



FILE NO: _____
 COMPANY: **CHESAPEAKE APPALCHIA, LLC.**
 WELL: **JAMES MESSENGER WTZ 3H U**
 FIELD: **WETZEL**
 COUNTY: **WETZEL** STATE: **WEST VIRGINIA**

API NO: **47-103-02973**
 Ver. 3.87
 SCALE: 5"/100'
 LOCATION: STATE TOWNSHIP: PROCTOR
 QUAD: WILEYVILLE
 LAT **39.673693 N** LONG **80.690861 W**
 OTHER SERVICES: DSL, TRIPLE COMBO

PERMANENT DATUM: **GL** ELEVATION: **1495 FT**
 LOG MEASURED FROM: **KB** **22 FT** ABOVE P.D.
 DRILL. MEAS. FROM: **KB**
 ELEVATIONS: **KB 1517 FT**
DF 1517 FT
GL 1495 FT

DATE	02-MAY-2014	
RUN	TRIP	1
SERVICE ORDER	US086078J	
DEPTH DRILLER	8951 FT	
DEPTH LOGGER	8950 FT	
BOTTOM LOGGED INTERVAL	8930 FT	
TOP LOGGED INTERVAL	2944 FT	
CASING DRILLER	10.75 IN @ 2946 FT	
CASING LOGGER	2944 FT	
BIT SIZE	9.875 IN	
TYPE OF FLUID IN HOLE	KCL 3%	
DENSITY	10.3 LB/G	42 S
PH	FLUID LOSS	10
SOURCE OF SAMPLE	TOOL MEASURED	
RM AT MEAS. TEMP.	0.039 OHMM @ 75 DEGF	
RM AT MEAS. TEMP.	0.030 OHMM @ 75 DEGF	
RM CAT MEAS. TEMP.	0.053 OHMM @ 75 DEGF	
SOURCE OF R/MF	RMC	CALC
RM AT BHT	0.019 OHMM @ 161.3 DEGF	
TIME SINCE CIRCULATION	8 HRS	
MAX. RECORDED TEMP.	162.6 DEGF	
EQUIP. NO.	LOCATION	CANTON, OH
RECORDED BY	S. PATEL	
WITNESSED BY	NICK DOWNS	

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.

BIT SIZE	FROM	TO
26 IN	0 FT	130 FT
22 IN	130 FT	822 FT
14.75 IN	806 FT	2953 FT
9.875 IN	2953 FT	8951 FT

SIZE	WEIGHT	GRADE	FROM	TO
24 IN	-	-	0 FT	130 FT
16 IN	-	-	0 FT	806 FT
10.75 IN	-	-	0 FT	2946 FT
7.625 IN	-	-	0 FT	-

REMARKS

RUN 3 TRIP 1: CREW: S. PATEL, R. BARNETT, T. WRIGHT
 RIG: NOMAC 337

OPERATION 1: DSL-CN-ZDL-RTEX-ORIT-XMAC RAN IN COMBINATION

DENSITY POROSITY (PORZ) = 2.71 G/CC
 NEUTRON POROSITY (CNC) = LIMESTONE MATRIX
 COMPENSATED NEUTRON (CNC) IS CALIPER CORRECTED
 DENSITY CURVE (ZDEN)

(CAL) = SINGLE AXIS CALIPER FROM DENSITY TOOL
 (CVOL) CEMENT VOLUME CALCULATED FOR 7.625" CASING
 (BVOL) = TOTAL BOREHOLE VOLUME FROM CALIPER

COMPENSATED NEUTRON RAN DECENTRALIZED
 RESISTIVITY CURVES BOREHOLE CORRECTED USING CALIPER
 XMAC AND RTEX RAN CENTRALIZED

FLUID LEVEL: SURFACE
 CHLORIDES: 171,000 PPM

ADDITIONAL CUSTOMER COMMENTS:
 BOREHOLE RUGOSITY AND WASHOUTS WILL EFFECT POROSITY AND SONIC DATA.

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
3	1	DHPA	4430XA	370977	FREE
3	1	TTRM	3981XA	183784	FREE
3	1	COM REMOTE	3514XA	173204	FREE
3	1	GR	1329XA	185486	FREE
3	1	CN	2446XA	179999	DECENTRALIZED
3	1	ISO	4485XA	11885356	DECENTRALIZED
3	1	ZDL	2234XA	Z370835	CALIPER / PAD-DEVICE
3	1	KNUCKLE	3939XA	10269798	FREE
3	1	RTEX	1241XA	10599960	CENTRALIZED
3	1	ORIT	4401XA	10363657	FREE
3	1	ISO	4485XA	10579508	FREE
3	1	XMAC ELEC	1677EA	Z166423	CENTRALIZED
3	1	XMAC REC	1678MC	10038648	CENTRALIZED
3	1	XMAC ISO	1678PB	10193786	FREE
3	1	XMAC TRANS	1678BA	10299609	CENTRALIZED
3	1	XMAC ELEC	1678FA	10299639	CENTRALIZED

MAIN LOG 5"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Patches: 5

Plotted: Thu May 1 20:03:16 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/CHESAPEAKE/JAMES MESSENGER_WTZ_3H_R3/QUADSLAM_RTEX02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 2825.000 ft BOTTOM DEPTH: 8953.250 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
Y AXIS CALIPER	FILTER ()	medium (1)		TOP BOTTOM
TENSION	FILTER ()	medium (1)		" "
GR	FILTER ()	medium (1)		" "
CALIPER	FILTER ()	medium (1)		" "
	FILTER (.h)	medium (1)		" "
	FILTER (.i)	medium (1)		" "
DT24	FILTER ()	light (2)		" "

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
BIT SIZE	BIT SIZE	9.875	in	TOP BOTTOM

ACOUSTIC POROSITY

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
ACOUSTIC POROSITY	POROSITY TYPE	WYLLIE		TOP BOTTOM
	DTmatrix	47.60	us/ft	" "

	DTmatrix	47.00	us/ft	"	"
	DTfluid	190.00	us/ft	"	"
	DTshale	100.00	us/ft	"	"
	MOD. WYLLIE PARM	2.25		"	"
	MOD. R-H-G PARM	2.00		"	"
DELTA T CURVE SELECTION	DT24 SOURCE	AVAN DT24		"	"

ACOUSTIC AVAN CORRELATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
MONOPOLE DELTA T	FORMATION TYPE	FAST		TOP	BOTTOM
	CORRELATION METHOD	NTH ROOT		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	40	us/ft	"	"
	TAPER - RIGHT END	130	us/ft	TOP	7180.750
		120	us/ft	BOTTOM	BOTTOM
MONOPOLE COMPRESSIONAL	FLOOR (UNIV. OPTION)	0.050		TOP	BOTTOM
	FORMATION TYPE	FAST		"	"
	CORRELATION METHOD	NTH ROOT		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	40	us/ft	"	"
	TAPER - RIGHT END	130	us/ft	TOP	7180.750
MONOPOLE SHEAR		120	us/ft	BOTTOM	BOTTOM
	FLOOR (UNIV. OPTION)	0.050		TOP	BOTTOM
	FORMATION TYPE	FAST		"	"
	CORRELATION METHOD	NTH ROOT		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	40	us/ft	"	"
MONOPOLE STONLEY	TAPER - RIGHT END	130	us/ft	TOP	7180.750
		120	us/ft	BOTTOM	BOTTOM
	FLOOR (UNIV. OPTION)	0.050		TOP	BOTTOM
	FORMATION TYPE	FAST		"	"
	GUIDE CURVE	DO NOT USE GUIDE		"	"
	RESET TAPERS			"	"
DIPOLE SHEAR	TAPER - LEFT END	80	us/ft	"	"
	TAPER - RIGHT END	175	us/ft	"	"
	FORMATION TYPE	FAST		"	"
	GUIDE CURVE	DO NOT USE GUIDE		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	100	us/ft	"	"
QUADRUPOLE	TAPER - RIGHT END	275	us/ft	"	"
	FORMATION TYPE	FAST		"	"
	CORRELATION METHOD	NTH ROOT		"	"
	GUIDE CURVE	DO NOT USE GUIDE		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	100	us/ft	"	"
	700	us/ft	"	"	

ACOUSTIC PICK CONTROL

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DELTA-T REJECTION RANGE	REJECTION DTmin	40	us/ft	TOP	BOTTOM
	REJECTION DTmax	180	us/ft	"	"
FIRST ARRIVAL PICK	SEARCH START OFFSET (sfan1*)	0	us	"	"
	SEARCH START OFFSET (sfan2*)	0	us	"	"
	SEARCH START OFFSET (sfan3*)	0	us	"	"
	SEARCH START OFFSET (sfan4*)	0	us	"	"
	SEARCH WINDOW LENGTH	1000	us	"	"
	THRESHOLD FACTOR	0.30		"	"
	THRESHOLD MINIMUM (sfan1*)	1.8	pct	"	"
	THRESHOLD MINIMUM (sfan2*)	1.8	pct	"	"
	THRESHOLD MINIMUM (sfan3*)	1.8	pct	"	"
	THRESHOLD MINIMUM (sfan4*)	1.8	pct	"	"
	E3 THRESHOLD	OFF		"	"

ACOUSTIC QUALITY CONTROL

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CYCLE SKIP LIMIT	CYCLE SKIP LIMIT	100	us	TOP	BOTTOM

ACOUSTIC WAVEFORM FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
WAVEFORM FILTER - DELTA T	SURFACE WAVE FILTER	ON		TOP	BOTTOM
	LOW FREQ CUTOFF	4000	Hz	"	"
	HIGH FREQ CUTOFF	20000	Hz	"	"
WAVEFORM FILTER - FULLWAVE	SURFACE WAVE FILTER	ON		"	"
	LOW FREQ CUTOFF	2000	Hz	"	"

WAVEFORM FILTER - STONELEY	HIGH FREQ CUTOFF	20000	Hz	"	"
	SURFACE WAVE FILTER	ON		"	"
	LOW FREQ CUTOFF	500	Hz	"	"
	HIGH FREQ CUTOFF	5500	Hz	"	"
WAVEFORM FILTER - DIPOLE	SURFACE WAVE FILTER	ON		"	"
	LOW FREQ CUTOFF	1500	Hz	"	"
	HIGH FREQ CUTOFF	5000	Hz	"	"
WAVEFORM FILTER - QUADRUPOLE	SURFACE WAVE FILTER	ON		"	"
	LOW FREQ CUTOFF	1500	Hz	"	"
	HIGH FREQ CUTOFF	5000	Hz	"	"

ACOUSTIC TCC CONTROL PARAMETERS

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GENERAL TCC PARAMETERS	AGC	ON		TOP	BOTTOM
	SUBCYCLE LENGTH	50		"	"
	SUBSET	1		"	"
GENERAL MONOPOLE TCC PARAMETERS	STACK LEVEL	2		"	"
	DSP FILTER	ON		"	"
DELTA T TCC PARAMETERS	ACG WINDOW	800	us	TOP	7368.250
		992	us	7368.250	7385.250
		800	us	7385.250	BOTTOM
	MOVEOUT	16	us/ft	TOP	BOTTOM
	SAMPLE PERIOD	16		"	"
	RX DELAY	400	us	TOP	7329.750
		592	us	7329.750	7375.250
		400	us	7375.250	BOTTOM
FULL WAVE MONOPOLE TCC PARAMETERS	ACG WINDOW	8064	us	TOP	BOTTOM
	SAMPLE PERIOD	24		"	"
	RX DELAY	0	us	"	"
GENERAL DIPOLE TCC PARAMETERS	STACK LEVEL	2		"	"
	DSP FILTER	ON		"	"
INLINE DIPOLE TCC PARAMETERS	ACG WINDOW	0	us	"	"
	SAMPLE PERIOD	64		"	"
	RX DELAY	0	us	"	"
CROSS DIPOLE TCC PARAMETERS	ACG WINDOW	14400	us	"	"
	SAMPLE PERIOD	72		"	"
	RX DELAY	0	us	"	"
QUADRUPOLE TCC PARAMETERS	ACG WINDOW	0	us	"	"
	SAMPLE PERIOD	16		"	"
	RX DELAY	0	us	"	"

CURVE DESCRIPTION REPORT

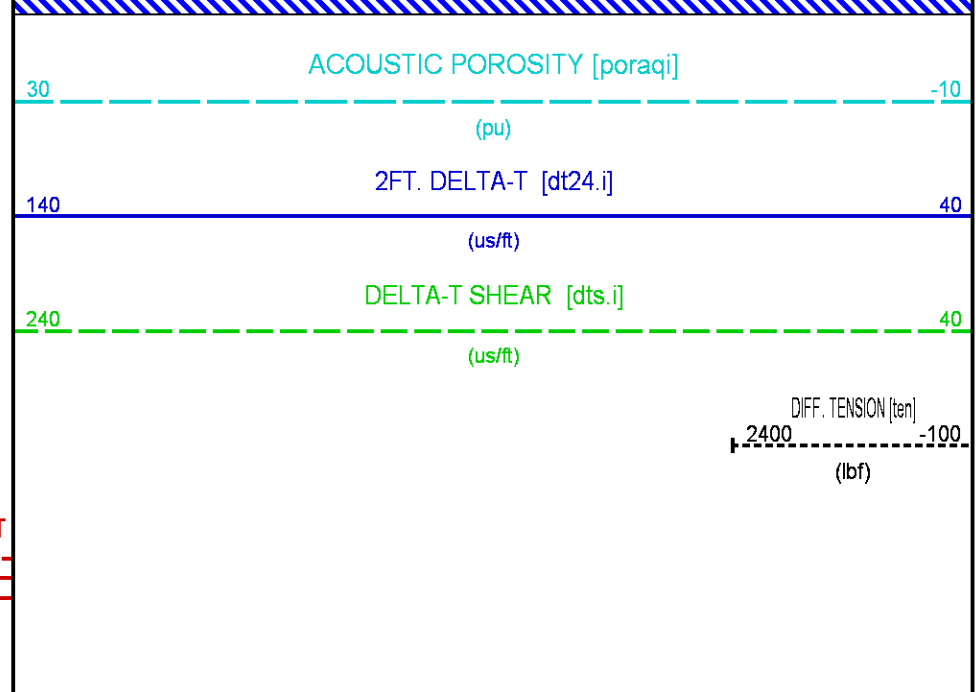
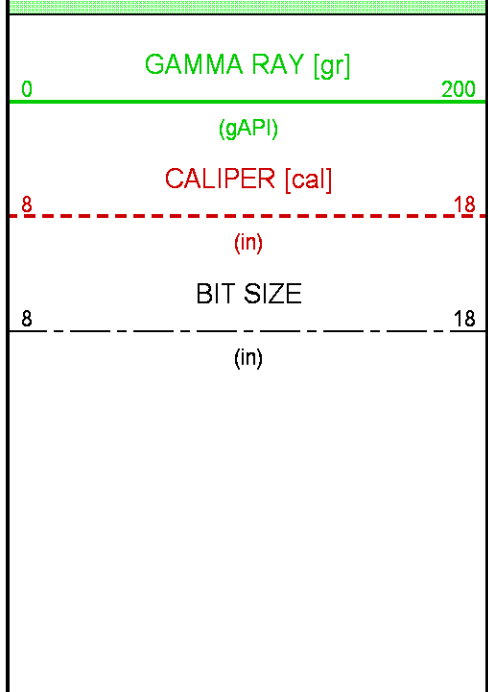
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	May 1 15:20:46 2014	BIT SIZE
F1:CAL	May 1 15:20:46 2014	CALIPER
F1:DT24QI	May 1 15:20:46 2014	SLOWNESS OVER 24-INCH INTERVAL
F1:DTSQI	May 1 15:20:46 2014	SHEAR WAVE SLOWNESS
F1:GR	May 1 15:20:46 2014	GAMMA RAY
F1:PORAQI	May 1 15:20:46 2014	ACOUSTIC POROSITY
F1:TEN	May 1 15:20:46 2014	DIFFERENTIAL TENSION
F1:TTQI	May 1 15:20:46 2014	INTEGRATED TRAVELTIME FROM ACOUSTIC SLOWNESS

CURVE MEASURE POINT OFFSET

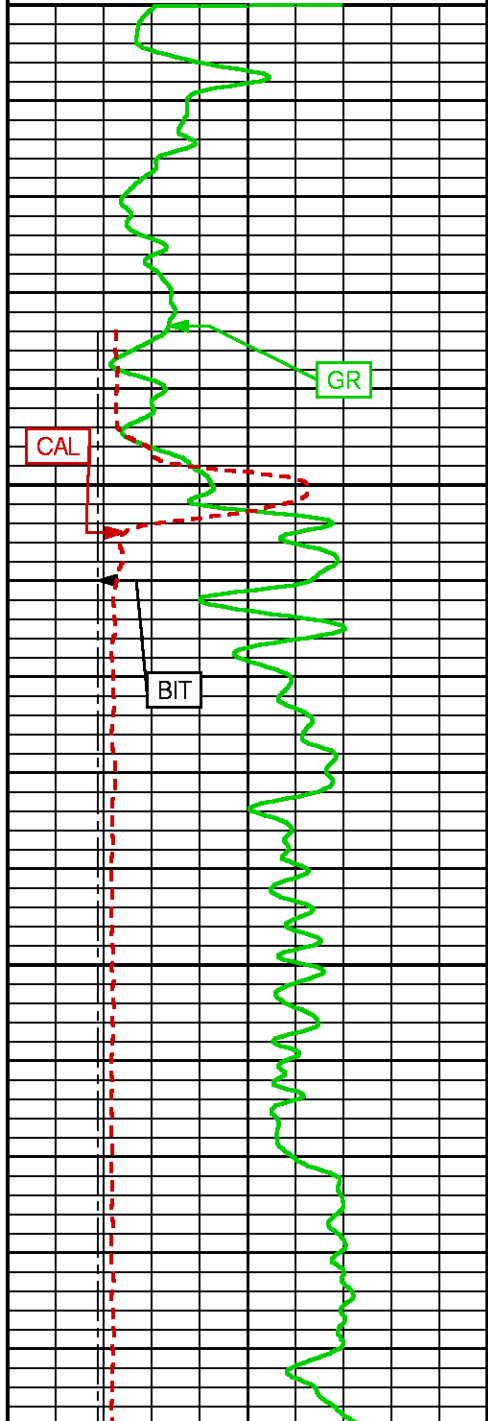
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	DT24QI	12.50	GR	92.25	TEN	0.00
CAL	73.00	DTSQI	20.50	PORAQI	12.50		

Presentation : sys1:/dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R3/XMAC_MN.fvpdf [5"/100' Scale]
Plot Interval : 2900 - 8960.25 Feet

Data File 1 : F1 : sys1:/dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R3/QUADSLAM_RTEX02.xtf
Created On : May 1 15:20:46 2014
Company : Chesapeake Appalachia LLC
Well : JAMES MESSENGER 3H
Field : WETZEL
File Interval : -32.25 - 8960.25 Feet
OCT : QUADSLAM



