



HIGH DEFINITION INDUCTION LOG
COMPENSATED Z-DENSITY LOG
COMPENSATED NEUTRON LOG
GAMMA RAY LOG
CALIPER LOG

FILE NO: OH097524	COMPANY PICEANCE ENERGY	
WELL PICEANCE 28-09W		
API NO: 05077097770000	FIELD VEGA	
	COUNTY MESA	
	STATE COLORADO	
Ver. 4.01 SEC 28 T9S R93W PICEANCE 28-05 PATTERSON 306	LOCATION: SHL: 1597' FNL 1230' FWL BHL: 2125' FNL 874' FWL SEC 28 TWP 9S RGE 93W	OTHER SERVICES CASING INSPECTION
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL ELEVATION 7556 FT KB 22 FT ABOVE P.D. KB	ELEVATIONS: KB 7578 FT DF GL 7556 FT

DATE		05-Aug-2015			
RUN	TRIP	1	1		
SERVICE ORDER		US097524J			
DEPTH DRILLER		7844 FT			
DEPTH LOGGER		7844 FT			
BOTTOM LOGGED INTERVAL		7841 FT			
TOP LOGGED INTERVAL		0 FT			
CASING DRILLER		8.625 IN @ 1570 FT			@
CASING LOGGER		1568 FT			
BIT SIZE		7.875 IN			
TYPE OF FLUID IN HOLE		LSND			
DENSITY	VISCOSITY	9.7 LB/G	65 CP		
PH	FLUID LOSS	10.3	7.6 C3		
SOURCE OF SAMPLE		MUD TANK			
RM AT MEAS. TEMP.		1.14 OHMM @ 67.3 DEGF			@
RMF AT MEAS. TEMP.		0.85 OHMM @ 67.3 DEGF			@
RMC AT MEAS. TEMP.		1.42 OHMM @ 67.3 DEGF			@
SOURCE OF RMF	RMC	CALCULATED	CALCULATED		
RM AT BHT		0.85 OHMM @ 177 DEGF			@
TIME SINCE CIRCULATION		4 HOURS			
MAX. RECORDED TEMP.		177 DEGF			
EQUIP. NO.	LOCATION	6685	GRAND JCT		
RECORDED BY		W. QUIGLEY			
WITNESSED BY		MR. ROGER FOSTER			

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BOREHOLE RECORD		
BIT SIZE	FROM	TO
7.875 IN	1570 FT	7844 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
8.625 IN	24 LB/F		0 FT	1570 FT

REMARKS

RUN 1 TRIP 1: HDIL ZDL CN GR RAN IN COMBINATION

BVOL CVOL CALCULATED IN CUBIC FT
CVOL CALCULATED USING PROPOSED 4.5" CASING
CALIPER VERIFIED INSIDE CASING

RHO MATRIX: 2.68 G/CC
RHO FLUID: 1.00 G/CC

CN MATRIX: SANDSTONE
CN RAN DECENTRALIZED

HDIL RAN FREE
KNUCKLE, CABBAGEHEAD, AND HOLEFINDER REMOVED AT CUSTOMER REQUEST

ABC TO CALCULATE MUD CONDUCTIVITY

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES
CREW: OLSON/HOLLAR/QUIGLEY
RIG: PATTERSON 306

BOREHOLE RUGOSITY CAUSES INVALID READINGS, SEE CALIPER
BVOL AND CVOL MAY BE LESS THAN ACTUAL DUE TO CALIPER MAXING OUT IN WASHOUTS

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWVL	3950XA	10119949	FREE
1	1	TTMA	3980XA	10121559	FREE
1	1	FOC TEL	3518FB	10137522	FREE
1	1	GR	3518EB	10139870	DECENTRALIZED
1	1	CN	2436XA	10522099	DECENTRALIZED
1	1	ZDL	2223XA	10123024	CALIPER DEVICE
1	1	HDIL	1530XA	10415933	FREE

MAIN LOG 2"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 7

Plotted: Wed Aug 5 21:40:03 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/OH097524/n970m03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 1453.494 ft BOTTOM DEPTH: 7852.372 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
SP-SPDH	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	7.875	in	TOP	BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	67.7	degF	"	"
	MUD SAMPLE RES	1.140	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM

ADAPTIVE BOREHOLE CORRECTION	TEMP CORRECTION	ON	TOP	BOTTOM
ABC PROCESSING	ABC to CALCULATE	MUD CONDUCTIVITY	"	"
STANDOFF	TOOL POSITION	1.50 in	"	"
Rmud MULTIPLIER	ECCENTERED	1.000	"	"

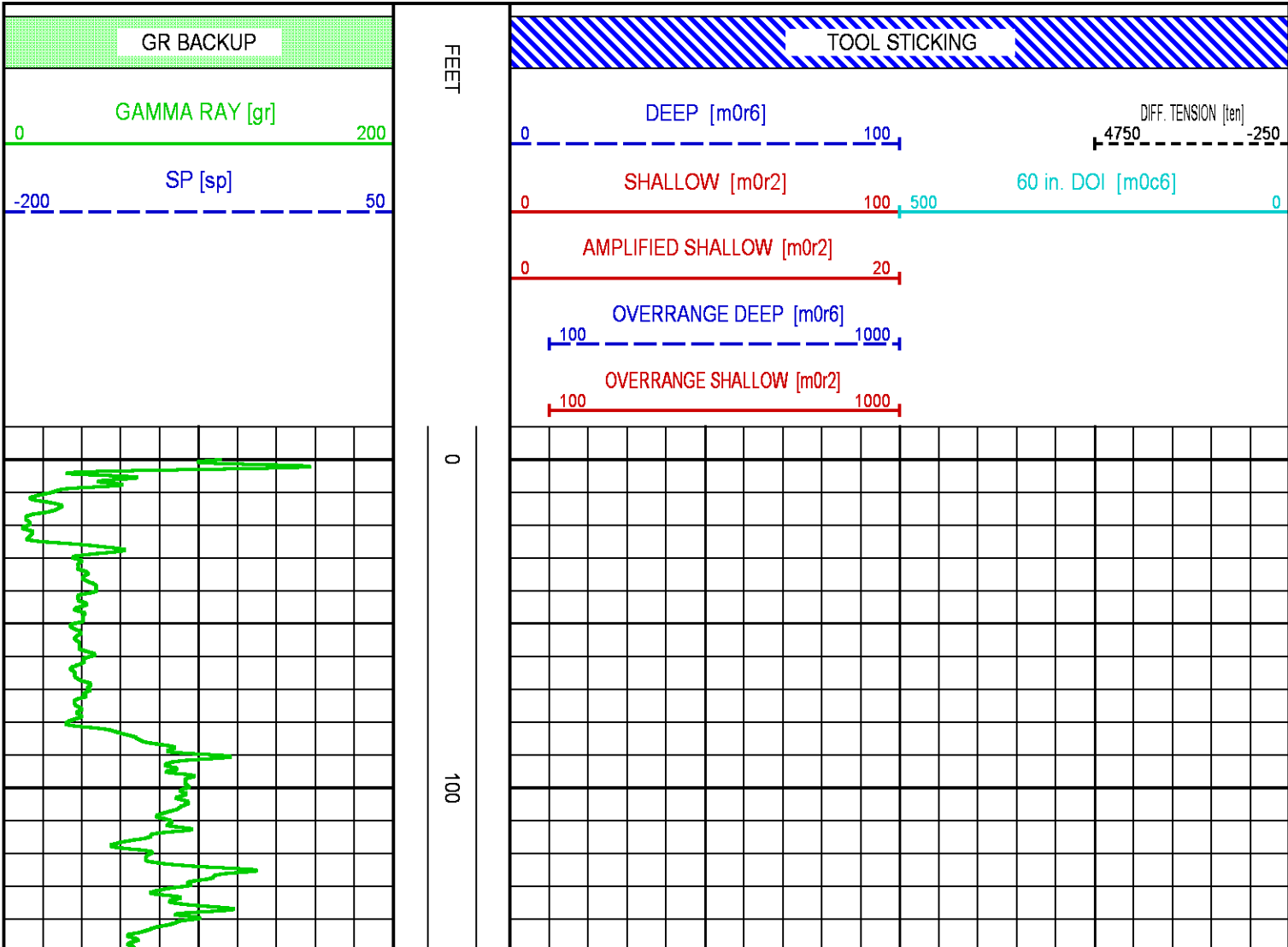
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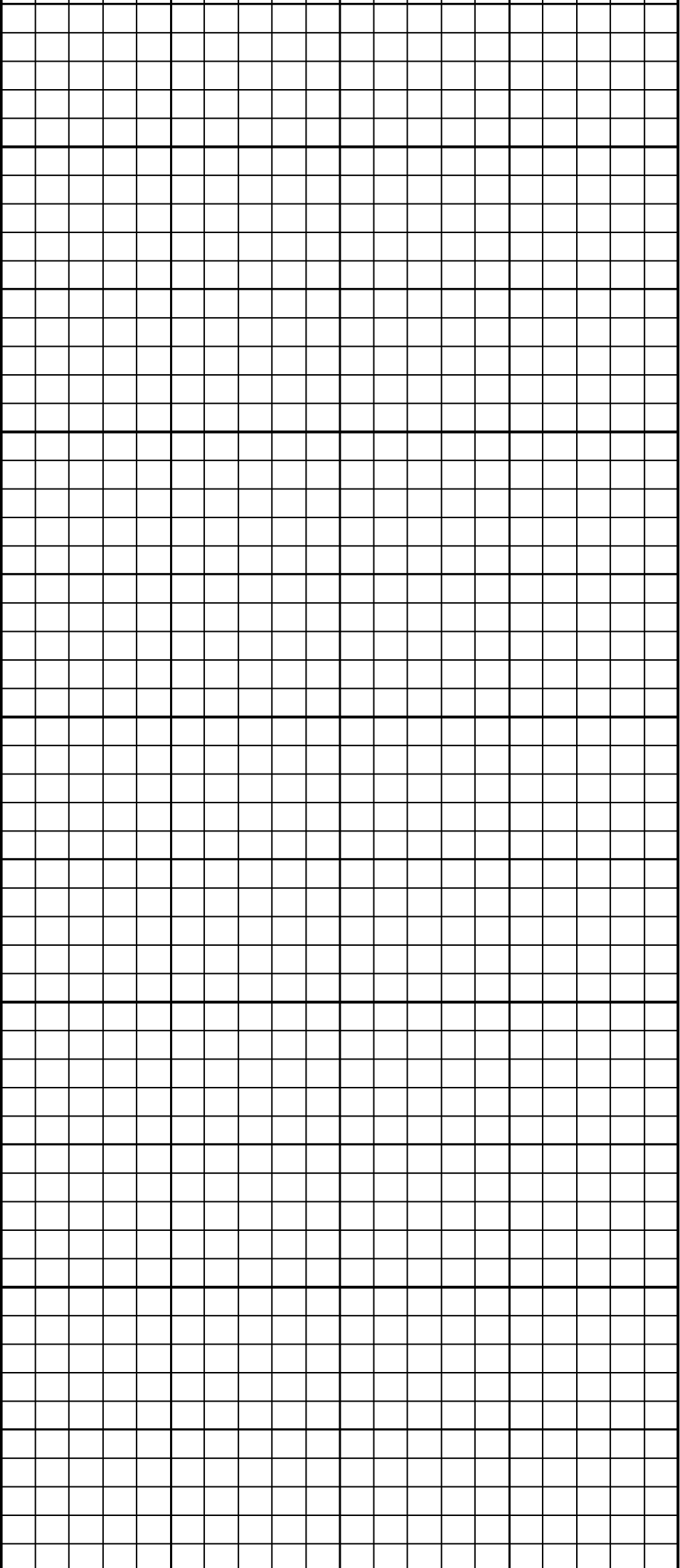
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
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F1:M0C6	Aug 5 18:59:19 2015	FOCUSED CONDUCTIVITY, 60-INCH DOI
F1:M0R2	Aug 5 18:59:19 2015	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:M0R6	Aug 5 18:59:19 2015	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:SP	Aug 5 18:59:19 2015	SPONTANEOUS POTENTIAL
F1:TEN	Aug 5 18:59:19 2015	DIFFERENTIAL TENSION

CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
GR	32.00	M0R2	2.75	SP	1.25		
M0C6	2.75	M0R6	2.75	TEN	0.00		

Presentation	: cas6685:/dat1a/OH097524/2IN.fvpdf [2"/100' Scale]
Plot Interval	: -0.75 - 7847.75 Feet
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Created On	: Aug 5 18:59:19 2015
Company	: LARAMIE ENERGY
Well	: PICEANCE 28-09W
Field	: VEGA
File Interval	: -0.75 - 7853.75 Feet
OCT	: n970m





200

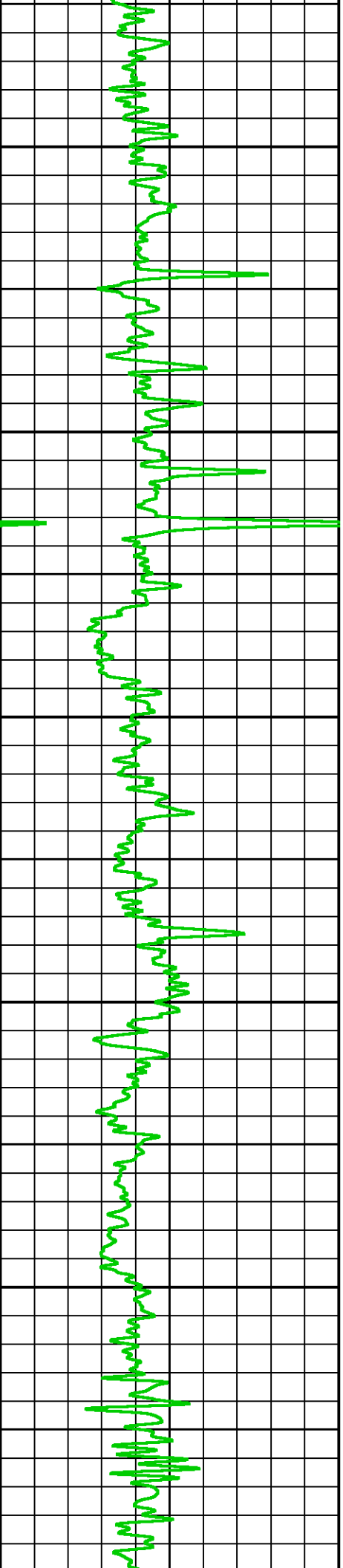
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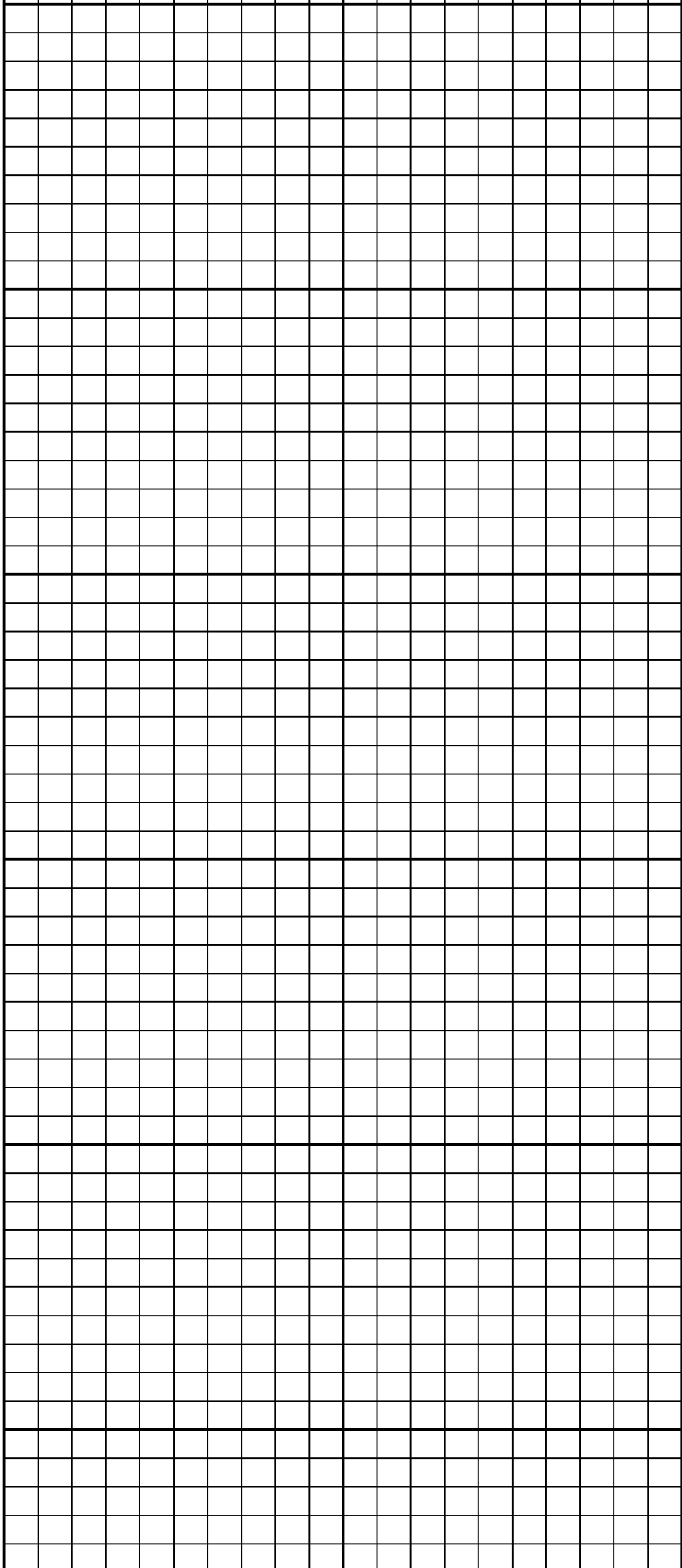
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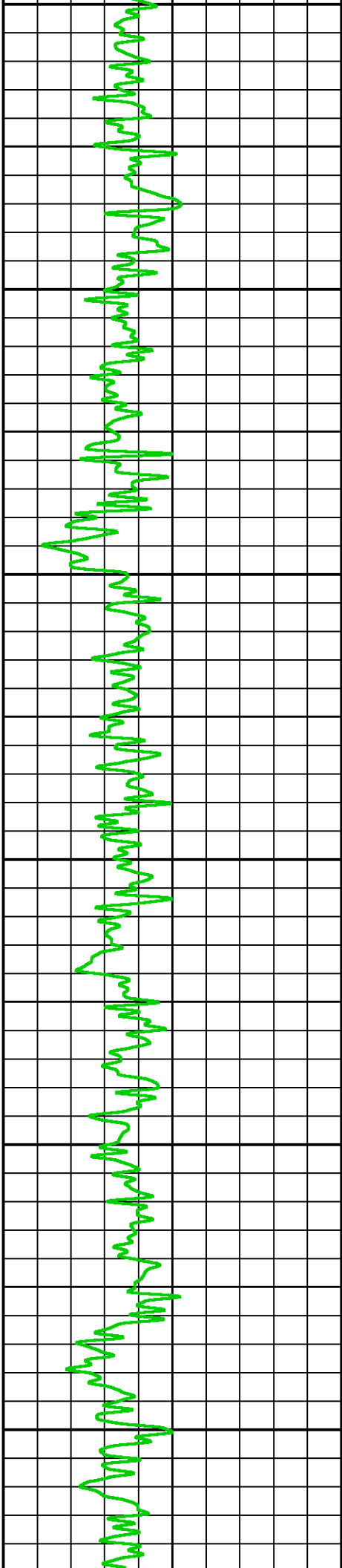
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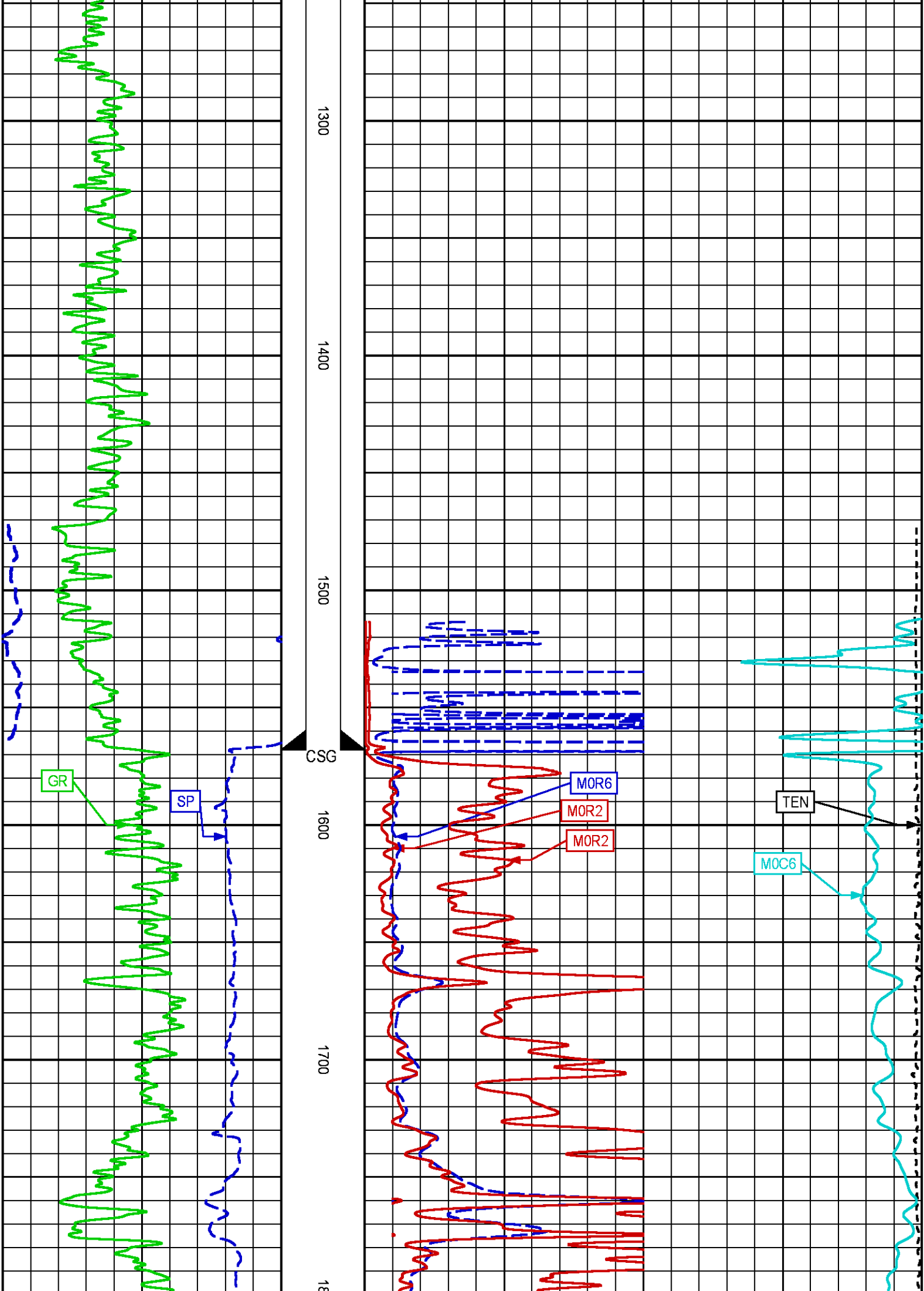
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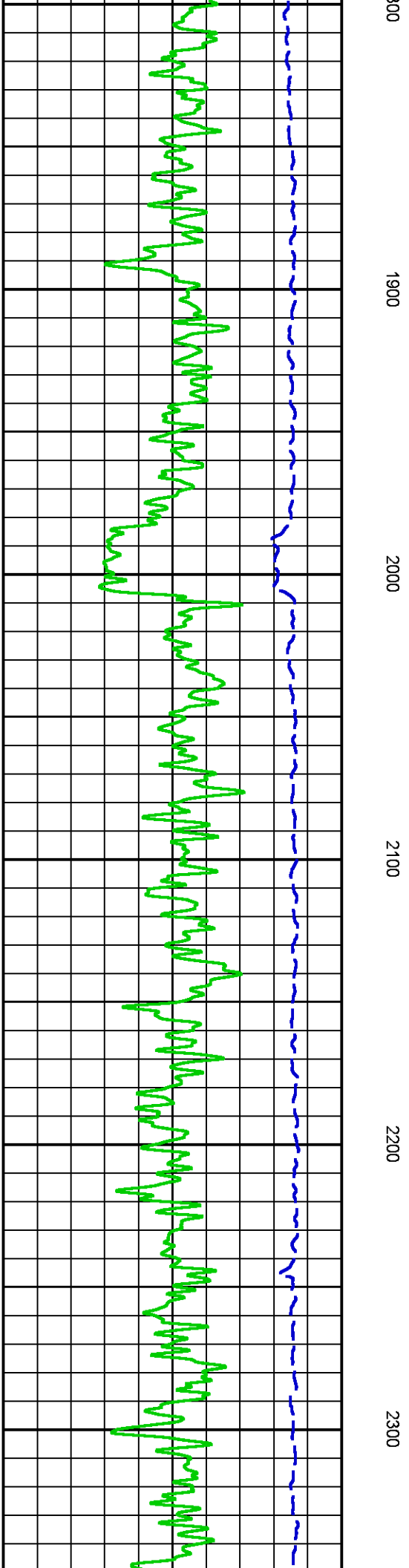
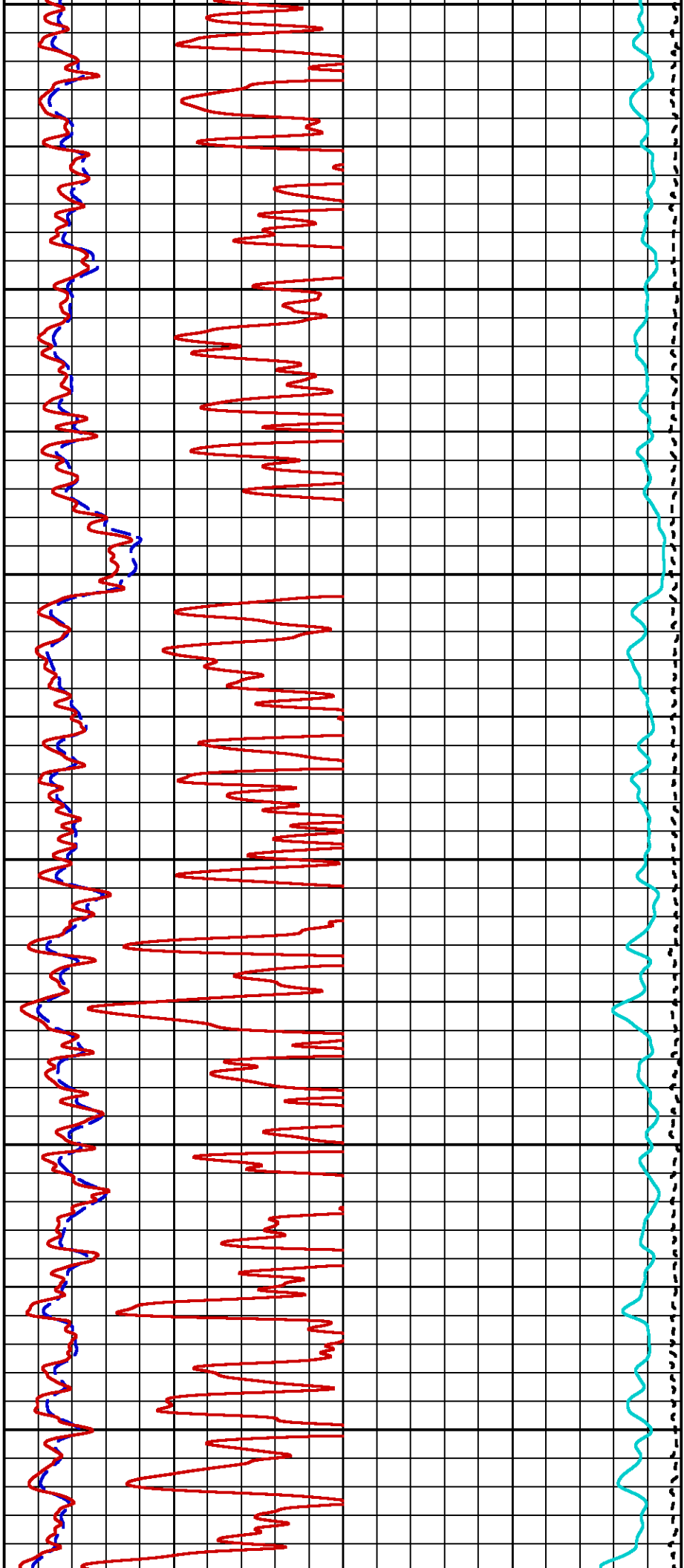


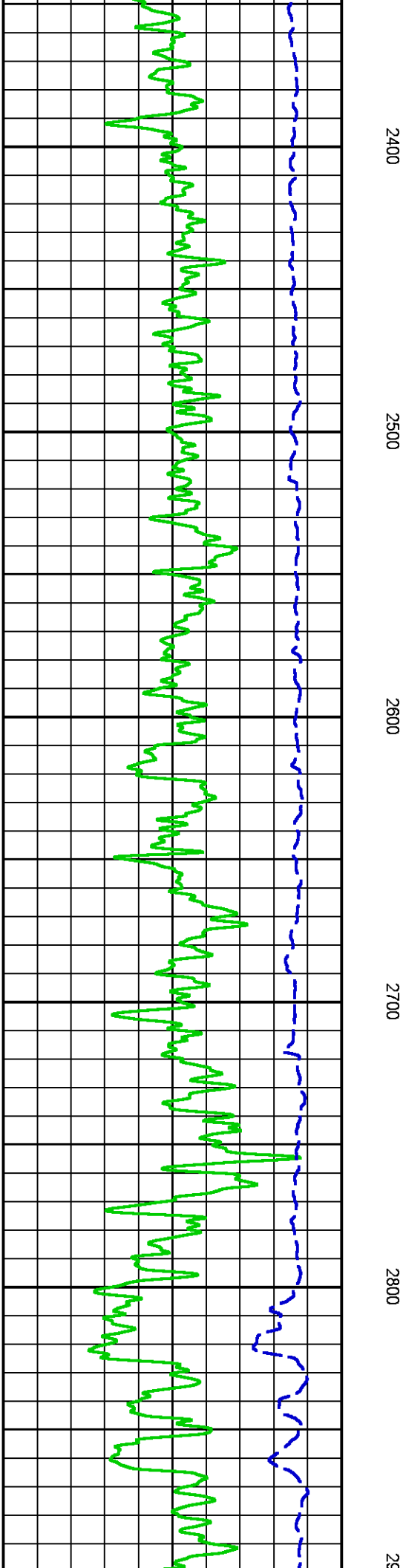
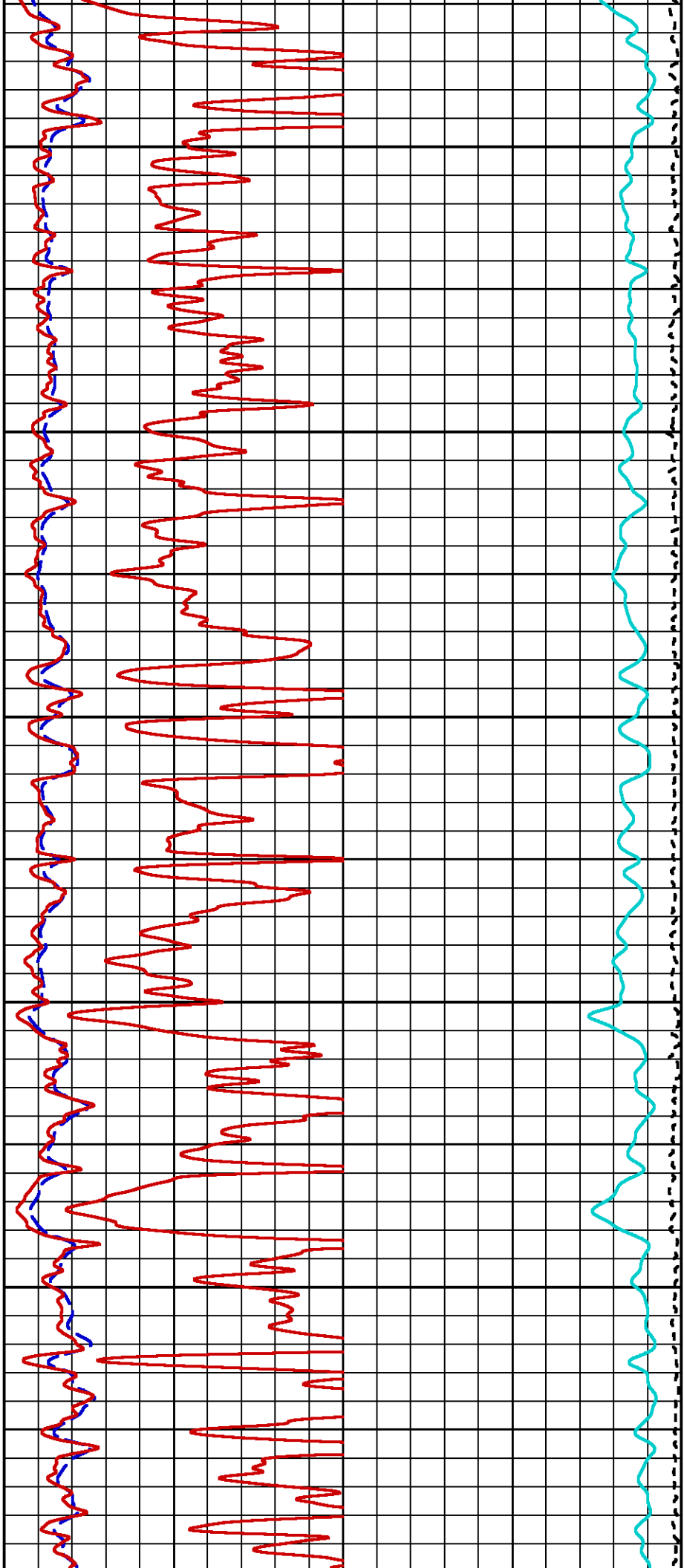


