



Pioneer Energy Services

# Microresistivity Log

API No.	15-141-20,468-00-00		
Company	Bruce Oil Company LLC		
Well	Bowen No. 2		
Field	Kill Creek Northwest		
County	Osborne	State	Kansas
Location	500' FSL & 2310' FWL		
Sec: 15	Twp: 8s	Rge: 14w	Elevation 1883
Permanent Datum	Ground Level	Kelly Bushing	5 Ft. Above Perm. Datum
Log Measured From	Kelly Bushing		
Drilling Measured From	Kelly Bushing		
Date	8/26/2014		
Run Number	Two		
Depth Driller	2910		
Depth Logger	2913		
Bottom Logged Interval	2912		
Top Log Interval	1600		
Casing Driller	8.625 @ 806		
Casing Logger	806		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	1200		
Density / Viscosity	8.9	41	
pH / Fluid Loss	11.5	6.8	
Source of Sample	Flowline		
Rm @ Meas. Temp	1.45 @ 78		
Rmf @ Meas. Temp	1.09 @ 78		
Rmc @ Meas. Temp	1.96 @ 78		
Source of Rmf / Rmc	Charts		
Rm @ BHT	1.08 @ 105		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	105		
Equipment Number	108		
Location	Hays		
Recorded By	J. Long		
Witnessed By	Bob Peterson		

Other Services	
CNL/CDL	
DIL	
Elevation	1888
K.B.	1883
D.F.	
G.L.	1883

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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

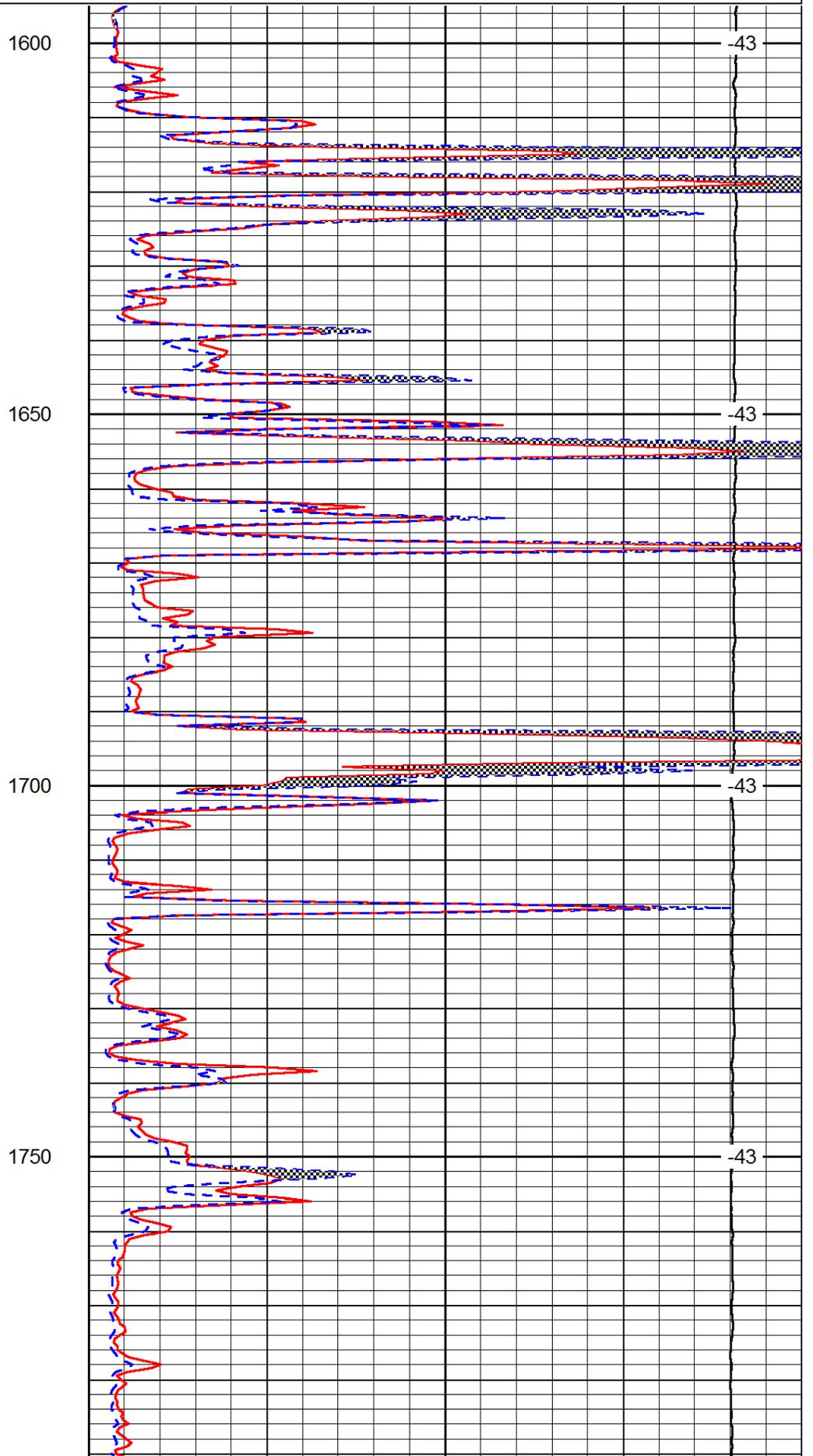
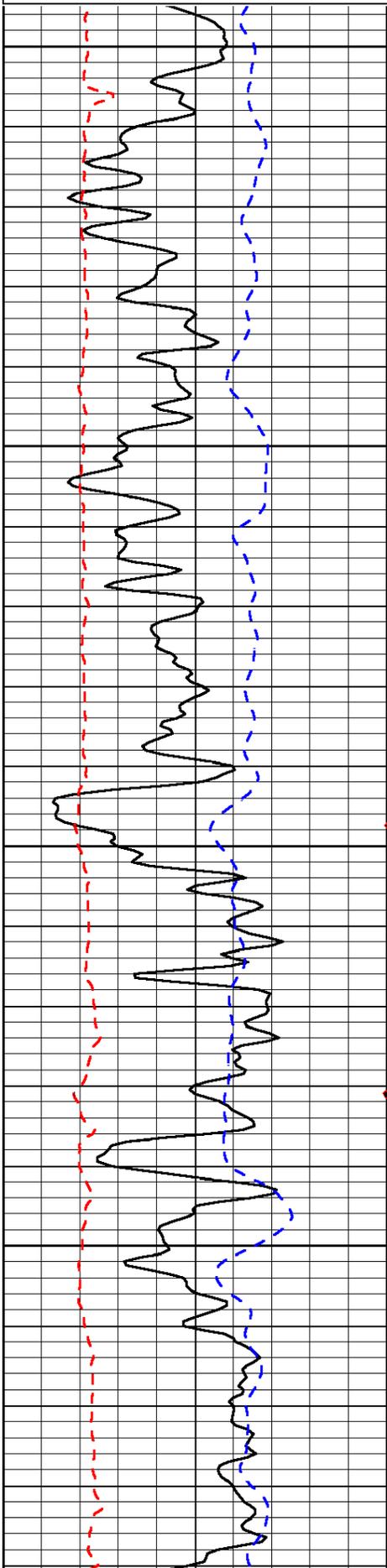
Natoma KS., North on 290th to Stop Sign, East to 250th, North to "T", East to 200th, North to Dead End, West Into Through Green Gate.

