



FILE NO: _____ COMPANY: **HUSKY OIL OPERATIONS LIMITED**
 WELL: **LITTLE BEAR N-9**
 API NO: _____ FIELD: **SLATER RIVER**
 PROVINCE: **NORTHWEST TERRITORIES**

Ver. 3.87 LOCATION: _____
 UID: **SURF LOC: LAT 64° 58' 55.24N LONG 128° 31' 20.2**
 300ND08500126300 BH LOC, LSD: _____
 LICENSE: **LAT 64° 58' 55.24N LONG 128° 31' 20.2'**
 483

PERMANENT DATUM **G.L.** ELEVATION **253.5 M**
 LOG MEASURED FROM **K.B.** **5.3 M** ABOVE P.D.
 DRILL MEAS. FROM **KELLY BUSHING**

OTHER SERVICES
 HDIL-GR-CAL, CNL
 XMAC-GR, FLEX-DIL
 EI-CRIL-GR, WREX
 CBL

ELEVATIONS:
 KB **298.8 M**
 DF _____
 GL **253.5 M**

DATE	13-FEB-2012	
RUN	TRIP	1
SERVICE ORDER	CA212310	
DEPTH DRILLER	1868.0 M	
DEPTH LOGGER	1868.0 M	
BOTTOM LOGGED INTERVAL	1842.0 M	
TOP LOGGED INTERVAL	638.5 M	
CASING DRILLER	244.5 M	
CASING LOGGER	638.5 M	
BT SIZE	222.0 MM	
TYPE OF FLUID IN HOLE	INVERT	
DENSITY	1280.0 G/L	39.0 S
PH	N/A	N/A
SOURCE OF SAMPLE	ND SAMPLE	
RM AT MEAS. TEMP.	NA	
RMF AT MEAS. TEMP.	NA	
RMC AT MEAS. TEMP.	NA	
SOURCE OF RMF	ND SAMPLE	ND SAMPLE
RM AT BHT	NA	
TIME SINCE CIRCULATION	11.5 HOURS	
MAX. RECORDED TEMP.	69.8 DEGC	
EQUIP. NO.	LOCATION	CANADA OPEN
RECORDED BY	J. COLLIER/I. ZALESKIYH	
WITNESSED BY	H. BARENHOVEN	

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE 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
311.0 MM	0.0 M	638.0 M
222.0 MM	638.0 M	1868.0 M

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
244.5 MM	53.6 KG/M	J-55	0.0 M	638.0 M

REMARKS

RUN 1 TRIP 1: TIME STOPPED CIRCULATION: 12-FEB-2012 05:30 PM

GR AND CN SPIKES IN INITIAL MAIN PASS, RELOG AREAS AND COPY CURVES TO MAIN PASS
 1480 - 1500M
 1802 - 1810M
 1035 - 1050M

CNC IS ZDL CALIPER CORRECTED.
 CNC AND PORZ PRESENTED IN LIMESTONE MATRIX 2.71G/CM3.
 CNC IS CORRECTED FOR 311.0 MM BIT SIZE BEHIND CASING FROM 638.5 M TO SURFACE AND PRESENTED ABOVE CAL/VER SECTION.

HIGH RESOLUTION PASS PRESENTED BELOW REPEAT PASS

RIG: NABORS 23

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWIVEL	3844XD	11848158	FREE
1	1	DHPA	4430KB	12088588	FREE
1	1	TIRM SUB	3881XA	7173348	FREE
1	1	COMM	3514XC	12079085	FREE
1	1	WTS DGR/SU	1328KB	11756674	FREE
1	1	CN	2448QA	12088884	DECENTRALIZED
1	1	ZDEN	2234XA	168004	PAD DEVICE
1	1	WTS DBL KNJ	3838QA	10283200	FREE
1	1	CR1	4401XB	12081717	FREE
1	1	ACOUSTIC EL	1877EA	12045828	CENTRALIZED
1	1	XMAC RX MDR	1878MC	12002082	CENTRALIZED
1	1	XMAC ISO	1878PB	12083102	FREE
1	1	XMAC TX ELC	1878BA	12083108	CENTRALIZED
1	1	XMAC TX ELC	1878FA	12111388	CENTRALIZED
1	1	HDIL ELCNS	1515EA	12032417	STANDOFF
1	1	HDIL MANDRL	1515MA	11887888	STANDOFF
1	1	CENTRALIZER	4341XA	7173361	FREE

INSTRUMENT CONFIGURATION

Source File: /data/husky_CA212310/run1-fdg

CABLEHEAD
 Diameter : 8.8 cm
 Length : 187.8 cm
 Weight : 10.8 kg
 Series : CABL338
 Manufacturer : ORLH
 Measure Point: 83.8 cm: CABLEHEAD TOP

SWIVEL
 Diameter : 8.8 cm
 Length : 108.7 cm
 Weight : 35.8 kg
 Series : 3844XD

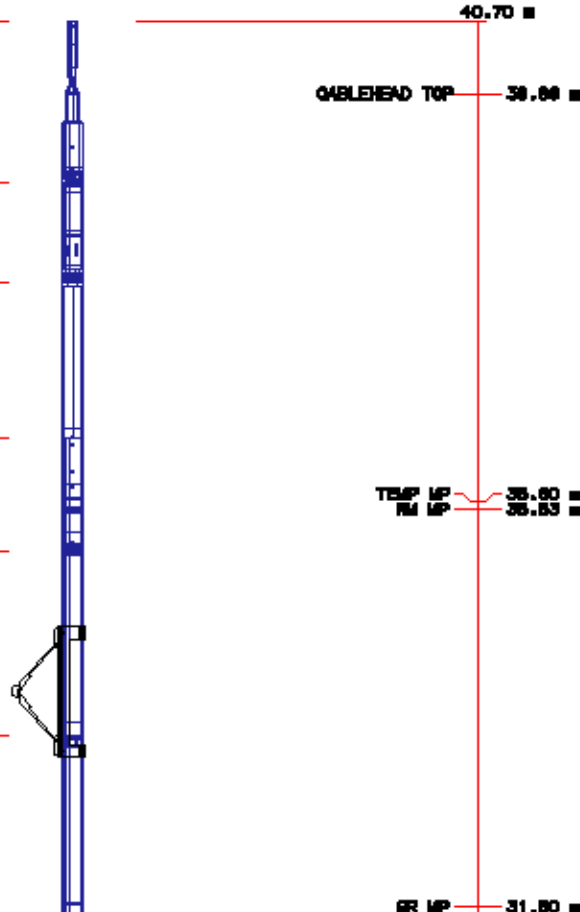
CONNECTOR POWER ADAPTER
 Diameter : 9.2 cm
 Length : 180.8 cm
 Weight : 38.1 kg
 Series : 4430KB
 Manufacturer : DHPA

TIRM SUB
 Diameter : 9.2 cm
 Length : 118.8 cm
 Weight : 28.2 kg
 Series : 3881XA
 Manufacturer : TIRM
 Measure Point: 42.2 cm: TEMP MP

WTS COMMON BRACKET
 Diameter : 9.2 cm
 Length : 184.0 cm
 Weight : 88.2 kg
 Series : 3814XC
 Manufacturer : ITR

DIGITAL SPECTRALOG
 Diameter : 9.2 cm
 Length : 222.8 cm
 Weight : 88.1 kg
 Series : 1328QA
 Manufacturer : ISI
 Measure Point: 48.8 cm: CR MP

COMPENSATED NEUTRON



Diameter : 9.3 cm
 Length : 231.4 cm
 Weight : 86.2 kg
 Series : 2448CA
 Mnemonic : CM
 Measure Point: 80.3 cm: LSN MP
 Measure Point: 86.2 cm: SEN MP

LSN MP — 23.28 ■
 SEN MP — 23.28 ■

Z-DENRILOR

Diameter : 12.4 cm
 Length : 341.9 cm
 Weight : 183.8 kg
 Series : 2238CA
 Mnemonic : ZDL
 Measure Point: 87.3 cm: CAL MP
 Measure Point: 76.4 cm: LSO MP
 Measure Point: 83.2 cm: SSO MP

CAL MP — 26.28 ■
 LSO MP — 26.04 ■
 SSO MP — 26.01 ■

KNUCKLE JOINT (DOUBLE)

Diameter : 8.9 cm
 Length : 141.8 cm
 Weight : 40.8 kg
 Series : 3838CA
 Mnemonic : KJMT

DIGITAL ORIENTATION

Diameter : 8.8 cm
 Length : 329.4 cm
 Weight : 50.0 kg
 Series : 4401KB
 Mnemonic : ORIT
 Measure Point: 0.0 cm: ORIENT MP

ORIENT MP — 20.57 ■

ARRAY ACUSTILOR ELECTRONICS, 8 CHANNEL

Diameter : 8.8 cm
 Length : 238.3 cm
 Weight : 46.4 kg
 Series : 1877EA
 Mnemonic : KMPC

CROSS MULTIPOLE ARRAY ACUSTILOR

Diameter : 9.8 cm
 Length : 332.4 cm
 Weight : 101.8 kg
 Series : 1878AC
 Mnemonic : KMPT
 Measure Point: 187.8 cm: R8
 Measure Point: 182.4 cm: R7
 Measure Point: 137.2 cm: R6
 Measure Point: 121.7 cm: R5
 Measure Point: 81.4 cm: R3
 Measure Point: 78.2 cm: R2
 Measure Point: 61.0 cm: R1

R8 — 16.06 ■
 R7 — 16.06 ■
 R6 — 16.06 ■
 R5 — 16.06 ■
 R3 — 12.48 ■
 R2 — 12.48 ■
 R1 — 12.48 ■

BEAR HIVE ACUSTILOR

Diameter : 9.2 cm
 Length : 182.4 cm
 Weight : 81.4 kg
 Series : 1878PB
 Mnemonic : KMPC

MONOPOLE T2 — 12.88 ■
 QUADRUPOLE T8 — 12.88 ■

MULTI-POLE ARRAY ACUSTIC

Diameter : 9.8 cm
 Length : 241.3 cm
 Weight : 77.3 kg
 Series : 1878BA
 Mnemonic : KMPC
 Measure Point: 185.8 cm: QUADRUPOLE T8
 Measure Point: 185.8 cm: MONOPOLE T2
 Measure Point: 142.2 cm: Y-DIPOLE T4
 Measure Point: 142.2 cm: X-DIPOLE T3
 Measure Point: 88.0 cm: MONOPOLE T1

X-DIPOLE T3 — 12.36 ■
 Y-DIPOLE T4 — 12.36 ■

MULTI-POLE ARRAY ACUSTIC

Diameter : 8.8 cm
 Length : 131.8 cm
 Weight : 38.4 kg
 Series : 1878FA
 Mnemonic : M4C

MONOPOLE T1 — 11.81 ■

HIGH DEFINITION INDUCTION TOOL

Diameter : 9.2 cm
 Length : 827.0 cm
 Weight : 189.8 kg
 Series : 1818KA
 Manufacturer : HDL
 Measure Point: 423.8 cm: SP MP
 Measure Point: 226.8 cm: KMTR MP

SP MP 8.85 m

KMTR MP 3.81 m

4 ARM SPIRAL SPRING CENTRALIZER

Diameter : 8.6 cm
 Length : 128.8 cm
 Weight : 32.7 kg
 Series : 4341KA
 Manufacturer : CBST

BALL PLUG 3 3/8

TOTAL LENGTH: 40.70 m
 TOTAL WEIGHT: 1088.5 kg
 MAX DIAMETER: 12.4 cm

0.00 m



MAIN LOG - UPPER PRESENTATION

ECLIPS 6.11 Aug 08, 2010
 Updates: 1 Patches: 1

Mon Feb 13 12:58:50 2012

Perfl /main/62

Cplot

Pdf_Cpp /main/16

Fileview 5.51

PARAMETER AND FILTER SUMMARY REPORT

File: /data/husky_CA212310/m77evh_xc03.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 814.553 m BOTTOM DEPTH: 1872.139 m

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
CHT	FILTER ()	medium (1)		TOP	BOTTOM
TENSION	FILTER ()	medium (1)		''	''
GR	FILTER ()	medium (1)		''	''
CALIPER	FILTER ()	medium (1)		''	''
ZDL MED RES	FILTER (hrd1*)	medium		''	''
	FILTER (hrd1a*)	medium		''	''
	FILTER (hrd2*)	medium		''	''
	FILTER (hrd2a*)	medium		''	''
	FILTER (soft*)	medium		''	''

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
BIT SIZE	BIT SIZE	222.000	mm	TOP	BOTTOM

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)
ZDL	DENK TRACKING	ON		TOP BOTTOM

CURVE DESCRIPTION REPORT

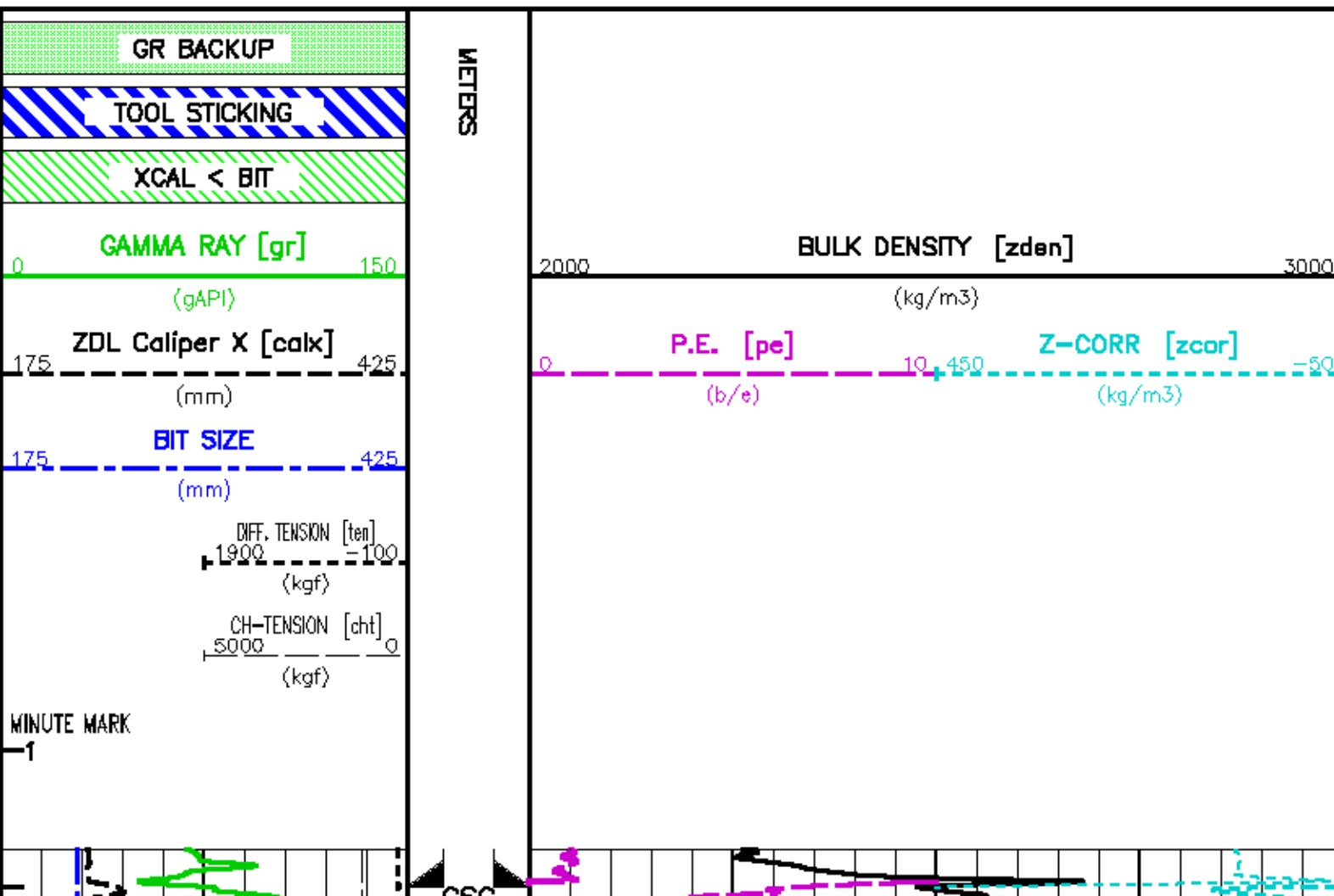
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F1:CALX	Feb 13 04:51:11 2012	CALIPER FROM X-AXIS OF XY CALIPER(S)
F1:CHT	Feb 13 04:51:11 2012	CABLE HEAD TENSION
F1:GR	Feb 13 04:51:11 2012	GAMMA RAY
F1:MARK	Feb 13 04:51:11 2012	MINUTE MARK
F1:PE	Feb 13 04:51:11 2012	PHOTO ELECTRIC CROSS-SECTION
F1:TEN	Feb 13 04:51:11 2012	DIFFERENTIAL TENSION
F1:ZCOR	Feb 13 04:51:11 2012	DENSITY CORRECTION
F1:ZDEN	Feb 13 04:51:11 2012	FORMATION BULK DENSITY

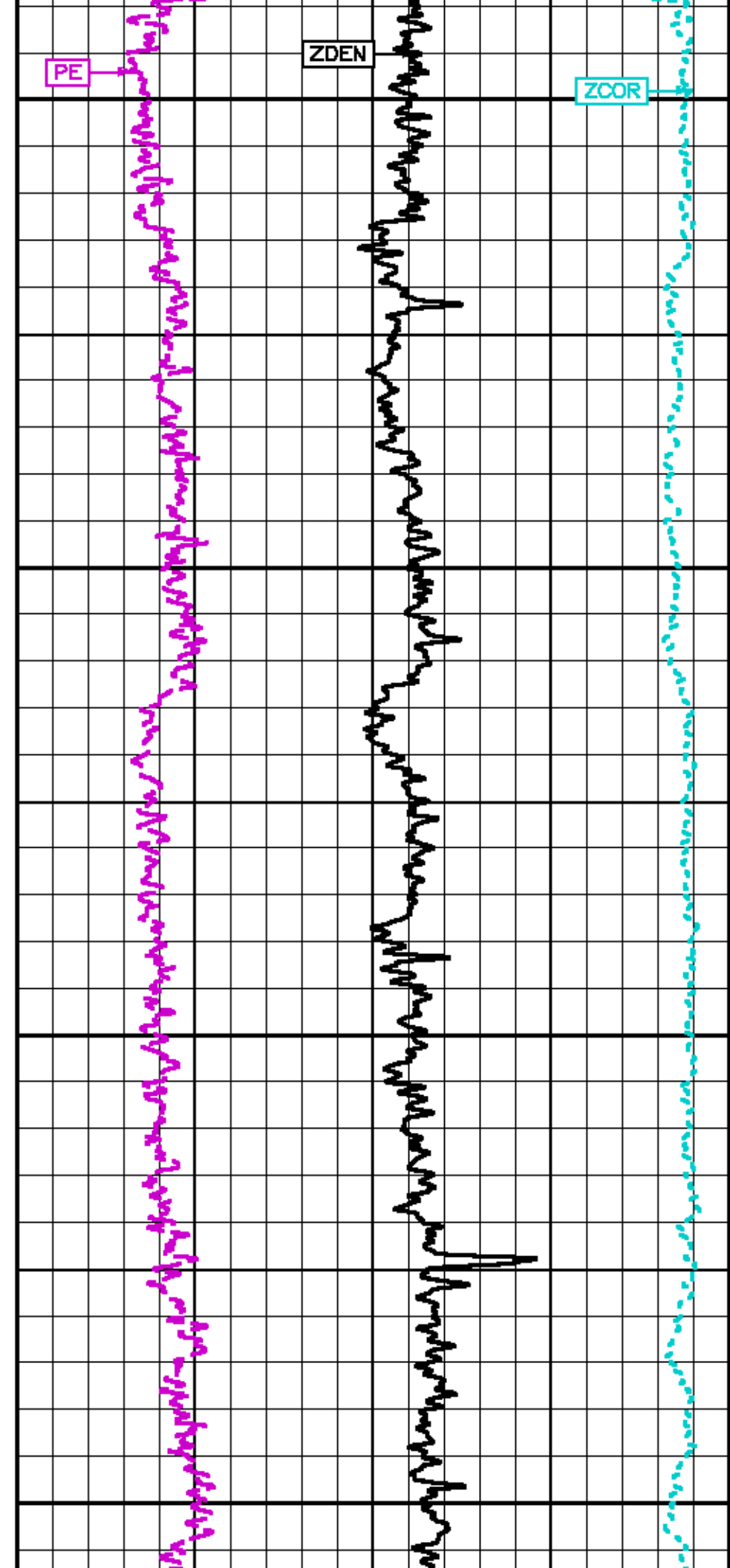
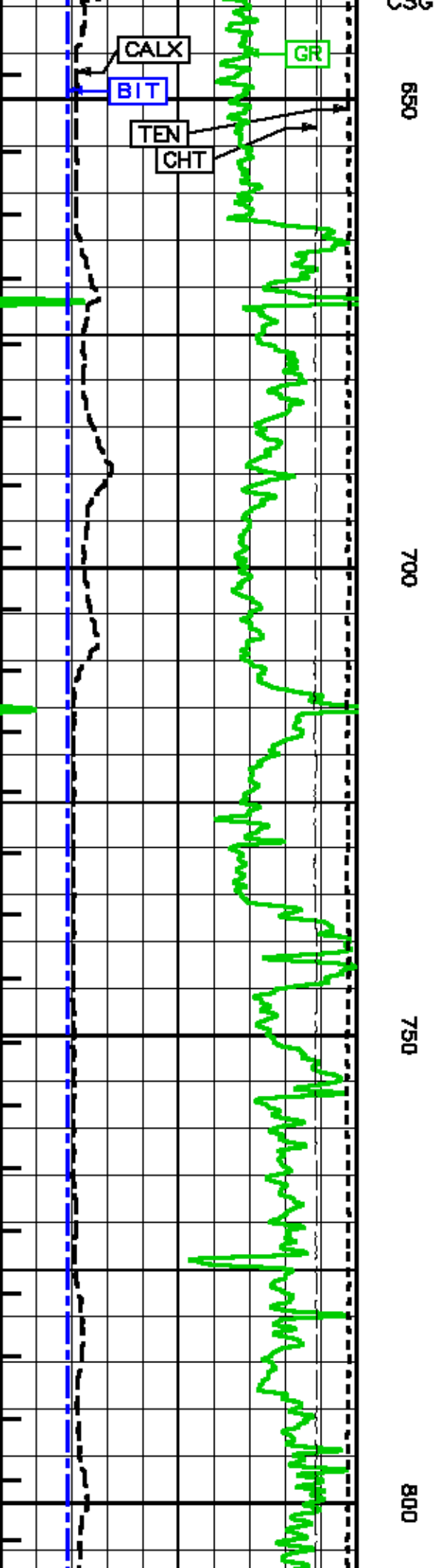
CURVE MEASURE POINT OFFSET

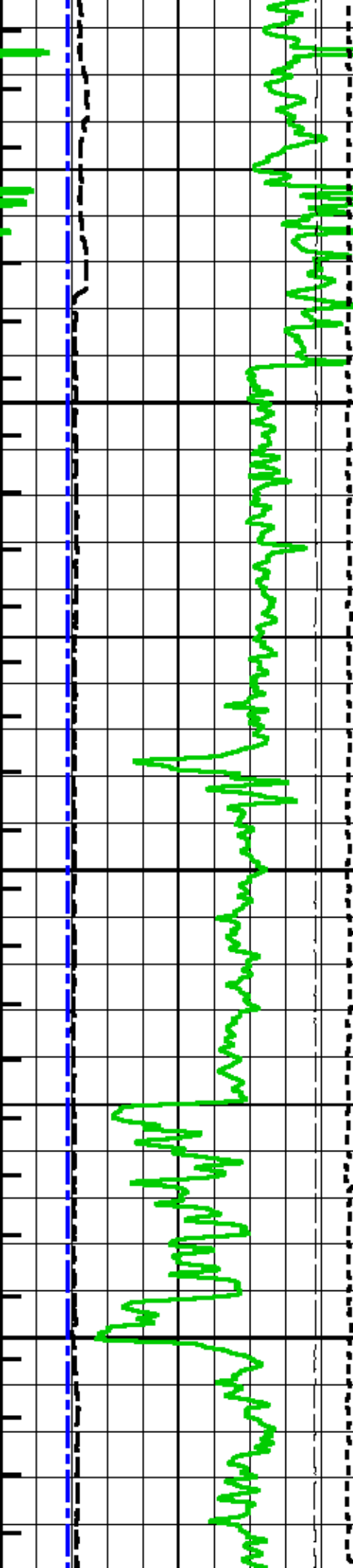
CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
BIT	0.00	CHT	0.00	PE	25.85	ZCOR	25.85
CALX	26.17	GR	31.30	TEN	0.00	ZDEN	25.85

Presentation : opuz/dat1a/husky_CA212310/zdl_upper.pdf [1:600 Scale]
Plot Interval : 635 - 1870.94 Meters

Data File 1 : F1 : opuz/dat1a/husky_CA212310/r111_mah.aiff
Created On : Feb 13 04:51:11 2012
Company : HUSKY OIL OPERATIONS LIMITED
Well : LITTLE BEAR N-8
Field : SLATER RIVER
File Interval : 570.186 - 1870.98 Meters
Out : m77wh_x



