BAKER HUGHES

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

FILE NO:	US093329J
API NO:	05045225080000
COMPANY	WPX ENERGY INC
WELL	WPX GM 433-28
FIELD	GRAND VALLEY
COUNTY	GARFIELD
STATE	COLORADO

Ver. 4.01

LOCATION:

SEC 28 T6S R96W

PAD: GM 323-28

RIG: H&P 318

SHL: 1503' FSL 2346' FWL

BHL: 1931' FSL 1615' FEL

SEC 28 TWP 6S RGE 96W

OTHER SERVICES

NONE

PERMANENT DATUM	GL	ELEVATION	5476 FT
LOG MEASURED FROM	KB	24 FT	ABOVE P.D.
DRILL. MEAS. FROM	KB		

ELEVATIONS:

KB	5500 FT
DF	
GL	5476 FT

DATE		21-Dec-2014			
RUN	TRIP	1	1		
SERVICE ORDER		US093329J			
DEPTH DRILLER		7039 FT			
DEPTH LOGGER		7038 FT			
BOTTOM LOGGED INTERVAL		7026 FT			
TOP LOGGED INTERVAL		0 FT			
CASING DRILLER		9.625 IN @ 1486 FT		@	
CASING LOGGER		1484 FT			
BIT SIZE		8.75 IN			
TYPE OF FLUID IN HOLE		LSND			
DENSITY	VISCOSITY	10.8 LB/G	65 CP		
PH	FLUID LOSS	9.1	4 C3		
SOURCE OF SAMPLE		FLOWLINE			
RM AT MEAS. TEMP.		0.885 OHMM @ 64.8 DEGF		@	
RMF AT MEAS. TEMP.		0.664 OHMM @ 64.8 DEGF		@	
RMC AT MEAS. TEMP.		1.11 OHMM @ 64.8 DEGF		@	
SOURCE OF RMF	RMC	CALCULATED	CALCULATED		
RM AT BHT		0.639 OHMM @ 187.7 DEGF		@	
TIME SINCE CIRCULATION		8 HOURS			
MAX. RECORDED TEMP.		187.7 DEGF			
EQUIP. NO.	LOCATION	6685	GRAND JCT		
RECORDED BY		W. QUIGLEY			
WITNESSED BY		MR. CUB WILSON			

CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN	32.3 LB/F		0 FT	1486 FT

BOREHOLE RECORD

BIT SIZE	FROM	TO
8.75 IN	0 FT	7039 FT

REMARKS

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

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

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

CN MATRIX: SANDSTONE
CN RAN DECENTRALIZED

HDIL RAN WITH 1.5" STANDOFFS
ABC TO CALCULATE MUD CONDUCTIVITY

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES
CREW: HOLLAR/COATE/QUIGLEY
RIG: H&P 318

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWIVEL	3950XA	10102176	FREE
1	1	TTMA	3980XA	10120299	FREE
1	1	TEL/GR	3518FB/EG	10126400/10139870	FREE
1	1	NEUTRON	2436XA	10137930	DECENTRALIZED
1	1	DENSITY	2223XA	10123024	DECENTRALIZED
1	1	KNUCKLE	3930XA	10102172/10087285	FREE
1	1	HDIL	1530XA	10118612	STOOD OFF

MAIN LOG 2"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 5

Plotted: Sun Dec 21 12:23:50 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/93329J/n970aR03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 1358.655 ft BOTTOM DEPTH: 4652.995 ft

SYMMETRIC FILTER

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

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	8.750	in	TOP	BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	8.750	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	64.8	degF	"	"
	MUD SAMPLE RES	0.885	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	64.8	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

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

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"

ABC to CALCULATE	MUD CONDUCTIVITY		"	"
STANDOFF	1.50	in	"	"
TOOL POSITION	ECCENTERED		"	"
Rmud MULTIPLIER	1.000		"	"

CURVE DESCRIPTION REPORT

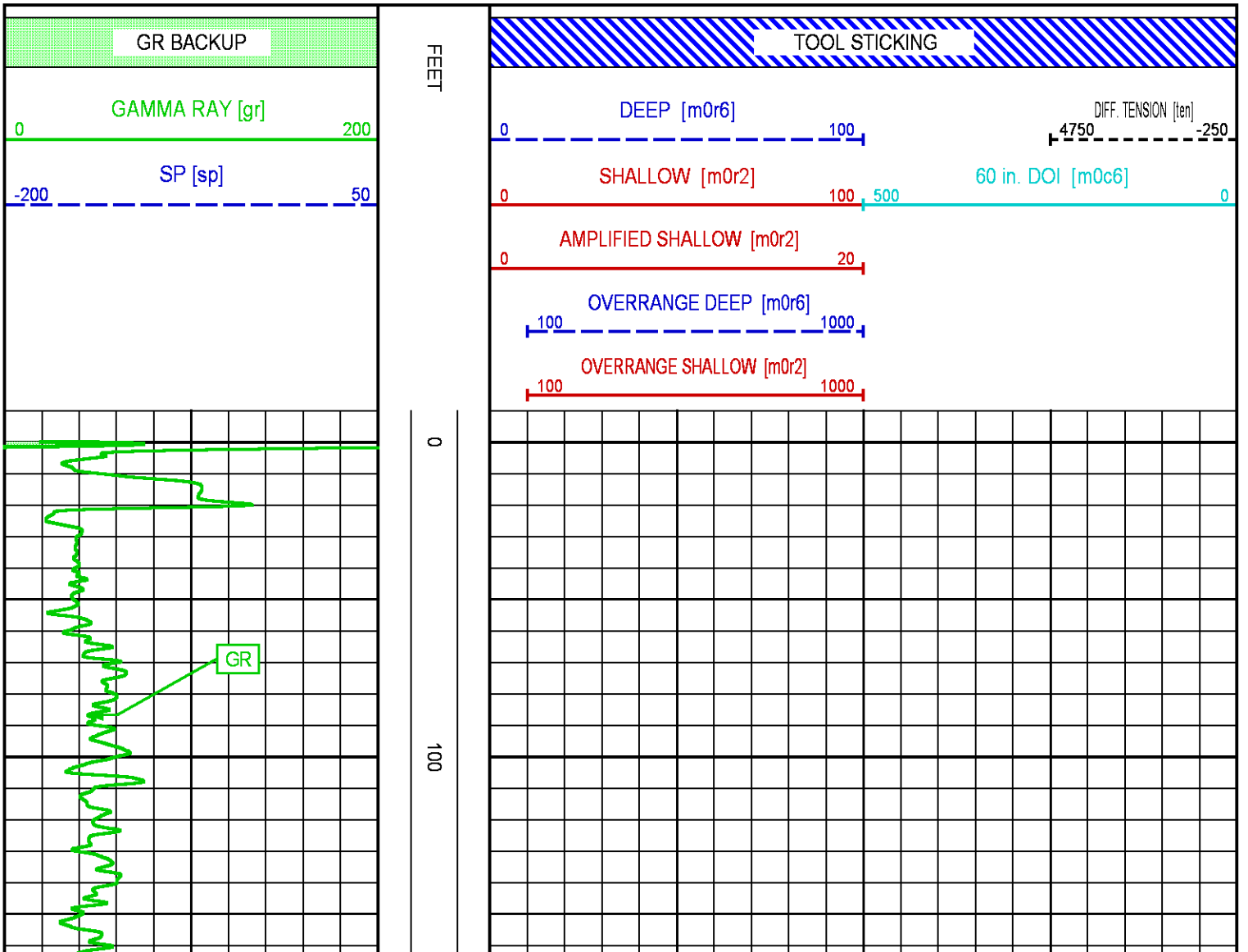
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:GR	Dec 21 12:04:02 2014	GAMMA RAY
F1:M0C6	Dec 21 12:04:02 2014	FOCUSED CONDUCTIVITY, 60-INCH DOI
F1:M0R2	Dec 21 12:04:02 2014	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:M0R6	Dec 21 12:04:02 2014	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:SP	Dec 21 12:04:02 2014	SPONTANEOUS POTENTIAL
F1:TEN	Dec 21 12:04:02 2014	DIFFERENTIAL TENSION

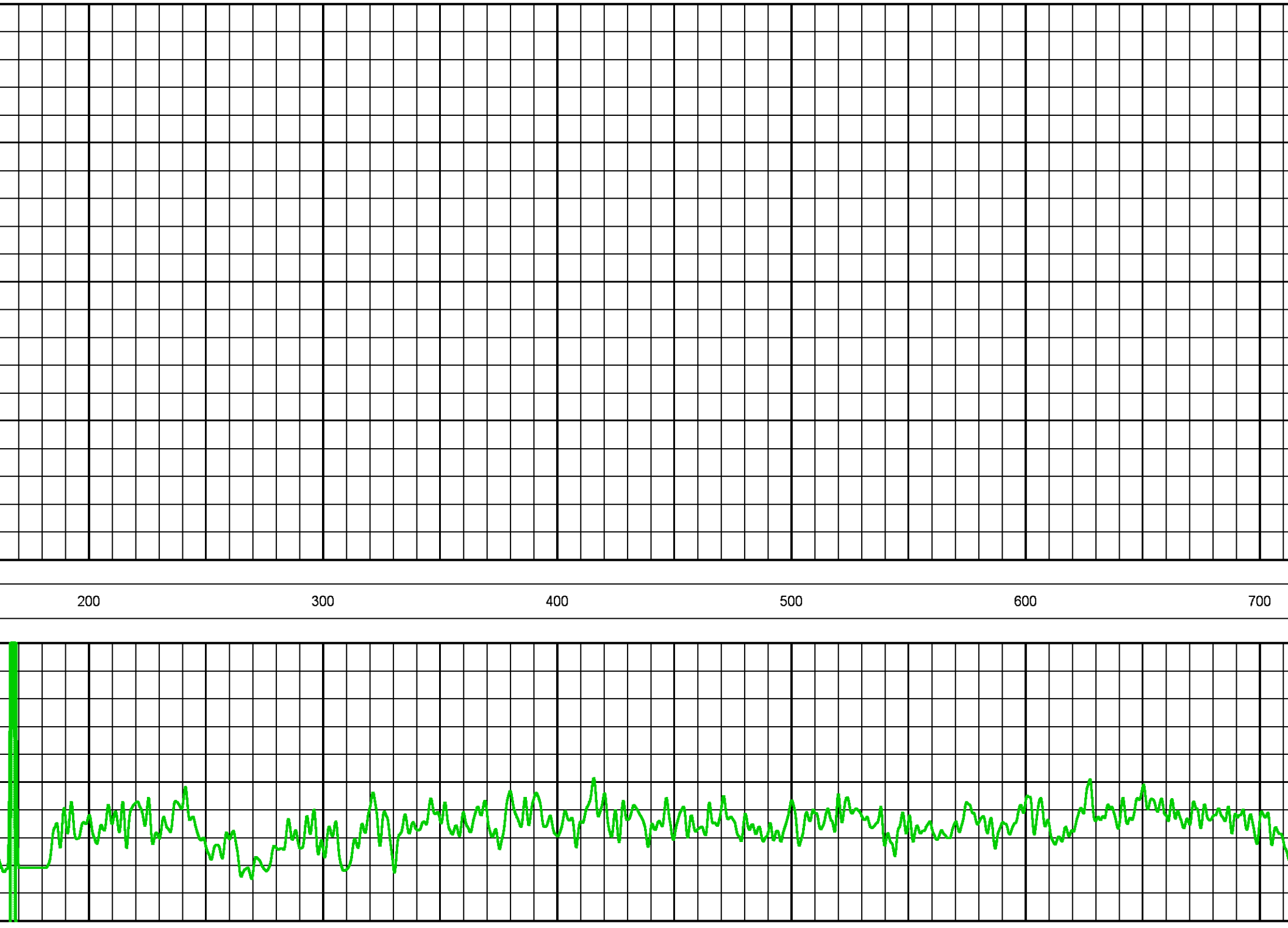
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
GR	35.00	M0R2	2.75	SP	1.25		
M0C6	2.75	M0R6	2.75	TEN	0.00		

Presentation : cas6685:/dat1a/93329J/WPX_2IN_R.fvpdf [2"/100' Scale]
Plot Interval : -3.25 - 7068.25 Feet

Data File 1 : F1 : cas6685:/dat1a/93329J/n970aRMAIN.xtf
Created On : Dec 21 12:04:02 2014
Company : WPX ENERGY INC
Well : WPX GM 433-28
Field : GRAND VALLEY
File Interval : -3.25 - 7068.25 Feet
OCT : n970a