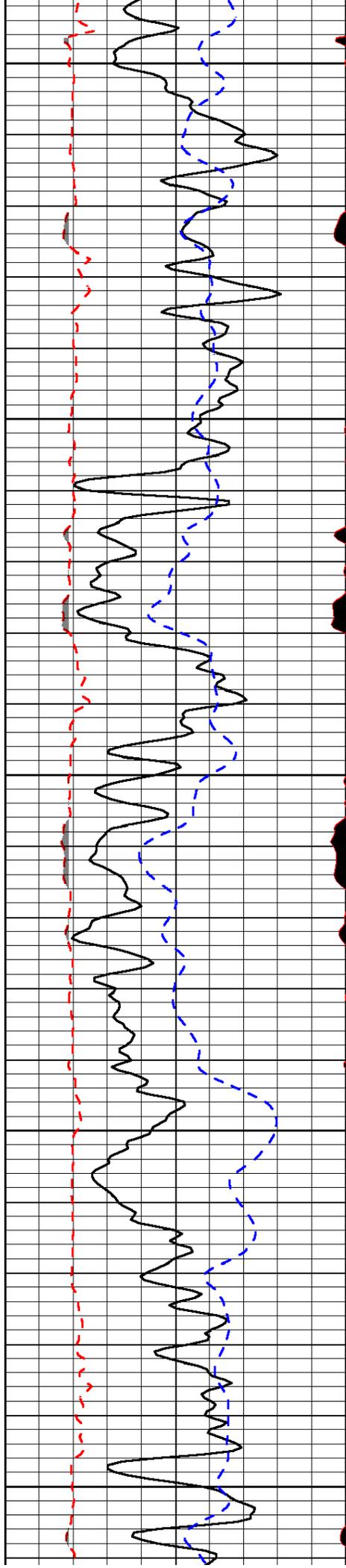
Database File: bruce\_oil\_bowen\_2hd.db  
 Dataset Pathname: DIL/brucstck  
 Presentation Format: micro  
 Dataset Creation: Tue Aug 26 09:30:47 2014  
 Charted by: Depth in Feet scaled 1:240

