

# RESERVOIR MONITOR TOOL - ELITE

Service Ticket No.	902453399	API No.	05-045-22808-0000	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.	Depth	Temperature	Pressure	Time	MAIN LOG SECTION			
ONE	6950'	3703'	0	25				
	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		

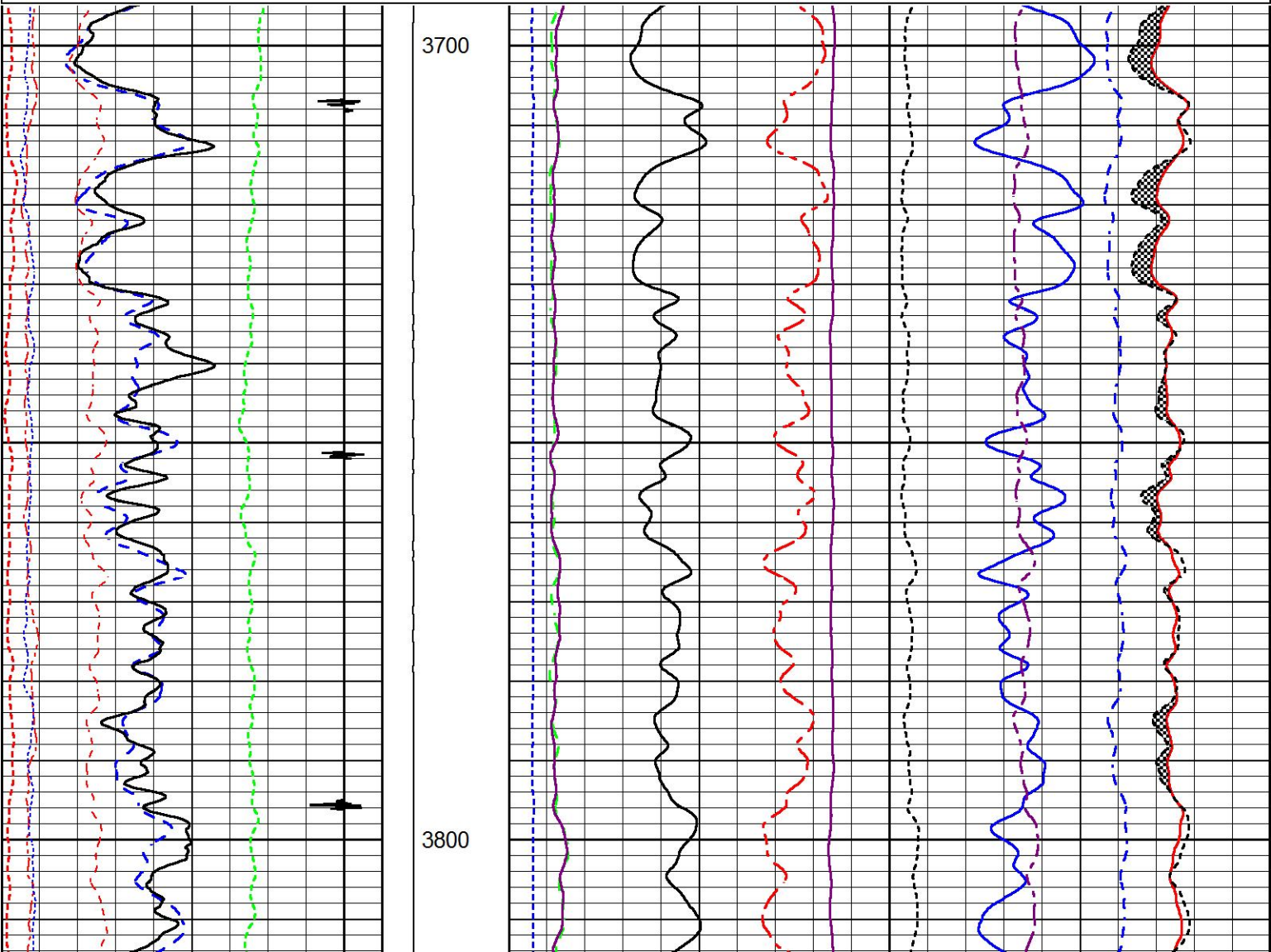
HALLIBURTON

MAIN LOG SECTION

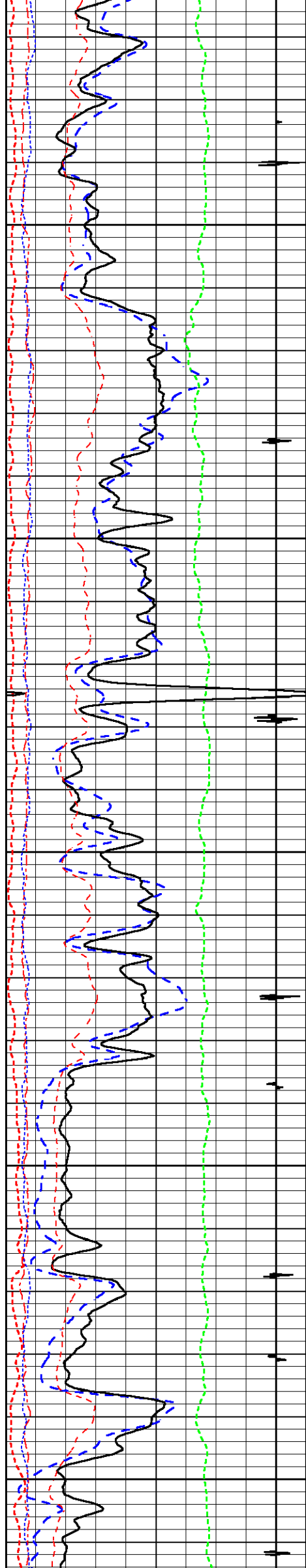
5" = 100'

Database File	watson_b_33b_combo.db
Dataset Pathname	MAIN1
Presentation Format	RMTE_M~1
Dataset Creation	Wed Jun 03 16:28:12 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

