



# Microresistivity Log

DIGITAL LOG (785) 625-3858

|                                      |             |                                   |           |                     |                                       |
|--------------------------------------|-------------|-----------------------------------|-----------|---------------------|---------------------------------------|
| API No.                              |             | Company Murfin Drilling Co., Inc. |           |                     |                                       |
|                                      |             | Well Kuhlman "E" No. 2-35         |           |                     |                                       |
|                                      |             | Field Wildcat                     |           |                     |                                       |
|                                      |             | County Logan                      | State     | Kansas              |                                       |
| 15-109-20,989-00-00                  |             | Location                          |           | 580' FSL & 660' FWL |                                       |
|                                      |             | Sec: 35                           | Twp: 12 S | Rge: 32 W           | Other Services<br>CNL/CDL<br>DIL/BHCS |
| Permanent Datum Ground Level         |             | Elevation 3002                    |           | Elevation           |                                       |
| Log Measured From Kelly Bushing      |             | 11 Ft. Above Perm. Datum          |           | K.B. 3013           |                                       |
| Drilling Measured From Kelly Bushing |             |                                   |           | D.F.                |                                       |
|                                      |             |                                   |           | G.L. 3002           |                                       |
| Date                                 | 3/29/2011   |                                   |           |                     |                                       |
| Run Number                           | Two         |                                   |           |                     |                                       |
| Depth Driller                        | 4740        |                                   |           |                     |                                       |
| Depth Logger                         | 4738        |                                   |           |                     |                                       |
| Bottom Logged Interval               | 4737        |                                   |           |                     |                                       |
| Top Log Interval                     | 3600        |                                   |           |                     |                                       |
| Casing Driller                       | 8.625 @ 226 |                                   |           |                     |                                       |
| Casing Logger                        | 222         |                                   |           |                     |                                       |
| Bit Size                             | 7.875       |                                   |           |                     |                                       |
| Type Fluid in Hole                   | Chemical    |                                   |           |                     |                                       |
| Salinity, ppm CL                     | 3.000       |                                   |           |                     |                                       |
| Density / Viscosity                  | 9.3         | 51                                |           |                     |                                       |
| pH / Fluid Loss                      | 11.0        | 6.8                               |           |                     |                                       |
| Source of Sample                     | Flowline    |                                   |           |                     |                                       |
| Rm @ Meas. Temp                      | .98 @ 55    |                                   |           |                     |                                       |
| Rmf @ Meas. Temp                     | .73 @ 55    |                                   |           |                     |                                       |
| Rmc @ Meas. Temp                     | 1.32 @ 55   |                                   |           |                     |                                       |
| Source of Rmf / Rmc                  | Charts      |                                   |           |                     |                                       |
| Rm @ BHT                             | .43 @ 125   |                                   |           |                     |                                       |
| Operating Rig Time                   | 5 1/2 Hours |                                   |           |                     |                                       |
| Max Rec. Temp. F                     | 125         |                                   |           |                     |                                       |
| Equipment Number                     | 4           |                                   |           |                     |                                       |
| Location                             | Hays        |                                   |           |                     |                                       |
| Recorded By                          | K. Bange    |                                   |           | D.Kerr              |                                       |
| Witnessed By                         | Wes Hansen  |                                   |           |                     |                                       |

