

HALLIBURTON

RESERVOIR MONITOR
TOOL - ELITE

Company		URSA OPERATING CO., LLC.	
Well		WATSON RANCH B 33A-17-07-95	
Field		PARACHUTE	
County		GARFIELDStateCO	
Company		URSA OPERATING CO., LLC.	
Well		WATSON RANCH B 33A-17-07-95	
Field		PARACHUTE	
County		GARFIELDStateCO	
API No.:		05-045-22800-0000	
Serv #:		902453901	
Location:		SURFACE HOLE LOCATION: 1069' FSL & 1928' FWL	
Other Services		GAUGE RING CBL	
Sec: 17		Twp: 07S Rge: 95W	
Permanent Datum		GROUND LEVEL Elevation 5585'	
Log Measured From		KB, 17 Ft. above perm. datum	
Drilling Measured From		KB	
Date @ Time Logged		04 JUNE 2015	
Run No.		ONE	
Depth - Driller		7289'	
Depth - Logger		7094'	
Bottom - Logged Interval		7094'	
Top - Log Interval		3804'	
Max. Recorded Temp.		218 DEG F	
CEMENTING DATA		SurfaceStringProtectionString	
Date / Time Cemented		N/A	
Primary / Squeeze		N/A	
Expected Compressive Strength		psi@ hrs	
Cement Volume		/	
Cement Type / Weight		/	
Formulation		/	
Mud Type / Mud Wgt.		/	
Borehole Record		Casing & Tubing Record	
Run Number		BitFromToSizeWeightFromTo	
ONE		12.25" SURFACE 1819' 8.625" 32.0# SURFACE 1819'	
TWO		7.875" 1819' 7289' 4.5" 11.6# SURFACE 7289'	

<<< 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

HES CBL LOG DATED: 04 JUNE 2015 IS THE PRIMARY DEPTH REFERENCE FOR THIS WELL.

GR-RMT-CBL RAN IN COMBINATION.

LOG INTERVALS PER CUSTOMER REQUEST.

SHORT JOINTS @: 4539' - 4549', 5570' - 5580', AND 6598' - 6608'.

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES.

Service Ticket No.	902453901	API No.	05-045-22800-0000	PGM Ver	14.11.12001
The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client					
EQUIPMENT DATA					
TELEMETRY		CEMENT BOND TOOL		RESERVOIR MONITOR TOOL	
Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	11224503	Serial No.	11002214	Serial No.	12095949
Model No.	TTTC-U-002	Model No.	RBT-004	Model No.	RMTI-A
Diameter	1.688"	Diameter	3.125"	Diameter	2.125"
LOGGING DATA					
General Data					
Pass	Depths		Well Head	Speed	Logging Run Comments
No	From	To	Pressure	Ft/Min	

No.	7094'	3804'	0	25	MAIN LOG SECTION			
ONE								
	GAMMA RAY		NEAR BORE SI (SGBN)		RATIO (RNF)		SGIN	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	200	200	0	2	0.5	60	0
DIRECTIONAL INFORMATION								
Maximum Deviation		N/A	deg. @	N/A	KOP	N/A		

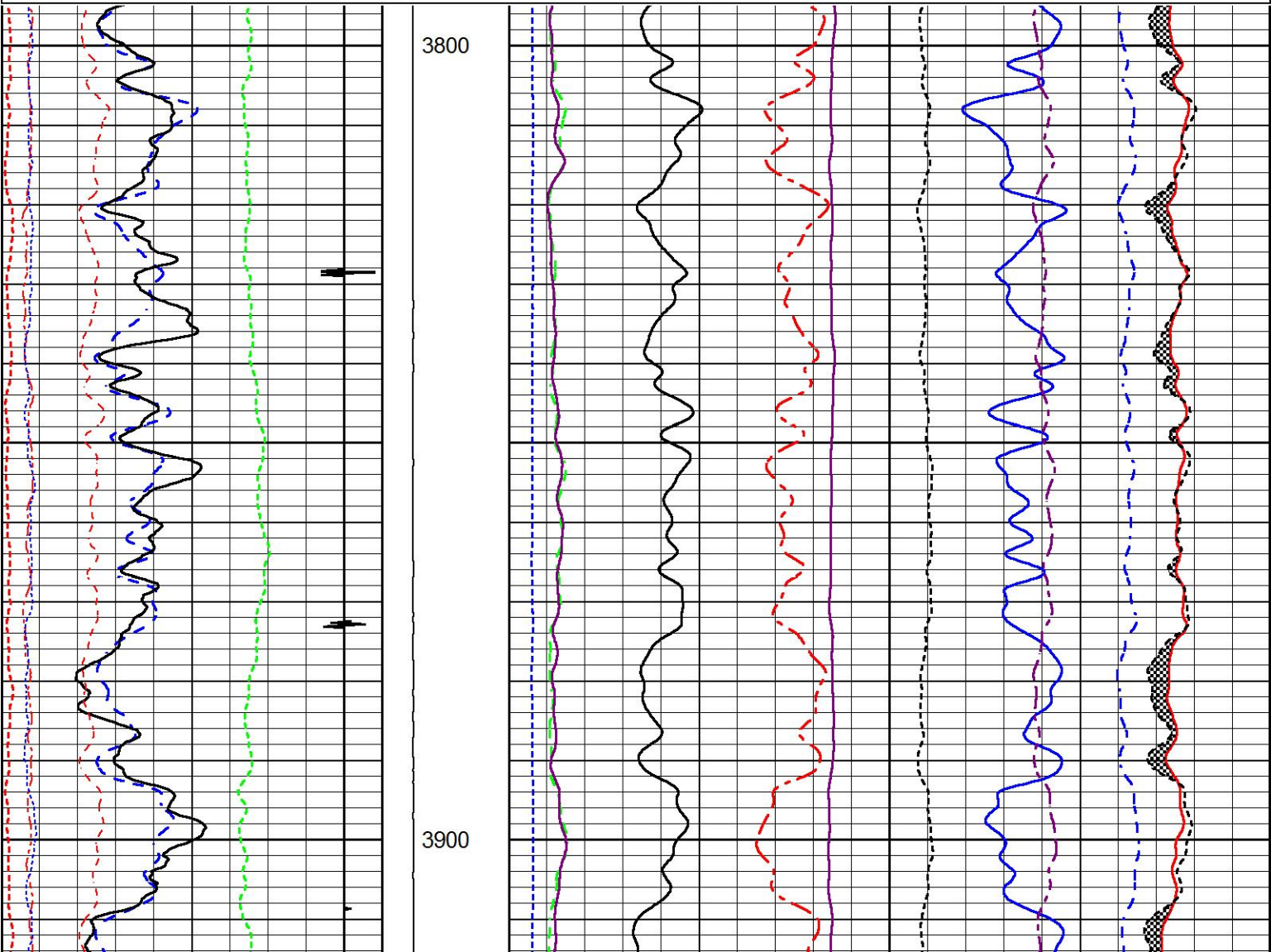
HALLIBURTON

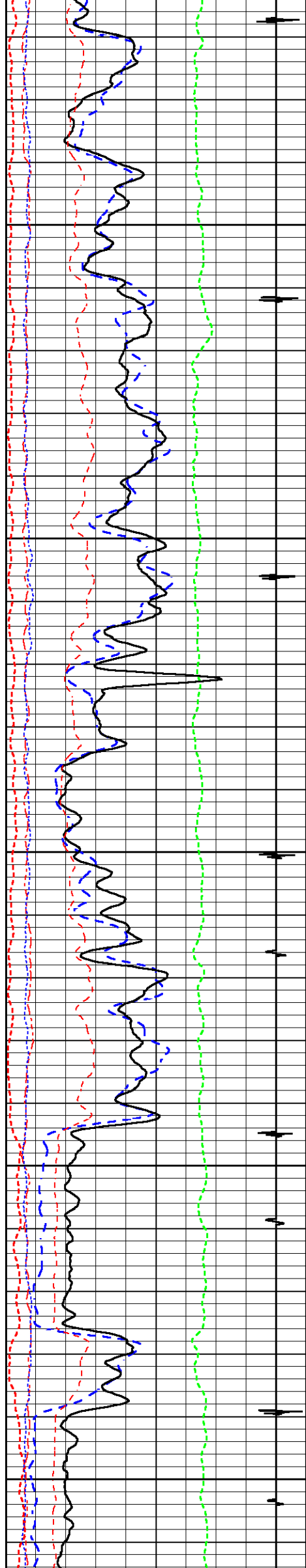
MAIN LOG SECTION

5" = 100'

Database File	watson_b_33a_combo.db
Dataset Pathname	MAIN1
Presentation Format	RMTE_M~1
Dataset Creation	Thu Jun 04 09:45:55 2015
Charted by	Depth in Feet scaled 1:240