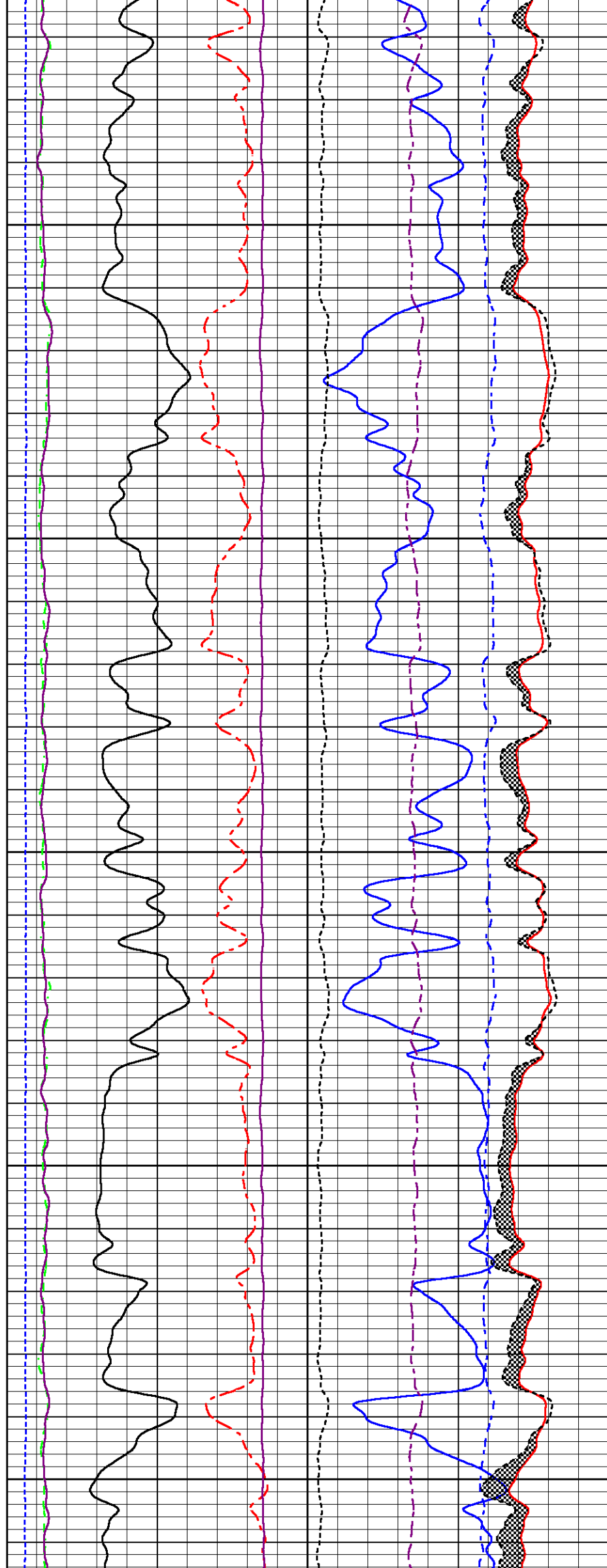


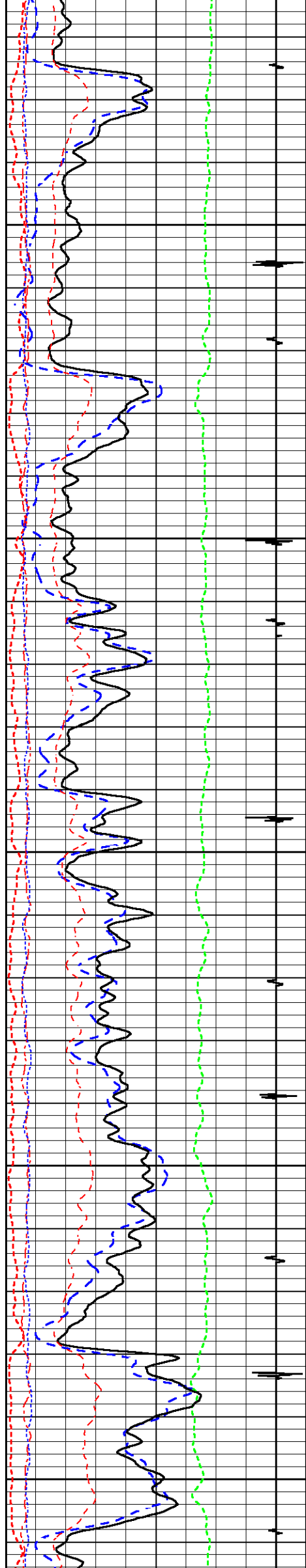




3900

4000

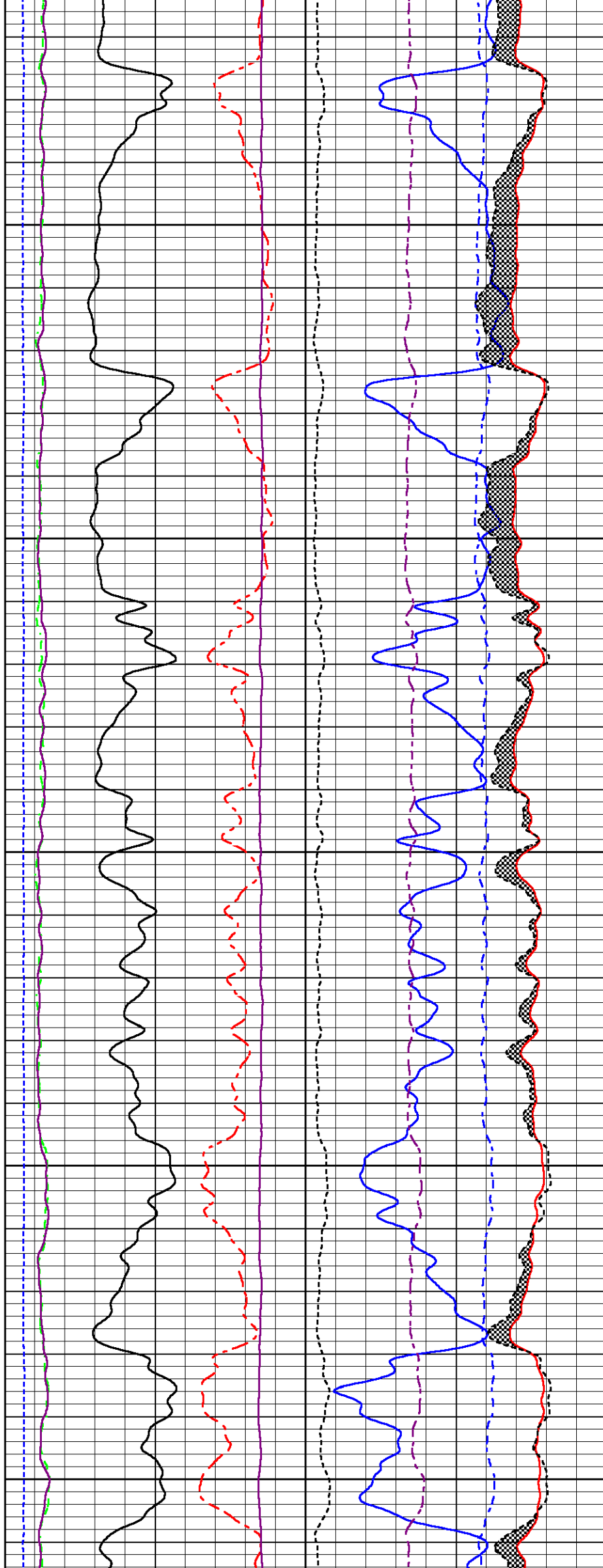


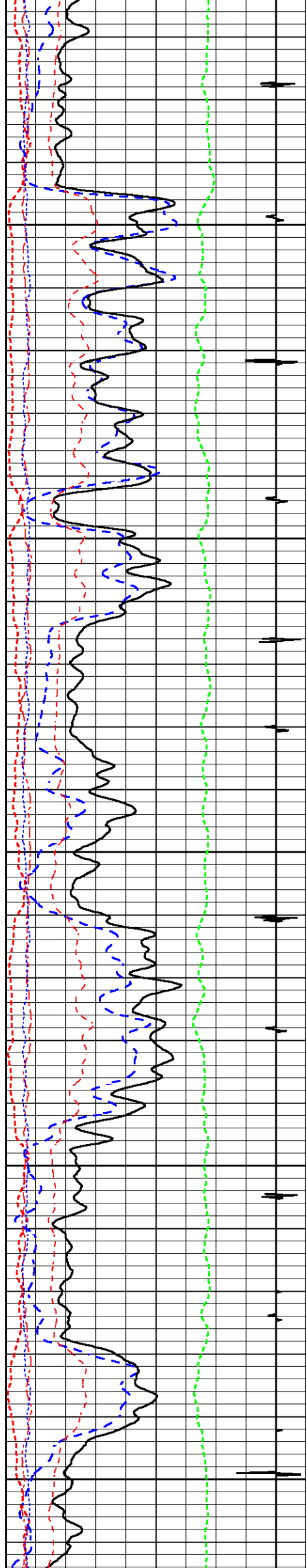


