



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

FILE NO: \_\_\_\_\_ COMPANY **TABULA RASA ENERGY**  
OH096970 **WELL CADDELL #3**  
API NO: \_\_\_\_\_ FIELD **OAKDALE**  
05055063190000 COUNTY **HUERFANO** STATE **COLORADO**

Ver. 4.01 LOCATION: SHL: 1334' FSL 1212' FEL  
BHL: 1578' FNL 730' FEL  
OTHER SERVICES  
NONE  
SEC 4 TWP 29S RGE 69W

PERMANENT DATUM GL ELEVATION 7834 FT  
LOG MEASURED FROM KB 11 FT ABOVE P.D.  
DRILL. MEAS. FROM KB ELEVATIONS:  
KB 7845 FT  
DF  
GL 7834 FT

DATE	06-Jul-2015
RUN	1
TRIP	1
SERVICE ORDER	US096970J
DEPTH DRILLER	6460 FT
DEPTH LOGGER	6458 FT
BOTTOM LOGGED INTERVAL	6455 FT
TOP LOGGED INTERVAL	0 FT
CASING DRILLER	9.625 IN @ 628 FT
CASING LOGGER	626 FT
BIT SIZE	7.875 IN
TYPE OF FLUID IN HOLE	OBM
DENSITY	8.25 LB/G
VISCOSITY	70 CP
PH	NA
FLUID LOSS	NA
SOURCE OF SAMPLE	NA
RM AT MEAS. TEMP.	NA @ NA
RMF AT MEAS. TEMP.	NA @ NA
RMC AT MEAS. TEMP.	NA @ NA
SOURCE OF RMF	NA
RMC	NA
RM AT BHT	NA @ NA
TIME SINCE CIRCULATION	12 HOURS
MAX. RECORDED TEMP.	172 DEGF
EQUIP. NO.	6685
LOCATION	GRAND JCT
RECORDED BY	W. QUIGLEY
WITNESSED BY	MR. JOE HOLLADAY

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE THE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT. BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

BOREHOLE RECORD

BIT SIZE	FROM	TO
7.875 IN	0 FT	6460 FT

CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN	36 LB/F	J-55	0 FT	628 FT

REMARKS

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

BVOL CVOL CALCULATED IN CUBIC FT  
CVOL CALCULATED USING PROPOSED 5.5" CASING  
CALIPER VERIFIED INSIDE CASING

RHO MATRIX: 2.65 G/CC  
RHO FLUID: 1.00 G/CC

CN MATRIX: SANDSTONE  
CN RAN DECENTRALIZED

HDIL RAN WITH 1.5" STANDOFF  
ABC TO CALCULATE MUD CONDUCTIVITY

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES

### EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWVL	3950XA	10119949	FREE
1	1	TTMA	3980XA	10120299	FREE
1	1	FOC TEL	3518FB	10137522	FREE
1	1	GR	3518EB	10139870	DECENTRALIZED
1	1	CN	2436XA	10522099	DECENTRALIZED
1	1	ZDL	2223XA	10090664	CALIPER DEVICE
1	1	KNCL	3930XA	10139400	FREE
1	1	HDIL	1530XA	10415933	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: 7

Plotted: Mon Jul 6 23:00:56 2015

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/OH096970/n970m03.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 551.427 ft BOTTOM DEPTH: 6468.724 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)		"	"

#### BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	7.875	in	TOP	BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	OIL BASE MUD		"	"

#### 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

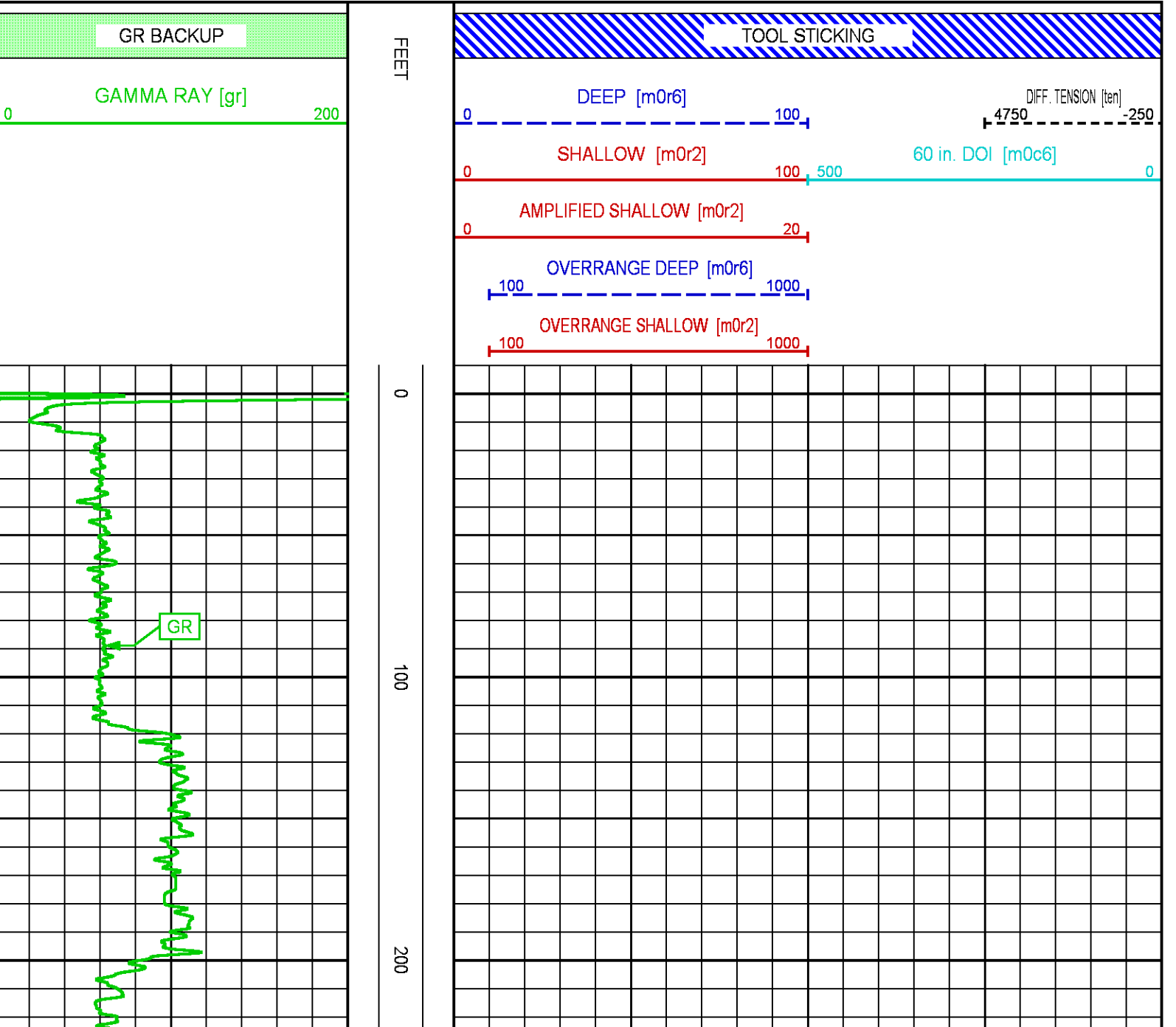
CURVE NAME		CREATION DATE	CURVE DESCRIPTION
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F1:M0C6	Jul 6 20:35:34 2015		FOCUSED CONDUCTIVITY, 60-INCH DOI
F1:M0R2	Jul 6 20:35:34 2015		TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:M0R6	Jul 6 20:35:34 2015		TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:TEN	Jul 6 20:35:34 2015		DIFFERENTIAL TENSION

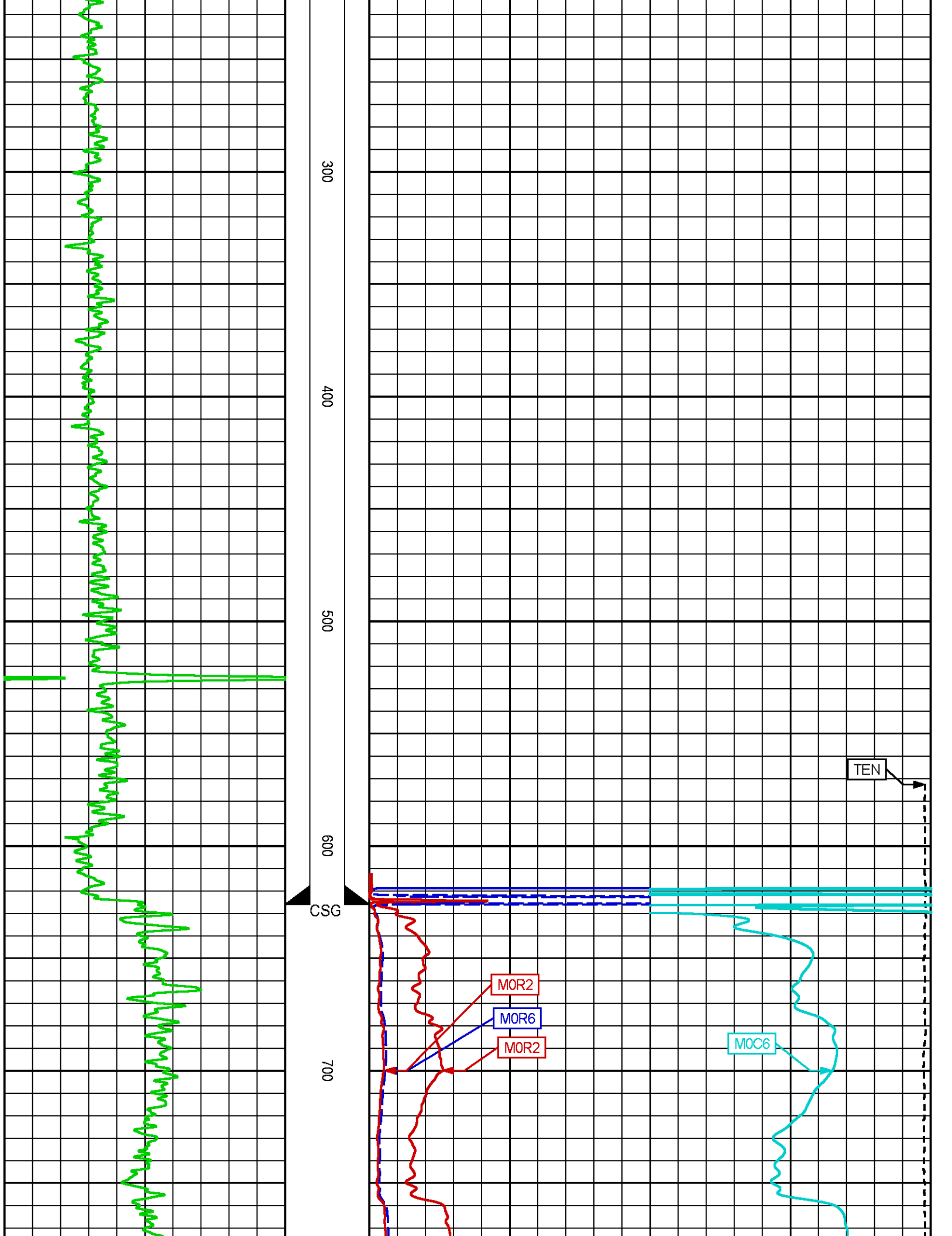
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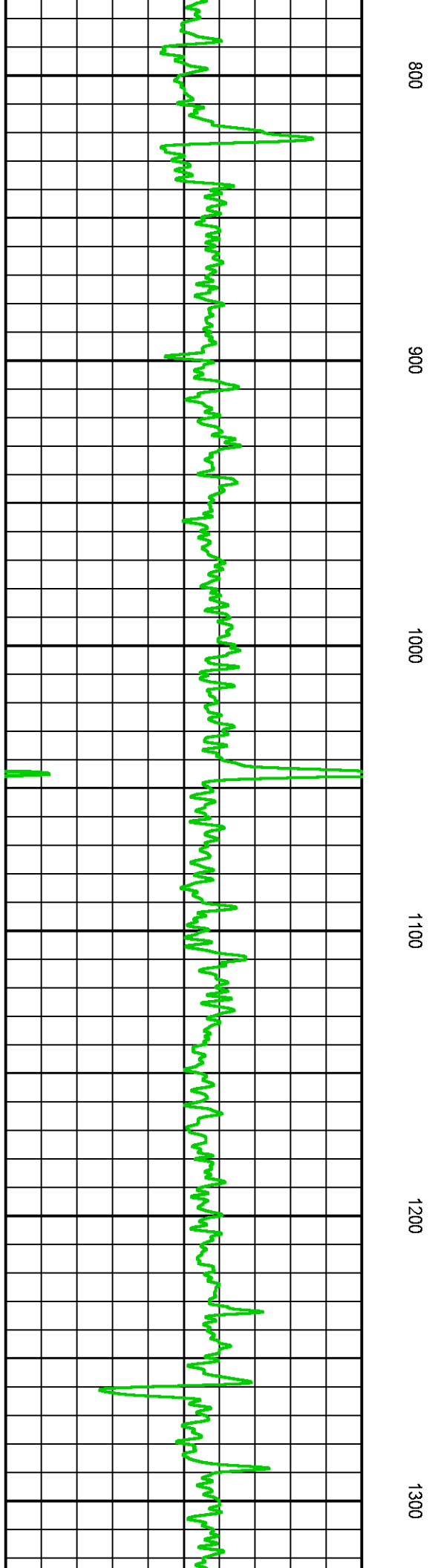
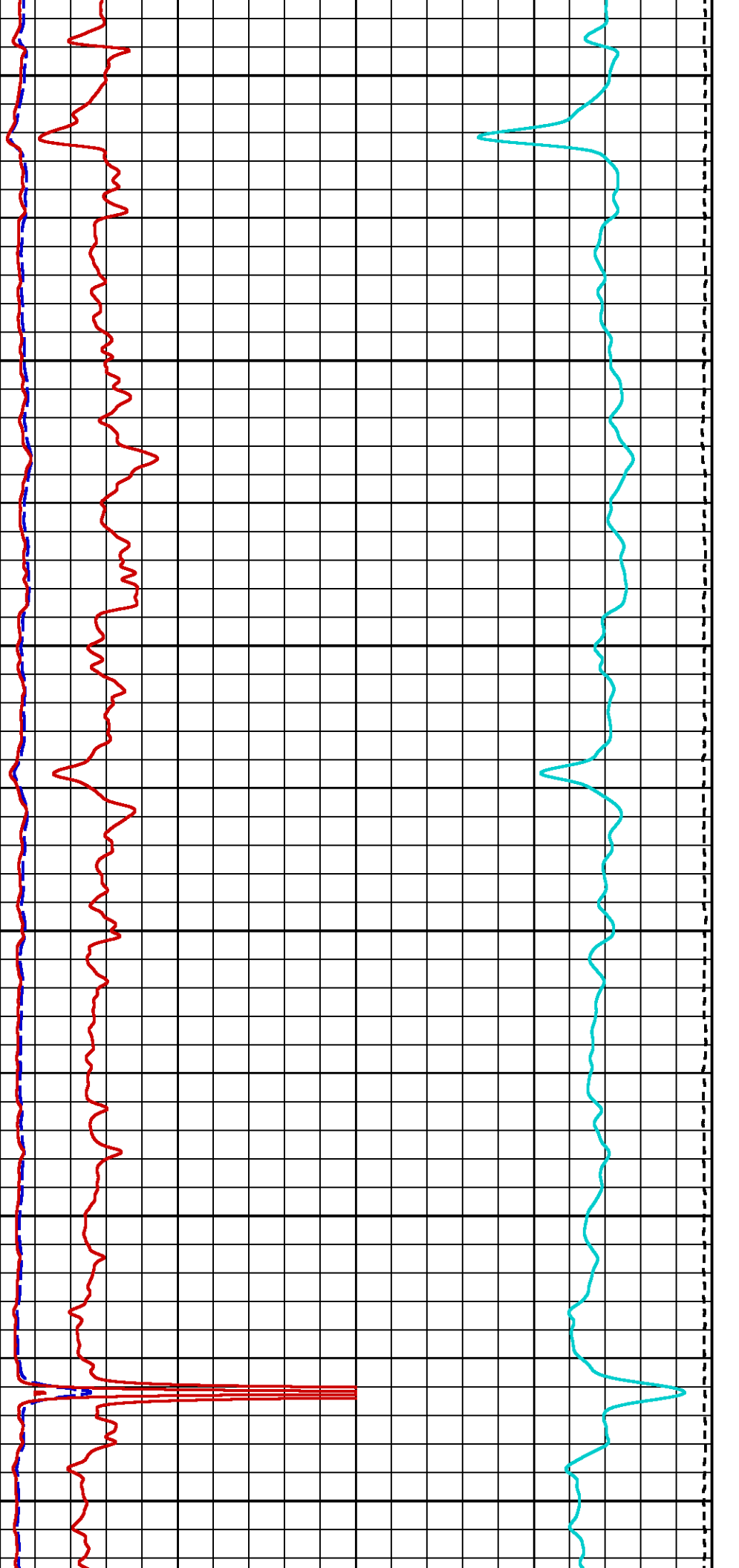
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M0C6	2.75	M0R6	2.75				

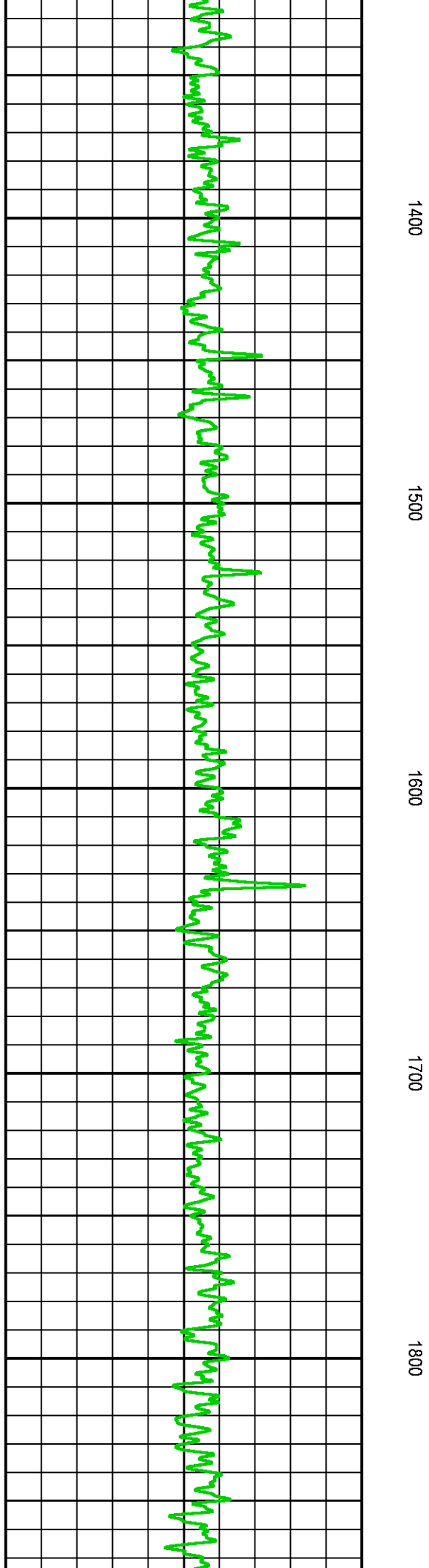
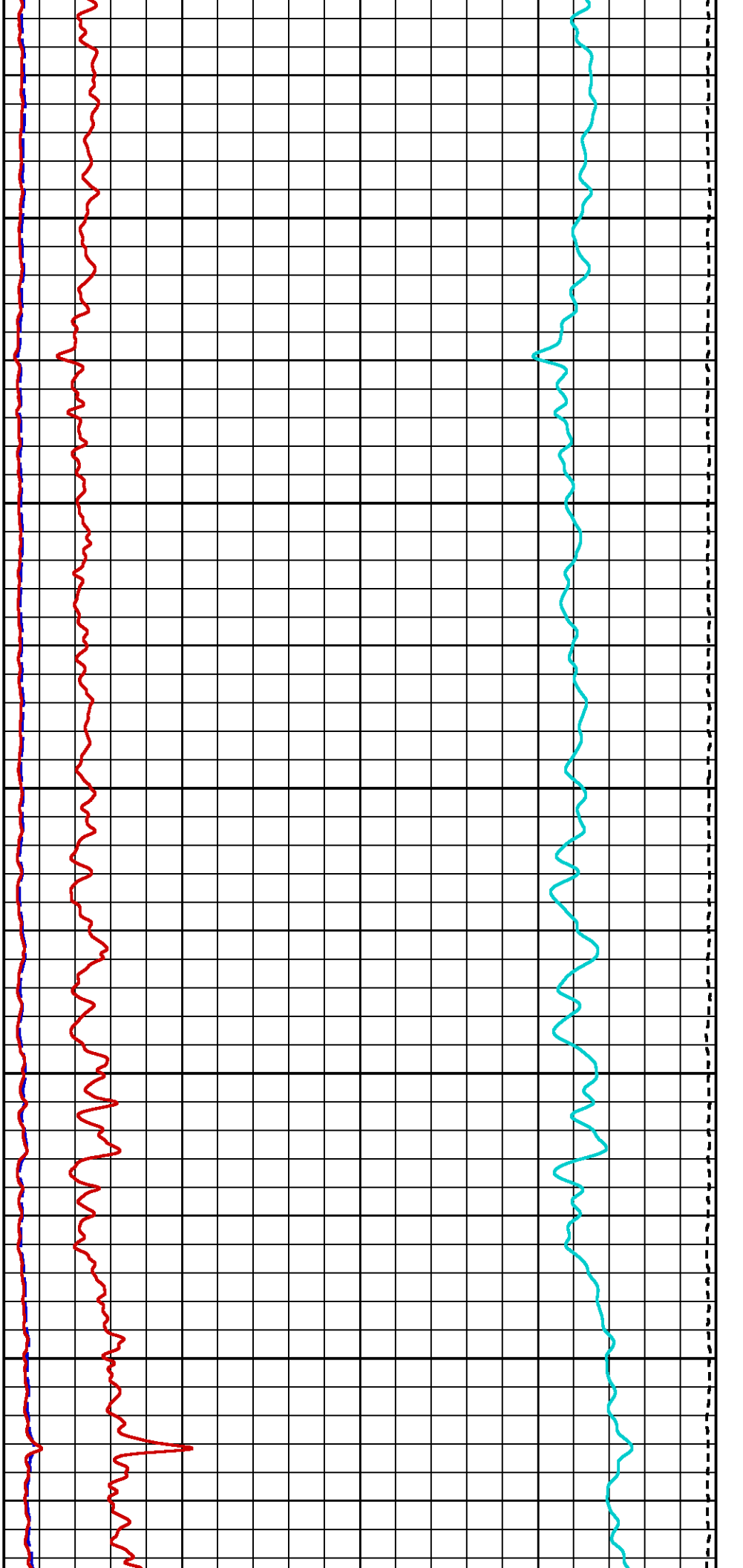
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Plot Interval : -1 - 6475.75 Feet

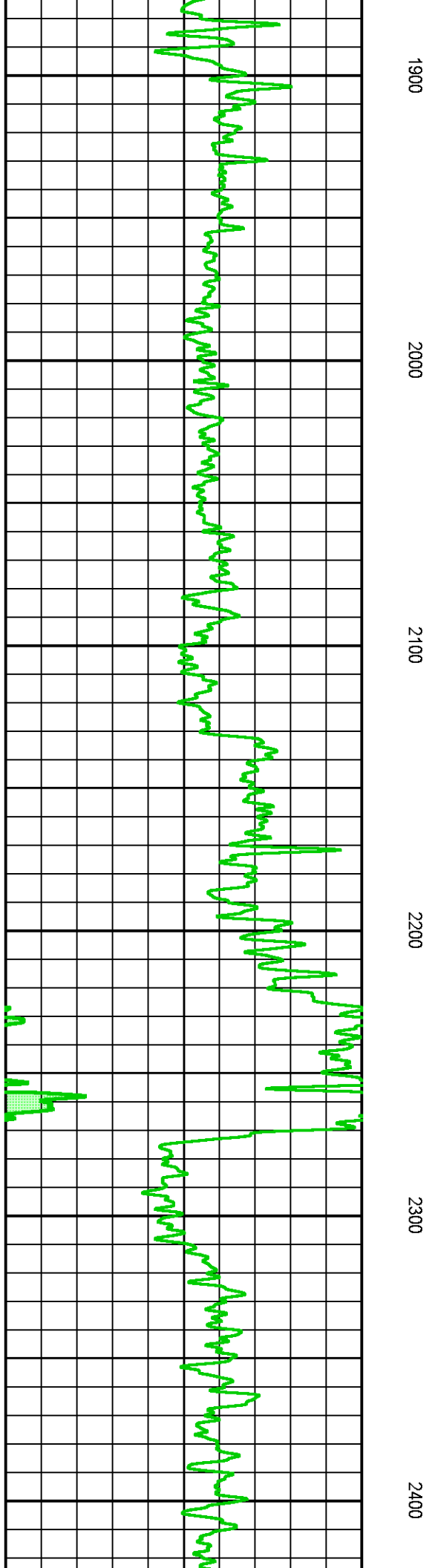
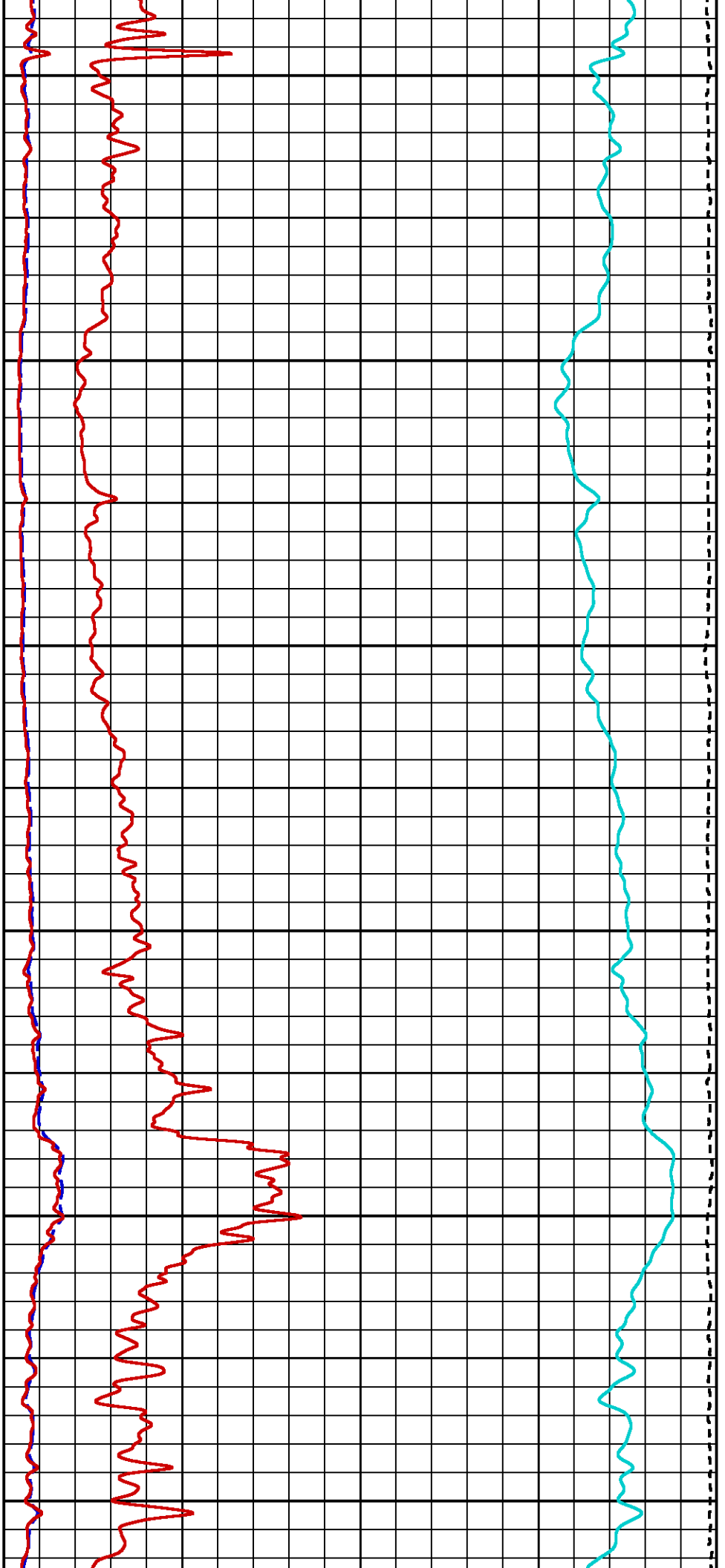
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Created On : 2015-07-06 20:35:34  
Company : TABUCA RASA ENERGY  
Well : CADDELL #3  
Field : OAKDALE  
File Interval : -1 - 6475.75 Feet  
OCT : n970m