TT
 1
 10
 100

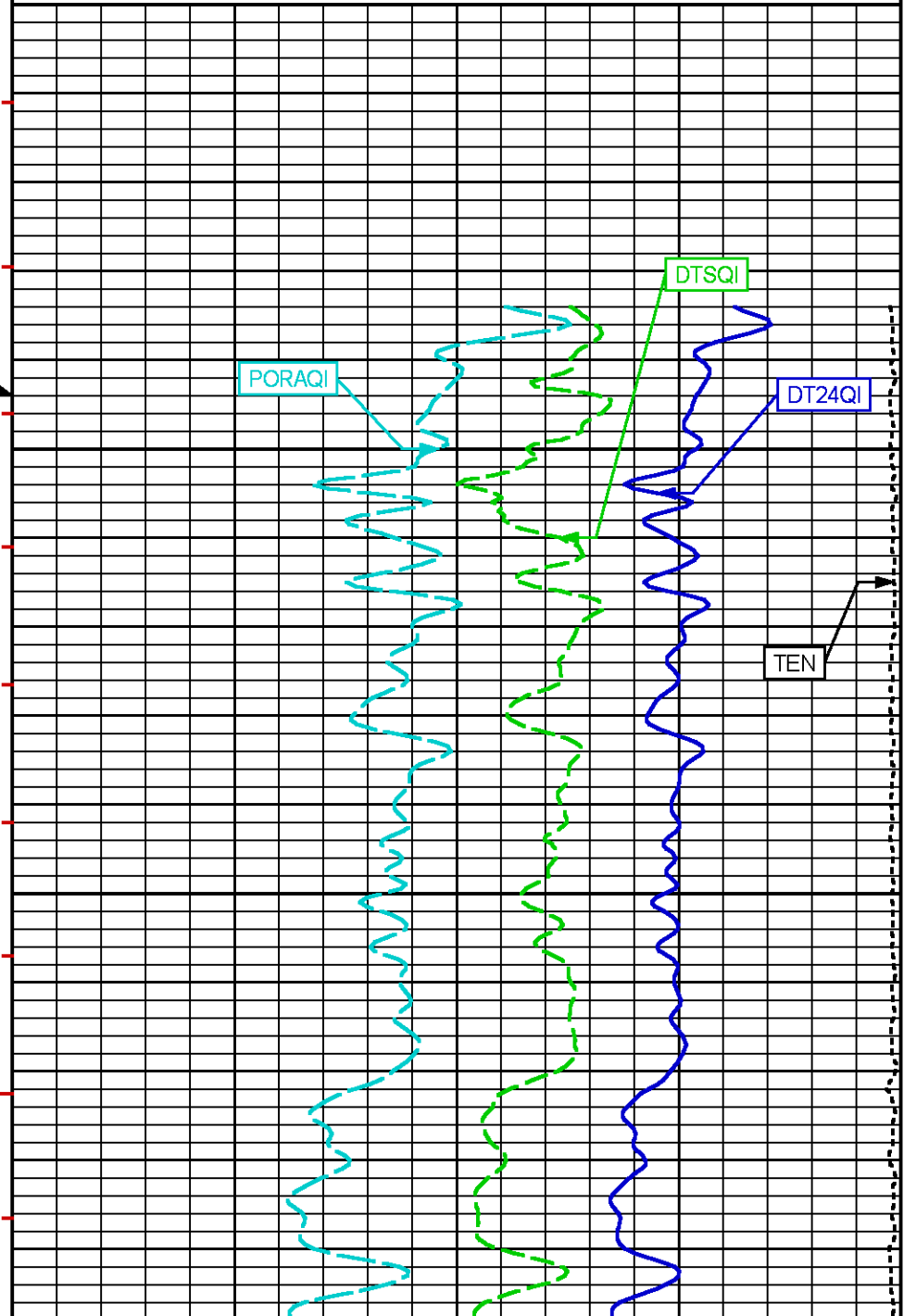


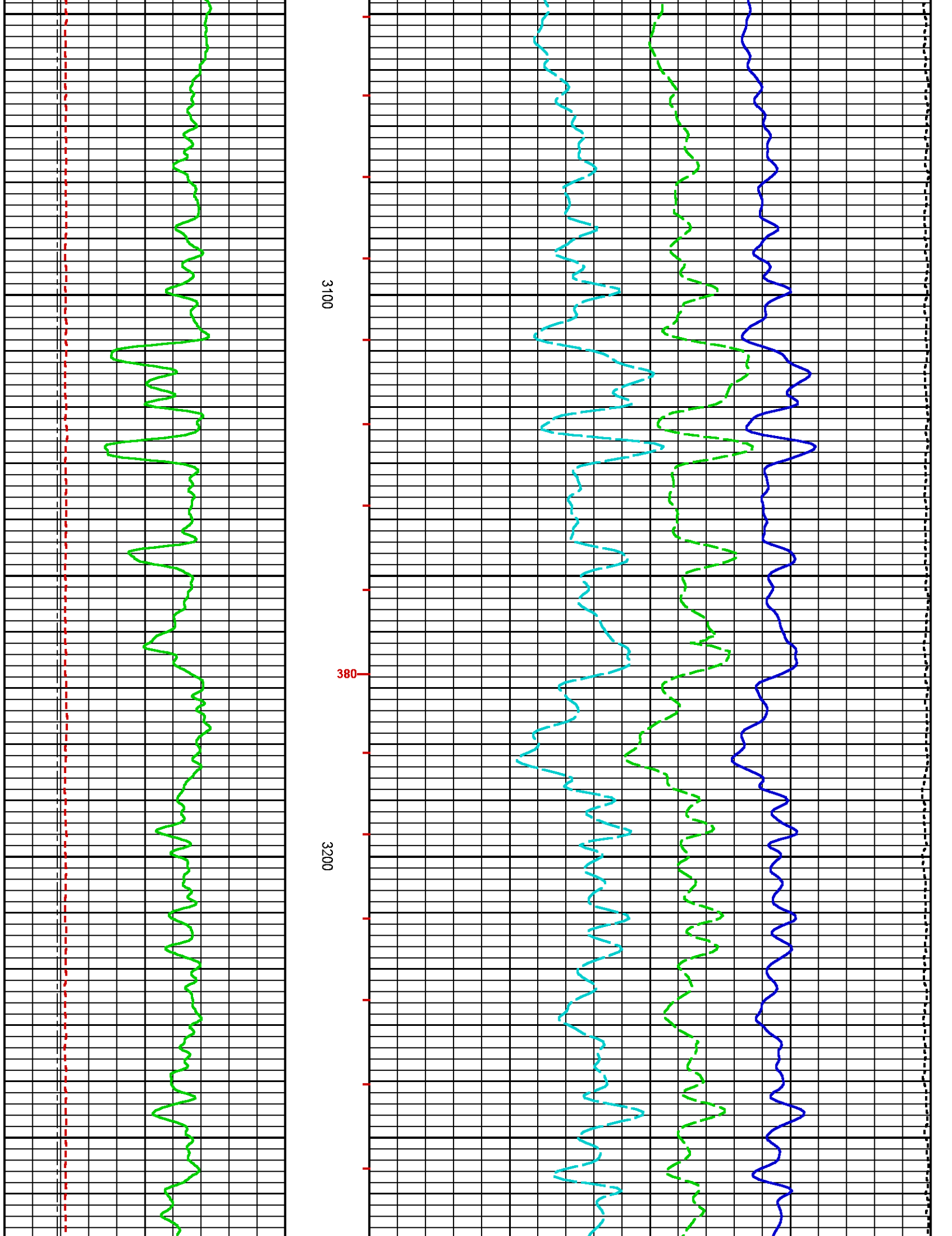
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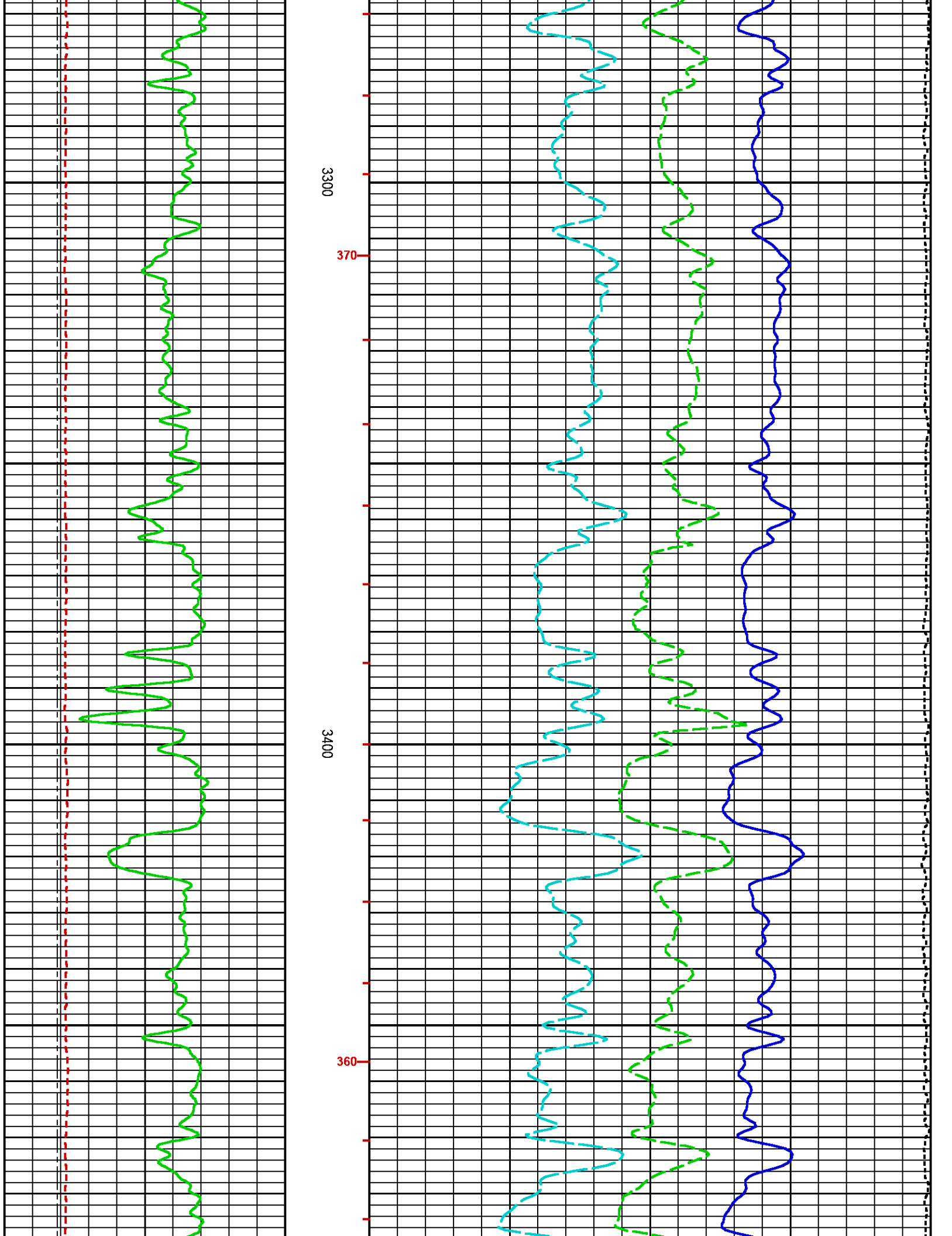
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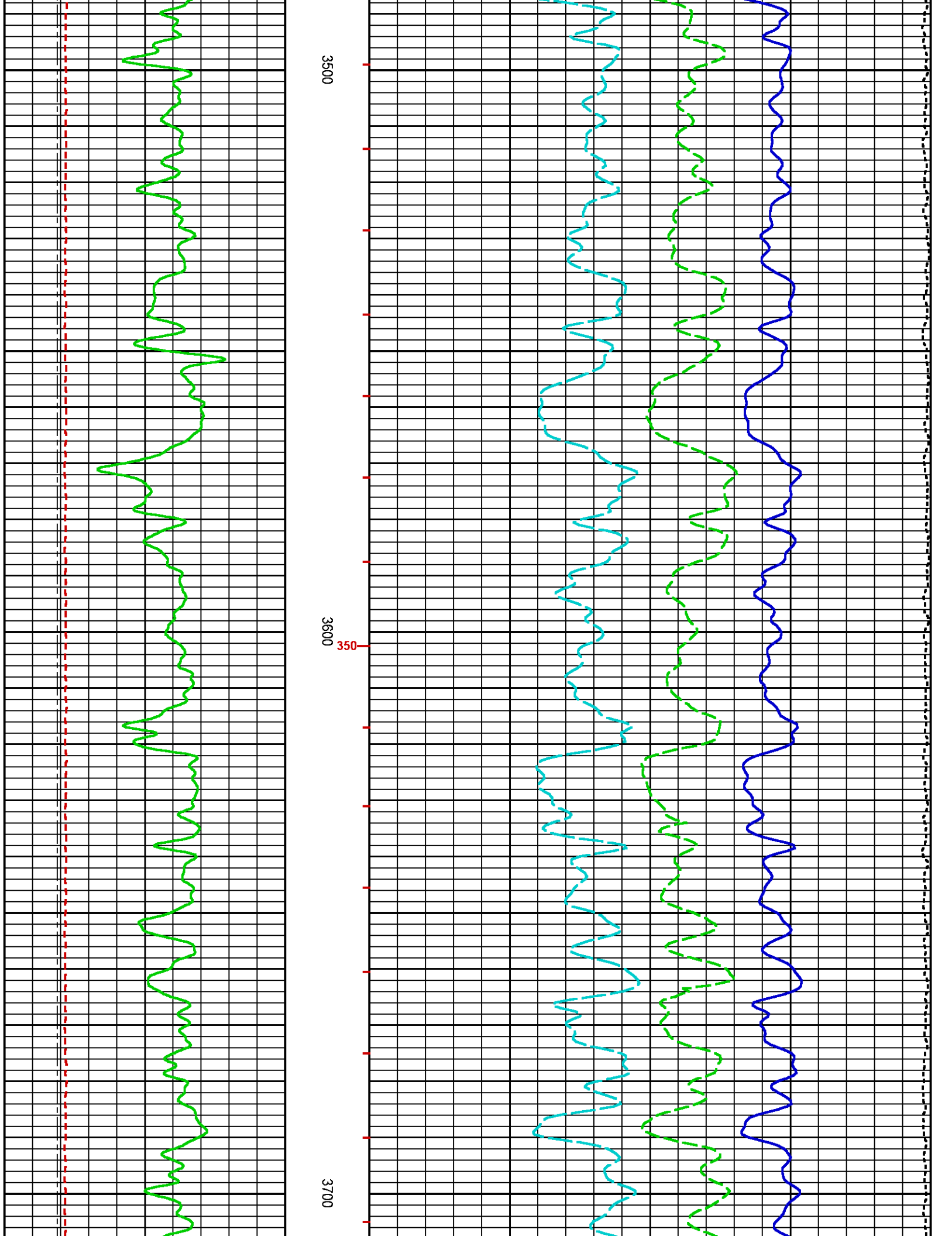
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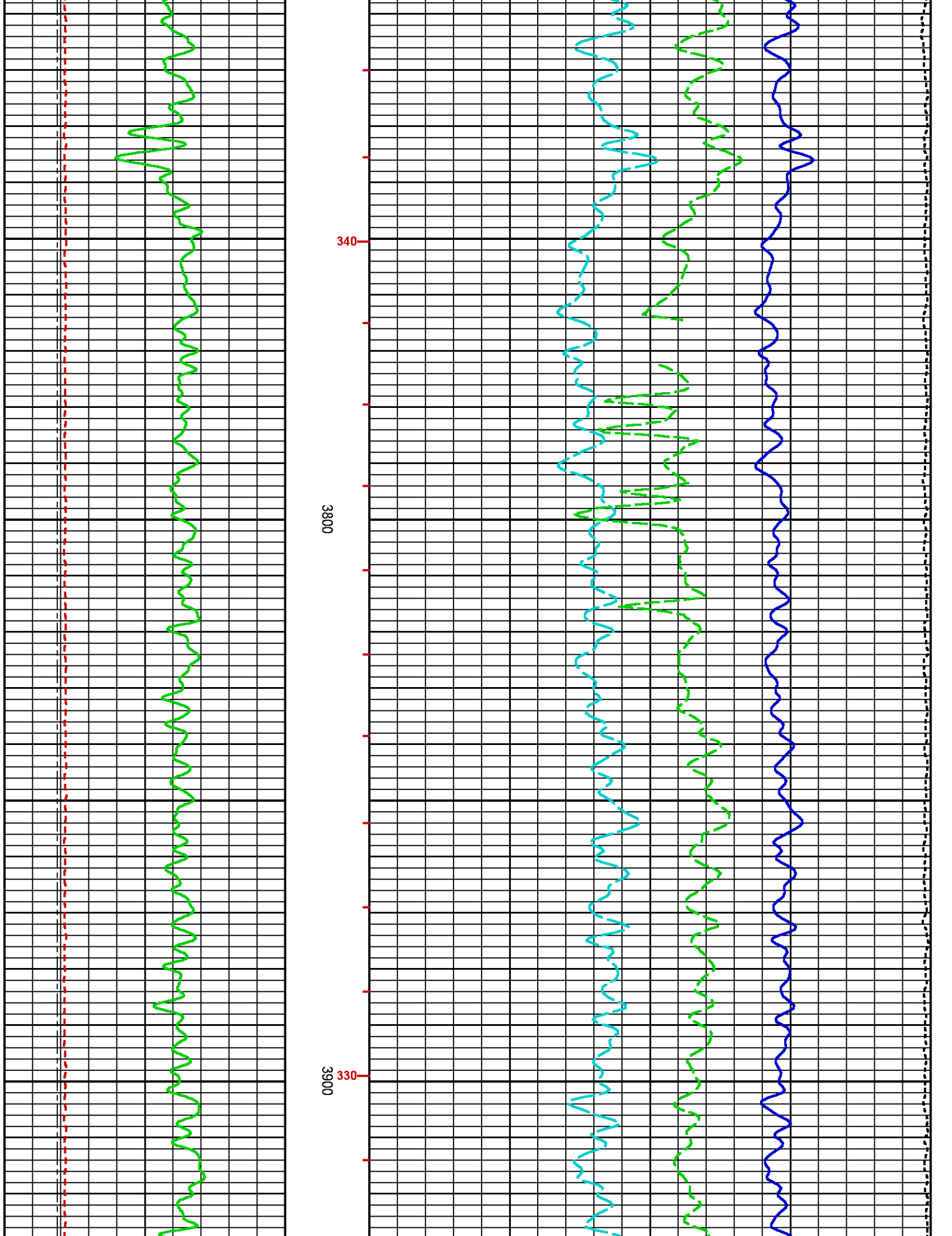
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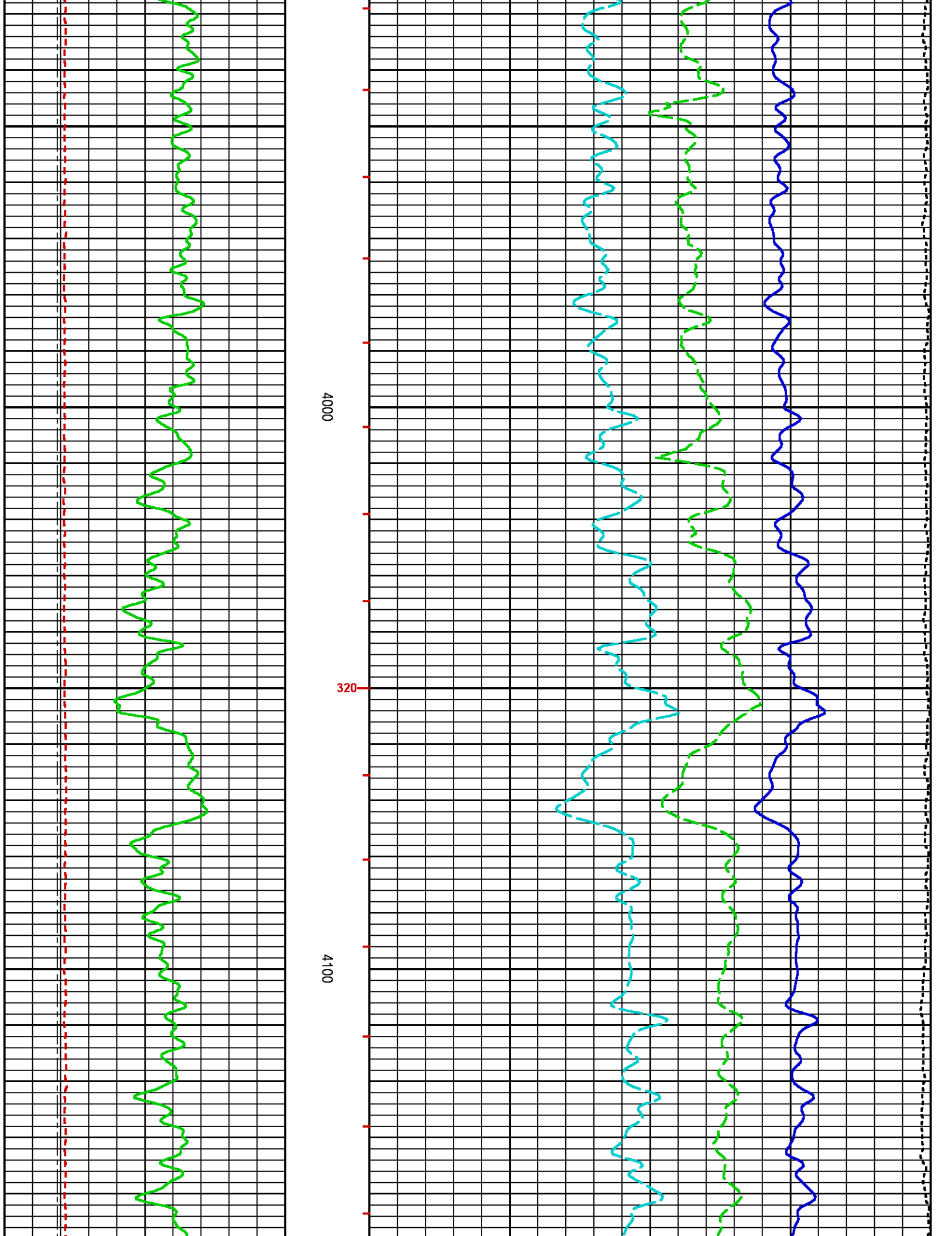


