

HALLIBURTON

RESERVOIR MONITOR TOOL - ELITE

Company URSA OPERATING CO, LLC
 Well WATSON RANCH B 34C-17-07-95
 Field PARACHUTE
 County GARFIELD State CO

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API No.: 05-045-228050000 Serv. #: 902453209
 Location: SURFACE HOLE LOCATION:
 1047 FSL' & 1965' FWL
 BOTTOM HOLE LOCATION:
 600' FSL' & 2005' FEL

Other Services
 CBL
 JB/GR

Permanent Datum GROUND LEVEL Elevation 5585 ft
 Log Measured From KB , 17 ft. Ft. above perm. datum
 Drilling Measured From KB
 Sec: 17 Twp: 07S Rge: 95W

Date @ Time Logged	03 JUNE 2015	Type Fluid in Hole	WATER
Run No.	ONE	Density of Fluid	8.4 ppg
Depth - Driller	7002'	Fluid Level	FULL
Depth - Logger	6722'	Cement Top Est. Logged	SEE LOG
Bottom - Logged Interval	6722'	Equipment / Location	11698439 / GJ, CO
Top - Log Interval	3521'	Recorded by	P. DIMPFL
Max. Recorded Temp.	175.0 degF	Witnessed by	R. TOLLE
CEMENTING DATA		Production	Liner
Surface	String	String	N/A
Primary / Squeeze	N/A	String	N/A

Expected Compressive Strength	psi@ hrs	psi@ hrs	psi@ hrs	psi@ hrs
Cement Volume	/	/	/	/
Cement Type / Weight Formulation	/	/	/	/
Mud Type / Mud Wgt.	/	/	/	/

Run Number	Borehole Record				Casing & Tubing Record			
	Bit	From	To	Size	Weight	From	To	
ONE	12.25"	SURFACE	1764'	8.625"	24#	SURFACE	1764'	
TWO	7.875"	1764'	7002'	4.5"	11.6#	SURFACE	7002'	

<<< 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: 03 JUNE 2015 IS THE PRIMARY DEPTH REFERENCE FOR THIS WELL.

GR-RMT-CBL RAN IN COMBINATION

LOG INTERVALS PER CUSTOMER REQUEST

SHORT JOINTS @: 2984' - 2994', 5391' - 5401' AND 6289' - 6299'.

****THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES****

Service Ticket No. 902453209 API No. 05-045-22805-0000 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.	10000028	Serial No.	12082235	Serial No.	11680606
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.	6722'	3521'	0	25	MAIN LOG SECTION			
	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			deg. @	KOP				

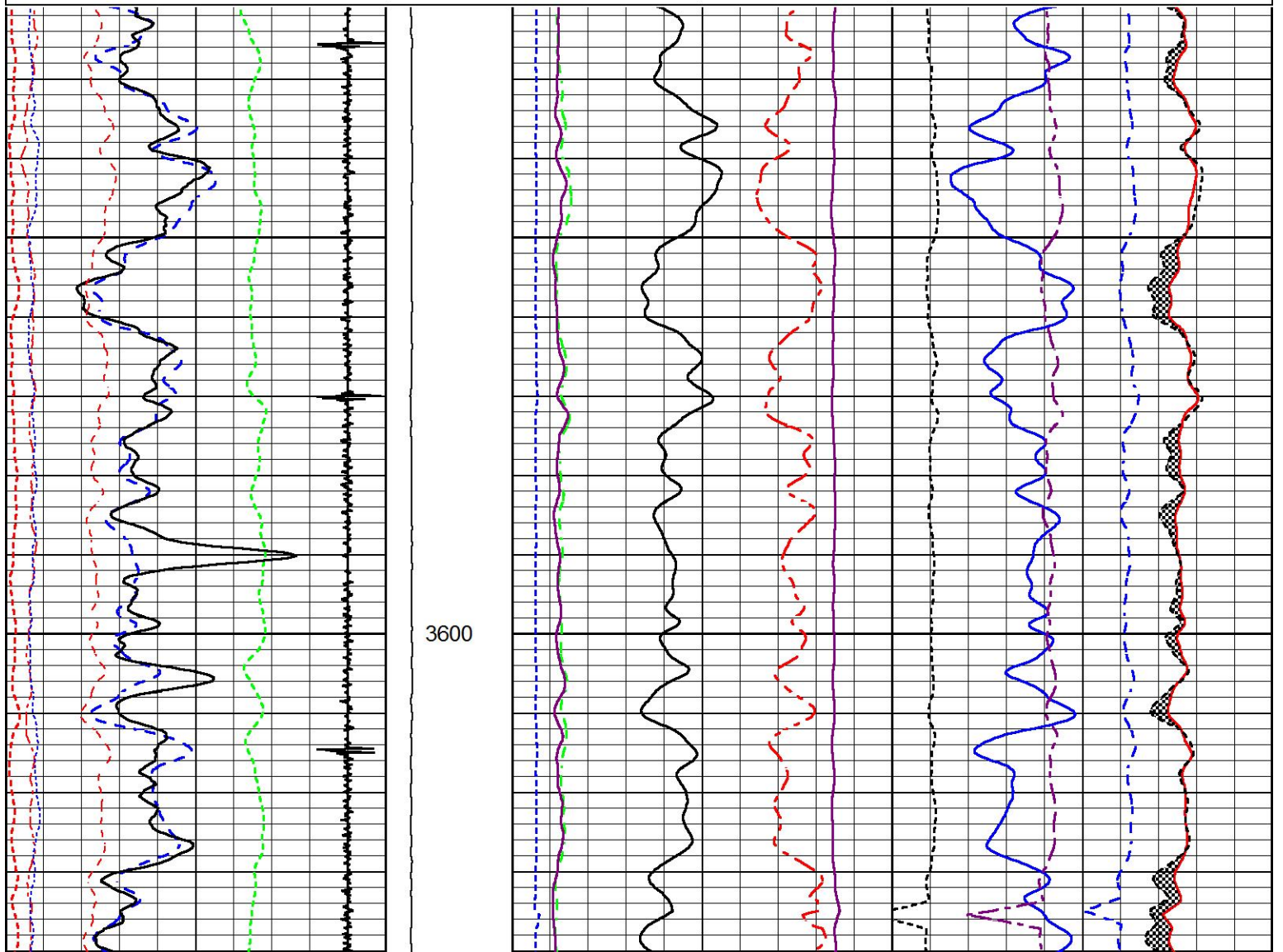
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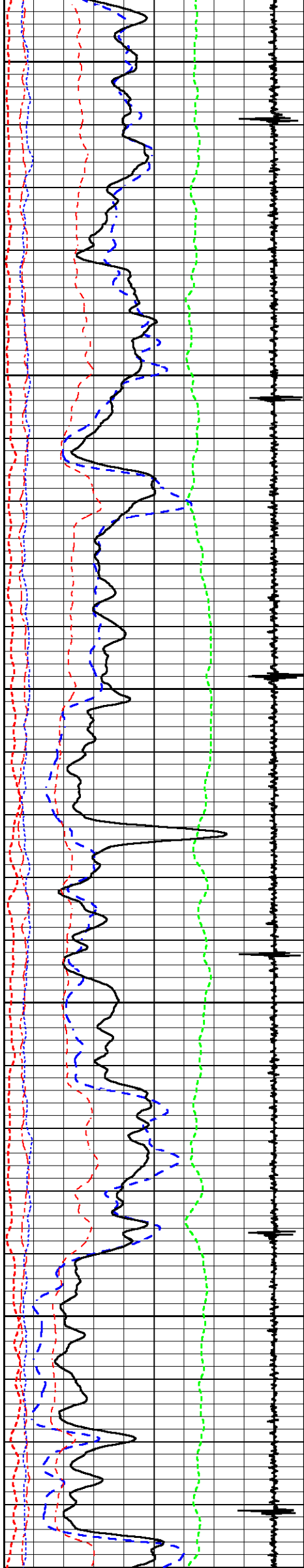
HALLIBURTON

5" = 100'

Database File watson_b_34c_combo.db
 Dataset Pathname RMT_MAIN
 Presentation Format RMTE_M~1
 Dataset Creation Wed Jun 03 11:17:34 2015
 Charted by Depth in Feet scaled 1:240

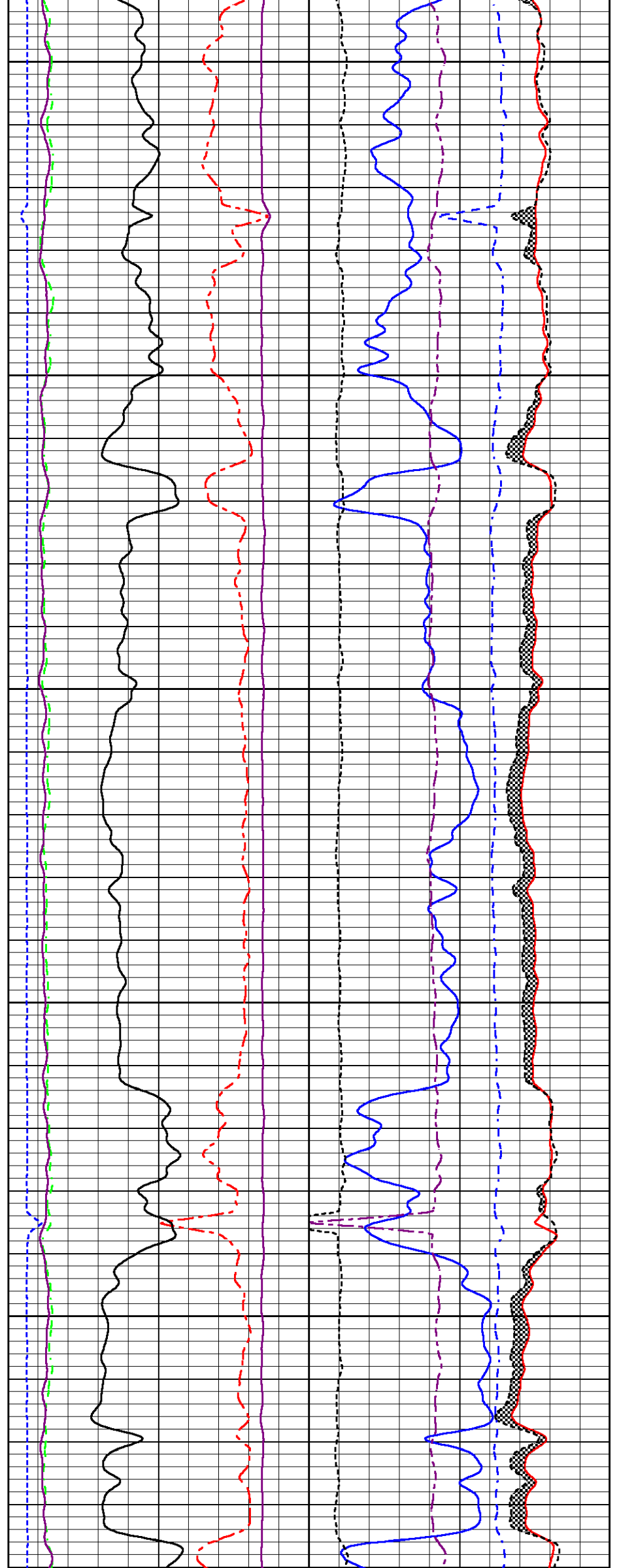
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0	OAI	100		2	RATIO (RNF)	0.5
10	FAR FIT ERR (SGFF)	40		0	RIN	15
0	GAMMA RAY (GAPI)	200		0	RICF	6
0	NEAR FIT ERR (SGFN)	100		0	H YIELD (YH2)	1
-5400	CCL	600		0	H YIELD (YH1)	1
0	IN FIT ERR (CFTR1) NEAR	1			INOX2	50000
0	IN FIT ERR (CFTR2) FAR	1				-1000