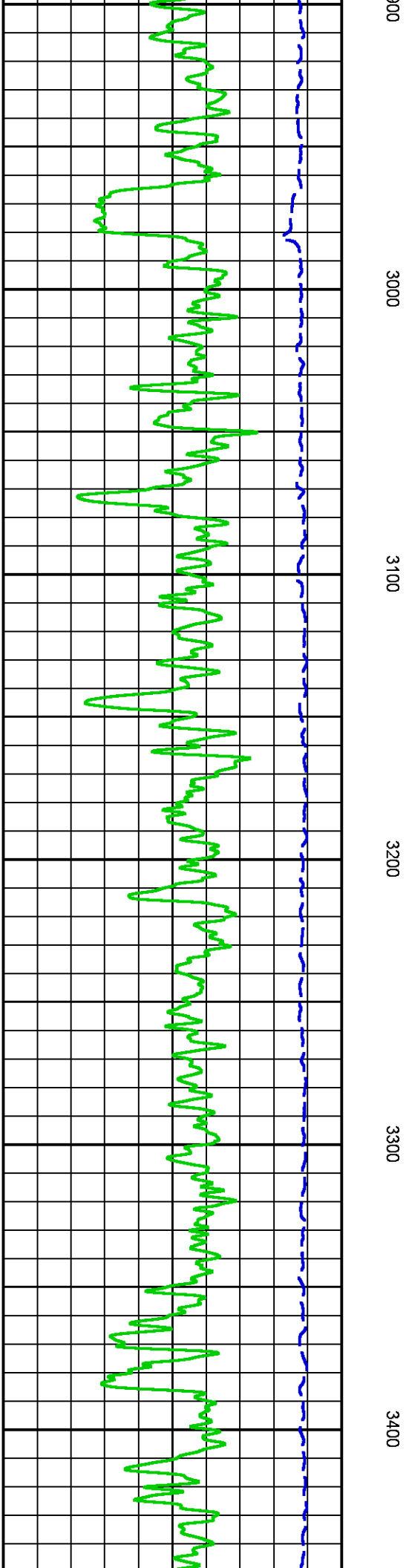
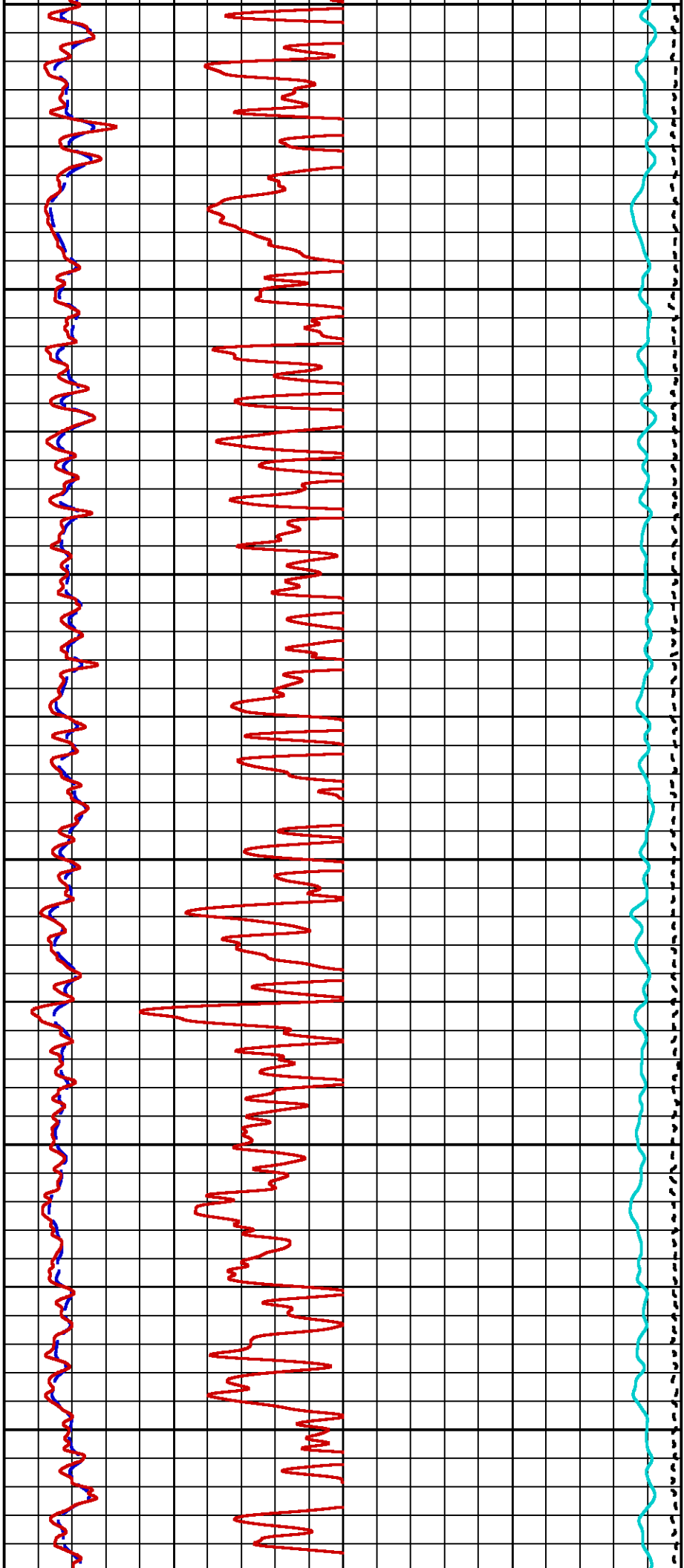
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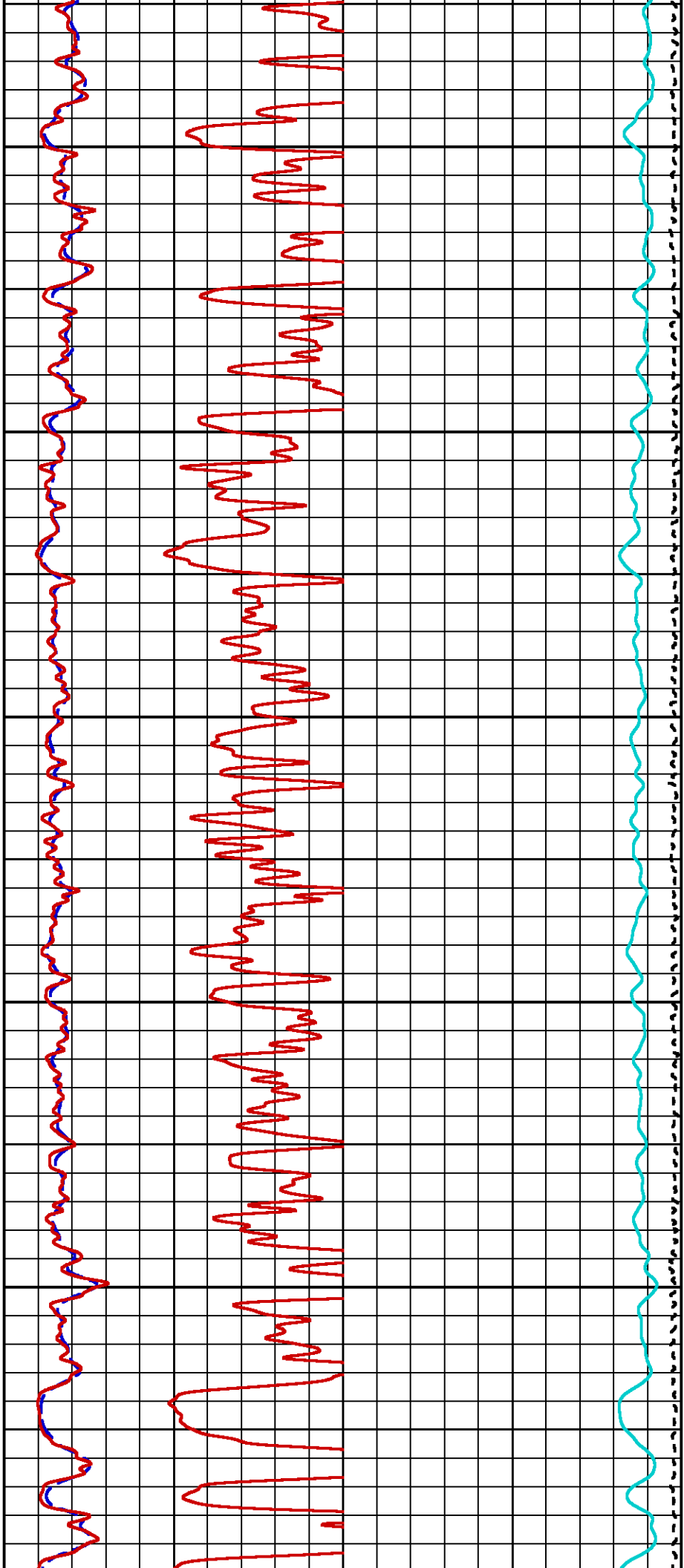












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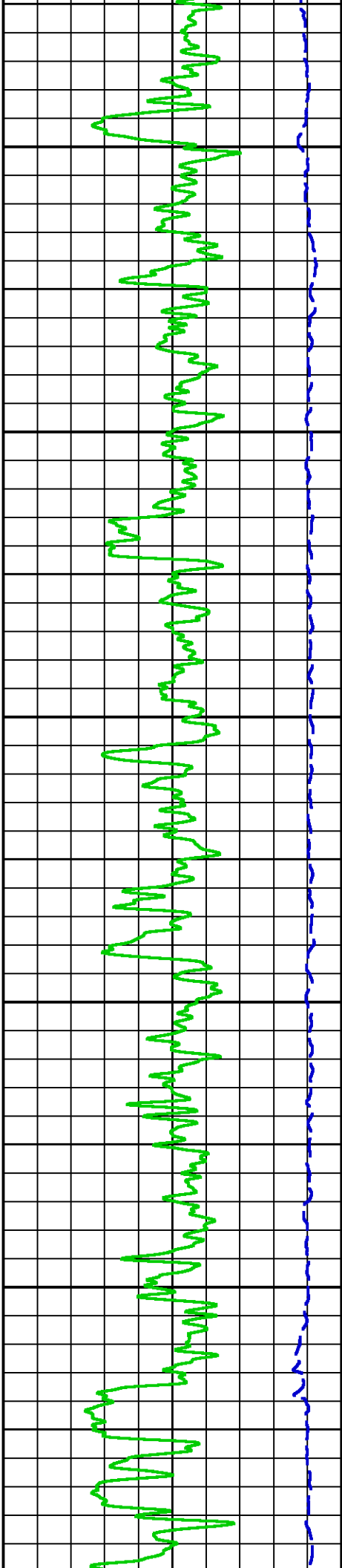
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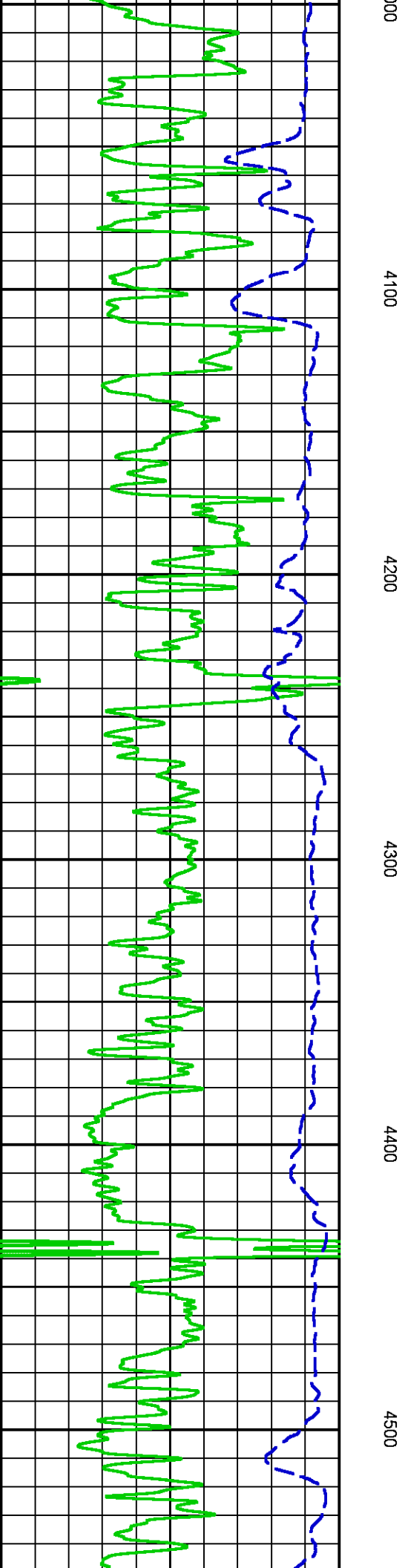
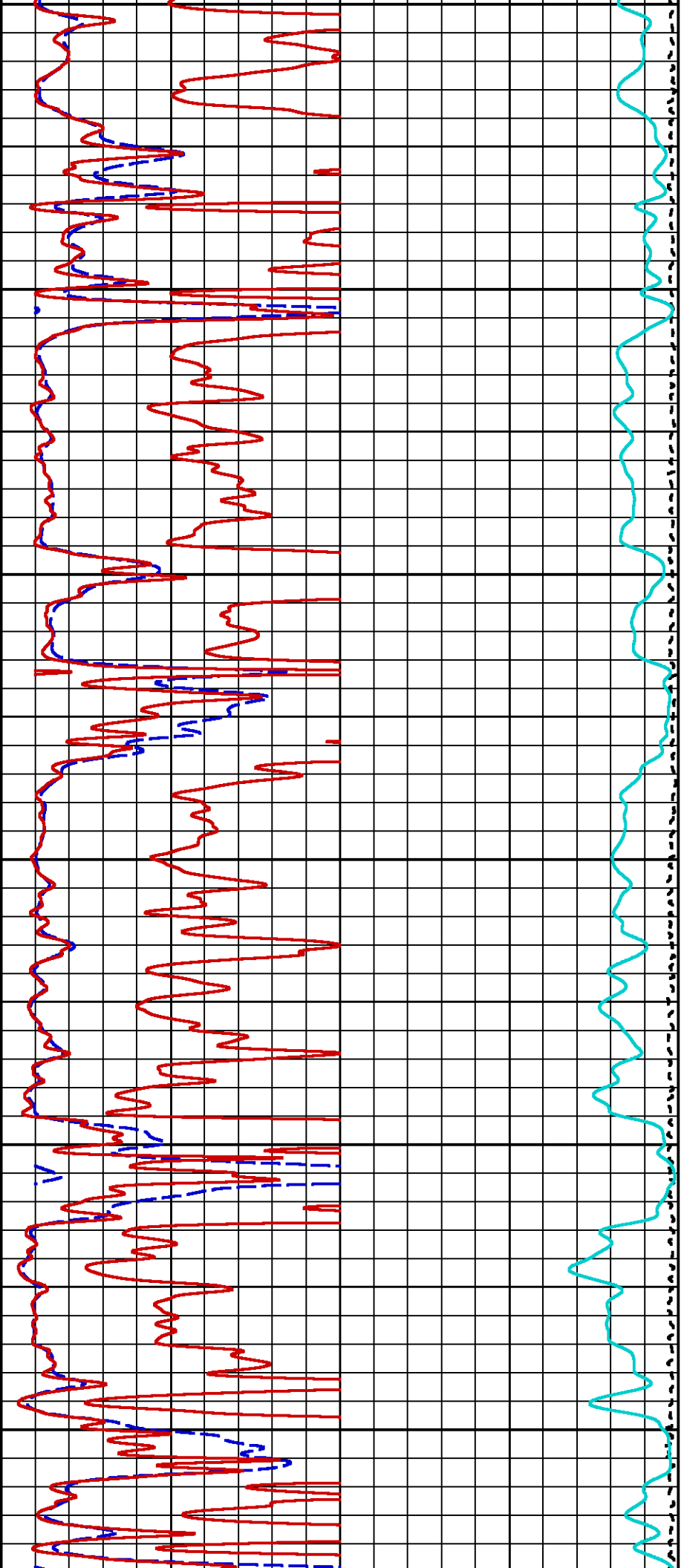
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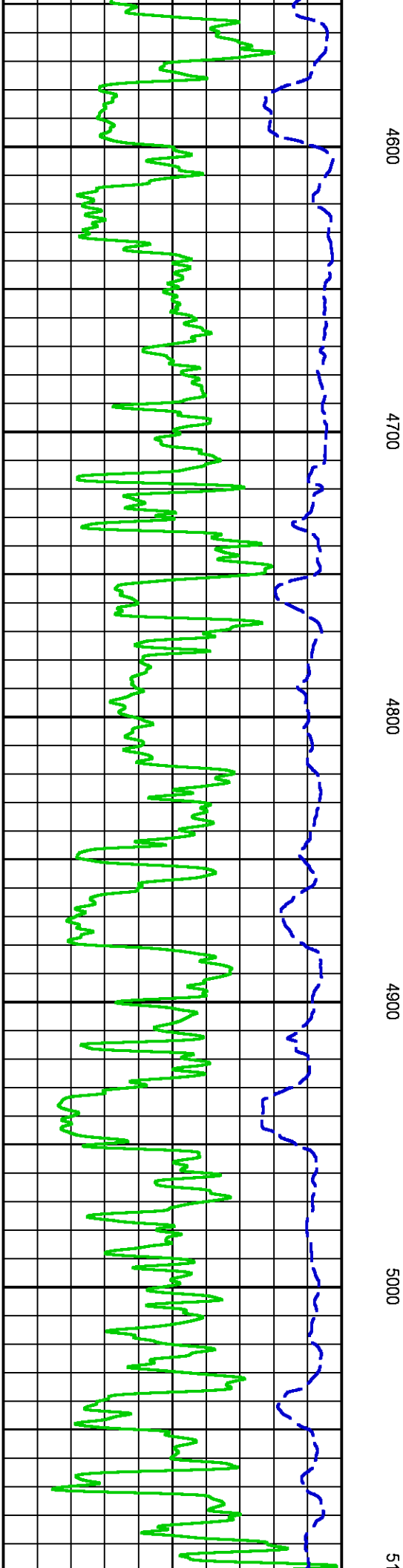
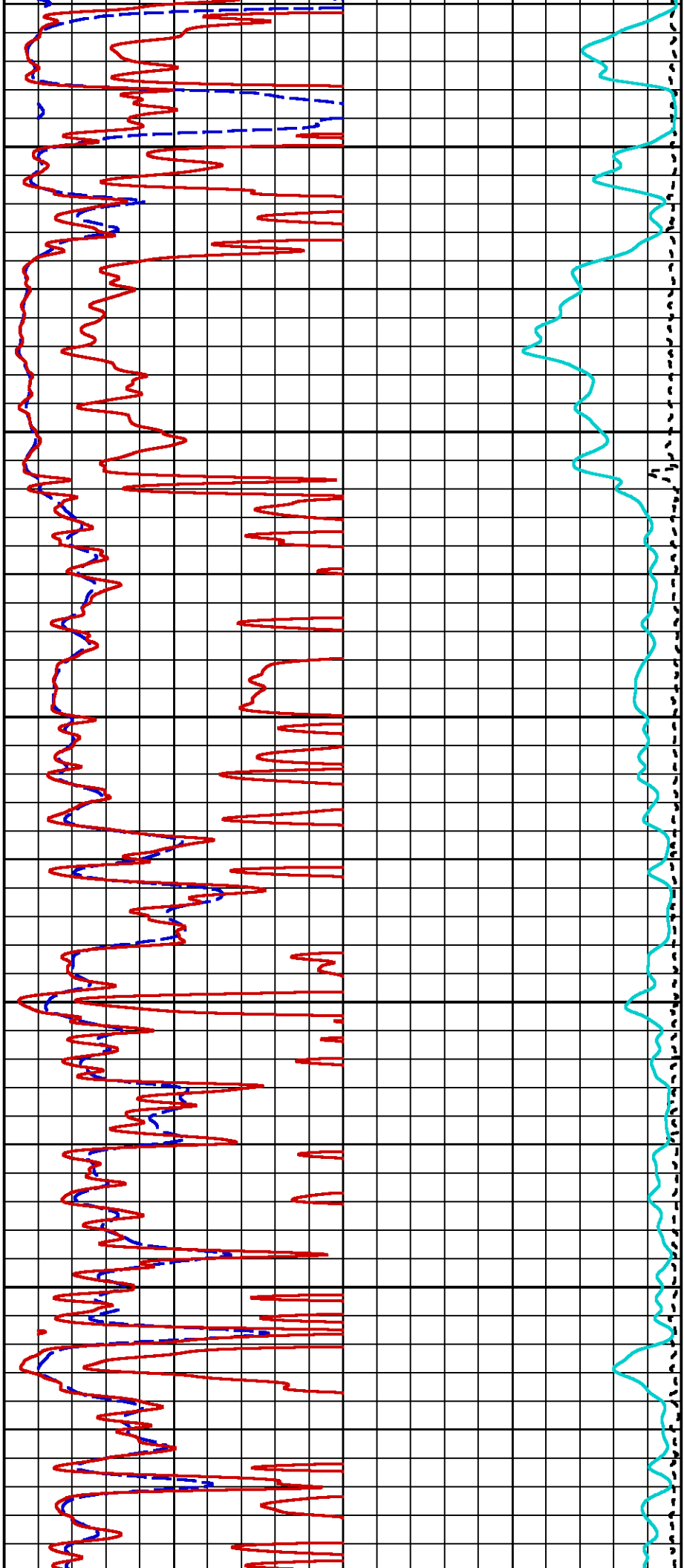
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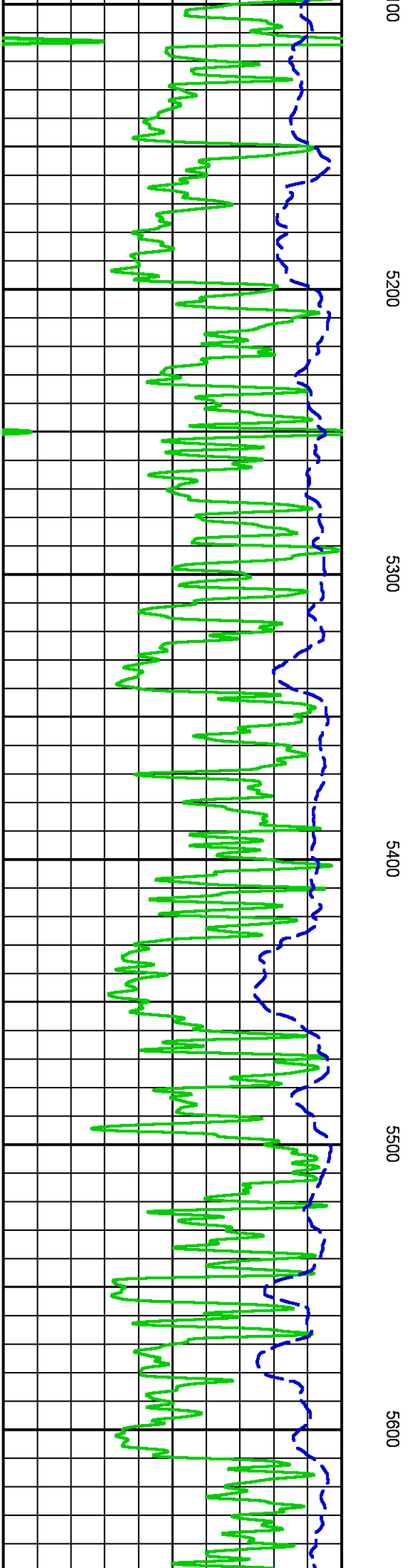
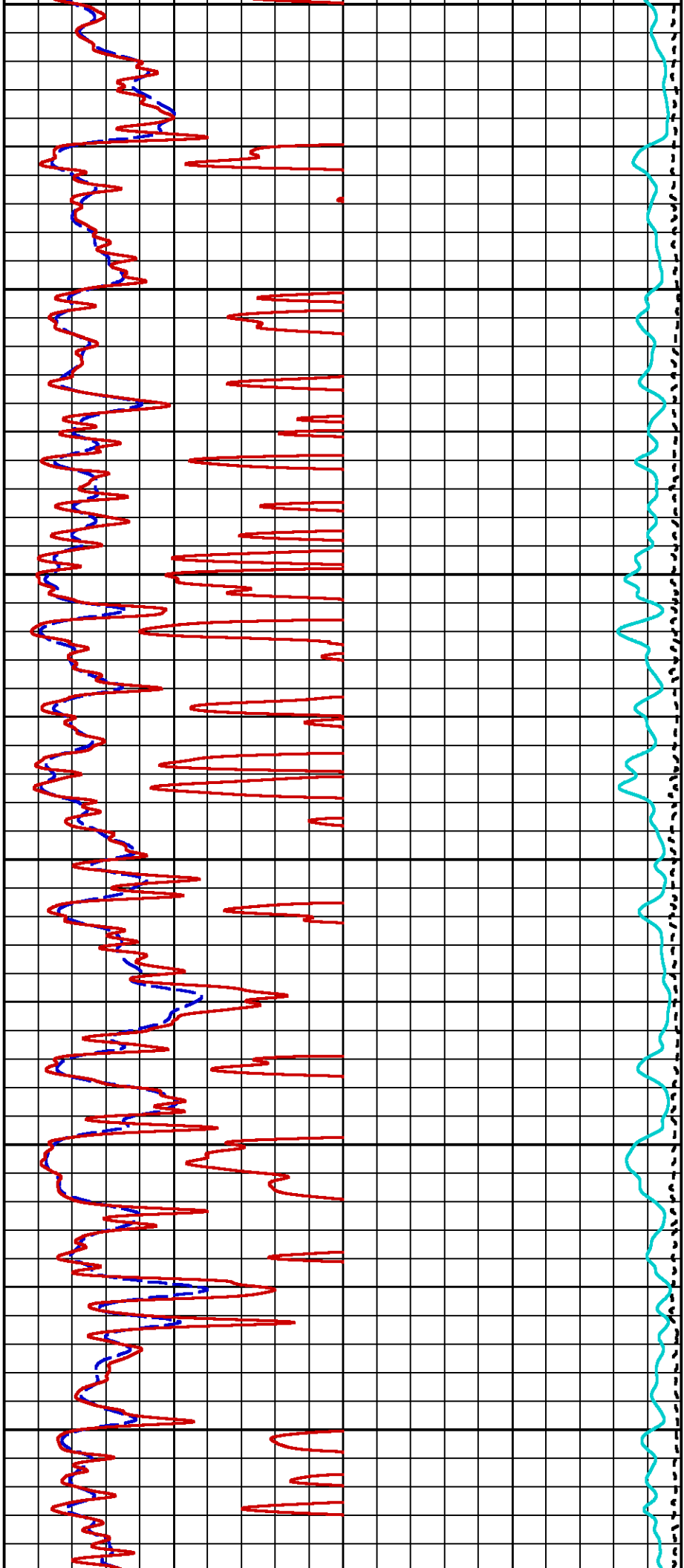
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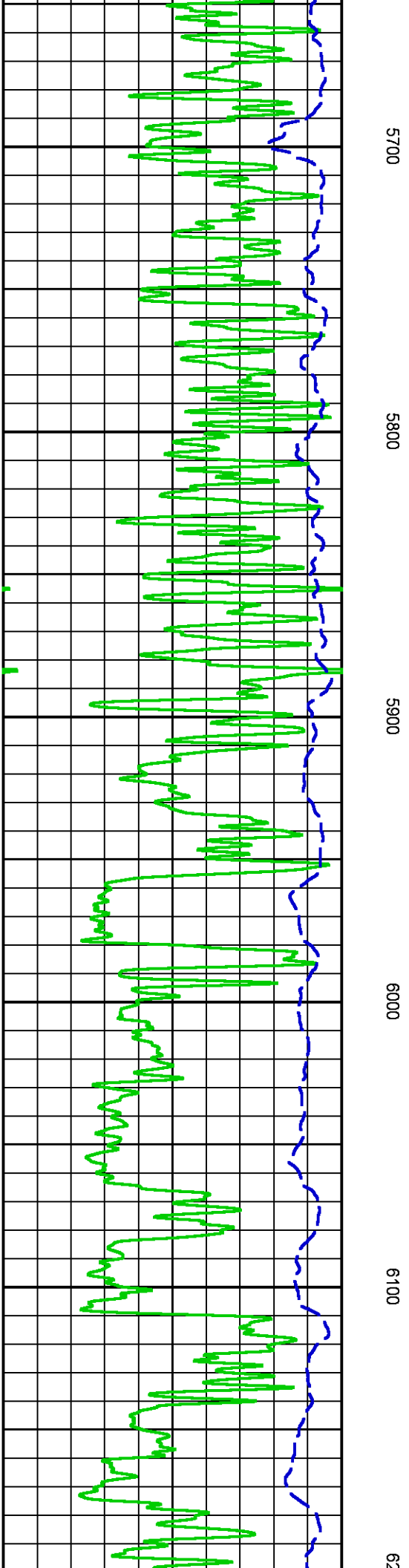
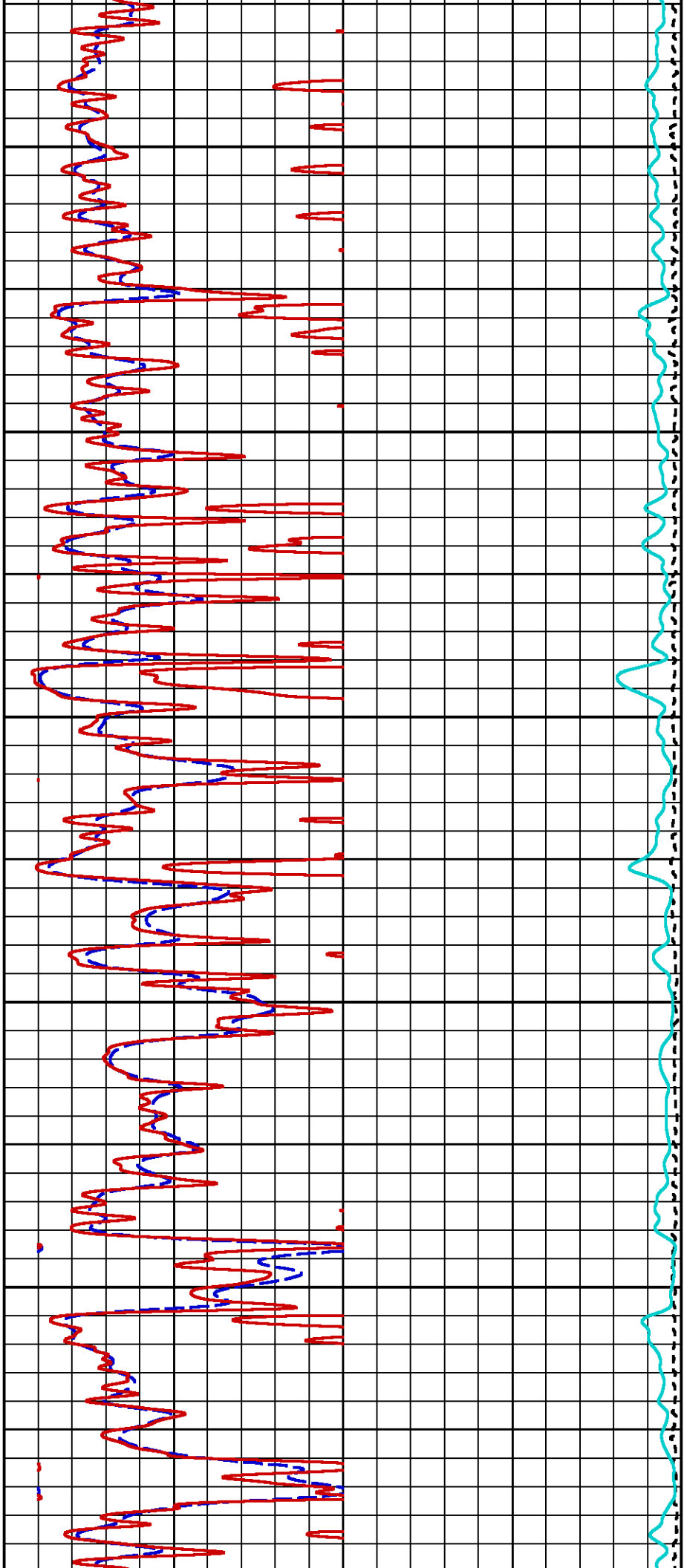
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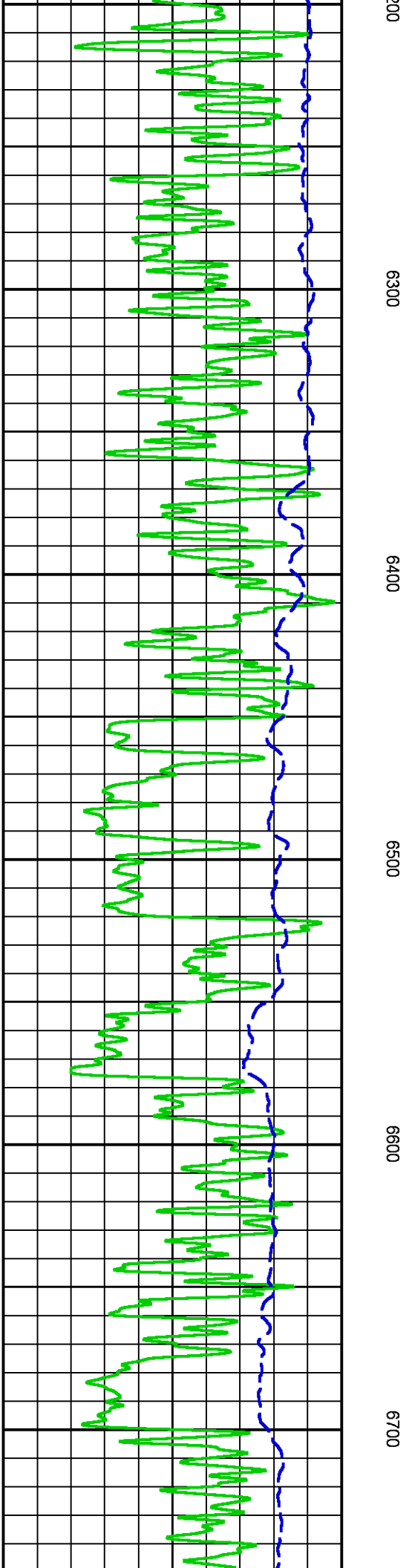
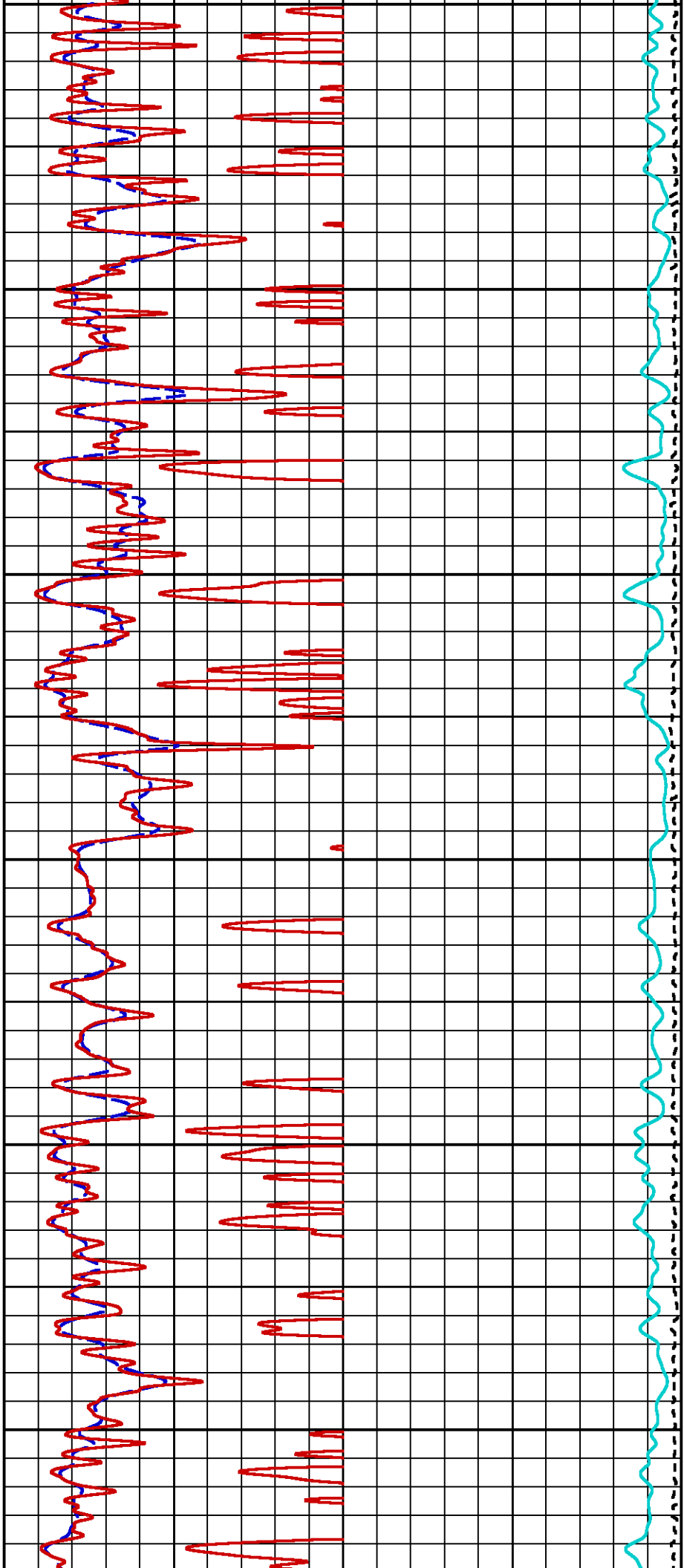


