



Pioneer Energy Services

# Microresistivity Log

API No.	15-101-22473-00-00		
Company	Larson Engineering, Inc.		
Well	Dutoit # 1-32		
Field	Amy West		
County	Lane	State	Kansas
Location	642' FNL & 638' FWL		
Sec: 32	Twp: 18 S	Rge: 30 W	
Permanent Datum	Ground Level	Elevation	2892
Log Measured From	Kelly Bushing	7 Ft. Above Perm. Datum	
Drilling Measured From	Kelly Bushing		
		Other Services	CNL/CDL DIL
		Elevation	K.B. 2899 D.F. 2892 G.L. 2892

Date	01-04-2014
Run Number	Two
Depth Driller	4614
Depth Logger	4614
Bottom Logged Interval	4613
Top Log Interval	3600
Casing Driller	8.625 @ 273
Casing Logger	272
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm Cl	3200
Density / Viscosity	9.0   55
pH / Fluid Loss	7.2   10.5
Source of Sample	Flowline
Rm @ Meas. Temp	1.20 @ 35
Rmf @ Meas. Temp	0.90 @ 35
Rmc @ Meas. Temp	1.62 @ 35
Source of Rmf / Rmc	Charts
Rm @ BHT	0.34 @ 124
Operating Rig Time	4 1/2 Hours
Max Rec. Temp. F	124
Equipment Number	91
Location	Hays
Recorded By	Y. Ruiz
Witnessed By	Vern Schrag

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

### Comments

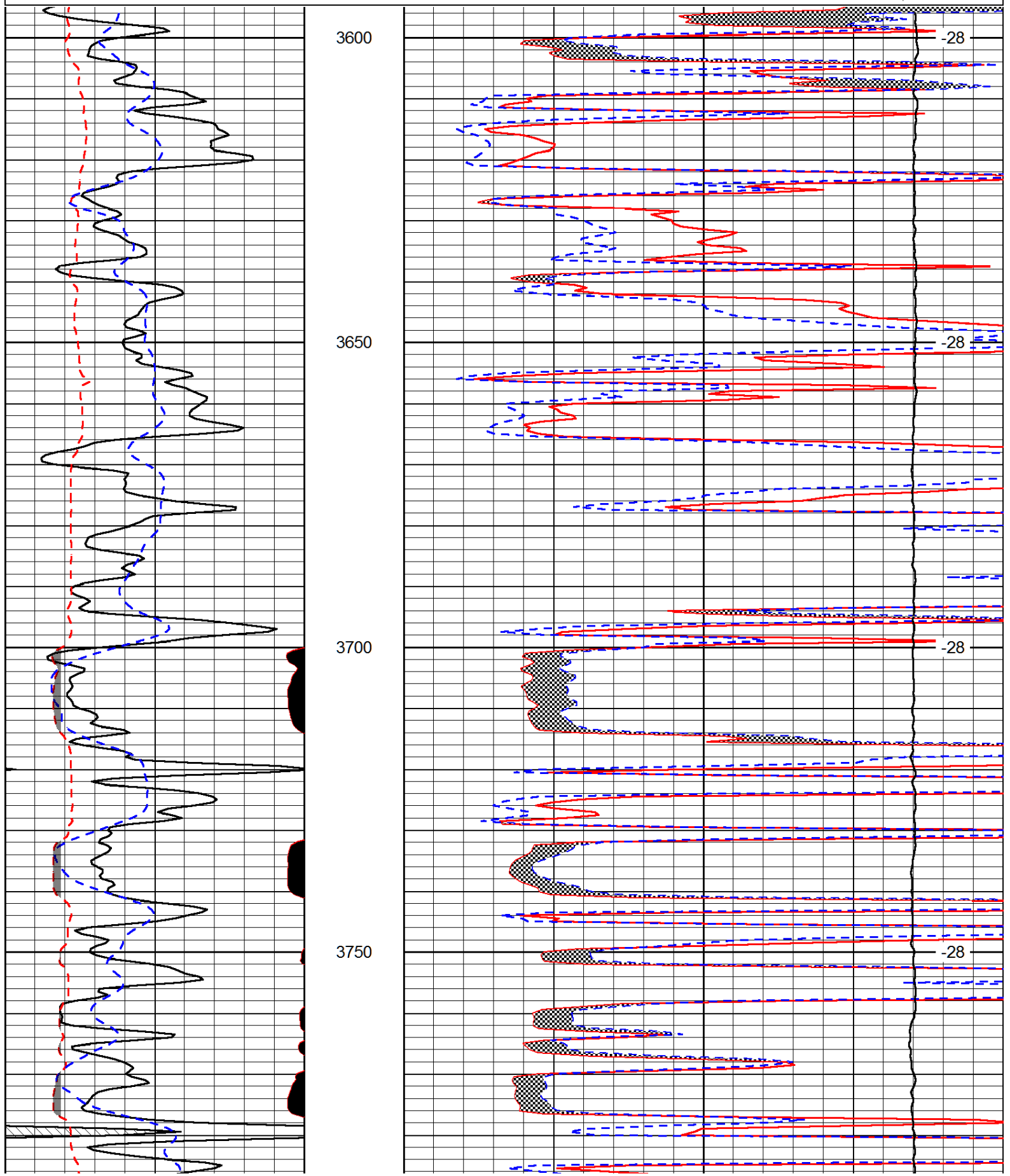
Thank you for using Log-Tech, Inc.  
 (785) 625-3858  
 Dighton,  
 West to Arapahoe RD, 2 1/8 South,  
 East into