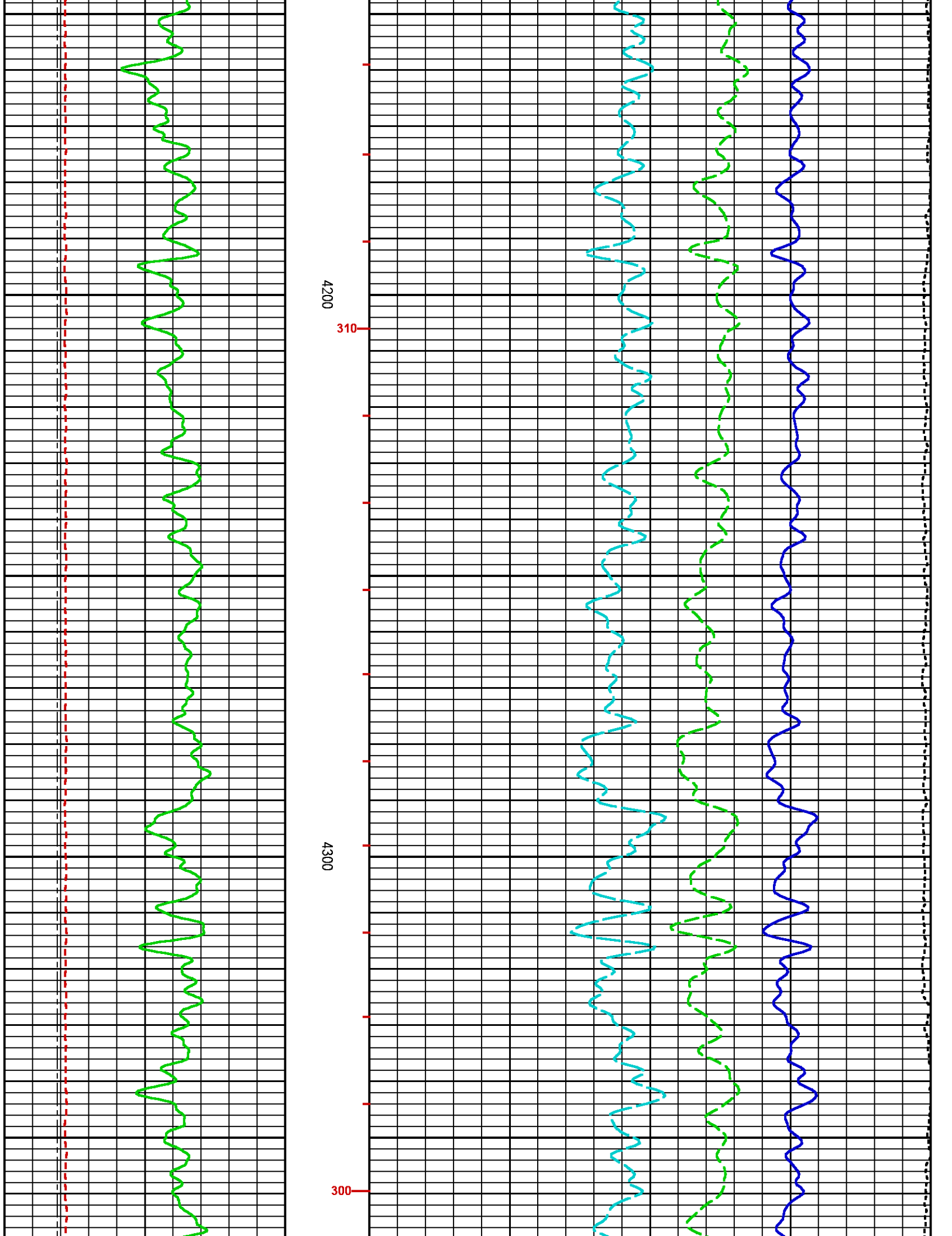


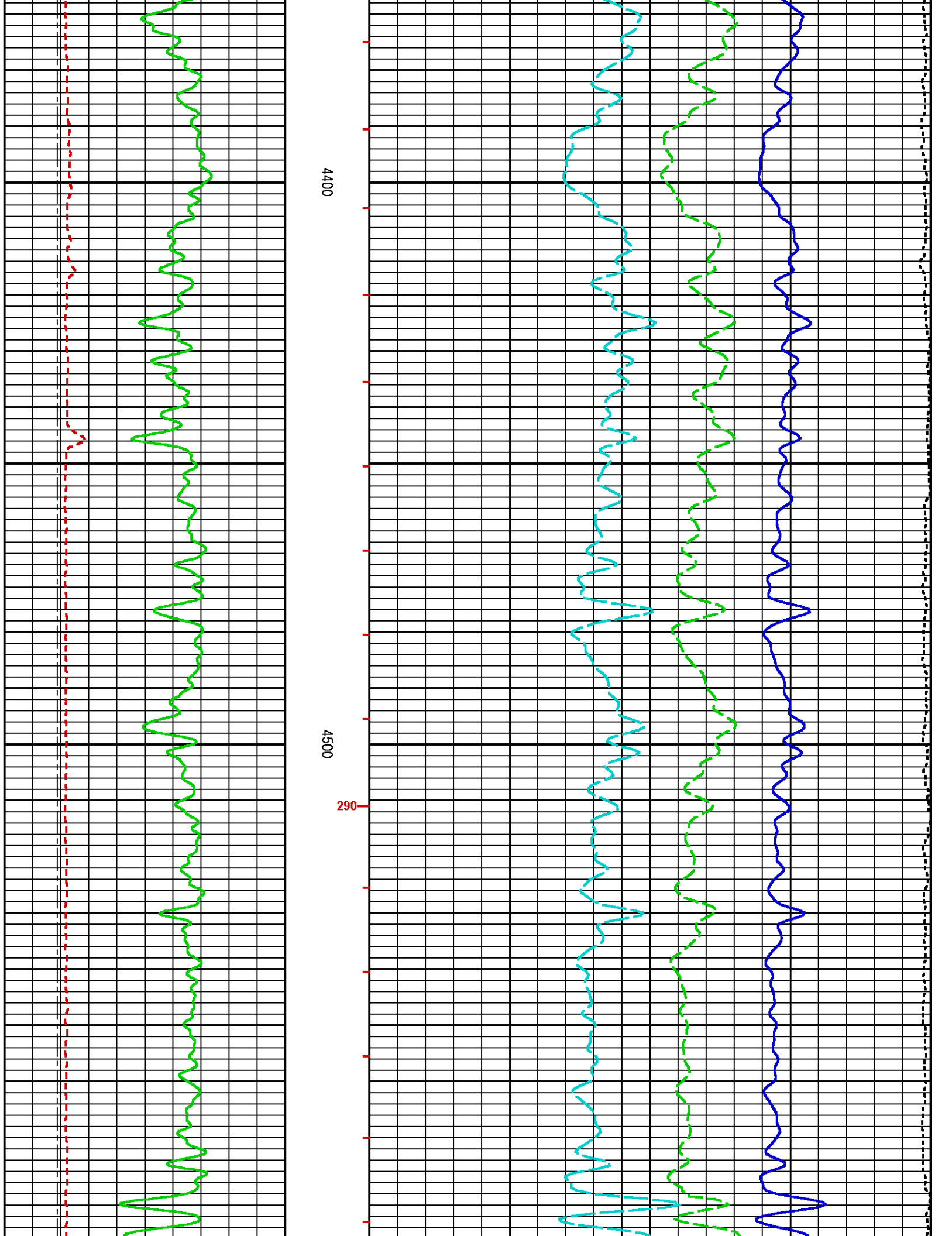


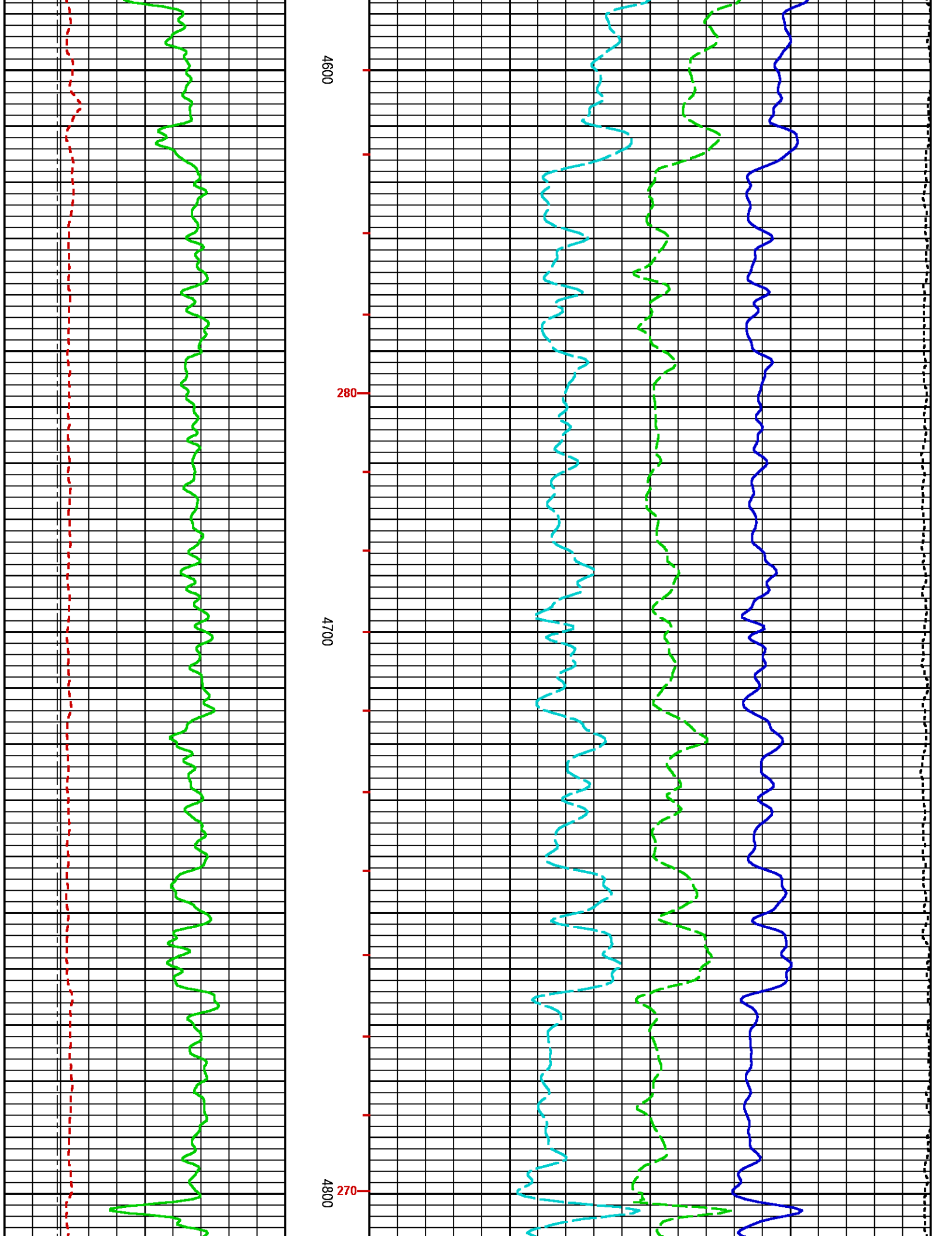


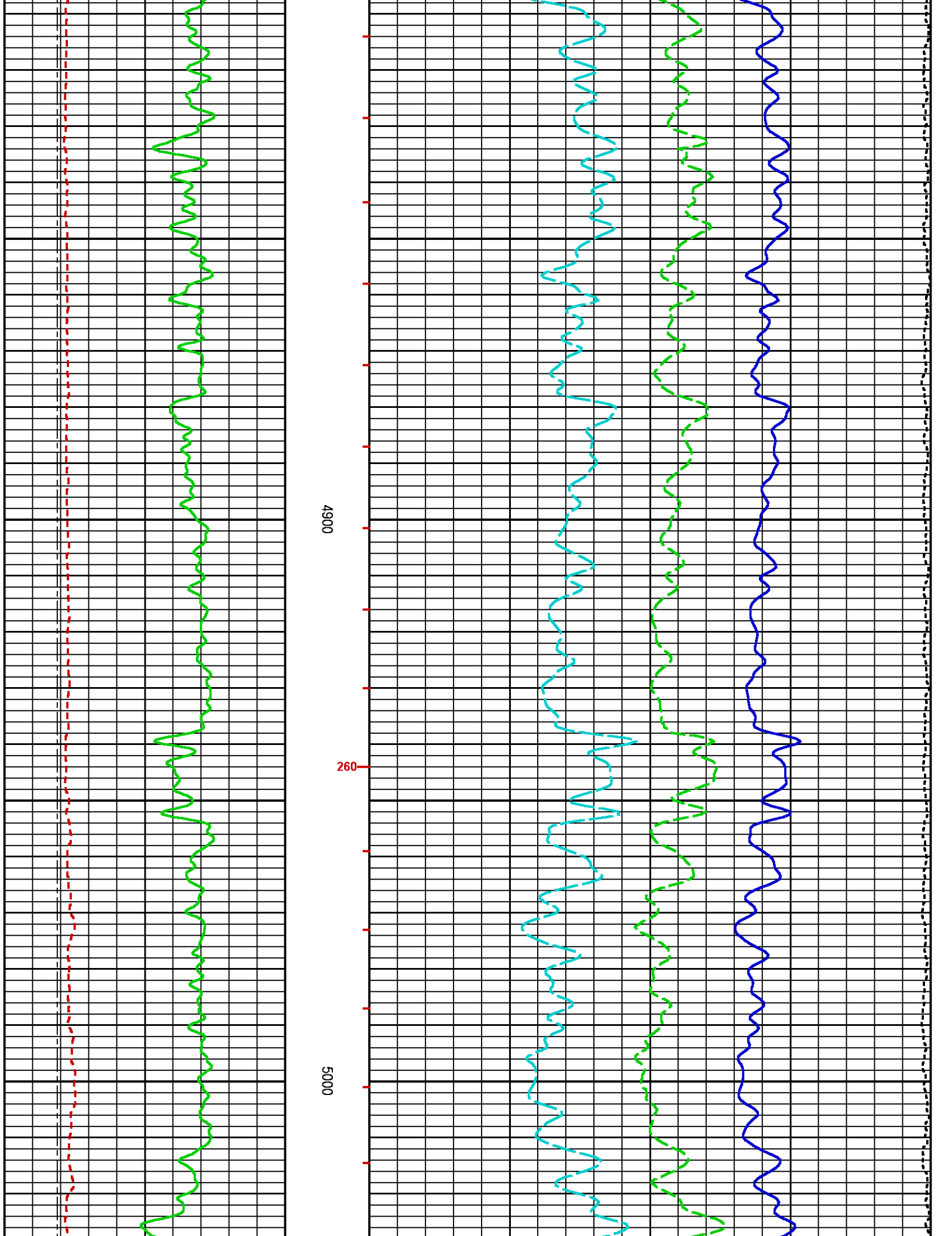


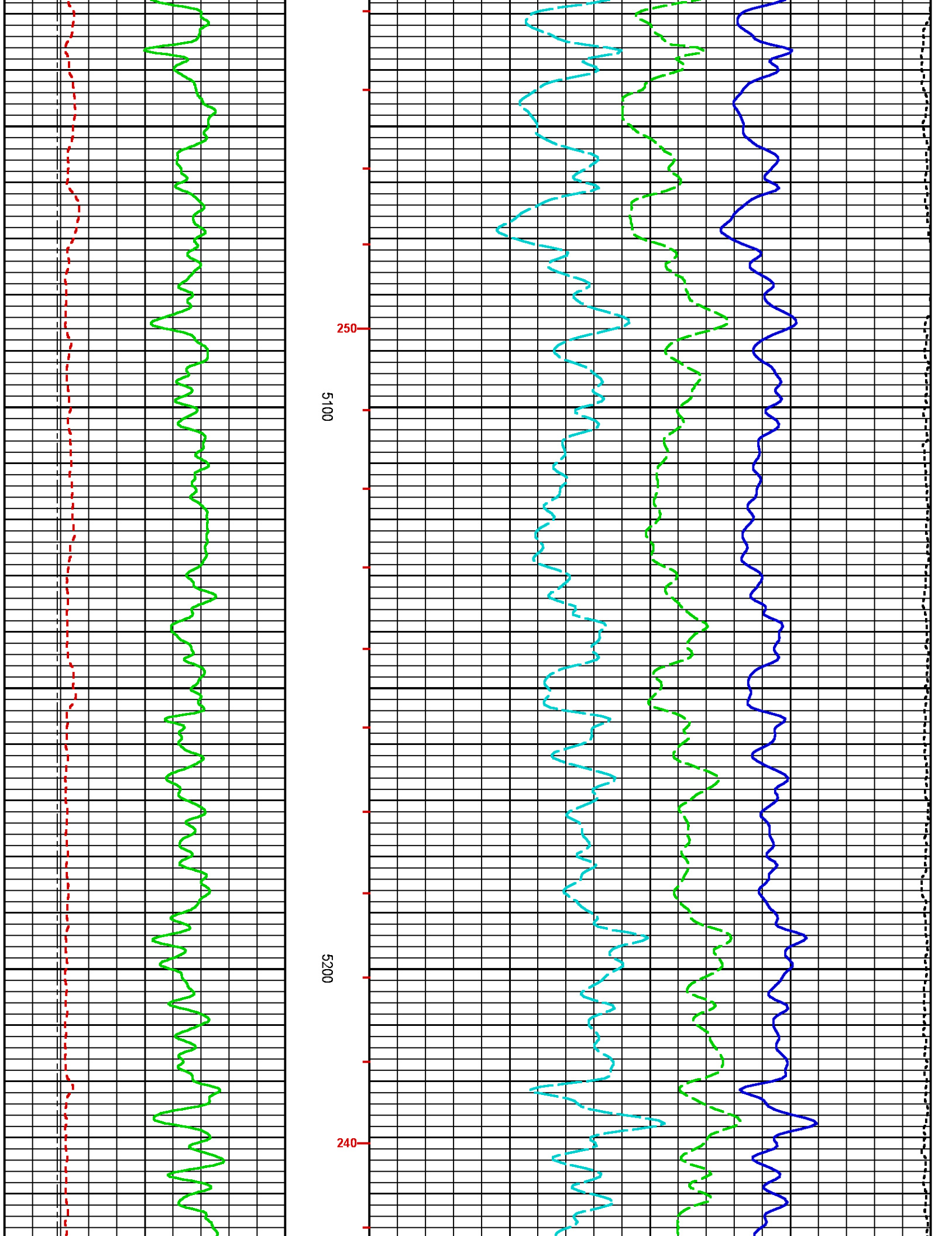


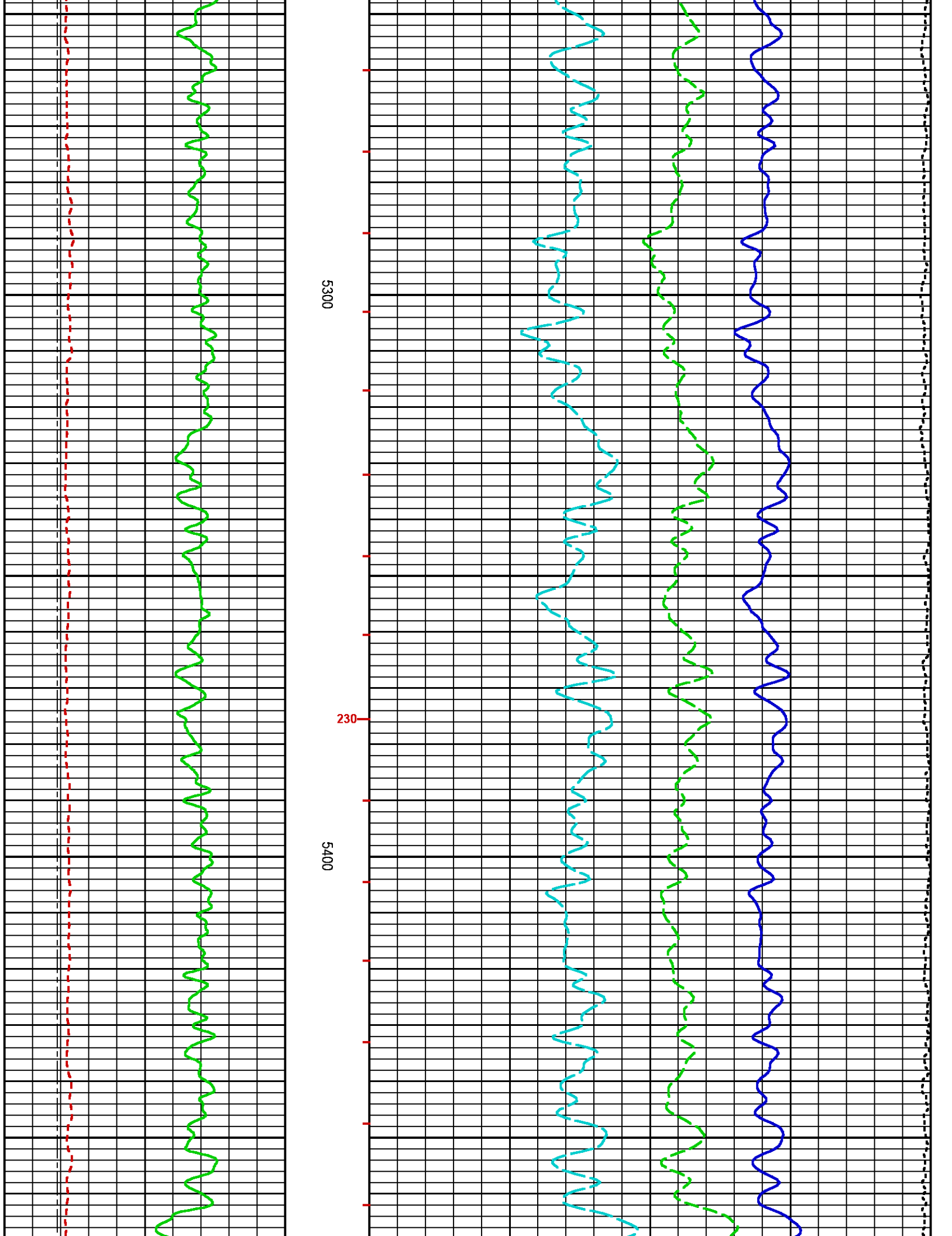


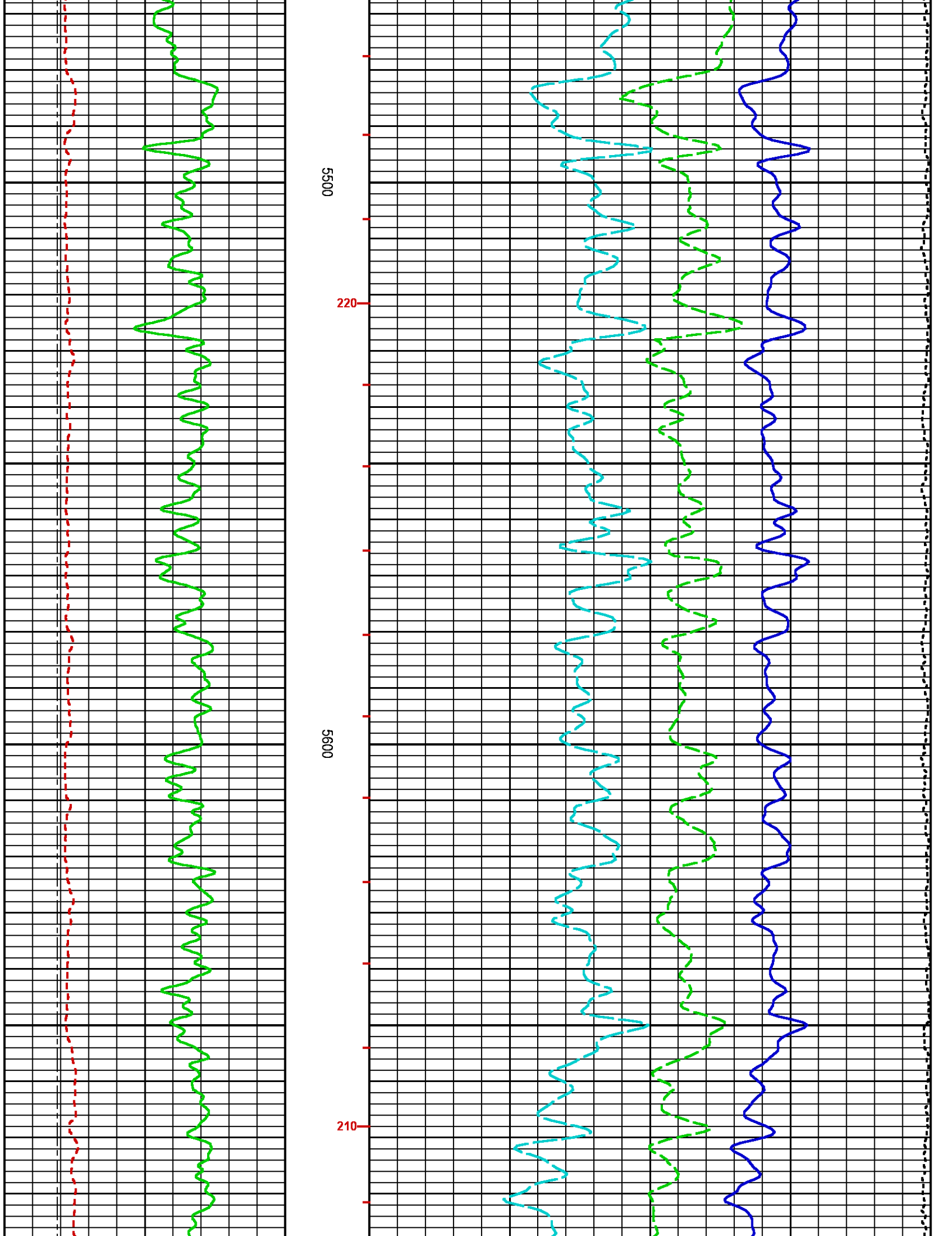


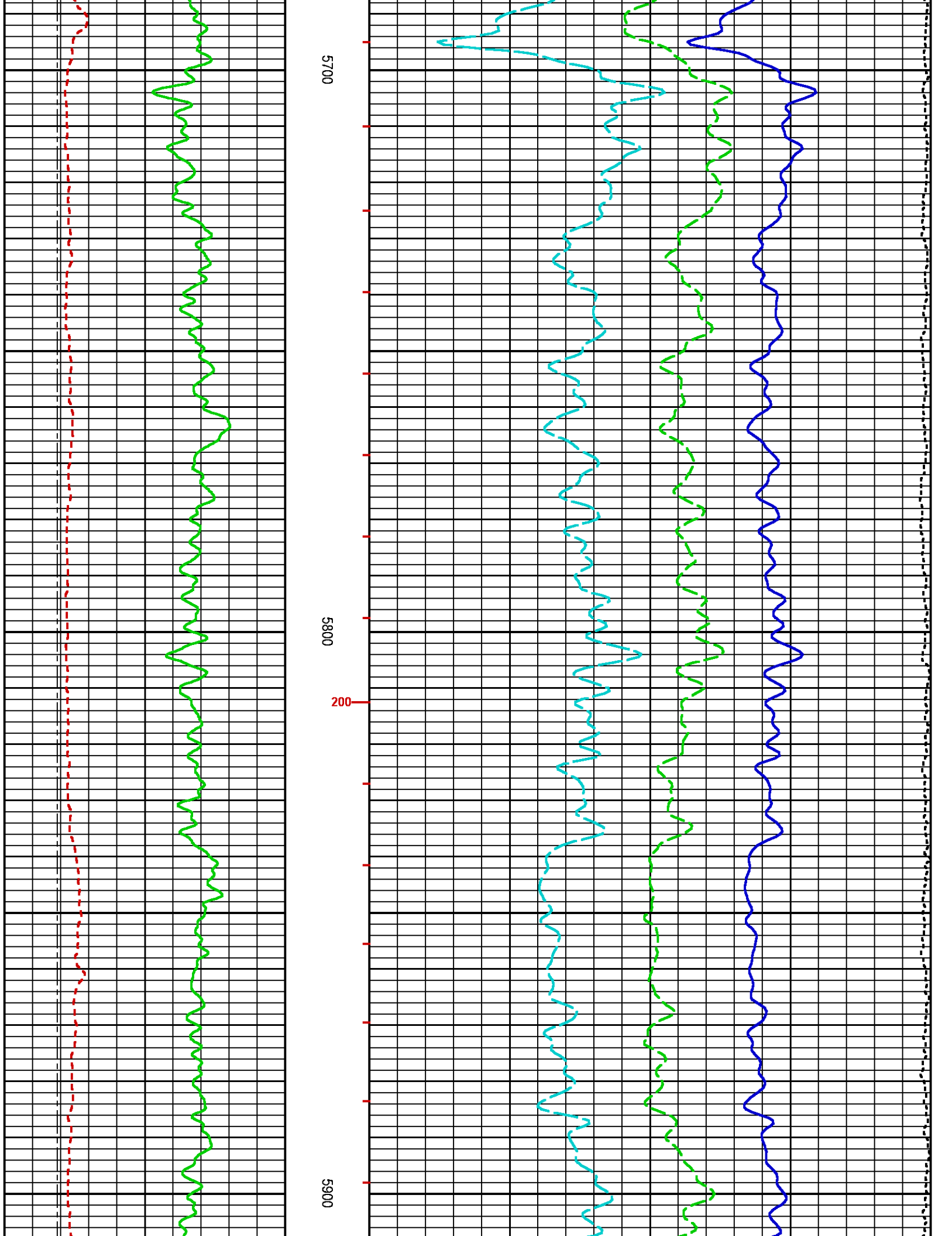


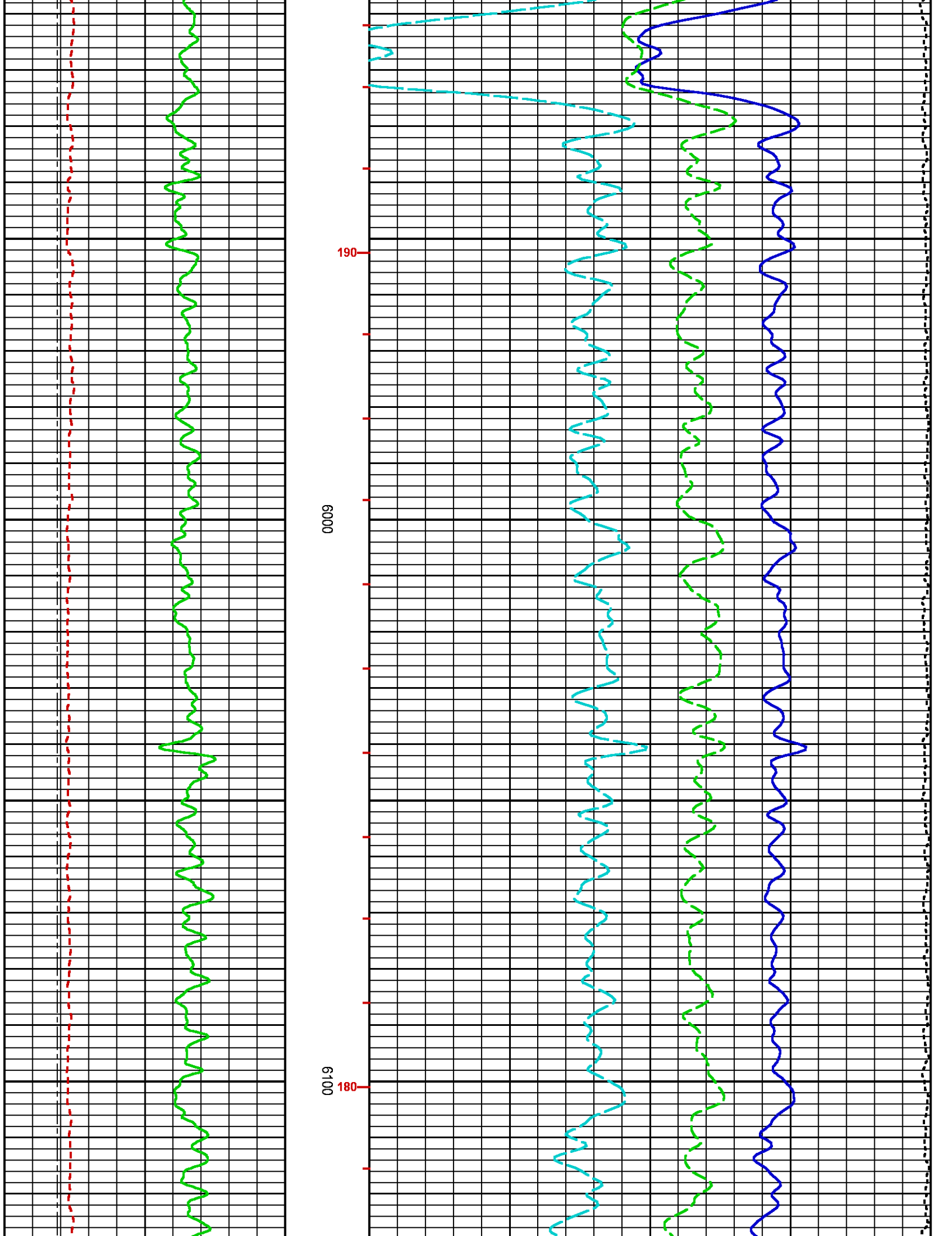


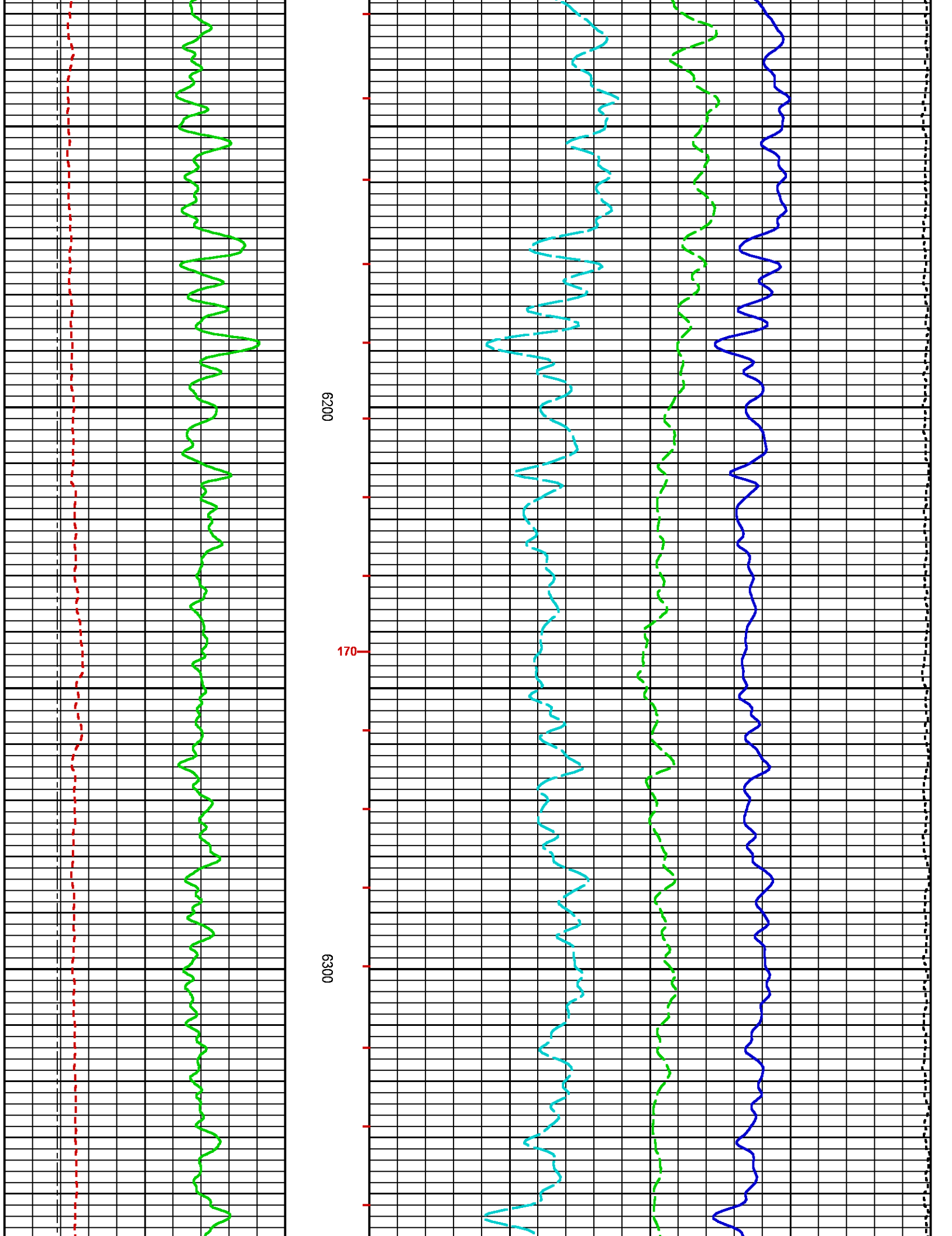


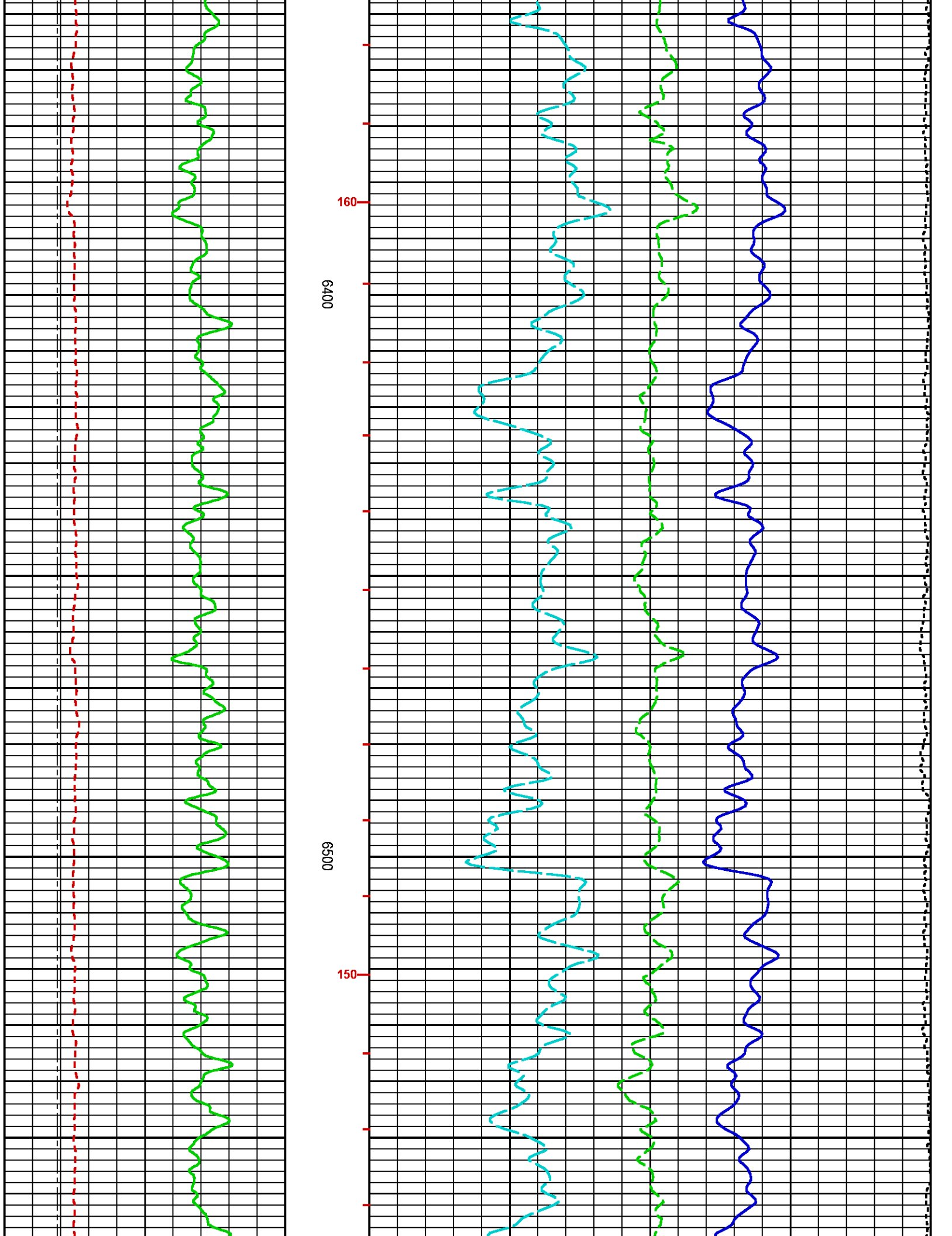


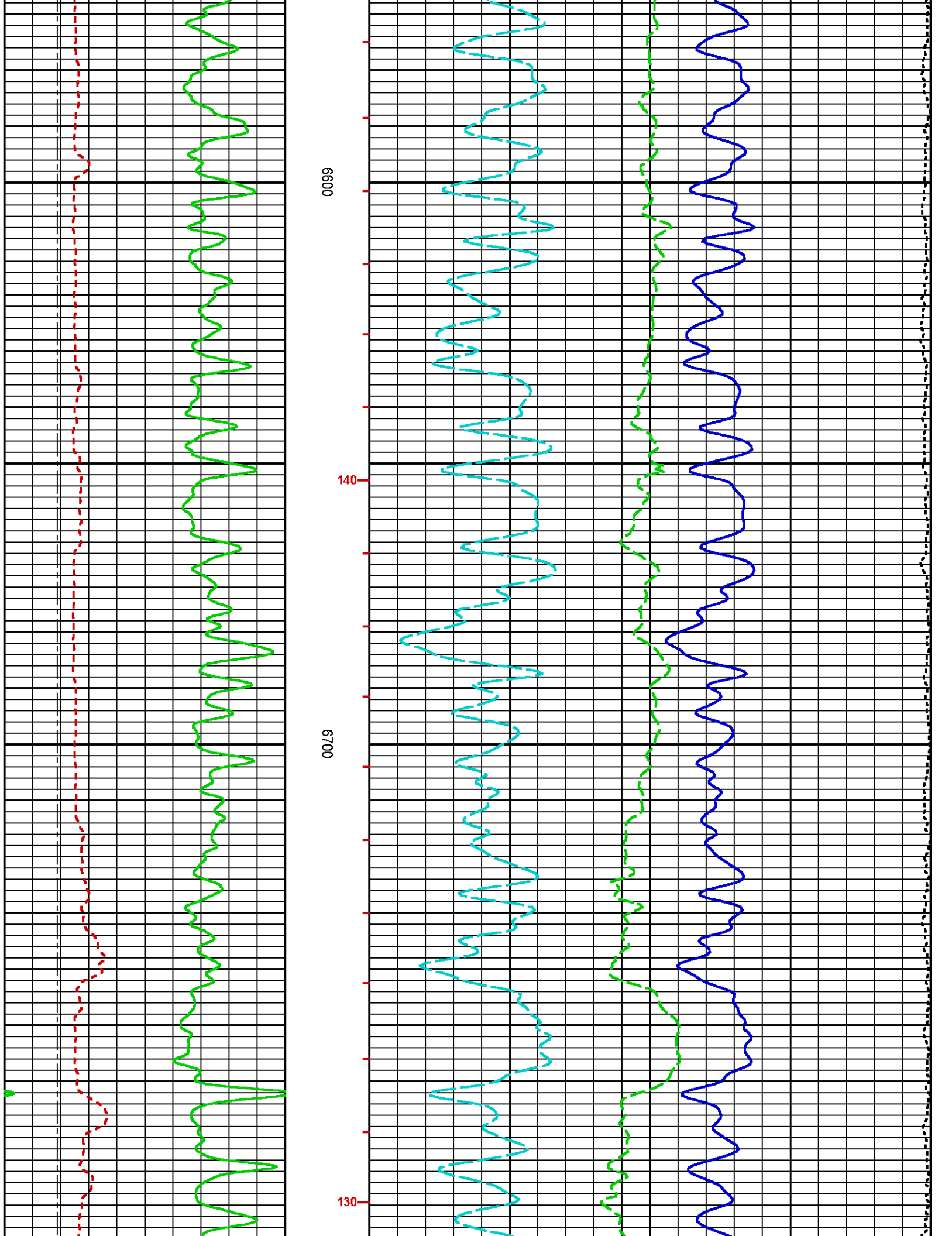


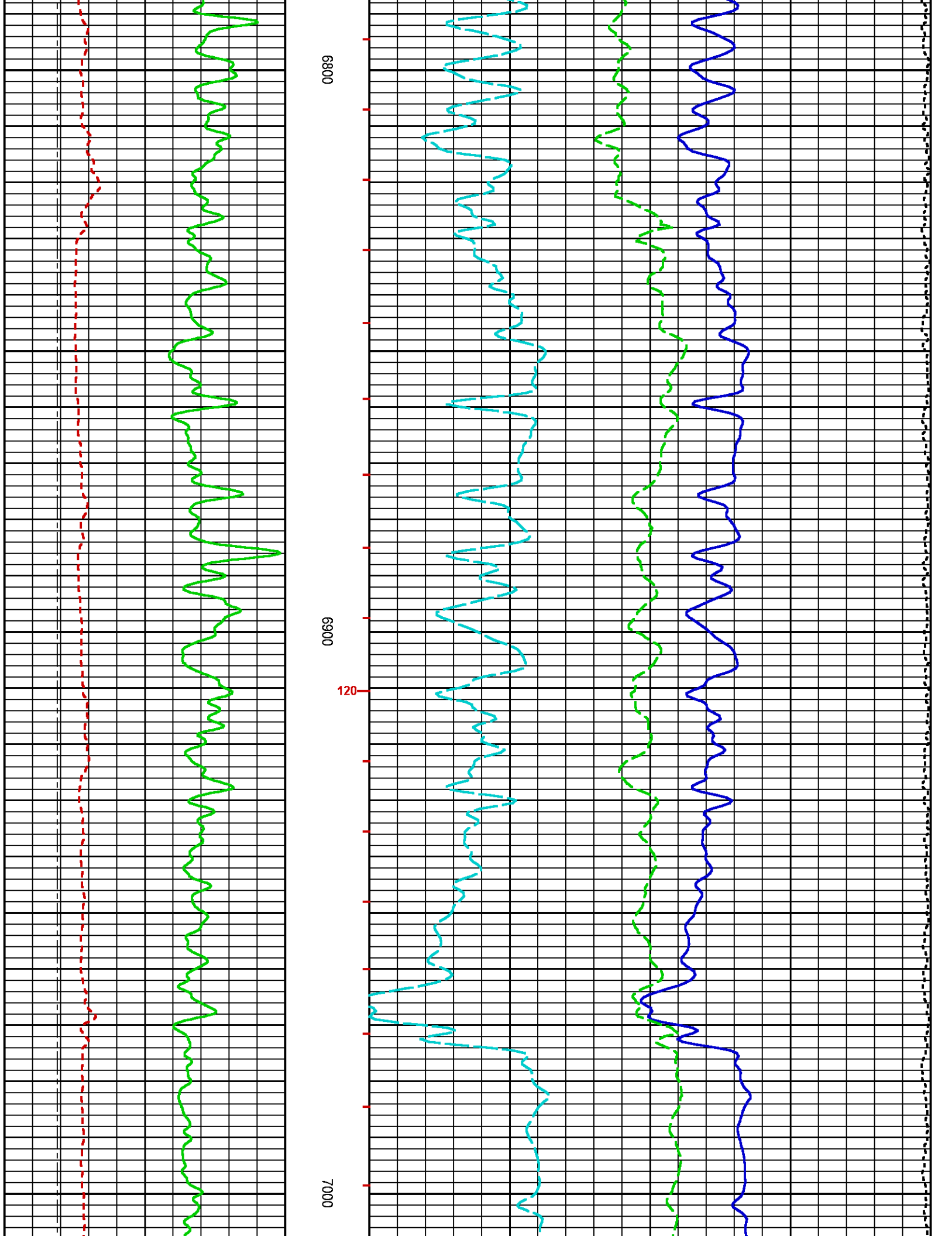


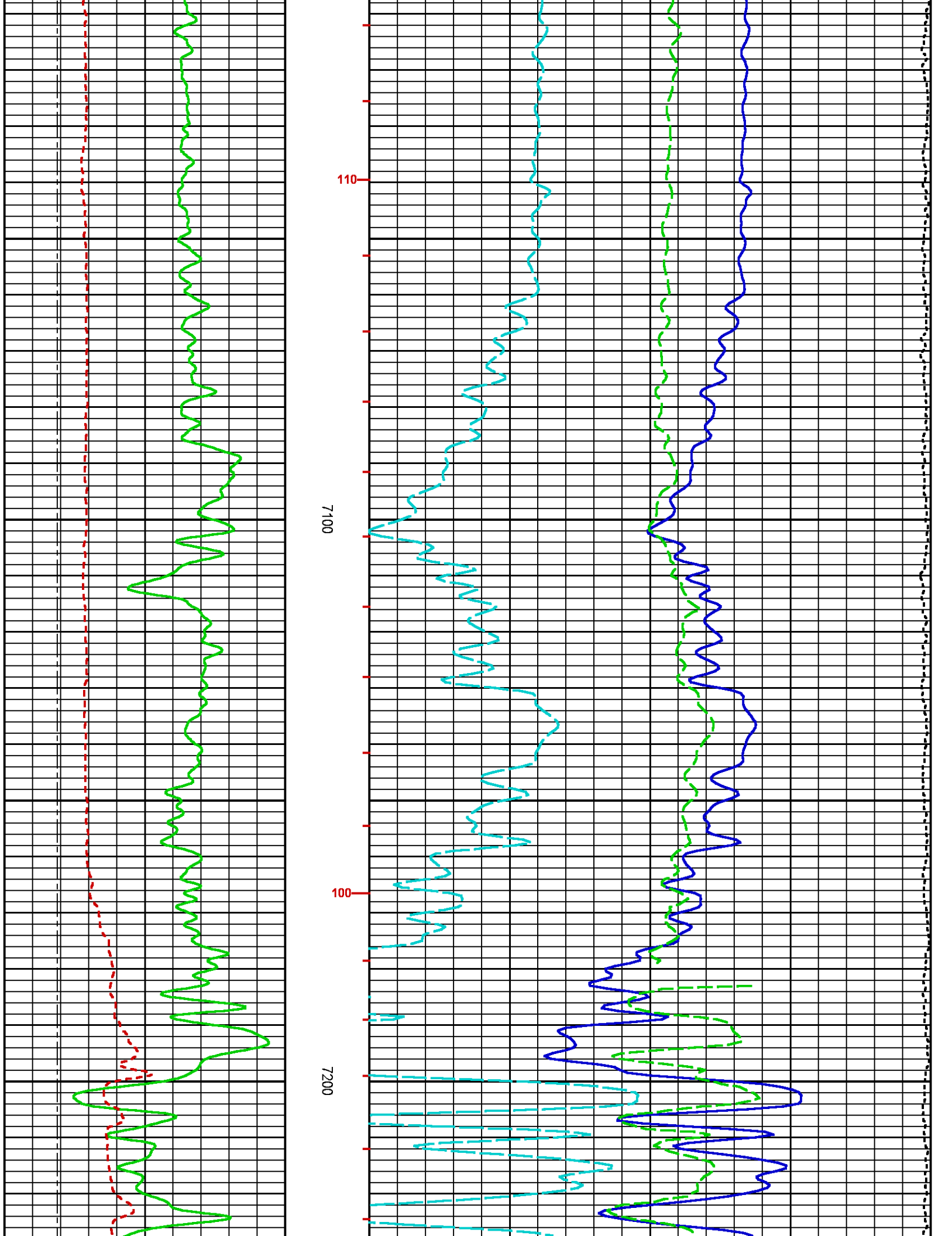


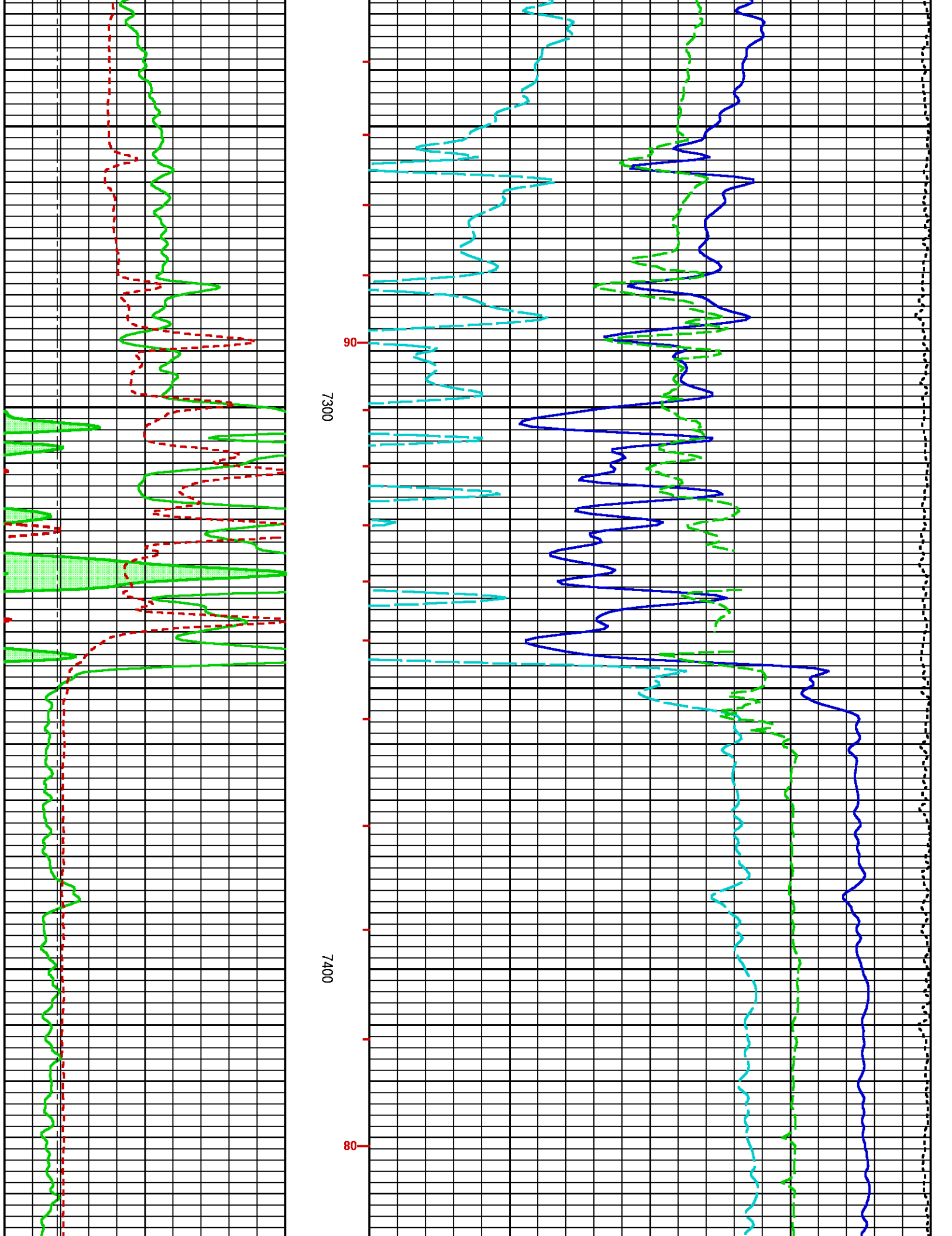


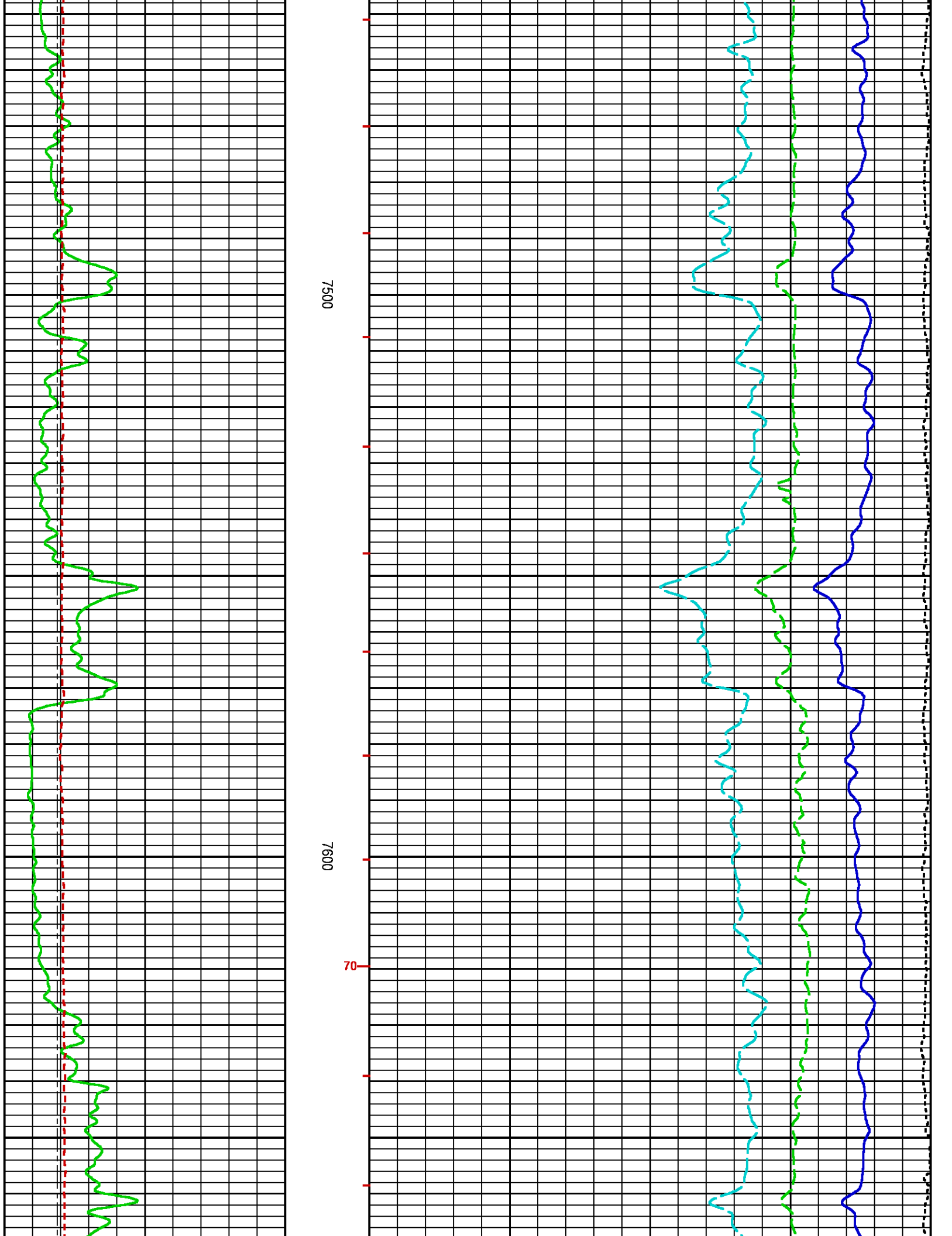


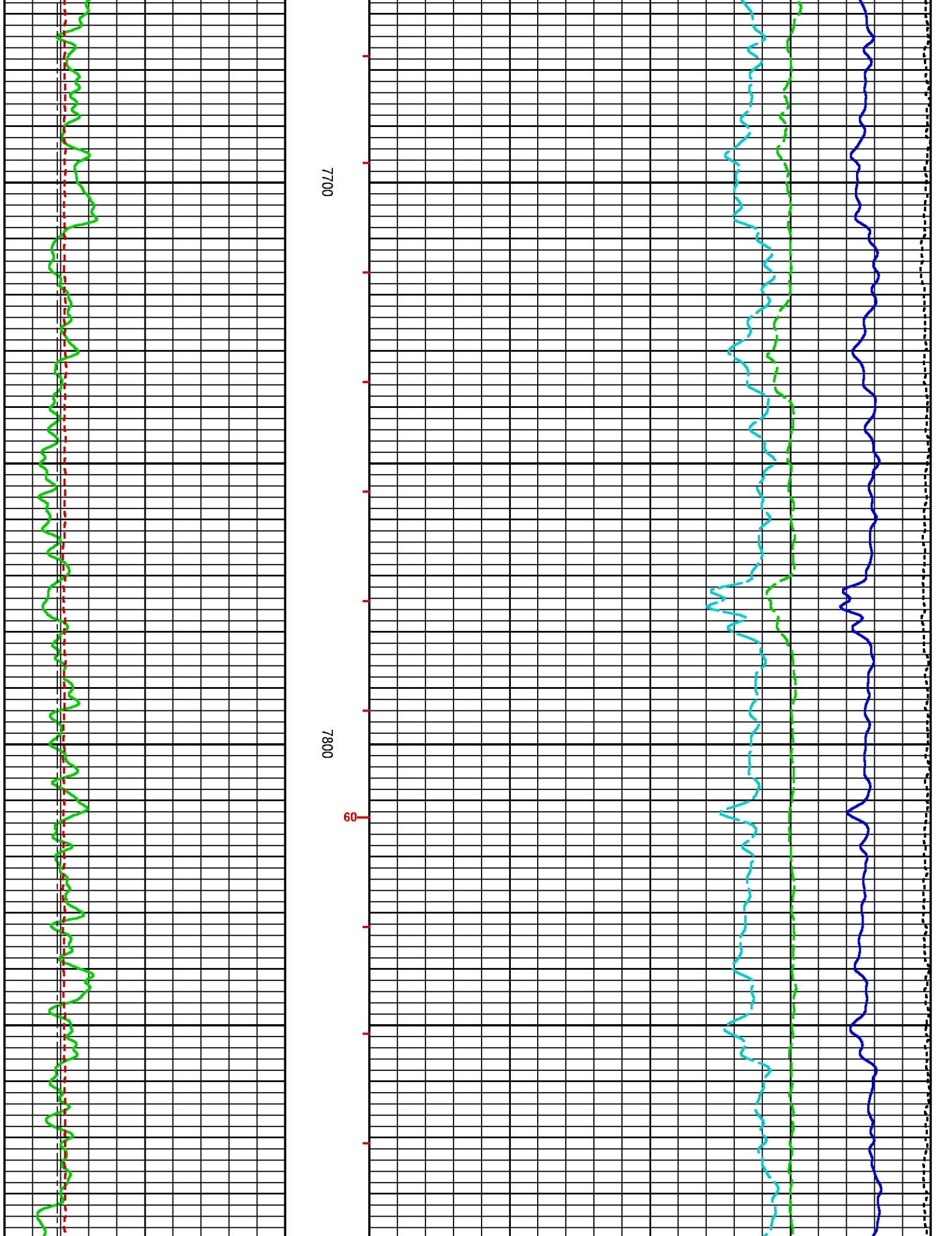


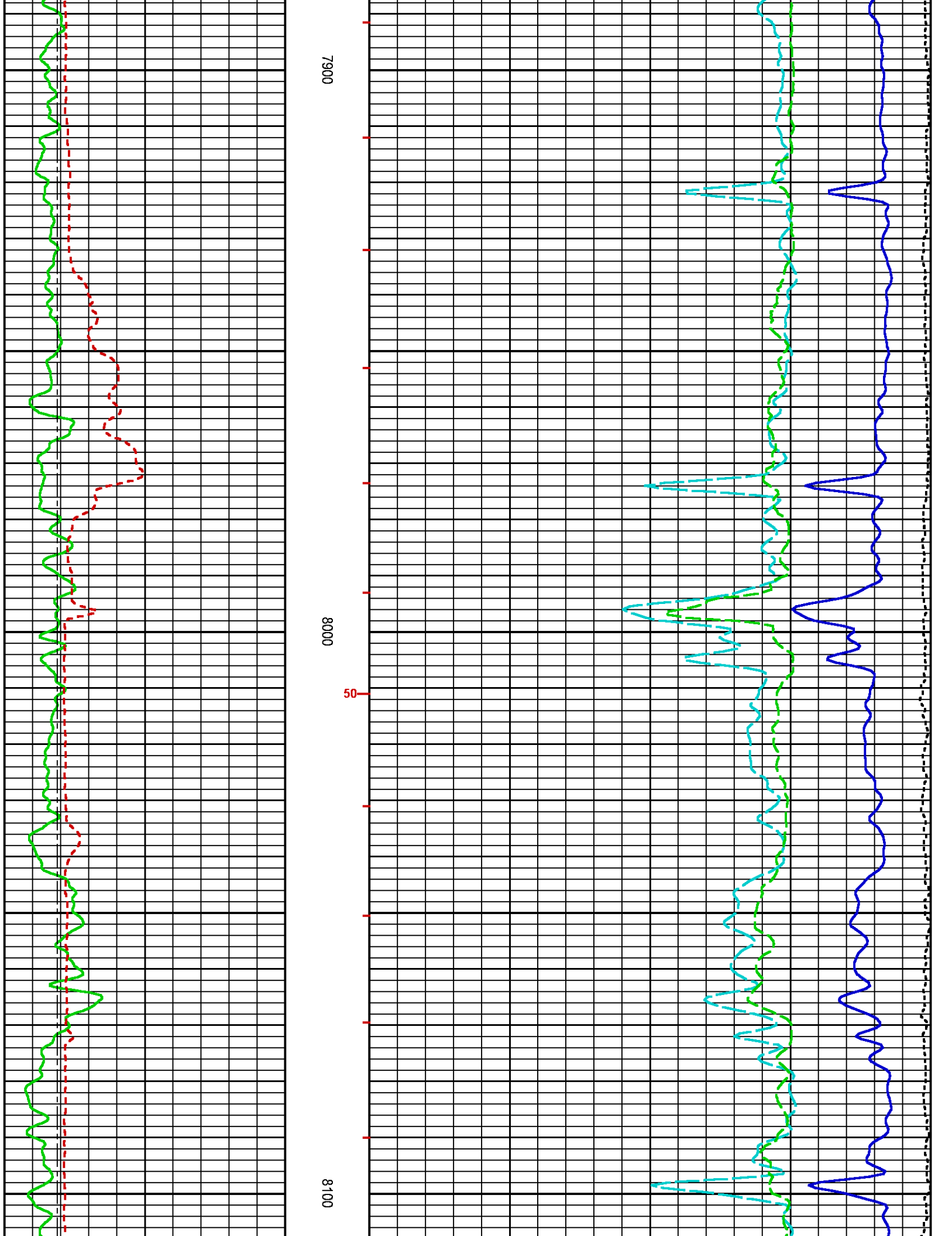


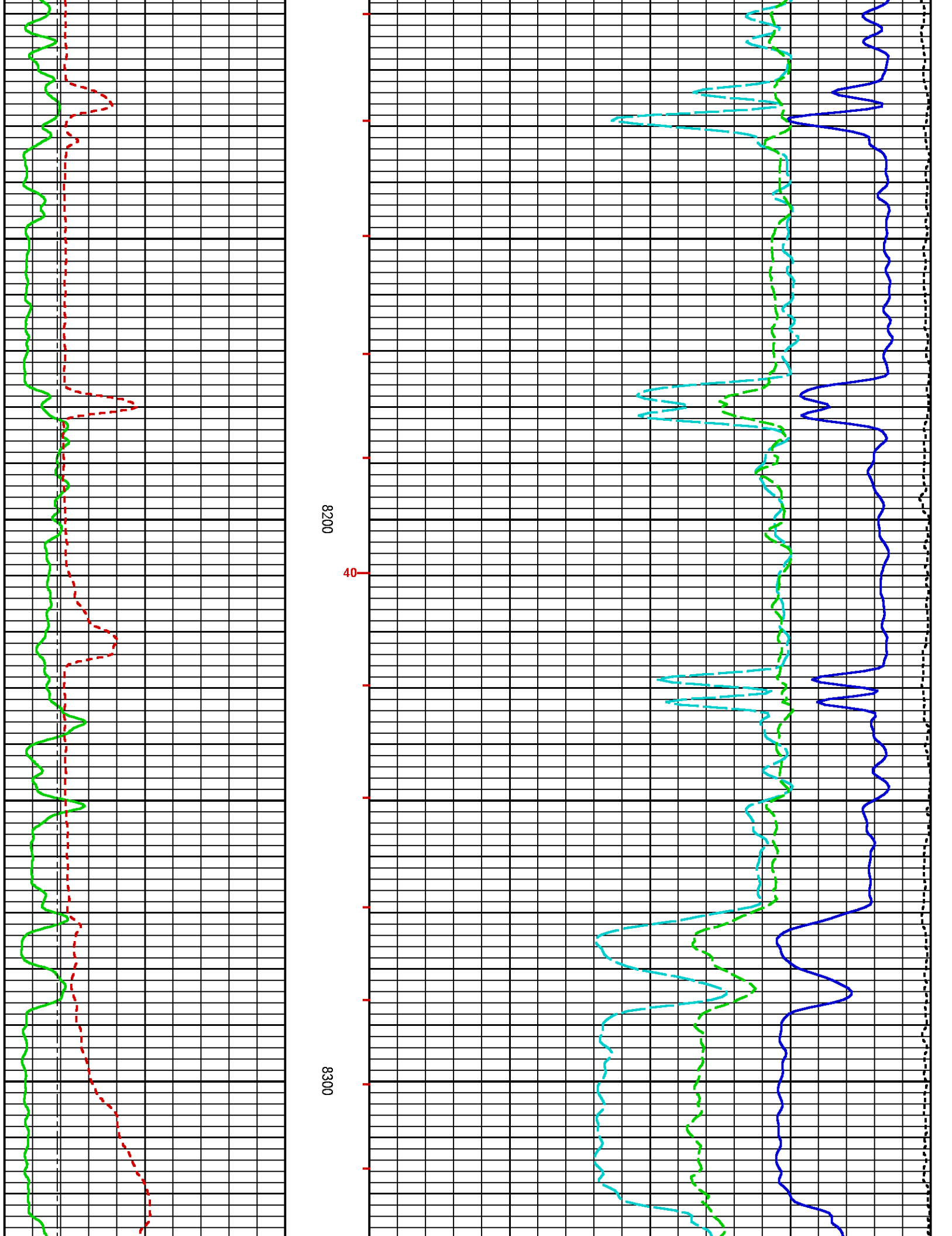


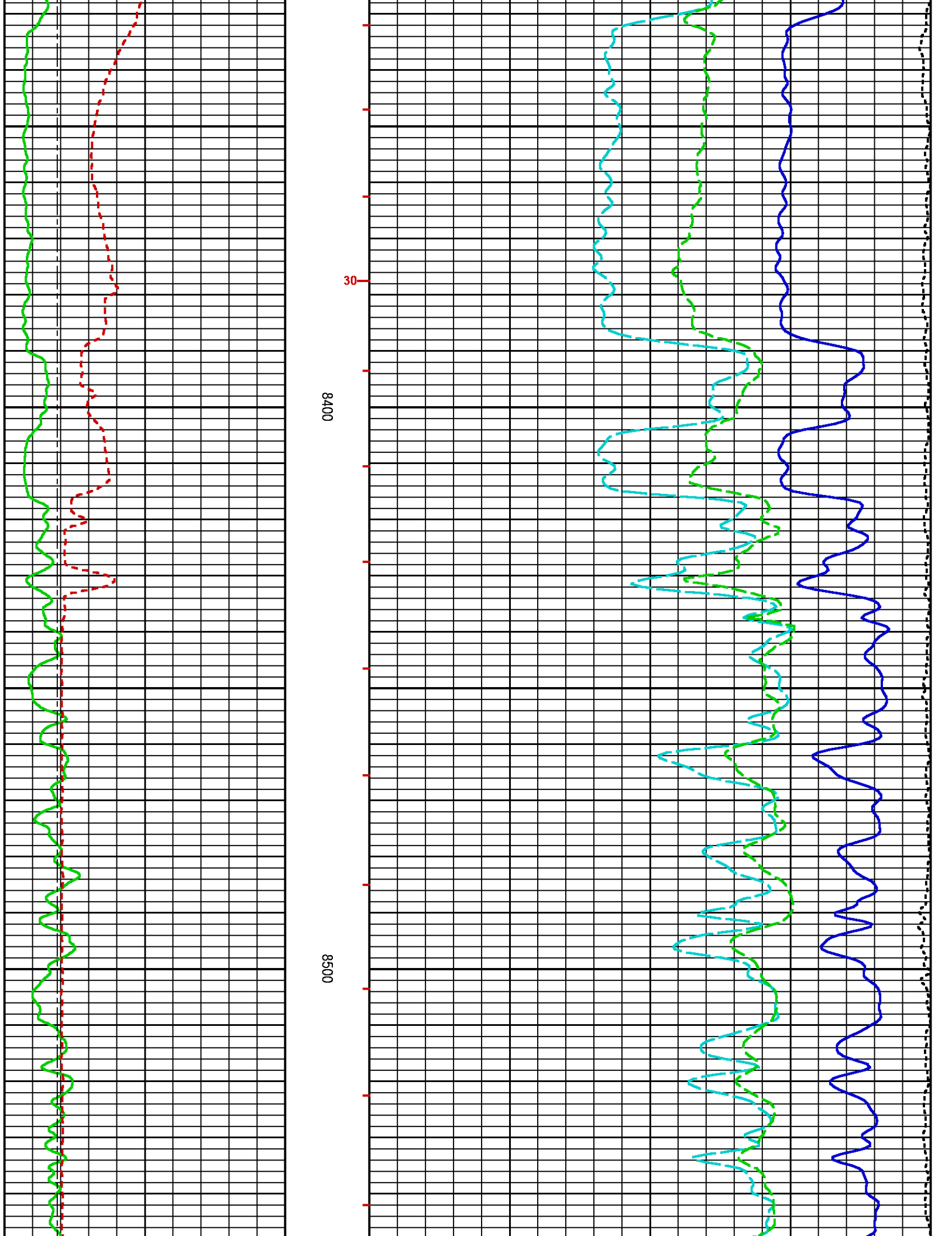


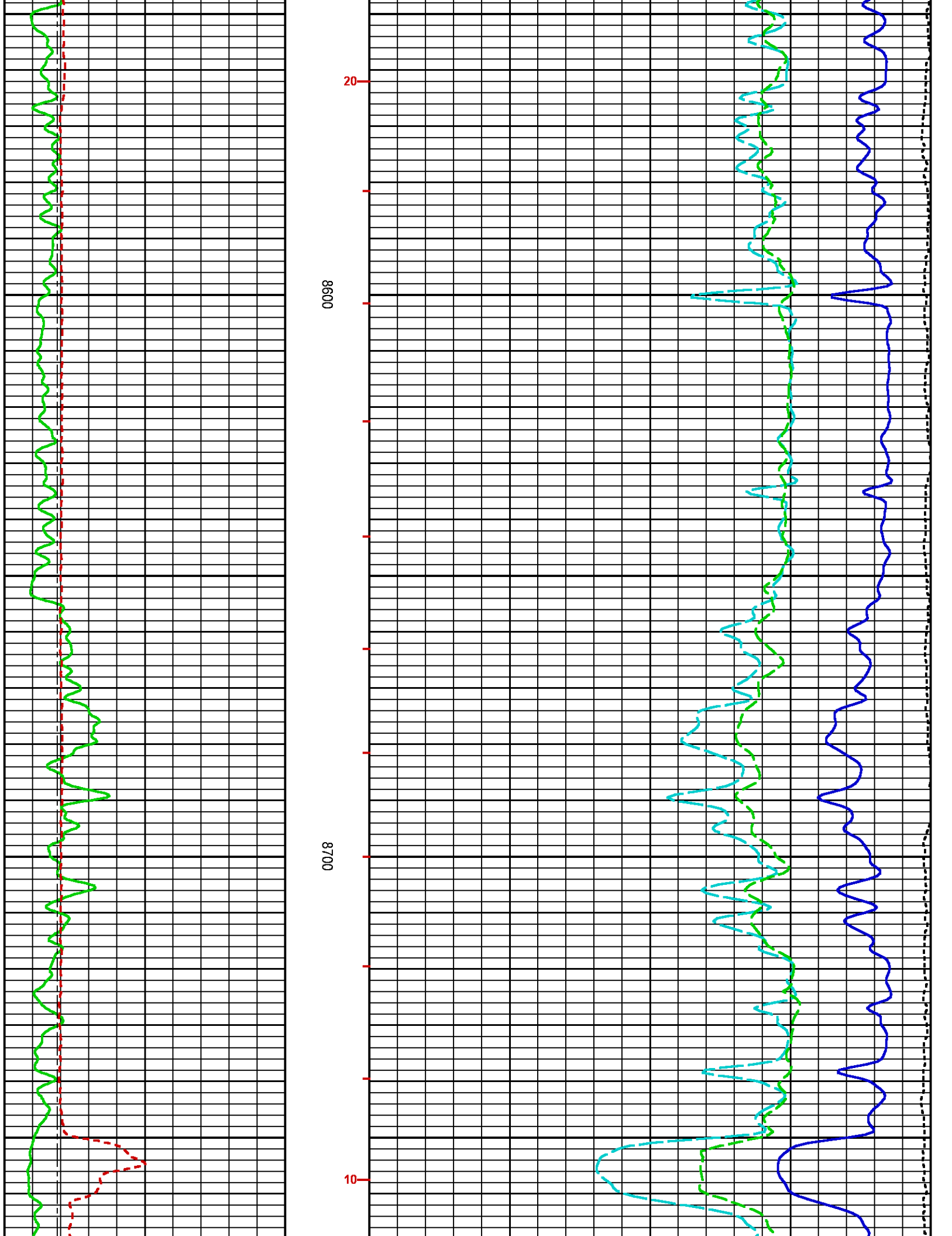


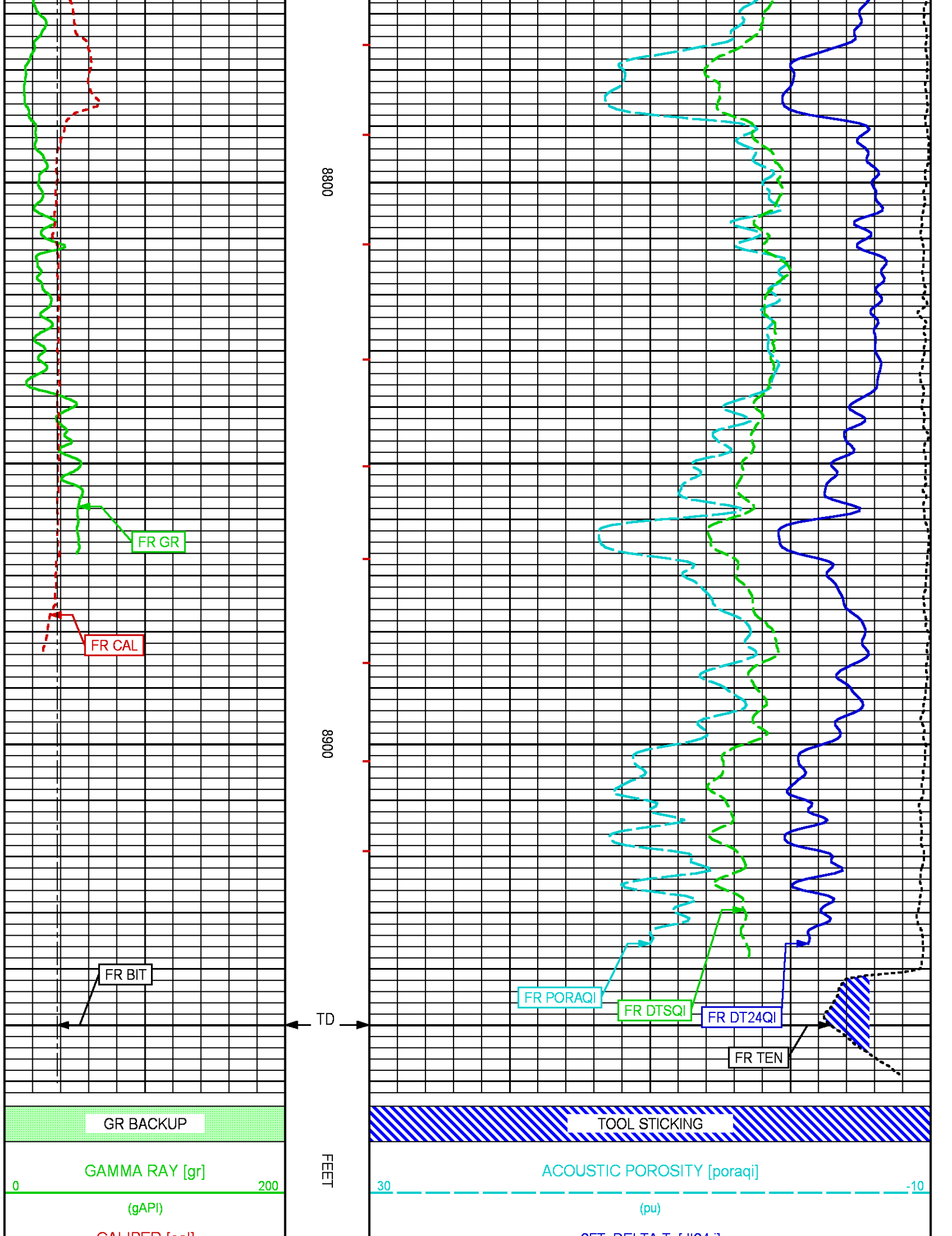


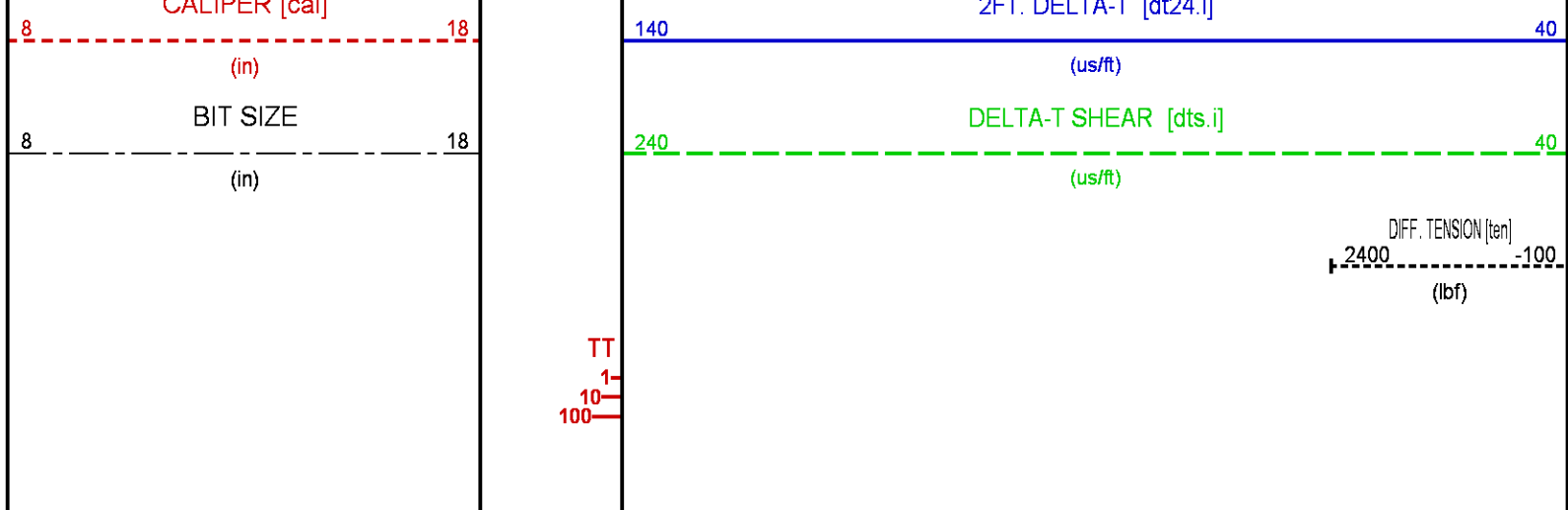












MAIN LOG 5"/100FT SCALE

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

Plotted: Thu May 1 20:03:29 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R3/QUADSLAM_RTEX01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 8642.750 ft BOTTOM DEPTH: 8959.750 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