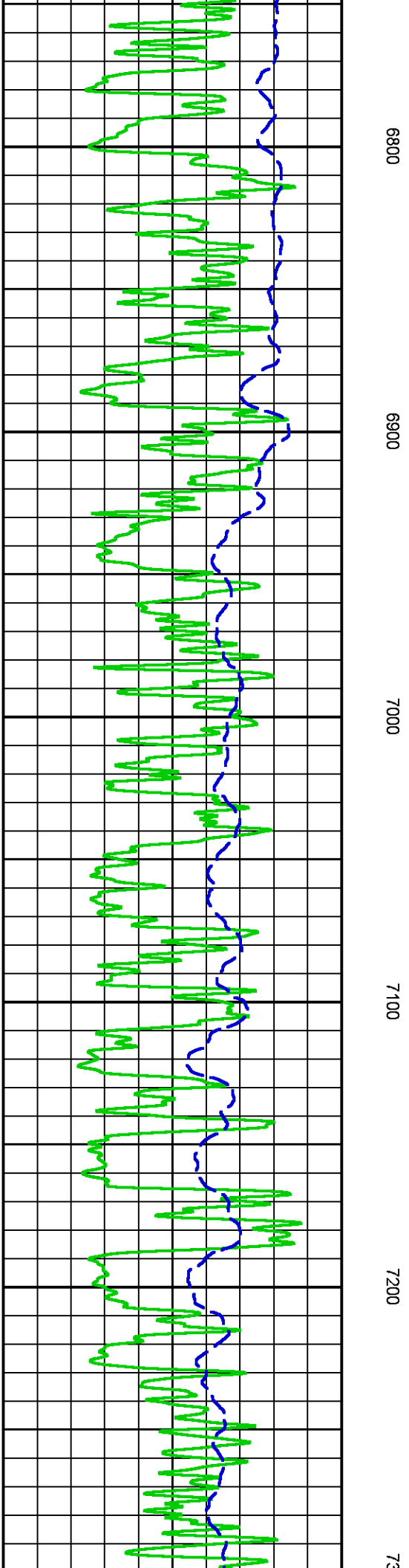
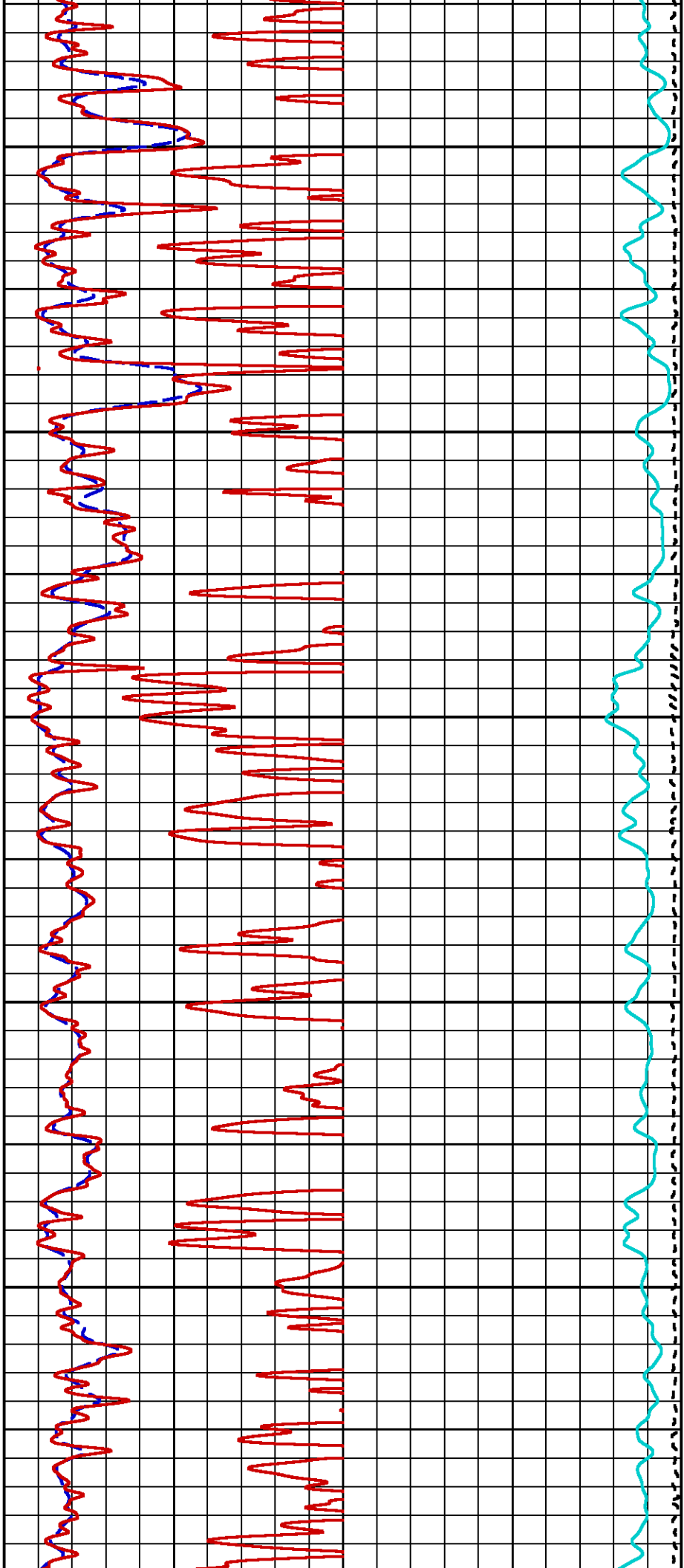


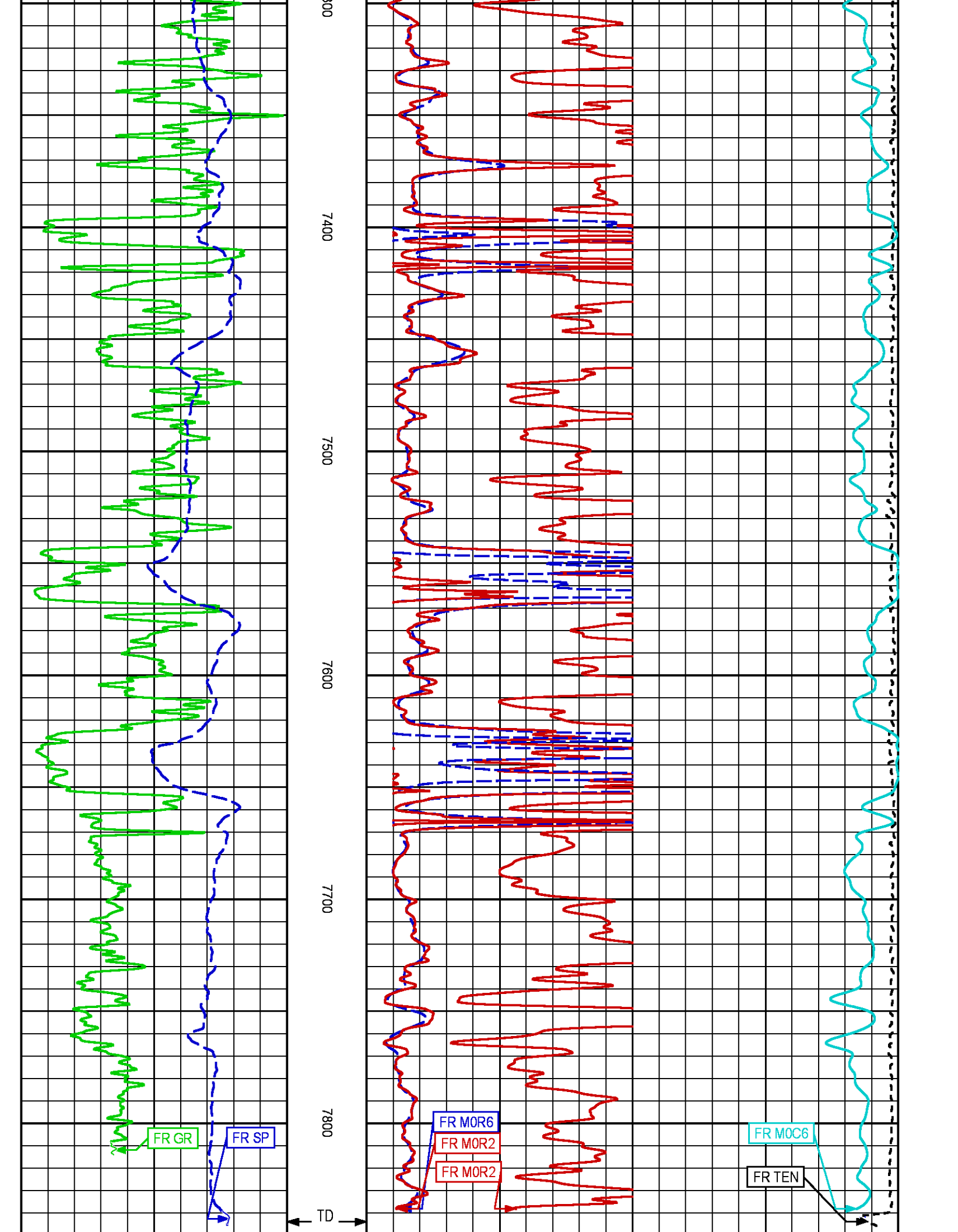












ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	SANDSTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	700	ppm	"	"
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	Air Filled Borehole	NO		TOP	BOTTOM
	RHOmatrix	2.680	g/cm3	"	"
	RHOfluid	1.000	g/cm3	"	"

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	MUD CONDUCTIVITY		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

CURVE DESCRIPTION REPORT

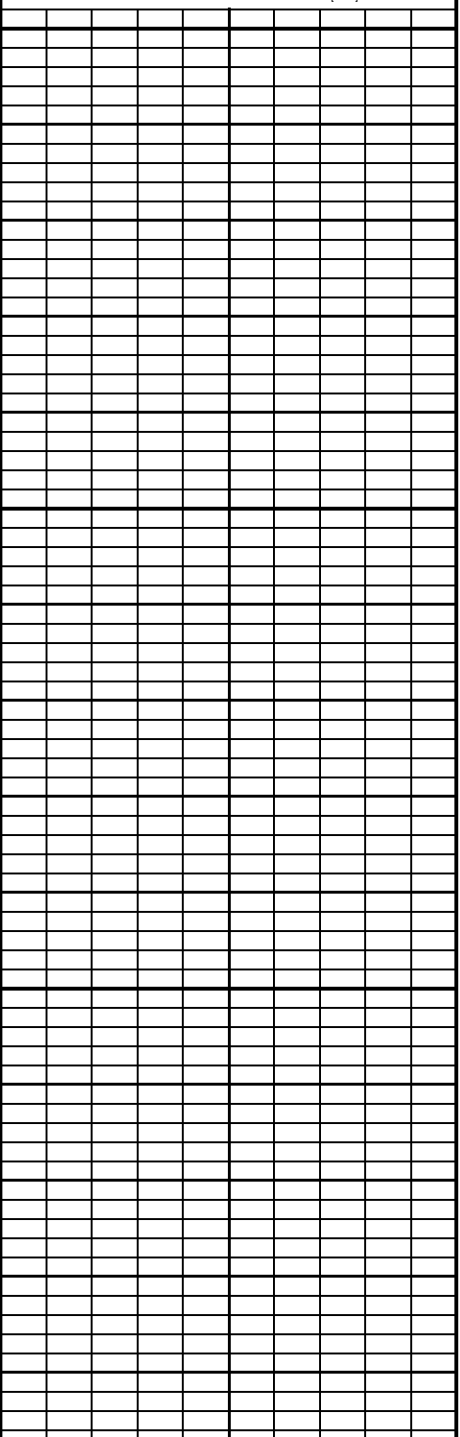
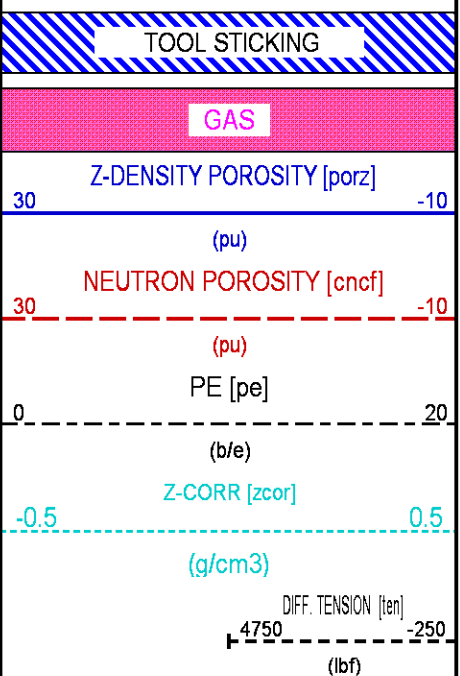
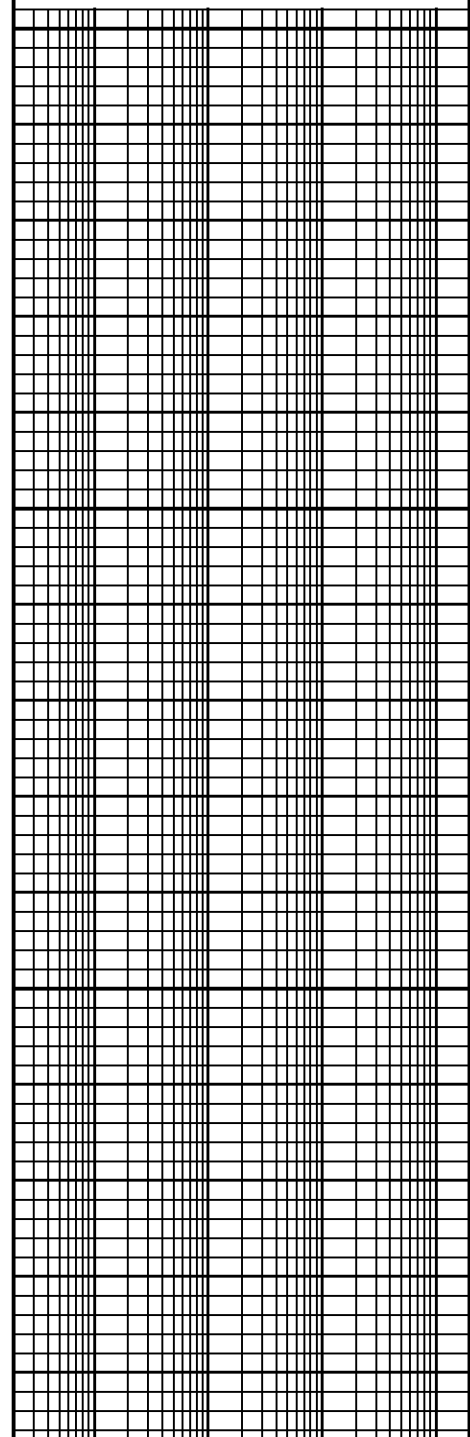
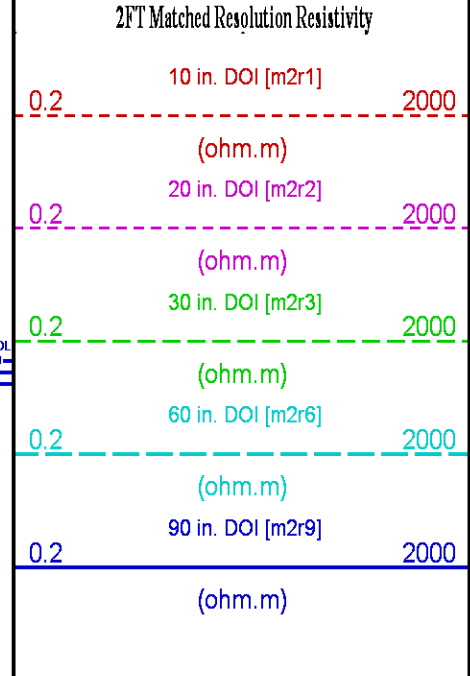
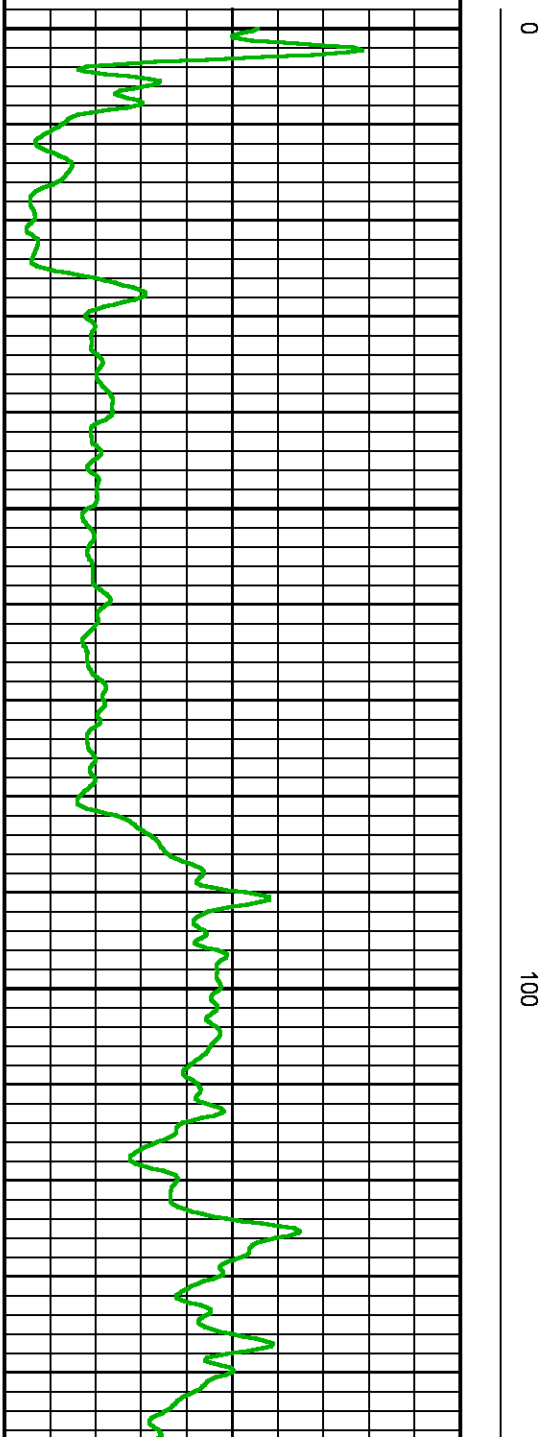
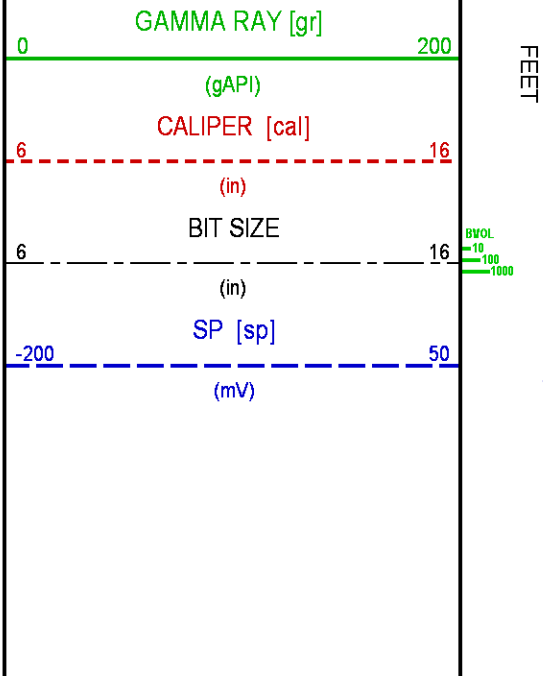
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Aug 5 18:59:19 2015	BIT SIZE
F1:BVOL	Aug 5 18:59:19 2015	BOREHOLE VOLUME
F1:CAL	Aug 5 18:59:19 2015	CALIPER
F1:CNCF	Aug 5 18:59:19 2015	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Aug 5 18:59:19 2015	CEMENT VOLUME
F1:GR	Aug 5 18:59:19 2015	GAMMA RAY
F1:M2R1	Aug 5 18:59:19 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Aug 5 18:59:19 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Aug 5 18:59:19 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Aug 5 18:59:19 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Aug 5 18:59:19 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Aug 5 18:59:19 2015	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Aug 5 18:59:19 2015	POROSITY FOR SELECTABLE MATRIX
F1:SP	Aug 5 18:59:19 2015	SPONTANEOUS POTENTIAL
F1:TEN	Aug 5 18:59:19 2015	DIFFERENTIAL TENSION
F1:ZCOR	Aug 5 18:59:19 2015	DENSITY CORRECTION

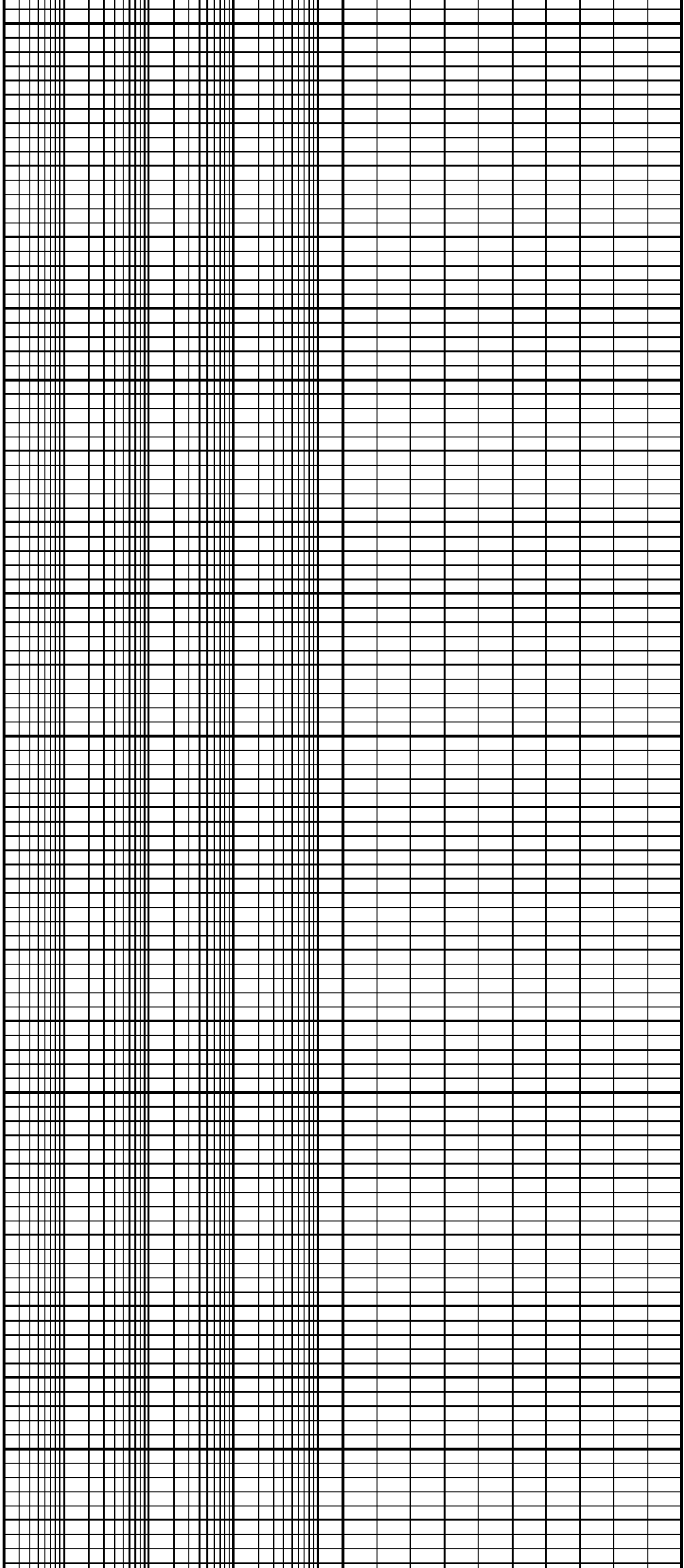
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	M2R1	2.75	M2R9	2.75	TEN	0.00
CAL	15.12	M2R2	2.75	PE	15.00	ZCOR	15.00
CNCF	24.38	M2R3	2.75	PORZ	15.00		
GR	32.00	M2R6	2.75	SP	1.25		

Presentation : cas6685:/dat1a/OH097524/MAIN.fvpdf [5"/100' Scale]
Plot Interval : -0.75 - 7852.5 Feet

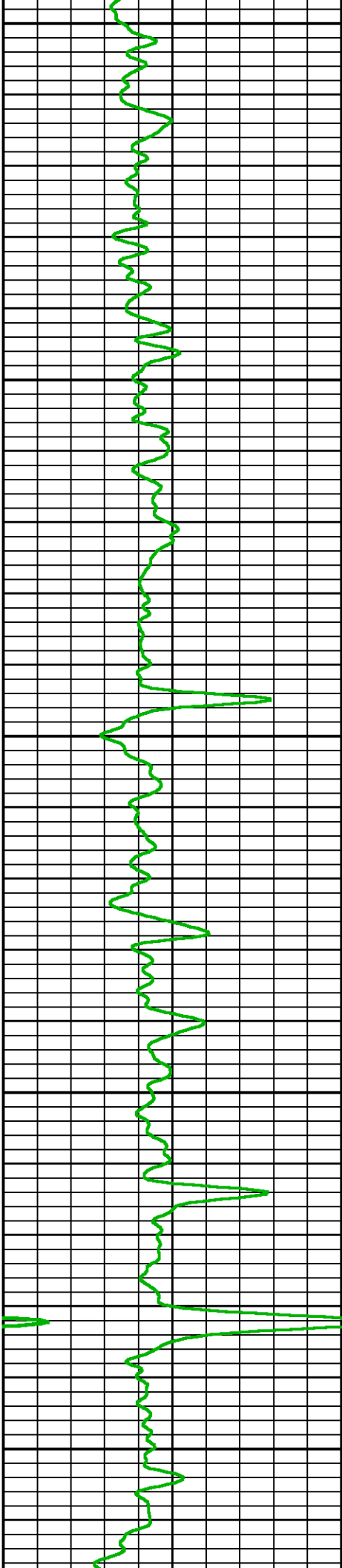
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Created On : Aug 5 18:59:19 2015
Company : LARAMIE ENERGY
Well : PICEANCE 28-09W
Field : VEGA
File Interval : -0.75 - 7853.75 Feet
OCT : n970m





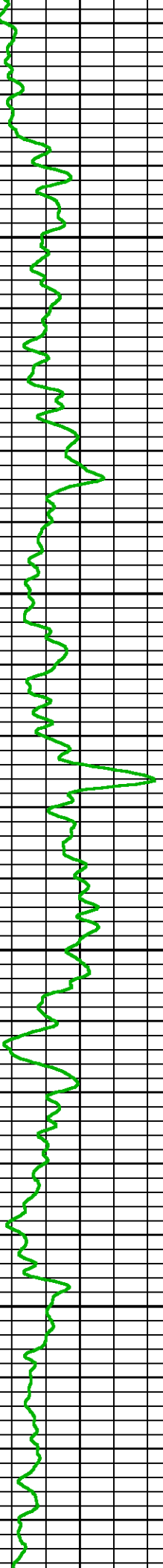
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300



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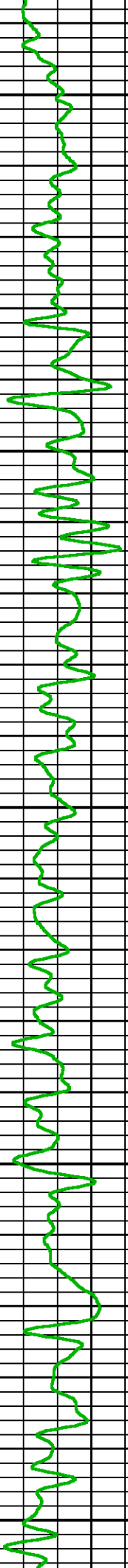
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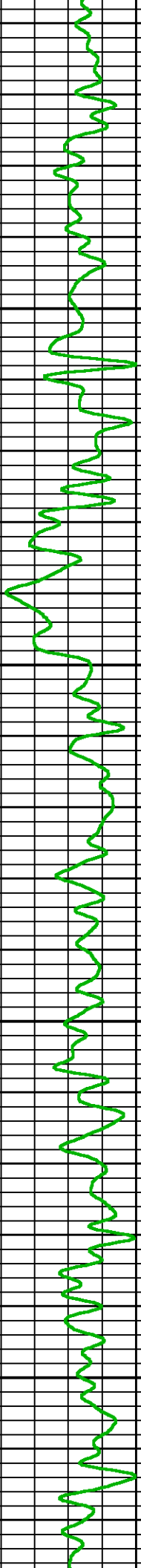
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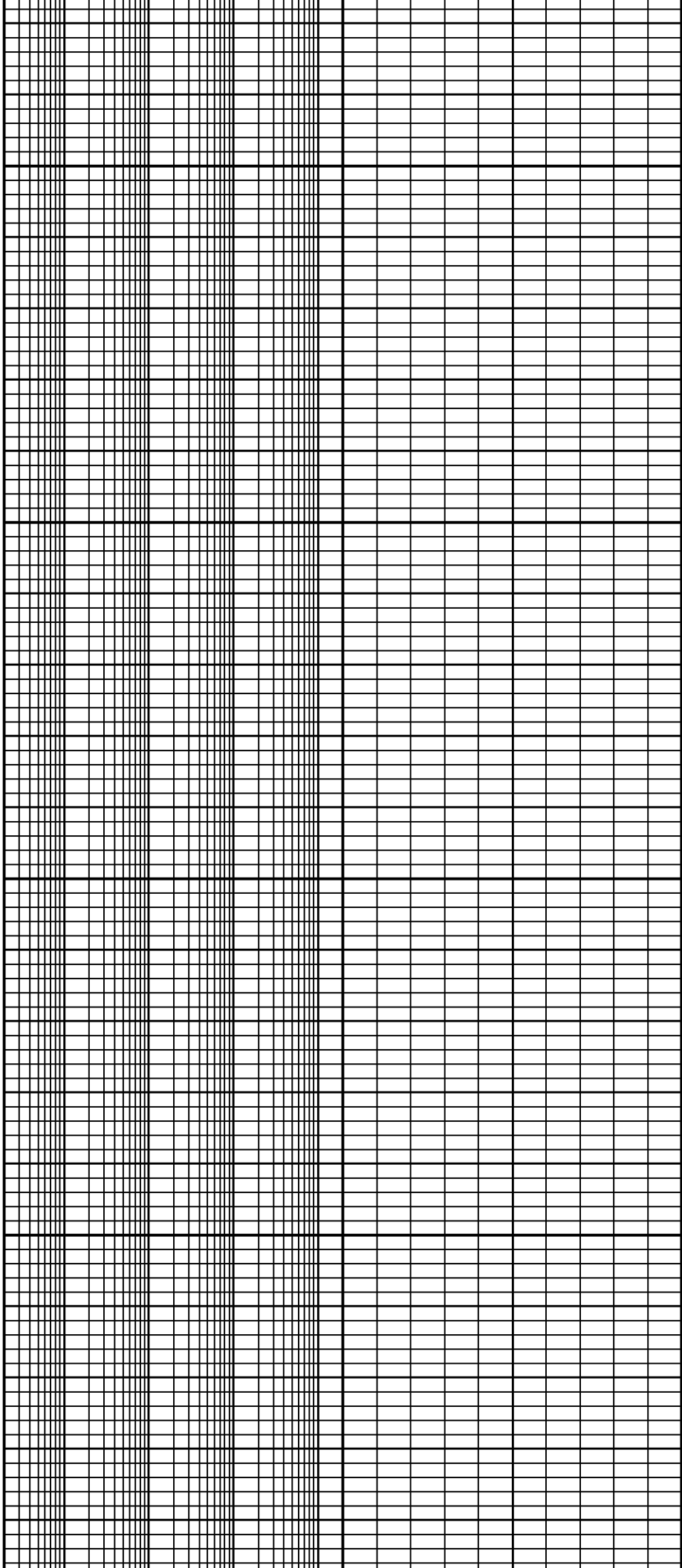
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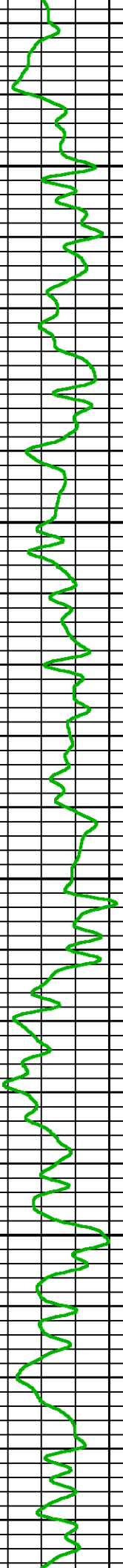
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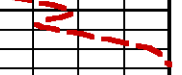
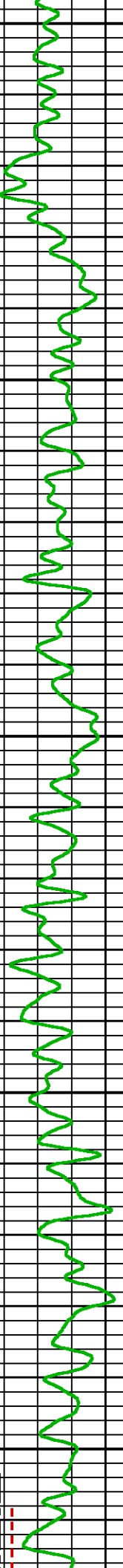
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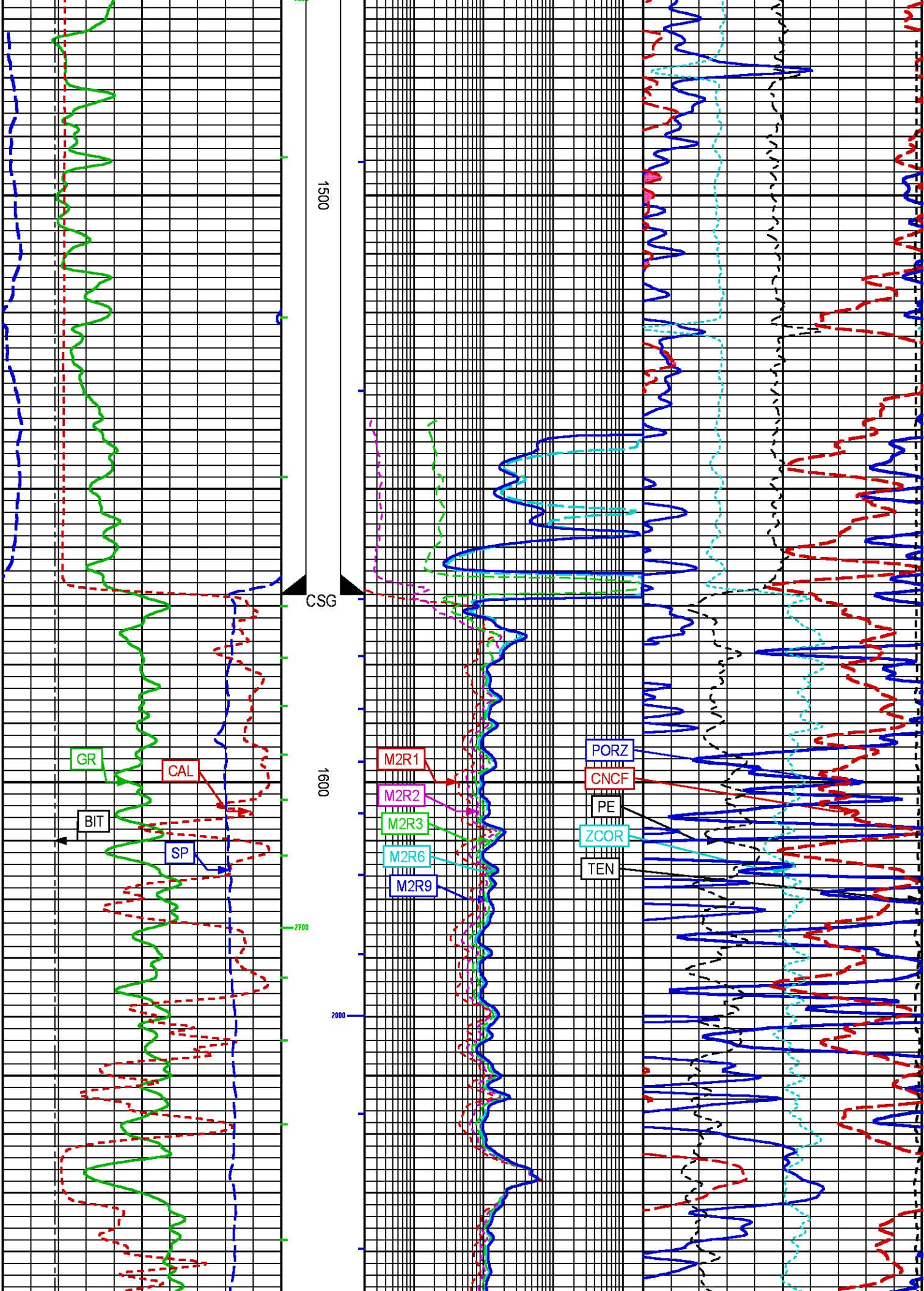
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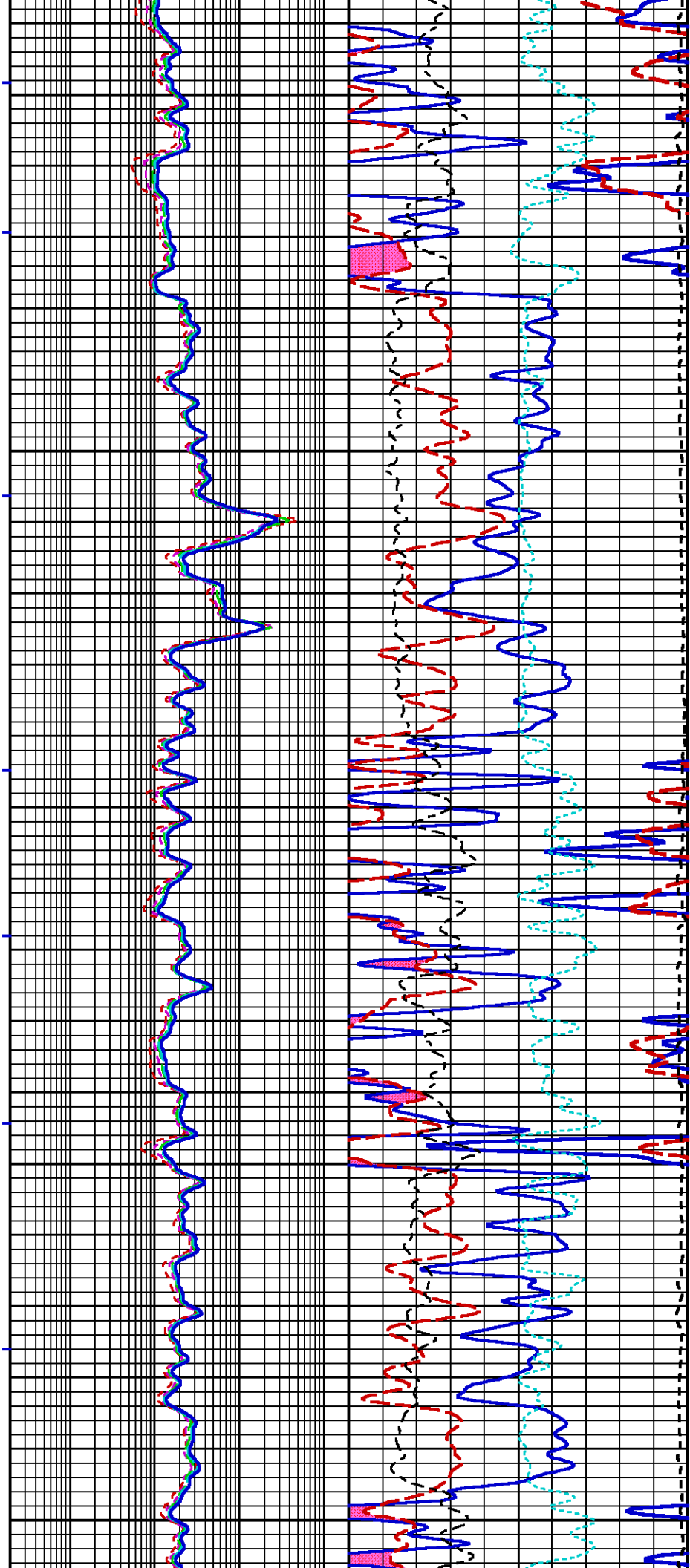


