



HIGH DEFINITION INDUCTION LOG<sup>SM</sup>  
COMPENSATED Z-DENSILOG<sup>SM</sup>  
GAMMA RAY LOG  
CALIPER LOG

FILE NO: 070307	COMPANY WELL FIELD COUNTY	WPX ENERGY INC DUGGAN RWF 413-29 RULSON GARFIELD	STATE COLORADO
API NO: 05045216570000	LOCATION: SHL : 572' FSL AND 585' FWL BHL : 1811' FSL AND 696' FWL		
Ver. 3.87 S29 T6S R94W PAD : RWF 14-29 RIG : NABORS 573	SEC 29 TWP 6S RGE 94W	OTHER SERVICES NONE	
PERMANENT DATUM LOG MEASURED FROM DRILL MEAS. FROM	GL KB ELEVATION 26 FT ABOVE P.D.	ELEVATIONS: KB 5445.2 FT DF GL 5419.2 FT	

DATE	07-APR-2013		
RUN	TRIP	1	1
SERVICE ORDER	US633634		
DEPTH DRILLER	8105 FT		
DEPTH LOGGER	8104 FT		
BOTTOM LOGGED INTERVAL	8096 FT		
TOP LOGGED INTERVAL	1 FT		
CASING DRILLER	9.625 IN	1142 FT	
CASING LOGGER	1141 FT		
BIT SIZE	8.75 IN		
TYPE OF FLUID IN HOLE	LSND		
DENSITY	13.4 LB/G	94 S	
PH	9.3	5.6 C3	
SOURCE OF SAMPLE	FLOWLINE		
RM AT MEAS. TEMP.	1.24 OHMM	54.5 DEGF	
RMF AT MEAS. TEMP.	.992 OHMM	54.5 DEGF	
RMC AT MEAS. TEMP.	1.48 OHMM	54.5 DEGF	
SOURCE OF RMF	MEASURED	MEASURED	
RM AT BHT	.37 OHMM	198 DEGF	
TIME SINCE CIRCULATION	7 HOURS		
MAX. RECORDED TEMP.	198 DEGF		
EQUIP. NO.	HL-6685	ROCK SPRINGS	
RECORDED BY	SCHWABZROCK		
WITNESSED BY	MOORE		

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.

## REMARKS

RUN 1 TRIP 1 : HDIL-ZDL-CN-GR-CAL RECORDED IN COMBINATION

LAST TIME CIRCULATED: 7-APRIL-2013 08:00  
MAIN LOG OFF BOTTOM : 7-APRIL-2013 15:00

BVOL AND CVOL IN CUBIC FEET  
CVOL COMPUTED USING 4.5" CASING  
CALIPER VERIFIED PRIOR TO RUNNING IN THE HOLE

NEUTRON DECENTRALIZER RAN  
HDIL STAND OFF RAN  
HDIL DATA MAY NOT BE RELIABLE FROM 3610' TO SURFACE CASING ON MAIN PASS  
RYAN FISHER CONSULTED ON HDIL FAILURE, INSTRUCTED TO LOG ZDL-CN AND NOT RELOG

MATRIX = SANDSTONE  
RHO MATRIX = 2.68 G/CC; RHO FLUID = 1.0 G/CC  
THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE

CREW: DOUGHERTY  
RIG: NABROS 573

## EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	TTRM	3981XA	10333337	FREE
1	1	WTS	3514XB	10184747	FREE
1	1	DSL	1329XA	10202998	FREE
1	1	CN	2446XA	10400811	FREE
1	1	ZDL	2234XA	10334913	DECENT - PAD DEVICE
1	1	KNJT	3939XA	10487433	FREE
1	1	HDIL	1515EA/1515MA	10197815/177927	STANDOFF

## MAIN LOG 2"/100FT SCALE

ECLIPS 6.1i Aug 06, 2010

Sun Apr 7 17:59:21 2013

Updates: 1,2 Patches: 2

Pcrplt /main/62

Cplot

Pdf\_Cpp /main/16

Fileview 5.61

## PARAMETER AND FILTER SUMMARY REPORT

File: /data/633634/m681i04.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 2831.750 ft BOTTOM DEPTH: 8120.000 ft

## SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
Y AXIS CALIPER	FILTER ( )	medium (1)		TOP	BOTTOM
TENSION	FILTER ( )	medium (1)		"	"
GR	FILTER ( )	medium (1)		"	"
CALIPER	FILTER ( )	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER (.l)	medium (1)		"	"
SP-SPDH	FILTER ( )	medium (1)		"	"

## BOREHOLE &amp; CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	8.750	in	TOP	BOTTOM
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	"	"
	MUD SAMPLE RES	1.240	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	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	8.750	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	MUD SAMP DERIVED		"	"

## HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	STANDOFF		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	3.000		"	"

## CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:GR	Apr 7 14:49:12 2013	GAMMA RAY
F1:MOC6	Apr 7 14:49:12 2013	FOCUSED CONDUCTIVITY 60-INCH DOI

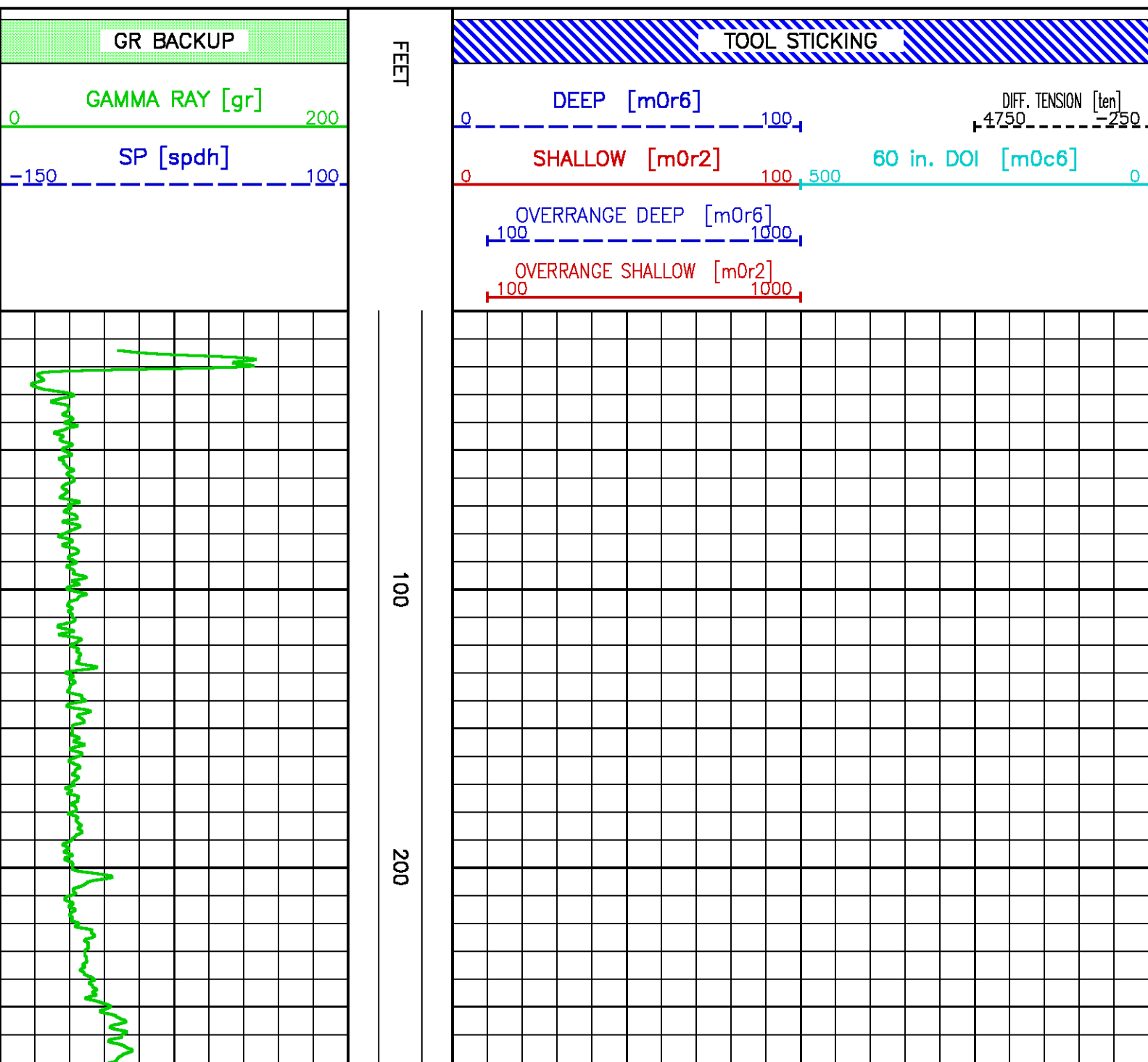
F1:MOR2	Apr 7 14:49:12 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:MOR6	Apr 7 14:49:12 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:SPDH	Apr 7 14:49:12 2013	SPONTANEOUS POTENTIAL PROCESSED IN COMMON REMOTE
F1:TEN	Apr 7 14:49:12 2013	DIFFERENTIAL TENSION

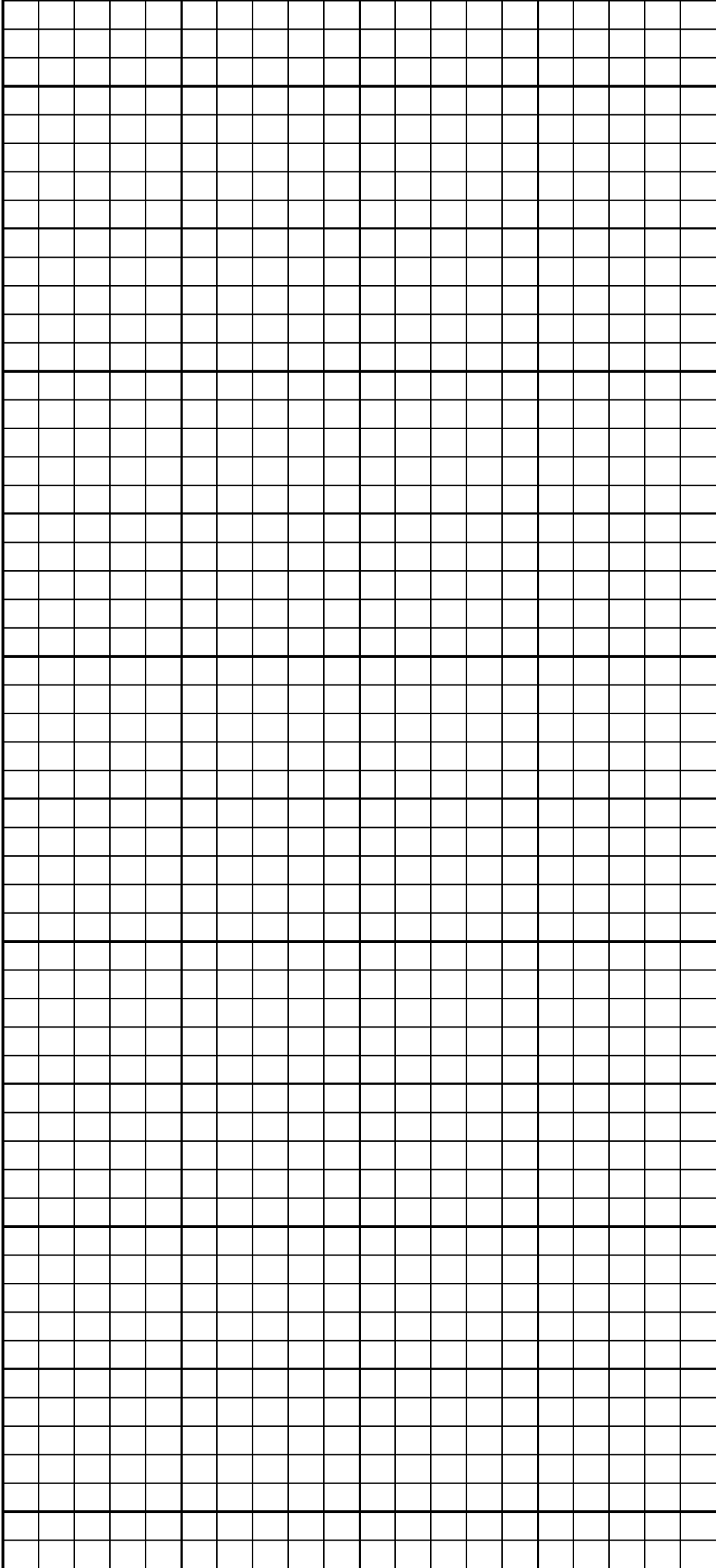
## CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
GR	52.25	MOR2	8.00	SPDH	14.00		
MOC6	8.00	MOR6	8.00	TEN	0.00		

Presentation : rks6685:/dat1a/633634/WPX\_2IN.pdf [2"/100" Scale]  
 Plot Interval : 1 - 8120 Feet

Data File 1 : F1 : rks6685:/dat1a/633634/MAIN\_1.xtf  
 Created On : Apr 7 14:49:12 2013  
 Company : WPX  
 Well : DUGGAN RWF 413-29  
 Field : RULLISON  
 File Interval : 1 - 8120 Feet  
 Oct : m681





300

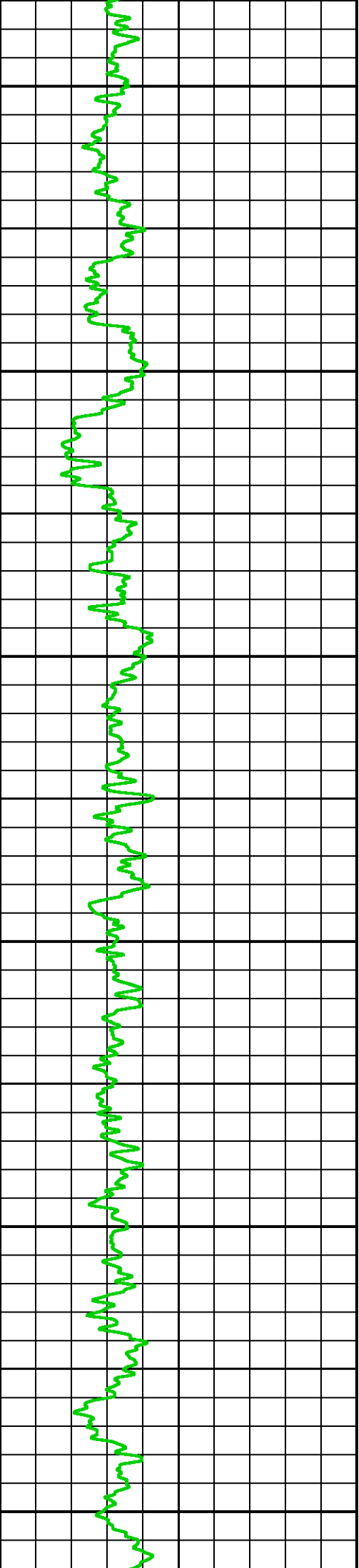
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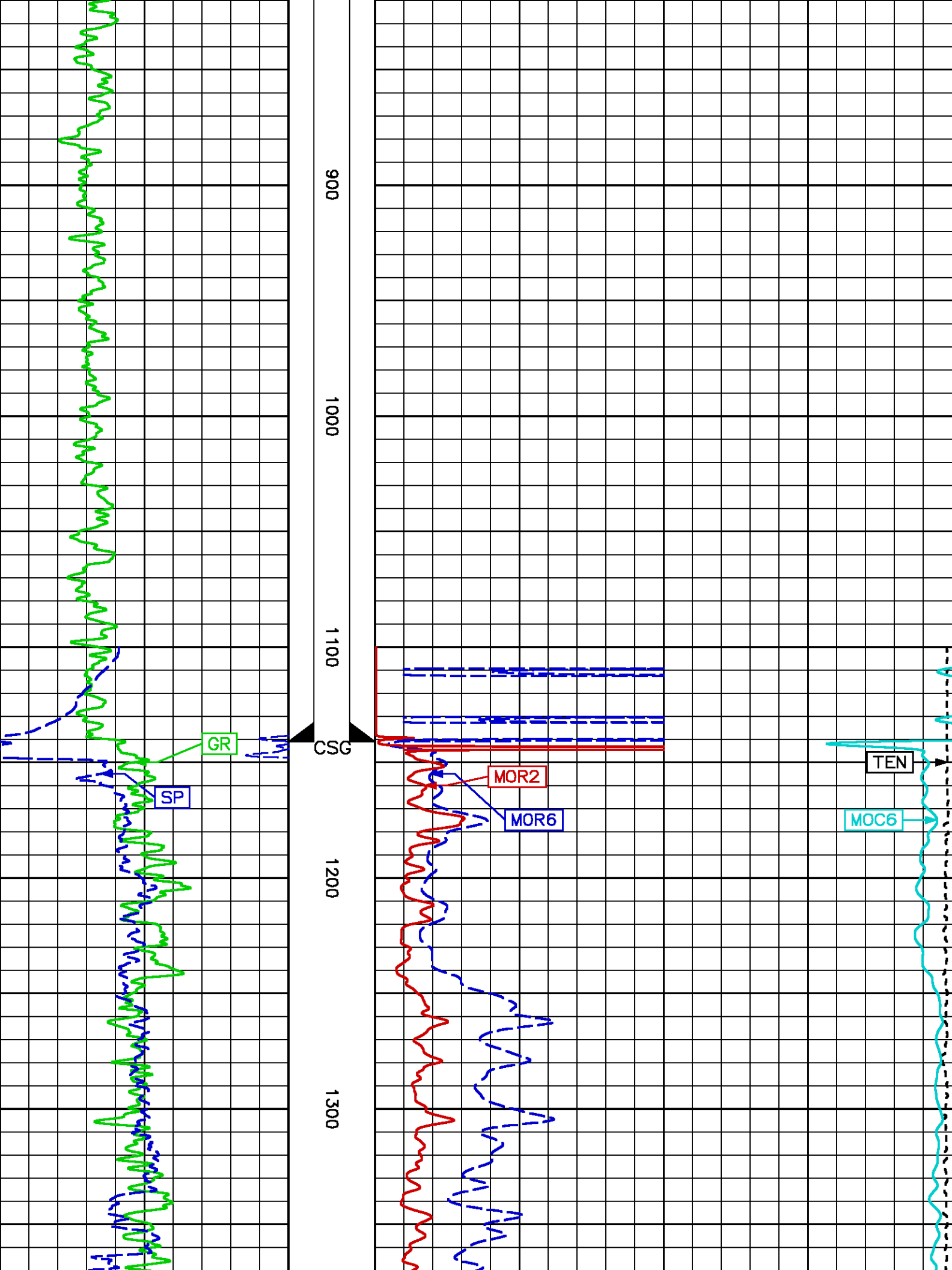
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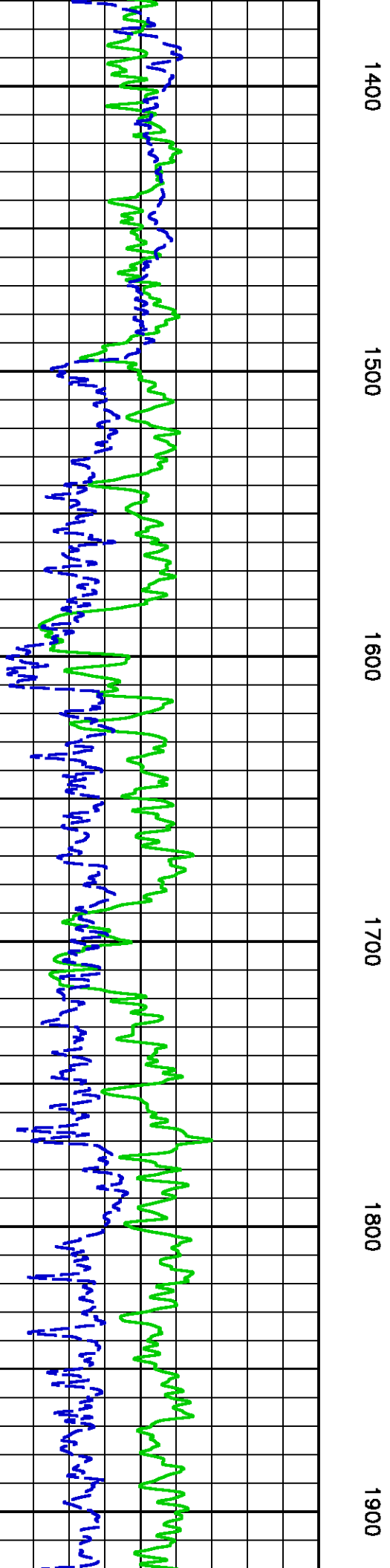
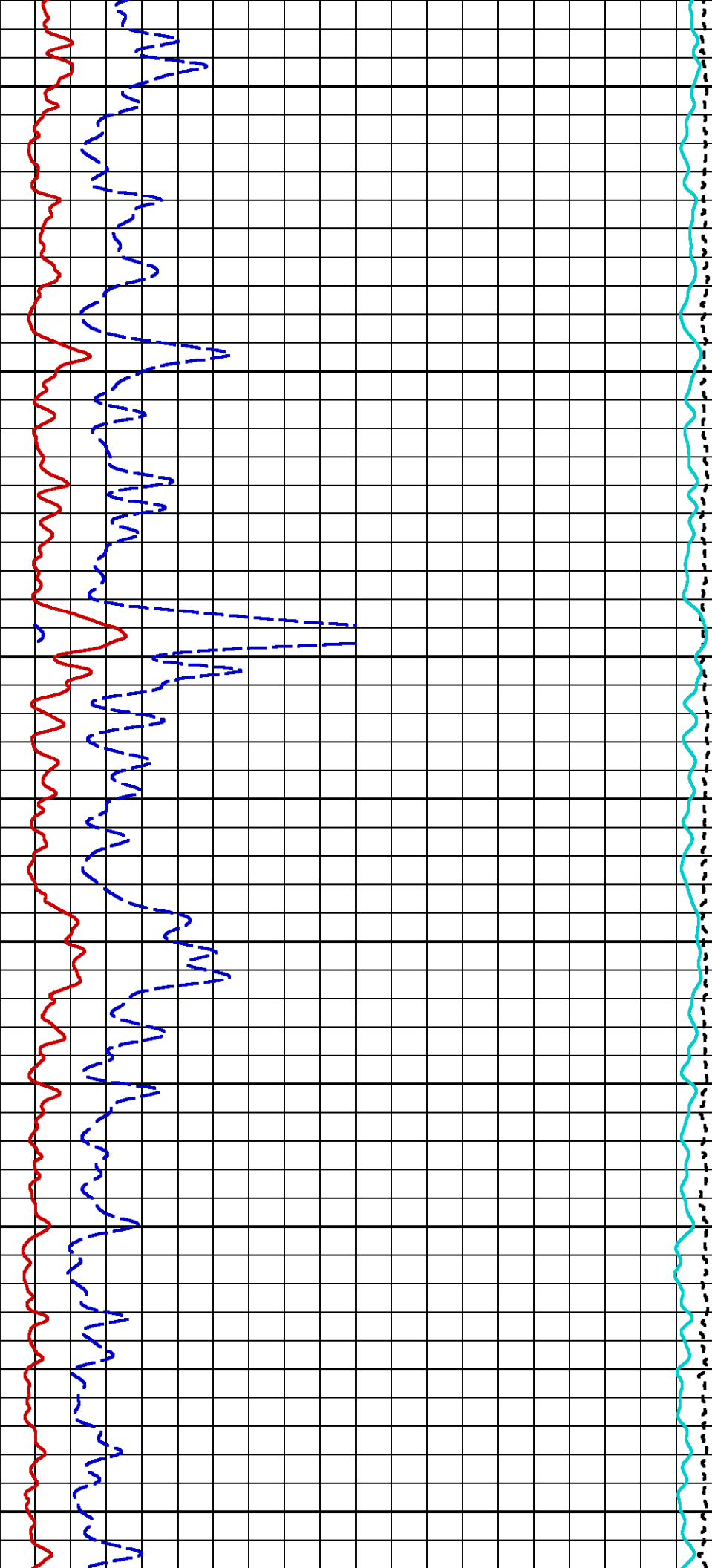
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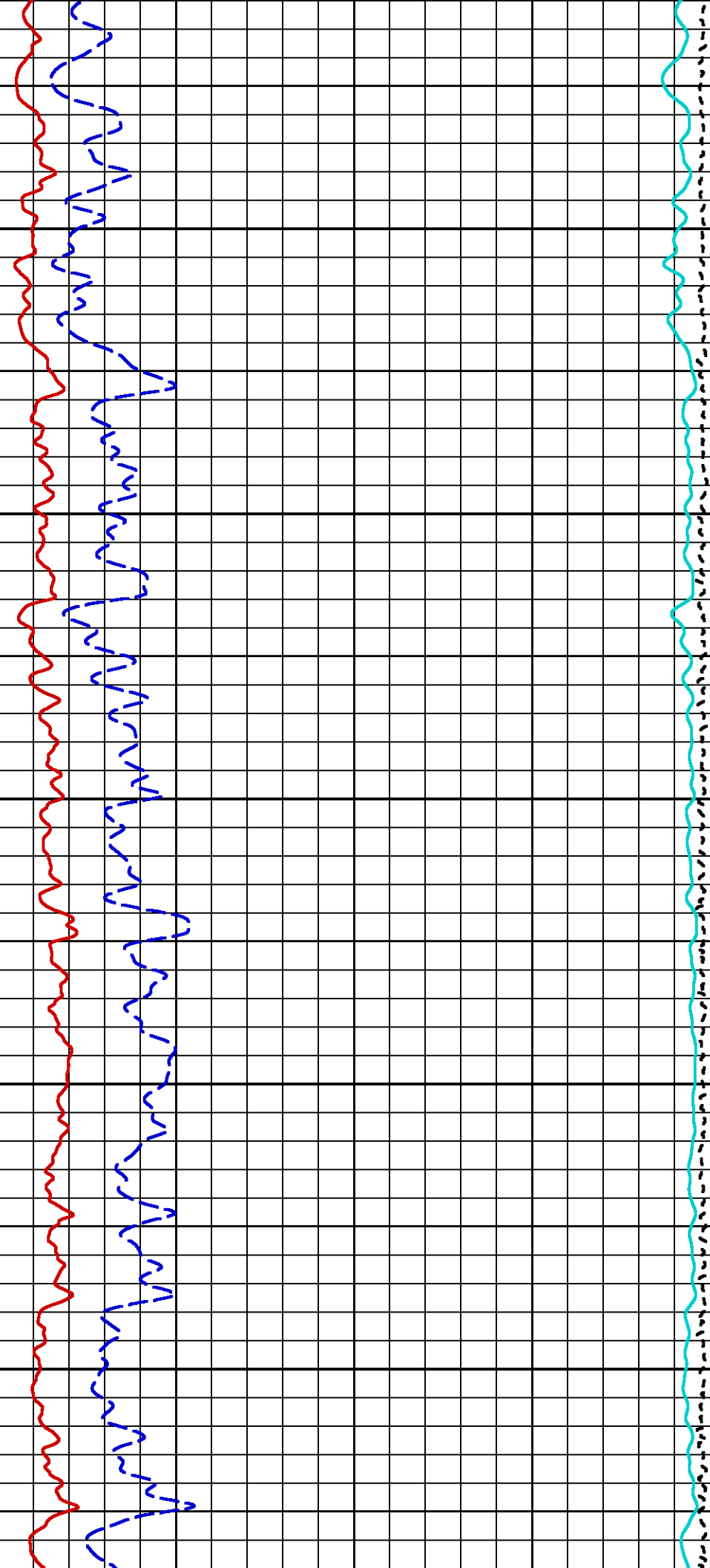
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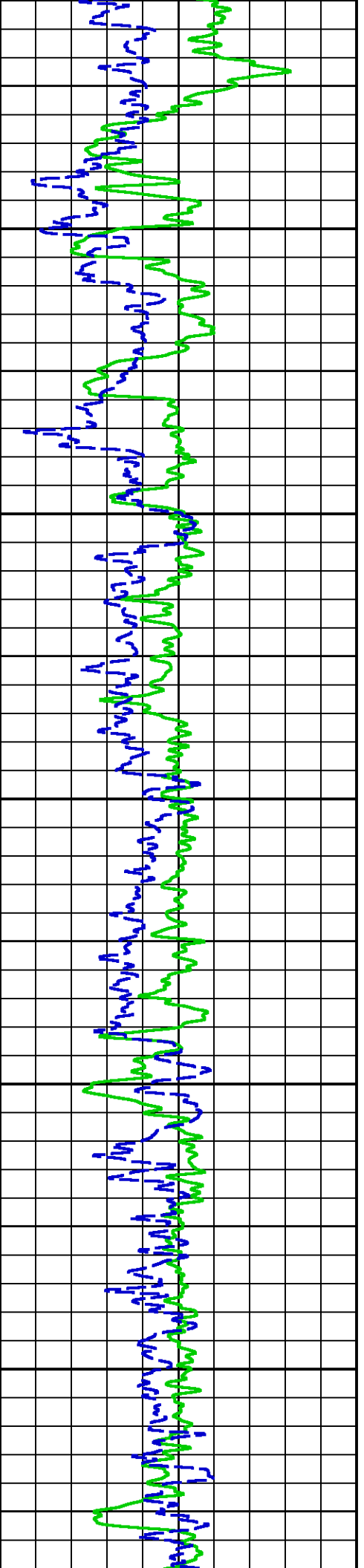
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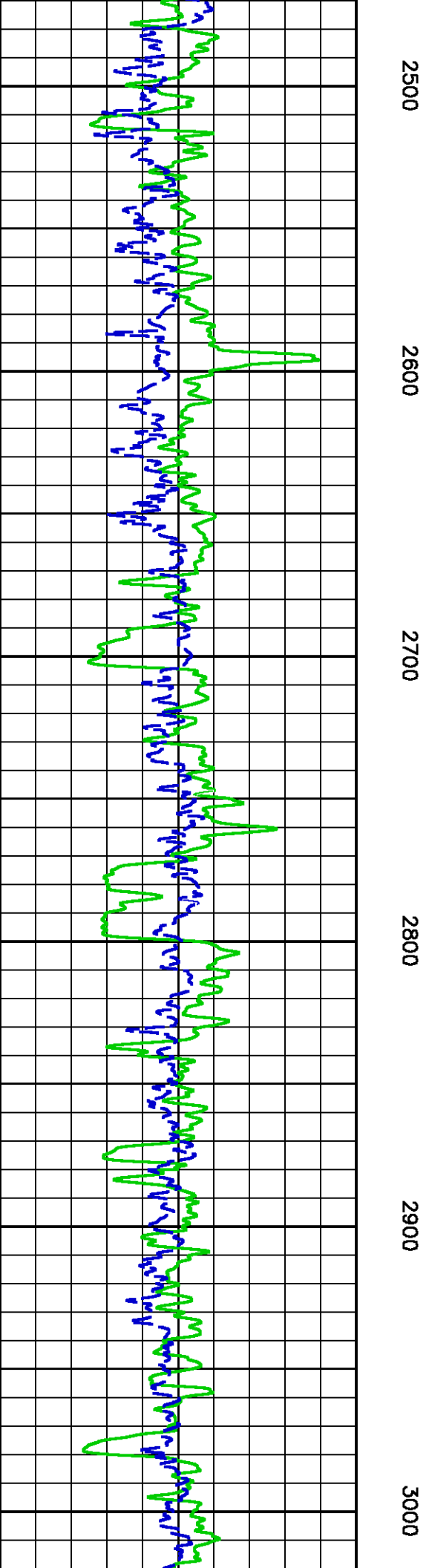
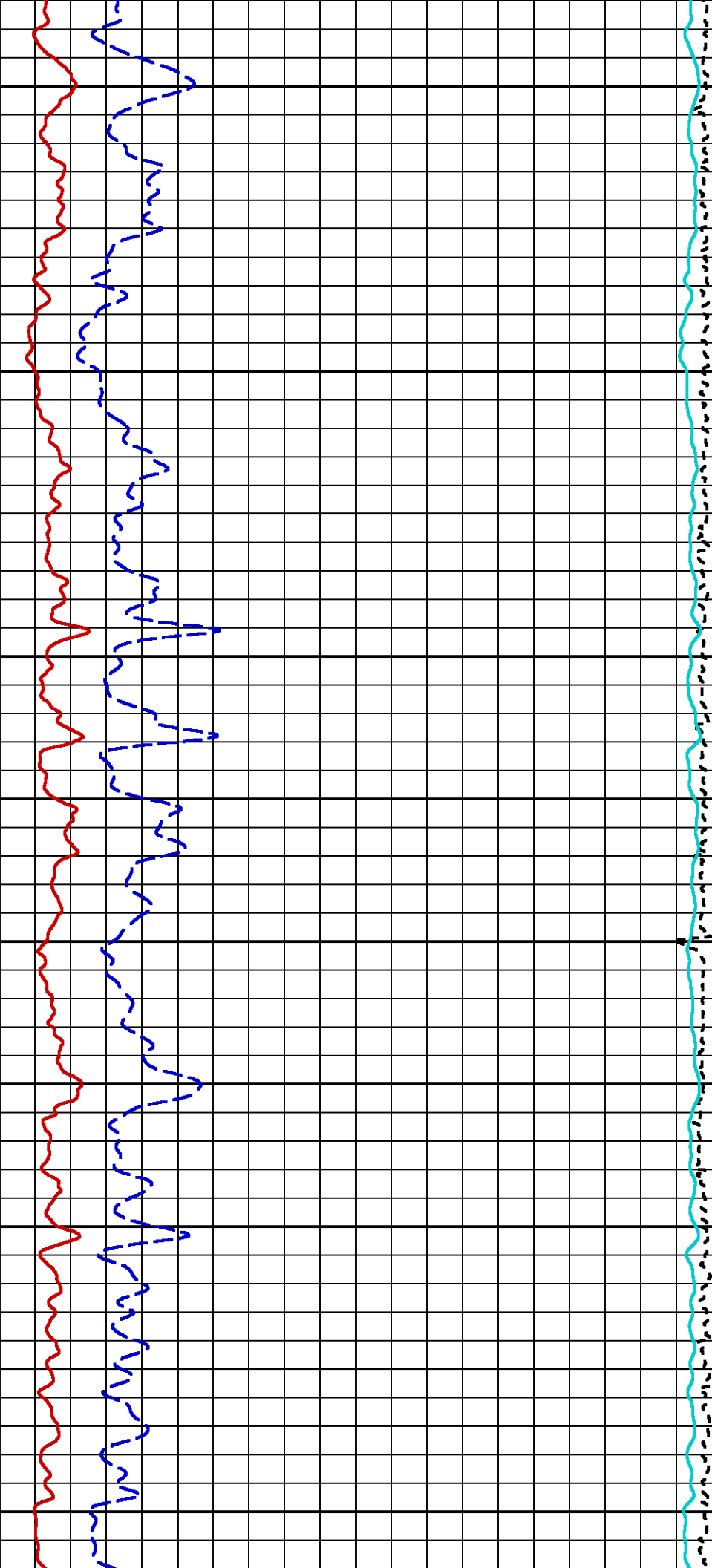
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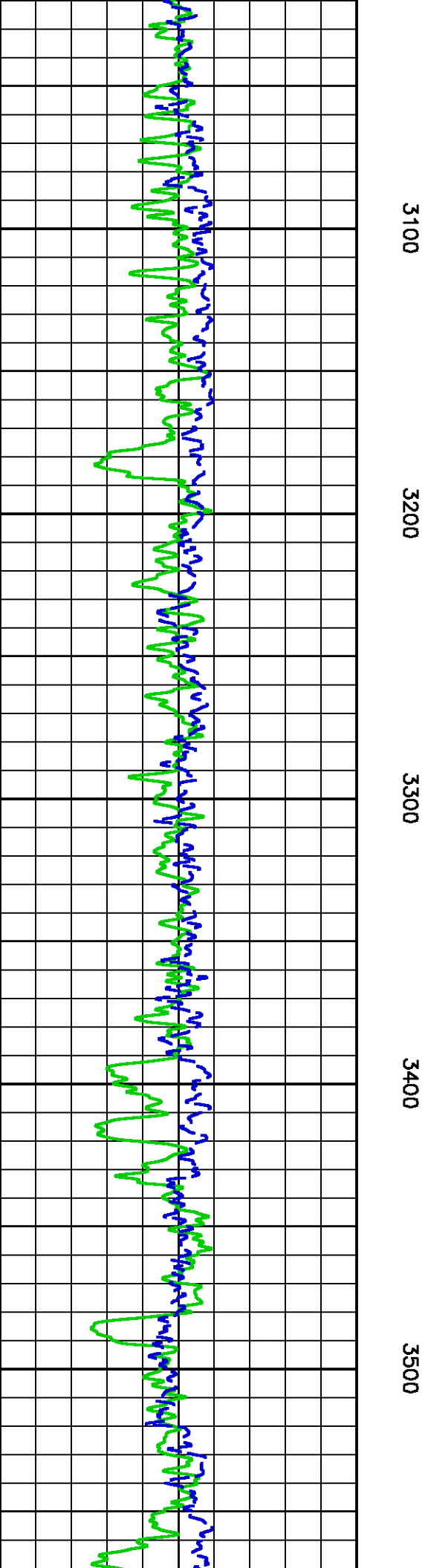
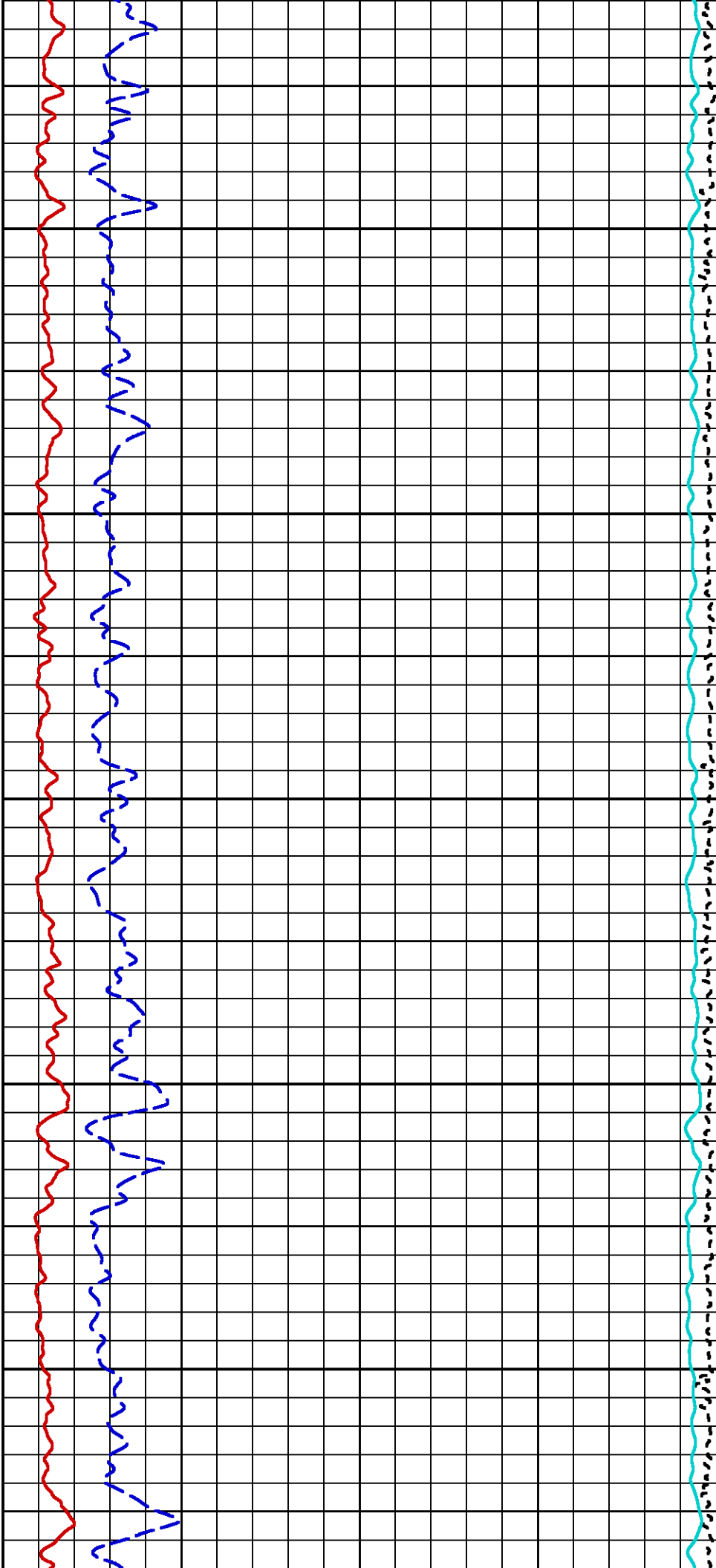
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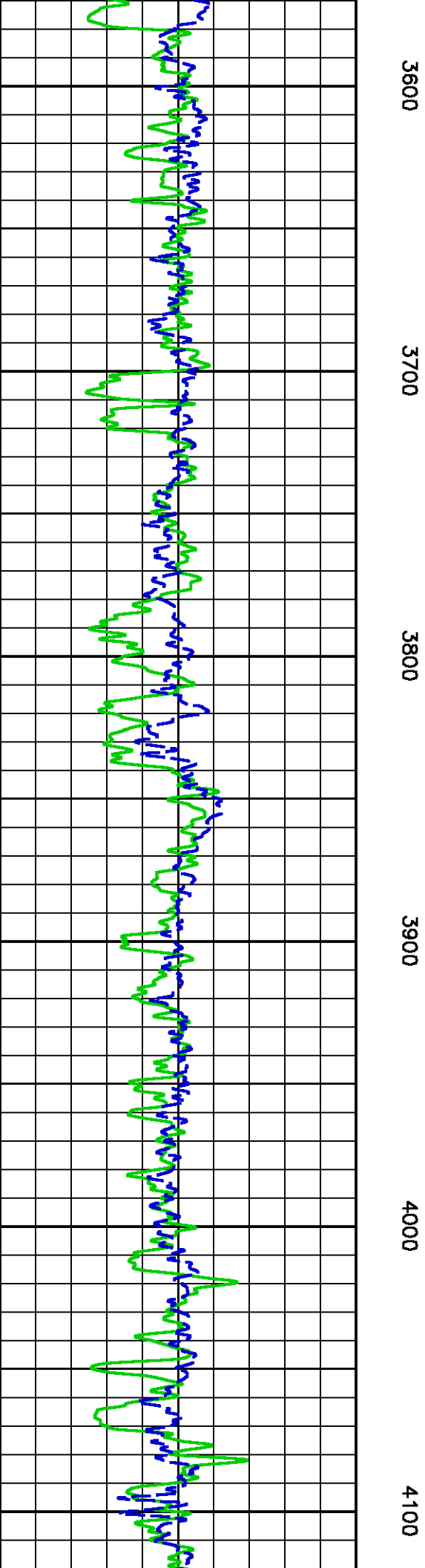
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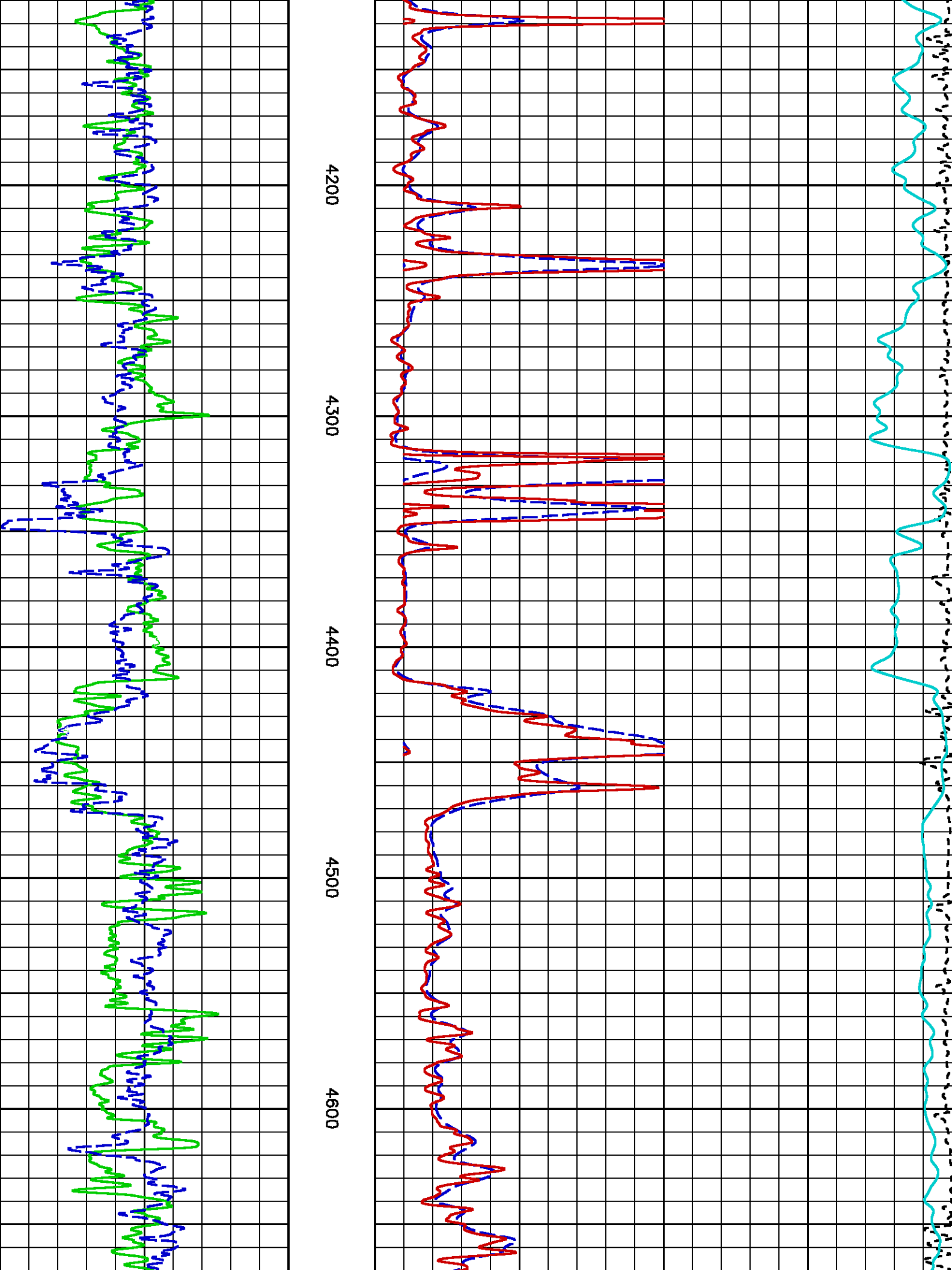


