



Pioneer Energy Services

Microresistivity Log

15-065-23964-00-00

API No.

Company **Spiral Energy Corp.**

Well **Pfeifer A #1**

Field **Emor, N**

County **Graham** State

Kansas

Location

1800' FSL & 1400' FWL

Other Services
RAG

Sec: 21 Twp: 9S Rge: 25W

Permanent Datum Ground Level Elevation 2566
Log Measured From Kelly Bushing 7 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Elevation
K.B. 2573
D.F. 2566
G.L. 2566

Date 8/20/2013

Run Number Two

Depth Driller 4112

Depth Logger 4113

Bottom Logged Interval 4112

Top Log Interval 3500

Casing Driller 8.625 @ 225

Casing Logger 217

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 1600

Density / Viscosity 9.2 58

pH / Fluid Loss 10.5 7.8

Source of Sample Flowline

Rm @ Meas. Temp 0.80 @ 74

Rmf @ Meas. Temp 0.60 @ 74

Rmc @ Meas. Temp 1.08 @ 74

Source of Rmf / Rmc Charts

Rm @ BHT 0.50 @ 119

Operating Rig Time 4 Hours

Max Rec. Temp. F 119

Equipment Number 91

Location Hays

Recorded By D. Schmidt

Witnessed By Gayland Simpson

Bill Robinson

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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

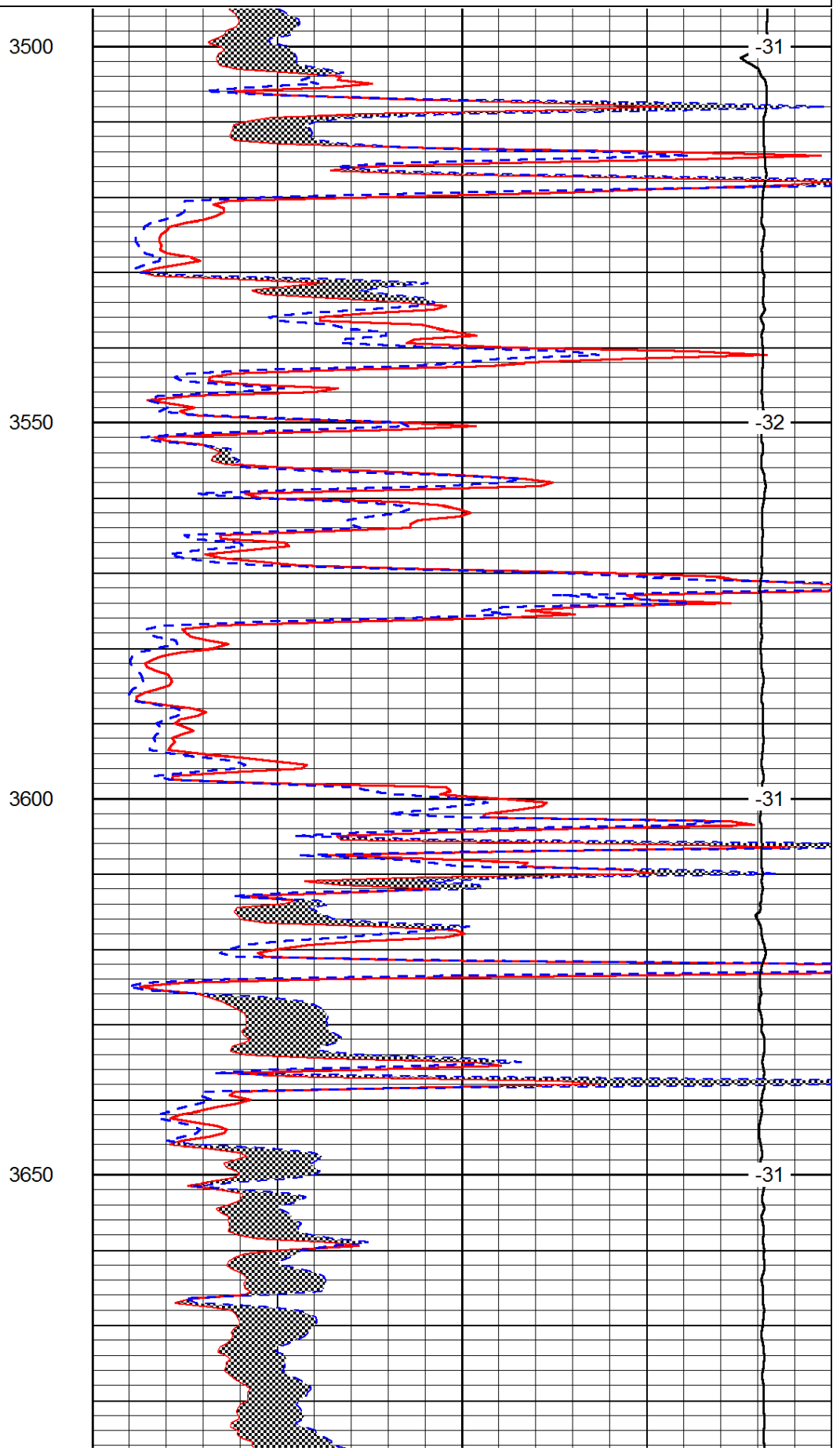
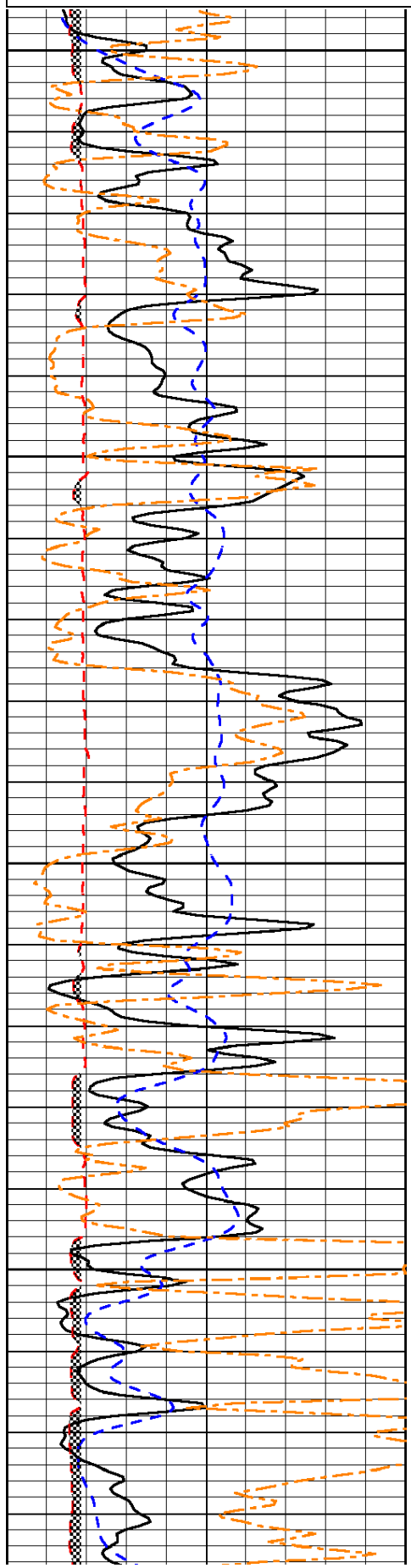
Thank you for using Pioneer Energy Services
www.pioneerenergy.com
 785 625 3858
 St. Peter,
 3 North to H Rd, 2 West to 120 Rd, 1 1/4 North,
 East into