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1400





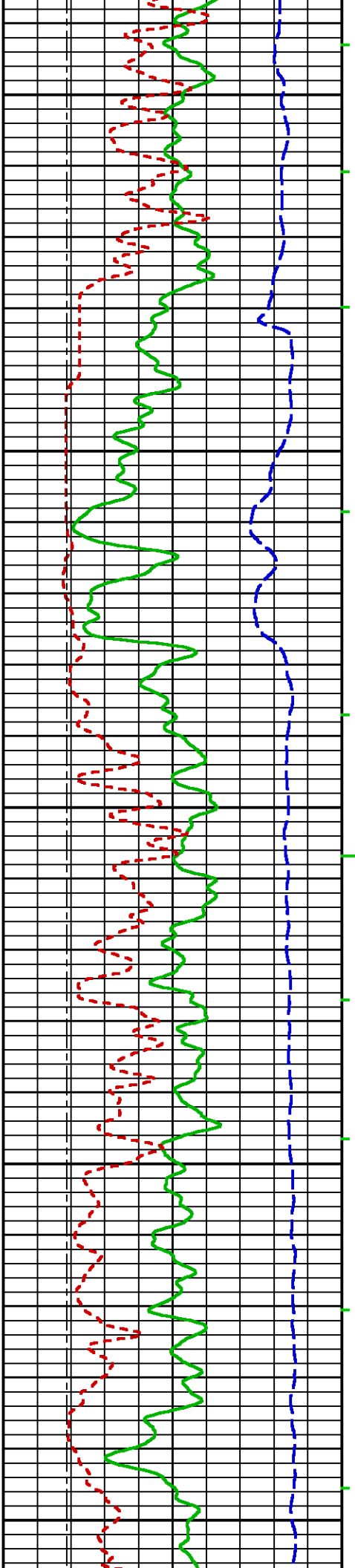


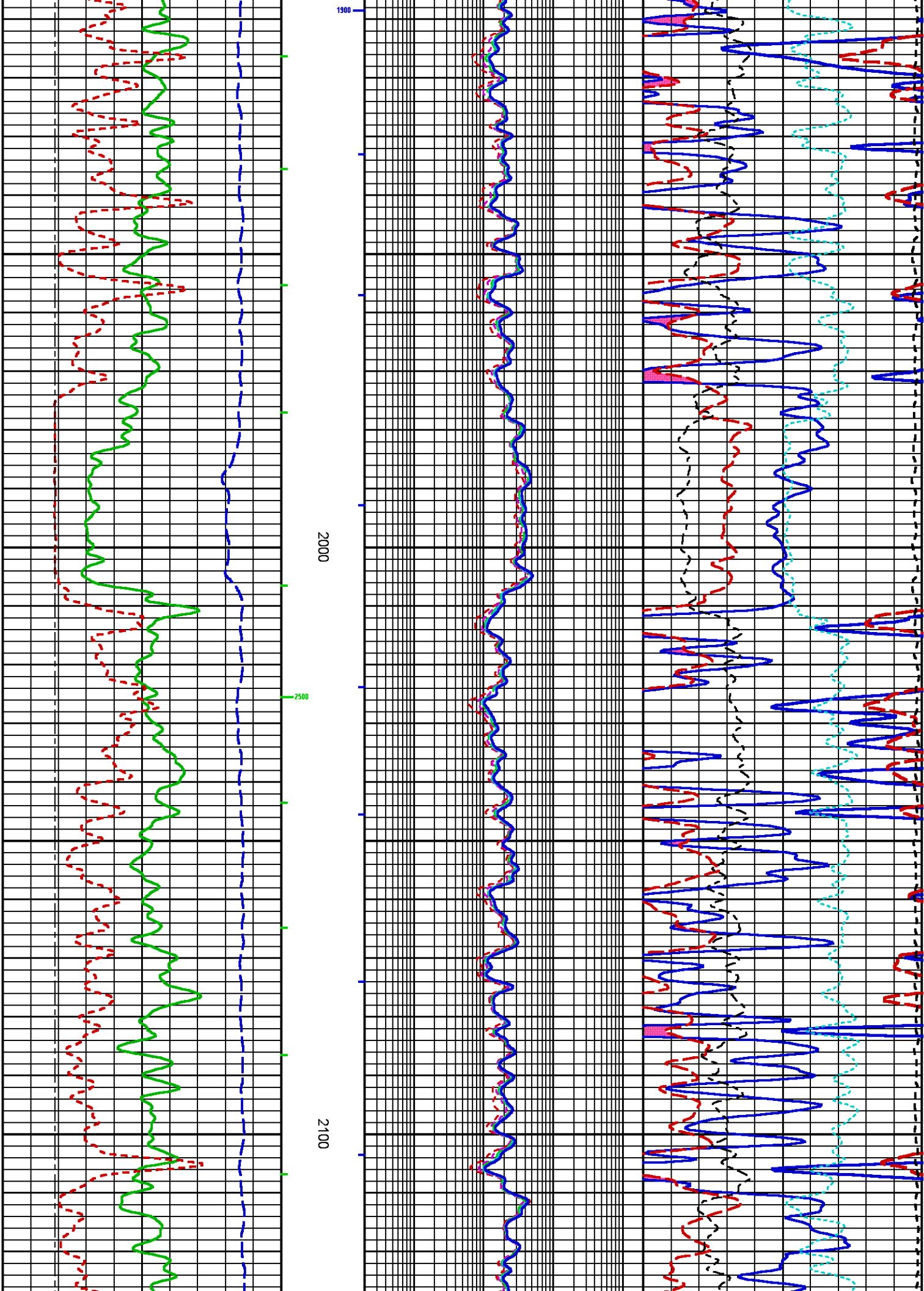
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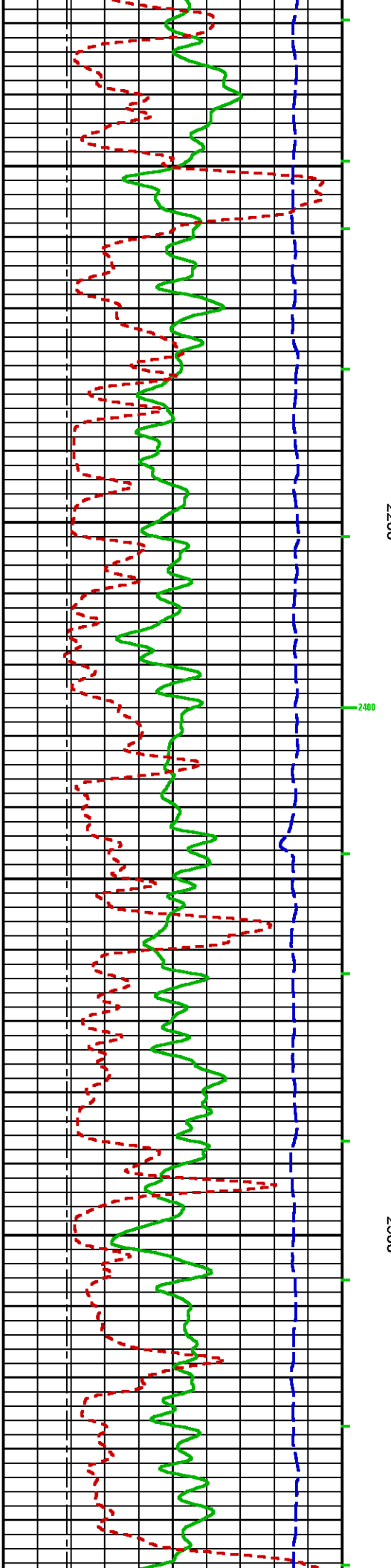
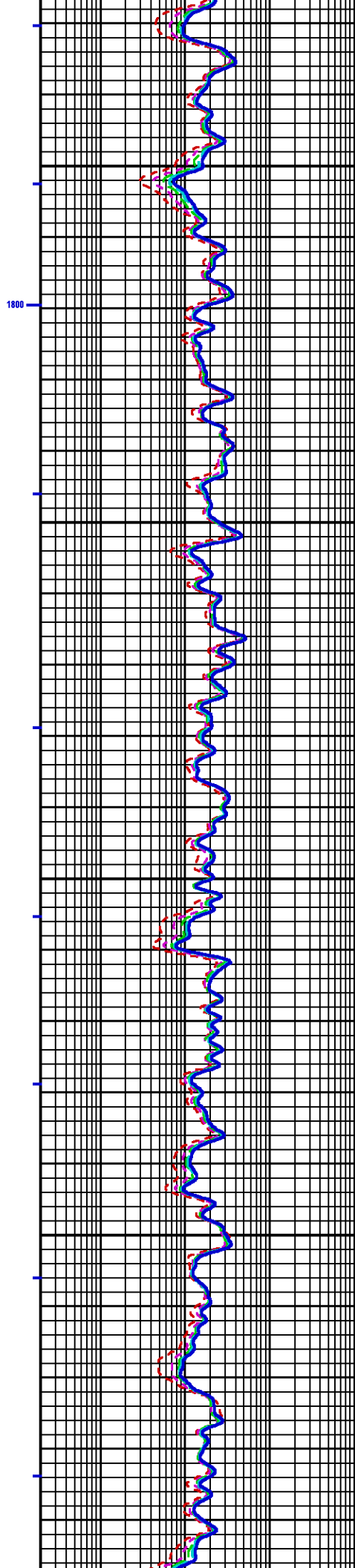
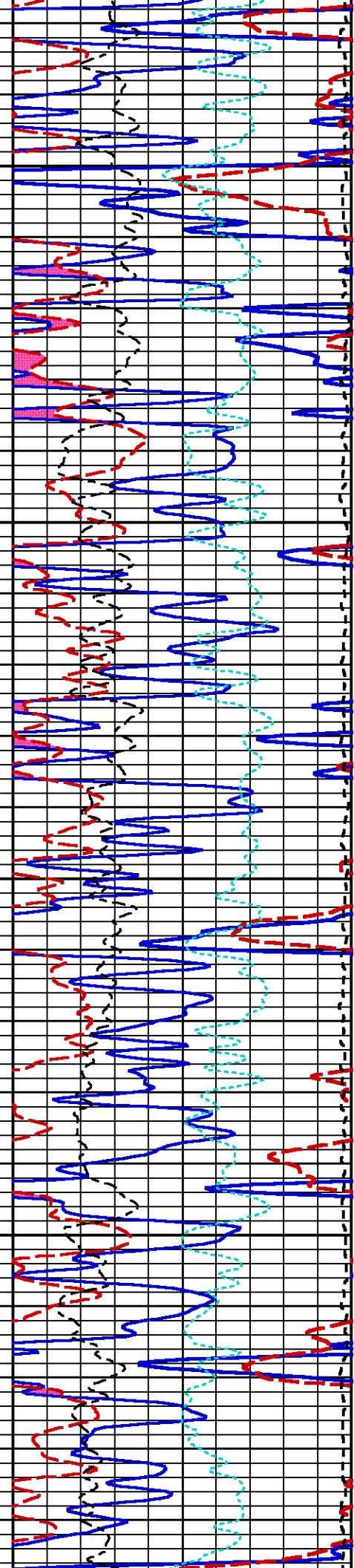
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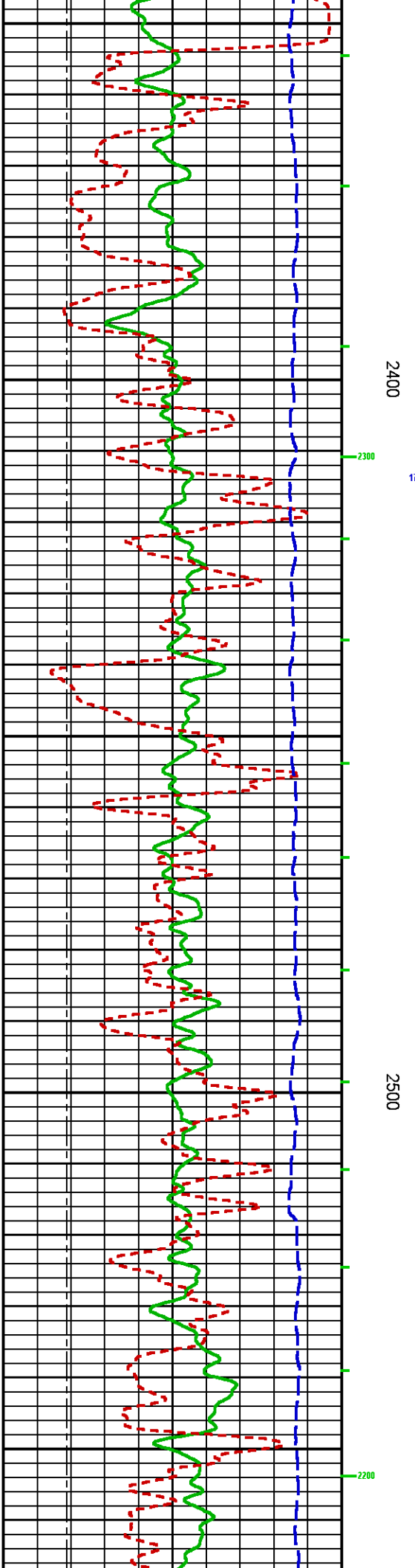
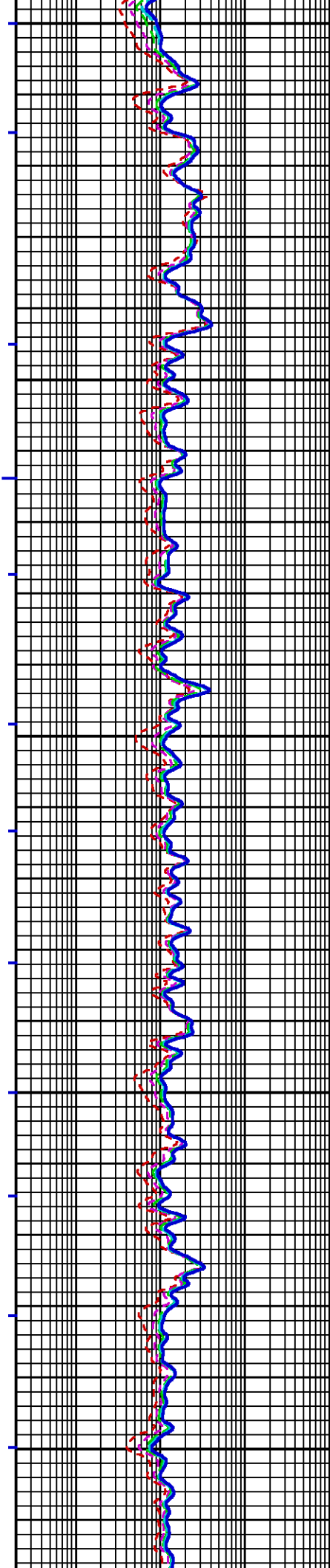
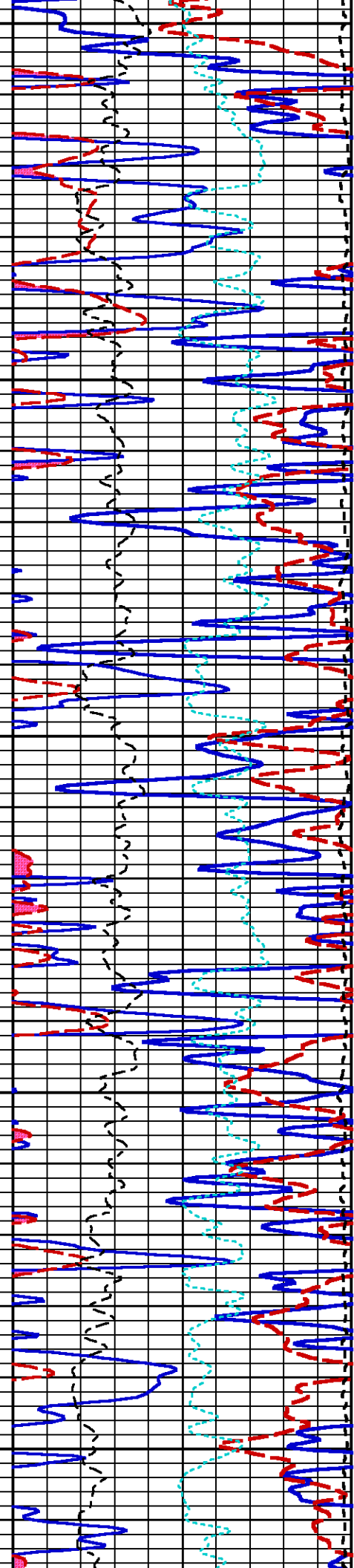
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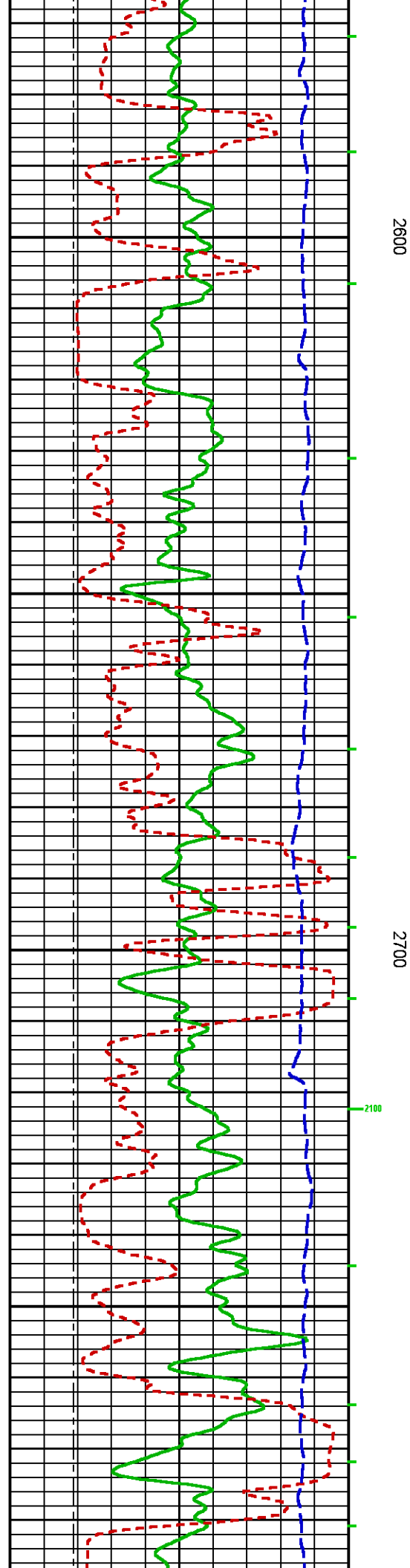
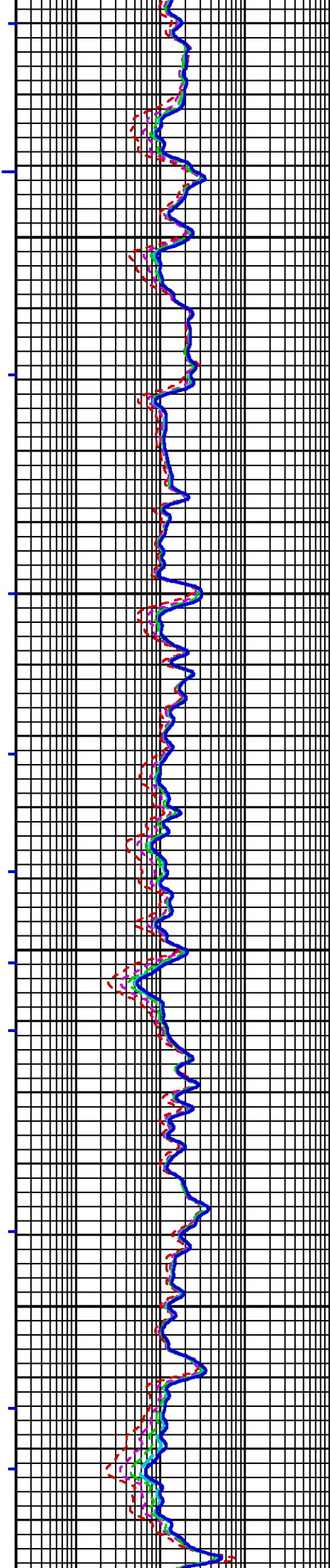
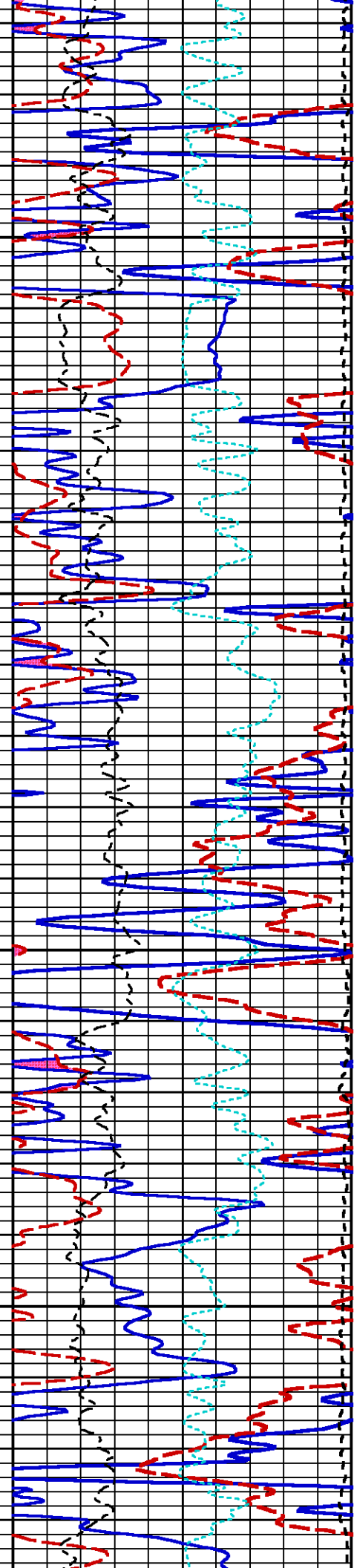
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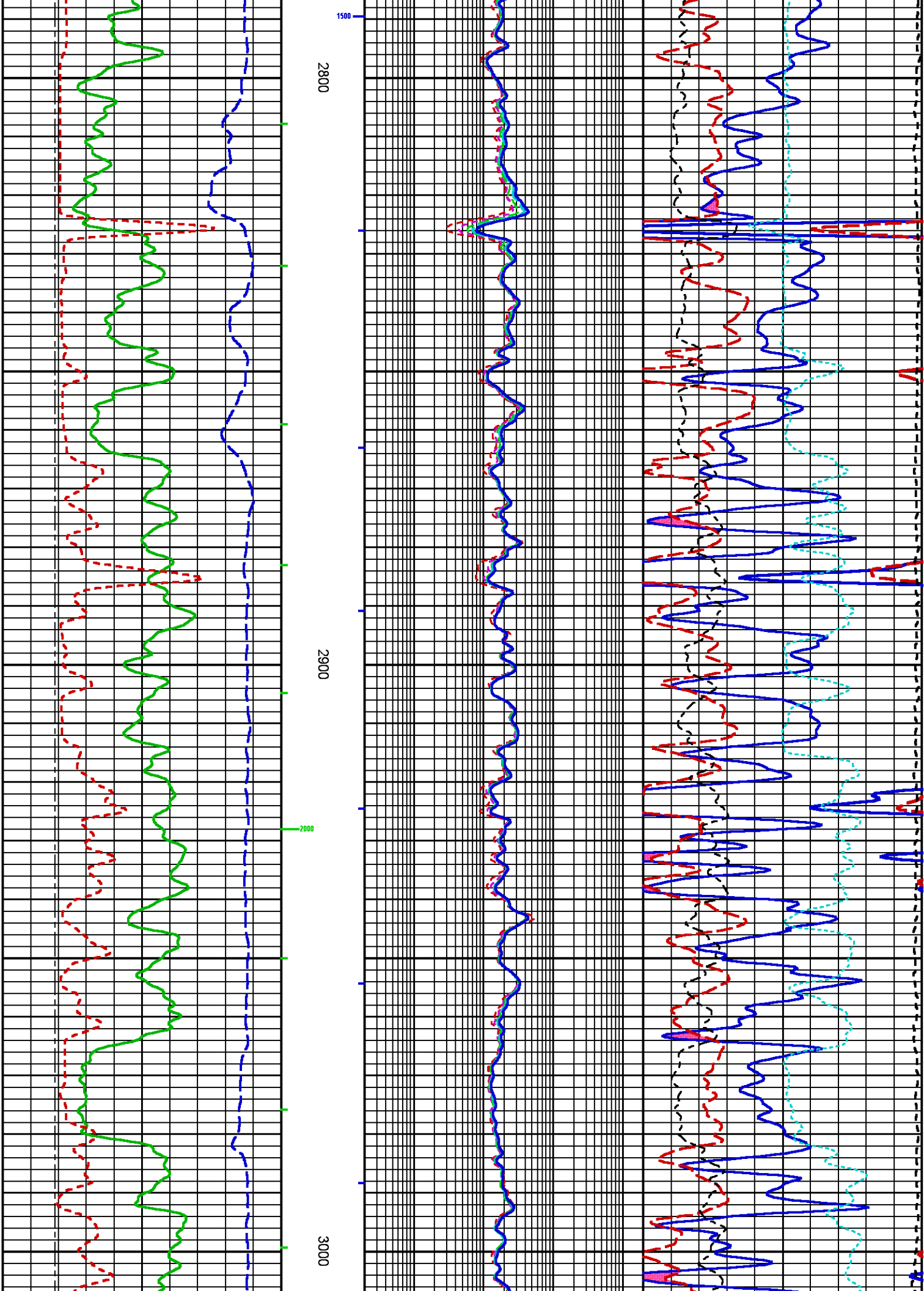


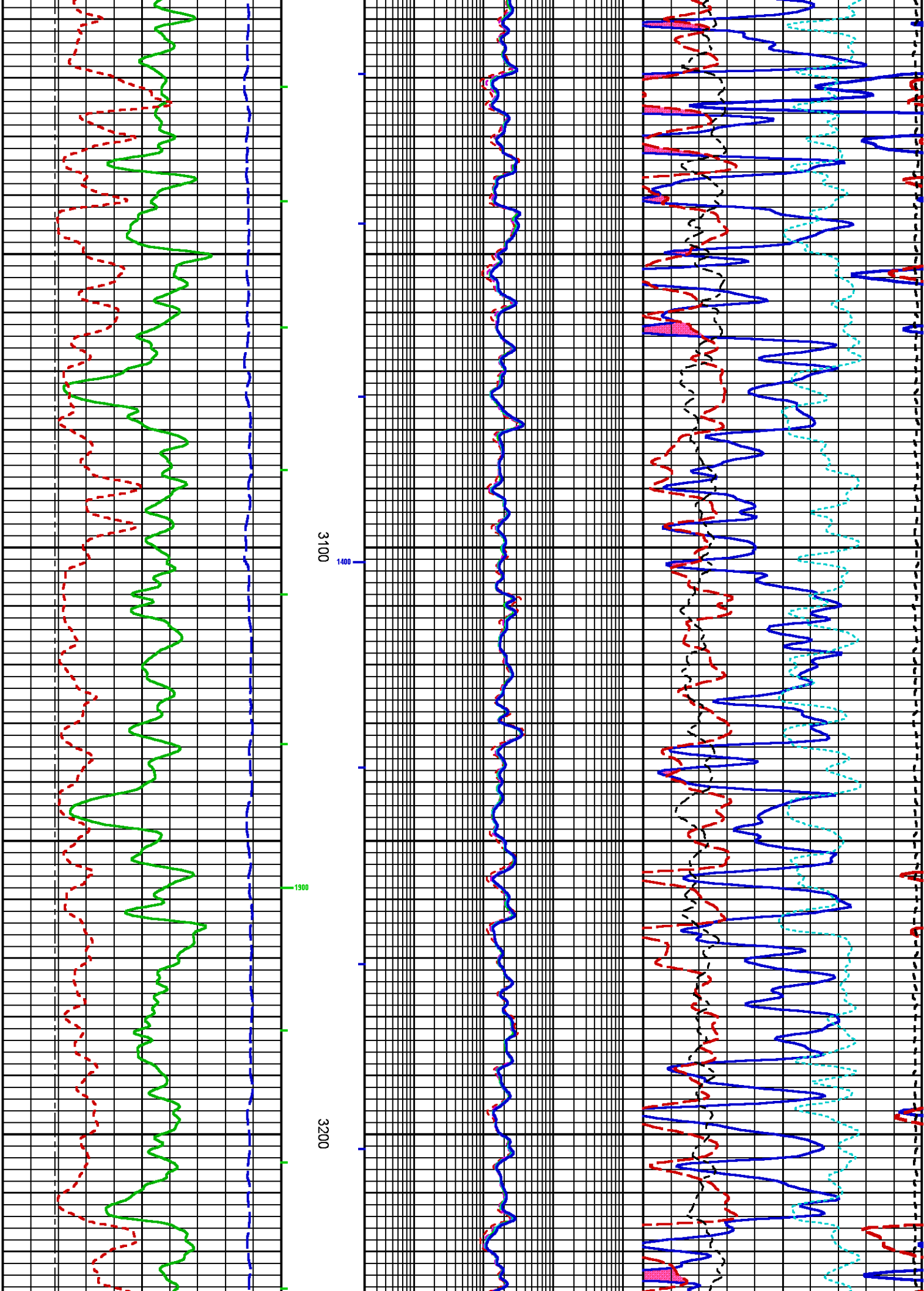


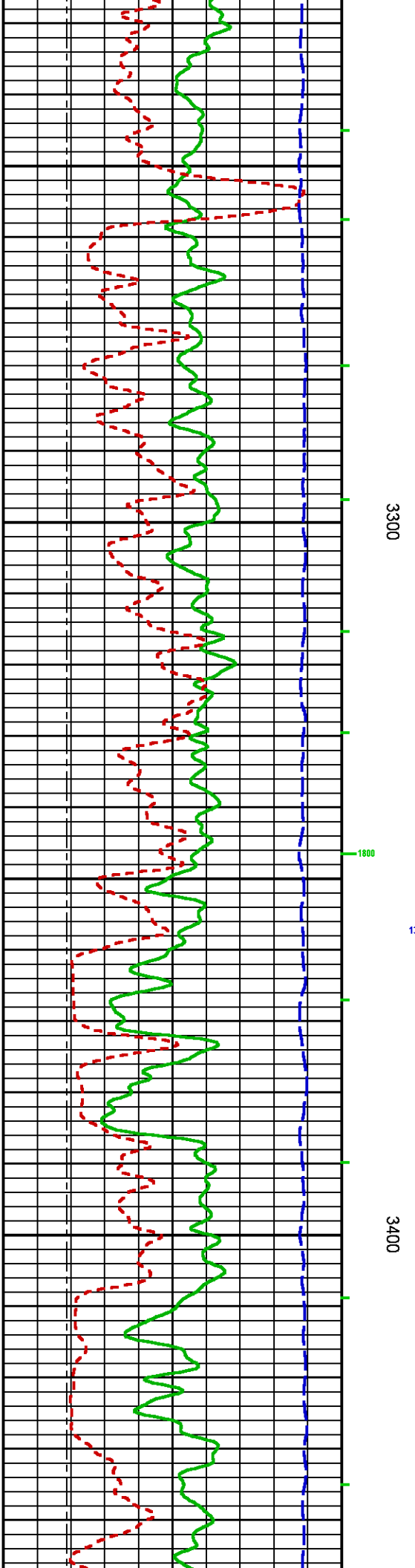
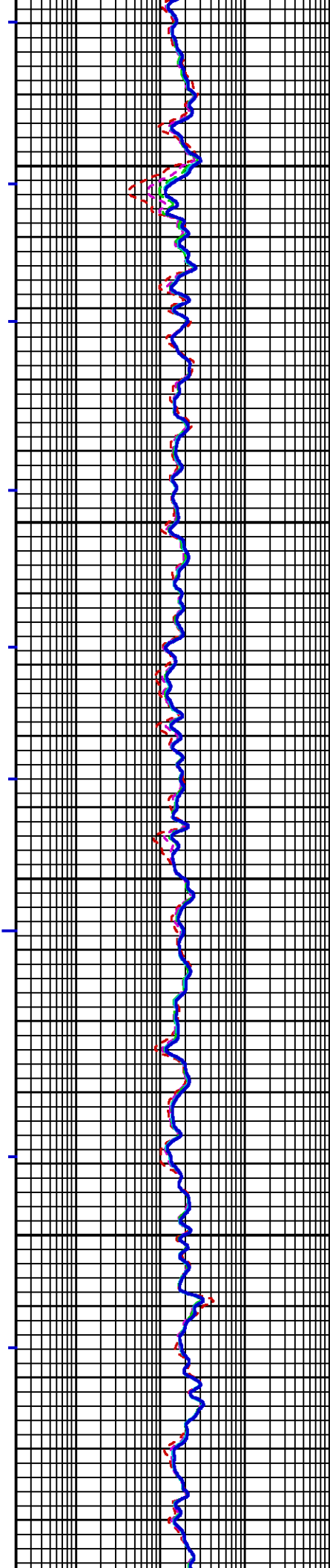
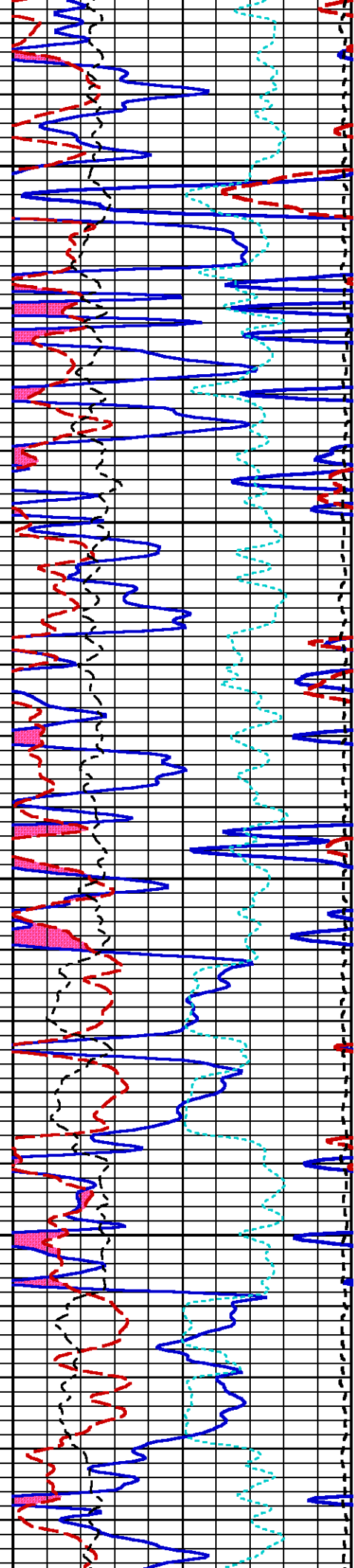


