

Company				URSA OPERATING CO, LLC							
Well				WATSON RANCH B 33D-17-07-95							
Field				PARACHUTE							
County				GARFIELD State CO							
Company				URSA OPERATING CO, LLC							
Well				WATSON RANCH B 33D-17-07-95							
Field				PARACHUTE							
County				GARFIELD State CO							
API No.:				05-045-22806000		Serv #: 902453076		Other Services			
Location:				SURFACE HOLE LOCATION: 1046' FSL & 1915' FWL BOTTOM HOLE LOCATION: 1542' FSL & 1984' FEL						CBL JB/GR	
Permanent Datum				GROUND LEVEL Elevation 5585 ft						Elevation	
Log Measured From				KB , 17 ft Ft. above perm. datum						K.B. 5602 ft D.F. 5601 ft G.L. 5585 ft	
Drilling Measured From				KB						WATER	
Date @ Time Logged				04 JUNE 2015		Type Fluid in Hole		WATER			
Run No.				ONE		Density of Fluid		8.4 ppg			
Depth - Driller				7067'		Fluid Level		FULL			
Depth - Logger				6808'		Cement Top Est. Logged		SEE LOG			
Bottom - Logged Interval				6808'		Equipment / Location		11698439 / G.J. CO			
Top - Log Interval				1500'		Recorded by		P. DIMPFL			
Max. Recorded Temp.				186.0 degF		Witnessed by		R. TOLLE			
CEMENTING DATA				Surface		Protection		Production			
				String		String		String			
				N/A		N/A		N/A			
Date / Time Cemented				N/A		N/A		N/A			
Primary / Squeeze											
Expected Compressive Strength				psi@		hrs		psi@			
Cement Volume											
Cement Type / Weight				/		/		/			
Formulation											
Mud Type / Mud Wgt.				/		/		/			
Borehole Record								Casing & Tubing Record			
Run Number				Bit		From		To			
ONE				12.25"		SURFACE		1771'			
TWO				7.875"		1771'		7076'			

<<< 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 @: 6375' - 6385', 5479' - 5489', 3030' - 3040'

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

Service Ticket No.	902453076	API No.	05-045-22806-0000	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.	1500'	1500'	Pressure	60	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			

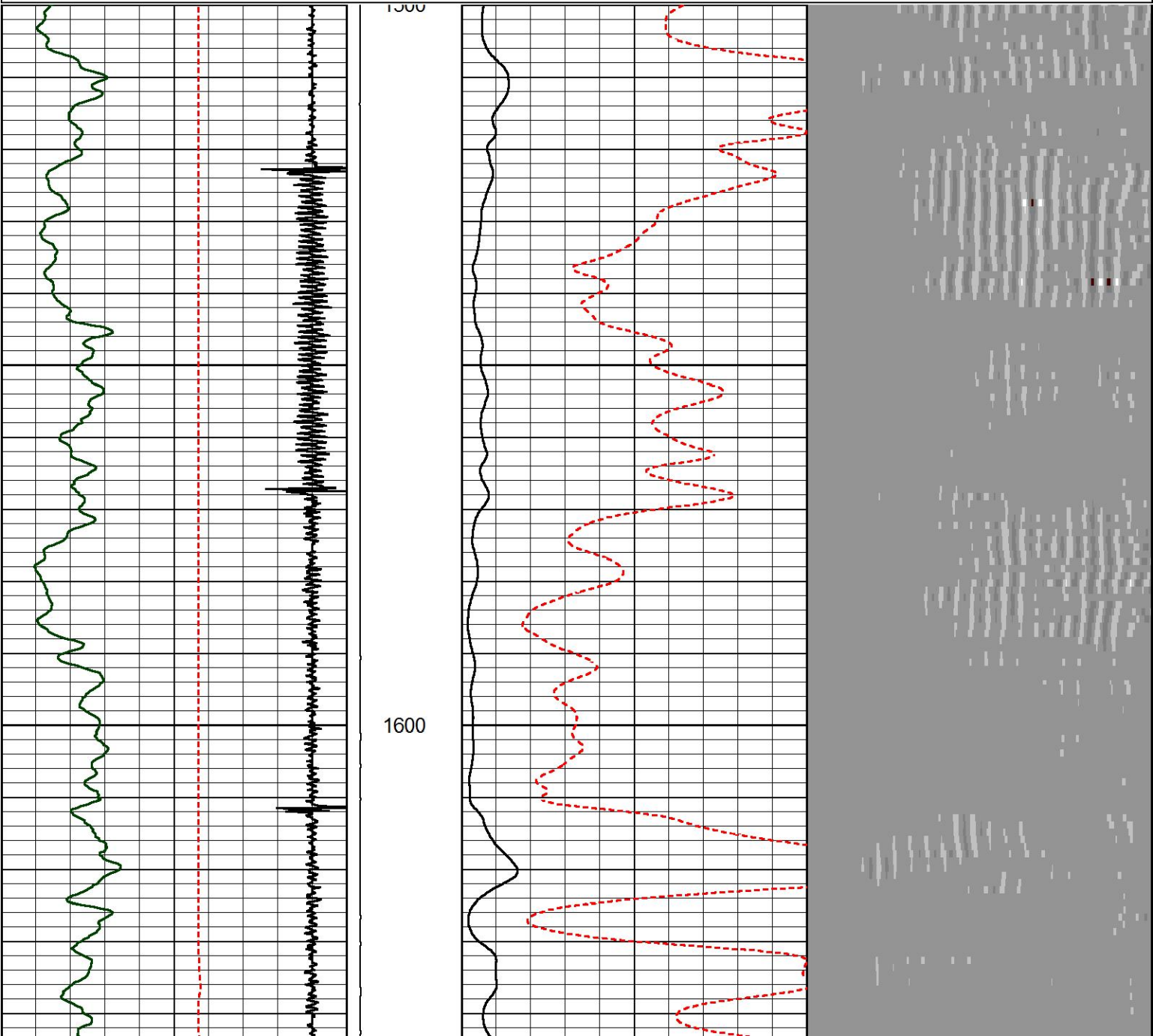
HALLIBURTON

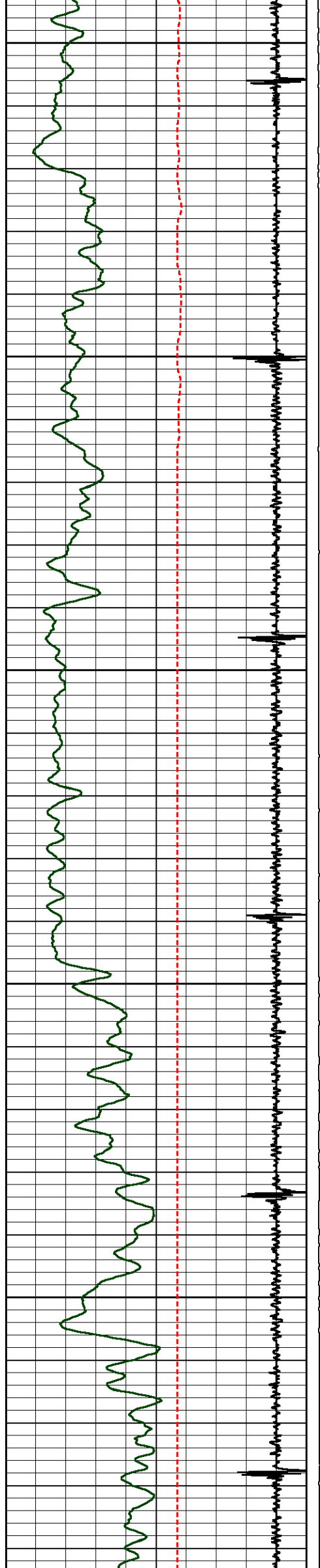
MAIN LOG SECTION

5" = 100'

Database File	watson_b_33d_combo.db
Dataset Pathname	MAIN
Presentation Format	hcbl
Dataset Creation	Thu Jun 04 07:03:41 2015
Charted by	Depth in Feet scaled 1:240

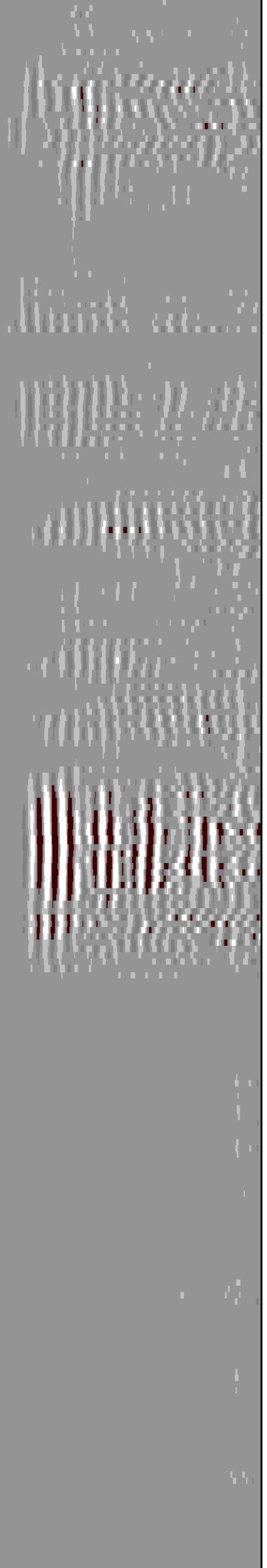
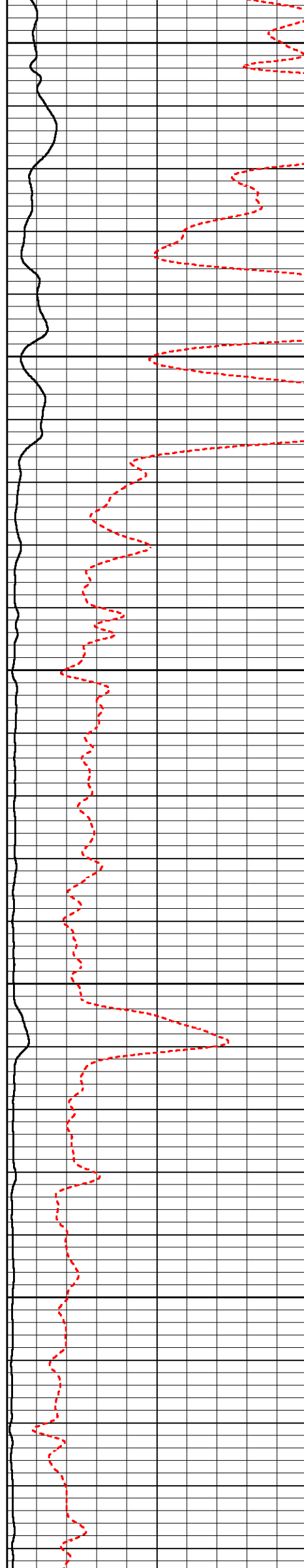
370	3' Travel Time (usec)	170	LTEN	0	AMPLITUDE (mV) (mV)	100	200	MSG	1200
-5400	CCL	600	0	(lb,4000	0	Amplified Amplitude (mV)	10		
0	Gamma Ray (GAPI)	200							

