

FILE NO: 1254	COMPANY WILLIAMS PRODUCTION RMT
API NO: 05045184250000	WELL GM 931-1D
	FIELD GRAND VALLEY
	COUNTY GARFIELD
	STATE CO

Ver. 3.87	LOCATION: SHL: 1743' FNL 1925' FEL BHL: 870' FNL 1664' FEL	OTHER SERVICES BHP
	SEC 1 TWP 6S RGE 96W	

PERMANENT DATUM LOG MEASURED FROM DRILL MEAS. FROM	GL KB KB	ELEVATION 5308 FT 23 FT ABOVE P.D.	ELEVATIONS: KB 5331 FT DF 5330 FT GL 5308 FT
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DATE	22-Jun-2009		
RUN	TRIP	1	1
SERVICE ORDER		573317	
DEPTH DRILLER		4825 FT	
DEPTH LOGGER		4825 FT	
BOTTOM LOGGED INTERVAL		4822 FT	
TOP LOGGED INTERVAL		0 FT	
CASING DRILLER		10.75 IN	670 FT
CASING LOGGER		670 FT	
BIT SIZE		9.875 IN	
TYPE OF FLUID IN HOLE		LSND	
DENSITY	VISCOSITY	10.45 LB/G	80 S
PH	FLUID LOSS	10.1	7.2 CS
SOURCE OF SAMPLE		MUD PIT	
RM AT MEAS. TEMP.		.522 OHMM	63 DEGF
RMF AT MEAS. TEMP.		.391 OHMM	62 DEGF
RMC AT MEAS. TEMP.		.652 OHMM	60 DEGF
SOURCE OF RMF	RMC	MEASURED	MEASURED
RM AT BHT		.478 OHMM	147 DEGF
TIME SINCE CIRCULATION		5 HOURS	
MAX. RECORDED TEMP.		147 DEGF	
EQUIP. NO.	LOCATION	HL-6741	VERNAL
RECORDED BY		DONALDSON	
WITNESSED BY		DUNIHO	

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

BOREHOLE RECORD		
BIT SIZE	FROM	TO
9.875 IN	670 FT	4825 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
10.75 IN	26 LB/F		0 FT	4825 FT

REMARKS

- RUN 1 TRIP 1 :
- * ZDL MATRIX: 2.68
 - * CN MATRIX: SANDSONE
 - * TOOL RAN DE-CENTRALIZED
 - * ZDL MAY BE AFFECTED BY BOREHOLE RUGOSITY
 - * THANK YOU FOR CHOOSING BAKER ATLAS
 - * CREW: HOWERTON/JONES

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWVAL	3950XA	10407978	FREE
1	1	TTMA	3980XA	10090453	FREE
1	1	TELEMETRY	3518EB	10110804	FREE
1	1	GR	3518EG	10139870	FREE
1	1	CN	2436XA	10411083	DE-CENTRALIZED
1	1	ZDL	2223XA	10097564	PAD DEVICE
1	1	KNUCKLE	3930XA	10163289	FREE
1	1	KNUCKLE	3930XA	10139400	FREE
1	1	HDIL	1530XA	10120519	STAND-OFF

MAIN LOG 2"/100FT SCALE

ECLIPS 6.01 Feb 21, 2008
Updates: 1

Mon Jun 22 06:24:29 2009

Pcrplt /main/62

Cplot

Pdf_Cpp /main/16

Fileview 5.42

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/1254/k970a01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 568.500 ft BOTTOM DEPTH: 4843.570 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	9.875	In	TOP	BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	In	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	"	"
	MUD SAMPLE RES	1.000	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

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

HDIL PROCESSING

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

CURVE DESCRIPTION REPORT

CURVE NAME CURVE ALIAS CREATION DATE CURVE DESCRIPTION

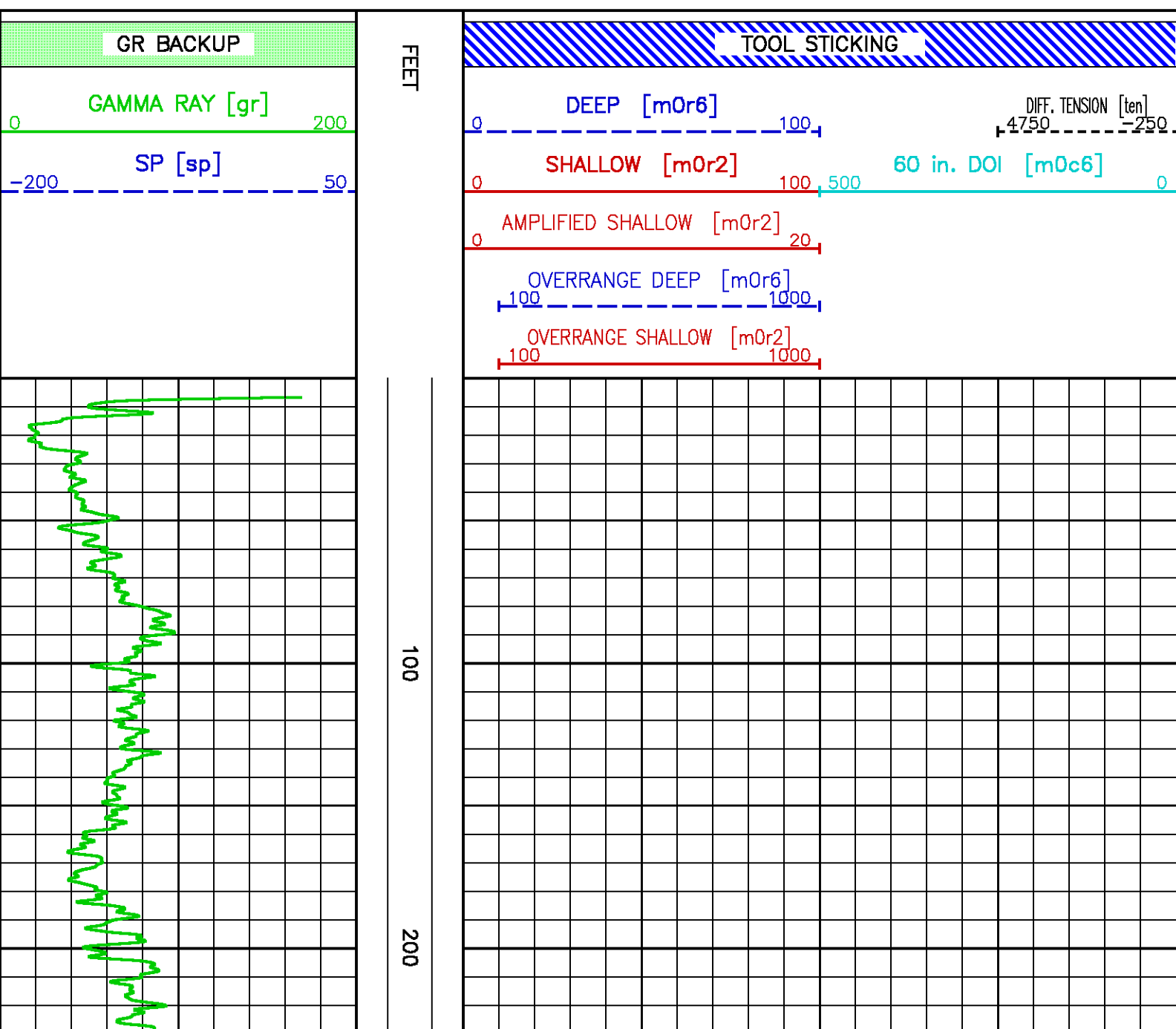
CURVE NAME	CURVE ALIAS	CREATION DATE	CURVE DESCRIPTION
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F1:MOC6	MOC6	Jun 22 04:42:13 2009	HDIL FOCUSED CONDUCTIVITY - 60" INVESTIGATION
F1:MOR2	MOR2A	Jun 22 04:42:13 2009	TRUE FOCUSED RESISTIVITY FOR HDIL - DOI 20 INCH
F1:MOR6	MOR6L	Jun 22 04:42:13 2009	TRUE FOCUSED RESISTIVITY FOR HDIL - DOI 60 INCH
F1:SP	SP	Jun 22 04:42:13 2009	SPONTANEOUS POTENTIAL
F1:TEN	TEN	Jun 22 04:42:13 2009	DIFFERENTIAL TENSION

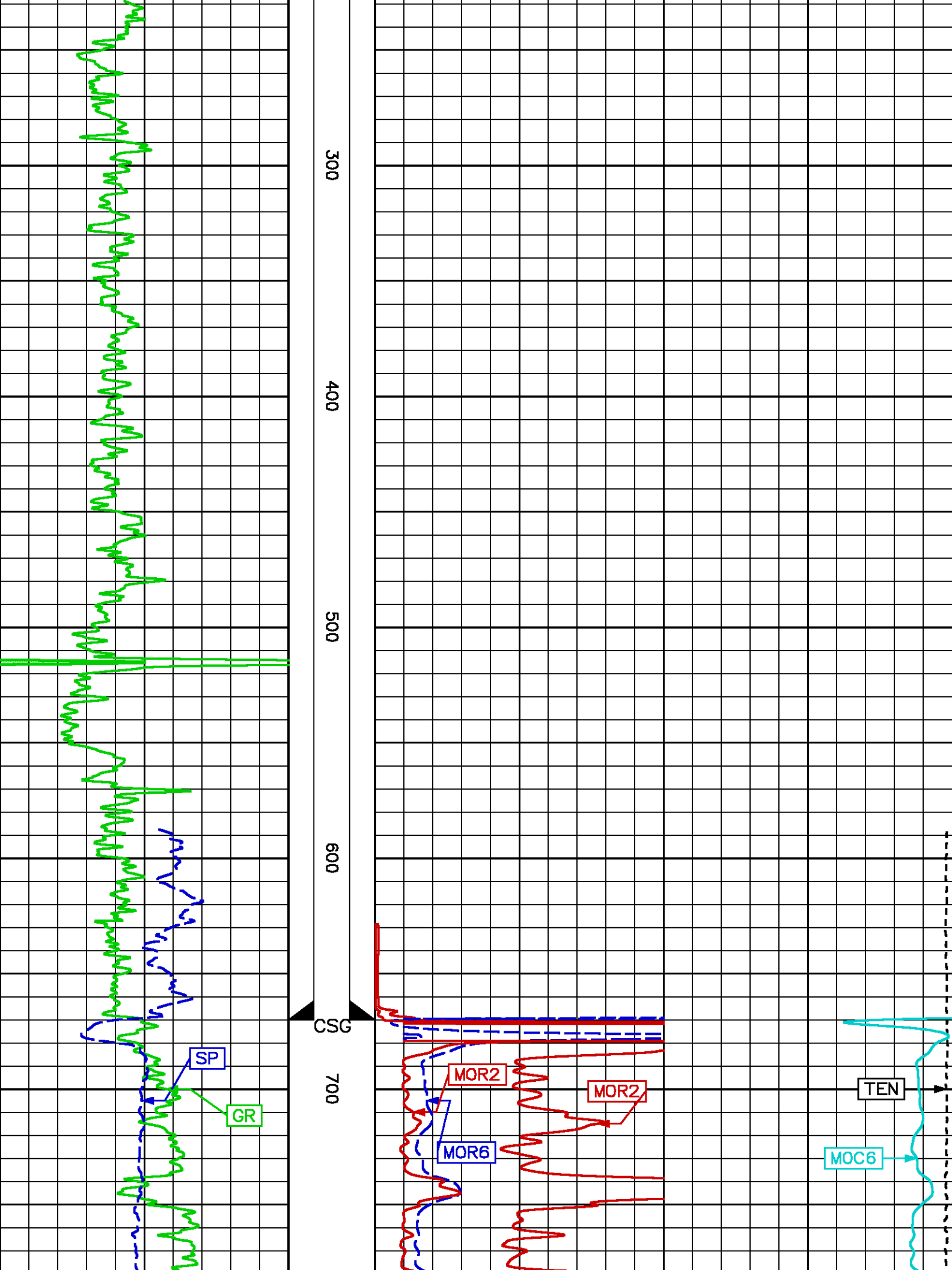
CURVE MEASURE POINT OFFSET

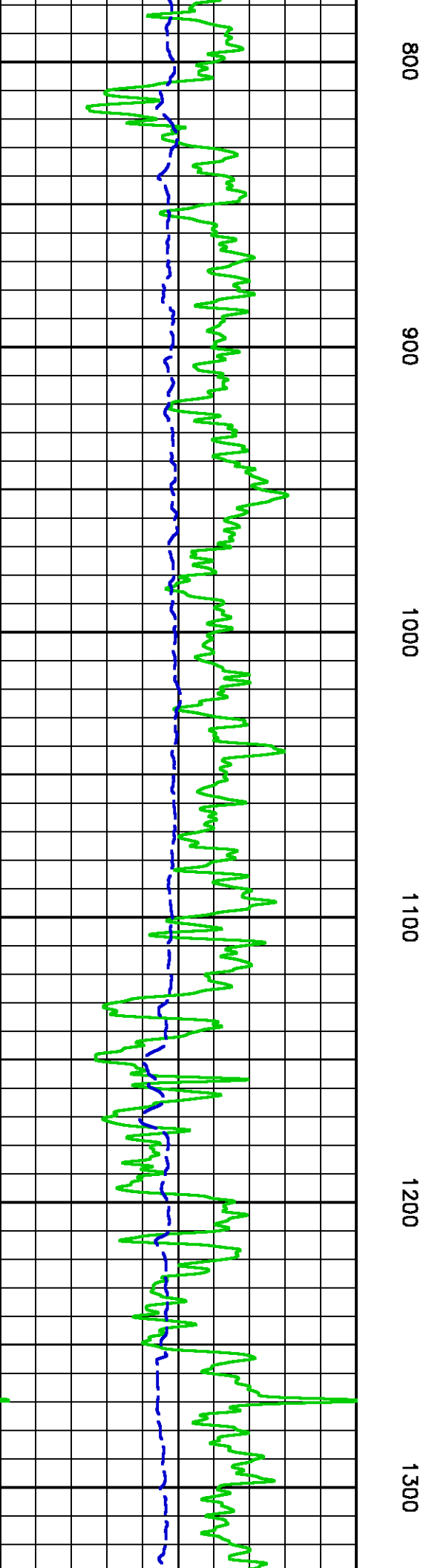
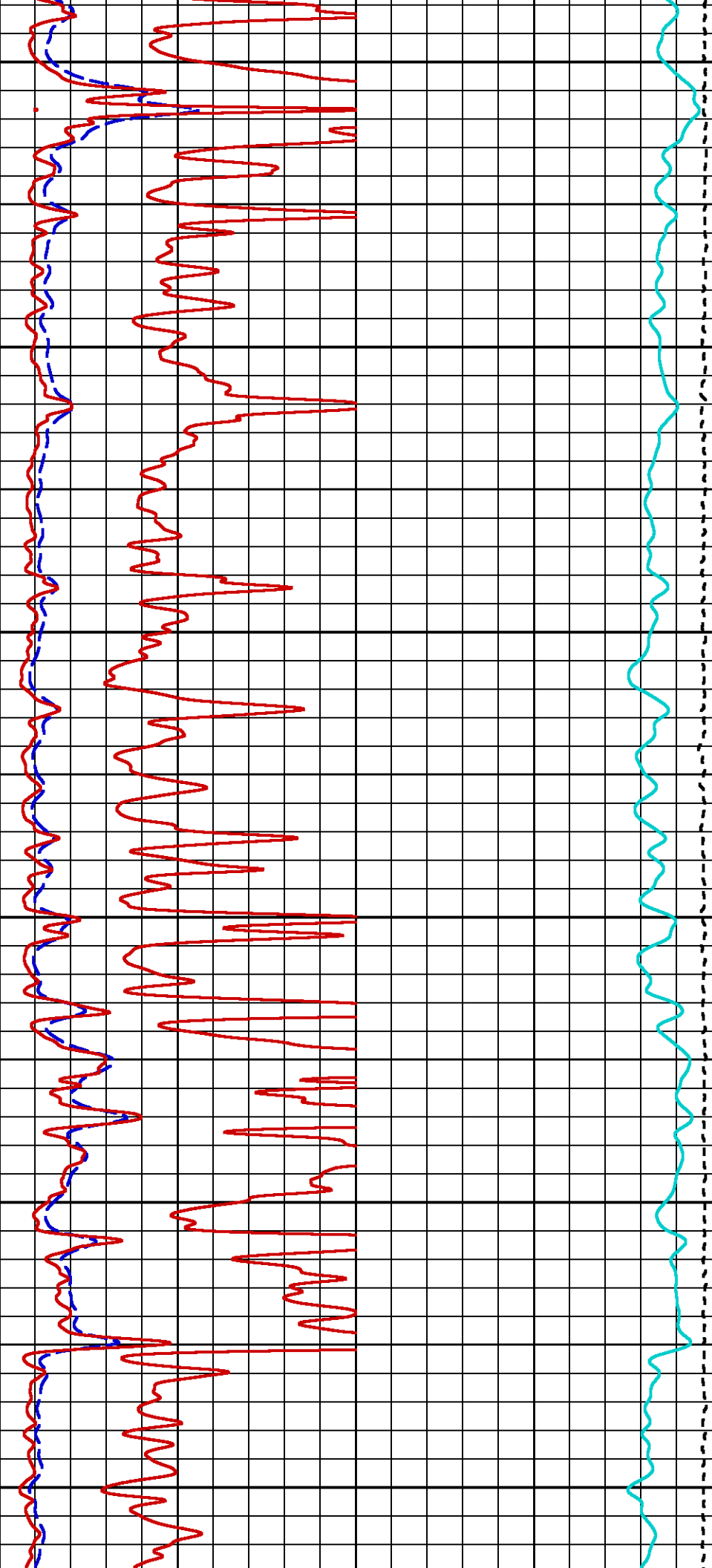
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
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MOC6	2.75	MOR6	2.75	TEN	0.00		

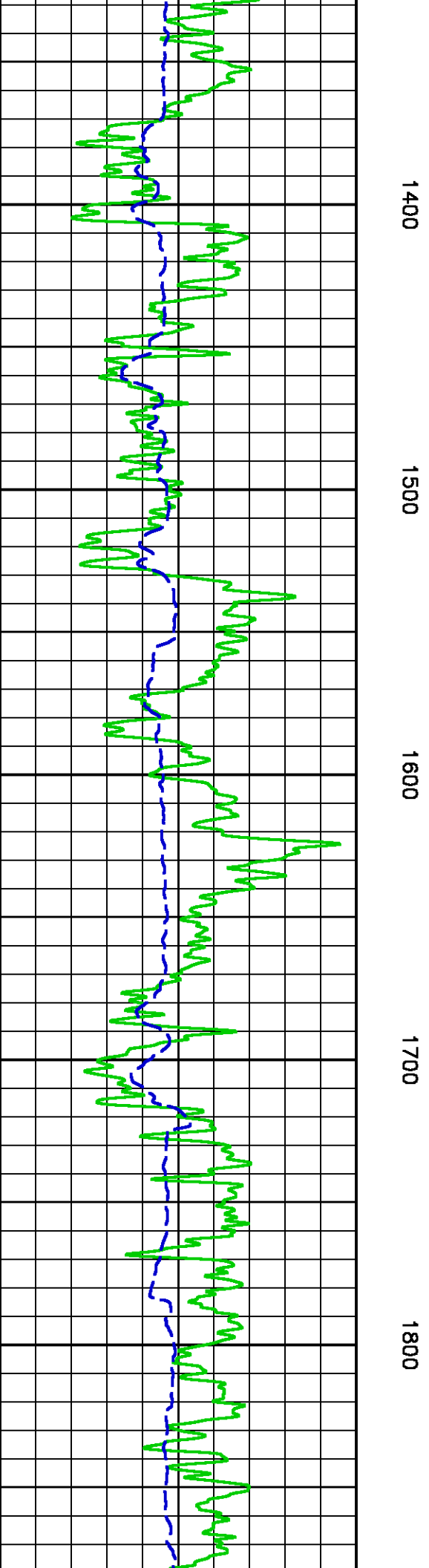
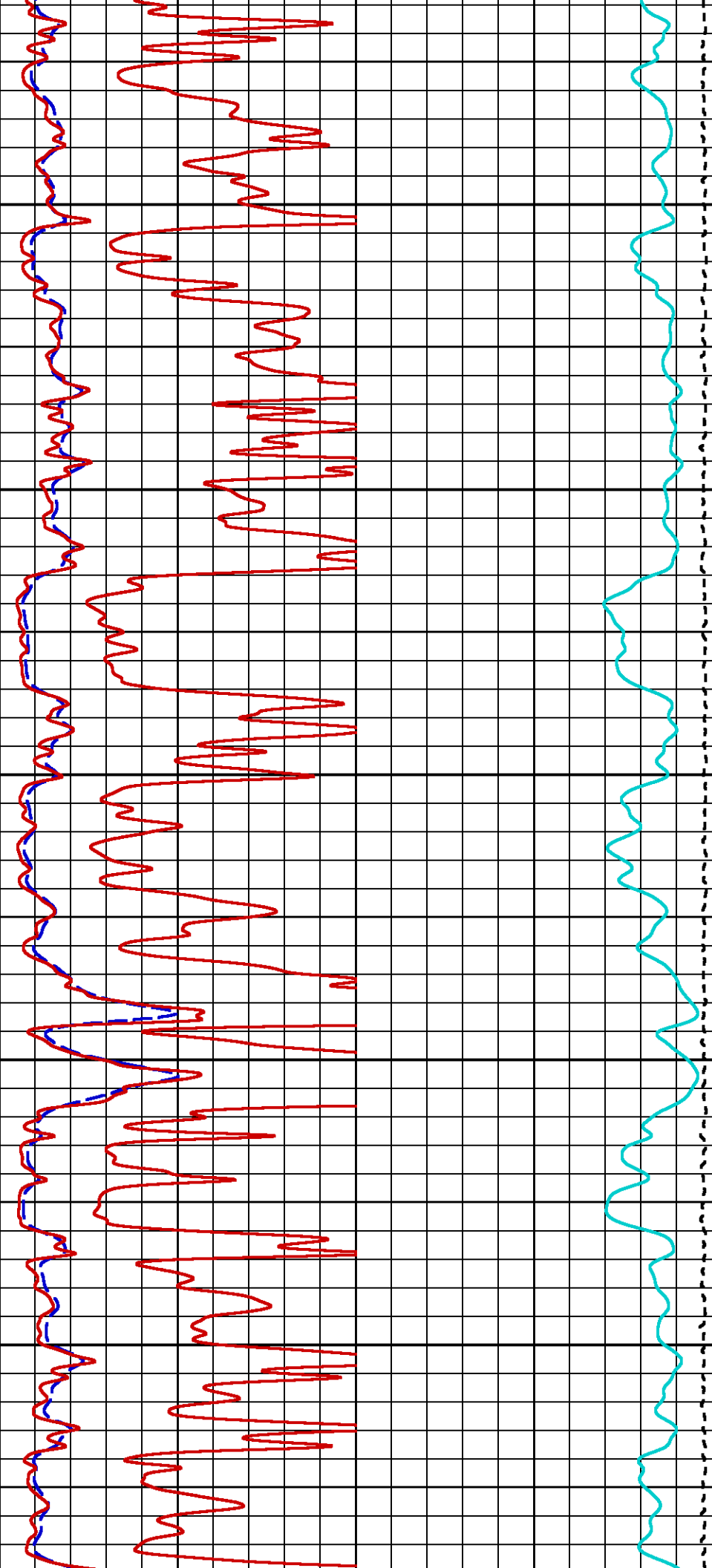
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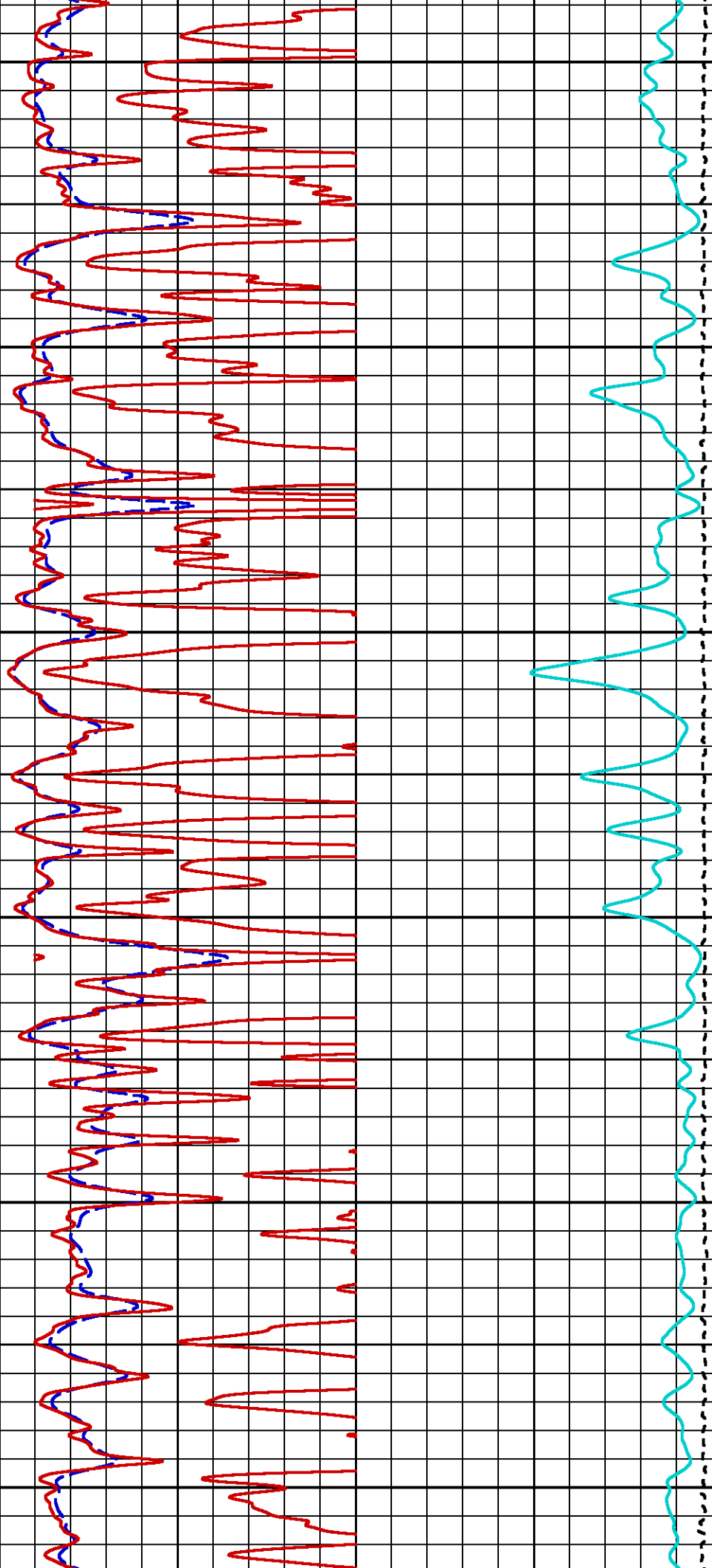
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 Created On : Jun 22 04:42:13 2009
 Company : WILLIAMS PRODUCTION COMPANY RMT
 Well : GM 931-1D
 Field : GRAND VALLEY
 File Interval : 0 - 4849 Feet
 Oct : k970a