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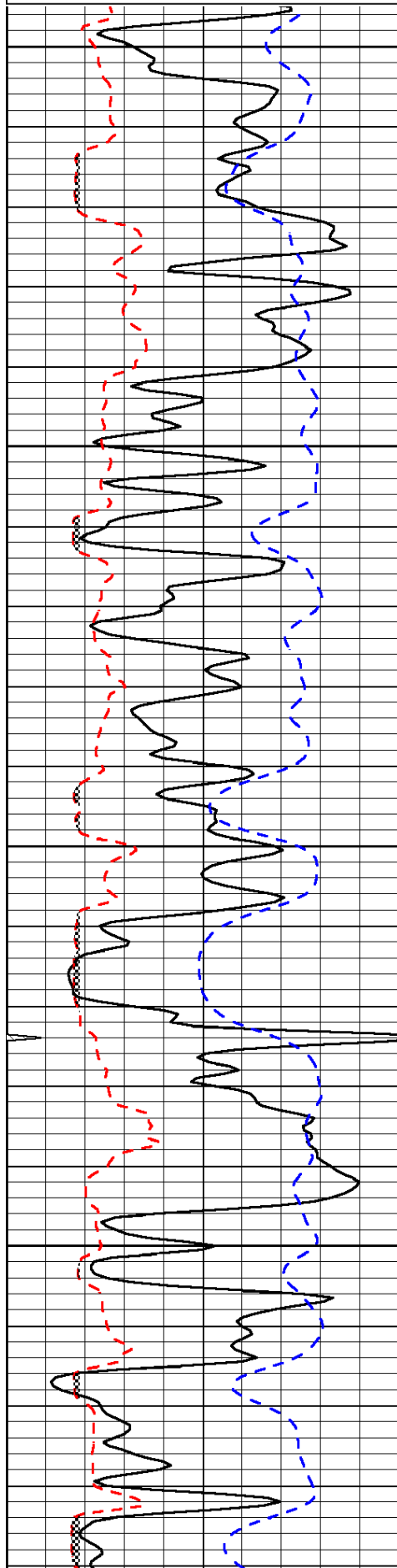
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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

