



FILE NO: CH100607	COMPANY LARAMIE ENERGY
API NO: 05077102560000	WELL PICEANCE FEDERAL 28-20E
	FIELD VEGA
	COUNTY MESA
	STATE CO
Ver. 4.05 SEC 28 T9S R93W 28-10 PAD PATTERSON 306	LOCATION: SHL: 2001' FSL 2489' FWL BHL: 363' FSL 881' FEL SEC 28 TWP 9S RGE 93W
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	OTHER SERVICES CBL JCGR
GL KB KB	ELEVATIONS: KB 7701 FT DF GL 7679 FT
ELEVATION 22 FT ABOVE P.D.	

DATE	31-Oct-2015
RUN	2
TRIP	1
SERVICE ORDER	US100607J
DEPTH DRILLER	8446 FT
DEPTH LOGGER	NOT TAGGED
BOTTOM LOGGED INTERVAL	8368 FT
TOP LOGGED INTERVAL	3000 FT
TIME STARTED	7:15
TIME FINISHED	14:00
OPERATOR RIG TIME	6:45
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	46 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMN
MAX. RECORDED TEMP.	243 DEGF
REFERENCE LOG	BAKER HUGHES BOND LOG
REFERENCE LOG DATE	30-OCT-2015
EQUIP. NO.	6685
LOCATION	W. QUIGLEY
RECORDED BY	MR. ROGER FOSTER
WITNESSED BY	

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
11 IN	0 FT	1604 FT
7.875 IN	1604 FT	8569 FT

#### CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
8.625 IN	24 LB/F	J-55	0 FT	1604 FT
4.5 IN	11.6 LB/F	I-80	0 FT	8569 FT

#### REMARKS

RUN 2 TRIP 1: DEPTH CORRELATED TO BAKER HUGHES BOND LOG DATED 30-OCT-2015

BHT = 243 degF

SJ = 6736' - 6759'

SJ = 7612' - 7634'

THANKS FOR USING BAKER HUGHES WIRELINE  
RIG: PATTERSON 306

LOGGED WITH 0 PSI AT THE WELLHEAD

JUNK CATCHER/GAUGE RING HIT PBTD/OBSTRUCTION AT ~8397 FT

SUBSEQUENT RUNS BEGIN WITH THE BOTTOM OF THE TOOLS AT 8390 FT TO AVOID STICKING  
PER CUSTOMER REQUEST

#### EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
2	1	TEL	8250XA	10586851	FREE
2	1	PWR	8248ED	10460262	FREE
2	1	GR	8262XA	10485470	FREE
2	1	RPM EA	8281EA	10294755	FREE
2	1	RPM	8283PA	10414345	FREE
2	1	RPM FA	8281FA	10460082	FREE
2	1	TEMP	8255XA	Z176973	FREE

### MAIN 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: Sat Oct 31 14:12:20 2015

#### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100607/n353h02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 2994.500 ft BOTTOM DEPTH: 8385.750 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	7.88	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

#### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100607/n012g02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 11.750 ft BOTTOM DEPTH: 8390.000 ft

#### SYMMETRIC FILTER

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

#### RAL CCL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CCL FLOOR	CCL FLOOR	0		TOP	BOTTOM

#### CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
------------	---------------	-------------------

F2:CCL	Oct 30 16:46:36 2015	CASING COLLAR LOCATOR
F1:GR	Oct 31 08:23:33 2015	GAMMA RAY
F1:ISS	Oct 31 08:23:33 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Oct 31 08:23:33 2015	LONG SPACE COUNT RATE
F1:RATO	Oct 31 08:23:33 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Oct 31 08:23:33 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Oct 31 08:23:33 2015	CORRECTED FORMATION SIGMA
F1:SS	Oct 31 08:23:33 2015	SHORT SPACE COUNT RATE

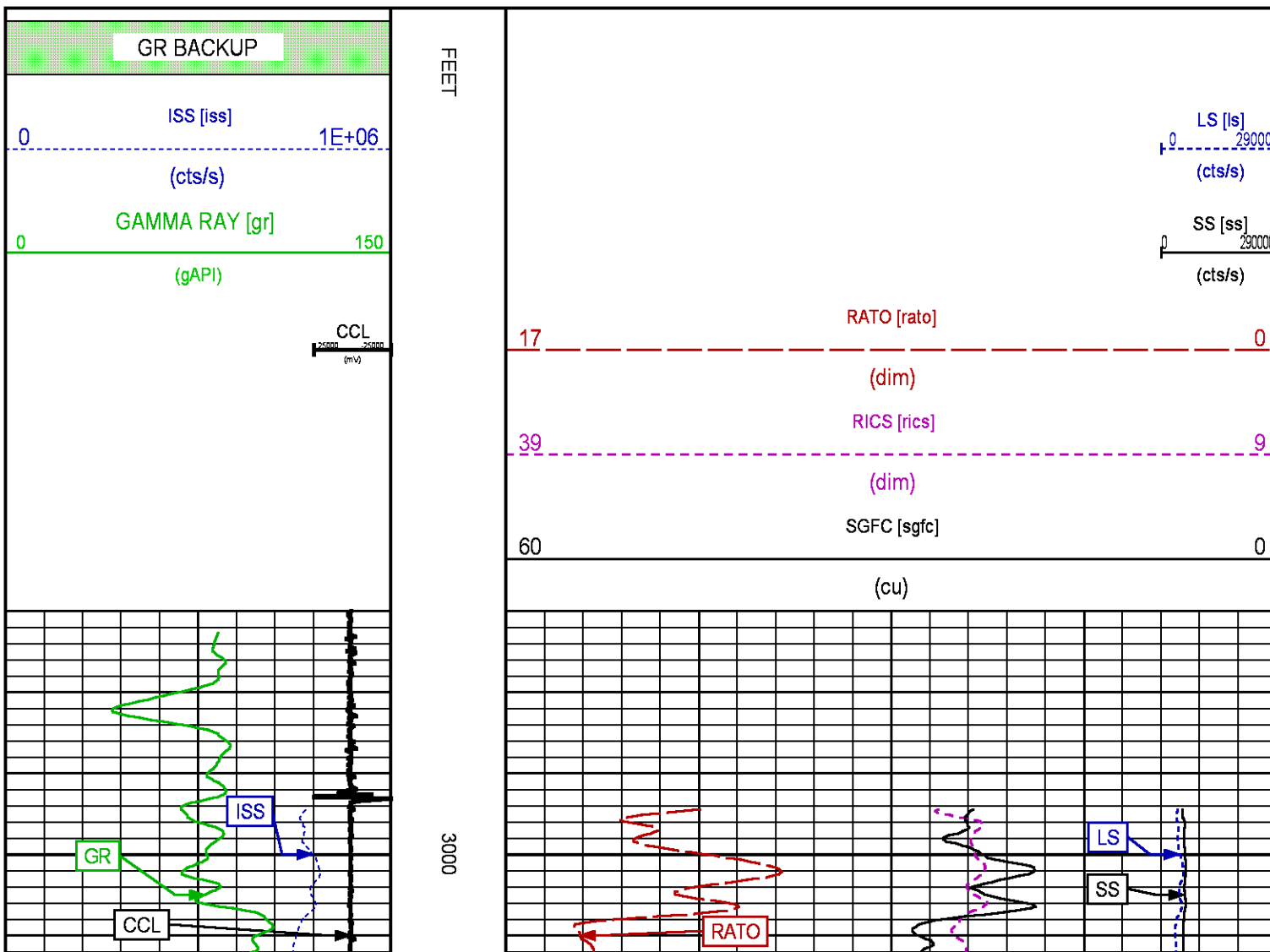
## CURVE MEASURE POINT OFFSET

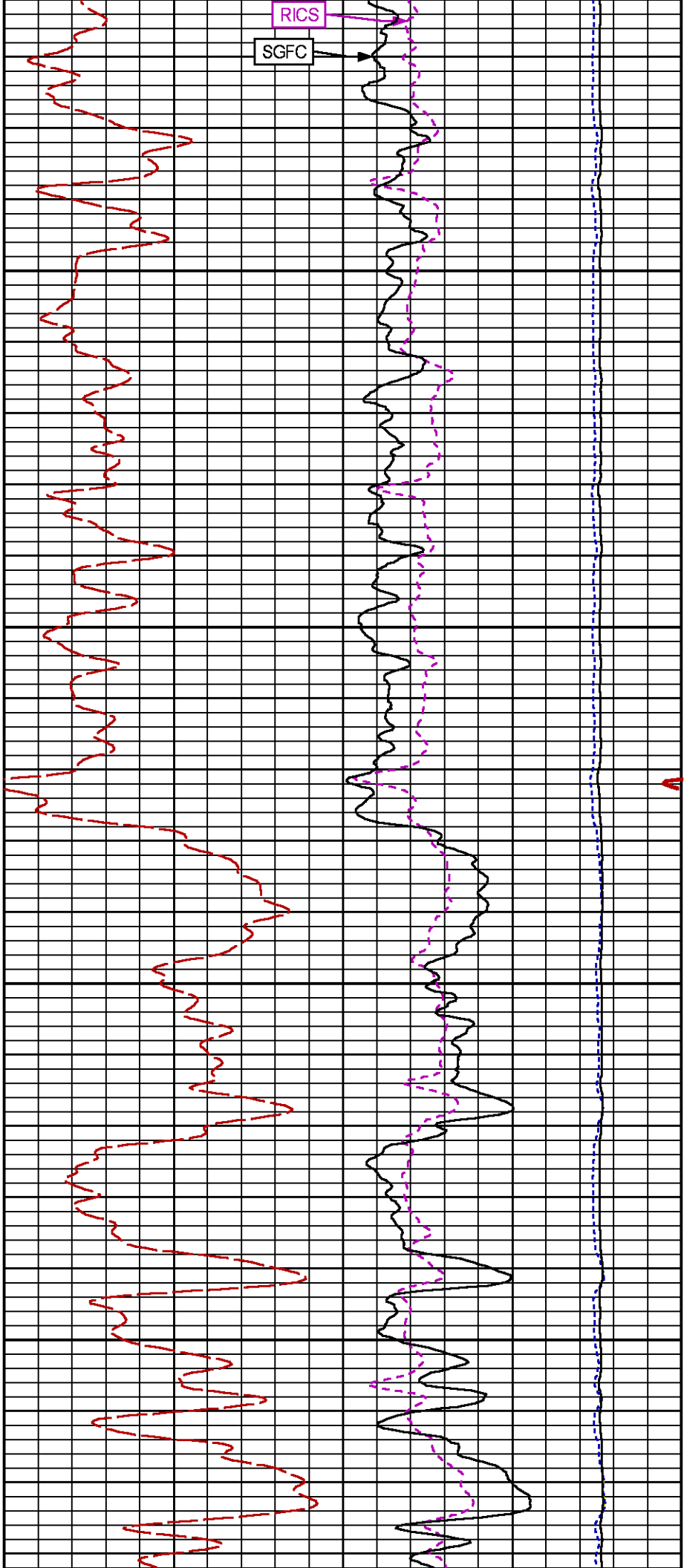
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	5.75	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

**Presentation** : cas6685:/dat1a/CH100607/RPM\_MAIN.fvpdf [5"/100' Scale]  
**Plot Interval** : 2970 - 8384.25 Feet

**Data File 1** : F1 : cas6685:/dat1a/CH100607/n353h02\_MAIN.xtf  
**Created On** : Oct 31 08:23:33 2015  
**Company** : LARAMIE ENERGY  
**Well** : PICEANCE FEDERAL 28-20E  
**Field** : VEGA  
**File Interval** : 2967.75 - 8385.75 Feet  
**OCT** : n353h

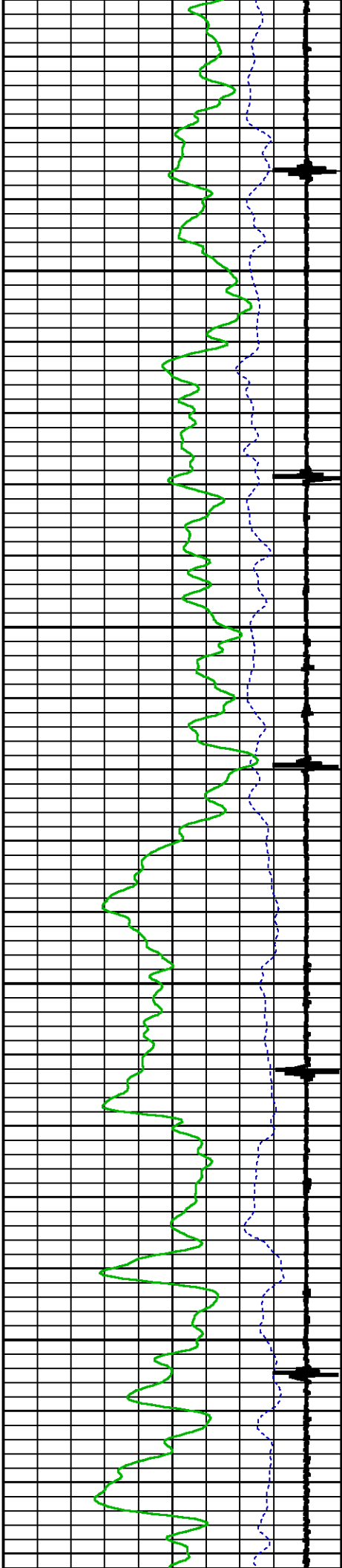
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**Company** : LARAMIE ENERGY  
**Well** : PICEANCE FEDERAL 28-20E  
**Field** : VEGA  
**File Interval** : 0.5 - 8390 Feet  
**OCT** : n012g

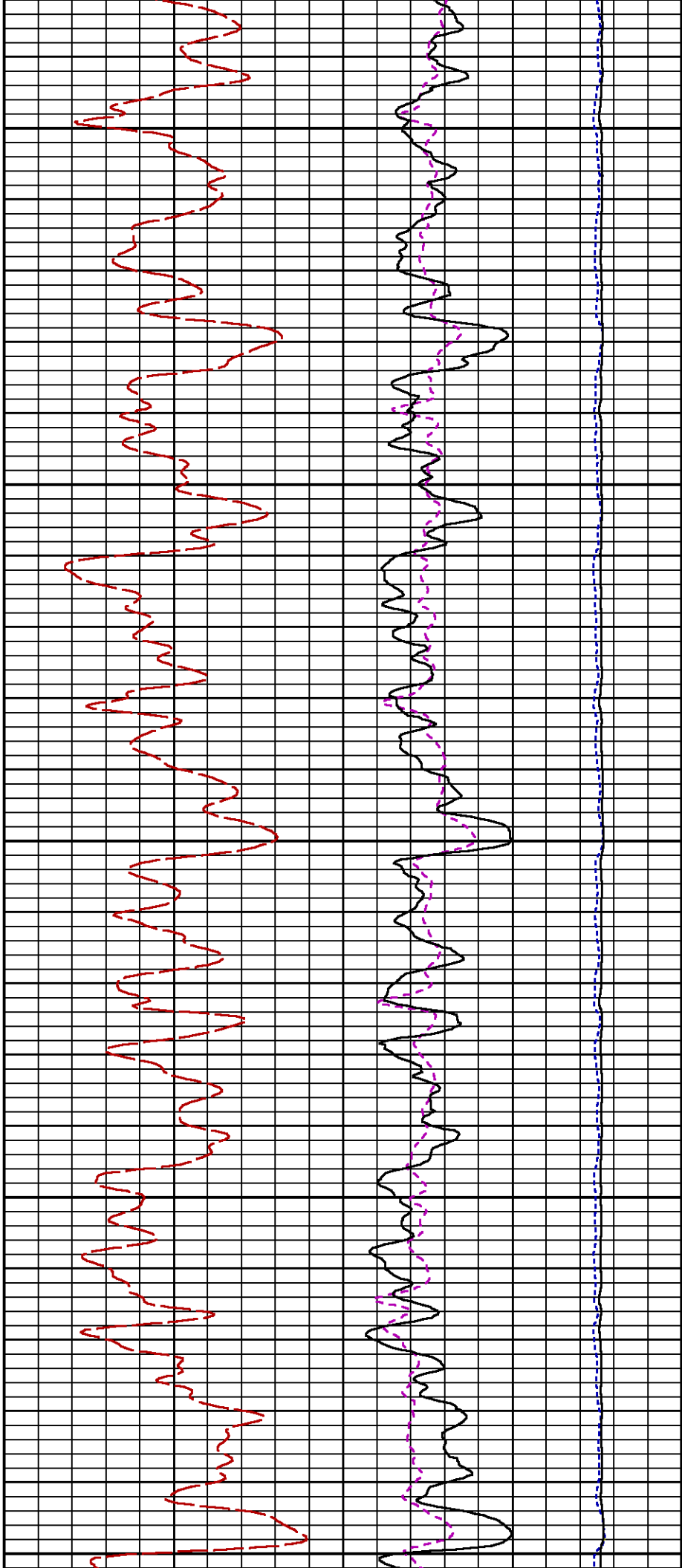




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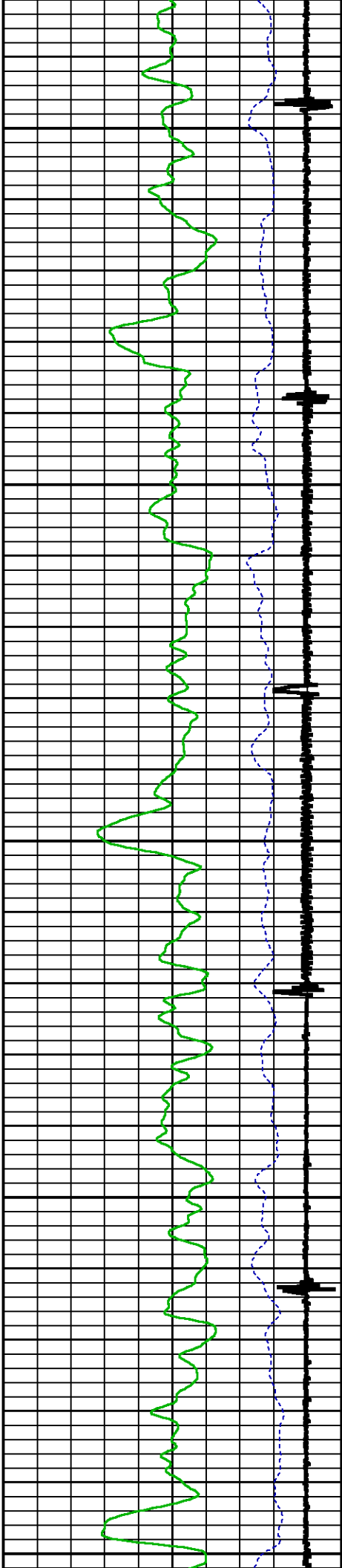
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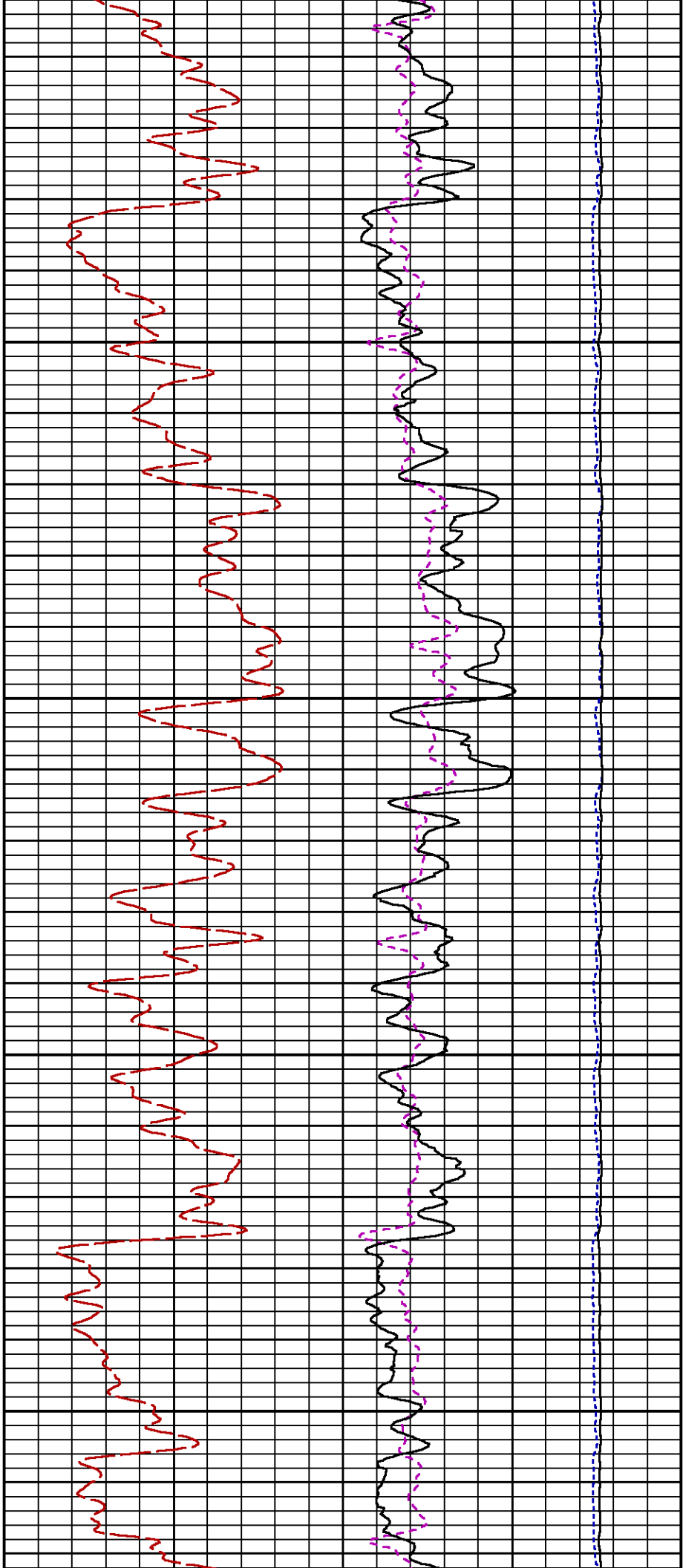