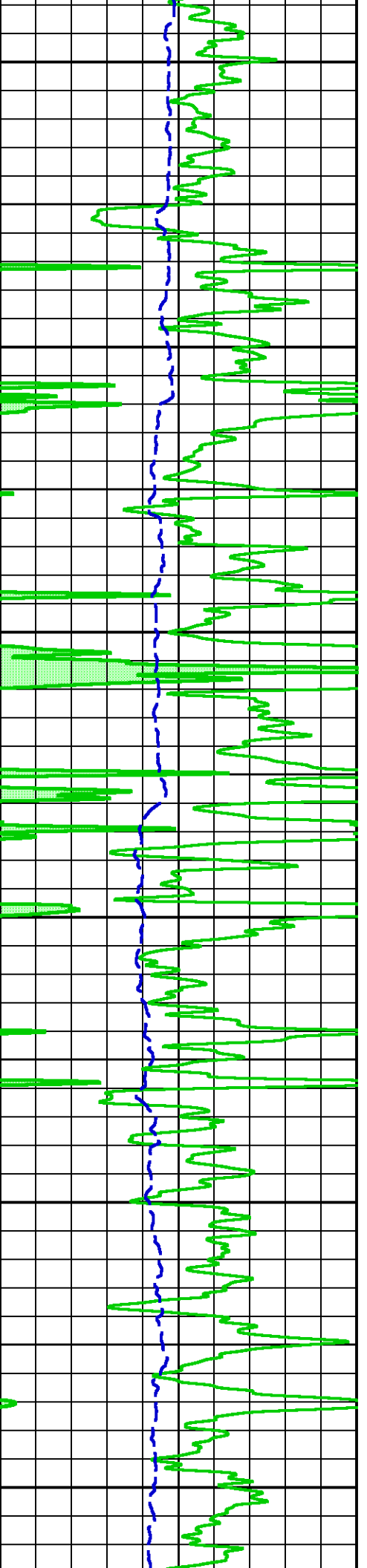


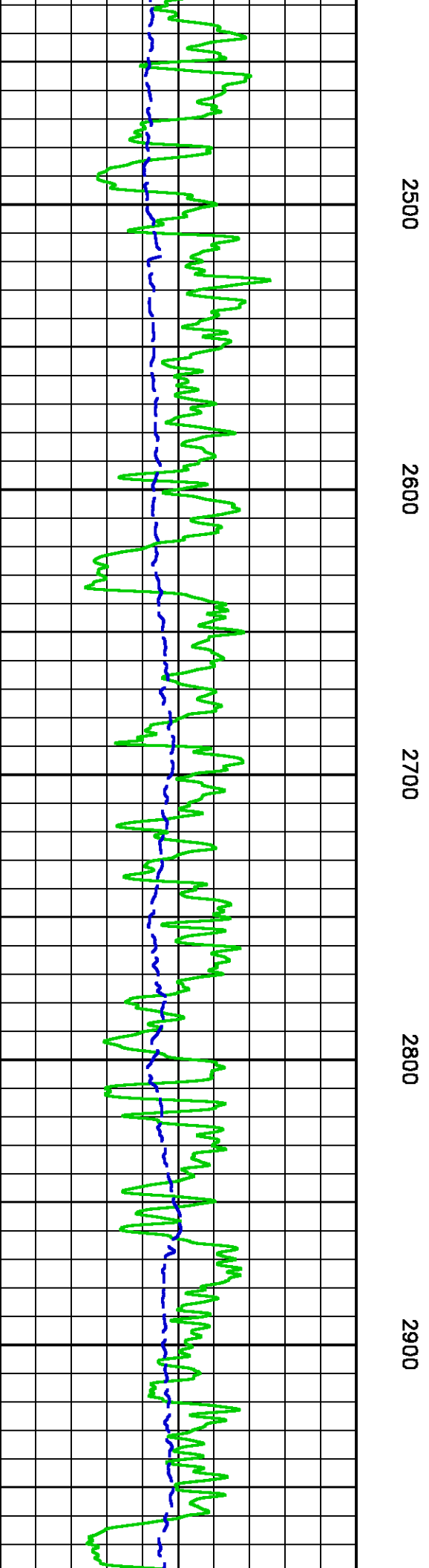
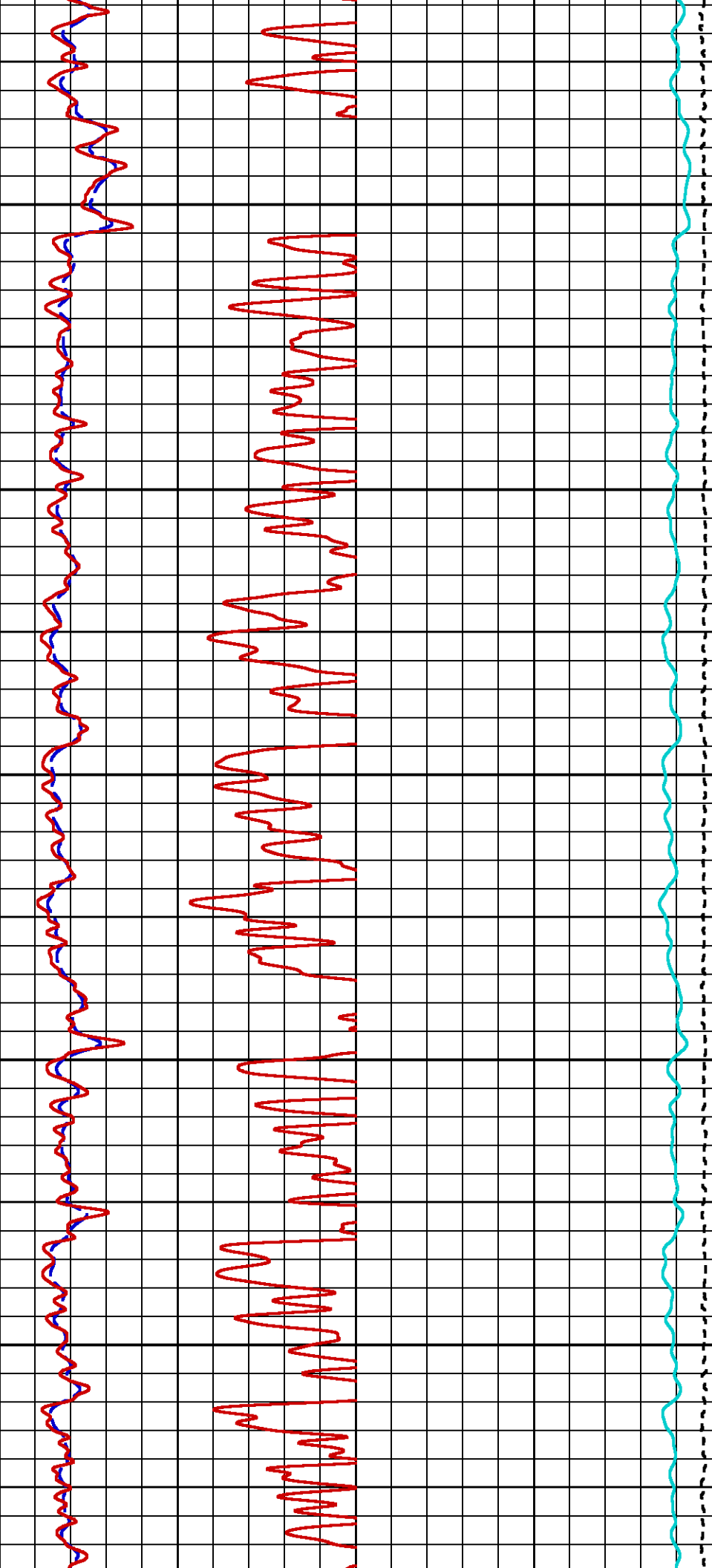


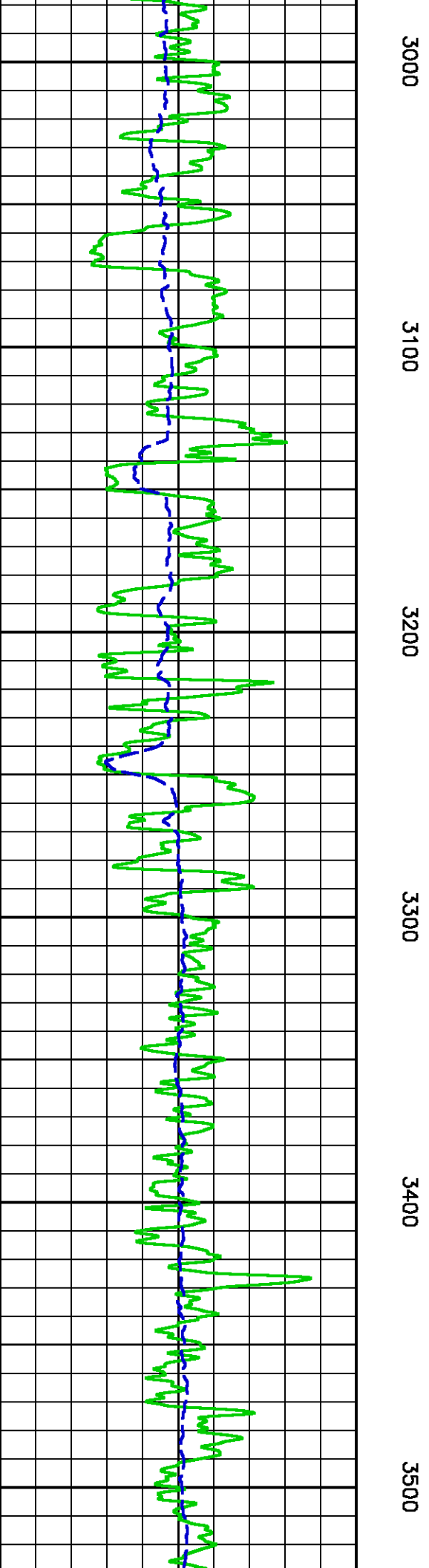
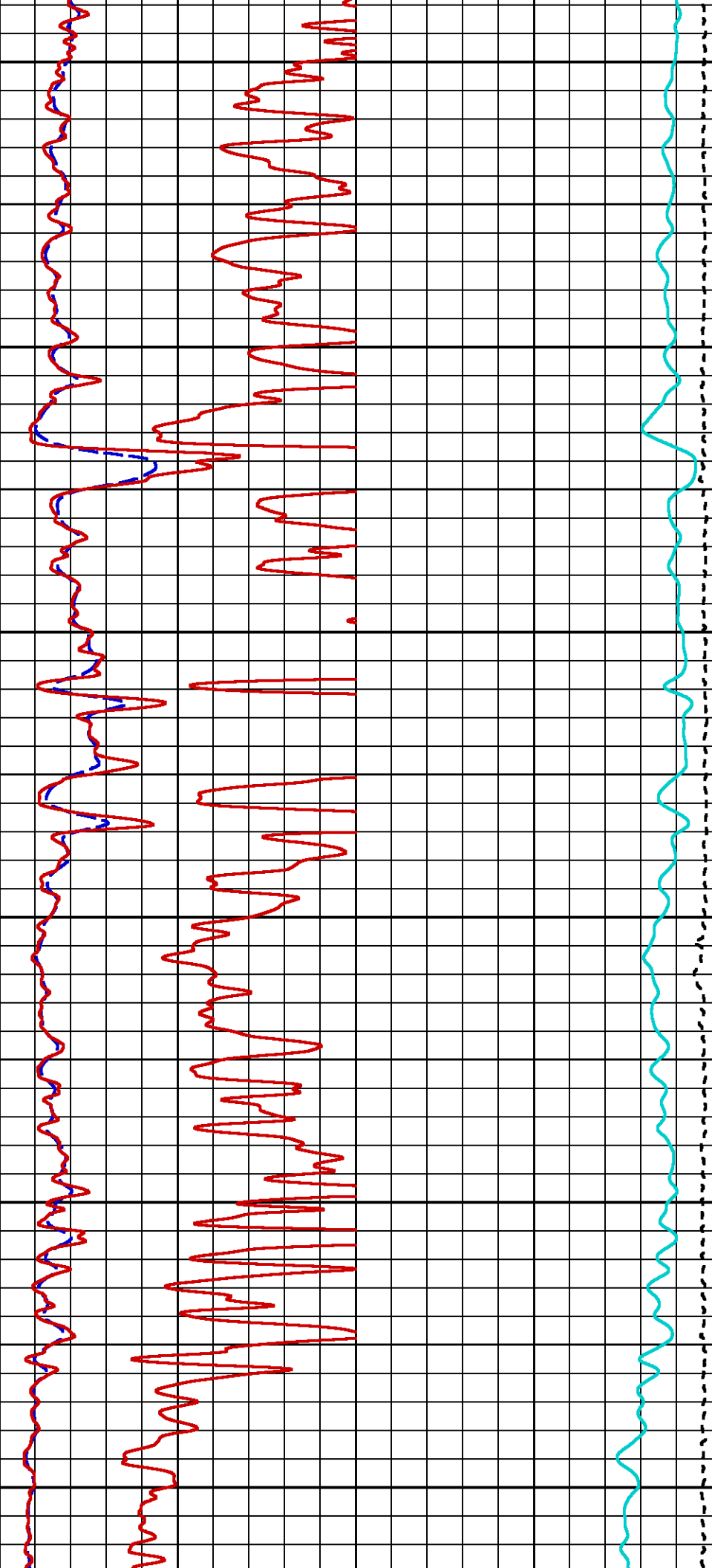


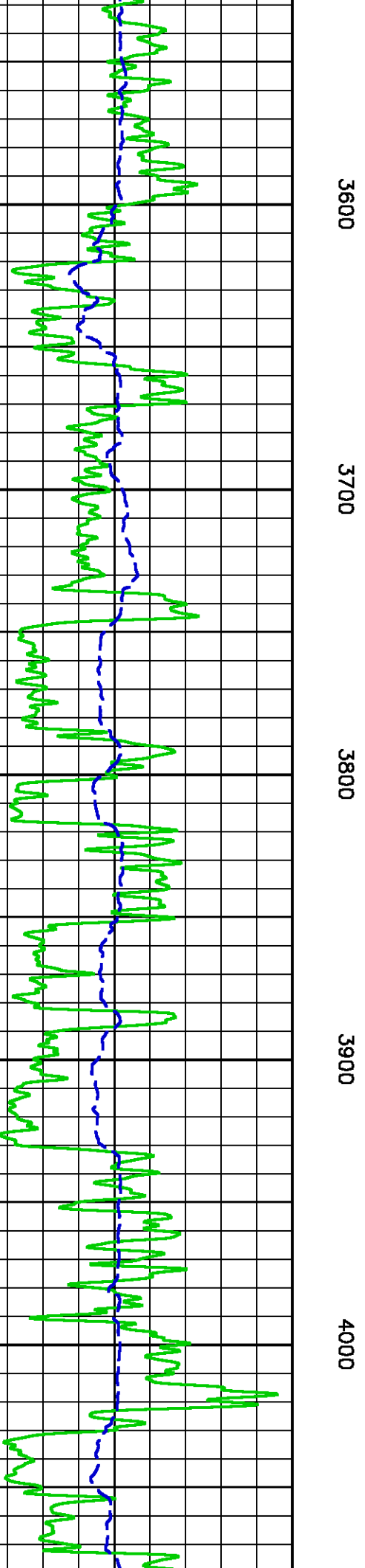
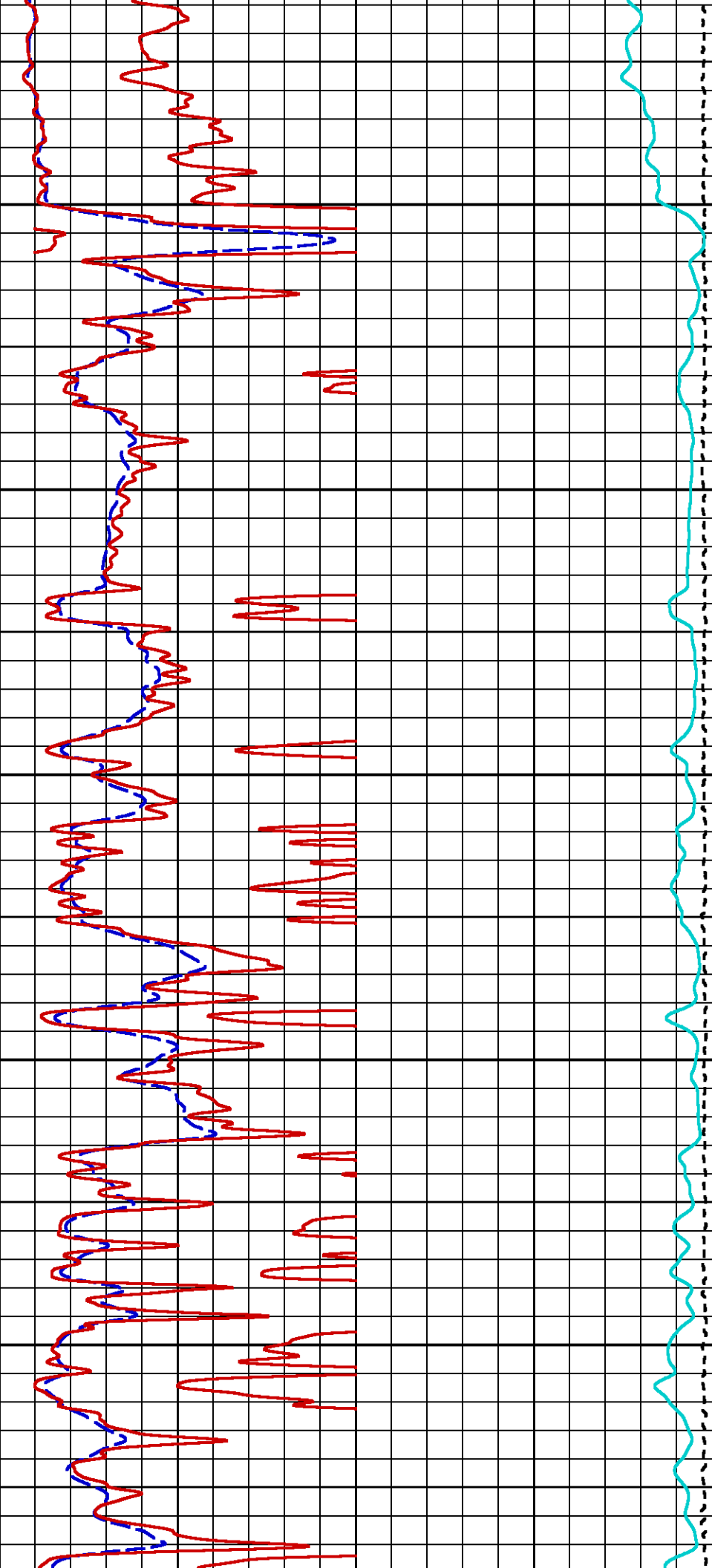