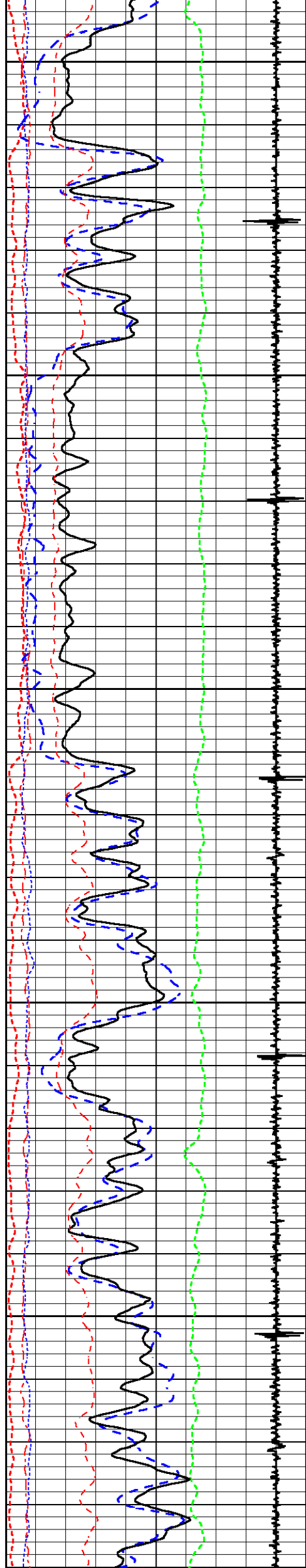




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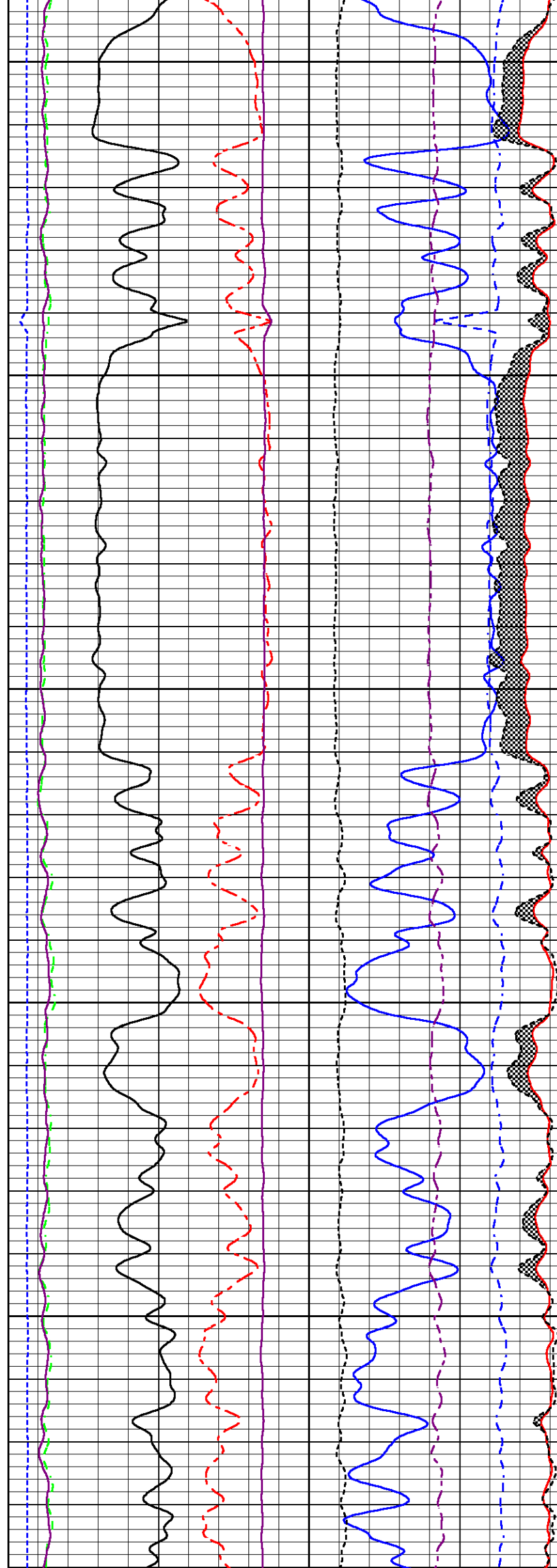


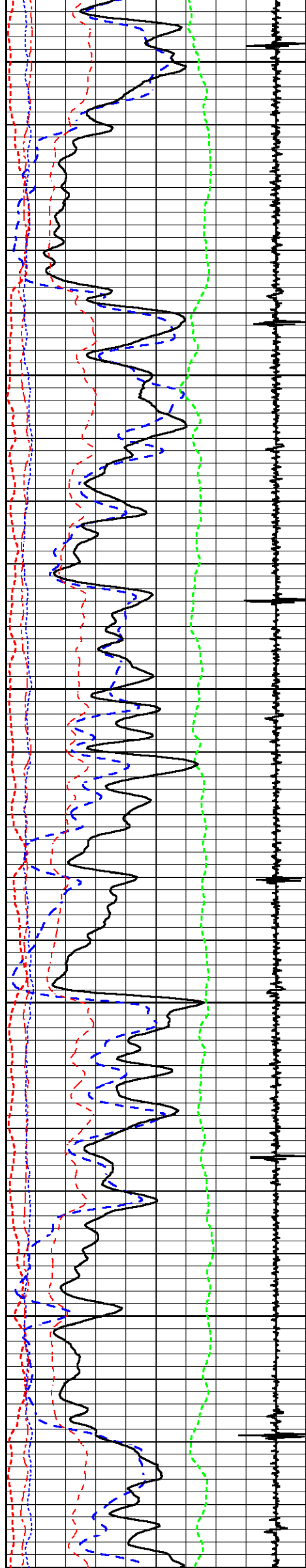


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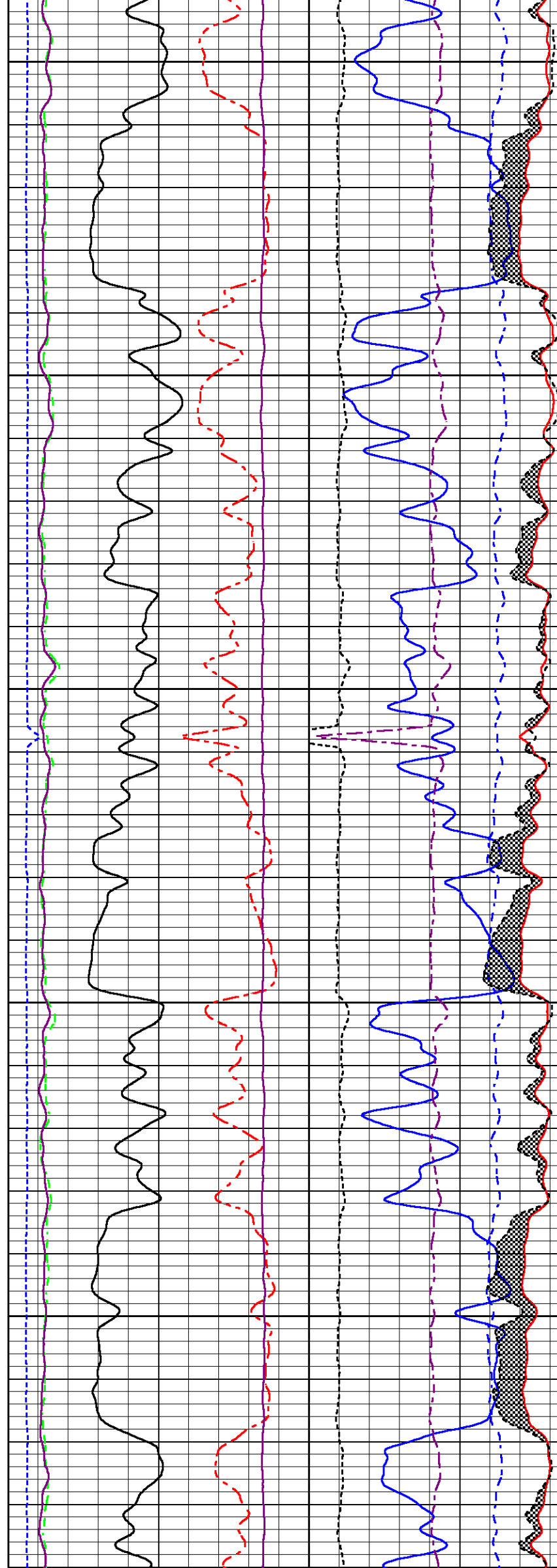
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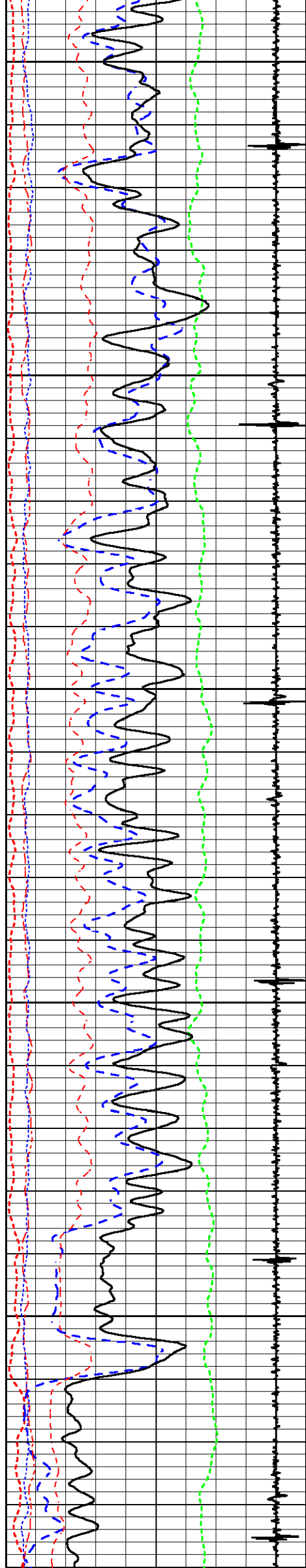




