

RESERVOIR MONITOR TOOL - ELITE

Service Ticket No.	902451897	API No.	05-045-22799-0000	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.	7272'	3853'	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		

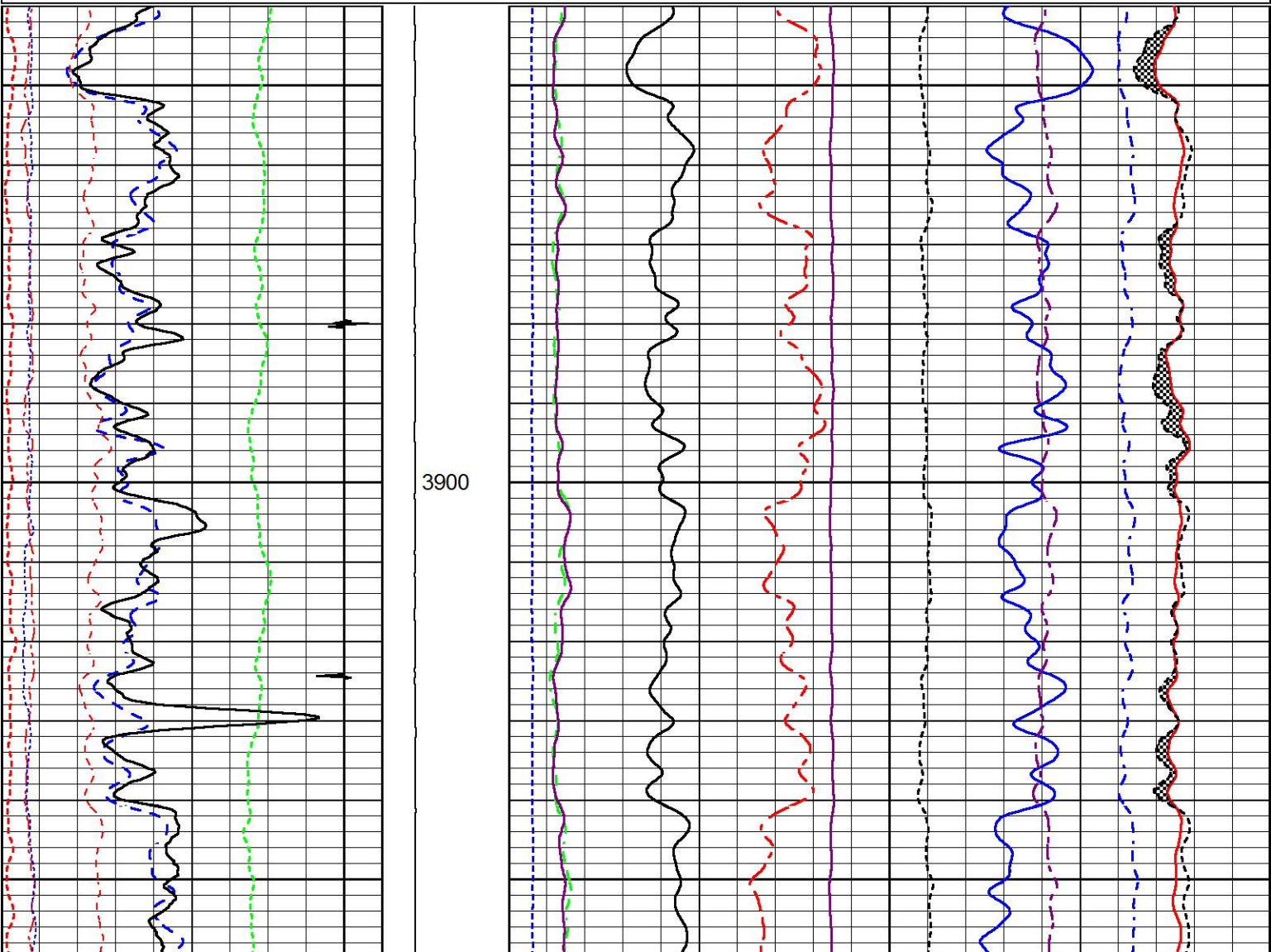
HALLIBURTON

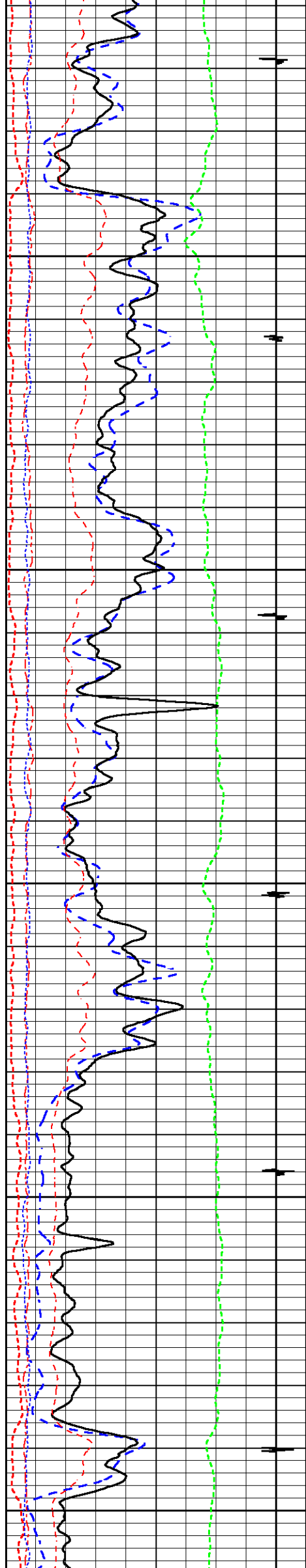
MAIN LOG SECTION

5" = 100'

Database File	watson_b_32c_combo.db
Dataset Pathname	MAIN1
Presentation Format	RMTE_M~1
Dataset Creation	Wed Jun 03 03:24:21 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

