

HALLIBURTON

RESERVOIR
MONITORING TOOL
ELITE

CompanyURSA OPERATING COMPANY LLC

WellTOMPKINS 32B-08-07-95

FieldPARACHUTE

CountyGARFIELDStateCO

CompanyURSA OPERATING COMPANY LLC

WellTOMPKINS 32B-08-07-95

FieldPARACHUTE

CountyGARFIELDStateCO

API No.:05045224750000

Serv #:903518021

Other Services

Location:SHL: 200' FSL & 585' FEL

BHL: 1760' FNL & 1980' FEL

Sec:11

Twp:6S

Rge:92W

CBL-M

Permanent DatumGROUND LEVEL

Elevation5532'

Elevation

Log Measured FromKB

17' Ft. above perm. datum

K.B. 5549'

D.F. 5549'

G.L. 5532'

Drilling Measured FromKB

Date @ Time Logged08 SEPT 2016 @ 02:00

Type Fluid in Hole

FRESH WATER

Run No. ONE

Density of Fluid

8.4 PPG

Depth - Driller7698'

Fluid Level

SURFACE

Depth - Logger7461'

Cement Top Est. Logged

2840'

Bottom - Logged Interval7461'

Equipment / Location

11808537 / RS. WY

Top - Log Interval3767'

Recorded by

S. BURGIE

Max. Recorded Temp.201 degF

Witnessed by

N/A

CEMENTING DATA

Surface

Protection

Liner

String

String

Date / Time Cemented

String

N/A

Primary / Squeeze

N/A

N/A

Expected Compressive Strength

N/A

psi@ N/A hrs

N/A

psi@ N/A hrs

N/A

psi@ N/A hrs

Cement Volume

N/A

N/A

N/A

N/A

N/A

N/A

Cement Type / Weight

N/A

/ N/A

N/A

/ N/A

N/A

/ N/A

Formulation

N/A

N/A

N/A

N/A

N/A

N/A

Mud Type / Mud Wgt.

N/A

/ N/A

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'

1808'

8.625"

32.0 #

SURFACE

1808'

THREE

7.875"

1808'

7562'

4.5"

11.6 #

SURFACE

7562'

<<< 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 : 2840'
GAMMA BLANKET : 223 GAPI
FREE PIPE CALIBRATION DEPTH : 215'

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SVCS.
YOUR CREW TODAY : SONNY BURGIE, BLAKE RIDDEL, DANIEL FLINDERS, CHUCK SIMONS, BRAD BRUDERER

Service Ticket No.903518021

API No.05045224750000

PGM Ver15.10.29001

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.

00000001

Serial No.

12105780

Serial No.

11680597

Serial No.

00000001

Model No.

XHU-3

Model No.

TTTC-U2

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	Turn				
ONE	3850'	4060'	0 PSI	20	REPEAT			
TWO	7461'	3767'	0 PSI	20	MAIN			
	GAMMA RAY		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			

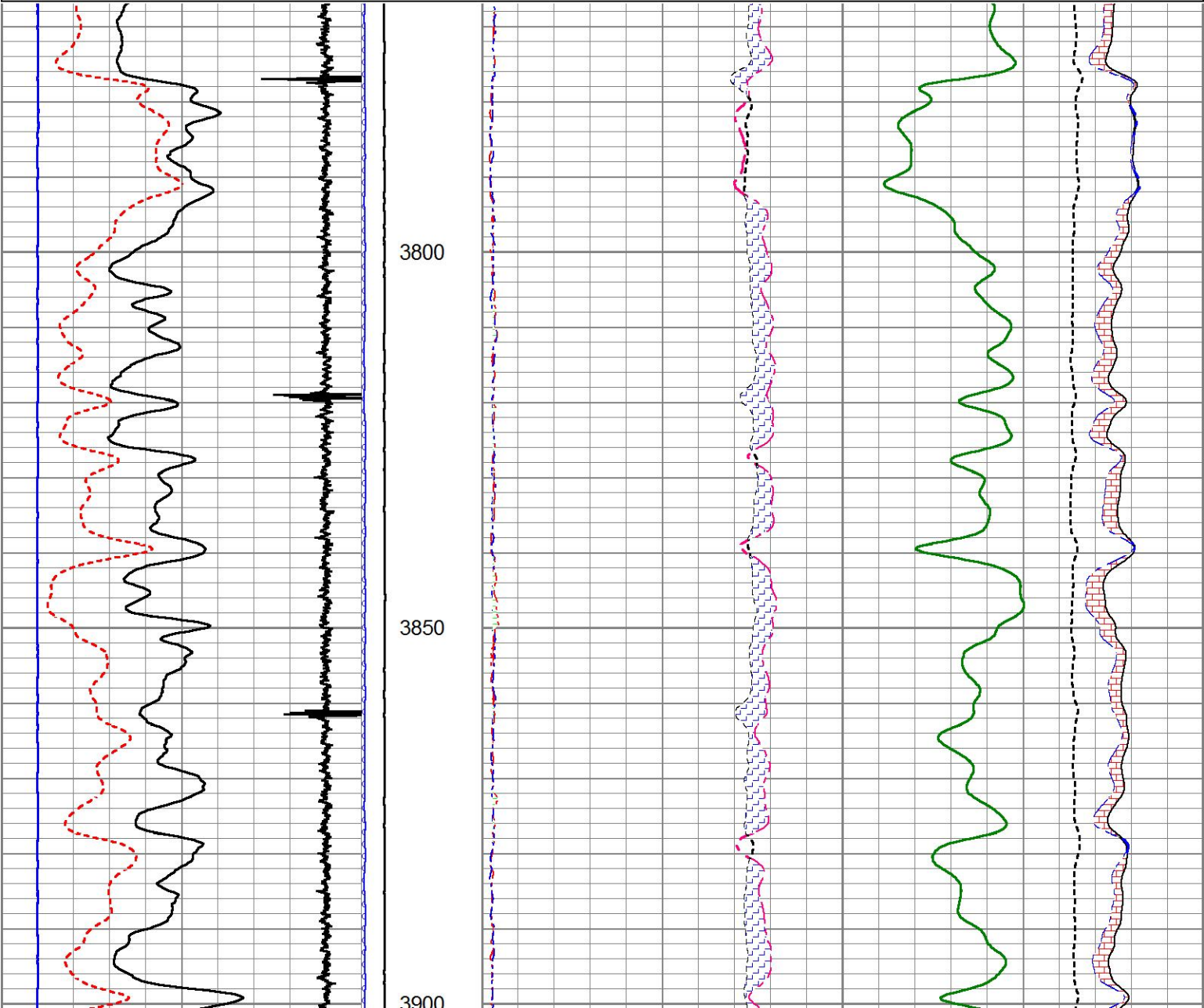
MAIN PASS

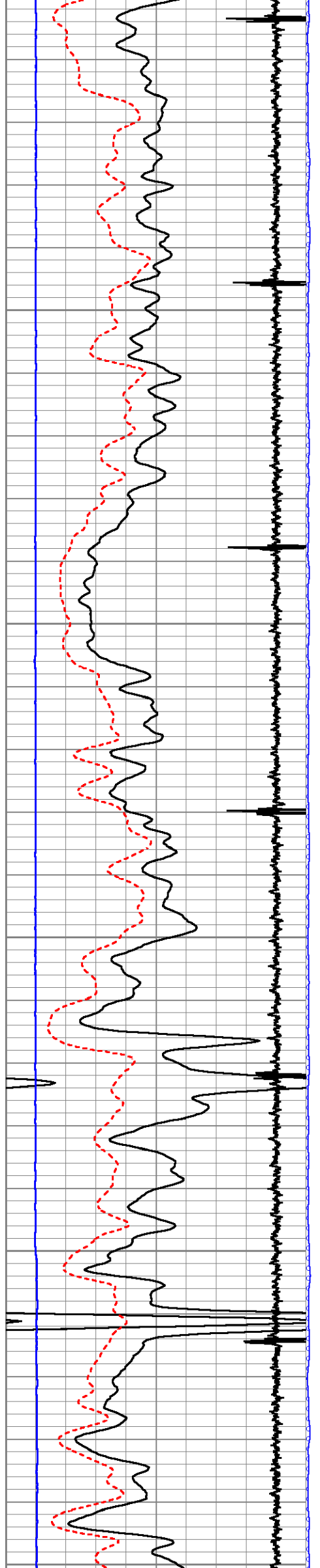
HALLIBURTON

5" = 100'

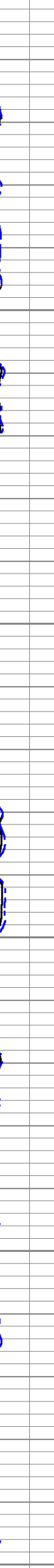
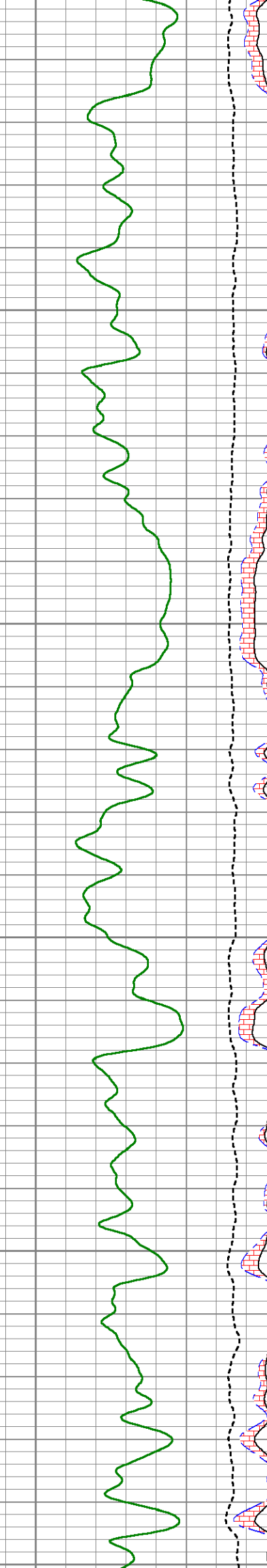
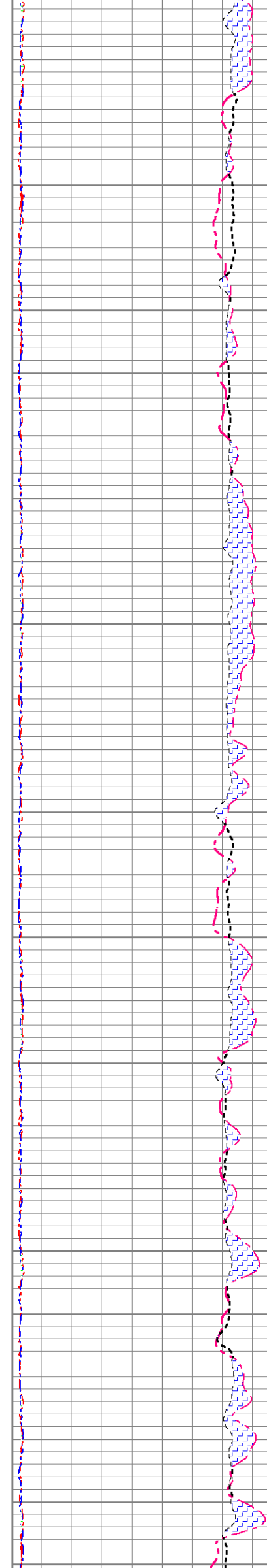
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Dataset Pathname merge2
Presentation Format !1!!RM~1
Dataset Creation Thu Sep 08 04:26:42 2016
Charted by Depth in Feet scaled 1:240