Y AXIS CALIPER	FILTER ()	medium (1)		TOP BOTTOM
TENSION	FILTER ()	medium (1)		" "
GR	FILTER ()	medium (1)		" "
CALIPER	FILTER ()	medium (1)		" "
	FILTER (.h)	medium (1)		" "
	FILTER (.i)	medium (1)		" "
DT24	FILTER ()	light (2)		" "

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
BIT SIZE	BIT SIZE	9.875	in	TOP BOTTOM

ACOUSTIC POROSITY

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
ACOUSTIC POROSITY	POROSITY TYPE	WYLLIE		TOP BOTTOM
	DTmatrix	47.60	us/ft	" "
	DTfluid	190.00	us/ft	" "
	DTshale	100.00	us/ft	" "
	MOD. WYLLIE PARM	2.25		" "
	MOD. R-H-G PARM	2.00		" "
DELTA T CURVE SELECTION	DT24 SOURCE	AVAN DT24		" "

ACOUSTIC AVAN CORRELATON

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
MONOPOLE DELTA T	FORMATION TYPE	FAST		TOP BOTTOM

	CORRELATION METHOD	NTH ROOT		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	40	us/ft	"	"
	TAPER - RIGHT END	120	us/ft	"	"
	FLOOR (UNIV. OPTION)	0.050		"	"
MONOPOLE COMPRESSIONAL	FORMATION TYPE	FAST		"	"
	CORRELATION METHOD	NTH ROOT		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	40	us/ft	"	"
	TAPER - RIGHT END	120	us/ft	"	"
	FLOOR (UNIV. OPTION)	0.050		"	"
MONOPOLE SHEAR	FORMATION TYPE	GENERIC (MEDIUM)		"	"
	GUIDE CURVE	DO NOT USE GUIDE		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	80	us/ft	TOP	8800.750