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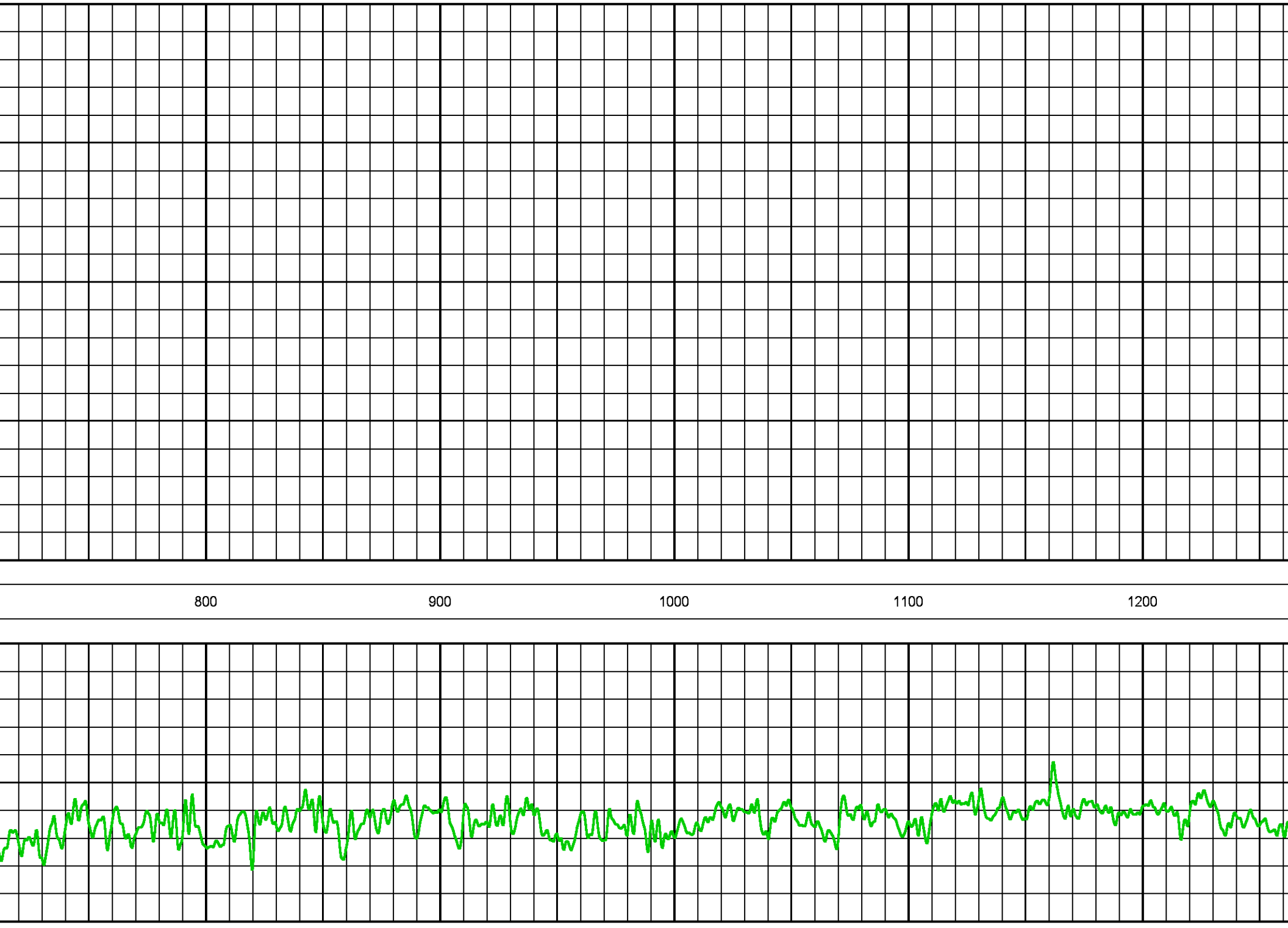
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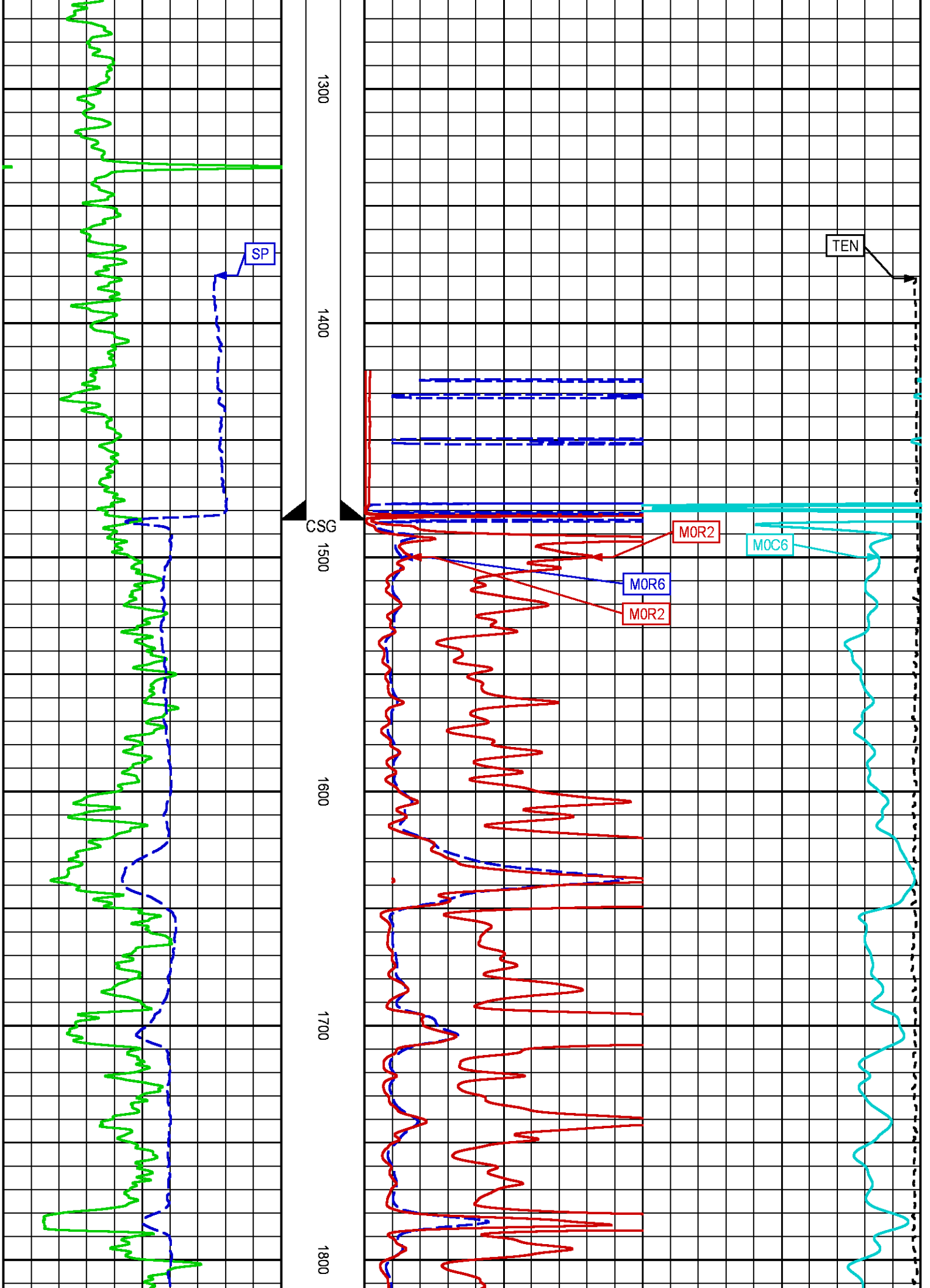
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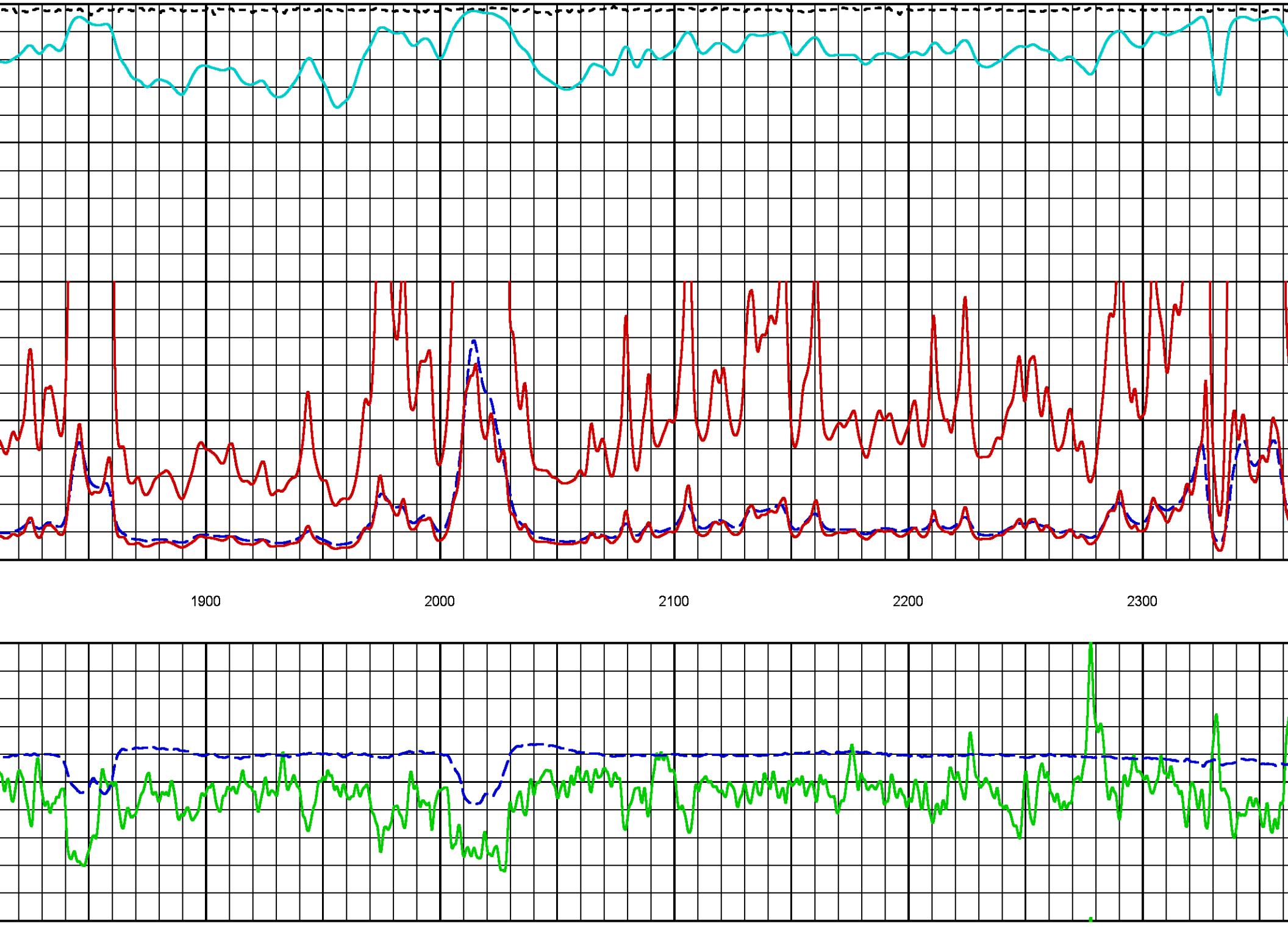
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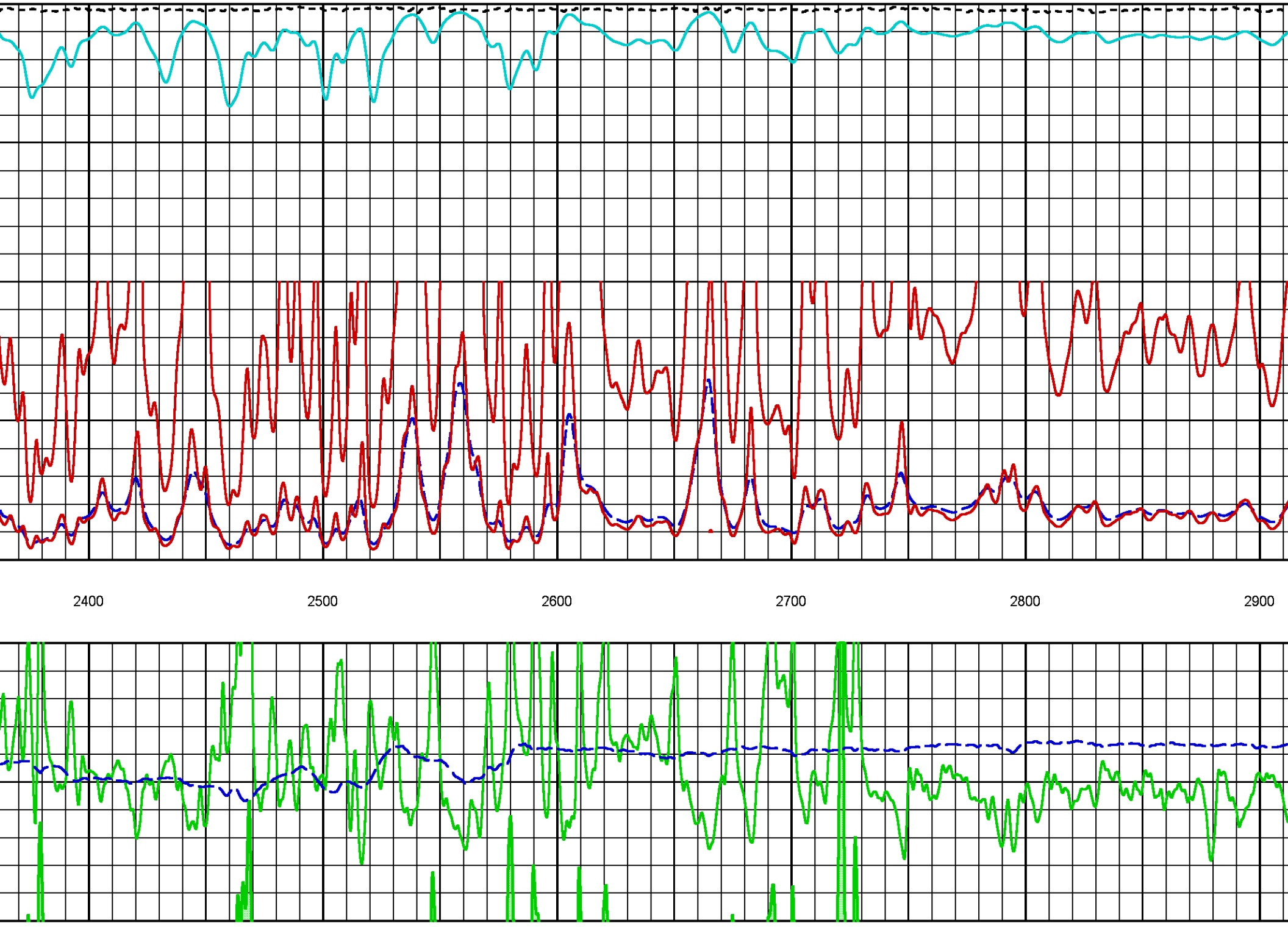
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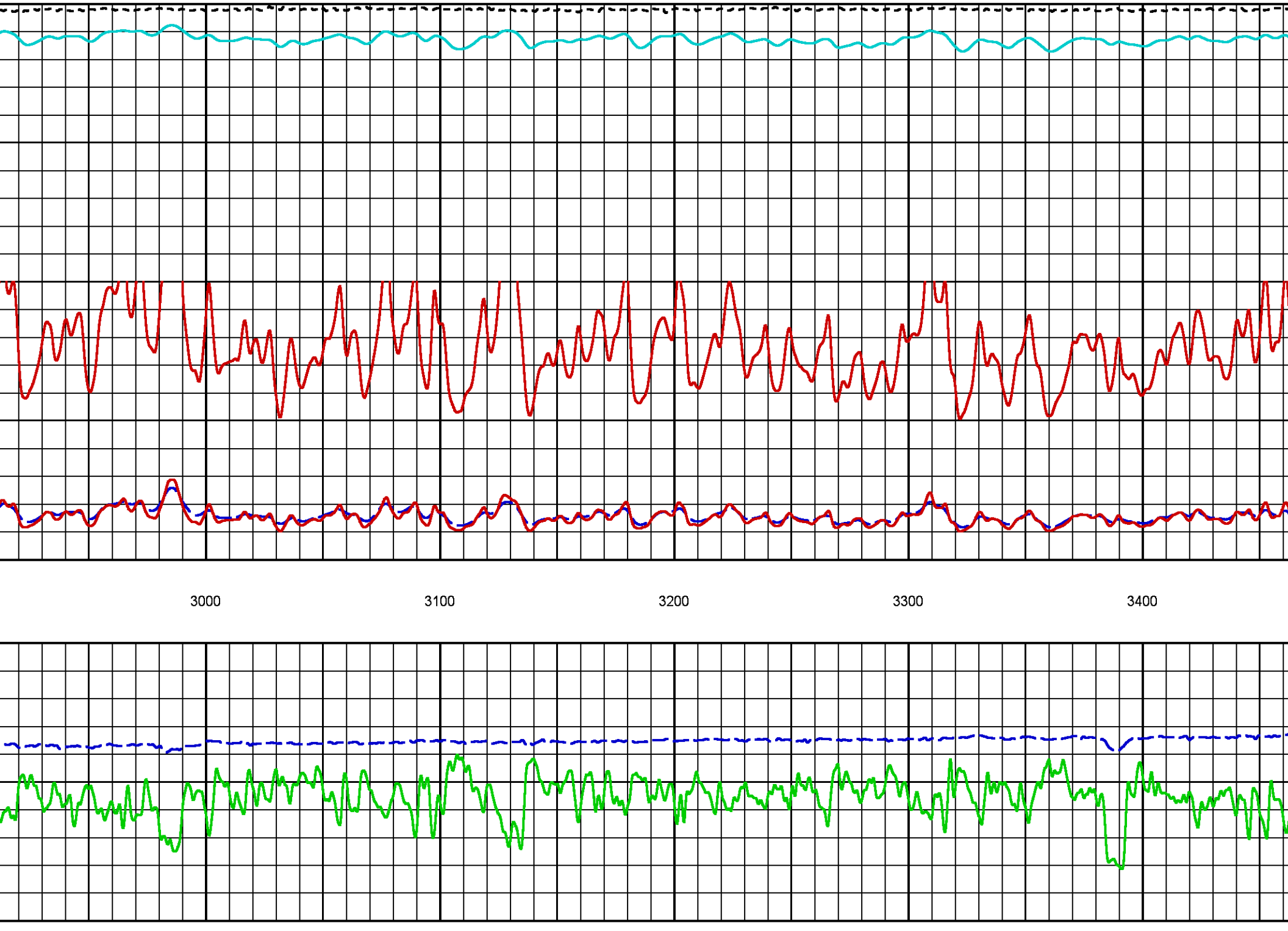
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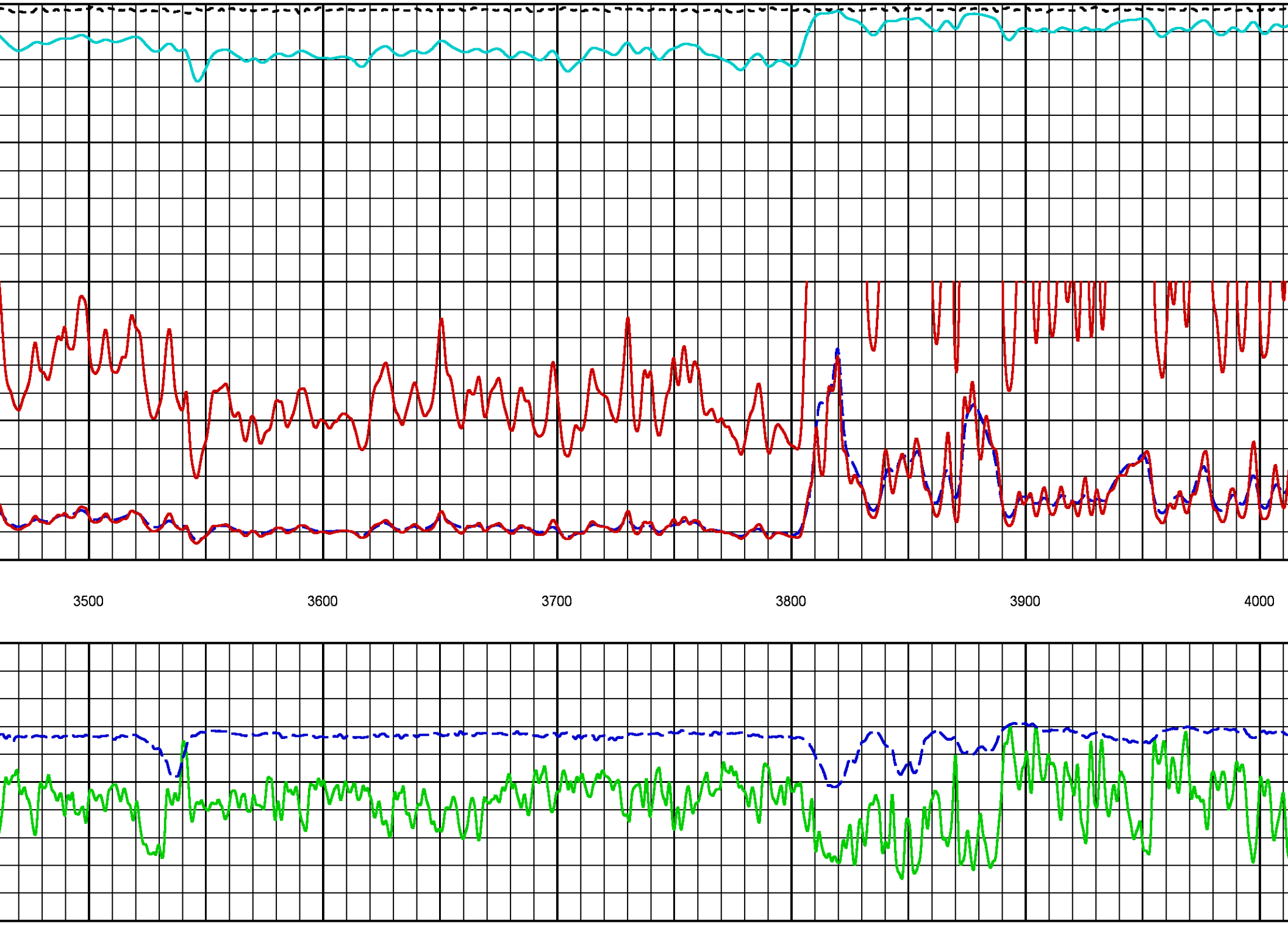
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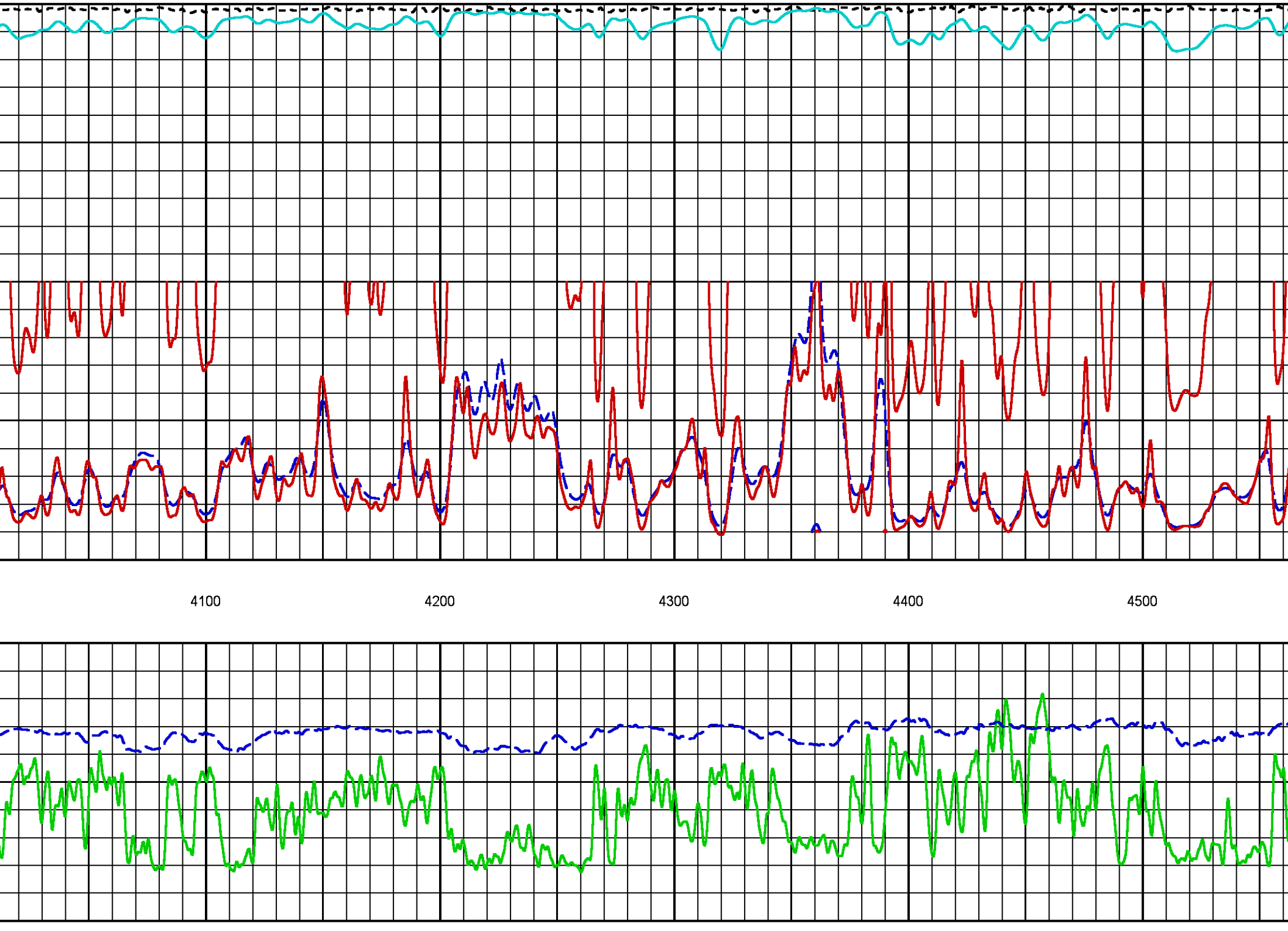
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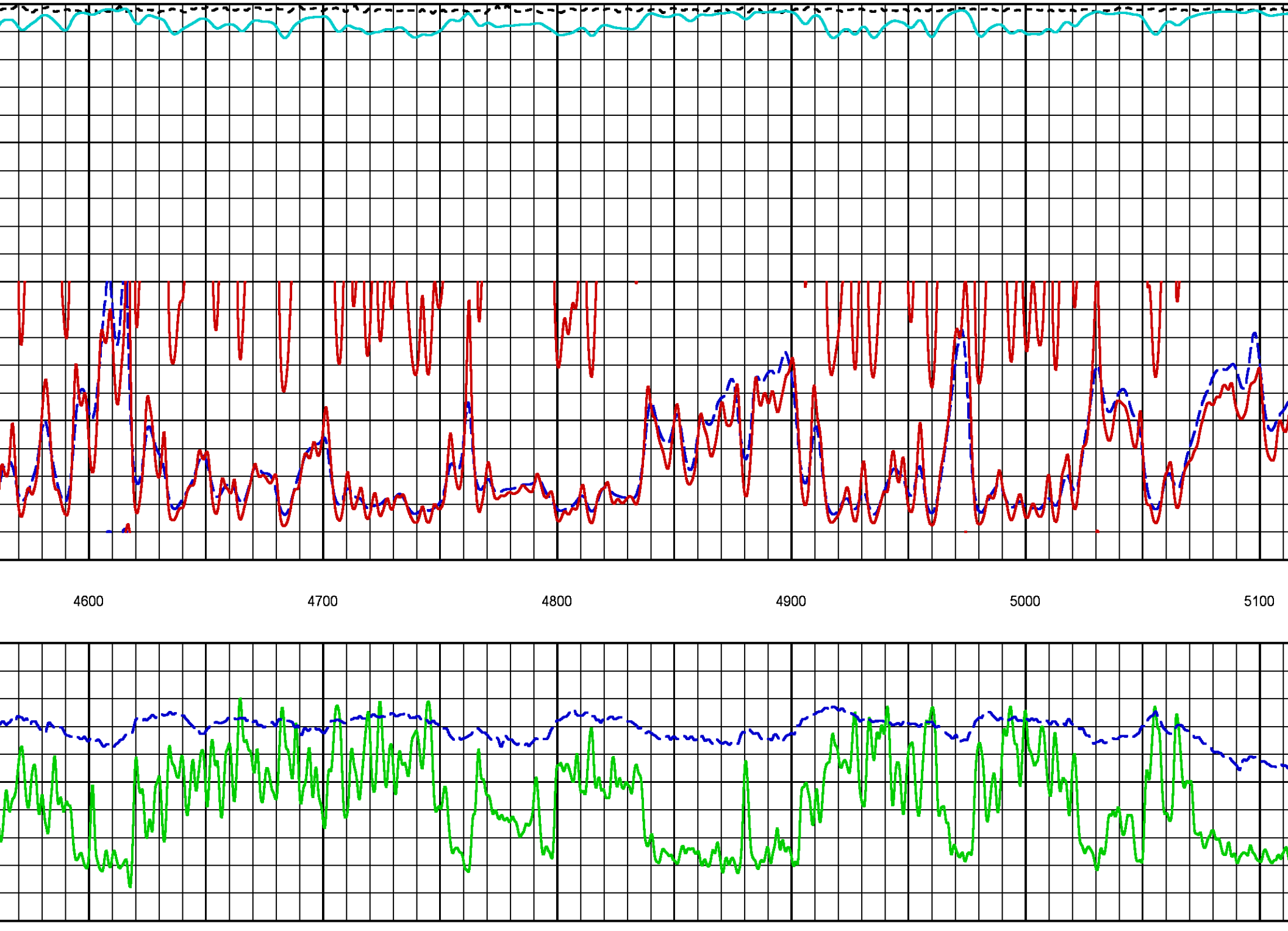
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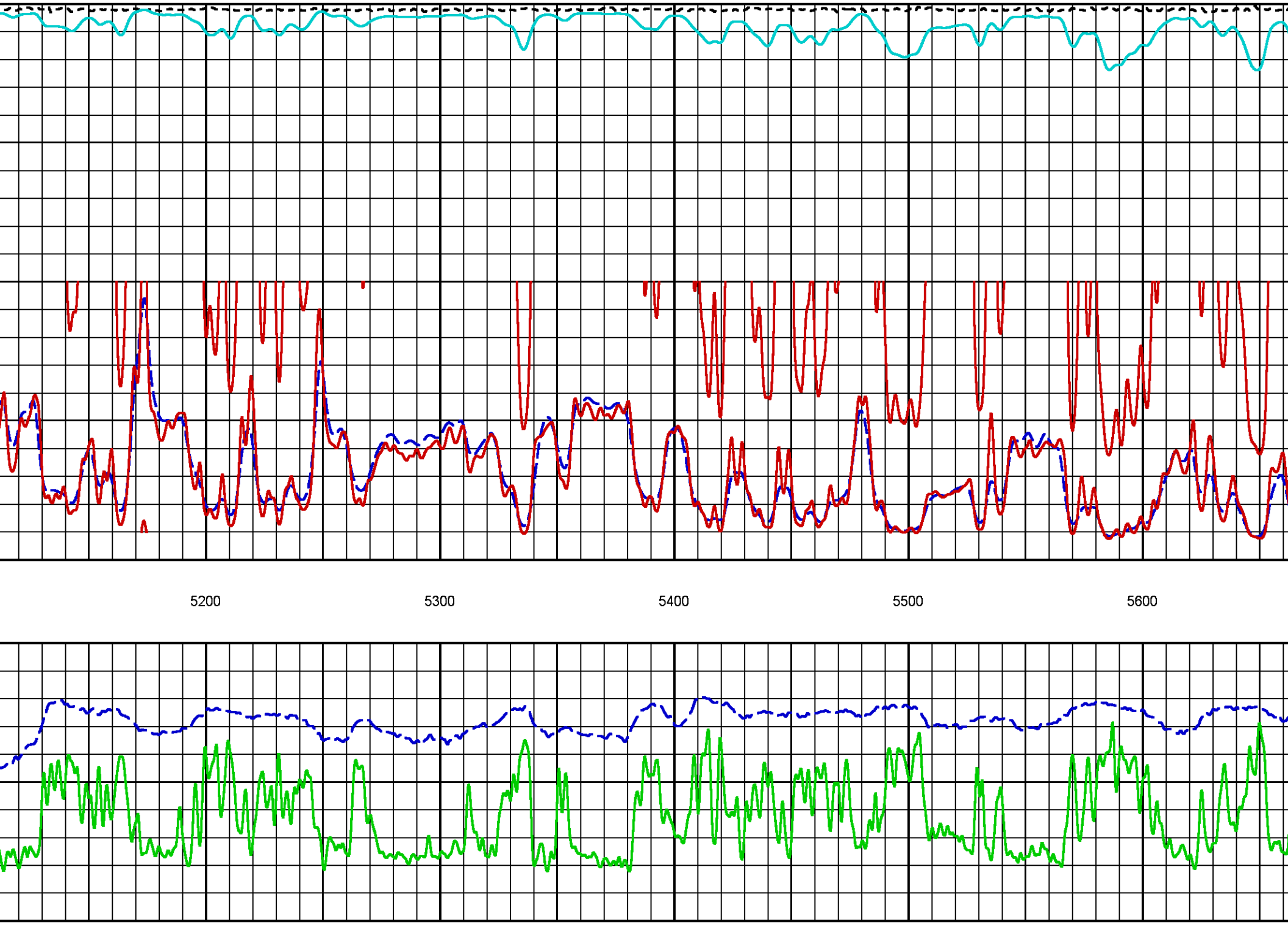
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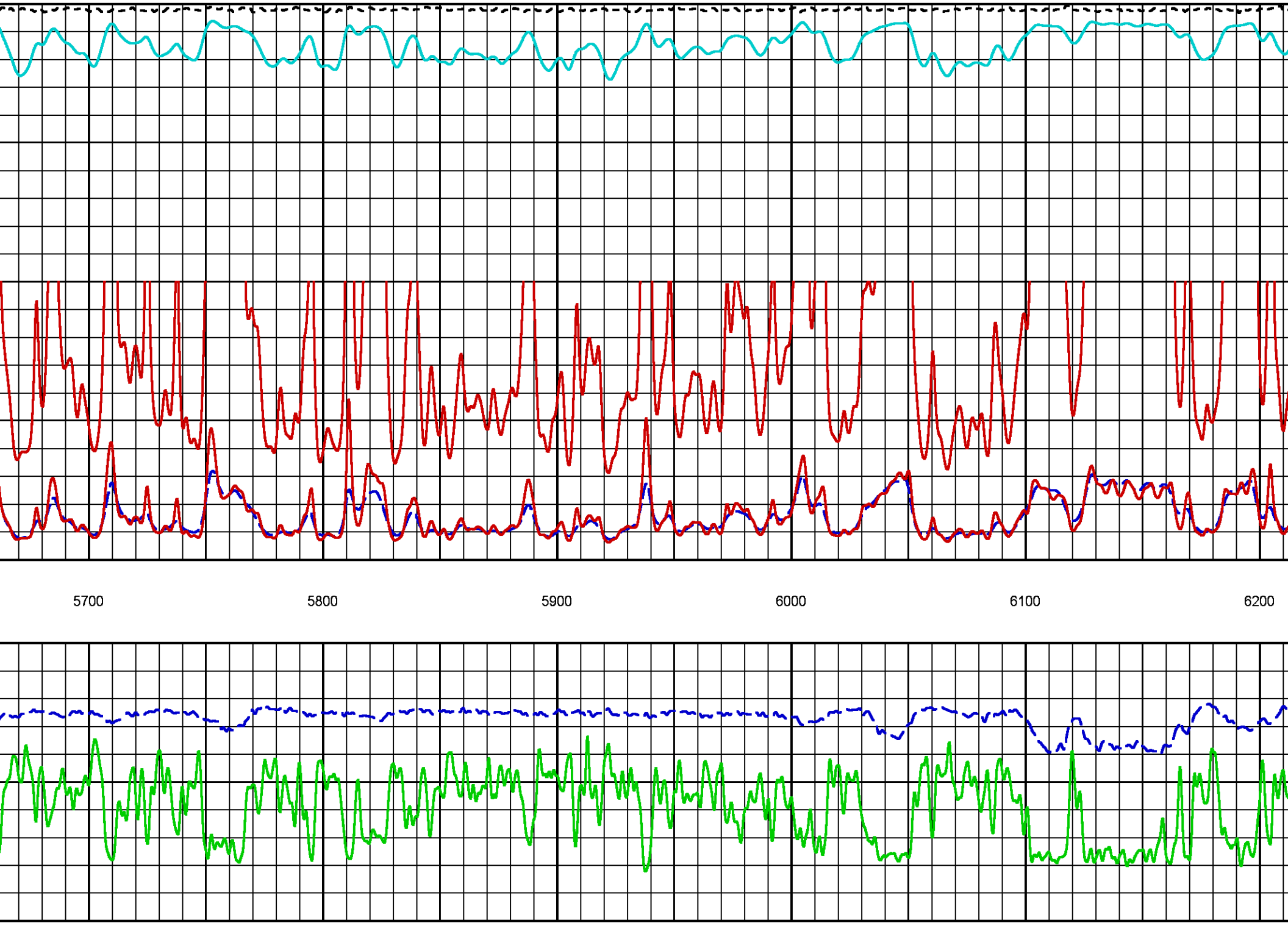
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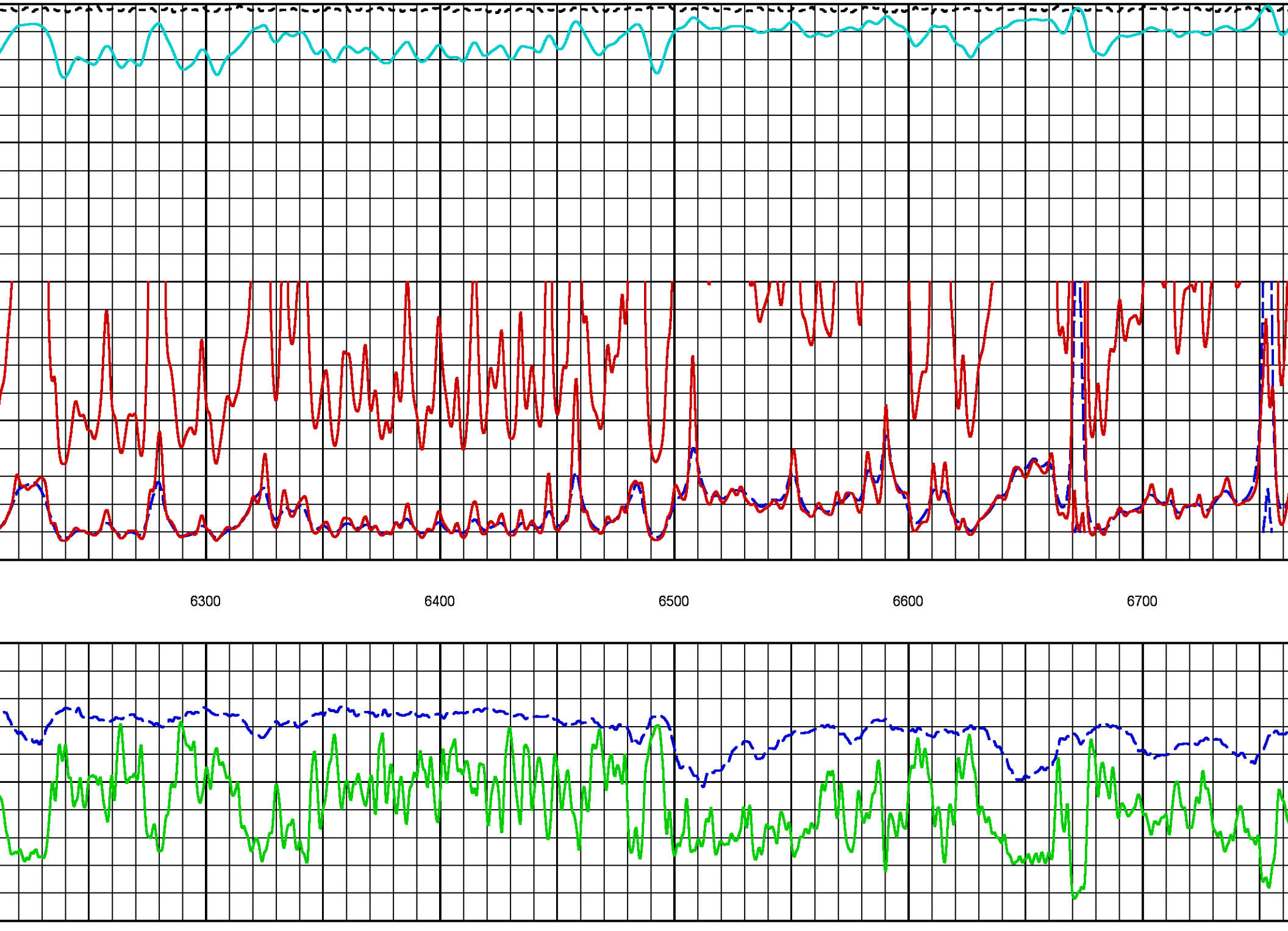
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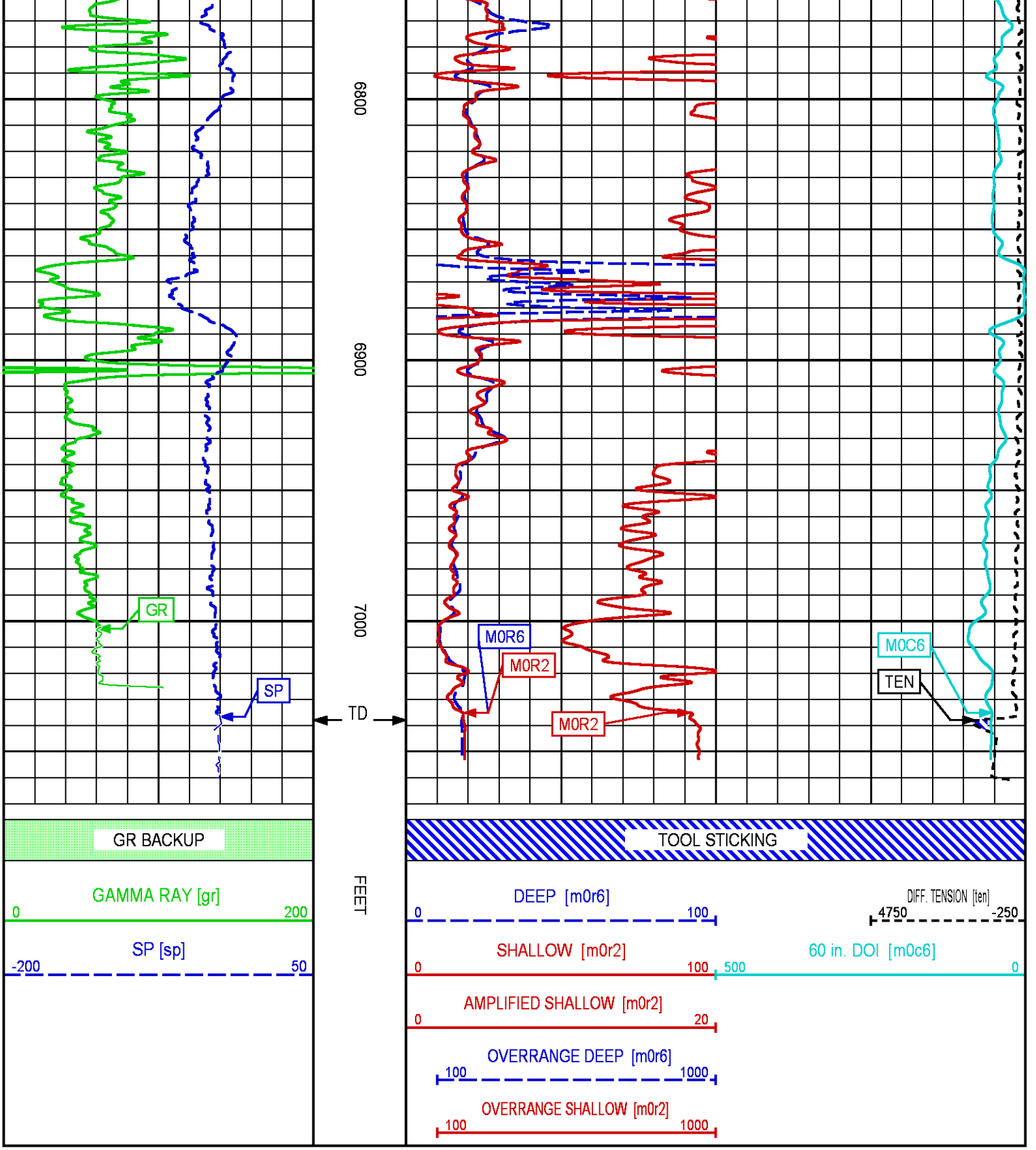


MAIN LOG 5"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 5

Plotted: Sun Dec 21 12:20:42 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/93329J/n970aR03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 1358.655 ft BOTTOM DEPTH: 4652.995 ft

SYMMETRIC FILTER

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

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	8.750	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	8.750	in	"	"
	FIXED DIAMETER (mbh*)	8.750	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	64.8	degF	"	"
	MUD SAMPLE RES	0.885	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	64.8	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

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

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	SANDSTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	1000	ppm	"	"
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