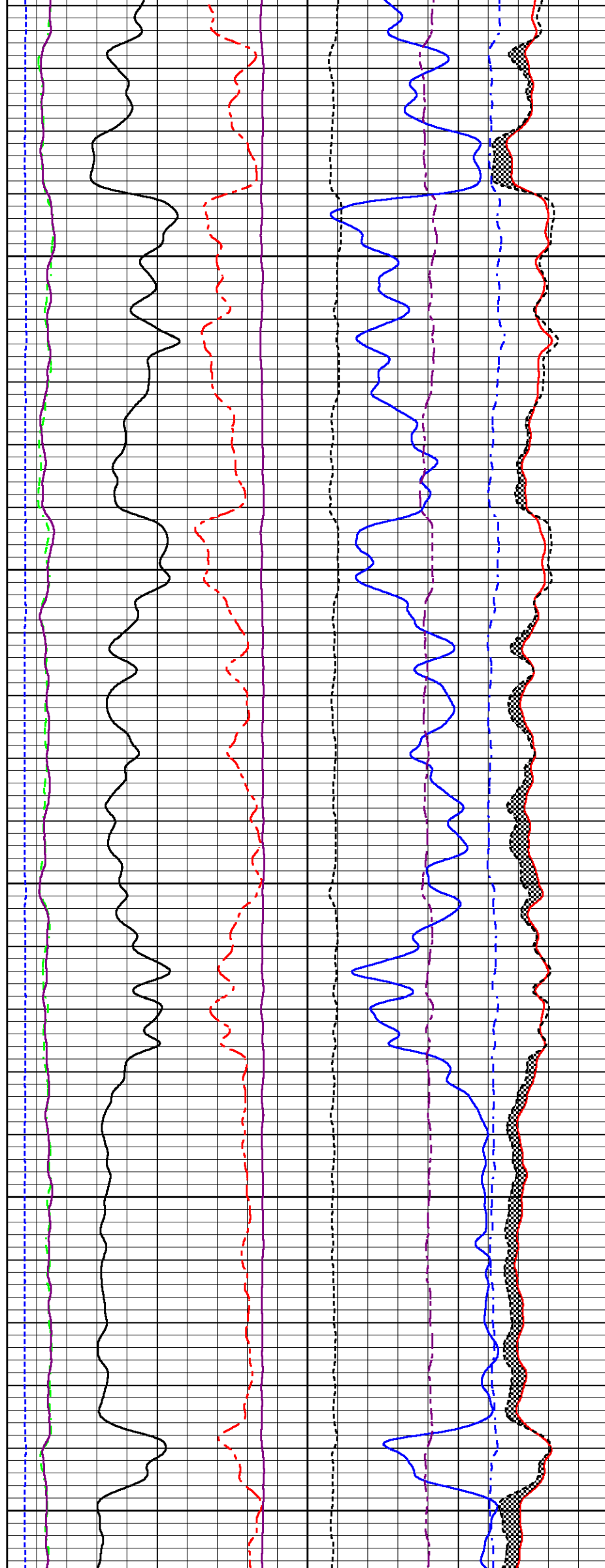


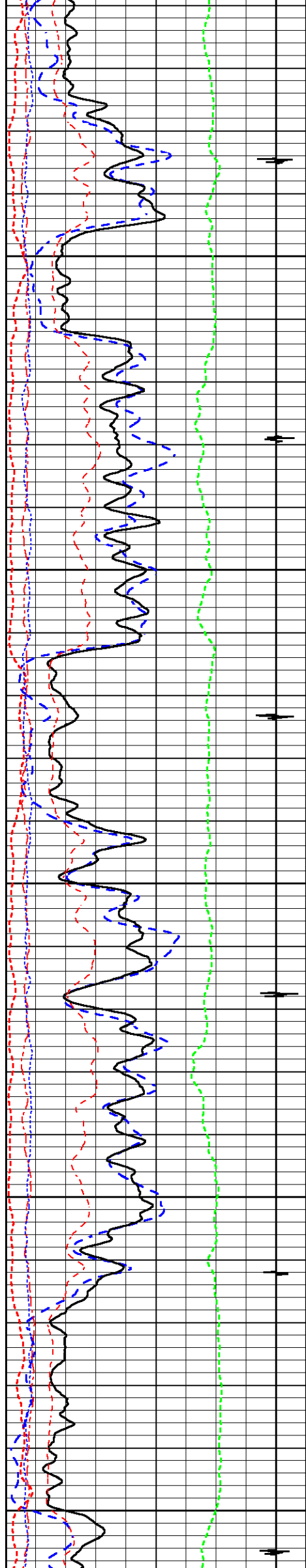


4000

4100

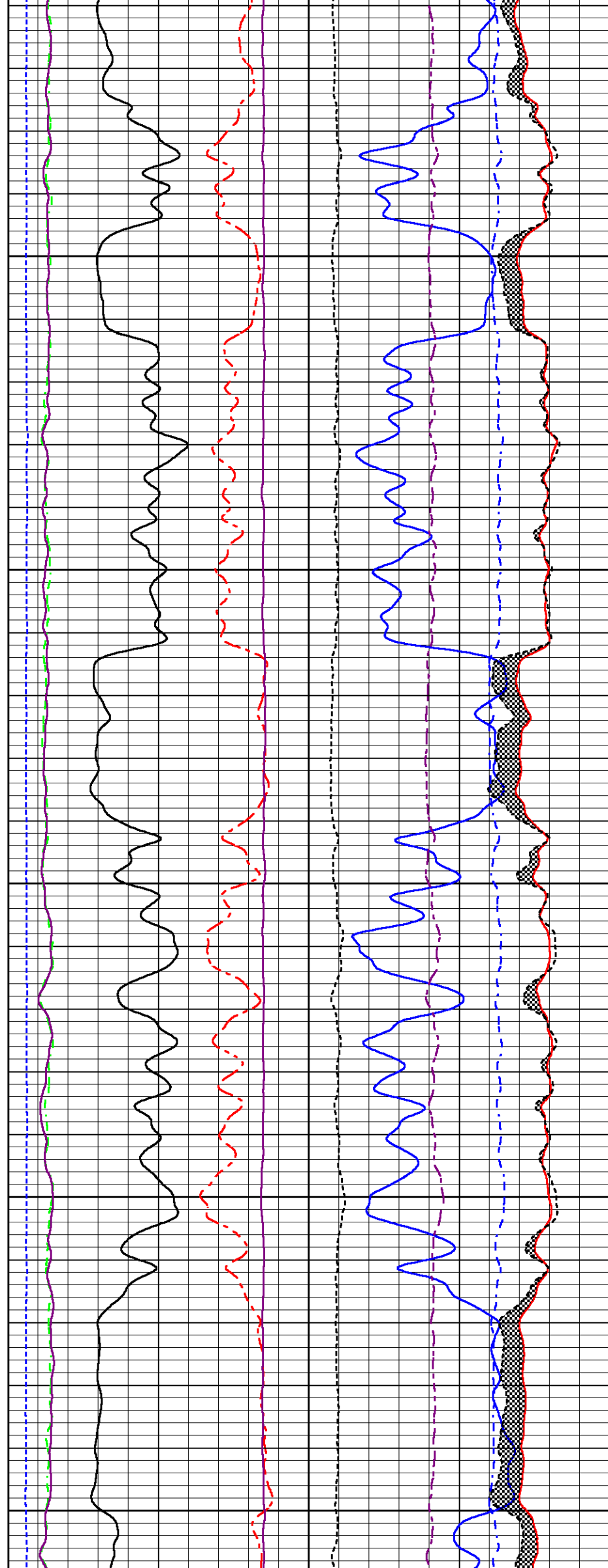
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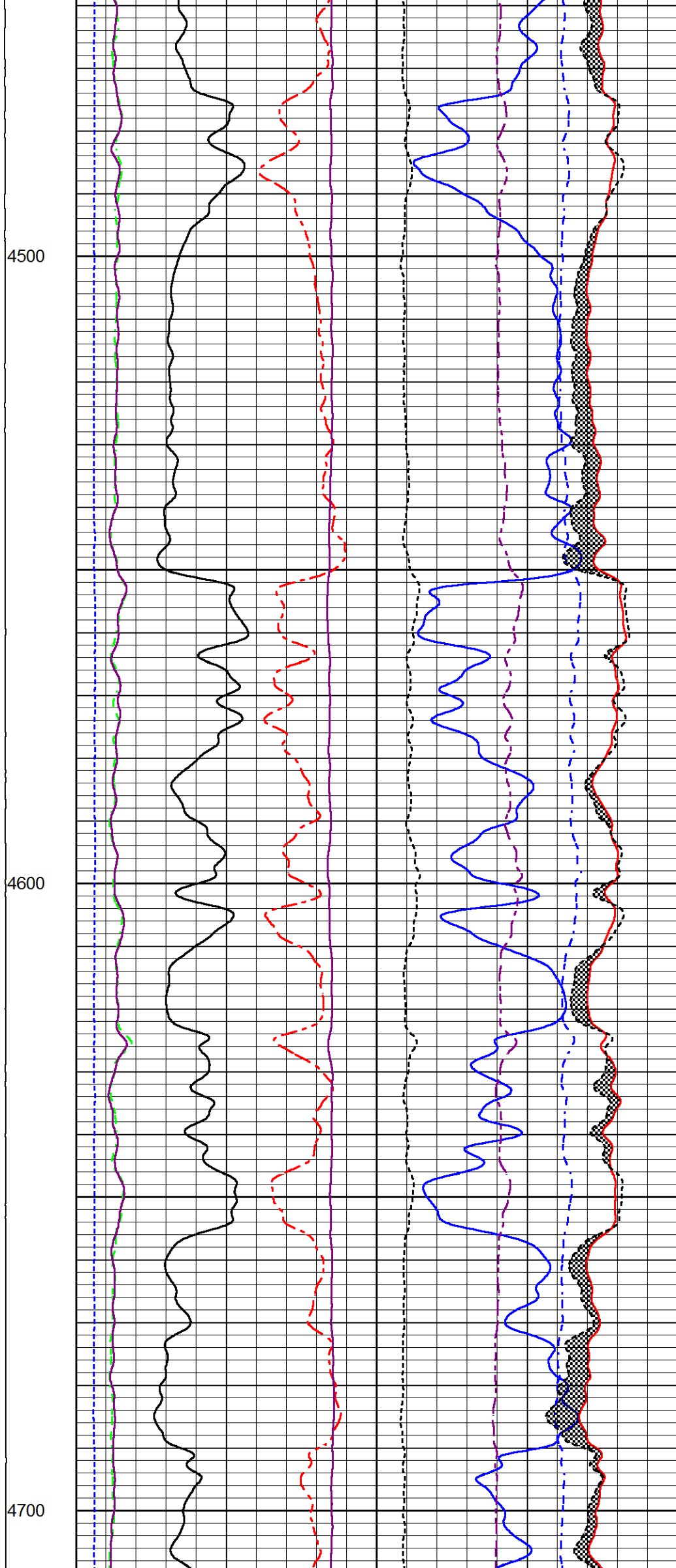
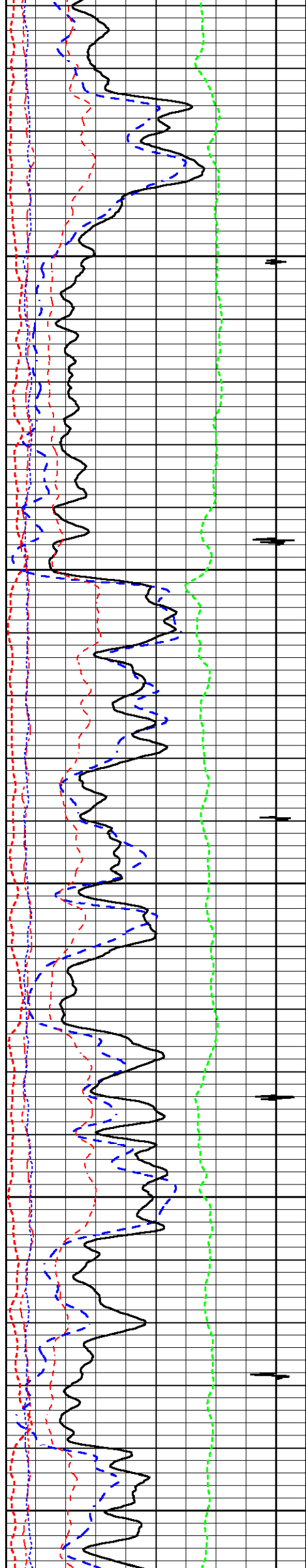


