

HALLIBURTON

RESERVOIR
MONITORING TOOL
ELITE

Company

URSA OPERATING COMPANY LLC

Well

MONUMENT RIDGE B 31D-17-7-95

Field

PARACHUTE

County

GARFIELD

State

CO

Company

URSA OPERATING COMPANY LLC

Well

MONUMENT RIDGE B 31D-17-7-95

Field

PARACHUTE

County

GARFIELD

State

CO

API No.: 05045228990000

Serv #: 903681440

Other Services

Location: SHL: 890' FSL & 144' FEL
BHL: 1306' FNL & 1982' FEL

Sec: 8

Twp: 7S

Rge: 95W

CBL-M

Permanent Datum

GROUND LEVEL

Elevation 5702'

Elevation

Log Measured From

KB

17' Ft. above perm. datum

K.B. 5719'
D.F. 5719'
G.L. 5702'

Drilling Measured From

KB

Date @ Time Logged

2 DEC 2016 @ 04:30

Type Fluid in Hole

FRESH WATER

Run No.

ONE

Density of Fluid

8.4 PPG

Depth - Driller

7914'

Fluid Level

SURFACE

Depth - Logger

7686'

Cement Top Est. Logged

1732'

Bottom - Logged Interval

7680'

Equipment / Location

11808537 / RS. WY

Top - Log Interval

3811'

Recorded by

B. RIDDEL

Max. Recorded Temp.

222 degF

Witnessed by

R. TOLLE

CEMENTING DATA

Surface

Protection

Production

Liner

String

String

String

Date / Time Cemented

N/A

N/A

N/A

N/A

Primary / Squeeze

N/A

N/A

N/A

N/A

Expected

N/A

psi@ N/A hrs

psi@ N/A hrs

psi@ N/A hrs

Compressive Strength

N/A

psi@ N/A hrs

psi@ N/A hrs

psi@ N/A hrs

Cement Volume

N/A

N/A

N/A

N/A

Cement Type / Weight

N/A

/ N/A

/ N/A

/ N/A

Formulation

N/A

N/A

N/A

N/A

Mud Type / Mud Wgt.

N/A

/ N/A

/ N/A

/ N/A

Borehole Record

Casing & Tubing Record

Run Number

Bit

From

To

Size

Weight

From

To

ONE

24"

SURFACE

60"

16"

75.5 #

SURFACE

60"

TWO

12.25"

60"

1843'

8.625"

32.0 #

SURFACE

1843'

THREE

7.875"

1843'

7914'

4.5"

11.6 #

SURFACE

7882'

<<< Fold Here >>>

HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

ESTIMATED TOP OF CEMENT : 1732'
GAMMA BLANKET : 408 GAPI
FREE PIPE CALIBRATION DEPTH : 370'

TENSION PULLED AT 6653'

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SVCS.
YOUR CREW TODAY: B. RIDDEL, D. FLINDERS, B. BURDERER

Service Ticket No. 903681440

API No. 05045228990000

PGM Ver 15.10.29001

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA

XHU		GAMMA		RMTI		CBL	
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	12146425	Serial No.	11224503	Serial No.	12095949	Serial No.	12091451
Model No.	XHU-3	Model No.	TTTCU-02	Model No.	RMTI	Model No.	CBLM
Diameter	1 11/16"	Diameter	1 11/16"	Diameter	2.25"	Diameter	2.75"

LOGGING DATA

General Data

Pass	Depths		Well Head	Speed	Logging Run Comments	
No	From	To	Pressure	Ft/Min		

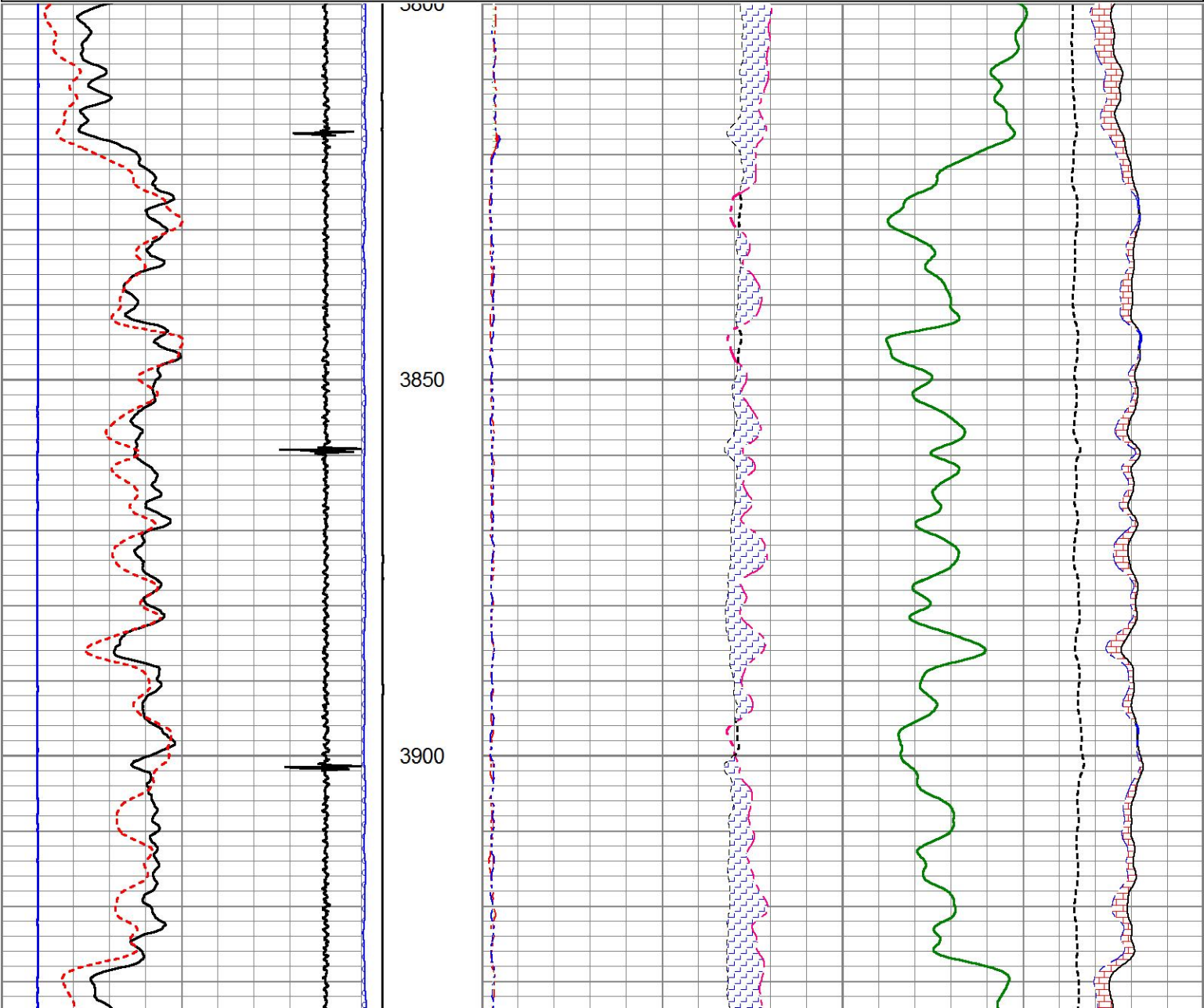
No.	FROM	TO	Pressure	Temp	Param			
ONE	4250'	4010'	0 PSI	20	REPEAT			
TWO	7686'	3811'	0 PSI	20	MAIN			
	GAMMA		SIGMA		AMPLITUDE			
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	200	60	0	0	100		
TWO	0	200	60	0	0	100		
DIRECTIONAL INFORMATION								
Maximum Deviation			deg. @		KOP			