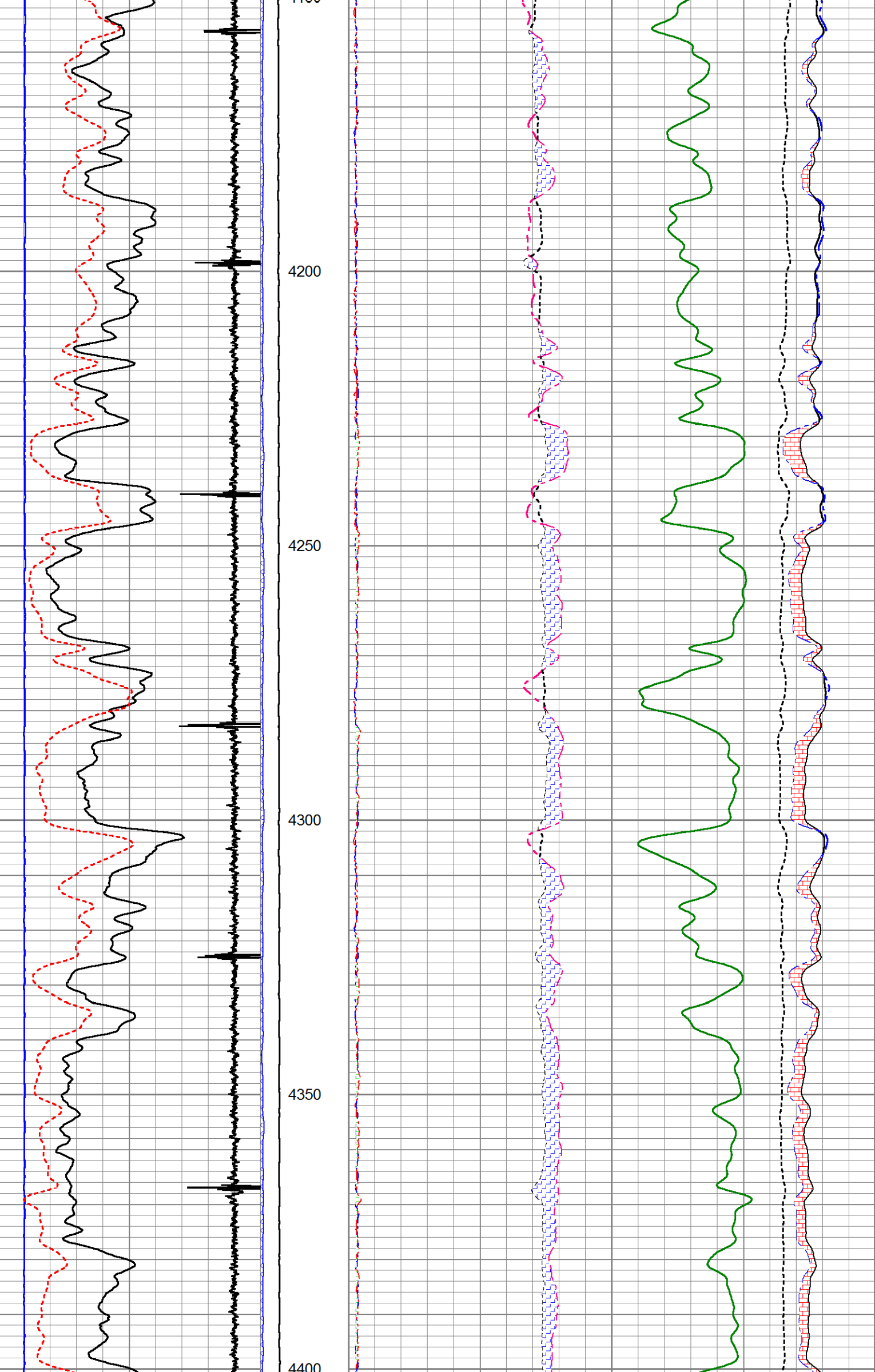
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2700	CCL	-300		0	(lb5000	2	RNF (Ratio Near/Far)	0.5	100000	FSIN
0	LSPD (ft/min)	200	0	OAI1100	1.65	RIN (Ratio Near/Far Incl)	0.65	60000	NCAP	0
10	SGINear	40			0	NFTR (Near Fit Error)	100	60000	FCAP	0
					0	FFTR (Far Fit Error)	100			