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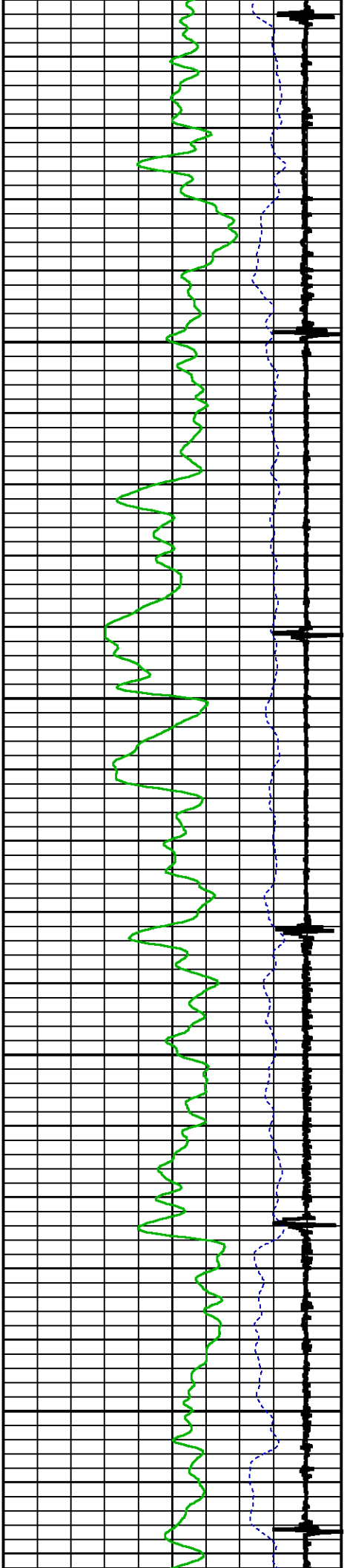
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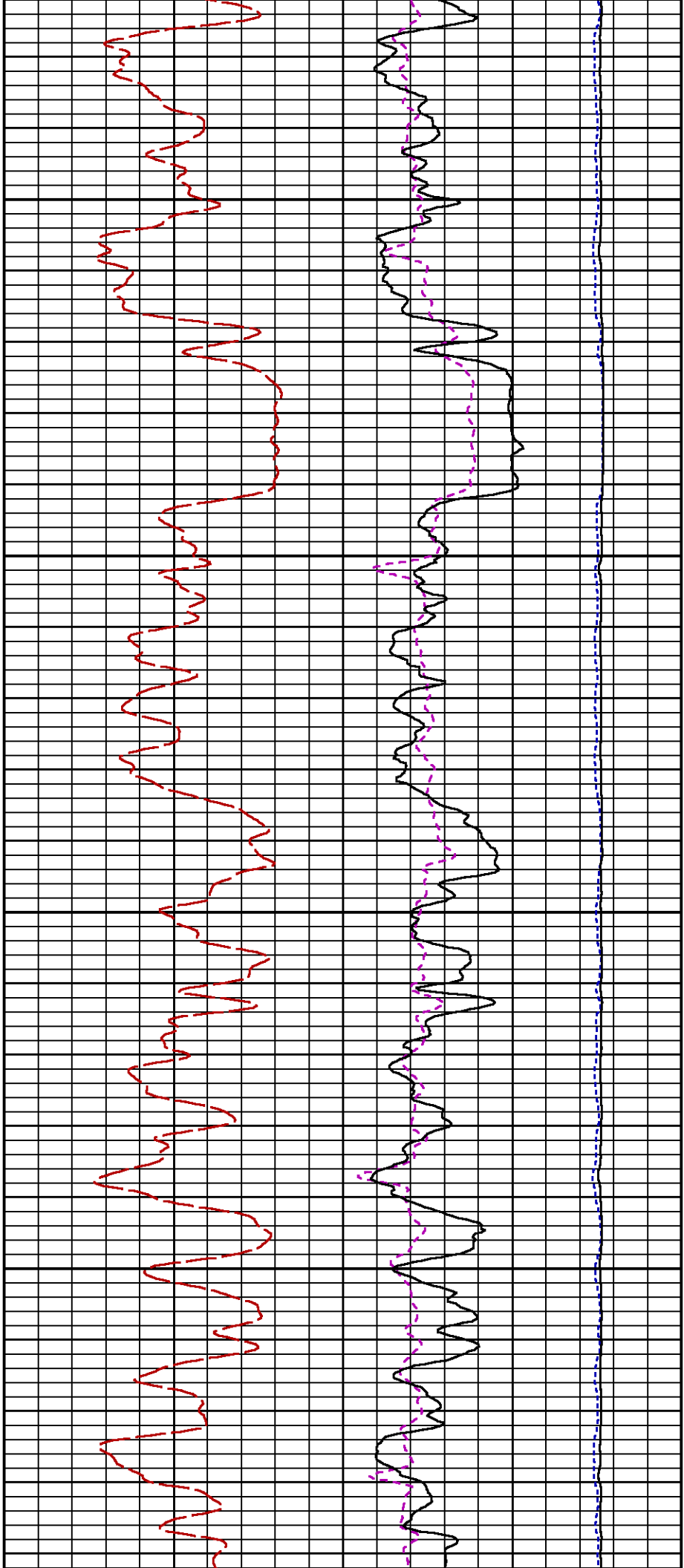




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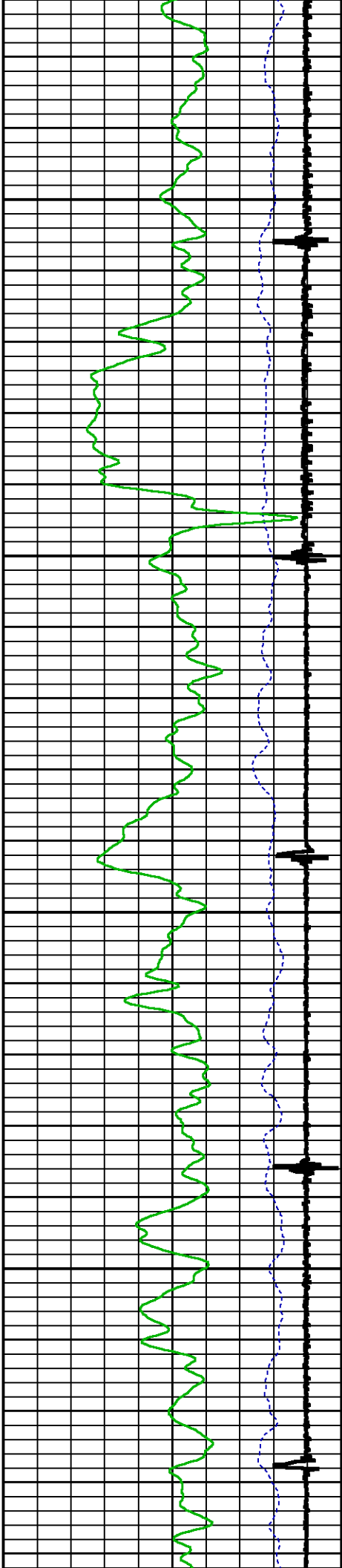
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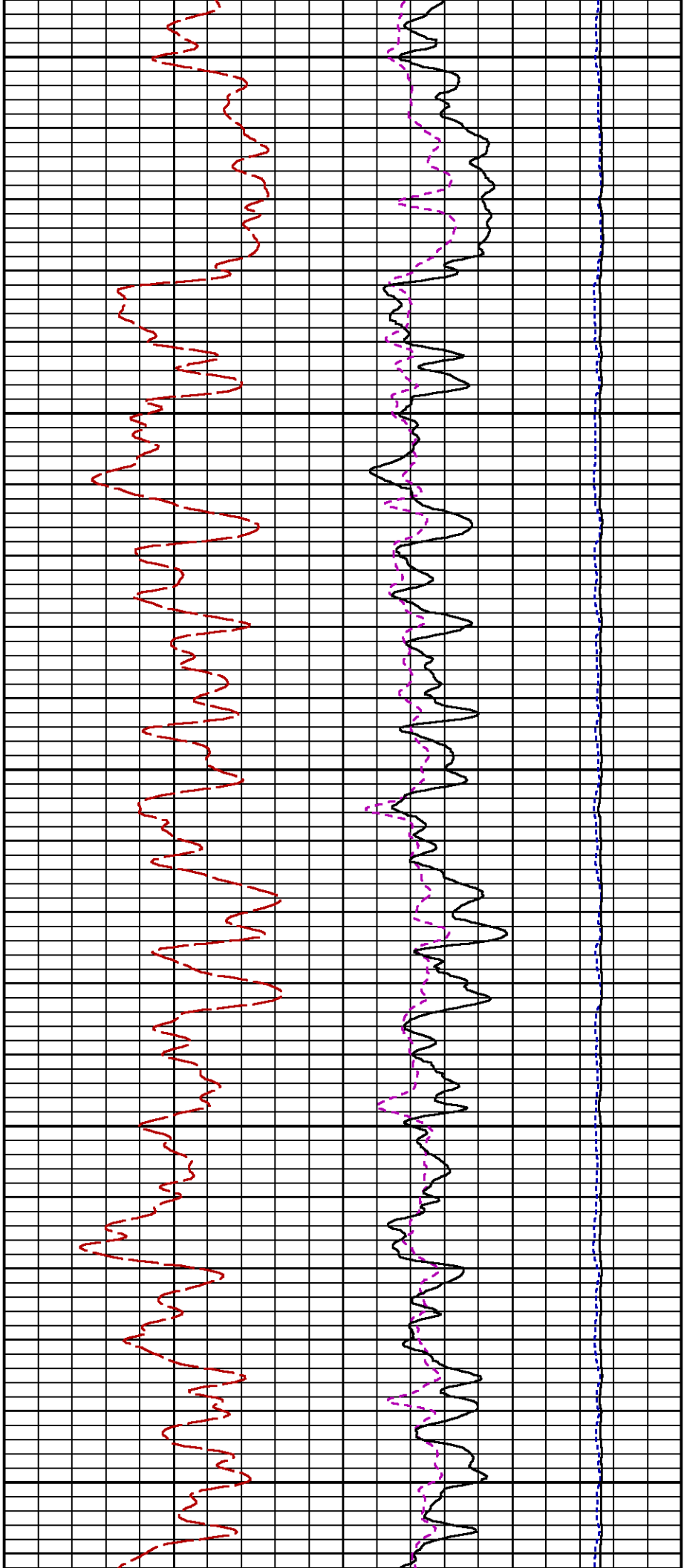




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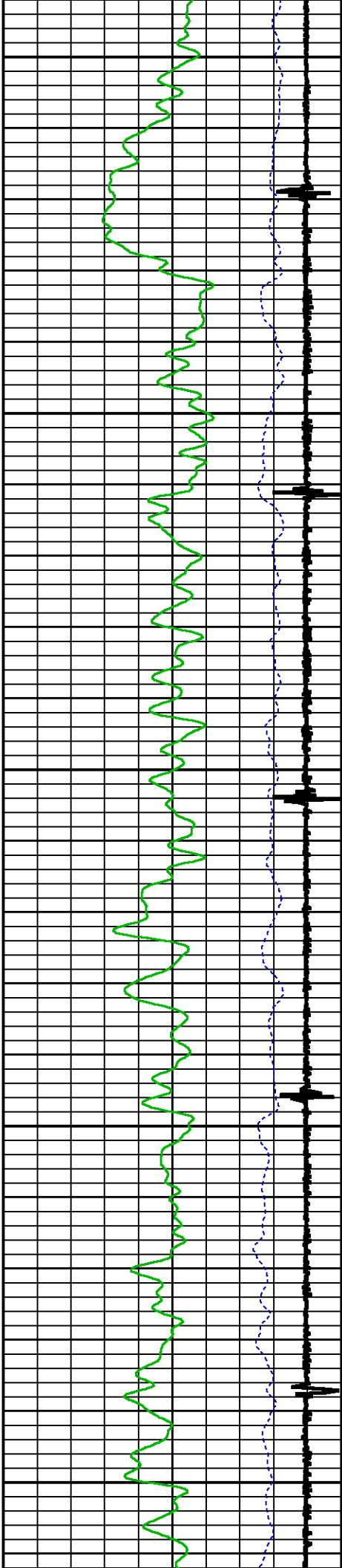




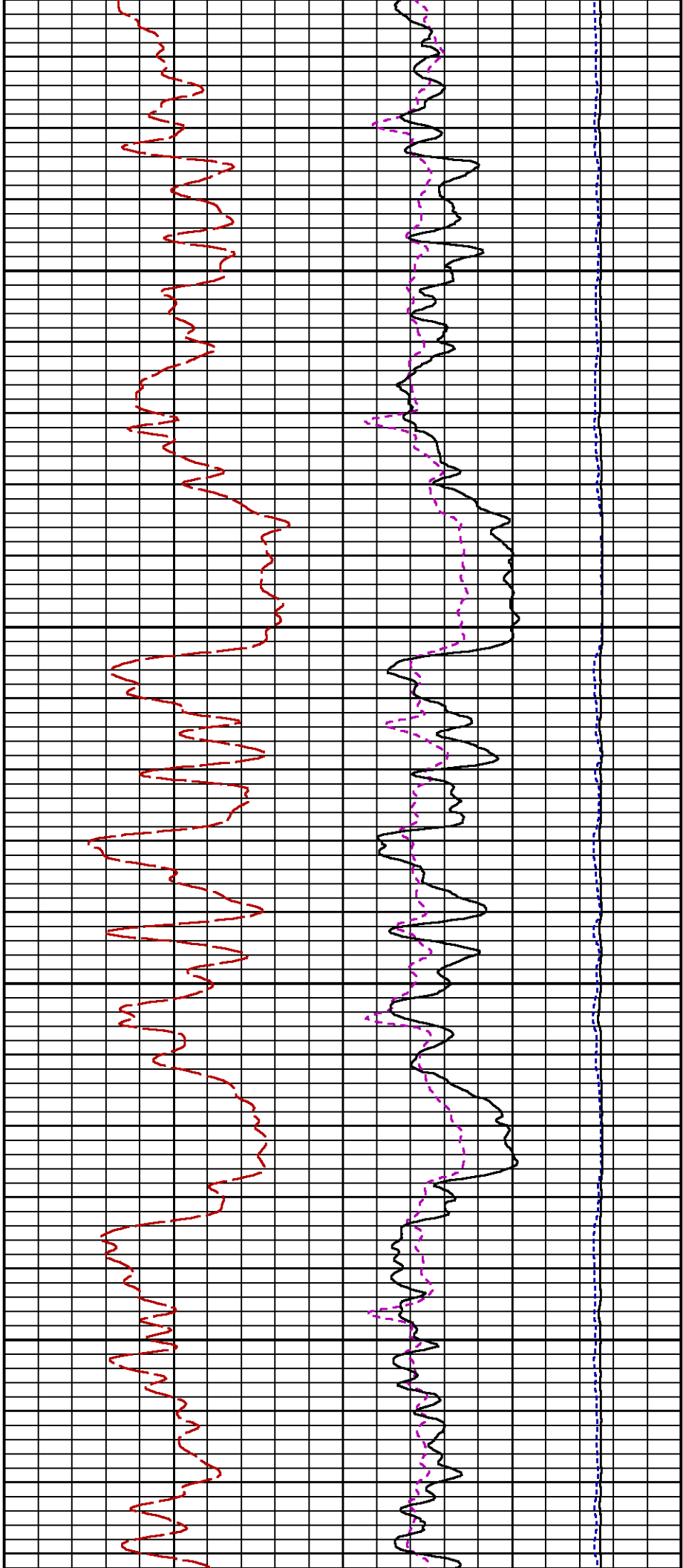
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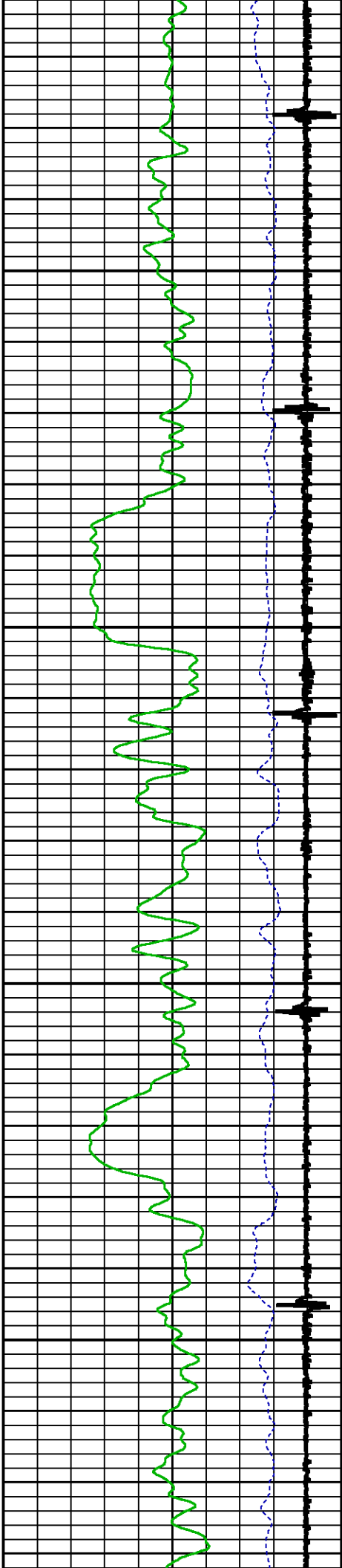