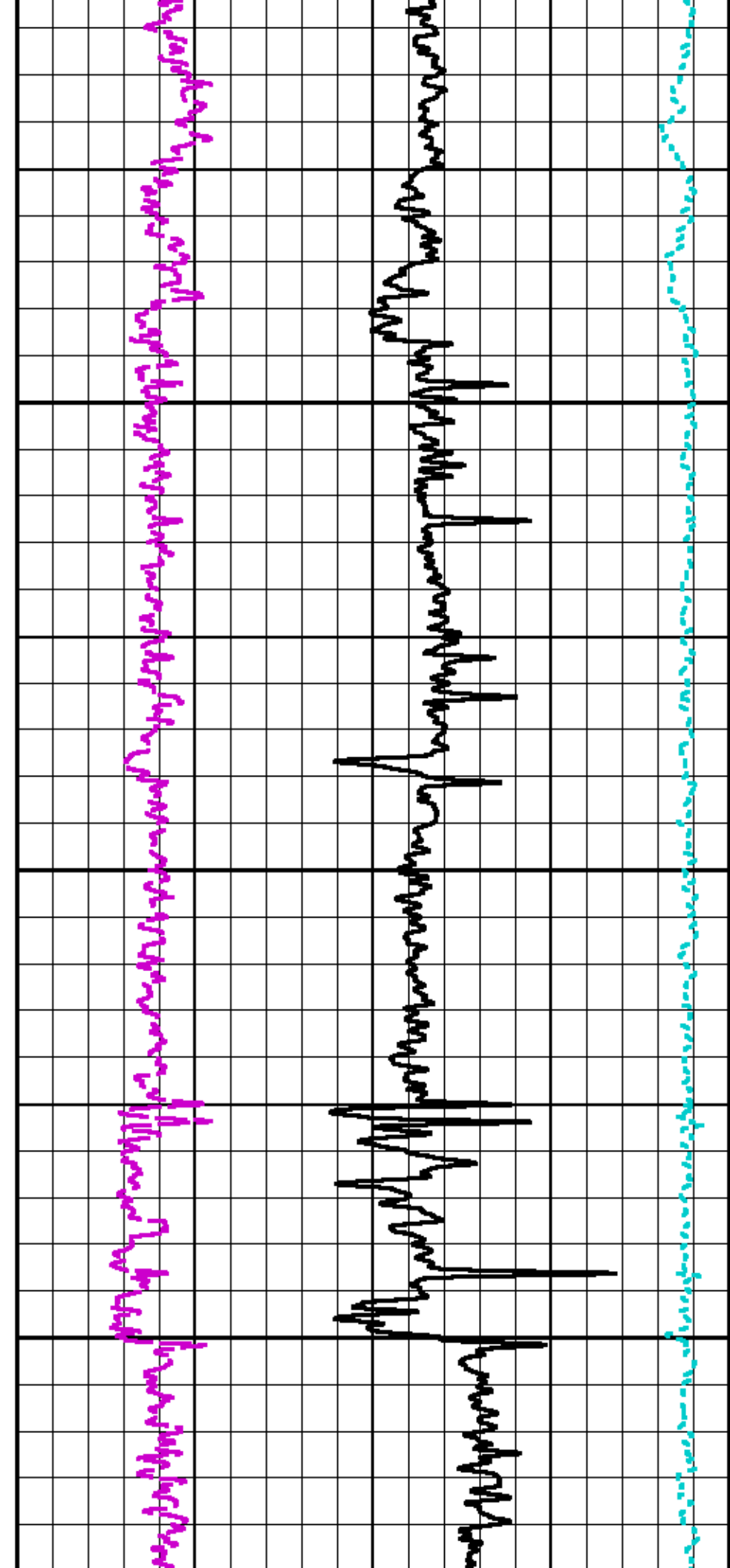


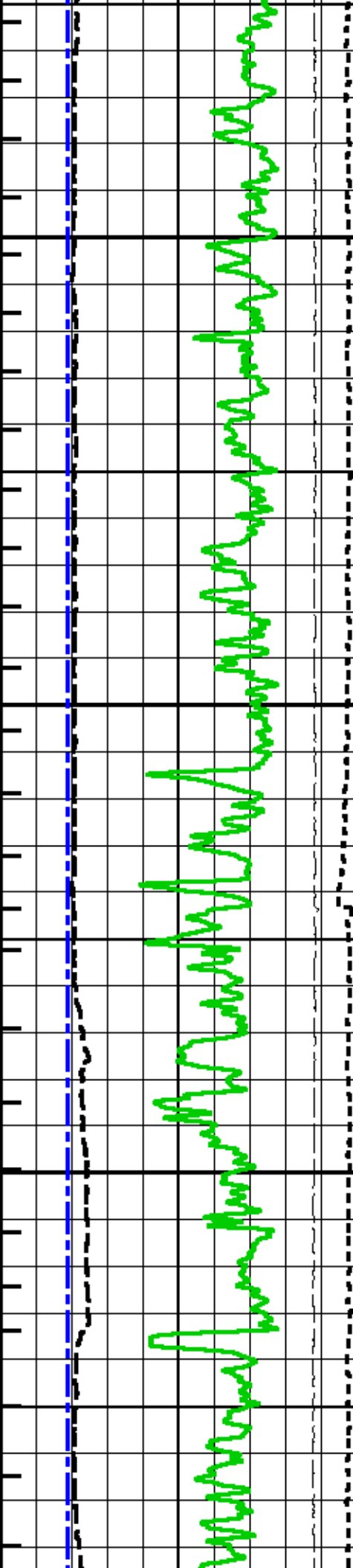


850

900

950

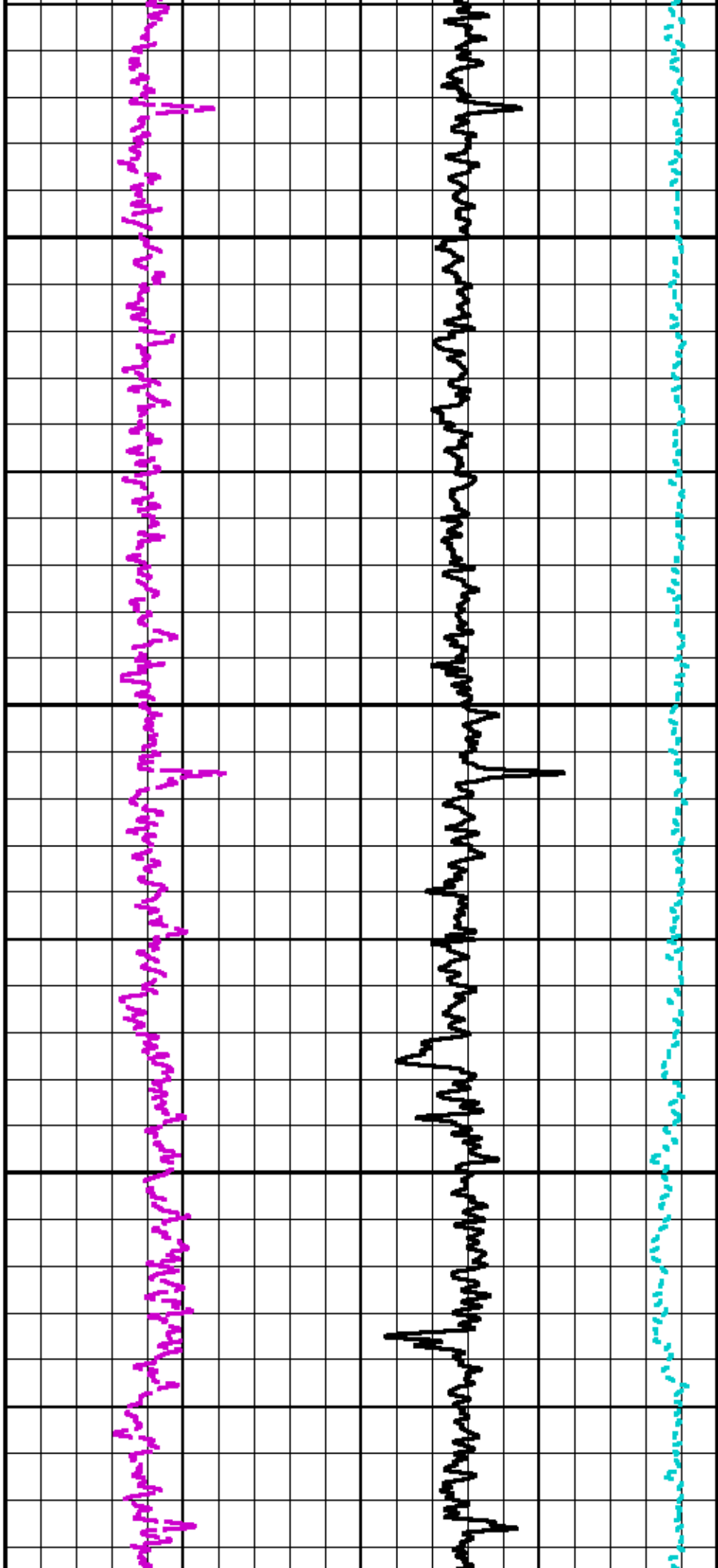


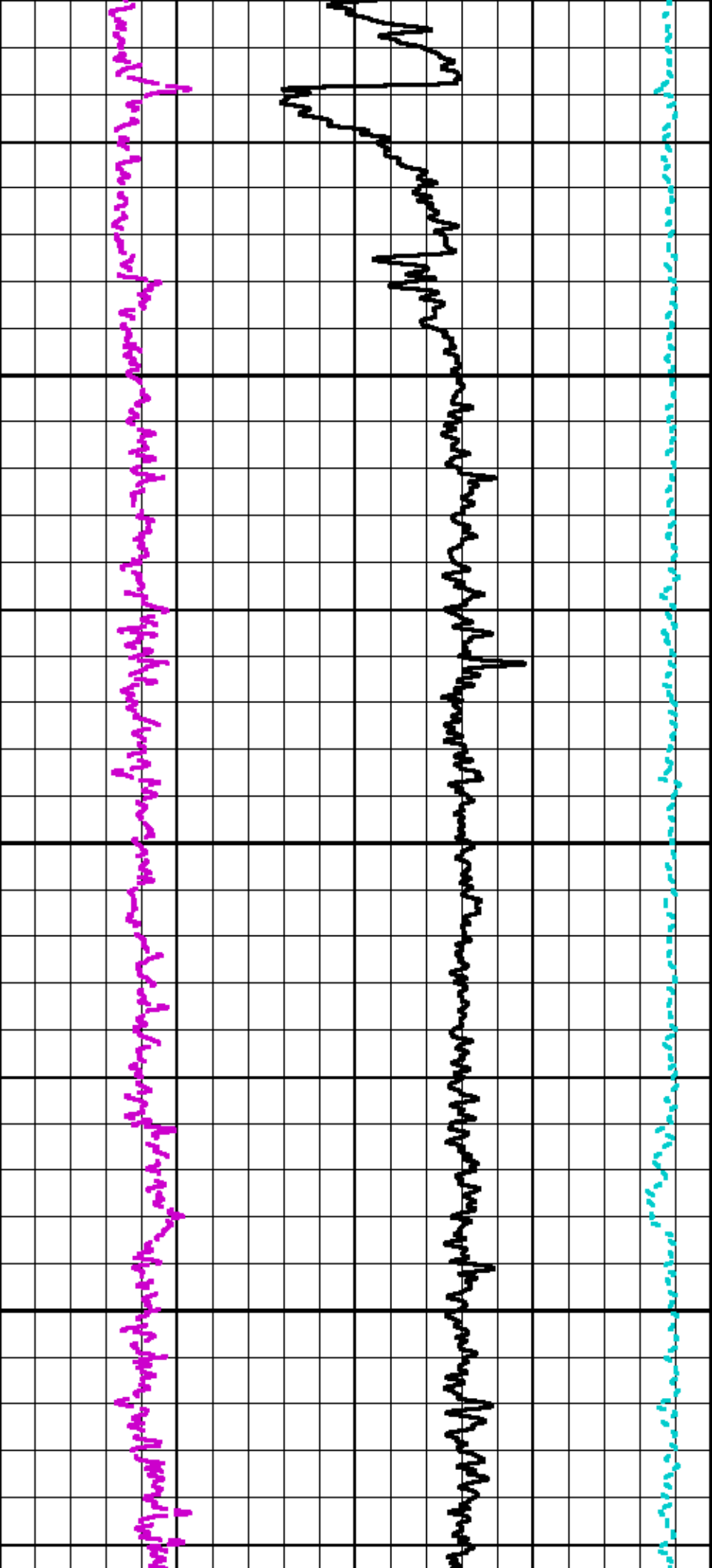


1000

1050

1100

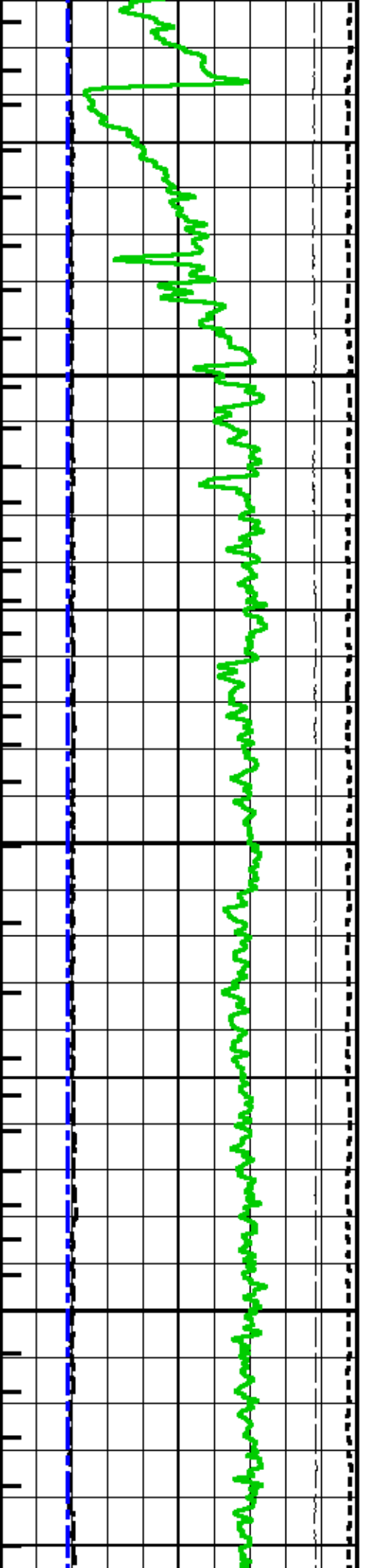


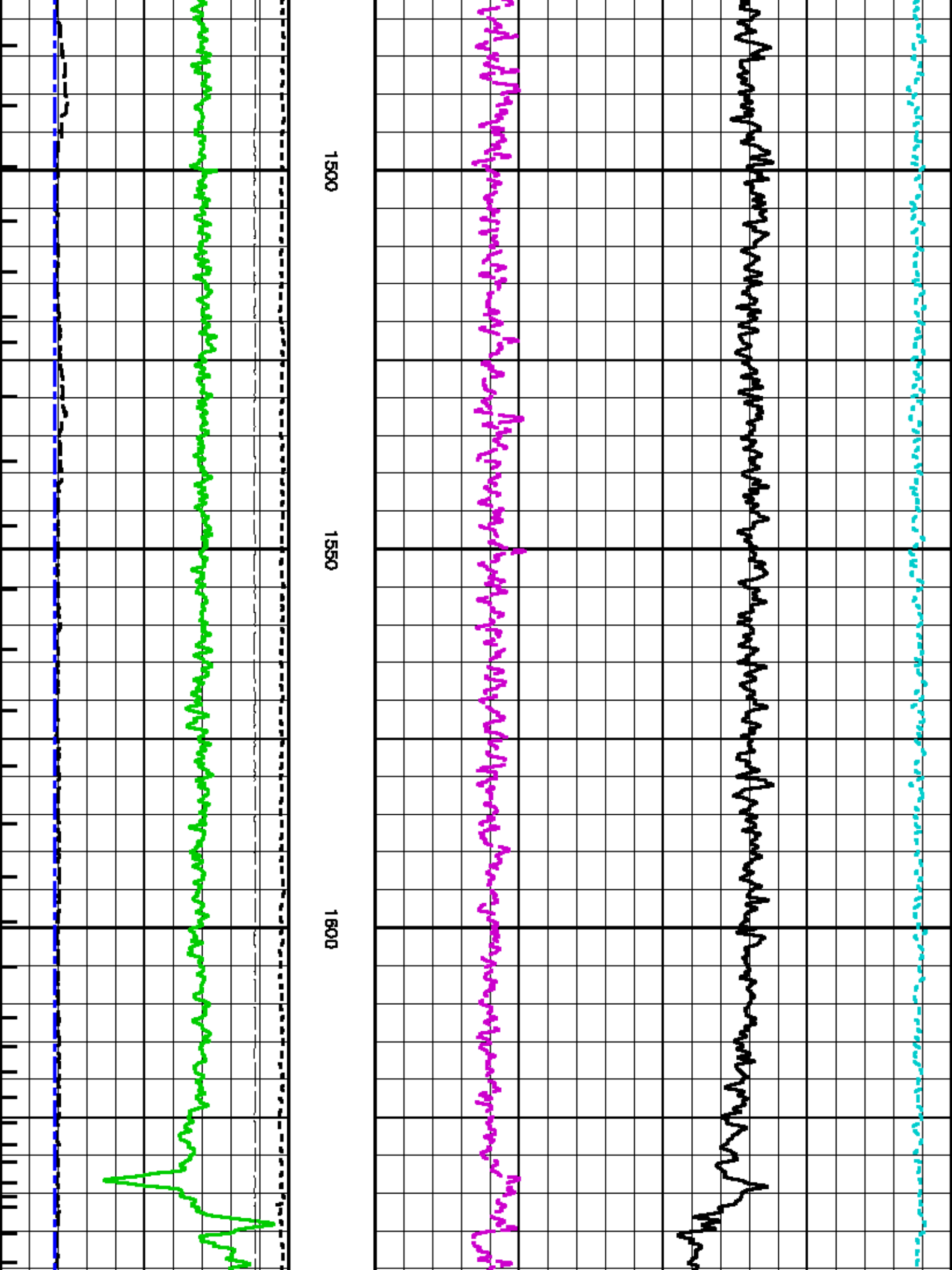


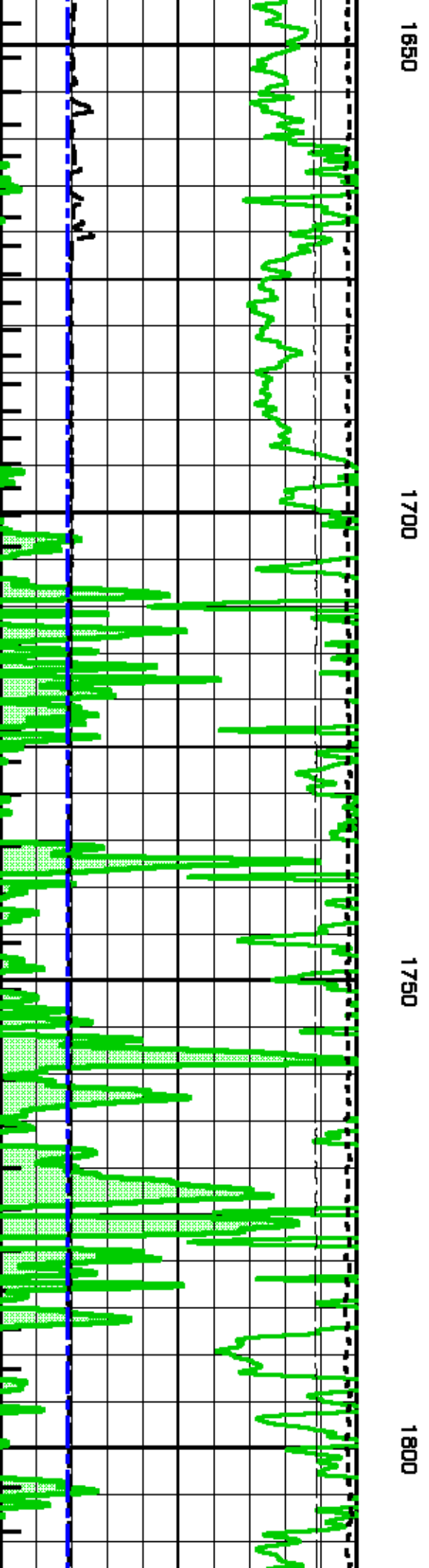
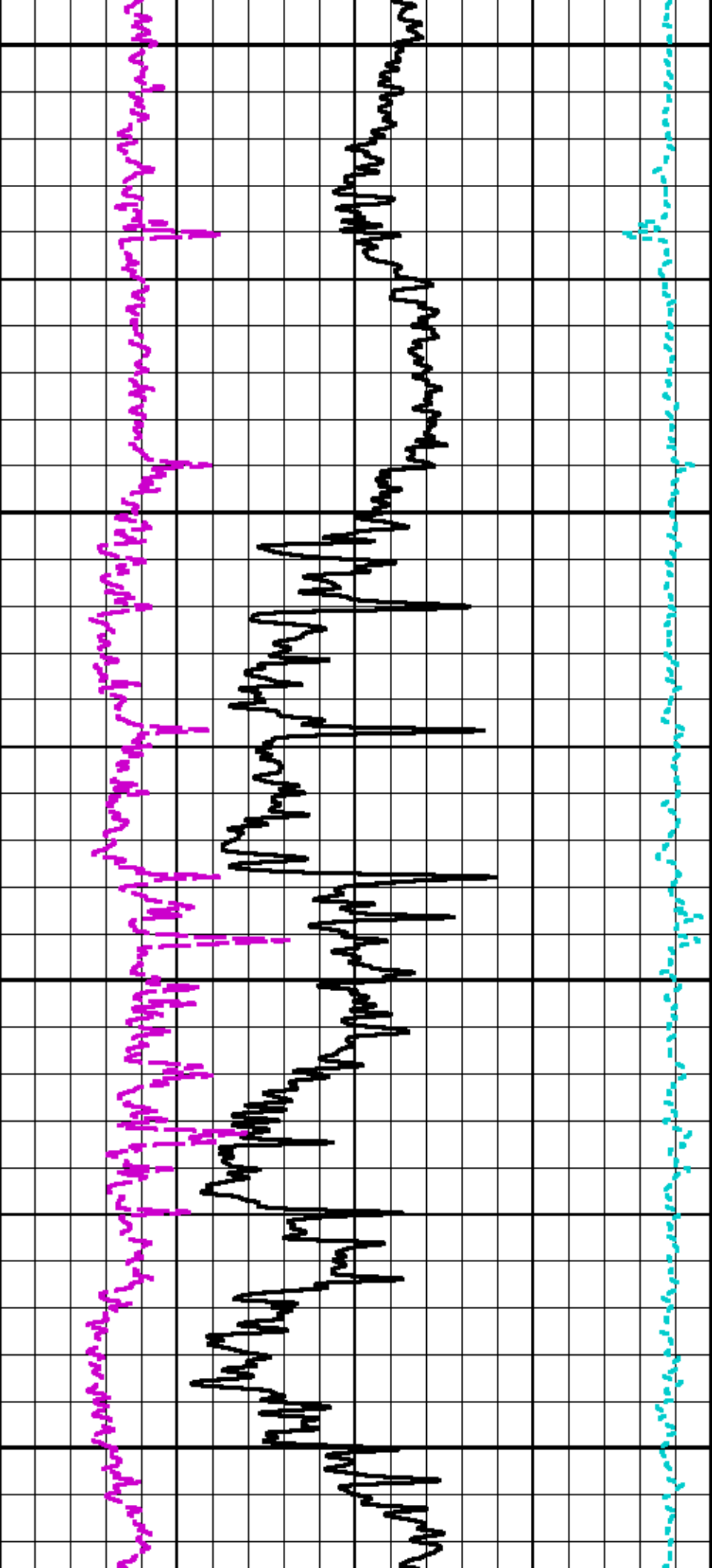
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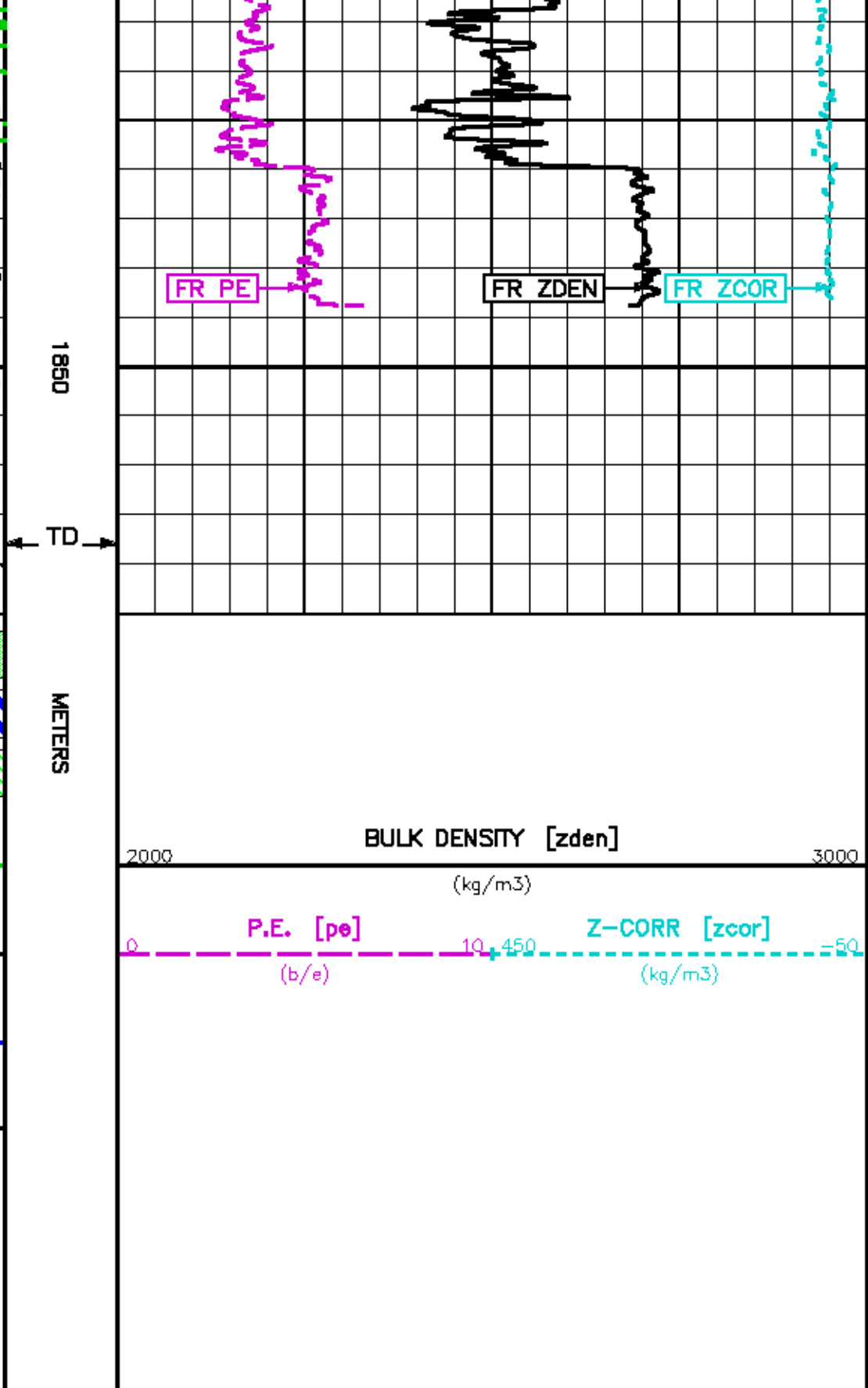
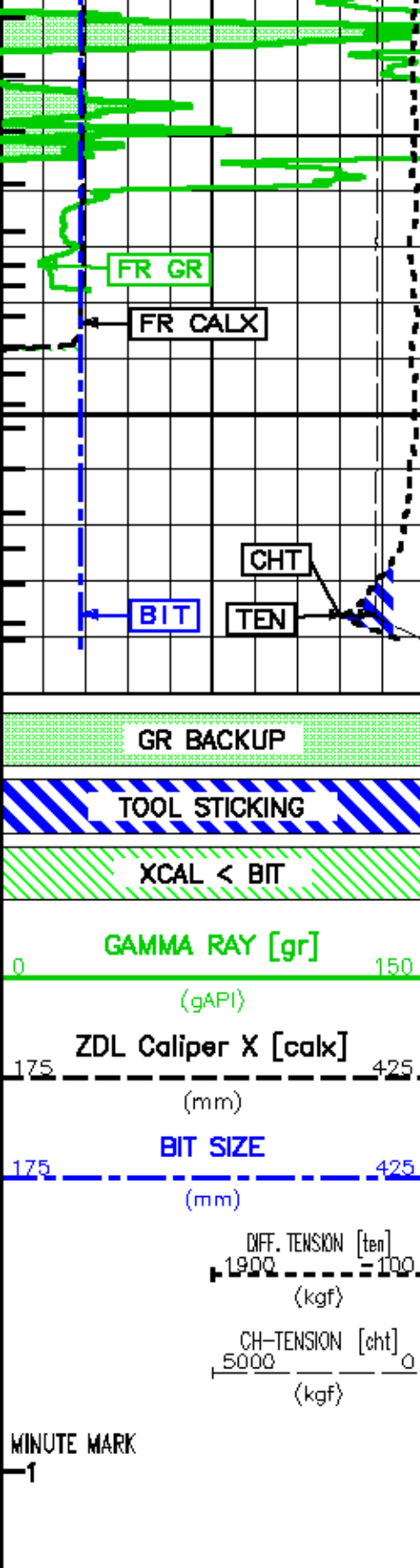
1400

1450









MAIN LOG - LIMESTONE MATRIX

PARAMETER AND FILTER SUMMARY REPORT

File: /data/husky_CA212310/m77evh_xc05.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 814.553 m BOTTOM DEPTH: 1872.139 m

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
CHT	FILTER ()	medium (1)		TOP	BOTTOM
Y AXIS CALIPER	FILTER ()	medium (1)		..	..
TENSION	FILTER ()	medium (1)		..	..
GR	FILTER ()	medium (1)		..	..
CN	FILTER ()	medium (1)		..	..
CALIPER	FILTER ()	medium (1)		..	..
	FILTER (.h)	medium (1)		..	..
	FILTER (.l)	medium (1)		..	..
ZDL MED RES	FILTER (hrd1*)	medium		..	..
	FILTER (hrd1a*)	medium		..	..
	FILTER (hrd2*)	medium		..	..
	FILTER (hrd2a*)	medium		..	..
	FILTER (soft*)	medium		..	..

BOREHOLE & CEMENT

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

CN PROCESSING

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

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
DENSITY POROSITY	RHDfluid	1.000	g/cm3	TOP	BOTTOM
	RHDmatrix (line)	2.710	g/cm3
ZDL	DENK TRACKING	ON	

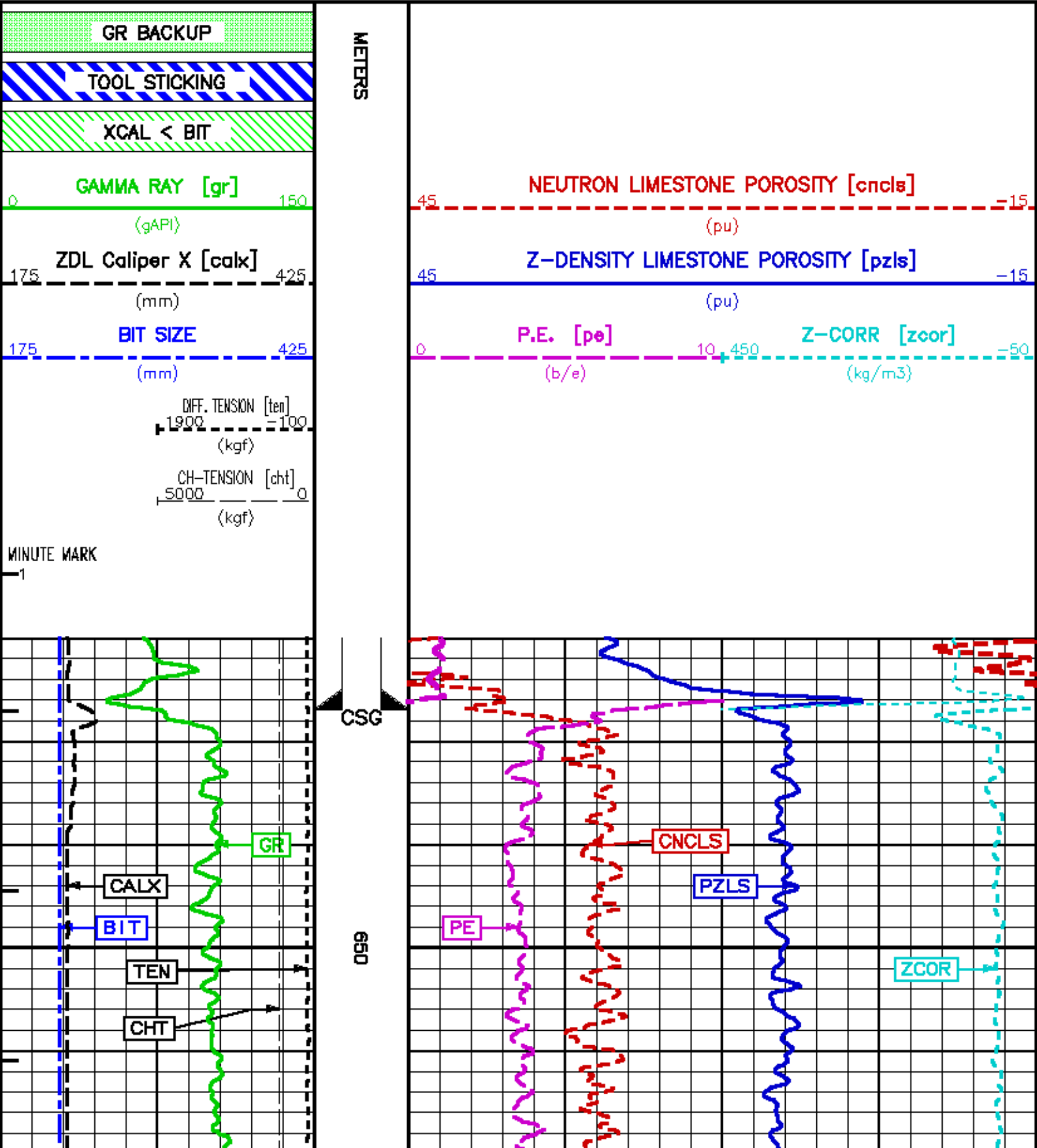
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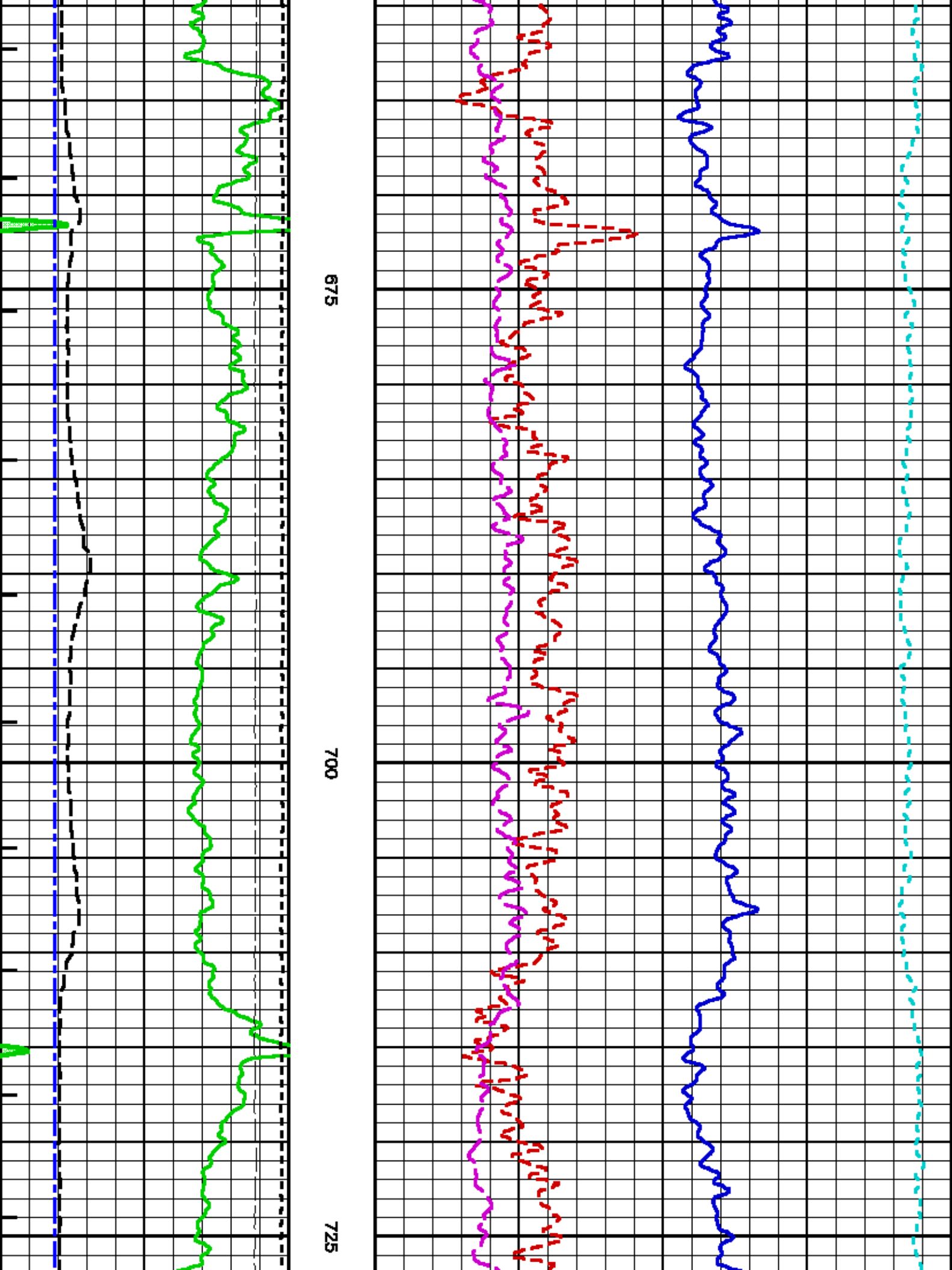
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Feb 13 04:51:11 2012	BIT SIZE
F1:CALX	Feb 13 04:51:11 2012	CALIPER FROM X-AXIS OF XY CALIPER(S)
F1:CHT	Feb 13 04:51:11 2012	CABLE HEAD TENSION
F1:CNCLS	Feb 13 04:51:11 2012	BOREHOLE SIZE CORRECTED LIMESTONE COMPENSATED NEU POROSITY
F1:GR	Feb 13 04:51:11 2012	GAMMA RAY
F1:MARK	Feb 13 04:51:11 2012	MINUTE MARK
F1:PE	Feb 13 04:51:11 2012	PHOTO ELECTRIC CROSS-SECTION
F1:PZLS	Feb 13 04:51:11 2012	POROSITY FOR LIMESTONE MATRIX
F1:TEN	Feb 13 04:51:11 2012	DIFFERENTIAL TENSION
F1:ZCOR	Feb 13 04:51:11 2012	DENSITY CORRECTION

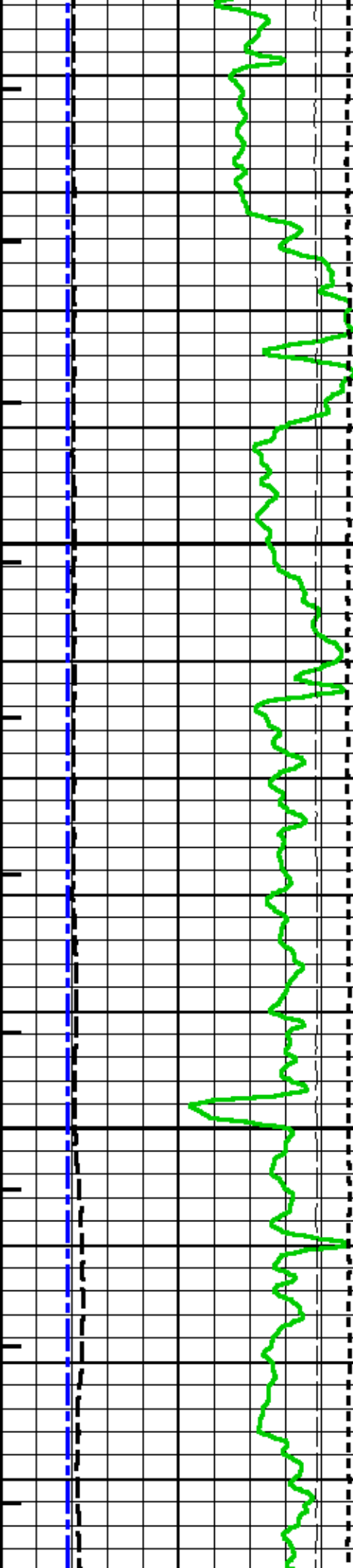
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
BIT	0.00	CNCLS	29.50	PZLS	25.95		
CALX	26.17	GR	31.59	TEN	0.00		

Presentation : opua:/data/husky_CA212310/zdl_main_b.pdf [1:240 Scale]
 Plot Interval : 635 - 1870.94 Meters
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 Company : HUSKY OIL OPERATIONS LIMITED
 Well : LITTLE BEAR N-9
 Field : SLATER RIVER
 File Interval : 579.196 - 1870.98 Meters
 Out : m77erh_x