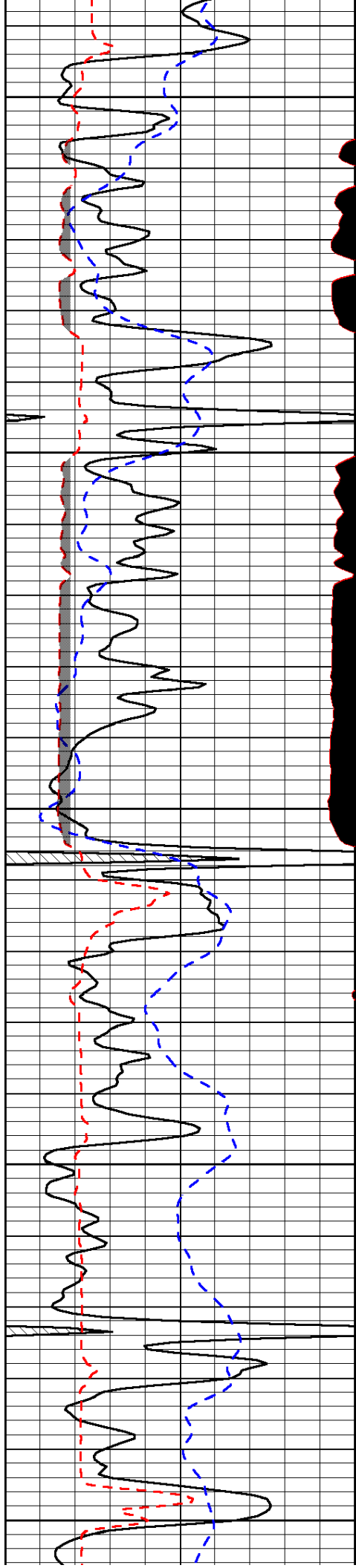
Database File: larson\_010414hd.db  
 Dataset Pathname: DIL/larstk  
 Presentation Format: micro  
 Dataset Creation: Sat Jan 04 18:27:44 2014  
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	Mud Cake (in)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

LSPD  
(ft/min)