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

HDIL PROCESSING

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

CURVE DESCRIPTION REPORT

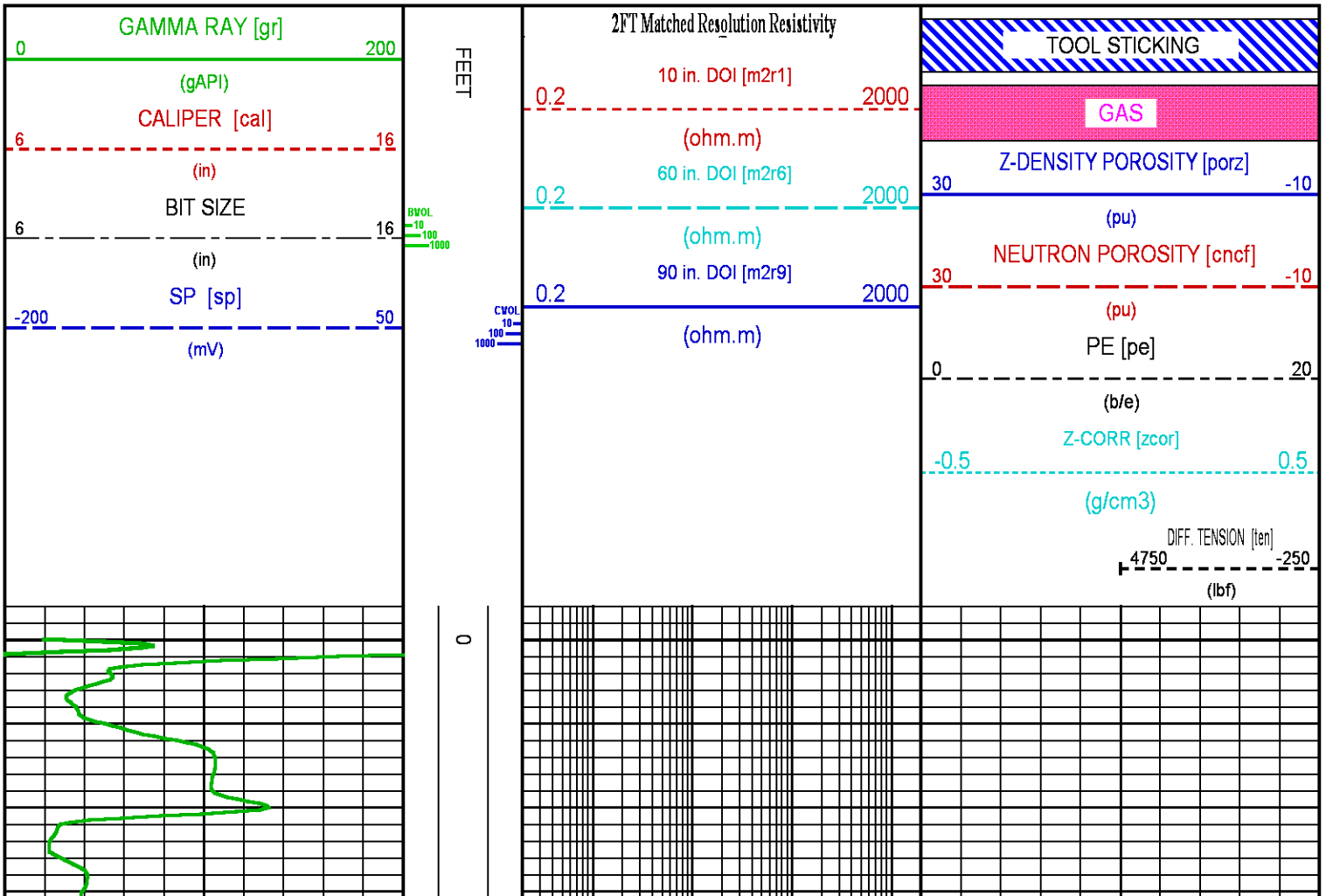
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Dec 21 12:04:02 2014	BIT SIZE
F1:BVOL	Dec 21 12:04:02 2014	BOREHOLE VOLUME
F1:CAL	Dec 21 12:04:02 2014	CALIPER
F1:CNCF	Dec 21 12:04:02 2014	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Dec 21 12:04:02 2014	CEMENT VOLUME
F1:GR	Dec 21 12:04:02 2014	GAMMA RAY
F1:M2R1	Dec 21 12:04:02 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	Dec 21 12:04:02 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Dec 21 12:04:02 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Dec 21 12:04:02 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Dec 21 12:04:02 2014	POROSITY FOR SELECTABLE MATRIX
F1:SP	Dec 21 12:04:02 2014	SPONTANEOUS POTENTIAL
F1:TEN	Dec 21 12:04:02 2014	DIFFERENTIAL TENSION
F1:ZCOR	Dec 21 12:04:02 2014	DENSITY CORRECTION

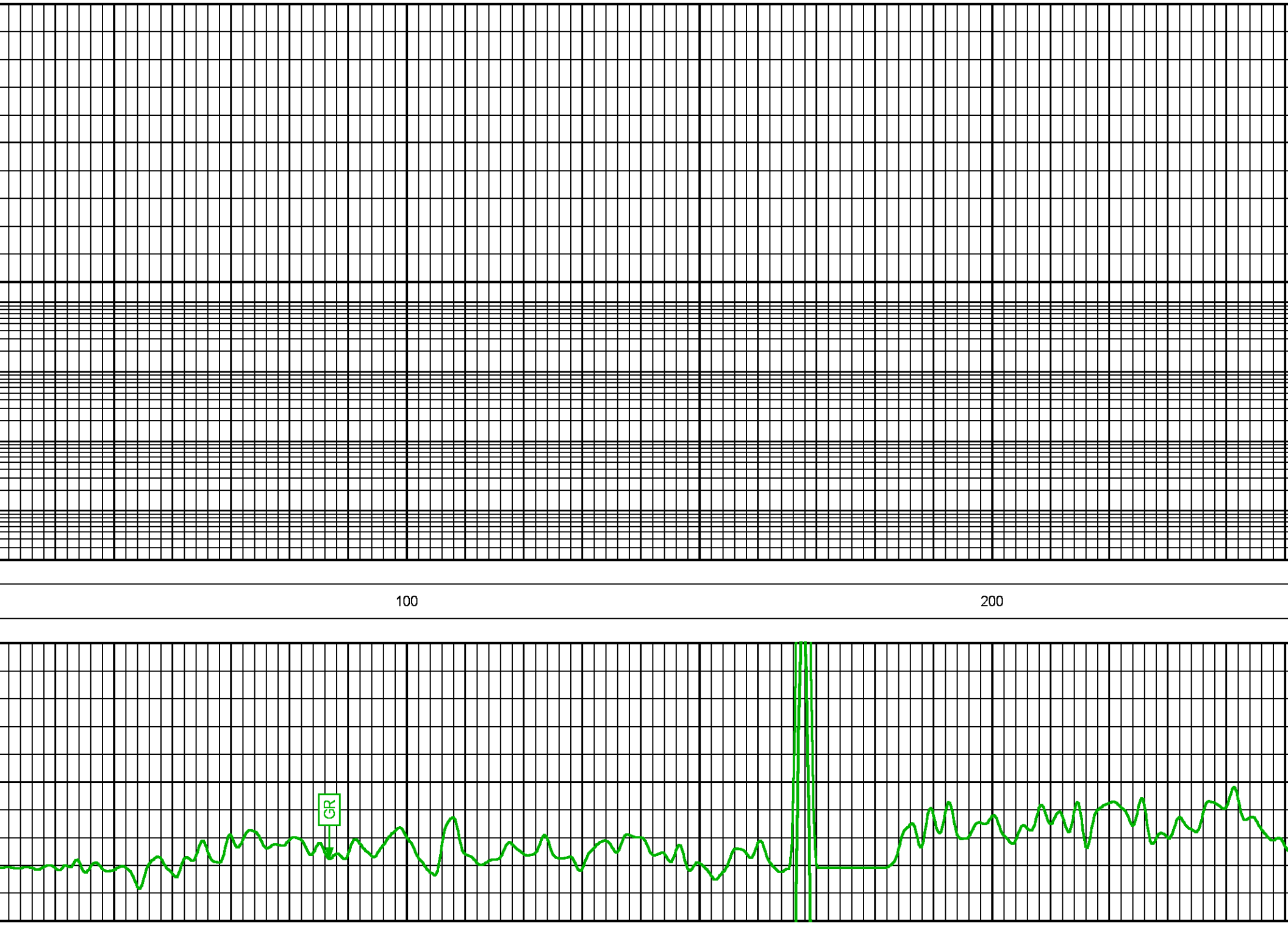
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	35.00	M2R9	2.75	SP	1.25
CAL	18.12	M2R1	2.75	PE	18.00	TEN	0.00
CNCF	27.38	M2R6	2.75	PORZ	18.00	ZCOR	18.00

Presentation : cas6685:/dat1a/93329J/WPX_MAIN_R.fvpdf [5"/100' Scale]
Plot Interval : -3.25 - 7068.25 Feet

Data File 1 : F1 : cas6685:/dat1a/93329J/n970aRMAIN.xtf
Created On : Dec 21 12:04:02 2014
Company : WPX ENERGY INC
Well : WPX GM 433-28
Field : GRAND VALLEY
File Interval : -3.25 - 7068.25 Feet
OCT : n970a

