



DUAL COMPENSATED Z-DENSILOG
COMPENSATED NEUTRON LOG
GAMMA RAY LOG
X-Y AXIS CALIPER LOG

FILE NO:	COMPANY	MGM ENERGY CORP	
API NO:	WELL	MGM SHELL EAST MACKAY 1-78	
	FIELD	EAST MACKAY	
	PROVINCE	NORTHWEST TERRITORIES	
Ver. 3.87	LOCATION:		
UID:		OTHER SERVICES	
3001786450125 30		STAR-CBIL-GR, DSL	
LICENSE:		HDIL-GR-CAL, RTEK	
1202		XMAC-GR, FLEX-DSL	
		CVL, MREX, DIRSUR	
PERMANENT DATUM	G.L.	ELEVATION	ELEVATIONS:
LOG MEASURED FROM	K.B.	6.20 M	KB 161.20 M
DRILL. MEAS. FROM	KELLY BUSHING	ABOVE P.D.	DF
			GL 155.00 M
DATE	16-FEB-2013		
RUN	TRIP	1	
SERVICE ORDER	CA215446		
DEPTH DRILLER	2001.0 M		
DEPTH LOGGER	1998.0 M		
BOTTOM LOGGED INTERVAL	1955.0 M		
TOP LOGGED INTERVAL	402.2 M		
CASING DRILLER	244.5 MM	Ø 401.8 M	Ø
CASING LOGGER	402.2 M		
BIT SIZE	222.0 MM		
TYPE OF FLUID IN HOLE	GELCHEM		
DENSITY	1075.0 G/L	80.0 CP	
PH	9.0	6.2 ML	
SOURCE OF SAMPLE	TOOL MEASURED		
RM AT MEAS. TEMP.	0.96 OHMM	Ø 15.0 DEGC	Ø
RMF AT MEAS. TEMP.	0.83 OHMM	Ø 15.0 DEGC	Ø
RMC AT MEAS. TEMP.	1.15 OHMM	Ø 15.0 DEGC	Ø
SOURCE OF RMF	RMC	CALCULATED	
RM AT BHT	0.44 OHMM	Ø 59.1 DEGC	Ø
TIME SINCE CIRCULATION	15.8 HOURS		
MAX. RECORDED TEMP.	59.1 DEGC		
EQUIP. NO.	LOCATION	2008672	CANADA OPEN
RECORDED BY		J. COLLIER/I. ZALESKI KH	
WITNESSED BY		D. PRIOR	

CASING RECORD			
SIZE	WEIGHT	GRADE	FROM
244.5 MM	59.5 KG/M	NA	0.0 M
			401.8 M

BOREHOLE RECORD		
BIT SIZE	FROM	TO
311.0 MM	0.0 M	401.8 M
222.0 MM	401.8 M	2001.0 M

REMARKS

RUN 2 TRIP 1 : TIME STOPPED CIRCULATION: 15-FEB-2013 04:00 PM

CORRELATED TO BAKER HUGHES WIRELINE 29-JAN-2013
GR FAILED NEAR 600M, SPLICED GR FROM DOWNLOG AT 659.0M
STUCK AT 1973.5M, LOGGED UP WHEN TOOLS BECAME FREE
COPIED GR OVER FROM SURFACE HOLE LOG TO CASING LOG
CNC IS ZDL CALIPER CORRECTED.
CNC AND PORZ PRESENTED IN SANDSTONE MATRIX 2.65G/CM3.
CNC IS CORRECTED FOR 311.0MM BIT SIZE BEHIND CASING FROM 402.2M TO SURFACE
AND PRESENTED ABOVE CAL/VER SECTION.

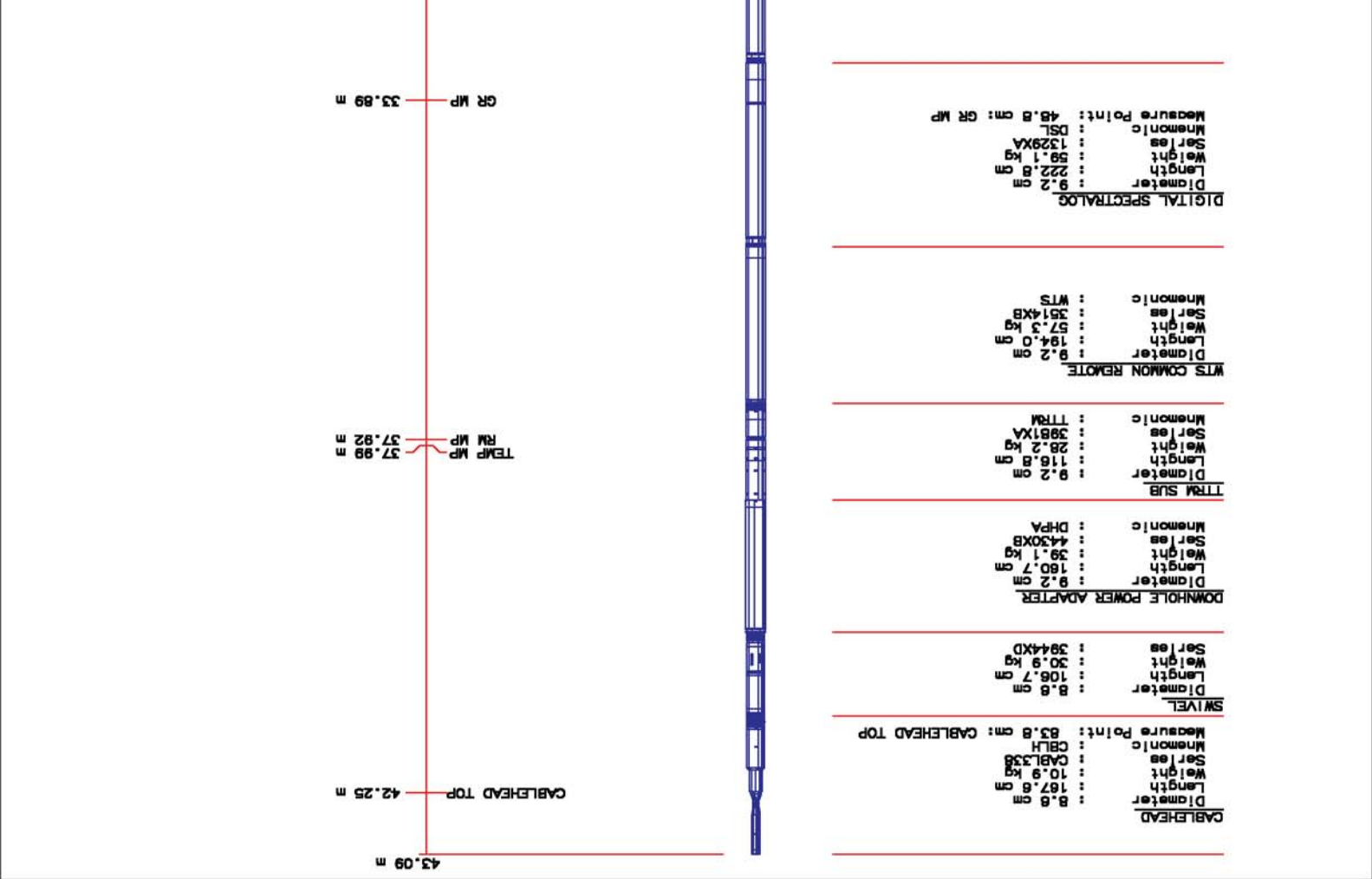
RIG: AKITA 37

CREW: J. COLLIER, I. ZALESKI KH, J. WOODS, N. MCDERMID, J. PEREIRA, J. VAN DER HONING,

EQUIPMENT DATA					
RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
2	1	SWIVEL	3944XD	10513050	FREE
2	1	DHPA	4430XB	10390598	FREE
2	1	TTRM SUB	3981XB	10516528	FREE
2	1	COMM	3514XB	10504656	FREE
2	1	WTS DGR/SU	1329XB	10293862	FREE
2	1	ORIT	4401XB	12466129	FREE
2	1	ACOUSTIC EL	1677EA	10383392	CENTRALIZED
2	1	XMAC RX MDR	1678MC	10386815	CENTRALIZED
2	1	XMAC ISO	1678PB	10039369	FREE
2	1	XMAC TX ELC	1678BA	12168167	CENTRALIZED
2	1	XMAC TX ELC	1678FA	12188364	CENTRALIZED
2	1	WTS DBL KNU	3939XA	12448499	FREE
2	1	FOC/WTS ADP	3527EA	12337591	FREE
2	1	FOC/WTS ADP	3527FA	12494796	FREE
2	1	TMA SUB	3980XA	Z402456	FREE
2	1	FOCUS CN	2436XA	10105638	DECENTRALIZED
2	1	FOCUS ZDEN	2223XA	10391896	PAD DEVICE
2	1	DBL KNU/T	3931XA	10469360	FREE
2	1	ALGNMNT SUB	4408NA	10265502	FREE
2	1	FOCUS ZDEN	2223XA	10102923	PAD DEVICE
2	1	DBL KNU/T	3931XA	10308519	FREE
2	1	FOCUS HDL	1530XA	10125755	STANDOFF

INSTRUMENT CONFIGURATION

Source File: /data/MGM/run2_oh/run1-tdg



DIGITAL ORIENTATION
Diameter : 8.6 cm
Length : 329.4 cm
Weight : 50.0 kg
Series : 4401XB
Mnemonic : OR17
Measure Point: 0.0 cm: ORIENT MP

ARRAY ACOUSTIC LOG ELECTRONICS, 8 CHANNEL
Diameter : 8.6 cm
Length : 238.3 cm
Weight : 46.4 kg
Series : 1677EA
Mnemonic : XMAC

GROSS MULTIPOLE ARRAY ACOUSTIC LOG
Diameter : 9.5 cm
Length : 332.4 cm
Weight : 101.8 kg
Series : 1678MC
Mnemonic : XMT1

MEASURE POINT: 167.6 cm: R8
MEASURE POINT: 152.4 cm: R7
MEASURE POINT: 137.2 cm: R6
MEASURE POINT: 121.9 cm: R5
MEASURE POINT: 106.7 cm: R4
MEASURE POINT: 91.4 cm: R3
MEASURE POINT: 76.2 cm: R2
MEASURE POINT: 61.0 cm: R1

SHEAR WAVE ACOUSTIC LOG
Diameter : 9.2 cm
Length : 152.4 cm
Weight : 61.4 kg
Series : 1678PB
Mnemonic : XMAC

MULTI-POLE ARRAY ACOUSTIC
Diameter : 9.8 cm
Length : 241.3 cm
Weight : 77.3 kg
Series : 1678BA
Mnemonic : XMAC

MEASURE POINT: 195.6 cm: QUADRUPOLE T5
MEASURE POINT: 185.6 cm: MONOPOLE T2
MEASURE POINT: 142.2 cm: Y-DIPOLE T4
MEASURE POINT: 142.2 cm: X-DIPOLE T3
MEASURE POINT: 88.9 cm: MONOPOLE T1

MULTI-POLE ARRAY ACOUSTIC
Diameter : 8.6 cm
Length : 131.6 cm
Weight : 26.4 kg
Series : 1678FA
Mnemonic : MAC

KNUCKLE JOINT (DOUBLE)
Diameter : 8.6 cm
Length : 141.8 cm
Weight : 40.8 kg
Series : 3939XA
Mnemonic : KNUJ

WTS FOCUS TELEMETRY TRANSFORMER SUB
Diameter : 9.2 cm
Length : 165.7 cm
Weight : 30.5 kg
Series : 3528EB
Mnemonic : ADAP

WTS FOCUS POWER ADAPTOR
Diameter : 9.2 cm
Length : 110.2 cm
Weight : 70.9 kg
Series : 3528FB
Mnemonic : ADAP

FOCUS TEN/TEMP/MUD RES/ACCEL
Diameter : 8.0 cm
Length : 131.4 cm
Weight : 27.7 kg
Series : 3980XA
Mnemonic : TMA

FOCUS COMPENSATED NEUTRON
Diameter : 8.0 cm
Length : 146.7 cm
Weight : 29.5 kg
Series : 2436XA
Mnemonic : CN

MEASURE POINT: 58.4 cm: LSN MP
MEASURE POINT: 44.5 cm: SSN MP
FOCUS Z-DENS LOG
Diameter : 9.5 cm
Length : 292.1 cm
Weight : 80.9 kg
Series : 2223XA

ORIENT MP 30.11 m

R8 26.08 m
R7 25.77 m
R6 25.62 m
R5 25.47 m
R4 25.32 m
R3 25.17 m
R2 25.01 m
R1 25.01 m

MONOPOLE T2 22.42 m
QUADRUPOLE T5 22.42 m
X-DIPOLE T3 21.89 m
Y-DIPOLE T4 21.89 m

MONOPOLE T1 21.56 m

LSN MP 12.78 m
SSN MP 12.64 m
CR1 MP 10.59 m

Sat Feb 16 18:03:26 2013

Fileview 5.61

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
SYMMETRIC FILTER	CHT	FILTER ()	medium (1)	TOP
	TENSION	FILTER ()	medium (1)	TOP
	GR	FILTER ()	medium (1)	TOP
	CALIPER	FILTER ()	medium (1)	TOP
	ZDL MED RES	FILTER (hrd1*)	medium	TOP
		FILTER (hrd12*)	medium	TOP
		FILTER (hrd1s*)	medium	TOP
		FILTER (hrd1s2*)	medium	TOP
		FILTER (hrd2*)	medium	TOP
		FILTER (hrd3*)	medium	TOP
				BOTTOM

BOTTOM DEPTH: 1994.840 m

MAIN LOG - UPPER PRESENTATION

F1:BIT	Feb 16 07:26:57	2013	BIT SIZE
F1:CALX	Feb 16 07:26:57	2013	CALIPER FROM X-AXIS OF XY CALIPER(S)
F1:CALY	Feb 16 07:26:57	2013	CALIPER FROM Y-AXIS OF XY CALIPER(S)
F1:CHT	Feb 16 07:26:57	2013	CABLE HEAD TENSION
F1:GR	Feb 16 07:26:57	2013	GAMMA RAY
F1:MMRK	Feb 16 07:26:57	2013	MINUTE MARK
F1:PE	Feb 16 07:26:57	2013	PHOTO ELECTRIC CROSS-SECTION
F1:PE2	Feb 16 07:26:57	2013	PHOTOELECTRIC CROSS-SECTION (2ND TOOL)
F1:TEN	Feb 16 07:26:57	2013	DIFFERENTIAL TENSION
CURVE NAME CREATION DATE CURVE DESCRIPTION			
CURVE DESCRIPTION REPORT			

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	DENSITY POROSITY
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION OFF		TOP BOTTOM	Air Filled Borehole NO
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
ACCELERATION PROCESSING					
BIT SIZE	BIT SIZE	222.000	mm	TOP 1818.475 BOTTOM	
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
BOREHOLE & CEMENT					
CHT	FILTER (	medium	(1)	TOP	
TENSION	FILTER (	medium	(1)	''	
GR	FILTER (	medium	(1)	''	
CALIPER	FILTER (	medium	(1)	''	
ZDL MED RES	FILTER (hrd1*	medium		''	
	FILTER (hrd12*	medium		''	
	FILTER (hrd1s*	medium		''	
	FILTER (hrd1s2*	medium		''	
	FILTER (hrd2*	medium		''	
	FILTER (hrd22*	medium		''	
	FILTER (hrd2s*	medium		''	
	FILTER (hrd2s2*	medium		''	
	FILTER (soft+*	medium		''	
	FILTER (soft+2*	medium		''	
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
SYMMETRIC FILTER					
FILE: /data/MGM/run2_oh/m980e07.prm LOGGING MODE: DEPTH TOP DEPTH: 353.008 m DIRECTION: UP BOTTOM DEPTH: 1968.772 m					

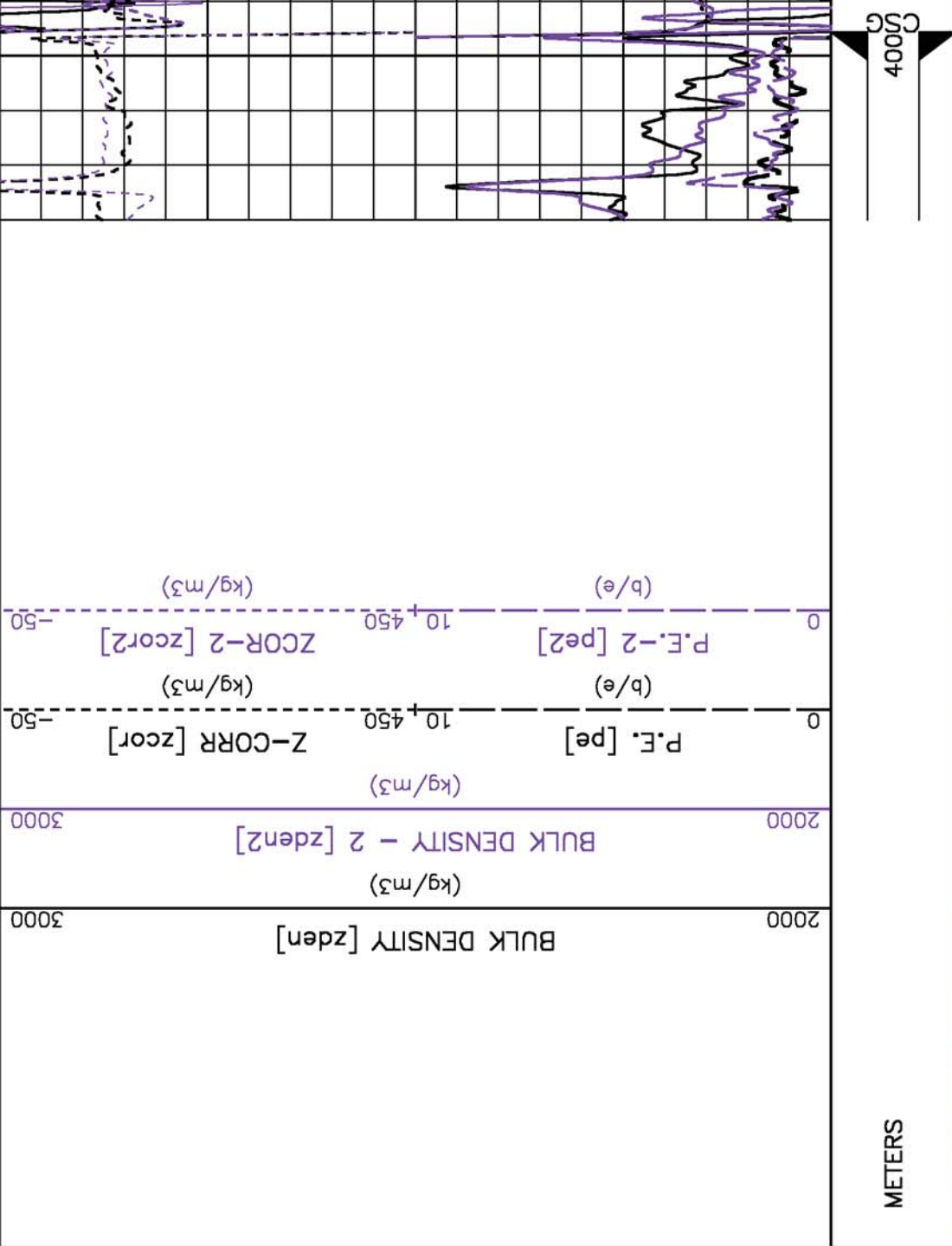
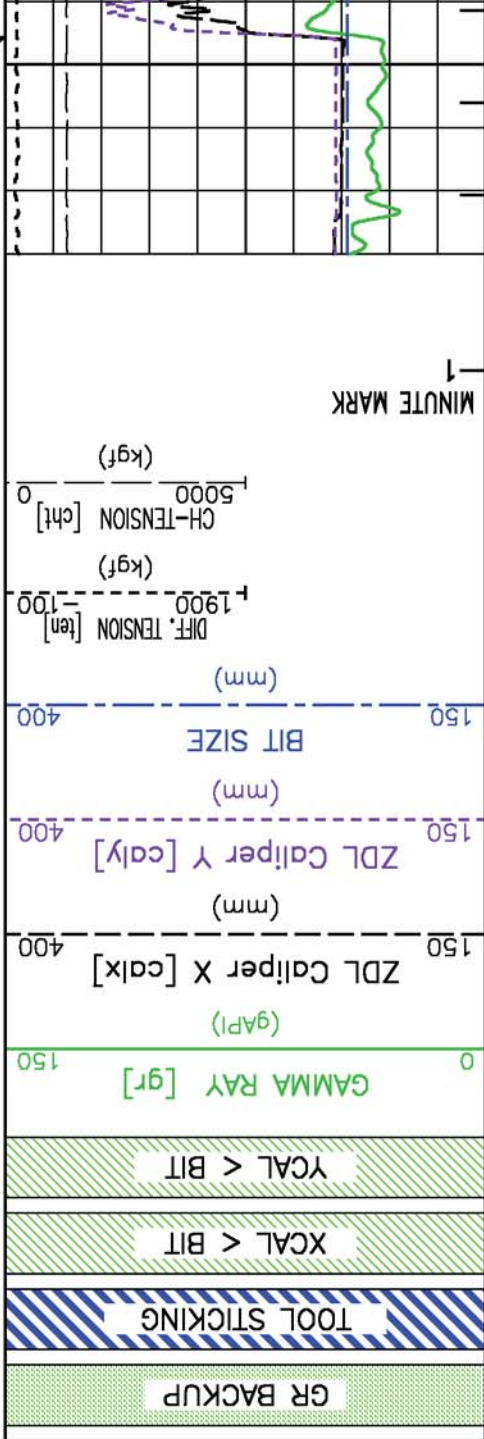
PARAMETER AND FILTER SUMMARY REPORT

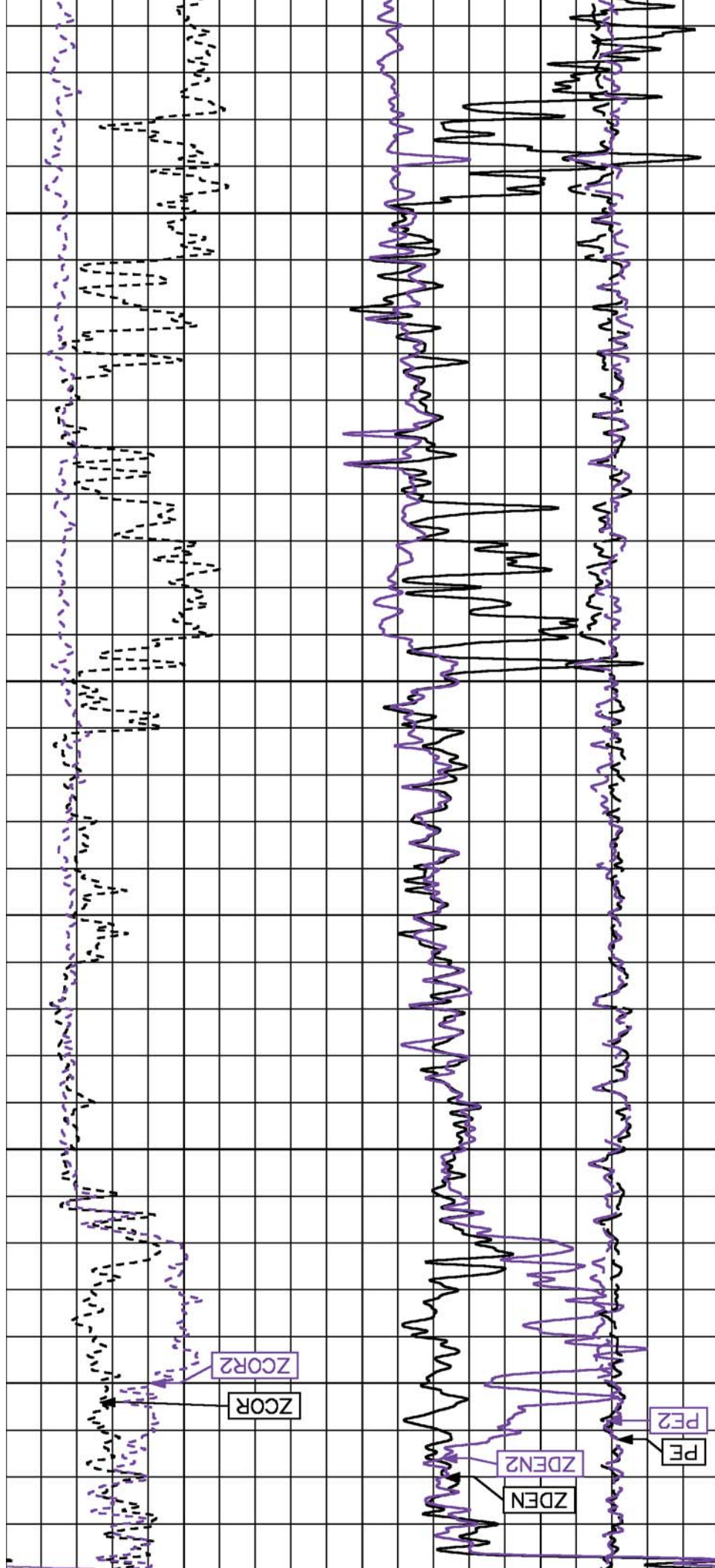
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ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION OFF		TOP BOTTOM	Air Filled Borehole NO
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
ACCELERATION PROCESSING					
BIT SIZE	BIT SIZE	222.000	mm	TOP BOTTOM	
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
BOREHOLE & CEMENT					
	FILTER (hrd2*	medium		''	
	FILTER (hrd2s*	medium		''	
	FILTER (hrd2s2*	medium		''	
	FILTER (soft+*	medium		''	
	FILTER (soft+2*	medium		''	

F1:ZCOR	Feb 16 07:26:57 2013	DENSITY CORRECTION
F1:ZCOR2	Feb 16 07:26:57 2013	DENSITY CORRECTION (2ND TOOL)
F1:ZDEN	Feb 16 07:26:57 2013	FORMATION BULK DENSITY
F1:ZDEN2	Feb 16 07:26:57 2013	FORMATION BULK DENSITY (2ND TOOL)

CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
BIT	0.00	CHT	0.00	PE2	5.49	ZCOR2	5.49
CALX	9.64	GR	33.76	TEN	0.00	ZDEN	9.64
CALY	5.49	PE	9.64	ZCOR	9.64	ZDEN2	5.49

Presentation	: sysa:/data/MGM/run2_oh/zdl2_upper.pdf [1:500 Scale]	Plot Interval	: 385 - 1980 Meters
Data File 1	F1 : sysa:/data/MGM/run2_oh/222_main.xtf	Created On	Feb 16 07:26:57 2013
Company	MGM ENERGY CORP	Well	MGM SHELL EAST MACKAY I-78
Field	EAST MACKAY	File Interval	: 318.973 - 1971.48 Meters
Oct	: m980e		

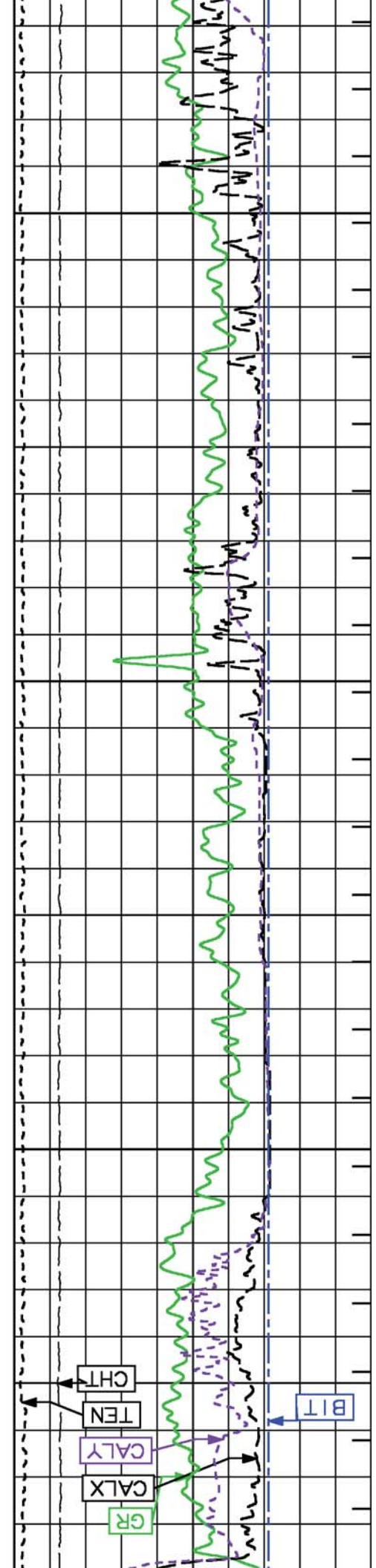




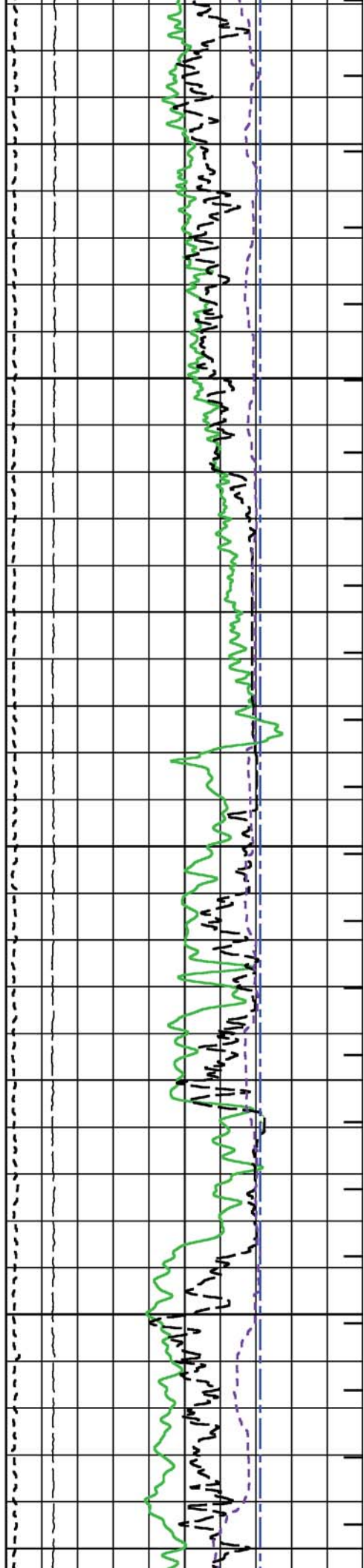
550

500

450



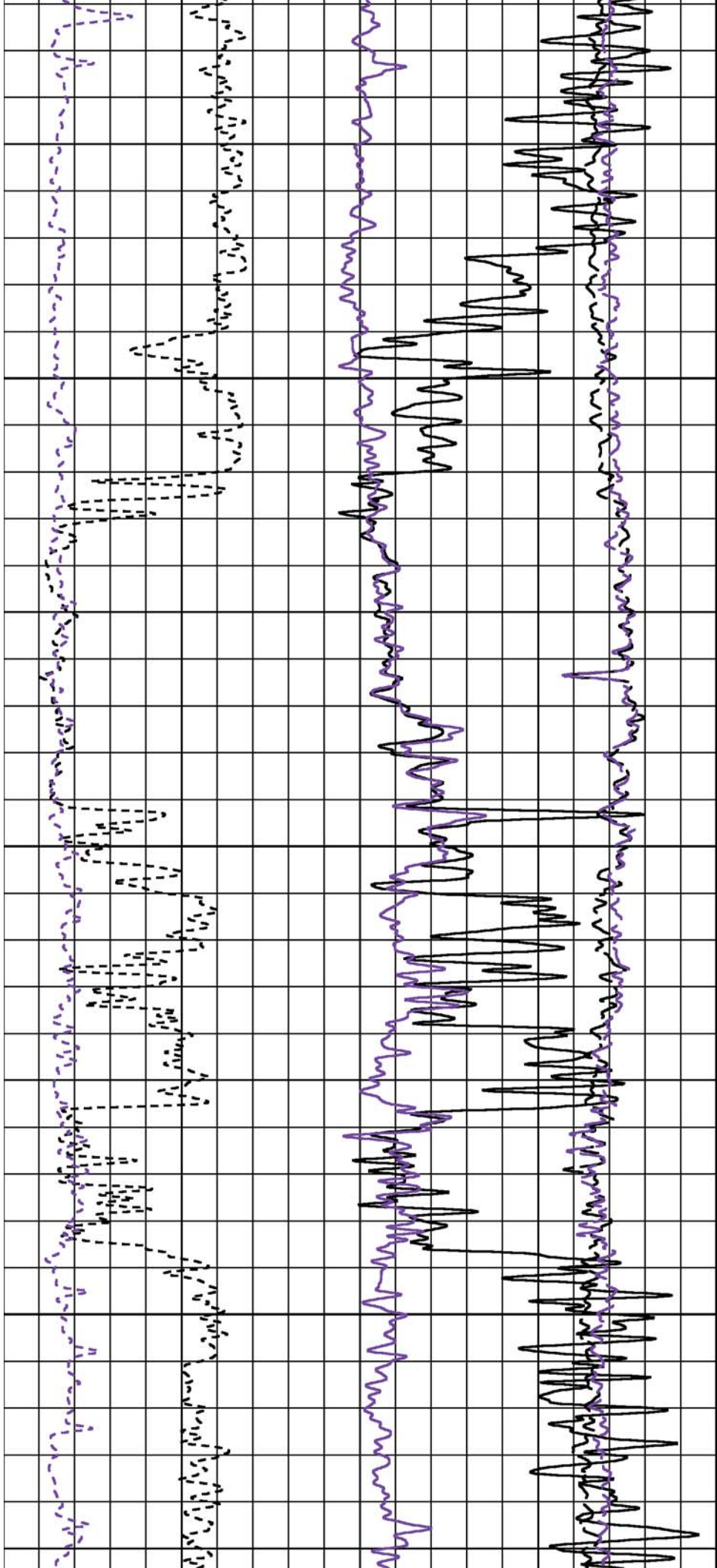
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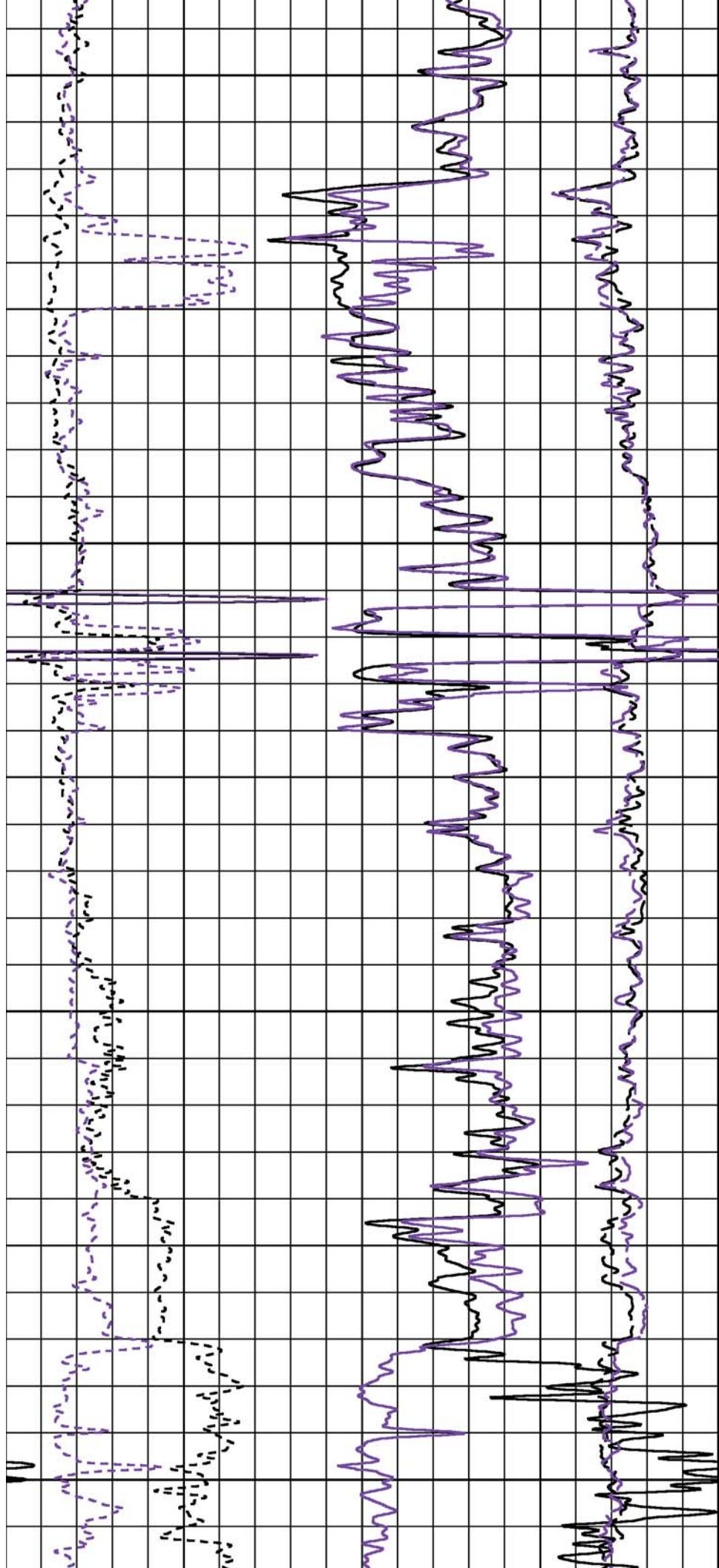


700

650

600



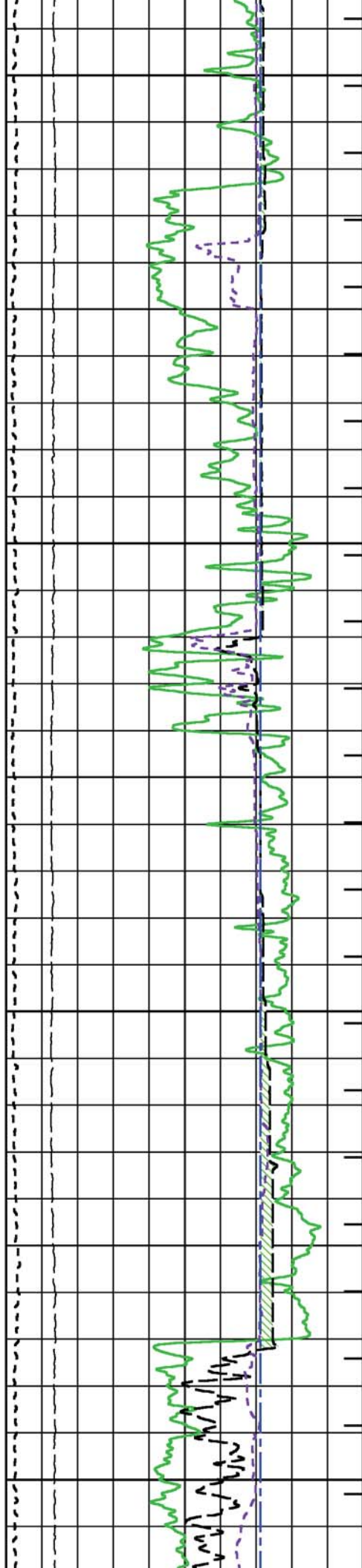


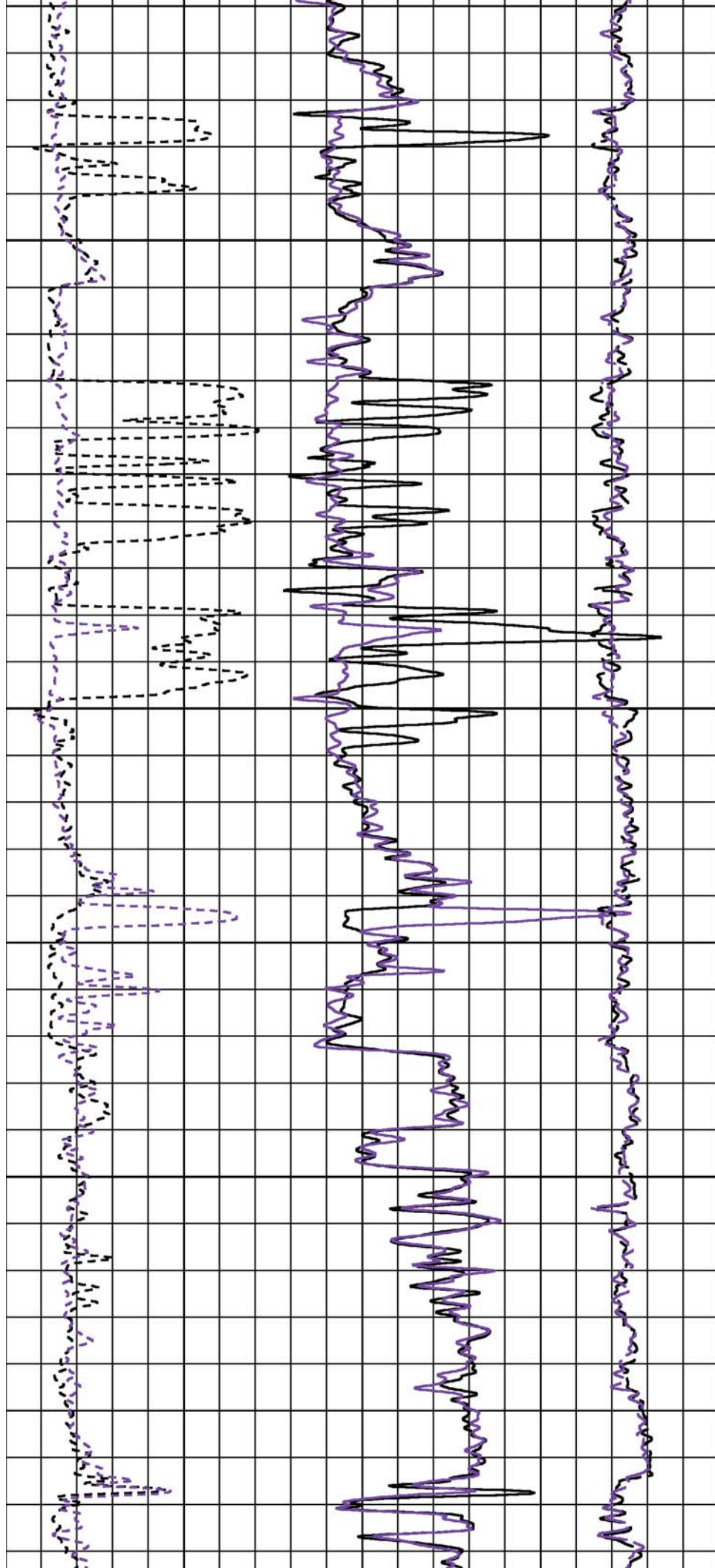
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800