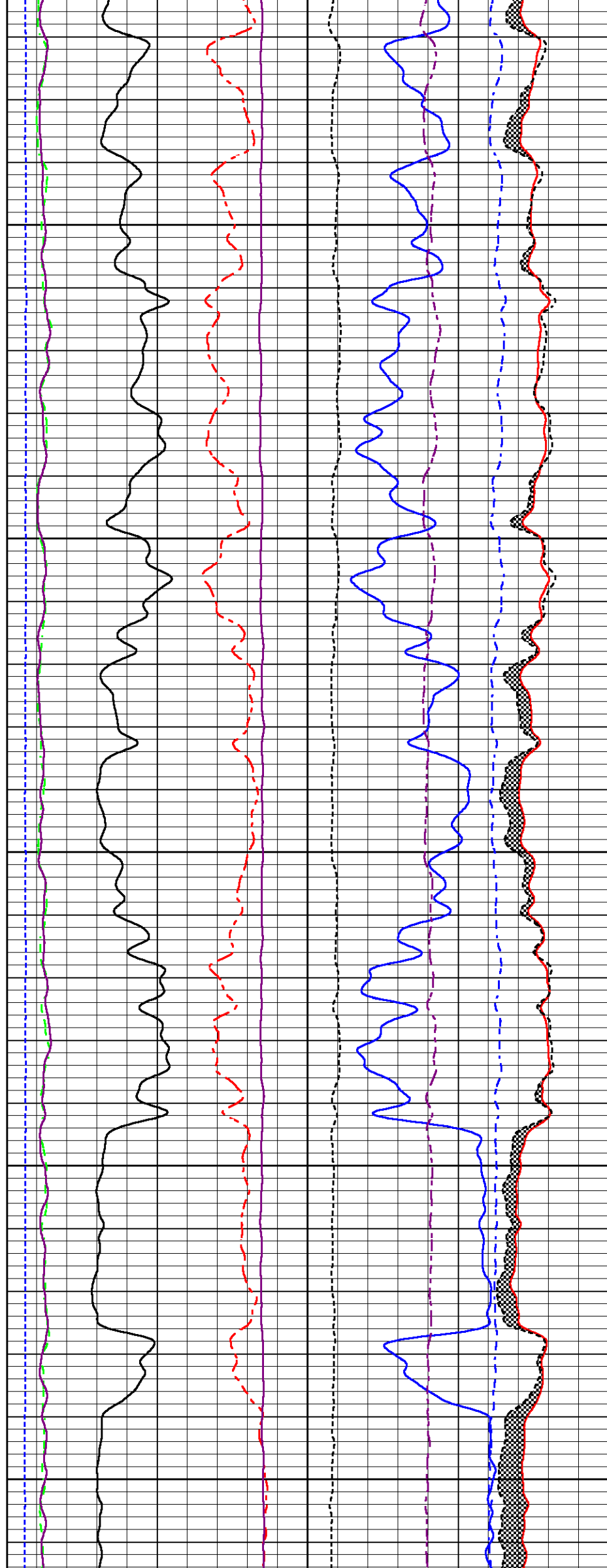
200	Near Bore Si (SGBN)	0	TENSION	60	SGIN	0
0	OAI	100		2	RATIO (RNF)	0.5
10	FAR FIT ERR (SGFF)	40		0	RIN	15
0	GAMMA RAY (GAPI)	200		0	RICF	6
0	NEAR FIT ERR (SGFN)	100		0	H YIELD (YH2)	1
-5400	CCL	600		0	H YIELD (YH1)	1
0	IN FIT ERR (CFTR1) NEAR	1			INOX2	50000
0	IN FIT ERR (CFTR2) FAR	1			-1500	1500
						-1000

