



Microresistivity Log

DIGITAL LOG (785) 625-3858

API No. 15-093-21,870-00-00		Company PetroSantander USA, Inc.	
Well Miller No. 4-13		Field Christabelle (Morrow) Unit	
County Kearny		State Kansas	
Location NW NE NW SE 2,380' FSL & 1,900' FEL		Other Services CNL/CDL DIL	
Sec: 13		Twp: 21S Rge: 35W	
Permanent Datum Ground Level		Elevation 3063	
Log Measured From Kelly Bushing		12 Ft. Above Perm. Datum	
Drilling Measured From Kelly Bushing		K.B. 3075 D.F. 3063 G.L. 3063	
Date	5/30/2011		
Run Number	Two		
Depth Driller	4970		
Depth Logger	4977		
Bottom Logged Interval	4976		
Top Log Interval	2600		
Casing Driller	8.625 @ 522		
Casing Logger	519		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	2000		
Density / Viscosity	9.4 60		
pH / Fluid Loss	10.5 7.2		
Source of Sample	Flowline		
Rm @ Meas. Temp	.30 @ 83		
Rmf @ Meas. Temp	.23 @ 83		
Rmc @ Meas. Temp	.41 @ 83		
Source of Rmf / Rmc	Charts		
Rm @ BHT	.20 @ 126		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	126		
Equipment Number	10		
Location	Hays		
Recorded By	J. Long		
Witnessed By	Mikeal K. Maune		

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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.

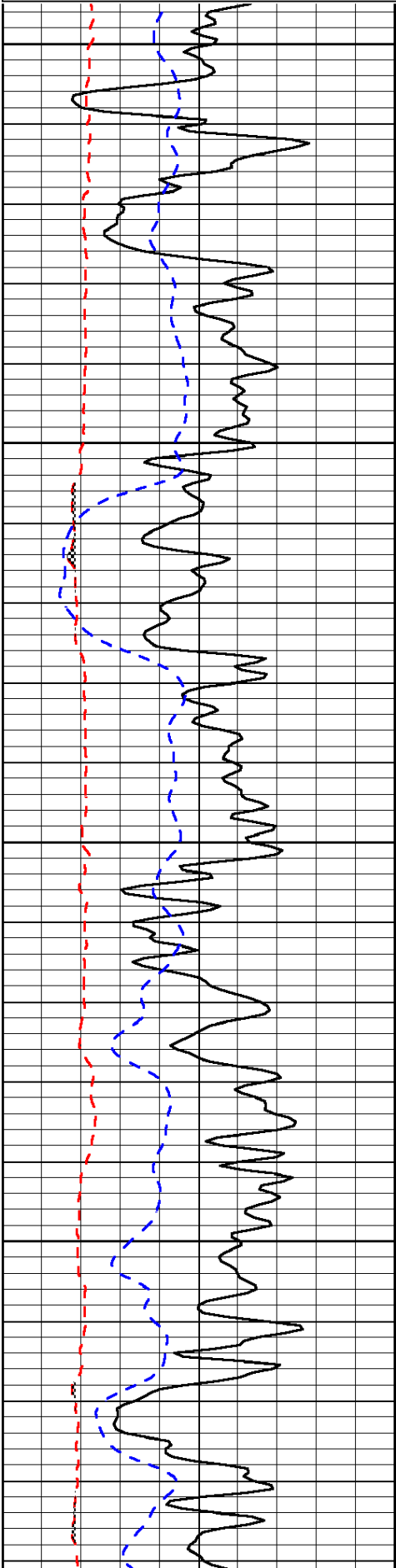
Comments

Thank you for using Log-Tech, Inc.
(785) 625-3858

Scott City, South to Finney/Scott Road, 10 West to Byrd Road, 2 South to Sondreagger Road,
1 West to BB Road, 1/2 South, West Into

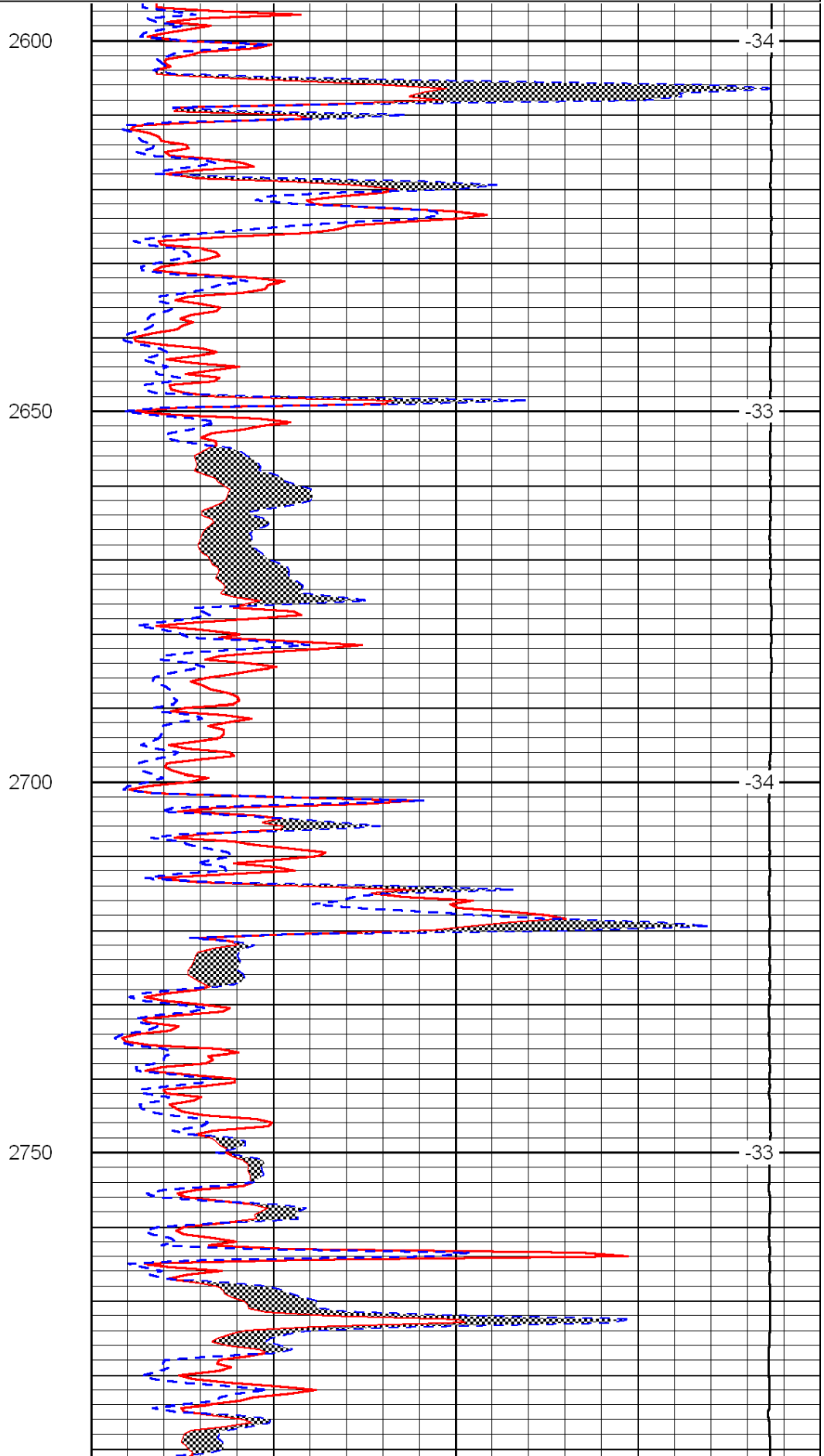
Database File: c:\warrior\data\petrosantander_miller no. 4-13\petrosantander_miller_4-13hd.db
Dataset Pathname: dil/petrostock
Presentation Format: micro
Dataset Creation: Mon May 30 20:03:37 2011
Charted by: Depth in Feet scaled 1:240

