

HALLIBURTON

RESERVOIR
MONITORING TOOL
ELITE

CompanyURSA OPERATING COMPANY LLC

WellMONUMENT RIDGE B 34C-08-7-95

FieldPARACHUTE

CountyGARFIELDStateCO

CompanyURSA OPERATING COMPANY LLC

WellMONUMENT RIDGE B 34C-08-7-95

FieldPARACHUTE

CountyGARFIELDStateCO

API No.:05045229110000

Serv #:903682720

Other Services

Location:SHL: 980' FSL & 144' FEL

BHL: 387' FSL & 1983' FEL

Sec: 8

Twp: 7S

Rge: 95W

CBL-M

Permanent DatumGROUND LEVEL

Elevation5702'

Elevation

Log Measured FromKB

17' Ft. above perm. datum

K.B. 5719'

D.F. 5719'

G.L. 5702'

Drilling Measured FromKB

Date @ Time Logged28 NOV 2016 @ 11:30

Type Fluid in Hole

FRESH WATER

Run No. ONE

Density of Fluid

8.4 PPG

Depth - Driller7530'

Fluid Level

SURFACE

Depth - Logger7287'

Cement Top Est. Logged

1742'

Bottom - Logged Interval7262'

Equipment / Location

11808537 / RS. WY

Top - Log Interval3564'

Recorded by

B. RIDDEL

Max. Recorded Temp.220 degF

Witnessed by

R. TOLLE

CEMENTING DATA

Surface

Protection

R. TOLLE

Liner

String

String

Date / Time Cemented

String

N/A

N/A

Primary / Squeeze

N/A

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'

1814'

8.625"

32.0 #

SURFACE

1814'

THREE

7.875"

1814'

7530'

4.5"

11.6 #

SURFACE

7480'

<<< Fold Here >>>

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Comments

ESTIMATED TOP OF CEMENT : 1742"
GAMMA BLANKET : 408 GAPI
FREE PIPE CALIBRATION DEPTH : 255'

PULLED TENSION @ 3215' 2878' AND 2645'

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

Service Ticket No.903682720

API No.05045229110000

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.	12146425	Serial No.	11224503	Serial No.	12095949	Serial No.	11836468
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	Gamma	Amplitude			
ONE	4000'	3800'	0 PSI	20	REPEAT			
TWO	7262'	3564'	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			