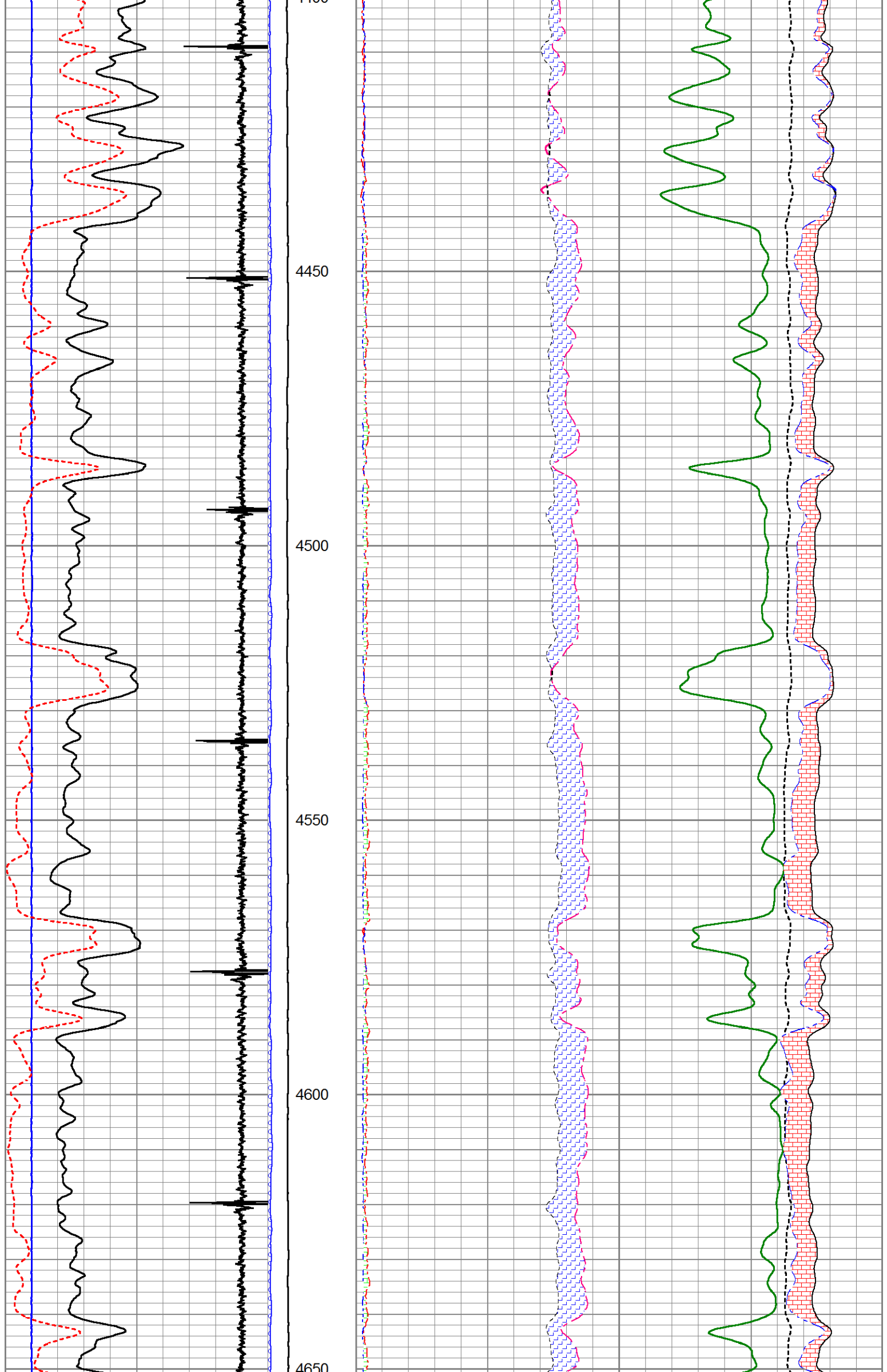


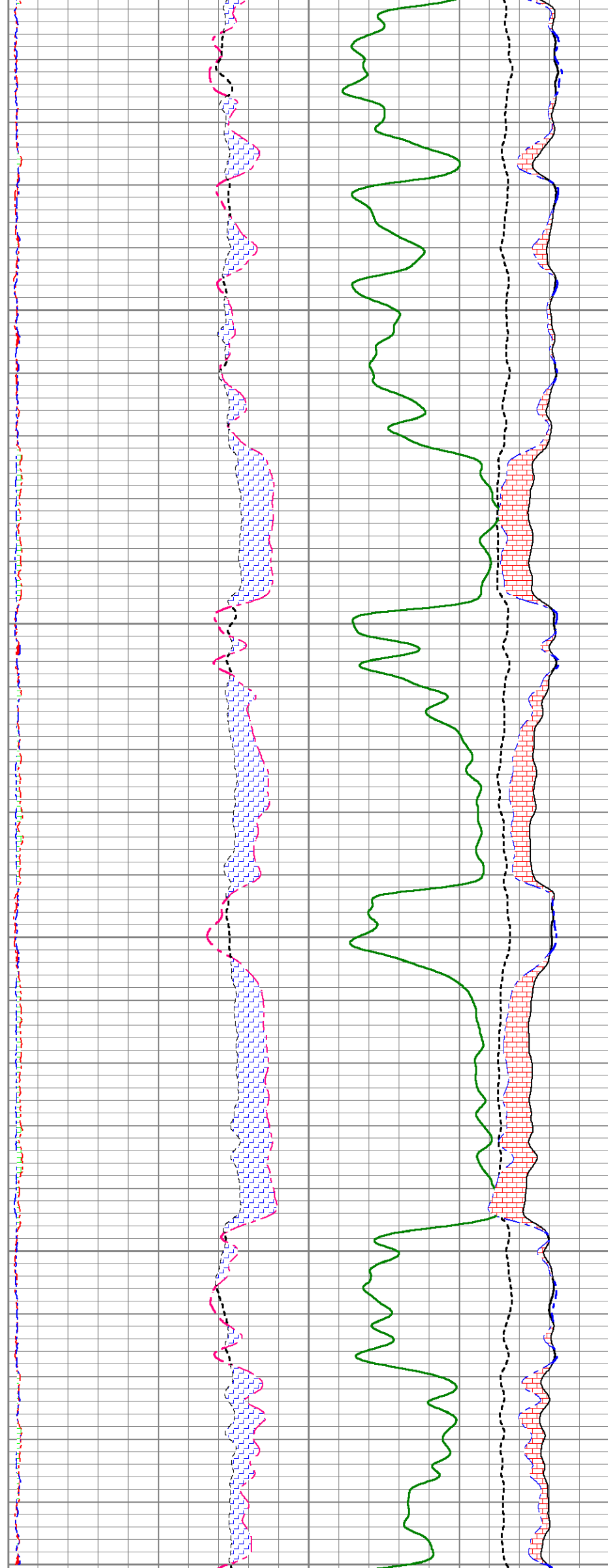
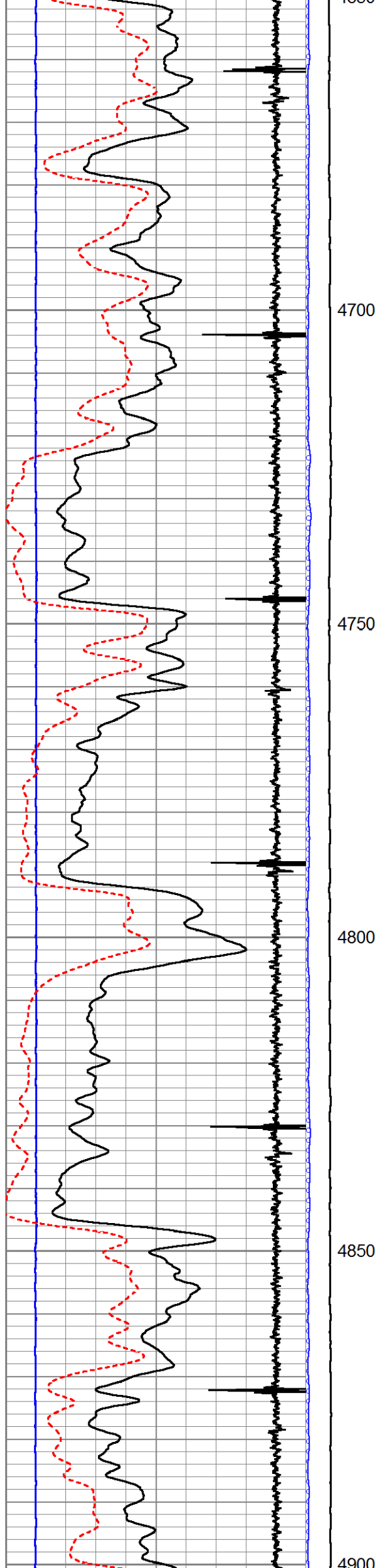


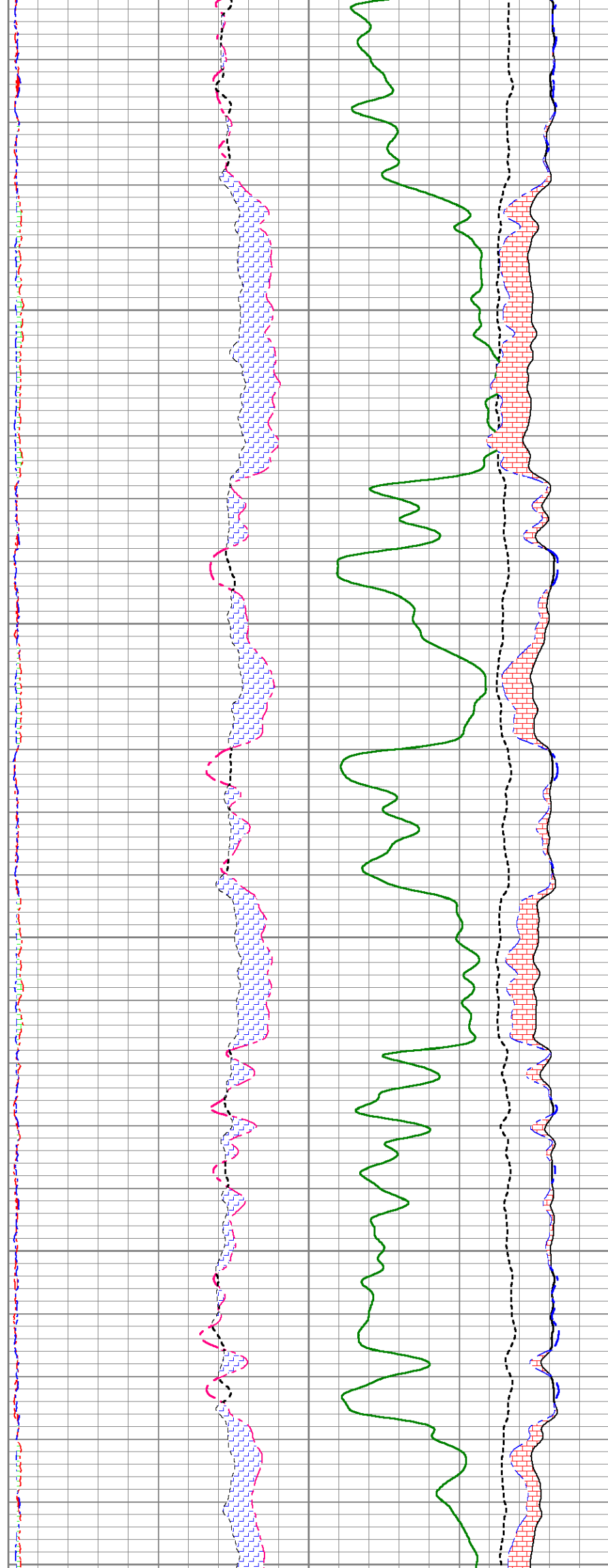
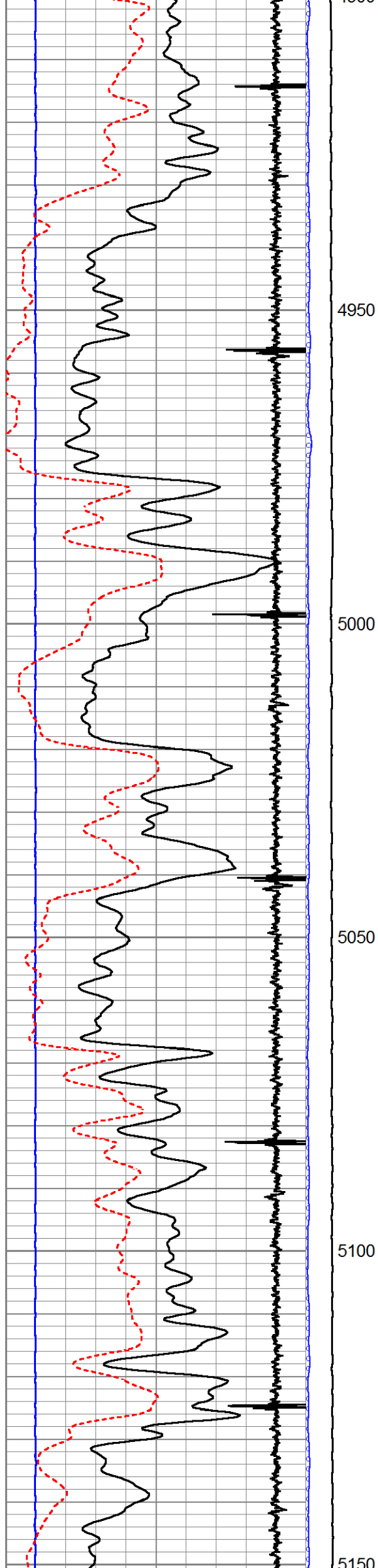
4150 4100 4050 4000 3950

