



# Microresistivity Log

Pioneer Energy Services

API No.

15-009-25936-00-00

Company Bird Dog Oil, LLC

Well Lakin-Sieker #1-23

Field Lanterman

County Barton State Kansas

Location 1335' FNL & 1000' FWL

Sec: 23 Twp: 19S Rge: 11W

Other Services  
CNL/CDL  
DIL/BHCS

Permanent Datum Ground Level Elevation 1775

Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

Date 2/2/2014

Run Number Two

Depth Driller 3450

Depth Logger 3448

Bottom Logged Interval 3447

Top Log Interval 2600

Casing Driller 8.625 @ 309

Casing Logger 309

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 8500

Density / Viscosity 9.3 47

pH / Fluid Loss 8.0 8.0

Source of Sample Flowline

Rm @ Meas. Temp 0.30 @ 38

Rmf @ Meas. Temp 0.23 @ 38

Rmc @ Meas. Temp 0.41 @ 38

Source of Rmf / Rmc Charts

Rm @ BHT 0.10 @ 111

Operating Rig Time 5 Hours

Max Rec. Temp. F 111

Equipment Number 10

Location Hays

Recorded By D. Schmidt

Witnessed By Adam Nighswonger

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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.

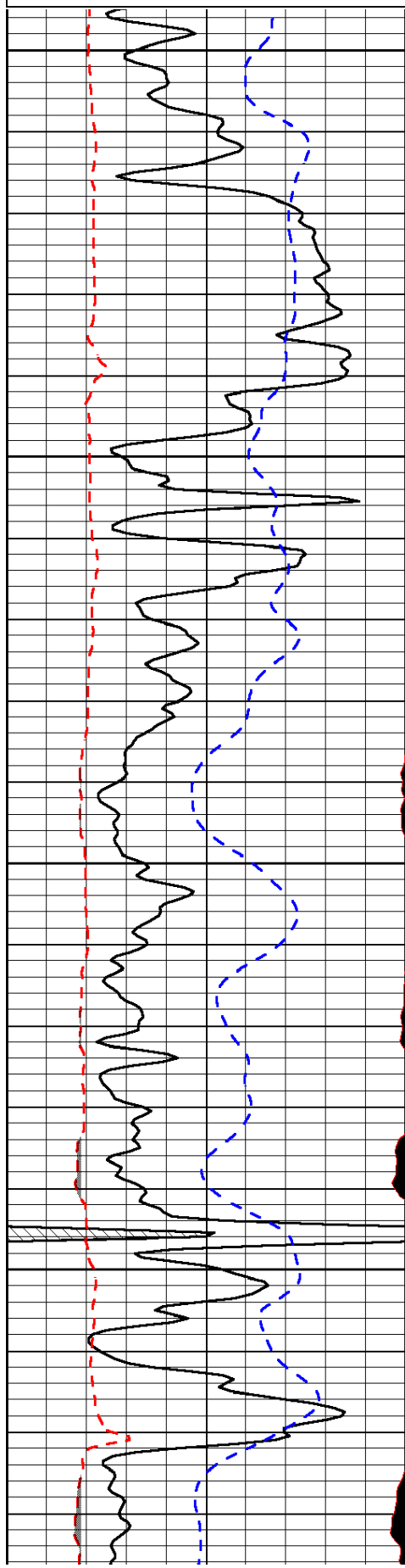
## Comments

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

Ellinwood,  
3 East to 140 Rd, 2 1/2 North,  
East & North into

Database File: birddog\_020214hd.db  
Dataset Pathname: dil/bdstck  
Presentation Format: micro  
Dataset Creation: Sun Feb 02 05:42:50 2014  
Charted by: Depth in Feet scaled 1:240

|                                         |                  |       |
|-----------------------------------------|------------------|-------|
| Charted by: Depth in Feet scaled 1:2.10 |                  |       |
| 0                                       | Gamma Ray (GAPI) | 150   |
| 6                                       | MCAL (in)        | 16    |
| 2.875                                   | Mud Cake (in)    | 7.875 |
| -200                                    | SP (mV)          | 0     |