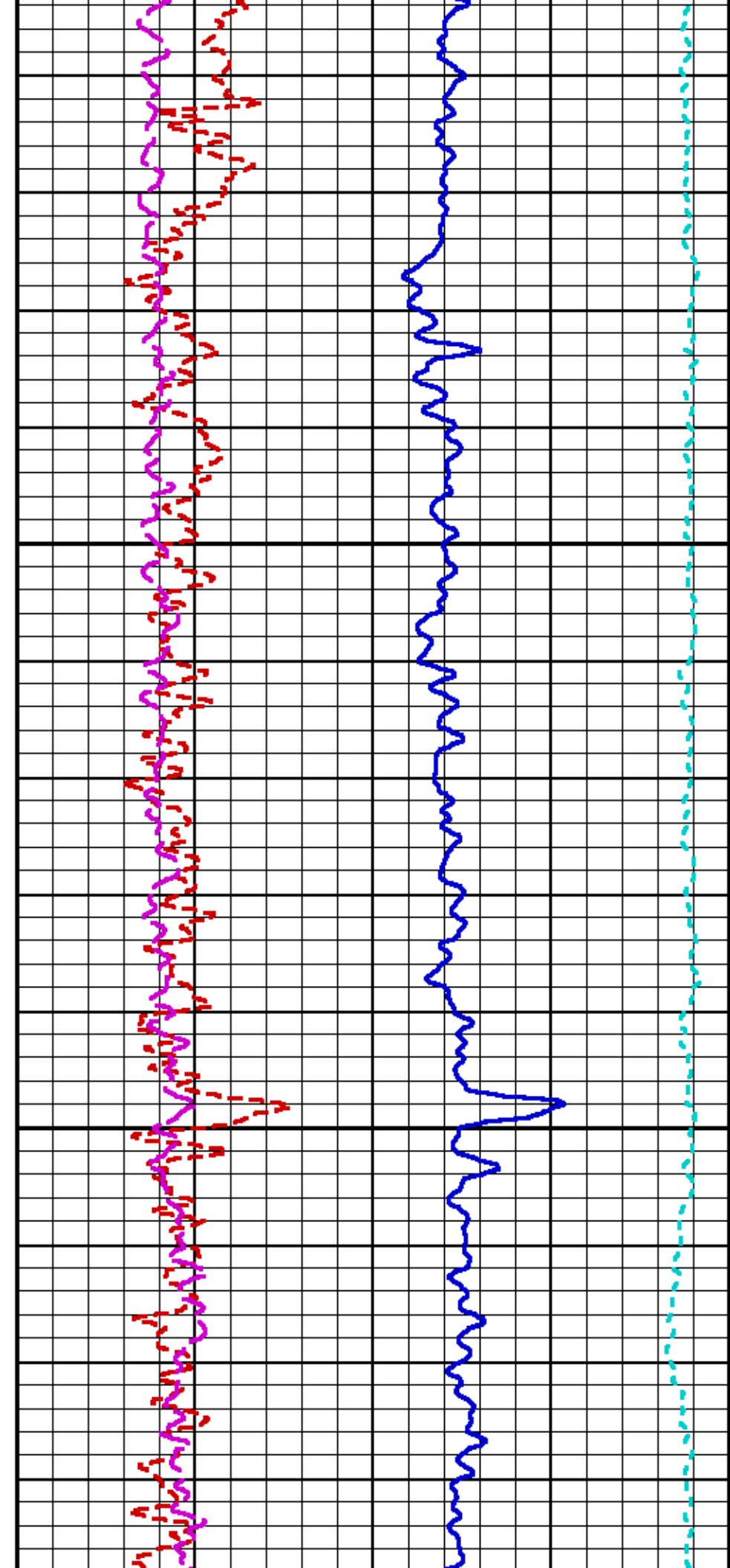


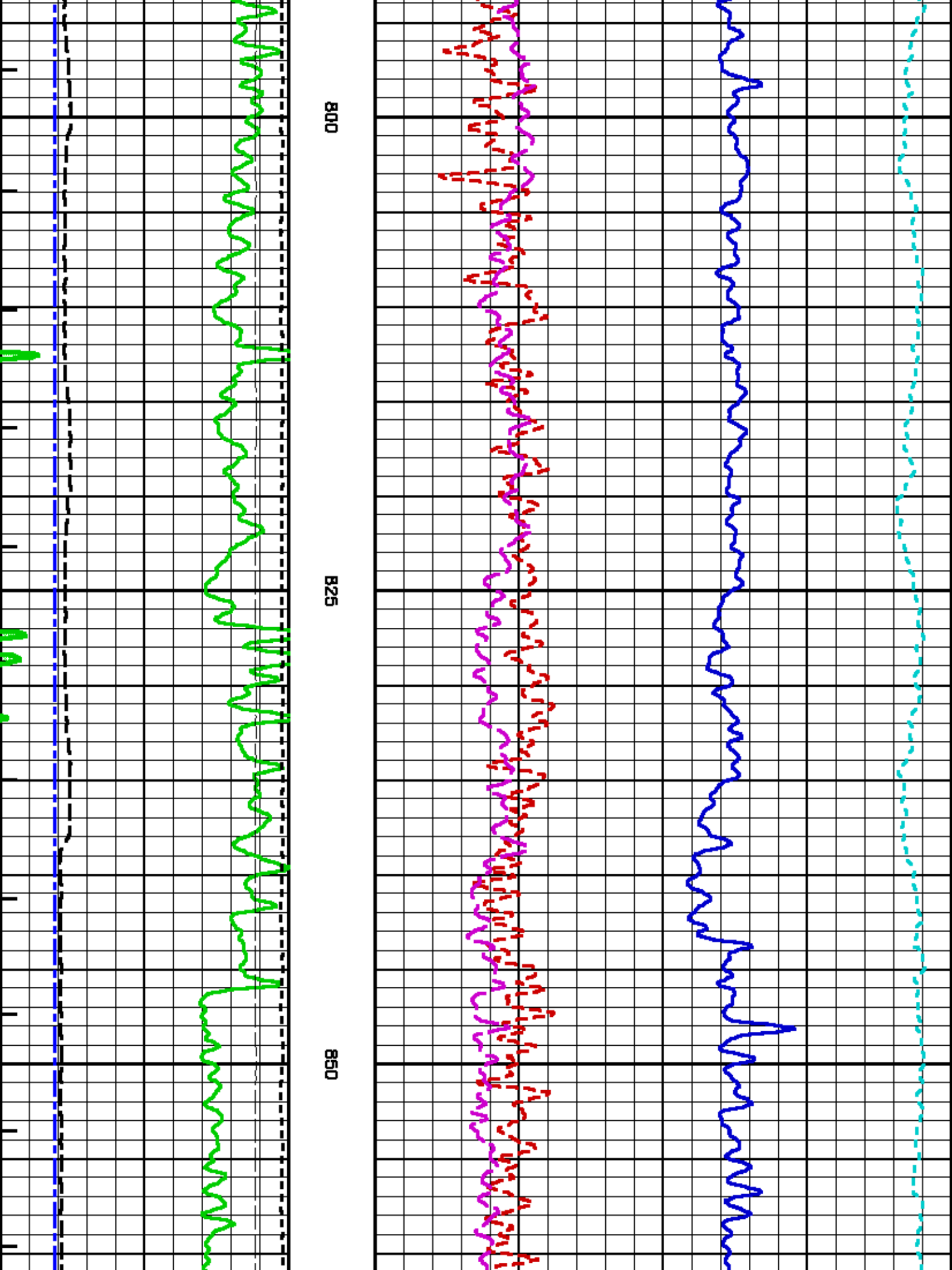


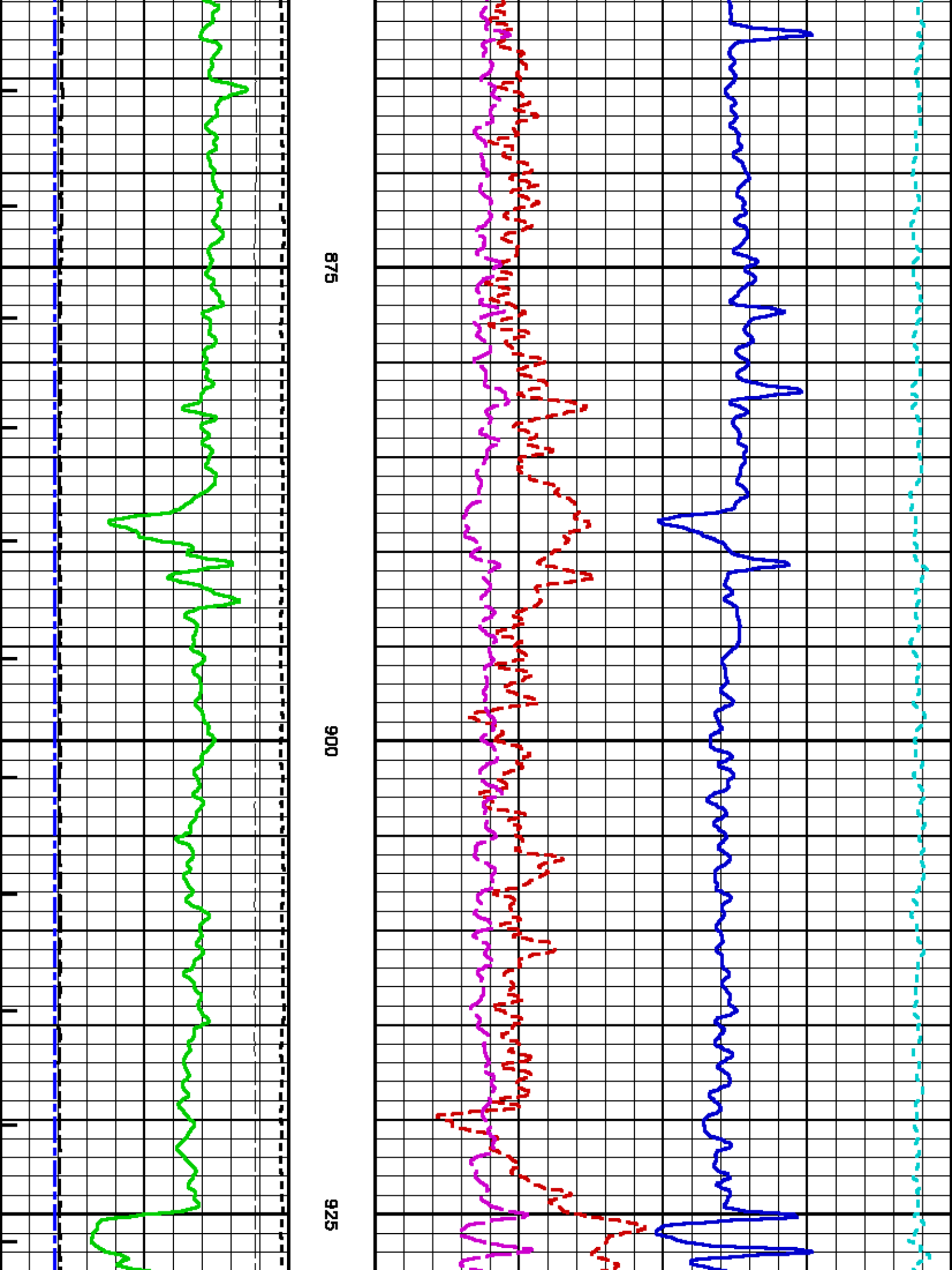


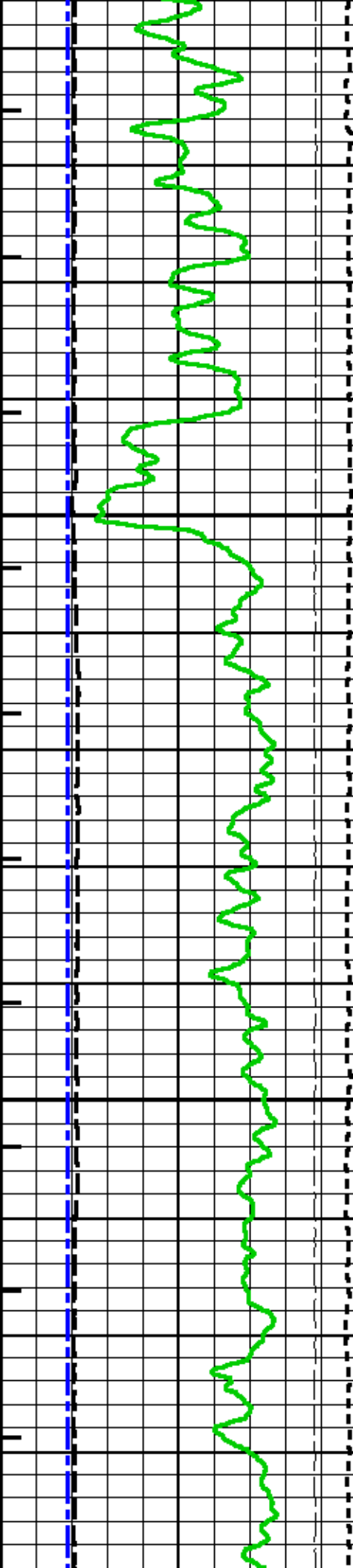
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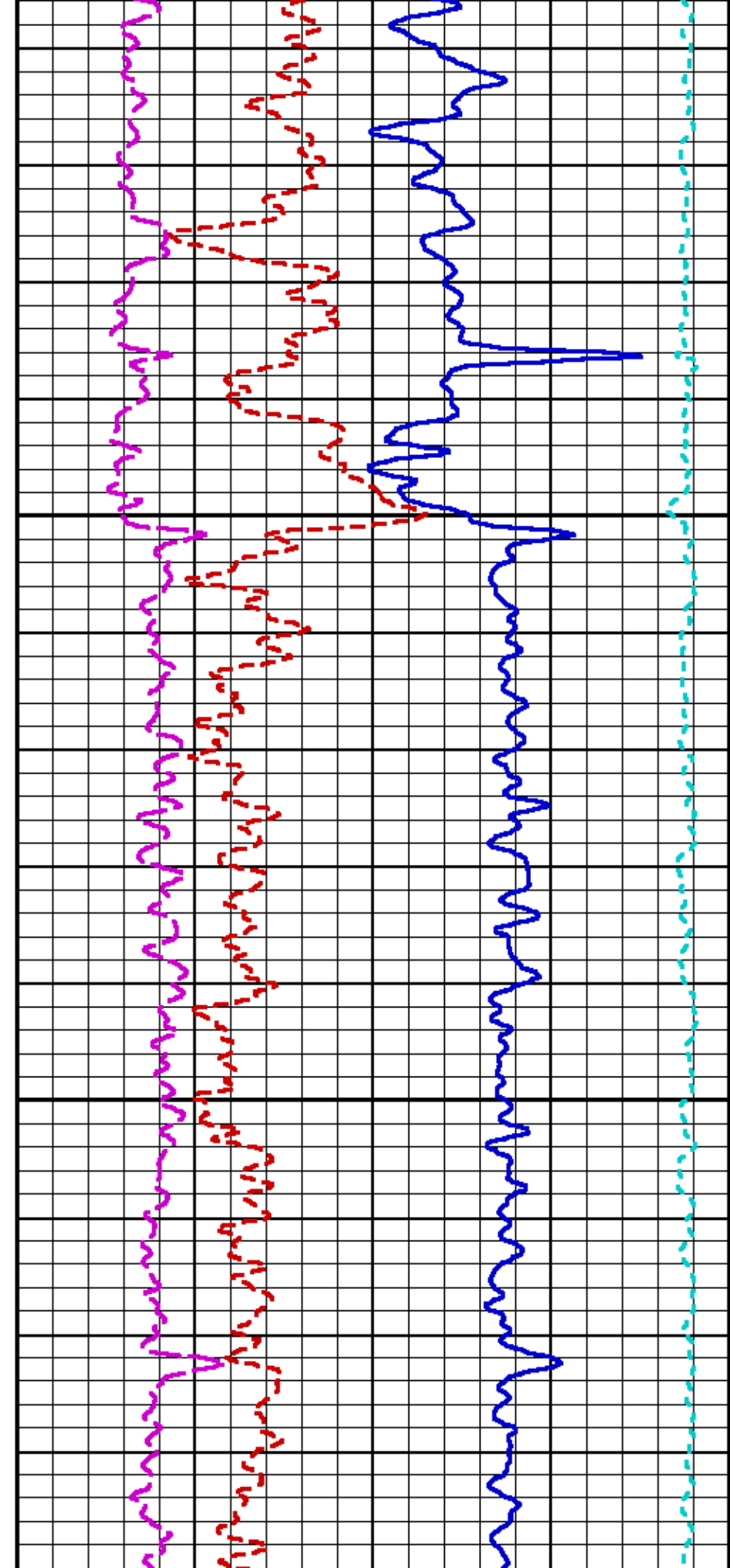


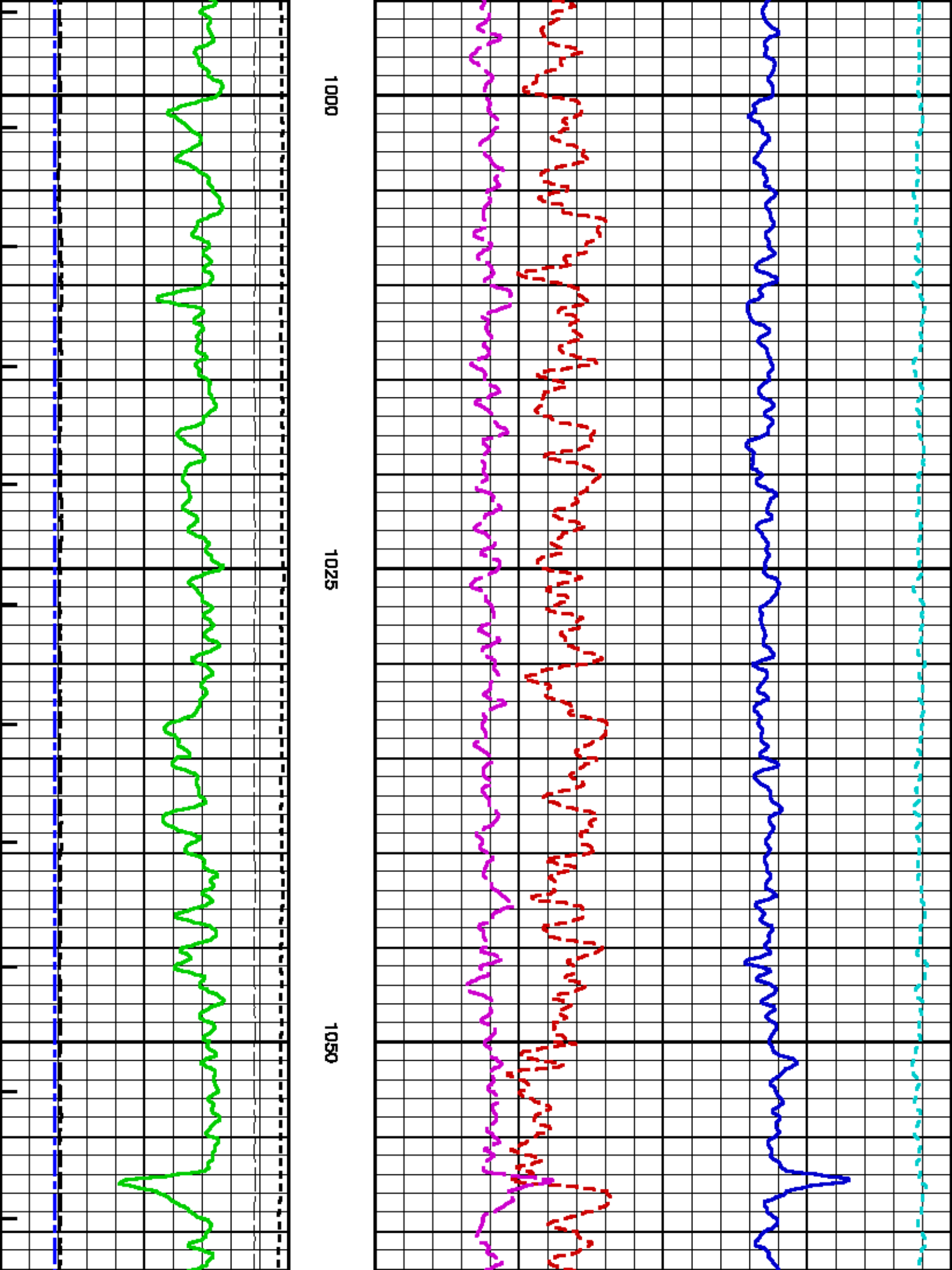


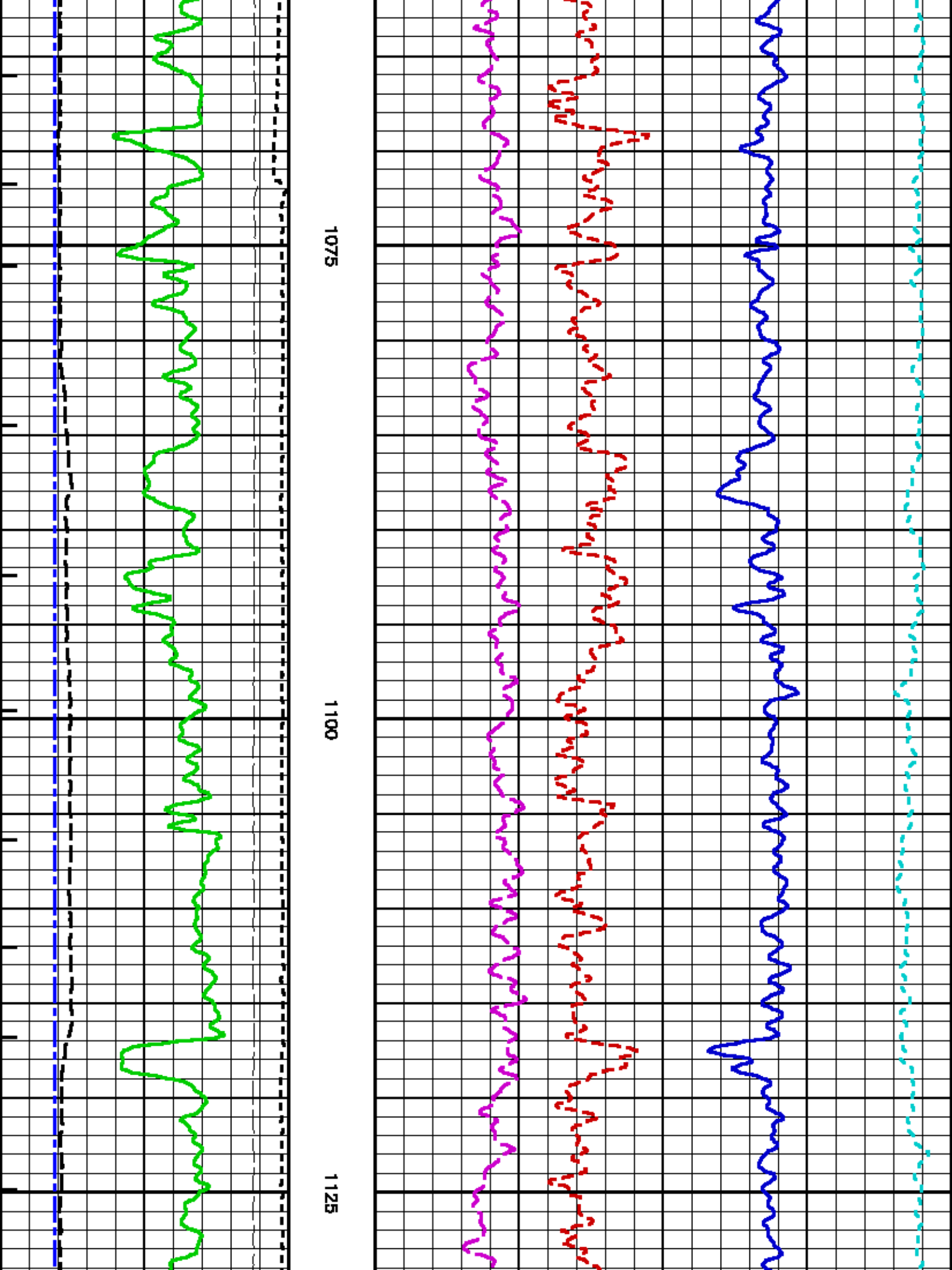


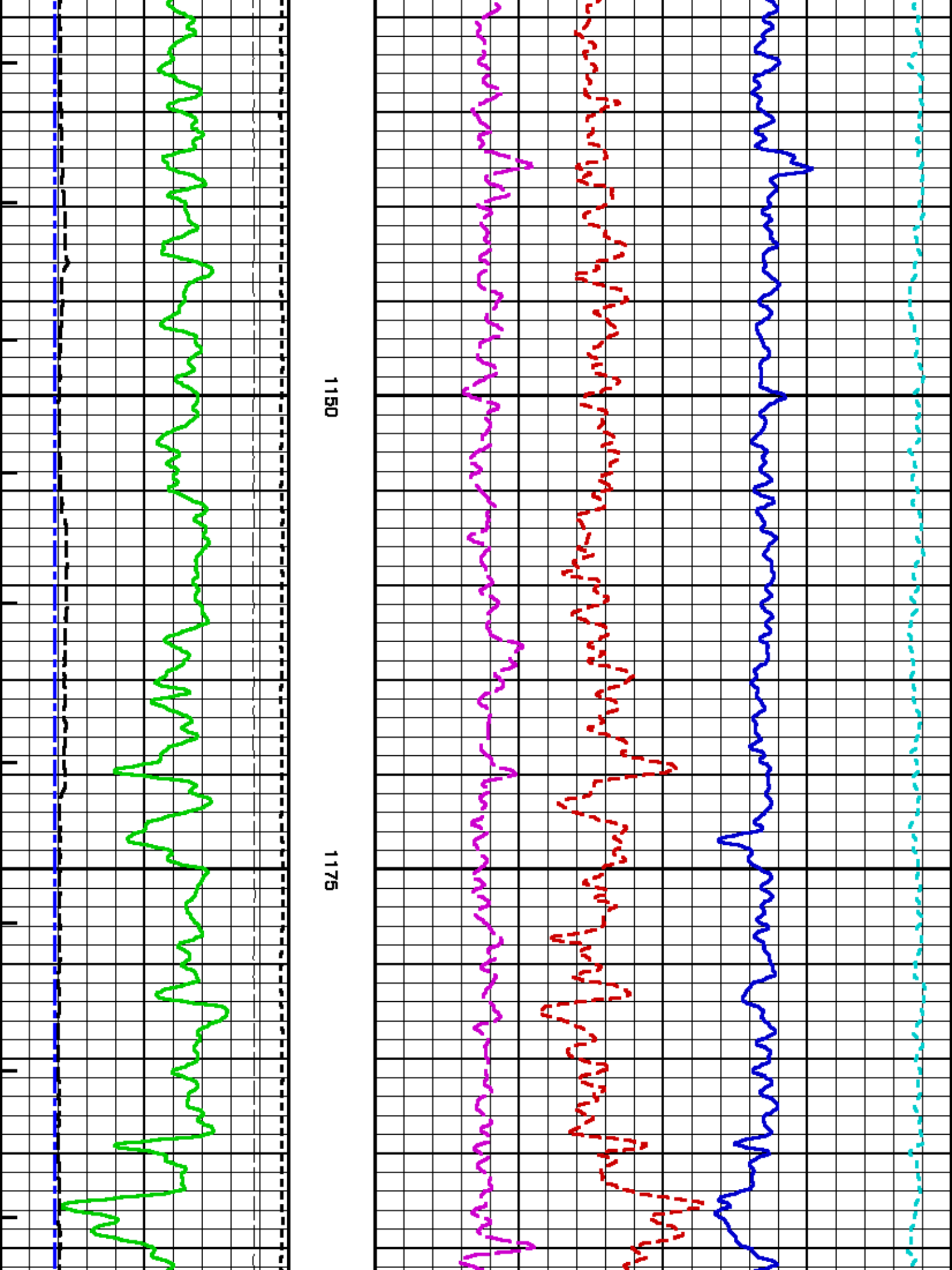
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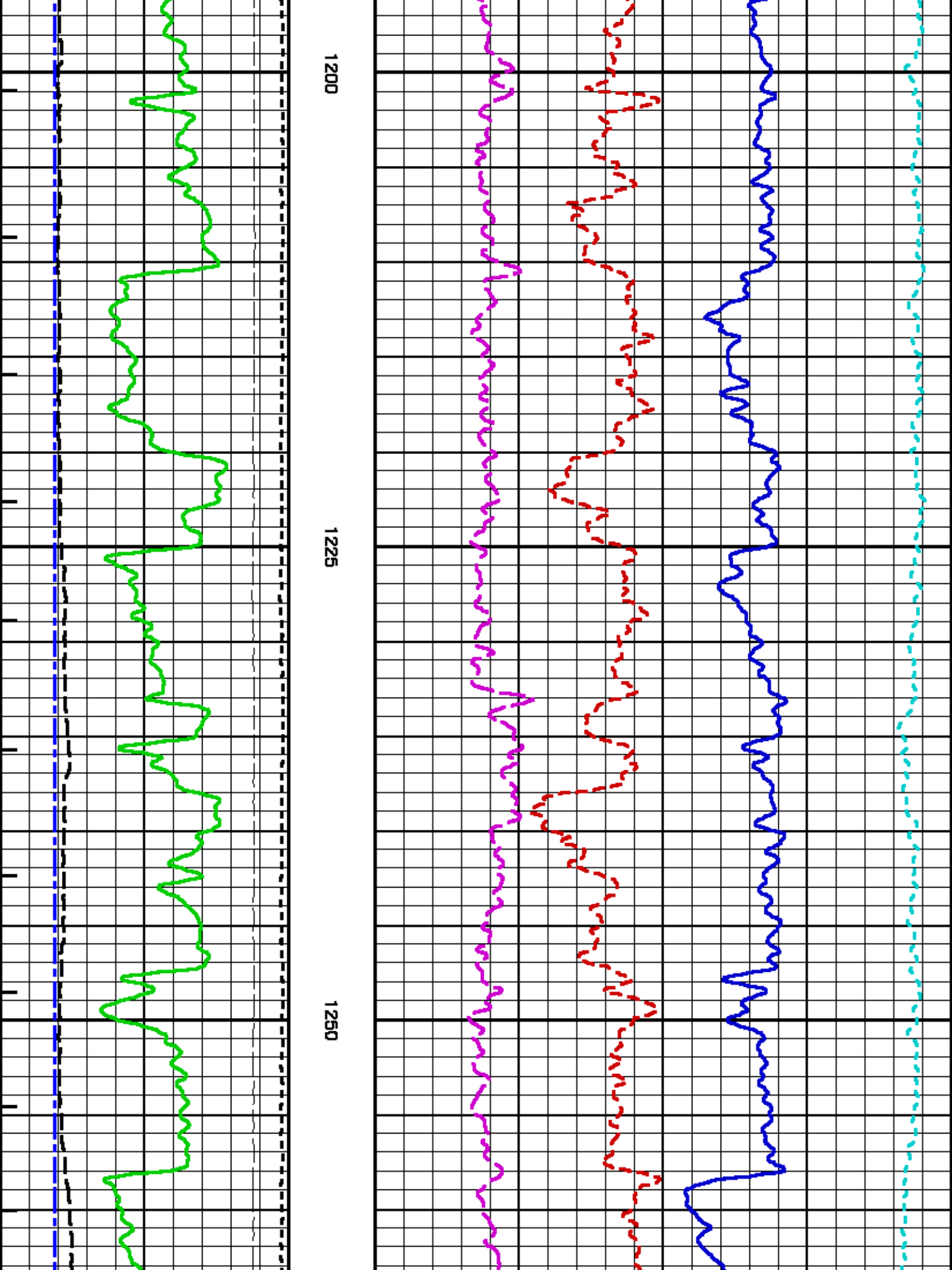






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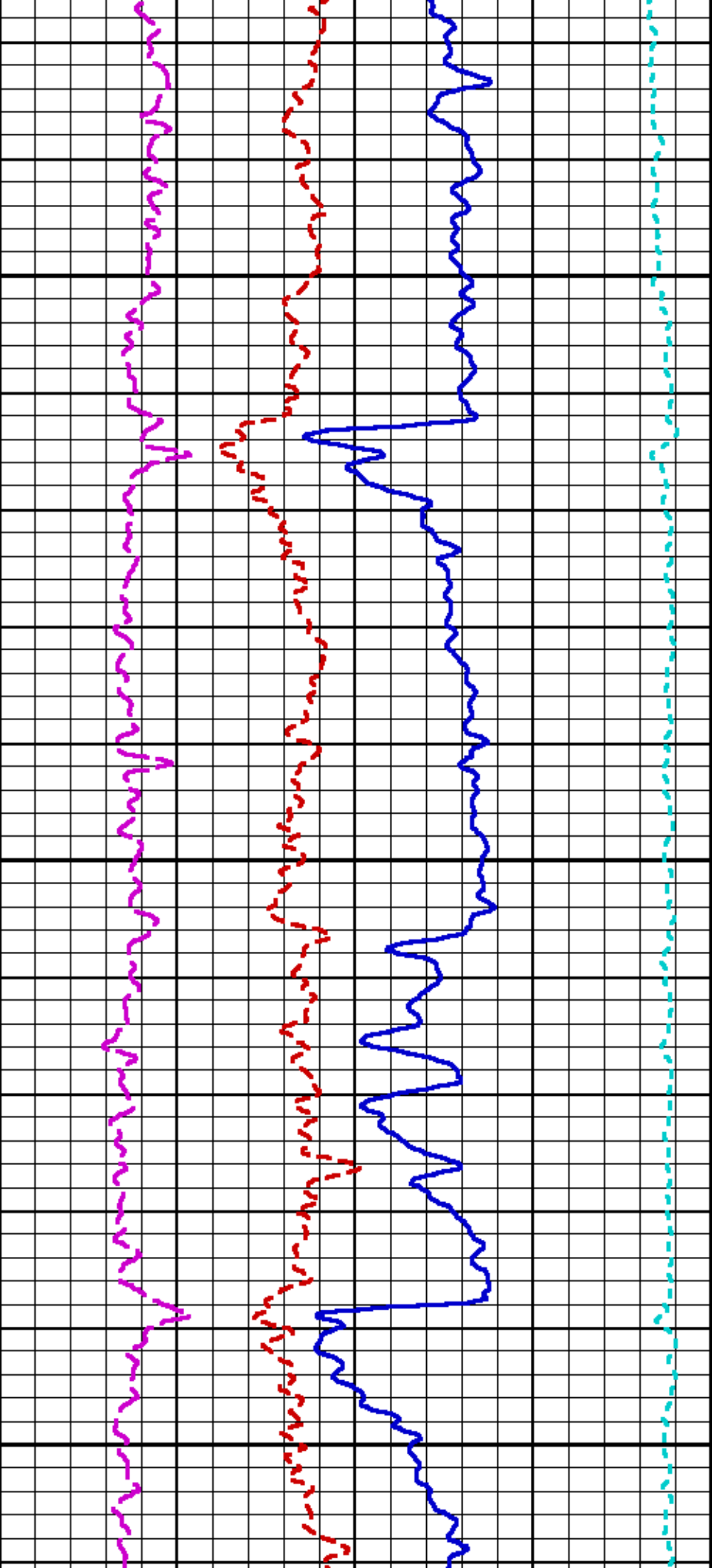
1175



1200

1225

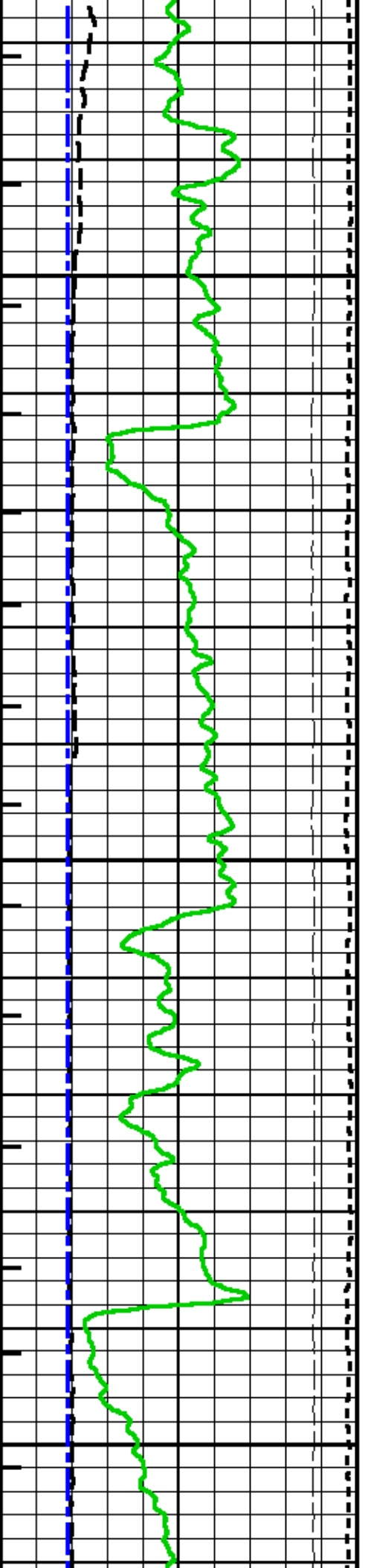
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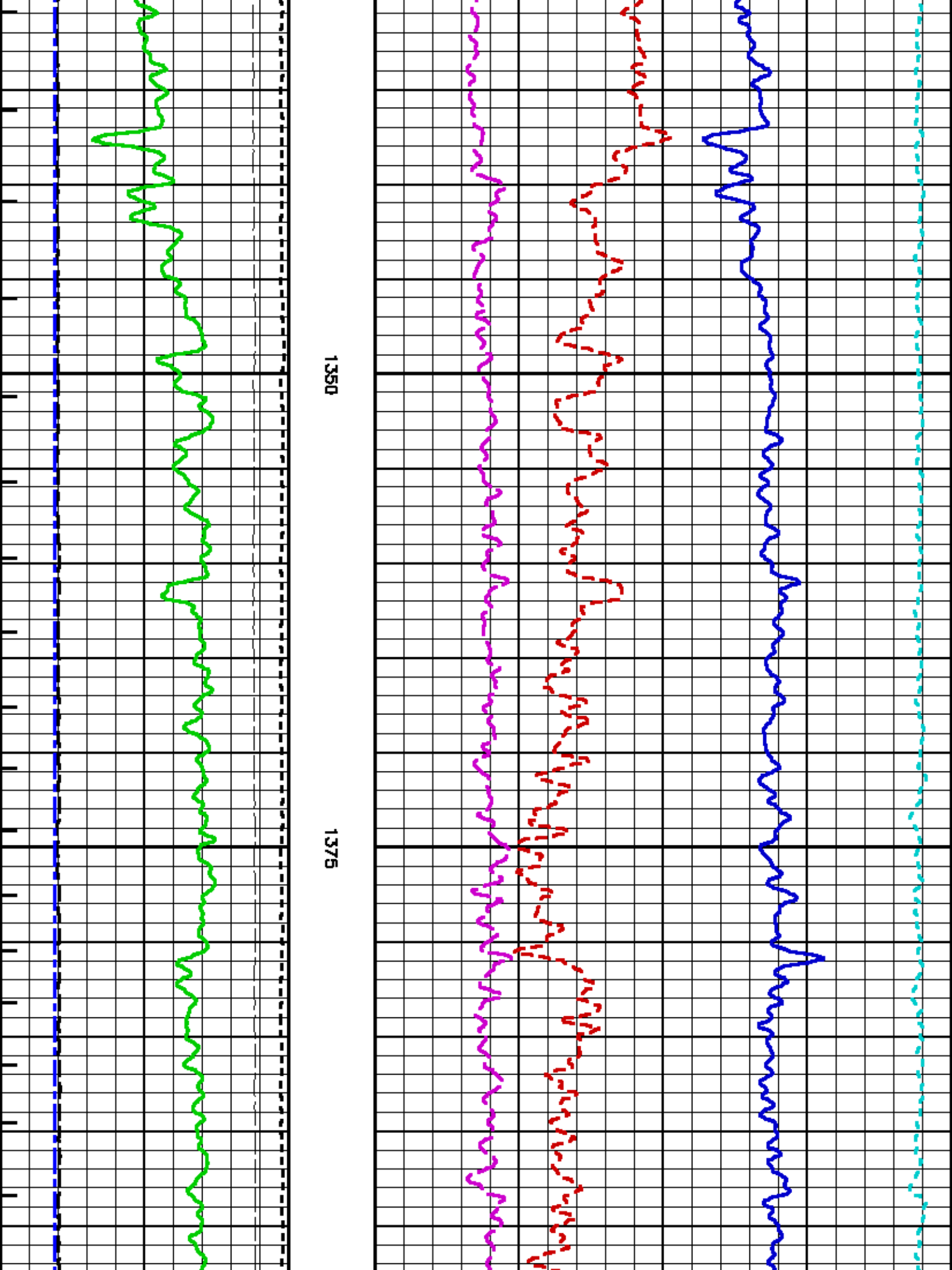