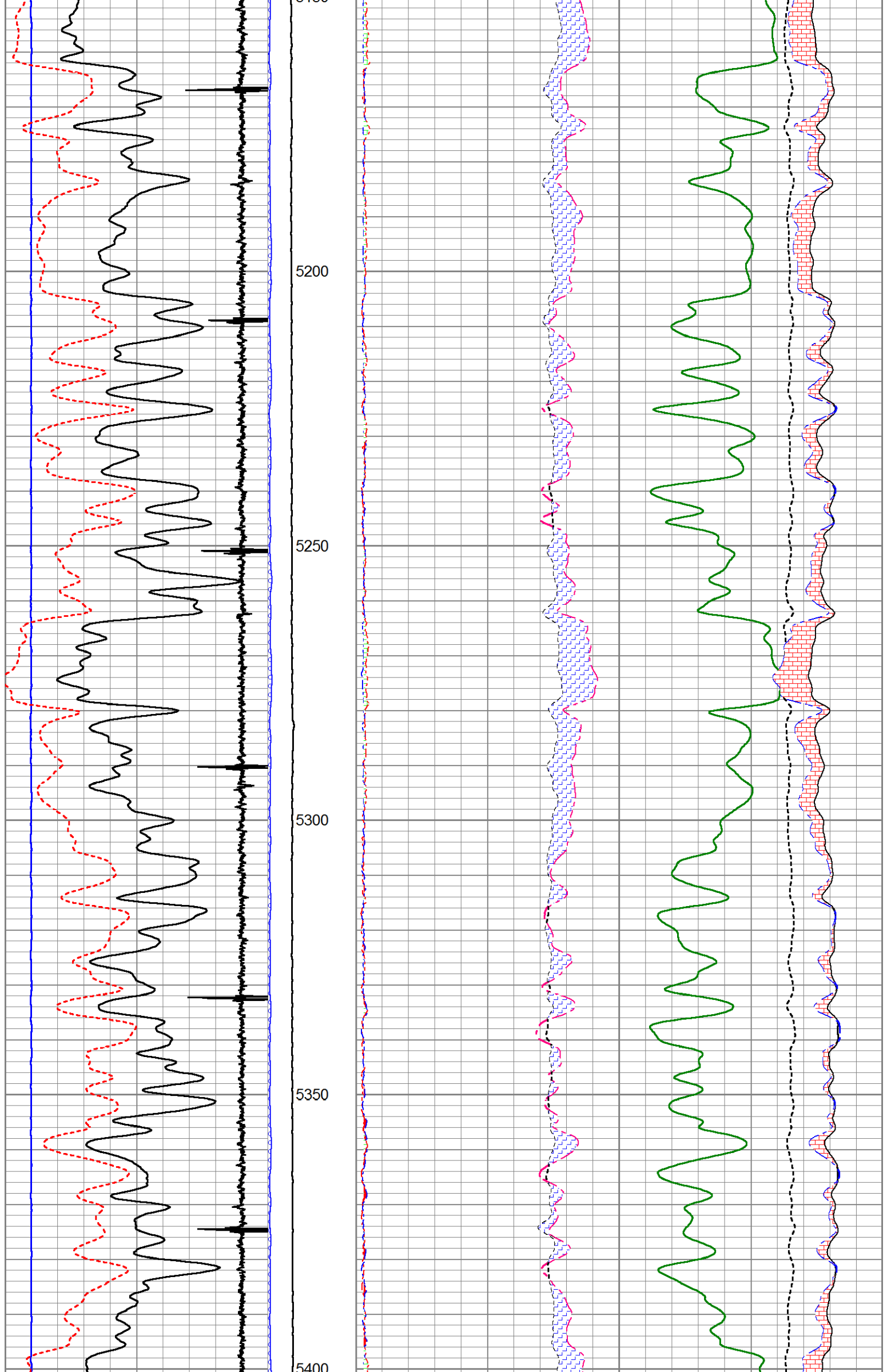


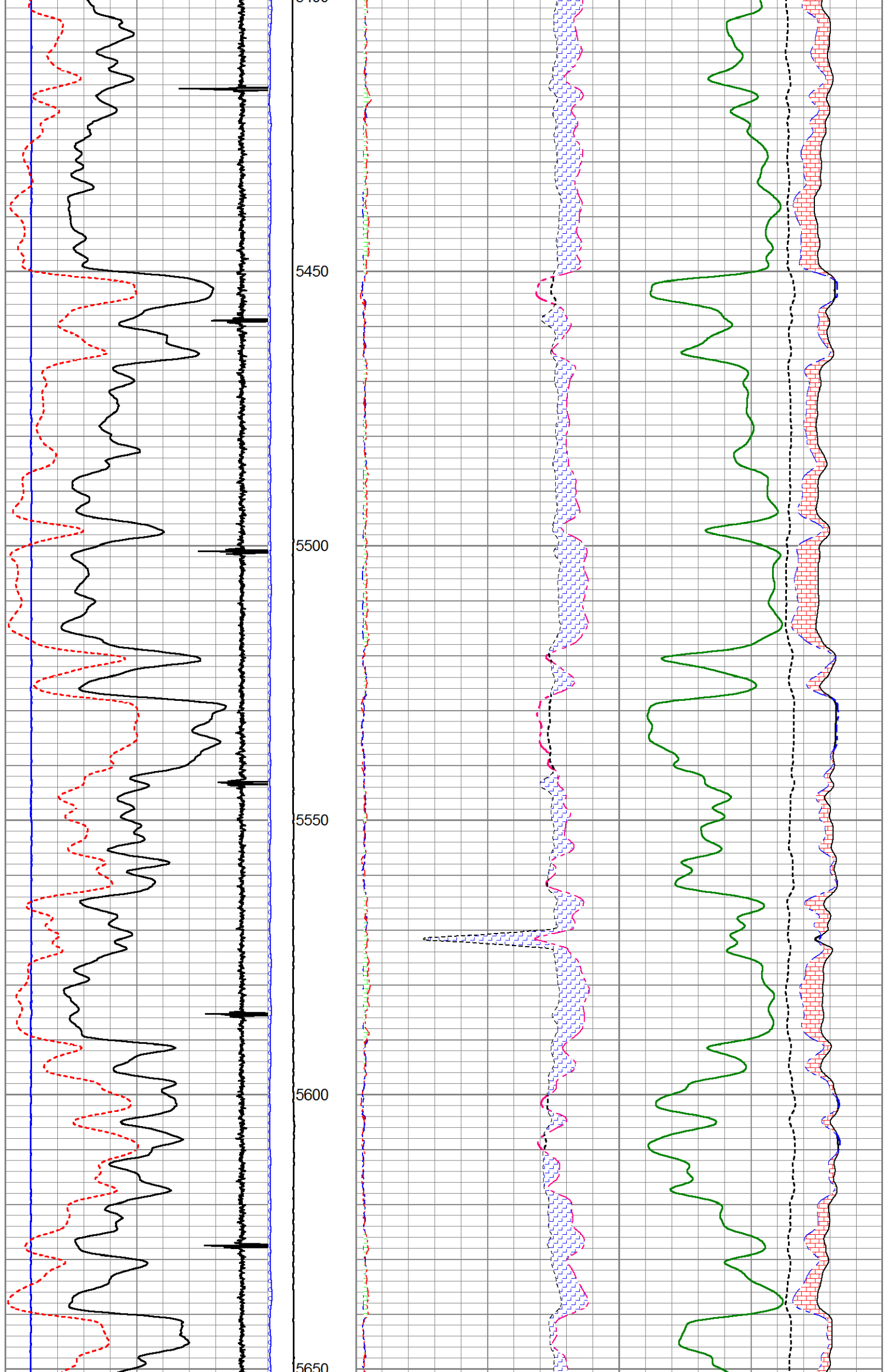


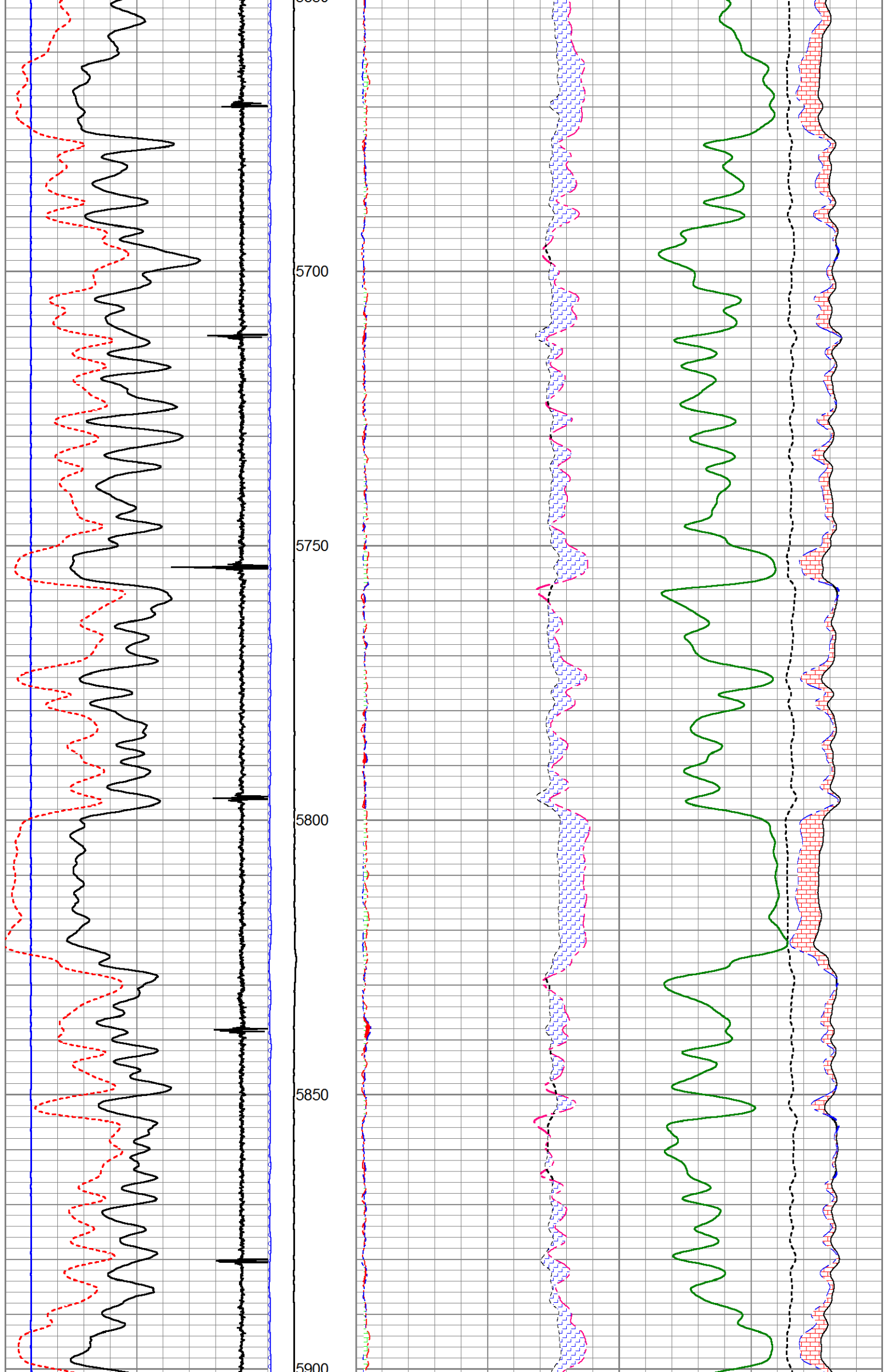