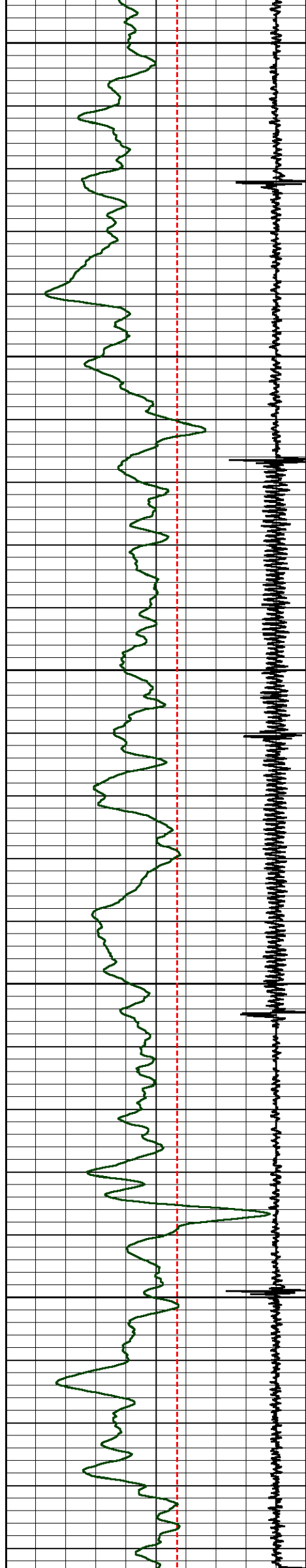




1700

1800

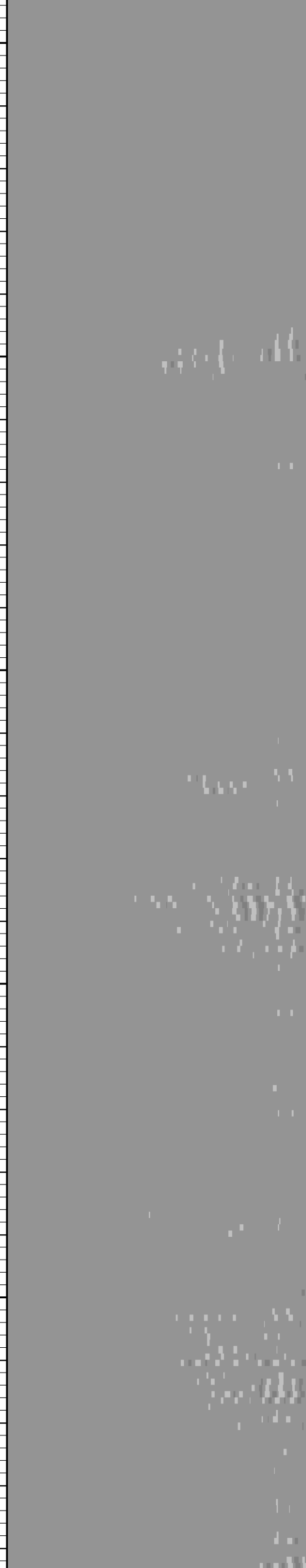
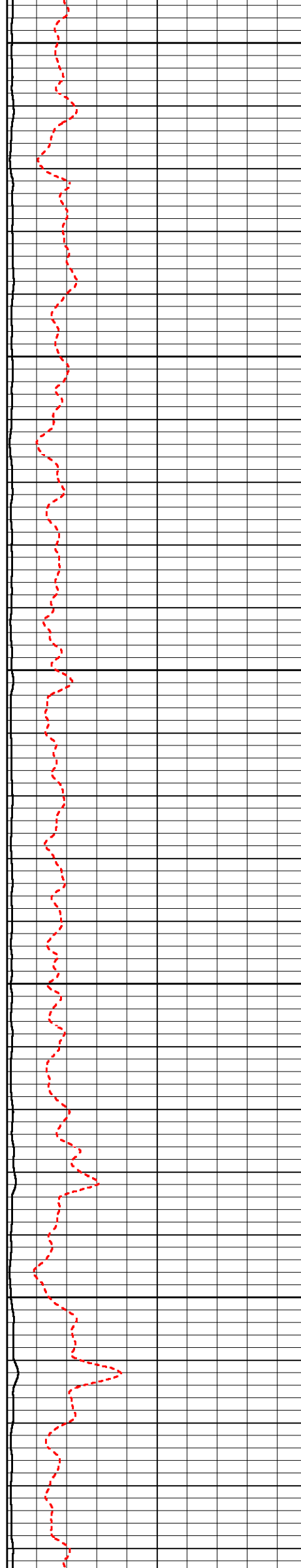


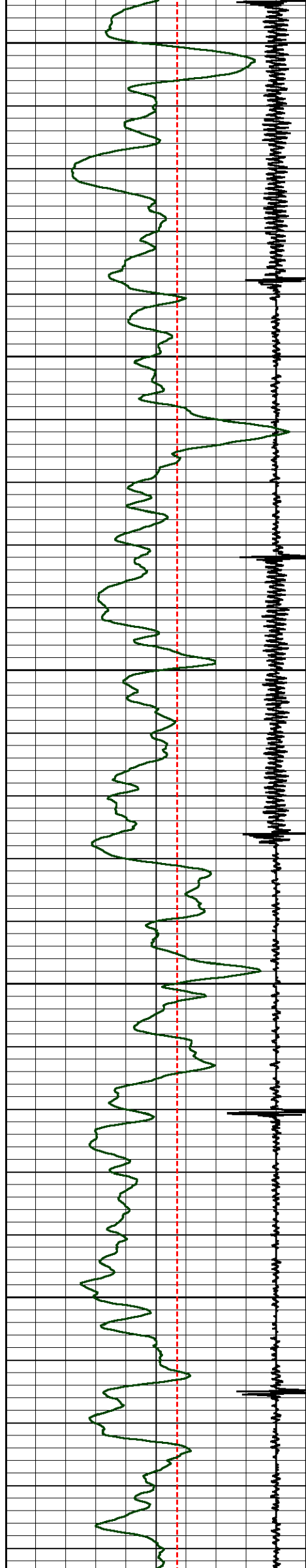


1900

2000

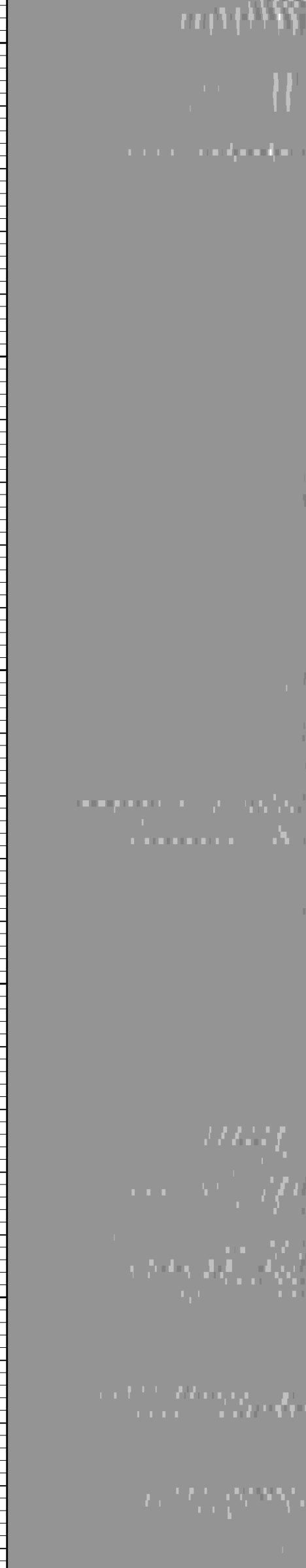
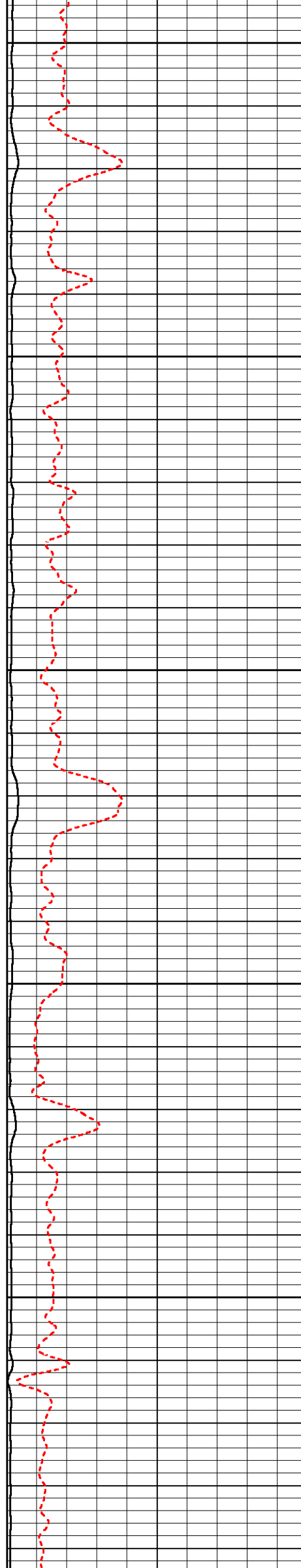
2100

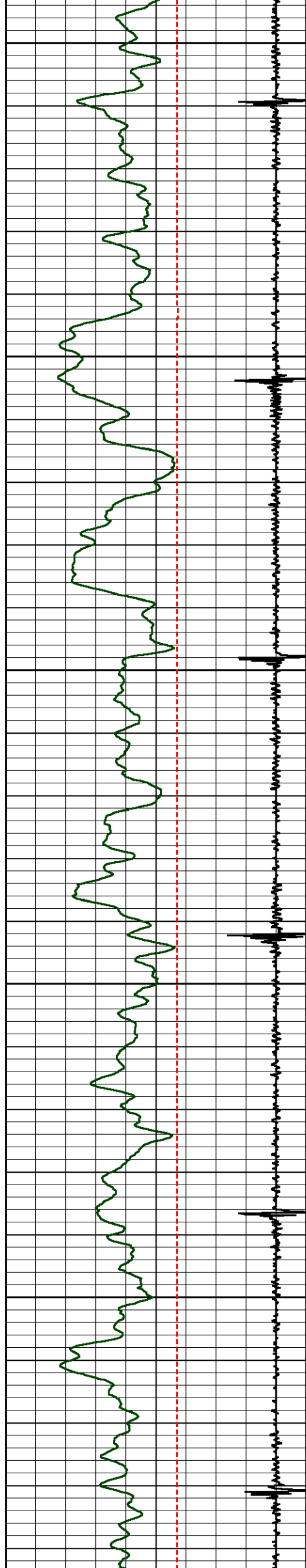




2200

2300

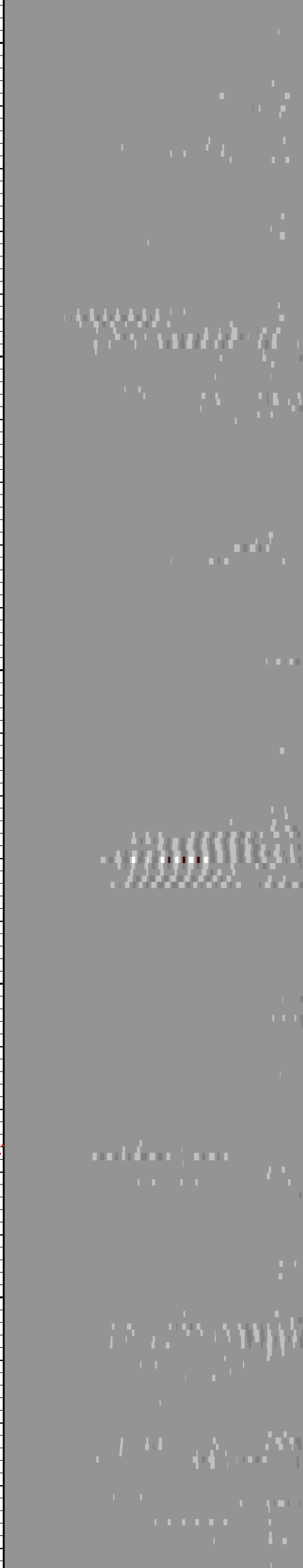
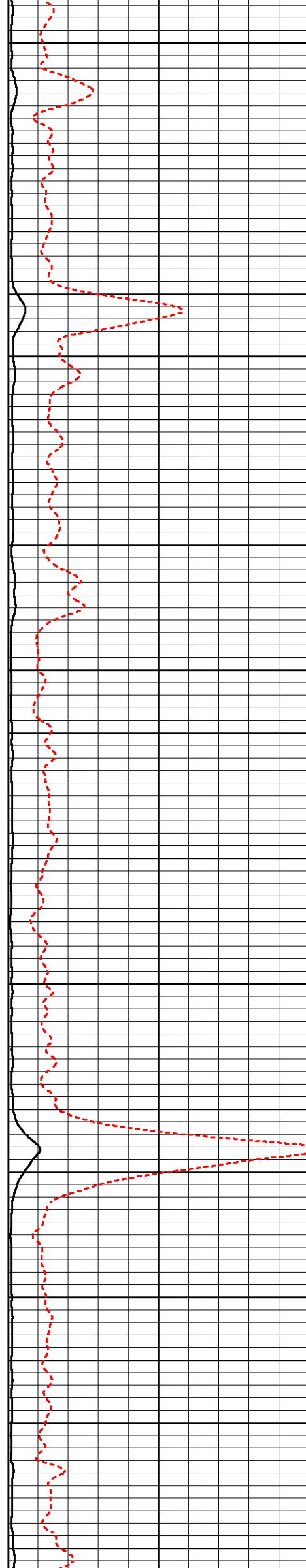