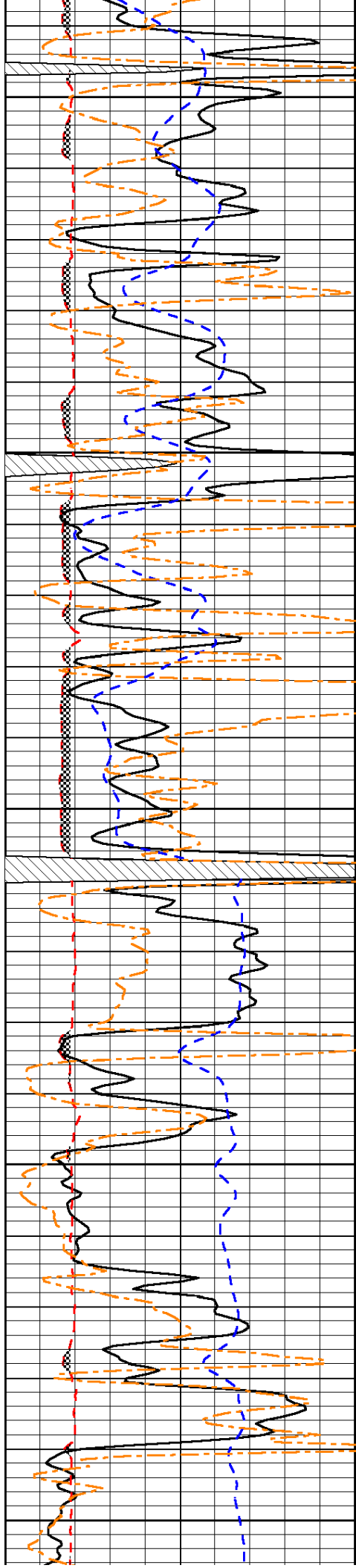
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 Dataset Pathname: rag/spirag
 Presentation Format: micro
 Dataset Creation: Tue Aug 20 11:47:36 2013
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
6	Micro Log Caliper (GAPI)	16
-200	SP (mV)	0
0	RWA	0.5