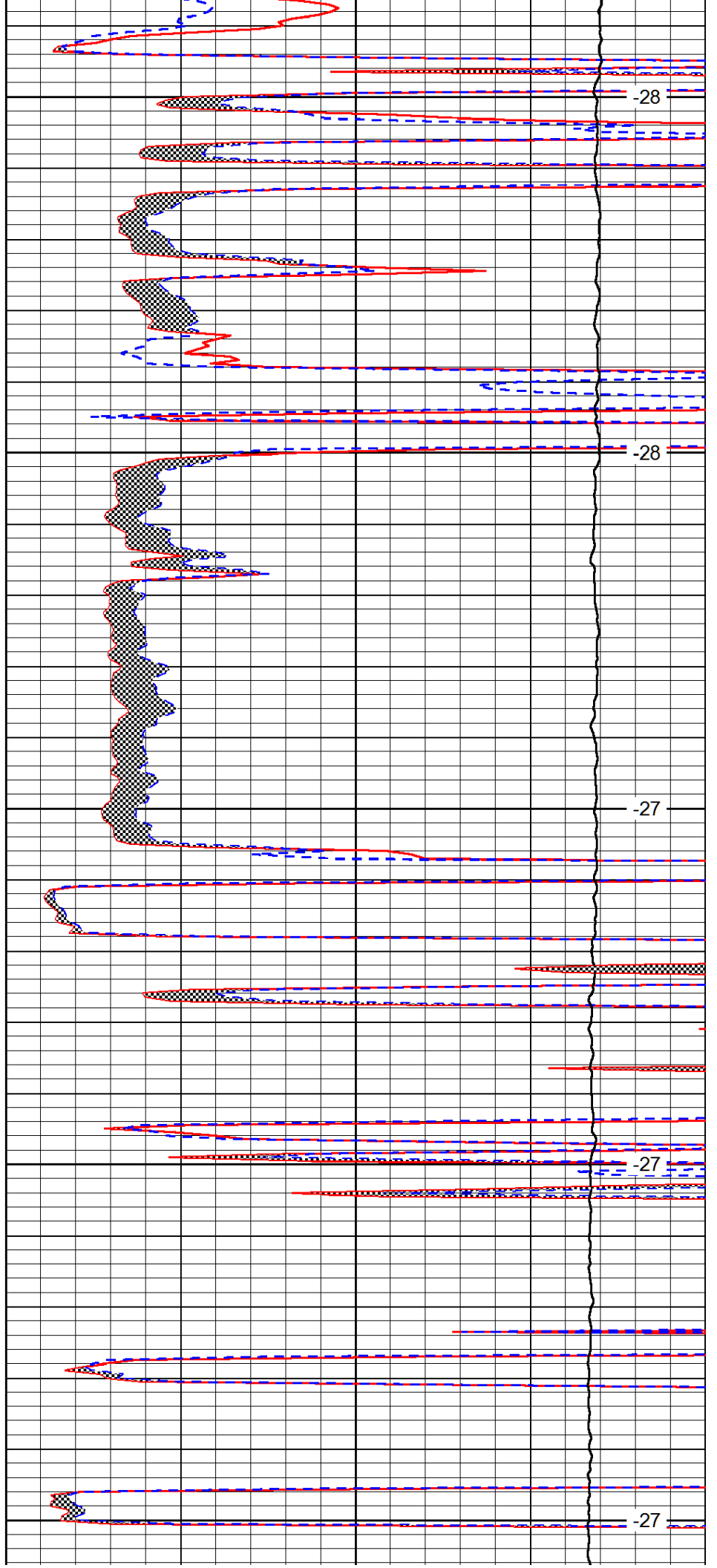
3800

3850

3900

3950

4000



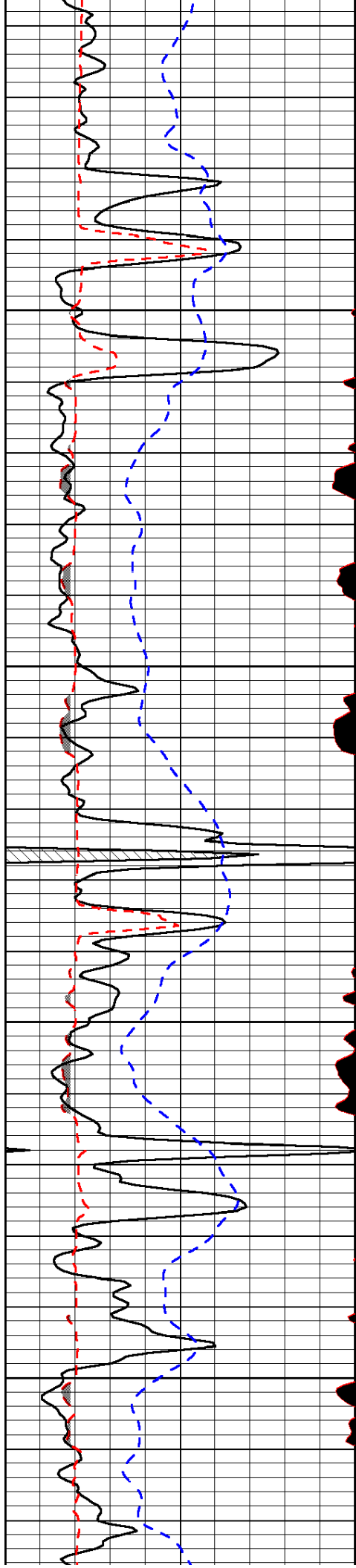
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-28