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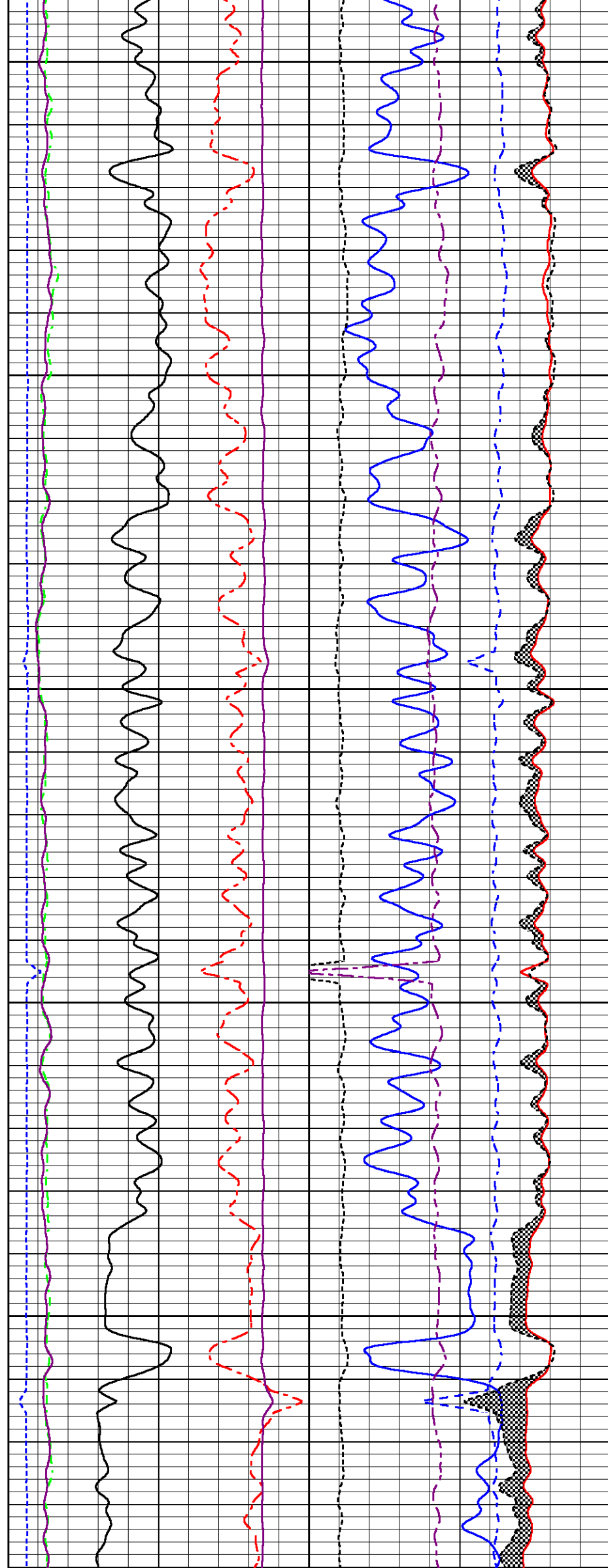


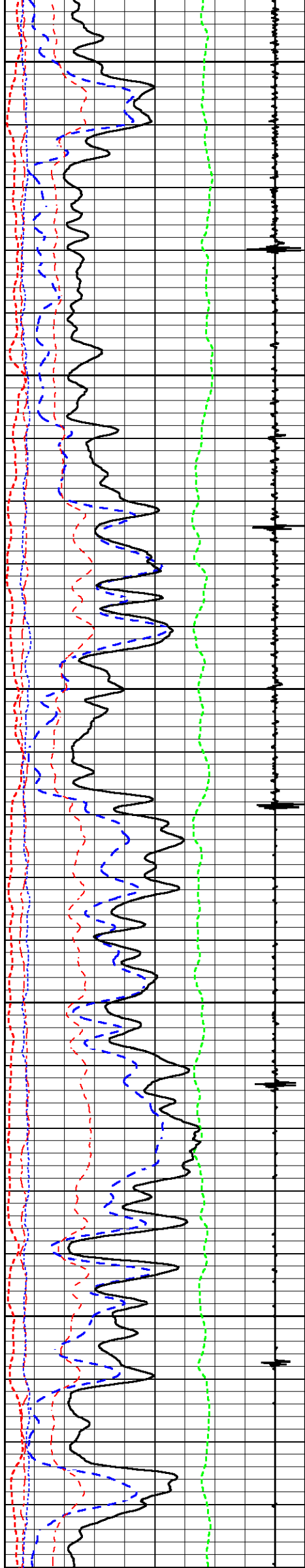


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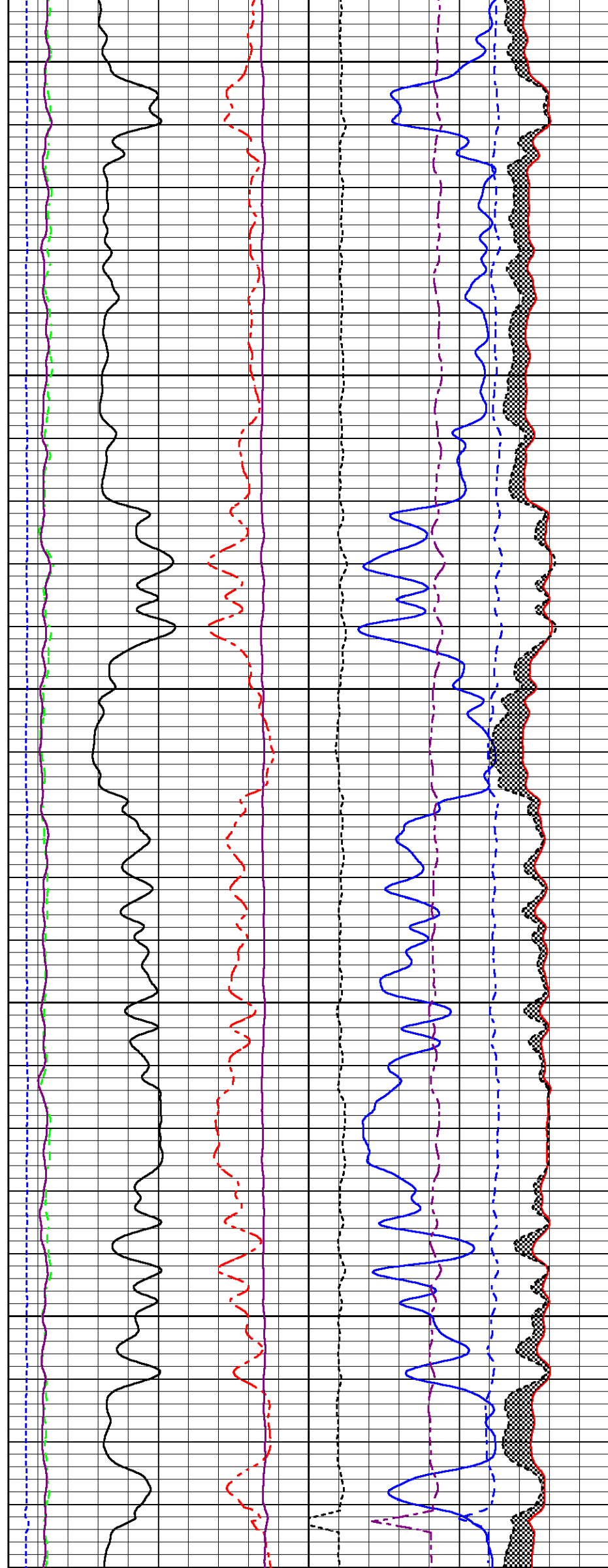
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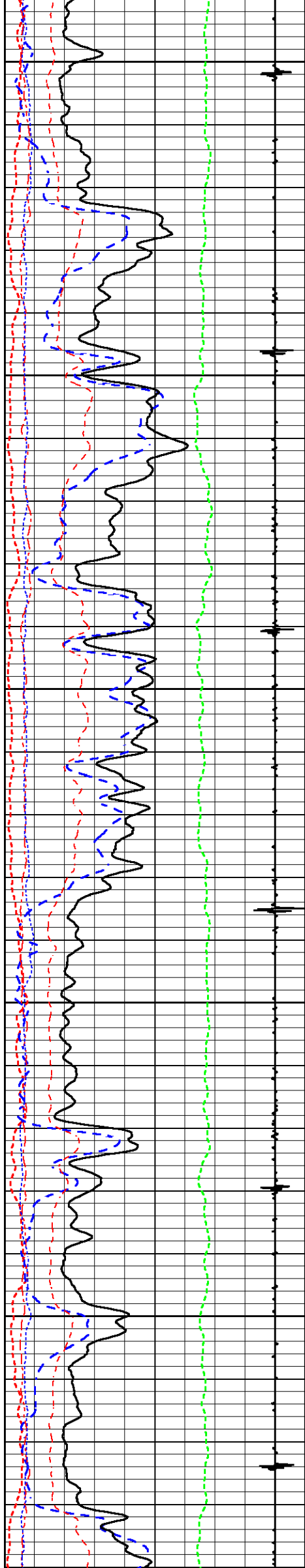




