BAKER HUGHES

HIGH DEFINITION INDUCTION LOG SM
COMPENSATED Z-DENSILOG SM
COMPENSATED NEUTRON LOG
GAMMA RAY LOG
CALIPER LOG

FILE NO:	074581
API NO:	05103119490000
COMPANY	WPX ENERGY
WELL	FEDERAL BCU 33-36-199
FIELD	BARCUS CREEK UNIT
COUNTY	RIO BLANCO
STATE	COLORADO

Version
SEC 36 T1N R99W
BCU 442-36-199
RIG: CYCLONE 29

LOCATION:
SHL: 1462' FNL & 1112' FEL
BHL: 2081' FSL & 1984' FEL
SEC 36 TWP 1N RGE 99W

OTHER SERVICES
BHP

PERMANENT DATUM	G.L.	ELEVATION	6868 FT
LOG MEASURED FROM	K.B.	21 FT	ABOVE P.D.
DRILL. MEAS. FROM	K.B.		

ELEVATIONS:
KB 6889 FT
DF
GL 6868 FT

DATE		16-JUL-2013			
RUN	TRIP	1	1		
SERVICE ORDER		633646			
DEPTH DRILLER		10278 FT			
DEPTH LOGGER		10280 FT			
BOTTOM LOGGED INTERVAL		10272 FT			
TOP LOGGED INTERVAL		0 FT			
CASING DRILLER		9.625 IN @ 3228 FT		@	
CASING LOGGER		3228 FT			
BIT SIZE		8.75 IN			
TYPE OF FLUID IN HOLE		LSND			
DENSITY	VISCOSITY	9.4 LB/G	70 S		
PH	FLUID LOSS	9.5	5.8 C3		
SOURCE OF SAMPLE		FLOWLINE			
RM AT MEAS. TEMP.		1.35 OHMM @ 74 DEGF		@	
RMF AT MEAS. TEMP.		0.98 OHMM @ 73 DEGF		@	
RMC AT MEAS. TEMP.		1.67 OHMM @ 72 DEGF		@	
SOURCE OF RMF	RMC	MEASURED	MEASURED		
RM AT BHT		0.482 OHMM @ 220 DEGF		@	
TIME SINCE CIRCULATION		9.5 HOURS			
MAX. RECORDED TEMP.		220 DEGF			
EQUIP. NO.	LOCATION	HL-6685	CASPER, WY		
RECORDED BY		VERCIMAK			
WITNESSED BY		BEAUDE OAKS			

CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
18 IN	NA	NA	0 FT	80 FT
9.625 IN	36 LB/F	NA	0 FT	3228 FT

BOREHOLE RECORD

BIT SIZE	FROM	TO
30 IN	0 FT	80 FT
14.75 IN	80 FT	3228 FT
8.75 IN	3228 FT	10278 FT

REMARKS

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

CVOL COMPUTED USING 4.5" CASING
BVOL, CVOL UNITS IN CUBIC FEET
CALIPER VERIFIED IN CASING

RHO M = 2.68 G/CC RHO F = 1.0 G/CC
MATRIX = SANDSTONE

BHT ESTIMATED WITH GRADIENT OF 1.4 DEGREES / 100' AS TTRM FAILED ON SURFACE
TOOL STRING RUN WITH NEUTRON BOWSPRING DECENTRALIZER AND 1.0" HDIL STANDOFFS
REPEAT SECTION LOGGED OVER BOTTOM OF HOLE TO VERIFY TOOL RESPONSE.

THANKS FOR USING BAKER HUGHES WIRELINE

CREW: WILLIS / PARSONS
RIG: CYCLONE 29

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	WTS	3514XB	153372	DECENTRALIZED
1	1	GR	1329XB	10399812	DECENTRALIZED
1	1	CN	2446XA	153114	DECENTRALIZED
1	1	ZDL	2234XA	120009	PAD DEVICE / DECENT
1	1	KNCKL	3939XA	10200308	FREE
1	1	HDIL	1515EA / MA	10499137 / 10200533	1.0" STANDOFFS

MAIN LOG 2"/100FT SCALE

ECLIPS 6.1i Aug 06, 2010
Updates: 1,2 Patches: 2

Tue Jul 16 16:53:54 2013

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

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/633646/m763g03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 3114.750 ft BOTTOM DEPTH: 10293.000 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft) TOP	BOTTOM
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 & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft) TOP	BOTTOM
BIT SIZE	BIT SIZE	8.750	in	TOP	BOTTOM
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	74.0	degF	"	"
	MUD SAMPLE RES	1.350	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	220.0	degF	"	"
	at BH REF DEPTH	10278.0	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*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	MUD SAMP DERIVED		"	"

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft) TOP	BOTTOM
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	STANDOFF		"	"
	STANDOFF	1.00	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/633646/m763g04.prm

LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 49.000 ft BOTTOM DEPTH: 3341.801 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 & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	8.750	in	TOP	BOTTOM
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	74.0	degF	''	''
	MUD SAMPLE RES	1.350	ohm.m	''	''
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	220.0	degF	''	''
	at BH REF DEPTH	10278.0	ft	''	''
	with TEMP GRADIENT	1.200	0.01 degF/ft	''	''
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE FIXED SIZE USE CALIPER		TOP 3325.750	3325.750 BOTTOM
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	8.750 7.875	in in	TOP 3321.250	3321.250 BOTTOM
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	MUD SAMP DERIVED		TOP	BOTTOM

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	1.00	in	''	''
	TOOL POSITION	ECCENTERED		''	''
	Rmud MULTIPLIER	1.000		''	''

CURVE DESCRIPTION REPORT

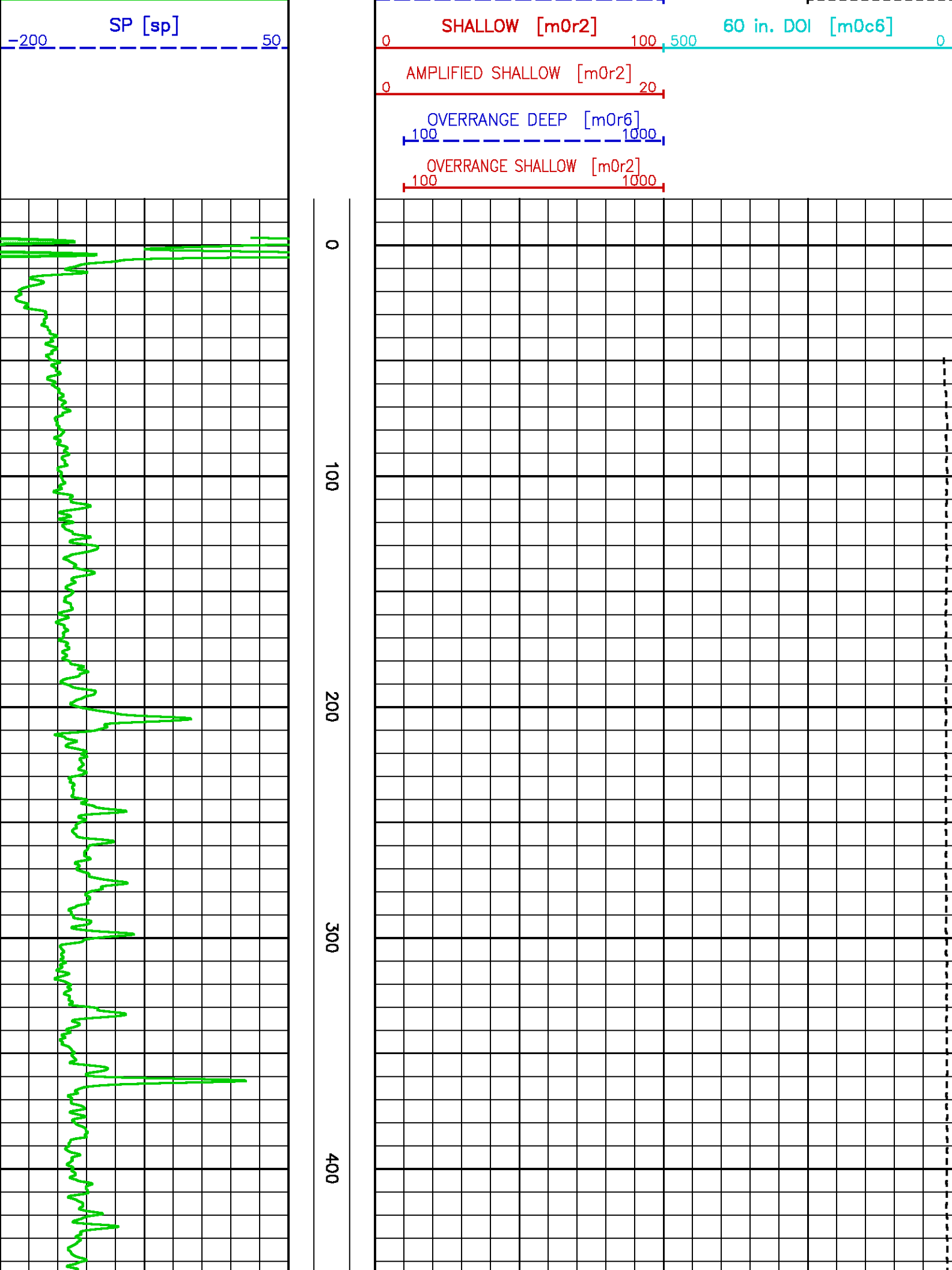
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:GR	Jul 16 15:12:58 2013	GAMMA RAY
F1:MOC6	Jul 16 11:59:06 2013	FOCUSED CONDUCTIVITY, 60-INCH DOI
F1:MOR2	Jul 16 11:59:06 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:MOR6	Jul 16 11:59:06 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:SP	Jul 16 15:12:58 2013	SPONTANEOUS POTENTIAL
F1:TEN	Jul 16 15:12:58 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	SP	14.00		
MOC6	8.00	MOR6	8.00	TEN	0.00		

Presentation : rks6685:/dat1a/633646/WPX_2IN.pdf [2"/100' Scale]
Plot Interval : -17.5 - 10293 Feet

Data File 1 : F1 : rks6685:D:\dat1a\633646\m763gs.xtf
Created On : Jul 16 11:59:06 2013
Company : WPX ENERGY
Well : BCU 33-36-199
Field : BARCUS CREEK UNIT
File Interval : -17.5 - 10293 Feet
Oct : m763g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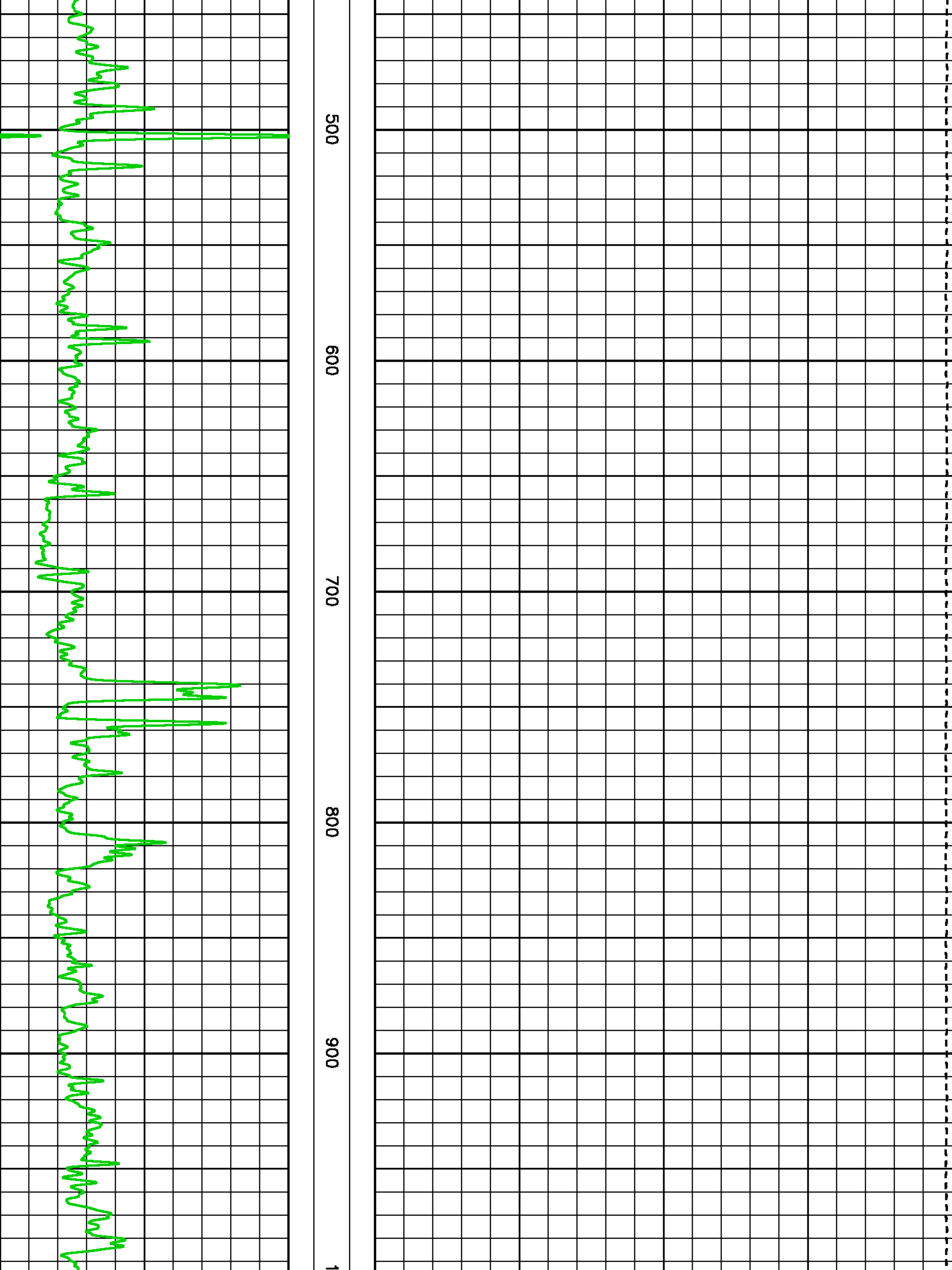