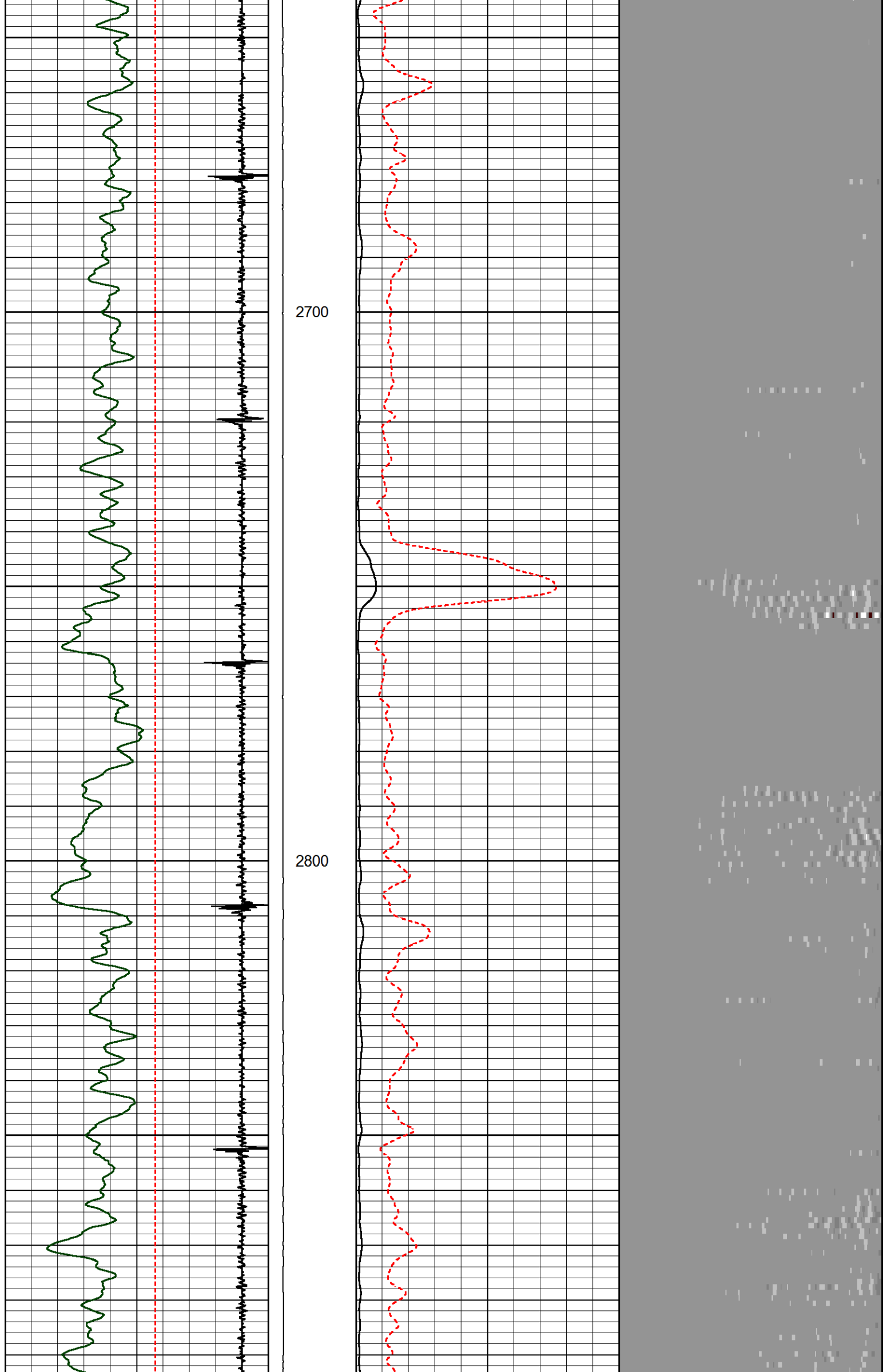


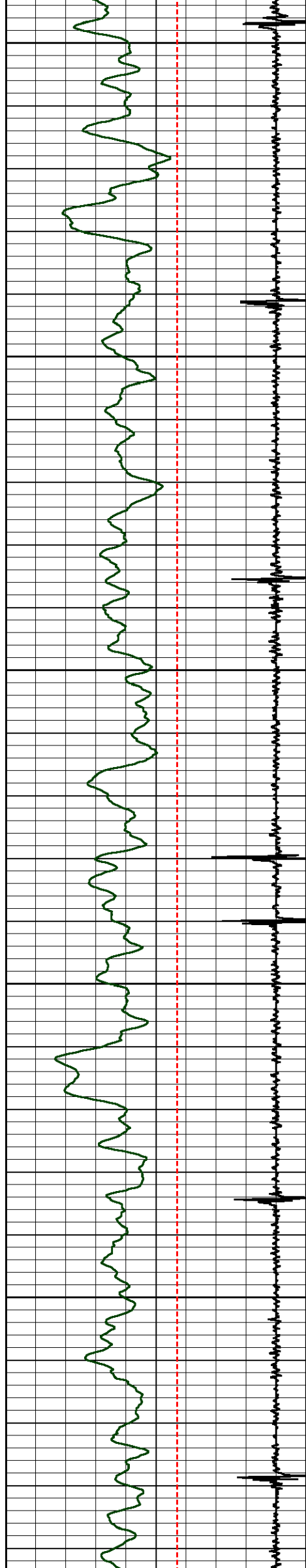
2400

2500

2600





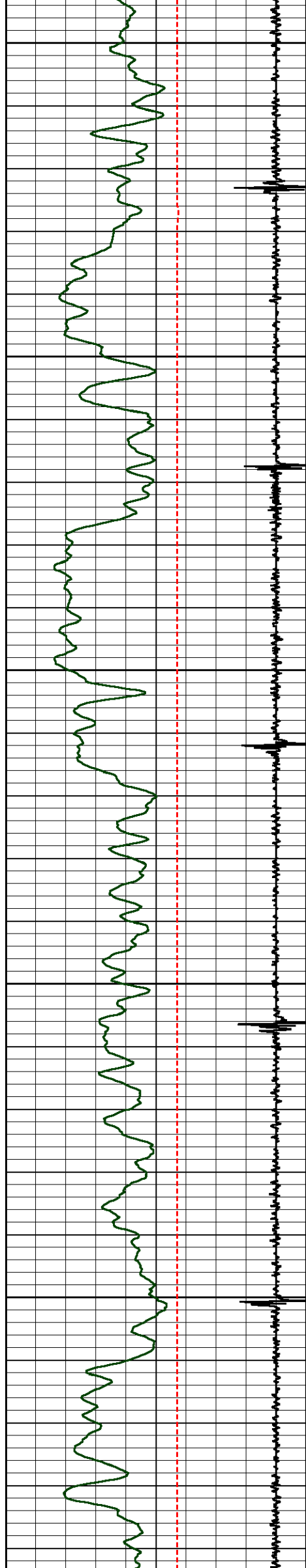


2900

3000

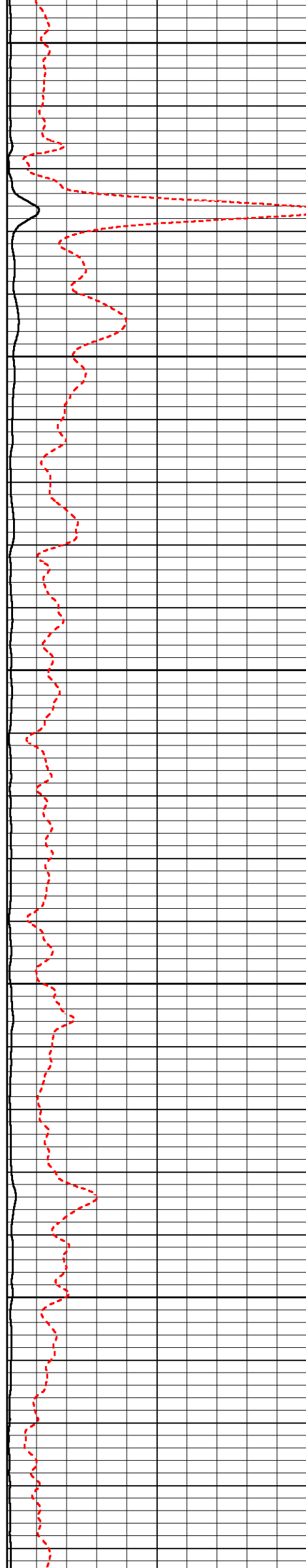
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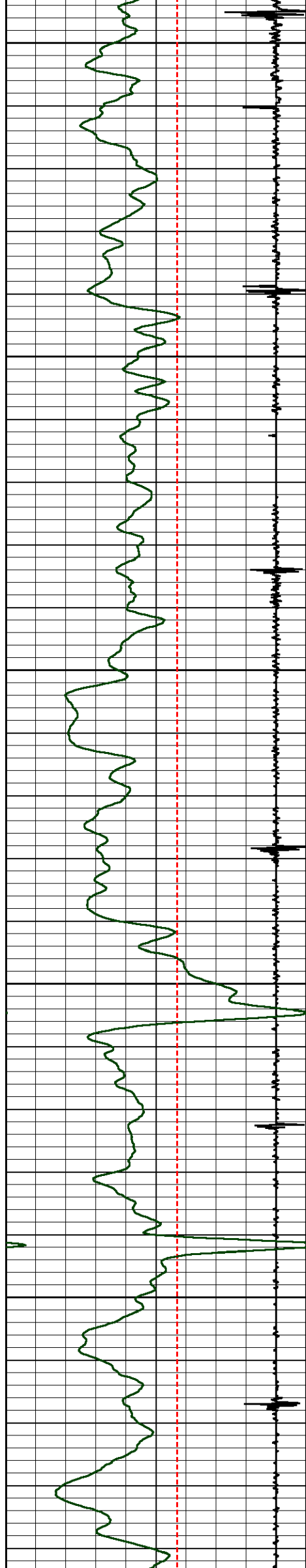




3200

3300

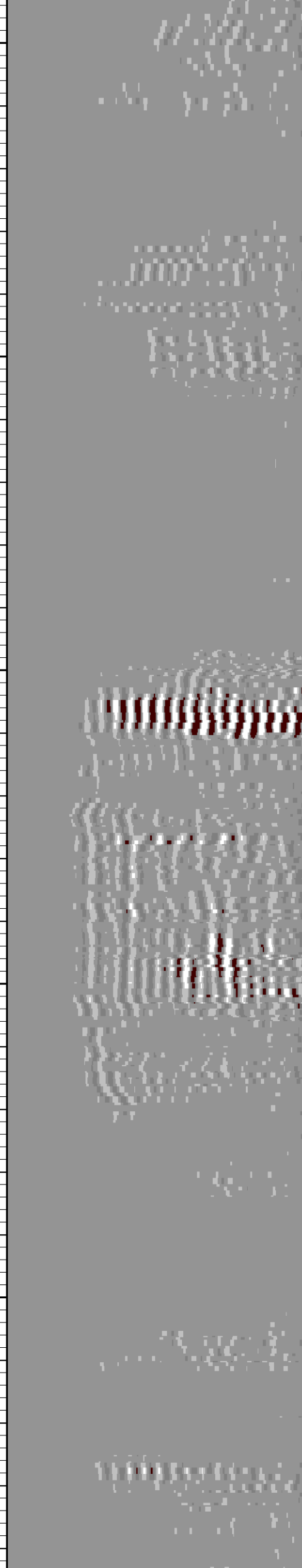
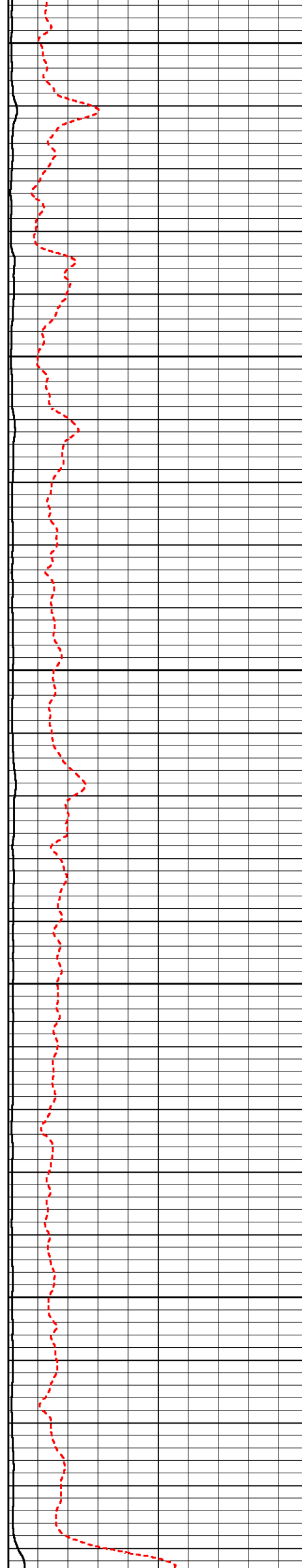


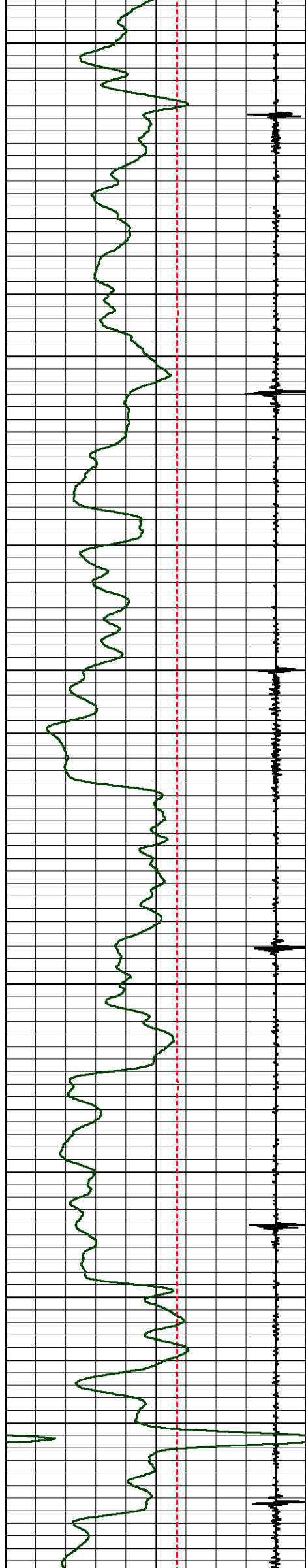


3400

3500

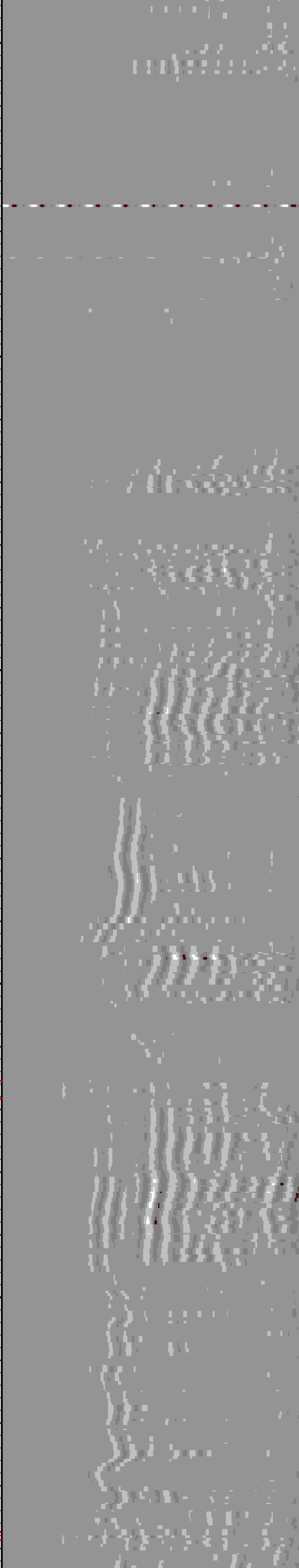
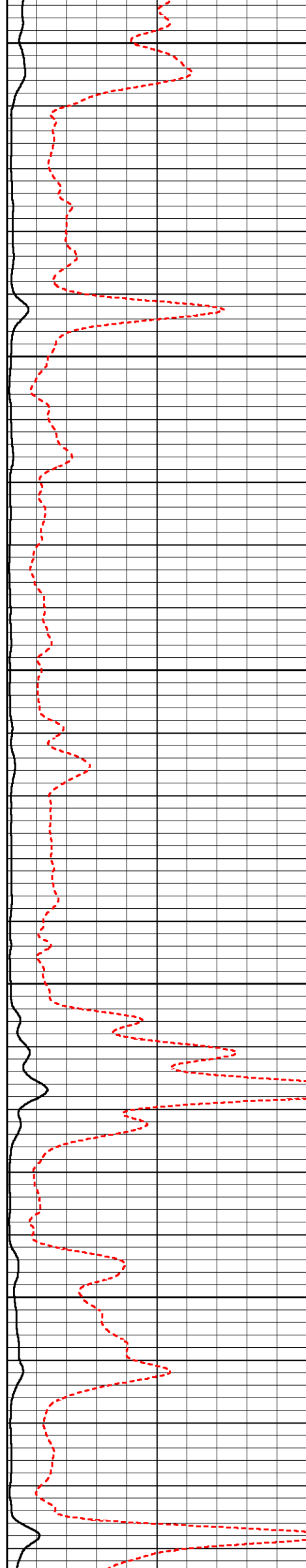
3600