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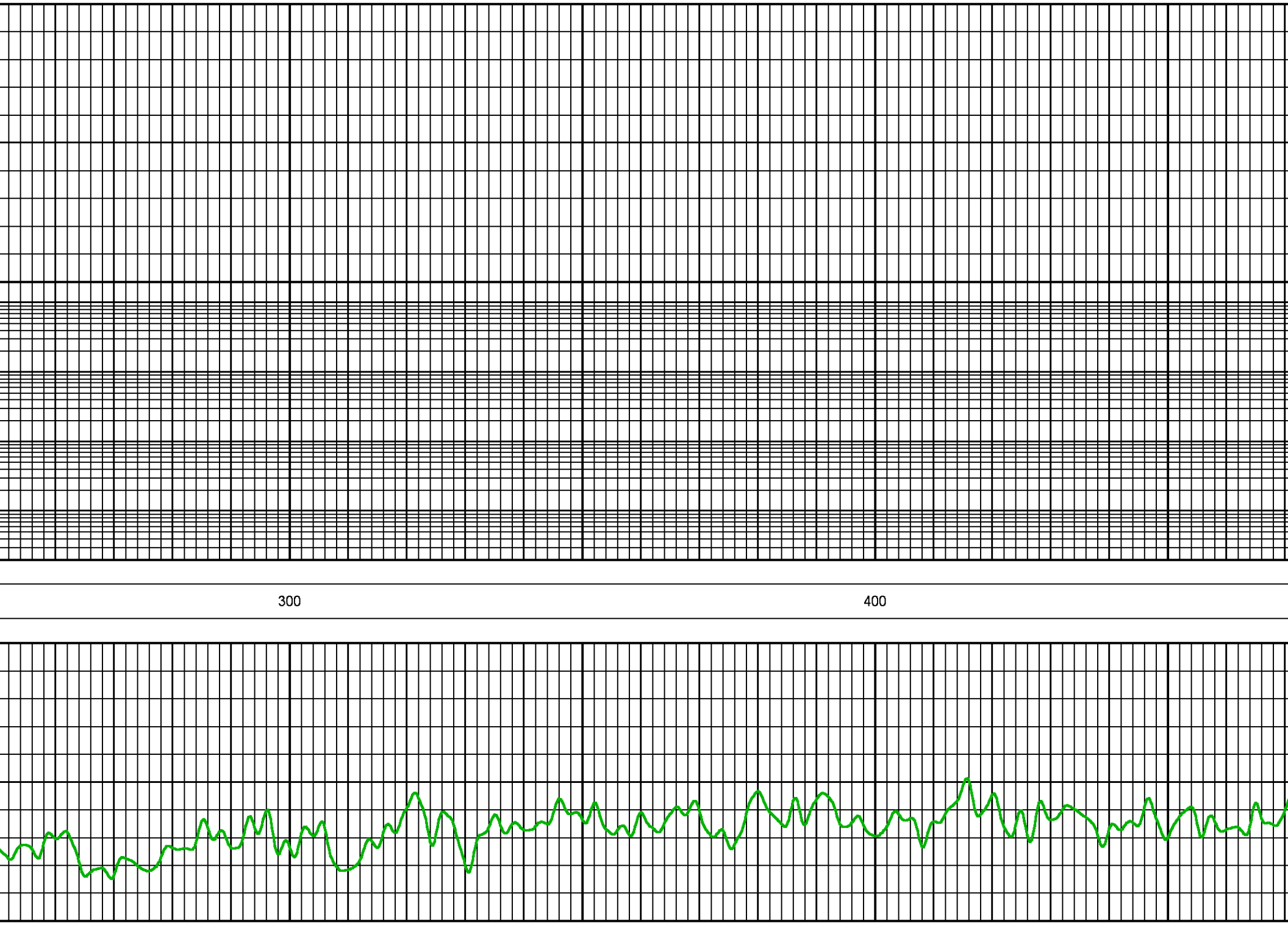
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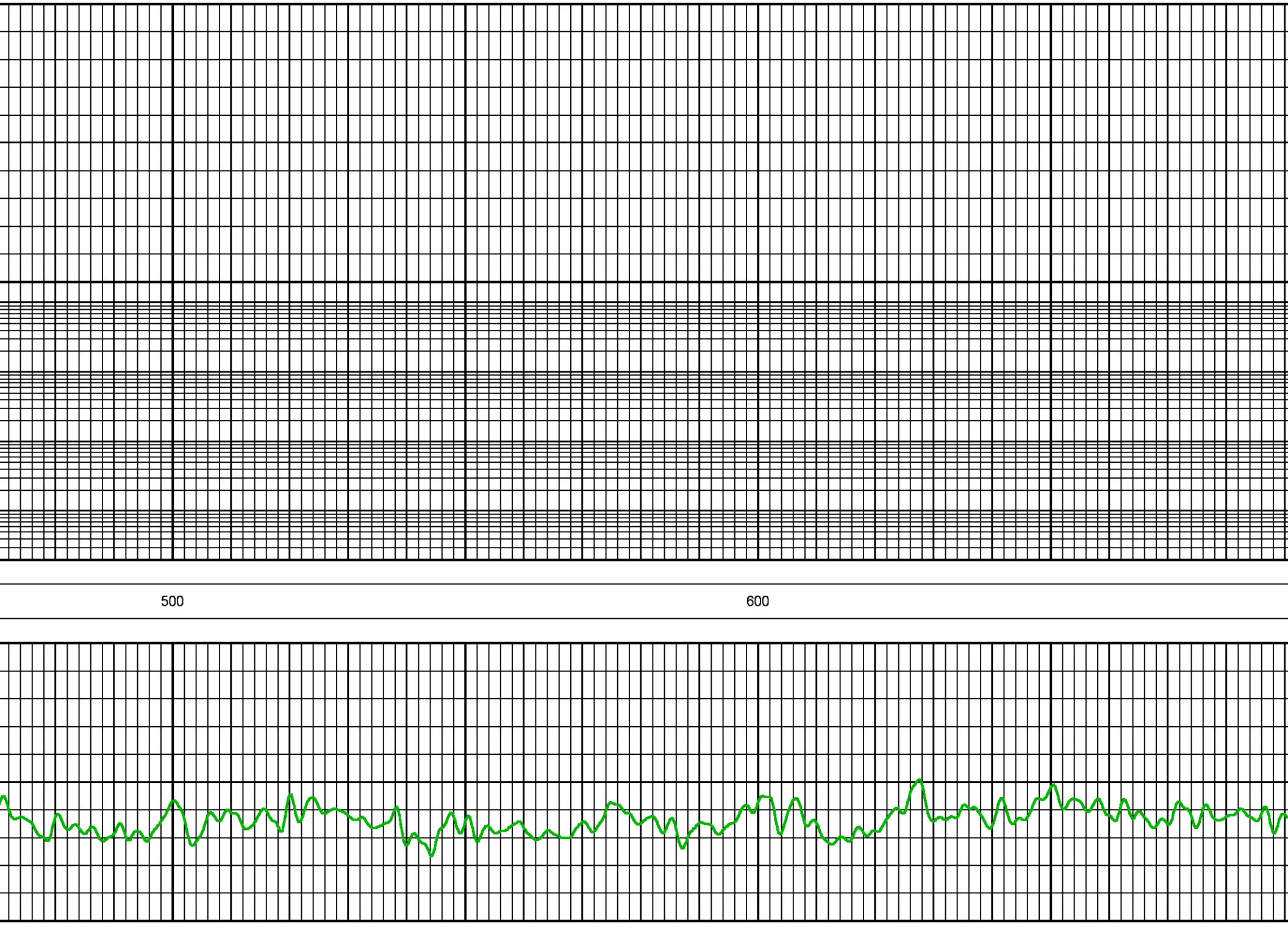
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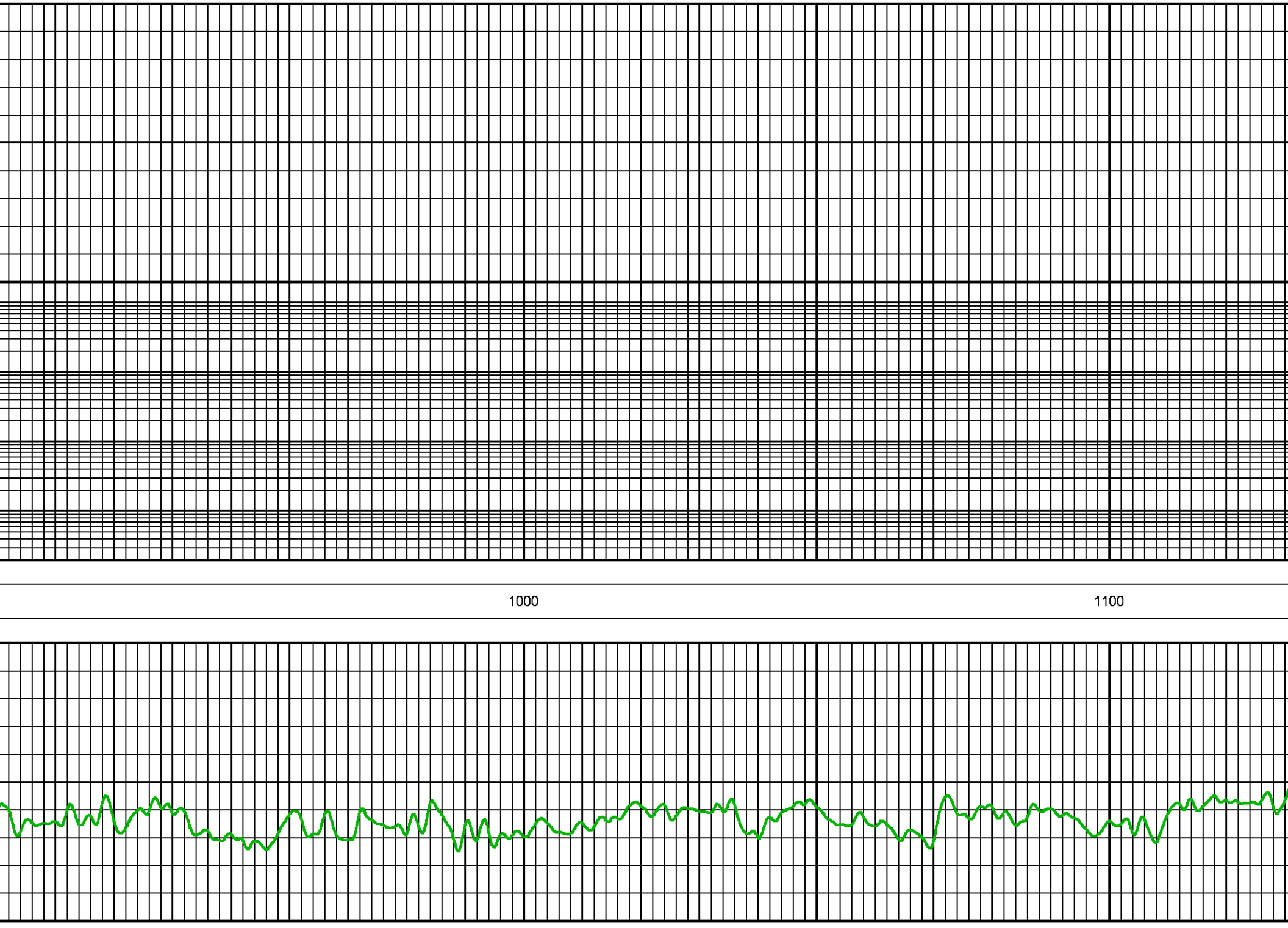
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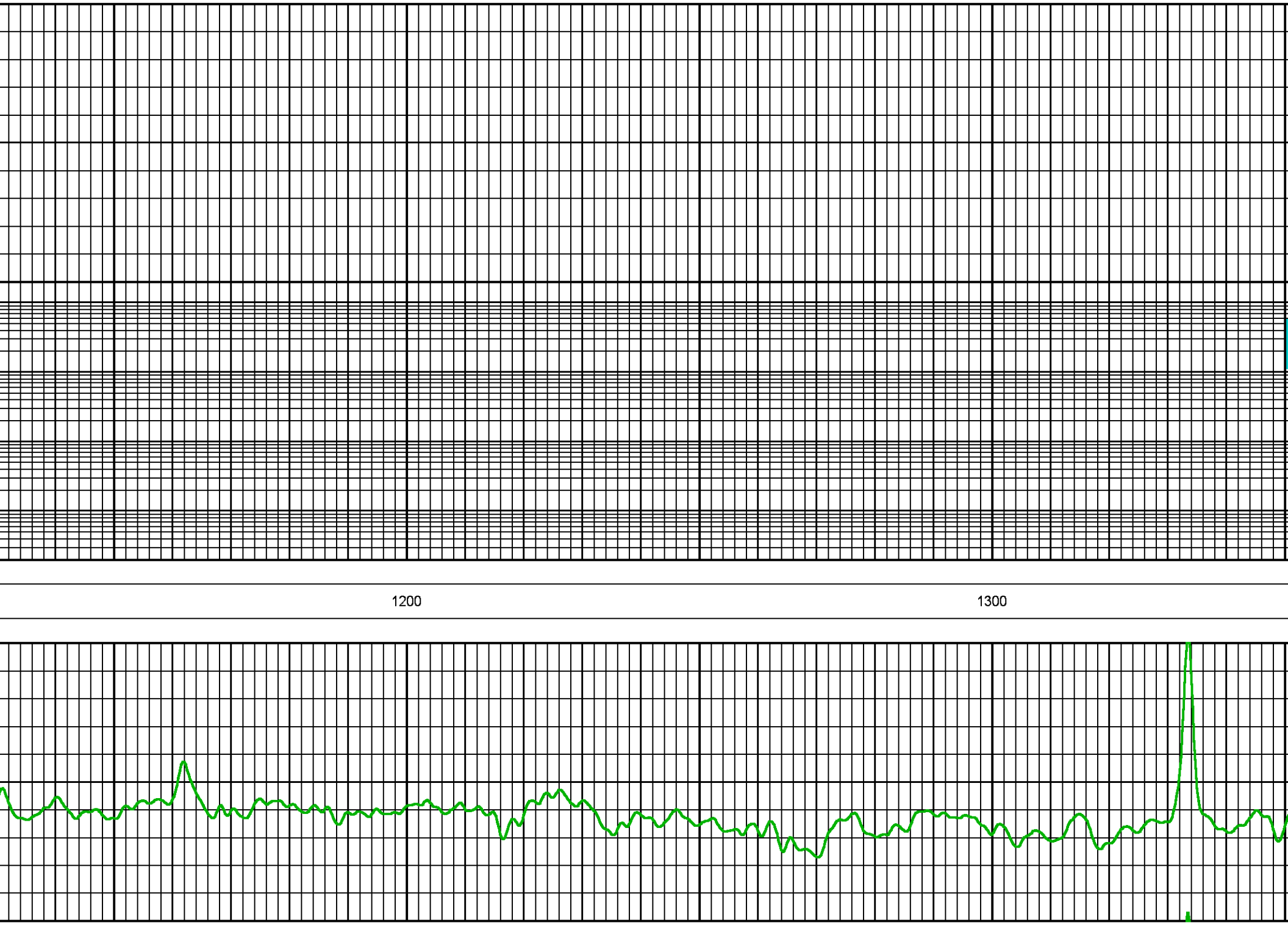
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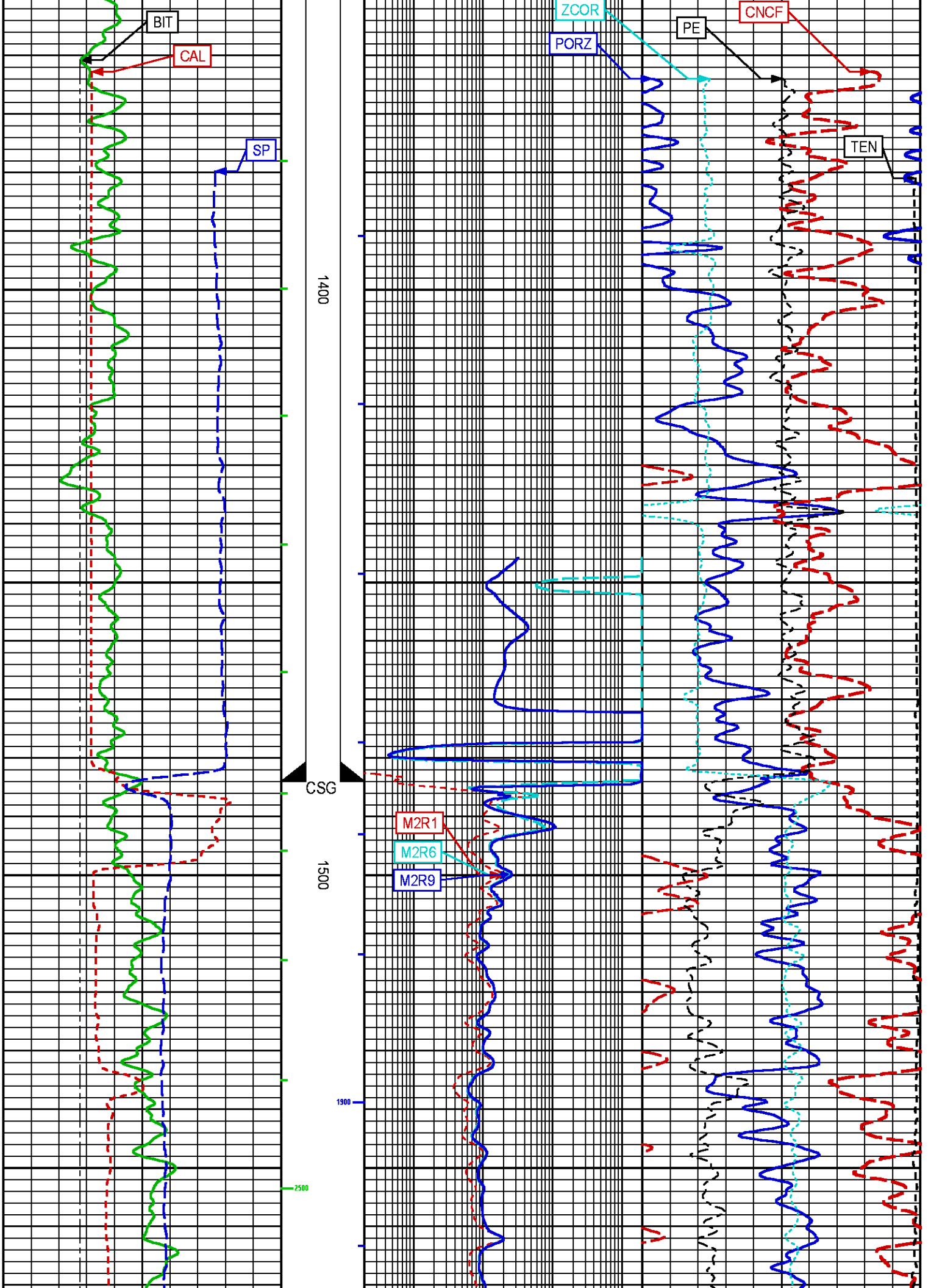
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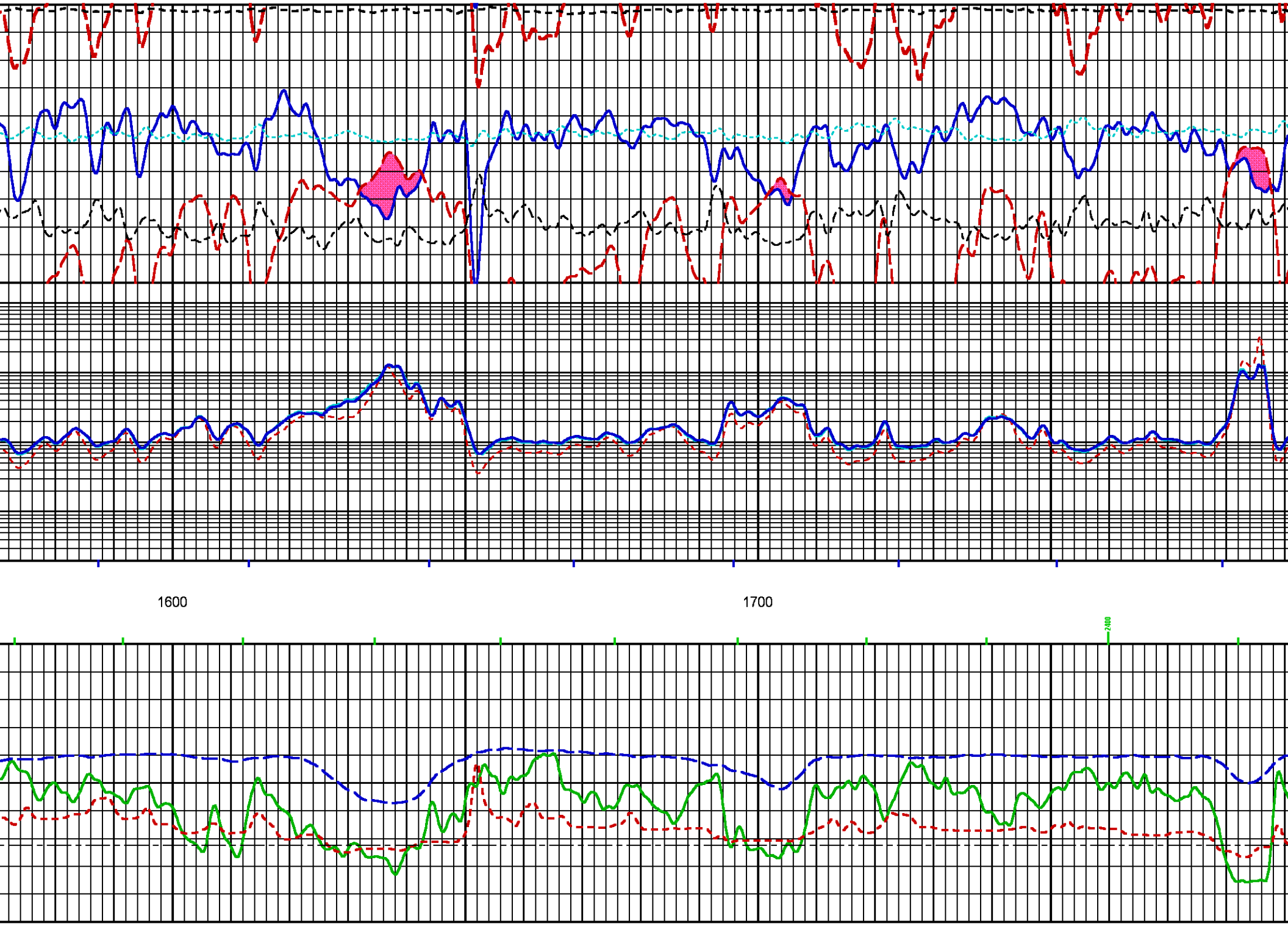
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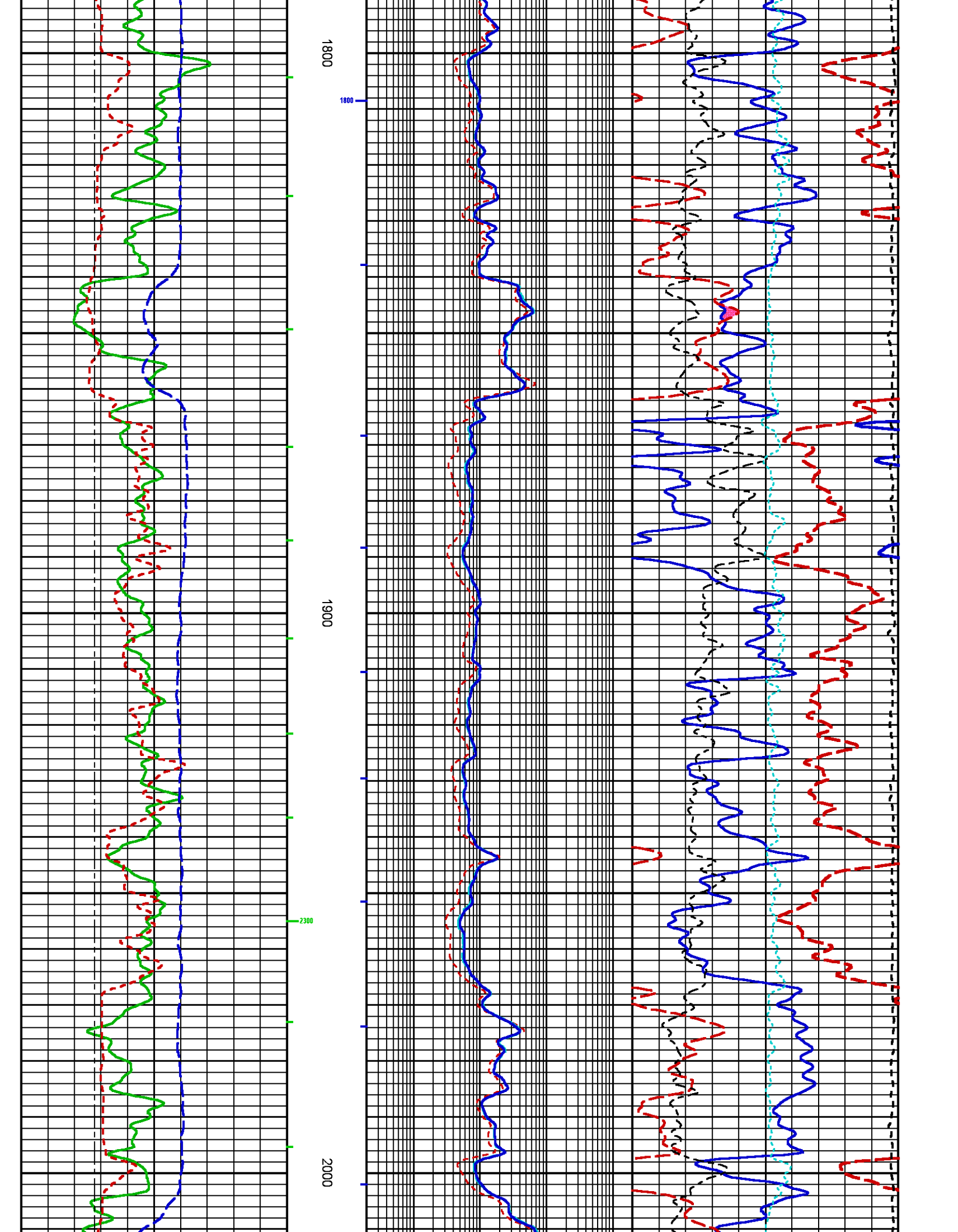
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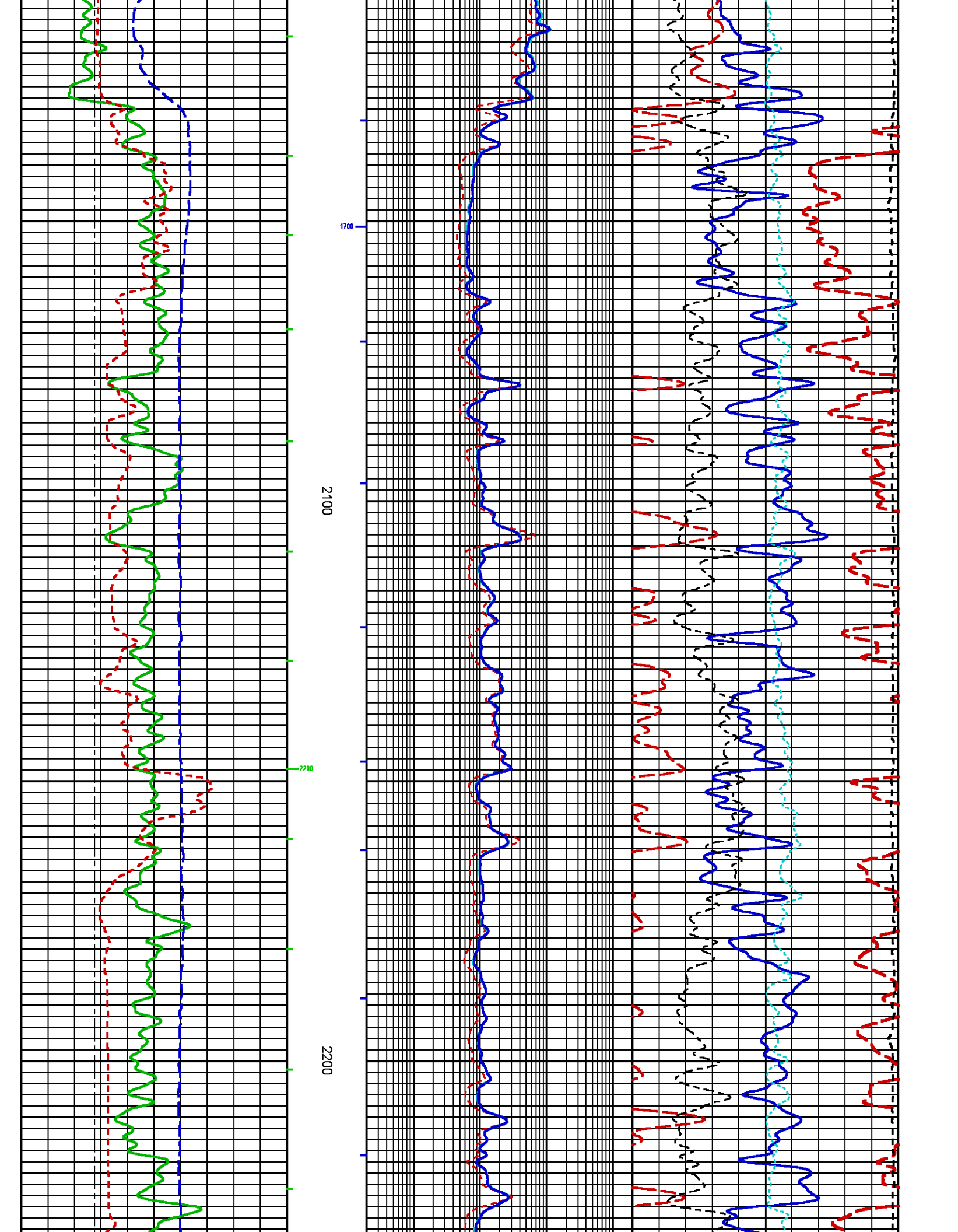