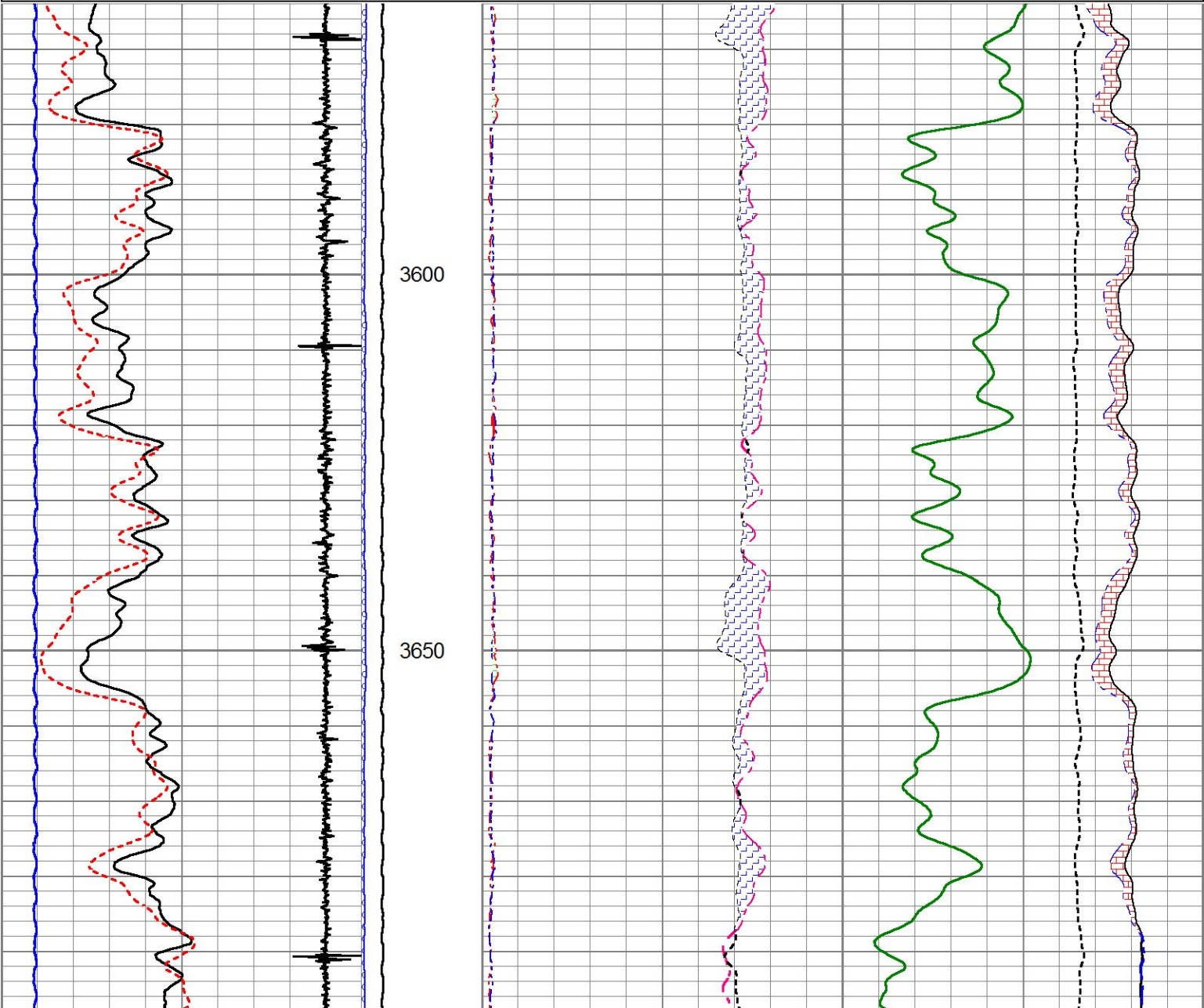
MAIN PASS

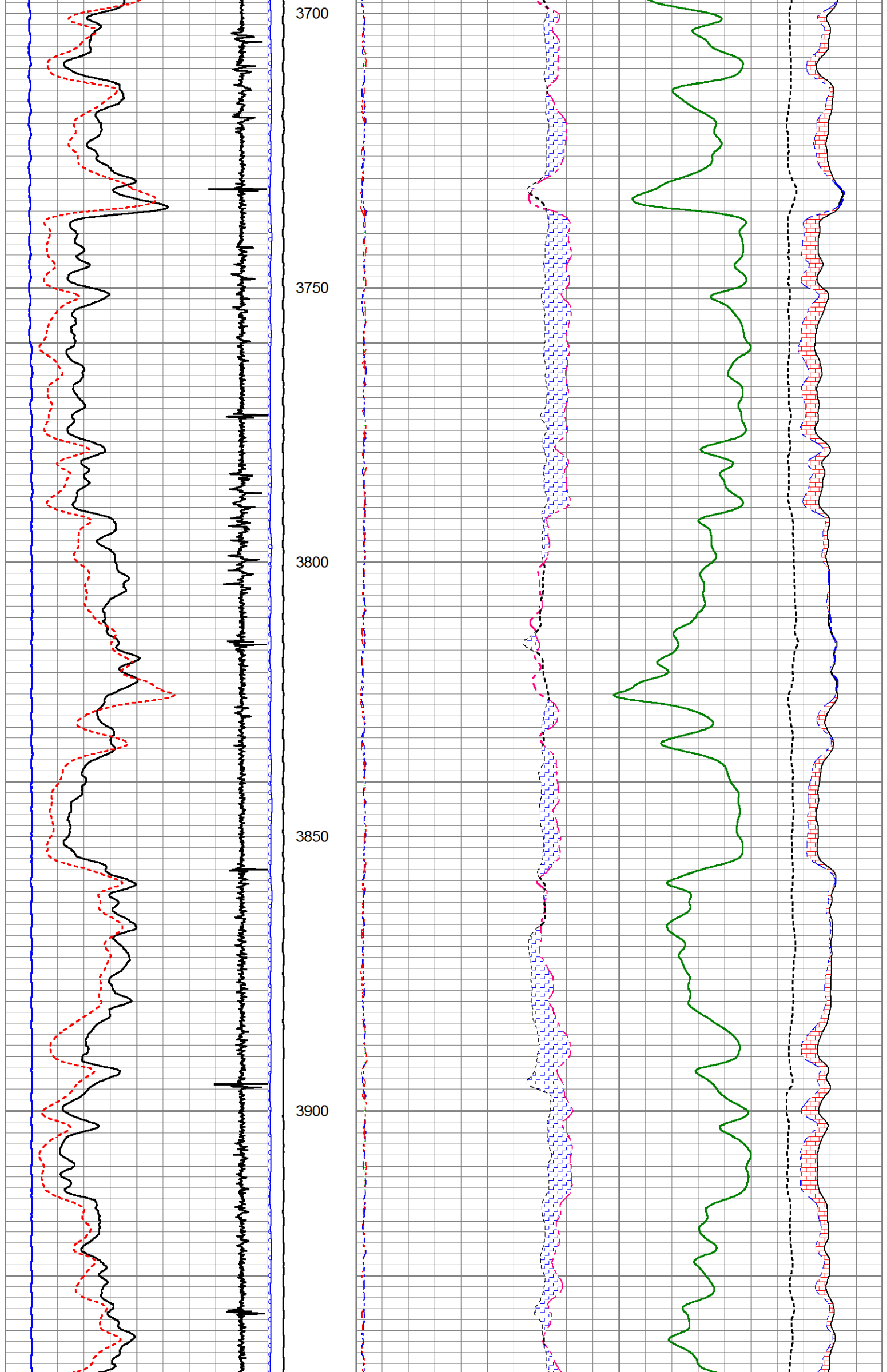
HALLIBURTON

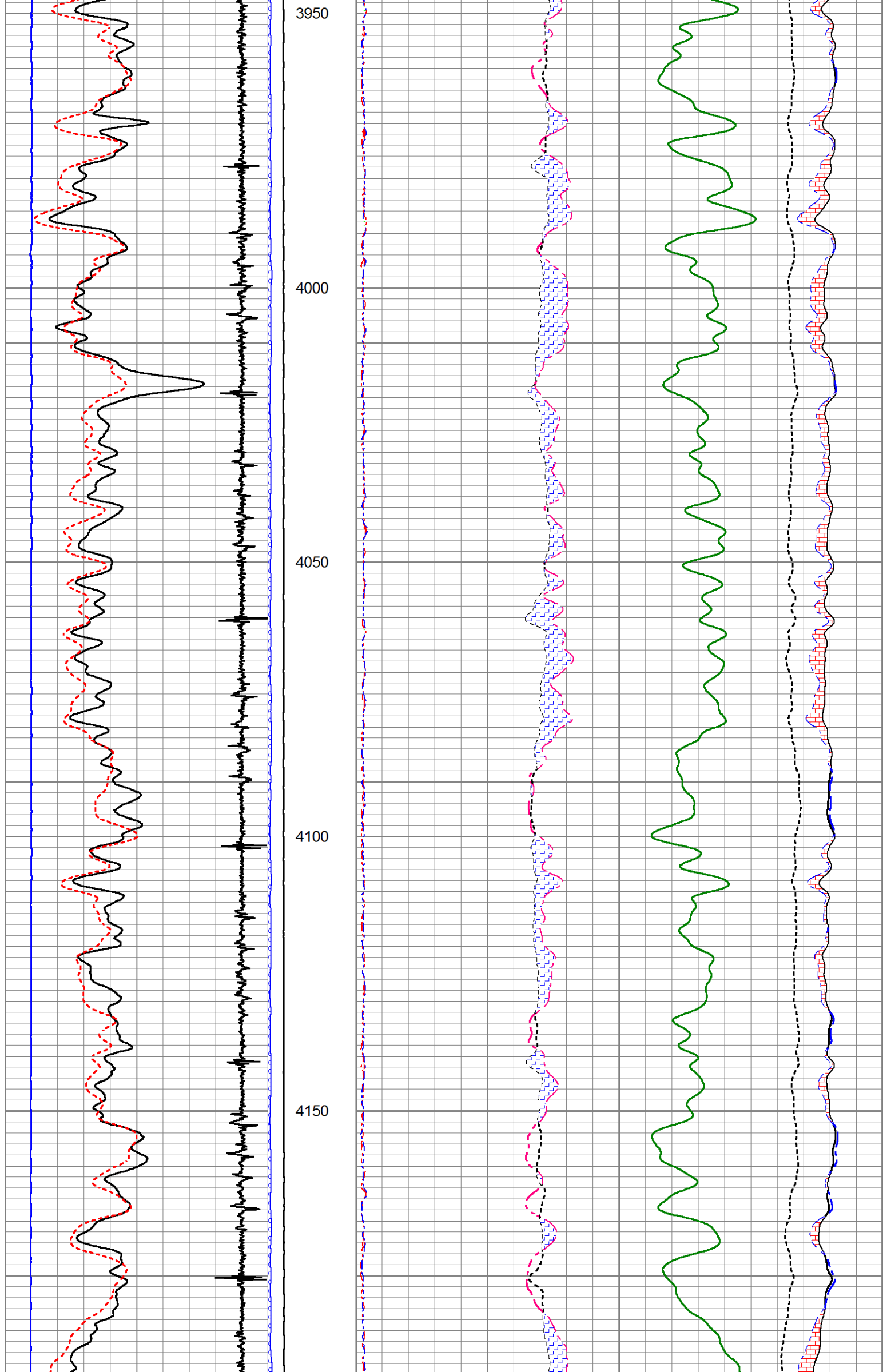
5" = 100'

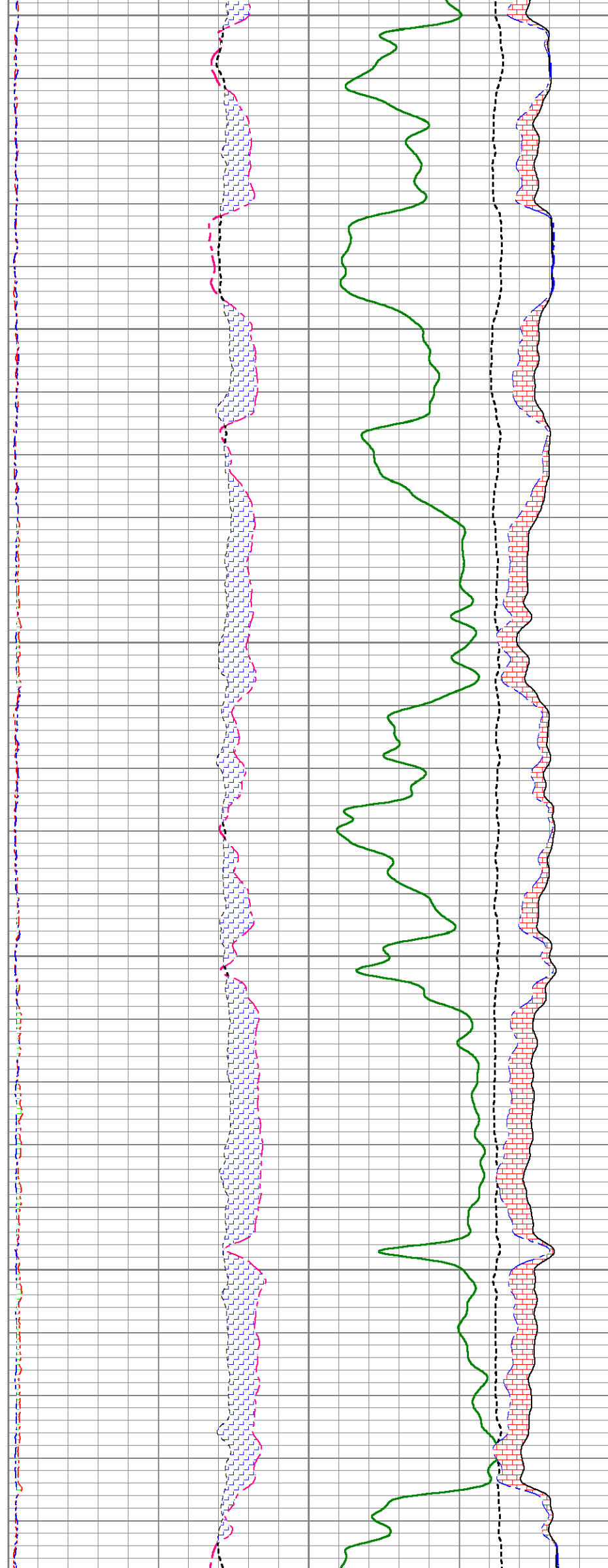
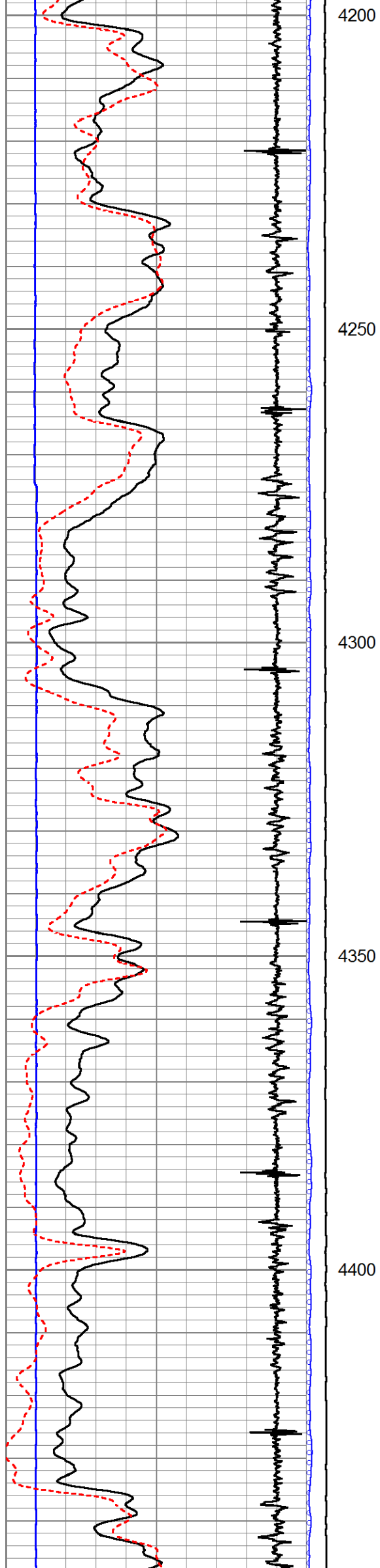
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Dataset Pathname merge1
Presentation Format !1!!RM~1
Dataset Creation Tue Nov 29 00:39:54 2016
Charted by Depth in Feet scaled 1:240