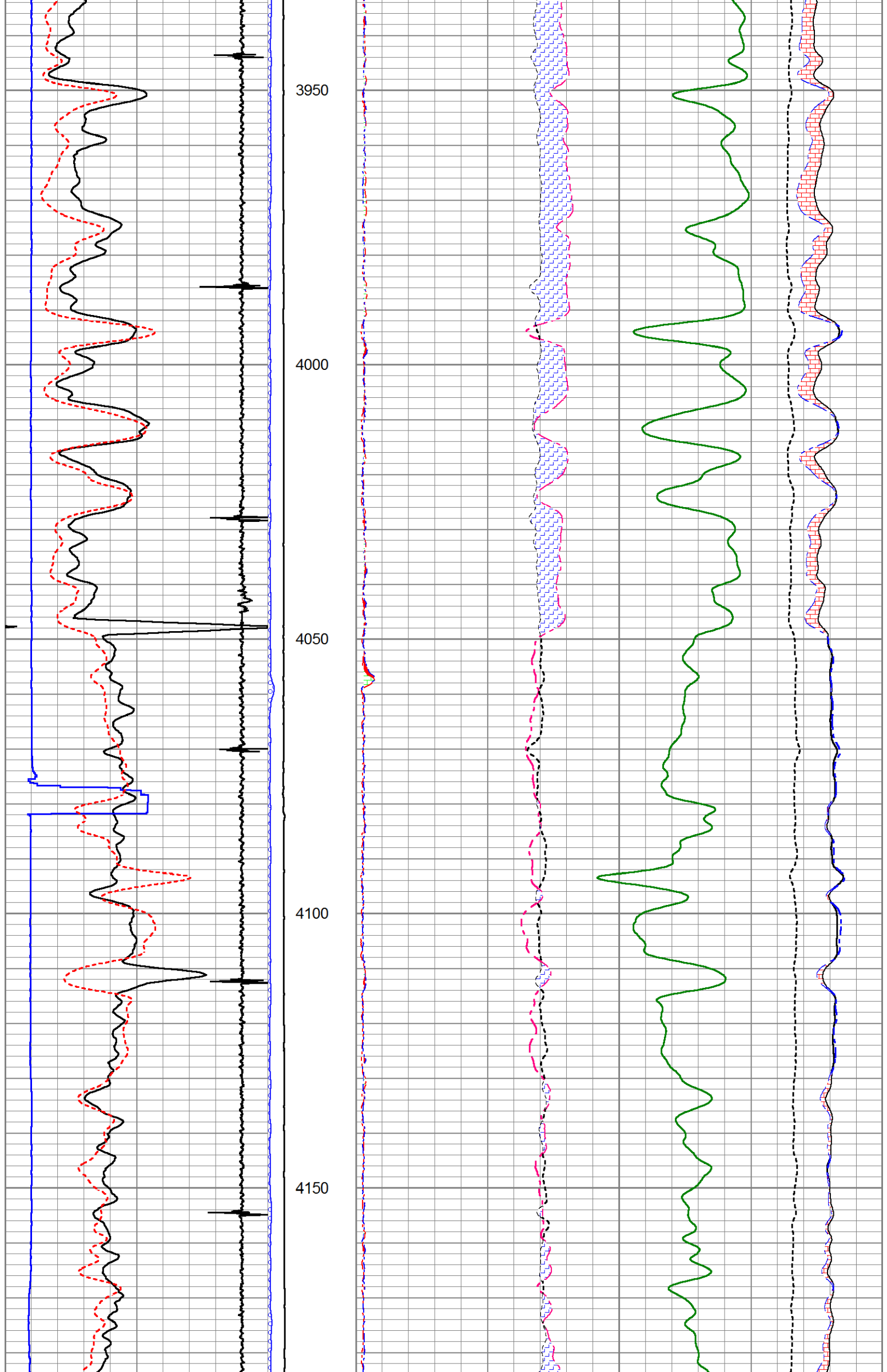
MAIN PASS

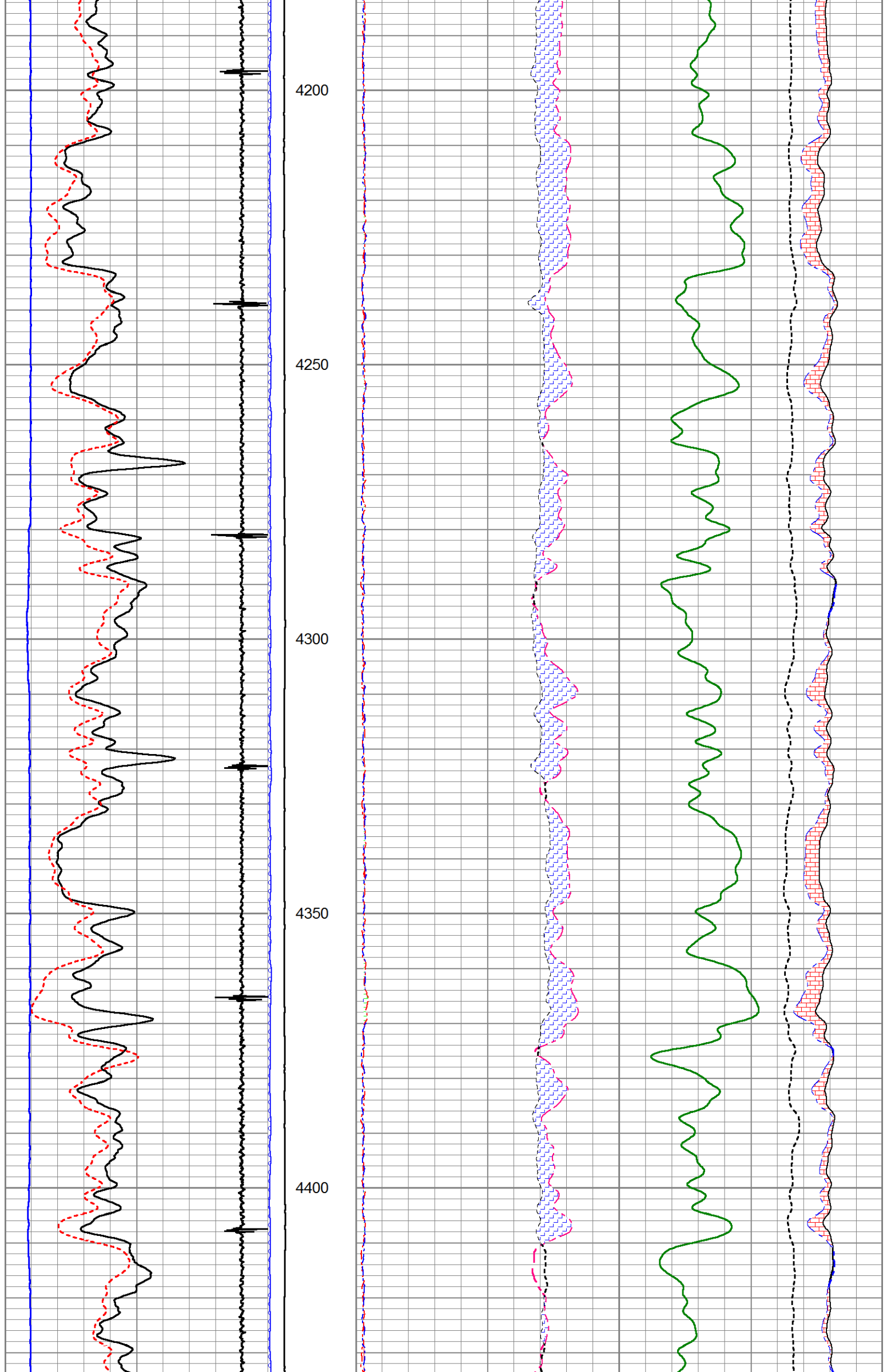
HALLIBURTON

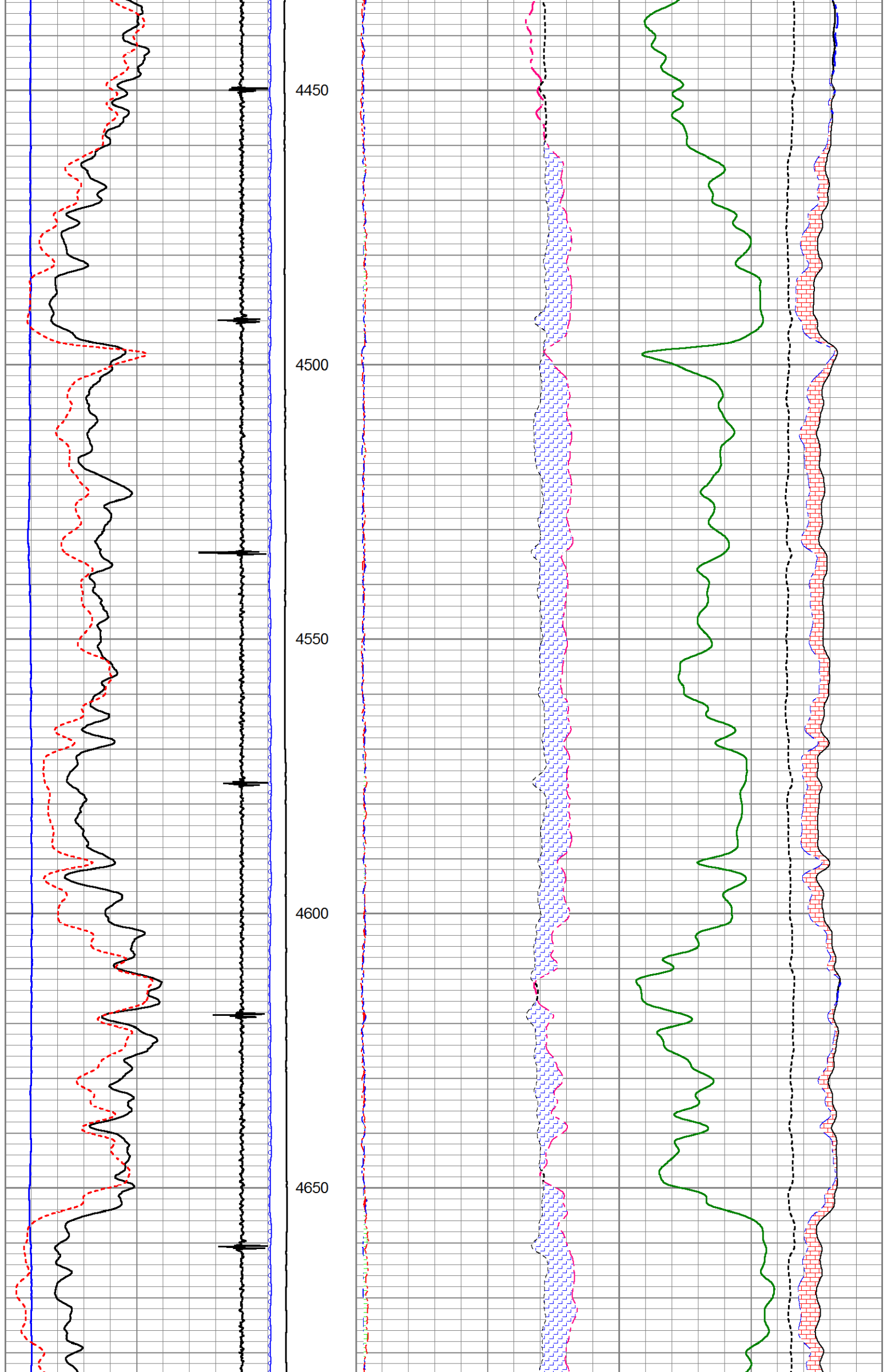
5" = 100'