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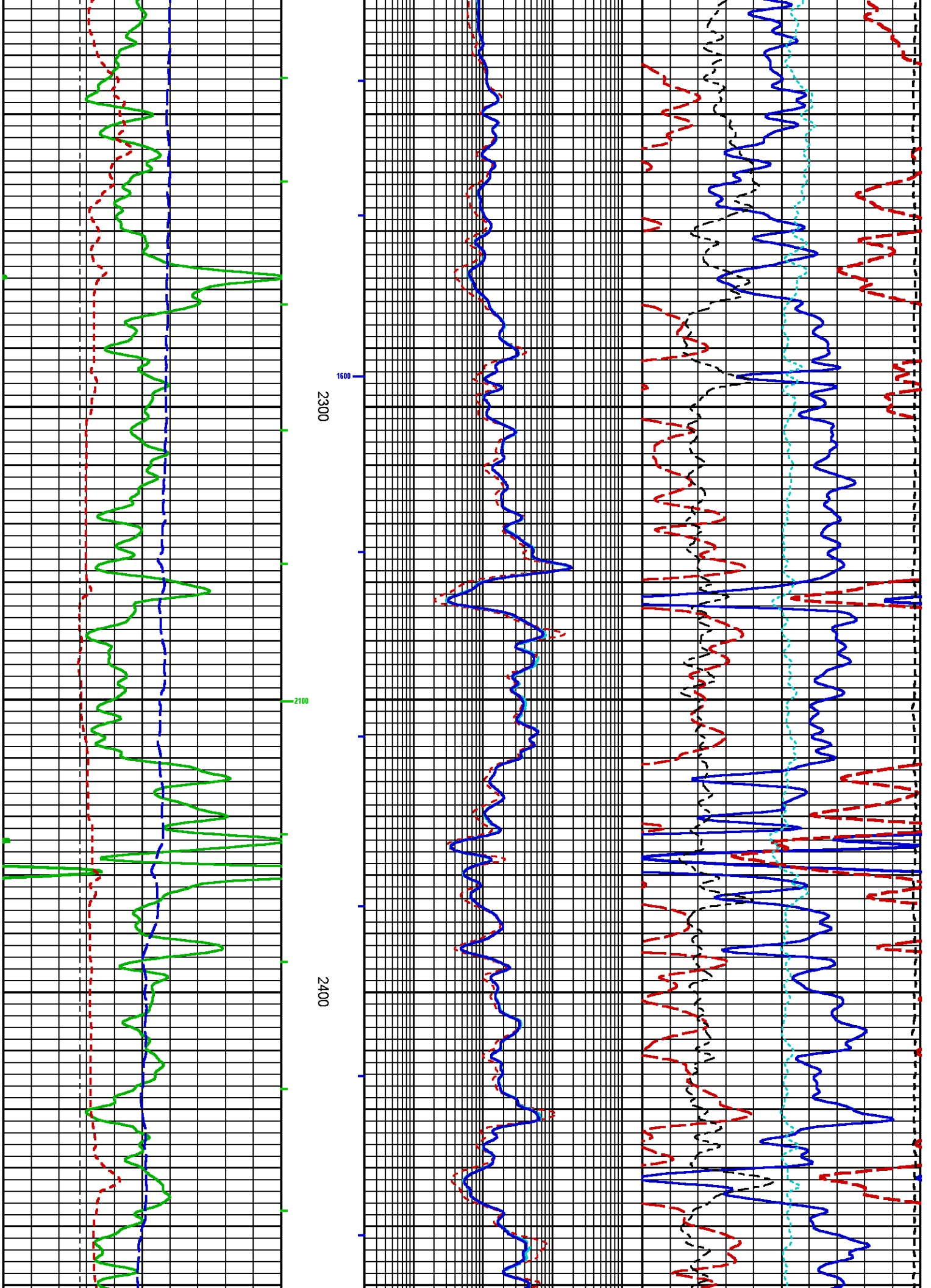
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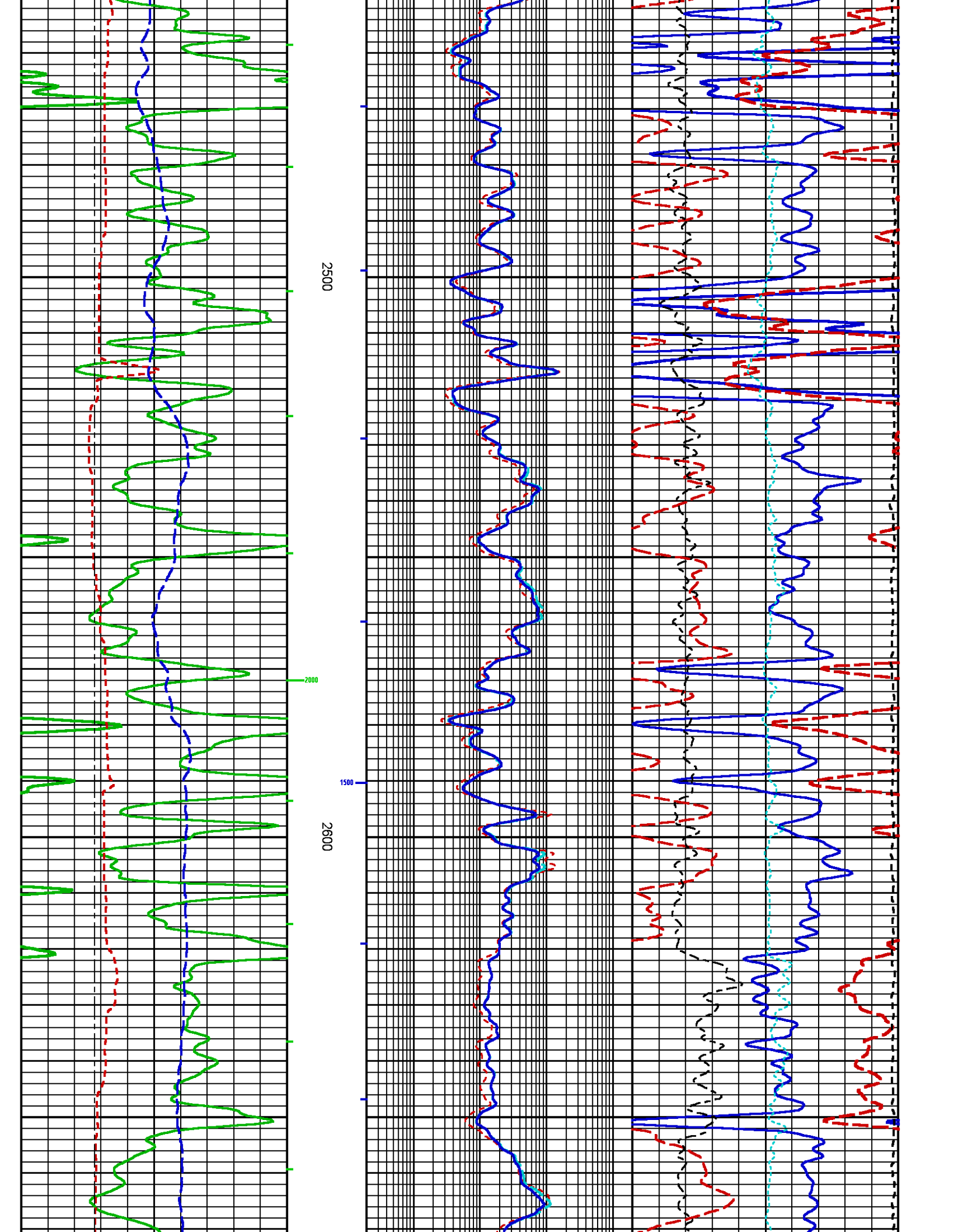
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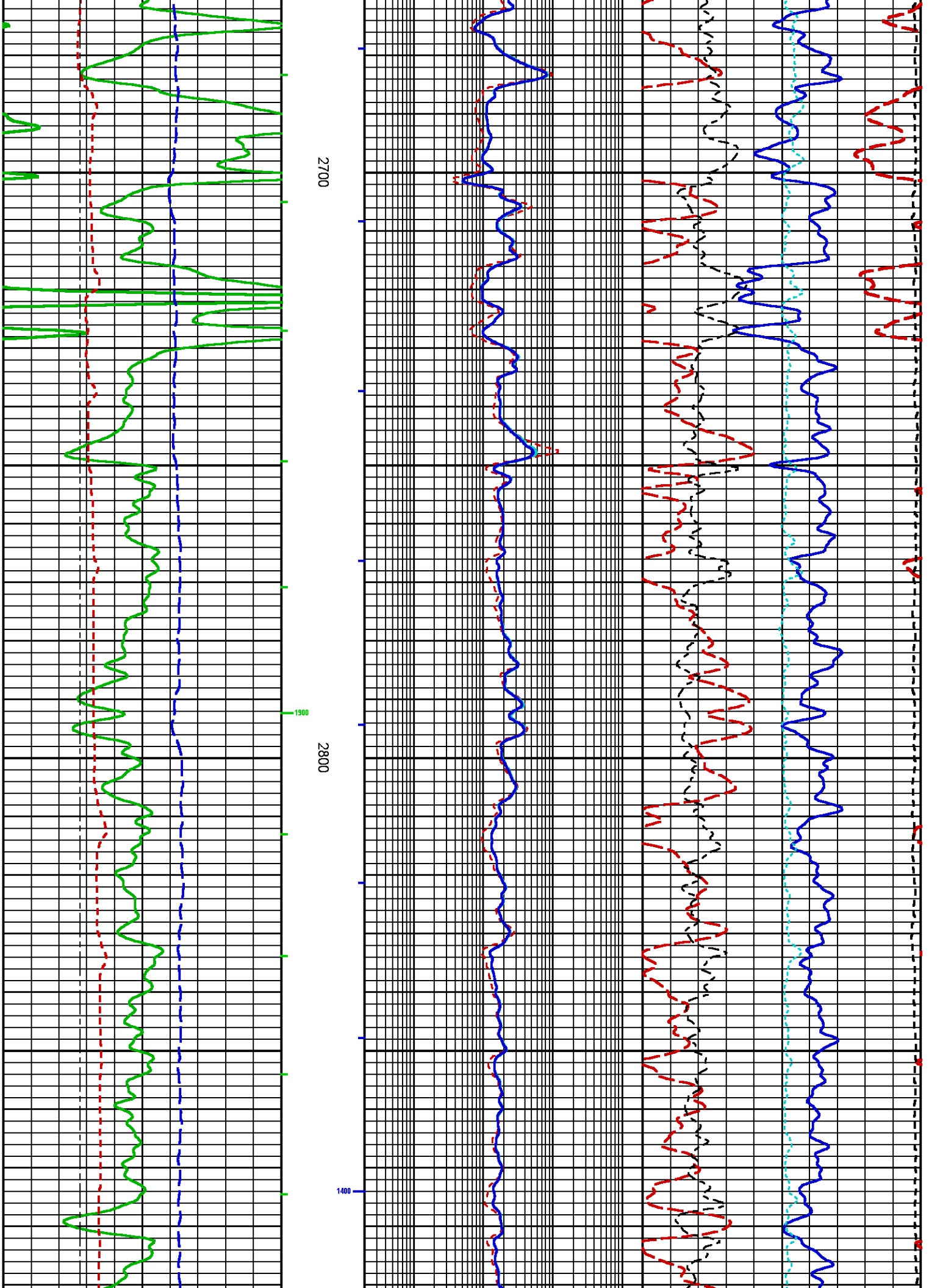
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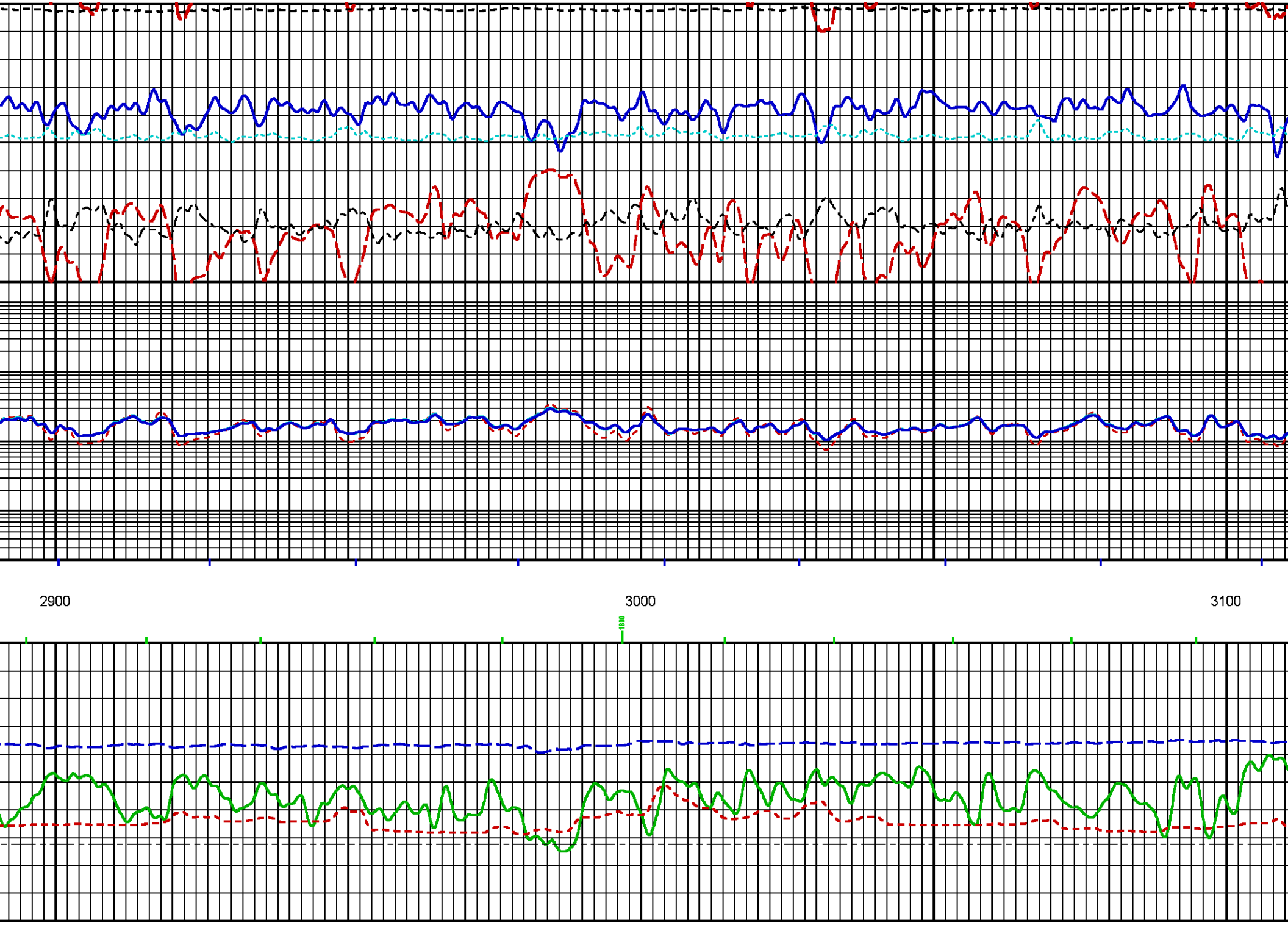
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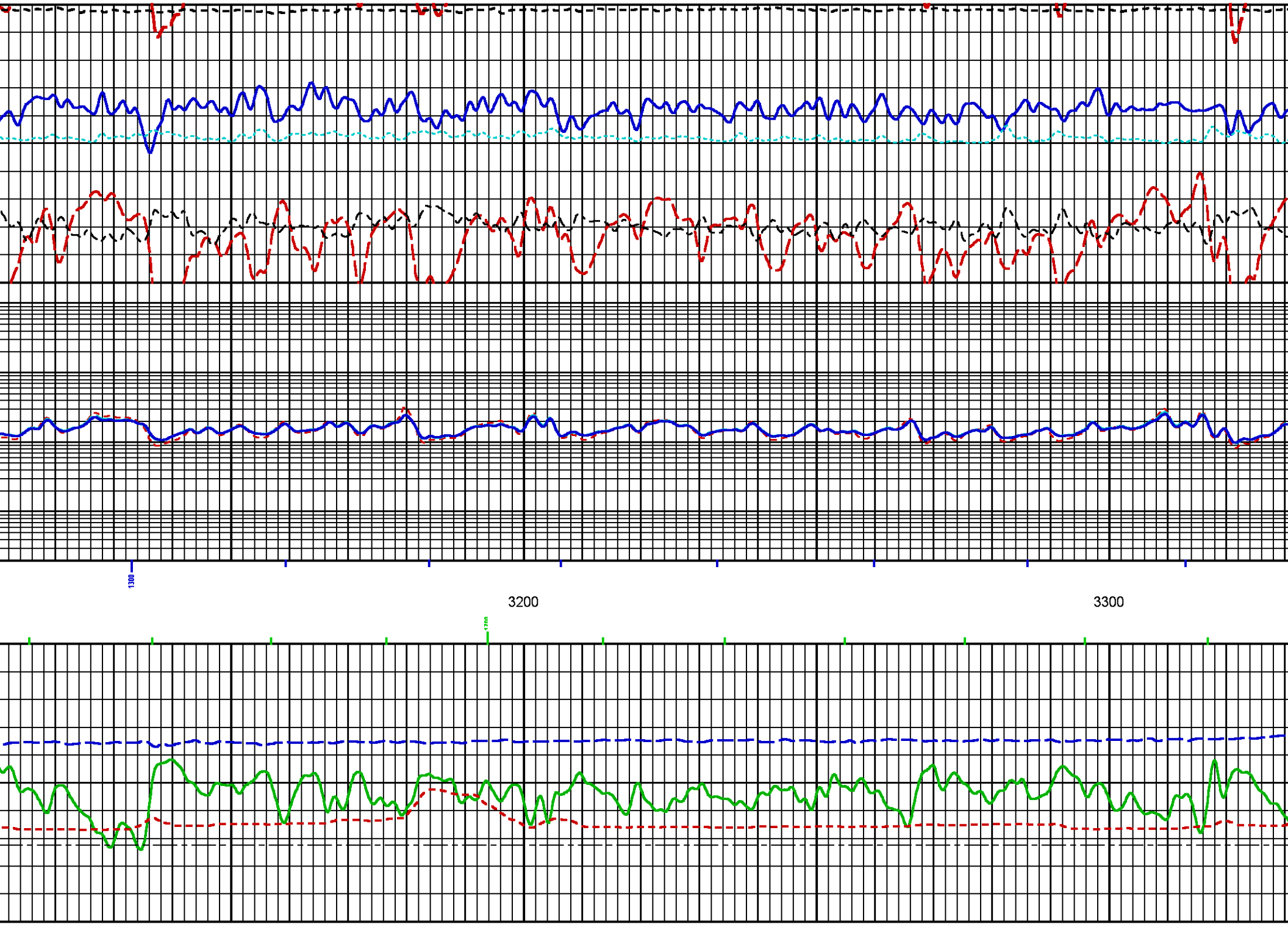
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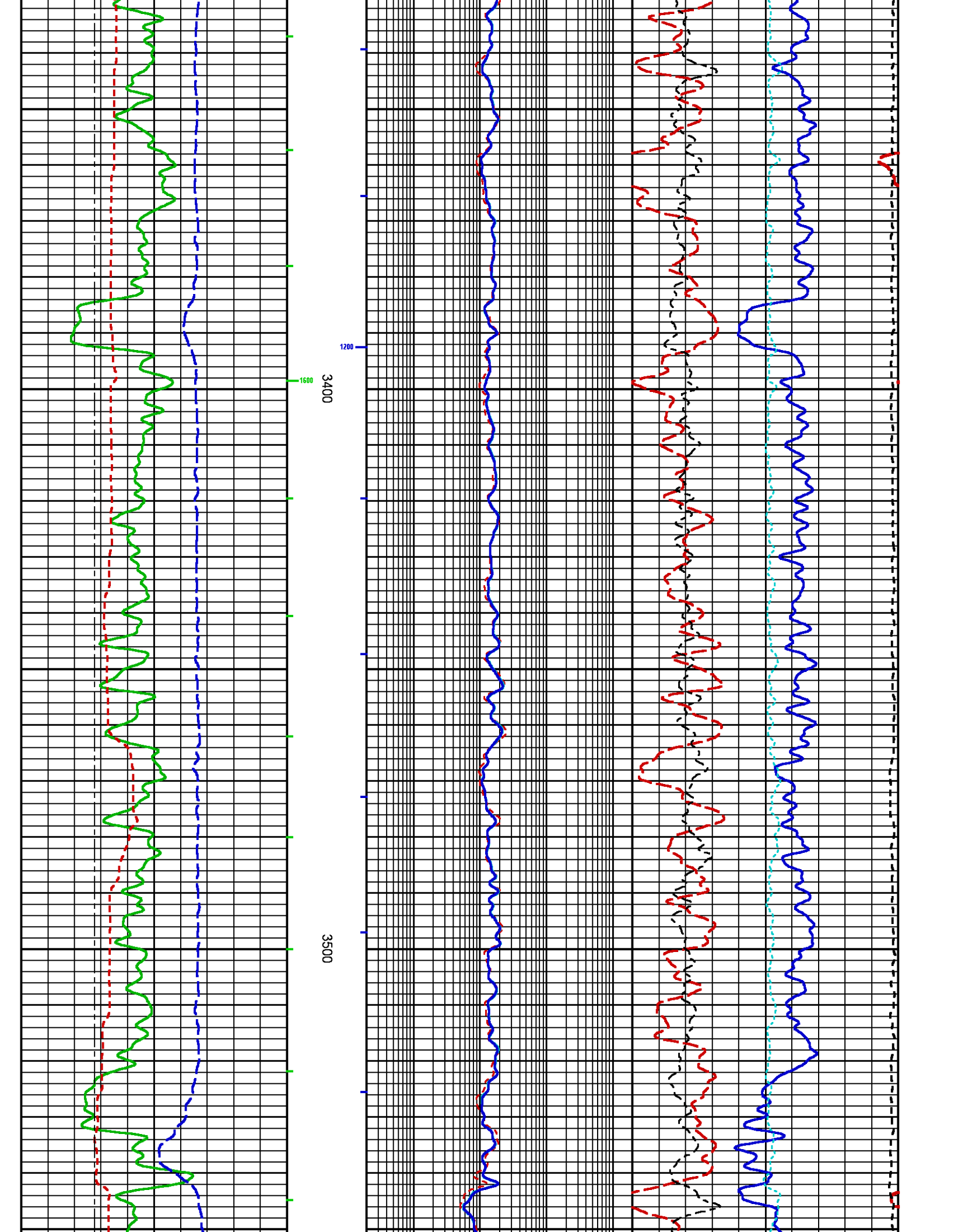
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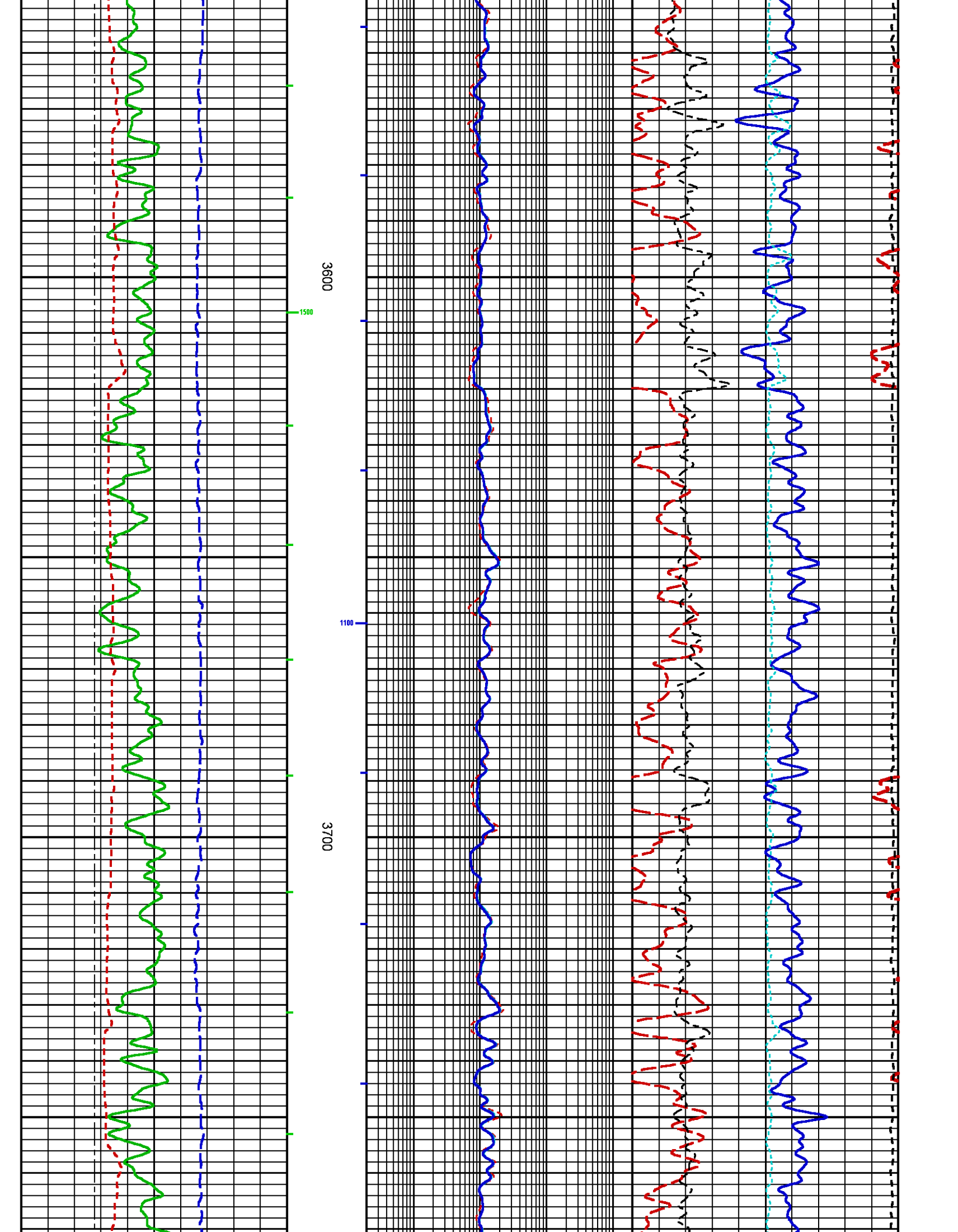
3500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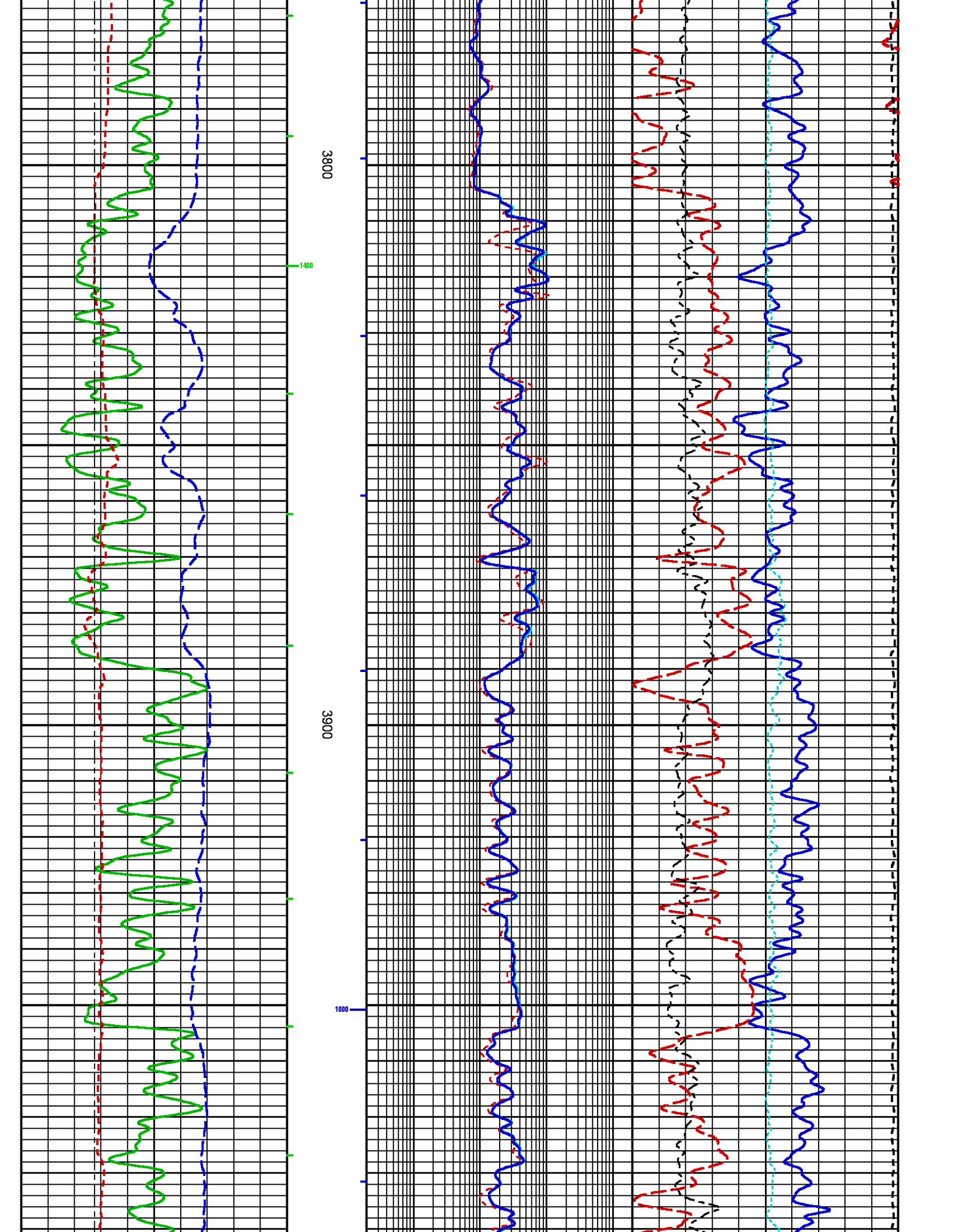
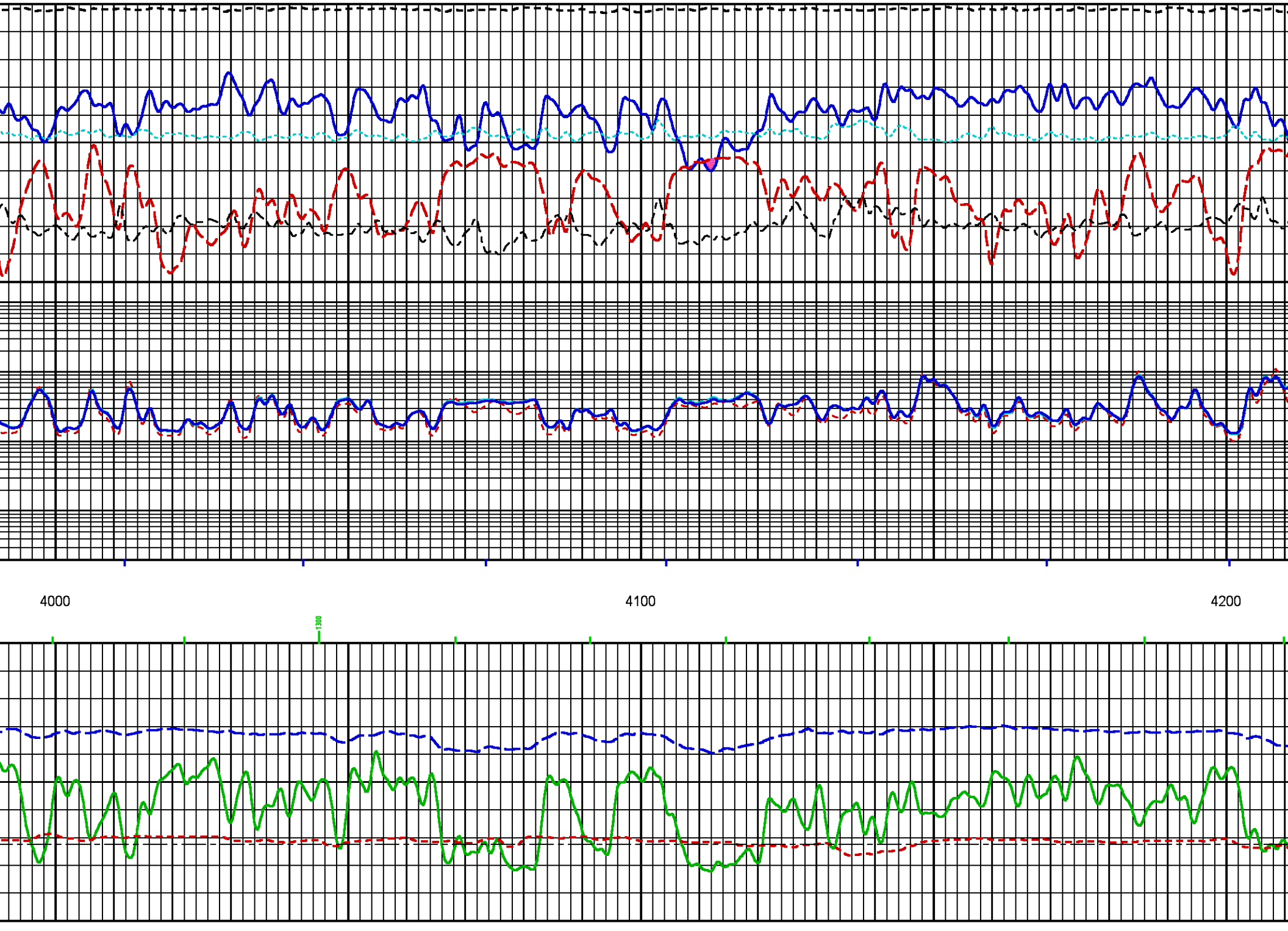
3700