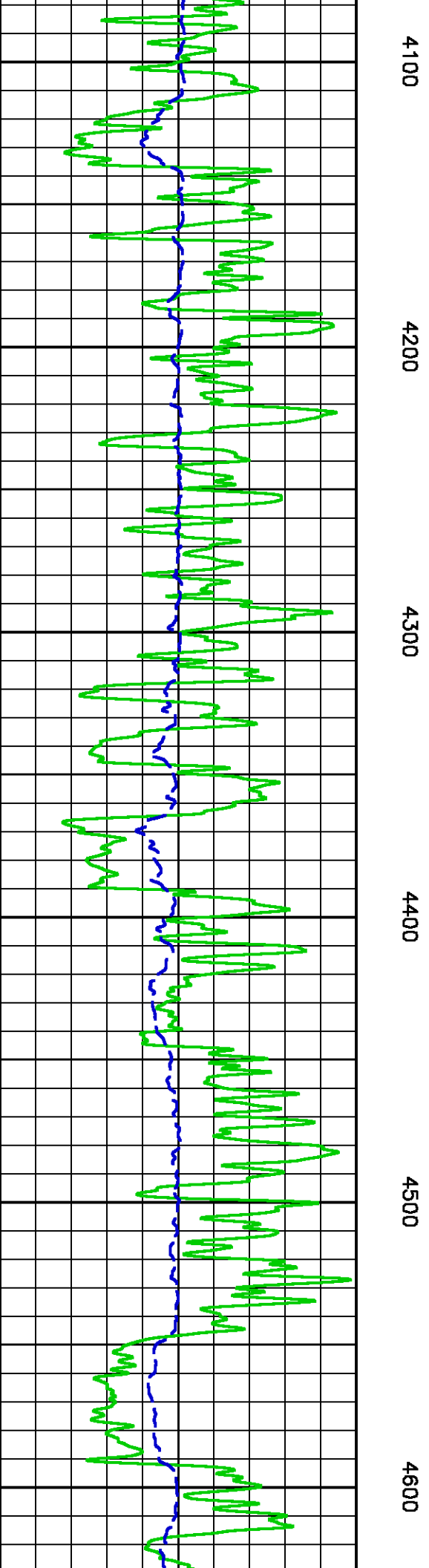
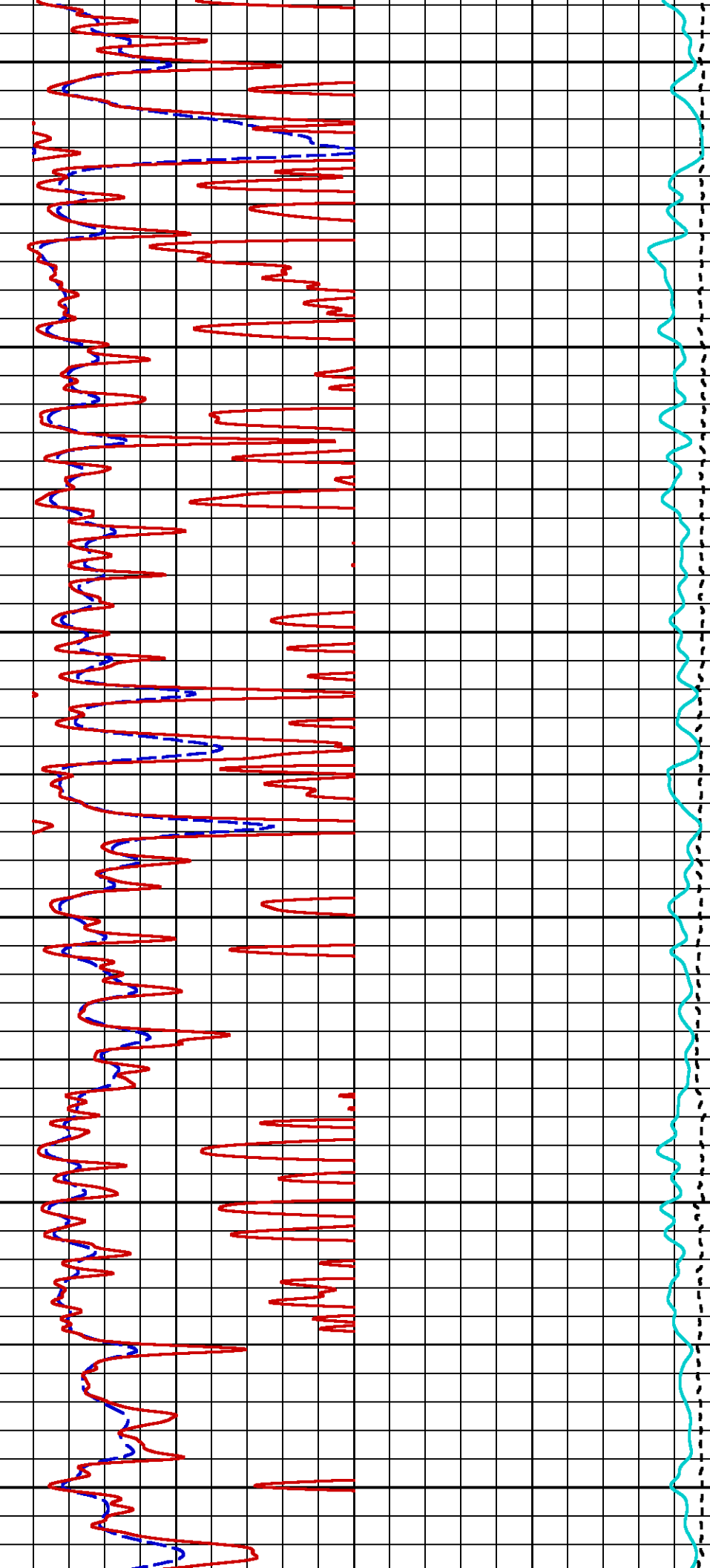
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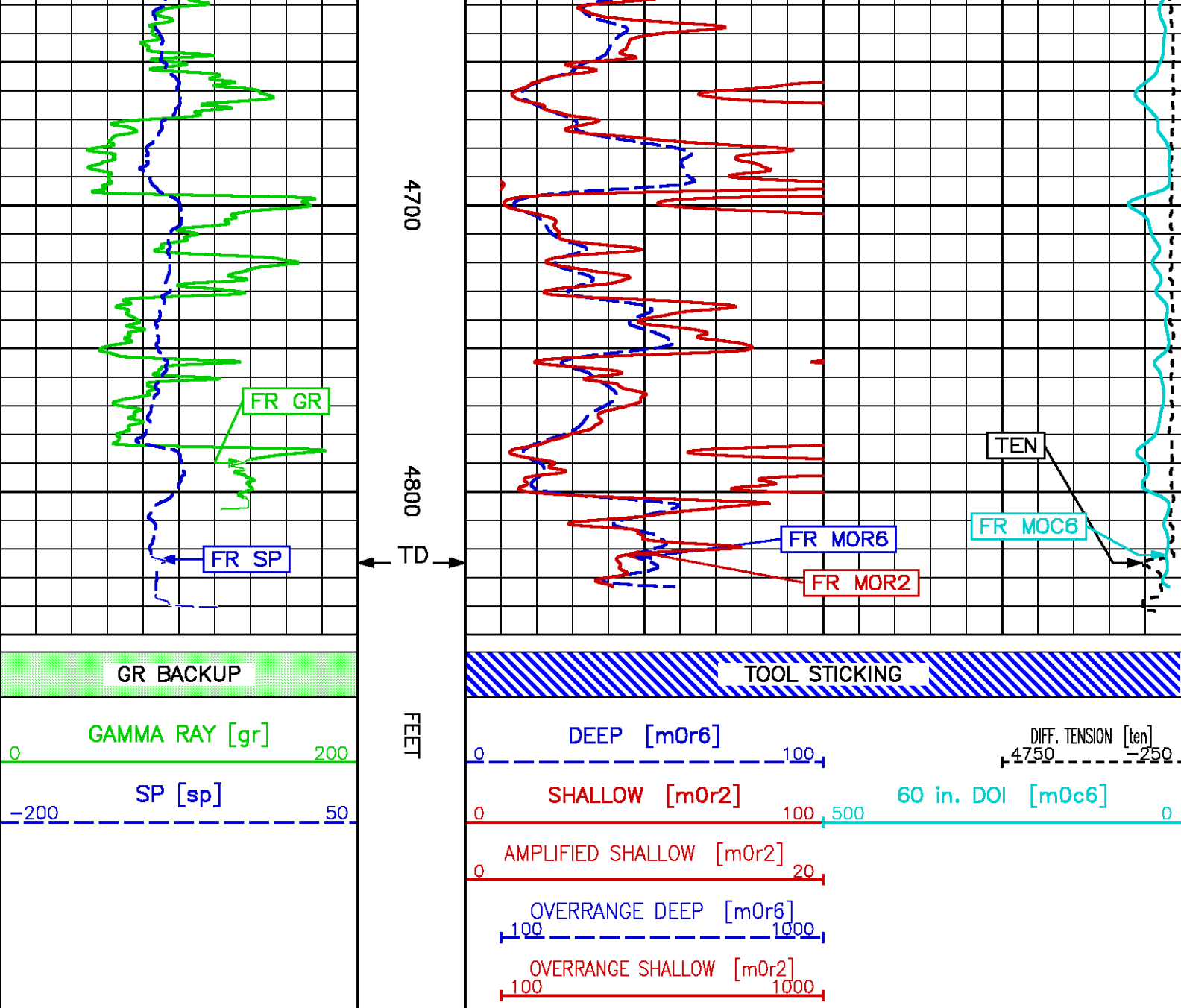












MAIN LOG 5"/100FT SCALE

ECLIPS 6.01 Feb 21, 2008
Updates: 1

Mon Jun 22 06:28:09 2009

Pcrplt /main/62

Cplot

Pdf_Cpp /main/16

Fileview 5.42

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/1254/k970a01.prm
LOGGING MODE: DEPTH
TOP DEPTH: 568.500 ft
DIRECTION: UP
BOTTOM DEPTH: 4843.570 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
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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.	7.000	ln	TOP	BOTTOM
	CASING THICKNESS	0.000	ln	''	''
BIT SIZE	BIT SIZE	9.875	ln	''	''
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		''	''
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		''	''
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	ln	''	''
	FIXED DIAMETER (mbh*)	7.875	ln	''	''
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		''	''
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	''	''
	MUD SAMPLE RES	1.000	ohm.m	''	''
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	''	''
	at BH REF DEPTH	0.0	ft	''	''
	with TEMP GRADIENT	1.200	0.01 degF/ft	''	''

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

CN PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	SANDSTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	8024	ppm	''	''
	BOREHOLE CORRECTION	ON		''	''
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		''	''
	BIT SIZE BEHIND CSNG	7.875	ln	''	''

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

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	ln	''	''
	TOOL POSITION	ECCENTERED		''	''
	Rmud MULTIPLIER	1.000		''	''

CURVE DESCRIPTION REPORT			
CURVE NAME	CURVE ALIAS	CREATION DATE	CURVE DESCRIPTION
F1:BIT	BIT	Jun 22 04:42:13 2009	BIT SIZE
F1:BVOL	BVOL	Jun 22 04:42:13 2009	BOREHOLE VOLUME
F1:CAL	CAL	Jun 22 04:42:13 2009	CALIPER
F1:CNCF	CNCF	Jun 22 04:42:13 2009	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	CVOL	Jun 22 04:42:13 2009	CEMENT VOLUME
F1:GR	GR	Jun 22 04:42:13 2009	GAMMA RAY
F1:M2R1	M2R1	Jun 22 04:42:13 2009	VERT RESOLUTION MATCHED (2 FT) RES - DOI 10 INCH
F1:M2R6	M2R6	Jun 22 04:42:13 2009	VERT RESOLUTION MATCHED (2 FT) RES - DOI 60 INCH
F1:M2R9	M2R9	Jun 22 04:42:13 2009	VERT RESOLUTION MATCHED (2 FT) RES - DOI 90 INCH
F1:PE	PE	Jun 22 04:42:13 2009	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	PORZ	Jun 22 04:42:13 2009	POROSITY FOR SELECTABLE MATRIX

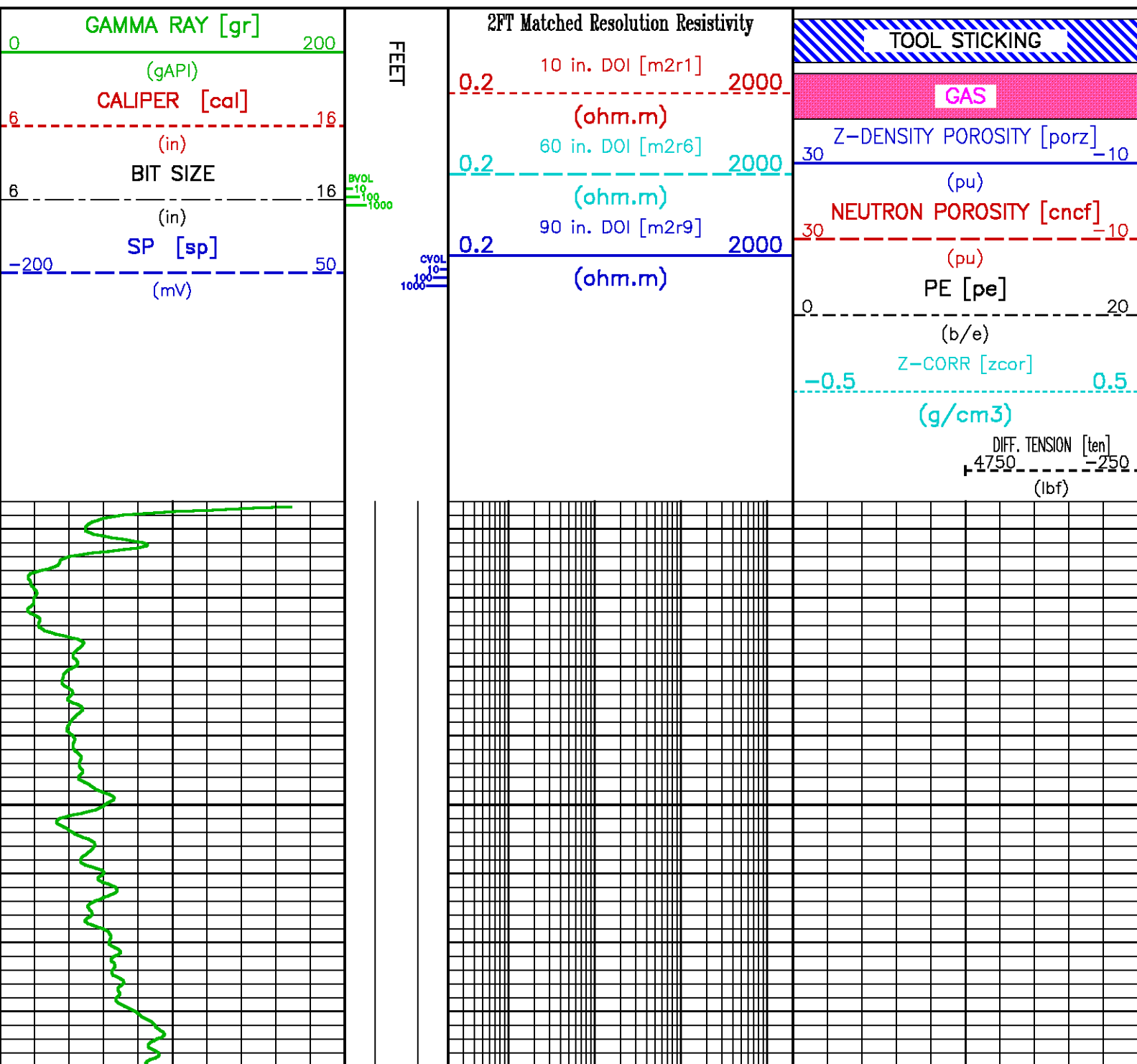
F1:SP	SP	Jun 22 04:42:13 2009	SPONTANEOUS POTENTIAL
F1:TEN	TEN	Jun 22 04:42:13 2009	DIFFERENTIAL TENSION
F1:ZCOR	ZCOR	Jun 22 04:42:13 2009	DENSITY CORRECTION

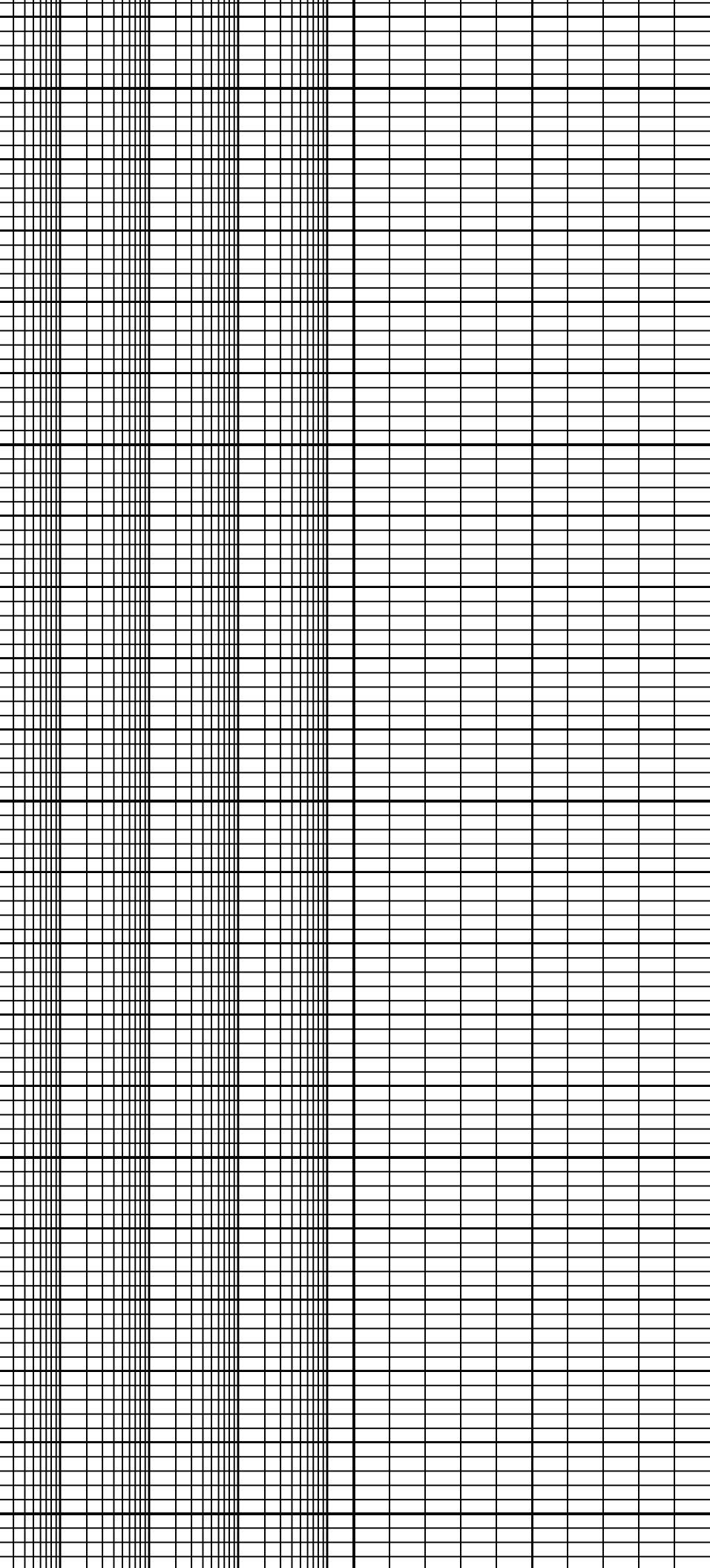
CURVE MEASURE POINT OFFSET

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 : mfg1:/dat1a/1254/MAIN.pdf [5"/100' Scale]
Plot Interval : 6.75 - 4849 Feet

Data File 1 : F1 : mfg1:/dat1a/1254/k970a01_MAIN.xtf
Created On : Jun 22 06:25:54 2009
Company : WILLIAMS PRODUCTION COMPANY RMT
Well : GM 931-1D
Field : GRAND VALLEY
File Interval : 0 - 4849 Feet
Oct : k970a



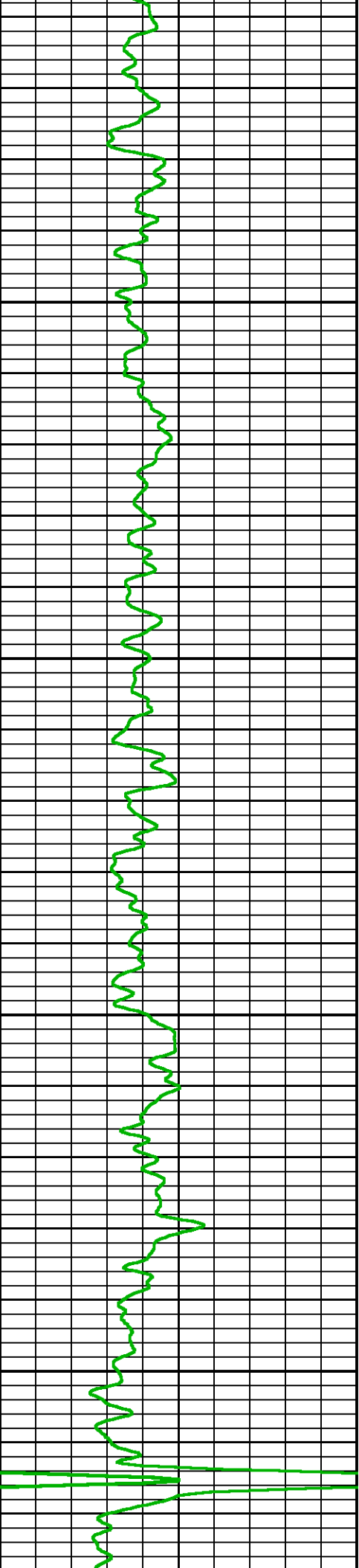


100

200

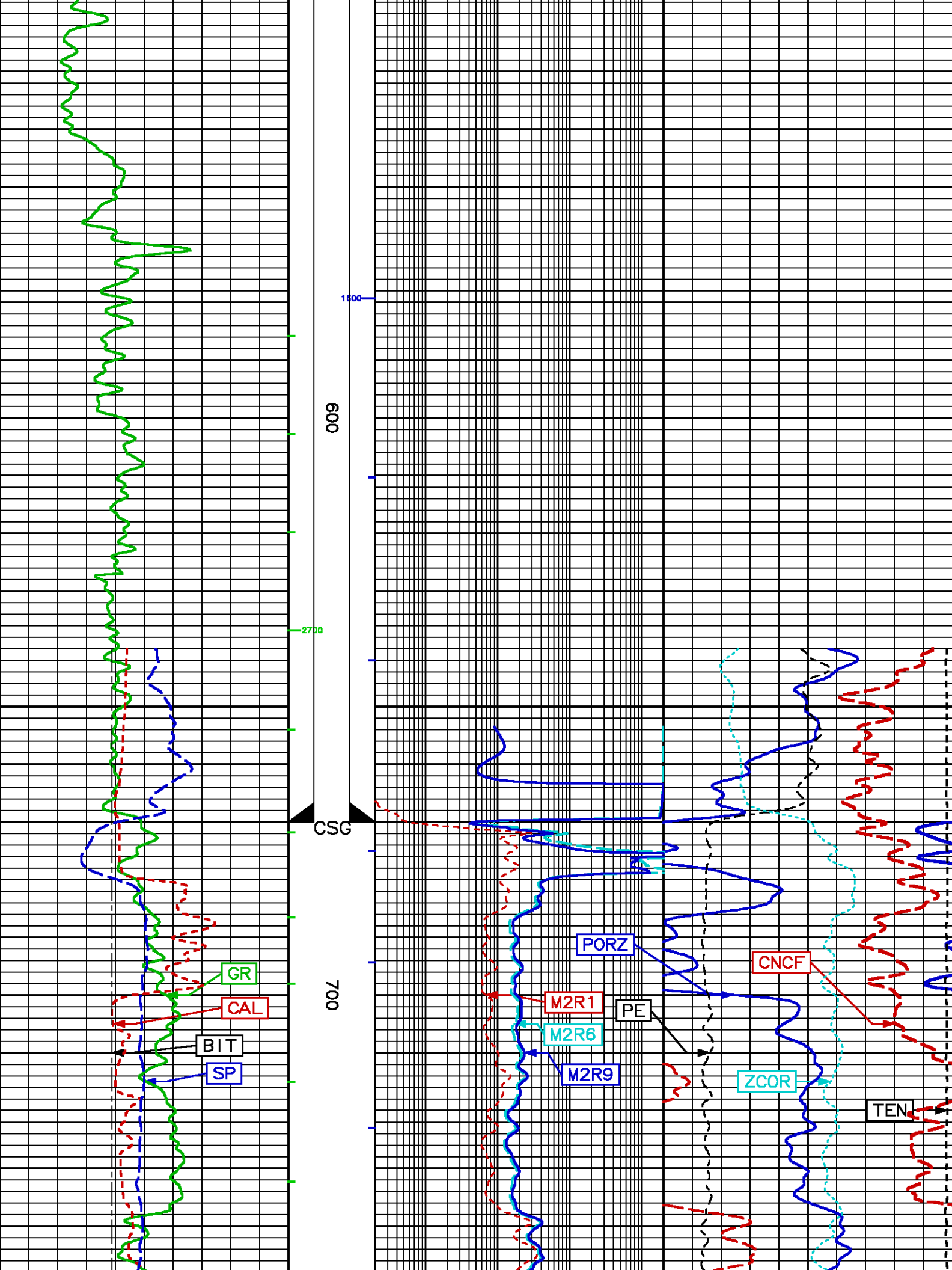
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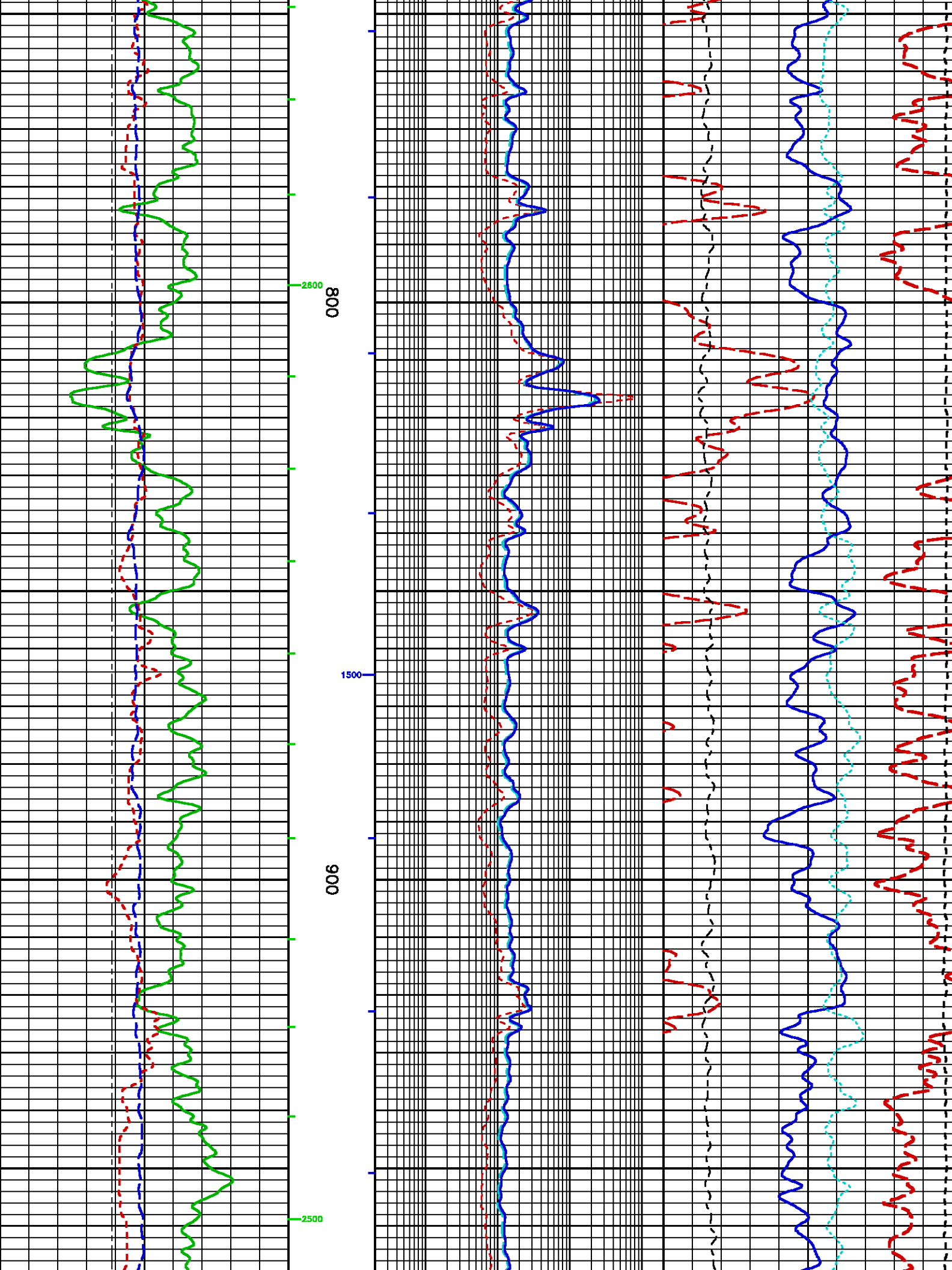