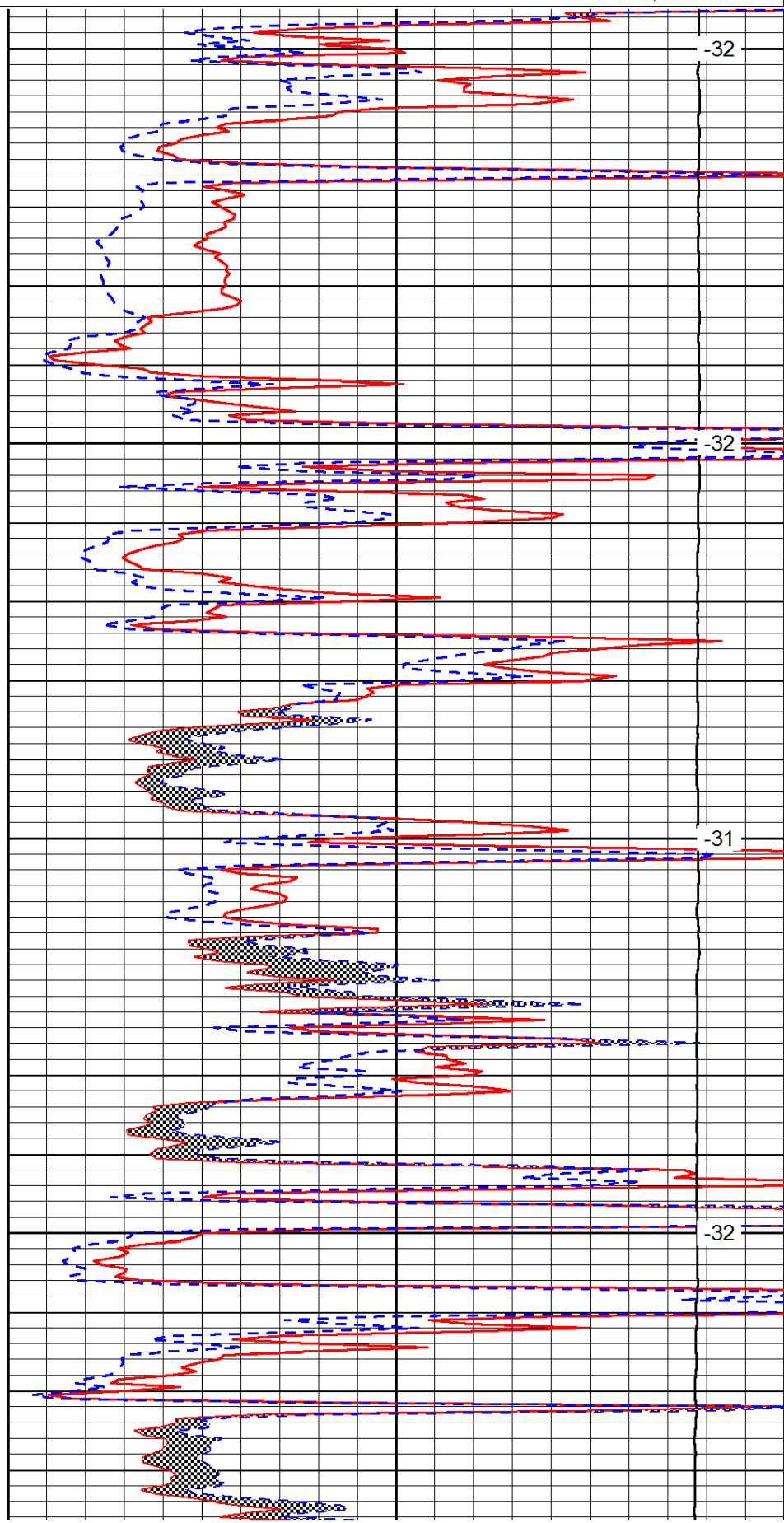
2600

2650

2700

2750

|       |                             |               |
|-------|-----------------------------|---------------|
| 0     | Micro Inverse 1 X 1 (Ohm-m) | 40            |
| 0     | Micro Normal 2" (Ohm-m)     | 40            |
| 10000 | Line Weight (lb)            | 0             |
|       |                             | LSPD (ft/min) |