3800
1400
3900
1000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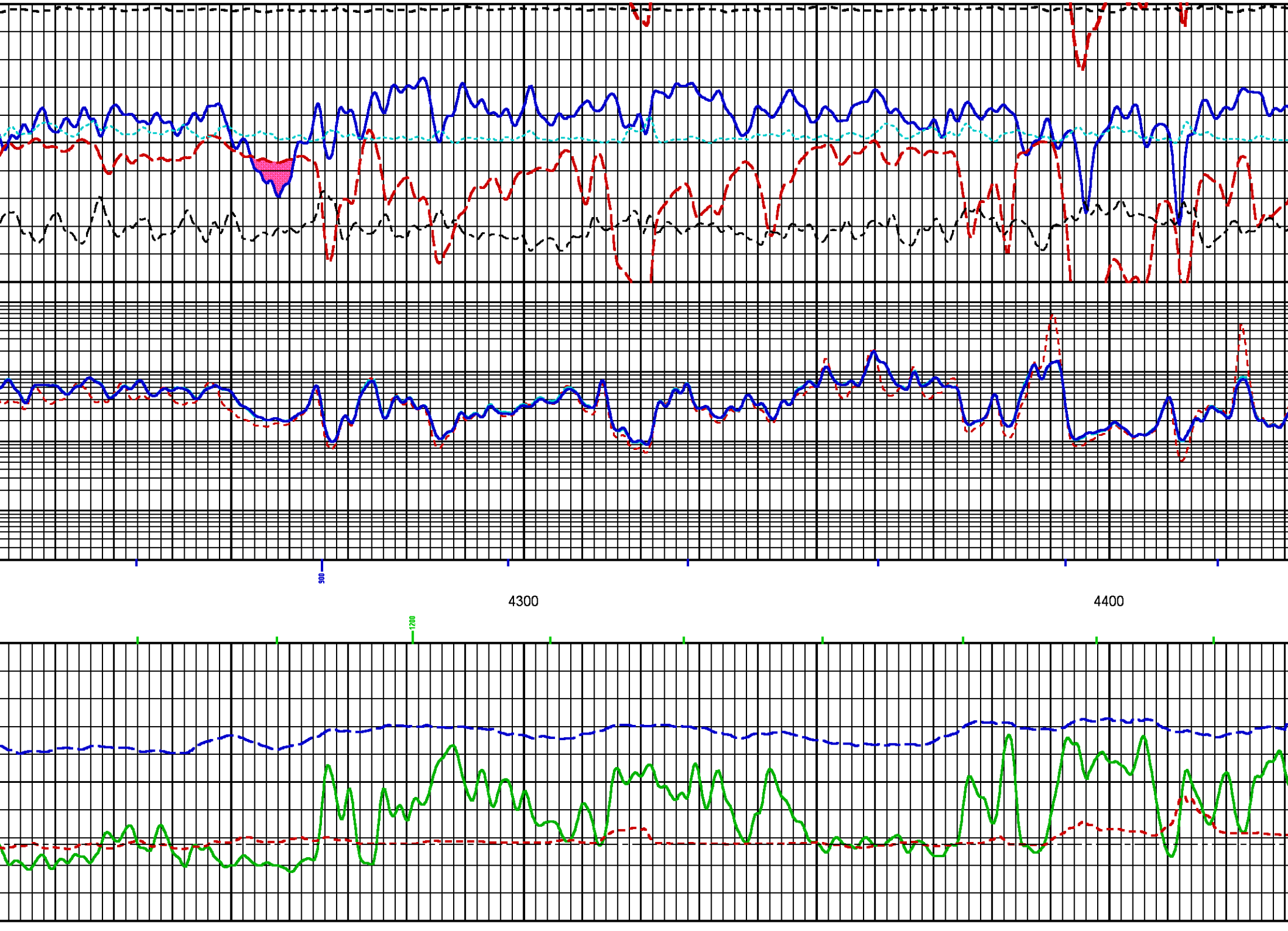
4200
1300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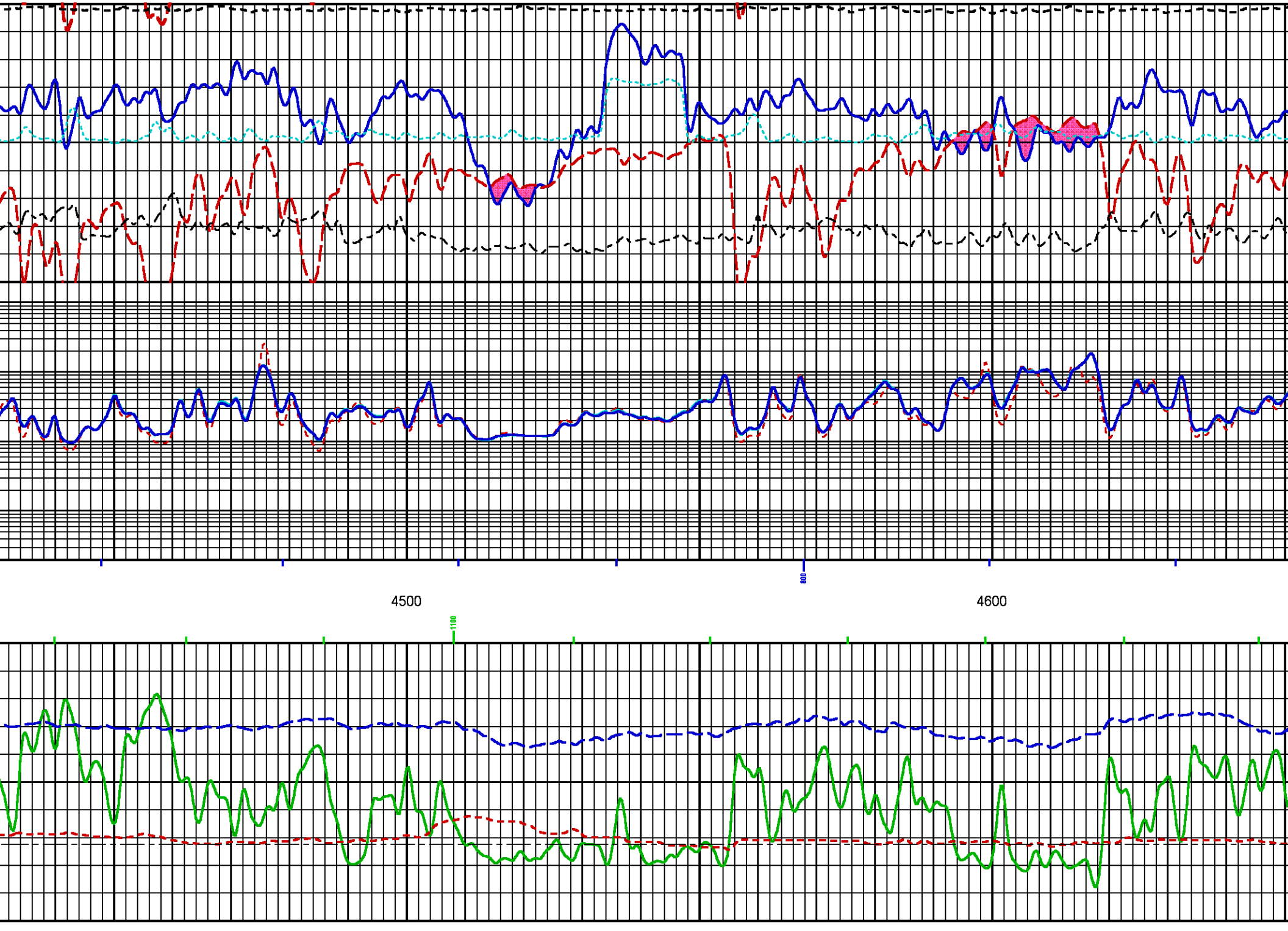
4300
4400
1200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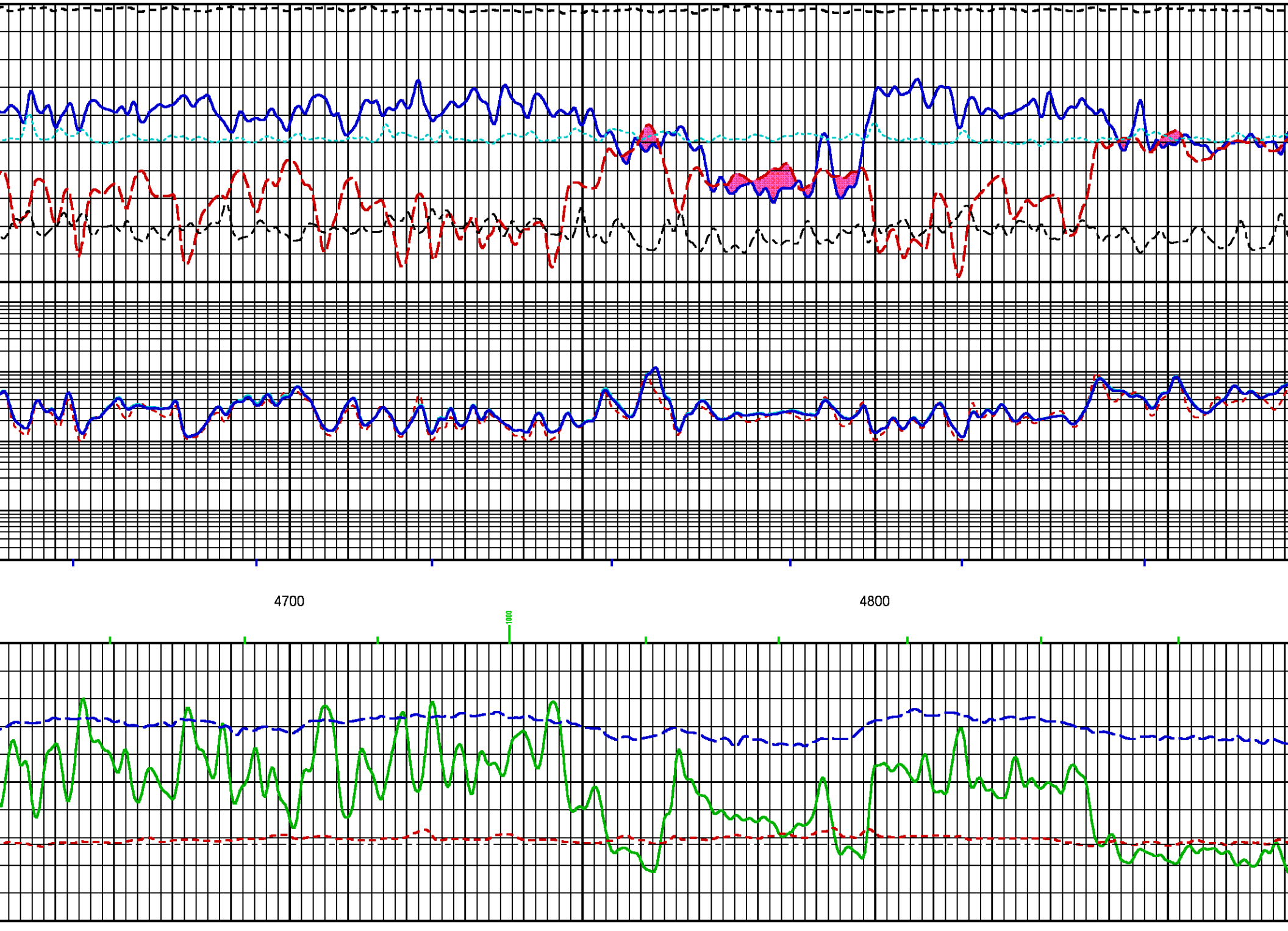
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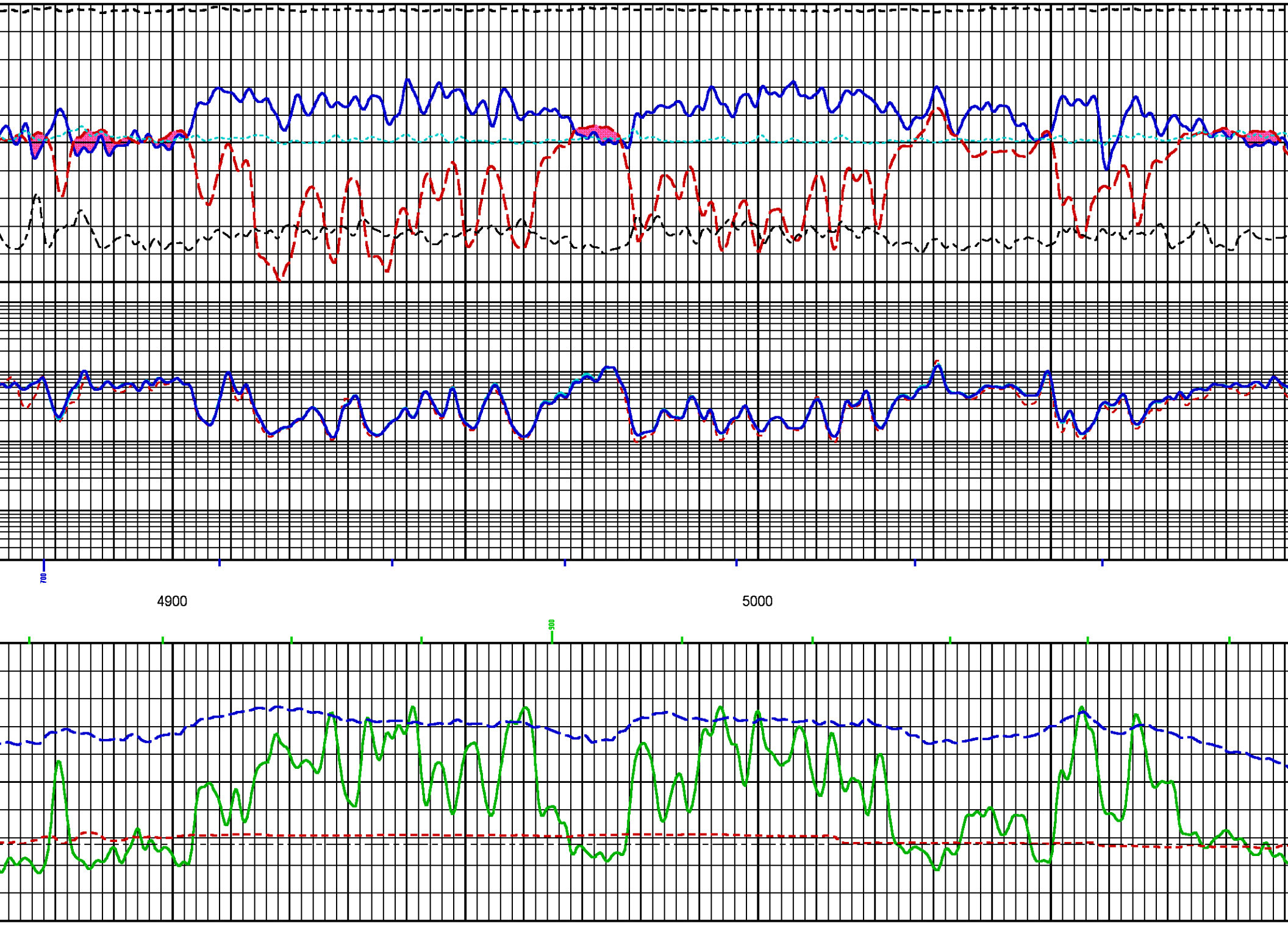
4800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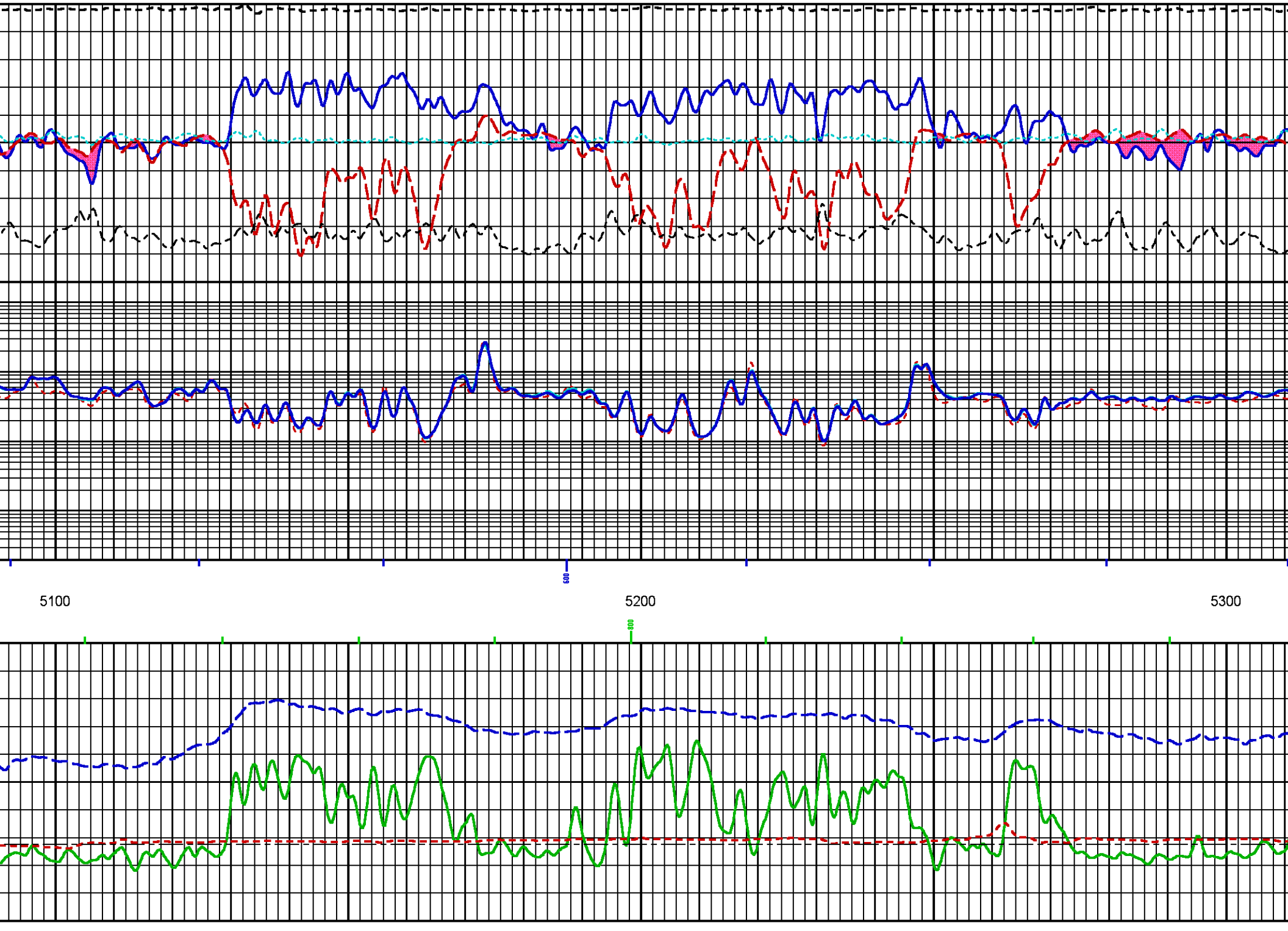
4900
5000
900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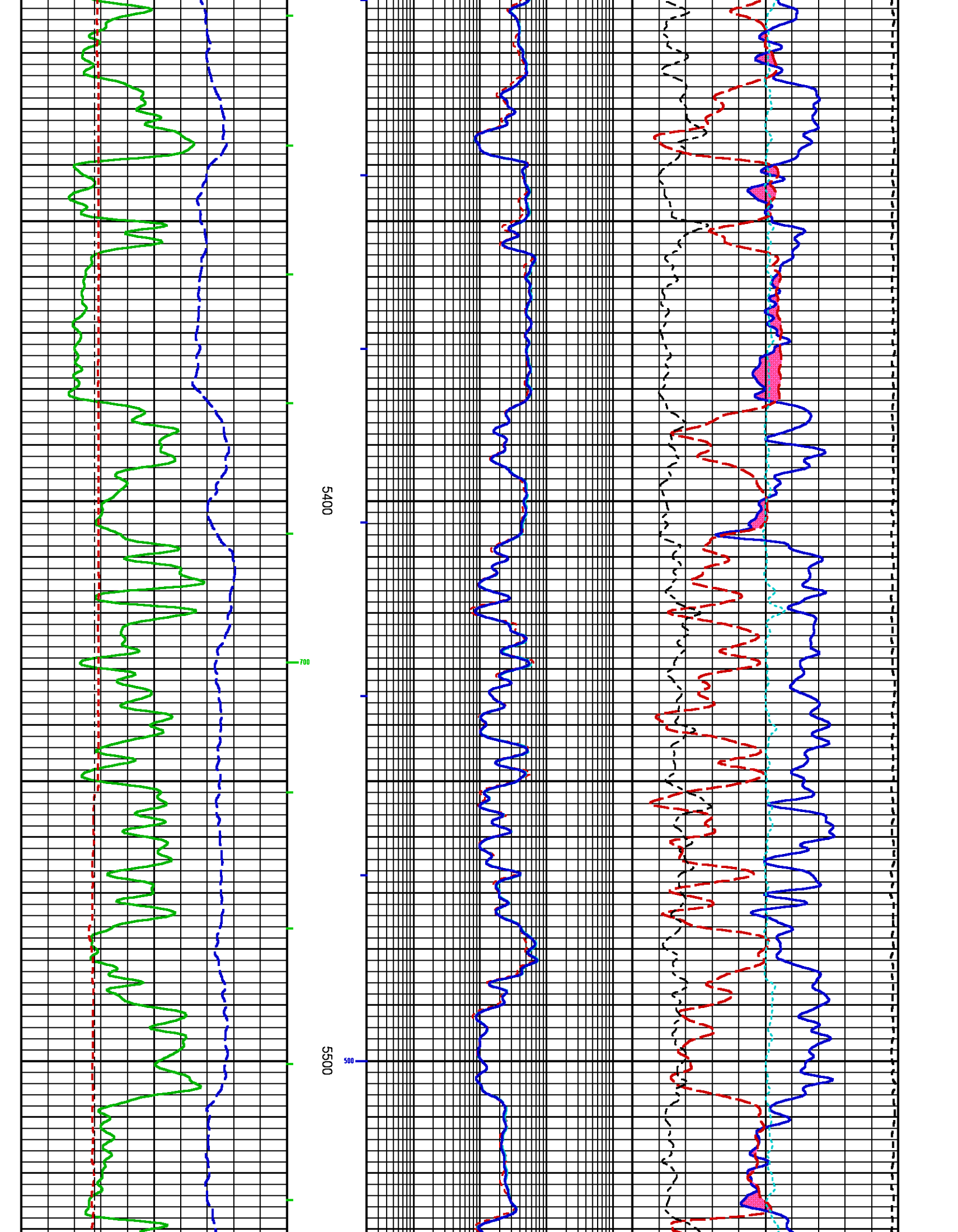
5100
5200
5300
800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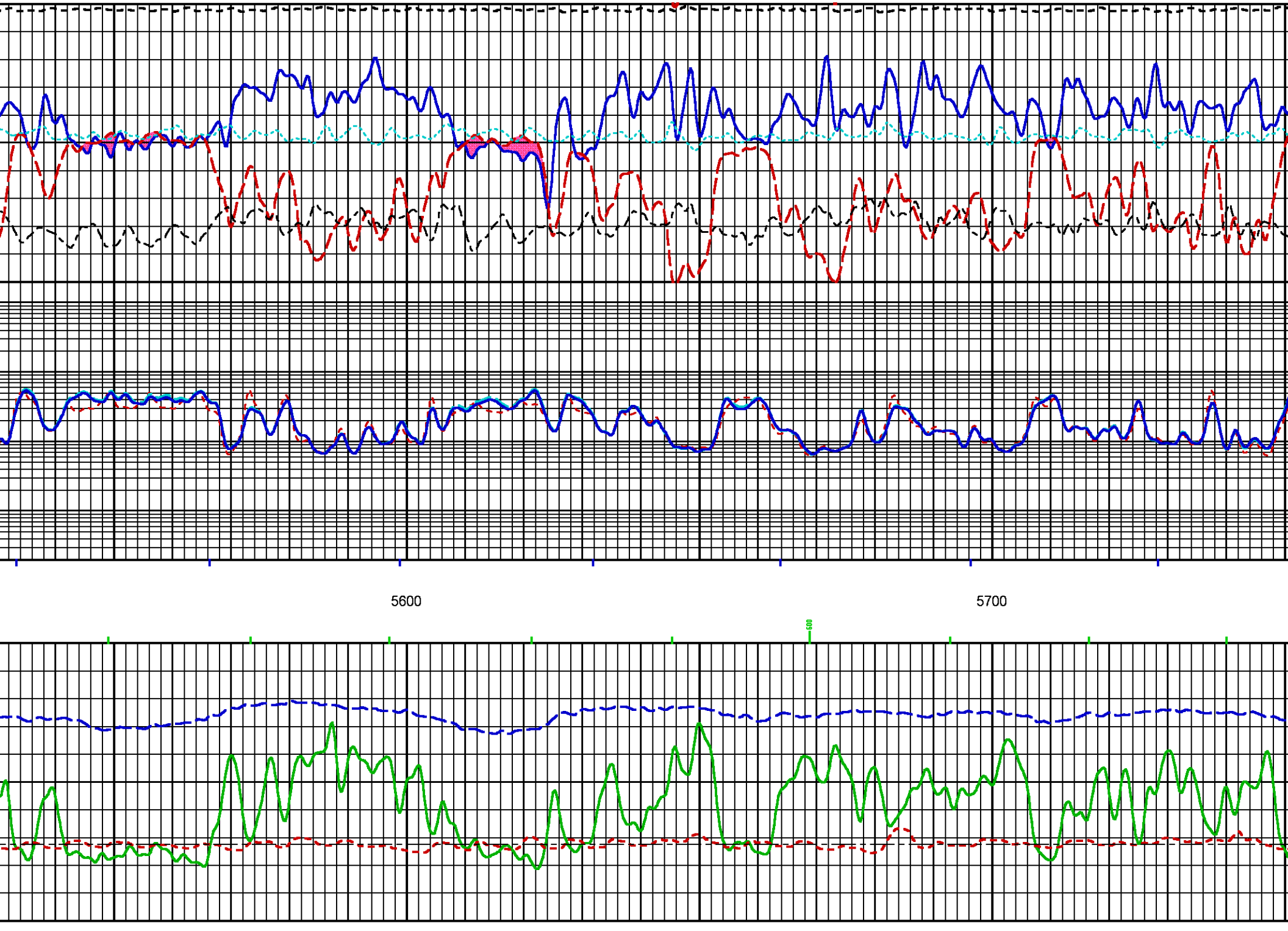
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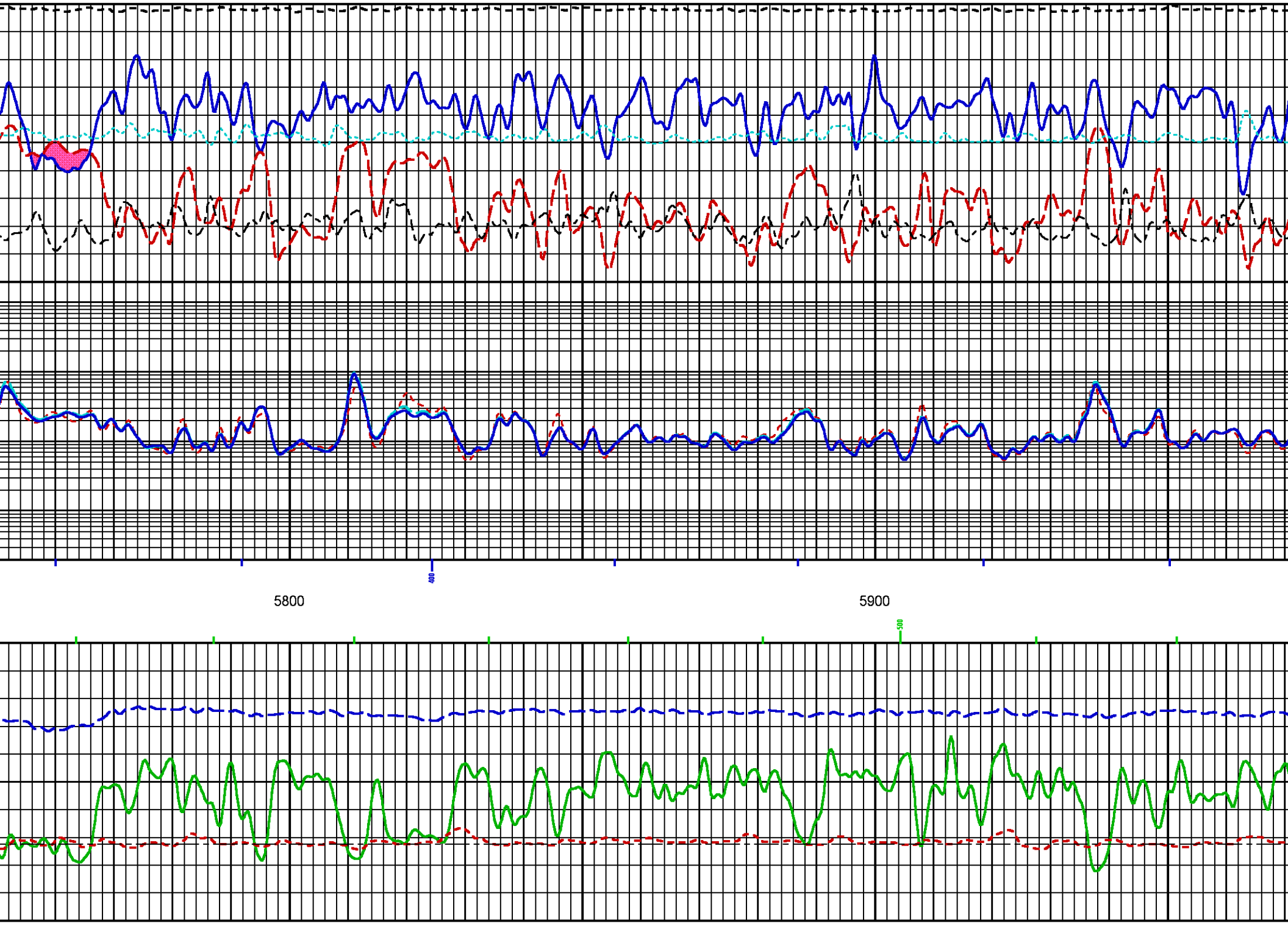
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5800
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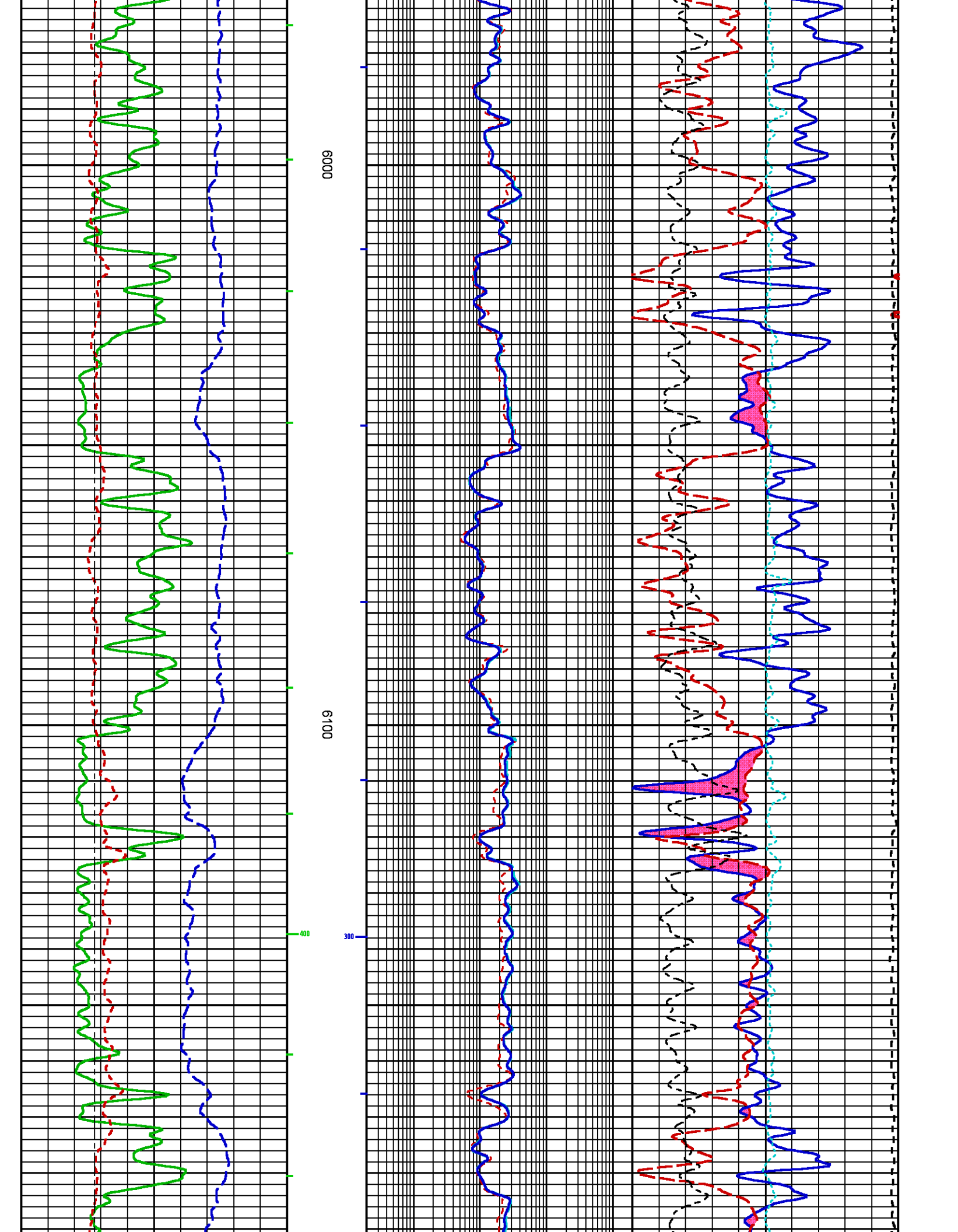
500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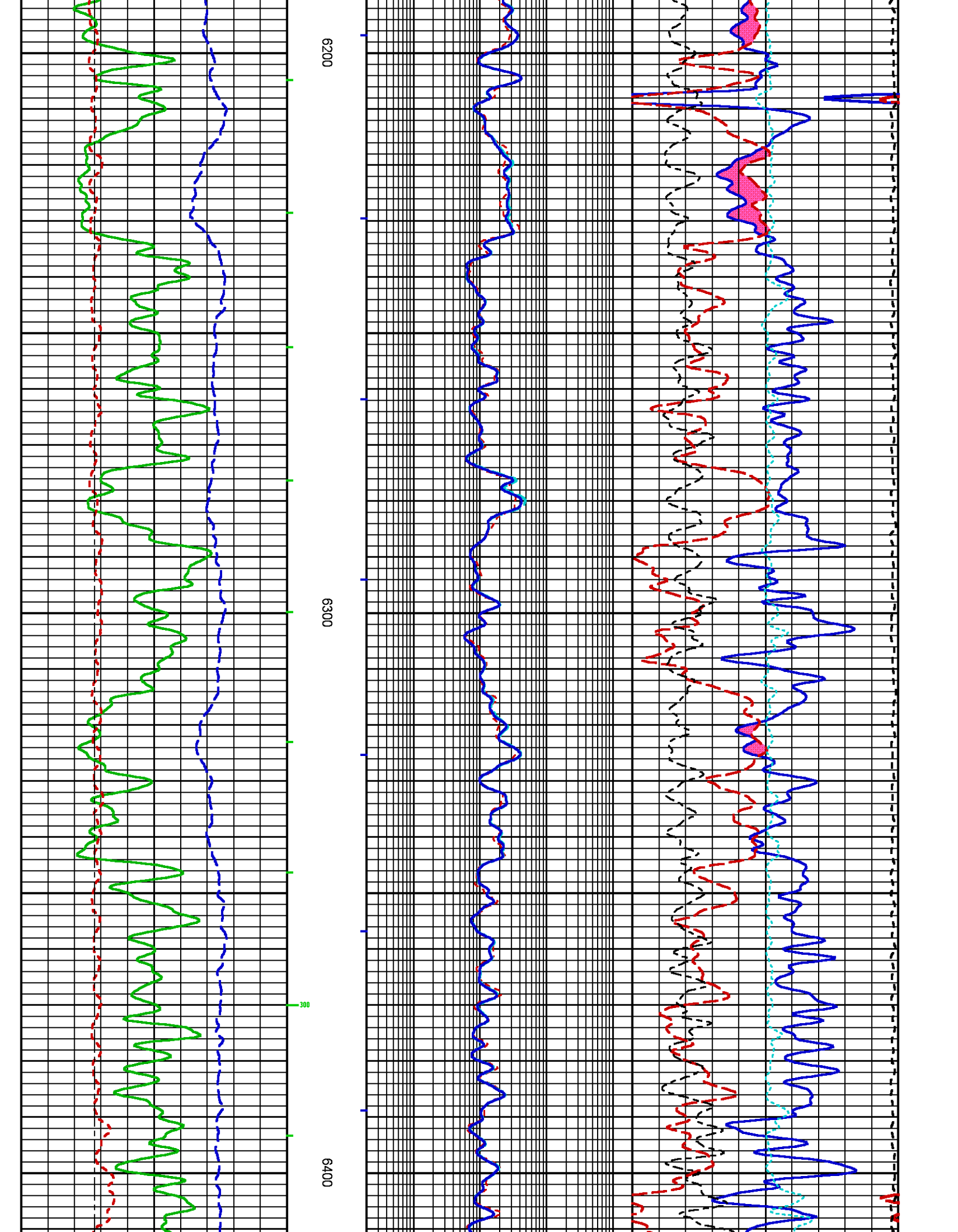
6100
400
300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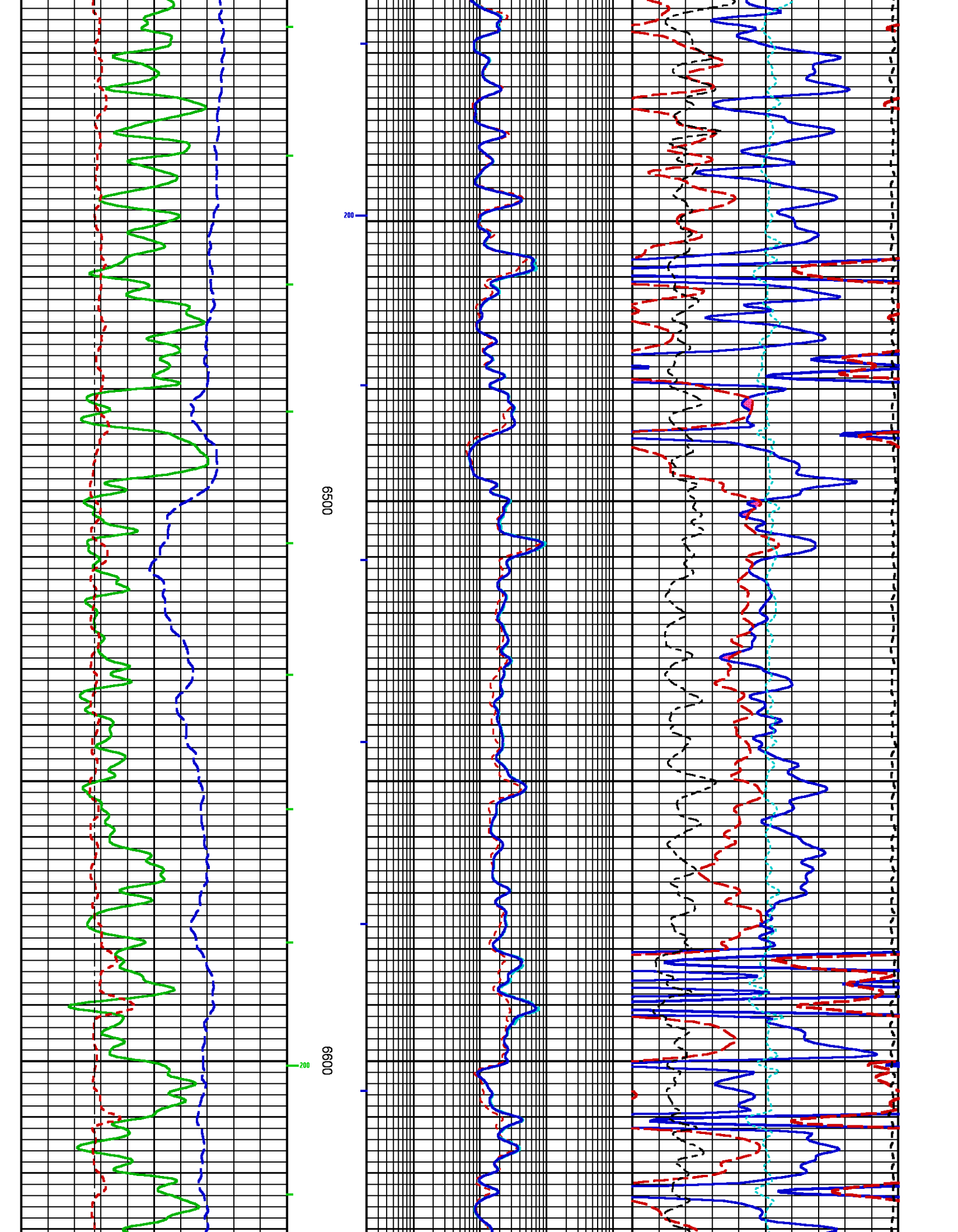
300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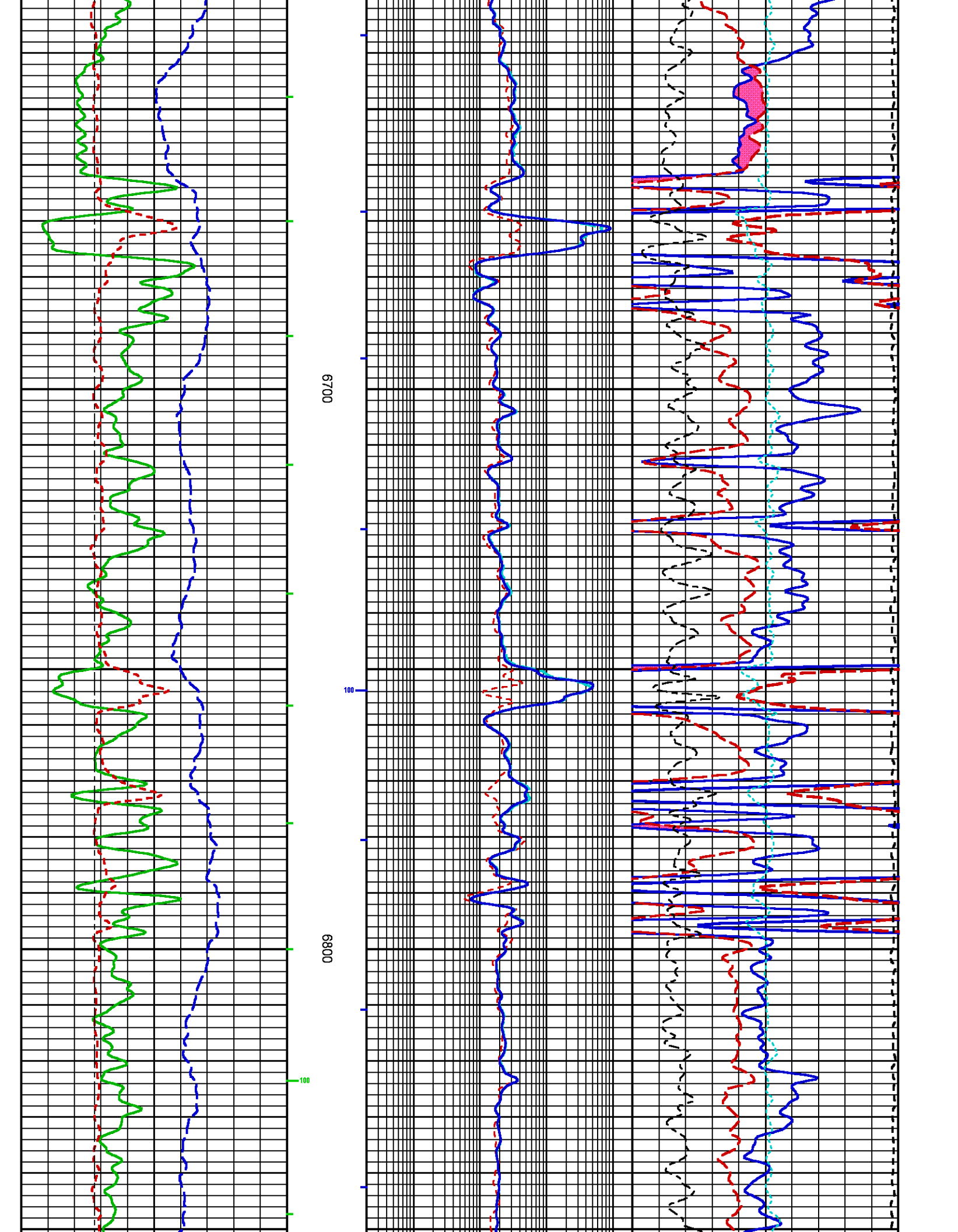
6500
200
6600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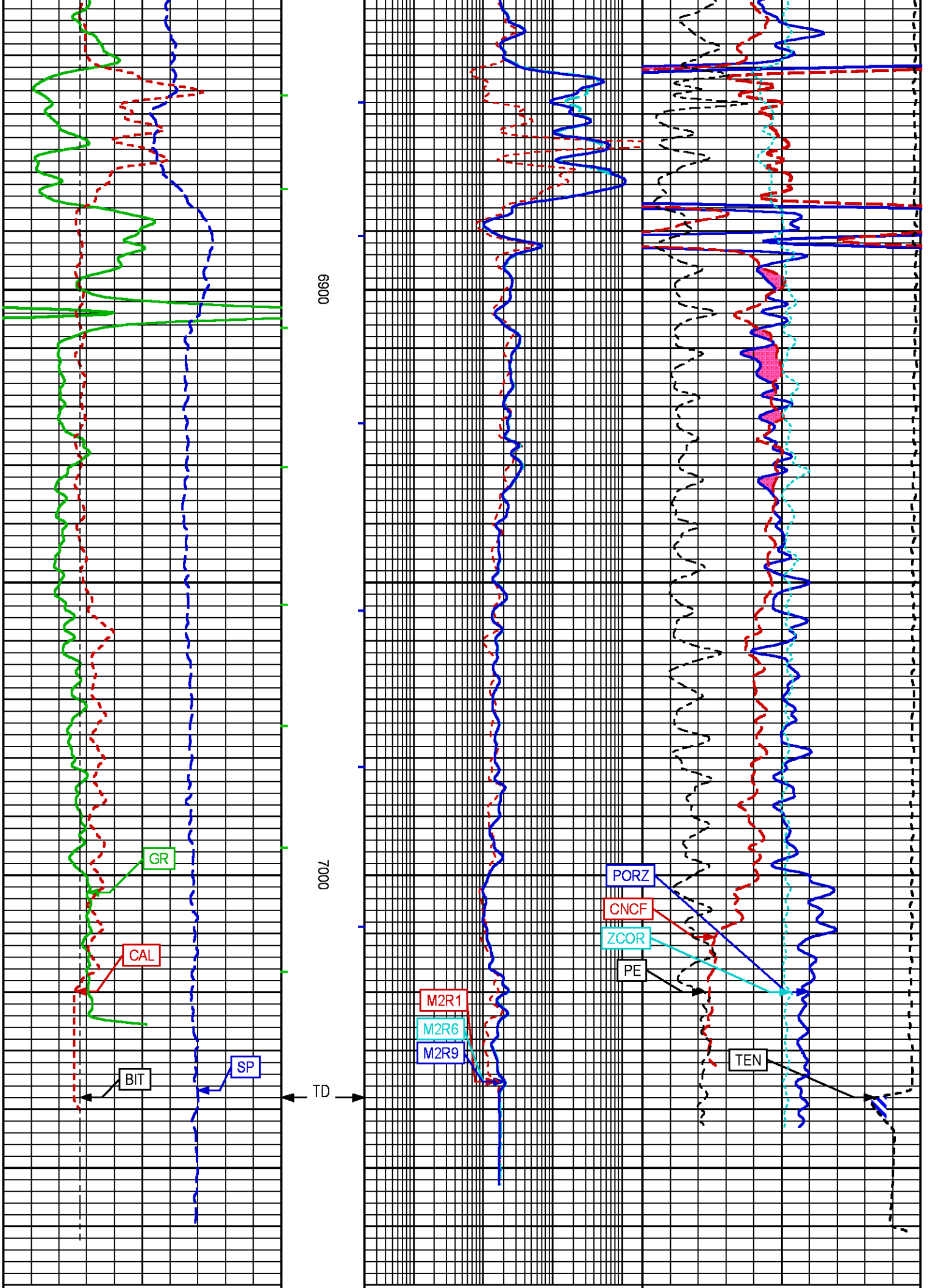
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7000
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CAL
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SP
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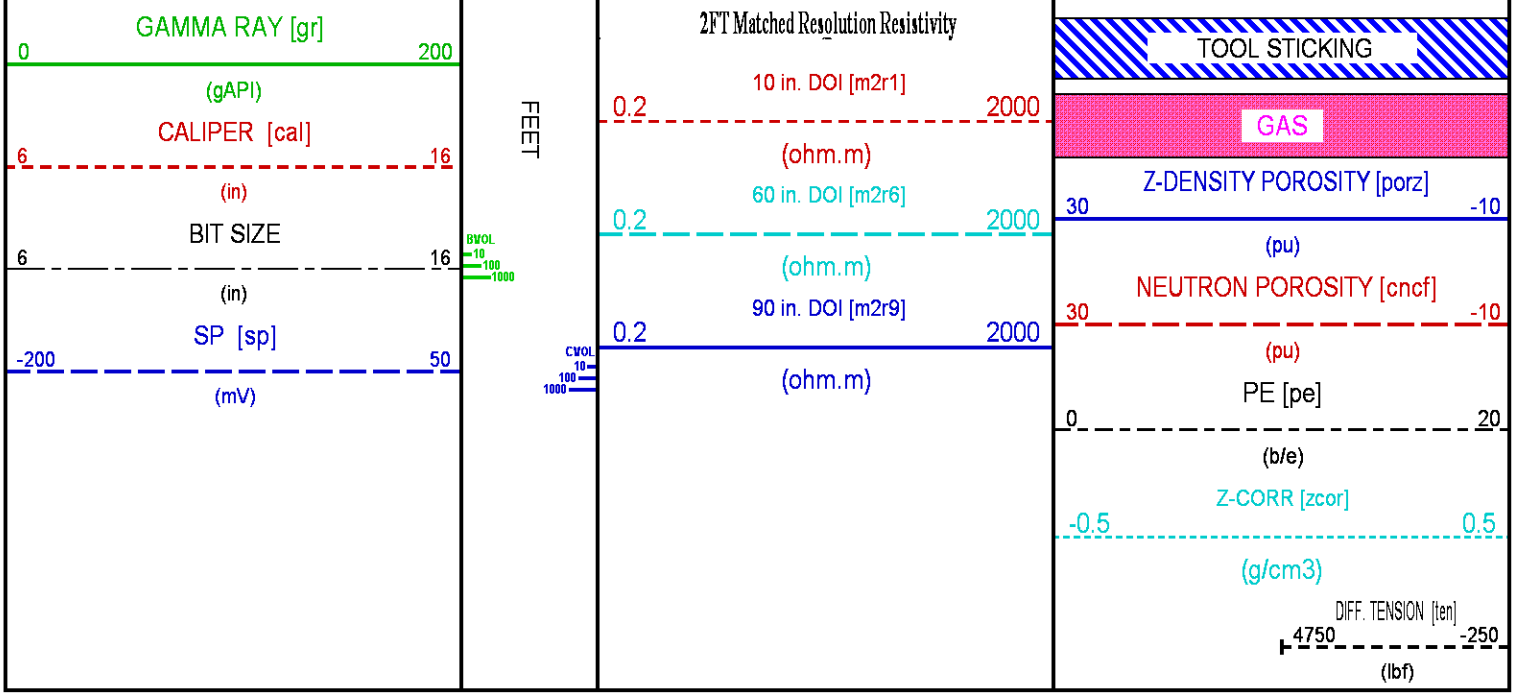
M2R1
M2R6
M2R9
PORZ
CNCF
ZCOR
PE
TEN