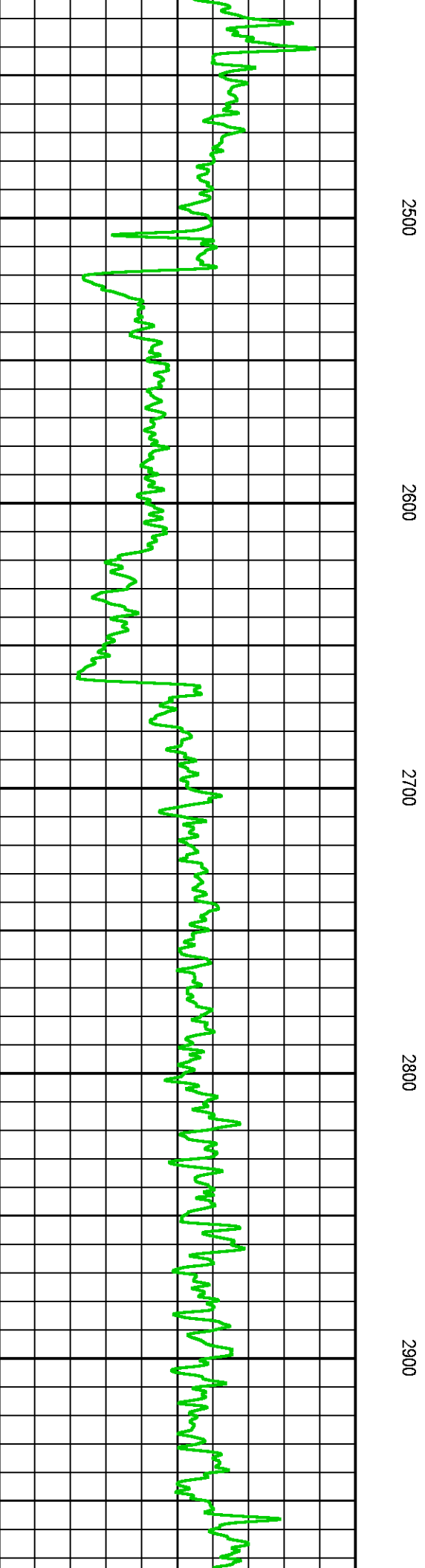
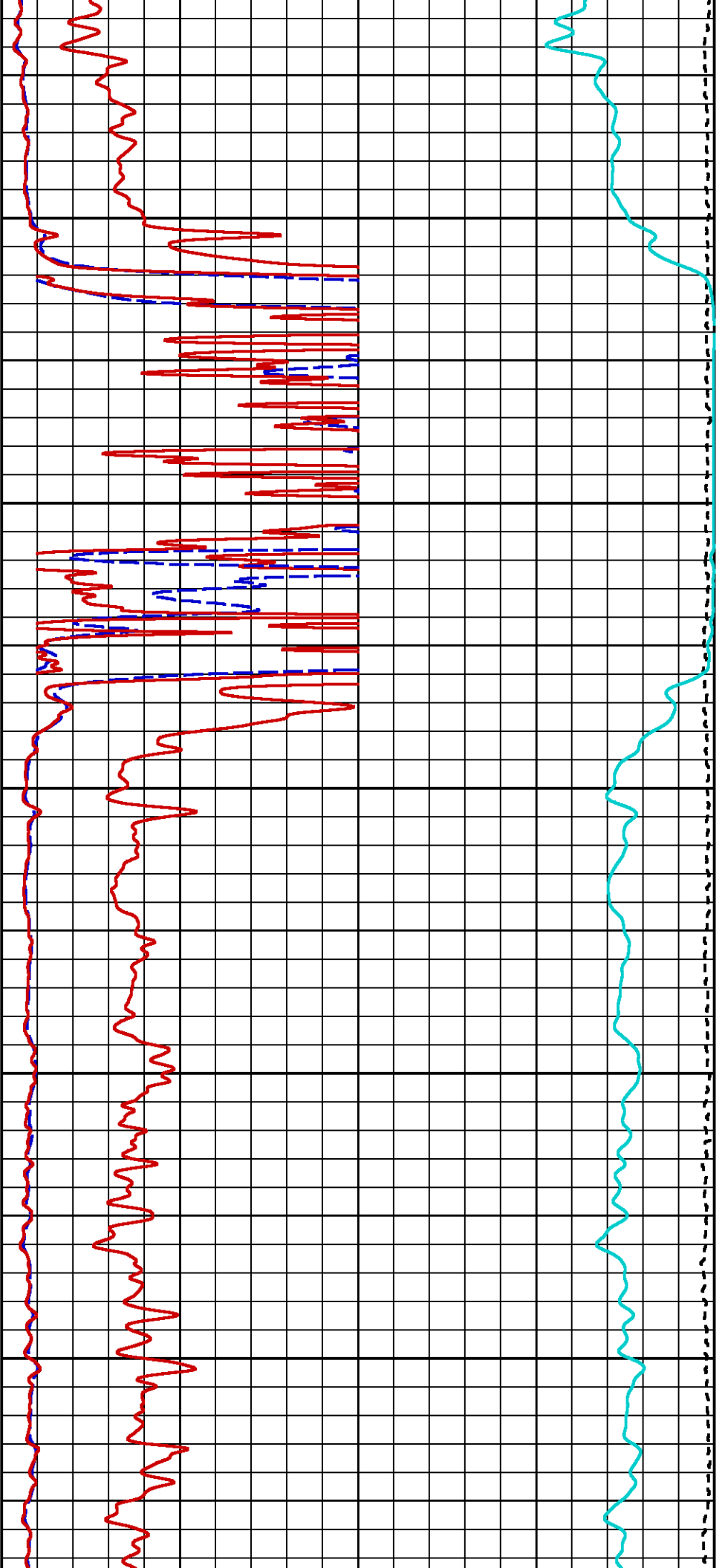




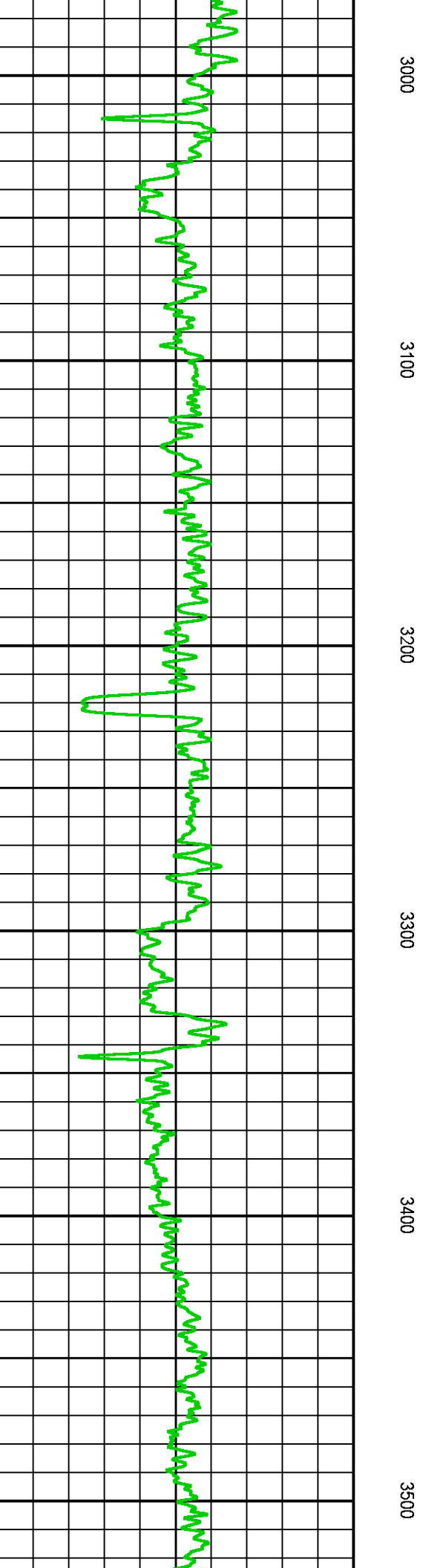
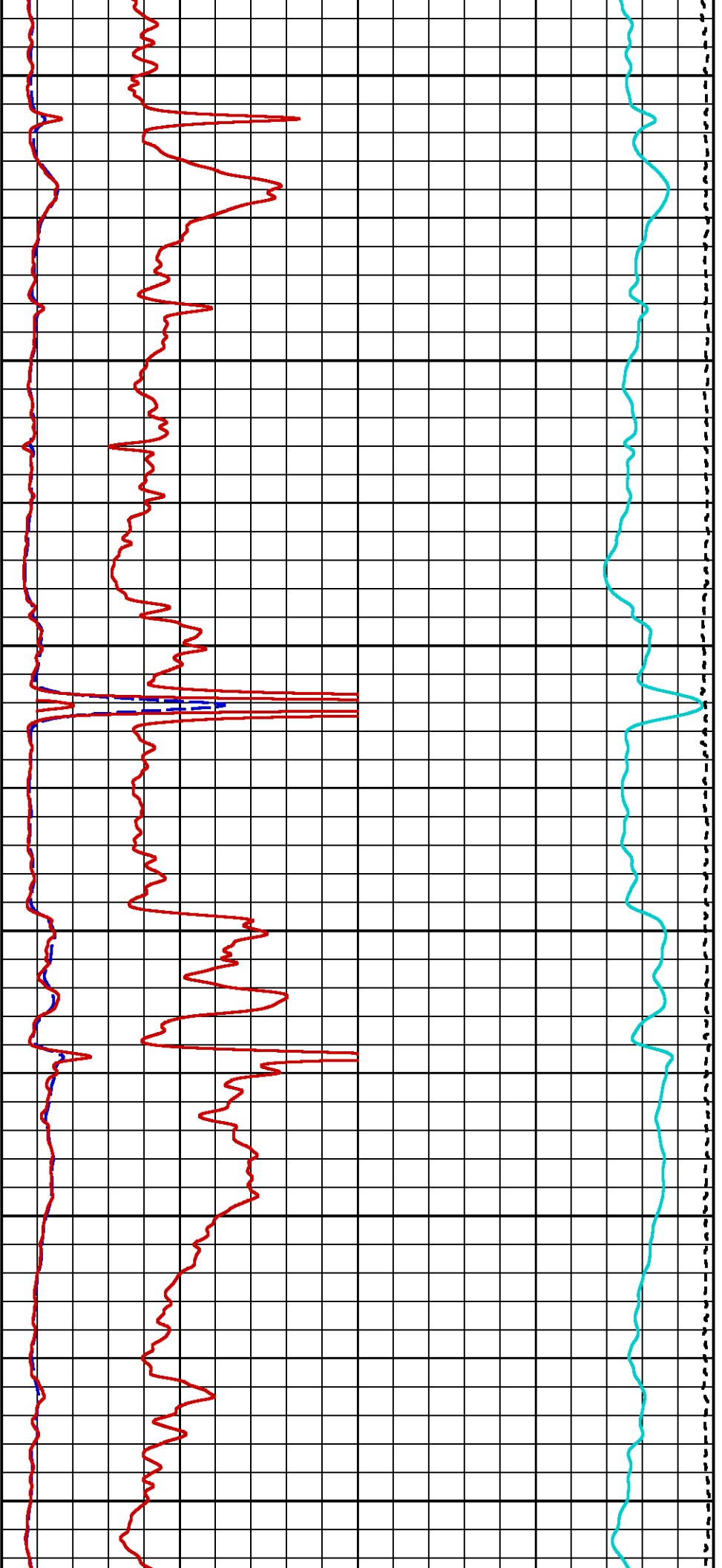


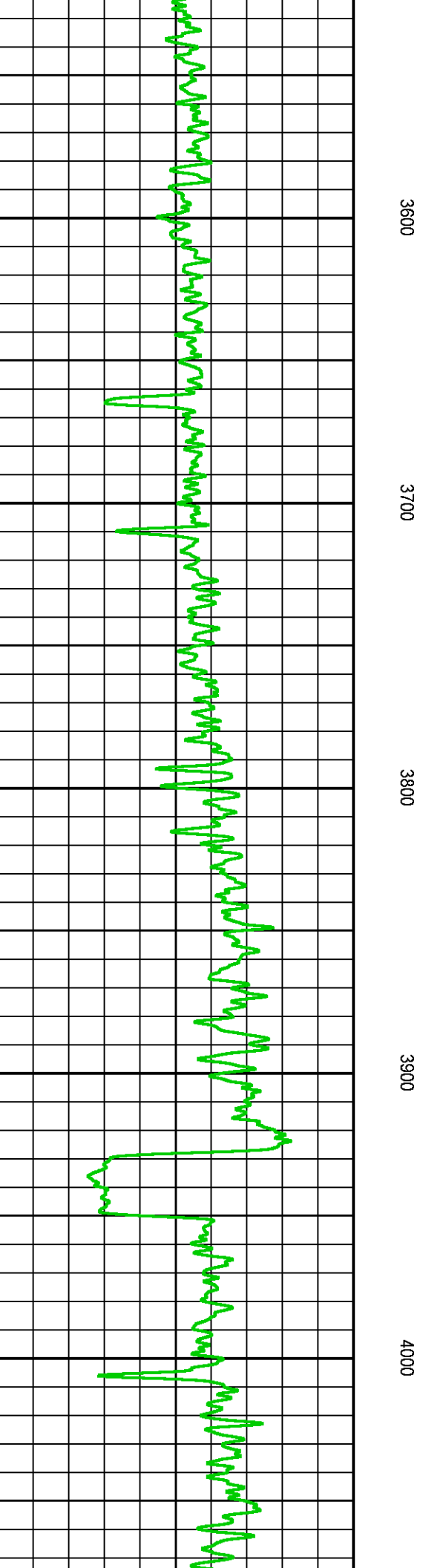
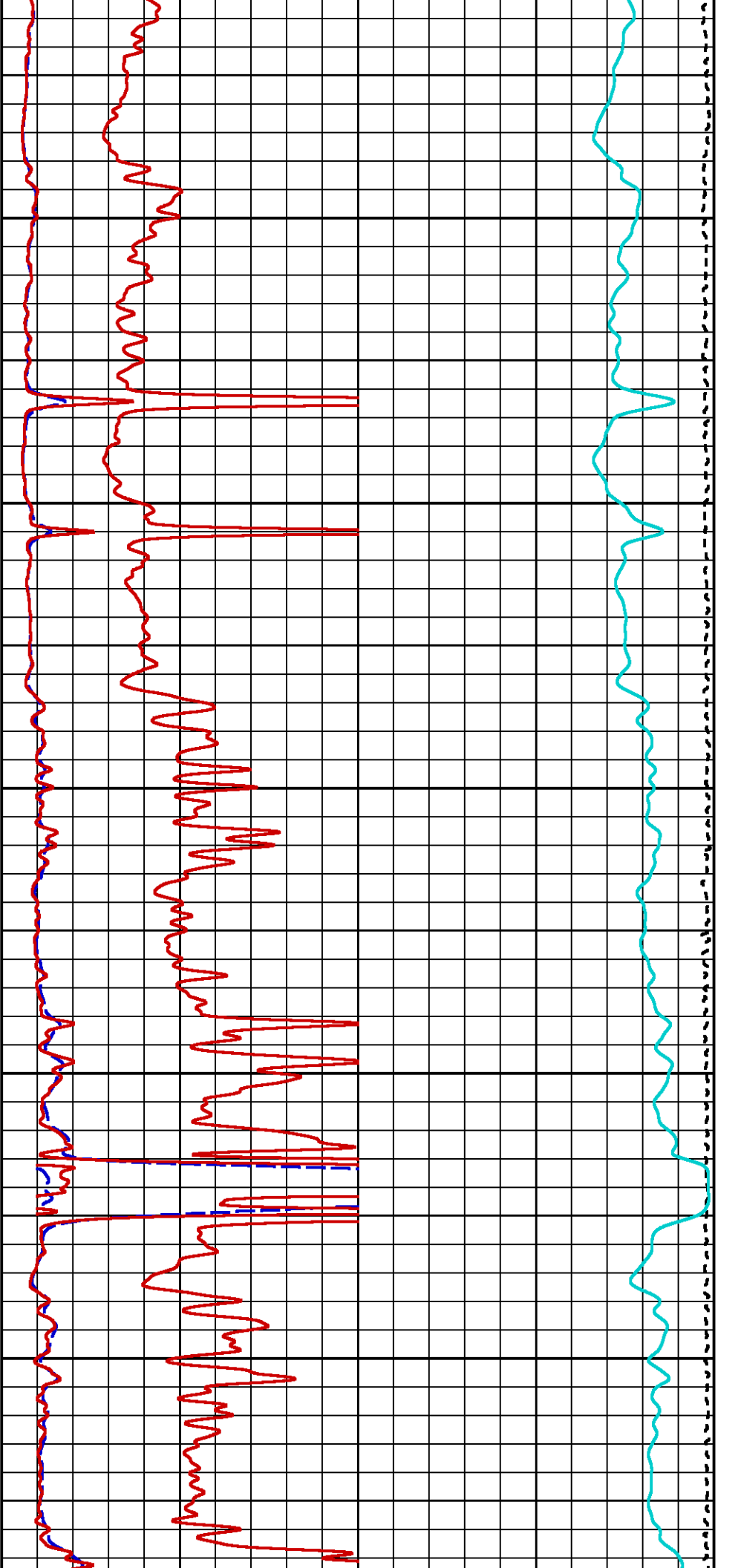


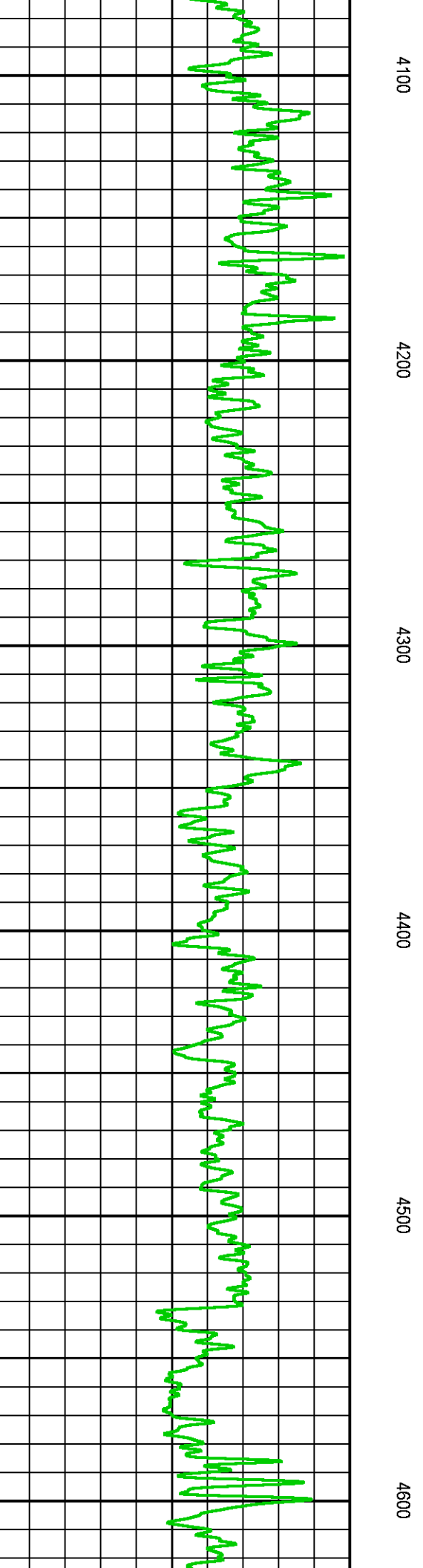
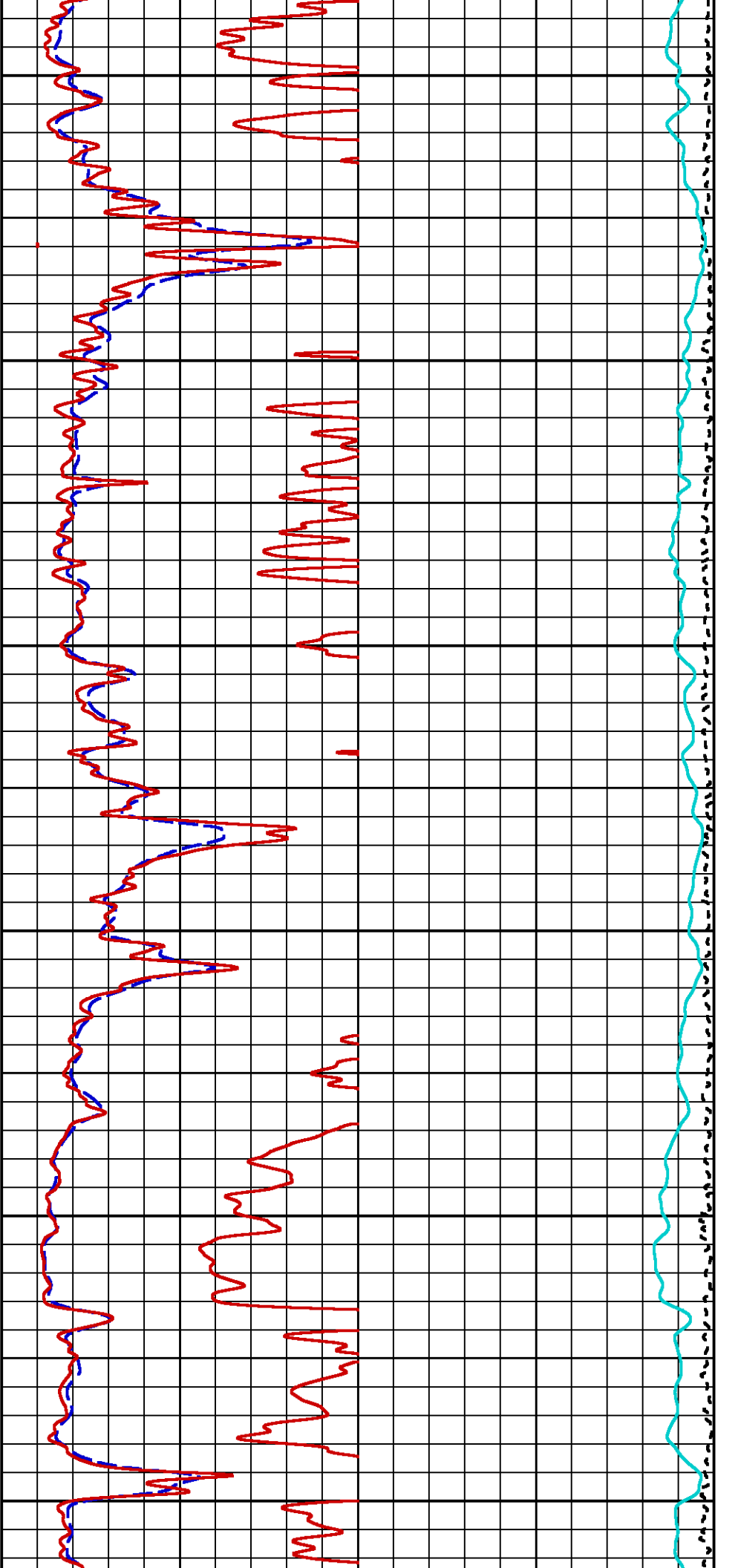


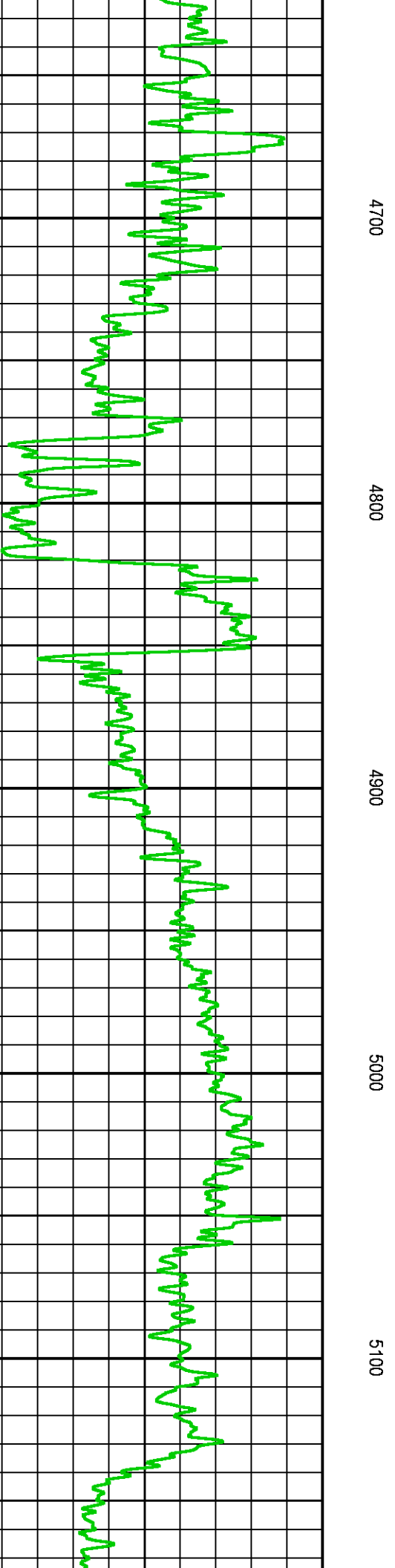
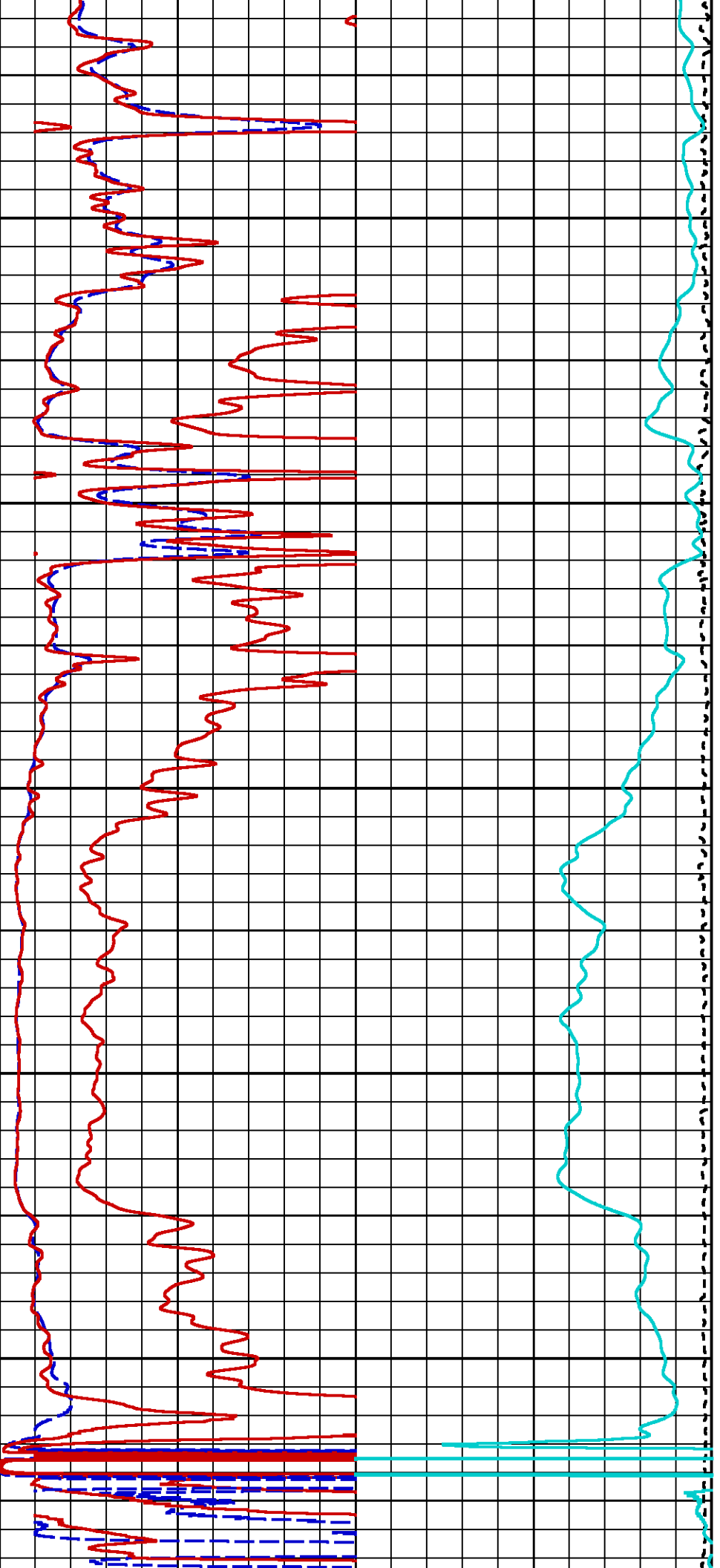


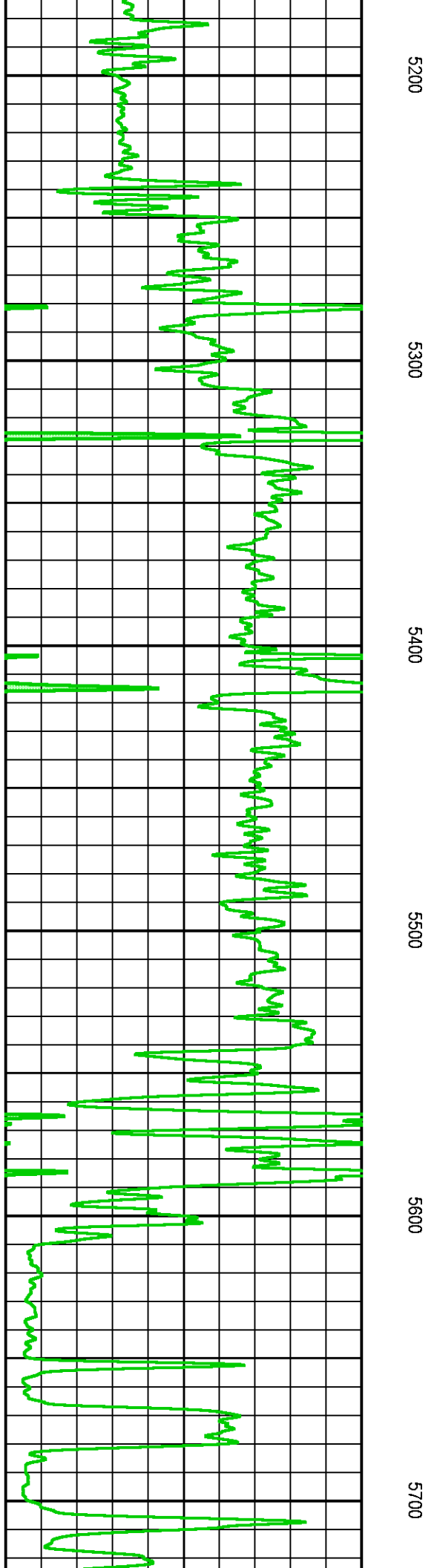
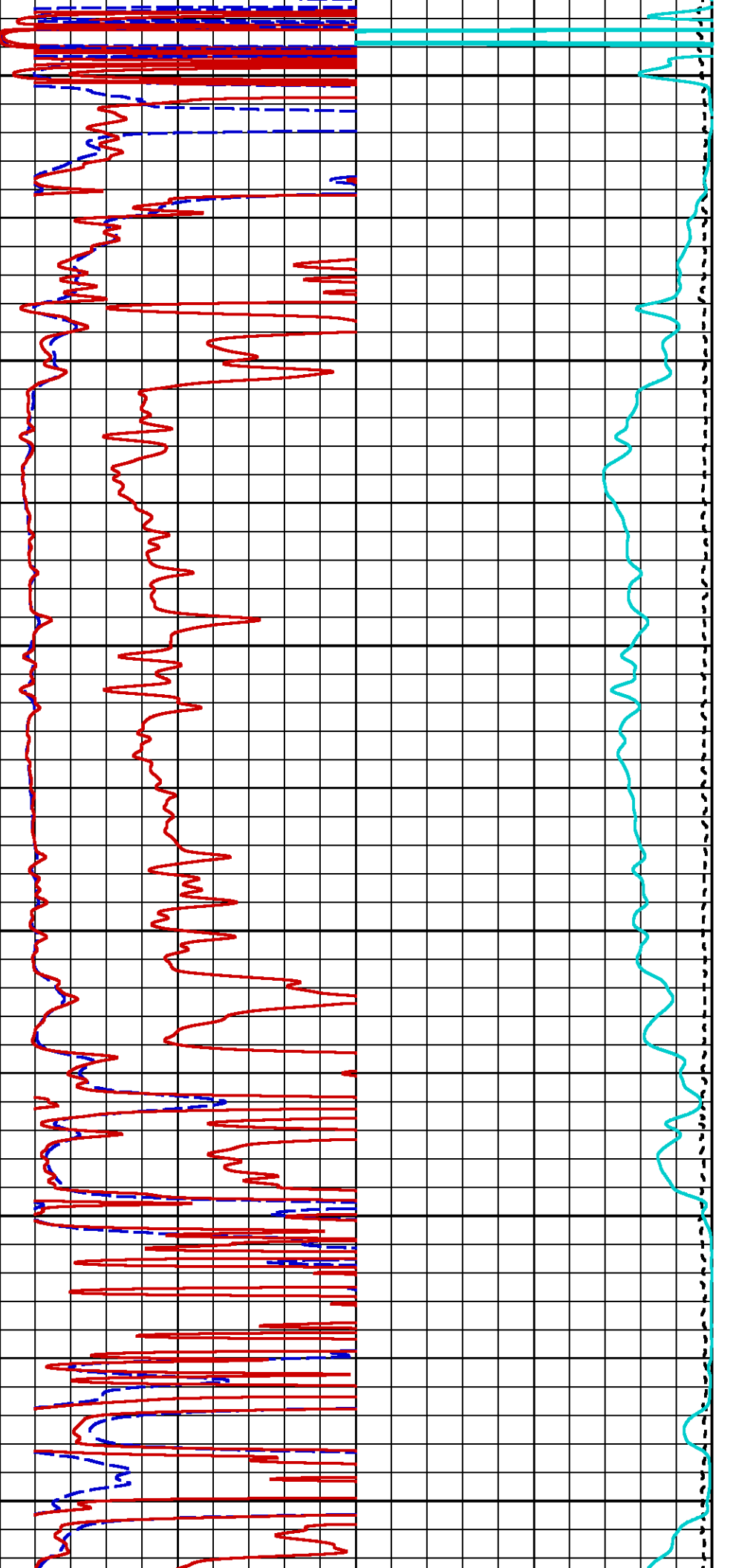


