



Pioneer Energy Services

Microresistivity Log

| | | | |
|------------------------|-------------------------------|--|-----------------------|
| API No. | 15-153-20,910-00-00 | | |
| Company | Murfin Drilling Company, Inc. | | |
| Well | PTL No. 1 - 22 | | |
| Field | Wildcat | | |
| County | Rawlins | State | Kansas |
| Location | 1550' FSL & 2210' FEL | | |
| Sec: 22 | Twp: 2 S | Rge: 36 W | |
| Permanent Datum | Ground Level | Elevation 3334 | |
| Log Measured From | Kelly Bushing | 10 | Ft. Above Perm. Datum |
| Drilling Measured From | Kelly Bushing | | |
| | | Other Services CNL/CDL DIL/BHCS | |
| | | Elevation K.B. 3344 D.F. 3334 G.L. 3334 | |

| | | |
|------------------------|----------------|-----|
| Date | 11/07/2012 | |
| Run Number | Two | |
| Depth Driller | 5060 | |
| Depth Logger | 5060 | |
| Bottom Logged Interval | 5059 | |
| Top Log Interval | 3600 | |
| Casing Driller | 8.625 @ 390 | |
| Casing Logger | 388 | |
| Bit Size | 7.875 | |
| Type Fluid in Hole | Chemical | |
| Salinity, ppm CL | 1400 | |
| Density / Viscosity | 9.3 | 80 |
| pH / Fluid Loss | 10.5 | 6.4 |
| Source of Sample | Flowline | |
| Rm @ Meas. Temp | 1.10 @ 75 | |
| Rmf @ Meas. Temp | .83 @ 75 | |
| Rmc @ Meas. Temp | 1.49 @ 75 | |
| Source of Rmf / Rmc | Charts | |
| Rm @ BHT | .65 @ 127 | |
| Operating Rig Time | 5 Hours | |
| Max Rec. Temp. F | 127 | |
| Equipment Number | 108 | |
| Location | Hays | |
| Recorded By | D. Martin | |
| Witnessed By | Robert Stolzie | |

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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.

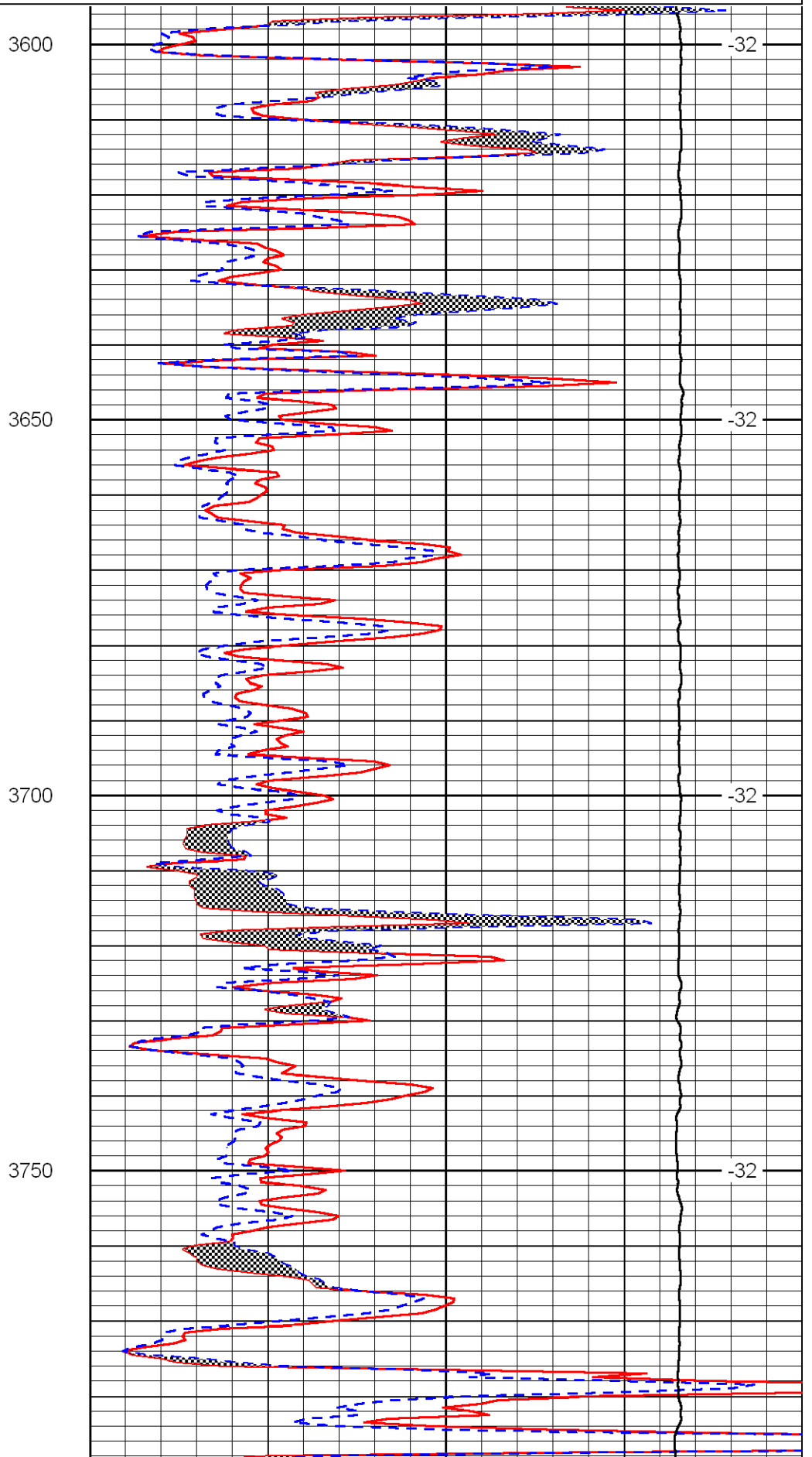
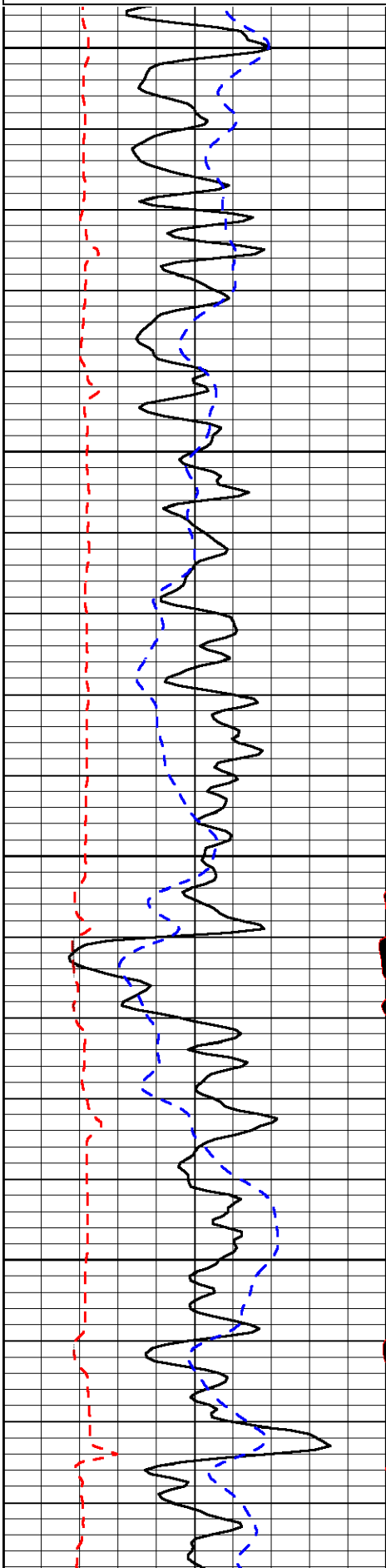
Comments