Oakley, 11 S to Gove rd, 1/4 E, N into

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



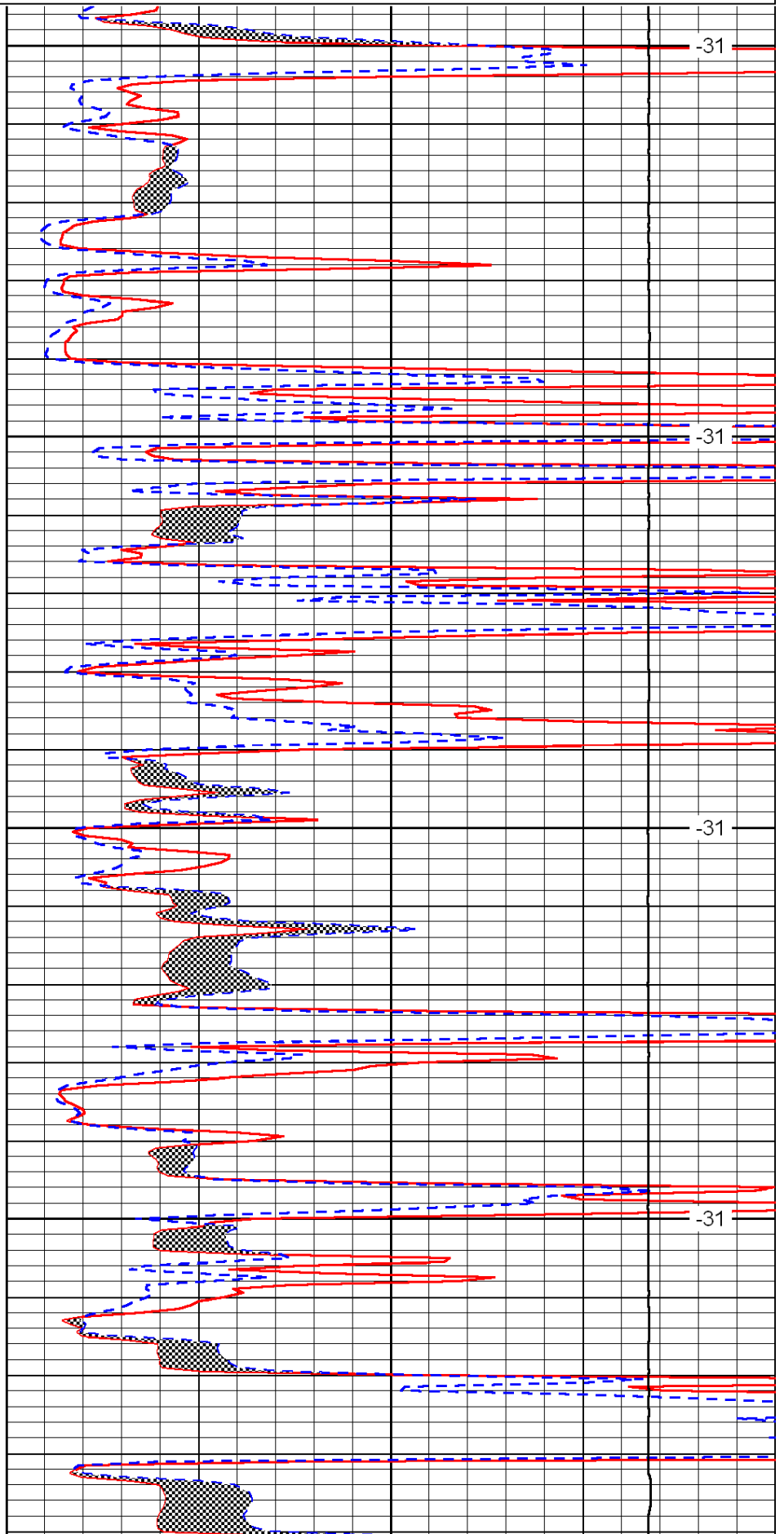
3600

3650

3700

3750