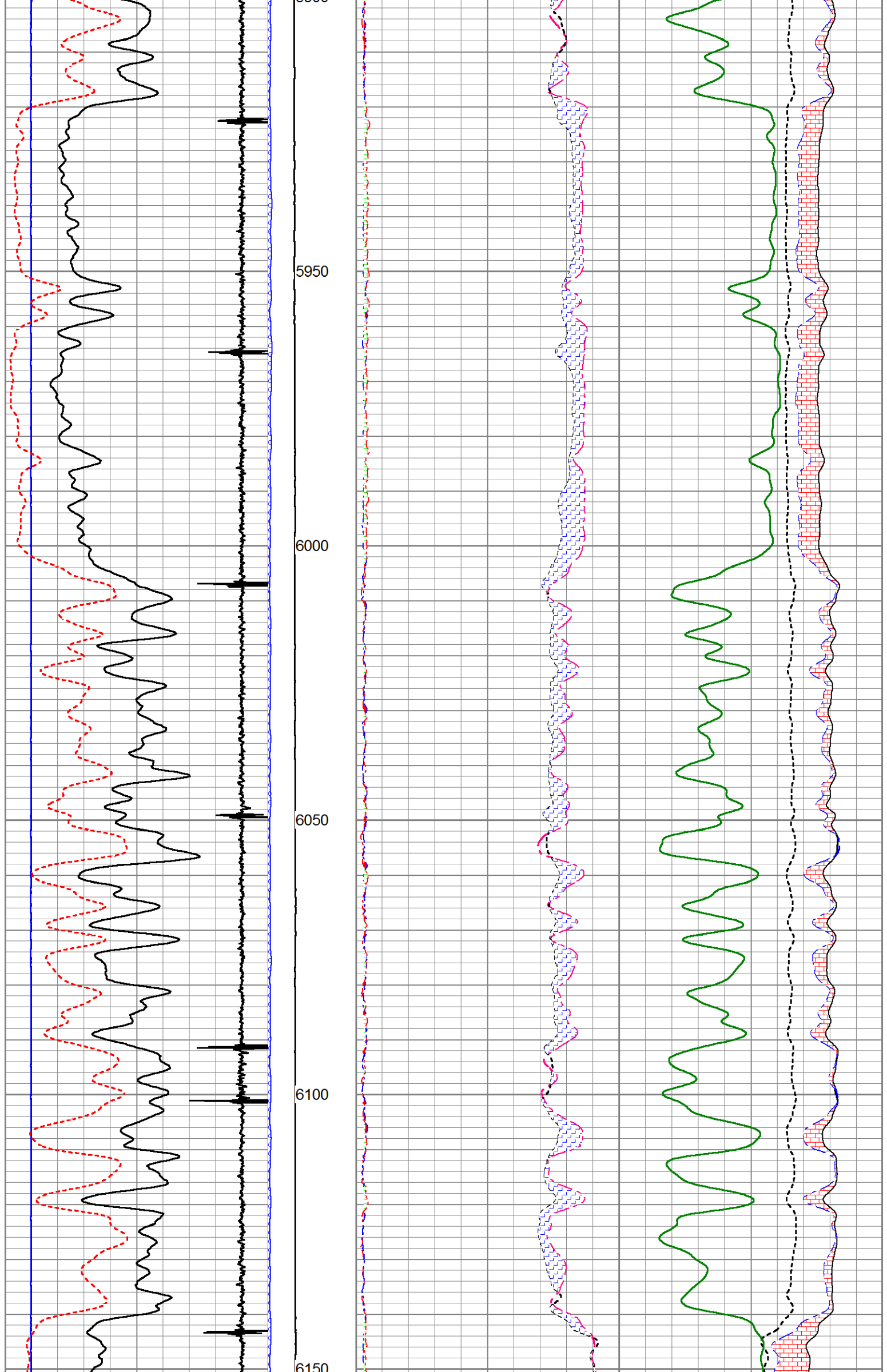


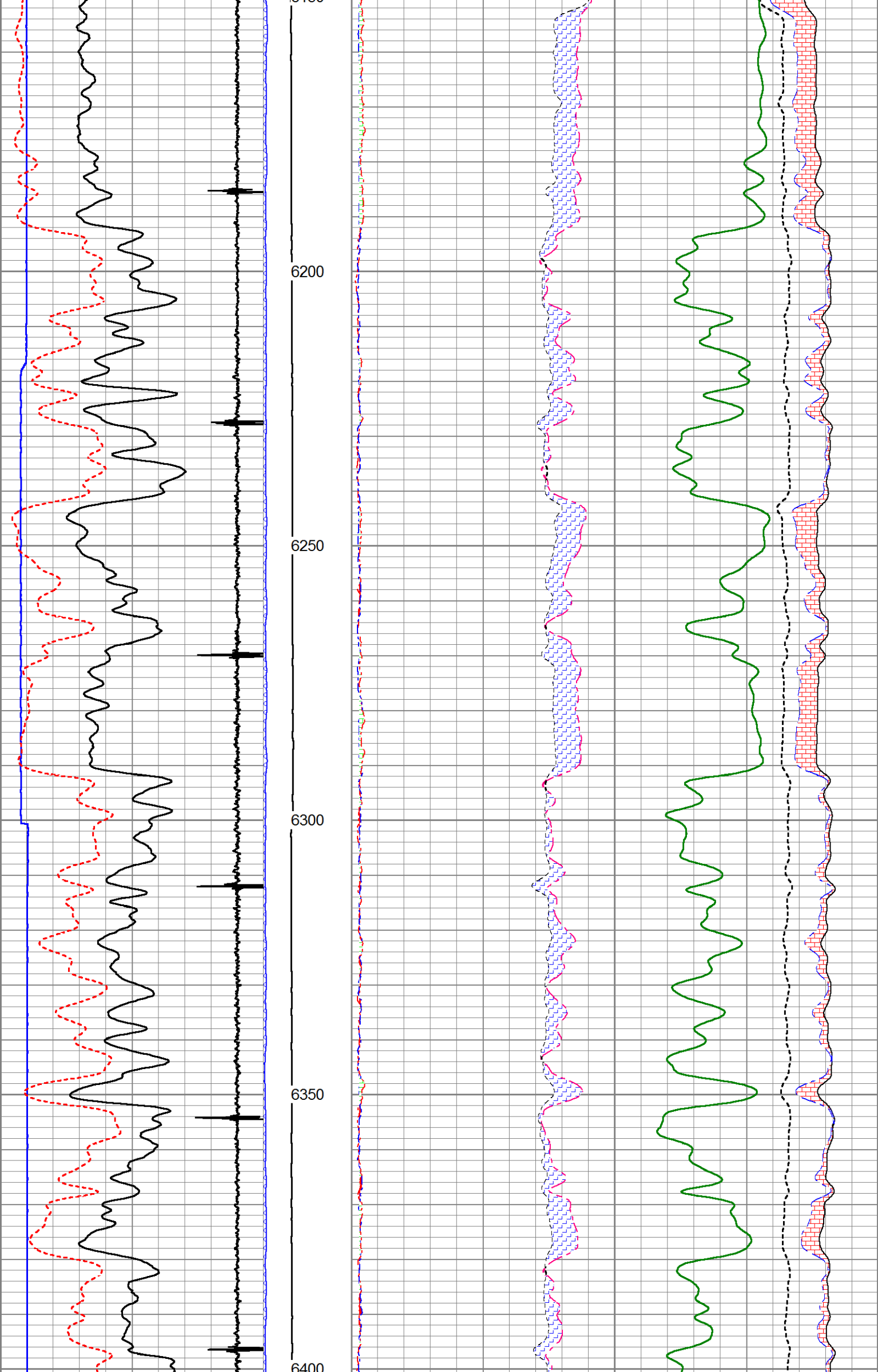


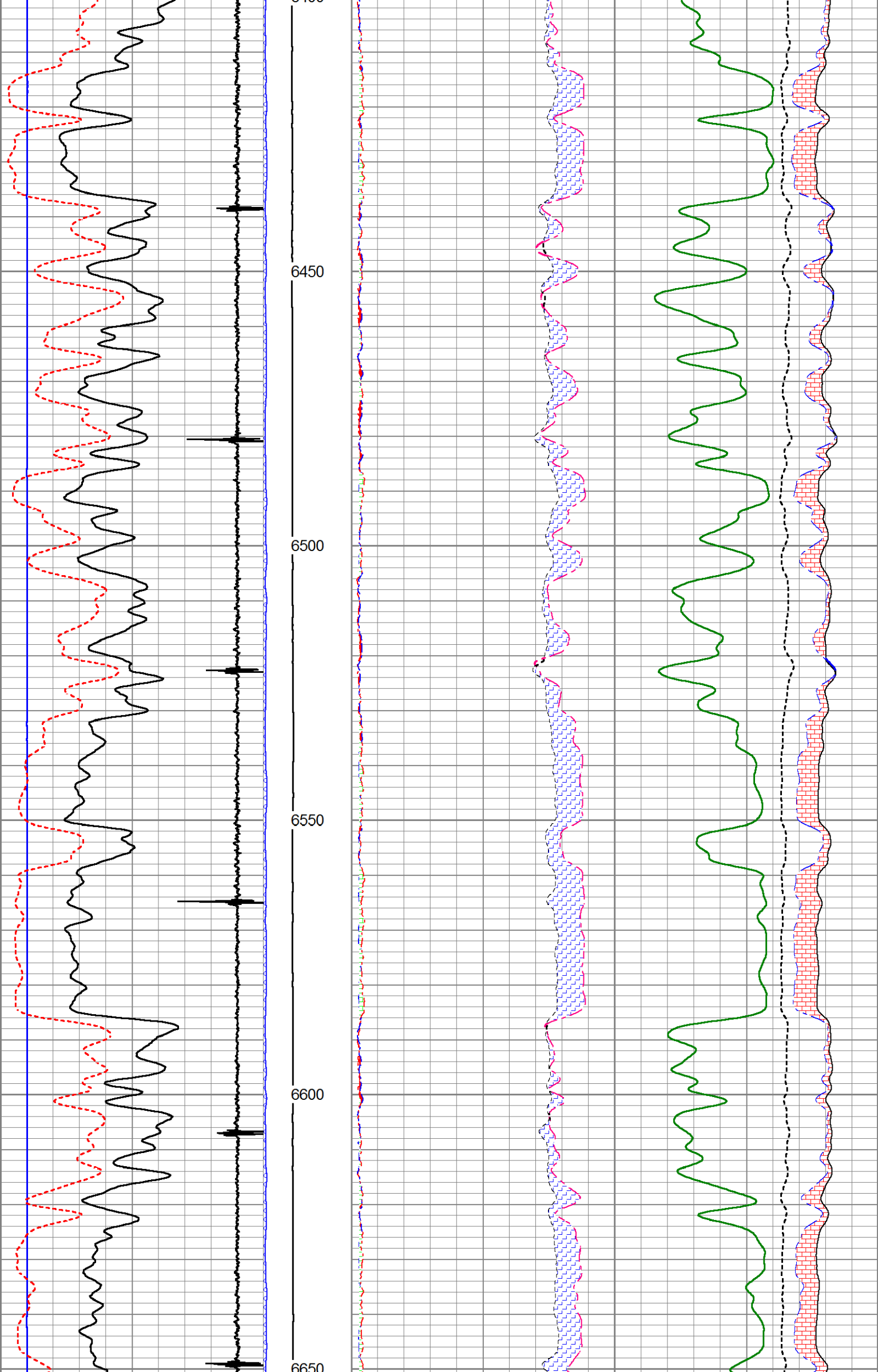