		100	us/ft	8800.750	BOTTOM
	TAPER - RIGHT END	175	us/ft	TOP	BOTTOM
MONOPOLE STONLEY	FORMATION TYPE	GENERIC (MEDIUM)		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	170	us/ft	"	"
	TAPER - RIGHT END	510	us/ft	"	"
DIPOLE SHEAR	FORMATION TYPE	GENERIC (MEDIUM)		"	"
	CORRELATION METHOD	NTH ROOT		"	"
	GUIDE CURVE	DO NOT USE GUIDE		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	100	us/ft	"	"
	TAPER - RIGHT END	275	us/ft	"	"
QUADRUPOLE	FORMATION TYPE	GENERIC (MEDIUM)		"	"
	CORRELATION METHOD	NTH ROOT		"	"
	GUIDE CURVE	DO NOT USE GUIDE		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	100	us/ft	"	"
	TAPER - RIGHT END	700	us/ft	"	"

ACOUSTIC PICK CONTROL

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DELTA-T REJECTION RANGE	REJECTION DTmin	40	us/ft	TOP	BOTTOM
	REJECTION DTmax	180	us/ft	"	"
FIRST ARRIVAL PICK	SEARCH START OFFSET (sfan1*)	0	us	"	"
	SEARCH START OFFSET (sfan2*)	0	us	"	"
	SEARCH START OFFSET (sfan3*)	0	us	"	"
	SEARCH START OFFSET (sfan4*)	0	us	"	"
	SEARCH WINDOW LENGTH	1000	us	"	"
	THRESHOLD FACTOR	0.30		"	"
	THRESHOLD MINIMUM (sfan1*)	1.8	pct	"	"
	THRESHOLD MINIMUM (sfan2*)	1.8	pct	"	"
	THRESHOLD MINIMUM (sfan3*)	1.8	pct	"	"
THRESHOLD MINIMUM (sfan4*)	1.8	pct	"	"	
	E3 THRESHOLD	OFF		"	"

ACOUSTIC QUALITY CONTROL