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4200

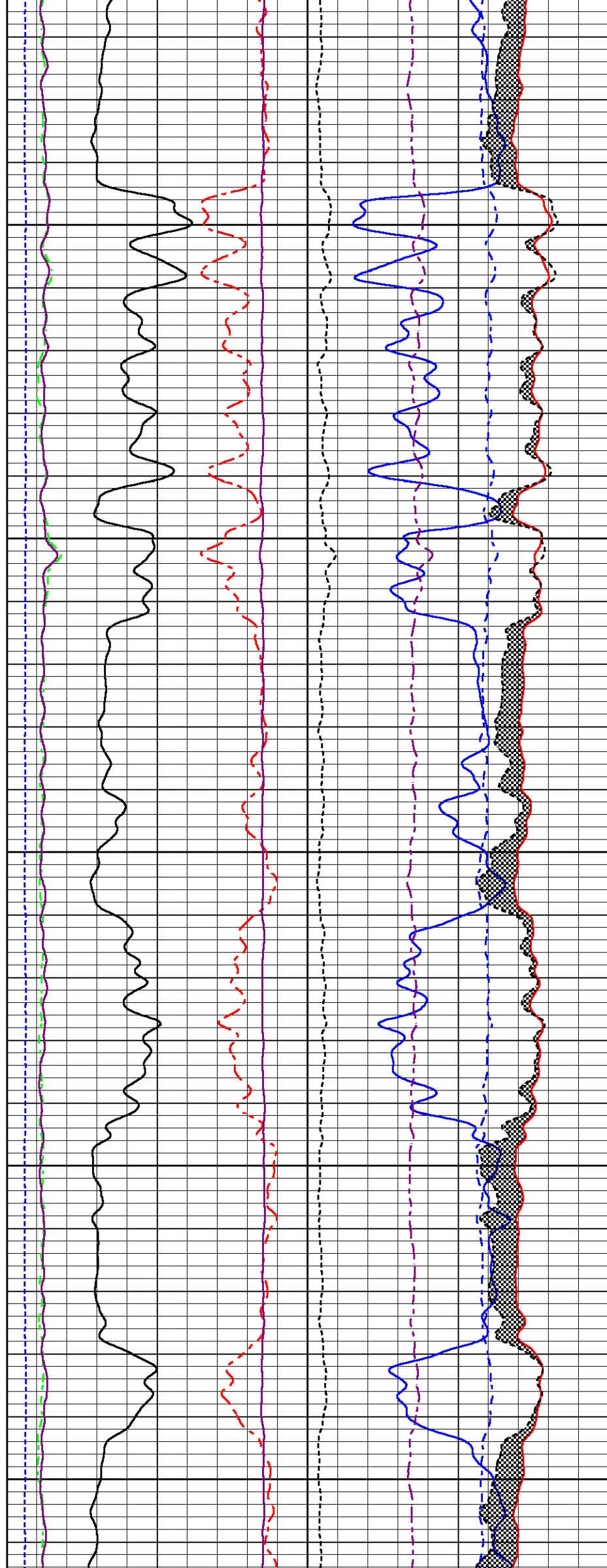
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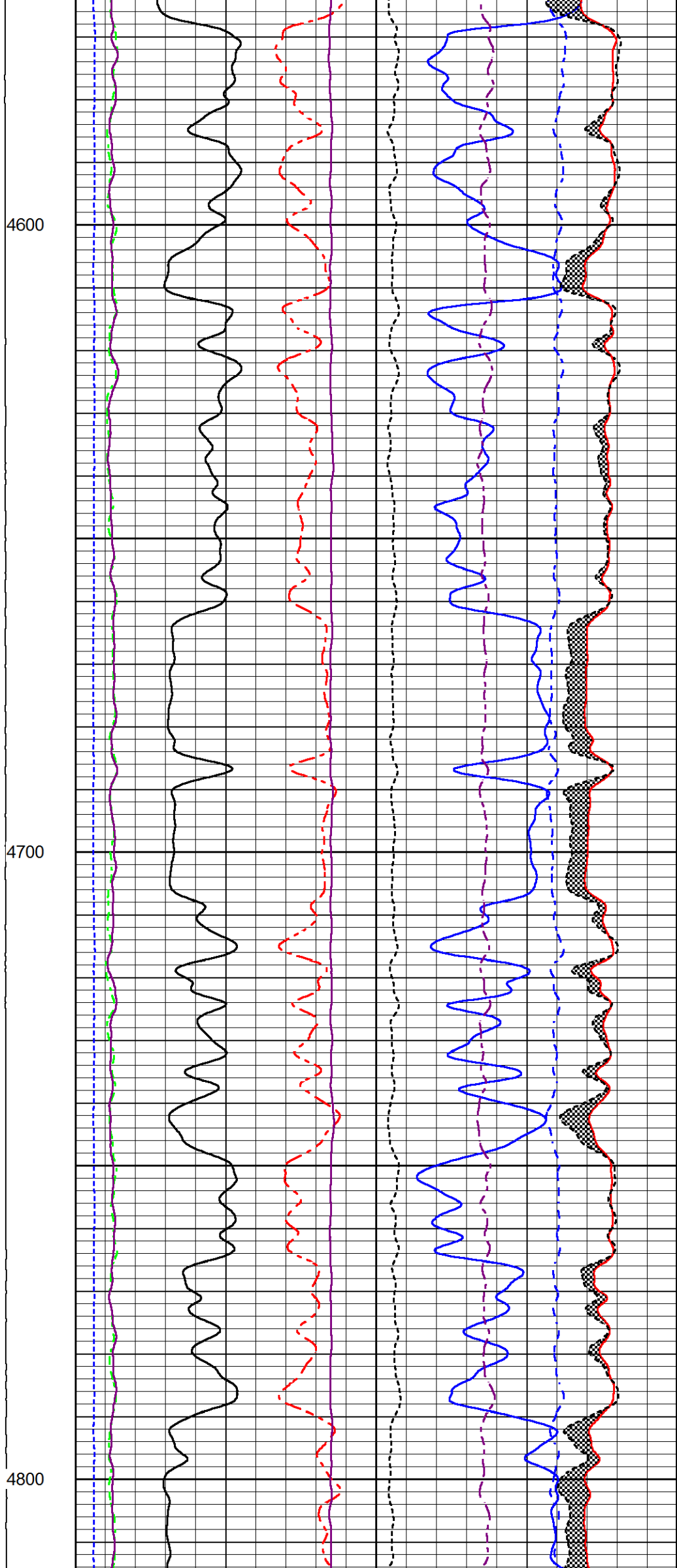
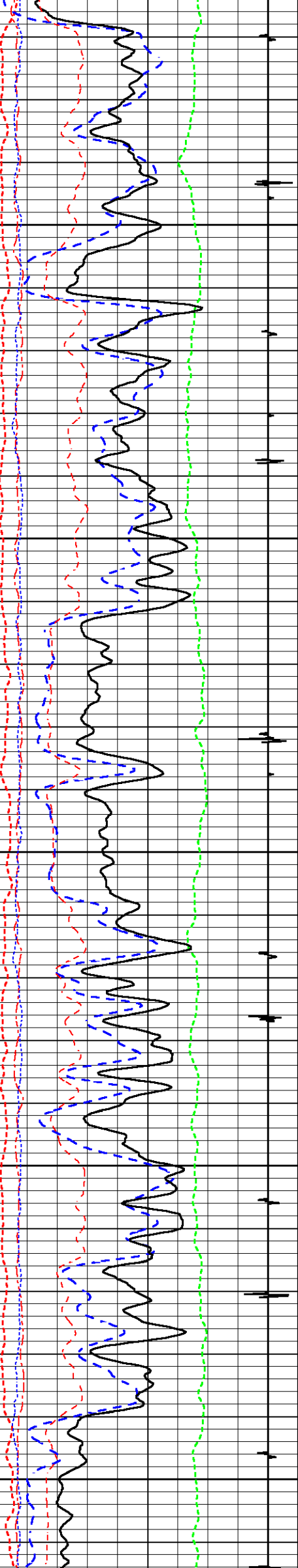


