



FILE NO: _____
 COMPANY: **CHESAPEAKE APPALACHIA 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 WILEVILLE
 LAT **N 39.673693** LONG **W 80.690861**
 OTHER SERVICES: GR-XMAC DSL

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	15-MAY-2014	
RUN	TRIP	4 1
SERVICE ORDER	US8560J	
DEPTH DRILLER	12625 FT	
DEPTH LOGGER	12616 FT	
BOTTOM LOGGED INTERVAL	12616 FT	
TOP LOGGED INTERVAL	8765 FT	
CASING DRILLER	7.625 IN @ 8936 FT	
CASING LOGGER	8929 FT	
BIT SIZE	6.75 IN	
TYPE OF FLUID IN HOLE	OBM	
DENSITY	12.7 LBG	62 S
PH	-	4 C3
SOURCE OF SAMPLE	TOOL MEASURED	
RM AT MEAS. TEMP.	19.579 OHMM @ 75 DEGF	
RMC AT MEAS. TEMP.	15.271 OHMM @ 75 DEGF	
RMC AT MEAS. TEMP.	25.452 OHMM @ 75 DEGF	
SOURCE OF RMC	CALCULATED @ CALCULATED	
RM AT BHT	8.372 OHMM @ 184.46 DEGF	
TIME SINCE CIRCULATION	12 HRS	
MAX. RECORDED TEMP.	204 DEGF	
EQUIP. NO.	LOCATION	4290 MASSILLION
RECORDED BY	A MILLER	
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
6.75 IN	8951 FT	12625 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	8936 FT

REMARKS

RUN 4 TRIP 1: OPERATION 1: DSL-CN-ZDL-ORIT-XMAC-HDIL RAN IN COMBINATION
 OPERATION 2: 30 CORES
 OPERATION 3: 30 CORES
 RIG: NOMAC 337

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 5.5" CASING

(BVOL) = TOTAL BOREHOLE VOLUME FROM CALIPER

TIED GAMMA RAY INTO RUN 3 TRIPLE COMBO LOG AT 8810 FT

CREW: S. PATEL, R. BARNETT, D. ALMACK

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
4	1	DHPA	4430XA	370977	FREE
4	1	TTRM	3981XA	183784	FREE
4	1	COM REMOTE	3514XA	173204	FREE
4	1	GR	1329XA	177854	FREE
4	1	CN	2446XA	172744	DECENTRALIZED
4	1	ZDL	2234XA	Z370835	CALIPER / PAD-DEVICE
4	1	KNUCKLE	3939XA	10269798	FREE
4	1	ORIT	4401XA	10363657	FREE
4	1	XMAC ELEC	1677EA	Z166423	CENTRALIZED
4	1	XMAC REC	1678MC	10038648	CENTRALIZED
4	1	XMAC ISO	1678PB	10193786	FREE
4	1	XMAC TRANS	1678BA	10299609	CENTRALIZED
4	1	XMAC ELEC	1678FA	10299639	CENTRALIZED
4	1	HDIL ELEC	1515EA	10038648	FREE
4	1	HDIL MAND	1515MA	167593	FREE

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 15 12:45:51 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R4/GSLAM04.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 8858.000 ft BOTTOM DEPTH: 12410.764 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
Y AXIS CALIPER	FILTER ()	medium (1)		TOP BOTTOM
TENSION	FILTER ()	medium (1)		" "
GR	FILTER ()	medium (1)		" "
CN	FILTER ()	medium (1)		" "
CALIPER	FILTER ()	medium (1)		" "
	FILTER (.h)	medium (1)		" "
	FILTER (.i)	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.	5.500	in	TOP BOTTOM
	CASING THICKNESS	0.000	in	" "
BIT SIZE	BIT SIZE	6.750	in	" "
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		" "
	CALIPER/FIXED DIA. (cmh*)	USE CALIPER		" "

BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	6.750	in	"	"
	FIXED DIAMETER (mbh*)	6.750	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	OIL BASE MUD		"	"

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	LIMESTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	0	ppm	"	"
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	RHOmatrix	2.710	g/cm3	TOP	BOTTOM
	RHOfluid	1.000	g/cm3	"	"
ZDL	DENX TRACKING	ON		"	"

HDIL PROCESSING

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

CURVE DESCRIPTION REPORT

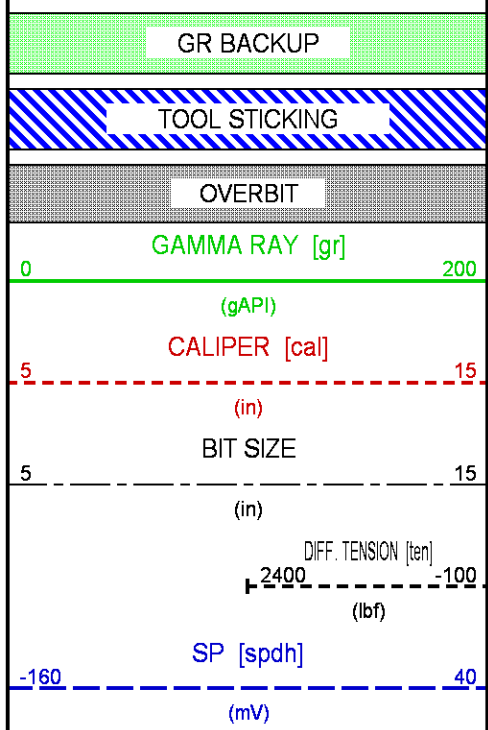
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	May 15 08:33:25 2014	BIT SIZE
F1:BVOL	May 15 08:33:25 2014	BOREHOLE VOLUME
F1:CAL	May 15 08:33:25 2014	CALIPER
F1:CNC	May 15 08:33:25 2014	BOREHOLE SIZE CORRECTED COMPENSATED NEUTRON POROSITY
F1:CVOL	May 15 08:33:25 2014	CEMENT VOLUME
F1:GR	May 15 08:33:25 2014	GAMMA RAY
F1:M2R1	May 15 08:33:25 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	May 15 08:33:25 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	May 15 08:33:25 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	May 15 08:33:25 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	May 15 08:33:25 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:M2RX	May 15 08:33:25 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 120-INCH DOI
F1:PE	May 15 08:33:25 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	May 15 08:33:25 2014	POROSITY FOR SELECTABLE MATRIX
F1:SPDH	May 15 08:33:25 2014	SPONTANEOUS POTENTIAL PROCESSED IN COMMON REMOTE
F1:TEN	May 15 08:33:25 2014	DIFFERENTIAL TENSION
F1:ZCOR	May 15 08:33:25 2014	DENSITY CORRECTION
F1:ZDEN	May 15 08:33:25 2014	FORMATION BULK DENSITY

CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	M2R1	8.00	M2R9	8.00	SPDH	14.00
CAL	81.50	M2R2	8.00	M2RX	8.00	TEN	0.00
CNC	92.00	M2R3	8.00	PE	81.00	ZCOR	81.00
GR	99.00	M2R6	8.00	PORZ	81.00	ZDEN	81.00

Presentation : sys1:/dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R4/TC_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 8750 - 12639.5 Feet

Data File 1 : F1 : sys1:/dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R4/MAINPASS.xtf
Created On : May 15 08:33:25 2014
Company : Chesapeake Appalachia LLC
Well : James Messenger WTZ 3H U
Field : Wetzell
File Interval : -32.25 - 12639.5 Feet
OCT : GSLAM

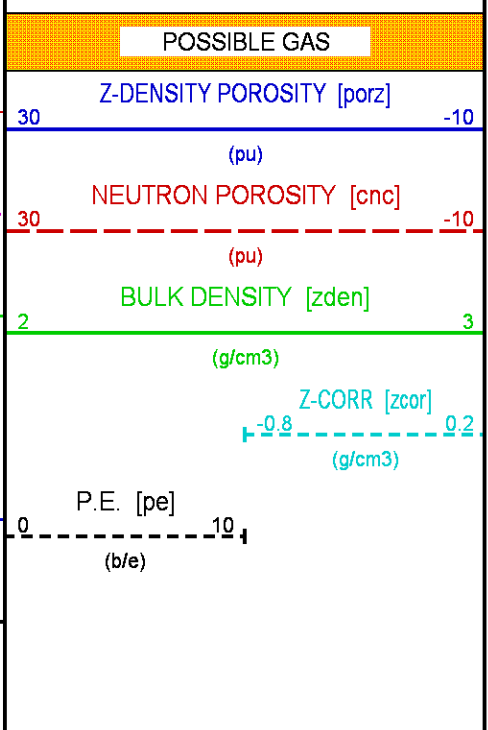
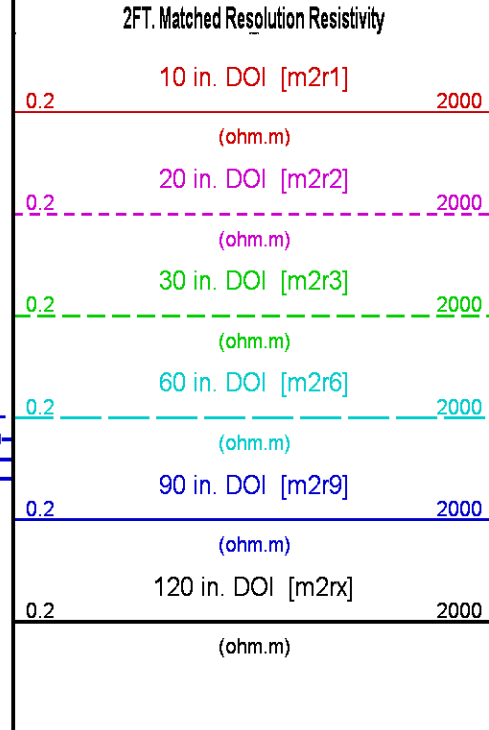