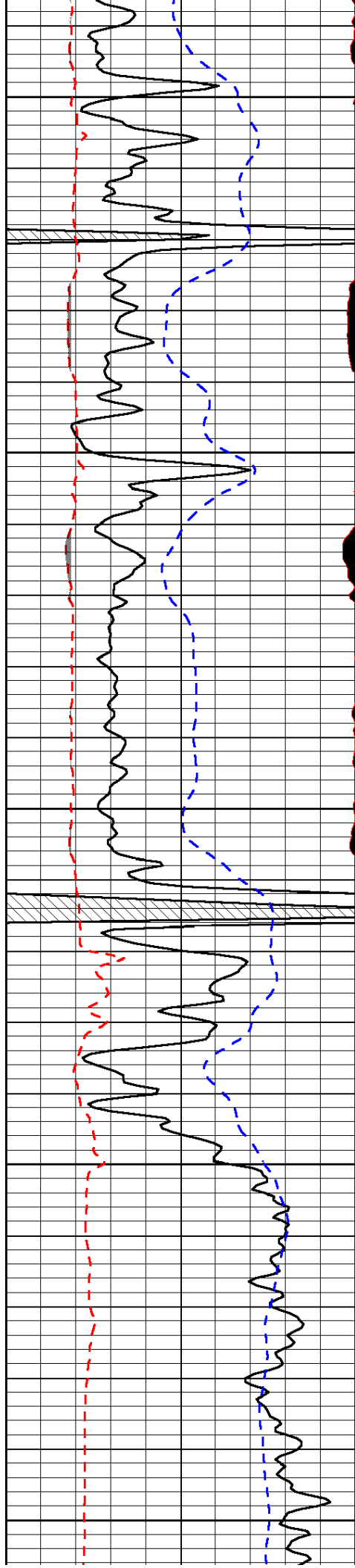


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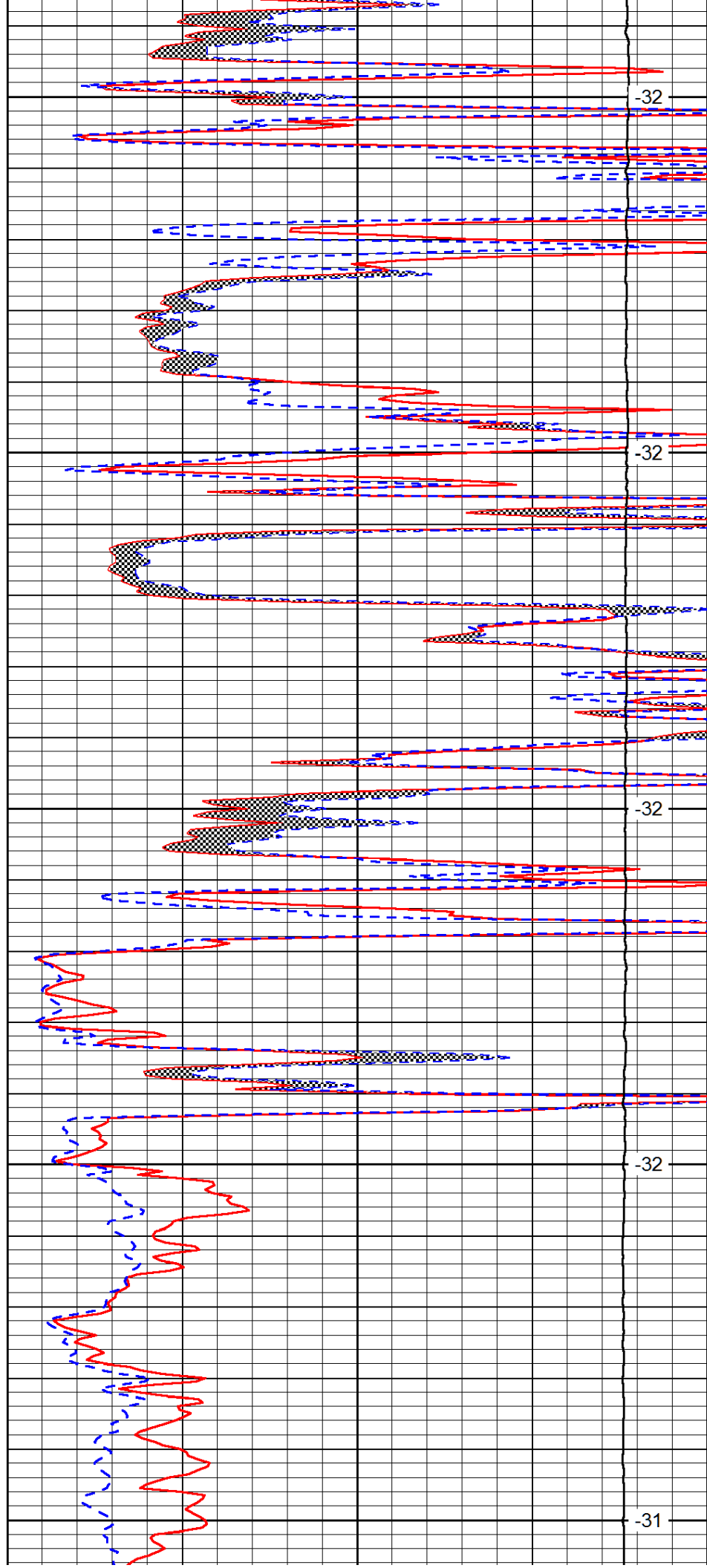
2800