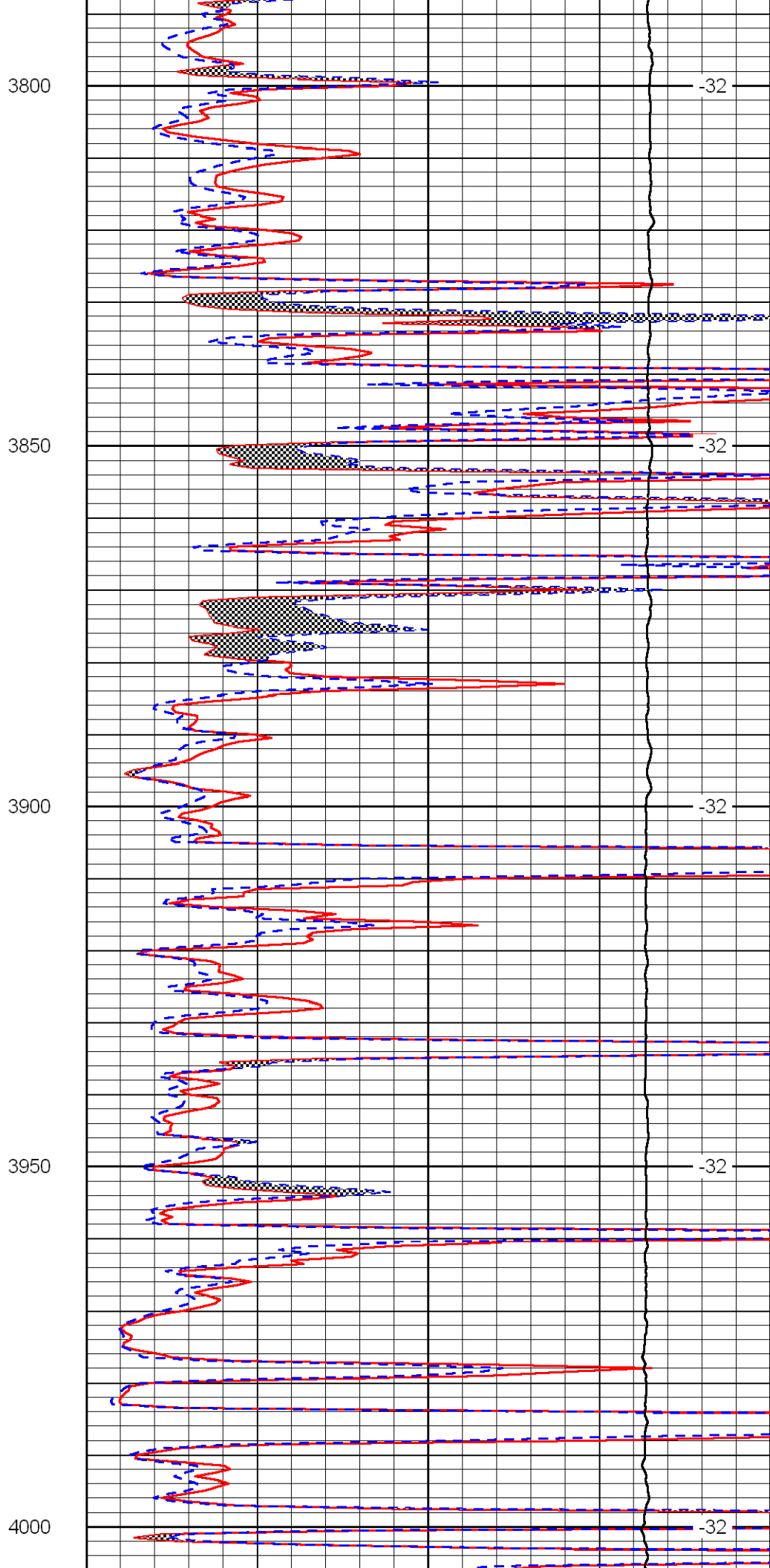
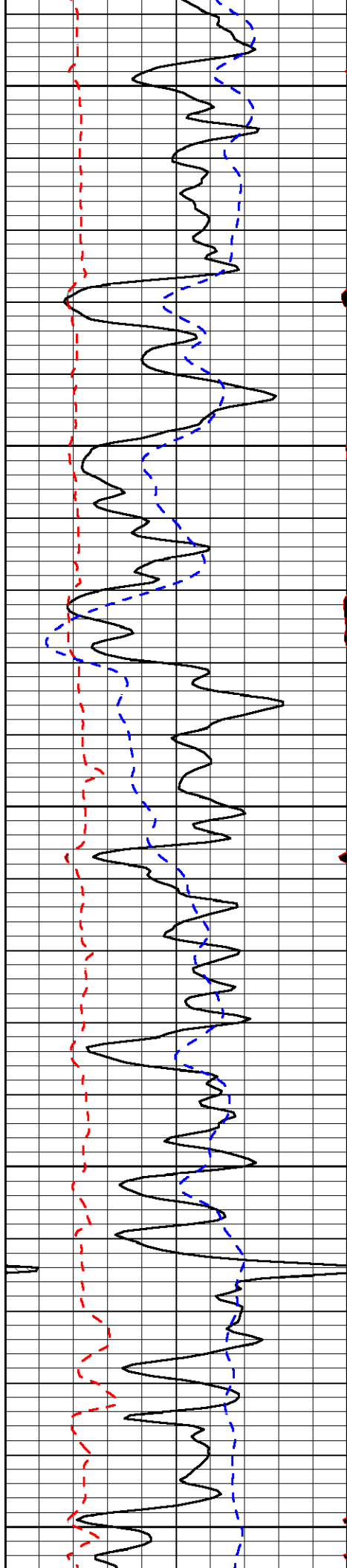
Thank you for using Log-Tech, Inc.
 (785) 625-3858
 Atwood, KS
 16 W to 5 Rd., 5 N to U Rd.,
 1/2 W, N Into

