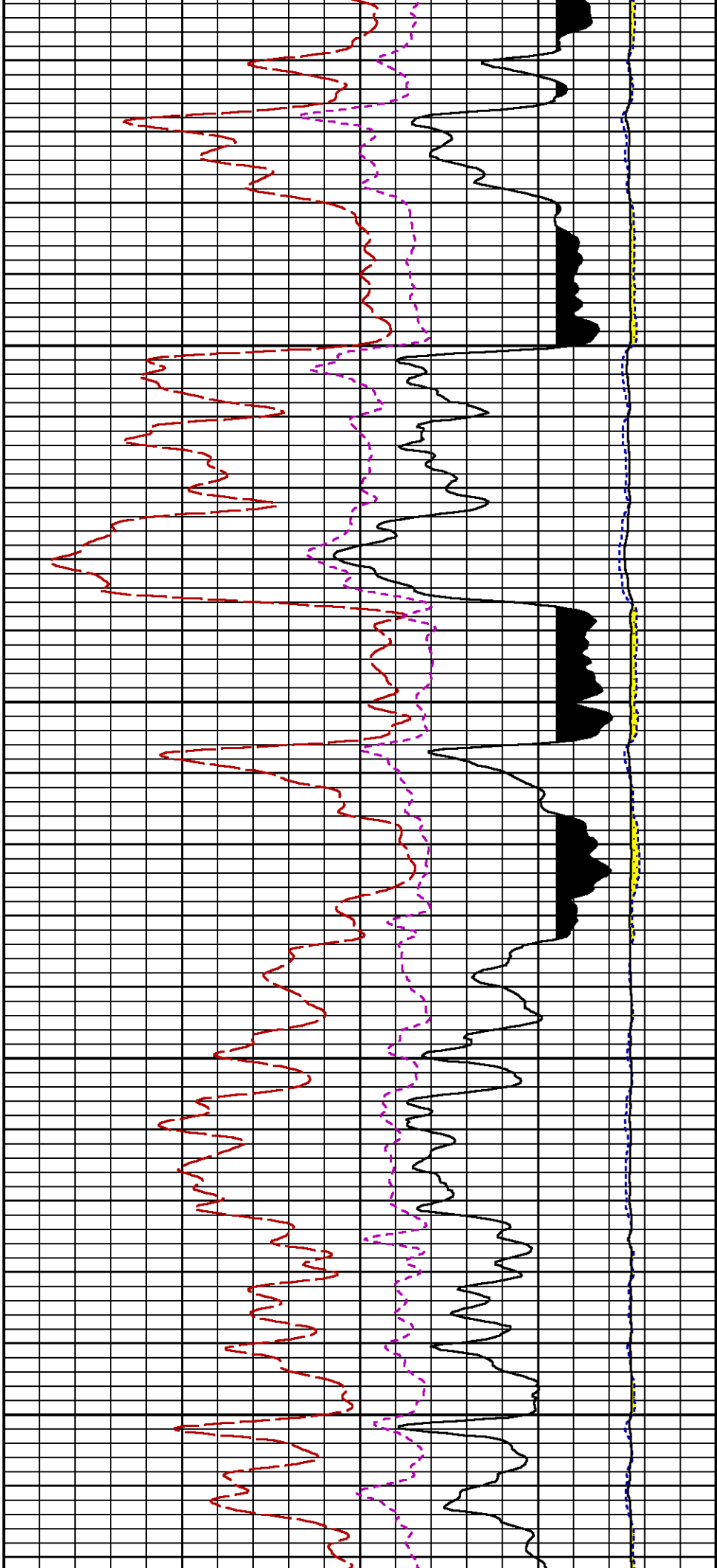
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
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GR	23.00	LS	12.75	RICS	12.75	SS	12.75

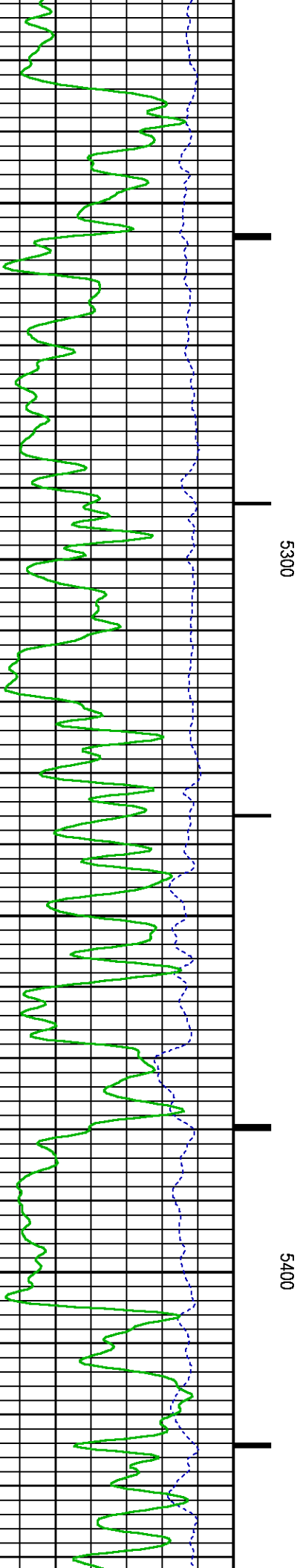
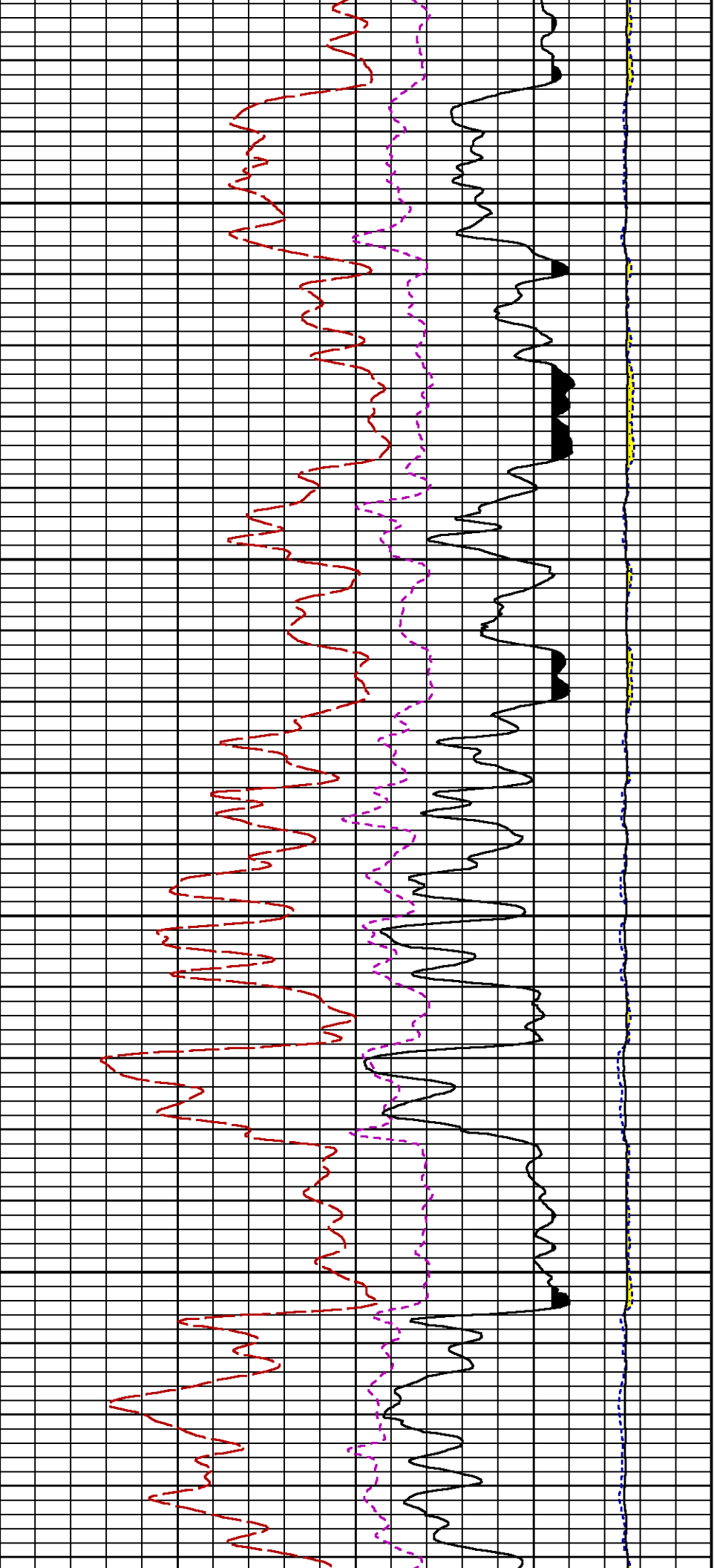
Presentation	: cas6685:/dat1a/CH100232/RPM_main.fvpdf [5"/100' Scale]
Plot Interval	: 4527.25 - 7782.25 Feet
Data File 1	: F1 : cas6685:/dat1a/CH100232/n353h02.xtf
Created On	: Oct 24 12:25:22 2015
Company	: LARAMIE ENERGY
Well	: PICEANCE 28-04W
Field	: VEGA
File Interval	: 4526.5 - 7798.5 Feet
OCT	: n353h