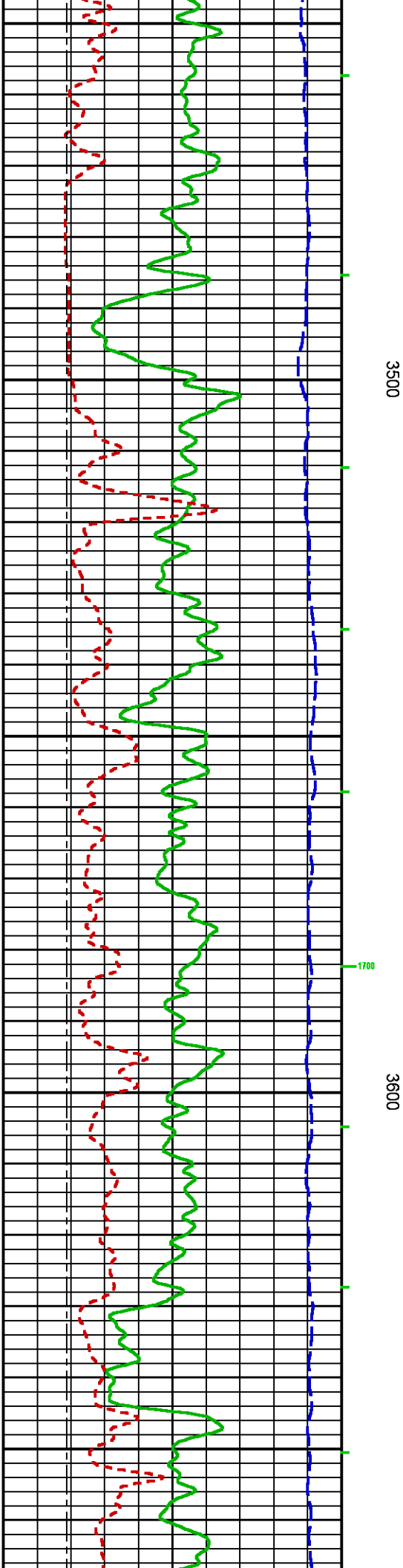
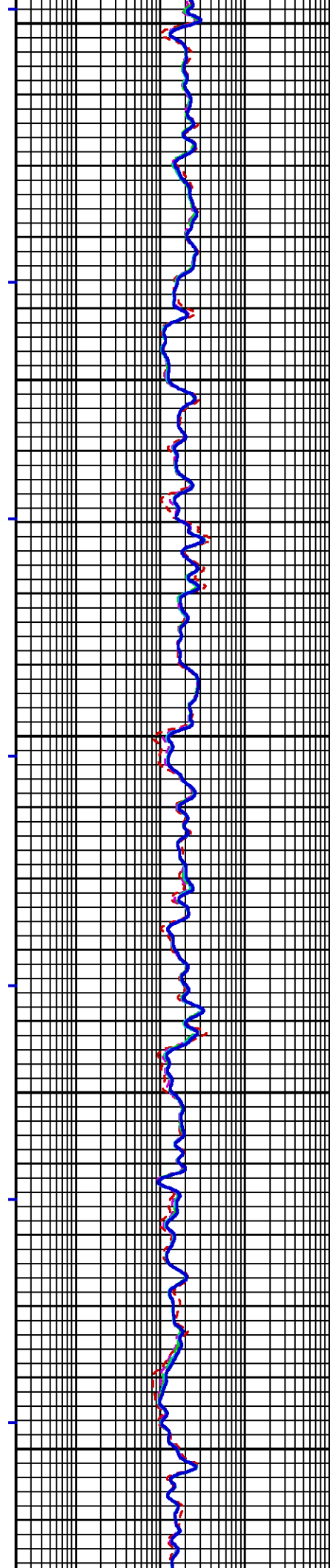
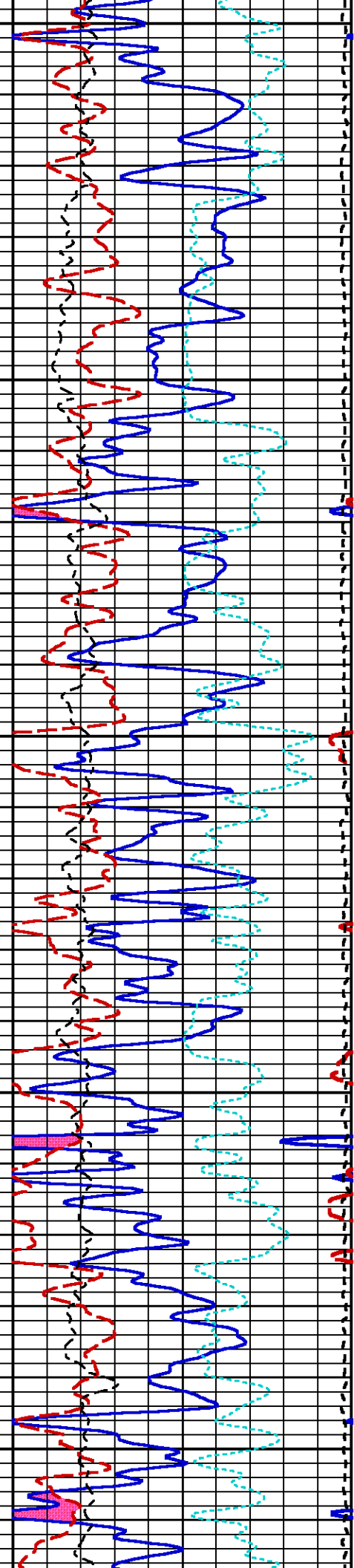


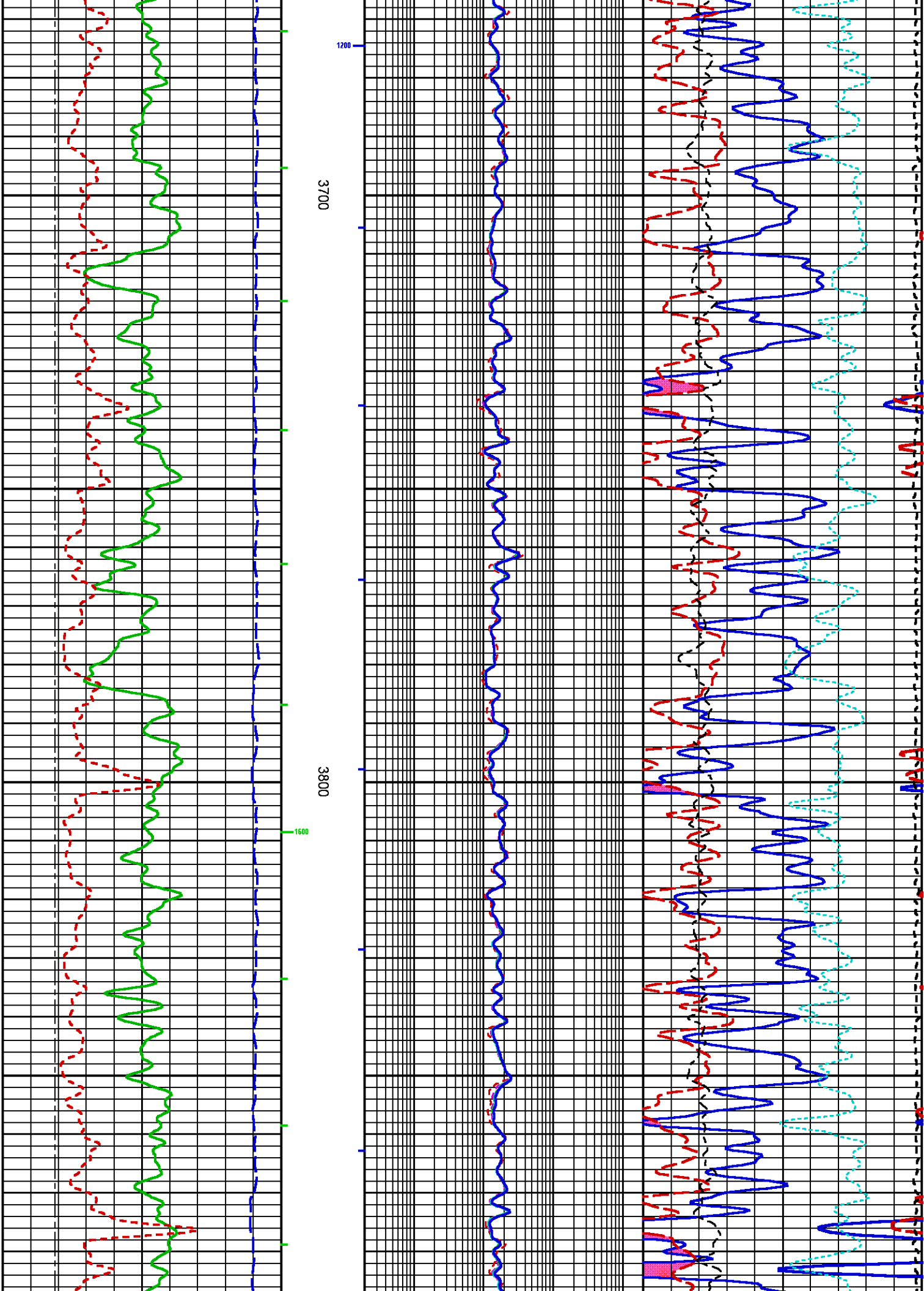


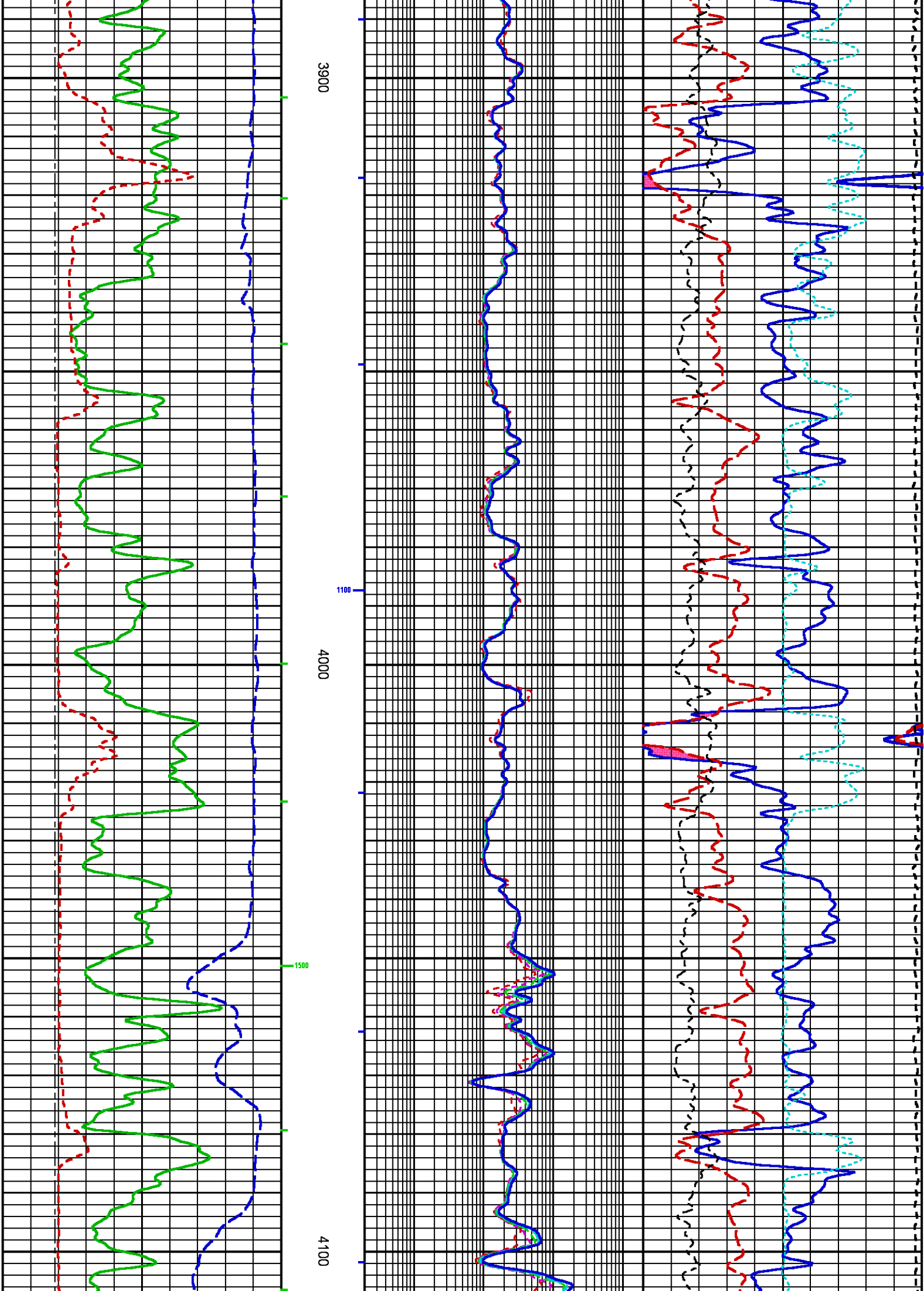


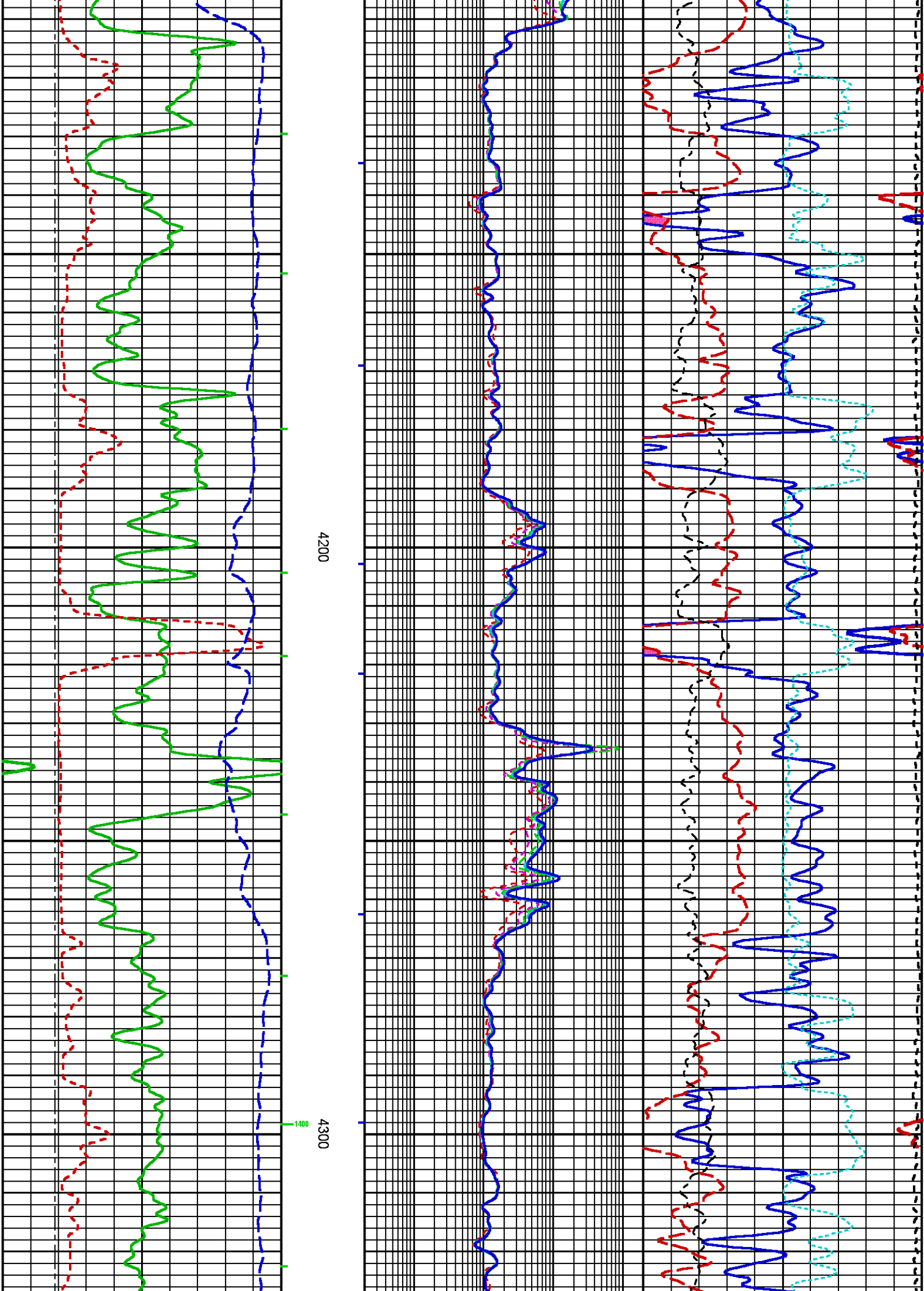


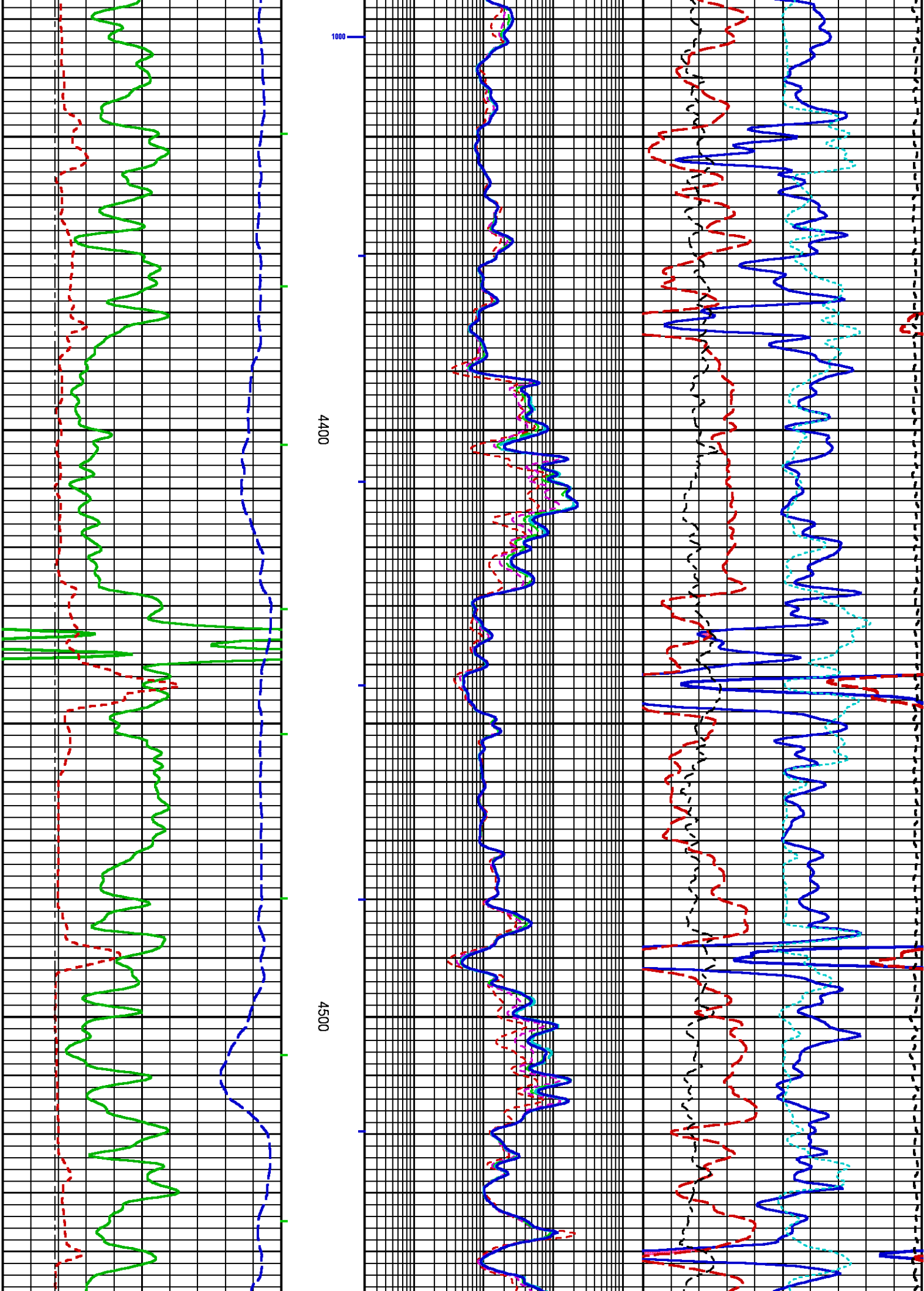


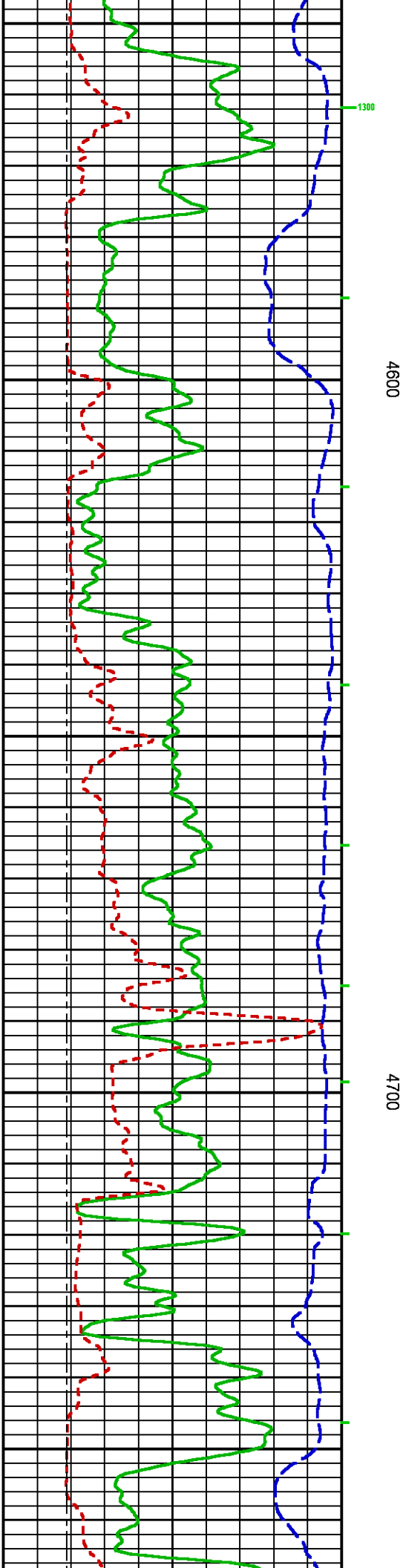
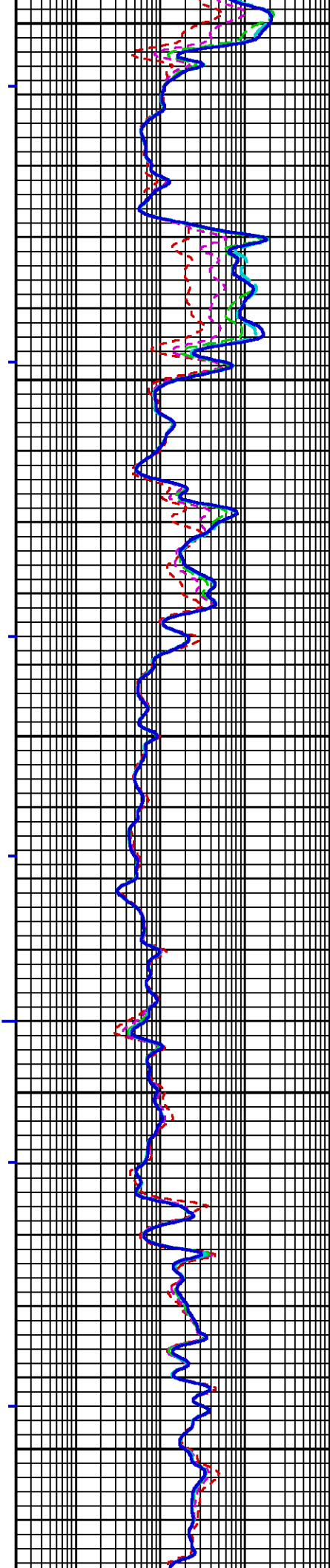
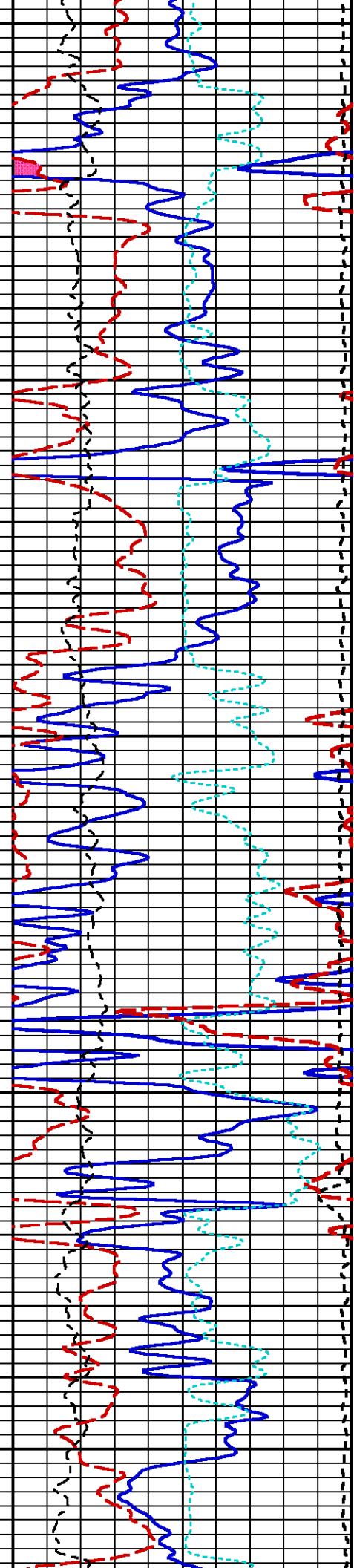