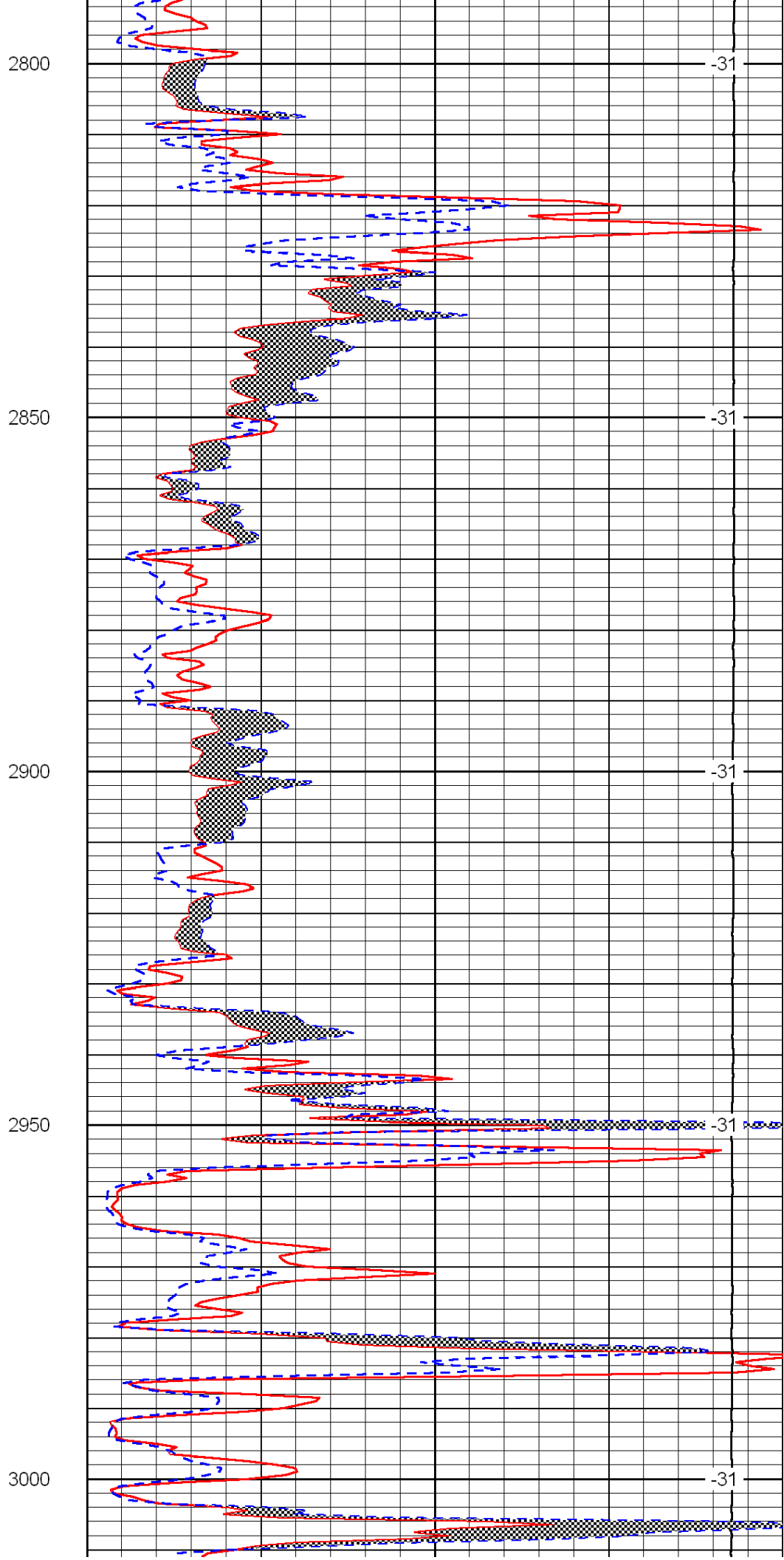
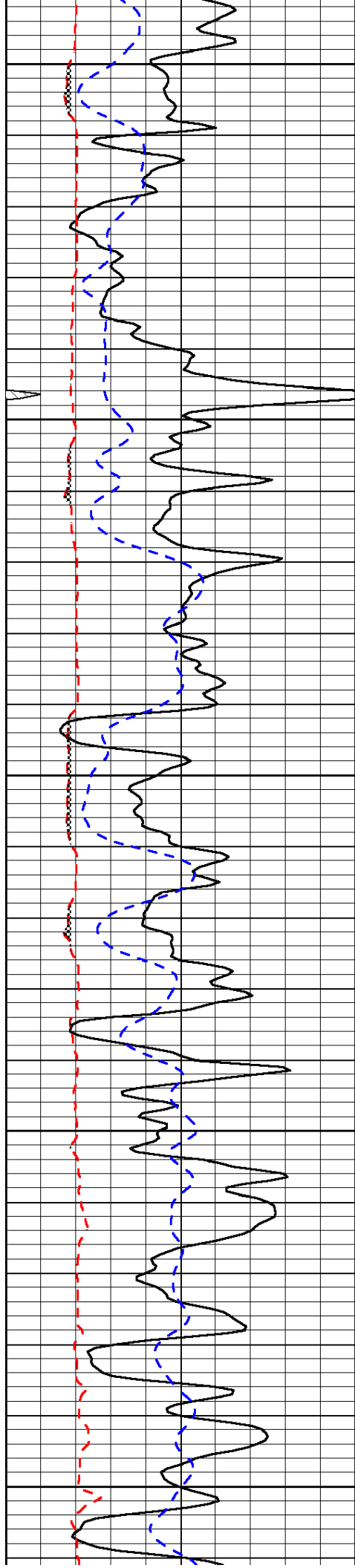
0	Gamma Ray	150
6	Micro Log Caliper (GAPI)	16
-200	SP (mV)	0