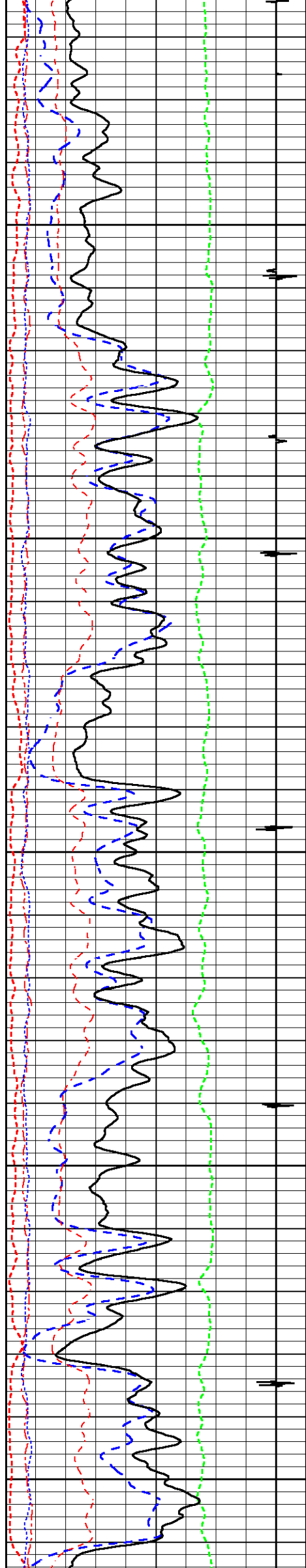


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4500

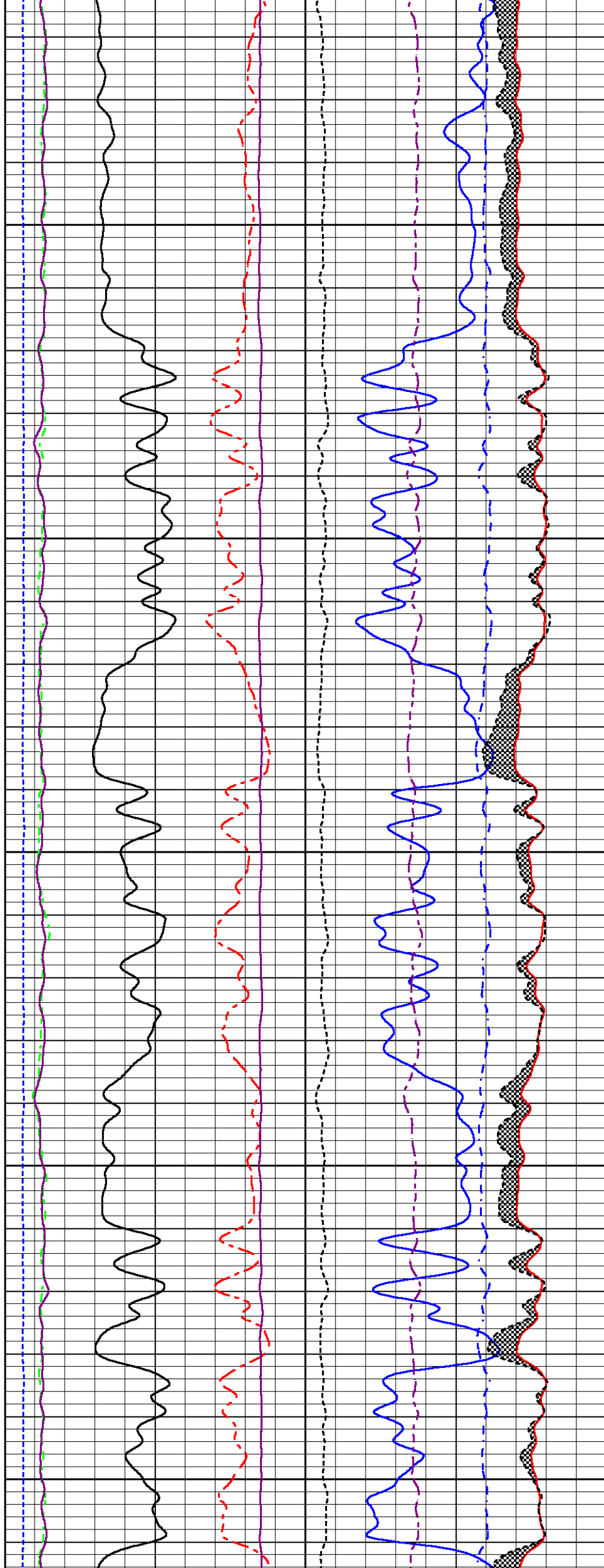


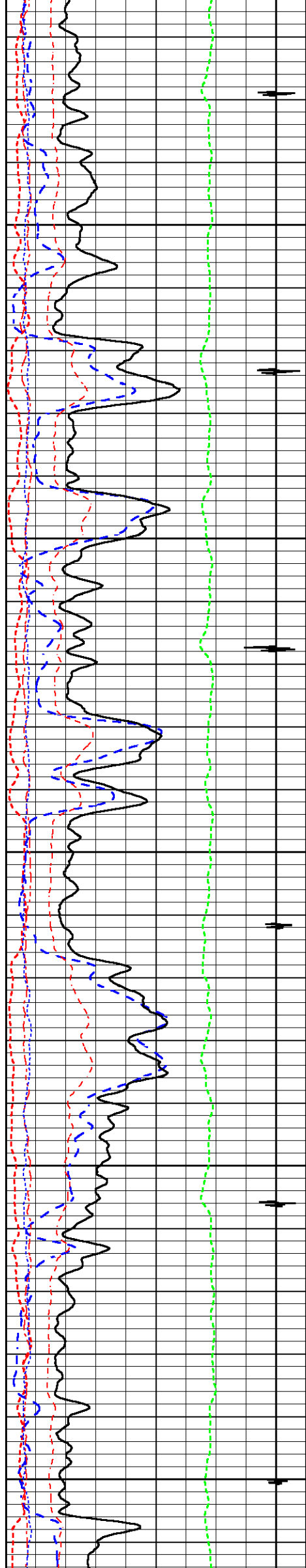




4900

5000

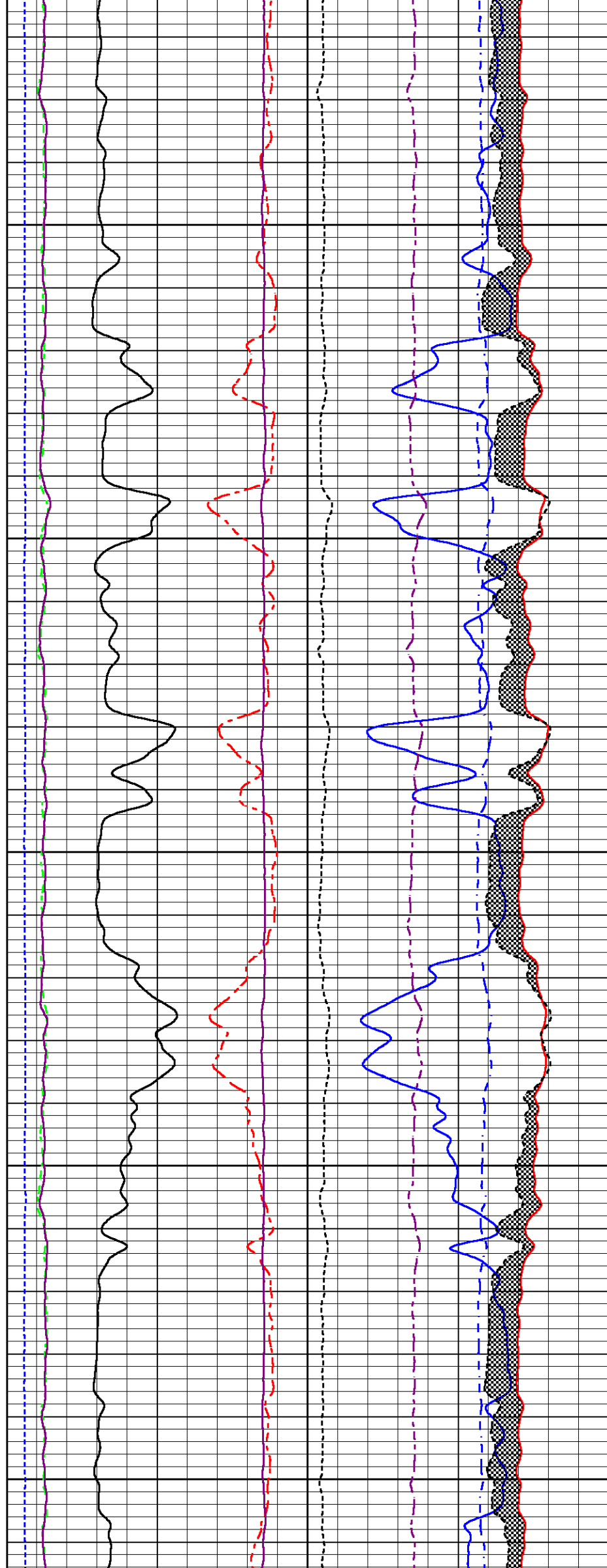




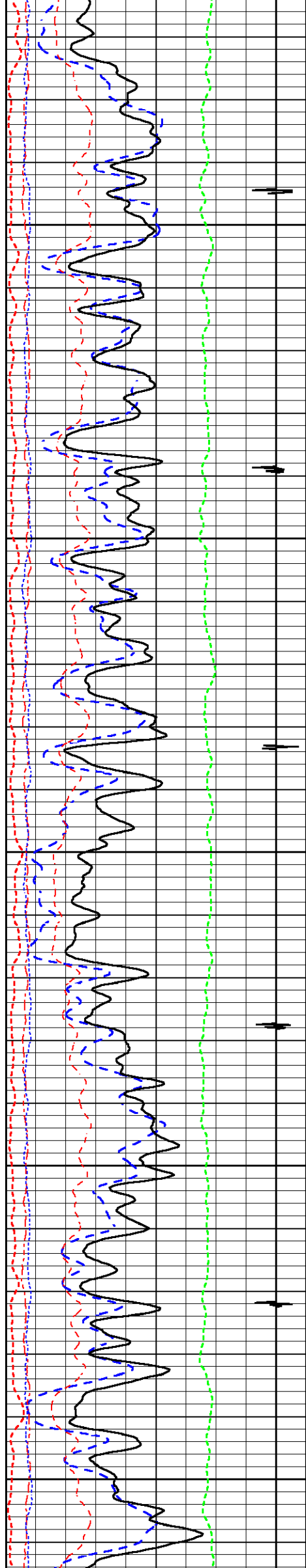
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5200