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

0	Micro Inverse 1 X 1	40
0	Micro Normal 2"	40
10000	Line Weight	0

LSPD





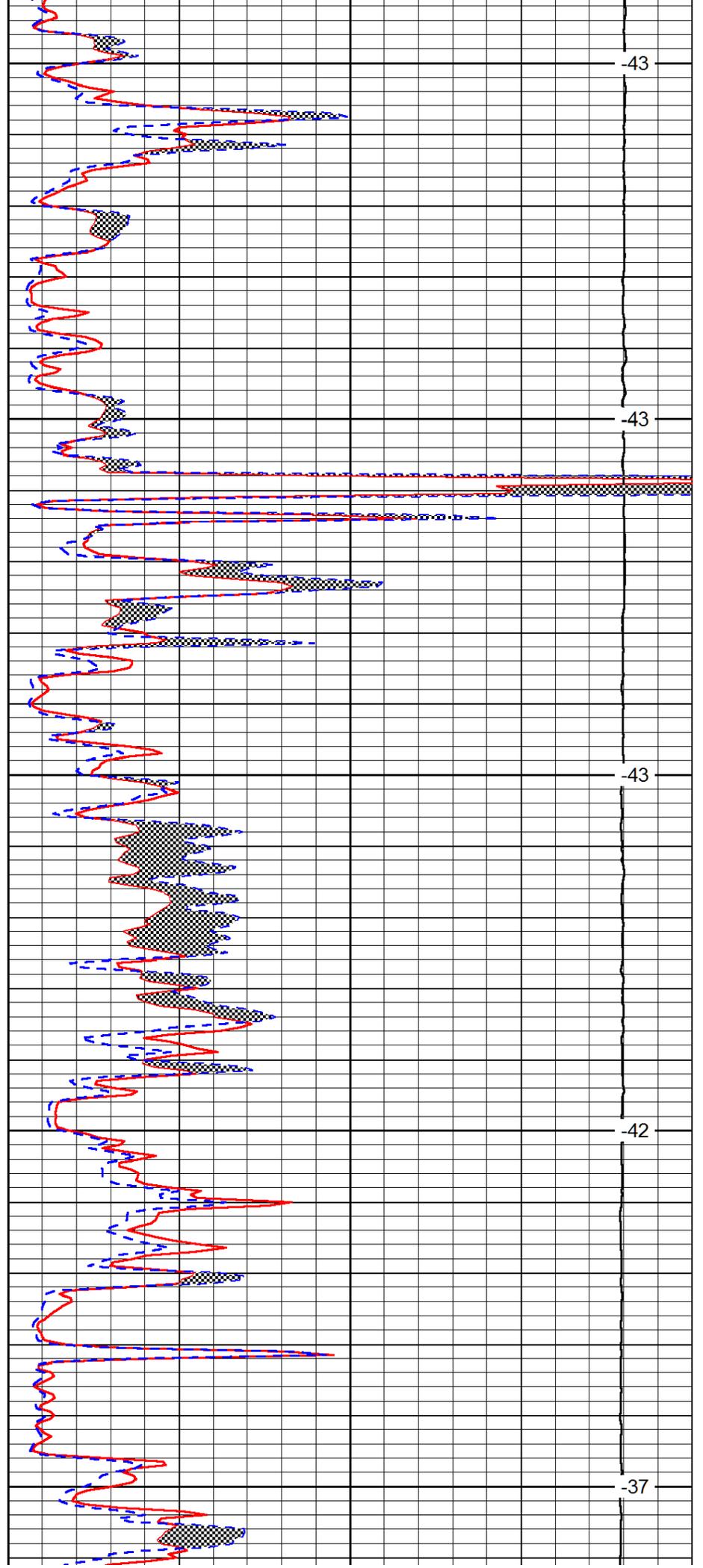
1800

1850

1900

1950

2000



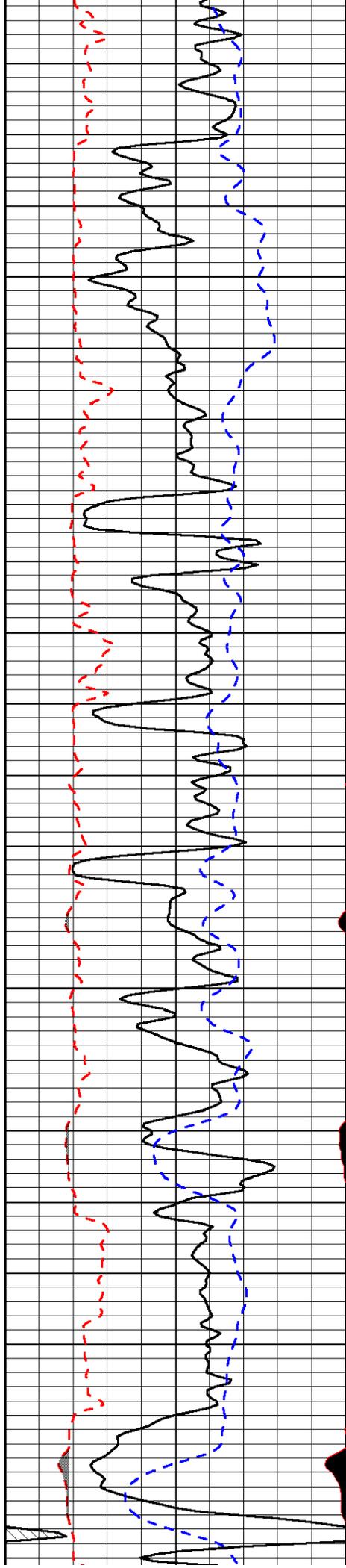
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-43