-27

-27

-27

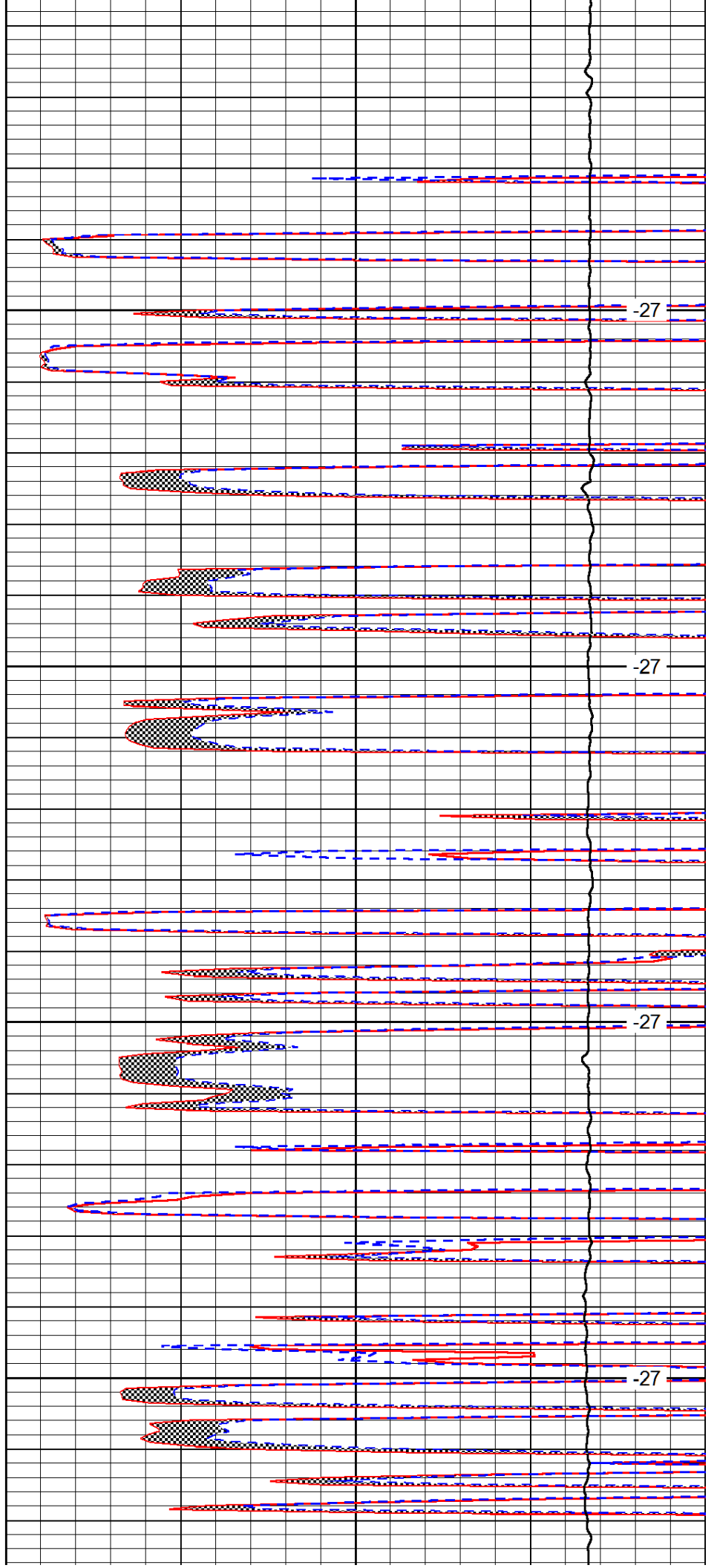


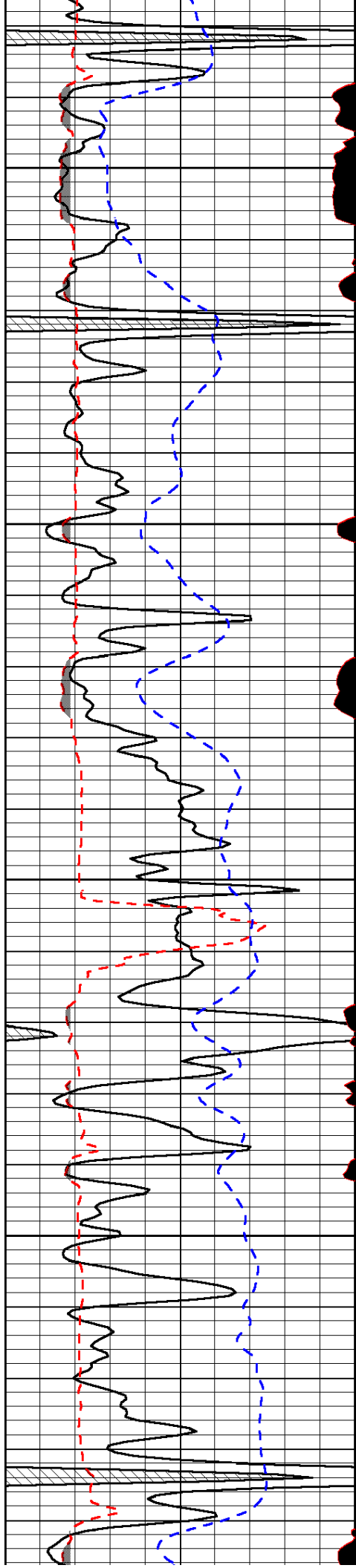