5300

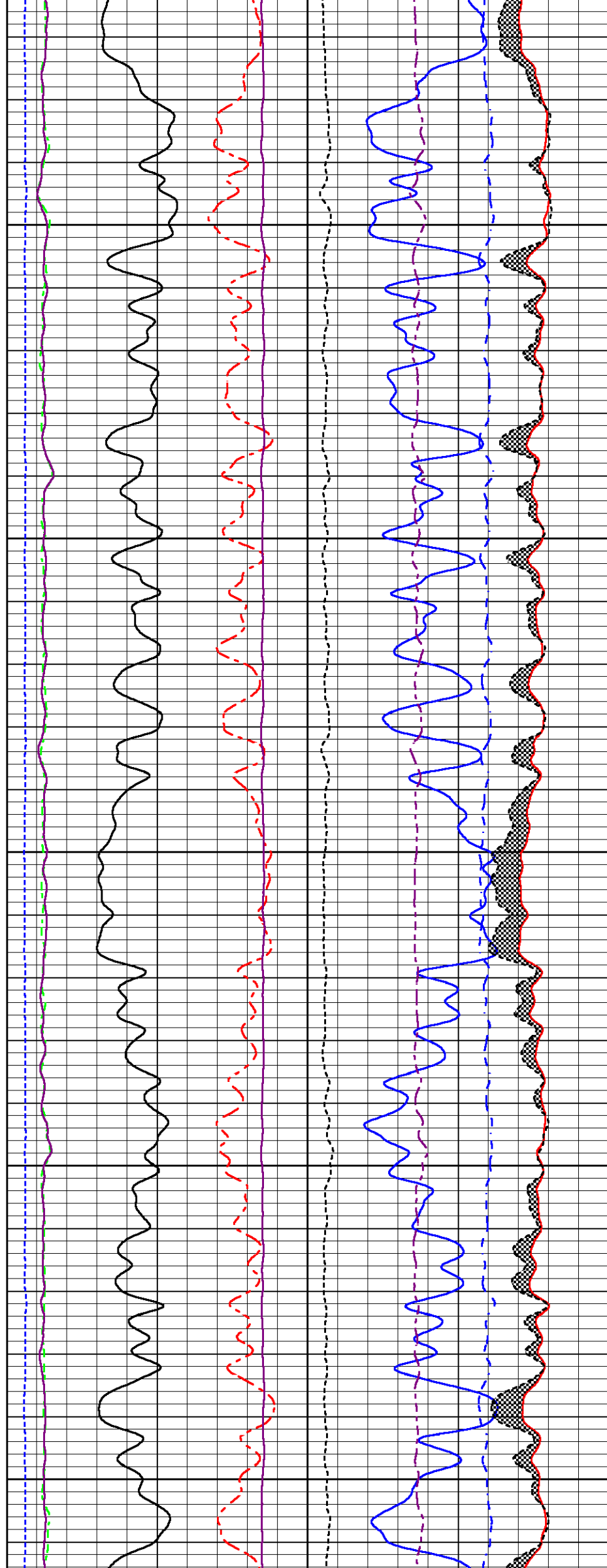


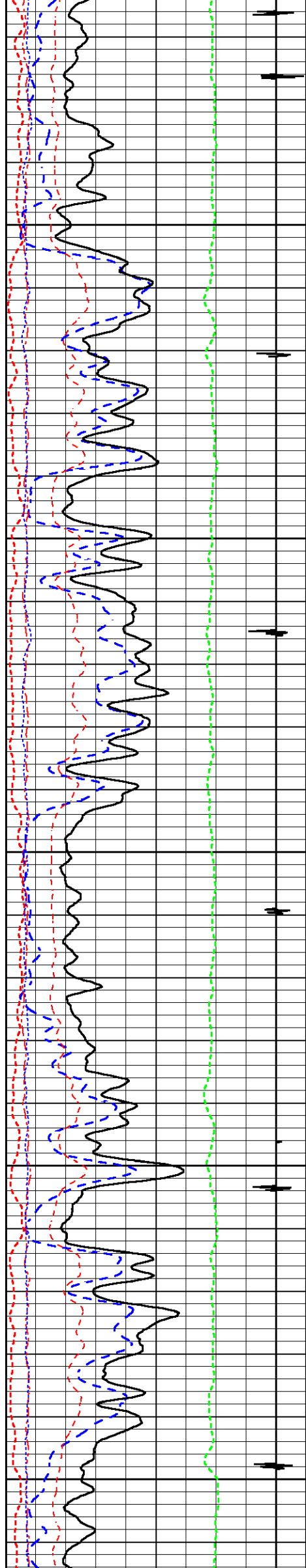




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5500

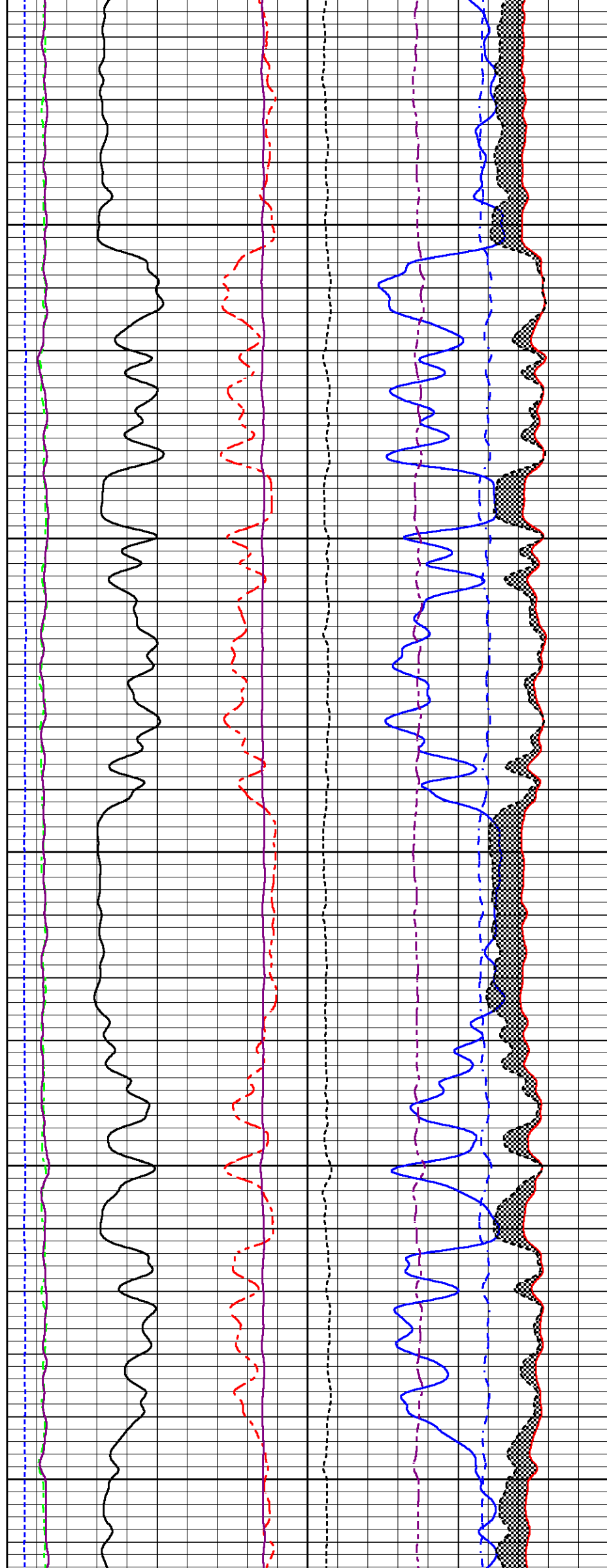


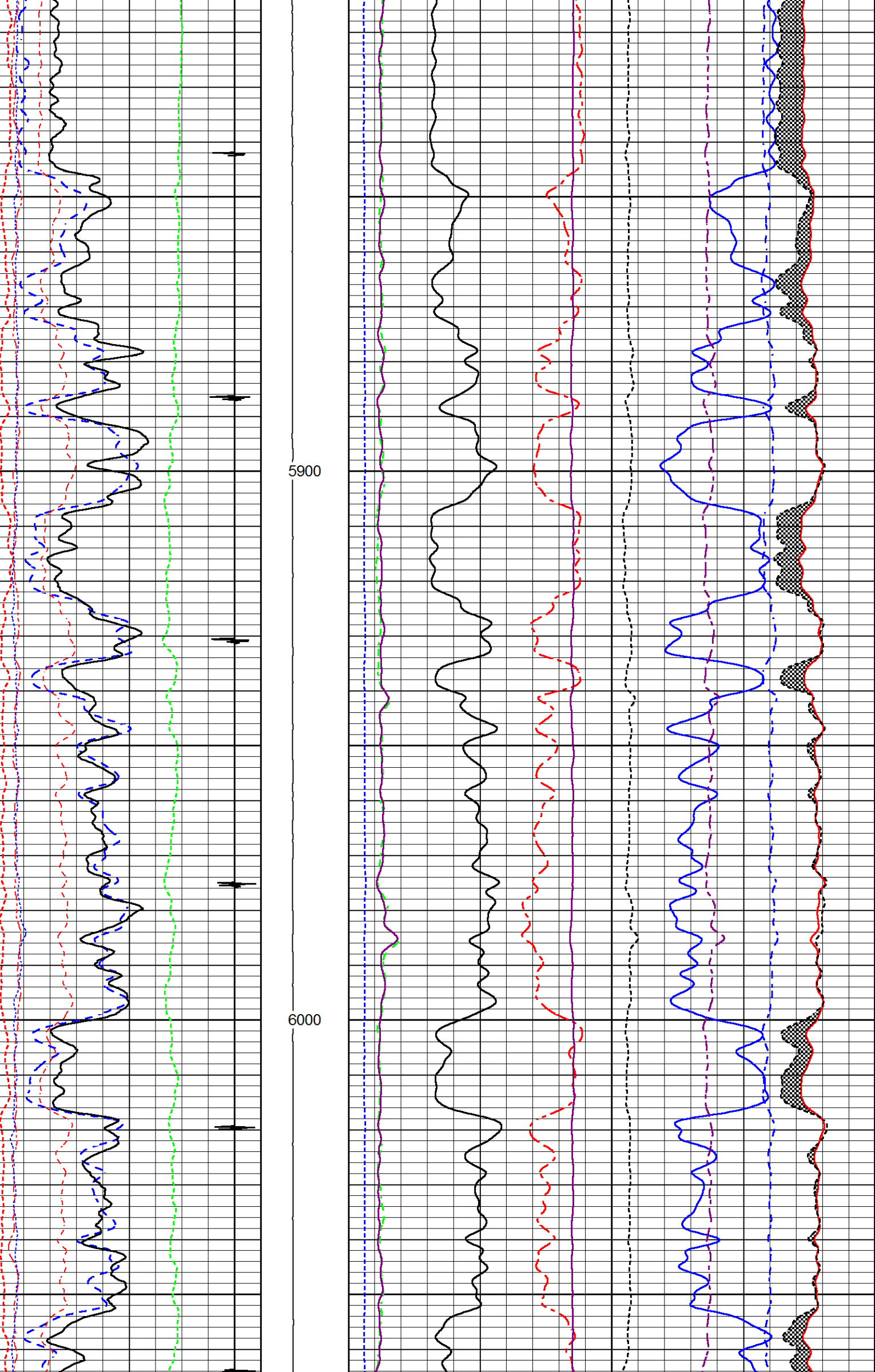


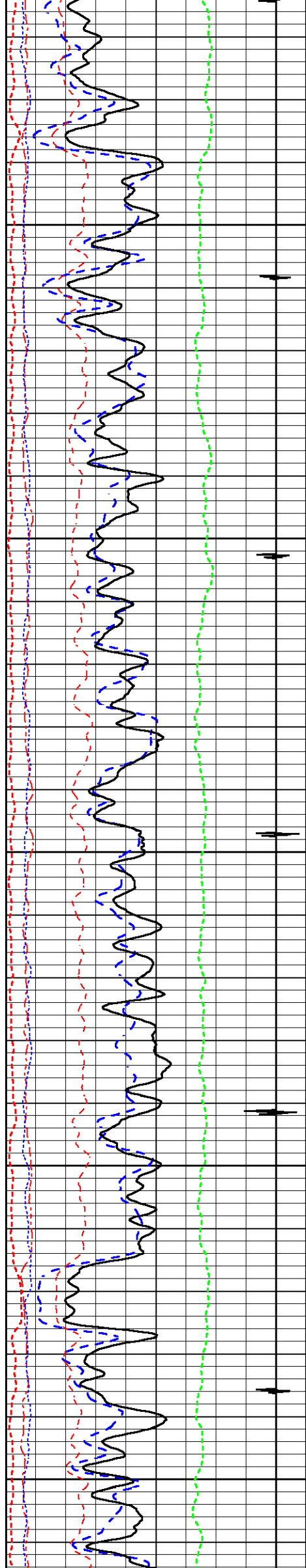
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5800