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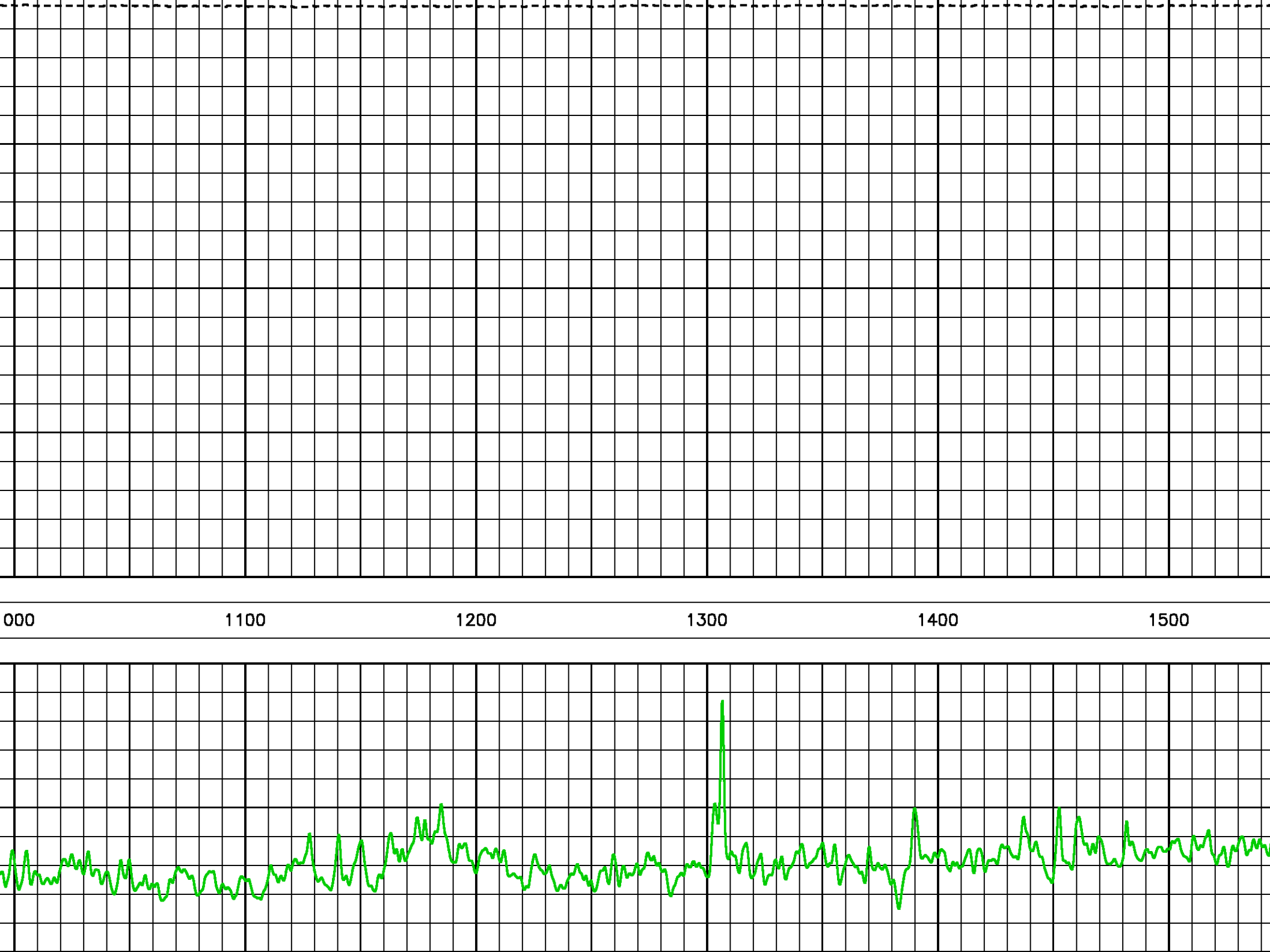
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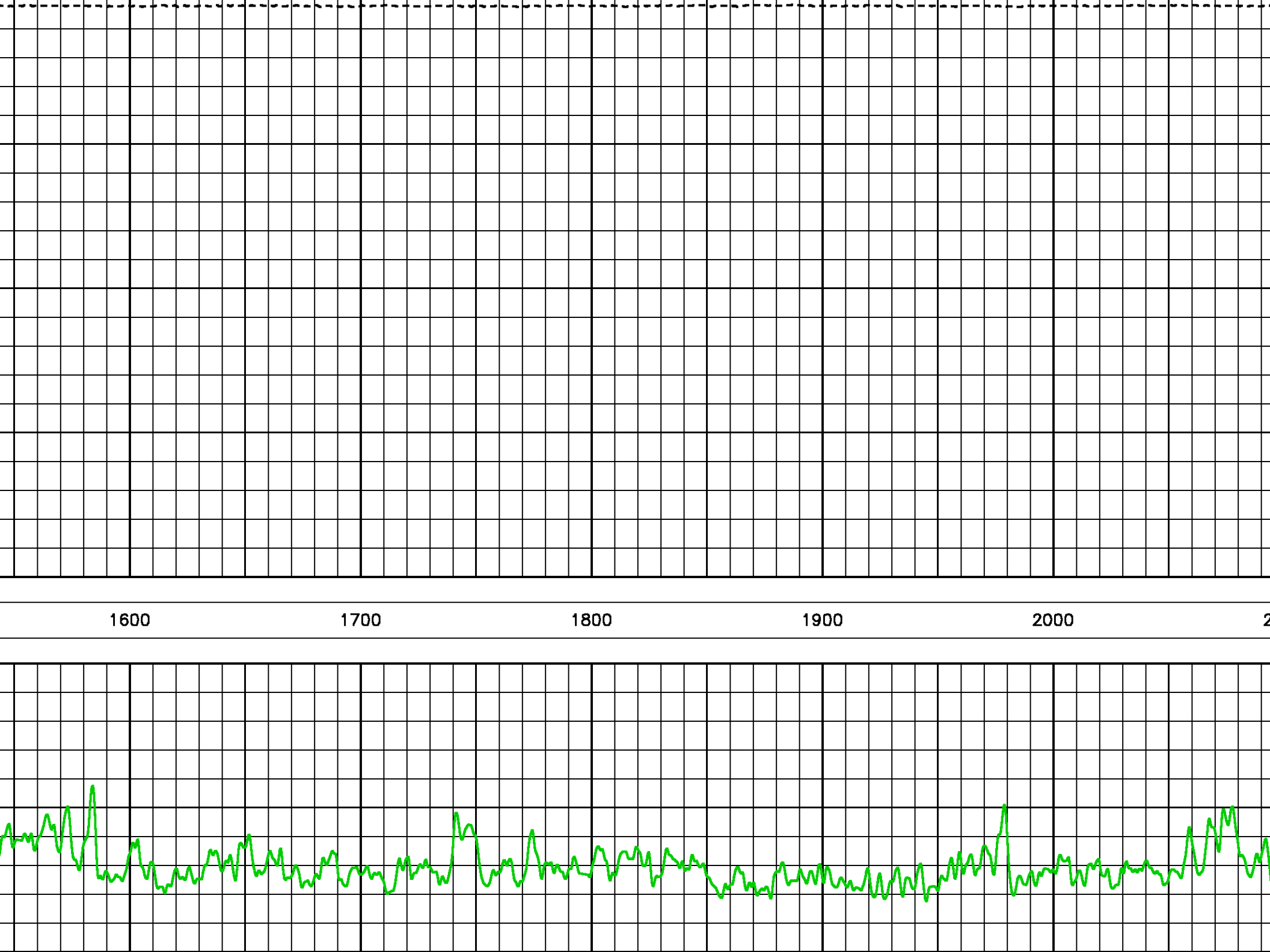
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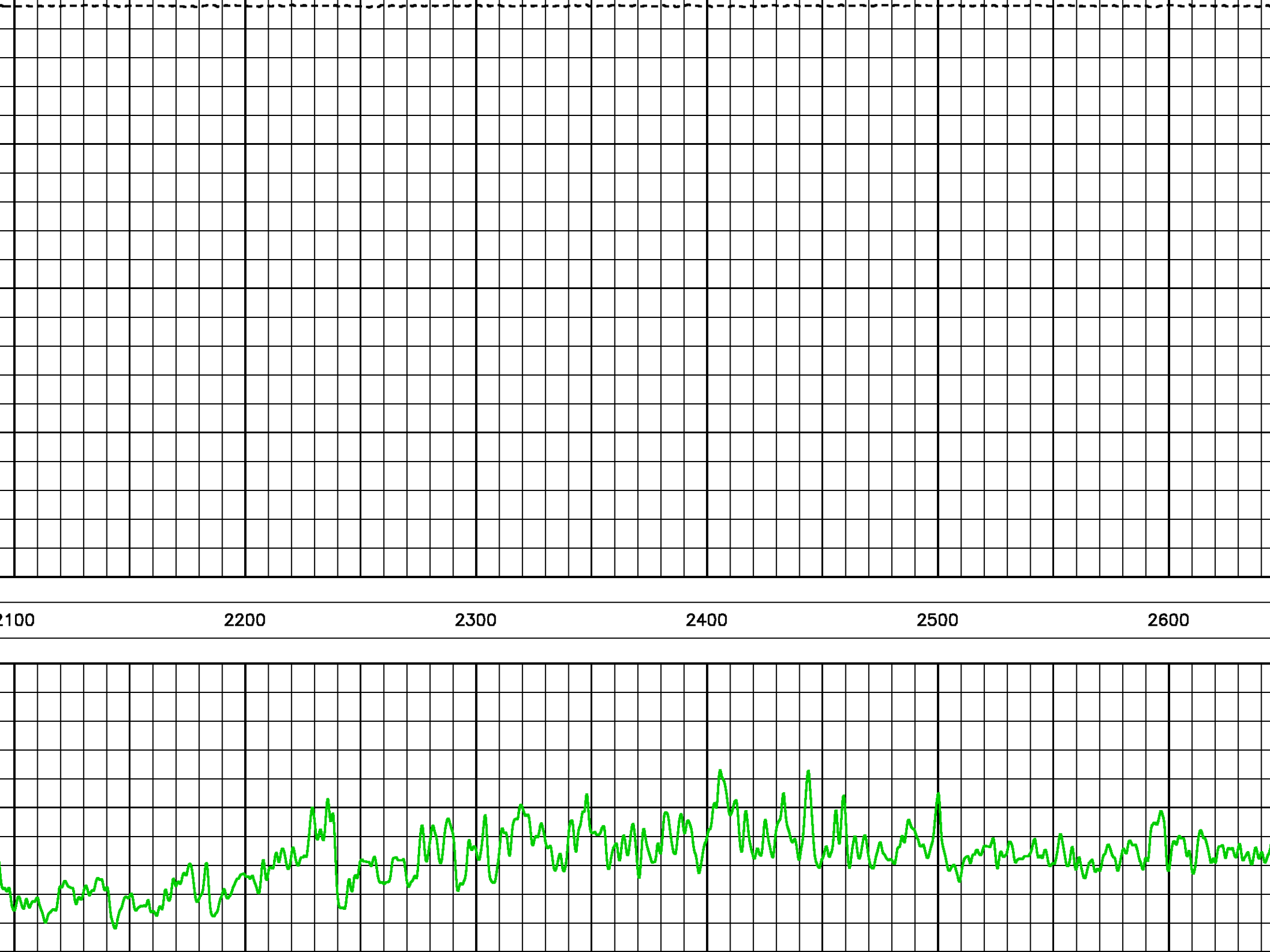
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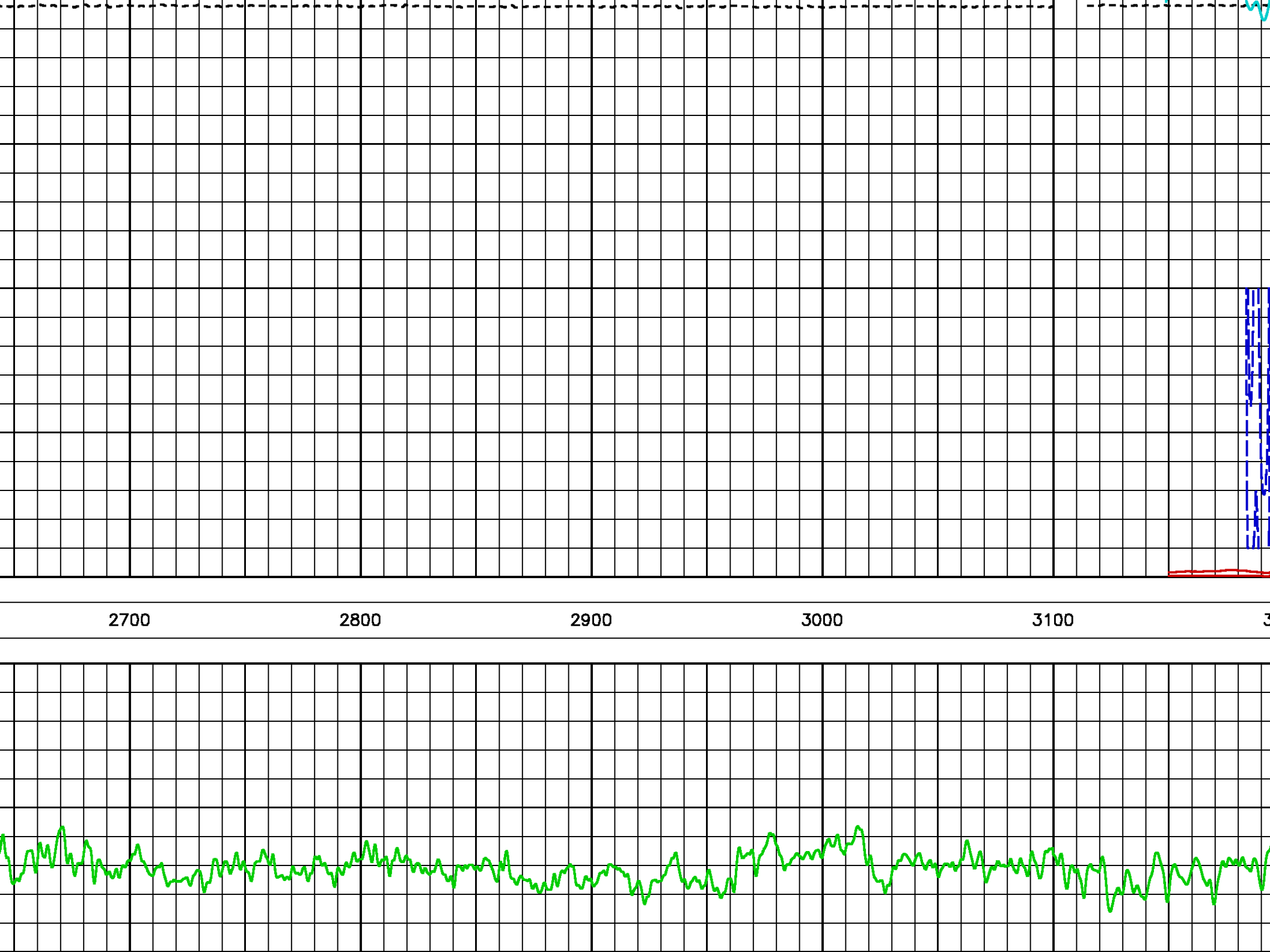
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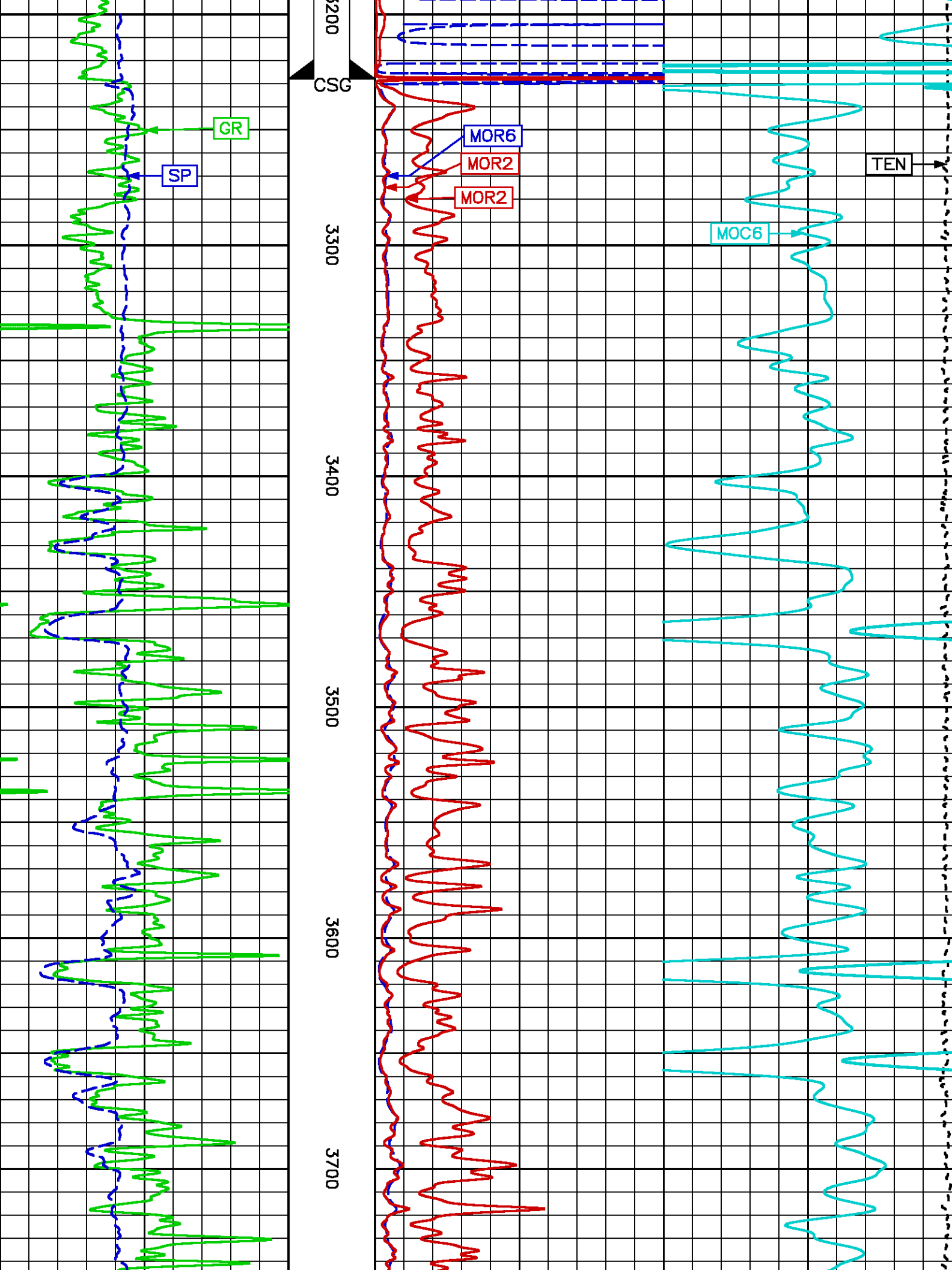
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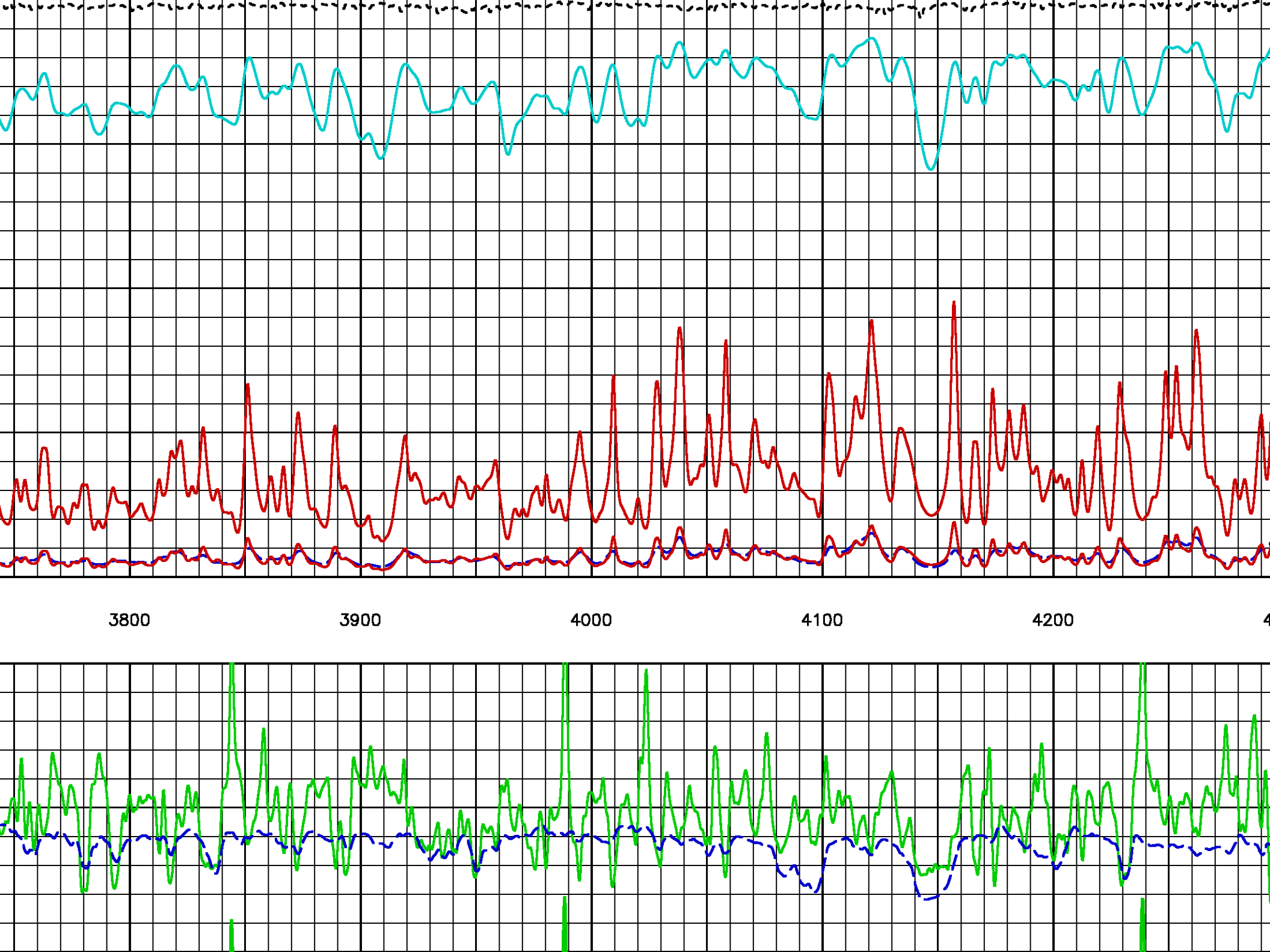
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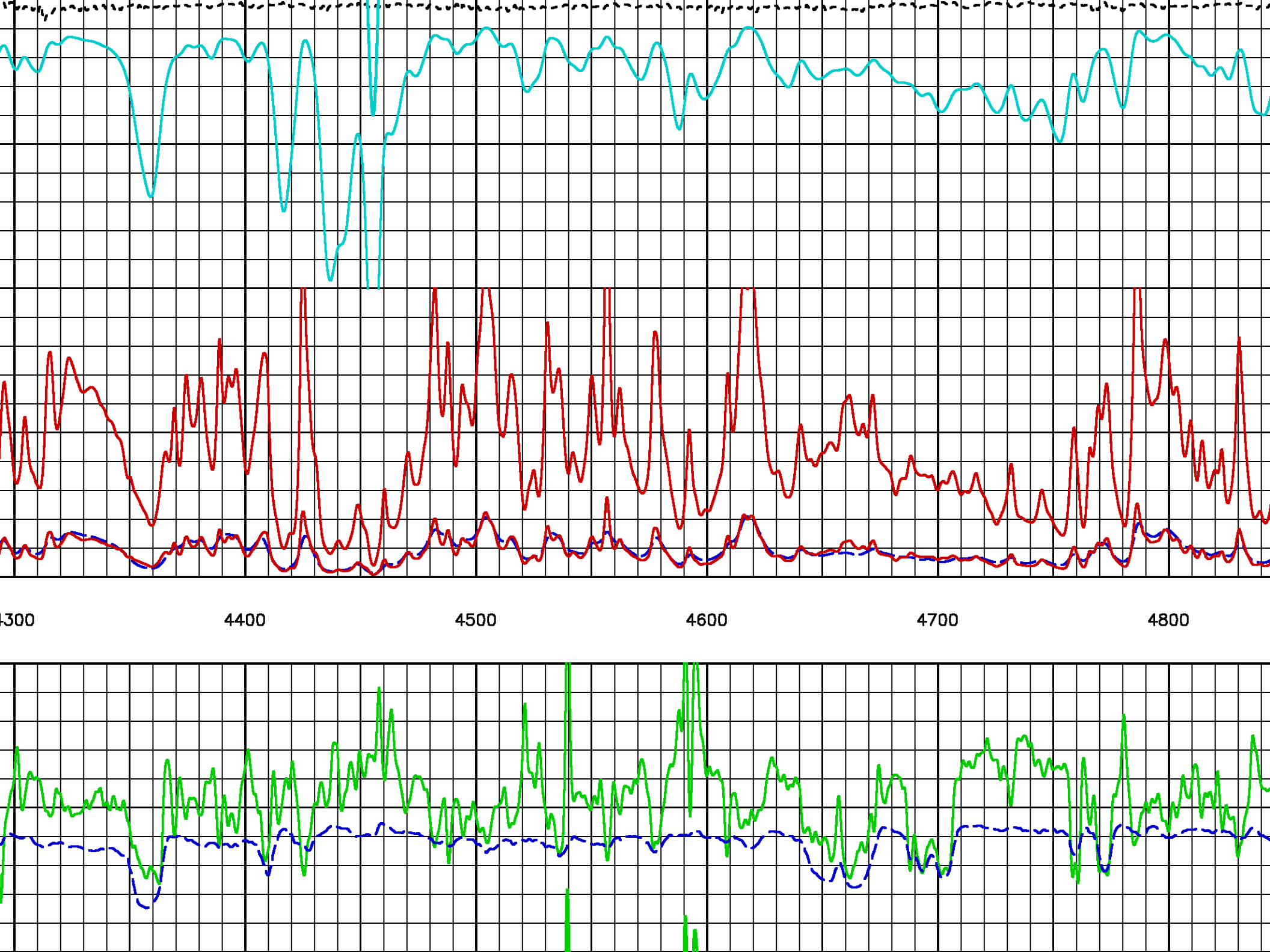
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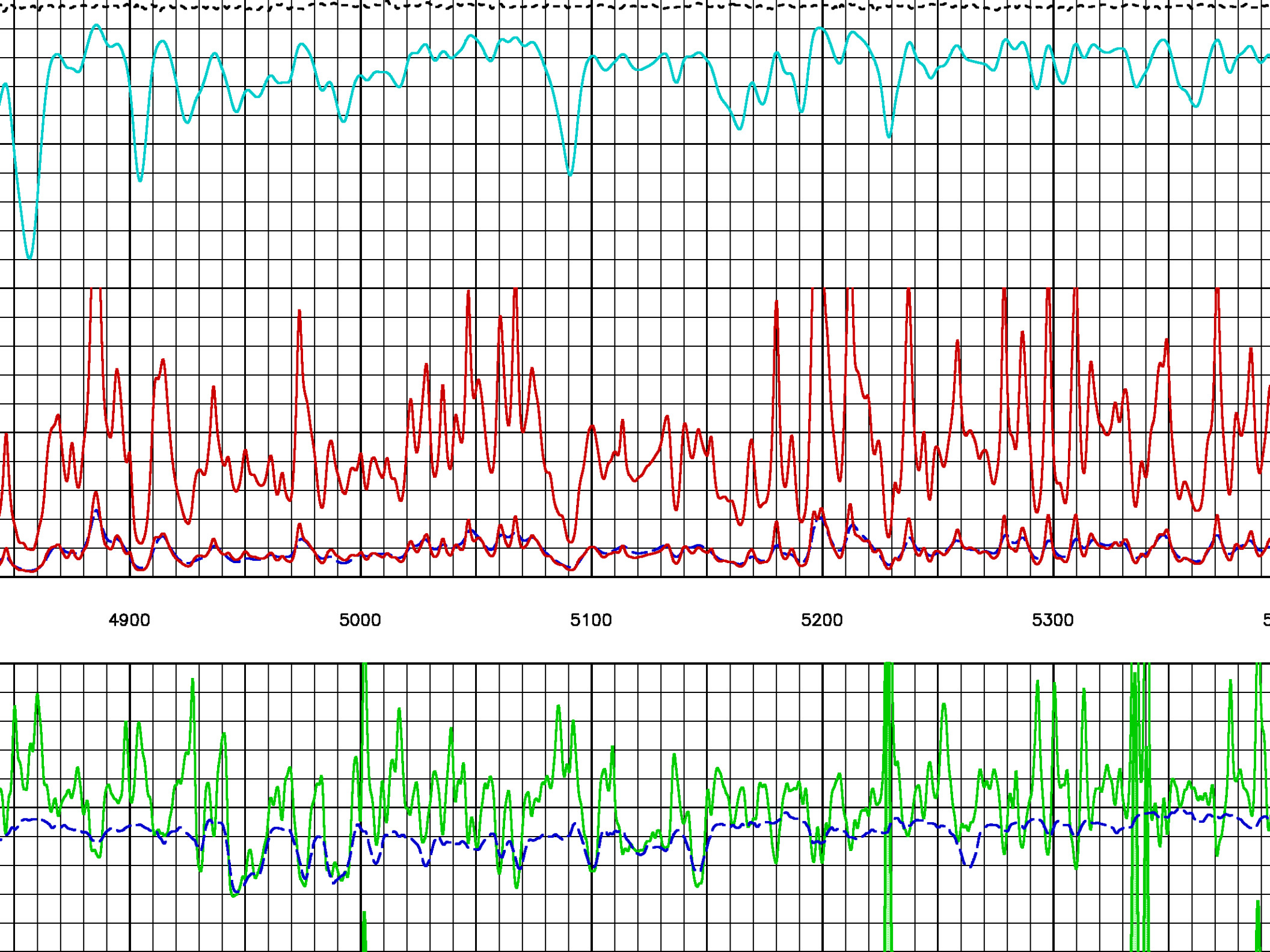
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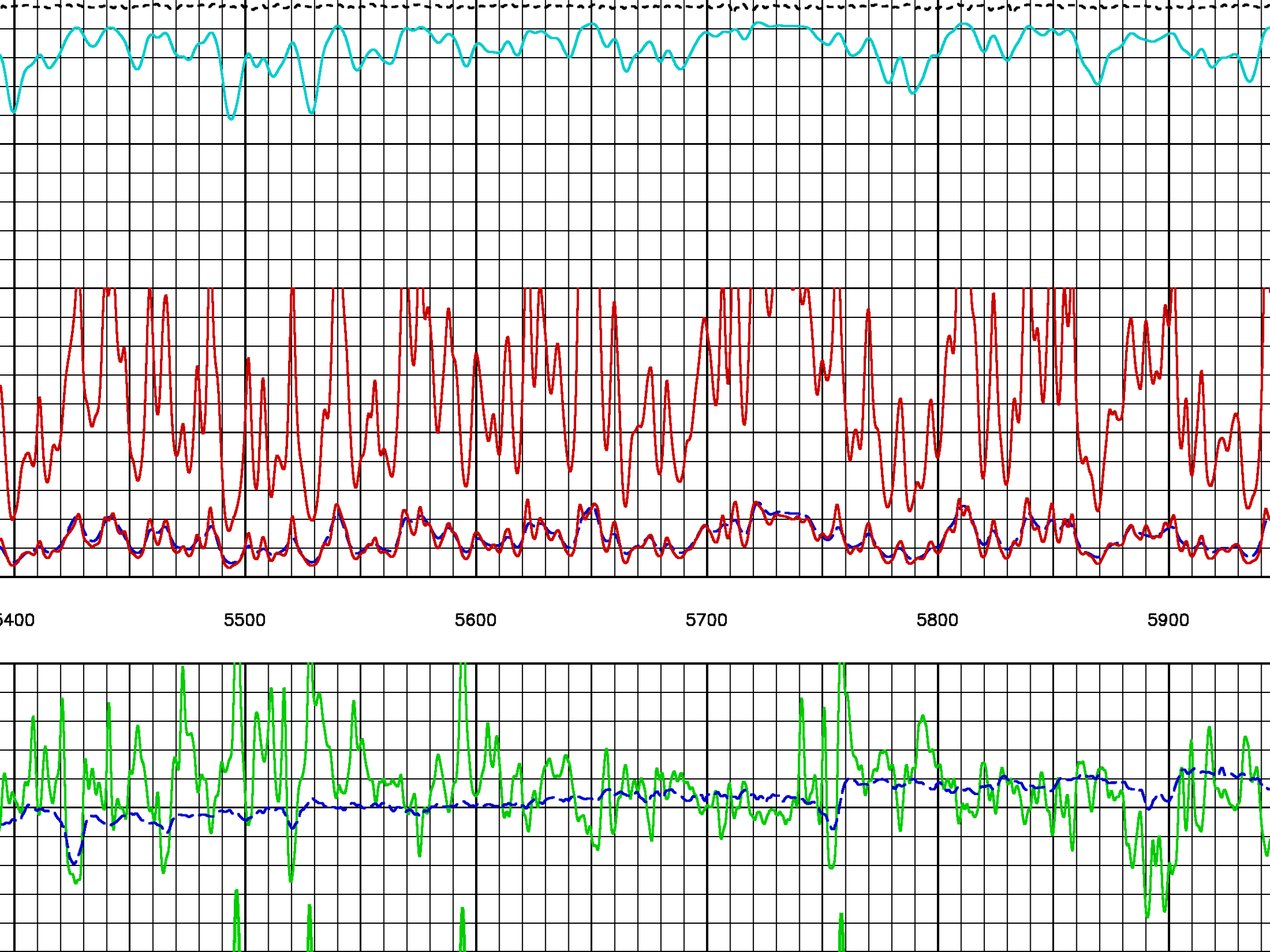
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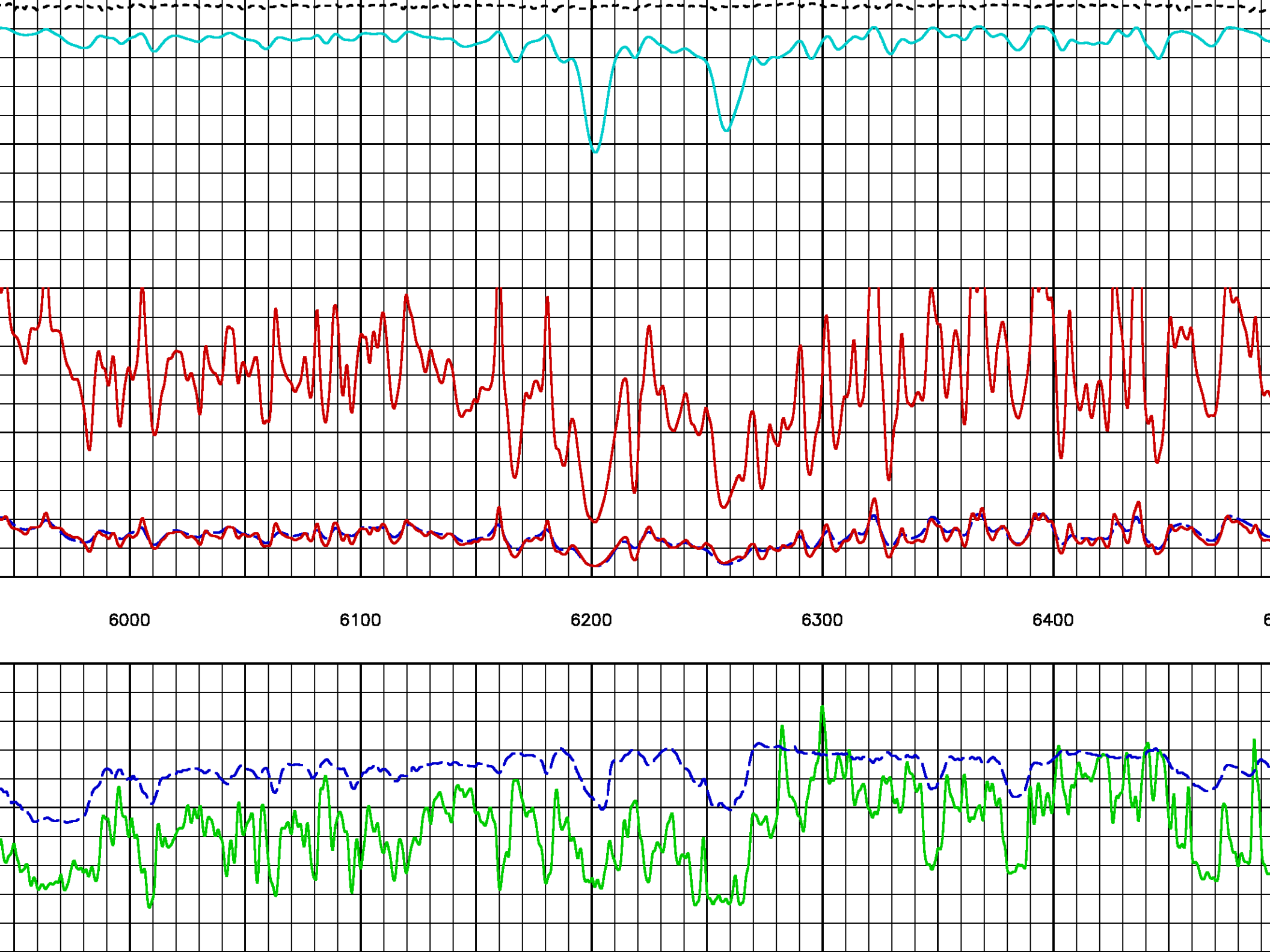
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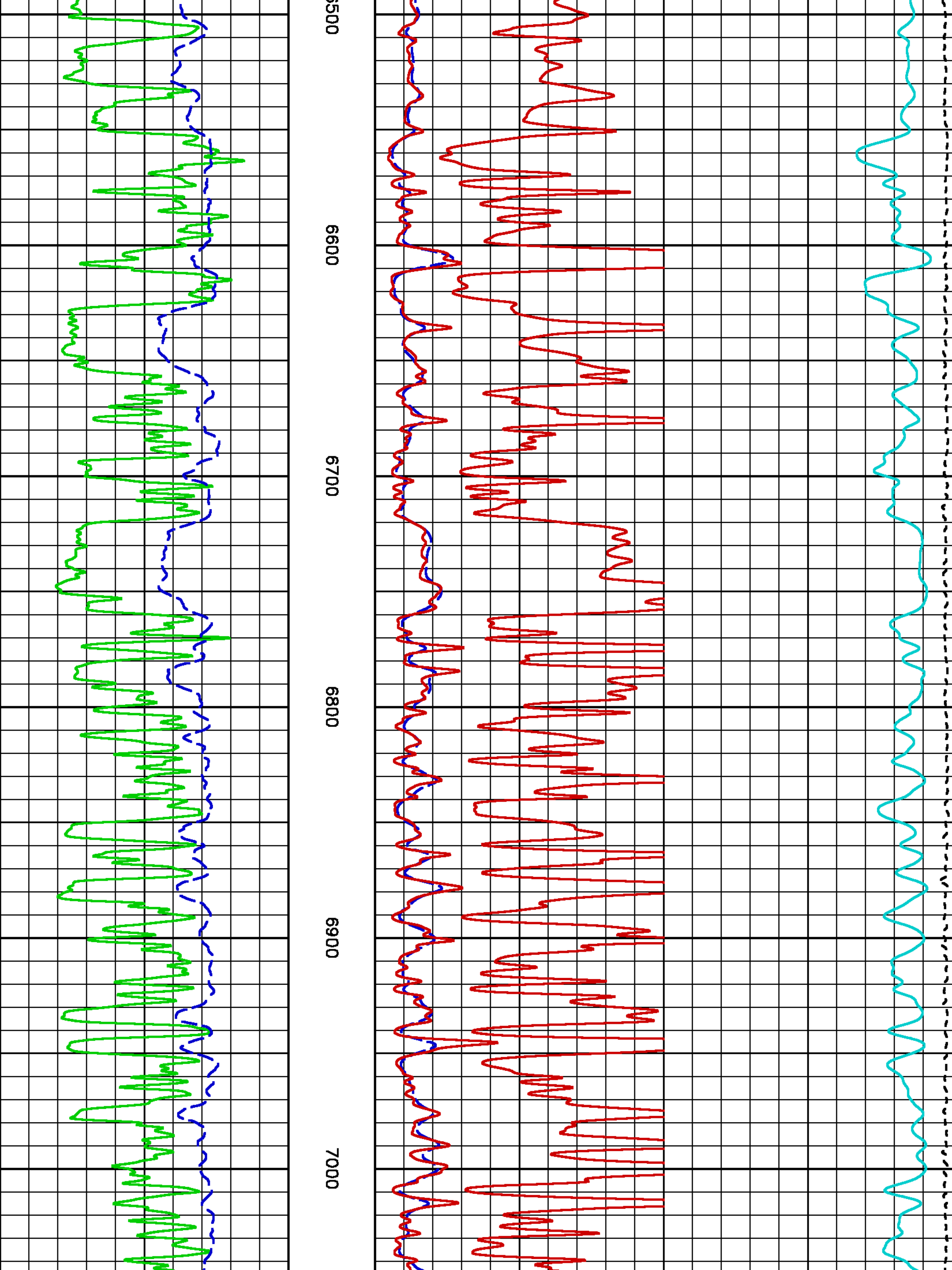
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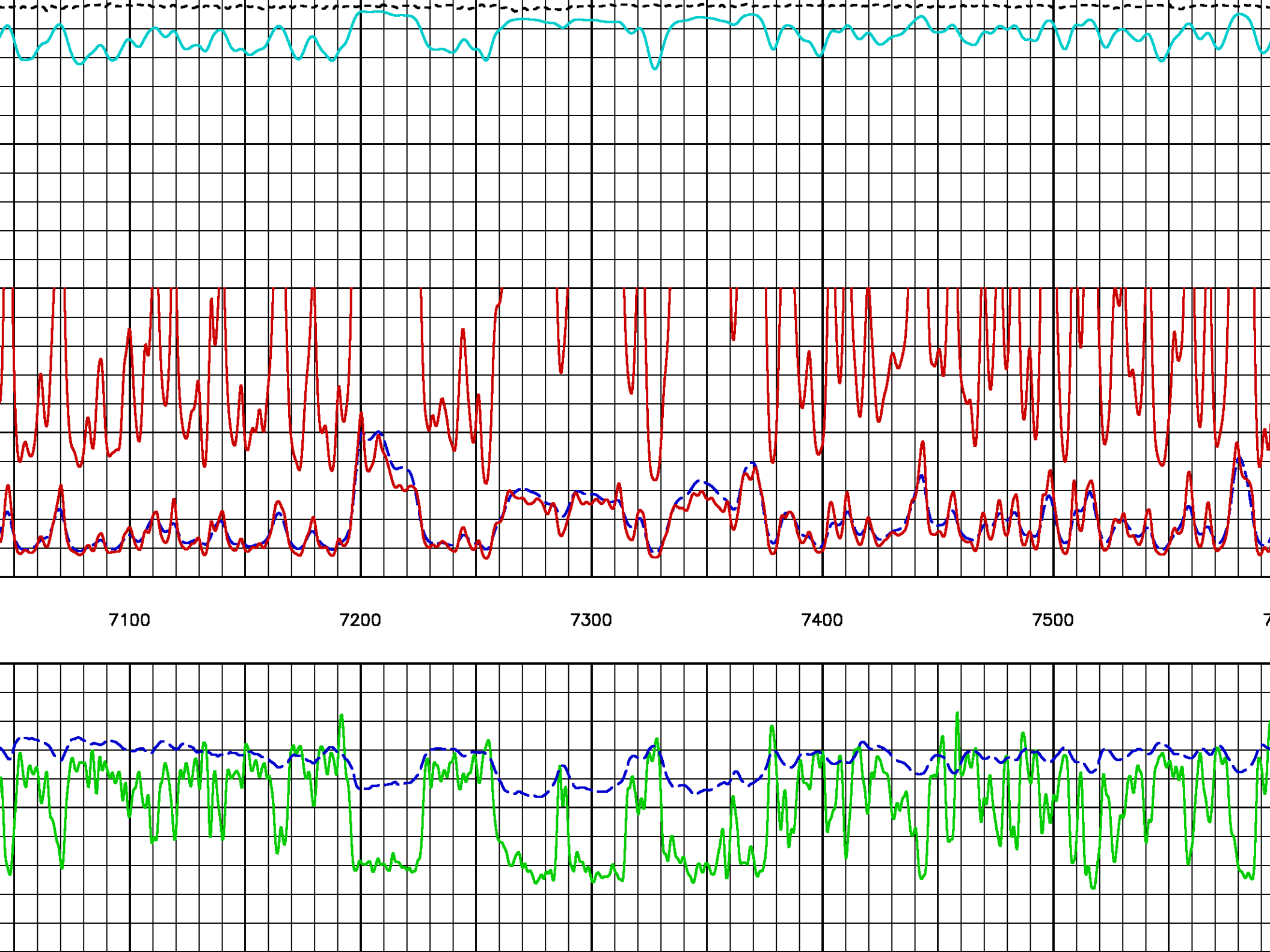
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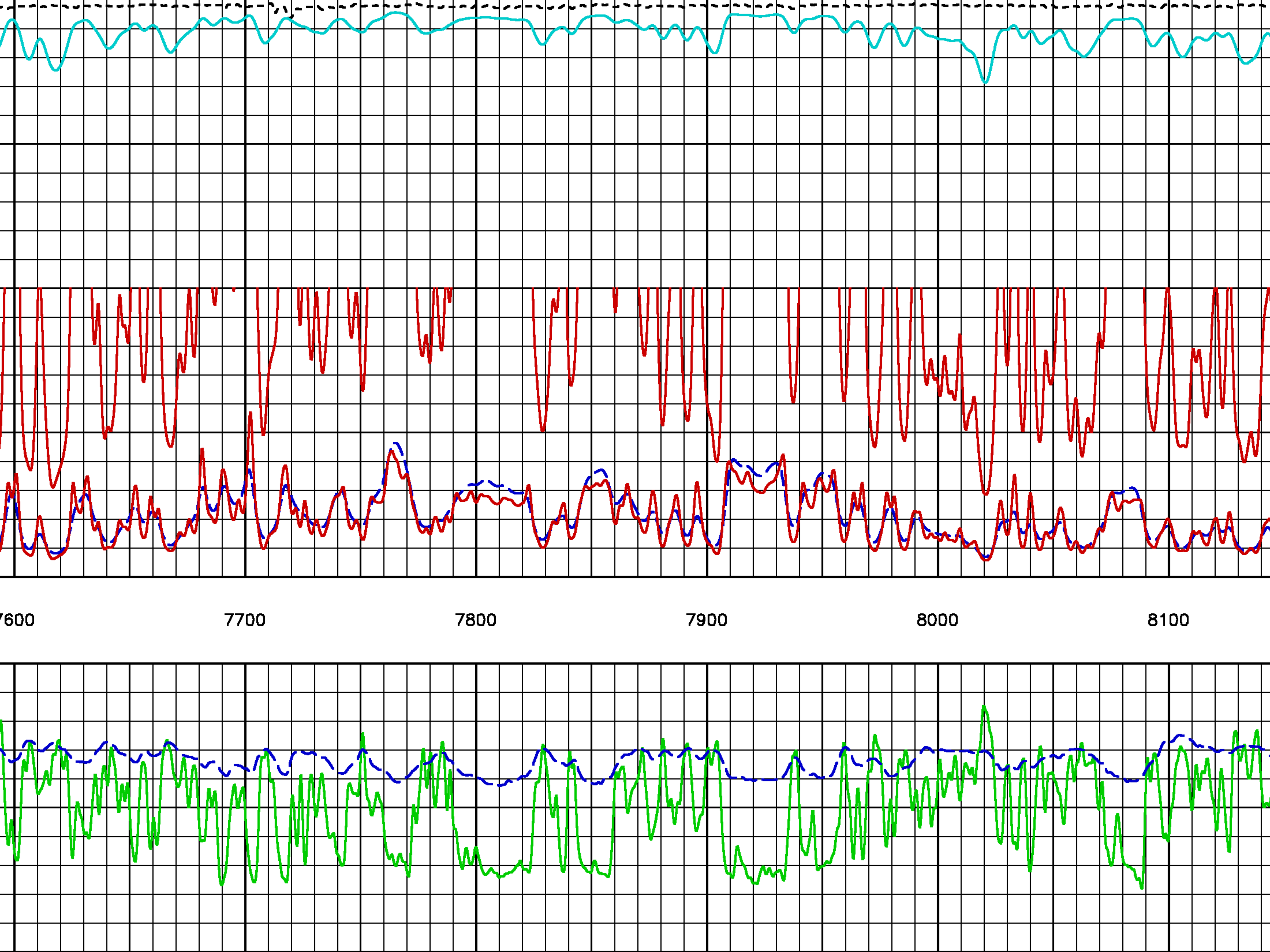
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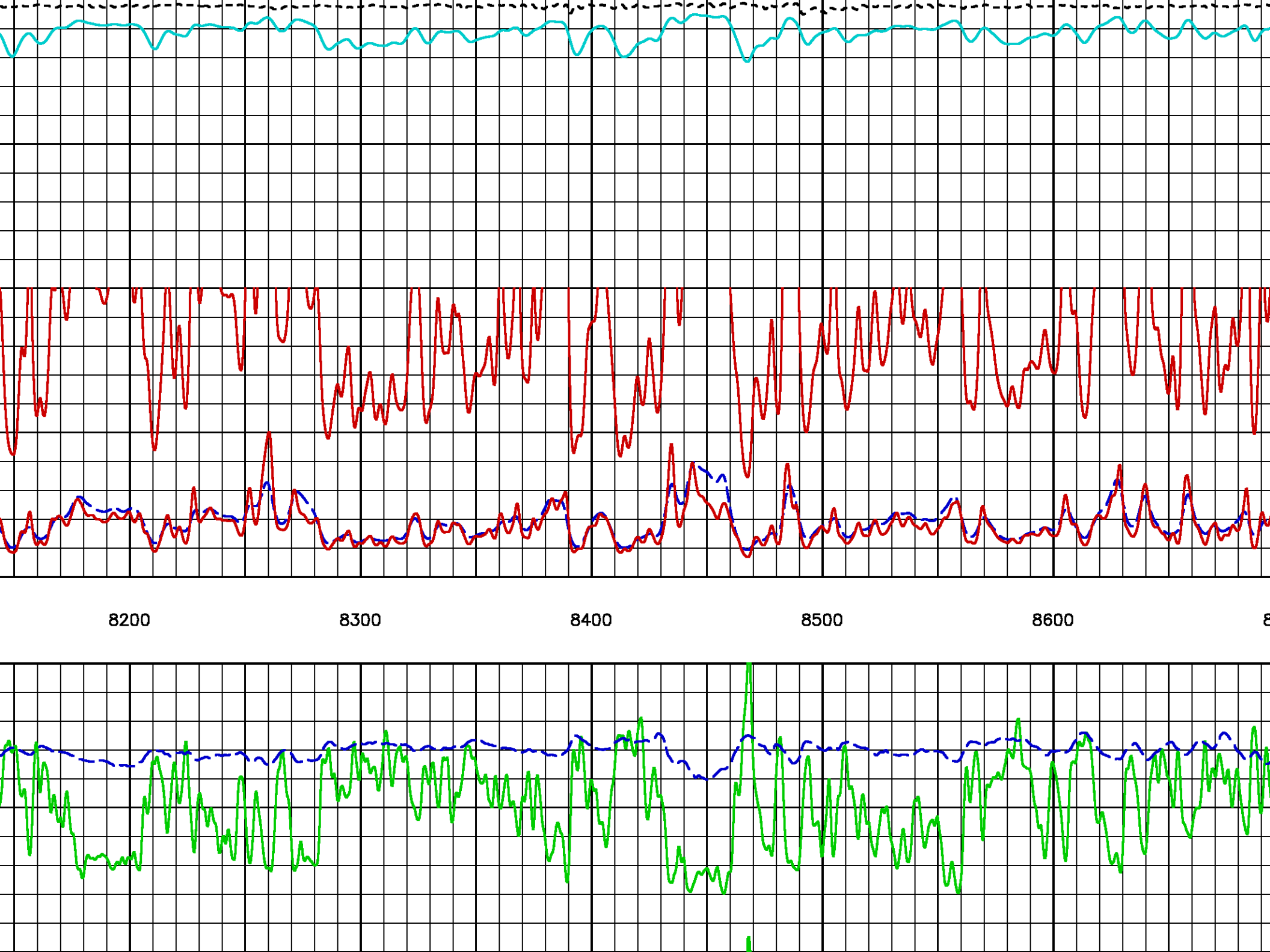
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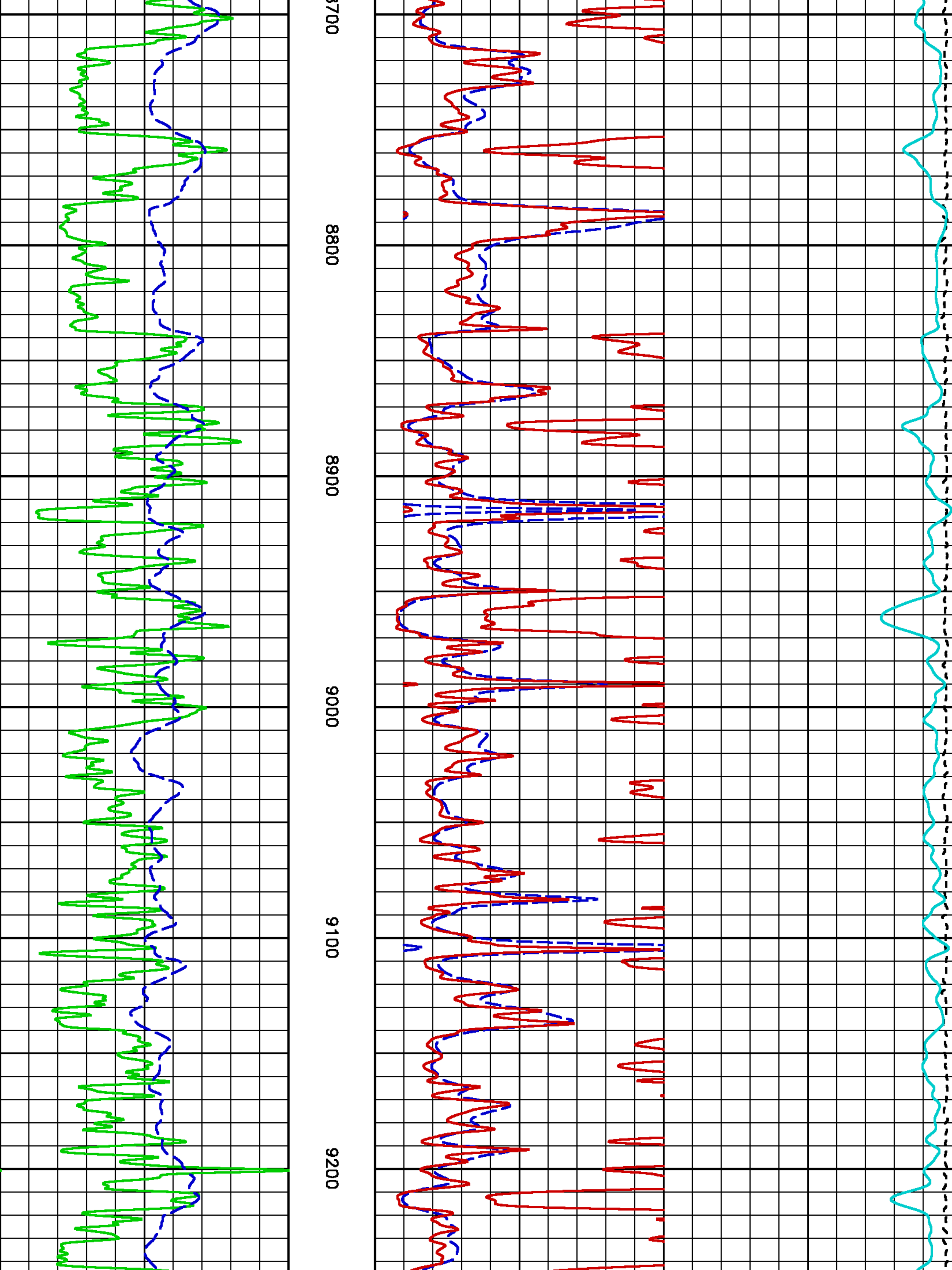

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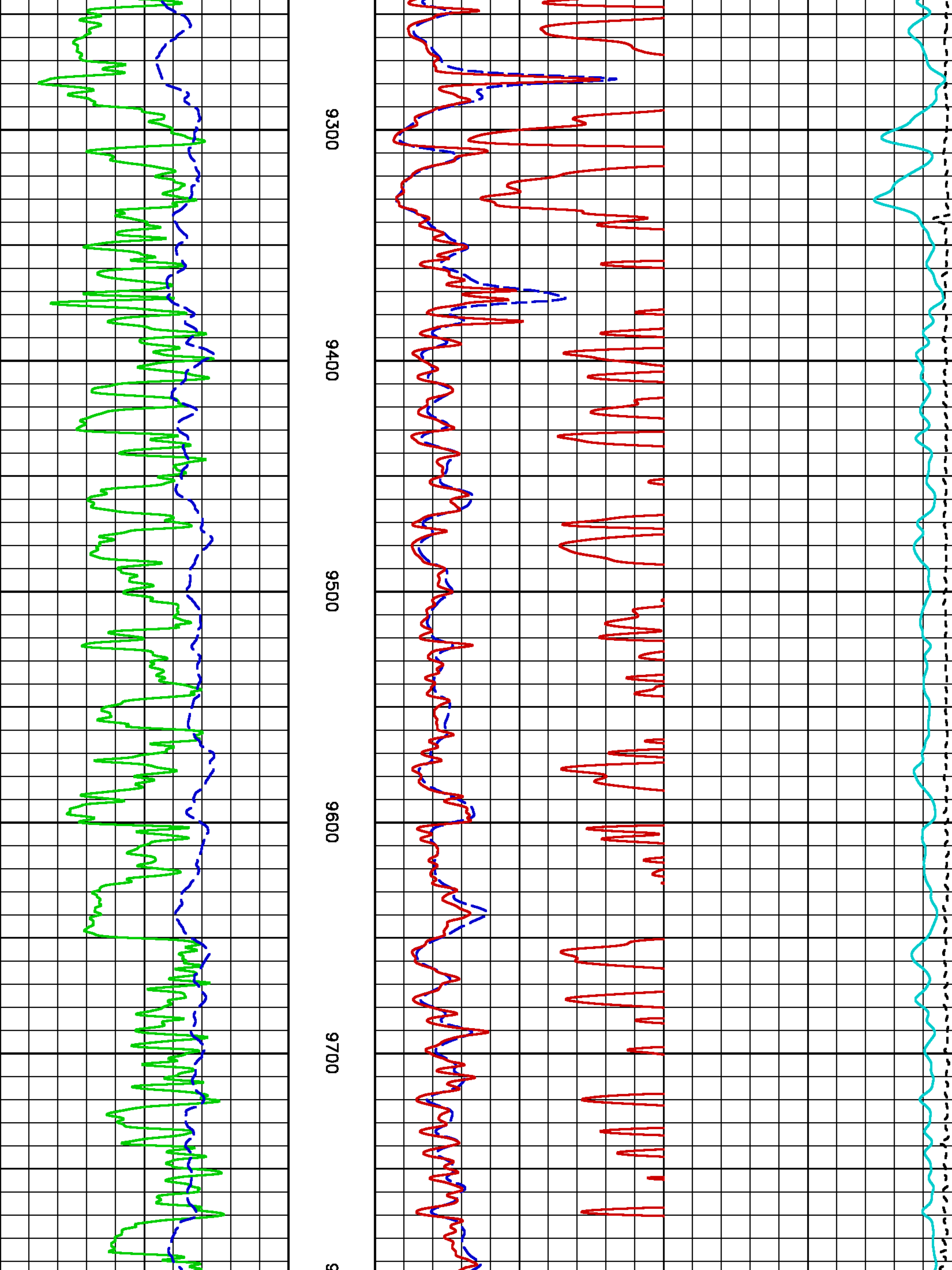
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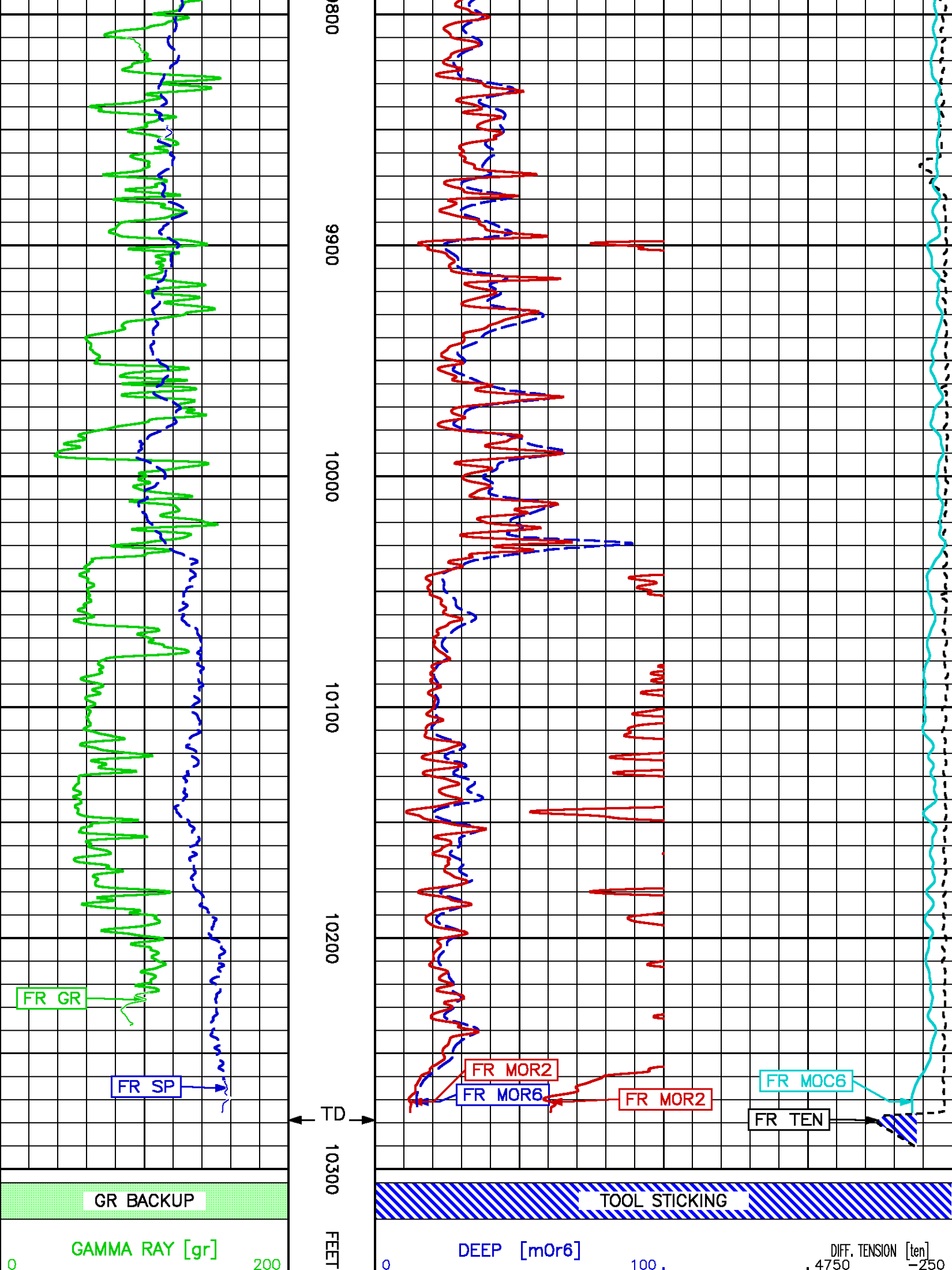
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FR MOR6
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FR MOC6
FR TEN
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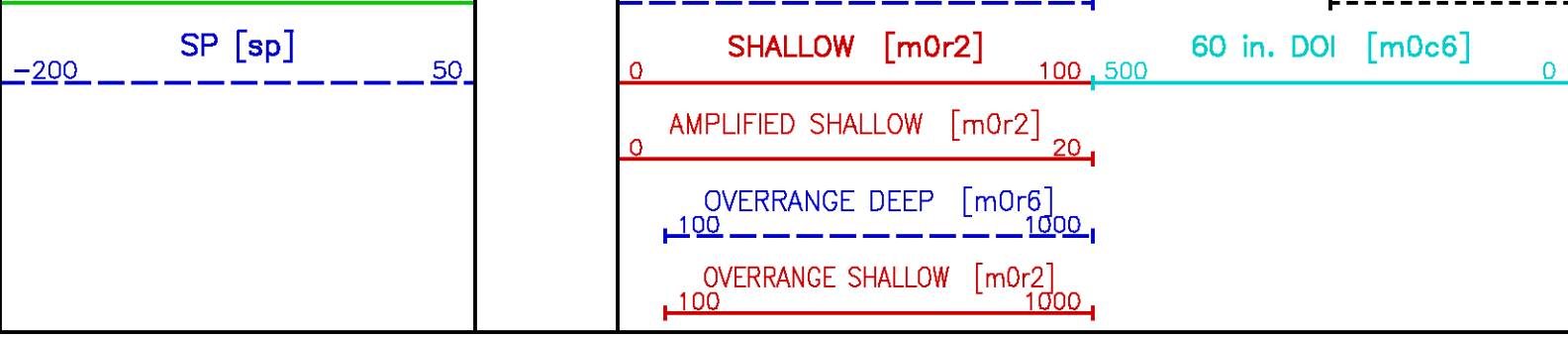