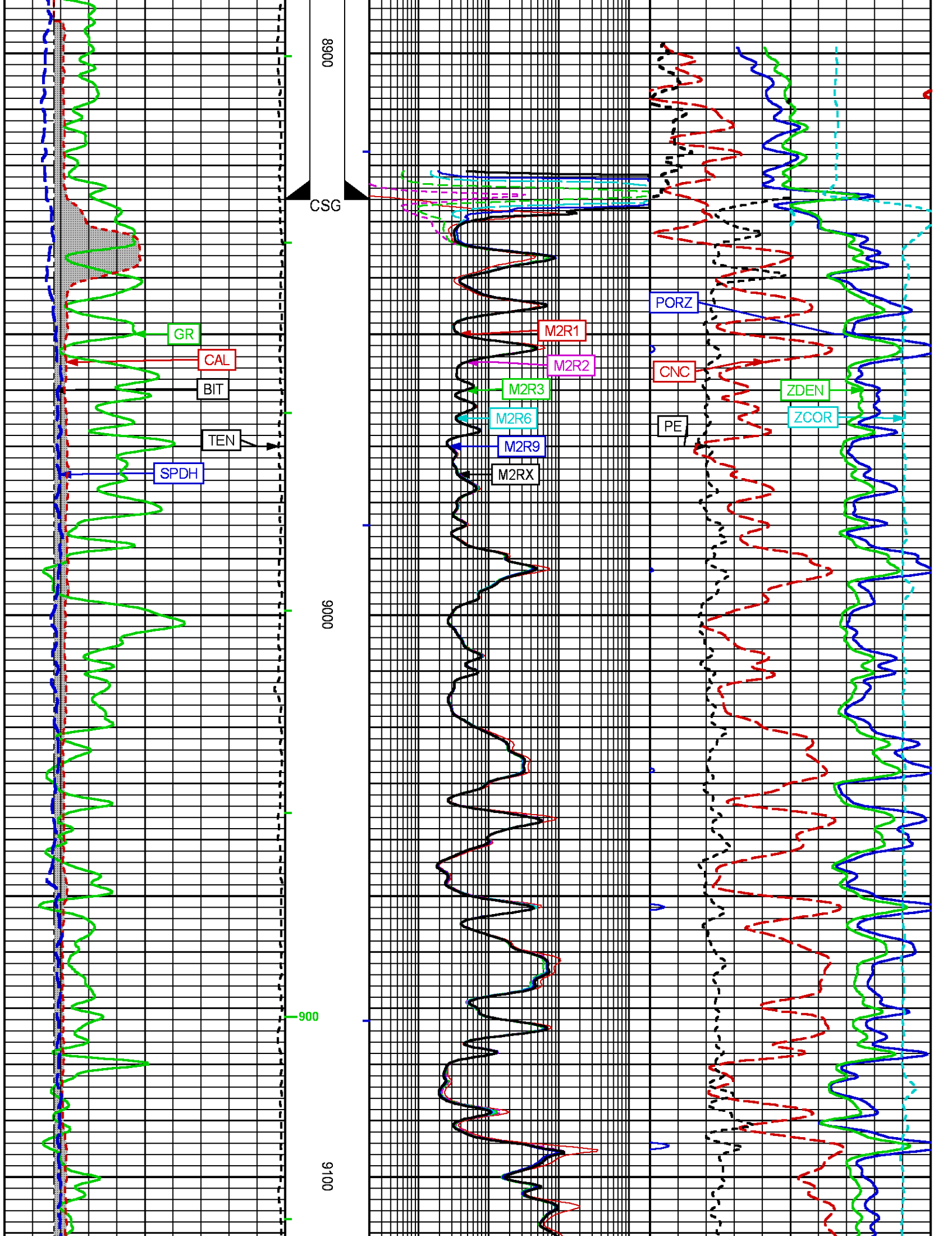
FEET

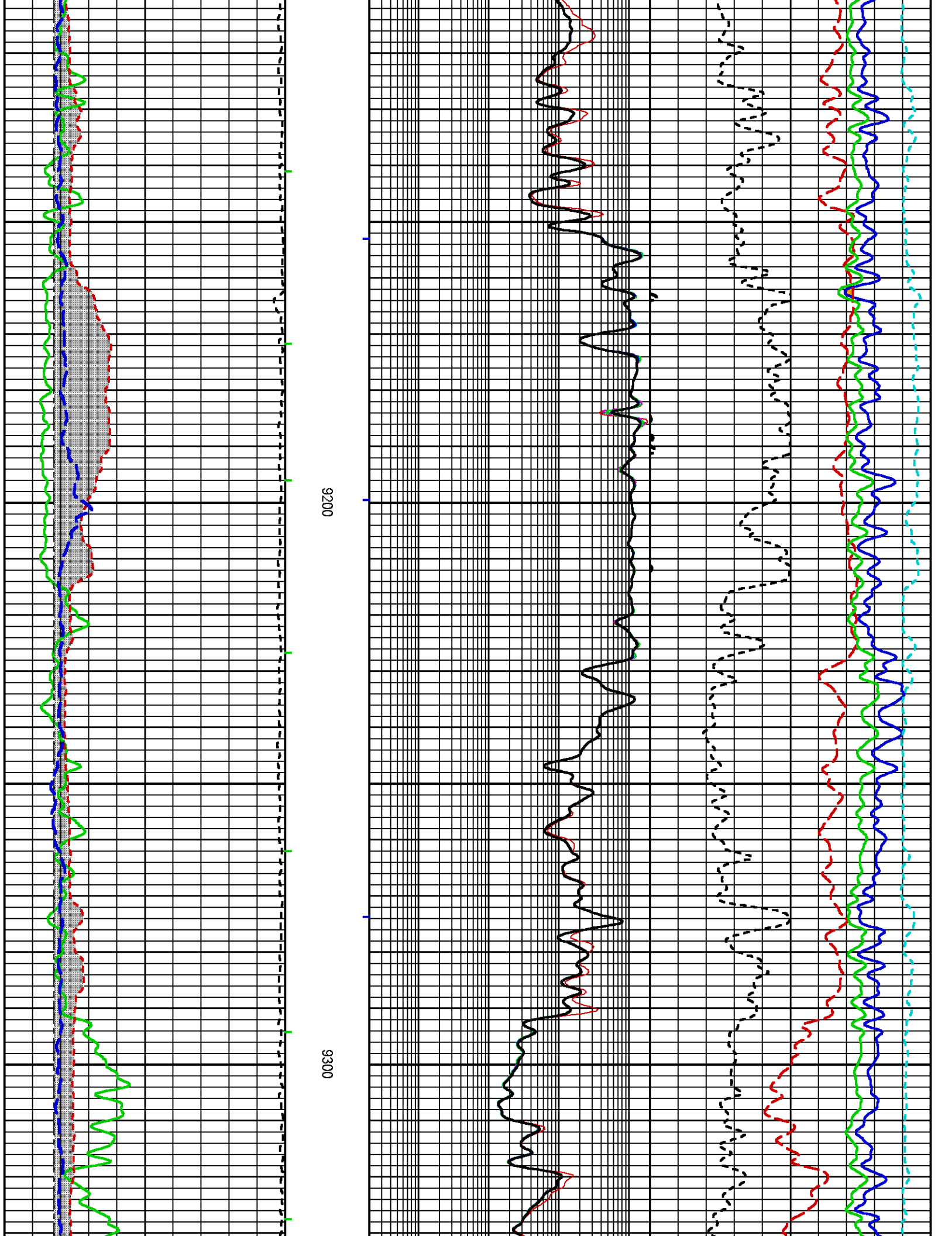
BVOL

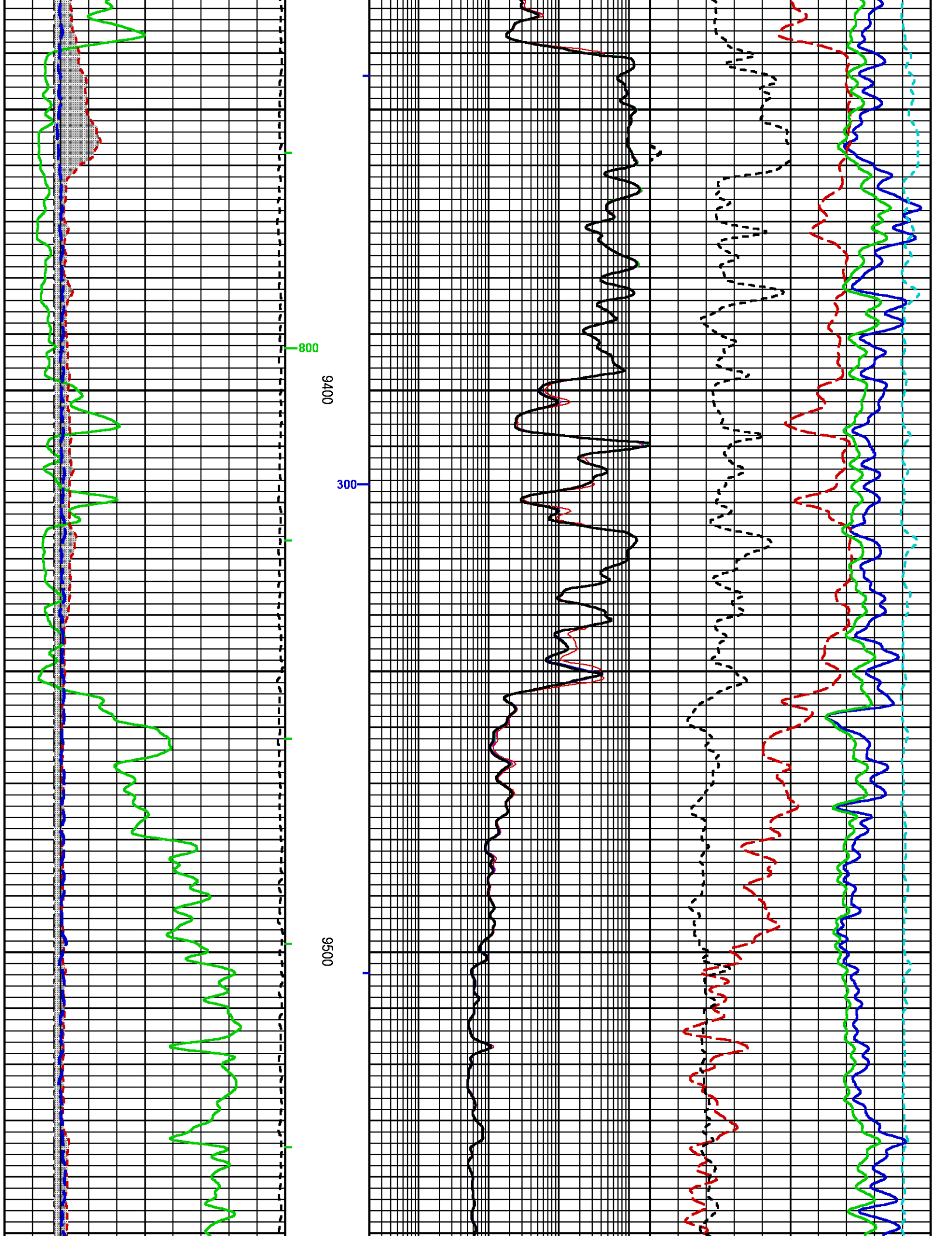
CVOL

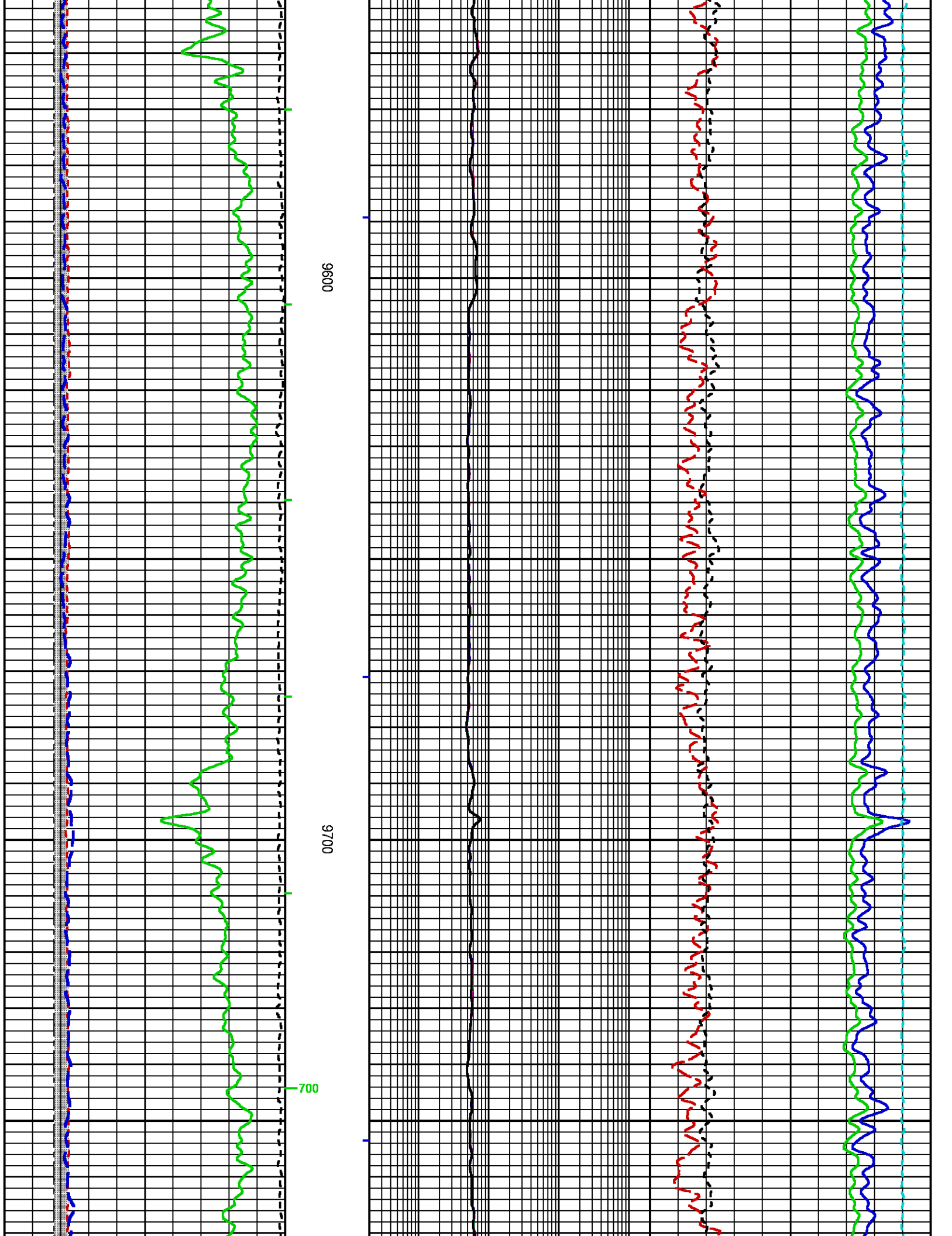
8800

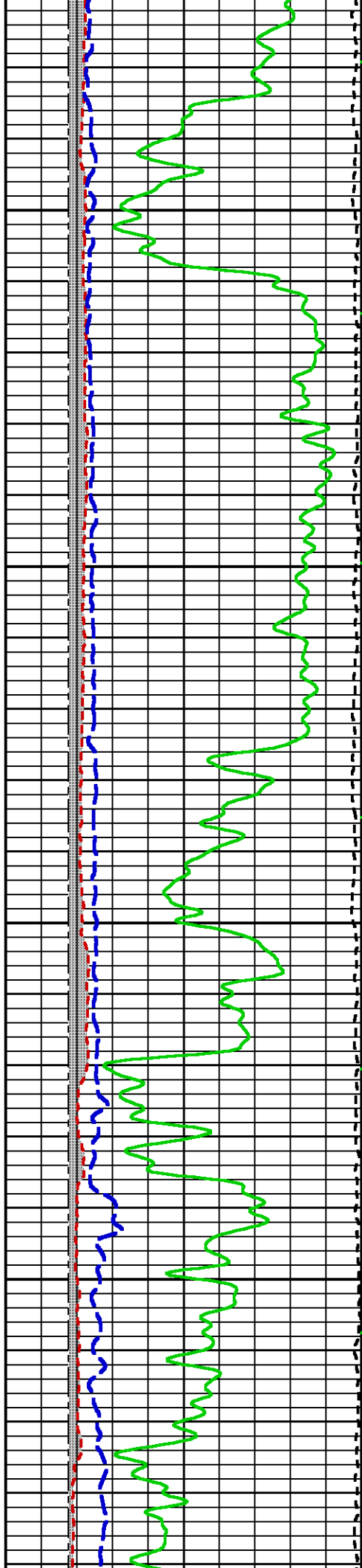






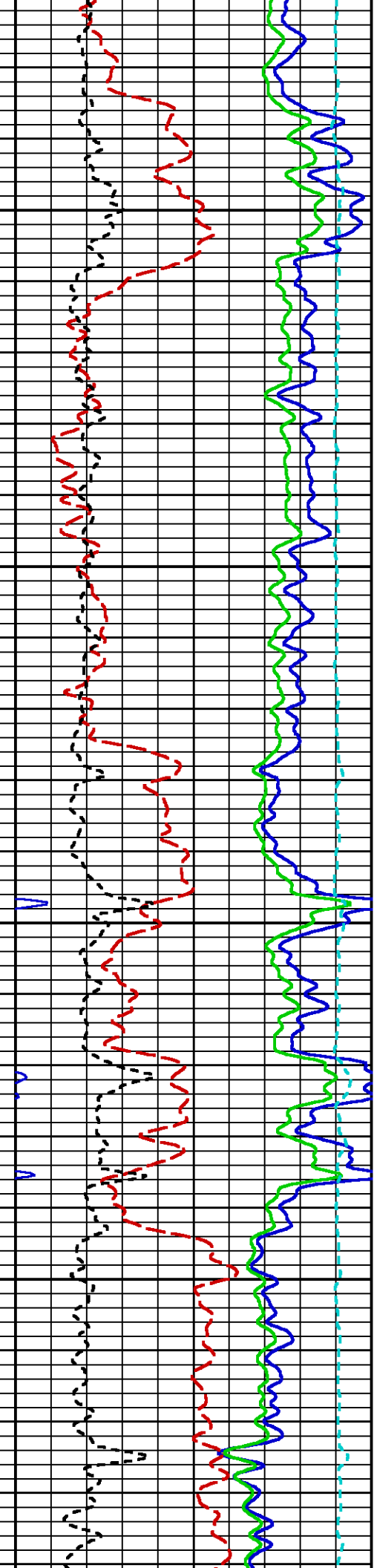
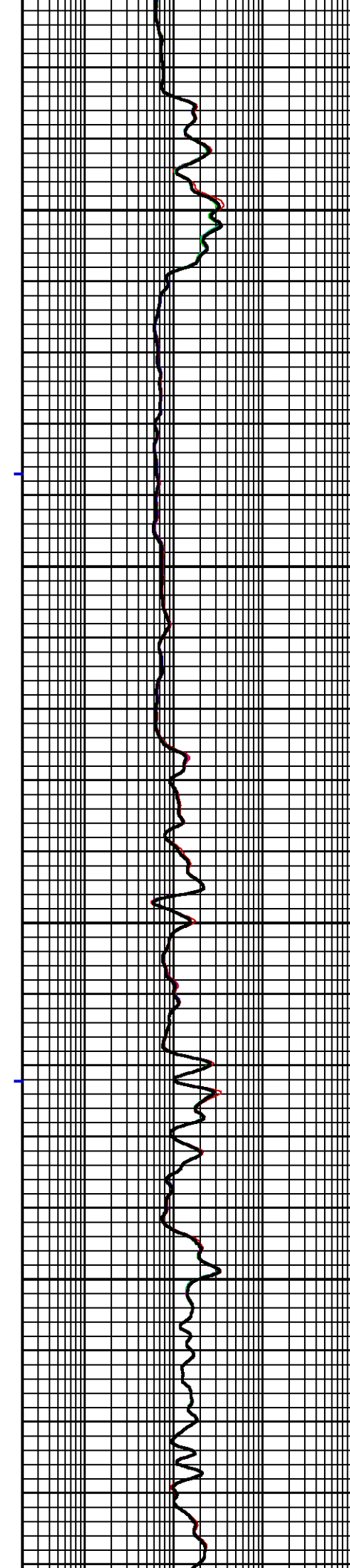