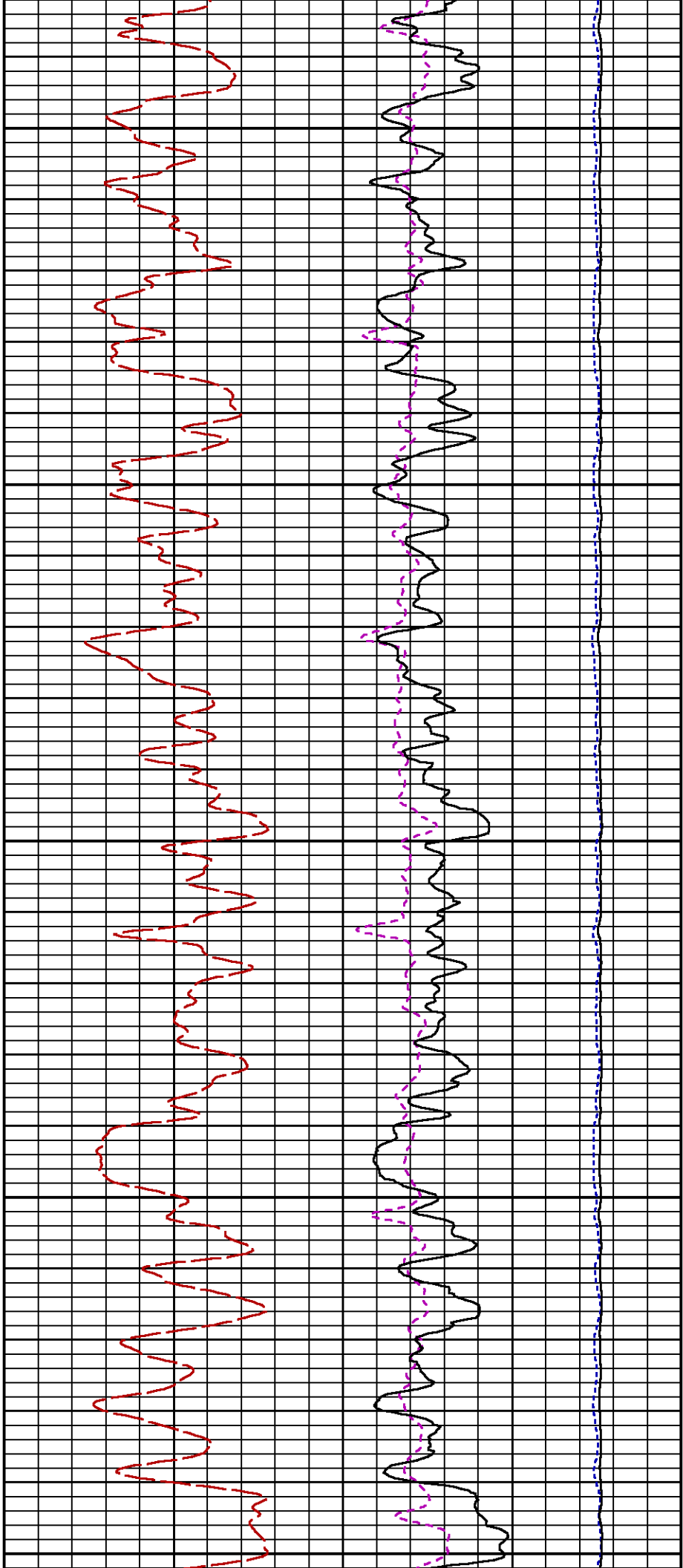




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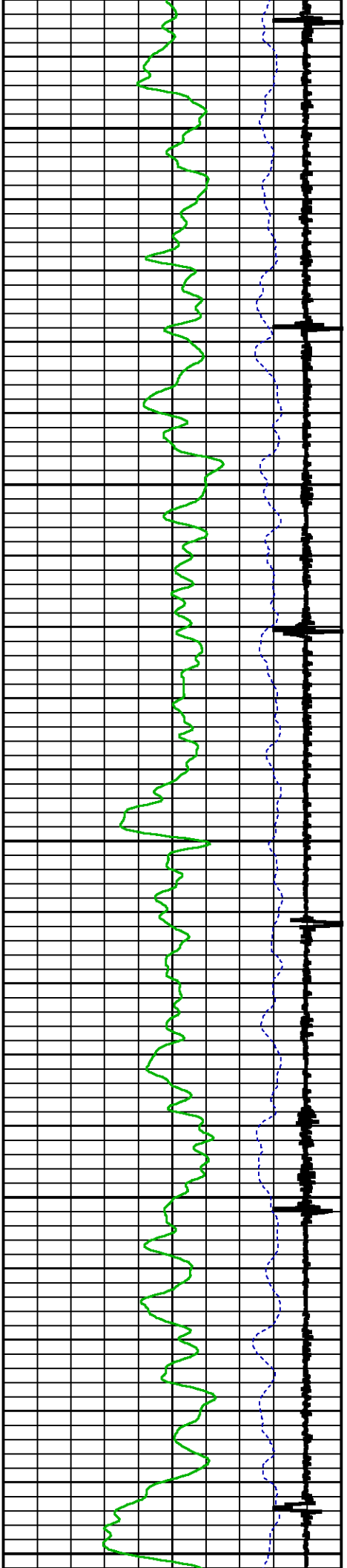
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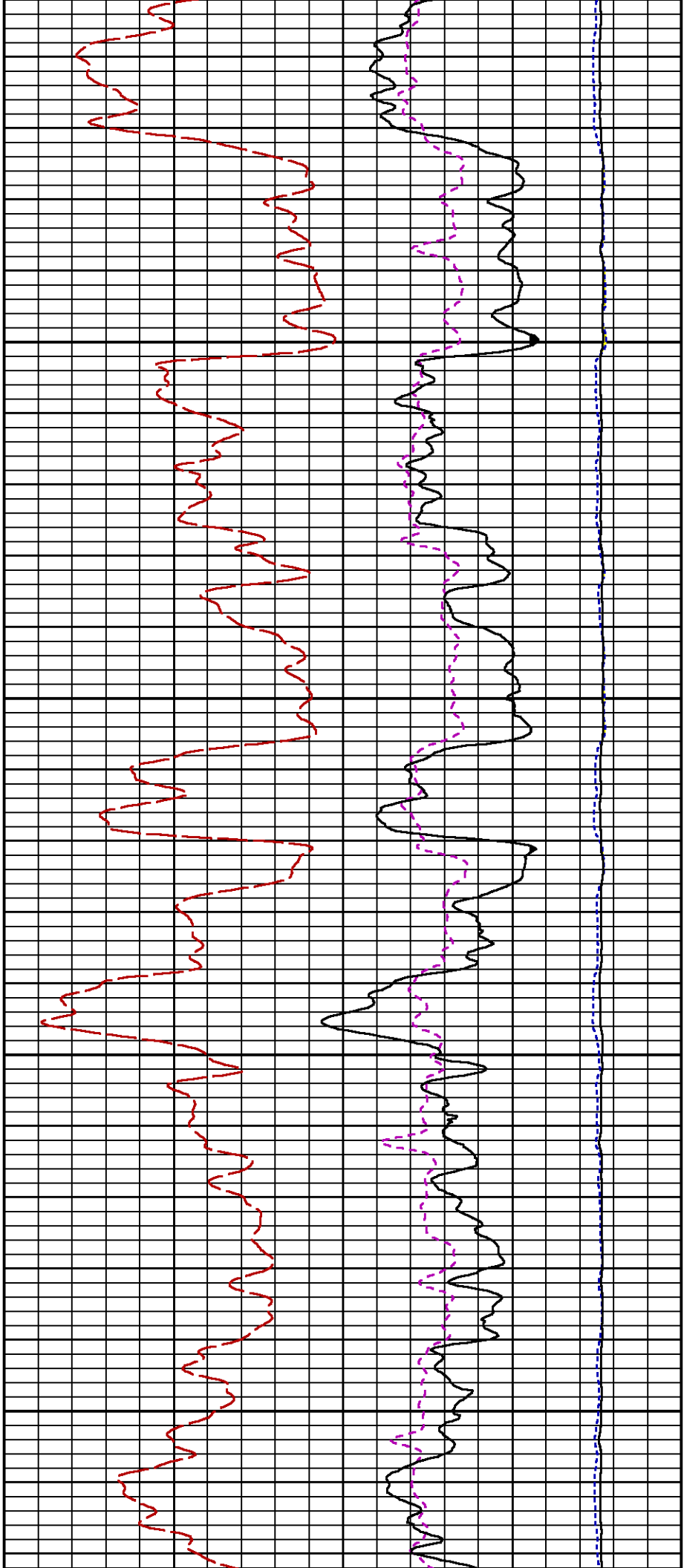




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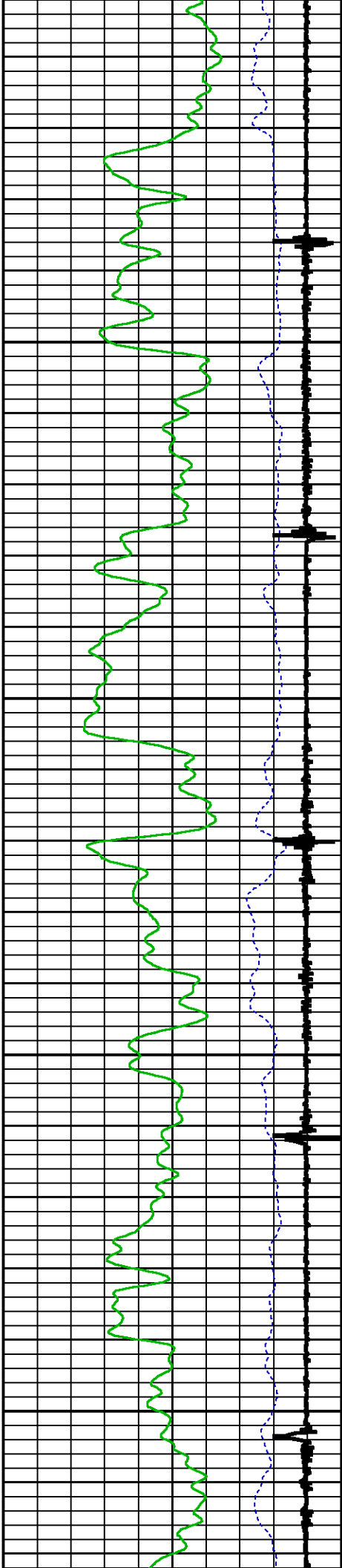
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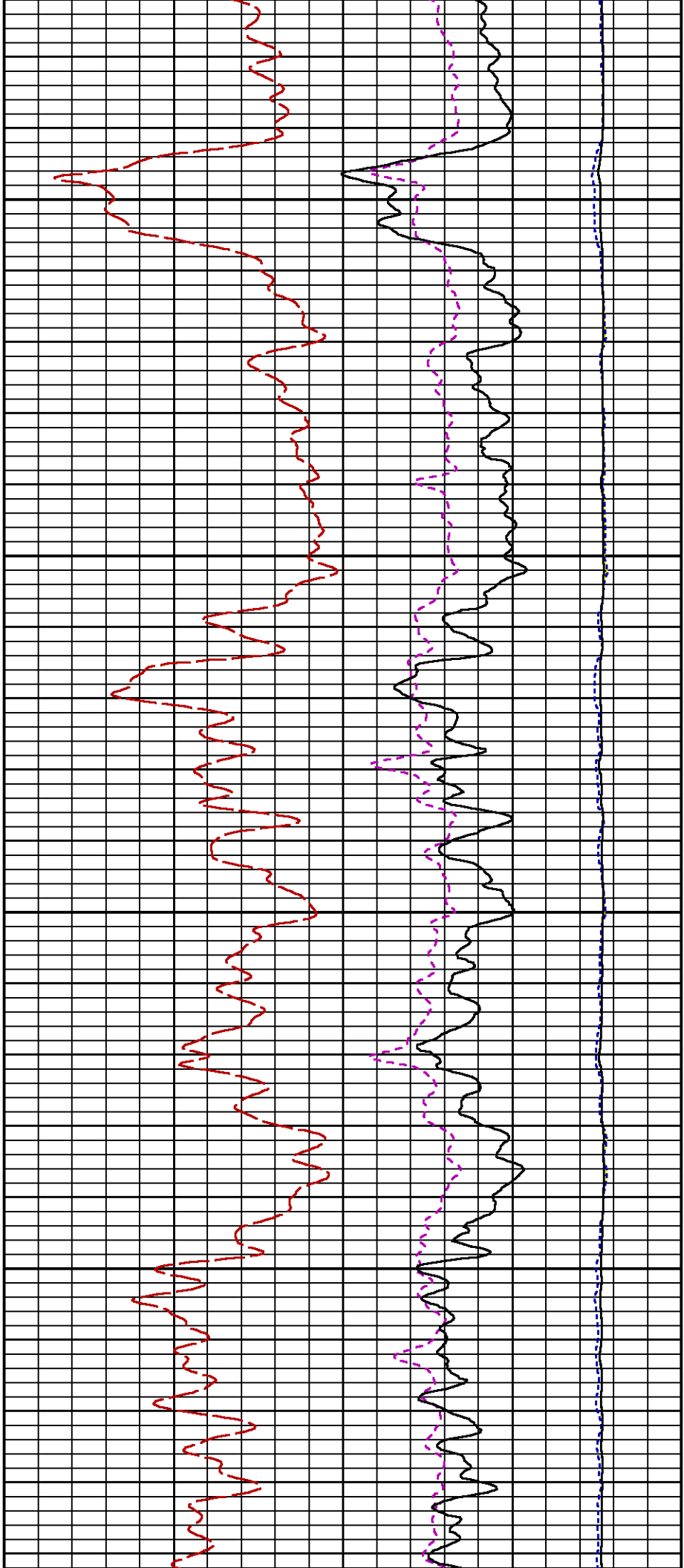




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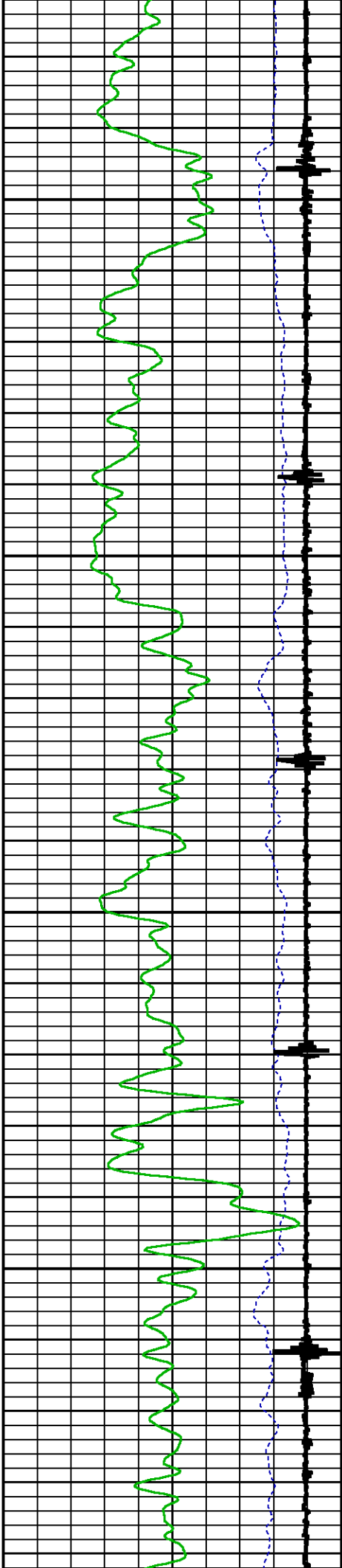
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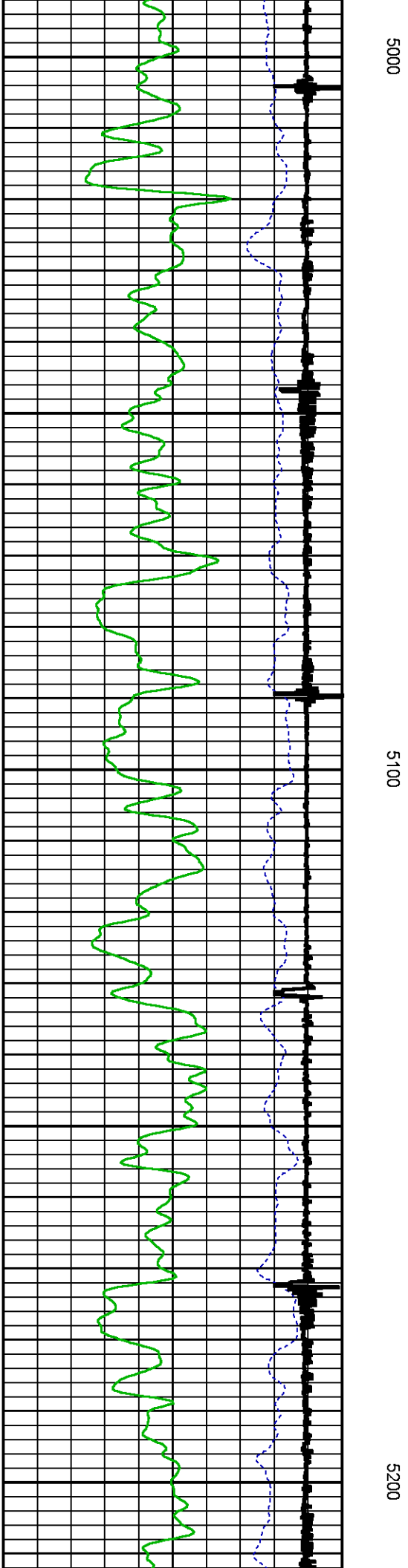
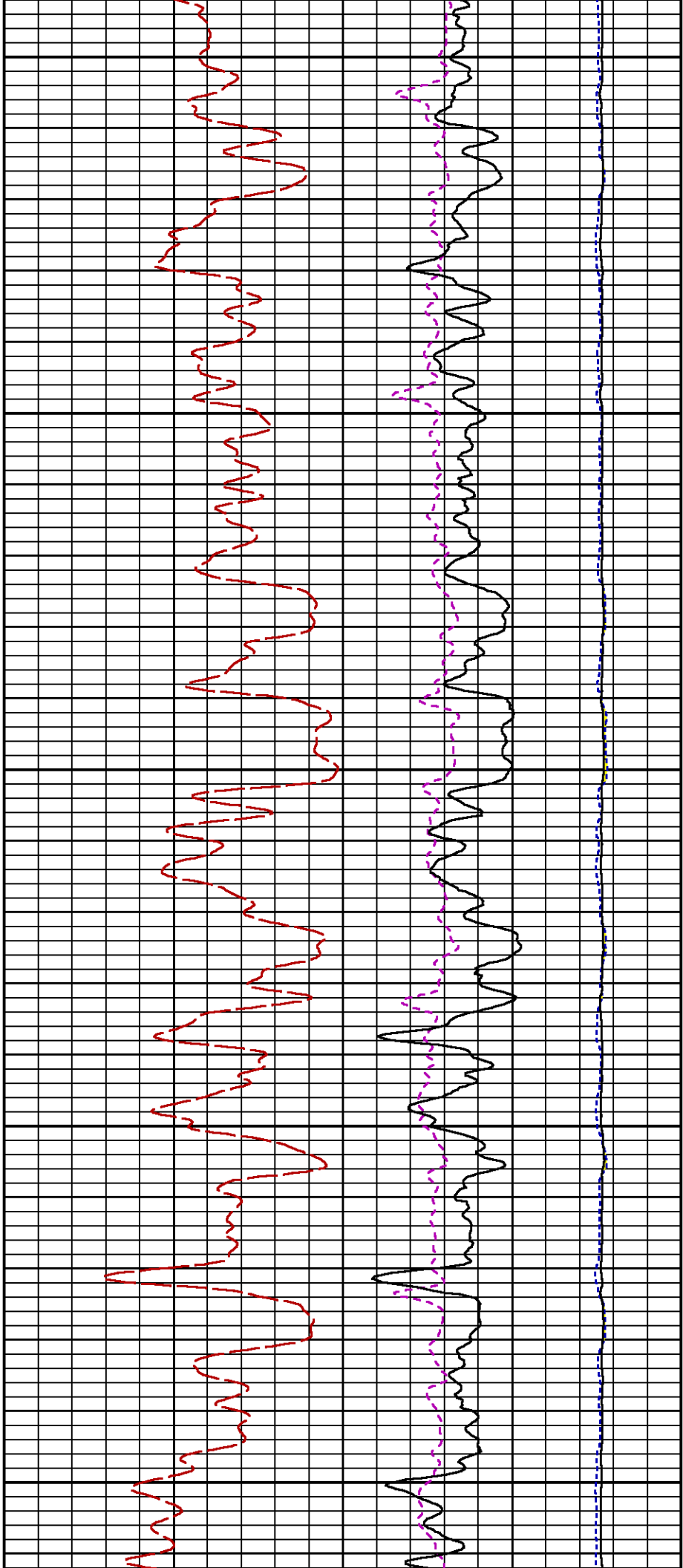