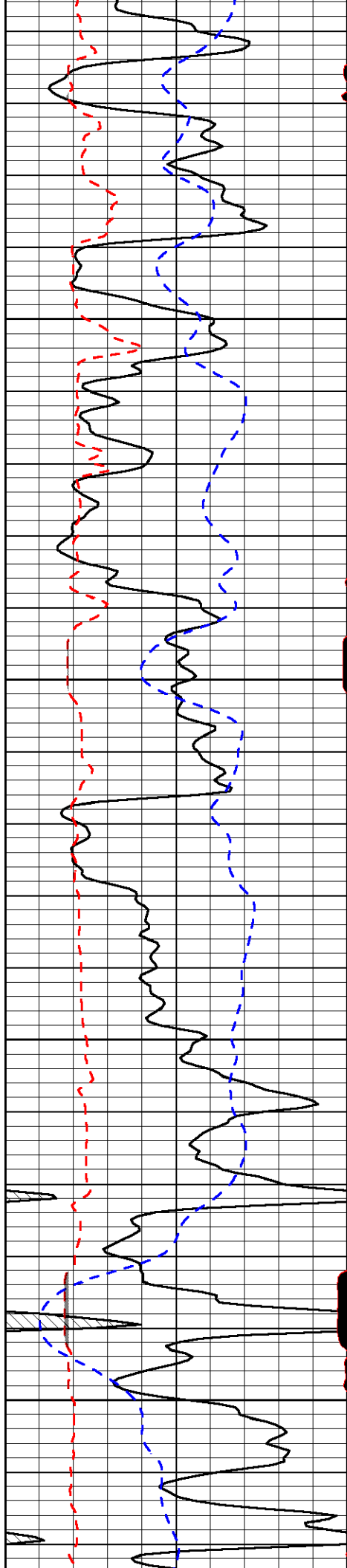
Database File: murfhd.db
 Dataset Pathname: DIL/murfstk
 Presentation Format: micro
 Dataset Creation: Tue Nov 06 06:48:09 2012
 Charted by: Depth in Feet scaled 1:240