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



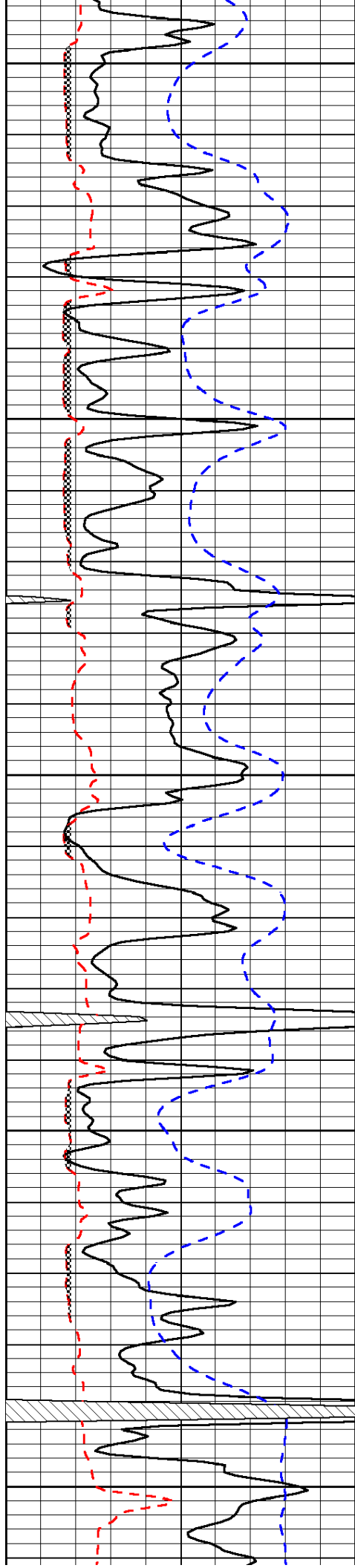
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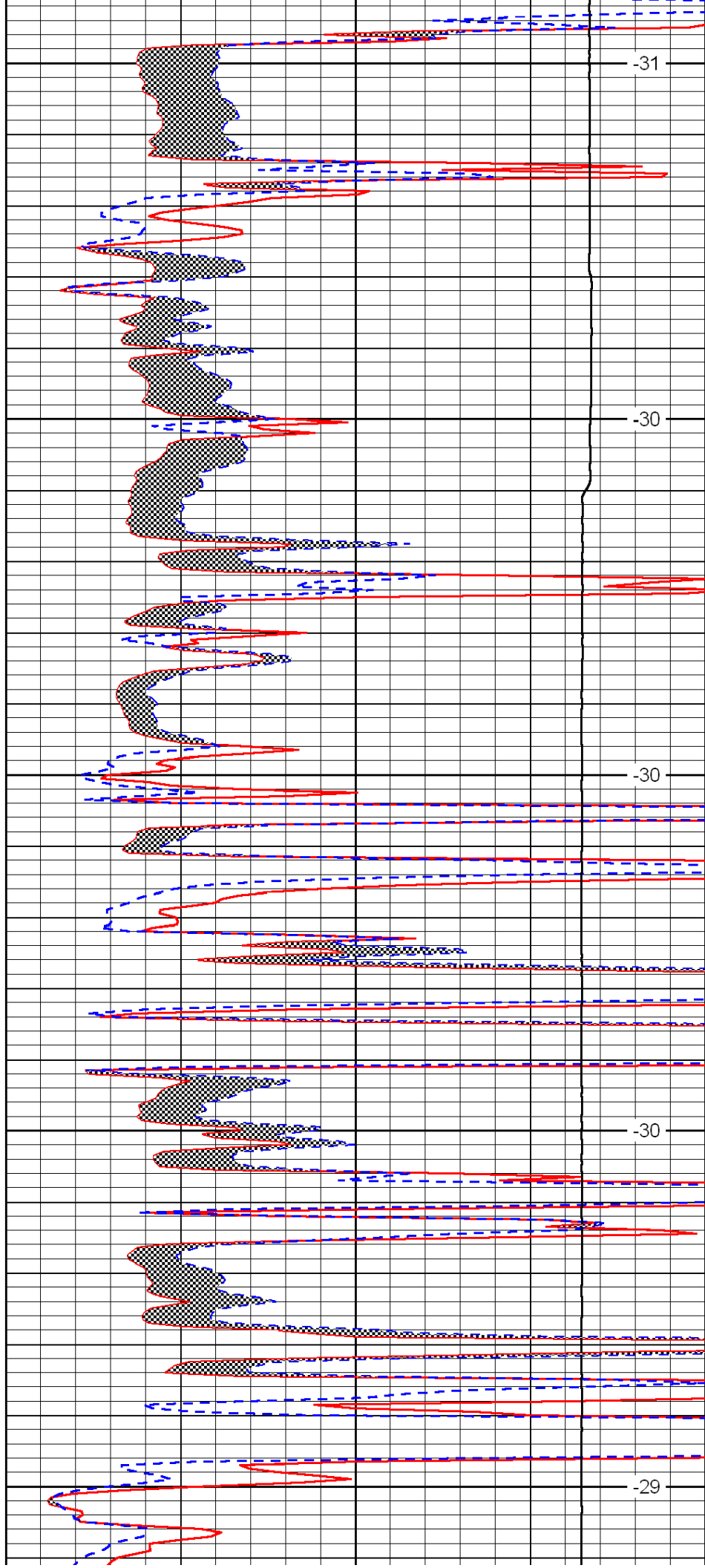
