



Microresistivity Log

Pioneer Energy Services

API No.

15-009-25,828-00-00

Company Hupfer Operating, Inc.

Well Knop #A - 2

Field Chase - Silica

County Barton State

Kansas

Location 1560' FSL & 2065' FEL

Sec: 32 Twp: 19 S Rge: 11 W

Other Services
CNL/CDL
DIL/BHCS

Permanent Datum Ground Level Elevation 1779
Log Measured From Kelly Bushing 8 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

Date 5/29/2013

Run Number Two

Depth Driller 3366

Depth Logger 3366

Bottom Logged Interval 3365

Top Log Interval 2600

Casing Driller 8.625 @ 262

Casing Logger 259

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 5600

Density / Viscosity 9.1 52

pH / Fluid Loss 9.0 9.2

Source of Sample Flowline

Rm @ Meas. Temp .42 @ 68

Rmf @ Meas. Temp .32 @ 68

Rmc @ Meas. Temp .57 @ 68

Source of Rmf / Rmc Charts

Rm @ BHT .26 @ 112

Operating Rig Time 4 1/2 Hours

Max Rec. Temp. F 112

Equipment Number 91

Location Hays

Recorded By D. Martin

Witnessed By Kurt Talbott

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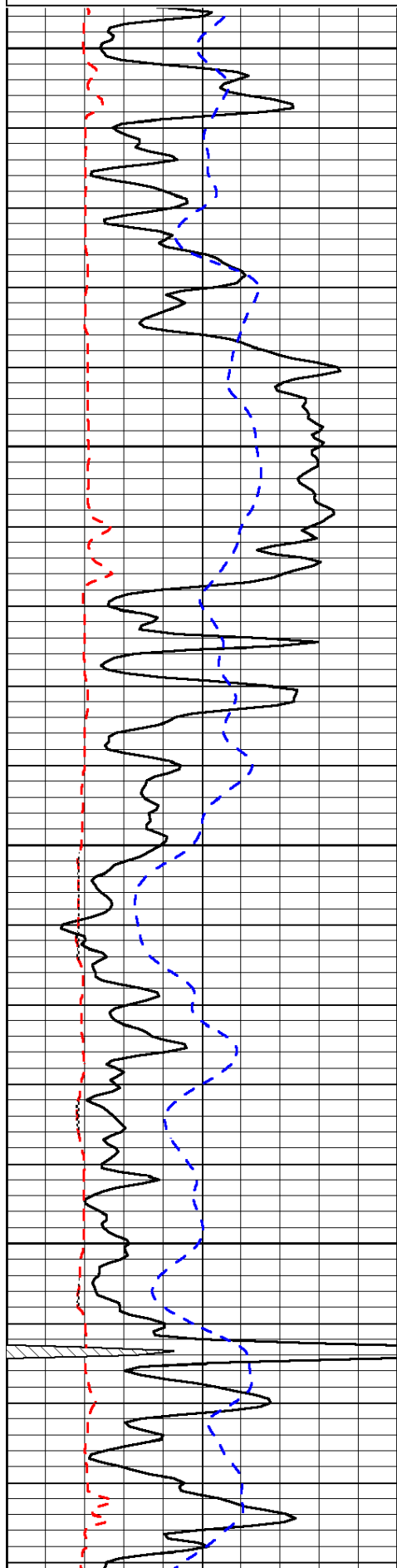
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 Pioneer Energy Services
www.pioneerres.com
785 625 3858
Ellinwood, KS
East Edge of town, S across RR tracks,
E Into

Database File: c:\warrior\data\hupfer_knop #a - 2\hupfer_knop_a-2hd.db
Dataset Pathname: dil\hupstk
Presentation Format: micro
Dataset Creation: Thu May 30 00:01:22 2013
Charted by: Depth in Feet scaled 1:240

Charted by: Depth in Feet scaled 1:2.15		
0	Gamma Ray	150
6	Micro Log Caliper (GAPI)	16
-200	SP (mV)	0