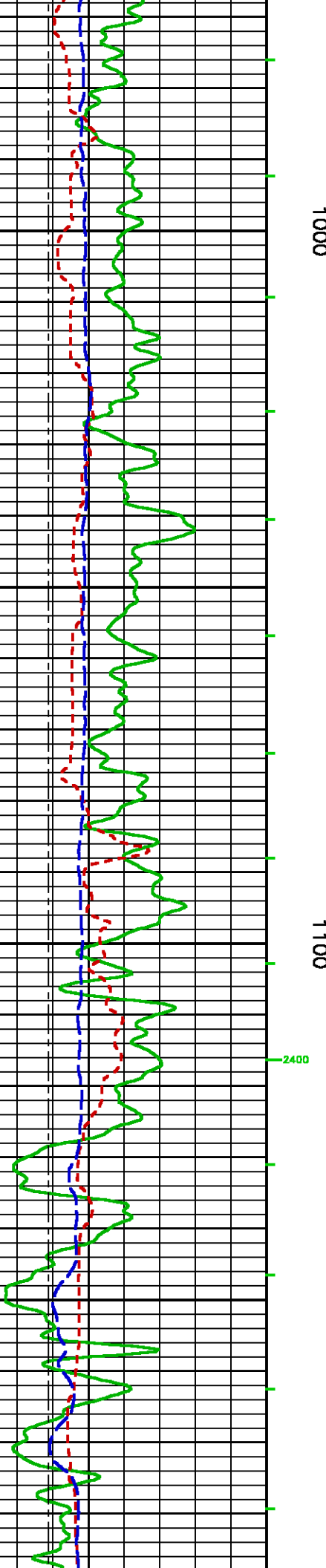
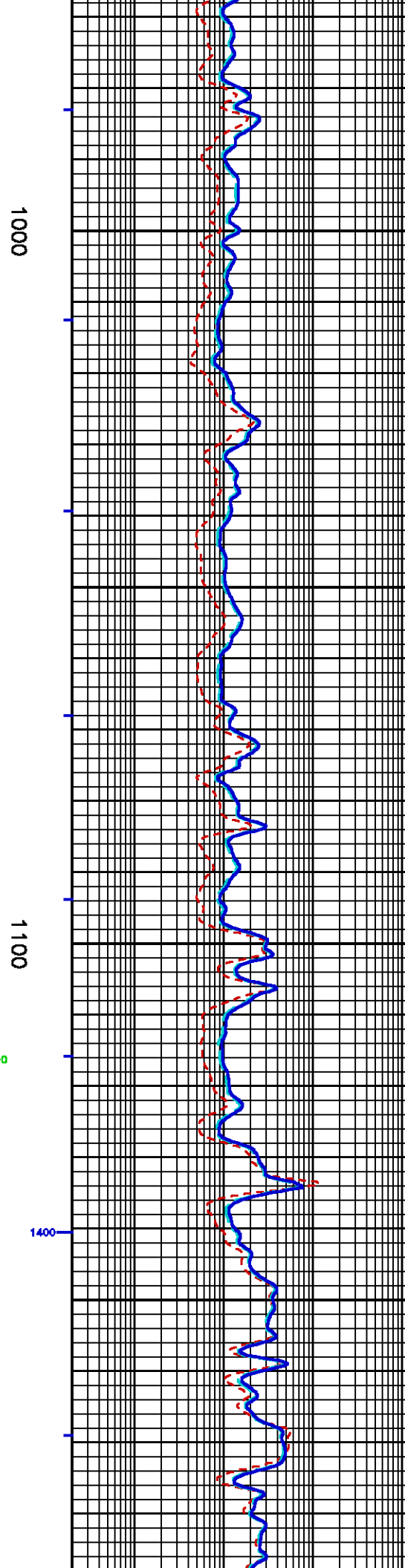
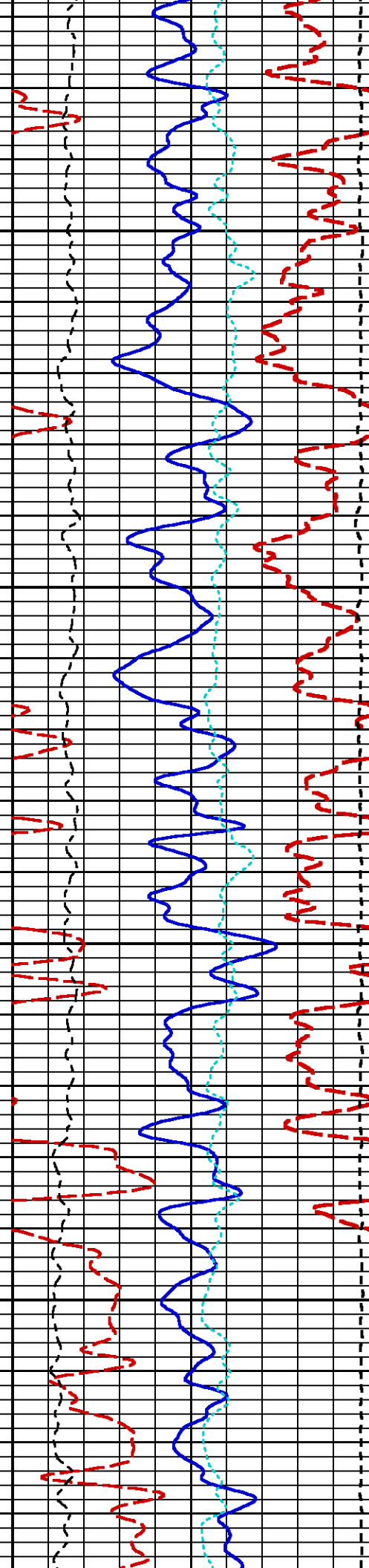


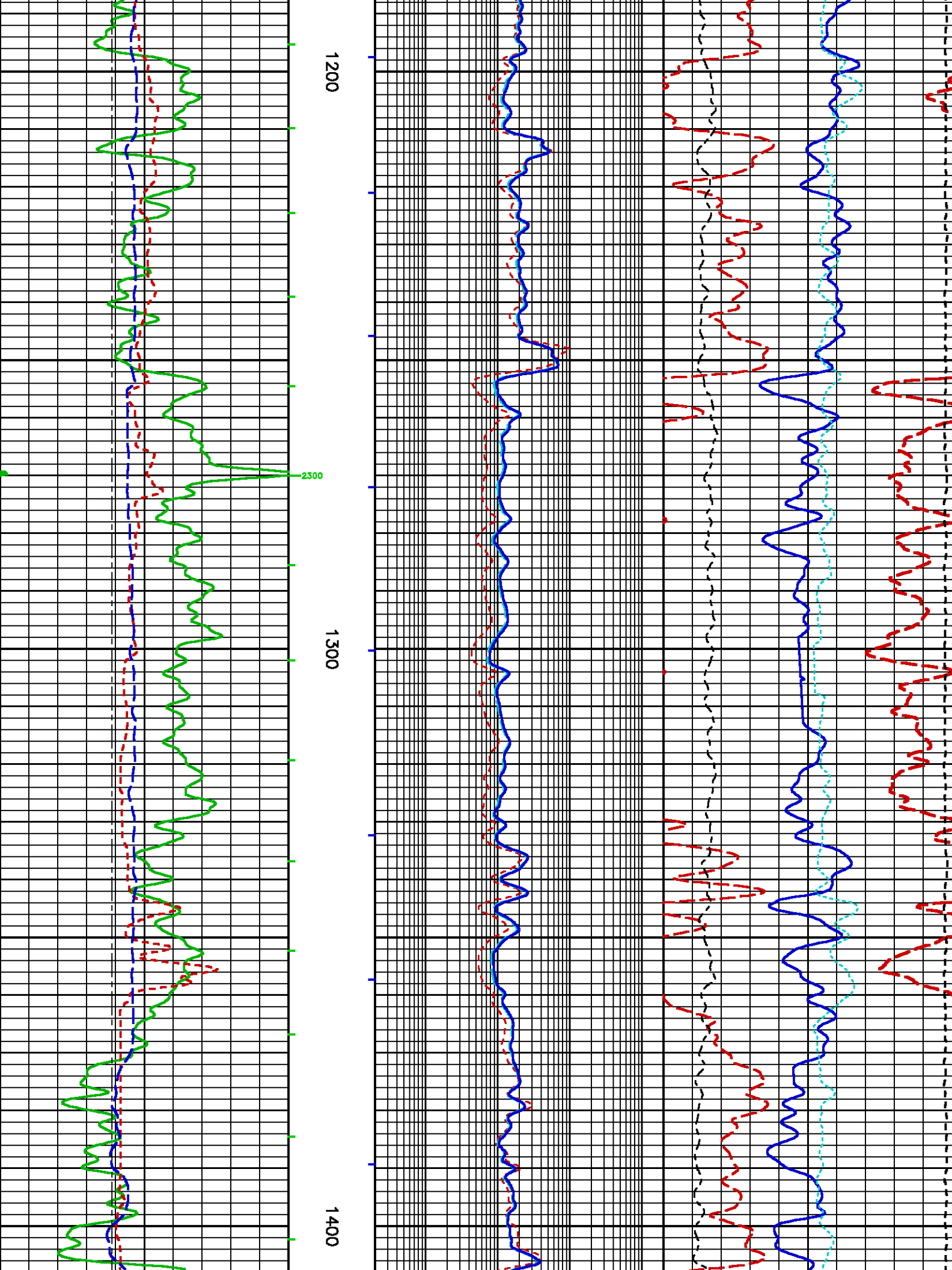
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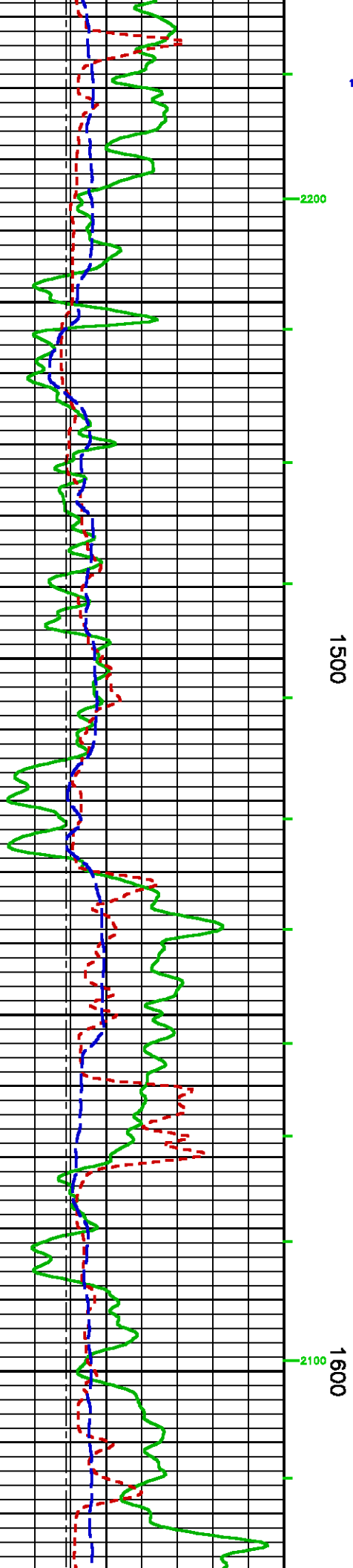
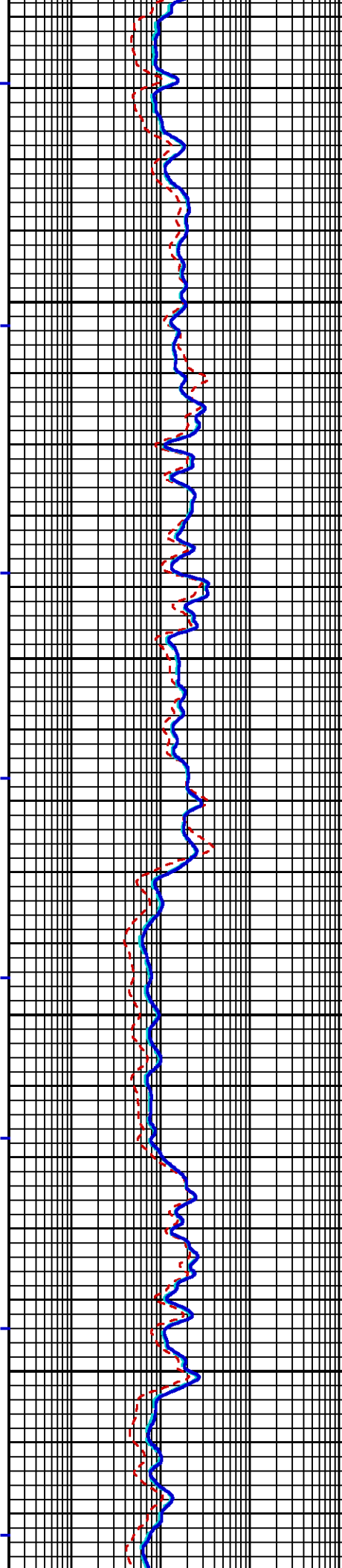
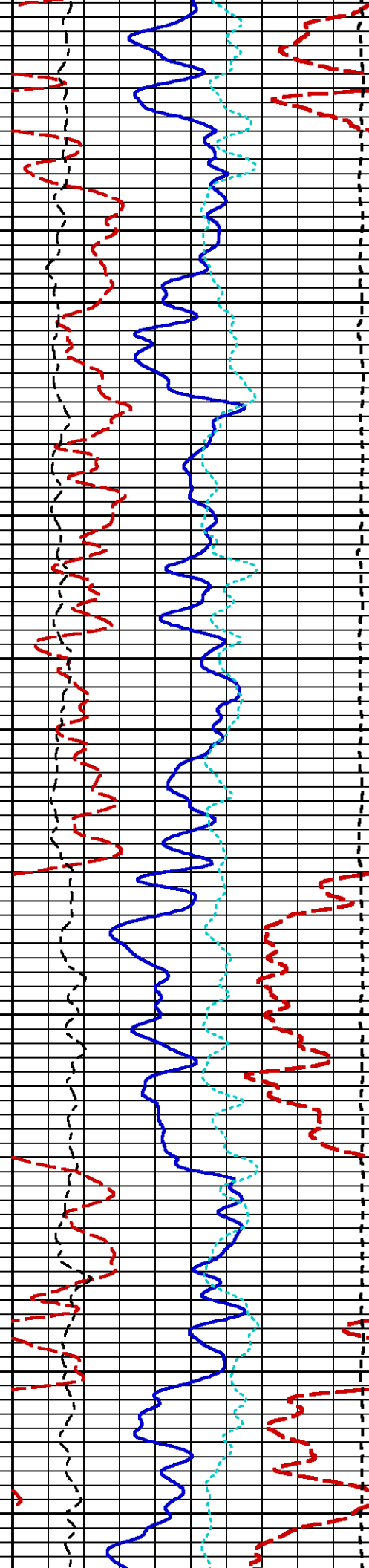
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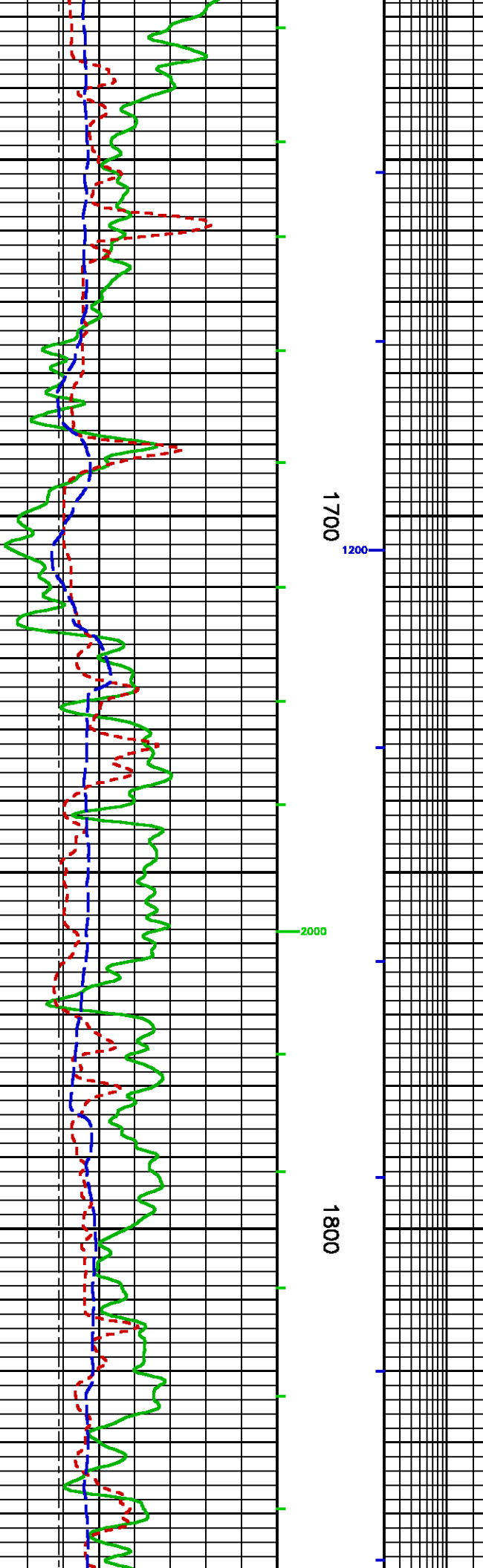
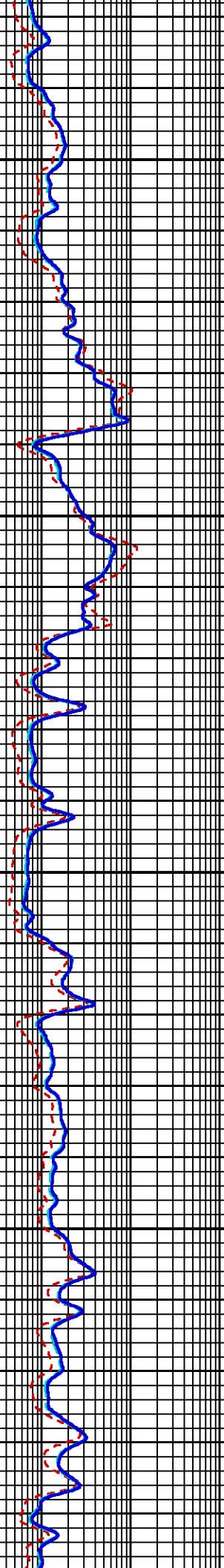
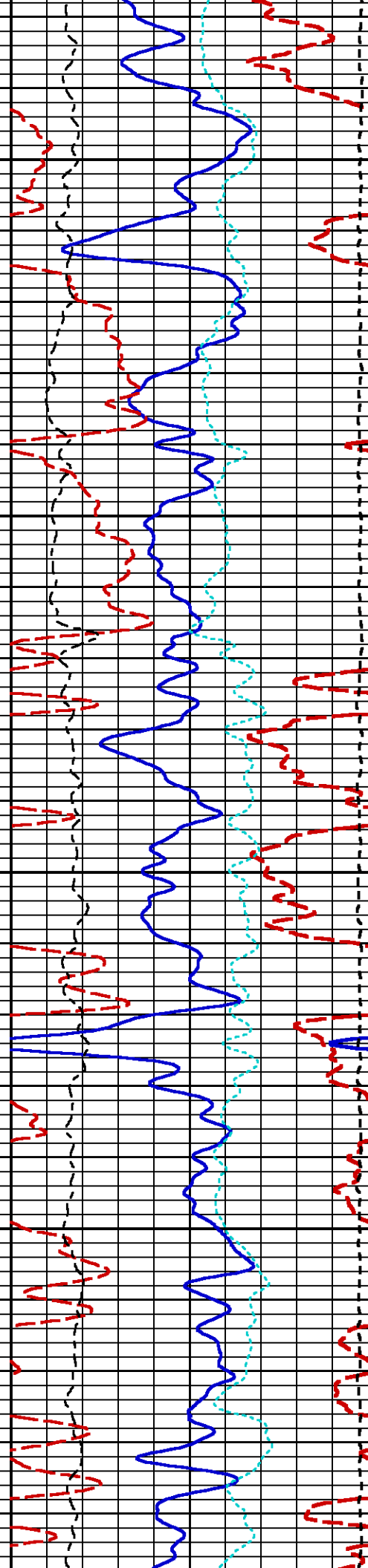