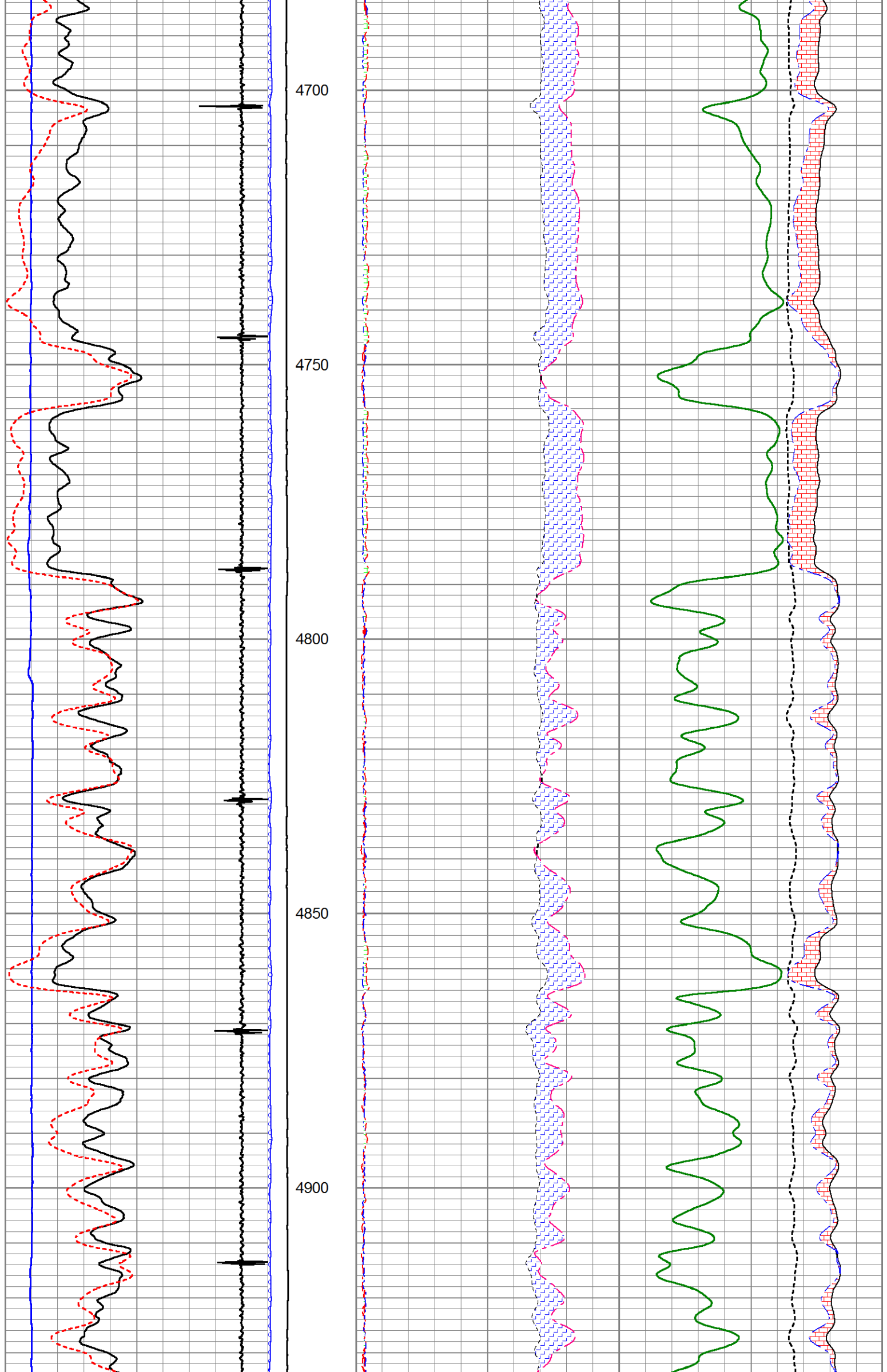
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Dataset Pathname		MAIN							
Presentation Format		I1!!RM~1							
Dataset Creation		Fri Dec 02 04:38:28 2016							
Charted by		Depth in Feet scaled 1:240							
0	GR	200	LTEN	60	SGFF				0
2700	CCL	-300		0 (lb5000	2	RNF (Ratio Near/Far)	0.5	100000	FSIN
0	LSPD (ft/min)	200	0 OAI1100	1.65	RIN (Ratio Near/Far Incl)	0.65	60000	NCAP	0
10	SGINear	40		0	NFTR (Near Fit Error)	100	60000	FCAP	0
				0	FFTR (Far Fit Error)	100			