REPEAT LOG 5"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 5

Plotted: Sun Dec 21 12:17:19 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/93329J/n970aR01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 1377.381 ft BOTTOM DEPTH: 1693.152 ft

SYMMETRIC FILTER

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

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	8.750	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	8.750	in	"	"
	FIXED DIAMETER (mbh*)	8.750	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	64.8	degF	"	"

	MUD SAMPLE RES	0.885	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	64.8	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

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

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	SANDSTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	1000	ppm	"	"
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

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

HDIL PROCESSING

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

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Dec 21 11:52:12 2014	BIT SIZE
F1:BVOL	Dec 21 11:52:12 2014	BOREHOLE VOLUME
F1:CAL	Dec 21 11:52:12 2014	CALIPER
F1:CNCF	Dec 21 11:52:12 2014	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Dec 21 11:52:12 2014	CEMENT VOLUME
F1:GR	Dec 21 11:52:12 2014	GAMMA RAY
F1:M2R1	Dec 21 11:52:12 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	Dec 21 11:52:12 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Dec 21 11:52:12 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Dec 21 11:52:12 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Dec 21 11:52:12 2014	POROSITY FOR SELECTABLE MATRIX
F1:SP	Dec 21 11:52:12 2014	SPONTANEOUS POTENTIAL
F1:TEN	Dec 21 11:52:12 2014	DIFFERENTIAL TENSION
F1:ZCOR	Dec 21 11:52:12 2014	DENSITY CORRECTION

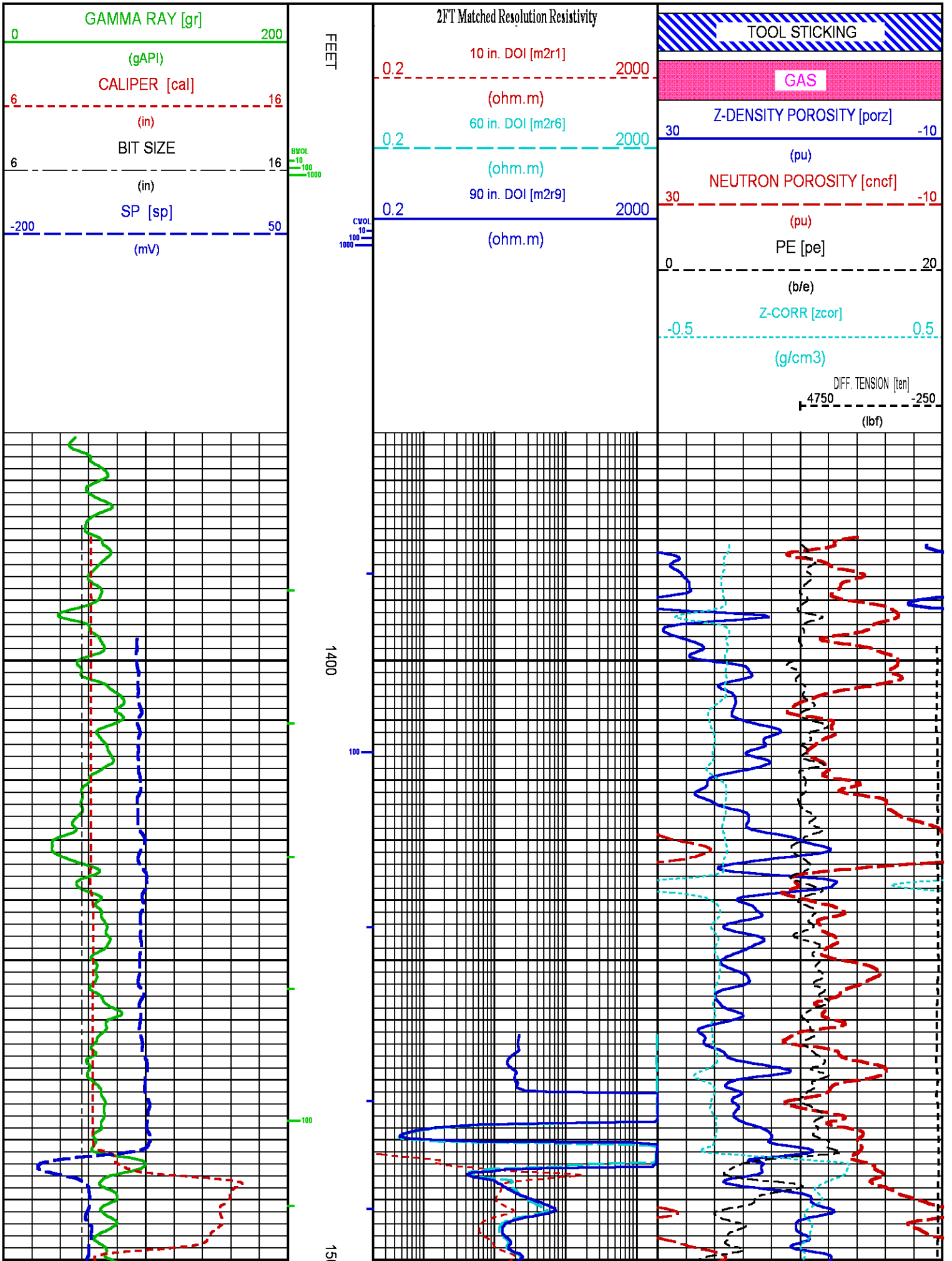
CURVE MEASURE POINT OFFSET

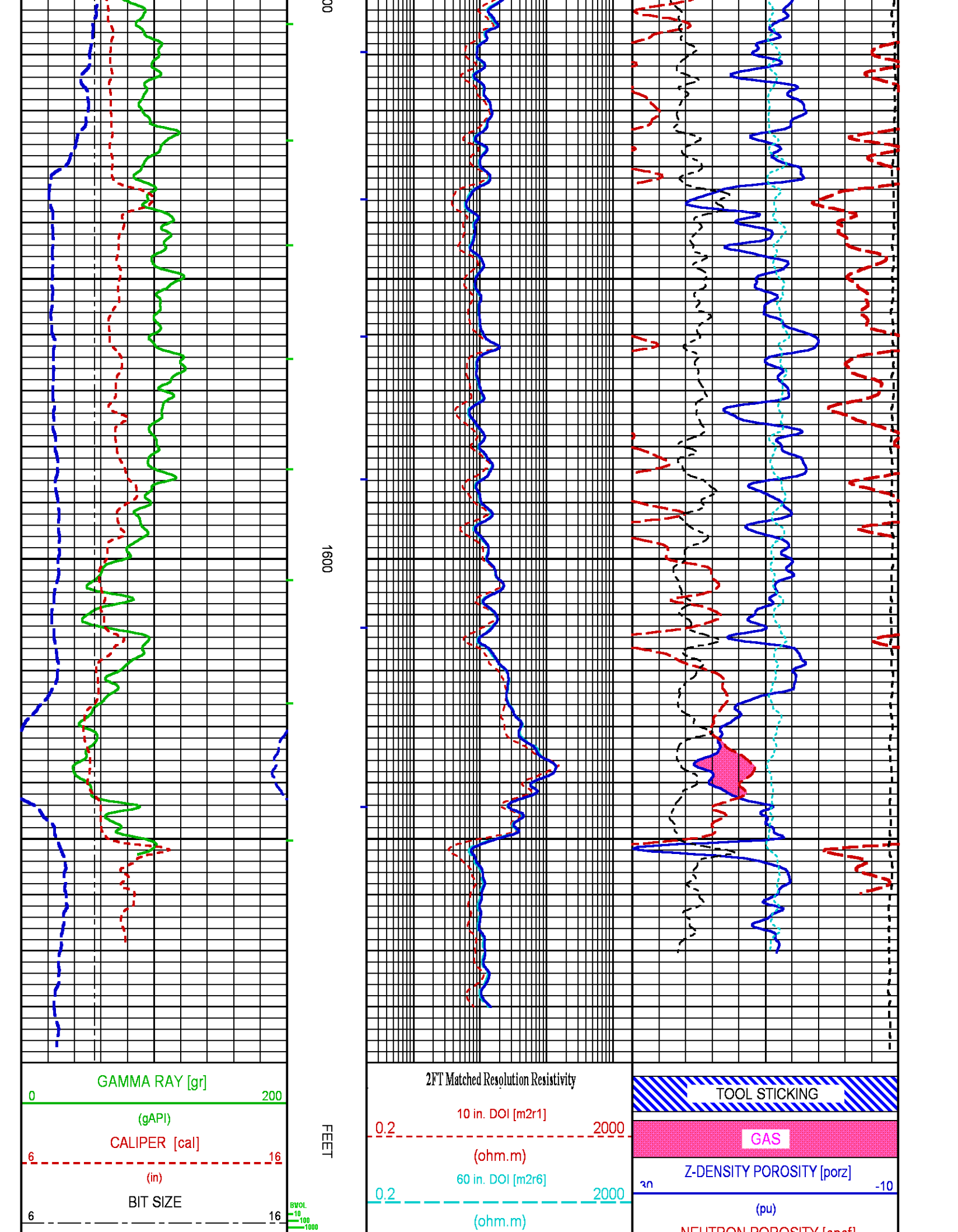
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	35.00	M2R9	2.75	SP	1.25
CAL	18.12	M2R1	2.75	PE	18.00	TEN	0.00
CNCF	27.38	M2R6	2.75	PORZ	18.00	ZCOR	18.00

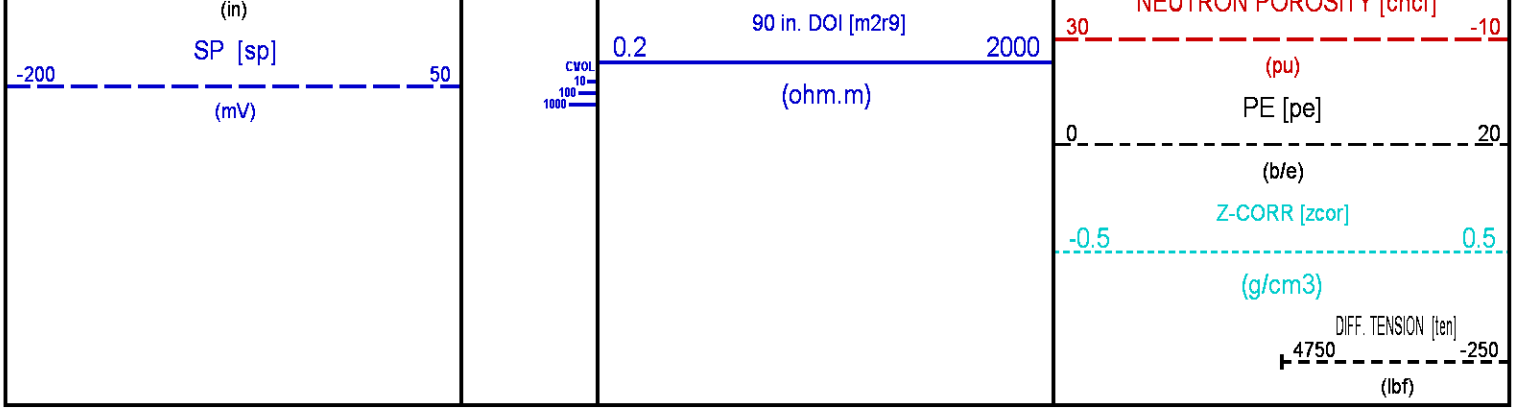
Presentation : cas6685:/dat1a/93329J/WPX_REPEAT_R.fvpdf [5"/100' Scale]
Plot Interval : 1362.75 - 1694.25 Feet

Data File 1 : F1 : cas6685:/dat1a/93329J/n970aR01_REPEAT.xtf
Created On : Dec 21 11:52:12 2014
Company : WPX ENERGY INC
Well : WPX GM 433-28
Field : GRAND VALLEY

Field : GRAND VALLEY
File Interval : 0 - 1695.5 Feet
OCT : n970a




GAMMA RAY [gr]
0
200
(gAPI)
CALIPER [cal]
6
16
(in)
BIT SIZE
6
16
BVOL
10
100
1000
1600
FEET
2FT Matched Resolution Resistivity
10 in. DOI [m2r1]
0.2
2000
(ohm.m)
60 in. DOI [m2r6]
0.2
2000
(ohm.m)
TOOL STICKING
GAS
Z-DENSITY POROSITY [porz]
30
-10
(pu)
NEUTRON POROSITY [apcf]



CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/93329J/n970a.tp1

TTMA PRIMARY CALIBRATION SUMMARY

TOOL #: 3980XA 10120299 DATE/TIME PERFORMED: Wed Jul 31 10:29:42 2013

UNIT #: 3880TA HL6670 ACCEL #: 3980XA 10120299 ACCEL CAL DATE: 14:43 05/21/2004

	GAIN	OFFSET (ohm.m)
Rm K Factors	0.14570	-0.01679

	Sig Low (ohm)	Sig High (ohm)	Mult Factor	Add Factor	Engr Low (ohm)	Engr High (ohm)
Rm Measurements	0.25	9.97	1.003059	0.000362	0.25	10.00
	0.20 0.30	8.00 12.00				

TTMA BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10120299 DATE/TIME PERFORMED: Sun Dec 21 06:05:36 2014 DAYS SINCE CAL: 507

UNIT #: 3885TC 6685

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	18810	497.82	9.97	997.99
	18030 19630	491.36 505.76	8.00 12.00	980.00 1020.00
ZERO	-23331	-436.02	0.249	997.609
	-24131 -22531	-443.20 -428.80	0.200 0.300	980.000 1020.000

TTMA AFTER LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10120299 DATE/TIME PERFORMED: Sun Dec 21 09:00:56 2014 DAYS SINCE CAL: 507

UNIT #: 3885TC 6685

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	18837	500.00	9.95	997.51
	18030 19630	491.36 505.76	8.00 12.00	980.00 1020.00
ZERO	-23331	-436.02	0.249	997.306
	-24131 -22531	-443.20 -428.80	0.200 0.300	980.000 1020.000

GR PRIMARY CALIBRATION SUMMARY

Tool #: 3518EG 10139870 DATE/TIME PERFORMED: Sun Dec 21 06:10:41 2014

Unit #: 3885TC 6685 Jig Series: 4702NK VBA-905

Background	Calibrator ON	Jig Value (gAPI)	Mult	Background (gAPI)	Calibrator ON (gAPI)
47.34	826.11	185	0.238	11.25	196.25
			0.230 0.280		

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870 DATE/TIME PERFORMED: Sun Dec 21 06:12:32 2014 DAYS SINCE CAL: 0

UNIT #: 3885TC 6685 Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67	64.72	1361.74
929.00 1027.00	536.00	1237.00 1512.00

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870 DATE/TIME PERFORMED: Sun Dec 21 09:00:37 2014 DAYS SINCE CAL: 0

UNIT #: 3885TC 6685 Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
977.33	128.46	1364.70
929.00 1027.00	536.00	1237.00 1512.00

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2436XA 10137930 DATE/TIME PERFORMED: Thu Sep 25 10:26:17 2014

UNIT #: 3885TC 6685 CALIBRATOR #: 2437XB 112674 SOURCE #: 4718XA N-0897

SSN DT CPS	LSN DT CPS	SSN/LSN	MCF	CNRATIO	CN PU
4635.00	804.17	5.76373	0.99536	5.73700	25.241
			0.95000 1.05000		

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10137930 DATE/TIME PERFORMED: Sun Dec 21 06:05:40 2014 DAYS SINCE CAL: 86

UNIT #: 3885TC 6685 CALIBRATOR #: INTRNL N/A

SSN DT CPS	LSN DT CPS	SSN/LSN	TEMP (degF)	HV (V)	LV (V)
991.06	993.42	0.99762	41.7	1352.7	4.612
		0.95000 1.05000	280.4	1250.0 1450.0	4.300 5.000

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10137930 DATE/TIME PERFORMED: Sun Dec 21 09:00:41 2014 DAYS SINCE CAL: 86

UNIT #: 3885TC 6685 CALIBRATOR #: INTRNL N/A

SSN DT CPS	LSN DT CPS	SSN/LSN	TEMP (degF)	HV (V)	LV (V)
992.43	994.45	0.99797	120.5	1364.4	4.614
		0.95000 1.05000	280.4	1250.0 1450.0	4.300 5.000

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2223XA 10123024 DATE/TIME PERFORMED: Sun Dec 21 11:42:49 2014

UNIT #: 3885TC 6685

	SIZE (in)	VALUE	MULTIPLIER	ADD
SMALL RING (Arm)	7.000	1428.0		
LARGE RING (Arm)	11.000	2684.0	0.00318	2.45223
PAD CLOSED		1208.4	0.00250	-3.02100

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2223XA 10123024 DATE/TIME PERFORMED: Thu Dec 11 12:09:19 2014

UNIT: 3885TC 6685 CALB BLKS: 2225XA 094292F CS SRC: 4705XA PP16068B PAD TYPE: PADTYP 7.5" PAD

SS CS PK (Channel)	LS CS PK (Channel)	SS_BKGD (cps)	LS BKGD (cps)
224.4 (220.0 – 230.0)	224.8 (220.0 – 230.0)	1351.8	1353.5

	SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)
MG (LO PE)	31717.3	11678.7	0.727 (0.720 – 0.890)	1.679	0.000	1.900
AL	19822.1	1306.7		2.667	-0.016	
AL + SHIM	26389.2	2259.7		2.558	0.098	
MG + SHIM (HI PE)	15499.5	5549.8	0.288 (0.280 – 0.360)			8.550
RATIO AL + SHIM/AL	1.33 (1.30 – 1.40)	1.73 (1.60 – 1.80)				
RATIO MG/AL	1.60 (1.58 – 1.70)	8.94 (8.55 – 9.55)				

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10123024 DATE/TIME PERFORMED: Sun Dec 21 06:13:52 2014 DAYS SINCE CAL: 9

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1 (3332.1 – 3352.1)	224.8 (220.0 – 230.0)	1399.2 (1250.0 – 1550.0)
SS	22355.0 (22344.8 – 22364.8)	224.1 (220.0 – 230.0)	1323.6 (1250.0 – 1550.0)

LV (V)	PAD CURRENT (mA)
5.0 (4.8 – 5.2)	100.8 (50.0 – 120.0)

ZDL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10123024 DATE/TIME PERFORMED: Sun Dec 21 09:00:33 2014 DAYS SINCE CAL: 9

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1 (3332.1 – 3352.1)	224.8 (220.0 – 230.0)	1439.9 (1250.0 – 1550.0)

SS	22355.0 22344.8 22364.8	224.1 220.0 230.0	1317.9 1250.0 1550.0

LV (V)	PAD CURRENT (mA)
4.9 4.8 5.2	102.4 50.0 120.0

HDIL PRIMARY CALIBRATION SUMMARY

TOOL #: 1530XA 10118612

DATE/TIME PERFORMED: Thu Nov 13 11:27:23 2014

UNIT #: 3885TC 6685

GRCOND ID & DATE: 86 101801

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-0.0013 -0.2000 0.2000	0.0002 -0.1000 0.1000	0.0004 -0.1000 0.1000	0.0001 -0.1000 0.1000	-0.0004 -0.1000 0.1000	0.0004 -0.1000 0.1000	-0.0001 -0.1000 0.1000	0.0002 -0.1000 0.1000
Coil 0 Q	0.0014 -0.5000 0.5000	0.0004 -0.2000 0.2000	0.0005 -0.1000 0.1000	-0.0002 -0.1000 0.1000	-0.0003 -0.1000 0.1000	-0.0002 -0.1000 0.1000	0.0004 -0.1000 0.1000	0.0001 -0.1000 0.1000
Coil 1 R	0.0056 -0.2000 0.2000	0.0011 -0.1000 0.1000	-0.0005 -0.1000 0.1000	0.0003 -0.1000 0.1000	-0.0007 -0.1000 0.1000	0.0001 -0.1000 0.1000	-0.0015 -0.1000 0.1000	0.0030 -0.1000 0.1000
Coil 1 Q	0.0023 -0.5000 0.5000	-0.0026 -0.2000 0.2000	0.0007 -0.1000 0.1000	-0.0001 -0.1000 0.1000	-0.0011 -0.1000 0.1000	0.0002 -0.1000 0.1000	-0.0002 -0.1000 0.1000	0.0012 -0.1000 0.1000
Coil 2 R	0.0063 -0.2000 0.2000	-0.0033 -0.1000 0.1000	0.0024 -0.1000 0.1000	-0.0022 -0.1000 0.1000	0.0012 -0.1000 0.1000	0.0005 -0.1000 0.1000	-0.0001 -0.1000 0.1000	-0.0031 -0.1000 0.1000
Coil 2 Q	0.0001 -0.5000 0.5000	0.0033 -0.2000 0.2000	0.0011 -0.1000 0.1000	0.0008 -0.1000 0.1000	-0.0003 -0.1000 0.1000	0.0023 -0.1000 0.1000	-0.0000 -0.1000 0.1000	-0.0013 -0.1000 0.1000
Coil 3 R	0.0198 -0.3000 0.3000	0.0001 -0.1000 0.1000	0.0002 -0.1000 0.1000	0.0003 -0.1000 0.1000	0.0016 -0.1000 0.1000	0.0004 -0.1000 0.1000	0.0018 -0.1000 0.1000	0.0012 -0.1000 0.1000
Coil 3 Q	0.0043 -0.5000 0.5000	-0.0042 -0.2000 0.2000	-0.0046 -0.1000 0.1000	-0.0012 -0.1000 0.1000	-0.0021 -0.1000 0.1000	-0.0025 -0.1000 0.1000	0.0015 -0.1000 0.1000	0.0008 -0.1000 0.1000
Coil 4 R	0.0695 -0.5000 0.5000	-0.0020 -0.2000 0.2000	-0.0046 -0.2000 0.2000	0.0073 -0.2000 0.2000	0.0013 -0.2000 0.2000	0.0001 -0.2000 0.2000	-0.0007 -0.2000 0.2000	-0.0006 -0.2000 0.2000
Coil 4 Q	0.0079 -1.0000 1.0000	-0.0151 -0.4000 0.4000	0.0055 -0.2000 0.2000	0.0001 -0.2000 0.2000	-0.0050 -0.2000 0.2000	0.0005 -0.2000 0.2000	-0.0027 -0.2000 0.2000	-0.0020 -0.2000 0.2000
Coil 5 R	0.1371 -1.2000 1.2000	-0.0130 -0.4000 0.4000	-0.0208 -0.4000 0.4000	0.0039 -0.4000 0.4000	0.0009 -0.4000 0.4000	0.0073 -0.4000 0.4000	0.0111 -0.4000 0.4000	0.0065 -0.4000 0.4000
Coil 5 Q	0.0671 -1.5000 1.5000	-0.0297 -0.8000 0.8000	0.0011 -0.4000 0.4000	-0.0003 -0.4000 0.4000	-0.0049 -0.4000 0.4000	0.0028 -0.4000 0.4000	0.0009 -0.4000 0.4000	-0.0174 -0.4000 0.4000