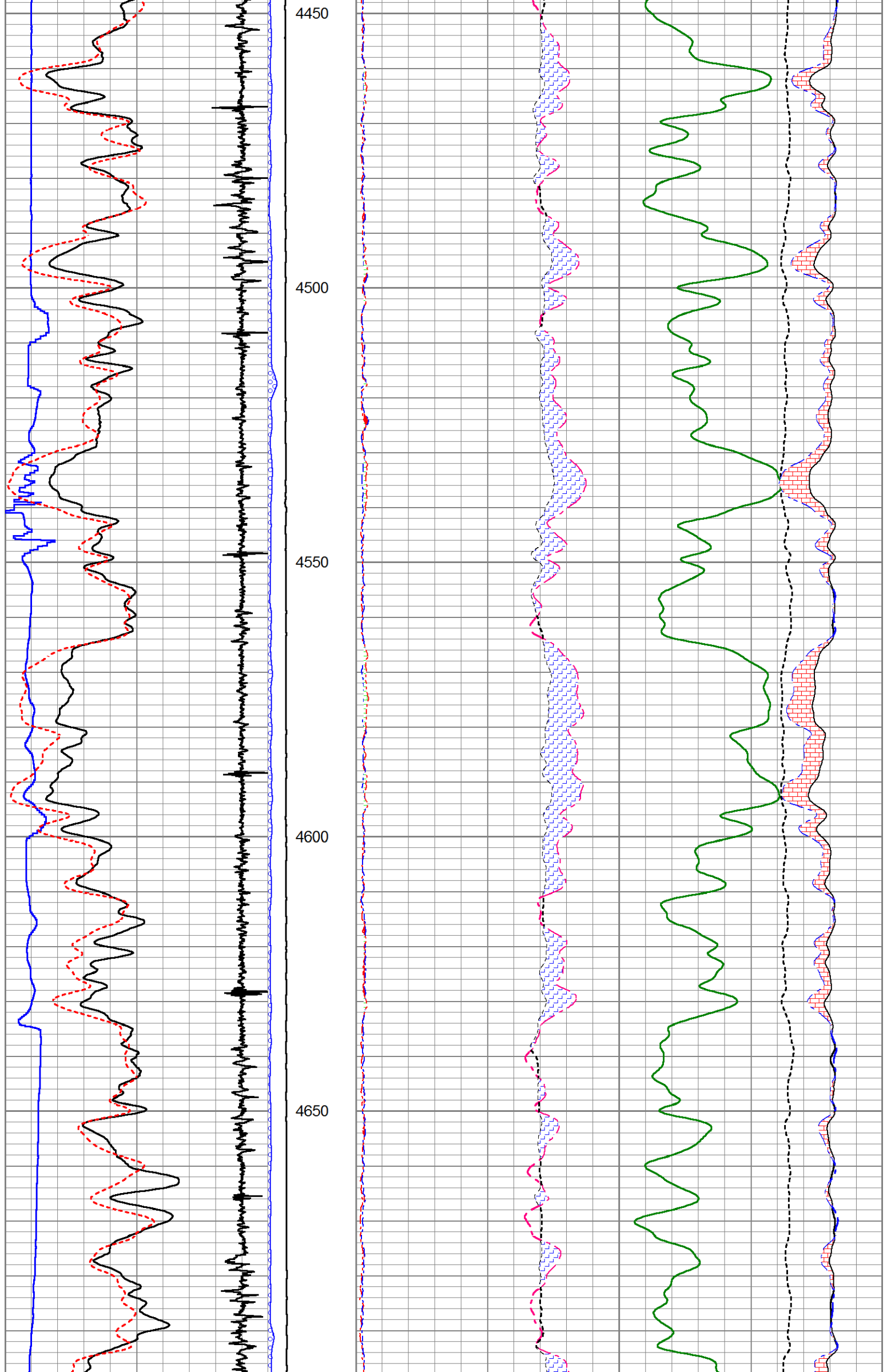
0	GR	200	LTEN	60	SGFF					0
2700	CCL	-300		0	(lb5000	2	RNF (Ratio Near/Far)	0.5	100000	FSIN
0	LSPD (ft/min)	200	0	OAI1100	1.65	RIN (Ratio Near/Far Incl)	0.65	60000	NCAP	0
10	SGINear	40			0	NFTR (Near Fit Error)	100	60000	FCAP	0
					0	FFTR (Far Fit Error)	100			