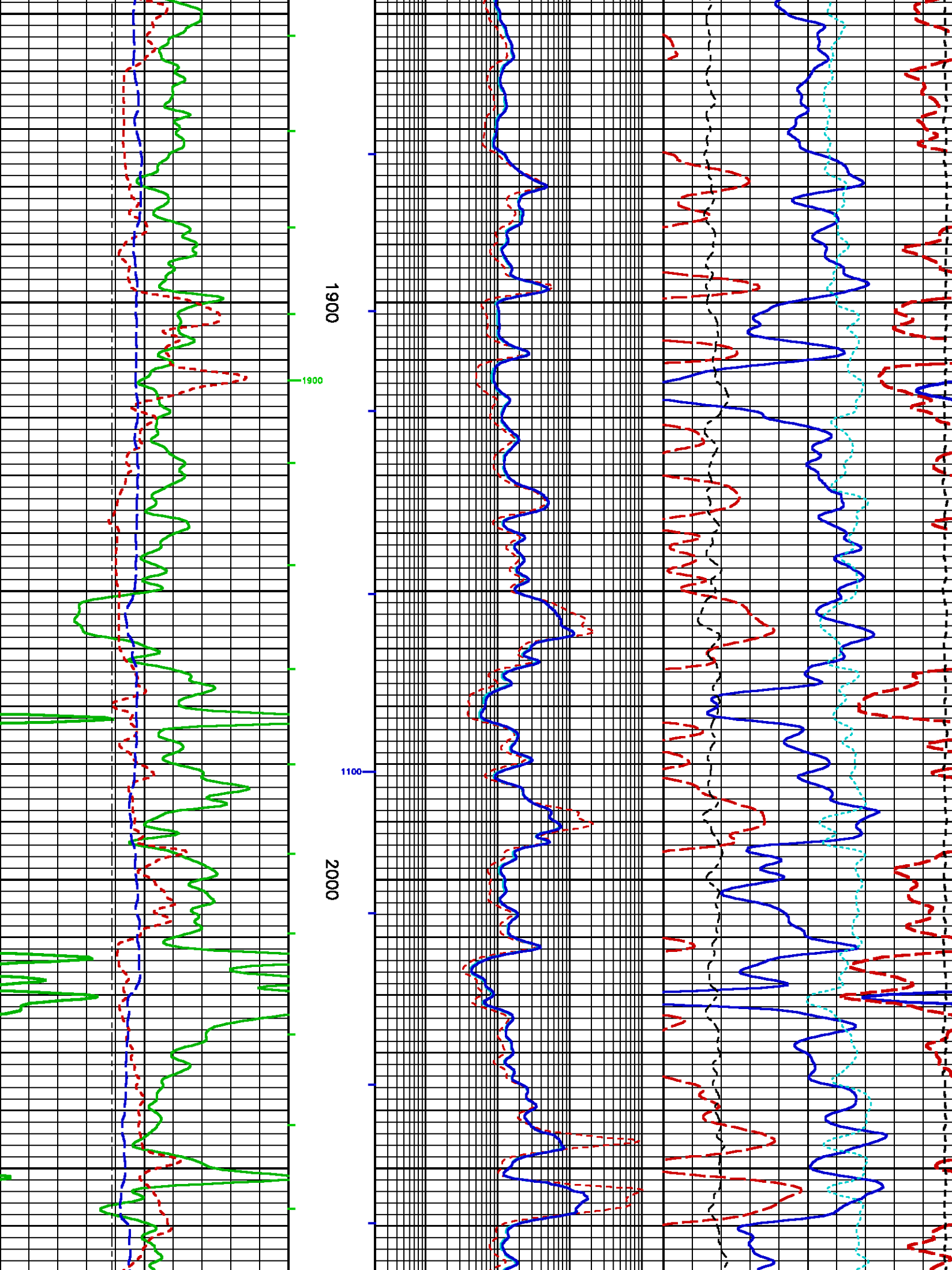


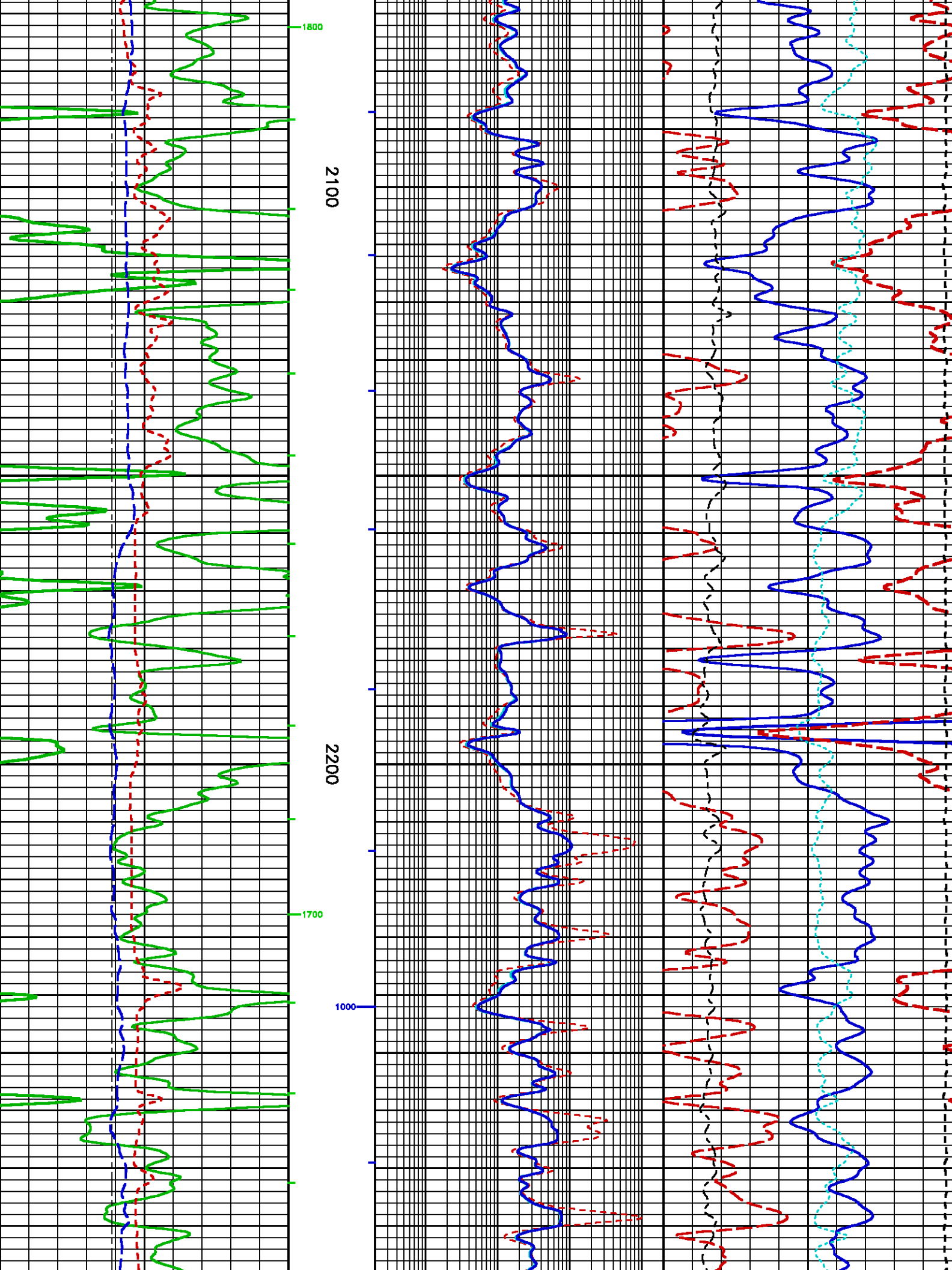


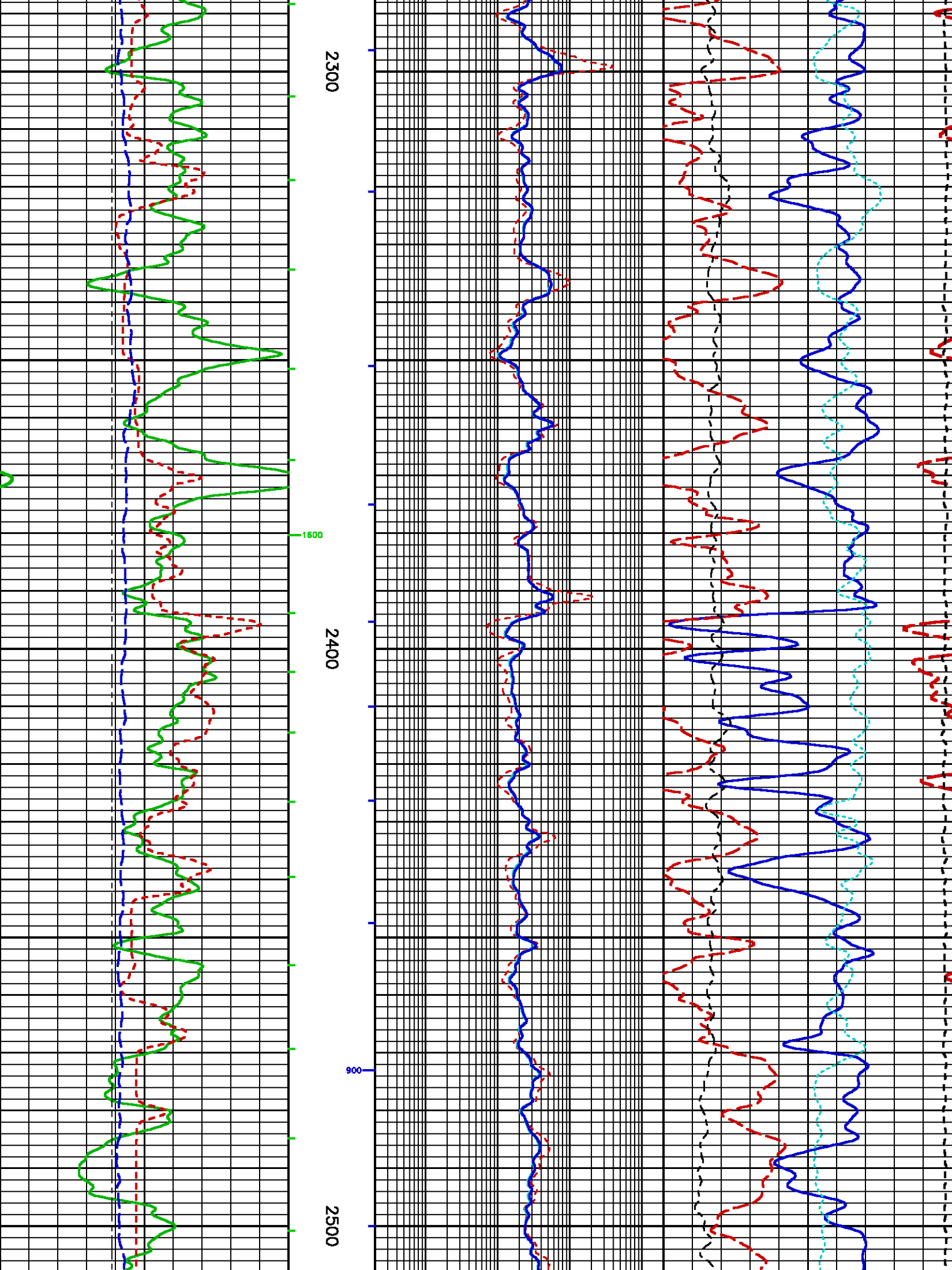


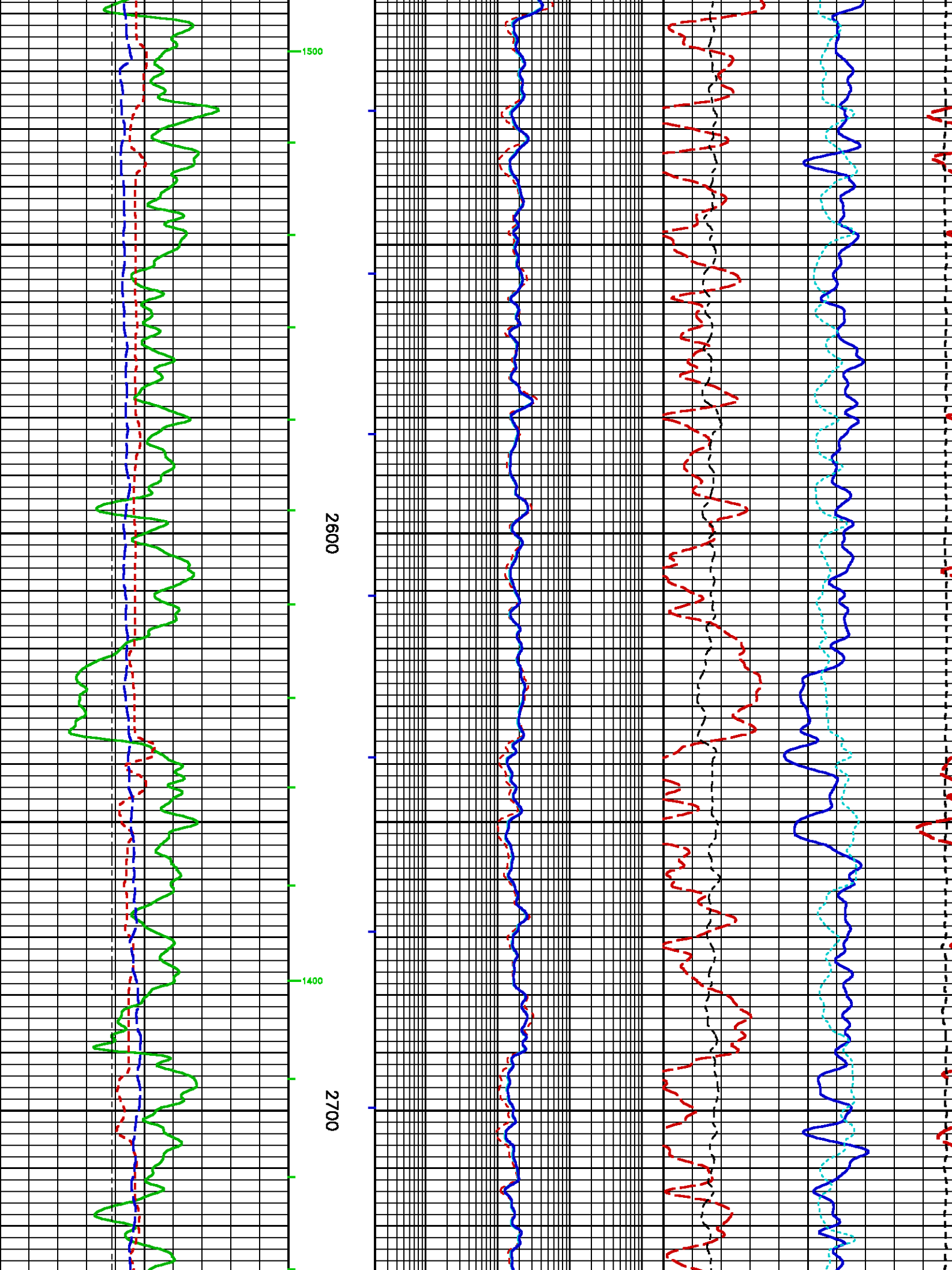


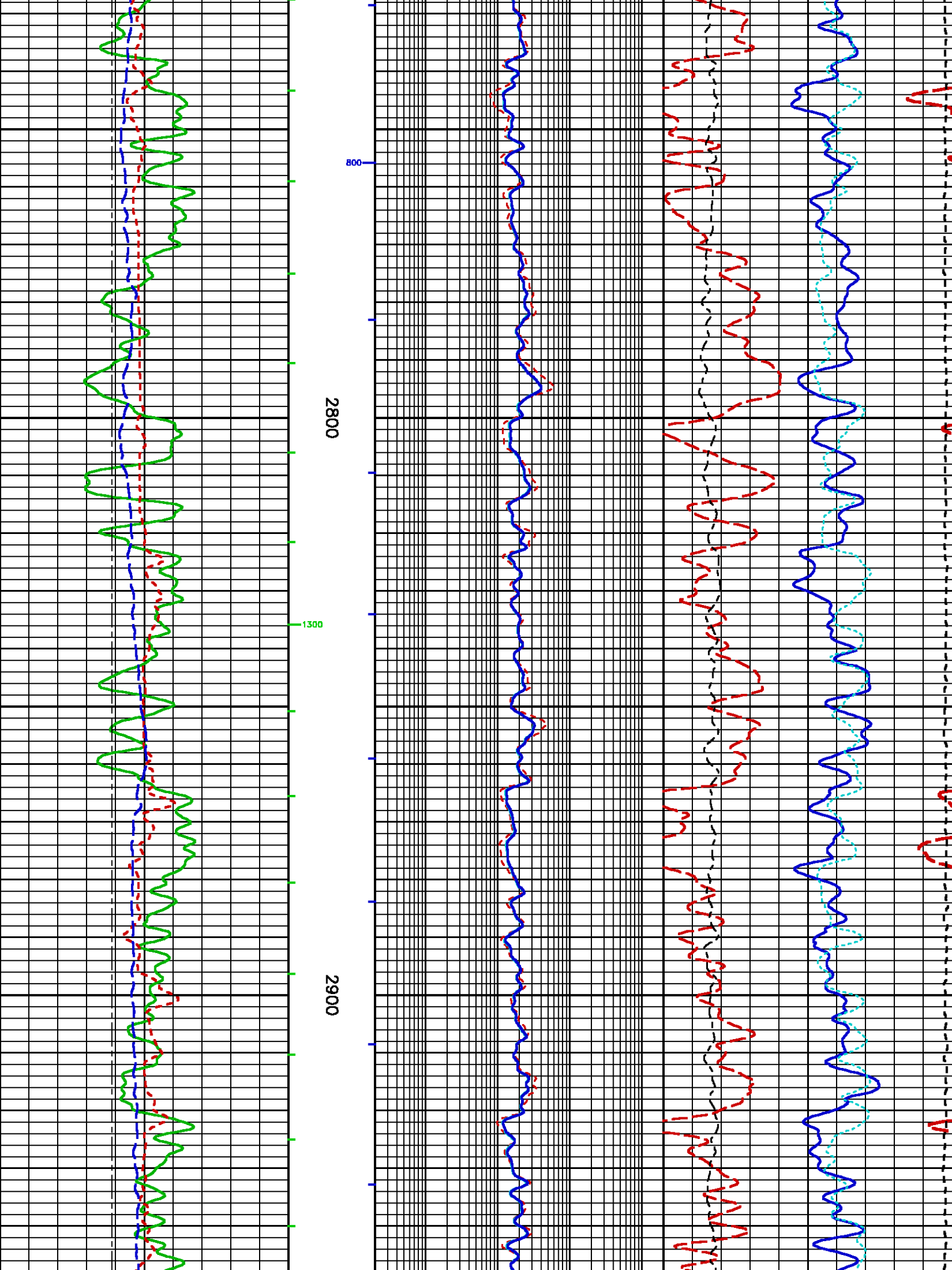


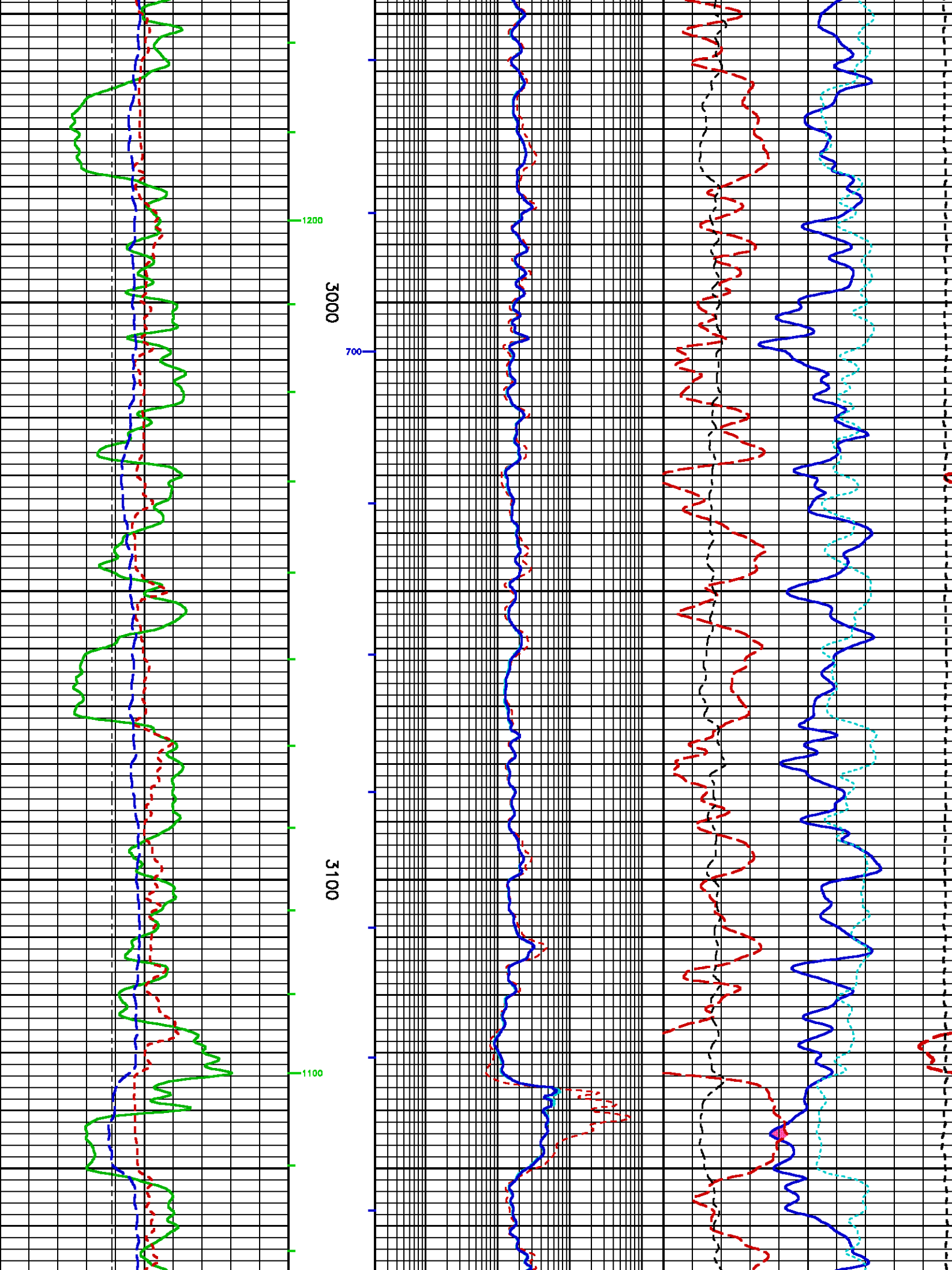


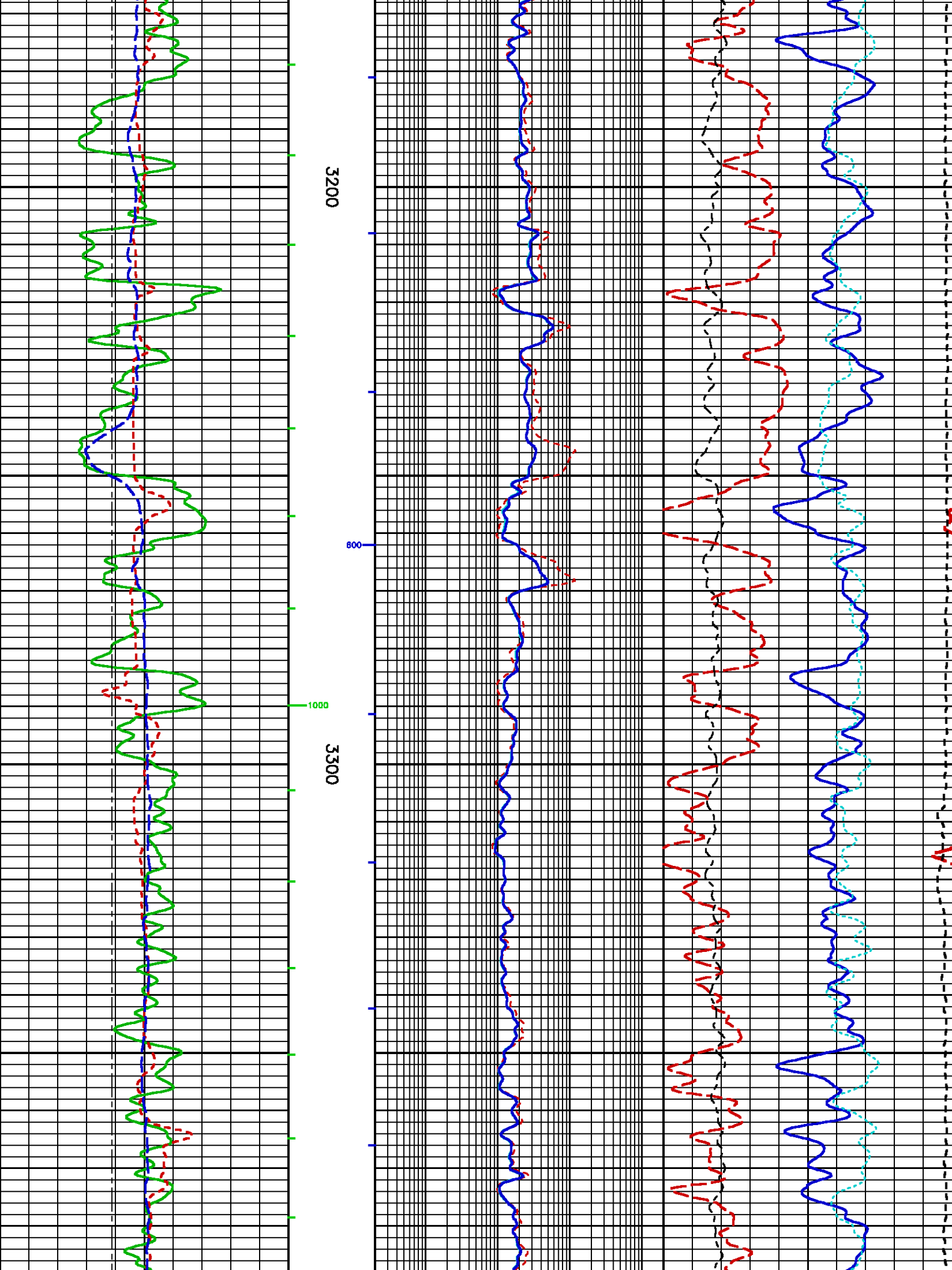


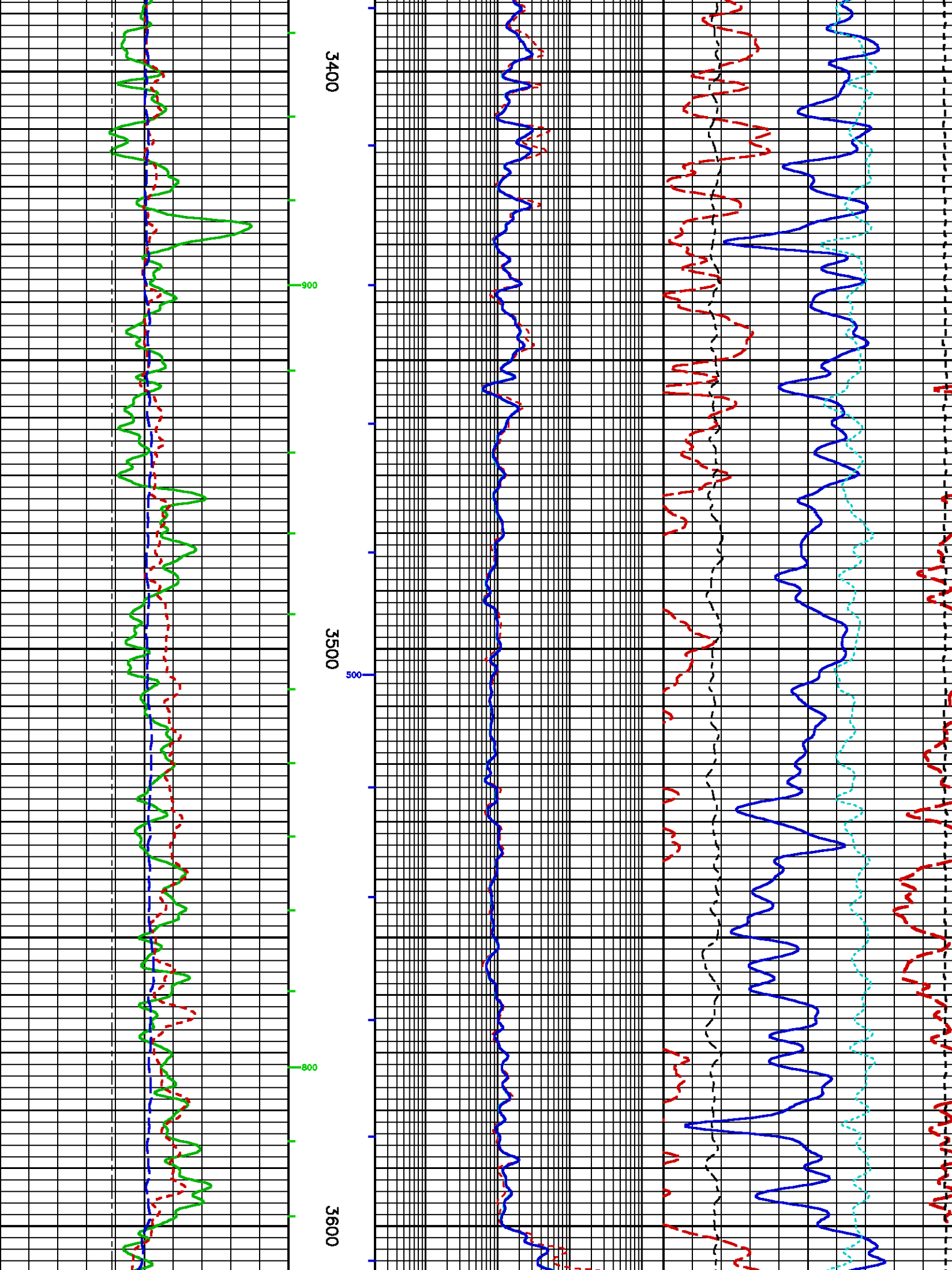


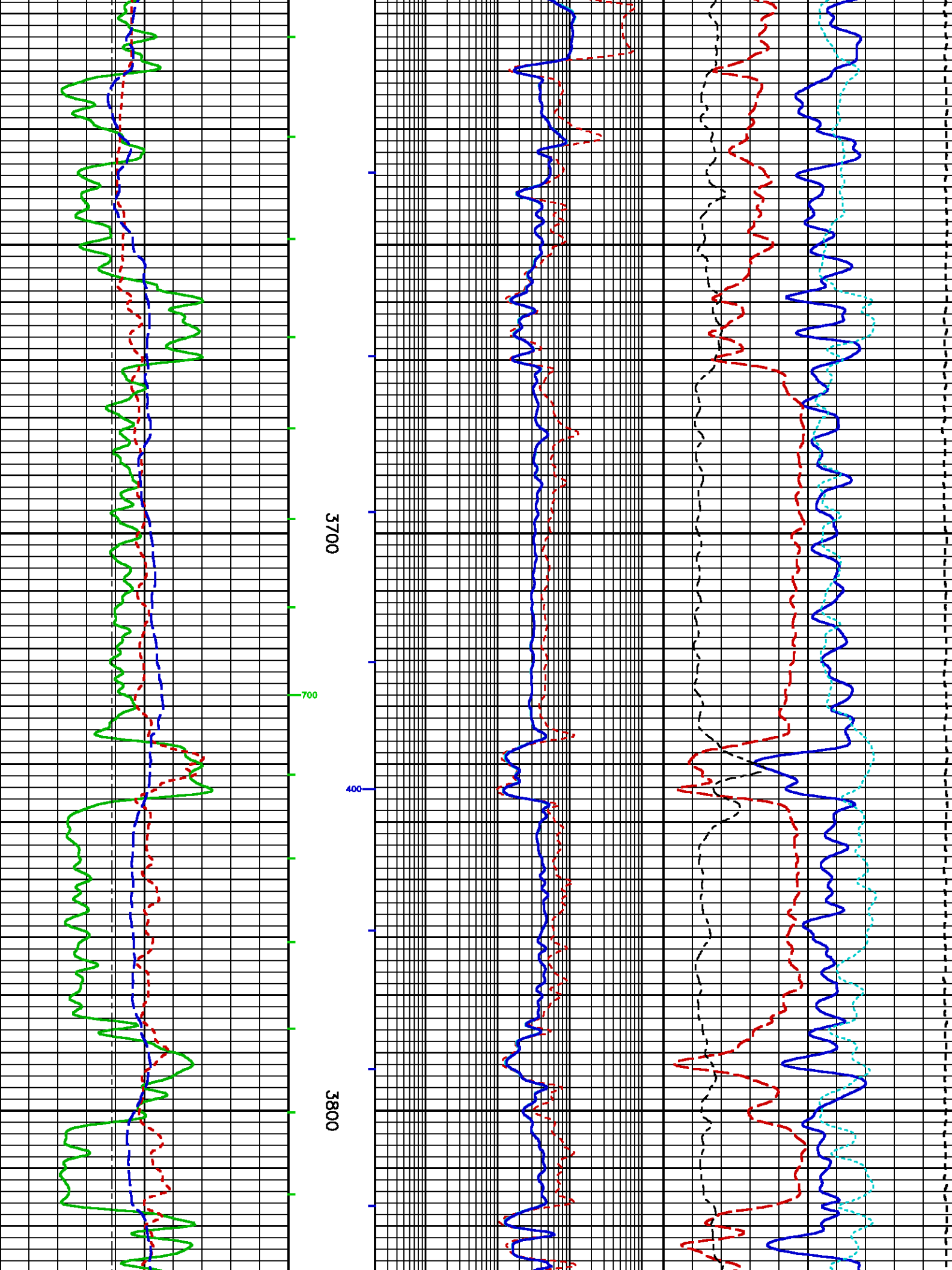


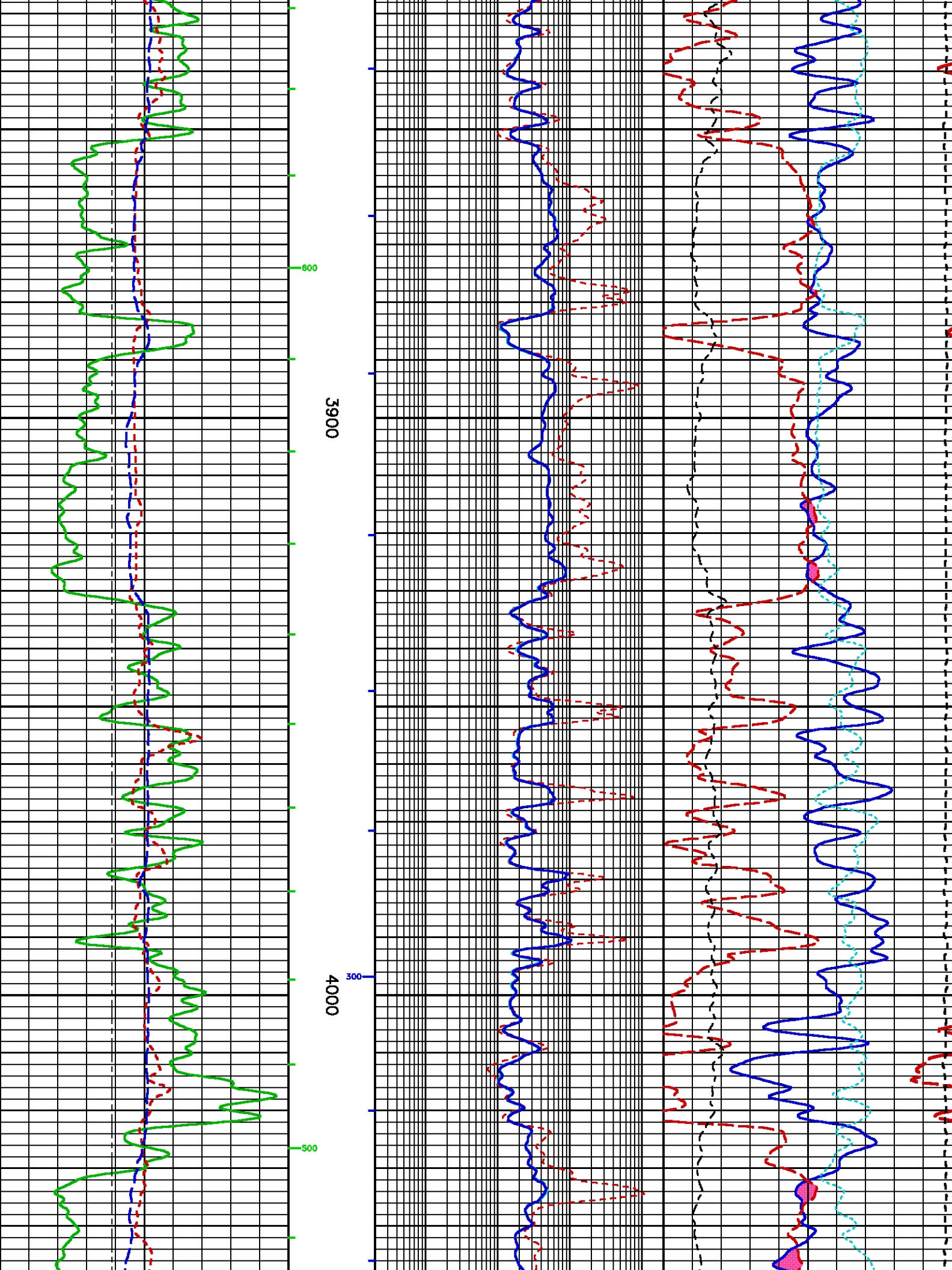


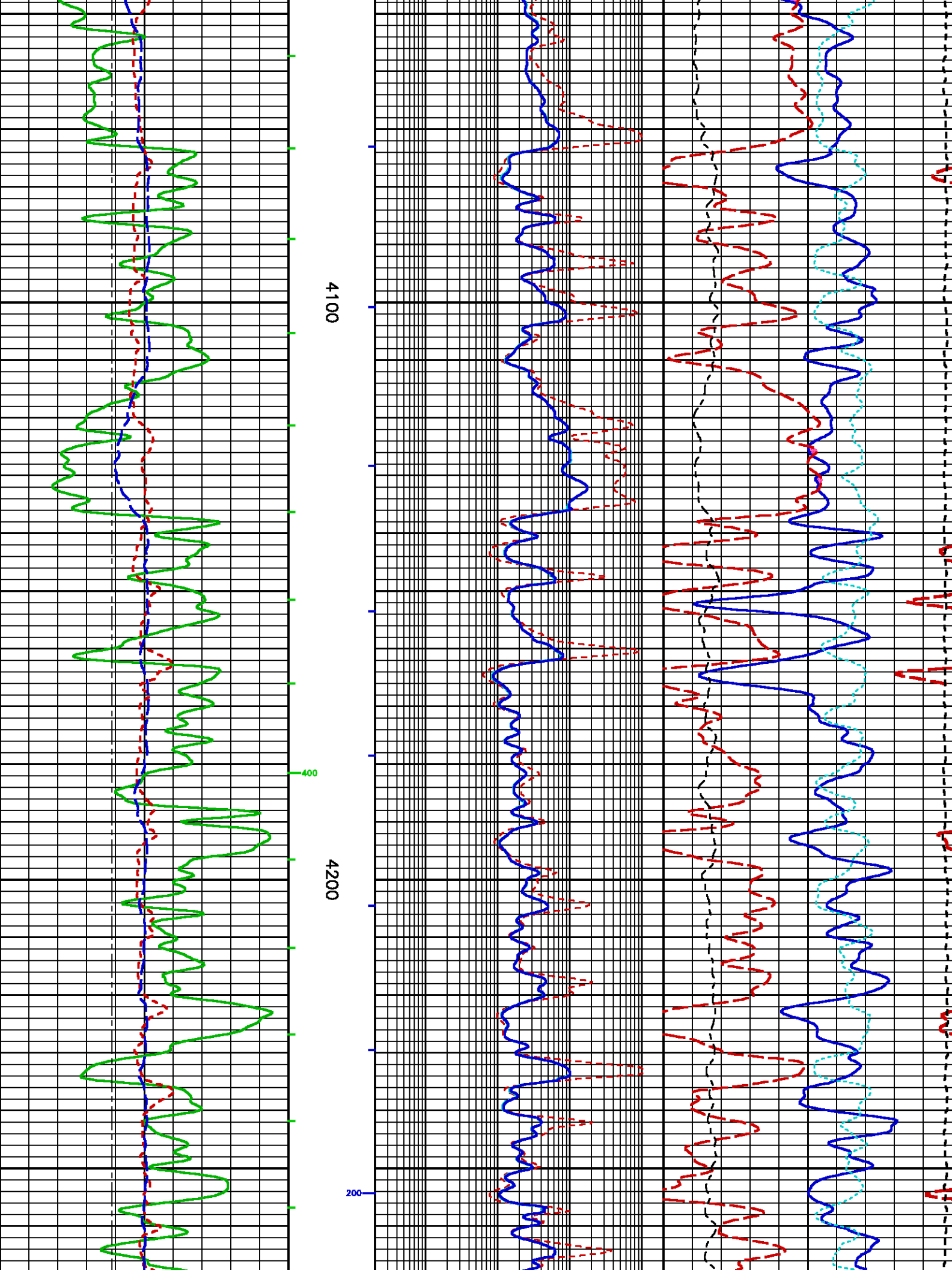


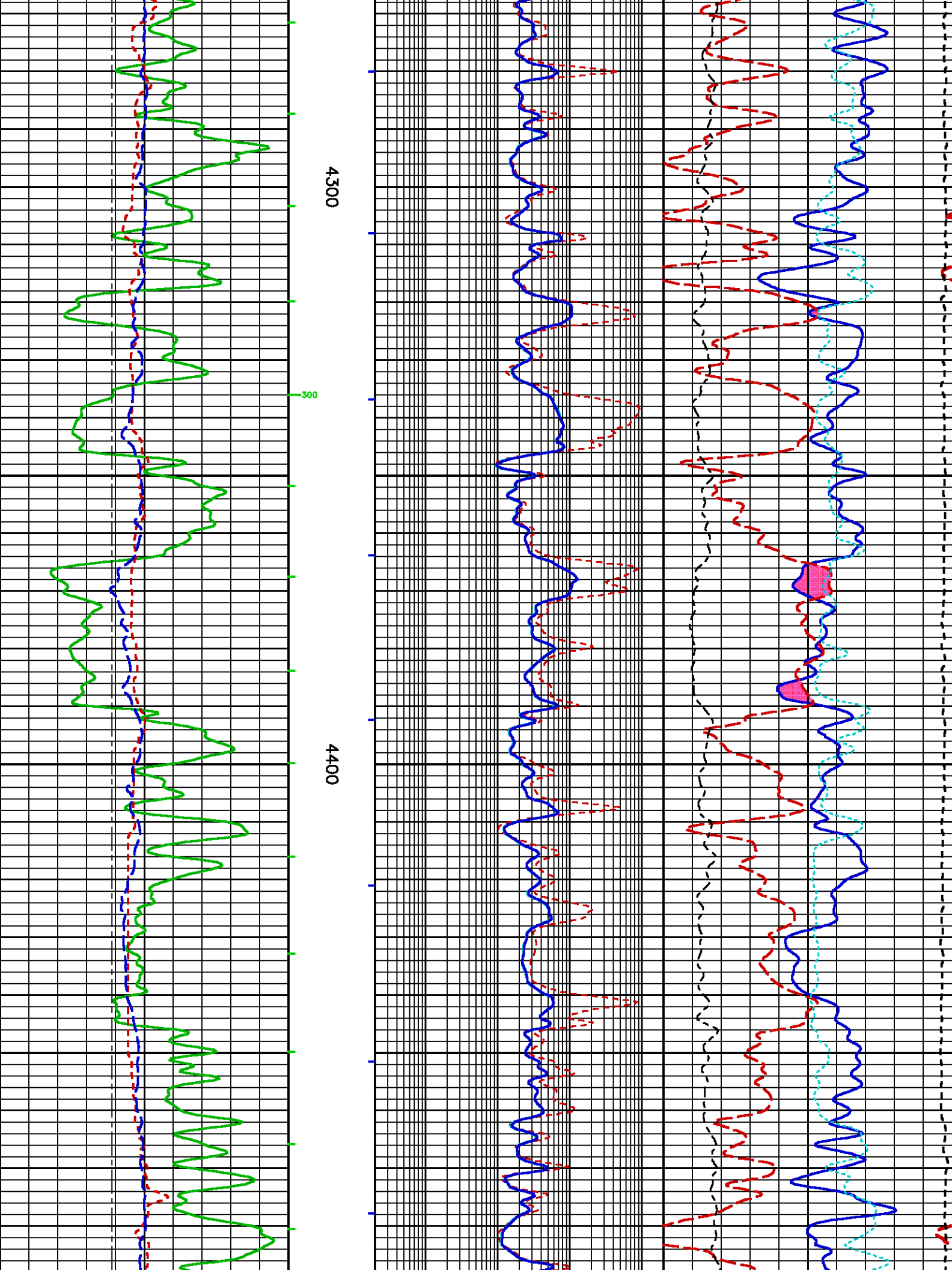


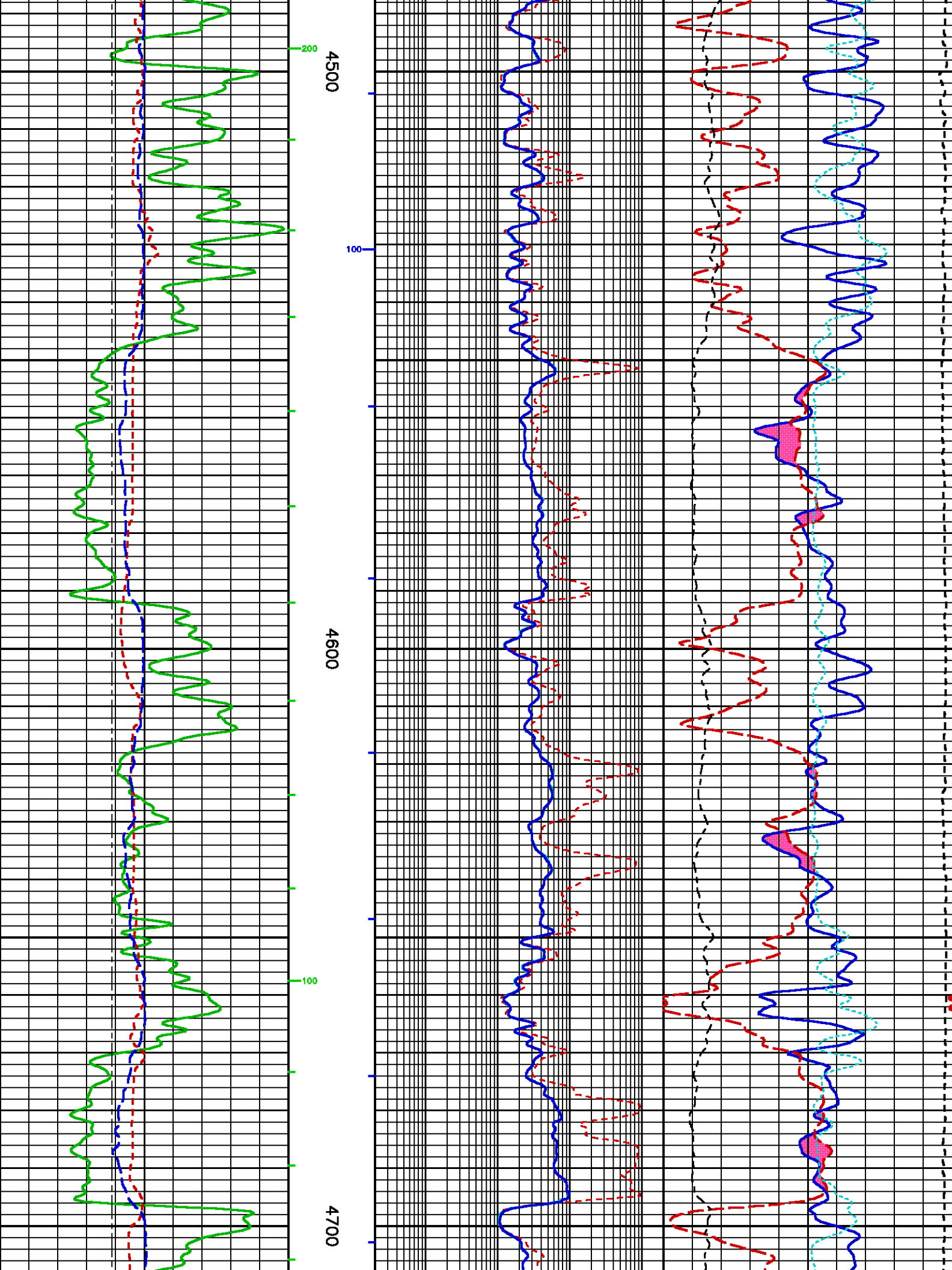


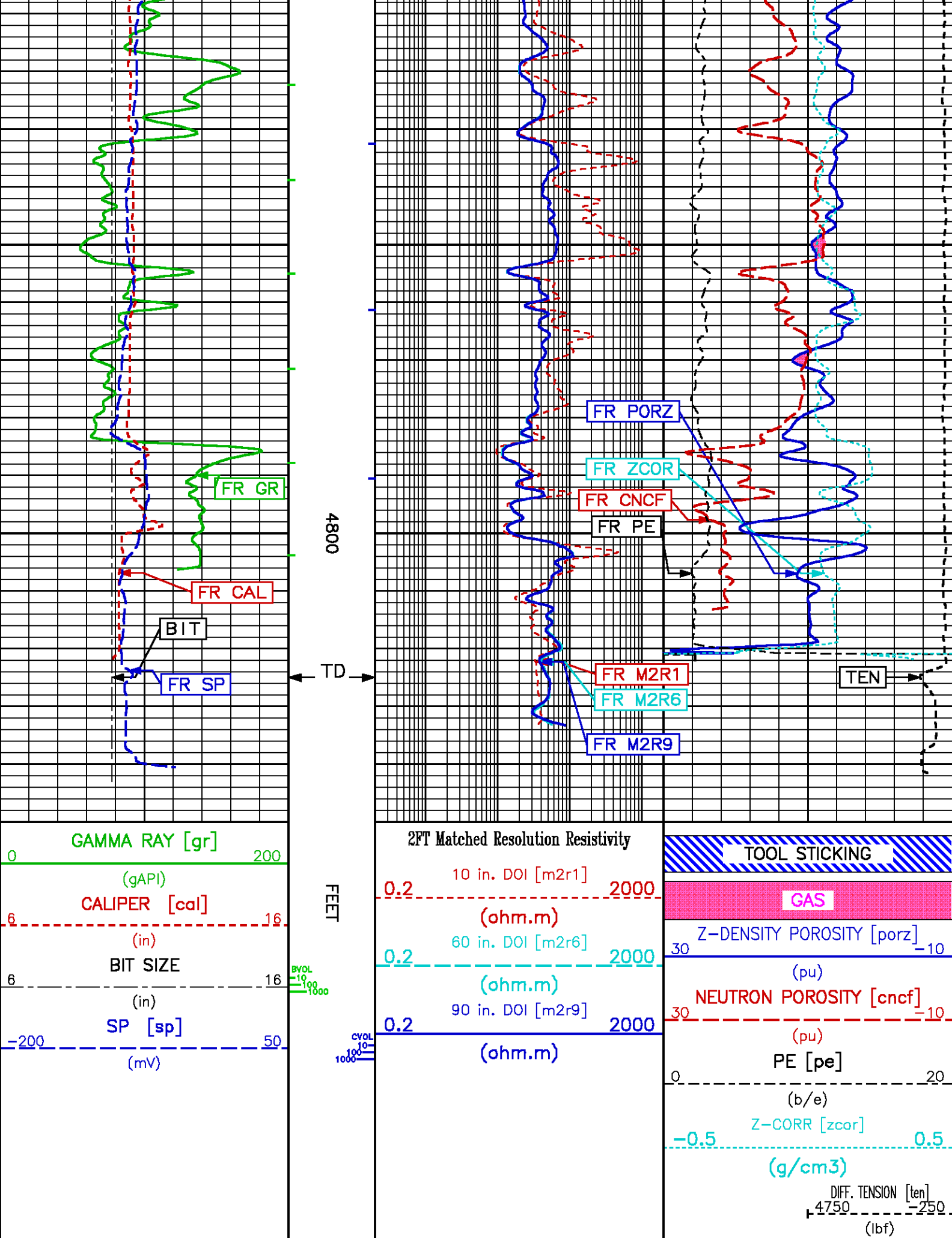












REPEAT LOG 5"/100FT SCALE

ECLIPS 6.0i Feb 21, 2008
Updates: 1

Mon Jun 22 06:23:16 2009

Pcrplt /main/62

Cplot

Pdf_Cpp /main/16

Fileview 5.42

PARAMETER AND FILTER SUMMARY REPORT

File: /data1a/1254/k970a02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 546.234 ft BOTTOM DEPTH: 995.590 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.	7.000	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	9.875	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)	TOOL MEASURED		"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	"	"
	MUD SAMPLE RES	1.000	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

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

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	SANDSTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	8024	ppm	"	"
	BOREHOLE CORRECTION	ON		"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	RHOmatrix	2.680	g/cm3	TOP	BOTTOM
	RHOfluid	1.000	g/cm3	"	"

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	ln	''	''
	TOOL POSITION	ECCENTERED		''	''
	Rmud MULTIPLIER	1.000		''	''