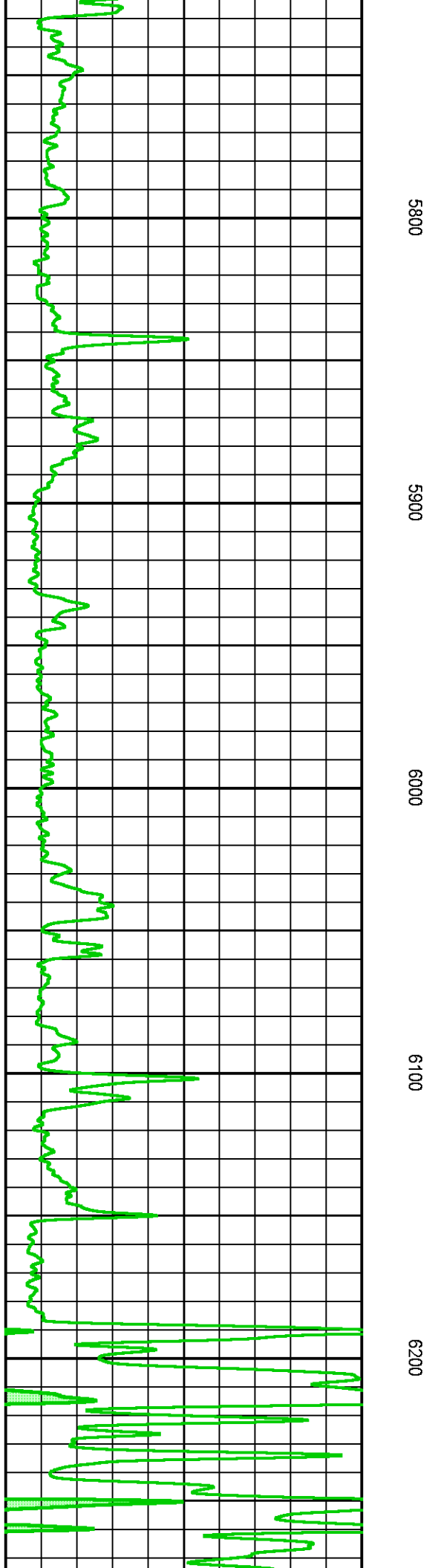
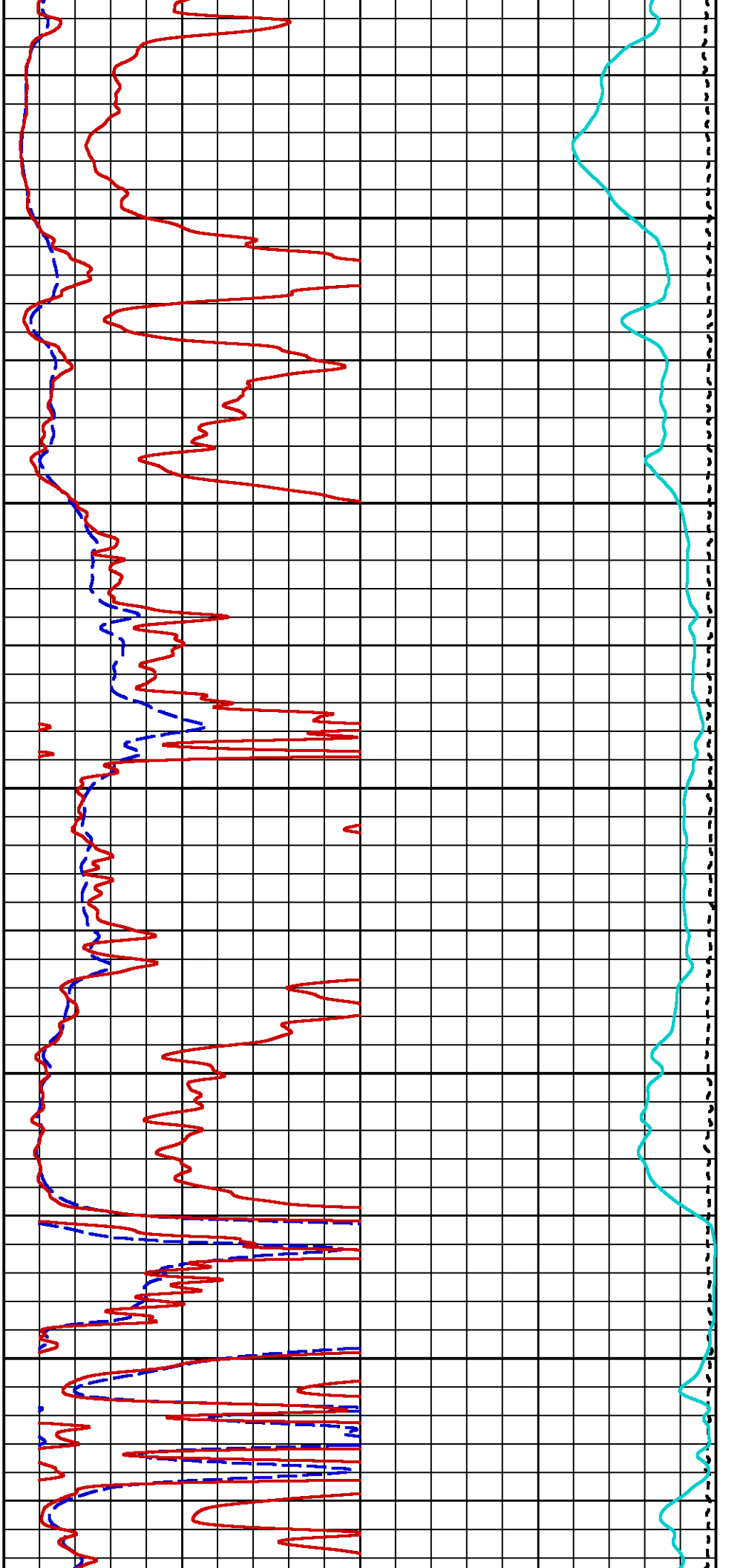


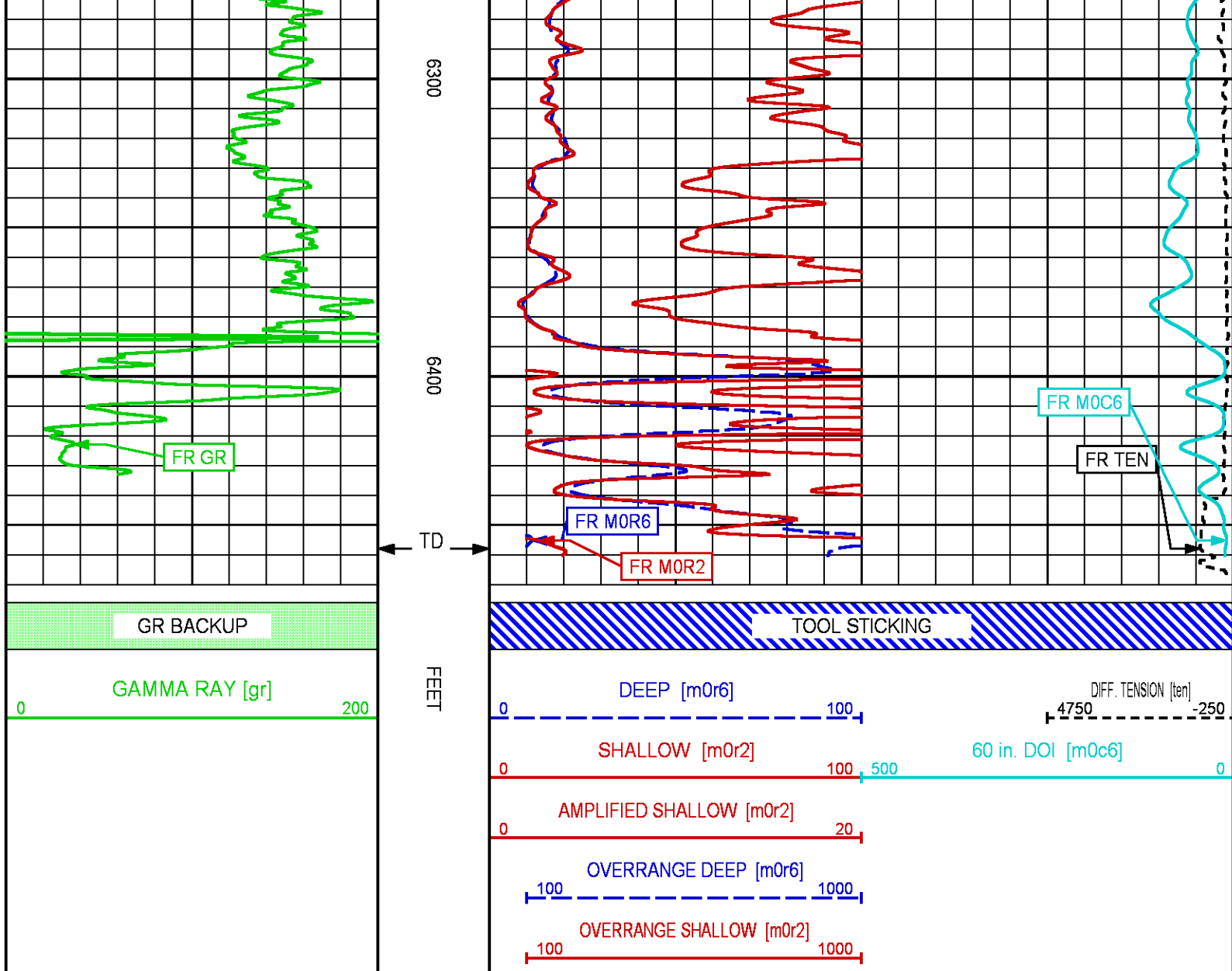












## MAIN LOG 5"/100FT SCALE

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

Plotted: Mon Jul 6 23:08:01 2015

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/OH096970/n970m03.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 551.427 ft BOTTOM DEPTH: 6468.724 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	"	"

BOREHOLE & CEMENT					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	5.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	OIL BASE MUD		"	"

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	34000	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
	RHOfmatrix	2.650	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	Jul 6 20:35:34 2015	BIT SIZE
F1:BVOL	Jul 6 20:35:34 2015	BOREHOLE VOLUME
F1:CAL	Jul 6 20:35:34 2015	CALIPER
F1:CNCF	Jul 6 20:35:34 2015	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Jul 6 20:35:34 2015	CEMENT VOLUME
F1:GR	Jul 6 20:35:34 2015	GAMMA RAY
F1:M2R1	Jul 6 20:35:34 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Jul 6 20:35:34 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Jul 6 20:35:34 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Jul 6 20:35:34 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Jul 6 20:35:34 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Jul 6 20:35:34 2015	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Jul 6 20:35:34 2015	POROSITY FOR SELECTABLE MATRIX
F1:TEN	Jul 6 20:35:34 2015	DIFFERENTIAL TENSION
F1:ZCOR	Jul 6 20:35:34 2015	DENSITY CORRECTION

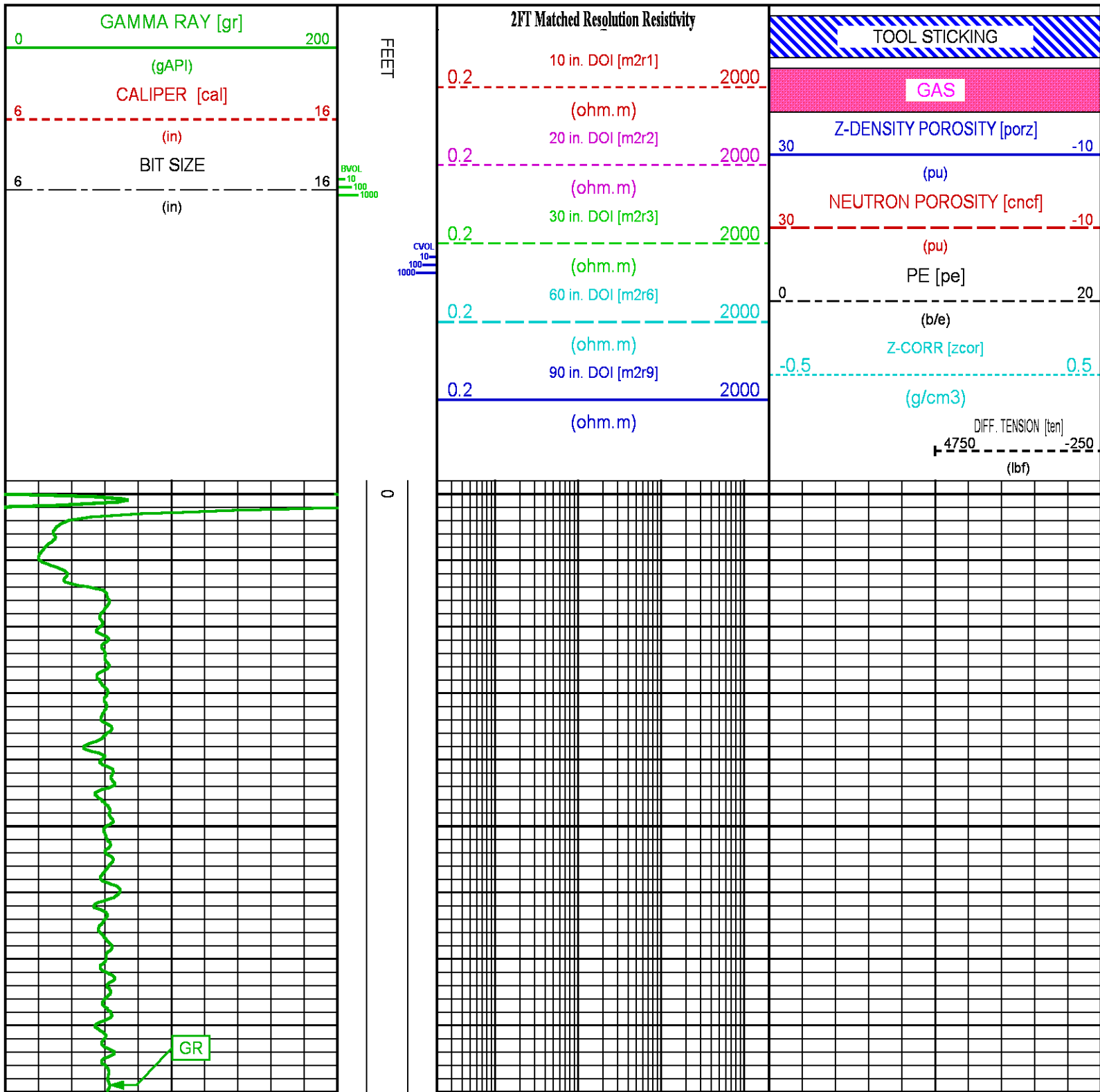
CURVE MEASURE POINTS		
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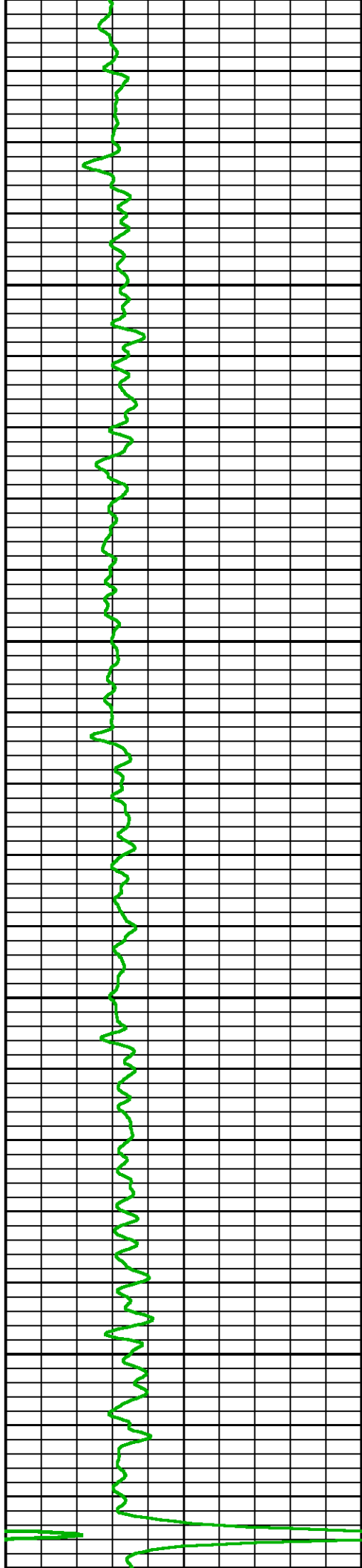
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CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
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CAL	18.12	M2R2	2.75	PE	18.00		
CNCF	27.38	M2R3	2.75	PORZ	18.00		
GR	35.00	M2R6	2.75	TEN	0.00		

<b>Presentation</b>	: cas6685:/dat1a/OH096970/MAIN.fvpdf [5"/100' Scale]
<b>Plot Interval</b>	: -1 - 6475.75 Feet
<b>Data File 1</b>	: F1 : cas6685:C:\dat1a\OH096970
<b>Created On</b>	: 9/20/2015 14:48
<b>Company</b>	: TABUCA RASA ENERGY
<b>Well</b>	: CADDELL #3
<b>Field</b>	: OAKDALE
<b>File Interval</b>	: -1 - 6475.75 Feet
<b>OCT</b>	: n970m