850

900

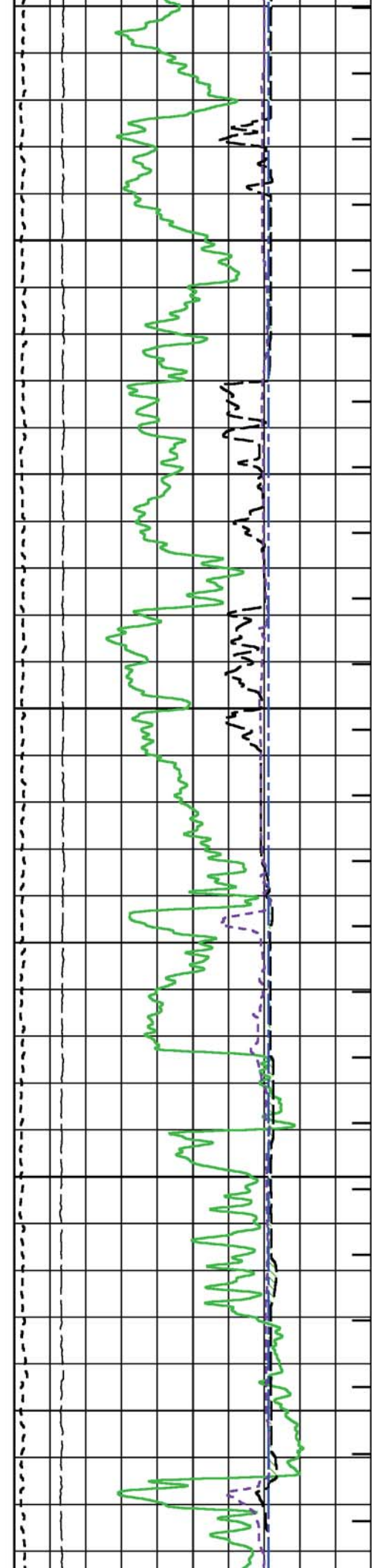


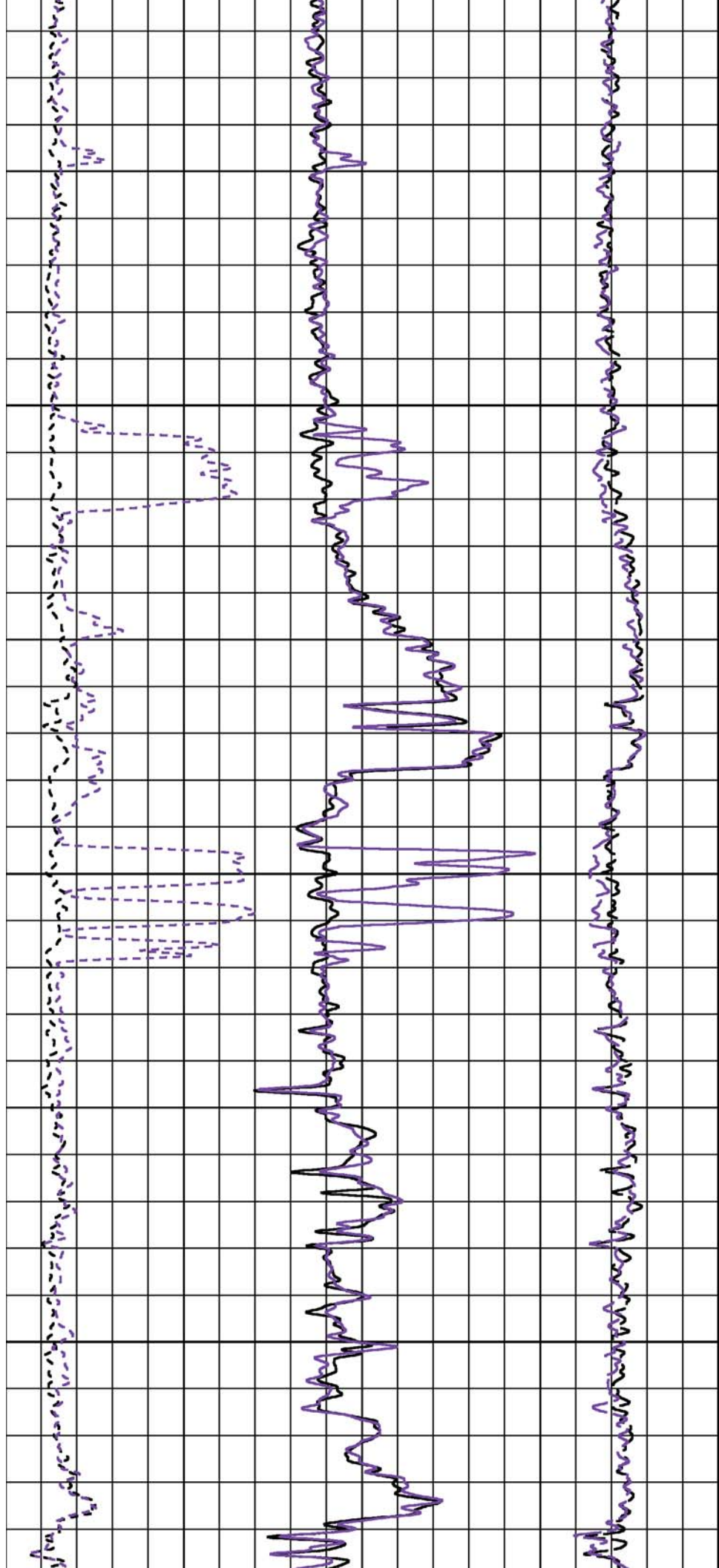


1050

1000

950

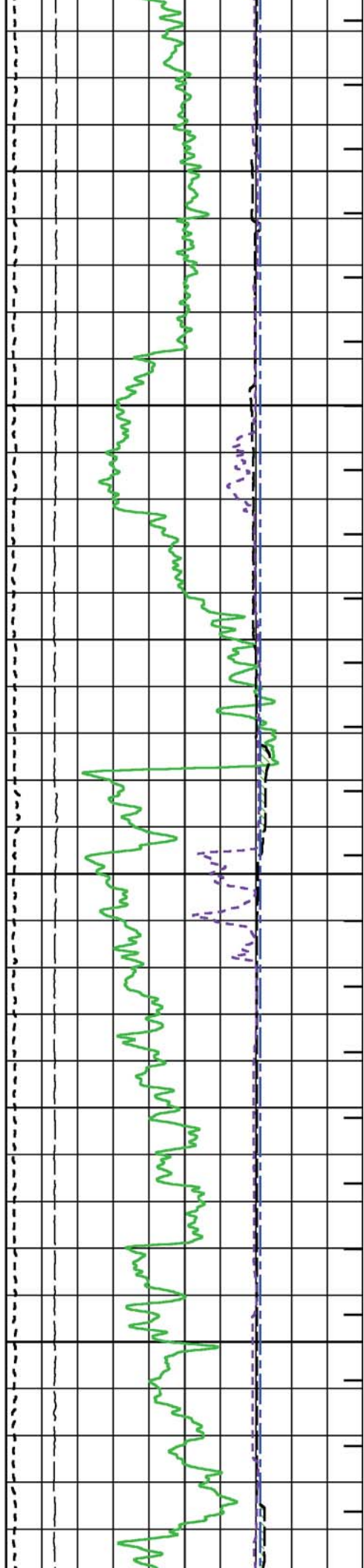


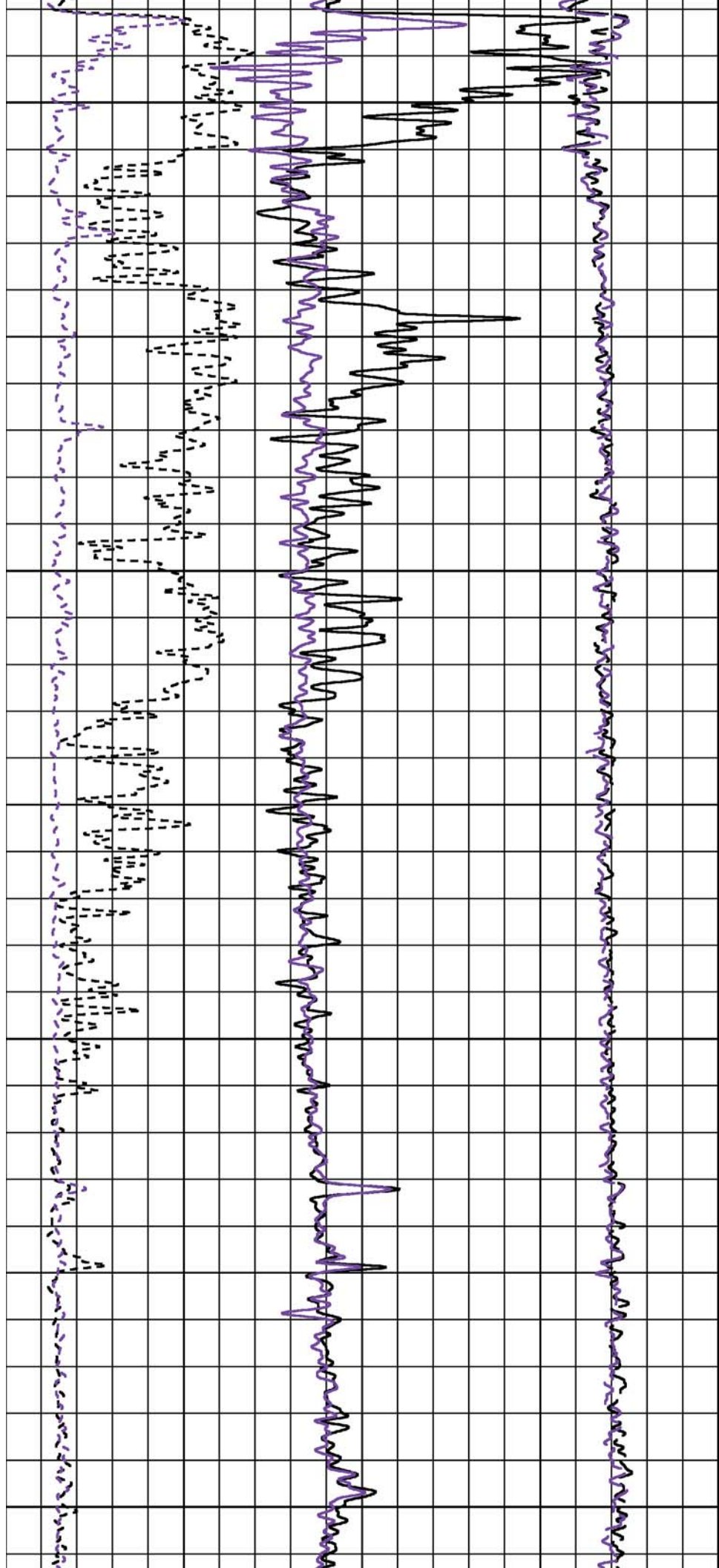


1200

1150

1100



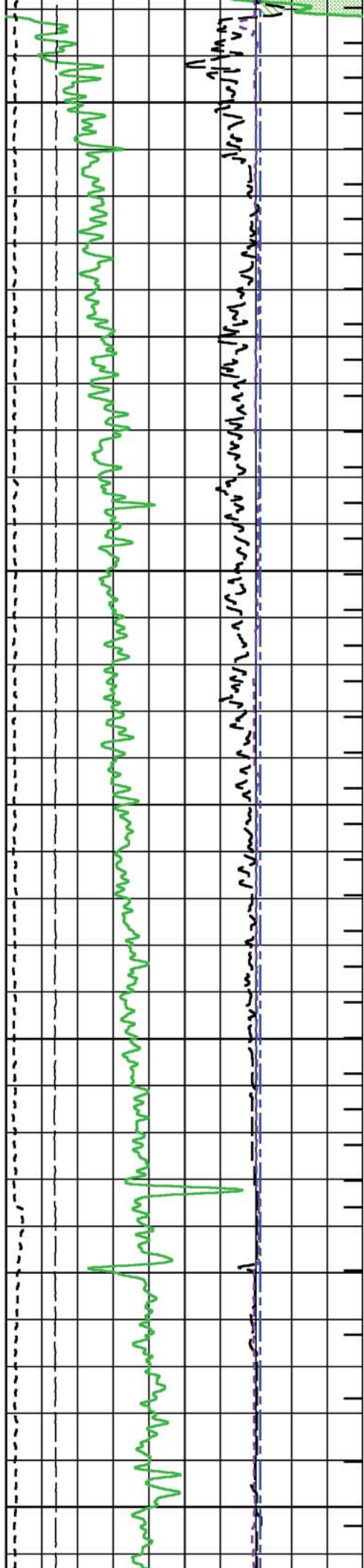


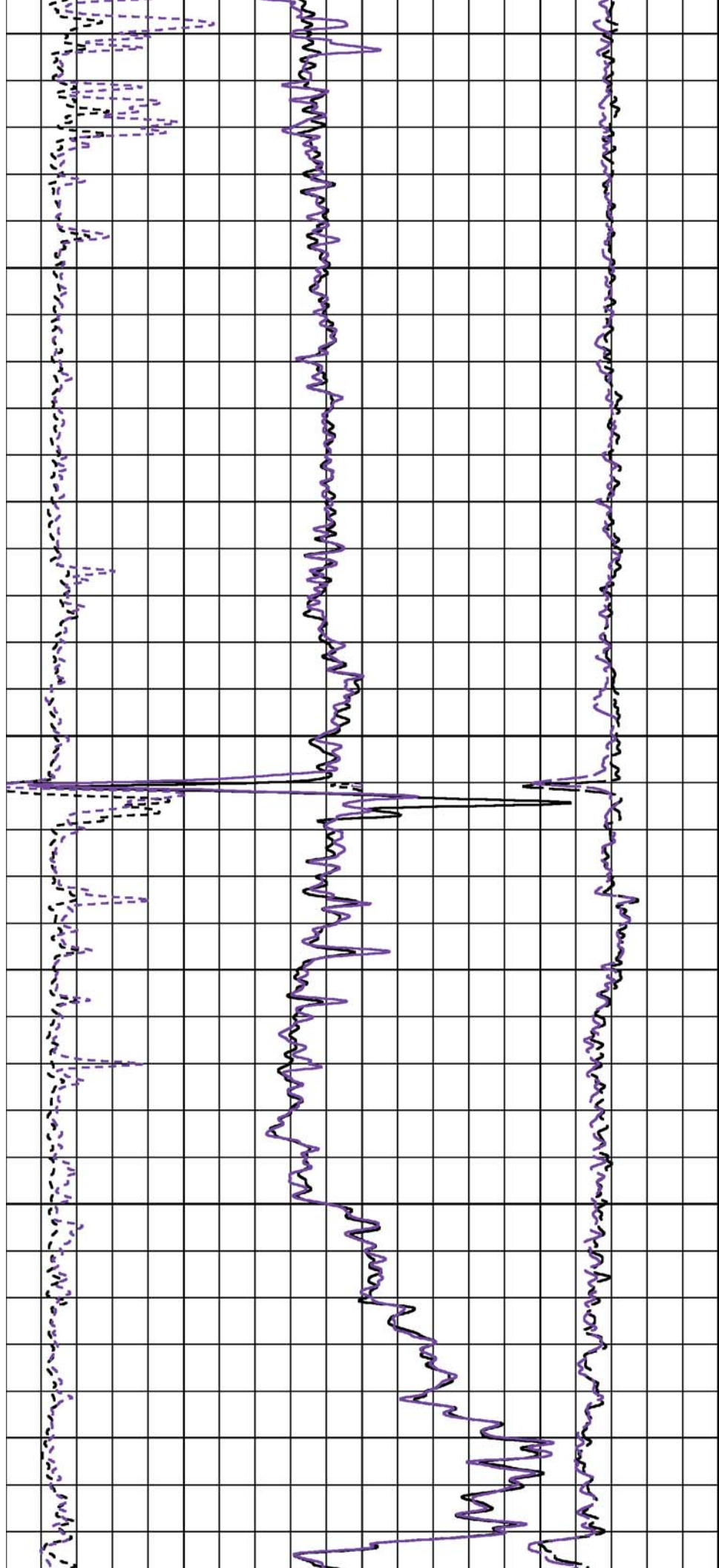
1250

1300

1350

1400

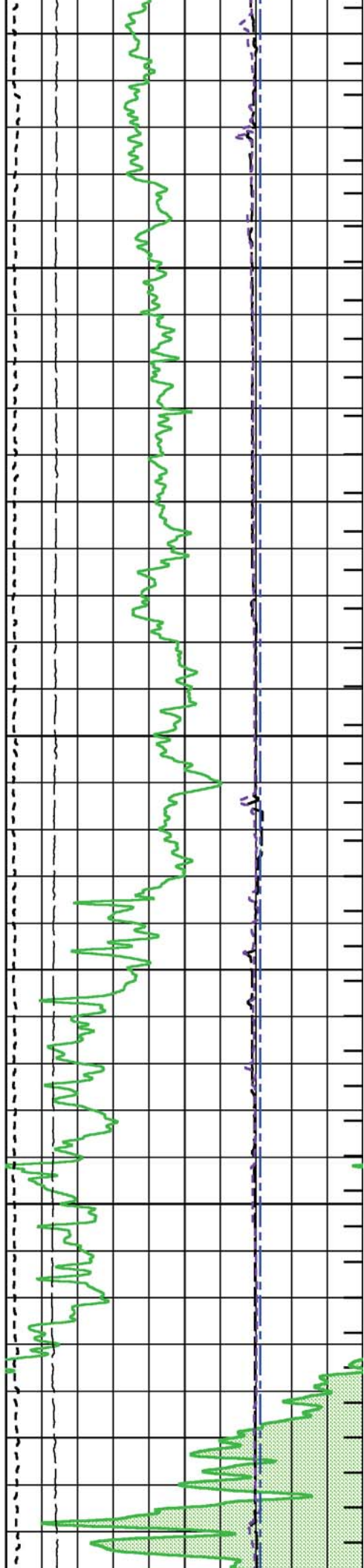


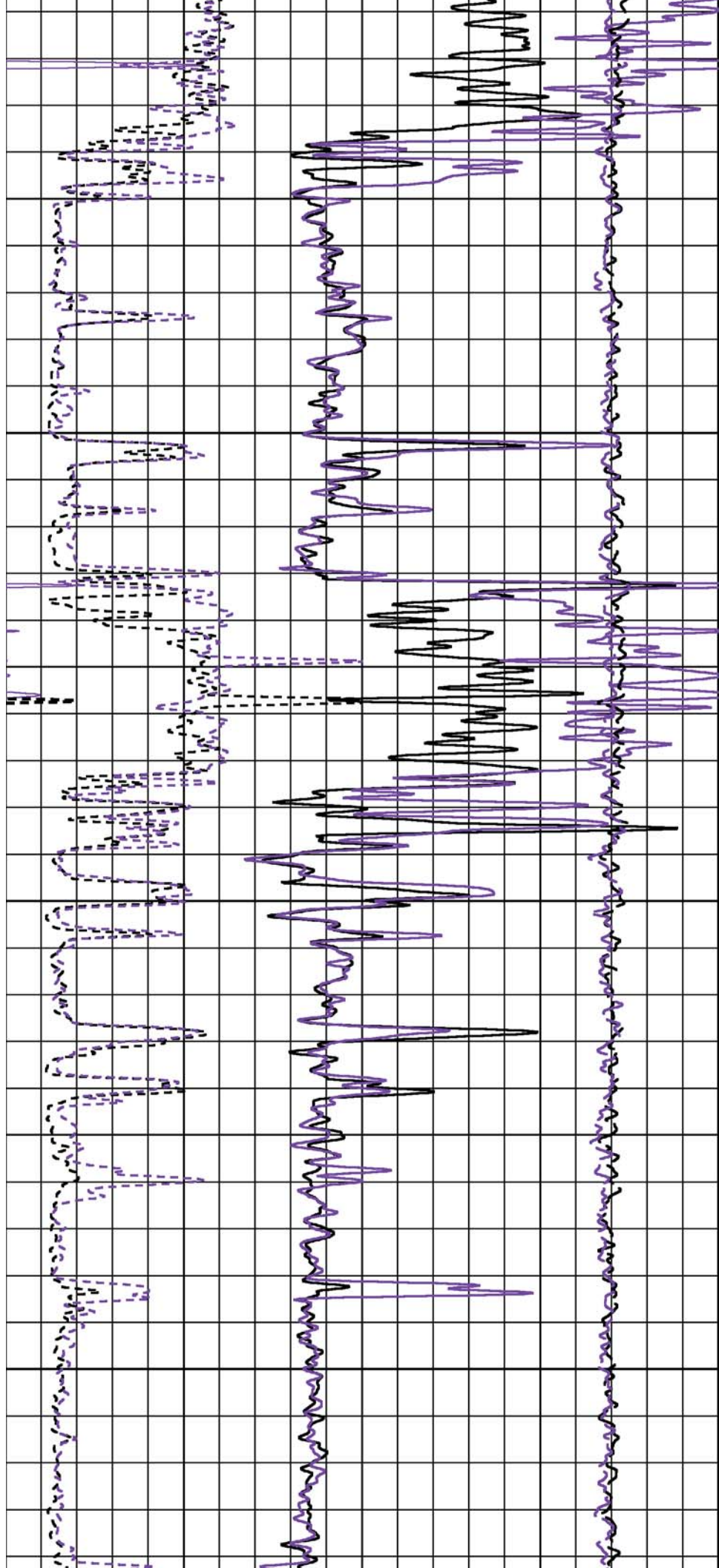


1550

1500

1450

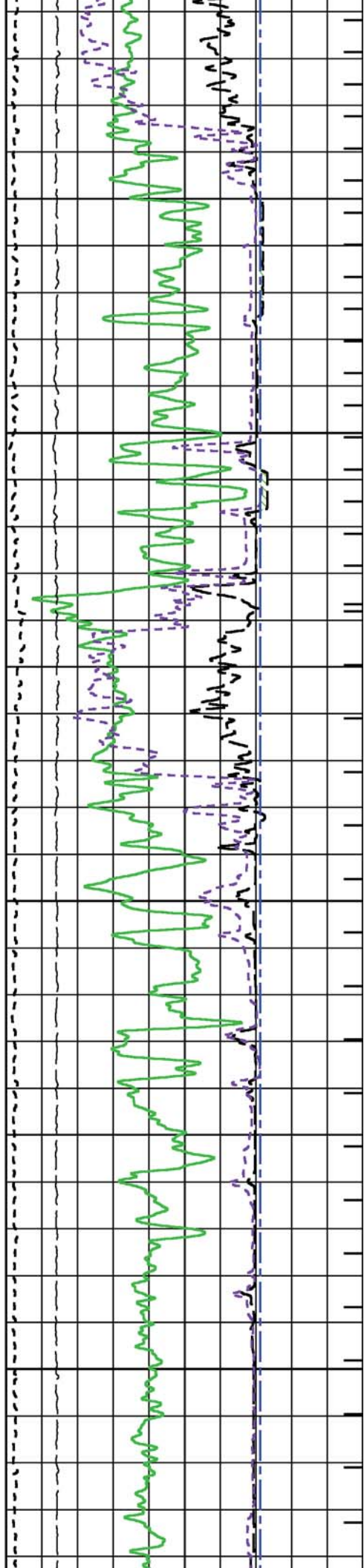


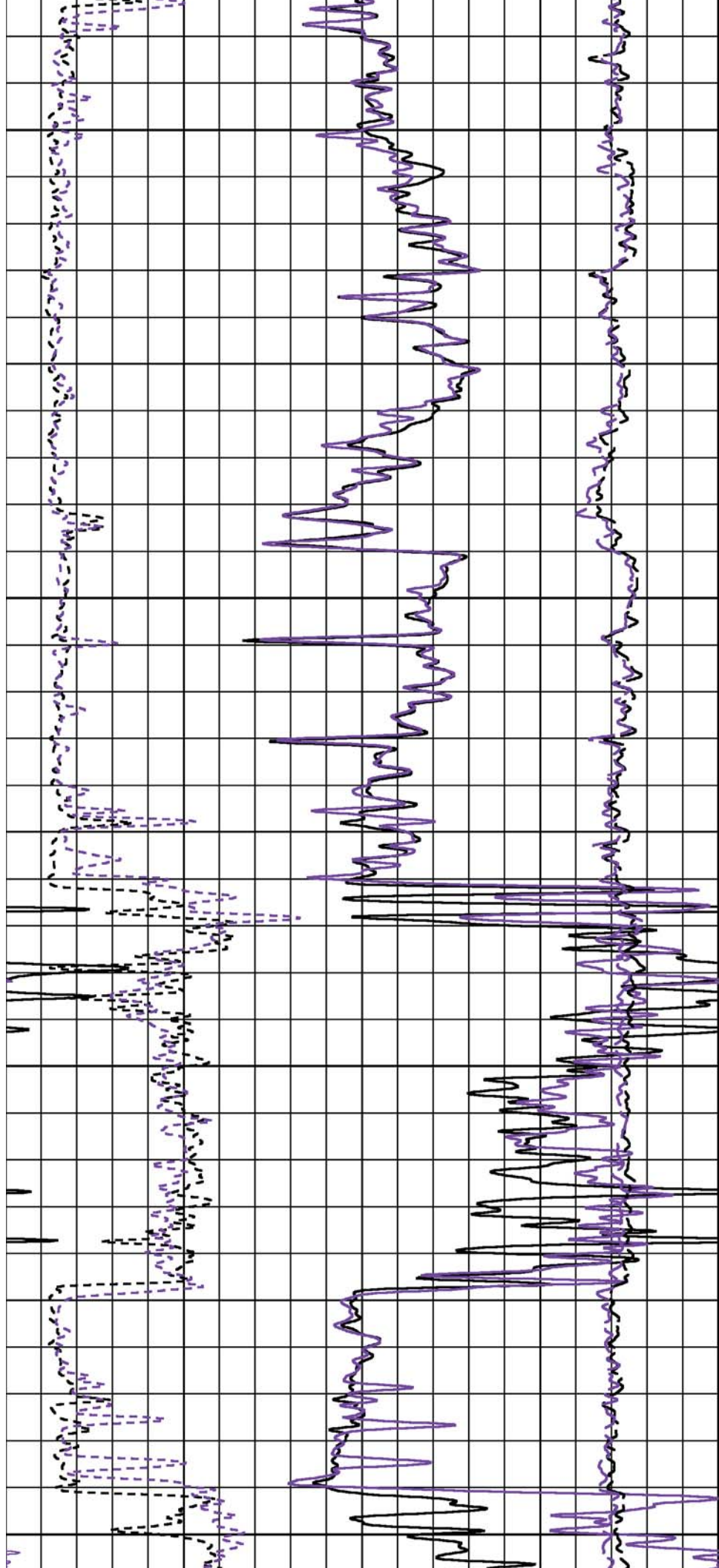


1700

1650

1600



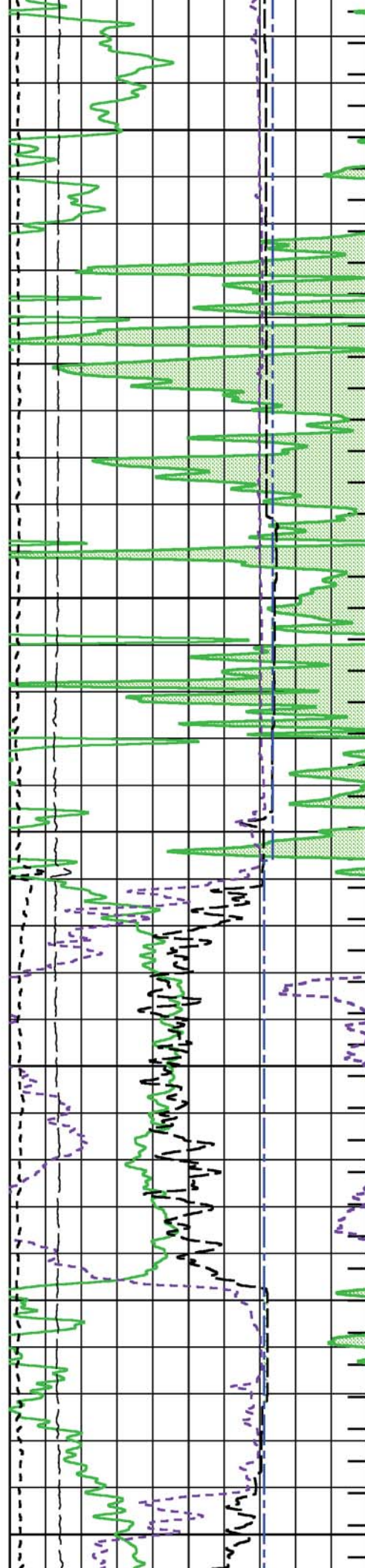


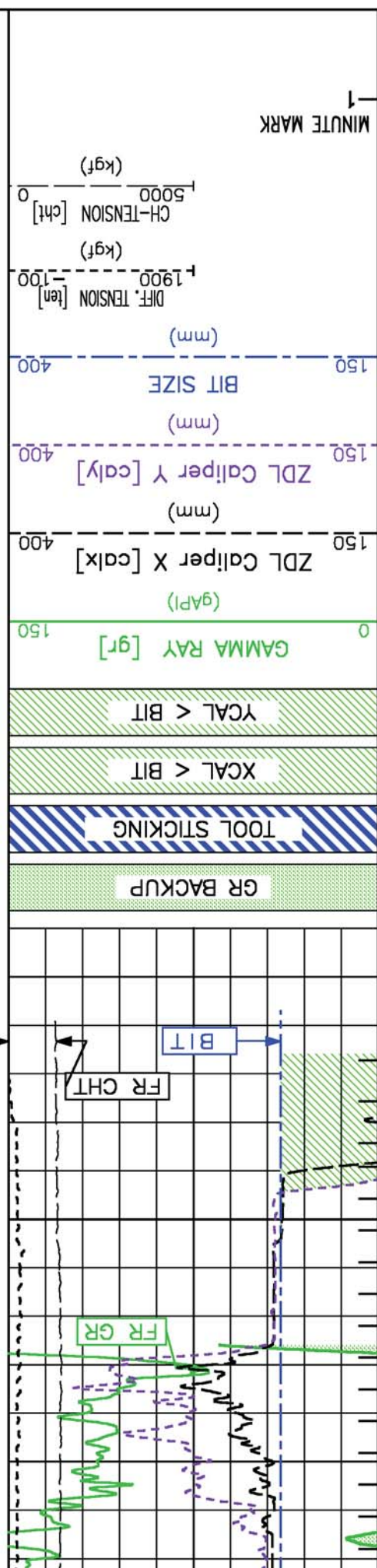
1750

1800

1850

1900

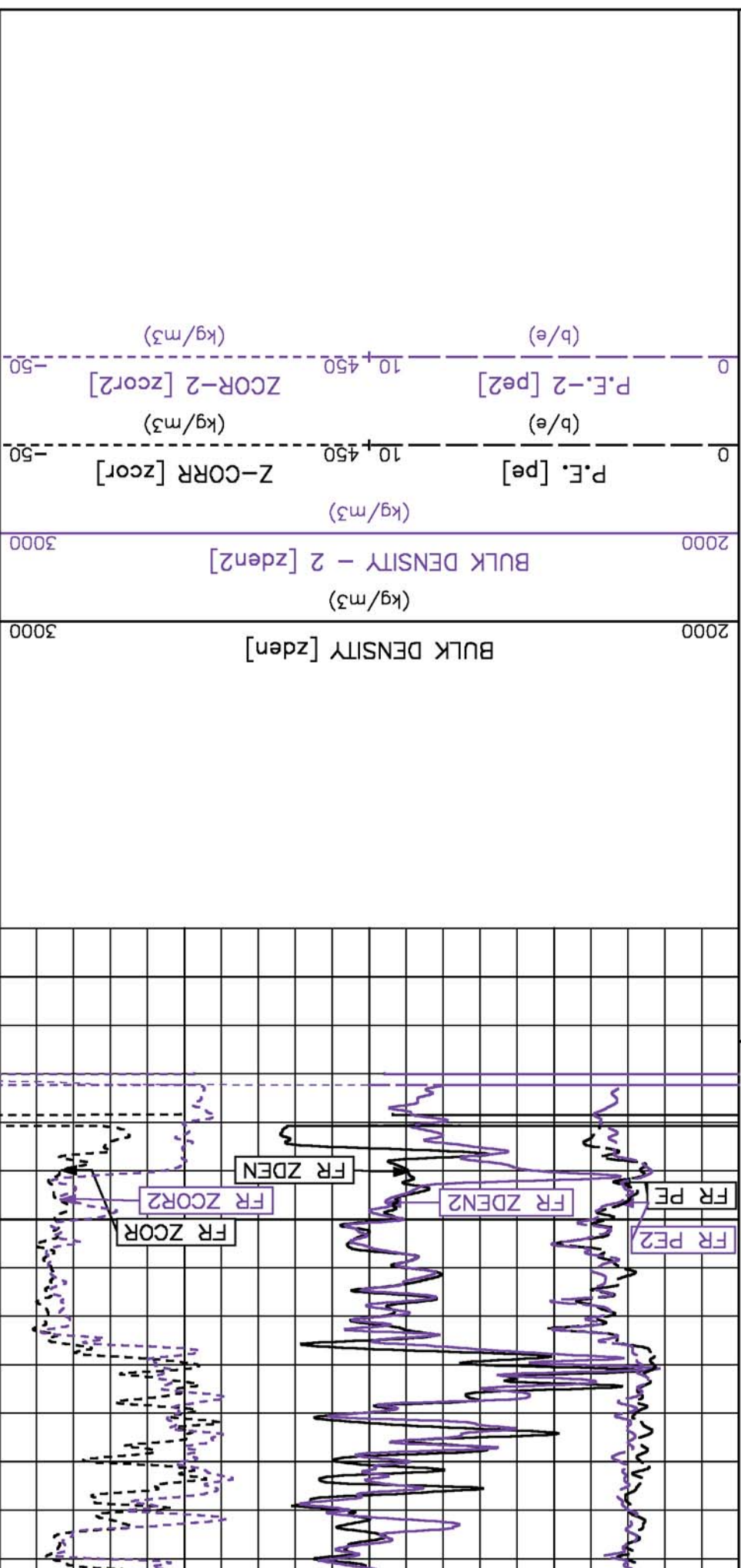




METERS

TD

1950



MAIN LOG - SANDSTONE MATRIX

PARAMETER AND FILTER SUMMARY REPORT

FILE: /data/MGM/run2-oh/m980e02.prm
LOGGING MODE: DEPTH
TOP DEPTH: 336.788 m
DIRECTION: DOWN
BOTTOM DEPTH: 1994.840 m

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
CHT	FILTER ()	medium	(1)	TOP
TENSION	FILTER ()	medium	(1)	TOP
GR	FILTER ()	medium	(1)	TOP
CALIPER	FILTER ()	medium	(1)	TOP
CN MED RES	FILTER ()	medium	(1)	TOP
ZDL MED RES	FILTER (hrd1*)	medium		TOP
	FILTER (hrd12*)	medium		TOP
	FILTER (hrd1s*)	medium		TOP
	FILTER (hrd1s2*)	medium		TOP
	FILTER (hrd2*)	medium		TOP
	FILTER (hrd22*)	medium		TOP
	FILTER (hrd2s*)	medium		TOP
	FILTER (hrd2s2*)	medium		TOP
	FILTER (soft*)	medium		TOP
	FILTER (soft2*)	medium		TOP

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	177.800	mm	TOP
	CASING THICKNESS	0.000	mm	TOP
	BIT SIZE	222.000	mm	TOP
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE FIXED SIZE		TOP
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	222.000	mm	TOP

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION OFF		TOP

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
CN BOREHOLE CORRECTION	SALINITY	0	ppm	TOP
	BOREHOLE CORRECTION	ON		TOP
	CORRECTION	OFF		TOP
CN CASING & CEMENT CORRECTION	BIT SIZE BEHIND CSNG	311.000	mm	TOP

ZDL PROCESSING

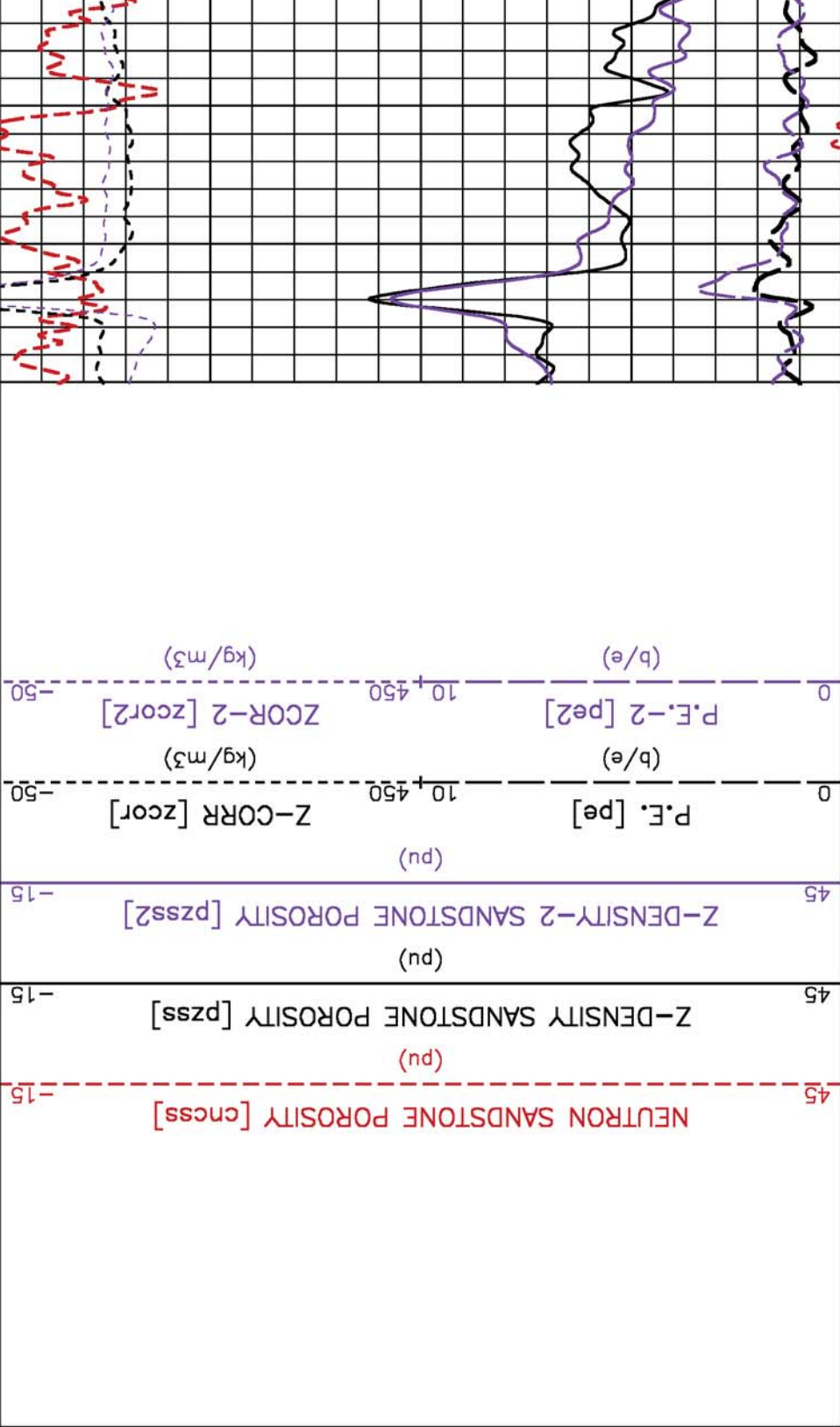
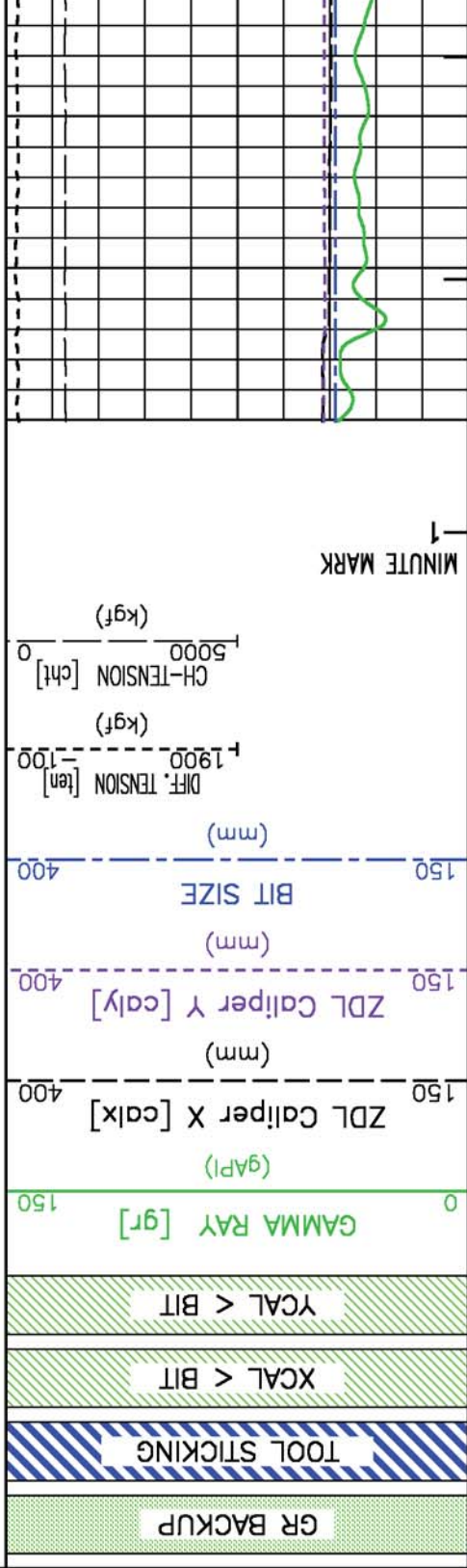
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
DENSITY POROSITY	Air Filled Borehole	NO		TOP
	RHOfluid	1.000	g/cm3	TOP
	RHOmatrix (sand)	2.650	g/cm3	TOP

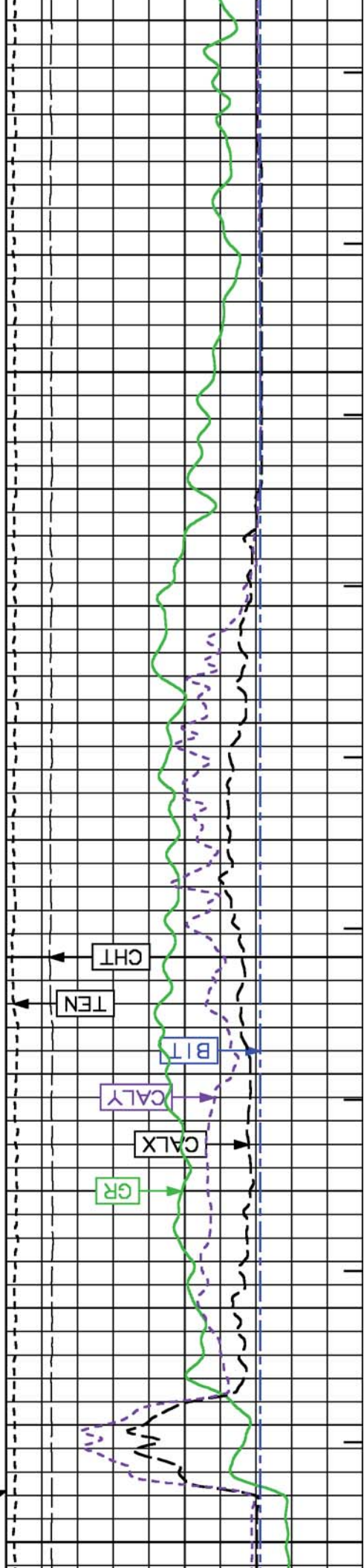
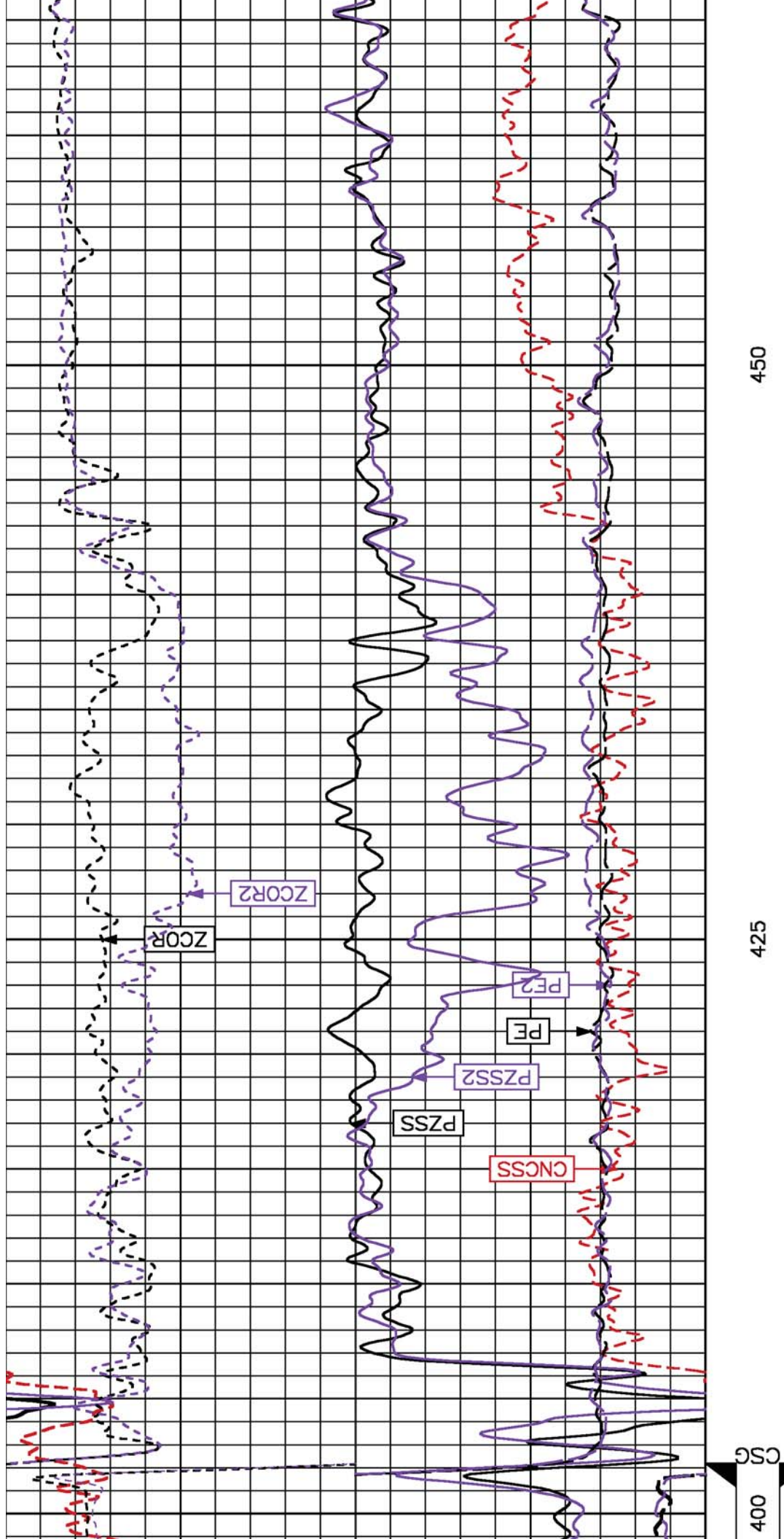
PARAMETER AND FILTER SUMMARY REPORT

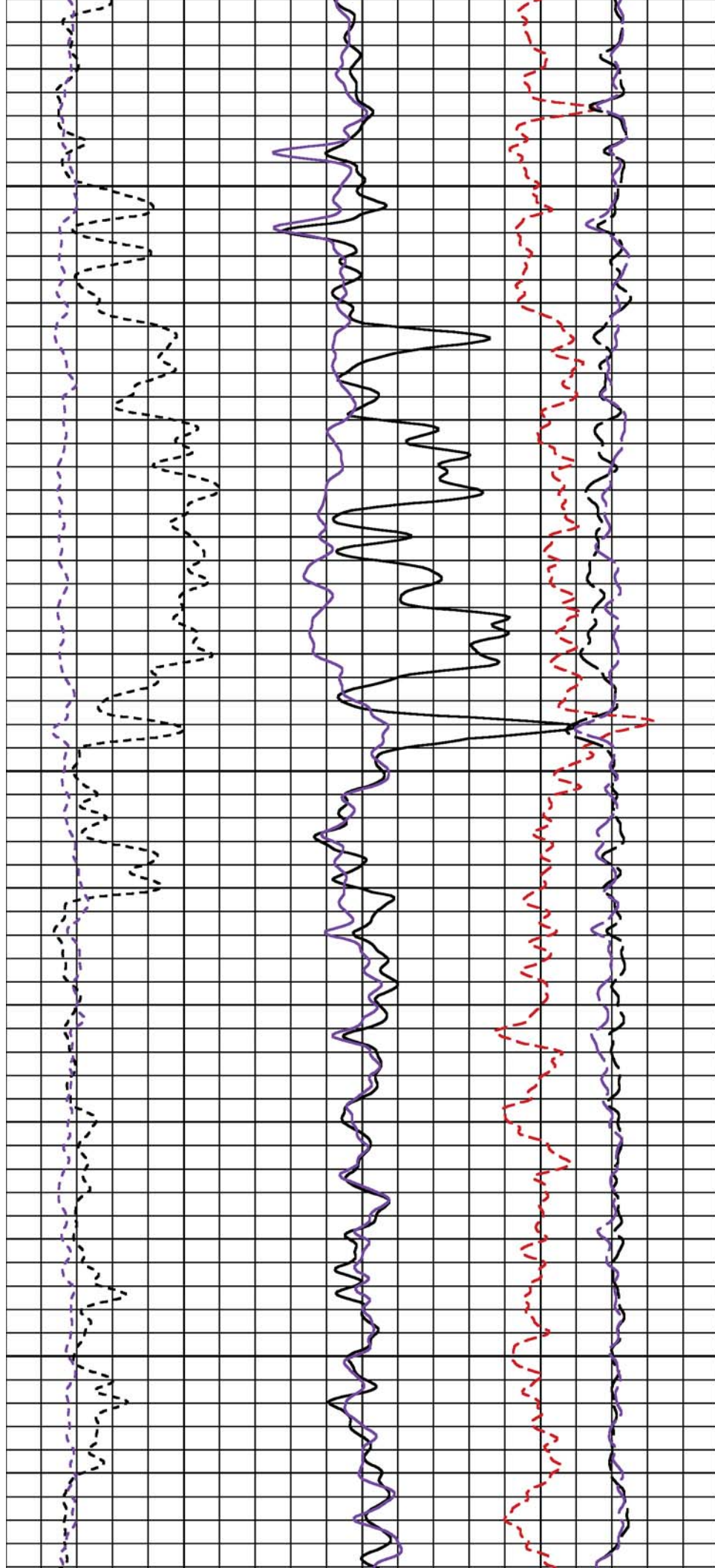
CURVE MEASUREMENT REPORT									
CURVE NAME		CREATION DATE		CURVE DESCRIPTION					
CURVE MEASUREMENT POINT OFFSET									
F1:BIT	Fab 16 07:26:57	2013	BIT SIZE	CALIPER FROM X-AXIS OF XY CALIPER(S)	Fab 16 07:26:57	2013	CALIPER FROM Y-AXIS OF XY CALIPER(S)	Fab 16 07:26:57	2013
F1:CALX	Fab 16 07:26:57	2013	CABLE HEAD TENSION	BOREHOLE SIZE CORRECTED SANDSTONE COMPENSATED NEU POROSITY	Fab 16 07:26:57	2013	GAMMA RAY	Fab 16 07:26:57	2013
F1:MMRK	Fab 16 07:26:57	2013	MINUTE MARK	PHOTO ELECTRIC CROSS-SECTION	Fab 16 07:26:57	2013	PHOTO ELECTRIC CROSS-SECTION (2ND TOOL)	Fab 16 07:26:57	2013
F1:PE2	Fab 16 07:26:57	2013	POROSITY FOR SANDSTONE MATRIX	POROSITY FOR SANDSTONE MATRIX (2ND TOOL)	Fab 16 07:26:57	2013	DENSITY CORRECTION	Fab 16 07:26:57	2013
F1:PZSS2	Fab 16 07:26:57	2013	DENSITY CORRECTION	DENSITY CORRECTION	Fab 16 07:26:57	2013	DENSITY CORRECTION	Fab 16 07:26:57	2013
F1:ZCOR	Fab 16 07:26:57	2013	DENSITY CORRECTION	DENSITY CORRECTION	Fab 16 07:26:57	2013	DENSITY CORRECTION	Fab 16 07:26:57	2013
F1:ZCOR2	Fab 16 07:26:57	2013	DENSITY CORRECTION	DENSITY CORRECTION	Fab 16 07:26:57	2013	DENSITY CORRECTION	Fab 16 07:26:57	2013
CURVE MEASUREMENT REPORT									
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
ZDL PROCESSING									
CN BOREHOLE CORRECTION	SALINITY	0	ON	311.000	mm	TOP	TOP	TOP	TOP
CN CASING & CEMENT CORRECTION	BOREHOLE CORRECTION	ON	OFF	311.000	mm	TOP	TOP	TOP	TOP
CN CASING & CEMENT CORRECTION	BIT SIZE BEHIND CSNG	311.000	mm	TOP	TOP	TOP	TOP	TOP	TOP
CN PROCESSING									
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
ACCELERATION PROCESSING									
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION OFF	TOP	TOP	TOP	TOP	TOP	TOP	TOP
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
X-Y COMBINED CALIPER PROCESSING-FOCMY Caliper - FOCUS									
BOREHOLE CORR DIAMETER	BOREHOLE CORR DIAMETER	222.000	mm	TOP	TOP	TOP	TOP	TOP	TOP
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnb*)	USE CALIPER	mm	TOP	TOP	TOP	TOP	TOP	TOP
BIT SIZE	BIT SIZE	222.000	mm	TOP	TOP	TOP	TOP	TOP	TOP
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	177.800	mm	TOP	TOP	TOP	TOP	TOP	TOP
CASING - BOREHOLE & CEMENT VOLUME	CASING THICKNESS	0.000	mm	TOP	TOP	TOP	TOP	TOP	TOP
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
BOREHOLE & CEMENT									
CHT	FILTER ()	medium	(1)	medium	TOP	TOP	TOP	TOP	TOP
TENSION	FILTER ()	medium	(1)	medium	TOP	TOP	TOP	TOP	TOP
GR	FILTER ()	medium	(1)	medium	TOP	TOP	TOP	TOP	TOP
CALIPER	FILTER ()	medium	(1)	medium	TOP	TOP	TOP	TOP	TOP
CN MED RES	FILTER ()	medium	(1)	medium	TOP	TOP	TOP	TOP	TOP
ZDL MED RES	FILTER ()	medium	(1)	medium	TOP	TOP	TOP	TOP	TOP
SYMMETRIC FILTER									
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
CURVE MEASUREMENT REPORT									

CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
BIT	0.00	CNCSS	12.50	PZSS	9.64	ZCOR2	5.49		
CALX	9.64	GR	33.76	PZSS2	5.49				
CALY	5.49	PE	9.64	TEN	0.00				
CHT	0.00	PE2	5.49	ZCOR	9.64				

Presentation	: sysa:/data/MGM/run2_oh/zd12_main_ss.pdf [1:240 Scale]
Plot Interval	: 385 - - 1980 Meters
Data File 1	: f1 : sysa:/data/MGM/run2_oh/222_main.xtf
Created On	: Feb 16 07:26:57 2013
Company	: MGM ENERGY CORP
Well	: MGM SHELL EAST MACKAY I-78
Field	: EAST MACKAY
File Interval	: 318.973 - - 1971.48 Meters
Oct	: m980e



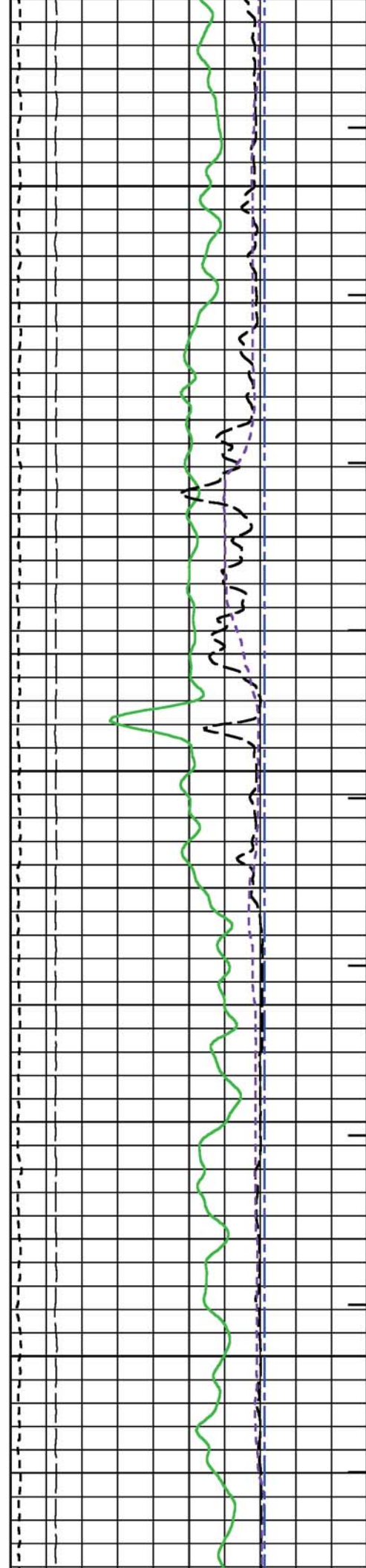


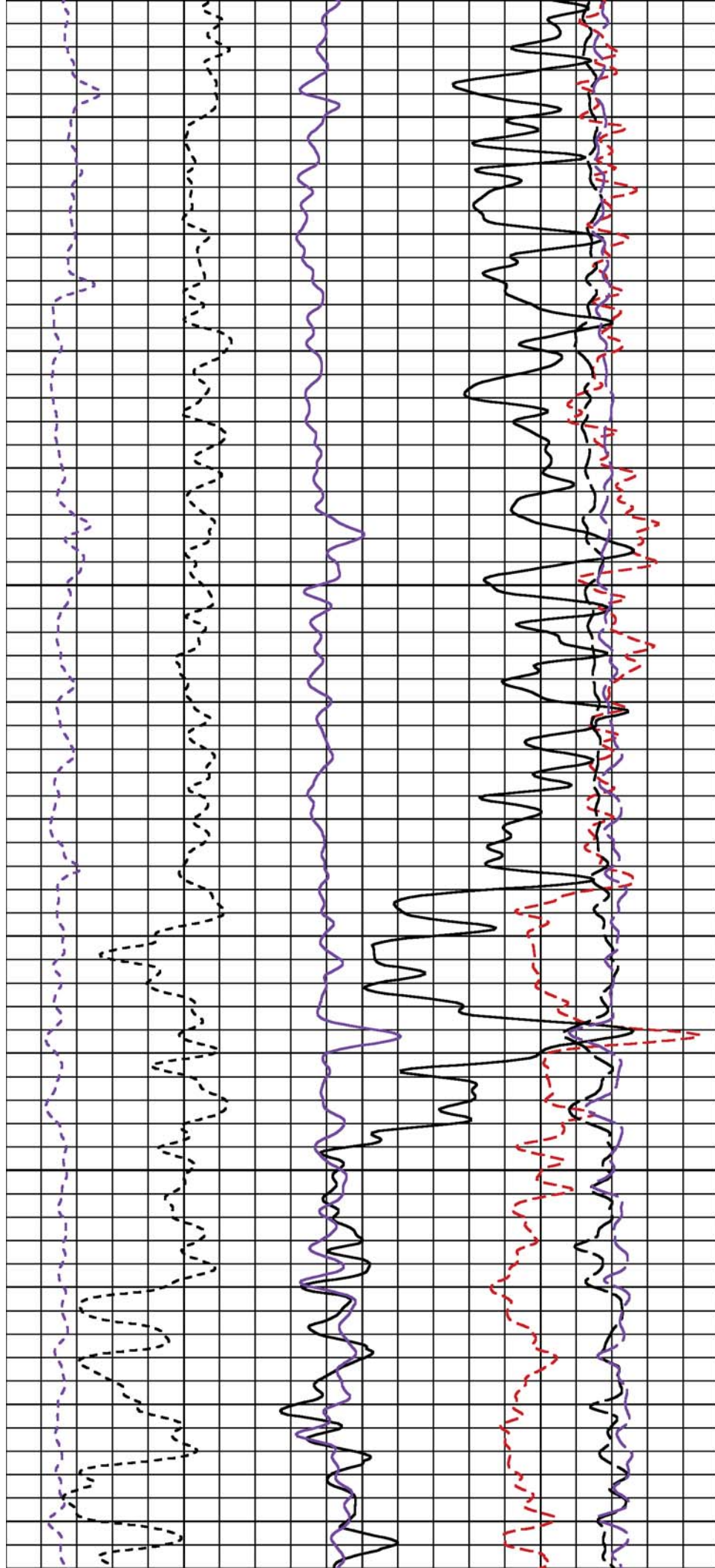


475

500

525

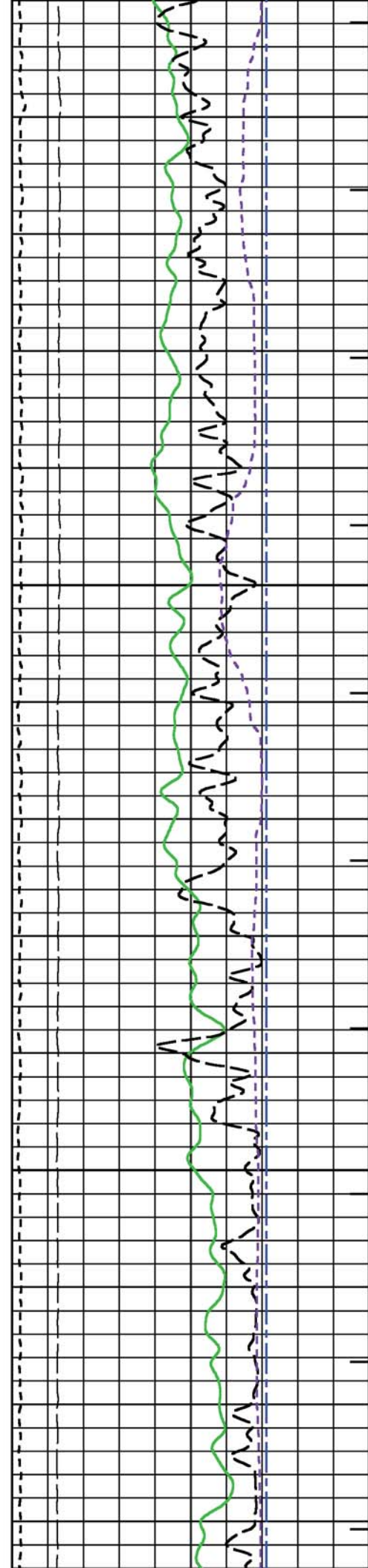


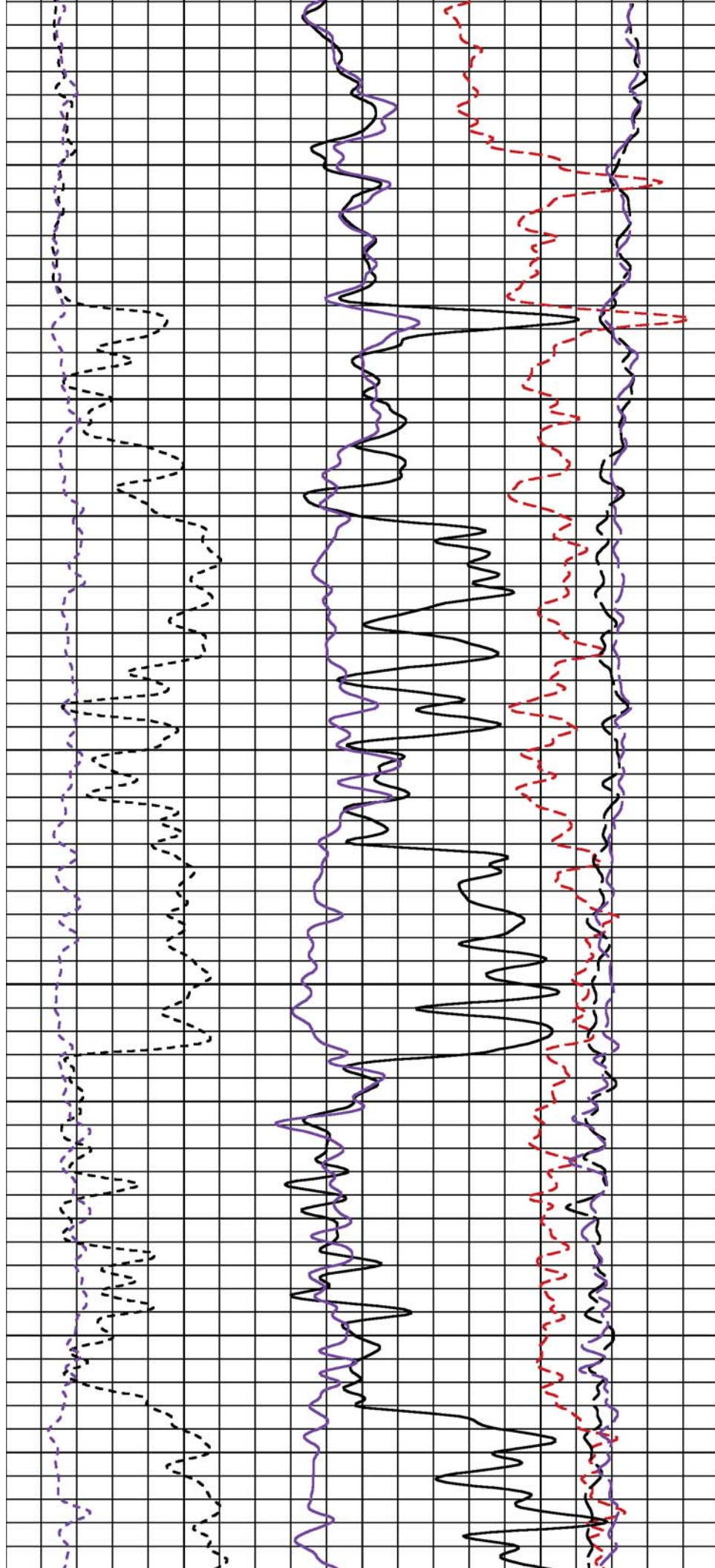


550

575

600

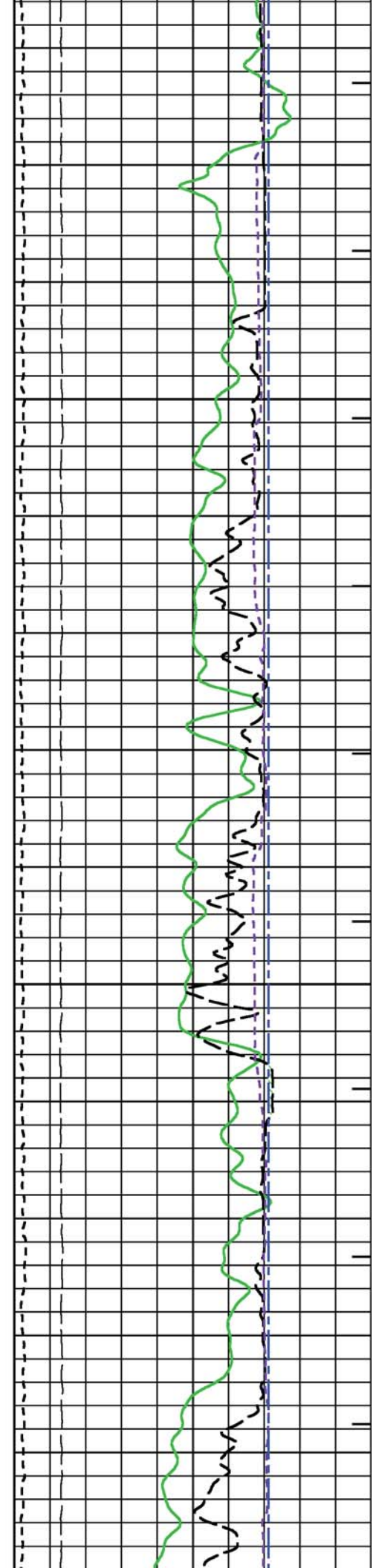


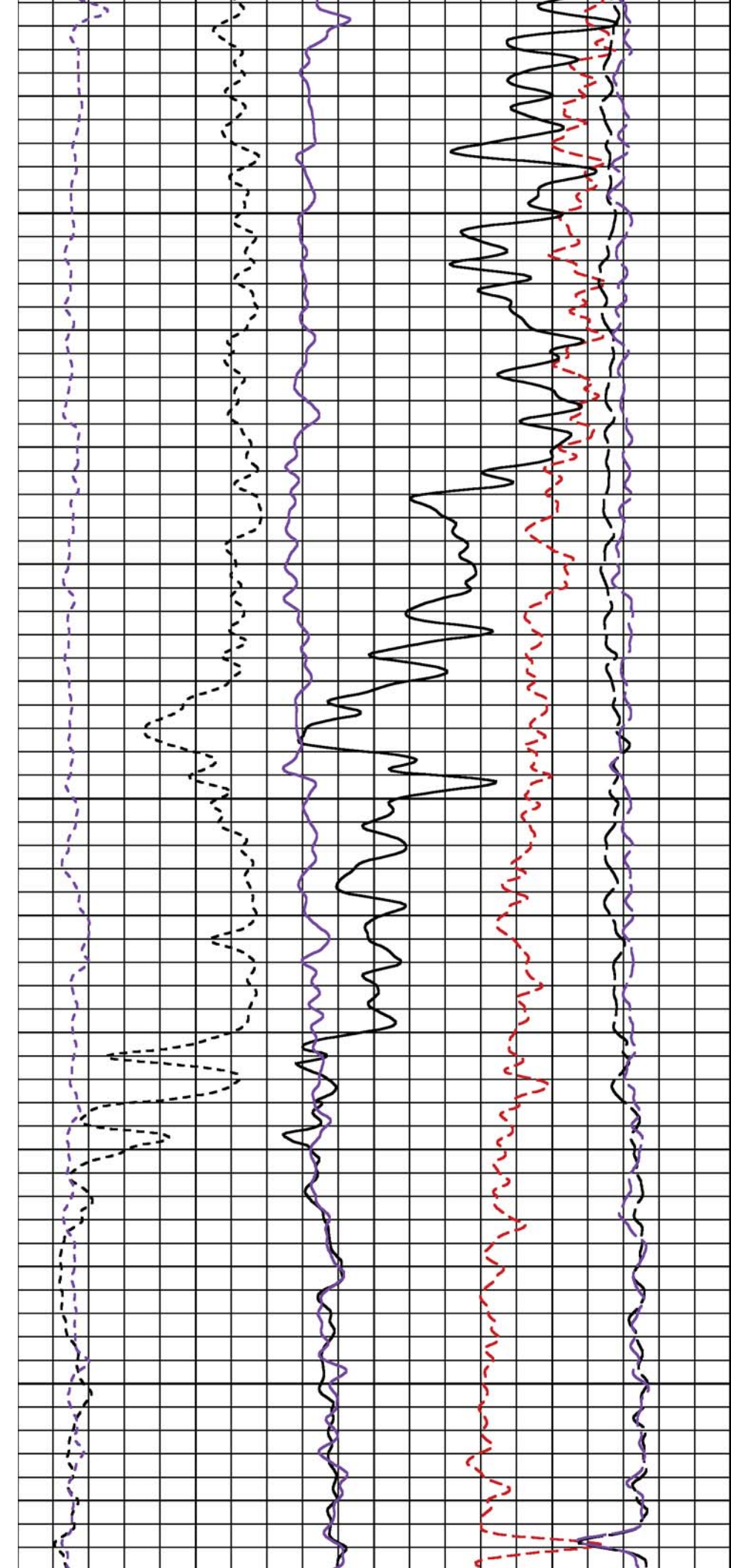


00

625

650

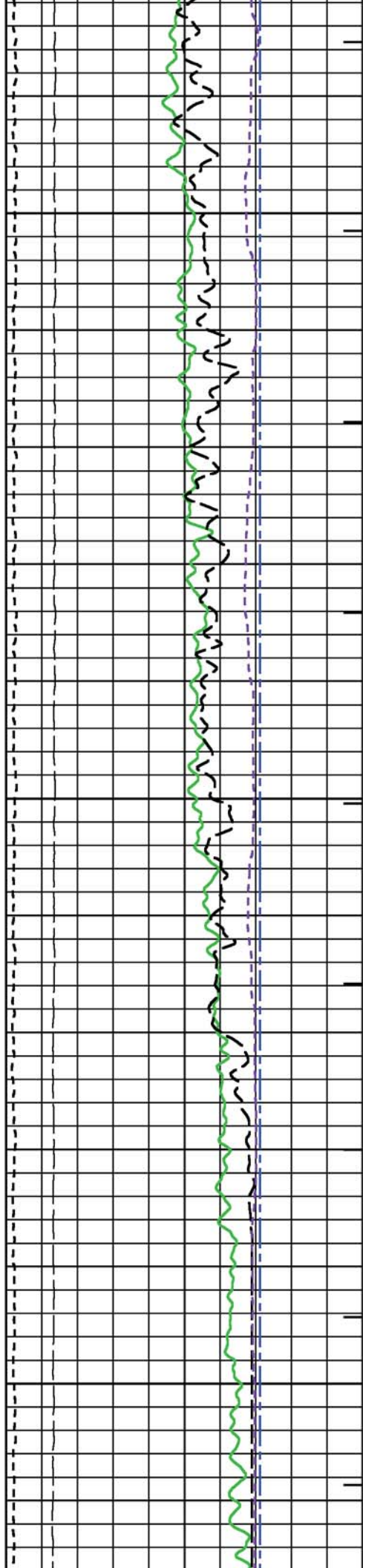


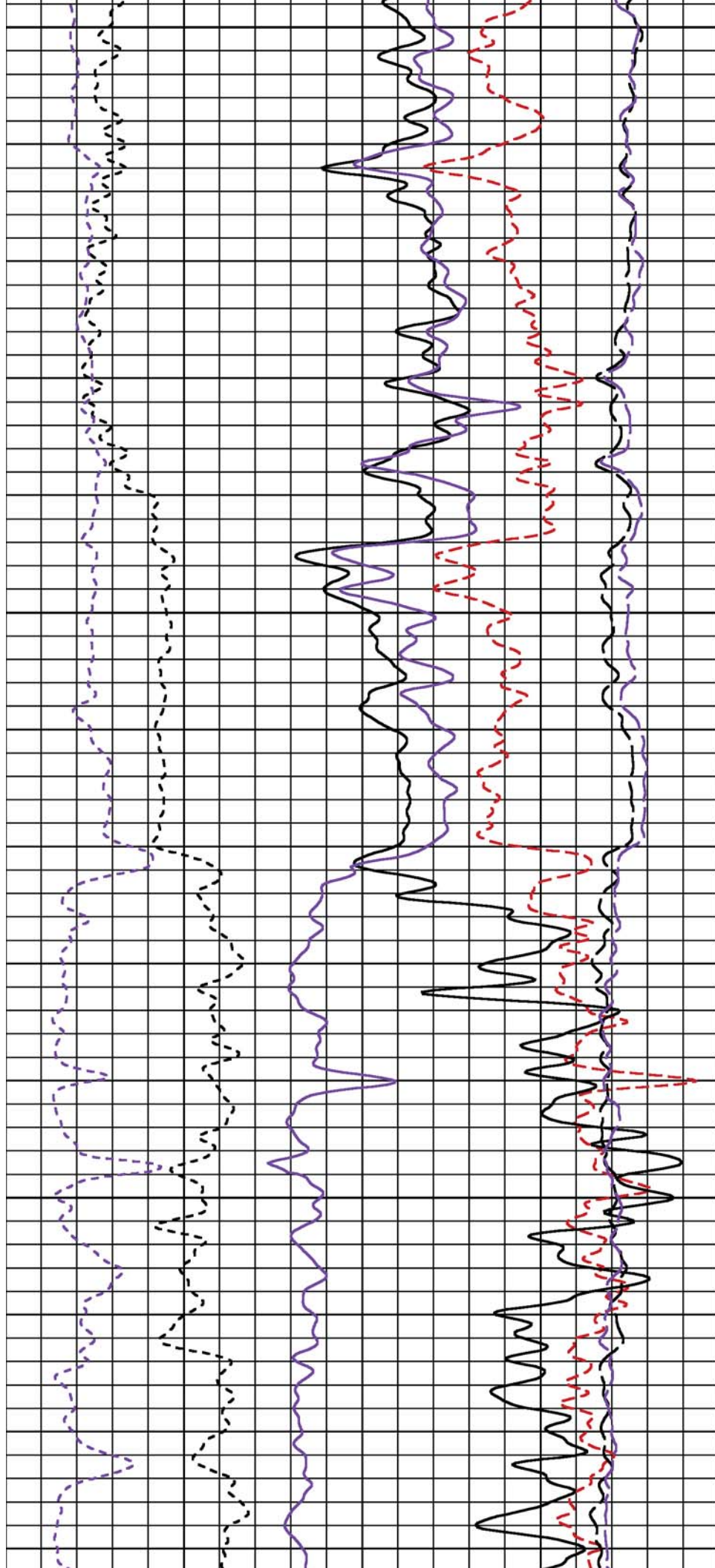


675

700

725

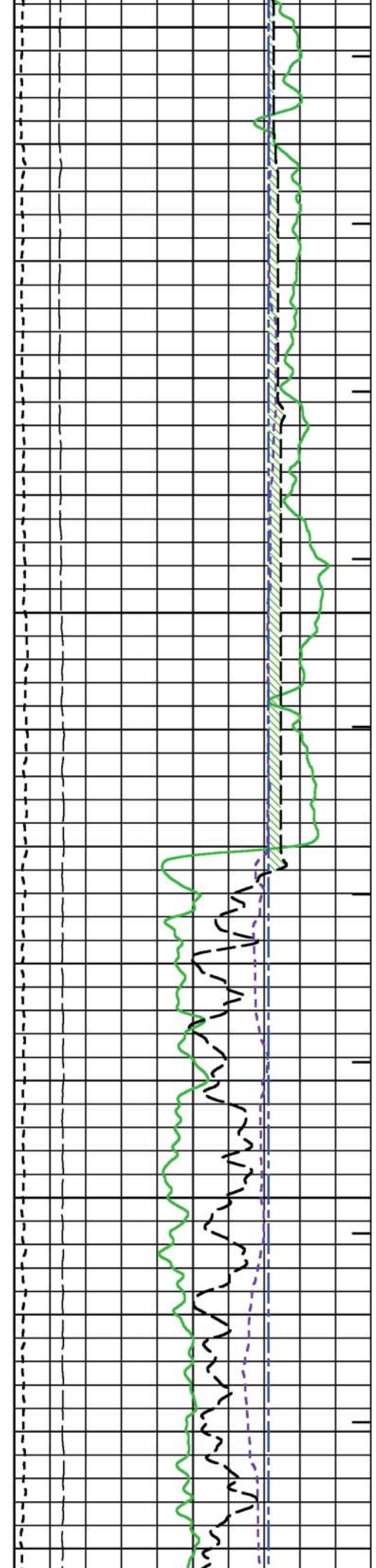


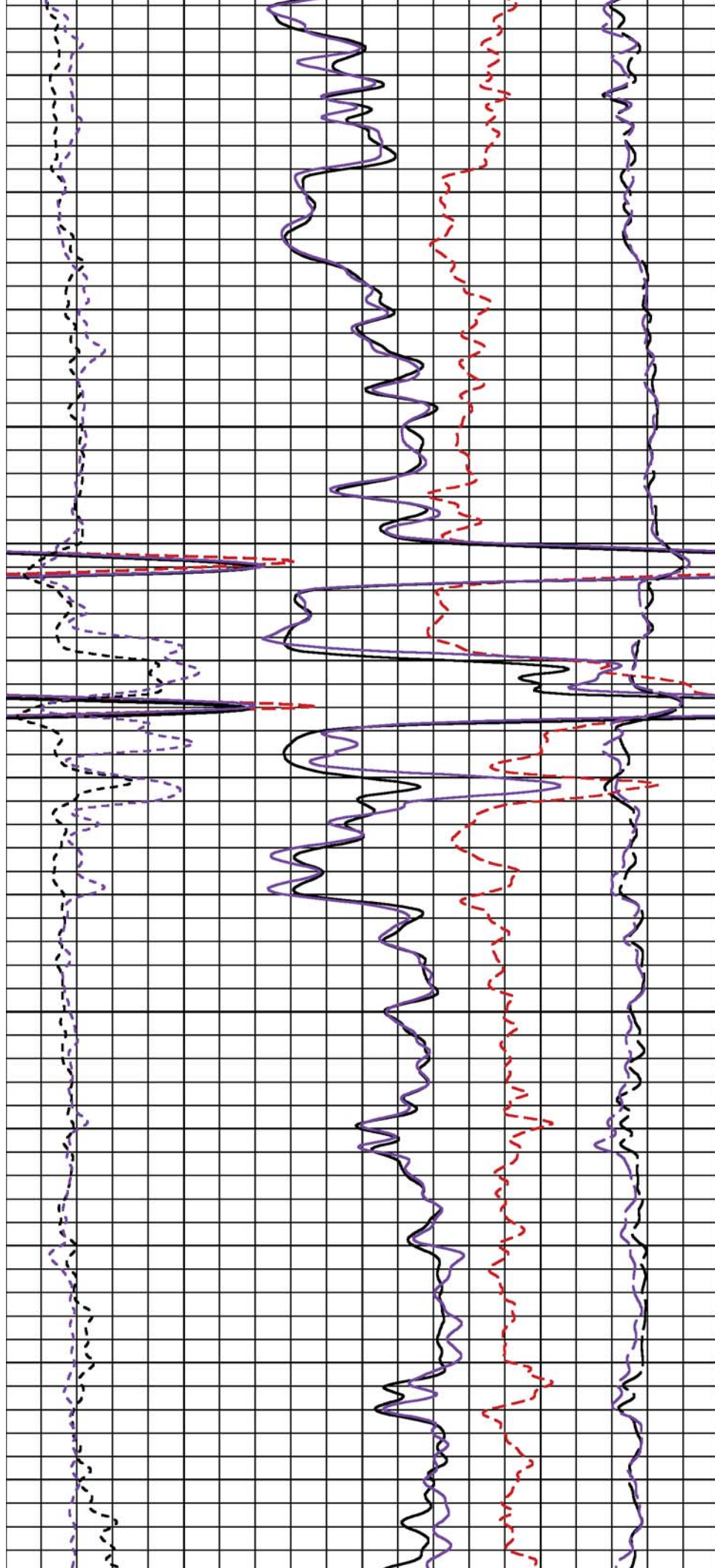


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775

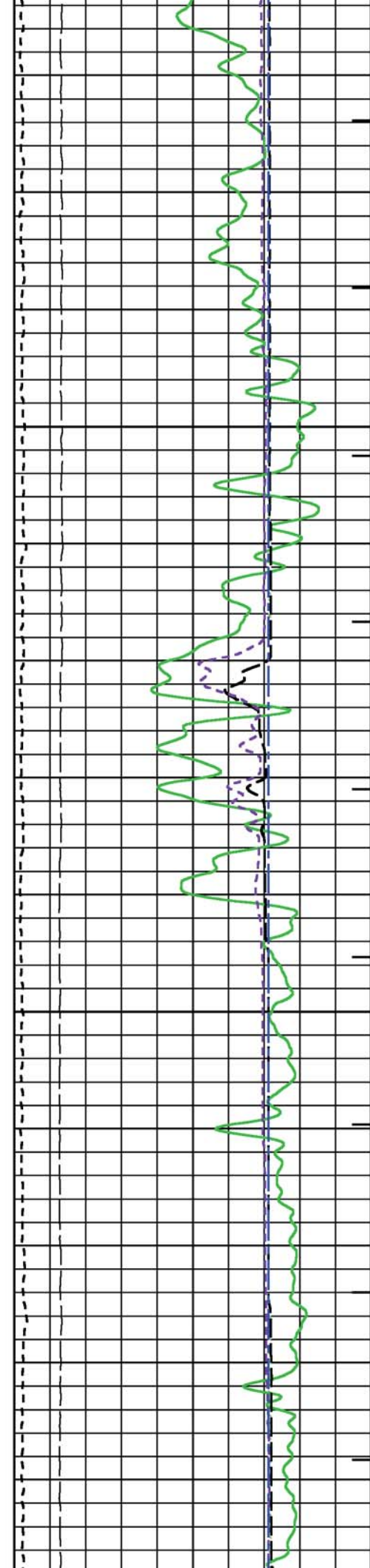
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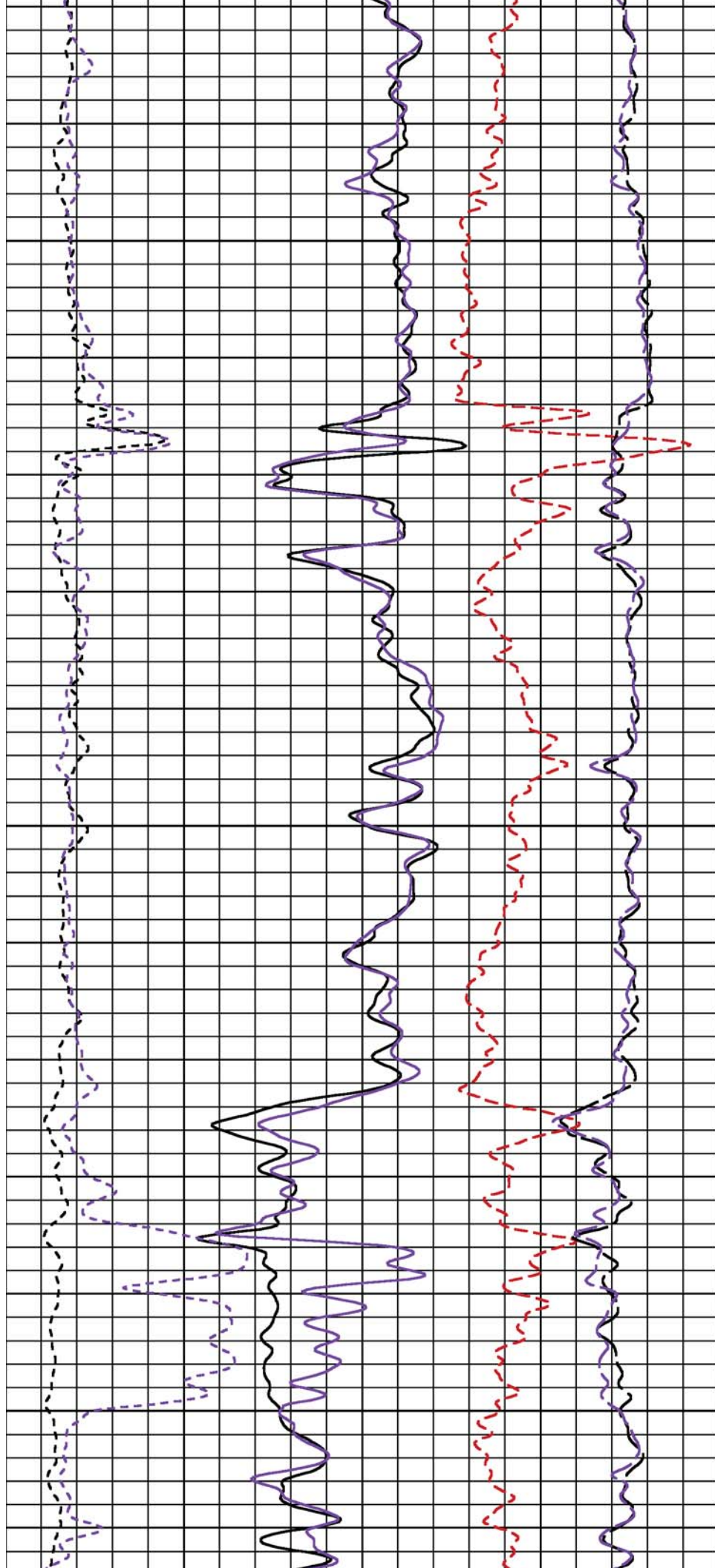




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850

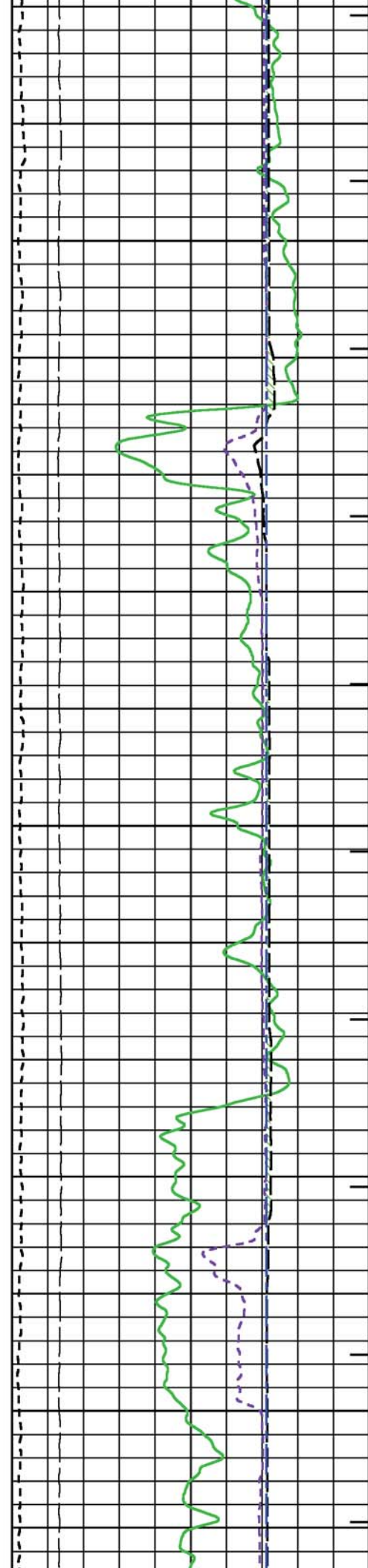


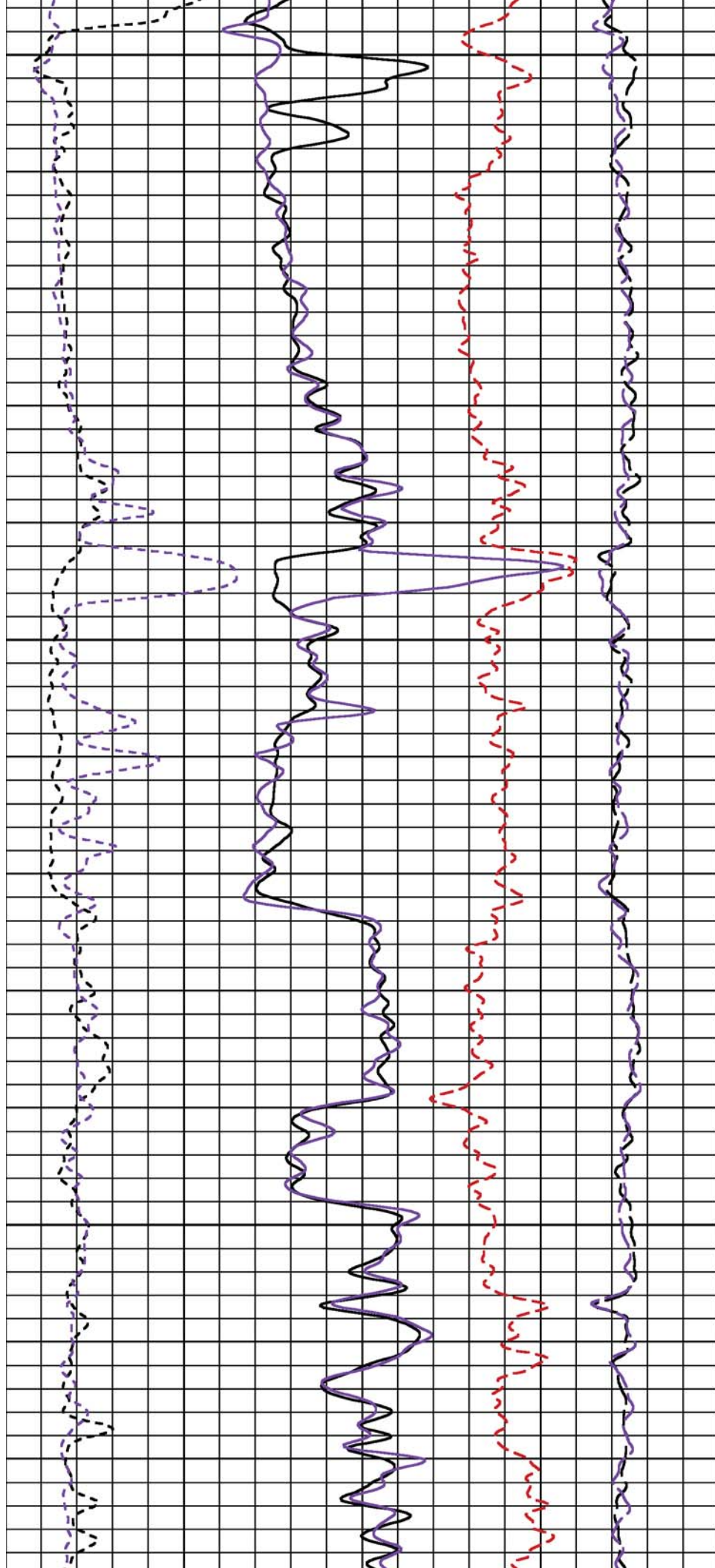


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900

925

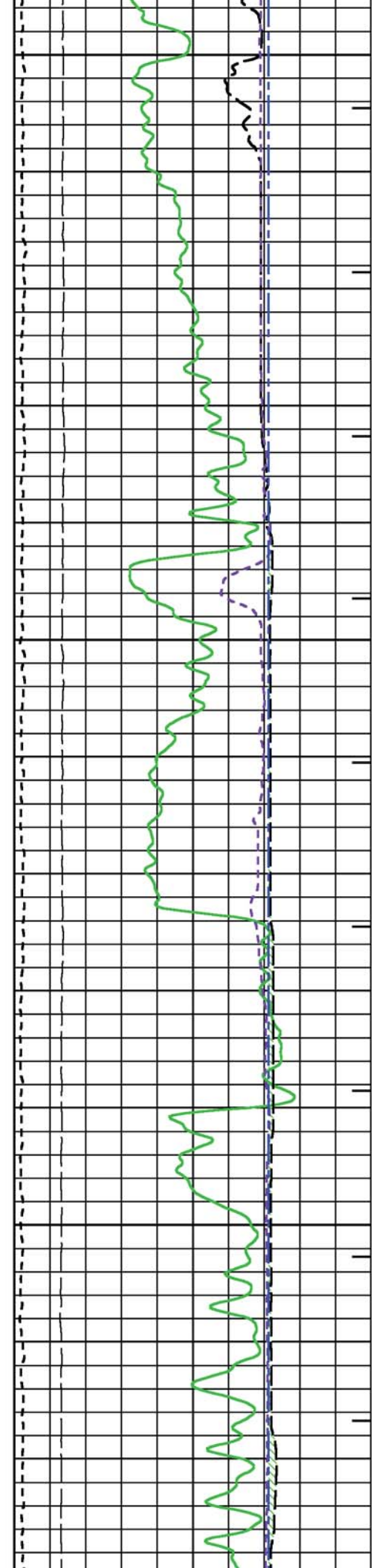


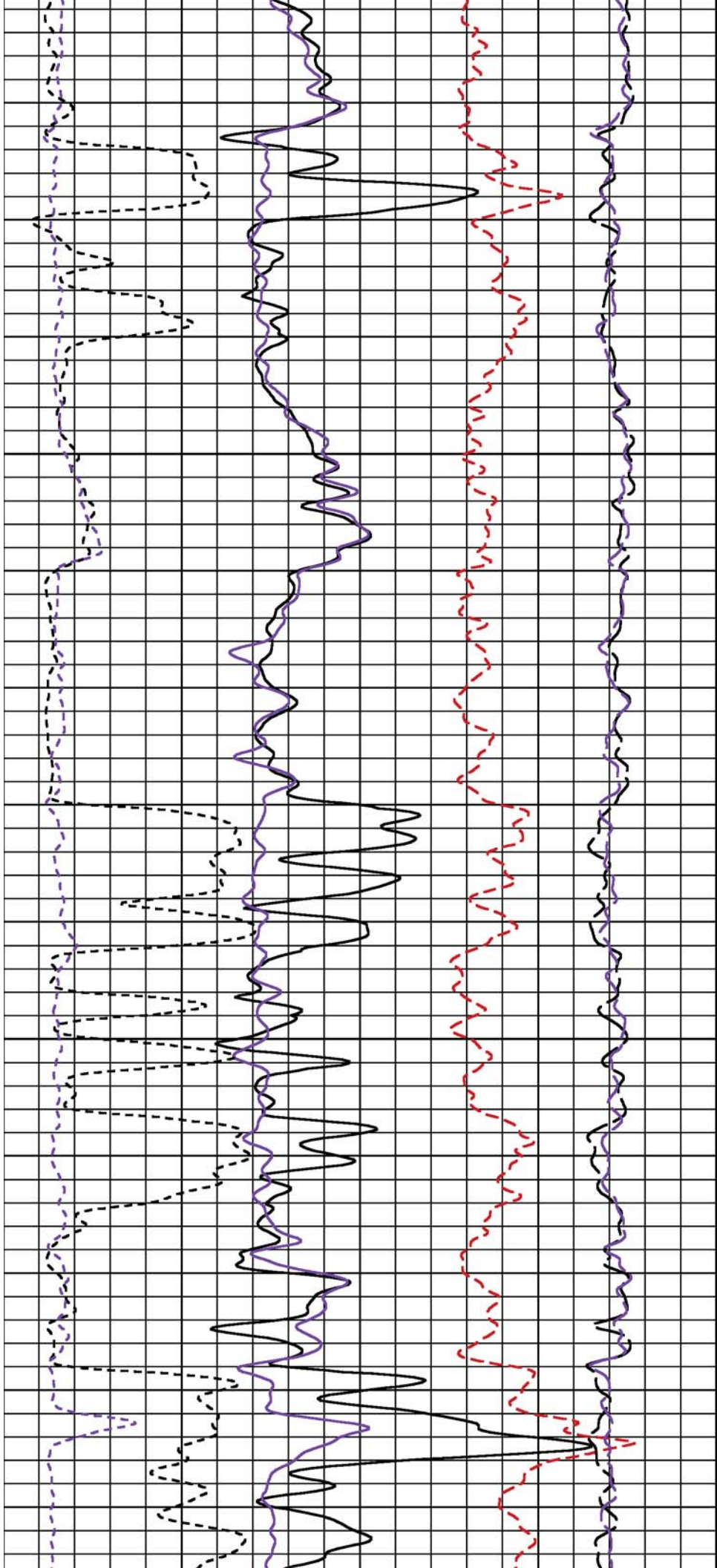


950

975

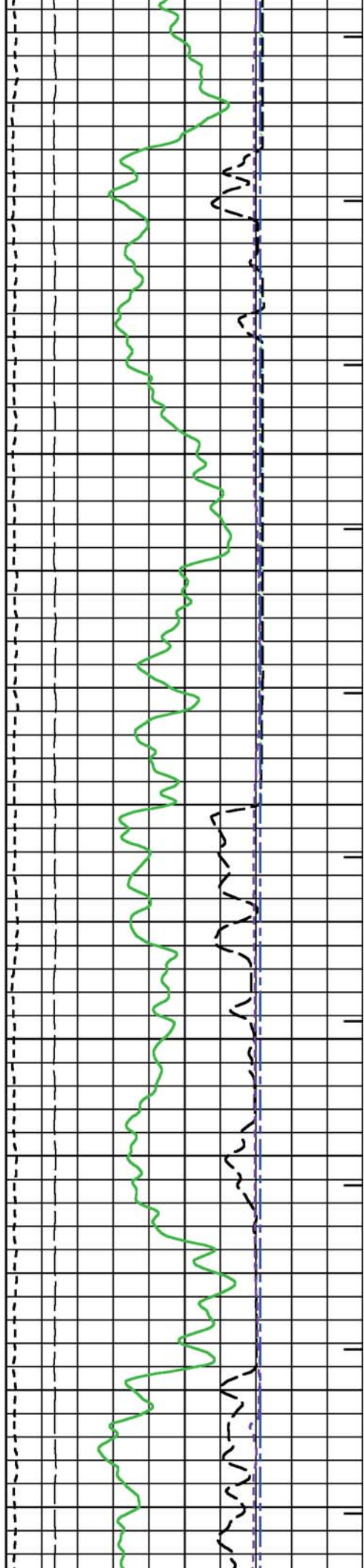
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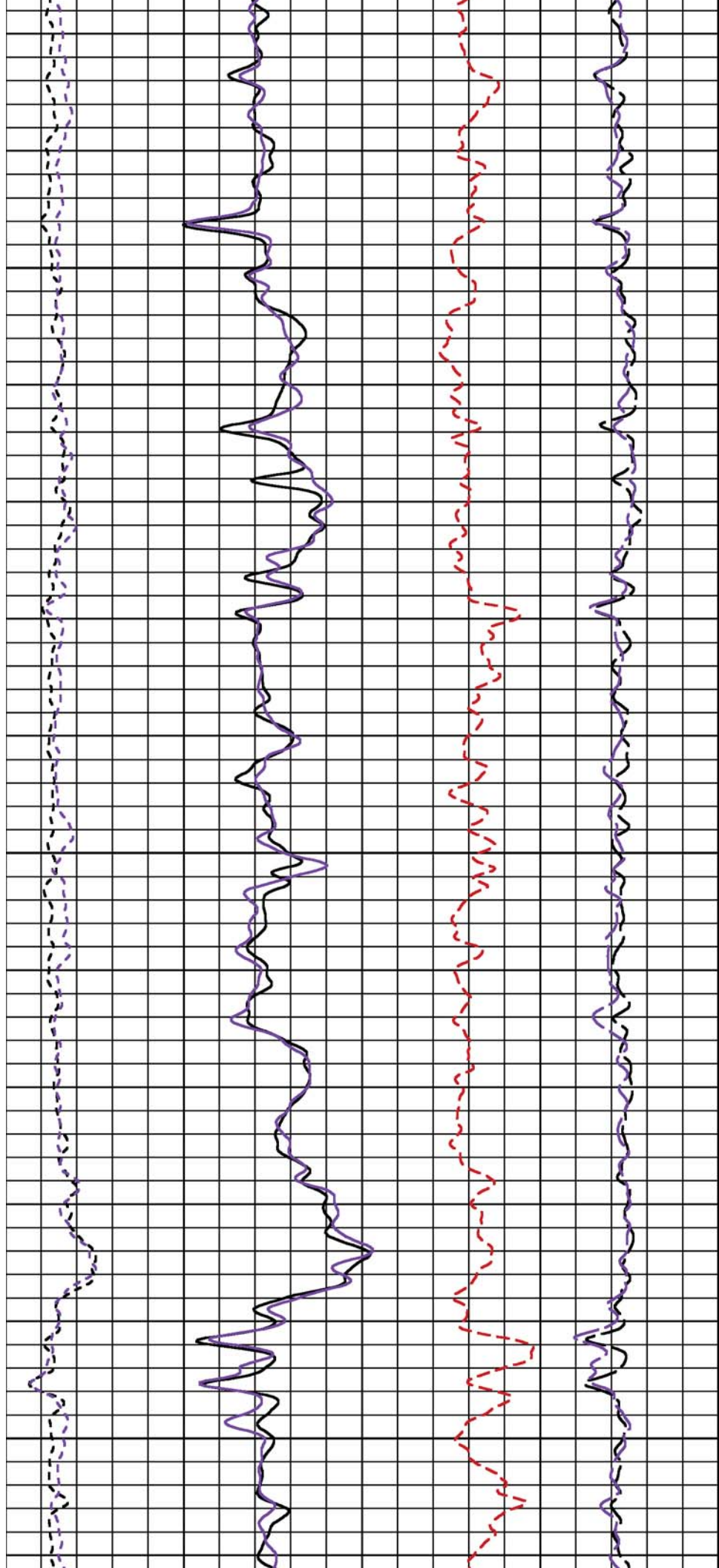