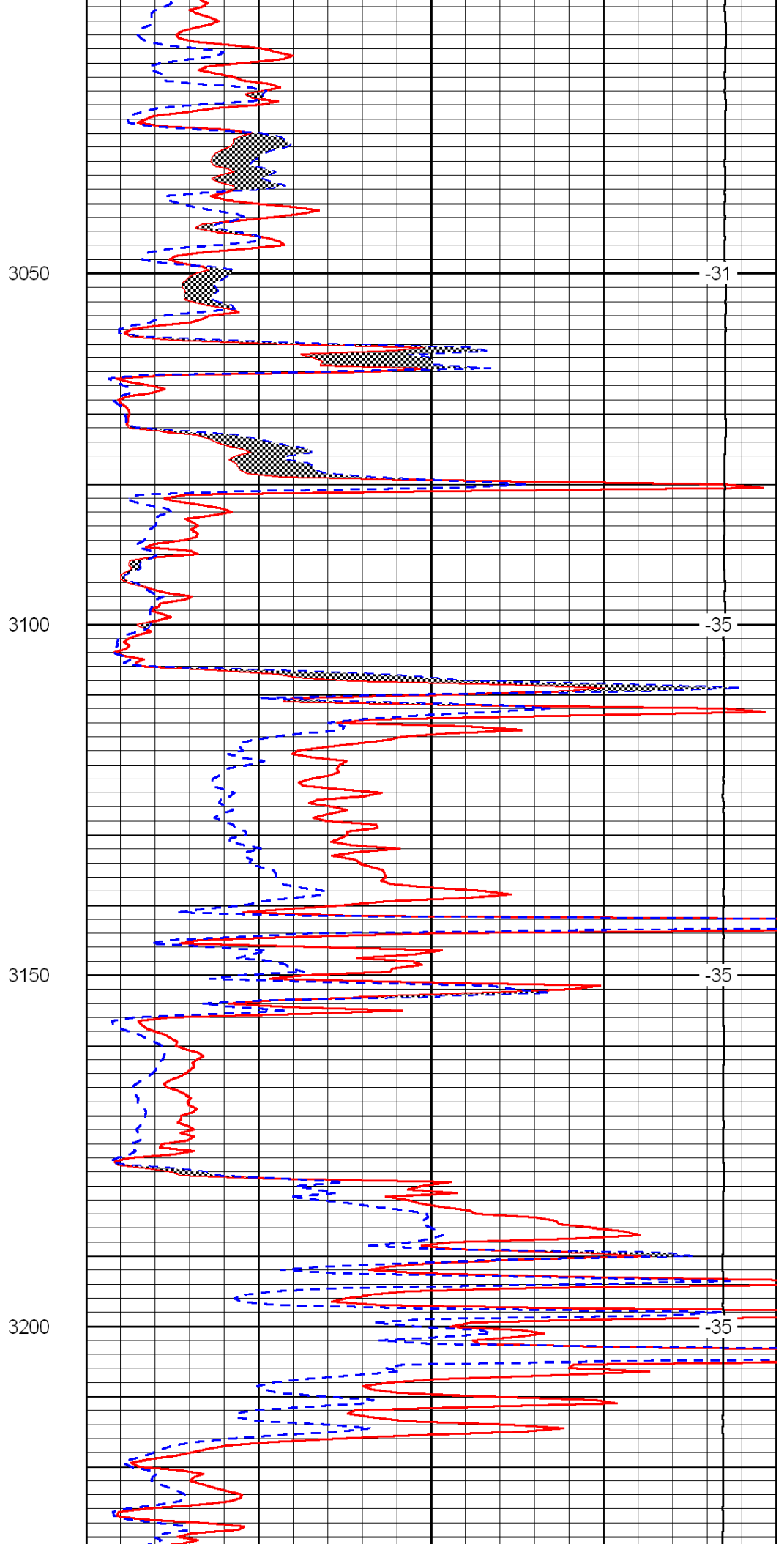
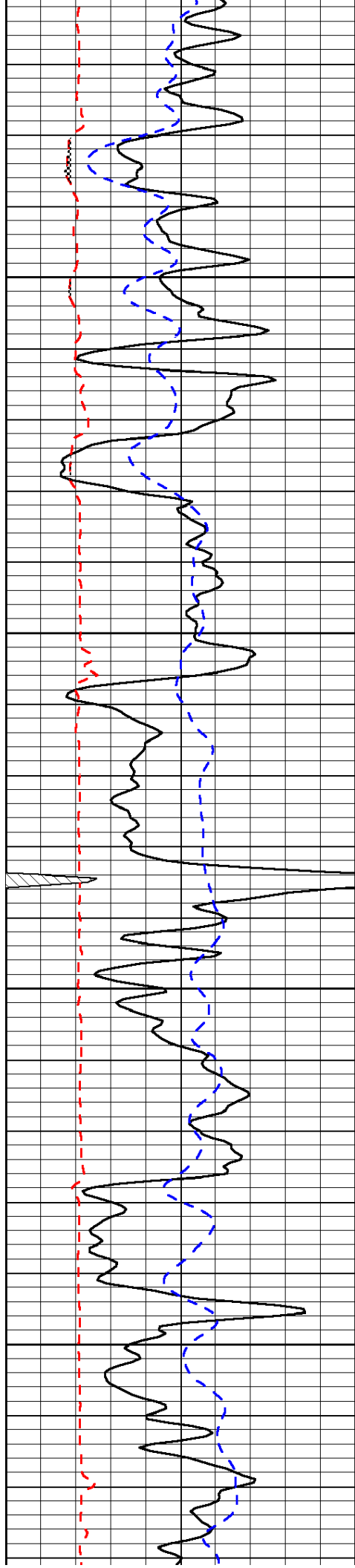


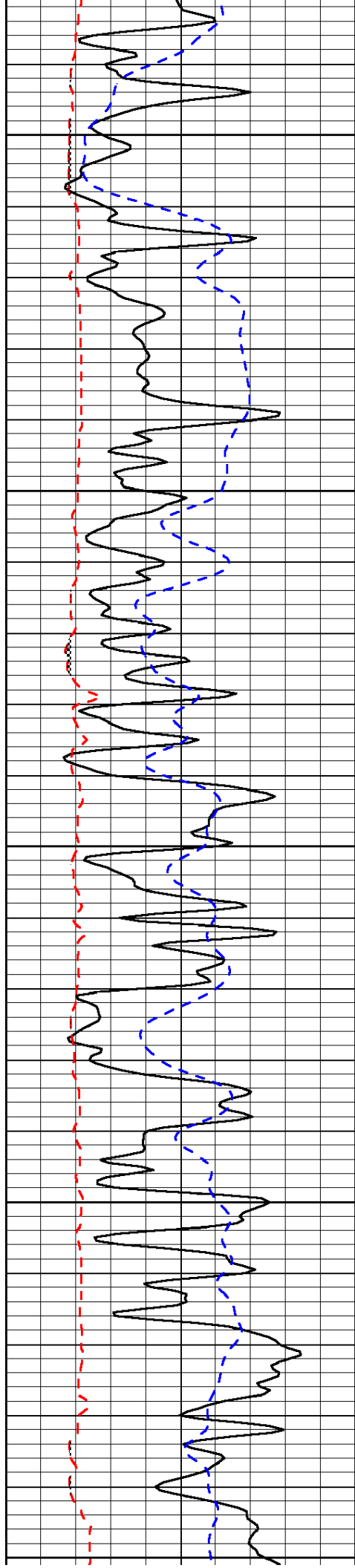
0	Micro Inverse 1 X 1	40
0	Micro Normal 2"	40
15000	Line Weight	0