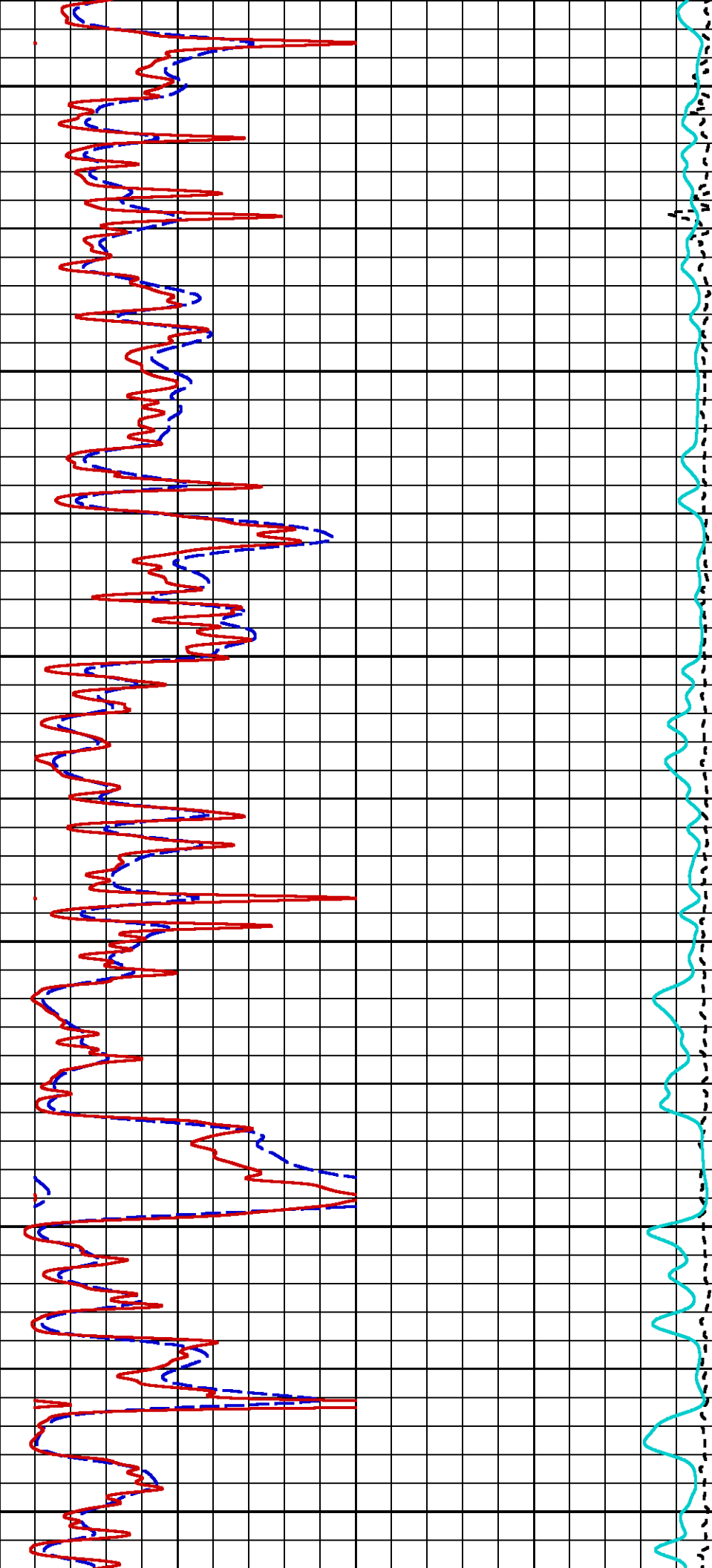












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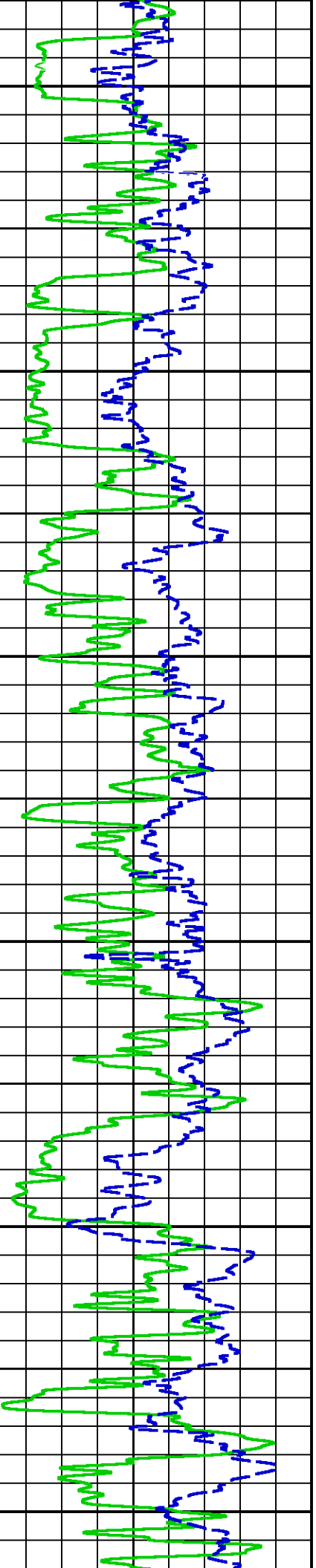
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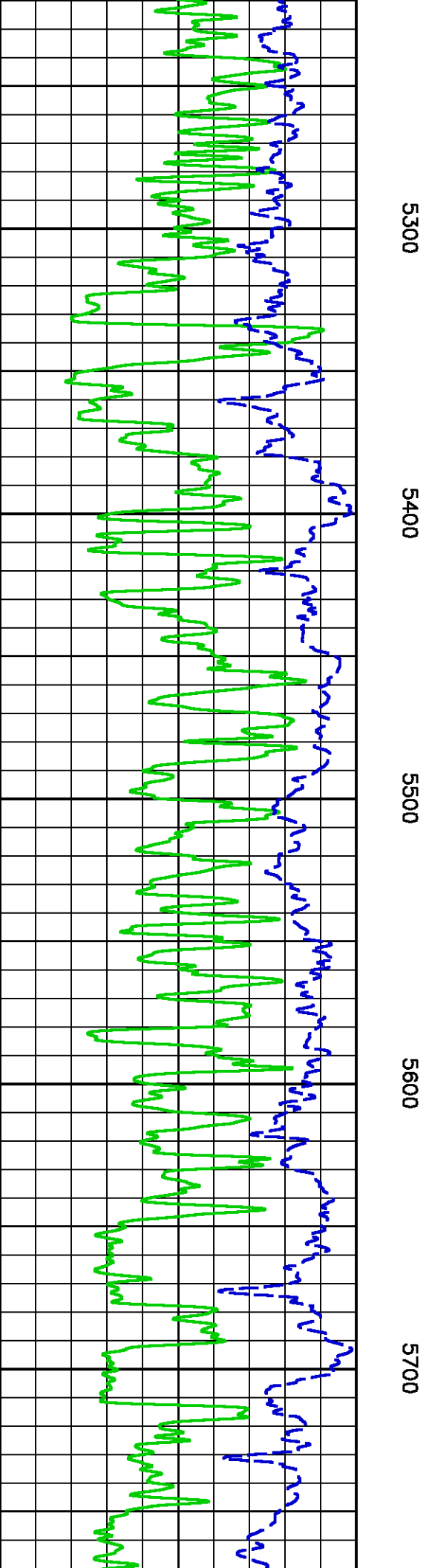
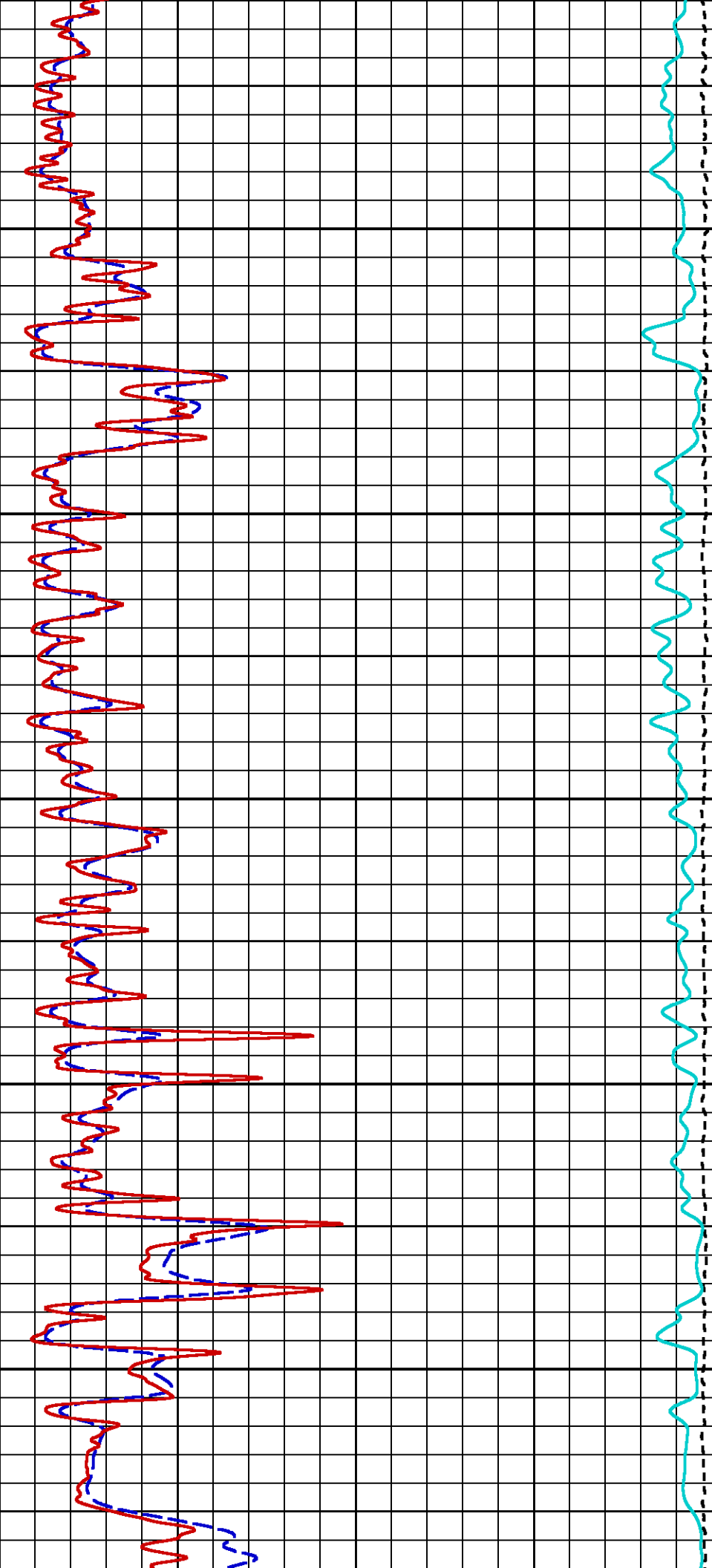
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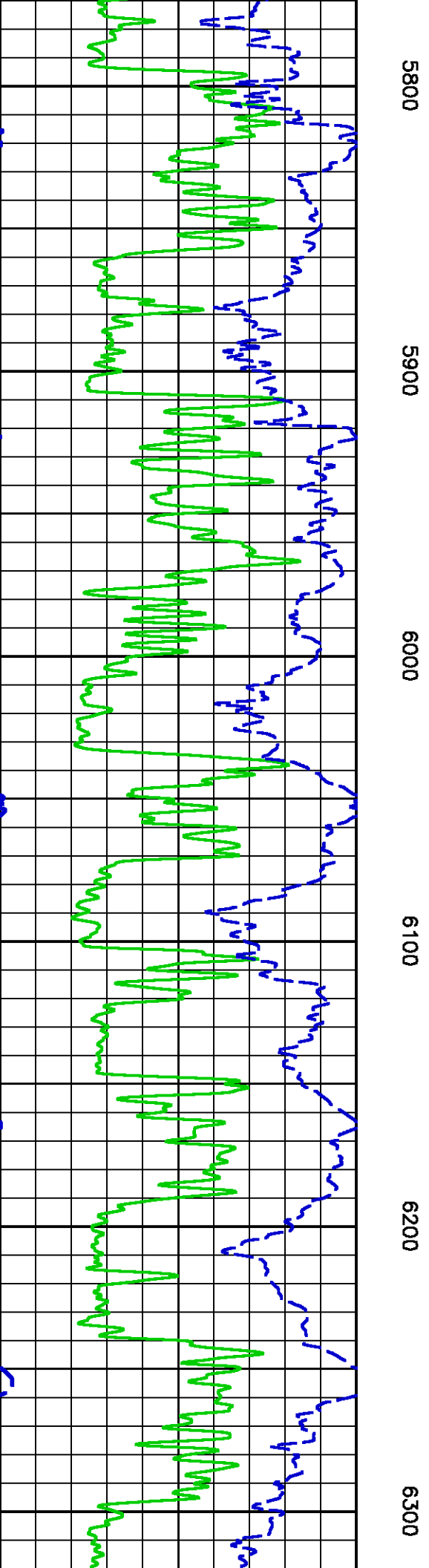
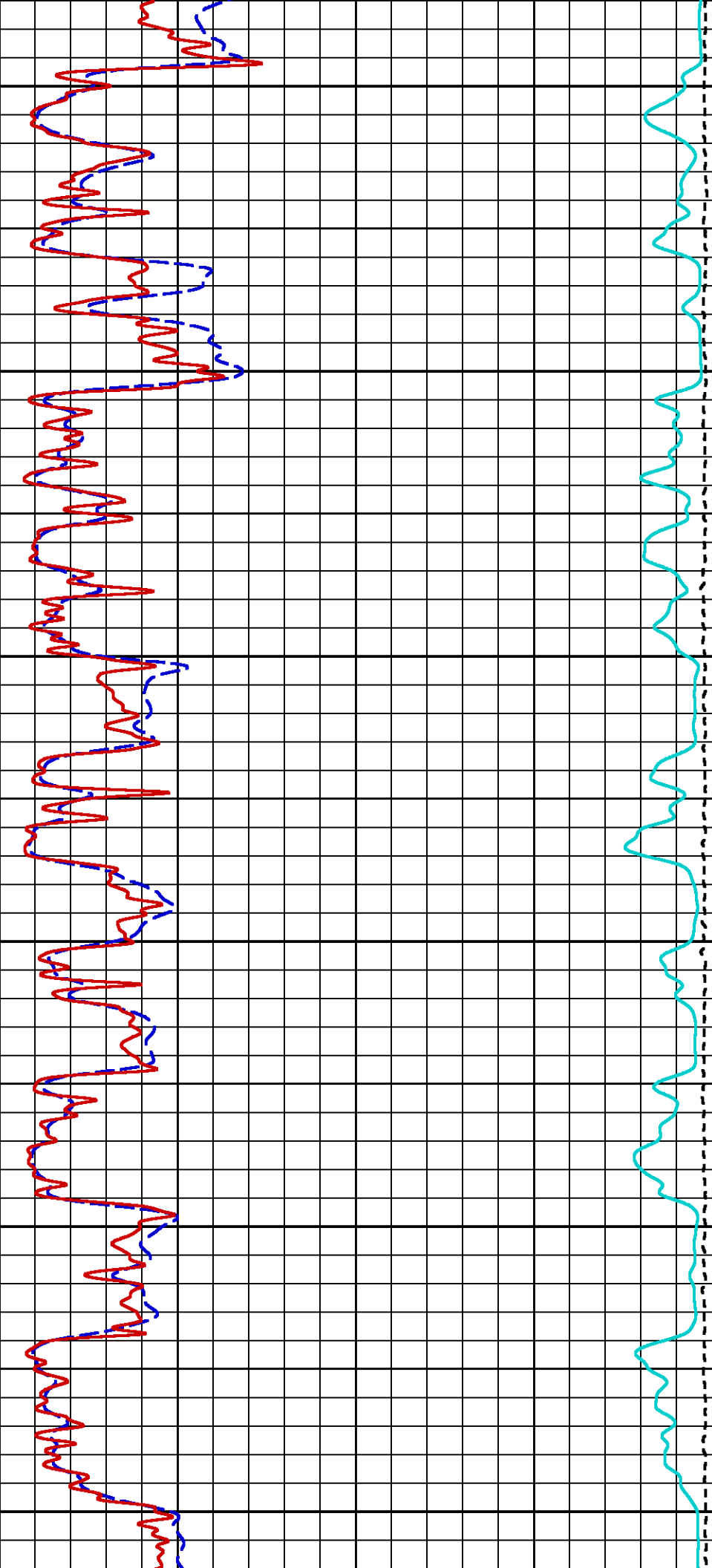
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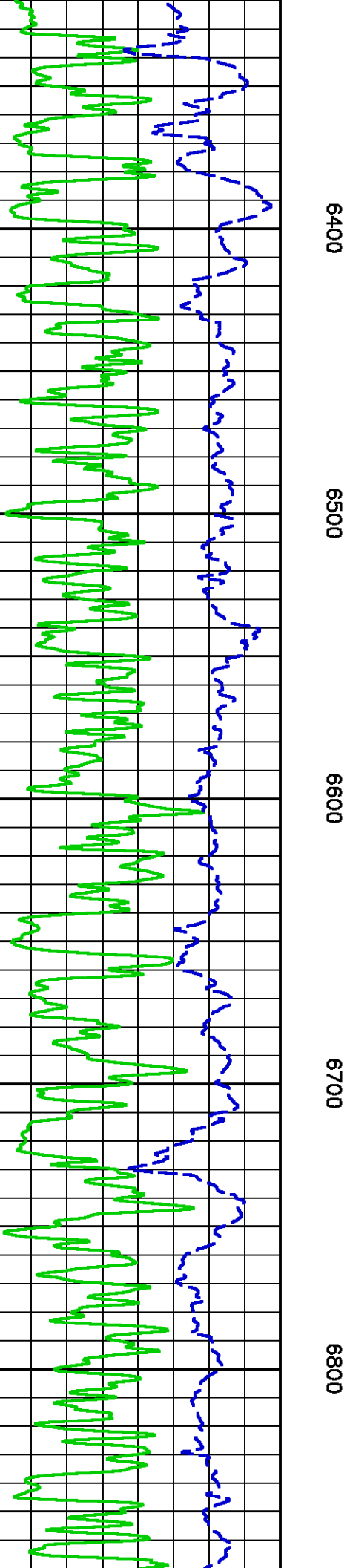
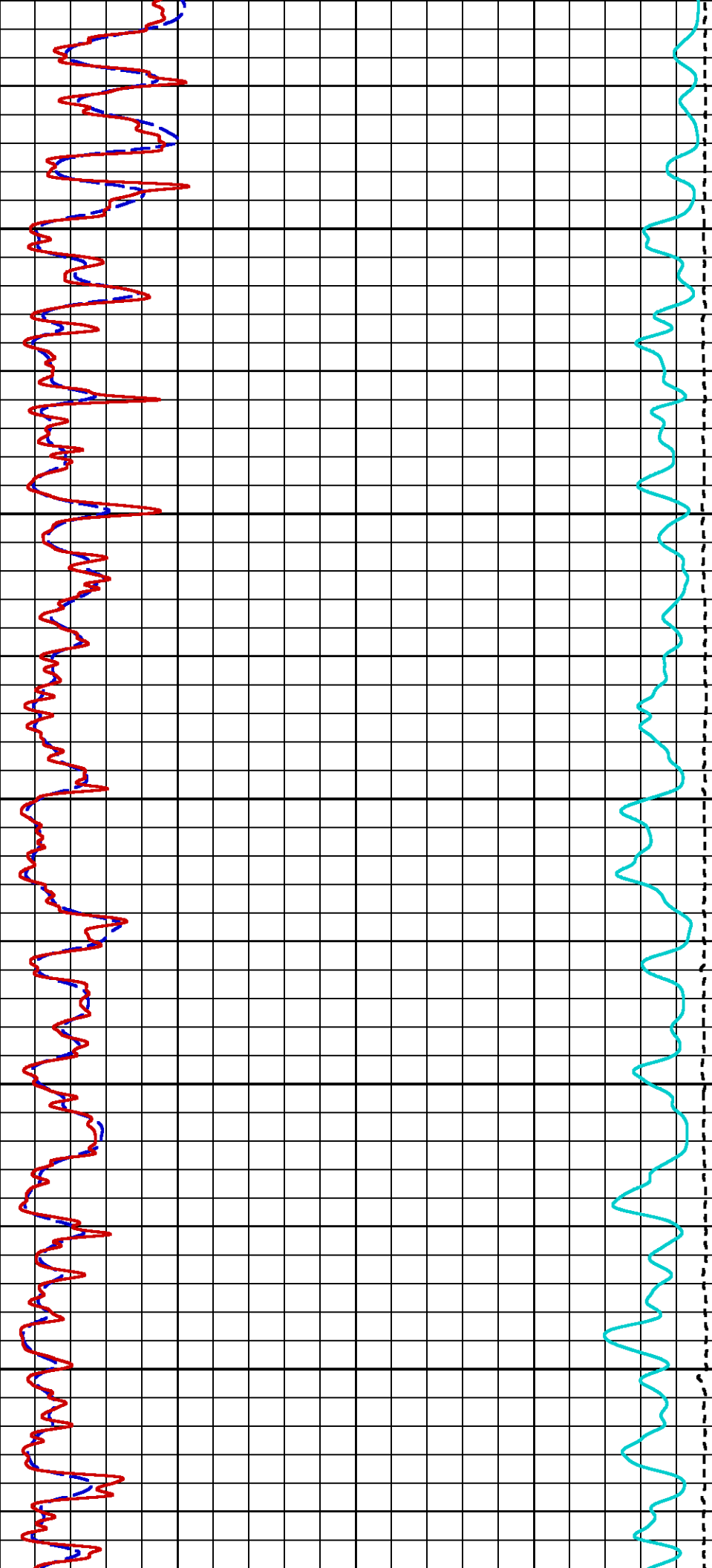
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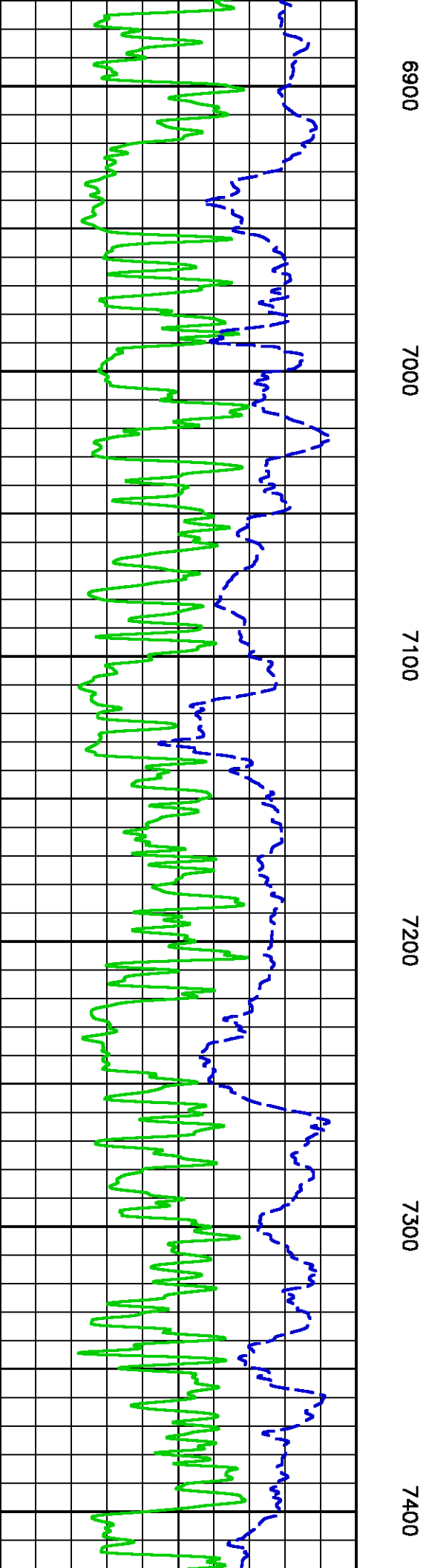
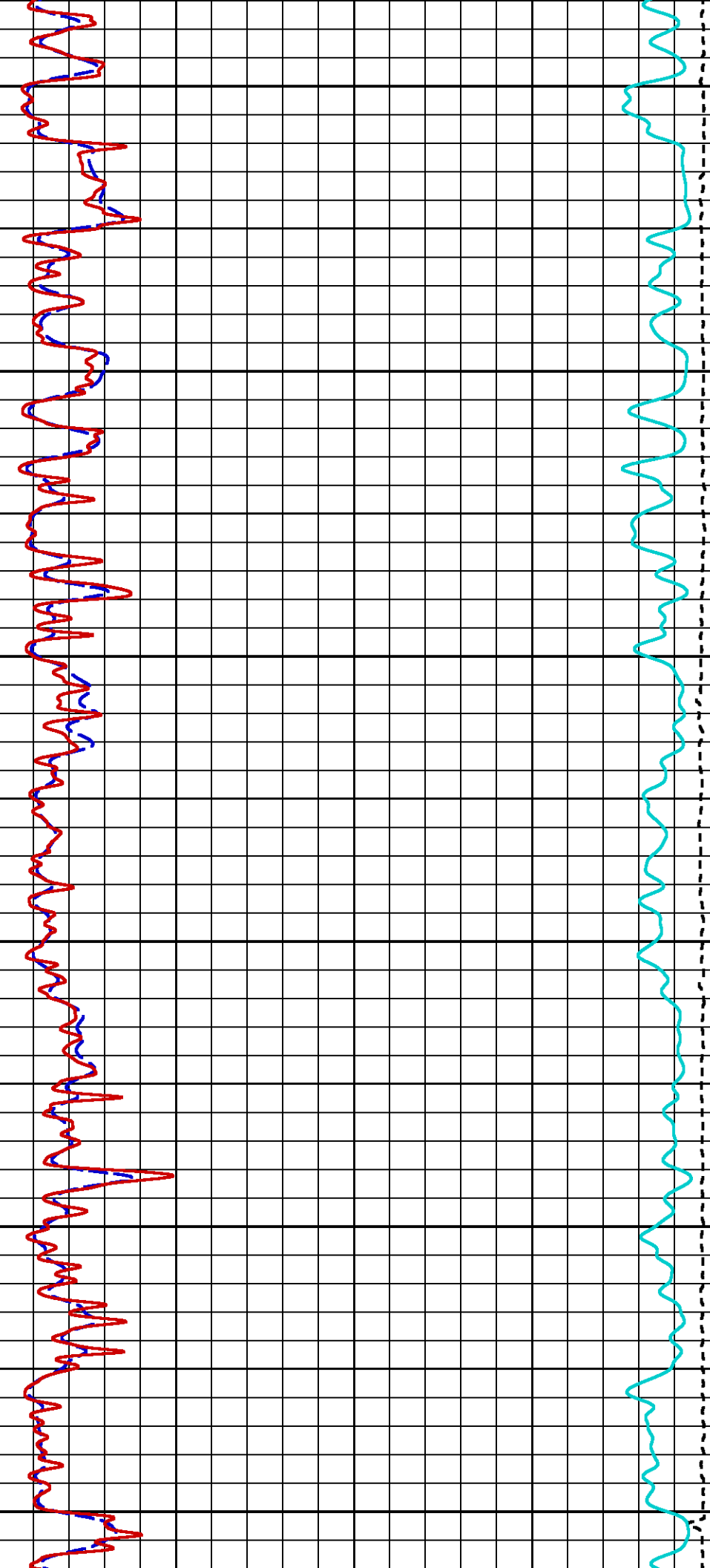
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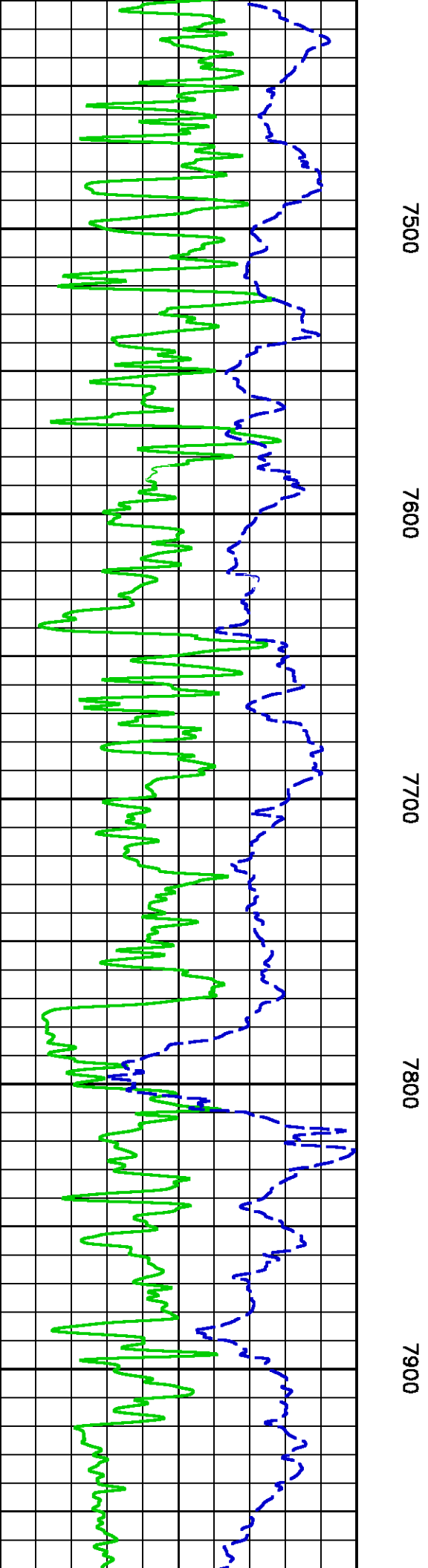
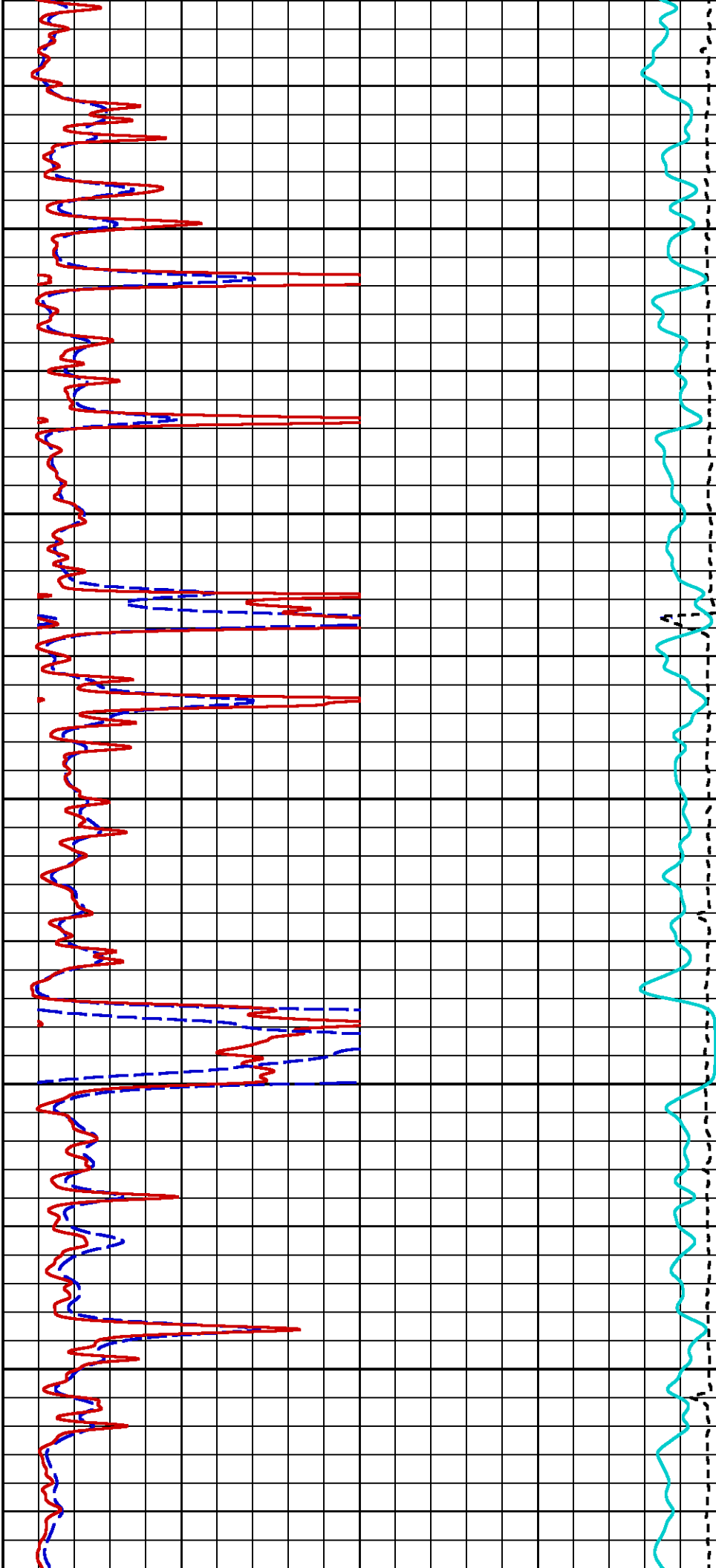