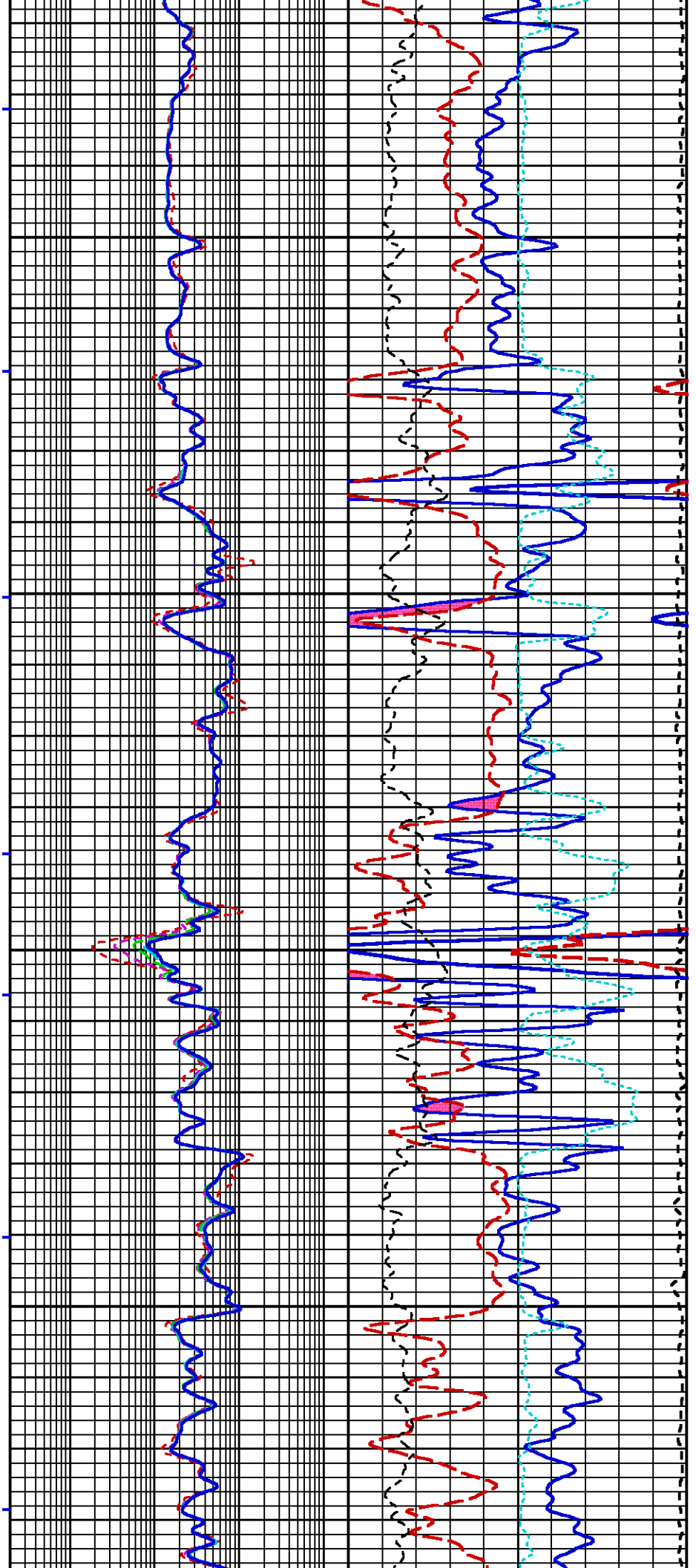








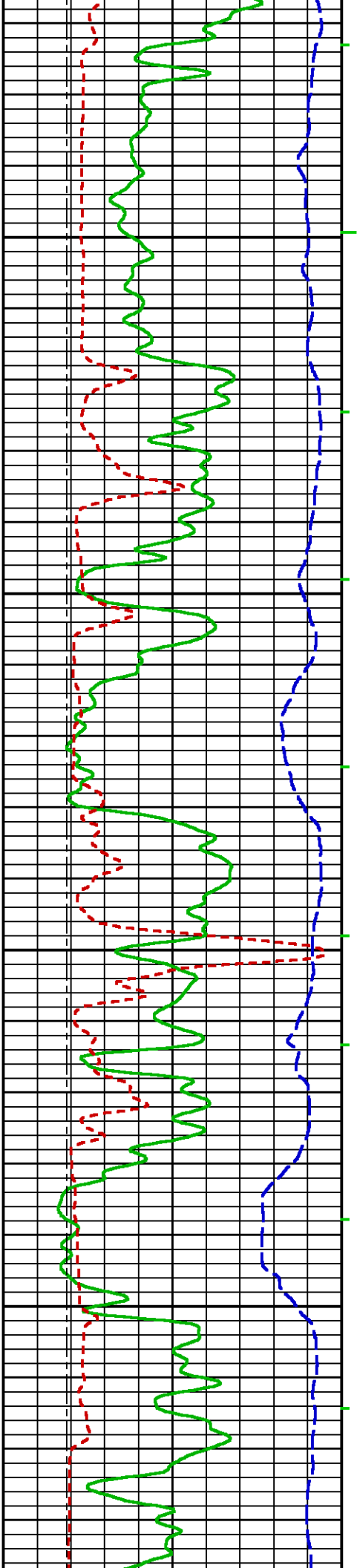


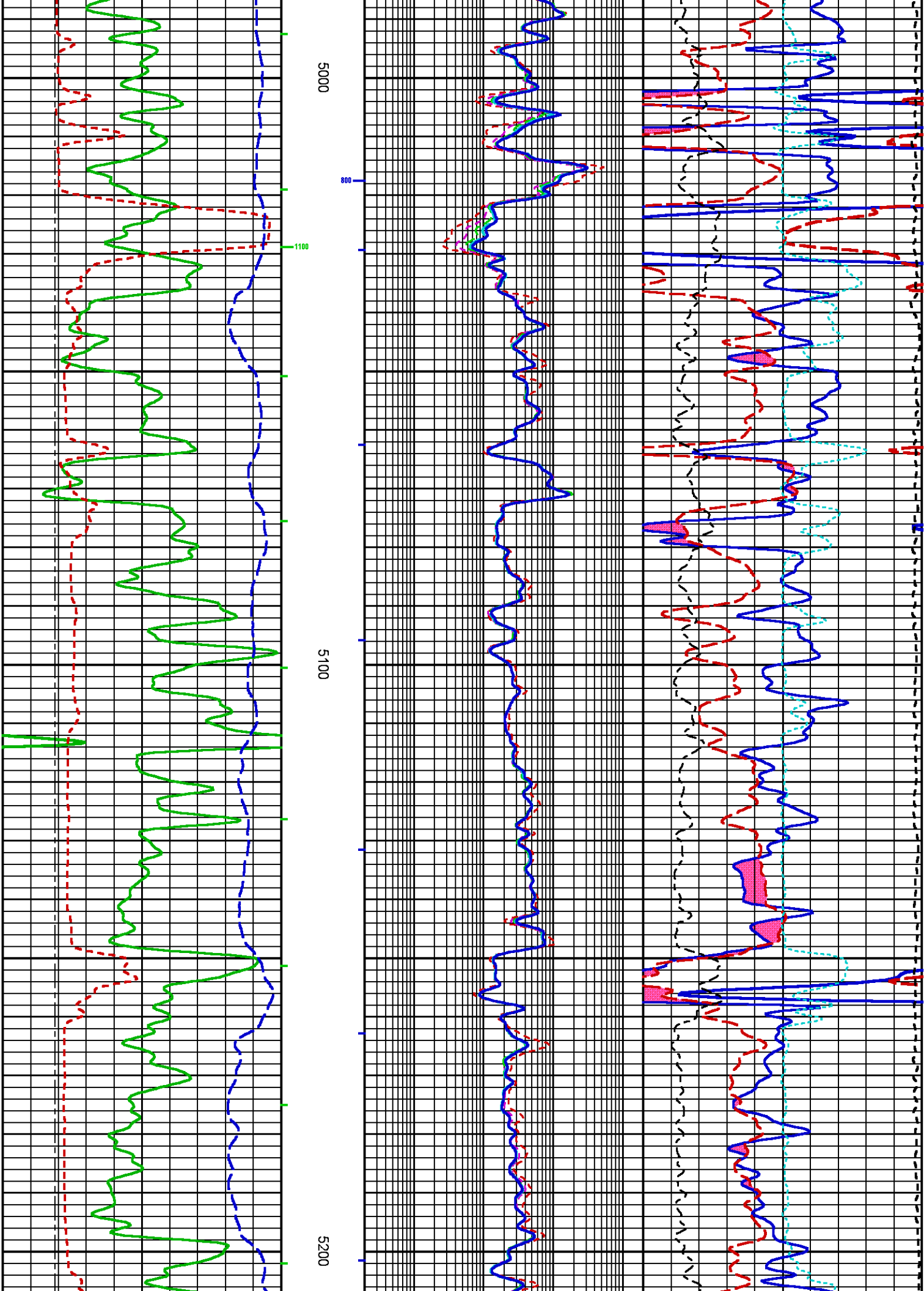


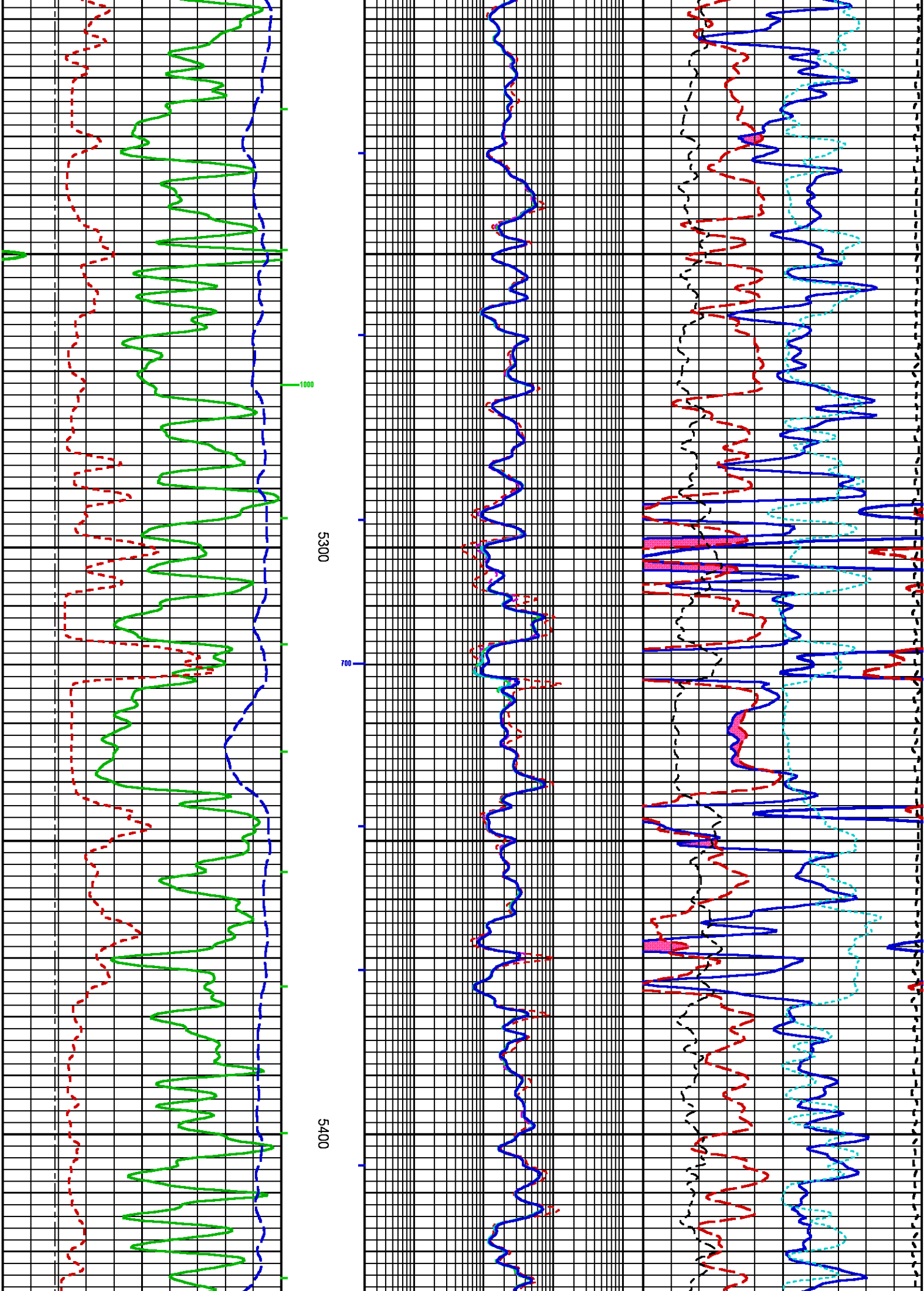
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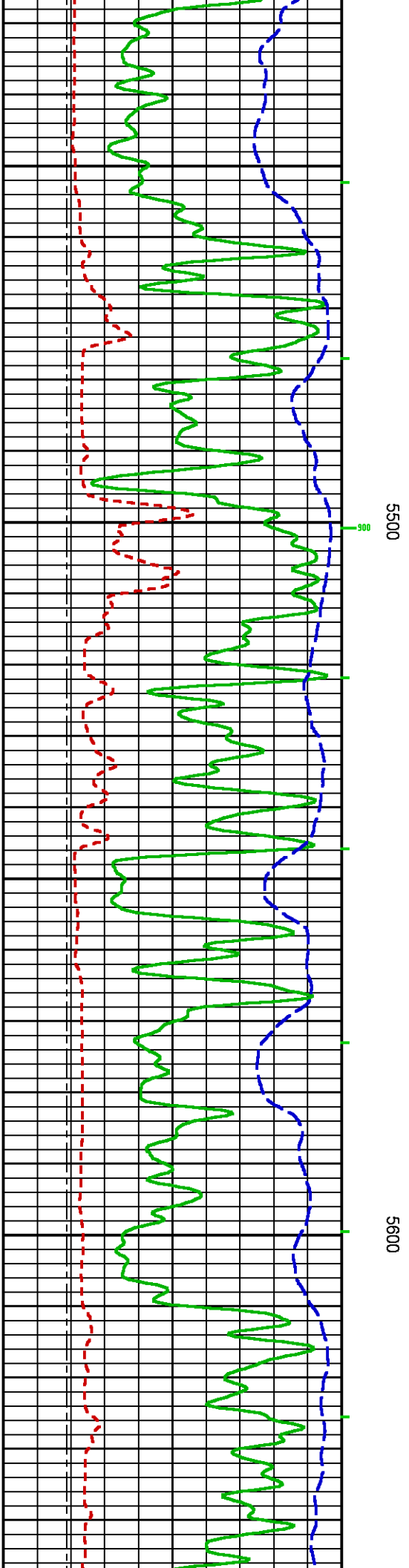
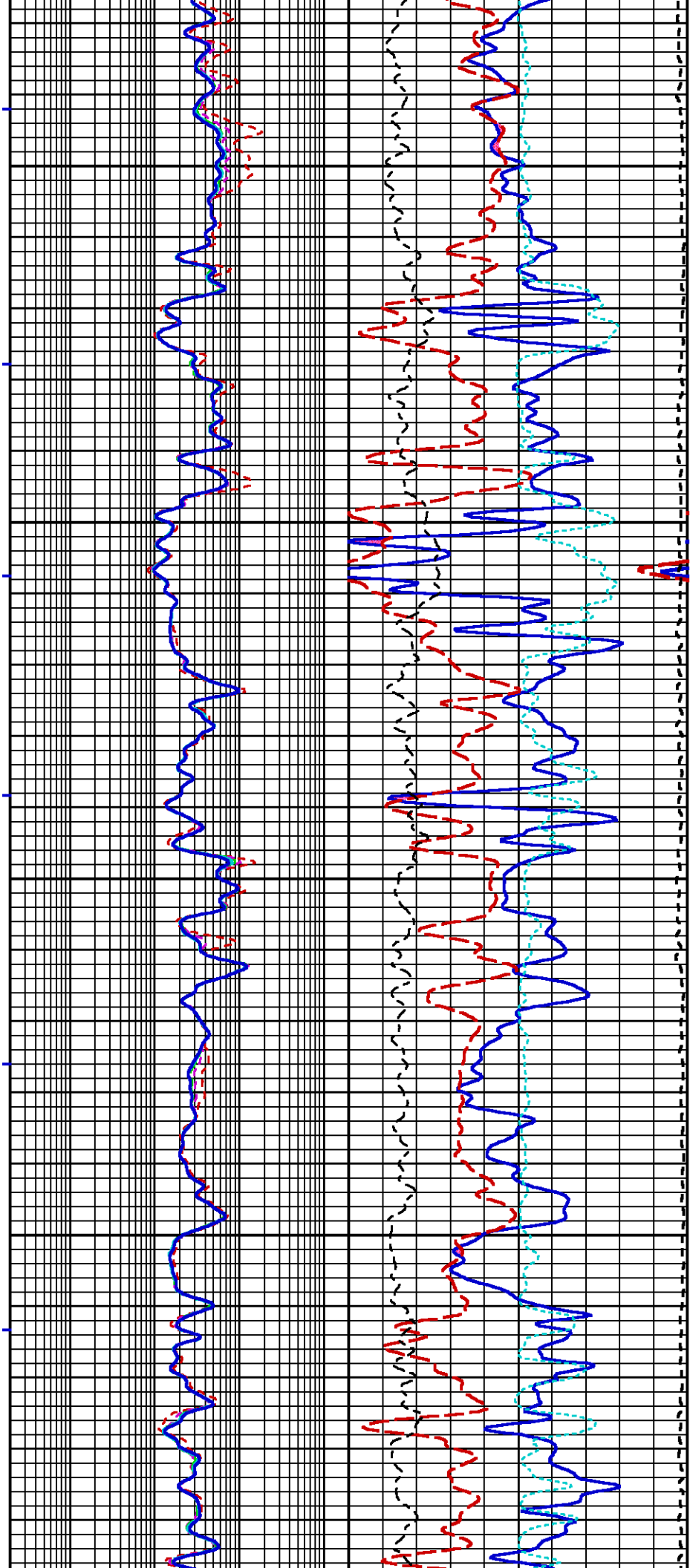
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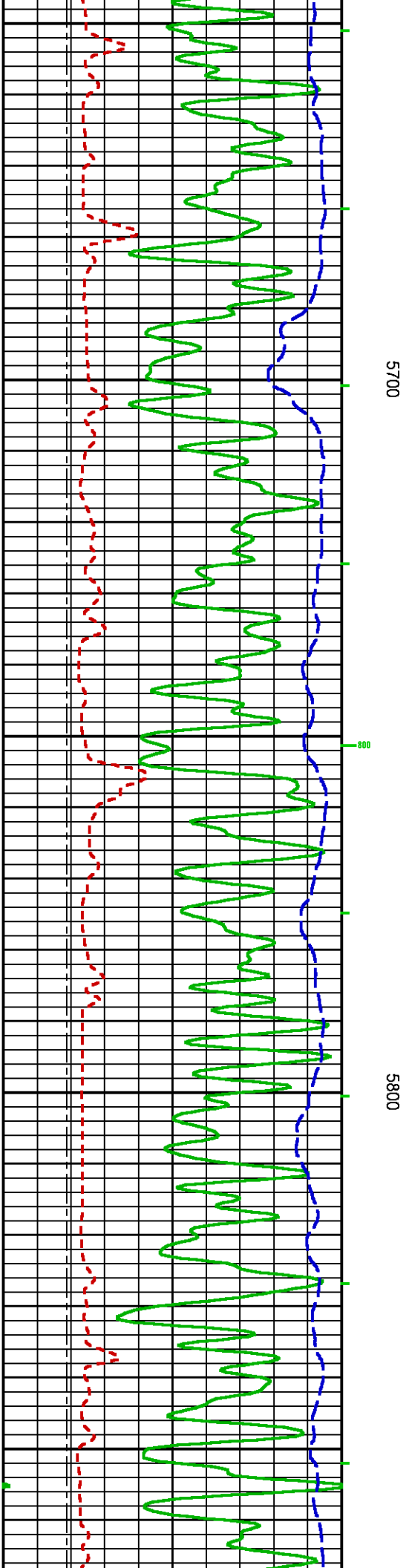
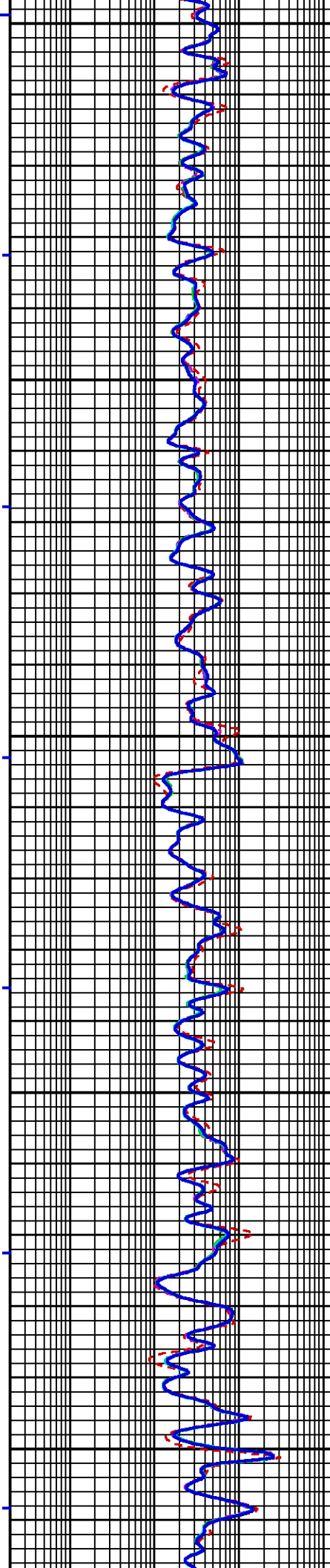
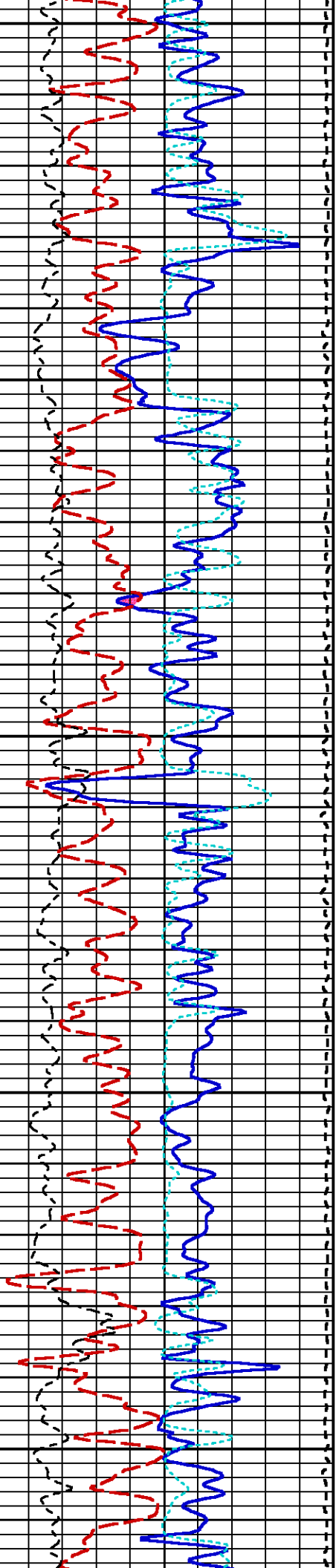
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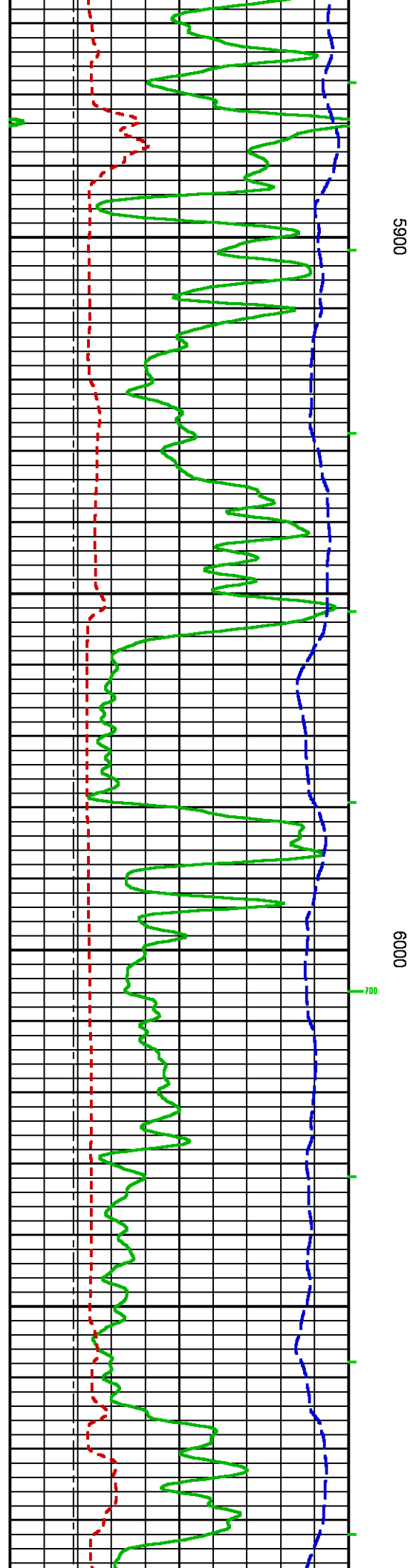
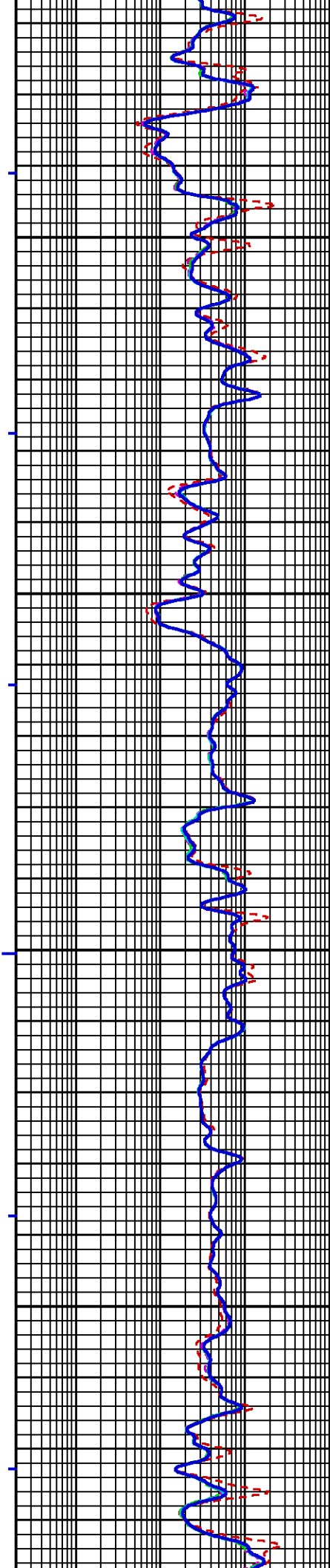
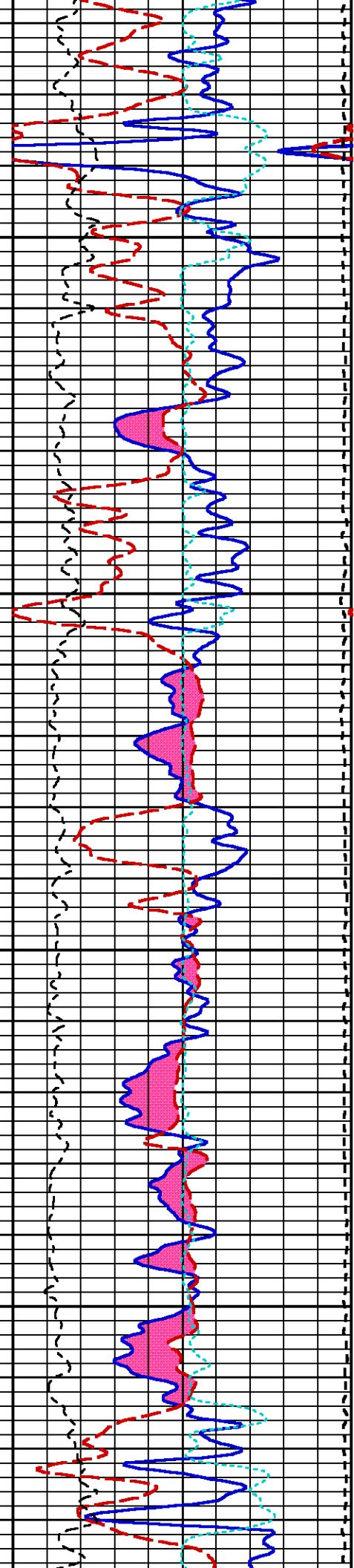


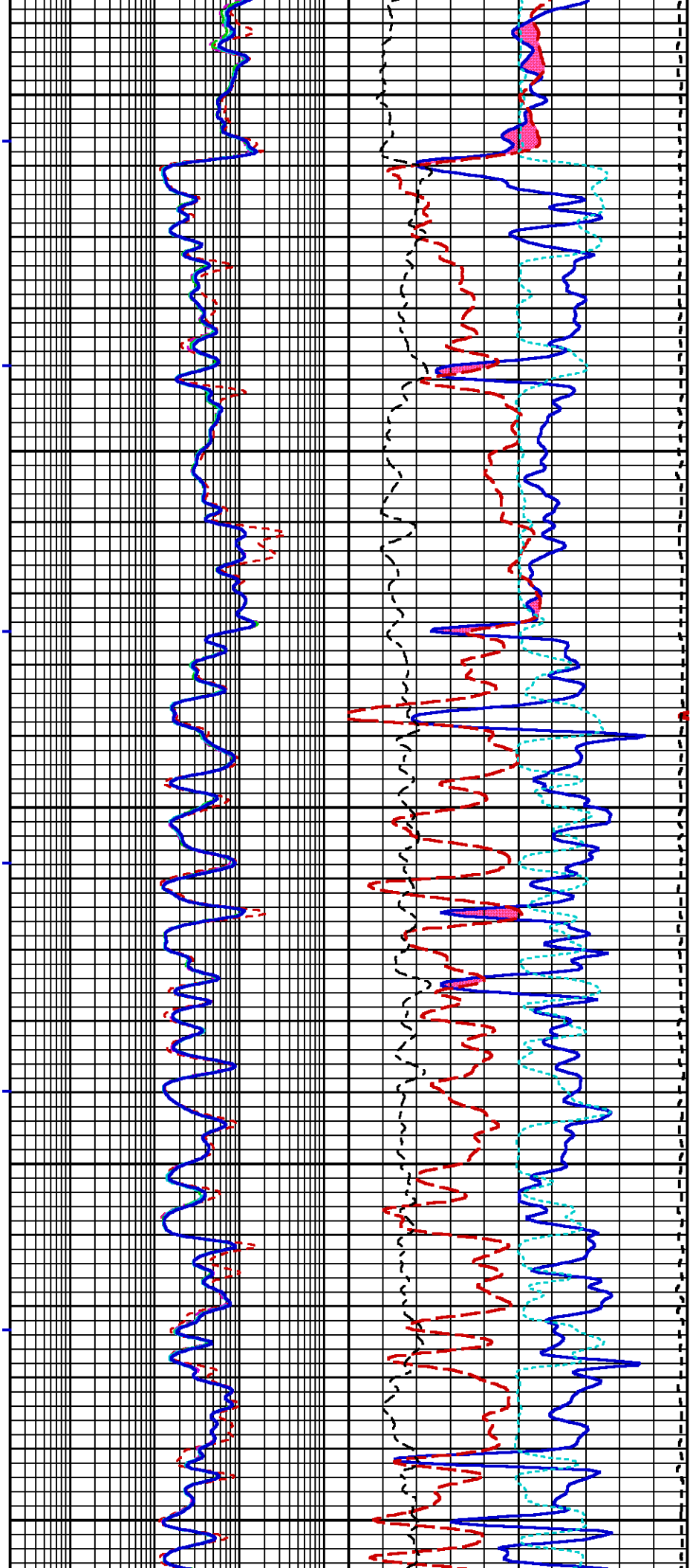








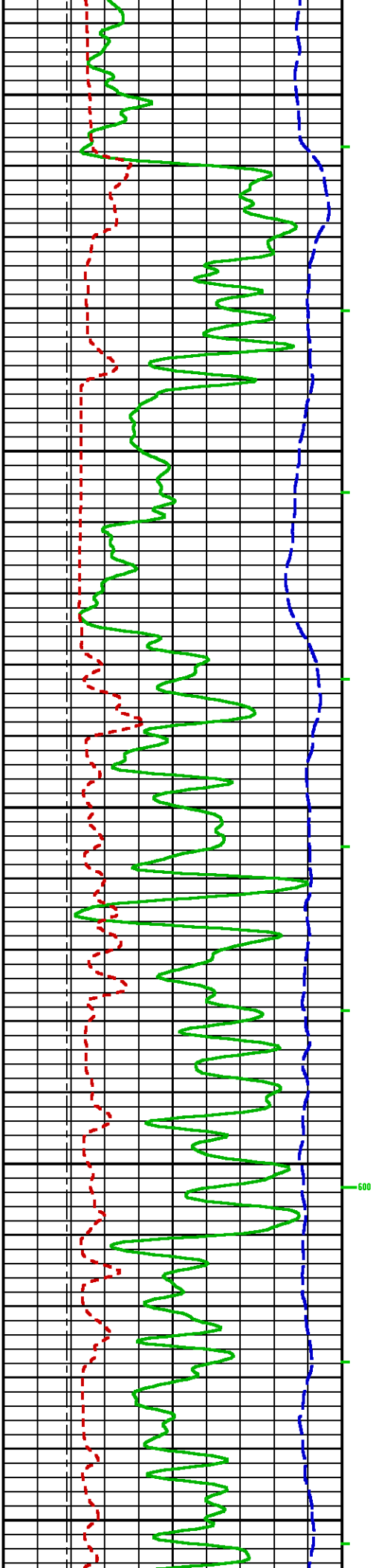


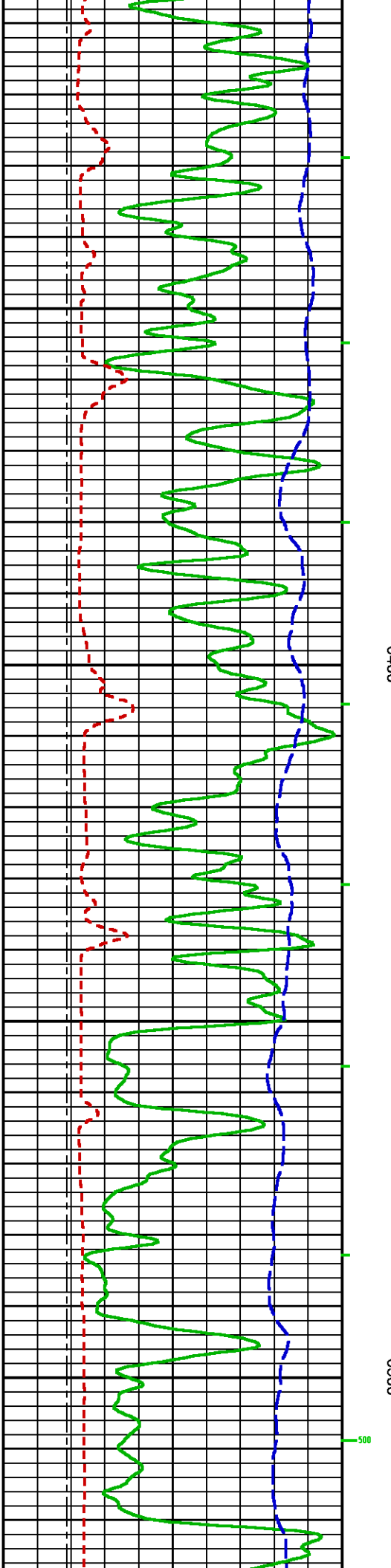
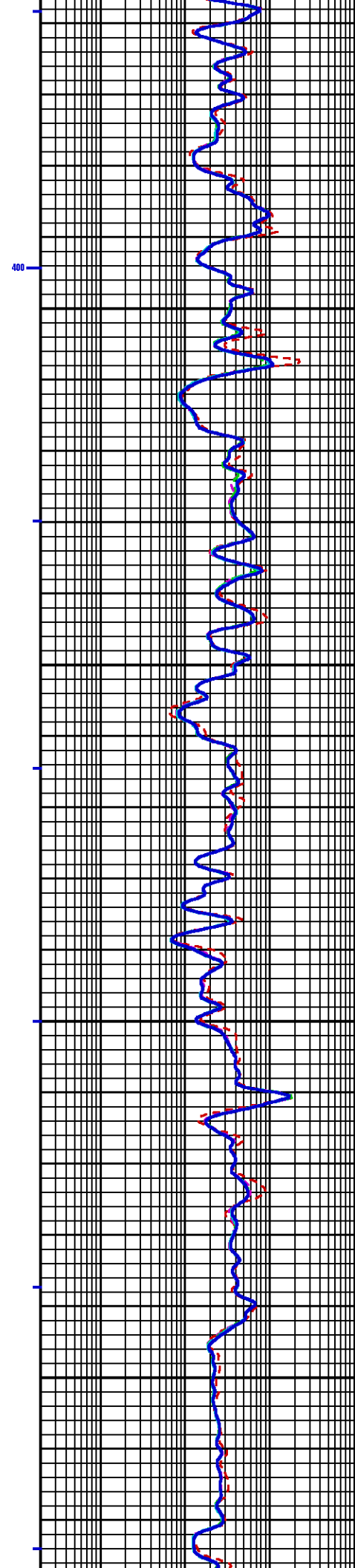
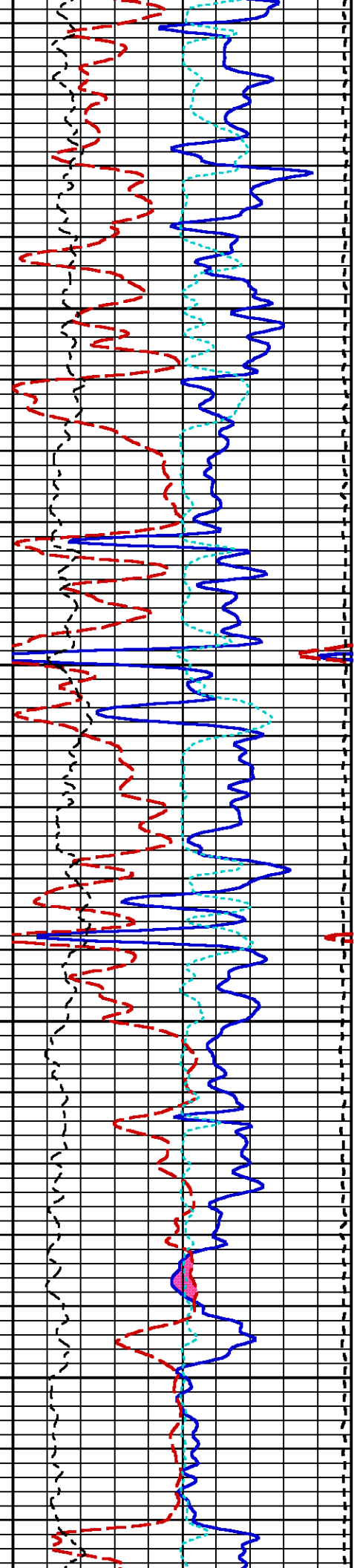


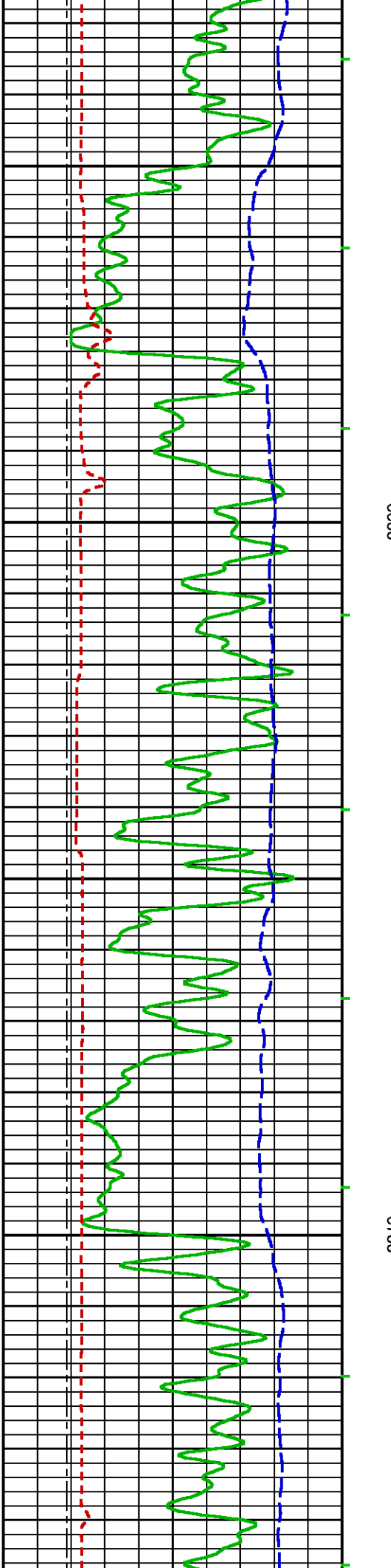
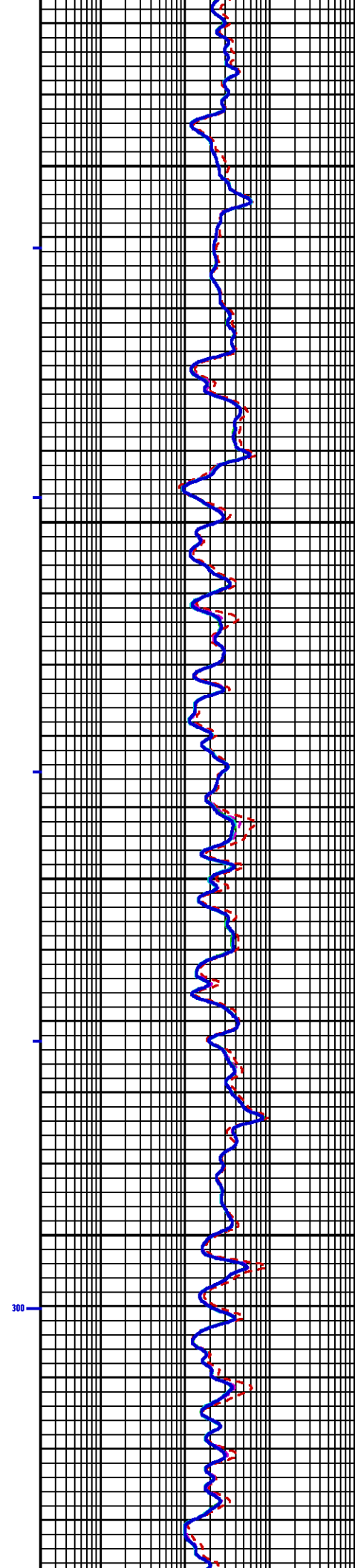
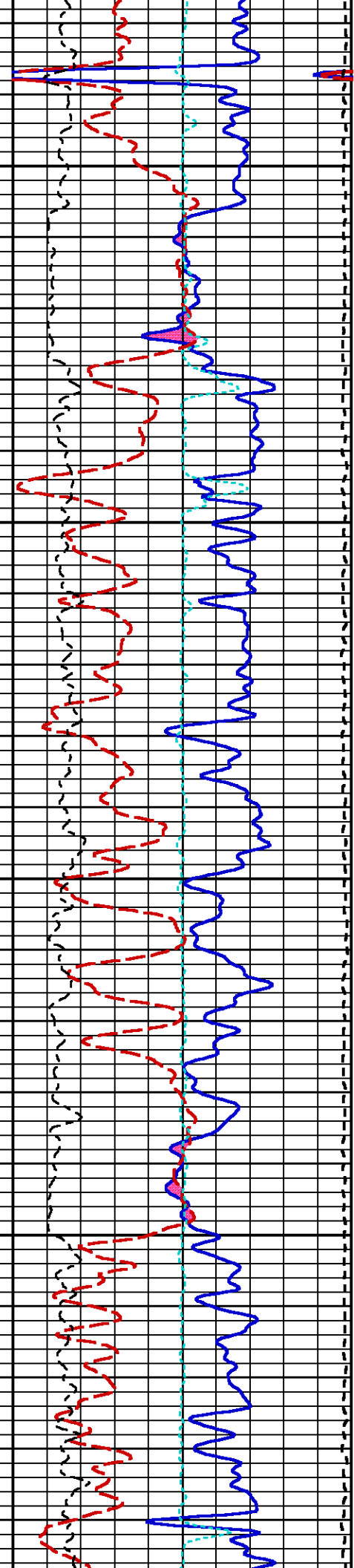
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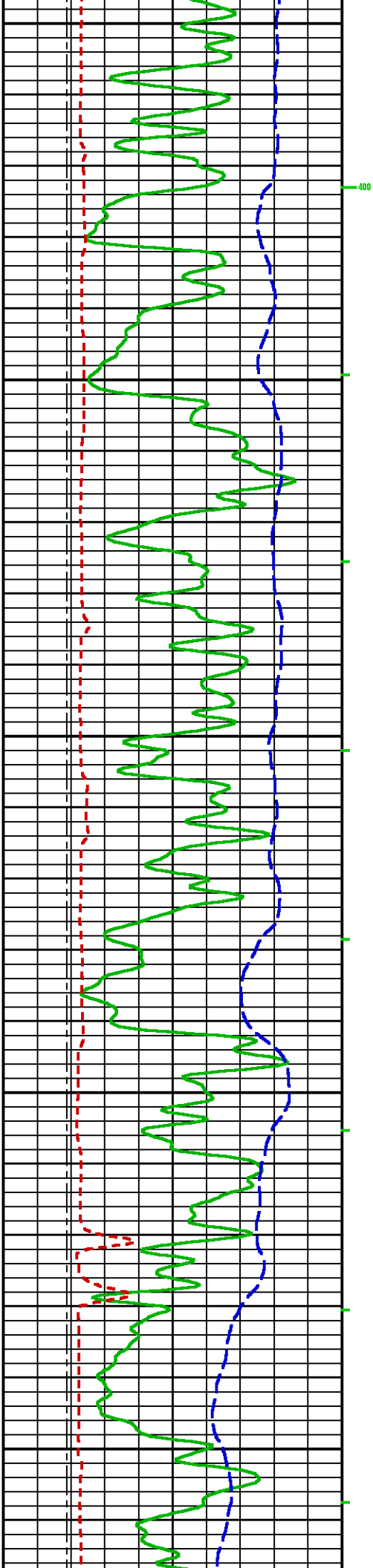
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6300