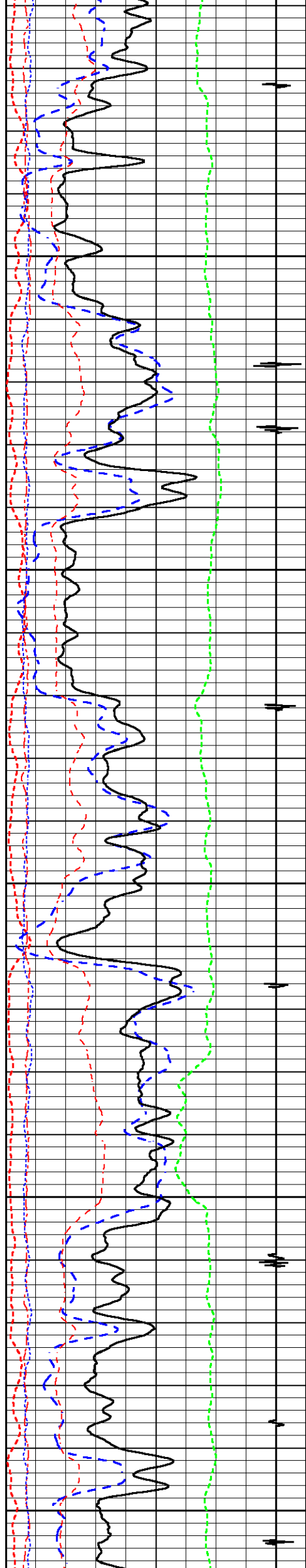


4300

4400

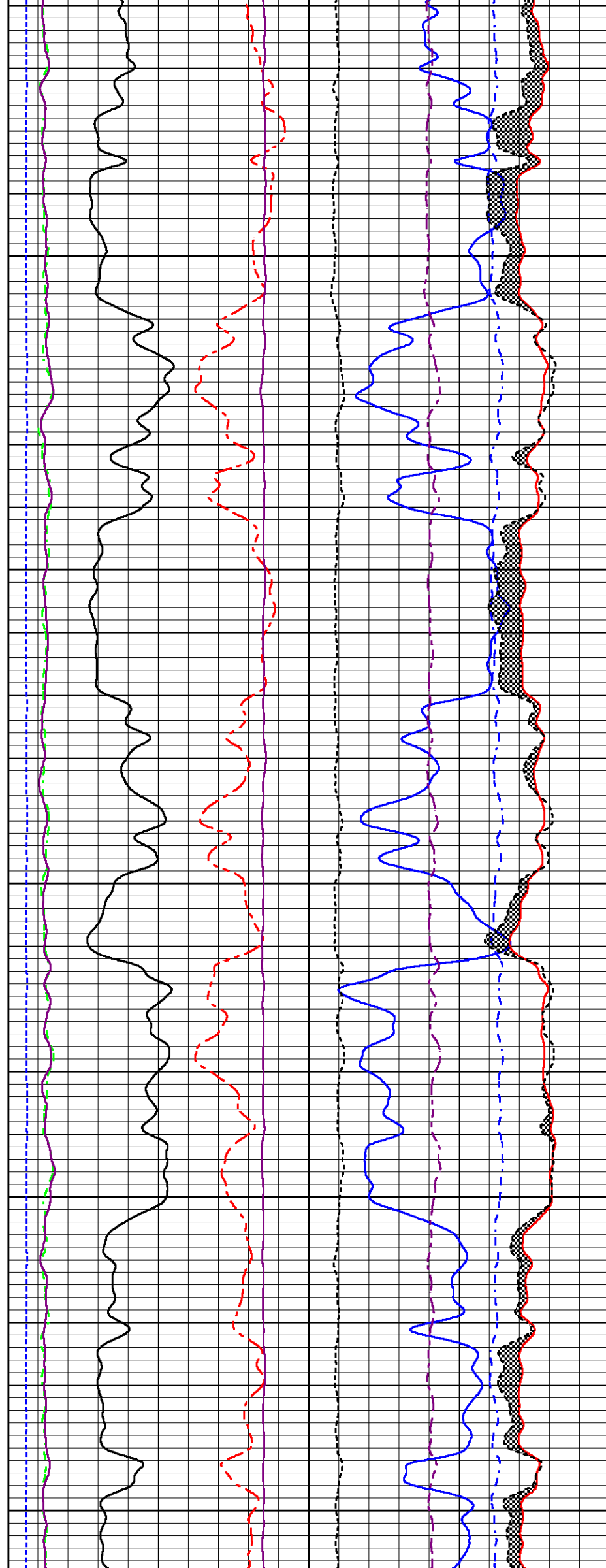


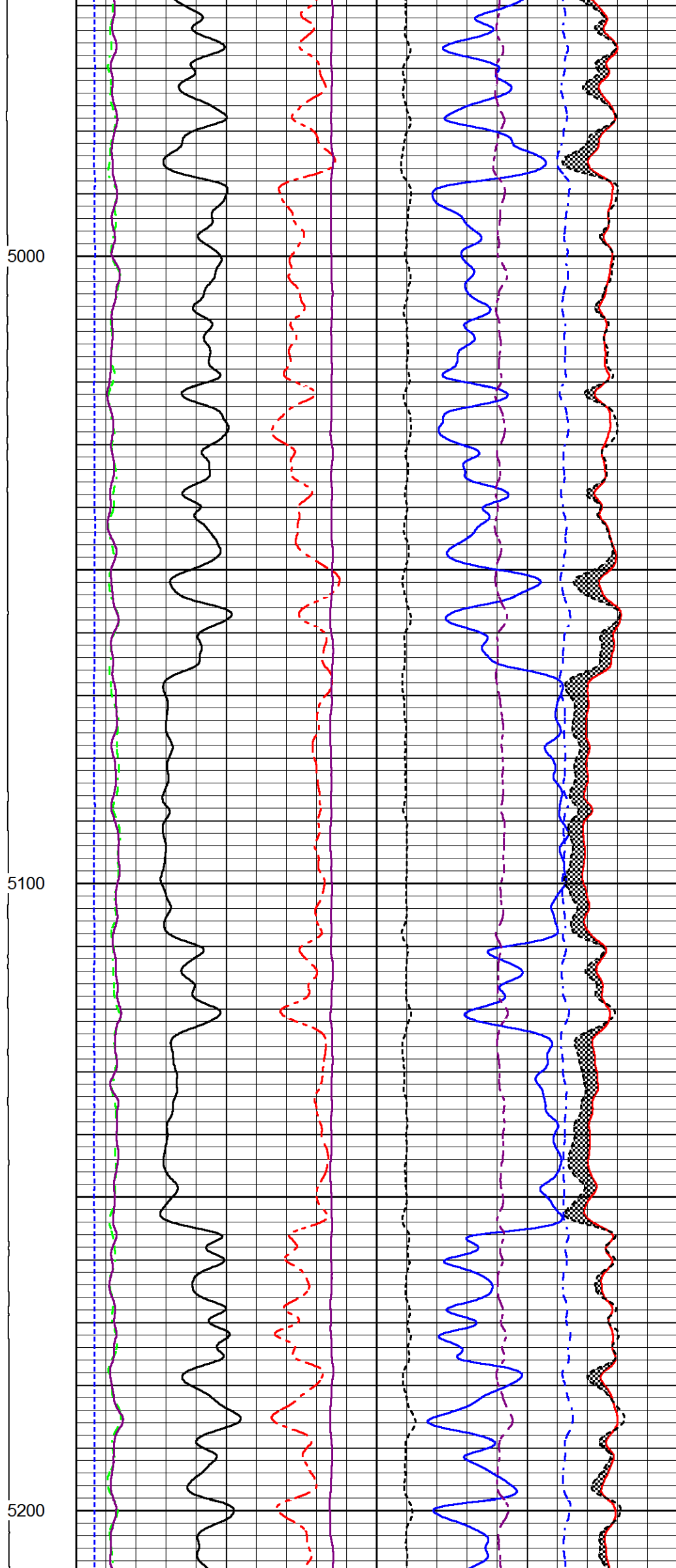
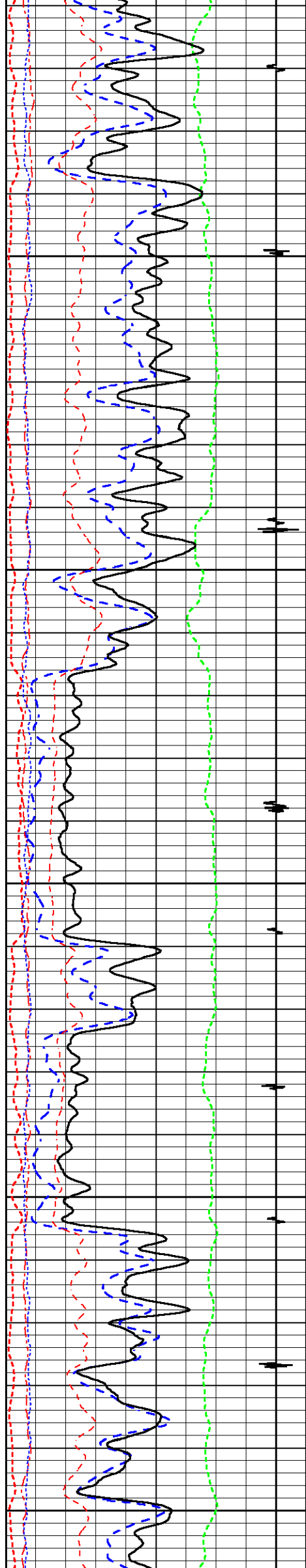