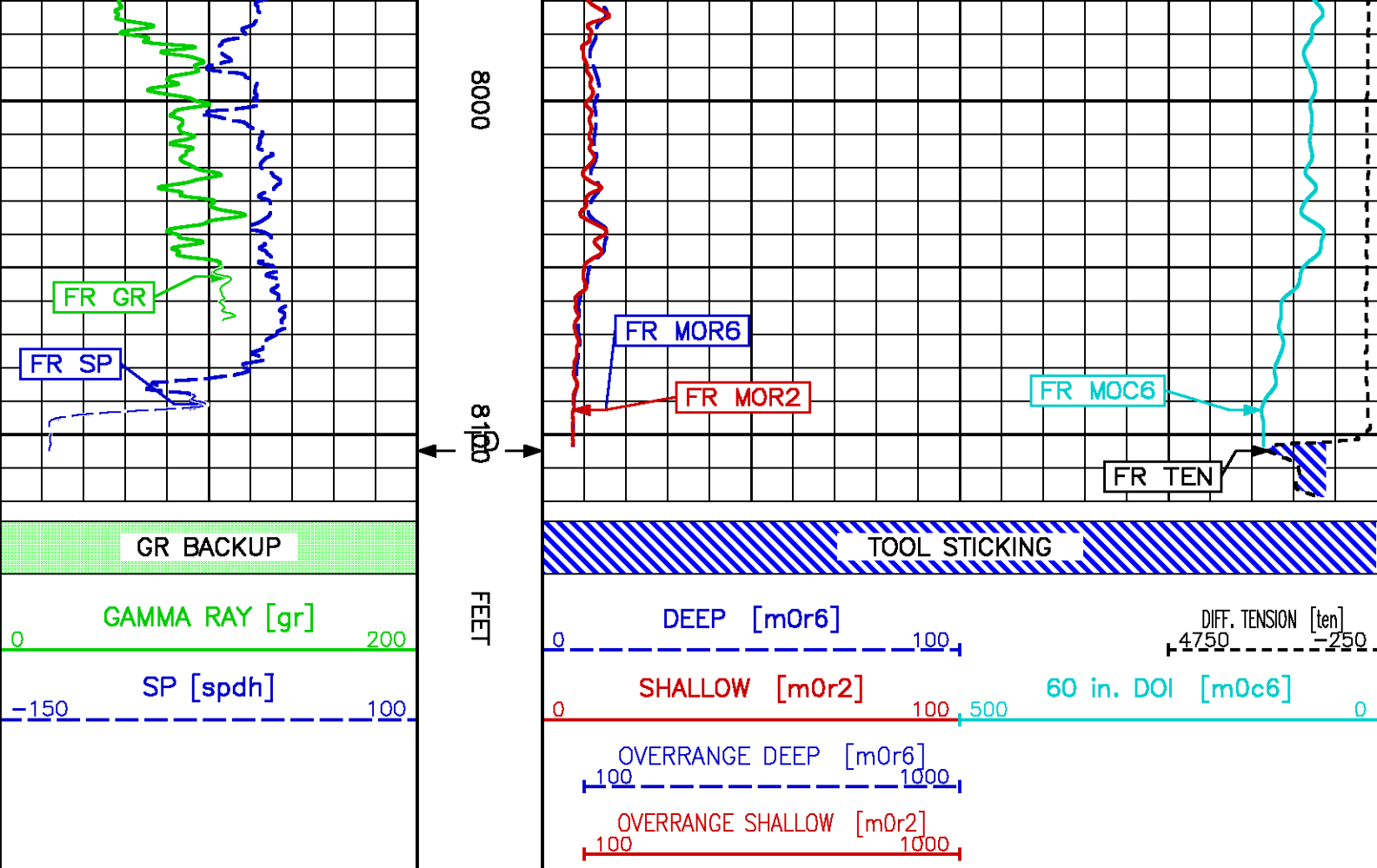












## MAIN LOG 5"/100FT SCALE

ECLIPS 6.11 Aug 06, 2010  
Updates: 1,2 Patches: 2

Sun Apr 7 17:20:08 2013

Pcrplt /main/62

Cplot

Pdf\_Cpp /main/16

Fileview 5.61

### PARAMETER AND FILTER SUMMARY REPORT

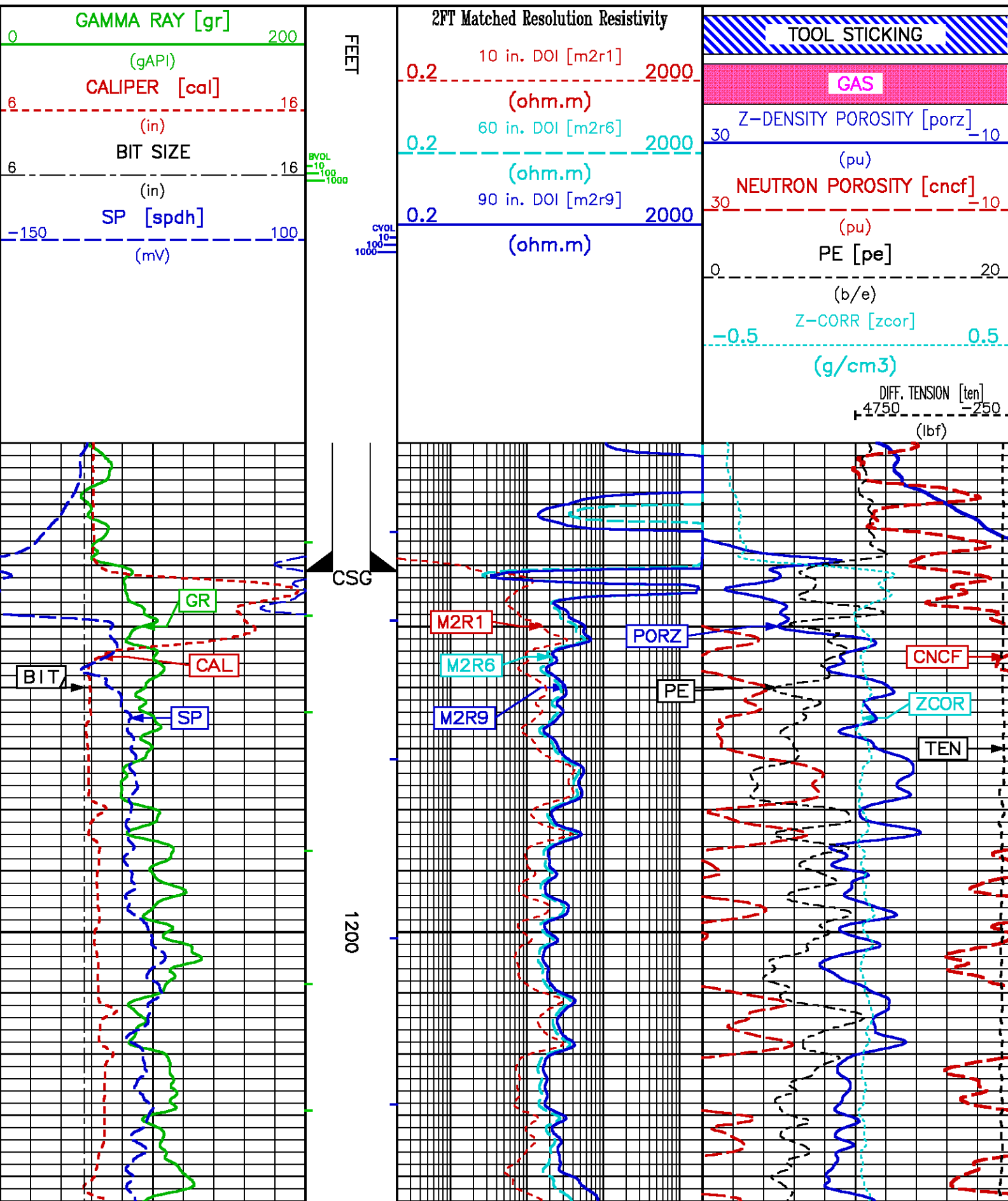
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LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 2831.750 ft BOTTOM DEPTH: 8120.000 ft

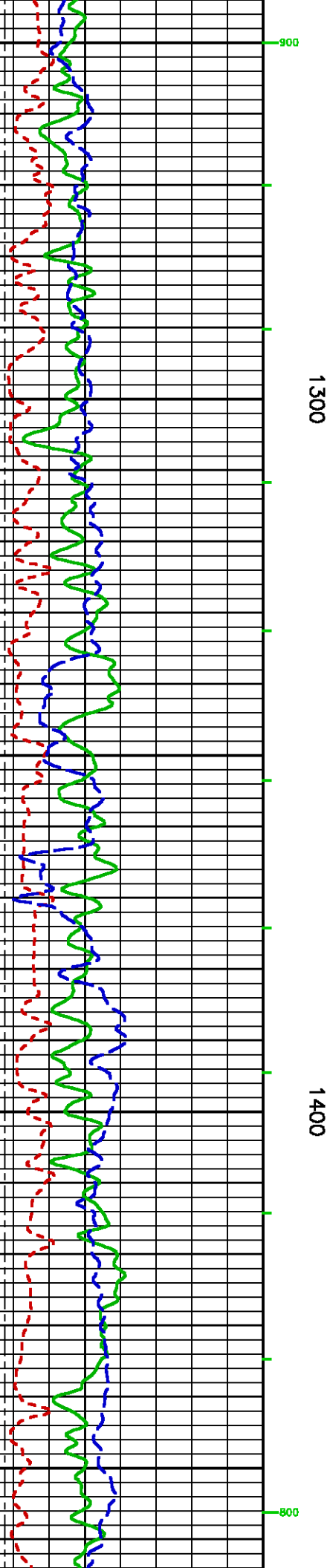
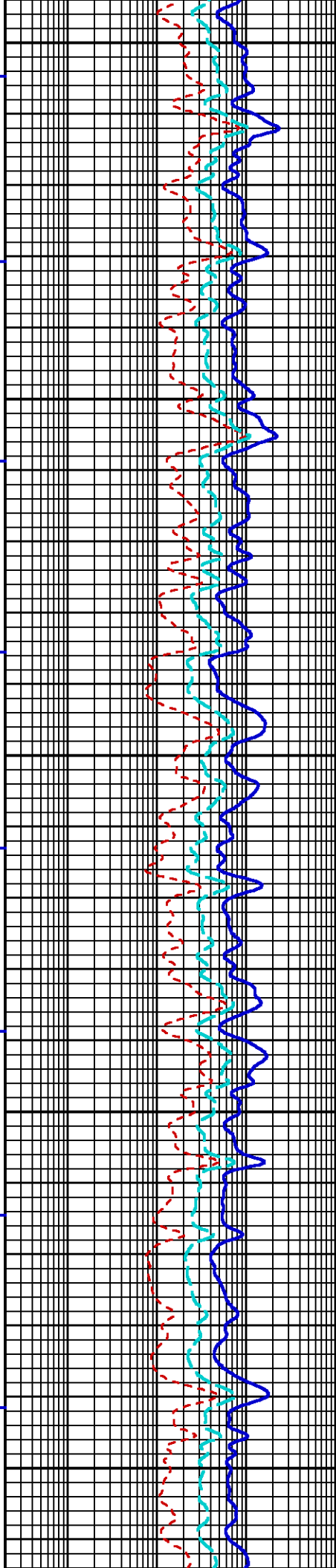
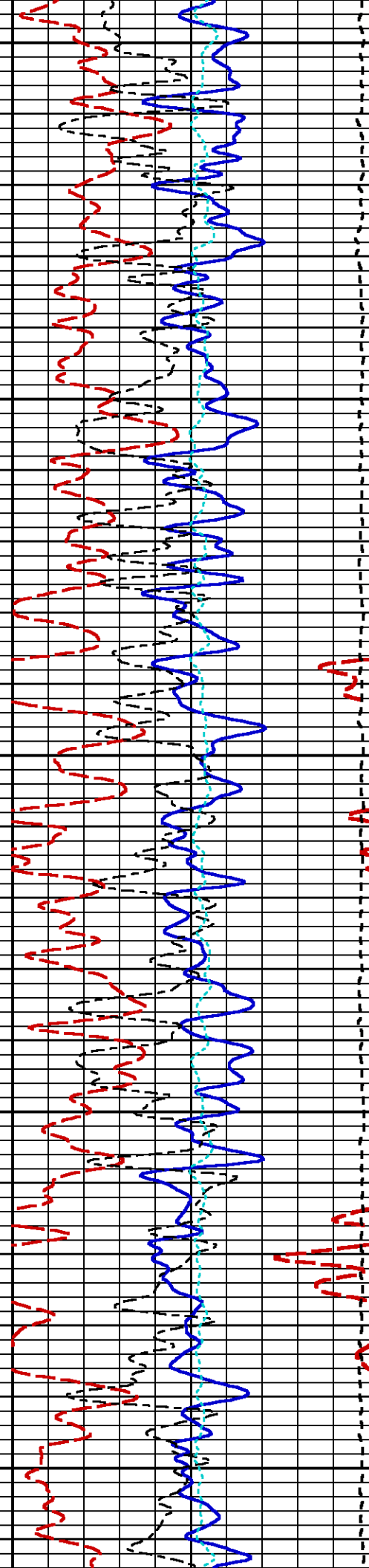
### SYMMETRIC FILTER

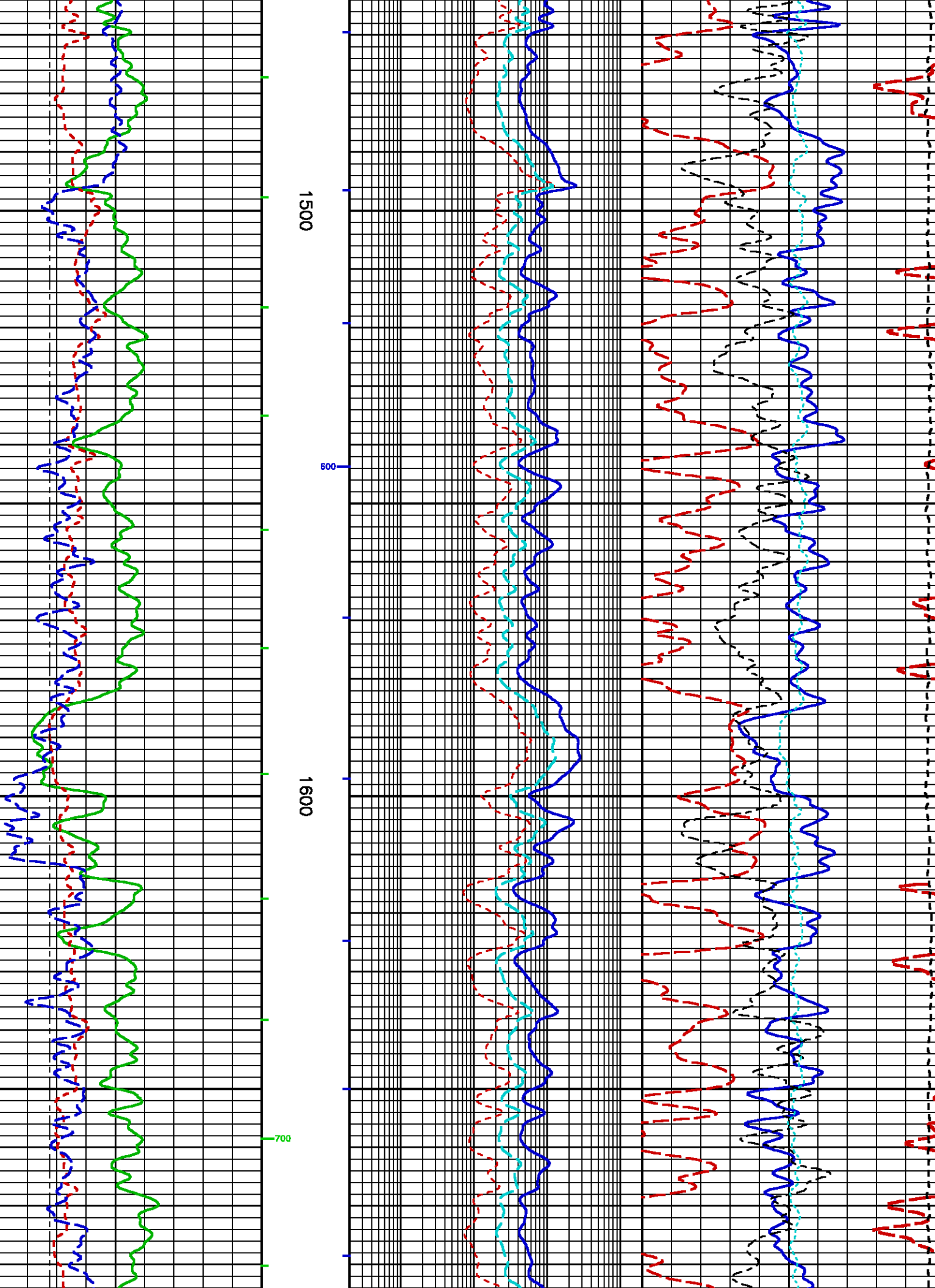
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
Y AXIS CALIPER TENSION GR CN CALIPER	FILTER ( )	medium (1)		TOP	BOTTOM
	FILTER ( )	medium (1)		"	"
	FILTER ( )	medium (1)		"	"
	FILTER ( )	medium (1)		"	"
	FILTER ( )	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER (.l)	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"

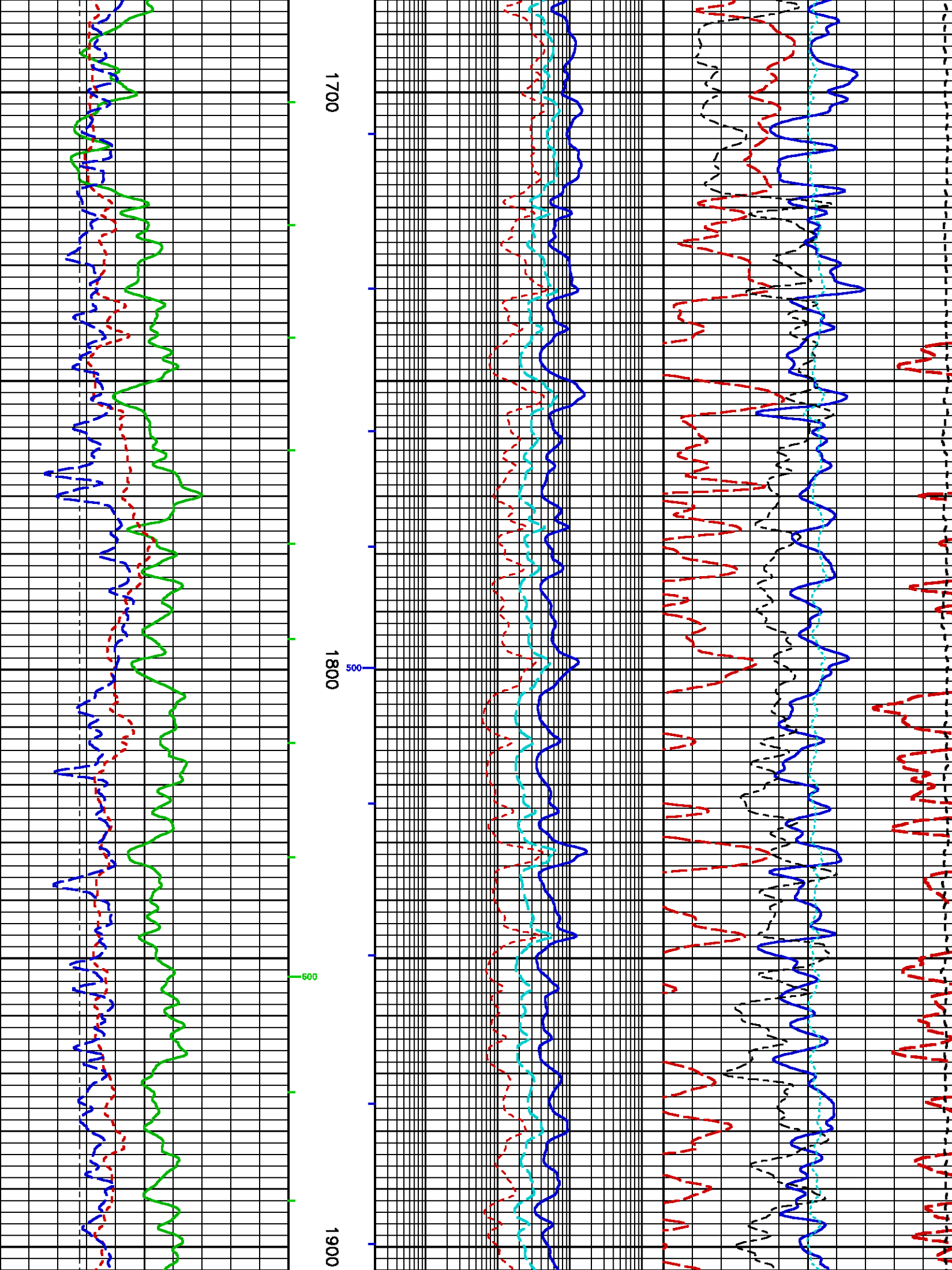
SP-SPDH	FILTER ( )		medium (1)	''	''
BOREHOLE & CEMENT					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	ln	TOP	BOTTOM
	CASING THICKNESS	0.000	ln	''	''
BIT SIZE	BIT SIZE	8.750	ln	''	''
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	''	''
	MUD SAMPLE RES	1.240	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	''	''
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		''	''
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		''	''
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	8.750	ln	''	''
	FIXED DIAMETER (mbh*)	8.750	ln	''	''
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	MUD SAMP DERIVED		''	''
CN PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	SANDSTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	900	ppm	''	''
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		''	''
	BIT SIZE BEHIND CSNG	7.875	ln	''	''
ZDL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	RHOmatrix	2.680	g/cm3	TOP	BOTTOM
	RHOfluid	1.000	g/cm3	''	''
ZDL	DENX TRACKING	ON		''	''
HDIL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		''	''
	ABC to CALCULATE	STANDOFF		''	''
	STANDOFF	1.50	ln	''	''
	TOOL POSITION	ECCENTERED		''	''
	Rmud MULTIPLIER	3.000		''	''
CURVE DESCRIPTION REPORT					
CURVE NAME	CREATION DATE	CURVE DESCRIPTION			
F1:BIT	Apr 7 14:49:12 2013	BIT SIZE			
F1:BVOL	Apr 7 14:49:12 2013	BOREHOLE VOLUME			
F1:CAL	Apr 7 14:49:12 2013	CALIPER			
F1:CNCF	Apr 7 14:49:12 2013	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY			
F1:CVOL	Apr 7 14:49:12 2013	CEMENT VOLUME			
F1:GR	Apr 7 14:49:12 2013	GAMMA RAY			
F1:M2R1	Apr 7 14:49:12 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI			
F1:M2R6	Apr 7 14:49:12 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI			
F1:M2R9	Apr 7 14:49:12 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI			
F1:PE	Apr 7 14:49:12 2013	PHOTO ELECTRIC CROSS-SECTION			
F1:PORZ	Apr 7 14:49:12 2013	POROSITY FOR SELECTABLE MATRIX			
F1:SPDH	Apr 7 14:49:12 2013	SPONTANEOUS POTENTIAL PROCESSED IN COMMON REMOTE			
F1:TEN	Apr 7 14:49:12 2013	DIFFERENTIAL TENSION			
F1:ZCOR	Apr 7 14:49:12 2013	DENSITY CORRECTION			
CURVE MEASURE POINT OFFSET					
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	52.25	M2R9	8.00
CAL	35.00	M2R1	8.00	PE	34.25
CNCF	45.25	M2R6	8.00	PORZ	34.25
				SPDH	14.00
				TEN	0.00
				ZCOR	34.25
Presentation : rks6685:/dat1a/633634/WPX_MAIN.pdf [5"/100' Scale]					
Plot Interval : 1120 - 8120 Feet					