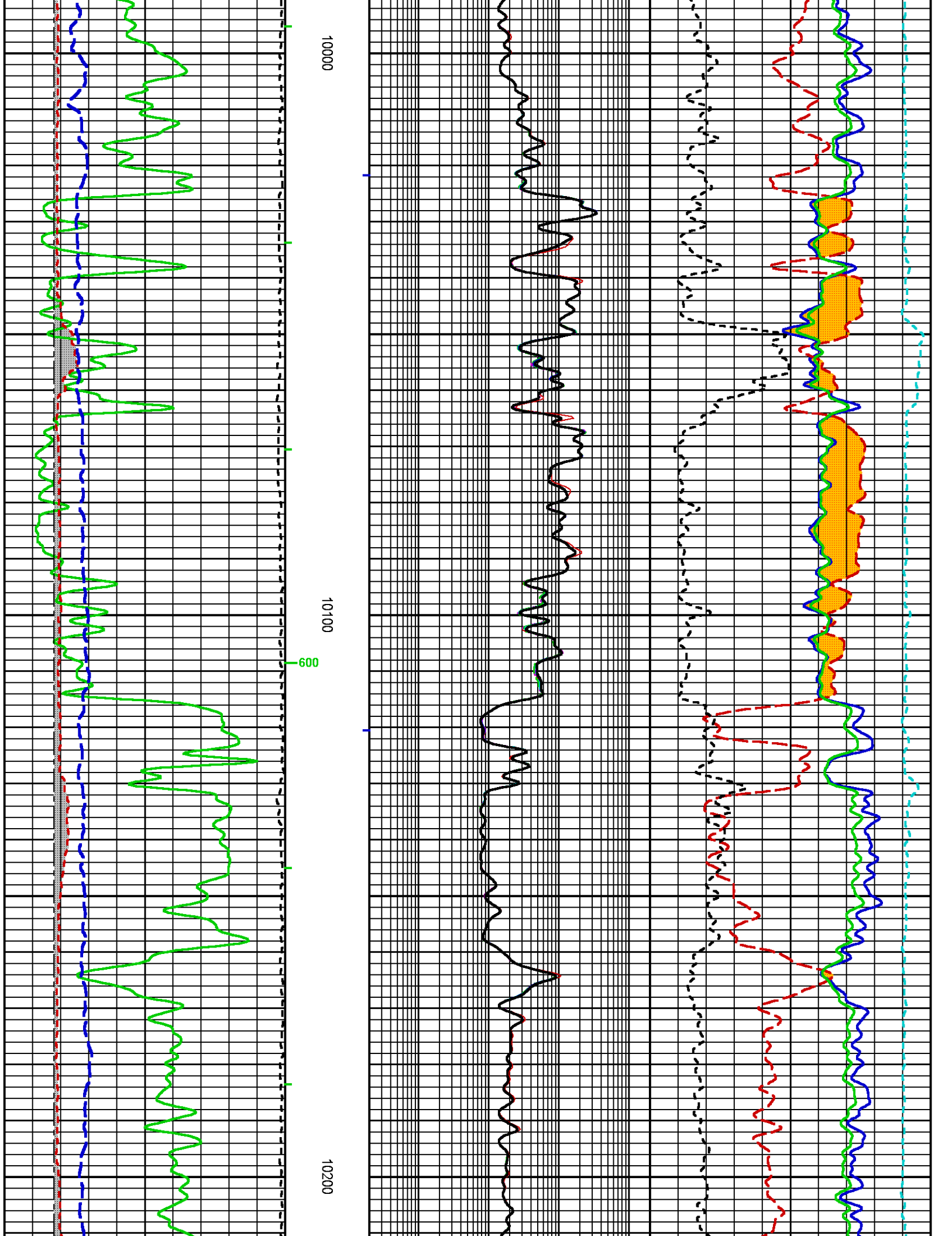


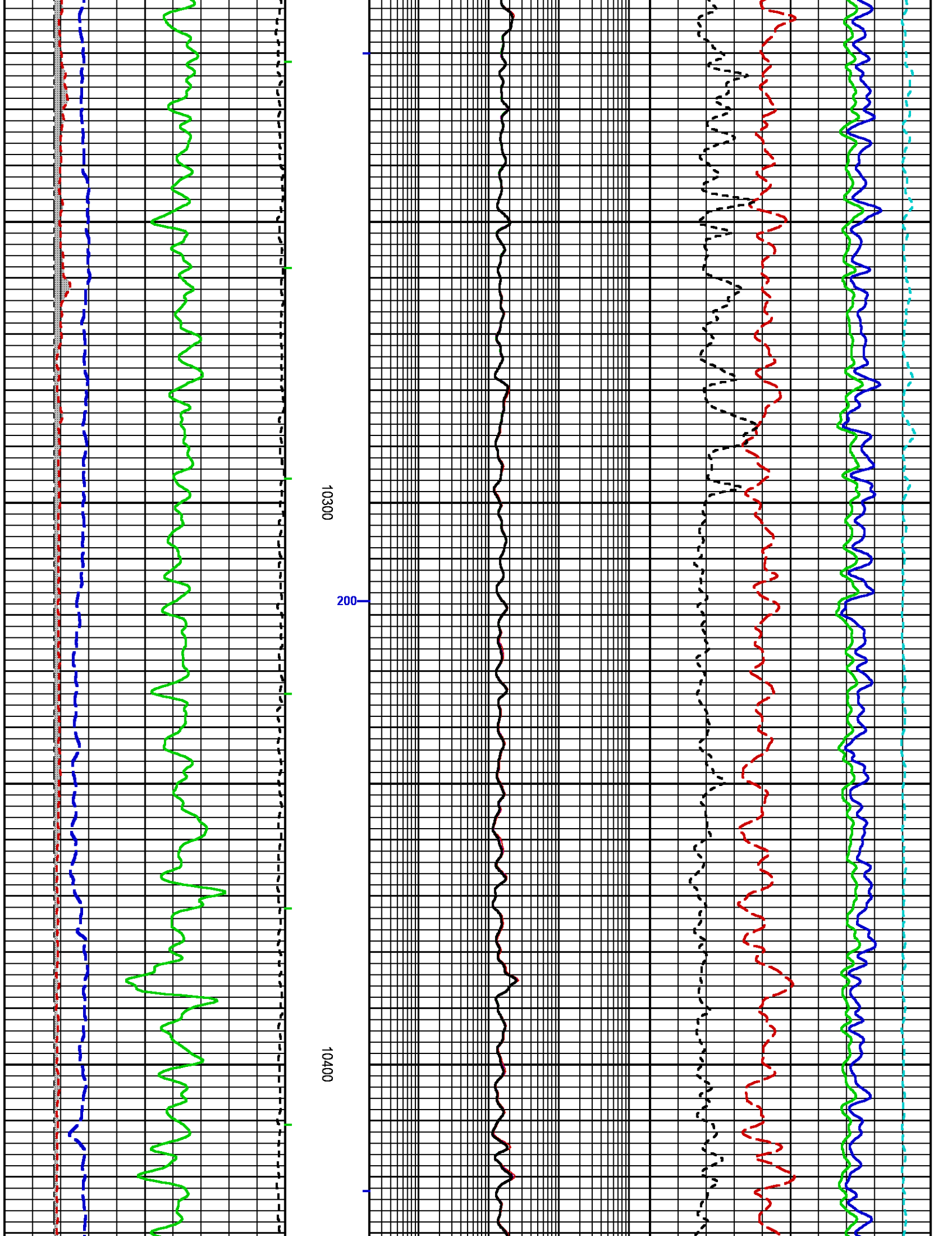


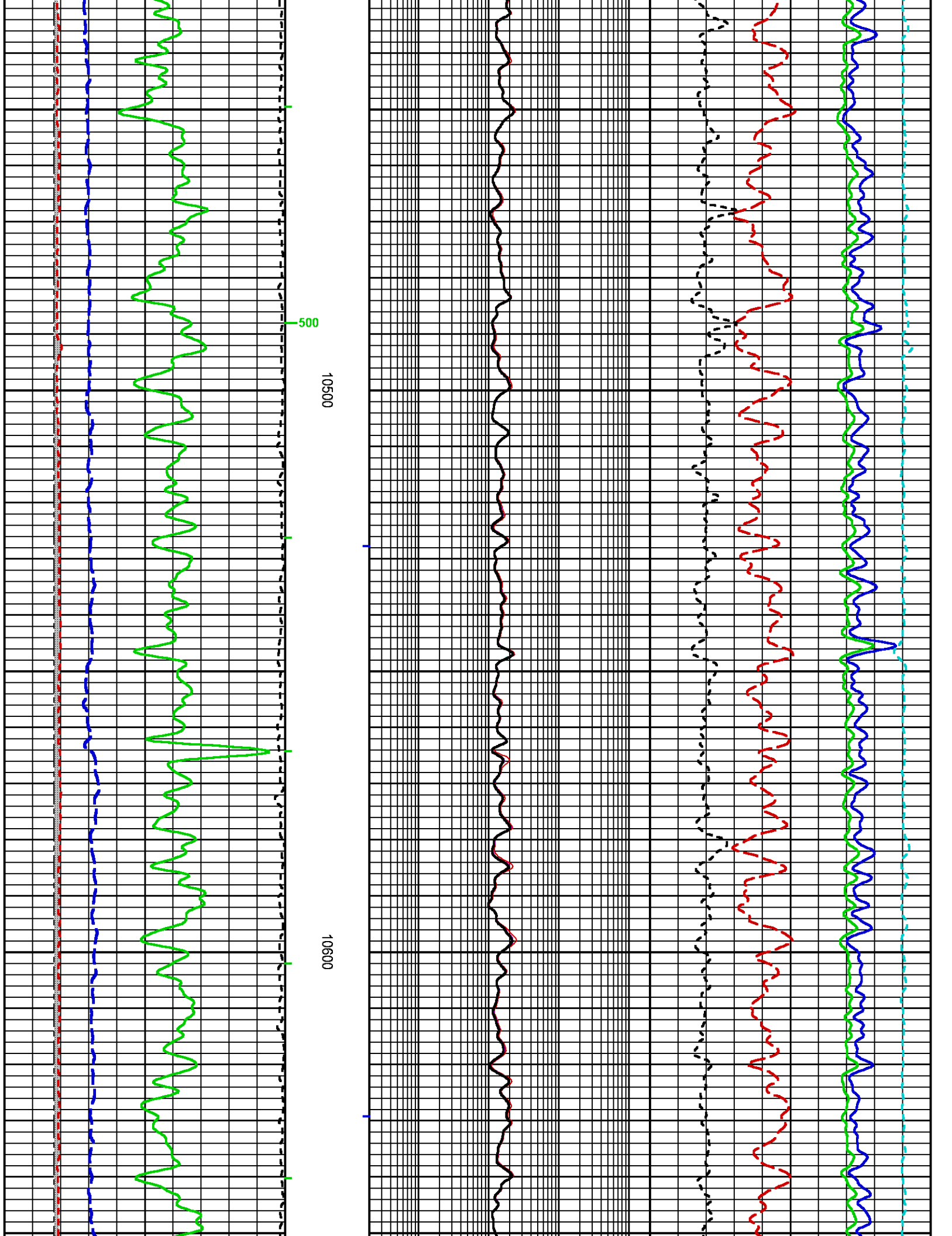
0086

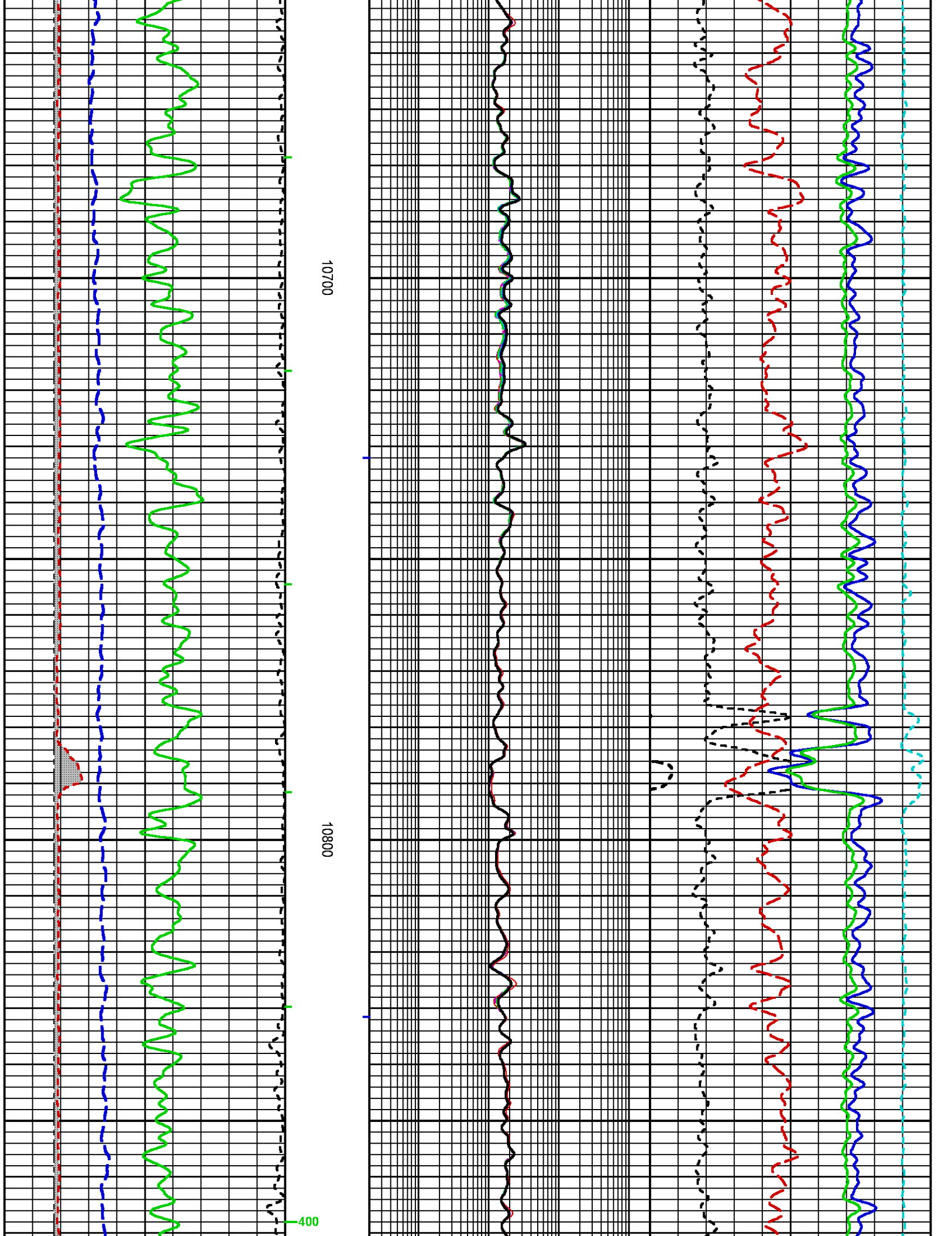
0066







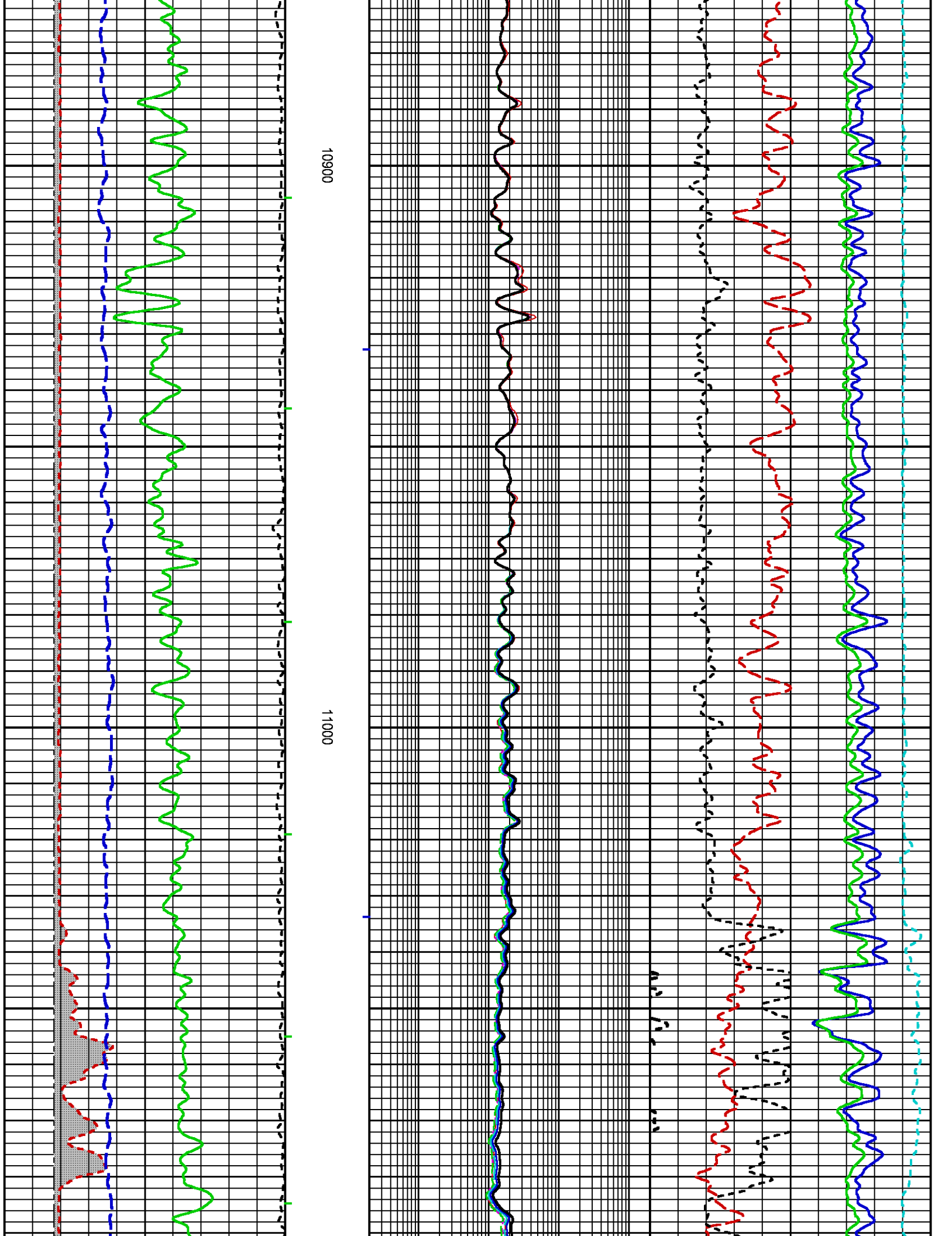


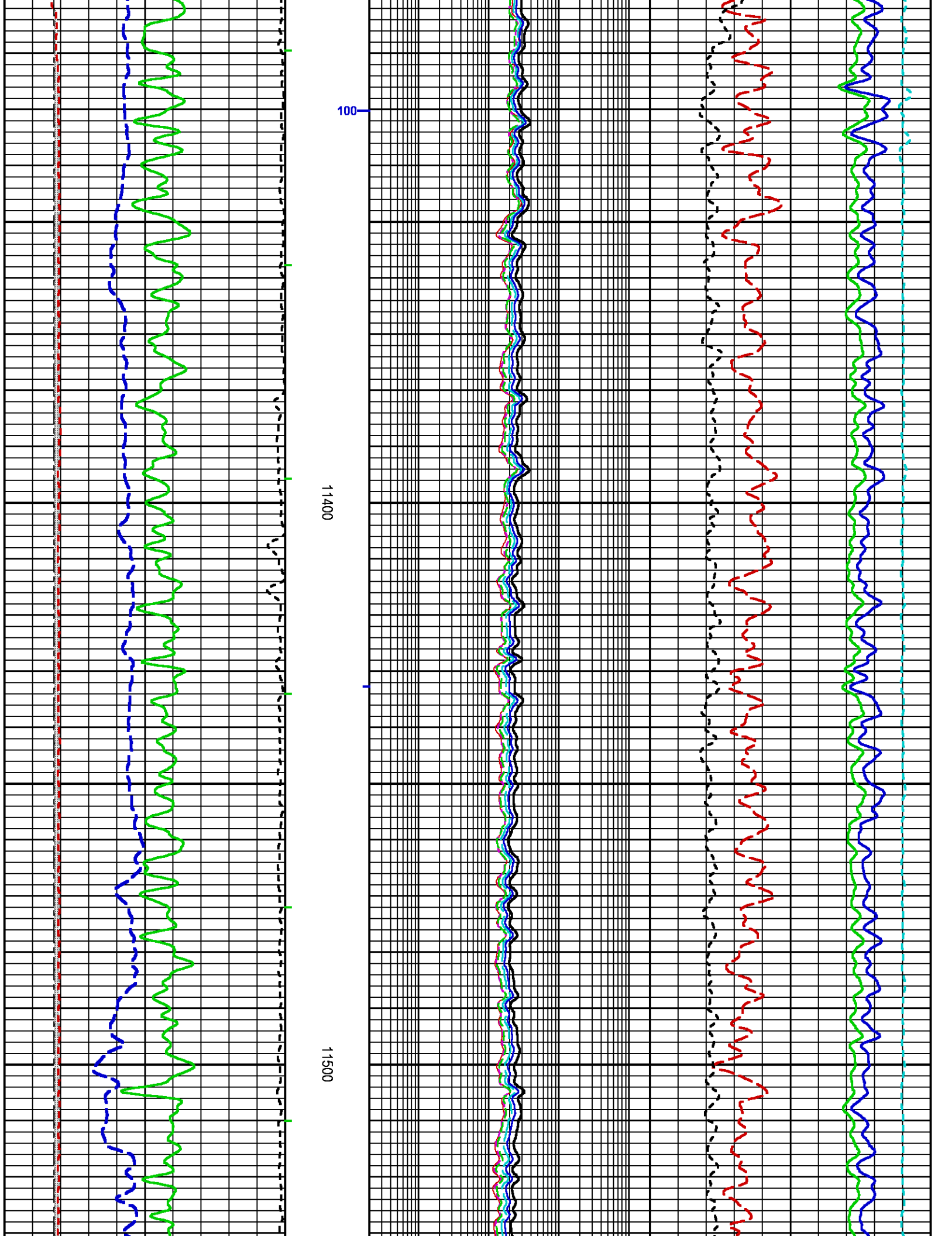


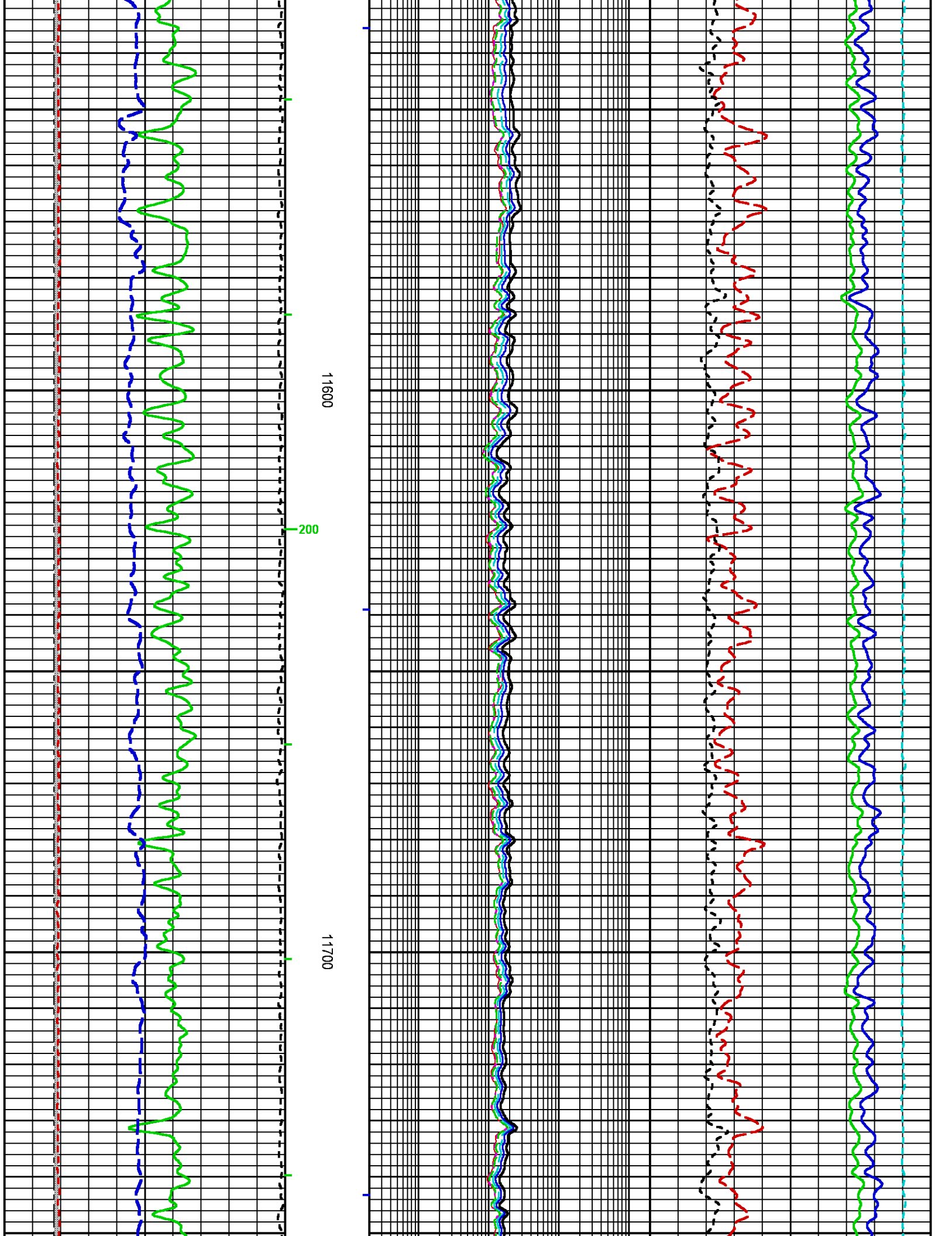
10700

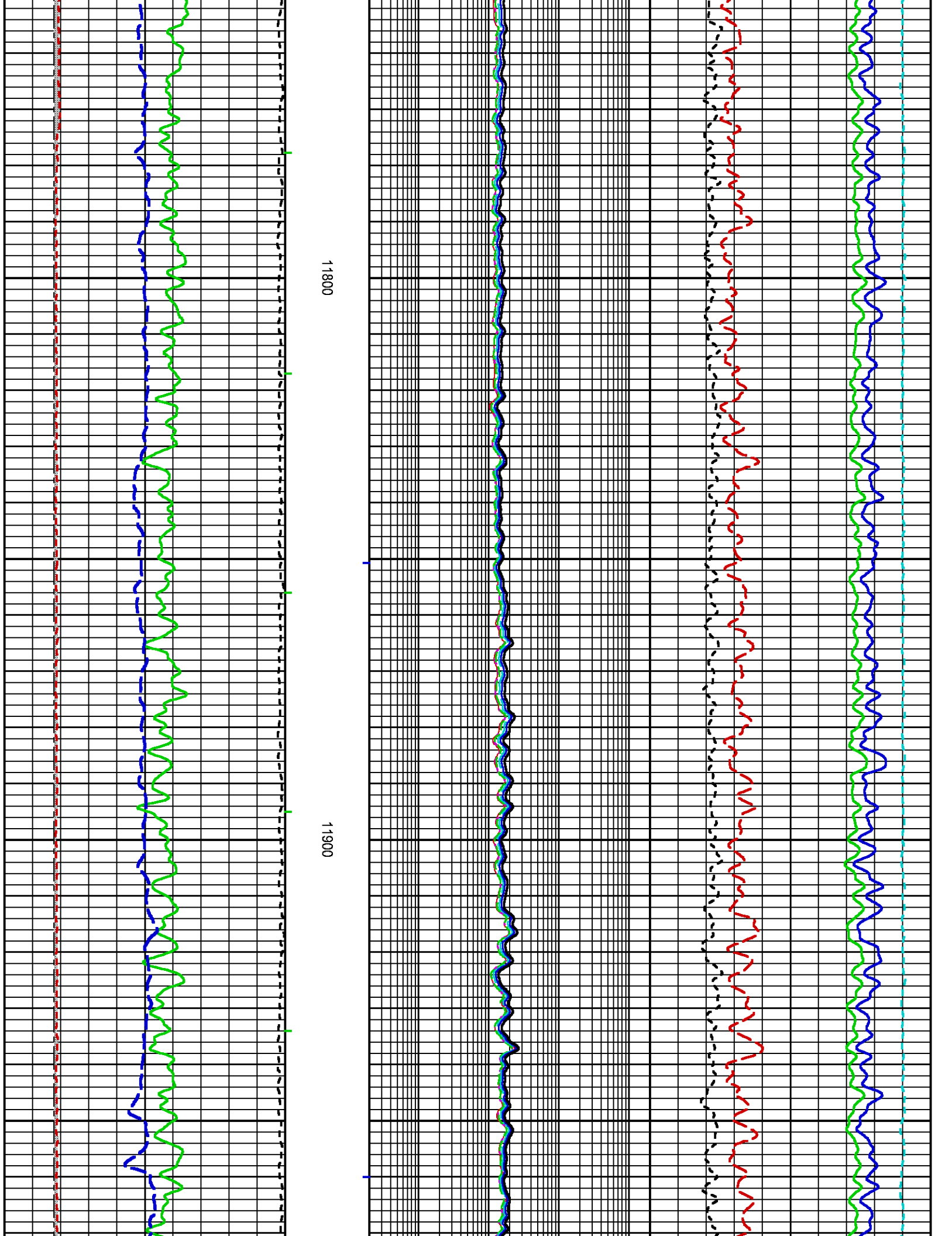
10800

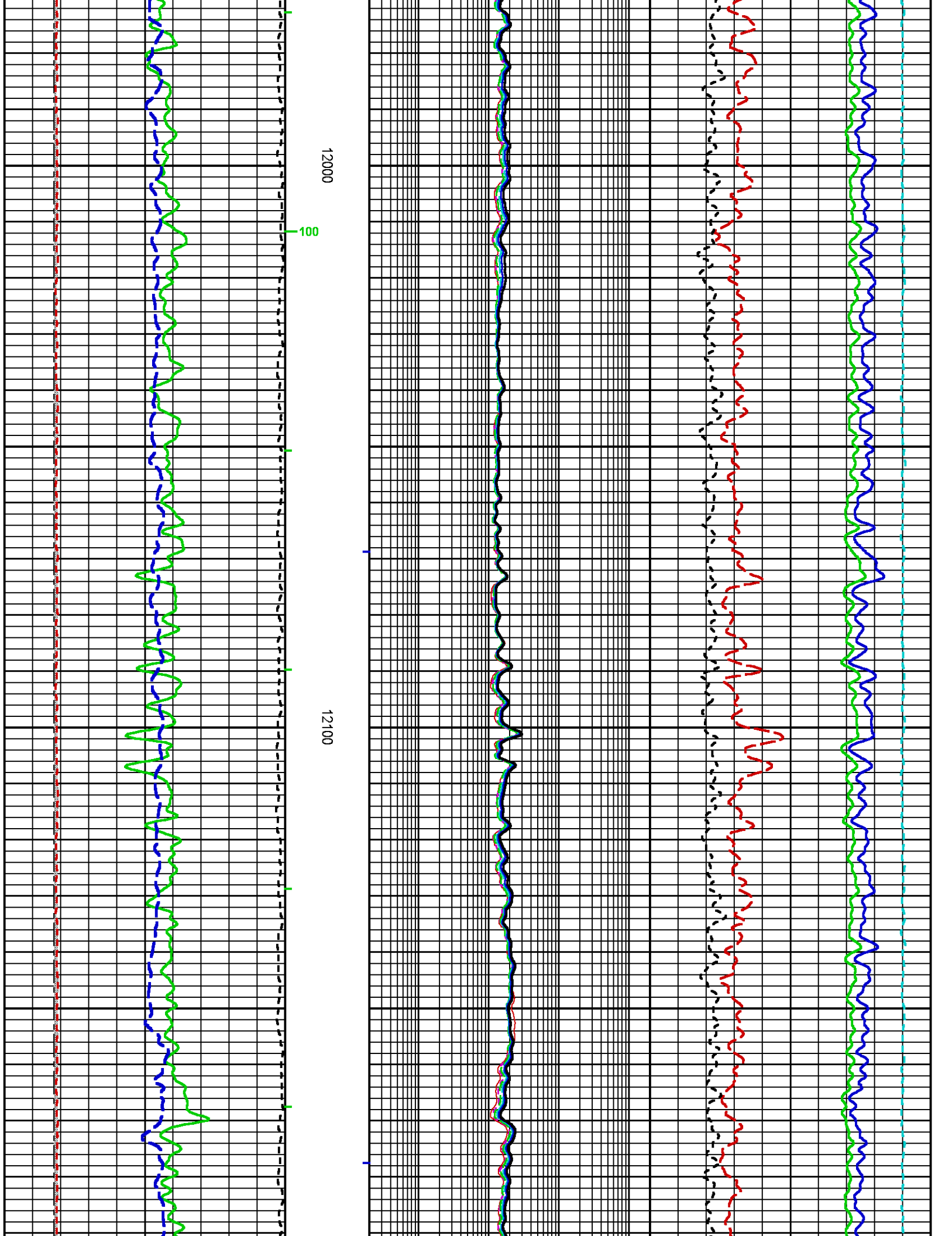
400

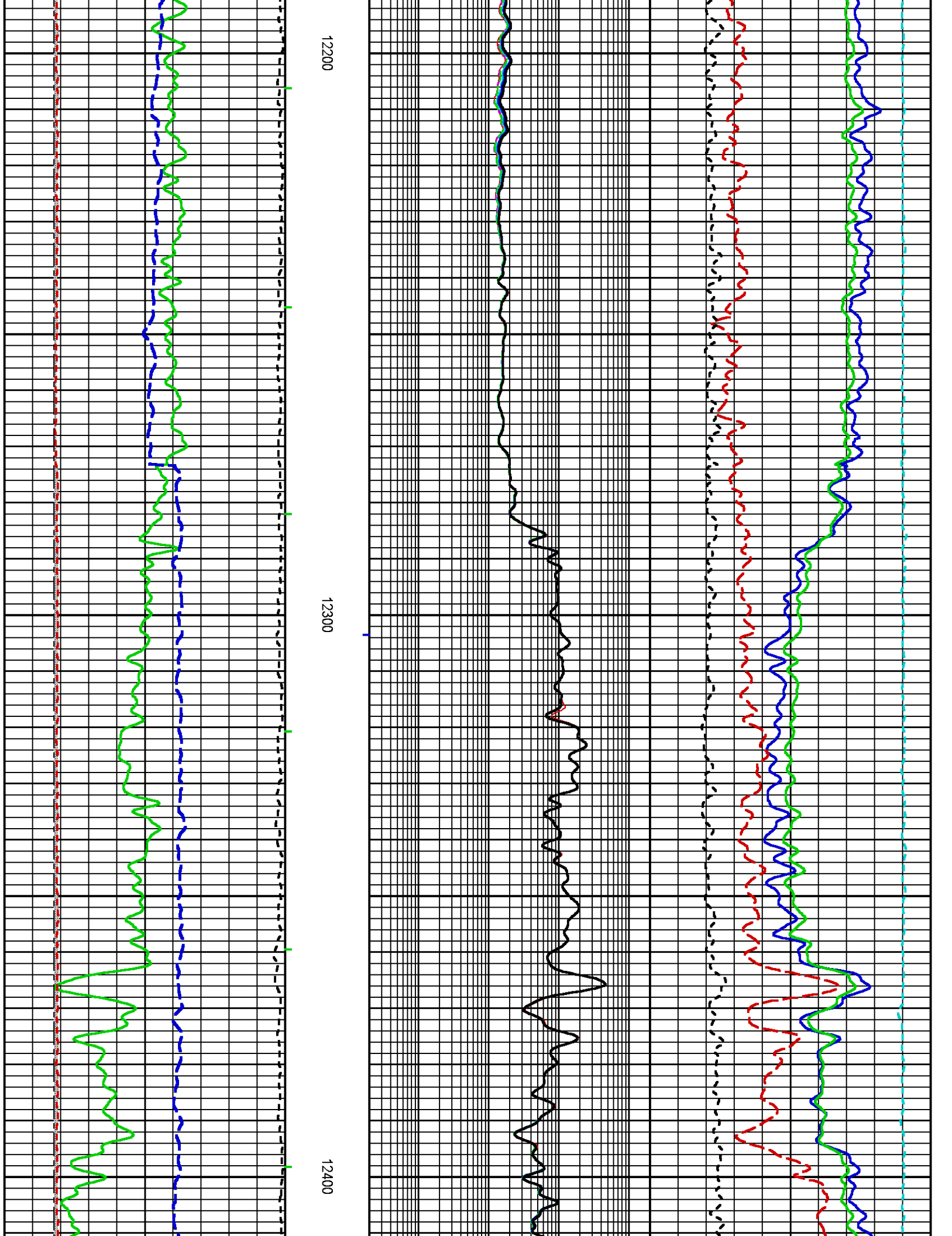


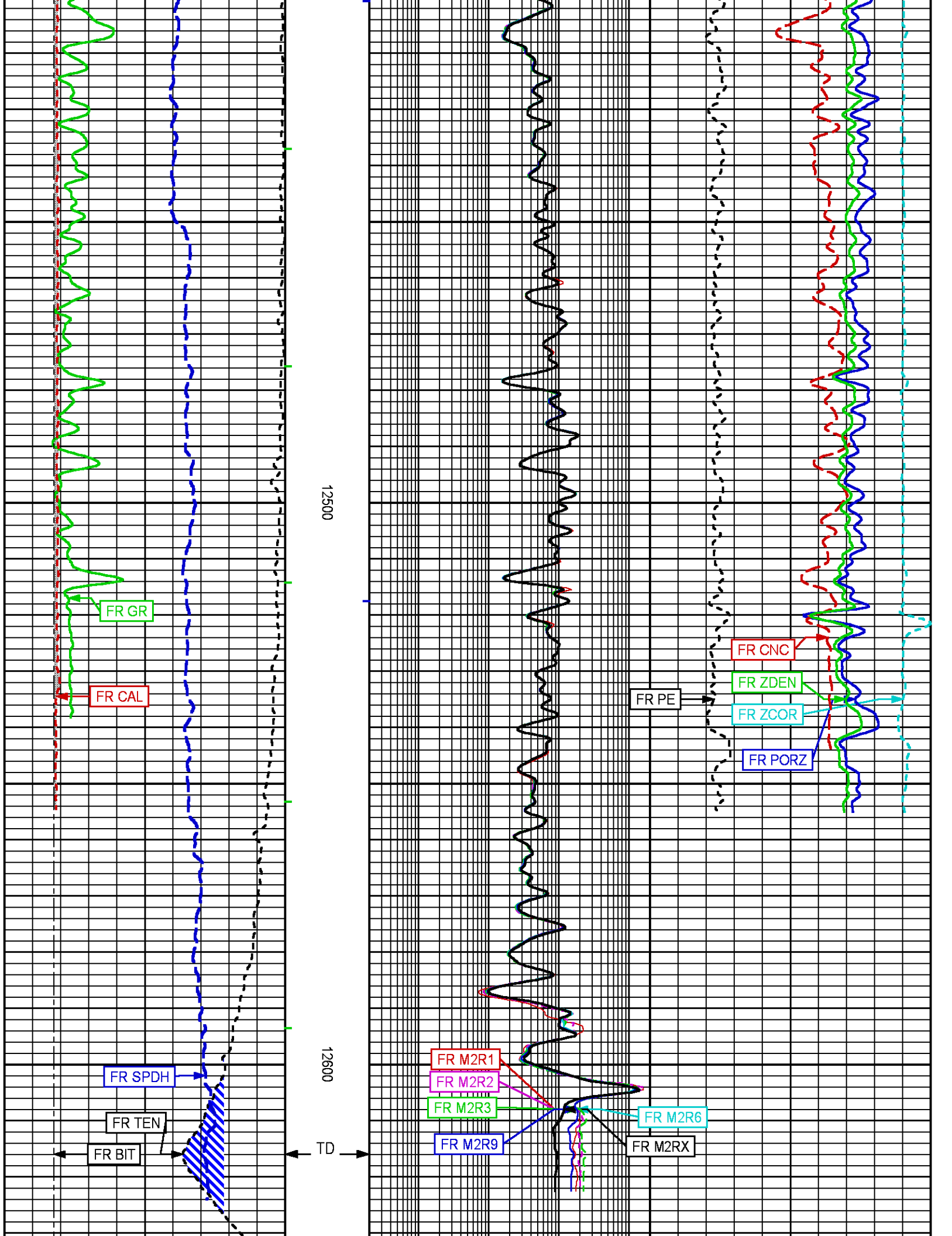


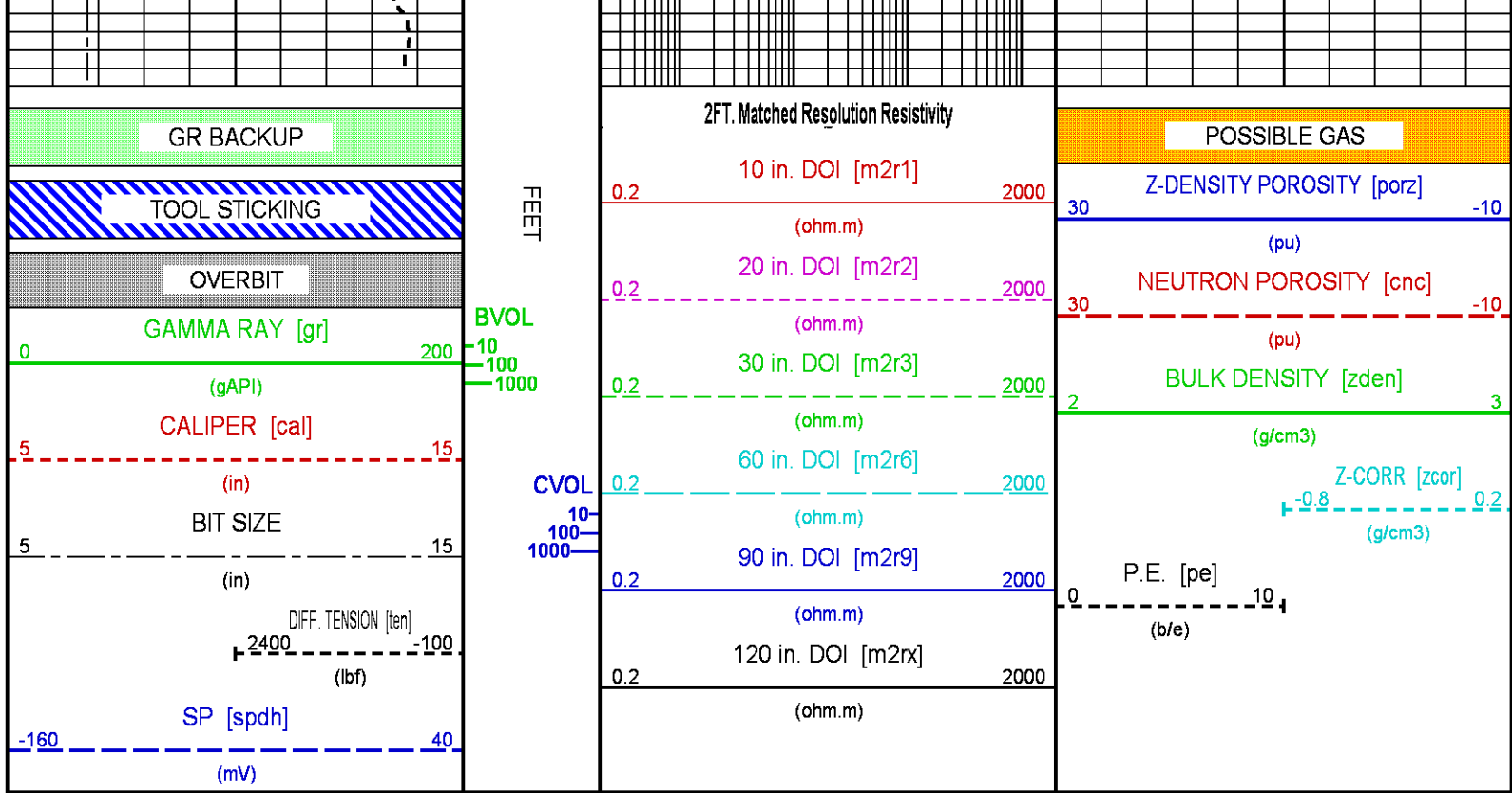












REPEAT LOG

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

Plotted: Thu May 15 07:44:53 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R4/GSLAM01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 12364.250 ft BOTTOM DEPTH: 12637.750 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)		" "