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CYCLE SKIP LIMIT	CYCLE SKIP LIMIT	100	us	TOP	BOTTOM

ACOUSTIC WAVEFORM FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
WAVEFORM FILTER - DELTA T	SURFACE WAVE FILTER	ON		TOP	BOTTOM
	LOW FREQ CUTOFF	4000	Hz	"	"
	HIGH FREQ CUTOFF	20000	Hz	"	"
WAVEFORM FILTER - FULLWAVE	SURFACE WAVE FILTER	ON		"	"
	LOW FREQ CUTOFF	2000	Hz	"	"
	HIGH FREQ CUTOFF	20000	Hz	"	"
WAVEFORM FILTER - STONELEY	SURFACE WAVE FILTER	ON		"	"
	LOW FREQ CUTOFF	500	Hz	"	"
	HIGH FREQ CUTOFF	5500	Hz	"	"
WAVEFORM FILTER - DIPOLE	SURFACE WAVE FILTER	ON		"	"
	LOW FREQ CUTOFF	1500	Hz	"	"
	HIGH FREQ CUTOFF	5000	Hz	"	"
WAVEFORM FILTER - QUADRUPOLE	SURFACE WAVE FILTER	ON		"	"
	LOW FREQ CUTOFF	1500	Hz	"	"
	HIGH FREQ CUTOFF	5000	Hz	"	"

ACOUSTIC TOOL CONTROL PARAMETERS

ACOUSTIC TCC CONTROL PARAMETERS

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GENERAL TCC PARAMETERS	AGC	ON		TOP	BOTTOM
	SUBCYCLE LENGTH	50		"	"
	SUBSET	1		"	"
GENERAL MONOPOLE TCC PARAMETERS	STACK LEVEL	2		"	"
	DSP FILTER	ON		"	"
DELTA T TCC PARAMETERS	ACG WINDOW	800	us	TOP	8891.750
		848	us	8891.750	BOTTOM
	MOVEOUT	16	us/ft	TOP	BOTTOM
	SAMPLE PERIOD	16		"	"
FULL WAVE MONOPOLE TCC PARAMETERS	RX DELAY	400	us	"	"
	ACG WINDOW	8064	us	"	"
	SAMPLE PERIOD	24		"	"
GENERAL DIPOLE TCC PARAMETERS	RX DELAY	0	us	"	"
	STACK LEVEL	2		"	"
	DSP FILTER	ON		"	"