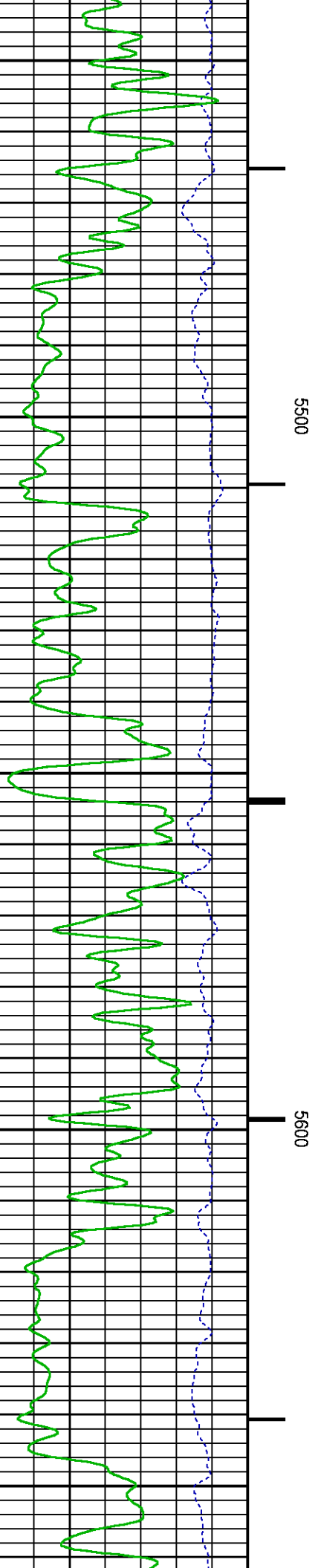
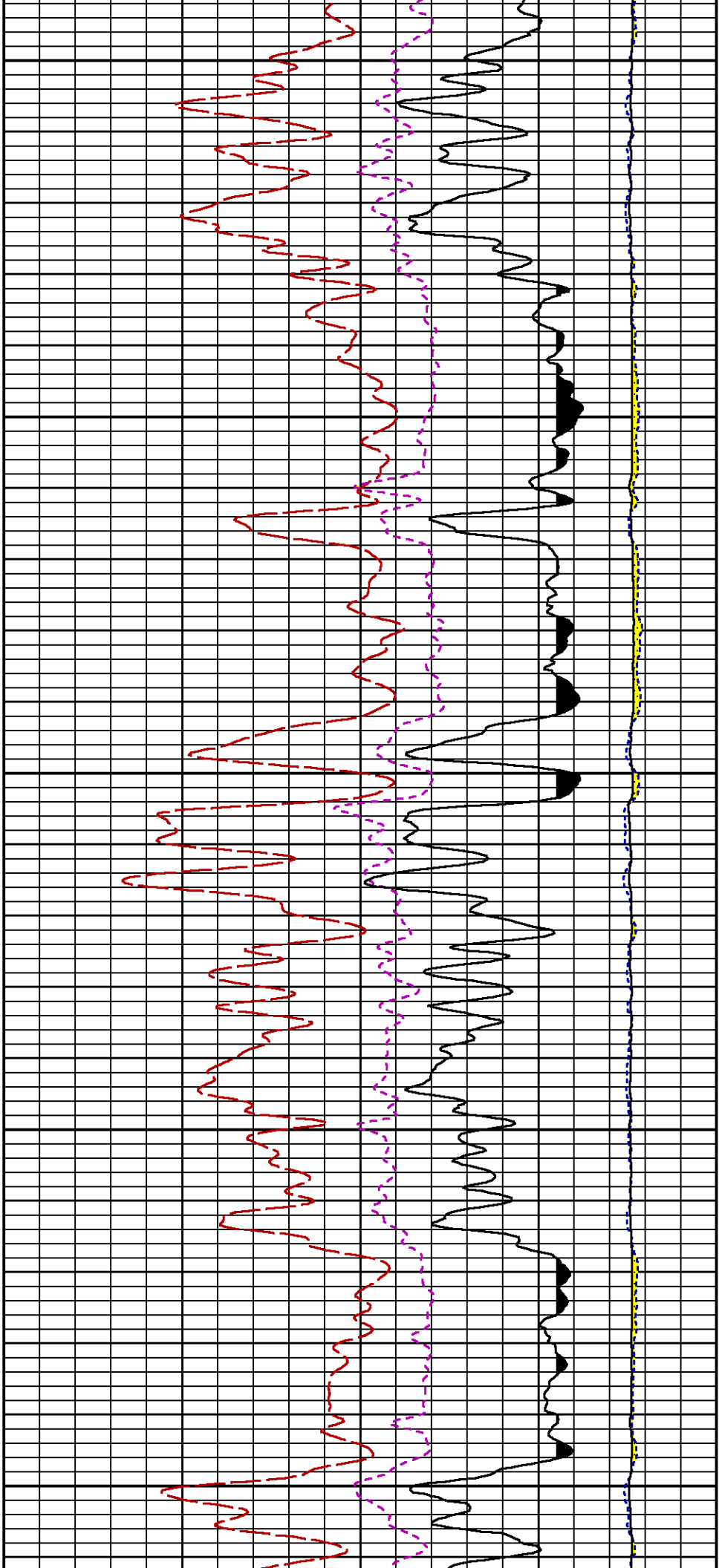


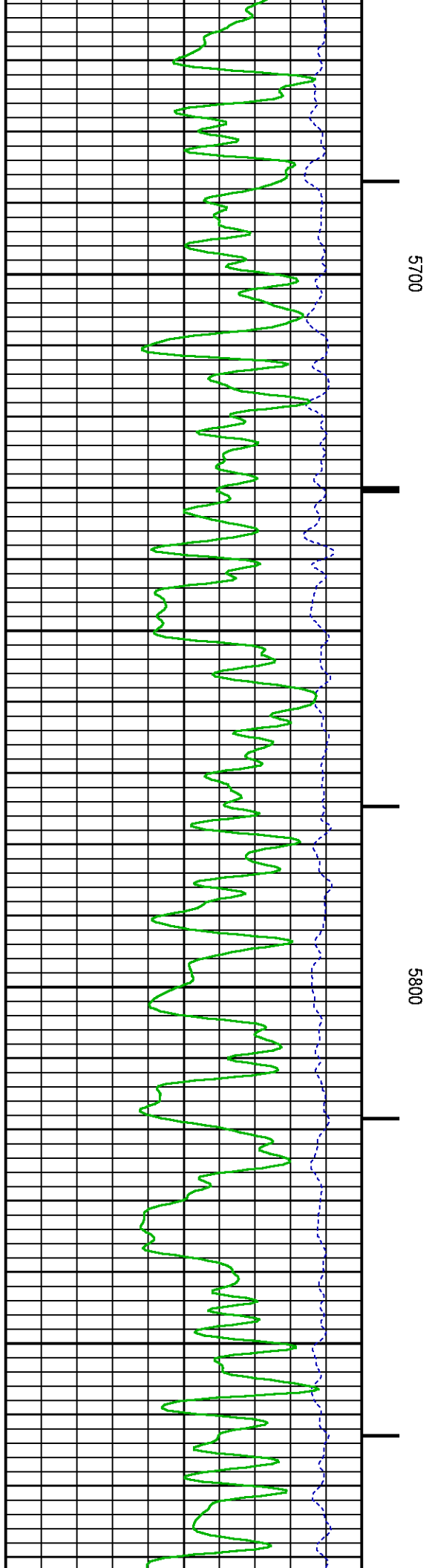
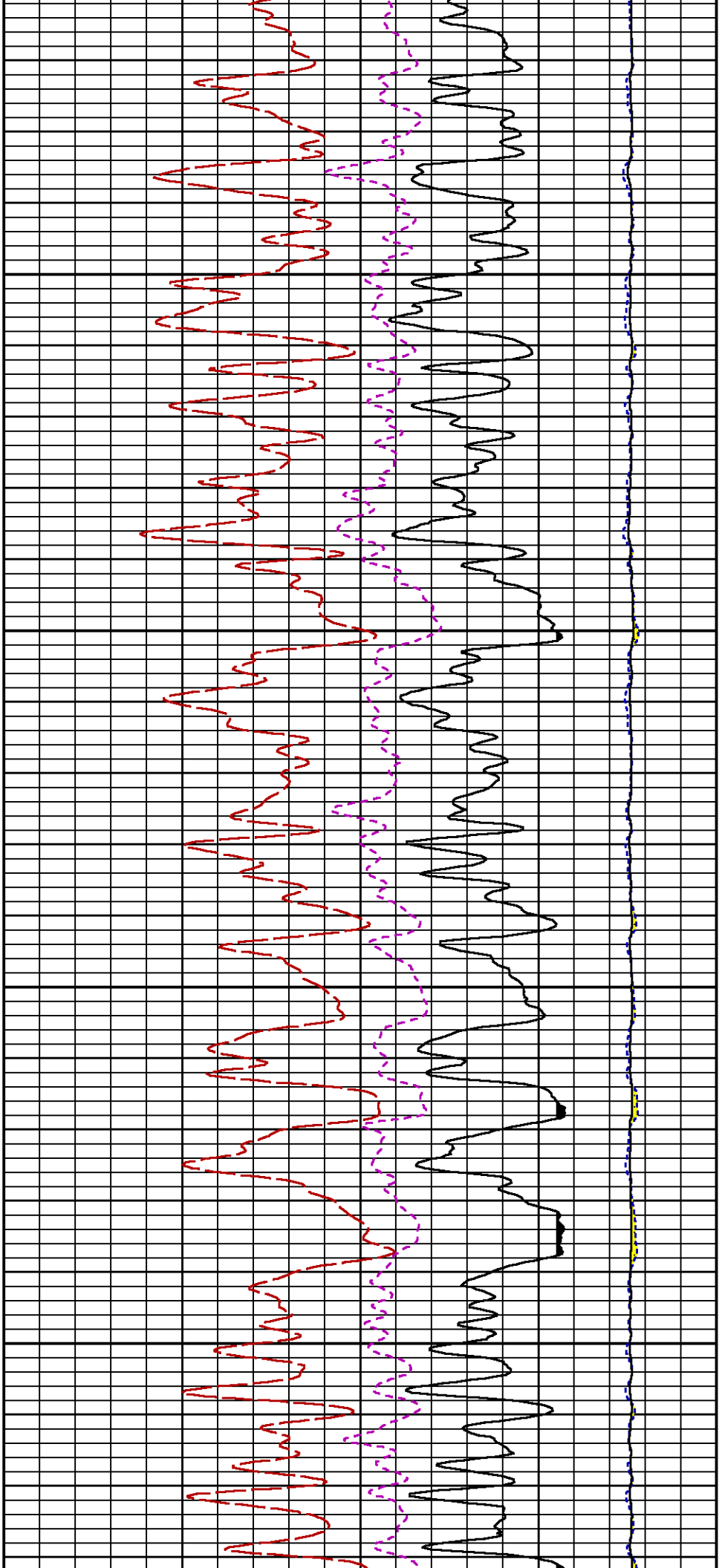