CN	FILTER ()	medium (1)		" "
CALIPER	FILTER ()	medium (1)		" "
	FILTER (.h)	medium (1)		" "
	FILTER (.i)	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 & B	5.588		TOP BOTTOM

CASING - BOREHOLE & CEMENT VOLUME	CASING U.D.	5.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	6.750	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	6.750	in	"	"
	FIXED DIAMETER (mbh*)	6.750	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	OIL BASE MUD		"	"

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	LIMESTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	0	ppm	"	"
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	RHOmatrix	2.710	g/cm3	TOP	BOTTOM
	RHOfluid	1.000	g/cm3	"	"
ZDL	DENX TRACKING	ON		"	"

HDIL PROCESSING

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

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	May 15 07:23:32 2014	BIT SIZE
F1:BVOL	May 15 07:23:32 2014	BOREHOLE VOLUME
F1:CAL	May 15 07:23:32 2014	CALIPER
F1:CNC	May 15 07:23:32 2014	BOREHOLE SIZE CORRECTED COMPENSATED NEUTRON POROSITY
F1:CVOL	May 15 07:23:32 2014	CEMENT VOLUME
F1:GR	May 15 07:23:32 2014	GAMMA RAY
F1:M2R1	May 15 07:23:32 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	May 15 07:23:32 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	May 15 07:23:32 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	May 15 07:23:32 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	May 15 07:23:32 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:M2RX	May 15 07:23:32 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 120-INCH DOI