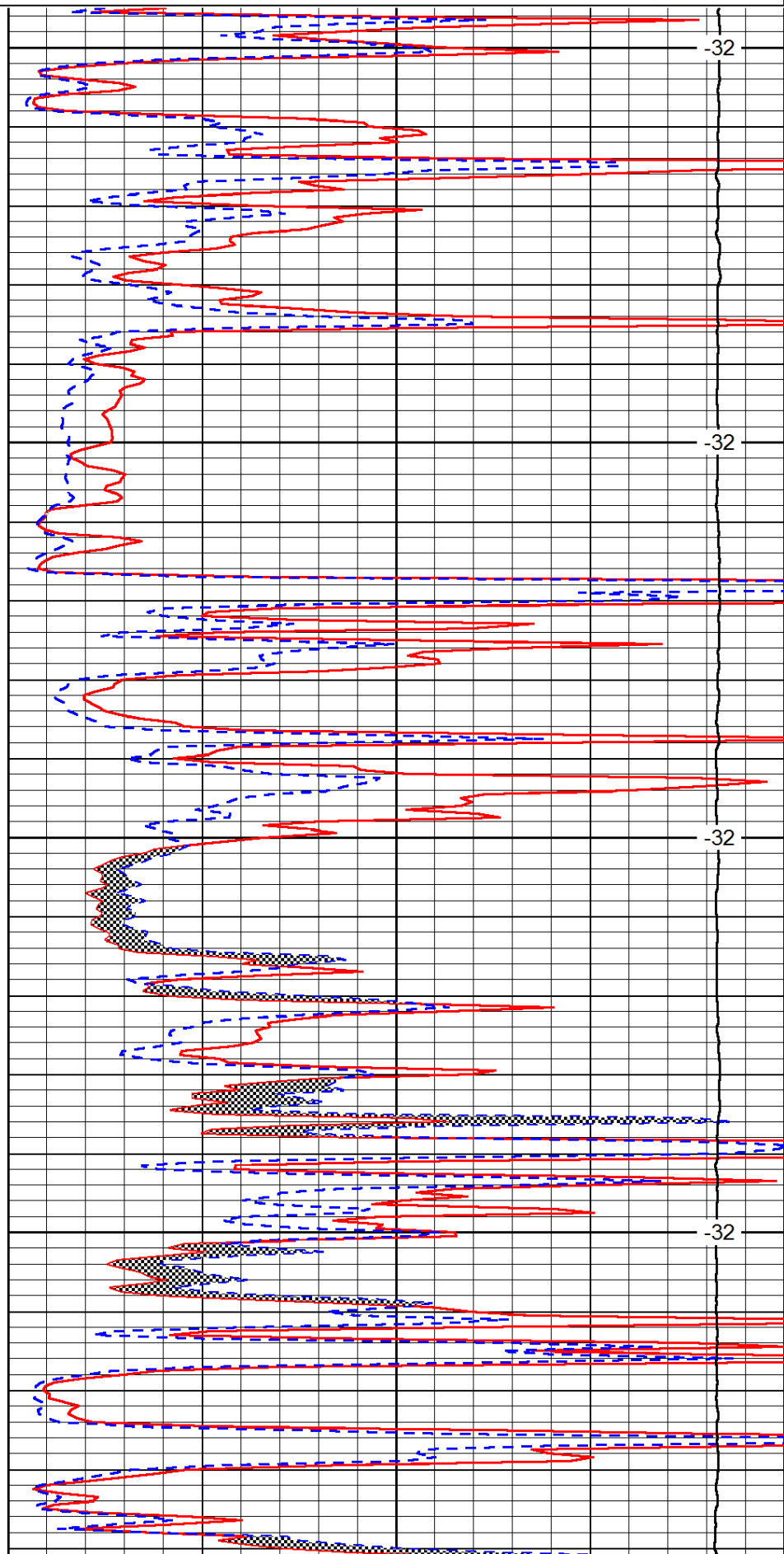


2600

2650

2700

2750



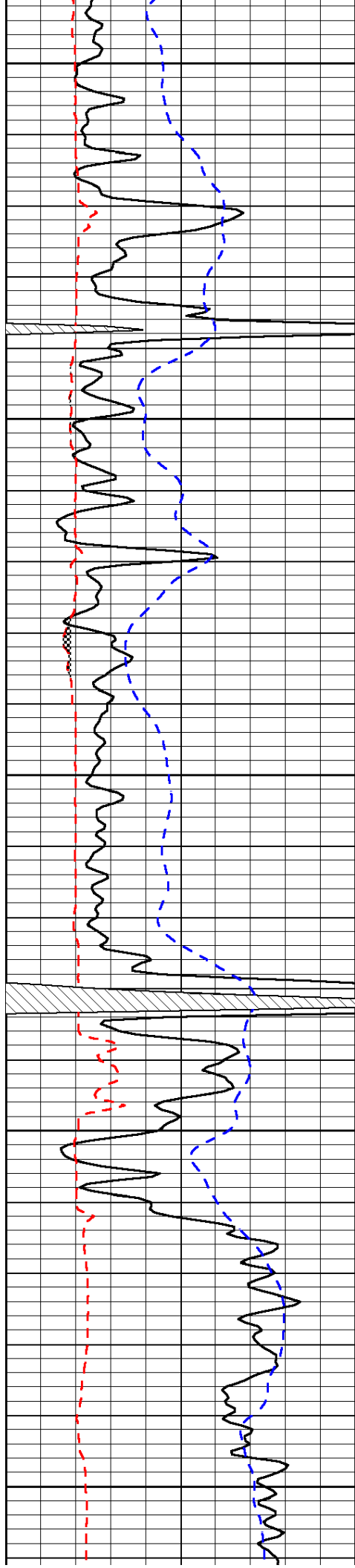