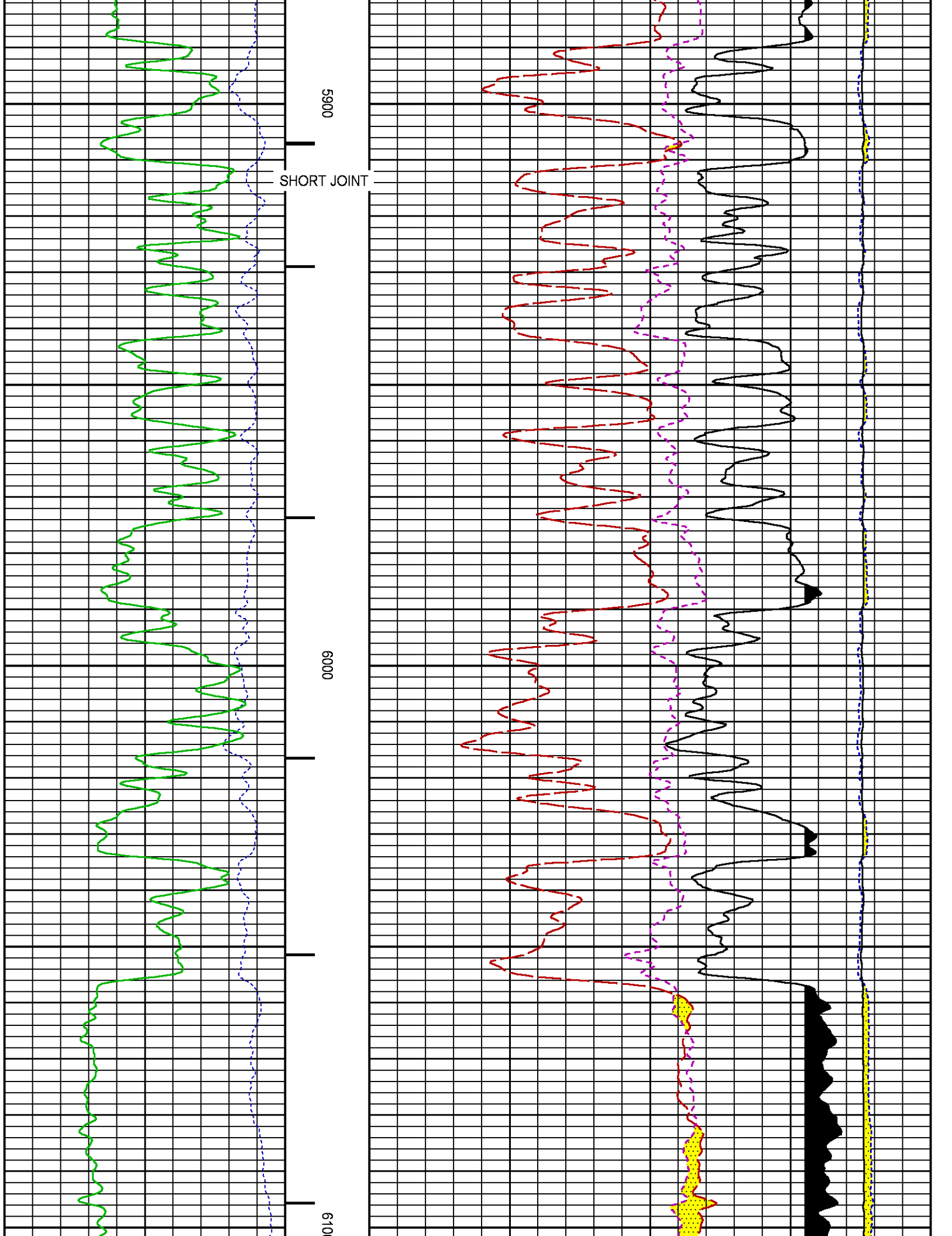


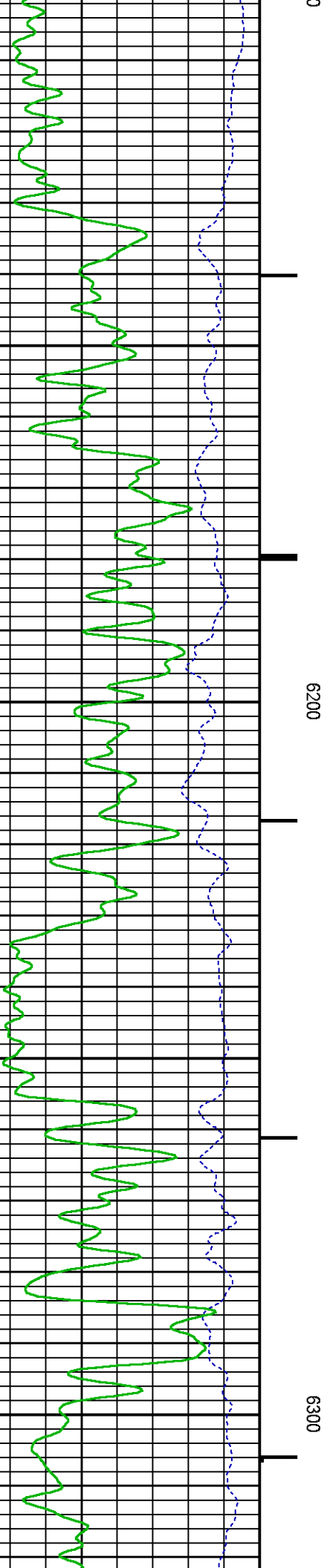
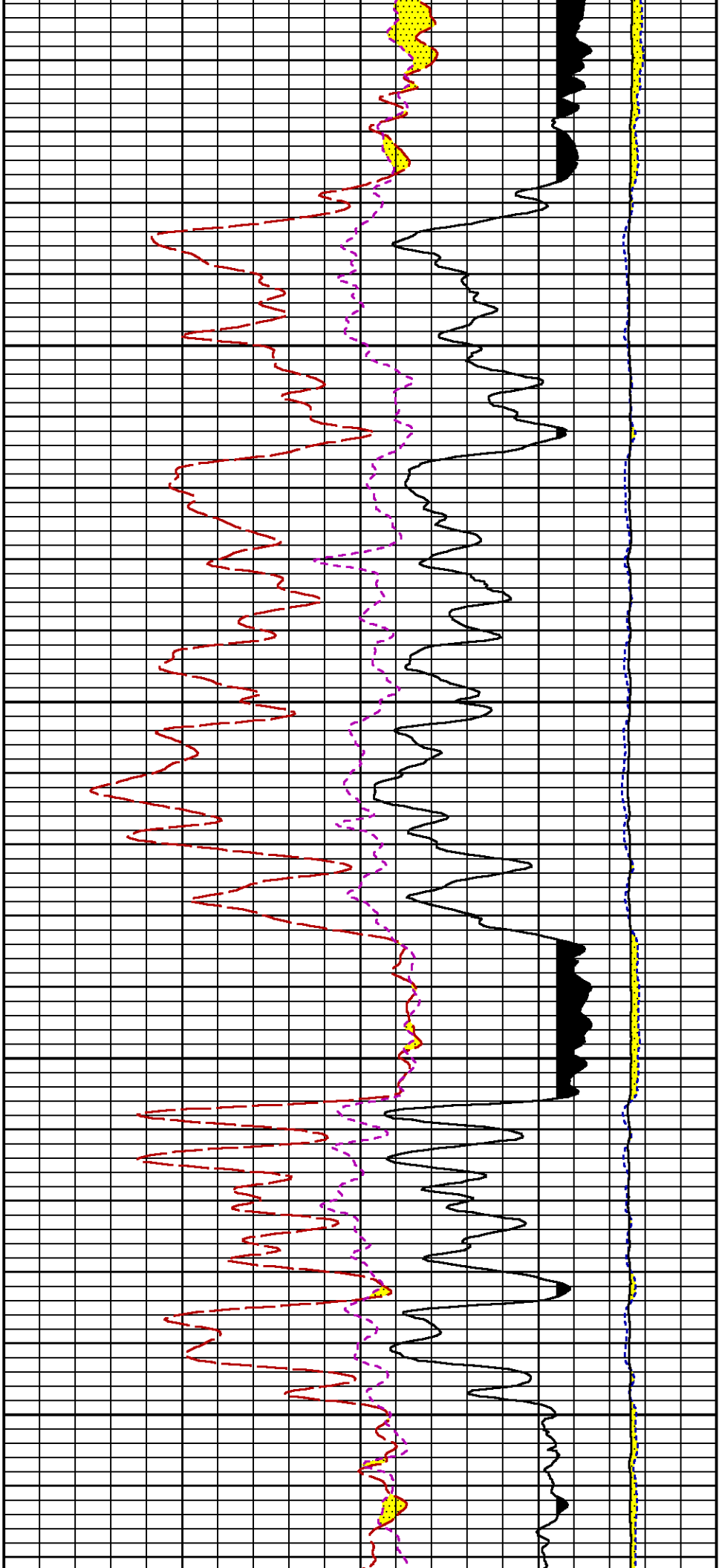