F1:PE	May 15 07:23:32 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	May 15 07:23:32 2014	POROSITY FOR SELECTABLE MATRIX
F1:SPDH	May 15 07:23:32 2014	SPONTANEOUS POTENTIAL PROCESSED IN COMMON REMOTE
F1:TEN	May 15 07:23:32 2014	DIFFERENTIAL TENSION
F1:ZCOR	May 15 07:23:32 2014	DENSITY CORRECTION
F1:ZDEN	May 15 07:23:32 2014	FORMATION BULK DENSITY

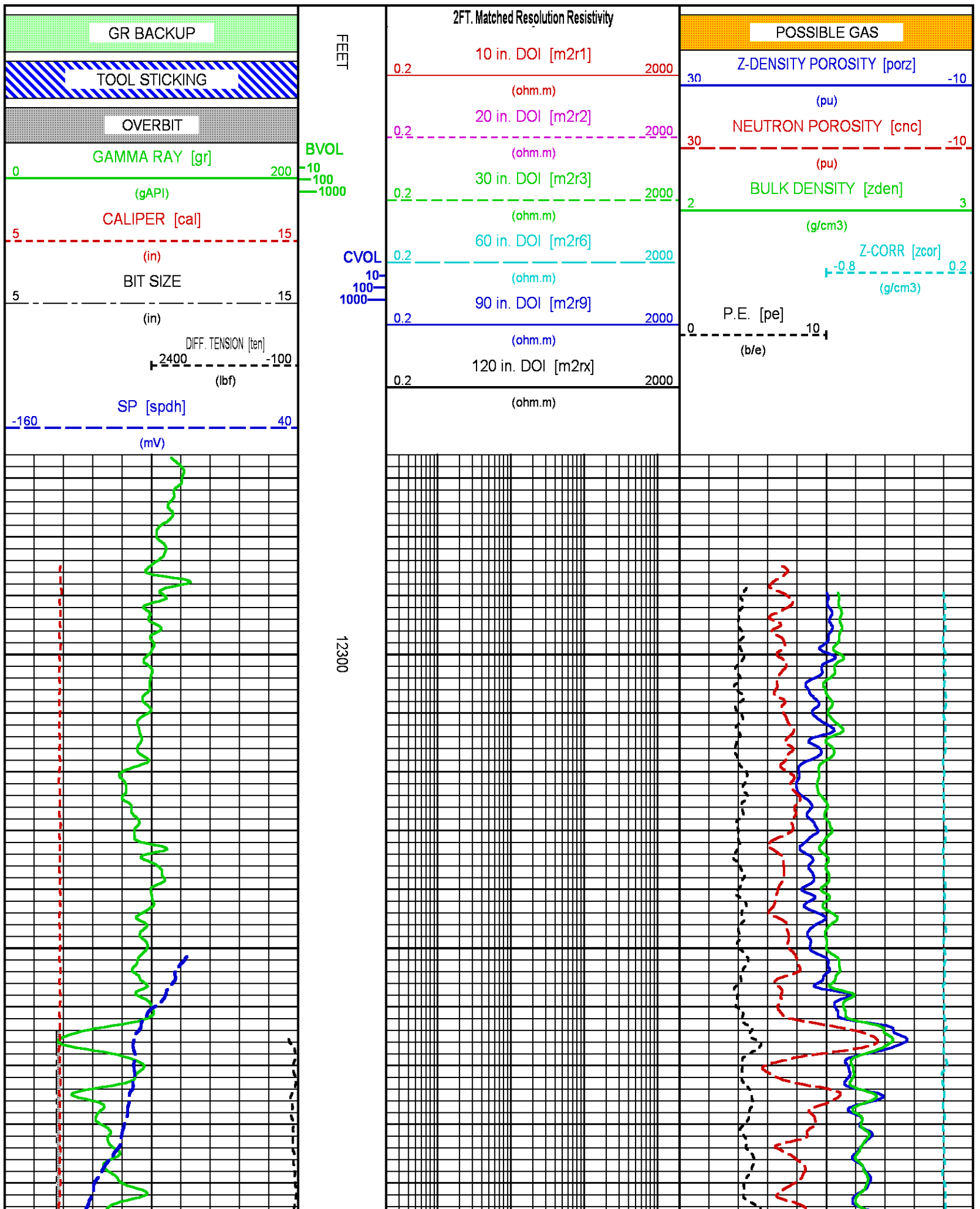
CURVE MEASURE POINT OFFSET

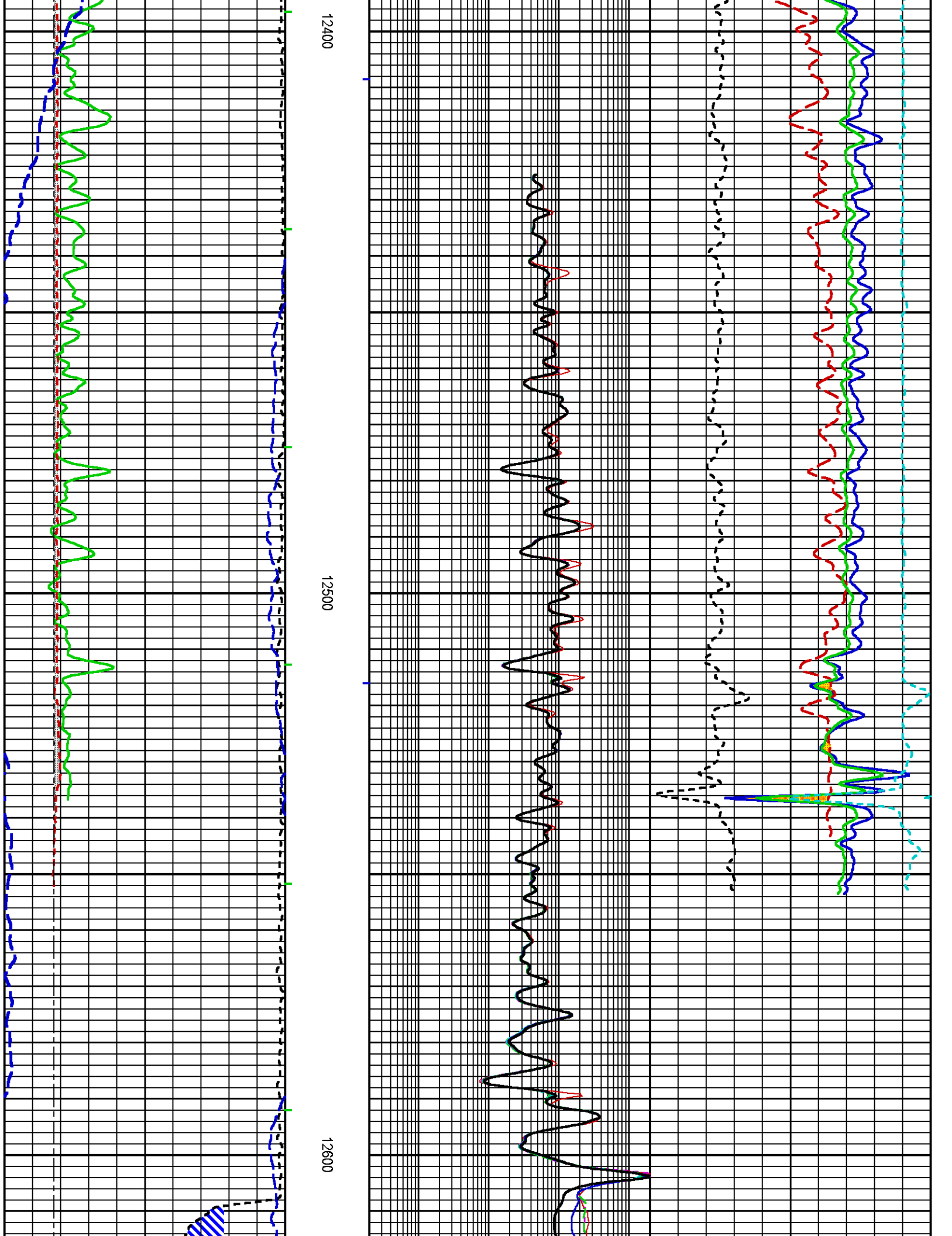
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	M2R1	8.00	M2R9	8.00	SPDH	14.00
CAL	81.50	M2R2	8.00	M2RX	8.00	TEN	0.00
CNC	92.00	M2R3	8.00	PE	81.00	ZCOR	81.00
GR	99.00	M2R6	8.00	PORZ	81.00	ZDEN	81.00