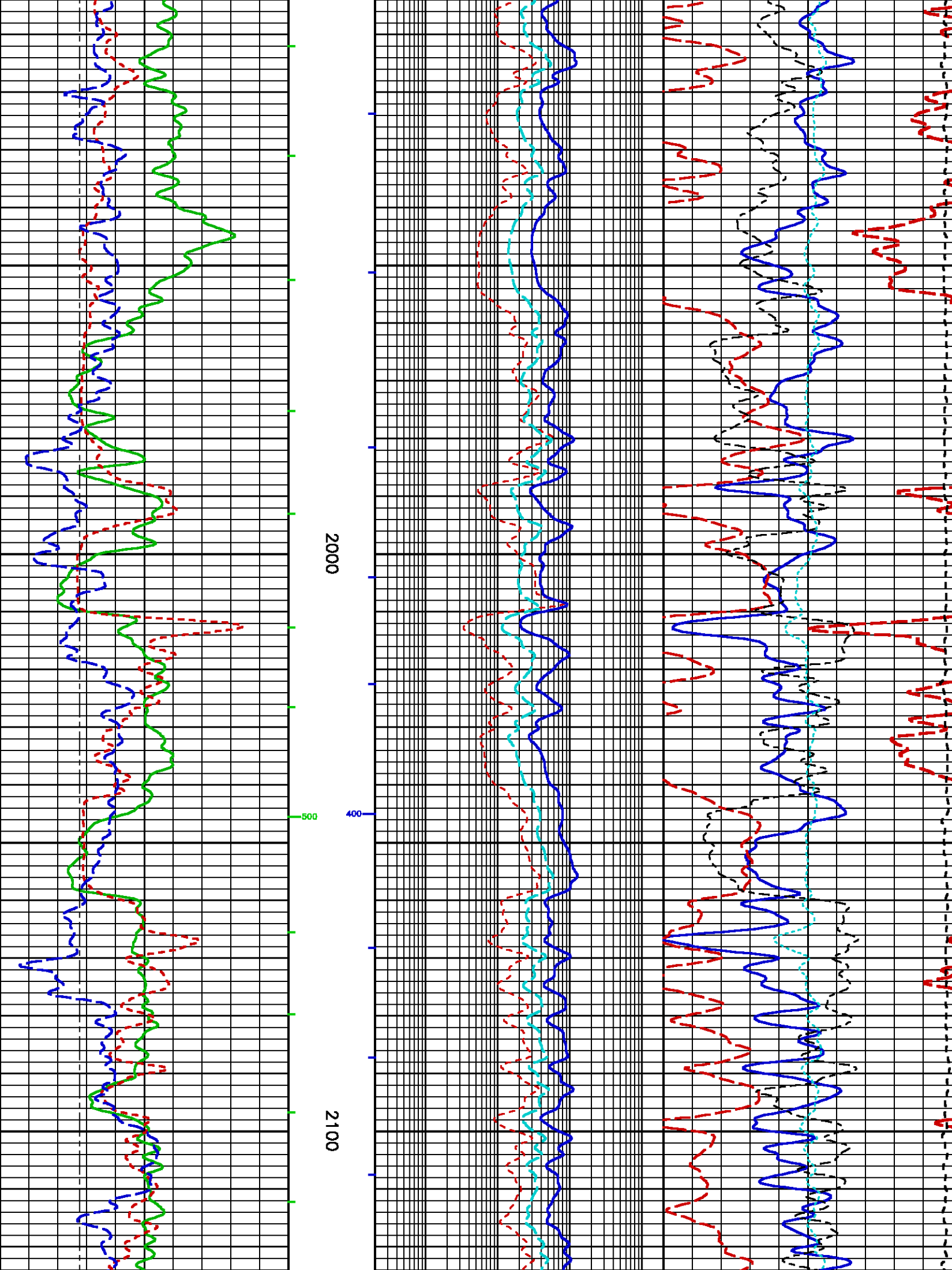
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Created On : Apr 7 14:49:12 2013  
Company : WPX  
Well : DUGGAN RWF 413-29  
Field : RULLISON  
File Interval : 900 - 8120 Feet  
Oct : m681]



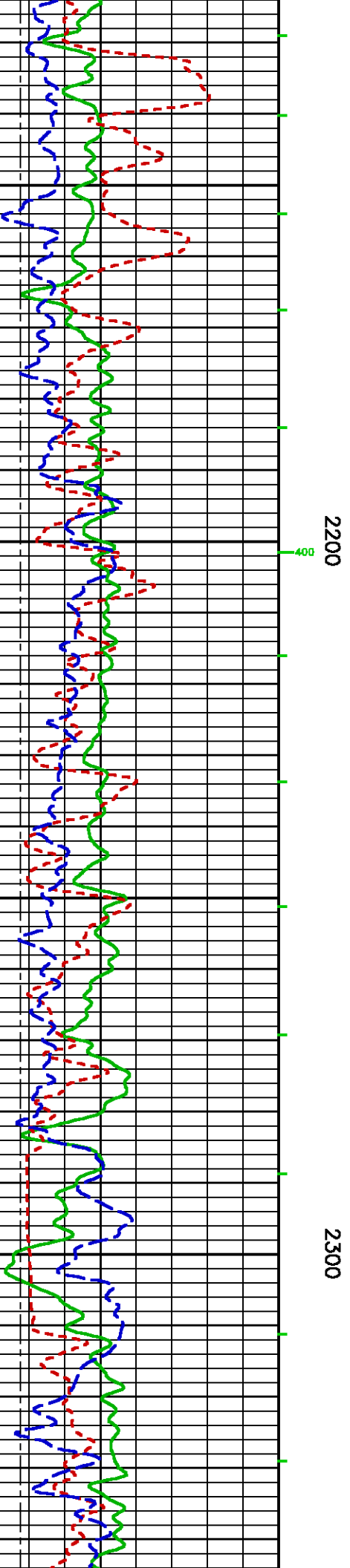
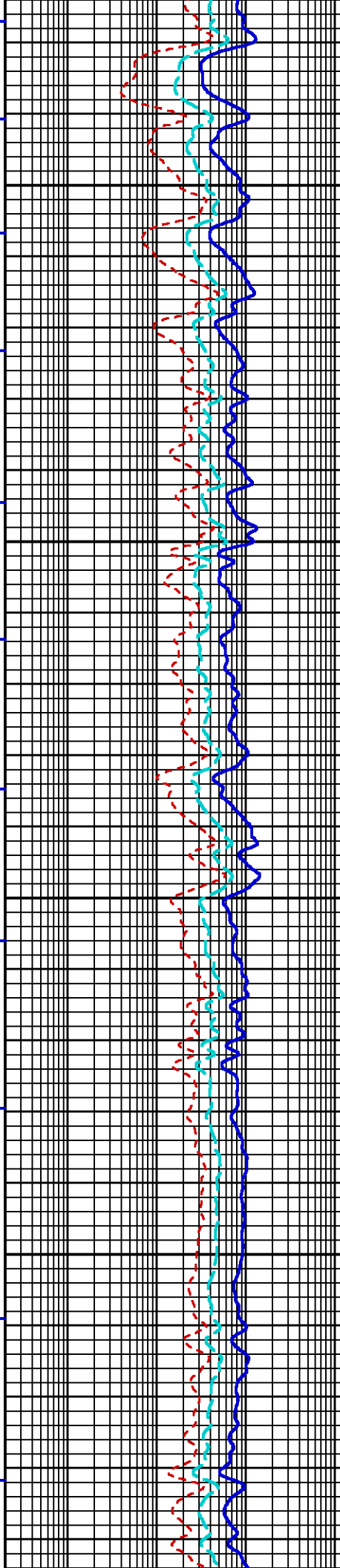
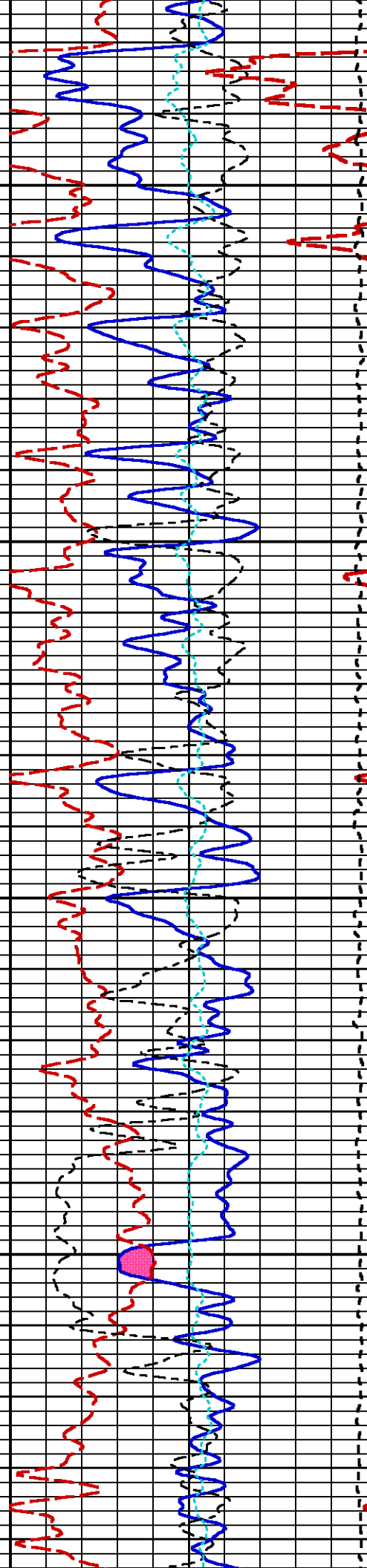


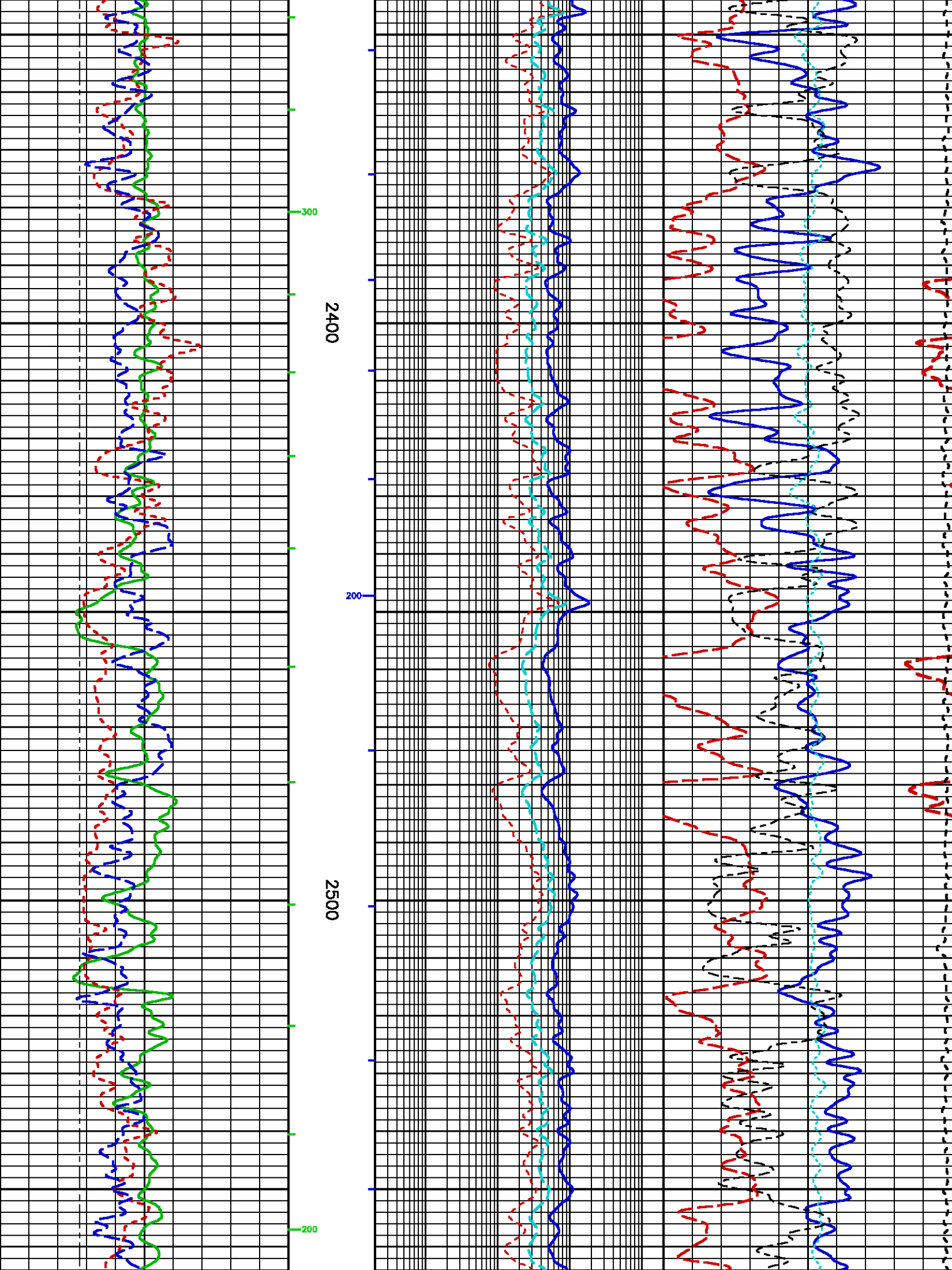


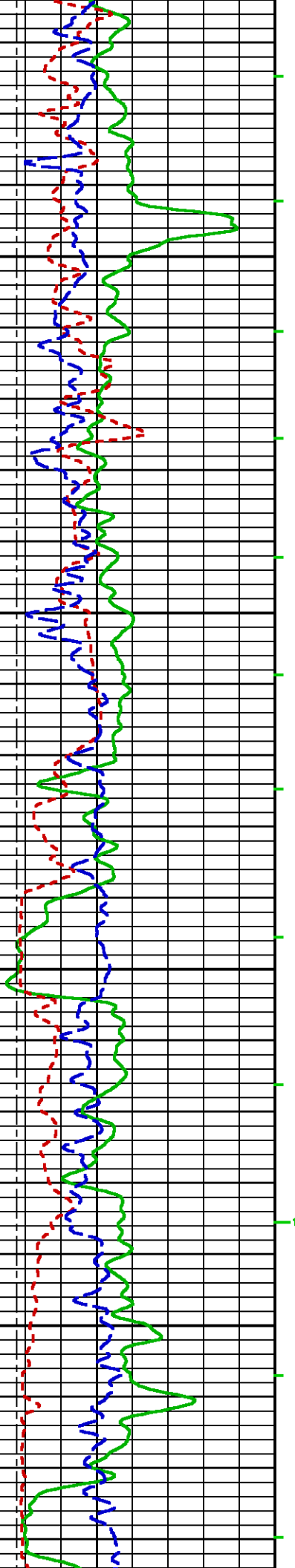
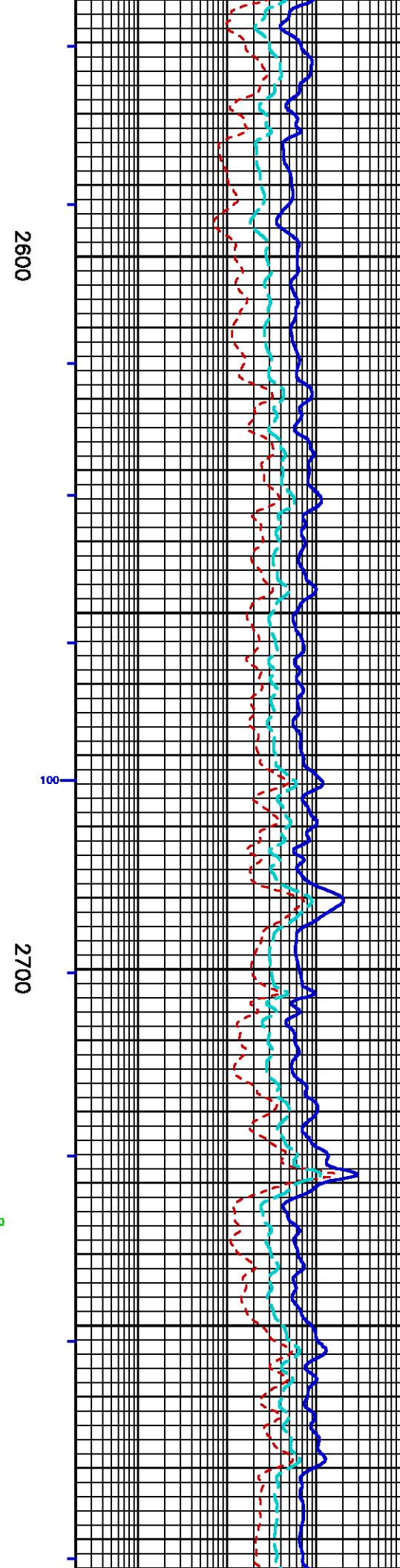
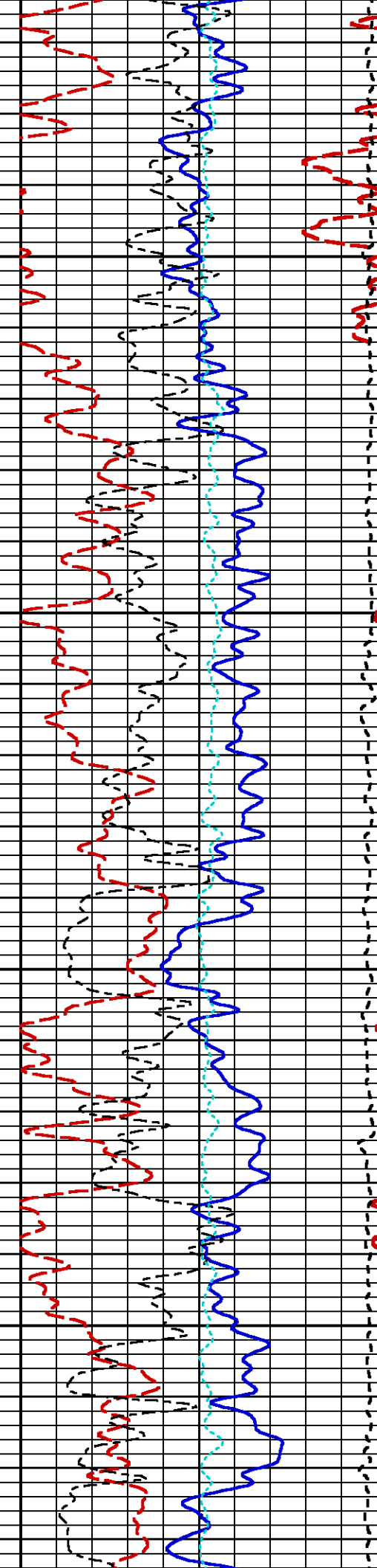


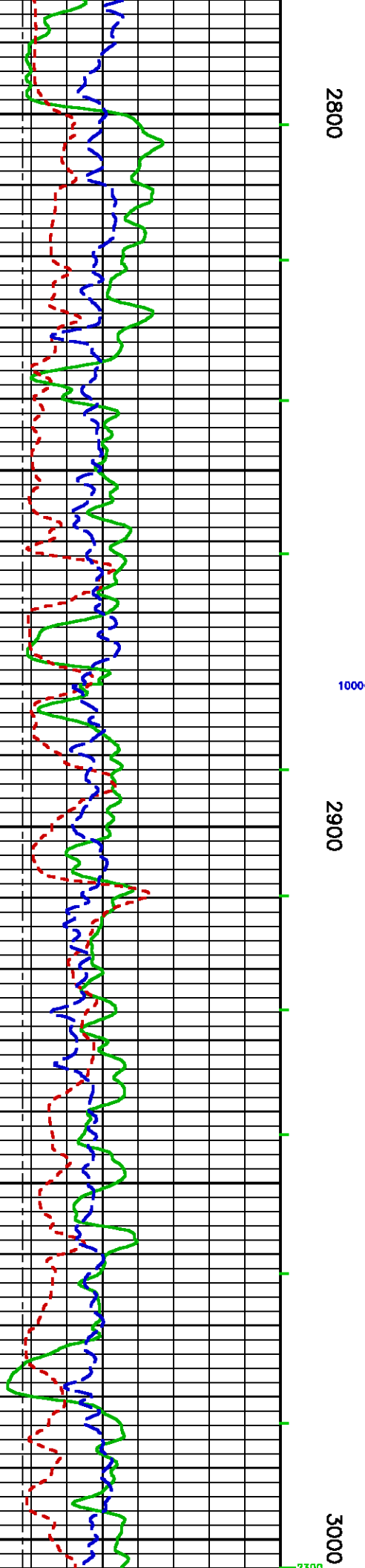
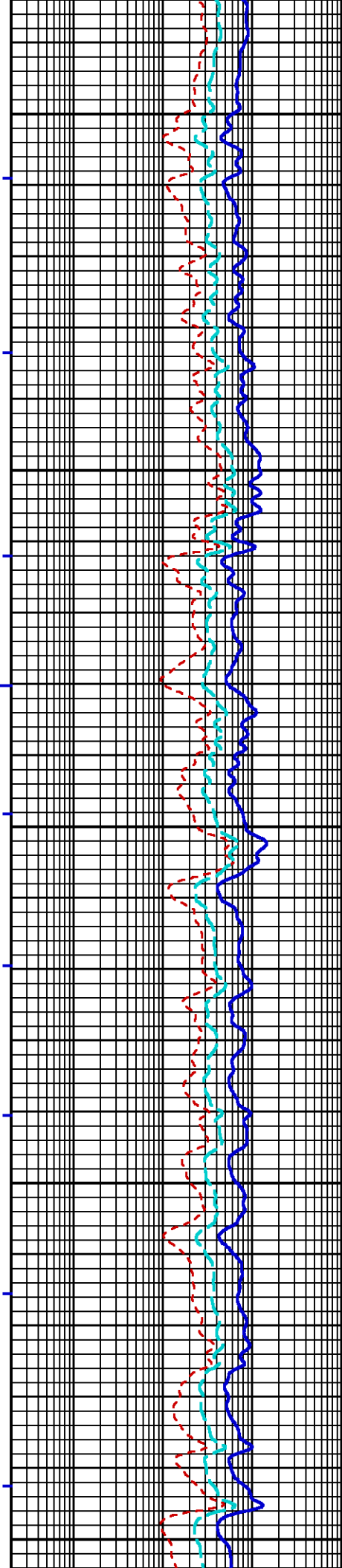
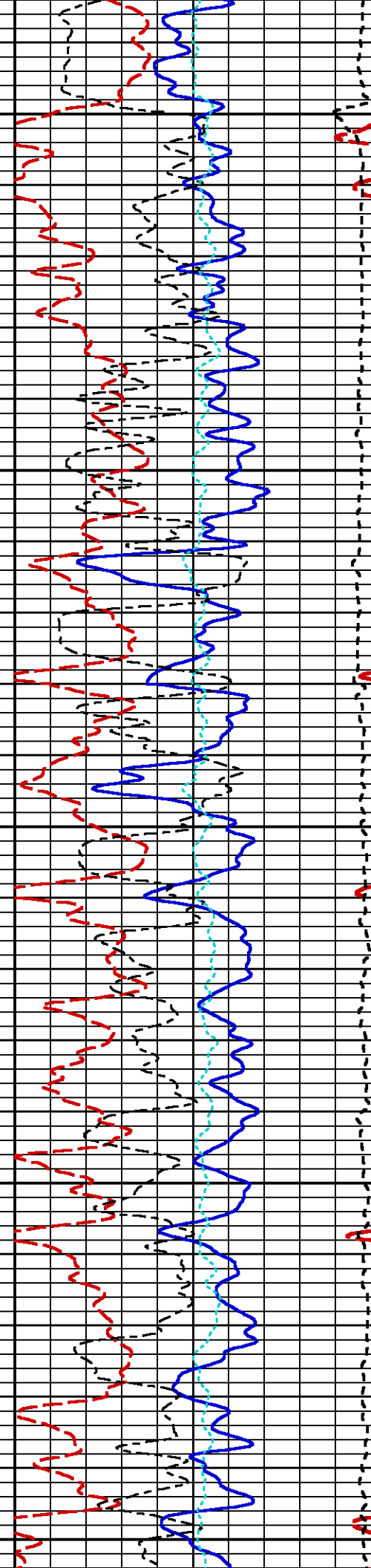