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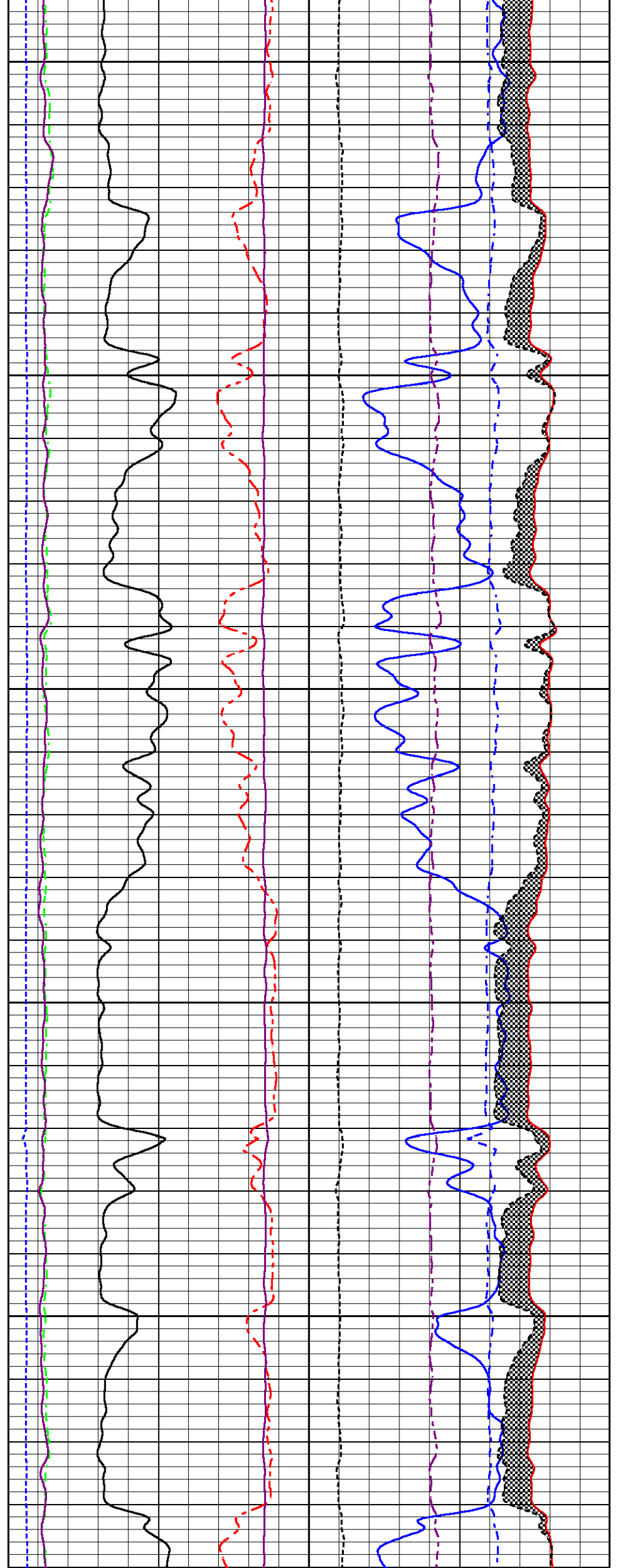


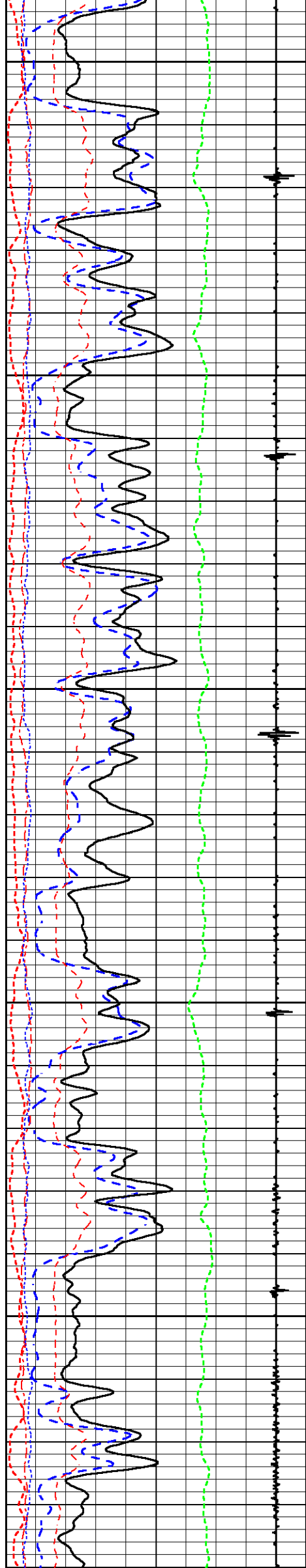


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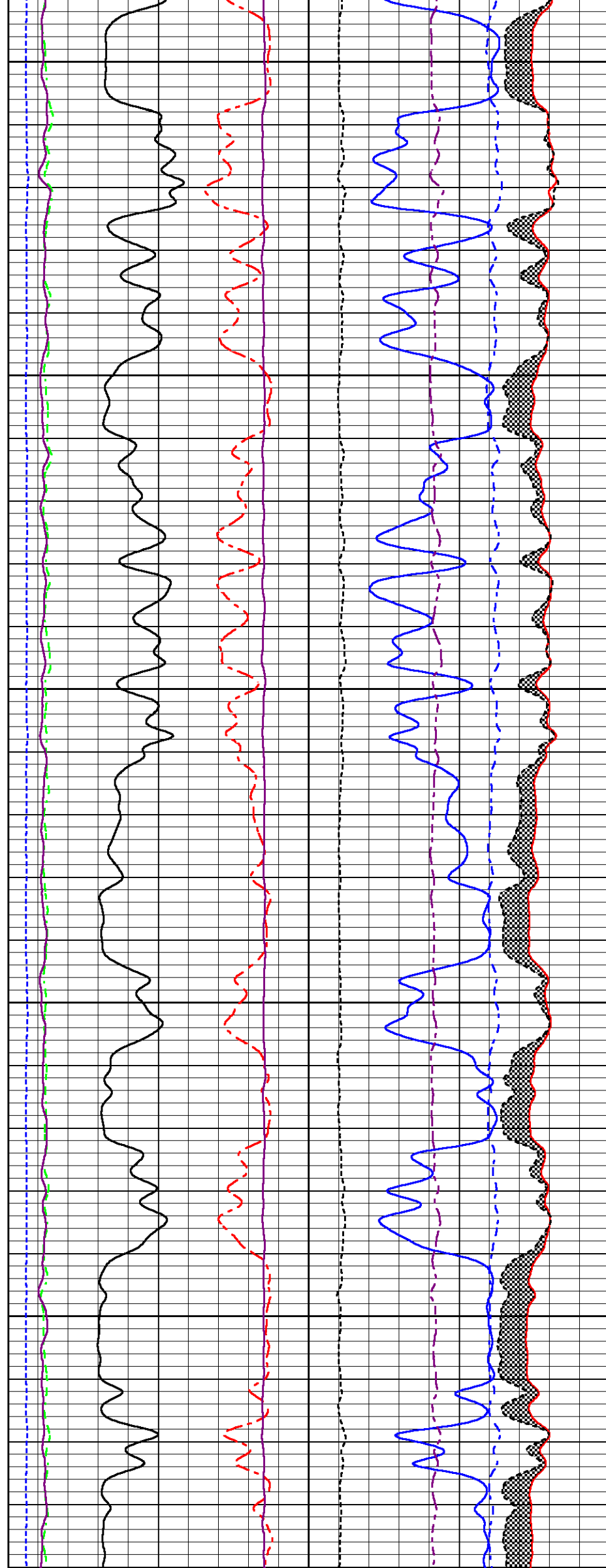
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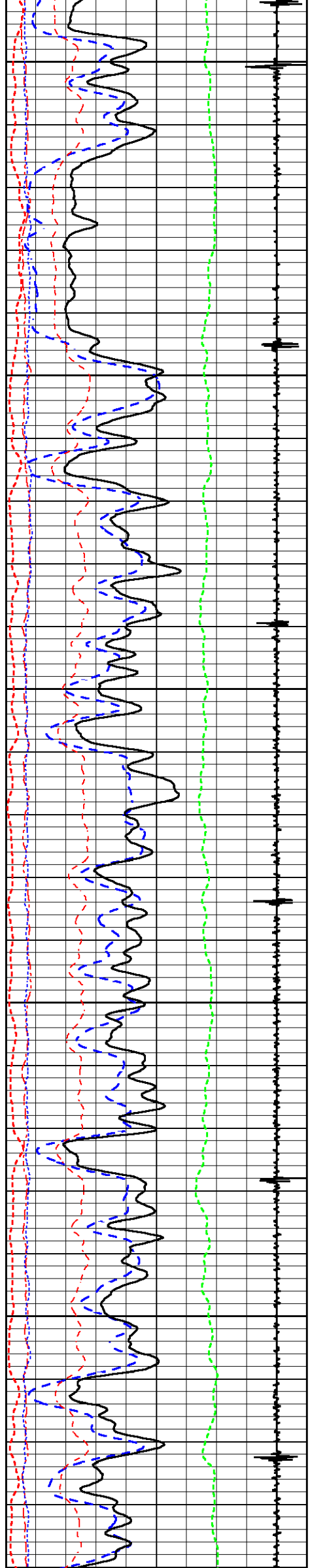