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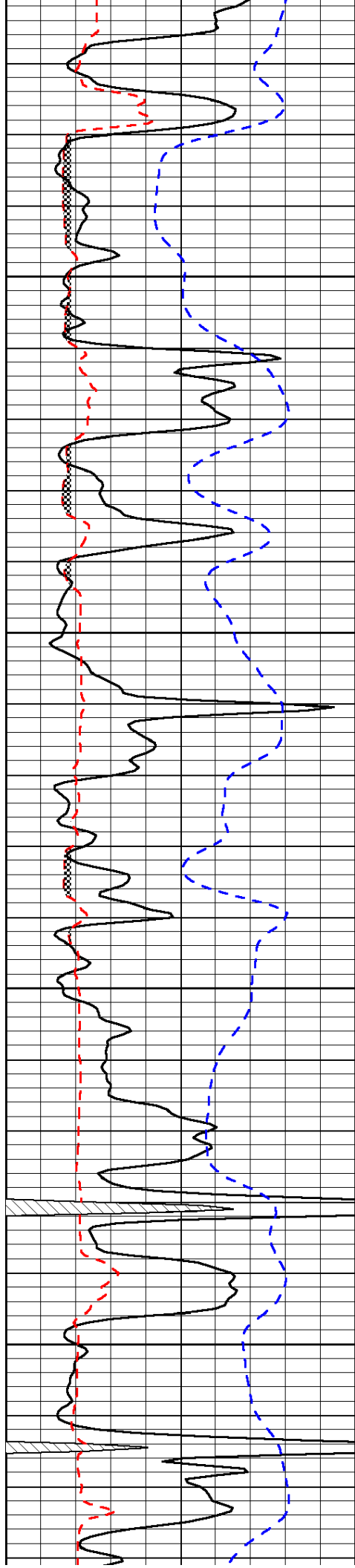
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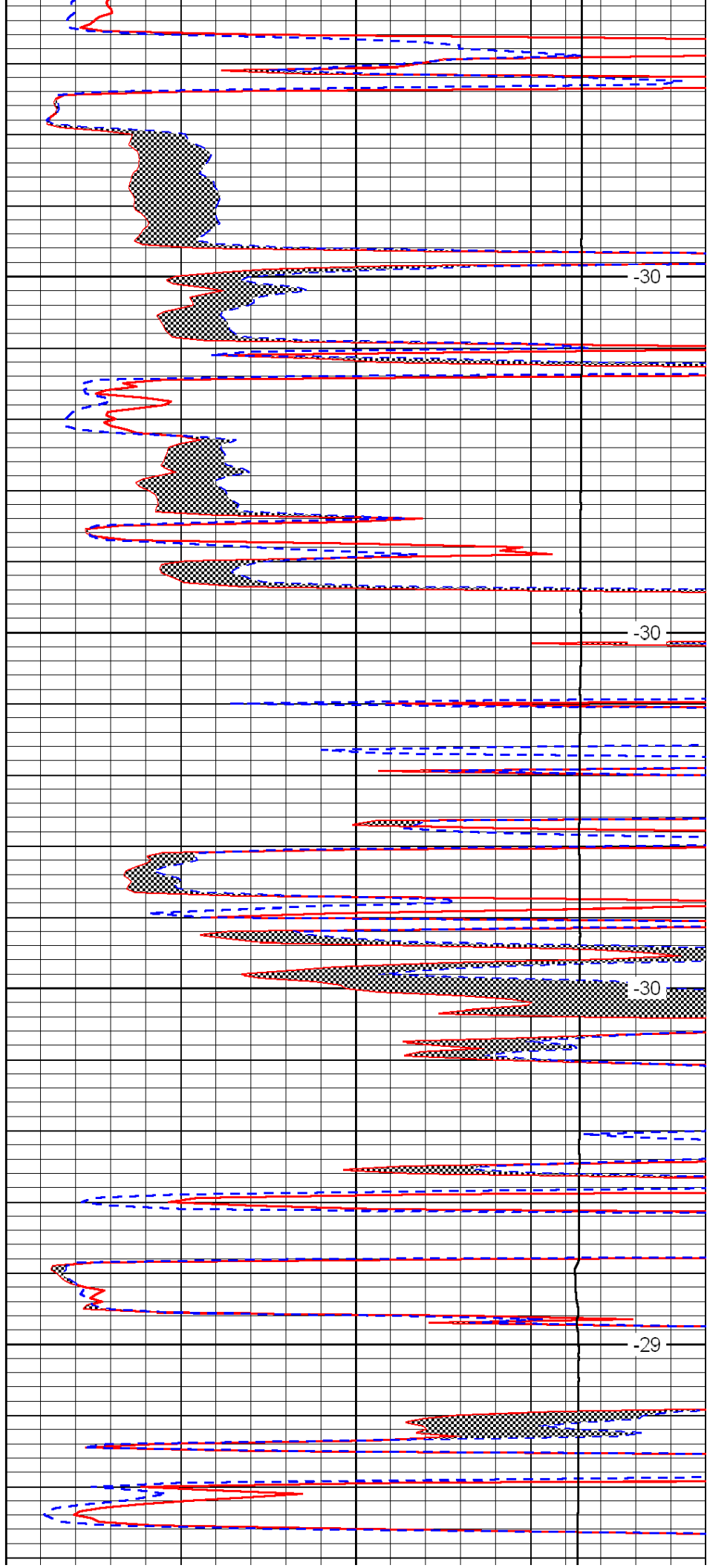