4050

4100

4150

4200



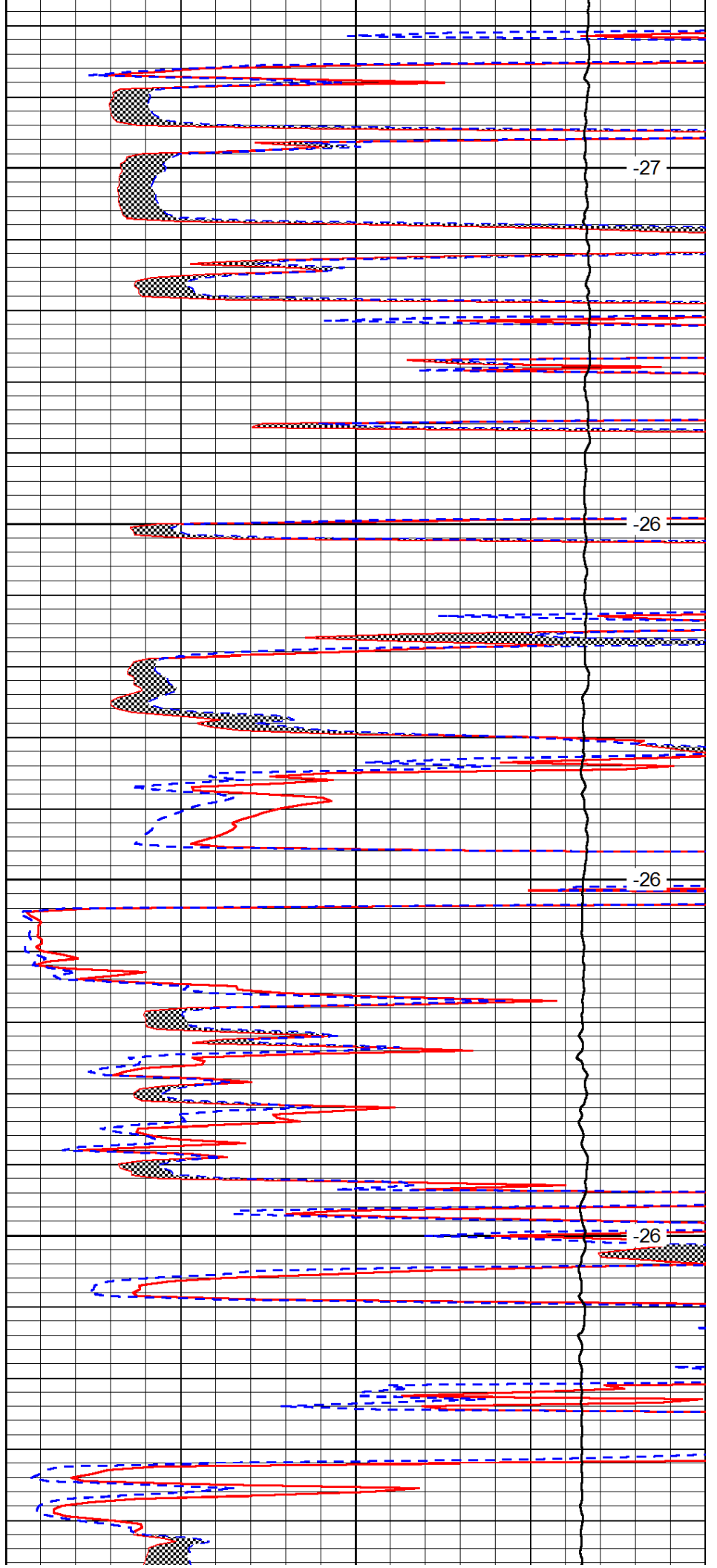


4250

4300

4350

4400