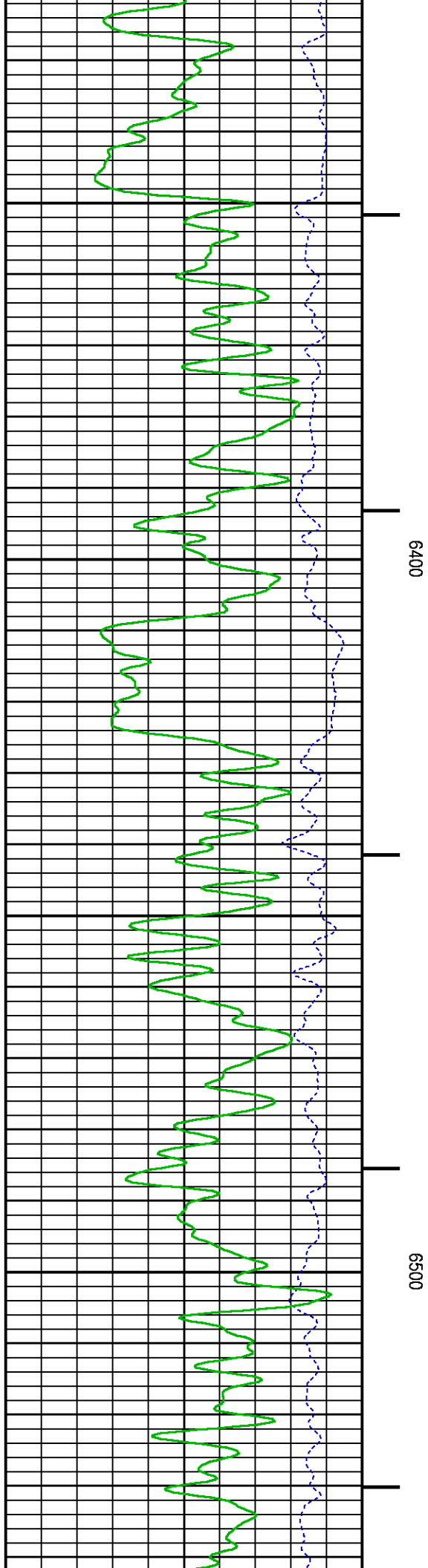
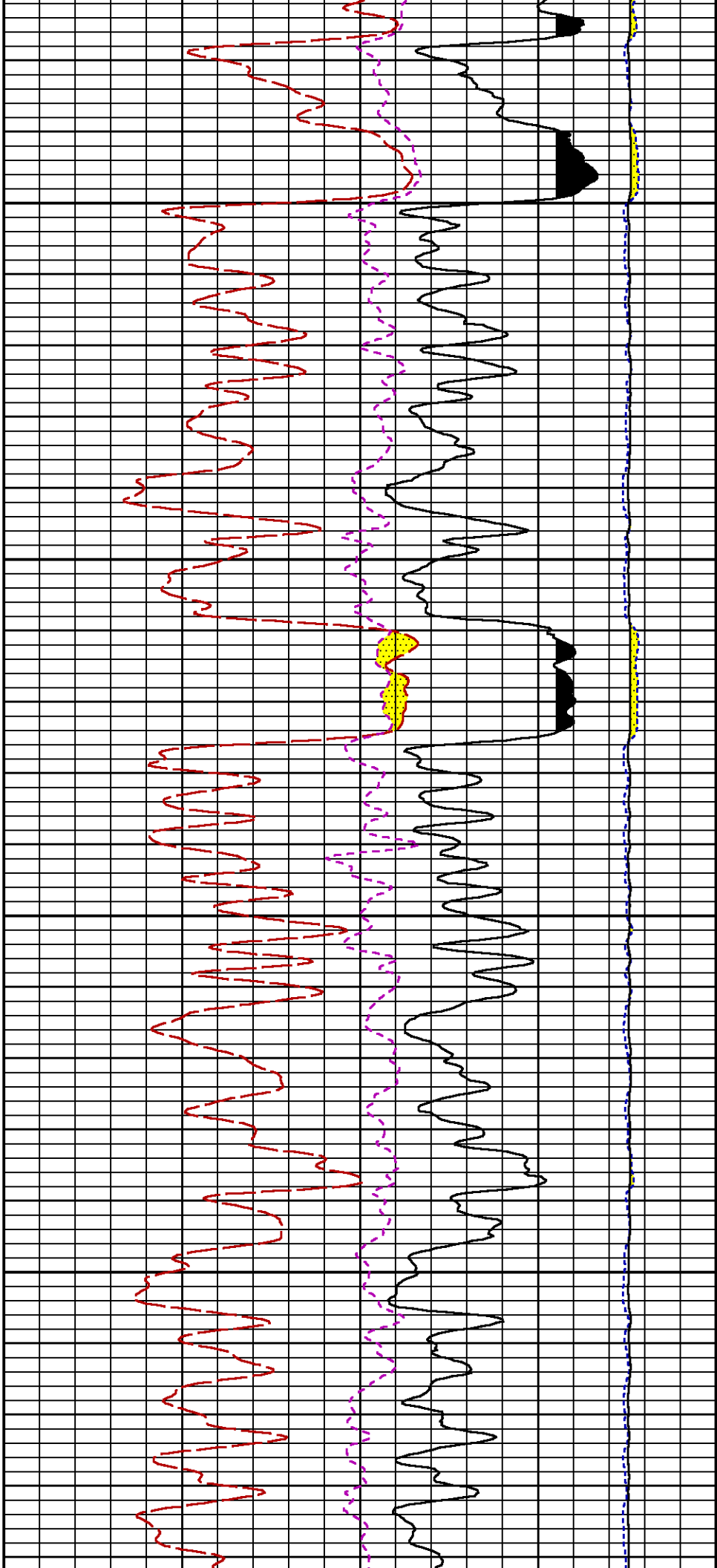


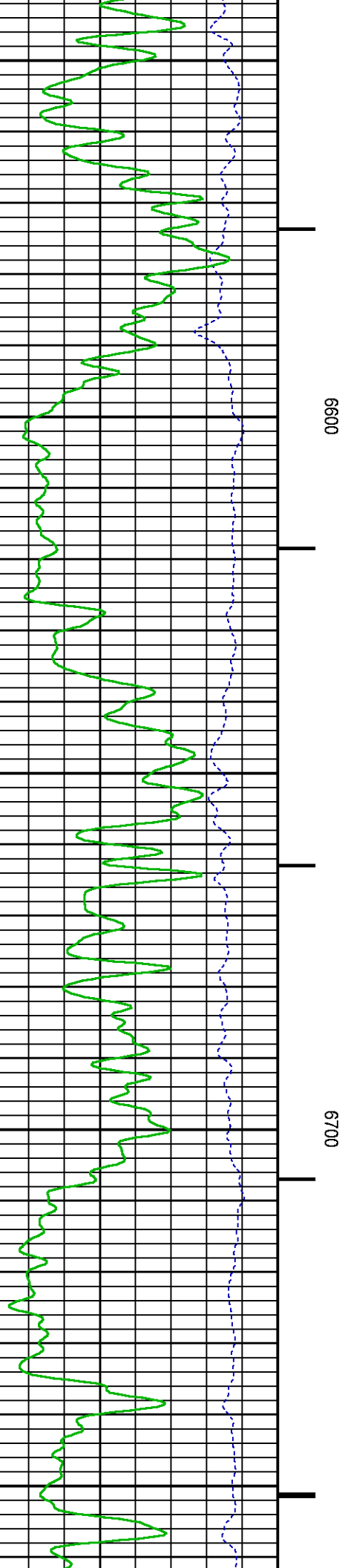
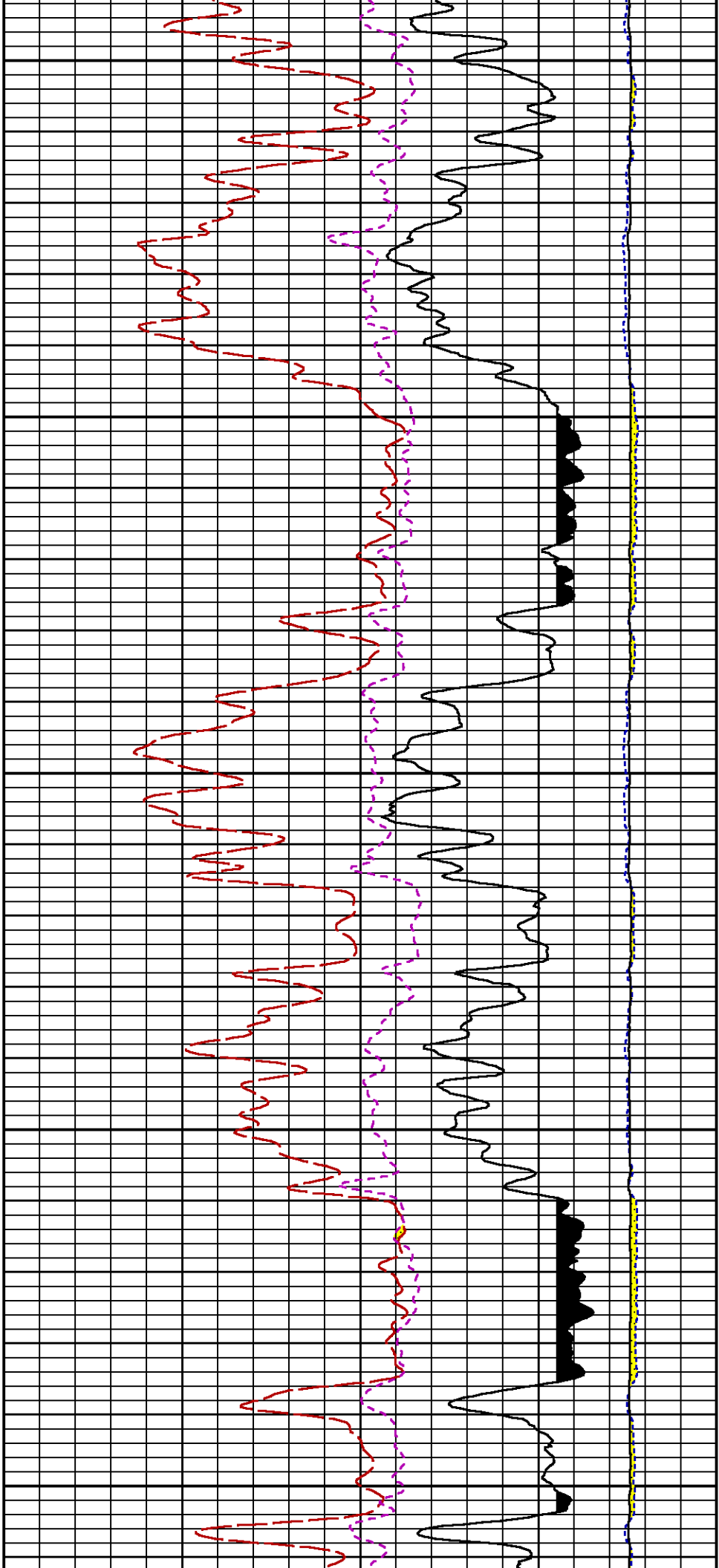