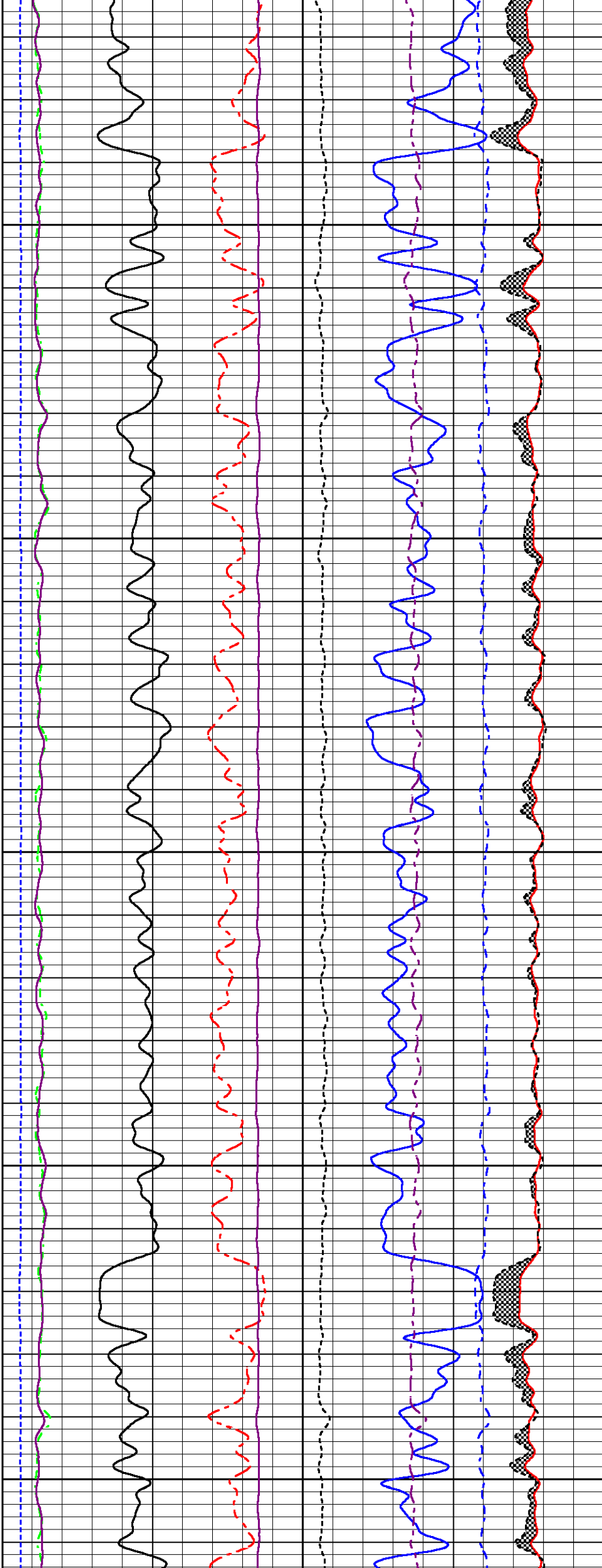




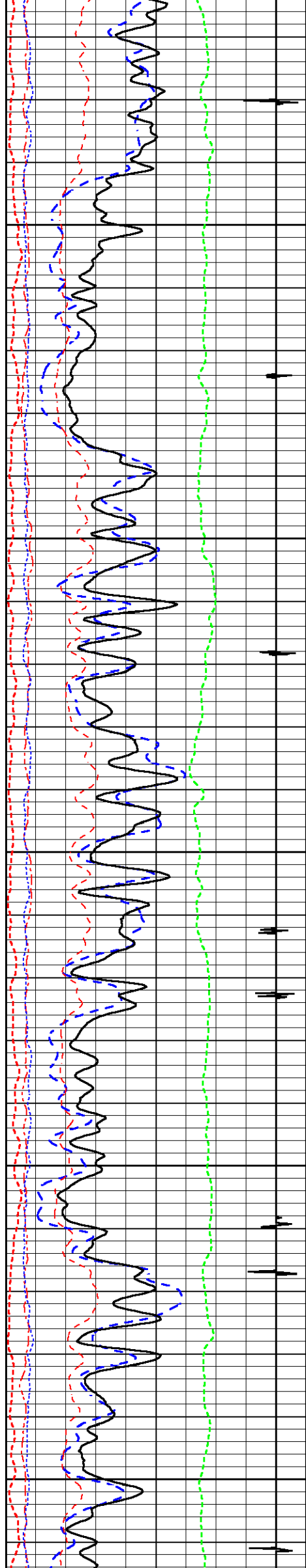
6100

6200

6300

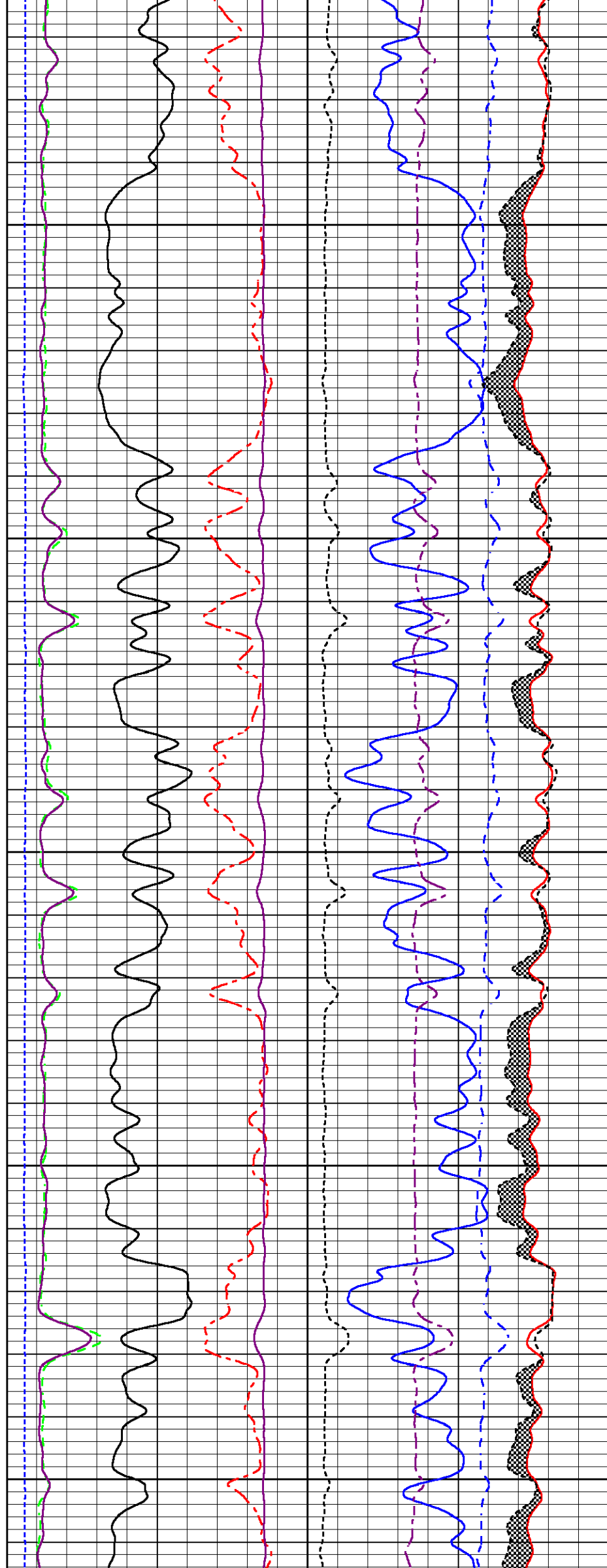


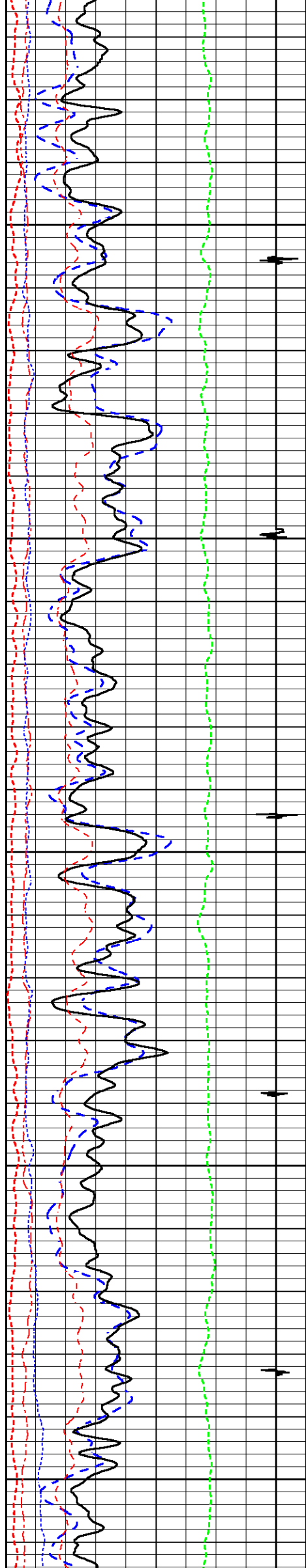




6400

6500

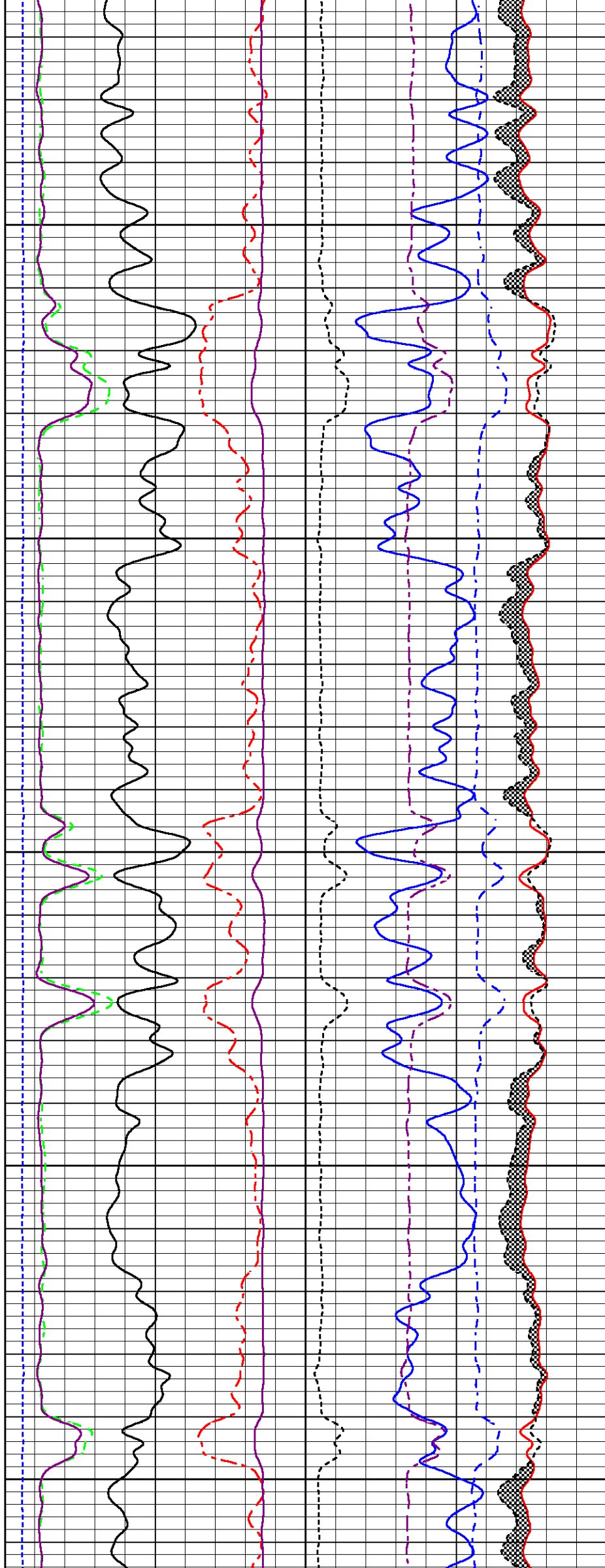