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

LSPD





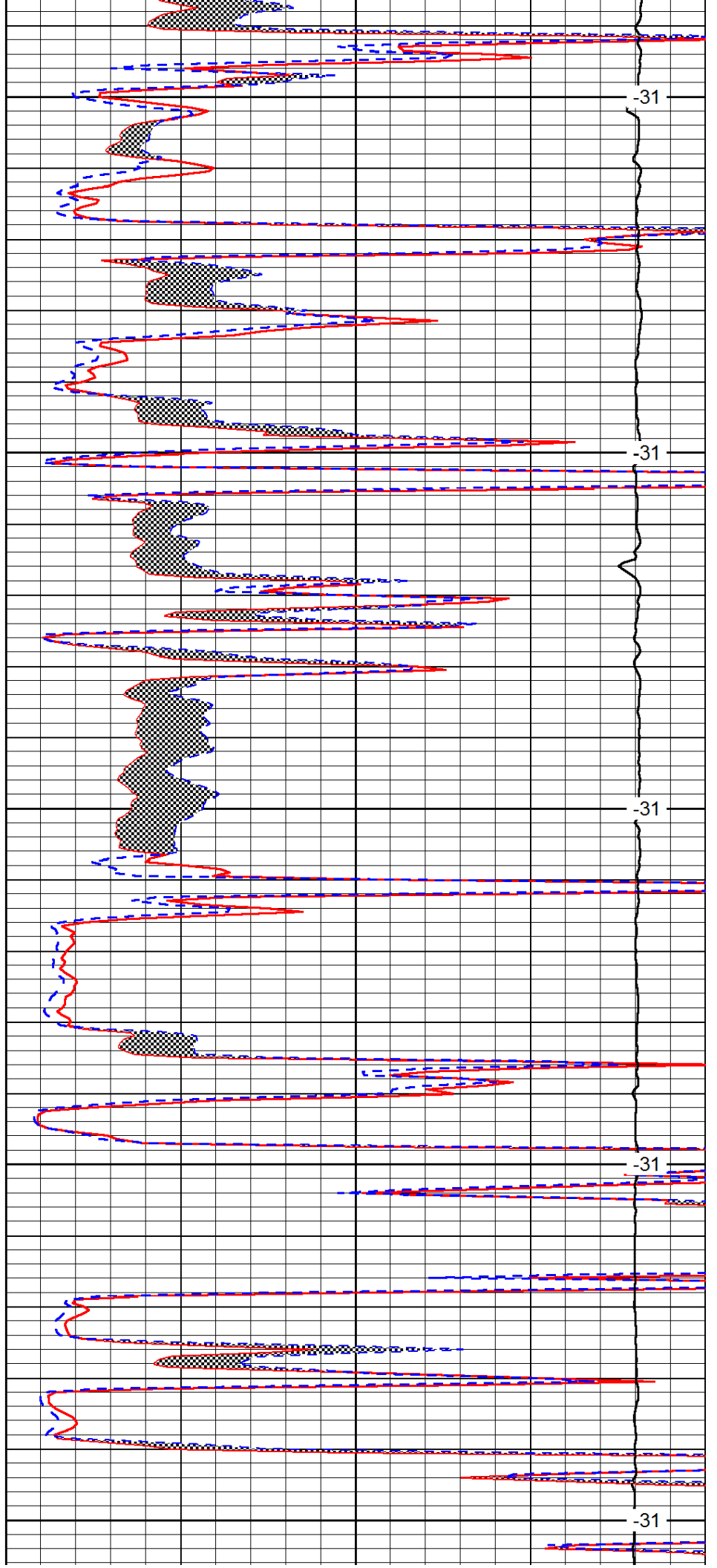
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3750