CURVE DESCRIPTION REPORT

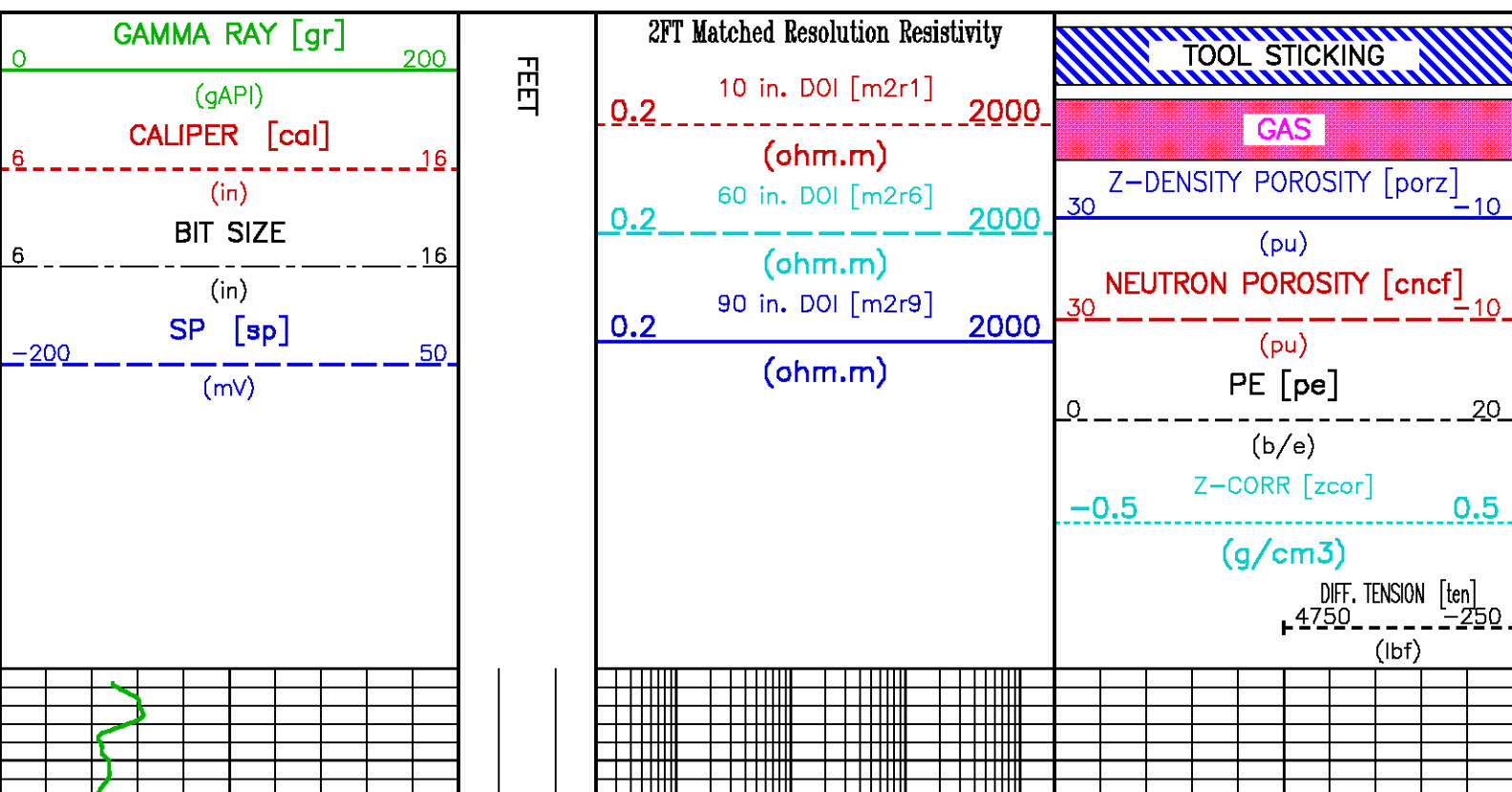
CURVE NAME	CURVE ALIAS	CREATION DATE	CURVE DESCRIPTION
F1:BIT	BIT	Jun 22 06:04:19 2009	BIT SIZE
F1:CAL	CAL	Jun 22 06:04:19 2009	CALIPER
F1:CNCF	CNCF	Jun 22 06:04:19 2009	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:GR	GR	Jun 22 06:04:19 2009	GAMMA RAY
F1:M2R1	M2R1	Jun 22 06:04:19 2009	VERT RESOLUTION MATCHED { 2 FT } RES - DOI 10 INCH
F1:M2R6	M2R6	Jun 22 06:04:19 2009	VERT RESOLUTION MATCHED { 2 FT } RES - DOI 60 INCH
F1:M2R9	M2R9	Jun 22 06:04:19 2009	VERT RESOLUTION MATCHED { 2 FT } RES - DOI 90 INCH
F1:PE	PE	Jun 22 06:04:19 2009	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	PORZ	Jun 22 06:04:19 2009	POROSITY FOR SELECTABLE MATRIX
F1:SP	SP	Jun 22 06:04:19 2009	SPONTANEOUS POTENTIAL
F1:TEN	TEN	Jun 22 06:04:19 2009	DIFFERENTIAL TENSION
F1:ZCOR	ZCOR	Jun 22 06:04:19 2009	DENSITY CORRECTION

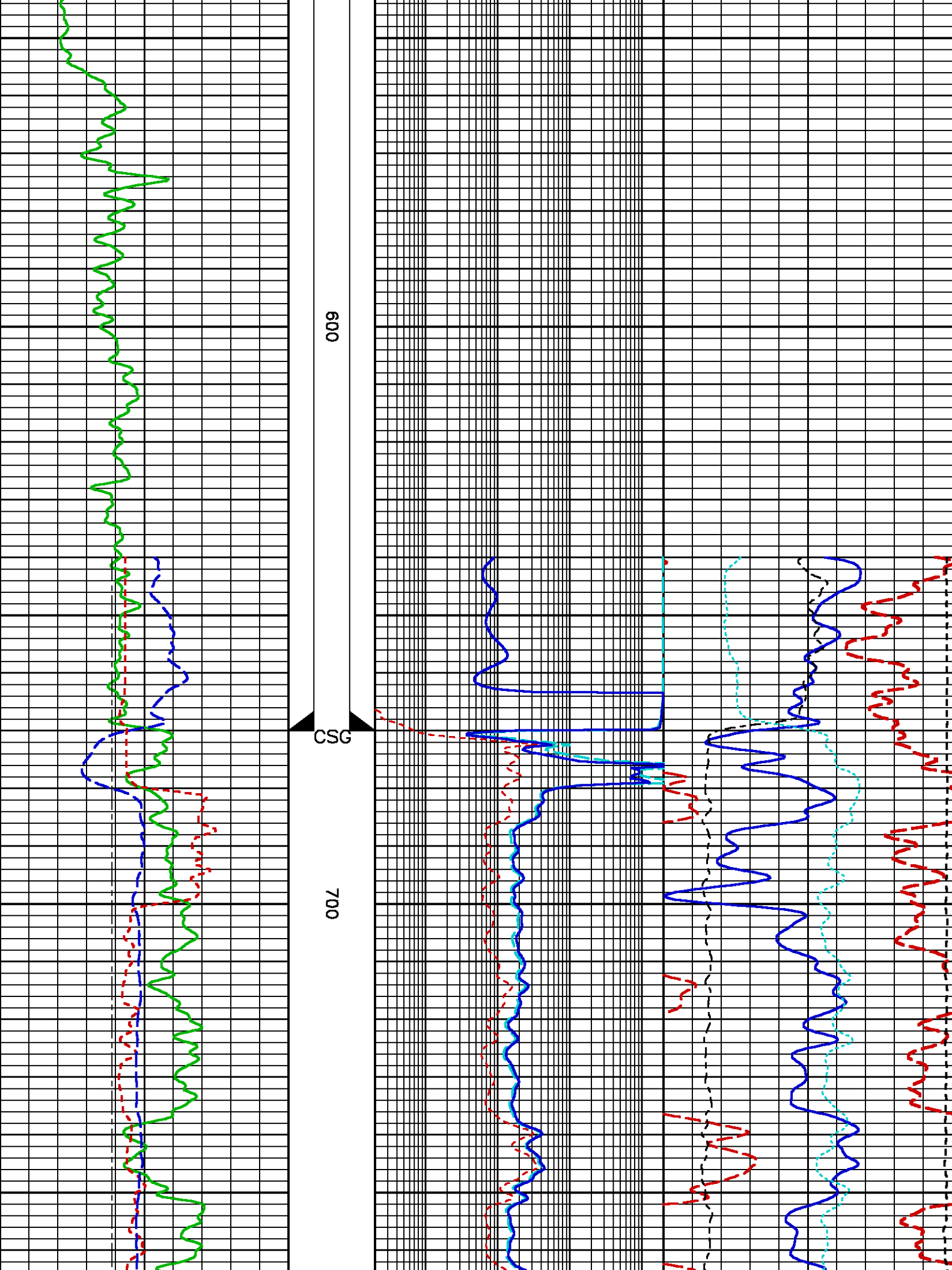
CURVE MEASURE POINT OFFSET

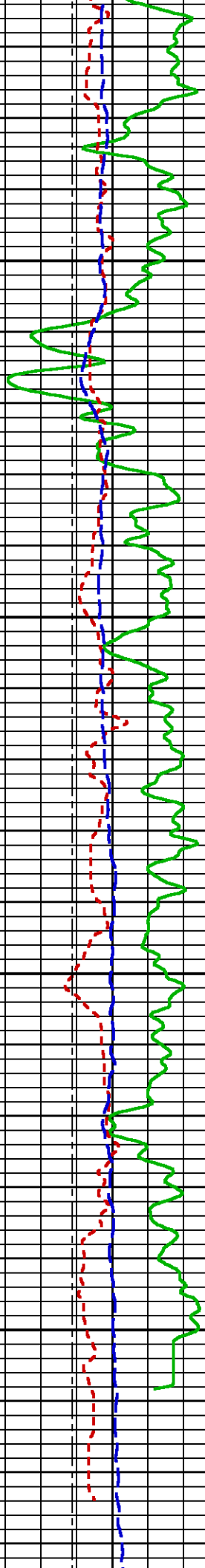
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	35.00	M2R9	2.75	SP	1.25
CAL	18.12	M2R1	2.75	PE	18.00	TEN	0.00
CNCF	27.38	M2R6	2.75	PORZ	18.00	ZCOR	18.00

Presentation : mfg1:/dat1a/1254/REPEAT.pdf [5"/100' Scale]
Plot Interval : 522 - 999.75 Feet

Data File 1 : F1 : mfg1:/dat1a/1254/k970a02_REPEAT.xtf
Created On : Jun 22 06:04:19 2009
Company : WILLIAMS PRODUCTION COMPANY RMT
Well : GM 931-1D
Field : GRAND VALLEY
File Interval : 0 - 1001 Feet
Oct : k970a

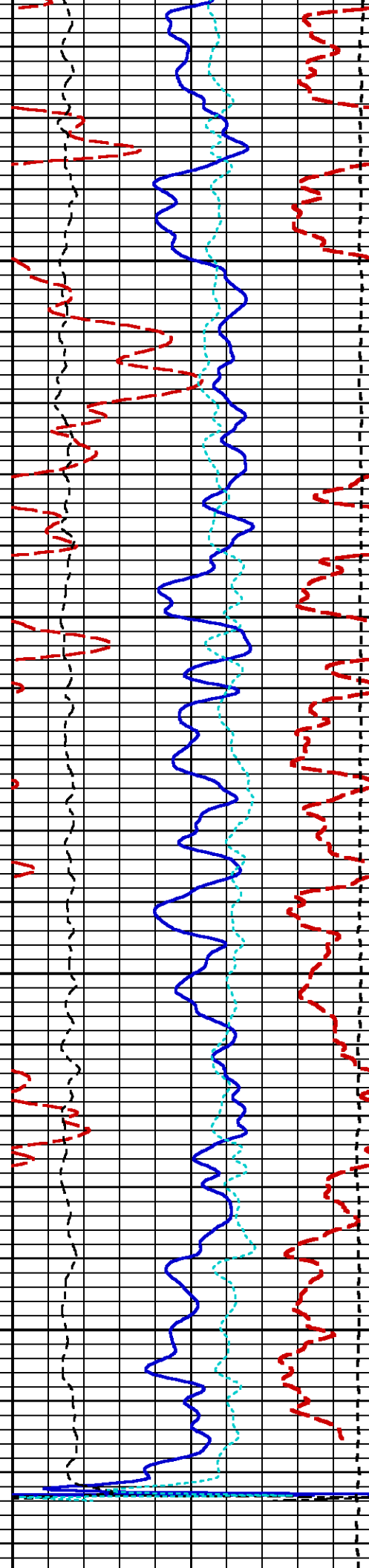
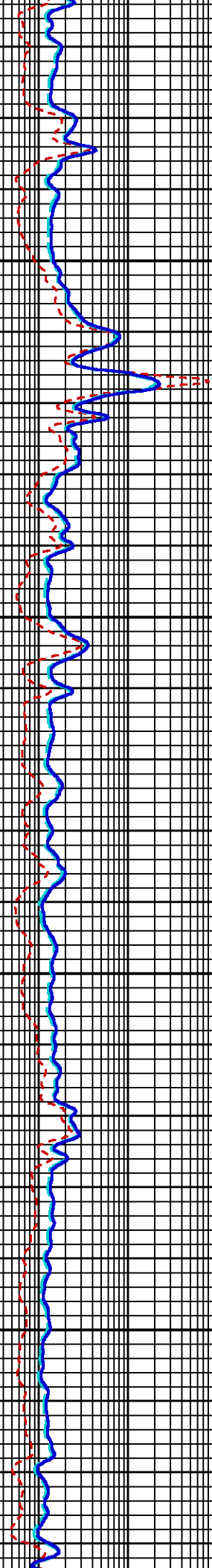


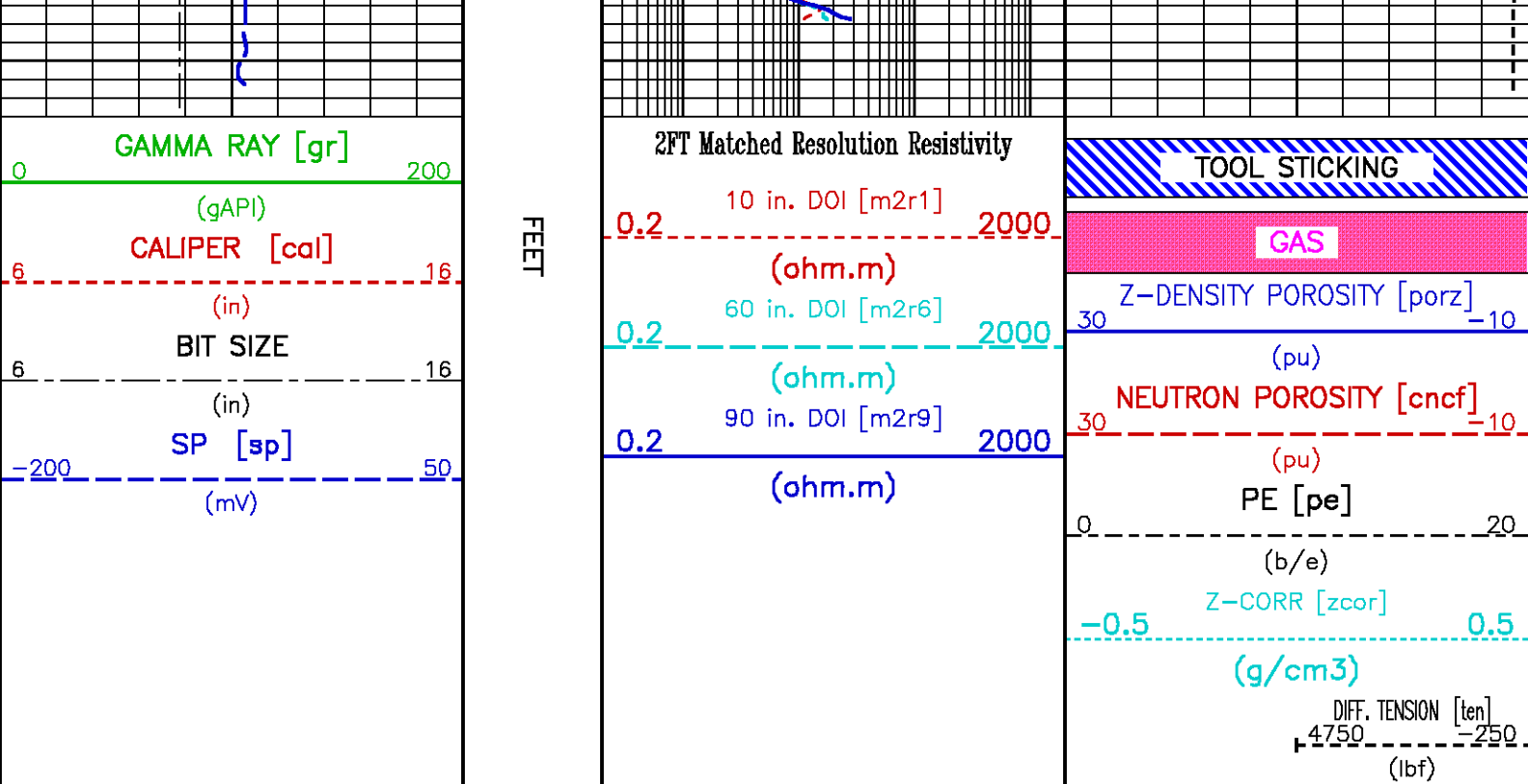




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CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/1254/k970a.tp1

GR PRIMARY CALIBRATION SUMMARY

Tool #: 3518EG 10139870

DATE/TIME PERFORMED: Tue May 12 13:49:32 2009

Unit #: 3880TA HL6741

Jlg Series: 4702NK BA-856

Background	Calibrator ON	Jlg Value (gAPI)	Mult	Background (gAPI)	Calibrator ON (gAPI)
174.52	879.55	185	0.282 0.230 0.280	45.79	230.79

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870 DATE/TIME PERFORMED: Mon Jun 22 04:20:16 2009 DAYS SINCE CAL: 40

UNIT #: 3880TA HL6741

Jlg: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67 928.00 1027.00	88.53 536.00	1363.22 1237.00 1512.00

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870 DATE/TIME PERFORMED: Mon Jun 22 06:15:01 2009 DAYS SINCE CAL: 40

UNIT #: 3880TA HL6741

Jlg: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.33 928.00 1027.00	128.22 536.00	1367.65 1237.00 1512.00

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2436XA 10411083

DATE/TIME PERFORMED: Wed May 13 10:06:47 2009

UNIT #: 3880TA HL6741

CALIBRATOR # 347592 110004

SOURCE # 4712XA N 0045

UNIT #: 3880TA HL6741 CALIBRATOR #: 2437XB 112674 SOURCE #: 4718XA N-0945

SSN	LSN	SSN/LSN	MCF	CNRATIO	CN
DT CPS	DT CPS				PU
4786.26	850.68	5.62638	1.01988	5.73700	25.241
			0.98000 1.05000		

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10411083 DATE/TIME PERFORMED: Mon Jun 22 04:20:10 2009 DAYS SINCE CAL: 39

UNIT #: 3880TA HL6741 CALIBRATOR #: INTRNL N/A

SSN	LSN	SSN/LSN	TEMP	HV	LV
DT CPS	DT CPS		(degF)	(V)	(V)
992.07	994.44	0.99782	76.8	1345.4	4.642
		0.98000 1.05000	280.4	1250.0 1450.0	4.300 5.000

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10411083 DATE/TIME PERFORMED: Mon Jun 22 06:15:05 2009 DAYS SINCE CAL: 39

UNIT #: 3880TA HL6741 CALIBRATOR #: INTRNL N/A

SSN	LSN	SSN/LSN	TEMP	HV	LV
DT CPS	DT CPS		(degF)	(V)	(V)
992.08	994.44	0.99782	117.8	1346.9	4.642
		0.98000 1.05000	280.4	1250.0 1450.0	4.300 5.000

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2223XA 10097564 DATE/TIME PERFORMED: Fri Jun 5 10:11:13 2009

UNIT #: 3880TA HL6741

	SIZE	VALUE	MULTIPLIER	ADD
	(In)			
SMALL RING (Arm)	7.000	1492.0		
LARGE RING (Arm)	11.000	2740.0	0.00321	2.21795
PAD CLOSED		1604.0	0.00250	-4.01000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10097564 DATE/TIME PERFORMED: Mon Jun 22 04:24:11 2009 DAYS SINCE CAL: 18

UNIT #: 3880TA HL6741

	VALUE	MULTIPLIER	ADD	SIZE
				(In)
ARM	2464.0	0.00321	2.21795	10.1
PAD	1679.2	0.00250	-4.01000	0.2

	ACTUAL	MEASURED
	(In)	(In)
DIAMETER (arm+pad)	10.192	10.1
		9.8 10.6

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10097564 DATE/TIME PERFORMED: Mon Jun 22 06:14:17 2009 DAYS SINCE CAL: 18

UNIT #: 3880TA HL6741

	VALUE	MULTIPLIER	ADD	SIZE
				(In)
ARM	2580.0	0.00321	2.21795	10.5
PAD	1772.0	0.00250	-4.01000	0.4

	ACTUAL	MEASURED
	(In)	(In)
DIAMETER (arm+pad)	10.192	10.2
		9.8 10.6

ZDL PRIMARY CALIBRATION SUMMARY

UNIT: 3880TA HL6741 CALB BLKS: 2225XA 094292 CS SRC: 4705XA 16068B PAD TYPE: PADTYP 7.5" PAD

ZDL BEFORE LOG VERIFICATION SUMMARY

UNIT #: 3880TA HL6741

ZDL AFTER LOG VERIFICATION SUMMARY

UNIT #: 3880TA HL6741

HDIL PRIMARY CALIBRATION SUMMARY

UNIT #: 3580TA HL6741 GRCOND ID & DATE: 94 101 01

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Co11 0 R	0.0035 -0.2000 0.2000	-0.0007 -0.1000 0.1000	-0.0001 -0.1000 0.1000	-0.0001 -0.1000 0.1000	-0.0009 -0.1000 0.1000	-0.0004 -0.1000 0.1000	-0.0008 -0.1000 0.1000	-0.0004 -0.1000 0.1000
Co11 0 Q	-0.0094 -0.5000 0.5000	-0.0012 -0.2000 0.2000	0.0011 -0.1000 0.1000	-0.0007 -0.1000 0.1000	0.0001 -0.1000 0.1000	0.0008 -0.1000 0.1000	-0.0008 -0.1000 0.1000	-0.0001 -0.1000 0.1000
Co11 1 R	0.0095 -0.2000 0.2000	-0.0002 -0.1000 0.1000	-0.0012 -0.1000 0.1000	0.0016 -0.1000 0.1000	-0.0007 -0.1000 0.1000	0.0001 -0.1000 0.1000	0.0003 -0.1000 0.1000	0.0008 -0.1000 0.1000
Co11 1 Q	-0.0087 -0.5000 0.5000	-0.0023 -0.2000 0.2000	0.0007 -0.1000 0.1000	-0.0001 -0.1000 0.1000	-0.0014 -0.1000 0.1000	-0.0001 -0.1000 0.1000	0.0013 -0.1000 0.1000	0.0005 -0.1000 0.1000
Co11 2 R	0.0052 -0.2000 0.2000	-0.0027 -0.1000 0.1000	0.0008 -0.1000 0.1000	-0.0008 -0.1000 0.1000	0.0021 -0.1000 0.1000	-0.0008 -0.1000 0.1000	-0.0011 -0.1000 0.1000	-0.0011 -0.1000 0.1000
Co11 2 Q	-0.0032 -0.5000 0.5000	0.0000 -0.2000 0.2000	0.0025 -0.1000 0.1000	0.0003 -0.1000 0.1000	-0.0004 -0.1000 0.1000	0.0008 -0.1000 0.1000	-0.0004 -0.1000 0.1000	0.0005 -0.1000 0.1000
Co11 3 R	0.0464 -0.3000 0.3000	-0.0045 -0.1000 0.1000	-0.0046 -0.1000 0.1000	0.0048 -0.1000 0.1000	0.0001 -0.1000 0.1000	0.0001 -0.1000 0.1000	0.0022 -0.1000 0.1000	0.0004 -0.1000 0.1000
Co11 3 Q	-0.0002 -0.5000 0.5000	-0.0138 -0.2000 0.2000	0.0049 -0.1000 0.1000	-0.0035 -0.1000 0.1000	-0.0033 -0.1000 0.1000	0.0032 -0.1000 0.1000	-0.0007 -0.1000 0.1000	0.0026 -0.1000 0.1000
Co11 4 R	0.1816 -0.5000 0.5000	-0.0021 -0.2000 0.2000	-0.0183 -0.2000 0.2000	0.0147 -0.2000 0.2000	-0.0074 -0.2000 0.2000	-0.0053 -0.2000 0.2000	0.0046 -0.2000 0.2000	-0.0046 -0.2000 0.2000
Co11 4 Q	0.0455 -0.5000 0.5000	-0.0434 -0.2000 0.2000	0.0053 -0.1000 0.1000	0.0046 -0.1000 0.1000	-0.0095 -0.1000 0.1000	0.0039 -0.1000 0.1000	-0.0038 -0.1000 0.1000	-0.0067 -0.1000 0.1000