2850

2900

2950

3000



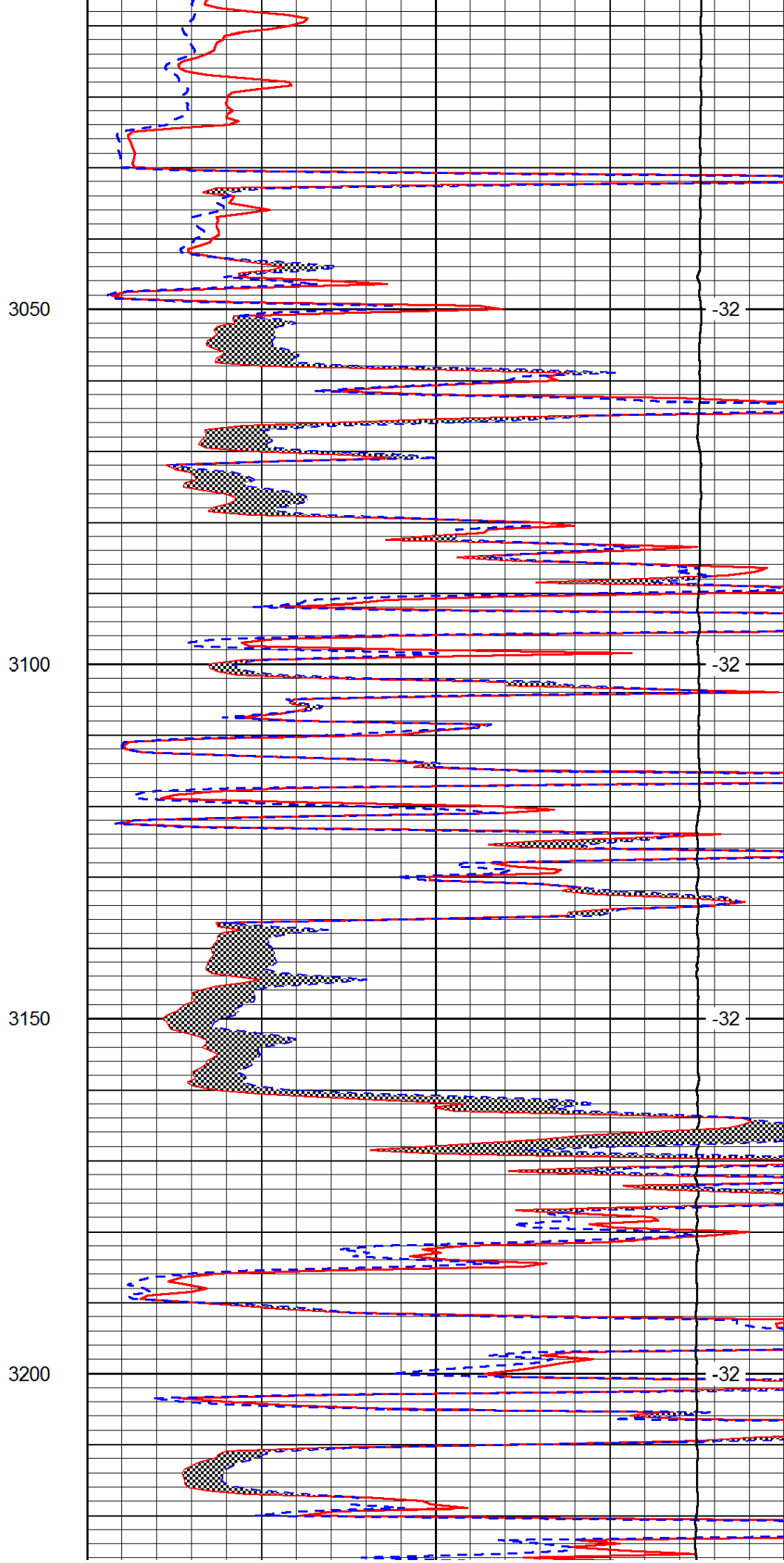
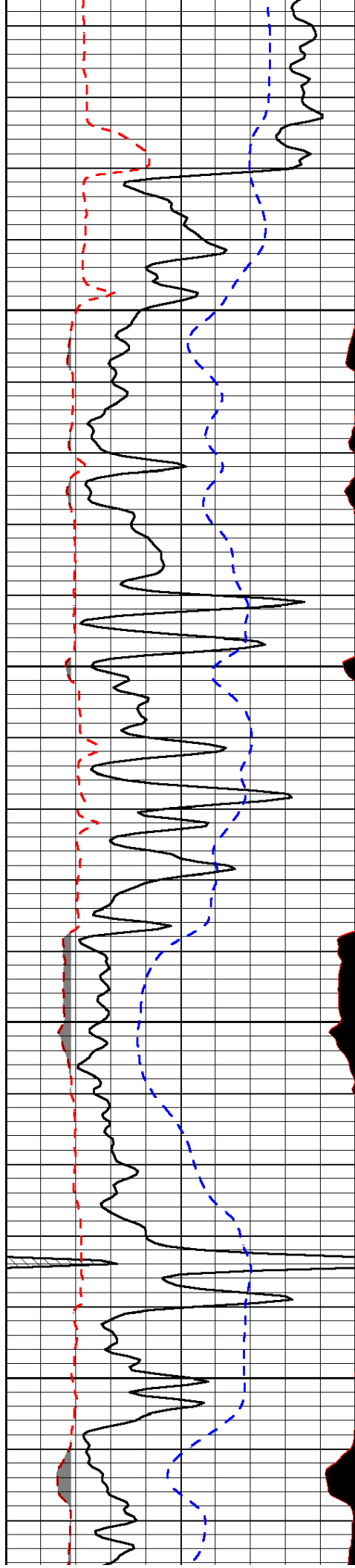