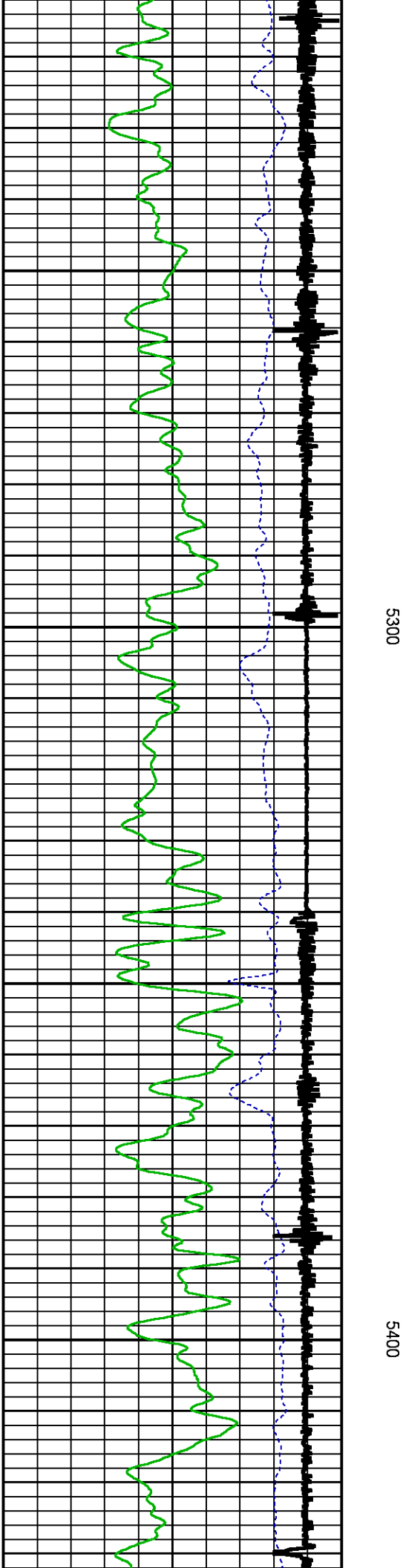
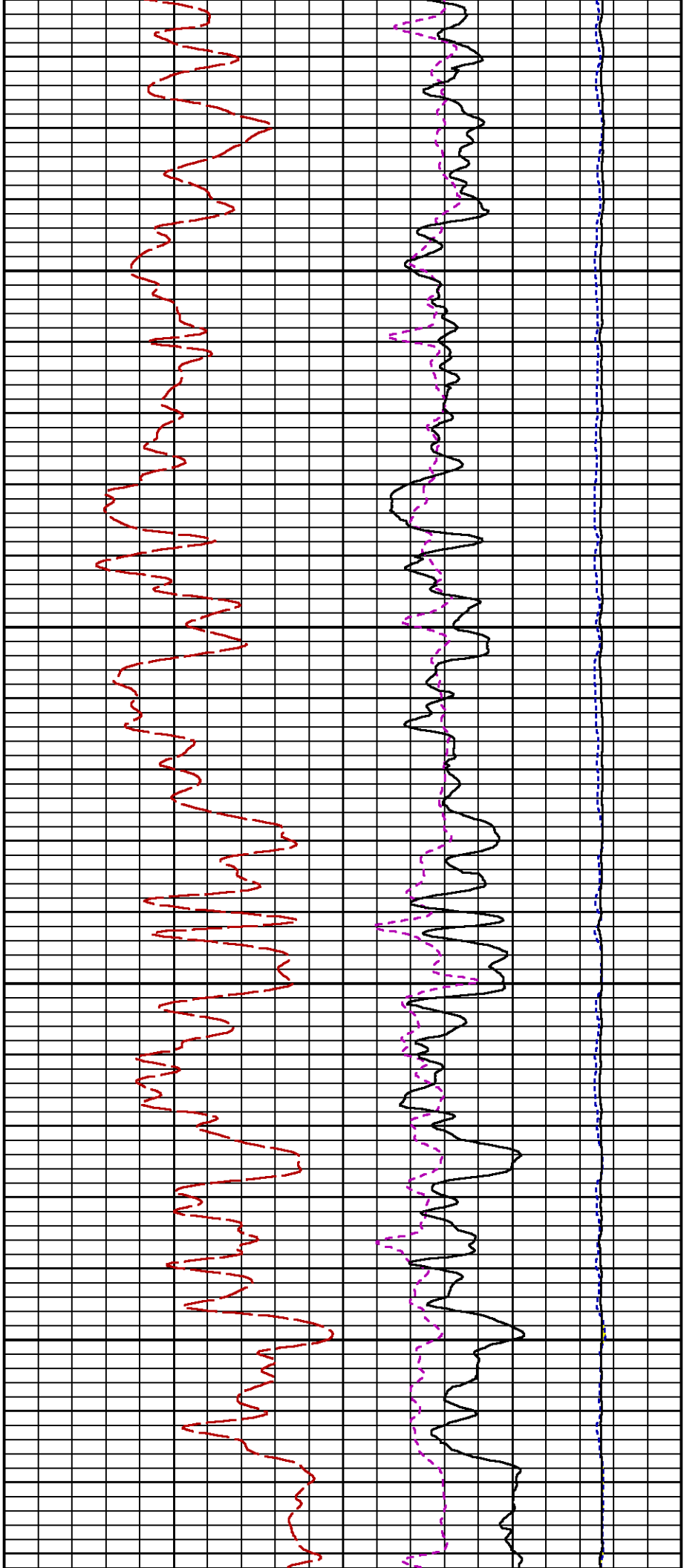


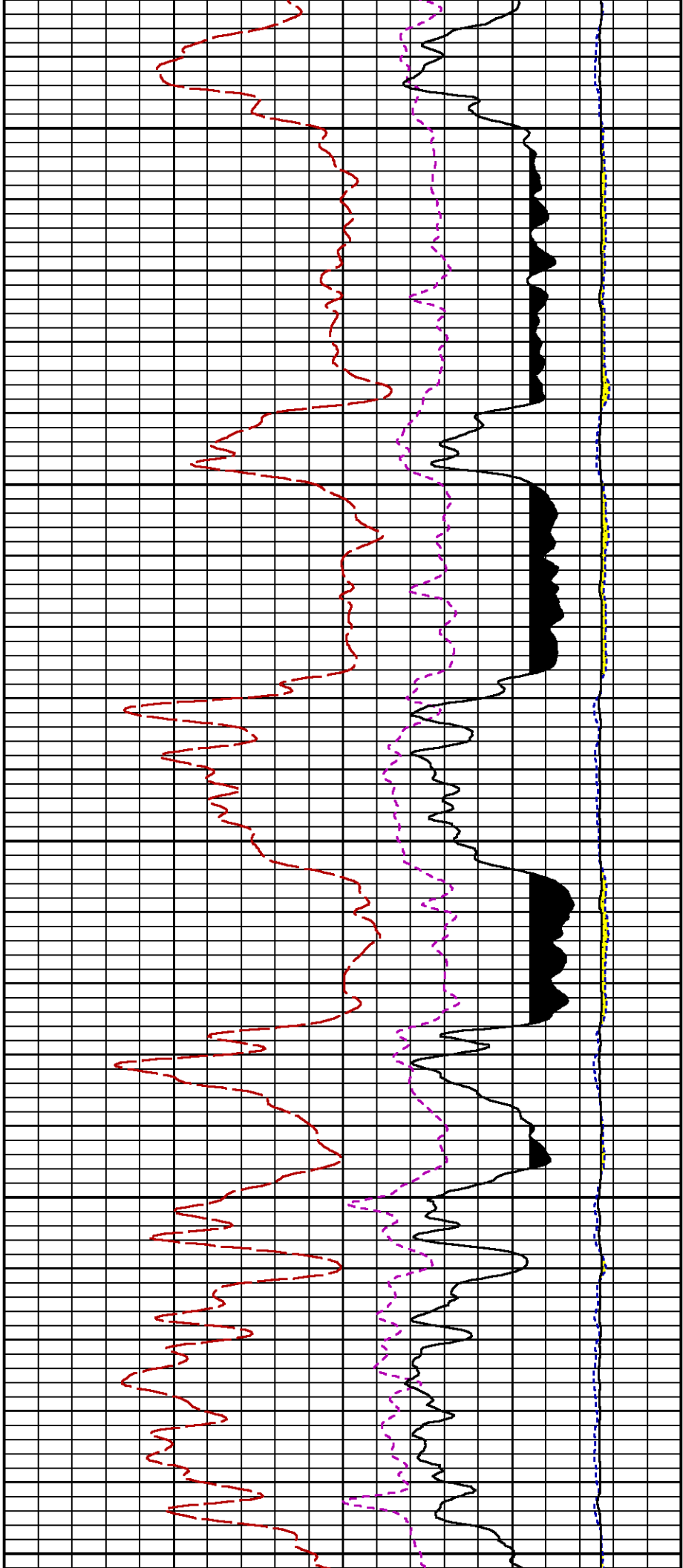
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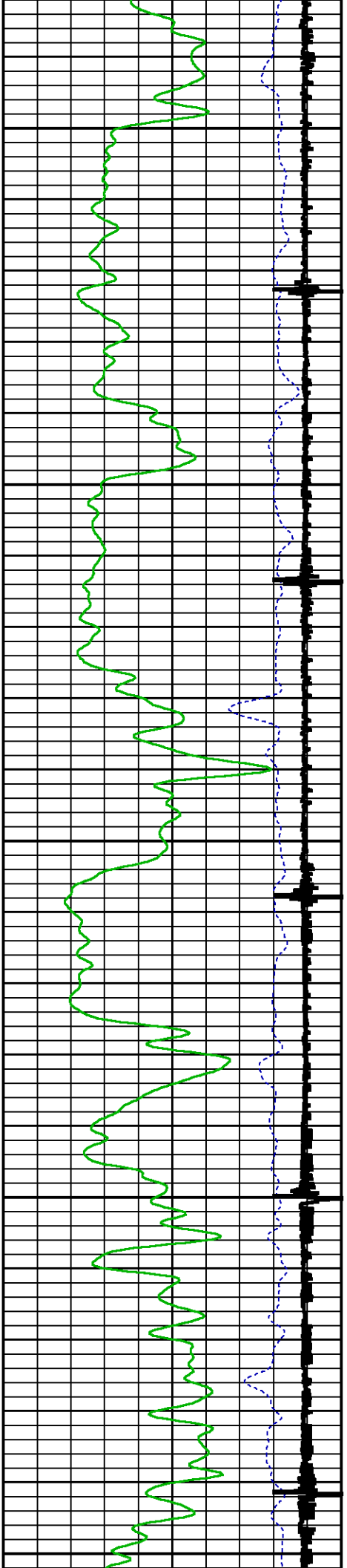


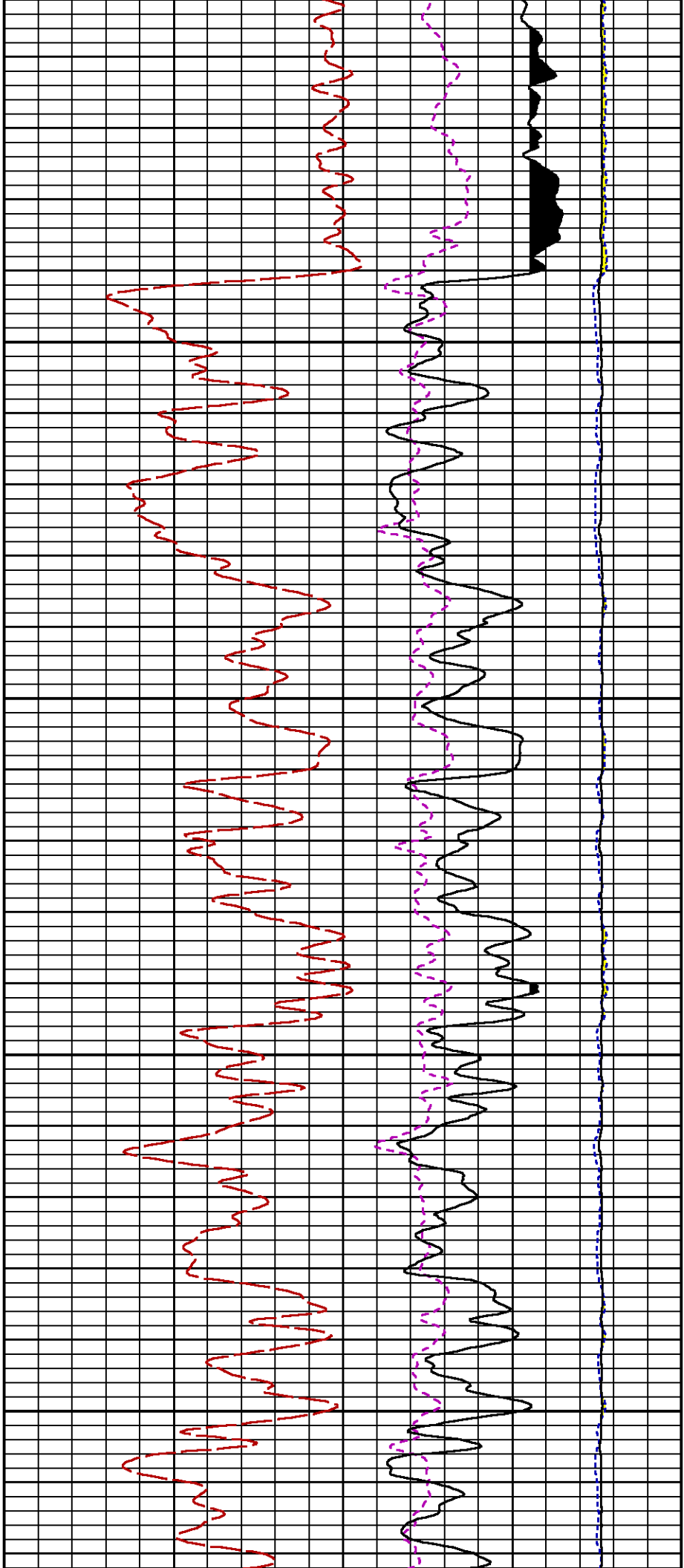




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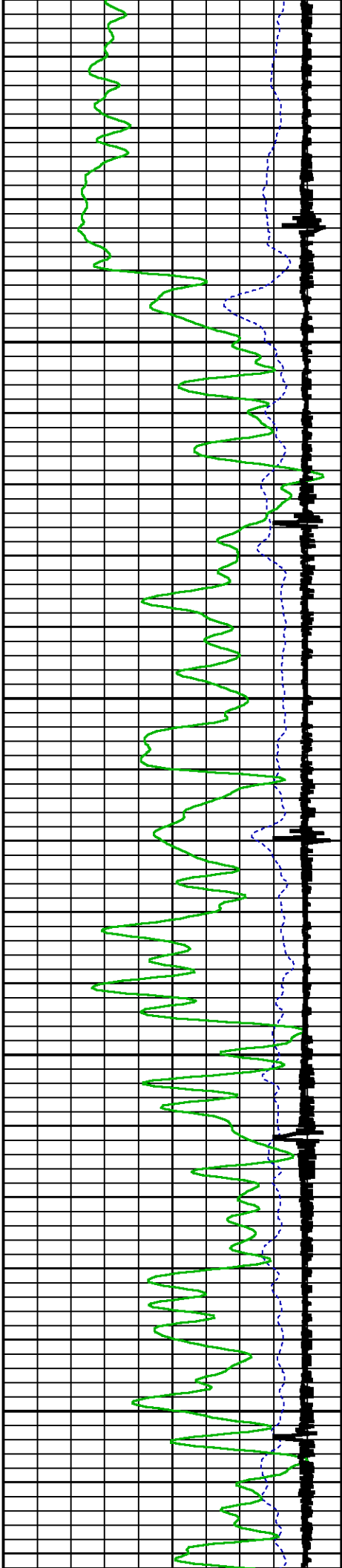
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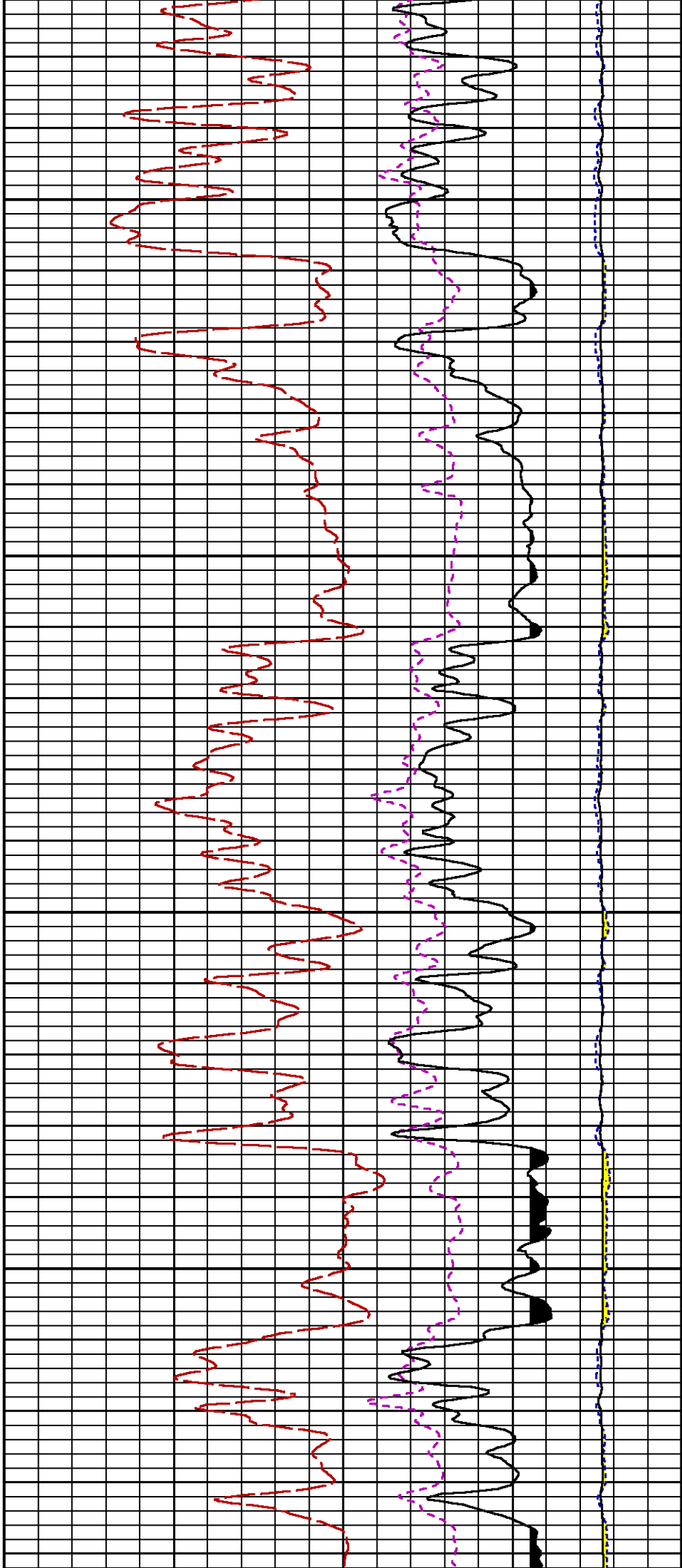