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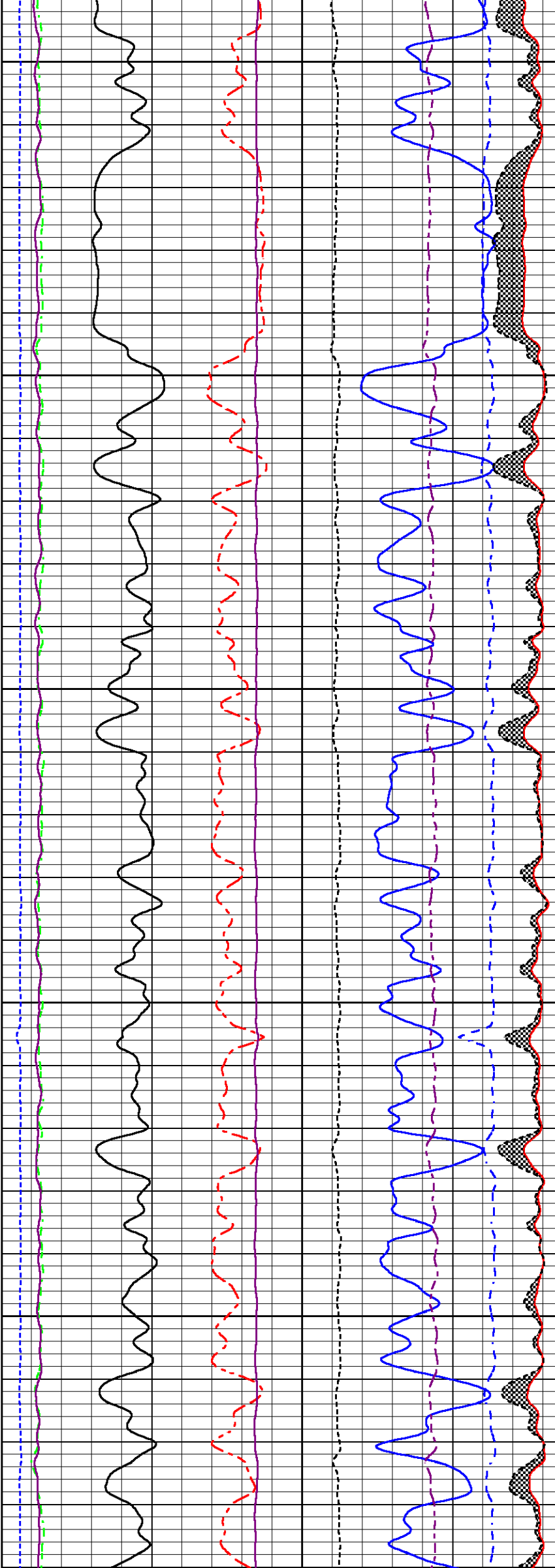


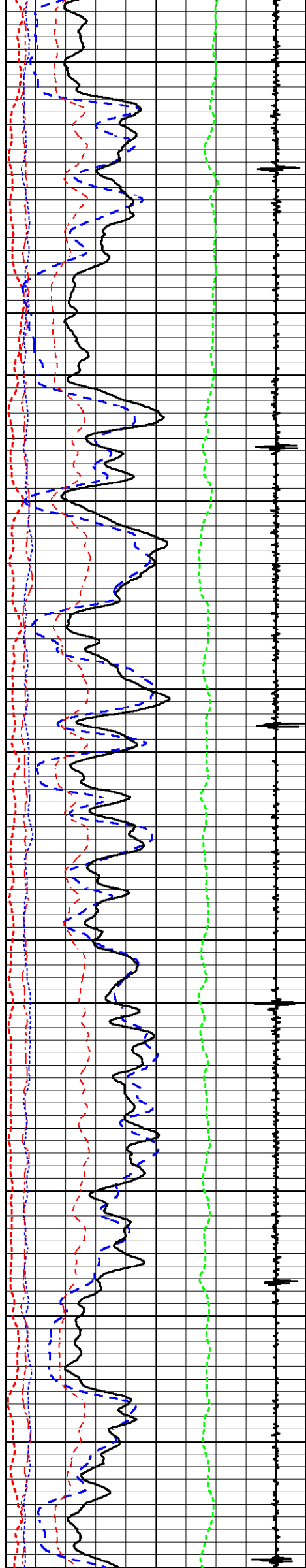


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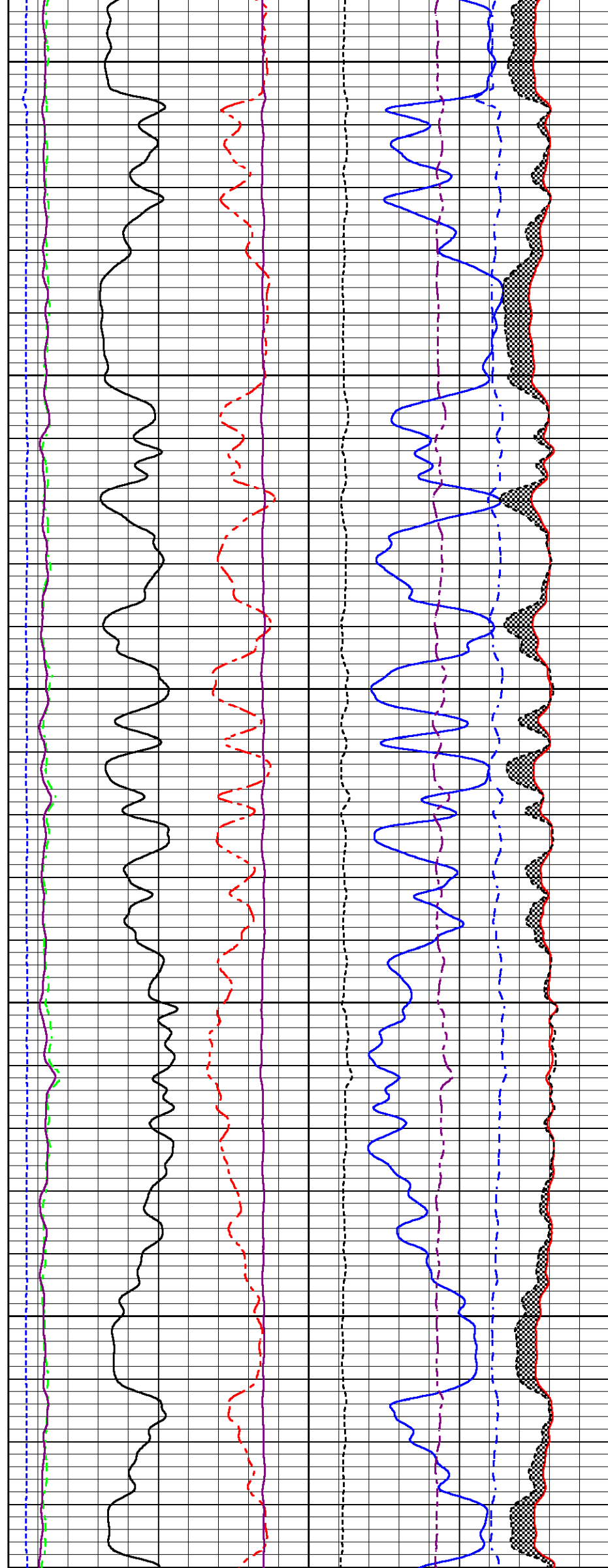
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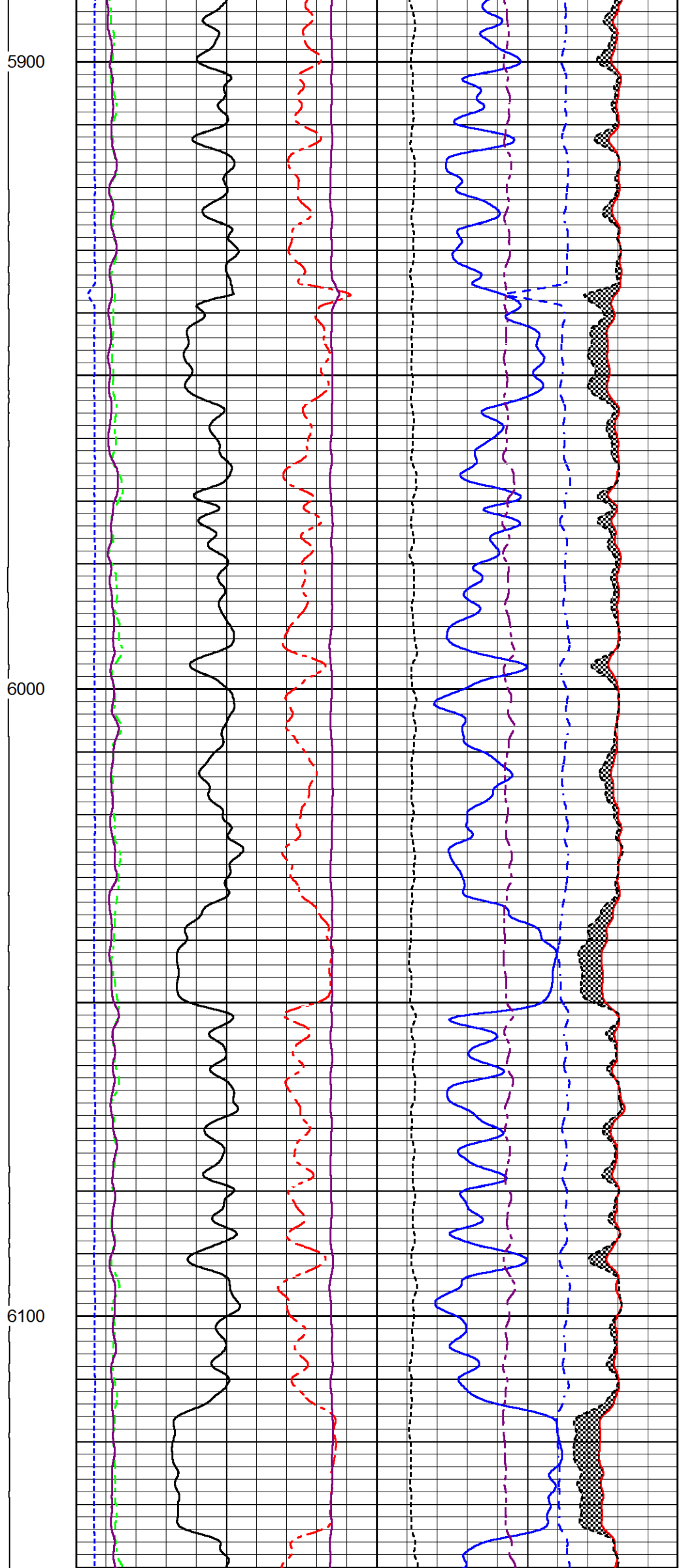
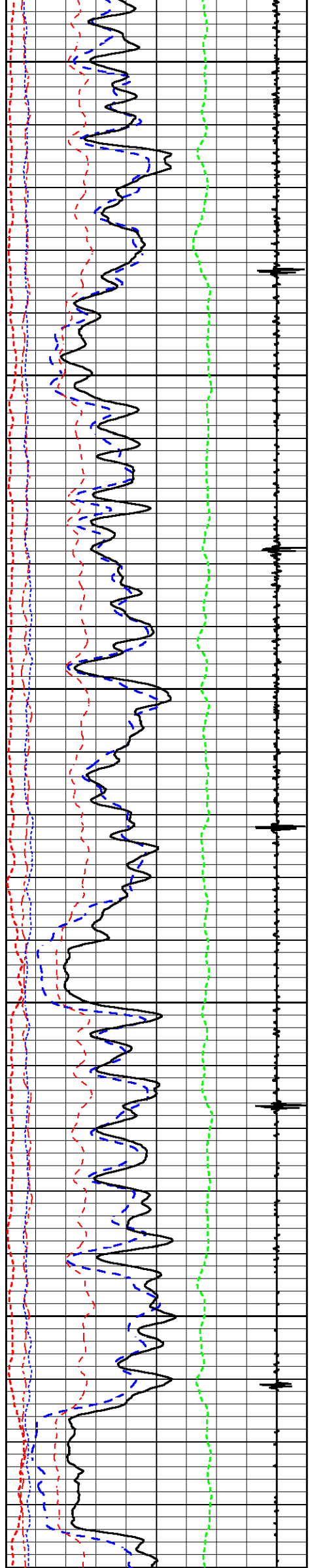