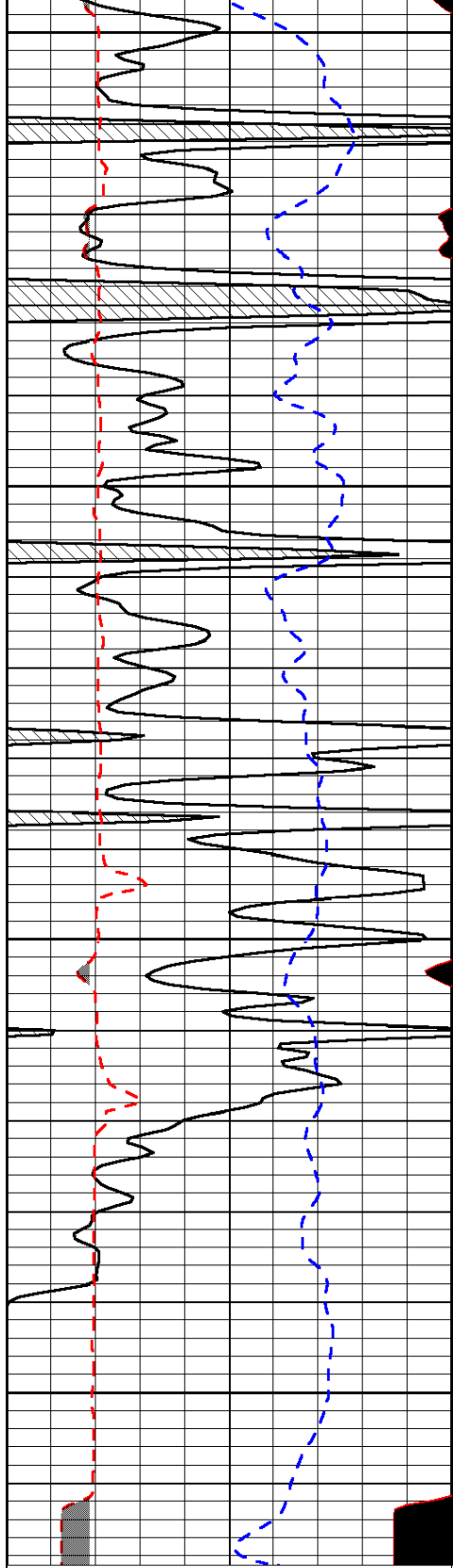


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