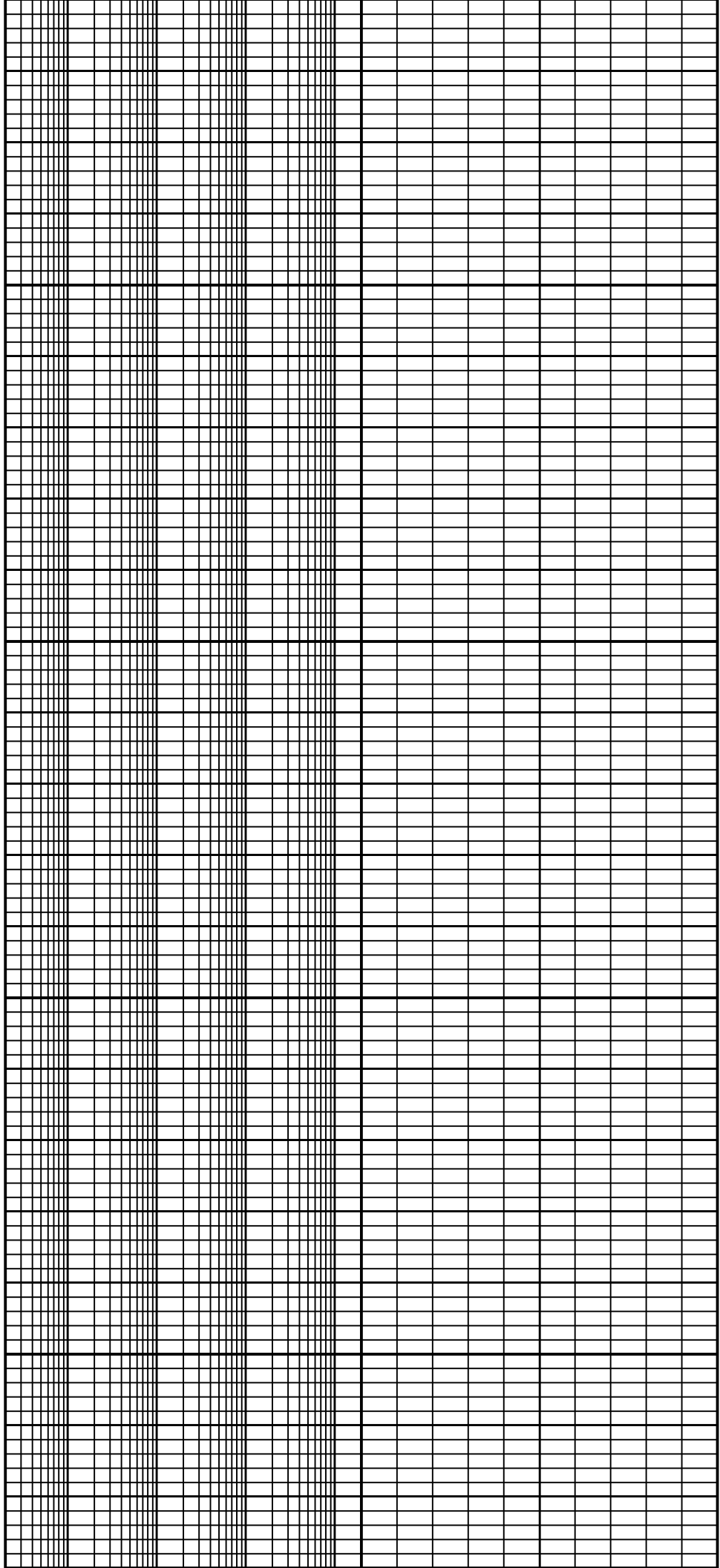


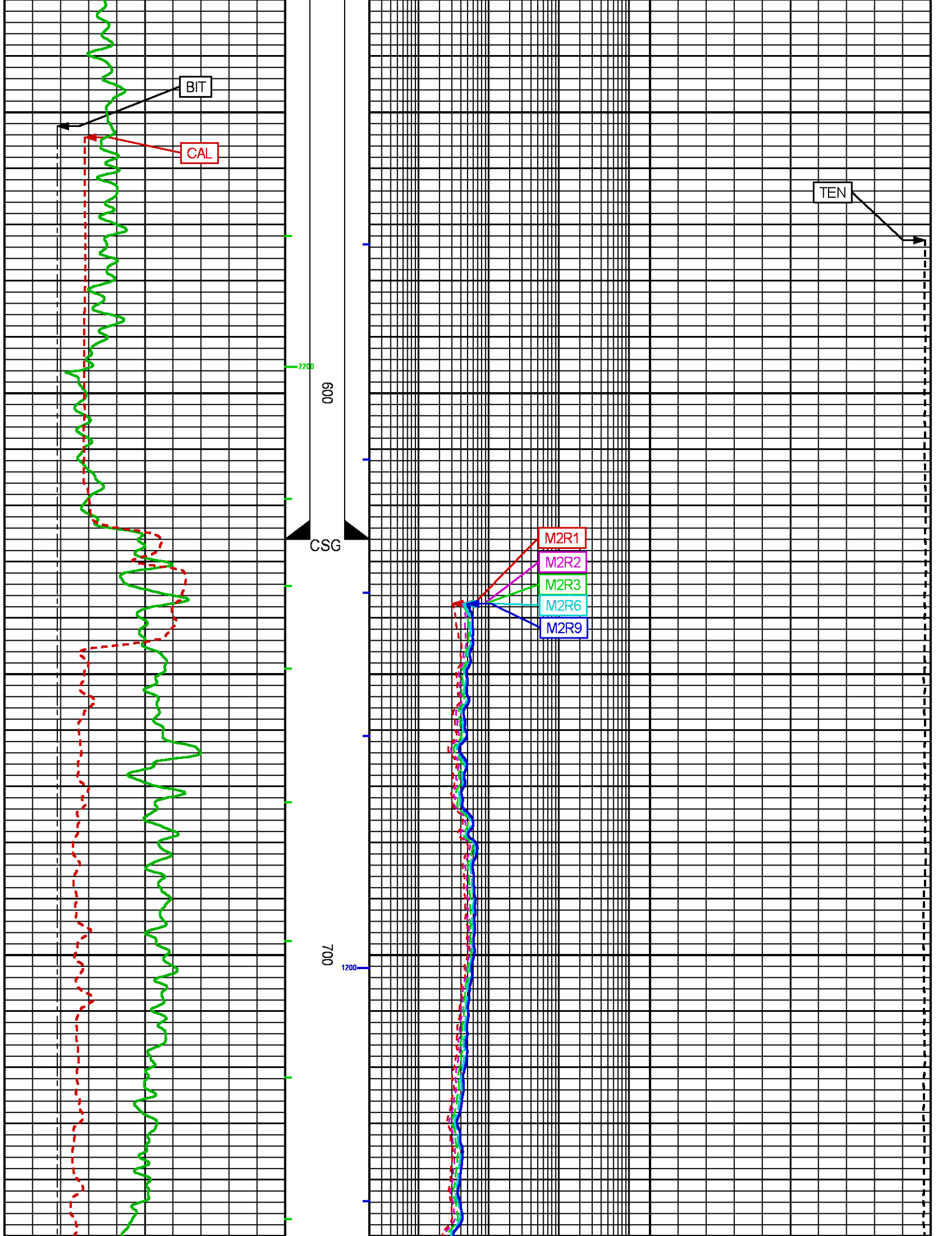


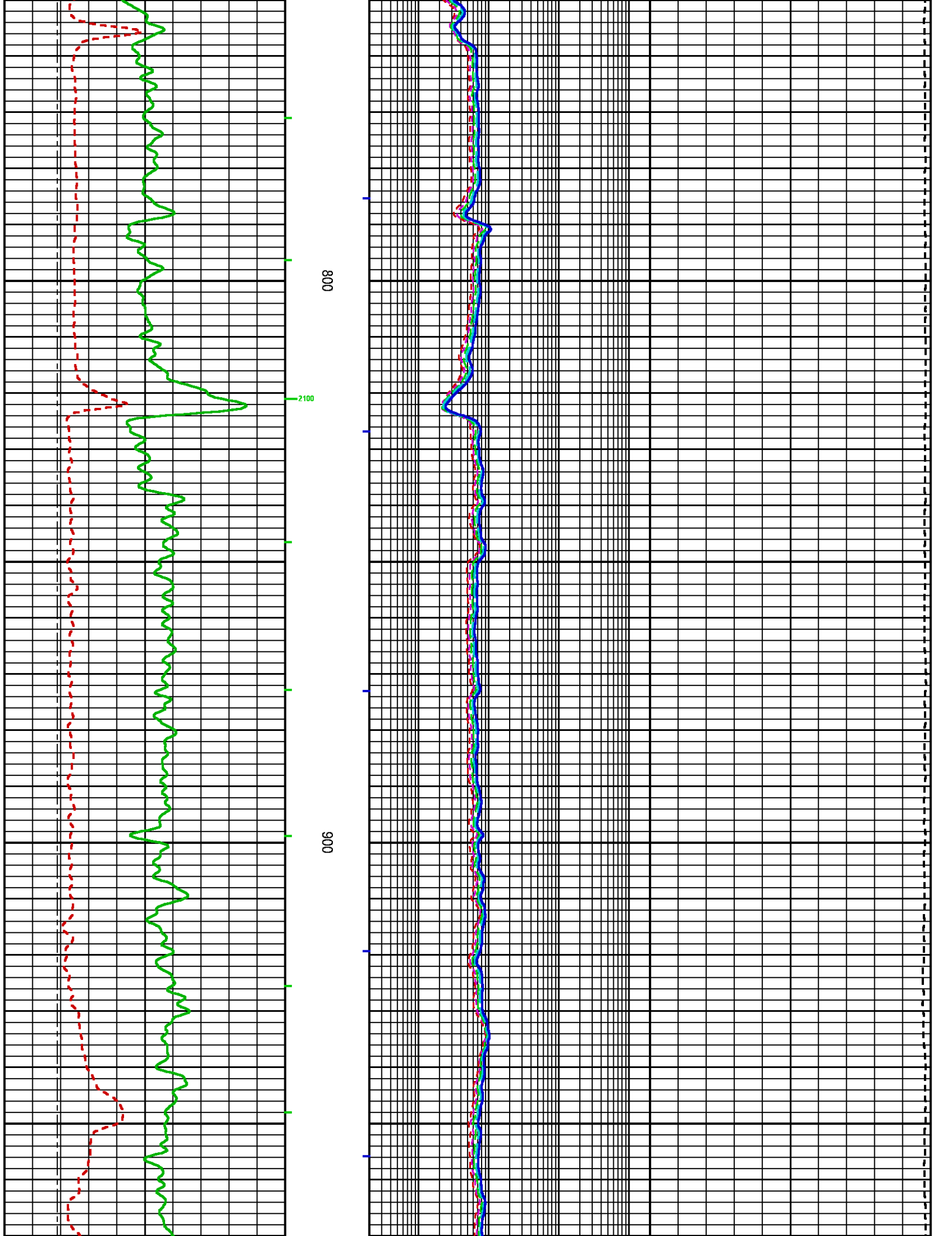


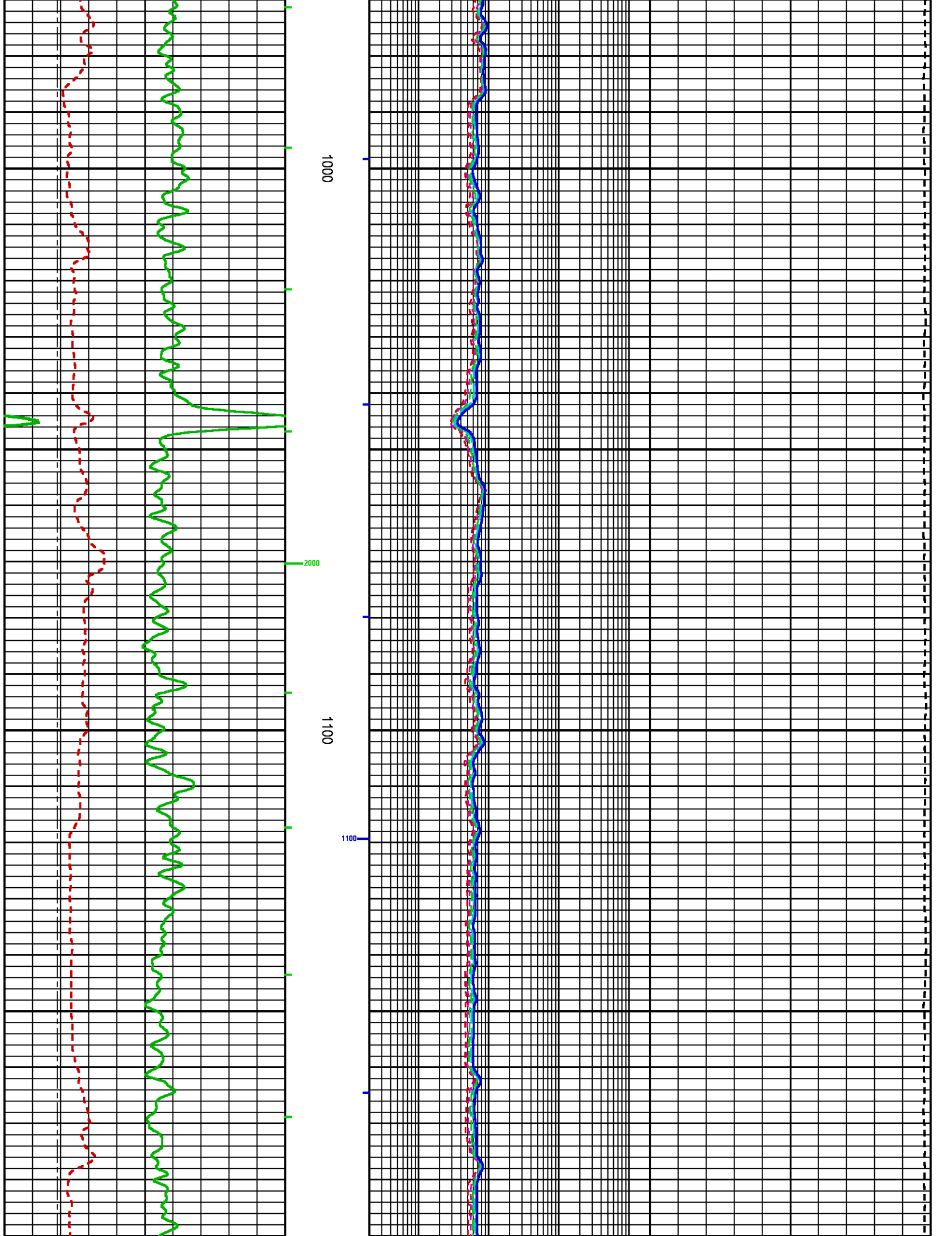
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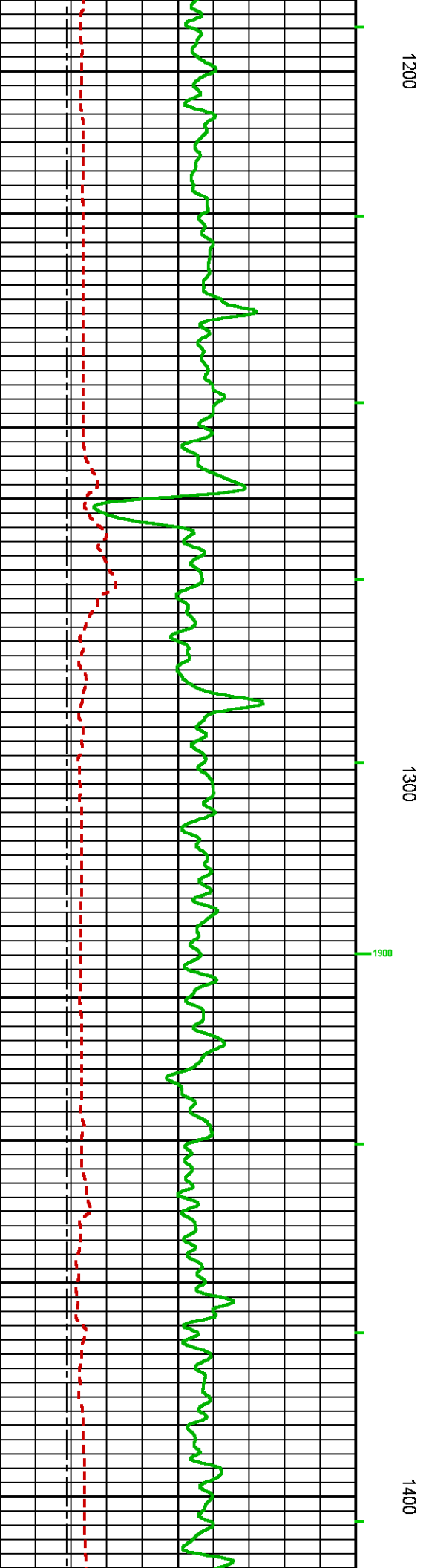
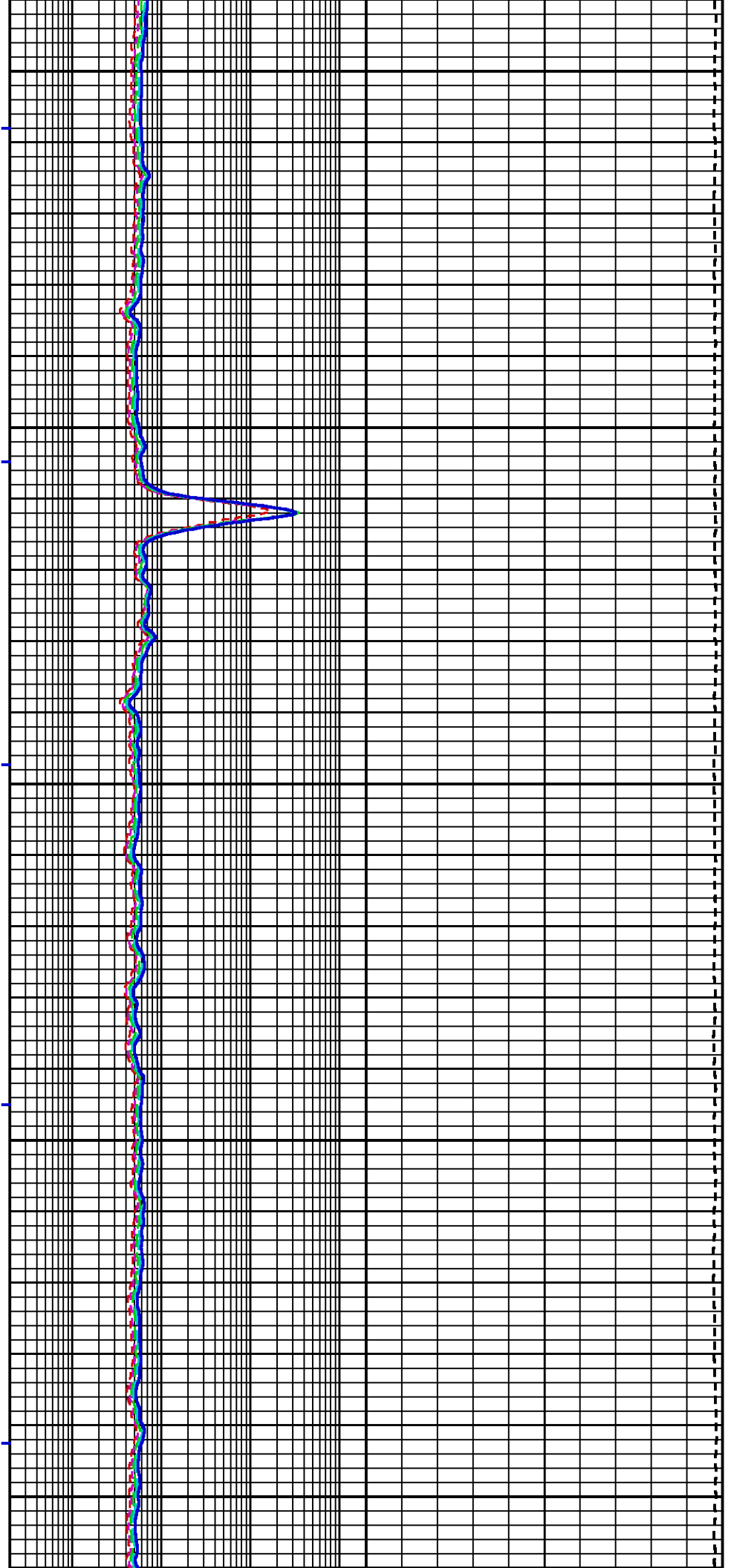
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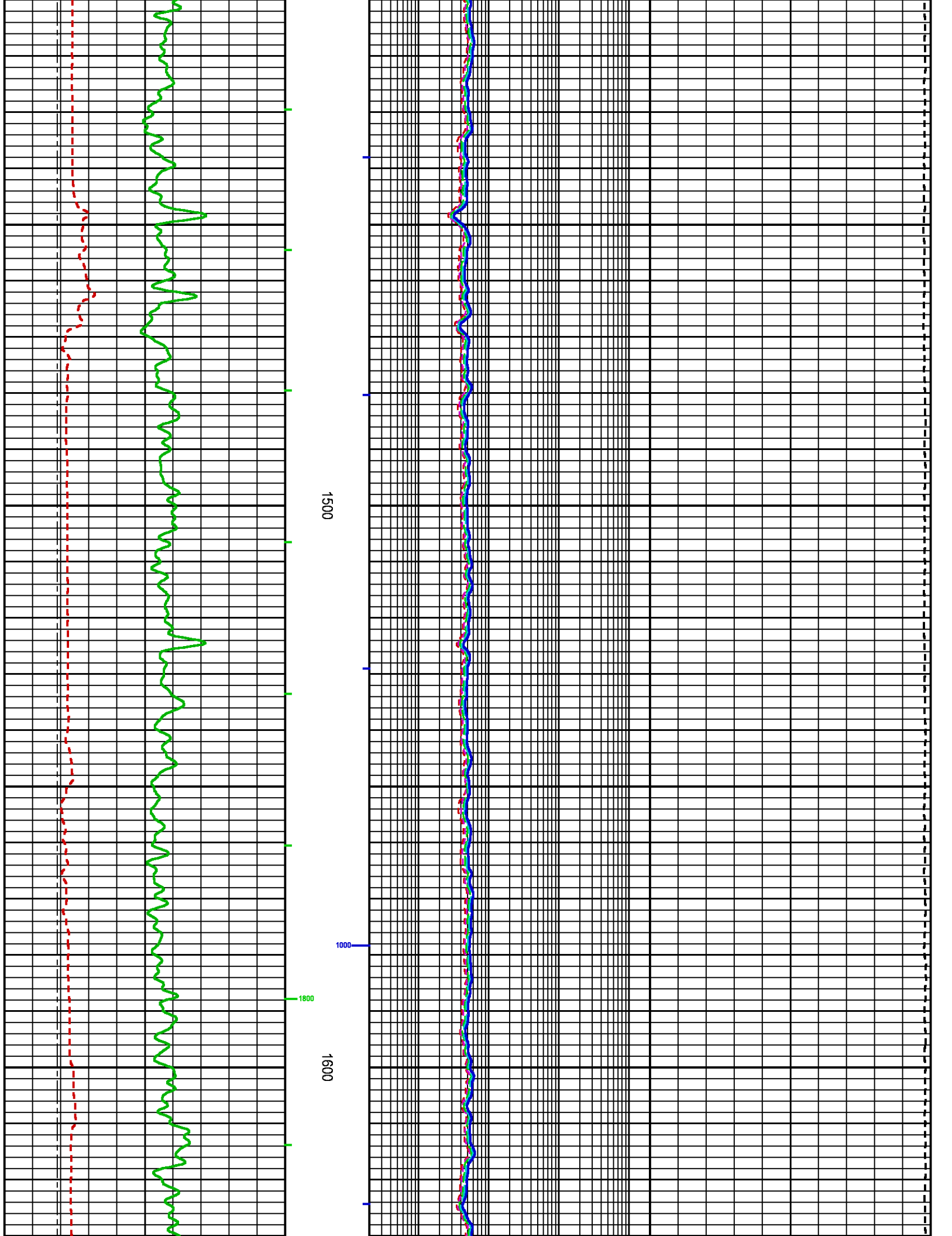




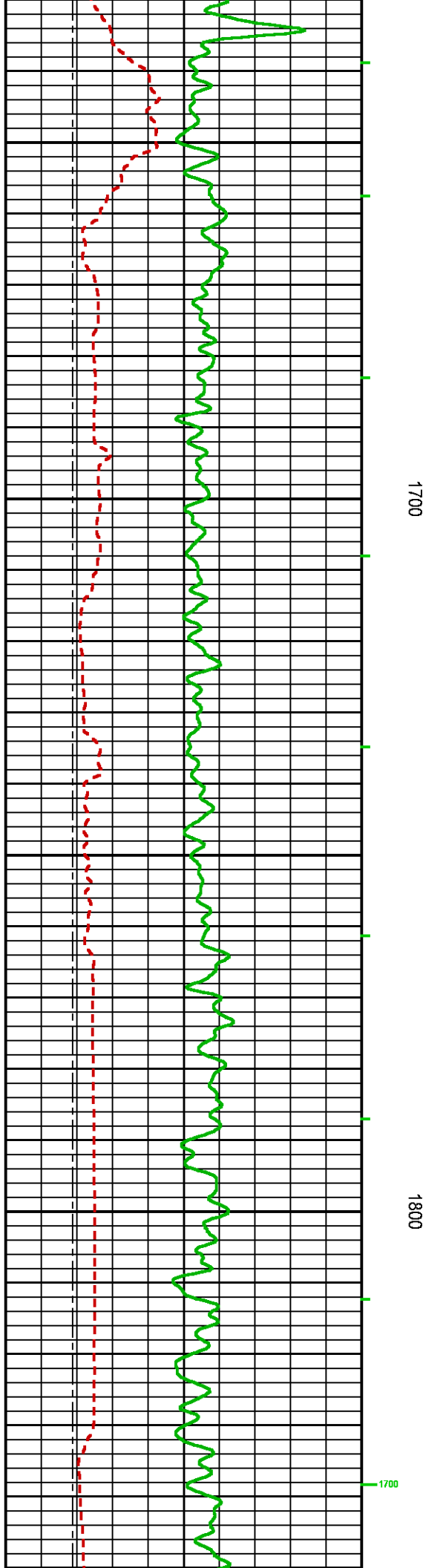
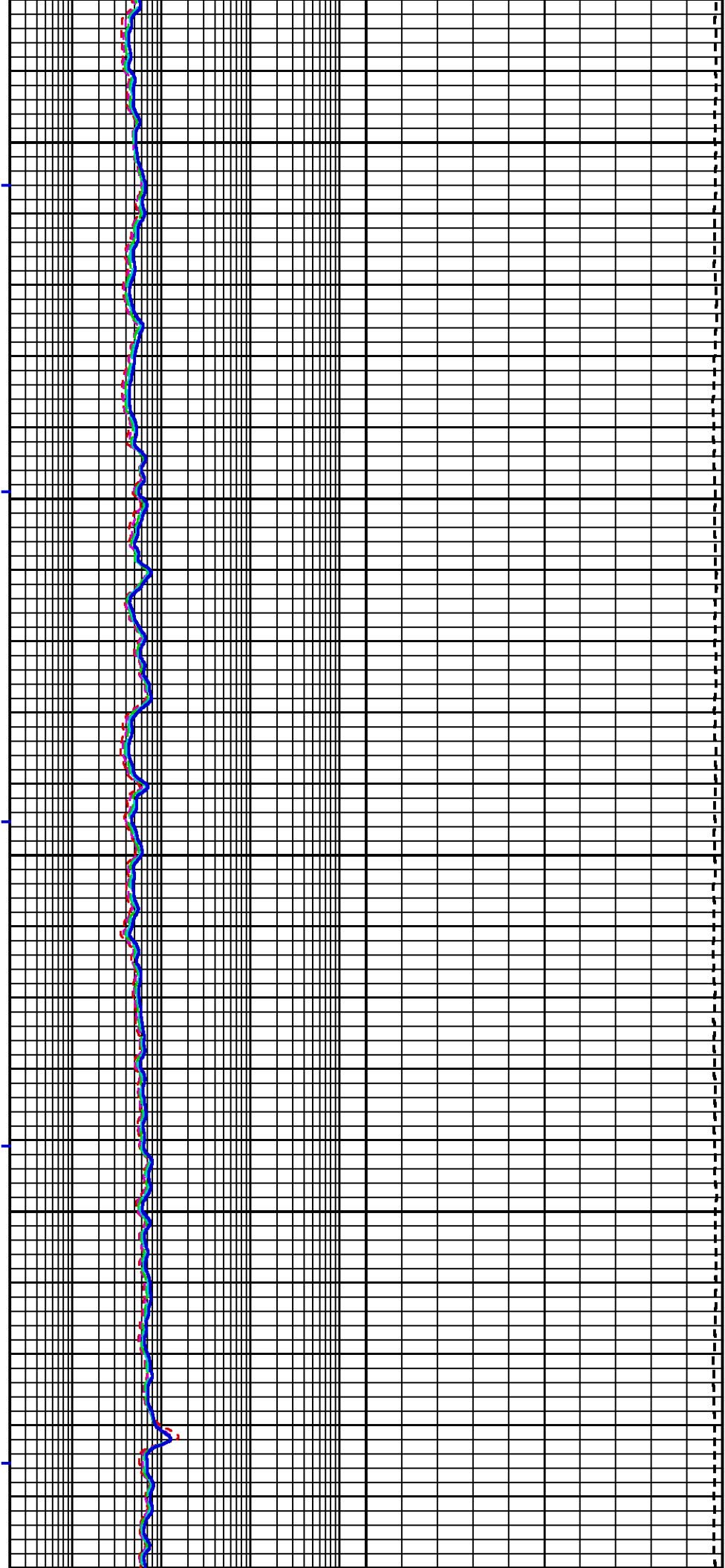








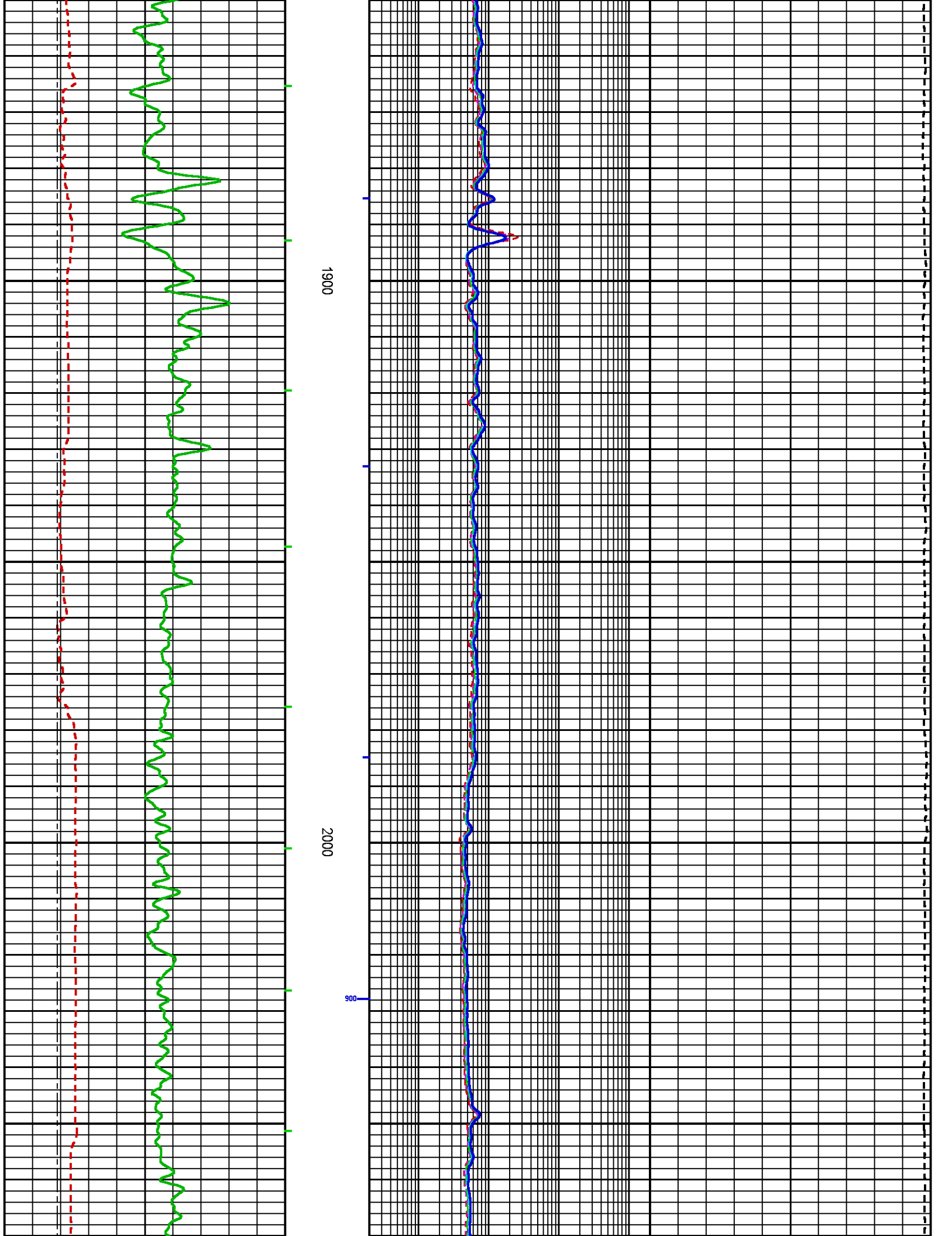


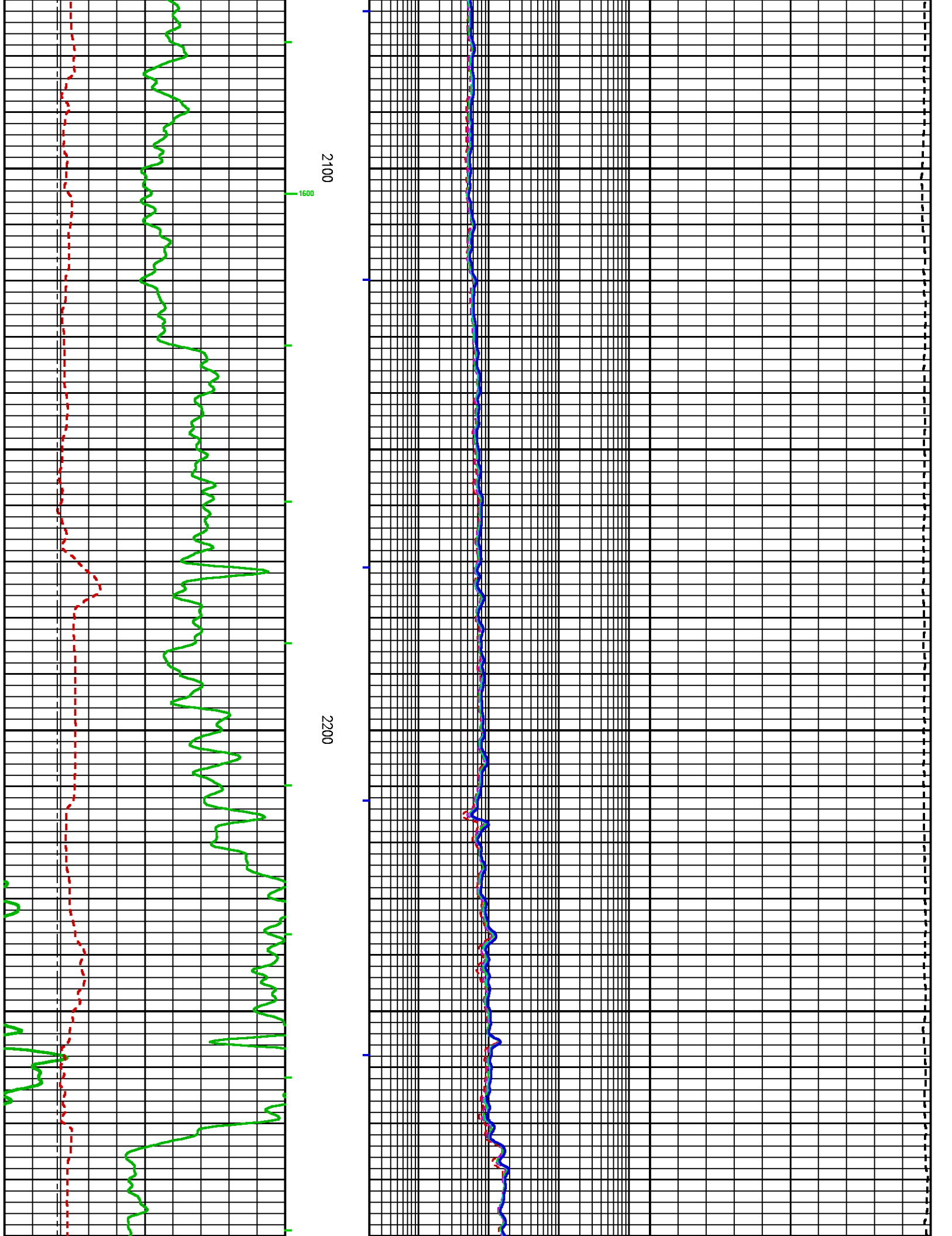


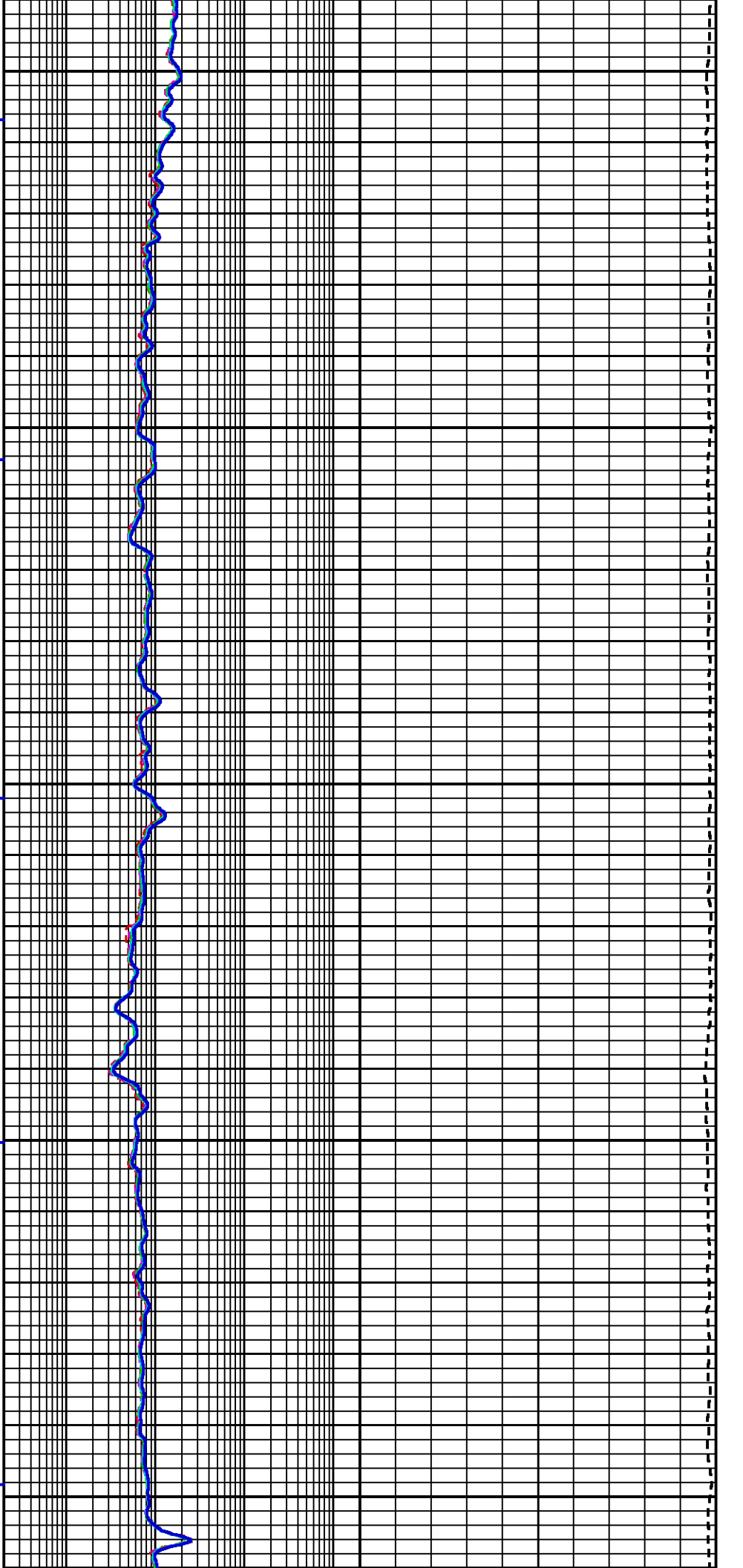
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2000