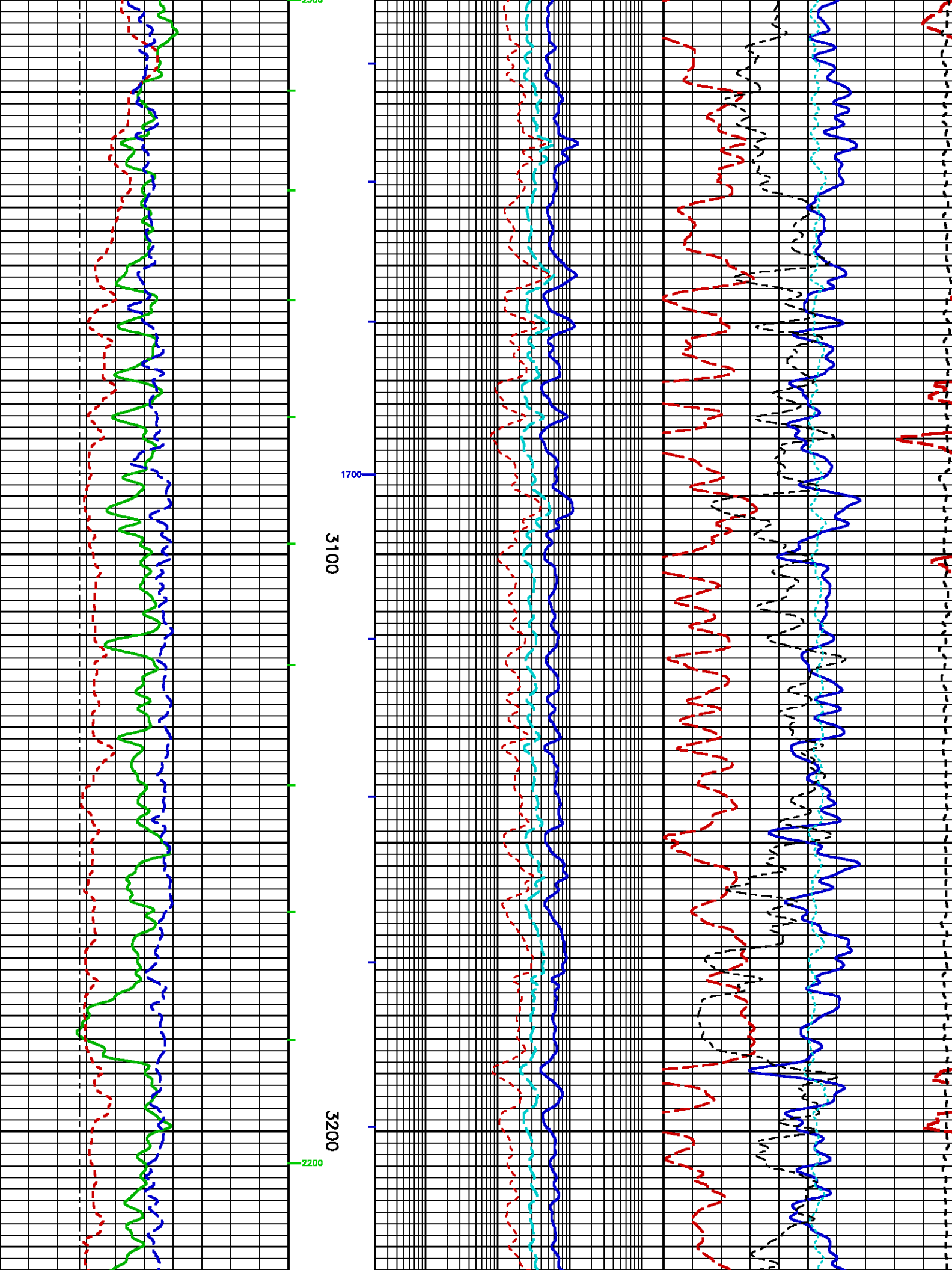


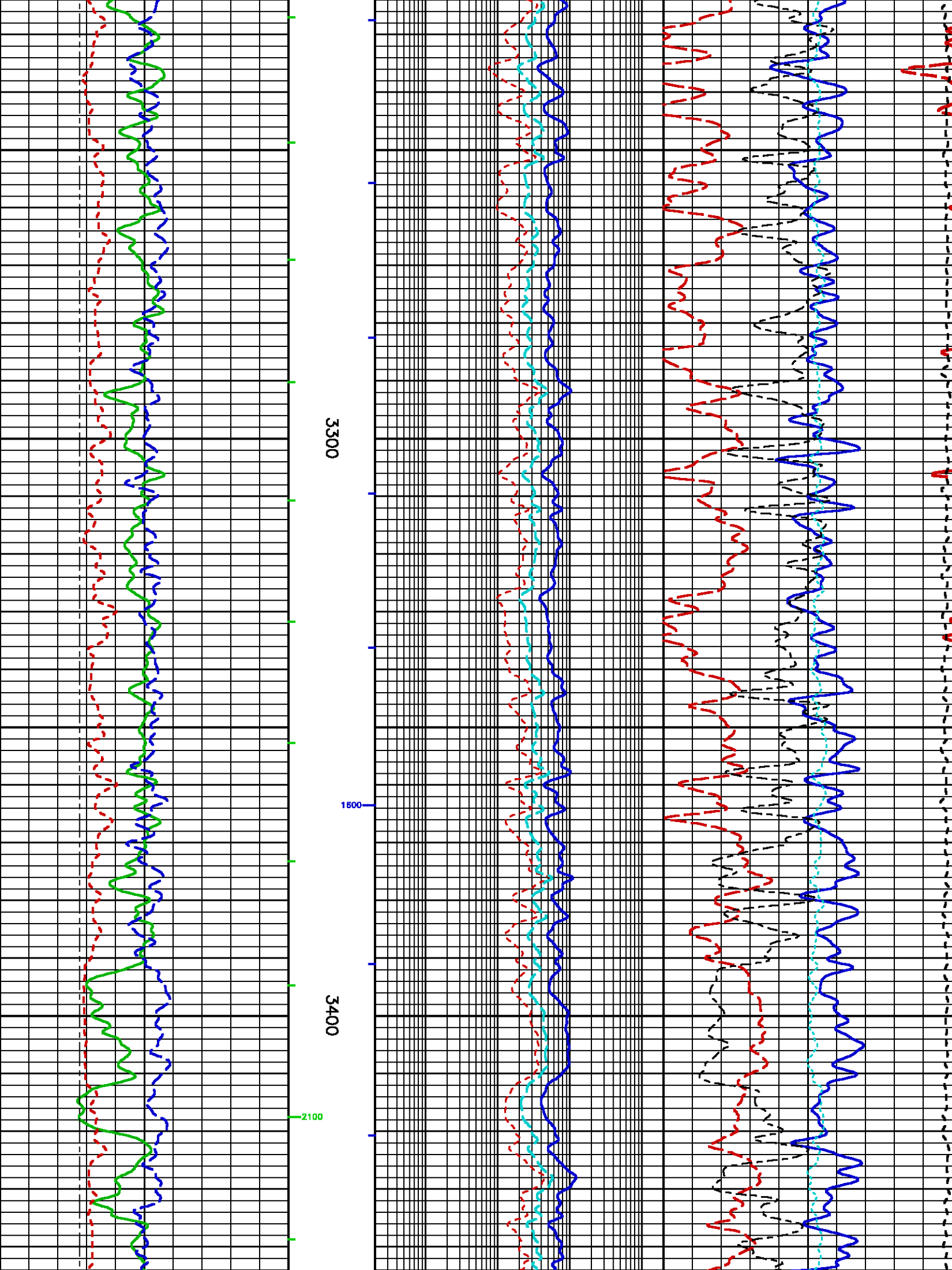


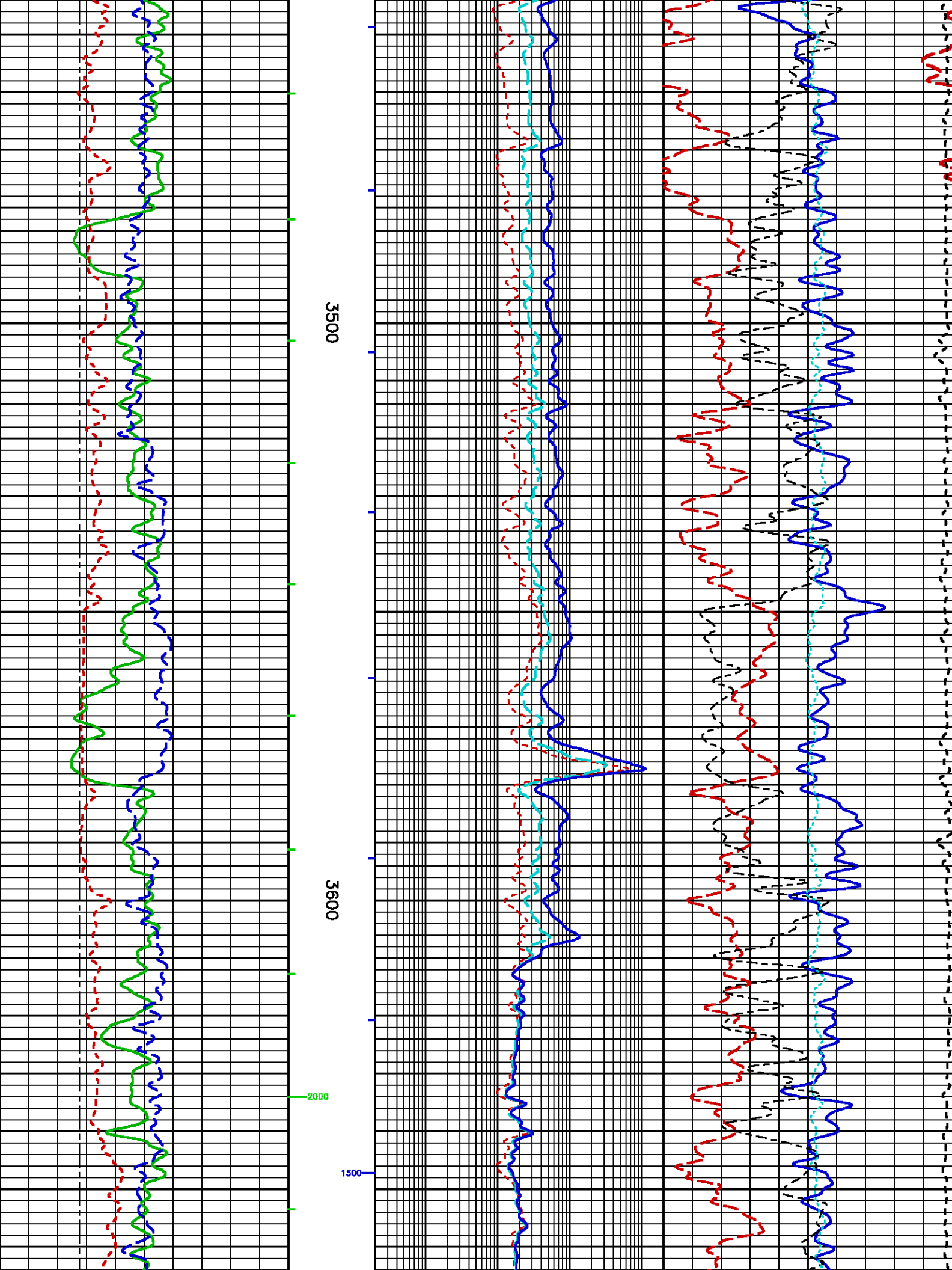


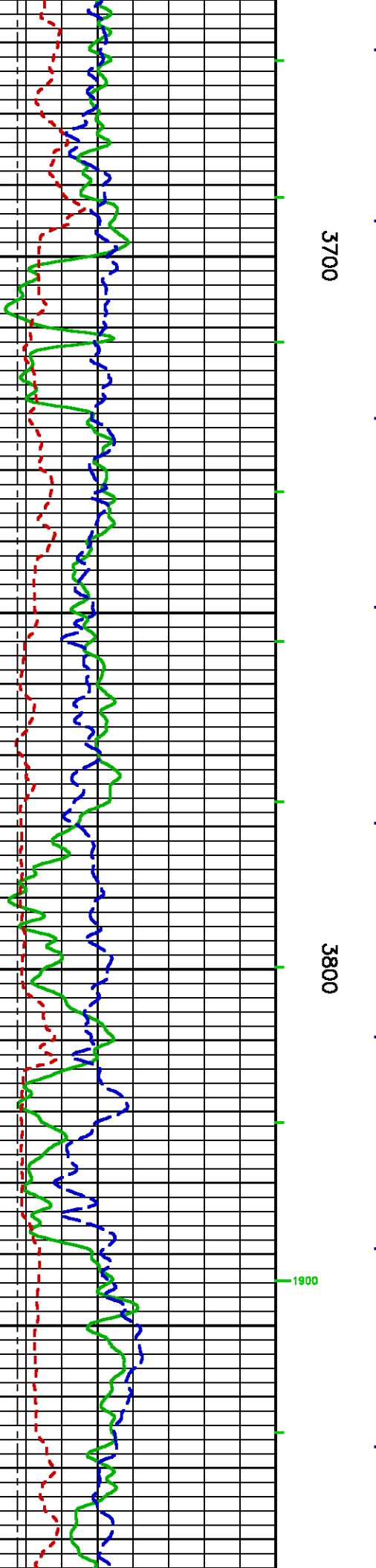
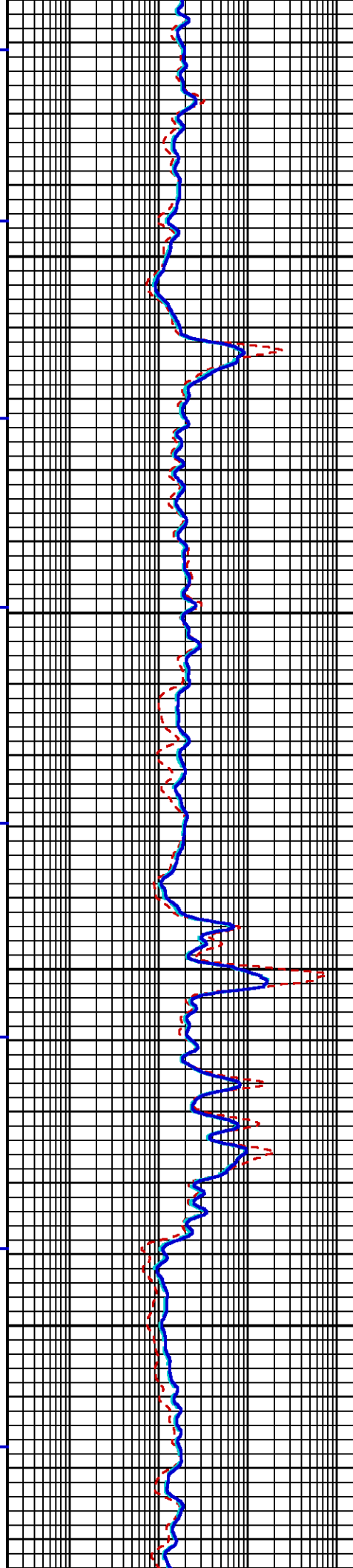
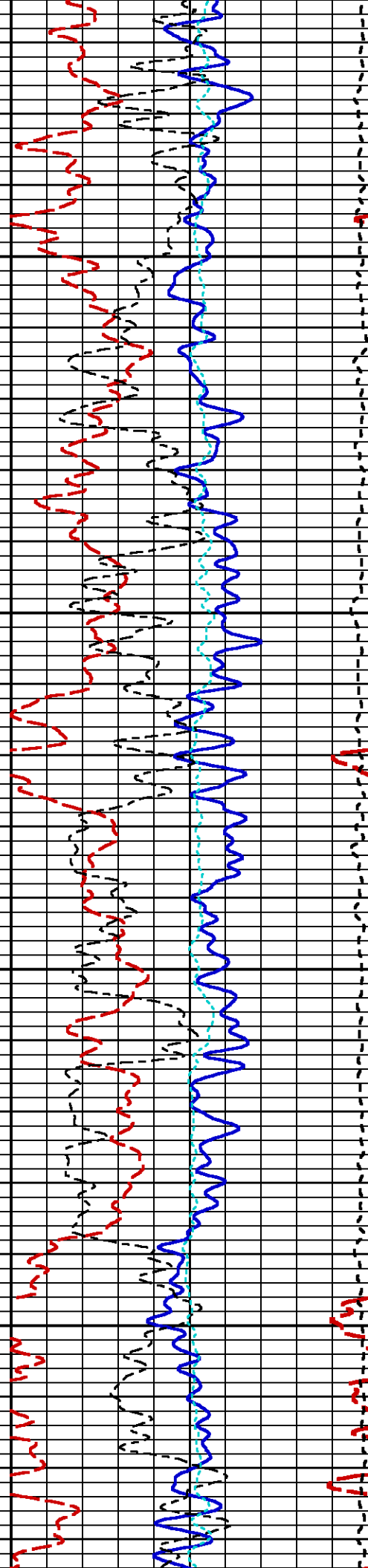