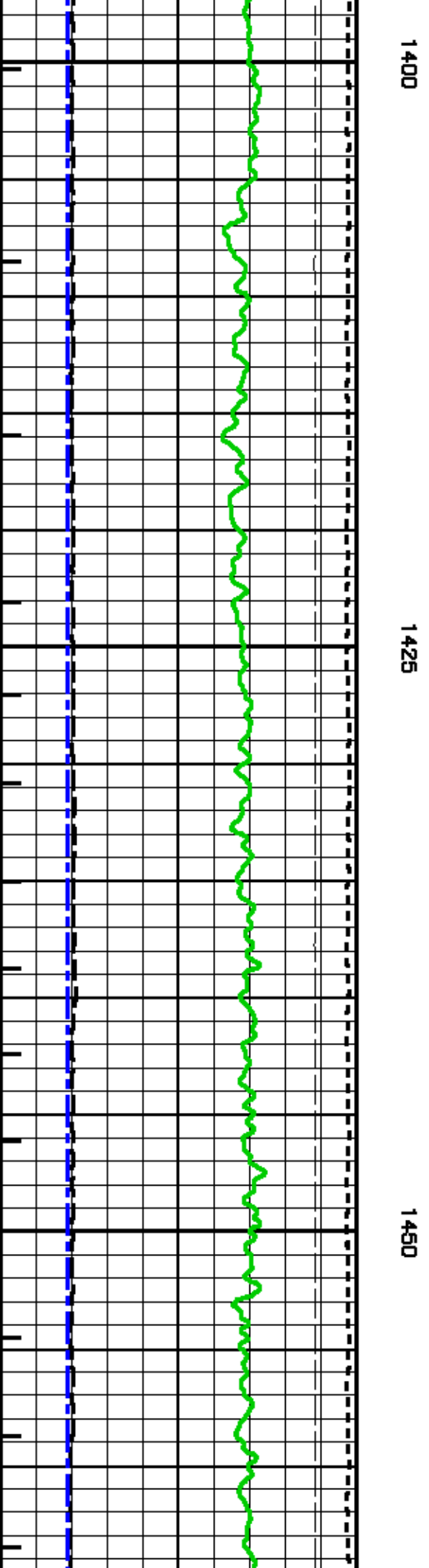
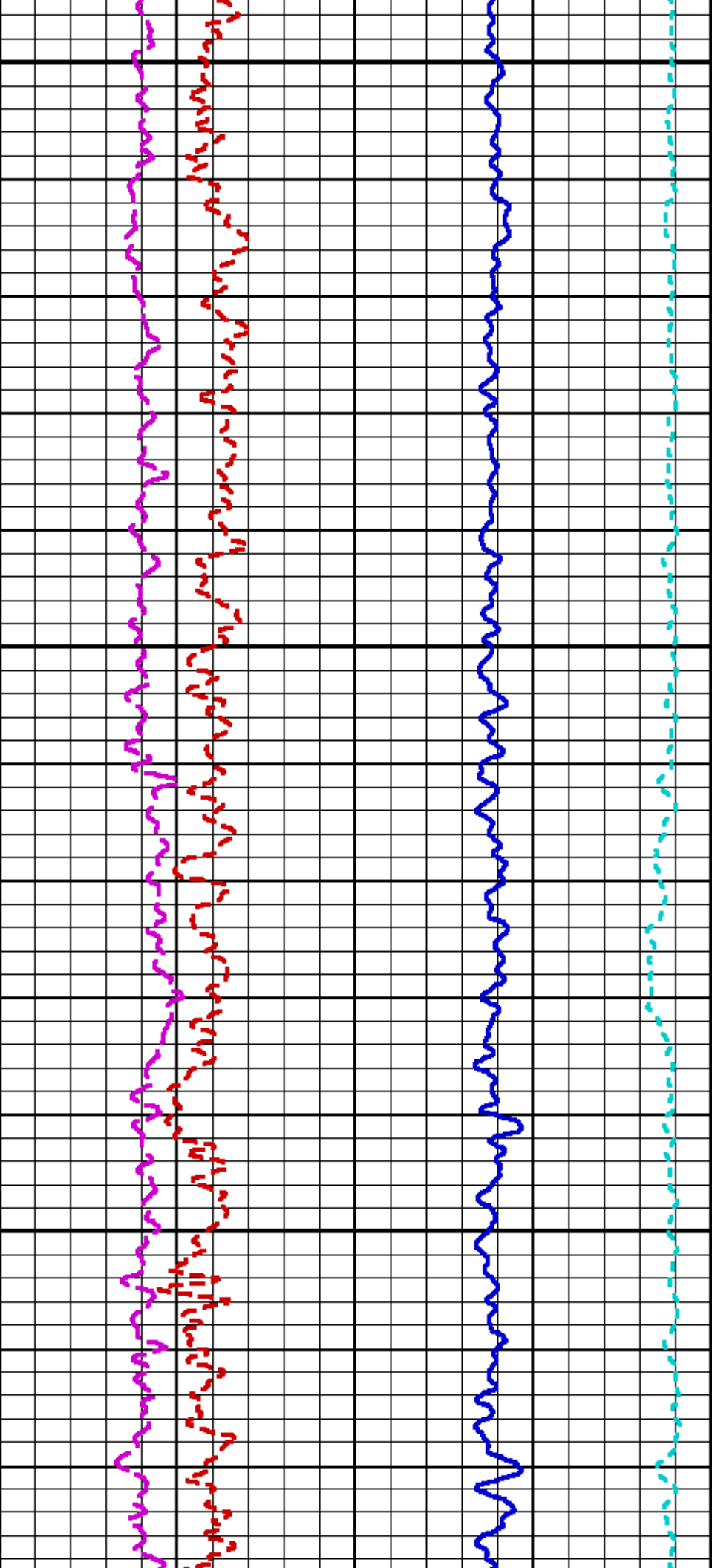
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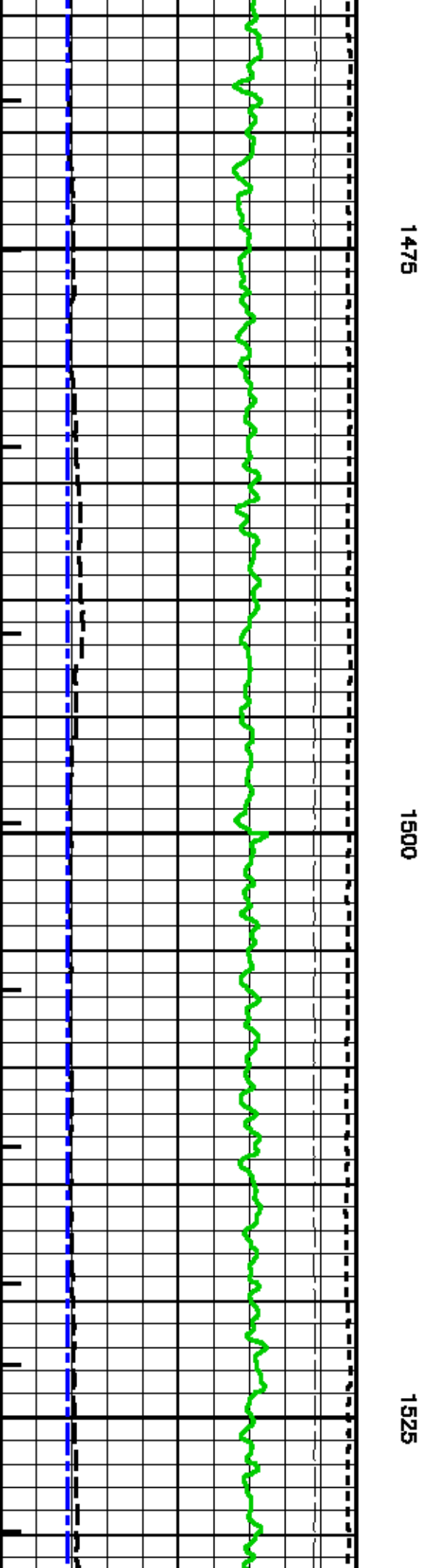
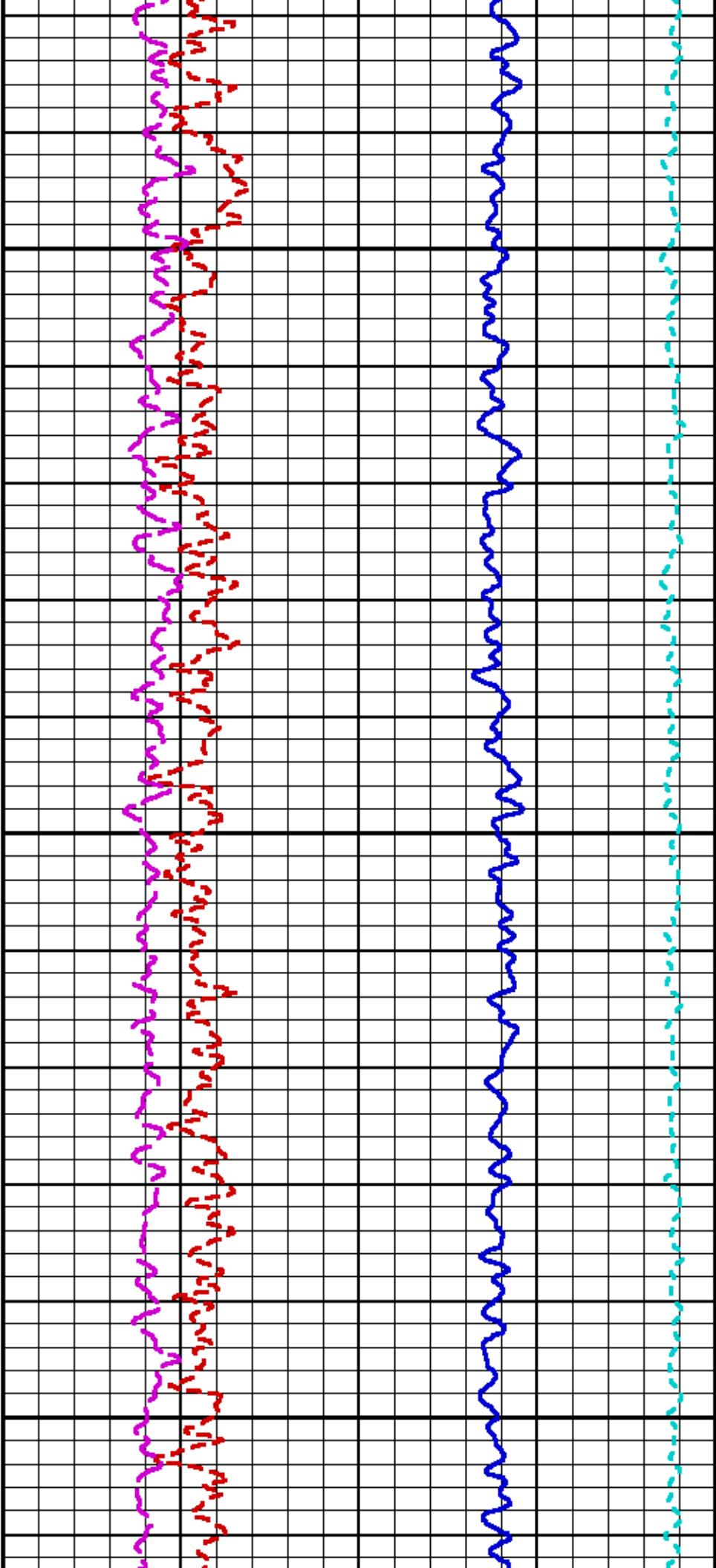
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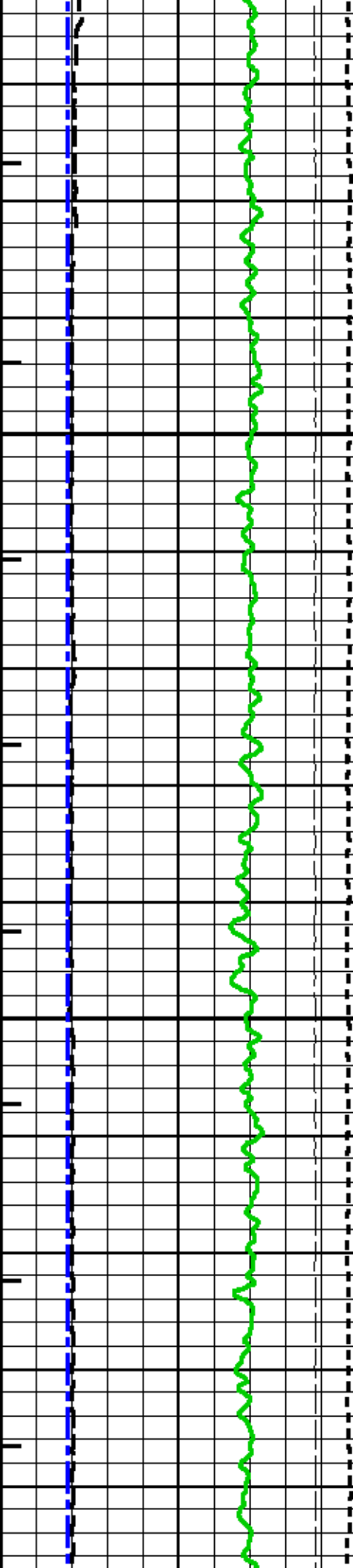
1325





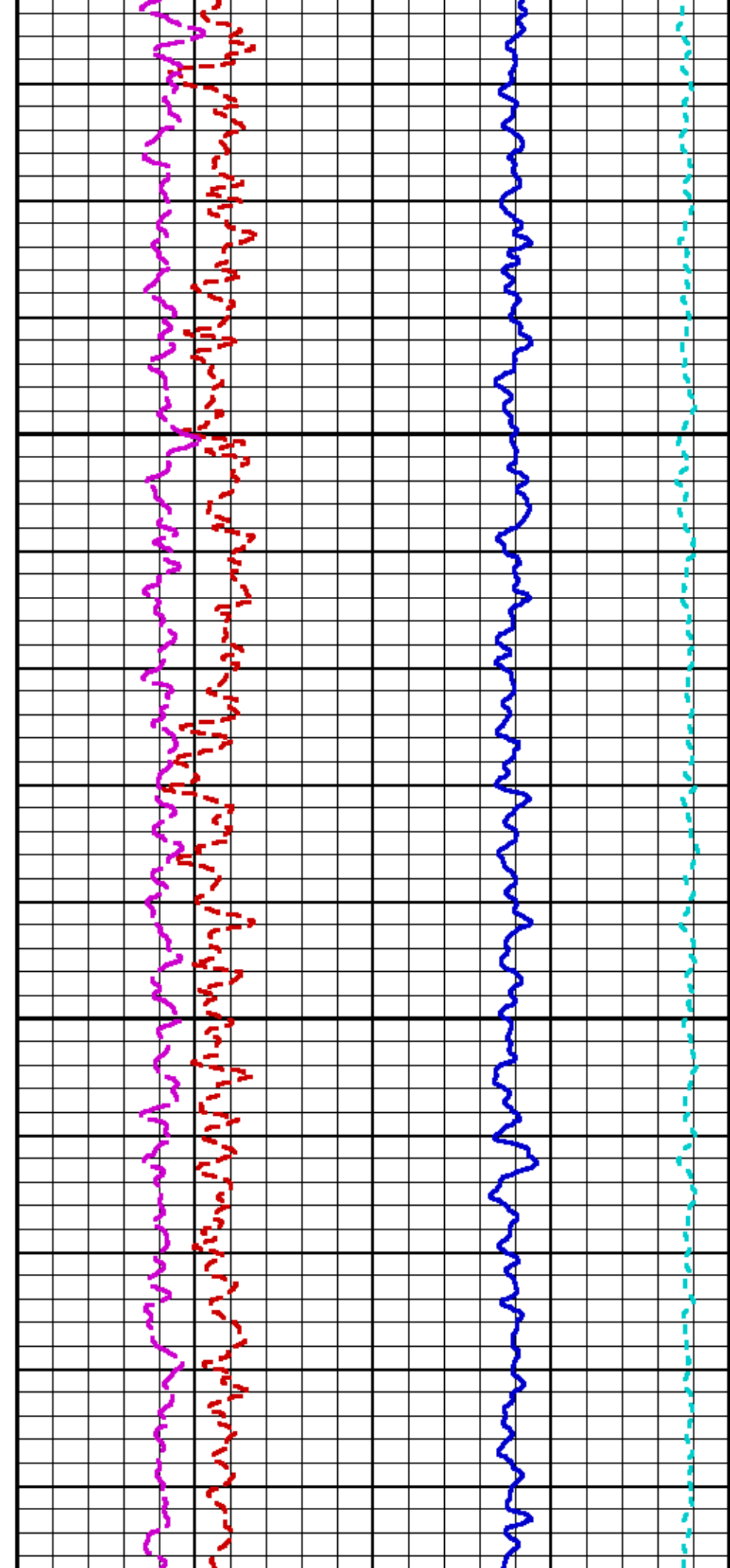


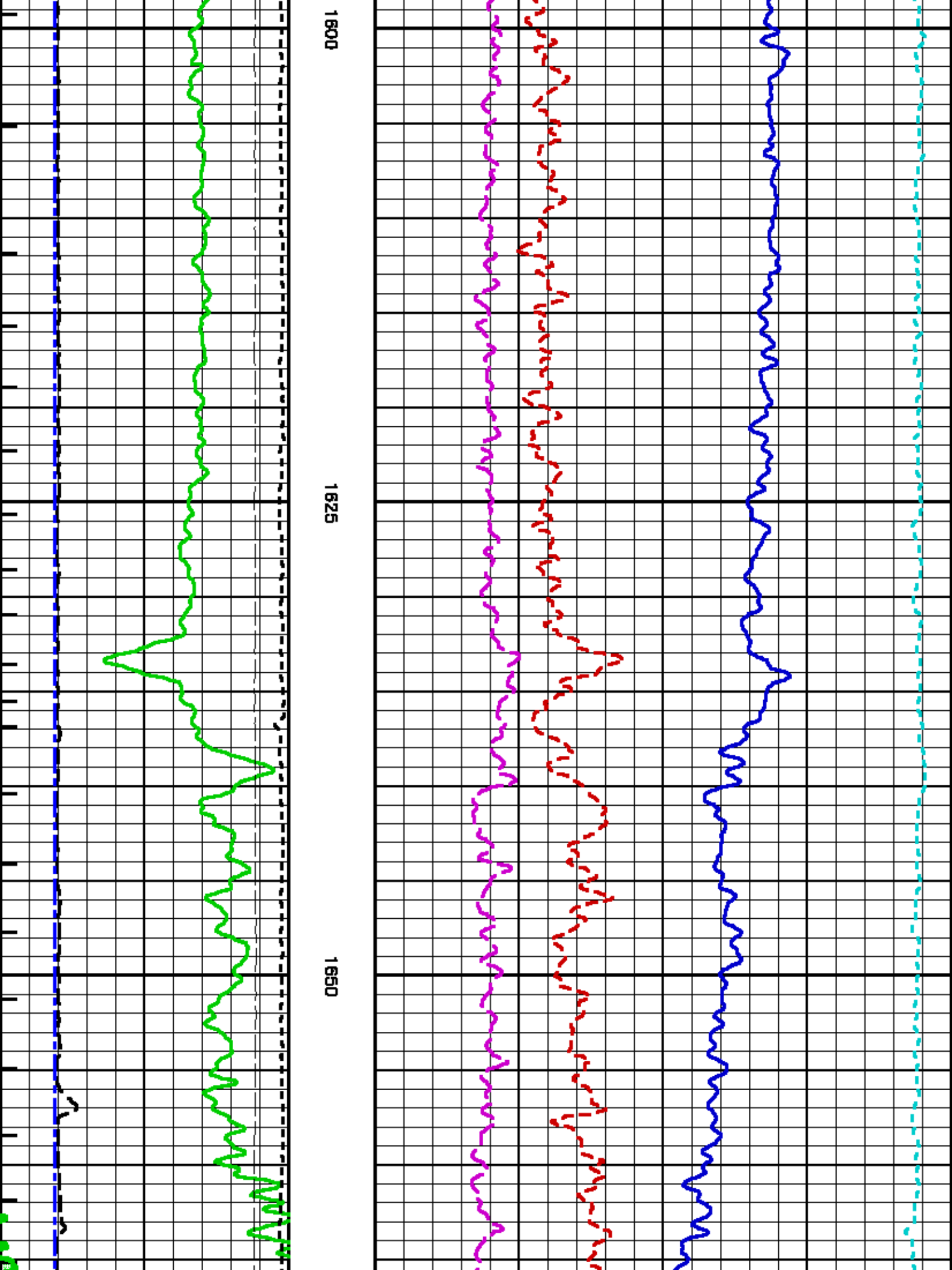


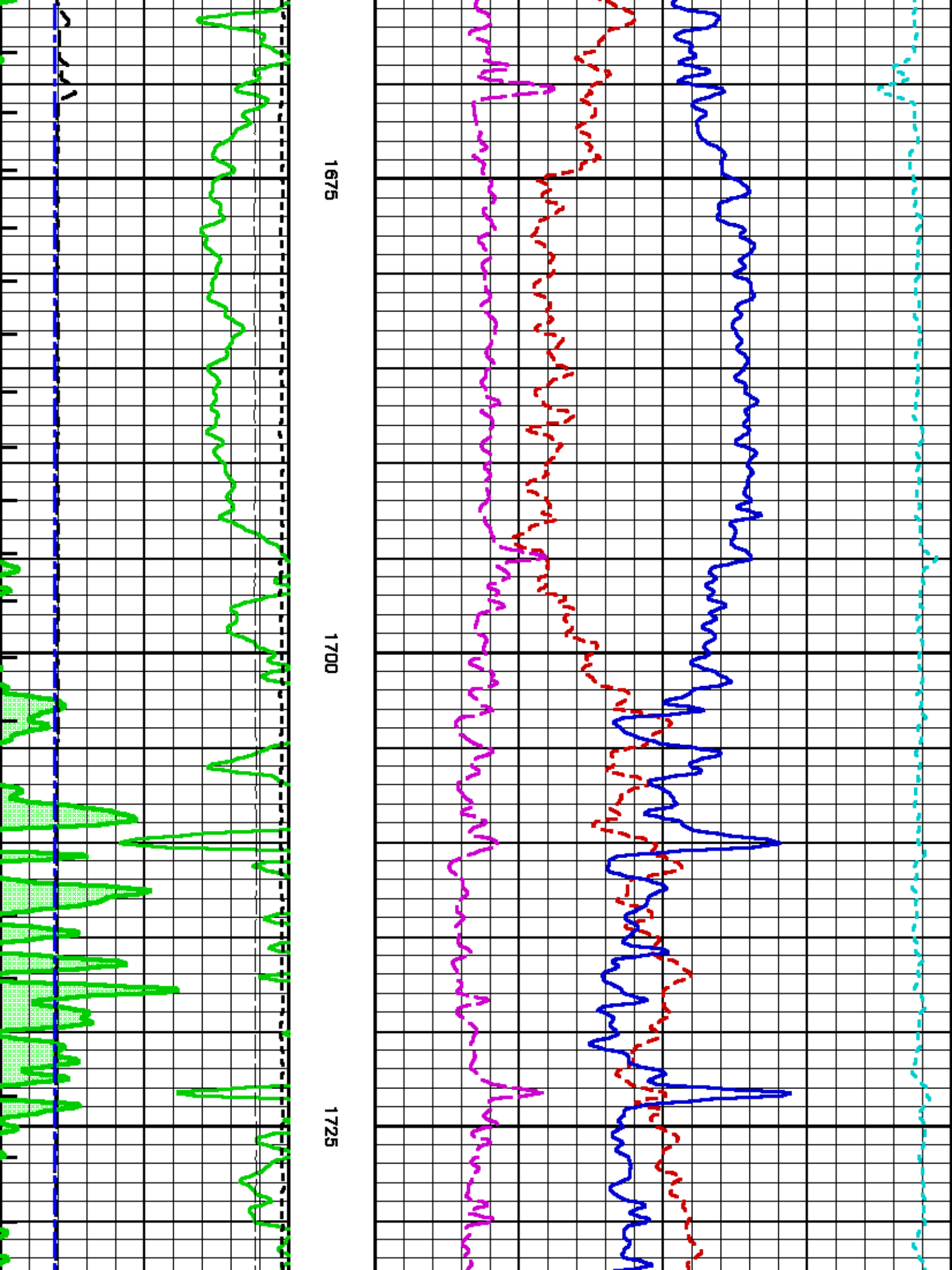


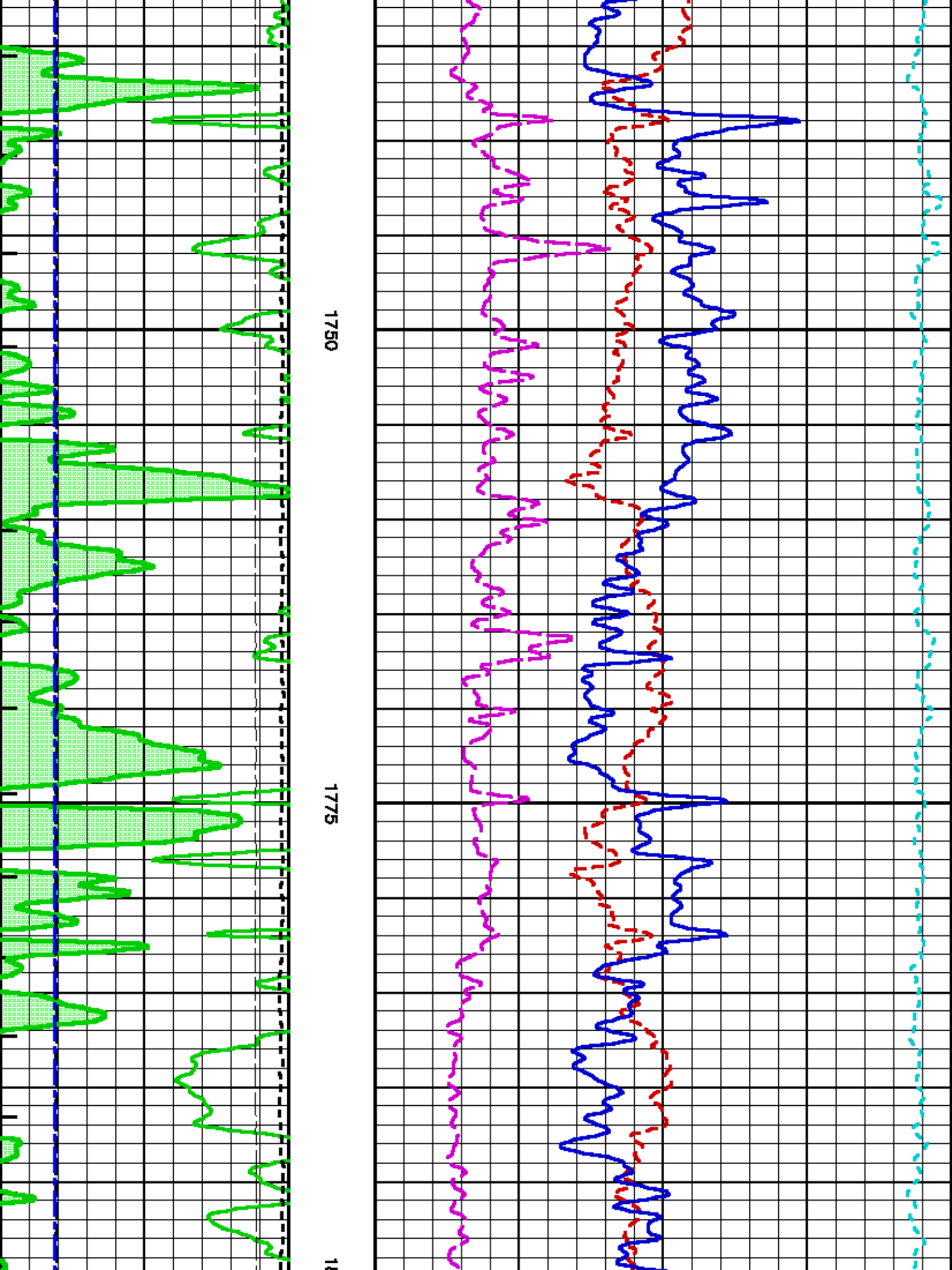
1550

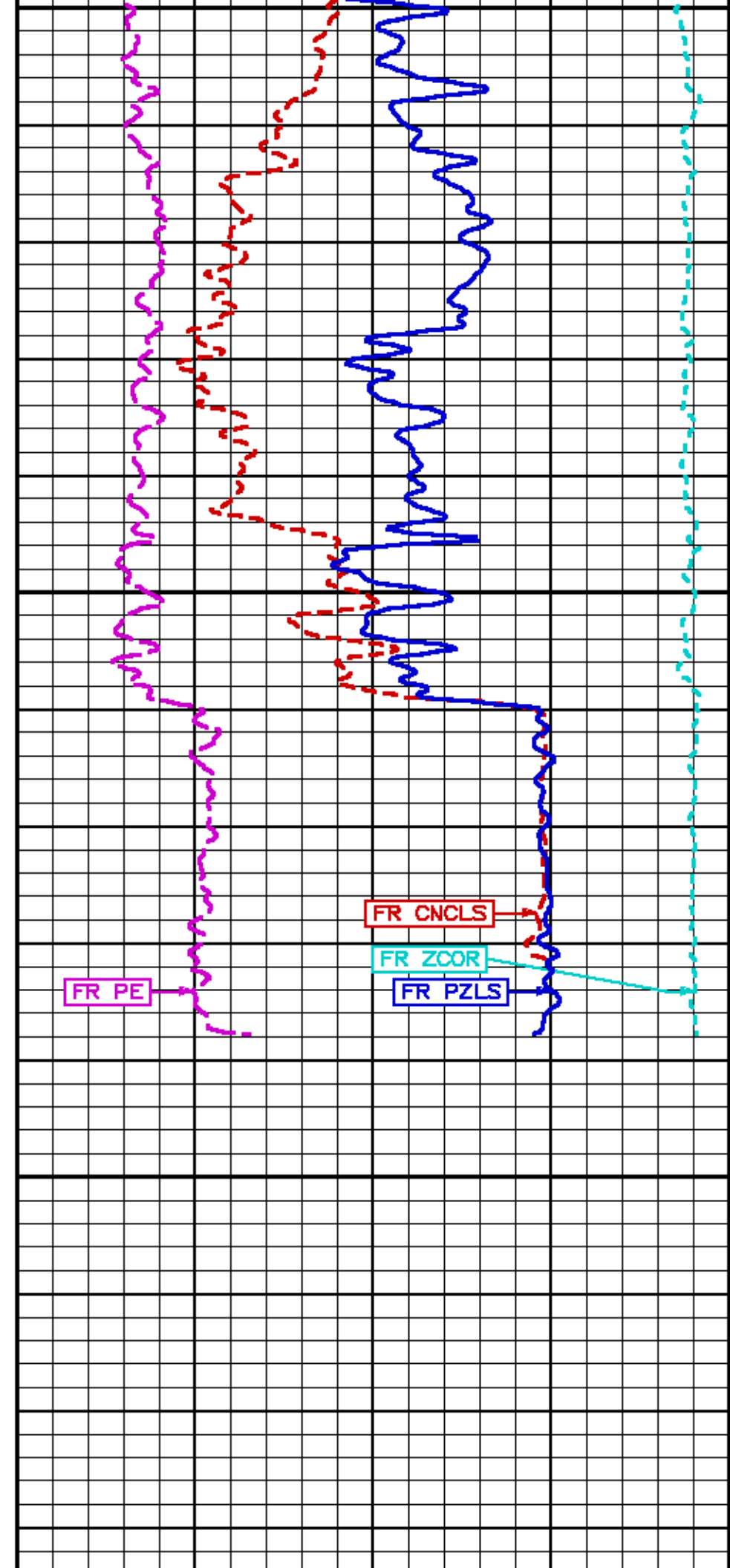
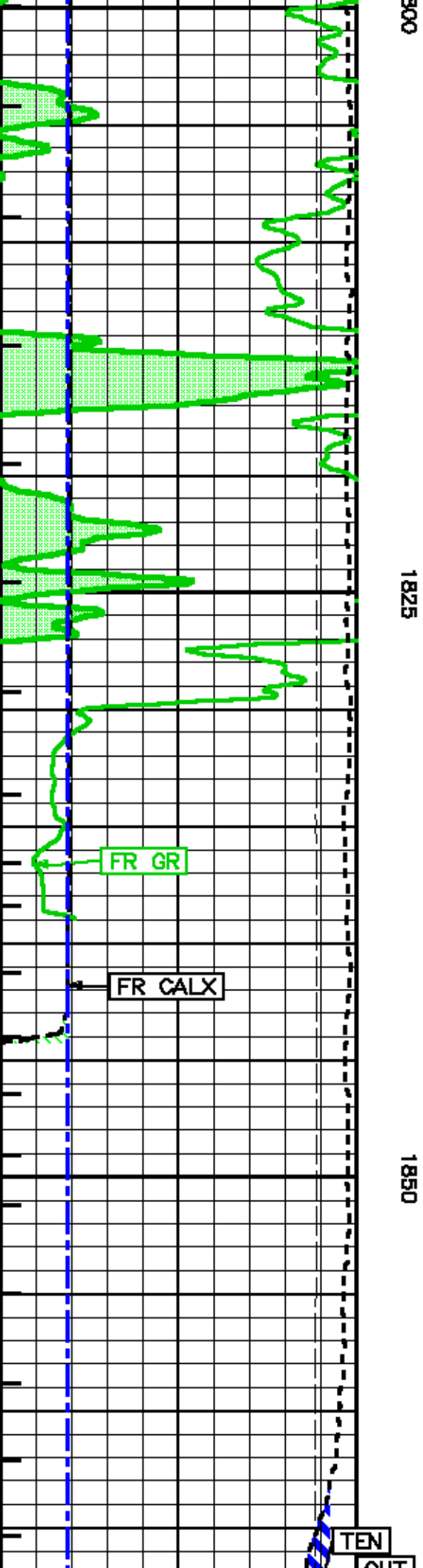
1575

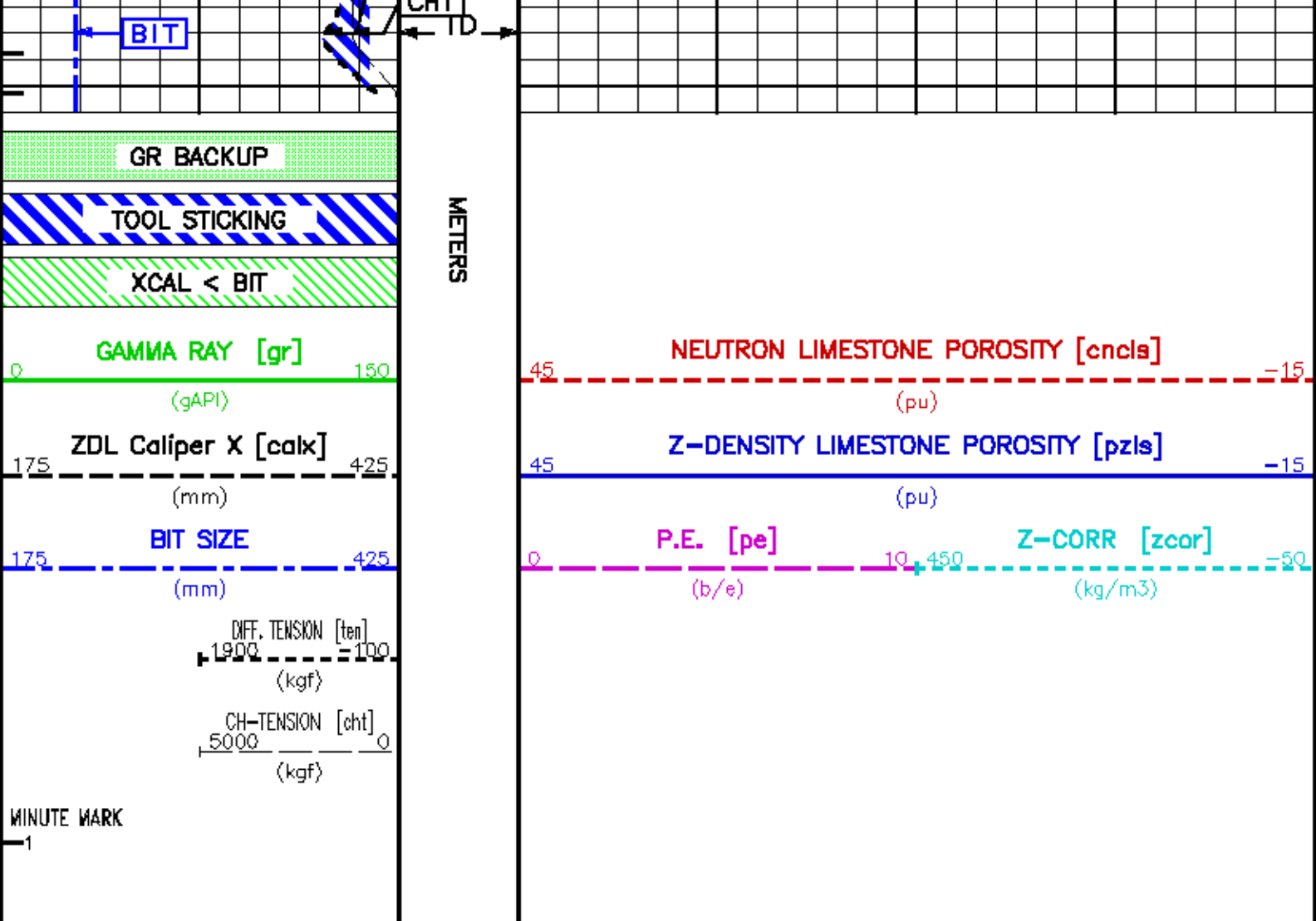












REPEAT LOG - LIMESTONE MATRIX

ECLIPS 6.11 Aug 06, 2010
Updates: 1 Patches: 1

Mon Feb 13 12:58:58 2012

Perplt /main/62

Cplot

Pdf_Cpp /main/16

Fileview 5.51

PARAMETER AND FILTER SUMMARY REPORT

File: /data/husky_CA212310/m77evh_xc02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 1641.734 m BOTTOM DEPTH: 1872.062 m

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
CHT	FILTER ()	medium (1)		TOP	BOTTOM
Y AXIS CALIPER	FILTER ()	medium (1)		..	..
TENSION	FILTER ()	medium (1)		..	..
GR	FILTER ()	medium (1)		..	..
CN	FILTER ()	medium (1)		..	..
CALIPER	FILTER ()	medium (1)		..	..
	FILTER (.h)	medium (1)		..	..
	FILTER (.l)	medium (1)		..	..