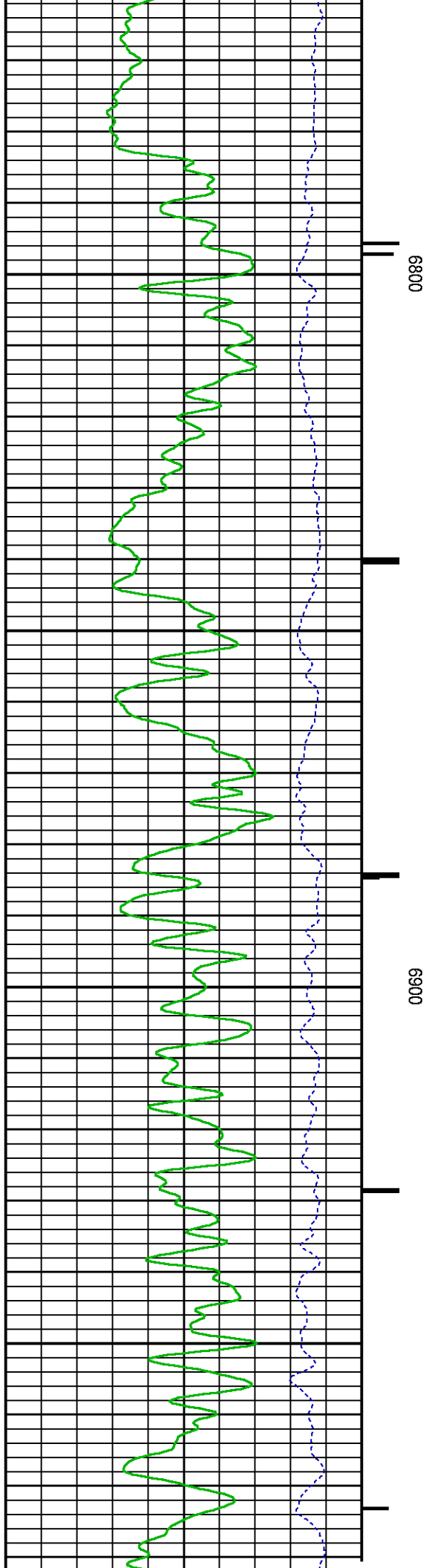
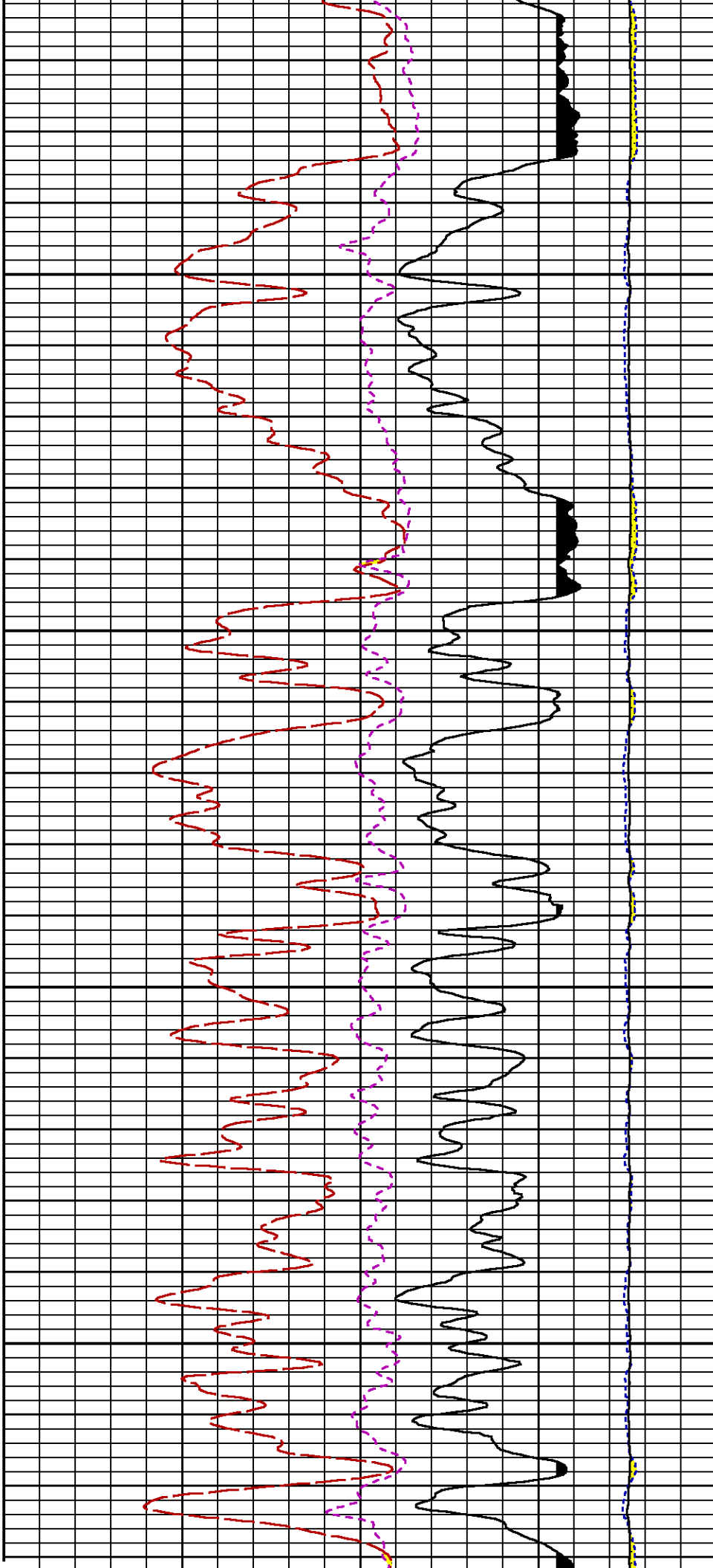