MAIN LOG 5"/100FT SCALE

ECLIPS 6.1i Aug 06, 2010
Updates: 1,2 Patches: 2

Tue Jul 16 17:07:35 2013

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

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/633646/m763q03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 3114.750 ft BOTTOM DEPTH: 10293.000 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft) TOP	BOTTOM
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) TOP	BOTTOM
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	8.750	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	74.0	degF	"	"
	MUD SAMPLE RES	1.350	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	220.0	degF	"	"
	at BH REF DEPTH	10278.0	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*)	7.875	in	"	"
	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	MUD SAMP DERIVED		"	"

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft) TOP	BOTTOM
2446 CN MATRIX	2446 MATRIX	SANDSTONE		TOP	BOTTOM

CN SALINITY CORRECTION	SALINITY	0	ppm	''	''
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		''	''
	BIT SIZE BEHIND CSNG	12.250	In	''	''

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	1.00	In	''	''
	TOOL POSITION	ECCENTERED		''	''
	Rmud MULTIPLIER	1.000		''	''

PARAMETER AND FILTER SUMMARY REPORT

FILE: /data/633646/m763g04.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 49.000 ft BOTTOM DEPTH: 3341.801 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	In	TOP	BOTTOM
	CASING THICKNESS	0.000	In	''	''
BIT SIZE	BIT SIZE	8.750	In	''	''
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	74.0	degF	''	''
	MUD SAMPLE RES	1.350	ohm.m	''	''
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	220.0	degF	''	''
	at BH REF DEPTH	10278.0	ft	''	''
	with TEMP GRADIENT	1.200	0.01 degF/ft	''	''
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE FIXED SIZE USE CALIPER		TOP 3300.750	3300.750 BOTTOM
	CALIPER/FIXED DIA. (mbh*)	USE FIXED SIZE USE CALIPER		TOP 3325.750	3325.750 BOTTOM
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	8.750 7.875	In In	TOP 3283.500	3283.500 BOTTOM
	FIXED DIAMETER (mbh*)	8.750 7.875	In In	TOP 3321.250	3321.250 BOTTOM
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	MUD SAMP DERIVED		TOP	BOTTOM

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	SANDSTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	0	ppm	''	''
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		''	''
	BIT SIZE BEHIND CSNG	12.250	In	''	''

ZDL PROCESSING

ZDL PROCESSING

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

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
				TOP	BOTTOM
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		''	''
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		''	''
	ABC to CALCULATE	STANDOFF		''	''
	STANDOFF	1.00	In	''	''
	TOOL POSITION	ECCENTERED		''	''
	Rmud MULTIPLIER	1.000		''	''

CURVE DESCRIPTION REPORT

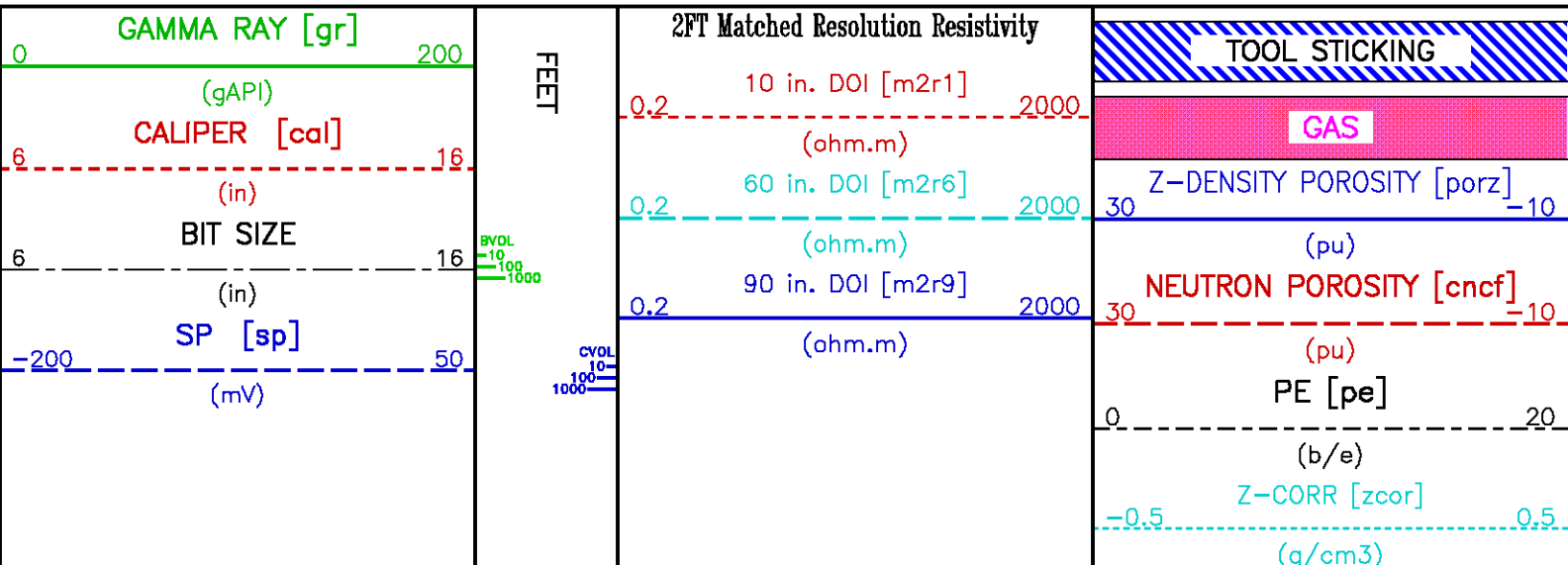
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Jul 16 15:12:58 2013	BIT SIZE
F1:BVOL	Jul 16 15:12:58 2013	BOREHOLE VOLUME
F1:CAL	Jul 16 15:12:58 2013	CALIPER
F1:CNCF	Jul 16 11:59:06 2013	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Jul 16 15:12:58 2013	CEMENT VOLUME
F1:GR	Jul 16 15:12:58 2013	GAMMA RAY
F1:M2R1	Jul 16 11:59:06 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	Jul 16 11:59:06 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Jul 16 11:59:06 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Jul 16 11:59:06 2013	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Jul 16 11:59:06 2013	POROSITY FOR SELECTABLE MATRIX
F1:SP	Jul 16 15:12:58 2013	SPONTANEOUS POTENTIAL
F1:TEN	Jul 16 15:12:58 2013	DIFFERENTIAL TENSION
F1:ZCOR	Jul 16 11:59:06 2013	DENSITY CORRECTION

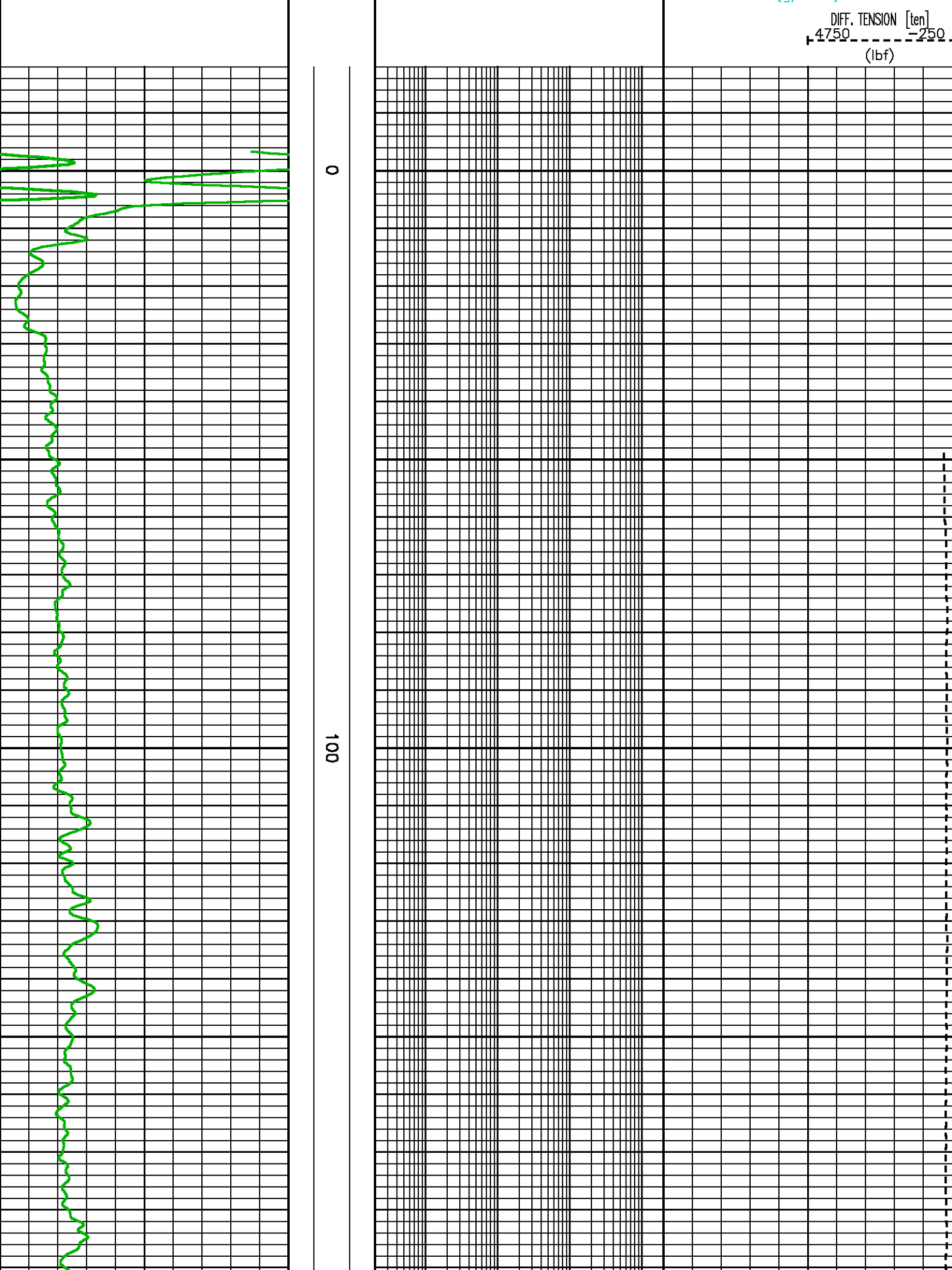
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	52.25	M2R9	8.00	SP	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/633646/WPX_MAIN.pdf [5"/100' Scale]
Plot Interval : -17.5 - 10293 Feet

Data File 1 : F1 : rks6685:D:\dat1a\633646\m763gs.xtf
Created On : Jul 16 11:59:06 2013
Company : WPX ENERGY
Well : BCU 33-36-199
Field : BARCUS CREEK UNIT
File Interval : -17.5 - 10293 Feet
Oct : m763g