3800

3850

3900



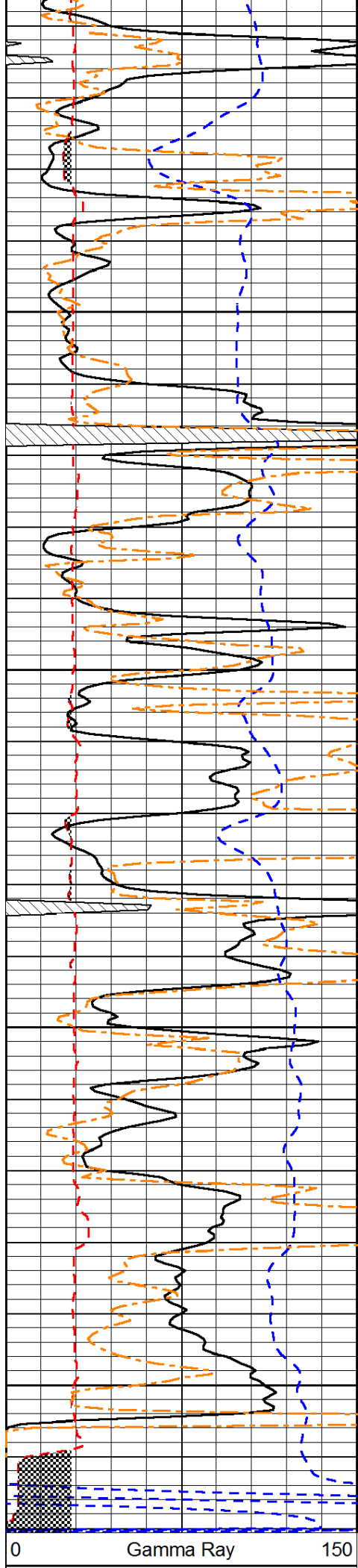
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-31

-31

-31

-31



3950

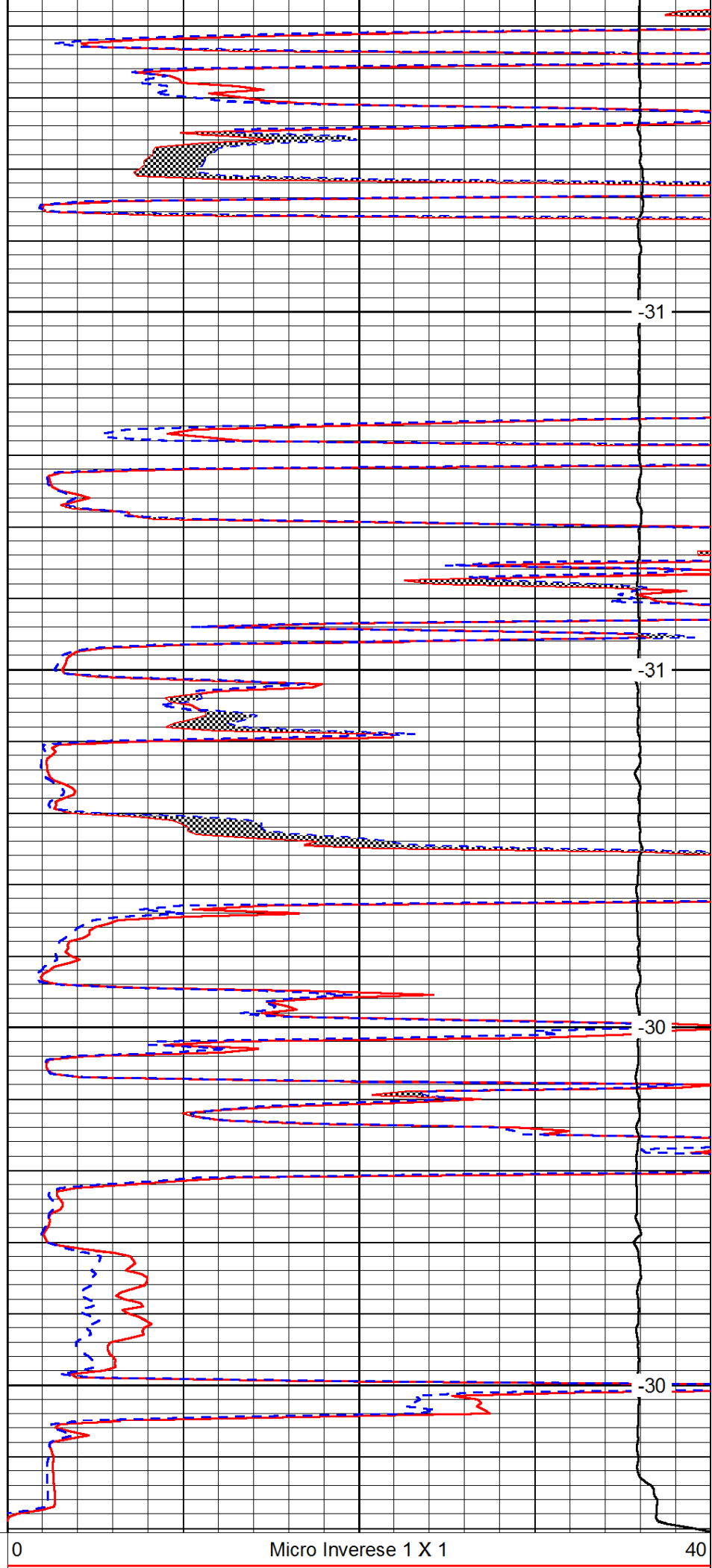
4000

4050

4100

Gamma Ray

150



-31

-31

-30

-30

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