900







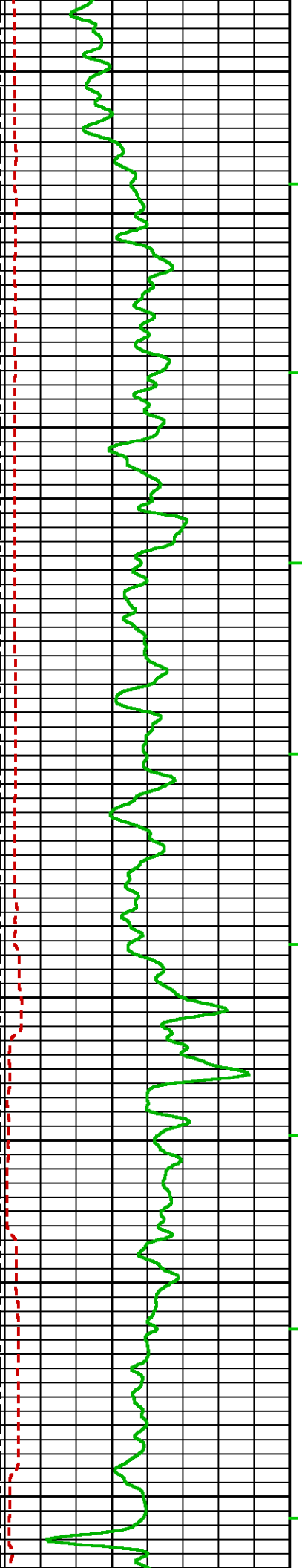
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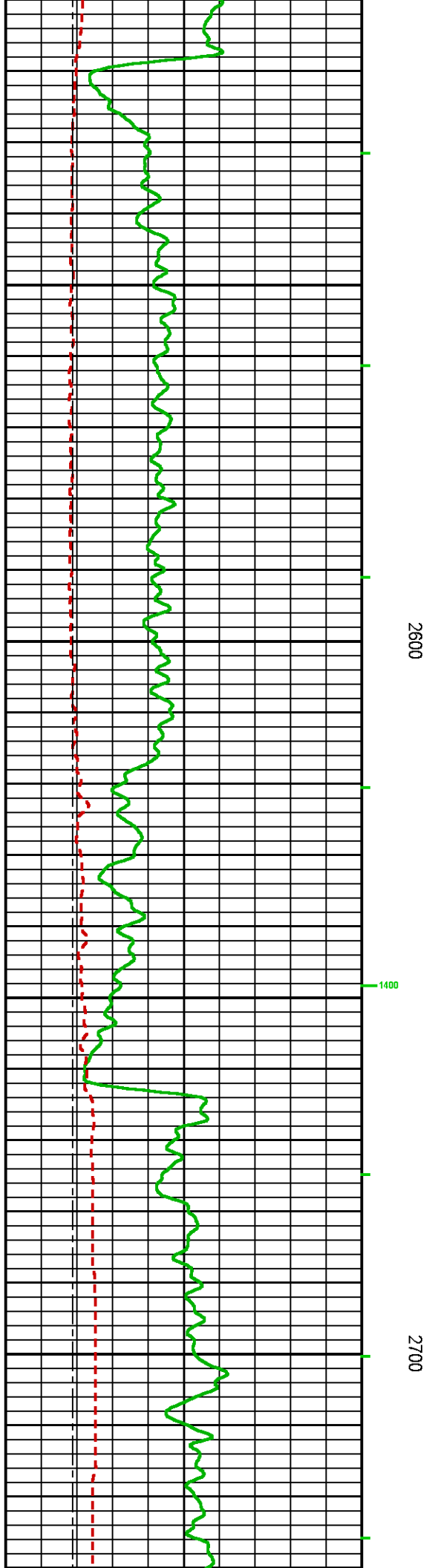
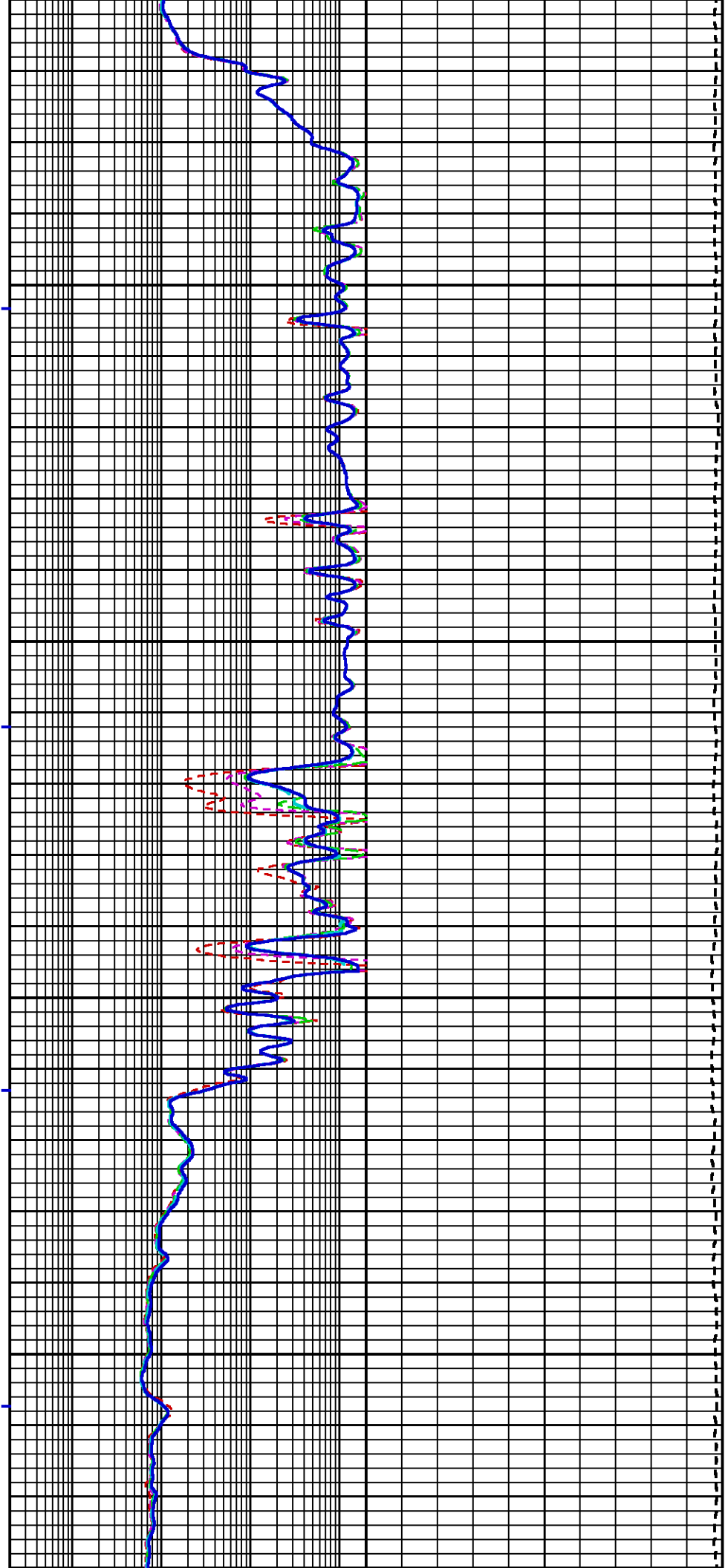
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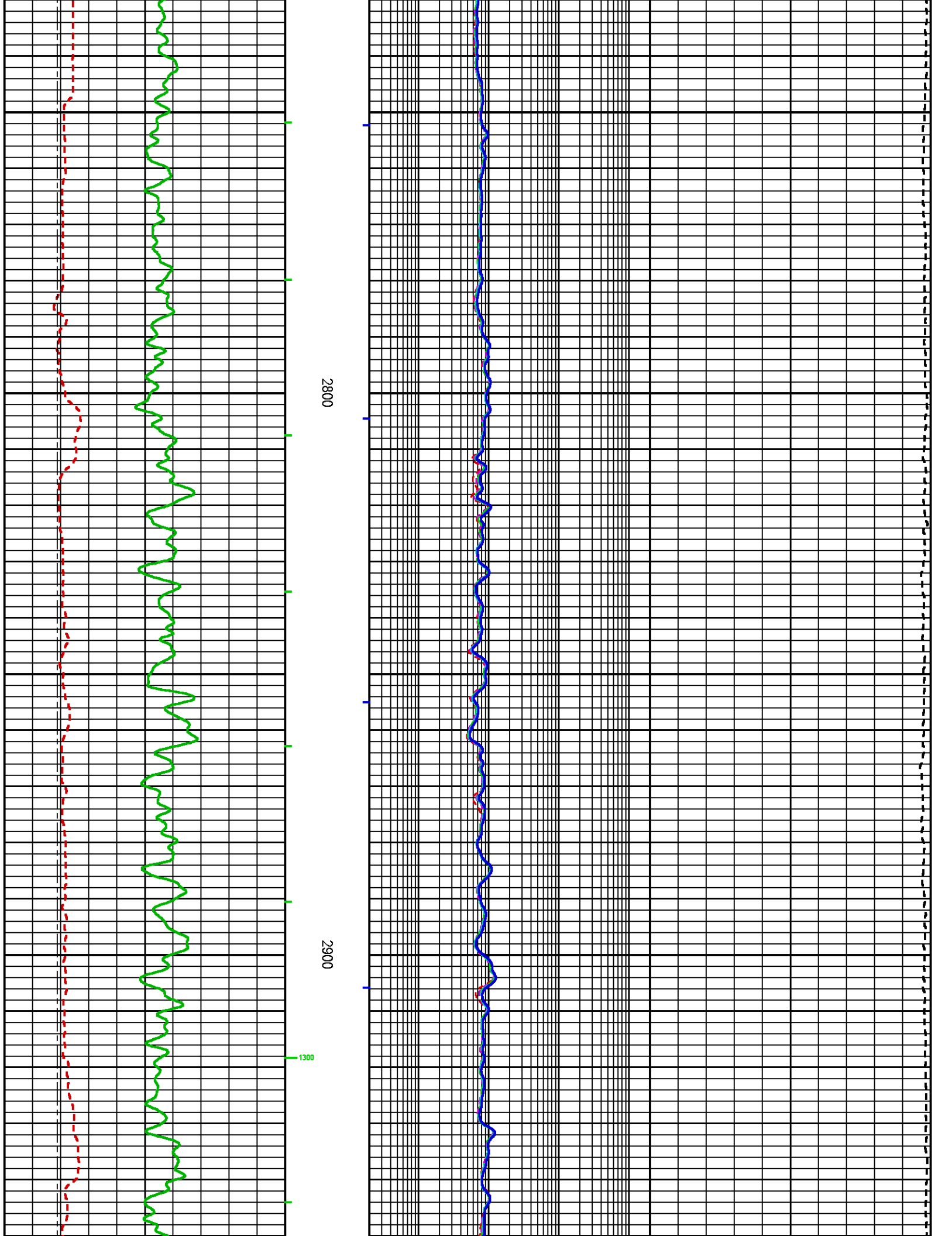
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1500

800



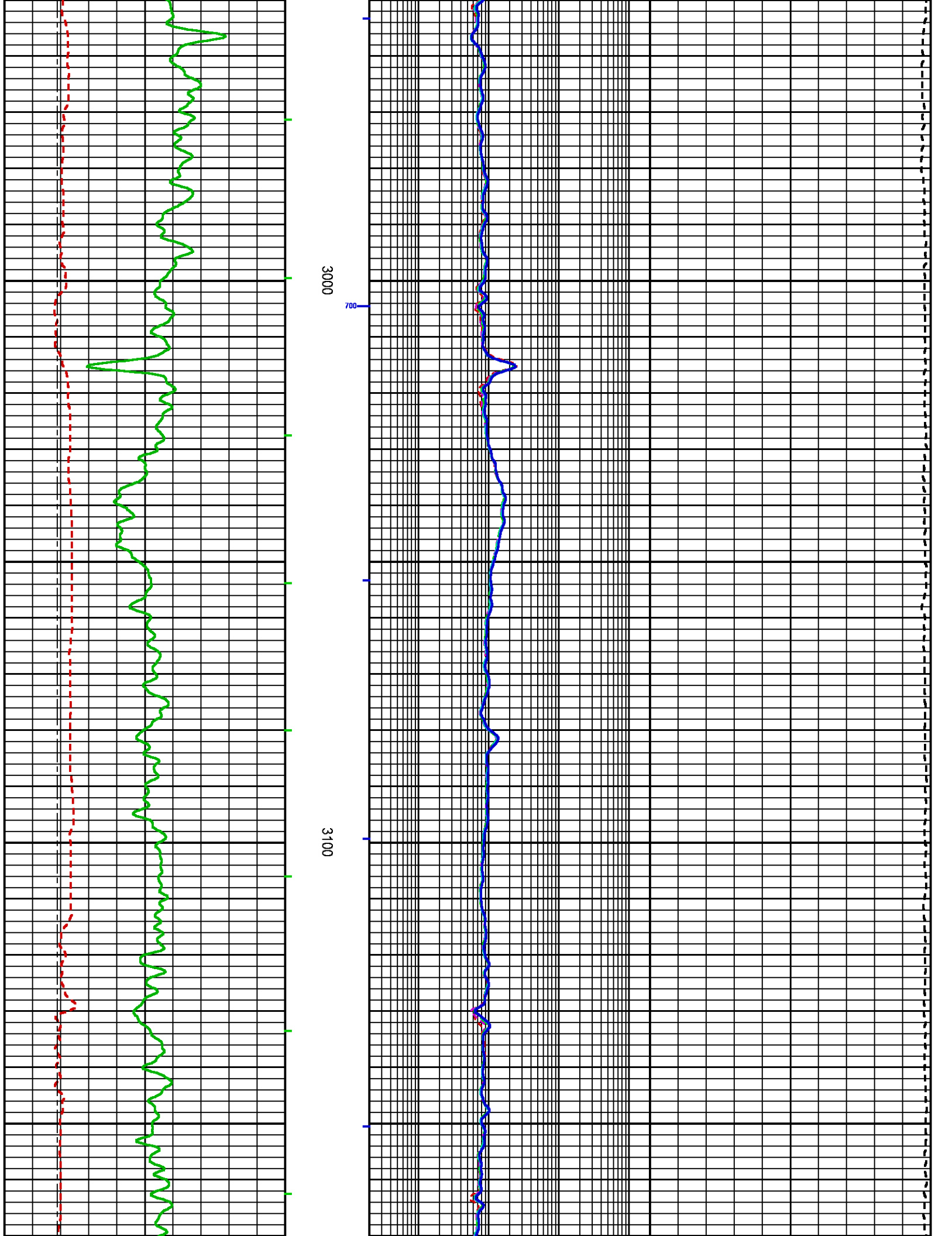


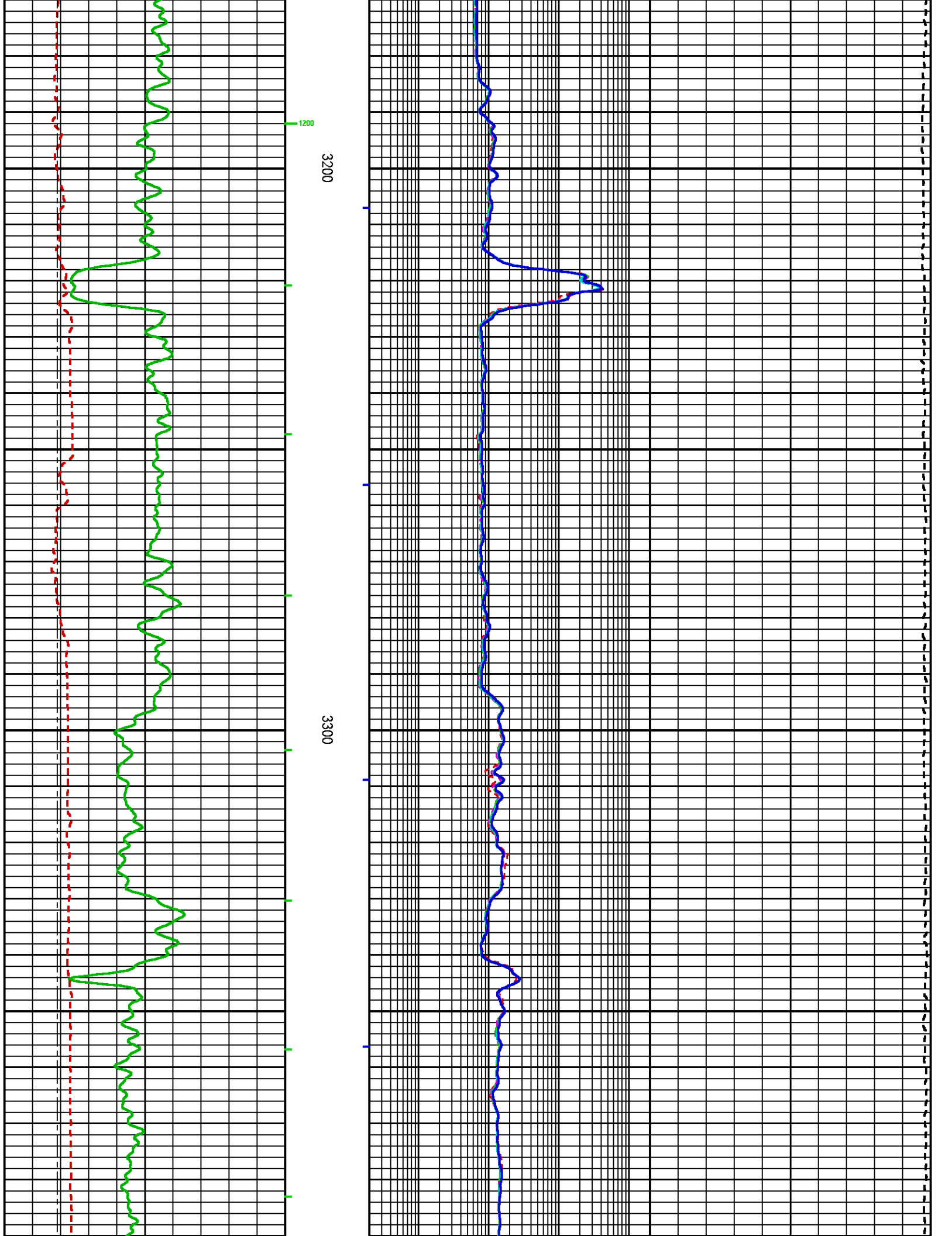


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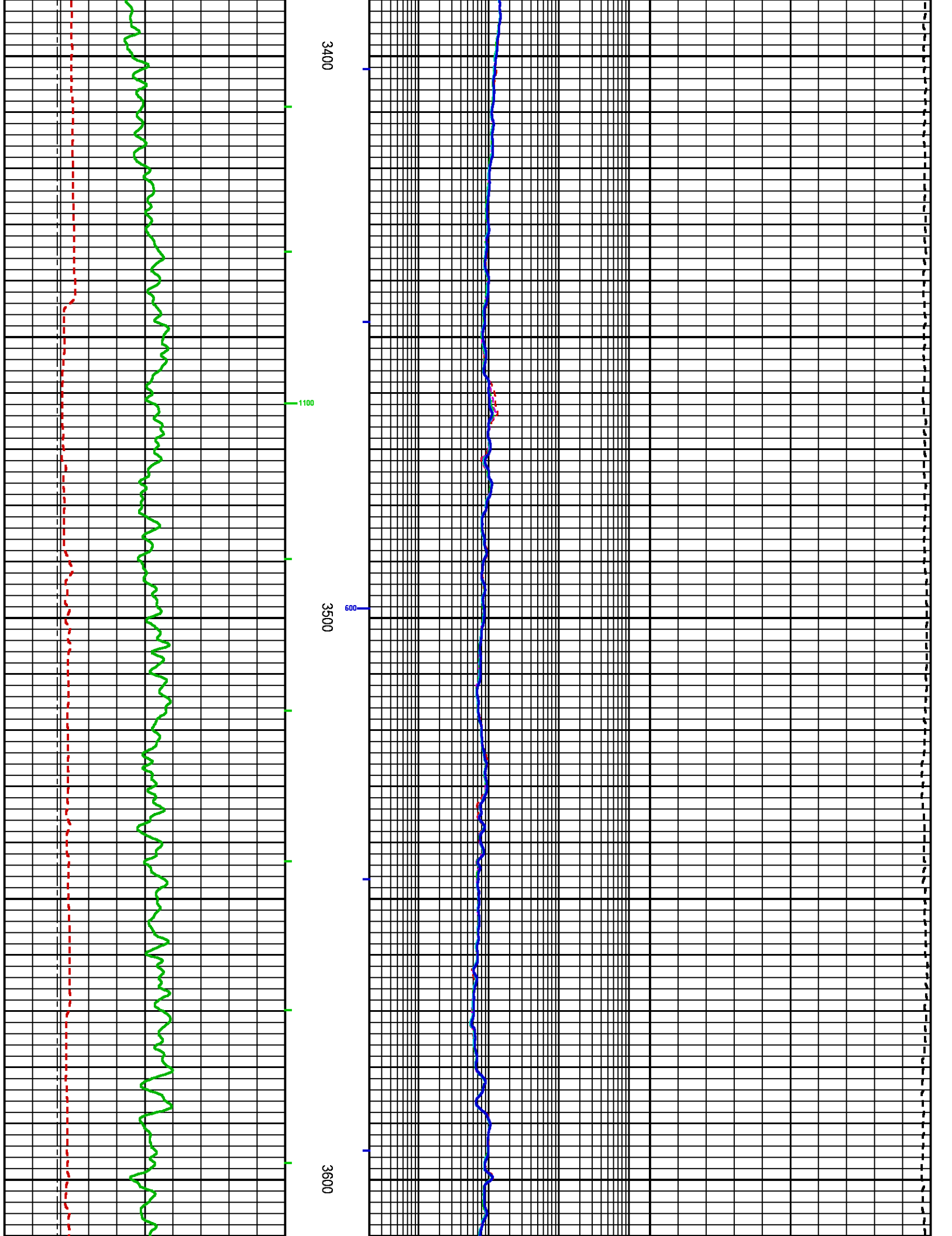
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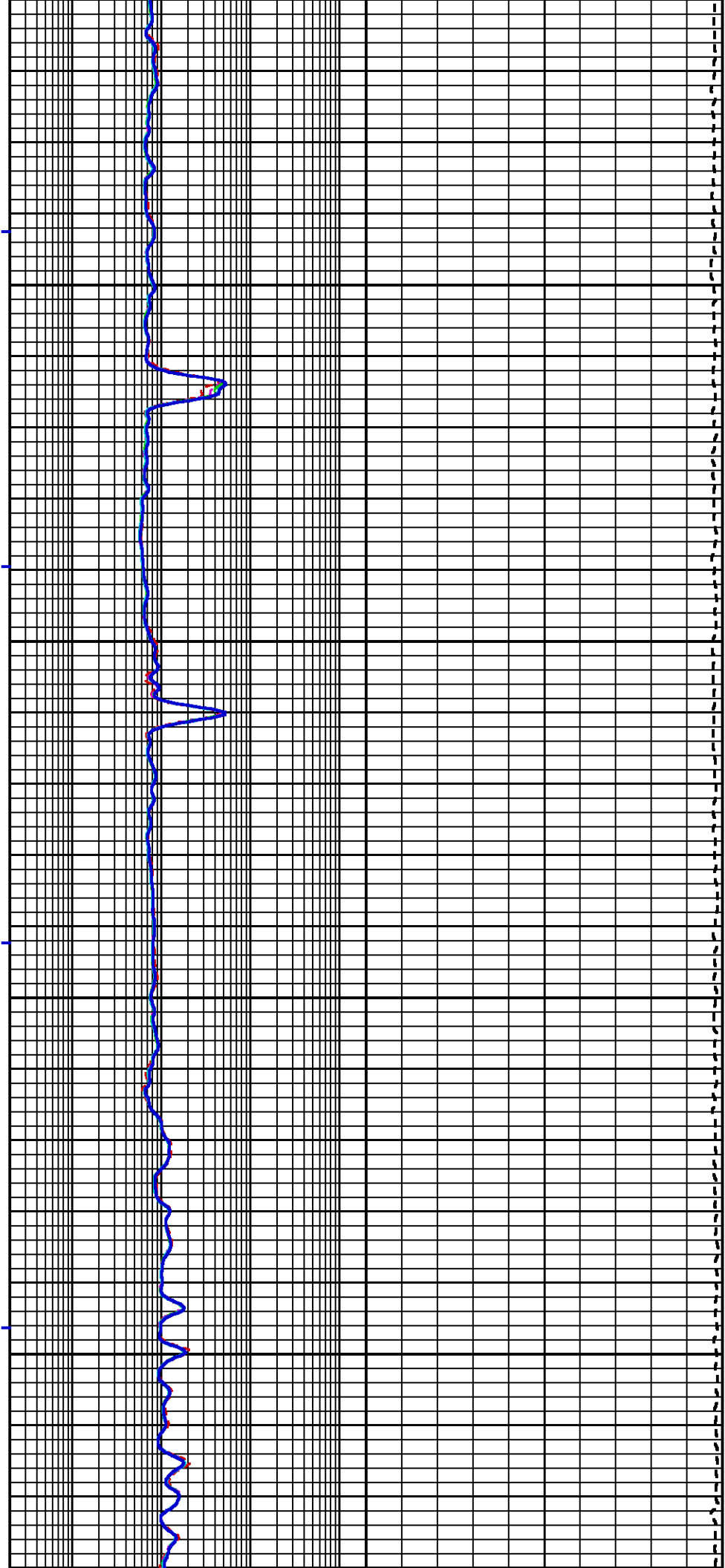
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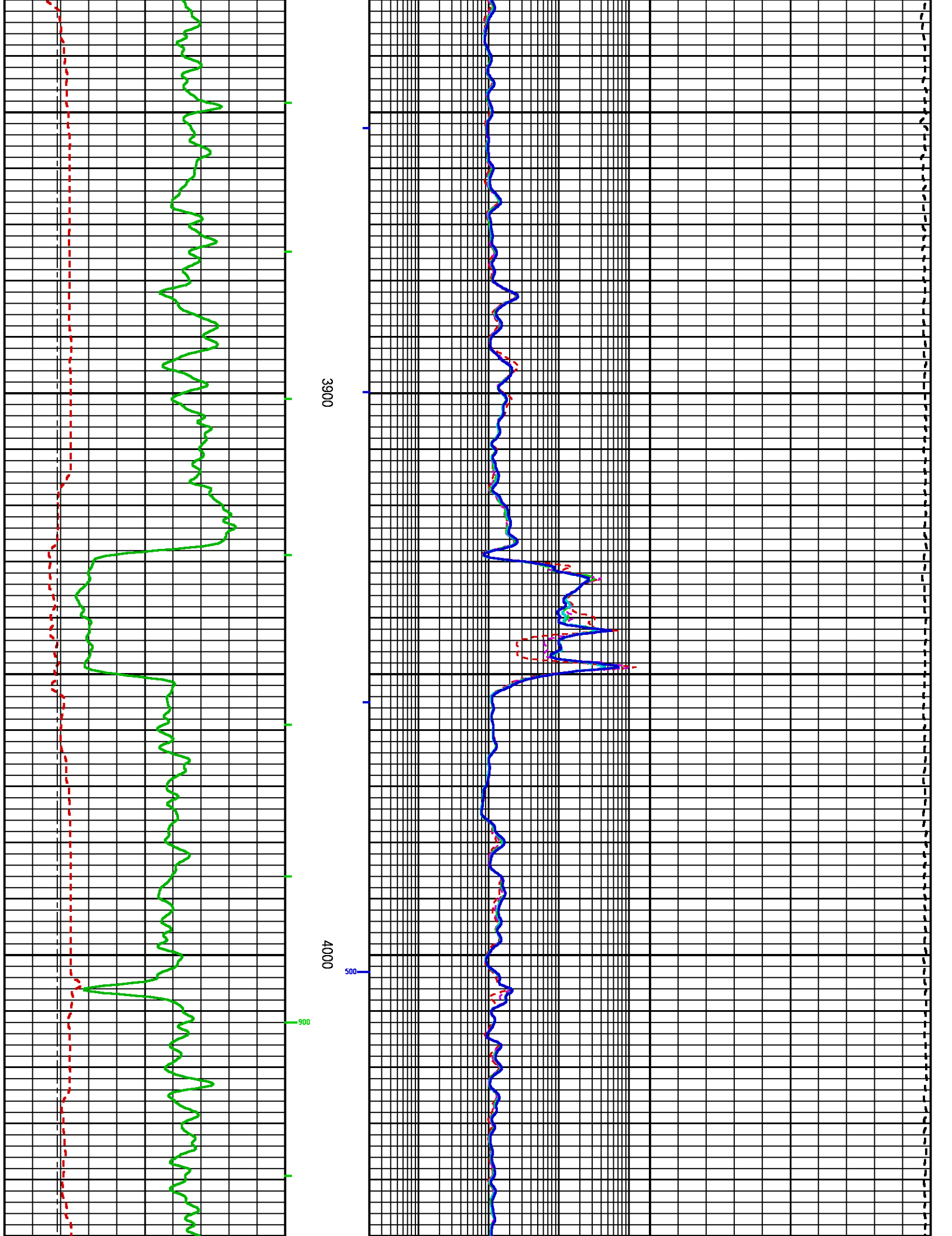