ZDL MED RES	FILTER (hrd1*)	medium	..	..
	FILTER (hrd1a*)	medium	..	..
	FILTER (hrd2*)	medium	..	..
	FILTER (hrd2a*)	medium	..	..
	FILTER (soft*)	medium	..	..

BOREHOLE & CEMENT

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

CN PROCESSING

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

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
DENSITY POROSITY	RHDfluid	1.000	g/cm3	TOP	BOTTOM
	RHDmatrix (line)	2.710	g/cm3	..	..
ZDL	DENK TRACKING	ON		..	..

CURVE DESCRIPTION REPORT

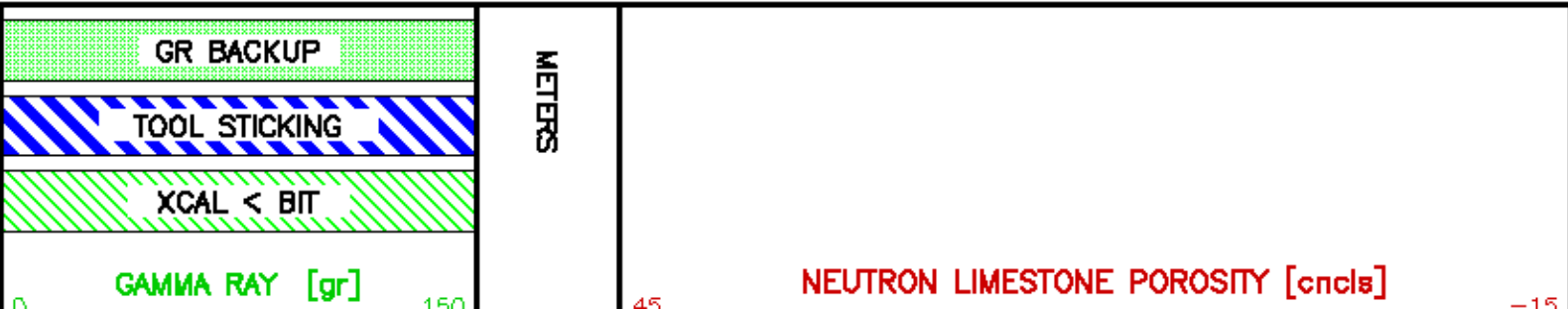
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Feb 13 04:06:43 2012	BIT SIZE
F1:CALX	Feb 13 04:06:43 2012	CALIPER FROM X-AXIS OF XY CALIPER(S)
F1:CHT	Feb 13 04:06:43 2012	CABLE HEAD TENSION
F1:CNCLS	Feb 13 04:06:43 2012	BOREHOLE SIZE CORRECTED LIMESTONE COMPENSATED NEU POROSITY
F1:GR	Feb 13 04:06:43 2012	GAMMA RAY
F1:MMRK	Feb 13 04:06:43 2012	MINUTE MARK
F1:PE	Feb 13 04:06:43 2012	PHOTO ELECTRIC CROSS-SECTION
F1:PZLS	Feb 13 04:06:43 2012	POROSITY FOR LIMESTONE MATRIX
F1:TEN	Feb 13 04:06:43 2012	DIFFERENTIAL TENSION
F1:ZCOR	Feb 13 04:06:43 2012	DENSITY CORRECTION

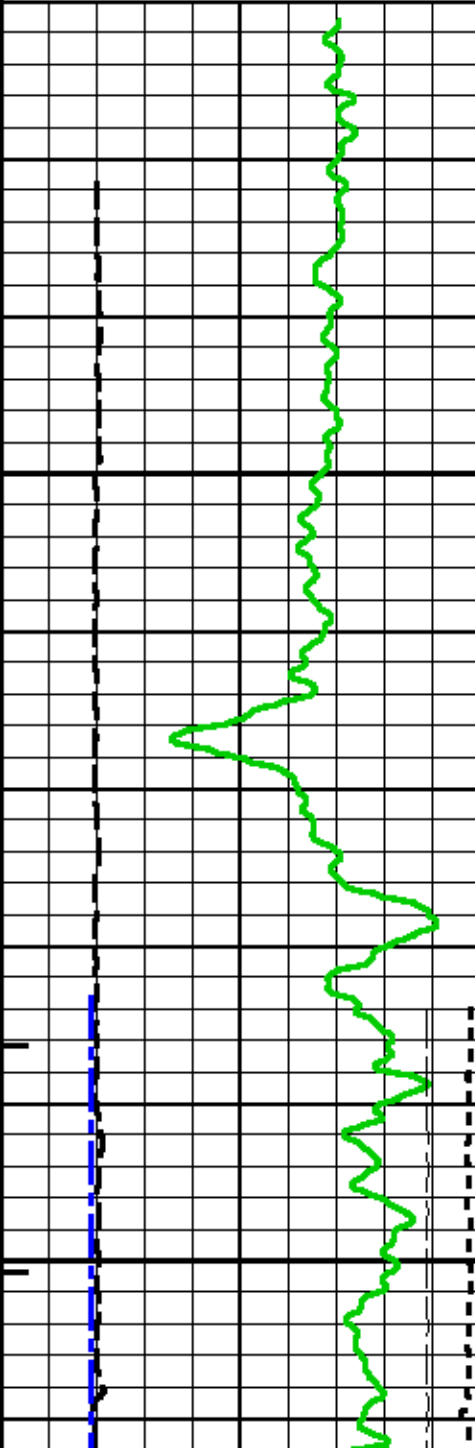
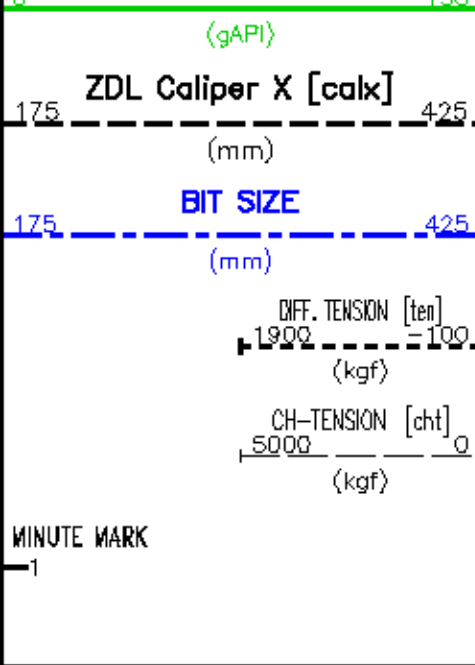
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
BIT	0.00	CNCLS	29.50	PZLS	29.95		
CALX	26.17	GR	31.59	TEN	0.00		
CHT	0.00	PE	29.95	ZCOR	29.95		

Presentation : epuz/datta/husky_CA212310/zdl_rpt_je.pdf [1:240 Scale]
 Plot Interval : 1610.96 - 1870.94 Meters

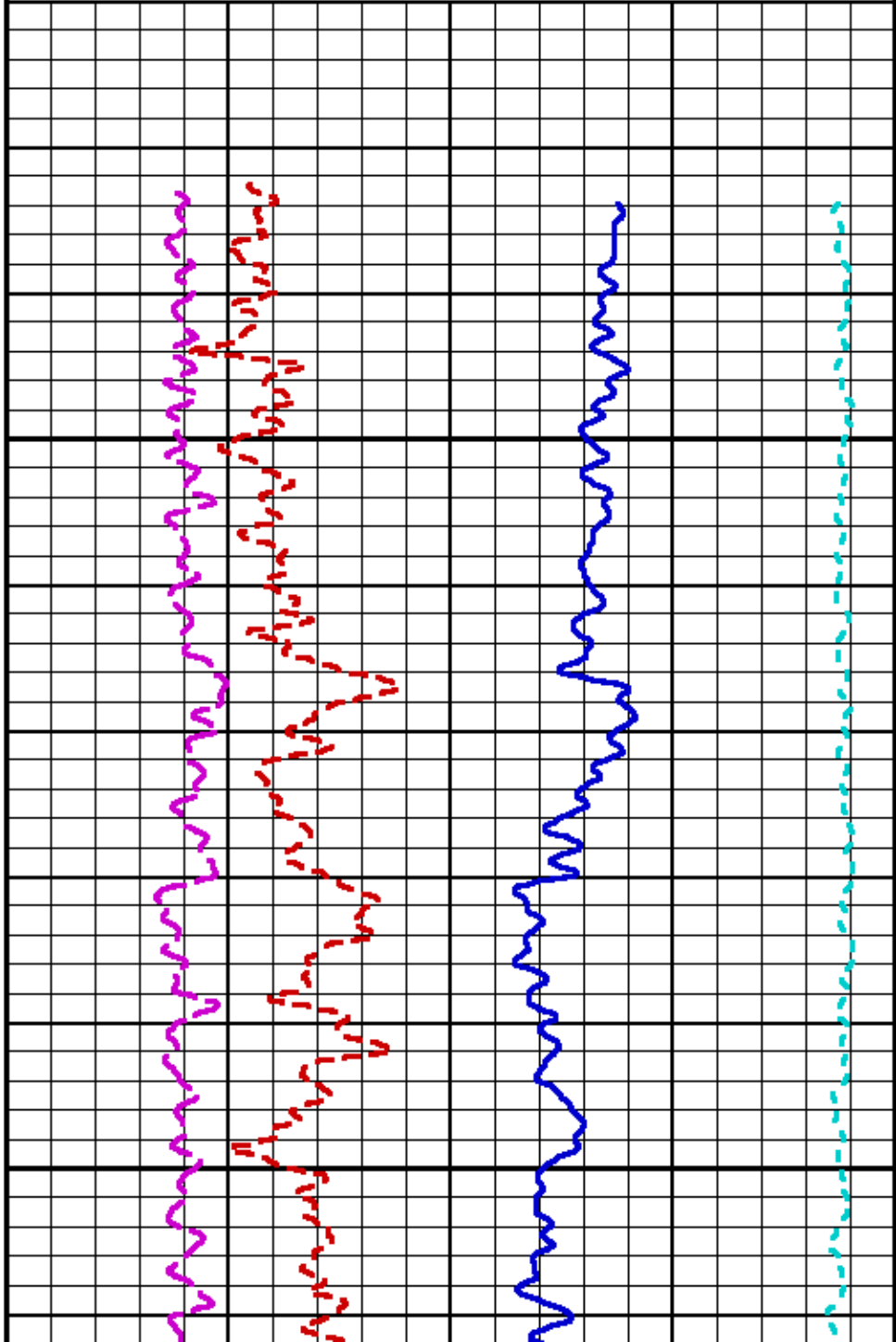
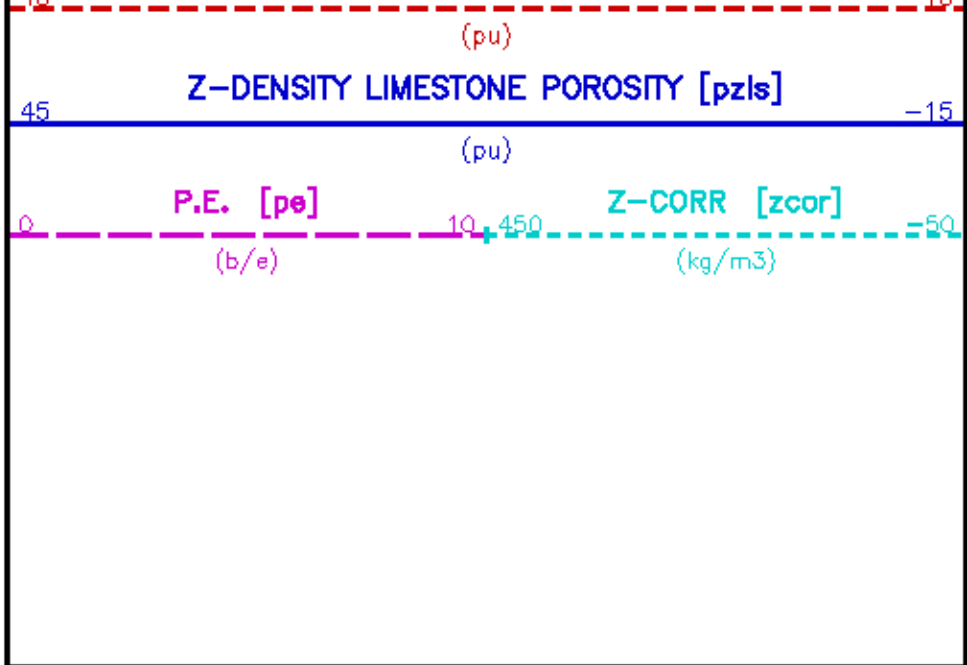
Data File 1 : F1 : epuz/datta/husky_CA212310/r1f1_rpt.tif
 Created On : Feb 13 04:06:43 2012
 Company : HUSKY OIL OPERATIONS LIMITED
 Well : LITTLE BEAR N-8
 Field : SLATER RIVER
 File Interval : 1606.57 - 1870.98 Meters
 Out : m77wh_x

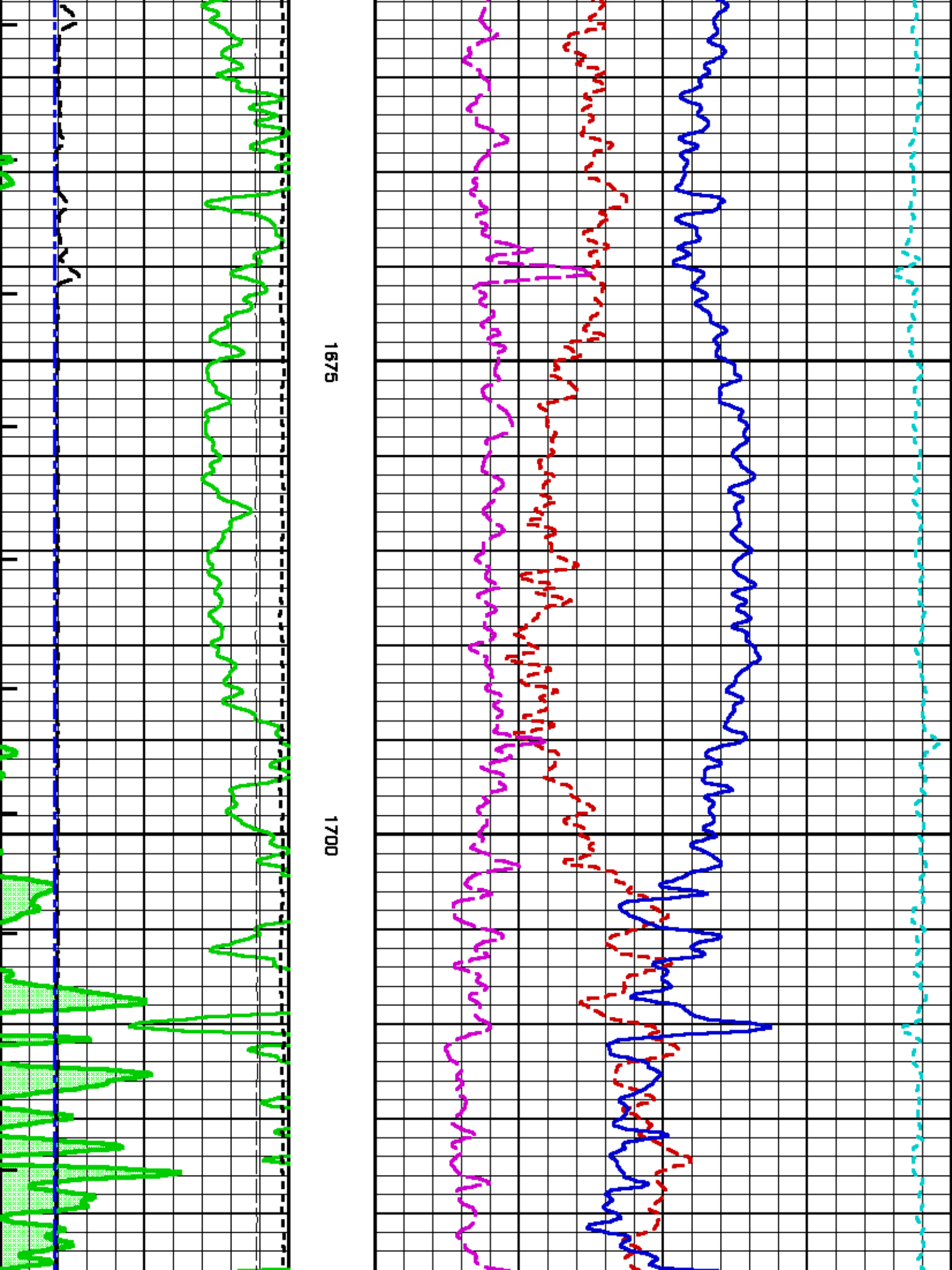


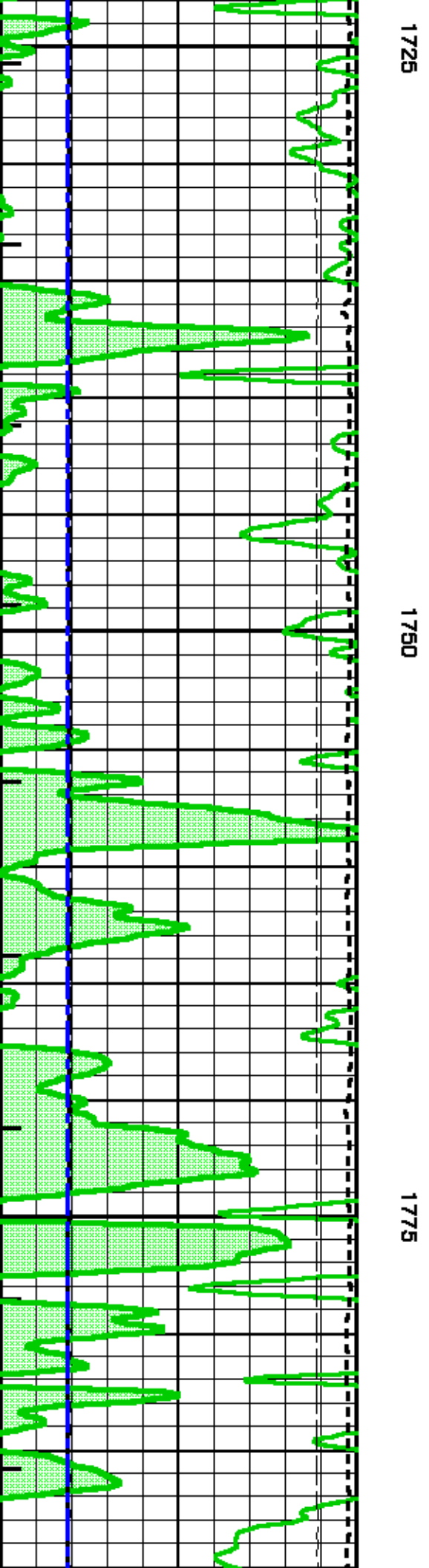
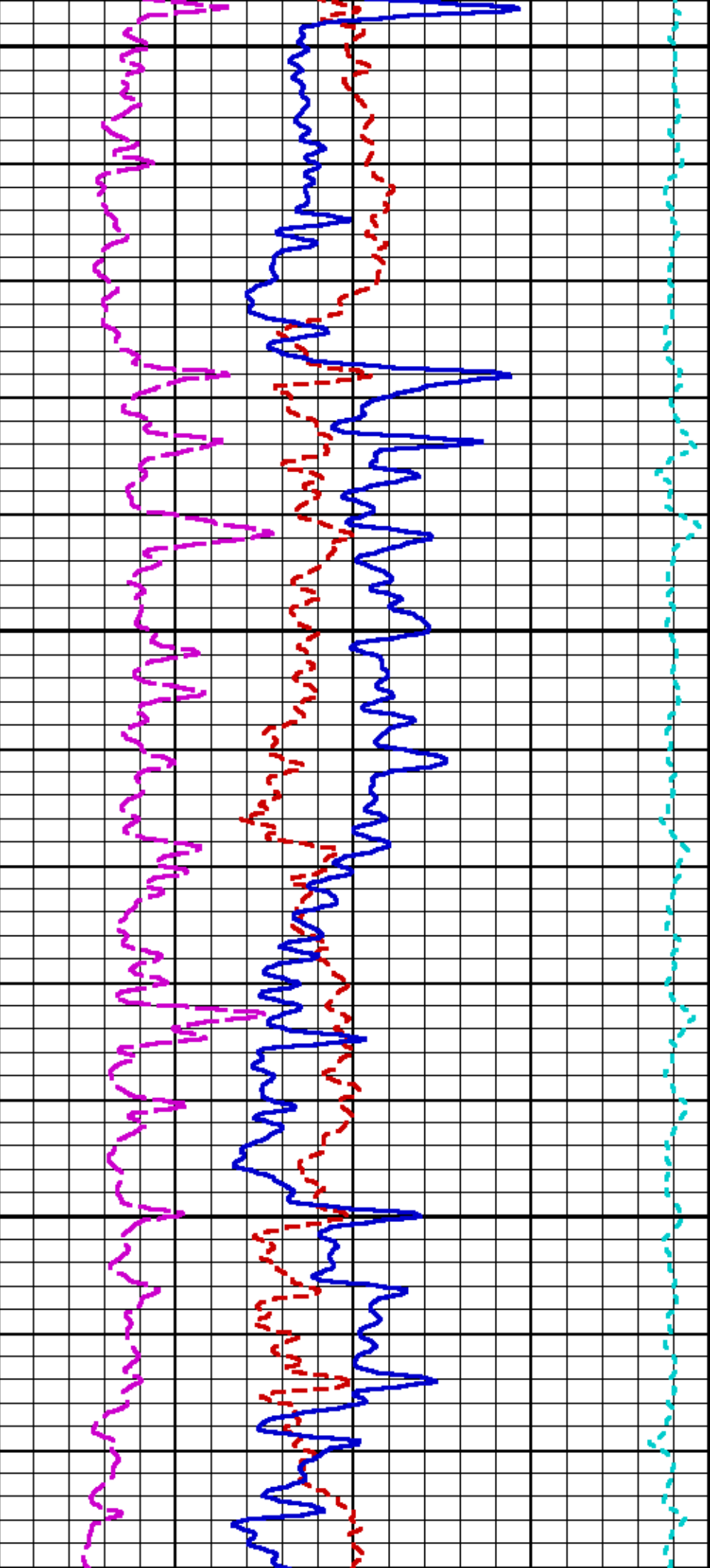


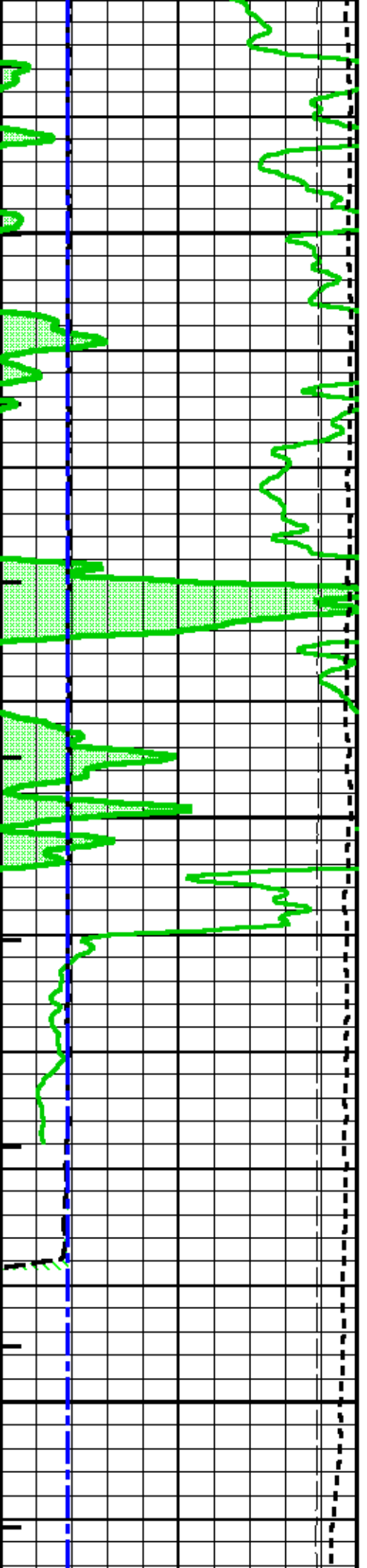
1625

1650





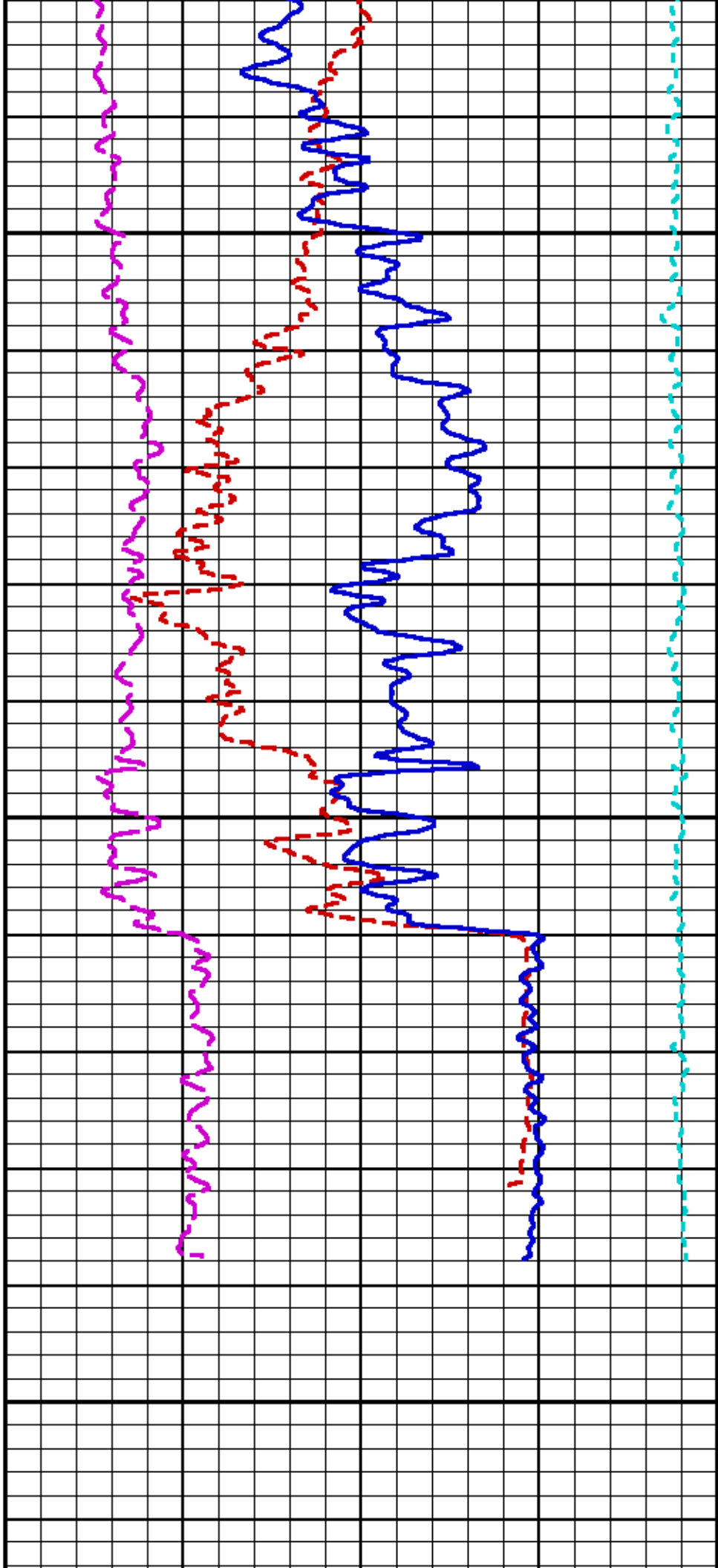


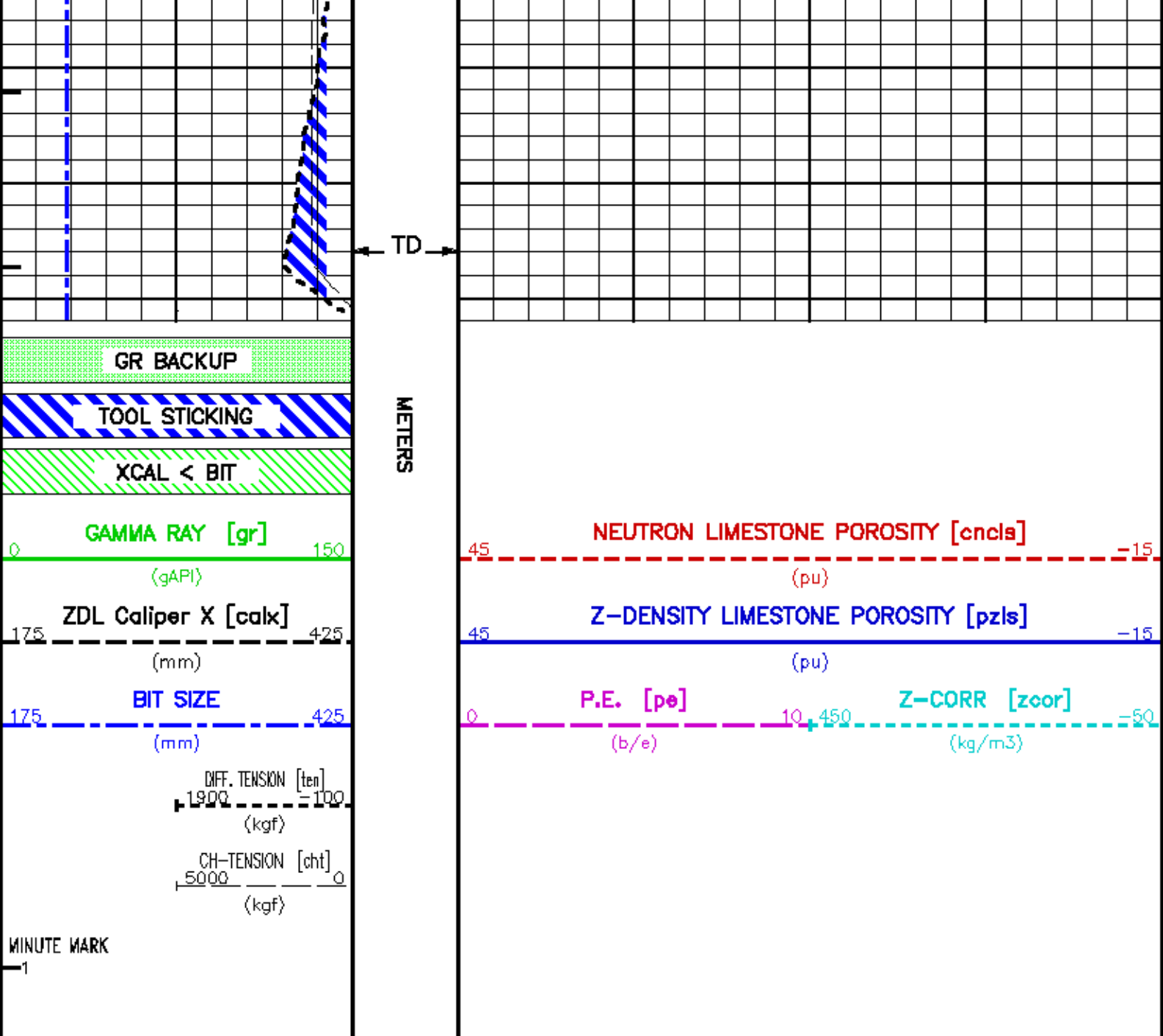


1800

1825

1850





HIGH RESOLUTION LOG - LIMESTONE MATRIX

ECLIPS 6.11 Aug 06, 2010
 Updates: 1 Patches: 1

Mon Feb 13 12:56:36 2012

Perpl /main/62

Cplot

Pdf_Cpp /main/16

Fileview 5.51

PARAMETER AND FILTER SUMMARY REPORT

File: /data/husky_CA212310/w77evh_xc03.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 614.933 m BOTTOM DEPTH: 1872.139 m