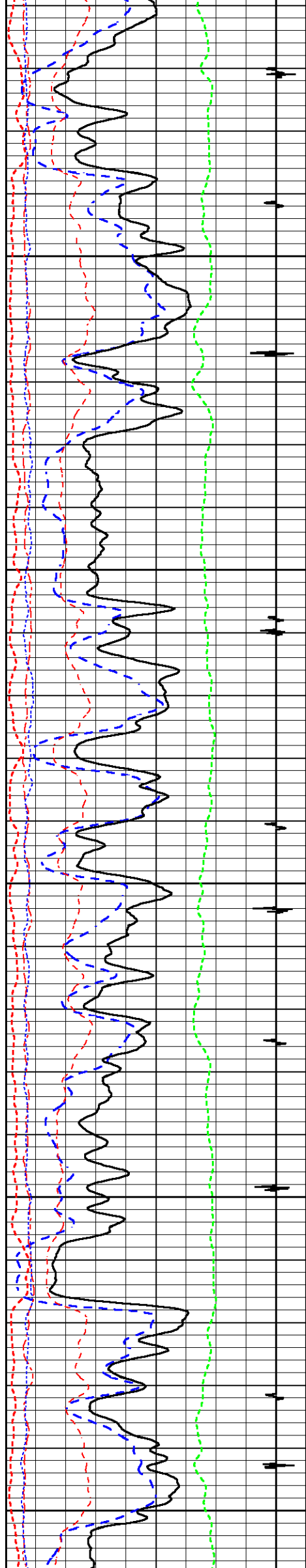


4800

4900

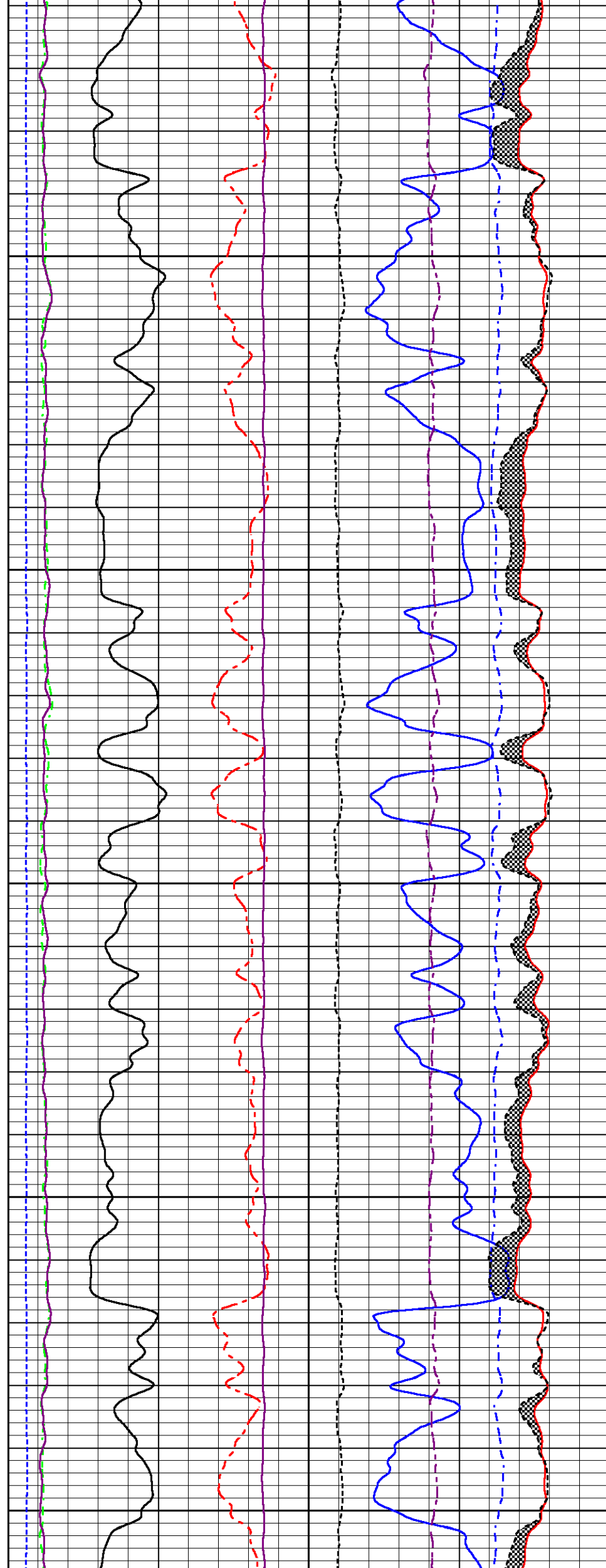


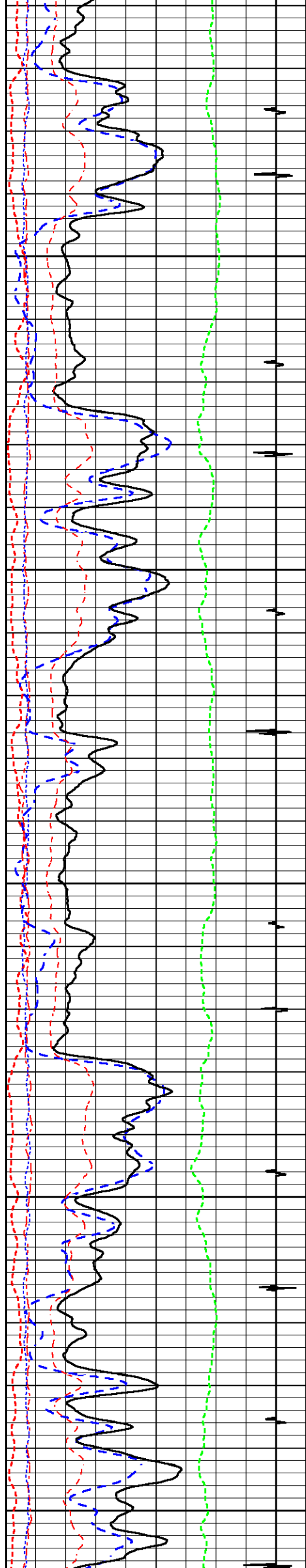




5300

5400

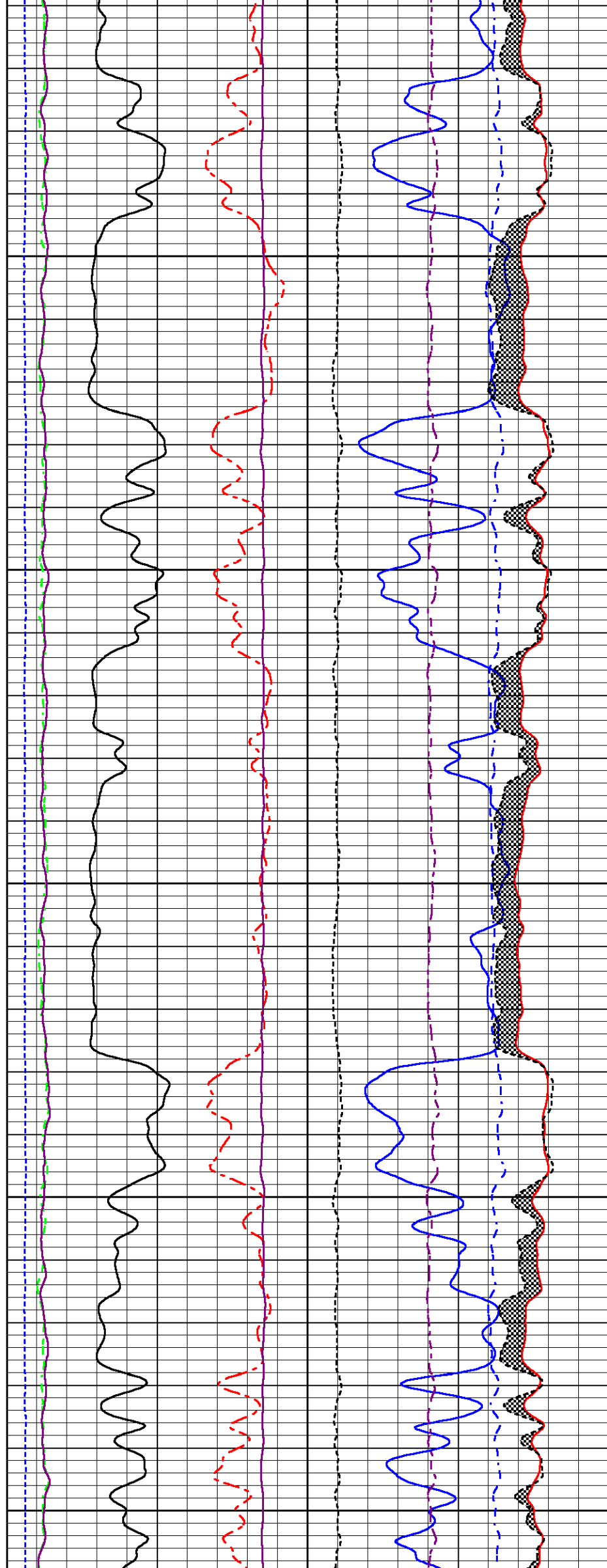