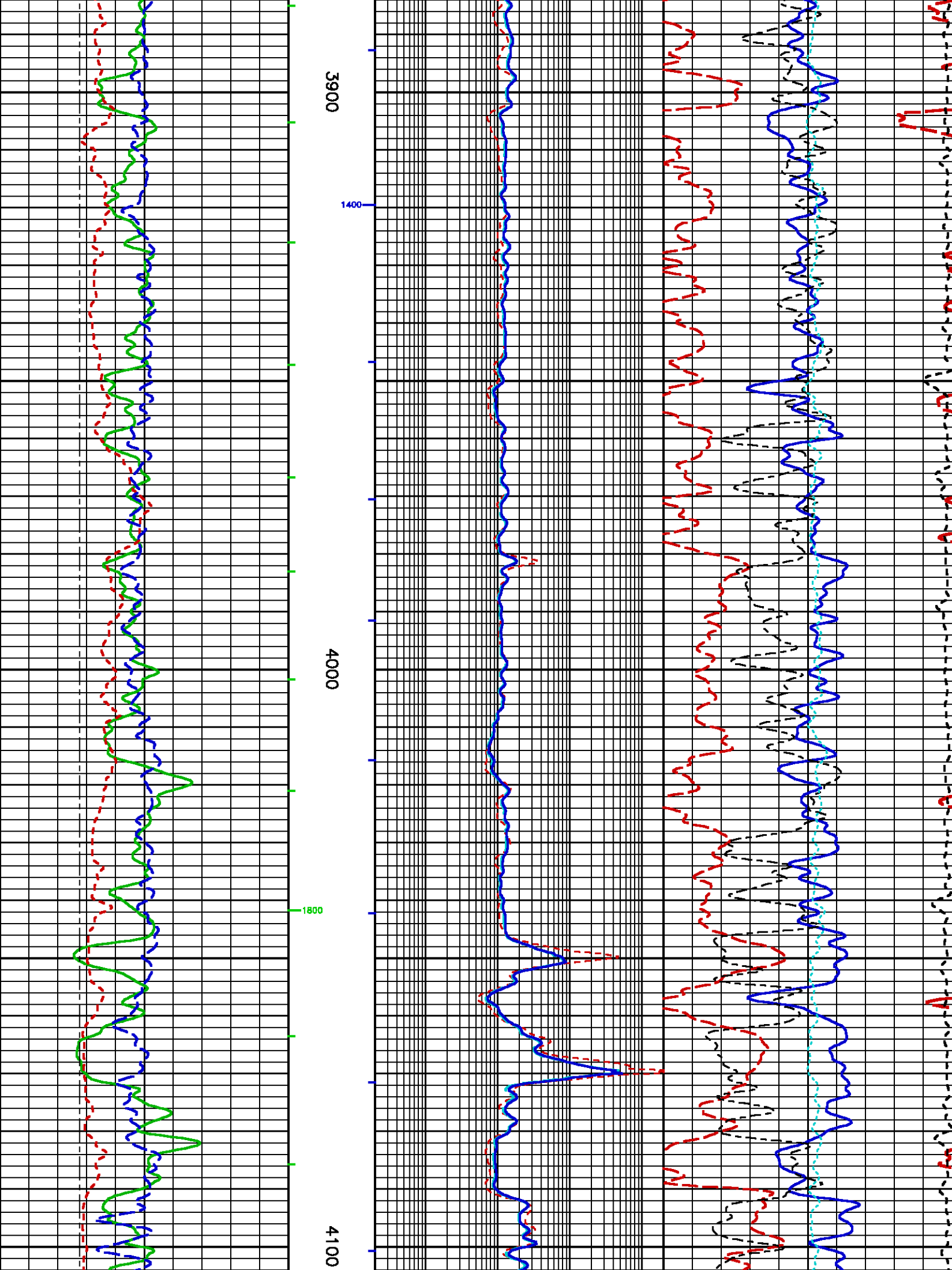


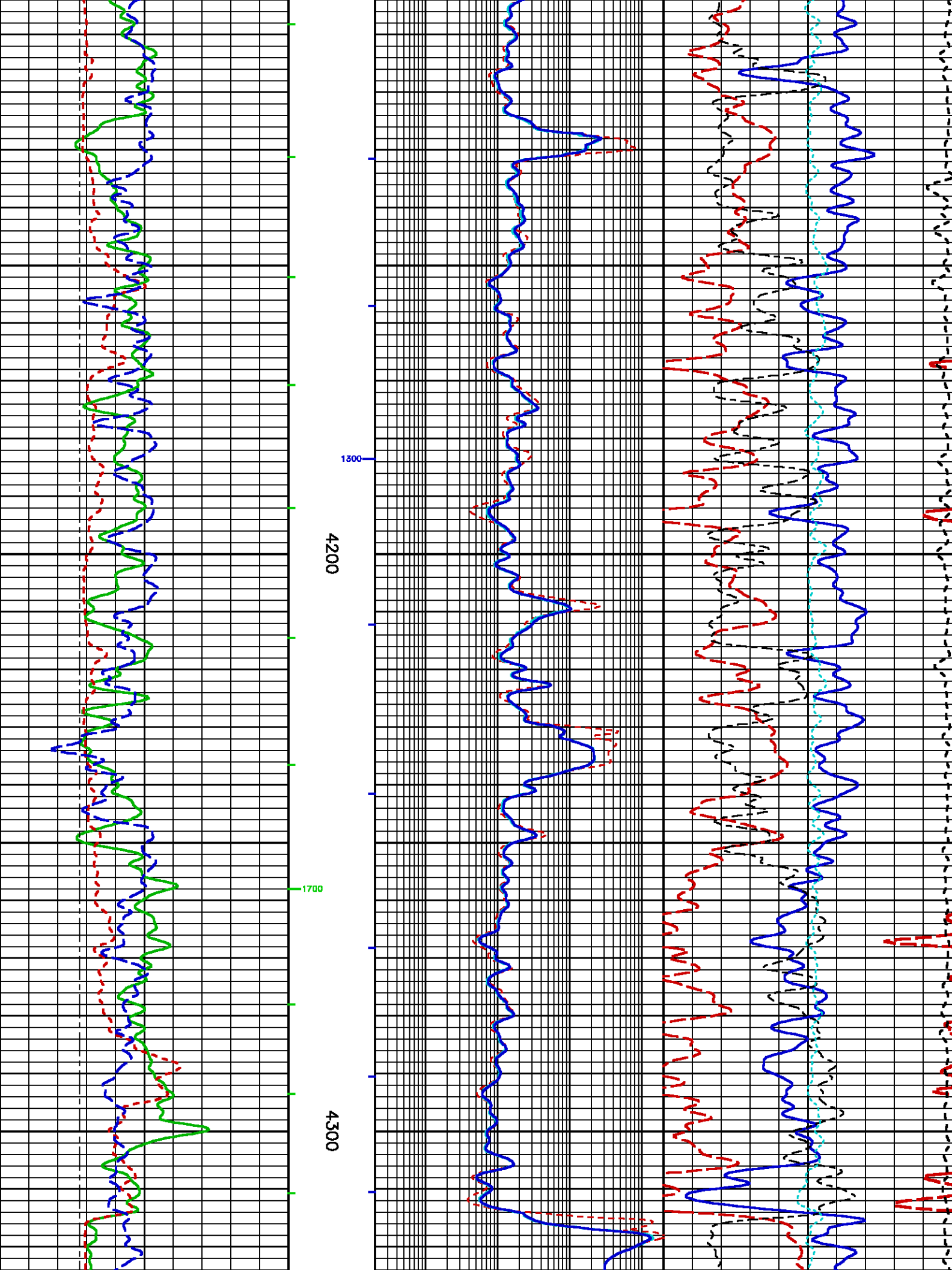


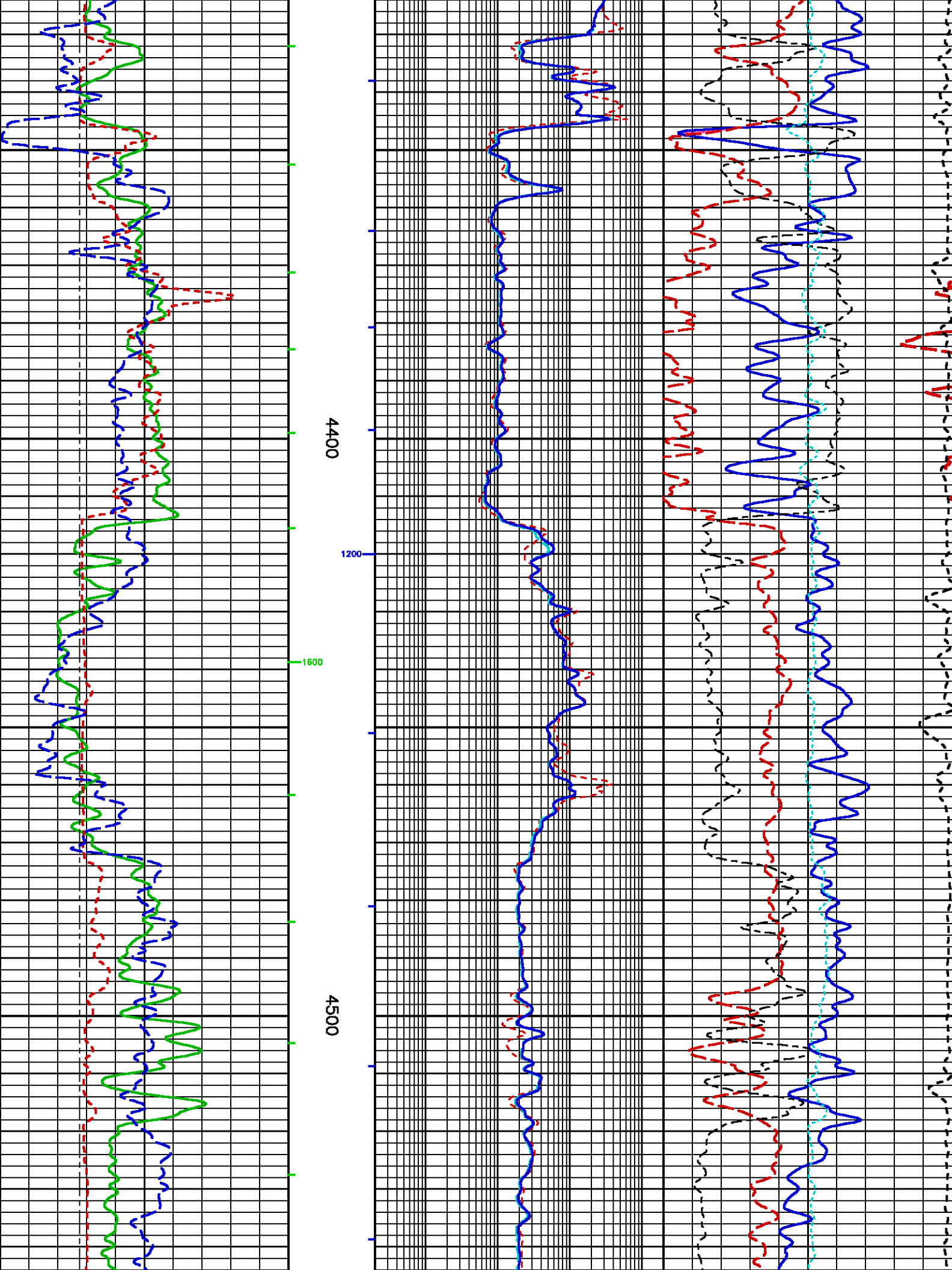


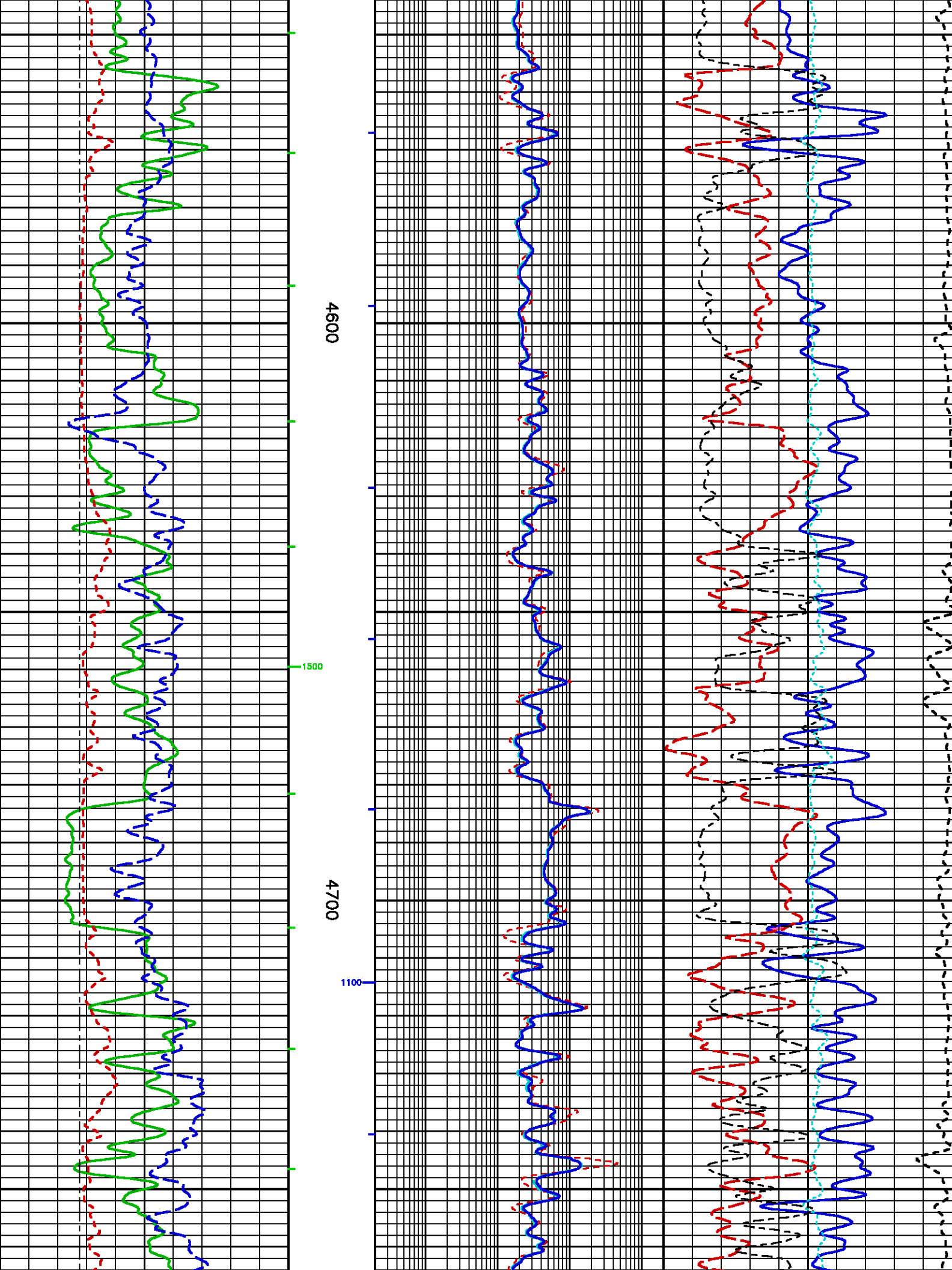


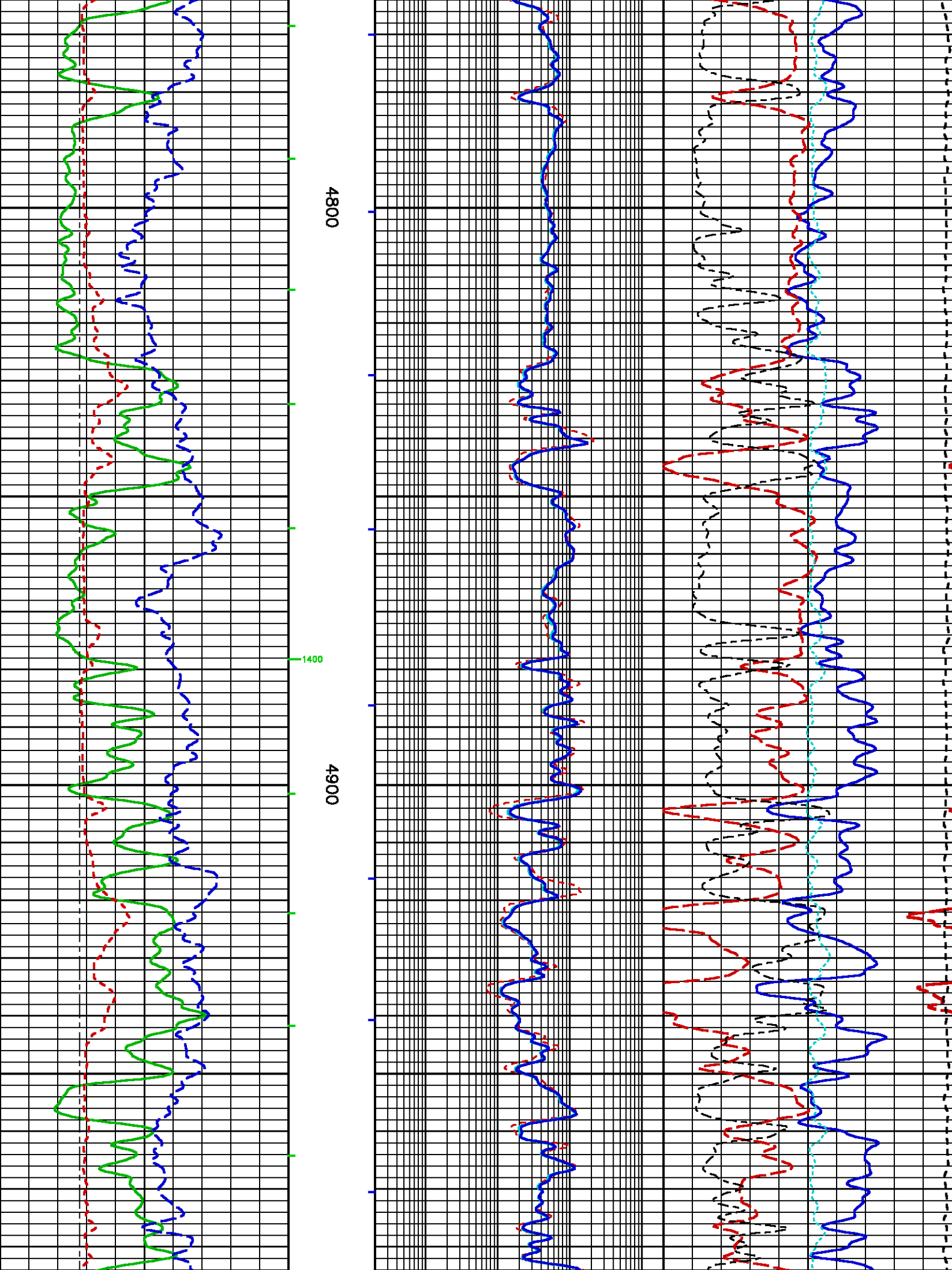


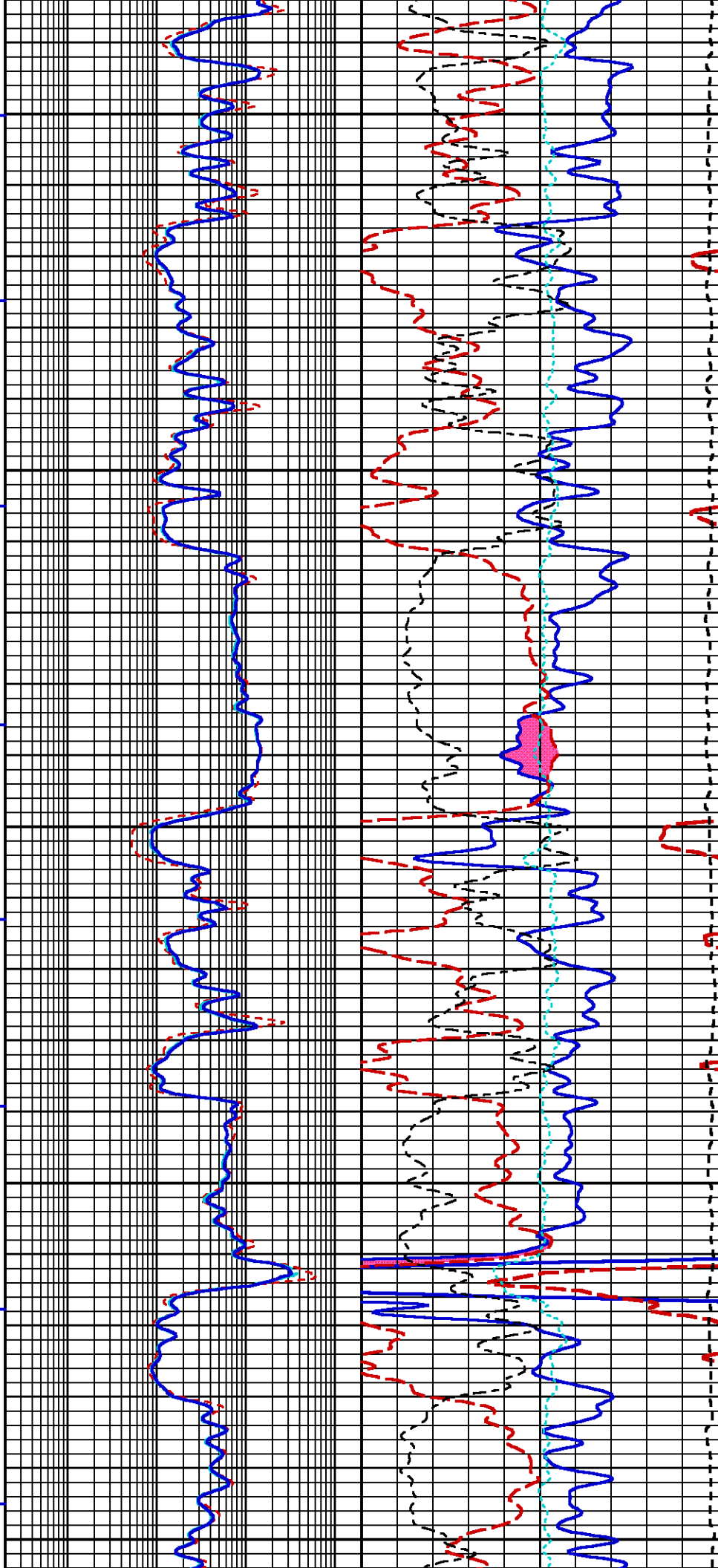








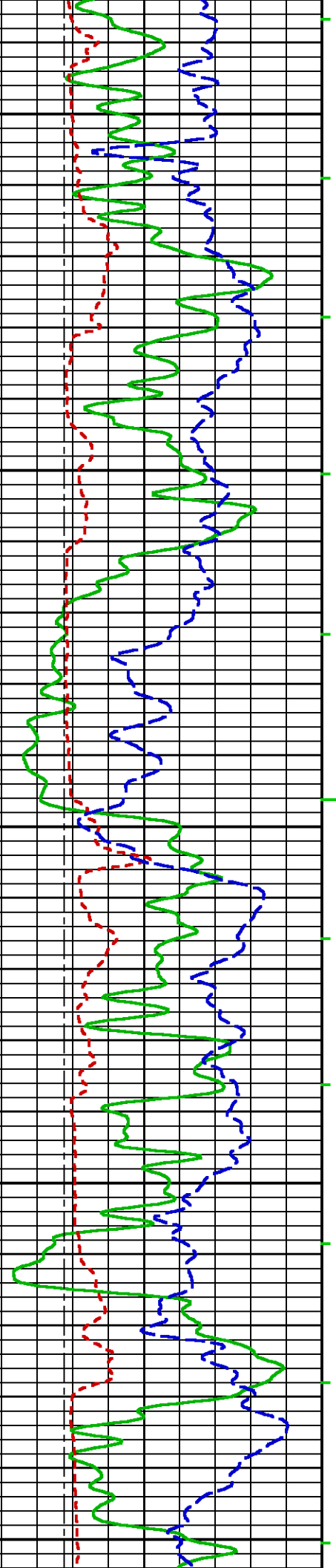


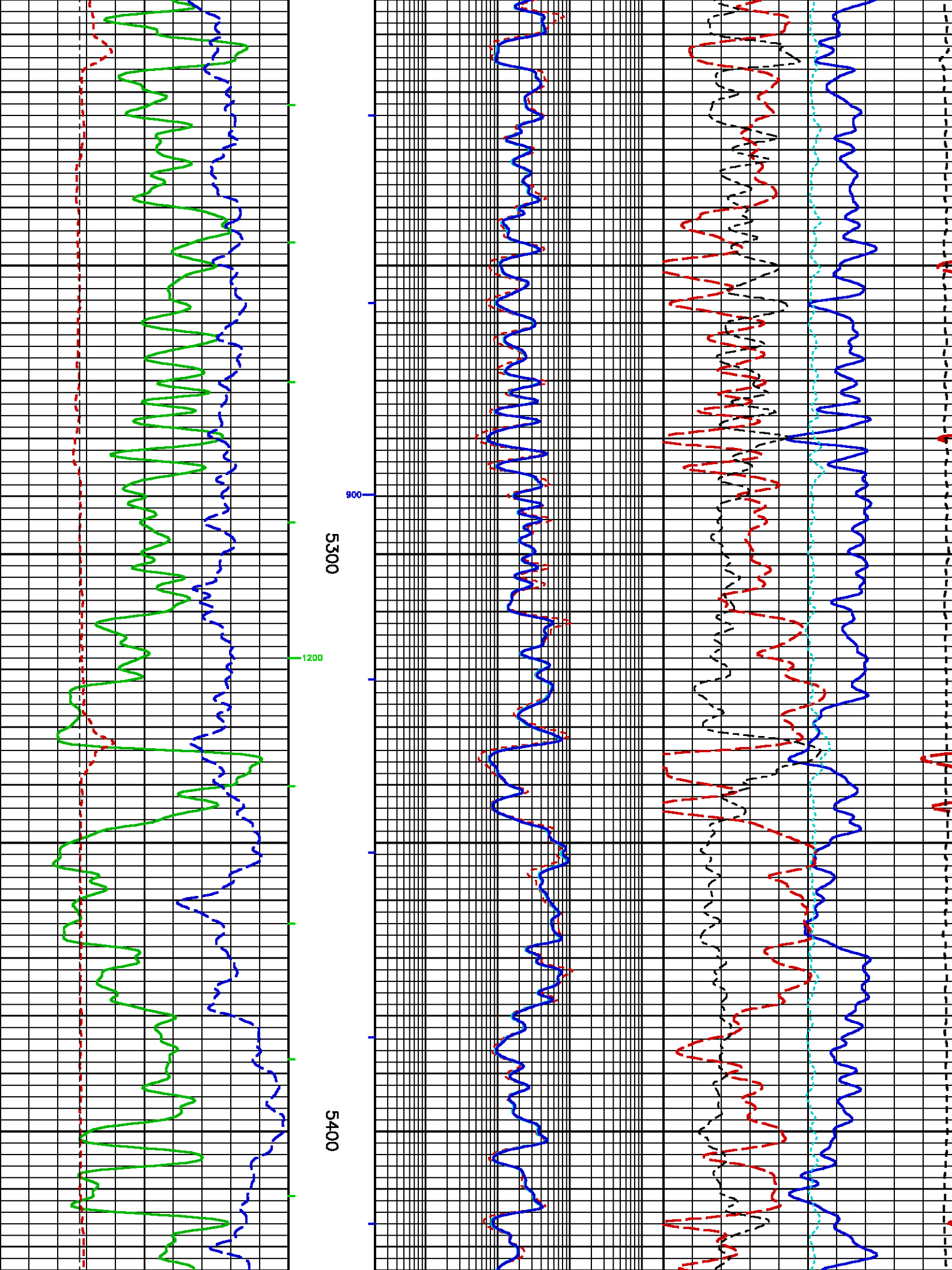


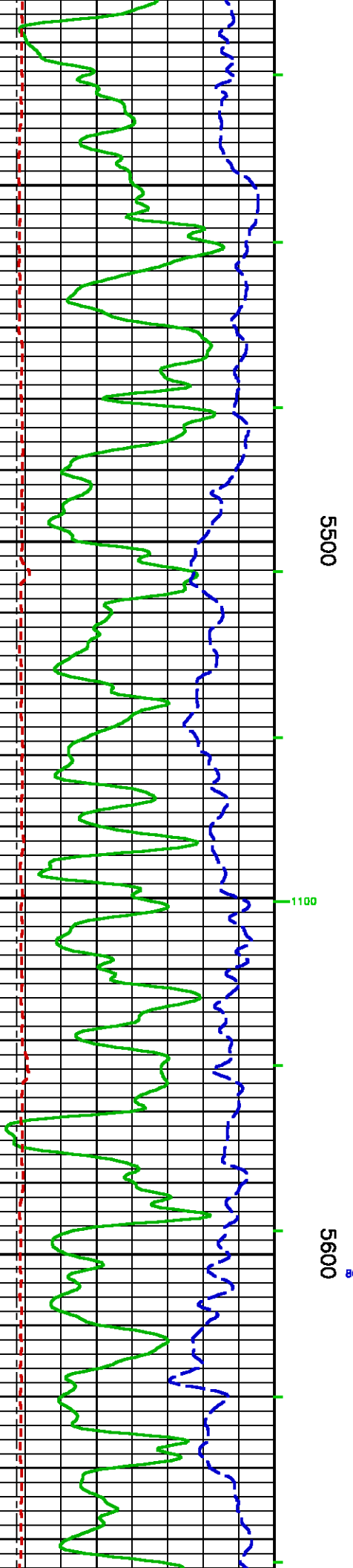
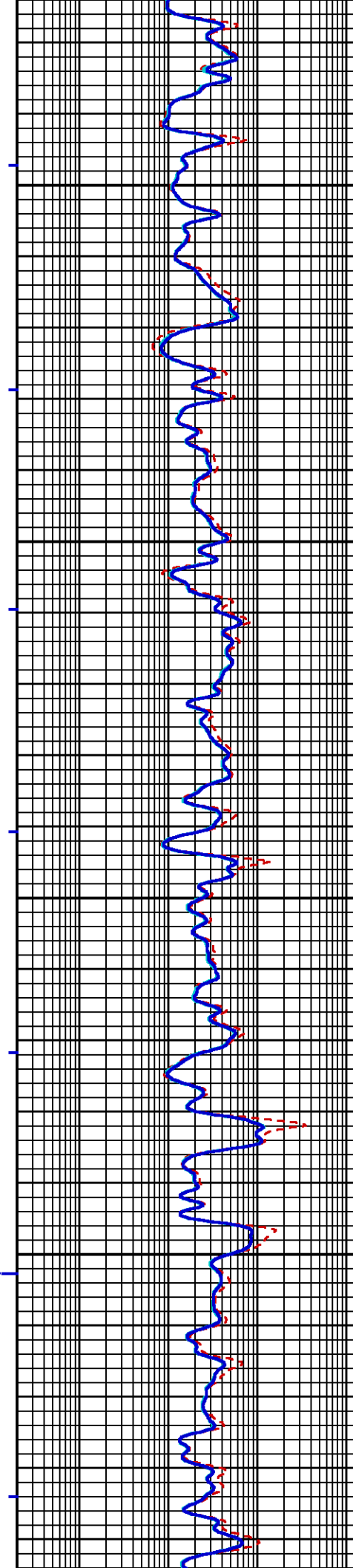
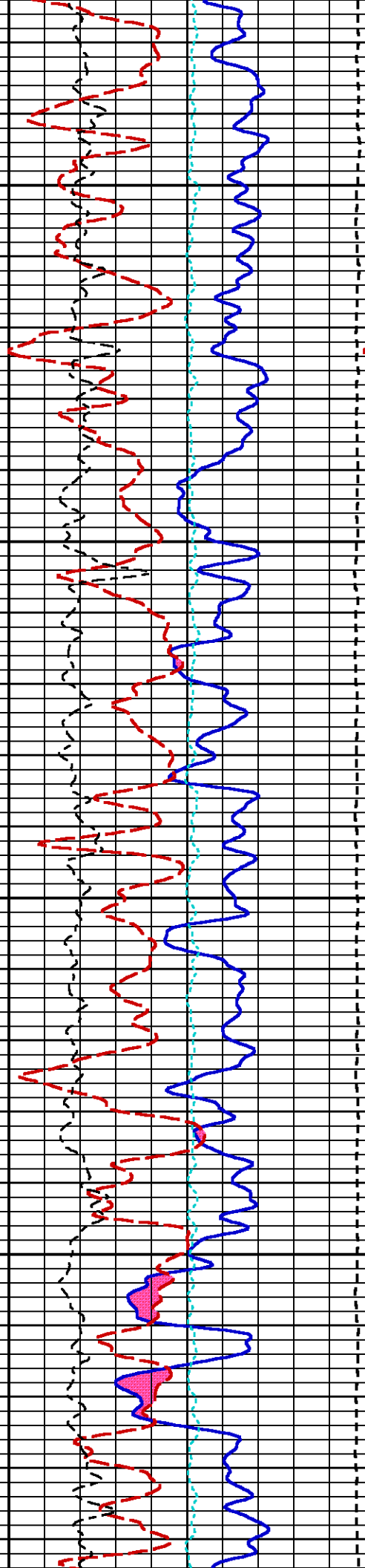
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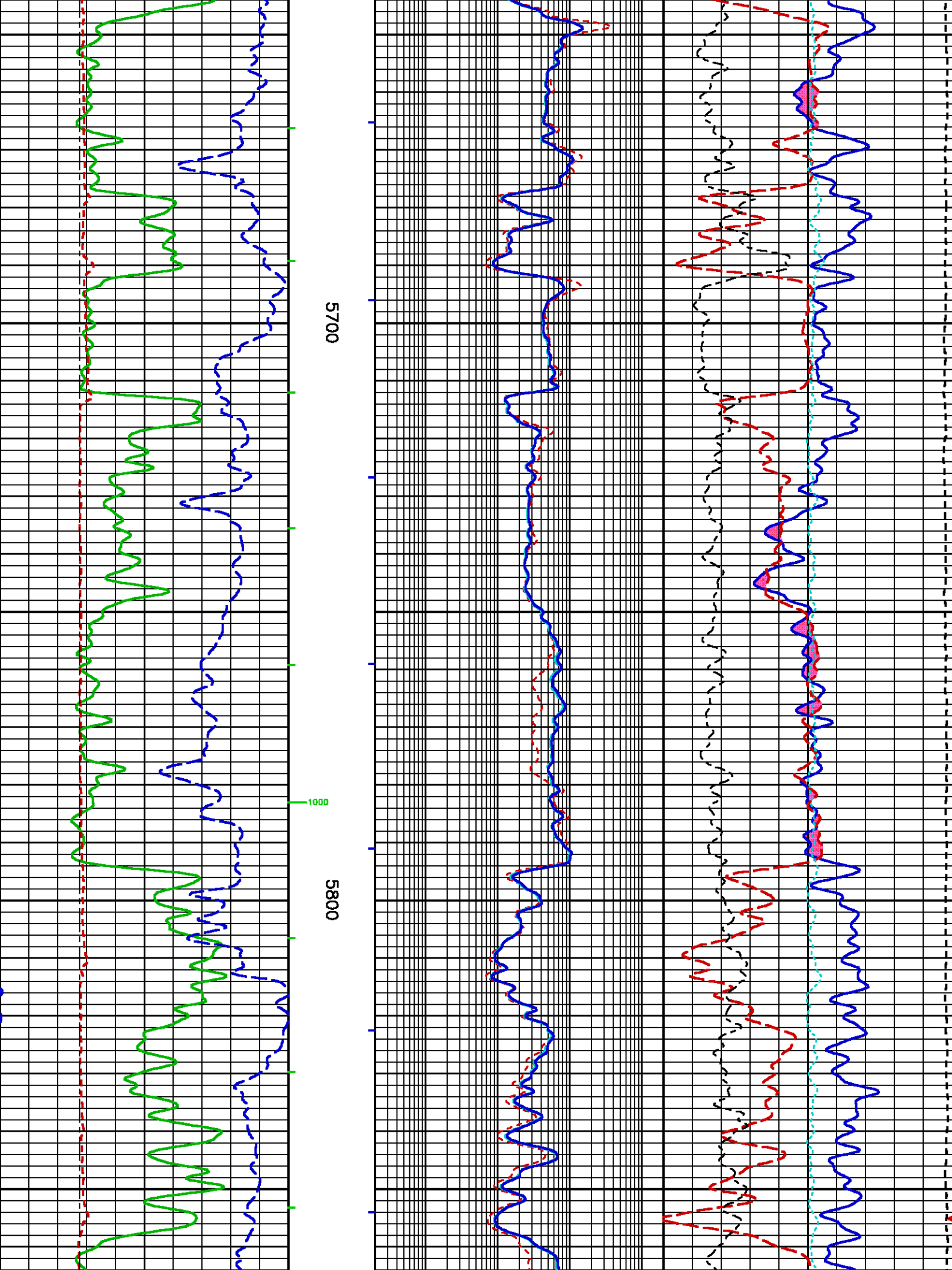
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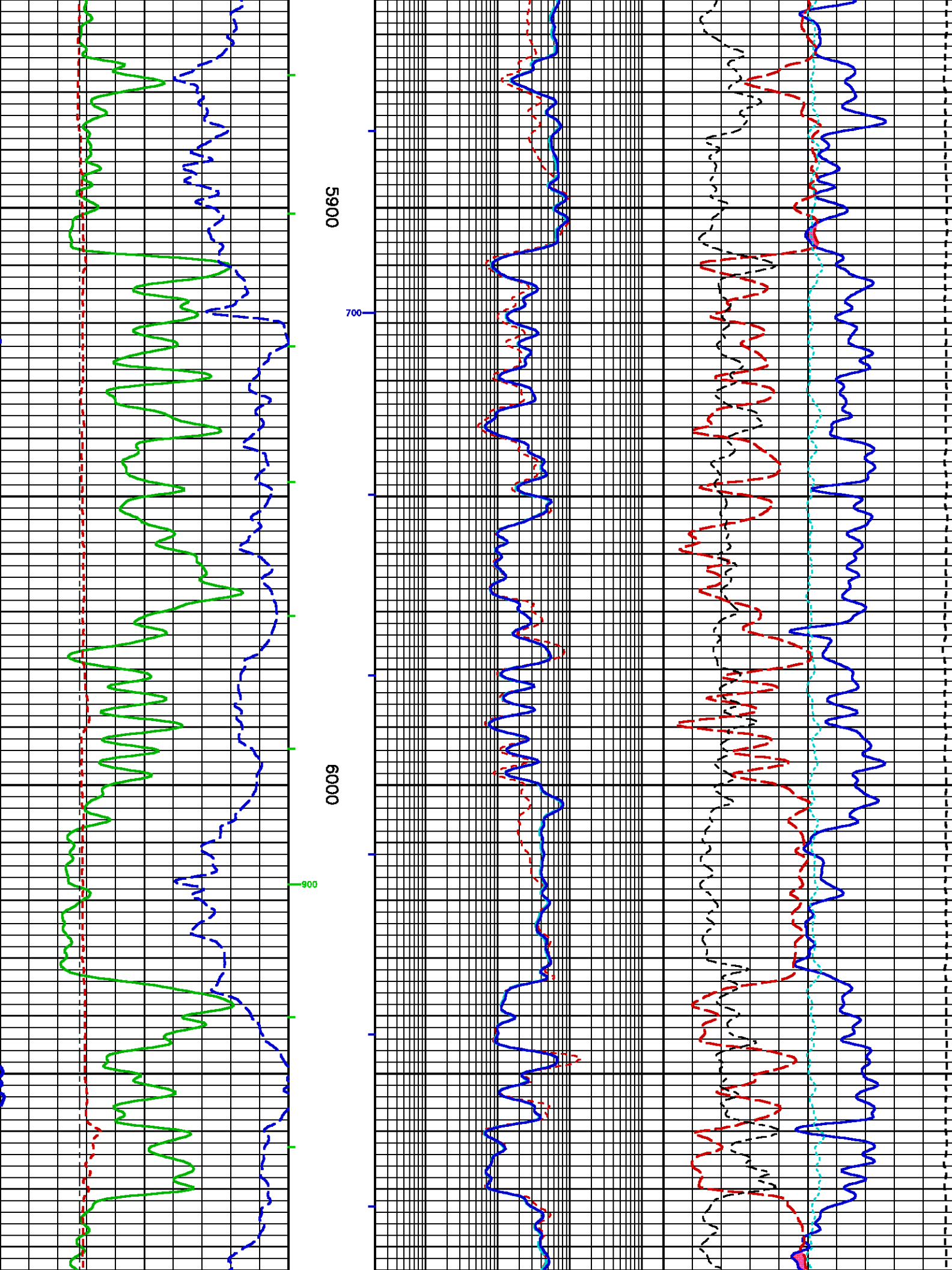


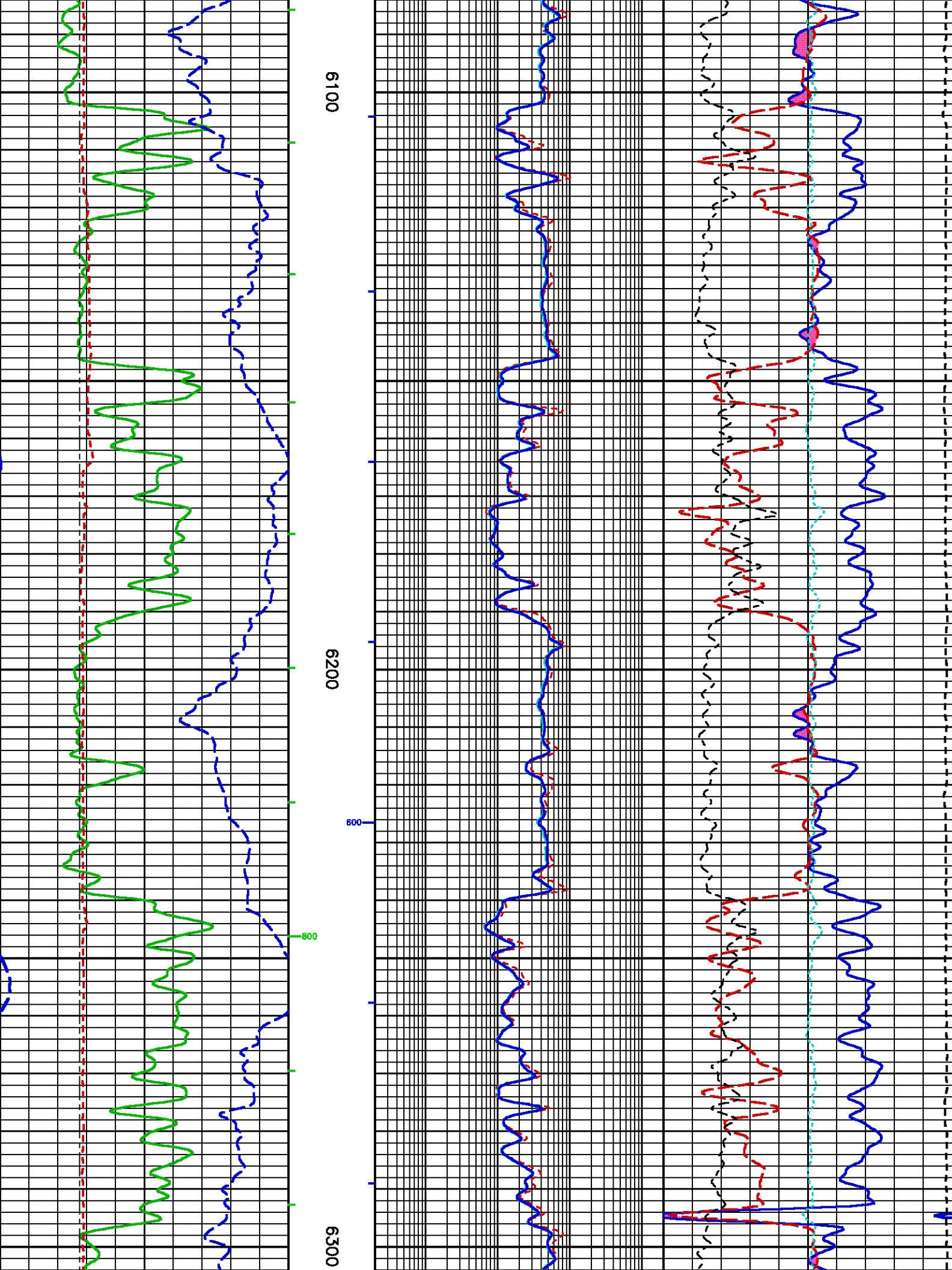


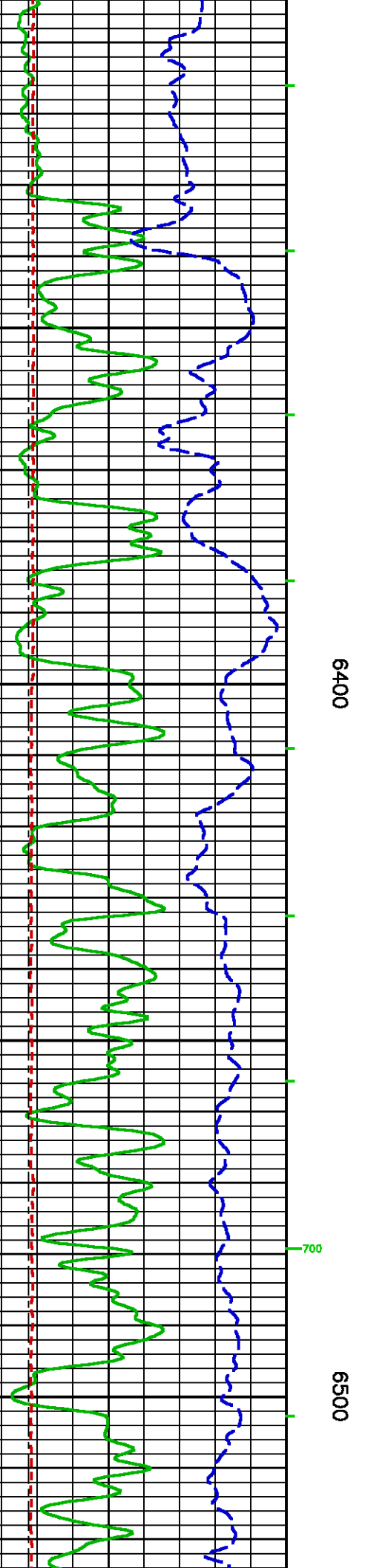
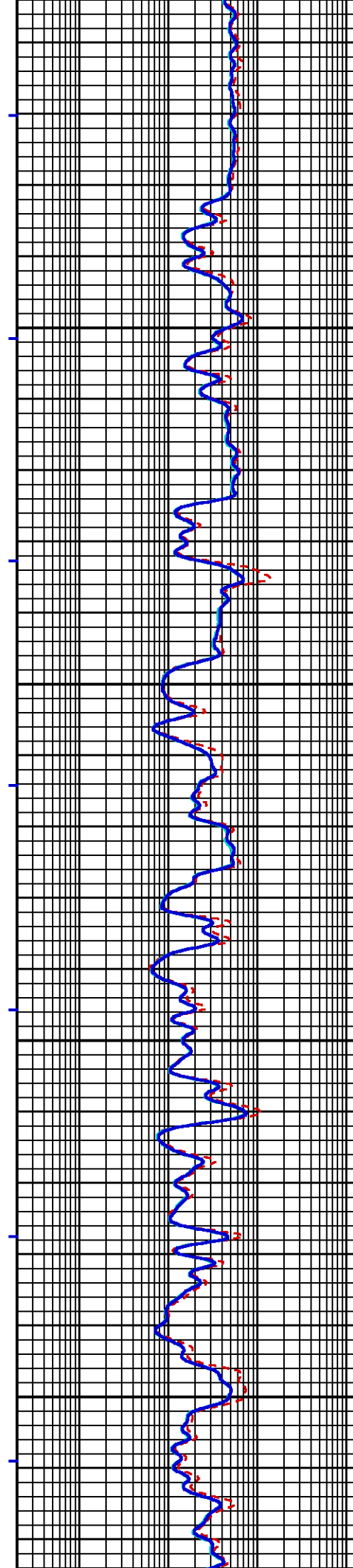
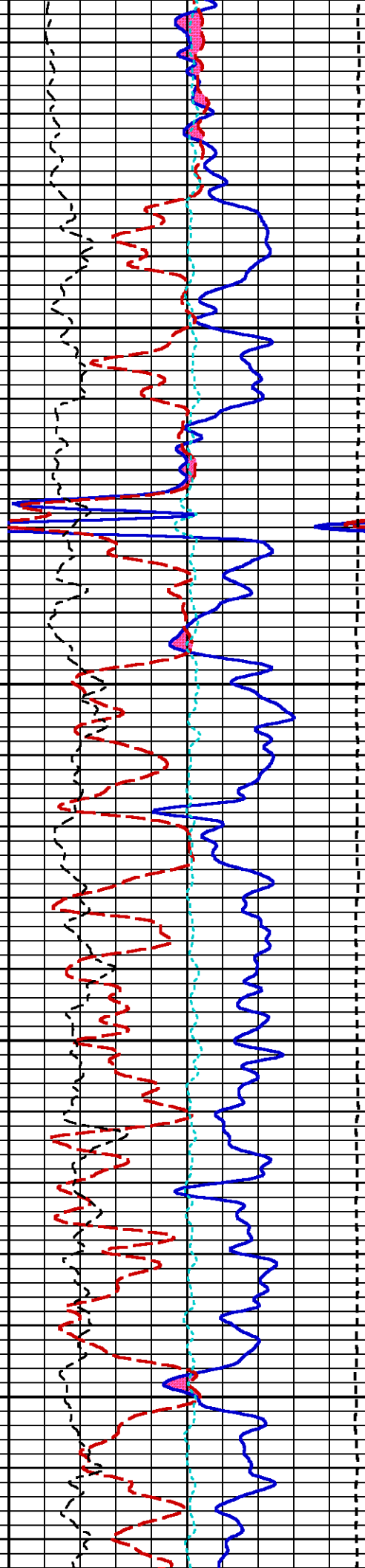


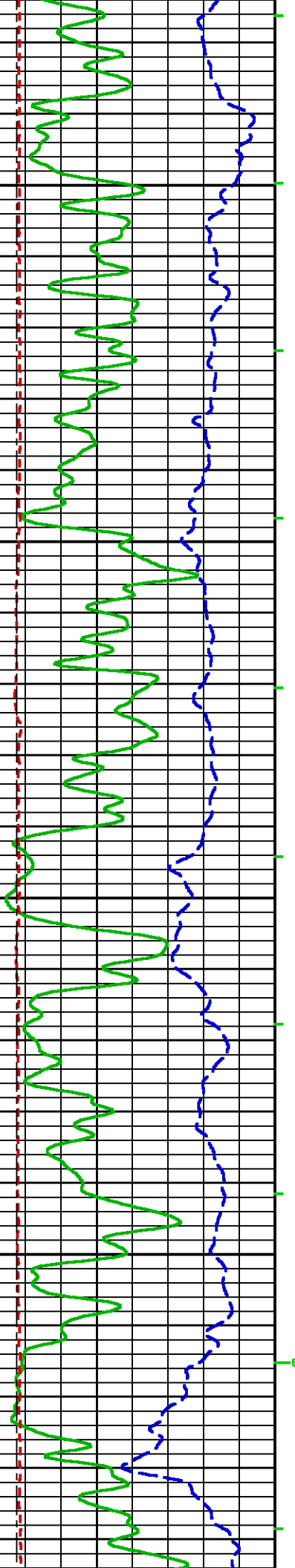
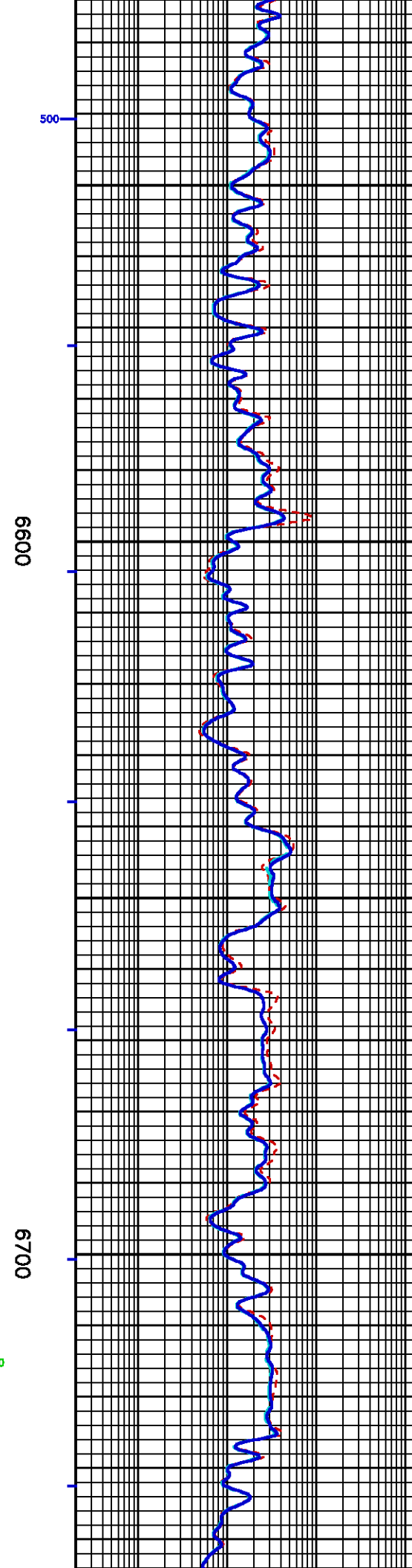
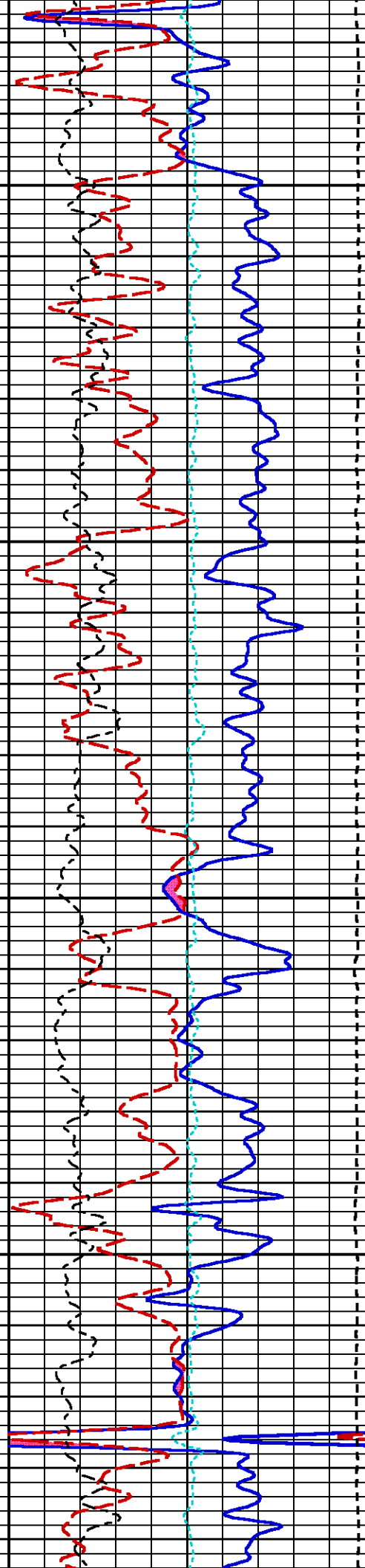


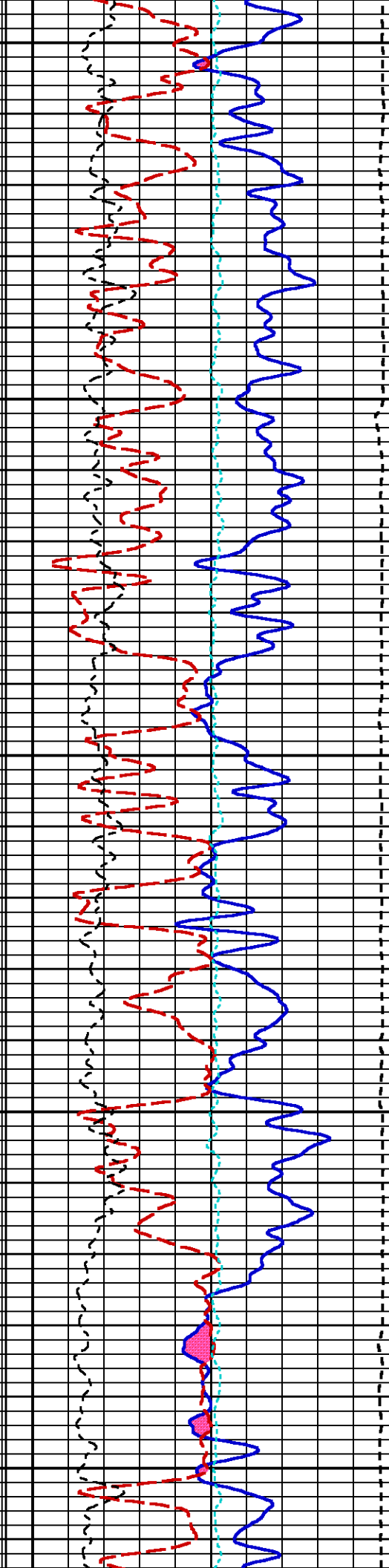
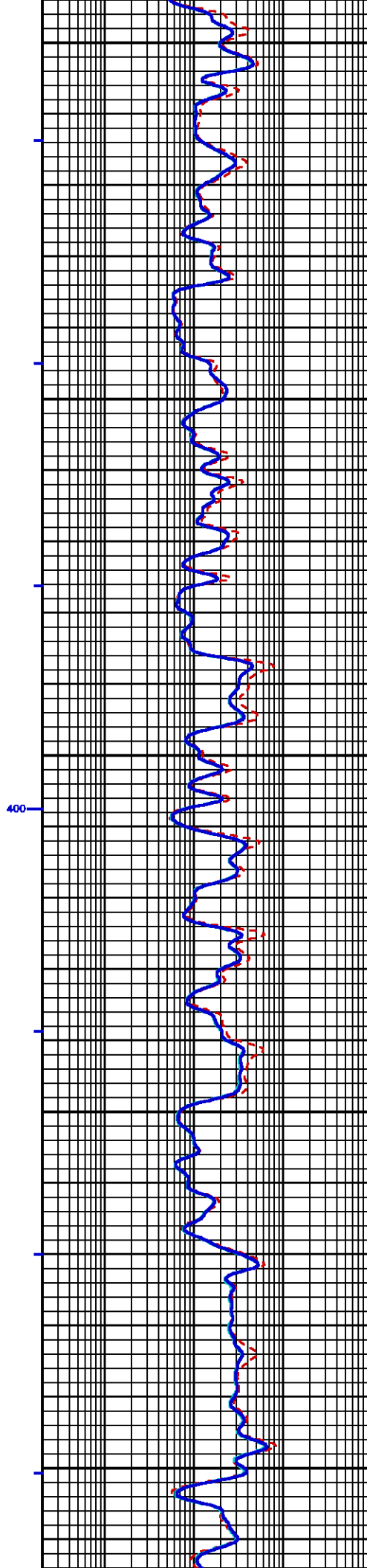
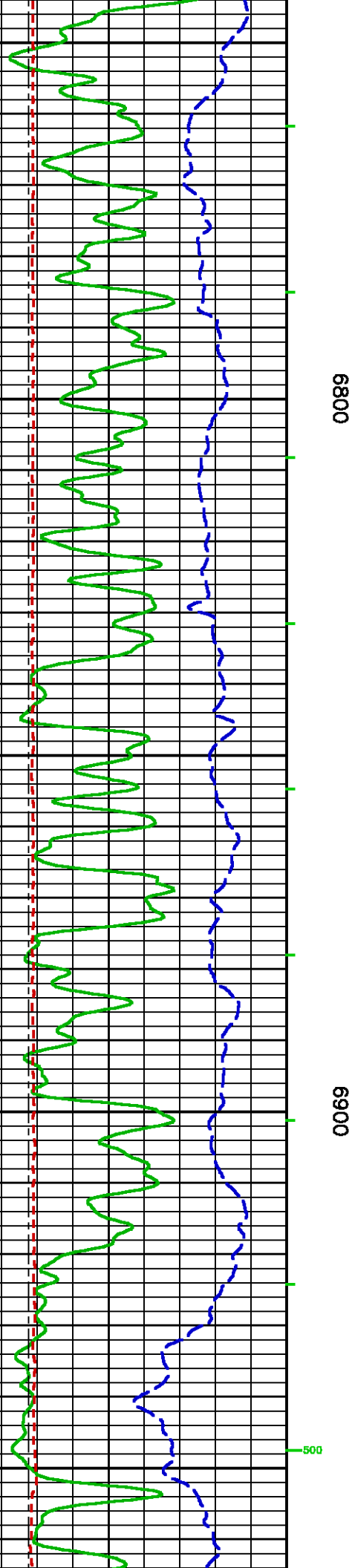