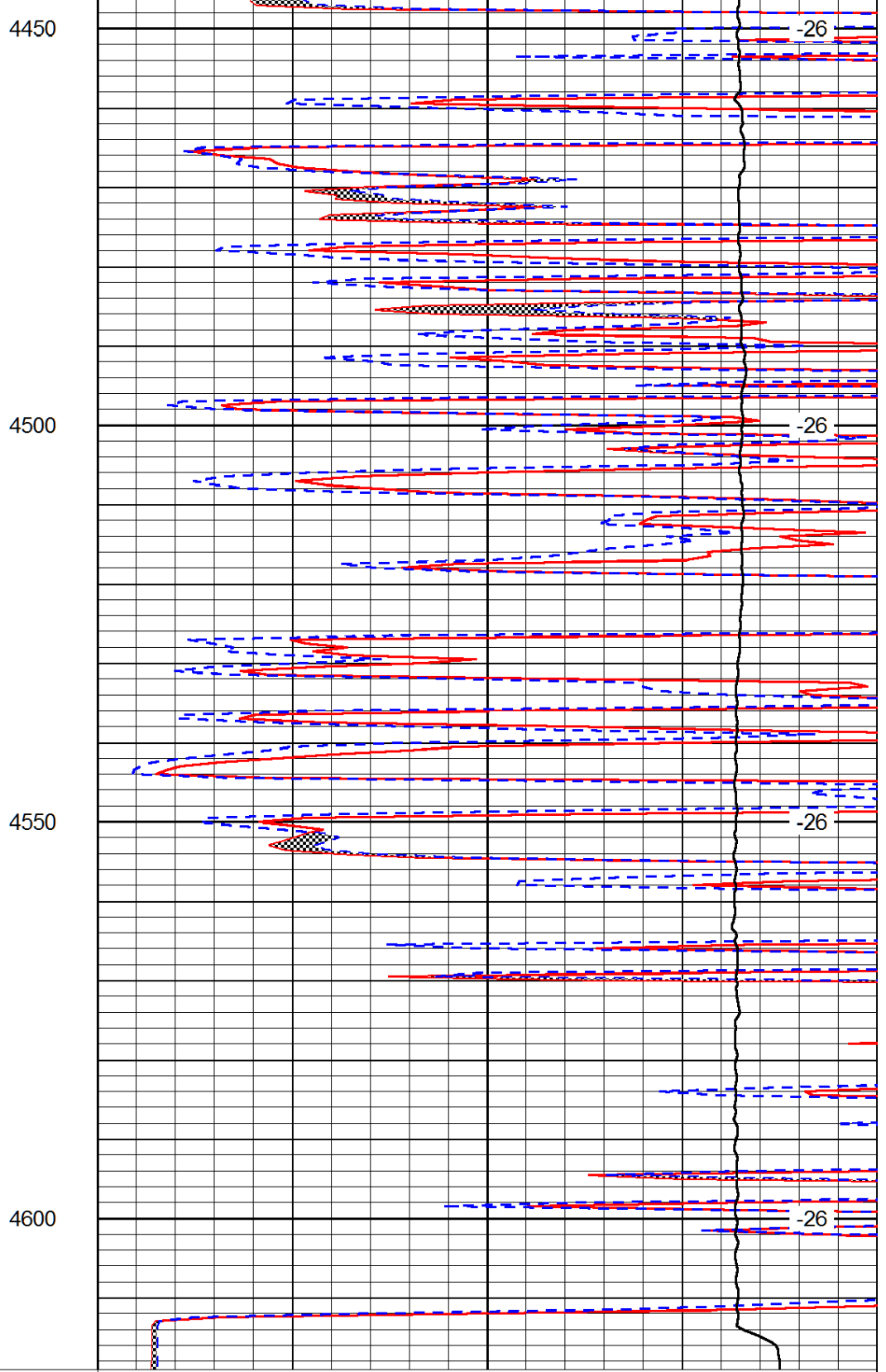
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