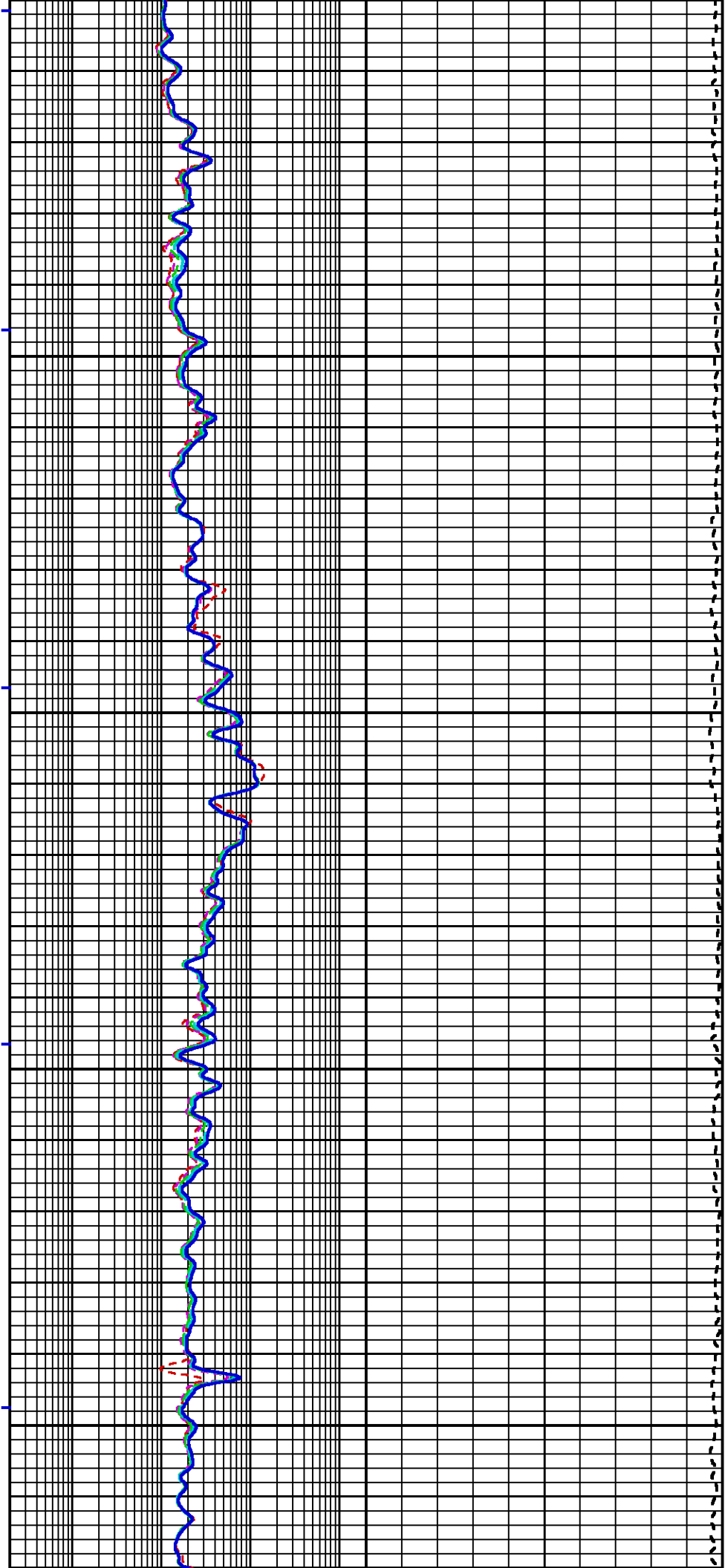


3700

3800

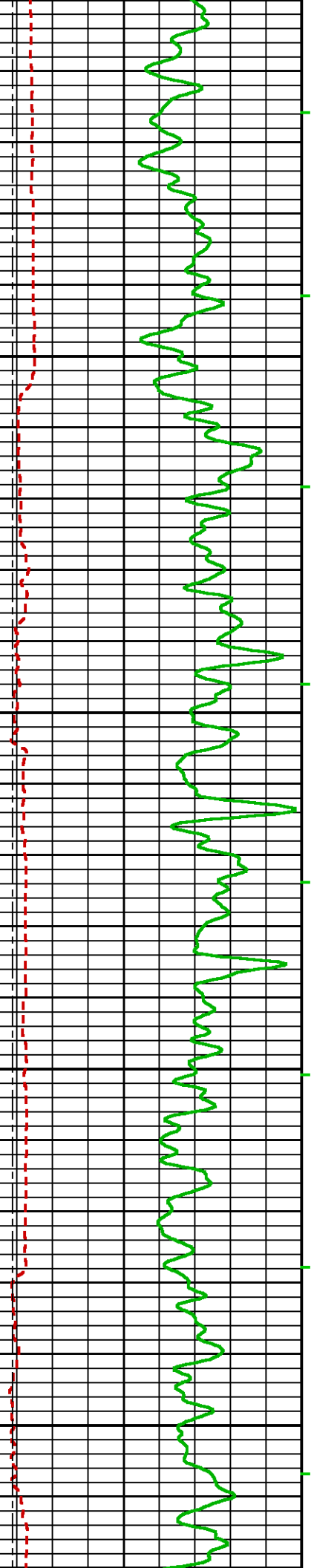
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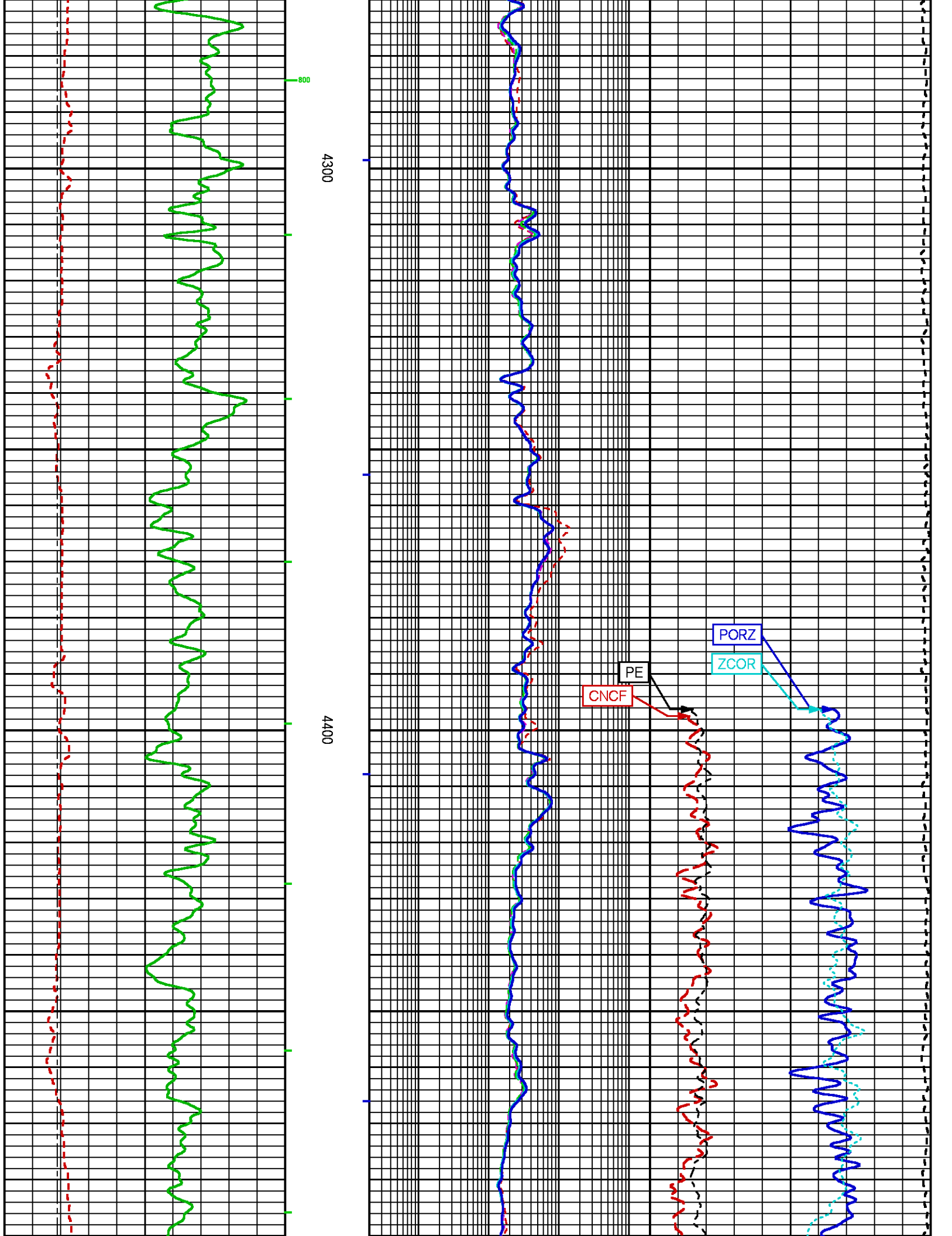


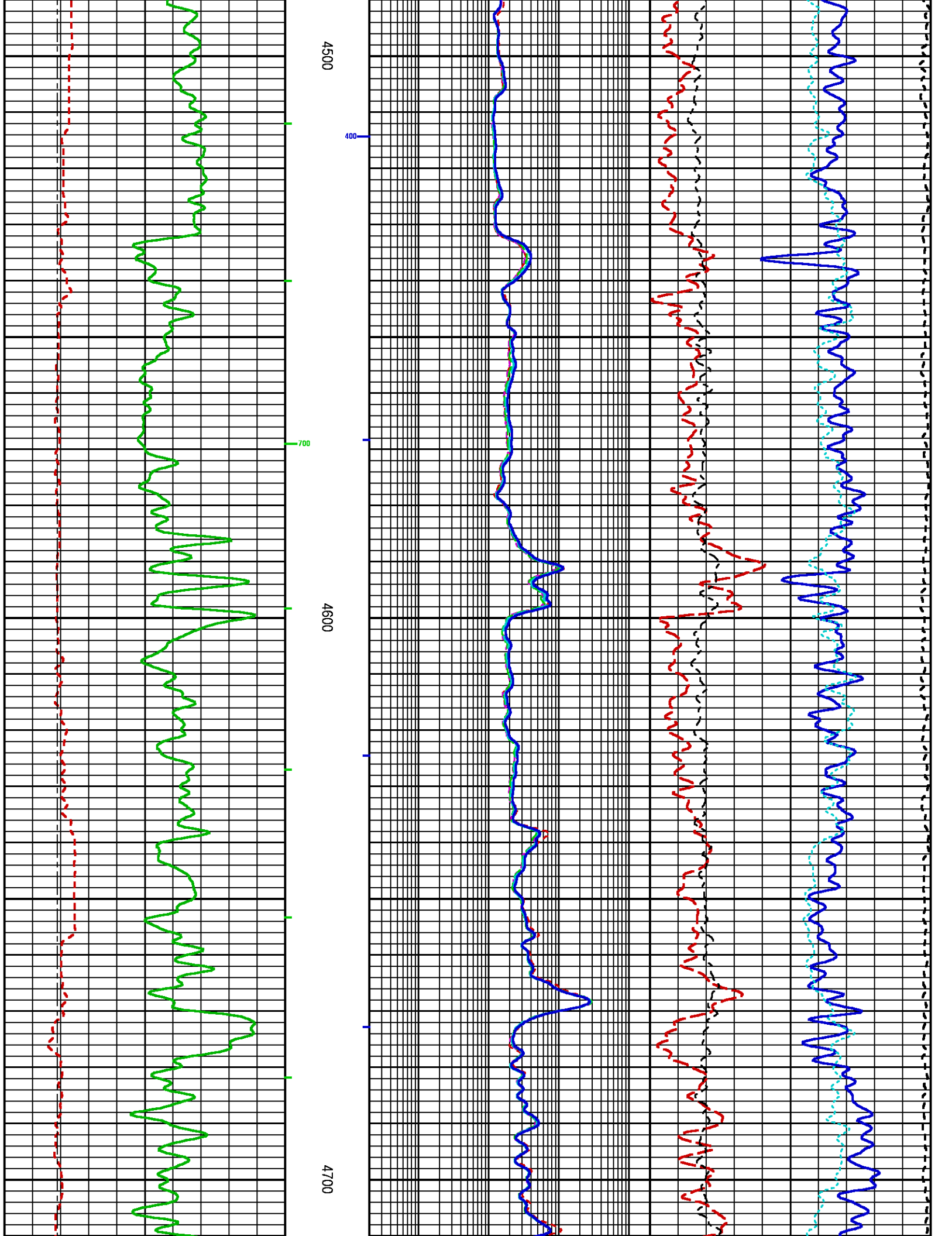


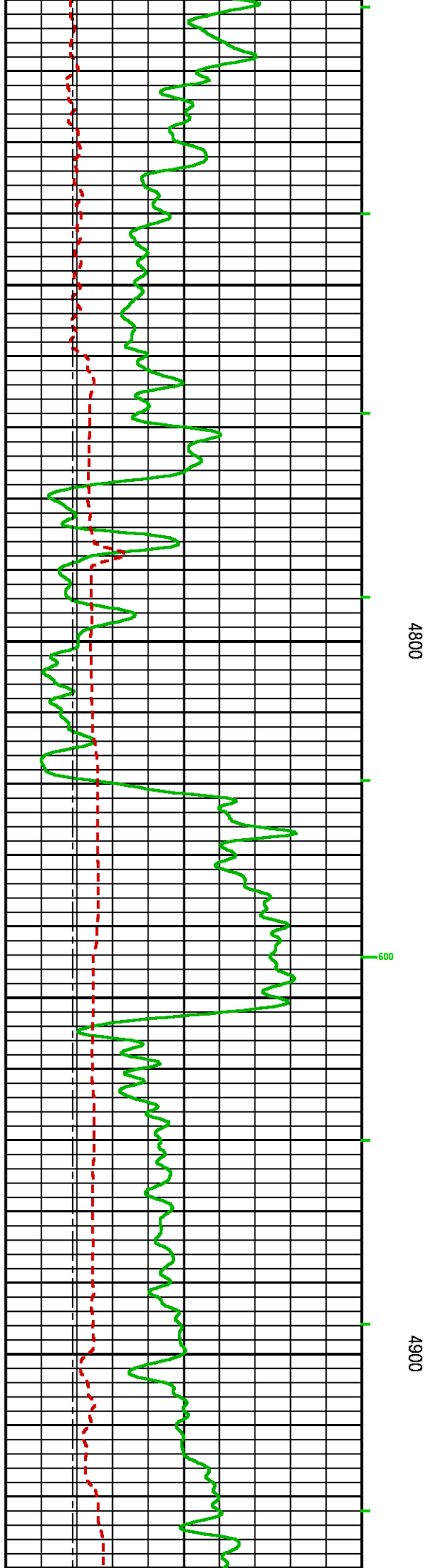
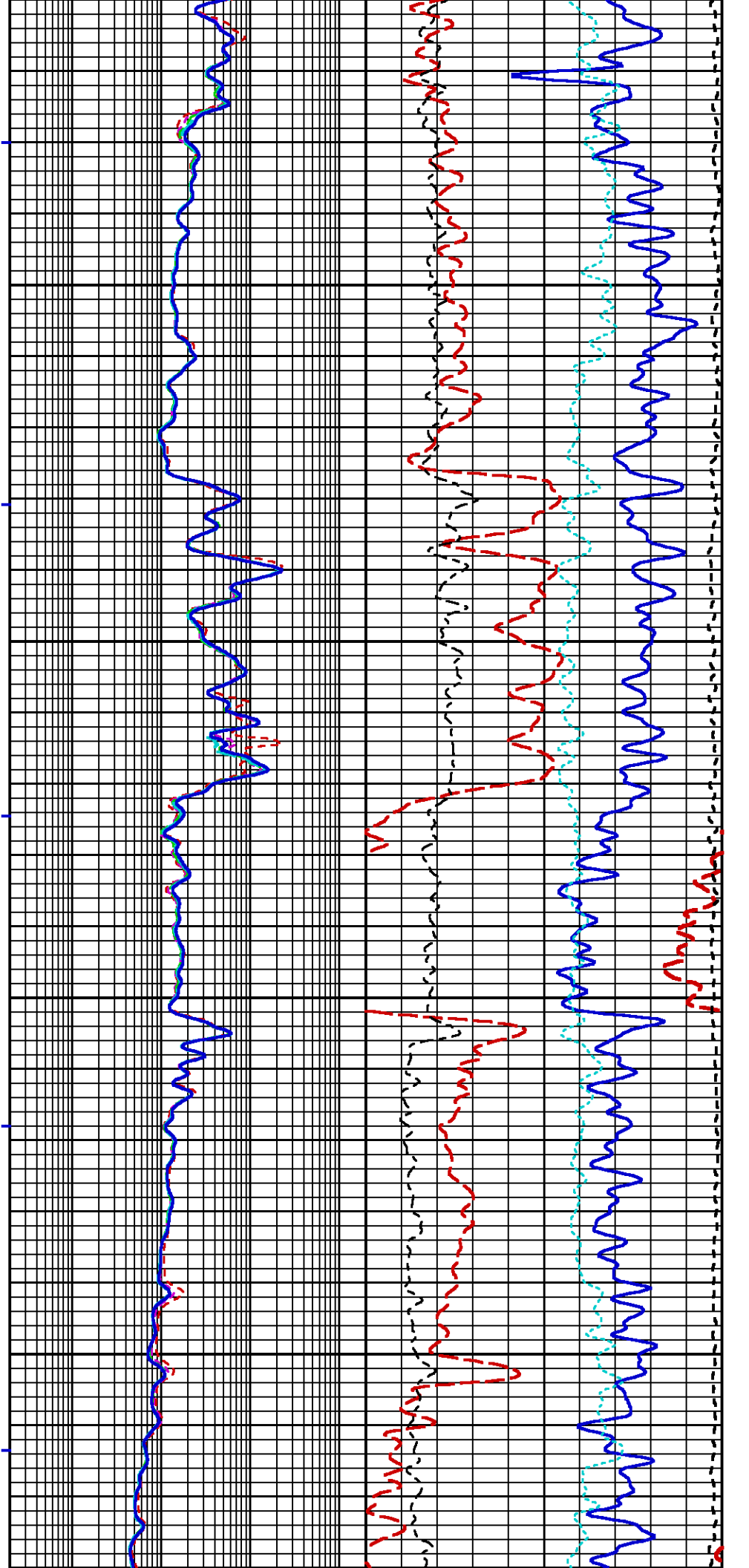
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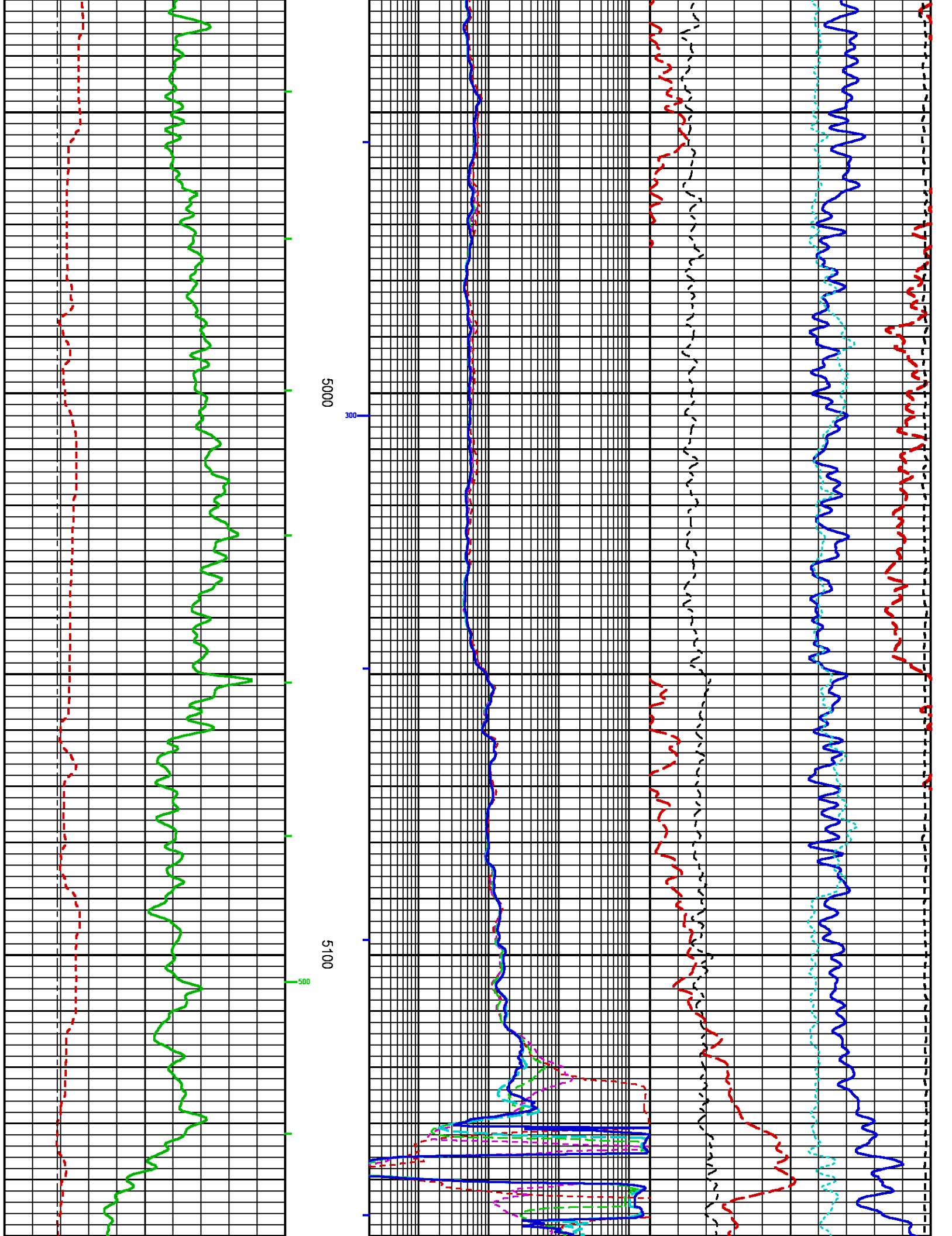
4200