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
CHT	FILTER ()	medium (1)		TOP	BOTTOM
Y AXIS CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
GR	FILTER (.h)	medium (1)		"	"
CN	FILTER (.h)	medium (1)		"	"
CALIPER	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER (.l)	medium (1)		"	"
ZDL HIGH RES	FILTER (hrd1*)	light		"	"
	FILTER (hrd1a*)	light		"	"
	FILTER (hrd2*)	light		"	"
	FILTER (hrd2a*)	light		"	"
	FILTER (soft*)	light		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	177.800	mm	TOP	BOTTOM
	CASING THICKNESS	0.000	mm	"	"
BIT SIZE	BIT SIZE	222.000	mm	"	"
MUD DENSITY	MUD DENSITY	1.28	g/cm3	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (zdbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	222.000	mm	"	"

CN PROCESSING

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

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
DENSITY POROSITY	RHDfluid	1.000	g/cm3	TOP	BOTTOM
	RHDmatrix (lms)	2.710	g/cm3	"	"

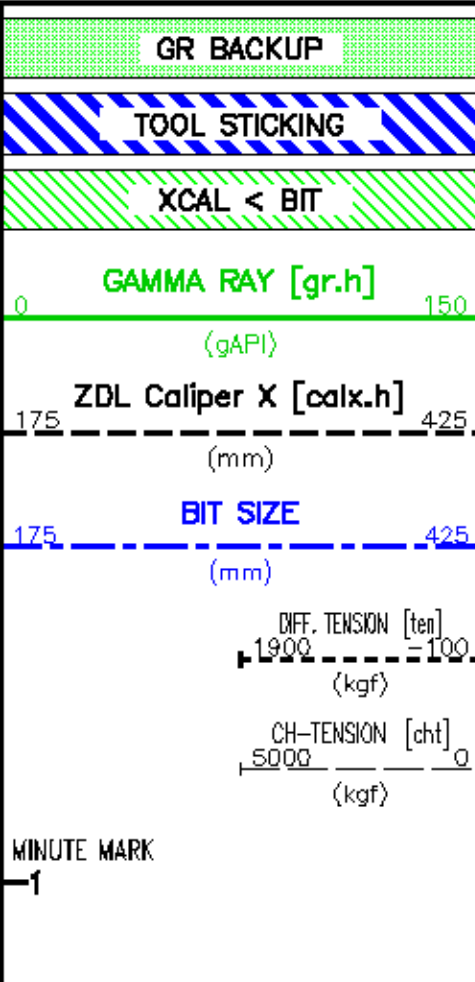
CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Feb 13 04:51:11 2012	BIT SIZE
F1:CALXQH	Feb 13 04:51:11 2012	CALIPER FROM X-AXIS OF XY CALIPER(S)
F1:CHT	Feb 13 04:51:11 2012	CABLE HEAD TENSION
F1:CNCLSQH	Feb 13 04:51:11 2012	BOREHOLE SIZE CORRECTED LIMESTONE COMPENSATED NEU POROSITY
F1:GRQH	Feb 13 04:51:11 2012	GAMMA RAY
F1:MARK	Feb 13 04:51:11 2012	MINUTE MARK
F1:PEQH	Feb 13 04:51:11 2012	PHOTO ELECTRIC CROSS-SECTION
F1:PZLSQH	Feb 13 04:51:11 2012	POROSITY FOR LIMESTONE MATRIX
F1:TEN	Feb 13 04:51:11 2012	DIFFERENTIAL TENSION
F1:ZCORQH	Feb 13 04:51:11 2012	DENSITY CORRECTION

CURVE MEASURE POINT OFFSET

CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
BIT	0.00	CNCLSQH	29.30	PZLSQH	25.85		
CALXQH	26.17	GRQH	31.43	TEN	0.00		
CHT	0.00	PEQH	25.85	ZCORQH	25.85		

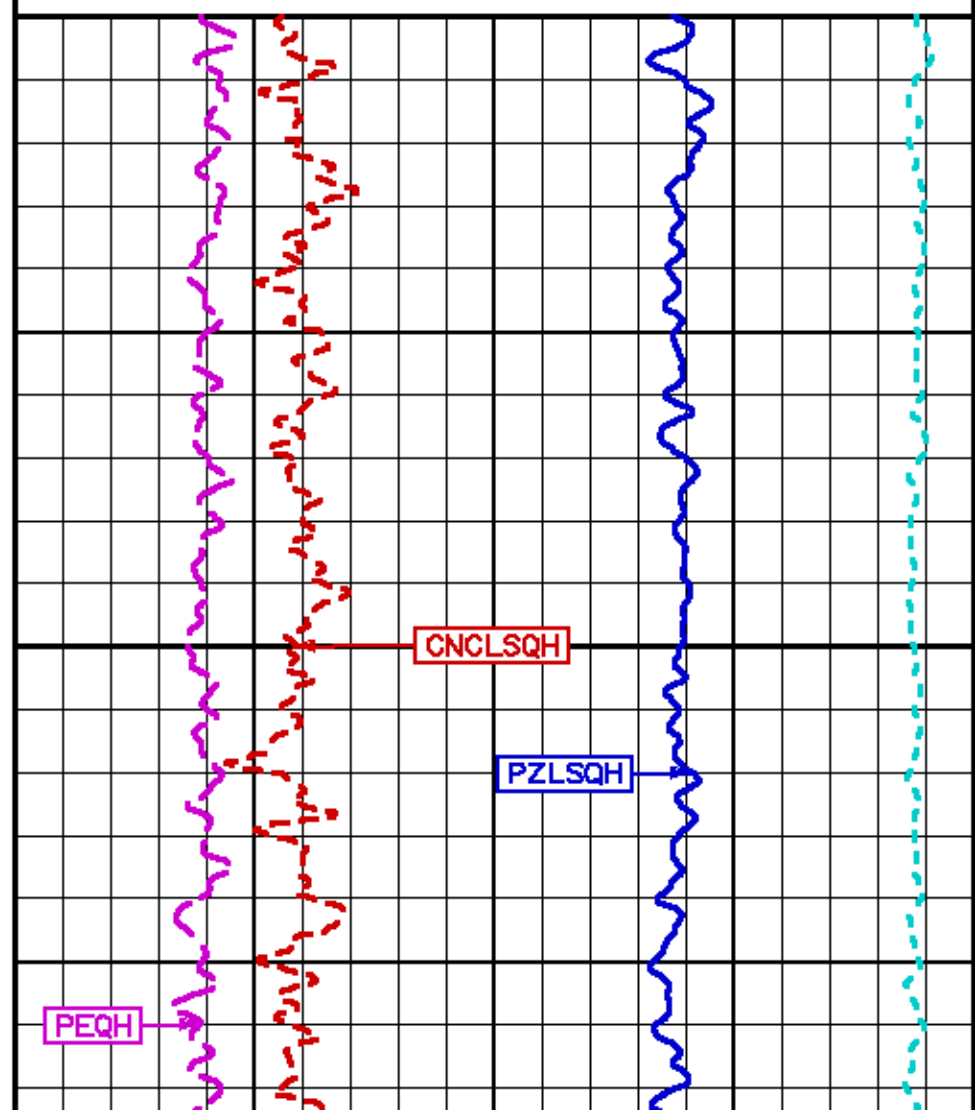
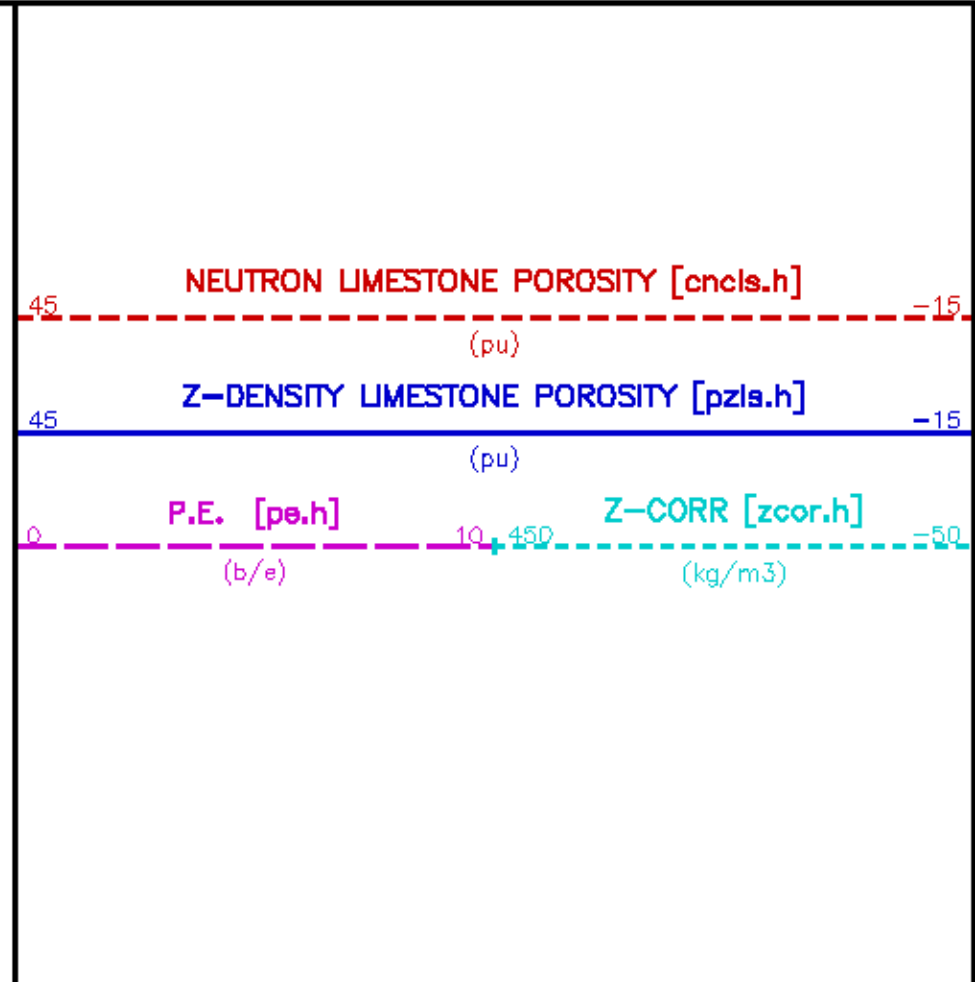
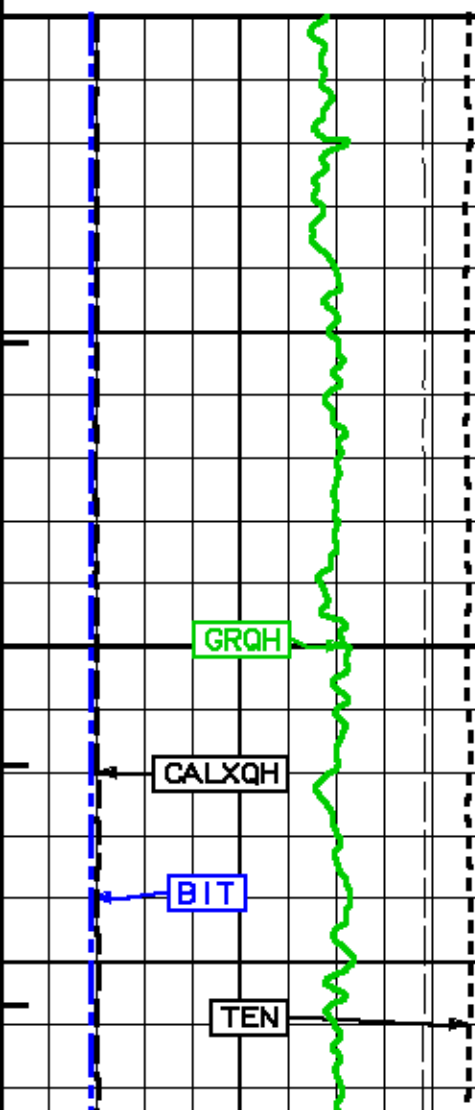
Presentation	: epuz/dat1a/husky_CA212310/zdl_hrvw_hu.pdf [1:120 Scale]
Plot Interval	: 1800 - 1870.94 Meters
Data File 1	: F1 : epuz/dat1a/husky_CA212310/r1t1_moln.pdf
Created On	: Feb 13 04:51:11 2012
Company	: HUSKY OIL OPERATIONS LIMITED
Well	: LITTLE BEAR N-9
Field	: SLATER RIVER
File Interval	: 578.188 - 1870.98 Meters
Out	: m77wh_x

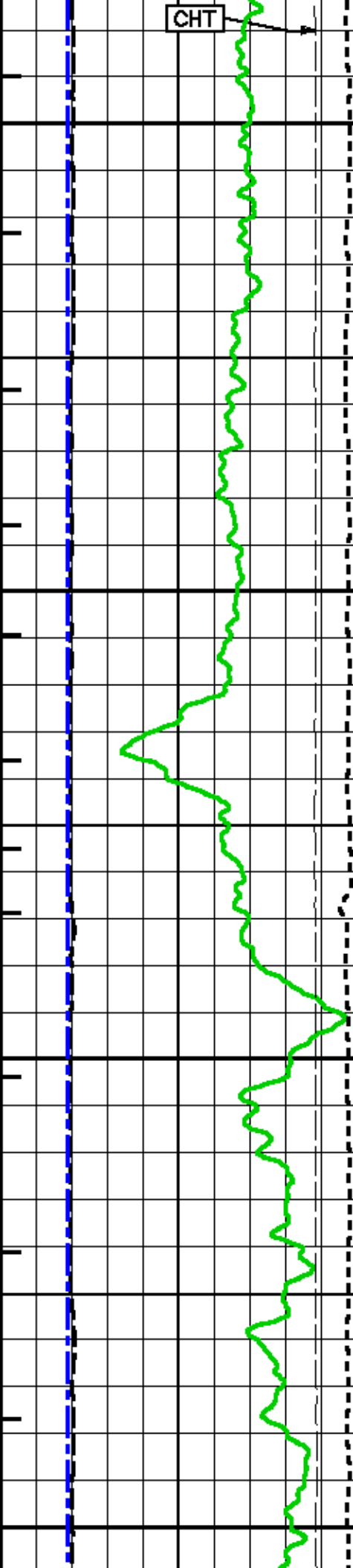


METERS

1600

1610



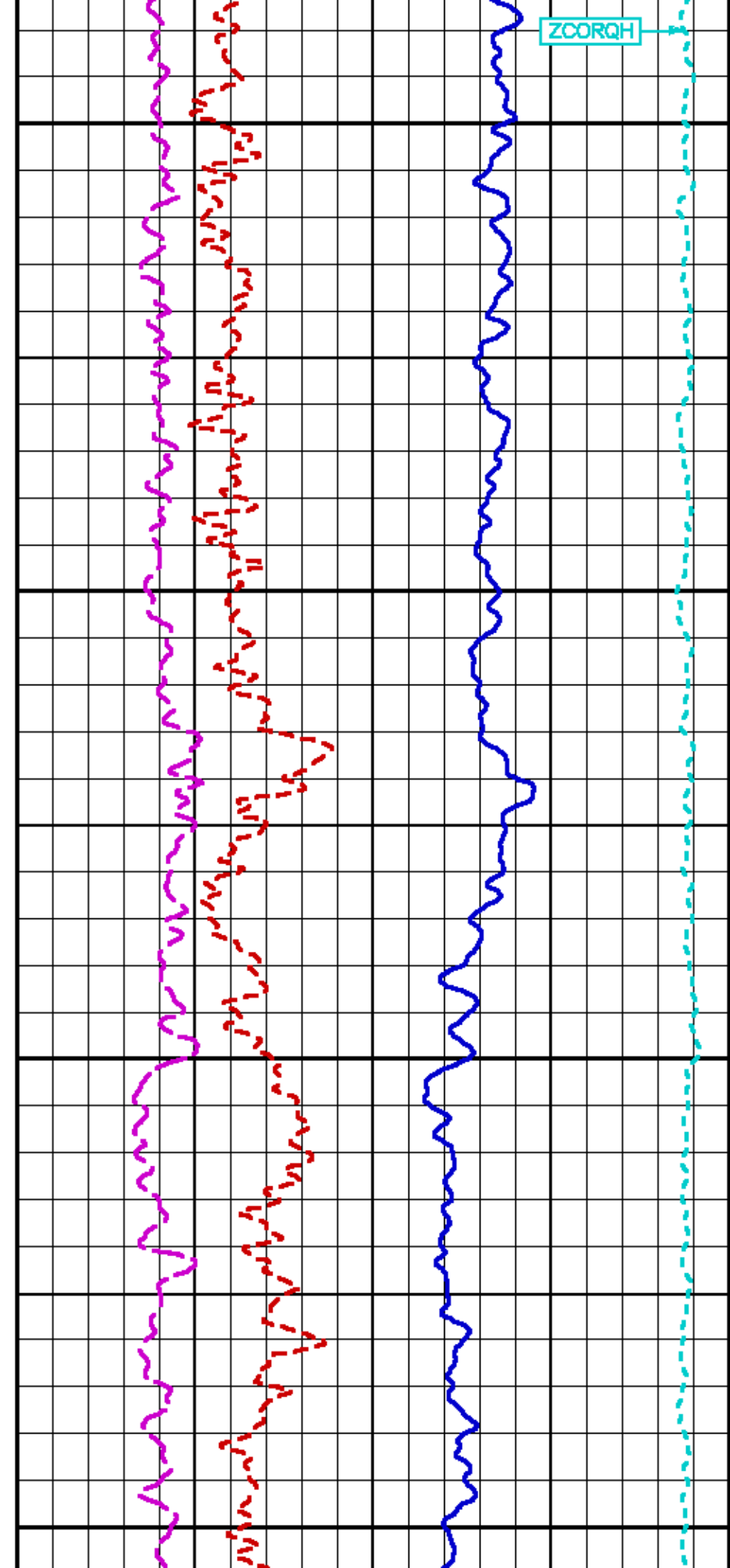


1620

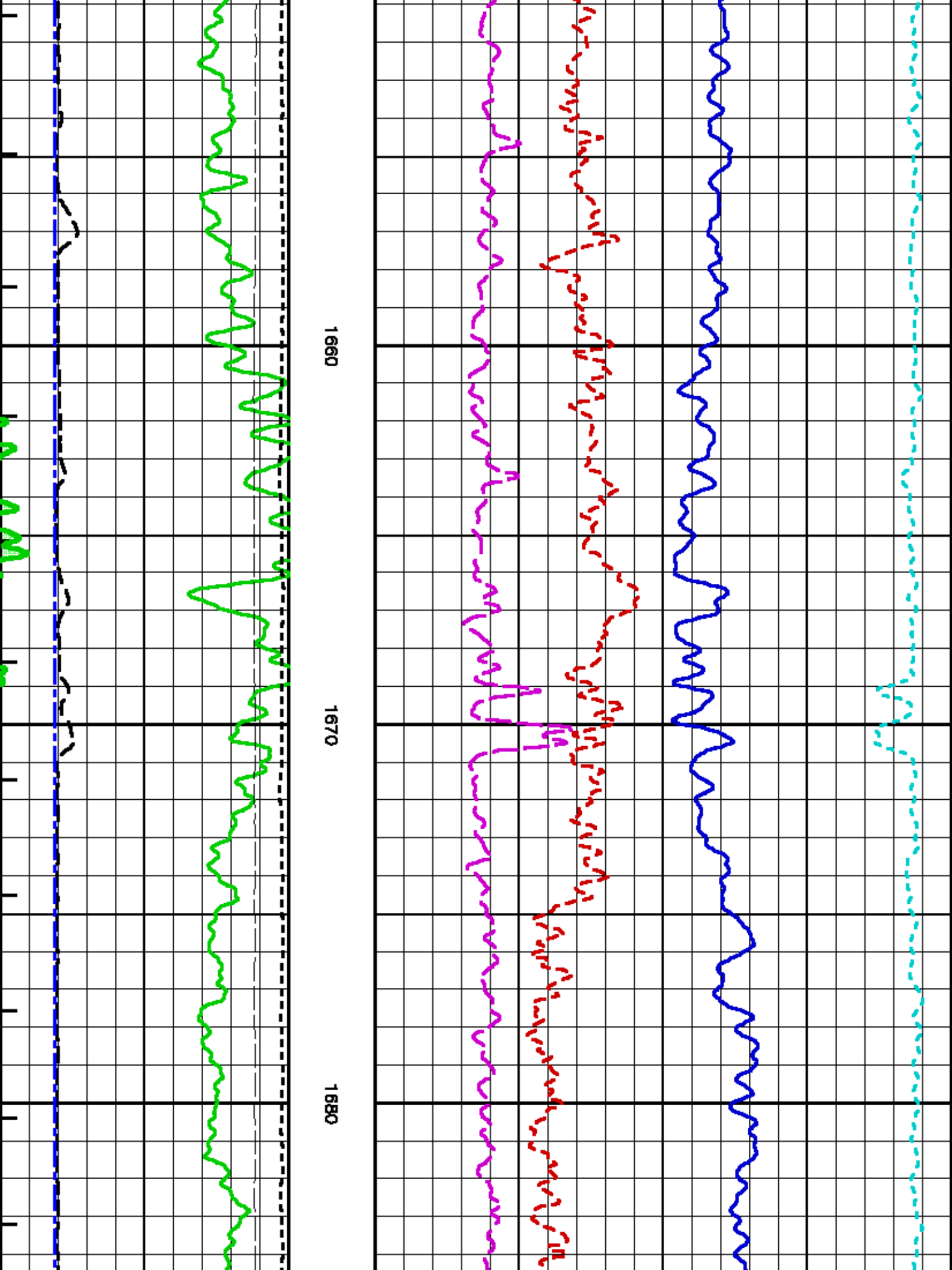
1630

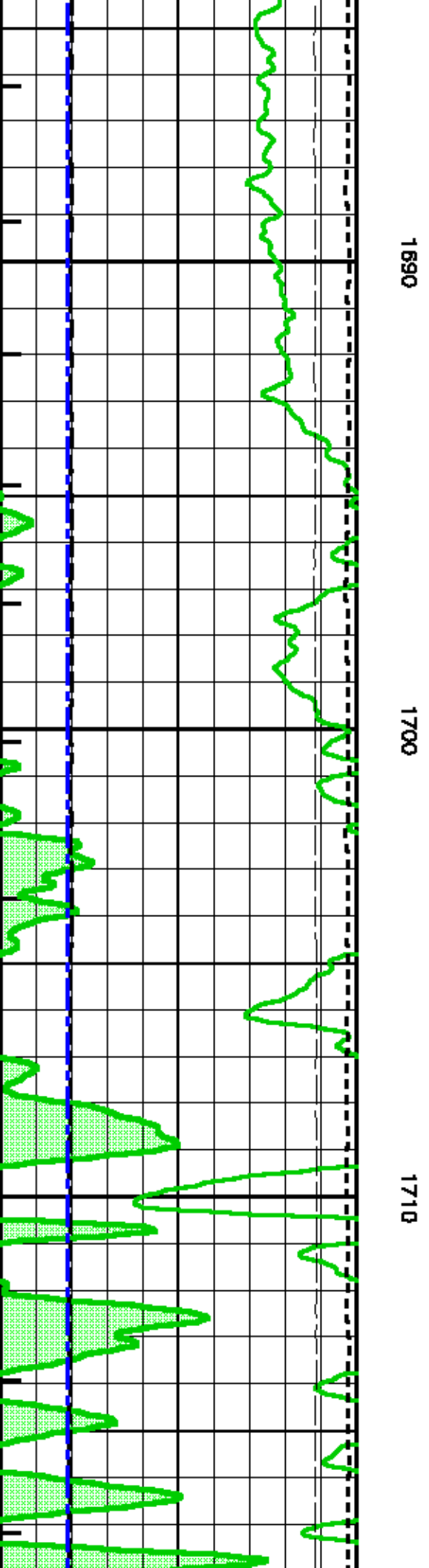
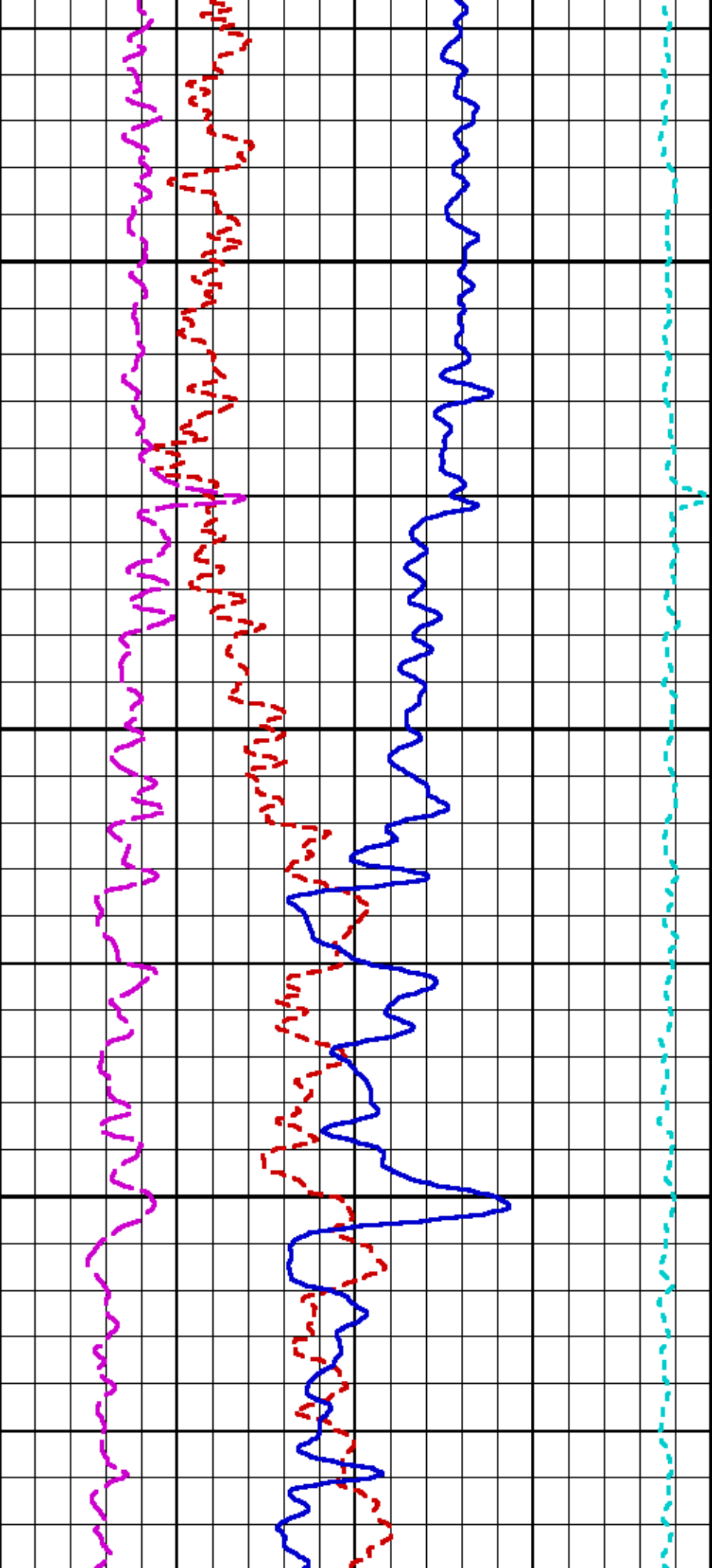
1640

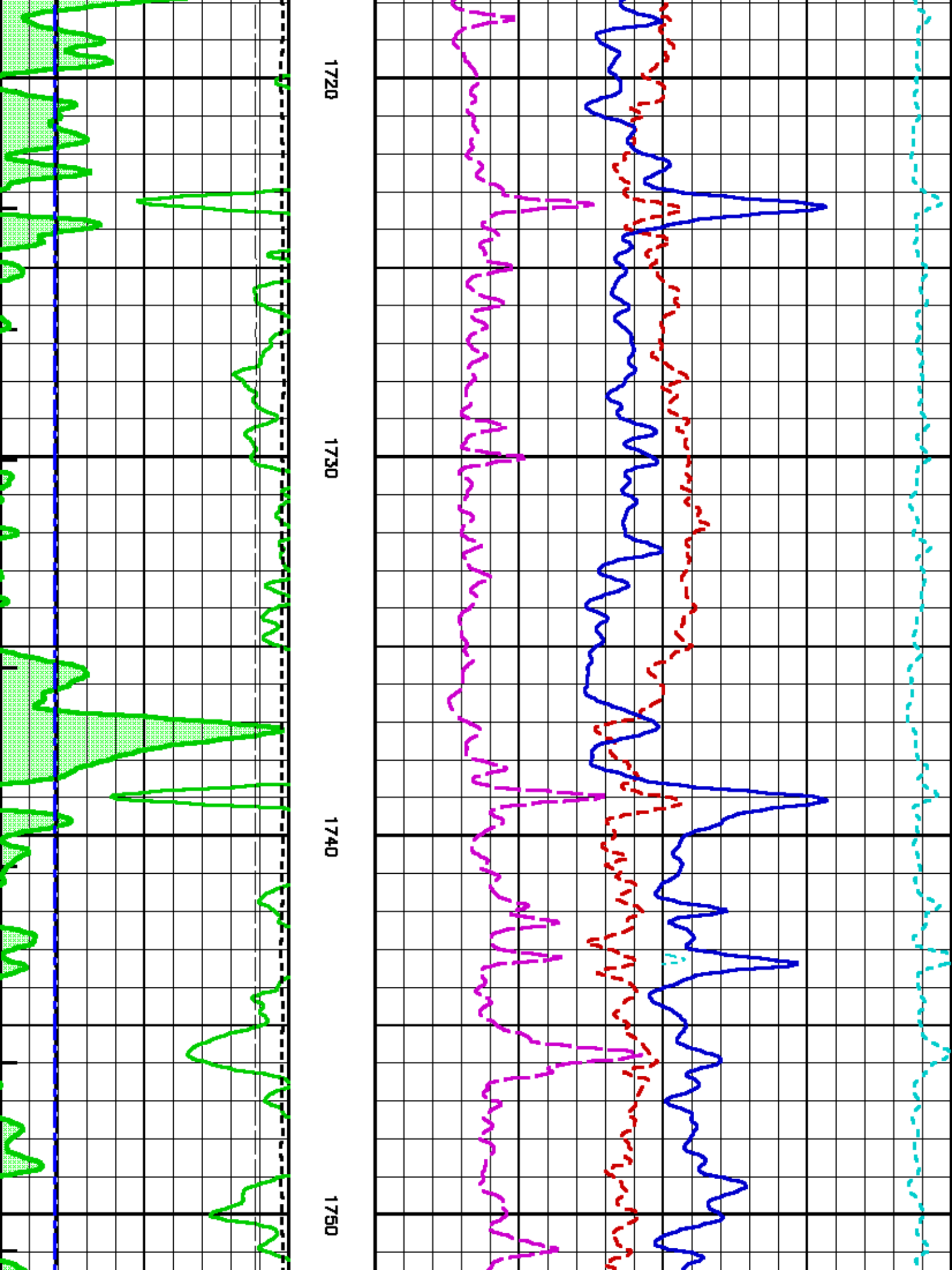
1650

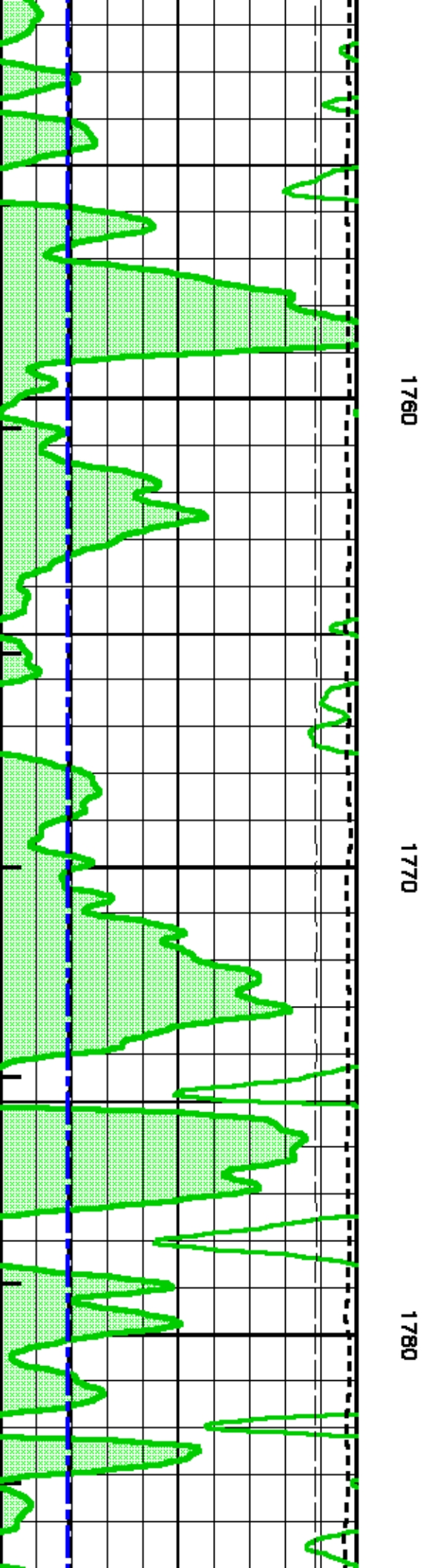
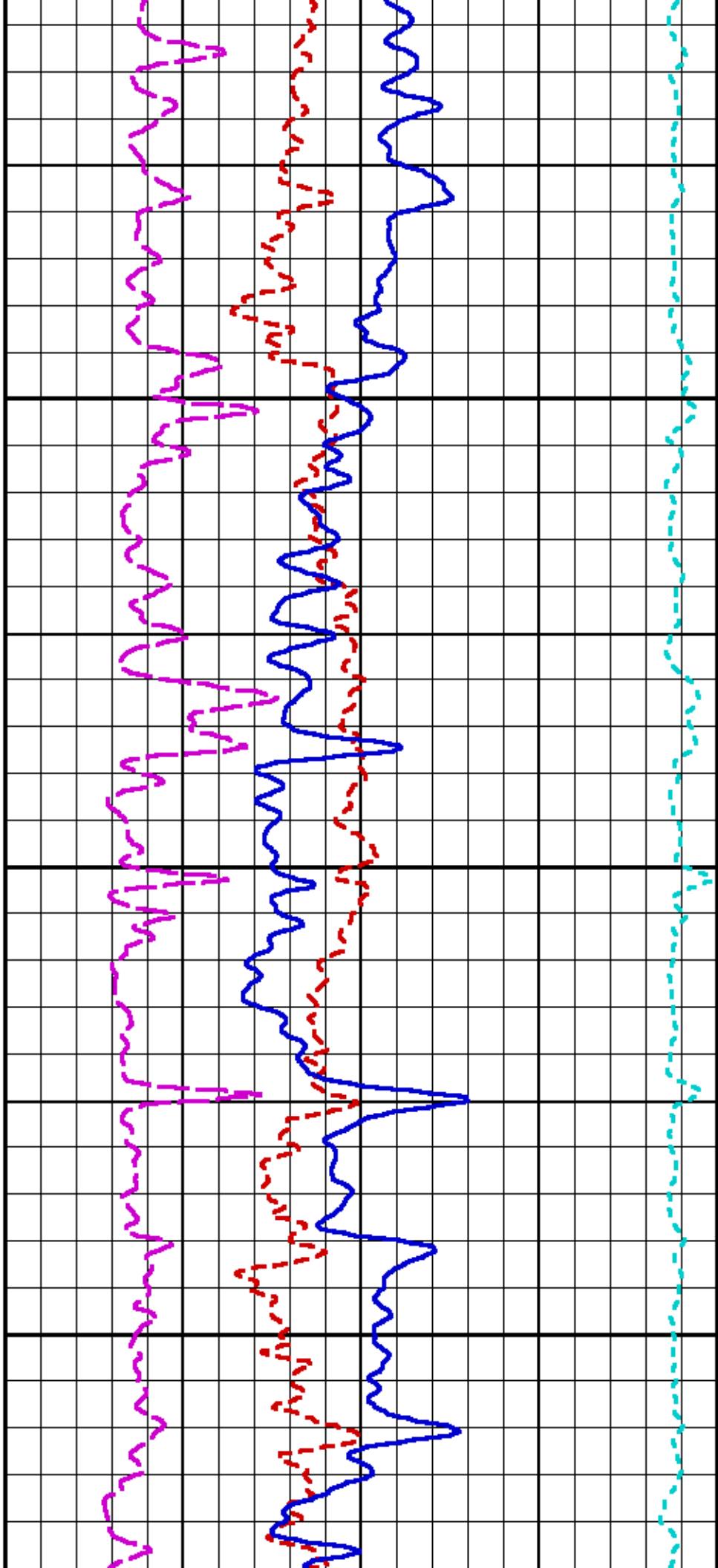