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

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





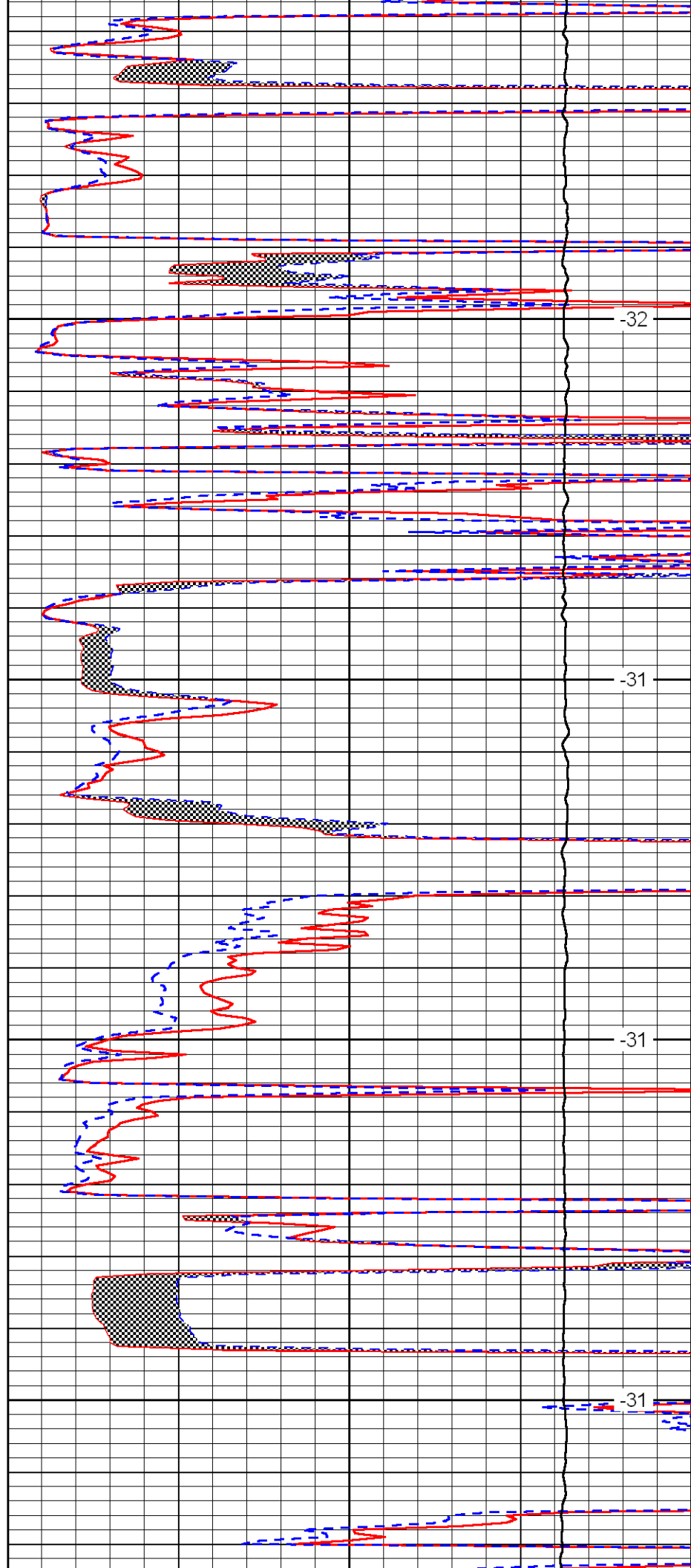


4050

4100