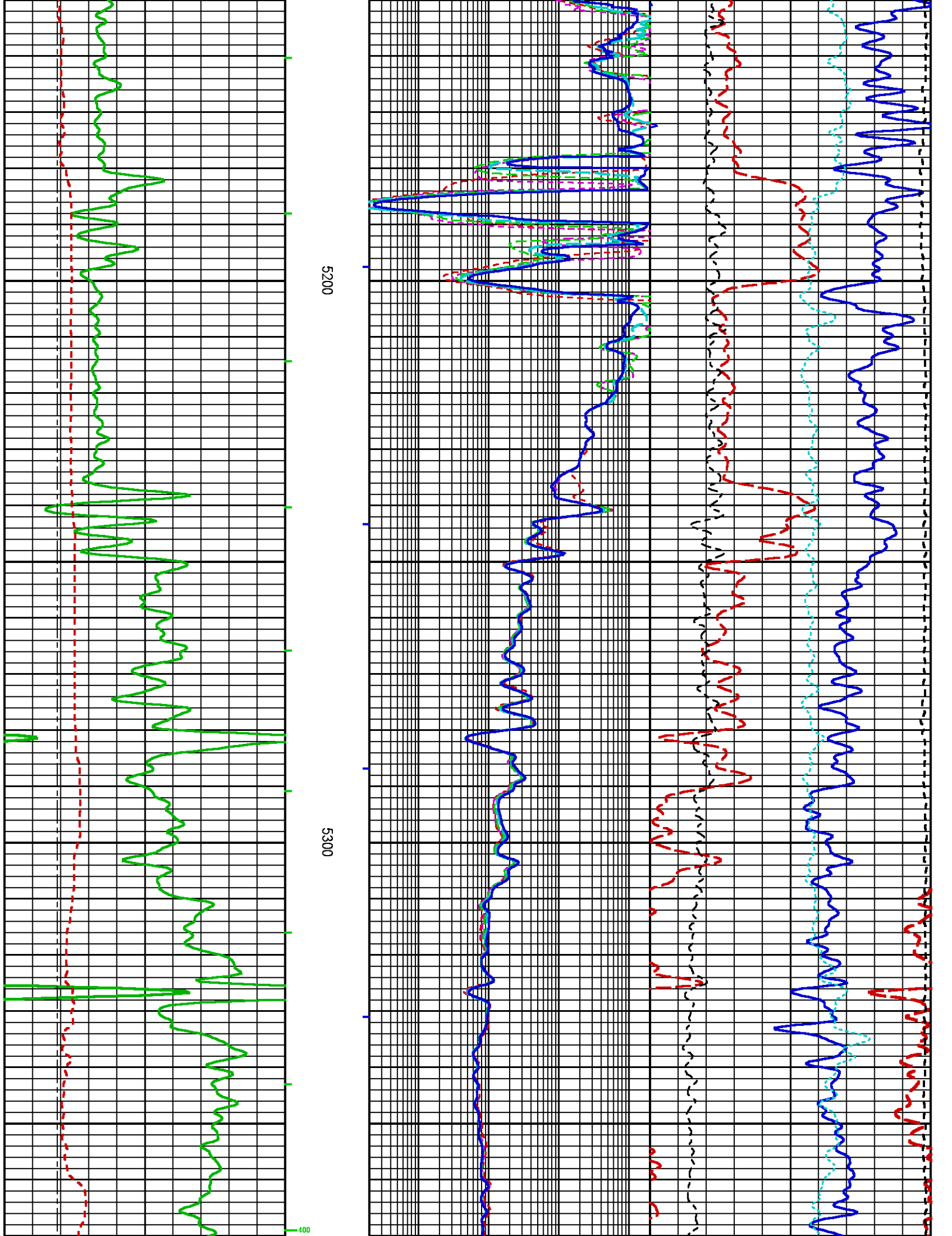


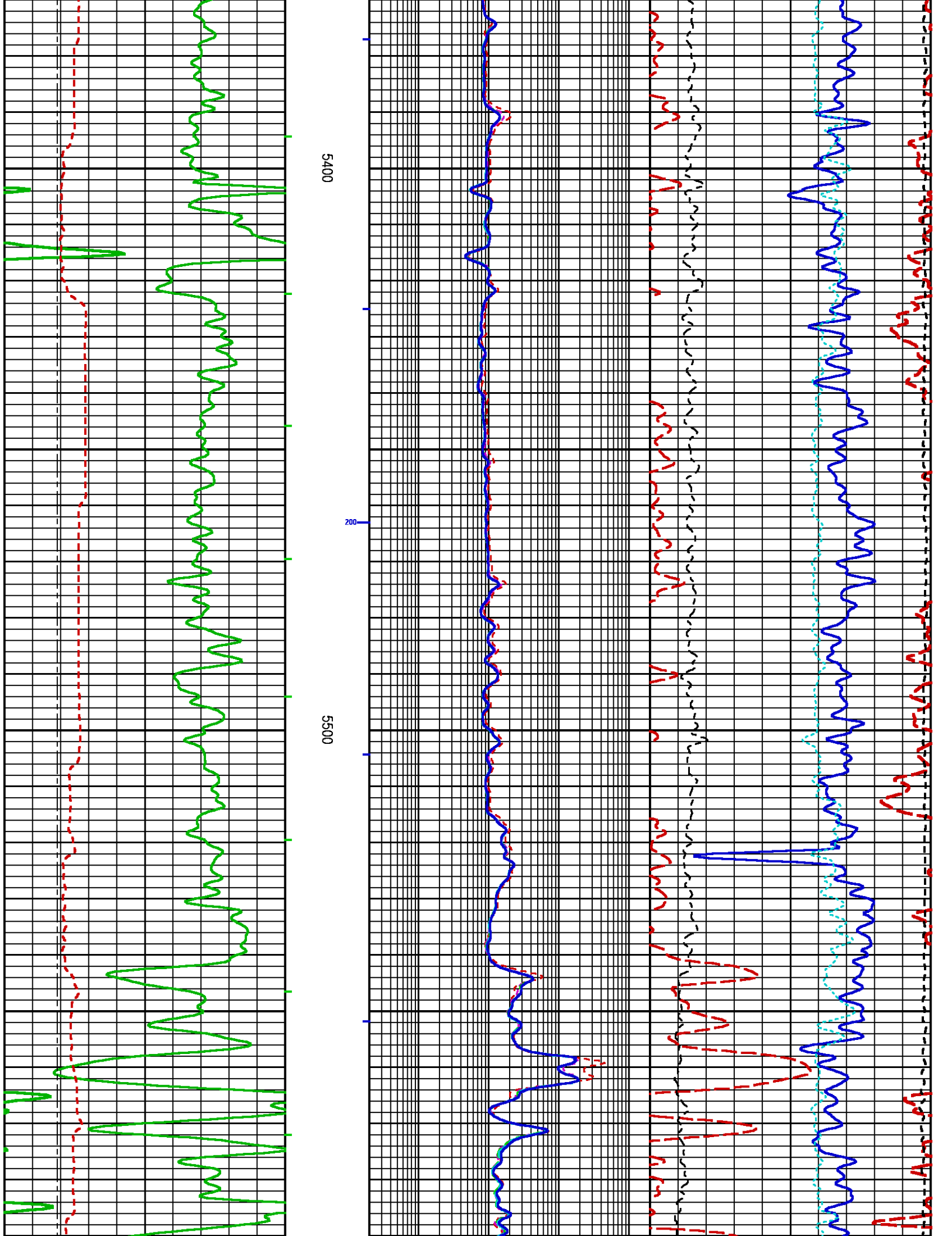


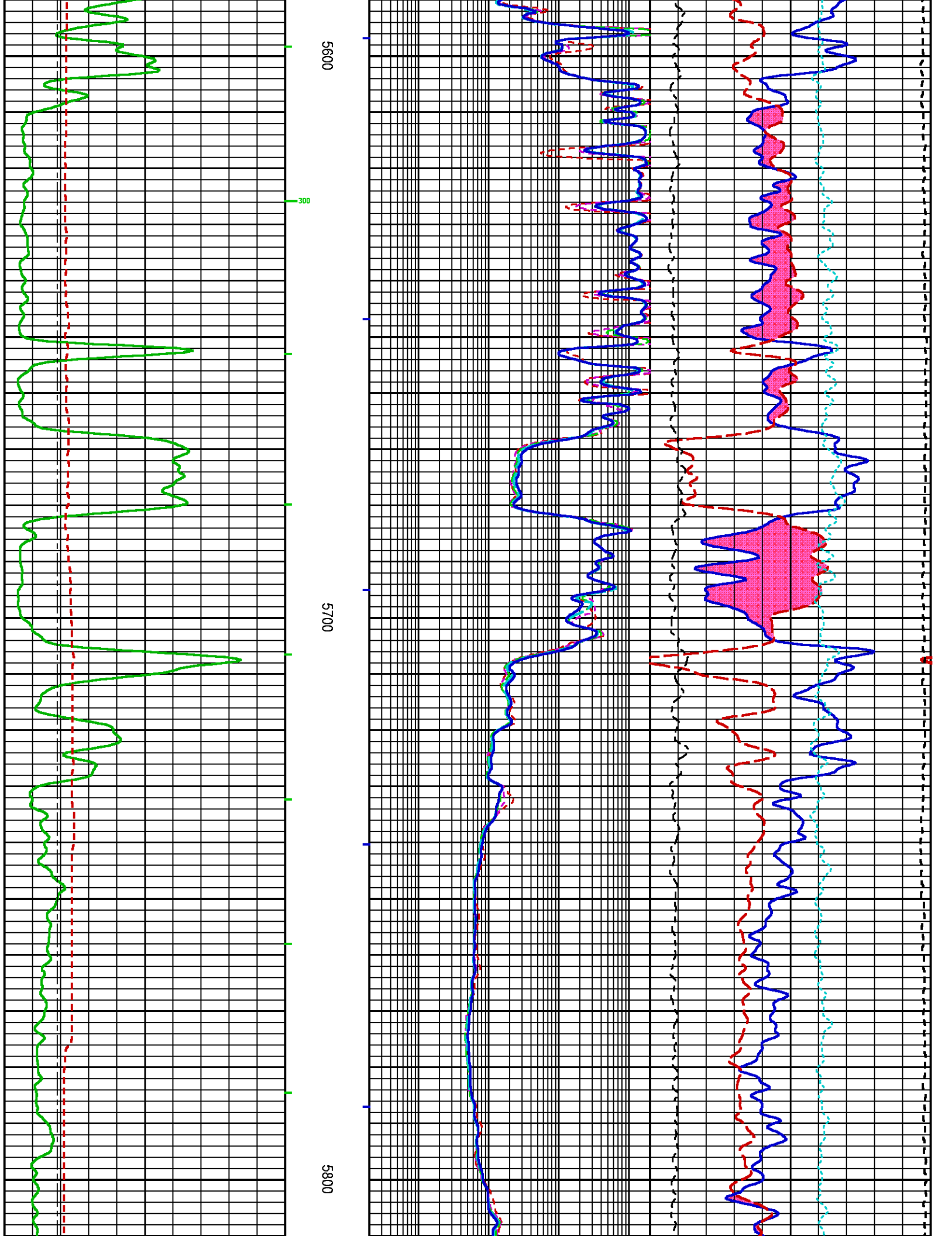


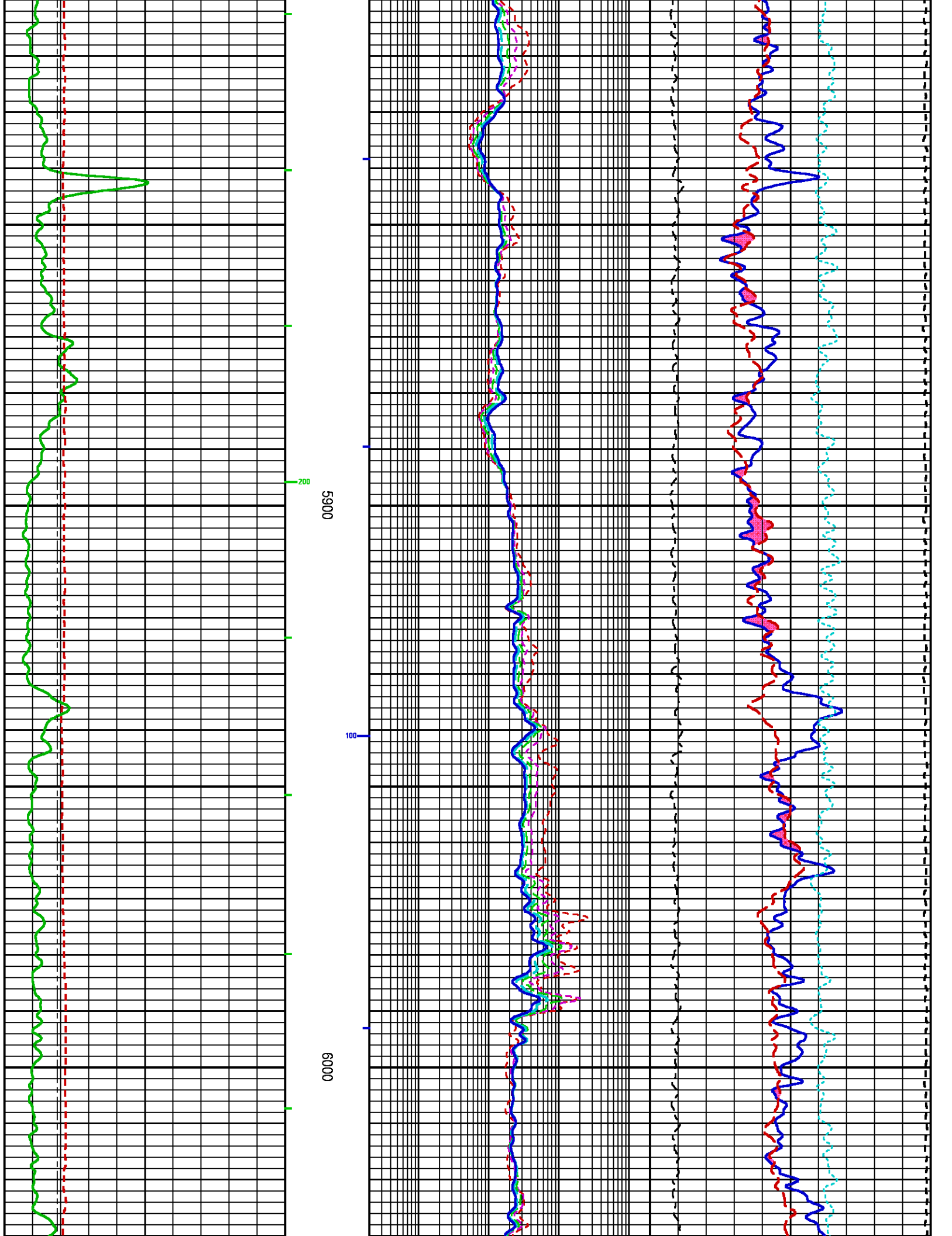


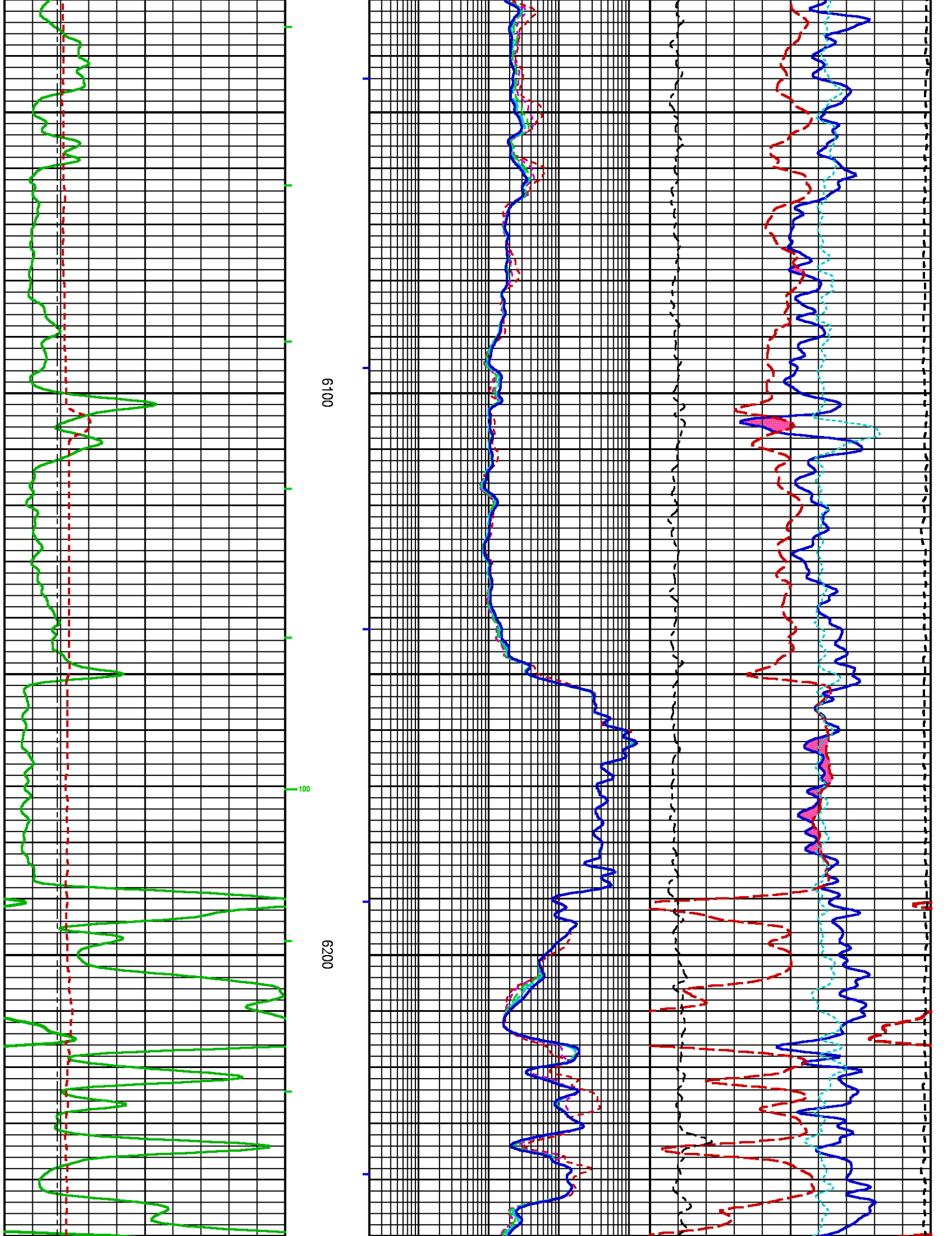


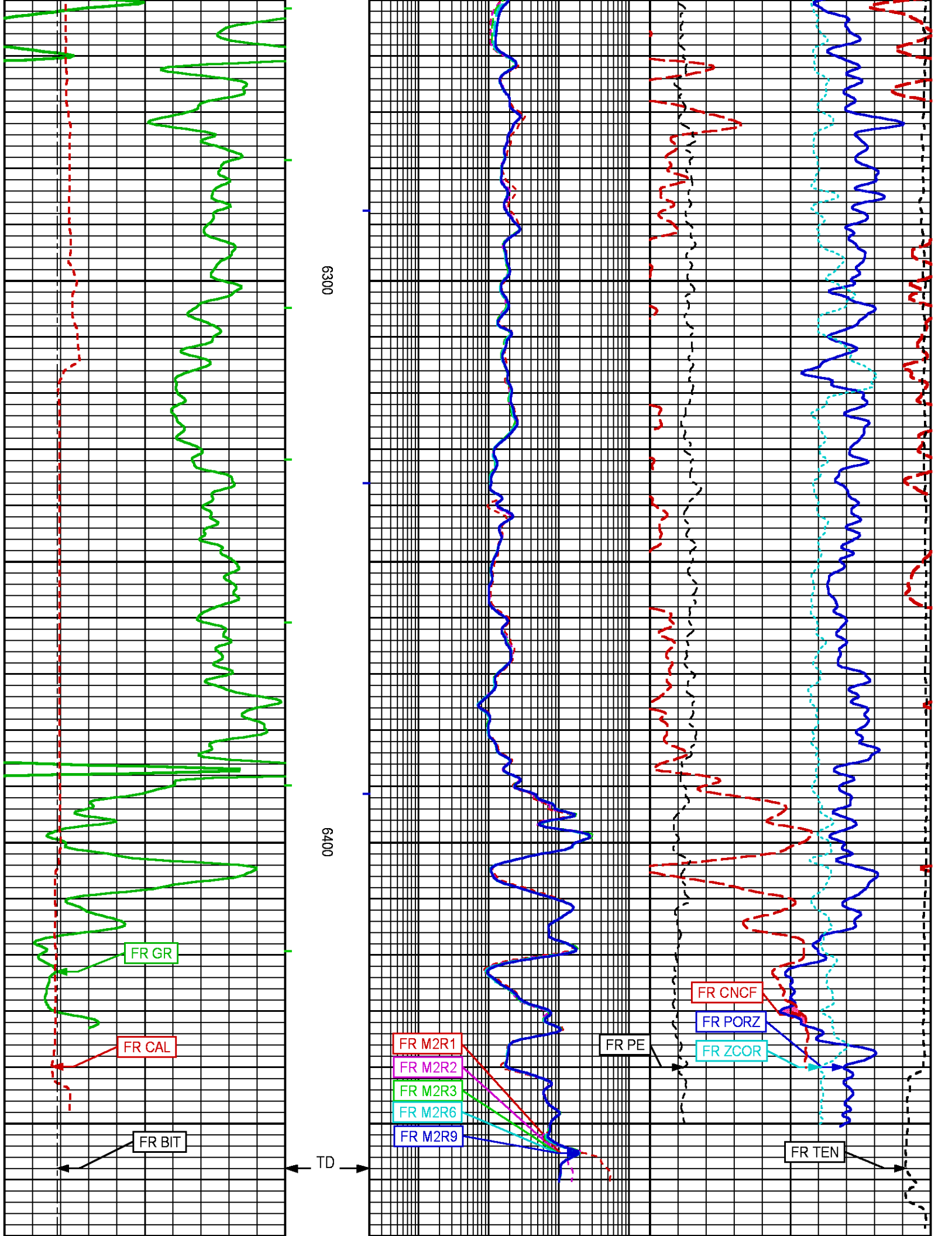


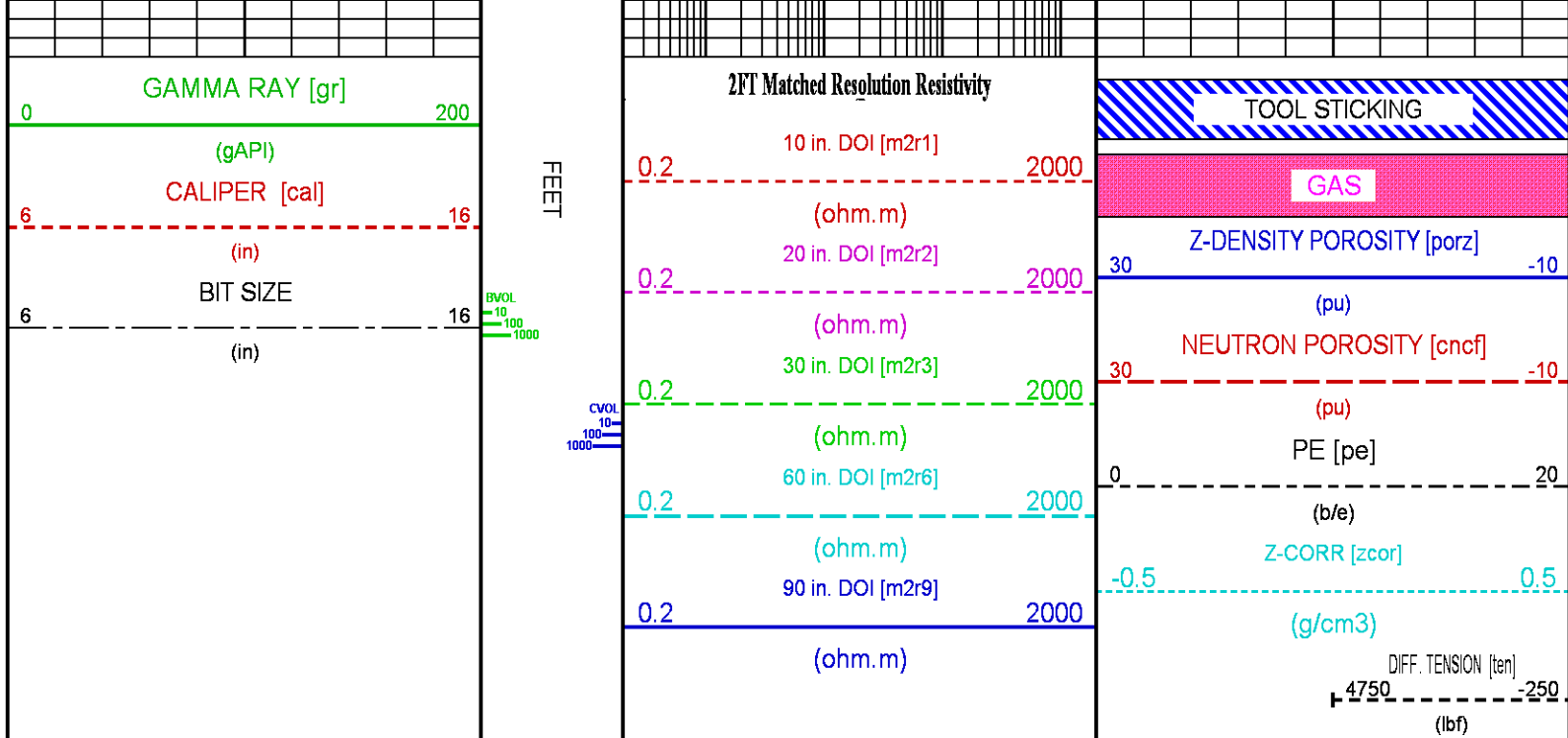












**REPEAT LOG 5"/100FT SCALE**

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

Plotted: Mon Jul 6 23:08:31 2015

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/OH096970/n970mR01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 6136.500 ft BOTTOM DEPTH: 6470.044 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		"	"

### BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	5.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (mbh*)	7.875	in	"	"

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

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	SANDSTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	34000	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	"	"

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	Air Filled Borehole	NO		TOP	BOTTOM
	RHOMatrix	2.650	g/cm3	"	"
	RHOfluid	1.000	g/cm3	"	"

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

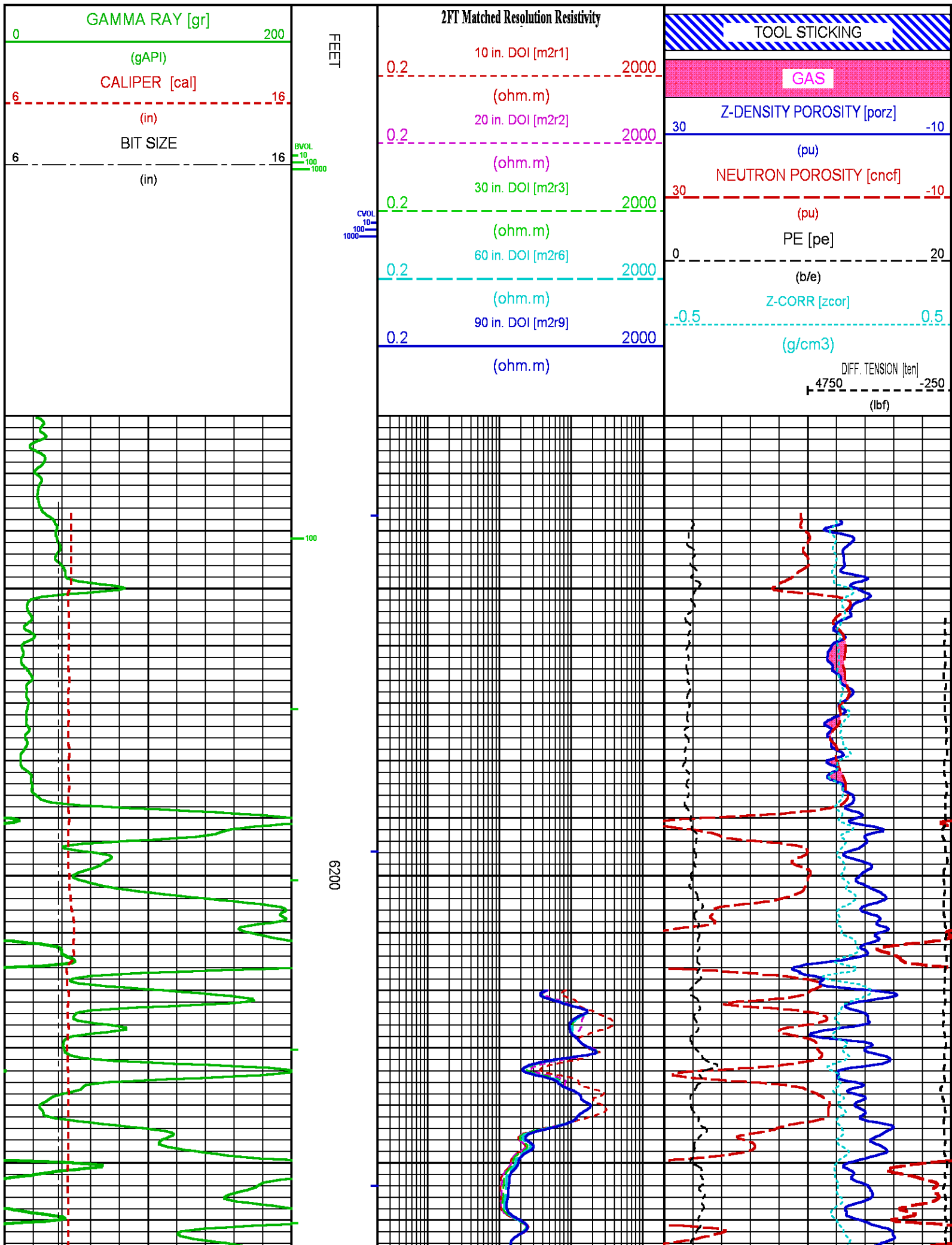
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Jul 6 21:28:56 2015	BIT SIZE
F1:BVOL	Jul 6 21:28:56 2015	BOREHOLE VOLUME
F1:CAL	Jul 6 21:28:56 2015	CALIPER
F1:CNCF	Jul 6 21:28:56 2015	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Jul 6 21:28:56 2015	CEMENT VOLUME
F1:GR	Jul 6 21:28:56 2015	GAMMA RAY
F1:M2R1	Jul 6 21:28:56 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Jul 6 21:28:56 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Jul 6 21:28:56 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Jul 6 21:28:56 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Jul 6 21:28:56 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Jul 6 21:28:56 2015	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Jul 6 21:28:56 2015	POROSITY FOR SELECTABLE MATRIX
F1:TEN	Jul 6 21:28:56 2015	DIFFERENTIAL TENSION
F1:ZCOR	Jul 6 21:28:56 2015	DENSITY CORRECTION

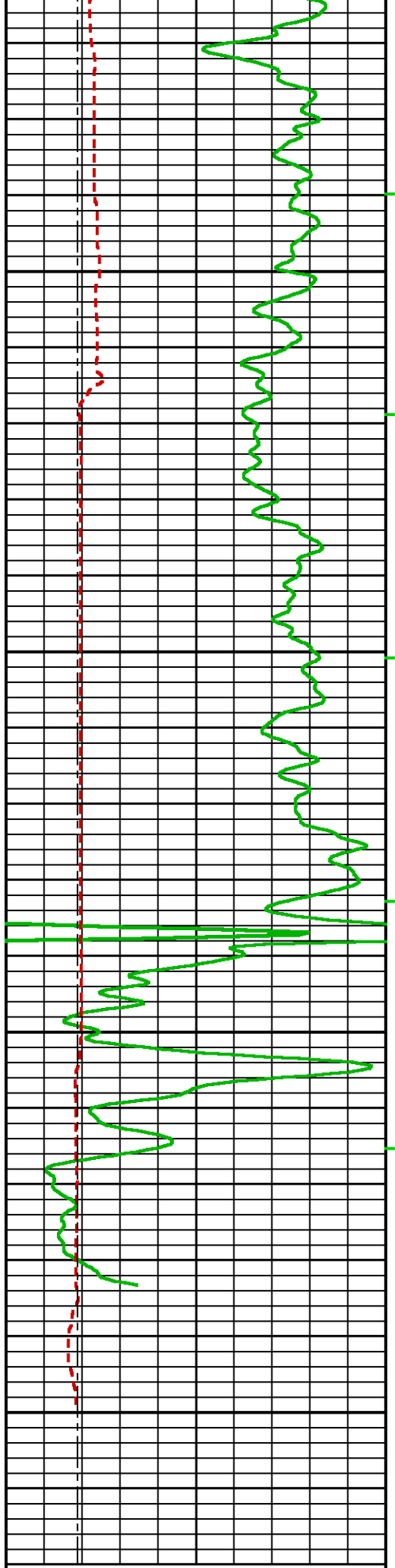
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	M2R1	2.75	M2R9	2.75	ZCOR	18.00
CAL	18.12	M2R2	2.75	PE	18.00		
CNCF	27.38	M2R3	2.75	PORZ	18.00		
GR	35.00	M2R6	2.75	TEN	0.00		

**Presentation : cas6685:/dat1a/OH096970/REPEAT.fvpdf [5"/100' Scale]**  
**Plot Interval : 6120.25 - 6474.25 Feet**

Data File 1 : F1 : cas6685:C:\data1\OH096970  
Created On 9/7/2015 12:21 PM  
Company : TABUCA RASA ENERGY  
Well : CADDELL #3  
Field : OAKDALE  
File Interval : 0 - 6475.5 Feet  
OCT : n970m



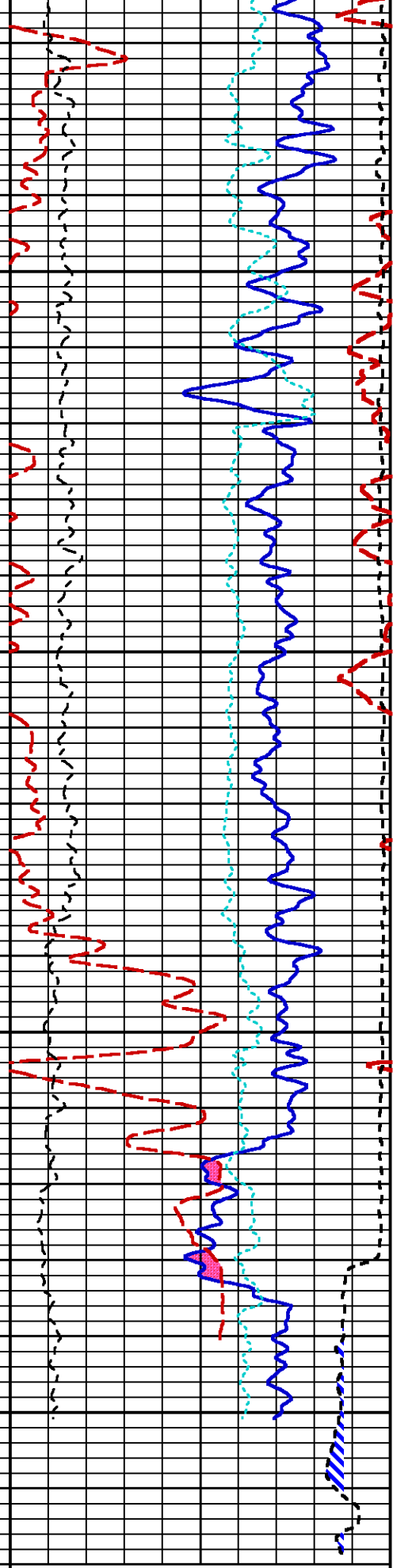
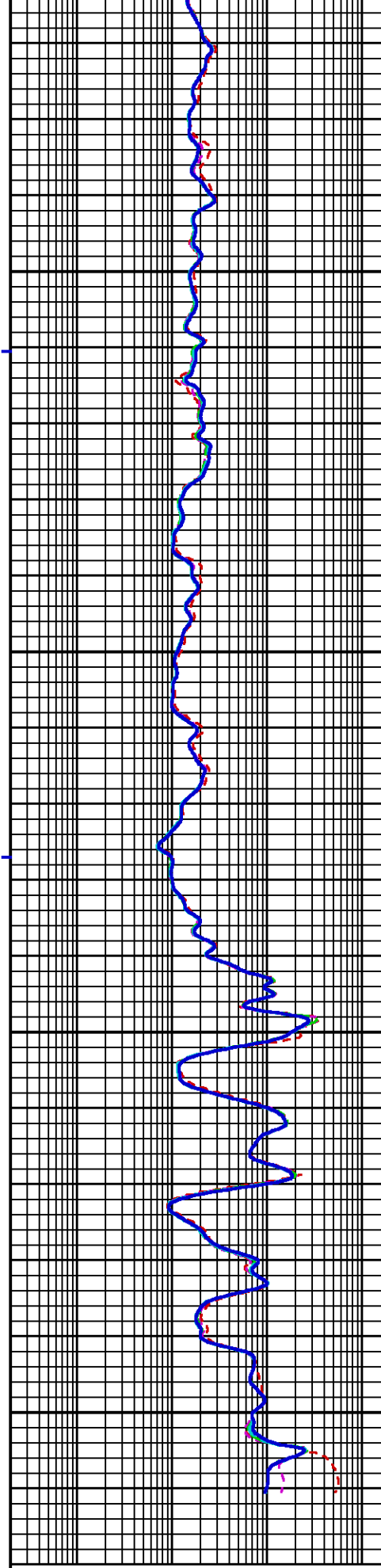




6300

6400

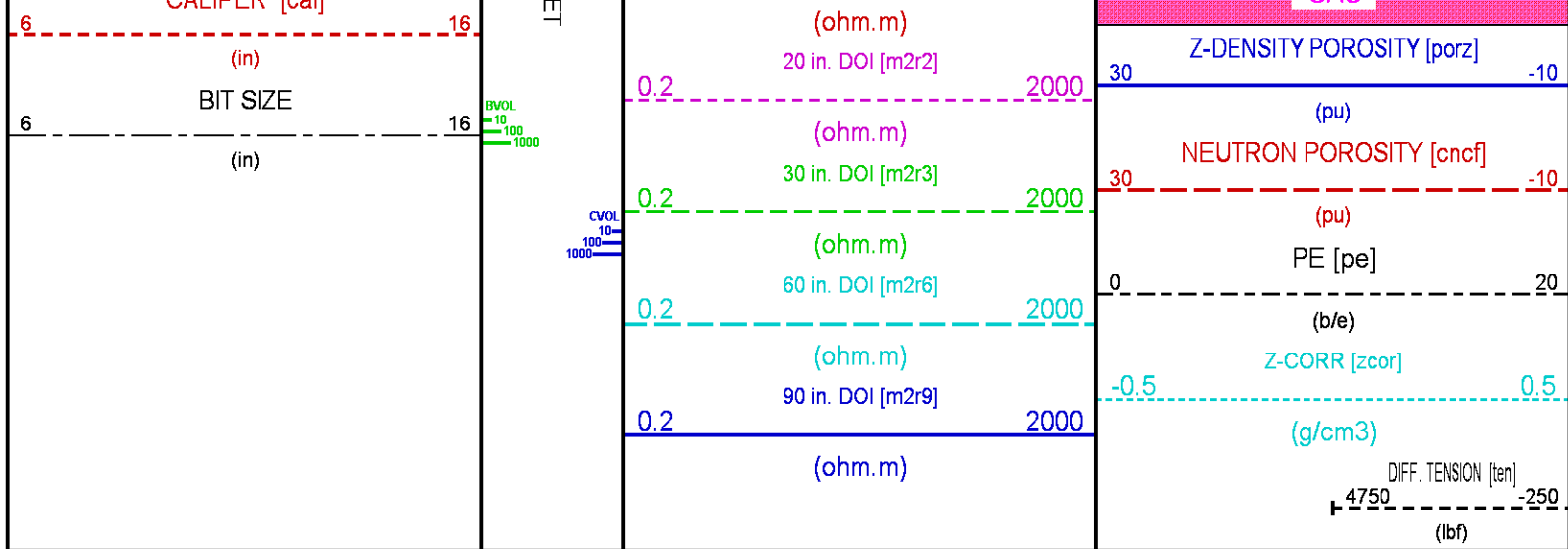
FE



0  
GAMMA RAY [gr]  
(gAPI)  
CALIBER [cal]

0.2  
2FT Matched Resolution Resistivity  
10 in. DOI [m2r1]  
2000

TOOL STICKING  
GAS



## CALIBRATION / VERIFICATION SUMMARY

Source File: C:\dat1a\OH096970\970m.tp1

### TTMA PRIMARY CALIBRATION SUMMARY

TOOL #: 3980XA 10120299

DATE/TIME PERFORMED: Tue Jun 09 15:51:10 2015

UNIT #: 3885TC 6685

ACCEL #: 3980XA 10120299

ACCEL CAL DATE: 13:43 05/21/2004

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

Rm Measurements

Sig Low (ohm)	Sig High (ohm)	Mult Factor	Add Factor	Engr Low (ohm)	Engr High (ohm)
0.25	9.97	1.003224	0.000443	0.25	10.00