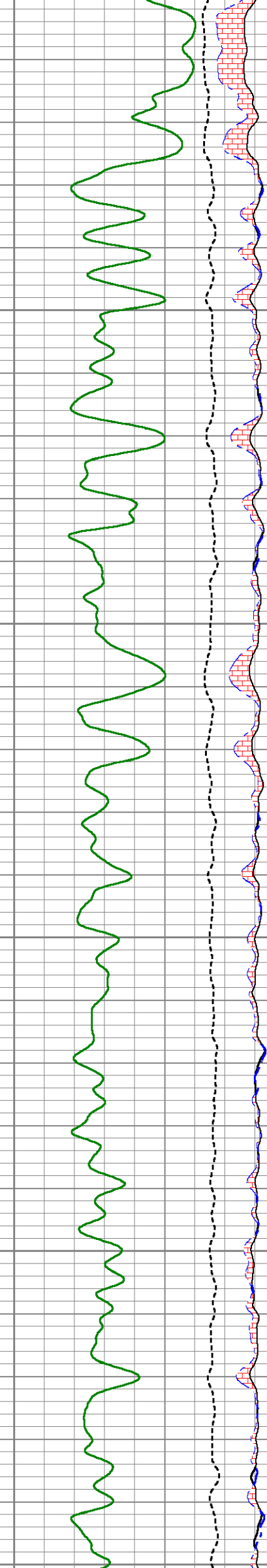
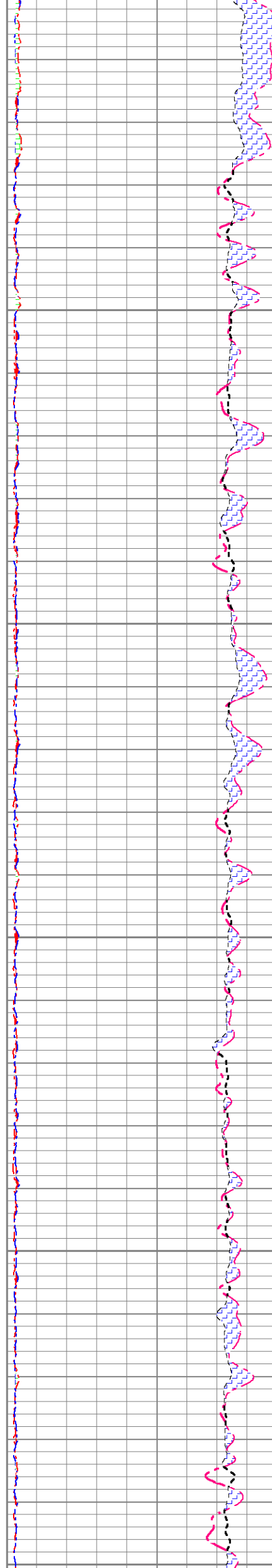
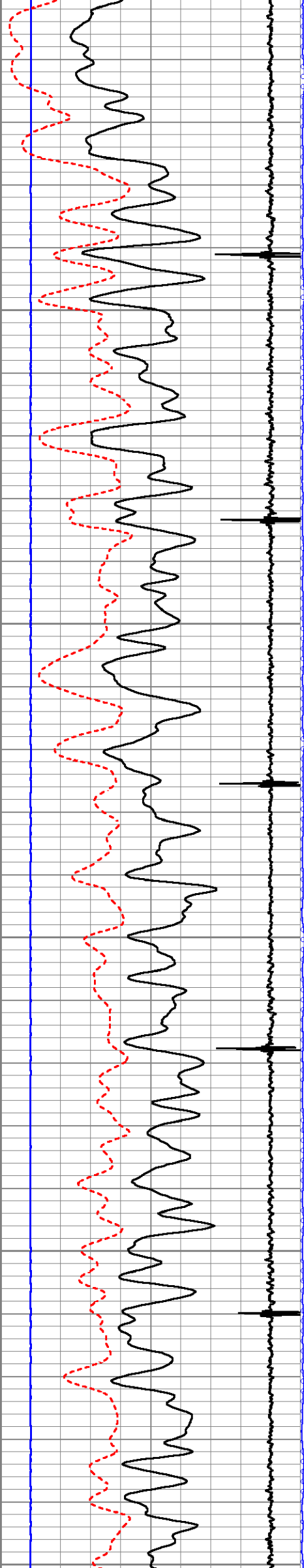