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4150

4200

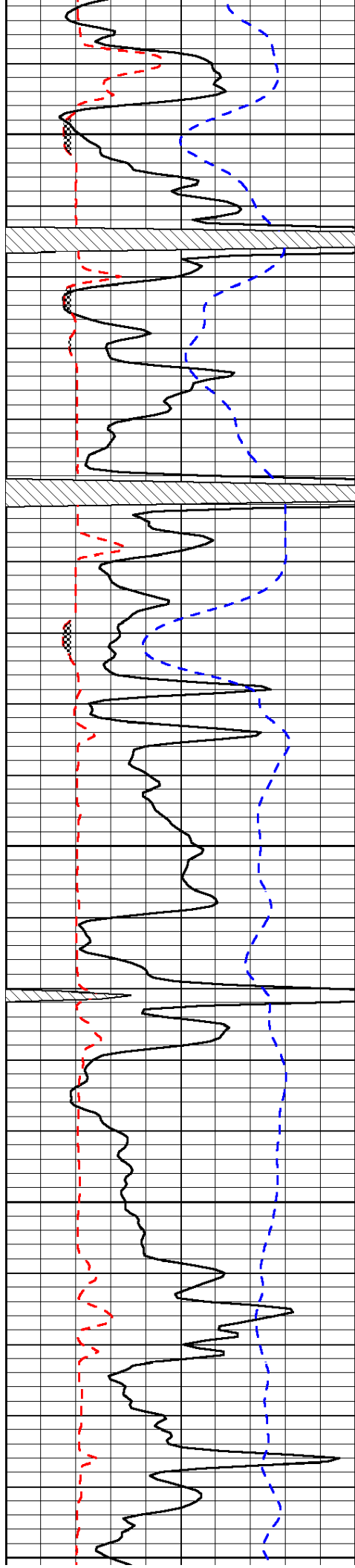


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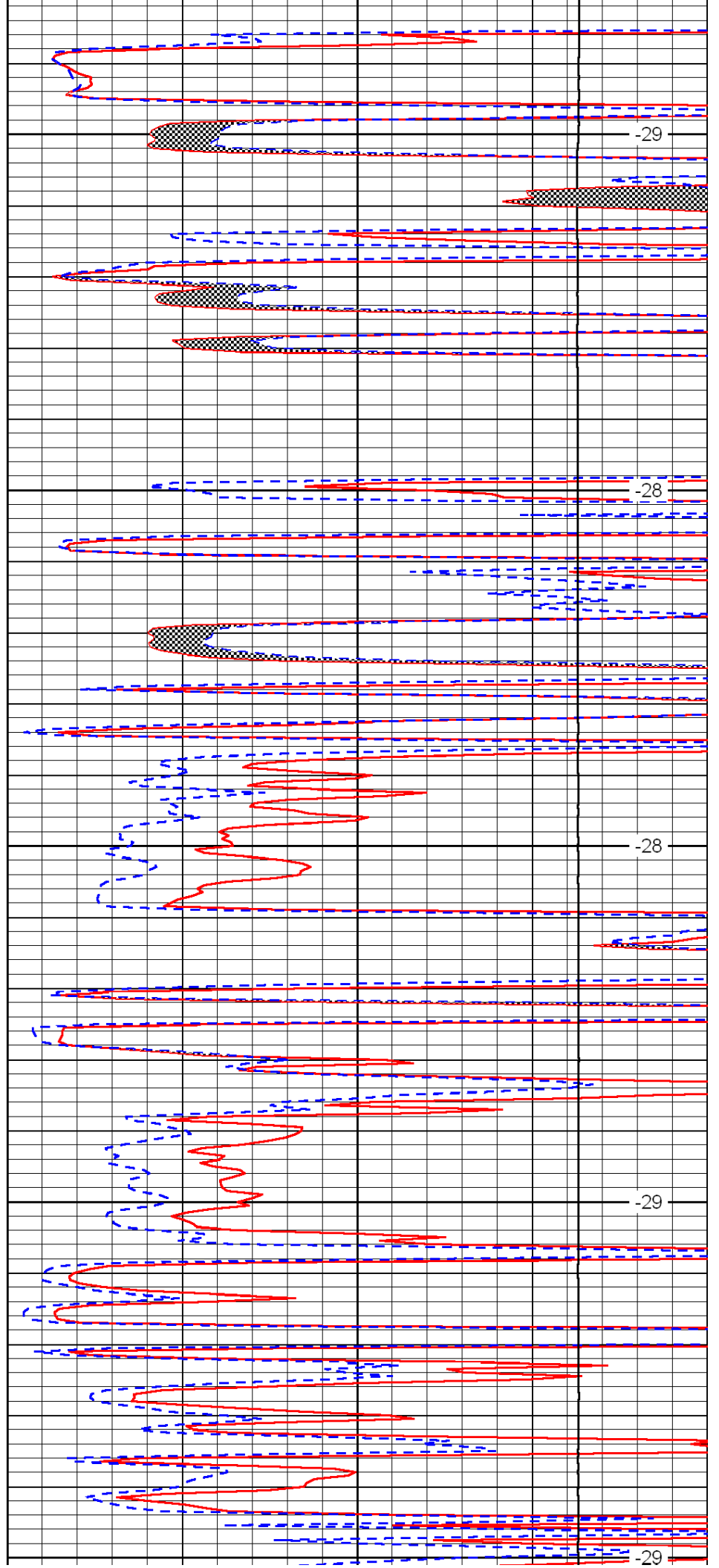