1025

1050

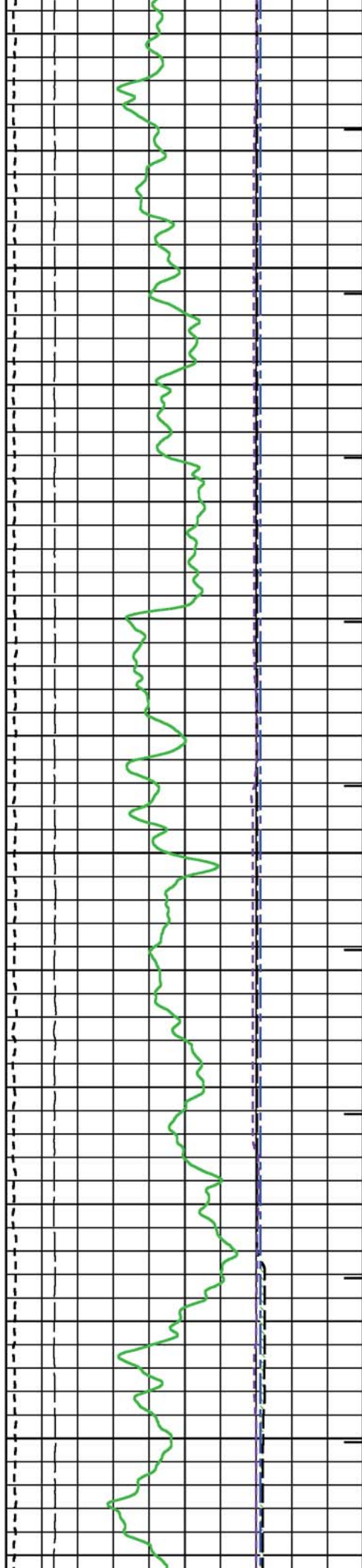


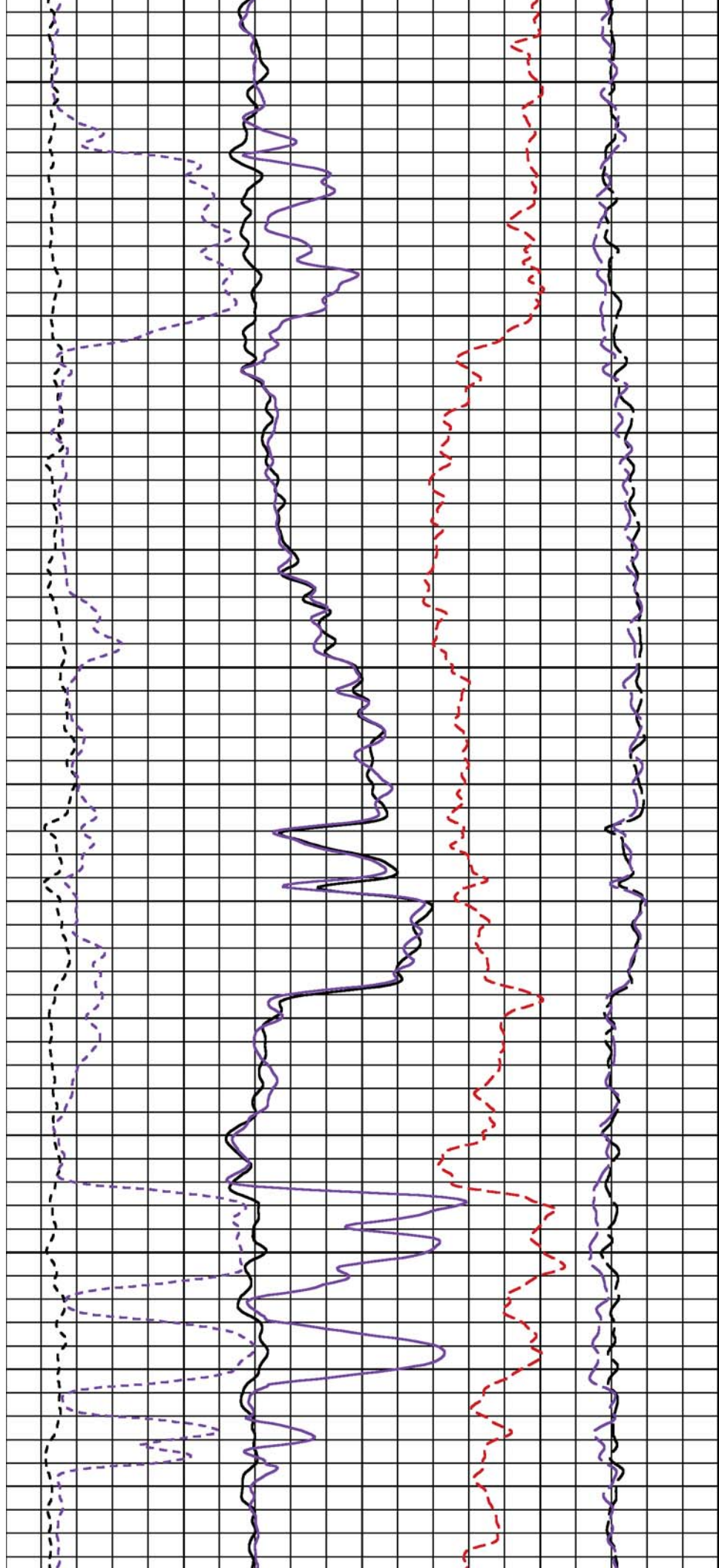


1075

1100

1125

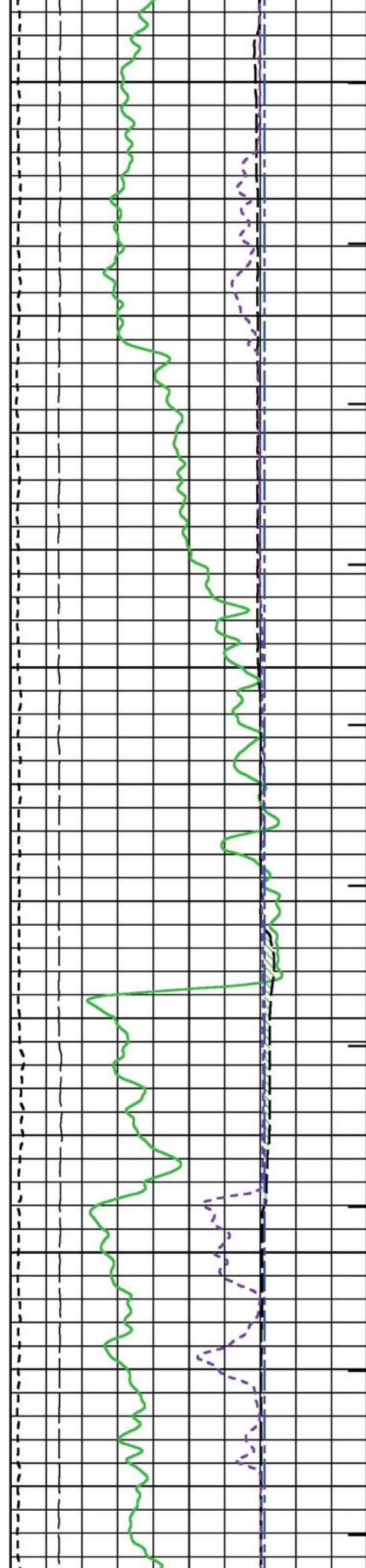


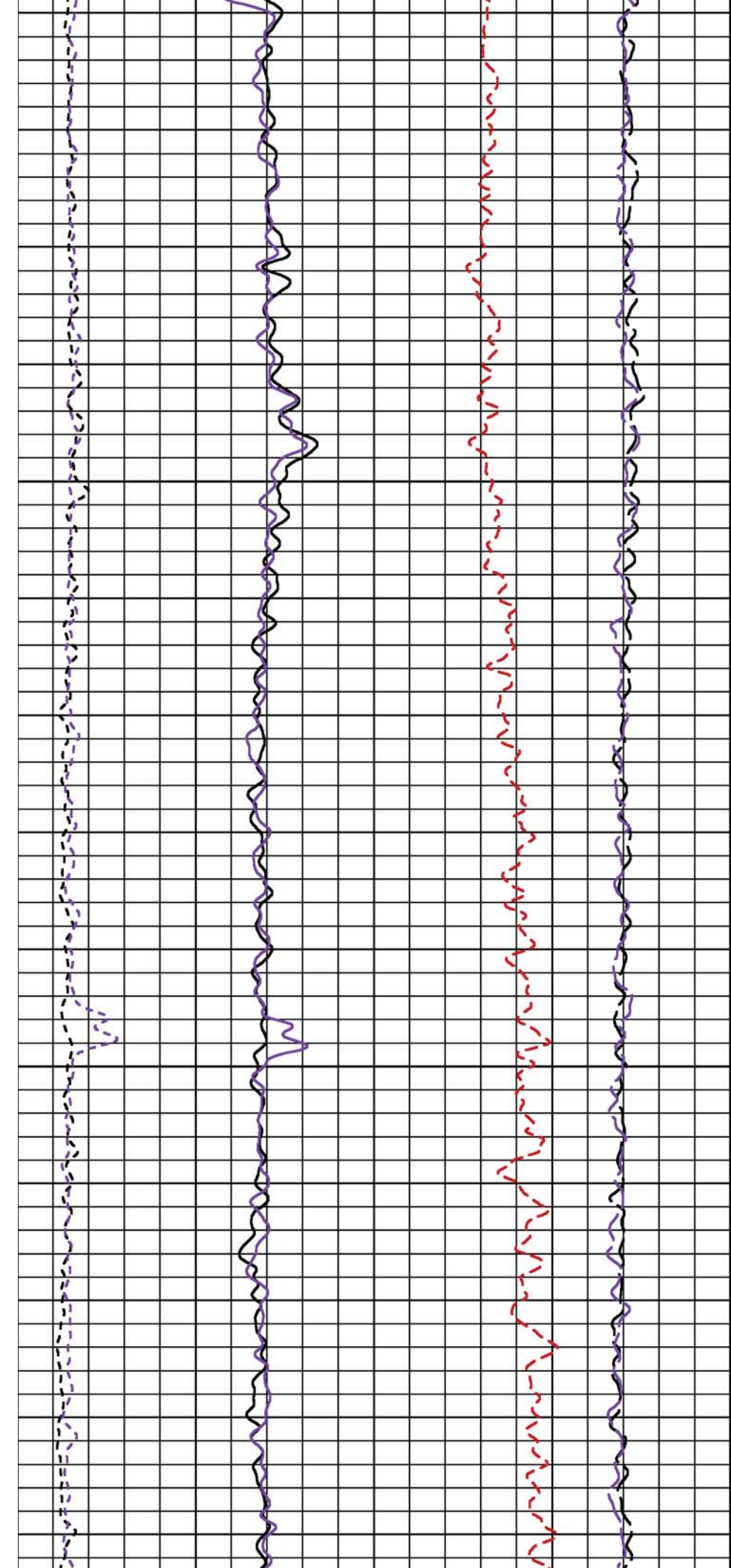


1150

1175

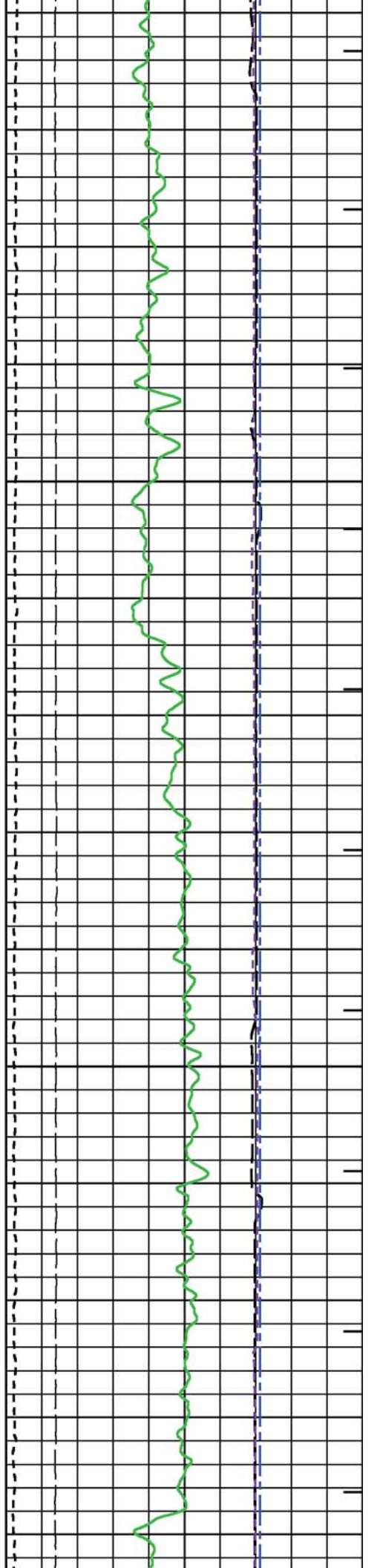
1200

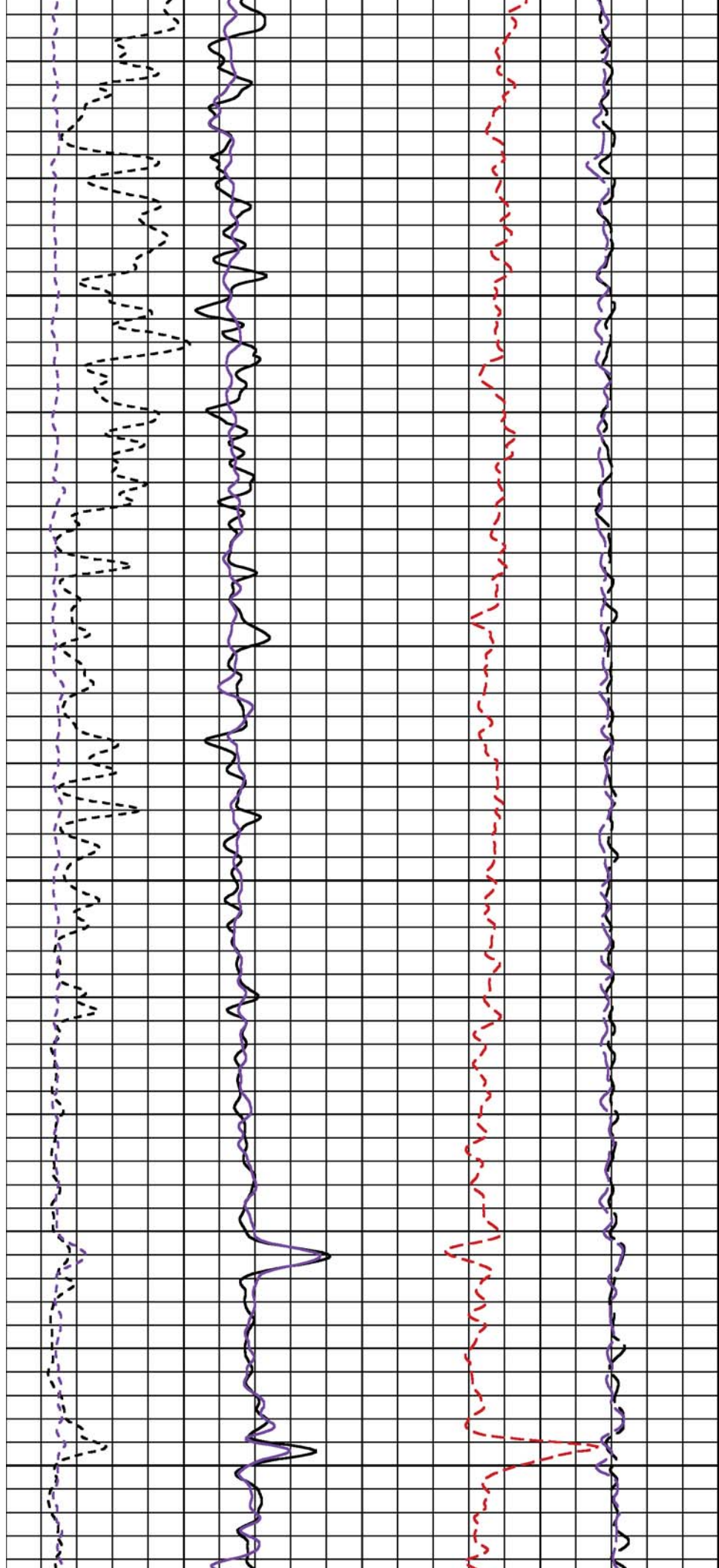




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1250

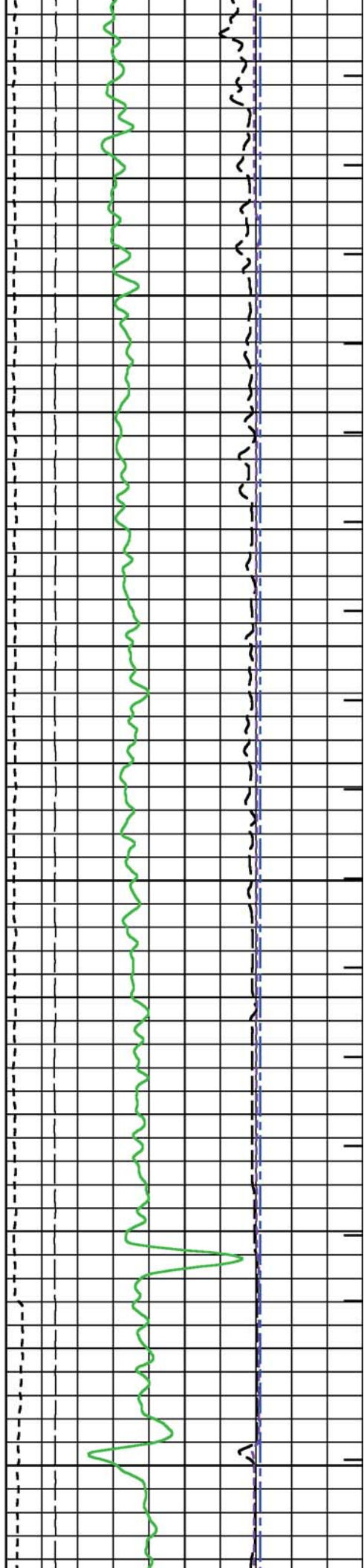


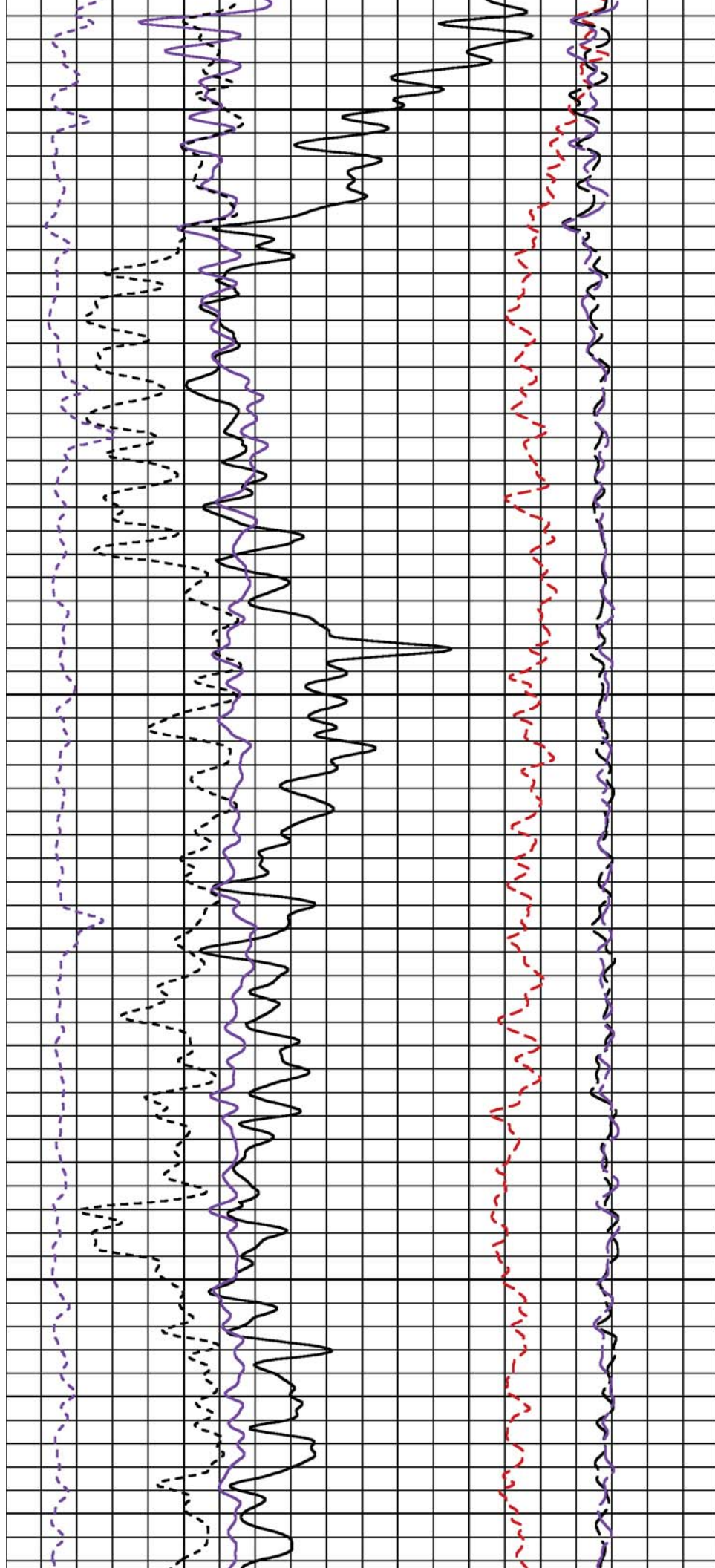


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1300

1325

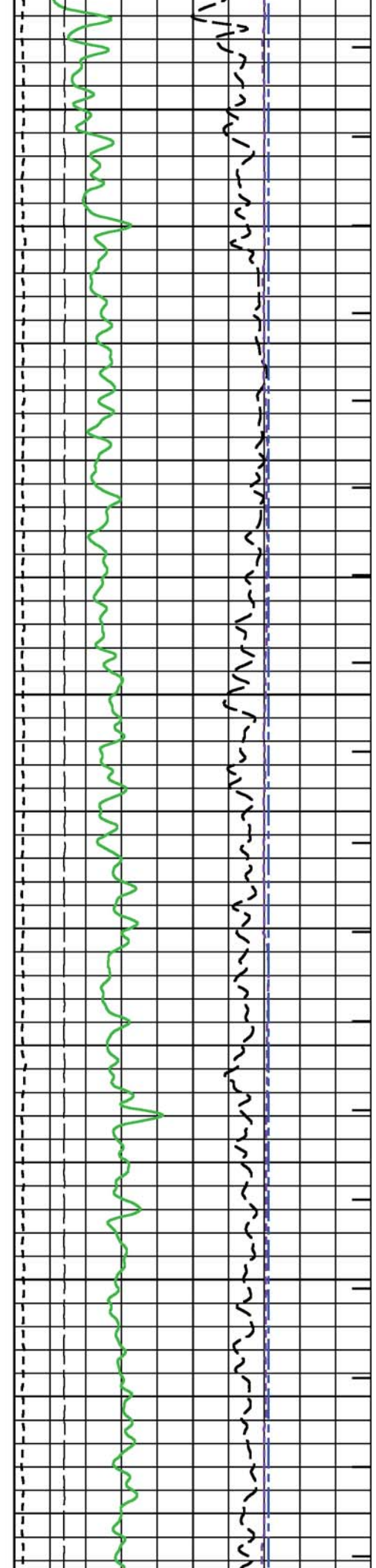


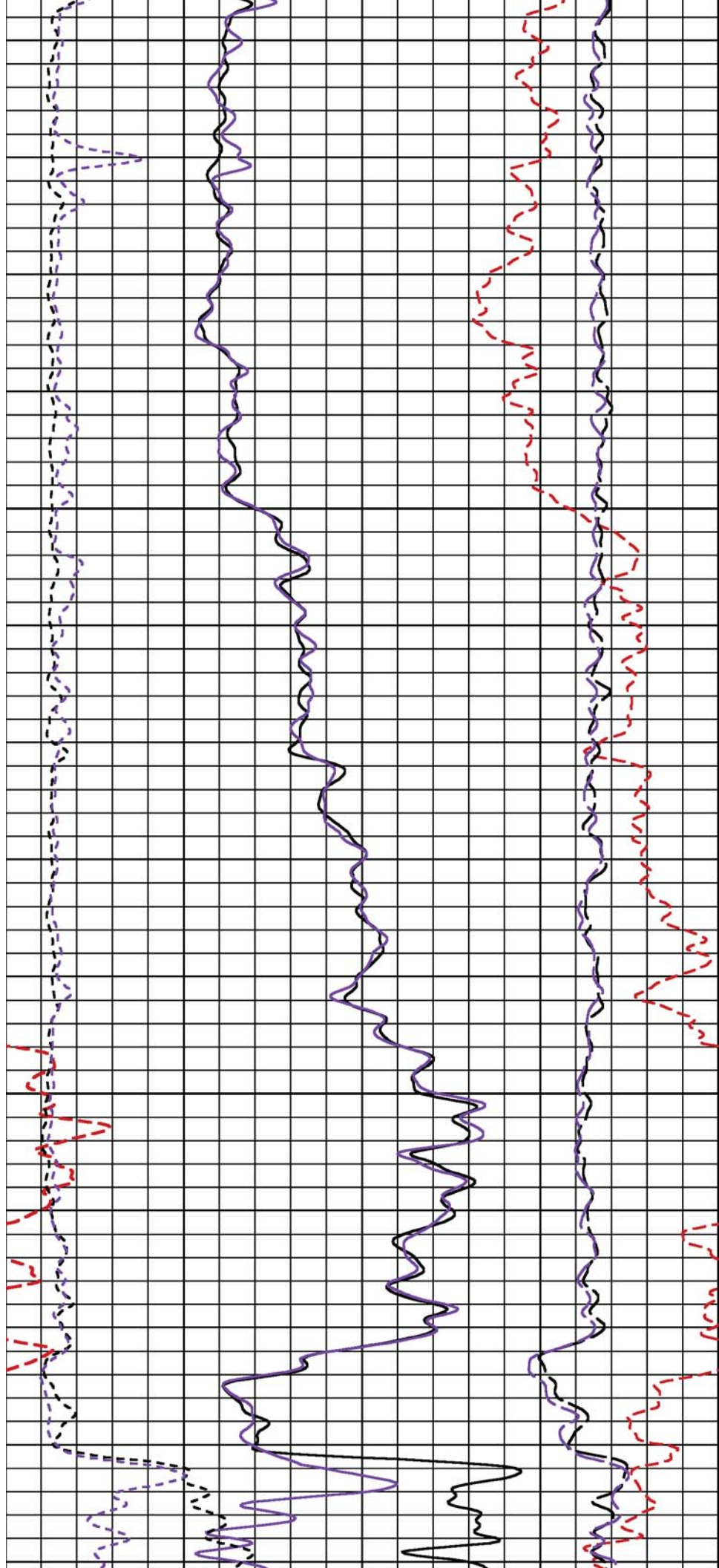


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1375

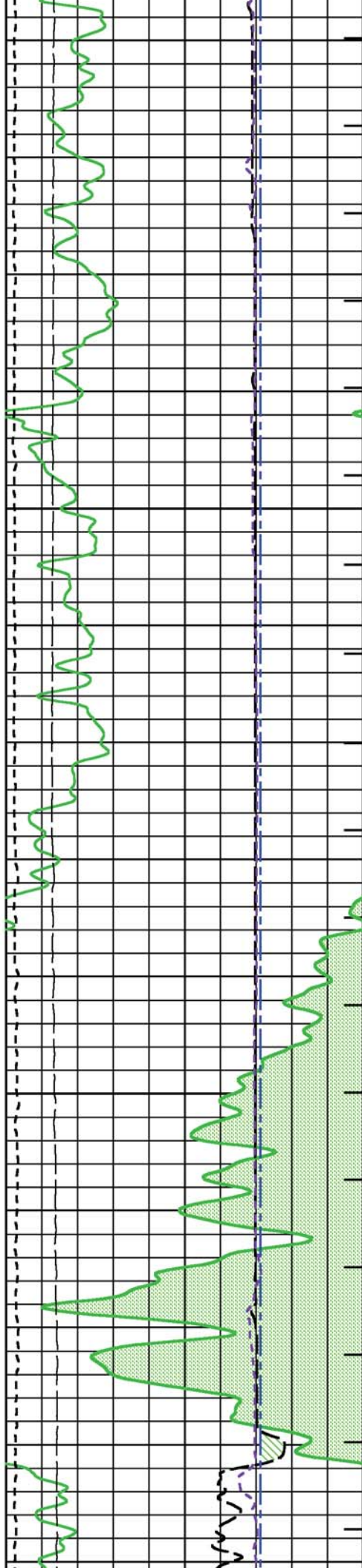
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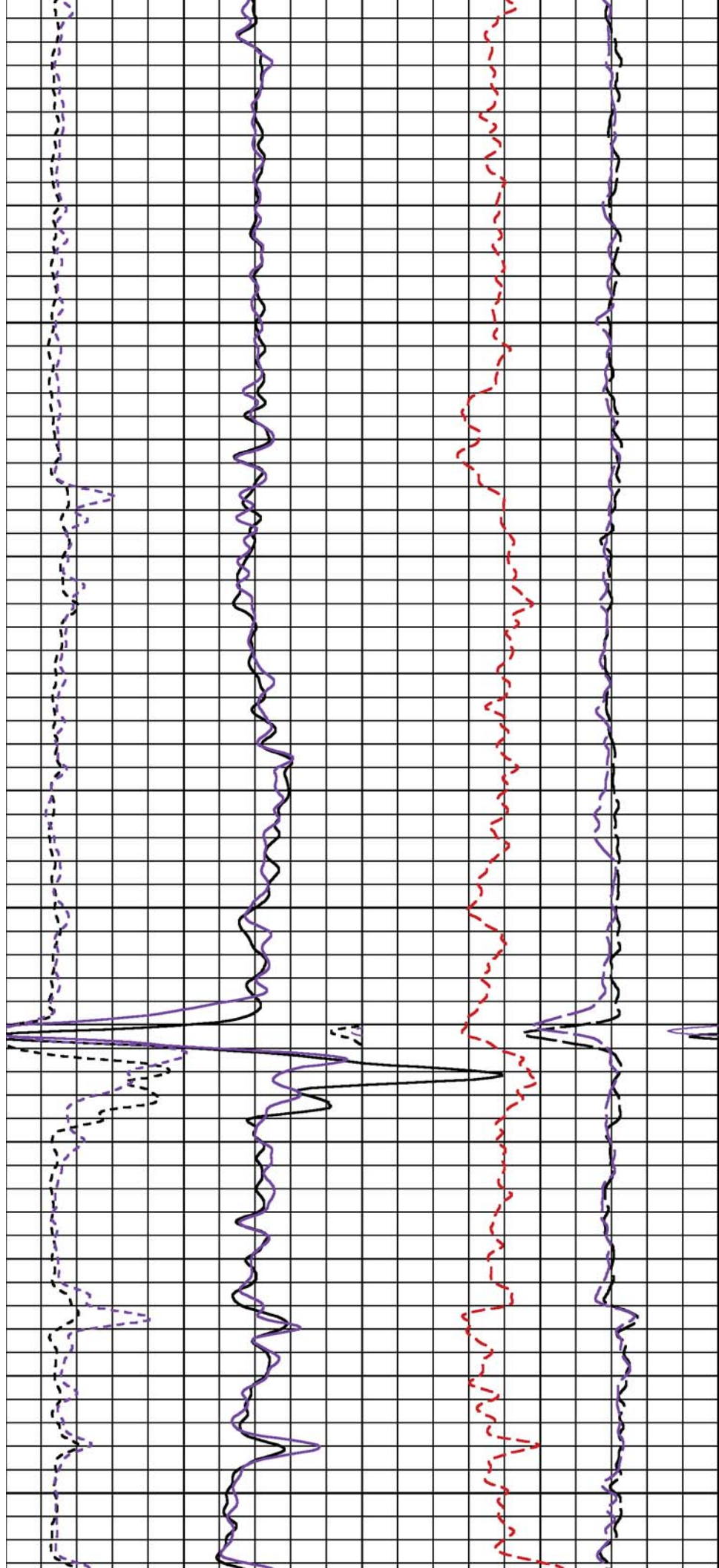




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1450

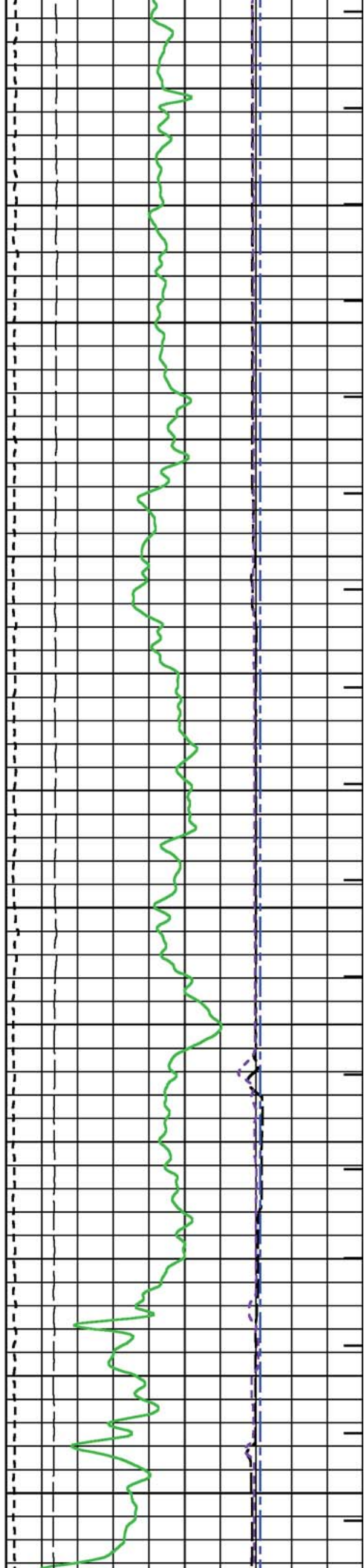


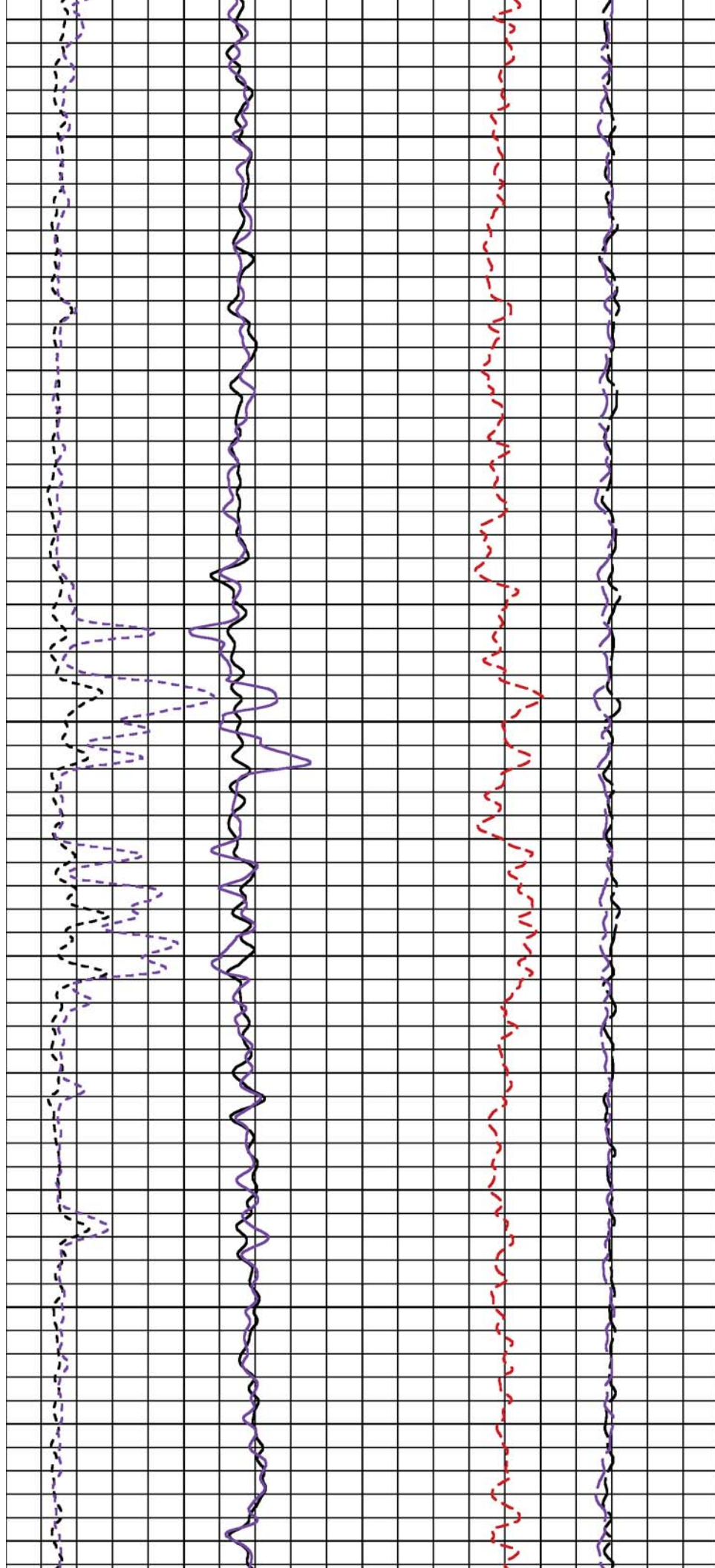


1475

1500

1525

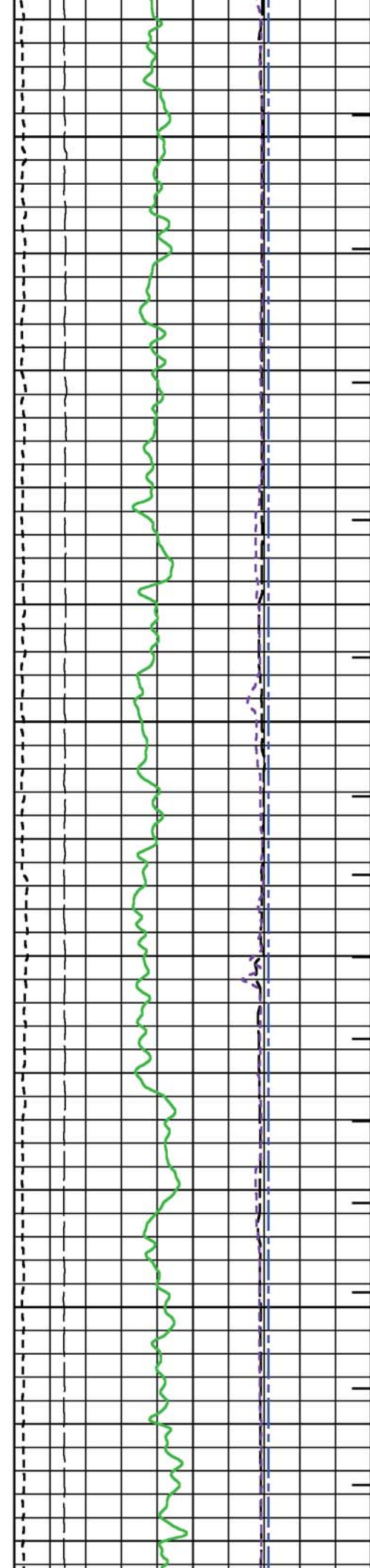


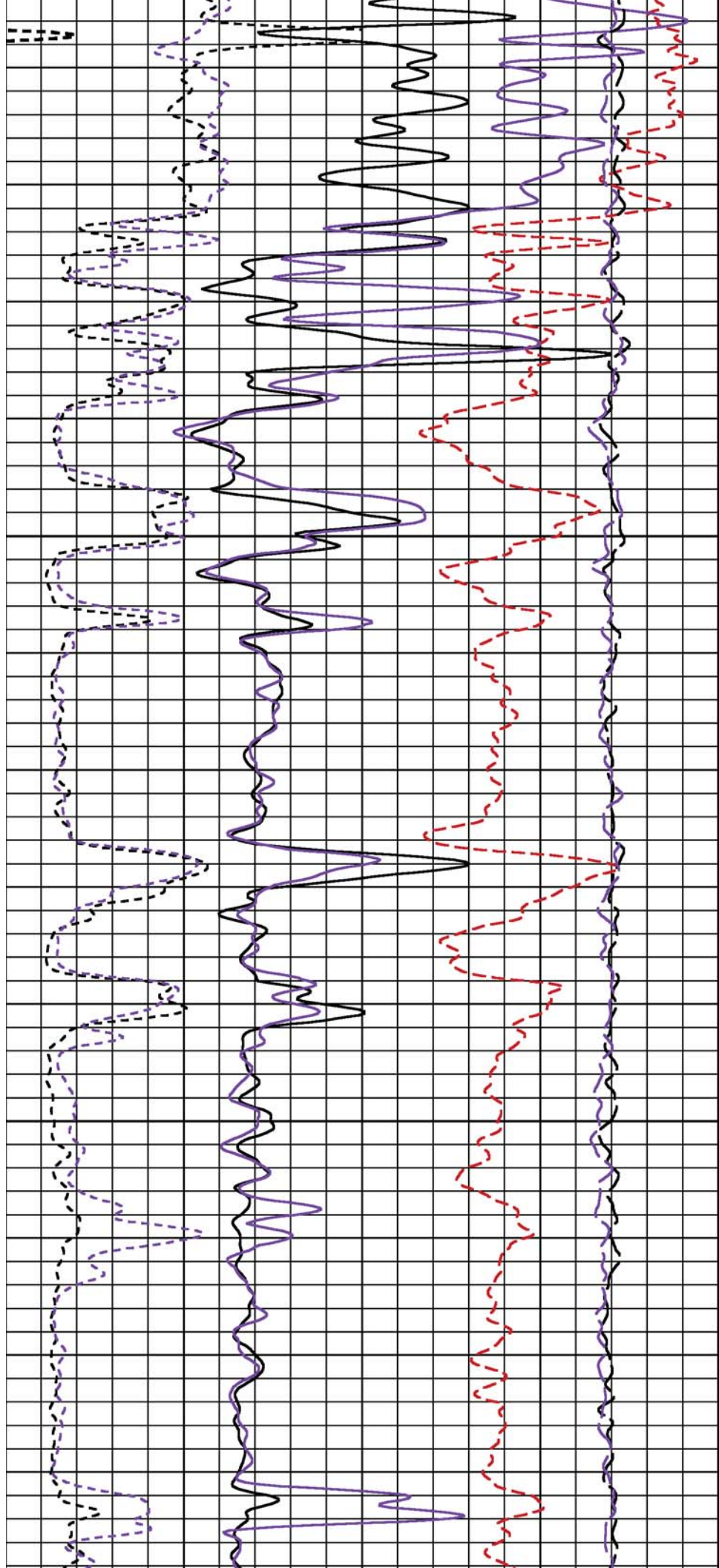


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1575

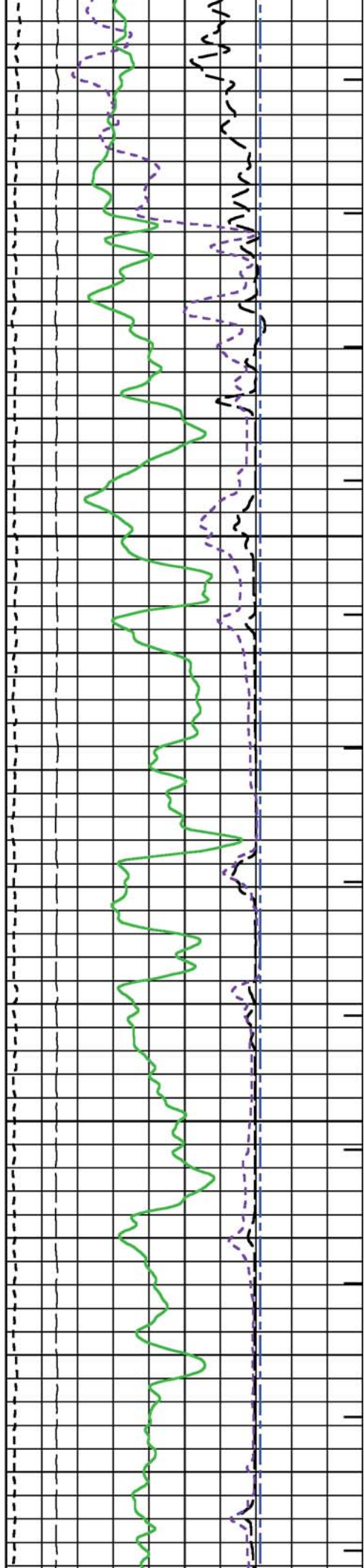
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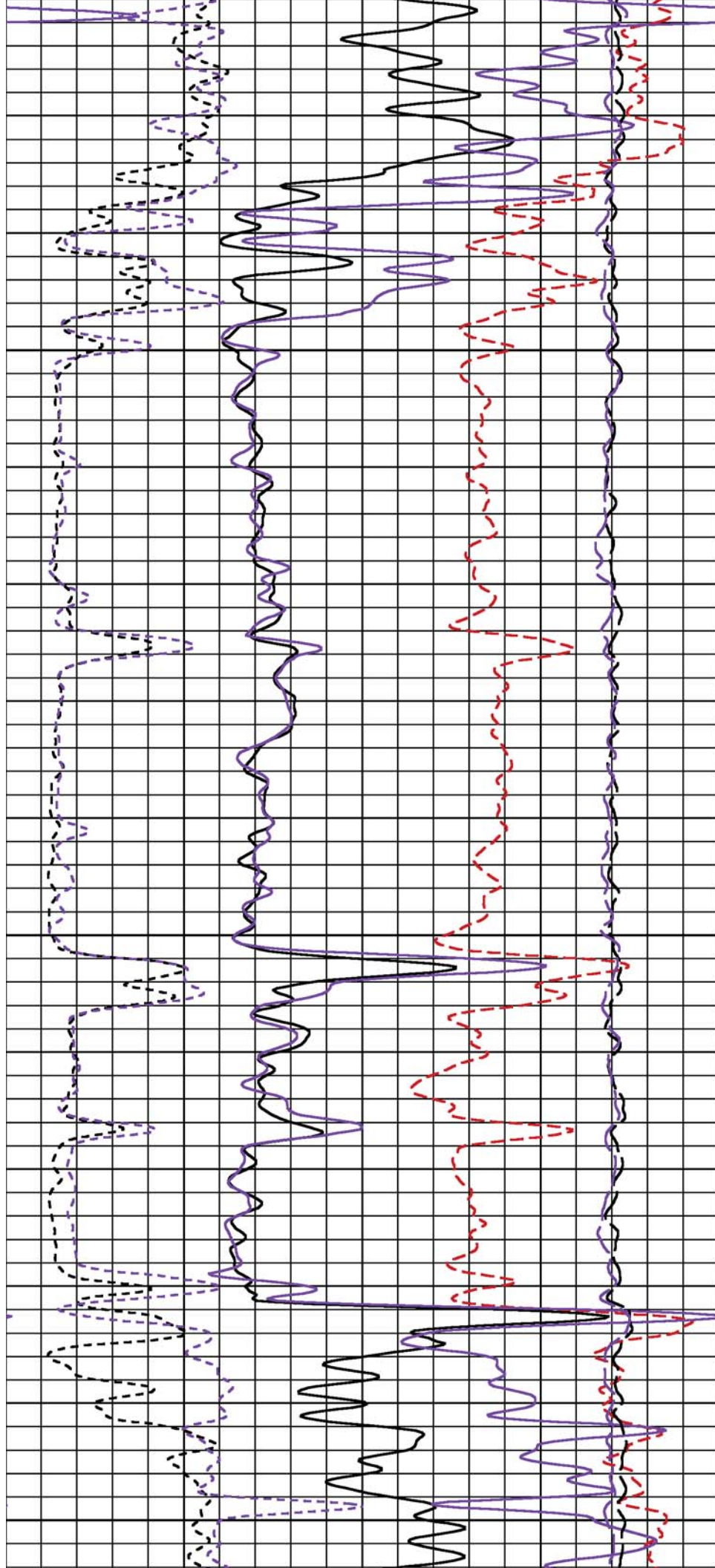