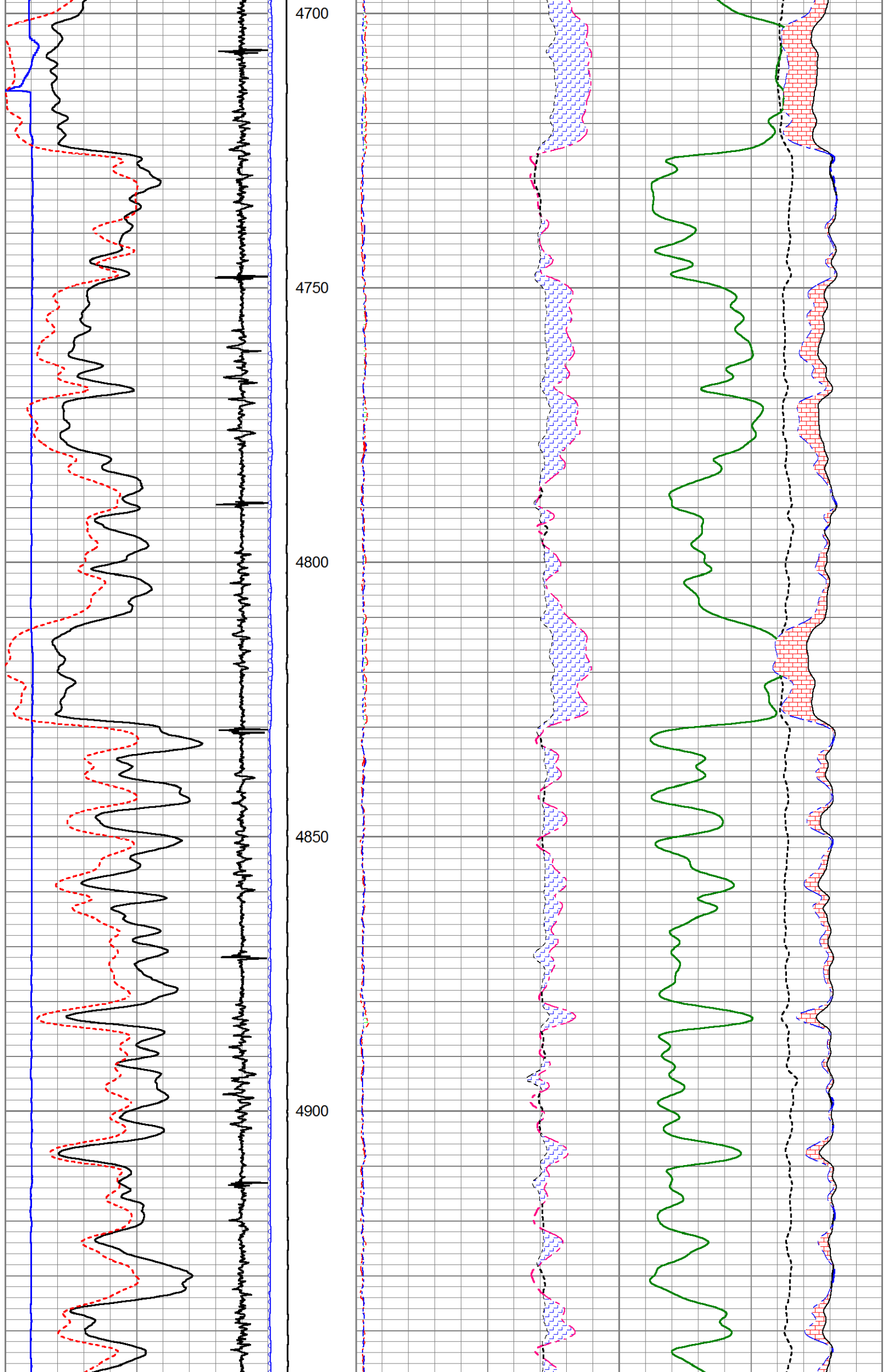


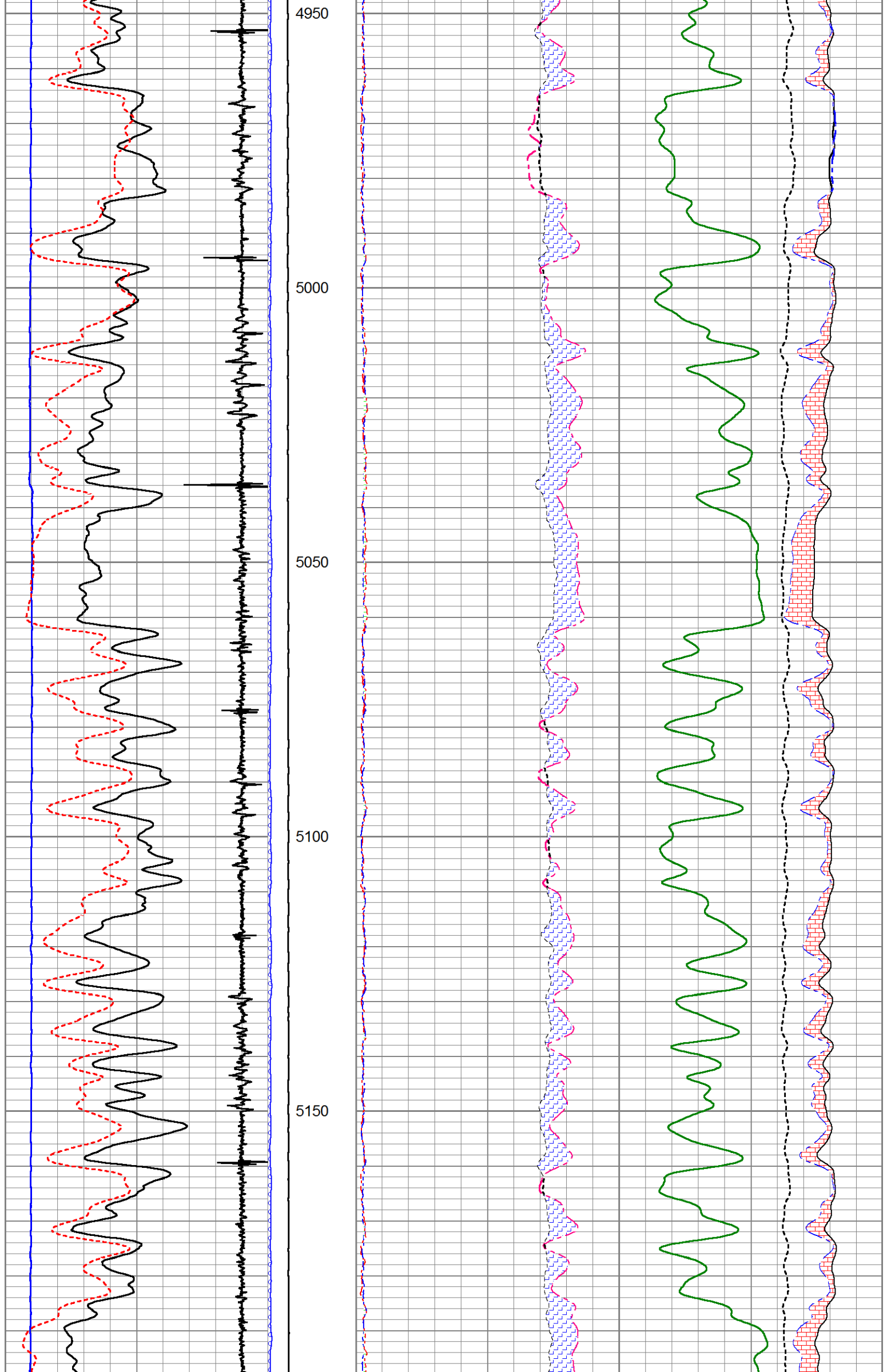


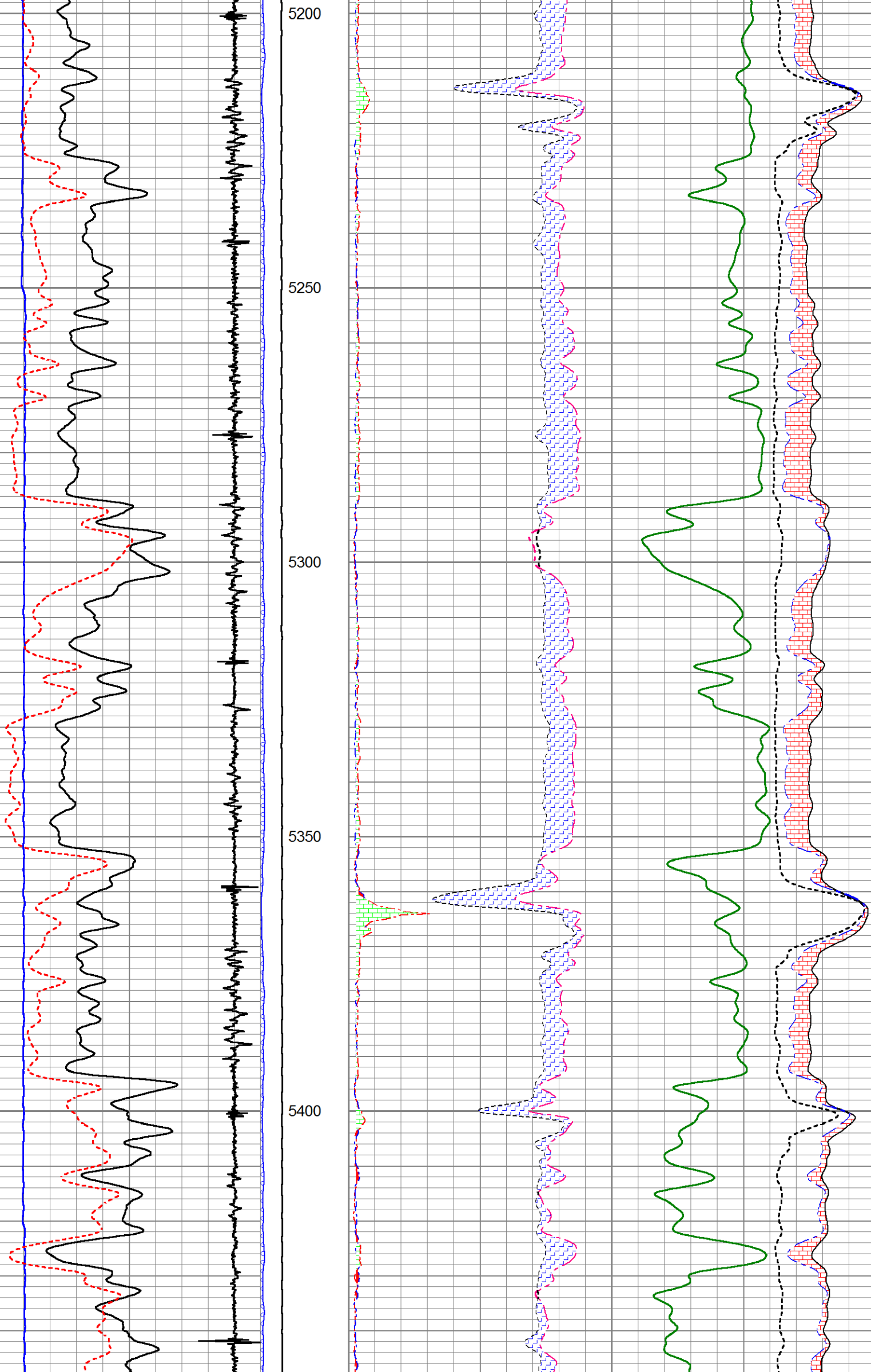


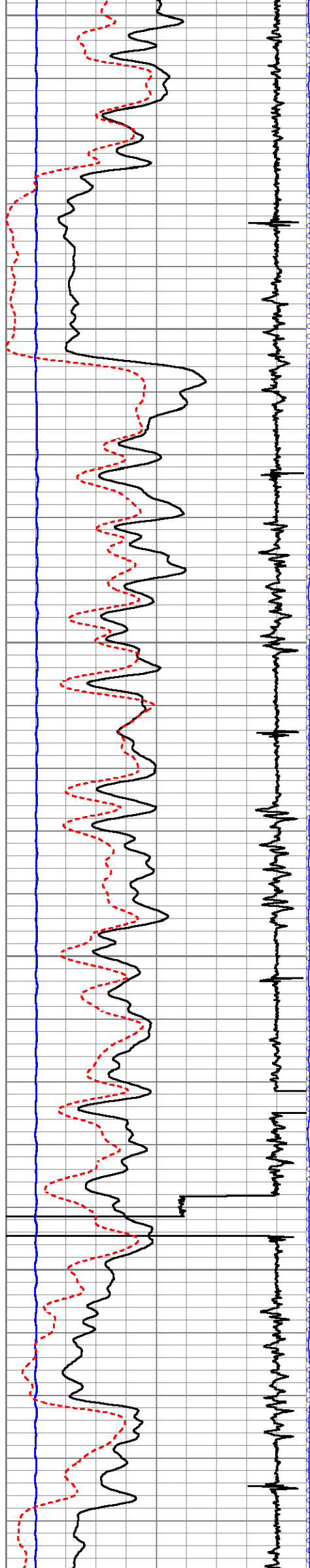




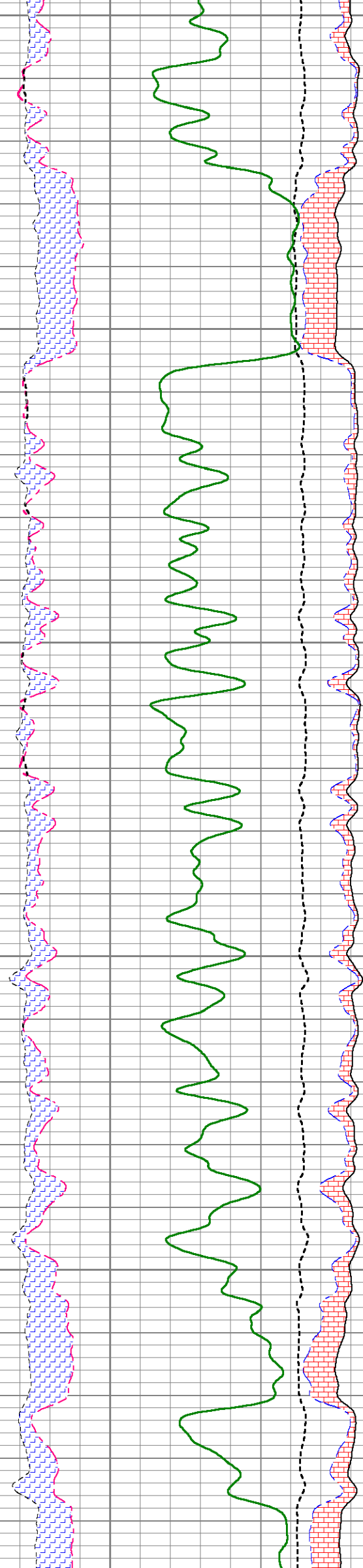
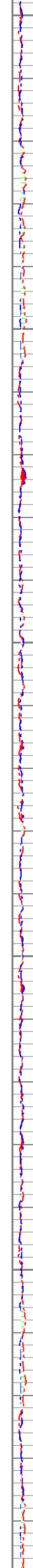