-32

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LSPD



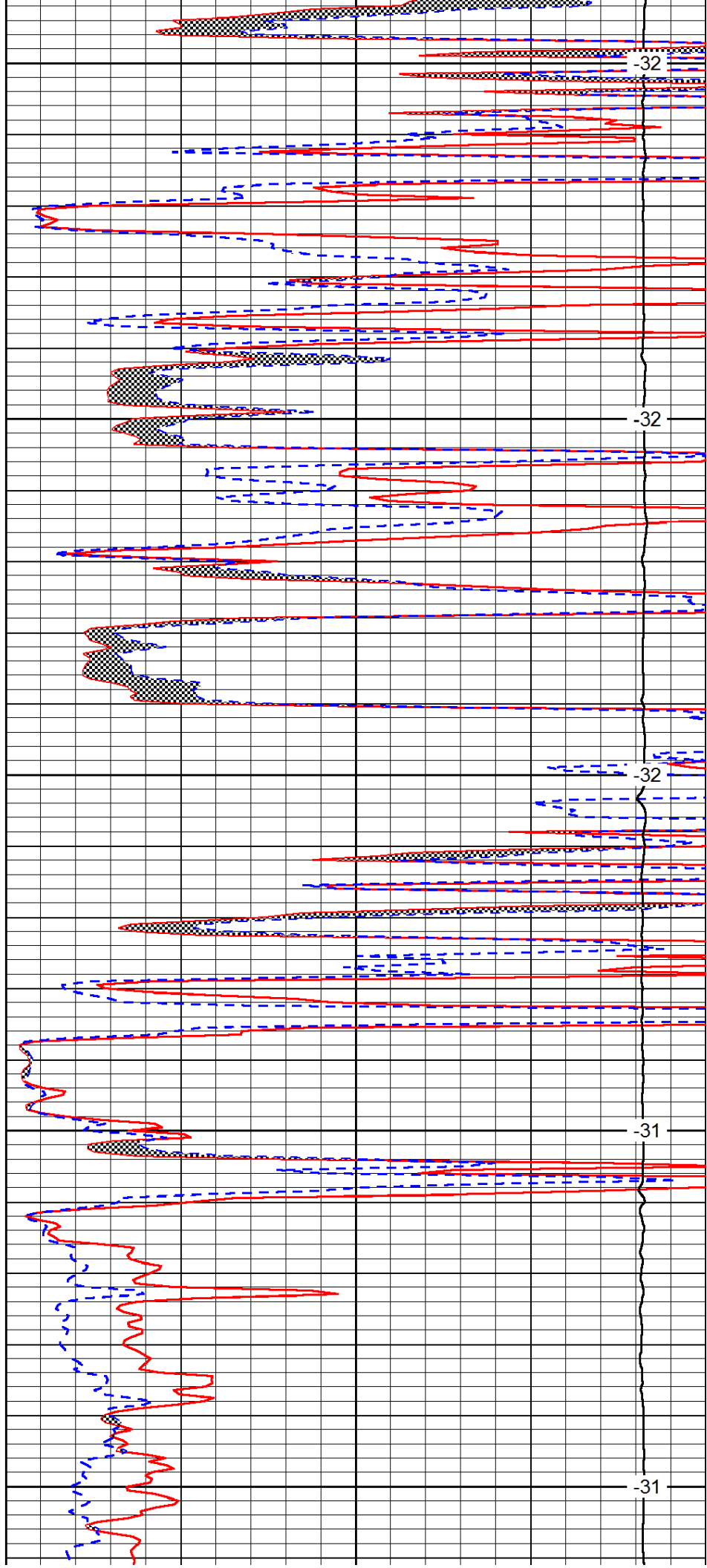
2800

2850

2900

2950

3000



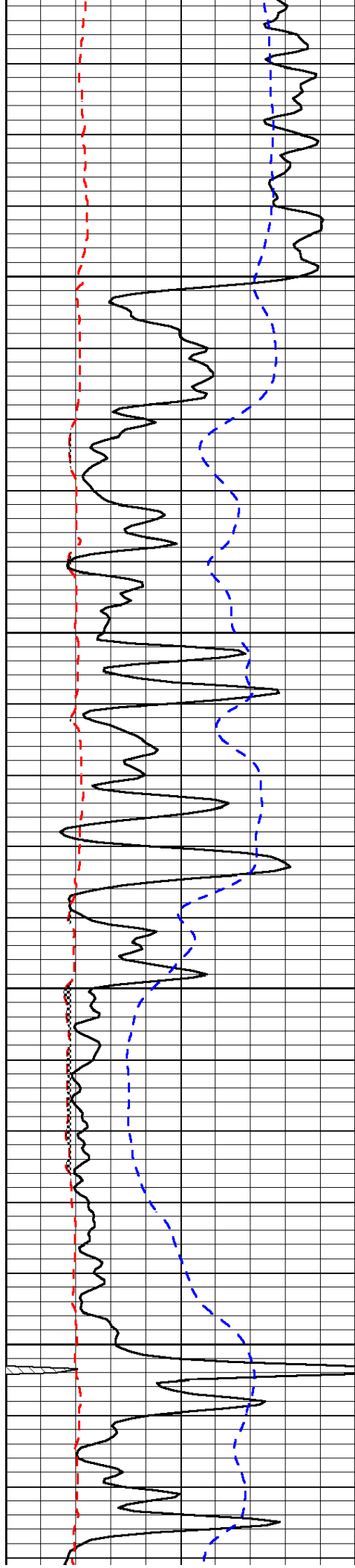