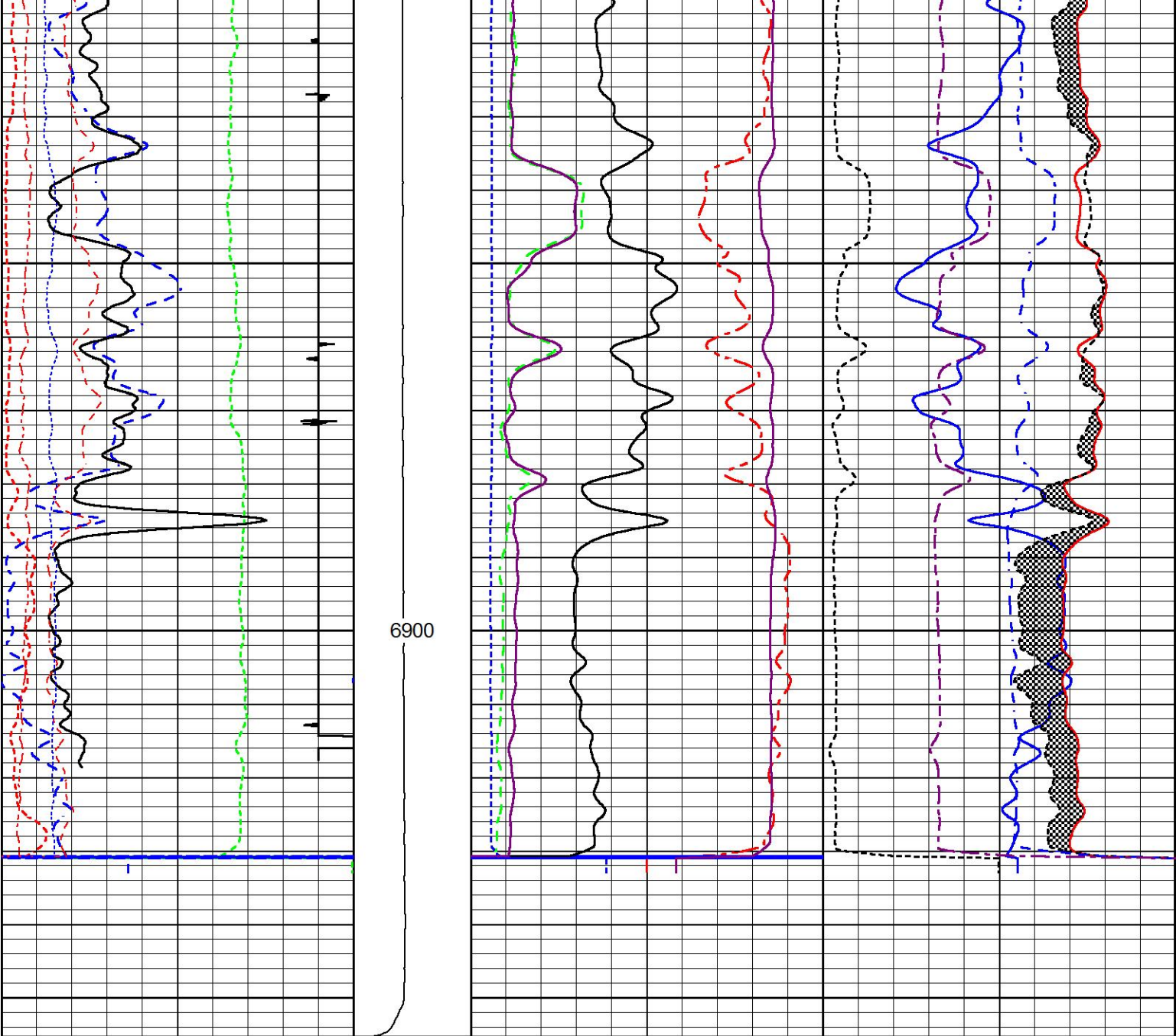


6600

6700

6800





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'

REPEAT LOG SECTION

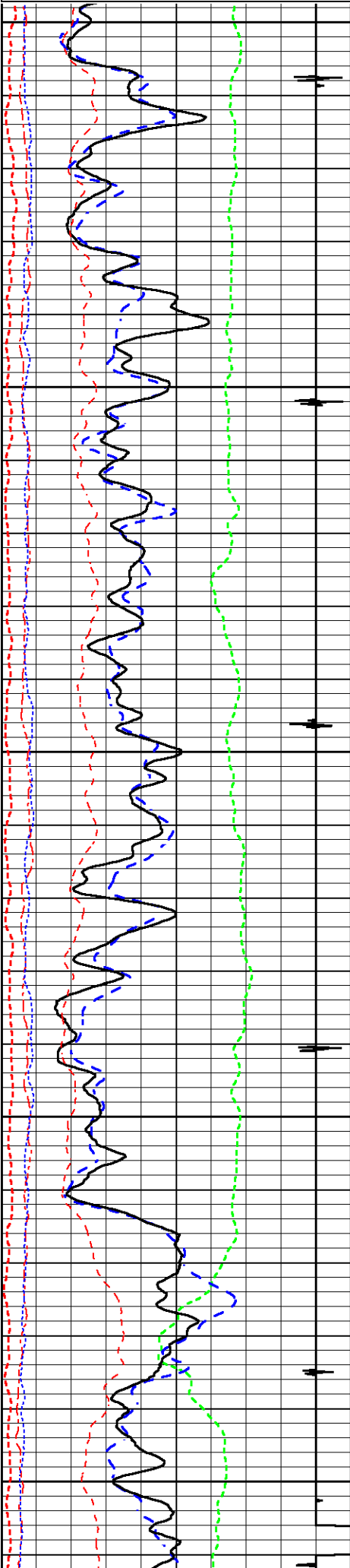
HALLIBURTON

5" = 100'