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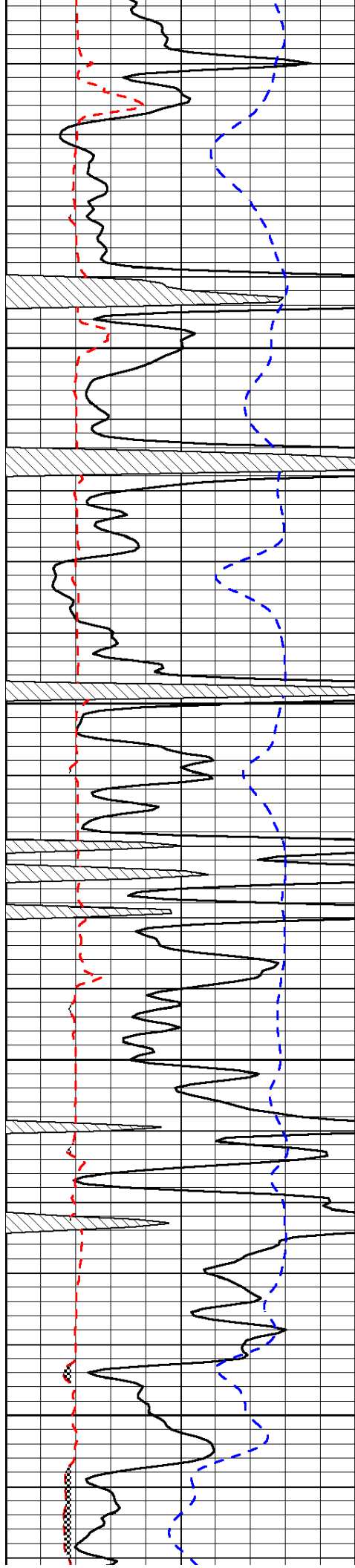
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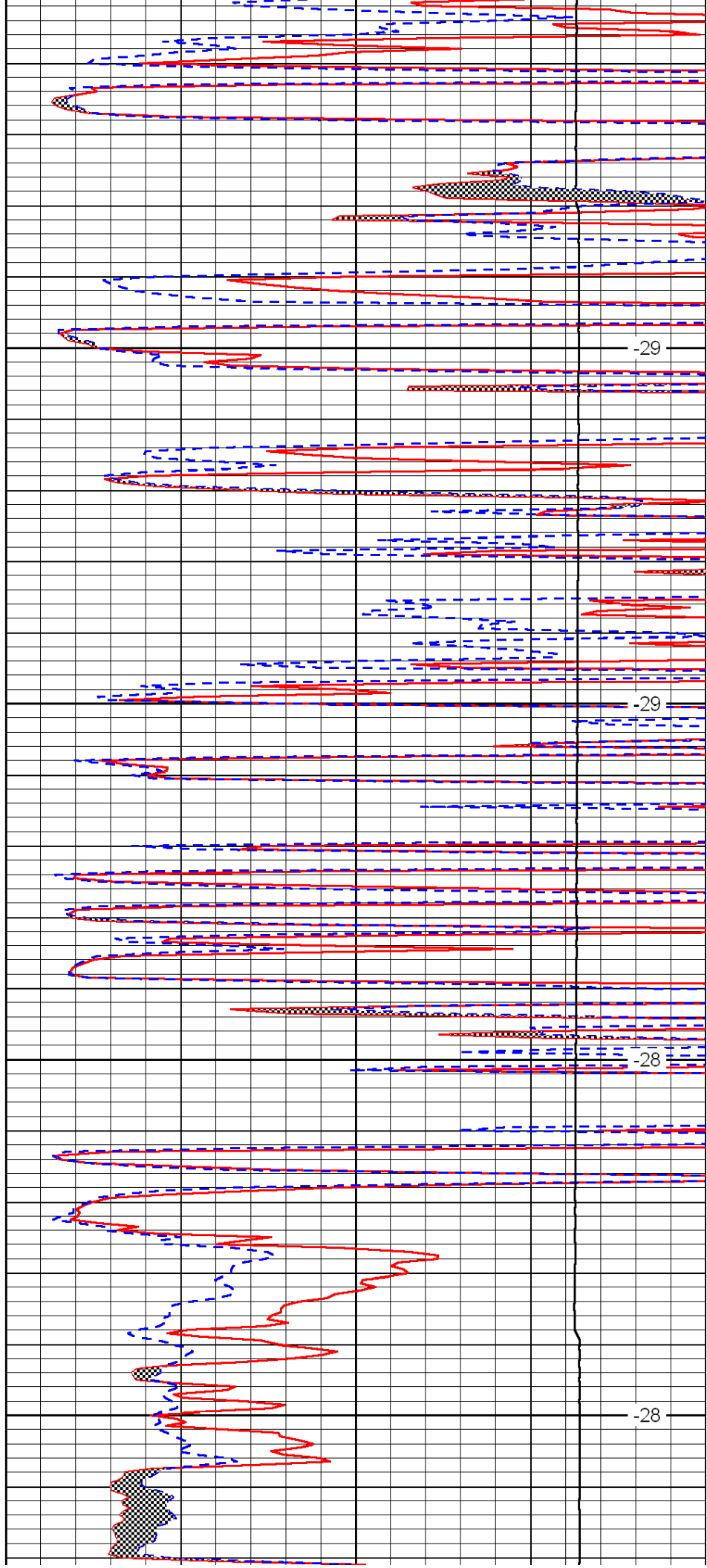