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	161.66 136.00 186.00	160.27 134.00 184.00	157.39 131.00 181.00	153.10 126.00 176.00	147.45 122.00 170.00	140.43 118.00 161.00	132.23 112.00 150.00	122.85 105.00 139.00
Coil 0 P	7.658 6.000 9.000	25.280 21.000 30.000	42.458 35.000 50.000	59.597 49.000 71.000	76.731 63.000 91.000	93.874 77.000 109.000	111.025 92.000 130.000	128.123 106.000 151.000
Coil 1 M	281.20 238.00 328.00	278.93 235.00 325.00	274.21 230.00 320.00	267.16 225.00 312.00	257.82 218.00 302.00	246.25 208.00 288.00	232.56 196.00 266.00	216.79 184.00 244.00
Coil 1 P	7.531 6.000 9.000	25.002 21.000 30.000	42.015 35.000 51.000	58.991 49.000 71.000	75.982 63.000 92.000	93.004 78.000 112.000	110.067 93.000 130.000	127.121 107.000 151.000
Coil 2 M	569.81 479.00 659.00	565.09 474.00 654.00	555.37 463.00 643.00	540.73 450.00 622.00	521.32 432.00 602.00	497.29 412.00 572.00	468.62 390.00 540.00	436.05 359.00 499.00

Coil 2 P	7.741 6.000 9.000	25.479 21.000 31.000	42.798 35.000 51.000	60.077 49.000 71.000	77.385 63.000 92.000	94.734 76.000 115.000	112.084 92.000 135.000	129.437 105.000 155.000
Coil 3 M	921.28 772.00 1060.00	913.04 764.00 1050.00	896.11 752.00 1030.00	871.04 728.00 1010.00	837.87 700.00 970.00	797.33 665.00 925.00	750.17 628.00 868.00	695.49 589.00 799.00
Coil 3 P	7.852 6.000 10.000	25.802 21.000 30.000	43.317 35.000 51.000	60.785 49.000 72.000	78.237 63.000 93.000	95.667 76.000 114.000	113.138 90.000 135.000	130.542 104.000 156.000
Coil 4 M	1445.5 1210.0 1700.0	1432.4 1205.0 1690.0	1405.4 1180.0 1650.0	1365.4 1140.0 1590.0	1312.6 1120.0 1530.0	1248.1 1070.0 1450.0	1172.7 1000.0 1350.0	1087.7 942.0 1240.0
Coil 4 P	7.814 6.000 10.000	25.736 21.000 31.000	43.218 35.000 52.000	60.650 49.000 73.000	78.083 63.000 93.000	95.498 77.000 114.000	112.906 91.000 135.000	130.239 105.000 156.000
Coil 5 M	2943.5 2450.0 3450.0	2922.6 2420.0 3400.0	2876.8 2410.0 3320.0	2808.0 2350.0 3200.0	2715.4 2280.0 3080.0	2600.3 2150.0 2950.0	2462.3 2020.0 2750.0	2304.2 1870.0 2570.0
Coil 5 P	7.539 6.000 10.000	25.019 20.000 31.000	42.085 35.000 52.000	59.130 49.000 73.000	76.228 63.000 94.000	93.396 79.000 113.000	110.623 93.000 134.000	127.927 106.000 156.000

AM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-1062 -3200 940	-606 -1400 -20	-486 -930 -150	-424 -760 -160	-382 -660 -130	-350 -600 -120	-325 -550 -110	-305 -520 -92
Coil 0 Q	499 -15000 11000	-134 -5800 3800	-199 -3700 2100	-228 -2700 1400	-249 -2200 1000	-265 -1800 790	-279 -1600 620	-290 -1500 490
Coil 1 R	-164 -750 460	-159 -360 83	-144 -280 9	-133 -230 -10	-123 -200 -26	-115 -180 -35	-108 -160 -46	-103 -150 -49
Coil 1 Q	428 -3300 3300	91 -1100 960	29 -630 530	0 -470 360	-17 -380 260	-27 -320 190	-34 -290 150	-39 -260 120
Coil 2 R	4.5 -85.0 76.0	-32.5 -64.0 -0.4	-36.0 -57.0 -12.0	-35.2 -51.0 -16.0	-32.9 -46.0 -17.0	-30.7 -42.0 -16.0	-28.5 -39.0 -15.0	-27.1 -37.0 -13.0
Coil 2 Q	387.6 -1500.0 1900.0	132.2 -500.0 610.0	76.6 -290.0 350.0	51.7 -220.0 260.0	38.5 -160.0 190.0	30.9 -140.0 160.0	26.2 -110.0 130.0	23.8 -99.0 120.0
Coil 3 R	1.4 -23.0 21.0	-8.0 -22.0 1.6	-9.5 -21.0 -1.3	-9.3 -20.0 -1.8	-8.8 -19.0 -2.0	-8.2 -19.0 -1.3	-7.8 -19.0 -0.8	-7.6 -19.0 -0.0
Coil 3 Q	103.8 -540.0 530.0	39.3 -180.0 180.0	26.2 -100.0 110.0	21.9 -71.0 81.0	20.2 -51.0 66.0	20.2 -37.0 58.0	21.2 -28.0 53.0	22.4 -21.0 51.0
Coil 4 R	-3.11 -18.00 13.00	-4.31 -12.00 2.70	-4.49 -11.00 1.50	-4.25 -9.80 0.52	-4.10 -9.90 0.96	-3.87 -10.00 1.50	-3.69 -11.00 2.30	-4.09 -11.00 2.60
Coil 4 Q	7.40 -250.00 280.00	5.87 -79.00 98.00	7.57 -43.00 64.00	9.89 -27.00 51.00	12.34 -18.00 46.00	15.07 -11.00 42.00	18.10 -5.50 42.00	21.21 -1.00 42.00
Coil 5 R	-2.87 -56.00 51.00	-2.73 -8.40 3.60	-2.92 -6.90 1.10	-2.53 -6.90 1.20	-2.48 -9.30 2.90	-2.23 -14.00 6.30	-2.49 -19.00 9.60	-2.94 -24.00 13.00
Coil 5 Q	-5.67 -88.00 69.00	2.18 -26.00 27.00	5.82 -14.00 22.00	9.24 -7.00 22.00	12.53 -2.50 24.00	15.75 1.10 26.00	19.00 4.10 29.00	22.22 7.10 32.00

MM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	0.965 0.850 1.100	0.973 0.860 1.100	0.977 0.870 1.100	0.979 0.880 1.100	0.980 0.880 1.100	0.979 0.880 1.100	0.979 0.880 1.100	0.978 0.880 1.100
Coil 0 P	-0.321 -1.500 1.500	-0.453 -1.500 1.500	-0.343 -1.500 1.500	-0.230 -1.500 1.500	-0.149 -1.500 1.500	-0.101 -1.500 1.500	-0.052 -1.500 1.500	-0.014 -1.500 1.500
Coil 1 M	0.959 0.850 1.100	0.968 0.860 1.100	0.972 0.870 1.100	0.973 0.880 1.100	0.973 0.880 1.100	0.973 0.880 1.100	0.973 0.880 1.100	0.972 0.880 1.100
Coil 1 P	-0.318 -1.500 1.500	-0.468 -1.500 1.500	-0.346 -1.500 1.500	-0.240 -1.500 1.500	-0.145 -1.500 1.500	-0.095 -1.500 1.500	-0.062 -1.500 1.500	-0.038 -1.500 1.500
Coil 2 M	0.989 0.890 1.100	0.989 0.890 1.100	0.989 0.890 1.100	0.988 0.890 1.100	0.988 0.890 1.100	0.987 0.890 1.100	0.985 0.890 1.100	0.984 0.890 1.100
Coil 2 P	0.007 -1.500 1.500	0.052 -1.500 1.500	0.121 -1.500 1.500	0.151 -1.500 1.500	0.188 -1.500 1.500	0.209 -1.500 1.500	0.210 -1.500 1.500	0.192 -1.500 1.500

Coil 3 M	0.997 (0.900 1.100)	0.997 (0.900 1.100)	0.997 (0.900 1.100)	0.996 (0.900 1.100)	0.995 (0.900 1.100)	0.994 (0.900 1.100)	0.993 (0.900 1.100)	0.991 (0.900 1.100)
Coil 3 P	0.024 (-1.500 1.500)	0.092 (-1.500 1.500)	0.158 (-1.500 1.500)	0.222 (-1.500 1.500)	0.266 (-1.500 1.500)	0.270 (-1.500 1.500)	0.346 (-1.500 1.500)	0.375 (-1.500 1.500)
Coil 4 M	1.001 (0.900 1.100)	1.001 (0.900 1.100)	1.001 (0.900 1.100)	1.000 (0.900 1.100)	1.000 (0.900 1.100)	0.999 (0.900 1.100)	0.998 (0.900 1.100)	0.998 (0.900 1.100)
Coil 4 P	0.002 (-1.500 1.500)	0.057 (-1.500 1.500)	0.116 (-1.500 1.500)	0.171 (-1.500 1.500)	0.232 (-1.500 1.500)	0.263 (-1.500 1.500)	0.300 (-1.500 1.500)	0.331 (-1.500 1.500)
Coil 5 M	1.001 (0.900 1.100)	1.000 (0.900 1.100)	1.000 (0.900 1.100)	0.999 (0.900 1.100)	0.998 (0.900 1.100)	0.996 (0.900 1.100)	0.996 (0.900 1.100)	0.994 (0.900 1.100)
Coil 5 P	0.001 (-1.500 1.500)	0.060 (-1.500 1.500)	0.136 (-1.500 1.500)	0.170 (-1.500 1.500)	0.227 (-1.500 1.500)	0.333 (-1.500 1.500)	0.313 (-1.500 1.500)	0.365 (-1.500 1.500)

PARMS	TCID 0	TCID 1	Cal Temp (degF)	T Factor
IDs	2.563	0.840	38.8	1.00

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1530XA 10118612 DATE/TIME PERFORMED: Sun Dec 21 06:06:22 2014 DAYS SINCE CAL: 37

UNIT #: 3885TC 6685

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.000 (-0.200 0.200)	0.000 (-0.100 0.100)	-0.001 (-0.100 0.100)	-0.000 (-0.100 0.100)	-0.000 (-0.100 0.100)	-0.001 (-0.100 0.100)	0.000 (-0.100 0.100)	-0.000 (-0.100 0.100)
Coil 0 Q	0.000 (-0.500 0.500)	0.001 (-0.200 0.200)	-0.000 (-0.100 0.100)	0.000 (-0.100 0.100)	0.000 (-0.100 0.100)	0.000 (-0.100 0.100)	0.000 (-0.100 0.100)	-0.000 (-0.100 0.100)
Coil 1 R	0.004 (-0.200 0.200)	-0.000 (-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)	-0.000 (-0.100 0.100)	0.001 (-0.100 0.100)
Coil 1 Q	0.004 (-0.500 0.500)	-0.001 (-0.200 0.200)	0.001 (-0.100 0.100)	-0.000 (-0.100 0.100)	-0.001 (-0.100 0.100)	0.000 (-0.100 0.100)	-0.001 (-0.100 0.100)	0.001 (-0.100 0.100)
Coil 2 R	0.005 (-0.200 0.200)	0.001 (-0.100 0.100)	0.000 (-0.100 0.100)	-0.001 (-0.100 0.100)	0.002 (-0.100 0.100)	0.001 (-0.100 0.100)	0.001 (-0.100 0.100)	-0.001 (-0.100 0.100)
Coil 2 Q	-0.000 (-0.500 0.500)	0.001 (-0.200 0.200)	-0.000 (-0.100 0.100)	-0.000 (-0.100 0.100)	-0.000 (-0.100 0.100)	-0.003 (-0.100 0.100)	-0.002 (-0.100 0.100)	0.002 (-0.100 0.100)
Coil 3 R	0.019 (-0.300 0.300)	0.001 (-0.100 0.100)	0.000 (-0.100 0.100)	0.002 (-0.100 0.100)	0.002 (-0.100 0.100)	0.001 (-0.100 0.100)	0.001 (-0.100 0.100)	-0.001 (-0.100 0.100)
Coil 3 Q	0.003 (-0.500 0.500)	-0.002 (-0.200 0.200)	0.005 (-0.100 0.100)	-0.001 (-0.100 0.100)	-0.001 (-0.100 0.100)	-0.001 (-0.100 0.100)	-0.002 (-0.100 0.100)	-0.001 (-0.100 0.100)
Coil 4 R	0.065 (-0.500 0.500)	-0.002 (-0.200 0.200)	-0.002 (-0.200 0.200)	0.003 (-0.200 0.200)	-0.002 (-0.200 0.200)	-0.002 (-0.200 0.200)	0.004 (-0.200 0.200)	-0.002 (-0.200 0.200)
Coil 4 Q	0.004 (-1.000 1.000)	-0.009 (-0.400 0.400)	0.005 (-0.200 0.200)	0.001 (-0.200 0.200)	-0.007 (-0.200 0.200)	0.000 (-0.200 0.200)	-0.004 (-0.200 0.200)	-0.001 (-0.200 0.200)
Coil 5 R	0.137 (-1.200 1.200)	-0.004 (-0.400 0.400)	-0.006 (-0.400 0.400)	0.008 (-0.400 0.400)	-0.003 (-0.400 0.400)	0.000 (-0.400 0.400)	-0.004 (-0.400 0.400)	0.006 (-0.400 0.400)
Coil 5 Q	0.067 (-1.500 1.500)	-0.018 (-0.800 0.800)	-0.003 (-0.400 0.400)	-0.011 (-0.400 0.400)	-0.009 (-0.400 0.400)	0.007 (-0.400 0.400)	0.007 (-0.400 0.400)	-0.002 (-0.400 0.400)

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	161.55 (136.00 186.00)	160.12 (134.00 184.00)	157.24 (131.00 181.00)	152.94 (126.00 176.00)	147.25 (122.00 170.00)	140.28 (118.00 161.00)	132.04 (112.00 150.00)	122.62 (105.00 139.00)

Coil 0 P	7.725 -1.000 12.000	25.324 19.000 30.000	42.512 35.000 50.000	59.651 49.000 71.000	76.805 63.000 91.000	93.953 77.000 110.000	111.108 92.000 130.000	128.218 105.000 151.000
Coil 1 M	281.15 237.00 327.00	278.83 235.00 325.00	274.10 230.00 320.00	267.00 225.00 312.00	257.62 218.00 302.00	246.10 208.00 288.00	232.38 196.00 266.00	216.53 184.00 244.00
Coil 1 P	7.614 -1.000 12.000	25.052 19.000 30.000	42.064 35.000 51.000	59.048 49.000 71.000	76.055 63.000 92.000	93.076 77.000 112.000	110.142 92.000 132.000	127.206 105.000 153.000
Coil 2 M	569.27 479.00 659.00	564.40 474.00 654.00	554.72 463.00 643.00	539.85 450.00 622.00	520.42 432.00 602.00	496.55 412.00 572.00	468.10 390.00 540.00	435.19 359.00 499.00
Coil 2 P	7.796 -1.000 12.000	25.518 19.000 31.000	42.837 35.000 51.000	60.127 49.000 71.000	77.443 63.000 92.000	94.773 77.000 114.000	112.160 92.000 135.000	129.513 105.000 156.000
Coil 3 M	921.30 772.00 1060.00	913.05 764.00 1050.00	895.97 752.00 1030.00	871.19 728.00 1010.00	838.00 700.00 970.00	797.24 665.00 925.00	749.29 628.00 868.00	695.01 589.00 799.00
Coil 3 P	7.909 -2.000 13.000	25.840 19.000 31.000	43.363 35.000 52.000	60.837 49.000 72.000	78.309 63.000 93.000	95.754 77.000 114.000	113.198 92.000 135.000	130.591 105.000 156.000
Coil 4 M	1446.6 1210.0 1700.0	1433.4 1205.0 1690.0	1406.2 1180.0 1650.0	1366.2 1140.0 1590.0	1313.5 1120.0 1530.0	1248.4 1070.0 1450.0	1172.5 1000.0 1350.0	1087.6 942.0 1240.0
Coil 4 P	7.877 -2.000 13.000	25.772 19.000 31.000	43.260 35.000 52.000	60.691 49.000 73.000	78.137 63.000 93.000	95.553 78.000 114.000	112.966 92.000 135.000	130.268 105.000 156.000
Coil 5 M	2942.1 2450.0 3450.0	2920.1 2420.0 3400.0	2874.6 2410.0 3320.0	2805.5 2350.0 3200.0	2712.9 2280.0 3080.0	2597.3 2150.0 2950.0	2459.2 2020.0 2750.0	2301.2 1870.0 2570.0
Coil 5 P	7.618 -2.000 13.000	25.065 19.000 31.000	42.132 35.000 52.000	59.185 49.000 73.000	76.300 63.000 94.000	93.461 79.000 114.000	110.707 93.000 135.000	127.970 106.000 156.000

HDIL AFTER LOG VERIFICATION SUMMARY

TOOL #: 1530XA 10118612 DATE/TIME PERFORMED: Sun Dec 21 09:00:50 2014 DAYS SINCE CAL: 37

UNIT #: 3885TC 6685

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.002 -0.080 0.080	0.000 -0.060 0.060	0.000 -0.031 0.029	-0.001 -0.030 0.030	-0.001 -0.030 0.030	0.000 -0.031 0.029	-0.000 -0.030 0.030	0.000 -0.030 0.030
Coil 0 Q	0.001 -0.040 0.040	-0.000 -0.119 0.121	0.000 -0.030 0.030	-0.000 -0.030 0.030	0.000 -0.030 0.030	-0.000 -0.030 0.030	-0.000 -0.030 0.030	0.000 -0.030 0.030
Coil 1 R	0.007 -0.076 0.084	0.001 -0.050 0.050	-0.000 -0.031 0.029	0.002 -0.030 0.030	0.001 -0.030 0.030	0.002 -0.030 0.030	-0.001 -0.030 0.030	0.000 -0.029 0.031
Coil 1 Q	0.006 -0.396 0.404	-0.001 -0.101 0.099	0.001 -0.029 0.031	-0.001 -0.030 0.030	-0.001 -0.031 0.029	-0.001 -0.030 0.030	-0.001 -0.031 0.029	0.001 -0.029 0.031
Coil 2 R	0.002 -0.065 0.075	-0.004 -0.029 0.031	-0.002 -0.030 0.030	0.001 -0.031 0.029	0.002 -0.028 0.032	0.002 -0.029 0.031	0.000 -0.029 0.031	-0.003 -0.031 0.029
Coil 2 Q	-0.001 -0.350 0.350	0.006 -0.099 0.101	-0.002 -0.030 0.030	-0.003 -0.030 0.030	0.000 -0.030 0.030	-0.001 -0.033 0.027	0.000 -0.032 0.028	0.001 -0.028 0.032
Coil 3 R	0.022 -0.021 0.059	-0.007 -0.039 0.041	0.006 -0.040 0.040	0.004 -0.038 0.042	-0.002 -0.038 0.042	-0.002 -0.039 0.041	0.000 -0.039 0.041	0.002 -0.041 0.039
Coil 3 Q	0.005 -0.197 0.203	-0.000 -0.082 0.078	0.002 -0.035 0.045	-0.005 -0.041 0.039	-0.001 -0.041 0.039	-0.002 -0.041 0.039	-0.001 -0.042 0.038	-0.001 -0.041 0.039
Coil 4 R	0.065 0.005 0.125	-0.009 -0.062 0.058	-0.004 -0.062 0.058	0.006 -0.057 0.063	-0.000 -0.062 0.058	0.006 -0.062 0.058	-0.000 -0.056 0.064	-0.001 -0.062 0.058
Coil 4 Q	0.005 -0.296 0.304	-0.017 -0.109 0.091	0.007 -0.055 0.065	-0.005 -0.059 0.061	-0.006 -0.067 0.053	0.002 -0.060 0.060	0.003 -0.064 0.056	-0.004 -0.061 0.059
Coil 5 R	0.153 0.017 0.257	-0.004 -0.124 0.116	0.004 -0.126 0.114	0.021 -0.112 0.128	-0.008 -0.123 0.117	0.007 -0.120 0.120	-0.010 -0.124 0.116	0.012 -0.114 0.126
Coil 5 Q	-0.000 -0.533 0.667	-0.026 -0.268 0.232	-0.002 -0.123 0.117	0.007 -0.131 0.109	-0.018 -0.129 0.111	0.001 -0.113 0.127	-0.006 -0.113 0.127	-0.005 -0.122 0.118

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	160.99 158.32 164.78	159.57 156.92 163.32	156.70 154.10 160.39	152.43 149.89 156.00	146.78 144.30 150.19	139.83 137.48 143.09	131.63 129.40 134.68	122.33 120.16 125.07
Coil 0 P	7.196 4.725 10.725	25.229 22.324 28.324	42.548 39.512 45.512	59.783 56.651 62.651	77.010 73.805 79.805	94.234 90.953 96.953	111.478 108.108 114.108	128.663 125.218 131.218
Coil 1 M	281.15 275.53 286.77	278.82 273.25 284.40	274.06 268.62 279.58	267.02 261.66 272.34	257.64 252.47 262.77	246.14 241.18 251.03	232.46 227.73 237.03	216.68 212.19 220.86
Coil 1 P	7.118 4.614 10.614	24.966 22.052 28.052	42.111 39.064 45.064	59.182 56.048 62.048	76.259 73.055 79.055	93.362 90.076 96.076	110.518 107.142 113.142	127.657 124.206 130.206
Coil 2 M	566.35 557.88 580.65	561.55 553.12 575.69	551.83 543.62 565.81	537.39 529.05 550.64	518.14 510.01 530.83	494.31 486.62 506.48	465.96 458.73 477.46	433.59 426.48 443.89
Coil 2 P	7.222 4.796 10.796	25.396 22.518 28.518	42.848 39.837 45.837	60.231 57.127 63.127	77.630 74.443 80.443	95.043 91.773 97.773	112.509 109.160 115.160	129.963 126.513 132.513
Coil 3 M	920.55 902.88 939.73	912.23 894.79 931.31	895.38 878.05 913.88	870.33 853.77 888.61	837.38 821.24 854.76	796.87 781.29 813.18	749.32 734.30 764.27	695.01 681.11 708.91
Coil 3 P	7.344 4.909 10.909	25.725 22.840 28.840	43.378 40.363 46.363	60.938 57.837 63.837	78.481 75.309 81.309	96.012 92.754 98.754	113.557 110.198 116.198	131.013 127.591 133.591
Coil 4 M	1449.9 1417.7 1475.5	1436.5 1404.7 1462.0	1409.4 1378.0 1434.3	1369.2 1338.8 1393.5	1316.2 1287.2 1339.7	1251.3 1223.4 1273.4	1175.2 1149.1 1196.0	1090.2 1065.9 1109.4
Coil 4 P	7.315 4.877 10.877	25.654 22.772 28.772	43.269 40.260 46.260	60.791 57.691 63.691	78.299 75.137 81.137	95.782 92.553 98.553	113.280 109.966 115.966	130.669 127.268 133.268
Coil 5 M	2929.7 2883.2 3000.9	2907.8 2861.7 2978.5	2862.3 2817.1 2932.1	2793.7 2749.4 2861.7	2701.1 2658.7 2767.2	2586.0 2545.4 2649.2	2448.4 2410.1 2508.4	2291.0 2255.2 2347.2
Coil 5 P	7.109 4.618 10.618	24.969 22.065 28.065	42.162 39.132 45.132	59.305 56.185 62.185	76.484 73.300 79.300	93.703 90.461 96.461	111.036 107.707 113.707	128.353 124.970 130.970

INSTRUMENT CONFIGURATION

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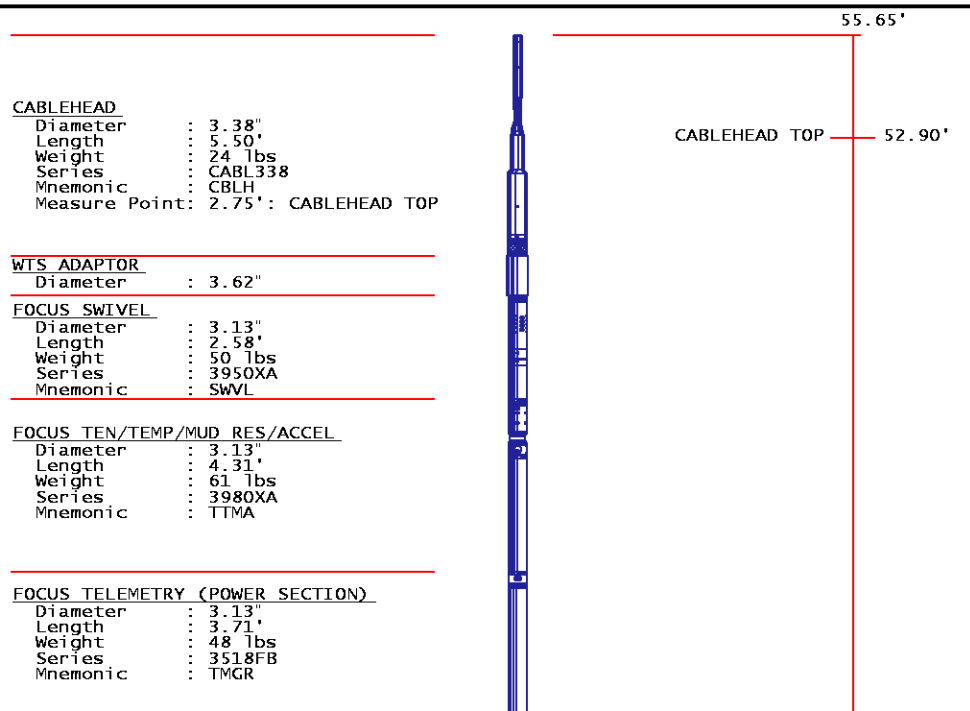


FOCUS EB/EG TELEMETRY GAMMA RAY
Diameter : 3.12"
Length : 5.83'
Weight : 63 lbs
Series : 3518EG
Mnemonic : GR
Measure Point: 4.24': GR MP

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

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

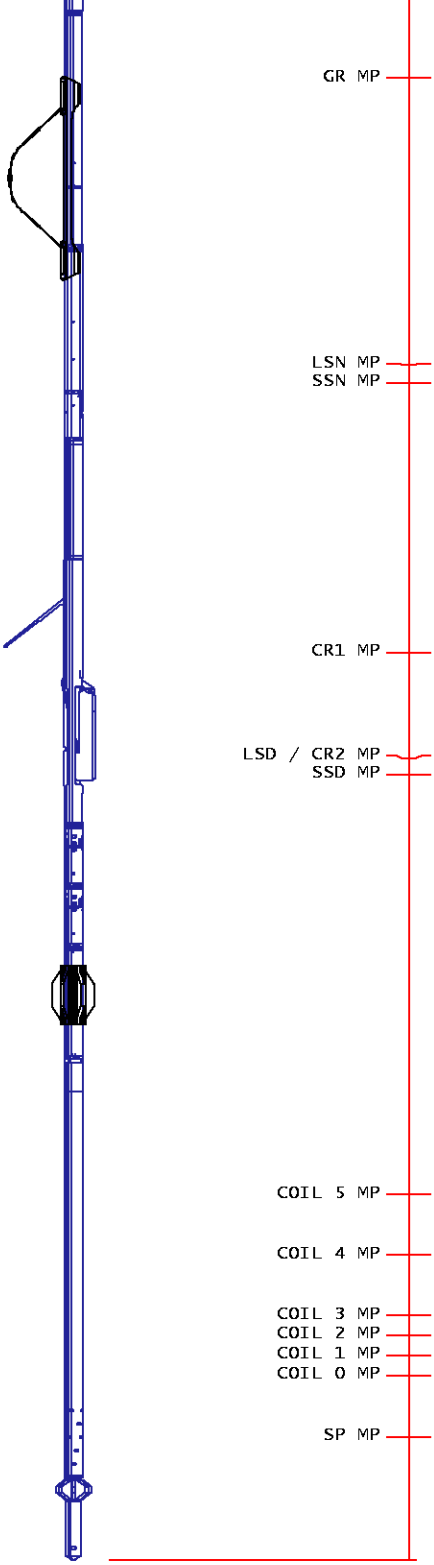
FOCUS KNUCKLE JOINT
Diameter : 3.13"
Length : 1.50'

FOCUS KNUCKLE JOINT
Diameter : 3.13"
Length : 1.50'

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

FOCUS PINEAPPLE / CABBAGE
HOLE FINDER
Diameter : 2.62"
Length : 1.50'

TOTAL LENGTH: 55.65'
TOTAL WEIGHT: 833 lbs
MAX DIAMETER: 0'6.13"



GR MP 36.97'
LSN MP 29.83'
SSN MP 29.38'
CR1 MP 22.67'
LSD / CR2 MP 20.02'
SSD MP 19.63'
COIL 5 MP 9.17'
COIL 4 MP 7.67'
COIL 3 MP 6.17'
COIL 2 MP 5.67'
COIL 1 MP 5.17'
COIL 0 MP 4.67'
SP MP 3.14'
0.00'

BAKER HUGHES
ECLIPS

COMPANY WPX ENERGY INC
WELL WPX GM 433-28
FIELD GRAND VALLEY
COUNTY GARFIELD STATE COLORADO

FILE NO: US093329J
API NO: 05045225080000

LOCATION:
SHL: 1503' FSL 2346' FWL
BHL: 1931' FSL 1615' FEL

SEC 28 TWP 6S RGE 96W

ELEVATIONS:
KB 5500 FT
DF
GL 5476 FT

SEC 28 T6S R96W
PAD: GM 323-28
RIG: H&P 318

DATE 21-Dec-2014