1625

1650

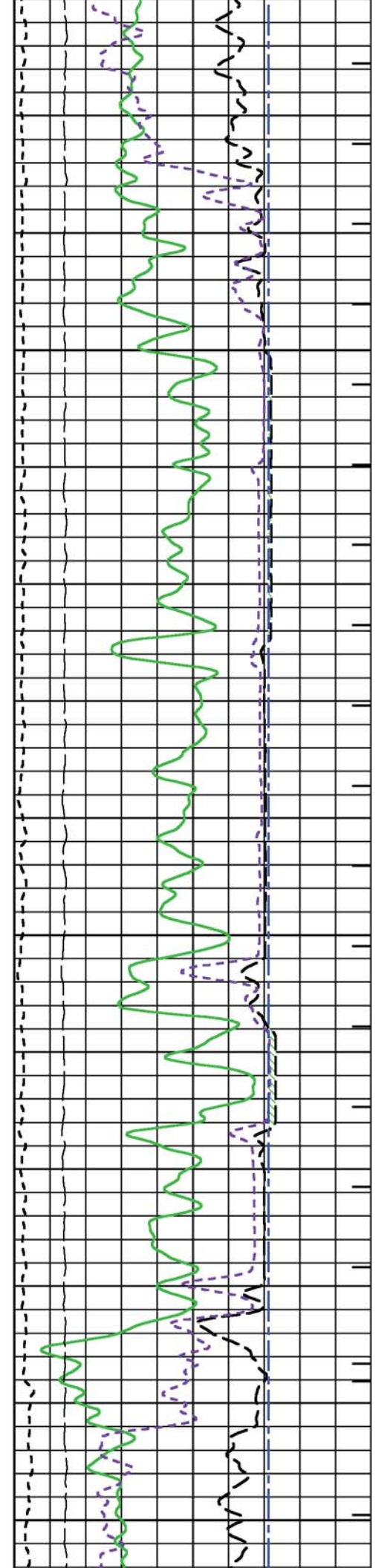


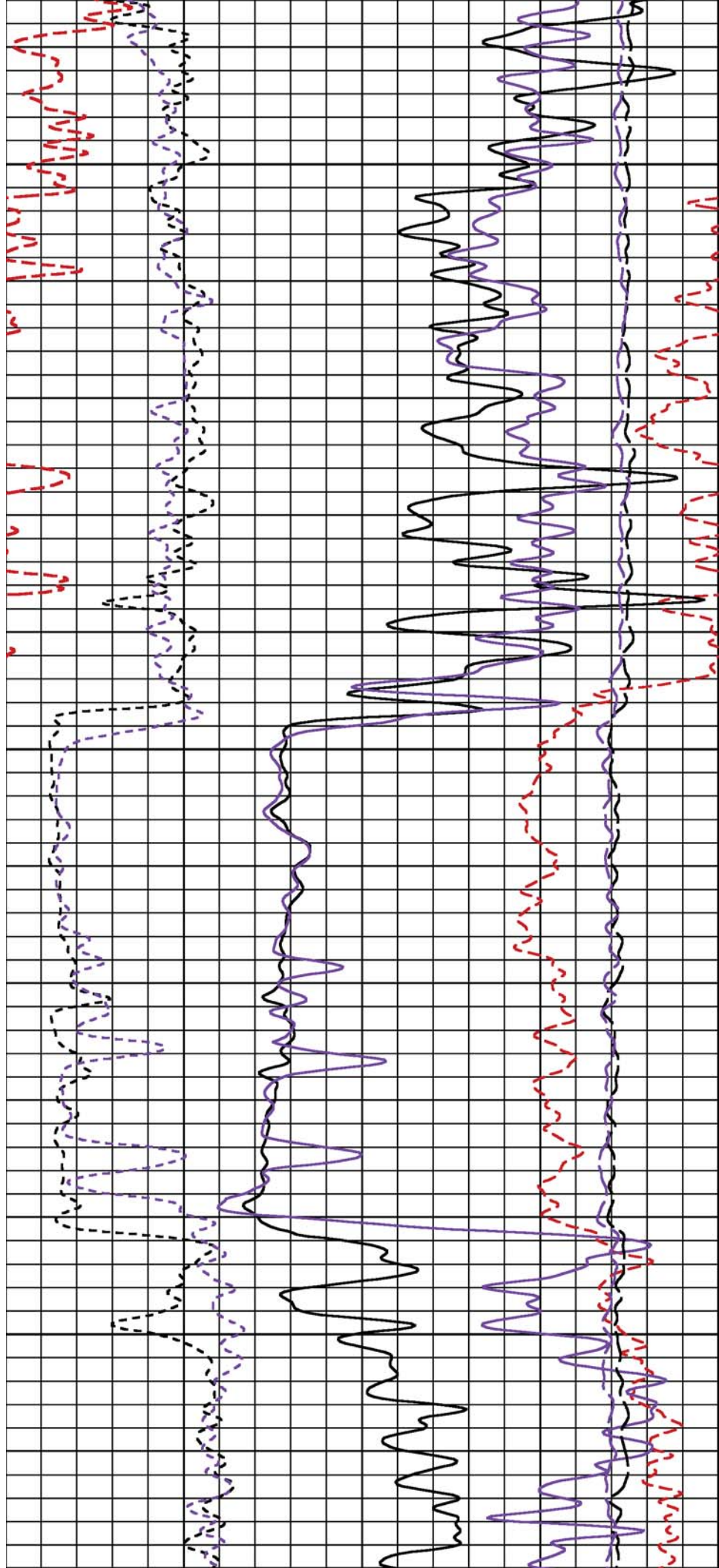


1675

1700

1725

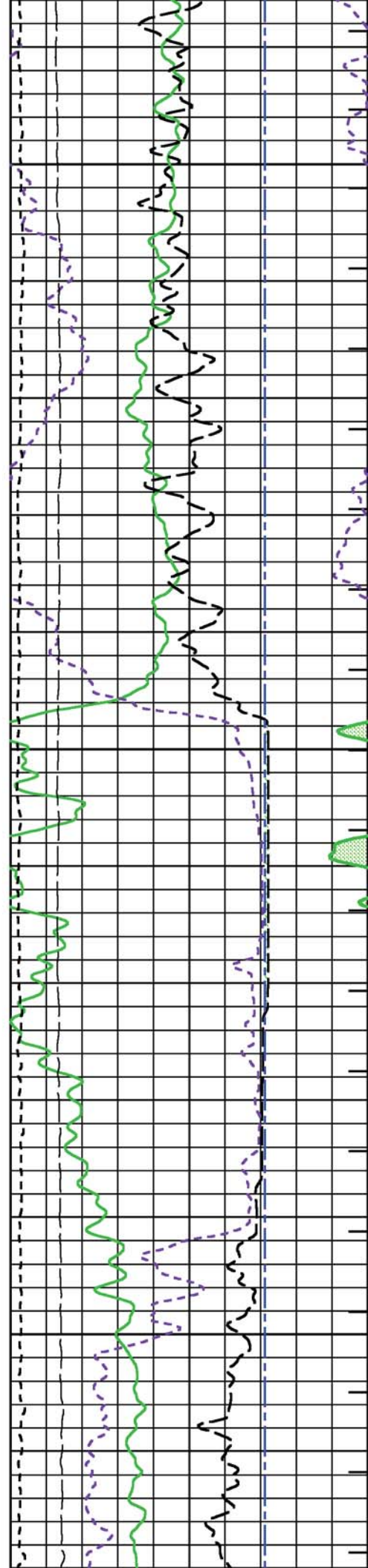


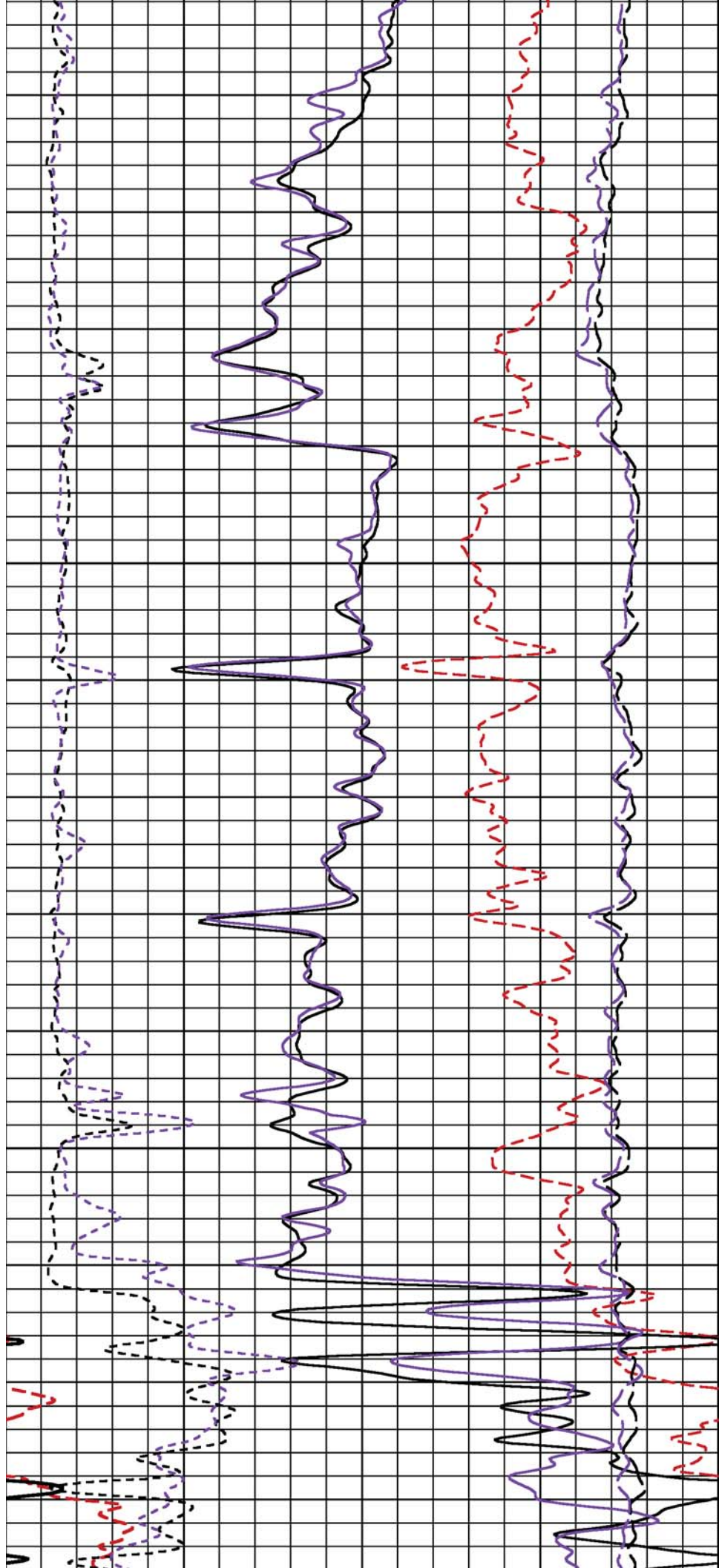


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1775

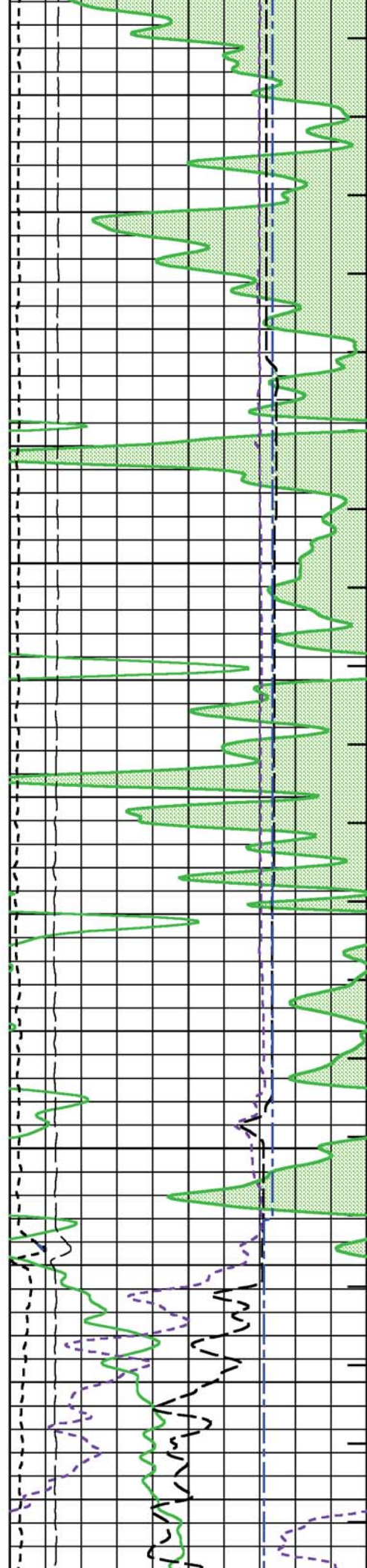
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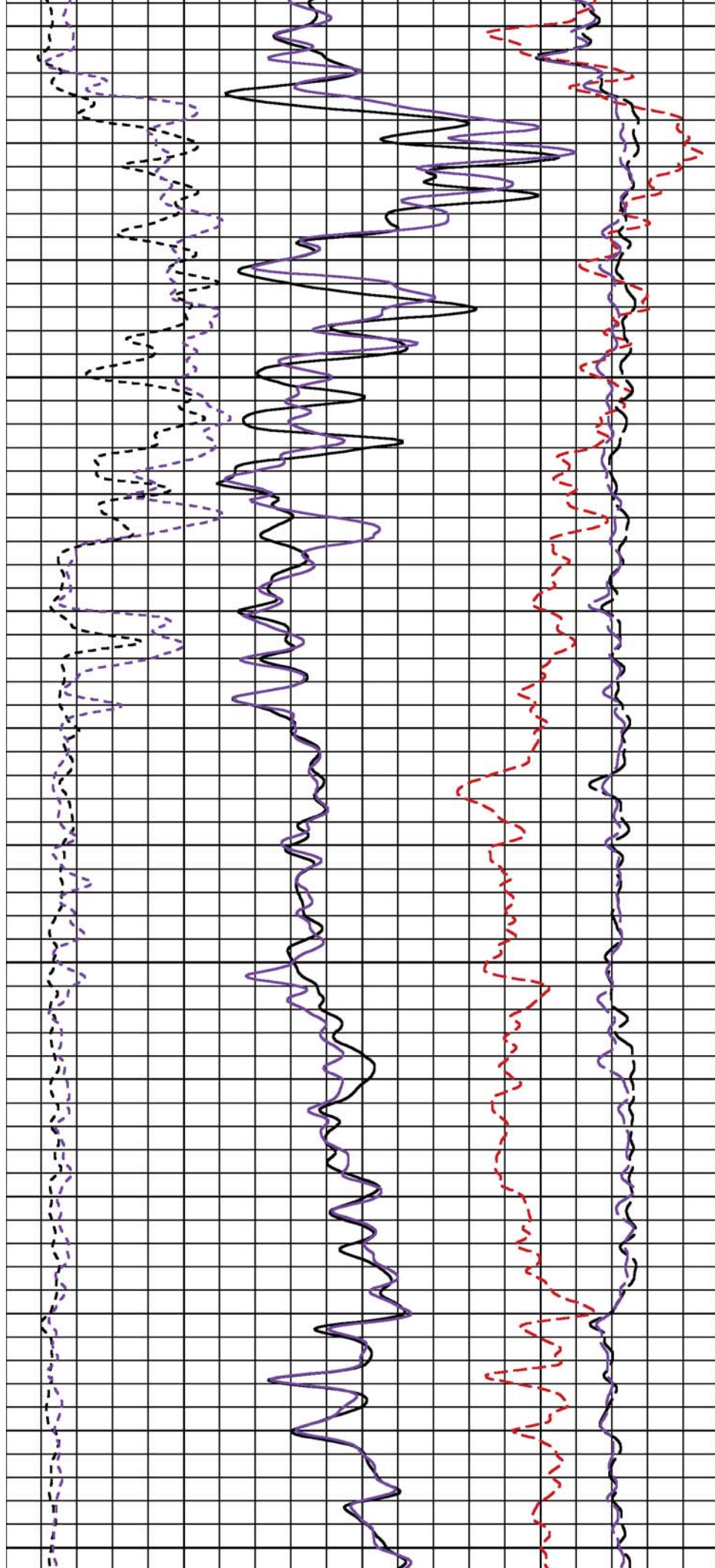




1825

1850

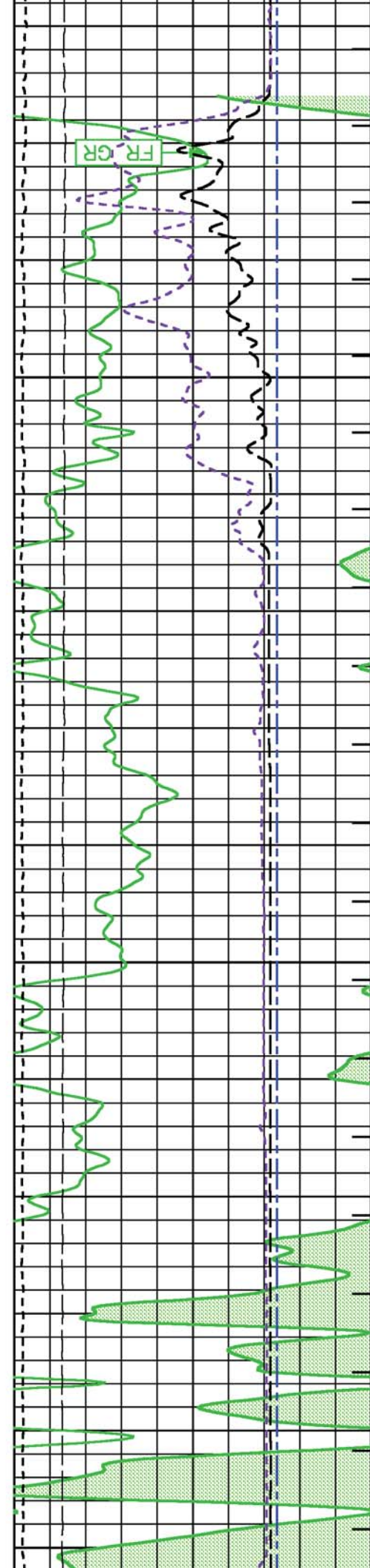


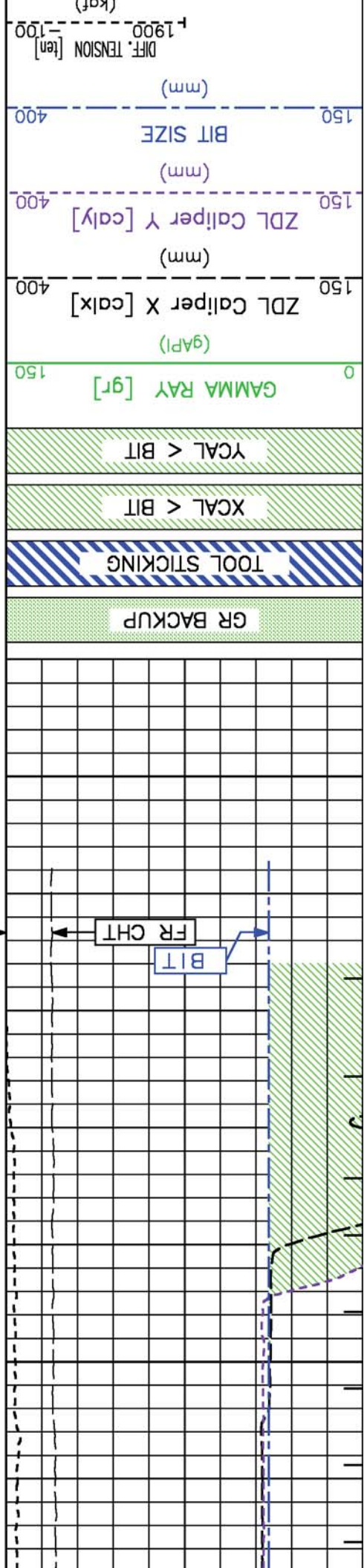


1875

1900

1925



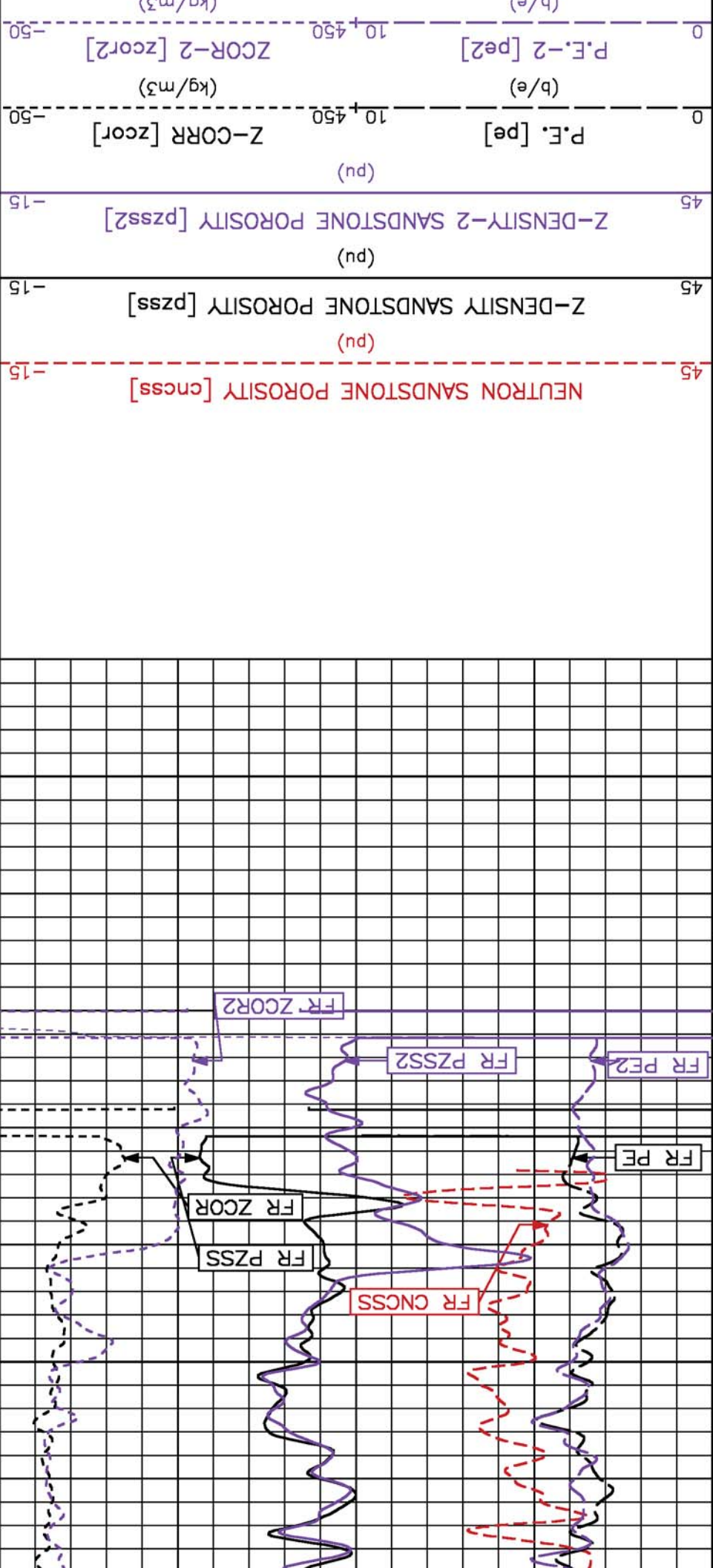


METERS

1975

TD

1950





HIGH RESOLUTION LOG - SANDSTONE MATRIX

ECLIPS 6.1! Aug 06, 2010
Updates: 1,2 Patches: 3

Sat Feb 16 18:13:37 2013

Perfit / main/62 Cplot Pdf_Cpp / main/16 Fileview 5.61

PARAMETER AND FILTER SUMMARY REPORT

FILE: /data/mgm/run2-oh/m980e02.prm
LOGGING MODE: DEPTH
DIRECTION: DOWN
TOP DEPTH: 336.788 m
BOTTOM DEPTH: 1994.840 m

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
SYMMETRIC FILTER				
CHT	FILTER ()	medium (1)		TOP
TENSION	FILTER ()	medium (1)		TOP
GR	FILTER (.h)	medium (1)		TOP
CALIPER	FILTER (.h)	medium (1)		TOP
CN HIGH RES	FILTER (.h)	medium (1)		TOP
ZDL HIGH RES	FILTER (hd1*)	light		TOP
	FILTER (hd12*)	light		TOP
	FILTER (hd1s*)	light		TOP
	FILTER (hd1s2*)	light		TOP
	FILTER (hd2*)	light		TOP
	FILTER (hd22*)	light		TOP
	FILTER (hd2s*)	light		TOP
	FILTER (hrd2s2*)	light		TOP
	FILTER (soft*)	light		TOP
	FILTER (soft+2*)	light		TOP

CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	177.800	mm	TOP
	CASING THICKNESS	0.000	mm	TOP
BIT SIZE	BIT SIZE	222.000	mm	TOP
MUD DENSITY	MUD DENSITY	1.08	g/cm3	TOP
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE FIXED SIZE		TOP
	CALIPER/FIXED DIA. (zdbh*)	USE FIXED SIZE		TOP
	CALIPER/FIXED DIA. (zdbh2*)	USE FIXED SIZE		TOP
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	222.000	mm	TOP
	FIXED DIAMETER (zdbh*)	222.000	mm	TOP
	FIXED DIAMETER (zdbh2*)	222.000	mm	TOP
ACCELERATION PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
CN PROCESSING				
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION OFF		TOP
				BOTTOM

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
ZDL PROCESSING				
CN BOREHOLE CORRECTION	SALINITY	0	ppm	TOP BOTTOM
CN CASING & CEMENT CORRECTION	BOREHOLE CORRECTION CORRECTION	ON OFF		TOP TOP
	BIT SIZE BEHIND CSNG	311.000	mm	TOP TOP
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
DENSITY POROSITY	Air Filled Borehole RHOfluid RHOmatrix (sand)	1.000 2.650	g/cm3	TOP BOTTOM

PARAMETER AND FILTER SUMMARY REPORT

FILE: /data/MGM/run2_oh/m980e07.prm LOGGING MODE: DEPTH TOP DEPTH: 353.008 m BOTTOM DEPTH: 1968.772 m
--

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
SYMMETRIC FILTER				
CHT	FILTER ()	medium (1)		TOP
TENSION	FILTER ()	medium (1)		TOP
GR	FILTER (.h)	medium (1)		TOP
CALIPER	FILTER (.h)	medium (1)		TOP
CN HIGH RES	FILTER (.h)	light		TOP
ZDL HIGH RES	FILTER (hrd1*)	light		TOP
	FILTER (hrd12*)	light		TOP
	FILTER (hrd1s*)	light		TOP
	FILTER (hrd1s2*)	light		TOP
	FILTER (hrd2*)	light		TOP
	FILTER (hrd22*)	light		TOP
	FILTER (hrd2s*)	light		TOP
	FILTER (hrd2s2*)	light		TOP
	FILTER (soft*)	light		TOP
	FILTER (soft2*)	light		TOP

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
BOREHOLE & CEMENT				
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D. CASING THICKNESS	177.800 0.000	mm	TOP TOP
BIT SIZE	BIT SIZE	222.000	mm	TOP
MUD DENSITY	MUD DENSITY	216.000	mm	TOP
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*) CALIPER/FIXED DIA. (zdbh*)	USE CALIPER	g/cm3	TOP TOP
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*) CALIPER/FIXED DIA. (zdbh2*)	222.000	mm	TOP TOP
X-Y COMBINED CALIPER PROCESSING-FOCMYS Caliper - FOCUS	Average	216.000	mm	TOP BOTTOM
ACCELERATION PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION OFF		TOP BOTTOM

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
CN PROCESSING				
CN BOREHOLE CORRECTION	SALINITY	0	ppm	TOP BOTTOM
CN CASING & CEMENT CORRECTION	BOREHOLE CORRECTION CORRECTION	ON OFF		TOP TOP
	BIT SIZE BEHIND CSNG	311.000	mm	TOP TOP
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
DENSITY POROSITY	Air Filled Borehole RHOfluid RHOmatrix (sand)	1.000 2.650	g/cm3	TOP BOTTOM

F1: BIT	Feb 16 07:26:57 2013
F1: CALXQH	Feb 16 07:26:57 2013
F1: CALYQH	Feb 16 07:26:57 2013
F1: CHT	Feb 16 07:26:57 2013
F1: CNCSSQH	Feb 16 07:26:57 2013
F1: GRQH	Feb 16 07:26:57 2013
F1: MMRK	Feb 16 07:26:57 2013
F1: PE2QH	Feb 16 07:26:57 2013
F1: PEQH	Feb 16 07:26:57 2013
F1: PZSS2QH	Feb 16 07:26:57 2013
F1: PZSSQH	Feb 16 07:26:57 2013
F1: TEN	Feb 16 07:26:57 2013
F1: ZCOR2QH	Feb 16 07:26:57 2013
F1: ZCORQH	Feb 16 07:26:57 2013
F1: BIT SIZE	Feb 16 07:26:57 2013
CALIPER FROM X-AXIS OF XY CALIPER(S)	Feb 16 07:26:57 2013
CALIPER FROM Y-AXIS OF XY CALIPER(S)	Feb 16 07:26:57 2013
CABLE HEAD TENSION	Feb 16 07:26:57 2013
BOREHOLE SIZE CORRECTED SANDSTONE COMPENSATED NEU POROSITY	Feb 16 07:26:57 2013
GAMMA RAY	Feb 16 07:26:57 2013
MINUTE MARK	Feb 16 07:26:57 2013
PHOTOELECTRIC CROSS-SECTION (2ND TOOL)	Feb 16 07:26:57 2013
PHOTO ELECTRIC CROSS-SECTION	Feb 16 07:26:57 2013
POROSITY FOR SANDSTONE MATRIX (2ND TOOL)	Feb 16 07:26:57 2013
POROSITY FOR SANDSTONE MATRIX	Feb 16 07:26:57 2013
DIFFERENTIAL TENSION	Feb 16 07:26:57 2013
DENSITY CORRECTION (2ND TOOL)	Feb 16 07:26:57 2013
DENSITY CORRECTION	Feb 16 07:26:57 2013

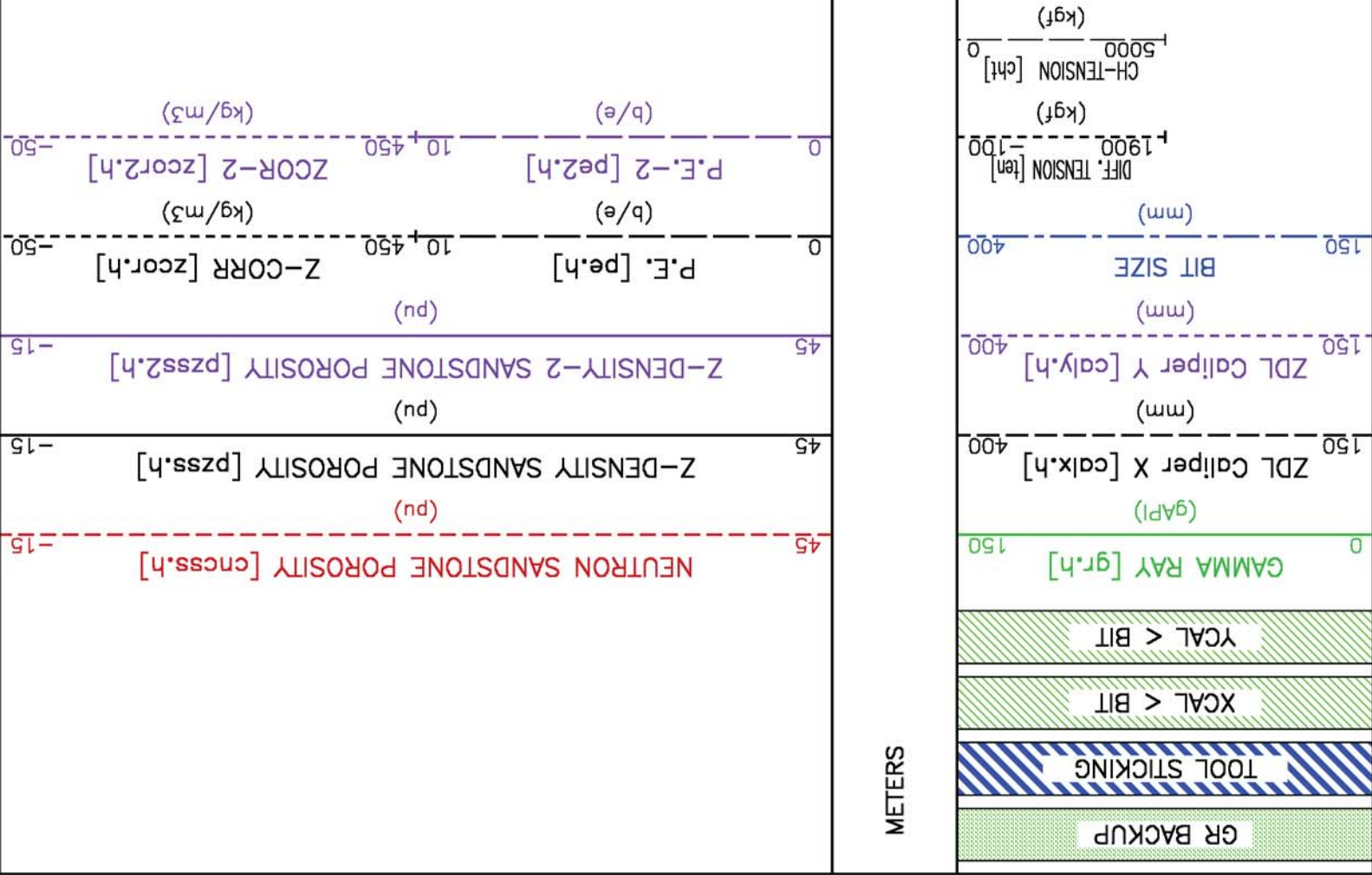
CURVE MEASURE POINT OFFSET					
CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
BIT	0.00	CNCSSQH	12.50	PZSS2QH	5.52
CALXQH	9.64	GRQH	33.76	PZSSQH	9.64
CALYQH	5.52	PE2QH	5.52	TEN	0.00
CHT	0.00	PEQH	9.64	ZCOR2QH	5.52
				ZCORQH	9.64

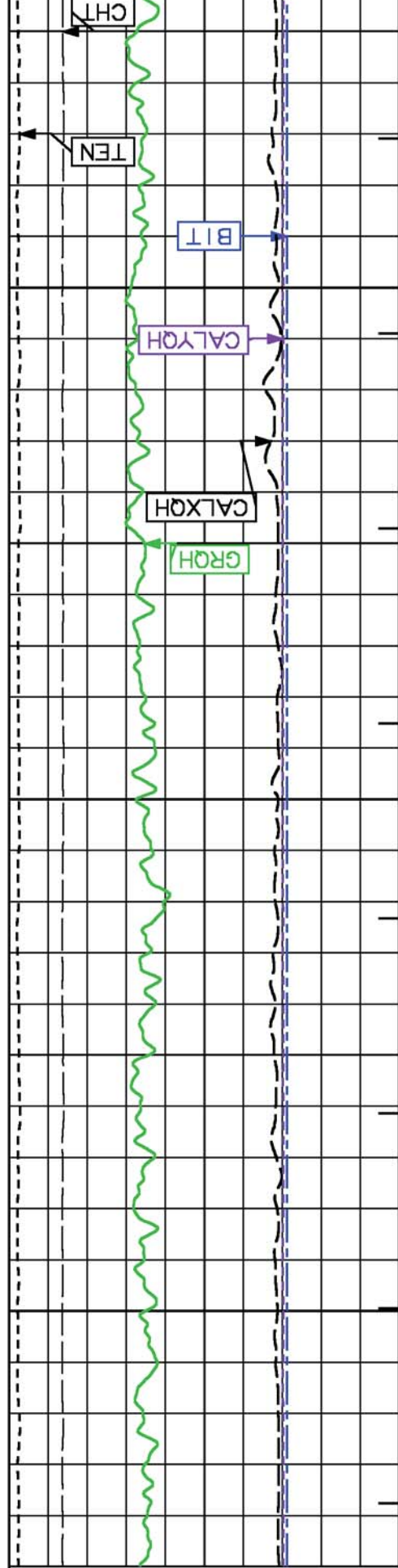
Presentation
Plot Interval

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: 1295 - 1505 Meters

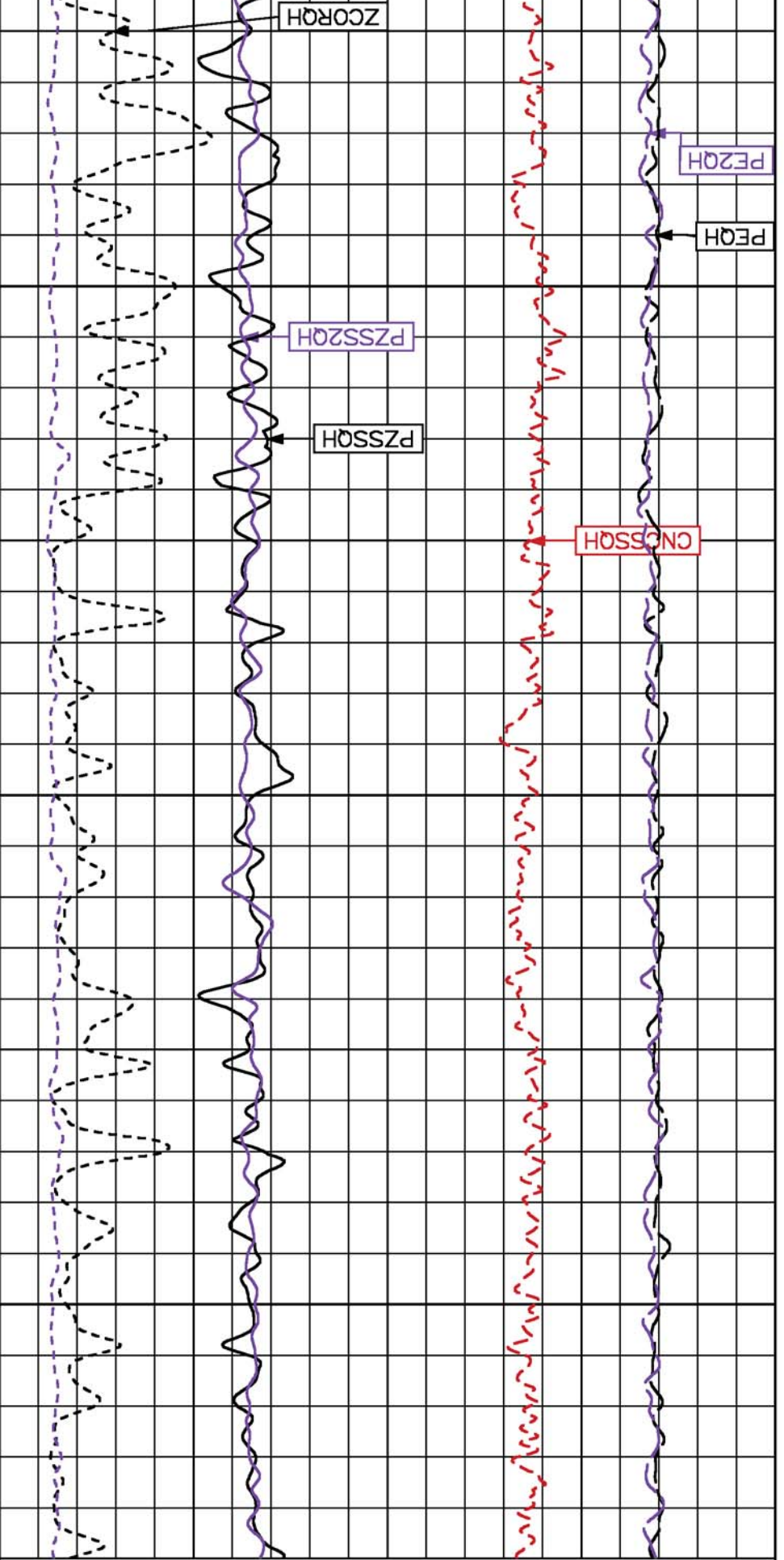
Data File 1
Created On
Company
Well
Field
File Interval
Oct

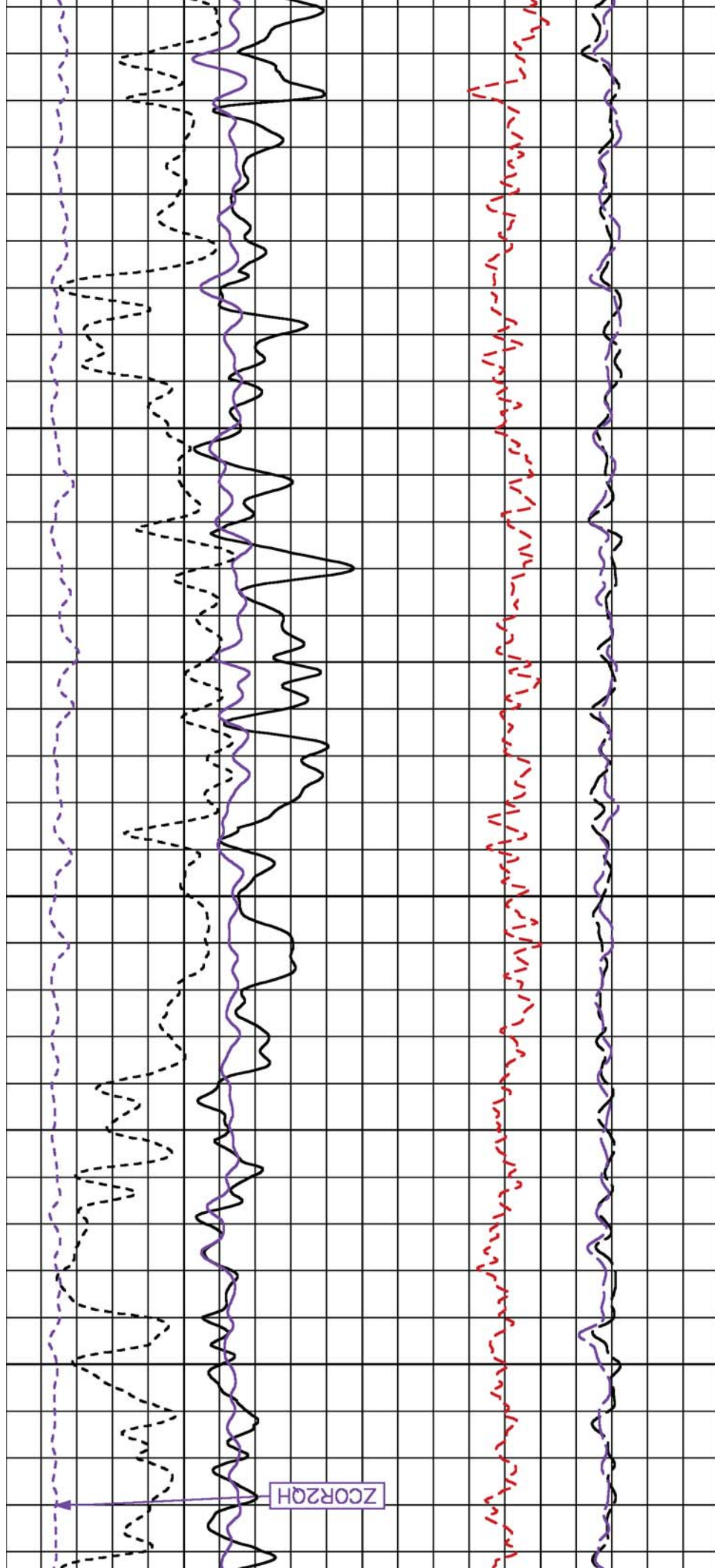
: F1 : sysa:/data/MGM/run2_oh/222_main.xtf
: Feb 16 07:26:57 2013
: MGM ENERGY CORP
: MGM SHELL EAST MACKAY I-78
: EAST MACKAY
: 318.973 - 1971.48 Meters
: m9806