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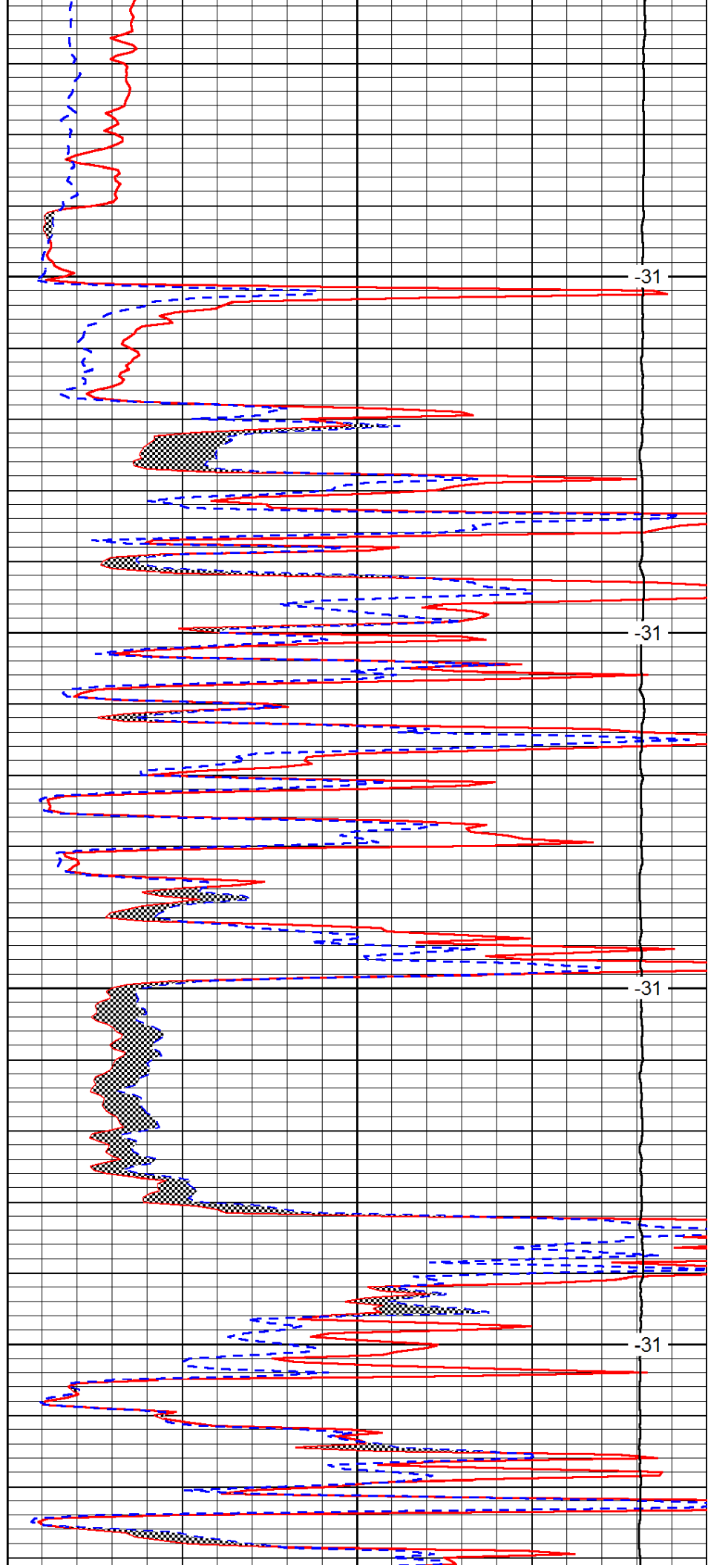