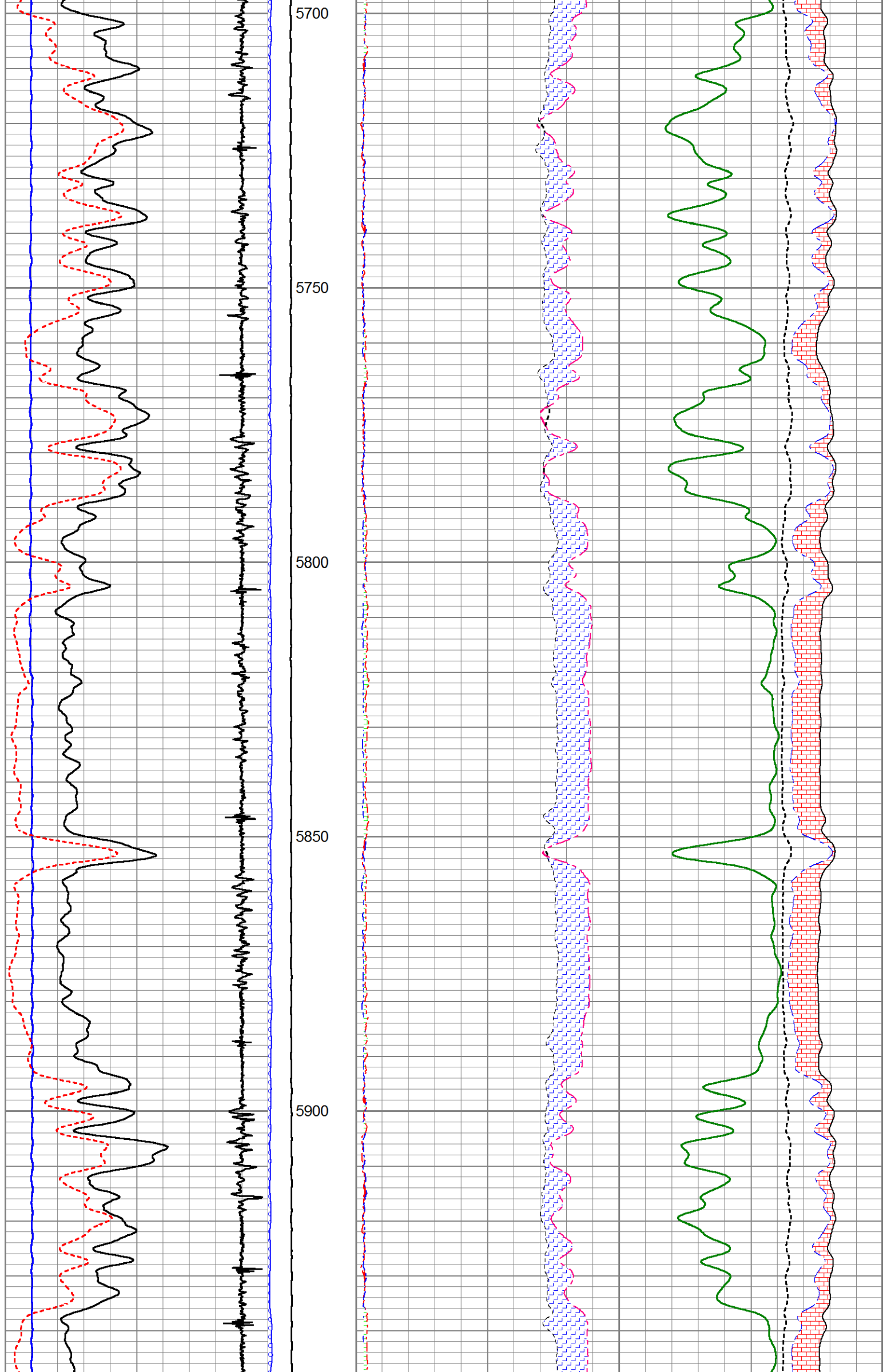


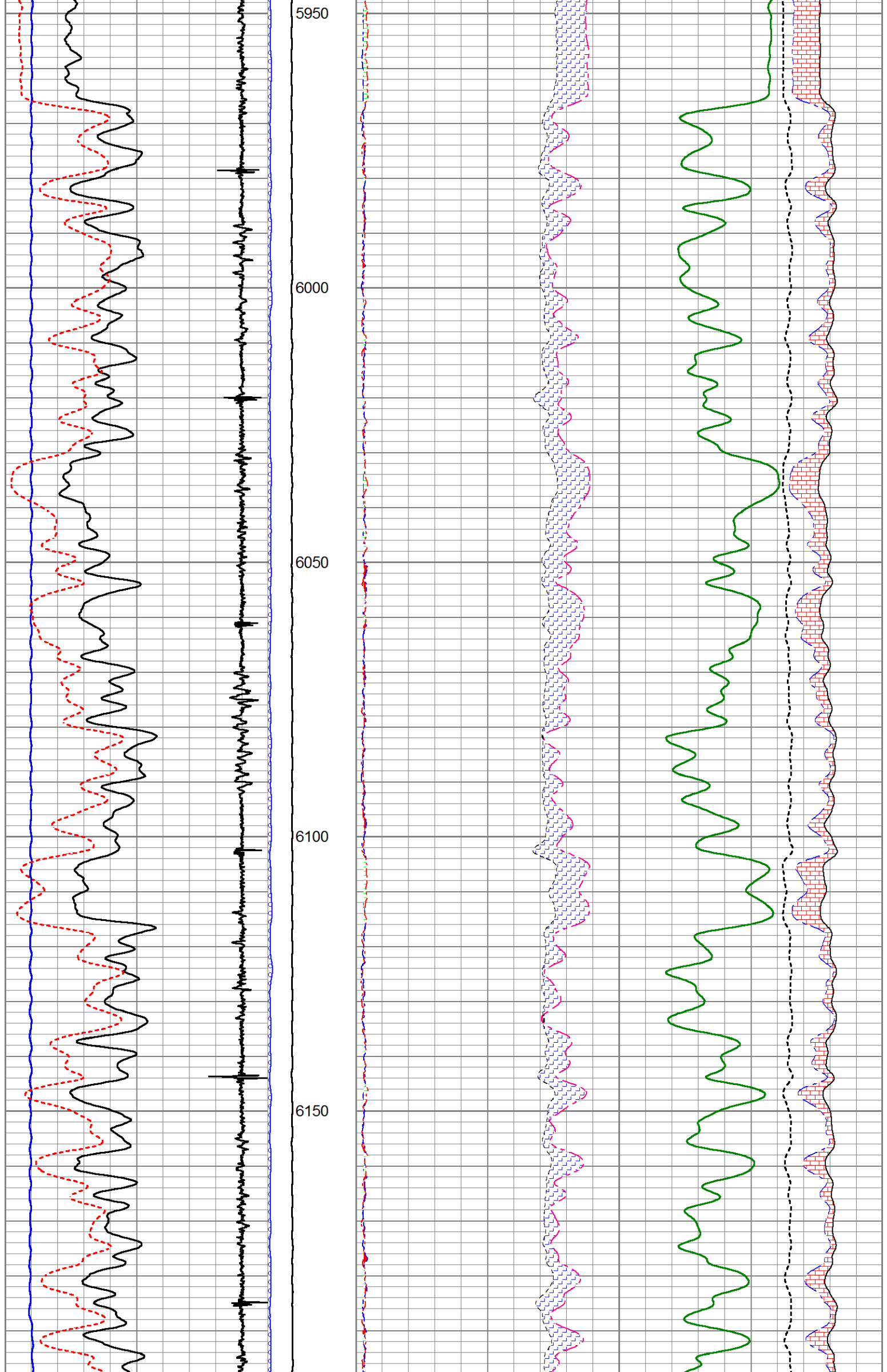


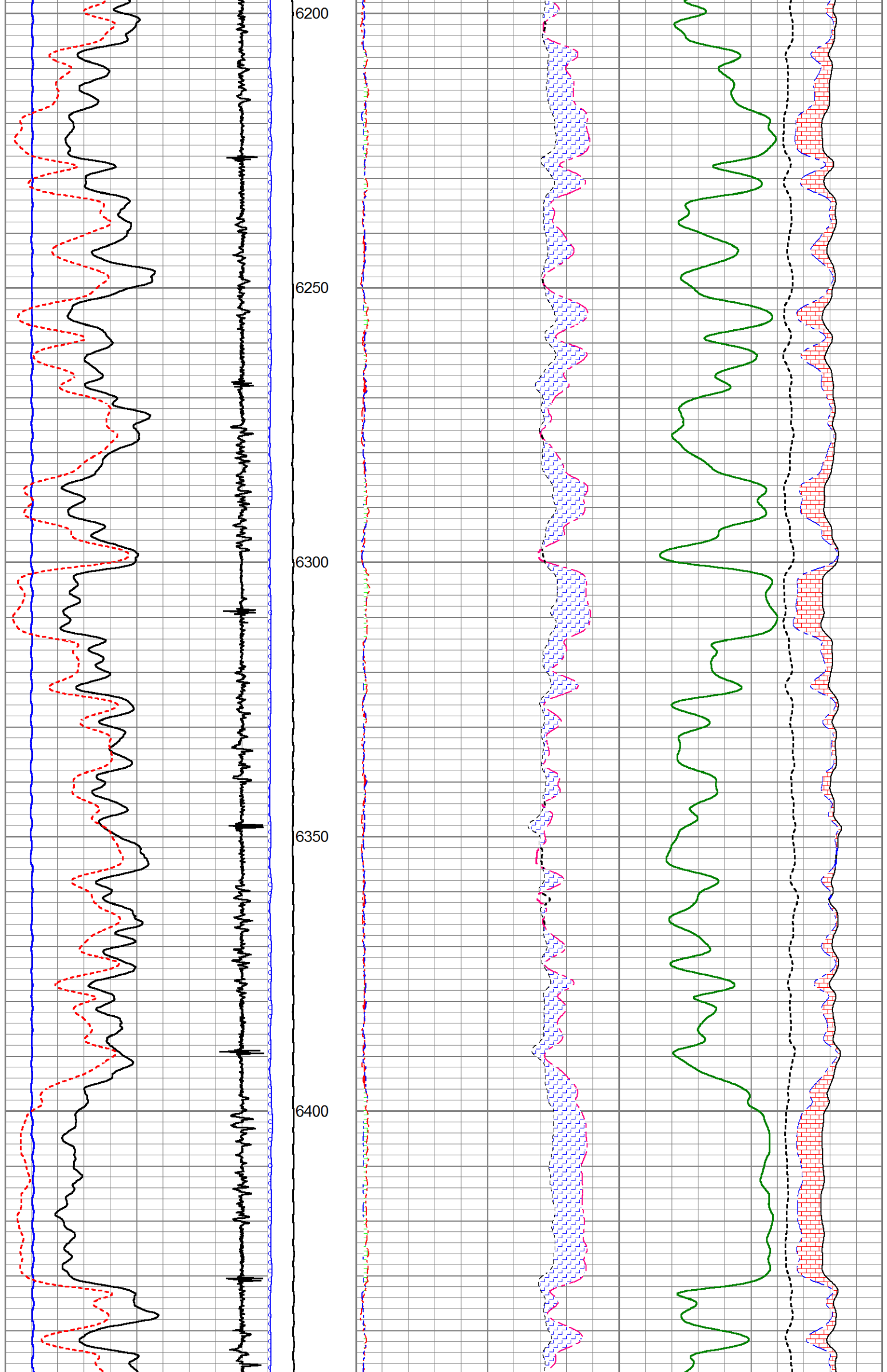