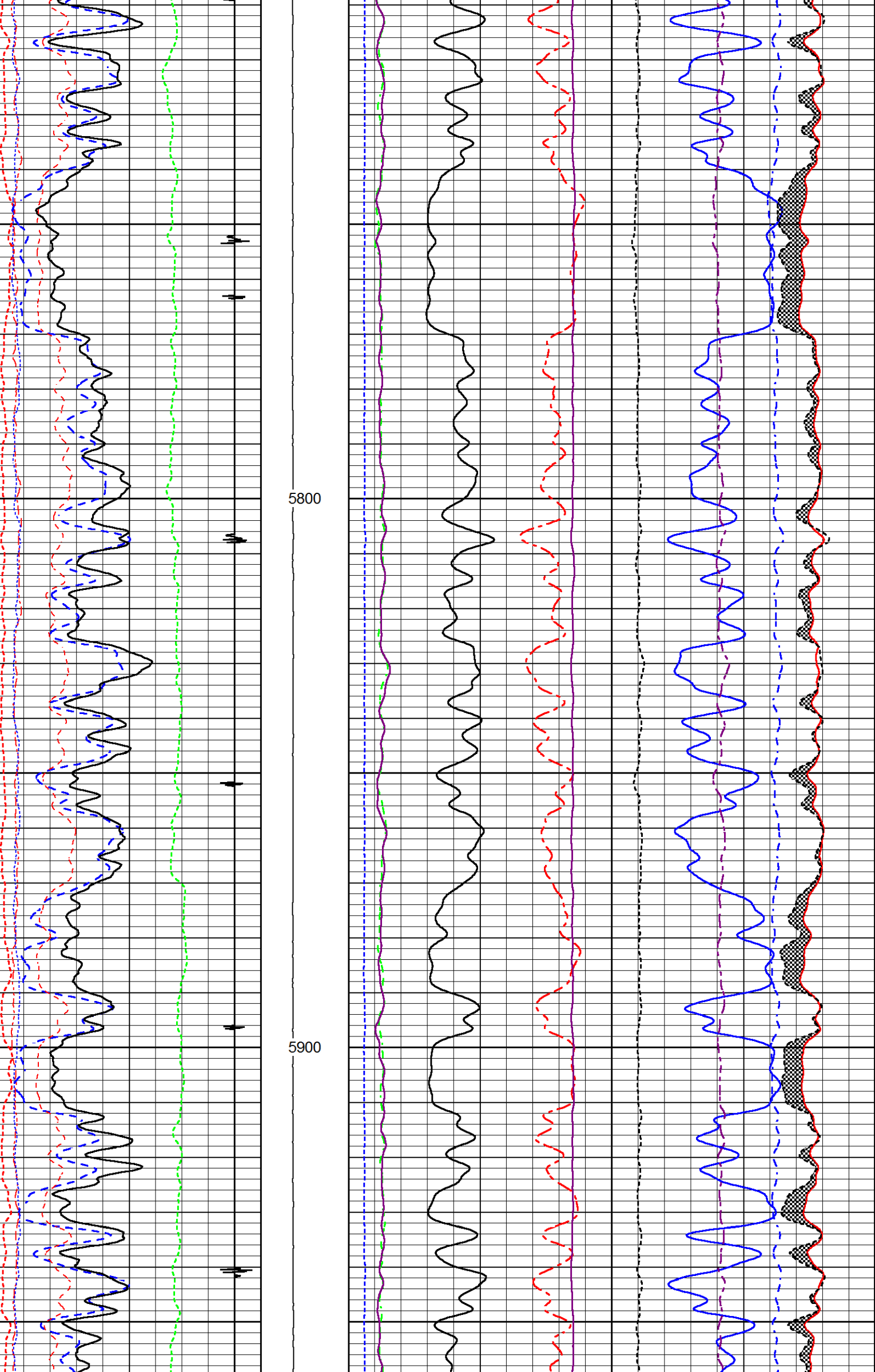


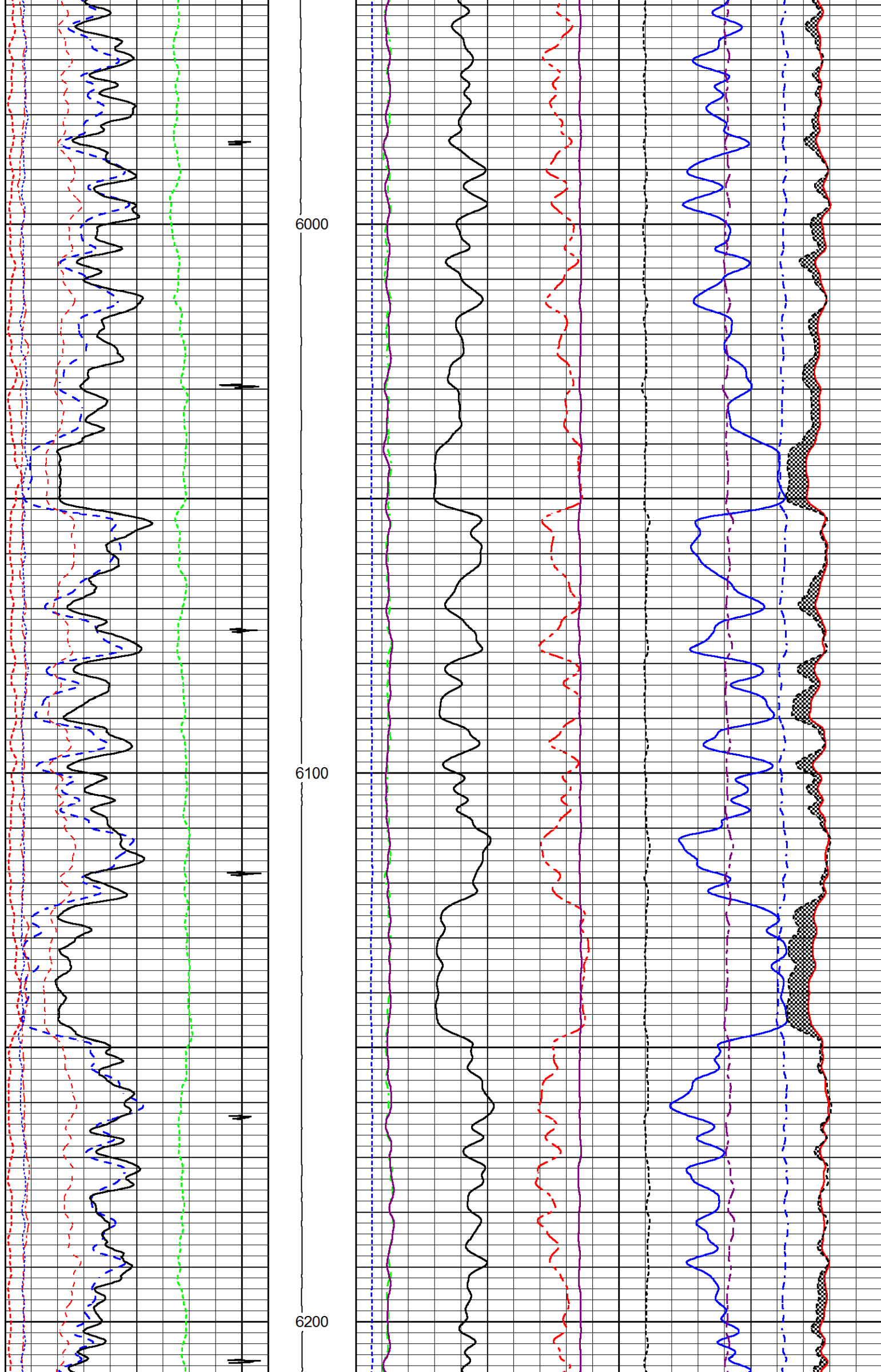
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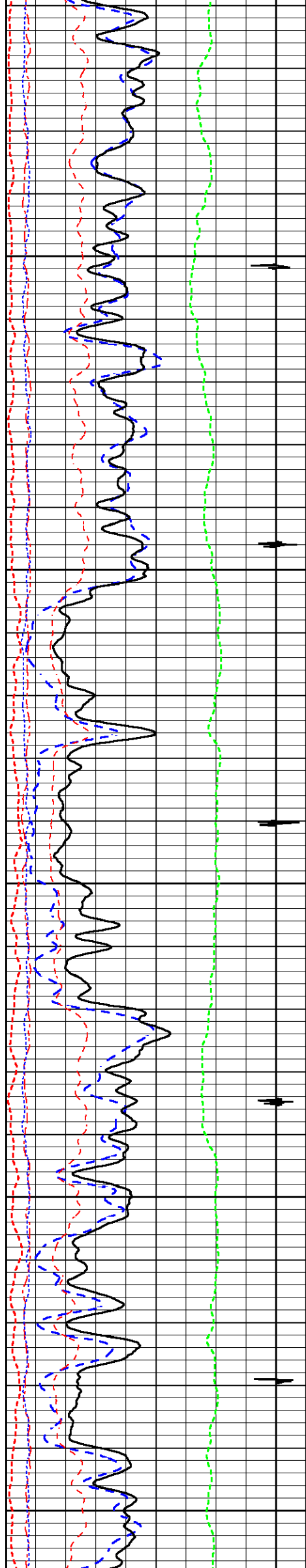
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5700