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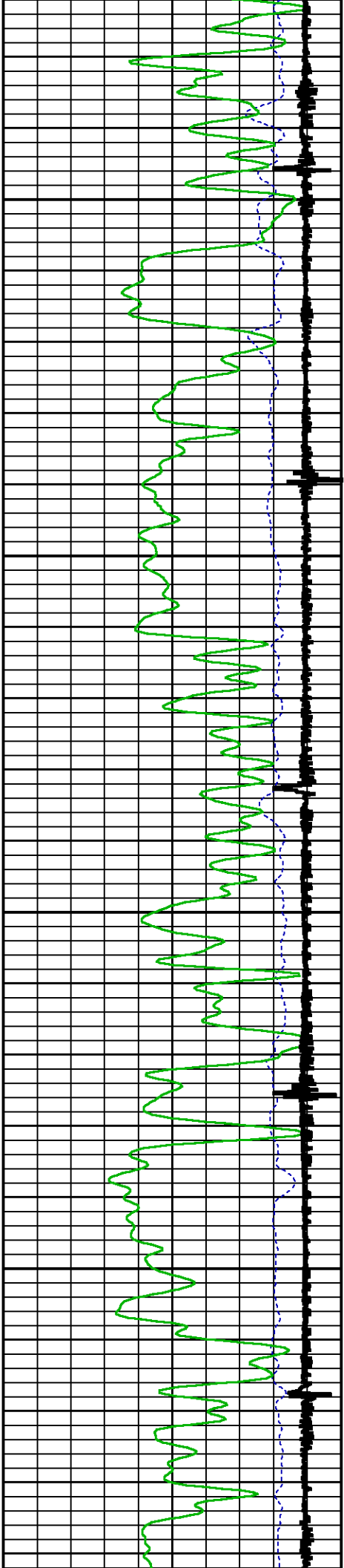


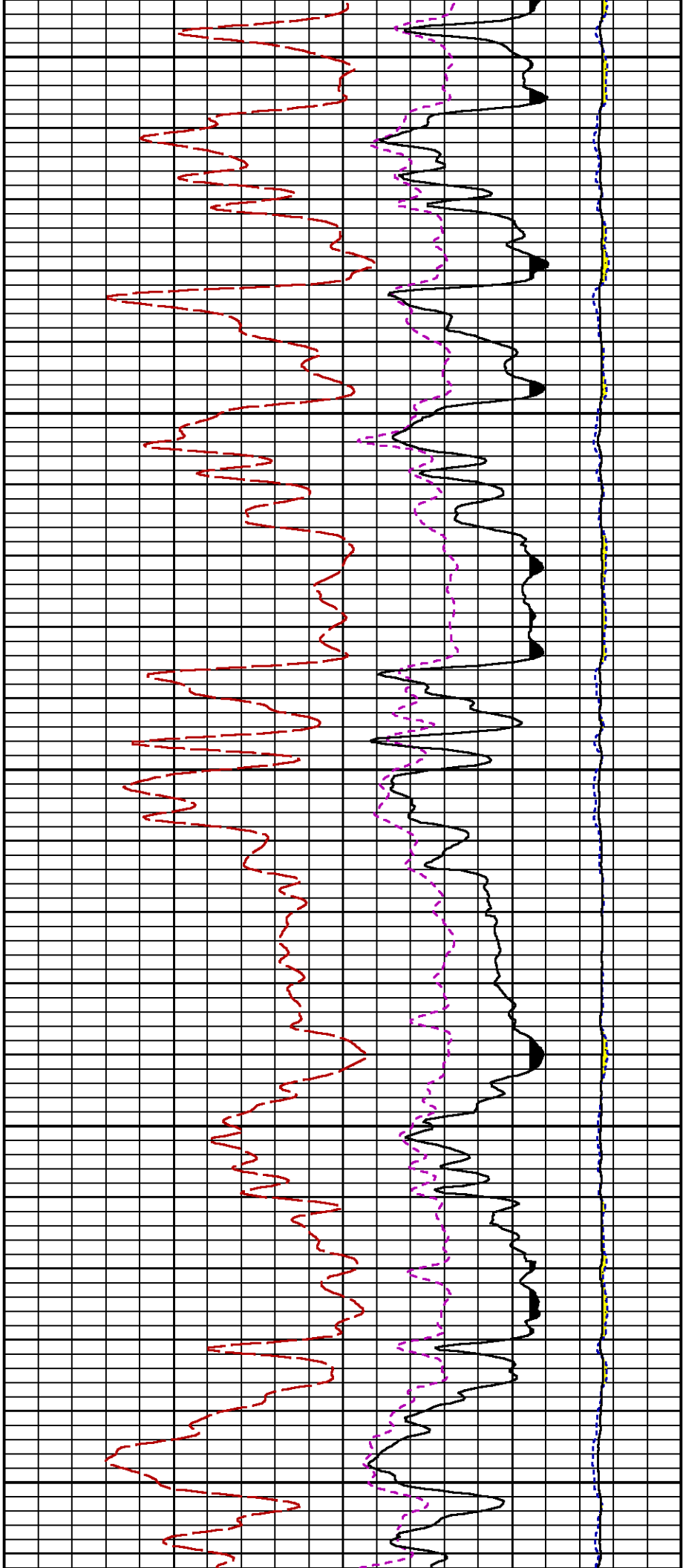




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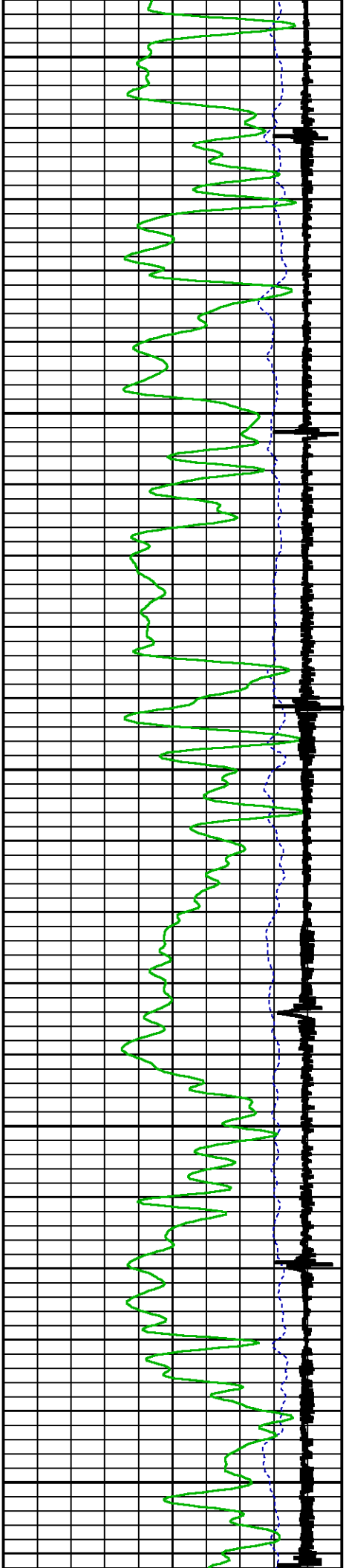


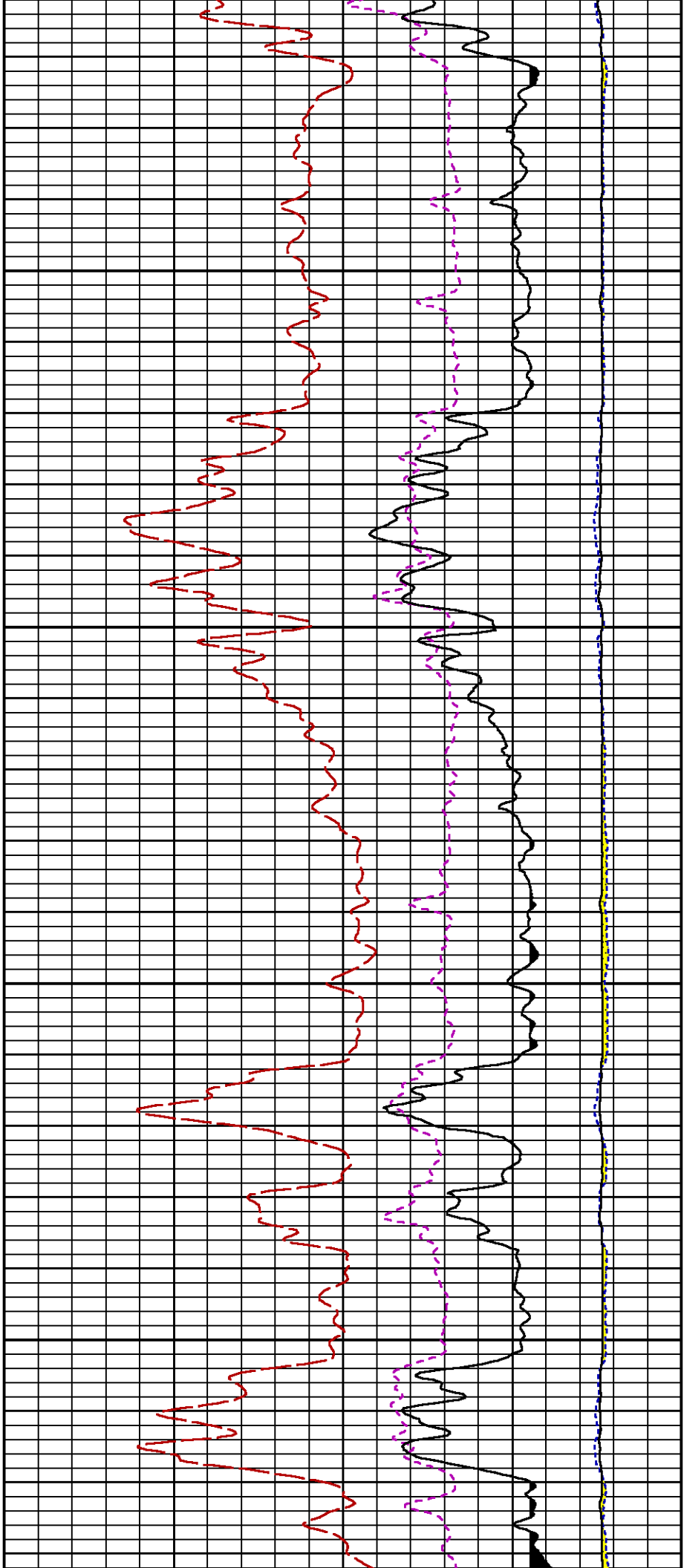


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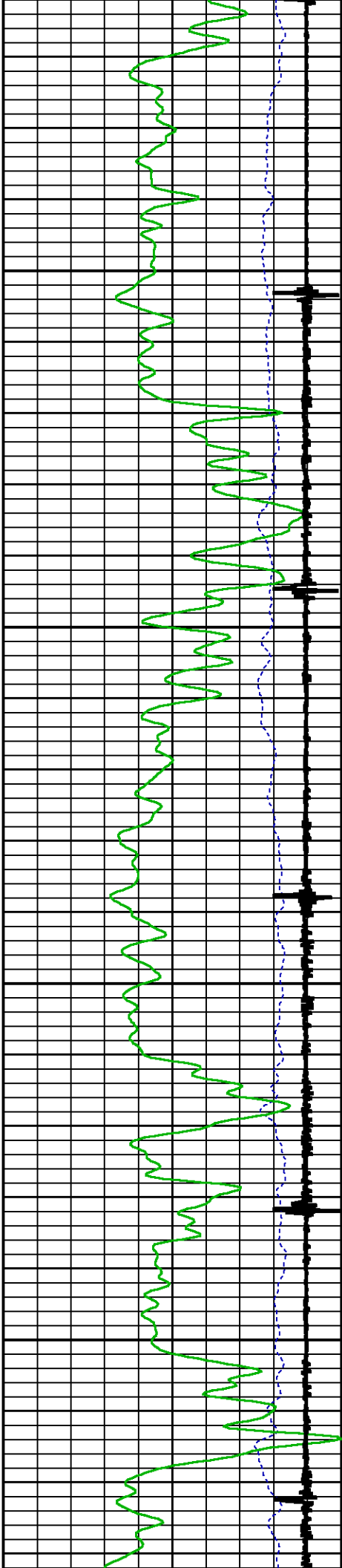
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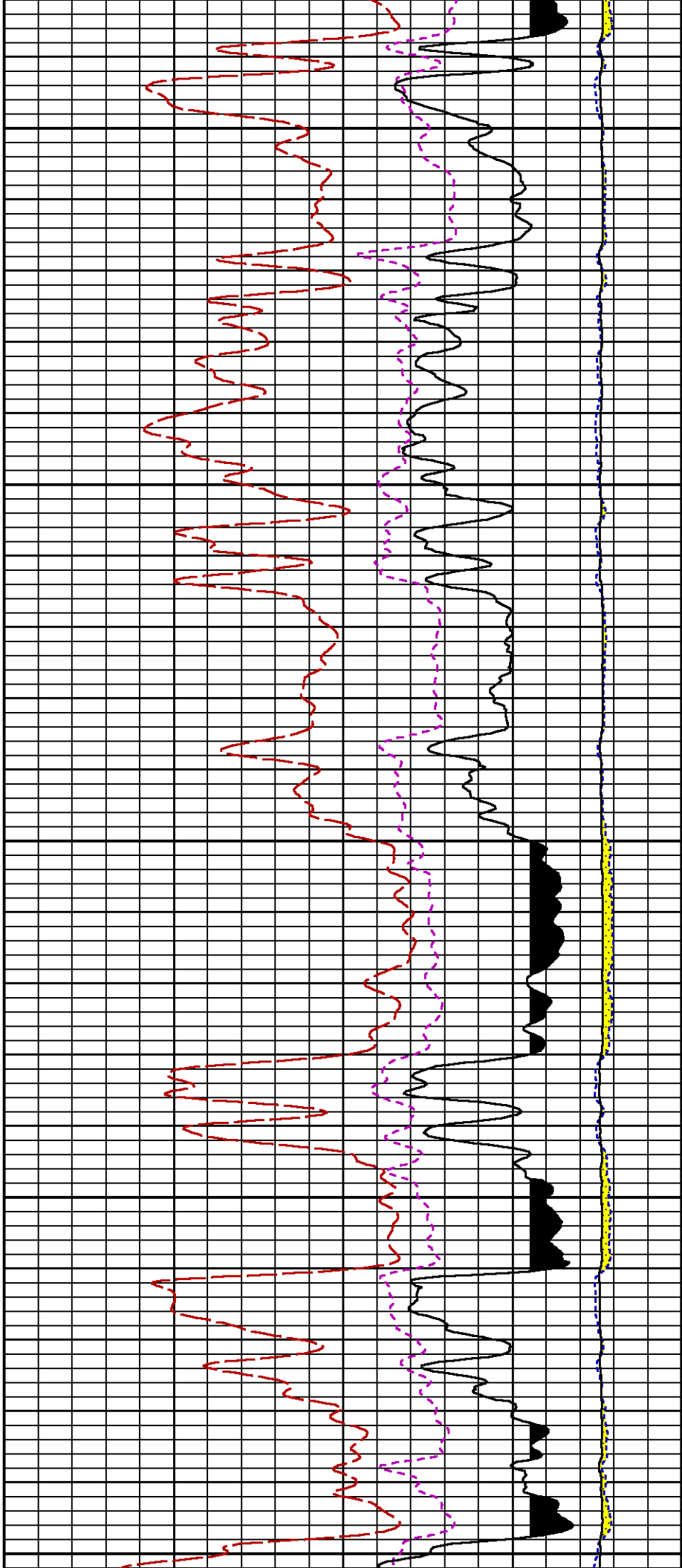




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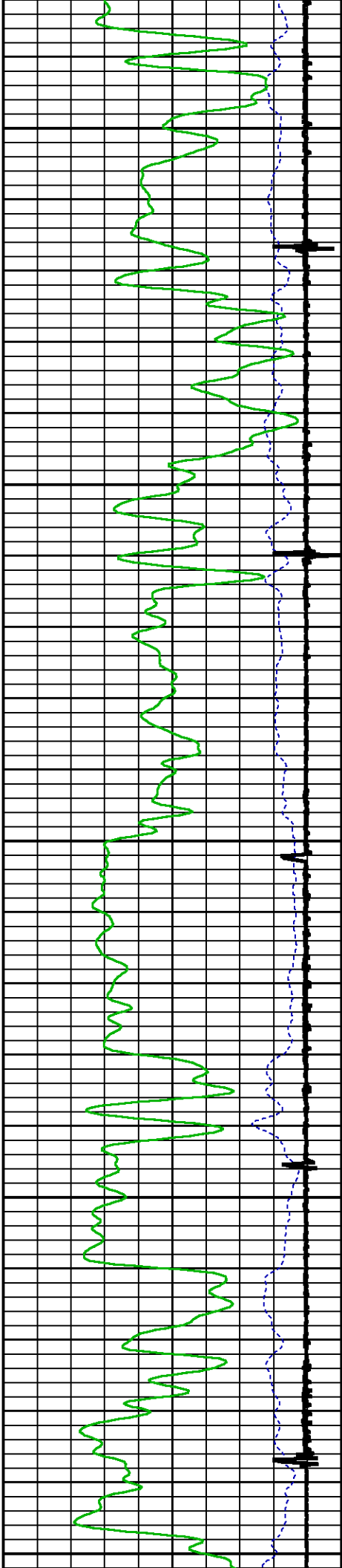
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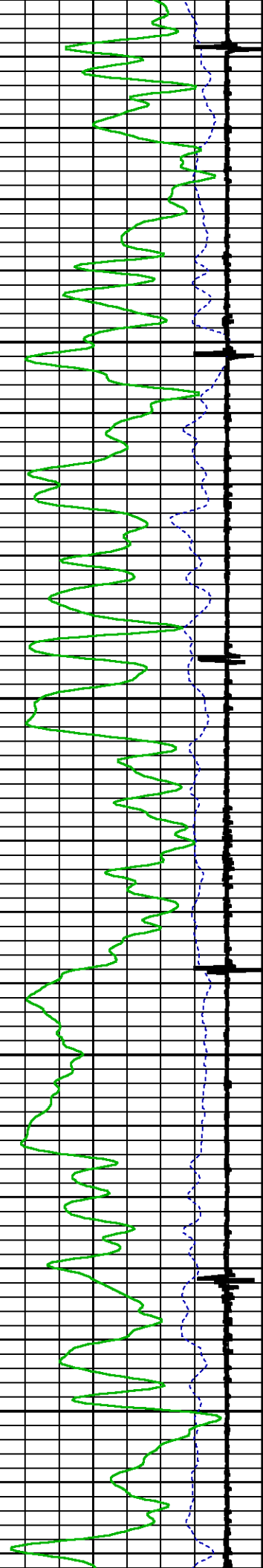