1300 1310 1320

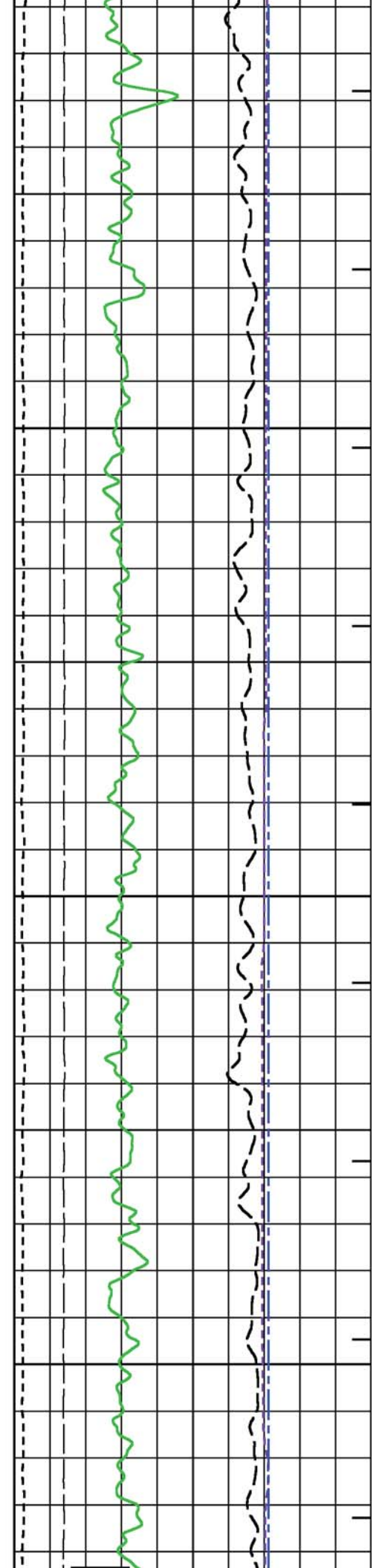


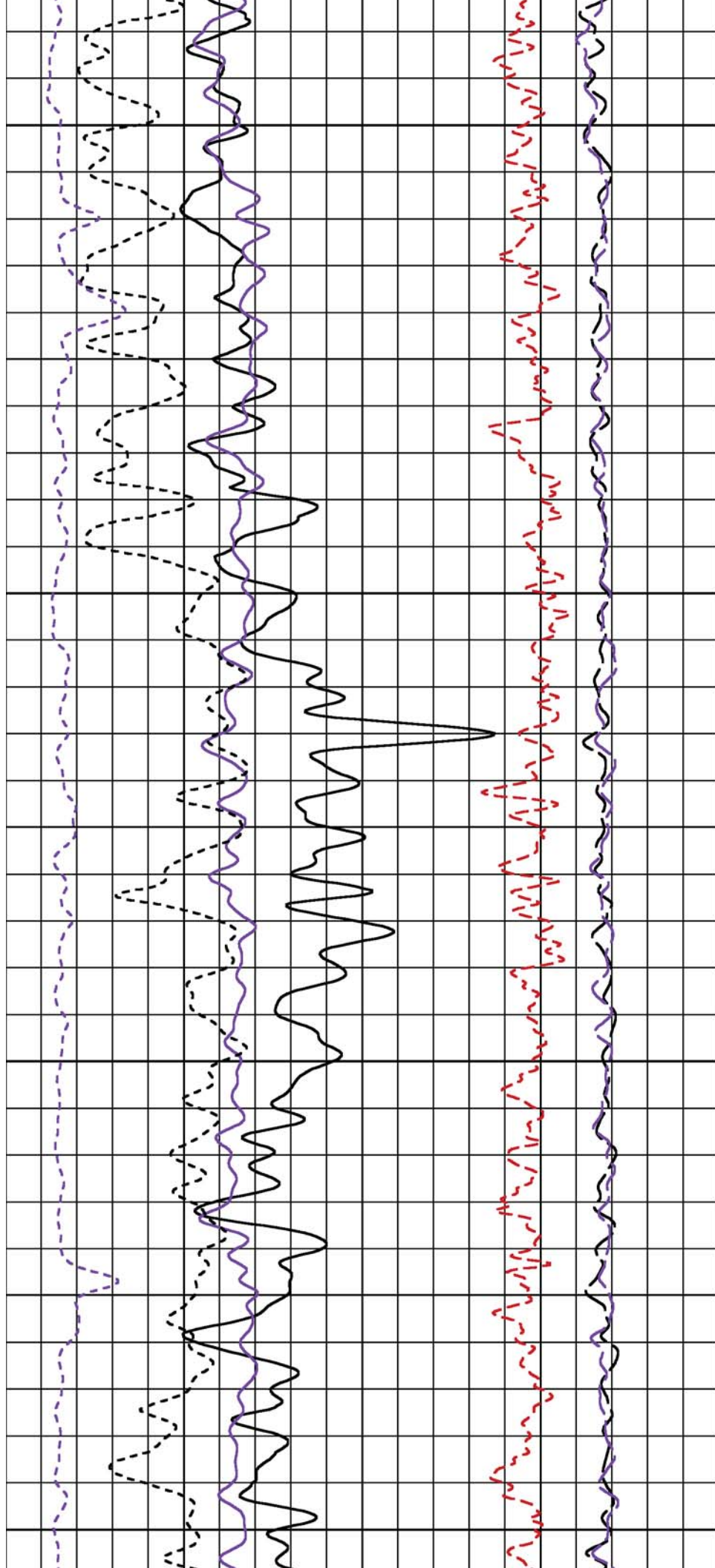


1350

1340

1330



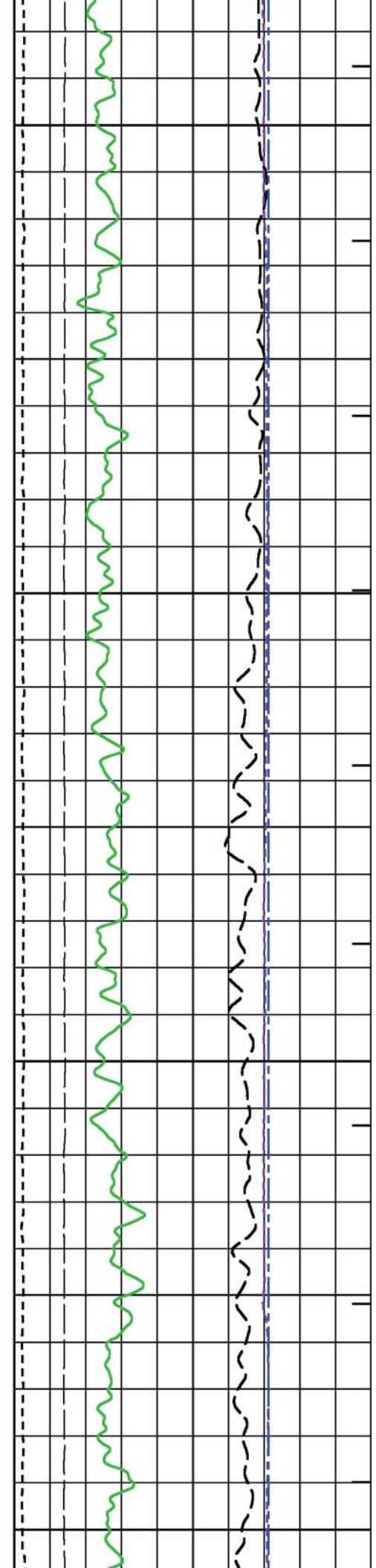


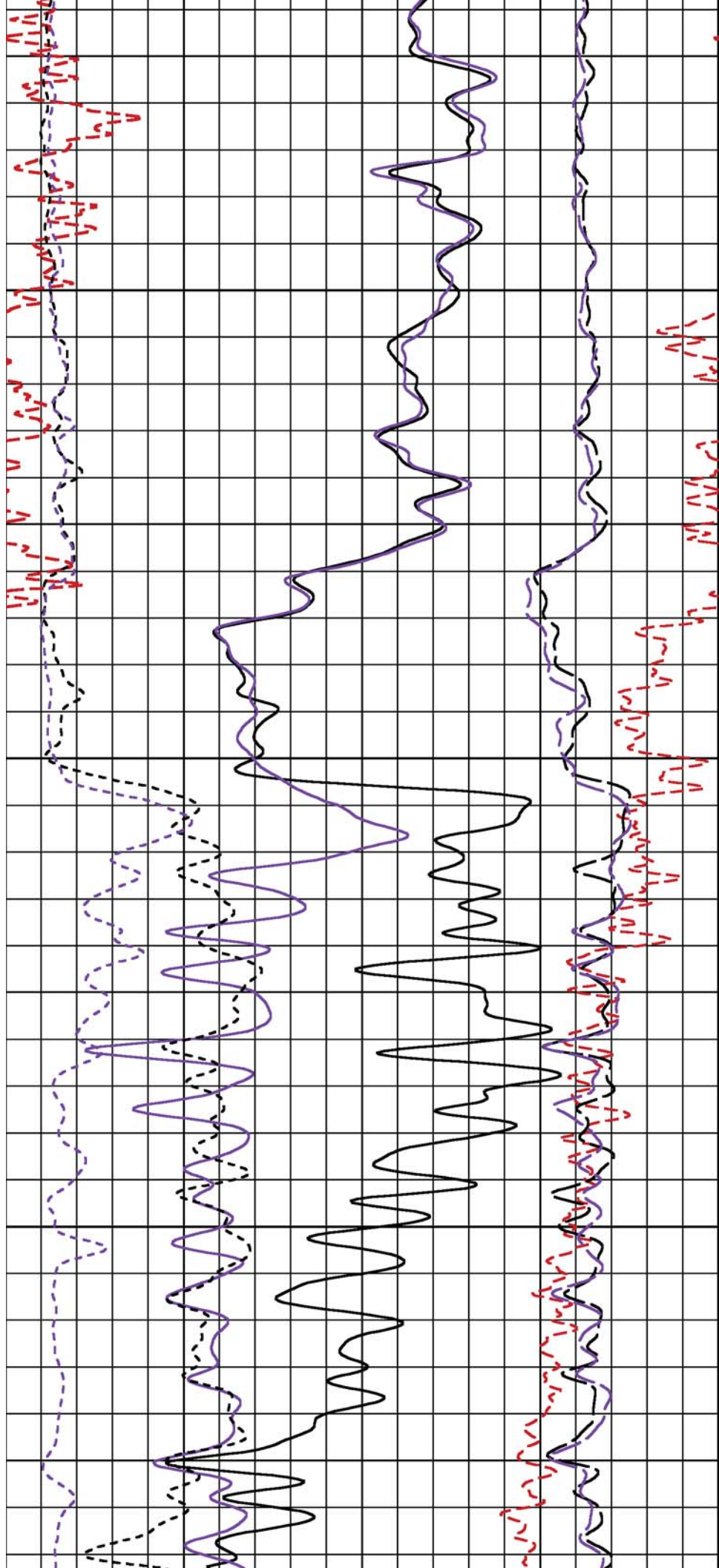
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1370

1380

1390

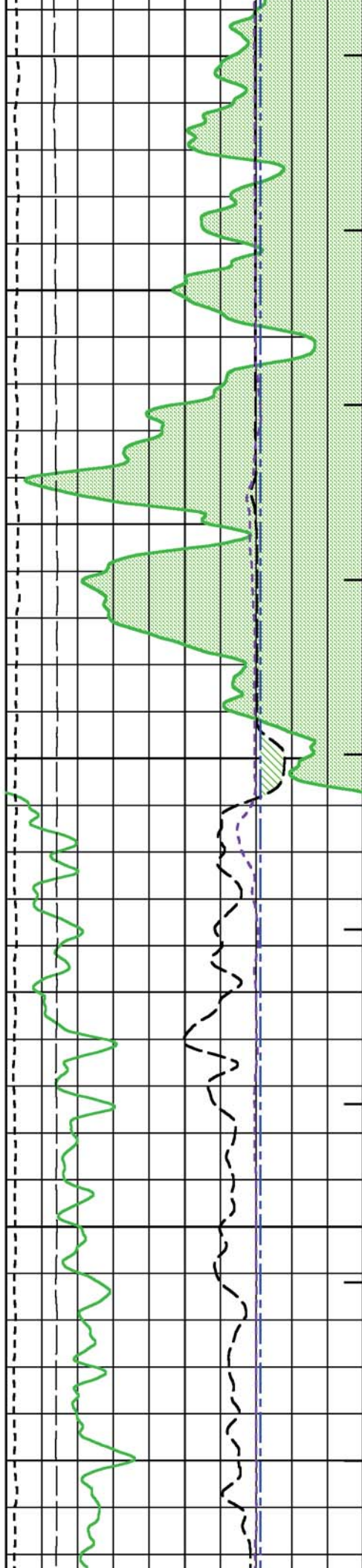


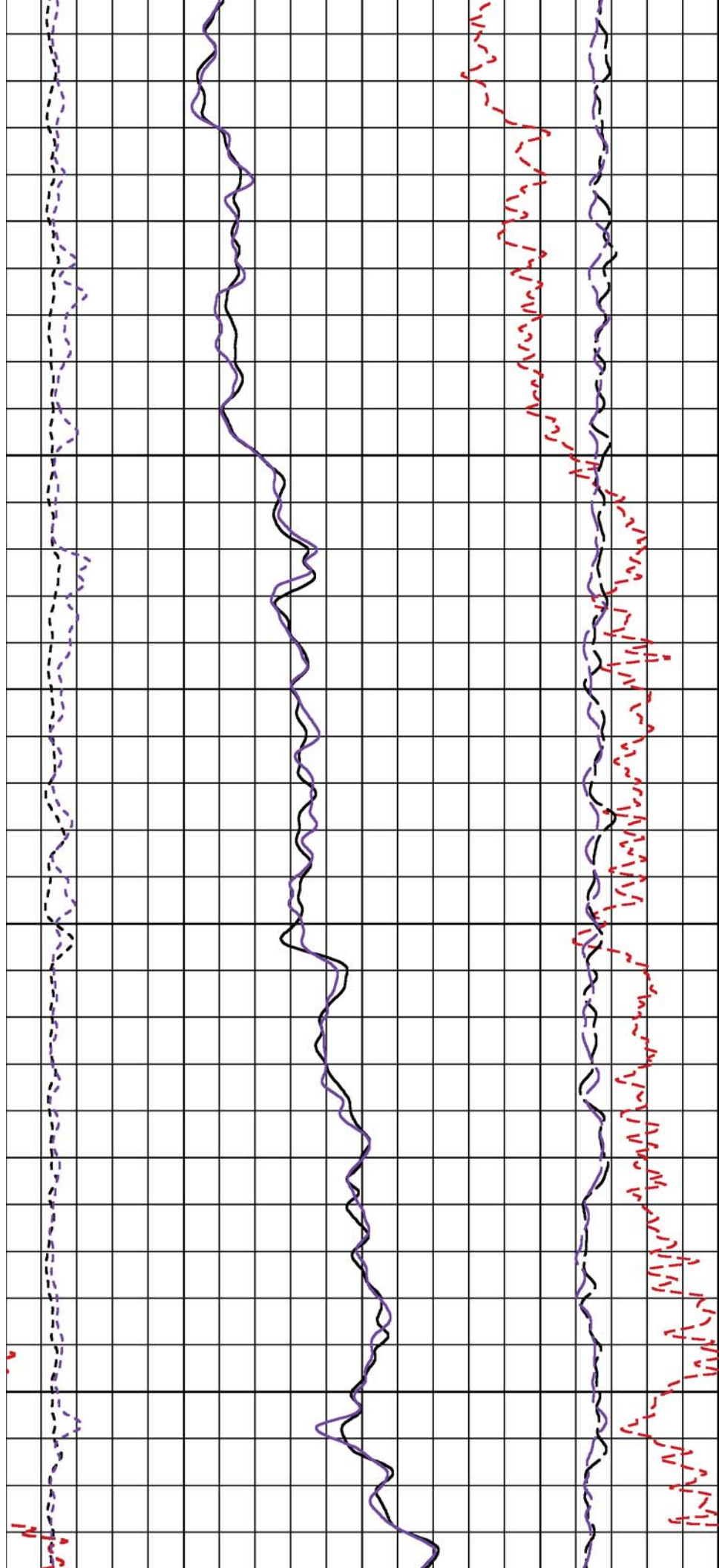


1400

1410

1420



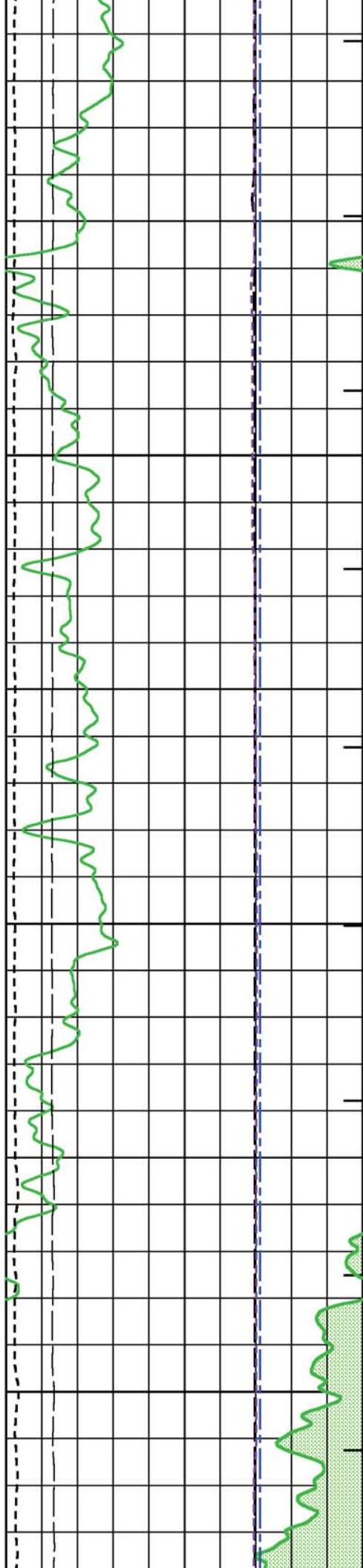


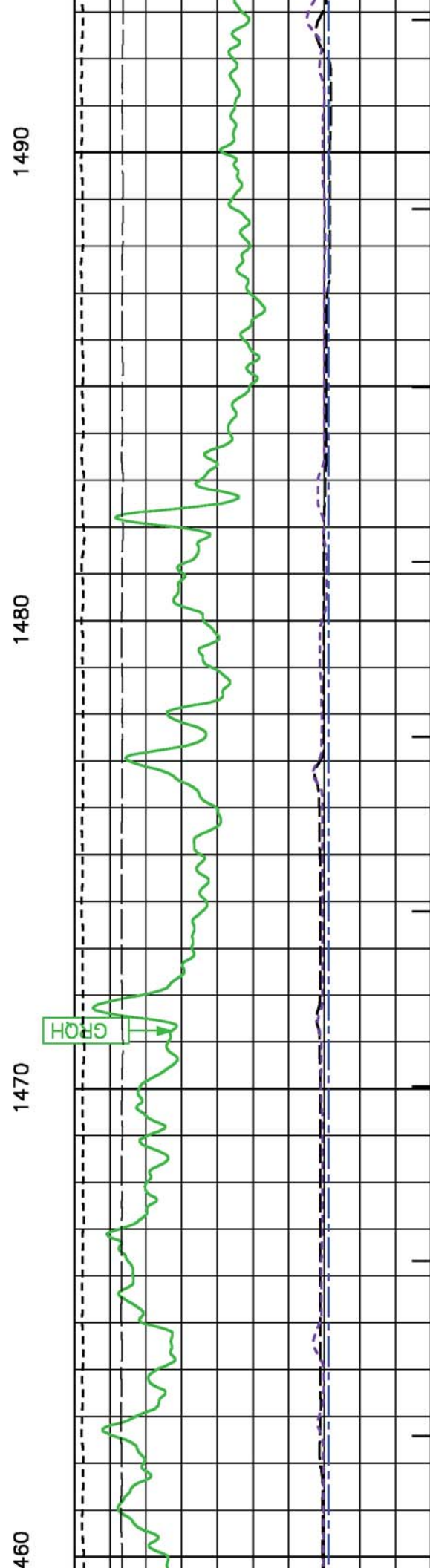
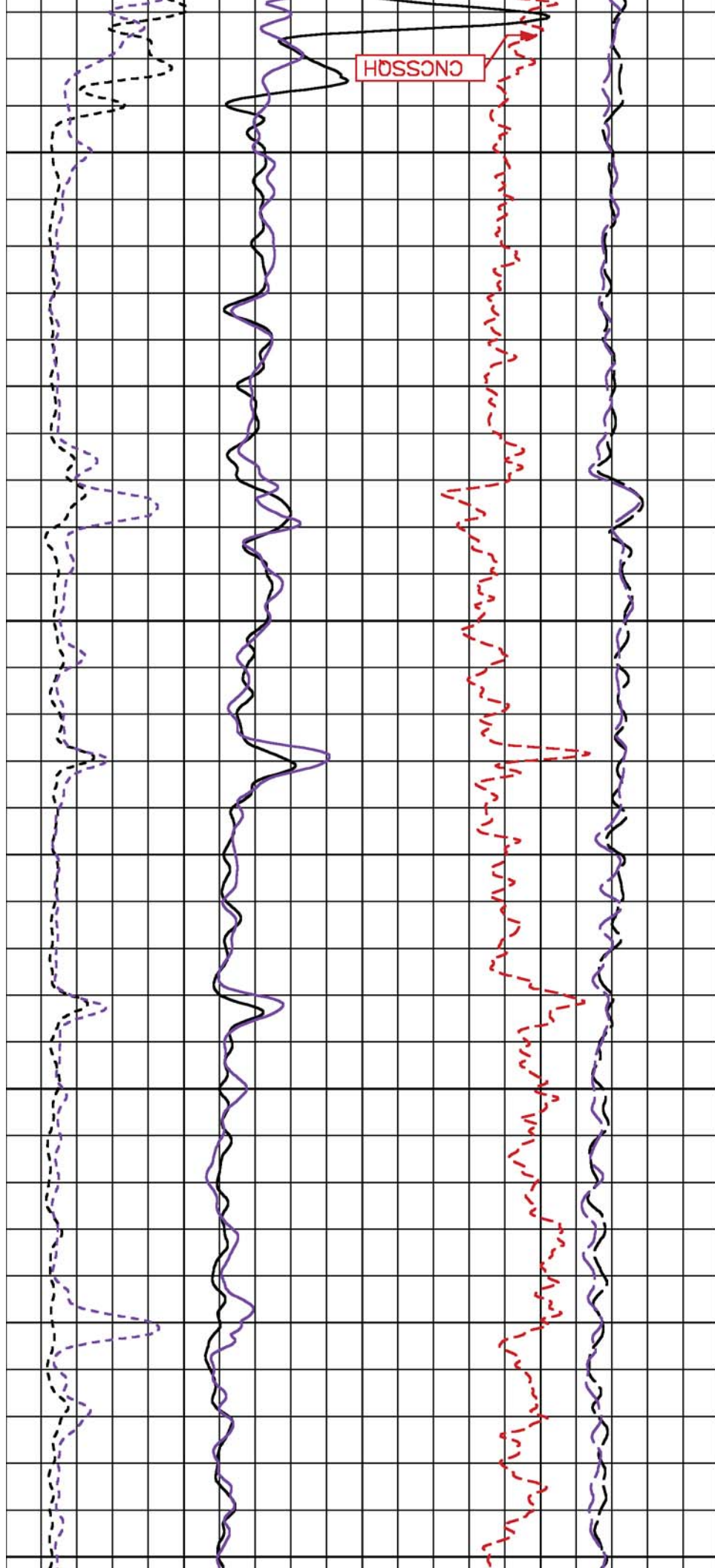
1430

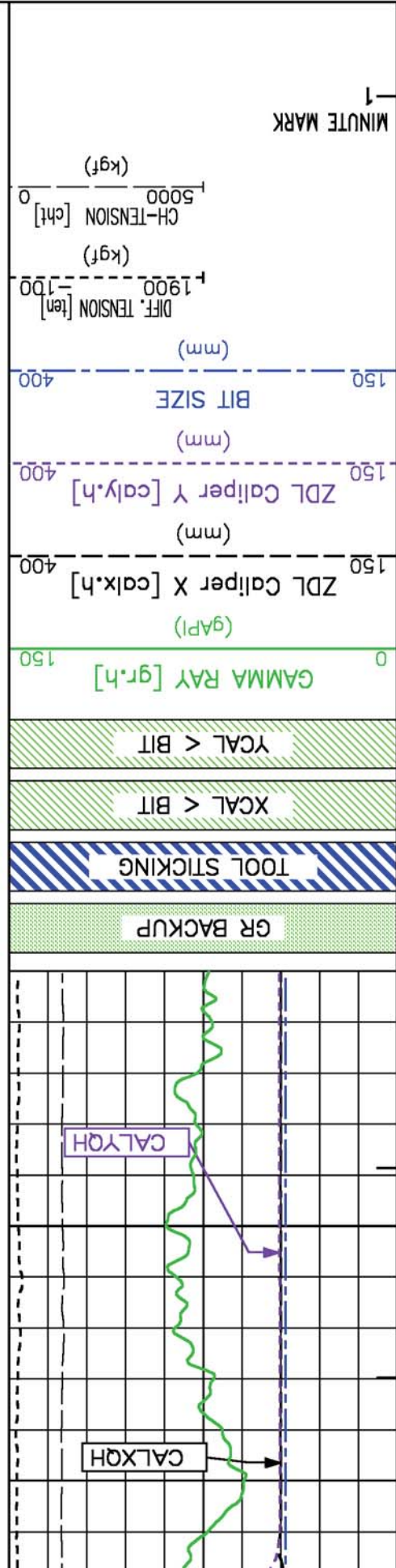
1440

1450

1

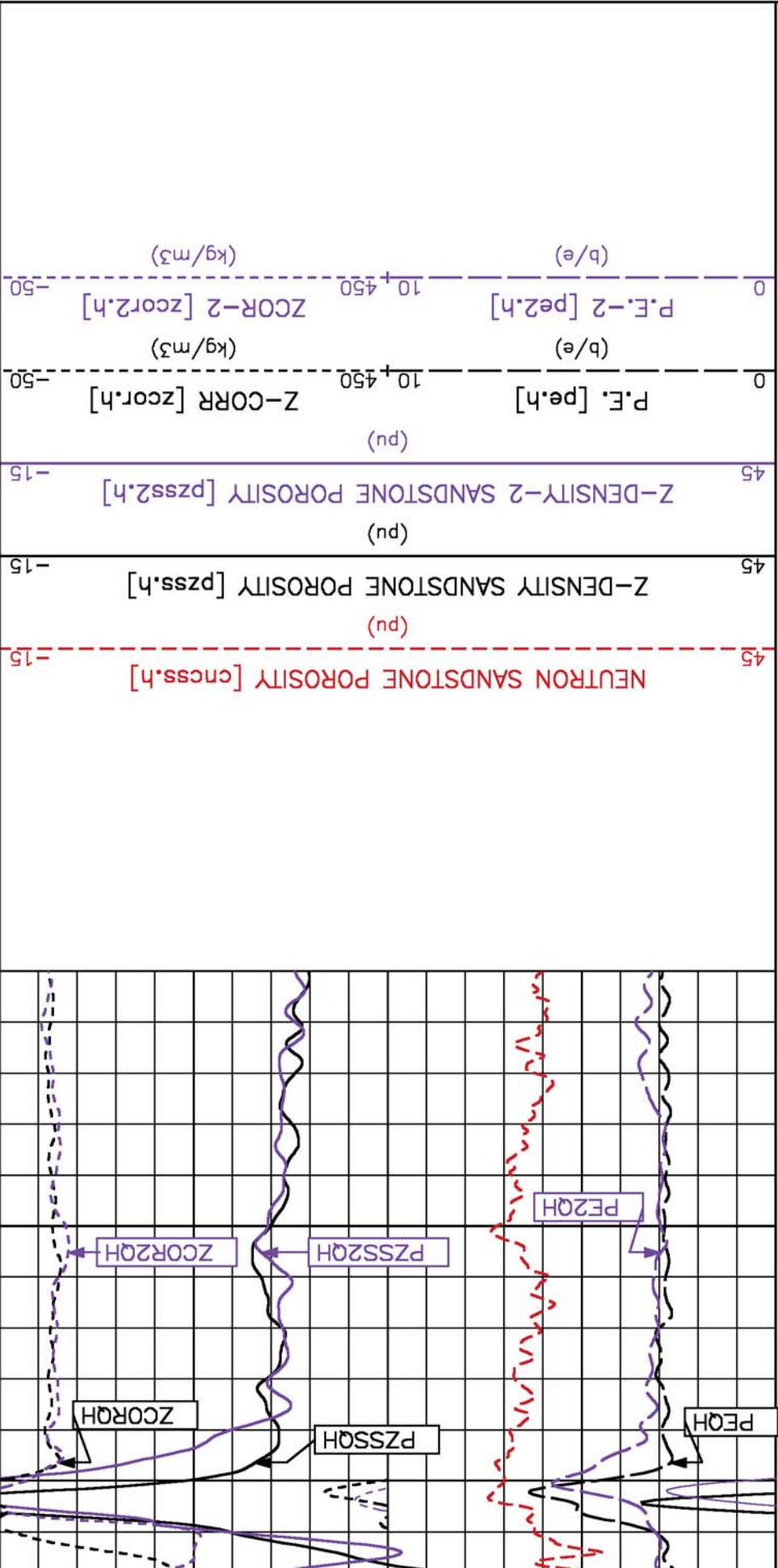






METERS

1500



HIGH RESOLUTION LOG - SANDSTONE MATRIX

ECLIPS 6.1! Aug 06, 2010
Updates: 1,2 Patches: 3

Sat Feb 16 18:08:44 2013

Perpfit /main/62 Cplot Pdf_Cpp /main/16 Fileview 5.61

PARAMETER AND FILTER SUMMARY REPORT

FILE: /data/mgm/run2_oh/m98002.prm
LOGGING MODE: DEPTH 336.788 m
DIRECTION: DOWN
TOP DEPTH: 1994.840 m
BOTTOM DEPTH: 1994.840 m

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
------------------	-----------	-------	-------	--------------

CMT TENSION GR CALIPER CN HIGH RES ZDL HIGH RES	FILTER ()	medium	(1)	TOP
	FILTER ()	medium	(1)	TOP
	FILTER (.h)	medium	(1)	TOP
	FILTER (.h)	medium	(1)	TOP
	FILTER (.h)	medium	(1)	TOP
	FILTER (h)	light		TOP
	FILTER (h)	light		TOP
	FILTER (h)	light		TOP
	FILTER (h)	light		TOP
	FILTER (h)	light		TOP
	FILTER (h)	light		TOP
	FILTER (h)	light		TOP

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
------------------	-----------	-------	-------	--------------

CASING - BOREHOLE & CEMENT VOLUME CASING O.D. CASING THICKNESS BIT SIZE MUD DENSITY BOREHOLE CORR DIAMETER SOURCE BOREHOLE CORR DIAMETER	177.800	mm	TOP	BOTTOM	
	0.000	mm	TOP	BOTTOM	
	222.000	mm	TOP	BOTTOM	
	1.08	g/cm3	TOP	BOTTOM	
	USE FIXED SIZE		TOP	BOTTOM	
	USE FIXED SIZE		TOP	BOTTOM	
	USE FIXED SIZE		TOP	BOTTOM	
	CALIPER/FIXED DIA. (cnbh*)		TOP	BOTTOM	
	CALIPER/FIXED DIA. (zdbh*)		TOP	BOTTOM	
	CALIPER/FIXED DIA. (zdbh2*)		TOP	BOTTOM	
	FIXED DIAMETER (cnbh*)	222.000	mm	TOP	BOTTOM
	FIXED DIAMETER (zdbh*)	222.000	mm	TOP	BOTTOM

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
------------------	-----------	-------	-------	--------------

ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION OFF	TOP	BOTTOM
CN BOREHOLE CORRECTION CN CASING & CEMENT CORRECTION	SALINITY	0	ppm	TOP
	BOREHOLE CORRECTION	ON		TOP
	CORRECTION	OFF		TOP
	BIT SIZE BEHIND CSNG	311.000	mm	TOP
	INTERVAL (m)			TOP
	INTERVAL (m)			TOP

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
------------------	-----------	-------	-------	--------------

DENSITY POROSITY	Air Filled Borehole	NO		TOP
	RHOfluid	1.000	g/cm3	TOP
	RHOmatrix (sand)	2.650	g/cm3	TOP

PARAMETER AND FILTER SUMMARY REPORT

FILE: /data/mwm/run2-on/msocuv/.pm LOGGING MODE: DEPTH TOP DEPTH: 353.008 m BOTTOM DEPTH: 1968.772 m									
SYMMETRIC FILTER									
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
CHT		FILTER ()		medium (1)		TOP		BOTTOM	
TENSION		FILTER ()		medium (1)		TOP		BOTTOM	
GR		FILTER (.h)		medium (1)		TOP		BOTTOM	
CALIPER		FILTER (.h)		medium (1)		TOP		BOTTOM	
CN HIGH RES		FILTER (.h)		light		TOP		BOTTOM	
ZDL HIGH RES		FILTER (.h)		light		TOP		BOTTOM	
		FILTER (hrd1*)		light		TOP		BOTTOM	
		FILTER (hrd12*)		light		TOP		BOTTOM	
		FILTER (hrd1s*)		light		TOP		BOTTOM	
		FILTER (hrd1s2*)		light		TOP		BOTTOM	
		FILTER (hrd2*)		light		TOP		BOTTOM	
		FILTER (hrd22*)		light		TOP		BOTTOM	
		FILTER (hrd2s*)		light		TOP		BOTTOM	
		FILTER (hrd2s2*)		light		TOP		BOTTOM	
		FILTER (soft*)		light		TOP		BOTTOM	
		FILTER (soft2*)		light		TOP		BOTTOM	
BOREHOLE & CEMENT									
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
CASING - BOREHOLE & CEMENT VOLUME		CASING O.D.		177.800		mm		TOP	
		CASING THICKNESS		0.000		mm		TOP	
BIT SIZE		BIT SIZE		222.000		mm		TOP	
				216.000		mm		1818.475	
MUD DENSITY		MUD DENSITY		1.08		g/cm3		TOP	
				USE CALIPER				BOTTOM	
BOREHOLE CORR DIAMETER SOURCE		CALIPER/FIXED DIA. (cnbh*)						TOP	
		CALIPER/FIXED DIA. (zdbh*)						1818.475	
		CALIPER/FIXED DIA. (zdbh2*)						BOTTOM	
BOREHOLE CORR DIAMETER		FIXED DIAMETER (cnbh*)		222.000		mm		TOP	
				216.000		mm		1420.901	
		Average						BOTTOM	
ACCELERATION PROCESSING									
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
ACCEL CORR SWITCH		ACCEL DEPTH CORR		CORRECTION OFF				TOP	
								BOTTOM	
CN PROCESSING									
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
CN BOREHOLE CORRECTION		SALINITY		0		ppm		TOP	
		BOREHOLE CORRECTION		ON				BOTTOM	
		CORRECTION		OFF				TOP	
		BIT SIZE BEHIND CSNG		311.000		mm		TOP	
ZDL PROCESSING									
MEASUREMENT TYPE		PARAMETER		VALUE		UNITS		INTERVAL (m)	
DENSITY POROSITY		Air filled Borehole		NO				TOP	
		RHOfluid		1.000		g/cm3		TOP	
		RHOmatrix (sand)		2.650		g/cm3		TOP	
								BOTTOM	
CURVE DESCRIPTION REPORT									
CURVE NAME		CREATION DATE		CURVE DESCRIPTION					
F1: BIT									
F1: CALXQH									
F1: CALYQH									
F1: CHT									
F1: CNCSSQH									
F1: GRQH									
F1: MMRK									
F1: PE2QH									
F1: PEQH									
F1: PSS2QH									
F1: PSSQH									
F1: TEN									
F1: ZCOR2QH									
F1: ZCOR3QH									
F1: ZCOR4QH									
F1: ZCOR5QH									
F1: ZCOR6QH									
F1: ZCOR7QH									
F1: ZCOR8QH									
F1: ZCOR9QH									
F1: ZCOR10QH									
F1: ZCOR11QH									
F1: ZCOR12QH									
F1: ZCOR13QH									
F1: ZCOR14QH									
F1: ZCOR15QH									
F1: ZCOR16QH									
F1: ZCOR17QH									
F1: ZCOR18QH									
F1: ZCOR19QH									
F1: ZCOR20QH									
F1: ZCOR21QH									
F1: ZCOR22QH									
F1: ZCOR23QH									
F1: ZCOR24QH									
F1: ZCOR25QH									
F1: ZCOR26QH									
F1: ZCOR27QH									
F1: ZCOR28QH									
F1: ZCOR29QH									
F1: ZCOR30QH									
F1: ZCOR31QH									
F1: ZCOR32QH									
F1: ZCOR33QH									
F1: ZCOR34QH									
F1: ZCOR35QH									
F1: ZCOR36QH									
F1: ZCOR37QH									
F1: ZCOR38QH									
F1: ZCOR39QH									
F1: ZCOR40QH									
F1: ZCOR41QH									
F1: ZCOR42QH									
F1: ZCOR43QH									
F1: ZCOR44QH									
F1: ZCOR45QH									
F1: ZCOR46QH									
F1: ZCOR47QH									
F1: ZCOR48QH									
F1: ZCOR49QH									
F1: ZCOR50QH									
F1: ZCOR51QH									
F1: ZCOR52QH									
F1: ZCOR53QH									
F1: ZCOR54QH									
F1: ZCOR55QH									
F1: ZCOR56QH									
F1: ZCOR57QH									
F1: ZCOR58QH									
F1: ZCOR59QH									
F1: ZCOR60QH									
F1: ZCOR61QH									
F1: ZCOR62QH									
F1: ZCOR63QH									

CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)

BIT	0.00	CNCSSQH	12.50	PZSS2QH	5.52	ZCQRQH	9.64
CALQXH	9.64	GRQH	33.76	PZSSQH	9.64		
CALYQH	5.52	PE2QH	5.52	TEN	0.00		
CHT	0.00	PEQH	9.64	ZCOR2QH	5.52		

```

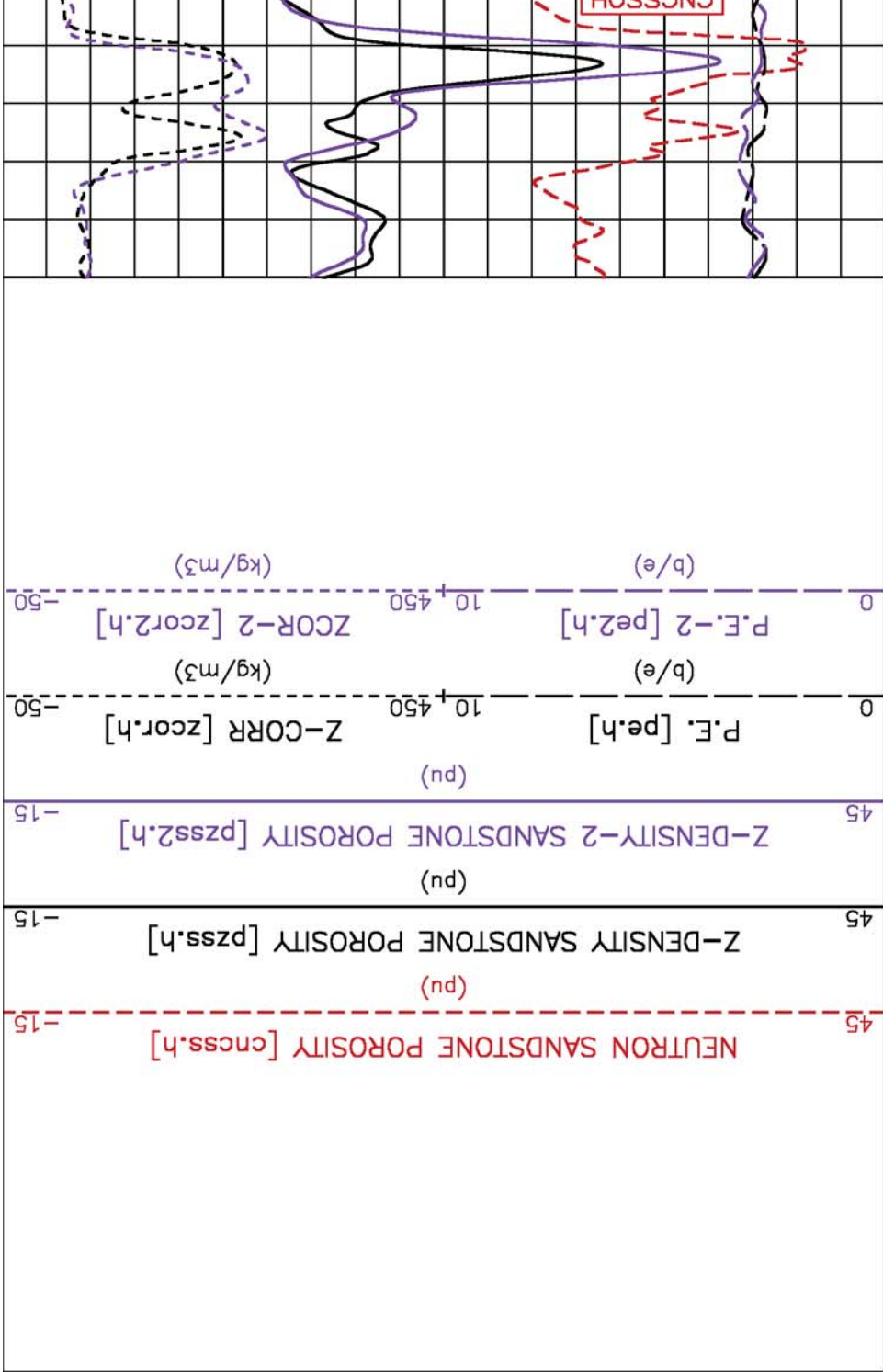
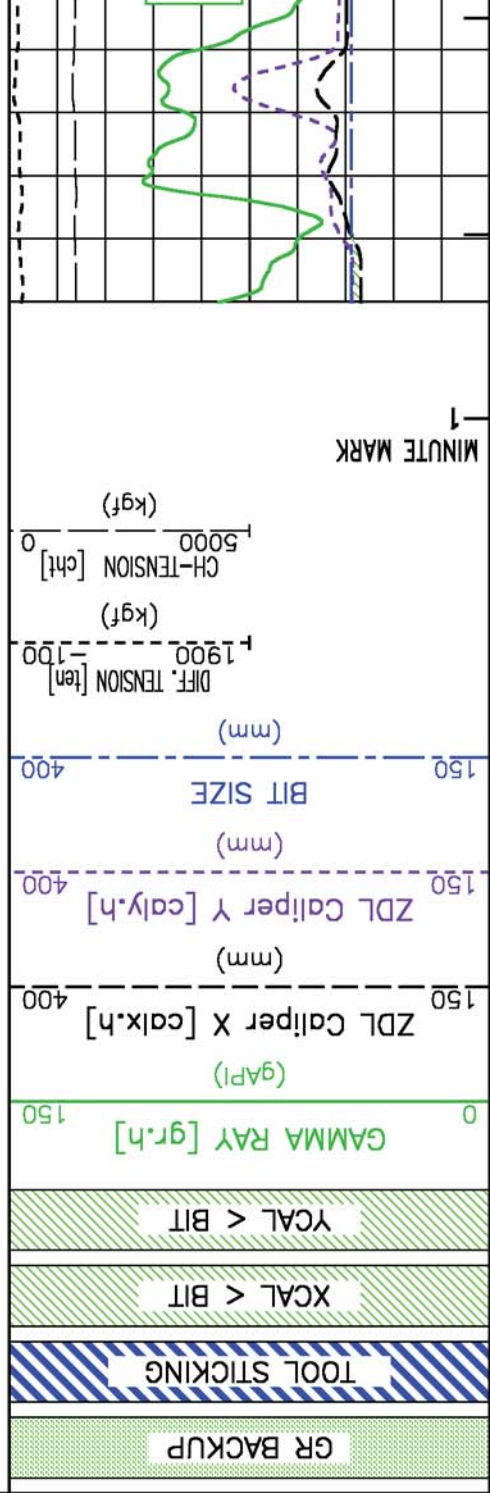
Presentation
: sys:/data/MGM/run2-oh/zd12-hires-ss.pdf [1:120 Scale]
Plot Interval
: 1695 - 1971.45 Meters

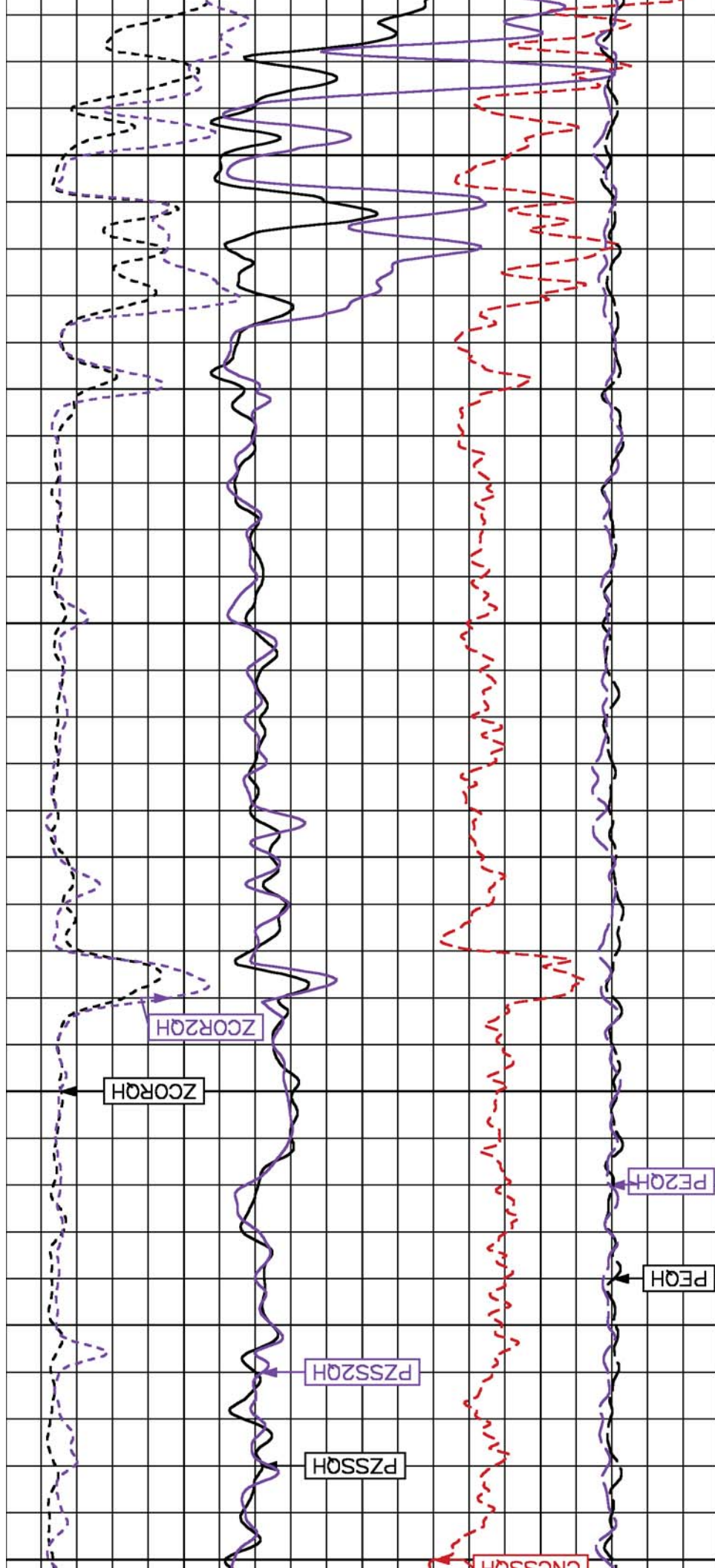
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```

Data File 1      : F1 : sysa:dat1a/MGM/run2_oh/222_main.xtf
Created On       : Feb 16 07:26:57 2013
Company         : MGM ENERGY CORP
Well           : MGM SHELL EAST MACKAY 1-78
Field          : EAST MACKAY
File Interval   : 318.973 - - 1971.48 Meters
Oct            : m980e