4150

4200

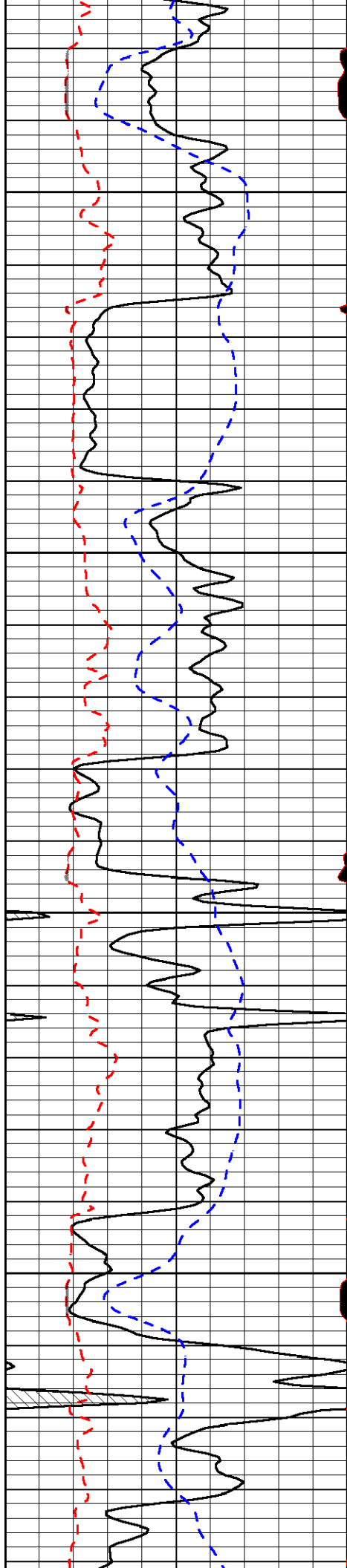


-32

-31

-31

-31

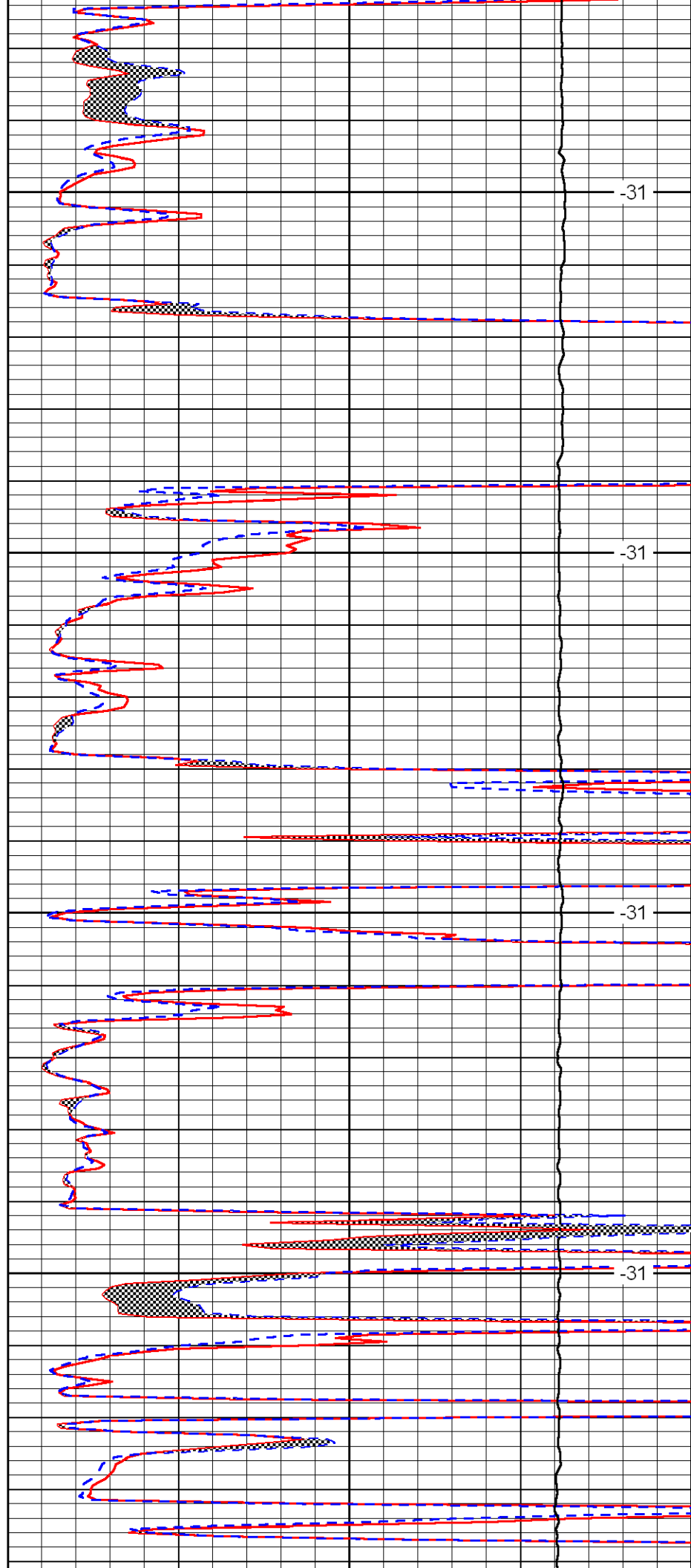


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4300