DIFF. TENSION [ten]
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(lbf)
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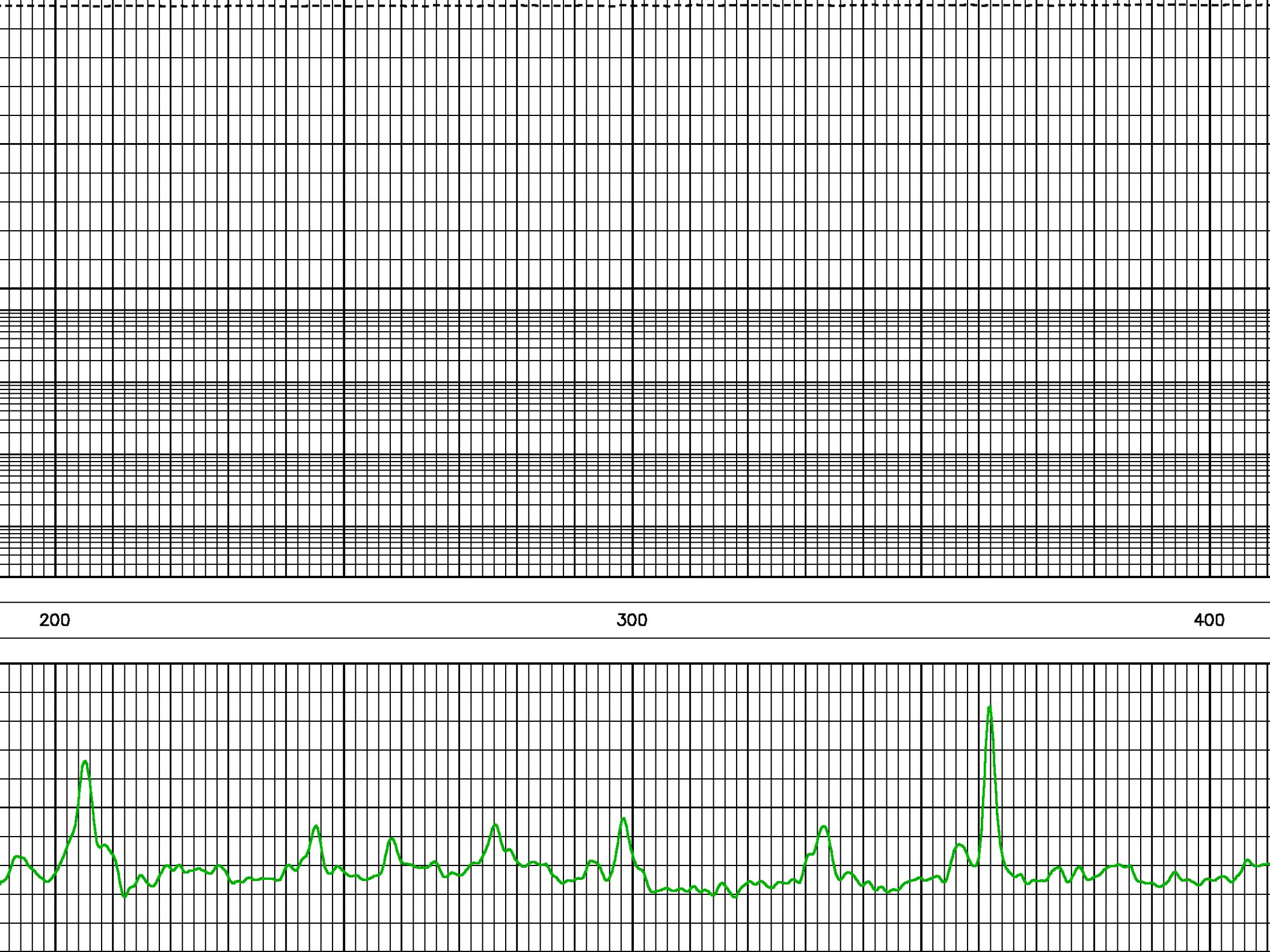
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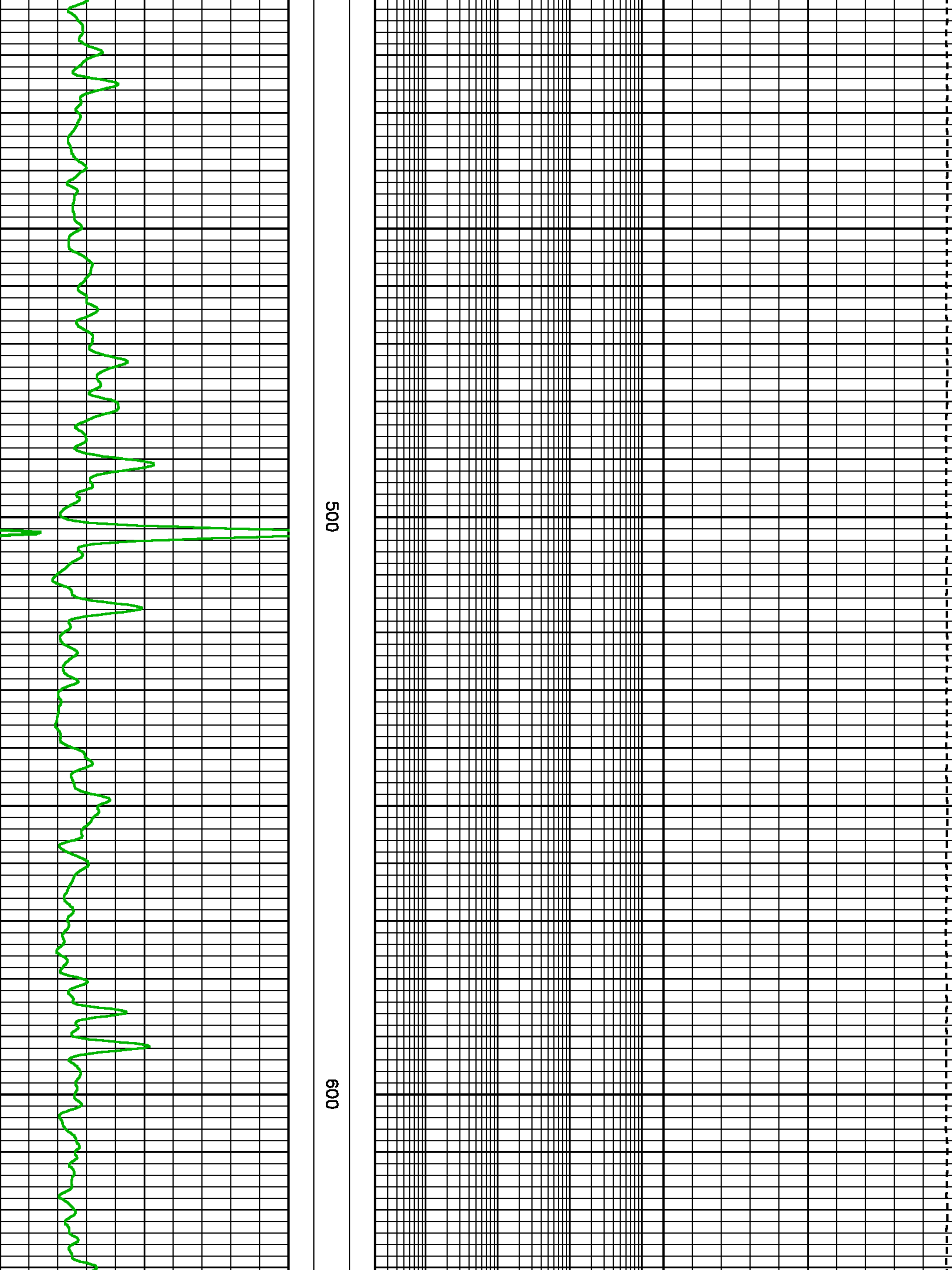
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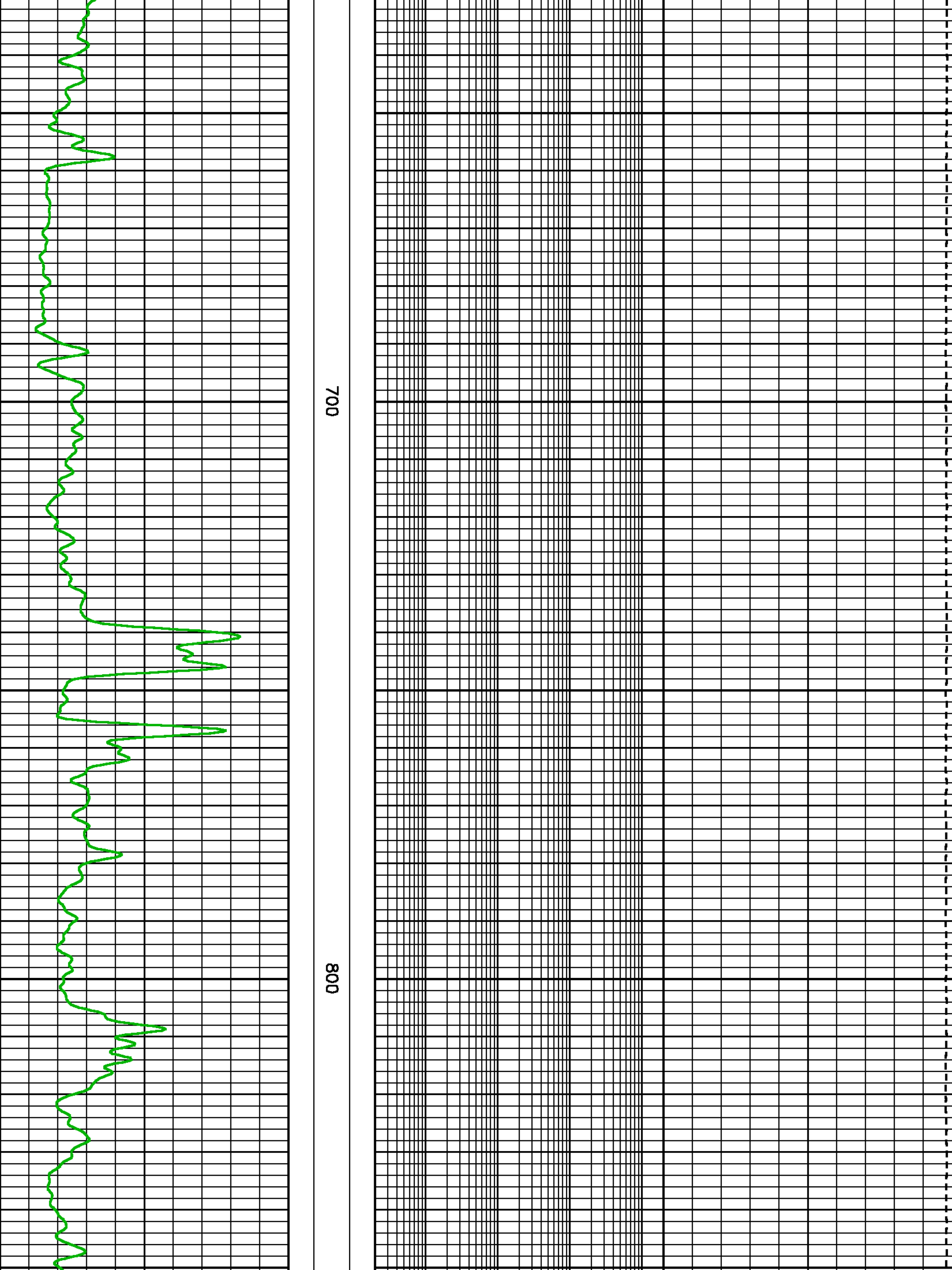
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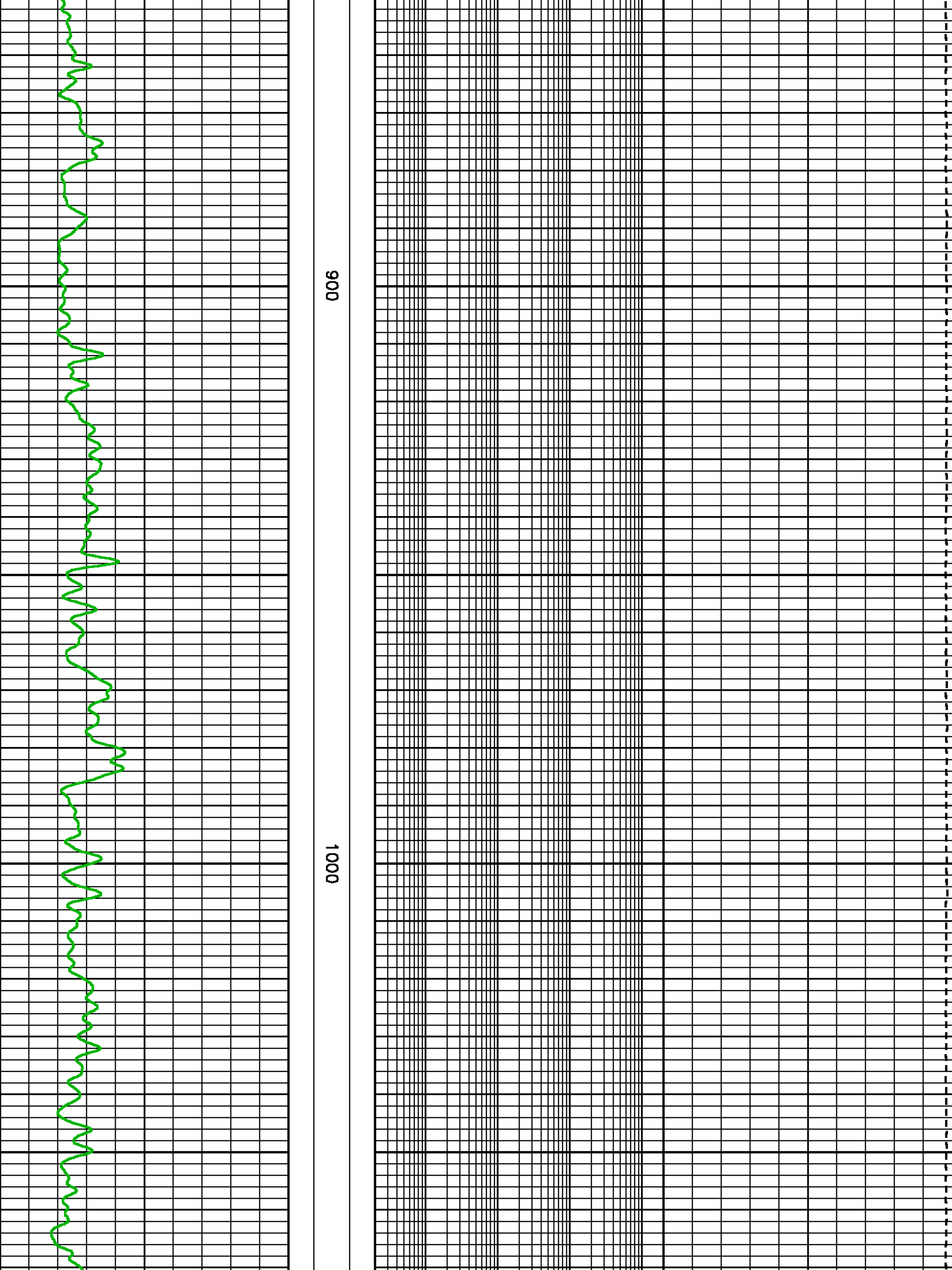
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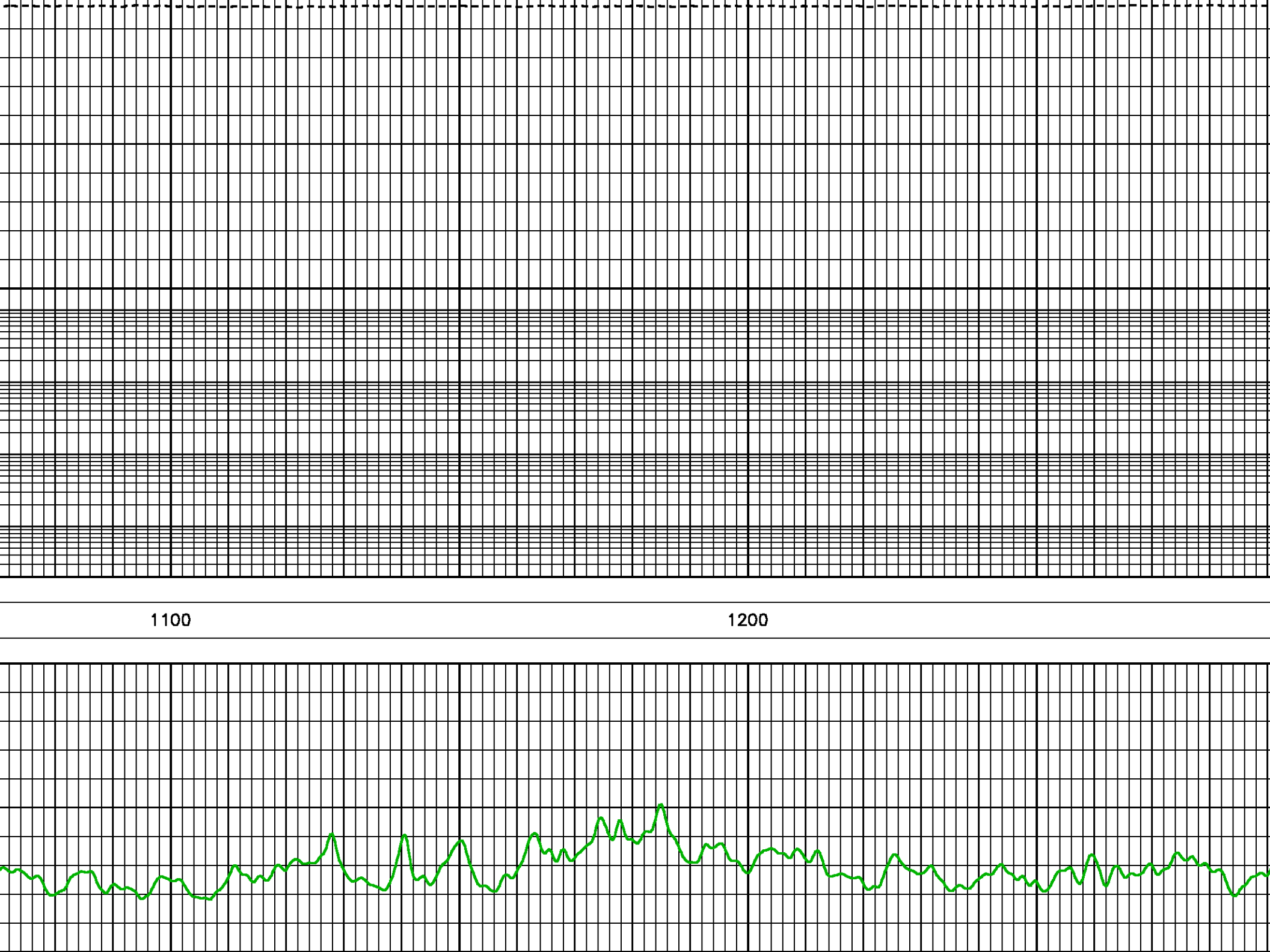
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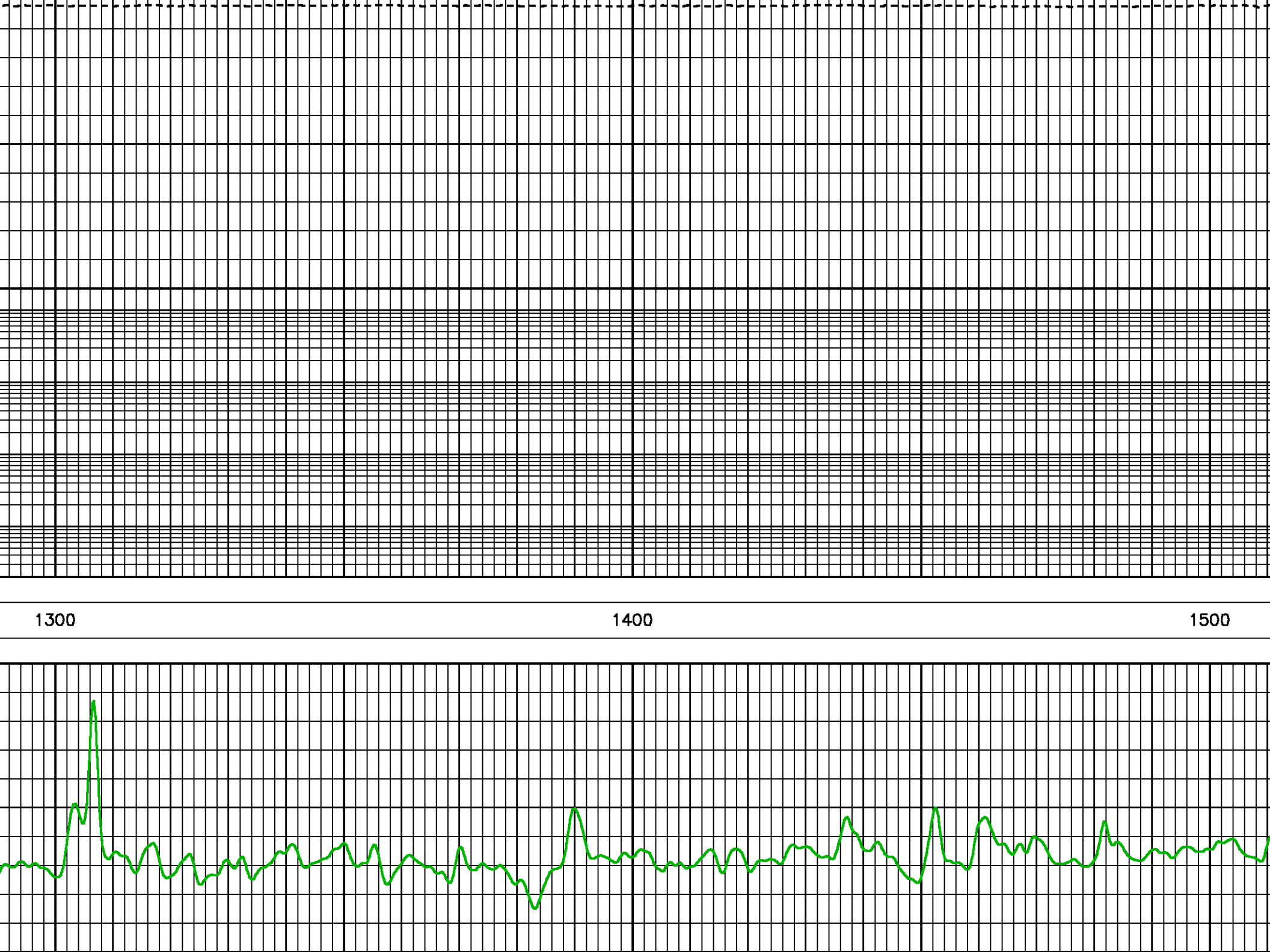
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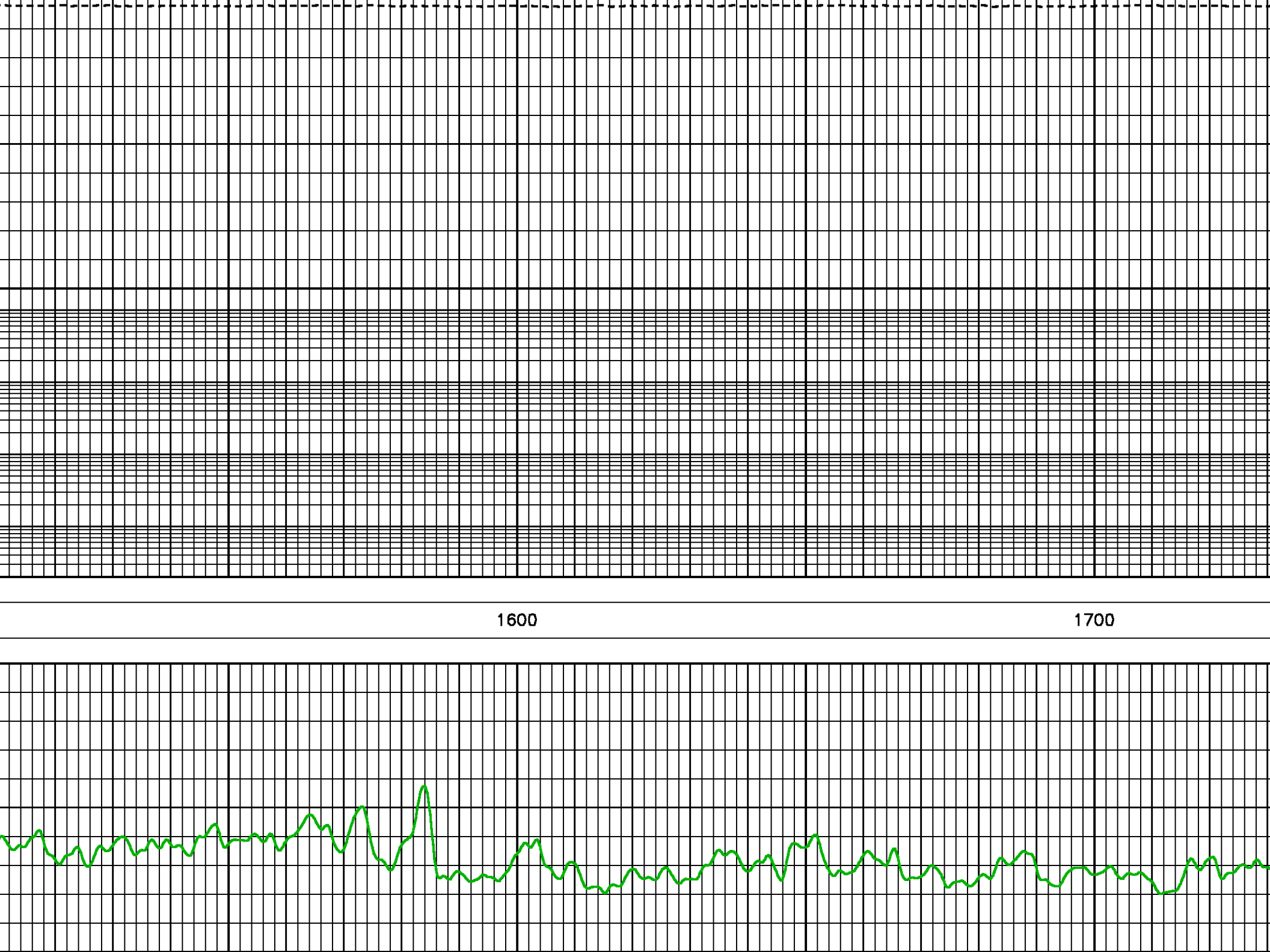
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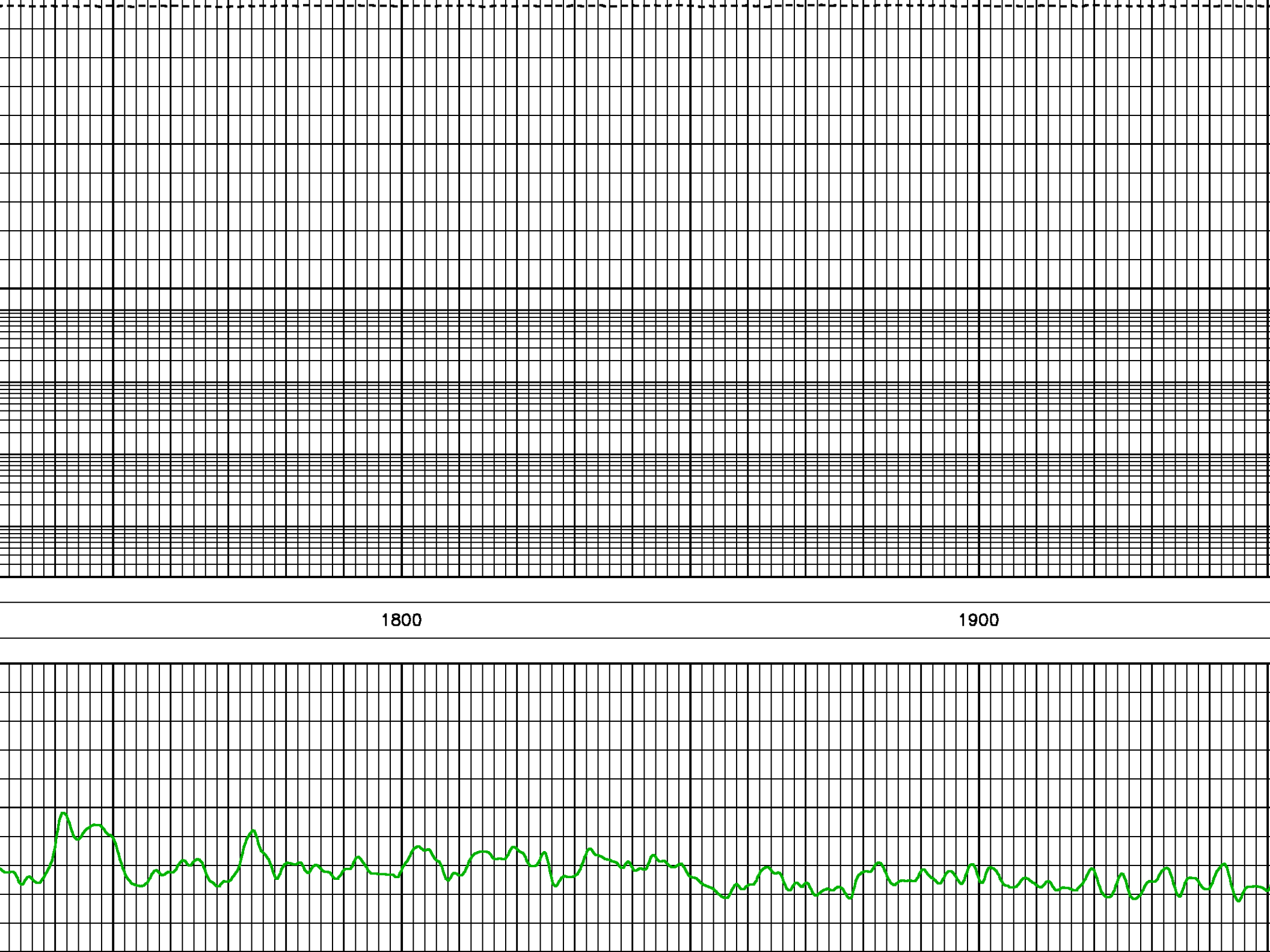
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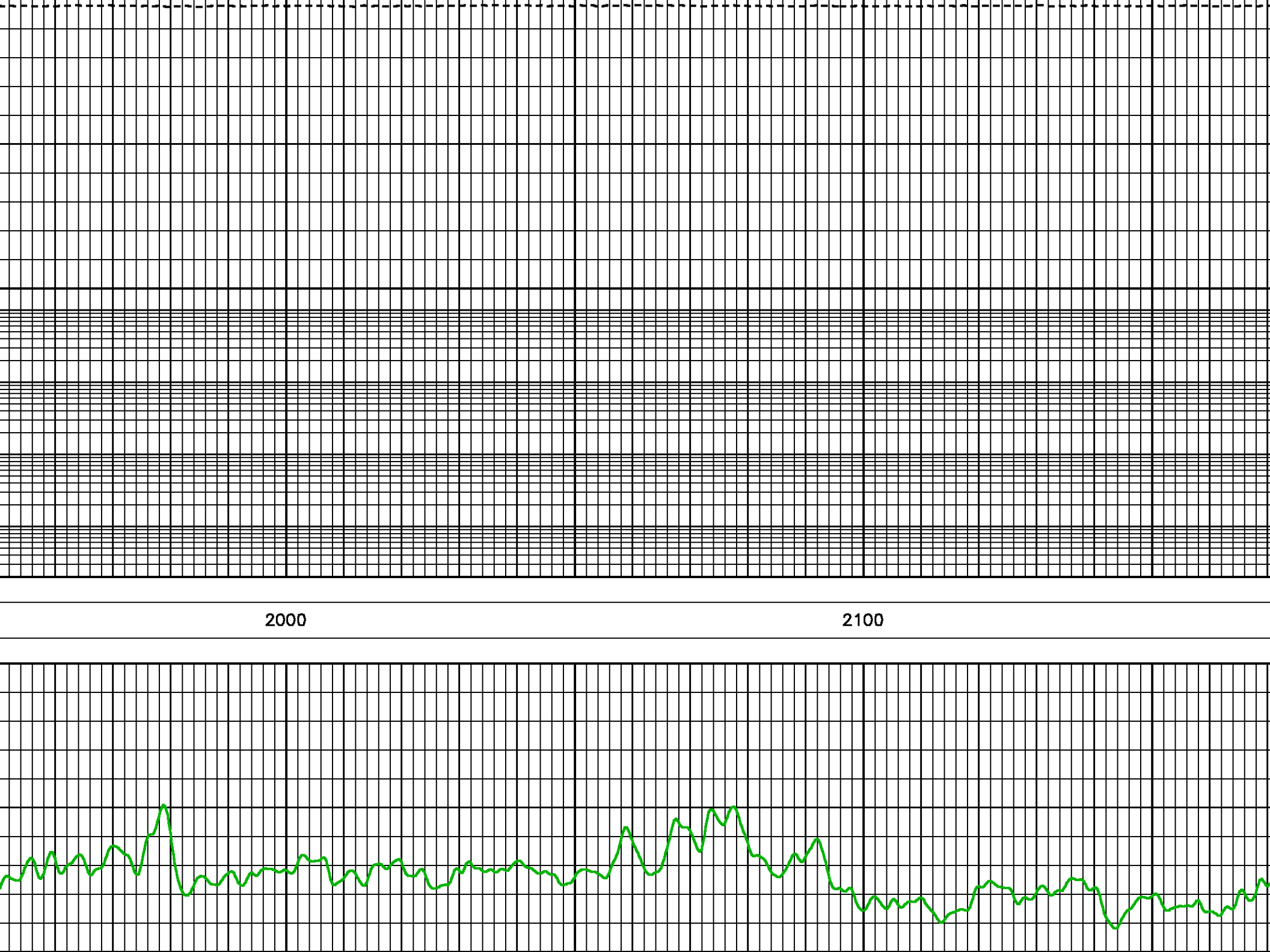
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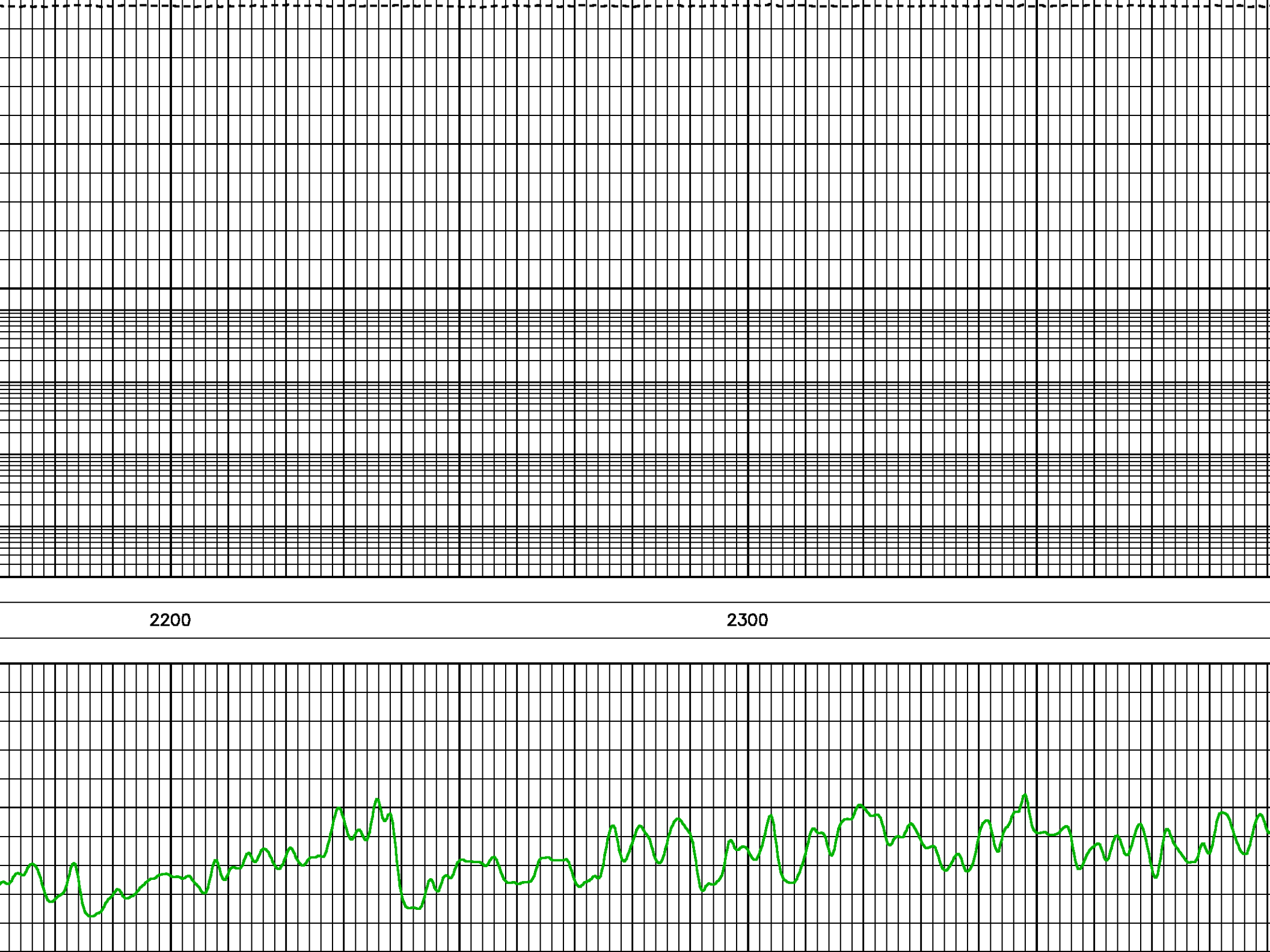
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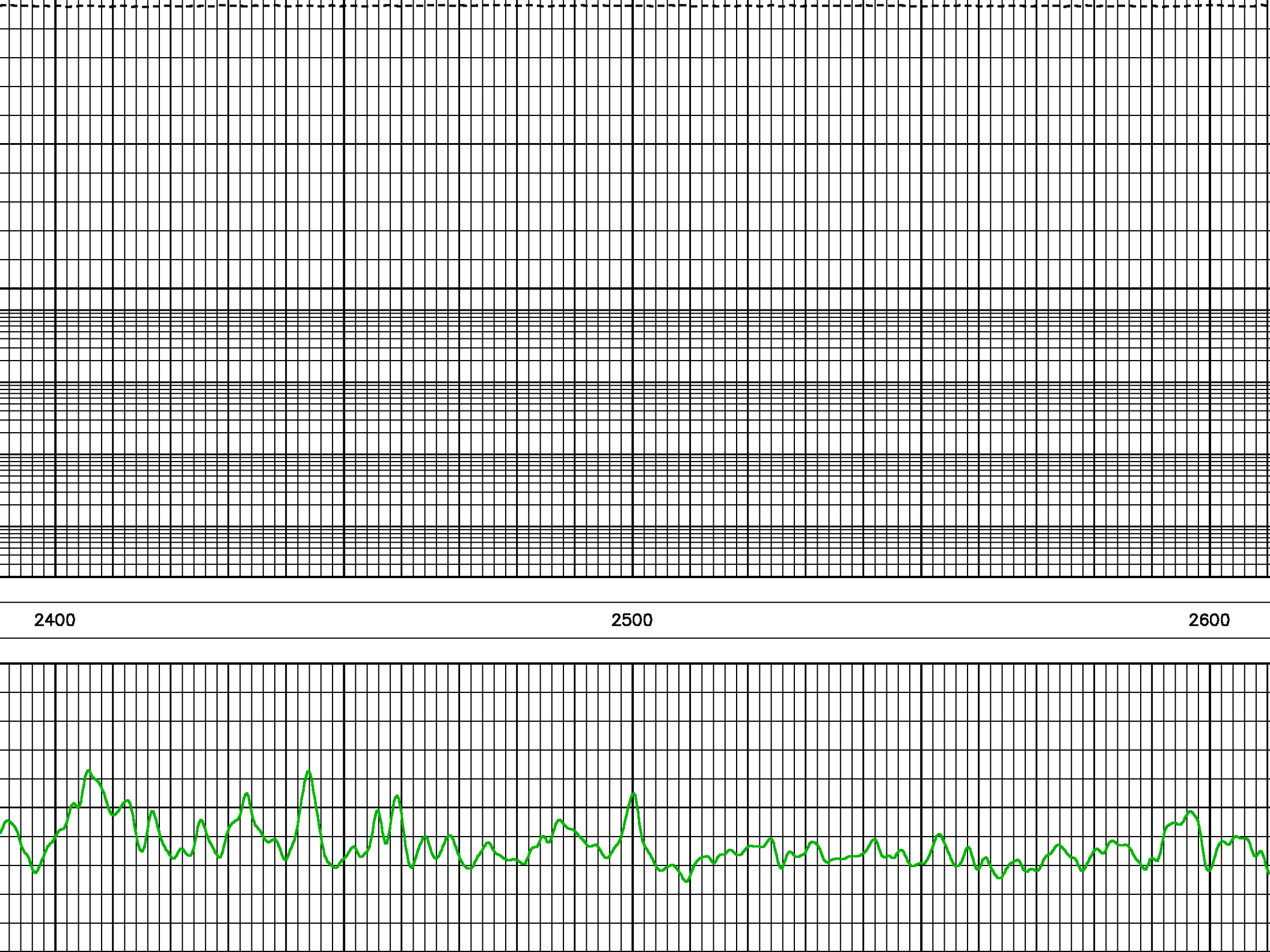
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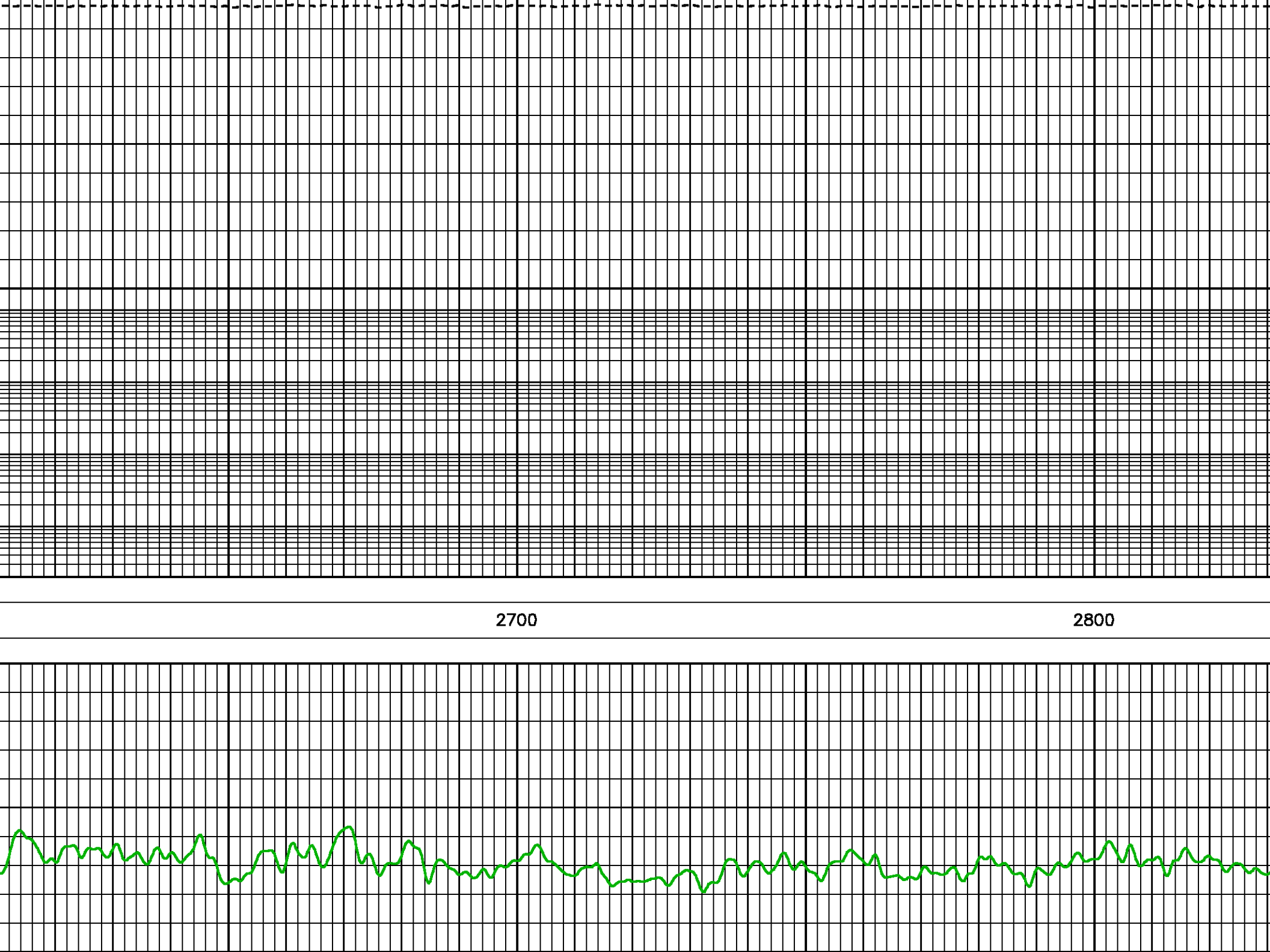
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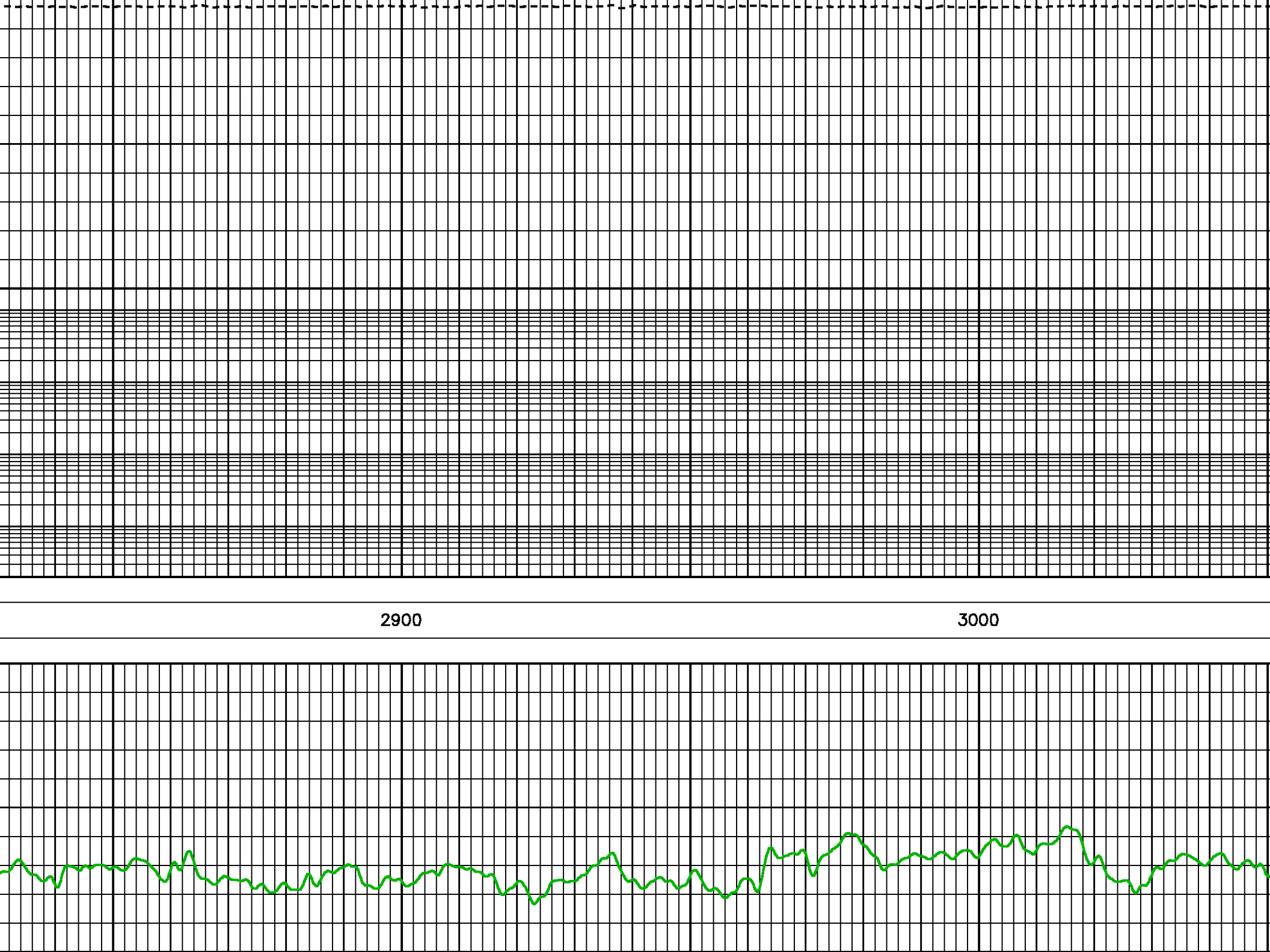
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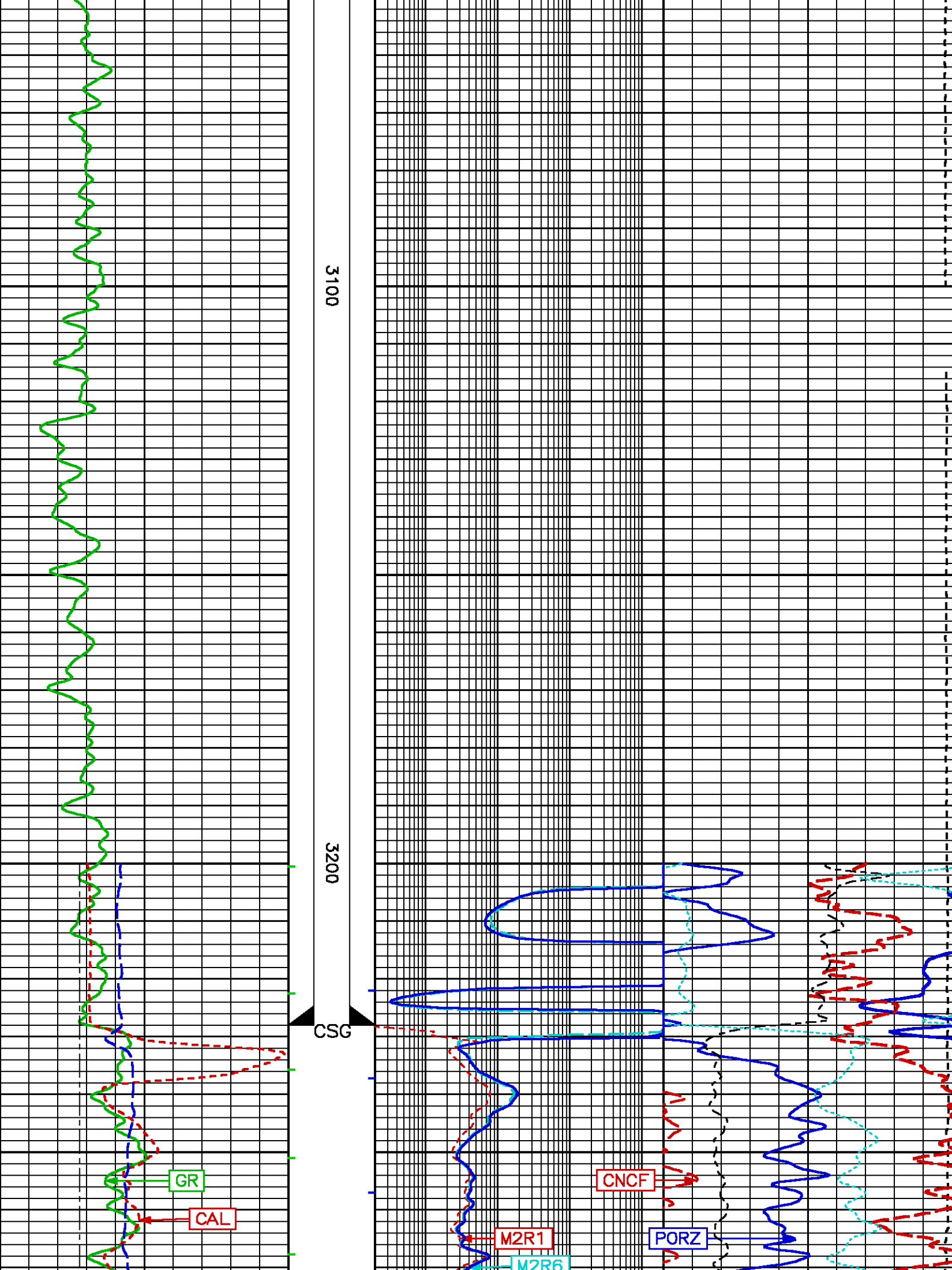
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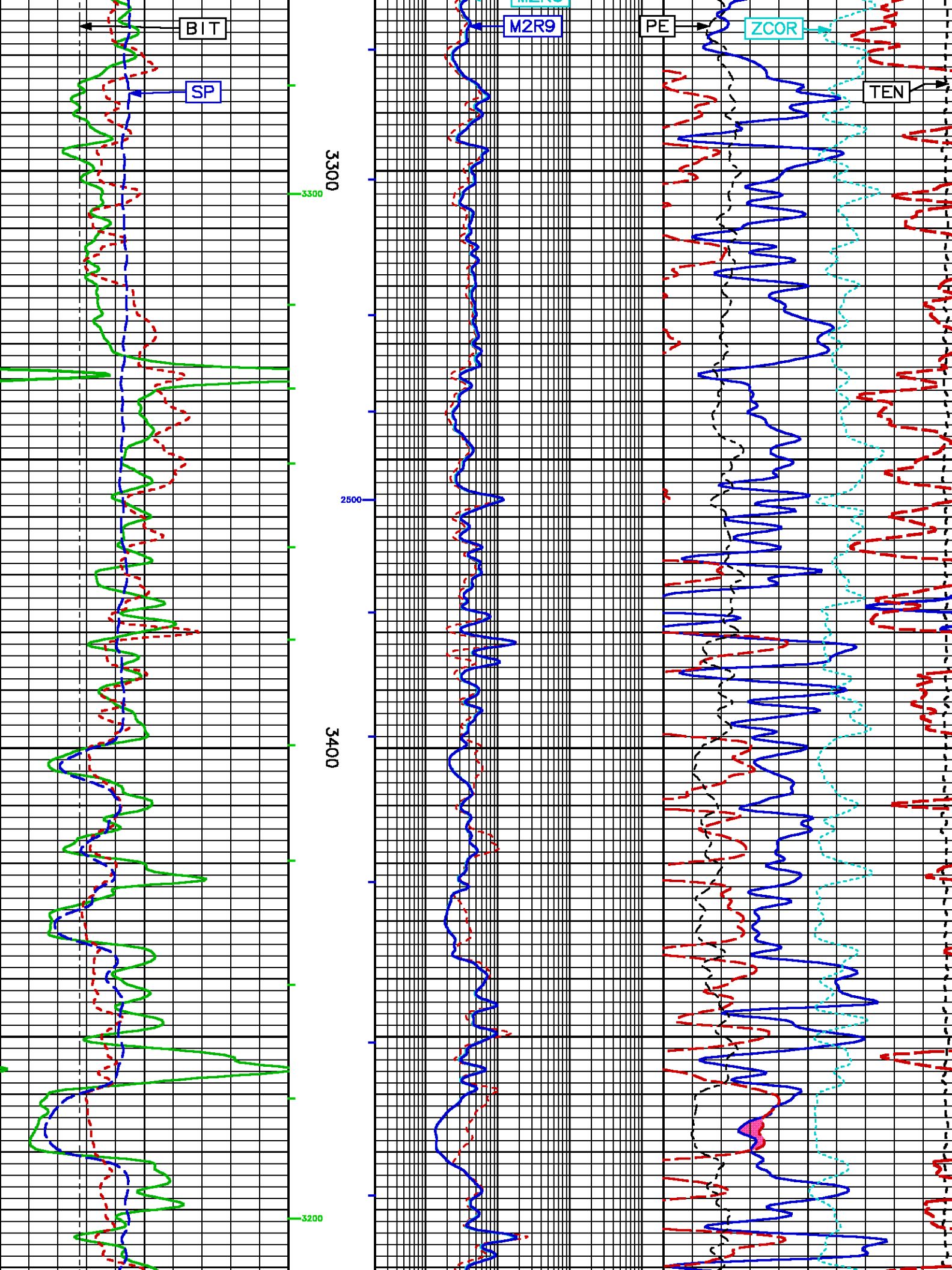
CAL
CNCF
M2R1
PORZ
M2R6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M2R9
PE
ZCOR
TEN