LSPD









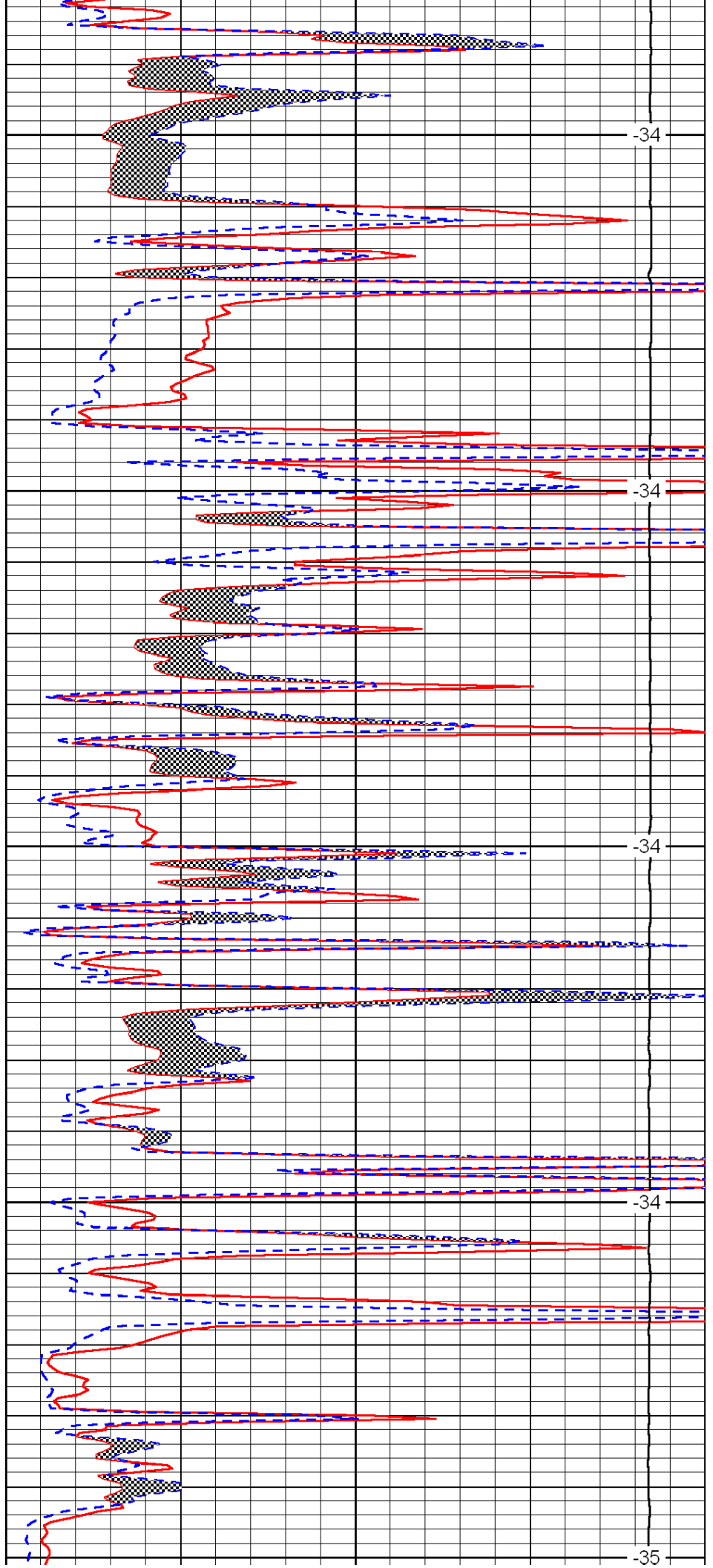
3250

3300

3350

3400

3450



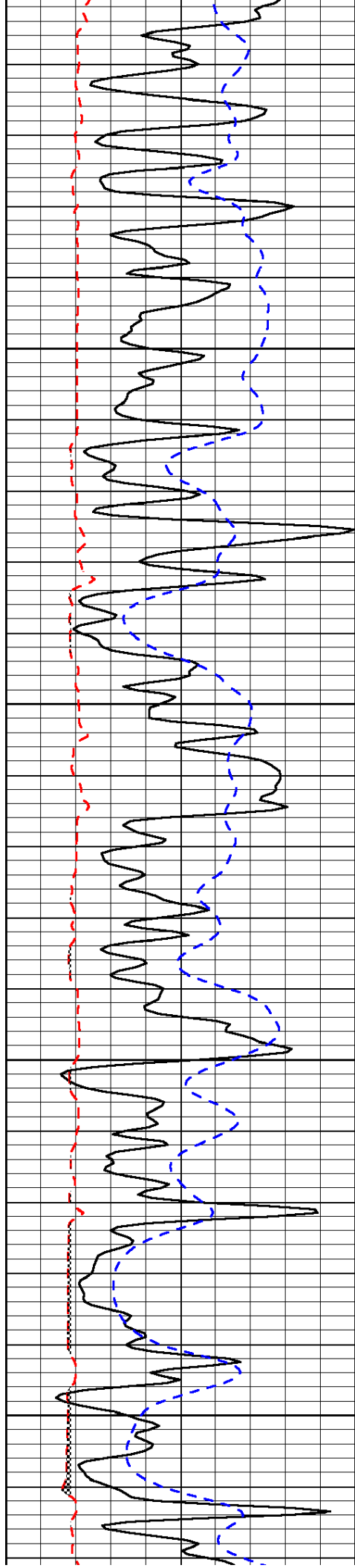
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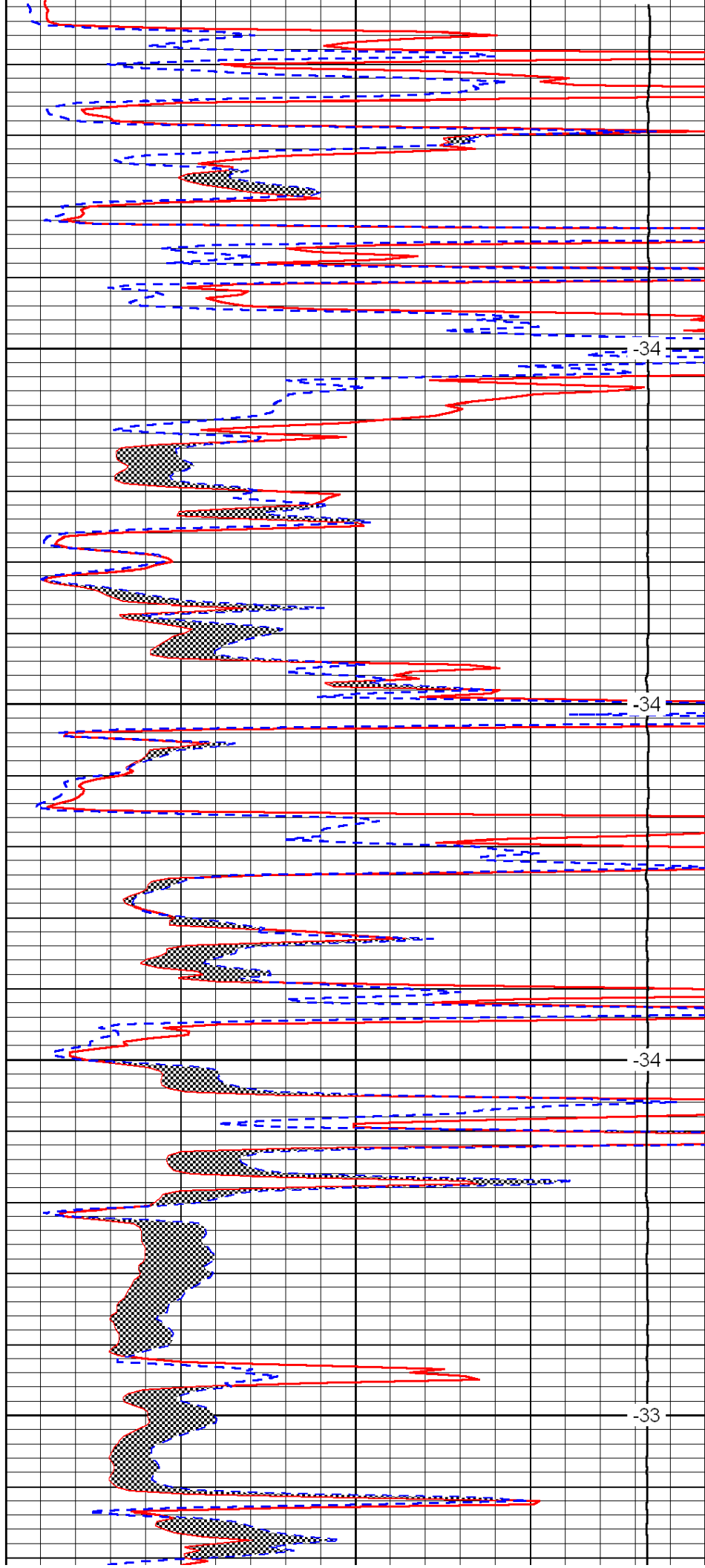