INLINE DIPOLE TCC PARAMETERS	ACG WINDOW	0	us	"	"
	SAMPLE PERIOD	64		"	"
	RX DELAY	0	us	"	"
CROSS DIPOLE TCC PARAMETERS	ACG WINDOW	14400	us	"	"
	SAMPLE PERIOD	72		"	"
	RX DELAY	0	us	"	"
QUADRUPOLE TCC PARAMETERS	ACG WINDOW	0	us	"	"
	SAMPLE PERIOD	16		"	"
	RX DELAY	0	us	"	"

CURVE DESCRIPTION REPORT

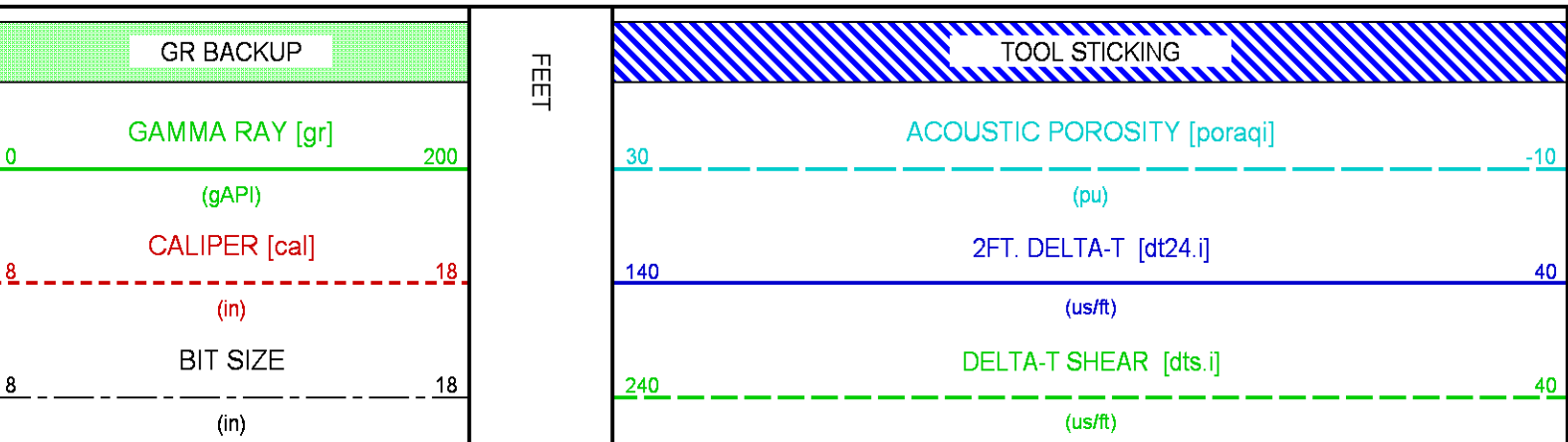
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	May 1 14:53:25 2014	BIT SIZE
F1:CAL	May 1 14:53:25 2014	CALIPER
F1:DT24QI	May 1 14:53:25 2014	SLOWNESS OVER 24-INCH INTERVAL
F1:DTSQI	May 1 14:53:25 2014	SHEAR WAVE SLOWNESS
F1:GR	May 1 14:53:25 2014	GAMMA RAY
F1:PORAQI	May 1 14:53:25 2014	ACOUSTIC POROSITY
F1:TEN	May 1 14:53:25 2014	DIFFERENTIAL TENSION
F1:TTQI	May 1 14:53:25 2014	INTEGRATED TRAVELTIME FROM ACOUSTIC SLOWNESS

CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	DT24QI	12.50	GR	92.25	TEN	0.00
CAL	73.00	DTSQI	20.50	PORAQI	12.50		

Presentation : sys1:/dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R3/XMAC_RPT.fvpdf [5"/100' Scale]
Plot Interval : 8558.5 - 8967 Feet

Data File 1 : F1 : sys1:/dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R3/QUADSLAM_RTEX01.xtf
Created On : May 1 14:53:25 2014
Company : Chesapeake Appalachia LLC
Well : JAMES MESSENGER 3H
Field : WETZEL
File Interval : 8543.75 - 8967 Feet
OCT : QUADSLAM