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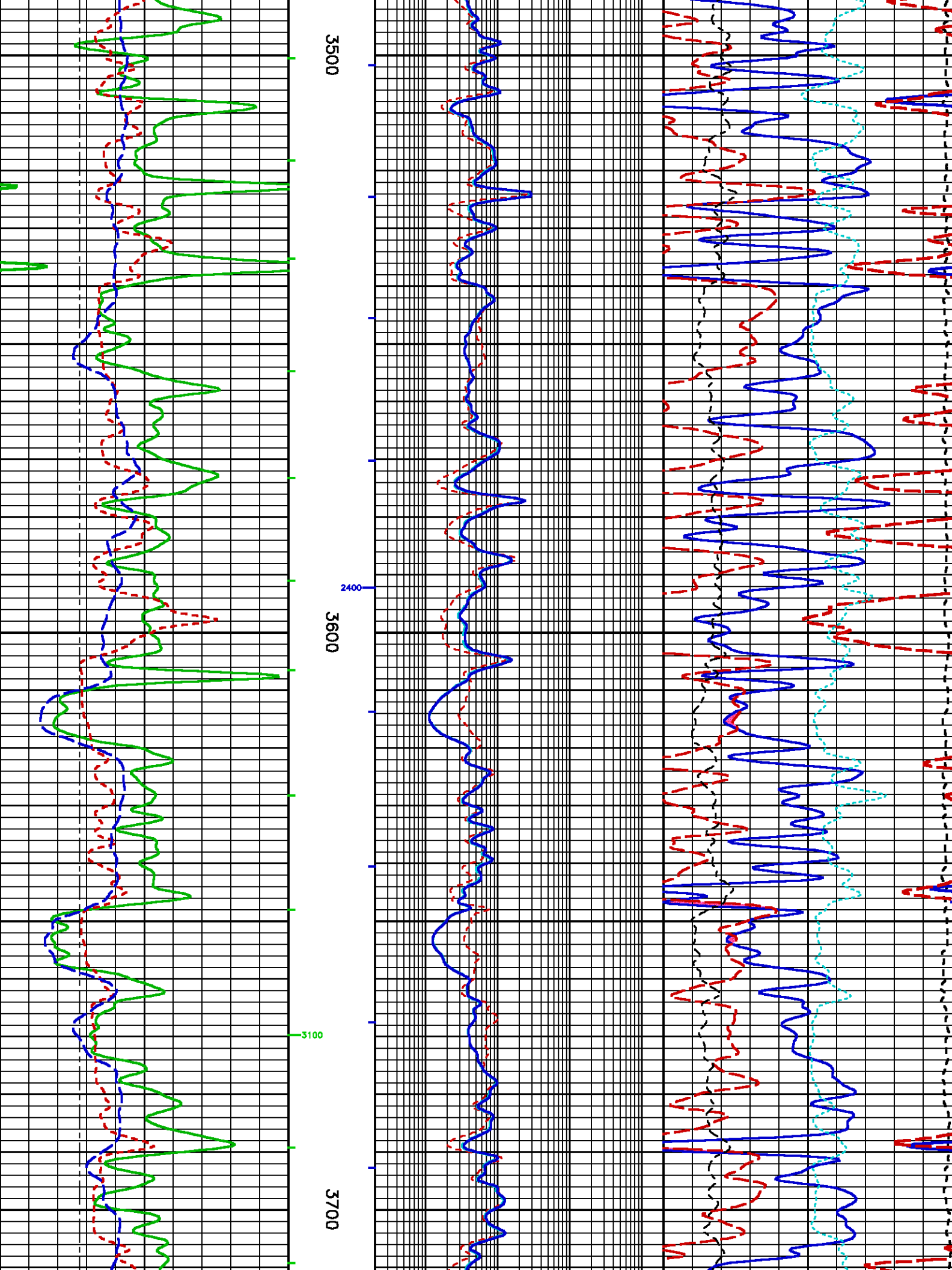
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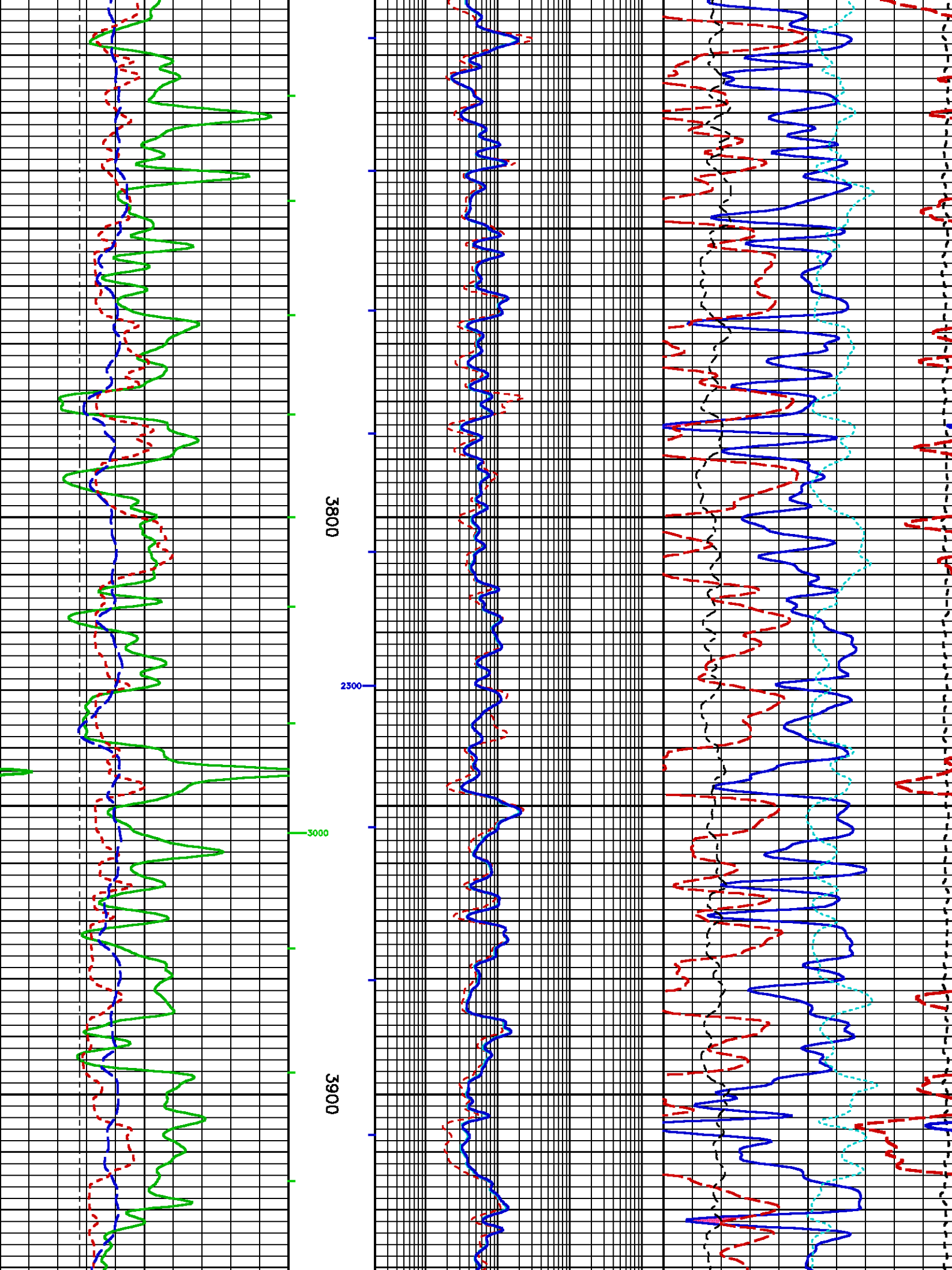
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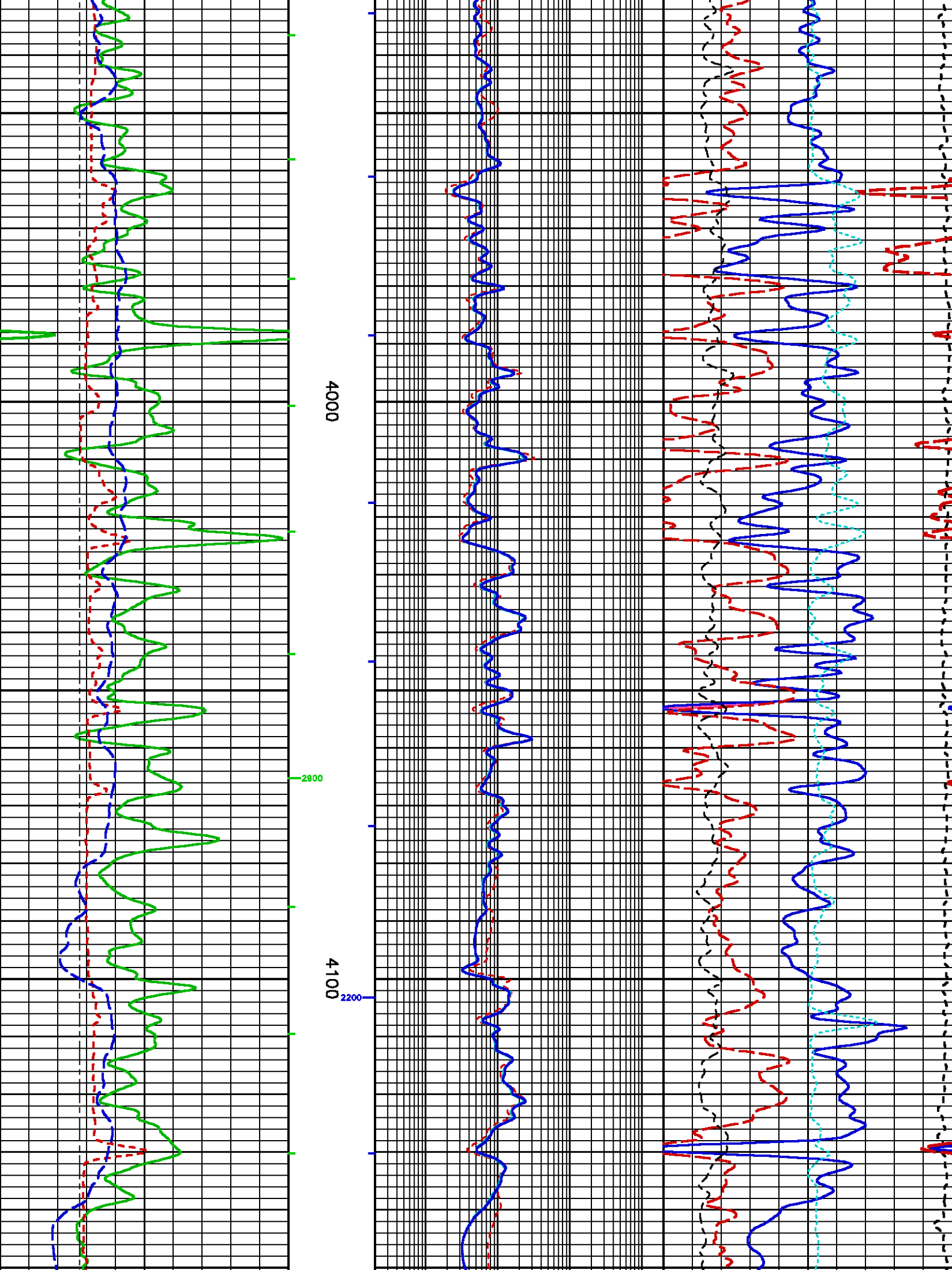
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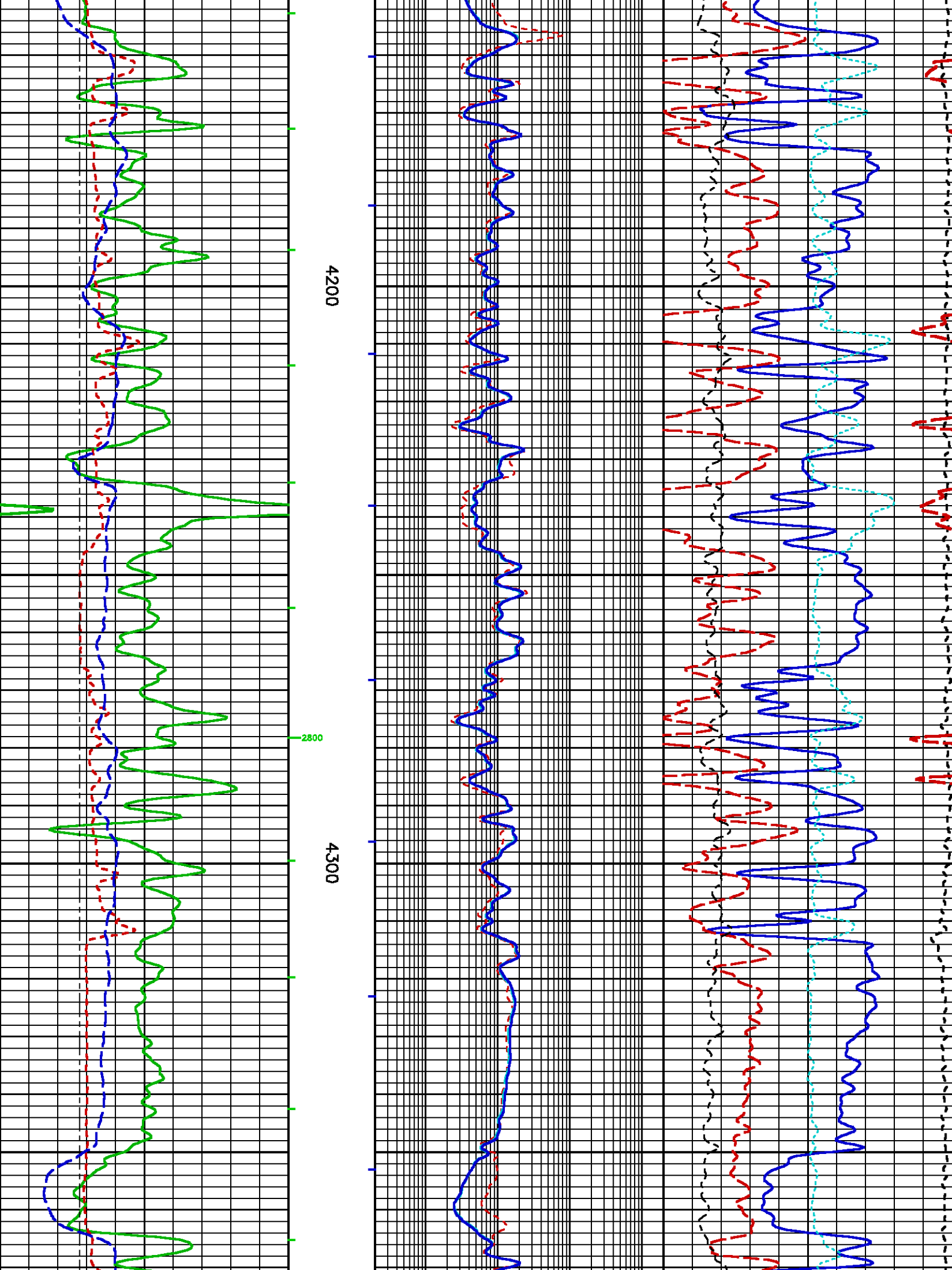
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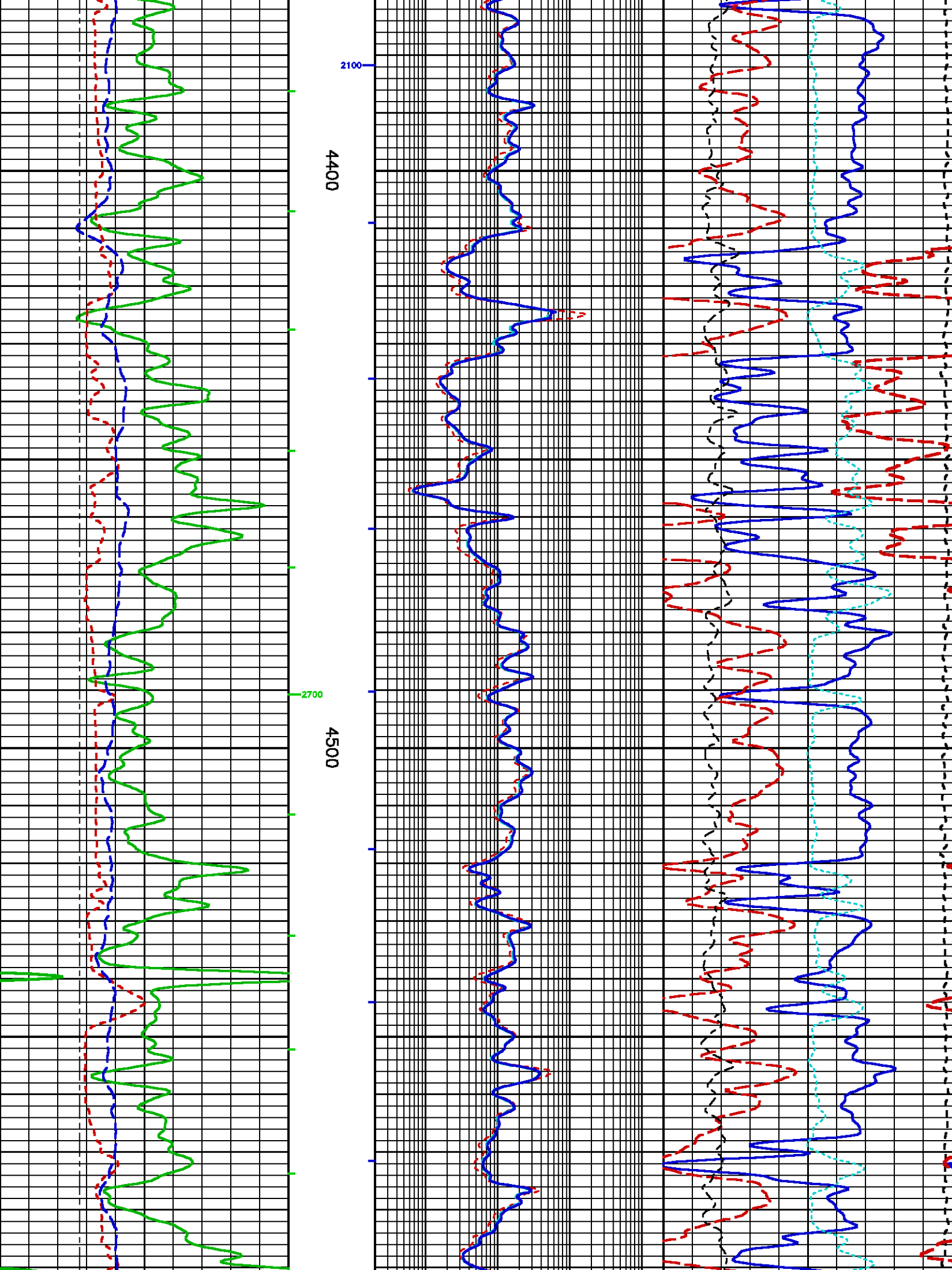
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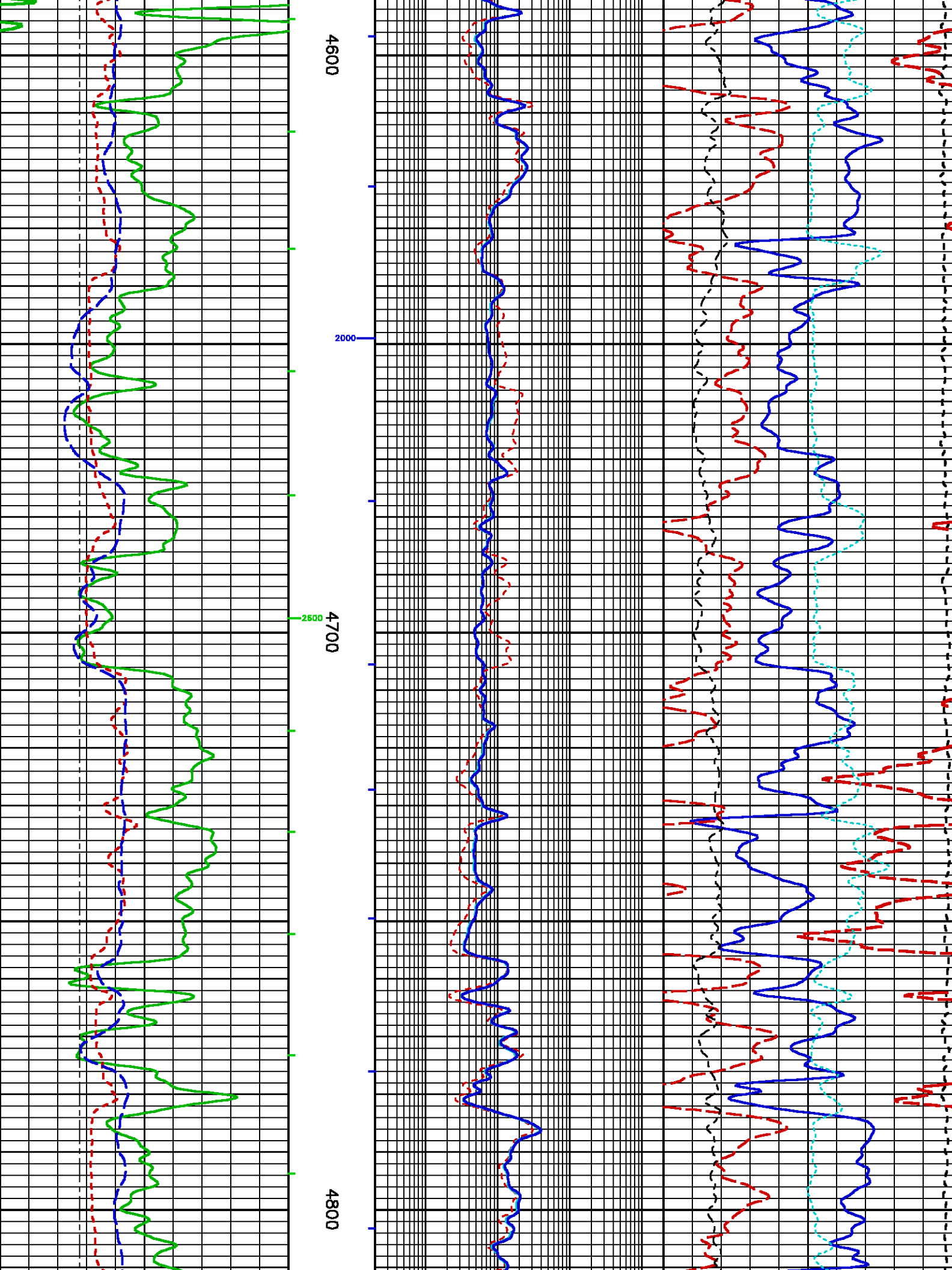
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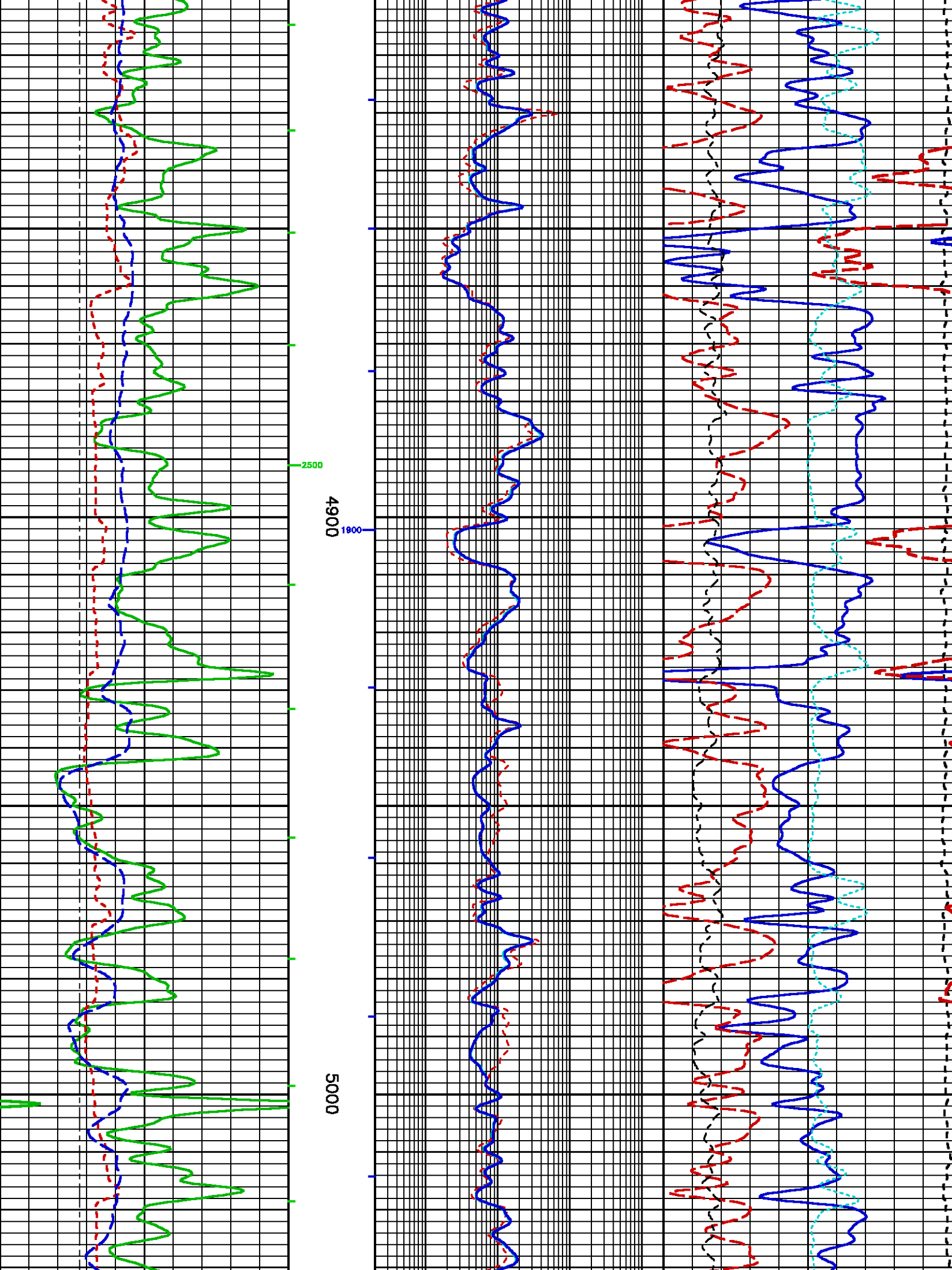
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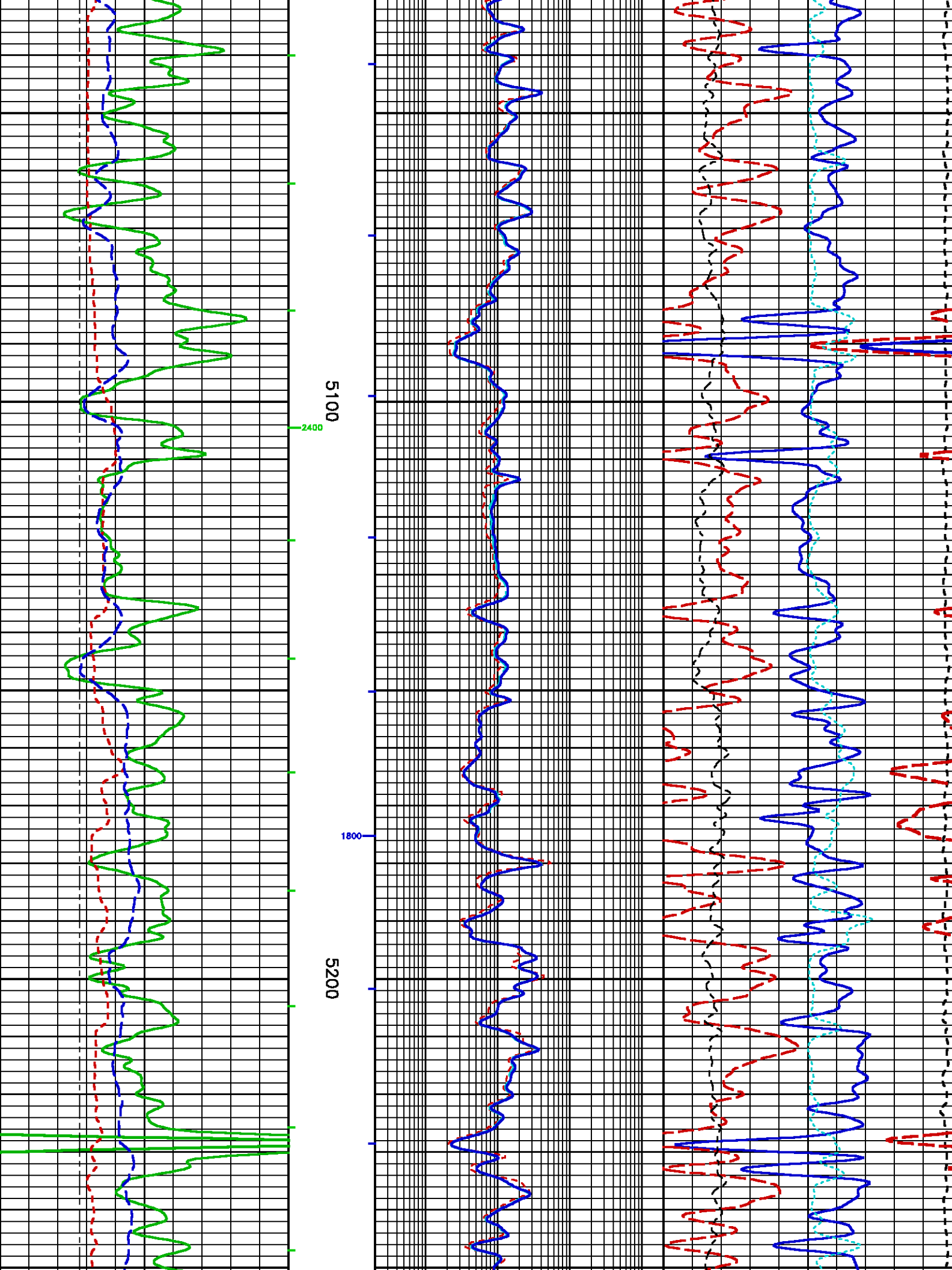
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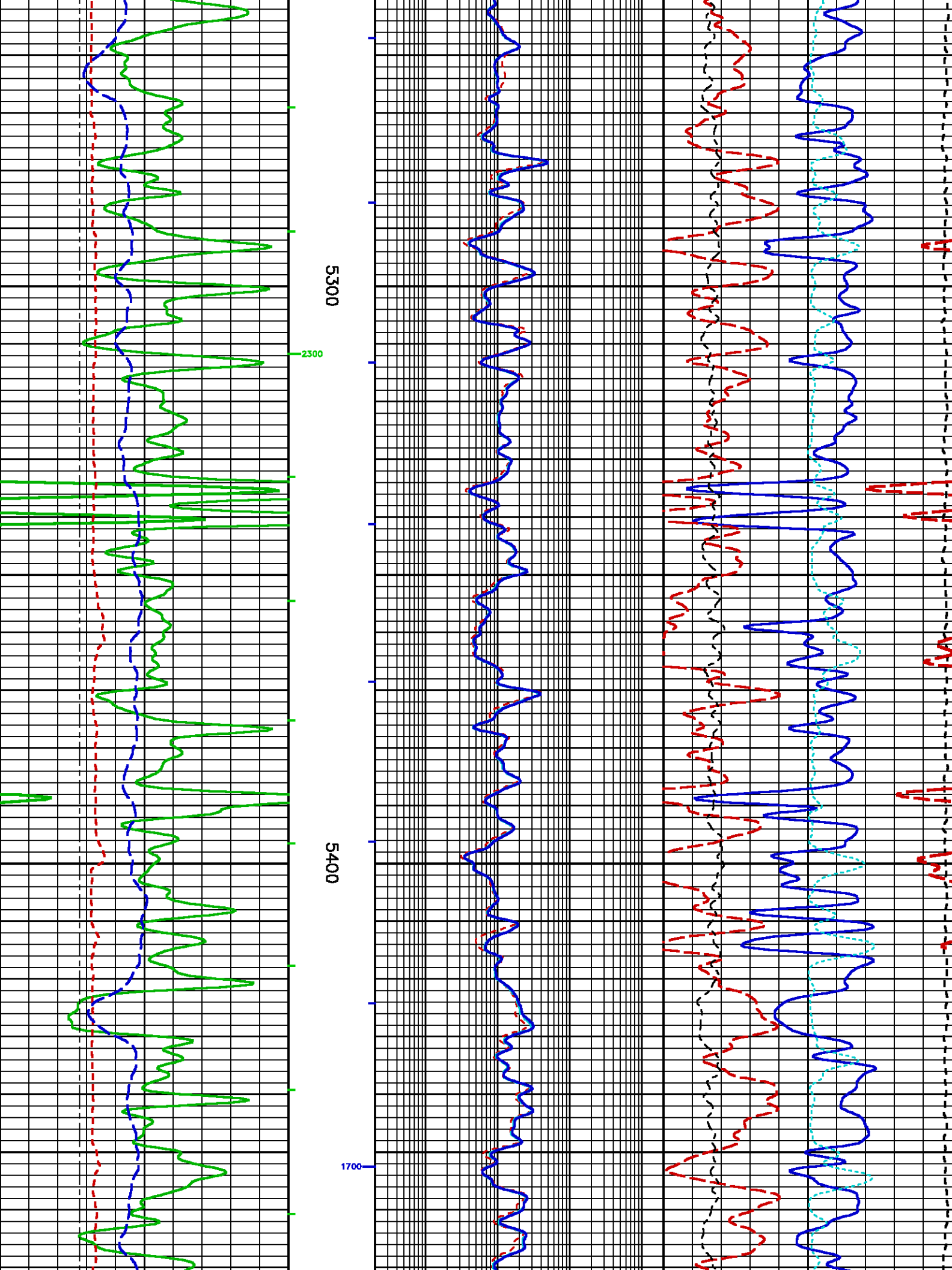
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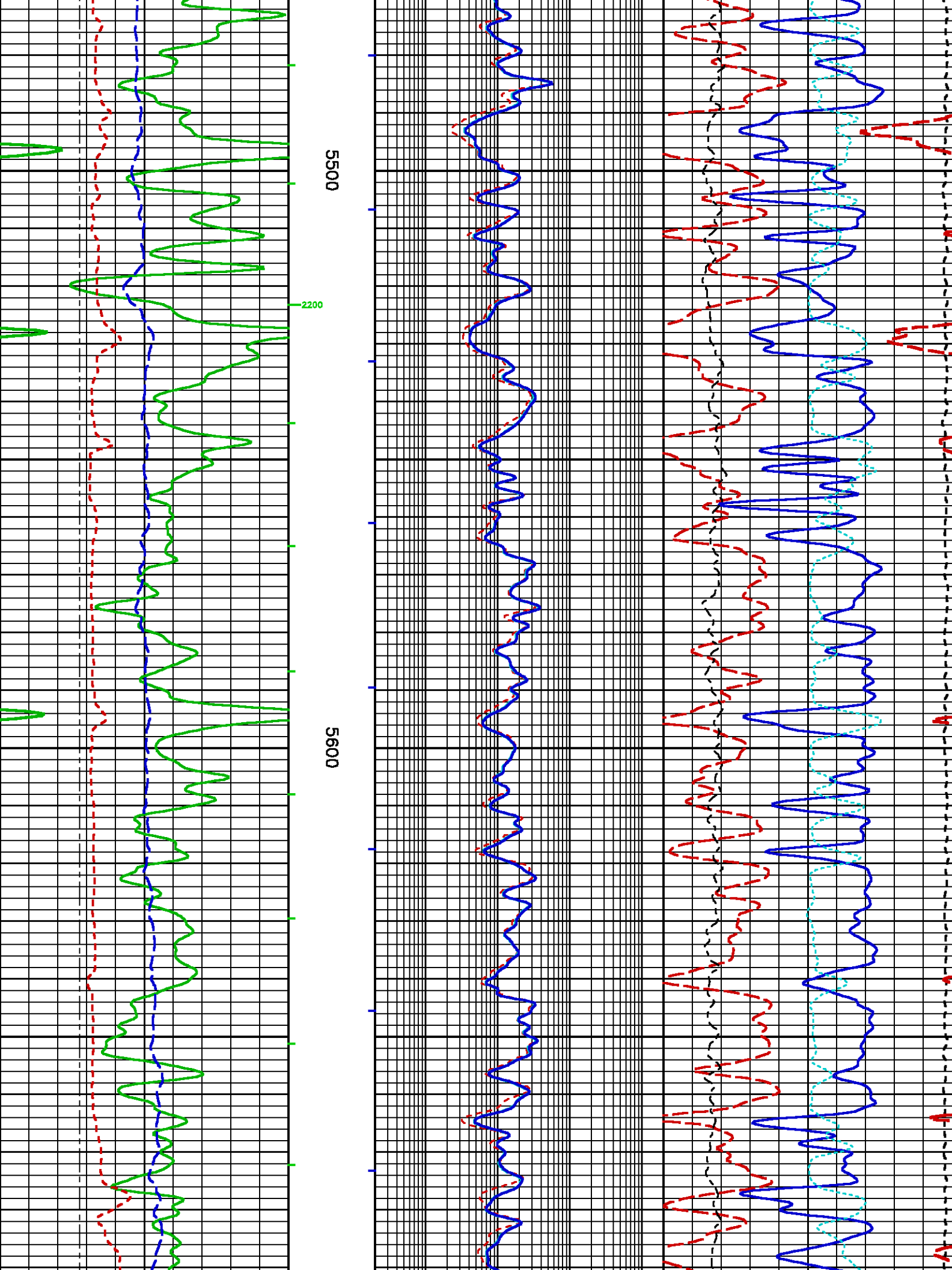
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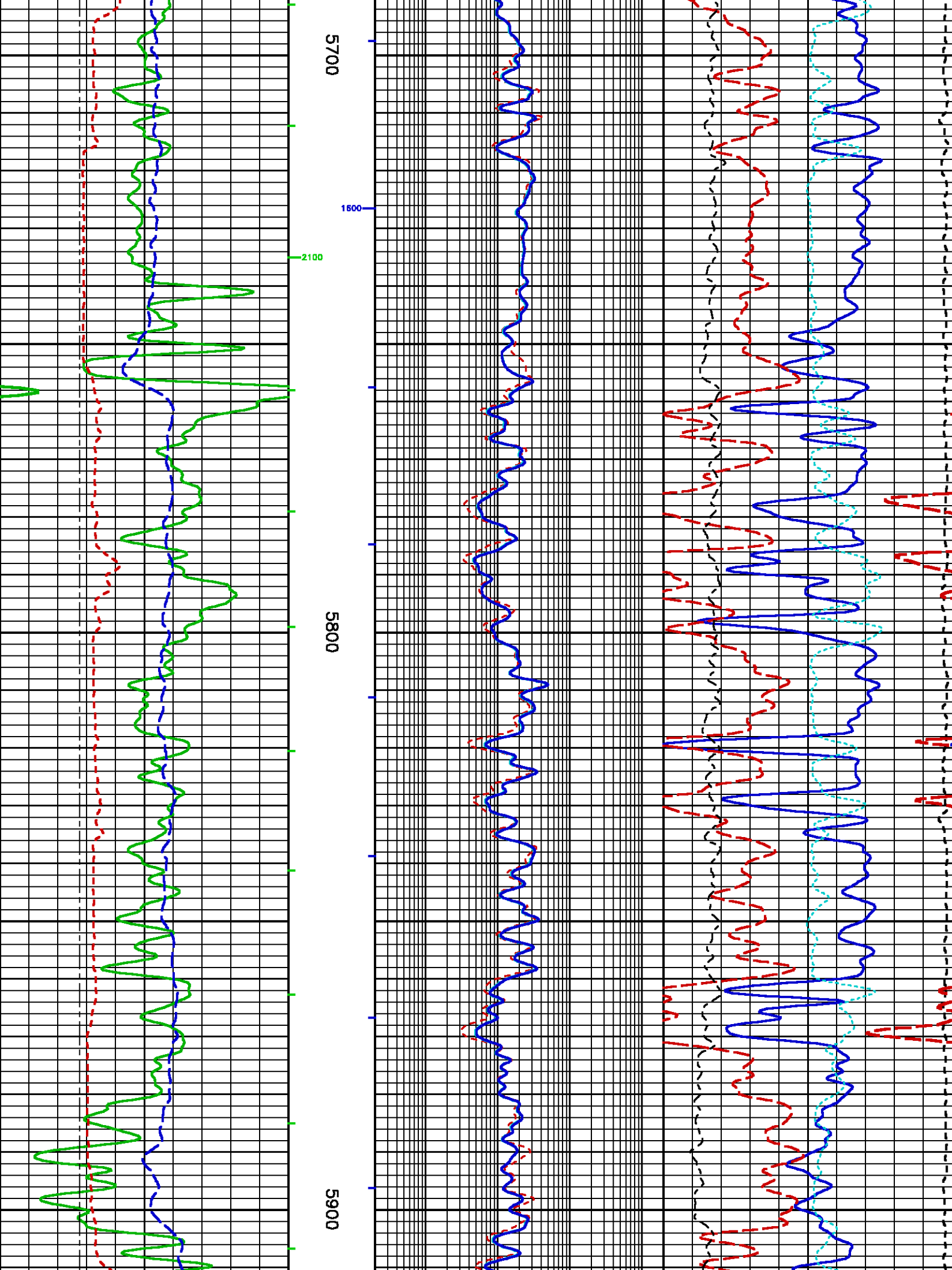
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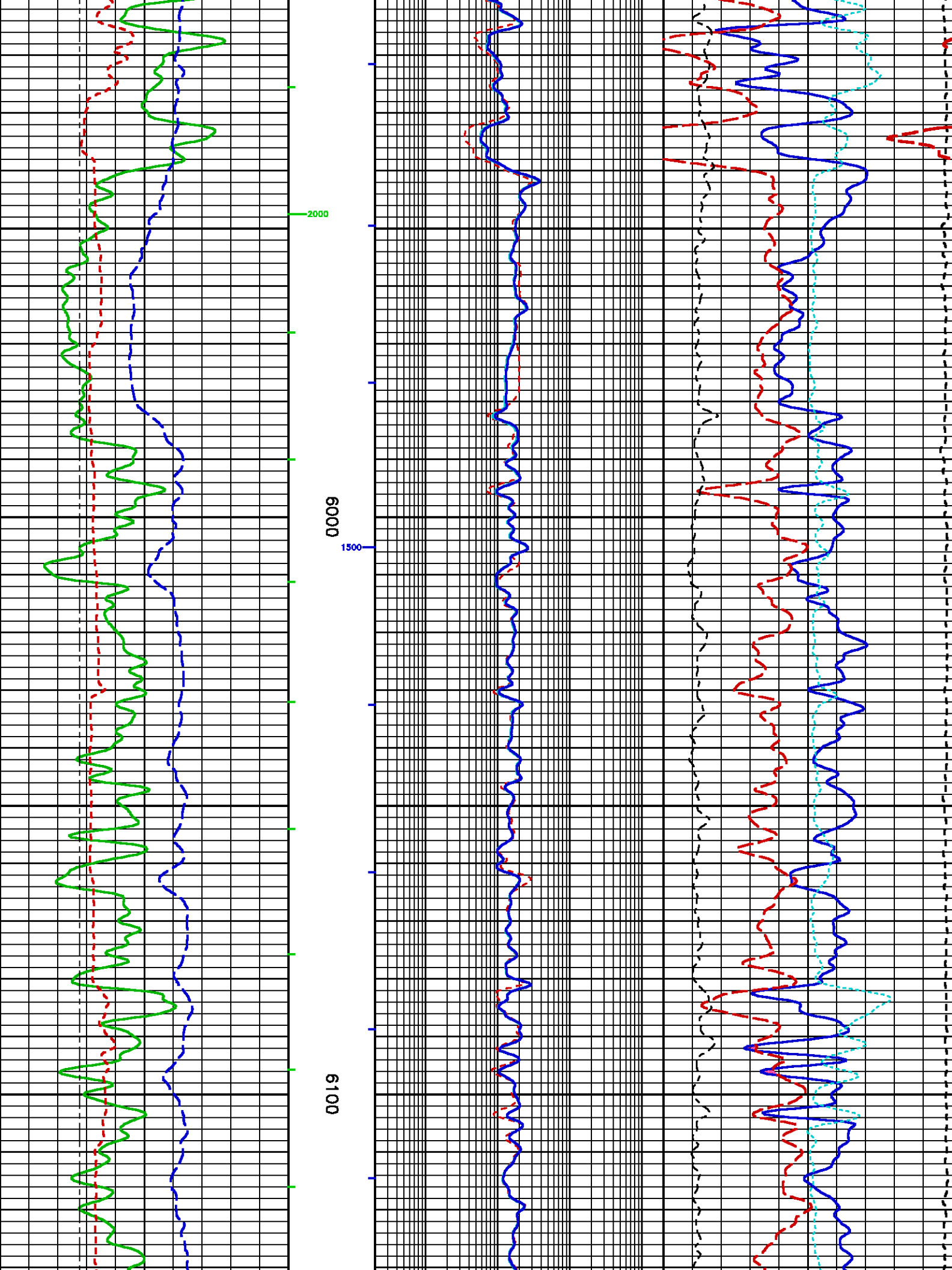
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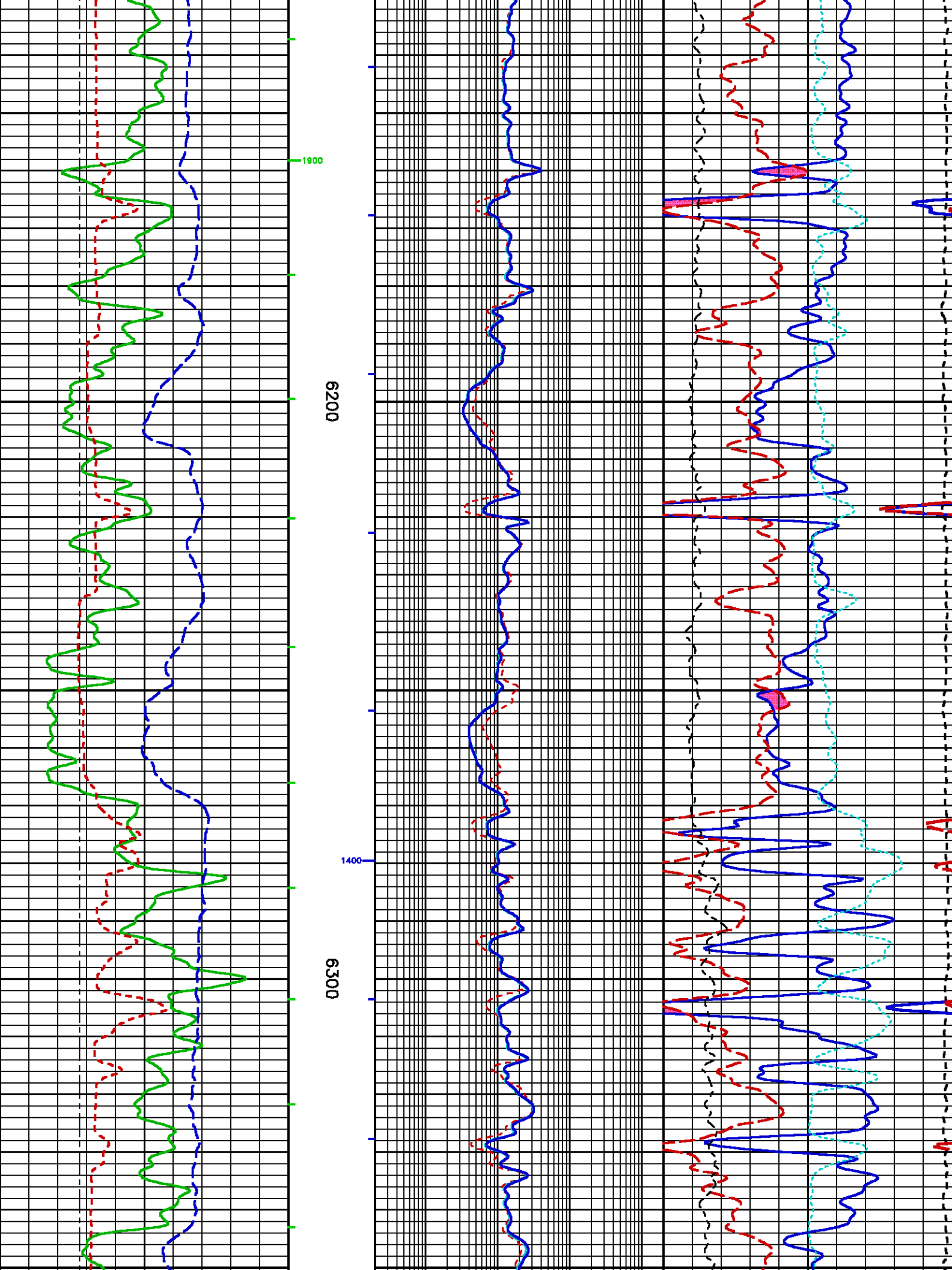
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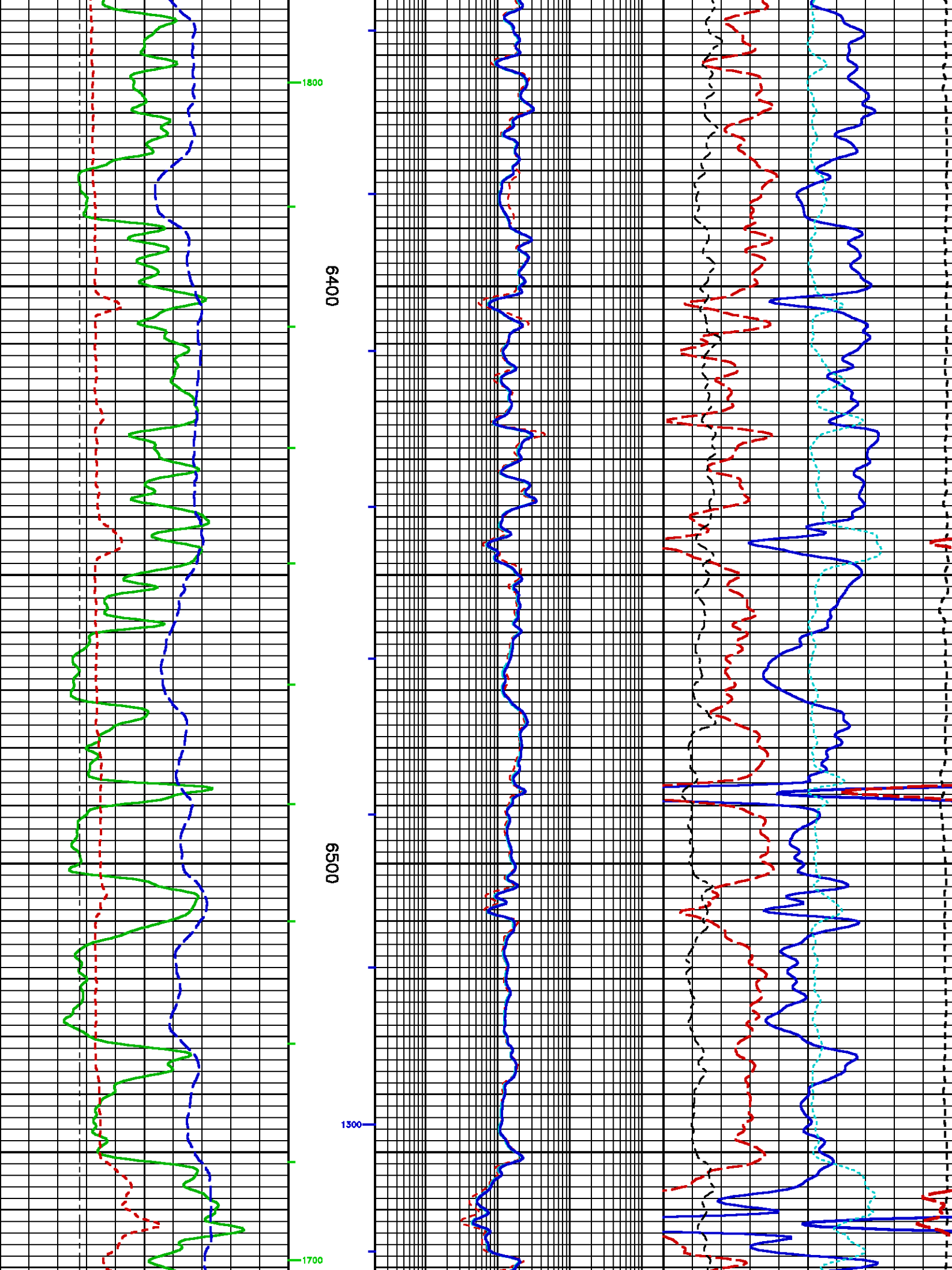
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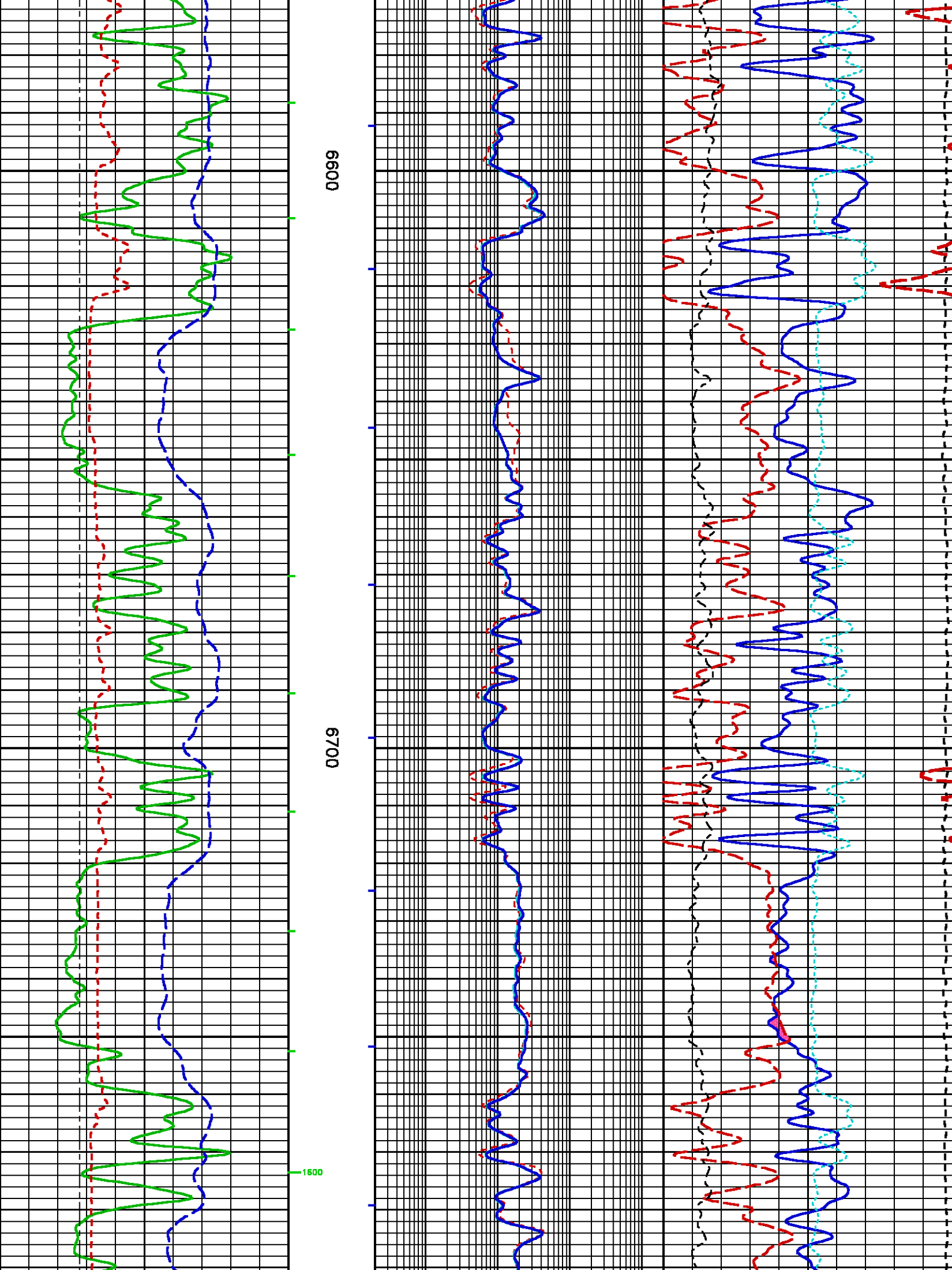
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6700
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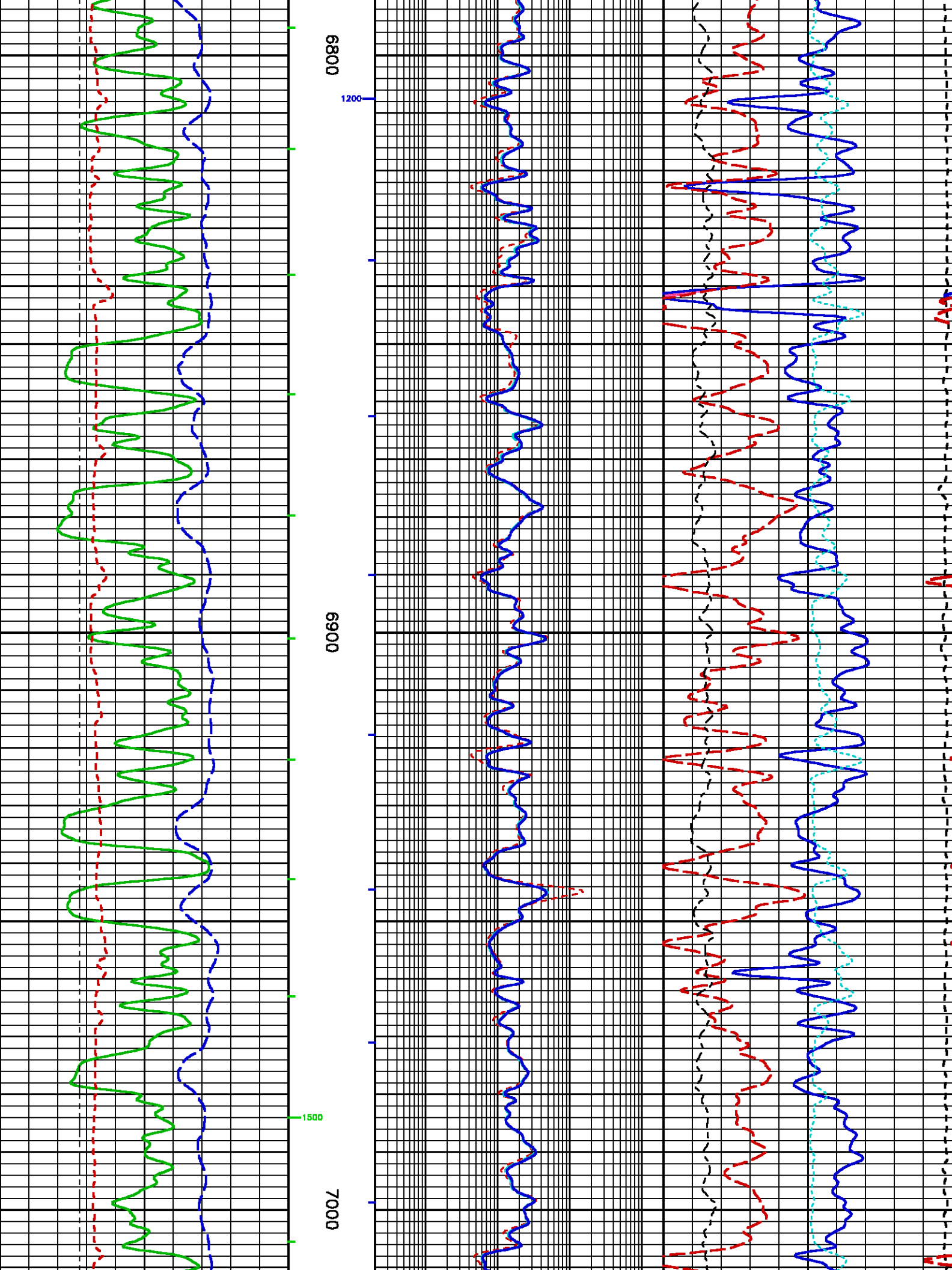
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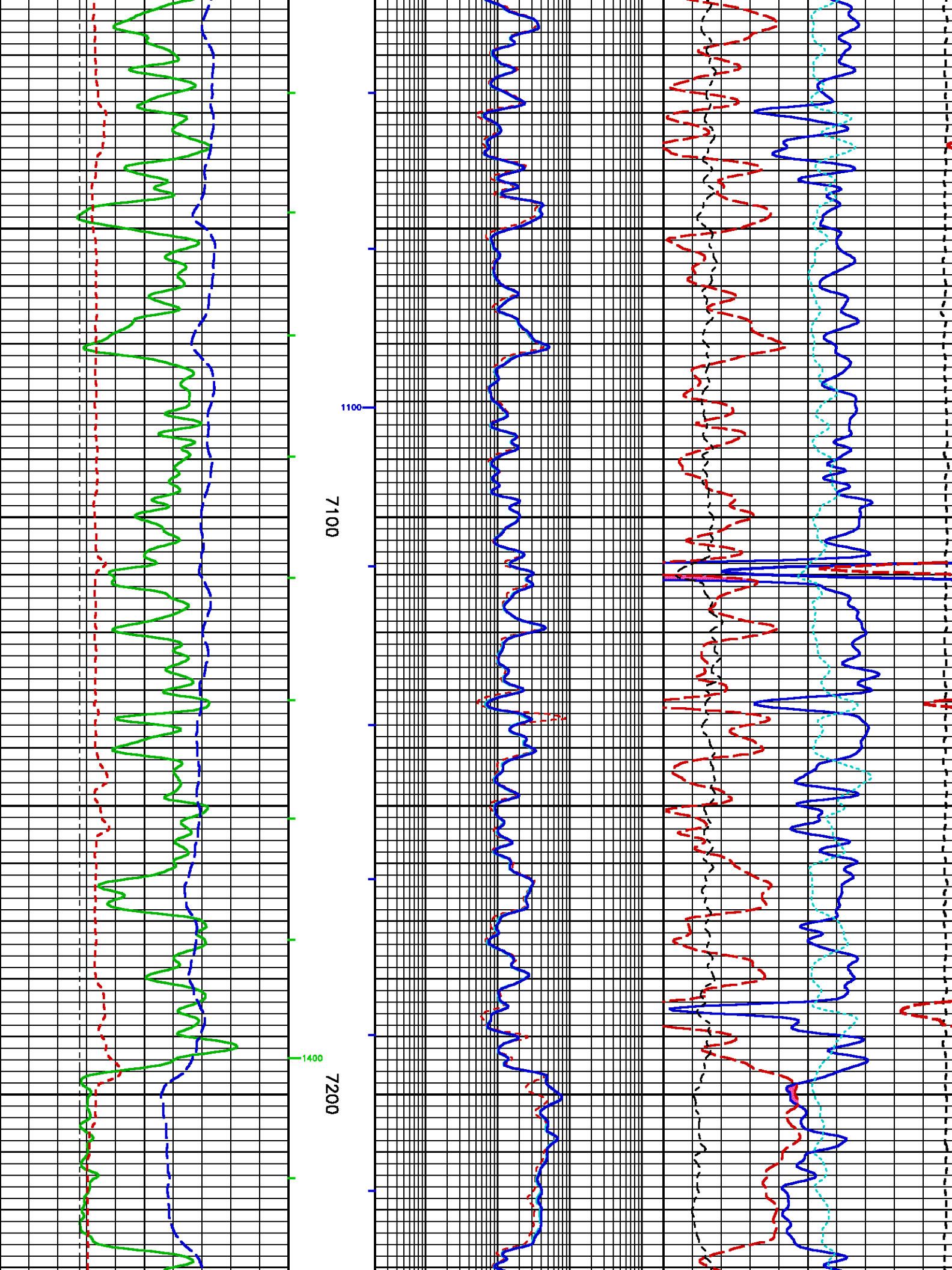