3500

3550

3600

3650

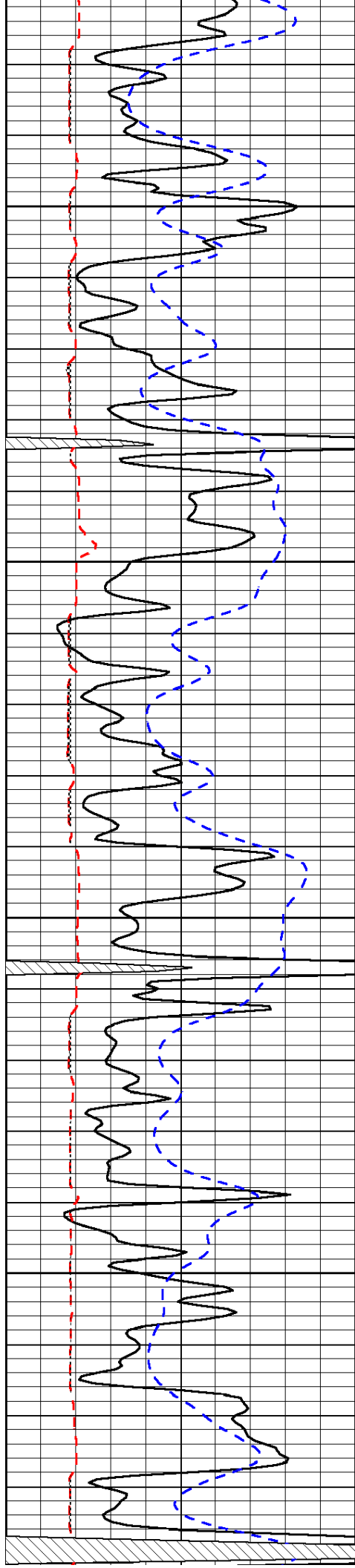


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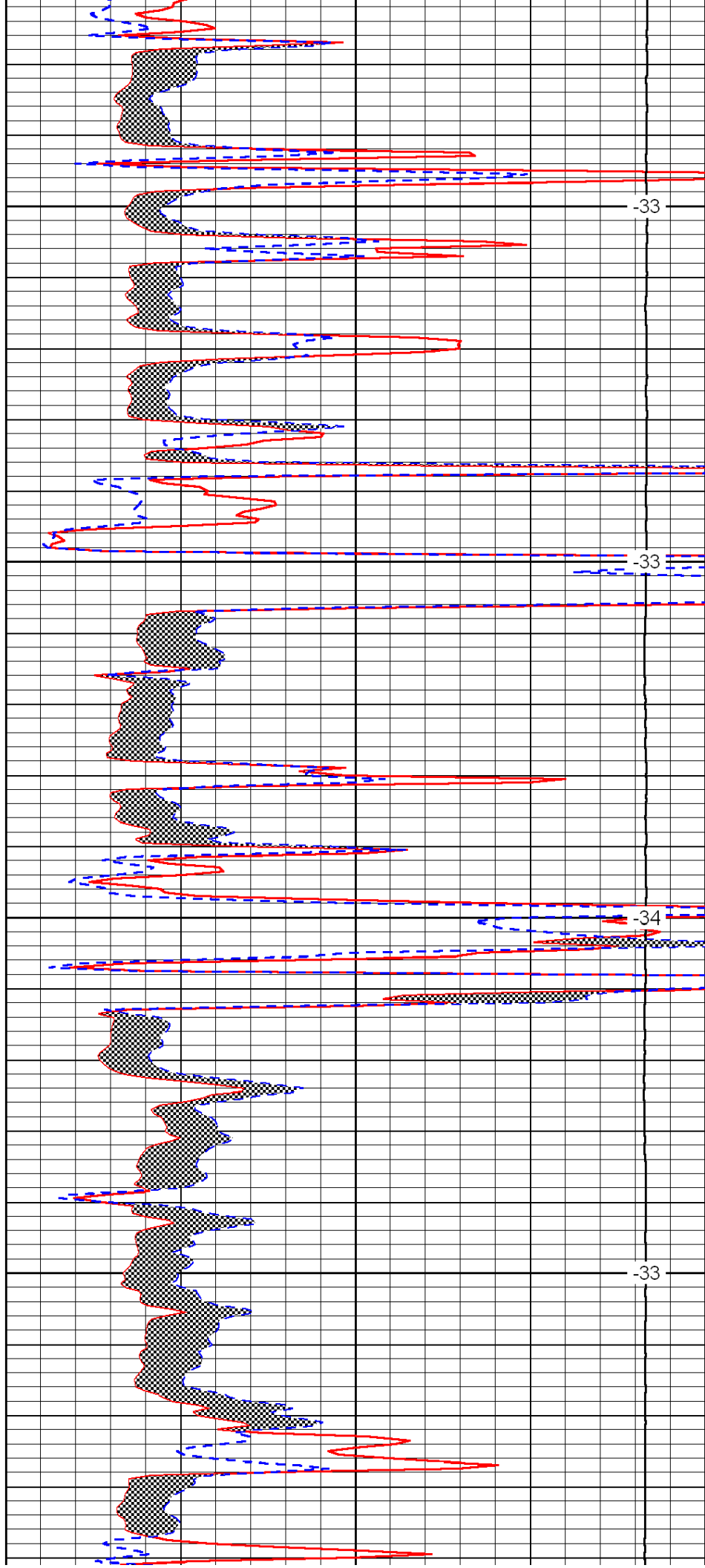


3700

3750

3800

3850

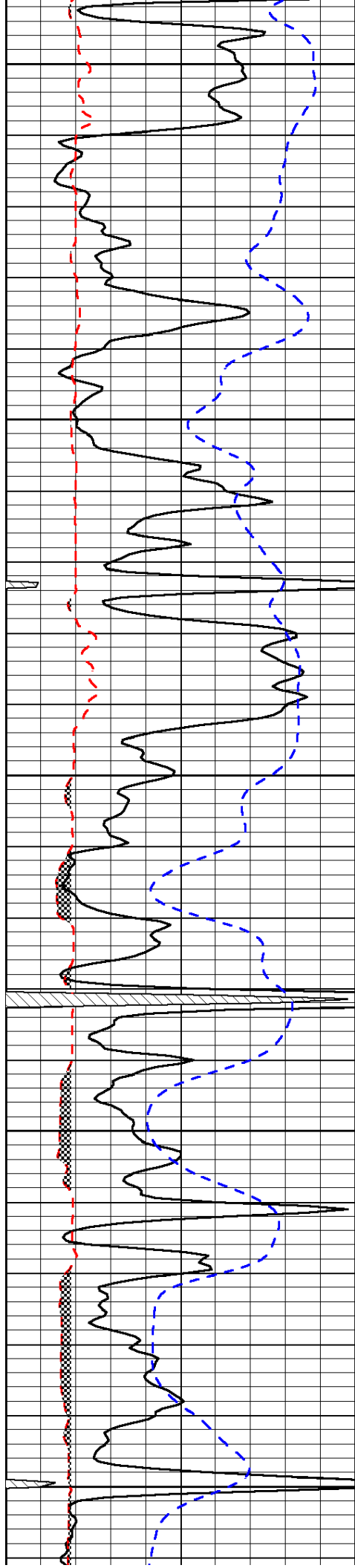


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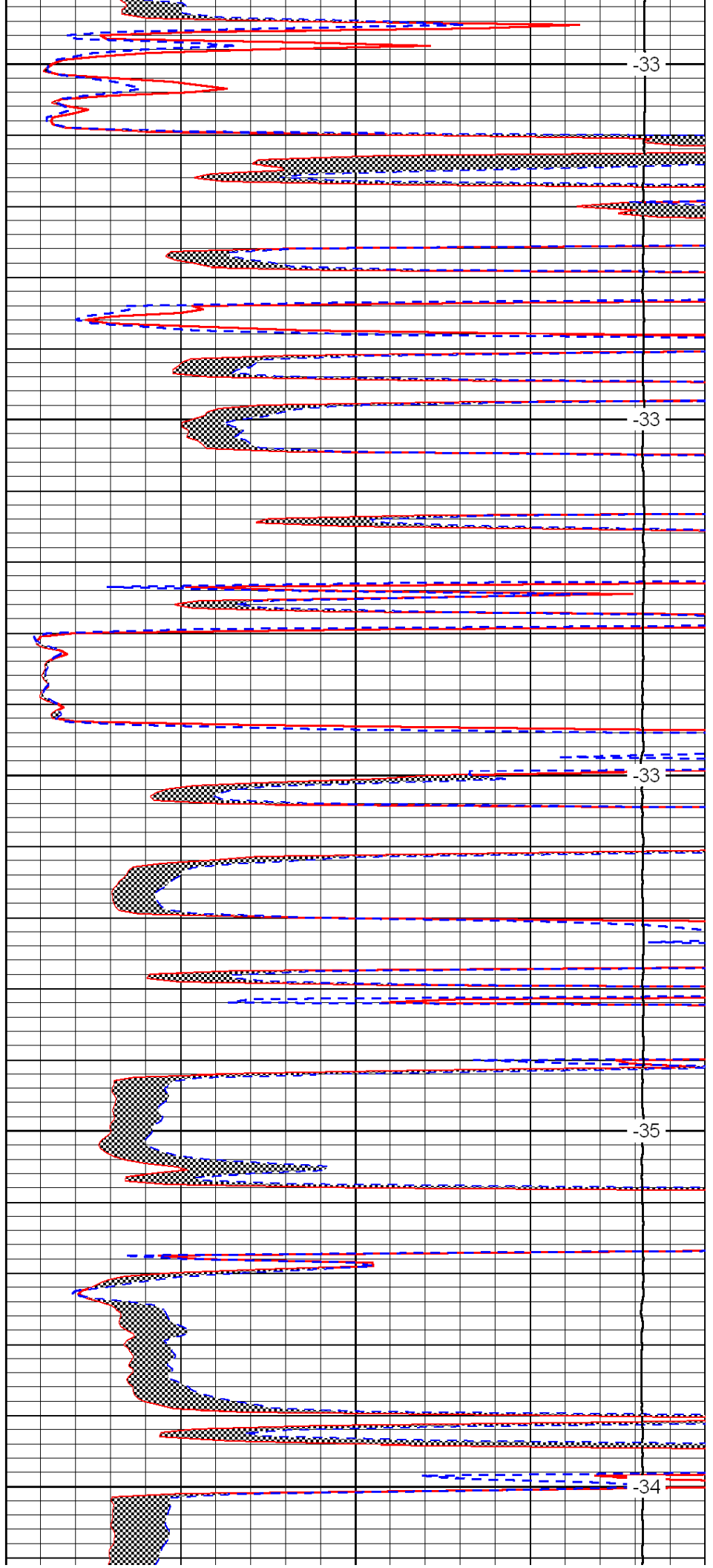
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3950