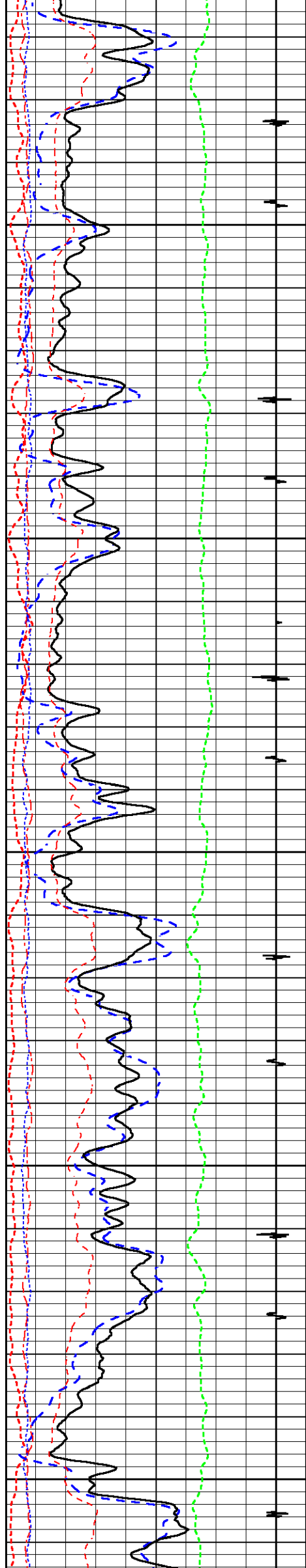




4000

4100

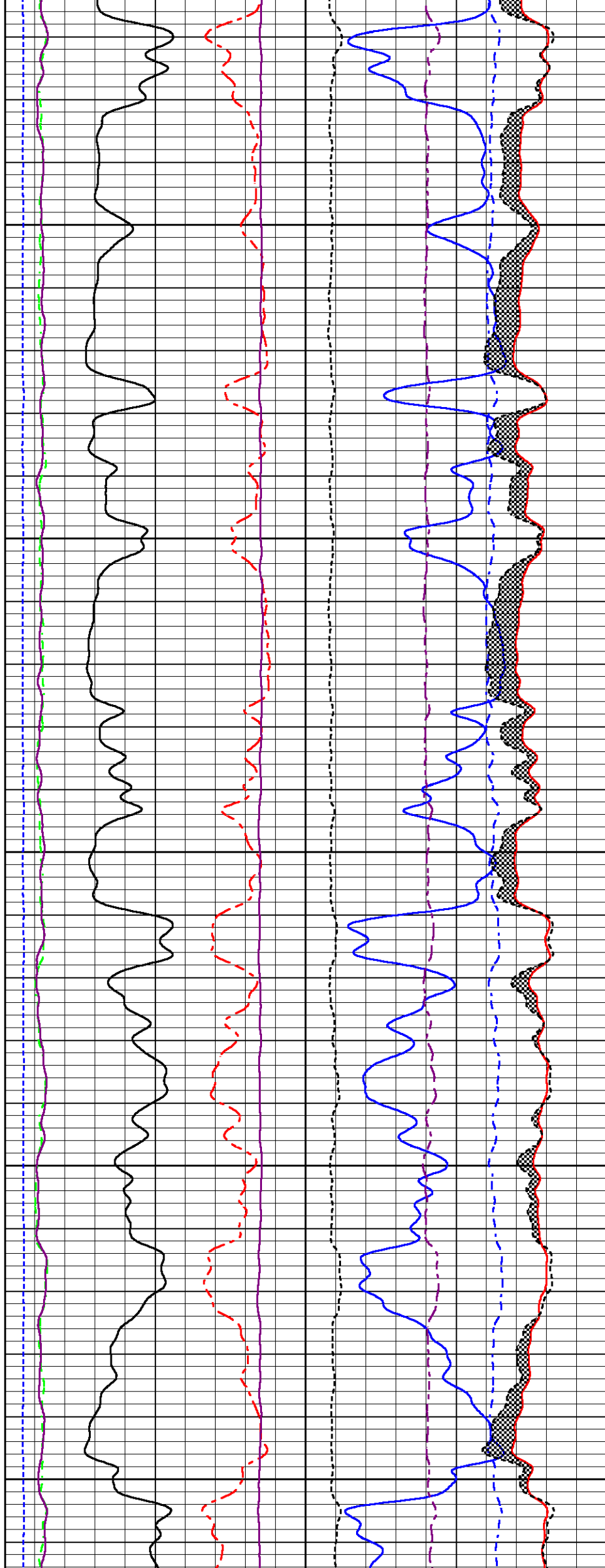


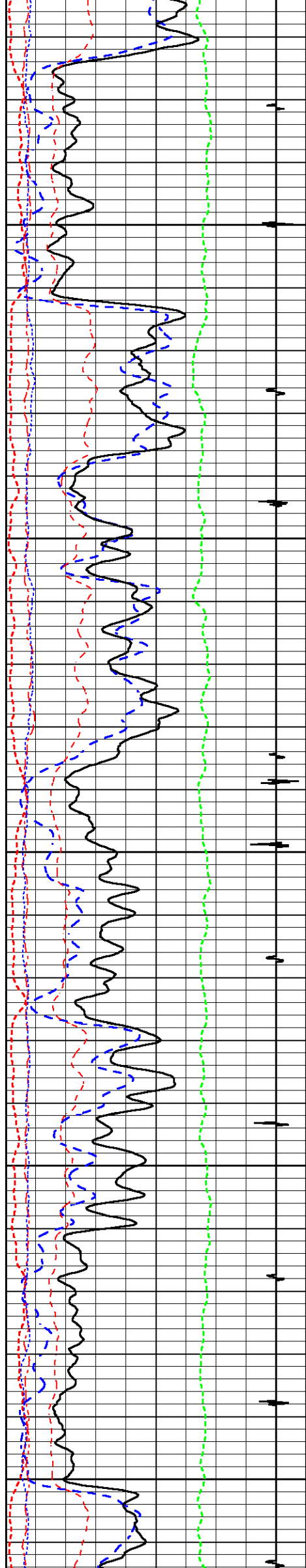


4200

4300

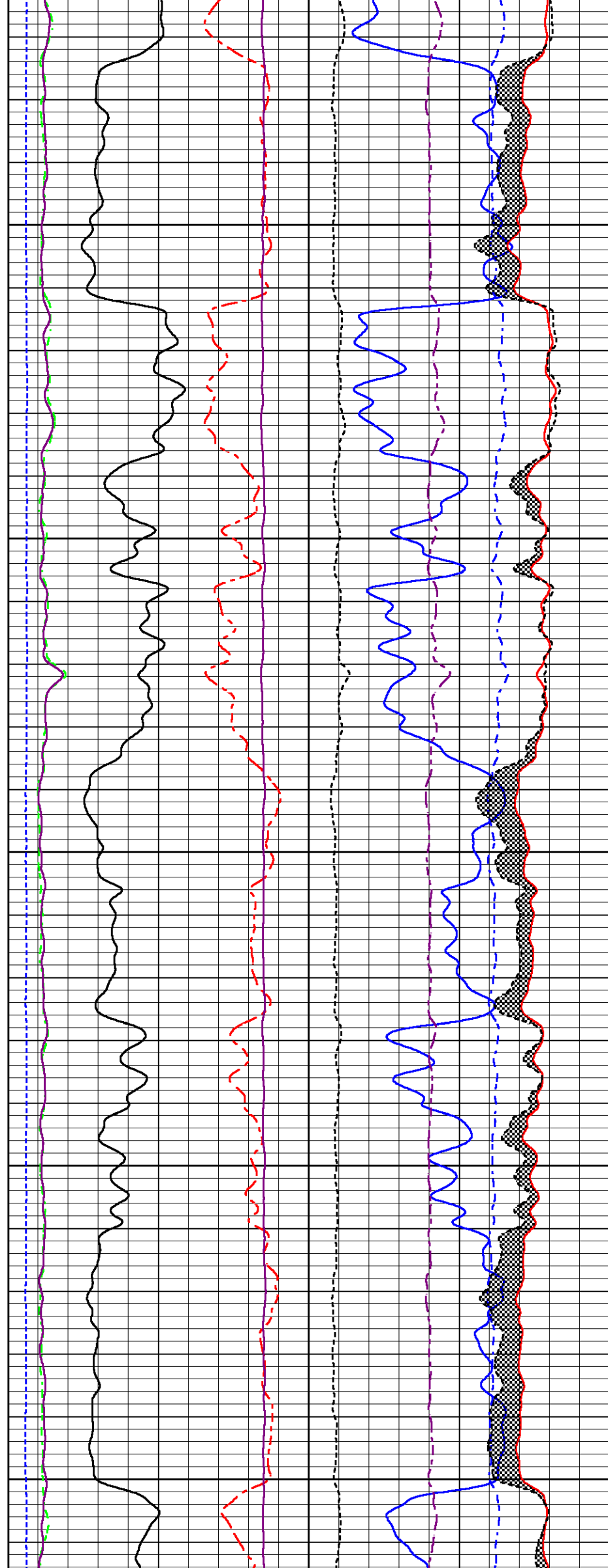
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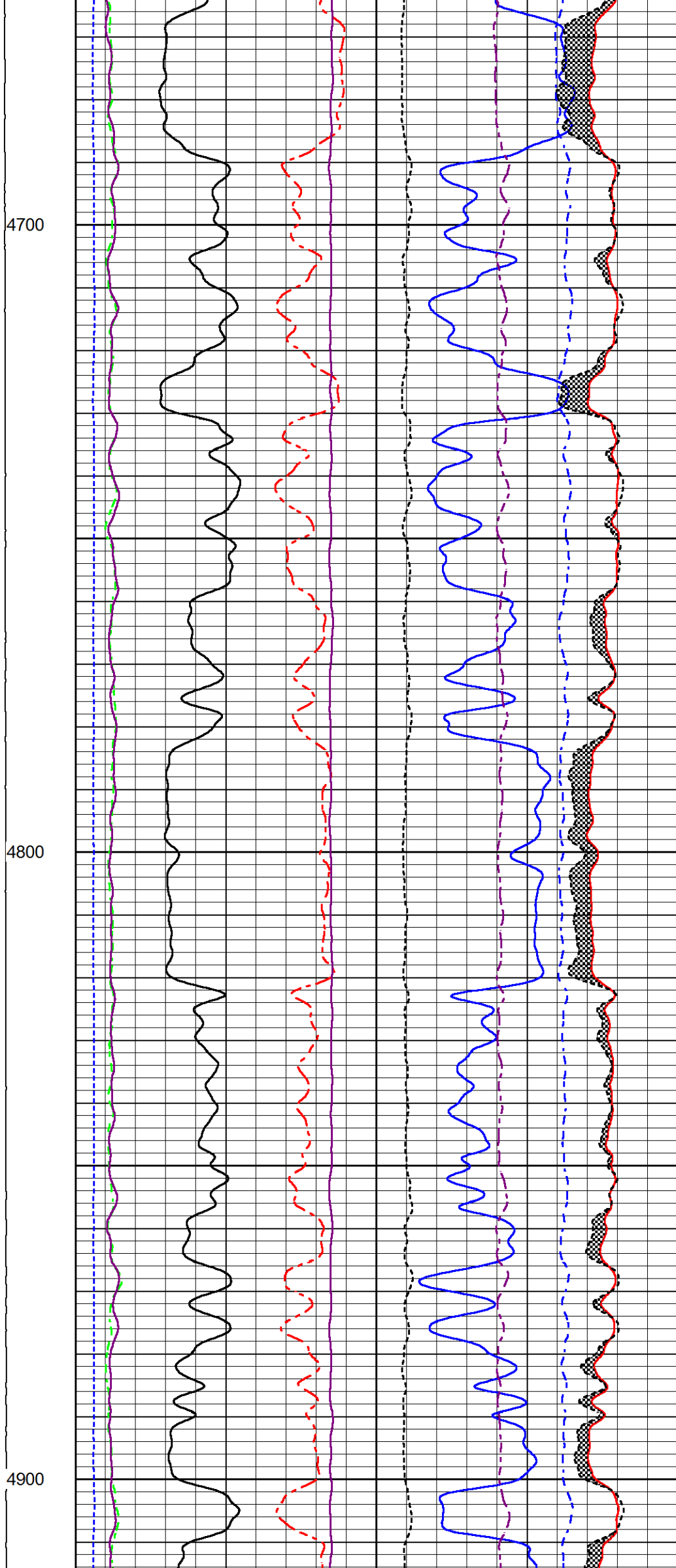
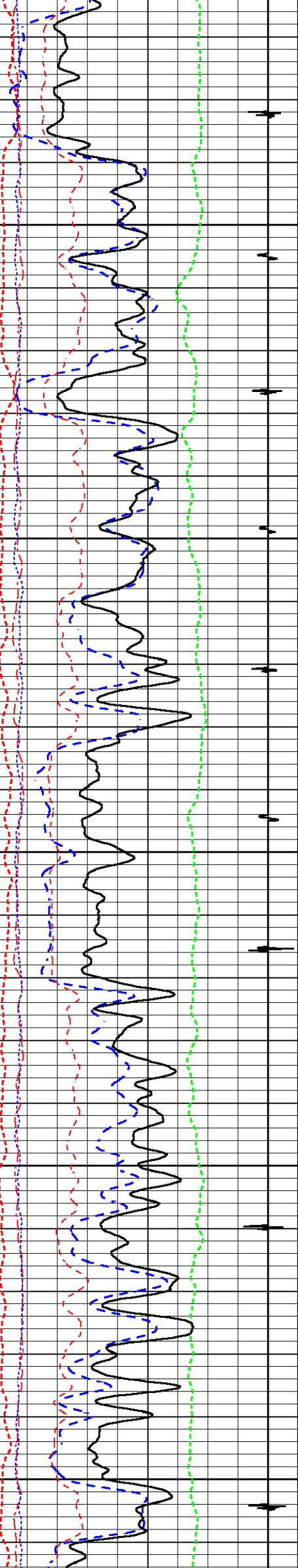