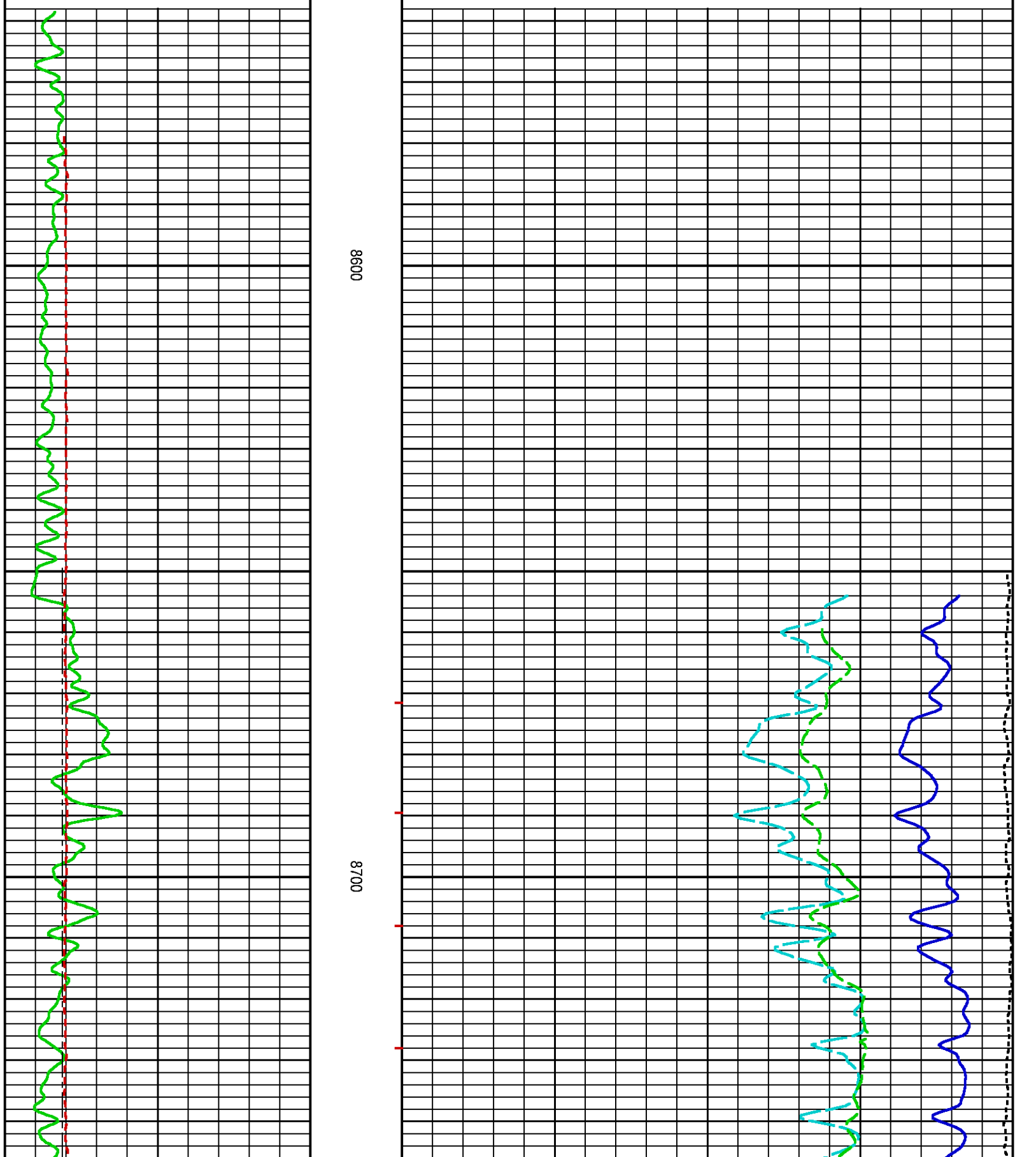


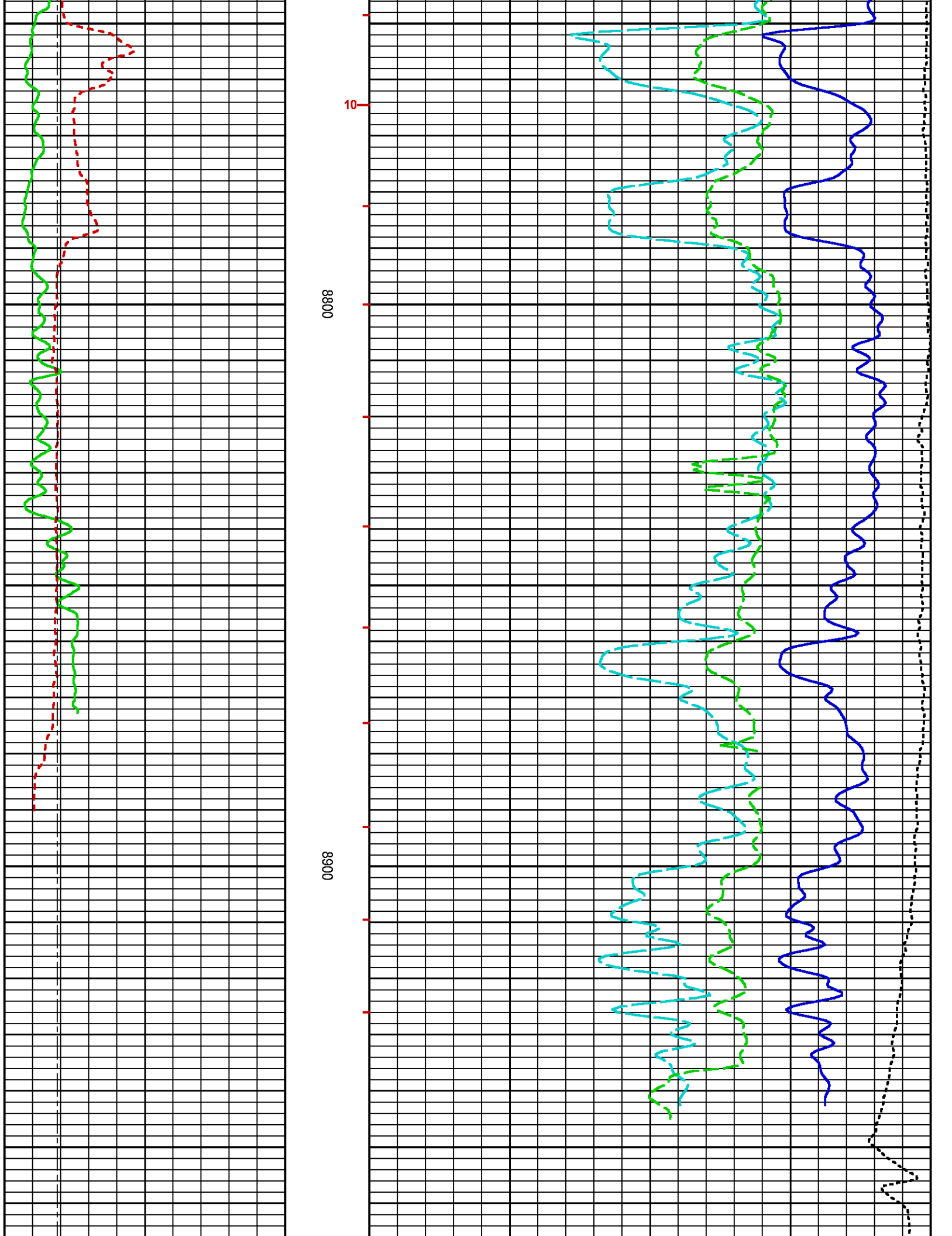
DIFF. TENSION (ten)
2400 -100
(lbf)

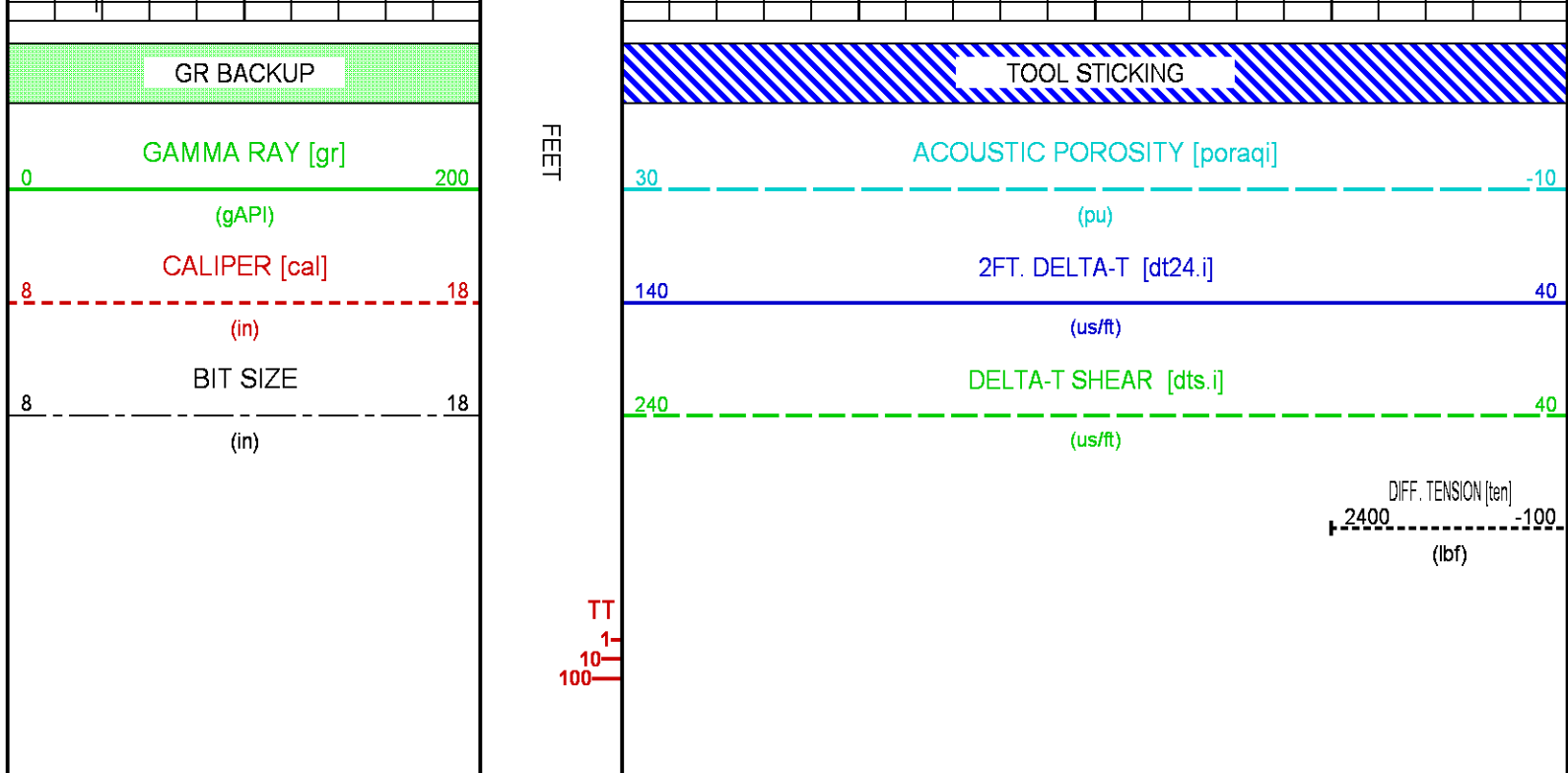
TT
1
10
100

8600

8700







CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R3/QUADSLAM_RTEX.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1329XA 177854 DATE/TIME PERFORMED: Fri Apr 25 11:10:40 2014

UNIT #: 3880TA ML4290 CALB JIG #: 4702NK V1-499-N

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	168.16	1058.62	890.5 830.0 960.0	0.168	28.33	178.33	150

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1329XA 177854 DATE/TIME PERFORMED: Fri Apr 25 11:19:56 2014

UNIT #: 3880TA ML4290 VERI JIG #: 4702NK V1-499-N

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	165.40	1044.58	0.168	27.86	175.96	148.10 140.00 160.00

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2234XA 370835

DATE/TIME PERFORMED: Mon Apr 7 10:49:03 2014

UNIT #: 3885TD Z4257

	SMALL RING	LARGE RING	MULT	ADD	SMALL RING (in)	LARGE RING (in)
CALIPER	1418.0	2718.4	0.00769	-4.90434	6.000	16.000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 370835

DATE/TIME PERFORMED: Thu May 1 14:04:04 2014

DAYS SINCE CAL: 24

UNIT #: 3880TA ML4290

	I.D.	MULT	ADD	I.D. (in)
CALIPER	1956.8	0.00769	-5.34768	9.700

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 370835

DATE/TIME PERFORMED: Thu May 1 18:48:19 2014

DAYS SINCE CAL: 24

UNIT #: 3880TA ML4290

	I.D.	MULT	ADD	I.D. (in)
CALIPER	1992.8	0.00769	-5.34768	9.977
				9.200 10.200

XMAC_ OR PRIMARY CALIBRATION SUMMARY

TOOL #: 1678MC 10038648

DATE/TIME PERFORMED: Thu Apr 24 14:02:20 2014

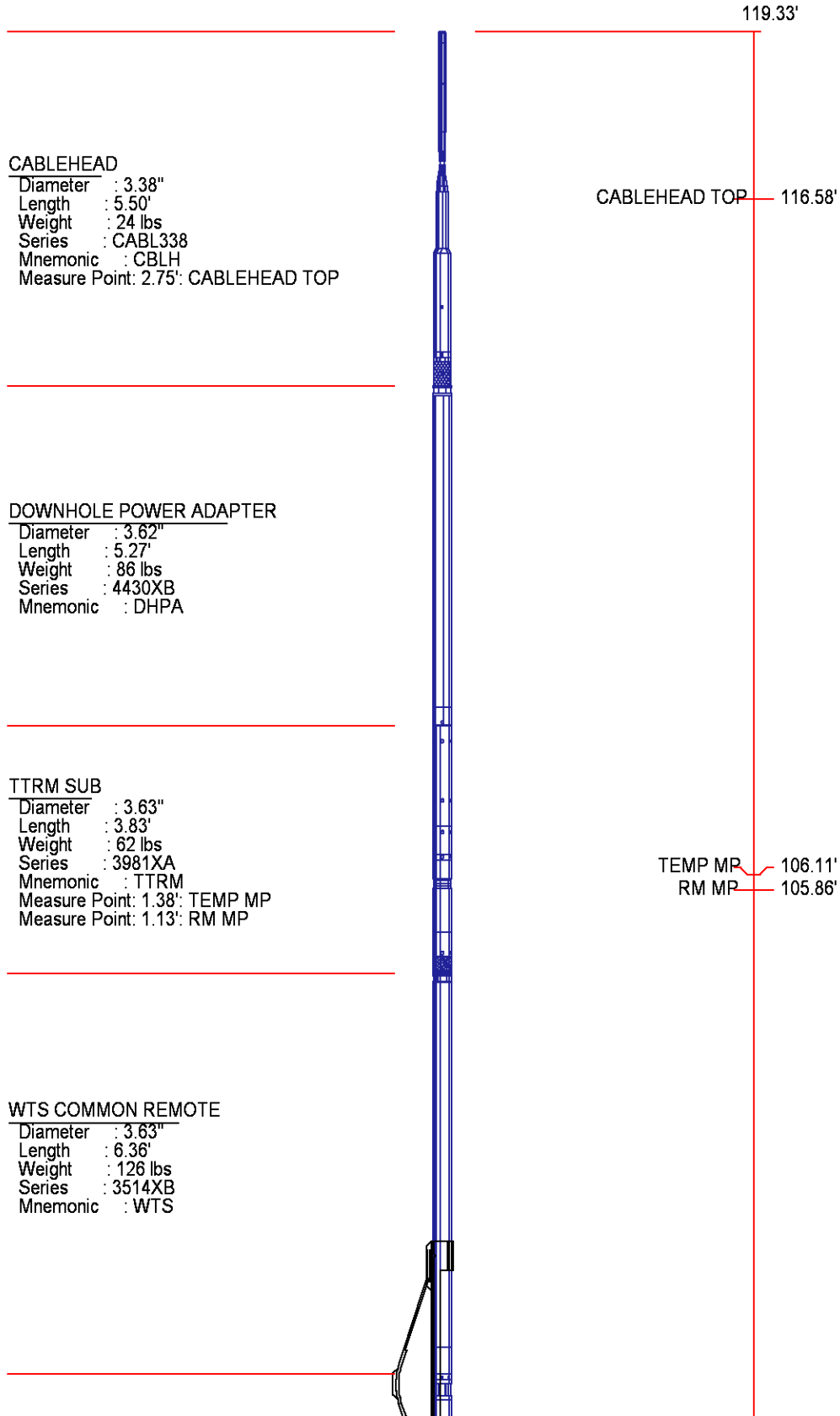
UNIT #: 3880TA ML4290

ORIENTATION #: 4401XB 10363657

	DEV (deg)	QA (mG)	MEAS RB (deg)	RB OFFSET (deg)	ROTATED RB (deg)
ORIT TBM CHECK	89.5	999.1	358.2		
		990.0 1010.0	357.5 2.5		
XMAC-F1 ORIENT			353.0	353.0	0.0

INSTRUMENT CONFIGURATION

Source File: /dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R3/QUADSLAM_RTEX~tdg



CABLEHEAD

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

CABLEHEAD TOP 116.58'

119.33'

DOWNHOLE POWER ADAPTER

Diameter : 3.62"
Length : 5.27'
Weight : 86 lbs
Series : 4430XB
Mnemonic : DHPA

TTRM SUB

Diameter : 3.63"
Length : 3.83'
Weight : 62 lbs
Series : 3981XA
Mnemonic : TTRM
Measure Point: 1.38': TEMP MP
Measure Point: 1.13': RM MP

TEMP MP 106.11'
RM MP 105.86'

WTS COMMON REMOTE

Diameter : 3.63"
Length : 6.36'
Weight : 126 lbs
Series : 3514XB
Mnemonic : WTS

DIGITAL SPECTRALOG

Diameter : 3.63"
Length : 7.31'
Weight : 130 lbs
Series : 1329XA
Mnemonic : DSL
Measure Point: 1.60': GR MP

GR MP — 92.65'

COMPENSATED NEUTRON

Diameter : 3.63"
Length : 7.59'
Weight : 150 lbs
Series : 2446XA
Mnemonic : CN
Measure Point: 2.63': LSN MP
Measure Point: 2.24': SSN MP

LSN MP — 86.09'
SSN MP — 85.69'

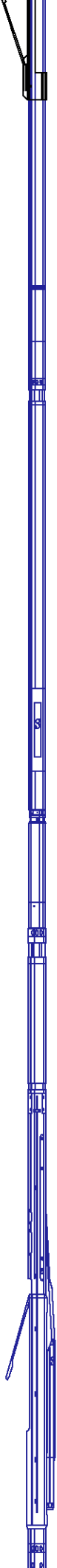
MASS ISOLATION SUB

Diameter : 3.63"
Length : 2.09'
Weight : 50 lbs
Series : 4485XA
Mnemonic : ISSB

Z-DENSILOG

Diameter : 4.88"
Length : 11.22'
Weight : 360 lbs
Series : 2234XA
Mnemonic : ZDL
Measure Point: 3.19': CAL MP
Measure Point: 2.47': LSD MP
Measure Point: 2.07': SSD MP

CAL MP — 73.35'
LSD MP — 72.63'
SSD MP — 72.23'



KNUCKLE JOINT (DOUBLE)

Diameter : 3.38"
Length : 4.65'
Weight : 90 lbs
Series : 3939XA
Mnemonic : KNJT

WTS RT EXPLORER POWER ADAPTER

Diameter : 3.63"
Length : 2.83'
Weight : 40 lbs
Series : 1241PA
Mnemonic : RTEX

WTS RT EXPLORER

Diameter : 4.00"
Length : 13.54'
Weight : 210 lbs
Series : 1241XB
Mnemonic : RTEX
Measure Point: 6.93': RTEX mp

RTEX mp — 56.06'

DIGITAL ORIENTATION

Diameter : 3.38"
Length : 10.81'
Weight : 110 lbs
Series : 4401XB
Mnemonic : ORIT
Measure Point: 0.00': ORIENT MP



MASS ISOLATION SUB

Diameter : 3.63"
Length : 2.09'
Weight : 50 lbs
Series : 4485XA
Mnemonic : ISSB

ORIENT MP — 38.32'

ARRAY ACOUSTILOG ELECTRONICS, 8 CHANNEL

Diameter : 3.38"
Length : 7.82'
Weight : 102 lbs
Series : 1677EA
Mnemonic : XMAC

CROSS MULTIPOLE ARRAY ACOUSTILOG

Diameter : 3.75"
Length : 10.91'
Weight : 224 lbs
Series : 1678MC
Mnemonic : XMF1
Measure Point: 5.50': R8
Measure Point: 5.00': R7
Measure Point: 4.50': R6
Measure Point: 4.00': R5
Measure Point: 3.50': R4
Measure Point: 3.00': R3
Measure Point: 2.50': R2
Measure Point: 2.00': R1

R8 — 23.01'
R7 — 22.51'
R6 — 22.01'
R5 — 21.51'
R4 — 21.01'
R3 — 20.51'
R2 — 20.01'
R1 — 19.51'

SHEAR WAVE ACOUSTILOG

Diameter : 3.63"
Length : 5.00'

Weight : 135 lbs
 Series : 1678PB
 Mnemonic : XMAC

MULTI-POLE ARRAY ACOUSTIC

Diameter : 3.88"
 Length : 7.92'
 Weight : 170 lbs
 Series : 1678BA
 Mnemonic : XMAC
 Measure Point: 6.42': QUADRUPOLE T5
 Measure Point: 6.42': MONOPOLE T2
 Measure Point: 4.67': Y-DIPOLE T4
 Measure Point: 4.67': X-DIPOLE T3
 Measure Point: 2.92': MONOPOLE T1

MULTI-POLE ARRAY ACOUSTIC

Diameter : 3.38"
 Length : 4.32'
 Weight : 58 lbs
 Series : 1678FA
 Mnemonic : MAC

BULL PLUG 3 3/8

TOTAL LENGTH: 119.33'
 TOTAL WEIGHT: 2222 lbs
 MAX DIAMETER: 04.88"




MONOPOLE T2 11.01'
 QUADRUPOLE T5 11.01'

X-DIPOLE T3 9.26'
 Y-DIPOLE T4 9.26'

MONOPOLE T1 7.52'

0.00'

	COMPANY <u>CHESAPEAKE APPALCHIA, LLC.</u> WELL <u>JAMES MESSENGER WTZ 3H U</u> FIELD <u>WETZEL</u> COUNTY <u>WETZEL</u> STATE <u>WEST VIRGINIA</u>	FILE NO: <hr/> API NO: <u>47-103-02973</u>
	LOCATION: STATE TOWNSHIP: PROCTOR QUAD: WILEYVILLE LAT <u>39.673693 N</u> LONG <u>80.690861 W</u>	ELEVATIONS: KB 1517 FT DF 1517 FT GL 1495 FT DATE <u>02-MAY-2014</u>