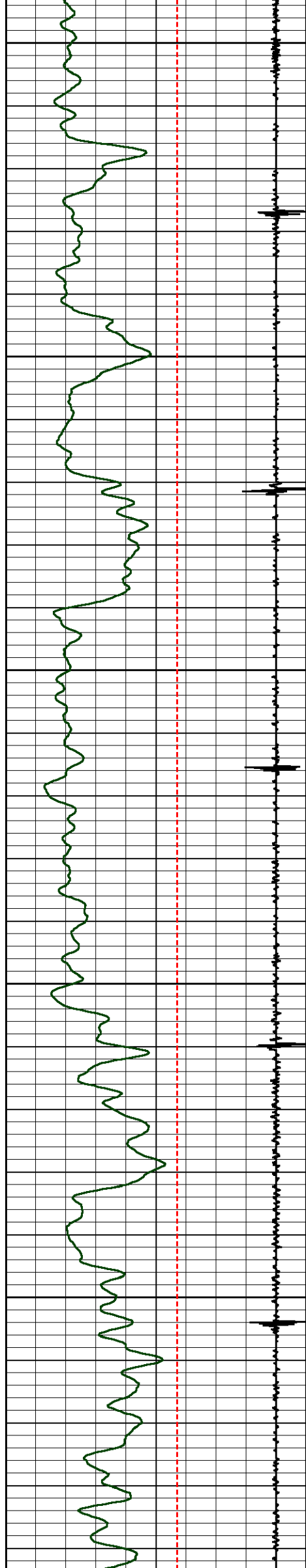




3700

3800

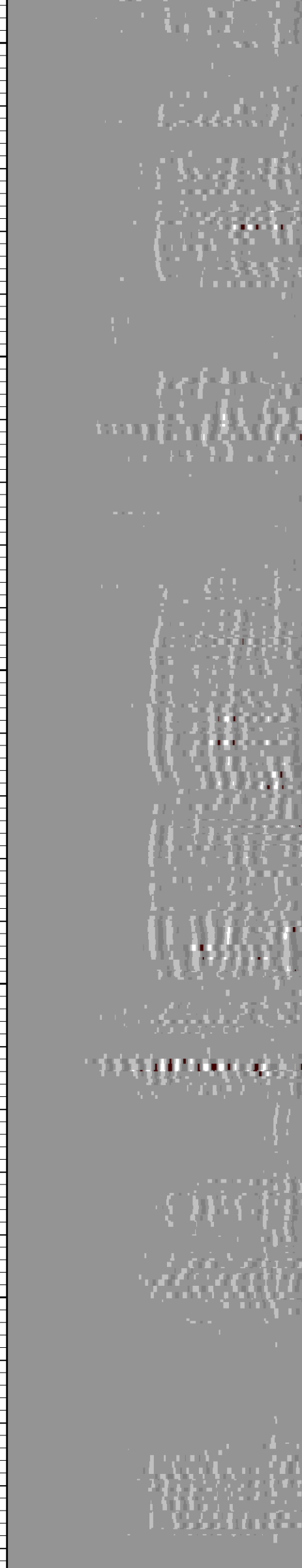
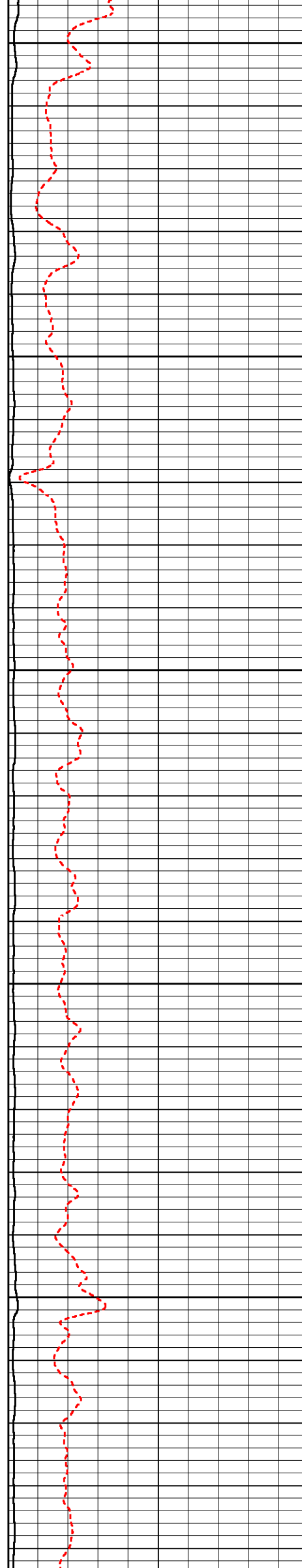


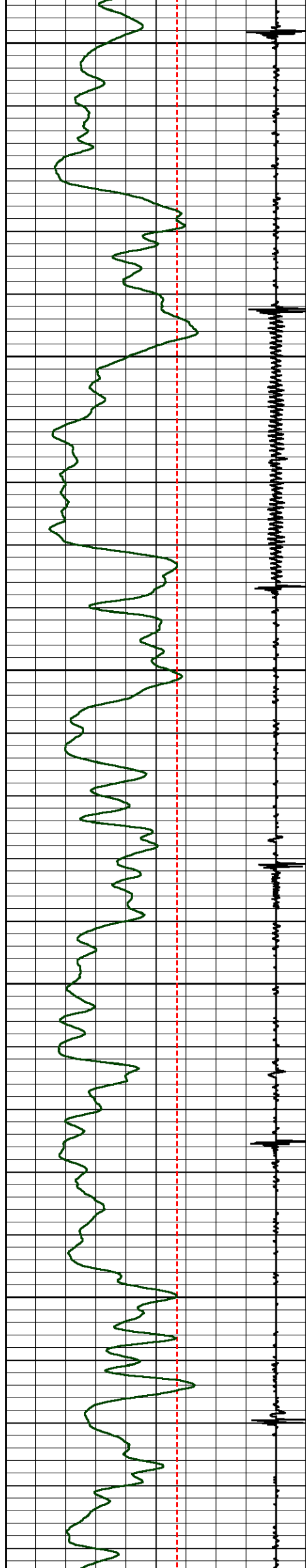


3900

4000

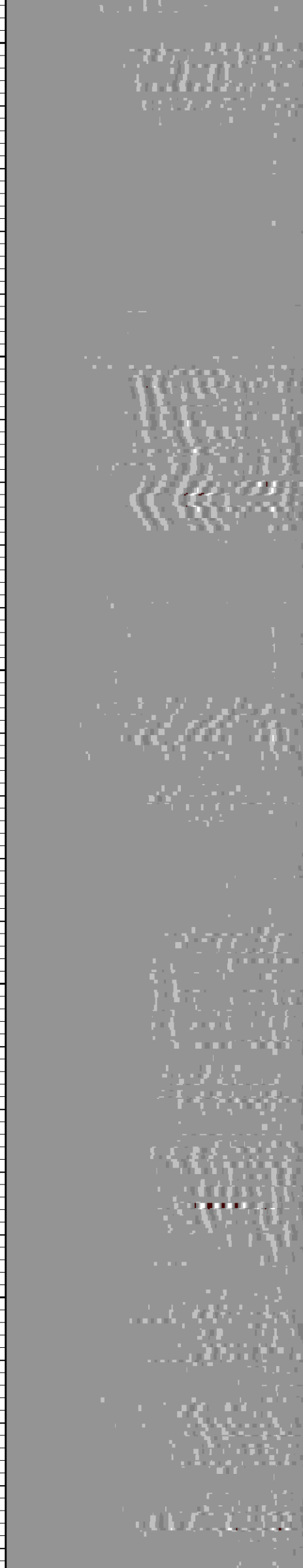
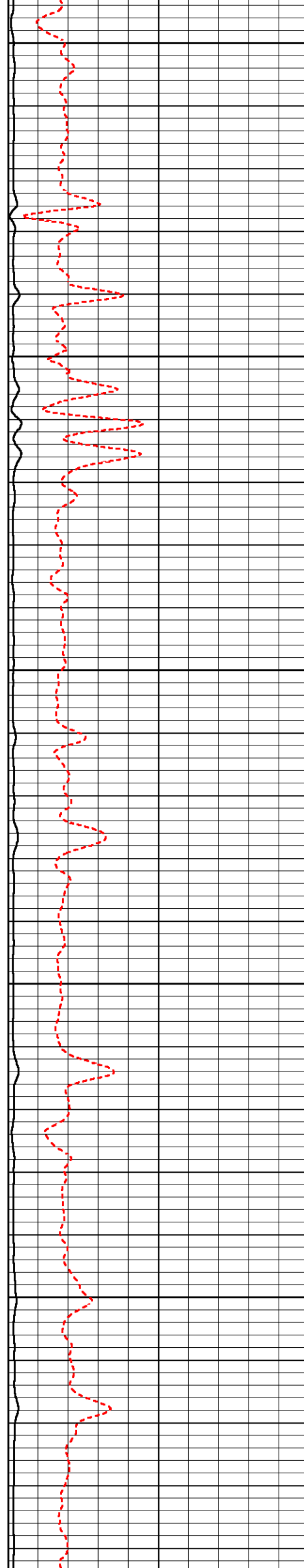
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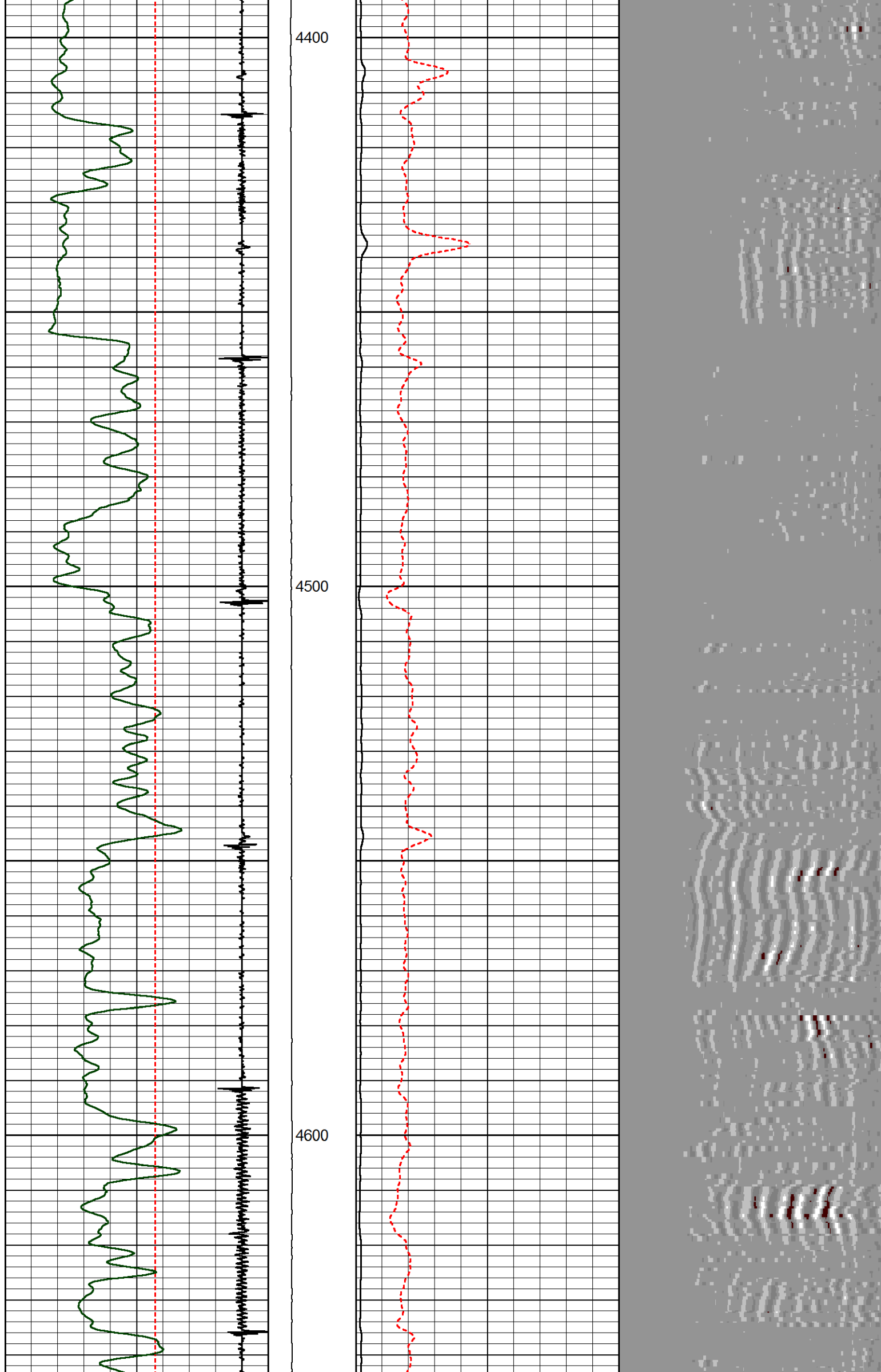