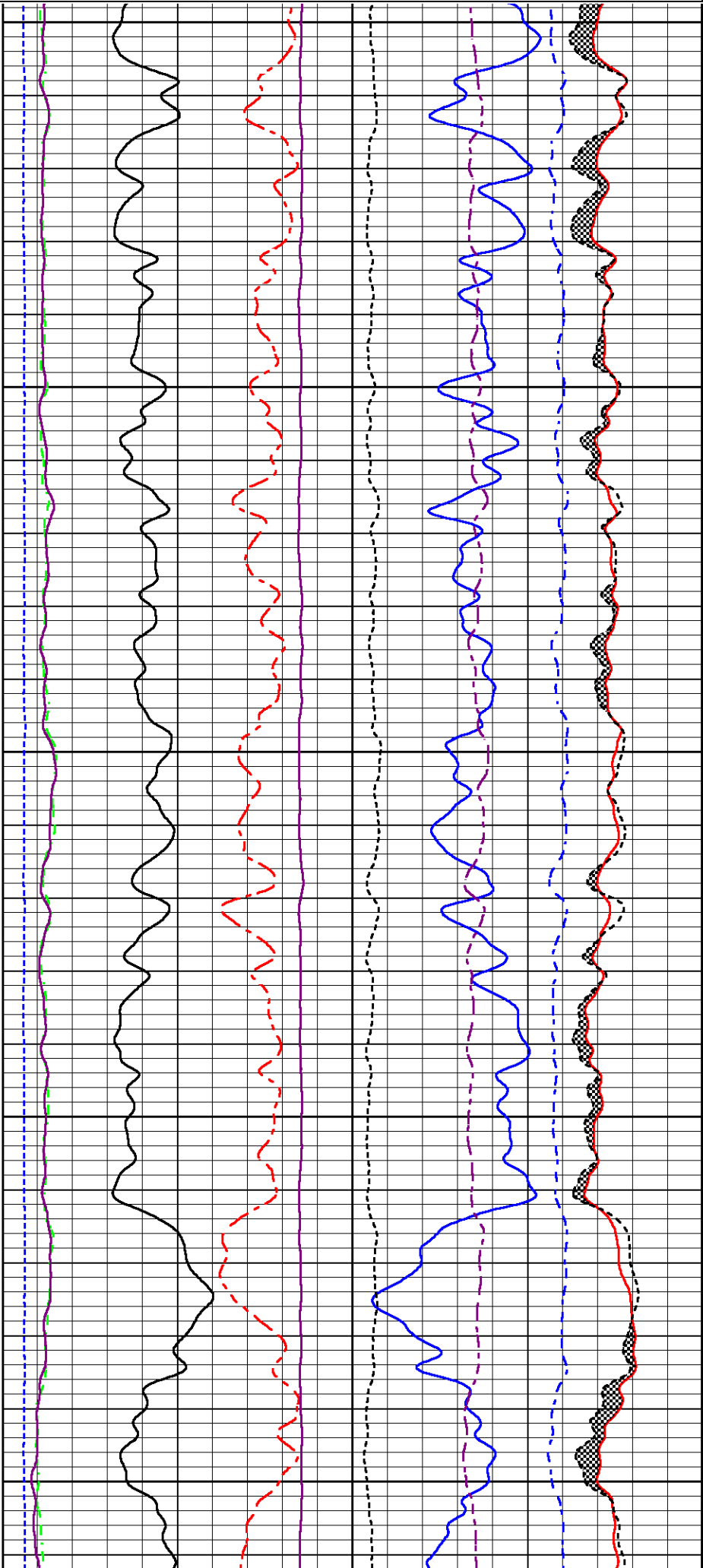
Database File	watson_b_33b_combo.db
Dataset Pathname	RMTRPT1
Presentation Format	RMTE_M~1
Dataset Creation	Wed Jun 03 15:49:20 2015
Charted by	Depth in Feet scaled 1:240

200	Near Bore Si (SGBN)	0	TENSION	60	SGIN	0
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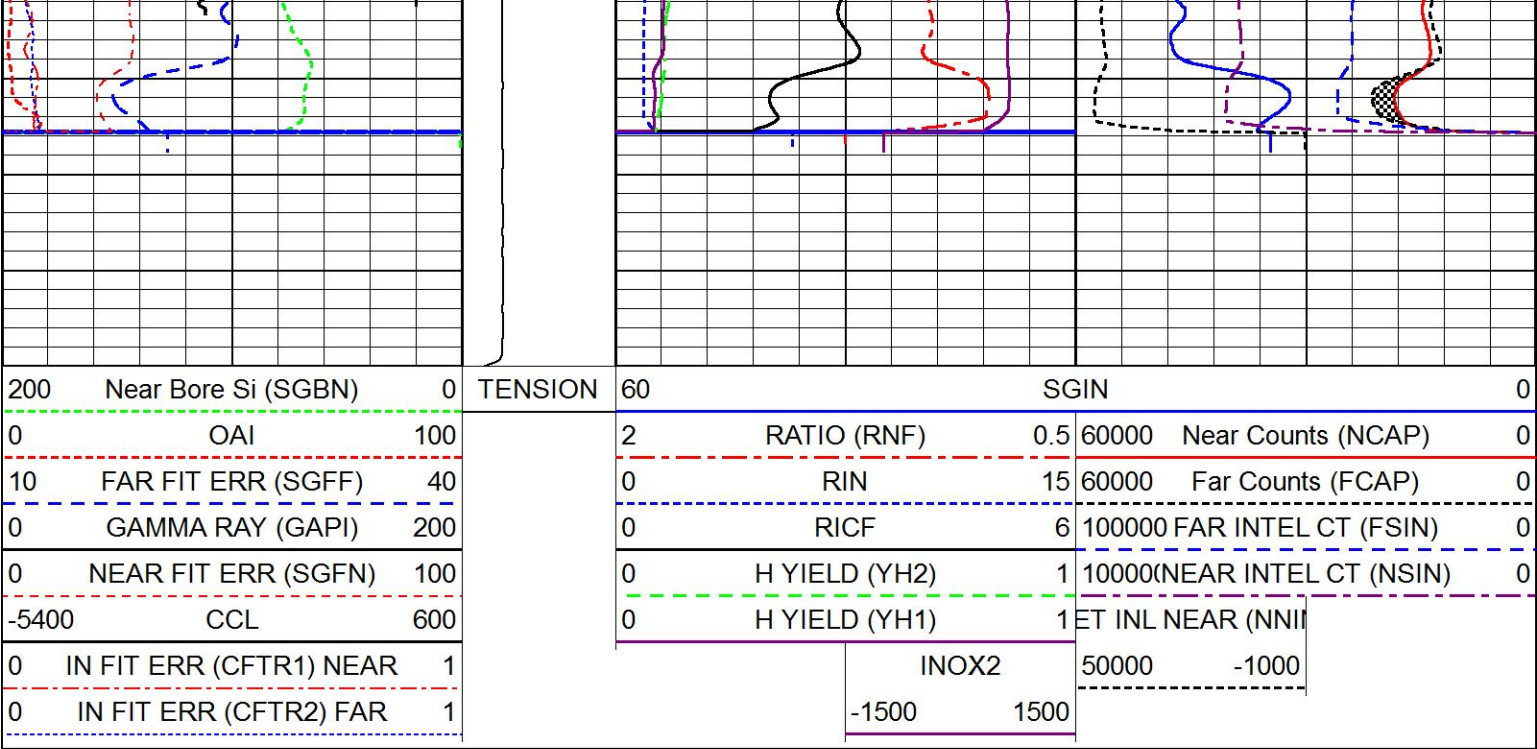
0	OAI	100
10	FAR FIT ERR (SGFF)	40
0	GAMMA RAY (GAPI)	200
0	NEAR FIT ERR (SGFN)	100
-5400	CCL	600
0	IN FIT ERR (CFTR1) NEAR	1
0	IN FIT ERR (CFTR2) FAR	1



2	RATIO (RNF)	0.5	60000	Near Counts (NCAP)	0
0	RIN	15	60000	Far Counts (FCAP)	0
0	RICF	6	100000	FAR INTEL CT (FSIN)	0
0	H YIELD (YH2)	1	10000	(NEAR INTEL CT (NSIN)	0
0	H YIELD (YH1)	1	ET INL NEAR (NNII		
	INOX2		50000	-1000	
	-1500	1500			







REPEAT LOG SECTION

5" = 100'

Log Variables

DatabaseD:\Warrior\_data\watson\_b\_33b\_combo.db  
Dataset field/well/run1/MAIN1/\_vars\_

Top - Bottom

BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1	LTH	UHSGC	RHO�F
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\_33b\_combo.db  
Dataset Pathname MAIN1  
Dataset Creation Wed Jun 03 16:28:12 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	Gain	Offset
3FT	-0.198	0.803	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 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	-----	-----
	NZOFF = 0.7				
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	-----	-----
	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

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		
	Counts/Sec.	Gain	Offset	Jig	Units
Background	36.8				cps
Calibrator	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)
CCL	37.31		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
			TTTCU-002 (11224503) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
GR	35.05		XHU-003 (12461939)	1.58	1.69	7.00

Tool Name	Length (ft)	Weight (lb)	O.D. (in)	Notes
RmtTFGT	24.39			
RmtTNGT	23.89			
				Crossover Halliburton 1553 to Ultrawire
				RMTI-A (12095949) Halliburton RMTI Tool
RmtFP5V	16.14			
RmtCommFWa	16.14			
				X-OVER-SondexxGo Sondex Box x Go Pin Cross Over
				AUH-001 (11072111) Adaptor Ultrawire/Halliburton
				CENT-Probe_275 Probe 2 3/4 Centralizer
CBLTEMP	8.23			
				RBT-004 (11002214) Radial Bond Tool (UW 3 1/8) 20K Rated
				CENT-Probe_275 Probe 2 3/4 Centralizer
LLMTEN	0.00			
				BUL-006 (000002) Bullnose Terminator
Dataset: watson_b_33b_combo.db: field/well/run1/MAIN1 Total length: 40.88 ft Total weight: 370.20 lb O.D.: 3.13 in				