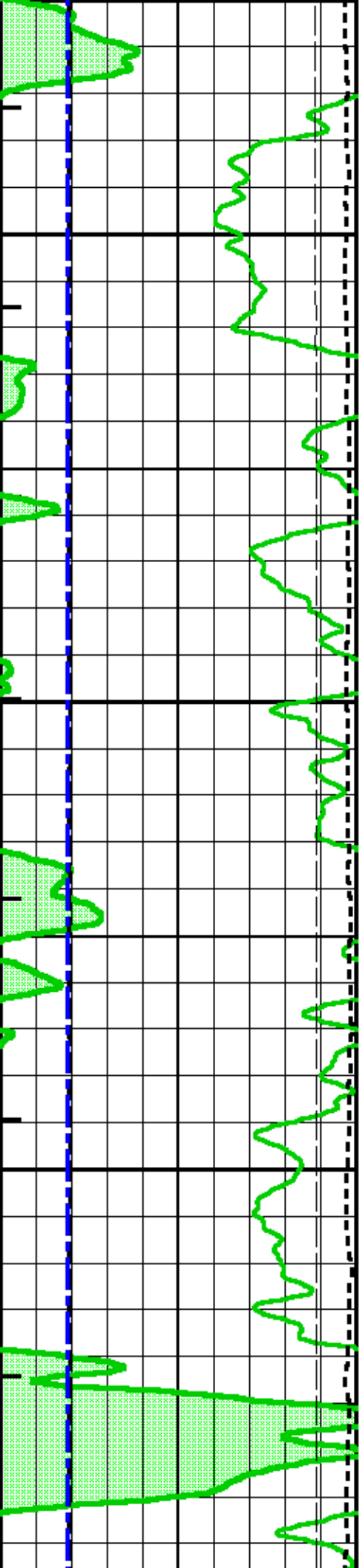
ZCORQH







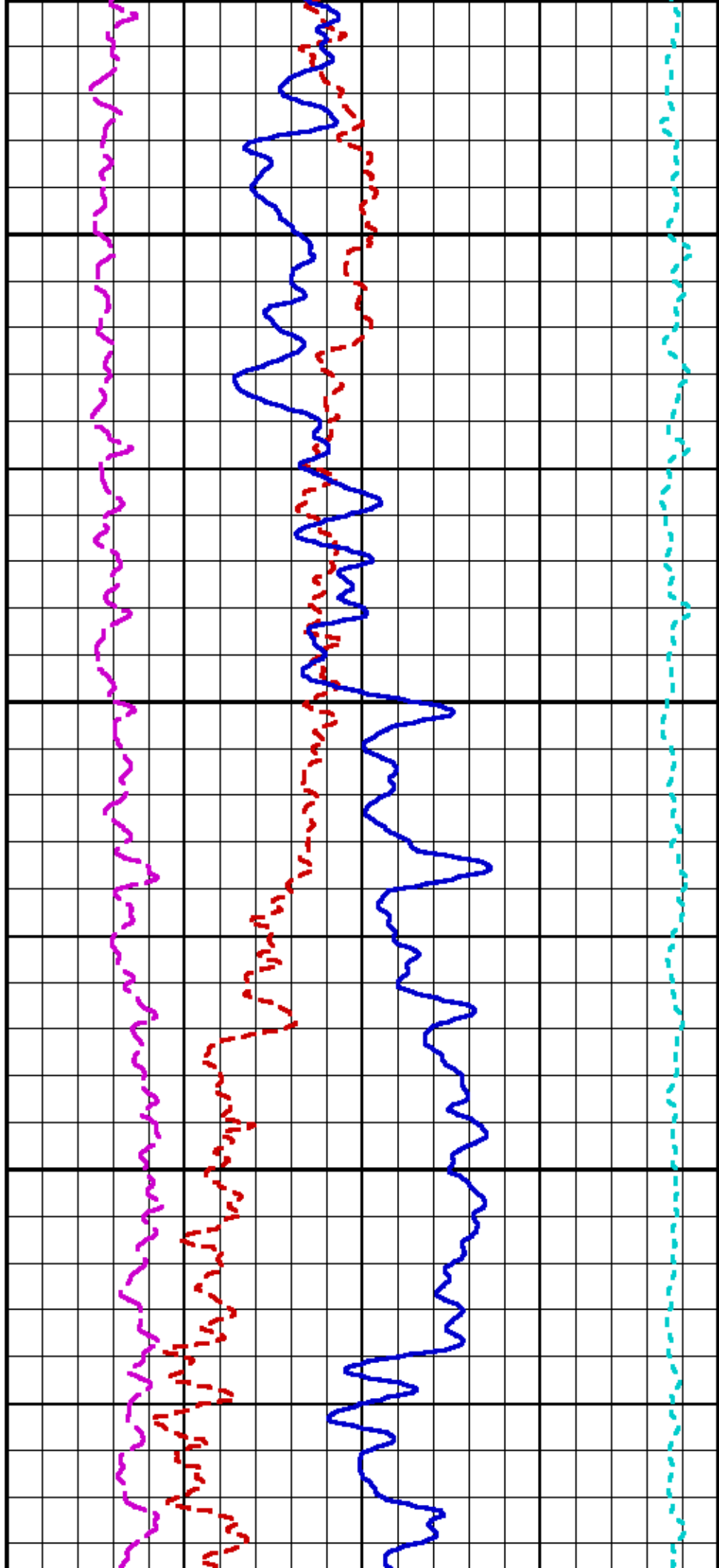


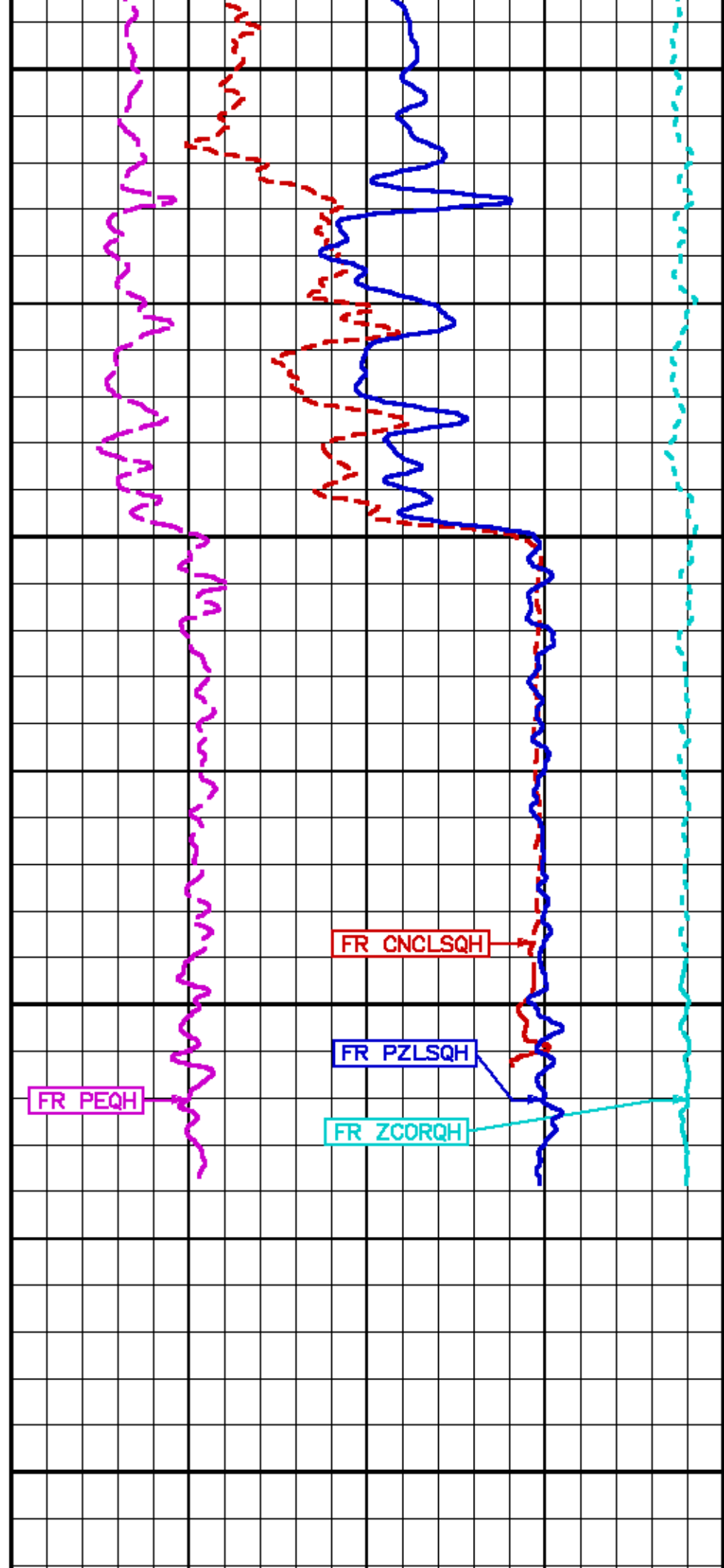
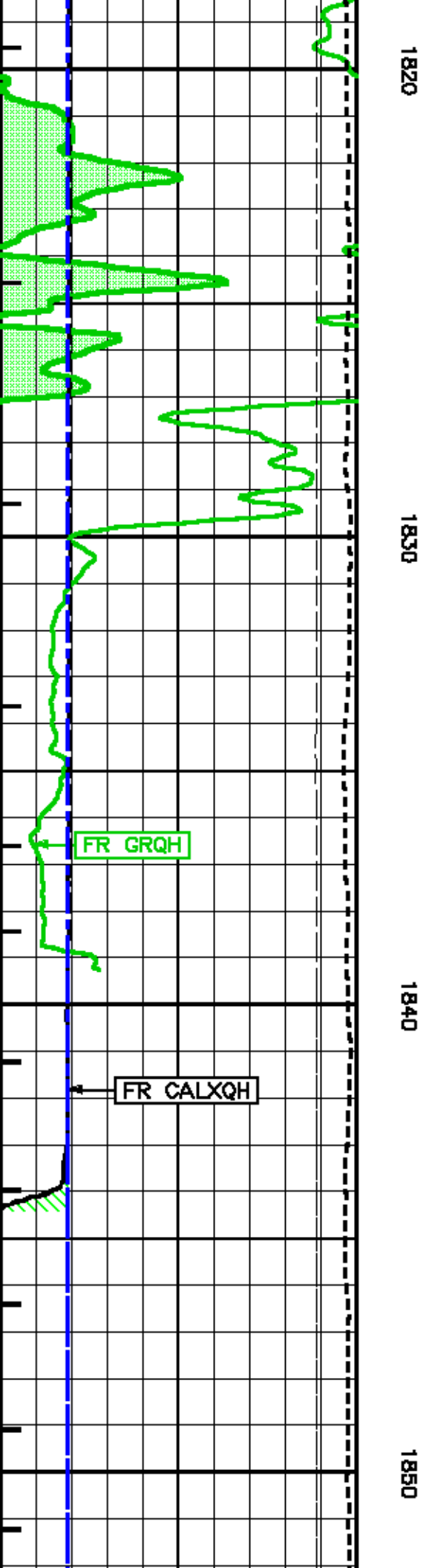


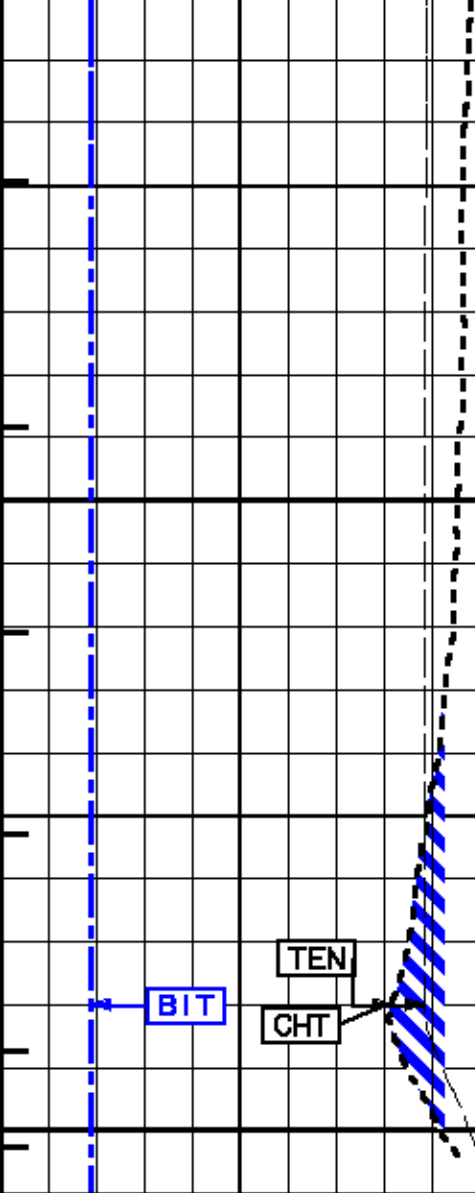
1790

1800

1810





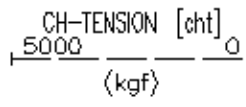
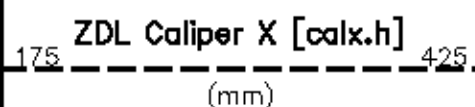


1860

1870

METERS

TD



MINUTE MARK
-1



MAIN PASS - SANDSTONE MATRIX

ECLIPS 6.11 Aug 06, 2010
 Updates: 1 Patches: 1

Mon Feb 13 13:45:17 2012

Perplf /main/62

Cplot

Pdf_Cpp /main/16

Fileview 5.51

PARAMETER AND FILTER SUMMARY REPORT

File: /data/husky_CA212310/m77evh_xc06.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 28.758 m BOTTOM DEPTH: 699.207 m

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
Y AXIS CALIPER	FILTER ()	medium (1)		TOP	BOTTOM
TENSION	FILTER ()	medium (1)		..	..
GR	FILTER ()	medium (1)		..	..
CN	FILTER ()	medium (1)		..	..
CALIPER	FILTER ()	medium (1)		..	..
	FILTER (.h)	medium (1)		..	..
	FILTER (.1)	medium (1)		..	..

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	177.800	mm	TOP	BOTTOM
	CASING THICKNESS	0.000	mm	..	..
BIT SIZE	BIT SIZE	222.000	mm	..	..
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE FIXED SIZE		..	..
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	226.600	mm	..	..

CN PROCESSING

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

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CNCS	Feb 13 10:17:39 2012	BOREHOLE SIZE CORRECTED SANDSTONE COMPENSATED NEU POROSITY
F1:GR	Feb 13 10:17:39 2012	GAMMA RAY
F1:TEM	Feb 13 10:17:39 2012	DIFFERENTIAL TENSION

CURVE MEASURE POINT OFFSET

CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
CNCS	29.30	GR	31.39	TEM	0.00		

Presentation : epua:/data/husky_CA212310/cn_main.pdf [1:240 Scale]
 Plot Interval : 0 - 650 Meters

Data File 1 : F1 : epua:/data/husky_CA212310/casing.tif
 Created On : Feb 13 10:17:39 2012

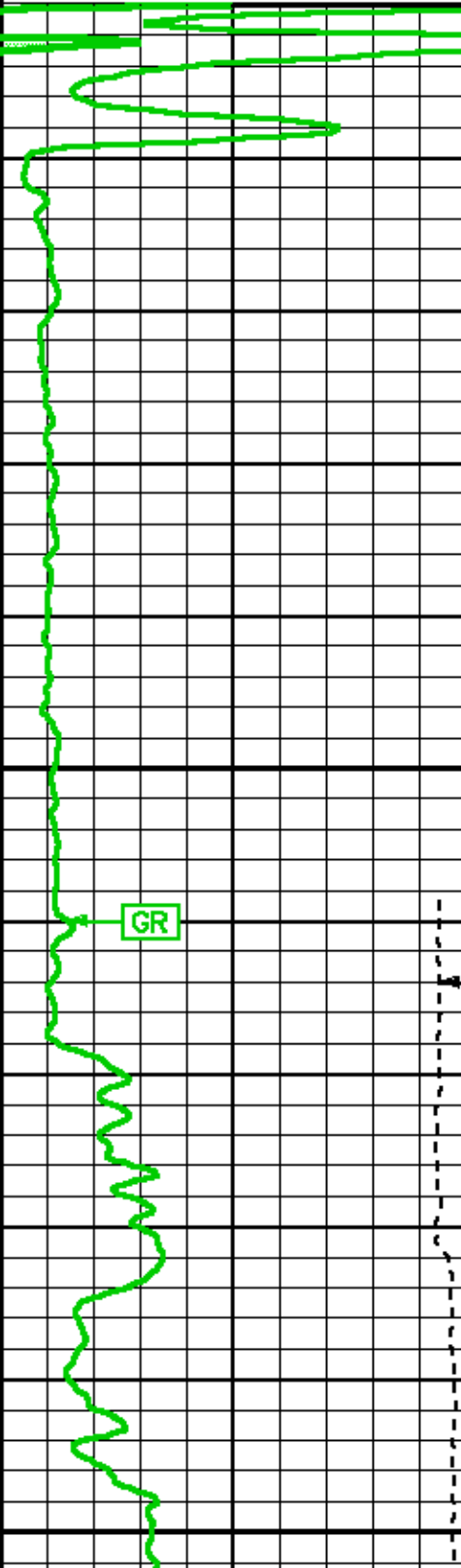
Company : HUSKY OIL OPERATIONS LIMITED
Well : LITTLE BEAR N-9
Field : SLATER RIVER
File Interval : -8.4000 - 899.44 Meters
Oct : m77erh_x