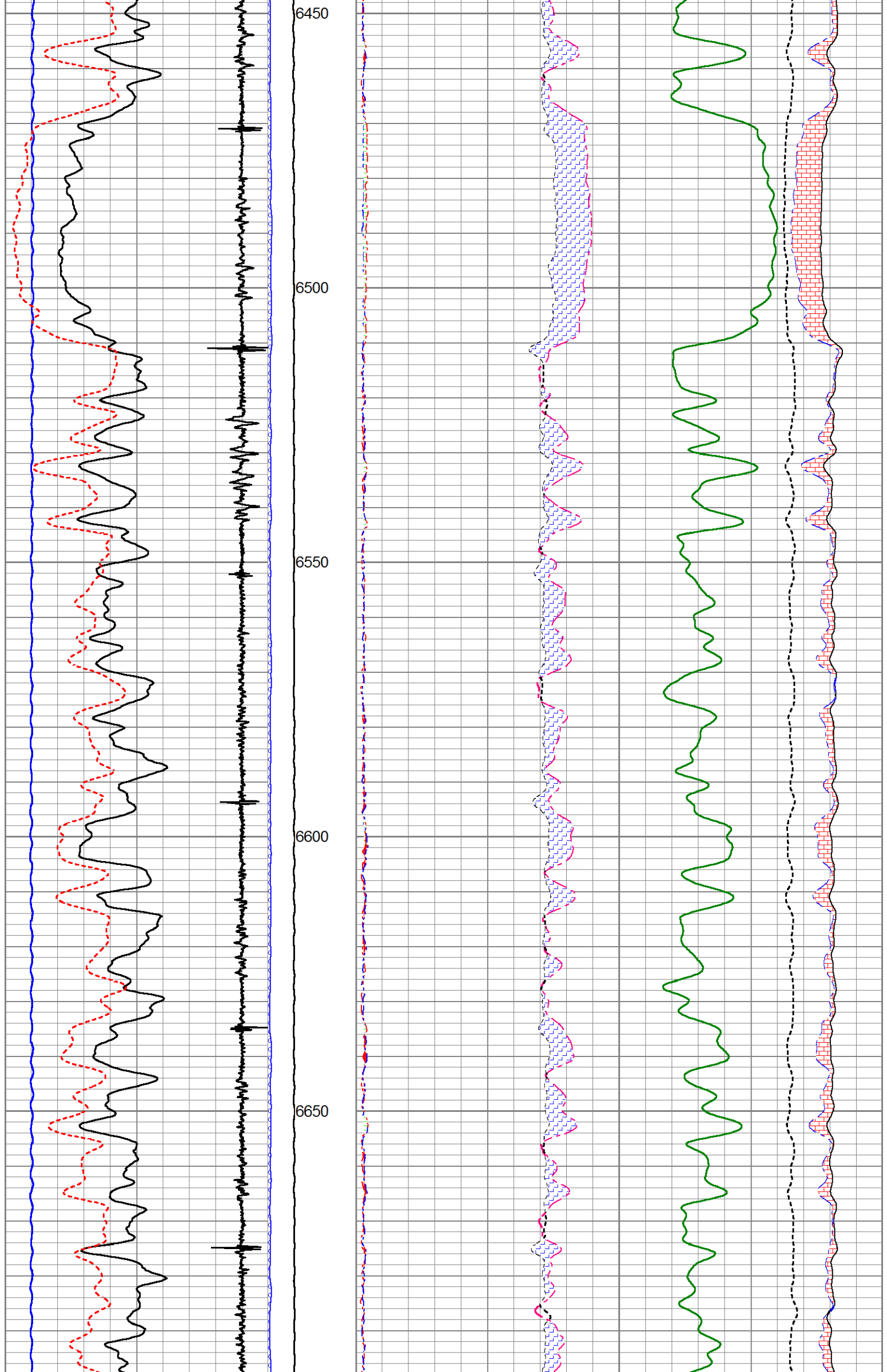
5450
5500
5550
5600
5650

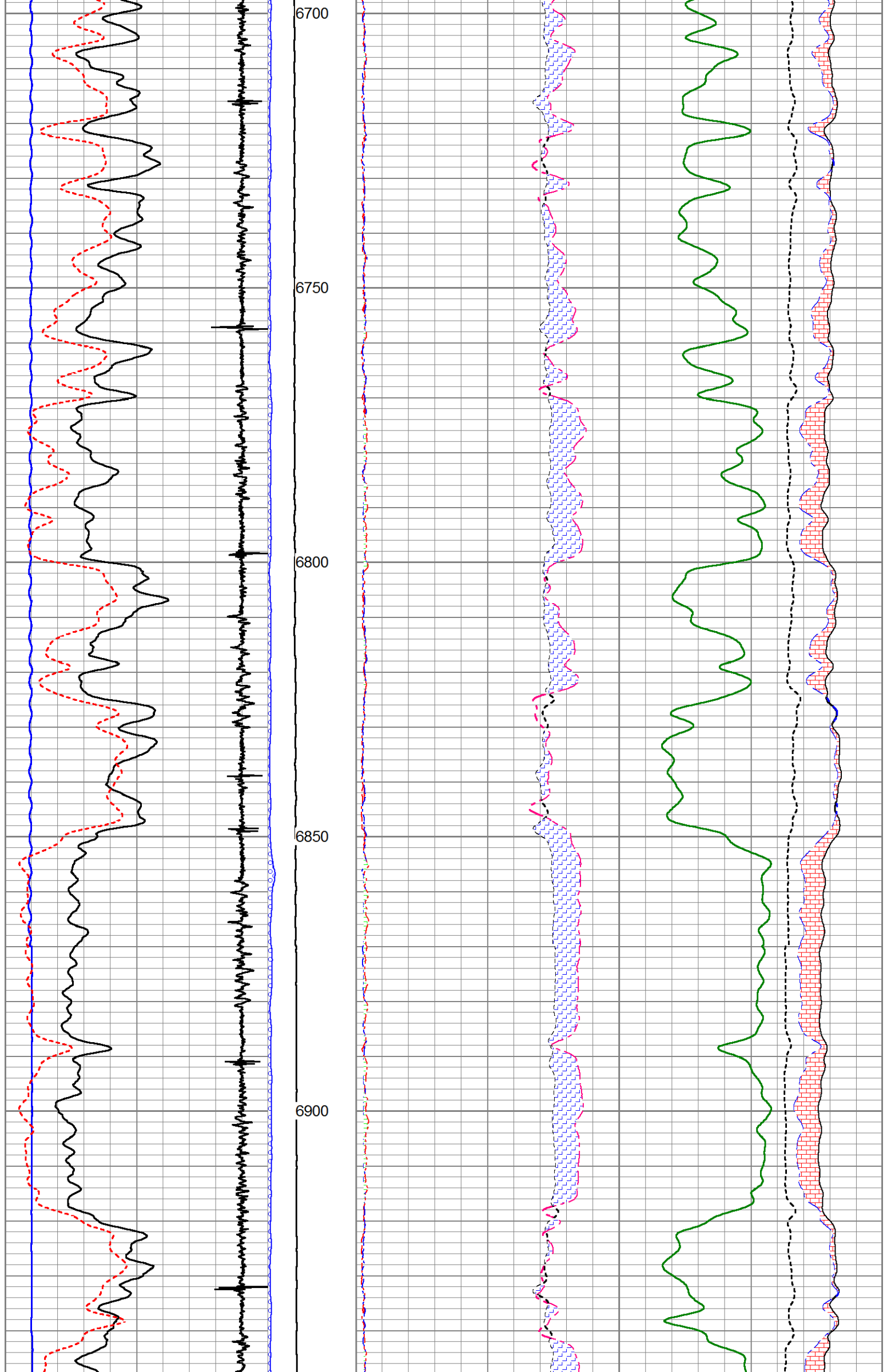