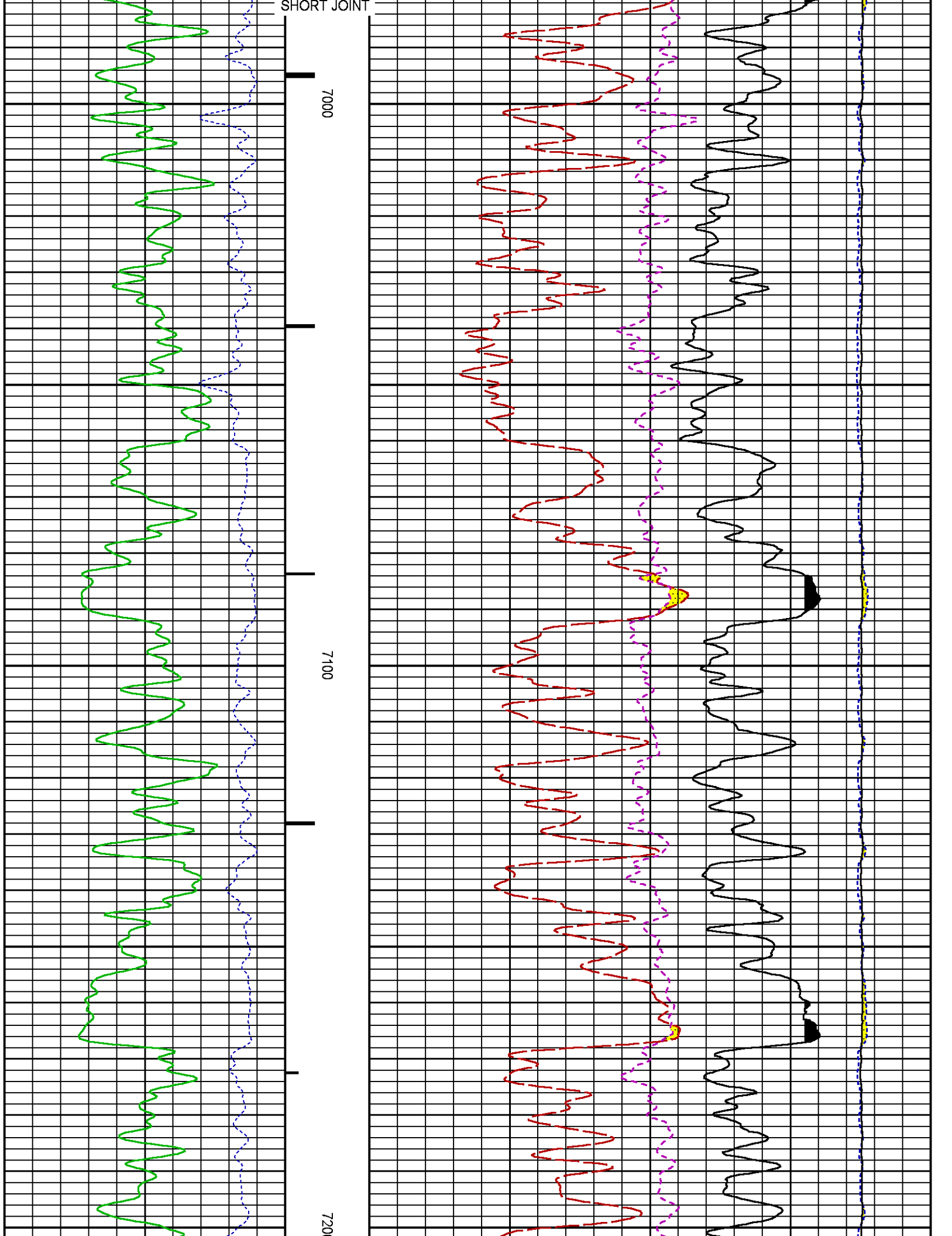


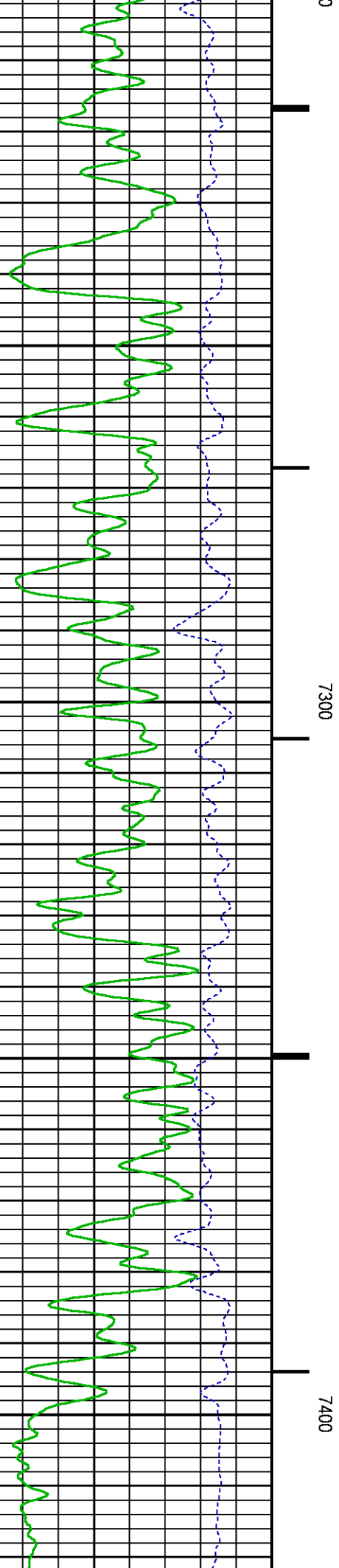
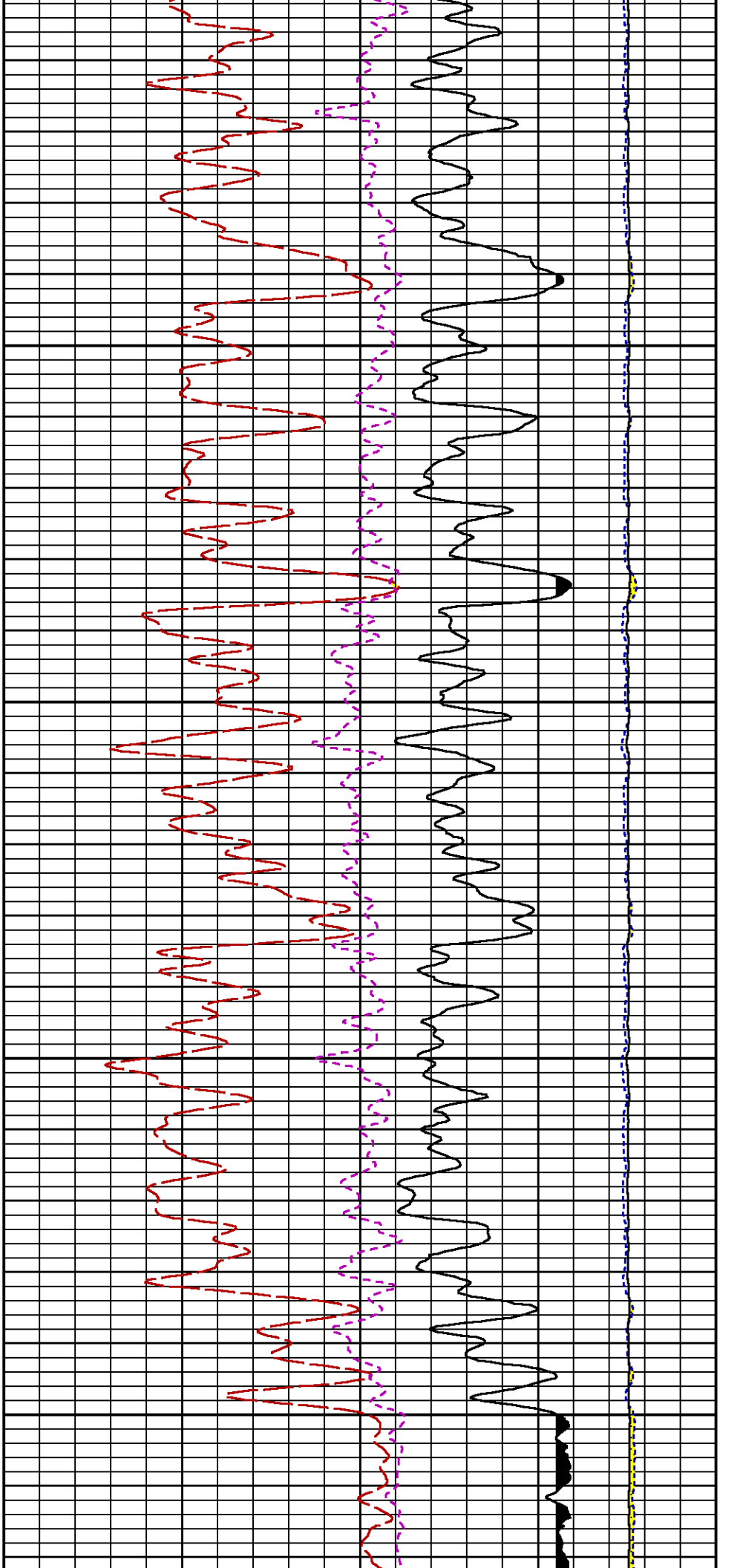
SHORT JOINT

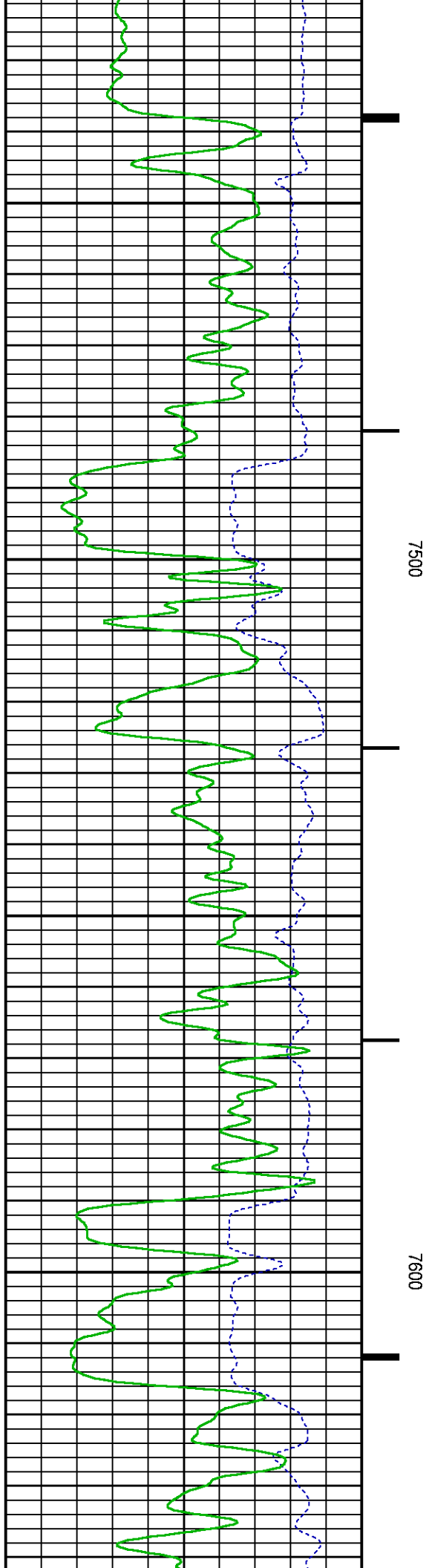
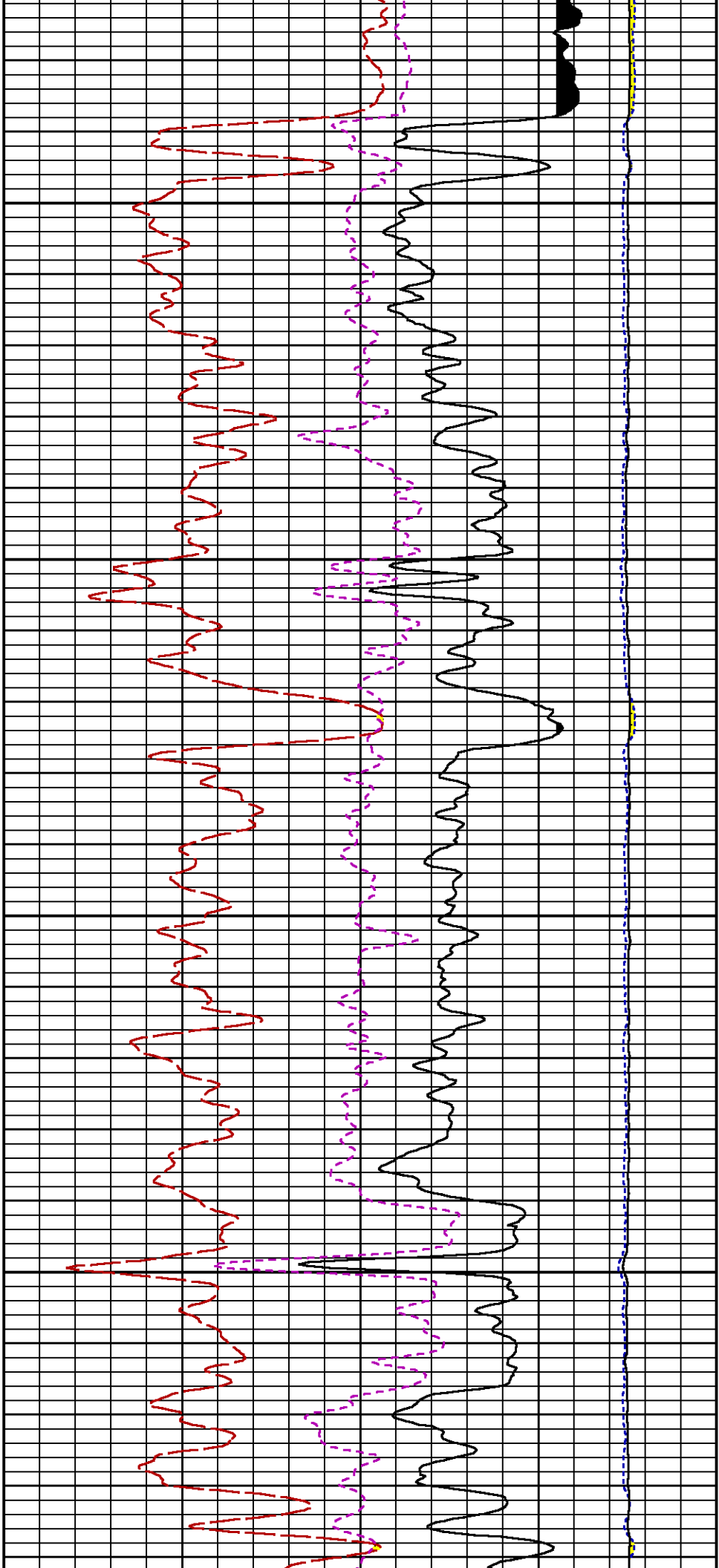
7000