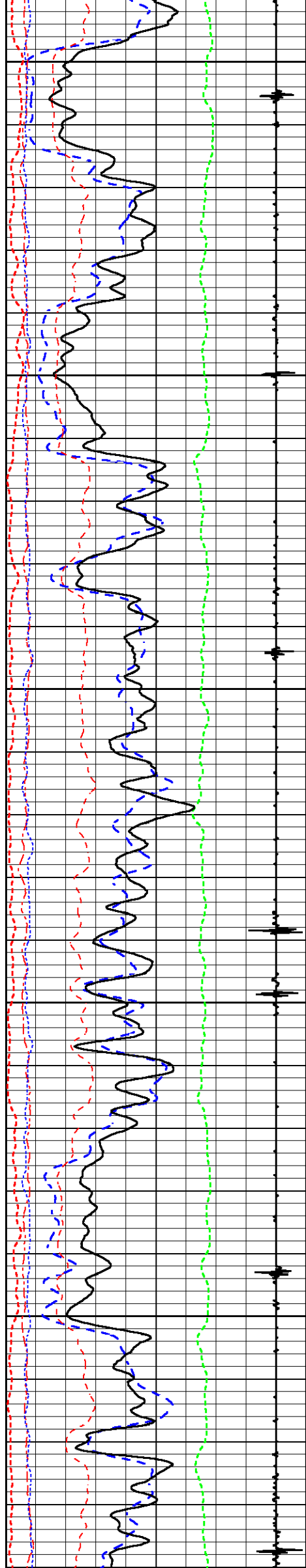


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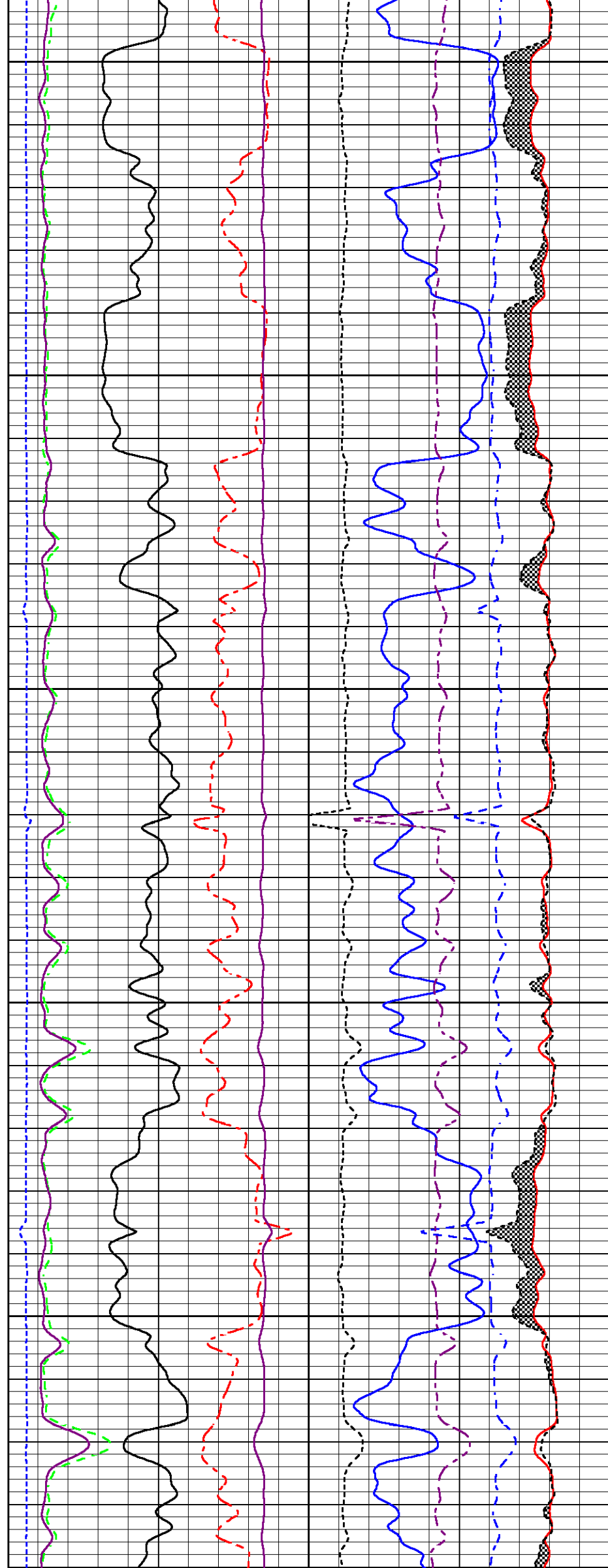


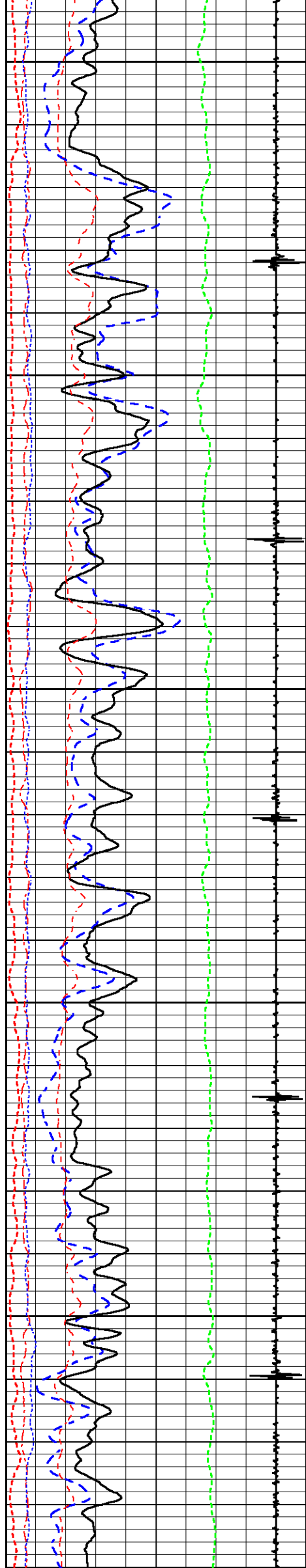




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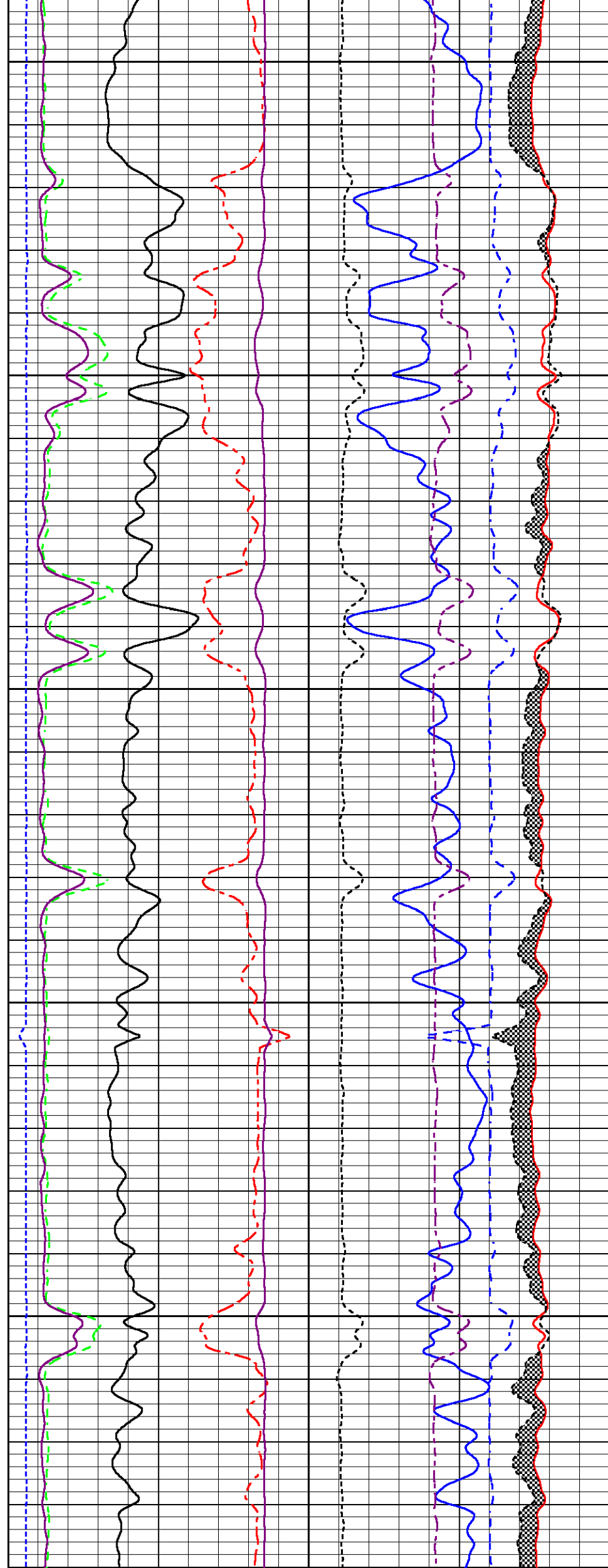