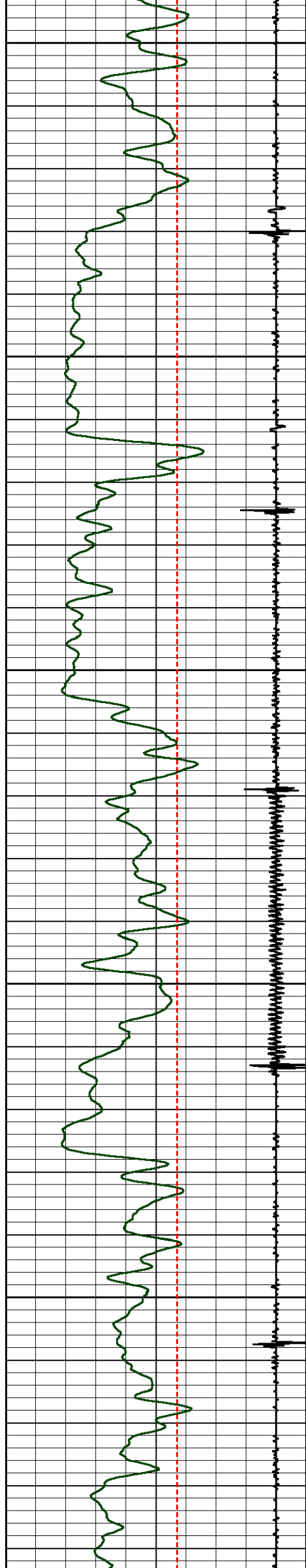


4200

4300

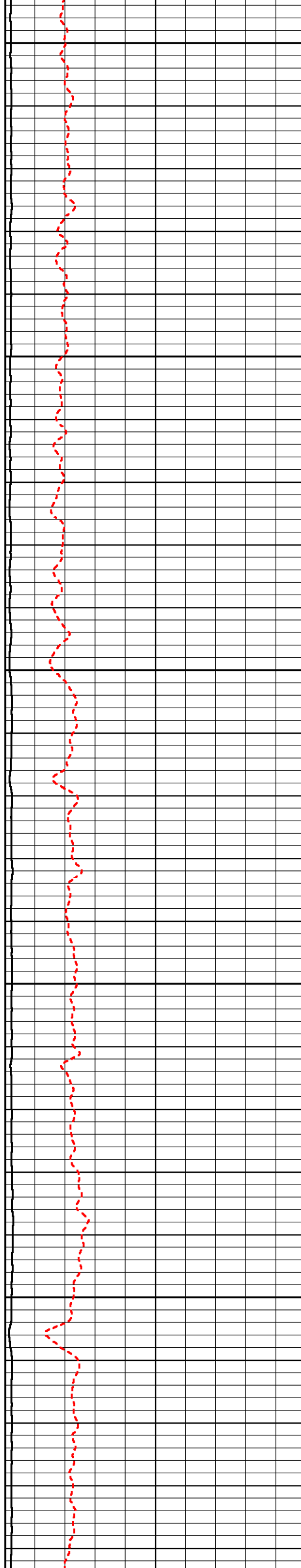


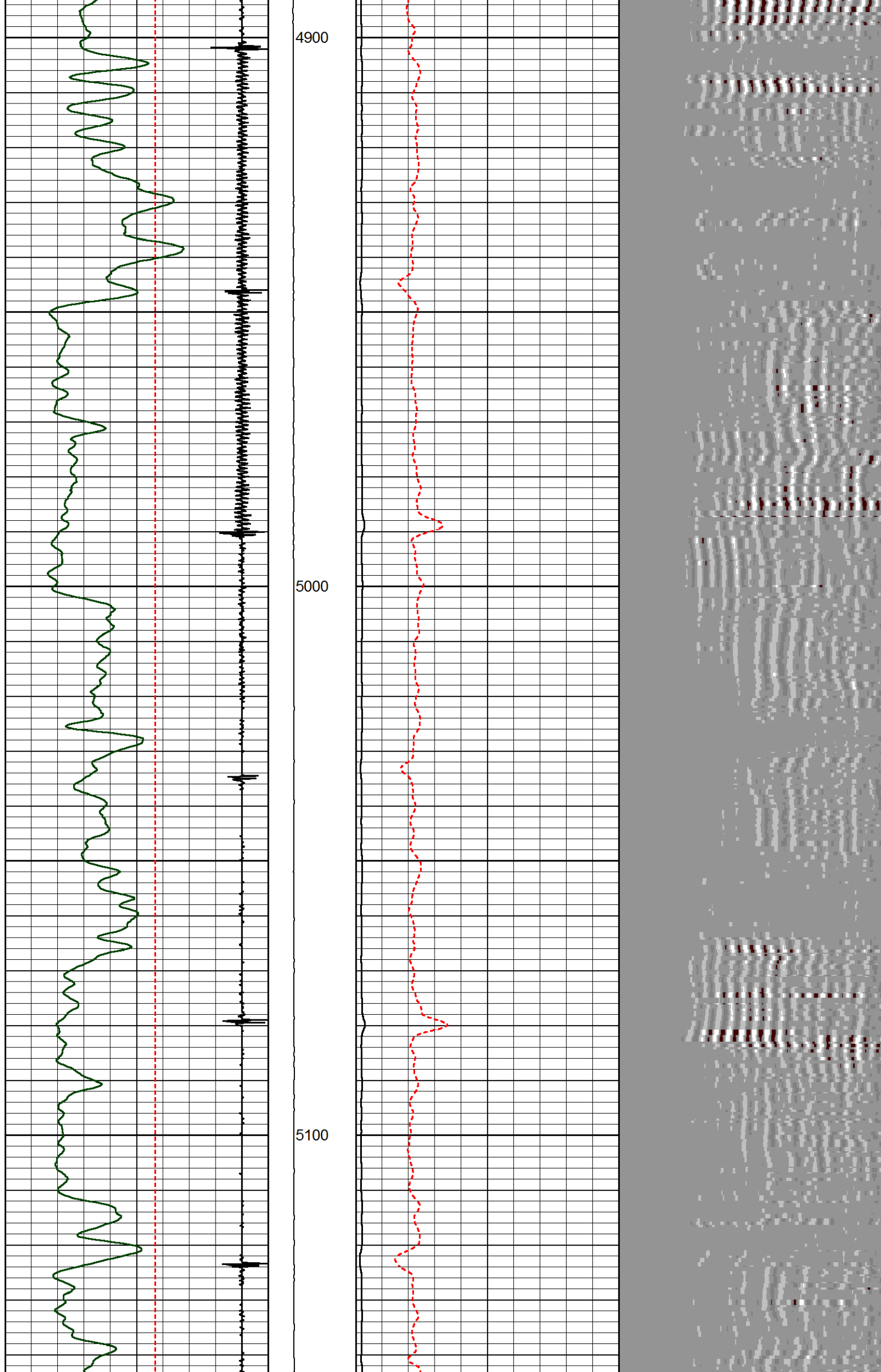


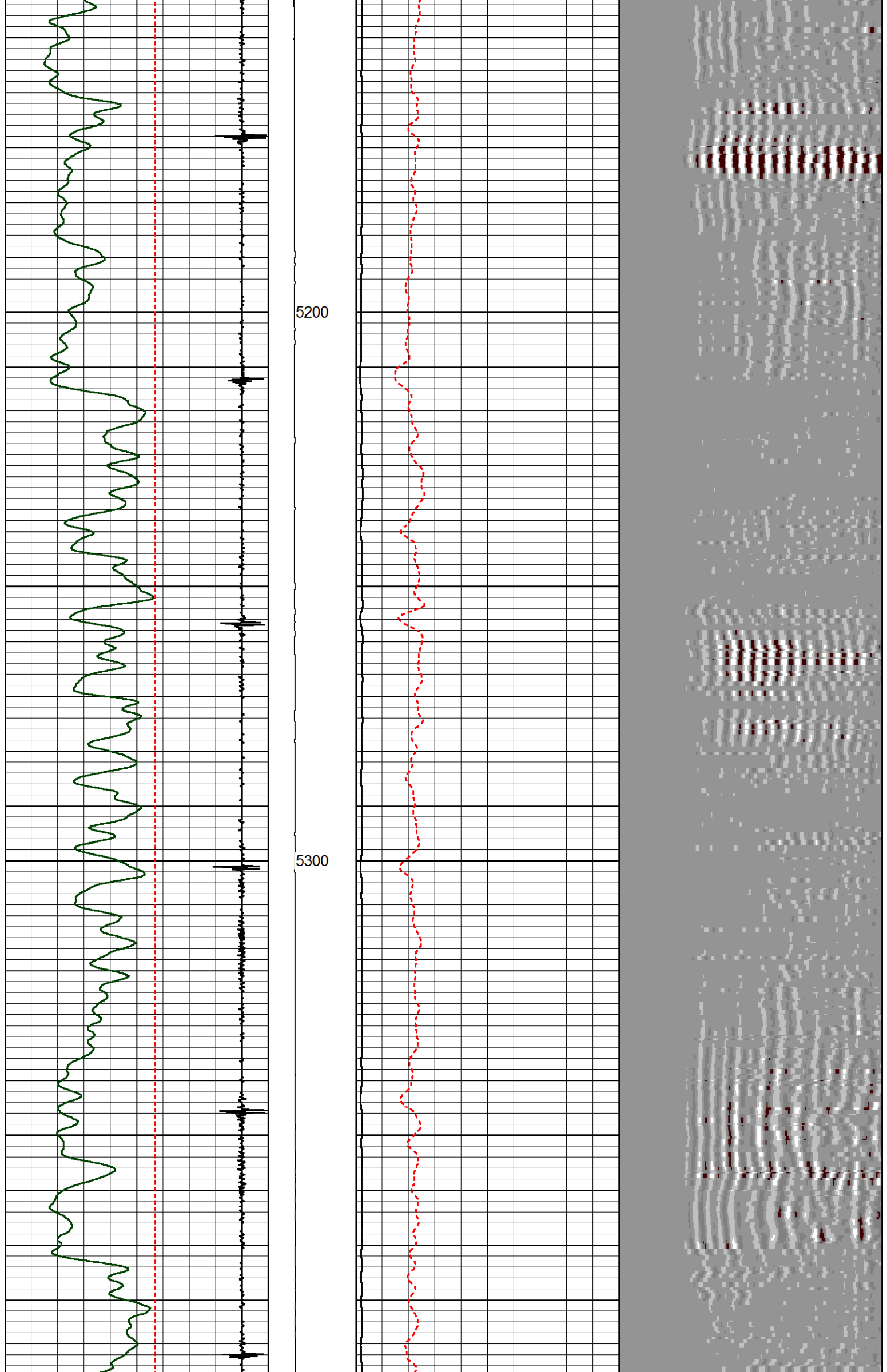


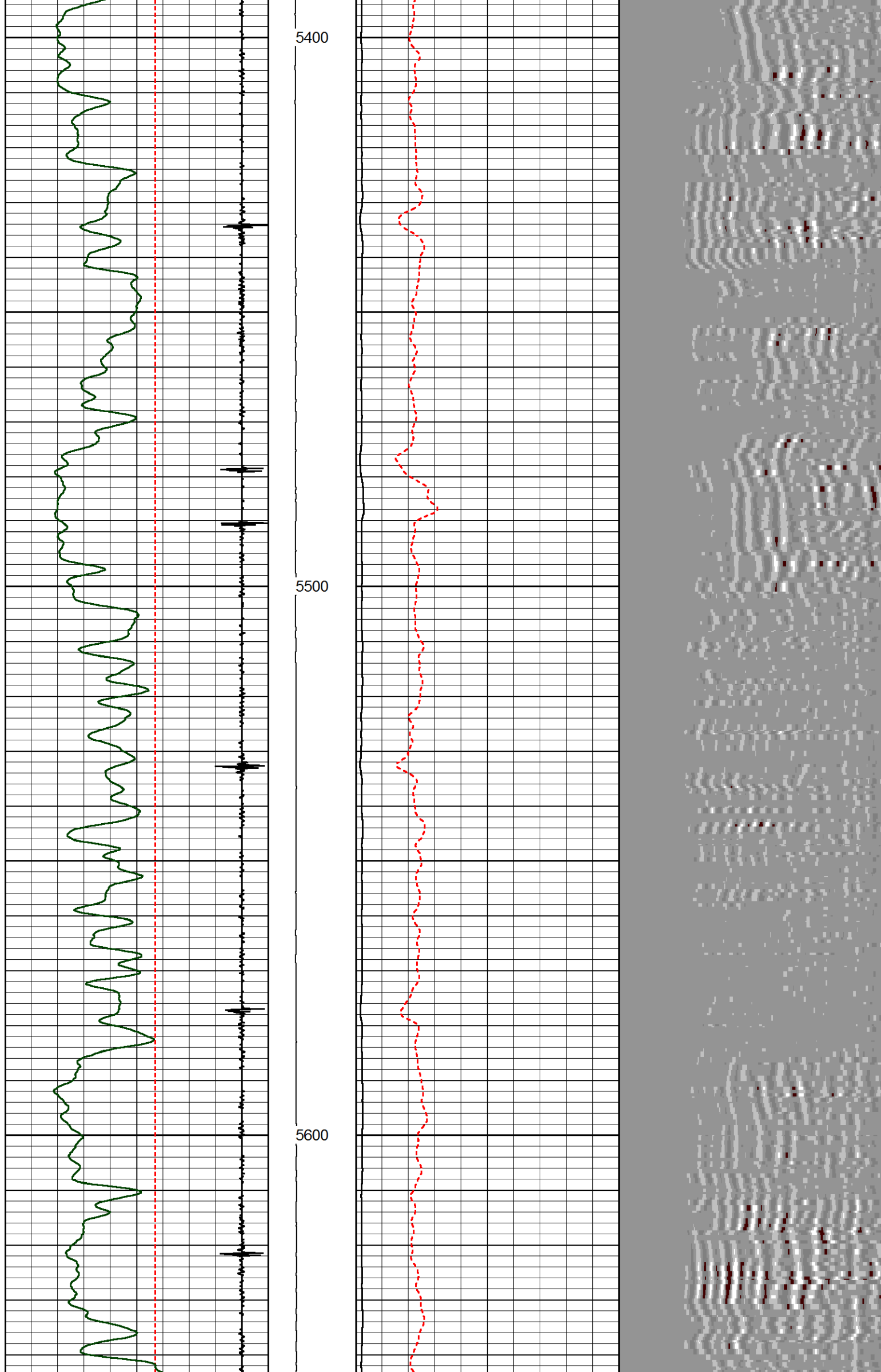