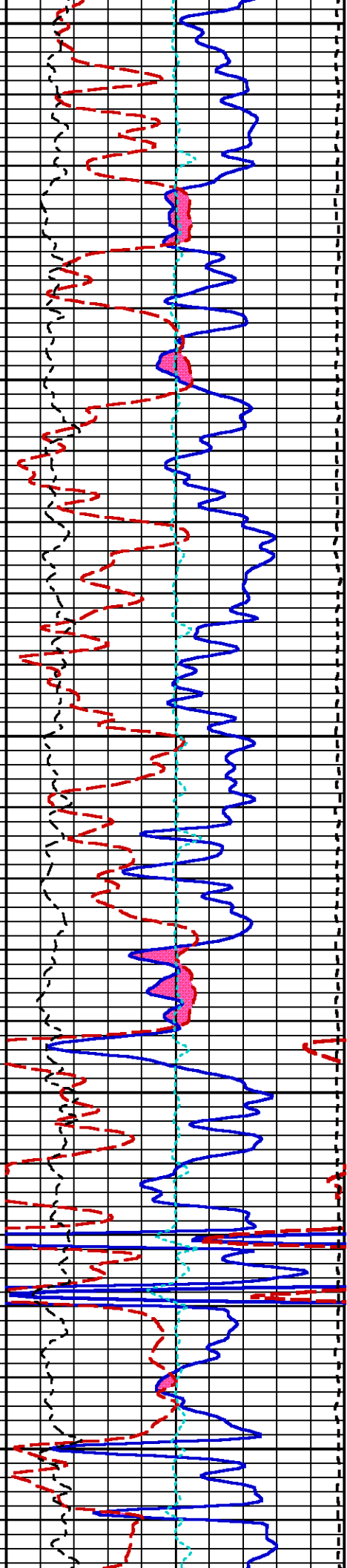
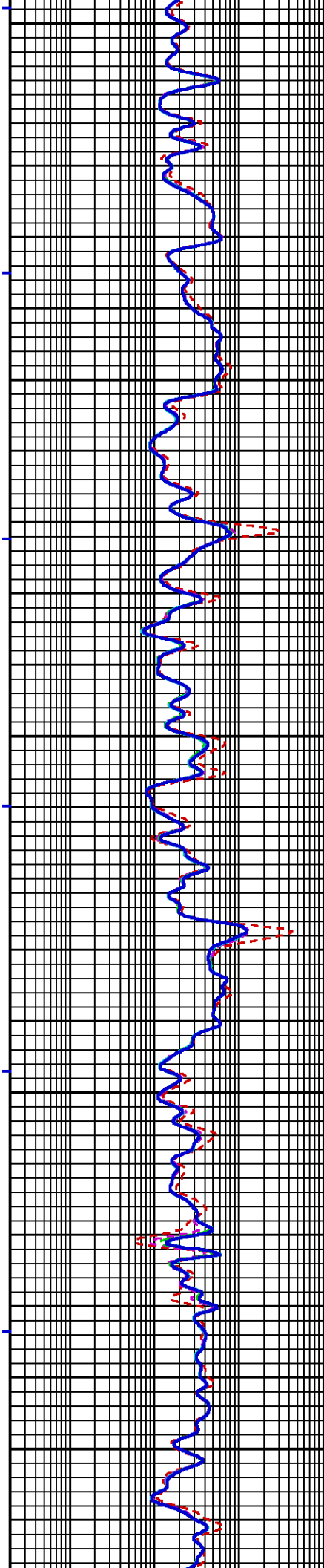


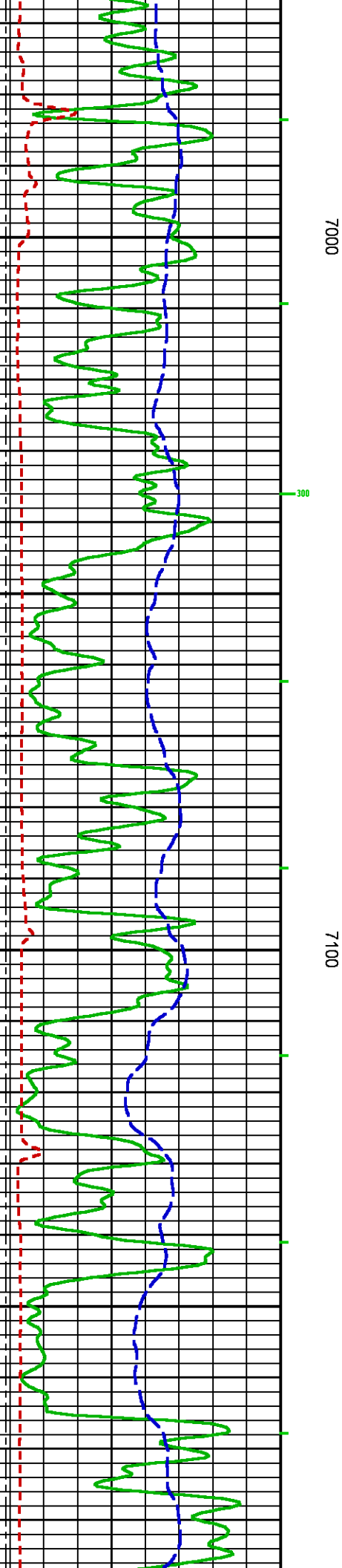
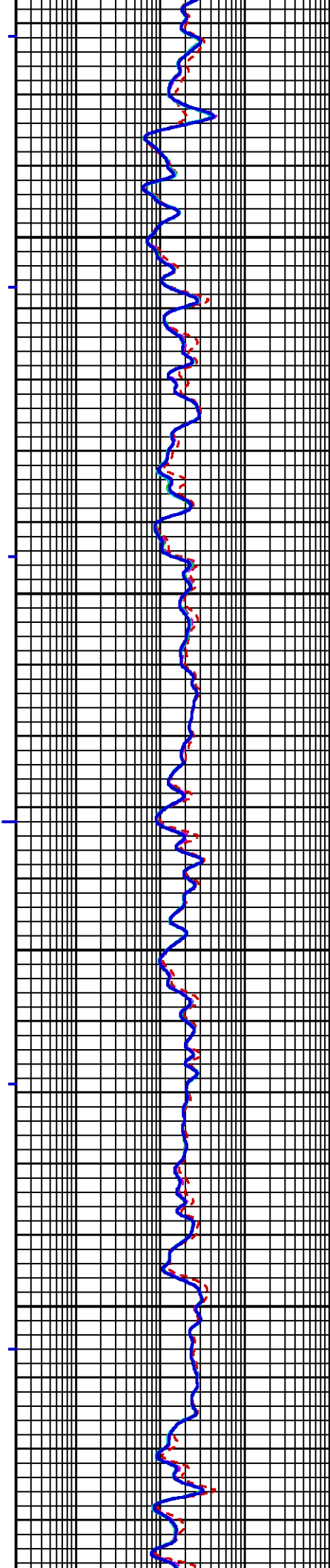
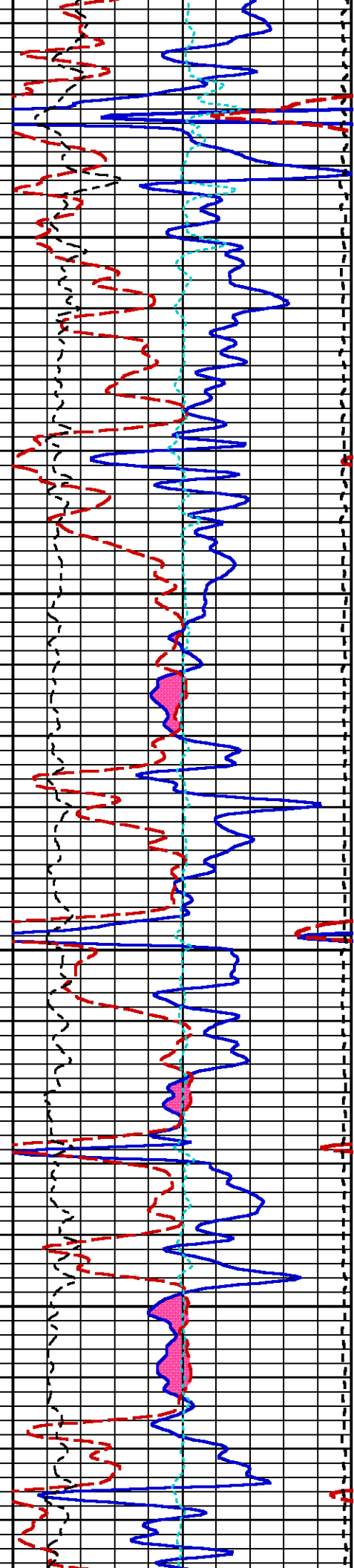


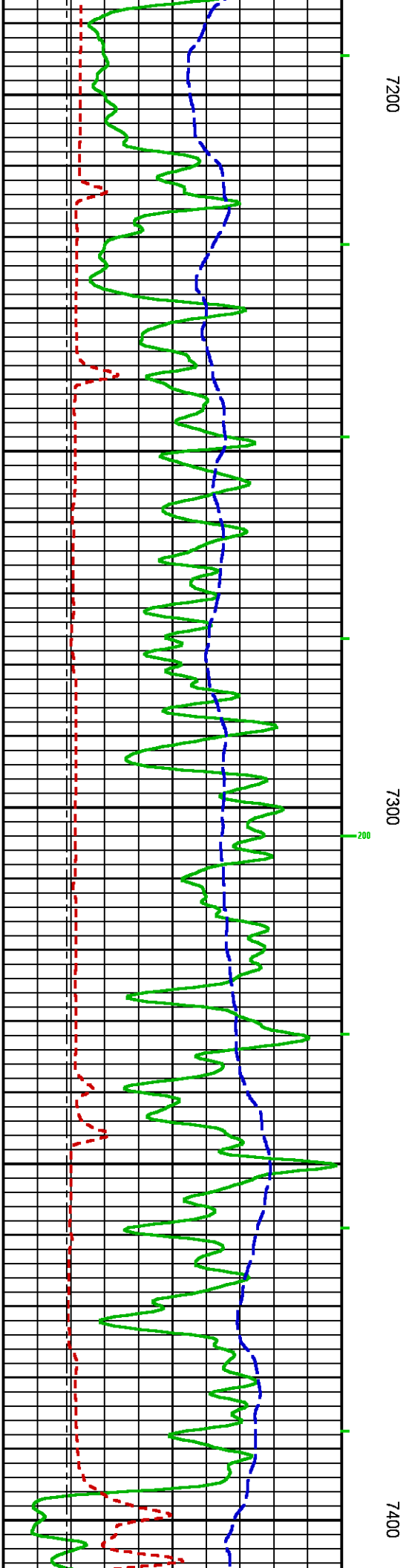
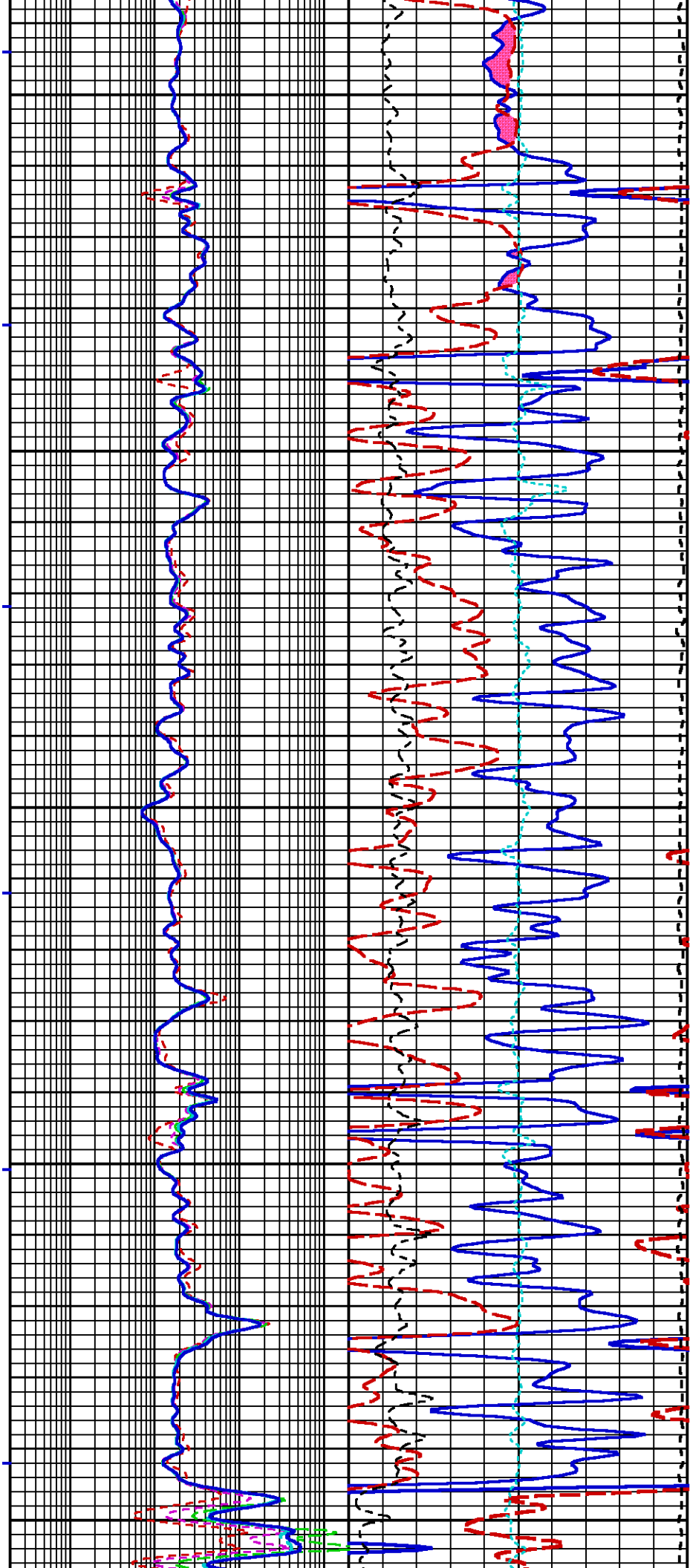


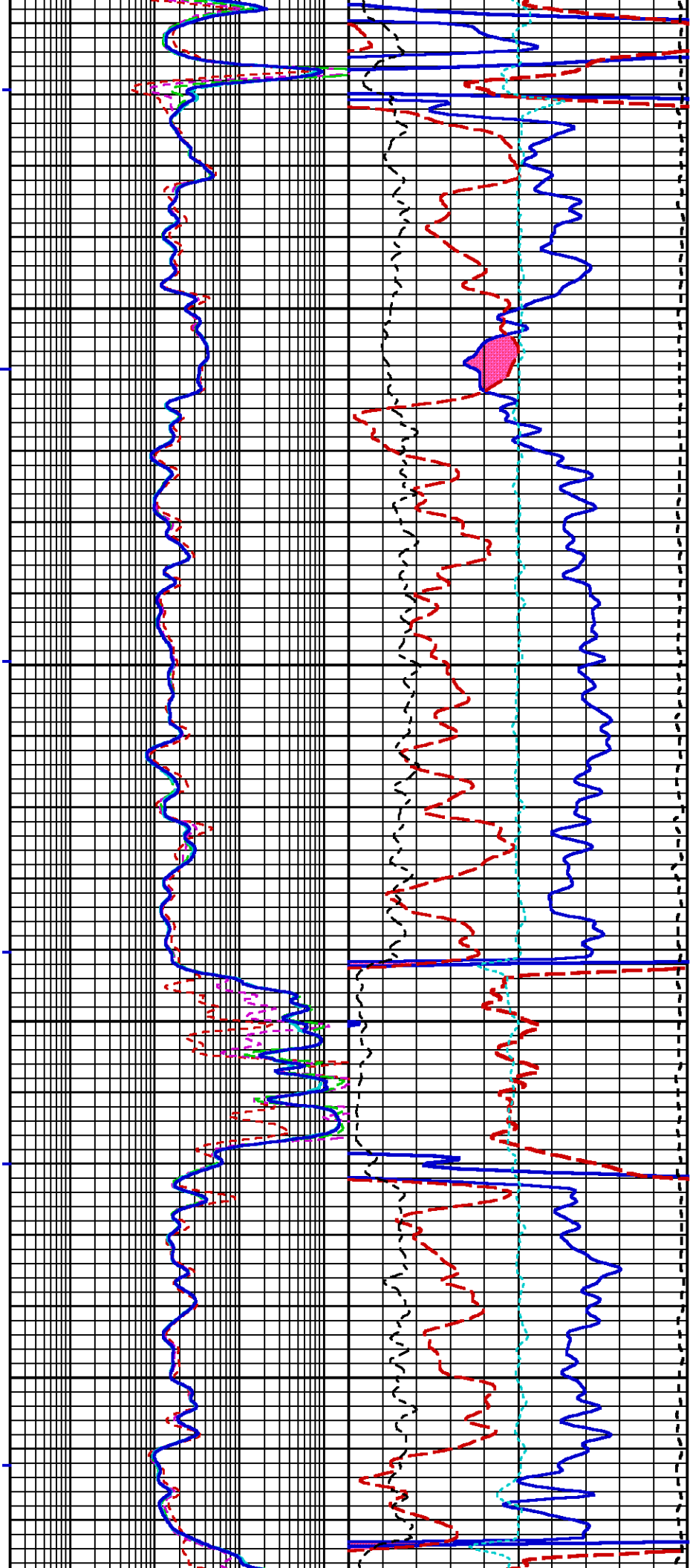
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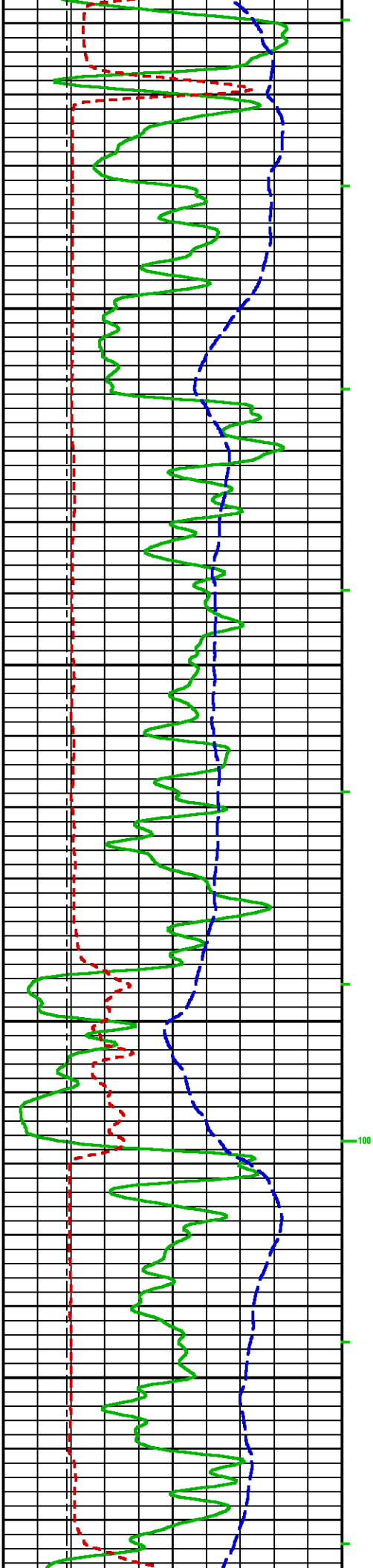


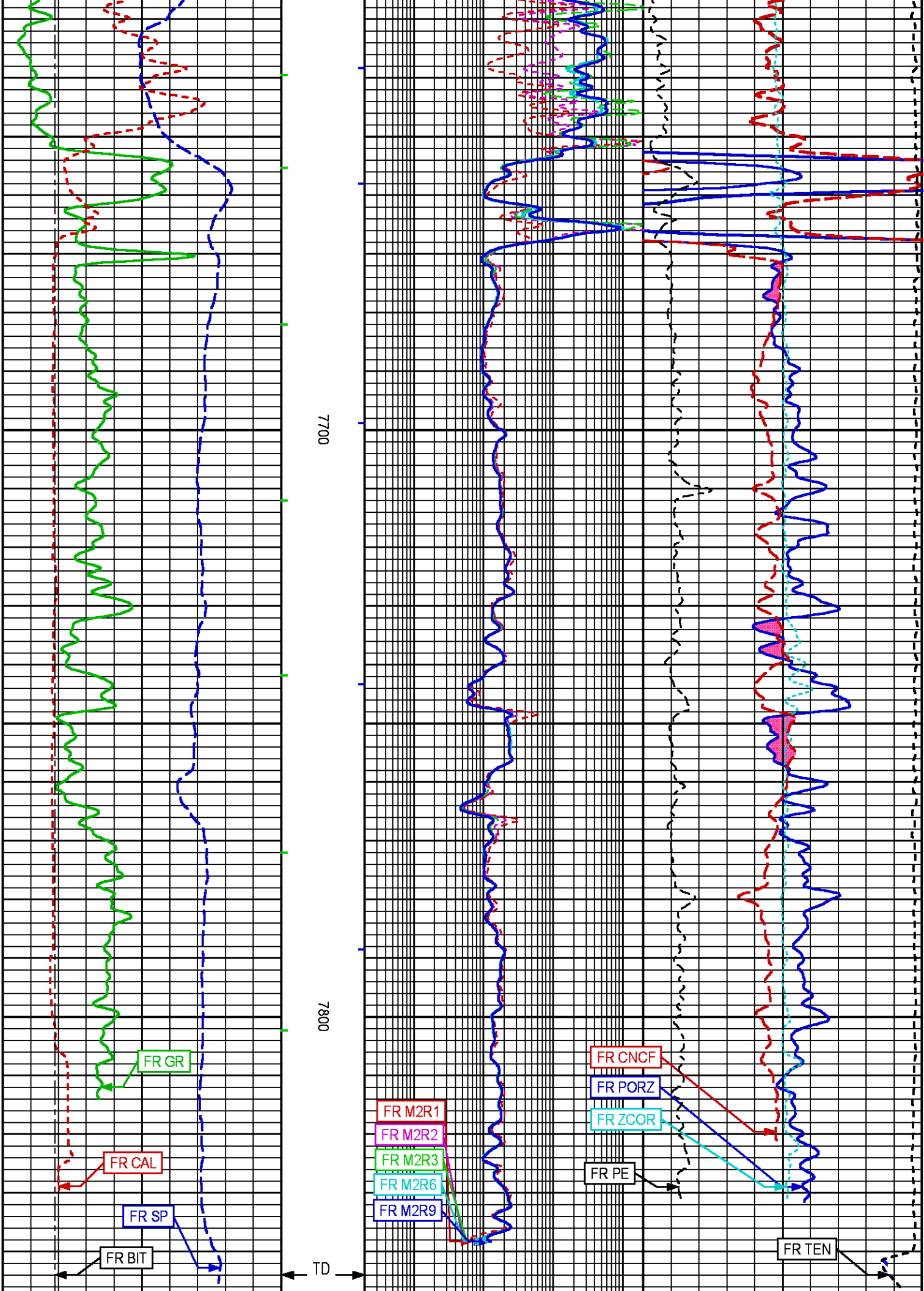
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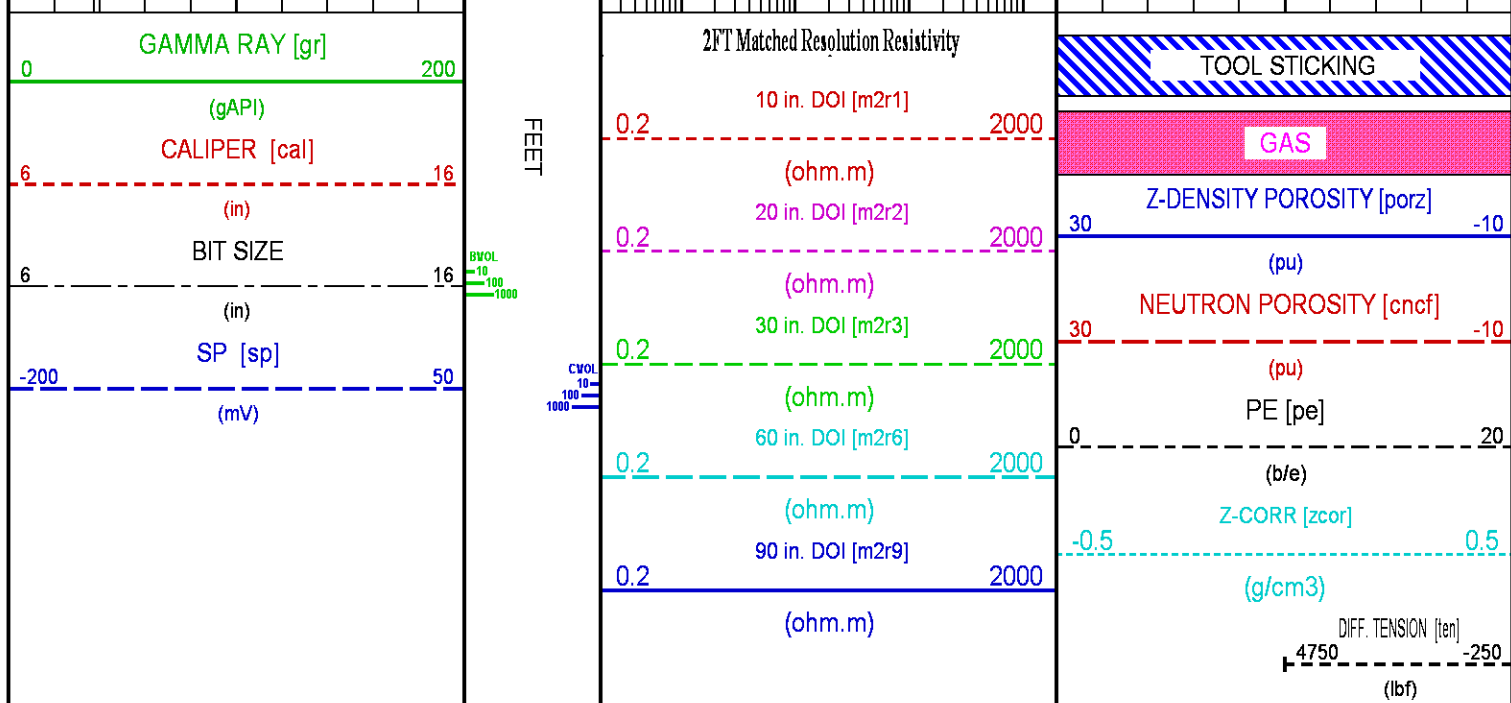
7600

100

100







REPEAT LOG 5"/100FT SCALE

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

Updates: 1 Patches: 7

Plotted: Wed Aug 5 21:38:52 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/OH097524/n970m02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 7547.250 ft BOTTOM DEPTH: 7857.014 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
CN MED RES	FILTER ()	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"
SP-SPDH	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	BH MUD SOURCE (UBH)	TOOL MEASURED		"	"

BM MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	67.7	degF	"
	MUD SAMPLE RES	1.140	ohm.m	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"
	at BH REF DEPTH	0.0	ft	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	SANDSTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	700	ppm	"	"
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	Air Filled Borehole	NO		TOP	BOTTOM
	RHOMatrix	2.680	g/cm3	"	"
	RHOfluid	1.000	g/cm3	"	"

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	MUD CONDUCTIVITY STANDOFF		TOP	7873.969
	STANDOFF	1.50	in	TOP	BOTTOM
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

CURVE DESCRIPTION REPORT

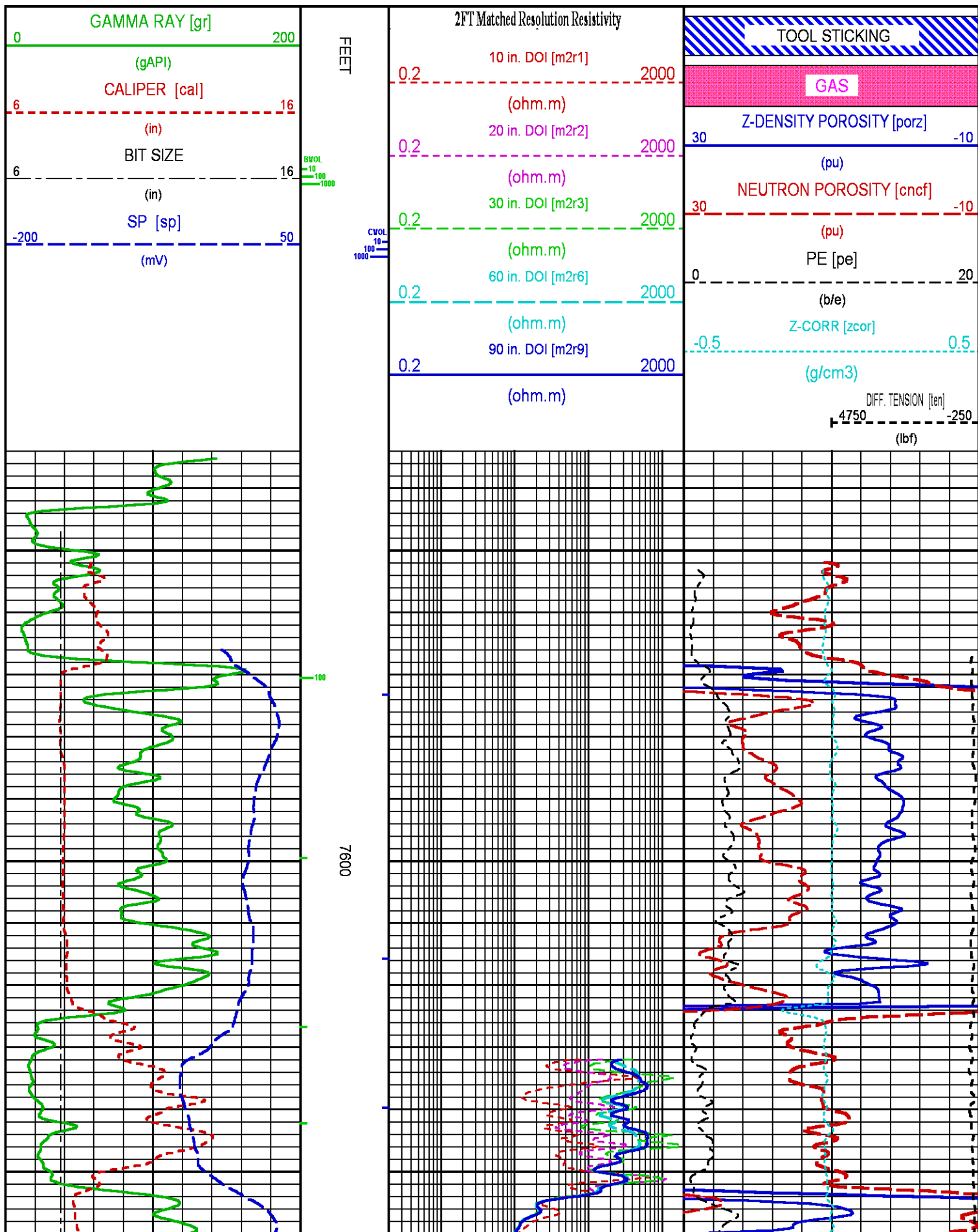
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Aug 5 18:47:26 2015	BIT SIZE
F1:BVOL	Aug 5 18:47:26 2015	BOREHOLE VOLUME
F1:CAL	Aug 5 18:47:26 2015	CALIPER
F1:CNCF	Aug 5 18:47:26 2015	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Aug 5 18:47:26 2015	CEMENT VOLUME
F1:GR	Aug 5 18:47:26 2015	GAMMA RAY
F1:M2R1	Aug 5 18:47:26 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Aug 5 18:47:26 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Aug 5 18:47:26 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Aug 5 18:47:26 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Aug 5 18:47:26 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Aug 5 18:47:26 2015	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Aug 5 18:47:26 2015	POROSITY FOR SELECTABLE MATRIX
F1:SP	Aug 5 18:47:26 2015	SPONTANEOUS POTENTIAL
F1:TEN	Aug 5 18:47:26 2015	DIFFERENTIAL TENSION
F1:ZCOR	Aug 5 18:47:26 2015	DENSITY CORRECTION