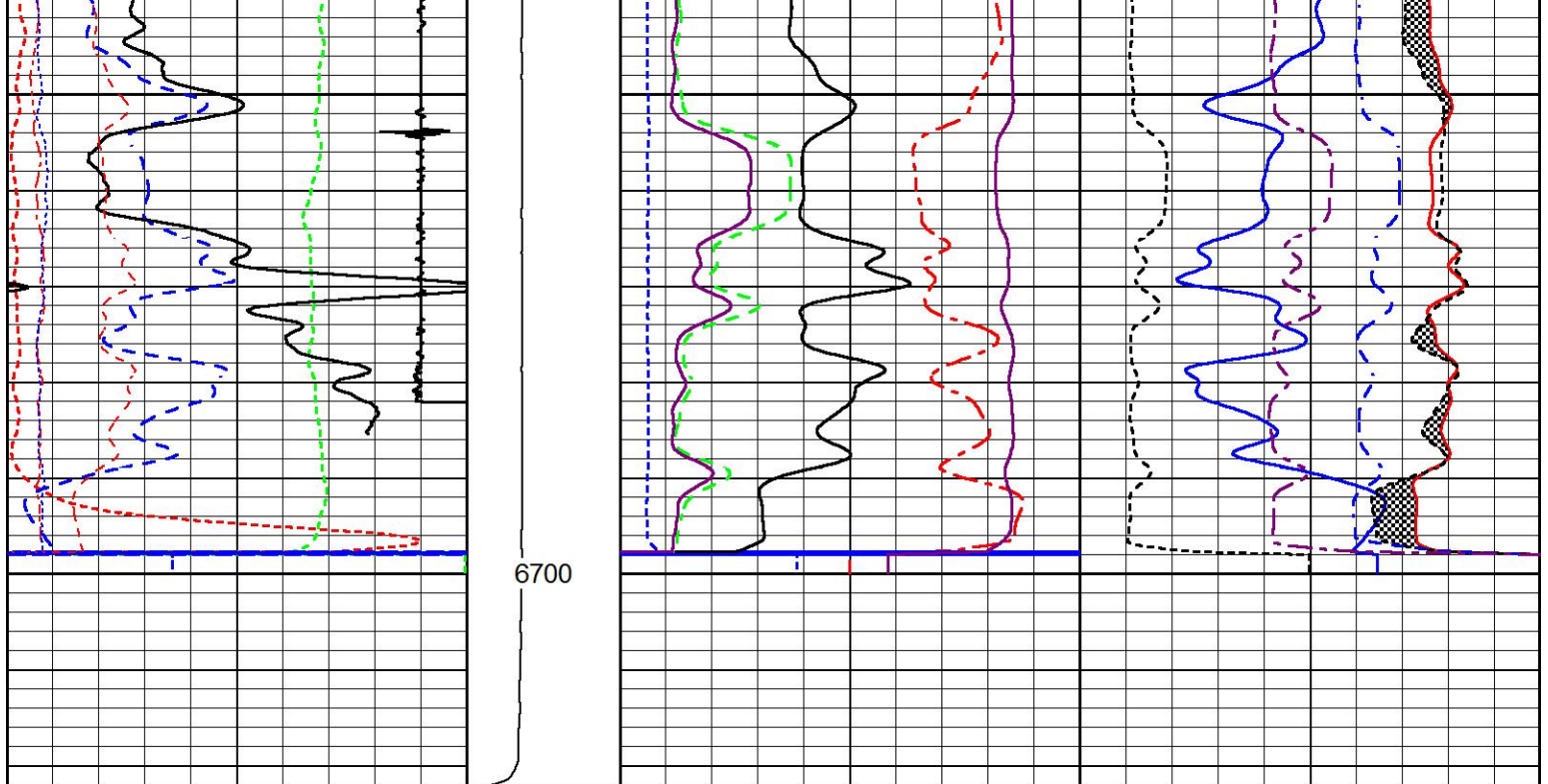


6400

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6600





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

HALLIBURTON

5" = 100'

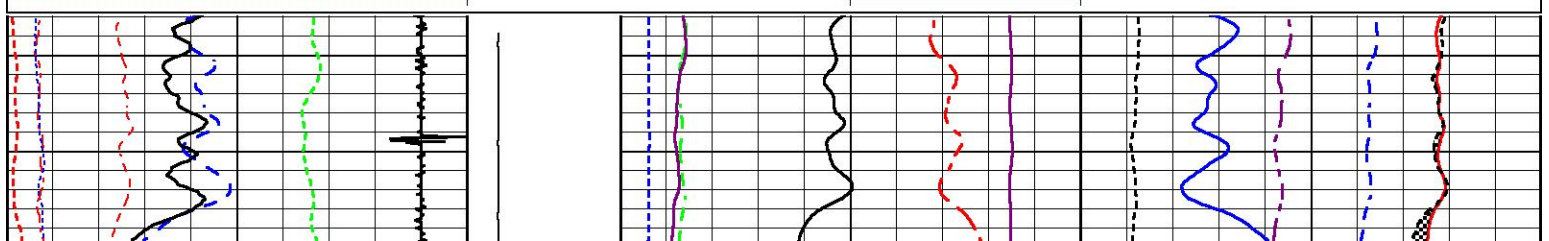
REPEAT LOG SECTION

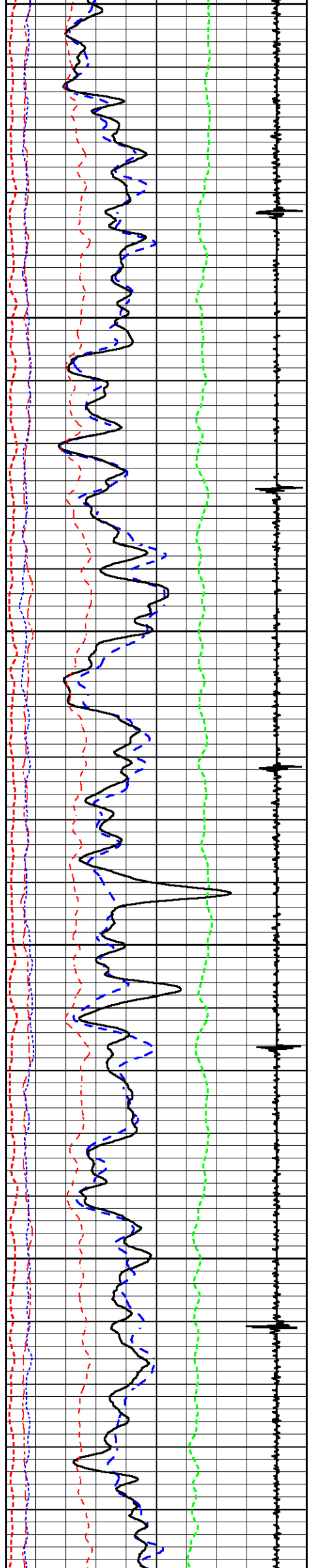
HALLIBURTON

5" = 100'

Database File watson_b_34c_combo.db
 Dataset Pathname RMT_RPT1
 Presentation Format rmt_main
 Dataset Creation Wed Jun 03 10:48:36 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