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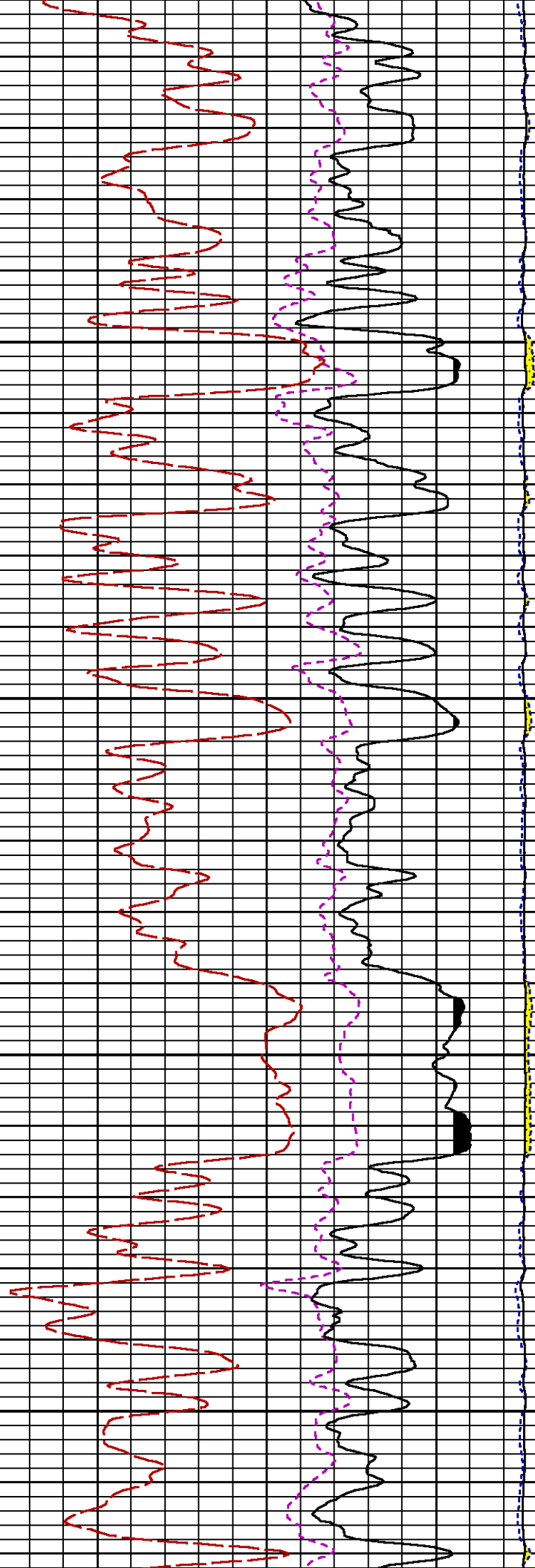
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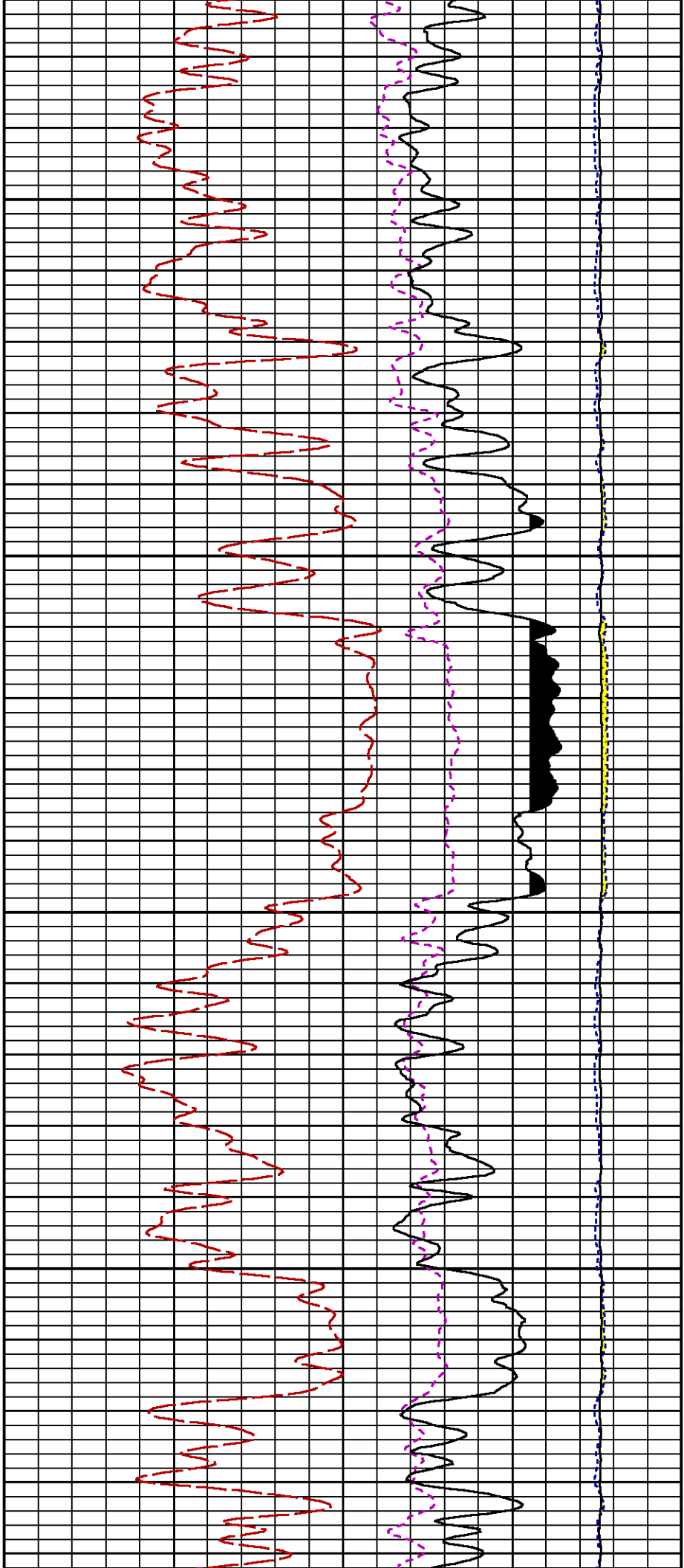




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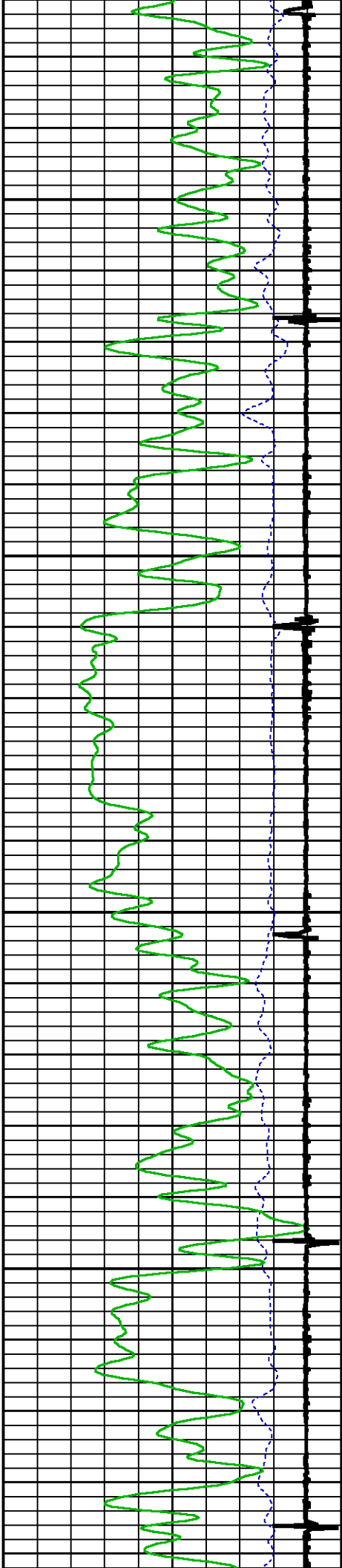
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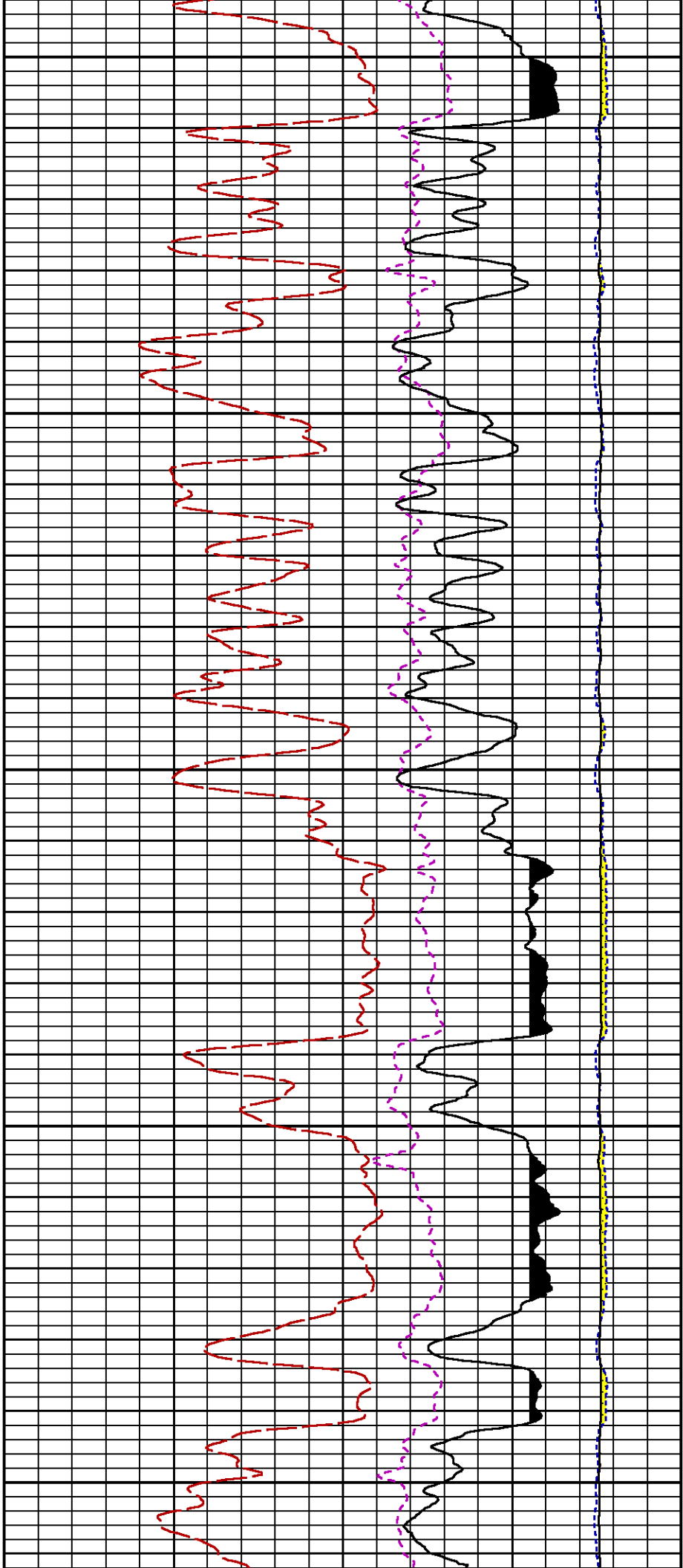




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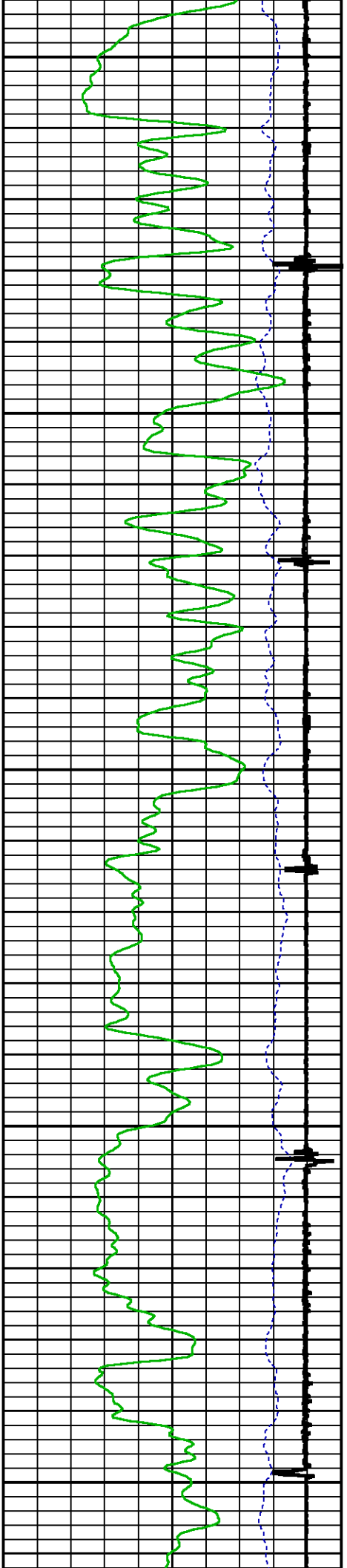