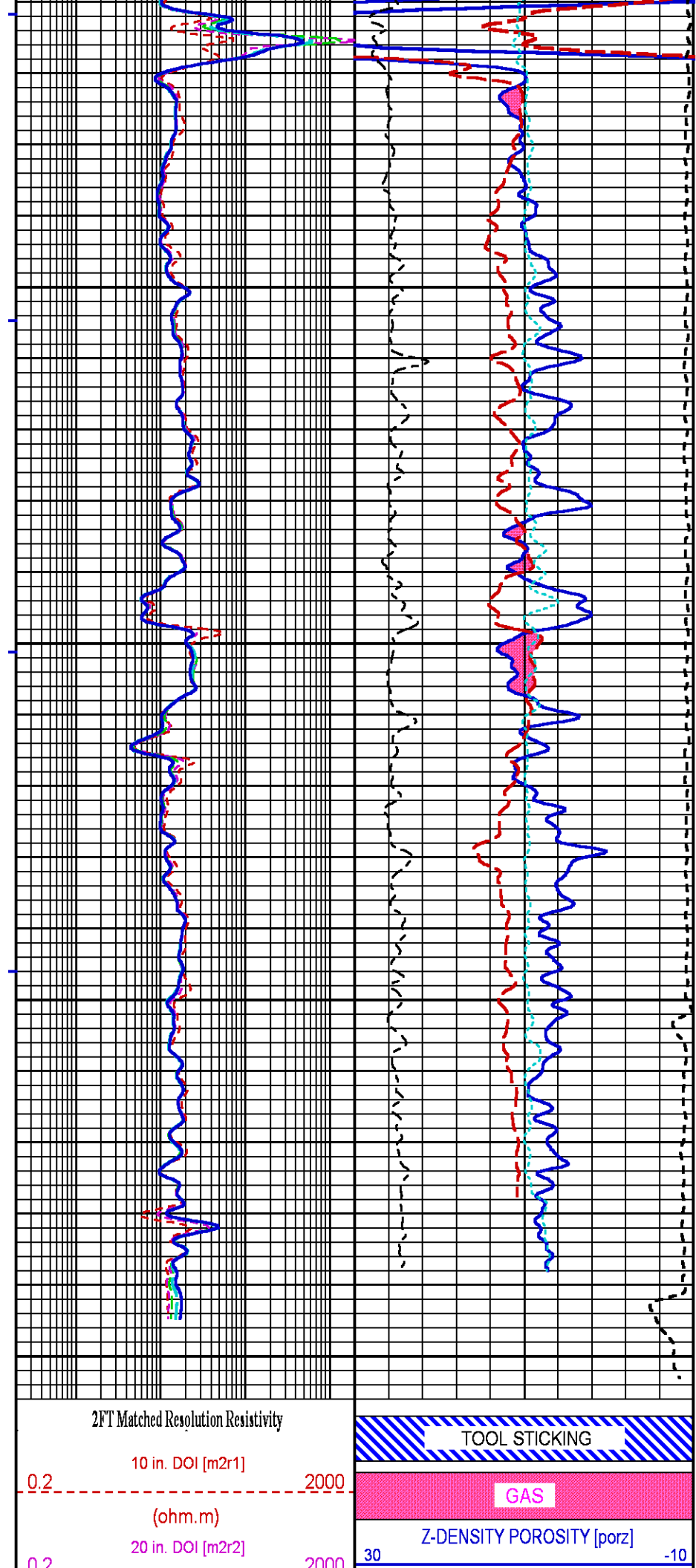
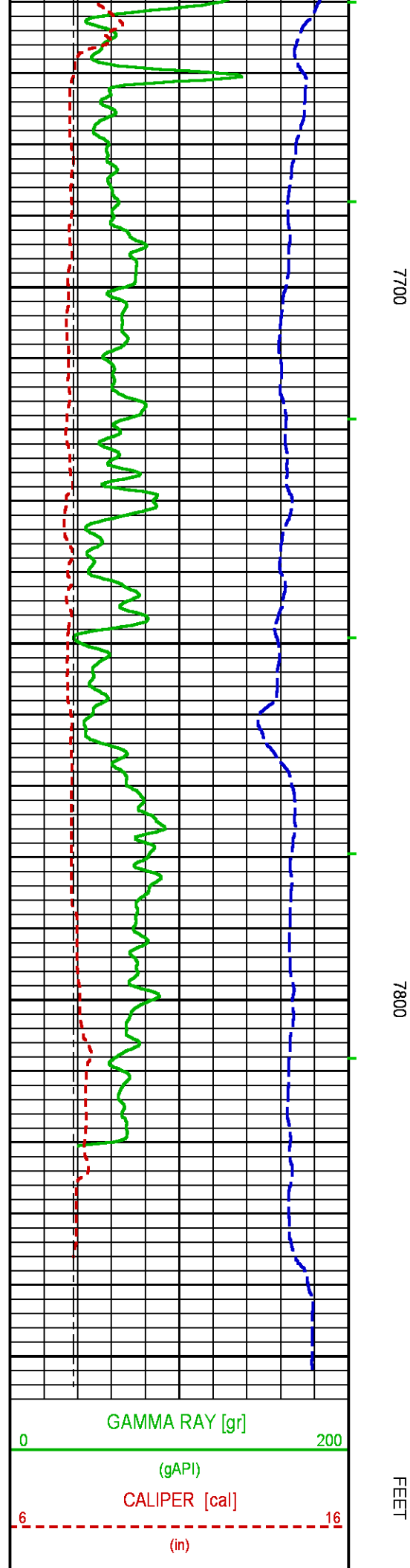
CURVE MEASURE POINT OFFSET

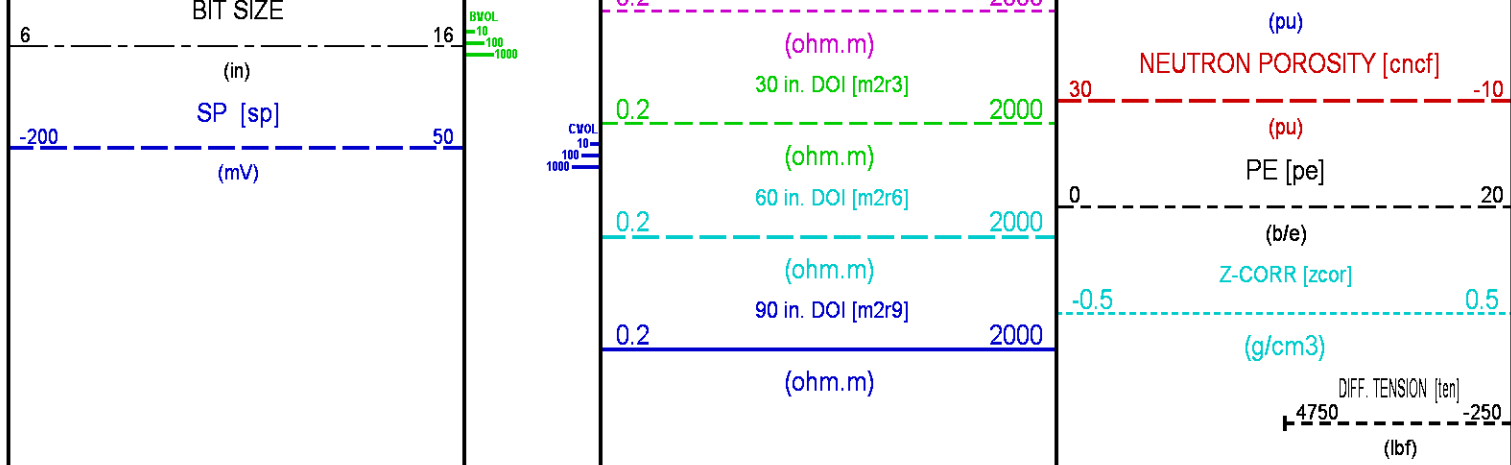
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	M2R1	2.75	M2R9	2.75	TEN	0.00
CAL	15.12	M2R2	2.75	PE	15.00	ZCOR	15.00
CNCF	24.38	M2R3	2.75	PORZ	15.00		
GR	32.00	M2R6	2.75	SP	1.25		

Presentation : cas6685/dat1a/OH097524/REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 7535.25 - 7859 Feet

Data File 1 : F1 : cas6685:/dat1a/OH097524/n970m02_repeat.xtf
Created On : Aug 5 18:47:26 2015
Company : LARAMIE ENERGY
Well : PICEANCE 28-09W
Field : VEGA
File Interval : 0 - 7860.25 Feet
OCT : n970m







CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/OH097524/n970m.tp1

TTMA PRIMARY CALIBRATION SUMMARY

TOOL #: 3980XA 10121559

DATE/TIME PERFORMED: Thu Feb 5 12:32:26 2015

UNIT #: 3885TC 6685

ACCEL #: 3980XA 10121559

ACCEL CAL DATE: 13:40 06/07/2004

GAIN OFFSET
(ohm.m)

Rm K Factors 0.14570 -0.01679

Rm Measurements

Sig Low (ohm)	Sig High (ohm)	Mult Factor	Add Factor	Engr Low (ohm)	Engr High (ohm)
0.25	9.99	1.001307	-0.000116	0.25	10.00
0.20 0.30	8.00 12.00				

TTMA BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10121559

DATE/TIME PERFORMED: Wed Aug 5 05:05:44 2015

DAYS SINCE CAL: 180

UNIT #: 3885TC 6685

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	19452	499.86	9.99	1000.70
	18659 20259	489.20 503.60	8.00 12.00	980.00 1020.00
ZERO	-24412	-436.02	0.250	1000.887
	-25212 -23612	-443.20 -428.80	0.200 0.300	980.000 1020.000

TTMA AFTER LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10121559

DATE/TIME PERFORMED: Wed Aug 5 20:58:10 2015

DAYS SINCE CAL: 181

UNIT #: 3885TC 6685

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	19457	501.61	9.98	1000.32
	18659 20259	489.20 503.60	8.00 12.00	980.00 1020.00
ZERO	-24412	-436.02	0.250	1000.344
	-25212 -23612	-443.20 -428.80	0.200 0.300	980.000 1020.000

GR PRIMARY CALIBRATION SUMMARY

Tool #: 3518EG 10139870

DATE/TIME PERFORMED: Sun Jul 26 19:28:54 2015

Unit #: 3885TC 6685

Jig Series: 4702NK VBA-905

Background	Calibrator ON	Jig Value (gAPI)	Mult	Background (gAPI)	Calibrator ON (gAPI)
102.77	819.22	185	0.258	26.54	211.54
			0.230 0.280		

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870

DATE/TIME PERFORMED: Wed Aug 5 05:06:08 2015

DAYS SINCE CAL: 9

UNIT #: 3885TC 6685

Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67	55.79	1361.74
929.00 1027.00	536.00	1237.00 1512.00

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870

DATE/TIME PERFORMED: Wed Aug 5 20:57:48 2015

DAYS SINCE CAL: 10

UNIT #: 3885TC 6685

Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67	122.51	1365.44
929.00 1027.00	536.00	1237.00 1512.00

CN PRIMARY CALIBRATION SUMMARY

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2436XA 10522099

DATE/TIME PERFORMED: Thu Jul 23 11:28:34 2015

UNIT #: 3885TD MI4230

CALIBRATOR #: 2437XB 112674

SOURCE #: 4718XA S35012

SSN	LSN	SSN/LSN	MCF	CNRATIO	CN
DT CPS	DT CPS				PU
1913.74	328.05	5.83364	0.98343	5.73700	0.252
			0.95000 1.05000		

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10522099

DATE/TIME PERFORMED: Wed Aug 5 05:06:11 2015

DAYS SINCE CAL: 12

UNIT #: 3885TC 6685

CALIBRATOR #: INTRNL N/A

SSN	LSN	SSN/LSN	TEMP	HV	LV
DT CPS	DT CPS		(degF)	(V)	(V)
991.06	993.08	0.99797	50.6	1322.0	4.624
		0.95000 1.05000	280.4	1250.0 1450.0	4.300 5.000

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10522099

DATE/TIME PERFORMED: Wed Aug 5 20:57:51 2015

DAYS SINCE CAL: 13

UNIT #: 3885TC 6685

CALIBRATOR #: INTRNL N/A

SSN	LSN	SSN/LSN	TEMP	HV	LV
DT CPS	DT CPS		(degF)	(V)	(V)
992.08	994.44	0.99762	121.3	1323.0	4.626
		0.95000 1.05000	280.4	1250.0 1450.0	4.300 5.000

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2223XA 10123024

DATE/TIME PERFORMED: Tue Aug 4 11:20:11 2015

UNIT #: 3885TC 6685

	SIZE	VALUE	MULTIPLIER	ADD
	(in)			
SMALL RING (Arm)	7.000	1468.0		
LARGE RING (Arm)	11.000	2684.0	0.00329	2.17105
PAD CLOSED		1187.2	0.00250	-2.96800

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10123024

DATE/TIME PERFORMED: Wed Aug 5 05:23:42 2015

DAYS SINCE CAL: 0

UNIT #: 3885TC 6685

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	1873.2	0.00329	1.42316	7.6
PAD	1392.0	0.00250	-2.96800	0.5

	ACTUAL (in)	MEASURED (in)
DIAMETER (arm+pad)	8.097	8.1
		7.7 8.5

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10123024

DATE/TIME PERFORMED: Wed Aug 5 20:56:40 2015

DAYS SINCE CAL: 1

UNIT #: 3885TC 6685

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	1908.0	0.00329	1.42316	7.7
PAD	1397.2	0.00250	-2.96800	0.5

	ACTUAL (in)	MEASURED (in)
DIAMETER (arm+pad)	8.097	8.2
		7.7 8.5

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2223XA 10123024

DATE/TIME PERFORMED: Tue Aug 4 11:11:42 2015

UNIT: 3885TC 6685

CALB BLKS: 2225XA 094292F

CS SRC: 4705XA 16068B

PAD TYPE: PADTYP 7.5" PAD

SS CS PK (Channel)	LS CS PK (Channel)	SS_BKGD (cps)	LS BKGD (cps)
225.0	223.5	1316.9	1328.0
220.0 230.0	220.0 230.0		

	SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)
MG (LO PE)	31234.1	11614.2	0.733	1.679	0.000	1.900
			0.720 0.890			
AL	19571.4	1308.3		2.667	-0.016	

AL + SHIM

26103.4

2261.1

2.558

0.098

MG + SHIM (HI PE)

15258.1

5520.5

0.289

8.550

0.280 0.360

RATIO AL + SHIM/AL

1.33

1.73

1.30

1.40

1.60

1.80

RATIO MG/AL

1.60

8.88

1.58

1.70

8.55

9.55

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10123024

DATE/TIME PERFORMED: Wed Aug 5 05:06:20 2015

DAYS SINCE CAL: 0

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1	224.8	1297.2
	3332.1 3352.1	220.0 230.0	1250.0 1550.0
SS	22355.0	224.1	1304.6
	22344.8 22364.8	220.0 230.0	1250.0 1550.0
	LV (V)	PAD CURRENT (mA)	
	5.0	99.2	
	4.8 5.2	50.0 120.0	

ZDL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10123024

DATE/TIME PERFORMED: Wed Aug 5 20:58:28 2015

DAYS SINCE CAL: 1

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1	224.8	1436.7
	3332.1 3352.1	220.0 230.0	1250.0 1550.0
SS	22354.8	223.6	1314.7
	22344.8 22364.8	220.0 230.0	1250.0 1550.0
	LV (V)	PAD CURRENT (mA)	
	5.0	101.9	
	4.8 5.2	50.0 120.0	

HDIL PRIMARY CALIBRATION SUMMARY

TOOL #: 1530XA 10415933

DATE/TIME PERFORMED: Tue Jun 30 07:53:32 2015

UNIT #:

3885TC 6685

GRCOND ID & DATE:

86 101801

ZERO DATA(mv) 10 KHz 30 KHz 50 KHz 70 KHz 90 KHz 110 KHz 130 KHz 150 KHz

Coil 0 R

0.0017	0.0005	0.0000	0.0009	-0.0004	-0.0002	0.0001	-0.0008
-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000

Coil 0 Q

-0.0009	0.0004	0.0012	0.0003	0.0003	0.0006	-0.0002	-0.0004
-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000

Coil 1 R

-0.0005	-0.0002	0.0009	0.0027	-0.0003	0.0003	-0.0011	-0.0020
-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000

Coil 1 Q

-0.0077	-0.0024	0.0019	0.0028	-0.0021	-0.0015	-0.0007	-0.0005
-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000

Coil 2 R

0.0005	-0.0032	0.0025	0.0029	-0.0019	0.0013	0.0018	-0.0016
-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000

Coil 2 Q

0.0029	-0.0005	0.0027	-0.0032	0.0012	0.0017	-0.0013	0.0005
-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000

Coil 3 R

0.0151	-0.0024	0.0059	-0.0046	0.0042	-0.0008	-0.0009	-0.0031
-0.3000 0.3000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000

Coil 3 Q

-0.0117	0.0033	-0.0054	-0.0020	0.0047	0.0037	-0.0011	0.0029
-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000

Coil 4 R

-0.0069	0.0014	0.0050	-0.0007	0.0121	0.0011	-0.0022	0.0014
-0.5000 0.5000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000

Coil 4 Q

-0.0108	-0.0053	-0.0070	0.0005	-0.0021	0.0078	-0.0000	0.0121
-1.0000 1.0000	-0.4000 0.4000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000

Coil 5 R

0.0243	0.0175	-0.0146	0.0328	-0.0136	-0.0018	-0.0087	-0.0134
-1.2000 1.2000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000

Coil 5 Q

-0.0147	-0.0077	0.0042	-0.0148	-0.0123	0.0093	-0.0047	0.0049
-1.5000 1.5000	-0.8000 0.8000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000

ELEC. GAINS

10 KHz 30 KHz 50 KHz 70 KHz 90 KHz 110 KHz 130 KHz 150 KHz

Coil 0 M

163.36	161.97	159.17	155.00	149.42	142.55	134.32	124.93
136.00 186.00	134.00 184.00	131.00 181.00	126.00 176.00	122.00 170.00	118.00 161.00	112.00 150.00	105.00 139.00

Coil 0 P

7.751	25.548	42.916	60.258	77.639	95.046	112.509	129.981
6.000 9.000	21.000 30.000	35.000 50.000	49.000 71.000	63.000 91.000	77.000 109.000	92.000 130.000	106.000 151.000

Coil 1 M

285.73	283.01	277.56	269.53	259.04	246.39	231.61	215.04
238.00 328.00	235.00 325.00	230.00 320.00	225.00 312.00	218.00 302.00	208.00 288.00	196.00 266.00	184.00 244.00

Coil 1 P

7.779	25.655	43.064	60.393	77.698	94.952	112.194	129.374
6.000 9.000	21.000 30.000	35.000 51.000	49.000 71.000	63.000 92.000	78.000 112.000	93.000 130.000	107.000 151.000

Coil 2 M

584.09	578.61	567.66	551.64	530.72	505.34	475.61	442.00
479.00 659.00	474.00 654.00	463.00 643.00	450.00 622.00	432.00 602.00	412.00 572.00	390.00 540.00	359.00 499.00

Coil 2 P

7.831	25.813	43.326	60.764	78.187	95.599	112.998	130.399
6.000 9.000	21.000 31.000	35.000 51.000	49.000 71.000	63.000 92.000	76.000 115.000	92.000 135.000	105.000 155.000

Coil 3 M

934.04	925.92	909.50	884.96	852.71	812.92	765.62	711.94
772.00 1060.00	764.00 1050.00	752.00 1030.00	728.00 1010.00	700.00 970.00	665.00 925.00	628.00 868.00	589.00 799.00

Coil 3 P

7.835	25.767	43.272	60.733	78.209	95.707	113.198	130.671
6.000 10.000	21.000 30.000	35.000 51.000	49.000 72.000	63.000 93.000	76.000 114.000	90.000 135.000	104.000 156.000

Coil 4 M

1501.2	1487.8	1460.2	1419.1	1365.4	1299.5	1222.1	1134.7
1210.0 1700.0	1205.0 1690.0	1180.0 1650.0	1140.0 1590.0	1120.0 1530.0	1070.0 1450.0	1000.0 1350.0	942.0 1240.0

Coil 4 P

7.854	25.964	43.609	61.193	78.774	96.340	113.887	131.394
6.000 10.000	21.000 31.000	35.000 52.000	49.000 73.000	63.000 93.000	77.000 114.000	91.000 135.000	105.000 156.000

Coil 5 M

3024.7	2997.6	2940.3	2855.9	2745.6	2611.7	2452.8	2276.1
2450.0 3450.0	2420.0 3400.0	2410.0 3320.0	2350.0 3200.0	2280.0 3080.0	2150.0 2950.0	2020.0 2750.0	1870.0 2570.0

Coil 5 P

8.027	26.404	44.317	62.162	79.997	97.839	115.630	133.470
6.000 10.000	20.000 31.000	35.000 52.000	49.000 73.000	63.000 94.000	79.000 113.000	93.000 134.000	106.000 156.000

115 KHz 125 KHz 135 KHz 145 KHz 155 KHz 165 KHz 175 KHz 185 KHz

AM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-1697 -3200 940	-837 -1400 -20	-583 -930 -150	-466 -780 -180	-398 -680 -130	-353 -600 -120	-322 -550 -110	-298 -520 -92
Coil 0 Q	-851 -15000 11000	-829 -5800 3800	-677 -3700 2100	-587 -2700 1400	-531 -2200 1000	-495 -1800 790	-473 -1600 620	-459 -1500 490
Coil 1 R	-250 -750 480	-188 -360 83	-159 -280 9	-141 -230 -10	-127 -200 -26	-116 -180 -35	-107 -160 -46	-100 -150 -49
Coil 1 Q	-182 -3300 3300	-137 -1100 960	-117 -630 530	-108 -470 360	-104 -380 260	-101 -320 190	-97 -290 150	-95 -260 120
Coil 2 R	-7.6 -85.0 76.0	-36.1 -64.0 -0.4	-37.0 -57.0 -12.0	-34.8 -51.0 -16.0	-31.8 -46.0 -17.0	-29.1 -42.0 -16.0	-26.6 -39.0 -15.0	-24.1 -37.0 -13.0
Coil 2 Q	-247.2 -1500.0 1900.0	-84.4 -500.0 610.0	-54.4 -290.0 350.0	-42.1 -220.0 260.0	-34.5 -160.0 190.0	-29.0 -140.0 160.0	-24.2 -110.0 130.0	-20.5 -99.0 120.0
Coil 3 R	0.0 -23.0 21.0	-9.5 -22.0 1.6	-10.3 -21.0 -1.3	-9.9 -20.0 -1.8	-9.4 -19.0 -2.0	-8.6 -19.0 -1.3	-8.1 -19.0 -0.8	-7.4 -19.0 -0.0
Coil 3 Q	-52.1 -540.0 530.0	-14.1 -180.0 180.0	-6.0 -100.0 110.0	-1.2 -71.0 81.0	2.3 -51.0 66.0	5.9 -37.0 58.0	9.1 -28.0 53.0	11.9 -21.0 51.0
Coil 4 R	-6.22 -18.00 13.00	-4.67 -12.00 2.70	-4.61 -11.00 1.50	-4.39 -9.80 0.52	-4.37 -9.90 0.96	-3.76 -10.00 1.50	-3.42 -11.00 2.30	-3.20 -11.00 2.60
Coil 4 Q	26.02 -250.00 280.00	10.74 -79.00 98.00	10.39 -43.00 64.00	11.79 -27.00 51.00	13.56 -18.00 46.00	16.28 -11.00 42.00	18.70 -5.50 42.00	21.74 -1.00 42.00
Coil 5 R	-0.88 -56.00 51.00	-3.31 -8.40 3.60	-2.81 -6.90 1.10	-2.34 -6.90 1.20	-2.29 -9.30 2.90	-2.18 -14.00 6.30	-2.08 -19.00 9.60	-2.05 -24.00 13.00
Coil 5 Q	-24.31 -88.00 69.00	-3.68 -26.00 27.00	2.00 -14.00 22.00	6.29 -7.00 22.00	9.77 -2.50 24.00	13.27 1.10 26.00	16.31 4.10 29.00	19.70 7.10 32.00

MM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	0.969 0.850 1.100	0.976 0.860 1.100	0.980 0.870 1.100	0.981 0.880 1.100	0.982 0.880 1.100	0.983 0.880 1.100	0.983 0.880 1.100	0.983 0.880 1.100
Coil 0 P	-0.249 -1.500 1.500	-0.383 -1.500 1.500	-0.288 -1.500 1.500	-0.188 -1.500 1.500	-0.109 -1.500 1.500	-0.062 -1.500 1.500	-0.009 -1.500 1.500	0.024 -1.500 1.500
Coil 1 M	0.961 0.850 1.100	0.968 0.860 1.100	0.971 0.870 1.100	0.973 0.880 1.100	0.973 0.880 1.100	0.974 0.880 1.100	0.974 0.880 1.100	0.974 0.880 1.100
Coil 1 P	-0.228 -1.500 1.500	-0.376 -1.500 1.500	-0.266 -1.500 1.500	-0.171 -1.500 1.500	-0.068 -1.500 1.500	-0.024 -1.500 1.500	0.010 -1.500 1.500	0.057 -1.500 1.500
Coil 2 M	0.984 0.890 1.100	0.984 0.890 1.100	0.984 0.890 1.100	0.984 0.890 1.100	0.984 0.890 1.100	0.984 0.890 1.100	0.983 0.890 1.100	0.983 0.890 1.100
Coil 2 P	0.043 -1.500 1.500	0.057 -1.500 1.500	0.104 -1.500 1.500	0.135 -1.500 1.500	0.173 -1.500 1.500	0.191 -1.500 1.500	0.215 -1.500 1.500	0.210 -1.500 1.500
Coil 3 M	0.993 0.900 1.100	0.993 0.900 1.100	0.993 0.900 1.100	0.993 0.900 1.100	0.992 0.900 1.100	0.992 0.900 1.100	0.991 0.900 1.100	0.991 0.900 1.100
Coil 3 P	0.067 -1.500 1.500	0.097 -1.500 1.500	0.153 -1.500 1.500	0.209 -1.500 1.500	0.266 -1.500 1.500	0.310 -1.500 1.500	0.333 -1.500 1.500	0.342 -1.500 1.500
Coil 4 M	0.998 0.900 1.100	0.999 0.900 1.100	0.999 0.900 1.100	0.998 0.900 1.100	0.998 0.900 1.100	0.997 0.900 1.100	0.996 0.900 1.100	0.996 0.900 1.100
Coil 4 P	0.038 -1.500 1.500	0.052 -1.500 1.500	0.093 -1.500 1.500	0.127 -1.500 1.500	0.188 -1.500 1.500	0.205 -1.500 1.500	0.235 -1.500 1.500	0.258 -1.500 1.500
Coil 5 M	0.999 0.900 1.100	0.999 0.900 1.100	0.999 0.900 1.100	0.999 0.900 1.100	0.999 0.900 1.100	0.998 0.900 1.100	0.997 0.900 1.100	0.996 0.900 1.100
Coil 5 P	0.020 -1.500 1.500	0.050 -1.500 1.500	0.080 -1.500 1.500	0.111 -1.500 1.500	0.180 -1.500 1.500	0.278 -1.500 1.500	0.238 -1.500 1.500	0.270 -1.500 1.500

PARMS

TCID 0

TCID 1

Cal Temp
(degF)

T Factor

IDS

3.659

0.987

79.5

1.00

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1530XA 10415933

DATE/TIME PERFORMED: Wed Aug 5 18:19:19 2015

DAYS SINCE CAL: 36

UNIT #: 3885TC 6685

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.002 -0.200 0.200	0.000 -0.100 0.100	0.000 -0.100 0.100	0.000 -0.100 0.100	-0.000 -0.100 0.100	0.001 -0.100 0.100	-0.001 -0.100 0.100	-0.000 -0.100 0.100
Coil 0 Q	-0.003 -0.500 0.500	-0.000 -0.200 0.200	0.000 -0.100 0.100	0.000 -0.100 0.100	0.001 -0.100 0.100	-0.001 -0.100 0.100	-0.001 -0.100 0.100	0.001 -0.100 0.100
Coil 1 R	-0.001 -0.200 0.200	-0.002 -0.100 0.100	0.001 -0.100 0.100	-0.000 -0.100 0.100	-0.000 -0.100 0.100	-0.000 -0.100 0.100	-0.001 -0.100 0.100	0.003 -0.100 0.100
Coil 1 Q	-0.005 -0.500 0.500	-0.001 -0.200 0.200	0.000 -0.100 0.100	-0.001 -0.100 0.100	-0.002 -0.100 0.100	-0.000 -0.100 0.100	0.000 -0.100 0.100	0.002 -0.100 0.100
Coil 2 R	0.002 -0.200 0.200	-0.000 -0.100 0.100	-0.003 -0.100 0.100	-0.001 -0.100 0.100	0.001 -0.100 0.100	-0.000 -0.100 0.100	0.002 -0.100 0.100	-0.001 -0.100 0.100
Coil 2 Q	-0.004 -0.500 0.500	0.000 -0.200 0.200	0.000 -0.100 0.100	0.008 -0.100 0.100	0.000 -0.100 0.100	-0.001 -0.100 0.100	-0.002 -0.100 0.100	0.005 -0.100 0.100
Coil 3 R	0.009 -0.300 0.300	-0.005 -0.100 0.100	0.006 -0.100 0.100	0.007 -0.100 0.100	0.009 -0.100 0.100	-0.002 -0.100 0.100	-0.002 -0.100 0.100	-0.003 -0.100 0.100
Coil 3 Q	-0.003 -0.500 0.500	-0.006 -0.200 0.200	0.008 -0.100 0.100	-0.001 -0.100 0.100	-0.006 -0.100 0.100	0.004 -0.100 0.100	0.007 -0.100 0.100	0.002 -0.100 0.100
Coil 4 R	-0.003 -0.500 0.500	-0.009 -0.200 0.200	0.004 -0.200 0.200	-0.003 -0.200 0.200	0.007 -0.200 0.200	0.009 -0.200 0.200	0.001 -0.200 0.200	-0.001 -0.200 0.200
Coil 4 Q	-0.005 -1.000 1.000	-0.002 -0.400 0.400	-0.010 -0.200 0.200	-0.006 -0.200 0.200	-0.000 -0.200 0.200	0.005 -0.200 0.200	0.003 -0.200 0.200	0.004 -0.200 0.200
Coil 5 R	0.017 -1.200 1.200	-0.018 -0.400 0.400	-0.007 -0.400 0.400	0.010 -0.400 0.400	-0.016 -0.400 0.400	-0.002 -0.400 0.400	0.014 -0.400 0.400	0.001 -0.400 0.400
Coil 5 Q	-0.039 -1.500 1.500	-0.014 -0.800 0.800	-0.006 -0.400 0.400	-0.015 -0.400 0.400	0.005 -0.400 0.400	0.016 -0.400 0.400	0.001 -0.400 0.400	-0.007 -0.400 0.400

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	163.23 136.00 186.00	161.85 134.00 184.00	159.05 131.00 181.00	154.89 126.00 176.00	149.30 122.00 170.00	142.44 118.00 161.00	134.26 112.00 150.00	124.84 105.00 139.00
Coil 0 P	7.684 -1.000 12.000	25.556 19.000 30.000	42.951 35.000 50.000	60.324 49.000 71.000	77.735 63.000 91.000	95.178 77.000 110.000	112.649 92.000 130.000	130.154 105.000 151.000
Coil 1 M	285.83 237.00 327.00	283.11 235.00 325.00	277.64 230.00 320.00	269.64 225.00 312.00	259.17 218.00 302.00	246.43 208.00 288.00	231.74 196.00 266.00	215.13 184.00 244.00
Coil 1 P	7.716 -1.000 12.000	25.665 19.000 30.000	43.099 35.000 51.000	60.454 49.000 71.000	77.787 63.000 92.000	95.071 77.000 112.000	112.331 92.000 132.000	129.543 105.000 153.000
Coil 2 M	583.21 479.00 659.00	577.73 474.00 654.00	566.83 463.00 643.00	550.79 450.00 622.00	529.92 432.00 602.00	504.51 412.00 572.00	474.91 390.00 540.00	441.28 359.00 499.00
Coil 2 P	7.756 -1.000 12.000	25.818 19.000 31.000	43.364 35.000 51.000	60.831 49.000 71.000	78.277 63.000 92.000	95.714 77.000 114.000	113.151 92.000 135.000	130.596 105.000 156.000
Coil 3 M	933.71 772.00 1060.00	925.63 764.00 1050.00	909.25 752.00 1030.00	884.81 728.00 1010.00	852.53 700.00 970.00	812.73 665.00 925.00	765.43 628.00 868.00	711.54 589.00 799.00
Coil 3 P	7.759 -2.000 13.000	25.772 19.000 31.000	43.307 35.000 52.000	60.795 49.000 72.000	78.304 63.000 93.000	95.822 77.000 114.000	113.362 92.000 135.000	130.895 105.000 156.000
Coil 4 M	1501.7 1210.0 1700.0	1488.2 1205.0 1690.0	1460.6 1180.0 1650.0	1419.7 1140.0 1590.0	1365.9 1120.0 1520.0	1299.8 1070.0 1450.0	1222.7 1000.0 1350.0	1134.8 843.0 1340.0

Coil 3 M	932.78	924.70	908.24	883.72	851.46	811.43	764.33	710.26
	915.03	952.38	907.12	944.14	891.07	927.44	867.11	902.51
Coil 3 P	7.438	25.731	43.362	60.912	78.462	96.044	113.630	131.158
	4.759	10.759	22.772	28.772	40.307	46.307	57.795	63.795
Coil 4 M	1501.7	1488.1	1460.5	1419.5	1365.3	1299.0	1221.9	1134.2
	1471.7	1531.7	1458.5	1518.0	1431.3	1489.8	1391.3	1448.1
Coil 4 P	7.476	25.941	43.710	61.383	79.054	96.708	114.337	131.942
	4.781	10.781	22.971	28.971	40.650	46.650	58.257	64.257
Coil 5 M	3018.5	2991.7	2934.5	2850.2	2739.5	2605.2	2449.4	2269.7
	2962.5	3083.5	2935.9	3055.7	2879.9	2997.5	2797.4	2911.6
Coil 5 P	7.678	26.381	44.427	62.354	80.247	98.178	116.086	133.963
	4.965	10.965	23.410	29.410	41.362	47.362	59.220	65.220

INSTRUMENT CONFIGURATION

Source File: /dat1a/OH097524/n970m--tdg

CABLEHEAD
Diameter : 3.38"
Length : 5.50'
Weight : 24 lbs
Series : CABL338
Mnemonic : CBLH
Measure Point: 2.75': CABLEHEAD TOP

WTS ADAPTOR
Diameter : 3.62"

FOCUS SWIVEL
Diameter : 3.13"
Length : 2.58'
Weight : 50 lbs
Series : 3950XA
Mnemonic : SWVL

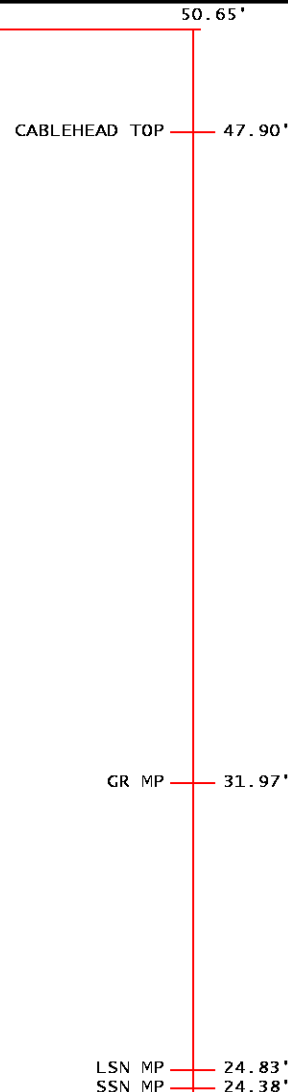
FOCUS TEN/TEMP/MUD RES/ACCEL
Diameter : 3.13"
Length : 4.31'
Weight : 61 lbs
Series : 3980XA
Mnemonic : TTMA

FOCUS TELEMETRY (POWER SECTION)
Diameter : 3.13"
Length : 3.71'
Weight : 48 lbs
Series : 3518FB
Mnemonic : TMGR

FOCUS EB/EG TELEMETRY GAMMA RAY
Diameter : 3.12"
Length : 5.83'
Weight : 63 lbs
Series : 3518EG
Mnemonic : GR
Measure Point: 4.24': GR MP

FOCUS COMPENSATED NEUTRON
Diameter : 3.13"
Length : 4.81'
Weight : 65 lbs
Series : 2436XA
Mnemonic : CN
Measure Point: 1.92': LSN MP
Measure Point: 1.46': SSN MP

FOCUS Z-DENSILOG



Diameter : 3.75"
 Length : 9.58'
 Weight : 200 lbs
 Series : 2223XA
 Mnemonic : ZDL
 Measure Point: 4.33': CR1 MP
 Measure Point: 1.69': LSD / CR2 MP
 Measure Point: 1.29': SSD MP

CR1 MP 17.67'

LSD / CR2 MP 15.02'
 SSD MP 14.63'

FOCUS HIGH DEFINITION INDUCTION TOOL

Diameter : 3.13"
 Length : 13.33'
 Weight : 115 lbs
 Series : 1530XA
 Mnemonic : HDIL
 Measure Point: 7.17': COIL 5 MP
 Measure Point: 5.67': COIL 4 MP
 Measure Point: 4.17': COIL 3 MP
 Measure Point: 3.67': COIL 2 MP
 Measure Point: 3.17': COIL 1 MP
 Measure Point: 2.67': COIL 0 MP
 Measure Point: 1.14': SP MP

COIL 5 MP 7.17'

COIL 4 MP 5.67'

COIL 3 MP 4.17'

COIL 2 MP 3.67'

COIL 1 MP 3.17'

COIL 0 MP 2.67'

SP MP 1.14'

0.00'

TOTAL LENGTH: 50.65'
 TOTAL WEIGHT: 762 lbs
 MAX DIAMETER: 0'3.75"



COMPANY PICEANCE ENERGY
WELL PICEANCE 28-09W
FIELD VEGA
COUNTY MESA **STATE** COLORADO

FILE NO:
OH097524
API NO:
05077097770000

LOCATION:
 SHL: 1597' FNL 1230' FWL
 BHL: 2125' FNL 874' FWL
 SEC 28 TWP 9S RGE 93W

ELEVATIONS:
 KB 7578 FT
 DF
 GL 7556 FT
DATE 05-Aug-2015

SEC 28 T9S R93W
 PICEANCE 28-05
 PATTERSON 306