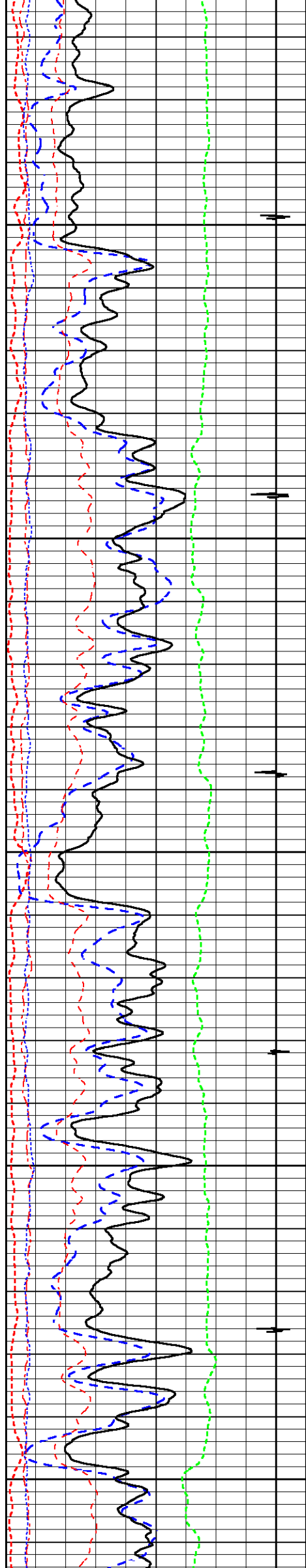


4500

4600

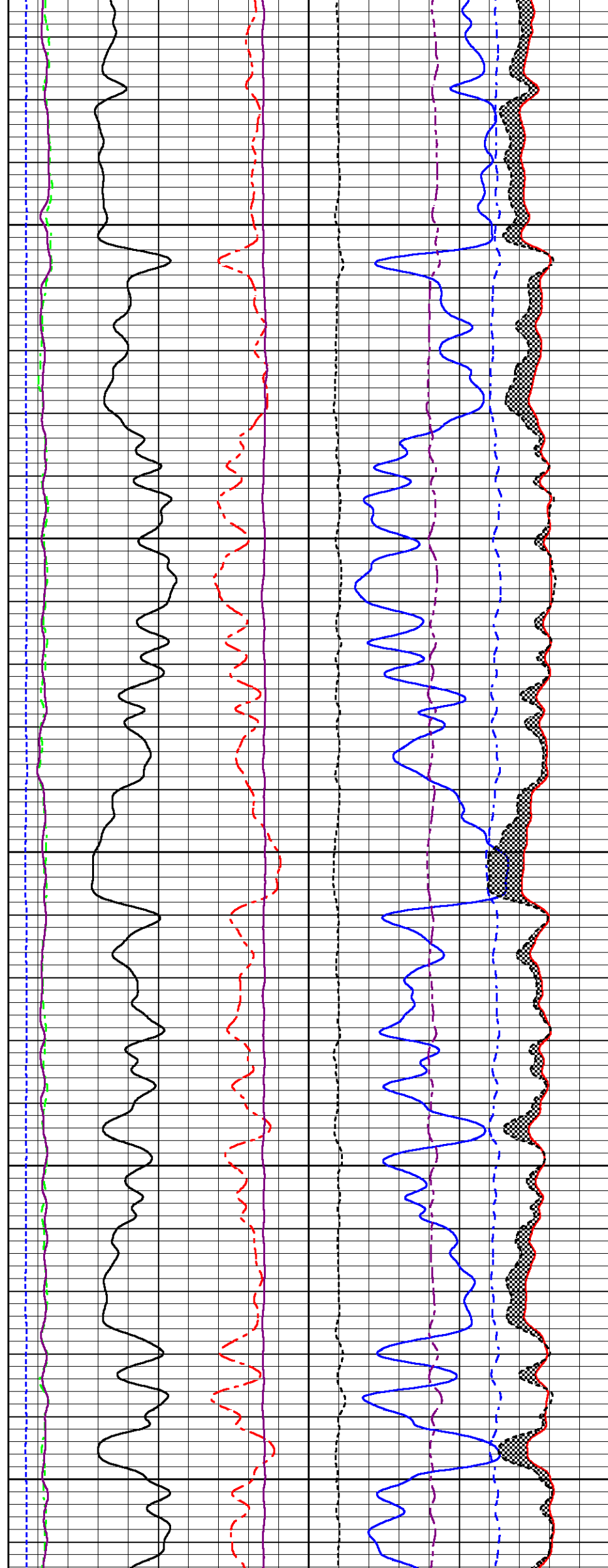


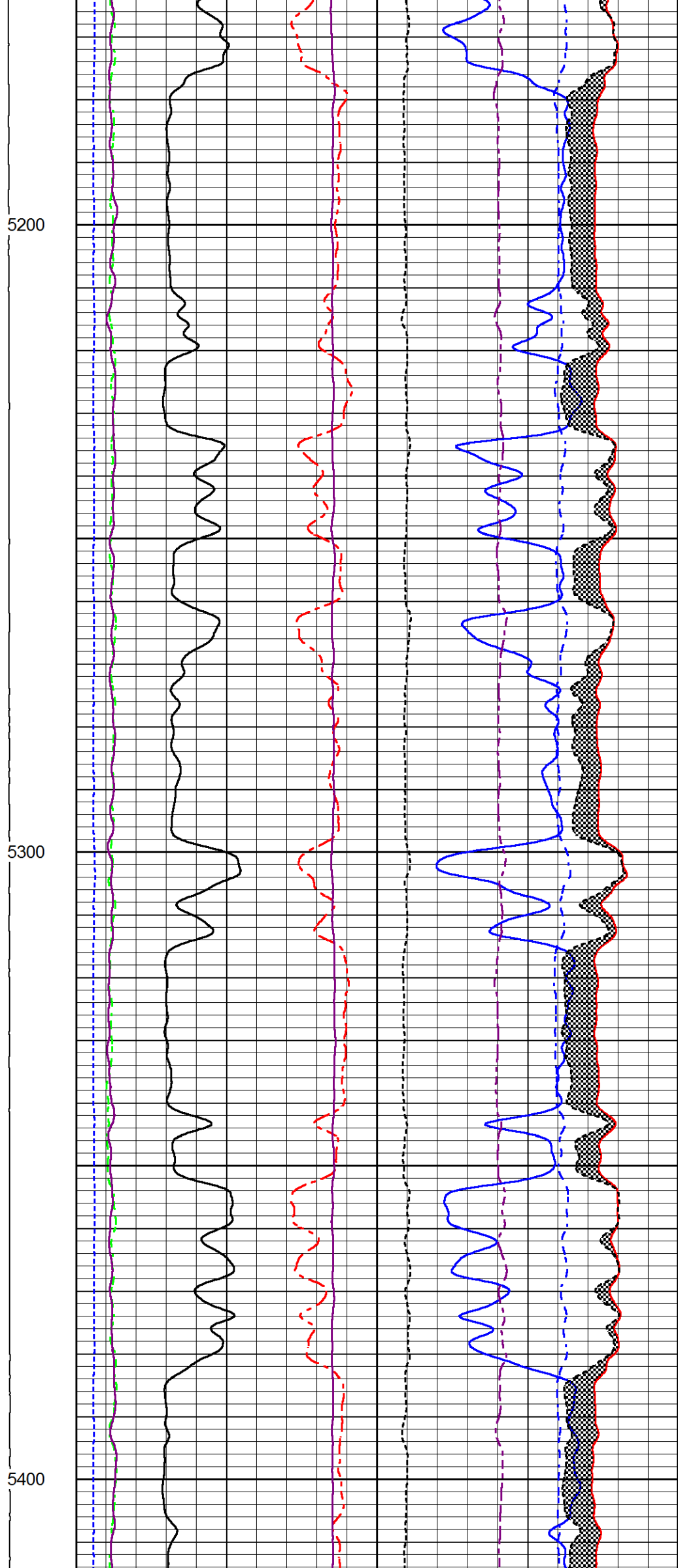
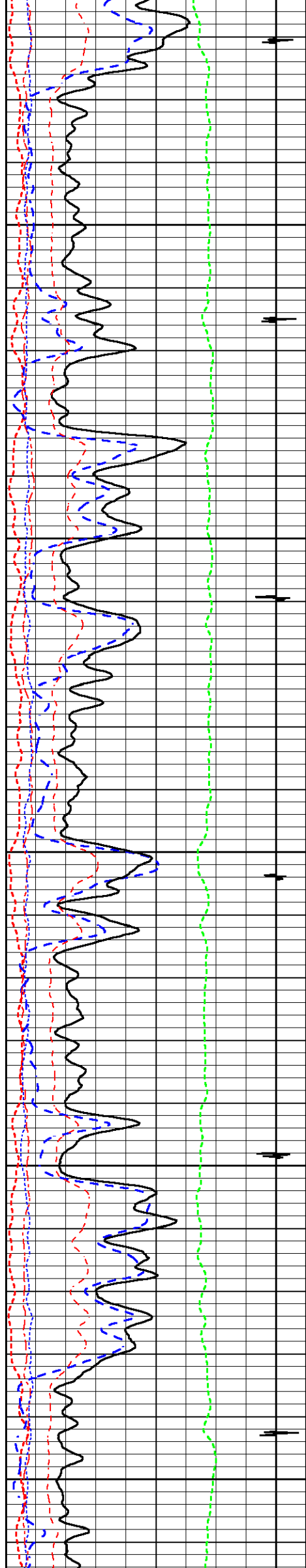