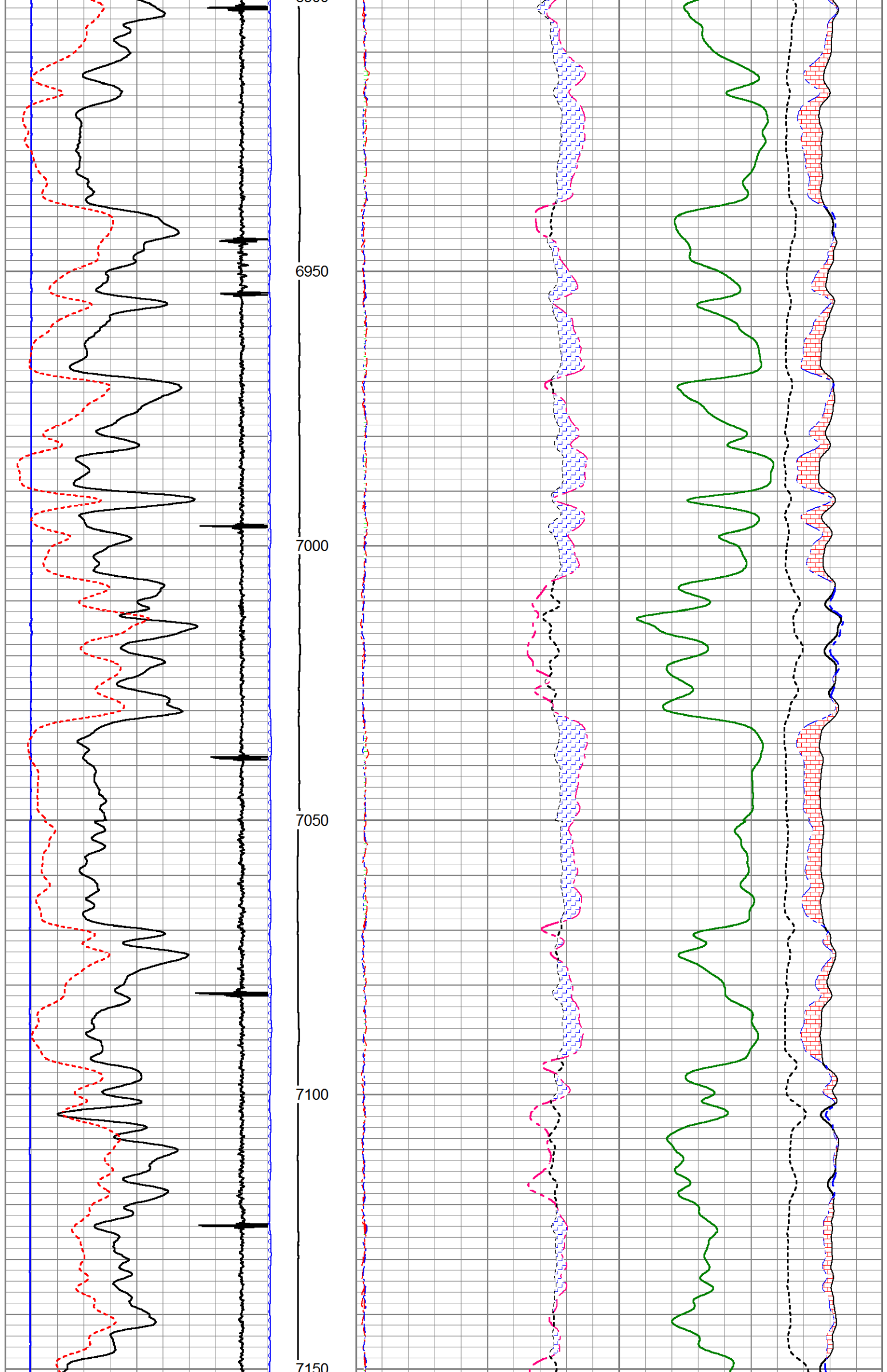


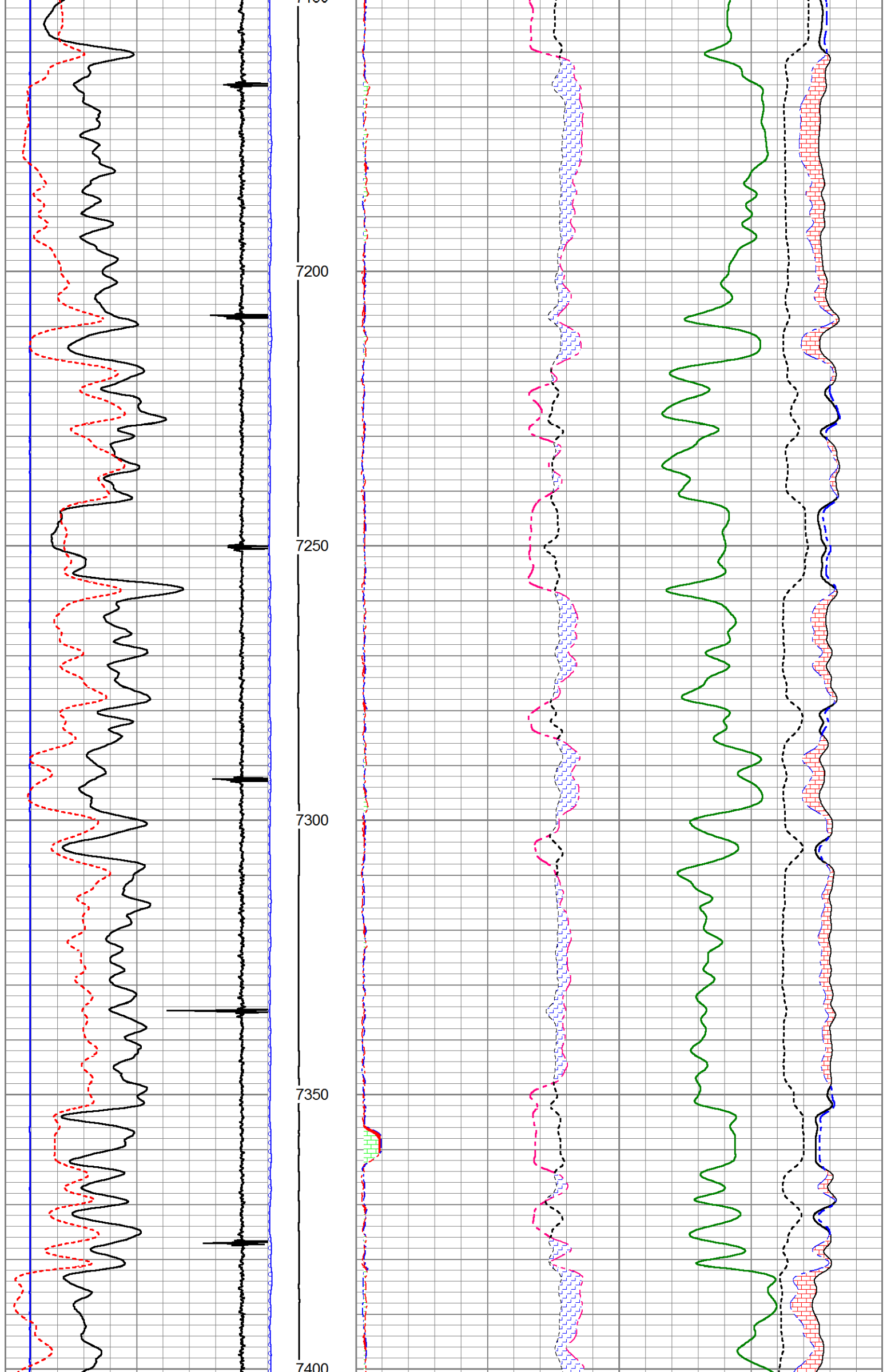


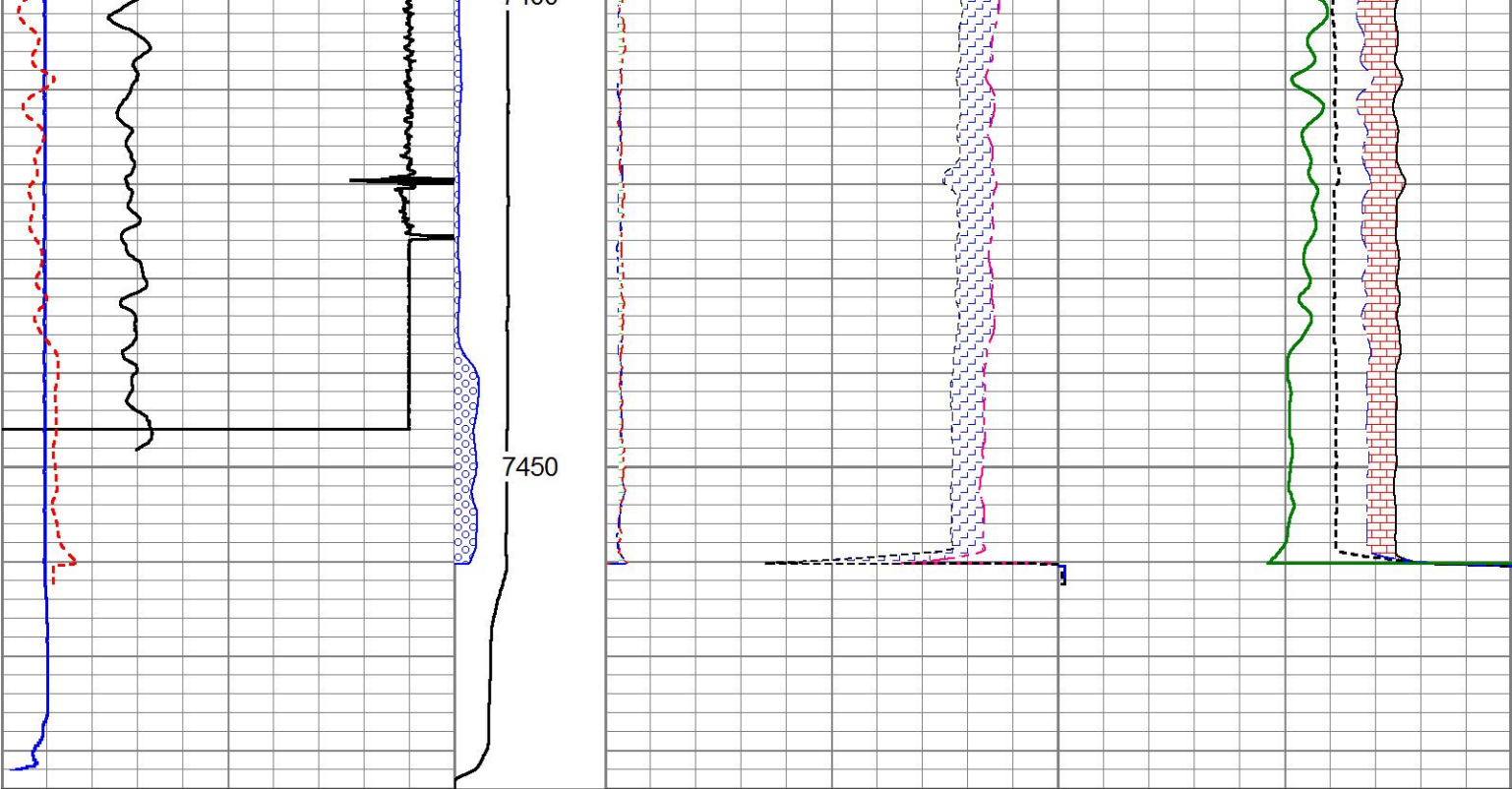












0	GR	200	LTEN	60	SGFF				0
2700	CCL	-300		0 (lb'5000	2	RNF (Ratio Near/Far)	0.5	100000	FSIN
0	LSPD (ft/min)	200	0 OAI1100	1.65	RIN (Ratio Near/Far Inel)	0.65	60000	NCAP	0
10	SGINear	40		0	NFTR (Near Fit Error)	100	60000	FCAP	0
				0	FFTR (Far Fit Error)	100			

MAIN PASS

HALLIBURTON

5" = 100'