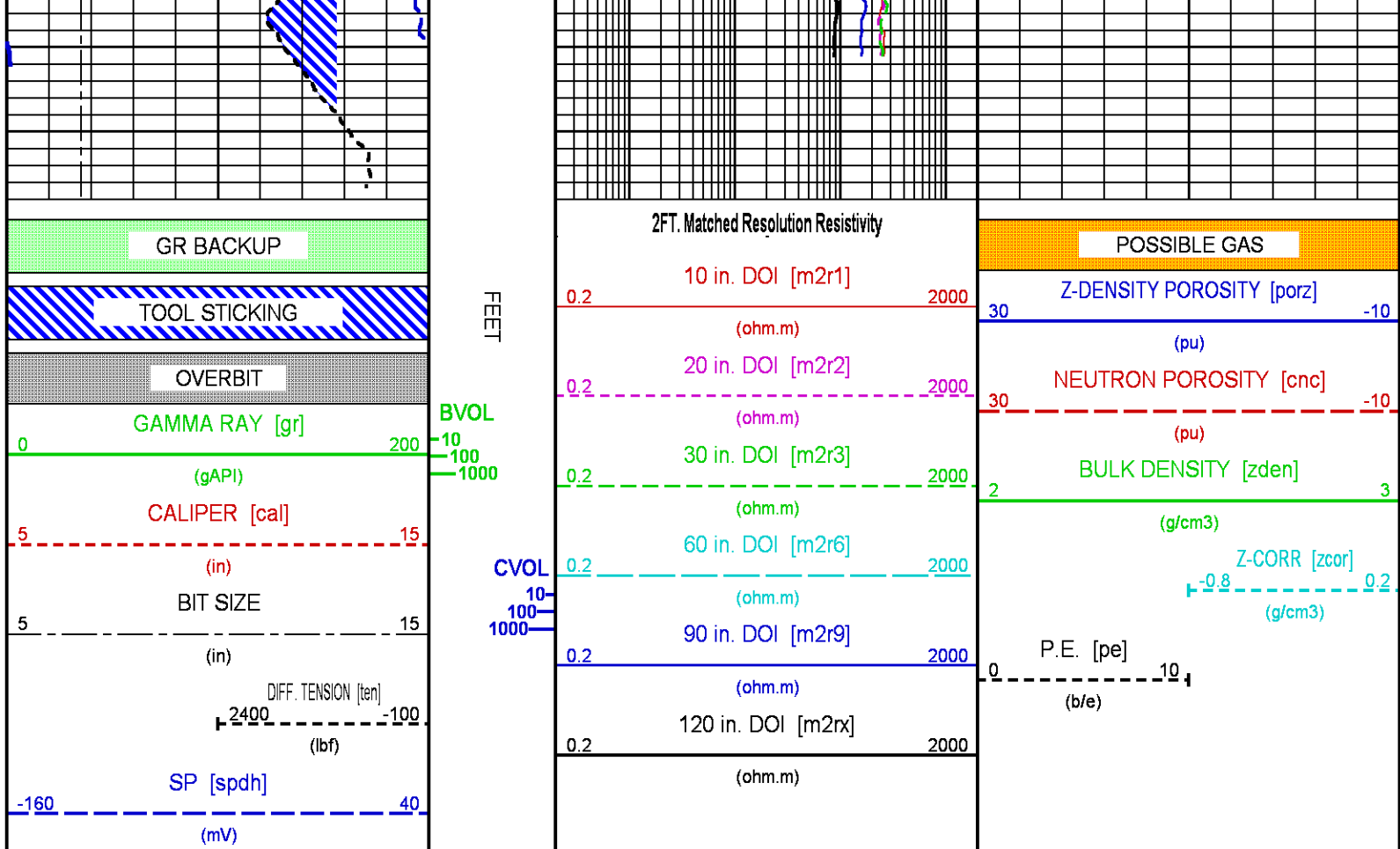
Presentation : sys1:/dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R4/TC_RPT.fvpdf [5"/100' Scale]
Plot Interval : 12266.5 - 12637.8 Feet

Data File 1 : F1 : sys1:/dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R4/GSLAM01.xtf
Created On : May 15 07:23:32 2014
Company : Chesapeake Appalachia LLC

Well : James Messenger WTZ 3H U
 Field : Wetzel
 File Interval : 12253 - 12637.8 Feet
 OCT : GSLAM







CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R4/GSLAM.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

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2446XA 172744 DATE/TIME PERFORMED: Mon Apr 7 10:37:08 2014

UNIT #: 3885TD Z4257 CALIBRATOR #: 2437XB 114695 SOURCE #: 4717XS S42216B

	MEASURED CPS	DEADTM CORR CPS	DTC SSN/LSN	NOMINAL SSN/LSN	CORRECTION FACTOR	POROSITY (pu)
LSN	594.07	602.66				
SSN	1532.78	1581.25				
RATIO			2.62377	2.75100	1.04849	
					0.97000 1.07000	
CN						21.358

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

ZDL PRIMARY CALIBRATION SUMMARY

TOOL #: 2234XA 370835 DATE/TIME PERFORMED: Mon Apr 7 11:22:18 2014

UNIT #: 3885TD Z4257 CALB BLKS: 2225XA W94304F CS SRC: 4703NT 16064B

SS CS PK (Channel)	LS CS PK (Channel)	SS_BKGD (cps)	LS BKGD (cps)
223.9	224.5	1173.4	1604.1
220.0 230.0	220.0 230.0		

SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)

Coil 1 R	0.004 -0.200 0.200	0.003 -0.100 0.100	-0.002 -0.100 0.100	0.001 -0.100 0.100	0.001 -0.100 0.100	0.002 -0.100 0.100	0.003 -0.100 0.100	0.001 -0.100 0.100
Coil 1 Q	0.001 -1.000 1.000	0.004 -0.200 0.200	0.001 -0.100 0.100	-0.002 -0.100 0.100	0.001 -0.100 0.100	0.002 -0.100 0.100	0.003 -0.100 0.100	0.004 -0.100 0.100
Coil 2 R	0.007 -0.200 0.200	0.001 -0.100 0.100	-0.003 -0.100 0.100	-0.001 -0.100 0.100	0.001 -0.100 0.100	0.003 -0.100 0.100	0.003 -0.100 0.100	0.003 -0.100 0.100
Coil 2 Q	-0.006 -1.000 1.000	-0.005 -0.200 0.200	0.002 -0.100 0.100	-0.001 -0.100 0.100	-0.005 -0.100 0.100	-0.005 -0.100 0.100	-0.003 -0.100 0.100	-0.002 -0.100 0.100
Coil 3 R	-0.002 -0.100 0.100	0.003 -0.100 0.100	-0.000 -0.100 0.100	0.002 -0.100 0.100	0.001 -0.100 0.100	0.003 -0.100 0.100	0.001 -0.100 0.100	0.002 -0.100 0.100
Coil 3 Q	-0.006 -0.500 0.500	-0.003 -0.200 0.200	0.003 -0.100 0.100	0.001 -0.100 0.100	0.002 -0.100 0.100	-0.001 -0.100 0.100	-0.005 -0.100 0.100	-0.003 -0.100 0.100
Coil 4 R	-0.004 -0.200 0.200	0.003 -0.200 0.200	-0.003 -0.200 0.200	0.003 -0.200 0.200	-0.003 -0.200 0.200	0.009 -0.200 0.200	0.013 -0.200 0.200	0.012 -0.200 0.200
Coil 4 Q	-0.003 -1.000 1.000	0.006 -0.400 0.400	0.000 -0.200 0.200	-0.004 -0.200 0.200	-0.009 -0.200 0.200	-0.007 -0.200 0.200	0.002 -0.200 0.200	0.000 -0.200 0.200
Coil 5 R	-0.007 -0.400 0.400	0.002 -0.400 0.400	-0.002 -0.400 0.400	-0.004 -0.400 0.400	0.002 -0.400 0.400	0.011 -0.400 0.400	-0.004 -0.400 0.400	0.002 -0.400 0.400
Coil 5 Q	-0.004 -2.000 2.000	0.004 -0.800 0.800	0.001 -0.400 0.400	0.007 -0.400 0.400	0.001 -0.400 0.400	0.002 -0.400 0.400	0.003 -0.400 0.400	0.001 -0.400 0.400
Coil 6 R	-0.003 -1.000 1.000	-0.023 -1.000 1.000	-0.009 -1.000 1.000	0.025 -1.000 1.000	-0.024 -1.000 1.000	-0.017 -1.000 1.000	0.008 -1.000 1.000	-0.006 -1.000 1.000
Coil 6 Q	-0.025 -5.000 5.000	0.021 -2.000 2.000	0.006 -1.000 1.000	0.018 -1.000 1.000	0.016 -1.000 1.000	0.023 -1.000 1.000	-0.009 -1.000 1.000	-0.005 -1.000 1.000

ELEC. GAINS

	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	122.68 100.00 150.00	121.77 100.00 150.00	119.87 98.00 150.00	116.93 96.00 140.00	112.98 92.00 140.00	107.99 87.00 130.00	101.99 82.00 120.00	95.18 76.00 110.00
Coil 0 P	7.302 6.000 9.000	23.100 19.000 28.000	38.673 32.000 47.000	54.292 44.000 66.000	69.887 57.000 85.000	85.500 70.000 100.000	101.022 82.000 120.000	116.487 95.000 140.000
Coil 1 M	209.45 180.00 270.00	206.95 180.00 270.00	201.97 170.00 260.00	194.80 170.00 250.00	185.58 160.00 250.00	174.72 160.00 230.00	162.45 150.00 220.00	149.25 140.00 200.00
Coil 1 P	7.925 6.000 9.000	25.068 19.000 28.000	41.857 32.000 48.000	58.528 45.000 67.000	74.994 57.000 86.000	91.279 70.000 110.000	107.278 83.000 120.000	123.069 96.000 140.000
Coil 2 M	425.13 360.00 540.00	420.64 360.00 540.00	411.86 350.00 530.00	398.88 340.00 510.00	382.29 330.00 500.00	362.30 310.00 470.00	339.31 300.00 440.00	313.73 270.00 410.00
Coil 2 P	7.986 6.000 9.000	25.153 19.000 29.000	42.029 32.000 48.000	58.831 45.000 67.000	75.503 58.000 87.000	92.135 71.000 110.000	108.615 84.000 130.000	125.064 96.000 140.000
Coil 3 M	709.09 590.00 880.00	702.84 580.00 870.00	689.82 570.00 850.00	670.16 550.00 830.00	643.82 530.00 800.00	611.19 500.00 760.00	572.19 470.00 710.00	528.75 440.00 650.00
Coil 3 P	7.891 6.000 10.000	25.059 20.000 29.000	41.958 33.000 49.000	58.862 46.000 69.000	75.746 59.000 89.000	92.596 72.000 110.000	109.311 85.000 130.000	125.959 98.000 150.000
Coil 4 M	1110.7 900.0 1400.0	1101.4 900.0 1300.0	1082.4 900.0 1300.0	1053.4 850.0 1300.0	1014.2 800.0 1200.0	965.2 800.0 1200.0	906.6 750.0 1100.0	839.5 700.0 1000.0
Coil 4 P	7.827 6.000 10.000	24.743 20.000 30.000	41.426 33.000 50.000	58.135 46.000 70.000	74.841 60.000 90.000	91.582 73.000 110.000	108.226 86.000 130.000	124.847 98.000 150.000
Coil 5 M	2254.4 1900.0 2800.0	2238.7 1800.0 2800.0	2205.7 1800.0 2700.0	2154.0 1800.0 2600.0	2081.8 1700.0 2500.0	1988.5 1600.0 2400.0	1874.2 1500.0 2200.0	1740.6 1400.0 2100.0
Coil 5 P	7.860 6.000 10.000	24.878 20.000 31.000	41.692 34.000 51.000	58.613 48.000 72.000	75.578 62.000 93.000	92.650 76.000 110.000	109.709 89.000 130.000	126.753 100.000 150.000
Coil 6 M	5879.8 4700.0 7100.0	5813.2 4700.0 7000.0	5684.8 4600.0 6900.0	5495.5 4400.0 6600.0	5251.7 4200.0 6400.0	4963.0 4000.0 6000.0	4631.7 3700.0 5600.0	4268.4 3400.0 5100.0
Coil 6 P	8.177 7.000 10.000	25.907 22.000 32.000	43.288 36.000 54.000	60.602 51.000 76.000	77.739 65.000 96.000	94.772 80.000 120.000	111.609 94.000 140.000	128.378 110.000 160.000