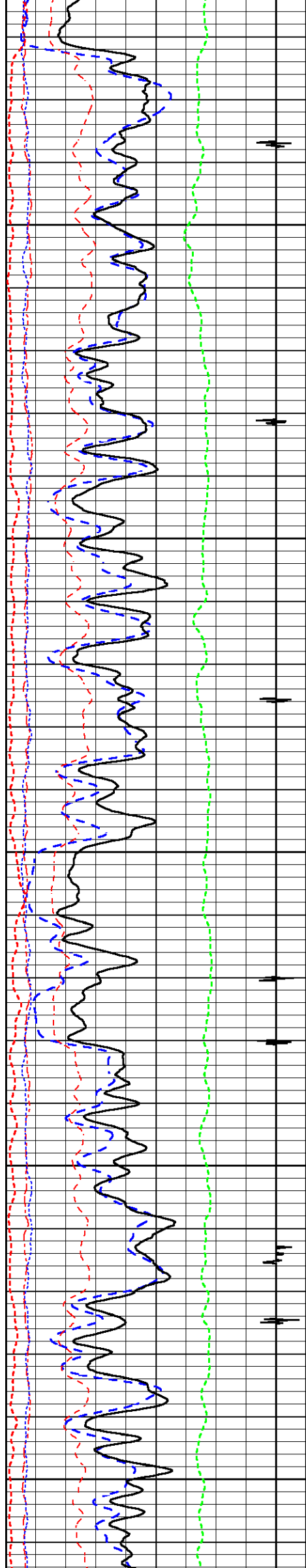


5000

5100

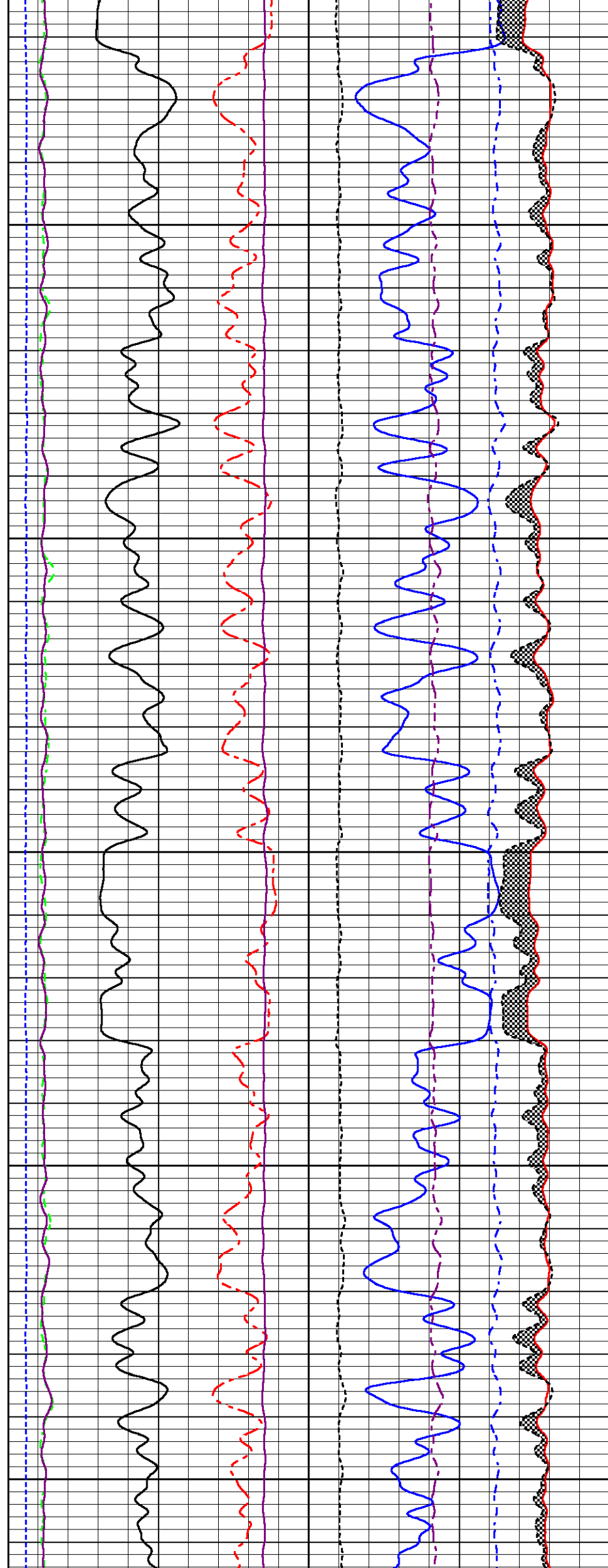


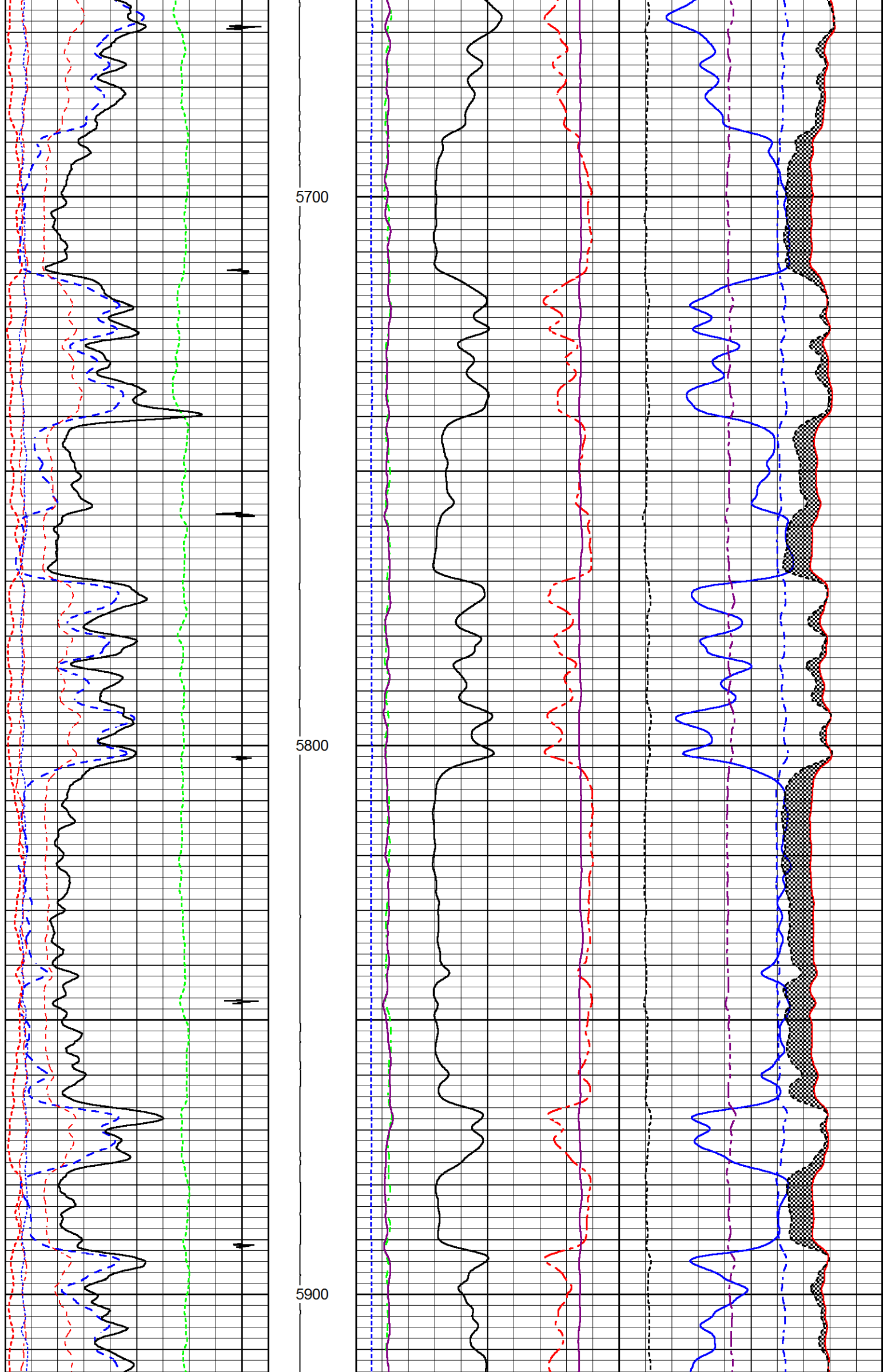


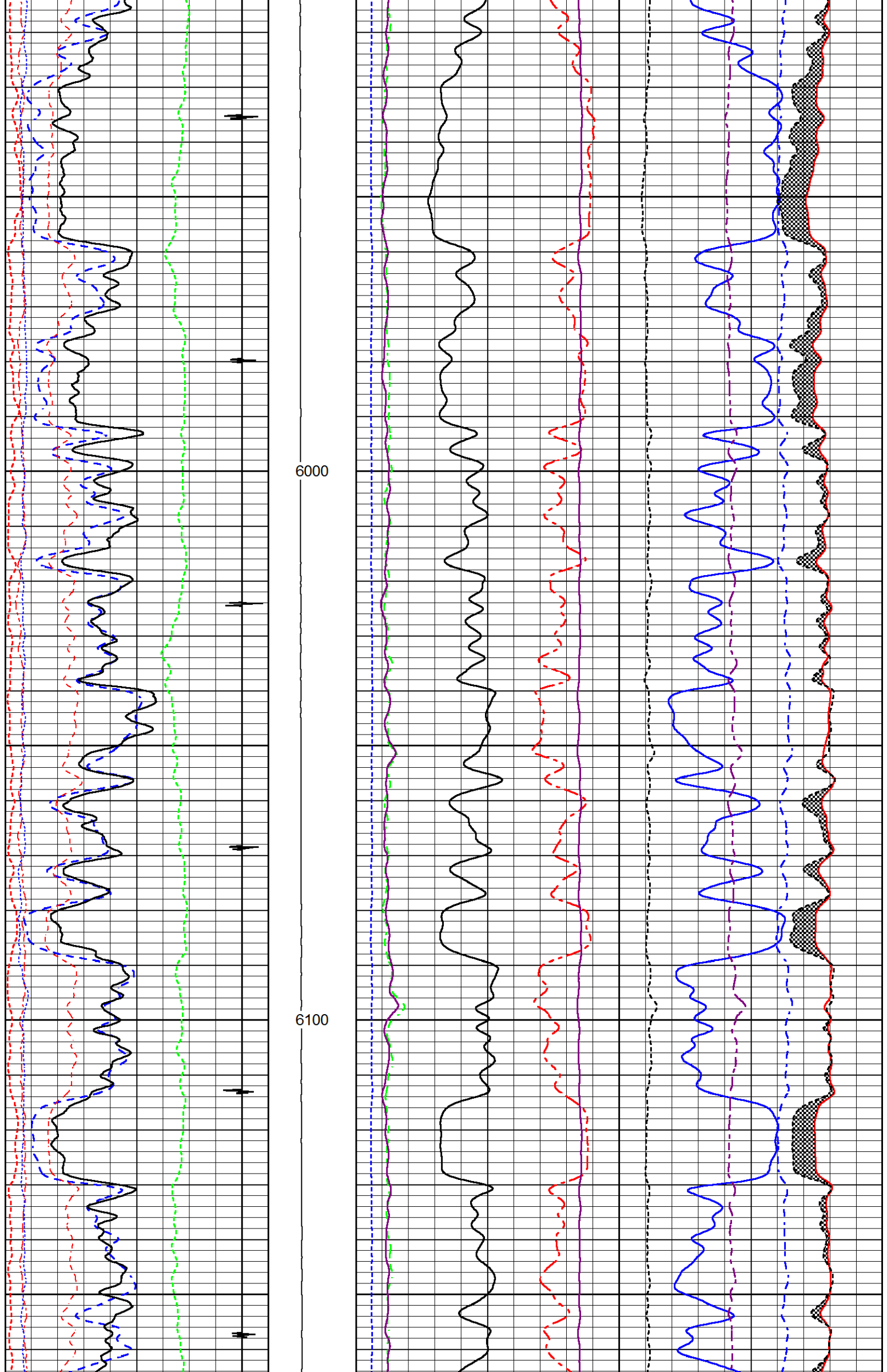


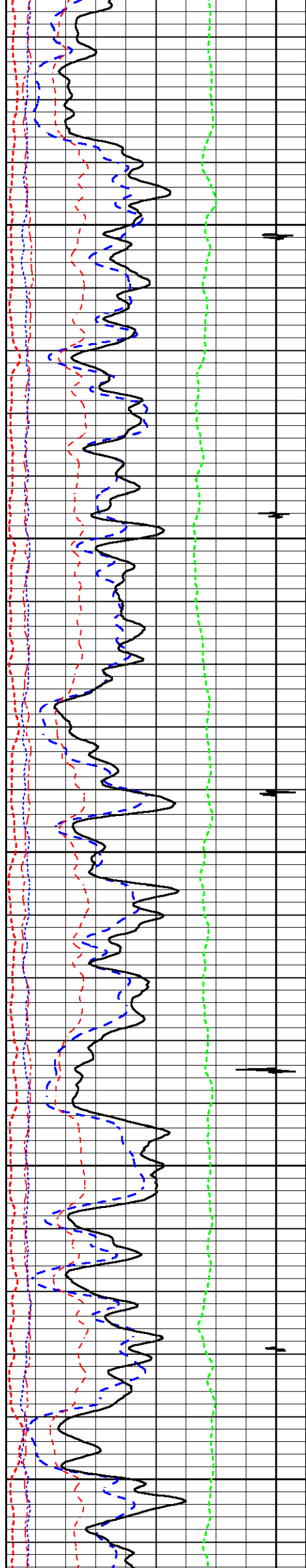
5500

5600





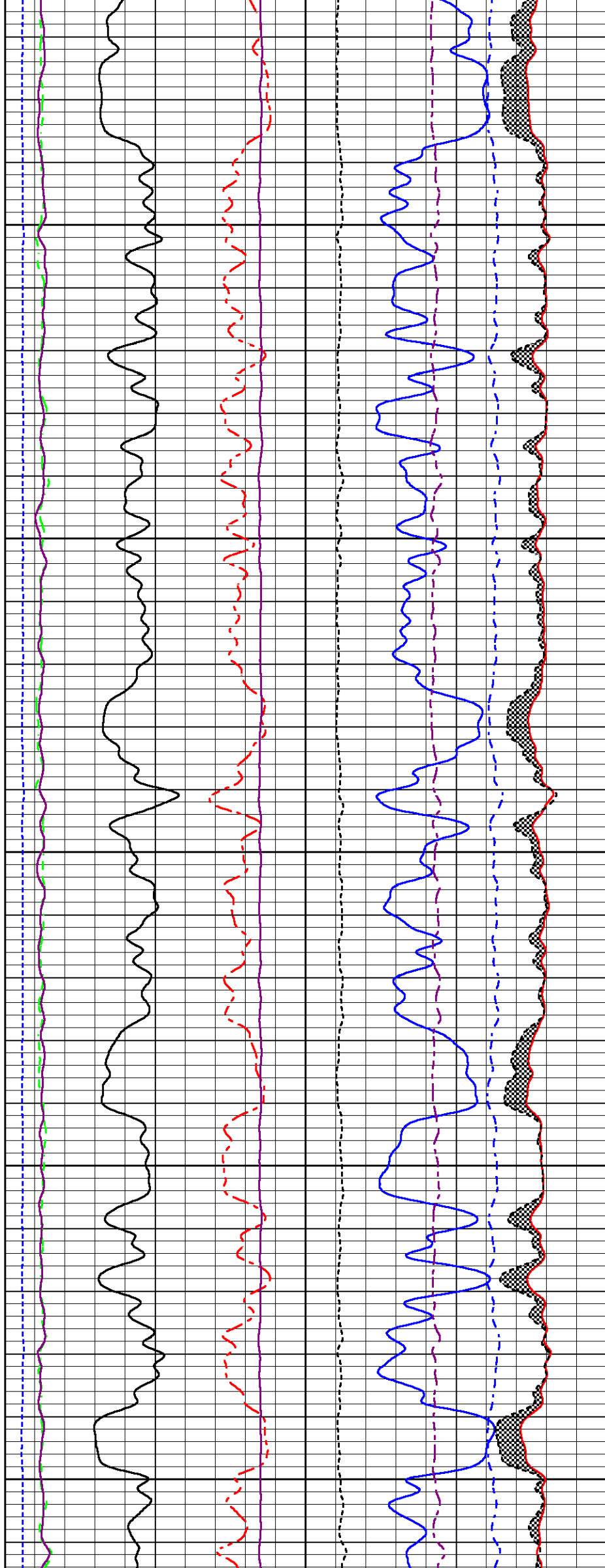