4000

4050

4100



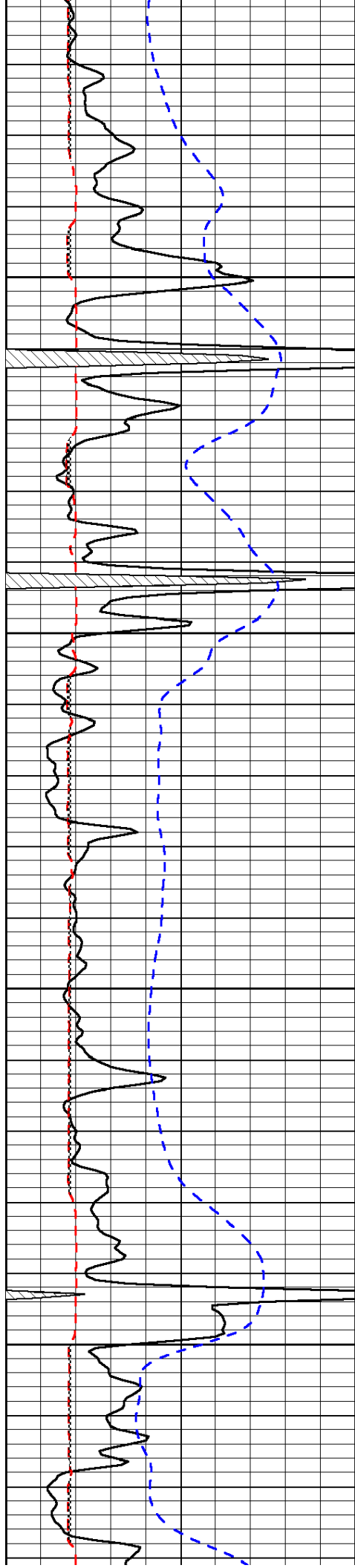
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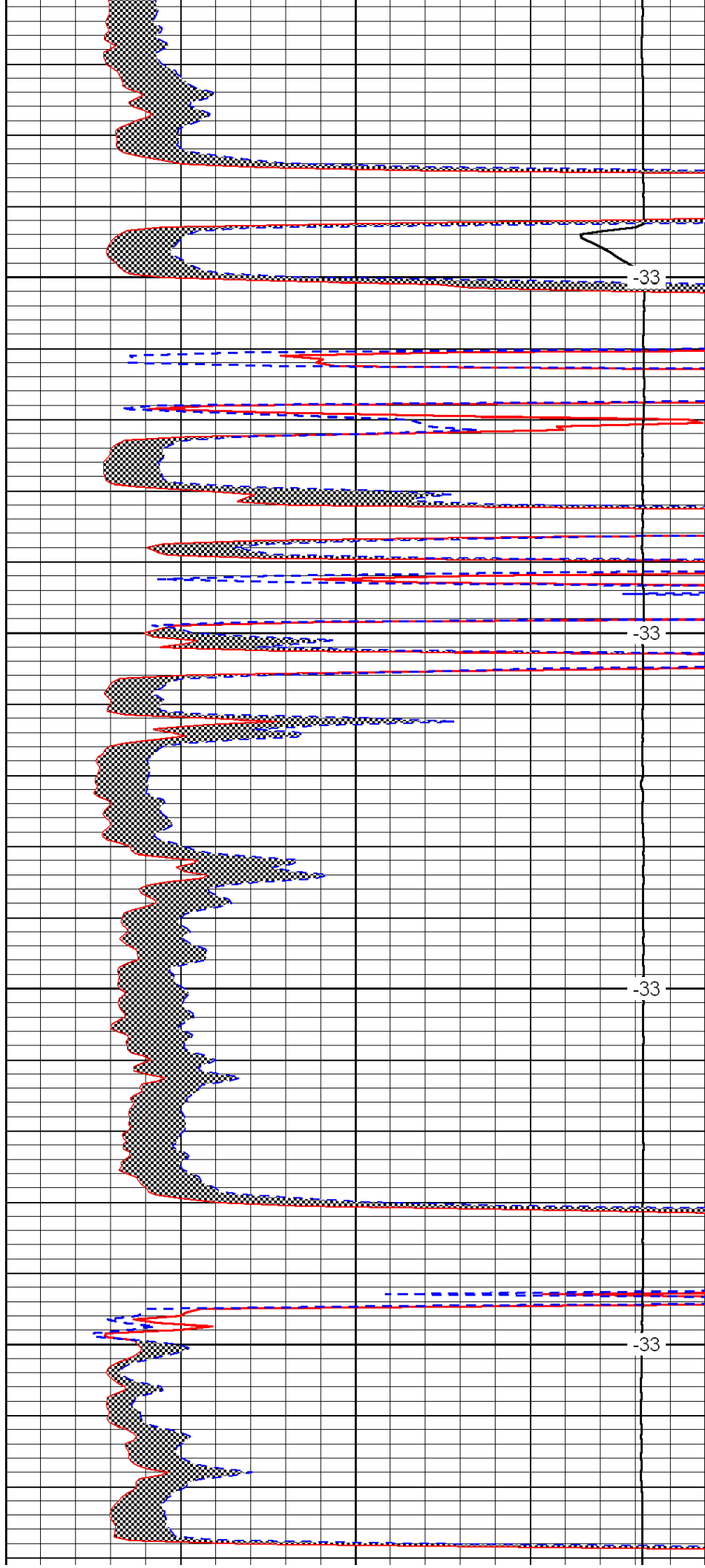