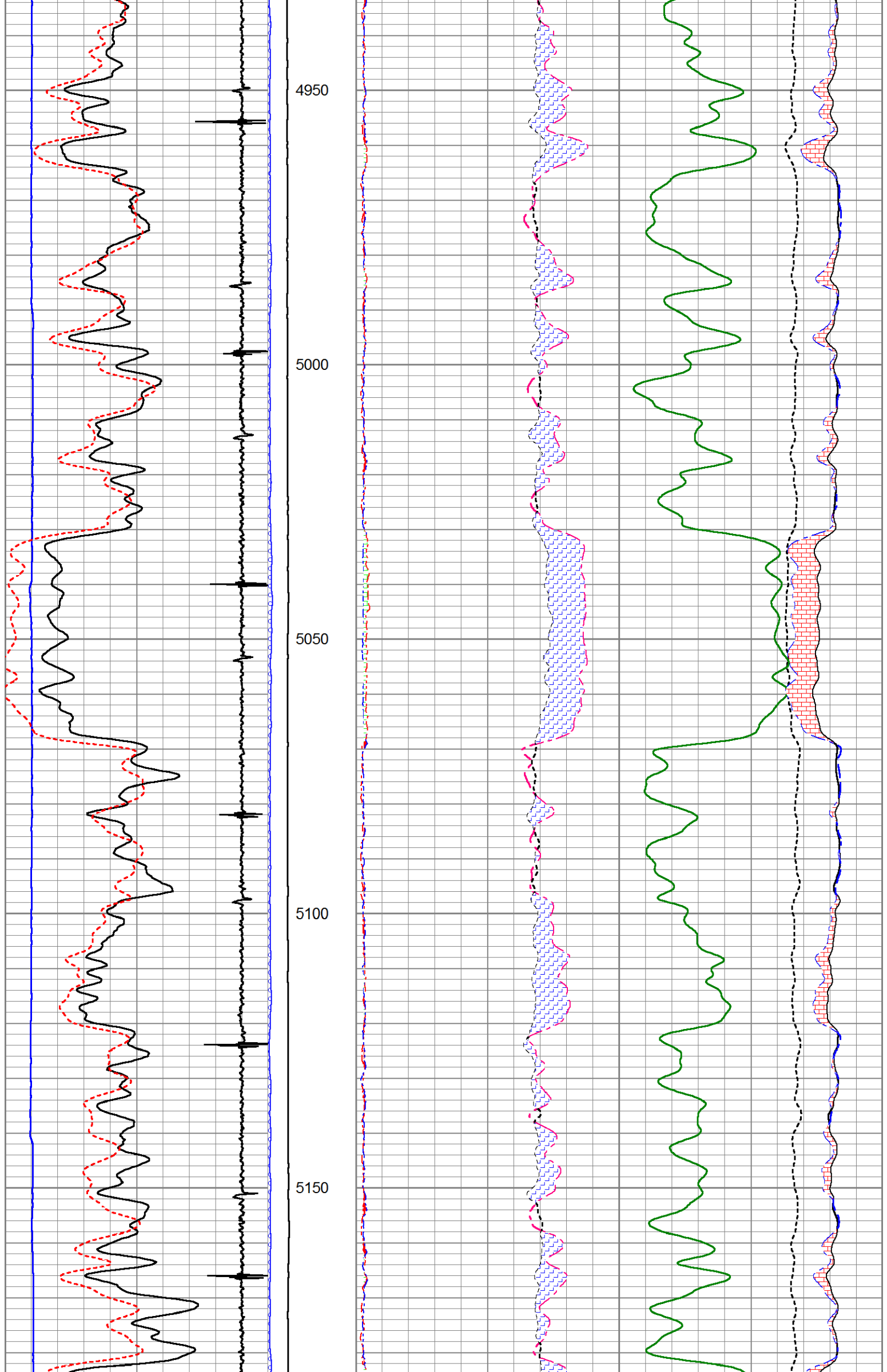


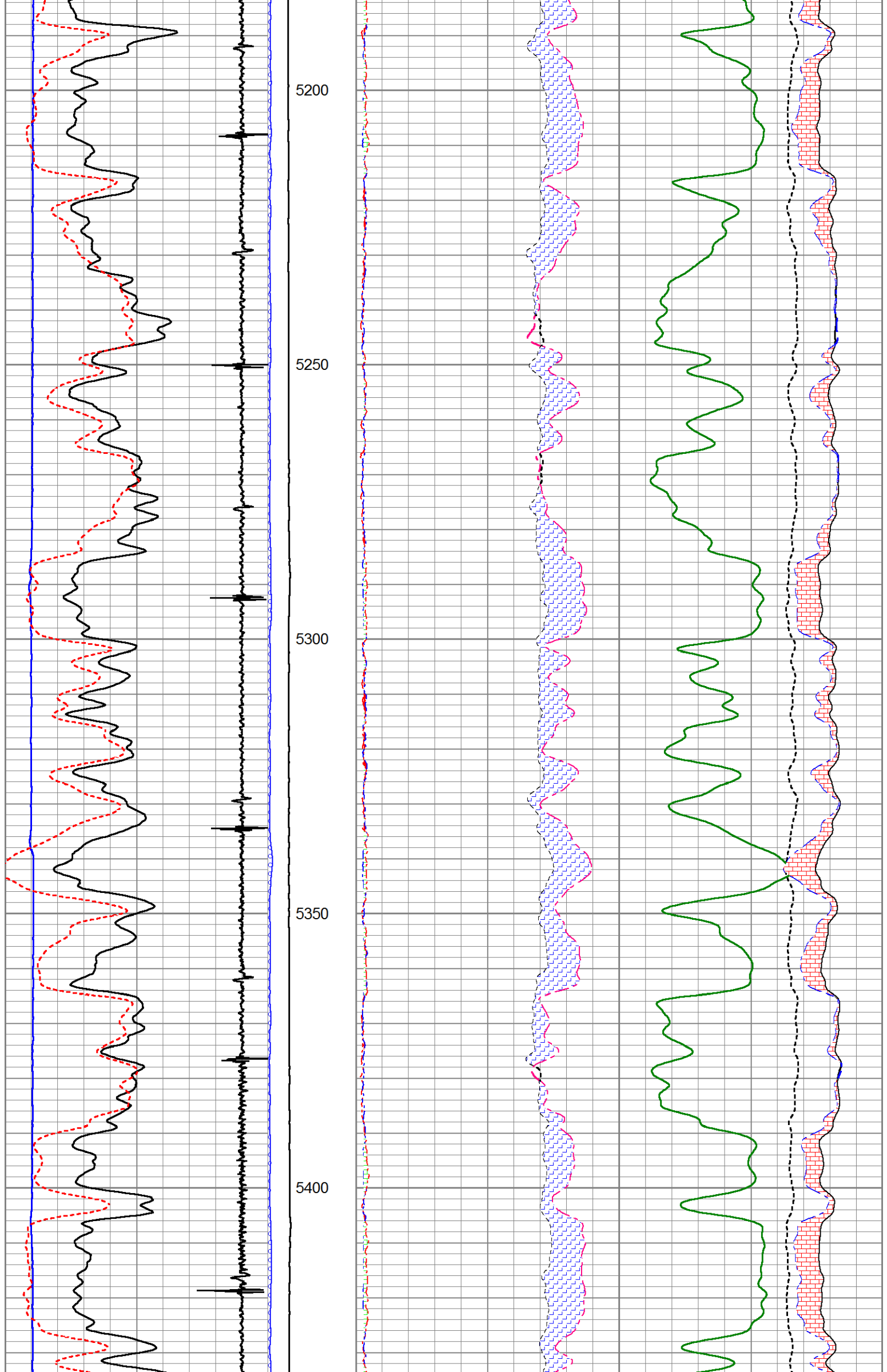


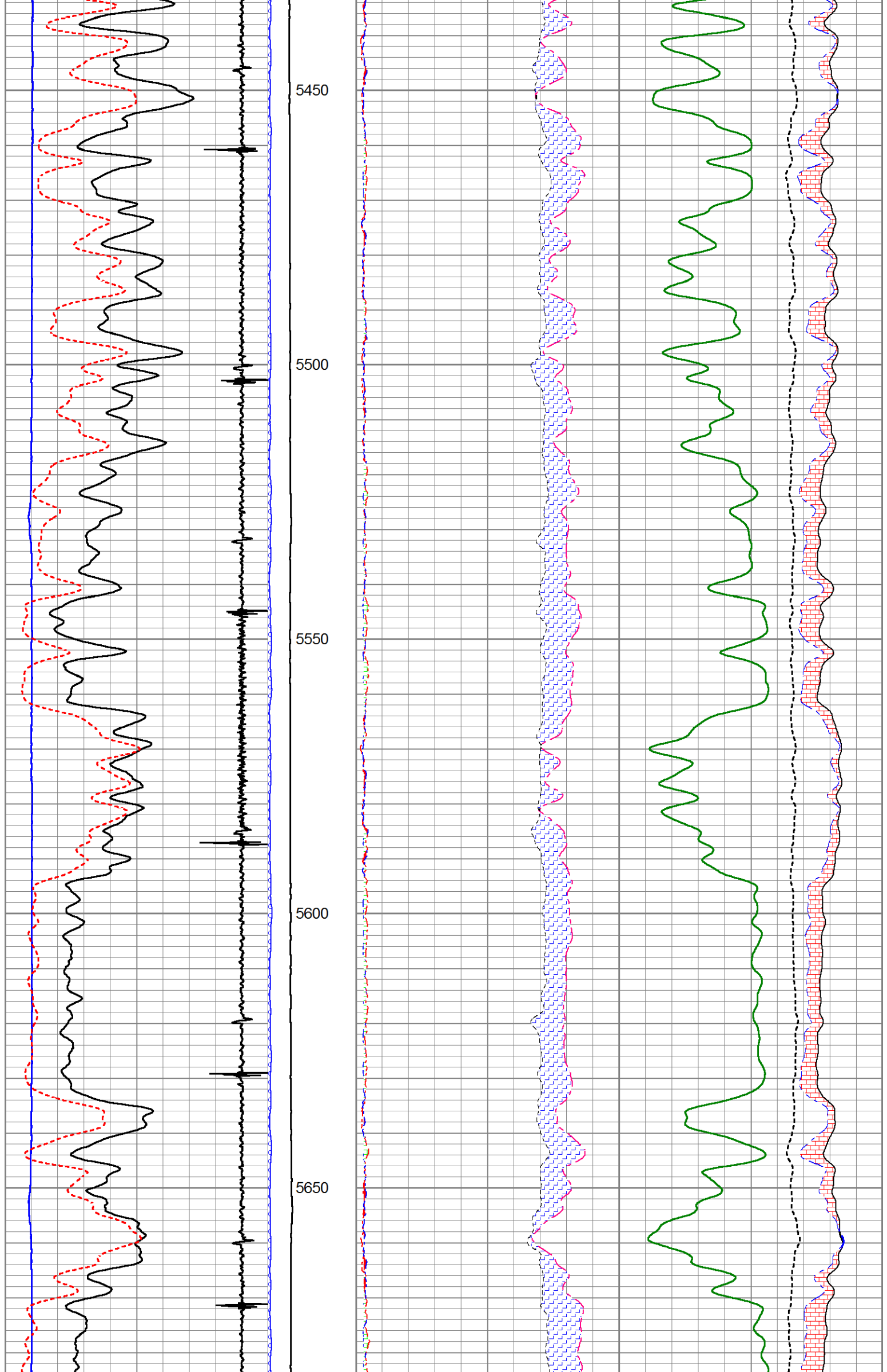


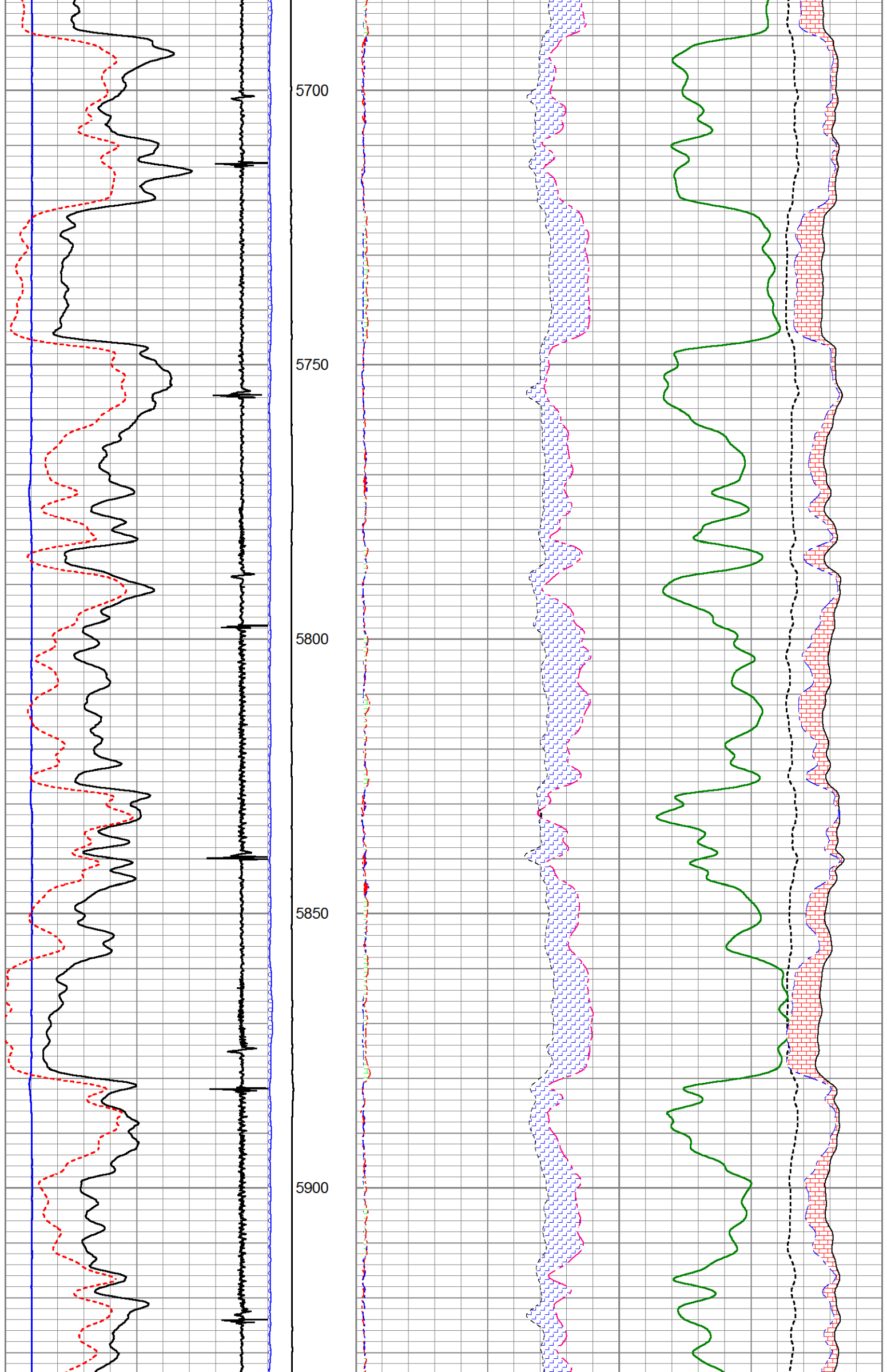