AM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	531 -200 800	-47 -500 200	-111 -600 100	-131 -600 50	-139 -500 20	-144 -500 20	-146 -500 20	-148 -500 20
Coil 0 Q	-73 -3000 6000	37 -1000 2000	0 -1000 1200	-31 -500 900	-59 -400 700	-83 -400 600	-108 -400 500	-130 -400 400
Coil 1 R	589 450 650	93 20 130	27 -30 60	3 -50 40	-9 -55 30	-16 -60 20	-20 -60 10	-22 -60 10
Coil 1 Q	792 0 2500	351 0 900	226 0 600	164 0 450	127 0 350	101 0 300	81 0 250	67 0 250
Coil 2 R	186.6 140.0 230.0	25.7 0.0 51.0	6.0 -10.0 25.0	-0.3 -15.0 15.0	-3.1 -16.0 10.0	-4.6 -16.0 7.0	-5.8 -16.0 5.0	-6.4 -16.0 3.0
Coil 2 Q	549.1 -200.0 1000.0	210.7 0.0 350.0	132.0 0.0 220.0	97.4 0.0 160.0	78.2 0.0 130.0	66.4 0.0 110.0	58.2 0.0 100.0	52.5 0.0 90.0
Coil 3 R	49.5 37.0 62.0	6.2 0.0 12.0	1.3 -3.0 6.0	-0.3 -4.0 4.0	-1.0 -5.0 2.0	-1.2 -5.0 1.0	-1.6 -6.0 1.0	-2.4 -6.0 1.0
Coil 3 Q	34.2 -140.0 280.0	20.7 -40.0 100.0	16.5 -20.0 70.0	15.7 -10.0 60.0	16.1 -10.0 50.0	17.0 -10.0 50.0	18.4 -10.0 50.0	19.9 -10.0 50.0
Coil 4 R	11.98 2.00 18.00	0.88 -3.00 6.00	-0.53 -3.50 3.00	-1.09 -3.90 2.00	-1.25 -4.20 2.00	-1.34 -4.50 2.00	-1.29 -4.70 2.00	-1.37 -5.00 2.00
Coil 4 Q	4.64 -100.00 100.00	6.39 -30.00 50.00	7.82 -20.00 40.00	9.61 -10.00 40.00	11.39 -10.00 40.00	13.46 -10.00 45.00	15.48 -10.00 50.00	17.57 -10.00 60.00
Coil 5 R	2.78 -2.00 5.80	-0.18 -3.20 2.40	-0.60 -4.50 3.10	-0.82 -4.70 3.20	-0.81 -4.80 3.20	-0.83 -5.00 3.30	-1.00 -5.20 3.40	-0.99 -5.40 3.50
Coil 5 Q	-1.98 -60.00 70.00	2.67 -20.00 30.00	5.23 -20.00 30.00	7.48 -20.00 35.00	9.65 -20.00 45.00	11.84 -20.00 50.00	14.00 -20.00 60.00	16.00 -30.00 70.00
Coil 6 R	-1.70 -4.80 1.00	-0.89 -5.70 3.80	-0.74 -6.50 4.90	-0.66 -6.90 5.40	-0.59 -7.30 5.80	-0.65 -7.50 6.00	-0.17 -7.70 6.10	-0.28 -7.90 6.30
Coil 6 Q	-5.49 -30.00 30.00	0.71 -20.00 25.00	3.73 -20.00 35.00	6.39 -30.00 50.00	8.60 -35.00 60.00	11.10 -40.00 70.00	13.33 -50.00 80.00	16.31 -60.00 100.00

MM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	0.999 0.900 1.100	0.997 0.900 1.100	0.993 0.900 1.100	0.992 0.900 1.100	0.991 0.900 1.100	0.989 0.900 1.100	0.988 0.900 1.100	0.989 0.900 1.100
Coil 0 P	0.047 -2.000 2.000	0.225 -2.000 2.000	0.310 -2.000 2.000	0.307 -2.000 2.000	0.261 -2.000 2.000	0.224 -2.000 2.000	0.170 -2.000 2.000	0.114 -2.000 2.000
Coil 1 M	0.979 0.900 1.100	0.977 0.900 1.100	0.973 0.900 1.100	0.972 0.900 1.100	0.970 0.900 1.100	0.969 0.900 1.100	0.968 0.900 1.100	0.969 0.900 1.100
Coil 1 P	0.086 -2.000 2.000	0.247 -2.000 2.000	0.318 -2.000 2.000	0.342 -2.000 2.000	0.311 -2.000 2.000	0.235 -2.000 2.000	0.183 -2.000 2.000	0.110 -2.000 2.000
Coil 2 M	0.999 0.900 1.100	0.996 0.900 1.100	0.995 0.900 1.100	0.994 0.900 1.100	0.993 0.900 1.100	0.993 0.900 1.100	0.992 0.900 1.100	0.991 0.900 1.100
Coil 2 P	0.015 -2.000 2.000	0.064 -2.000 2.000	0.098 -2.000 2.000	0.141 -2.000 2.000	0.153 -2.000 2.000	0.143 -2.000 2.000	0.134 -2.000 2.000	0.128 -2.000 2.000
Coil 3 M	0.984 0.900 1.100	0.983 0.900 1.100	0.983 0.900 1.100	0.981 0.900 1.100	0.980 0.900 1.100	0.979 0.900 1.100	0.978 0.900 1.100	0.978 0.900 1.100
Coil 3 P	0.022 -2.000 2.000	0.067 -2.000 2.000	0.121 -2.000 2.000	0.159 -2.000 2.000	0.192 -2.000 2.000	0.148 -2.000 2.000	0.105 -2.000 2.000	0.026 -2.000 2.000
Coil 4 M	1.000 0.900 1.100	0.999 0.900 1.100	0.998 0.900 1.100	0.998 0.900 1.100	0.997 0.900 1.100	0.996 0.900 1.100	0.995 0.900 1.100	0.994 0.900 1.100
Coil 4 P	0.027 -2.000 2.000	0.078 -2.000 2.000	0.095 -2.000 2.000	0.137 -2.000 2.000	0.146 -2.000 2.000	0.150 -2.000 2.000	0.119 -2.000 2.000	0.098 -2.000 2.000
Coil 5 M	1.001 0.900 1.100	1.001 0.900 1.100	1.001 0.900 1.100	0.999 0.900 1.100	0.999 0.900 1.100	0.999 0.900 1.100	0.997 0.900 1.100	0.997 0.900 1.100
Coil 5 P	0.004 0.900 1.100	0.011 0.900 1.100	0.081 0.900 1.100	0.130 0.900 1.100	0.100 0.900 1.100	0.045 0.900 1.100	0.088 0.900 1.100	0.059 0.900 1.100

	-2.000	2.000	-2.000	2.000	-2.000	2.000	-2.000	2.000	-2.000	2.000	-2.000	2.000	-2.000	2.000
Coil 6 M	1.012	1.013	1.012	1.012	1.010	1.016	1.016	1.017						
	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100
Coil 6 P	0.043	0.159	0.091	0.220	0.125	-0.079	-0.041	-0.356						
	-2.000	2.000	-2.000	2.000	-2.000	2.000	-2.000	2.000	-2.000	2.000	-2.000	2.000	-2.000	2.000

PARMS TCID 0 TCID 1 Cal Temp T Factor
(degF)
IDs 1.554 0.868 54.9 1.04

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1515MA 167593 DATE/TIME PERFORMED: Thu May 15 07:41:01 2014 DAYS SINCE CAL: 84

UNIT #: 3880TA ML4290

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.006	0.001	0.001	0.001	-0.000	0.002	0.000	-0.000
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 0 Q	0.001	0.006	0.000	0.000	0.002	-0.000	0.001	0.001
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 1 R	0.001	0.002	0.001	0.002	0.001	0.002	0.000	-0.001
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 1 Q	0.006	0.006	0.002	0.003	0.002	-0.000	-0.000	0.000
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 2 R	0.009	0.005	0.002	0.001	0.005	0.004	0.008	0.010
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 2 Q	-0.006	-0.006	-0.002	0.000	-0.007	-0.006	-0.004	-0.004
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 3 R	0.001	0.004	0.004	0.004	0.001	-0.000	0.002	0.006
	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 3 Q	-0.004	-0.001	0.000	0.004	-0.002	-0.003	-0.005	-0.003
	-0.500 0.500	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 4 R	0.005	-0.005	-0.001	-0.004	-0.001	0.009	0.006	0.003
	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200
Coil 4 Q	-0.007	0.007	-0.002	-0.001	-0.001	-0.003	-0.004	-0.000
	-1.000 1.000	-0.400 0.400	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200
Coil 5 R	0.004	0.006	0.008	-0.009	-0.010	0.004	-0.010	-0.006
	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400
Coil 5 Q	0.001	0.012	0.010	0.004	-0.001	0.008	0.009	0.004
	-2.000 2.000	-0.800 0.800	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400
Coil 6 R	-0.001	0.003	0.001	-0.017	-0.003	0.004	-0.009	0.008
	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000
Coil 6 Q	-0.015	-0.016	0.004	0.013	-0.008	-0.029	-0.005	-0.026
	-5.000 5.000	-2.000 2.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	125.74	124.76	122.88	119.78	115.97	110.77	104.83	97.56
	100.00 150.00	100.00 150.00	98.00 150.00	96.00 140.00	92.00 140.00	87.00 130.00	82.00 120.00	76.00 110.00
Coil 0 P	7.250	22.978	38.472	54.015	69.569	85.220	100.753	116.458
	6.000 9.000	19.000 28.000	32.000 47.000	44.000 66.000	57.000 85.000	70.000 100.000	82.000 120.000	95.000 140.000
Coil 1 M	217.27	214.62	209.60	201.92	192.70	181.18	168.74	154.59

Coil 1 M	217.27	217.62	236.98	237.62	782.75	787.48	788.71	787.88
	180.00 270.00	180.00 270.00	170.00 260.00	170.00 250.00	160.00 250.00	160.00 230.00	150.00 220.00	140.00 200.00
Coil 1 P	7.884	24.860	41.514	58.033	74.375	90.621	106.603	122.519
	6.000 9.000	19.000 28.000	32.000 48.000	45.000 67.000	57.000 88.000	70.000 110.000	83.000 120.000	96.000 140.000
Coil 2 M	436.39	431.64	422.74	408.87	392.54	371.71	348.85	321.70
	360.00 540.00	360.00 540.00	350.00 530.00	340.00 510.00	330.00 500.00	310.00 470.00	300.00 440.00	270.00 410.00
Coil 2 P	7.987	25.148	41.995	58.778	75.458	92.175	108.717	125.423
	6.000 9.000	19.000 29.000	32.000 48.000	45.000 67.000	58.000 87.000	71.000 110.000	84.000 130.000	96.000 140.000
Coil 3 M	719.54	712.24	699.09	678.63	653.26	619.70	582.01	536.84
	590.00 880.00	580.00 870.00	570.00 850.00	550.00 830.00	530.00 800.00	500.00 760.00	470.00 710.00	440.00 650.00
Coil 3 P	7.904	24.941	41.693	58.461	75.197	92.036	108.715	125.515
	6.000 10.000	20.000 29.000	33.000 49.000	46.000 69.000	59.000 89.000	72.000 110.000	85.000 130.000	98.000 150.000
Coil 4 M	1131.4	1120.4	1101.0	1070.5	1033.1	982.4	925.1	855.5
	900.0 1400.0	900.0 1300.0	900.0 1300.0	850.0 1300.0	800.0 1200.0	800.0 1200.0	750.0 1100.0	700.0 1000.0
Coil 4 P	7.926	24.983	41.781	58.604	75.441	92.366	109.235	126.241
	6.000 10.000	20.000 30.000	33.000 50.000	46.000 70.000	60.000 90.000	73.000 110.000	86.000 130.000	98.000 150.000
Coil 5 M	2305.1	2287.5	2254.2	2199.4	2130.0	2033.8	1921.3	1781.6
	1900.0 2800.0	1800.0 2800.0	1800.0 2700.0	1800.0 2600.0	1700.0 2500.0	1600.0 2400.0	1500.0 2200.0	1400.0 2100.0
Coil 5 P	7.935	25.069	41.995	59.015	76.105	93.388	110.635	128.101
	6.000 10.000	20.000 31.000	34.000 51.000	48.000 72.000	62.000 93.000	76.000 110.000	89.000 130.000	100.000 150.000
Coil 6 M	6014.6	5943.4	5811.3	5612.9	5375.4	5074.1	4750.7	4369.3
	4700.0 7100.0	4700.0 7000.0	4600.0 6900.0	4400.0 6600.0	4200.0 6400.0	4000.0 6000.0	3700.0 5600.0	3400.0 5100.0
Coil 6 P	8.231	26.148	43.686	61.125	78.421	95.714	112.843	130.027
	7.000 10.000	22.000 32.000	36.000 54.000	51.000 76.000	65.000 98.000	80.000 120.000	94.000 140.000	110.000 160.000

INSTRUMENT CONFIGURATION

Source File: /dat1a/CHESAPEAKE/JAMES_MESSENGER_WTZ_3H_R4/GSLAM~tdg

CABLEHEAD

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



125.92'

CABLEHEAD TOP 123.17'

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 — 112.70'
RM MP — 112.45'

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 — 99.24'

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 — 92.68'
SSN MP — 92.29'

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 — 82.02'

LSD MP — 81.31'

SSD MP — 80.91'

KNUCKLE JOINT (DOUBLE)

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

DIGITAL ORIENTATION

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

ORIENT MP — 63.37'

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 — 50.15'
R7 — 49.65'
R6 — 49.15'
R5 — 48.65'
R4 — 48.15'
R3 — 47.65'
R2 — 47.15'
R1 — 46.65'

SHEAR WAVE ACOUSTILOG

Diameter : 3.63"
Length : 5.00'
Weight : 135 lbs
Series : 1678PB
Mnemonic : XMAC

MONOPOLE T2 — 38.15'
QUADRUPOLE T5 — 38.15'

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: 3.00': MONOPOLE T4

X-DIPOLE T3 — 36.40'
Y-DIPOLE T4 — 36.40'
MONOPOLE T4 — 34.65'



MULTI-POLE ARRAY ACOUSTIC

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



HIGH DEFINITION INDUCTION TOOL

Diameter : 3.62"
Length : 27.13'
Weight : 415 lbs
Series : 1515XA
Mnemonic : HDIL
Measure Point: 13.91': SP MP
Measure Point: 7.44': XMTR MP


SP MP — 14.19'

XMTR MP — 7.72'

BULL PLUG 3 3/8

0.00'

TOTAL LENGTH: 125.92'
TOTAL WEIGHT: 2258 lbs
MAX DIAMETER: 0'4.88"

	COMPANY <u>CHESAPEAKE APPALACHIA LLC</u>	FILE NO: _____
	WELL <u>JAMES MESSENGER WTZ 3H U</u>	API NO: _____
	FIELD <u>WETZEL</u>	<u>47-103-02973</u>
	COUNTY <u>WETZEL</u> STATE <u>WEST VIRGINIA</u>	
LOCATION:	ELEVATIONS:	SCALE 5"/100'
STATE TOWNSHIP PROCTOR	KB 1517 FT	
QUAD WILEVILLE	DF 1517 FT	
	GL 1495 FT	
LAT <u>N 39.673693</u> LONG <u>W 80.690861</u>	DATE <u>15-MAY-2014</u>	