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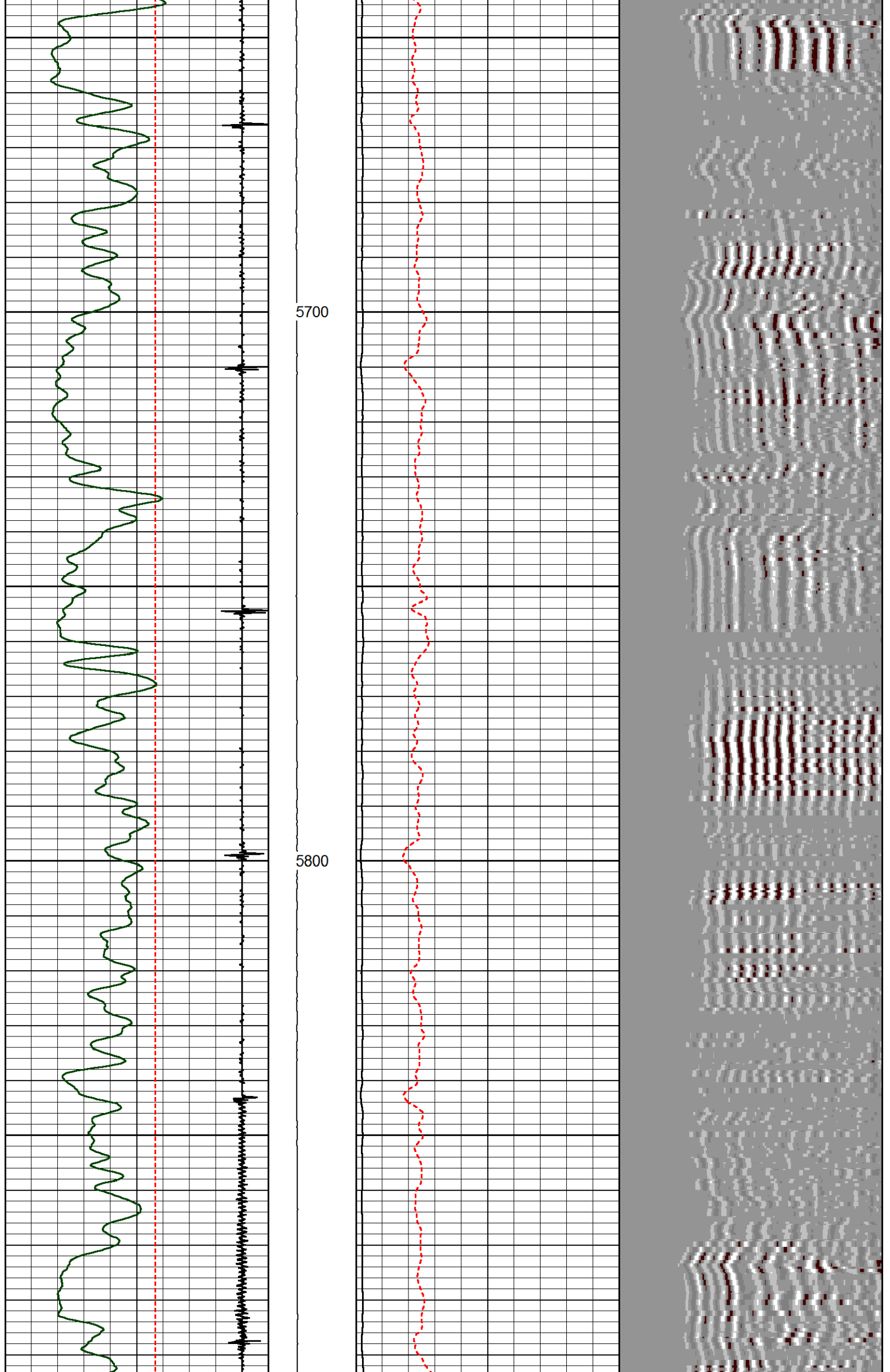
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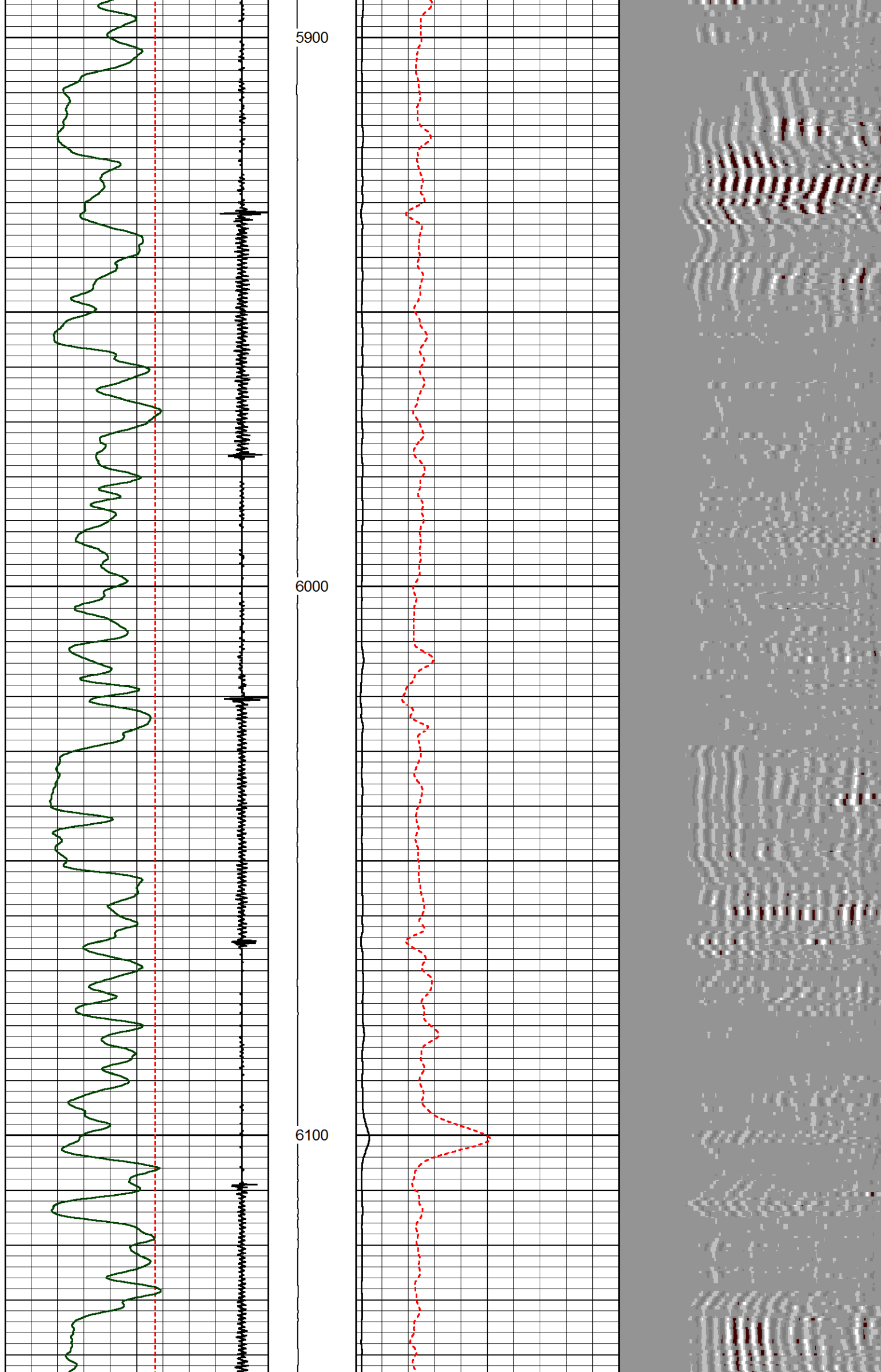