-43

-42

-37



2050

2100

2150

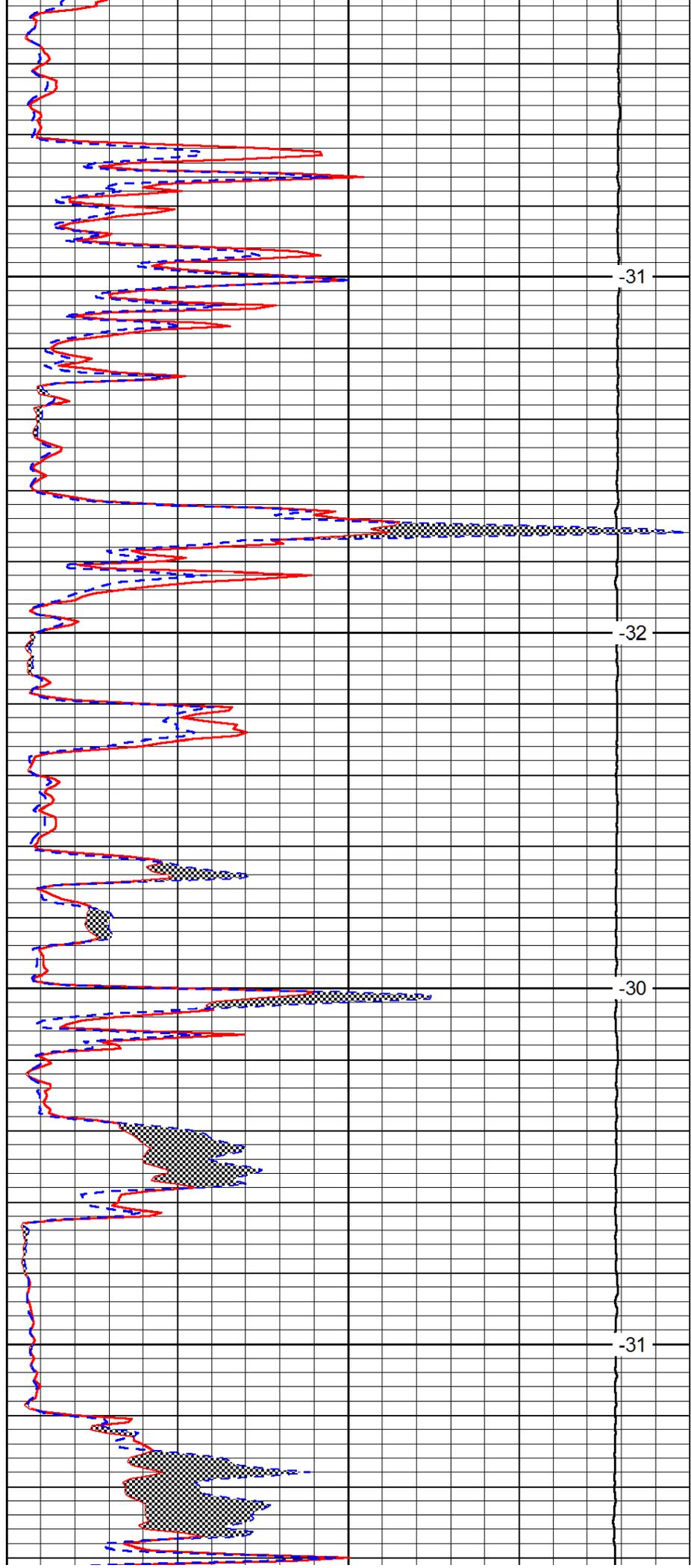
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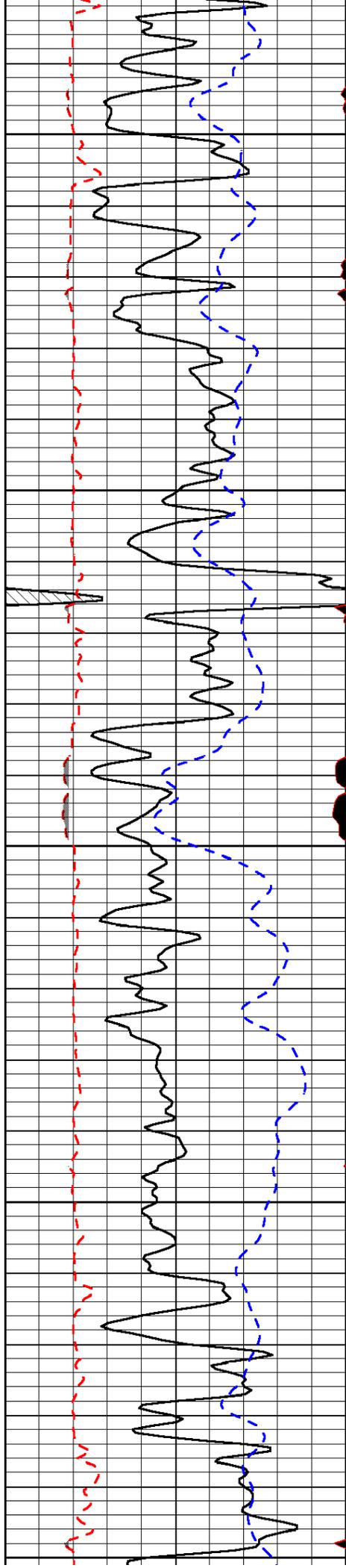