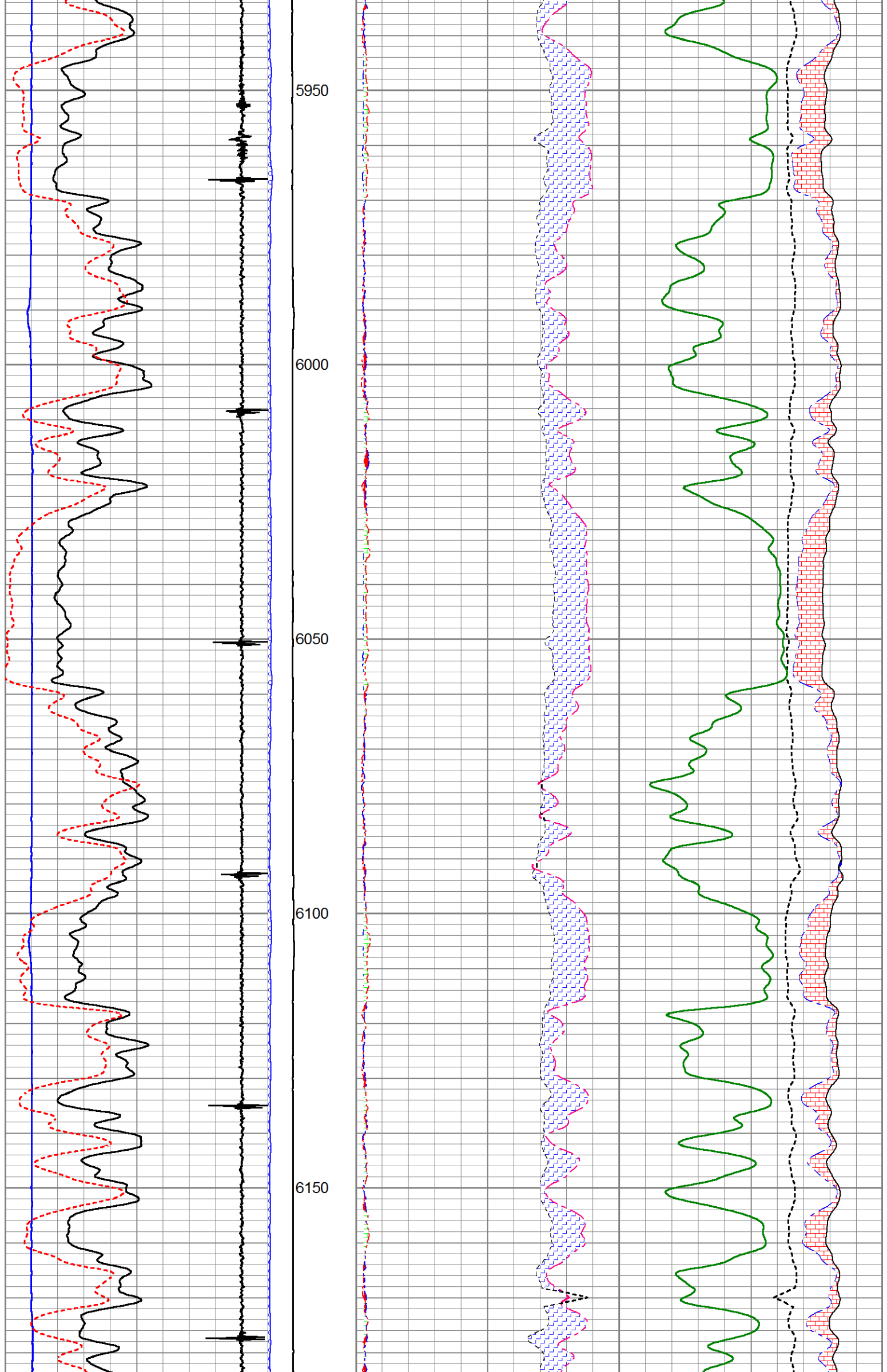


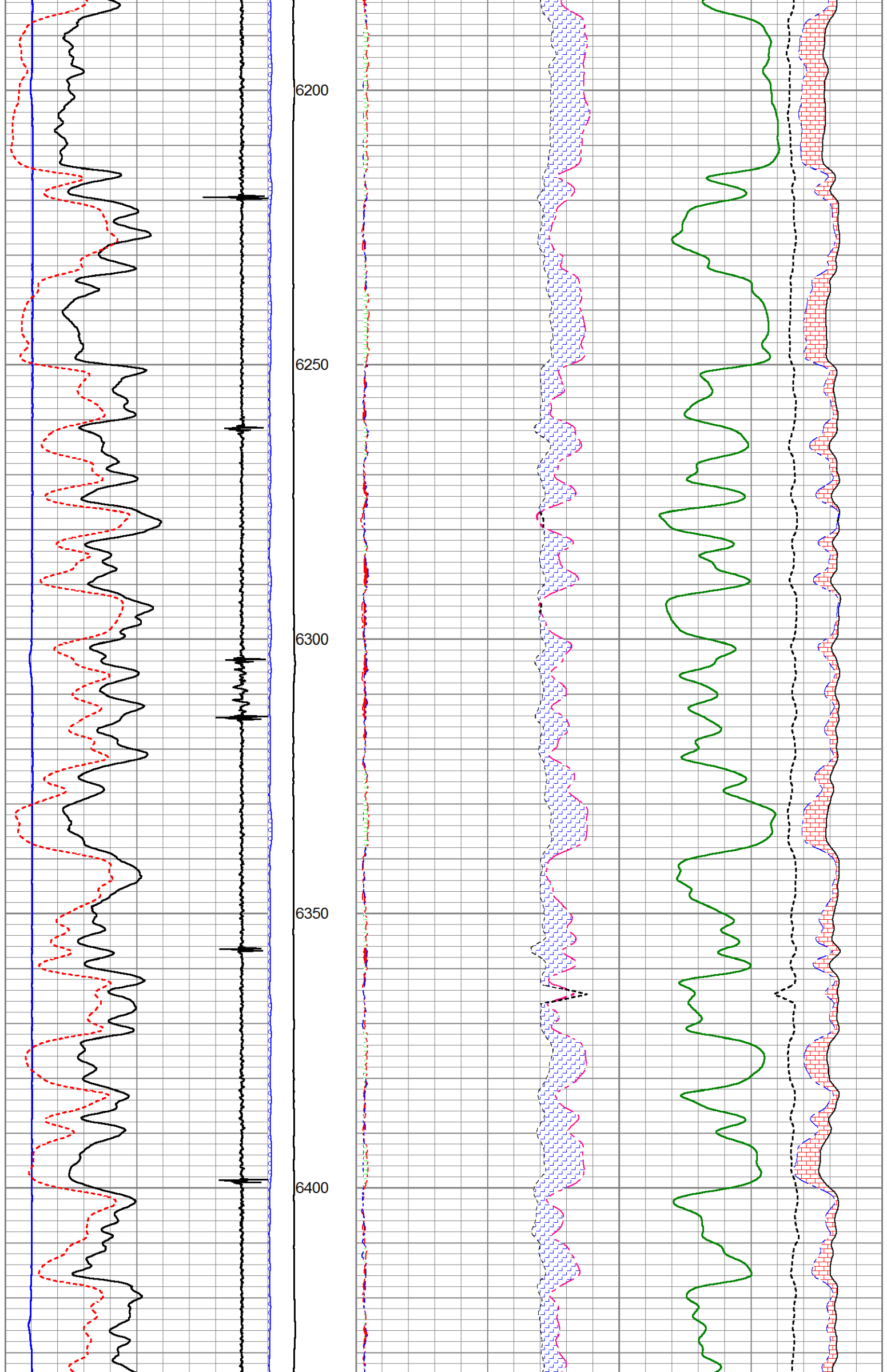


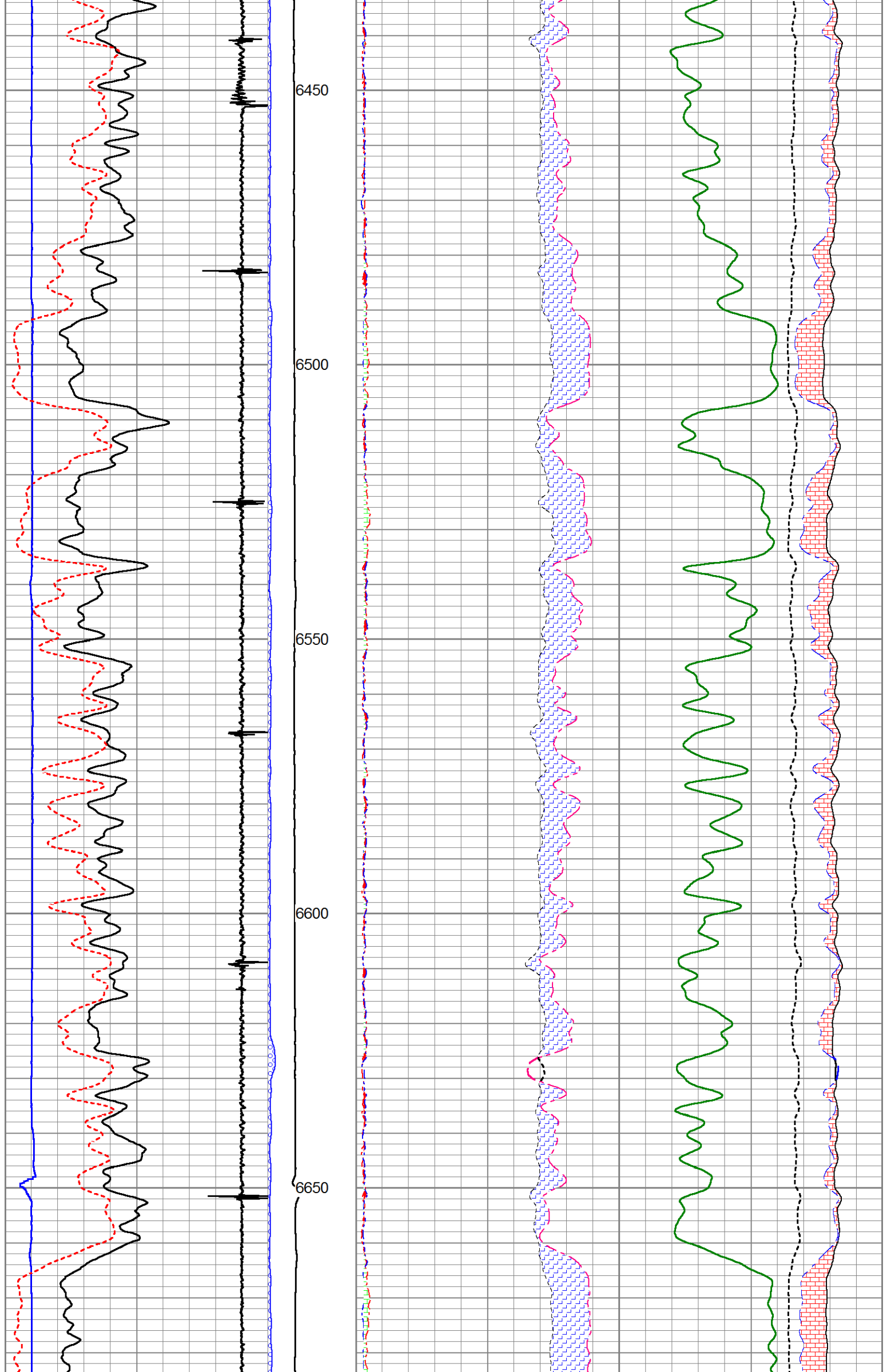


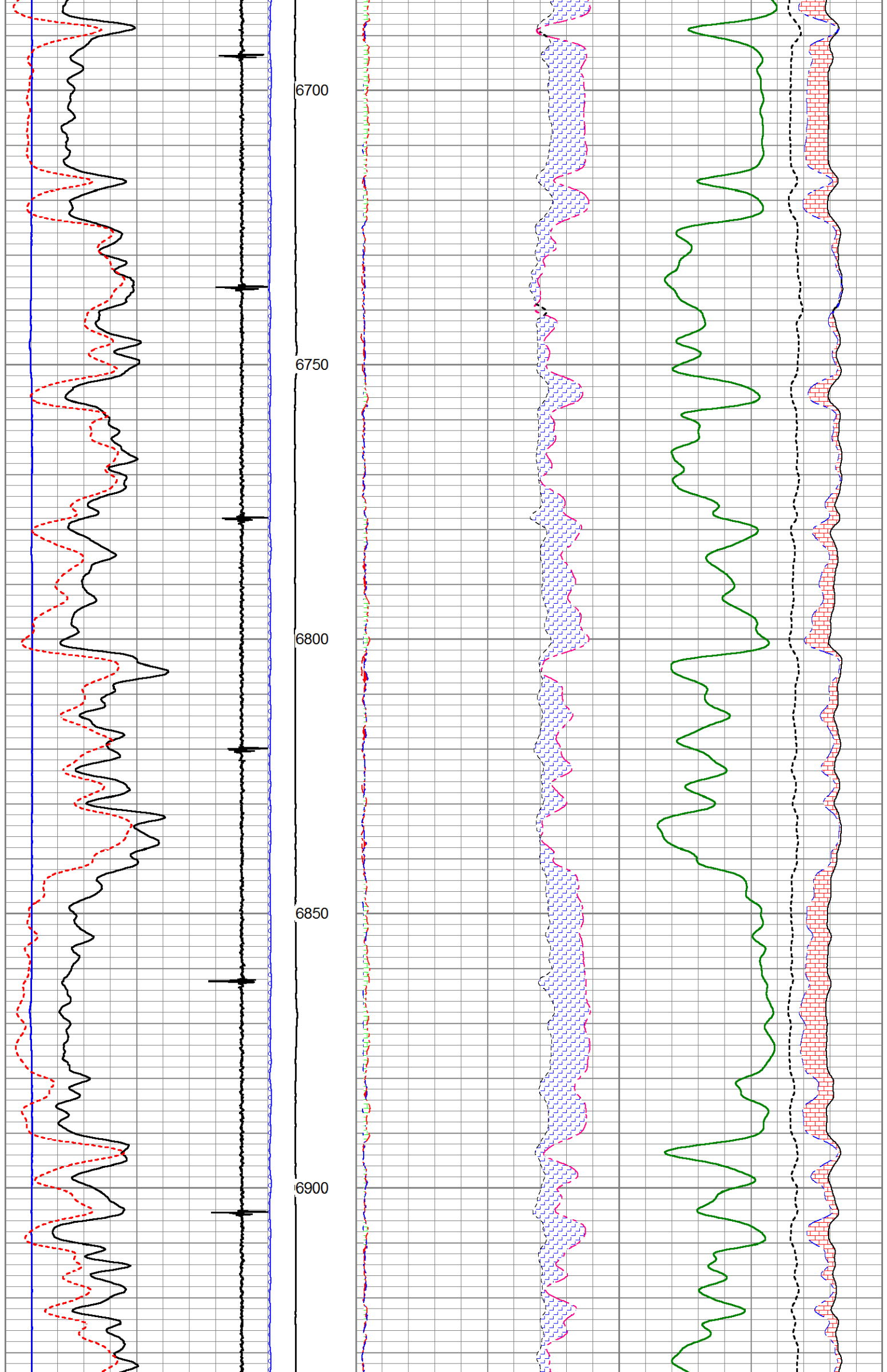


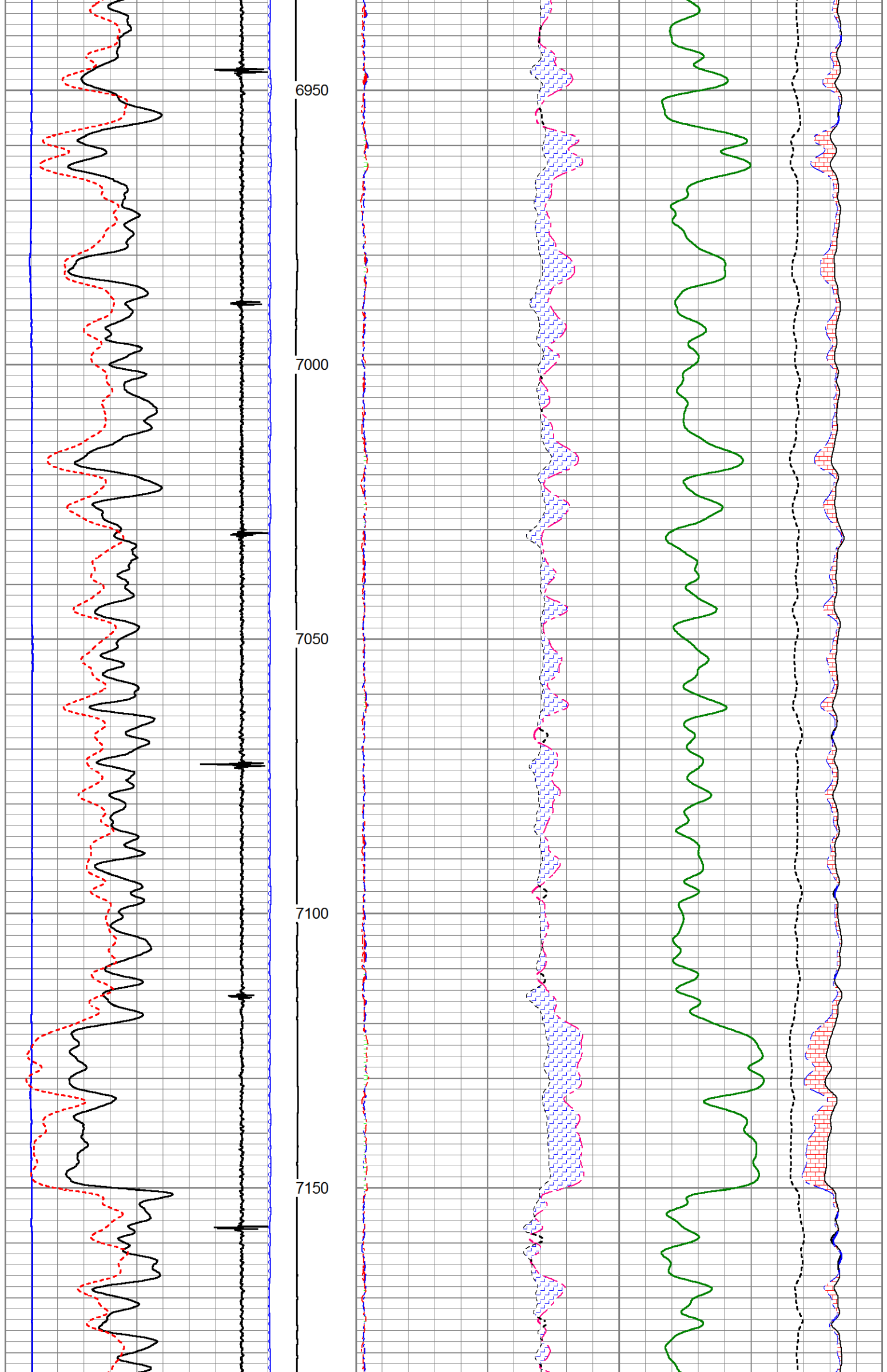