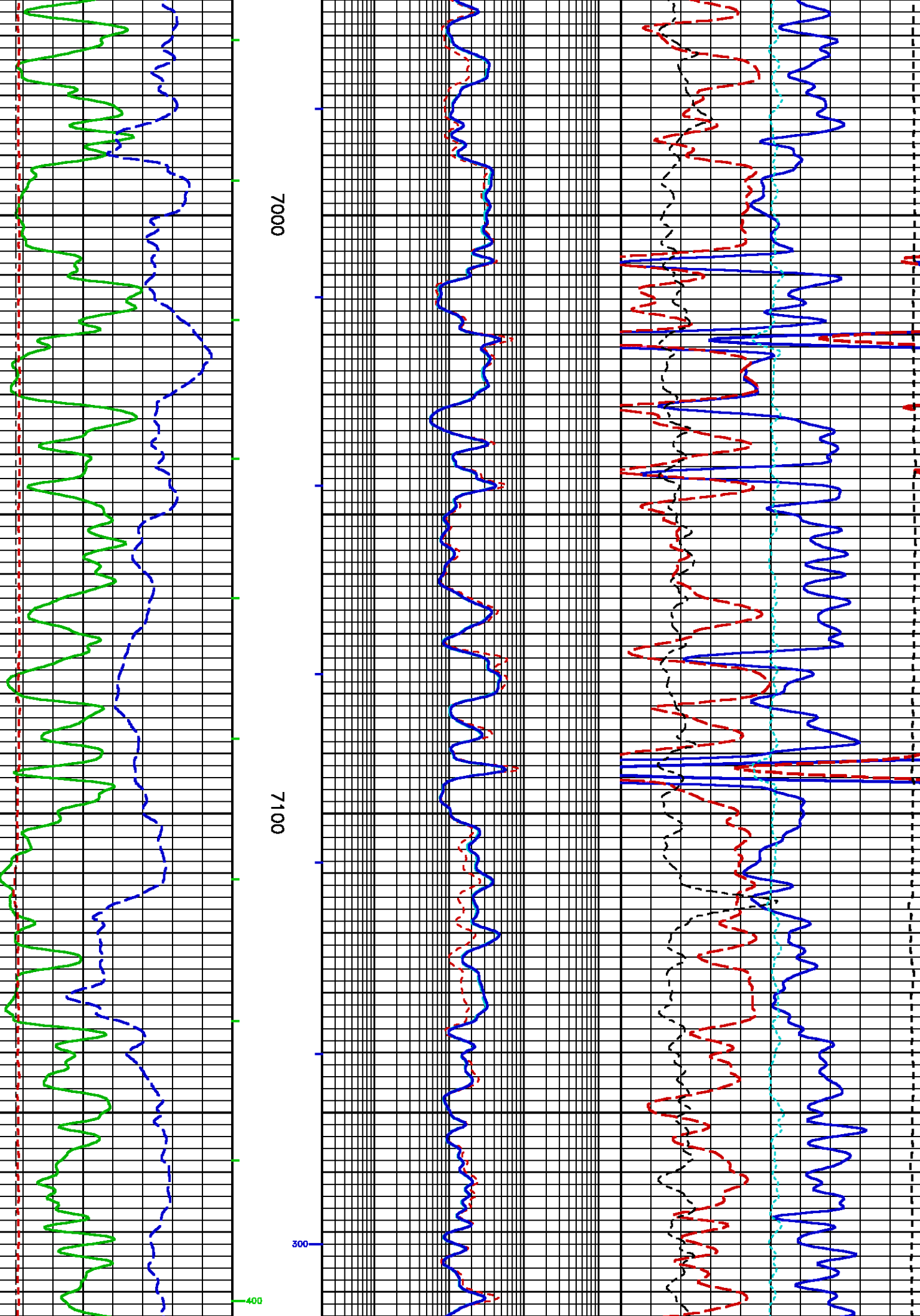


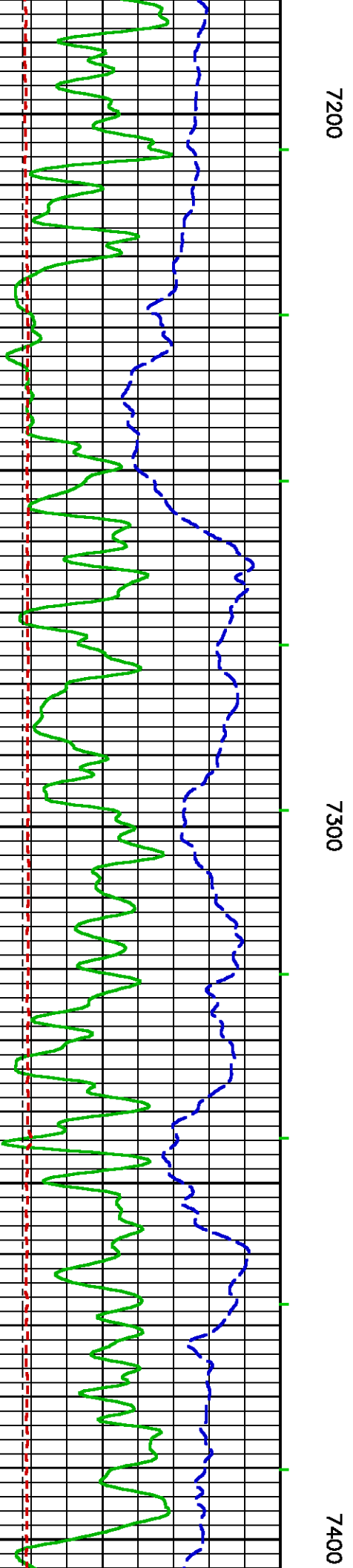
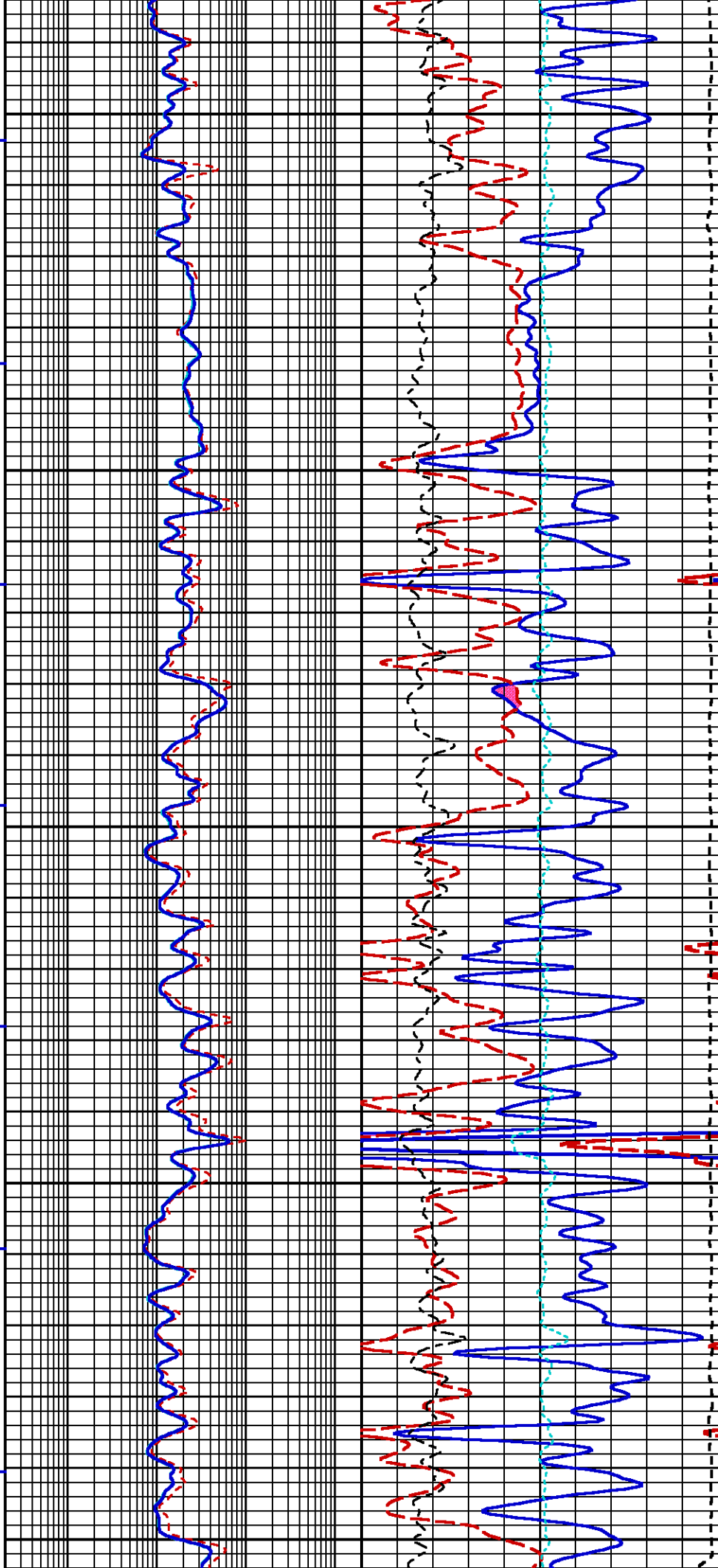




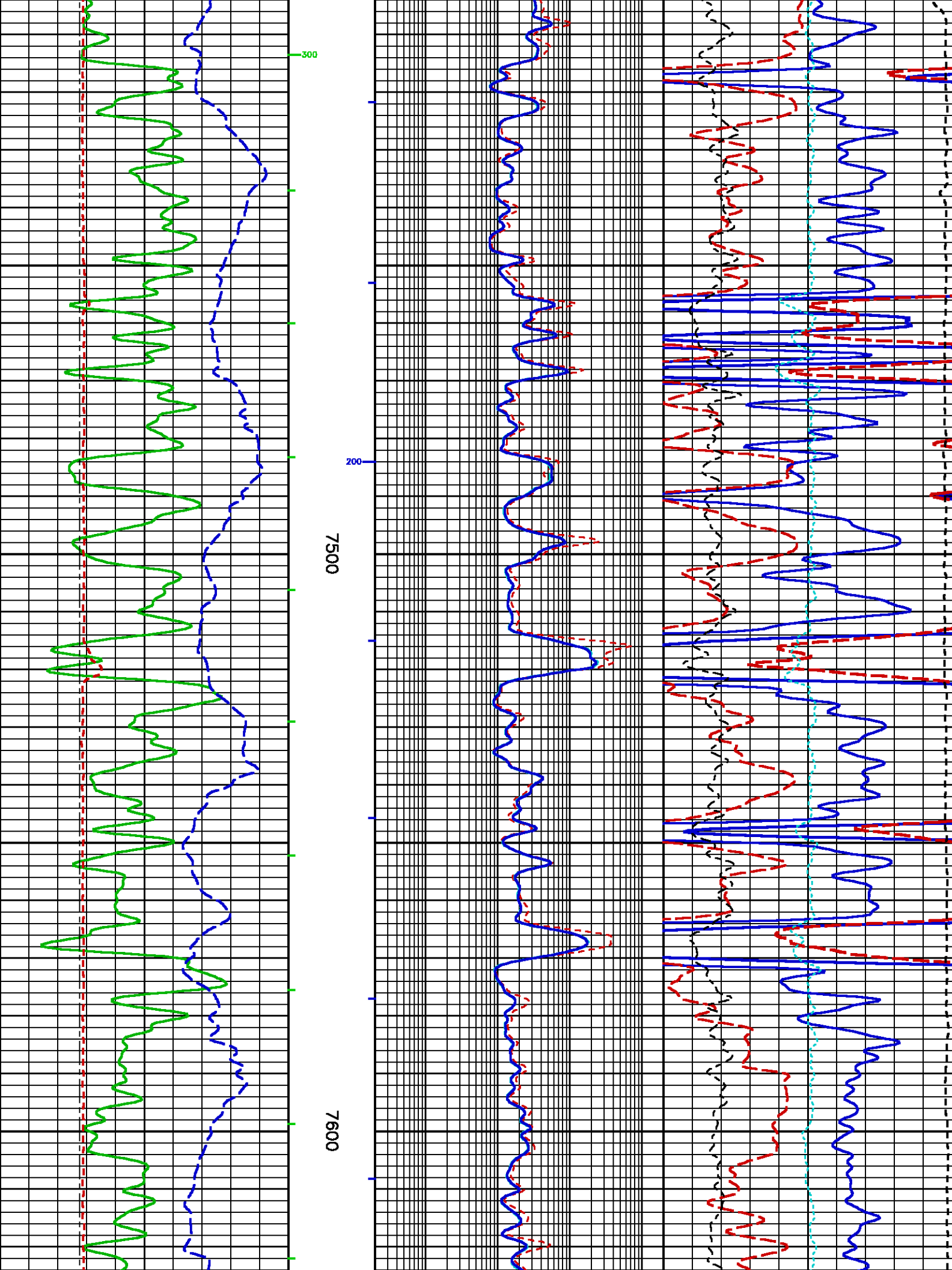


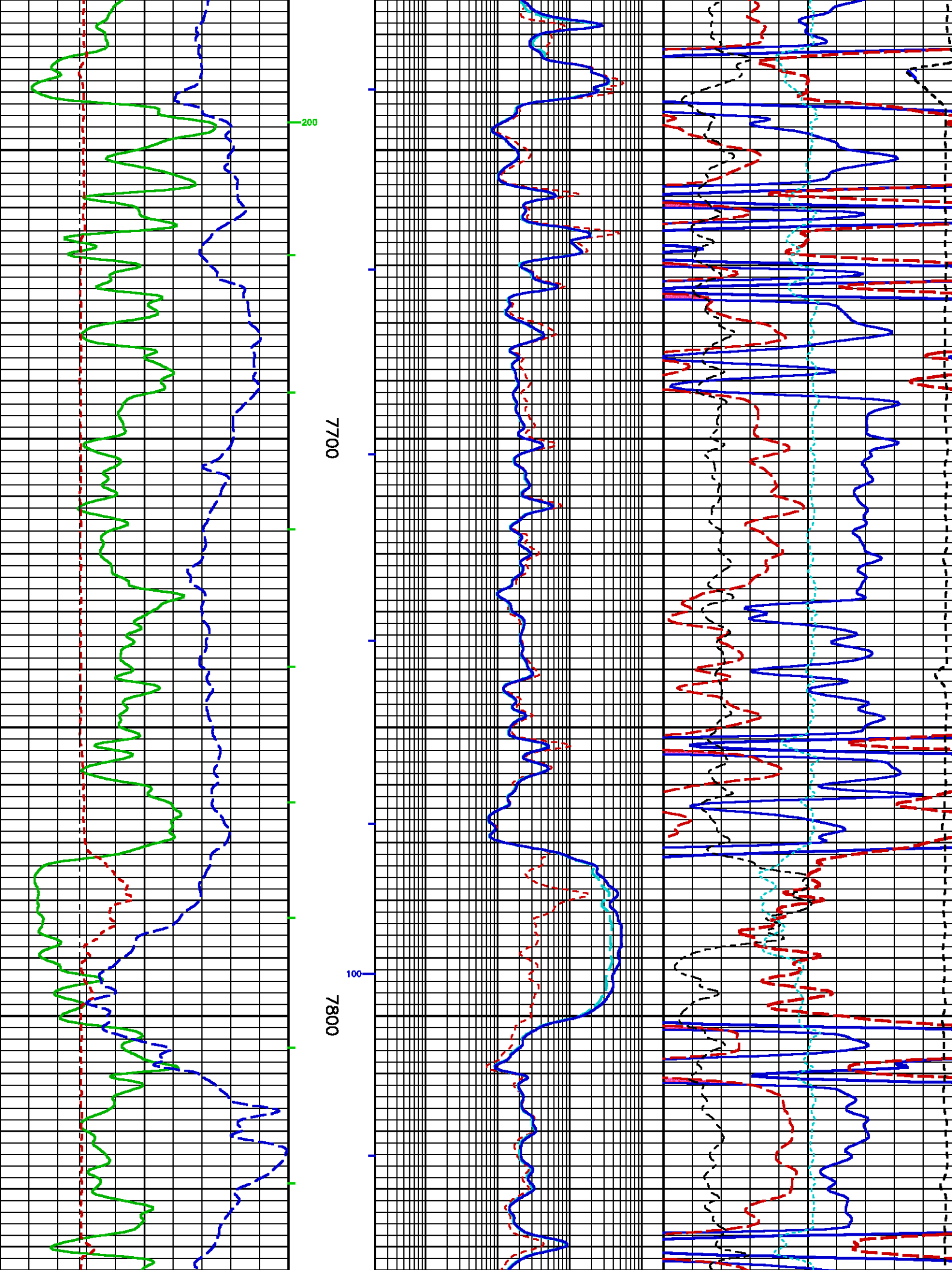


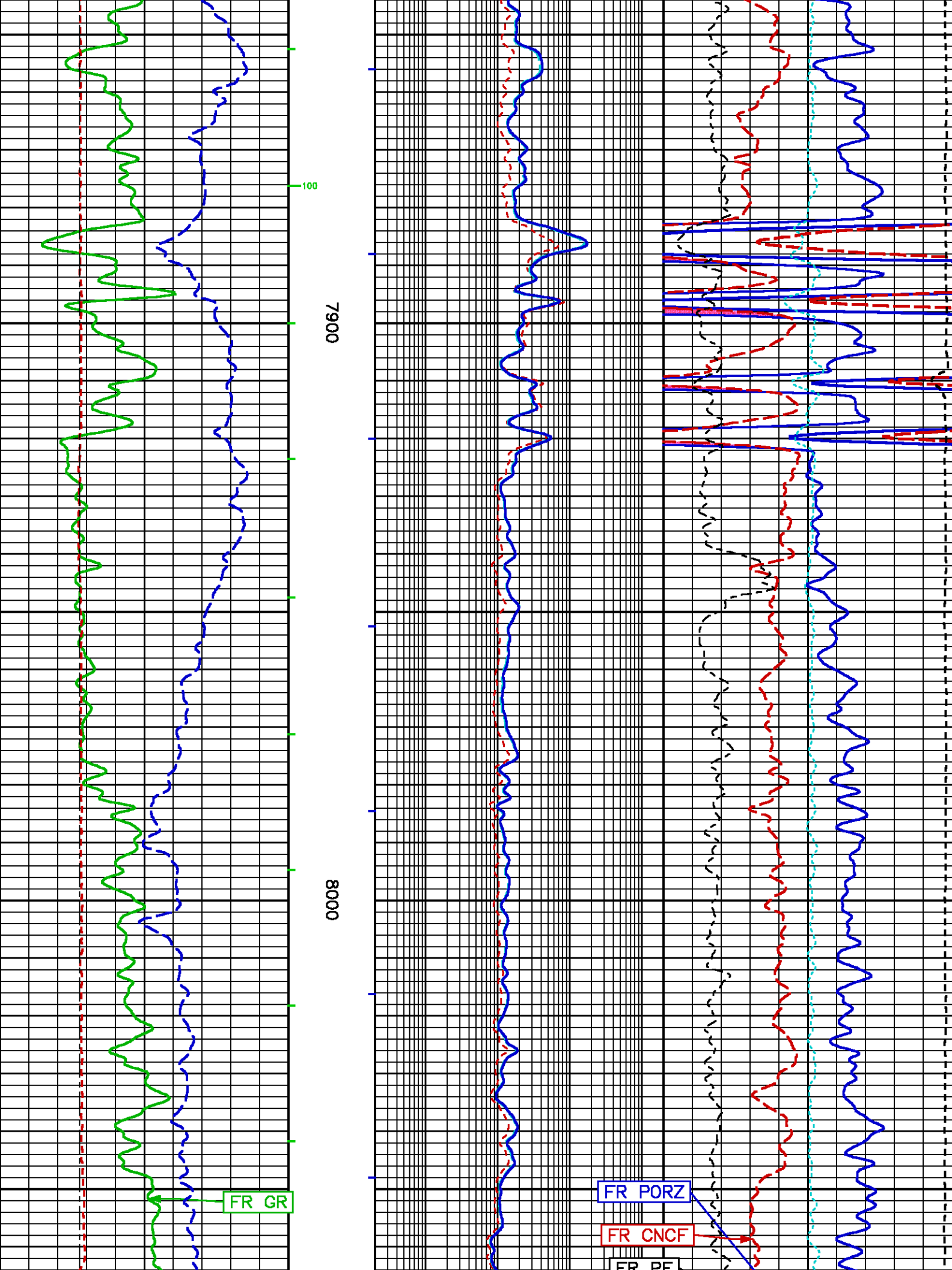


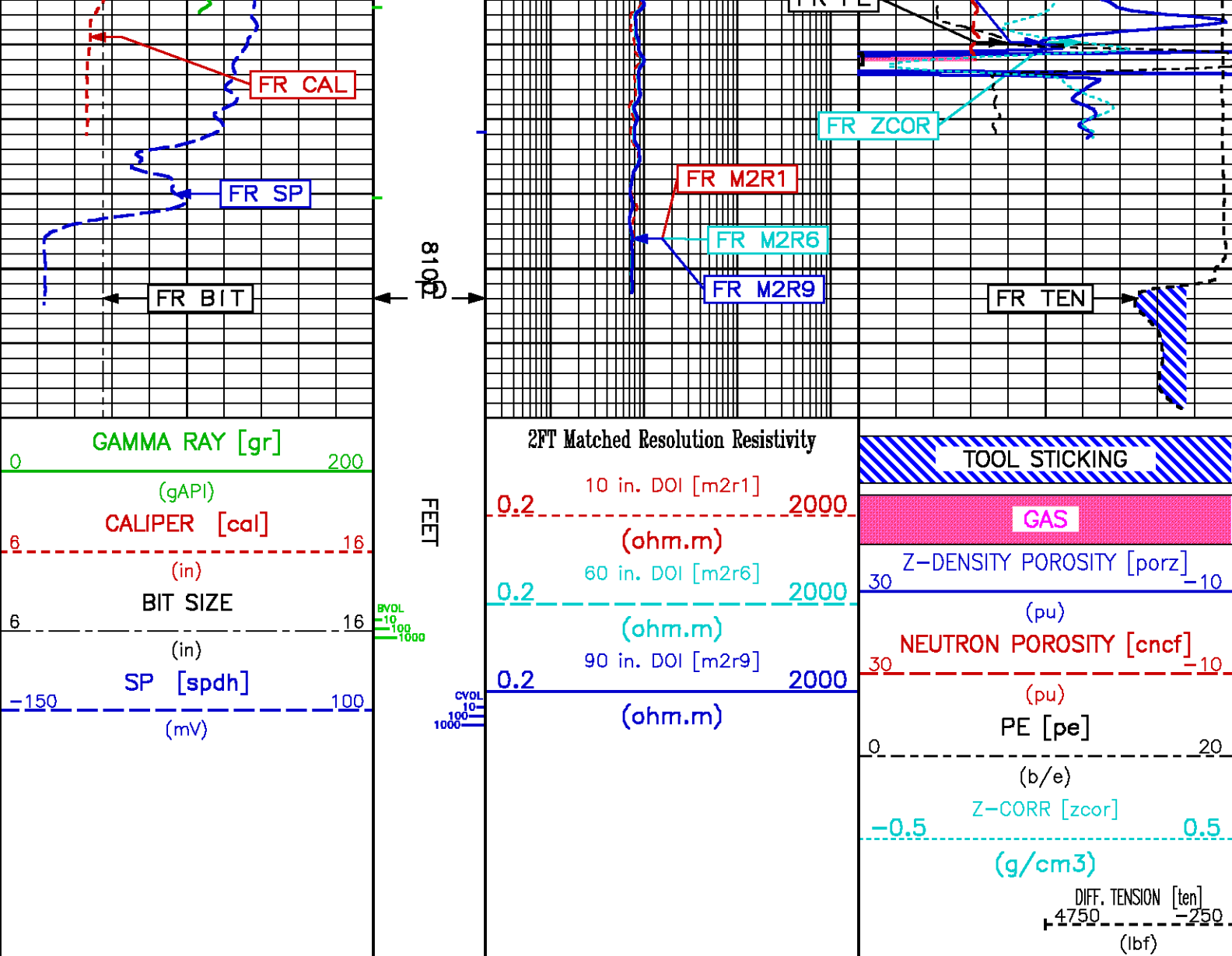












REPEAT LOG

ECLIPS 6.11 Aug 06, 2010  
Updates: 1,2 Patches: 2

Sun Apr 7 17:20:51 2013

Pcrplt /main/62

Cplot

Pdf\_Cpp /main/16

Fileview 5.61

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/633634/m881102.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 1074.250 ft BOTTOM DEPTH: 1462.000 ft

## SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
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 (.l)	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	ln	TOP	BOTTOM
	CASING THICKNESS	0.000	in	''	''
BIT SIZE	BIT SIZE	8.750	in	''	''
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	''	''
	MUD SAMPLE RES	1.240	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	''	''
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		''	''
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		''	''
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	8.750	ln	''	''
	FIXED DIAMETER (mbh*)	8.750	ln	''	''
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	MUD SAMP DERIVED		''	''

CN PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	SANDSTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	900	ppm	''	''
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		''	''
	BIT SIZE BEHIND CSNG	7.875	ln	''	''

ZDL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	RHOmatrix	2.680	g/cm3	TOP	BOTTOM
	RHOfluid	1.000	g/cm3	''	''
ZDL	DENX TRACKING	ON		''	''

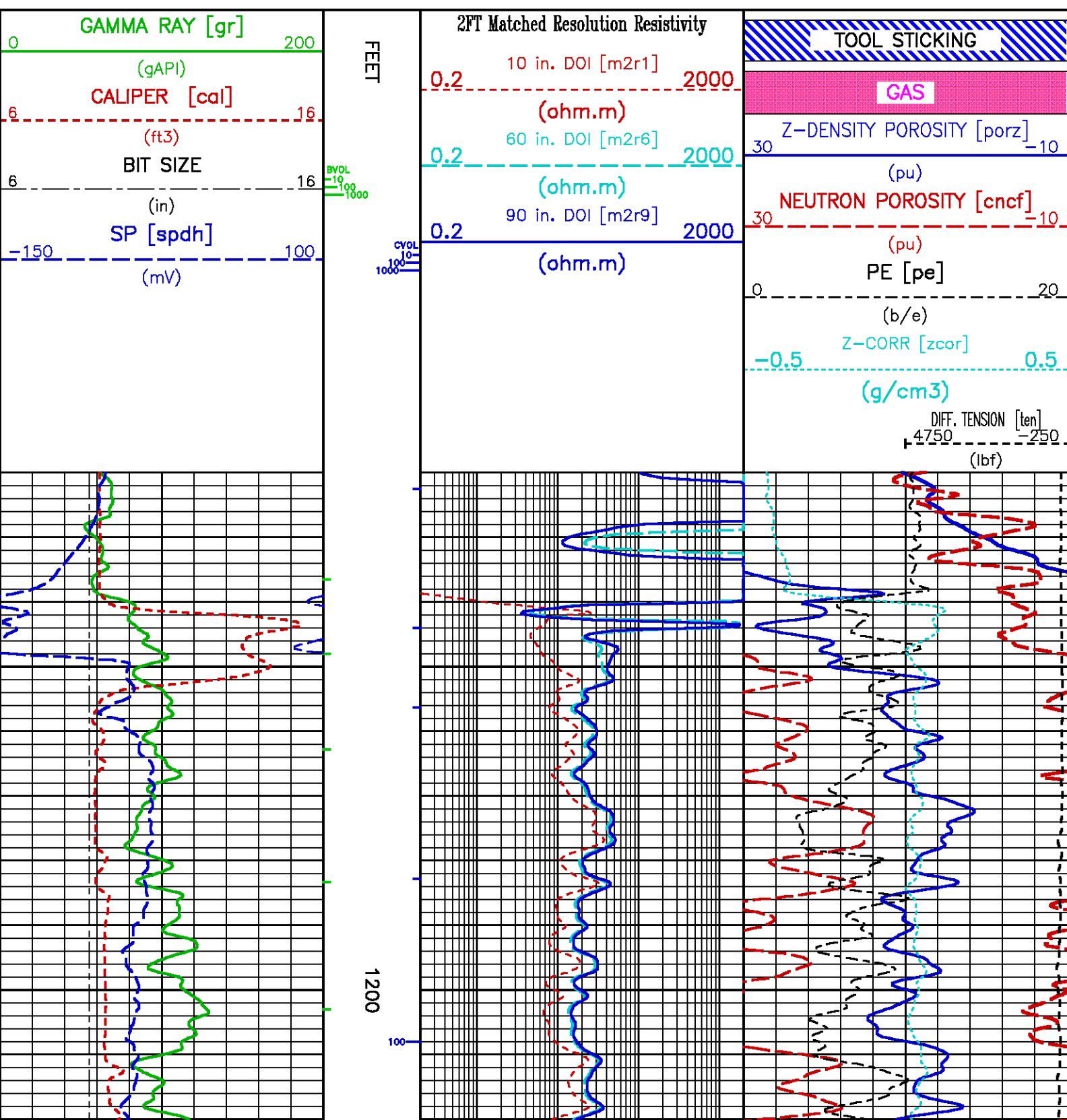
HDIL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		''	''
	ABC to CALCULATE	STANDOFF		''	''
	STANDOFF	1.50	ln	''	''
	TOOL POSITION	ECCENTERED		''	''
	Rmud MULTIPLIER	1.000		''	''