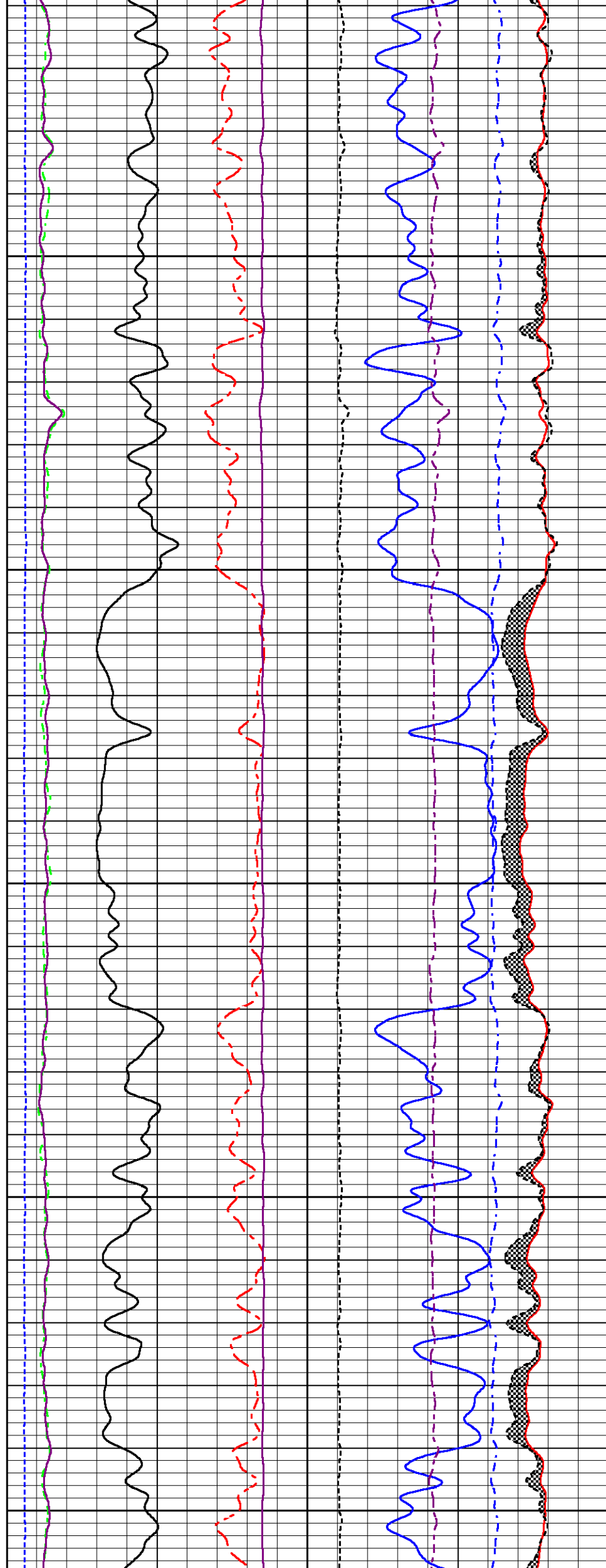


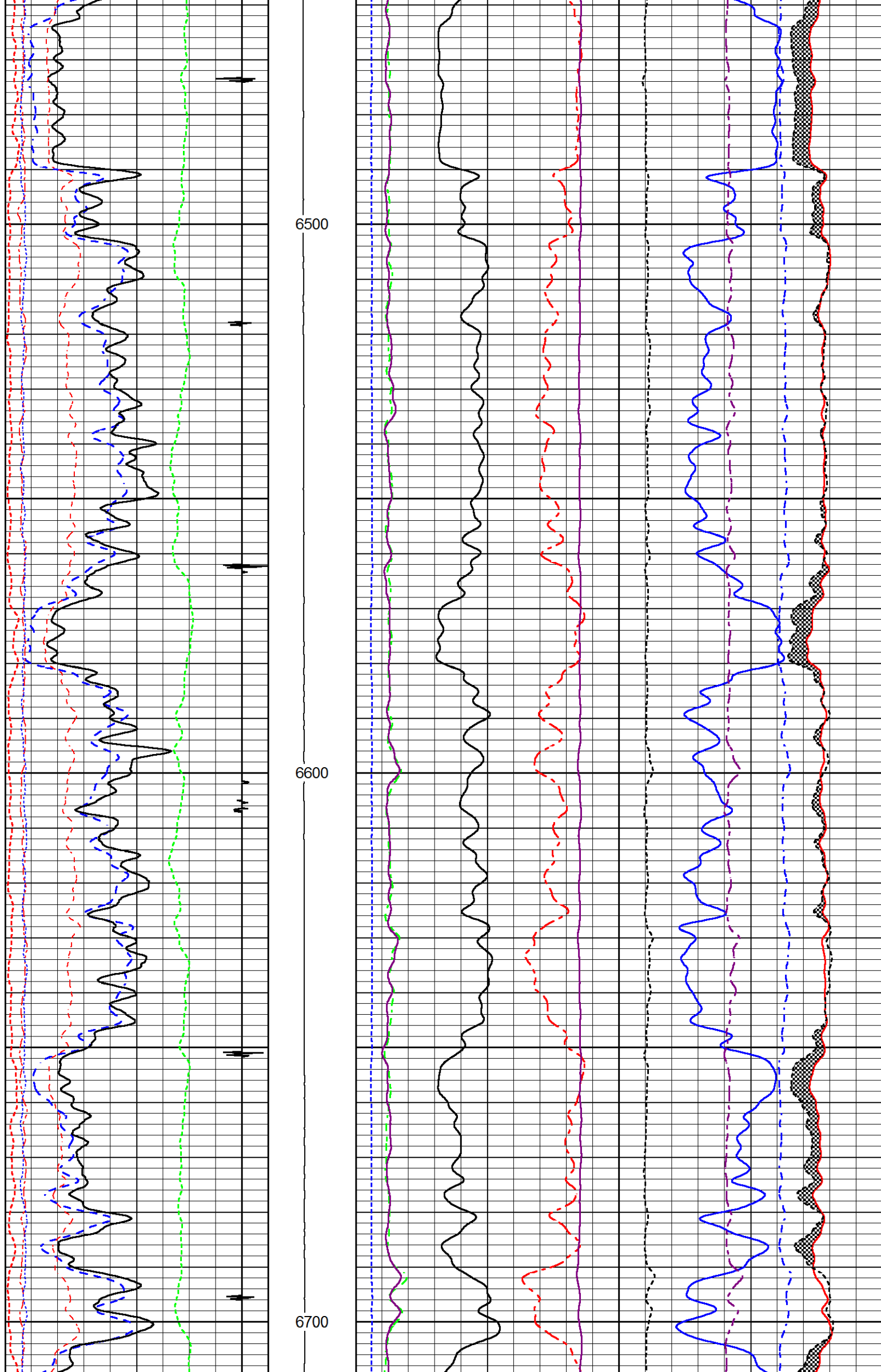


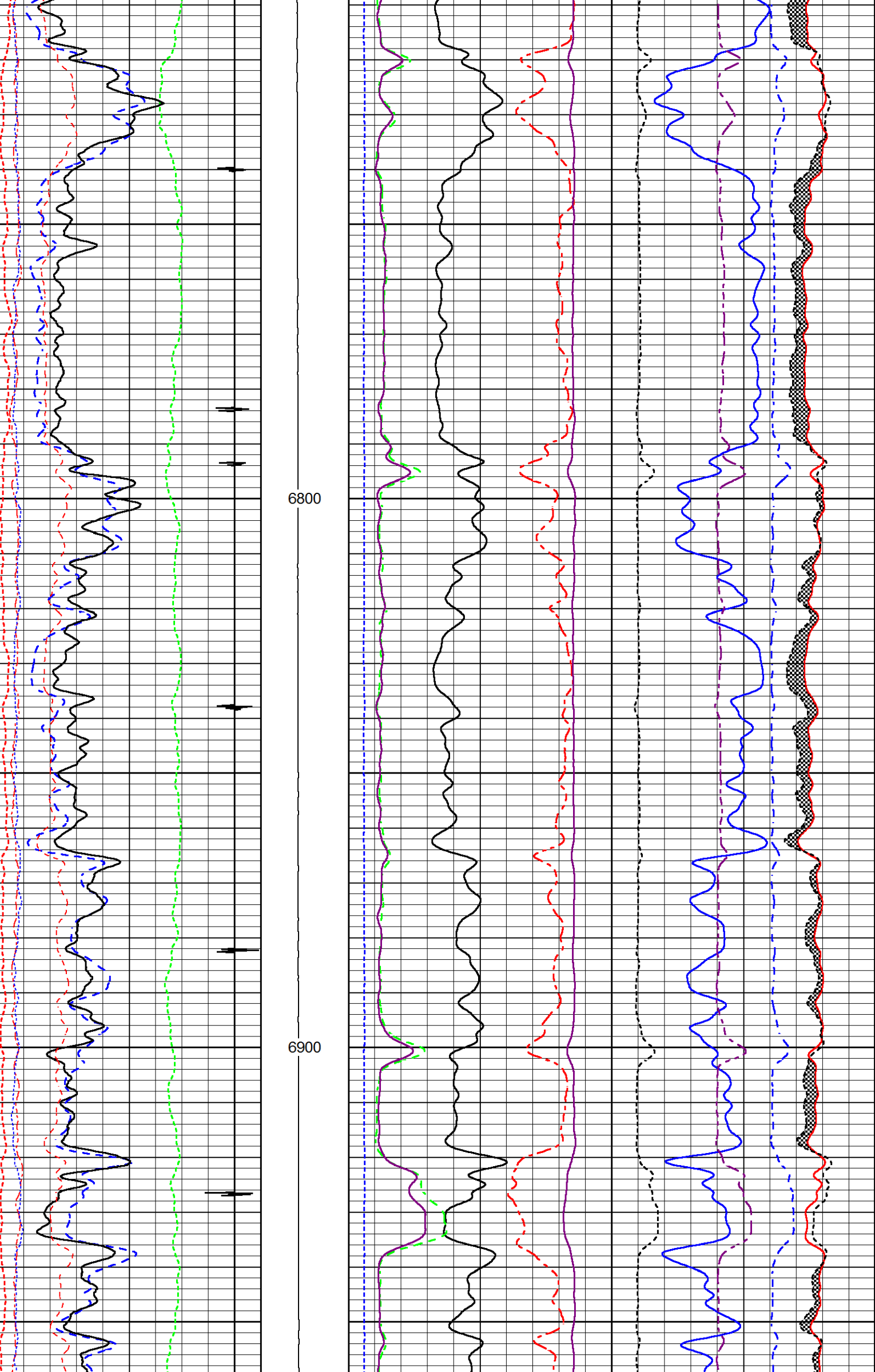


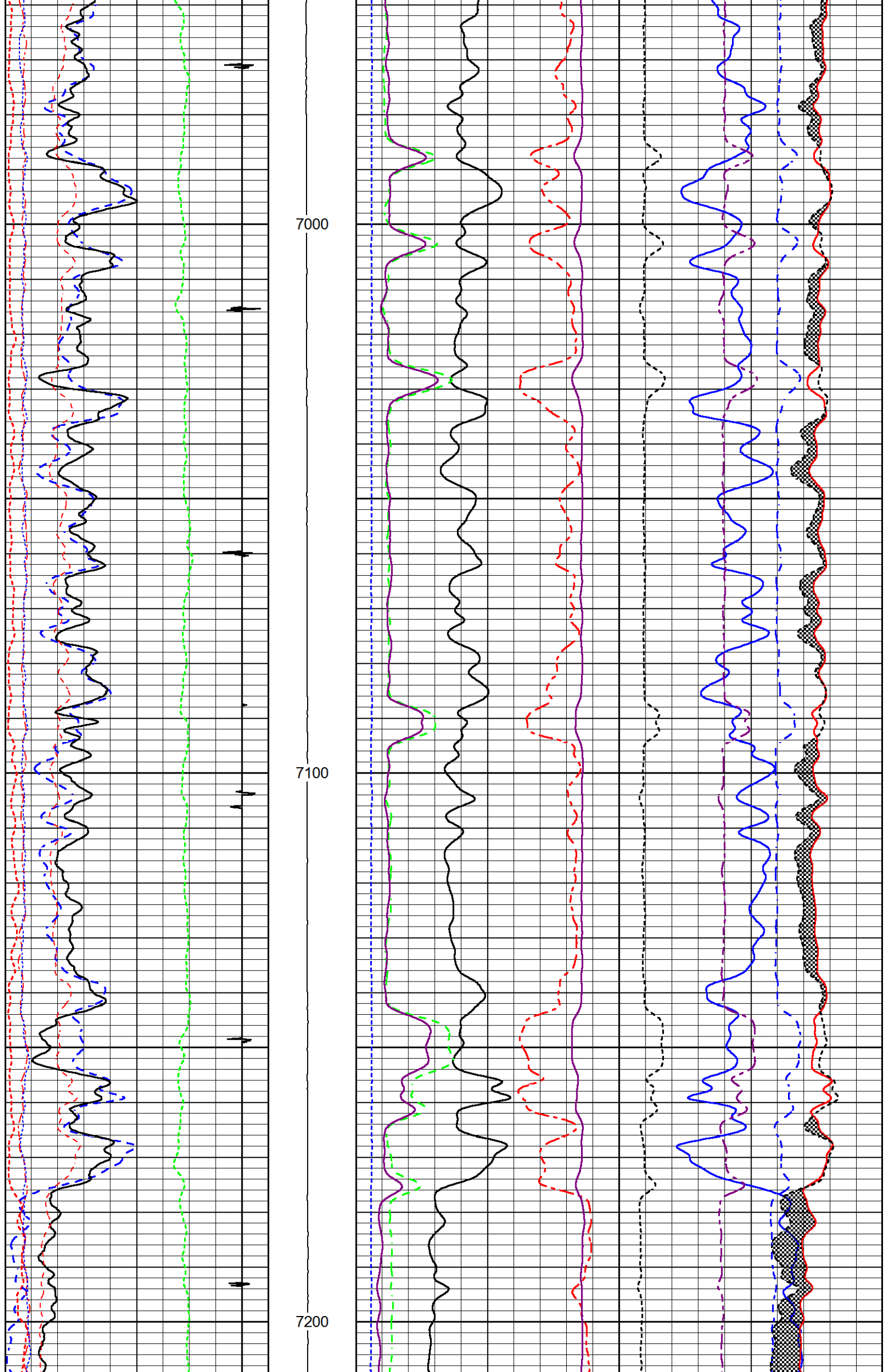
6300

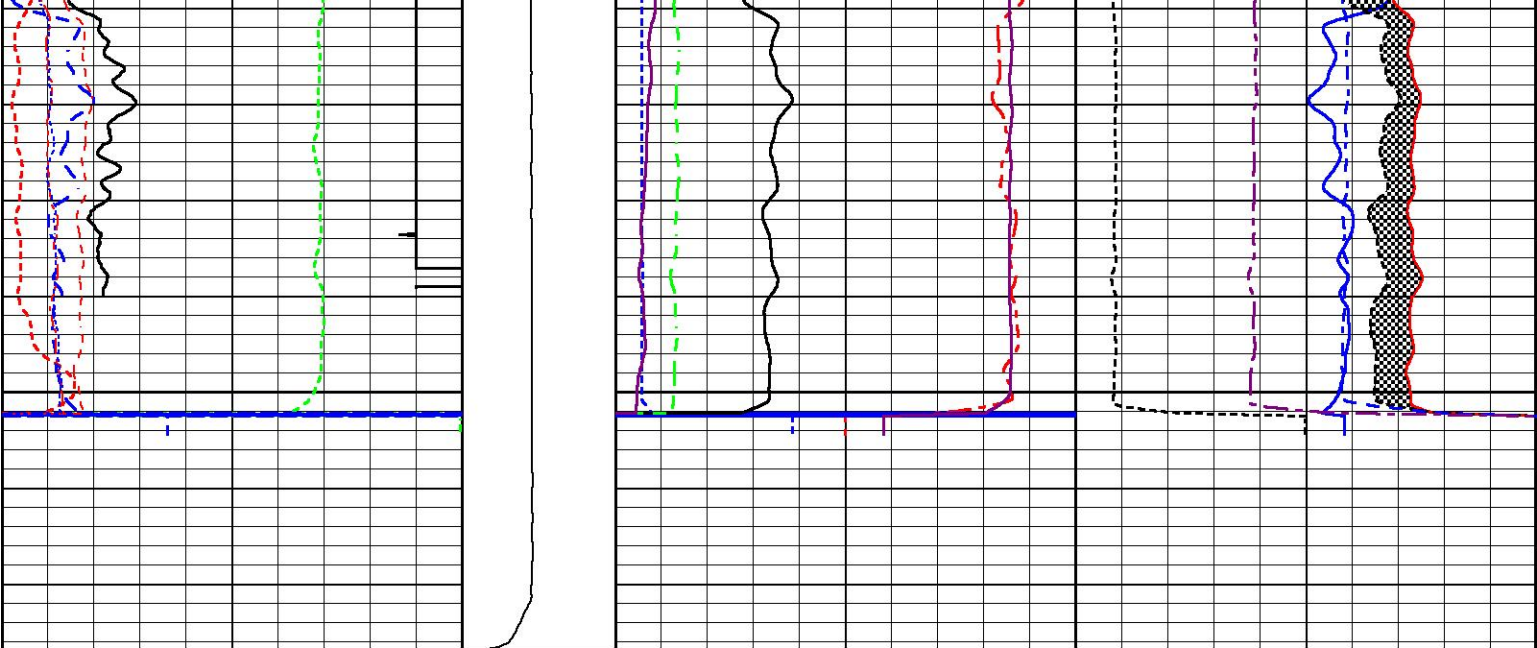
6400