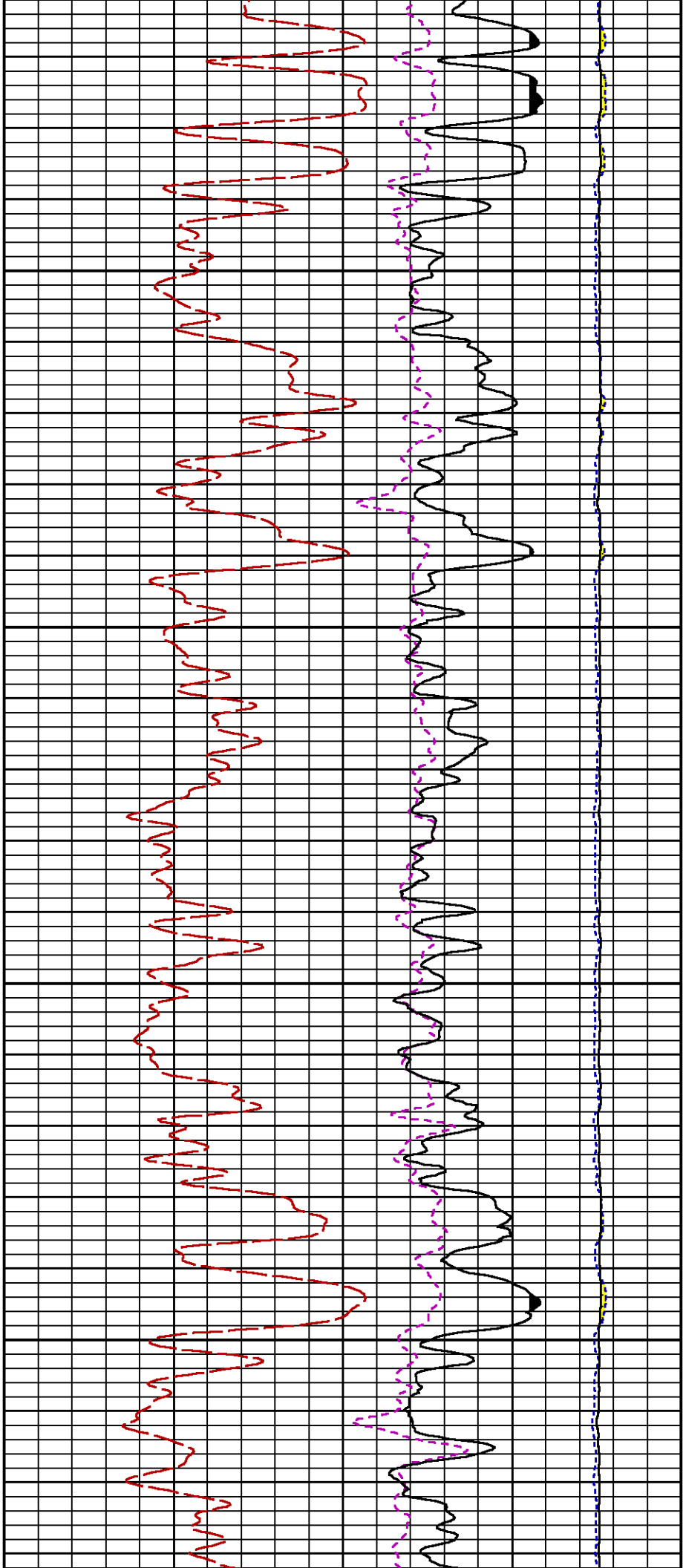


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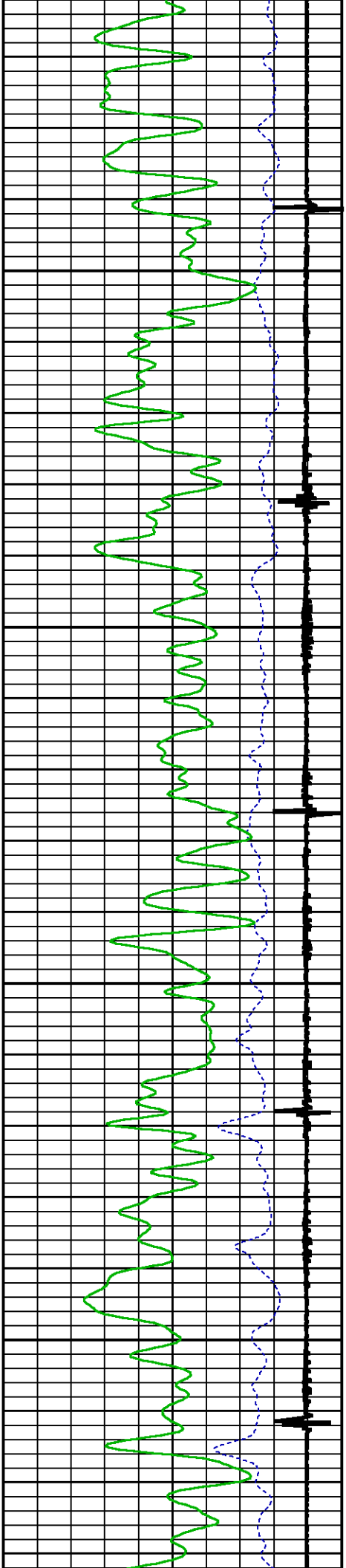
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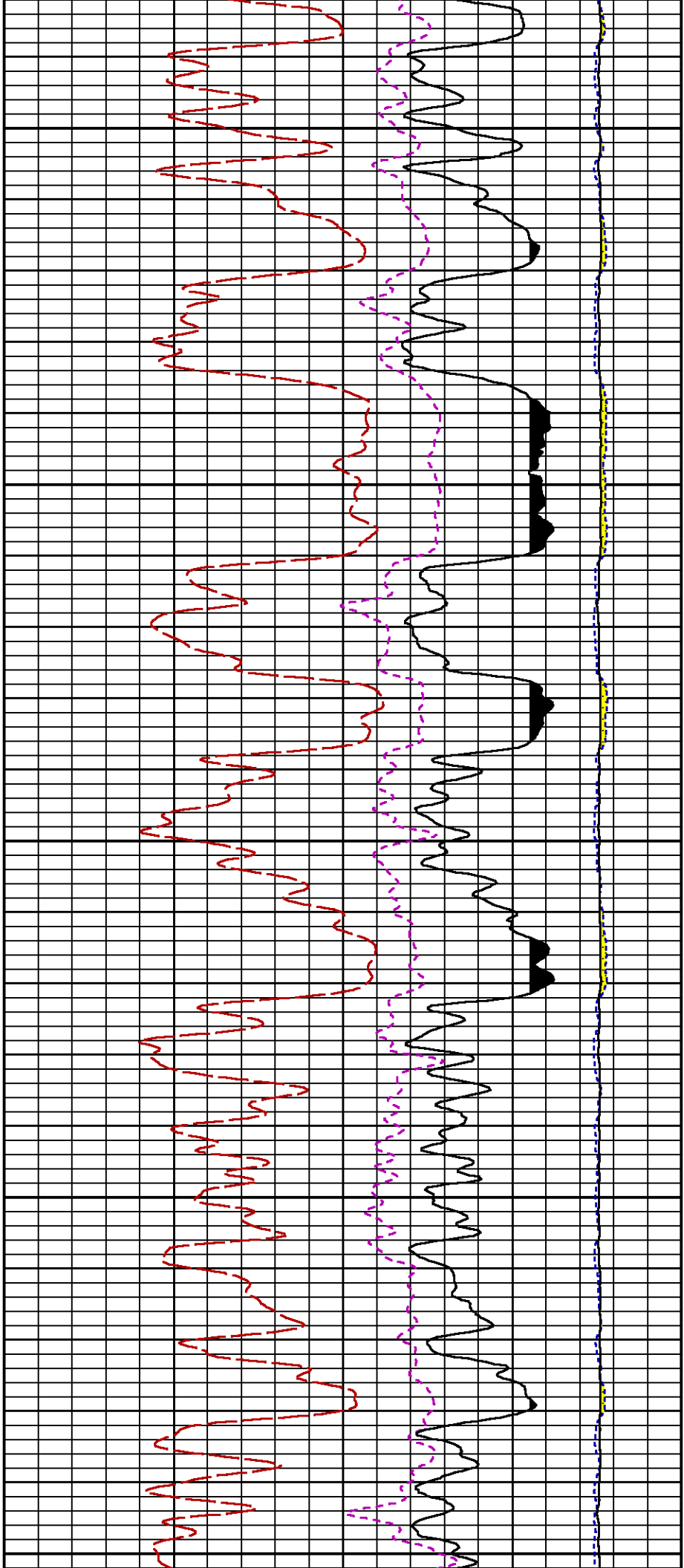


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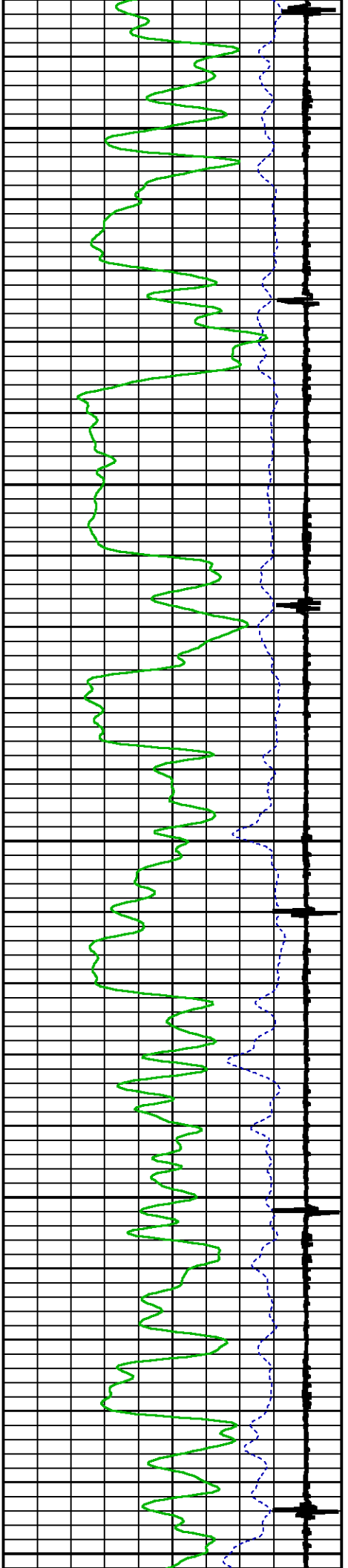


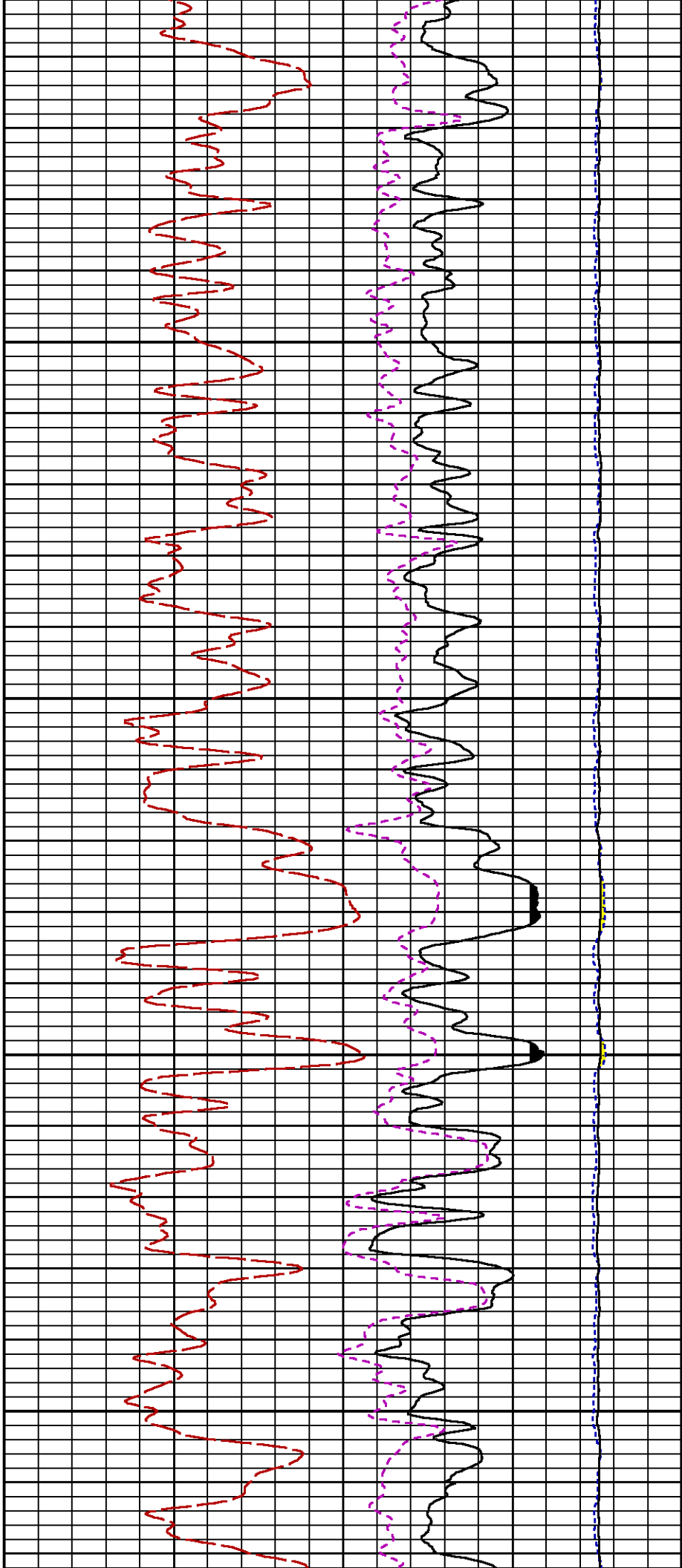




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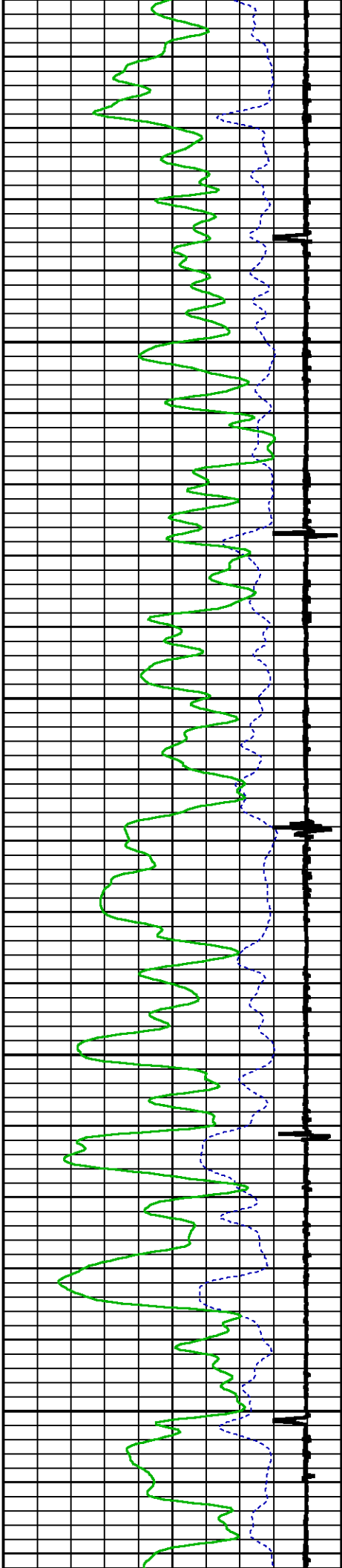
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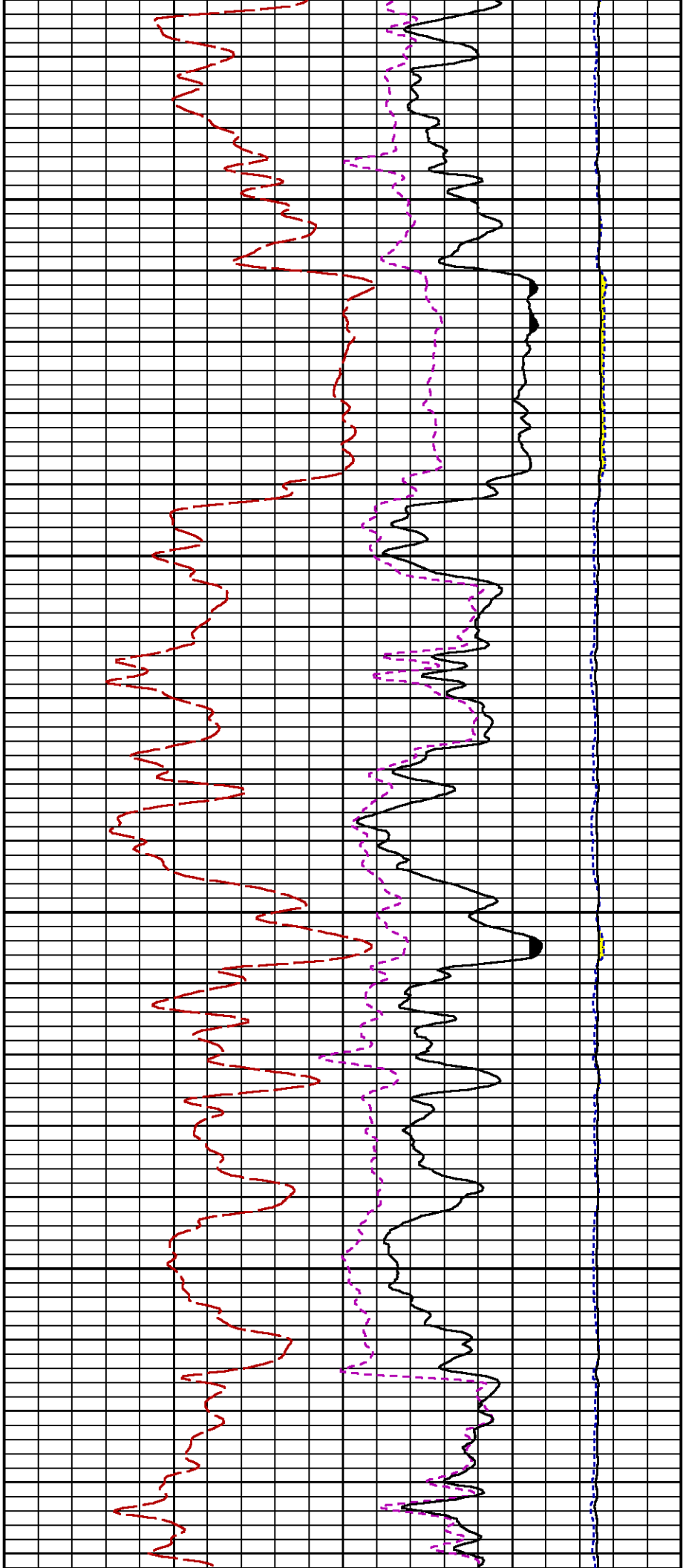




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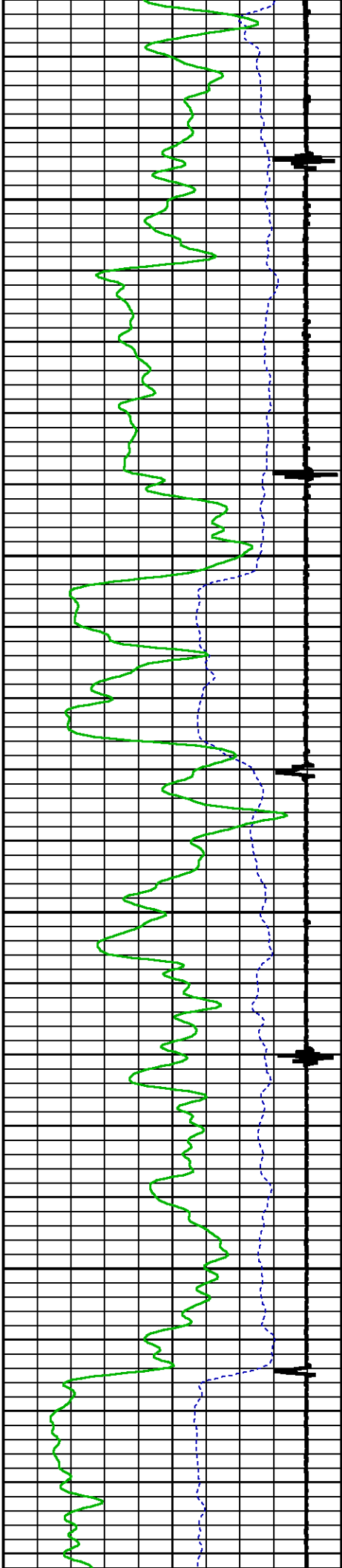
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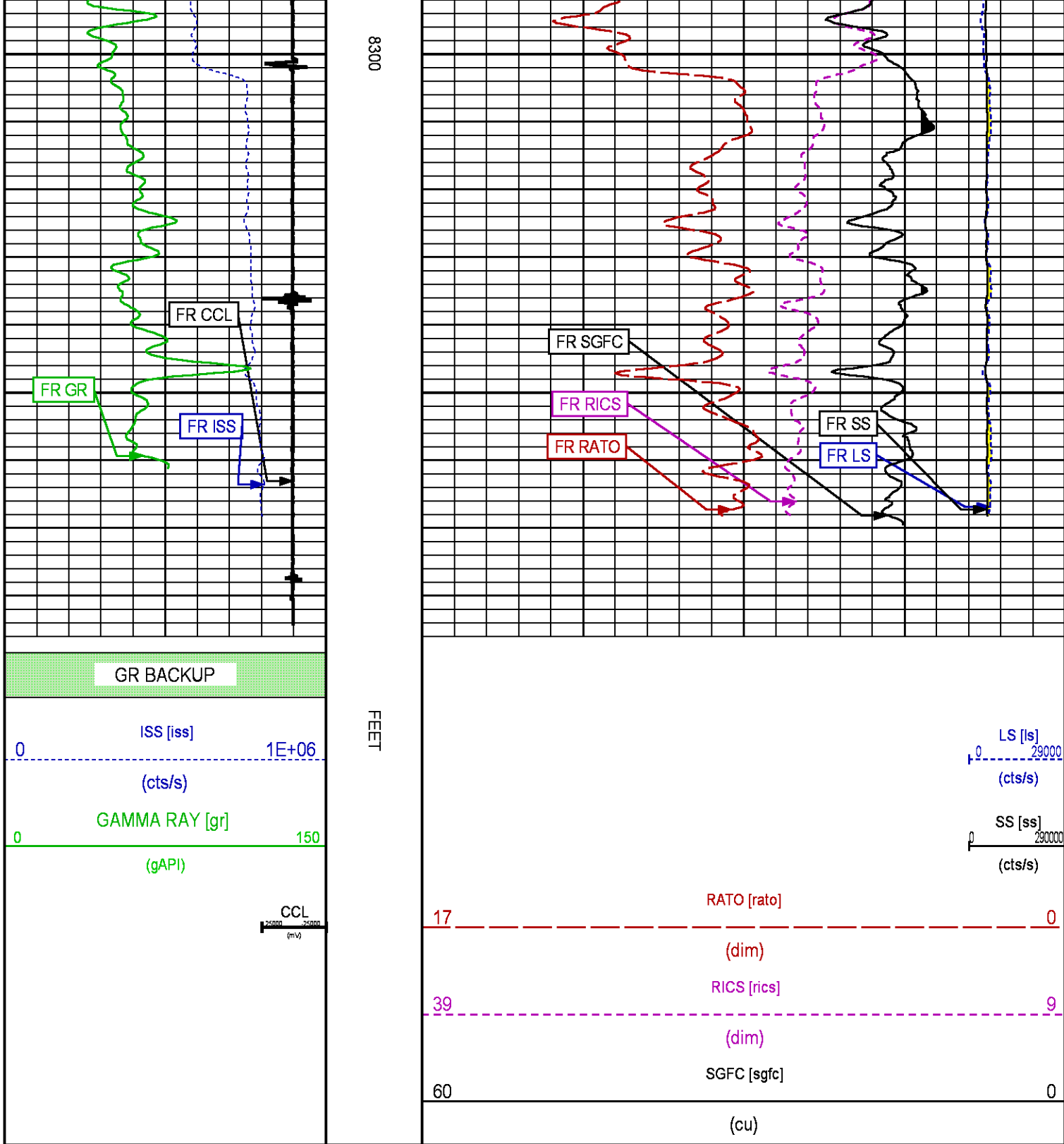




8100

8200





REPEAT SECTION PNC-3D MODE

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100607/n353hR01.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 8095.250 ft BOTTOM DEPTH: 8389.000 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	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH100607/n012g02.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 11.750 ft BOTTOM DEPTH: 8390.000 ft