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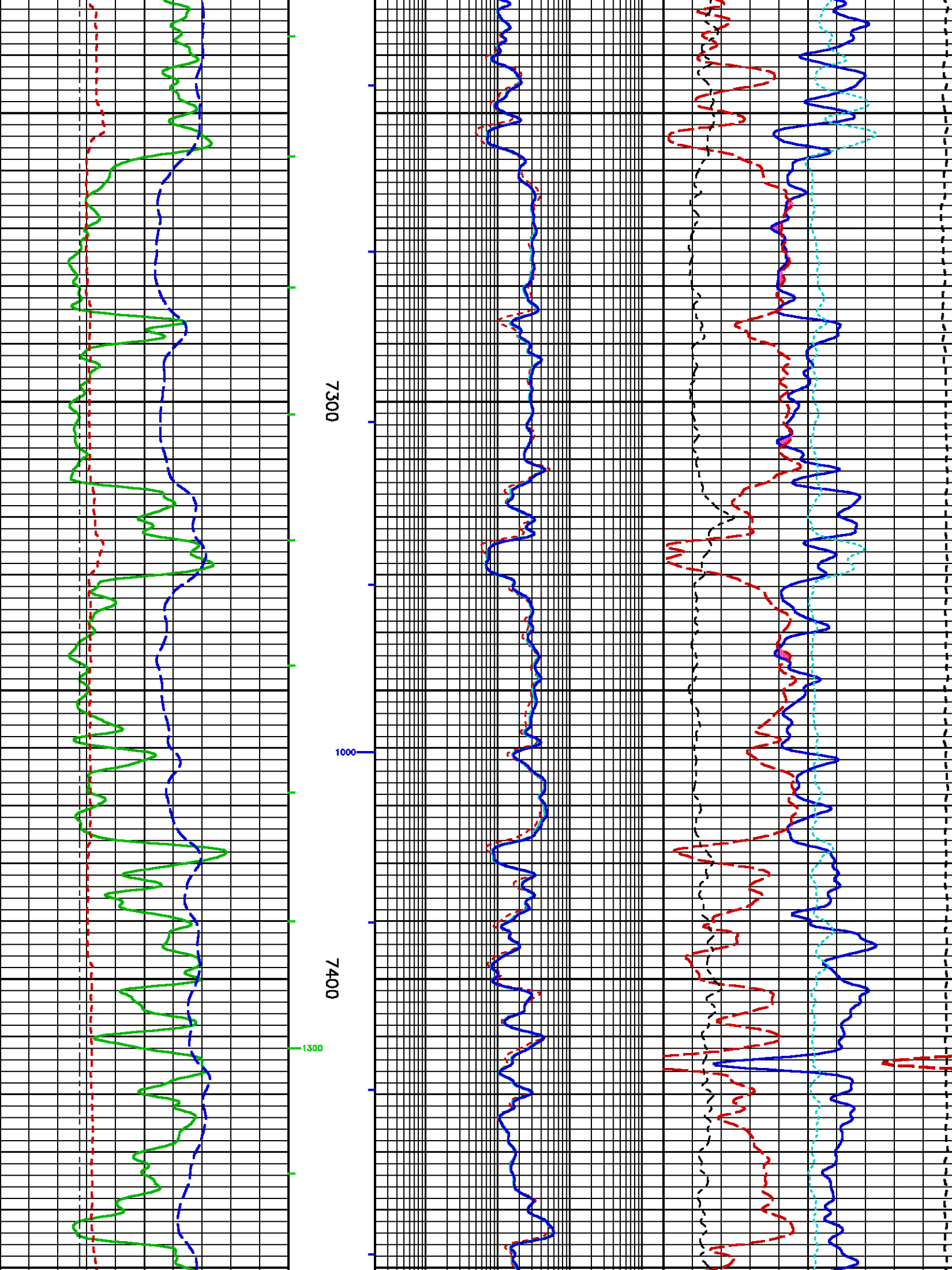
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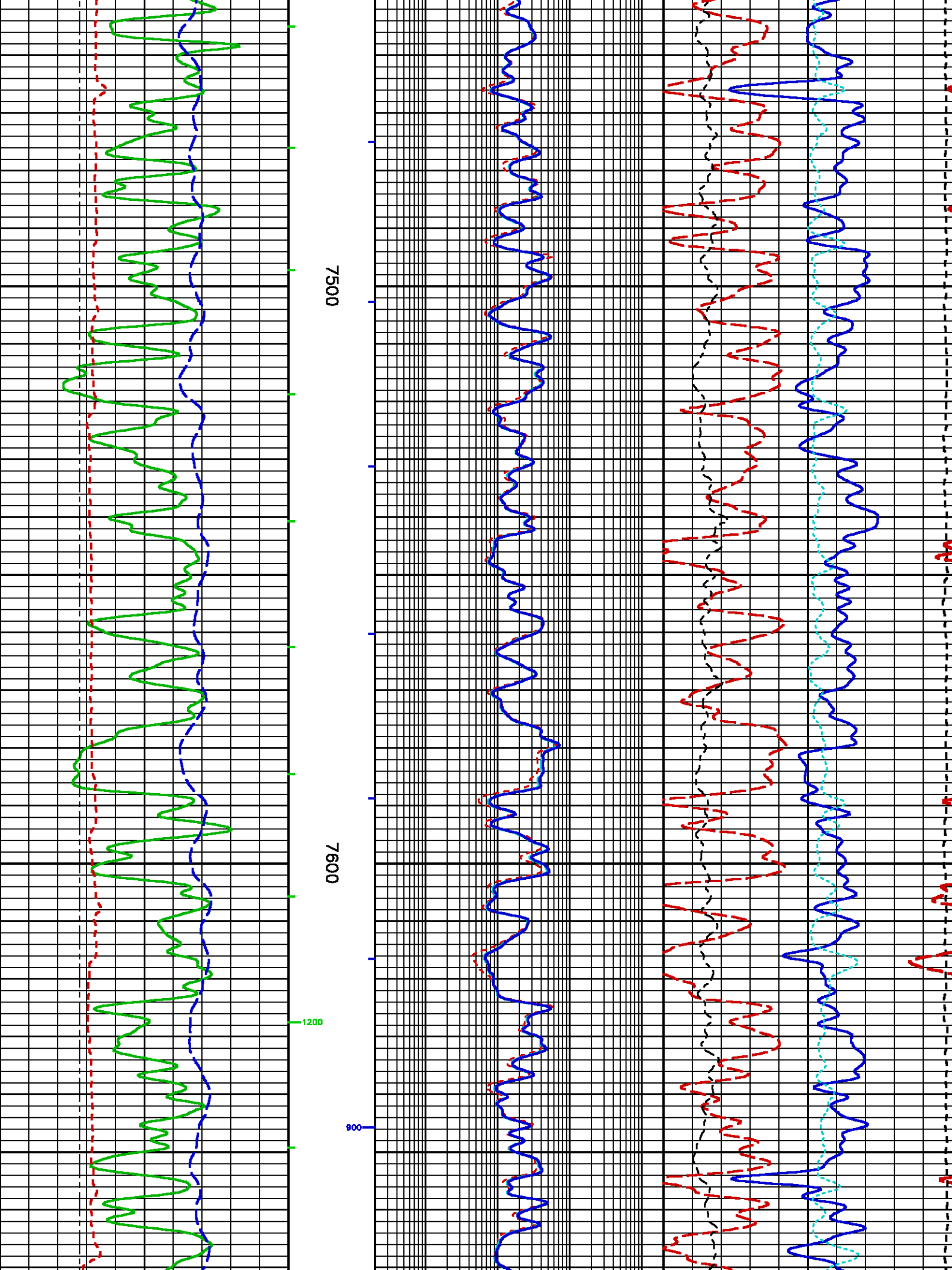
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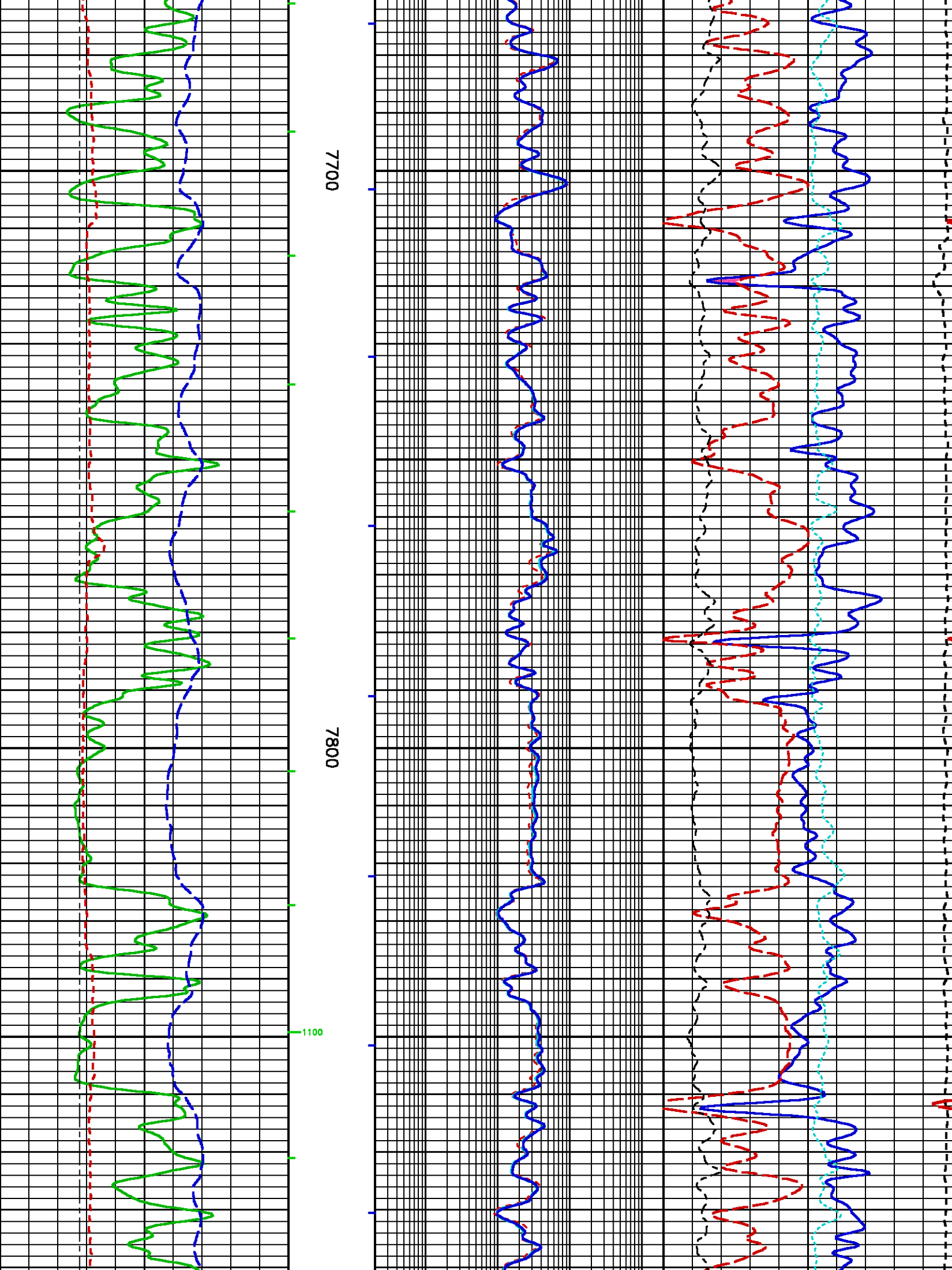
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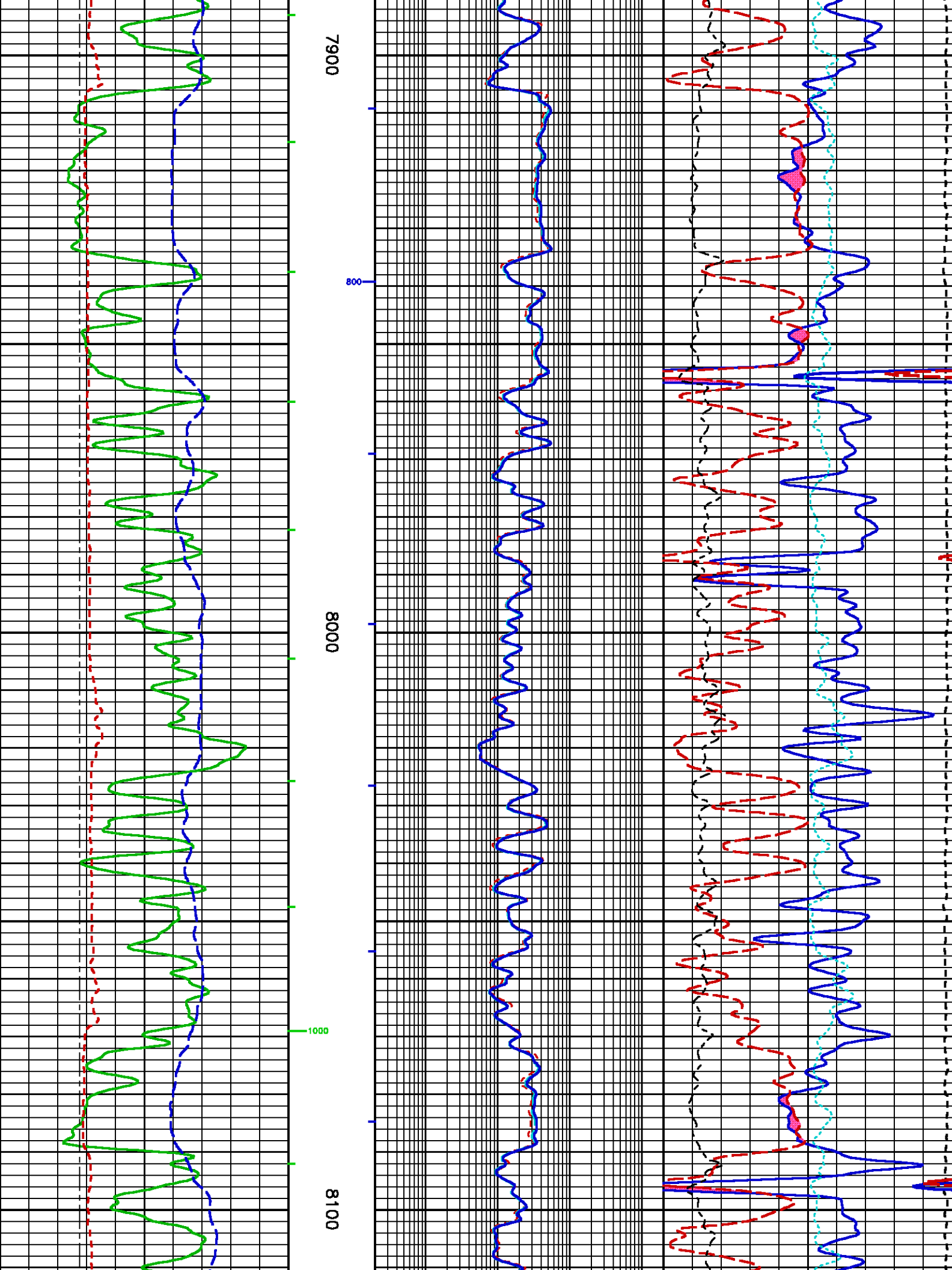
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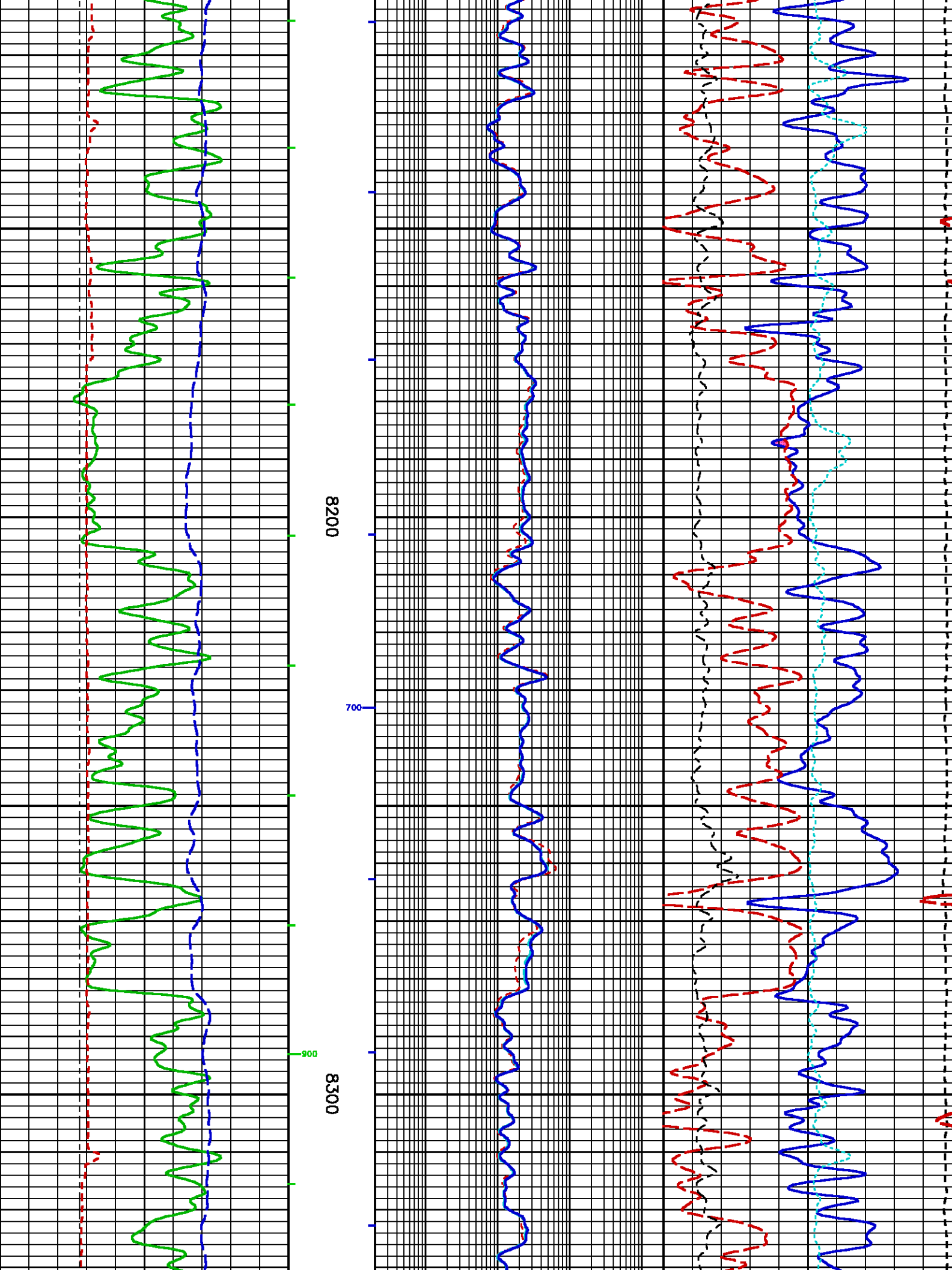
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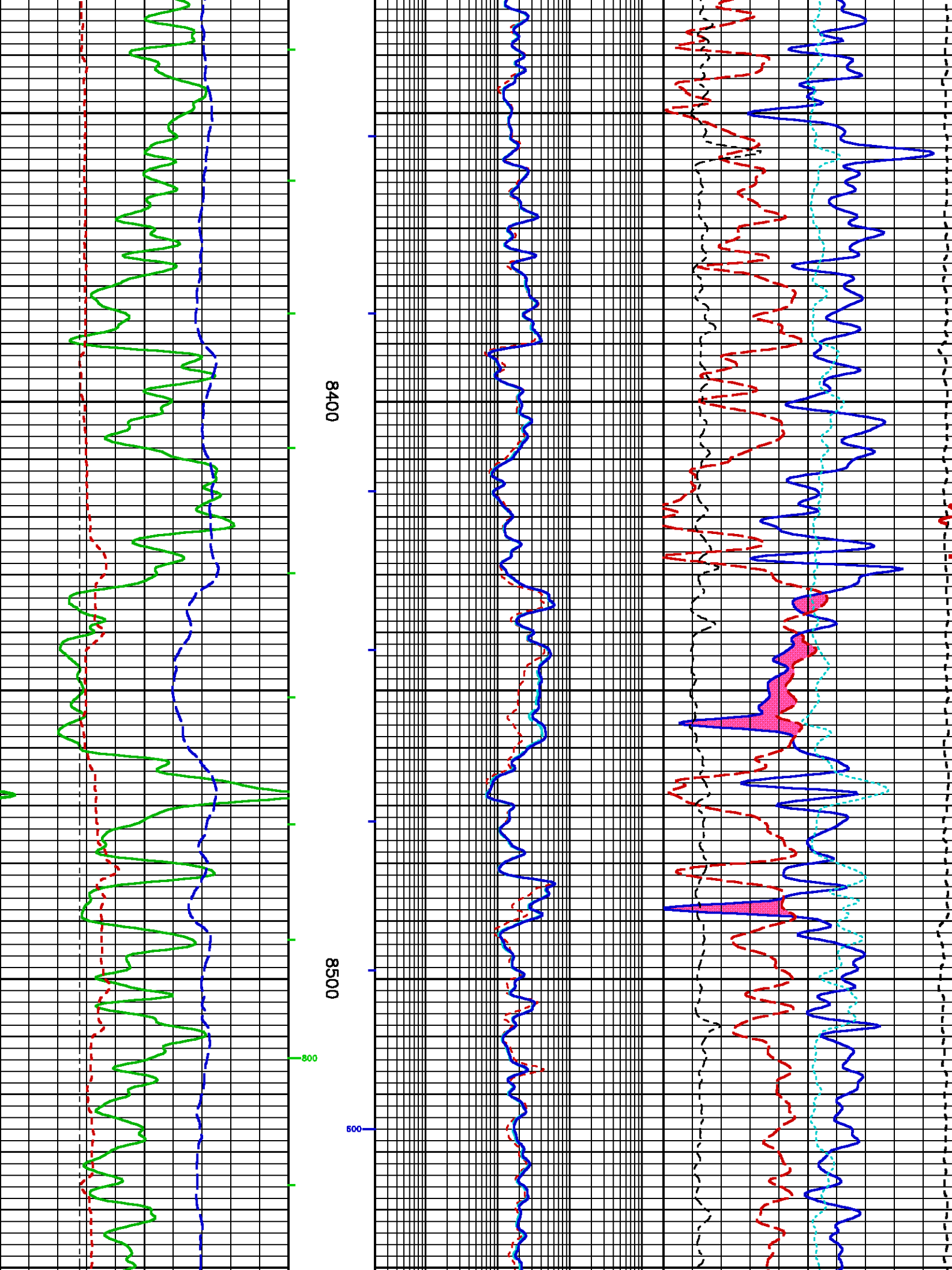
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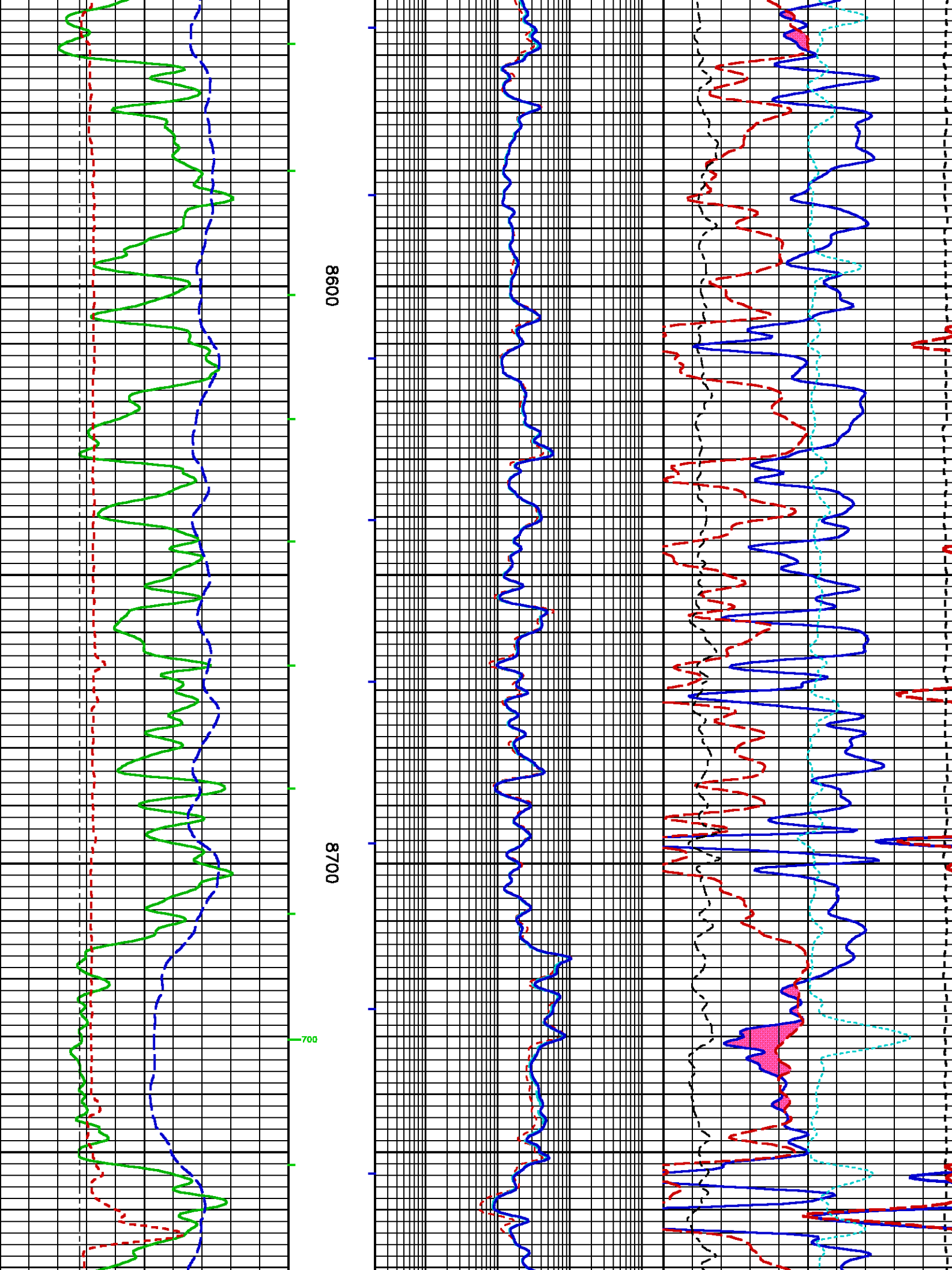
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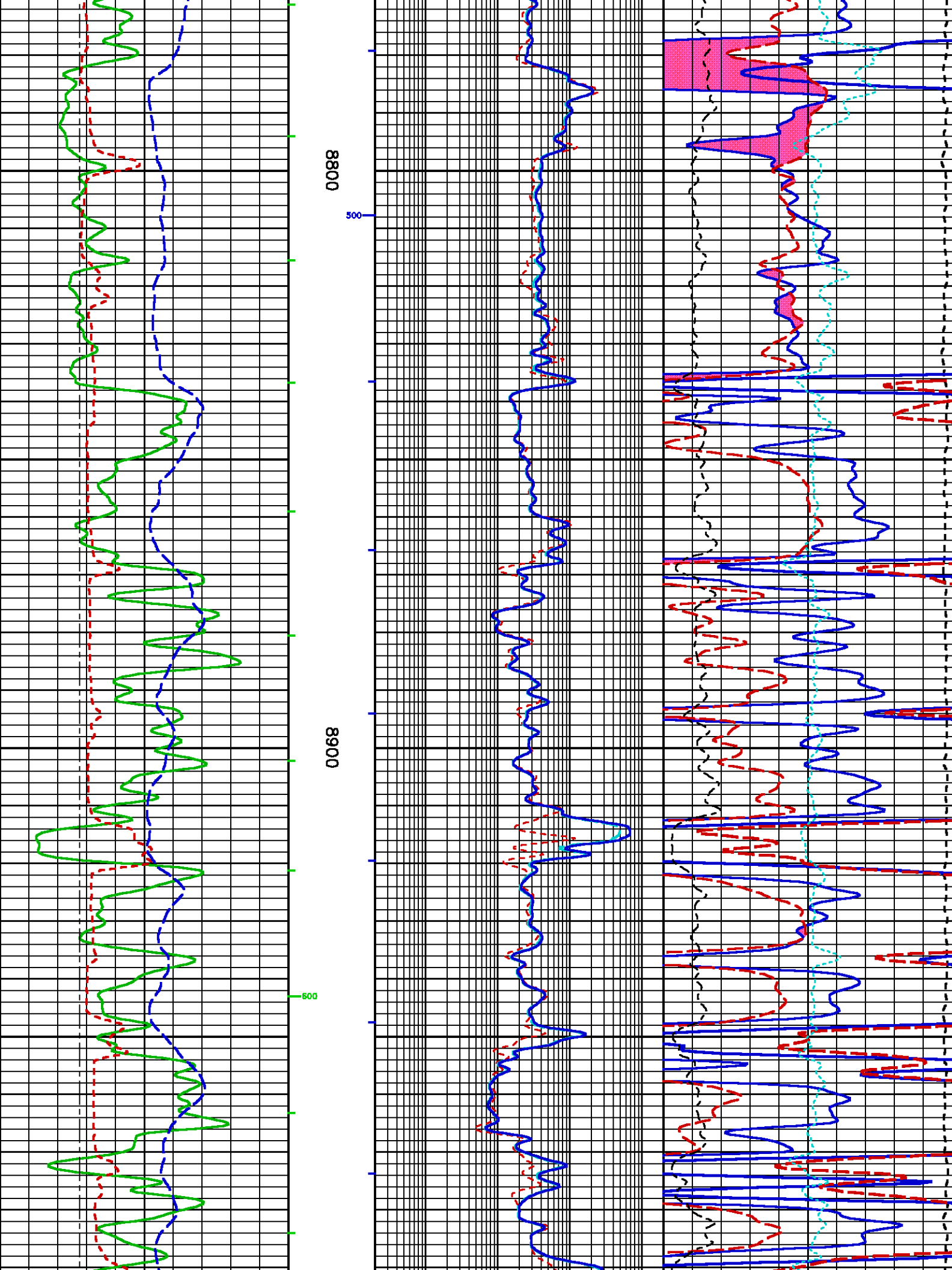
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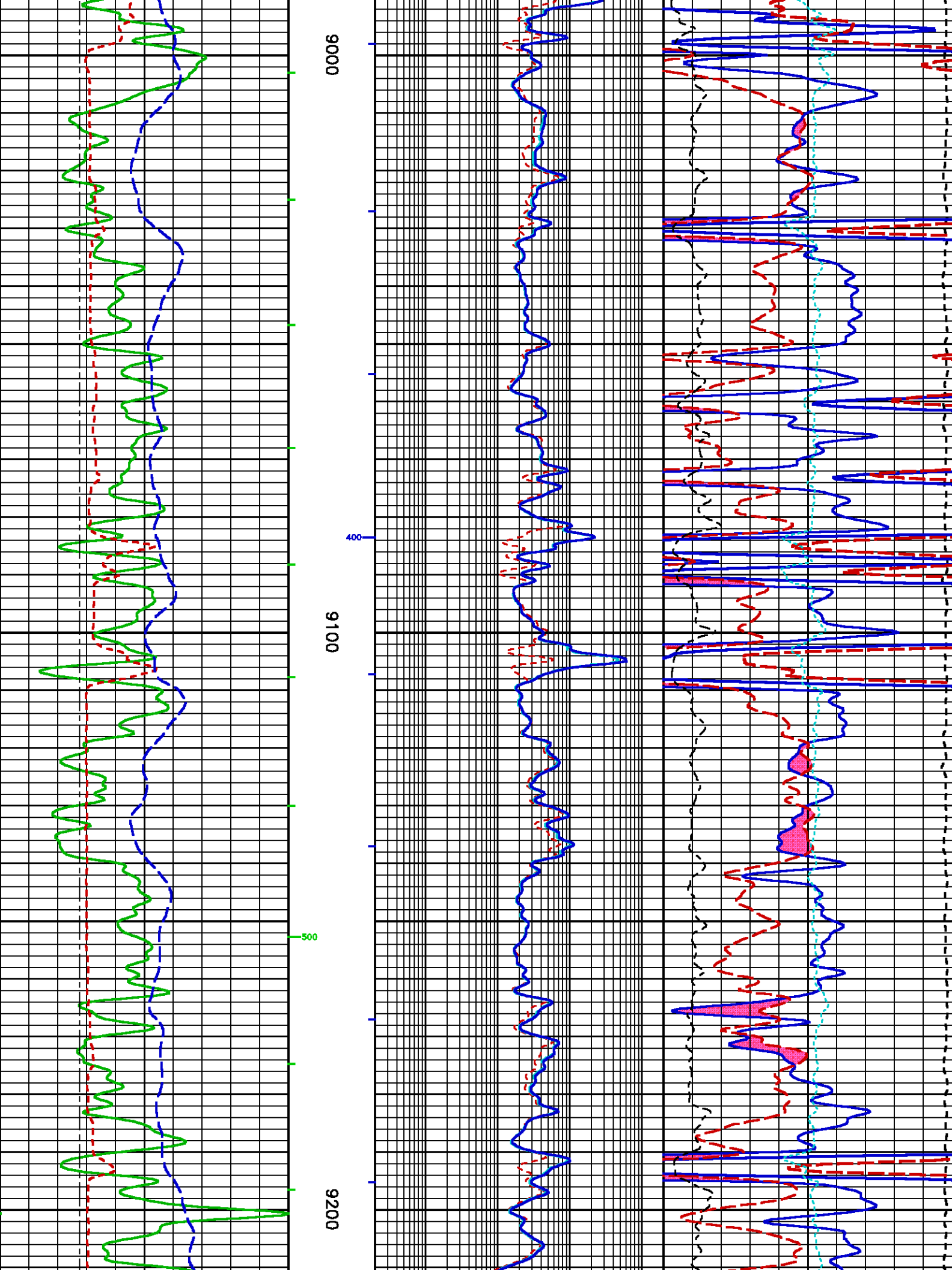
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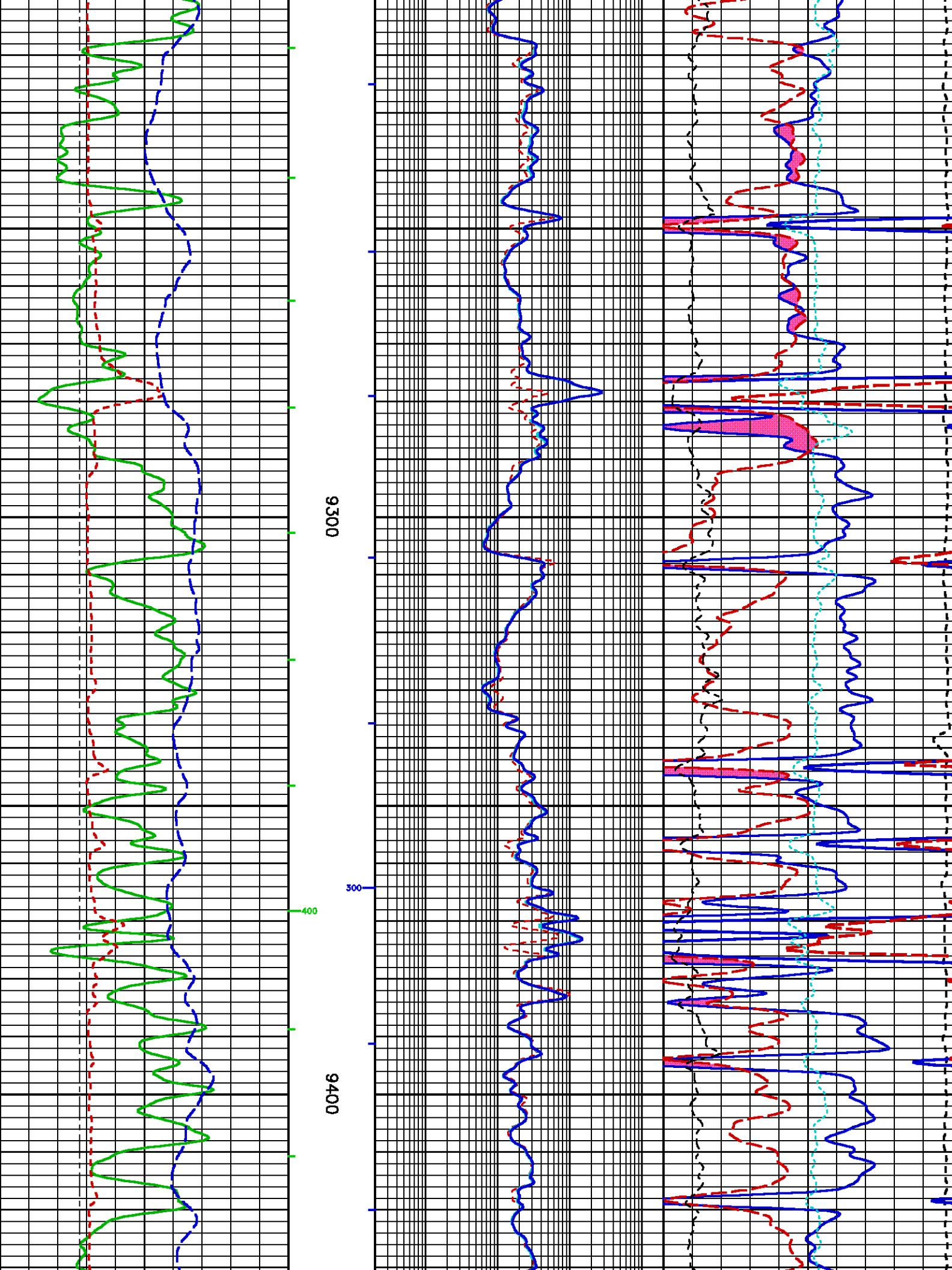
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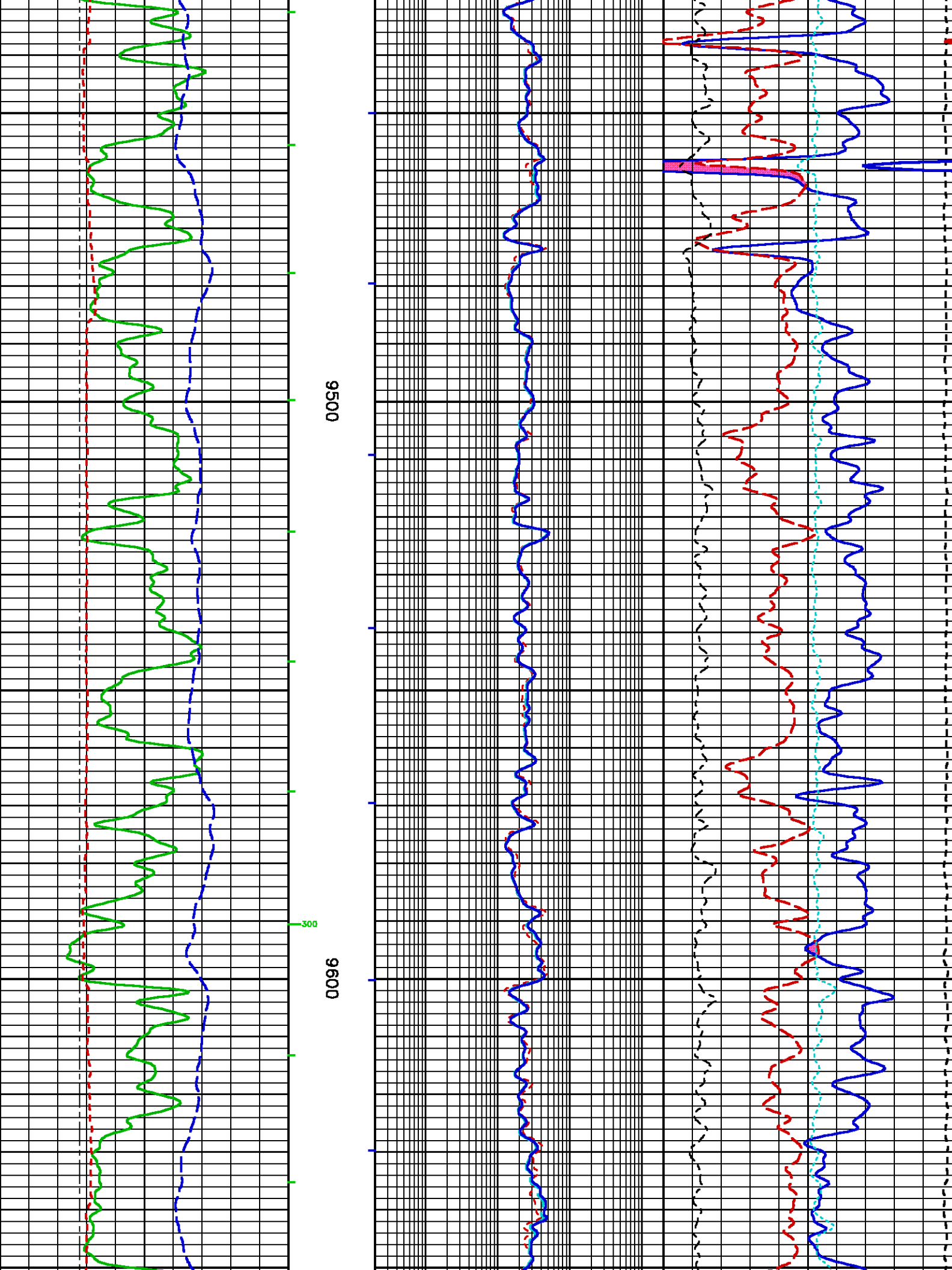
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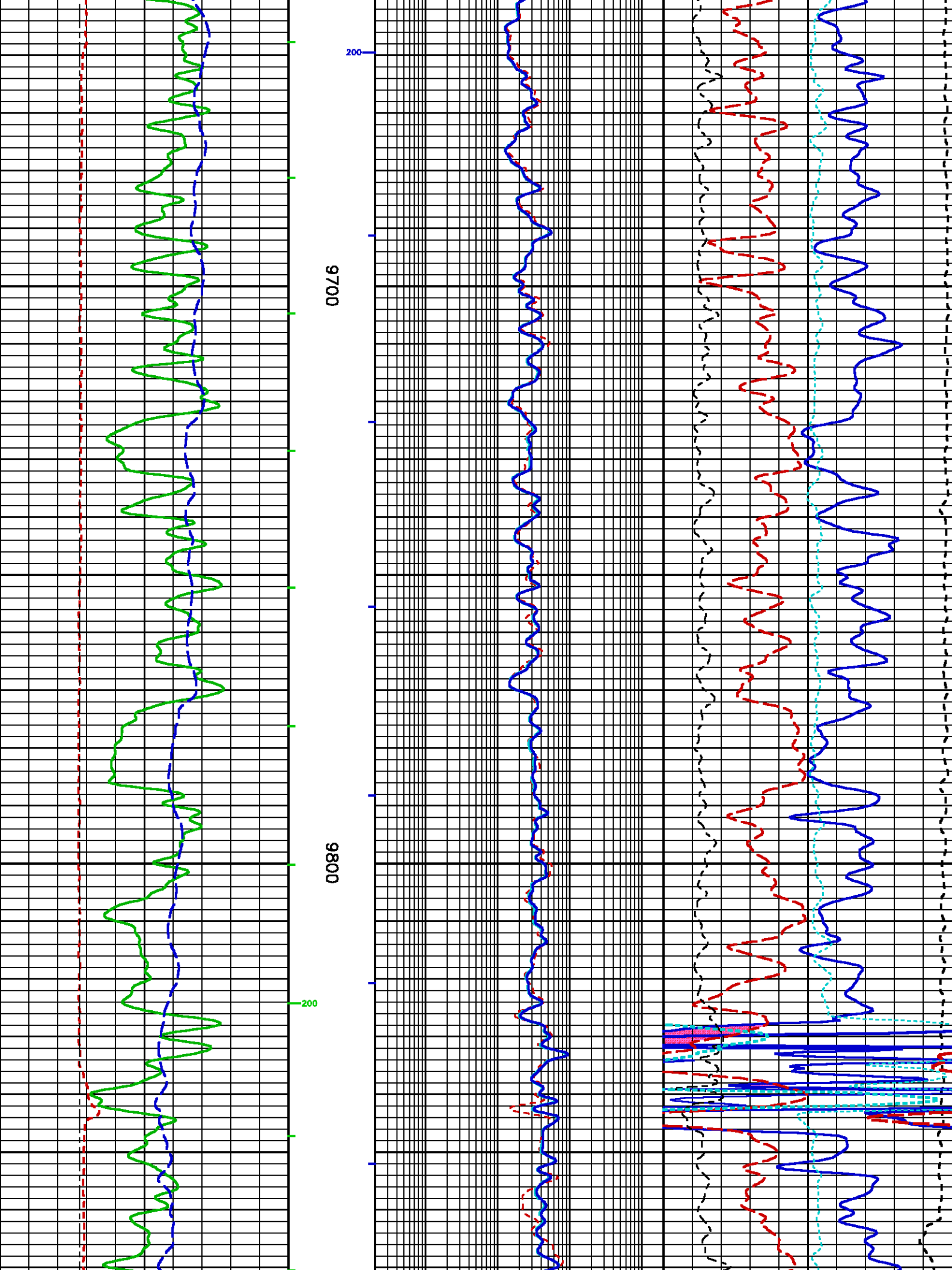
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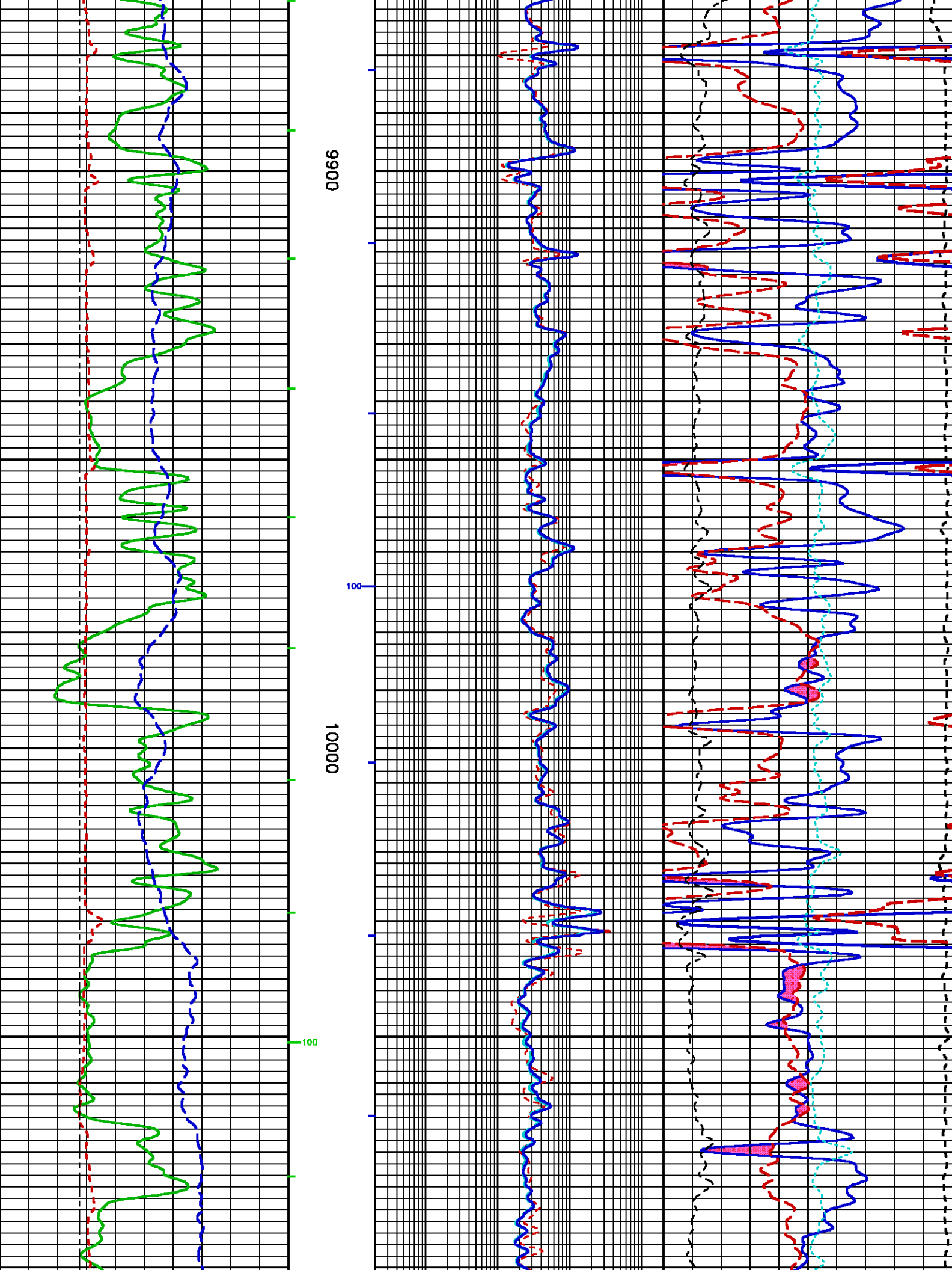
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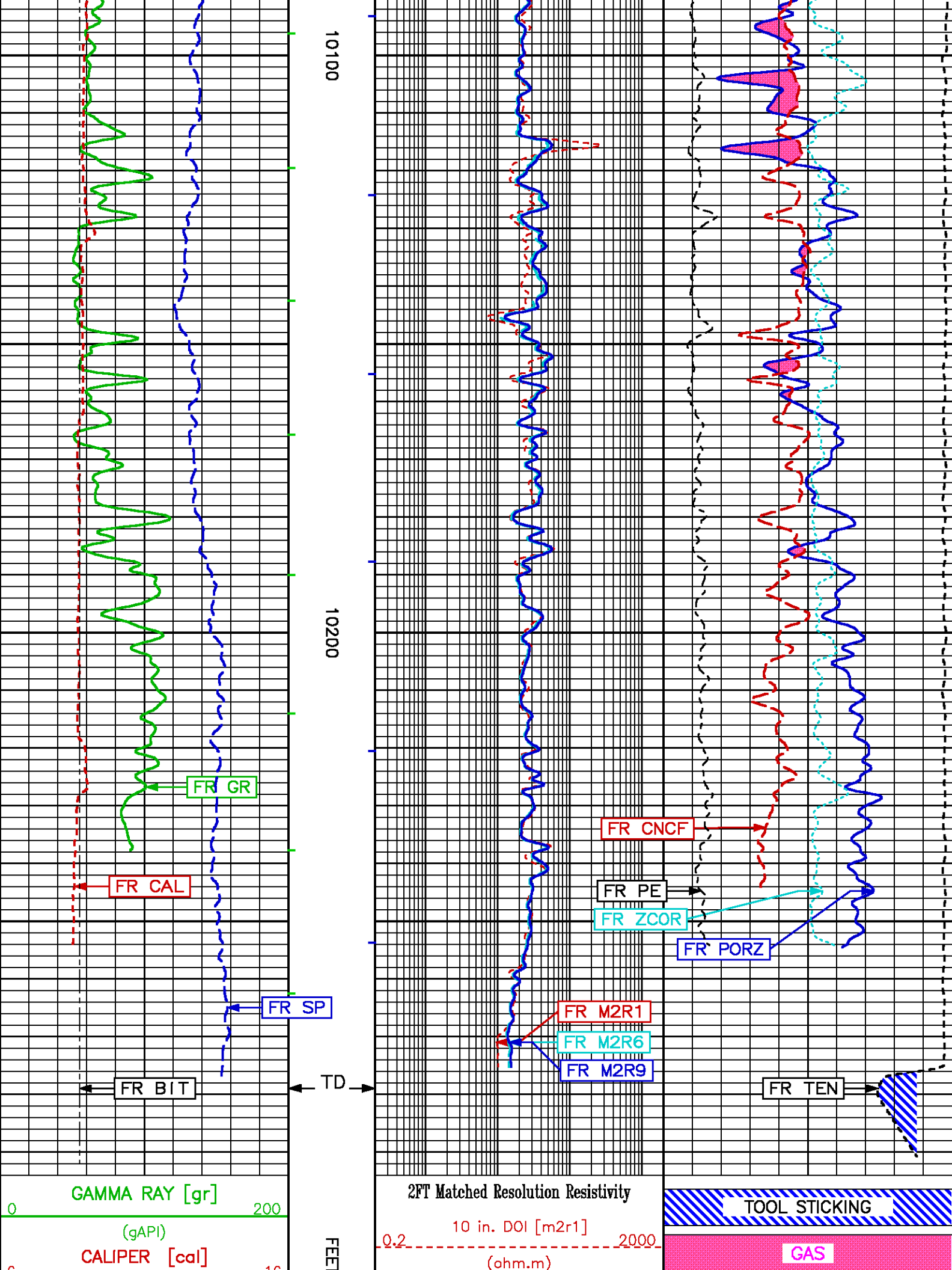
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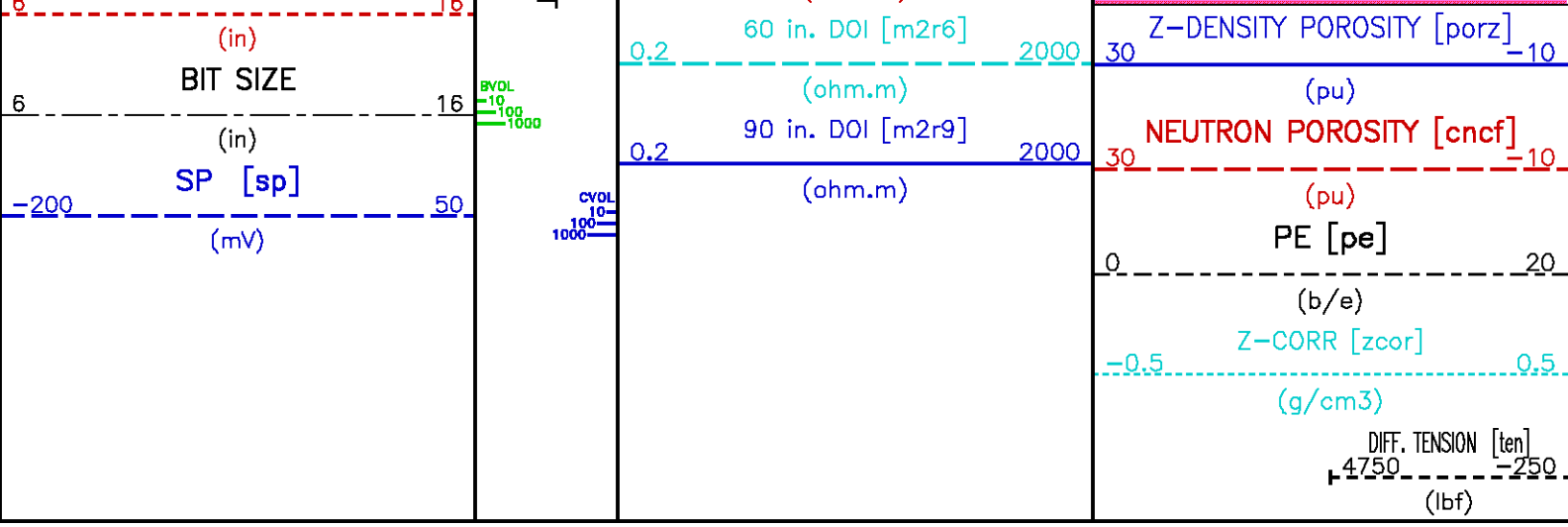
FR PE
FR ZCOR
FR PORZ
FR M2R1
FR M2R6
FR M2R9
FR TEN
GAMMA RAY [gr]
0
200
(gAPI)
CALIPER [cal]
2FT Matched Resolution Resistivity
10 in. DOI [m2r1]
0.2
2000
(ohm.m)
TOOL STICKING
GAS
FEET