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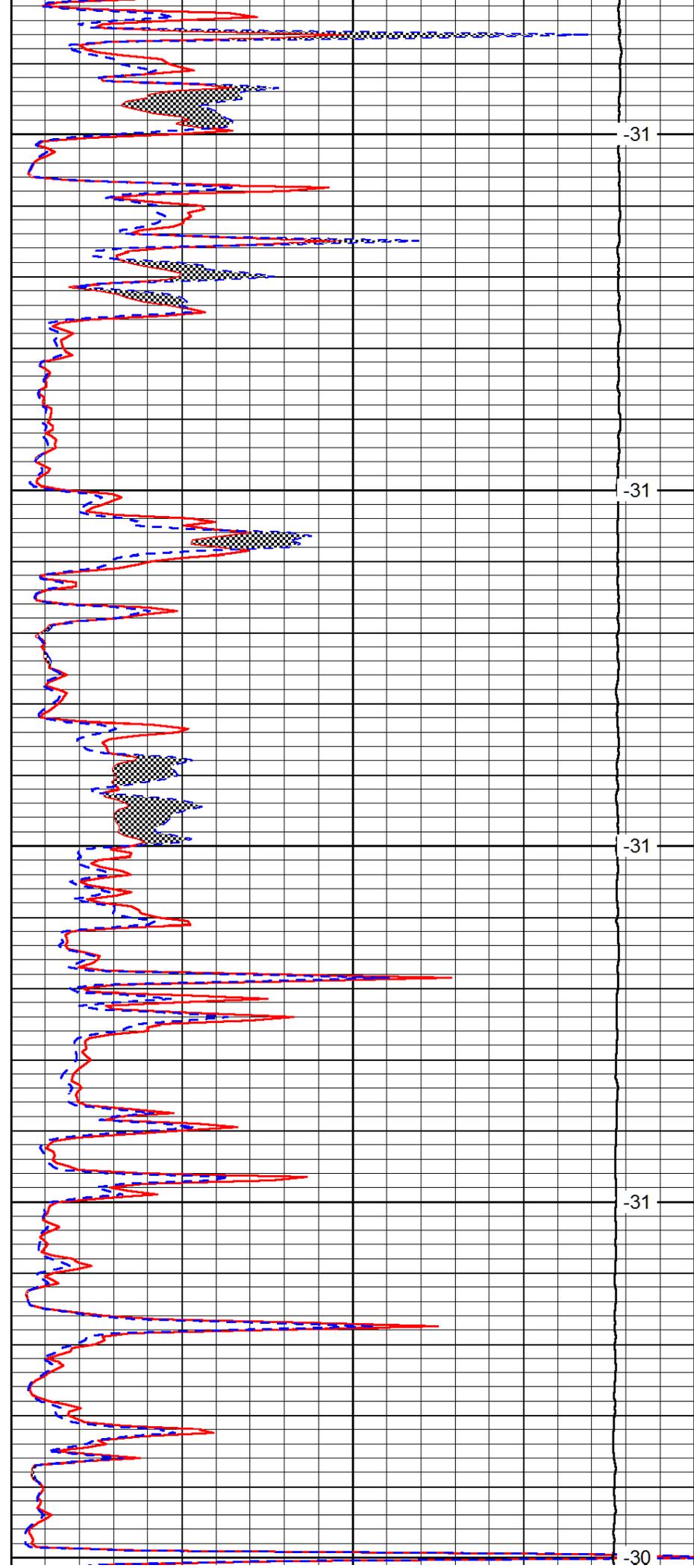
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2300