### SYMMETRIC FILTER

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

### RAL CCL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CCL FLOOR	CCL FLOOR	0		TOP	BOTTOM

## CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F2:CCL	Oct 30 16:46:36 2015	CASING COLLAR LOCATOR
F1:GR	Oct 31 08:32:22 2015	GAMMA RAY
F1:ISS	Oct 31 08:32:22 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Oct 31 08:32:22 2015	LONG SPACE COUNT RATE
F1:RATO	Oct 31 08:32:22 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Oct 31 08:32:22 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Oct 31 08:32:22 2015	CORRECTED FORMATION SIGMA
F1:SS	Oct 31 08:32:22 2015	SHORT SPACE COUNT RATE

## CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	5.75	ISS	12.75	RATO	12.75	SGFC	12.75
GR	23.00	LS	12.75	RICS	12.75	SS	12.75

Presentation : cas6685:/dat1a/CH100607/RPM\_REPEAT.fvpdf [5"/100' Scale]  
 Plot Interval : 8100 - 8384.25 Feet

Data File 1 : F1 : cas6685:/dat1a/CH100607/n353hR01\_REPEAT.xtf  
 Created On : Oct 31 08:32:22 2015  
 Company : LARAMIE ENERGY  
 Well : PICEANCE FEDERAL 28-20E  
 Field : VEGA  
 File Interval : 8068.5 - 8389 Feet  
 OCT : n353h

Data File 2 : F2 : cas6685:/dat1a/CH100607/n012g02\_MAIN.xtf  
 Created On : Oct 30 16:46:36 2015  
 Company : LARAMIE ENERGY  
 Well : PICEANCE FEDERAL 28-20E  
 Field : VEGA

GR BACKUP

ISS [iss] 0 1E+06

(cts/s)

GAMMA RAY [gr] 0 150

(gAPI)

CCL

(mV)

FEET

8100

8200

LS [ls]

0 29000

(cts/s)

SS [ss]

0 290000

(cts/s)

RATO [rato]

17

0

(dim)

RICS [rics]

39

9

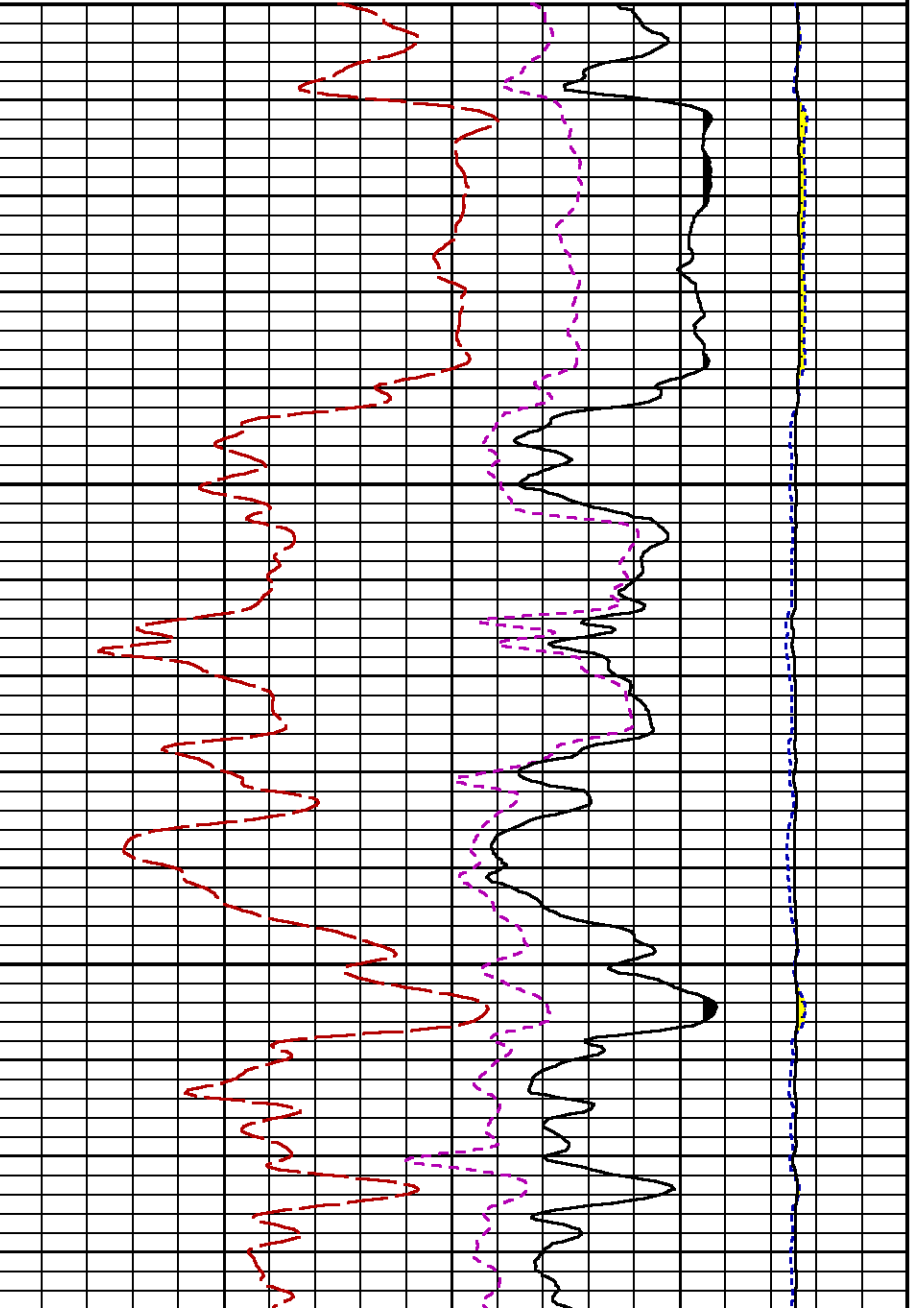
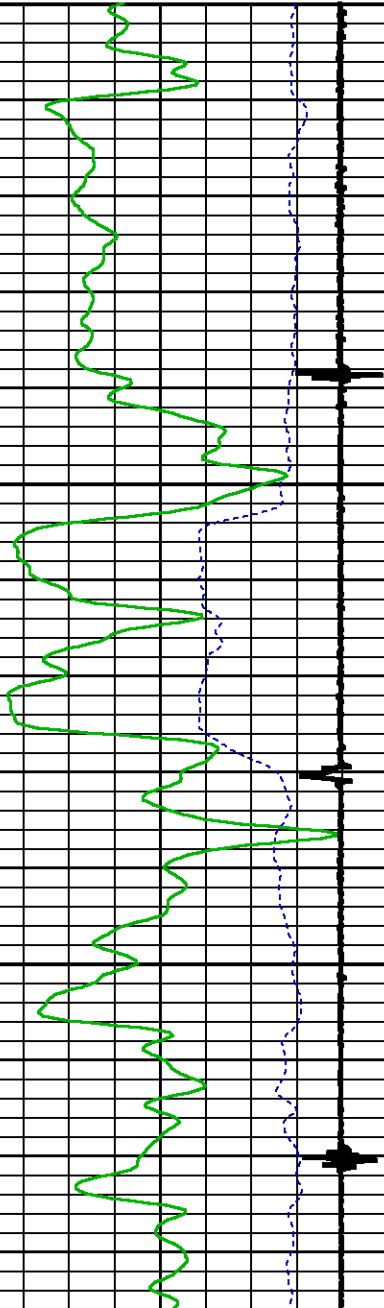
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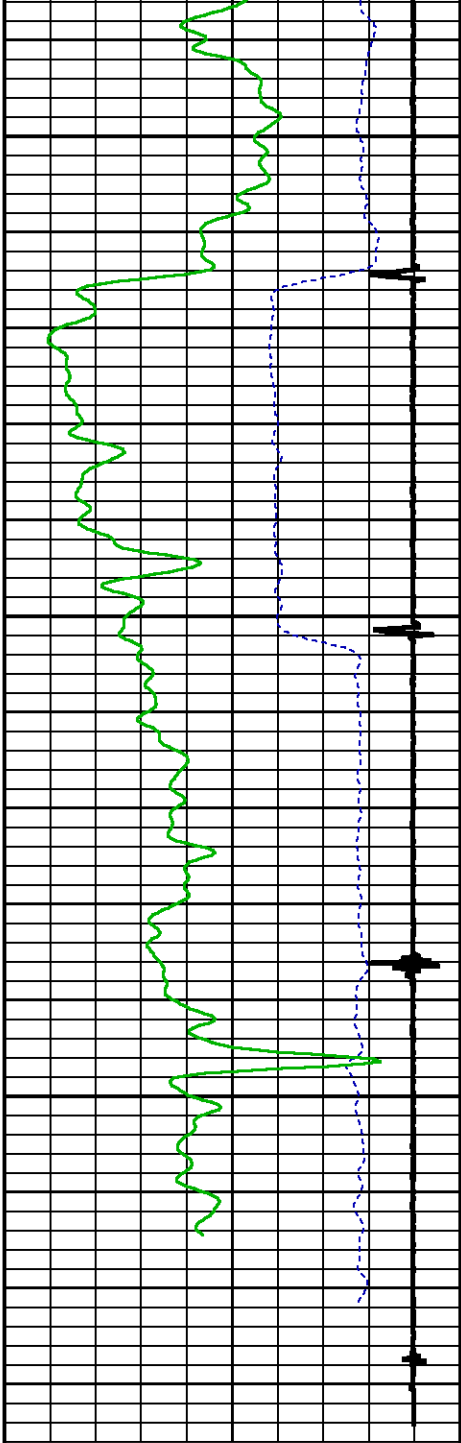
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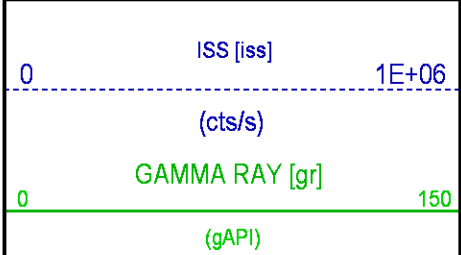
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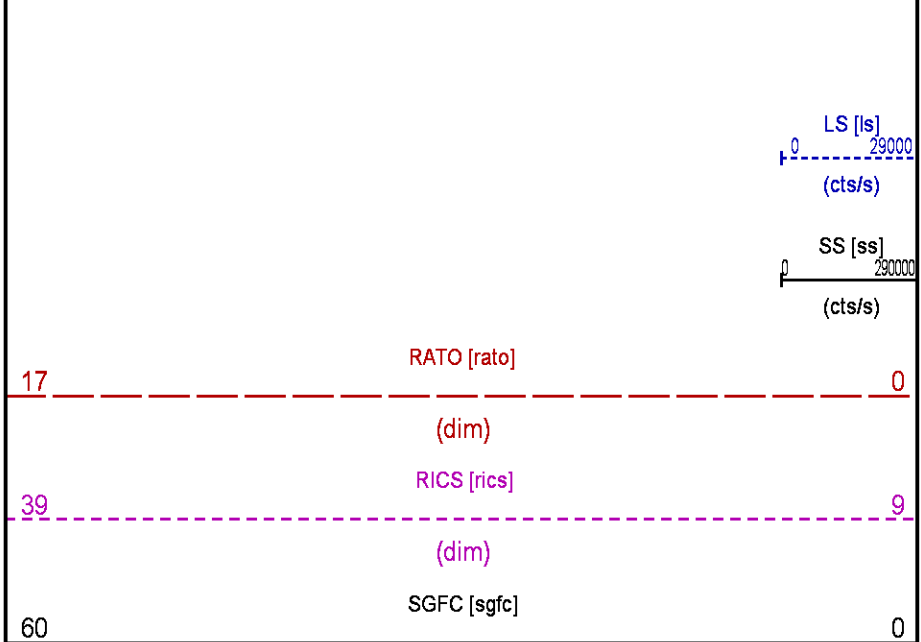
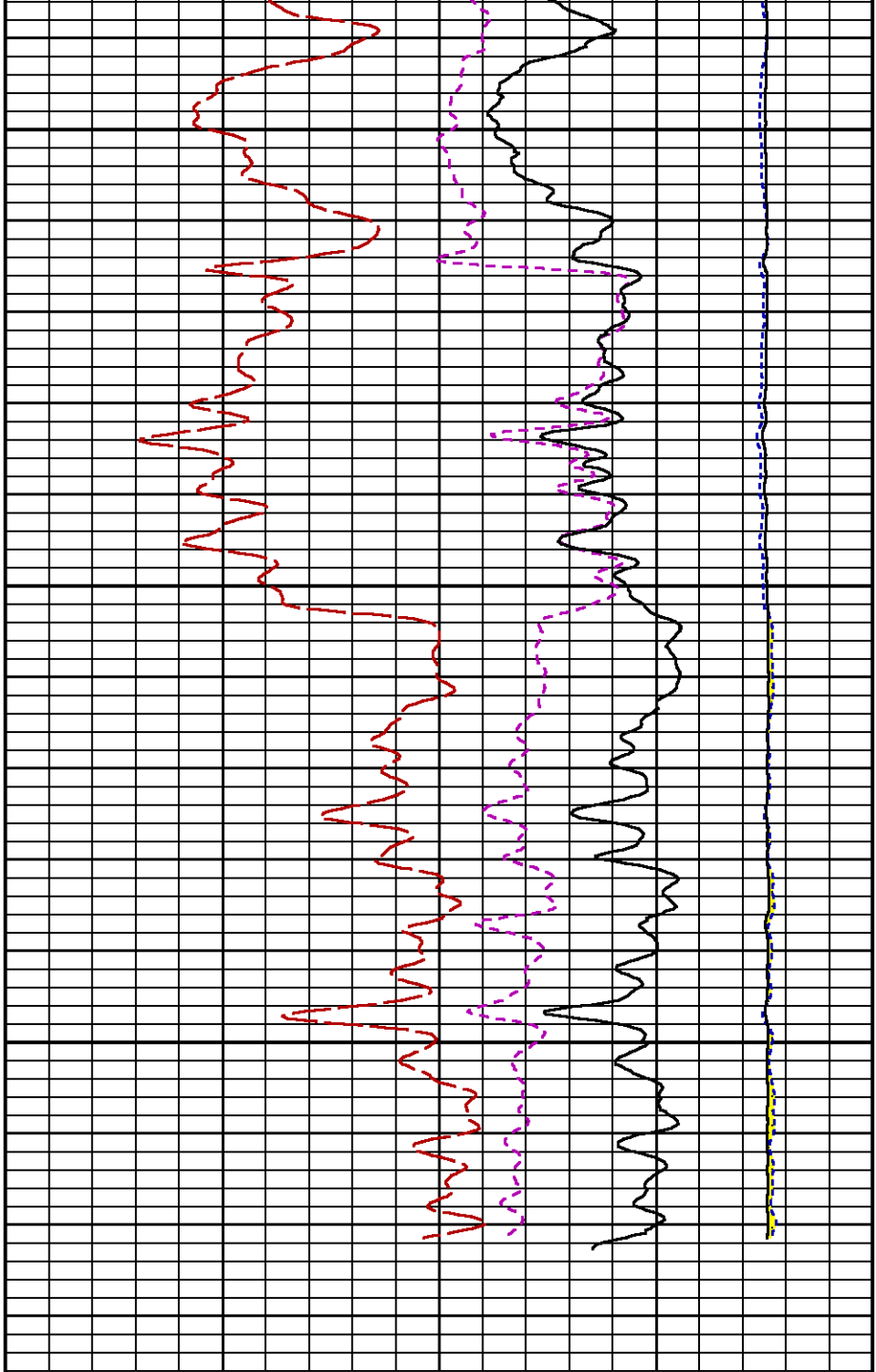


GR BACKUP



8300

FEET



## CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH100607/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	CALBRTR ON	CR DIFF	MULT	BACKGROUND	CALBRTR ON	CALBRTR
	(cts/s)	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(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	CALBRTR ON	MULT	BACKGROUND	CALBRTR ON	DIFF.
	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(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 Vlt's (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

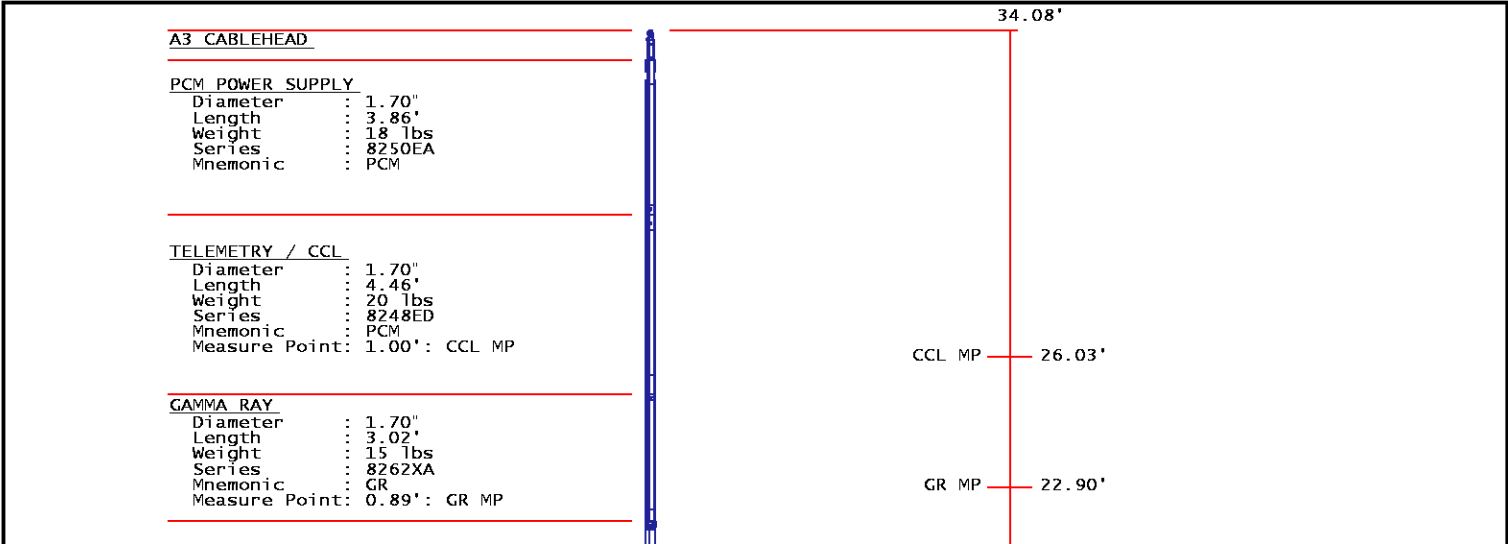


	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	801603	167903	25988	88575	31568	8240	53636	13173
Fit Quality %		0.898	1.042	0.778	0.769	0.808	0.724	0.842
	ISS	RBOR	RIN	RIN13	RICS	RATO	RTWO	RONE
		ISS/LS	ISS/IXS	ISS/CSS	SS/LS	SS2/LS	CSS/CLS	
Raw Data	801603	1.43	4.77	30.86	14.95	10.75	3.83	4.07
		1.42 1.45	3.55 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 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

Source File: /dat1a/CH100606/n353h~joe-tdg



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'

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

TEMP MP 1.65'  
PRES MP 0.00'

	COMPANY	LARAMIE ENERGY		FILE NO:	
	WELL	PICEANCE FEDERAL 28-20E			CH100607
	FIELD	VEGA		API NO:	
	COUNTY	MESA	STATE	CO	05077102560000
LOCATION:			ELEVATIONS:	SEC 28 T9S R93W	
SHL: 2001' FSL 2489' FWL			KB 7701 FT	28-10 PAD	
BHL: 363' FSL 881' FEL			DF	PATTERSON 306	
SEC 28 TWP 9S RGE 93W			GL 7679 FT		
			DATE	31-Oct-2015	