```



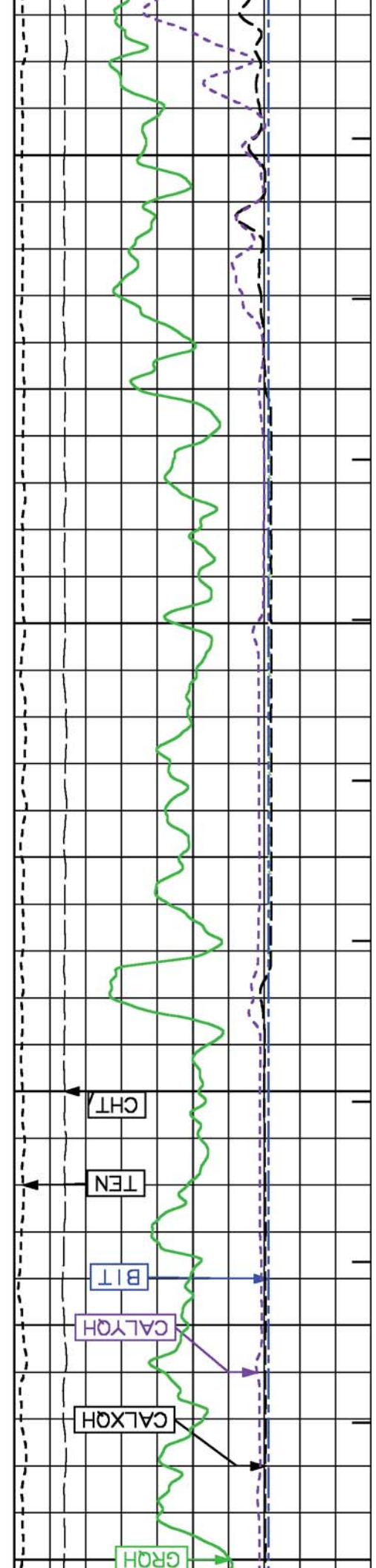


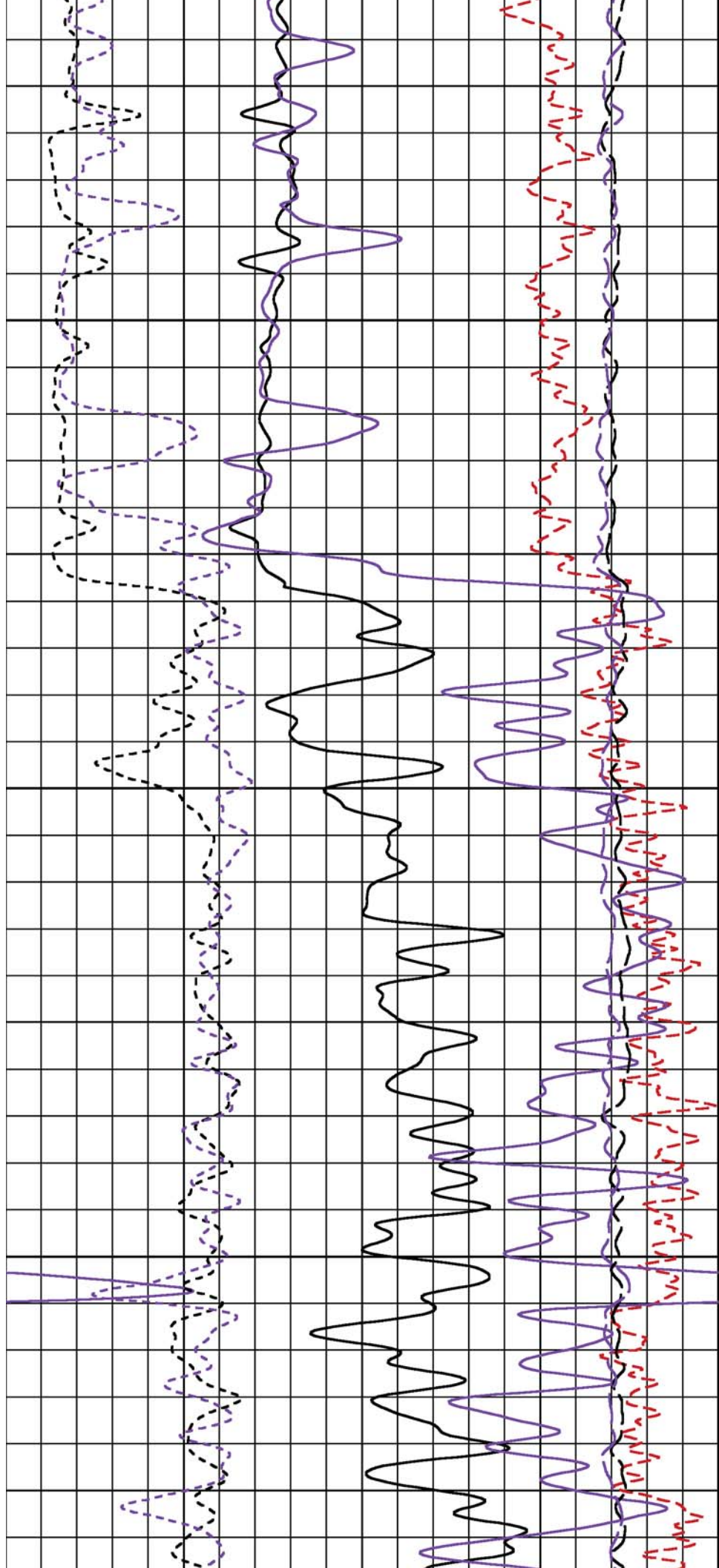
1730

1720

1710

700

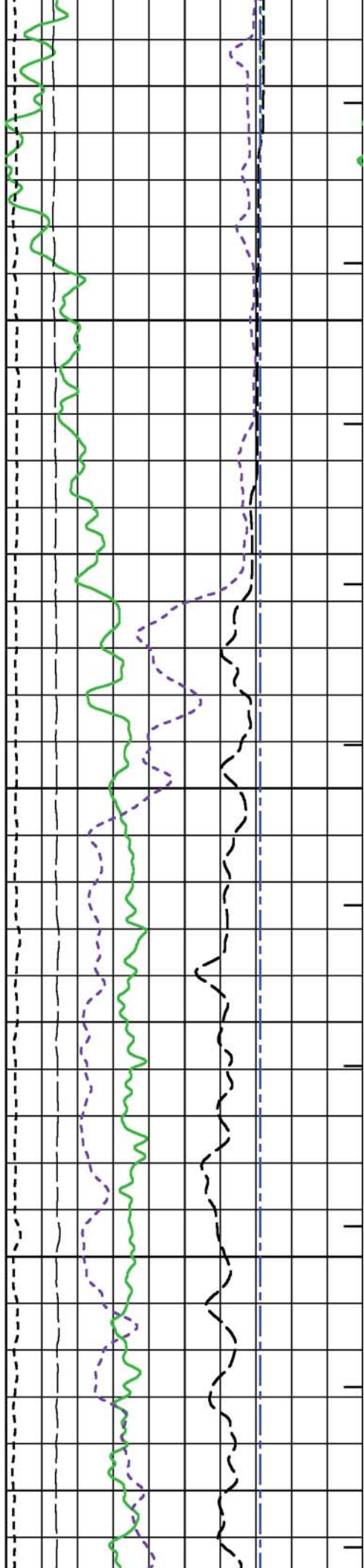


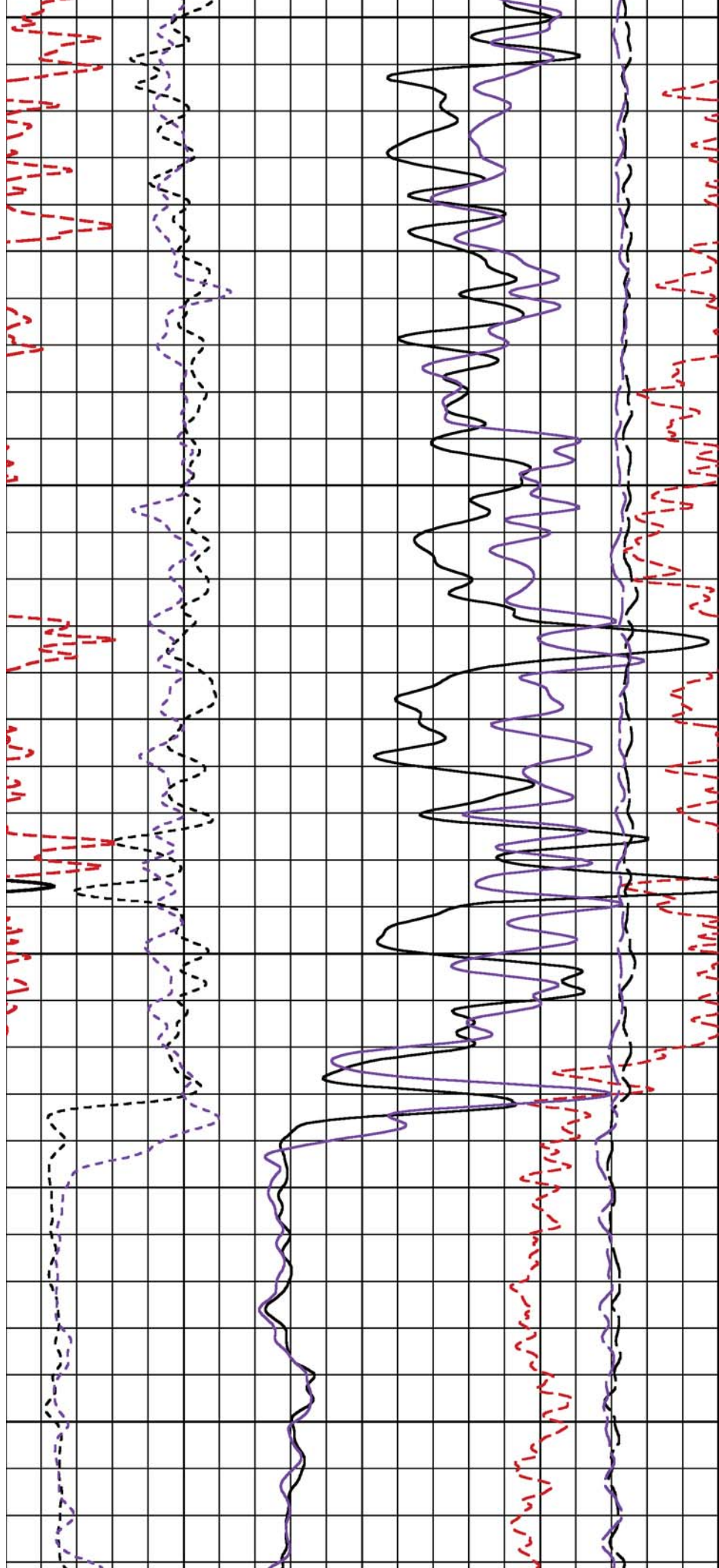


1740

1750

1760



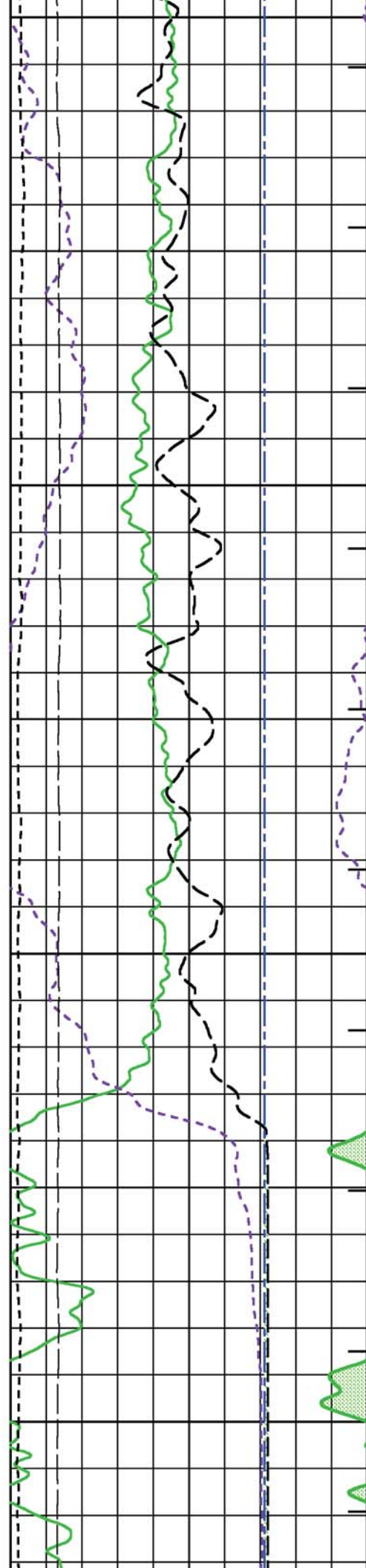


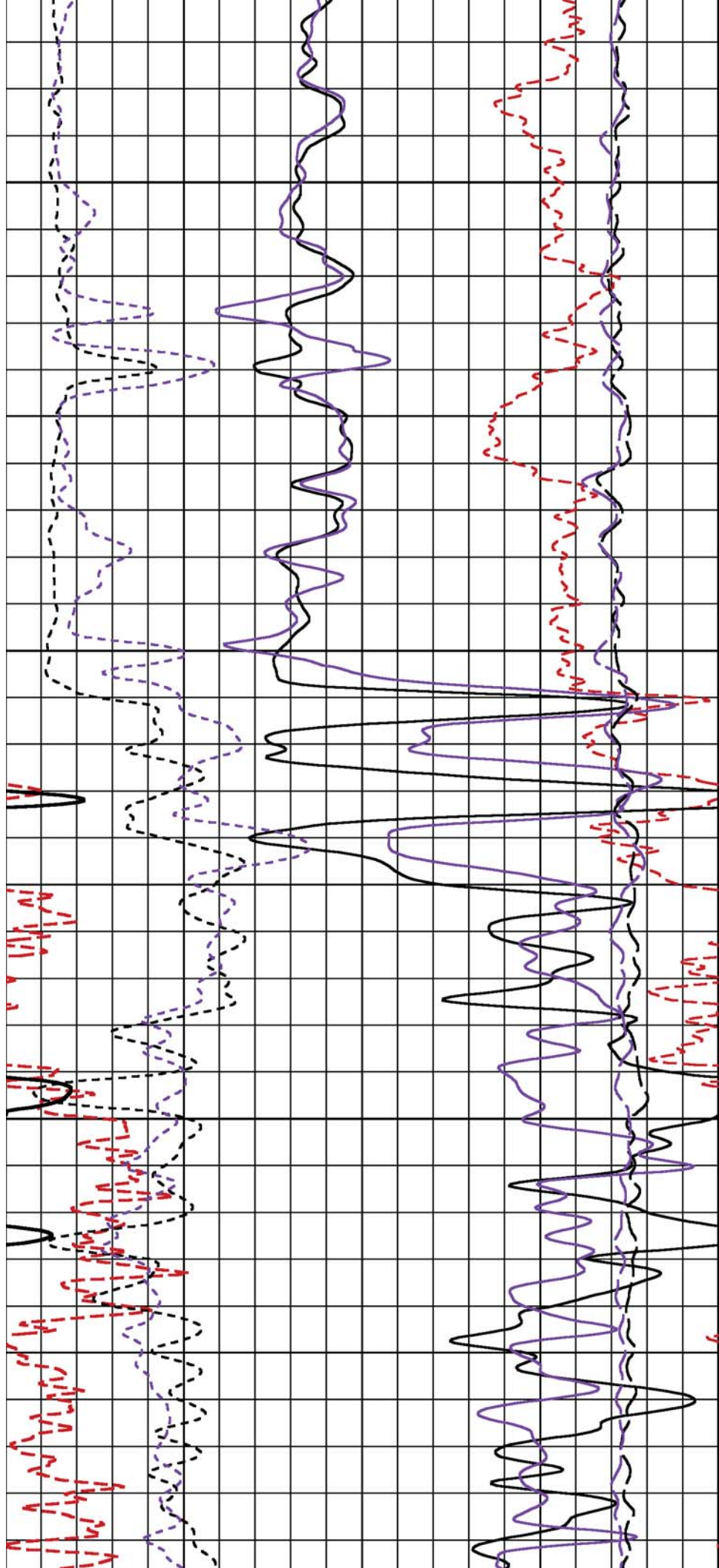
1770

1780

1790

1800

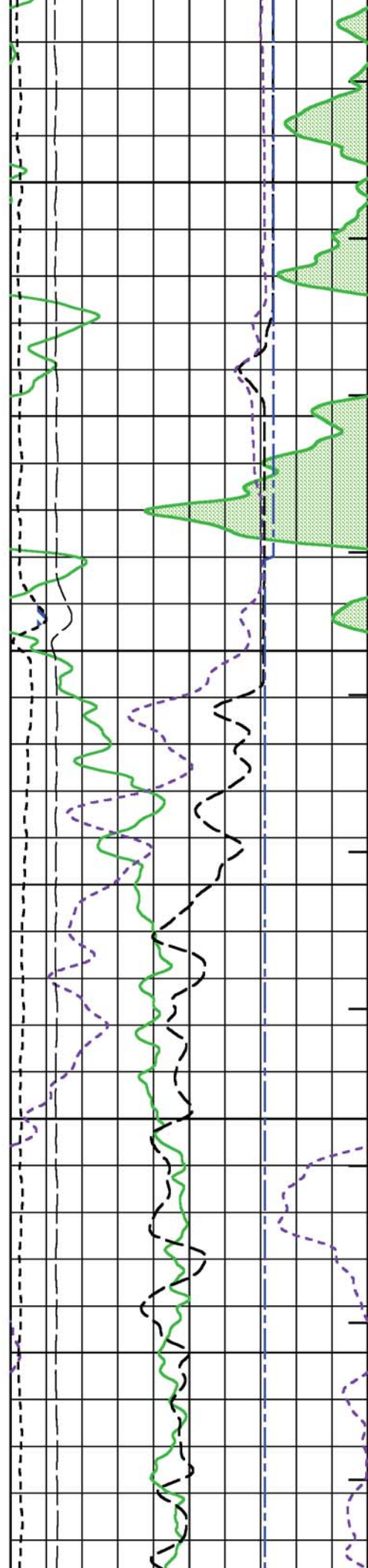


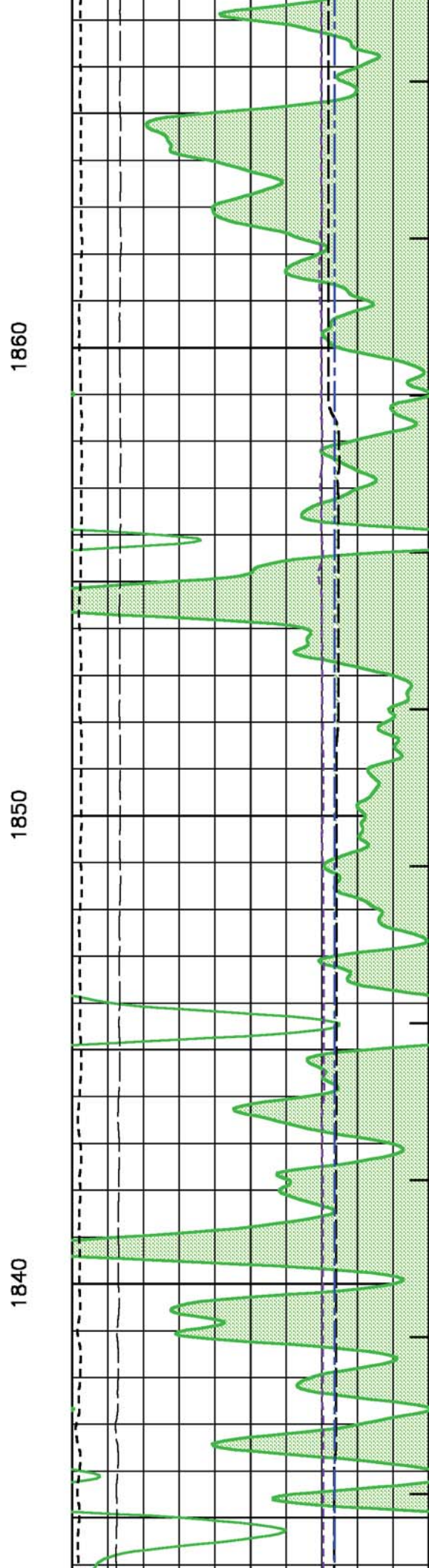
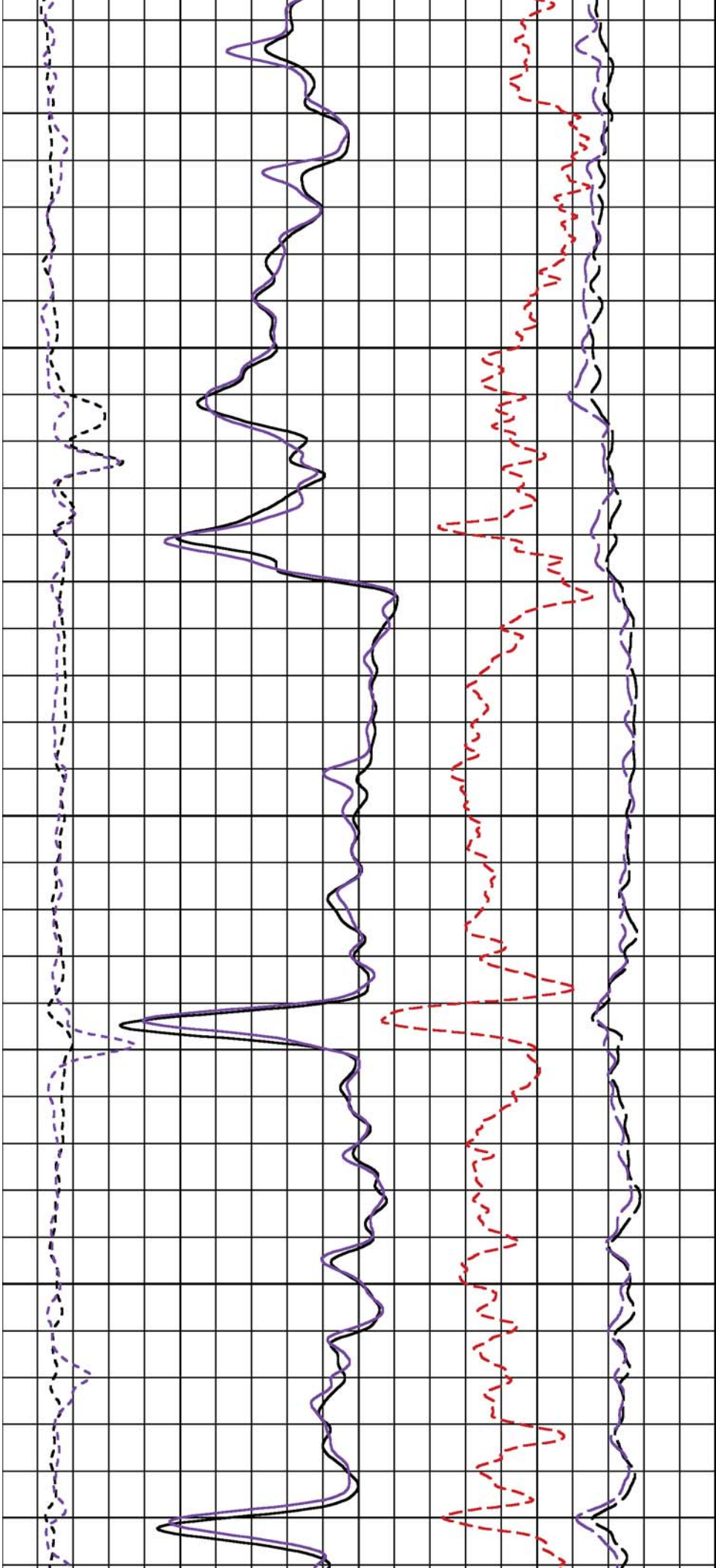


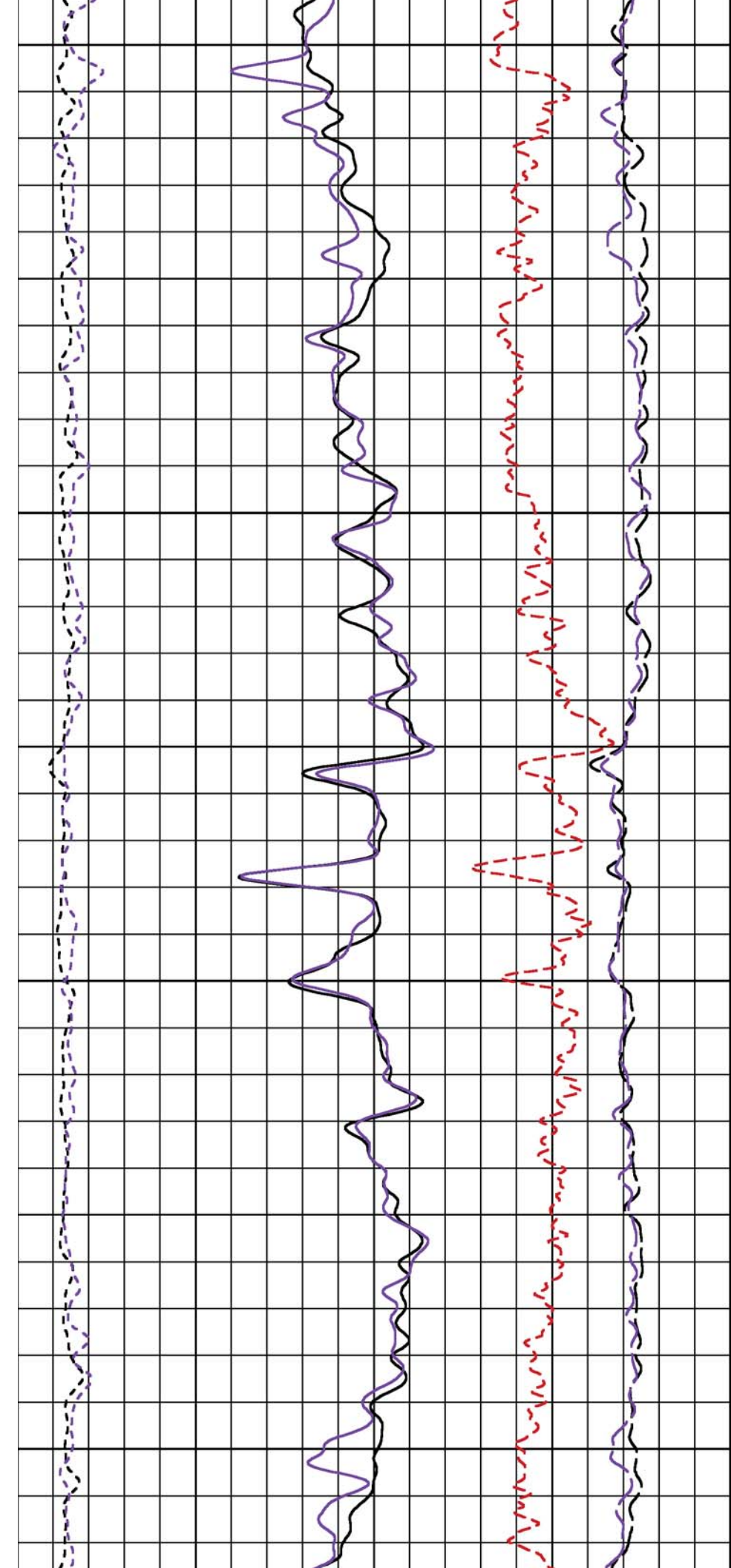
1810

1820

1830





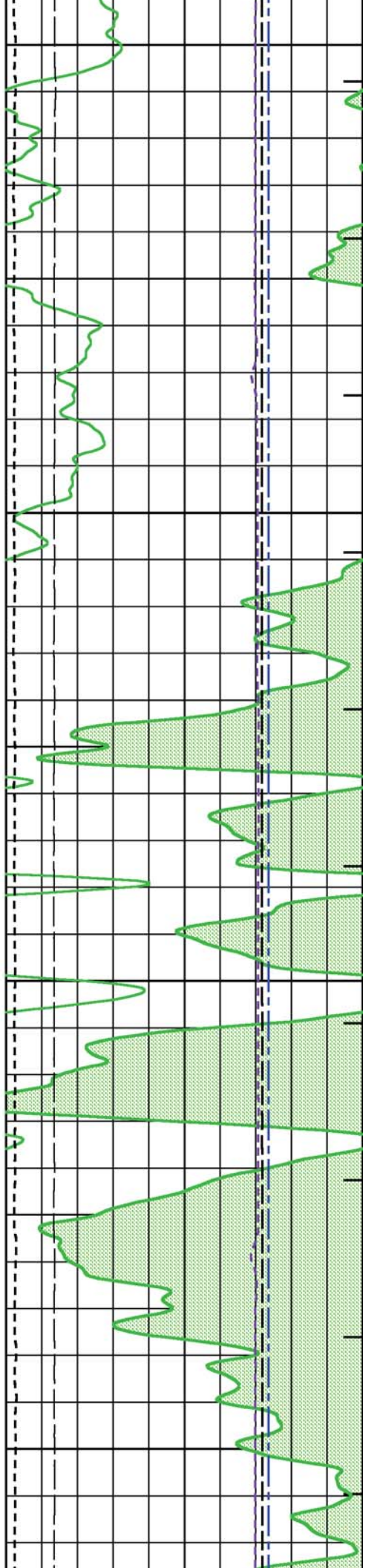


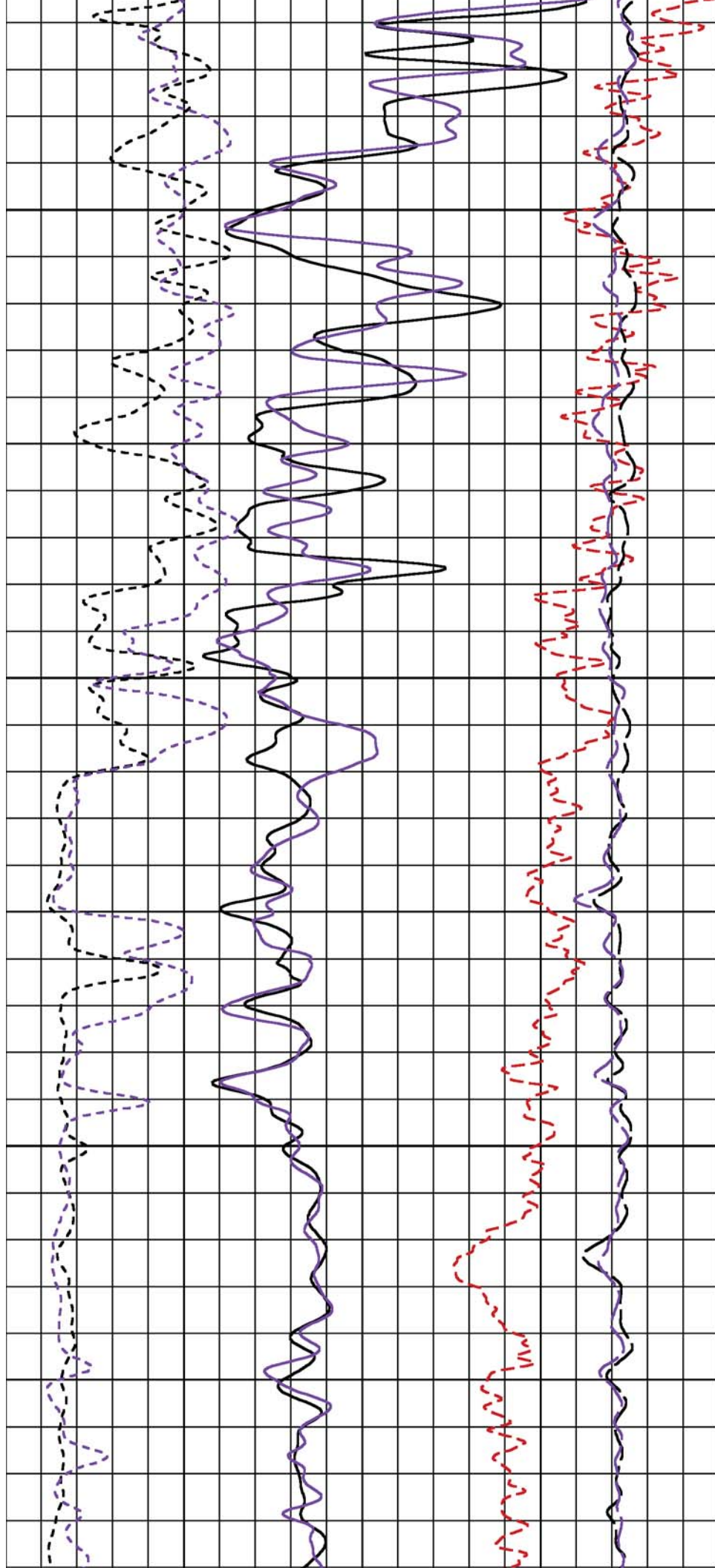
1870

1880

1890

1900

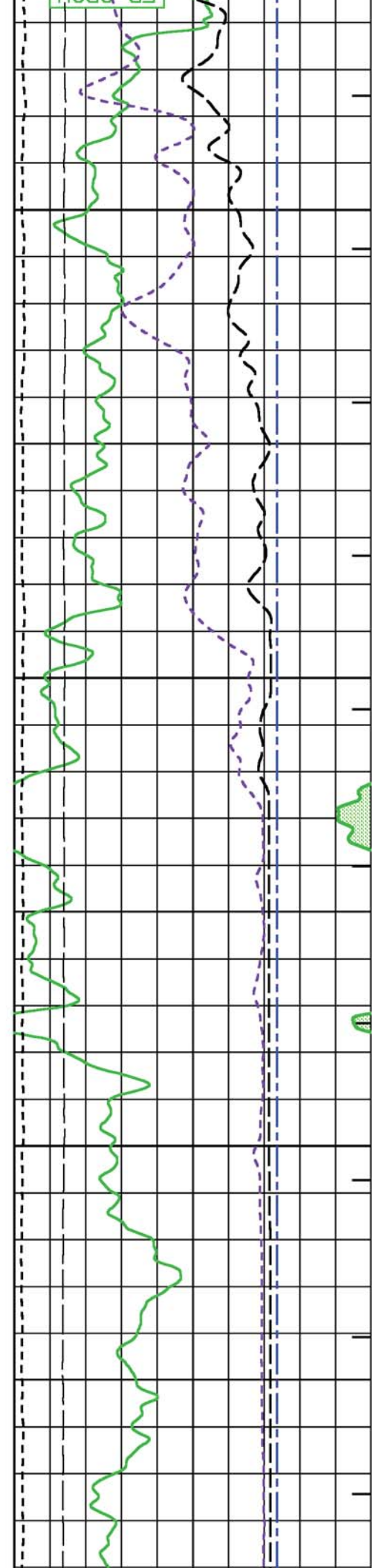


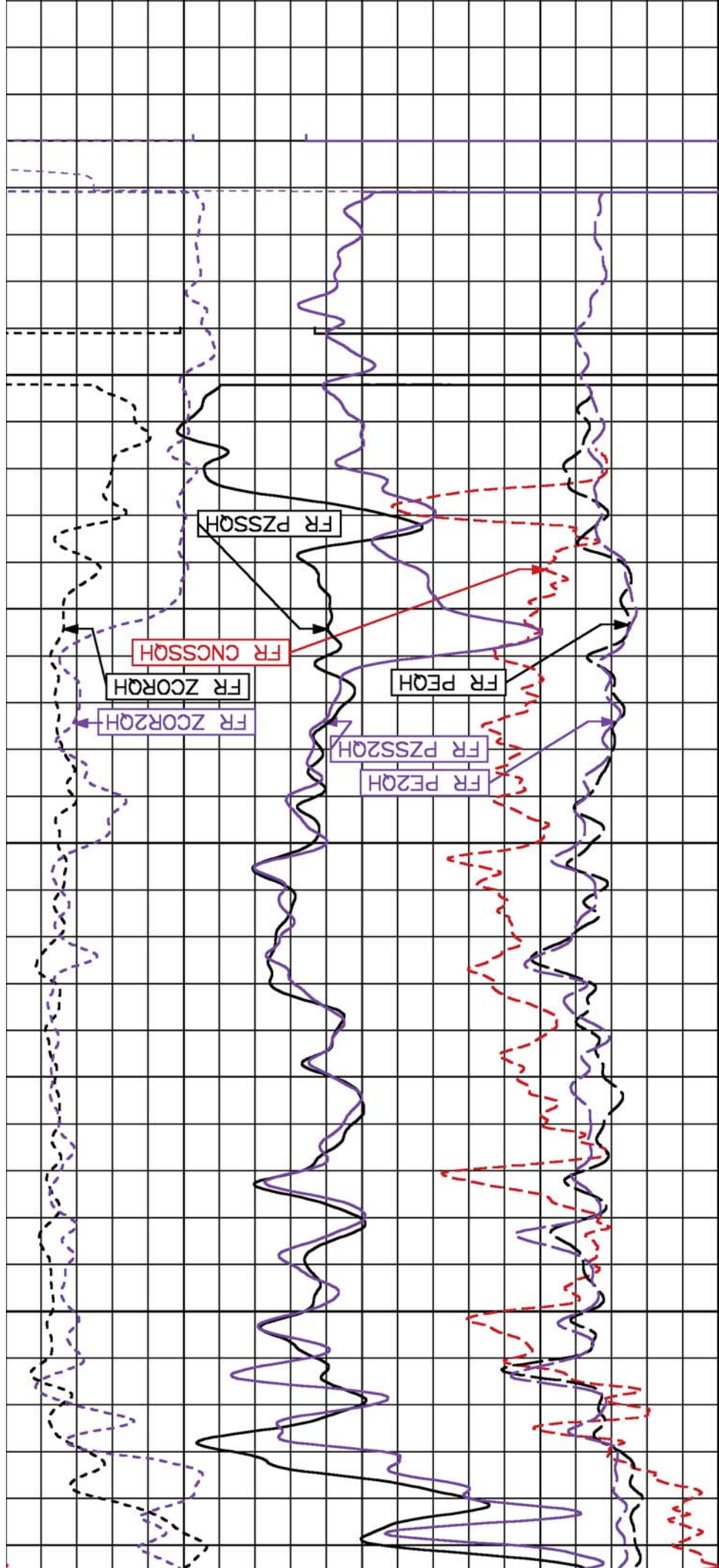


1910

1920

1930

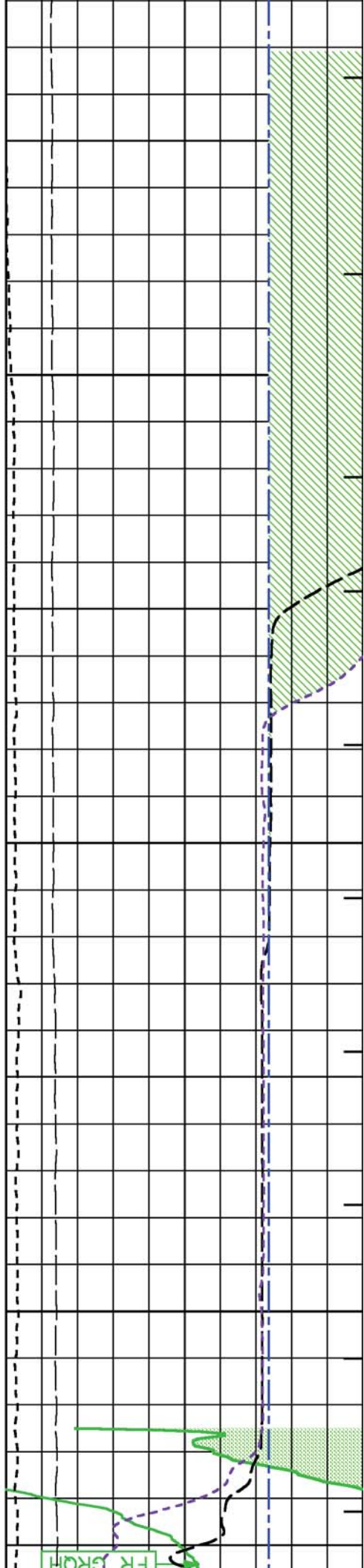




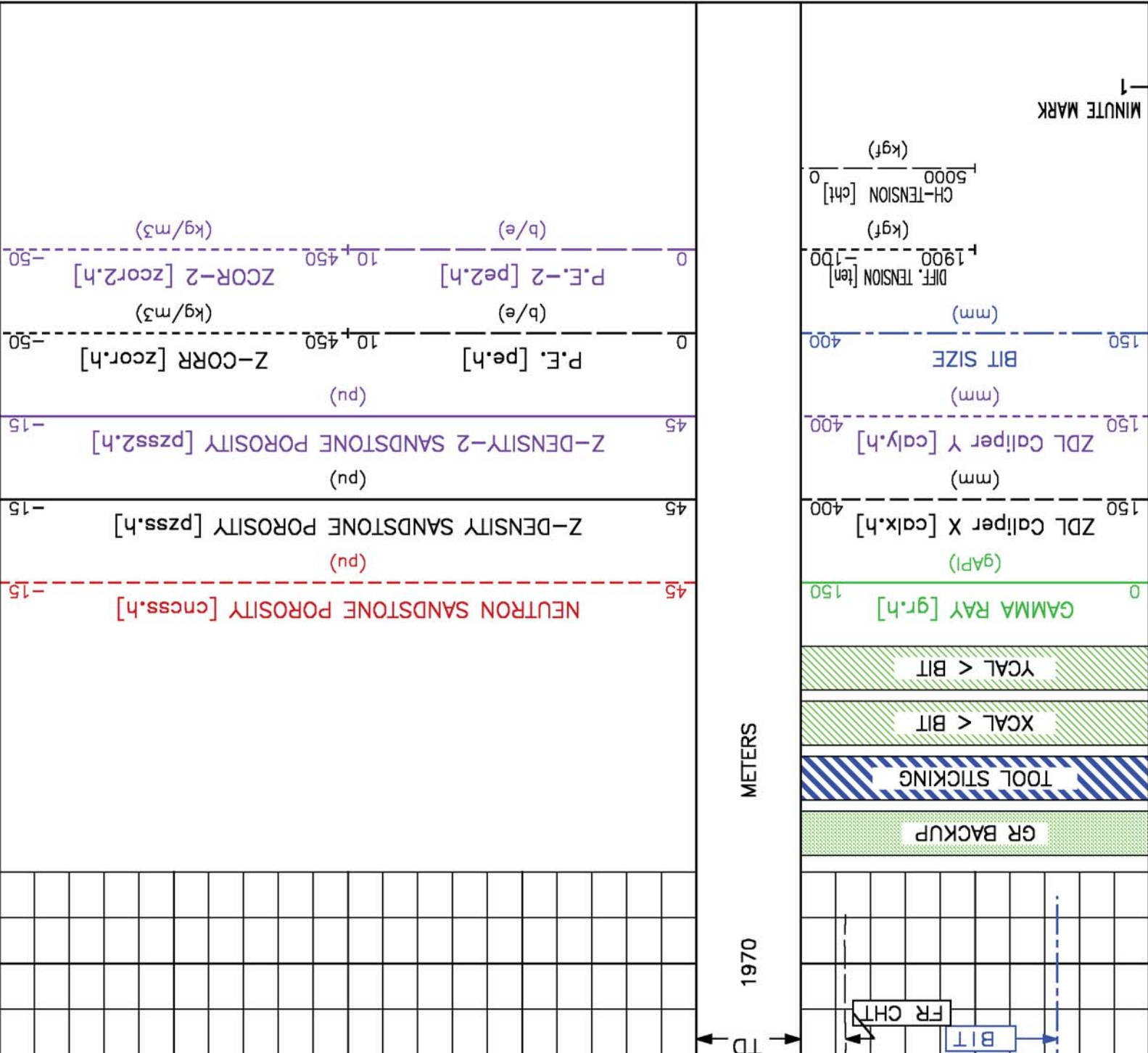
1960

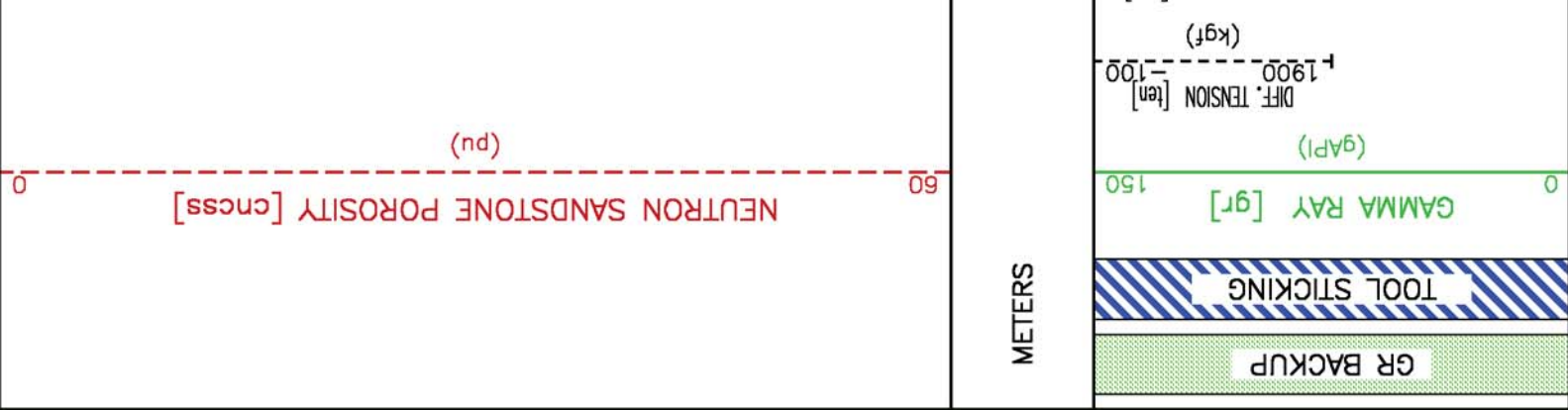
1950

1940



CSG LOG - SANDSTONE MATRIX



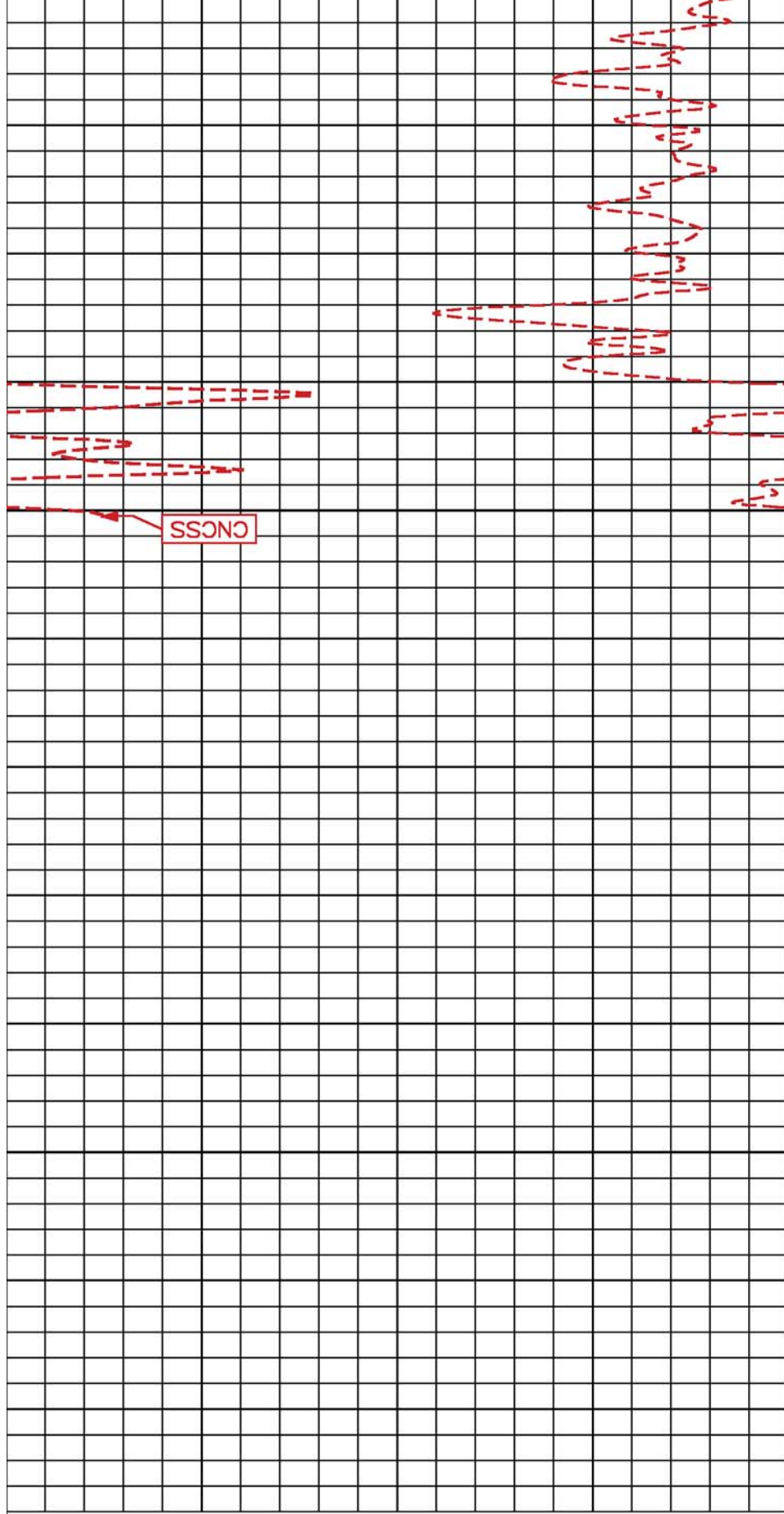


Presentation	: sysa:/data/MGM/run2_oh/csg.pdf [1:240 Scale]
Pilot Interval	: -13.2588 - 466.115 Meters
Data File 1	: F1 : sysa:/data/MGM/run2_oh/csg.xtf
Created On	: Feb 16 13:01:02 2013
Company	: MGM ENERGY CORP
Well	: MGM SHELL EAST MACKAY I-78
Field	: EAST MACKAY
File Interval	: -13.3335 - 466.115 Meters
Oct	: m980e

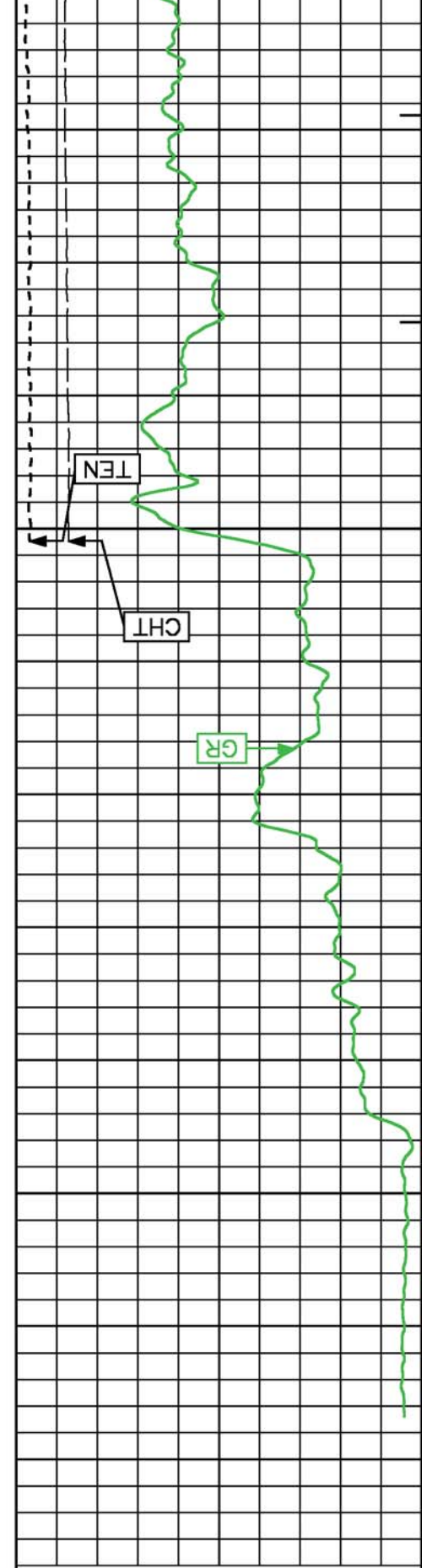
CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
CHT	0.00	CNCSS	12.50	GR	33.76	TEN	0.00		
CURVE MEASURE POINT OFFSET									