REPEAT LOG

ECLIPS 6.1i Aug 06, 2010
Updates: 1,2 Patches: 2

Tue Jul 16 14:51:19 2013

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

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/633646/m763g02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 10080.500 ft BOTTOM DEPTH: 10288.254 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft) TOP	BOTTOM
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) TOP	BOTTOM
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	''	''
BIT SIZE	BIT SIZE	8.750	in	''	''
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	74.0	degF	''	''
	MUD SAMPLE RES	1.350	ohm.m	''	''
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	220.0	degF	''	''
	at BH REF DEPTH	10278.0	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*)	7.875	in	''	''

FIXED DIAMETER (mBH*)		7.875	in		
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	MUD SAMP DERIVED		''	''

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft) TOP	BOTTOM
2446 CN MATRIX	2446 MATRIX	SANDSTONE			
CN SALINITY CORRECTION	SALINITY	0	ppm	''	''
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		''	''
	BIT SIZE BEHIND CSNG	12.250	in	''	''

ZDL PROCESSING

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

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft) TOP	BOTTOM
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP			
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		''	''
	ABC to CALCULATE	STANDOFF		''	''
	STANDOFF	1.00	in	''	''
	TOOL POSITION	ECCENTERED		''	''
	Rmud MULTIPLIER	1.000		''	''

CURVE DESCRIPTION REPORT

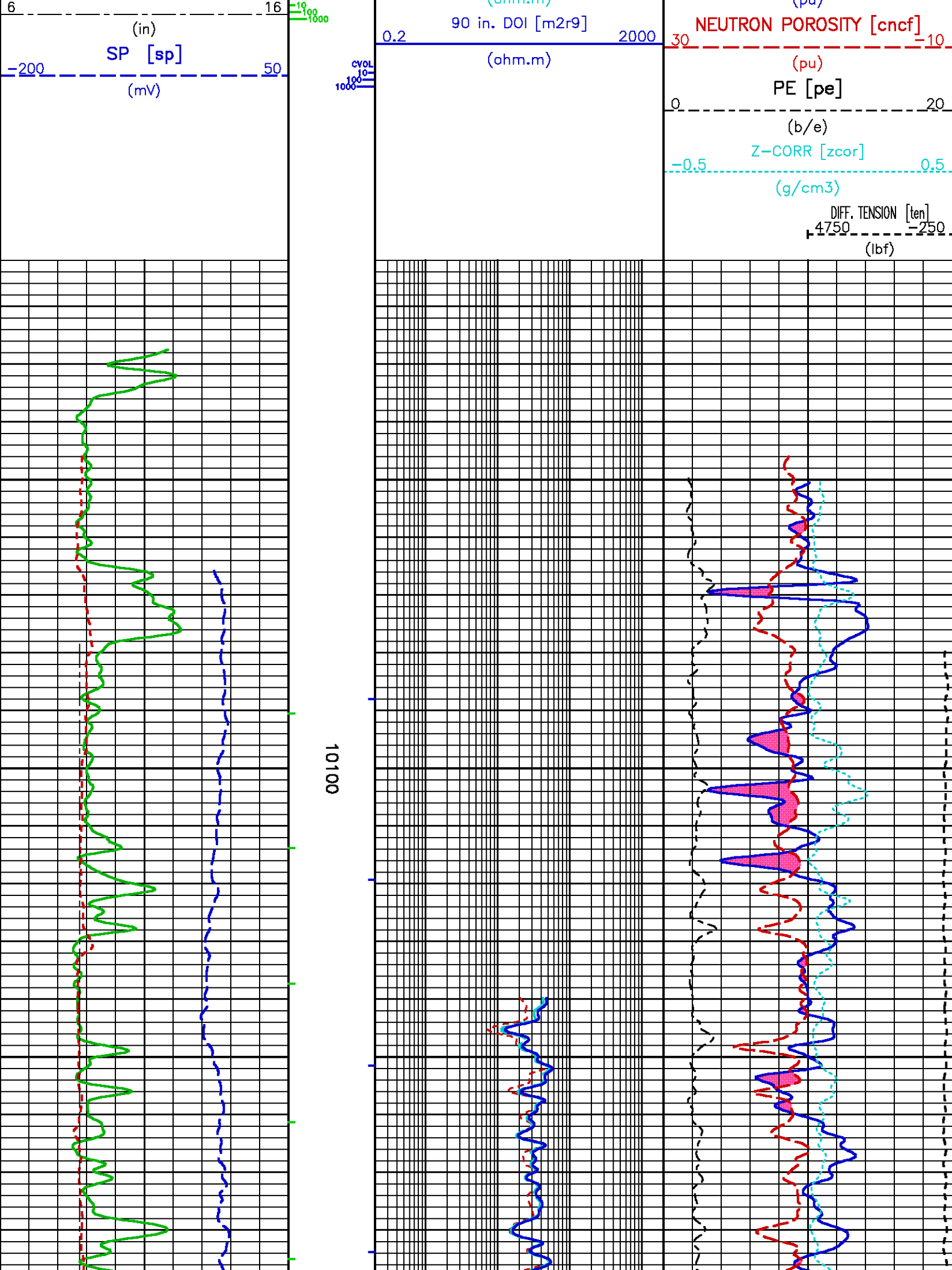
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Jul 16 11:48:08 2013	BIT SIZE
F1:BVOL	Jul 16 11:48:08 2013	BOREHOLE VOLUME
F1:CAL	Jul 16 11:48:08 2013	CALIPER
F1:CNCF	Jul 16 11:48:08 2013	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Jul 16 11:48:08 2013	CEMENT VOLUME
F1:GR	Jul 16 11:48:08 2013	GAMMA RAY
F1:M2R1	Jul 16 11:48:08 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	Jul 16 11:48:08 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Jul 16 11:48:08 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Jul 16 11:48:08 2013	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Jul 16 11:48:08 2013	POROSITY FOR SELECTABLE MATRIX
F1:SP	Jul 16 11:48:08 2013	SPONTANEOUS POTENTIAL
F1:TEN	Jul 16 11:48:08 2013	DIFFERENTIAL TENSION
F1:ZCOR	Jul 16 11:48:08 2013	DENSITY CORRECTION

CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	52.25	M2R9	8.00	SP	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/633646/WPX_REPEAT.pdf [5"/100' Scale]
Plot Interval : 10014 - 10286 Feet

Data File 1 : F1 : rks6685:D:\dat1a\633646\m763g02.aff
Created On : Jul 16 11:48:08 2013
Company : WPX ENERGY
Well : BCU 33-36-199
Field : BARCUS CREEK UNIT
File Interval : 10014 - 10287 Feet
Oct : m763g


6
16
(in)
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50
(mV)
CVOL
10
100
1000
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0.2
2000
(ohm.m)
(pu)
NEUTRON POROSITY [cncf]
30
-10
(pu)
PE [pe]
0
20
(b/e)
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(g/cm3)
DIFF. TENSION [ten]
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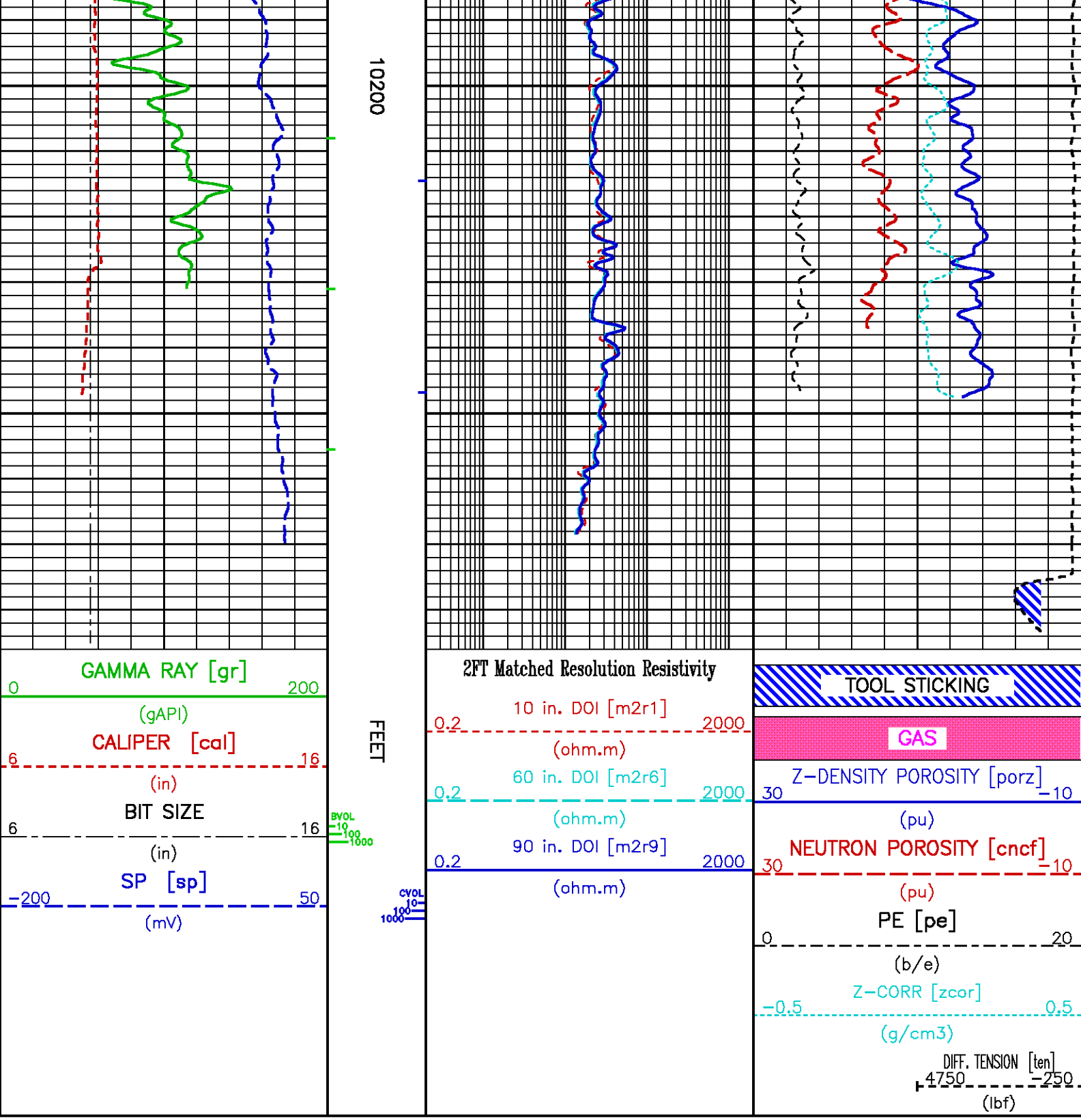
-250
(lbf)
10100