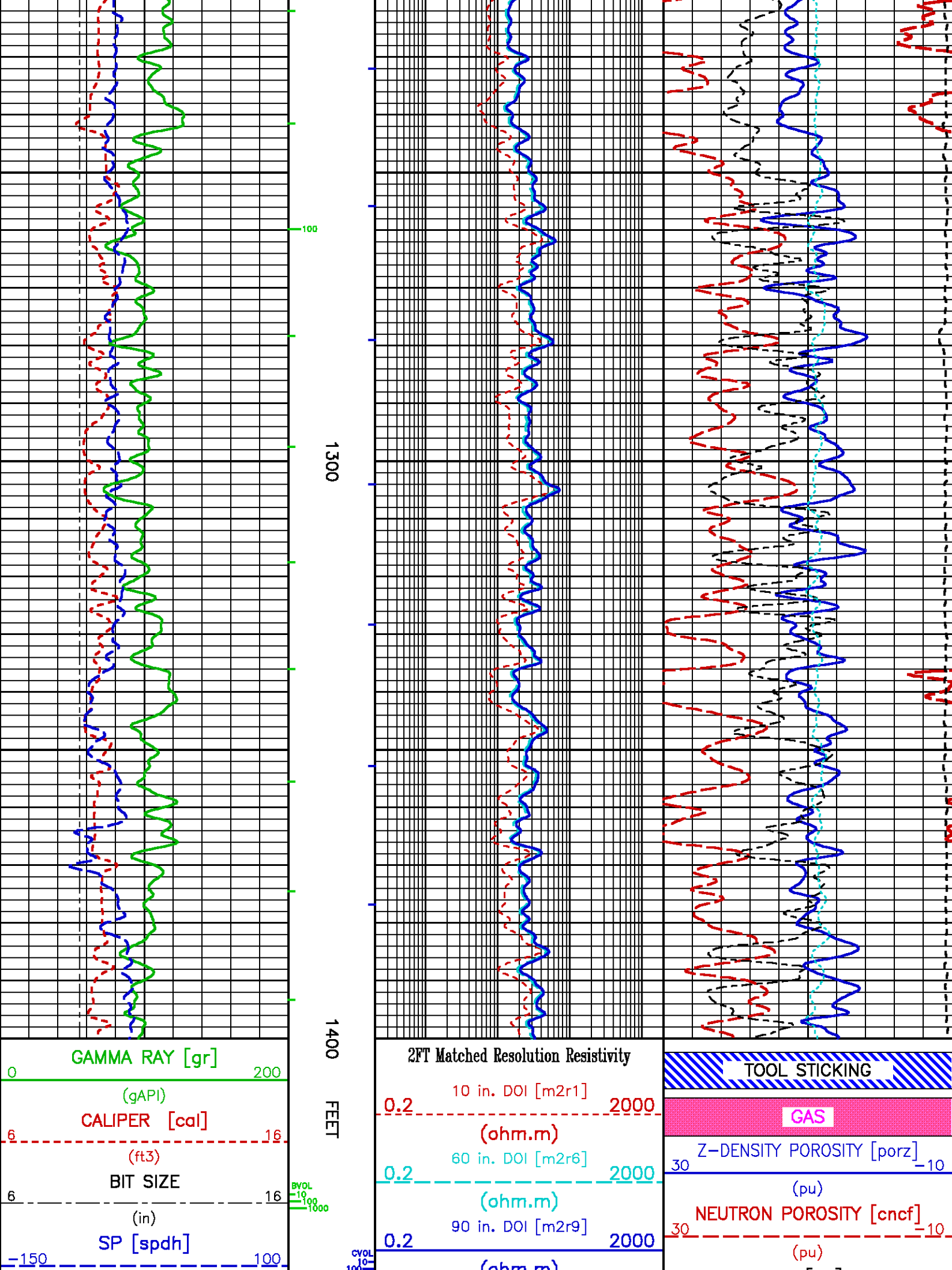
CURVE DESCRIPTION REPORT			
CURVE NAME	CREATION DATE	CURVE DESCRIPTION	
F1:BIT	Apr 7 13:51:10 2013	BIT SIZE	
F1:BVOL	Apr 7 13:51:10 2013	BOREHOLE VOLUME	
F1:CAL	Apr 7 13:51:10 2013	CALIPER	
F1:CNCF	Apr 7 13:51:10 2013	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY	
F1:CVOL	Apr 7 13:51:10 2013	CEMENT VOLUME	
F1:GR	Apr 7 13:51:10 2013	GAMMA RAY	
F1:M2R1	Apr 7 13:51:10 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI	
F1:M2R6	Apr 7 13:51:10 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI	
F1:M2R9	Apr 7 13:51:10 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI	
F1:PE	Apr 7 13:51:10 2013	PHOTO ELECTRIC CROSS-SECTION	
F1:PORZ	Apr 7 13:51:10 2013	POROSITY FOR SELECTABLE MATRIX	
F1:SPDH	Apr 7 13:51:10 2013	SPONTANEOUS POTENTIAL PROCESSED IN COMMON REMOTE	
F1:TEN	Apr 7 13:51:10 2013	DIFFERENTIAL TENSION	
F1:ZCOR	Apr 7 13:51:10 2013	DENSITY CORRECTION	

CURVE MEASURE POINT OFFSET					
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	52.25	M2R9	8.00	SPDH	14.00
CAL	35.00	M2R1	8.00	PE	34.25	TEN	0.00
CNCF	45.25	M2R6	8.00	PORZ	34.25	ZCOR	34.25

Presentation	: rks6685:/dat1a/633634/WPX_REPEAT.pdf [5"/100' Scale]
Plot Interval	: 1120 - 1400 Feet
Data File 1	: F1 : rks6685:/dat1a/633634/repeat.xtf
Created On	: Apr 7 13:51:10 2013
Company	: WPX
Well	: DUGGAN RWF 413-29
Field	: RULLISON
File Interval	: 1009.5 - 2942.75 Feet
Oct	: m681





(mV)	1000	(g/mm.m)	0	20
			(b/e)	
			Z-CORR [zcor]	
			-0.5	0.5
			(g/cm3)	
			DIFF. TENSION [ten]	
			4750	250
			(lbf)	

CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/833834/m6881\_1.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #:	1329XA 1020998	DATE/TIME PERFORMED:	Thu Apr 4 12:12:09 2013
UNIT #:	3885TC HL6685	CALB JIG #:	4702NK WA-841
	BACKGROUND CALBTR ON	CR DIFF	MULT
	(cts/s) (cts/s)	(cts/s)	
GR	322.49 1174.78	852.3	0.176
		830.0 960.0	
	BACKGROUND CALBTR ON	CALBTR	
	(gAPI) (gAPI)	(gAPI)	
	56.78 206.78	150	

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #:	1329XA 1020998	DATE/TIME PERFORMED:	Sat Apr 6 18:18:36 2013	DAYS SINCE CAL:	2
UNIT #:	3885TC HL6685	VERI JIG #:	4702NK WA-841		
	BACKGROUND CALBTR ON	MULT	BACKGROUND CALBTR ON	DIFF.	
	(cts/s) (cts/s)		(gAPI) (gAPI)	(gAPI)	
GR	329.20 1182.13	0.176	57.94 208.05	150.11	
				144.58 164.58	

CN PRIMARY CALIBRATION SUMMARY

TOOL #:	2446XA 10400611	DATE/TIME PERFORMED:	Thu Apr 4 14:45:12 2013
UNIT #:	3885TC HL6685	CALIBRATOR #:	2437XB 112644
		SOURCE #:	4717XS N-943
	MEASURED DEADTM CORR	DTC	NOMINAL
	CPS CPS	SSN/LSN	SSN/LSN
LSN	601.54 610.35		
SSN	1533.77 1582.31		
		CORRECTION	POROSITY
		FACTOR	(pu)
RATIO		2.59247 2.75100	1.06115
		0.87000 1.07000	
CN			21.358

CN PRIMARY VERIFICATION SUMMARY

TOOL #:	2446XA 10400611	DATE/TIME PERFORMED:	Mon Feb 4 14:55:31 2013
UNIT #:	3885TC HL6685	ICE BLOCK #:	4717ND D-070
	MEASURED DEADTM CORR	DTC	CORRECTION
	CPS CPS	SSN/LSN	FACTOR
LSN	1819.56 1902.69		
		DTC CORR	POROSITY
		SSN/LSN	(pu)



SSN	4130.67	4502.72	
RATIO	2.36651	1.06115	2.51249
CN	18.026		

### CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2446XA 10400611 DATE/TIME PERFORMED: Sat Apr 6 18:17:17 2013 DAYS SINCE CAL: 2

UNIT #: 3885TC HL6685 ICE BLOCK #: 4717ND D-070

	MEASURED	DEADTM	CORR	DTC	CORRECTION	DTC CORR	POROSITY
	CPS	CPS	SSN/LSN	FACTOR	SSN/LSN	(pu)	
LSN	1874.48	1962.83					
SSN	4106.16	4473.62					
RATIO			2.27917	1.06115	2.41981		
CN					16.785		
					16.026		20.028

### CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2234XA 10334913 DATE/TIME PERFORMED: Thu Apr 4 15:01:34 2013

UNIT #: 3885TC HL6685

	SMALL RING	LARGE RING	MULT	ADD	SMALL RING	LARGE RING
	(In)	(In)			(In)	(In)
CALIPER	2562.4	1764.0	-0.00767	27.53269	7.875	14.000

### CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 10334913 DATE/TIME PERFORMED: Sat Apr 6 18:23:34 2013 DAYS SINCE CAL: 2

UNIT #: 3885TC HL6685

	I.D.	MULT	ADD	I.D.
	(In)			(In)
CALIPER	2571.6	-0.00767	27.60327	7.875

### ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2234XA 10334913 DATE/TIME PERFORMED: Thu Apr 4 15:41:32 2013

UNIT: 3885TC HL6685 CALB BLKS: 2225XA 094299 CS SRC: 4703NT 3046GW

	SS CS PK	LS CS PK	SS_BKGD	LS BKGD		
	(Channel)	(Channel)	(cps)	(cps)		
	225.2	224.0	1478.2	1578.5		
	220.0	230.0	220.0	230.0		
	SS	LS	SHR	DEN	CORR	PE
	(cps)	(cps)		(g/cm3)	(g/cm3)	(b/e)
MG (LO PE)	19644.8	10576.8	0.612	1.699	0.003	2.150
			0.565	0.665		
AL	11553.2	1067.9		2.695	-0.009	
AL + SHIM	15858.3	1865.1		2.613	0.157	
MG + SHIM (HI PE)	9493.7	4999.5	0.243			8.700
			0.210	0.270		
RATIO AL + SHIM/AL	1.37	1.75				
	1.32	1.42	1.64	1.84		
RATIO MG/AL	1.70	9.90				
	1.65	1.78	8.40	10.20		

# ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 10334913 DATE/TIME PERFORMED: Sat Apr 6 18:17:23 2013 DAYS SINCE CAL: 2

UNIT #: 3885TC HL6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	1587.1	224.7	1178.0
	1478.5 1678.5	220.0 230.0	1100.0 1550.0
SS	1485.7	224.0	1274.0
	1578.2 1578.2	220.0 230.0	1100.0 1550.0
LV (V)	5.0	PAD CURRENT (mA)	74.7
	4.8 5.2	50.0 120.0	

# HDIL PRIMARY CALIBRATION SUMMARY

TOOL #: 1515MA 177927 DATE/TIME PERFORMED: Fri Aug 3 11:25:55 2012

UNIT #: 3885TD ML4230 GRCOND ID & DATE: 178 082996

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.027 -0.200 0.200	0.038 -0.100 0.100	0.035 -0.100 0.100	0.022 -0.100 0.100	0.014 -0.100 0.100	0.018 -0.100 0.100	0.018 -0.100 0.100	0.018 -0.100 0.100
Coil 0 Q	0.017 -1.000 1.000	0.028 -0.200 0.200	0.020 -0.100 0.100	0.015 -0.100 0.100	0.012 -0.100 0.100	0.005 -0.100 0.100	-0.005 -0.100 0.100	-0.008 -0.100 0.100
Coil 1 R	0.049 -0.200 0.200	0.043 -0.100 0.100	0.034 -0.100 0.100	0.032 -0.100 0.100	0.030 -0.100 0.100	0.031 -0.100 0.100	0.033 -0.100 0.100	0.038 -0.100 0.100
Coil 1 Q	-0.008 -1.000 1.000	-0.001 -0.200 0.200	0.004 -0.100 0.100	0.005 -0.100 0.100	-0.000 -0.100 0.100	-0.004 -0.100 0.100	-0.007 -0.100 0.100	-0.008 -0.100 0.100
Coil 2 R	0.032 -0.200 0.200	0.040 -0.100 0.100	0.040 -0.100 0.100	0.034 -0.100 0.100	0.036 -0.100 0.100	0.042 -0.100 0.100	0.049 -0.100 0.100	0.054 -0.100 0.100
Coil 2 Q	0.003 -1.000 1.000	0.004 -0.200 0.200	0.004 -0.100 0.100	-0.001 -0.100 0.100	-0.007 -0.100 0.100	-0.010 -0.100 0.100	-0.009 -0.100 0.100	-0.008 -0.100 0.100
Coil 3 R	0.087 -0.100 0.100	0.058 -0.100 0.100	0.044 -0.100 0.100	0.046 -0.100 0.100	0.041 -0.100 0.100	0.037 -0.100 0.100	0.038 -0.100 0.100	0.043 -0.100 0.100
Coil 3 Q	-0.015 -0.500 0.500	-0.009 -0.200 0.200	0.002 -0.100 0.100	0.009 -0.100 0.100	0.001 -0.100 0.100	-0.003 -0.100 0.100	-0.008 -0.100 0.100	-0.013 -0.100 0.100
Coil 4 R	-0.004 -0.200 0.200	0.014 -0.200 0.200	0.010 -0.200 0.200	-0.000 -0.200 0.200	-0.001 -0.200 0.200	0.001 -0.200 0.200	0.007 -0.200 0.200	0.004 -0.200 0.200
Coil 4 Q	-0.002 -1.000 1.000	0.011 -0.400 0.400	0.007 -0.200 0.200	0.010 -0.200 0.200	0.003 -0.200 0.200	-0.003 -0.200 0.200	-0.008 -0.200 0.200	-0.005 -0.200 0.200
Coil 5 R	0.030 -0.400 0.400	0.024 -0.400 0.400	0.022 -0.400 0.400	0.030 -0.400 0.400	0.037 -0.400 0.400	0.024 -0.400 0.400	0.032 -0.400 0.400	0.031 -0.400 0.400
Coil 5 Q	-0.014 -2.000 2.000	-0.013 -0.800 0.800	-0.003 -0.400 0.400	0.002 -0.400 0.400	0.006 -0.400 0.400	-0.002 -0.400 0.400	0.004 -0.400 0.400	-0.001 -0.400 0.400
Coil 6 R	0.011 -1.000 1.000	0.013 -1.000 1.000	0.011 -1.000 1.000	0.018 -1.000 1.000	-0.005 -1.000 1.000	0.021 -1.000 1.000	0.019 -1.000 1.000	0.013 -1.000 1.000
Coil 6 Q	-0.019 -5.000 5.000	0.011 -2.000 2.000	0.003 -1.000 1.000	0.007 -1.000 1.000	0.003 -1.000 1.000	-0.005 -1.000 1.000	-0.014 -1.000 1.000	-0.017 -1.000 1.000

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	126.69 100.00 150.00	125.47 100.00 150.00	123.21 98.00 150.00	119.71 88.00 140.00	115.08 82.00 140.00	109.38 87.00 130.00	102.58 82.00 120.00	94.62 78.00 110.00
Coil 0 P	7.252 6.000 9.000	22.818 19.000 28.000	38.177 32.000 47.000	53.521 44.000 66.000	88.846 57.000 85.000	84.178 70.000 100.000	99.399 82.000 120.000	114.674 85.000 140.000
Coil 1 M	218.92 180.00 270.00	216.47 180.00 270.00	211.83 170.00 260.00	204.92 170.00 250.00	196.00 180.00 250.00	185.15 160.00 230.00	172.69 150.00 220.00	158.55 140.00 200.00
Coil 1 P	7.620 6.000 9.000	24.028 19.000 28.000	40.155 32.000 48.000	56.192 45.000 67.000	72.152 57.000 86.000	88.068 70.000 110.000	103.782 83.000 120.000	119.427 98.000 140.000
Coil 2 M	443.05 360.00 540.00	438.36 360.00 540.00	429.52 350.00 530.00	418.37 340.00 510.00	399.31 330.00 500.00	378.51 310.00 470.00	354.58 300.00 440.00	326.65 270.00 410.00
Coil 2 P	7.587 6.000 9.000	23.788 19.000 28.000	39.737 32.000 48.000	55.823 45.000 67.000	71.430 58.000 87.000	87.253 71.000 110.000	102.848 84.000 130.000	118.469 98.000 140.000
Coil 3 M	717.48 590.00 880.00	708.02 580.00 870.00	692.71 570.00 850.00	669.13 550.00 830.00	638.61 530.00 800.00	601.77 500.00 780.00	560.51 470.00 710.00	513.32 440.00 680.00
Coil 3 P	7.740 6.000 10.000	24.254 20.000 29.000	40.499 33.000 49.000	56.654 46.000 69.000	72.684 59.000 89.000	88.635 72.000 110.000	104.347 85.000 130.000	120.019 98.000 150.000
Coil 4 M	1148.3 800.0 1400.0	1135.1 800.0 1300.0	1113.6 800.0 1300.0	1081.3 850.0 1300.0	1038.4 800.0 1300.0	985.7 800.0 1300.0	923.7 750.0 1100.0	852.1 700.0 1000.0

Coil 4 P	7.560 6.000 10.000	23.769 20.000 30.000	39.780 35.000 50.000	55.704 48.000 70.000	71.620 60.000 90.000	87.550 75.000 110.000	103.347 88.000 130.000	119.148 99.000 150.000
Coil 5 M	2310.5 1900.0 2800.0	2290.4 1800.0 2800.0	2250.6 1800.0 2700.0	2188.9 1800.0 2600.0	2107.0 1700.0 2500.0	2002.0 1600.0 2400.0	1878.3 1500.0 2200.0	1731.6 1400.0 2100.0
Coil 5 P	7.881 6.000 10.000	24.717 20.000 31.000	41.376 34.000 51.000	58.034 48.000 72.000	74.728 62.000 93.000	91.498 76.000 110.000	108.135 89.000 130.000	124.843 100.000 150.000
Coil 6 M	6013.8 4700.0 7100.0	5937.5 4700.0 7000.0	5795.6 4600.0 6900.0	5589.7 4400.0 6600.0	5328.2 4200.0 6400.0	5016.9 4000.0 6000.0	4668.2 3700.0 5600.0	4277.4 3400.0 5100.0
Coil 6 P	8.136 7.000 10.000	25.667 22.000 32.000	42.843 36.000 54.000	59.871 51.000 76.000	78.769 65.000 98.000	93.526 80.000 120.000	110.055 94.000 140.000	126.521 110.000 180.000

AM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	501 -200 800	-52 -500 200	-120 -600 100	-140 -600 50	-148 -500 20	-152 -500 20	-154 -500 20	-155 -500 20
Coil 0 Q	1379 -3000 8000	531 -1000 2000	303 -1000 1200	191 -500 900	119 -400 700	68 -400 800	26 -400 500	-10 -400 400
Coil 1 R	571 450 650	88 20 130	24 -30 60	1 -50 40	-11 -55 30	-17 -60 20	-21 -80 10	-23 -80 10
Coil 1 Q	1001 0 2500	421 0 900	268 0 600	196 0 450	153 0 350	125 0 500	104 0 250	88 0 250
Coil 2 R	200.4 140.0 230.0	31.1 0.0 51.0	10.5 -10.0 25.0	3.5 -15.0 15.0	0.2 -16.0 10.0	-1.7 -18.0 7.0	-3.3 -18.0 5.0	-4.2 -16.0 3.0
Coil 2 Q	225.2 -200.0 1000.0	105.7 0.0 350.0	72.0 0.0 220.0	58.9 0.0 160.0	49.1 0.0 130.0	45.0 0.0 110.0	42.2 0.0 100.0	40.7 0.0 90.0
Coil 3 R	46.3 37.0 62.0	5.7 0.0 12.0	0.8 -3.0 6.0	-0.9 -4.0 4.0	-1.7 -5.0 2.0	-2.1 -5.0 1.0	-2.7 -8.0 1.0	-2.9 -8.0 1.0
Coil 3 Q	74.3 -140.0 280.0	34.0 -40.0 100.0	25.2 -20.0 70.0	22.5 -10.0 60.0	21.8 -10.0 50.0	22.4 -10.0 50.0	23.1 -10.0 50.0	23.9 -10.0 50.0
Coil 4 R	10.02 2.00 18.00	0.56 -3.00 6.00	-0.55 -3.50 3.00	-0.92 -3.90 2.00	-1.09 -4.20 2.00	-1.23 -4.50 2.00	-1.32 -4.70 2.00	-1.32 -5.00 2.00
Coil 4 Q	-14.77 -100.00 100.00	-0.29 -30.00 50.00	3.87 -20.00 40.00	6.99 -10.00 40.00	9.64 -10.00 40.00	12.17 -10.00 45.00	14.62 -10.00 50.00	17.24 -10.00 60.00
Coil 5 R	1.55 -2.00 5.80	-0.40 -3.20 2.40	-0.55 -4.50 3.10	-0.64 -4.70 3.20	-0.73 -4.80 3.20	-0.91 -5.00 3.30	-0.78 -5.20 3.40	-0.93 -5.40 3.50
Coil 5 Q	-4.49 -80.00 70.00	1.66 -20.00 30.00	4.67 -20.00 30.00	7.39 -20.00 35.00	9.91 -20.00 45.00	12.30 -20.00 50.00	14.63 -20.00 60.00	16.95 -30.00 70.00
Coil 6 R	-2.52 -4.80 1.00	-0.81 -5.70 3.80	-0.44 -6.50 4.90	-0.39 -8.90 5.40	-0.37 -7.30 5.80	-0.33 -7.50 6.00	-0.44 -7.70 6.10	-0.59 -7.90 6.30
Coil 6 Q	-3.46 -30.00 30.00	1.02 -20.00 25.00	3.88 -20.00 35.00	6.48 -30.00 50.00	8.72 -35.00 60.00	10.99 -40.00 70.00	13.19 -50.00 80.00	15.41 -60.00 100.00

MM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	0.993 0.900 1.100	0.992 0.900 1.100	0.988 0.900 1.100	0.987 0.900 1.100	0.986 0.900 1.100	0.986 0.900 1.100	0.985 0.900 1.100	0.987 0.900 1.100
Coil 0 P	0.067 -2.000 2.000	0.143 -2.000 2.000	0.286 -2.000 2.000	0.255 -2.000 2.000	0.193 -2.000 2.000	0.095 -2.000 2.000	0.034 -2.000 2.000	0.024 -2.000 2.000
Coil 1 M	0.979 0.800 1.100	0.977 0.800 1.100	0.973 0.900 1.100	0.972 0.800 1.100	0.970 0.800 1.100	0.968 0.900 1.100	0.967 0.800 1.100	0.967 0.900 1.100
Coil 1 P	0.093 -2.000 2.000	0.237 -2.000 2.000	0.318 -2.000 2.000	0.313 -2.000 2.000	0.275 -2.000 2.000	0.218 -2.000 2.000	0.150 -2.000 2.000	0.118 -2.000 2.000
Coil 2 M	0.989 0.800 1.100	0.987 0.800 1.100	0.986 0.900 1.100	0.985 0.800 1.100	0.983 0.800 1.100	0.982 0.900 1.100	0.981 0.800 1.100	0.979 0.900 1.100
Coil 2 P	0.066 -2.000 2.000	0.109 -2.000 2.000	0.151 -2.000 2.000	0.207 -2.000 2.000	0.237 -2.000 2.000	0.278 -2.000 2.000	0.227 -2.000 2.000	0.235 -2.000 2.000
Coil 3 M	1.007 0.800 1.100	1.006 0.800 1.100	1.006 0.900 1.100	1.005 0.800 1.100	1.003 0.800 1.100	1.002 0.900 1.100	1.002 0.800 1.100	1.001 0.900 1.100
Coil 3 P	0.098 -2.000 2.000	0.063 -2.000 2.000	0.127 -2.000 2.000	0.162 -2.000 2.000	0.190 -2.000 2.000	0.169 -2.000 2.000	0.164 -2.000 2.000	0.237 -2.000 2.000
Coil 4 M	1.019 0.800 1.100	1.018 0.800 1.100	1.017 0.900 1.100	1.016 0.800 1.100	1.014 0.800 1.100	1.013 0.900 1.100	1.012 0.800 1.100	1.011 0.800 1.100
Coil 4 P	0.035 -2.000 2.000	0.087 -2.000 2.000	0.120 -2.000 2.000	0.160 -2.000 2.000	0.156 -2.000 2.000	0.154 -2.000 2.000	0.139 -2.000 2.000	0.116 -2.000 2.000
Coil 5 M	1.022 0.900 1.100	1.022 0.900 1.100	1.022 0.900 1.100	1.020 0.900 1.100	1.020 0.900 1.100	1.019 0.900 1.100	1.018 0.900 1.100	1.017 0.900 1.100
Coil 5 P	0.072 -2.000 2.000	-0.000 -2.000 2.000	0.090 -2.000 2.000	0.102 -2.000 2.000	0.077 -2.000 2.000	0.024 -2.000 2.000	0.050 -2.000 2.000	0.032 -2.000 2.000
Coil 6 M	1.017 0.800 1.100	1.018 0.800 1.100	1.017 0.900 1.100	1.015 0.800 1.100	1.015 0.800 1.100	1.021 0.900 1.100	1.021 0.800 1.100	1.020 0.800 1.100
Coil 6 P	0.008 -2.000 2.000	0.124 -2.000 2.000	0.088 -2.000 2.000	0.158 -2.000 2.000	0.080 -2.000 2.000	-0.045 -2.000 2.000	0.002 -2.000 2.000	-0.120 -2.000 2.000

PARMS

TCID 0

TCID 1

Cal Temp  
(degF)

T Factor

IDs

1.250

0.747

75.9

1.04

TOOL #: 1515MA 177927 DATE/TIME PERFORMED: Sat Apr 6 18:19:49 2013 DAYS SINCE CAL: 246

UNIT #: 3885TC HL6685

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-0.001 -0.200 0.200	0.002 -0.100 0.100	0.003 -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	0.005 -1.000 1.000	0.007 -0.200 0.200	0.002 -0.100 0.100	0.003 -0.100 0.100	0.002 -0.100 0.100	0.001 -0.100 0.100	0.000 -0.100 0.100	0.001 -0.100 0.100
Coil 1 R	0.002 -0.200 0.200	0.003 -0.100 0.100	0.003 -0.100 0.100	0.002 -0.100 0.100	0.001 -0.100 0.100	0.002 -0.100 0.100	0.001 -0.100 0.100	0.000 -0.100 0.100
Coil 1 Q	0.001 -1.000 1.000	0.003 -0.200 0.200	0.002 -0.100 0.100	0.003 -0.100 0.100	0.003 -0.100 0.100	0.002 -0.100 0.100	0.002 -0.100 0.100	0.001 -0.100 0.100
Coil 2 R	0.000 -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 2 Q	-0.004 -1.000 1.000	-0.001 -0.200 0.200	-0.001 -0.100 0.100	0.001 -0.100 0.100	-0.002 -0.100 0.100	-0.004 -0.100 0.100	-0.001 -0.100 0.100	-0.001 -0.100 0.100
Coil 3 R	0.001 -0.100 0.100	0.000 -0.100 0.100	-0.003 -0.100 0.100	0.003 -0.100 0.100	0.001 -0.100 0.100	-0.003 -0.100 0.100	-0.003 -0.100 0.100	-0.003 -0.100 0.100
Coil 3 Q	-0.005 -0.500 0.500	-0.005 -0.200 0.200	0.001 -0.100 0.100	0.001 -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
Coil 4 R	0.001 -0.200 0.200	0.008 -0.200 0.200	0.005 -0.200 0.200	0.005 -0.200 0.200	0.004 -0.200 0.200	0.007 -0.200 0.200	0.003 -0.200 0.200	0.005 -0.200 0.200
Coil 4 Q	-0.009 -1.000 1.000	0.003 -0.400 0.400	-0.000 -0.200 0.200	0.005 -0.200 0.200	0.006 -0.200 0.200	-0.001 -0.200 0.200	-0.001 -0.200 0.200	0.003 -0.200 0.200
Coil 5 R	-0.003 -0.400 0.400	-0.000 -0.400 0.400	0.007 -0.400 0.400	0.009 -0.400 0.400	0.006 -0.400 0.400	0.004 -0.400 0.400	-0.009 -0.400 0.400	-0.005 -0.400 0.400
Coil 5 Q	-0.000 -2.000 2.000	0.000 -0.800 0.800	-0.009 -0.400 0.400	0.011 -0.400 0.400	0.019 -0.400 0.400	0.009 -0.400 0.400	0.001 -0.400 0.400	0.002 -0.400 0.400
Coil 6 R	-0.010 -1.000 1.000	-0.001 -1.000 1.000	0.033 -1.000 1.000	0.001 -1.000 1.000	-0.001 -1.000 1.000	0.001 -1.000 1.000	-0.023 -1.000 1.000	-0.008 -1.000 1.000
Coil 6 Q	0.027 -5.000 5.000	-0.005 -2.000 2.000	-0.007 -1.000 1.000	0.009 -1.000 1.000	-0.001 -1.000 1.000	0.018 -1.000 1.000	-0.000 -1.000 1.000	-0.006 -1.000 1.000

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	128.14 100.00 150.00	126.87 100.00 150.00	124.47 98.00 150.00	120.73 86.00 140.00	115.91 82.00 140.00	109.84 87.00 130.00	102.81 82.00 120.00	94.56 76.00 110.00
Coil 0 P	7.643 6.000 9.000	23.984 19.000 28.000	40.107 32.000 47.000	56.214 44.000 68.000	72.278 57.000 85.000	88.362 70.000 100.000	104.275 82.000 120.000	120.182 95.000 140.000
Coil 1 M	219.91 180.00 270.00	217.37 180.00 270.00	212.53 170.00 260.00	205.23 170.00 250.00	196.04 160.00 250.00	184.74 160.00 230.00	172.01 150.00 220.00	157.47 140.00 200.00
Coil 1 P	7.915 6.000 9.000	24.848 19.000 28.000	41.500 32.000 48.000	58.079 45.000 67.000	74.536 57.000 86.000	90.945 70.000 110.000	107.070 83.000 120.000	123.148 98.000 140.000
Coil 2 M	448.96 380.00 540.00	444.07 380.00 540.00	434.69 350.00 530.00	420.67 340.00 510.00	402.87 330.00 500.00	380.87 310.00 470.00	355.95 300.00 440.00	326.99 270.00 410.00
Coil 2 P	7.882 6.000 9.000	24.630 19.000 28.000	41.116 32.000 48.000	57.548 45.000 67.000	73.885 58.000 87.000	90.177 71.000 110.000	106.282 84.000 130.000	122.324 96.000 140.000
Coil 3 M	720.72 590.00 880.00	711.92 580.00 870.00	695.13 570.00 850.00	670.35 550.00 830.00	639.11 530.00 800.00	600.78 500.00 780.00	558.48 470.00 710.00	510.04 440.00 850.00
Coil 3 P	8.153 6.000 10.000	25.464 20.000 28.000	42.497 33.000 49.000	59.430 46.000 69.000	76.224 59.000 88.000	92.929 72.000 110.000	109.338 85.000 130.000	125.673 98.000 150.000
Coil 4 M	1142.8 900.0 1400.0	1131.0 900.0 1300.0	1108.7 900.0 1300.0	1074.3 850.0 1300.0	1031.9 800.0 1200.0	976.0 800.0 1200.0	914.2 750.0 1100.0	839.8 700.0 1000.0
Coil 4 P	7.875 6.000 10.000	24.879 20.000 30.000	41.561 33.000 50.000	58.268 48.000 70.000	74.925 60.000 90.000	91.506 73.000 110.000	107.965 86.000 130.000	124.358 99.000 150.000
Coil 5 M	2188.6 1900.0 2500.0	2167.9 1800.0 2800.0	2128.6 1800.0 2700.0	2067.4 1800.0 2600.0	1987.3 1700.0 2500.0	1884.3 1600.0 2400.0	1765.1 1500.0 2200.0	1622.9 1400.0 2100.0
Coil 5 P	8.154 6.000 10.000	25.553 20.000 31.000	42.738 34.000 51.000	59.948 48.000 72.000	77.157 62.000 93.000	94.434 76.000 110.000	111.540 89.000 130.000	128.690 100.000 150.000
Coil 6 M	6042.0 4700.0 7100.0	5983.5 4700.0 7000.0	5817.3 4600.0 6900.0	5599.4 4400.0 6800.0	5329.3 4200.0 6400.0	5006.0 4000.0 6000.0	4649.5 3700.0 5600.0	4246.2 3400.0 5100.0
Coil 6 P	8.393 7.000 10.000	26.445 22.000 32.000	44.125 36.000 54.000	61.682 51.000 76.000	79.050 65.000 98.000	96.297 80.000 120.000	113.258 94.000 140.000	130.130 110.000 180.000

## INSTRUMENT CONFIGURATION

**CABLEHEAD**  
Diameter : 3.38"  
Length : 5.50'  
Weight : 24 lbs  
Series : CABL338  
Mnemonic : CBLH

**TRM SUB**  
Diameter : 3.63"  
Length : 3.83'  
Weight : 62 lbs  
Series : 3881XA  
Mnemonic : TTRM

**WTS COMMON REMOTE**  
Diameter : 3.63"  
Length : 6.38'  
Weight : 126 lbs  
Series : 3881XB  
Mnemonic : WTS

**DIGITAL SPECTRALOG**  
Diameter : 3.63"  
Length : 7.31'  
Weight : 130 lbs  
Series : 1329XA  
Mnemonic : DSL

**COMPENSATED NEUTRON**  
Diameter : 3.63"  
Length : 7.89'  
Weight : 150 lbs  
Series : 2448XA  
Mnemonic : CN

**Z-DENSILOG**  
Diameter : 4.88"  
Length : 11.22'  
Weight : 360 lbs  
Series : 2234XA  
Mnemonic : ZDL

**KNUCKLE JOINT (DOUBLE)**  
Diameter : 3.38"  
Length : 4.65'  
Weight : 90 lbs  
Series : 3839XA  
Mnemonic : KJNT

**HIGH DEFINITION INDUCTION TOOL**  
Diameter : 3.62"  
Length : 27.13'  
Weight : 415 lbs  
Series : 1515XA  
Mnemonic : HDIL

**BULL PLUG 3 3/8**

TOTAL LENGTH: 73.88'  
TOTAL WEIGHT: 1378 lbs  
MAX DIAMETER: 0'4.88"

CABLEHEAD TOP 71.13'

TEMP MP 65.93'  
RM MP 65.68'

GR MP 62.48'

LSN MP 45.92'  
SSN MP 45.52'

CAL MP 35.28'  
LSD MP 34.54'  
SSD MP 34.14'

SP MP 14.19'

XMTR MP 7.72'

0.00'



**BAKER**

COMPANY  
WELL  
FIELD  
COUNTY

WPX ENERGY INC  
DUGGAN RWF 413-29  
RULISON  
CARFIELD

STATE COLORADO

FILE NO:  
070307

API NO:

05045010570000



COUNTY	<u>GARFIELD</u>	STATE	<u>COLORADO</u>	<u>050452165/0000</u>
LOCATION:  SHL : 572' FSL AND 585' FWL BHL : 1811' FSL AND 696' FWL		ELEVATIONS:		S29 T6S R94W
		KB 5445.2 FT DF GL 5419.2 FT		PAD : RWF 14-29 RIG : NABORS 573
SEC	<u>29</u>	TWP	<u>6S</u>	RGE <u>94W</u>
		DATE	<u>07-APR-2013</u>	