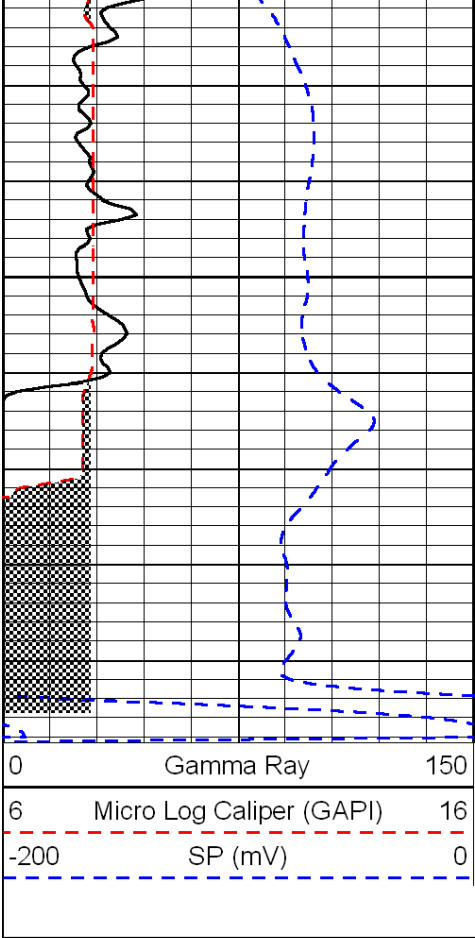
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