GR BACKUP

TOOL STICKING

GAMMA RAY [gr] 150

DIFF. TENSION [ten]
1900 -100



METERS

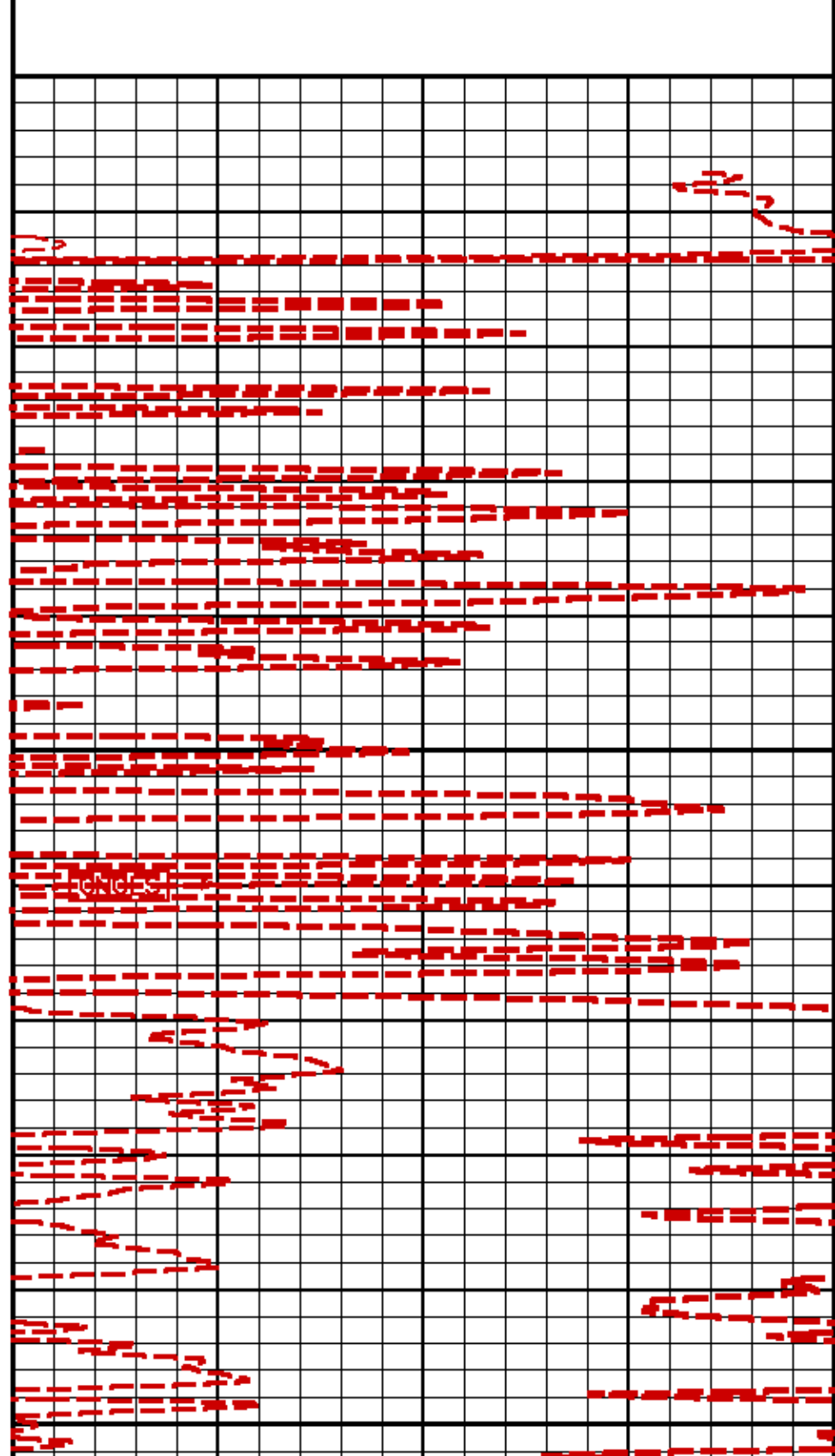
0

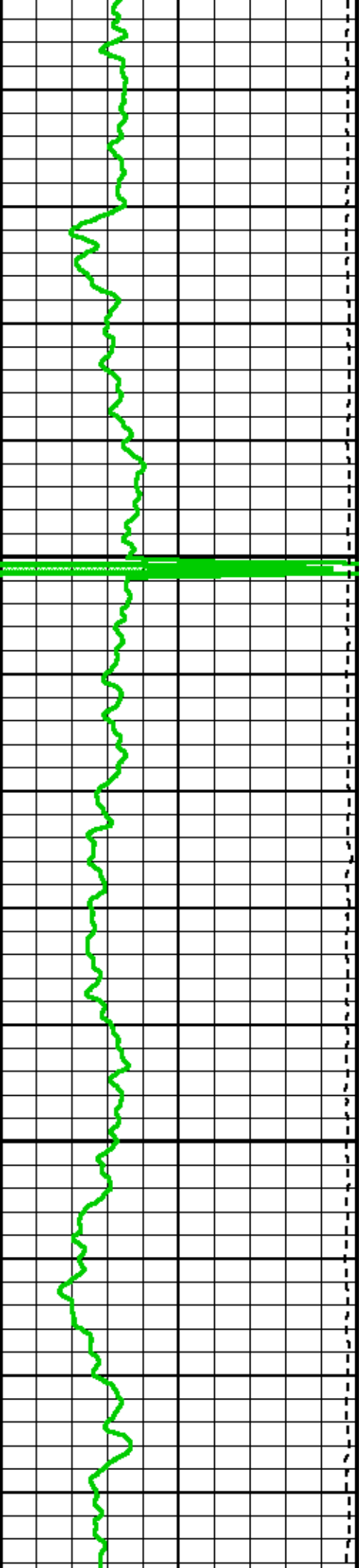
25

TEN

50

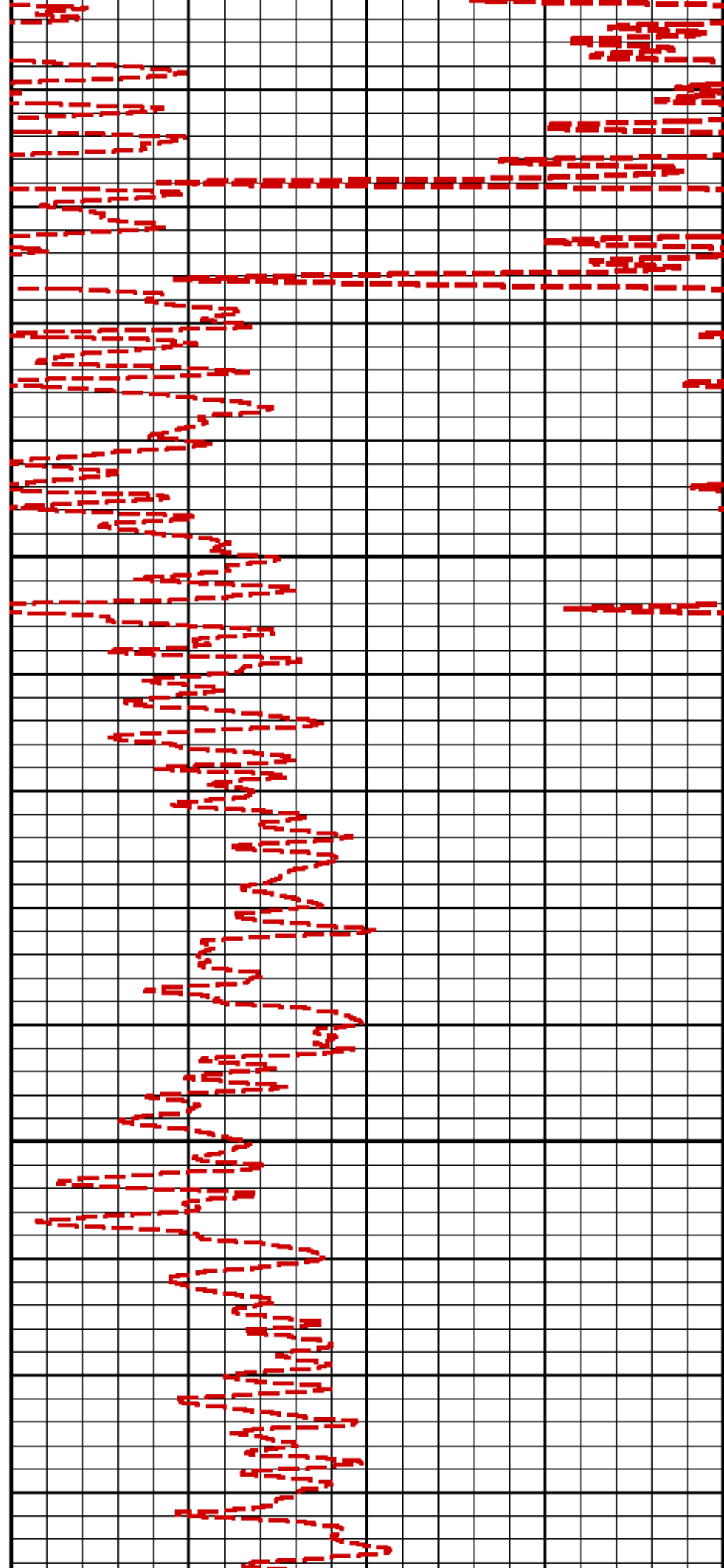
NEUTRON POROSITY [cnrss] 60 0

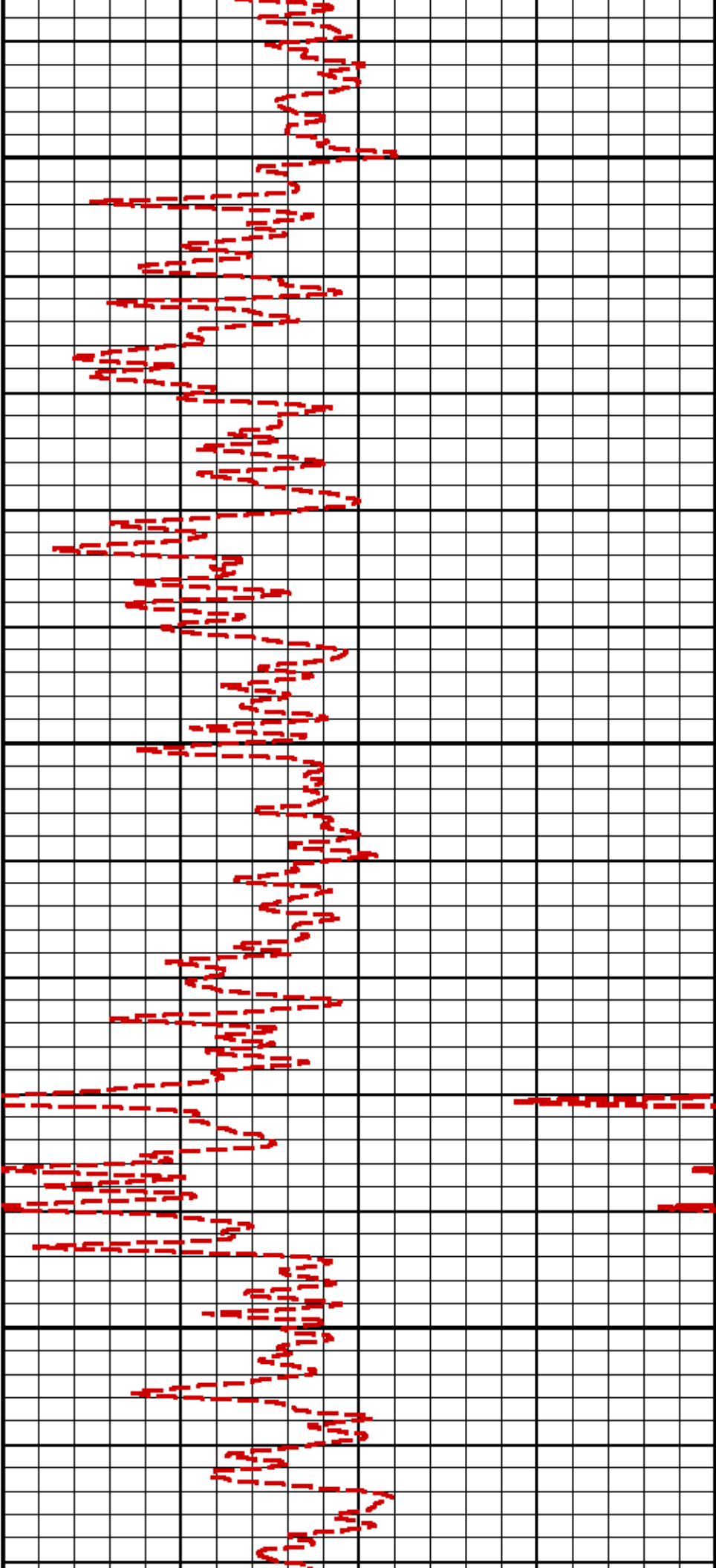




75

100

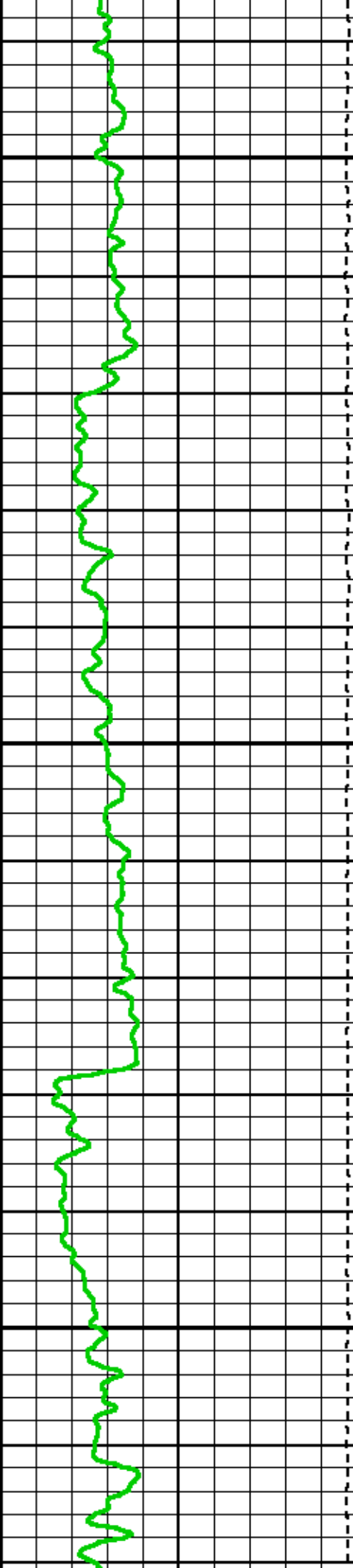


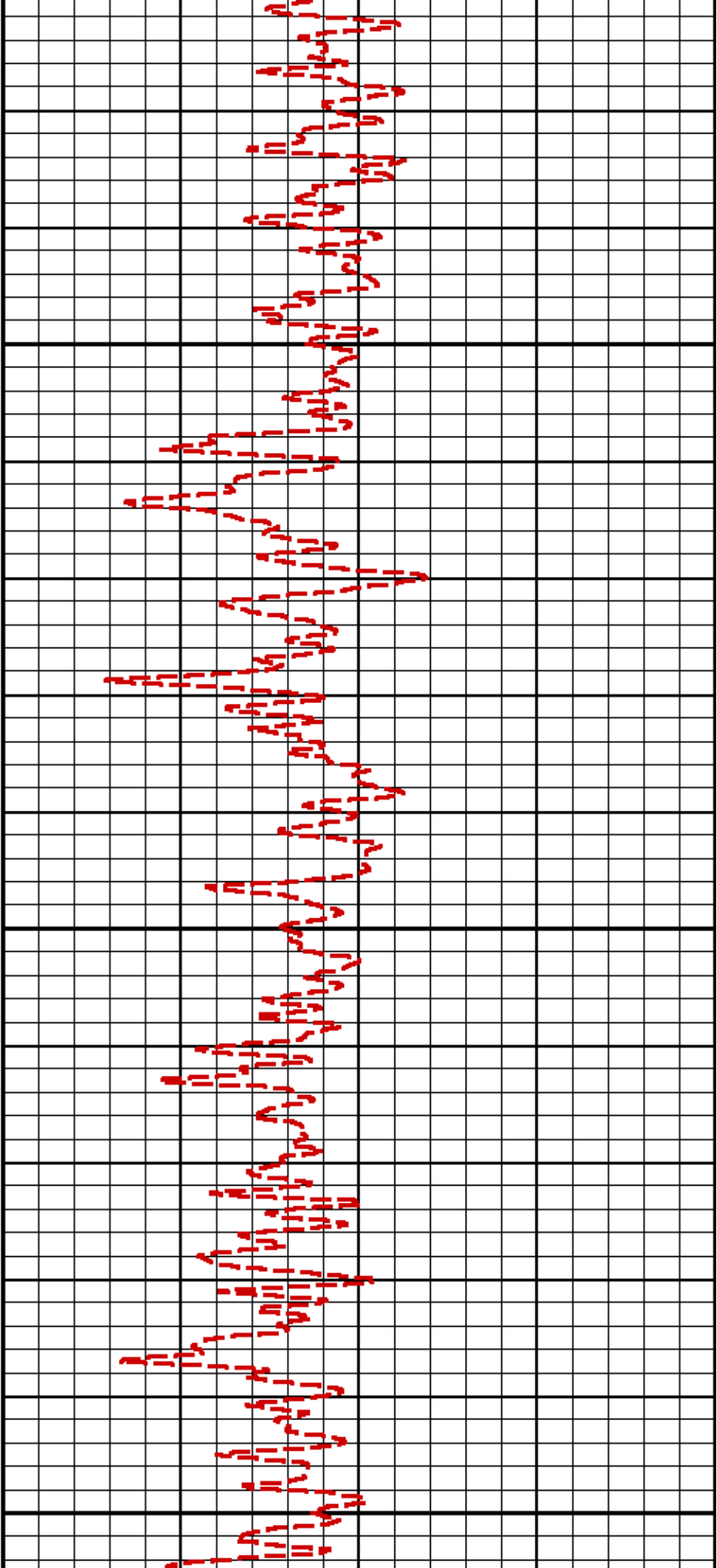


125

150

175

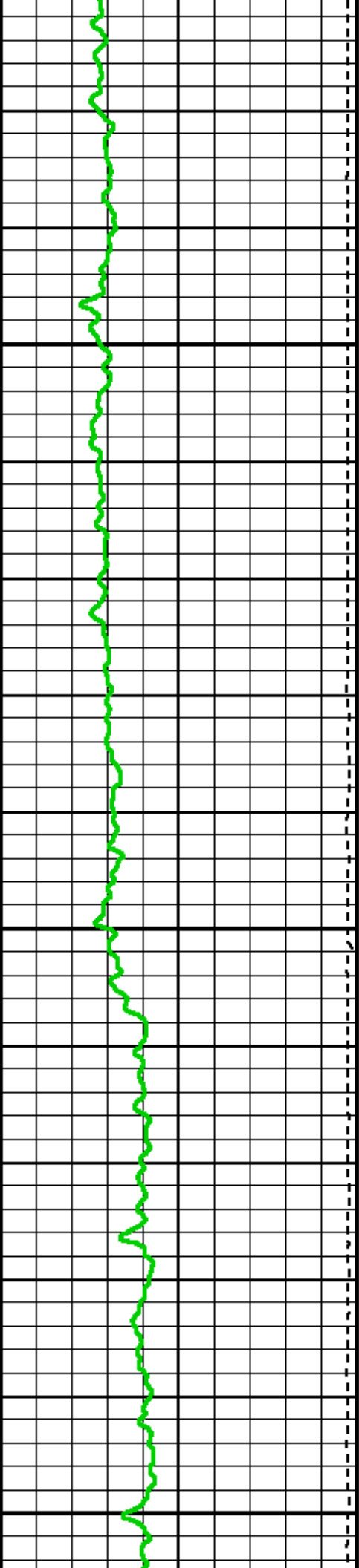


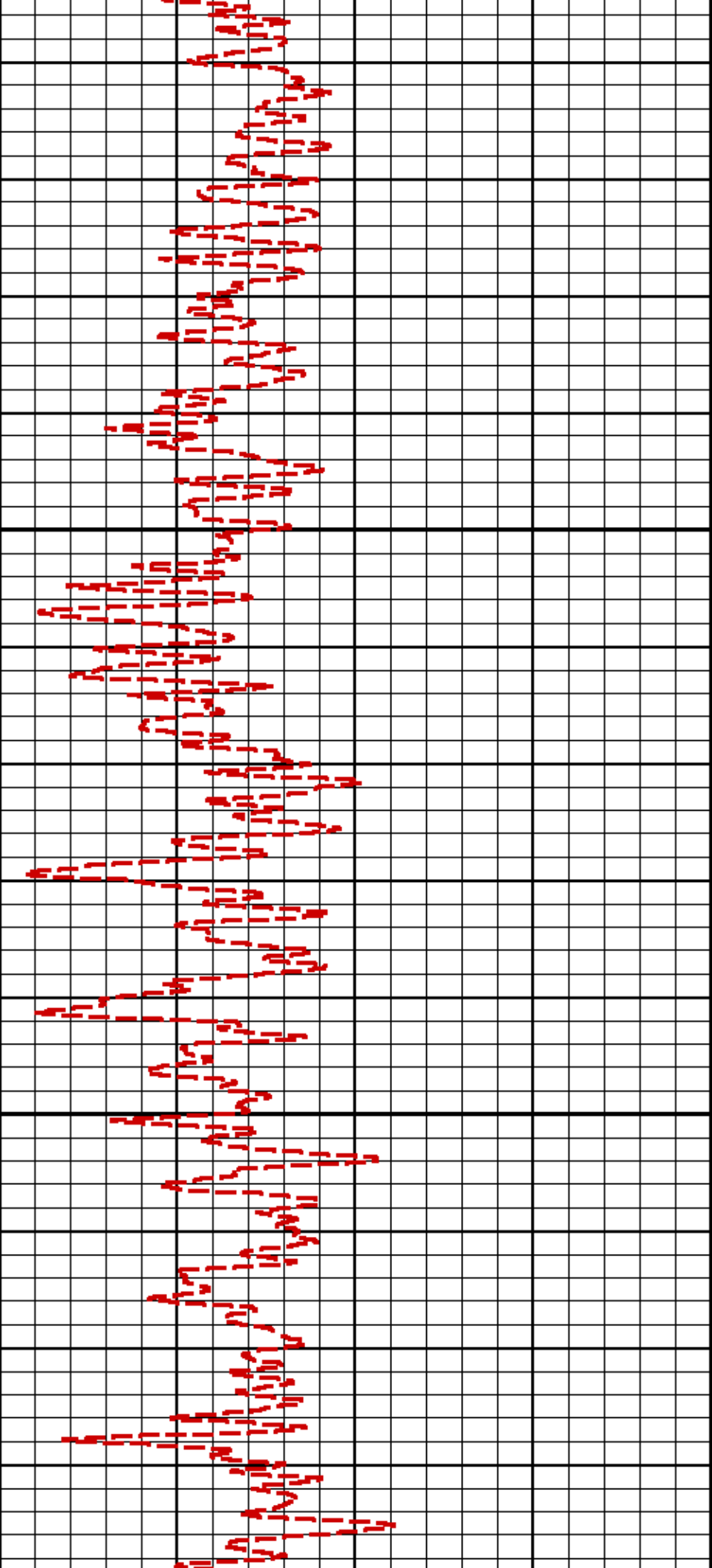


200

225

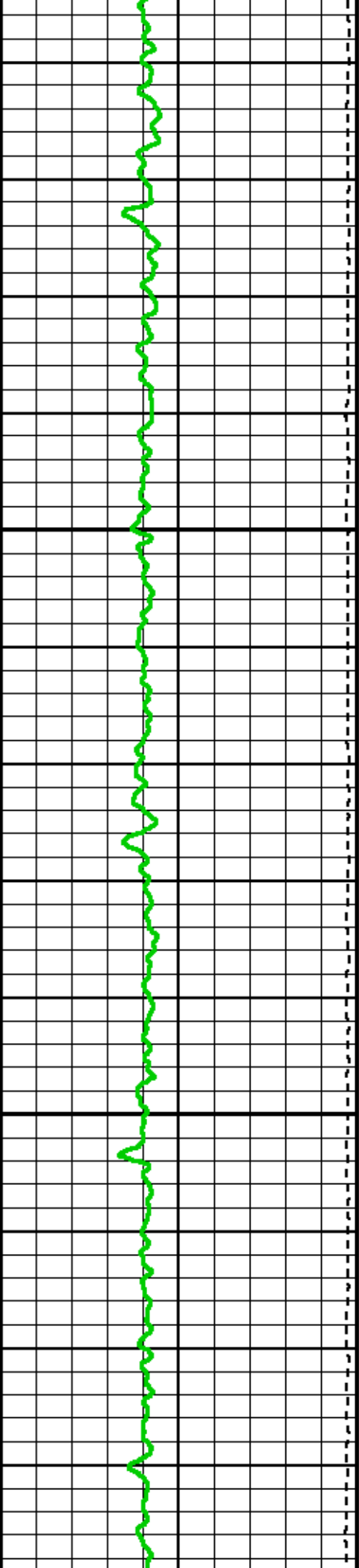
250

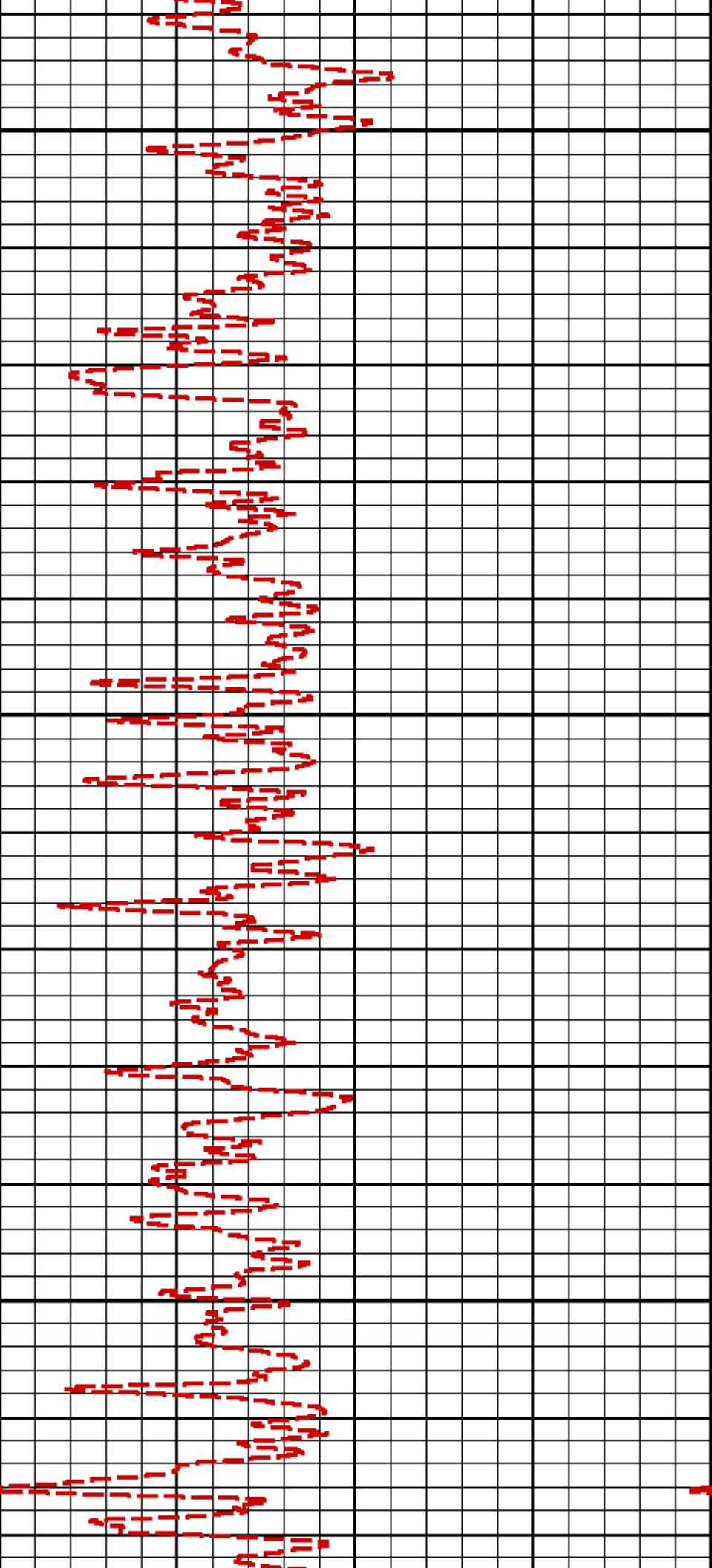




275

300

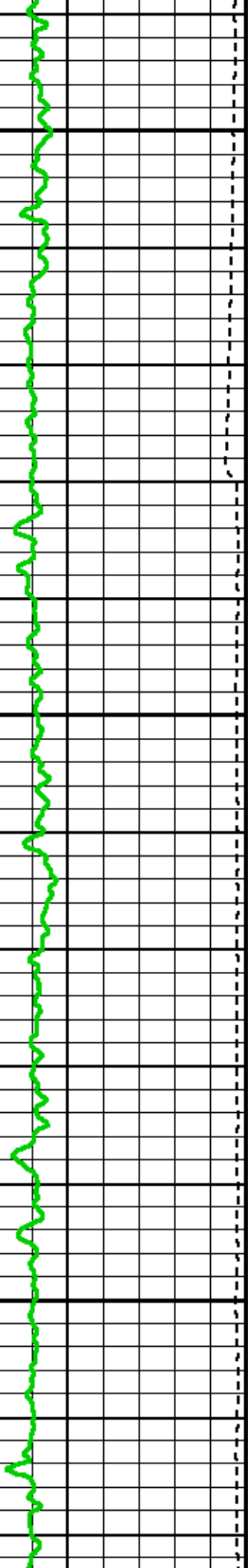


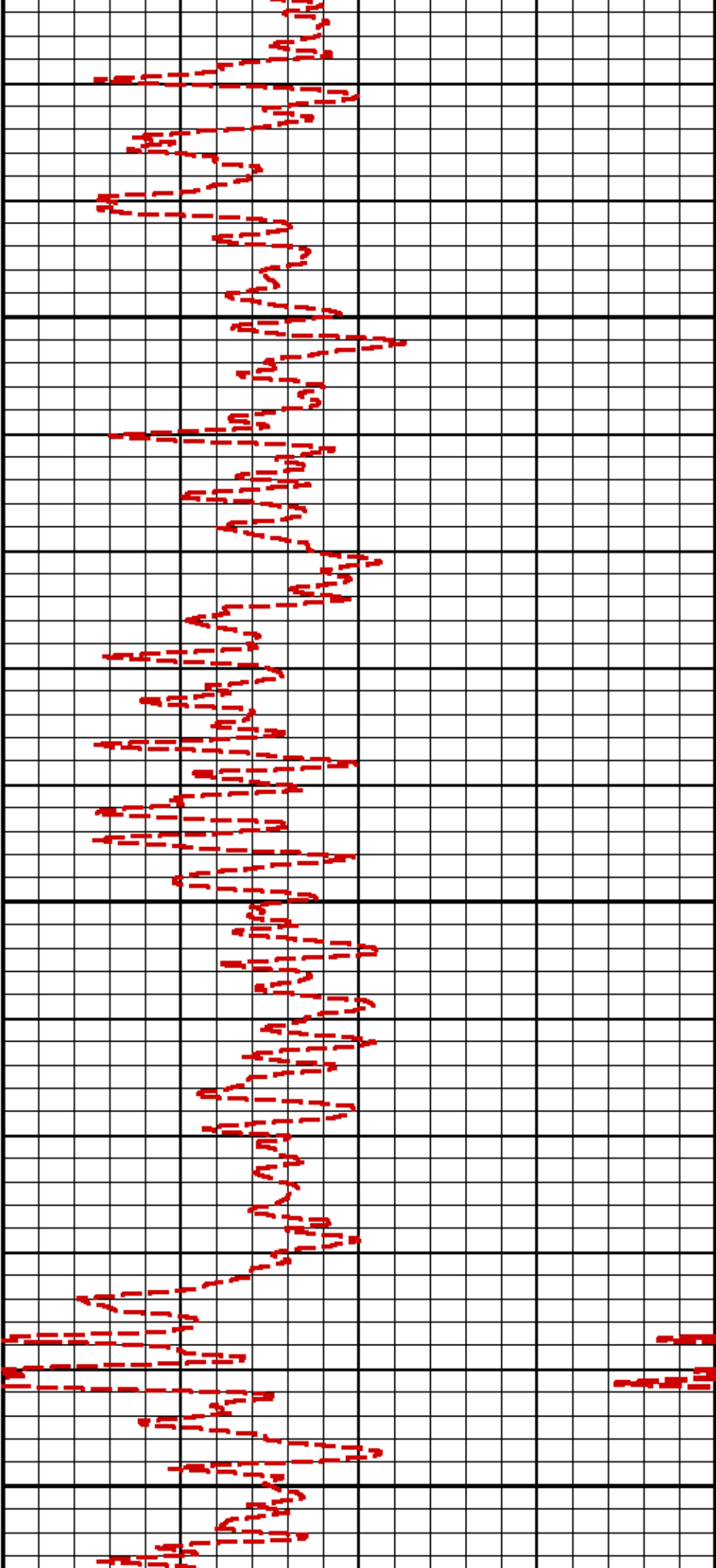


325

350

375

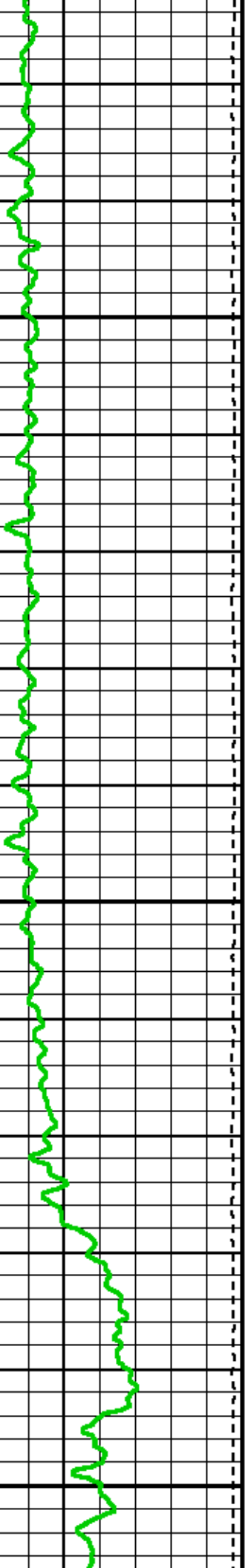


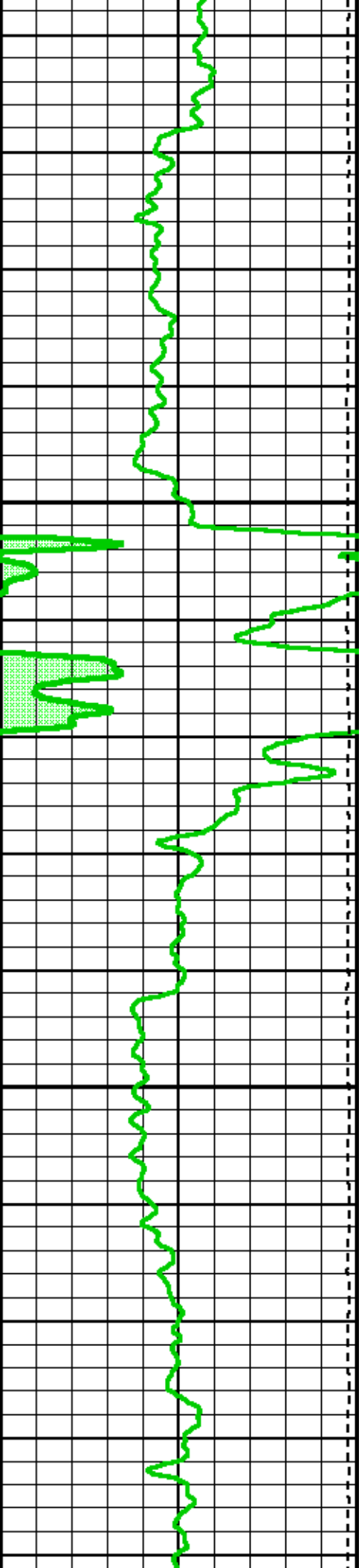


400

425

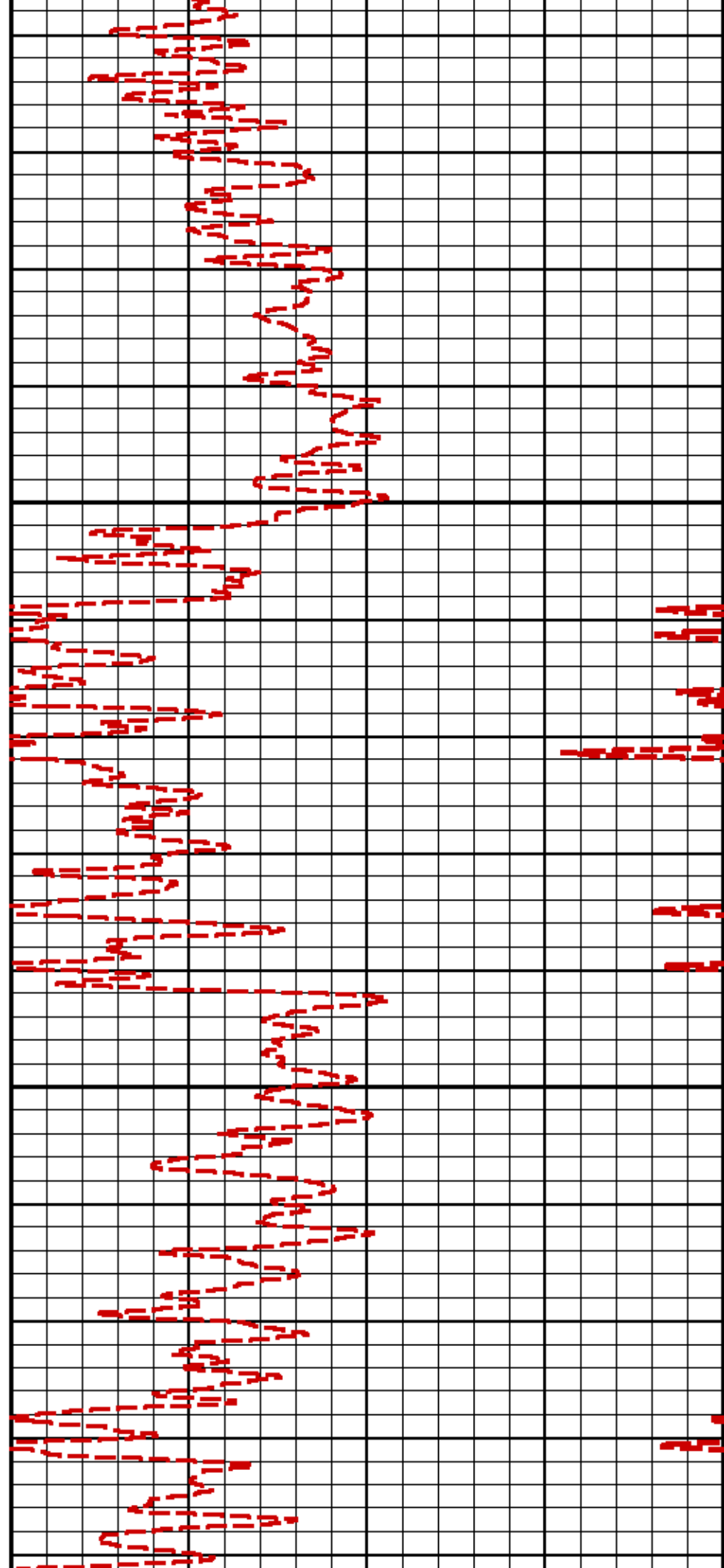
450

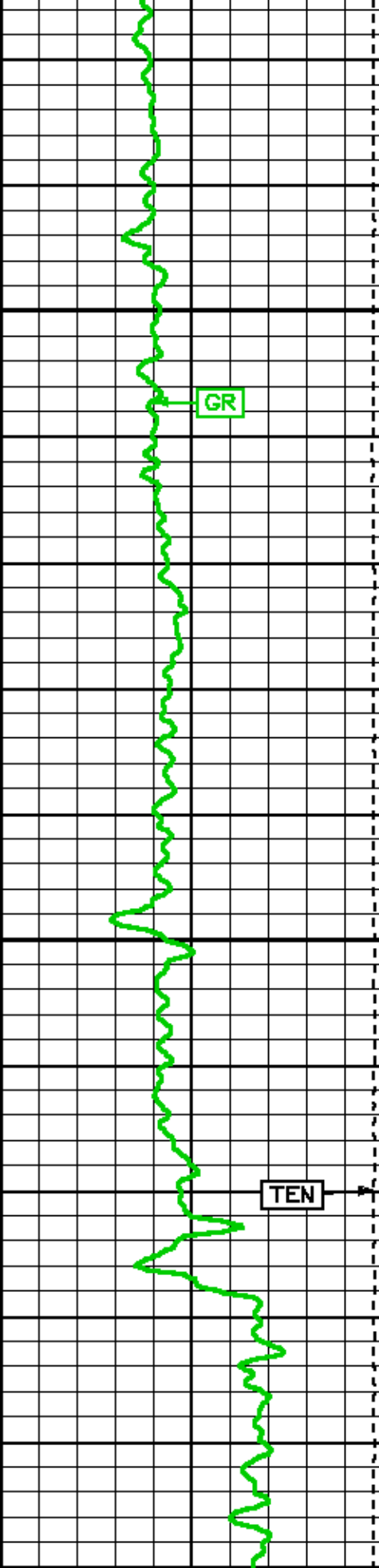




475

500





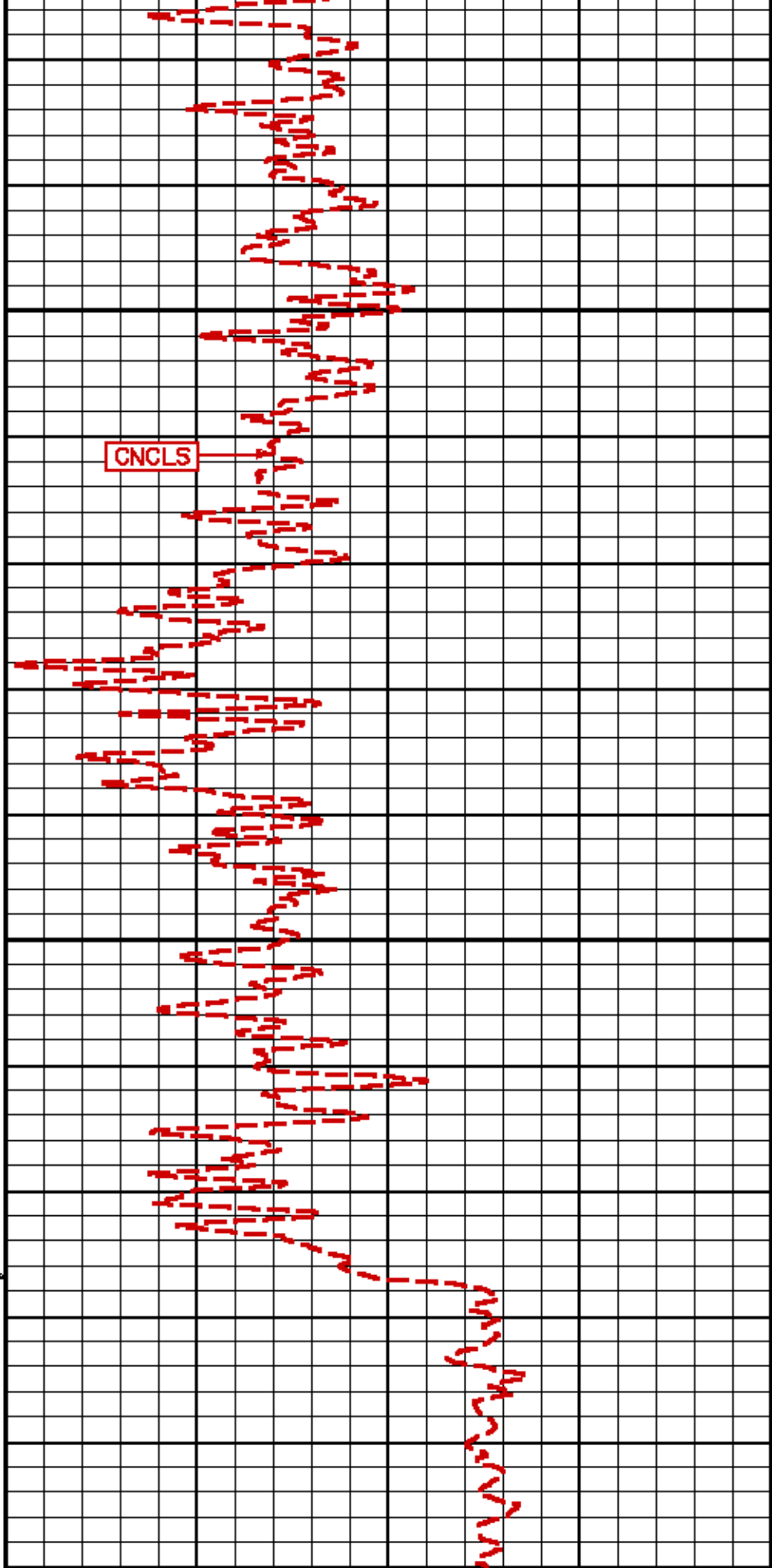
800

825

CSG

850

MET



GR BACKUP

TOOL STICKING



ERS



CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/husky_CA212510/m77wh_xe_calc.lp1

CHTEN PRIMARY CALIBRATION SUMMARY

TOOL #: 3981XA 173348 DATE/TIME PERFORMED: Mon Feb 13 03:05:54 2012

UNIT #: 3854SA 008672

	Signal Low (raw)	Signal High (raw)	Scale Mult	Scale Add	Engr Low (kgf)	Engr High (kgf)
CHT	2014.20	2119.20	22.89	-20989.31	-80.00	1010.00

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1329XA 11756674 DATE/TIME PERFORMED: Sat Feb 11 15:40:57 2012

UNIT #: 3854SA 008672 CALB JIG #: 4702NK DA-554

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CRDIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	34.36	938.07	903.7 830.0	0.166	5.70	155.70	150

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1329XA 11756674 DATE/TIME PERFORMED: Sat Feb 11 15:55:48 2012

UNIT #: 3854SA 008672 VERI JIG #: 4702NK DA-554

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	33.04	928.56	0.166	5.48	154.12	148.64 140.00 160.00

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1329XA 11756674 DATE/TIME PERFORMED: Sat Feb 11 16:23:14 2012 DAYS SINCE CAL: 0

UNIT #: 3854SA 008672 VERI JIG #: 4702NK DA-554

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	36.04	928.44	0.166	5.98	154.11	148.12
						138.84 158.84

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 1329XA 11756674 DATE/TIME PERFORMED: Mon Feb 13 12:23:20 2012 DAYS SINCE CAL: 1

UNIT #: 3854SA 008672 VERI JIG #: 4702NK DA-554

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	181.31	1042.73	0.166	30.09	173.08	142.98
						138.12 158.12

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2446XA 12088884 DATE/TIME PERFORMED: Sun Jan 8 11:40:46 2012

UNIT #: 3854SA 008672 CALIBRATOR #: 2437XB 112675 SOURCE #: 4717XS n--1023

	MEASURED CPS	DEADTM CPS	CORR	DTC SSN/LSN	NOMINAL SSN/LSN	CORRECTION FACTOR	POROSITY (pu)
LSN	599.34	608.09					
SSN	1534.74	1583.34					
RATIO				2.60382	2.75100	1.05652	
						0.97000 1.07000	
CN							21.358

CN PRIMARY VERIFICATION SUMMARY

TOOL #: 2446XA 12088884 DATE/TIME PERFORMED: Fri Feb 10 17:06:50 2012

UNIT #: 3854SA 008672 ICE BLOCK #: 4717ND D--416

	MEASURED CPS	DEADTM CPS	CORR	DTC SSN/LSN	CORRECTION FACTOR	DTC CORR SSN/LSN	POROSITY (pu)
LSN	928.82	950.03					
CN	1570.50	1621.50					

SSN [1570.59] [1621.36]

RATIO [1.70685] [1.05652] [1.80563]

CN [9.168]

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: [2446XA 12088884] DATE/TIME PERFORMED: [Fri Feb 10 17:08:35 2012] DAYS SINCE CAL: [33]

UNIT #: [38545A 008672] ICE BLOCK #: [4717ND D--416]

	MEASURED CPS	DEADTM CPS	CORR	DTC SSN/LSN	CORRECTION FACTOR	DTC CORR SSN/LSN	POROSITY (pu)
LSN	[934.67]	[956.14]					
SSN	[1566.90]	[1617.62]					
RATIO				[1.69183]	[1.05652]	[1.78974]	
CN							[8.982] [7.168] [11.168]

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: [2446XA 12088884] DATE/TIME PERFORMED: [Mon Feb 13 12:15:44 2012] DAYS SINCE CAL: [36]

UNIT #: [38545A 008672] ICE BLOCK #: [4717ND D--416]

	MEASURED CPS	DEADTM CPS	CORR	DTC SSN/LSN	CORRECTION FACTOR	DTC CORR SSN/LSN	POROSITY (pu)
LSN	[855.33]	[873.33]					
SSN	[1557.20]	[1607.30]					
RATIO				[1.84043]	[1.05652]	[1.95101]	
CN							[10.903] [6.882] [10.982]

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: [2234XA 168004] DATE/TIME PERFORMED: [Sat Jan 14 10:11:09 2012]

UNIT #: [38545A 008672]

	SMALL RING (mm)	LARGE RING (mm)	MULT	ADD	SMALL RING (mm)	LARGE RING (mm)
CALIPER	[883.6]	[1429.6]	[0.18535]	[14.02653]	[177.800]	[279.000]

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 168004 DATE/TIME PERFORMED: Mon Feb 13 03:36:21 2012 DAYS SINCE CAL: 29

UNIT #: 38545A 008672

	I.D.	MULT	ADD	I.D. (mm)
CALIPER	1162.0	0.18535	12.02664	227.401

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 168004 DATE/TIME PERFORMED: Mon Feb 13 08:52:36 2012 DAYS SINCE CAL: 29

UNIT #: 38545A 008672

	I.D.	MULT	ADD	I.D. (mm)
CALIPER	1159.2	0.18535	12.02664	226.882
				214.701 240.101

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2234XA 168004 DATE/TIME PERFORMED: Sat Jan 14 12:59:06 2012

UNIT: 38545A 008672 CALB BLKS: 2225XA 094290 CS SRC: 4703NT 16050B

SS CS PK (Channel)	LS CS PK (Channel)	SS_BKGD (cps)	LS BKGD (cps)
226.1 <small>220.0 230.0</small>	225.5 <small>220.0 230.0</small>	1255.6	1695.3

	SS (cps)	LS (cps)	SHR	DEN (kg/m ³)	CORR (kg/m ³)	PE (b/e)
MG (LO PE)	21939.1	11453.9	0.625 <small>0.565 0.685</small>	1697.000	2.000	2.140
AL	12832.7	1159.9		2700.000	-4.000	
AL + SHIM	17665.2	2018.2		2614.000	157.000	
MG + SHIM (HI PE)	10659.0	5439.6	0.252 <small>0.210 0.270</small>			8.550
RATIO AL + SHIM/AL	1.38 <small>1.32 1.42</small>	1.74 <small>1.64 1.84</small>				
RATIO MG/AL	1.71 <small>1.65 1.78</small>	9.87 <small>8.40 10.20</small>				

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 168004 DATE/TIME PERFORMED: Mon Feb 13 02:56:14 2012 DAYS SINCE CAL: 29

UNIT #: 38545A 008672

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	1688.8	223.4	1220.7
	1595.3 1795.3	220.0 230.0	1100.0 1550.0
SS	1257.1	223.5	1228.0
	1155.6 1355.6	220.0 230.0	1100.0 1550.0
LV (V)		PAD CURRENT (mA)	
5.0		67.4	
4.8 5.2		50.0 120.0	

ZDL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 168004 DATE/TIME PERFORMED: Mon Feb 13 12:19:51 2012 DAYS SINCE CAL: 29

UNIT #: 38545A 008672

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	1680.1	221.8	1213.9
	1595.3 1795.3	220.0 230.0	1100.0 1550.0
SS	1257.9	224.1	1225.8
	1155.6 1355.6	220.0 230.0	1100.0 1550.0
LV (V)		PAD CURRENT (mA)	
5.0		65.2	
4.8 5.2		50.0 120.0	



COMPANY HUSKY OIL OPERATIONS LIMITED
WELL LITTLE BEAR N-9
FIELD SLATER RIVER
PROVINCE NORTHWEST TERRITORIES

FILE NO: _____
API NO: _____

LOCATION:
 SURF LOC: LAT 64° 58' 55.2"N LONG 126° 31' 20.2"
 BH LOC. LSD:
 LAT 64° 58' 55.2"N LONG 126° 31' 20.2"

ELEVATIONS:
 KB 258.8 M
 DF
 GL 253.5 M
DATE 13-FEB-2012

UID: 300N086500126300
LICENSE: 463