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CHT	Feb 16 13:01:02 2013	CABLE HEAD TENSION
F1:CNCSS	Feb 16 13:01:02 2013	BOREHOLE SIZE CORRECTED SANDSTONE COMPENSATED NEU POROSITY
F1:GR	Feb 16 13:01:02 2013	GAMMA RAY
F1:MMRK	Feb 16 13:01:02 2013	MINUTE MARK
F1:TEN	Feb 16 13:01:02 2013	DIFFERENTIAL TENSION
CURVE DESCRIPTION REPORT		

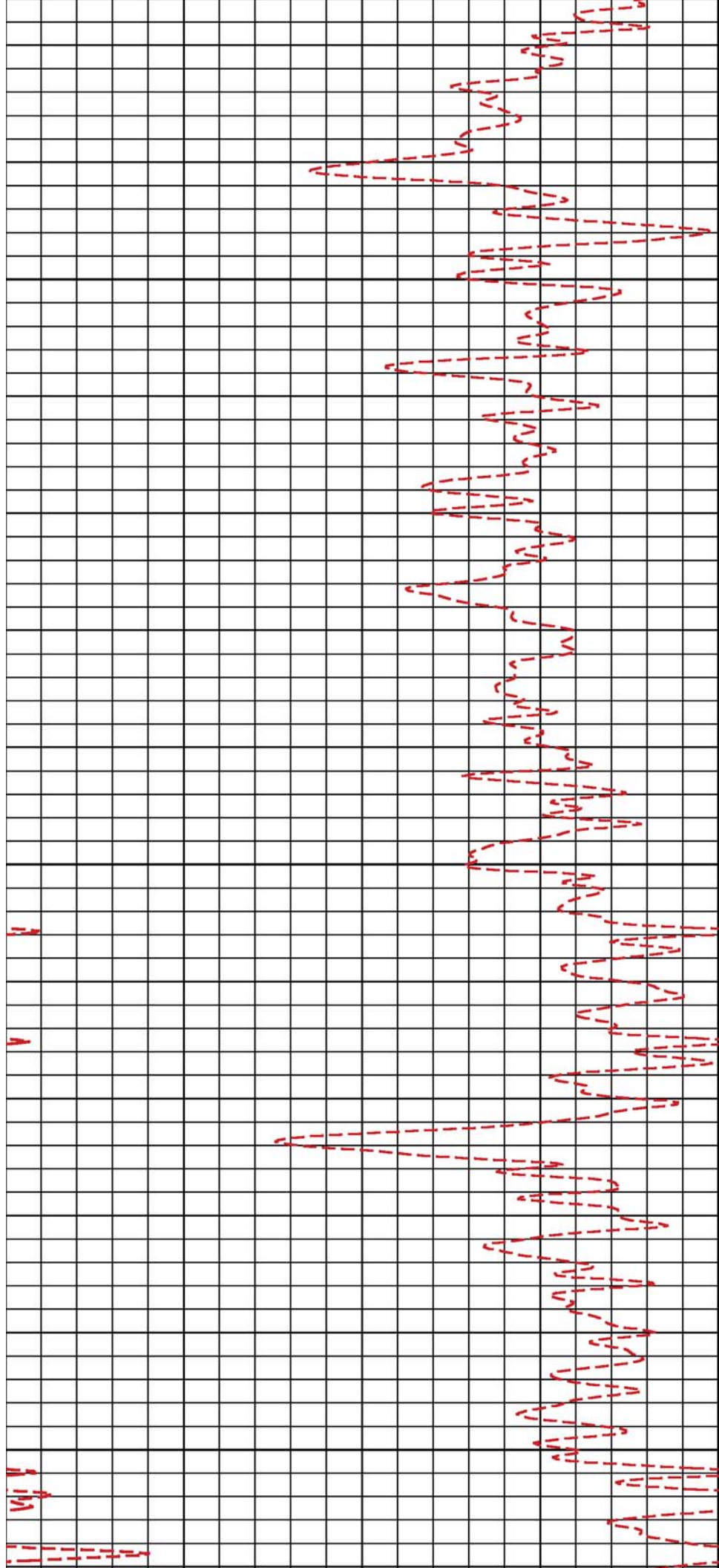
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
CN PROCESSING				
CN BOREHOLE CORRECTION	SALINITY	0	ppm	TOP BOTTOM
CN CASING & CEMENT CORRECTION	BOREHOLE CORRECTION	ON		TOP BOTTOM
	CORRECTION	ON	mm	TOP BOTTOM
	BIT SIZE BEHIND CSNG	311.000		TOP BOTTOM
ACCELERATION PROCESSING				
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION OFF		TOP BOTTOM
BOREHOLE & CEMENT				
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	177.800	mm	TOP BOTTOM
	CASING THICKNESS	0.000	mm	TOP BOTTOM
	BIT SIZE	222.000	mm	TOP BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER	mm	TOP BOTTOM
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	222.000	mm	TOP BOTTOM
X-Y COMBINED CALIPER PROCESSING-FOCUS	Caliper - FOCUS	Average		TOP BOTTOM
SYMMETRIC FILTER				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
CHT	FILTER ()	medium (1)		TOP BOTTOM
TENSION	FILTER ()	medium (1)		TOP BOTTOM
GR	FILTER ()	medium (1)		TOP BOTTOM
CN MED RES	FILTER ()	medium (1)		TOP BOTTOM



25 0



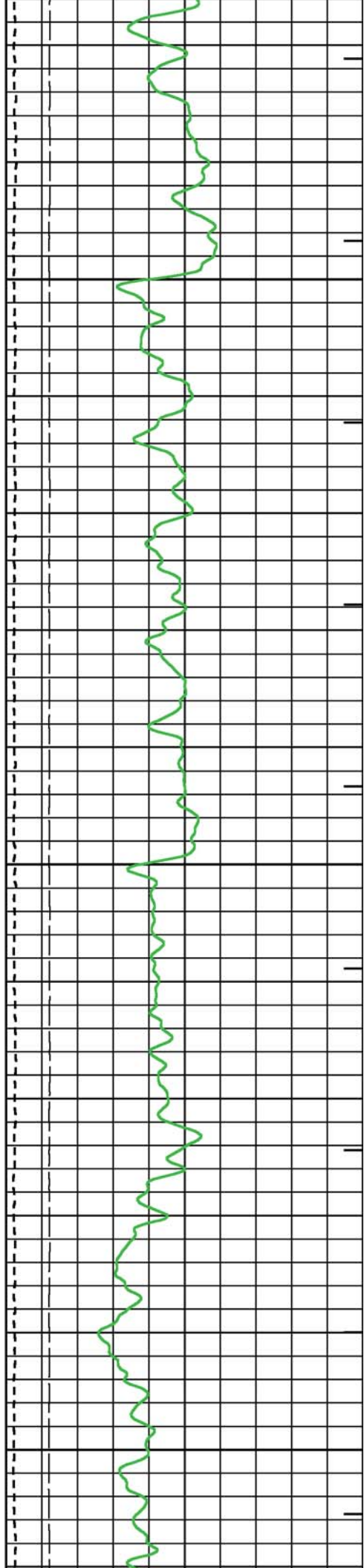
MINUTE MARK
CH-TENSION [cht] 0 5000 15000 (kgf)

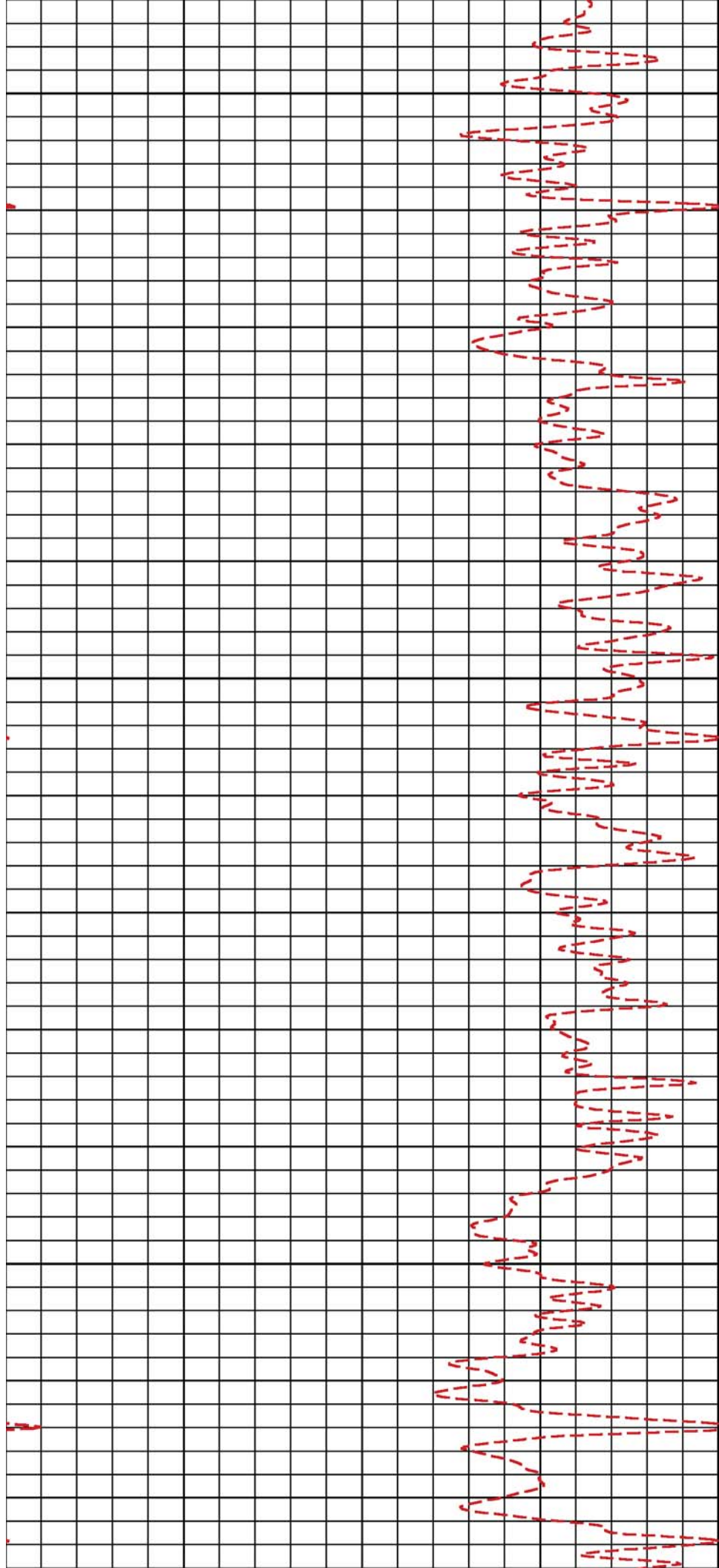


50

75

100

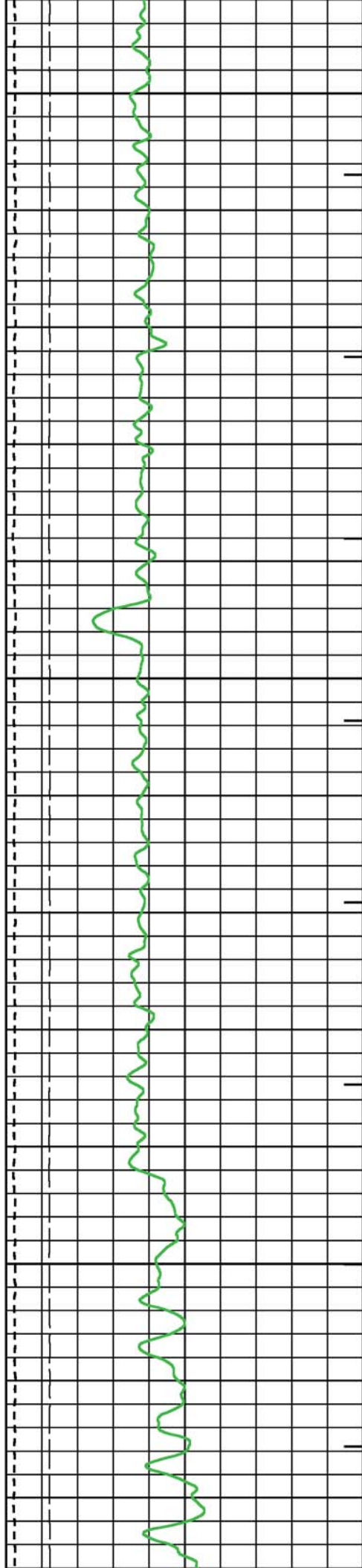


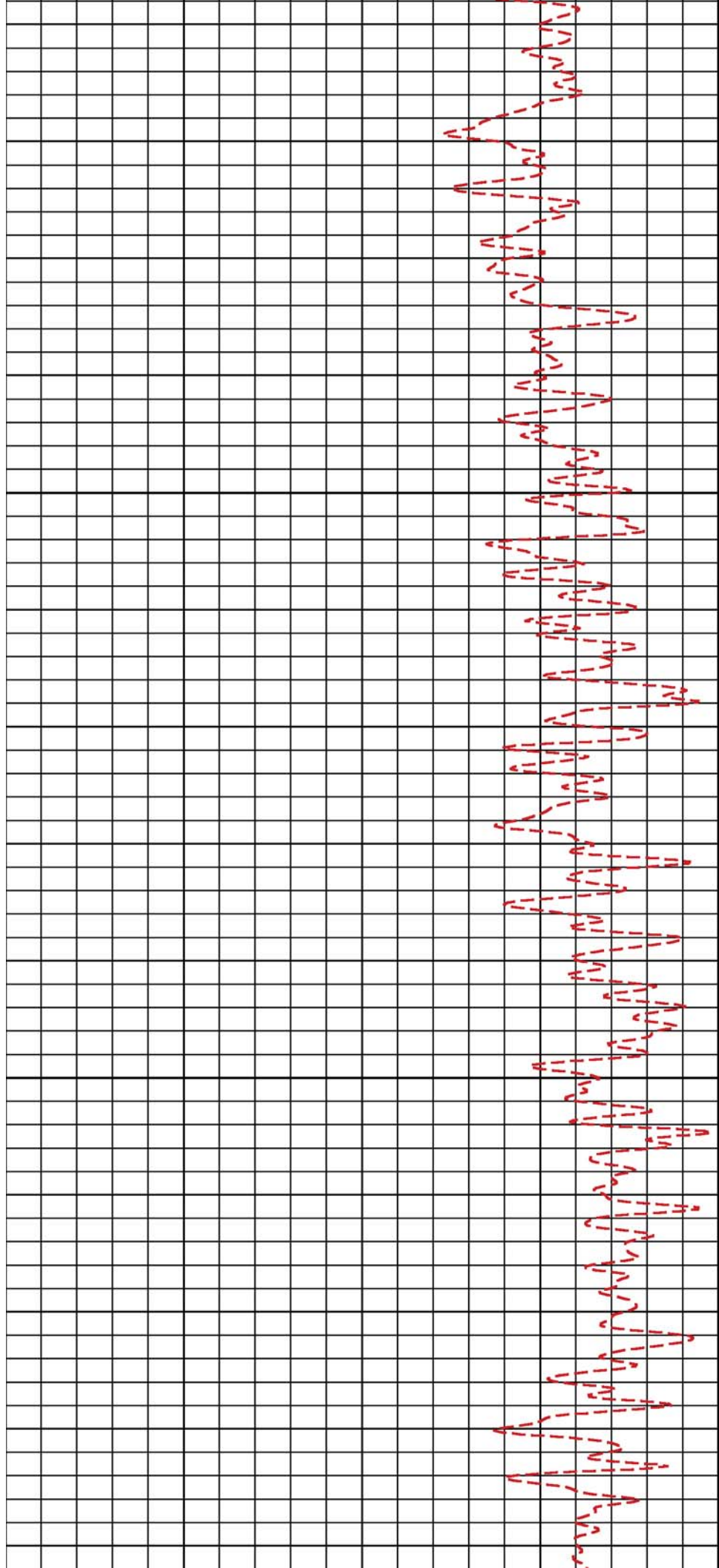


125

150

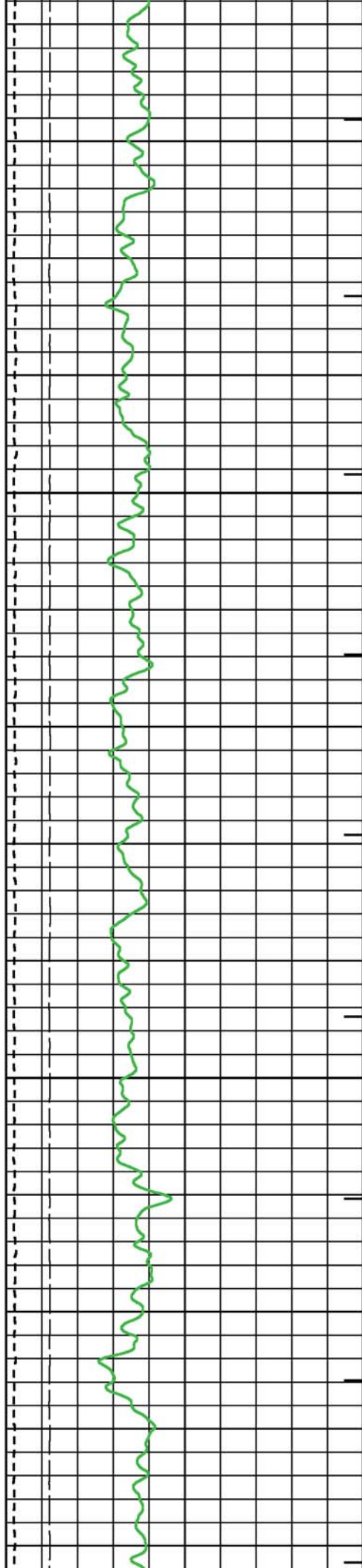
175

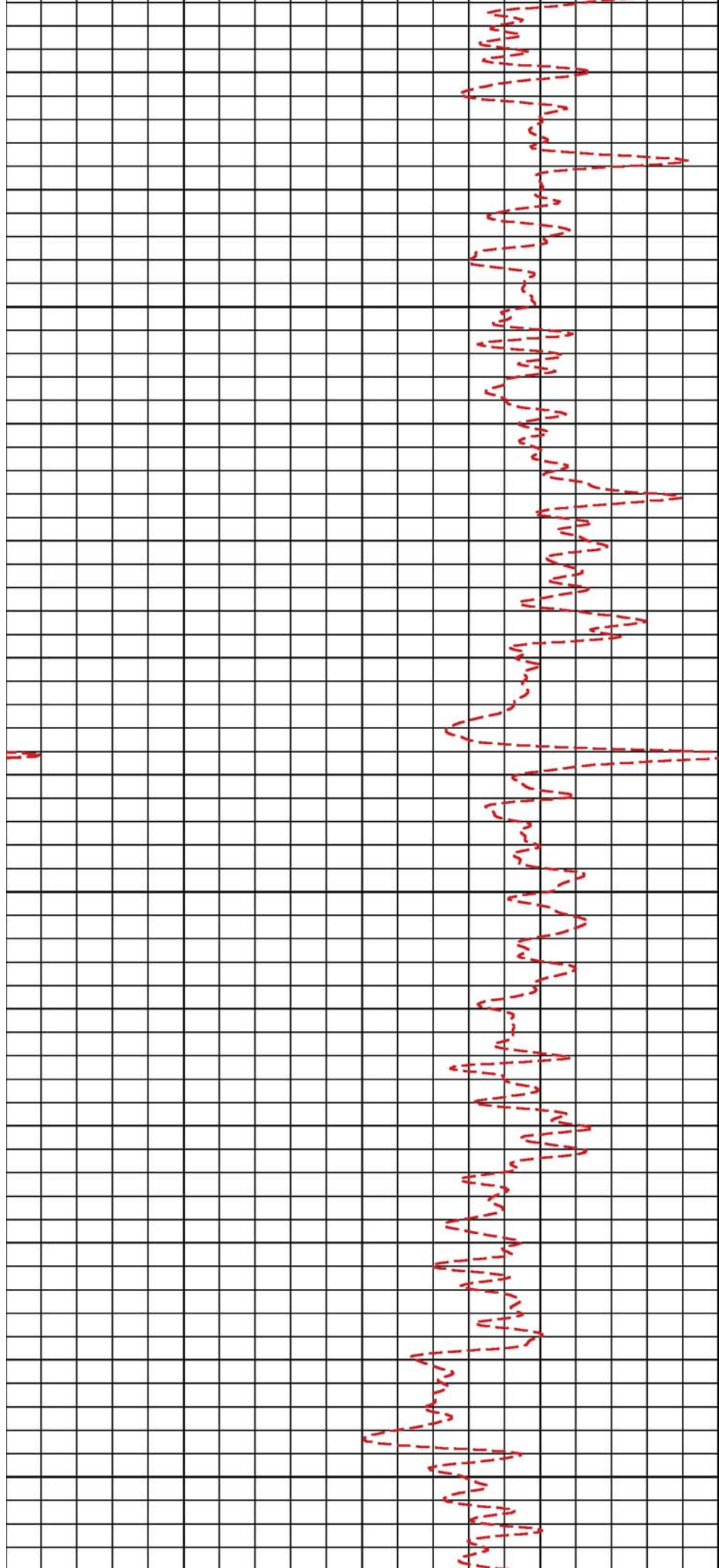




200

225

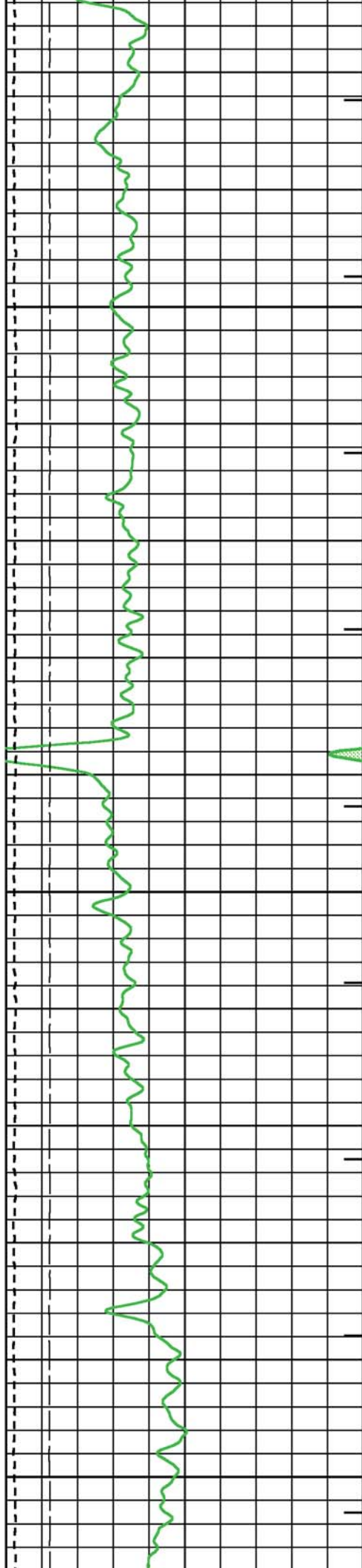


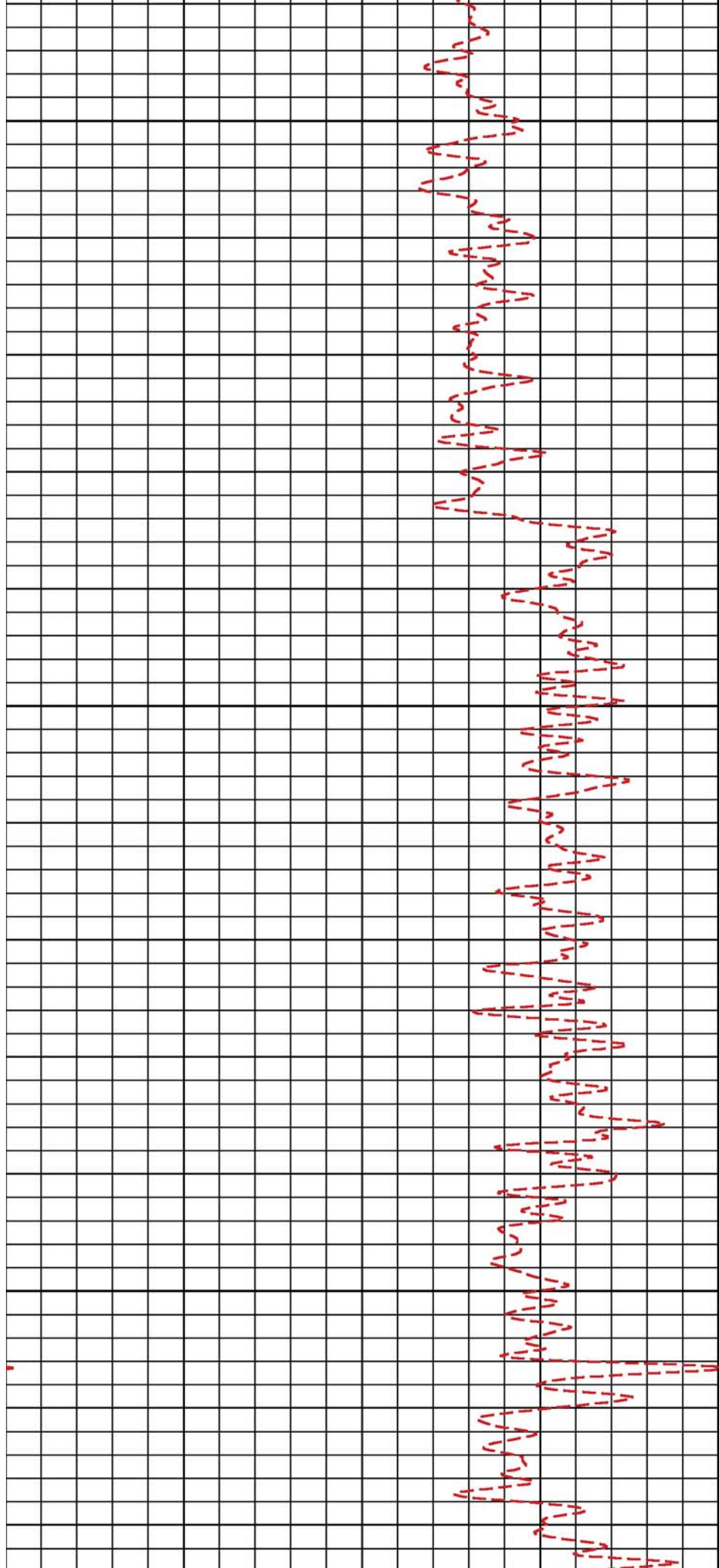


250

275

300

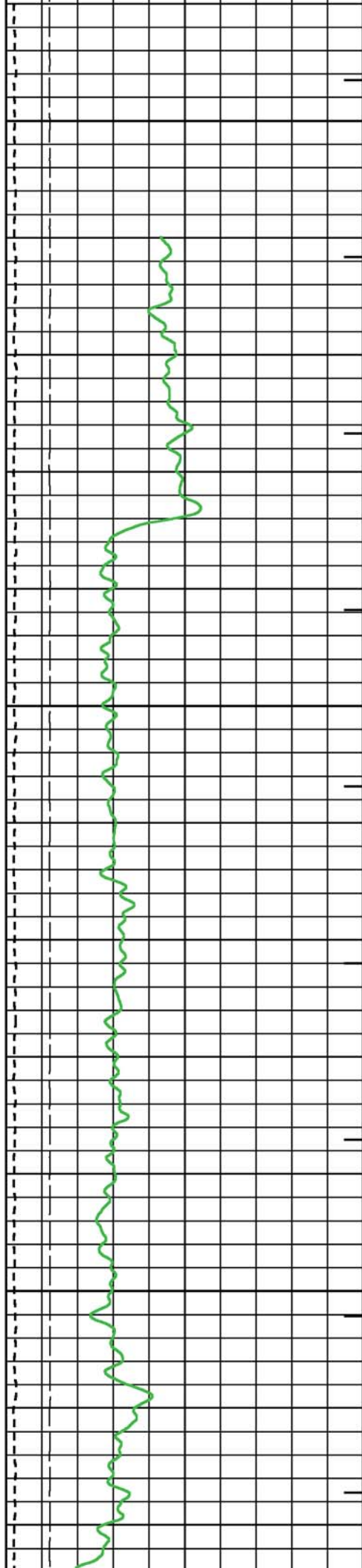


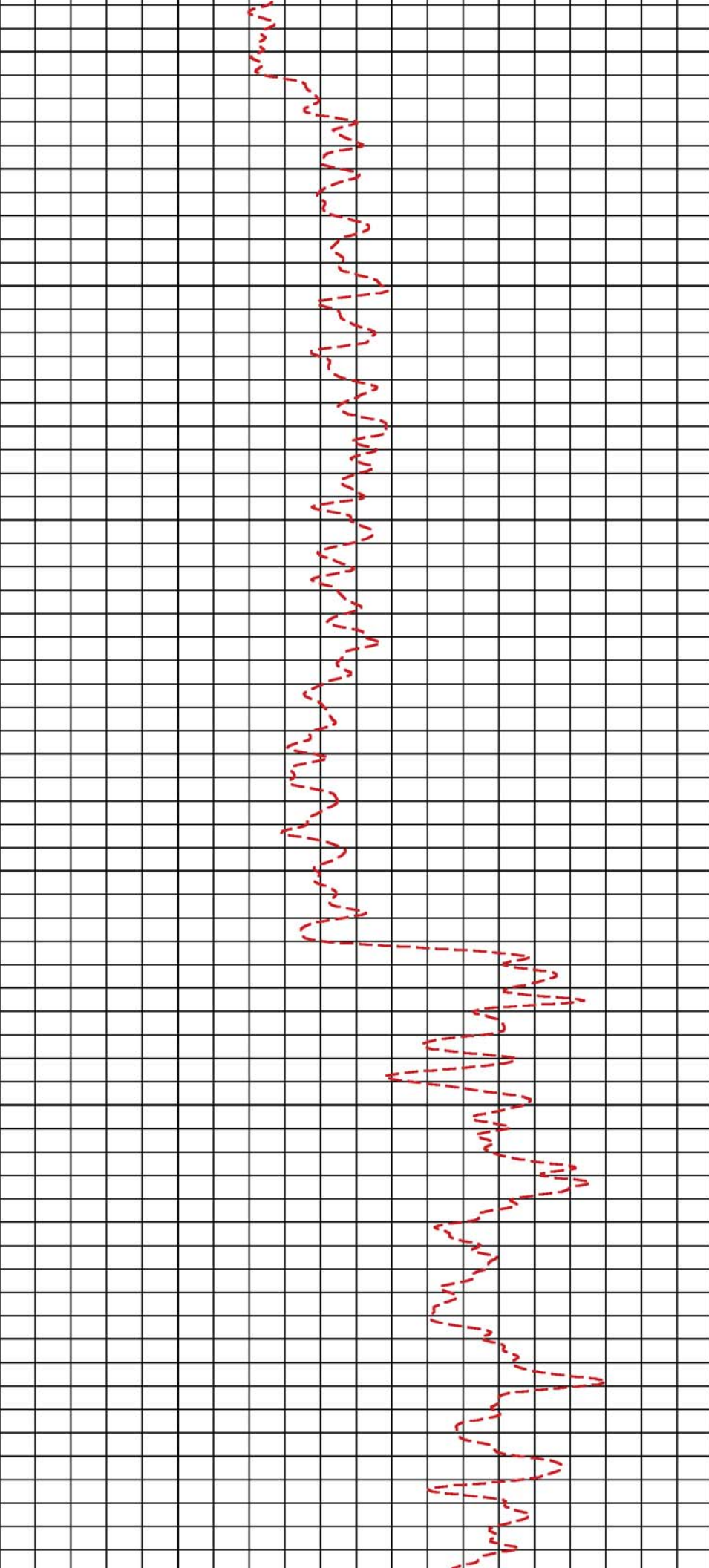


325

350

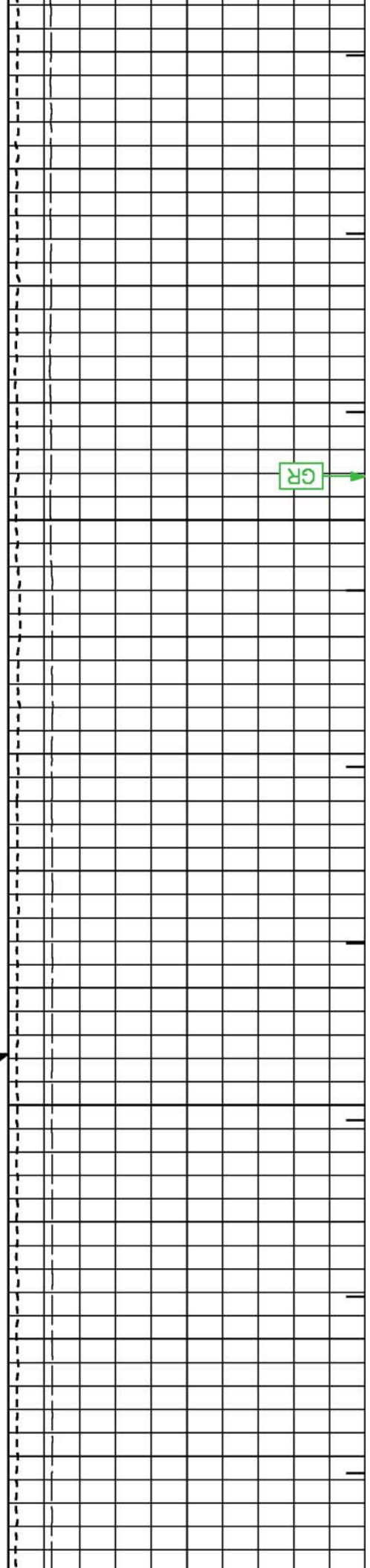
375





CSG
400

425



GR

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1329XA 10293862

DATE/TIME PERFORMED: Sun Feb 10 10:53:03 2013

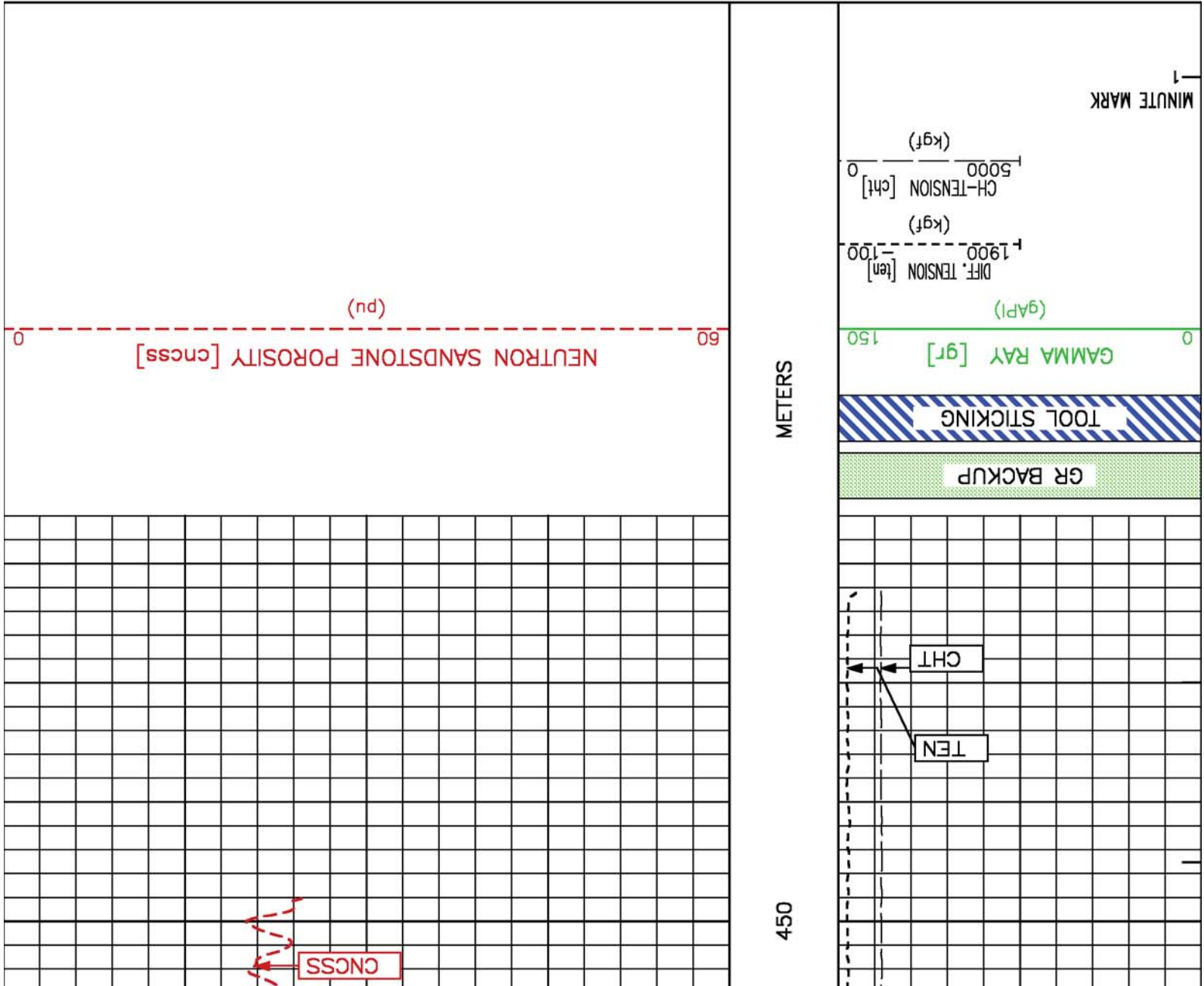
UNIT #: 3815SA 008672

CALB JIG #: 4702NK DA-477

BACKGROUND CALBTR ON	CR DIFF	MULT	BACKGROUND CALBTR ON	CALBTR
(c/s/s)	(c/s/s)	(gAPl)	(gAPl)	(gAPl)
38.87	966.29	927.4	0.162	6.29
GR				156.29
				150

Source File: /data/MGM/run2_oh/m980e.ip1

CALIBRATION / VERIFICATION SUMMARY



GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1329XA 10293862 DATE/TIME PERFORMED: Sun Feb 10 11:02:45 2013

UNIT #: 3815SA 008672 VERI JIG #: 4702NK DA-477

GR	39.18	960.56	0.162	6.34	155.36	149.02
	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
BACKGROUND CALBTR ON	MULT	BACKGROUND CALBTR ON	MULT	BACKGROUND CALBTR ON	DIFF.	

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1329XA 10293862 DATE/TIME PERFORMED: Sun Feb 10 11:09:32 2013 DAYS SINCE CAL: 0

UNIT #: 3815SA 008672 VERI JIG #: 4702NK DA-477

GR	40.98	963.64	0.162	6.63	155.86	149.23
	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
BACKGROUND CALBTR ON	MULT	BACKGROUND CALBTR ON	MULT	BACKGROUND CALBTR ON	DIFF.	

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2436XA 10105638 DATE/TIME PERFORMED: Sun Jan 13 18:44:58 2013

UNIT #: RCON 10274 CALIBRATOR #: 2437XB 112675 SOURCE #: 4718XA N-1234

SSN	LSN	SSN/LSN	MCF	CNRATIO	CN
4800.31	823.98	5.82573	0.98477	5.73700	25.241
DT CPS	DT CPS		0.95000 1.05000		PU

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10105638 DATE/TIME PERFORMED: Sat Feb 16 00:19:49 2013 DAYS SINCE CAL: 33

UNIT #: 3815SA 008672 CALIBRATOR #: INTRNL N/A

SSN	LSN	SSN/LSN	TEMP	HV	LV
992.07	994.44	0.99762	19.0	1357.1	4.605
DT CPS	DT CPS		(degC)	(V)	(V)

0.95000 1.05000 138.0 1250.0 1450.0 4.300 5.000

CN AFTER LOG VERIFICATION SUMMARY

TOOL # : 2436XA 10105638

DATE/TIME PERFORMED: Sat Feb 16 12:44:40 2013

DAYS SINCE CAL: 33

UNIT # : 3815SA 008672

CALIBRATOR # : INTRNL N/A

CAL PRIMARY CALIBRATION SUMMARY

TOOL # : 2223XA 10391896

DATE/TIME PERFORMED: Fri Jan 18 17:30:07 2013

UNIT # : S23 8672

CAL BEFORE LOG VERIFICATION SUMMARY

SIZE

VALUE

MULTIPLIER

ADD

SSN

LSN

DT CPS

992.07

994.44

0.99762

SSN/LSN

TEMP

HV

LV

0.95000 1.05000

32.2

1358.6

4.612

138.0

1250.0

1450.0

4.300

0.06350

-109.42319

PAD CLOSED

LARGE RING (Arm)

SMALL RING (Arm)

177.800

1199.6

279.400

2200.0

0.10156

55.96938

1723.2

0.06350

-109.42319

CAL AFTER LOG VERIFICATION SUMMARY

TOOL # : 2223XA 10391896

DATE/TIME PERFORMED: Sat Feb 16 01:03:10 2013

DAYS SINCE CAL: 28

UNIT # : 3815SA 008672

VALUE

MULTIPLIER

ADD

SIZE

ARM

PAD

1680.0

0.10156

55.96938

226.6

1708.4

0.06350

-109.42319

-0.9

DIAMETER (arm+pad)

ACTUAL

MEASURED

226.000

225.6

215.8

236.2

VALUE

MULTIPLIER

ADD

SIZE

UNIT # : 3815SA 008672

TOOL # : 2223XA 10391896

DATE/TIME PERFORMED: Sat Feb 16 12:43:32 2013

DAYS SINCE CAL: 28

ARM 1724.0 0.10156 55.96938 231.1 (mm)

PAD 1688.8 0.06350 -109.42319 -2.2

DIAMETER (arm+pad) 224.400 (mm)

ACTUAL 228.9 (mm)

MEASURED 214.2 234.6

ZDL PRIMARY CALIBRATION SUMMARY

TOOL #: 2223XA 10391896 DATE/TIME PERFORMED: Sun Jan 13 18:12:46 2013

UNIT: S23 8672 CALB BLKS: 2225XA 094290 CS SRC: 4705XA 16107B PAD TYPE: PADTYP 7.5" PAD

SS CS PK 224.0 220.0 230.0 220.0

LS CS PK 224.9 220.0 230.0

SS_BKGD (Channel) 1404.6 (cps)

LS_BKGD (cps) 1628.9

SS (cps) 38709.2

LS (cps) 14552.3

SHR 0.751 0.720 0.890

DEN (kg/m³) 1697.000

CORR (kg/m³) 0.000

PE (b/e) 1.900

AL

AL + SHIM 24264.8 1636.8

2657.000 -16.000

MG + SHIM (HI PE) 19185.1

6952.3 0.294 0.280 0.360

RATIO AL + SHIM/AL

1.33 1.30 1.40 1.60 1.80

1.74 1.60 1.80

RATIO MG/AL

1.60 1.70 8.55 9.55

8.89

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10391896 DATE/TIME PERFORMED: Sat Feb 16 00:19:53 2013 DAYS SINCE CAL: 33

UNIT #: 3815SA 008672

TOTAL (cps) 3342.1 3332.1 22344.8 22364.8

CSPK 225.0 230.0 220.0 224.2

HV (V) 1386.5 1250.0 1250.0 1468.5

PAD CURRENT (mA) 220.0 230.0 220.0 1550.0

4.8	5.2	50.0	120.0
5.0		86.4	

ZDL AFTER LOG VERIFICATION SUMMARY

TOOL # : 2223XA 10391896
 DATE/TIME PERFORMED: Sat Feb 16 12:44:31 2013
 DAYS SINCE CAL: 33

UNIT #: 3815SA 008672

LS	3332.1	3332.1	220.0	230.0	1250.0	1550.0
	3342.1	224.8			1387.5	
SS	22355.0	22364.8	220.0	230.0	1250.0	1550.0
	224.1				1471.5	

LV	5.0	5.2	50.0	120.0
PAD CURRENT	84.8			

CAL[2] PRIMARY CALIBRATION SUMMARY

TOOL # : 2223XA 10102923
 DATE/TIME PERFORMED: Fri Jan 18 18:11:06 2013

UNIT #: S23 8672

SIZE	(mm)	VALUE	MULTIPLIER	ADD	SMALL RING (Arm)	LARGE RING (Arm)	PAD CLOSED
		177.800			1040.0		
		279.400			2060.0		
		0.09961			74.20783		
		0.06350			-113.28400		

CAL[2] BEFORE LOG VERIFICATION SUMMARY

TOOL # : 2223XA 10102923
 DATE/TIME PERFORMED: Sat Feb 16 01:03:18 2013
 DAYS SINCE CAL: 28

UNIT #: 3815SA 008672

VALUE	MULTIPLIER	ADD	SIZE	ARM	PAD
				1488.0	
				0.09961	
				74.20783	
				222.4	
				0.06350	
				-113.28400	
				7.4	

ACTUAL MEASURED

ZDL[2] PRIMARY CALIBRATION SUMMARY									
T00L: 2223XA 10102923		DATE/TIME PERFORMED: Sat Jan 12 20:19:02 2013							
UNIT: S23 8672		CALB BLKS: 2225XA 094290		CS SRC: 4705XA 18204B		PAD TYPE: PAD TYP 7.5" PAD			
SS CS PK	224.6	220.0	230.0	220.0	230.0	SS_BKGD	1149.5	1466.0	
LS CS PK	(Channel)			(Channel)		LS_BKGD	(cps)		
SS CS PK	224.7	220.0	230.0	224.7	230.0	SS_BKGD	(cps)		
LS CS PK						LS_BKGD	(cps)		
SS CS PK	39084.9	14425.4	0.733	0.720	0.890	SSR	1697.000	0.000	1.900
LS	(cps)					DEN	(kg/m3)		
SS	24250.4	1613.0	2657.000	-16.000		CORR	(kg/m3)		
AL						PE	(b/e)		
AL + SHIM	32297.3	2817.2	2548.000	98.000					
MG + SHIM (HI PE)	19158.4	6839.7	0.285	0.280	0.360				8.550
RATIO AL + SHIM/AL	1.33	1.75							
	1.40	1.60							
RATIO MG/AL	1.61	8.94							
	1.58	1.70	8.55	9.55					

TOOL # : 2223XA 10102923		DATE/TIME PERFORMED: Sat Feb 16 12:42:55 2013		DAYS SINCE CAL: 28	
UNIT #: 3815SA 008672					
VALUE		MULTIPLIER		ADD	
ARM		PAD		SIZE	
1464.0	0.09961	74.20783	220.0		
			(mm)		
ACTUAL		MEASURED			
224.400		228.1		214.2	
				234.6	
DIAMETER (arm+pad)					

CAL[2] AFTER LOG VERIFICATION SUMMARY

NAME	UNIT	VALUE
DIAMETER (arm+pad)	(mm)	226.000
DIAMETER (arm)	(mm)	229.8
DIAMETER (pad)	(mm)	236.2

TOOL #: 2223XA 10102923 DATE/TIME PERFORMED: Sat Feb 16 00:19:46 2013 DAYS SINCE CAL: 34

UNIT #: 3815SA 008672

LS	3341.3	3332.1	220.0	230.0	1250.0	1480.8
	(cps)		(Channel)		(V)	HV
SS	22349.3	22344.8	22364.8	220.0	230.0	1452.2

LV	5.0	5.2	50.0	120.0
PAD CURRENT	(V)		(mA)	
				86.4

ZDL[2] AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10102923 DATE/TIME PERFORMED: Sat Feb 16 12:44:24 2013 DAYS SINCE CAL: 34

UNIT #: 3815SA 008672

LS	3343.0	3332.1	220.0	230.0	1250.0	1497.0
	(cps)		(Channel)		(V)	HV
SS	22360.5	22344.8	22364.8	220.0	230.0	1470.7

LV	5.0	5.2	50.0	120.0
PAD CURRENT	(V)		(mA)	
				88.0



LOCATION:		LAT 64.795 N	LONG 125.722 W
COMPANY WELL FIELD PROVINCE	MGM ENERGY CORP	ELEVATIONS:	
	MGM SHELL EAST MACKAY I-78		
	EAST MACKAY		
	NORTHWEST TERRITORIES		
FILE NO:	API NO:	DATE 16-FEB-2013	
UID: 3001786450125 30		KB 161.20 M	GL 155.00 M
LICENSE: 1202		DF	