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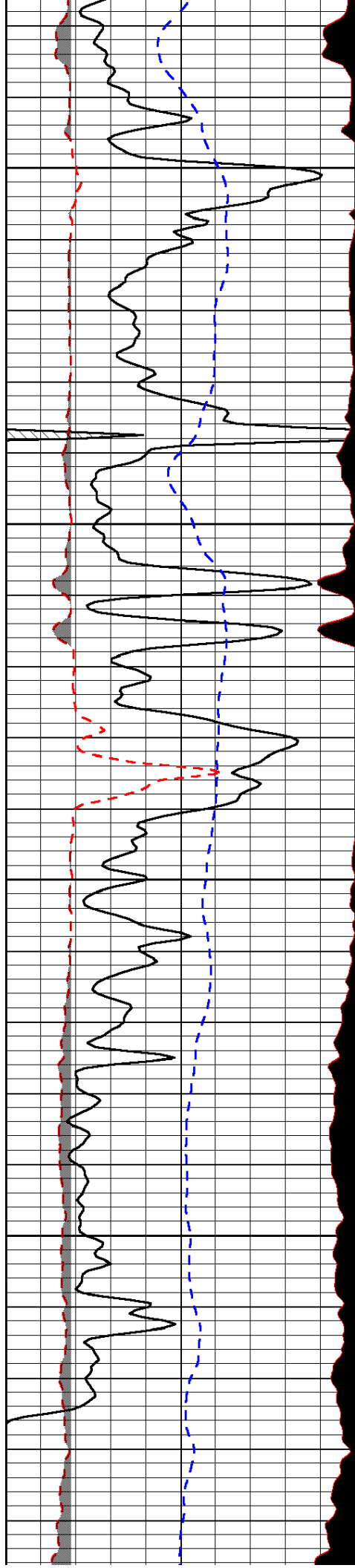
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