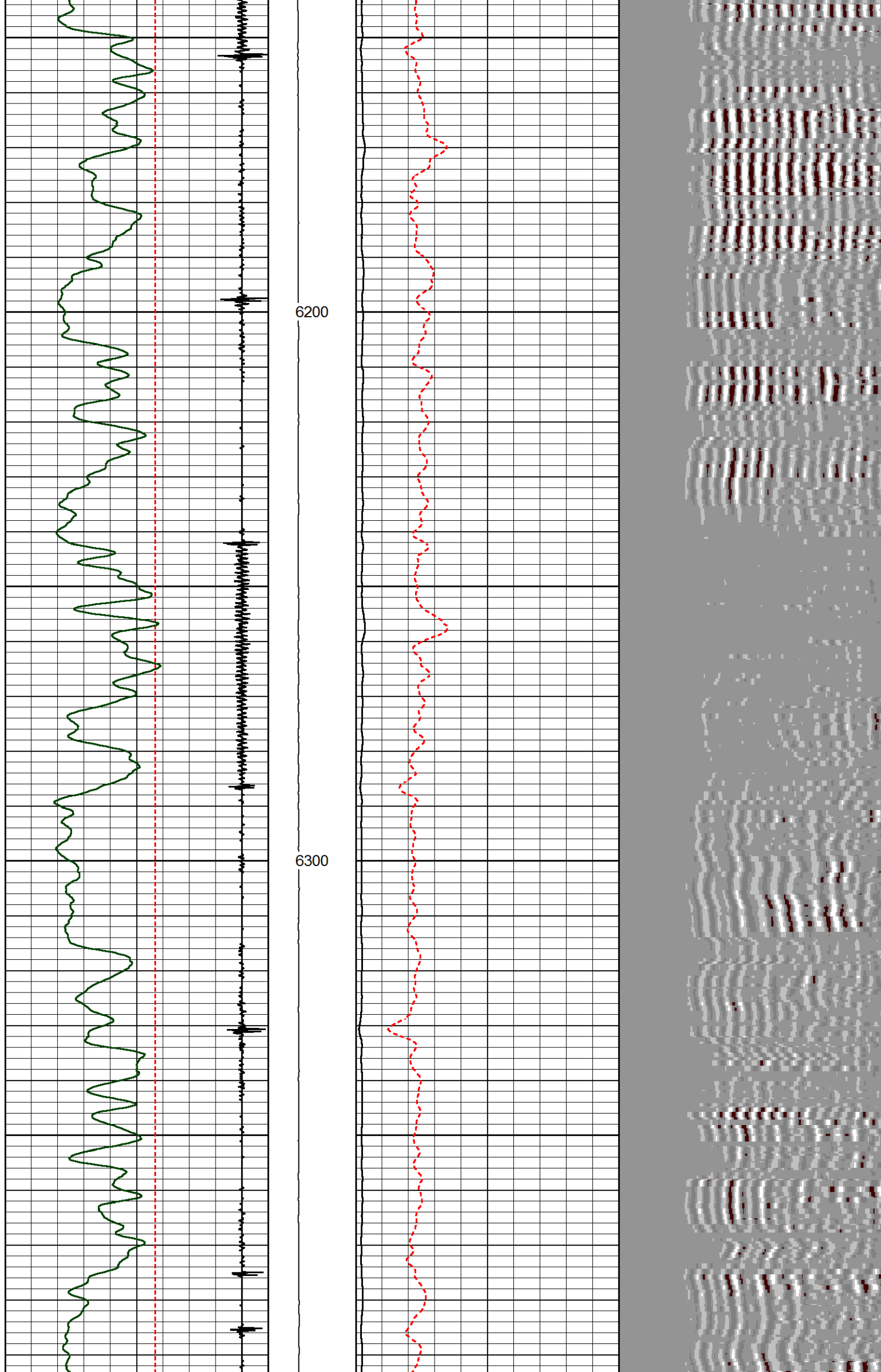


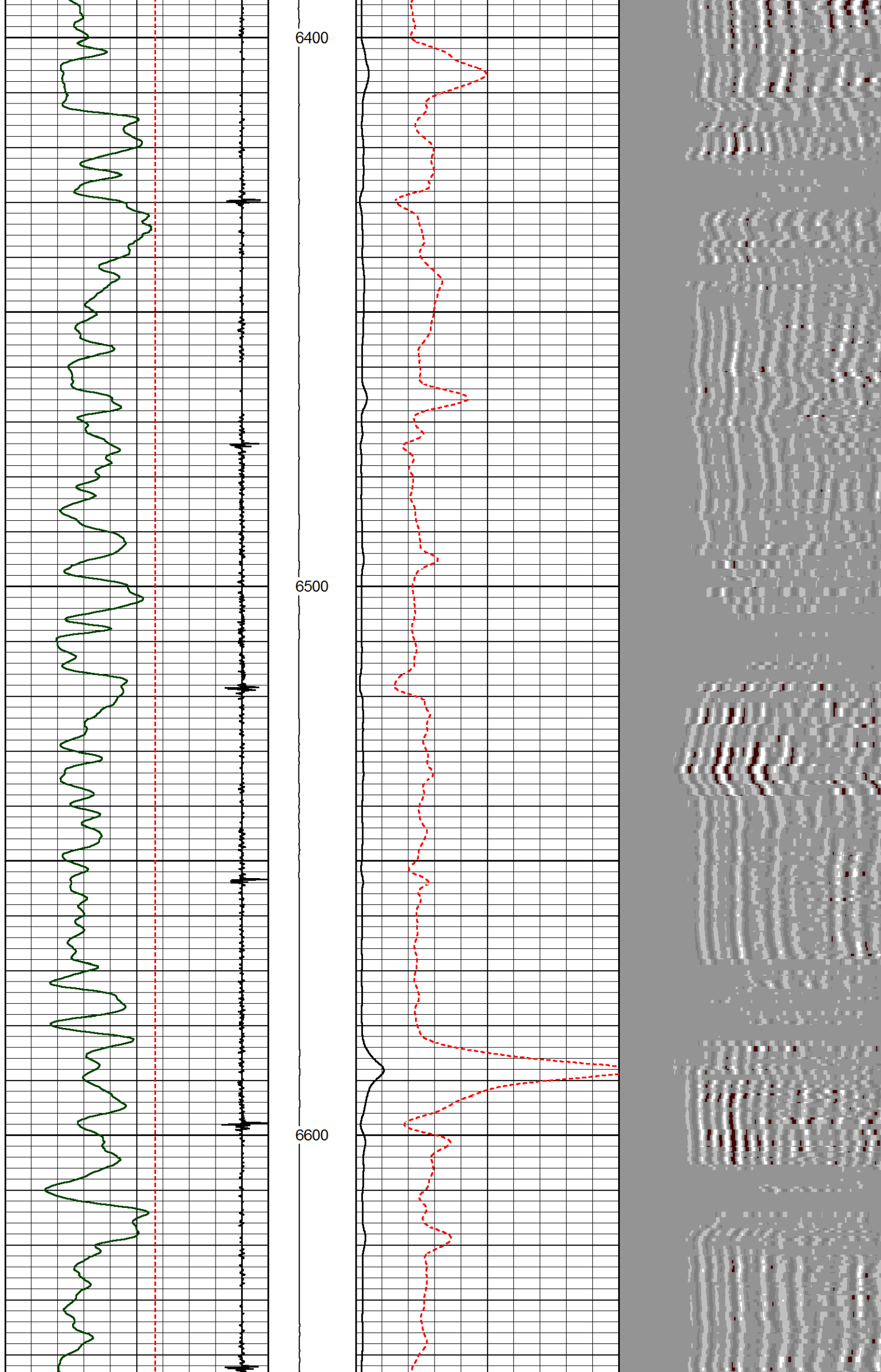


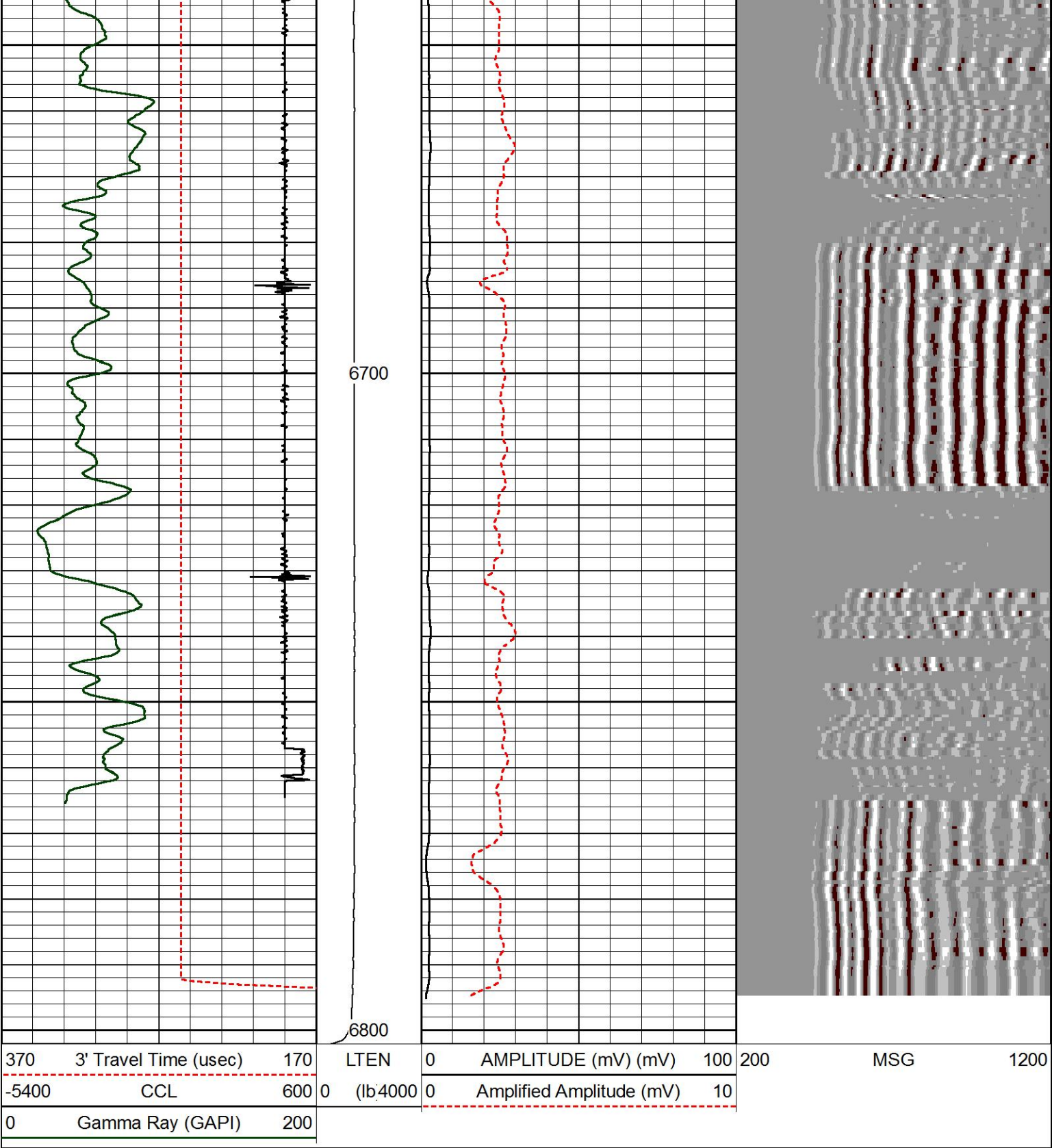












MAIN LOG SECTION

HALLIBURTON

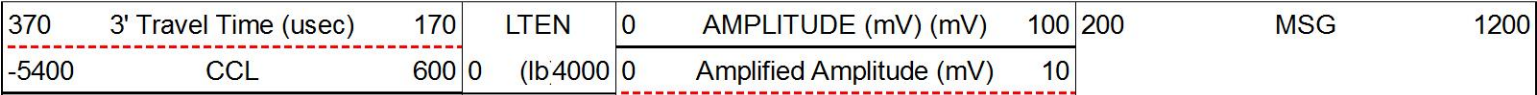
5" = 100'

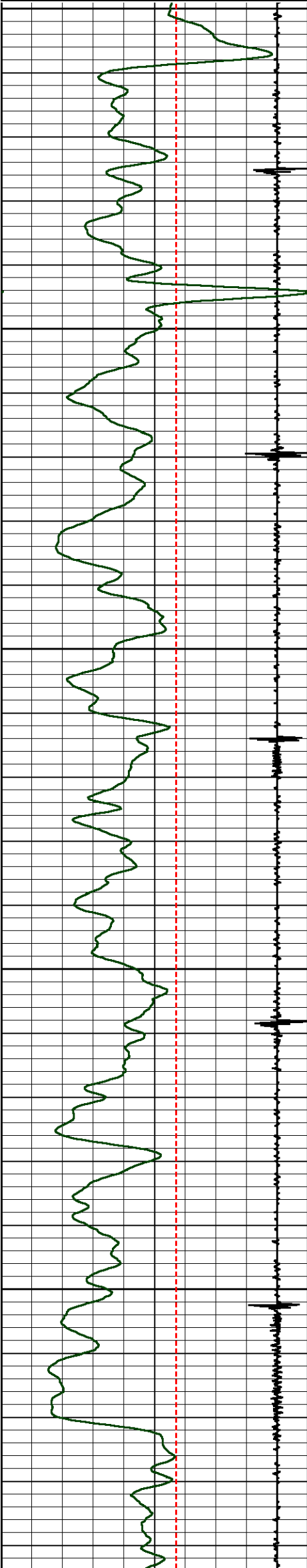
REPEAT LOG SECTION

HALLIBURTON

5" = 100'

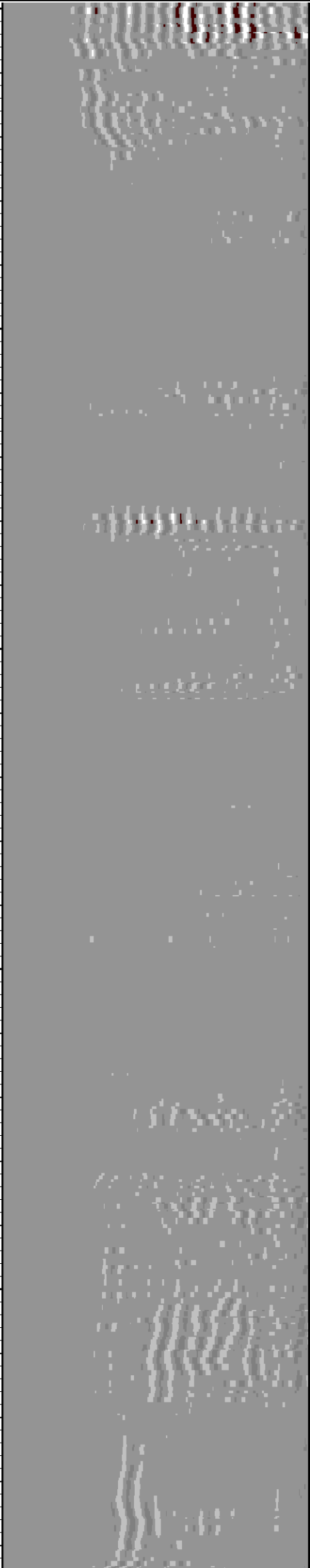
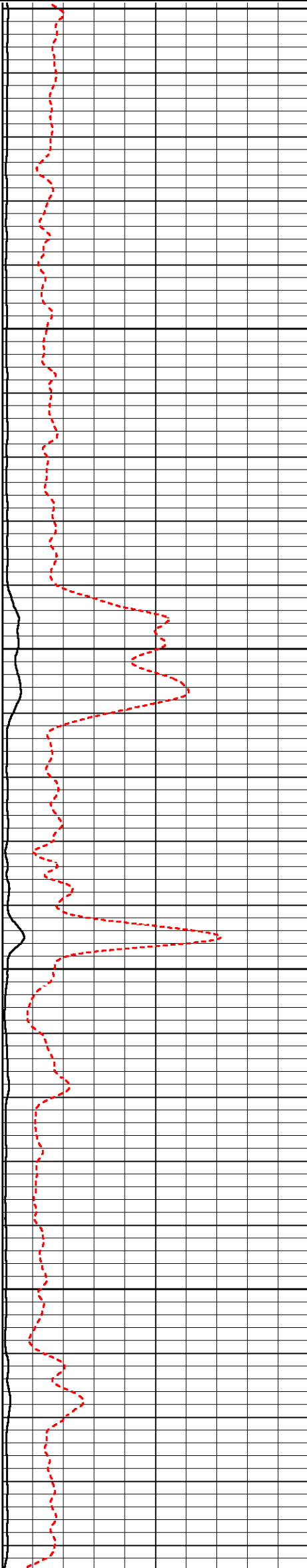
Database File watson_b_33d_combo.db
Dataset Pathname REPEAT
Presentation Format hcbI
Dataset Creation Thu Jun 04 06:30:40 2015
Charted by Depth in Feet scaled 1:240