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				-1000

MAIN LOG SECTION

5" = 100'

HALLIBURTON

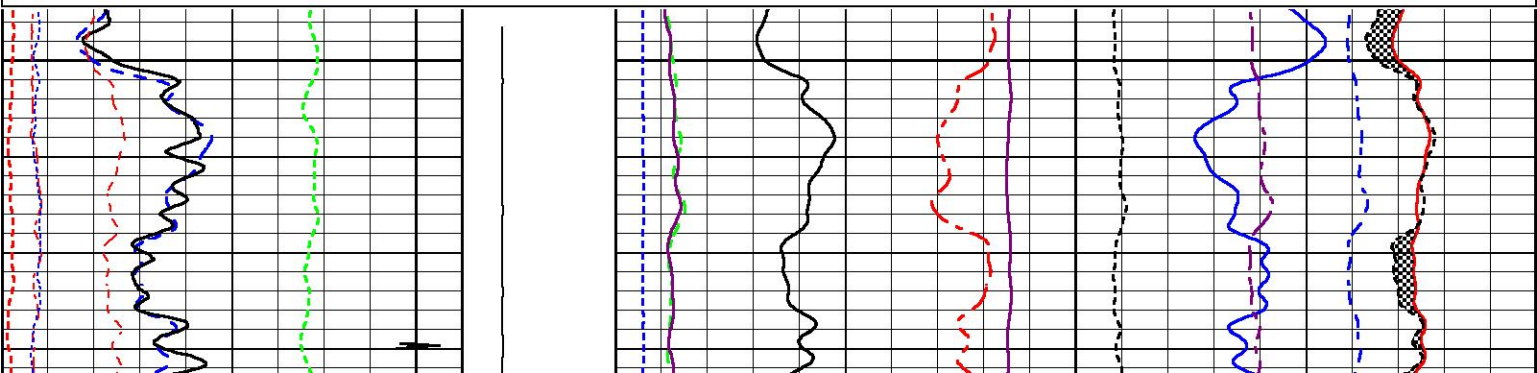
REPEAT LOG SECTION

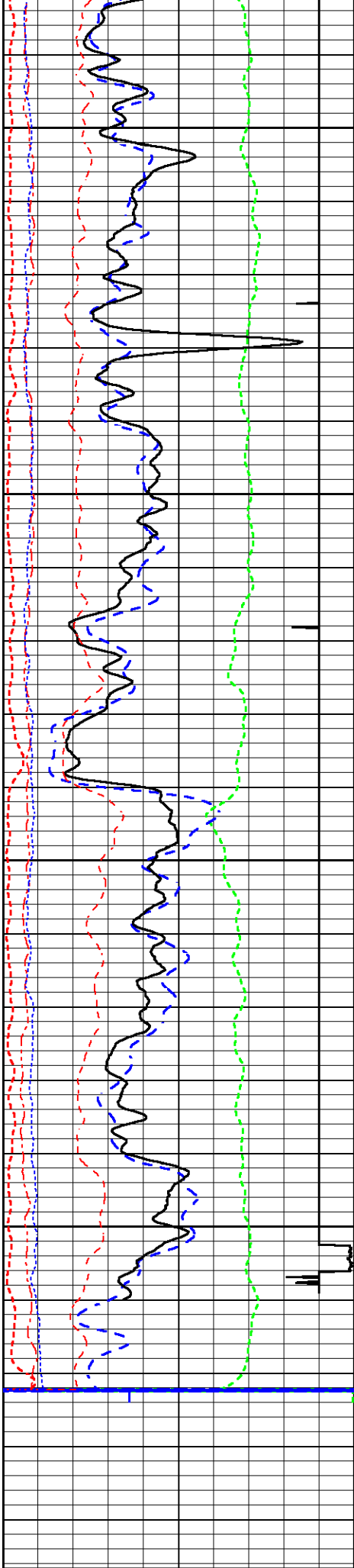
5" = 100'