2350

2400

2450



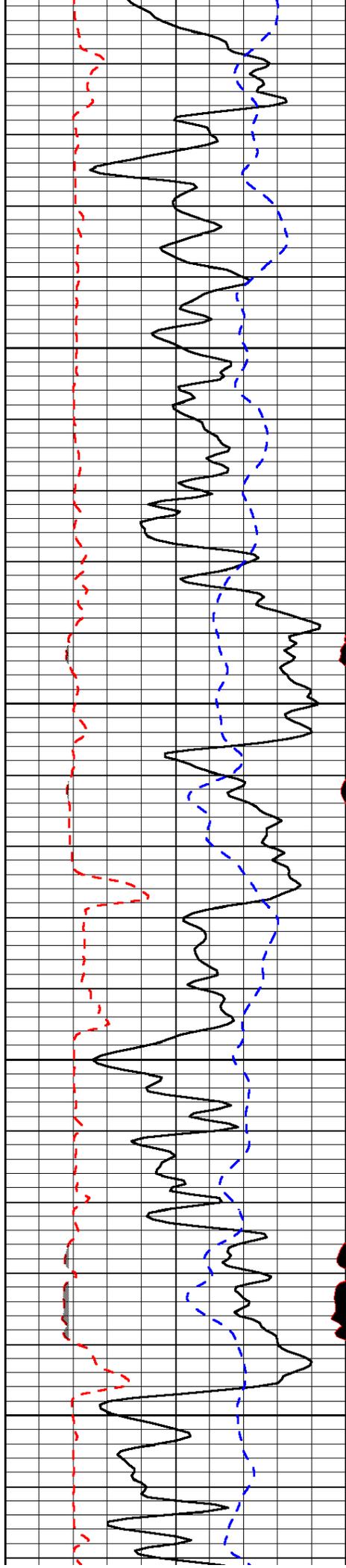
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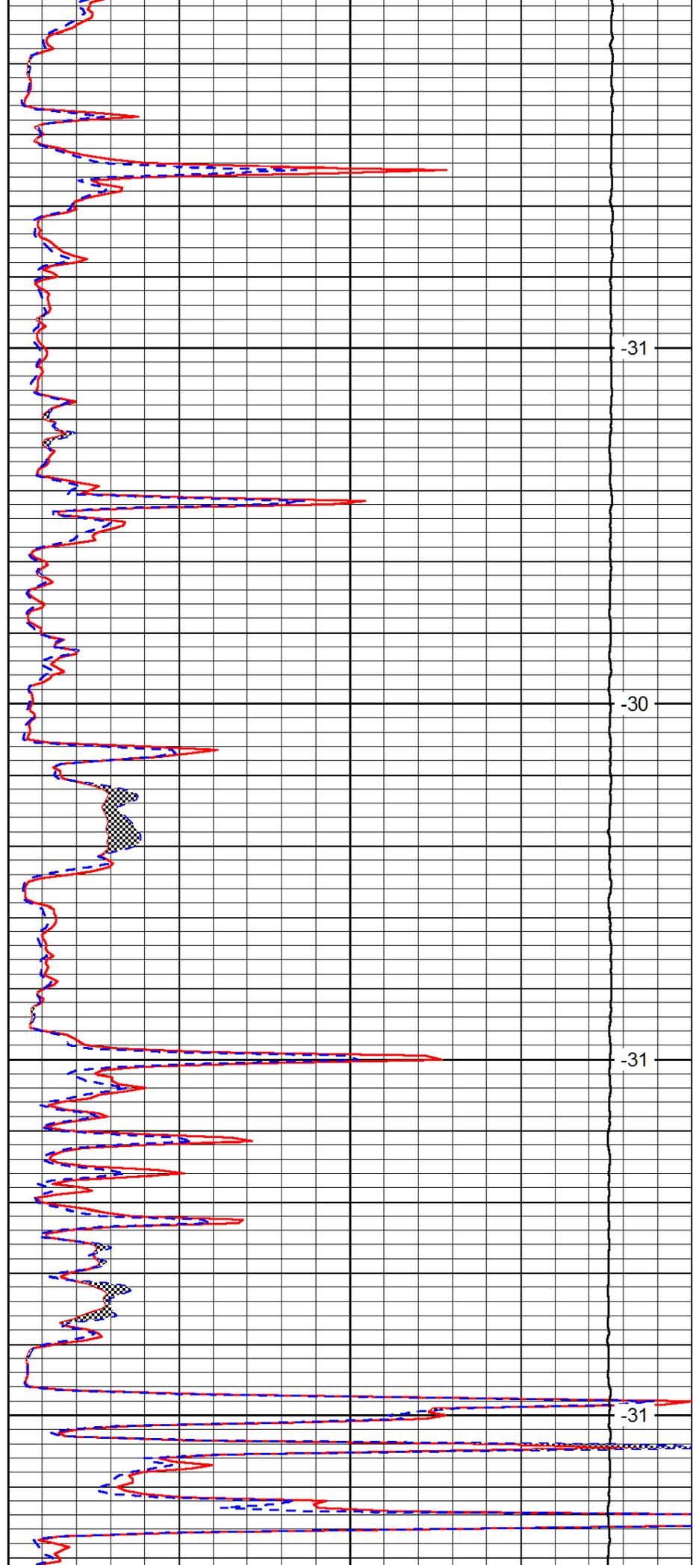