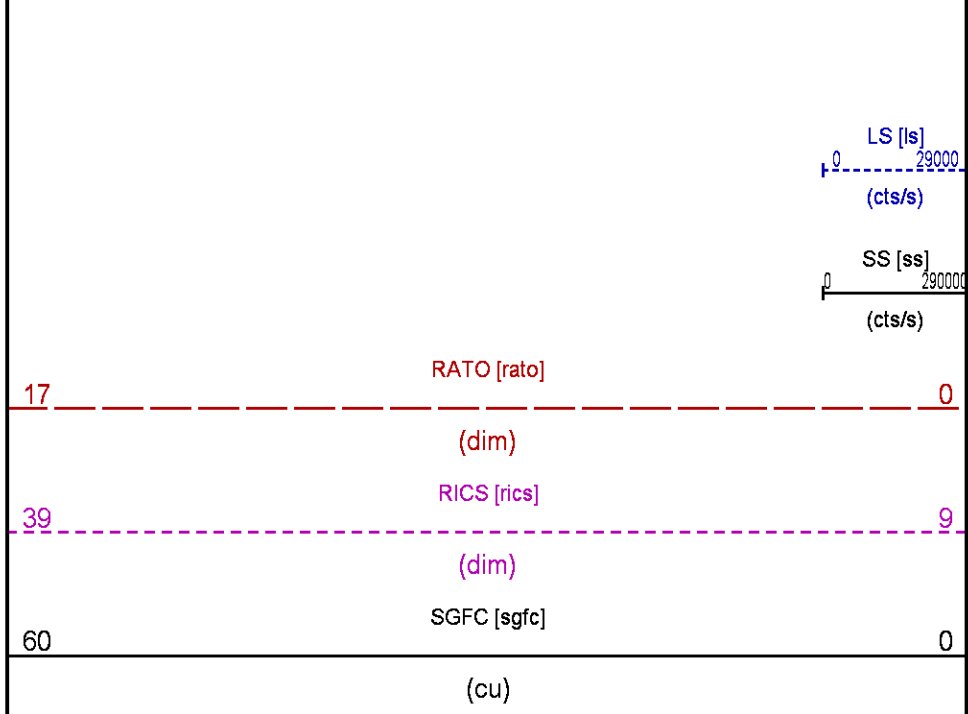
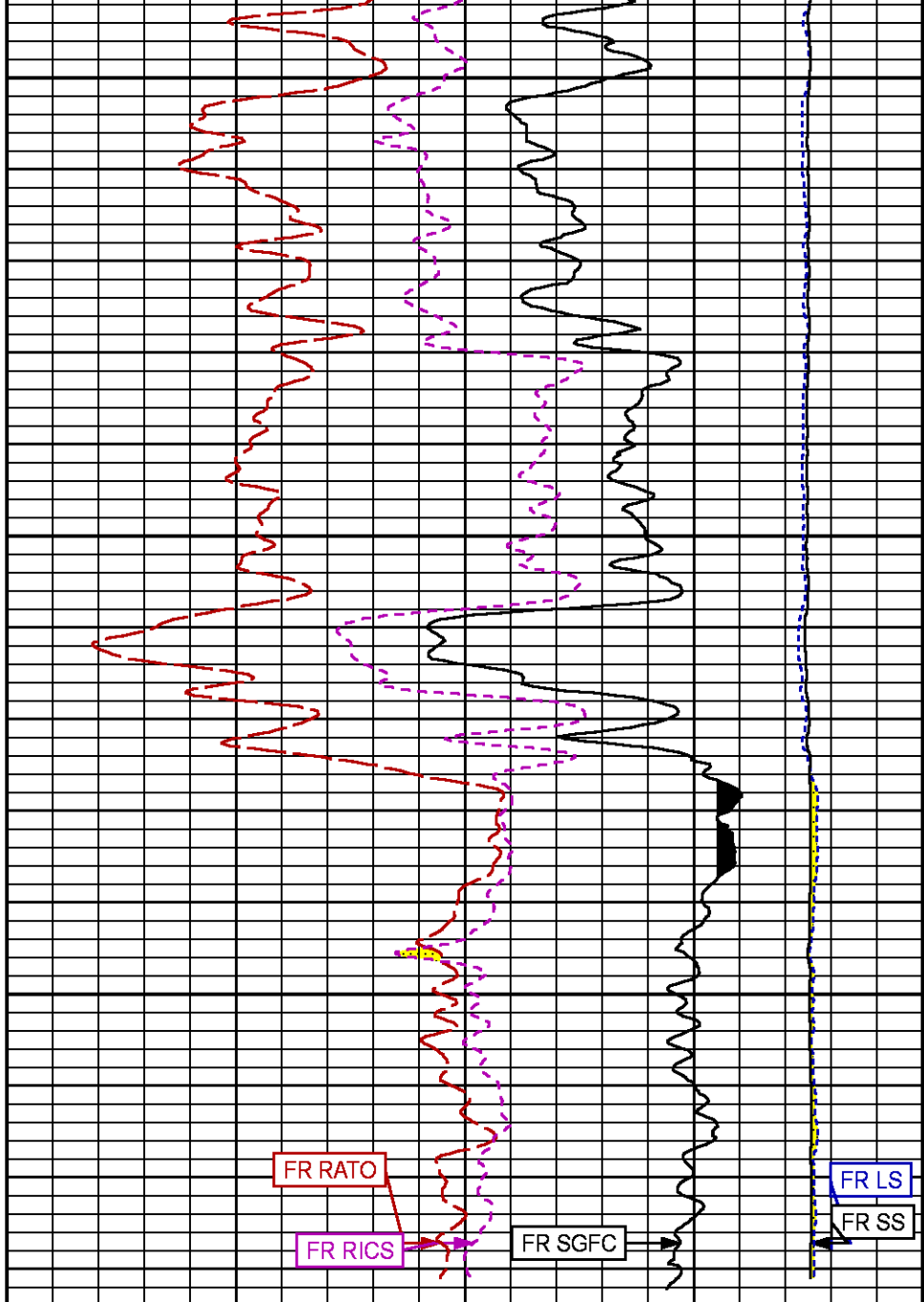
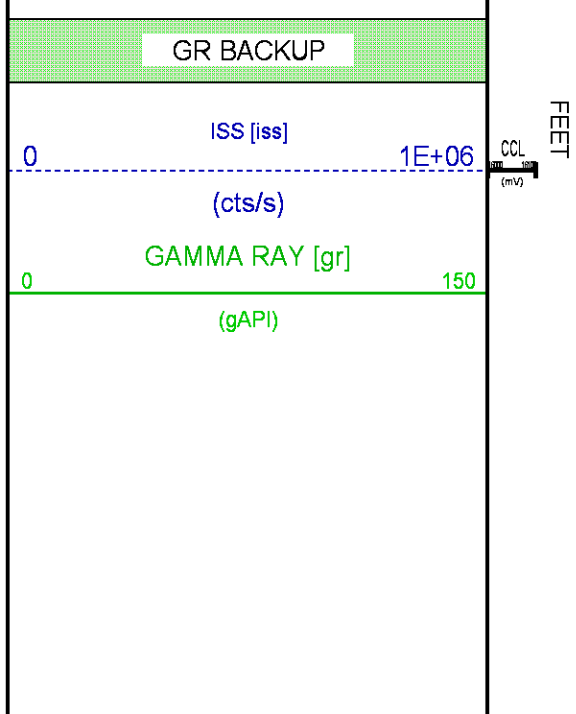
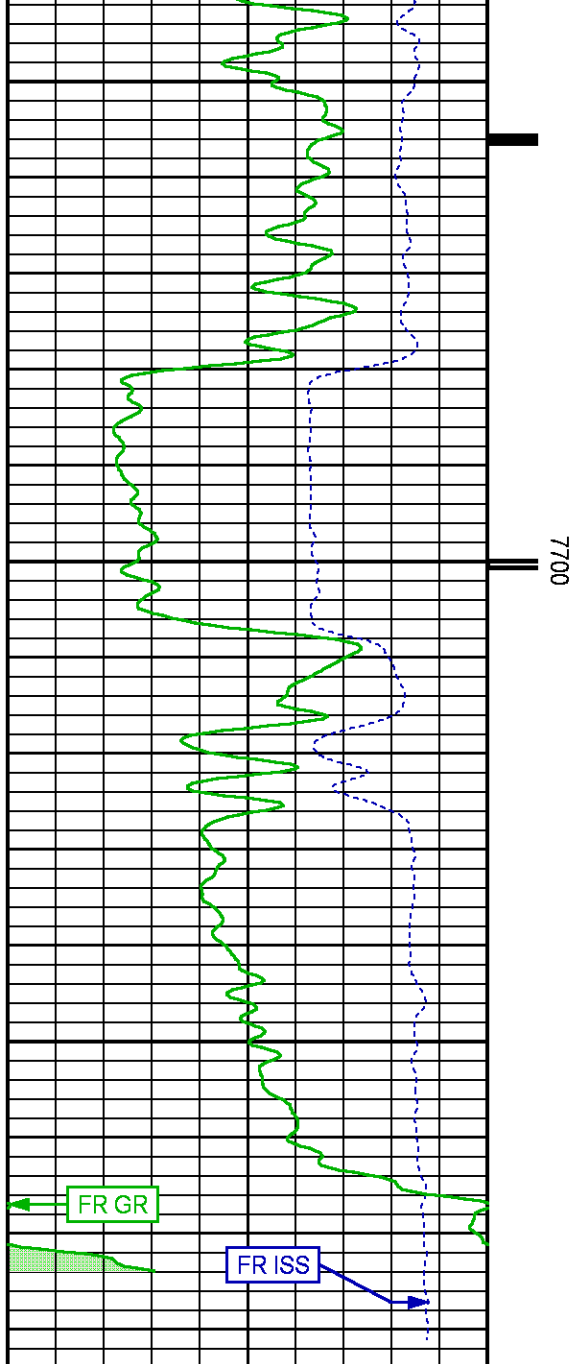
7100

7200









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: Sat Oct 24 13:03:42 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100232/n353h01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 7586.500 ft BOTTOM DEPTH: 7795.250 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	7.87	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Oct 24 12:09:41 2015	CASING COLLAR LOCATOR
F1:GR	Oct 24 12:09:41 2015	GAMMA RAY
F1:ISS	Oct 24 12:09:41 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Oct 24 12:09:41 2015	LONG SPACE COUNT RATE
F1:RATO	Oct 24 12:09:41 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Oct 24 12:09:41 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Oct 24 12:09:41 2015	CORRECTED FORMATION SIGMA
F1:SS	Oct 24 12:09:41 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/CH100232/RPM_RPT.fvpdf [5"/100' Scale]
 Plot Interval : 7557.25 - 7776 Feet