HALLIBURTON

Database File watson_b_32c_combo.db
Dataset Pathname RMTRPT1
Presentation Format RMTE_M~1
Dataset Creation Wed Jun 03 02:47:00 2015
Charted by Depth in Feet scaled 1:240

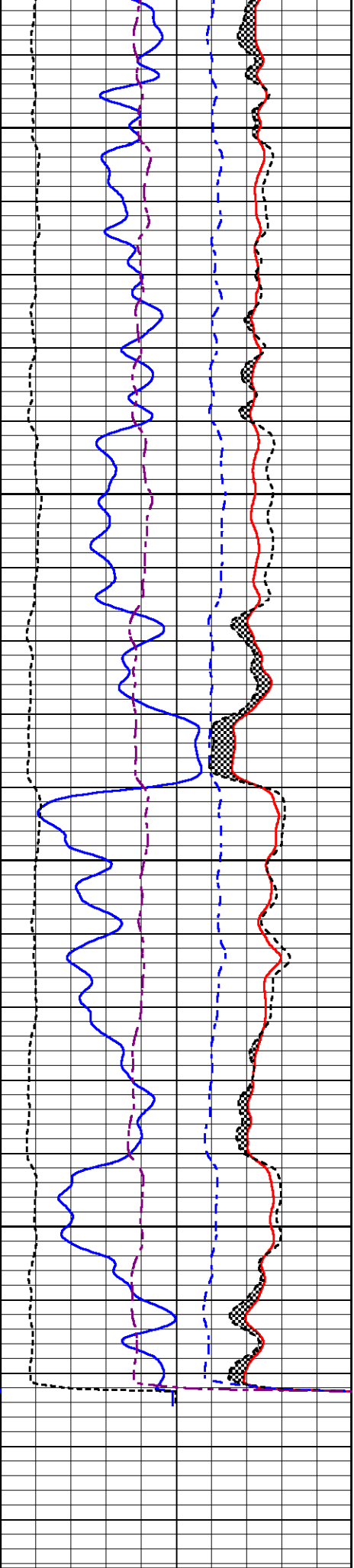
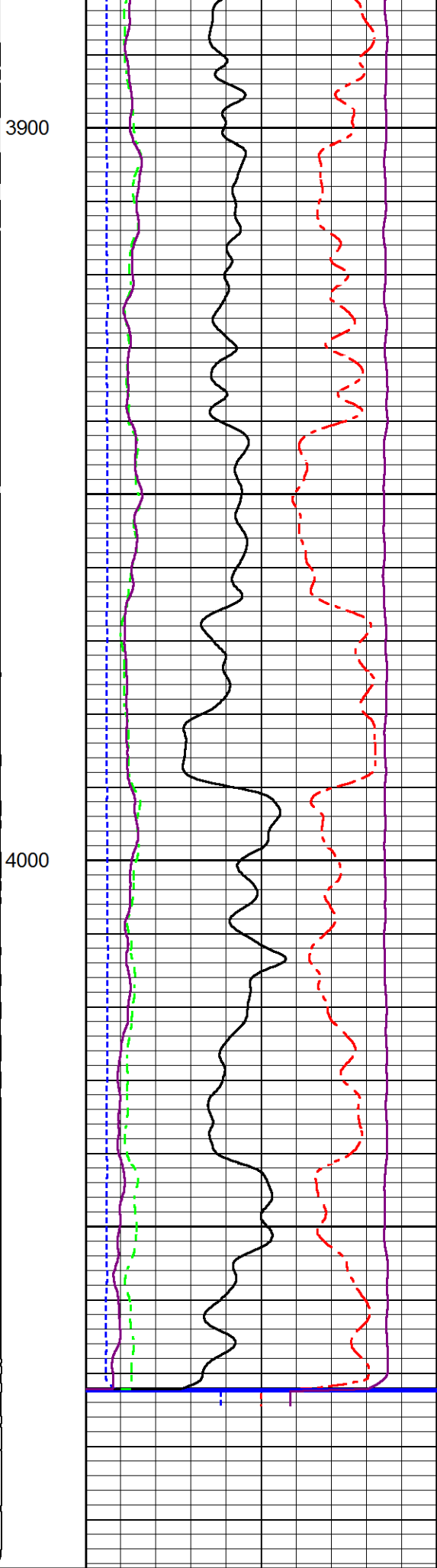
200	Near Bore Si (SGBN)	0	TENSION	60	SGIN	0
0	OAI	100		2	RATIO (RNF)	0.5
10	FAR FIT ERR (SGFF)	40		0	RIN	15
0	GAMMA RAY (GAPI)	200		0	RICF	6
0	NEAR FIT ERR (SGFN)	100		0	H YIELD (YH2)	1
-5400	CCL	600		0	H YIELD (YH1)	1
0	IN FIT ERR (CFTR1) NEAR	1			INOX2	50000
0	IN FIT ERR (CFTR2) FAR	1				-1000





3900

4000



200	Near Bore Si (SGBN)	0
0	OAI	100
10	FAR FIT ERR (SGFF)	40
0	GAMMA RAY (GAPI)	200
0	NEAR FIT ERR (SGFN)	100
-5400	CCL	600
0	IN FIT ERR (CFTR1) NEAR	1
0	IN FIT ERR (CFTR2) FAR	1

60	TENSION	SGIN
2	RATIO (RNF)	0.5
0	RIN	15
0	RICF	6
0	H YIELD (YH2)	1
0	H YIELD (YH1)	1
	INOX2	1500

0	Near Counts (NCAP)	0
0	Far Counts (FCAP)	0
0	100000 FAR INTEL CT (FSIN)	0
0	10000(NEAR INTEL CT (NSIN)	0
0	ET INL NEAR (NNII	50000
	-1000	

Log VariablesDatabaseD:\Warrior_data\watson_b_32c_combo.dbDataset 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 17	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.8
SRFTEMP degF 0	MudWgt lb/gal 9.5	CASETHCK in 0	CASEOD in 7	PERFS 0	TDEPTH ft 0	BOTTEMP degF 100	BITSIZE in 10

Calibration Report

Database File watson_b_32c_combo.db
Dataset Pathname MAIN1
Dataset Creation Wed Jun 03 03:24:21 2015

Segmented Cement Bond Log Calibration Report

Serial Number: 11002214
Tool Model: 004

Calibration Casing Diameter: 4.500 in
Calibration Depth: 262.058 ft

Master Calibration, performed Tue Jun 02 22:01:03 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.198	0.803	1.500	81.196	79.674	17.256
5FT	-0.208	0.858	1.500	81.196	74.819	17.029
S1	-0.196	0.981	0.000	100.000	84.942	16.690
S2	-0.199	0.701	0.000	100.000	111.104	22.096
S3	-0.199	0.952	0.000	100.000	86.871	17.273
S4	-0.201	0.798	0.000	100.000	100.075	20.105
S5	-0.198	0.723	0.000	100.000	108.676	21.471
S6	-0.200	0.635	0.000	100.000	119.700	23.957
S7	-0.198	0.619	0.000	100.000	122.466	24.253
S8	-0.199	0.618	0.000	100.000	122.485	24.356

Calibration Report

Serial Number: 11002214
Tool Model: 004
Performed:

Reference (degF) Reading ()
Low: 0.000 0.000
High: 1.000 1.000
Gain = 1.000 Offset = 0.000

Reservoir Monitor Tool | 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

	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0270	5.32	<6.00
Fe	207	206 +/-2	0.0961	-----	-----
NGAIN = 0.993	NZOFF = 0.7				

Far Detector

	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0360	5.72	<6.50
Fe	209	208 +/-2	0.0918	-----	-----
FGAIN = 0.991	FZOFF = 0.5				

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

Tue Jun 02 21:41:46 2015

Background	Counts/Sec.	Gain	Offset	Jig	Units
Calibrator	36.8				cps
	322.4				cps
		1.4287			GAPI/cps

PRIMARY VERIFICATION

Tue Jun 02 21:44:07 2015


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 1.4375 IN CABLE HEAD	1.50	1.44	1.00
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	16.14		X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
RmtCommFWa	16.14		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
LLMTEN	0.00		CENT-Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	20.00
			BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
Dataset: watson_b_32c_combo.db: field/well/run1/MAIN1 Total length: 40.88 ft Total weight: 370.20 lb O.D.: 3.13 in						

Company	URSA OPERATING CO., LLC.				
Well	WATSON RANCH B 32C-17-07-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	RESERVOIR MONITOR TOOL - ELITE				