2500

2550

2600

2650

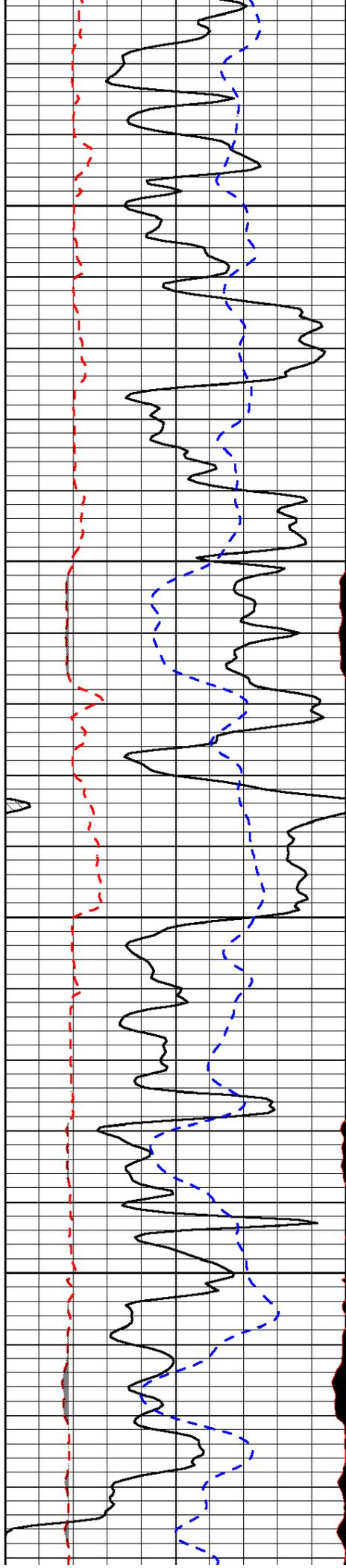


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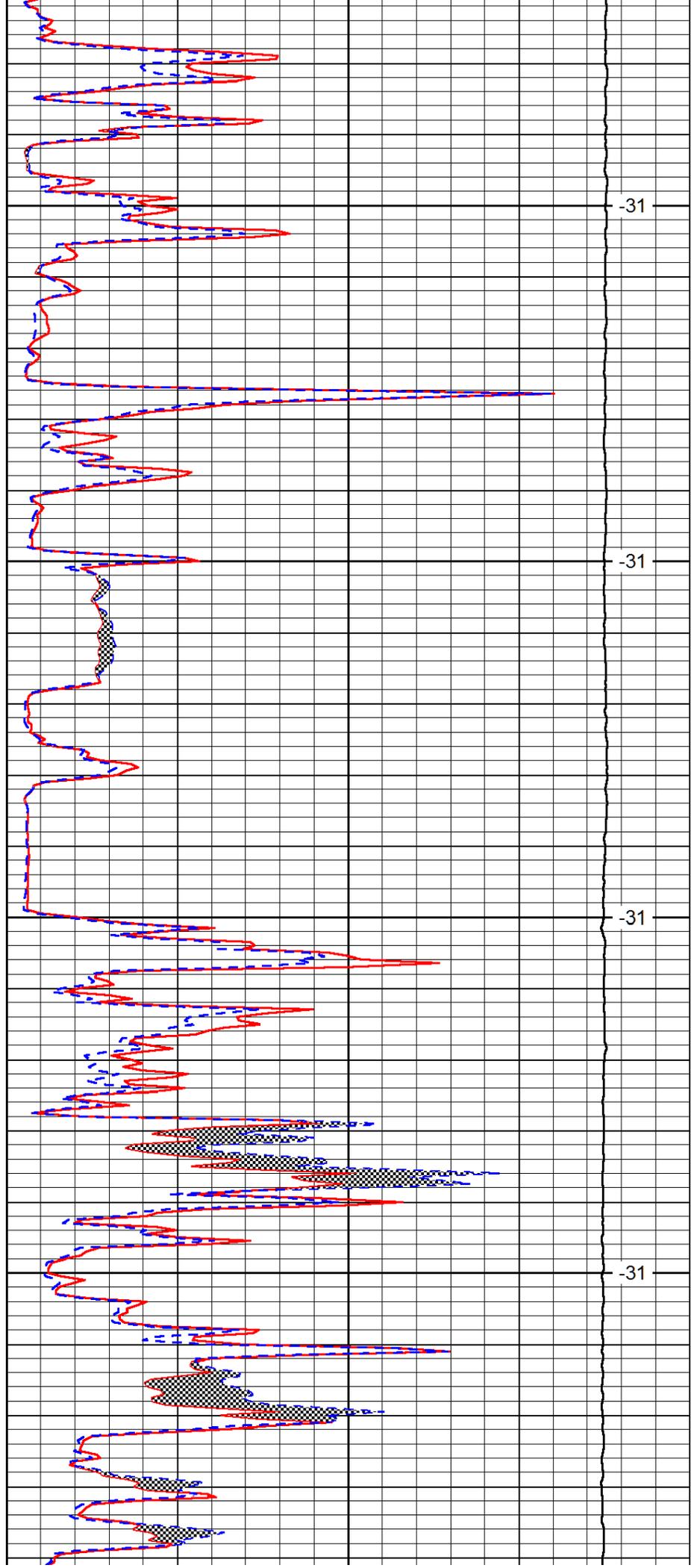


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2750

2800

2850

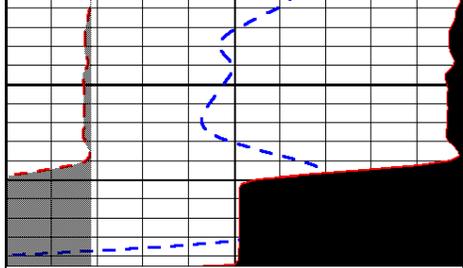


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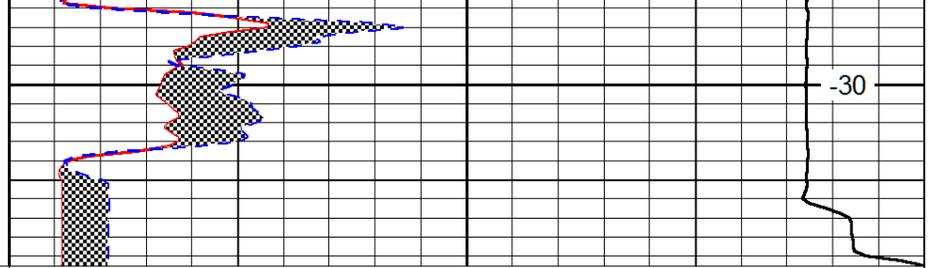
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