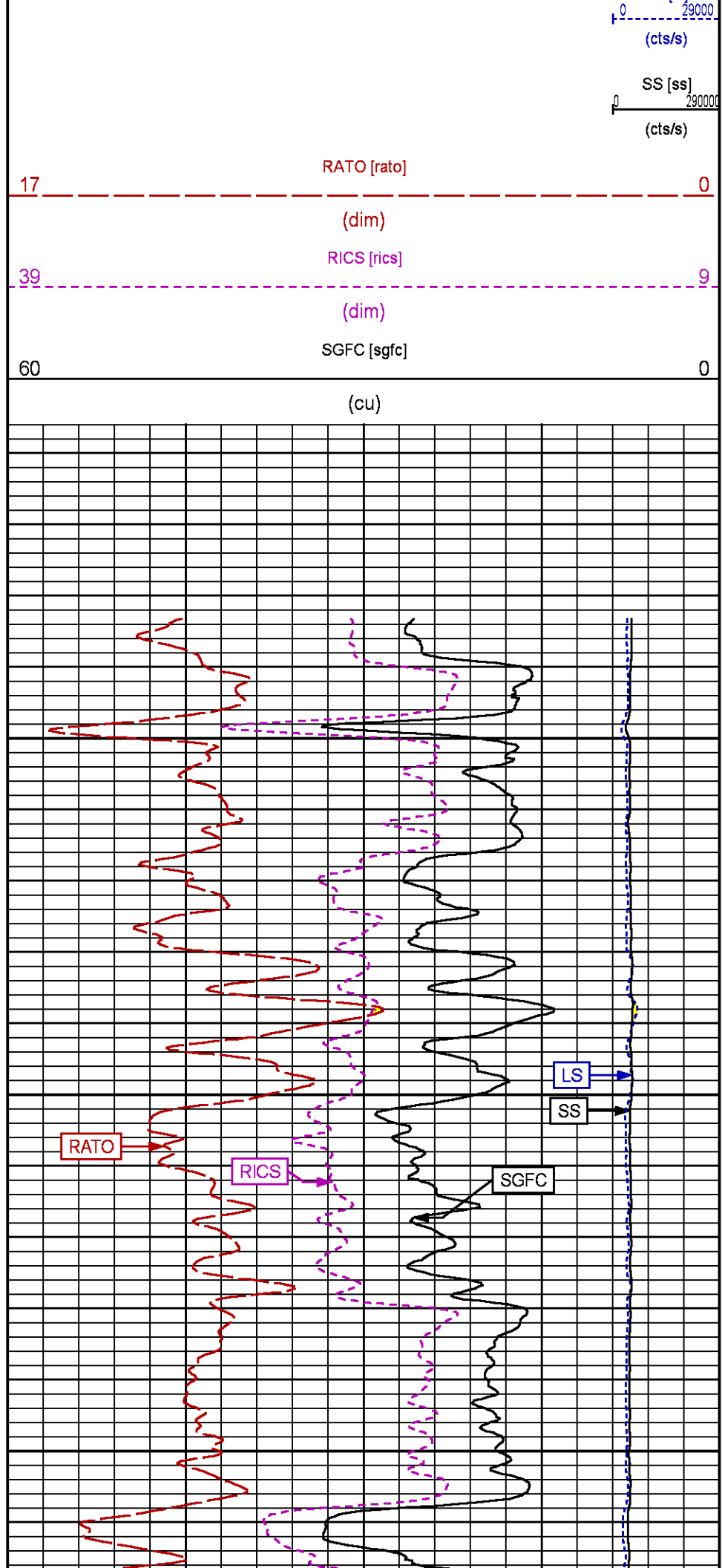
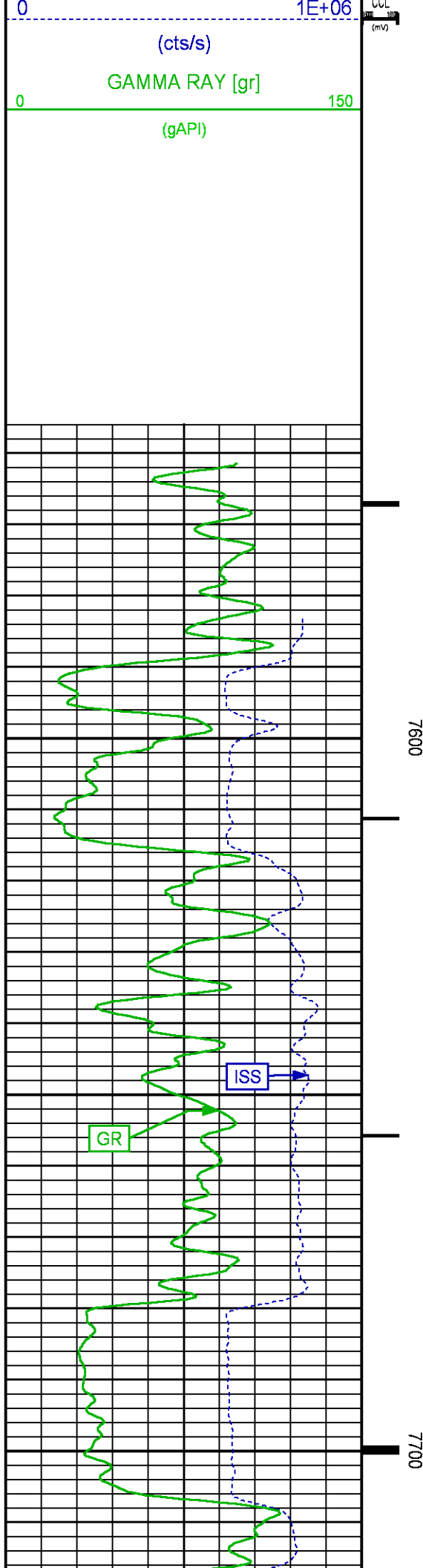
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 Created On : Oct 24 12:09:41 2015
 Company : LARAMIE ENERGY
 Well : PICEANCE 28-04W
 Field : VEGA
 File Interval : 7556.5 - 7795.25 Feet
 OCT : n353h

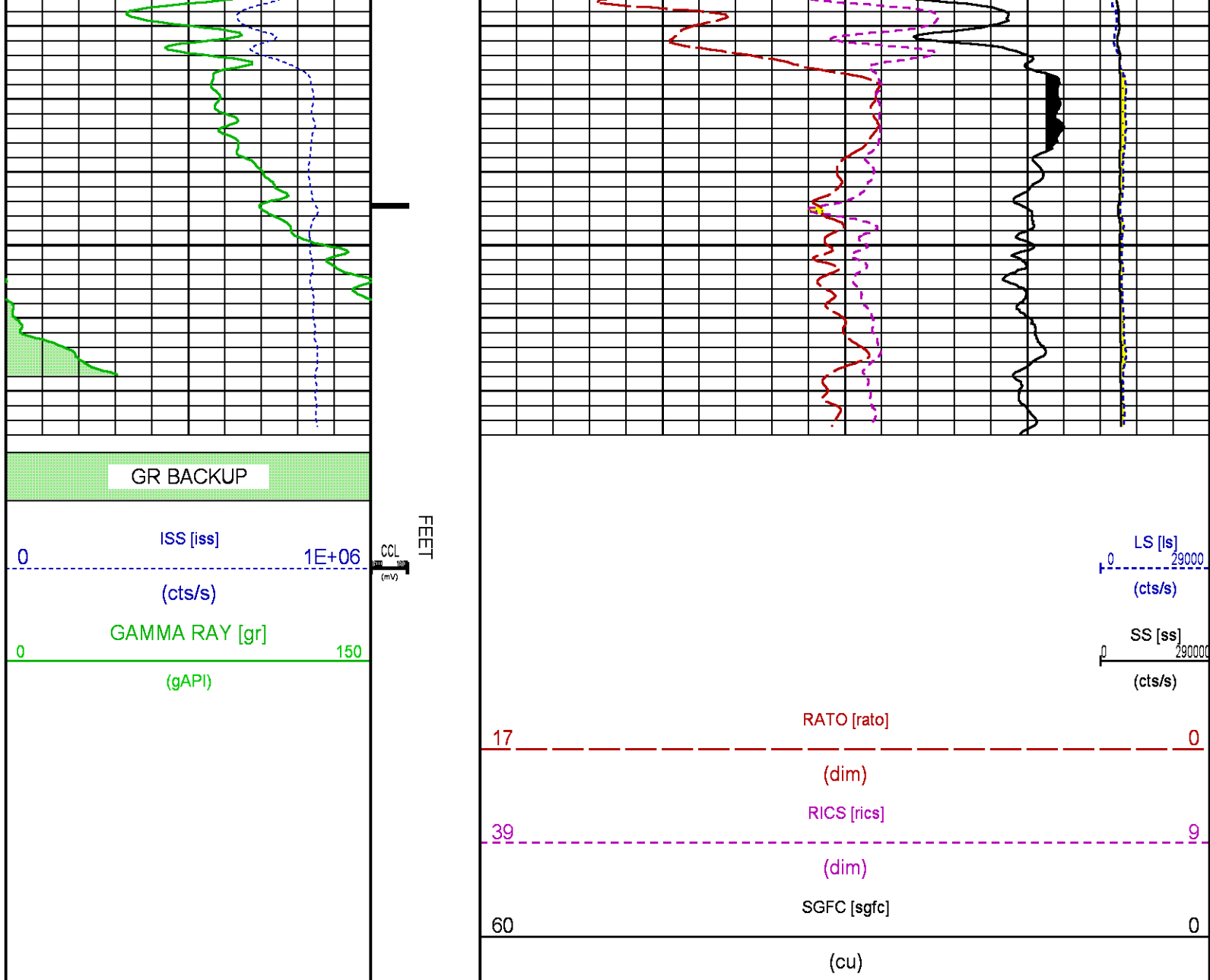
GR BACKUP

FEET

ISS [iss]

LS [ls]





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH100232/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	RIN13	RICS	RATO	RTWO	RONE
		ISS/ILS	ISS/IXS	ISS/CSS	SS/LS	SS2/LS	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 Z176973

DATE/TIME PERFORMED: Wed Oct 21 14:27:55 2015

UNIT #: 3885TC 6685

	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

Source File: /dat1a/CH100232/h353h~joe-tdg

A3 CABLEHEAD

PCM POWER SUPPLY

Diameter : 1.70"

Length : 3.86'

34.08'

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

CCL MP 26.03'

GAMMA RAY

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

GR MP 22.90'

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

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

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

TEMP MP 1.65'
PRES MP

BULL PLUG 1 11/16

0.00'


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



COMPANY

LARAMIE ENERGY

FILE NO:

	WELL	PICEANCE 28-04W		CH100232
	FIELD	VEGA		API NO:
	COUNTY	MESA	STATE	COLORADO
	LOCATION:			ELEVATIONS:
SHL: LAT 39.251150, LONG -107.779647 BHL: LAT 39.252950, LONG -107.780719			KB 7578 FT DF GL 7556 FT	28 9S 93W 28-05 PAD PATTERSON 308
SEC 28 TWP 9S RGE 93W			DATE 24-Oct-2015	