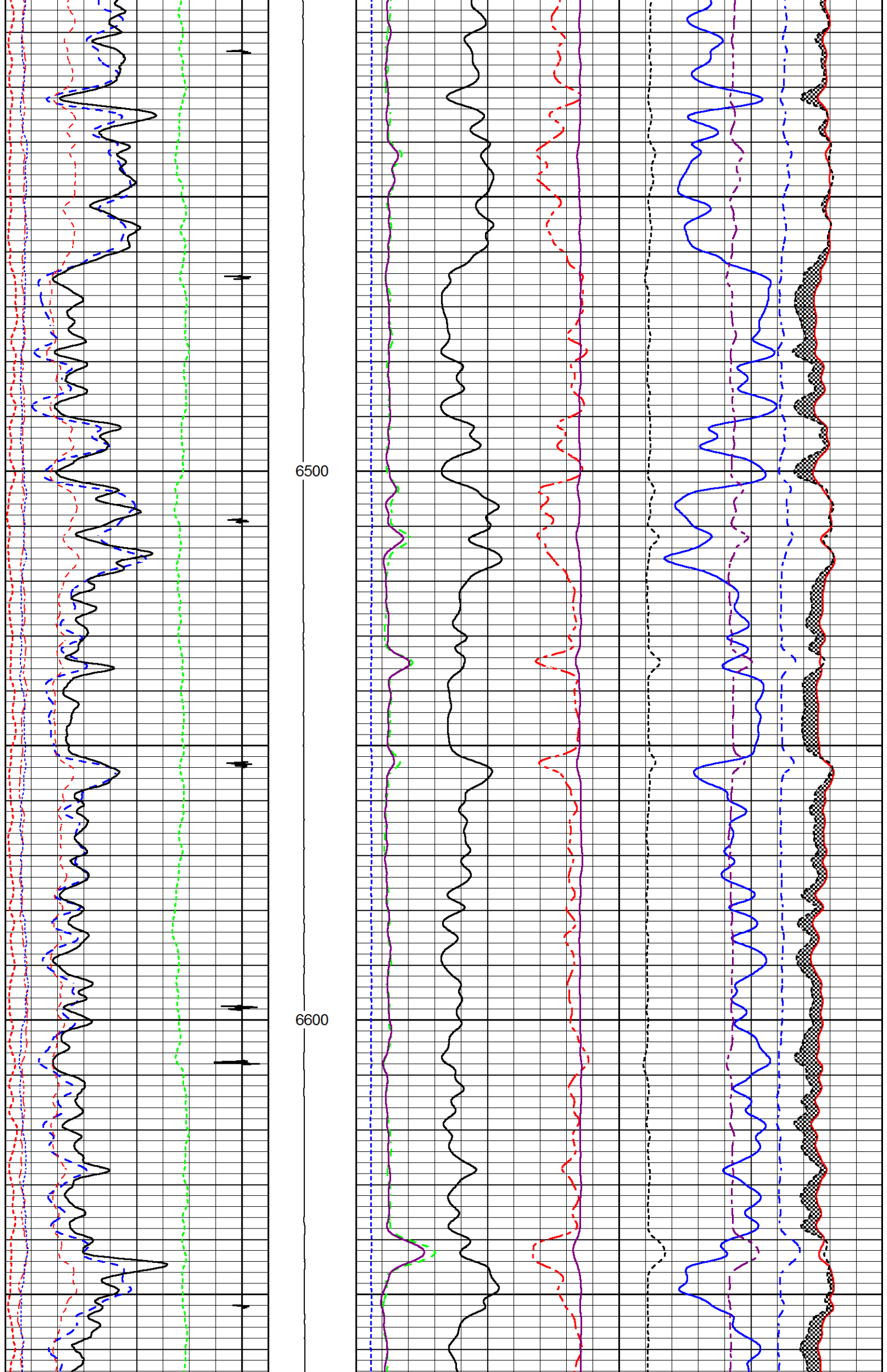


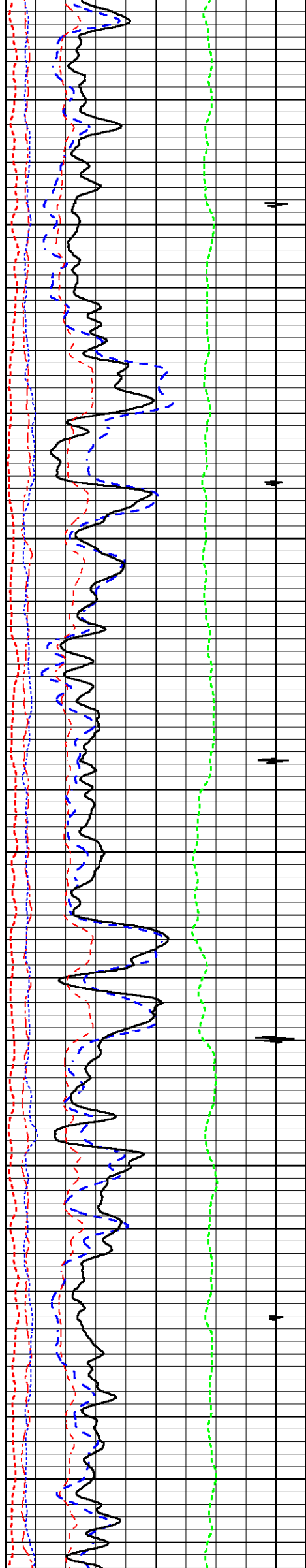
6200

6300

6400



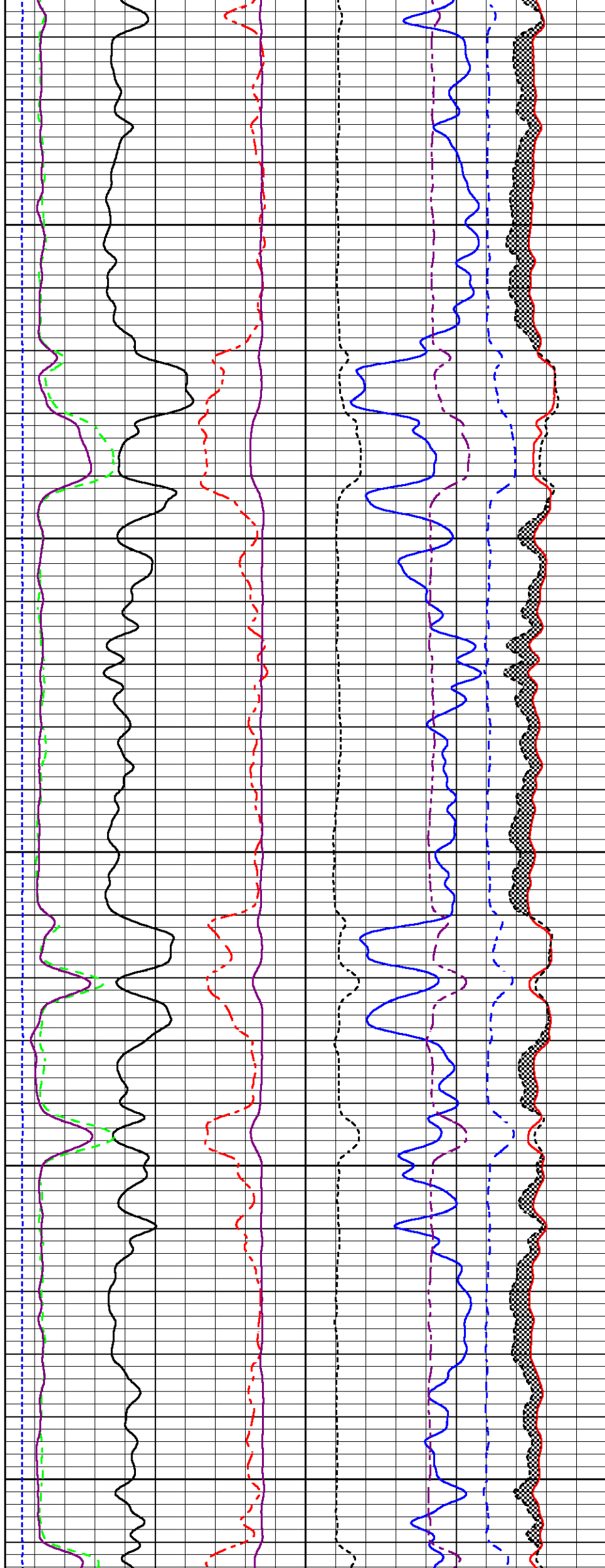


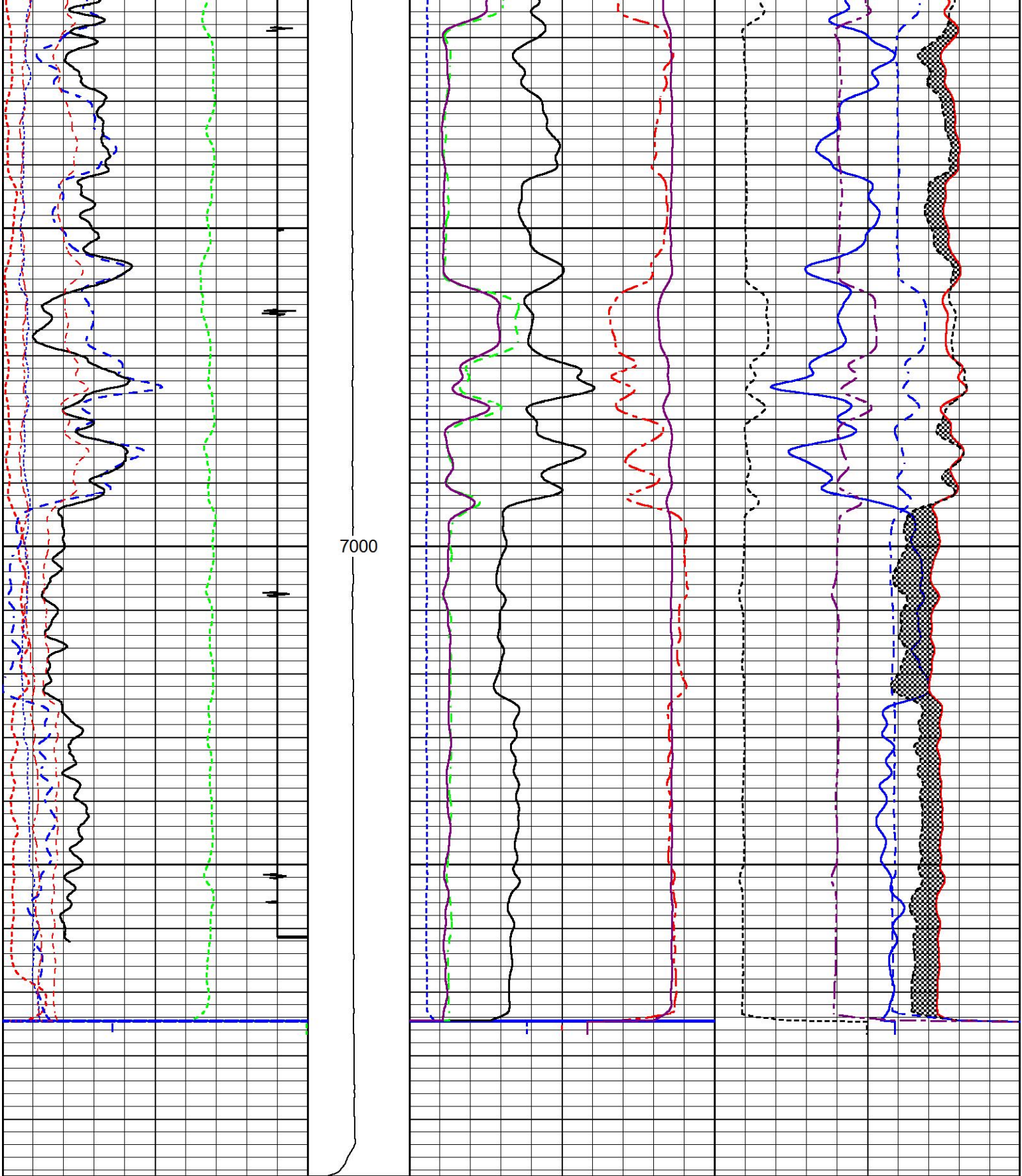


6700

6800

6900





200	Near Bore Si (SGBN)	0	TENSION	60	SGIN	0
0	OAI	100		2	RATIO (RNF)	0.5
10	FAR FIT ERR (SGFF)	40		0	RIN	15
0	GAMMA RAY (GAPI)	200		0	RICF	6
0	NEAR FIT ERR (SGFN)	100		0	H YIELD (YH2)	1
-5400	CCL	600		0	H YIELD (YH1)	1
0	IN FIT ERR (CFTR1) NEAR	1			INOX2	50000
0	IN FIT ERR (CFTR2) FAR	1			-1500	1500
						-1000