### TTMA BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10120299

DATE/TIME PERFORMED: Mon Jul 06 19:33:06 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

	CHT (lb/f)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	18824	498.11	9.97	996.97
	18030 19630	491.36 505.76	8.00 12.00	980.00 1020.00
ZERO	-23331	-436.02	0.249	997.332
	-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: Mon Jul 06 22:21:48 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	18838	500.00	9.95	997.58
	18030 19630	491.36 505.76	8.00 12.00	980.00 1020.00
ZERO	-23331	-436.02	0.249	997.574
	-24131 -22531	-443.20 -428.80	0.200 0.300	980.000 1020.000

## GR PRIMARY CALIBRATION SUMMARY

Tool #: 3518EG 10139870

DATE/TIME PERFORMED: Tue Jun 09 10:18:46 2015

Unit #: 3885TD MI4230

Jig Series: 4702NK VBA-905

Background	Calibrator ON	Jig Value (gAPI)	Mult	Background (gAPI)	Calibrator ON (gAPI)
224.36	971.35	185	0.248	55.57	240.57
			0.230 0.280		

## GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870

DATE/TIME PERFORMED: Mon Jul 06 19:34:16 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67	60.50	1361.74
929.00 1027.00	536.00	1237.00 1512.00

## GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870

DATE/TIME PERFORMED: Mon Jul 06 22:21:44 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
977.00	125.24	1365.44
929.00 1027.00	536.00	1237.00 1512.00

## CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2436XA 10522099

DATE/TIME PERFORMED: Tue Jun 09 10:43:53 2015

UNIT #: 3885TD MI4230

CALIBRATOR #: 2437XB 112674

SOURCE #: 4718XA N-0897

SSN	LSN	SSN/LSN	MCF	CNRATIO	CN
DT CPS	DT CPS				PU
4824.30	847.72	5.69094	1.00809	5.73700	0.252
			0.95000 1.05000		

## CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10522099

DATE/TIME PERFORMED: Mon Jul 06 19:33:33 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

CALIBRATOR #: INTRNL N/A

SSN	LSN	SSN/LSN	TEMP	HV	LV
DT CPS	DT CPS		(degF)	(V)	(V)
992.07	994.44	0.99762	55.8	1322.0	4.624
		0.95000 1.05000	280.4	1250.0 1450.0	4.300 5.000

## CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10522099

DATE/TIME PERFORMED: Mon Jul 06 22:21:54 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

CALIBRATOR #: INTRNL N/A

SSN	LSN	SSN/LSN	TEMP	HV	LV
DT CPS	DT CPS		(degF)	(V)	(V)
992.07	994.09	0.99797	124.2	1322.5	4.626
		0.95000 1.05000	280.4	1250.0 1450.0	4.300 5.000

## CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2223XA 10090664

DATE/TIME PERFORMED: Tue Jun 09 09:20:29 2015

UNIT #: 3885TD MI4230

	SIZE	VALUE	MULTIPLIER	ADD
	(in)			
SMALL RING (Arm)	7.000	1107.6		
LARGE RING (Arm)	11.000	2355.6	0.00321	3.45000
PAD CLOSED		1572.0	0.00250	-3.93000

## CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10090664

DATE/TIME PERFORMED: Mon Jul 06 19:50:41 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	1884.0	0.00321	2.21554	8.3
PAD	1838.8	0.00250	-3.93000	0.7
		ACTUAL (in)	MEASURED (in)	
DIAMETER (arm+pad)		8.921	8.9	
			8.5 9.3	

## CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10090664

DATE/TIME PERFORMED: Mon Jul 06 22:20:19 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	1788.0	0.00321	2.21554	7.9
PAD	1776.0	0.00250	-3.93000	0.5
		ACTUAL (in)	MEASURED (in)	
DIAMETER (arm+pad)		8.921	8.9	
			8.5 9.3	

## ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2223XA 10090664

DATE/TIME PERFORMED: Tue Jun 09 09:54:16 2015

UNIT: 3885TD MI4230

CALB BLKS: 2225XA 094292F

CS SRC: 4705XA 16068B

PAD TYPE: PADTYP 7.5" PAD

	SS CS PK (Channel)	LS CS PK (Channel)	SS_BKGD (cps)	LS BKGD (cps)		
	225.0	223.9	1231.0	1603.8		
	220.0 230.0	220.0 230.0				
	SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)
MG (LO PE)	31905.9	11361.3	0.782	1.679	0.000	1.900

MG (HI PE)

0.1550.0	0.1550.0	0.720	0.890
----------	----------	-------	-------

0.1550.0	0.1550.0
----------	----------

AL

19877.7	1279.1
---------	--------

2.667	-0.016
-------	--------

AL + SHIM

26491.1	2231.2
---------	--------

2.558	0.098
-------	-------

MG + SHIM (HI PE)

15608.3	5426.8	0.306
0.280	0.360	

8.550
-------

RATIO AL + SHIM/AL

1.33	1.74
1.30	1.40
1.60	1.80

RATIO MG/AL

1.61	8.88
1.58	1.70
8.55	9.55

## ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10090664

DATE/TIME PERFORMED: Mon Jul 06 19:34:01 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1	224.8	1352.5
	3332.1 3352.1	220.0 230.0	1250.0 1550.0
SS	22355.0	224.1	1299.6
	22344.8 22364.8	220.0 230.0	1250.0 1550.0
	LV (V)	PAD CURRENT (mA)	
	5.0	76.8	
	4.8 5.3	50.0 120.0	

## ZDL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10090664

DATE/TIME PERFORMED: Mon Jul 06 22:21:09 2015

DAYS SINCE CAL: 27

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1	223.5	1400.3
	3332.1 3352.1	220.0 230.0	1250.0 1550.0
SS	22354.8	224.5	1365.0
	22344.8 22364.8	220.0 230.0	1250.0 1550.0
	LV (V)	PAD CURRENT (mA)	
	5.0	78.4	
	4.8 5.3	50.0 120.0	

## HDIL PRIMARY CALIBRATION SUMMARY

TOOL #: 1530XA 10415933

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

UNIT #: 3885TC 6685

GRCOND ID &amp; DATE: 86 101801

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.0017	0.0005	0.0000	0.0009	-0.0004	-0.0002	0.0001	-0.0008
	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 0 Q	-0.0009	0.0004	0.0012	0.0003	0.0003	0.0006	-0.0002	-0.0004
	-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 1 R	-0.0005	-0.0002	0.0009	0.0027	-0.0003	0.0003	-0.0011	-0.0020
	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 1 Q	-0.0077	-0.0024	0.0019	0.0028	-0.0021	-0.0015	-0.0007	-0.0005
	-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 2 R	0.0005	-0.0032	0.0025	0.0029	-0.0019	0.0013	0.0018	-0.0016
	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 2 Q	0.0029	-0.0005	0.0027	-0.0032	0.0012	0.0017	-0.0013	0.0005
	-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 3 R	0.0151	-0.0024	0.0059	-0.0046	0.0042	-0.0008	-0.0009	-0.0031
	-0.3000 0.3000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 3 Q	-0.0117	0.0033	-0.0054	-0.0020	0.0047	0.0037	-0.0011	0.0029
	-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 4 R	-0.0069	0.0014	0.0050	-0.0007	0.0121	0.0011	-0.0022	0.0014
	-0.5000 0.5000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000
Coil 4 Q	-0.0108	-0.0053	-0.0070	0.0005	-0.0021	0.0078	-0.0000	0.0121
	-1.0000 1.0000	-0.4000 0.4000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000
Coil 5 R	0.0243	0.0175	-0.0146	0.0328	-0.0136	-0.0018	-0.0087	-0.0134
	-1.2000 1.2000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000
Coil 5 Q	-0.0147	-0.0077	0.0042	-0.0148	-0.0123	0.0093	-0.0047	0.0049
	-1.5000 1.5000	-0.8000 0.8000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	163.36	161.97	159.17	155.00	149.42	142.55	134.32	124.93
	136.00 186.00	134.00 184.00	131.00 181.00	126.00 176.00	122.00 170.00	118.00 161.00	112.00 150.00	105.00 139.00
Coil 0 P	7.751	25.548	42.916	60.258	77.639	95.046	112.509	129.981
	6.000 9.000	21.000 30.000	35.000 50.000	49.000 71.000	63.000 91.000	77.000 109.000	92.000 130.000	106.000 151.000
Coil 1 M	285.73	283.01	277.56	269.53	259.04	246.39	231.61	215.04
	238.00 328.00	235.00 325.00	230.00 320.00	225.00 312.00	218.00 302.00	208.00 288.00	196.00 266.00	184.00 244.00
Coil 1 P	7.779	25.655	43.064	60.393	77.698	94.952	112.194	129.374
	6.000 9.000	21.000 30.000	35.000 51.000	49.000 71.000	63.000 92.000	78.000 112.000	93.000 130.000	107.000 151.000
Coil 2 M	584.09	578.61	567.66	551.64	530.72	505.34	475.61	442.00
	479.00 659.00	474.00 654.00	463.00 643.00	450.00 622.00	432.00 602.00	412.00 572.00	390.00 540.00	359.00 499.00
Coil 2 P	7.831	25.813	43.326	60.764	78.187	95.599	112.998	130.399
	6.000 9.000	21.000 31.000	35.000 51.000	49.000 71.000	63.000 92.000	76.000 115.000	92.000 135.000	105.000 155.000
Coil 3 M	934.04	925.92	909.50	884.96	852.71	812.92	765.62	711.94
	772.00 1060.00	764.00 1050.00	752.00 1030.00	728.00 1010.00	700.00 970.00	665.00 925.00	628.00 868.00	589.00 799.00
Coil 3 P	7.835	25.767	43.272	60.733	78.209	95.707	113.198	130.671
	6.000 10.000	21.000 30.000	35.000 51.000	49.000 72.000	63.000 93.000	76.000 114.000	90.000 135.000	104.000 156.000
Coil 4 M	1501.2	1487.8	1460.2	1419.1	1365.4	1299.5	1222.1	1134.7
	1210.0 1700.0	1205.0 1690.0	1180.0 1650.0	1140.0 1590.0	1120.0 1530.0	1070.0 1450.0	1000.0 1350.0	942.0 1240.0
Coil 4 P	7.854	25.964	43.609	61.193	78.774	96.340	113.887	131.394
	6.000 10.000	21.000 31.000	35.000 52.000	49.000 73.000	63.000 93.000	77.000 114.000	91.000 135.000	105.000 156.000
Coil 5 M	3024.7	2997.6	2940.3	2855.9	2745.6	2611.7	2452.8	2276.1
	2450.0 3450.0	2420.0 3400.0	2410.0 3320.0	2350.0 3200.0	2280.0 3080.0	2150.0 2950.0	2020.0 2750.0	1870.0 2570.0
Coil 5 P	8.027	26.404	44.317	62.162	79.997	97.839	115.630	133.470



AM Factor	10 KHz		30 KHz		50 KHz		70 KHz		90 KHz		110 KHz		130 KHz		150 KHz	
Coil 0 R	-1697		-837		-583		-466		-398		-353		-322		-298	
	-3200	940	-1400	-20	-930	-150	-760	-160	-660	-130	-600	-120	-550	-110	-520	-92
Coil 0 Q	-851		-829		-677		-587		-531		-495		-473		-459	
	-15000	11000	-5800	3800	-3700	2100	-2700	1400	-2200	1000	-1800	790	-1600	620	-1500	490
Coil 1 R	-250		-188		-159		-141		-127		-116		-107		-100	
	-750	460	-360	83	-280	9	-230	-10	-200	-26	-180	-35	-160	-46	-150	-49
Coil 1 Q	-182		-137		-117		-108		-104		-101		-97		-95	
	-3300	3300	-1100	960	-630	530	-470	360	-380	260	-320	190	-290	150	-260	120
Coil 2 R	-7.6		-36.1		-37.0		-34.8		-31.8		-29.1		-26.6		-24.1	
	-85.0	76.0	-64.0	-0.4	-57.0	-12.0	-51.0	-16.0	-46.0	-17.0	-42.0	-16.0	-39.0	-15.0	-37.0	-13.0
Coil 2 Q	-247.2		-84.4		-54.4		-42.1		-34.5		-29.0		-24.2		-20.5	
	-1500.0	1900.0	-500.0	610.0	-290.0	350.0	-220.0	260.0	-160.0	190.0	-140.0	160.0	-110.0	130.0	-99.0	120.0
Coil 3 R	0.0		-9.5		-10.3		-9.9		-9.4		-8.6		-8.1		-7.4	
	-23.0	21.0	-22.0	1.6	-21.0	-1.3	-20.0	-1.8	-19.0	-2.0	-19.0	-1.3	-19.0	-0.8	-19.0	-0.0
Coil 3 Q	-52.1		-14.1		-6.0		-1.2		2.3		5.9		9.1		11.9	
	-540.0	530.0	-180.0	180.0	-100.0	110.0	-71.0	81.0	-51.0	66.0	-37.0	58.0	-28.0	53.0	-21.0	51.0
Coil 4 R	-6.22		-4.67		-4.61		-4.39		-4.37		-3.76		-3.42		-3.20	
	-18.00	13.00	-12.00	2.70	-11.00	1.50	-9.80	0.52	-9.90	0.96	-10.00	1.50	-11.00	2.30	-11.00	2.60
Coil 4 Q	26.02		10.74		10.39		11.79		13.56		16.28		18.70		21.74	
	-250.00	280.00	-79.00	98.00	-43.00	64.00	-27.00	51.00	-18.00	46.00	-11.00	42.00	-5.50	42.00	-1.00	42.00
Coil 5 R	-0.88		-3.31		-2.81		-2.34		-2.29		-2.18		-2.08		-2.05	
	-56.00	51.00	-8.40	3.60	-6.90	1.10	-6.90	1.20	-9.30	2.90	-14.00	6.30	-19.00	9.60	-24.00	13.00
Coil 5 Q	-24.31		-3.68		2.00		6.29		9.77		13.27		16.31		19.70	
	-88.00	69.00	-26.00	27.00	-14.00	22.00	-7.00	22.00	-2.50	24.00	1.10	26.00	4.10	29.00	7.10	32.00

[illegible]

PARMS

TCID 0

TCID 1

Cal Temp

T Factor

(degF)

IDs

3.659

0.987

79.5

1.00

## HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1530XA 10415933

DATE/TIME PERFORMED: Mon Jul 06 19:33:52 2015

DAYS SINCE CAL: 6

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	-0.000 -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	-0.001 -0.100 0.100
Coil 0 Q	-0.003 -0.500 0.500	0.000 -0.200 0.200	-0.000 -0.100 0.100	0.001 -0.100 0.100	-0.001 -0.100 0.100	0.000 -0.100 0.100	-0.001 -0.100 0.100	-0.000 -0.100 0.100
Coil 1 R	-0.001 -0.200 0.200	-0.002 -0.100 0.100	0.001 -0.100 0.100	0.003 -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
Coil 1 Q	-0.008 -0.500 0.500	-0.001 -0.200 0.200	0.002 -0.100 0.100	0.001 -0.100 0.100	0.001 -0.100 0.100	-0.001 -0.100 0.100	-0.001 -0.100 0.100	-0.001 -0.100 0.100
Coil 2 R	0.002 -0.200 0.200	-0.004 -0.100 0.100	0.002 -0.100 0.100	-0.003 -0.100 0.100	0.002 -0.100 0.100	0.001 -0.100 0.100	0.003 -0.100 0.100	0.003 -0.100 0.100
Coil 2 Q	-0.002 -0.500 0.500	0.001 -0.200 0.200	0.000 -0.100 0.100	-0.000 -0.100 0.100	0.001 -0.100 0.100	-0.002 -0.100 0.100	-0.002 -0.100 0.100	0.003 -0.100 0.100
Coil 3 R	0.018 -0.300 0.300	-0.000 -0.100 0.100	0.005 -0.100 0.100	0.005 -0.100 0.100	0.001 -0.100 0.100	0.000 -0.100 0.100	0.003 -0.100 0.100	-0.001 -0.100 0.100
Coil 3 Q	-0.008 -0.500 0.500	-0.004 -0.200 0.200	0.007 -0.100 0.100	0.000 -0.100 0.100	-0.003 -0.100 0.100	-0.003 -0.100 0.100	0.002 -0.100 0.100	0.001 -0.100 0.100
Coil 4 R	0.008 -0.500 0.500	-0.005 -0.200 0.200	-0.009 -0.200 0.200	0.002 -0.200 0.200	-0.006 -0.200 0.200	-0.007 -0.200 0.200	0.009 -0.200 0.200	-0.001 -0.200 0.200
Coil 4 Q	-0.003 -1.000 1.000	-0.005 -0.400 0.400	0.005 -0.200 0.200	0.005 -0.200 0.200	0.008 -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	0.012 -1.200 1.200	0.003 -0.400 0.400	0.012 -0.400 0.400	-0.009 -0.400 0.400	0.003 -0.400 0.400	0.027 -0.400 0.400	0.000 -0.400 0.400	0.005 -0.400 0.400
Coil 5 Q	-0.025 -1.500 1.500	0.001 -0.800 0.800	-0.009 -0.400 0.400	-0.003 -0.400 0.400	-0.019 -0.400 0.400	0.006 -0.400 0.400	-0.001 -0.400 0.400	-0.003 -0.400 0.400

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	163.44 136.00 186.00	162.05 134.00 184.00	159.24 131.00 181.00	155.04 126.00 176.00	149.49 122.00 170.00	142.54 118.00 161.00	134.34 112.00 150.00	124.90 105.00 139.00
Coil 0 P	7.789 -1.000 12.000	25.547 19.000 30.000	42.893 35.000 50.000	60.226 49.000 71.000	77.592 63.000 91.000	94.987 77.000 110.000	112.422 92.000 130.000	129.899 105.000 151.000
Coil 1 M	285.71 237.00 327.00	282.98 235.00 325.00	277.53 230.00 320.00	269.46 225.00 312.00	259.01 218.00 302.00	246.23 208.00 288.00	231.49 196.00 266.00	214.89 184.00 244.00
Coil 1 P	7.816 -1.000 12.000	25.656 19.000 30.000	43.043 35.000 51.000	60.360 49.000 71.000	77.651 63.000 92.000	94.892 77.000 112.000	112.118 92.000 132.000	129.285 105.000 153.000
Coil 2 M	585.15 479.00 659.00	579.67 474.00 654.00	568.73 463.00 643.00	552.54 450.00 622.00	531.61 432.00 602.00	506.03 412.00 572.00	476.25 390.00 540.00	442.55 359.00 499.00
Coil 2 P	7.875 -1.000 12.000	25.812 19.000 31.000	43.302 35.000 51.000	60.727 49.000 71.000	78.129 63.000 92.000	95.528 77.000 114.000	112.922 92.000 135.000	130.299 105.000 156.000
Coil 3 M	934.75 772.00 1080.00	926.72 764.00 1050.00	910.24 752.00 1030.00	885.63 728.00 1010.00	853.34 700.00 970.00	813.23 665.00 925.00	765.93 628.00 868.00	712.10 589.00 799.00
Coil 3 P	7.875	25.767	43.246	60.699	78.154	95.631	113.124	130.577

	-2.000	13.000	19.000	31.000	35.000	52.000	49.000	72.000	63.000	93.000	77.000	114.000	92.000	135.000	105.000	156.000
Coil 4 M	1501.5		1488.1		1460.4		1419.2		1365.5		1299.3		1221.9		1134.3	
	1210.0	1700.0	1205.0	1690.0	1180.0	1650.0	1140.0	1590.0	1120.0	1530.0	1070.0	1450.0	1000.0	1350.0	942.0	1240.0
Coil 4 P	7.896		25.957		43.578		61.148		78.688		96.254		113.794		131.296	
	-2.000	13.000	19.000	31.000	35.000	52.000	49.000	73.000	63.000	93.000	78.000	114.000	92.000	135.000	105.000	156.000
Coil 5 M	3027.5		3000.1		2942.7		2856.9		2747.1		2612.7		2453.3		2275.3	
	2450.0	3450.0	2420.0	3400.0	2410.0	3320.0	2350.0	3200.0	2280.0	3080.0	2150.0	2950.0	2020.0	2750.0	1870.0	2570.0
Coil 5 P	8.059		26.396		44.288		62.126		79.963		97.732		115.555		133.341	
	-2.000	13.000	19.000	31.000	35.000	52.000	49.000	73.000	63.000	94.000	79.000	114.000	93.000	135.000	106.000	156.000

## HDIL AFTER LOG VERIFICATION SUMMARY

TOOL #: 1530XA 10415933

DATE/TIME PERFORMED: Mon Jul 06 22:21:29 2015

DAYS SINCE CAL: 6

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	0.001		-0.001		-0.001		0.001		0.000		-0.000		0.001		0.001	
	-0.080	0.080	-0.080	0.080	-0.030	0.030	-0.030	0.030	-0.030	0.030	-0.030	0.030	-0.030	0.030	-0.031	0.029
Coil 0 Q	-0.003		-0.000		0.000		-0.000		-0.000		-0.000		0.001		-0.000	
	-0.043	0.037	-0.120	0.120	-0.030	0.030	-0.029	0.031	-0.031	0.029	-0.030	0.030	-0.031	0.029	-0.030	0.030
Coil 1 R	0.002		0.001		-0.001		0.000		-0.002		-0.001		-0.001		-0.000	
	-0.081	0.079	-0.052	0.048	-0.029	0.031	-0.027	0.033	-0.029	0.031	-0.031	0.029	-0.031	0.029	-0.028	0.032
Coil 1 Q	-0.003		0.002		0.000		0.000		0.002		-0.000		-0.000		0.001	
	-0.408	0.392	-0.101	0.099	-0.028	0.032	-0.029	0.031	-0.029	0.031	-0.031	0.029	-0.031	0.029	-0.031	0.029
Coil 2 R	0.005		-0.003		0.003		0.001		-0.002		0.002		-0.002		-0.001	
	-0.068	0.072	-0.034	0.026	-0.028	0.032	-0.033	0.027	-0.028	0.032	-0.029	0.031	-0.027	0.033	-0.027	0.033
Coil 2 Q	-0.000		0.002		-0.001		-0.001		0.003		0.002		-0.003		0.002	
	-0.352	0.348	-0.099	0.101	-0.030	0.030	-0.030	0.030	-0.029	0.031	-0.032	0.028	-0.032	0.028	-0.027	0.033
Coil 3 R	0.012		0.001		0.007		0.004		0.002		0.004		-0.006		-0.002	
	-0.022	0.058	-0.040	0.040	-0.035	0.045	-0.035	0.045	-0.039	0.041	-0.040	0.040	-0.037	0.043	-0.041	0.039
Coil 3 Q	0.001		-0.006		0.001		-0.002		0.003		-0.001		-0.004		0.002	
	-0.208	0.192	-0.084	0.076	-0.033	0.047	-0.040	0.040	-0.043	0.037	-0.043	0.037	-0.038	0.042	-0.039	0.041
Coil 4 R	-0.003		0.001		0.004		0.003		-0.002		0.007		0.004		-0.000	
	-0.052	0.068	-0.065	0.055	-0.069	0.051	-0.058	0.062	-0.068	0.054	-0.067	0.053	-0.051	0.069	-0.061	0.059
Coil 4 Q	0.001		0.005		0.004		-0.001		-0.008		-0.001		-0.003		-0.008	
	-0.303	0.297	-0.105	0.095	-0.055	0.065	-0.055	0.065	-0.052	0.068	-0.060	0.060	-0.056	0.064	-0.059	0.061
Coil 5 R	-0.005		-0.002		0.007		-0.005		0.012		0.017		0.002		-0.006	
	-0.108	0.132	-0.117	0.123	-0.108	0.132	-0.129	0.111	-0.117	0.123	-0.093	0.147	-0.120	0.120	-0.115	0.125
Coil 5 Q	-0.029		-0.025		0.011		0.003		0.003		-0.010		0.006		-0.005	
	-0.625	0.575	-0.249	0.251	-0.129	0.111	-0.123	0.117	-0.139	0.101	-0.114	0.126	-0.121	0.119	-0.123	0.117

ELEC. GAINS      10 KHz      30 KHz      50 KHz      70 KHz      90 KHz      110 KHz      130 KHz      150 KHz

Coil 0 M	163.04		161.66		158.88		154.71		149.15		142.23		134.07		124.63	
	160.17	166.71	158.81	165.29	156.06	162.43	151.94	158.14	146.50	152.48	139.69	145.40	131.65	137.03	122.41	127.40
Coil 0 P	7.309		25.493		42.988		60.418		77.881		95.401		112.925		130.475	
	4.789	10.789	22.547	28.547	39.893	45.893	57.226	63.226	74.592	80.592	91.987	97.987	109.422	115.422	126.899	132.899
Coil 1 M	285.88		283.14		277.69		269.65		259.18		246.43		231.68		215.04	
	279.99	291.42	277.32	288.64	271.97	283.08	264.07	274.85	253.83	264.19	241.31	251.15	226.86	236.12	210.59	219.19
Coil 1 P	7.353		25.603		43.132		60.547		77.924		95.282		112.584		129.838	
	4.816	10.816	22.656	28.656	40.043	46.043	57.360	63.360	74.651	80.651	91.892	97.892	109.118	115.118	126.285	132.285
Coil 2 M	581.79		576.33		565.46		549.47		528.59		503.08		473.53		440.01	
	573.44	596.85	568.08	591.27	557.36	580.11	541.49	563.59	520.98	542.24	495.91	516.15	466.72	485.77	433.70	451.40

Coil 2 P	7.362	25.750	43.397	60.935	78.424	95.930	113.427	130.904
	4.875    10.875	22.812    28.812	40.302    46.302	57.727    63.727	75.129    81.129	92.528    98.528	109.922    115.922	127.299    133.299
Coil 3 M	932.83	924.73	908.38	883.97	851.52	811.60	764.44	710.53
	916.06    953.45	908.18    945.25	892.03    928.44	867.92    903.34	836.28    870.41	796.96    829.49	750.61    781.25	697.85    726.34
Coil 3 P	7.376	25.713	43.347	60.911	78.467	96.057	113.632	131.211
	4.875    10.875	22.767    28.767	40.246    46.246	57.699    63.699	75.154    81.154	92.631    98.631	110.124    116.124	127.577    133.577
Coil 4 M	1501.9	1488.4	1460.9	1419.8	1365.9	1299.6	1222.3	1134.2
	1471.4    1531.5	1458.3    1517.9	1431.2    1489.6	1390.8    1447.5	1338.2    1392.8	1273.3    1325.2	1197.5    1246.4	1111.6    1157.0
Coil 4 P	7.413	25.920	43.705	61.384	79.058	96.718	114.368	131.985
	4.896    10.896	22.957    28.957	40.578    46.578	58.148    64.148	75.688    81.688	93.254    99.254	110.794    116.794	128.296    134.296
Coil 5 M	3018.8	2991.9	2934.6	2850.2	2739.6	2605.1	2449.4	2272.2
	2967.0    3088.1	2940.1    3060.1	2883.8    3001.5	2799.8    2914.0	2692.2    2802.1	2560.4    2664.9	2404.2    2502.4	2229.8    2320.8
Coil 5 P	7.615	26.361	44.401	62.351	80.282	98.166	116.124	134.015
	5.059    11.059	23.396    29.396	41.288    47.288	59.126    65.126	76.963    82.963	94.732    100.732	112.555    118.555	130.341    136.341

## INSTRUMENT CONFIGURATION

Source File: /dat1a/OH096970/n970m~tdg

### CABLEHEAD

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

### WTS ADAPTOR

Diameter : 3.62"

### FOCUS SWIVEL

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

### FOCUS TEN/TEMP/MUD RES/ACCEL

Diameter : 3.13"  
Length : 4.31'  
Weight : 61 lbs  
Series : 3980XA  
Mnemonic : TTMA

### FOCUS TELEMETRY (POWER SECTION)

Diameter : 3.13"  
Length : 3.71'  
Weight : 48 lbs  
Series : 3518FB  
Mnemonic : TMGR

54.15'

CABLEHEAD TOP 51.40'

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

GR MP — 35.47'

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

LSN MP — 28.33'

SSN MP — 27.88'

FOCUS Z-DENSILOG

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

CR1 MP — 21.17'

LSD / CR2 MP — 18.52'

SSD MP — 18.13'

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

COIL 5 MP — 7.67'

COIL 4 MP — 6.17'

COIL 3 MP — 4.67'

COIL 2 MP — 4.17'

COIL 1 MP — 3.67'


COIL 0 MP — 3.17'

SP MP — 1.64'

FOCUS PINEAPPLE / CABBAGE

0.00'

TOTAL LENGTH: 54.15'  
TOTAL WEIGHT: 824 lbs  
MAX DIAMETER: 0'6.13"

	COMPANY	TABULA RASA ENERGY		FILE NO:	
	WELL	CADDELL #3			OH096970
	FIELD	OAKDALE		API NO:	
	COUNTY	HUERFANO	STATE	COLORADO	05055063190000
LOCATION:		ELEVATIONS:			
SHL: 1334' FSL 1212' FEL		KB 7845 FT			
BHL: 1578' FNL 730' FEL		DF			
		GL 7834 FT			
SEC	4	TWP	29S	RGE	69W
		DATE		06-Jul-2015	