4350

4400

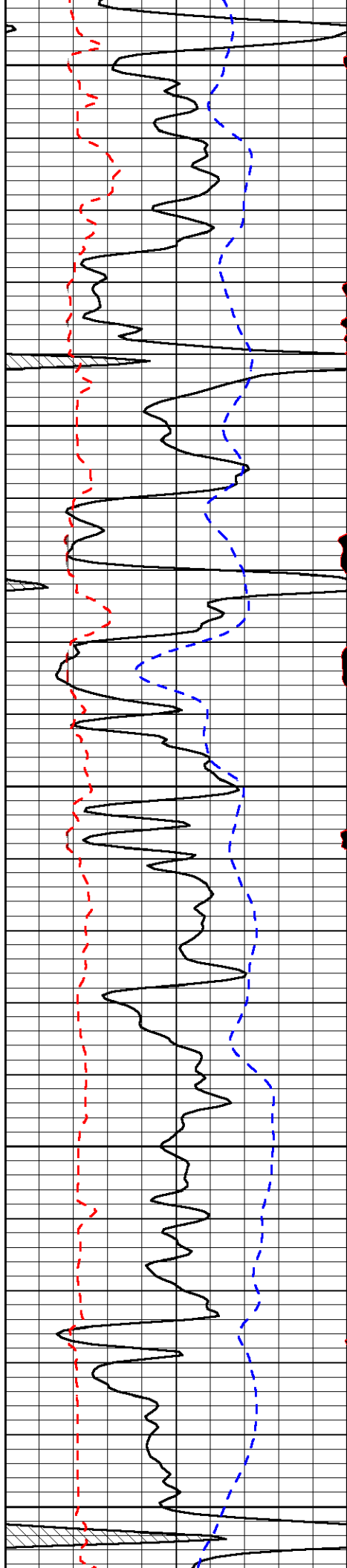


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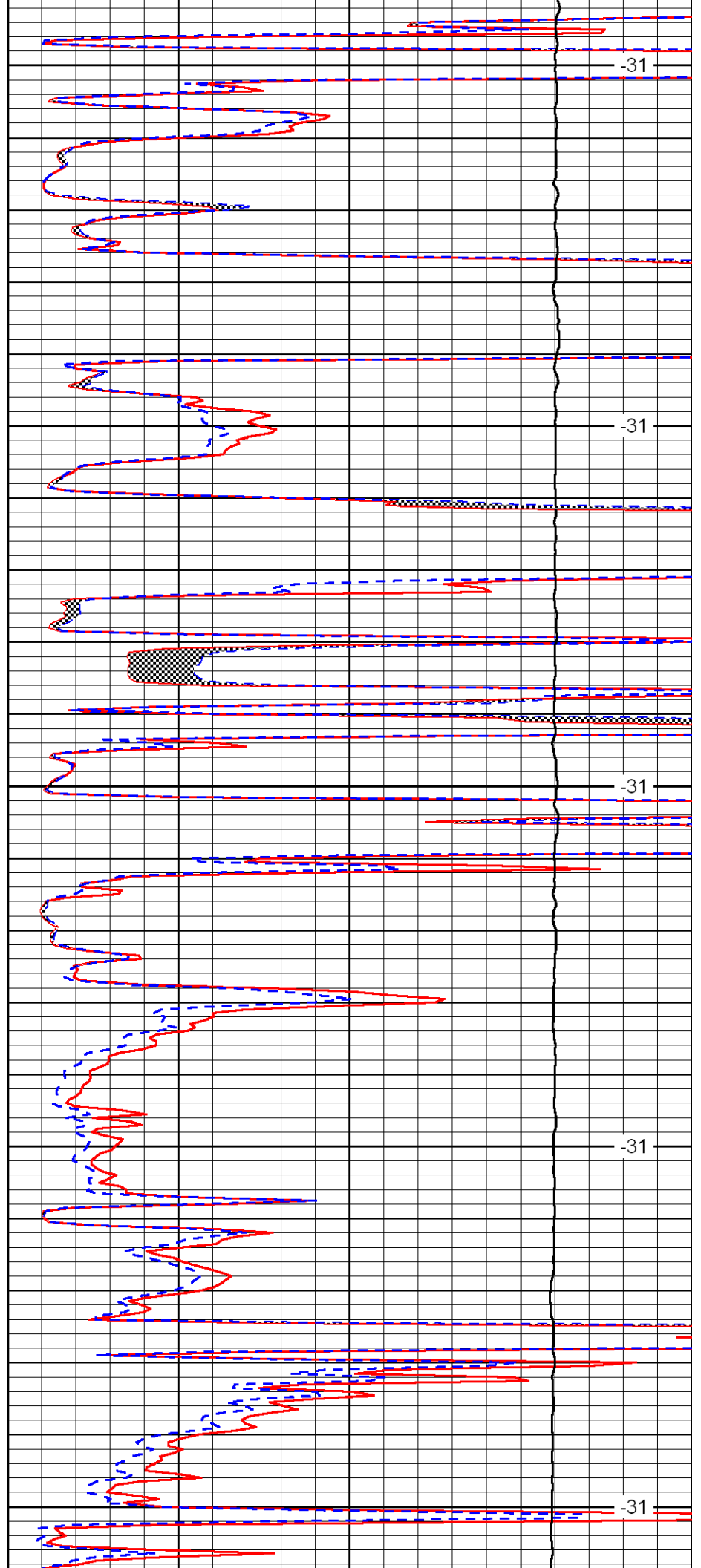