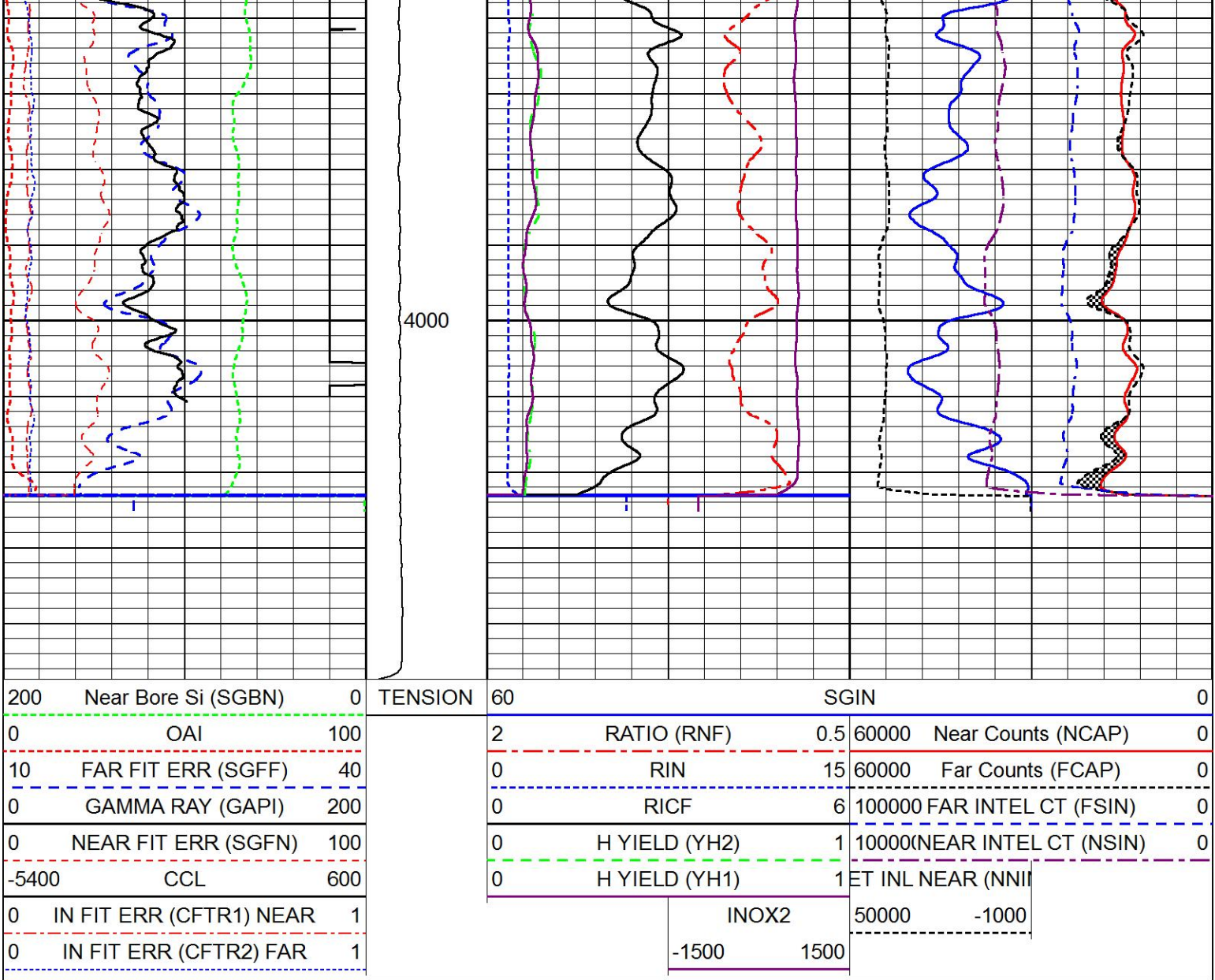
MAIN LOG SECTION

HALLIBURTON

5" = 100'

HALLIBURTON

Database File	watson_b_33a_combo.db
Dataset Pathname	RMTRPT1
Presentation Format	RMTE_M~1
Dataset Creation	Thu Jun 04 09:08:57 2015
Charted by	Depth in Feet scaled 1:240



REPEAT LOG SECTION

HALLIBURTON

5" = 100'

Log Variables

DatabaseD:\Warrior_data\watson_b_33a_combo.db
Dataset field\well\run1\MAIN1_vars_

Top - Bottom

BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1	LTH	UHSGC	RHO CF
ITEMPX	0	1	0	1	Sandstone	NONE	0.25
SO in 0	BORSAL kppm 150	CASED? Yes	PPT usec 0	CASEWGHT lb/ft 11.6	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.8
SRFTEMP degF 0	MudWgt lb/gal 8.4	CASETHCK in 0.25	CASEOD in 4.5	PERFS 0	TDEPTH ft 0	BOTTEMP degF 100	BITSIZE in 7.875

Calibration Report

Database File watson_b_33a_combo.db
Dataset Pathname MAIN1
Dataset Creation Thu Jun 04 09:45:55 2015

Segmented Cement Bond Log Calibration Report						
Serial Number:		11002214				
Tool Model:		004				
Calibration Casing Diameter:		4.500	in			
Calibration Depth:		206.907	ft			

Master Calibration, performed Thu Jun 04 08:40:05 2015:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.195	0.877	1.500	81.196	74.313	16.017
5FT	-0.205	0.490	1.500	81.196	114.642	25.010
S1	-0.193	0.992	0.000	100.000	84.421	16.282
S2	-0.197	0.785	0.000	100.000	101.902	20.027
S3	-0.195	1.048	0.000	100.000	80.455	15.706
S4	-0.197	0.919	0.000	100.000	89.610	17.670
S5	-0.194	0.811	0.000	100.000	99.423	19.323
S6	-0.197	0.743	0.000	100.000	106.389	20.918
S7	-0.196	0.673	0.000	100.000	115.056	22.588
S8	-0.197	0.693	0.000	100.000	112.289	22.148

Calibration Report						
Serial Number:		11002214				
Tool Model:		004				
Performed:						
Low: High:	Reference (degF)		Reading ()			
	0.000		0.000			
	1.000		1.000			
	Gain = 1.000		Offset = 0.000			


Reservoir Monitor Tool I Calibration Report						
Serial-Model:		12095949-A				
Shop Calibration Performed:		Wed May 27 10:12:02 2015				

Carbon/Oxygen Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	82.00	80.00	2.00	+/-15.00	V
ITCR2	3281	3250	31	+/-250	cps
Near Detector					
H	Channel	Expected Value	Amplitude	FWHM	Tol.
Fe	60	60 +/-2	0.0270	5.32	<6.00
NGAIN = 0.993	207	206 +/-2	0.0961	-----	-----
Far Detector					
H	Channel	Expected Value	Amplitude	FWHM	Tol.
Fe	60	60 +/-2	0.0360	5.72	<6.50
FGAIN = 0.991	209	208 +/-2	0.0918	-----	-----
Flask Temperature	63.5 degF				
Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.65	1.64	0.01	+/-0.05	
TCCR2	5061	5000	61	+/-1000	cps

ITCR2	3240	3200	40	+/-250	cps
Sigma Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	82.00	80.00	2.00	+/-15.00	V
FCAP	10080	10000	80	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.91	0.95	-0.04		
N/F Inel Norm	0.58	0.61	-0.03		
RNF	1.10	1.07	0.03	+/-0.12	
RINC	1.71	1.64	0.07	+/-0.18	
SGFN	24.09	24.00	0.09	+/-0.50	cu
SGFF	22.90	22.85	0.05	+/-0.50	cu
FSIN	24192	24000	192	+/-2000	cps
FCAP	10177	10000	177	+/-1000	cps
NFTR	0.84			<5.00	
FFTR	0.88			<5.00	
NBKG	179			<500	cps
FBKG	93			<500	cps
RTN	0.40	0.40	0.00	+/-0.10	usec
RTF	0.43	0.40	0.03	+/-0.10	usec

Calibration Software Modules	
HRMTI Module	2013.11.14.0
RMTI Module	2014.8.28.1
Log Data Acquisition Software Modules	
HRMTI Module	2013.11.14.0
RMTI Module	2014.8.28.1

Gamma Ray Calibration Report						
Type / Serial:			002 / 11224503			
SHOP CALIBRATION		Thu Jun 04 08:32:15 2015				
	Counts/Sec.	Gain	Offset	Jig	Units	
Background	36.8				cps	
Calibrator	322.4				cps	
		1.4100			GAPI/cps	
PRIMARY VERIFICATION						
Background	53.3				cps	
Calibrator	467.2				cps	
Difference				413.8	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	1.50	1.44	1.00

			1.4375 IN CABLE HEAD			
CCL	37.31					
GR	35.05		TTTCU-002 (11224503) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
			XHU-003 (12461939) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
RmtTFGT RmtTNGT	24.39 23.89		RMTI-A (12095949) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V RmtCommFWa	16.14 16.14		X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
			AUH-001 (11072111) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
			CENT-Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	20.00
CBLTEMP	8.23		RBT-004 (11002214) Radial Bond Tool (UW 3 1/8) 20K Rated	9.48	3.13	140.00
			CENT-Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	20.00
LLMTEN	0.00		BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
<div> <div>Dataset:</div> <div>watson_b_33a_combo.db: field/well/run1/MAIN1</div> <div>Total length:</div> <div>40.88 ft</div> <div>Total weight:</div> <div>370.20 lb</div> <div>O.D.:</div> <div>3.13 in</div> </div>						

Company	CROSA OPERATING CO., LLC.		
Well	WATSON RANCH B 33A-17-07-95		
Field	PARACHUTE		
County	GARFIELD	State	CO
HALLIBURTON		RESERVOIR MONITOR TOOL - ELITE	