	-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	0.3935	0.0120	-0.0453	0.0354	-0.0151	0.0012	0.0008	-0.0125
	-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	0.1424	-0.1024	0.0249	-0.0013	-0.0055	0.0067	-0.0030	-0.0073
	-1.8000 1.8000	-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	163.26 136.00 188.00	161.80 134.00 184.00	158.87 131.00 181.00	154.52 128.00 176.00	148.82 122.00 170.00	141.85 118.00 161.00	133.62 112.00 150.00	124.25 105.00 139.00
Coil 0 P	7.784 6.000 8.000	25.445 21.000 30.000	42.692 35.000 50.000	59.888 49.000 71.000	77.099 63.000 91.000	94.299 77.000 109.000	111.529 82.000 130.000	128.741 106.000 151.000
Coil 1 M	282.65 238.00 328.00	280.10 235.00 325.00	274.90 230.00 320.00	267.21 225.00 312.00	257.02 218.00 302.00	244.51 208.00 288.00	229.77 196.00 268.00	213.02 184.00 244.00
Coil 1 P	7.839 6.000 9.000	25.650 21.000 30.000	43.048 36.000 51.000	60.404 49.000 71.000	77.754 63.000 92.000	95.109 78.000 112.000	112.451 83.000 130.000	129.736 107.000 151.000
Coil 2 M	561.07 479.00 659.00	555.86 474.00 654.00	545.43 465.00 645.00	530.02 450.00 622.00	509.83 432.00 602.00	485.27 412.00 572.00	456.49 390.00 540.00	423.80 359.00 499.00
Coil 2 P	7.748 6.000 9.000	25.378 21.000 31.000	42.587 35.000 51.000	59.732 49.000 71.000	76.864 63.000 92.000	94.001 76.000 115.000	111.145 82.000 135.000	128.251 105.000 155.000
Coil 3 M	918.97 772.00 1060.00	908.95 764.00 1050.00	891.74 752.00 1030.00	864.91 728.00 1010.00	829.88 700.00 970.00	787.48 665.00 925.00	737.96 626.00 888.00	682.59 589.00 799.00
Coil 3 P	8.041 6.000 10.000	26.190 21.000 30.000	43.919 35.000 51.000	61.588 49.000 72.000	79.201 63.000 93.000	96.788 76.000 114.000	114.321 80.000 135.000	151.783 104.000 156.000
Coil 4 M	1419.5 1210.0 1700.0	1407.3 1206.0 1690.0	1382.6 1180.0 1680.0	1345.9 1140.0 1680.0	1297.4 1120.0 1630.0	1236.9 1070.0 1480.0	1165.7 1000.0 1350.0	1085.2 942.0 1240.0
Coil 4 P	7.831 6.000 10.000	25.628 21.000 31.000	43.028 36.000 52.000	60.401 49.000 75.000	77.798 63.000 93.000	95.223 77.000 114.000	112.662 81.000 136.000	130.098 106.000 156.000
Coil 5 M	2957.6 2450.0 3450.0	2933.0 2420.0 3400.0	2881.6 2410.0 3320.0	2804.8 2350.0 3200.0	2703.1 2280.0 3080.0	2576.8 2150.0 2950.0	2428.2 2020.0 2750.0	2262.5 1870.0 2570.0
Coil 5 P	7.889 6.000 10.000	25.793 20.000 31.000	43.321 35.000 52.000	60.800 49.000 73.000	78.314 63.000 94.000	95.844 78.000 113.000	113.363 83.000 134.000	130.870 106.000 156.000

AM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-916 -3200 940	-606 -1400 -20	-489 -930 -150	-422 -760 -180	-375 -860 -130	-341 -600 -120	-314 -550 -110	-293 -520 -92
Coil 0 Q	110 -18000 11000	-248 -5800 3800	-278 -3700 2100	-288 -2700 1400	-294 -2200 1000	-301 -1800 790	-308 -1600 620	-313 -1500 490
Coil 1 R	-110 -750 480	-136 -360 63	-133 -280 9	-127 -230 -10	-120 -200 -26	-112 -180 -35	-106 -160 -46	-101 -150 -49
Coil 1 Q	338 -3300 3300	83 -1100 960	32 -630 530	6 -470 360	-10 -360 260	-21 -320 180	-27 -280 150	-31 -260 120
Coil 2 R	-0.4 -85.0 76.0	-29.2 -84.0 -0.4	-31.5 -97.0 -12.0	-30.7 -81.0 -16.0	-28.7 -46.0 -17.0	-26.5 -42.0 -16.0	-24.2 -39.0 -15.0	-22.4 -37.0 -13.0
Coil 2 Q	141.1 -1500.0 1900.0	49.4 -500.0 610.0	28.4 -290.0 350.0	19.3 -220.0 280.0	15.2 -160.0 190.0	13.3 -140.0 160.0	13.3 -110.0 130.0	13.9 -99.0 120.0
Coil 3 R	-2.2 -23.0 21.0	-8.7 -22.0 1.6	-9.4 -21.0 -1.3	-9.0 -20.0 -1.6	-8.7 -19.0 -2.0	-8.2 -19.0 -1.3	-7.6 -19.0 -0.8	-7.4 -19.0 -0.0
Coil 3 Q	79.3 -540.0 530.0	30.1 -180.0 180.0	22.0 -100.0 110.0	19.8 -71.0 81.0	19.7 -81.0 86.0	20.9 -37.0 68.0	22.8 -26.0 83.0	24.7 -21.0 81.0
Coil 4 R	1.30 -18.00 13.00	-3.58 -12.00 2.70	-4.50 -11.00 1.50	-4.52 -9.80 0.52	-4.48 -9.90 0.96	-4.13 -10.00 1.50	-4.01 -11.00 2.30	-4.33 -11.00 2.60
Coil 4 Q	64.36 -250.00 280.00	26.26 -79.00 98.00	20.28 -43.00 84.00	19.39 -27.00 51.00	20.29 -18.00 49.00	21.92 -11.00 42.00	24.25 -3.50 42.00	27.13 -1.00 42.00
Coil 5 R	10.58 -56.00 51.00	-1.28 -8.40 3.60	-2.14 -6.90 1.10	-2.20 -8.90 1.20	-2.34 -9.30 2.90	-2.39 -14.00 6.30	-2.51 -19.00 9.80	-3.36 -24.00 13.00
Coil 5 Q	4.20 -86.00 69.00	6.27 -26.00 27.00	8.55 -14.00 22.00	11.27 -7.00 22.00	14.12 -2.60 24.00	17.04 1.10 26.00	20.16 4.10 29.00	23.39 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	0.972 0.880 1.100	0.980 0.880 1.100	0.985 0.870 1.100	0.987 0.880 1.100	0.988 0.880 1.100	0.988 0.880 1.100	0.988 0.880 1.100	0.988 0.880 1.100
Coil 0 P	-0.308 -1.500 1.500	-0.504 -1.500 1.500	-0.407 -1.500 1.500	-0.286 -1.500 1.500	-0.205 -1.500 1.500	-0.161 -1.500 1.500	-0.104 -1.500 1.500	-0.066 -1.500 1.500
Coil 1 M	0.957 0.850 1.100	0.966 0.860 1.100	0.970 0.870 1.100	0.972 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	-0.279 -1.500 1.500	-0.494 -1.500 1.500	-0.392 -1.500 1.500	-0.281 -1.500 1.500	-0.190 -1.500 1.500	-0.120 -1.500 1.500	-0.084 -1.500 1.500	-0.051 -1.500 1.500
Coil 2 M	0.986 0.890 1.100	0.986 0.890 1.100	0.986 0.890 1.100	0.986 0.890 1.100	0.986 0.890 1.100	0.985 0.890 1.100	0.984 0.890 1.100	0.984 0.890 1.100
Coil 2 P	0.049 -1.500 1.500	0.043 -1.500 1.500	0.083 -1.500 1.500	0.112 -1.500 1.500	0.120 -1.500 1.500	0.132 -1.500 1.500	0.160 -1.500 1.500	0.151 -1.500 1.500
Coil 3 M	0.991 0.900 1.100	0.992 0.900 1.100	0.991 0.900 1.100	0.991 0.900 1.100	0.990 0.900 1.100	0.990 0.900 1.100	0.988 0.900 1.100	0.987 0.900 1.100
Coil 3 P	0.071 -1.500 1.500	0.082 -1.500 1.500	0.113 -1.500 1.500	0.171 -1.500 1.500	0.199 -1.500 1.500	0.253 -1.500 1.500	0.257 -1.500 1.500	0.271 -1.500 1.500
Coil 4 M	0.994 0.900 1.100	0.994 0.900 1.100	0.995 0.900 1.100	0.994 0.900 1.100	0.994 0.900 1.100	0.992 0.900 1.100	0.992 0.900 1.100	0.992 0.900 1.100
Coil 4 P	0.009 -1.500 1.500	0.021 -1.500 1.500	0.038 -1.500 1.500	0.051 -1.500 1.500	0.110 -1.500 1.500	0.130 -1.500 1.500	0.151 -1.500 1.500	0.156 -1.500 1.500
Coil 5 M	0.992 0.900 1.100	0.992 0.900 1.100	0.992 0.900 1.100	0.991 0.900 1.100	0.991 0.900 1.100	0.989 0.900 1.100	0.990 0.900 1.100	0.989 0.900 1.100
Coil 5 P	0.056 -1.500 1.500	0.049 -1.500 1.500	0.078 -1.500 1.500	0.079 -1.500 1.500	0.116 -1.500 1.500	0.197 -1.500 1.500	0.131 -1.500 1.500	0.148 -1.500 1.500

PARMS TCID 0 TCID 1 Cal Temp T Factor
(degF)
ID# 2.834 0.730 73.4 1.00

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #: **1530XA 10120519** DATE/TIME PERFORMED: **Mon Jun 22 04:21:22 2009** DAYS SINCE CAL: **80**

UNIT #: **3880TA HL6741**

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.003 -0.200 0.200	-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	-0.000 -0.100 0.100
Coil 0 Q	-0.009 -0.500 0.500	-0.000 -0.200 0.200	0.002 -0.100 0.100	0.001 -0.100 0.100	-0.000 -0.100 0.100	0.000 -0.100 0.100	0.000 -0.100 0.100	0.000 -0.100 0.100
Coil 1 R	0.011 -0.200 0.200	-0.001 -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	0.000 -0.100 0.100
Coil 1 Q	-0.006 -0.500 0.500	-0.005 -0.200 0.200	0.001 -0.100 0.100	0.000 -0.100 0.100	-0.001 -0.100 0.100	0.001 -0.100 0.100	-0.000 -0.100 0.100	0.000 -0.100 0.100
Coil 2 R	0.012 -0.200 0.200	-0.001 -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	0.000 -0.100 0.100	-0.001 -0.100 0.100
Coil 2 Q	0.006 -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	-0.001 -0.100 0.100	0.002 -0.100 0.100	-0.001 -0.100 0.100
Coil 3 R	0.052 -0.300 0.300	-0.004 -0.100 0.100	-0.006 -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	0.000 -0.100 0.100
Coil 3 Q	0.010 -0.500 0.500	-0.011 -0.200 0.200	0.006 -0.100 0.100	-0.001 -0.100 0.100	-0.003 -0.100 0.100	0.005 -0.100 0.100	0.005 -0.100 0.100	0.000 -0.100 0.100
Coil 4 R	0.196 -0.500 0.500	-0.000 -0.200 0.200	-0.017 -0.200 0.200	0.014 -0.200 0.200	-0.008 -0.200 0.200	-0.000 -0.200 0.200	0.008 -0.200 0.200	0.003 -0.200 0.200
Coil 4 Q	0.044 -1.000 1.000	-0.046 -0.400 0.400	0.019 -0.200 0.200	0.003 -0.200 0.200	-0.005 -0.200 0.200	0.007 -0.200 0.200	-0.004 -0.200 0.200	0.001 -0.200 0.200
Coil 5 R	0.406 -1.200 1.200	-0.017 -0.400 0.400	-0.039 -0.400 0.400	0.022 -0.400 0.400	-0.005 -0.400 0.400	-0.004 -0.400 0.400	0.022 -0.400 0.400	-0.001 -0.400 0.400
Coil 5 Q	0.143 -1.500 1.500	-0.091 -0.800 0.800	0.023 -0.400 0.400	0.003 -0.400 0.400	-0.009 -0.400 0.400	0.001 -0.400 0.400	-0.008 -0.400 0.400	-0.005 -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	162.87 136.00 188.00	161.41 134.00 184.00	158.50 131.00 181.00	154.16 126.00 178.00	148.49 122.00 170.00	141.53 118.00 161.00	133.31 112.00 150.00	123.98 105.00 139.00
Coil 0 P	7.649 -1.000 12.000	25.426 19.000 30.000	42.712 35.000 50.000	59.945 49.000 71.000	77.180 63.000 91.000	94.408 77.000 110.000	111.674 82.000 130.000	128.891 105.000 151.000
Coil 1 M	282.60 237.00 327.00	280.05 235.00 325.00	274.91 230.00 320.00	267.17 225.00 312.00	257.09 216.00 302.00	244.53 208.00 288.00	229.83 196.00 266.00	213.12 184.00 244.00
Coil 1 P	7.711 -1.000 12.000	25.625 19.000 30.000	43.058 35.000 51.000	60.436 49.000 71.000	77.813 63.000 92.000	95.179 77.000 112.000	112.560 82.000 132.000	129.876 105.000 153.000
Coil 2 M	560.33 479.00 659.00	555.14 474.00 654.00	544.77 463.00 643.00	529.39 450.00 622.00	509.40 432.00 602.00	484.78 412.00 572.00	458.12 390.00 540.00	423.39 369.00 499.00
Coil 2 P	7.604 -1.000 12.000	25.351 19.000 31.000	42.589 35.000 51.000	59.768 49.000 71.000	76.924 63.000 92.000	94.075 77.000 114.000	111.251 82.000 136.000	128.371 105.000 156.000
Coil 3 M	917.67 772.00 1060.00	908.70 764.00 1050.00	890.61 752.00 1030.00	863.79 728.00 1010.00	829.09 700.00 970.00	786.59 665.00 925.00	737.41 628.00 868.00	682.07 588.00 799.00
Coil 3 P	7.920 -2.000 13.000	26.160 19.000 31.000	43.923 35.000 52.000	61.816 49.000 72.000	79.247 63.000 93.000	96.849 77.000 114.000	114.443 82.000 135.000	131.914 105.000 156.000
Coil 4 M	1420.5 1210.0 1700.0	1408.4 1205.0 1690.0	1384.0 1180.0 1650.0	1347.1 1140.0 1590.0	1298.6 1120.0 1530.0	1238.1 1070.0 1450.0	1168.9 1000.0 1350.0	1086.1 942.0 1240.0
Coil 4 P	7.708 -2.000 13.000	25.612 19.000 31.000	43.042 35.000 52.000	60.448 49.000 73.000	77.869 63.000 93.000	95.305 78.000 114.000	112.788 82.000 135.000	130.213 105.000 156.000
Coil 5 M	2953.6 2460.0 3450.0	2928.9 2420.0 3400.0	2878.1 2410.0 3320.0	2801.6 2360.0 3200.0	2700.1 2260.0 3080.0	2574.3 2160.0 2960.0	2426.6 2020.0 2750.0	2258.9 1870.0 2570.0
Coil 5 P	7.775 -2.000 13.000	25.770 19.000 31.000	43.322 35.000 52.000	60.838 49.000 73.000	78.378 63.000 94.000	95.928 78.000 114.000	113.516 83.000 135.000	131.024 106.000 156.000

HDIL AFTER LOG VERIFICATION SUMMARY

TOOL #: **1530XA 10120519** DATE/TIME PERFORMED: **Mon Jun 22 06:15:19 2009** DAYS SINCE CAL: **80**

UNIT #: **3880TA HL6741**

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.002 -0.077 0.083	-0.001 -0.061 0.059	-0.002 -0.030 0.030	-0.000 -0.030 0.030	-0.001 -0.031 0.029	0.001 -0.030 0.030	0.000 -0.030 0.030	0.000 -0.030 0.030
Coil 0 Q	-0.009 -0.048 0.031	-0.001 -0.120 0.120	0.001 -0.028 0.032	0.001 -0.029 0.031	-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	0.010 -0.089 0.091	-0.002 -0.061 0.049	-0.002 -0.031 0.029	0.001 -0.028 0.032	-0.001 -0.031 0.029	0.000 -0.029 0.031	0.001 -0.031 0.029	0.001 -0.030 0.030
Coil 1 Q	-0.006 -0.406 0.594	-0.004 -0.106 0.096	0.000 -0.029 0.031	-0.000 -0.030 0.030	-0.001 -0.031 0.029	0.000 -0.029 0.031	-0.001 -0.030 0.030	0.001 -0.030 0.030
Coil 2 R	0.009 -0.056 0.082	0.001 -0.031 0.029	0.000 -0.029 0.031	0.001 -0.033 0.027	0.002 -0.029 0.031	-0.000 -0.031 0.029	0.001 -0.030 0.030	-0.001 -0.031 0.029
Coil 2 Q	0.007 -0.344 0.356	-0.001 -0.101 0.099	0.001 -0.031 0.029	0.000 -0.030 0.030	-0.001 -0.031 0.029	0.001 -0.031 0.029	0.000 -0.028 0.032	0.001 -0.031 0.029
Coil 3 R	0.054 0.012 0.092	-0.009 -0.044 0.036	-0.003 -0.046 0.034	0.008 -0.037 0.043	-0.004 -0.041 0.039	0.001 -0.041 0.039	0.004 -0.039 0.041	0.002 -0.040 0.040
Coil 3 Q	0.018 -0.190 0.210	-0.017 -0.091 0.089	0.005 -0.034 0.048	0.003 -0.041 0.039	-0.002 -0.043 0.037	0.003 -0.036 0.045	-0.003 -0.036 0.045	-0.001 -0.040 0.040
Coil 4 R	0.195 0.138 0.256	0.004 -0.060 0.060	-0.015 -0.077 0.043	0.013 -0.048 0.074	-0.002 -0.068 0.062	-0.005 -0.080 0.060	0.005 -0.062 0.068	-0.003 -0.067 0.063
Coil 4 Q	0.043 -0.256 0.344	-0.052 -0.146 0.054	0.006 -0.041 0.079	0.005 -0.057 0.063	-0.011 -0.065 0.055	0.005 -0.053 0.067	-0.001 -0.064 0.056	-0.002 -0.059 0.061
Coil 5 R	0.432 0.286 0.526	0.004 -0.137 0.103	-0.031 -0.139 0.061	0.037 -0.098 0.142	-0.009 -0.125 0.115	-0.008 -0.124 0.116	0.010 -0.068 0.142	0.001 -0.121 0.119
Coil 5 Q	0.141 -0.457 0.743	-0.109 -0.341 0.159	0.032 -0.097 0.143	0.001 -0.117 0.123	-0.021 -0.129 0.111	0.008 -0.119 0.121	0.002 -0.128 0.112	0.000 -0.125 0.115

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

Coil 0 M	182.45 159.81 168.13	181.01 158.19 164.84	158.10 155.33 161.67	153.78 151.08 157.24	148.13 145.62 151.46	141.15 138.70 144.38	132.97 130.65 135.98	123.61 121.50 128.46
Coil 0 P	7.193 4.649 10.649	25.323 22.428 28.428	42.714 39.712 45.712	60.010 58.945 62.945	77.299 74.180 80.180	94.600 91.408 97.408	111.894 108.674 114.674	129.196 125.891 131.891
Coil 1 M	282.65 276.95 288.25	280.11 274.45 285.85	274.98 269.41 280.41	267.32 261.83 272.52	257.18 251.85 262.25	244.68 239.64 249.42	229.82 225.23 234.42	213.17 208.65 217.38
Coil 1 P	7.267 4.711 10.711	25.515 22.823 28.625	43.041 40.036 46.058	60.480 57.436 63.436	77.909 74.813 80.813	95.344 92.179 98.179	112.750 108.560 115.560	130.130 126.876 132.876
Coil 2 M	559.47 549.12 571.53	554.33 544.03 568.24	544.02 533.88 555.67	528.74 518.80 539.97	508.73 498.21 519.59	484.19 475.08 494.48	455.40 446.89 465.24	422.75 414.82 431.85
Coil 2 P	7.120 4.604 10.604	25.231 22.351 28.351	42.570 39.589 45.589	59.808 56.768 62.768	77.020 73.924 79.924	94.240 91.075 97.075	111.443 108.251 114.251	128.644 125.371 131.371
Coil 3 M	916.34 899.32 938.03	907.51 890.63 928.88	889.55 872.79 908.42	862.87 846.52 881.07	828.14 812.61 843.87	785.89 770.86 802.32	736.41 722.67 752.16	681.35 668.43 695.71
Coil 3 P	7.476 4.820 10.820	26.055 23.160 28.160	43.910 40.823 46.923	61.645 58.616 64.616	79.339 76.247 82.247	96.992 93.848 99.848	114.808 111.443 117.443	132.136 128.814 134.814
Coil 4 M	1421.9 1382.1 1448.9	1409.9 1360.3 1436.6	1385.4 1336.3 1411.7	1348.7 1320.2 1374.0	1300.1 1272.8 1324.6	1259.5 1213.4 1262.9	1188.1 1143.8 1190.2	1087.1 1064.4 1107.8
Coil 4 P	7.284 4.708 10.708	25.506 22.812 28.612	43.027 40.042 46.042	60.489 57.448 63.448	77.949 74.869 80.869	95.443 92.305 98.305	112.965 108.788 115.788	130.470 127.213 133.213
Coil 5 M	2947.9 2894.6 3012.7	2923.4 2870.3 2987.5	2873.2 2820.6 2935.7	2798.8 2745.5 2857.6	2695.3 2648.1 2754.1	2570.1 2522.8 2625.8	2421.0 2378.1 2476.2	2253.4 2213.7 2304.1
Coil 5 P	7.366 4.775 10.775	25.663 22.770 28.770	43.297 40.322 46.322	60.868 57.838 63.838	78.459 75.378 81.378	96.068 92.928 98.928	113.649 110.516 116.516	131.233 128.024 134.024

INSTRUMENT CONFIGURATION

Source File: /dat1a/1254/k970a"ebmalem-fdg

FOCUS CABLEHEAD

Series : CABL318
Mnemonic : CBLH
Diameter : 3.12"

FOCUS SWIVEL

Series : 3950XA
Mnemonic : SWVL

FOCUS TEN/TEMP/MUD RES/ACCEL

Series : 3950XA
Mnemonic : TTMA
Diameter : 3.13"

FOCUS TELEMETRY (POWER SECTION)

Series : 3518FB
Mnemonic : TMGR
Diameter : 3.13"

FOCUS FB/EG TELEMETRY GAMMA RAY

Series : 3518EG
Mnemonic : GR
Diameter : 3.12"
Measure Point: 4.24'; GR MP

FOCUS COMPENSATED NEUTRON

Series : 2436XA
Mnemonic : CN
Diameter : 3.13"
Measure Point: 1.92'; LSN MP
Measure Point: 1.48'; SSN MP

FOCUS Z-DENSILOG

Series : 2223XA
Mnemonic : ZDL
Diameter : 3.78"
Measure Point: 4.33'; CR1 MP
Measure Point: 1.69'; LSN MP
Measure Point: 1.29'; SSD MP

FOCUS KNUCKLE JOINT

Series : 3930XA

FOCUS KNUCKLE JOINT

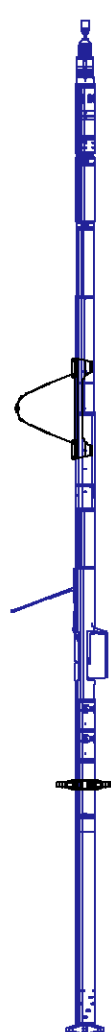
Series : 3930XA

FOCUS HIGH DEFINITION INDUCTION TOOL

Series : 1630XA
Mnemonic : HDIL
Diameter : 3.13"
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 / CARRIAGE

TOTAL LENGTH: 50.84'
TOTAL WEIGHT: 749 lbs
MAX DIAMETER: 0'6.13"



50.84'

GR MP 35.47'

LSN MP 28.33'

SSN MP 27.88'

CR1 MP 21.17'

LSN / CR2 MP 18.52'

SSD MP 18.13'

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'

0.00'



COMPANY
WELL
FIELD
COUNTY

WILLIAMS PRODUCTION RMT
GM 931-1D
GRAND VALLEY
GARFIELD

STATE CO

FILE NO:

1254

API NO:

05045184250000

Baker Atlas

LOCATION:

SHL: 1743' FNL 1925' FEL
BHL: 870' FNL 1664' FEL

ELEVATIONS:

KB 5331 FT

DF 5330 FT

GL 5308 FT

SEC 1 TWP 6S RGE 96W

DATE

22-Jun-2009

focus