3050

3100

3150

3200

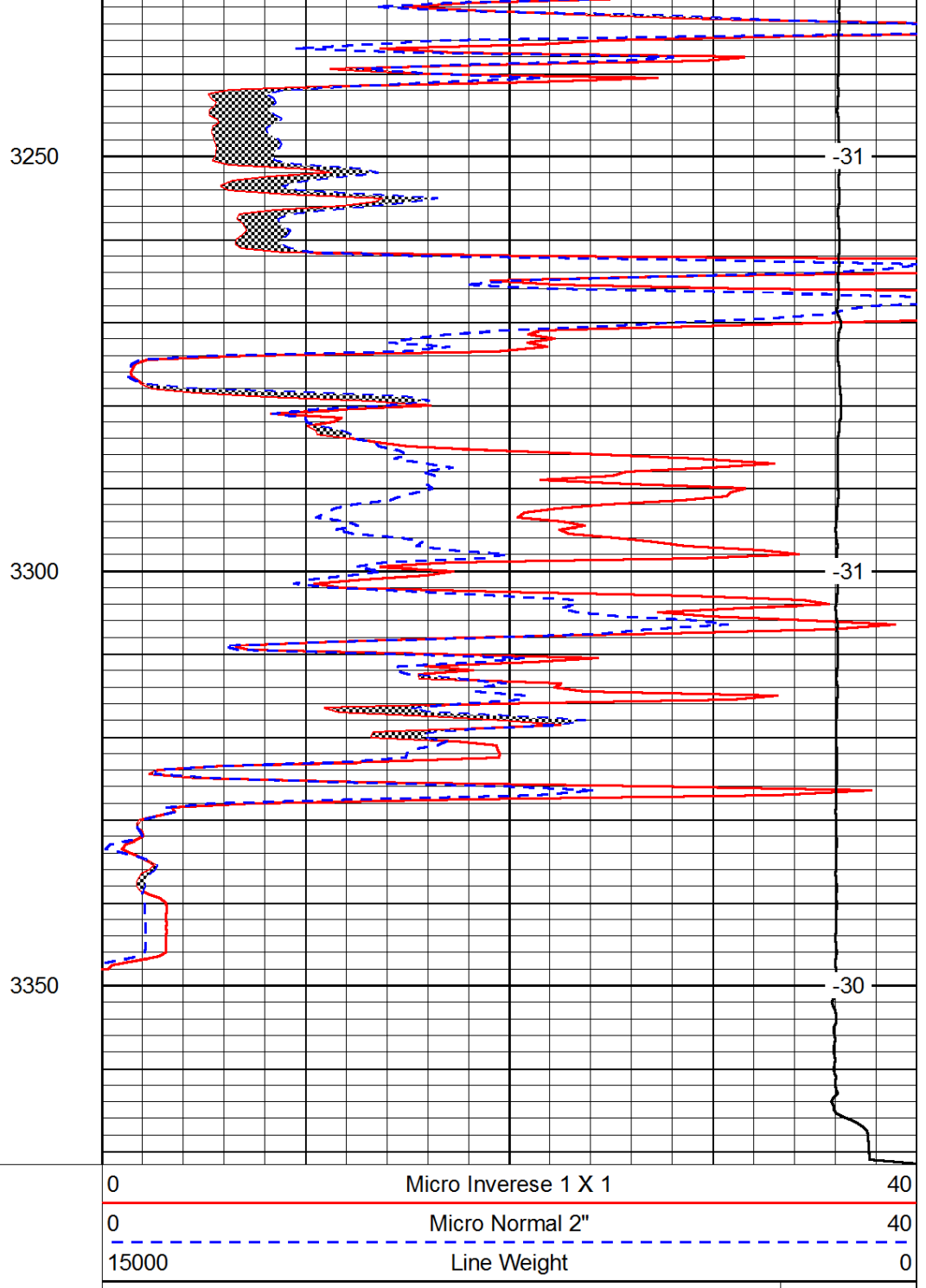
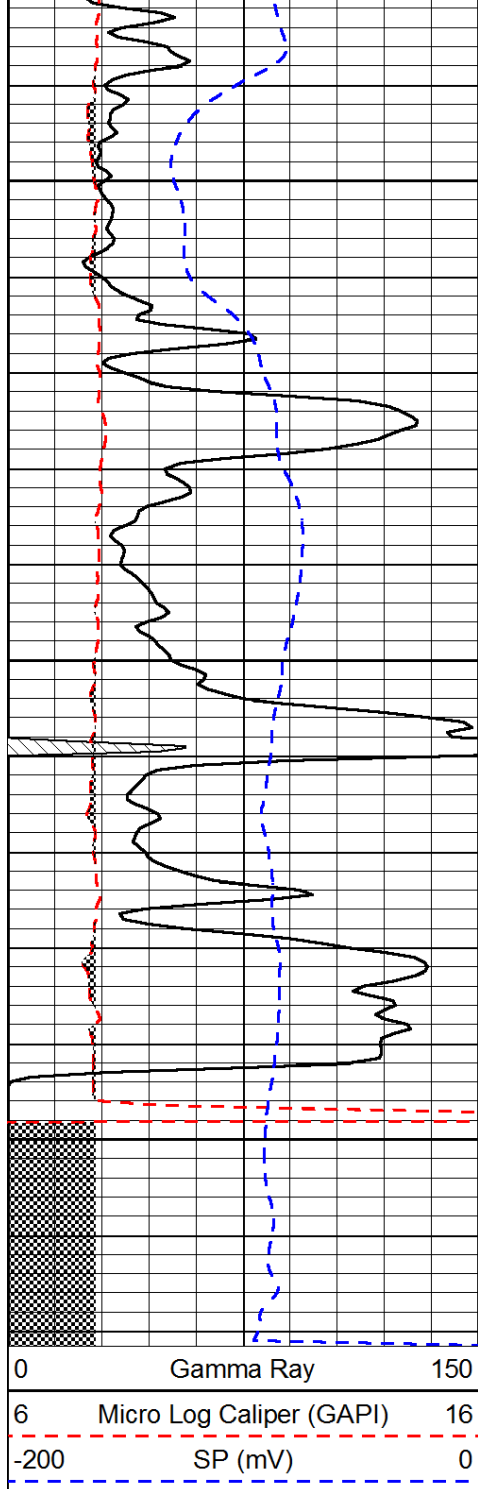


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LSPD