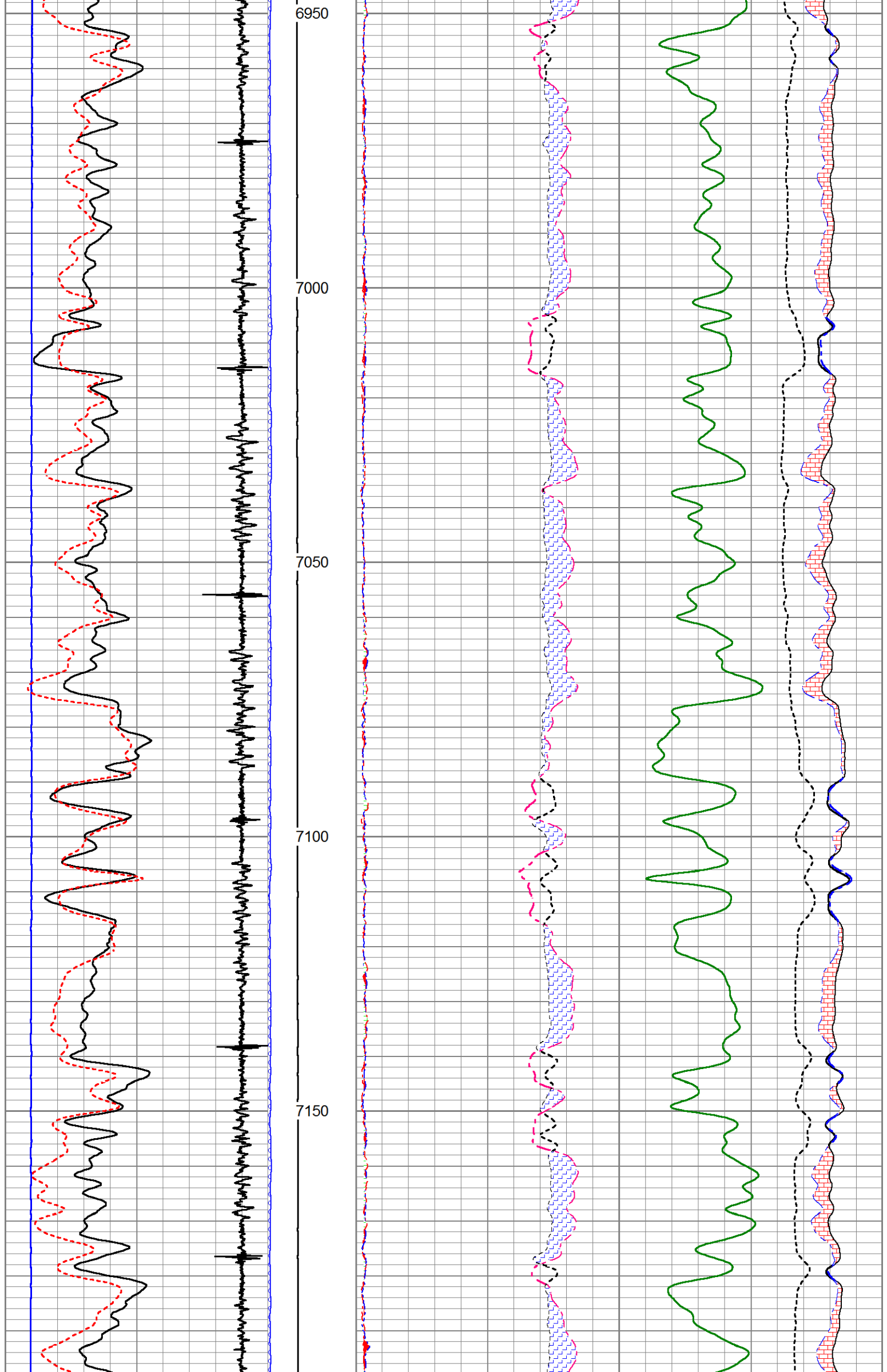


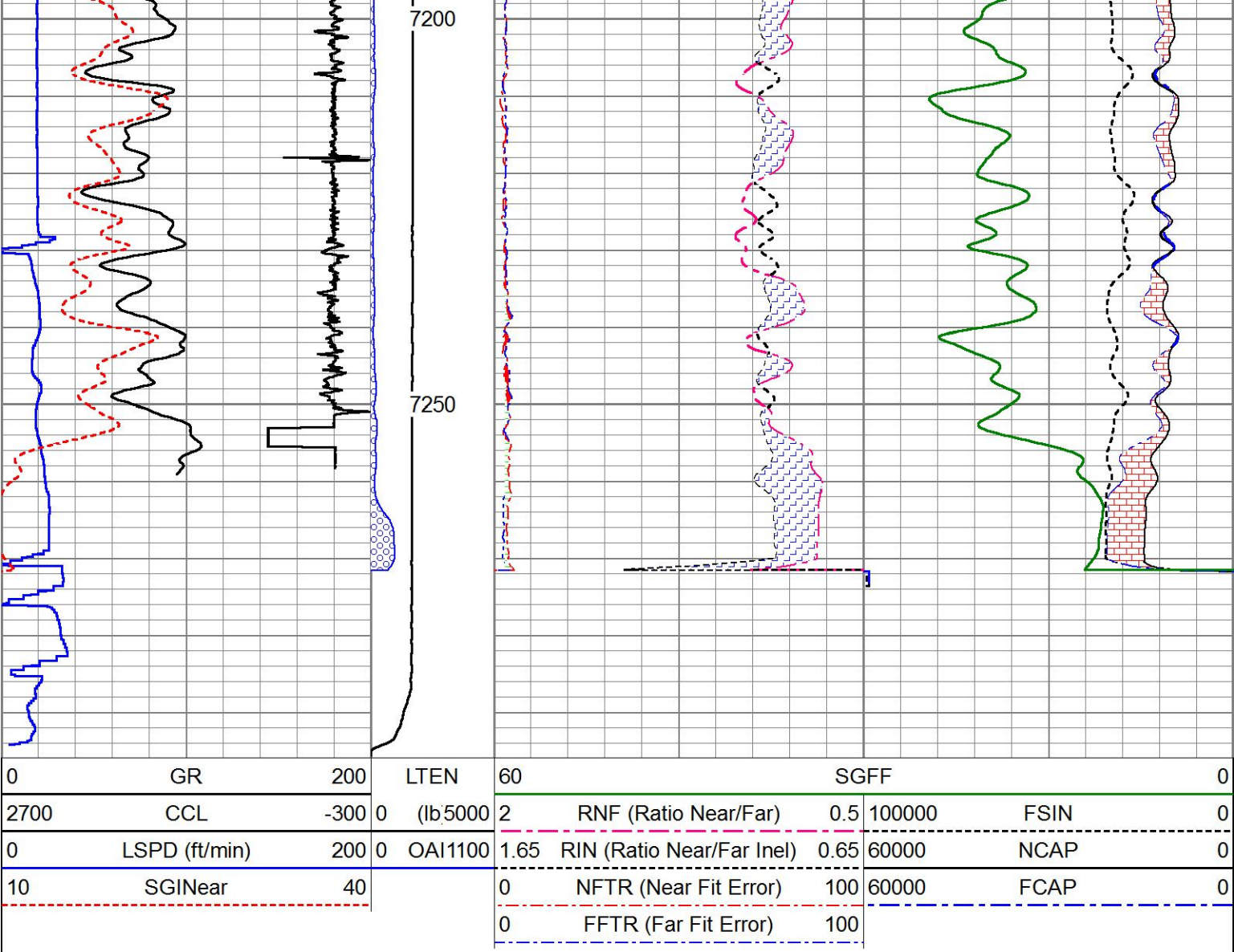












MAIN PASS

HALLIBURTON

5" = 100'