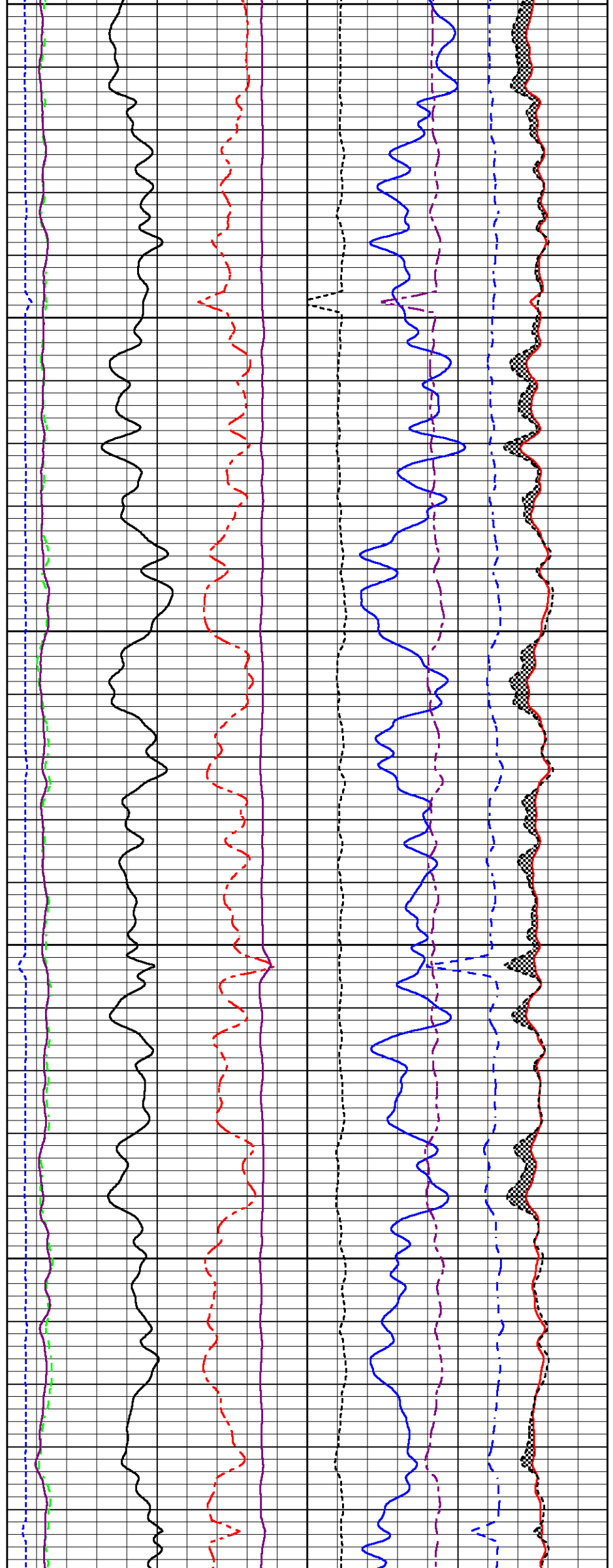




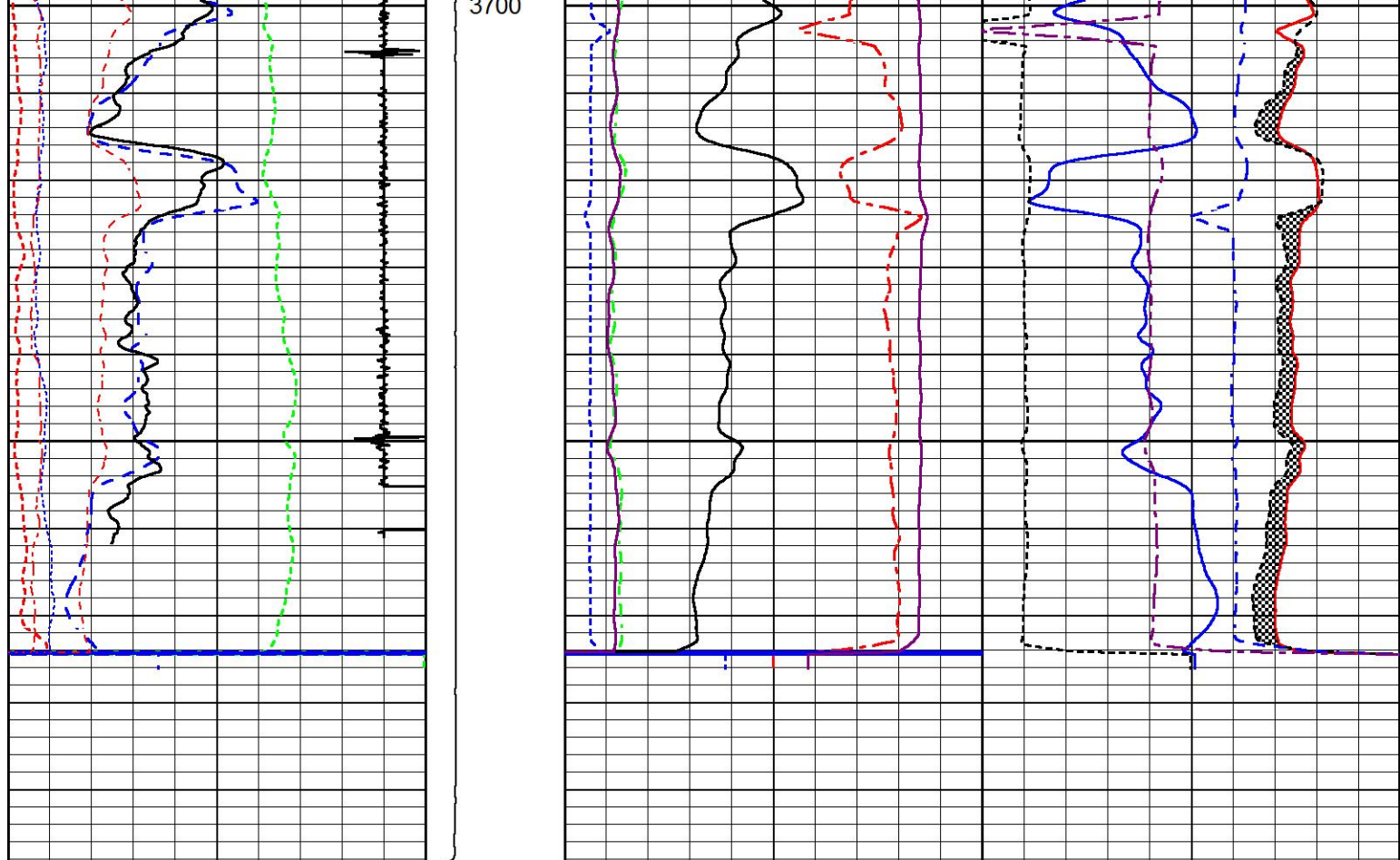
3500

3600

3700



3700



200	Near Bore Si (SGBN)	0	TENSION	60		SGIN		0	
0	OAI	100		2	RATIO (RNF)	0.5	60000	Near Counts (NCAP)	0
10	FAR FIT ERR (SGFF)	40		0	RIN	15	60000	Far Counts (FCAP)	0
0	GAMMA RAY (GAPI)	200		0	RICF	6	100000	FAR INTEL CT (FSIN)	0
0	NEAR FIT ERR (SGFN)	100		0	H YIELD (YH2)	1	10000	(NEAR INTEL CT (NSIN)	0
-5400	CCL	600		0	H YIELD (YH1)	1	ET INL NEAR (NNII		
0	IN FIT ERR (CFTR1) NEAR	1			INOX2		50000	-1000	
0	IN FIT ERR (CFTR2) FAR	1					-1500	1500	

REPEAT LOG SECTION

HALLIBURTON

5" = 100'

Log Variables DatabaseD:\Warrior_data\watson_b_34c_combo.db Dataset field/well/run1/RMT_MAIN/_vars_

Top - Bottom

PPT usec 0	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.8	BHTEMP_Src ITEMPX	BHSAL2 0	BHSAL1 1	POROS2 0
POROS1 1	LTH Sandstone	UHSGC NONE	RHO�F 0.25	SO in 0	BORSAL kppm 150	CASED? Yes	MSGGN 1
USERFTT usec/ft 0	ZREF MRayl 1.7	CASEWGHT lb/ft 11.6	SRFTEMP degF 0	MudWgt lb/gal 8.4	CASETHCK in 0.25	CASEOD in 4.5	PERFS 0
TDEPTH ft 0	BOTTEMP degF 180	BITSIZE in 7.875					

Calibration Report

Segmented Cement Bond Log Calibration Report

Serial Number: 12082235
 Tool Model: 004
 Calibration Casing Diameter: 4.500 in
 Calibration Depth: 136.007 ft

Master Calibration, performed Wed Jun 03 10:22:21 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.013	0.728	0.000	82.000	110.637	1.453
5FT	-0.013	0.678	0.000	82.000	118.543	1.592
S1	-0.007	0.758	0.000	100.000	130.644	0.957
S2	-0.008	0.742	0.000	100.000	133.232	1.116
S3	-0.005	0.716	0.000	100.000	138.718	0.677
S4	-0.008	0.687	0.000	100.000	143.987	1.135
S5	-0.005	0.708	0.000	100.000	140.298	0.685
S6	-0.005	0.720	0.000	100.000	137.883	0.673
S7	-0.004	0.746	0.000	100.000	133.453	0.479
S8	-0.004	0.749	0.000	100.000	132.787	0.533

Calibration Report

Serial Number: 12082235
 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: 11680606-A
 Shop Calibration Performed: Mon Jun 01 14:01:58 2015

Carbon/Oxygen Mode

Stabilization

Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	75.00	80.00	-5.00	+/-15.00	V
ITCR2	3230	3250	-20	+/-250	cps

Near Detector

	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0244	5.81	<6.00
Fe	206	206 +/-2	0.0944	----	----
NGAIN = 0.998		NZOFF = 0.2			

Far Detector

	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0365	5.60	<6.50
Fe	209	208 +/-2	0.0910	----	----
FGAIN = 0.994		FZOFF = 0.2			

Flask Temperature 65.6 degF

Result	Logged	Expected Value	Diff.	Tol.	Units
--------	--------	----------------	-------	------	-------

COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.64	1.64	-0.00	+/-0.05	
TCCR2	5062	5000	62	+/-1000	cps
ITCR2	3213	3200	13	+/-250	cps

Sigma Mode

Stabilization

Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	76.00	80.00	-4.00	+/-15.00	V
FCAP	10334	10000	334	+/-500	cps

Horizontal Water Tank

Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.94	0.95	-0.01		
N/F Inel Norm	0.61	0.61	0.00		
RNF	1.07	1.07	-0.00	+/-0.12	
RINC	1.63	1.64	-0.01	+/-0.18	
SGFN	24.06	24.00	0.06	+/-0.50	cu
SGFF	22.87	22.85	0.02	+/-0.50	cu
FSIN	25058	24000	1058	+/-2000	cps
FCAP	10528	10000	528	+/-1000	cps
NFTR	0.86			<5.00	
FFTR	0.91			<5.00	
NBKG	133			<500	cps
FBKG	102			<500	cps
RTN	0.44	0.40	0.04	+/-0.10	usec
RTF	0.47	0.40	0.07	+/-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 / 10000028

SHOP CALIBRATION

Wed Jun 03 00:21:49 2015

	Counts/Sec.	Gain	Offset	Jig	Units
Background	39.9				cps
Calibrator	330.3				cps
		1.4048			GAPI/cps

PRIMARY VERIFICATION


Background	55.8				cps
Calibrator	458.8				cps
Difference				403.0	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)
			STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
CCL	37.26					
GR	35.00		TTTCU-002 (10000028) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
			XHU-003 (12218041) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
RmtTFGT RmtTNGT	24.35 23.85		RMTI-A (11680606) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V RmtCommFWa	16.10 16.10		X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
			AUH-001 (000001) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
			CENT-CSSMid3.00Roller CSS 3.00" MIDDLE ROLLER CENTRALIZER	2.75	3.00	36.00
CBLTEMP	8.31		RBT-004 (12082235) 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-001 (000001) Bullnose	0.30	1.69	1.50	

Dataset: watson_b_34c_combo.db: field/well/run1/RMT_MAIN
 Total length: 40.83 ft
 Total weight: 386.50 lb
 O.D.: 3.13 in

Company URSA OPERATING CO, LLC
Well WATSON RANCH B 34C-17-07-95
Field PARACHUTE
County GARFIELD

State CO

HALLIBURTON

RESERVOIR MONITOR
TOOL - ELITE