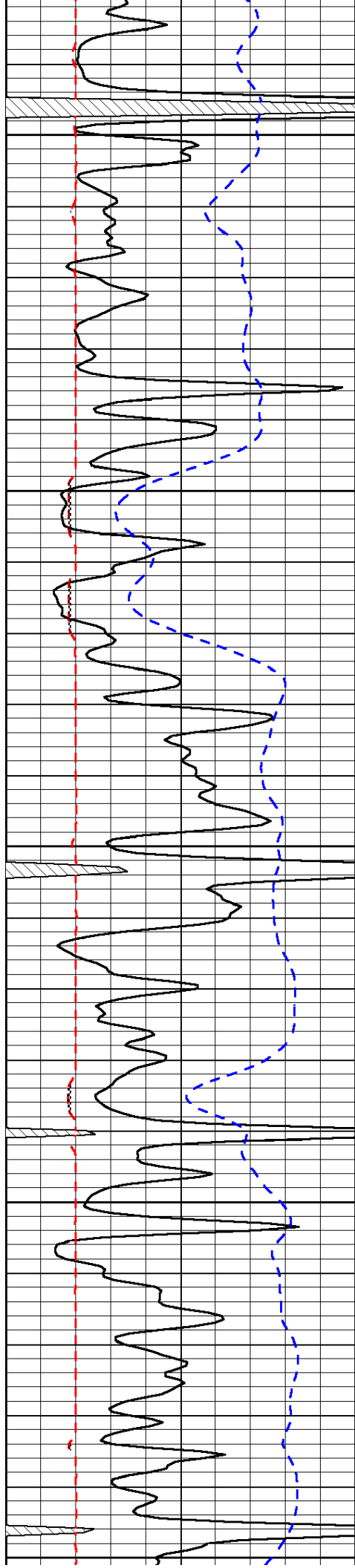
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4200

4250

4300





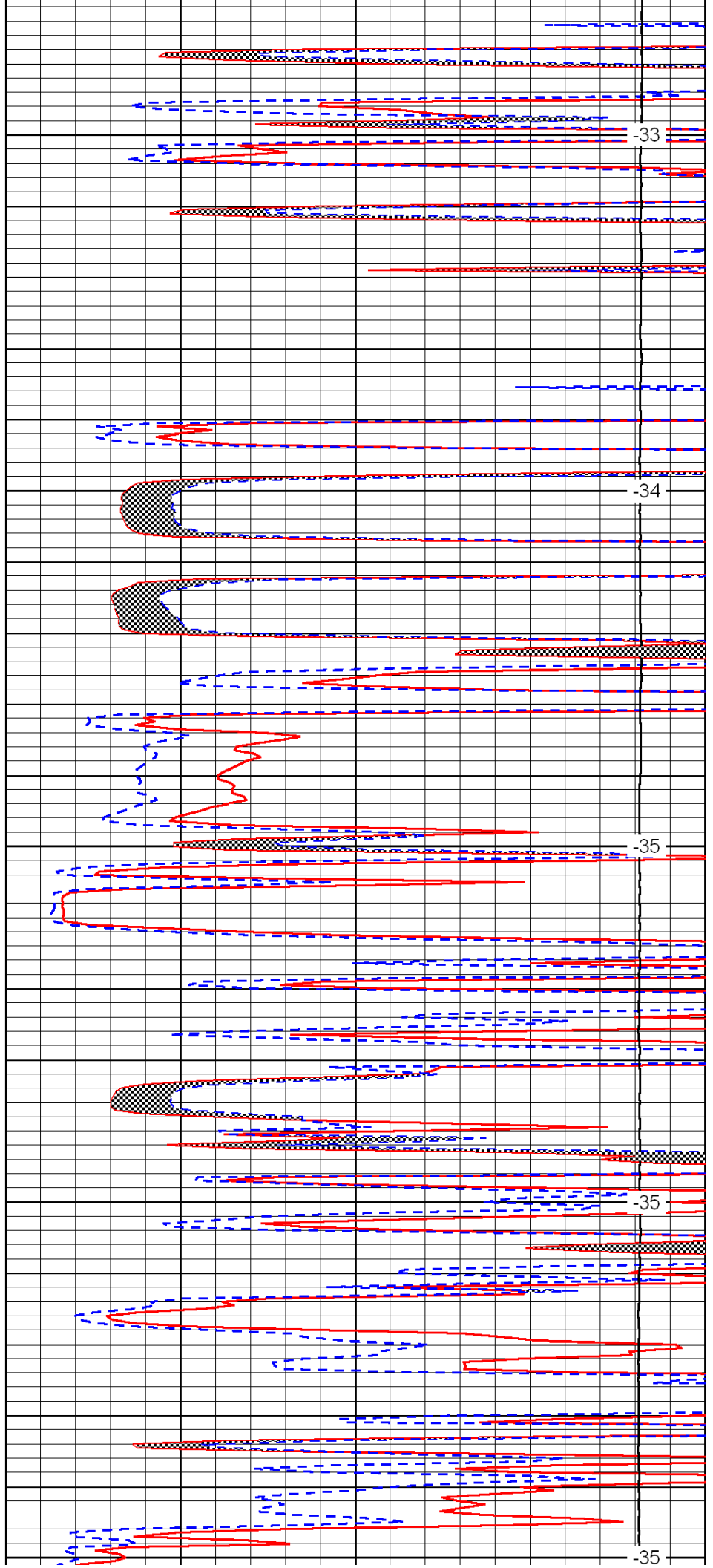
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4400

4450

4500

4550



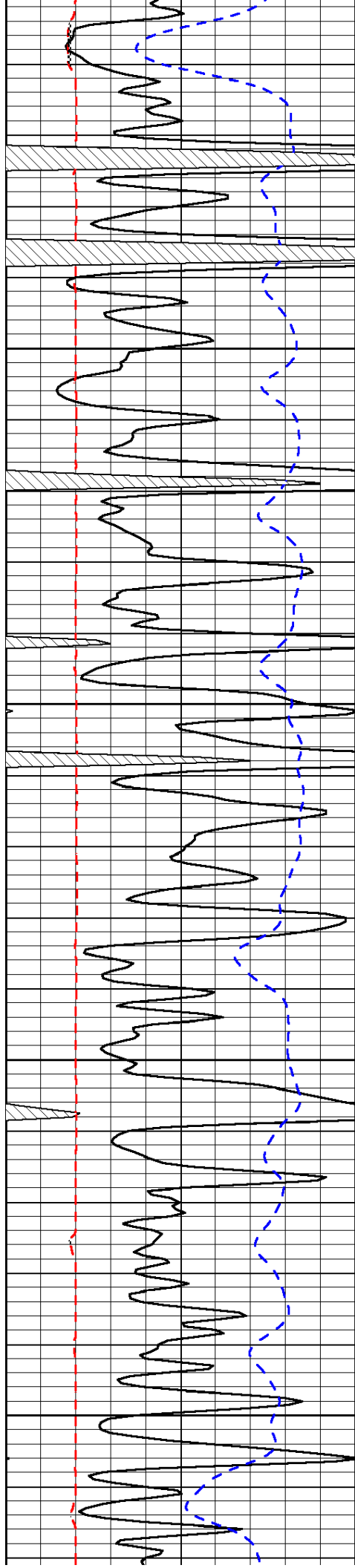
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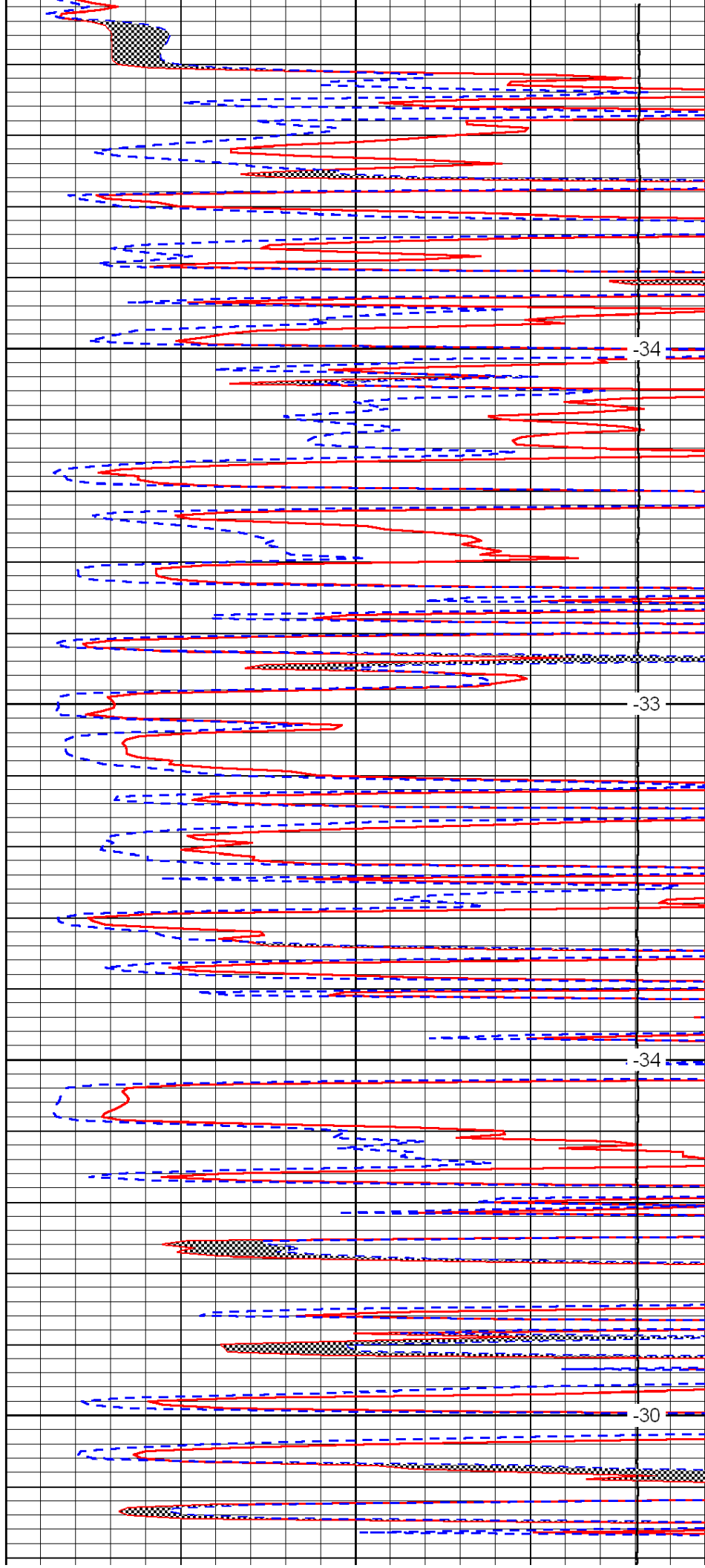