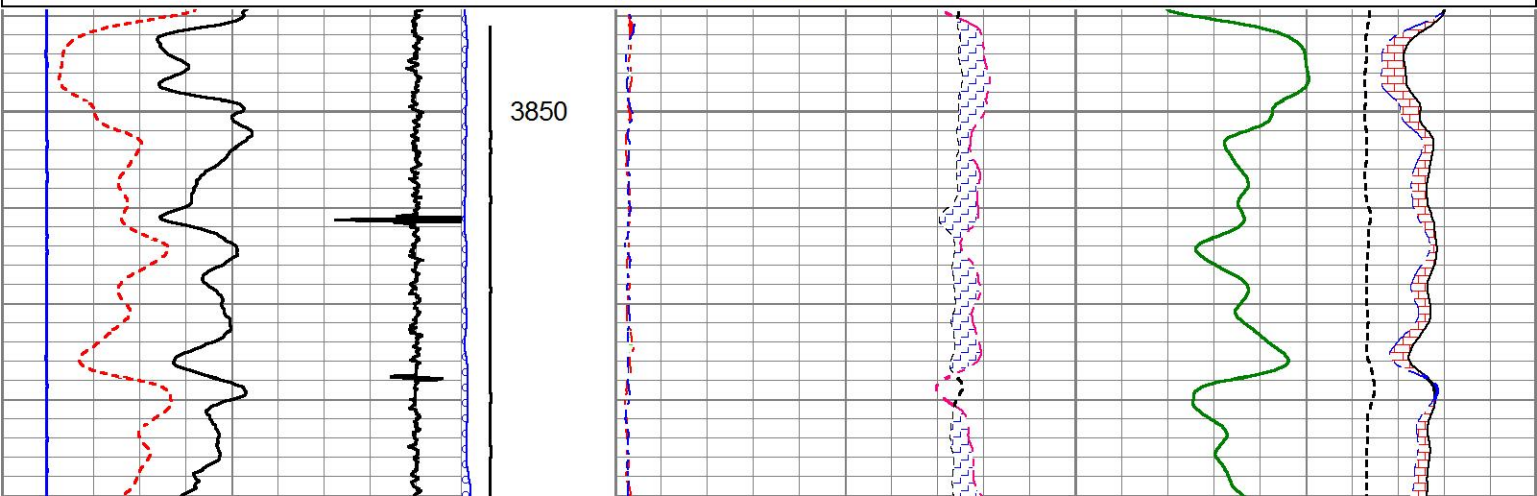
REPEAT PASS

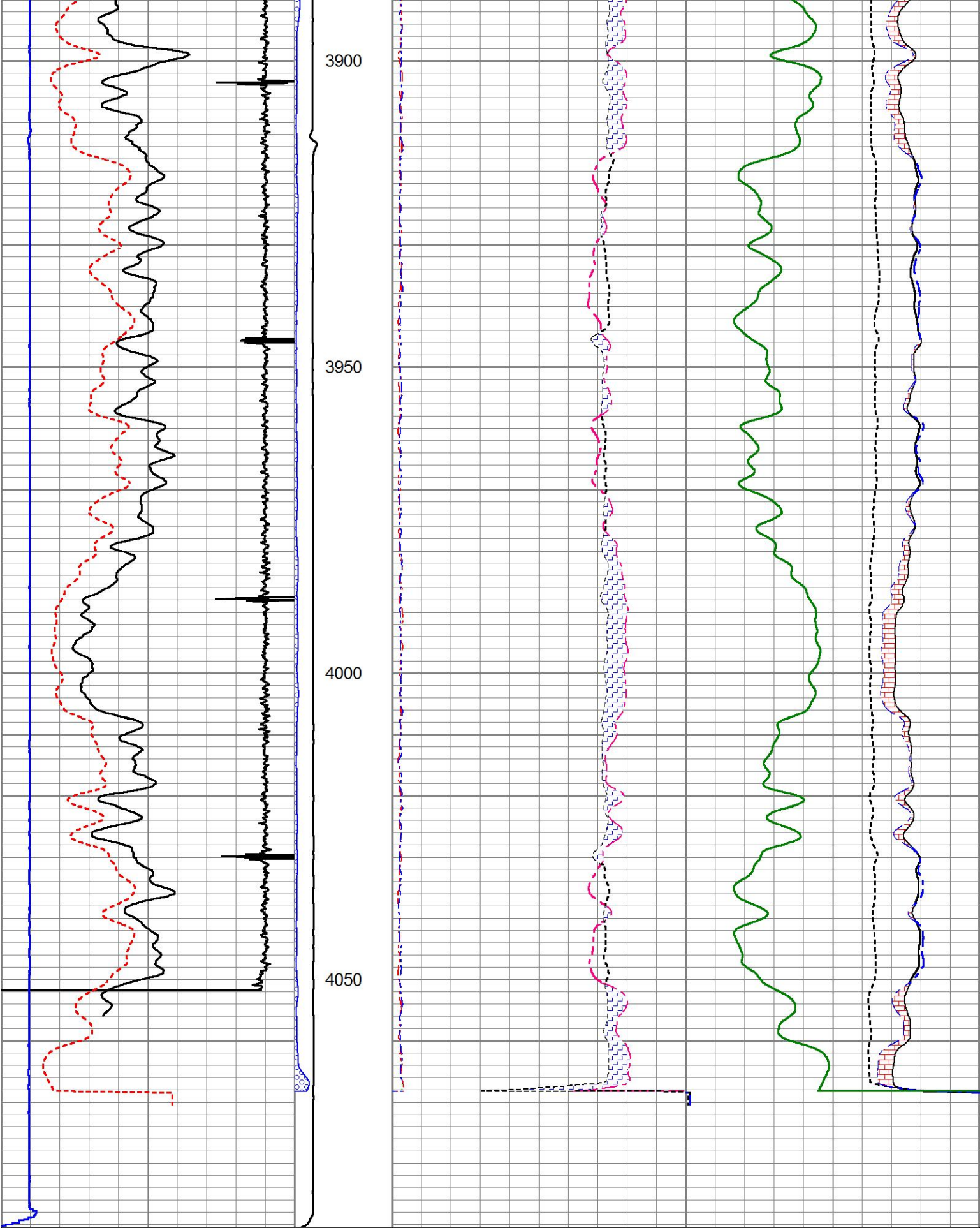
HALLIBURTON

5" = 100'

Database File	thompkins_32b_08_07_95.db
Dataset Pathname	pass2
Presentation Format	!1!!rmt_rmti
Dataset Creation	Wed Sep 07 22:57:07 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	FSIN	0
0	LSPD (ft/min)	200	0	OAI1100	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			





0	GR	200	LTEN	60	SGFF				0
2700	CCL	-300		0 (lb 5000)	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			

REPEAT PASS

HALLIBURTON

5" = 100'

Top - Bottom							
BHSAL1 1	BHSAL2 0	BHTEMP_Src TEMP	BITSIZE in 10	BORSAL kppm 150	BOTTEMP degF 100	CASED? Yes	CASEOD in 4.5
CASETHCK in 0	CASEWGHT lb/ft 11.6	LTH Sandstone	MSGGN 1	MudWgt lb/gal 8.4	PERFS 0	POROS1 1	POROS2 0
RHOCF 0.25	SO in 0	SRFTEMP degF 0	TDEPTH ft 0	UHSGC NONE	USERFTT usec/ft 0	ZREF MRayl 1.7	

Calibration Report		
Database File	thompkins_32b_08_07_95.db	
Dataset Pathname	pass4	
Dataset Creation	Wed Sep 07 23:34:51 2016	
Cement Bond Log Shop Calibration Report		
Serial-Model:	1-A	
Calibration Performed:	Wed Sep 07 22:29:12 2016	
Free Pipe Calibration		
	Measured	Units
TT	245.6	usec
Amplitude	615.7	mV
Log Base Line	6.2	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	0.133	

Reservoir Monitor Tool I Calibration Report	
Serial-Model:	11680597-A
Shop Calibration Performed:	Sat Aug 27 18:21:57 2016

Carbon/Oxygen Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	84.00	80.00	4.00	+/-15.00	V
ITCR2	3130	3250	-120	+/-250	cps
Near Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0278	5.69	<6.00
Fe	207	206 +/-2	0.0967	-----	-----
NGAIN = 0.992		NZOFF = 0.8			
Far Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0382	5.90	<6.50

Fe	209	208 +/-2	0.0926	-----	-----
FGAIN = 0.992	FZOFF = 0.8				
Flask Temperature	57.6 degF				
Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.44	0.45	-0.01	+/-0.02	
LIRI2	1.37	1.36	0.01	+/-0.05	
TCCR2	3766	4000	-234	+/-1000	cps
ITCR2	3102	3200	-98	+/-250	cps

Sigma Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	84.00	80.00	4.00	+/-15.00	V
FCAP	9744	10000	-256	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.92	0.95	-0.03		
N/F Inel Norm	0.60	0.61	-0.01		
RNF	1.09	1.07	0.02	+/-0.12	
RINC	1.68	1.64	0.04	+/-0.18	
SGFN	24.13	24.00	0.13	+/-0.50	cu
SGFF	22.93	22.85	0.08	+/-0.50	cu
FSIN	23037	24000	-963	+/-2000	cps
FCAP	9704	10000	-296	+/-1000	cps
NFTR	0.80			<5.00	
FFTR	0.91			<5.00	
NBKG	216			<500	cps
FBKG	105			<500	cps
RTN	0.37	0.40	-0.03	+/-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 / 12105780
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SHOP CALIBRATION		Mon Sep 05 10:59:30 2016			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	28.5				cps
Calibrator	160.5				cps
		1.6899			GAPI/cps
PRIMARY VERIFICATION					
Background	46.0				cps
Calibrator	265.1				cps
Difference				219.0	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)
CCL	35.14		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
GR	32.88		TTTCU-002 (12105780) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
RmtTFGT RmtTNGT	22.23		XHU-003 (000001) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
	21.73		RMTI-A (11680597) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V	13.98		X-OVER-GoxSondex Go Box x Sondex Pin CrossOver	0.27	1.69	1.00
RmtNFwvMcsP	13.98		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
RmtCommFWa	13.98					
Temp	8.89		HCBLM-A (1) Halliburton HCBLM Tool	9.38	2.75	116.00
TT3FT	6.64					
AMP3FT	6.64					
WVF5FT	5.68		CENT-CASTM-CENT	2.16	3.13	25.00
WVF3FT	2.16					

LLMTEN	0.00			CAST M INLINE CENTRALIZER			
Dataset: thompkins_32b_08_07_95.db: field/well/run1/pass4 Total length: 38.71 ft Total weight: 352.00 lb O.D.: 3.13 in							

Company	URSA OPERATING COMPANY LLC				
Well	TOMPKINS 32B-08-07-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	RESERVOIR MONITORING TOOL ELITE				