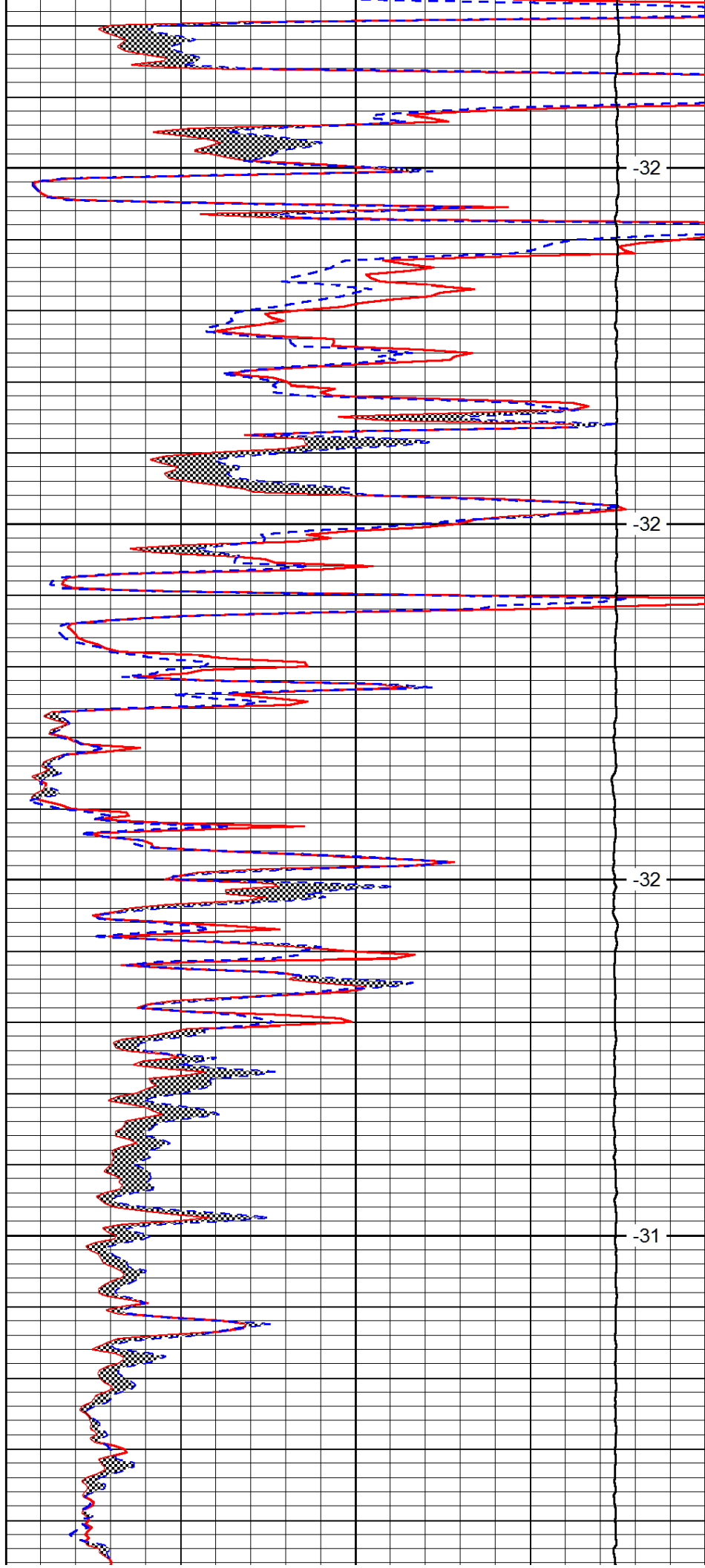


3250

3300

3350

3400



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