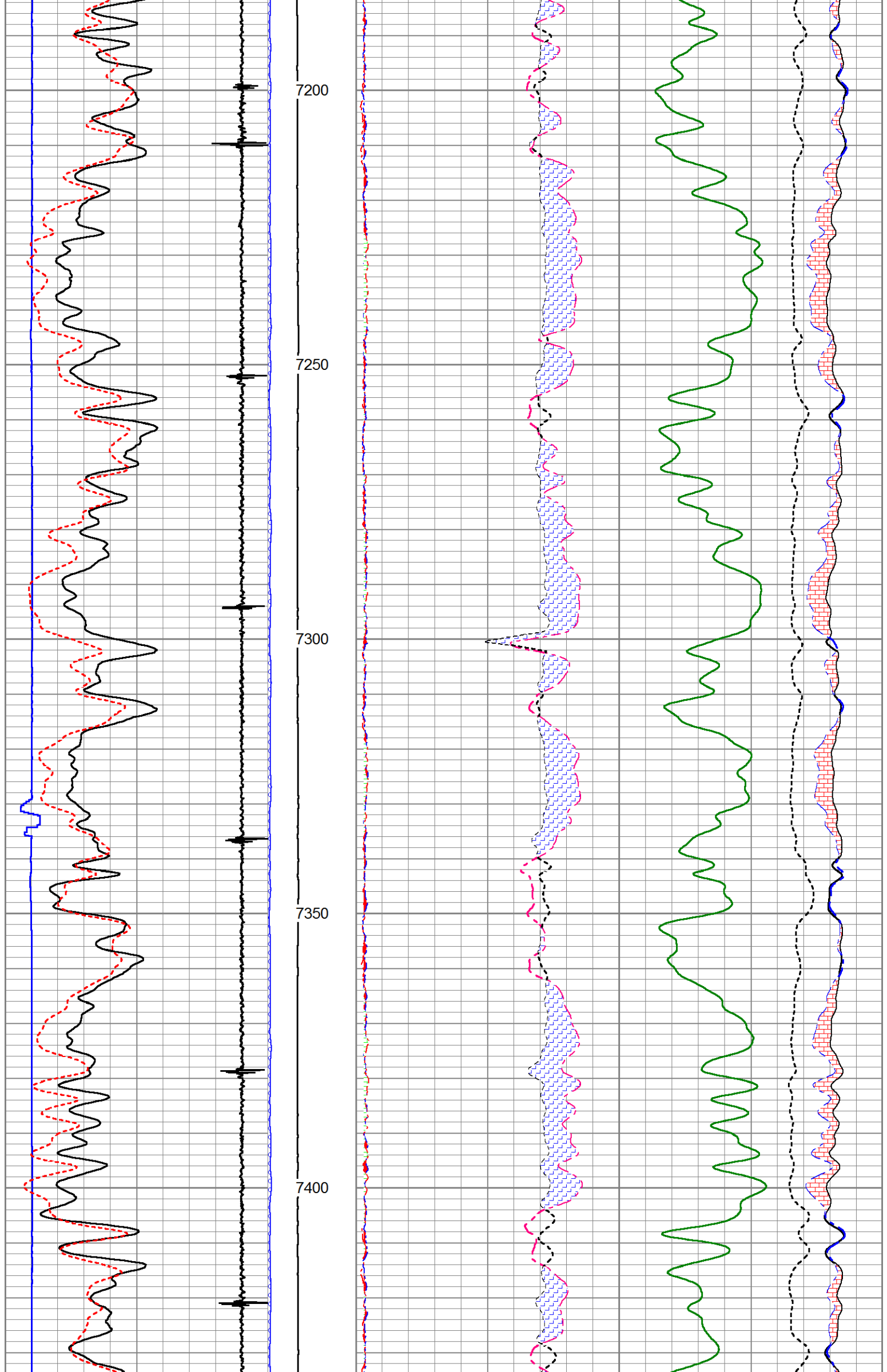


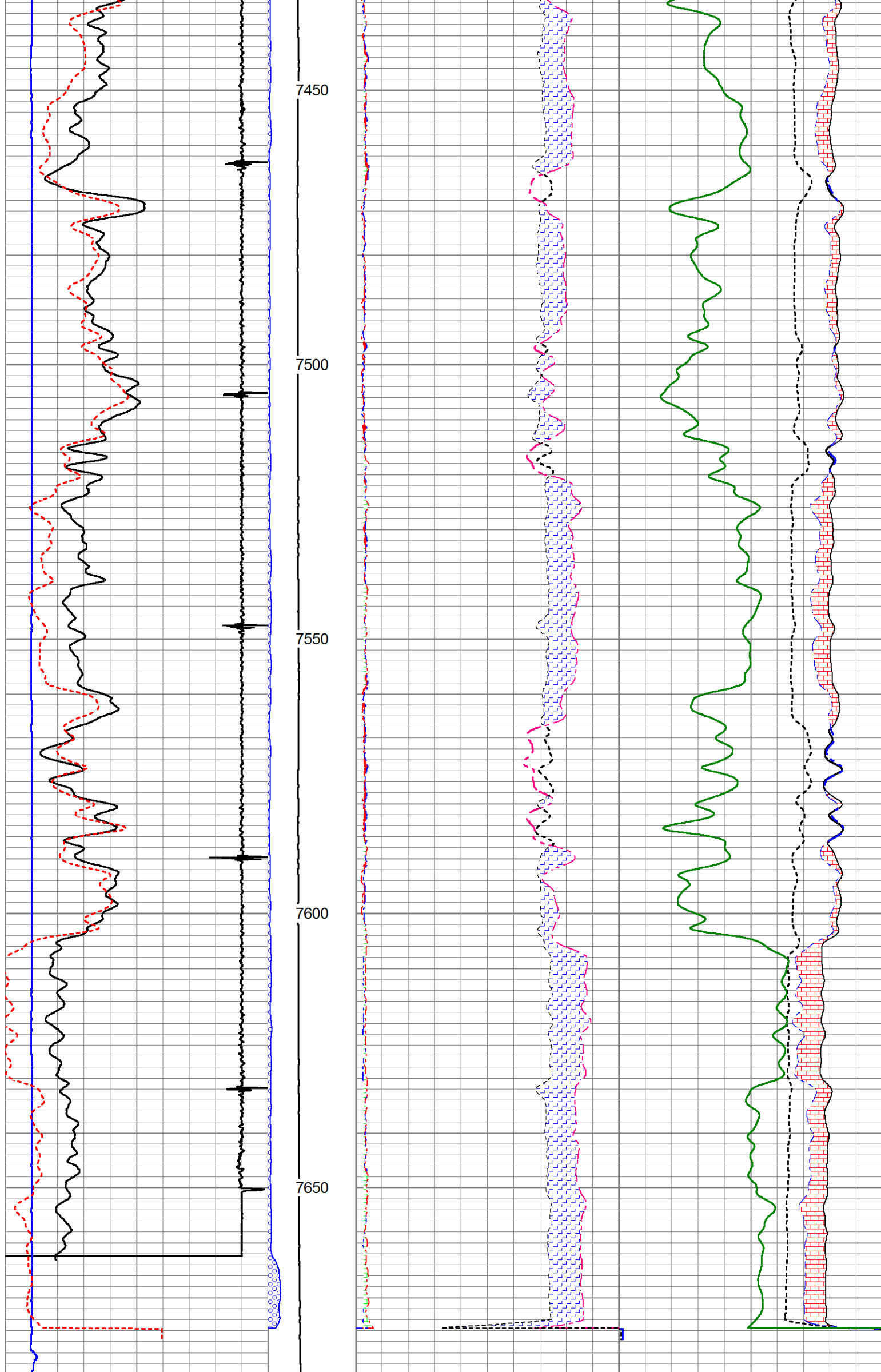












0	GR	200	LTEN	60	SGFF	0
2700	CCL	-300	0 (lb/5000	2	RNF (Ratio Near/Far)	0.5 100000
0	LSPD (ft/min)	200	0 OAI1100	1.65	RIN (Ratio Near/Far Incl)	0.65 60000
10	SGINear	40		0	NFTR (Near Fit Error)	100 60000
				0	FFTR (Far Fit Error)	100

MAIN PASS

HALLIBURTON

5" = 100'