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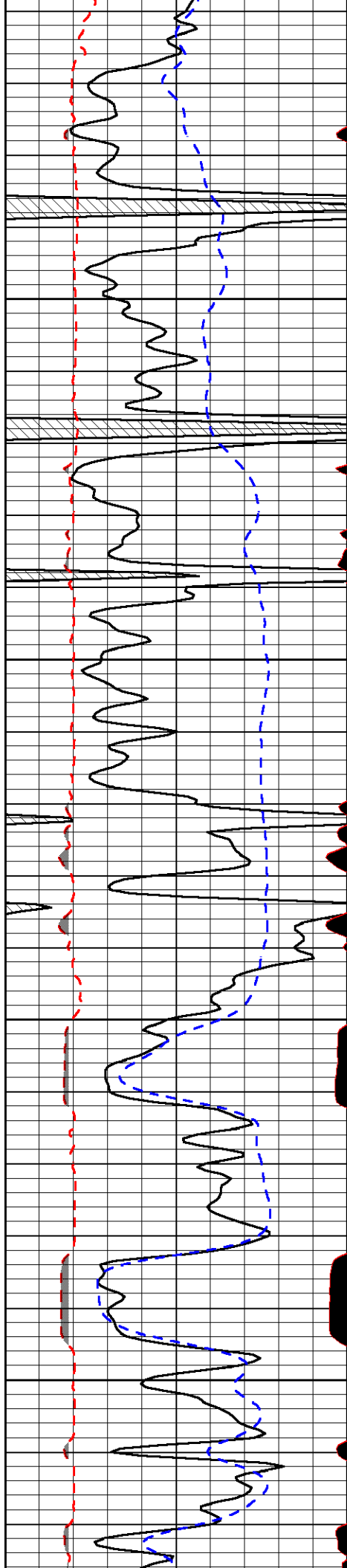
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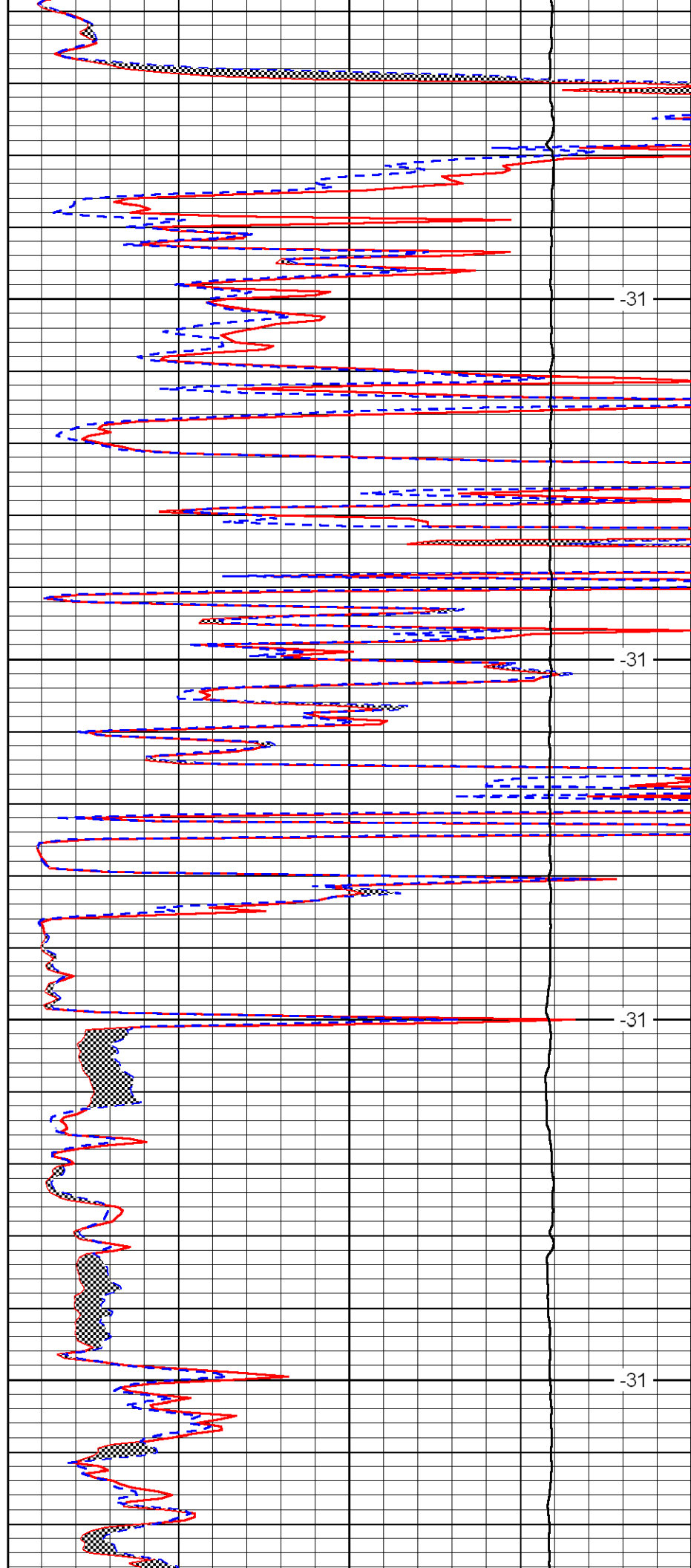