CALIBRATION / VERIFICATION SUMMARY

Source File: D:\dat1a\633646\m763g.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1329XA 10399812 DATE/TIME PERFORMED: Sun Jun 23 13:20:54 2013

UNIT #: 3885TC HL6685 CALB JIG #: 4702NK WA-641

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	323.49	1194.64	871.2 (830.0 960.0)	0.172	55.70	205.70	150

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1329XA 10399812 DATE/TIME PERFORMED: Sun Jun 23 13:23:13 2013

UNIT #: 3885TC HL6685 VERI JIG #: 4702NK WA-641

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	322.38	1199.49	0.172	55.51	206.53	151.03 (140.00 160.00)

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1329XA 10399812 DATE/TIME PERFORMED: Tue Jul 16 10:21:44 2013 DAYS SINCE CAL: 22

UNIT #: 3885TC HL6685 VERI JIG #: 4702NK WA-641

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	134.80	1029.64	0.172	23.18	177.29	154.11 (141.03 161.03)

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 1329XA 10399812 DATE/TIME PERFORMED: Tue Jul 16 16:16:54 2013 DAYS SINCE CAL: 23

UNIT #: 3885TC HL6685 VERI JIG #: 4702NK WA-641

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	148.58	1037.91	0.172	25.58	178.71	153.13 (144.11 184.11)

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2446XA 153114 DATE/TIME PERFORMED: Sun Jun 23 12:43:52 2013

UNIT #: 3885TC HL6685 CALIBRATOR #: 2437XB 12170130 SOURCE #: 4717XS ON-943

	MEASURED CPS	DEADTM CORR CPS	DTC SSN/LSN	NOMINAL SSN/LSN	CORRECTION FACTOR	POROSITY (pu)
LSN	612.14	621.27				
SSN	1580.16	1631.73				
RATIO			2.62646	2.75100	1.04742 (0.97000 1.07000)	
CN						21.358

CN PRIMARY VERIFICATION SUMMARY

TOOL #: 2446XA 153114 DATE/TIME PERFORMED: Sun Jun 23 12:48:31 2013

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

	MEASURED CPS	DEADTM CORR CPS	DTC SSN/LSN	CORRECTION FACTOR	DTC CORR SSN/LSN	POROSITY (pu)
LSN	1890.37	1980.25				
SSN	4171.56	4551.36				
RATIO			2.29838	1.04742	2.40856	
CN						16.638

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2446XA 153114 DATE/TIME PERFORMED: Tue Jul 16 10:25:06 2013 DAYS SINCE CAL: 22

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

	MEASURED CPS	DEADTM CORR CPS	DTC SSN/LSN	CORRECTION FACTOR	DTC CORR SSN/LSN	POROSITY (pu)
LSN	1907.37	1998.91				
SSN	4162.14	4540.15				
RATIO			2.27132	1.04742	2.38002	
CN						16.261 (14.638 18.638)

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2446XA 153114 DATE/TIME PERFORMED: Tue Jul 16 16:12:47 2013 DAYS SINCE CAL: 23

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

	MEASURED CPS	DEADTM CORR CPS	DTC SSN/LSN	CORRECTION FACTOR	DTC CORR SSN/LSN	POROSITY (pu)
LSN	1928.20	2021.80				
SSN	4197.29	4582.03				
RATIO			2.26631	1.04742	2.37490	
CN						16.196 (14.261 18.261)

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2234XA 120009 DATE/TIME PERFORMED: Thu Jul 11 13:55:50 2013

UNIT #: 3885TC HL6685

	SMALL RING	LARGE RING	MULT	ADD	SMALL RING (In)	LARGE RING (In)
CALIPER	1081.2	1804.8	0.00846	-1.27695	7.875	14.000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 120009 DATE/TIME PERFORMED: Tue Jul 16 11:00:00 2013 DAYS SINCE CAL: 4

UNIT #: 3885TC HL6685

	I.D.	MULT	ADD	I.D. (In)
CALIPER	1271.2	0.00846	-1.83923	8.921

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 120009 DATE/TIME PERFORMED: Tue Jul 16 15:08:04 2013 DAYS SINCE CAL: 5

UNIT #: 3885TC HL6685

	I.D.	MULT	ADD	I.D. (In)
CALIPER	1294.0	0.00846	-1.83923	9.114 (8.421 9.421)

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2234XA 120009 DATE/TIME PERFORMED: Thu Jul 11 14:20:38 2013

UNIT: 3885TC HL6685 CALB BLKS: 2225XA 094299 CS SRC: 4703NT 14058B

SS CS PK (Channel)	LS CS PK (Channel)	SS_BKGD (cps)	LS BKGD (cps)
224.3 (220.0 – 230.0)	223.7 (220.0 – 230.0)	1222.1	1572.0

	SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)
MG (LO PE)	22777.0	11792.6	0.633 (0.565 – 0.665)	1.699	0.003	2.150
AL	13188.5	1173.7		2.695	-0.009	
AL + SHIM	18135.5	2043.8		2.613	0.157	
MG + SHIM (HI PE)	11127.5	5611.3	0.258 (0.210 – 0.270)			8.700
RATIO AL + SHIM/AL	1.38 (1.32 – 1.42)	1.74 (1.64 – 1.84)				
RATIO MG/AL	1.73 (1.65 – 1.78)	10.05 (9.40 – 10.20)				

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 120009 DATE/TIME PERFORMED: Tue Jul 16 10:25:59 2013 DAYS SINCE CAL: 4

UNIT #: 3885TC HL6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	1569.1 (1472.0 – 1672.0)	224.6 (220.0 – 230.0)	1236.0 (1100.0 – 1550.0)
SS	1220.1 (1122.1 – 1322.1)	225.0 (220.0 – 230.0)	992.0 (1100.0 – 1550.0)

LV (V)	PAD CURRENT (mA)
5.0 (4.8 – 5.3)	59.2 (50.0 – 120.0)

ZDL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 120009 DATE/TIME PERFORMED: Tue Jul 16 16:14:41 2013 DAYS SINCE CAL: 5

UNIT #: 3885TC HL6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	1568.9 (1472.0 – 1672.0)	223.7 (220.0 – 230.0)	1241.1 (1100.0 – 1550.0)
SS	1220.7 (1122.1 – 1322.1)	223.8 (220.0 – 230.0)	995.9 (1100.0 – 1550.0)

LV (V)	PAD CURRENT (mA)
5.0 (4.8 – 5.3)	59.2 (50.0 – 120.0)

HDIL PRIMARY CALIBRATION SUMMARY

TOOL #: 1515MA 10200533 DATE/TIME PERFORMED: Fri Apr 12 16:57:03 2013

UNIT #: 3885TC HL6685 GRCOND ID & DATE: 126 082996

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.012 (-0.200 – 0.200)	0.023 (-0.100 – 0.100)	0.019 (-0.100 – 0.100)	0.003 (-0.100 – 0.100)	-0.006 (-0.100 – 0.100)	-0.004 (-0.100 – 0.100)	-0.007 (-0.100 – 0.100)	-0.007 (-0.100 – 0.100)
Coil 0 Q	0.020	0.032	0.025	0.019	0.017	0.010	-0.001	-0.006

	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 1 R	0.053 -0.200 0.200	0.041 -0.100 0.100	0.027 -0.100 0.100	0.020 -0.100 0.100	0.012 -0.100 0.100	0.004 -0.100 0.100	0.004 -0.100 0.100	0.009 -0.100 0.100
Coil 1 Q	-0.003 -1.000 1.000	0.009 -0.200 0.200	0.018 -0.100 0.100	0.020 -0.100 0.100	0.013 -0.100 0.100	0.007 -0.100 0.100	-0.002 -0.100 0.100	-0.011 -0.100 0.100
Coil 2 R	0.042 -0.200 0.200	0.049 -0.100 0.100	0.044 -0.100 0.100	0.035 -0.100 0.100	0.031 -0.100 0.100	0.032 -0.100 0.100	0.035 -0.100 0.100	0.042 -0.100 0.100
Coil 2 Q	0.005 -1.000 1.000	0.008 -0.200 0.200	0.015 -0.100 0.100	0.010 -0.100 0.100	0.002 -0.100 0.100	-0.003 -0.100 0.100	-0.008 -0.100 0.100	-0.014 -0.100 0.100
Coil 3 R	0.064 -0.100 0.100	0.035 -0.100 0.100	0.018 -0.100 0.100	0.020 -0.100 0.100	0.009 -0.100 0.100	0.003 -0.100 0.100	0.004 -0.100 0.100	0.010 -0.100 0.100
Coil 3 Q	-0.015 -0.500 0.500	-0.005 -0.200 0.200	0.010 -0.100 0.100	0.015 -0.100 0.100	0.010 -0.100 0.100	-0.001 -0.100 0.100	-0.000 -0.100 0.100	-0.008 -0.100 0.100
Coil 4 R	-0.027 -0.200 0.200	-0.015 -0.200 0.200	-0.017 -0.200 0.200	-0.026 -0.200 0.200	-0.032 -0.200 0.200	-0.029 -0.200 0.200	-0.025 -0.200 0.200	-0.028 -0.200 0.200
Coil 4 Q	-0.001 -1.000 1.000	0.016 -0.400 0.400	0.014 -0.200 0.200	0.011 -0.200 0.200	0.002 -0.200 0.200	-0.000 -0.200 0.200	-0.009 -0.200 0.200	-0.009 -0.200 0.200
Coil 5 R	0.038 -0.400 0.400	0.032 -0.400 0.400	0.035 -0.400 0.400	0.031 -0.400 0.400	0.037 -0.400 0.400	0.018 -0.400 0.400	0.024 -0.400 0.400	0.031 -0.400 0.400
Coil 5 Q	-0.011 -2.000 2.000	-0.002 -0.800 0.800	-0.003 -0.400 0.400	0.003 -0.400 0.400	-0.005 -0.400 0.400	-0.001 -0.400 0.400	-0.000 -0.400 0.400	0.000 -0.400 0.400
Coil 6 R	0.007 -1.000 1.000	0.009 -1.000 1.000	0.014 -1.000 1.000	-0.006 -1.000 1.000	-0.009 -1.000 1.000	-0.010 -1.000 1.000	0.018 -1.000 1.000	0.027 -1.000 1.000
Coil 6 Q	-0.008 -5.000 5.000	0.027 -2.000 2.000	0.007 -1.000 1.000	-0.024 -1.000 1.000	-0.002 -1.000 1.000	-0.027 -1.000 1.000	-0.016 -1.000 1.000	-0.026 -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	124.79 100.00 150.00	123.31 100.00 150.00	120.63 98.00 150.00	116.76 96.00 140.00	111.76 92.00 140.00	105.81 87.00 130.00	98.87 82.00 120.00	91.01 76.00 110.00
Coil 0 P	7.520 6.000 9.000	23.637 19.000 28.000	39.421 32.000 47.000	55.105 44.000 66.000	70.757 57.000 85.000	86.315 70.000 100.000	101.796 82.000 120.000	117.199 95.000 140.000
Coil 1 M	221.06 180.00 270.00	218.09 180.00 270.00	212.61 170.00 260.00	204.86 170.00 250.00	195.10 160.00 250.00	183.81 160.00 230.00	170.88 150.00 220.00	156.59 140.00 200.00
Coil 1 P	7.887 6.000 9.000	24.761 19.000 28.000	41.249 32.000 48.000	57.575 45.000 67.000	73.778 57.000 86.000	89.830 70.000 110.000	105.682 83.000 120.000	121.499 98.000 140.000
Coil 2 M	437.66 360.00 540.00	432.36 360.00 540.00	422.63 350.00 530.00	408.60 340.00 510.00	390.82 330.00 500.00	369.80 310.00 470.00	345.16 300.00 440.00	317.77 270.00 410.00
Coil 2 P	7.809 6.000 9.000	24.533 19.000 29.000	40.931 32.000 48.000	57.199 45.000 67.000	73.392 58.000 87.000	89.477 71.000 110.000	105.504 84.000 130.000	121.455 98.000 140.000
Coil 3 M	717.20 590.00 860.00	712.39 580.00 870.00	703.18 570.00 850.00	689.90 550.00 830.00	671.70 530.00 800.00	648.32 500.00 780.00	619.20 470.00 710.00	583.27 440.00 850.00
Coil 3 P	6.902 6.000 10.000	21.869 20.000 28.000	36.629 33.000 49.000	51.401 46.000 69.000	66.325 59.000 88.000	81.368 72.000 110.000	96.524 85.000 130.000	111.905 98.000 150.000
Coil 4 M	1144.2 900.0 1400.0	1135.4 900.0 1300.0	1118.9 900.0 1300.0	1094.0 850.0 1300.0	1059.9 800.0 1200.0	1017.5 800.0 1200.0	965.0 750.0 1100.0	902.5 700.0 1000.0
Coil 4 P	7.117 6.000 10.000	22.525 20.000 30.000	37.704 33.000 50.000	52.886 46.000 70.000	68.170 60.000 90.000	83.496 73.000 110.000	98.866 86.000 130.000	114.350 99.000 150.000
Coil 5 M	2285.9 1900.0 2600.0	2264.9 1800.0 2800.0	2224.2 1800.0 2700.0	2162.2 1800.0 2600.0	2079.7 1700.0 2500.0	1976.2 1600.0 2400.0	1851.3 1500.0 2200.0	1705.1 1400.0 2100.0
Coil 5 P	7.931 6.000 10.000	24.915 20.000 31.000	41.680 34.000 51.000	58.444 48.000 72.000	75.289 62.000 93.000	92.148 76.000 110.000	108.985 89.000 130.000	125.802 100.000 150.000
Coil 6 M	5969.9 4700.0 7100.0	5895.2 4700.0 7000.0	5755.9 4600.0 6900.0	5555.8 4400.0 6600.0	5303.1 4200.0 6400.0	5002.1 4000.0 6000.0	4659.3 3700.0 5600.0	4275.7 3400.0 5100.0
Coil 6 P	8.050 7.000 10.000	25.572 22.000 32.000	42.686 36.000 54.000	59.648 51.000 76.000	76.534 65.000 98.000	93.280 80.000 120.000	109.851 94.000 140.000	126.394 110.000 160.000

AM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	591 -200 800	23 -500 200	-49 -600 100	-75 -600 50	-90 -500 20	-100 -500 20	-109 -500 20	-115 -500 20
Coil 0 Q	1490 -3000 6000	575 -1000 2000	339 -1000 1200	224 -500 900	150 -400 700	97 -400 600	52 -400 500	14 -400 400
Coil 1 R	562 450 650	86 20 130	25 -30 80	4 -50 40	-7 -55 30	-13 -60 20	-17 -80 10	-20 -80 10
Coil 1 Q	121 0 2500	121 0 900	84 0 600	62 0 450	47 0 350	36 0 300	27 0 250	19 0 250
Coil 2 R	193.8 140.0 230.0	31.5 0.0 51.0	11.4 -10.0 25.0	4.3 -15.0 15.0	0.8 -16.0 10.0	-1.3 -18.0 7.0	-2.6 -16.0 5.0	-3.8 -16.0 3.0
Coil 2 Q	310.9 -200.0 1000.0	131.8 0.0 350.0	86.4 0.0 220.0	65.9 0.0 160.0	54.4 0.0 130.0	47.2 0.0 110.0	42.7 0.0 100.0	39.1 0.0 90.0
Coil 3 R	46.9 37.0 62.0	5.8 0.0 12.0	0.9 -3.0 5.0	-0.6 -4.0 4.0	-1.4 -5.0 2.0	-1.8 -5.0 1.0	-2.3 -5.0 1.0	-2.4 -5.0 1.0
Coil 3 Q	82.8 -140.0 280.0	37.0 -40.0 100.0	26.6 -20.0 70.0	23.1 -10.0 60.0	22.1 -10.0 50.0	22.0 -10.0 50.0	22.7 -10.0 50.0	23.1 -10.0 50.0
Coil 4 R	8.87 2.00 18.00	0.06 -3.00 6.00	-0.89 -3.50 3.00	-1.11 -3.90 2.00	-1.24 -4.20 2.00	-1.31 -4.50 2.00	-1.40 -4.70 2.00	-1.41 -5.00 2.00
Coil 4 Q	1.60 -100.00 100.00	4.97 -30.00 50.00	6.99 -20.00 40.00	9.26 -10.00 40.00	11.48 -10.00 40.00	13.80 -10.00 45.00	16.05 -10.00 50.00	18.40 -10.00 60.00
Coil 5 R	-0.09 -2.00 2.00	-0.94 -3.00 1.00	-0.94 -3.50 1.50	-0.86 -3.90 2.00	-0.79 -4.20 2.50	-0.90 -4.50 2.50	-0.88 -4.70 2.50	-0.82 -5.00 2.50

Coil 5 Q	1.04	3.29	5.60	7.98	10.32	12.63	15.09	17.38
	-60.00 70.00	-20.00 30.00	-20.00 30.00	-20.00 35.00	-20.00 45.00	-20.00 50.00	-20.00 60.00	-30.00 70.00
Coil 6 R	-3.65	-1.16	-0.72	-0.61	-0.65	-0.64	-0.64	-0.69
	-4.80 1.00	-5.70 3.80	-6.50 4.90	-8.90 5.40	-7.30 5.80	-7.50 6.00	-7.70 8.10	-7.90 8.30
Coil 6 Q	1.04	2.63	5.11	7.33	9.66	11.83	14.17	16.40
	-30.00 30.00	-20.00 25.00	-20.00 35.00	-30.00 50.00	-35.00 60.00	-40.00 70.00	-50.00 80.00	-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	0.997	0.995	0.992	0.991	0.989	0.989	0.988	0.990
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 0 P	0.106	0.198	0.325	0.296	0.246	0.153	0.131	0.036
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 1 M	0.996	0.993	0.989	0.988	0.985	0.984	0.982	0.982
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 1 P	0.138	0.290	0.368	0.389	0.361	0.295	0.211	0.157
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 2 M	0.997	0.994	0.993	0.992	0.990	0.989	0.987	0.987
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 2 P	0.095	0.135	0.167	0.248	0.257	0.246	0.237	0.216
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 3 M	1.014	1.013	1.012	1.012	1.010	1.009	1.009	1.008
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 3 P	0.109	0.042	0.081	0.098	0.094	0.039	0.008	0.053
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 4 M	1.034	1.033	1.032	1.031	1.030	1.029	1.028	1.027
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 4 P	0.052	0.109	0.142	0.202	0.199	0.185	0.162	0.135
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 5 M	1.036	1.035	1.035	1.034	1.032	1.033	1.032	1.031
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 5 P	0.026	-0.088	-0.066	-0.107	-0.188	-0.309	-0.326	-0.431
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 6 M	1.014	1.015	1.014	1.012	1.012	1.017	1.017	1.016
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 6 P	0.002	0.132	0.088	0.164	0.065	-0.029	-0.041	-0.130
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000

PARMS	TCID 0	TCID 1	Cal Temp (degF)	T Factor
IDs	1.722	0.918	68.0	1.04

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1515MA 10200533 DATE/TIME PERFORMED: Tue Jul 16 11:04:57 2013 DAYS SINCE CAL: 94

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	-0.019	-0.004	0.001	-0.004	-0.005	-0.001	-0.001	-0.004
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 0 Q	0.013	0.016	0.005	-0.001	0.003	0.002	-0.002	0.001
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 1 R	0.011	0.006	0.003	0.004	0.002	-0.000	-0.002	-0.002
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 1 Q	-0.010	-0.005	0.000	0.002	0.002	0.002	0.002	-0.000
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 2 R	-0.010	0.000	0.001	-0.004	-0.002	0.002	0.004	0.006
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 2 Q	0.000	0.002	0.004	-0.001	-0.003	-0.004	-0.006	-0.003
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 3 R	0.027	0.003	-0.000	0.006	0.007	0.002	0.003	0.006
	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 3 Q	-0.025	-0.018	-0.008	-0.002	-0.002	-0.002	0.003	0.002
	-0.500 0.500	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 4 R	-0.017	-0.003	0.002	-0.006	0.001	0.002	0.002	0.002
	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200
Coil 4 Q	-0.007	0.008	0.004	-0.001	-0.004	-0.005	-0.007	-0.001
	-1.000 1.000	-0.400 0.400	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200
Coil 5 R	0.018	0.006	-0.000	-0.008	0.001	-0.004	-0.005	0.004
	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400
Coil 5 Q	-0.016	-0.009	-0.007	0.002	-0.001	-0.001	0.004	-0.002
	-2.000 2.000	-0.800 0.800	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400
Coil 6 R	-0.002	-0.015	-0.010	-0.018	-0.023	0.004	-0.003	0.011
	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000
Coil 6 Q	-0.009	0.013	-0.006	-0.003	-0.001	-0.012	-0.014	0.013

	-5.000 5.000	-2.000 2.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-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	124.94 100.00 150.00	123.23 100.00 150.00	120.29 98.00 150.00	116.06 86.00 140.00	111.03 82.00 140.00	104.73 87.00 130.00	97.78 82.00 120.00	89.75 76.00 110.00
Coil 0 P	7.840 6.000 9.000	24.557 19.000 28.000	40.849 32.000 47.000	57.018 44.000 66.000	73.089 57.000 85.000	89.065 70.000 100.000	104.888 82.000 120.000	120.721 95.000 140.000
Coil 1 M	220.98 180.00 270.00	217.56 180.00 270.00	211.60 170.00 260.00	203.31 170.00 250.00	193.43 160.00 250.00	181.71 160.00 230.00	168.82 150.00 220.00	154.34 140.00 200.00
Coil 1 P	8.211 6.000 9.000	25.679 19.000 28.000	42.688 32.000 48.000	59.484 45.000 67.000	76.095 57.000 86.000	92.562 70.000 110.000	108.750 83.000 120.000	124.983 95.000 140.000
Coil 2 M	437.35 360.00 540.00	431.11 360.00 540.00	420.32 350.00 530.00	405.11 340.00 510.00	387.26 330.00 500.00	364.91 310.00 470.00	340.84 300.00 440.00	312.83 270.00 410.00
Coil 2 P	8.139 6.000 9.000	25.469 19.000 28.000	42.372 32.000 48.000	59.091 45.000 67.000	75.688 58.000 87.000	92.197 71.000 110.000	108.531 84.000 130.000	124.871 96.000 140.000
Coil 3 M	716.95 590.00 860.00	710.66 580.00 870.00	699.92 570.00 850.00	684.74 550.00 830.00	666.04 530.00 800.00	641.16 500.00 780.00	611.55 470.00 710.00	574.83 440.00 650.00
Coil 3 P	7.231 6.000 10.000	22.805 20.000 29.000	38.086 33.000 49.000	53.332 46.000 69.000	68.668 59.000 89.000	84.173 72.000 110.000	99.655 85.000 130.000	115.475 98.000 150.000
Coil 4 M	1144.2 900.0 1400.0	1133.0 900.0 1300.0	1113.9 900.0 1300.0	1085.9 850.0 1300.0	1051.1 800.0 1200.0	1005.9 800.0 1200.0	953.3 750.0 1100.0	890.1 700.0 1000.0
Coil 4 P	7.448 6.000 10.000	23.467 20.000 30.000	39.165 33.000 50.000	54.815 46.000 70.000	70.527 60.000 90.000	86.285 73.000 110.000	102.011 88.000 130.000	117.896 99.000 150.000
Coil 5 M	2289.2 1900.0 2800.0	2263.7 1800.0 2800.0	2217.8 1800.0 2700.0	2149.9 1800.0 2600.0	2066.3 1700.0 2500.0	1957.6 1600.0 2400.0	1832.8 1500.0 2200.0	1684.4 1400.0 2100.0
Coil 5 P	8.243 6.000 10.000	25.807 20.000 31.000	43.059 34.000 51.000	60.275 48.000 72.000	77.519 62.000 93.000	94.788 76.000 110.000	111.941 89.000 130.000	129.156 100.000 150.000
Coil 6 M	6047.2 4700.0 7100.0	5958.1 4700.0 7000.0	5803.1 4600.0 6900.0	5584.4 4400.0 6600.0	5325.6 4200.0 6400.0	5007.7 4000.0 6000.0	4661.0 3700.0 5600.0	4268.4 3400.0 5100.0
Coil 6 P	8.379 7.000 10.000	26.501 22.000 32.000	44.119 36.000 54.000	61.548 51.000 76.000	78.833 65.000 98.000	95.973 80.000 120.000	112.892 94.000 140.000	129.782 110.000 160.000

HDIL AFTER LOG VERIFICATION SUMMARY

TOOL #: 1515MA 10200533 DATE/TIME PERFORMED: Tue Jul 16 15:12:31 2013 DAYS SINCE CAL: 94

UNIT #: 3885TC HL6685

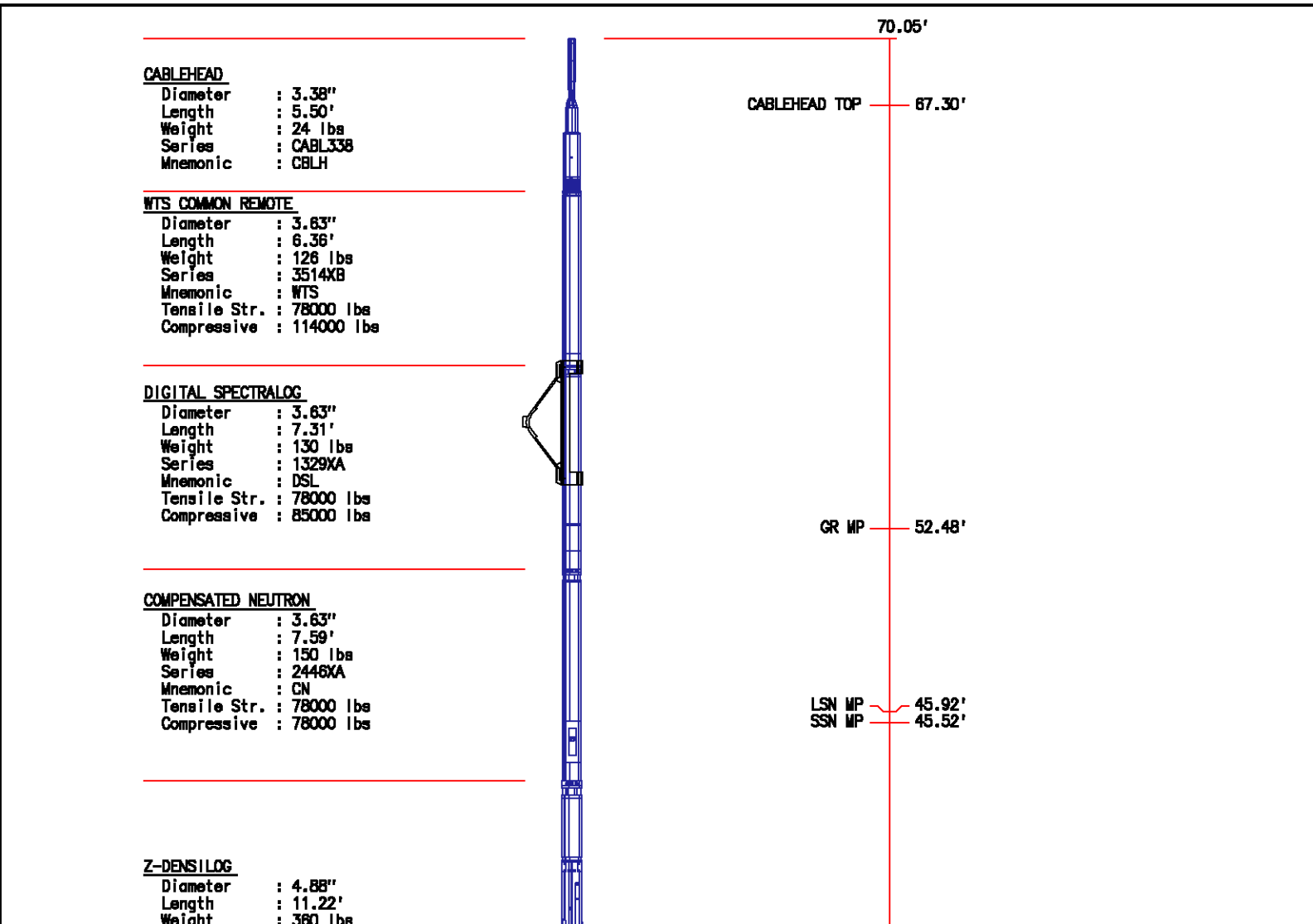
ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-0.016 -0.099 0.061	-0.003 -0.064 0.056	0.001 -0.029 0.031	-0.003 -0.034 0.026	-0.005 -0.035 0.025	-0.001 -0.031 0.029	-0.001 -0.031 0.029	-0.004 -0.034 0.026
Coil 0 Q	0.014 -0.027 0.053	0.016 -0.104 0.136	0.005 -0.025 0.035	0.001 -0.031 0.028	0.002 -0.027 0.033	0.001 -0.028 0.032	-0.000 -0.032 0.028	0.001 -0.029 0.031
Coil 1 R	0.009 -0.089 0.091	0.006 -0.044 0.056	0.003 -0.027 0.033	0.002 -0.026 0.034	0.002 -0.028 0.032	0.000 -0.030 0.030	-0.000 -0.032 0.028	-0.000 -0.032 0.028
Coil 1 Q	-0.009 -0.410 0.390	-0.005 -0.105 0.095	-0.001 -0.030 0.030	0.002 -0.028 0.032	0.000 -0.028 0.032	-0.000 -0.028 0.032	0.001 -0.028 0.032	-0.002 -0.030 0.030
Coil 2 R	-0.012 -0.080 0.060	-0.002 -0.030 0.030	0.002 -0.029 0.031	-0.006 -0.034 0.026	-0.002 -0.032 0.028	0.002 -0.028 0.032	0.004 -0.028 0.034	0.008 -0.024 0.036
Coil 2 Q	0.002 -0.350 0.350	0.003 -0.098 0.102	0.006 -0.026 0.034	0.001 -0.031 0.029	-0.004 -0.033 0.027	-0.003 -0.034 0.028	-0.005 -0.038 0.024	-0.006 -0.033 0.027
Coil 3 R	0.027 -0.013 0.067	0.005 -0.037 0.043	-0.001 -0.040 0.040	0.005 -0.034 0.046	0.010 -0.033 0.047	0.001 -0.038 0.042	0.005 -0.037 0.043	0.007 -0.034 0.046
Coil 3 Q	-0.021 -0.225 0.175	-0.021 -0.098 0.082	-0.009 -0.048 0.032	-0.003 -0.042 0.038	-0.003 -0.042 0.038	-0.003 -0.042 0.038	-0.000 -0.037 0.043	0.003 -0.038 0.042
Coil 4 R	-0.015 -0.077 0.043	-0.002 -0.063 0.057	-0.006 -0.058 0.062	-0.004 -0.066 0.054	-0.007 -0.059 0.081	0.002 -0.058 0.062	-0.003 -0.058 0.062	0.003 -0.058 0.062
Coil 4 Q	-0.006 -0.307 0.293	0.010 -0.092 0.108	0.006 -0.056 0.064	0.005 -0.061 0.059	0.000 -0.064 0.056	-0.006 -0.065 0.055	-0.004 -0.067 0.053	-0.005 -0.061 0.059
Coil 5 R	0.017 -0.102 0.136	-0.007 -0.114 0.126	-0.010 -0.120 0.120	0.008 -0.128 0.112	0.004 -0.119 0.121	-0.003 -0.124 0.118	-0.004 -0.125 0.115	0.000 -0.118 0.124
Coil 5 Q	-0.013 -0.616 0.584	-0.008 -0.259 0.241	-0.011 -0.127 0.113	0.004 -0.118 0.122	-0.007 -0.121 0.118	-0.005 -0.121 0.119	0.001 -0.116 0.124	0.010 -0.122 0.118
Coil 6 R	-0.026 -0.302 0.298	0.024 -0.315 0.285	-0.011 -0.310 0.290	-0.009 -0.318 0.282	-0.012 -0.323 0.277	0.003 -0.296 0.304	-0.006 -0.303 0.297	0.013 -0.289 0.311
Coil 6 Q	0.011 -1.509 1.491	-0.006 -0.587 0.613	0.018 -0.306 0.294	-0.016 -0.303 0.297	0.010 -0.301 0.299	0.002 -0.312 0.288	-0.015 -0.314 0.286	0.013 -0.287 0.313

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	125.09 122.45 127.44	123.42 120.77 125.70	120.51 117.89 122.70	116.35 113.74 118.38	111.33 108.81 113.25	105.04 102.84 106.83	98.06 95.82 99.73	90.05 87.96 91.55
Coil 0 P	7.835 4.840 10.840	24.565 21.557 27.557	40.873 37.849 43.849	57.061 54.018 60.018	73.196 70.089 76.089	89.191 86.085 92.065	105.087 101.888 107.888	120.954 117.721 123.721
Coil 1 M	220.99 216.56 225.40	217.67 213.21 221.91	211.78 207.37 215.83	203.57 199.25 207.38	193.85 189.56 197.30	181.99 178.08 185.34	169.18 165.45 172.20	154.72 151.25 157.42
Coil 1 P	8.201	25.682	42.707	59.524	76.187	92.702	108.960	125.249

	5.211 11.211	22.679 28.679	39.686 45.686	58.484 62.484	73.095 79.095	89.562 95.562	105.750 111.750	121.983 127.983
Coil 2 M	437.31 428.60 446.10	431.21 422.49 439.74	420.52 411.92 428.73	405.59 397.00 413.21	387.83 379.52 395.01	365.53 357.61 372.21	341.42 334.02 347.65	313.29 306.57 319.08
Coil 2 P	8.132 5.139 11.139	25.478 22.469 28.469	42.399 39.372 45.372	59.145 56.091 62.091	75.793 72.888 78.888	92.340 89.197 95.197	108.765 105.531 111.531	125.119 121.871 127.871
Coil 3 M	717.55 702.81 731.29	711.34 696.45 724.88	700.64 685.92 713.91	685.67 671.05 698.44	667.18 652.72 679.36	641.84 628.34 653.99	612.61 599.32 623.78	575.66 563.33 588.32
Coil 3 P	7.244 4.231 10.231	22.855 19.805 25.805	38.171 35.086 41.086	53.461 50.332 56.332	68.869 65.668 71.668	84.398 81.173 87.173	99.943 96.655 102.655	115.826 112.475 118.475
Coil 4 M	1144.8 1121.3 1167.1	1133.7 1110.4 1155.7	1114.6 1091.6 1136.2	1086.8 1064.2 1107.6	1052.4 1030.1 1072.1	1006.7 985.8 1026.0	954.6 934.3 972.4	890.9 872.3 907.9
Coil 4 P	7.464 4.448 10.448	23.518 20.467 26.467	39.252 36.165 42.165	54.944 51.815 57.815	70.725 67.527 73.527	86.514 83.285 89.285	102.316 99.011 105.011	118.243 114.896 120.896
Coil 5 M	2291.5 2243.4 2335.0	2266.3 2218.4 2309.0	2220.6 2173.4 2262.1	2153.5 2106.9 2192.9	2069.9 2025.0 2107.6	1960.4 1918.4 1998.7	1836.0 1795.1 1869.4	1687.9 1650.7 1718.1
Coil 5 P	8.252 5.243 11.243	25.840 22.807 28.807	43.121 40.059 46.059	60.370 57.275 63.275	77.667 74.519 80.519	94.963 91.788 97.788	112.186 108.941 114.941	129.431 126.156 132.156
Coil 6 M	6055.2 5926.2 6168.1	5967.0 5839.0 6077.3	5811.0 5687.1 5919.2	5593.6 5472.7 5696.1	5334.7 5219.1 5432.1	5013.1 4907.5 5107.8	4664.9 4567.8 4754.2	4274.2 4183.0 4353.8
Coil 6 P	8.395 5.379 11.379	26.553 23.501 29.501	44.220 41.119 47.119	61.679 58.548 64.548	79.023 75.833 81.833	96.218 92.973 98.973	113.187 109.892 115.892	130.110 126.782 132.782

INSTRUMENT CONFIGURATION

Source File: D:\dat1a\633646\m763g~MSLAM-tdg.msla



Series : 2234XA
Mnemonic : ZDL
Tensile Str. : 78000 lbs
Compressive : 74500 lbs

CAL MP — 35.26'
LSD MP — 34.54'
SSD MP — 34.14'

KNUCKLE JOINT (DOUBLE)
Diameter : 3.38"
Length : 4.65'
Weight : 90 lbs
Series : 3939XA
Mnemonic : KNJT
Tensile Str. : 32000 lbs

HIGH DEFINITION INDUCTION TOOL
Diameter : 3.63"
Length : 27.13'
Weight : 415 lbs
Series : 1515XA
Mnemonic : HDIL
Tensile Str. : 36000 lbs
Compressive : 1900 lbs

SP MP — 14.19'

XMTR MP — 7.72'

BULL PLUG 3 3/8

0.00'

TOTAL LENGTH: 70.05'
TOTAL WEIGHT: 1316 lbs
MAX DIAMETER: 0'4.88"

BAKER HUGHES
EOLIPS

COMPANY	WPX ENERGY		FILE NO: 074581
WELL	FEDERAL BCU 33-36-199		API NO: 05103119490000
FIELD	BARCUS CREEK UNIT		
COUNTY	RIO BLANCO	STATE COLORADO	

LOCATION:
SHL: 1462' FNL & 1112' FEL
BHL: 2081' FSL & 1984' FEL
SEC 36 TWP 1N RGE 99W

ELEVATIONS:
KB 6889 FT
DF
GL 6868 FT

SEC 36 T1N R99W
BCU 442-36-199
RIG: CYCLONE 29

DATE 16-JUL-2013