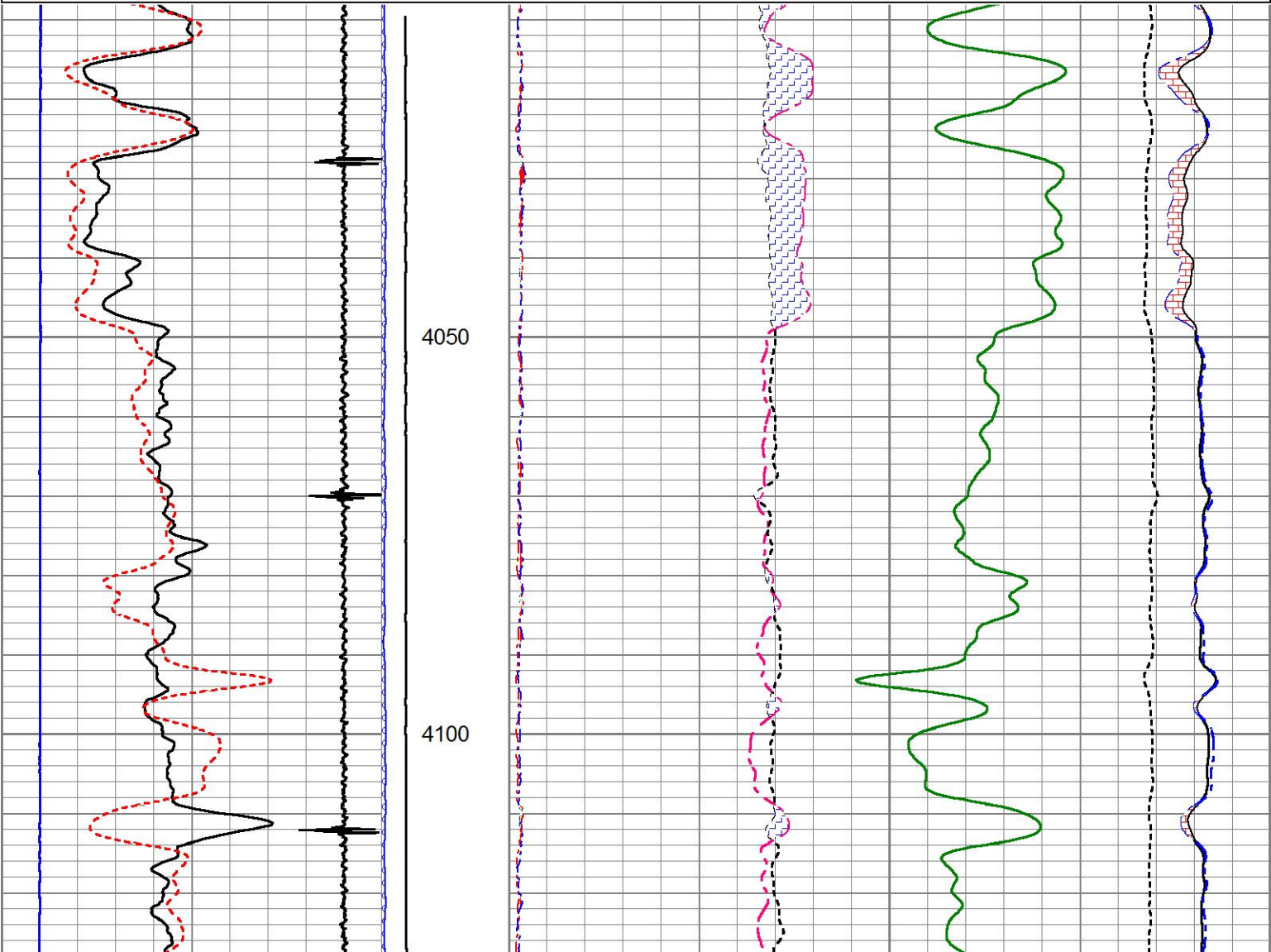
REPEAT PASS

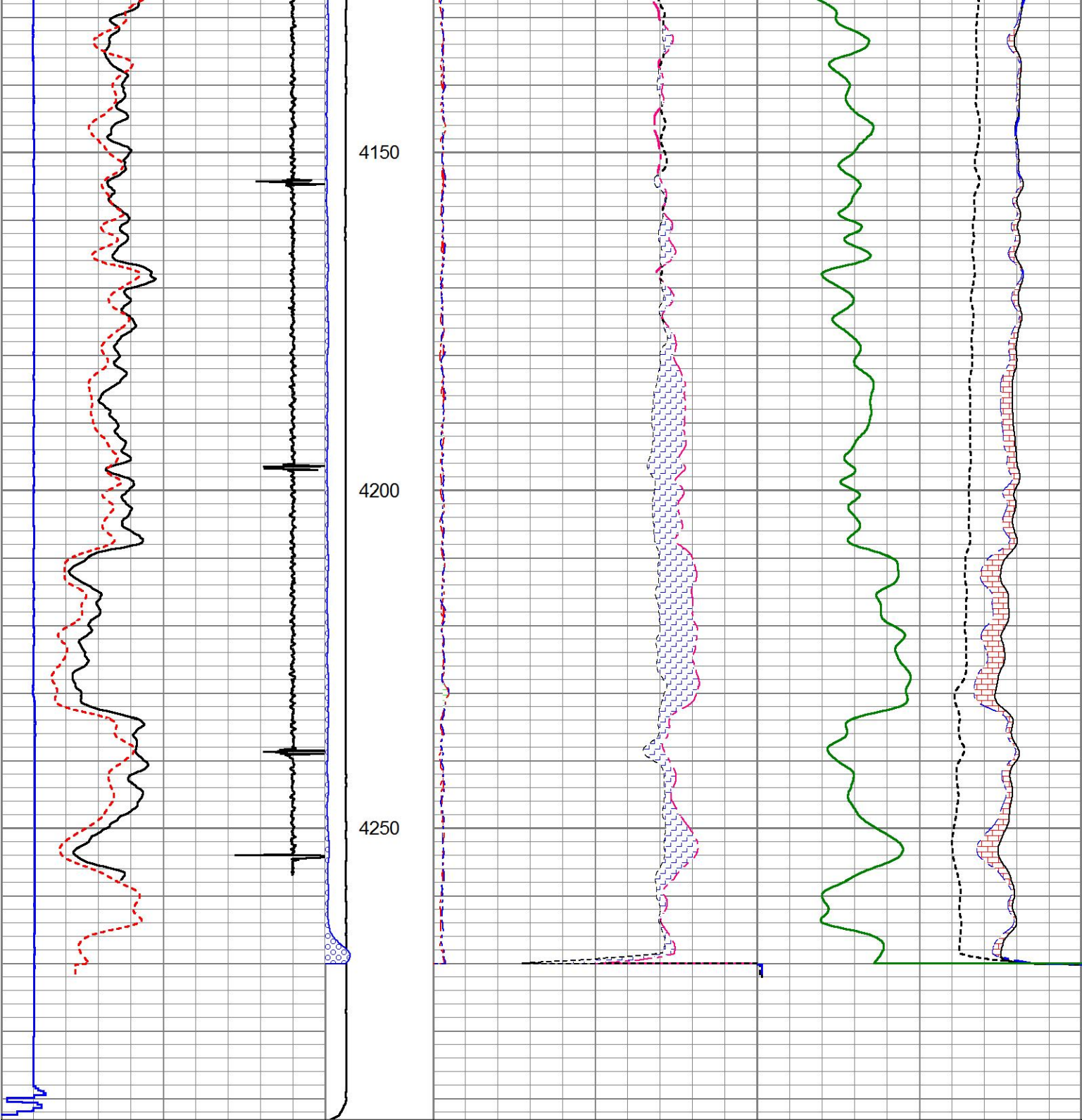
HALLIBURTON

5" = 100'

Database File	c:\users\h180706\desktop\ursa\31d\31d_17_7_95.db
Dataset Pathname	REPEAT
Presentation Format	!1!!RM~1
Dataset Creation	Fri Dec 02 03:46:59 2016
Charted by	Depth in Feet scaled 1:240

0	GR	200	LTEN	60	SGFF	0
2700	CCL	-300	0 (lb/5000	2	RNF (Ratio Near/Far)	0.5 100000
0	LSPD (ft/min)	200	0 OAI1100	1.65	RIN (Ratio Near/Far Incl)	0.65 60000
10	SGINear	40		0	NFTR (Near Fit Error)	100 60000
				0	FFTR (Far Fit Error)	100





0	GR	200	LTEN (lb5000)	60	SGFF				0	
2700	CCL	-300		2	RNF (Ratio Near/Far)		0.5	100000	FSIN	0
0	LSPD (ft/min)	200		1.65	RIN (Ratio Near/Far Inel)		0.65	60000	NCAP	0
10	SGINear	40		0	NFTR (Near Fit Error)		100	60000	FCAP	0
				0	FFTR (Far Fit Error)		100			

REPEAT PASS

HALLIBURTON

5" = 100'

Log Variables

Database: c:\users\h180706\desktop\ursa\31d\31d_17_7_95.db
Dataset: field/well/run1/MAIN/_vars_

Top - Bottom


BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE in	BORSAL kppm	BOTTEMP degF	CASED?	CASEOD in
1	0	TEMP	7.875	150	220	Yes	4.5
CASETHCK	CASEWGHT	LTH	MSGGN	MudWgt	PERFS	POROS1	POROS2

in 0.25	lb/ft 11.6	Sandstone	1	lb/gal 8.4	0	1	0
RHO�F 0.25	SO in 0	SRFTEMP degF 0	TDEPTH ft 7700	UHSGC NONE	USERFTT usec/ft 0	ZREF MRayl 1.7	

Calibration Report		
Database File	c:\users\h180706\desktop\ursa\31d\31d_17_7_95.db	
Dataset Pathname	MAIN	
Dataset Creation	Fri Dec 02 04:38:28 2016	
Cement Bond Log Shop Calibration Report		
Serial-Model:	12091451-A	
Calibration Performed:	Thu Dec 01 13:19:47 2016	
Free Pipe Calibration		
TT	Measured	Units
Amplitude	244.6	usec
Log Base Line	552.0	mV
	5.9	mV
Calibration References and Gain		
Name	Value	Units
Pipe O.D.	4.500	in
Pipe Weight	11.6	lb/ft
Pipe Ref. Amp.	81.2	mV
Amp. Gain	0.149	
Reservoir Monitor Tool I Calibration Report		
Serial-Model:	12095949-A	
Shop Calibration Performed:	Thu Nov 24 11:32:44 2016	

Carbon/Oxygen Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	90.00	80.00	10.00	+/-15.00	V
ITCR2	3153	3250	-97	+/-250	cps
Near Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0259	5.51	<6.00
Fe	206	206 +/-2	0.0966	-----	-----
NGAIN = 0.996	NZOFF = 0.5				
Far Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0356	5.76	<6.50
Fe	210	208 +/-2	0.0903	-----	-----
FGAIN = 0.990	FZOFF = 0.5				
Flask Temperature	50.0 degF				
Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.36	1.36	0.00	+/-0.05	
TCCR2	5059	5000	59	+/-1000	cps

ITCR2	3123	3200	-77	+/-250	cps
Sigma Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	90.00	80.00	10.00	+/-15.00	V
FCAP	9856	10000	-144	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.96	0.95	0.01		
N/F Inel Norm	0.62	0.61	0.01		
RNF	1.04	1.07	-0.03	+/-0.12	
RINC	1.61	1.64	-0.03	+/-0.18	
SGFN	24.07	24.00	0.07	+/-0.50	cu
SGFF	22.92	22.85	0.07	+/-0.50	cu
FSIN	23621	24000	-379	+/-2000	cps
FCAP	9956	10000	-44	+/-1000	cps
NFTR	0.82			<5.00	
FFTR	0.92			<5.00	
NBKG	190			<500	cps
FBKG	97			<500	cps
RTN	0.40	0.40	-0.00	+/-0.10	usec
RTF	0.42	0.40	0.02	+/-0.10	usec
Calibration Software Modules					
HRMTI Module	2015.5.4.0				
RMTI Module	2015.10.16.1				
Log Data Acquisition Software Modules					
HRMTI Module	2015.5.4.0				
RMTI Module	2015.10.16.1				
Gamma Ray Calibration Report					
Type / Serial:		002 / 11214503			
SHOP CALIBRATION		Wed Nov 09 16:25:32 2016			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	34.1				cps
Calibrator	297.9				cps
		1.3950			GAPI/cps
PRIMARY VERIFICATION					
Background	42.3				cps
Calibrator	413.8				cps
Difference				371.5	GAPI
BEFORE SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
AFTER SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00

MONUMENT RIDGE B 31D-17-7-95

PARACHUTE

GARFIELDStateCO

CompanyURSA OPERATING COMPANY LLC
WellMONUMENT RIDGE B 31D-17-7-95
FieldPARACHUTE
CountyGARFIELDStateCO

API No.: 05045228990000Serv #: 903681440
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BHL: 1306' FNL & 1982' FEL
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CBL-M

Sec: 8Twp: 7SRge: 95W

GROUND LEVEL Elevation5702'

KB, 17' Ft. above perm. datum

KB

Type Fluid in Hole

FRESH WATER

@ Time Logged2 DEC 2016 @ 04:30

Density of Fluid

8.4 PPG

- Driller7914'

Fluid Level

SURFACE

- Logger7686'

Cement Top Est. Logged1732'

11808537 / RS, WY

n - Logged Interval7680'

Equipment / Location

B. RIDDEL

Log Interval3811'

Recorded by

R. TOLLE

Recorded Temp.222 degF

Witnessed by

Surface

Protection

Liner

String

String

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

ESTIMATED TOP OF CEMENT : 1732'
GAMMA BLANKET : 408 GAPI
FREE PIPE CALIBRATION DEPTH : 370'

TENSION PULLED AT 6653'

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