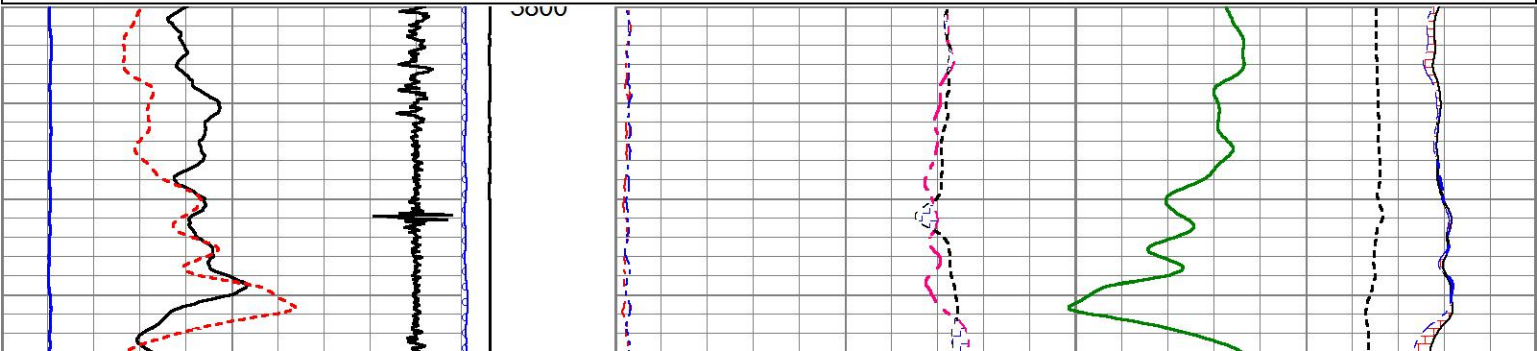
REPEAT PASS

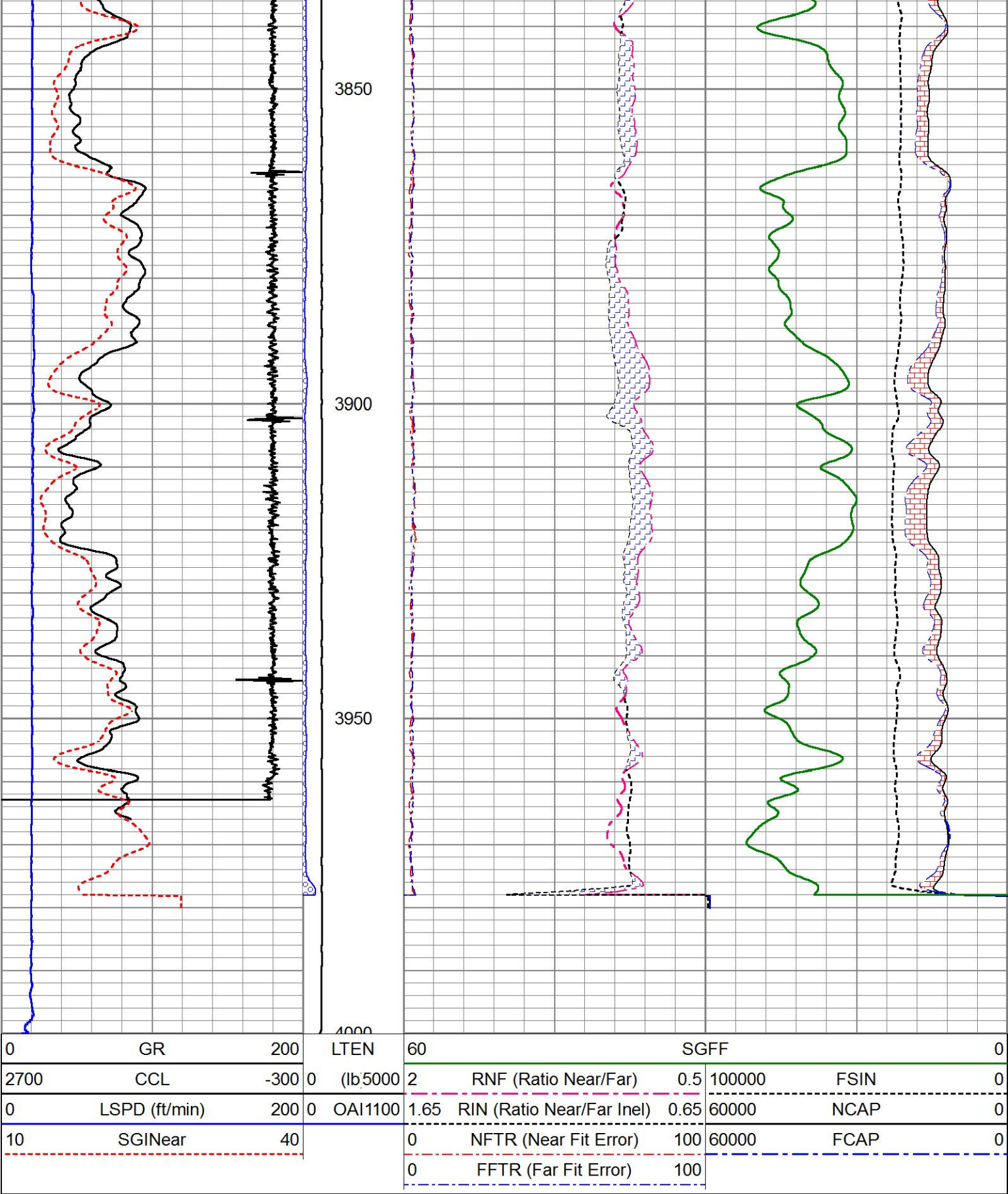
HALLIBURTON

5" = 100'

Database File	mr_b_34c_08_7_95.db									
Dataset Pathname	pass4									
Presentation Format	!1!!rmt_rmti									
Dataset Creation	Mon Nov 28 12:14:38 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 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'

Log Variables

DatabaseC:\ProgramData\Warrior\Data\mr_b_34c_08_7_95.db
Dataset field/well/run1/pass8/_vars_

Top - Bottom

BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE	BORSAL	BOTTEMP	CASED?	CASEOD
1	0	TEMP	in 7.875	kppm 150	degF 210	Yes	in 4.5
CASETHCK	CASEWGHT	LTH	MSGGN	MudWgt	PERFS	POROS1	POROS2
in	lb/ft			lb/gal			


0.5	11.6	Sandstone	1	8.4	0	1	0
RHO�F	SO in	SRFTEMP degF	TDEPTH ft	UHSGC	USERFTT usec/ft	ZREF MRayl	
0.25	0	40	7700	NONE	0	1.7	

Calibration Report		
Database File	mr_b_34c_08_7_95.db	
Dataset Pathname	pass9	
Dataset Creation	Mon Nov 28 13:58:42 2016	
Cement Bond Log Shop Calibration Report		
Serial-Model:	12091451-A	
Calibration Performed:	Mon Nov 28 11:51:11 2016	
Free Pipe Calibration		
	Measured	Units
TT	244.4	usec
Amplitude	560.6	mV
Log Base Line	7.4	mV
Calibration References and Gain		
	Value	Units
Name		
Pipe O.D.	4.500	in
Pipe Weight	11.6	lb/ft
Pipe Ref. Amp.	81.2	mV
Amp. Gain	0.147	

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						
H	Channel	Expected Value	Amplitude	FWHM	Tol.	
Fe	60	60 +/-2	0.0259	5.51	<6.00	
NGAIN = 0.996	206	206 +/-2	0.0966	-----	-----	
Far Detector						
H	Channel	Expected Value	Amplitude	FWHM	Tol.	
Fe	60	60 +/-2	0.0356	5.76	<6.50	
FGAIN = 0.990	210	208 +/-2	0.0903	-----	-----	
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	3153	3250	-97	+/-250		

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

CCL	35.82					
GR	33.56		TTTCU-002 (11214503) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
			XHU-003 (000001) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
RmtTFGT	22.91					
RmtTNGT	22.41		RMTI-A (12095949) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V	14.66		X-OVER-GoxSondex Go Box x Sondex Pin CrossOver	0.27	1.69	1.00
RmtNFwvMcsPI	14.66					
RmtCommFWa	14.66		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
Temp	9.57					
TT3FT	7.32		HCBLM-A (12091451) Halliburton HCBLM Tool	9.38	2.75	116.00
AMP3FT	7.32					
WVF5FT	6.36					
WVF3FT	2.84		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
			AUH-001 (11072111) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
LLMTEN	0.00		BUL-001 (000001) Bullnose	0.30	1.69	1.50
<div>Dataset: mr_b_34c_08_7_95.db: field/well/run1/pass9</div> <div>Total length: 39.39 ft</div> <div>Total weight: 356.50 lb</div> <div>O.D.: 3.13 in</div>						

Well	MONUMENT RIDGE B 34C-08-7-95		
Field	PARACHUTE		
County	GARFIELD	State	CO
HALLIBURTON		RESERVOIR MONITORING TOOL ELITE	