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4650

4700

4750

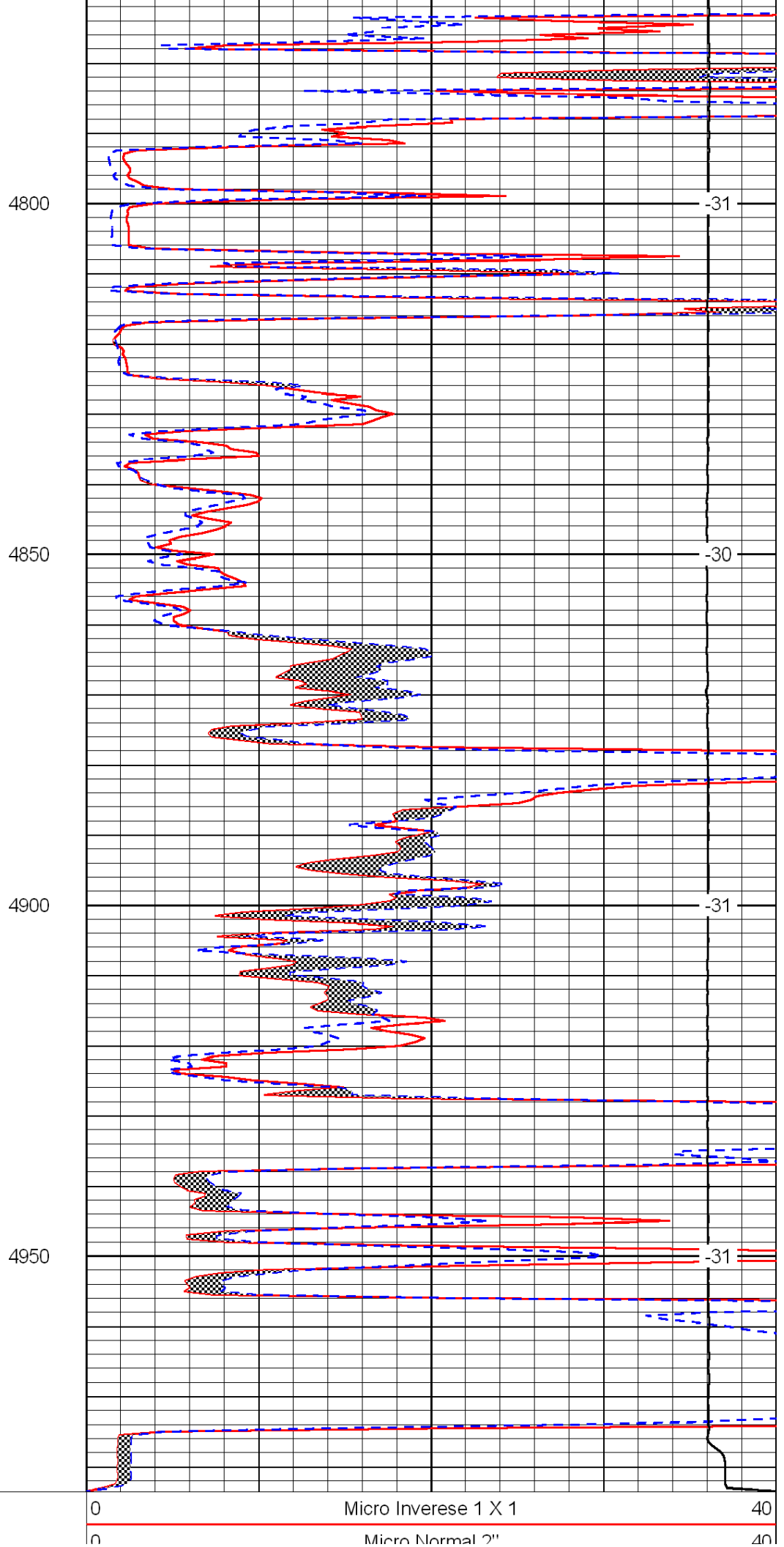
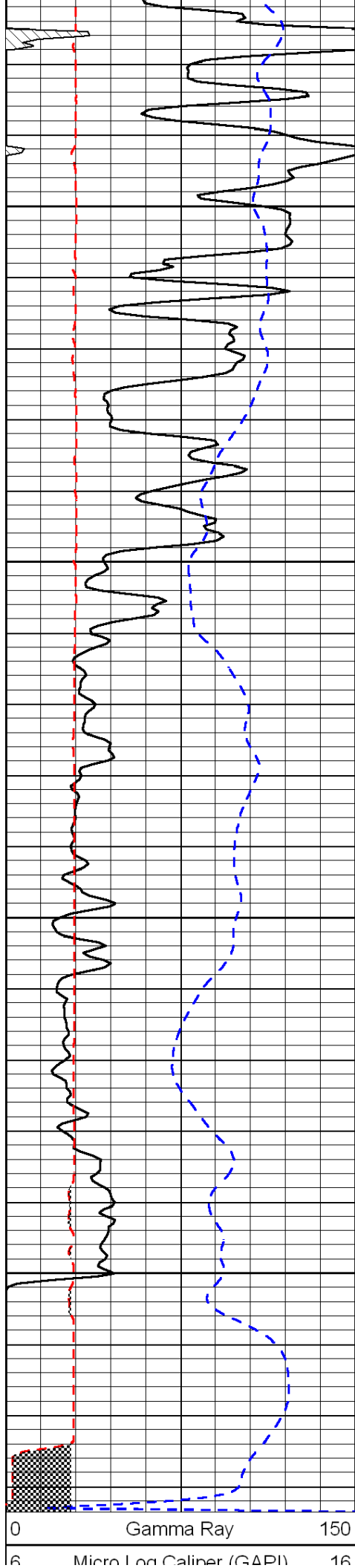


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-33

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-30



0	Micro Log Caliper (CAH 1)	10
-200	SP (mV)	0

0	Micro Normal 2	40
15000	Line Weight	0

LSPD