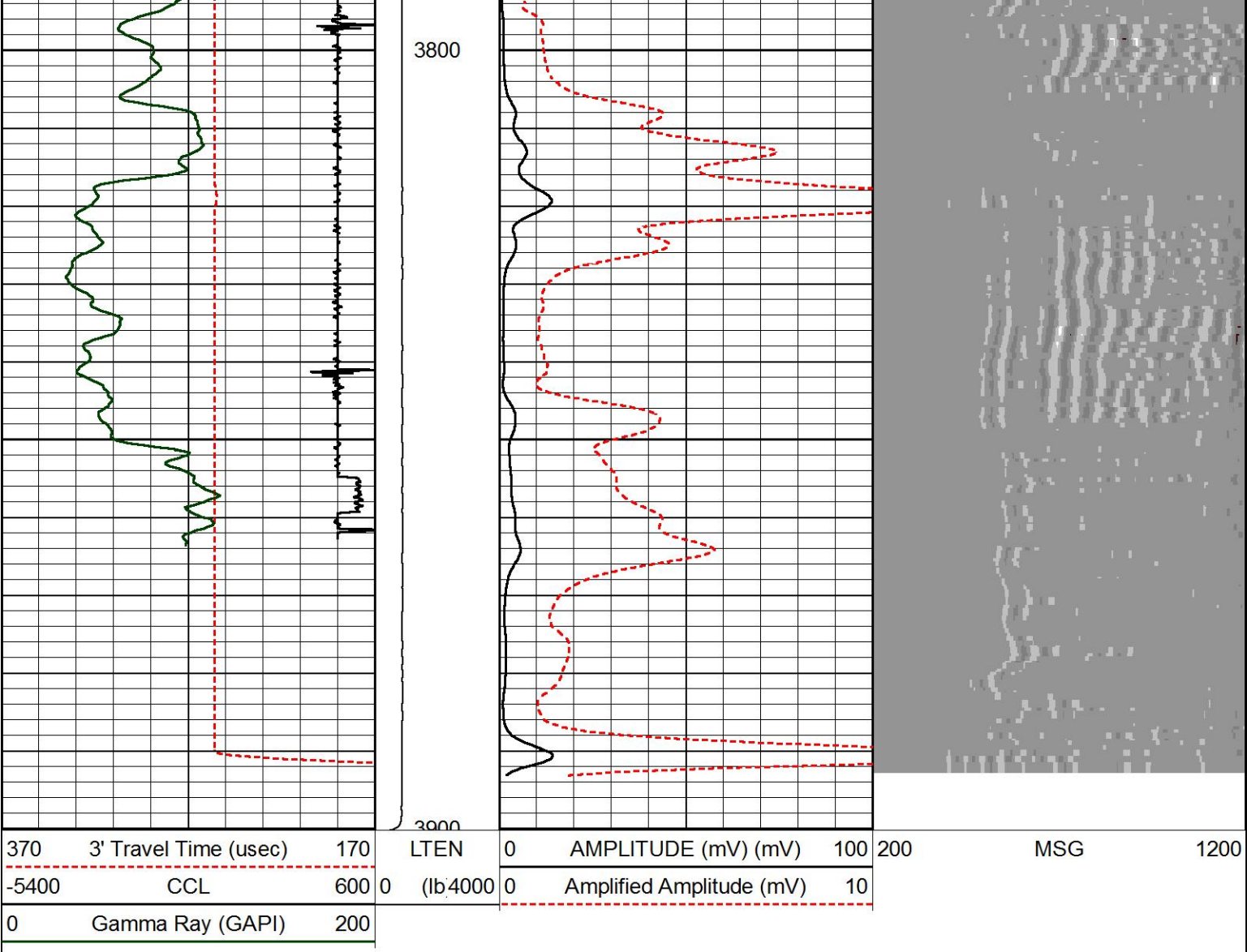




3600

3700





REPEAT LOG SECTION

HALLIBURTON

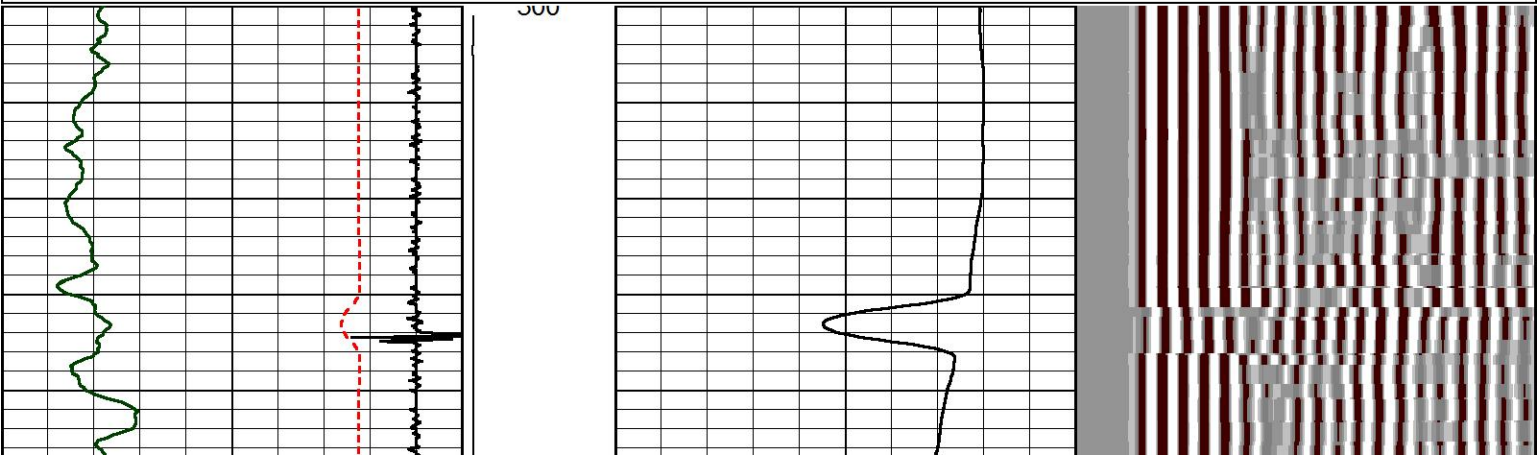
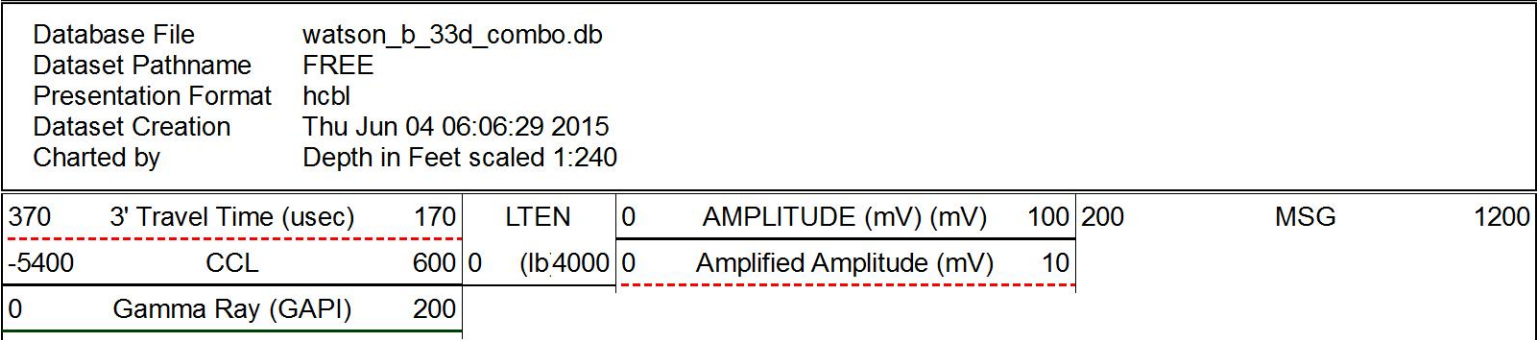
5" = 100'

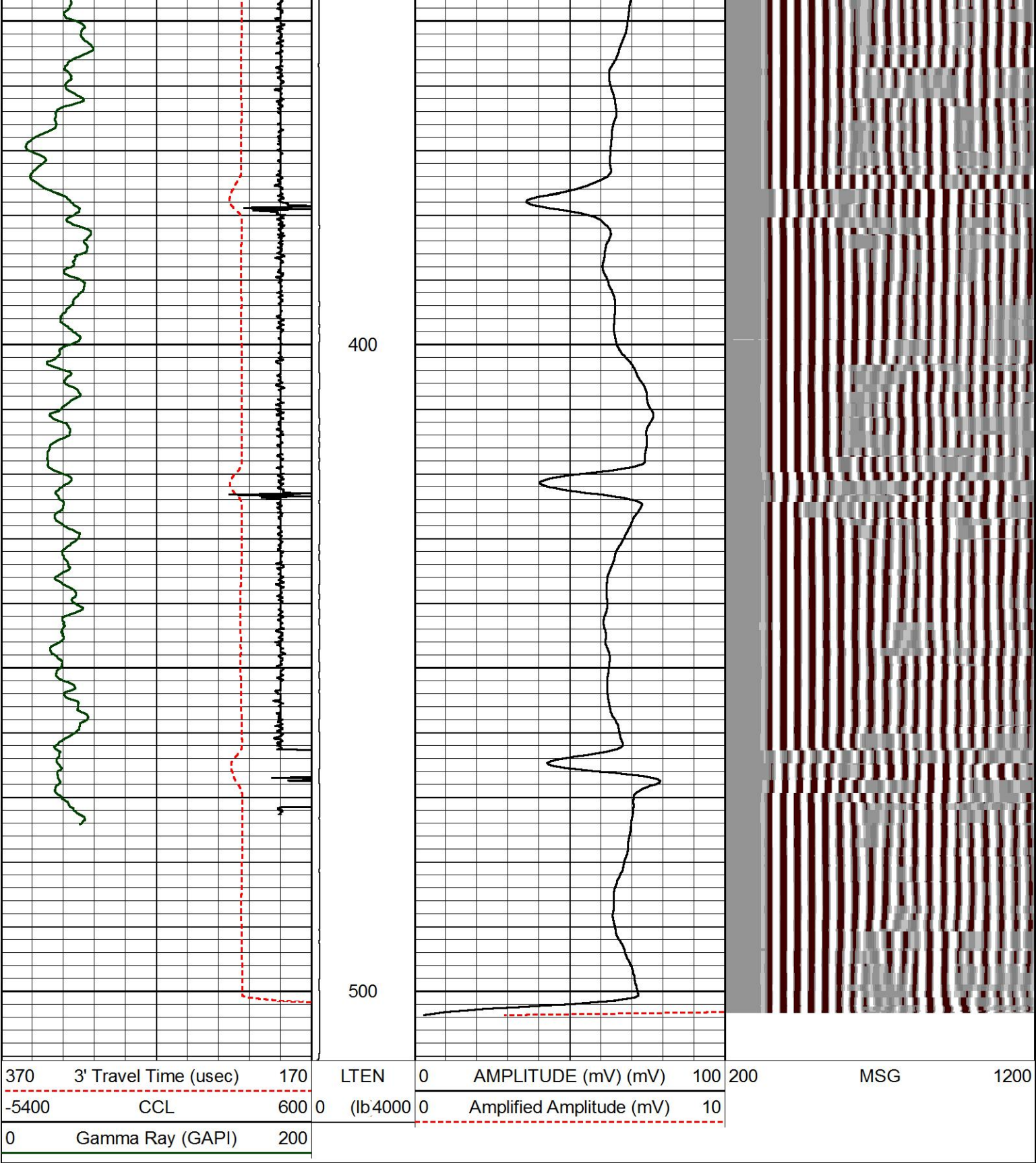


FREE PIPE SECTION

HALLIBURTON

5" = 100'





FREE PIPE SECTION

HALLIBURTON

5" = 100'

Log Variables DatabaseD:\Warrior_data\watson_b_33d_combo.db
Dataset field/well/run1/MAIN/_vars_

Top - Bottom

MSGGN	USERFTT uSec/ft	ZREF MRayl	BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1
1	0	1.7	ITEMPX	0	1	0	1
LTH	UHSGC	RHO�F	SO in	BORSAL kppm	CASED?	PPT uSec	CASEWGHT lb/ft
Sandstone	NONE	0.25	0	150	Yes	0	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 180	BITSIZE in 7.875					

Calibration Report						
Database File	watson_b_33d_combo.db					
Dataset Pathname	MAIN					
Dataset Creation	Thu Jun 04 07:03:41 2015					
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					
H	Channel	Expected Value	Amplitude	FWHM	Tol.
Fe	60	60 +/-2	0.0365	5.60	<6.50
FGAIN = 0.994	209	208 +/-2	0.0910	-----	-----
	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	
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Type / Serial:	002 / 10000028
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SHOP CALIBRATION		Wed Jun 03 00:21:49 2015			
Background	Counts/Sec.	Gain	Offset	Jig	Units
Calibrator	39.9				cps
	330.3				cps
		1.4048			GAPI/cps
PRIMARY VERIFICATION					
Background	55.8				cps
Calibrator	458.8				cps
Difference				403.0	GAPI
BEFORE SURVEY VERIFICATION					


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

							
				CENT-Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	20.00
LLMTEN	0.00			BUL-001 (000001) Bullnose	0.30	1.69	1.50
Dataset: watson_b_33d_combo.db: field/well/run1/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 33D-17-07-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	ACOUSTIC CEMENT BOND LOG				