4700

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4800

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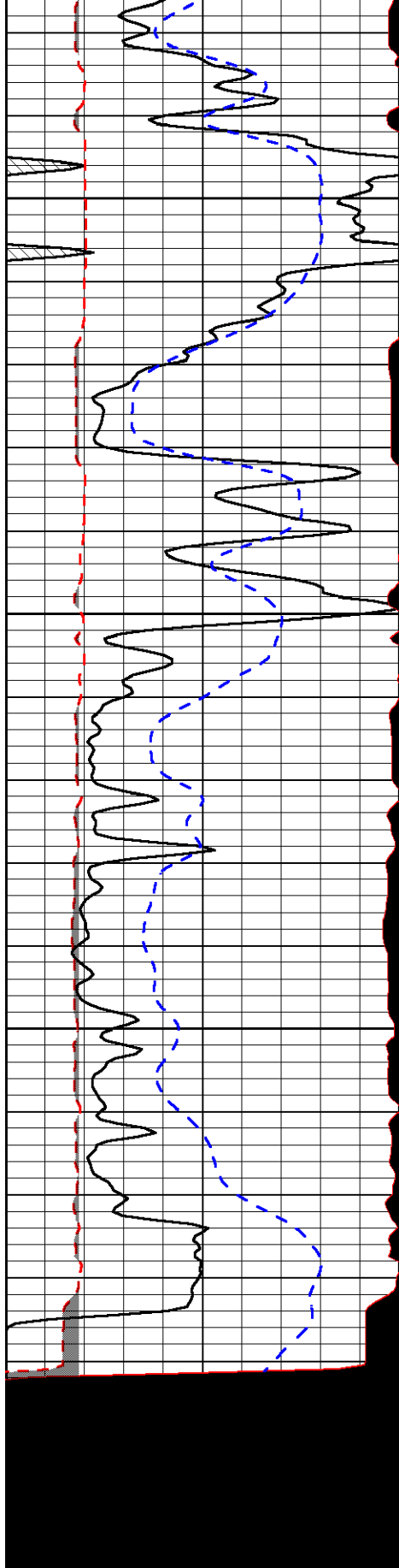


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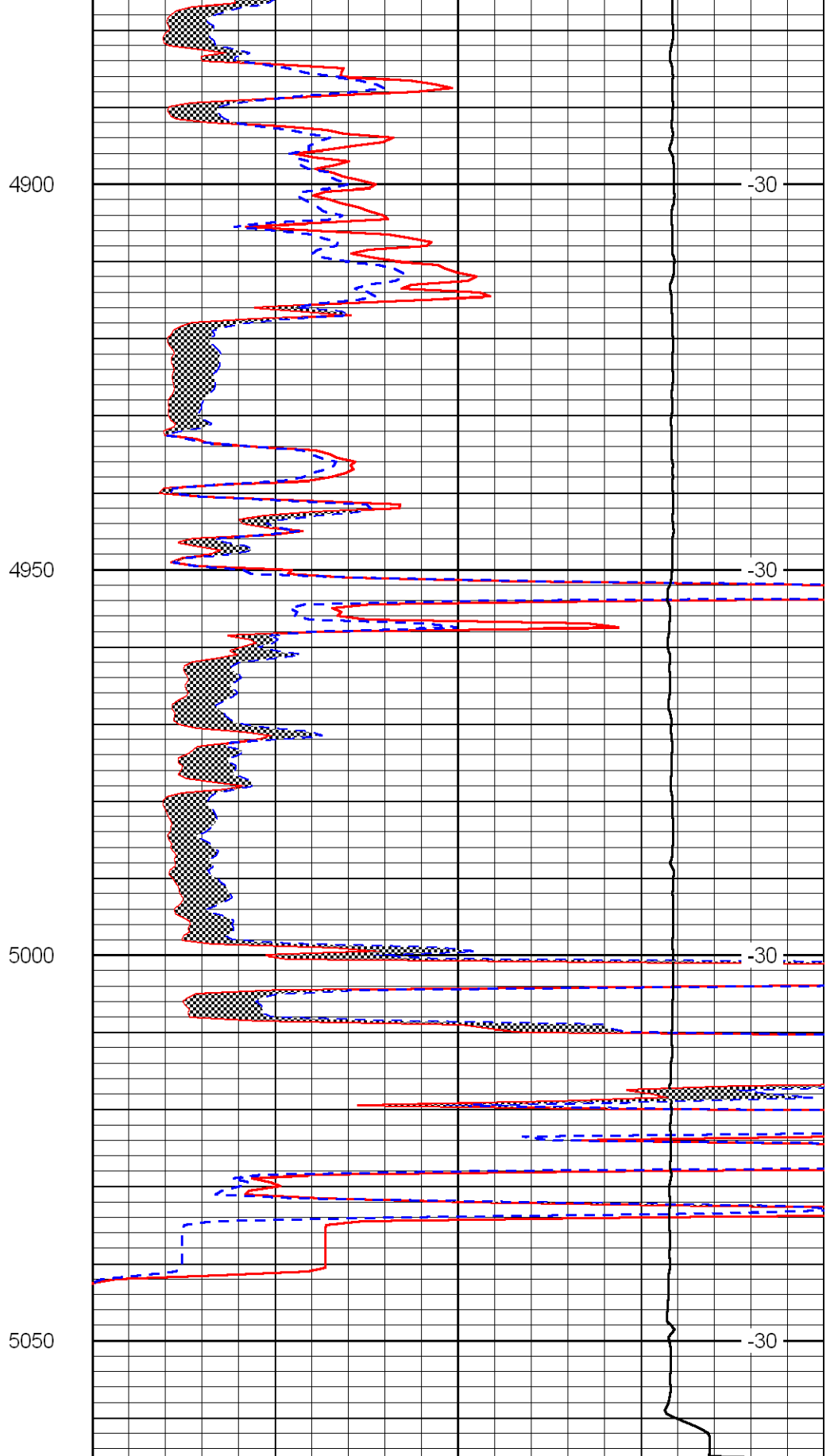
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