



Microresistivity Log

Pioneer Energy Services

API No.

15-065-23,970-00-00

Company Spiral Energy Corp., LLC

Well Kuehl No. 2

Field Cooper

County Graham

State

Kansas

Location

1320' FSL & 1980' FWL

Sec: 34

Twp: 9S

Rge: 21W

Elevation

Permanent Datum Ground Level

Log Measured From Kelly Bushing

7

Ft. Above Perm. Datum

Drilling Measured From

Kelly Bushing

8/30/2013

Date

Run Number

Depth Driller

Depth Logger

Bottom Logged Interval

Top Log Interval

Casing Driller

Casing Logger

Bit Size

Type Fluid in Hole

Salinity, ppm CL

Density / Viscosity

pH / Fluid Loss

Source of Sample

Rm @ Meas. Temp

Rmf @ Meas. Temp

Rmc @ Meas. Temp

Source of Rmf / Rmc

Rm @ BHT

Operating Rig Time

Max Rec. Temp. F

Equipment Number

Location

Recorded By

Witnessed By

J. Henrickson

Bill Robinson

8/30/2013

Two

3955

3955

3954

3200

8.625 @ 222

219

7.875

Chemical

1,000

9.2

58

11.0

7.6

Flowline

.44 @ 90

.33 @ 90

.59 @ 90

Charts

.34 @ 116

4 Hours

116

15

Hays

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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

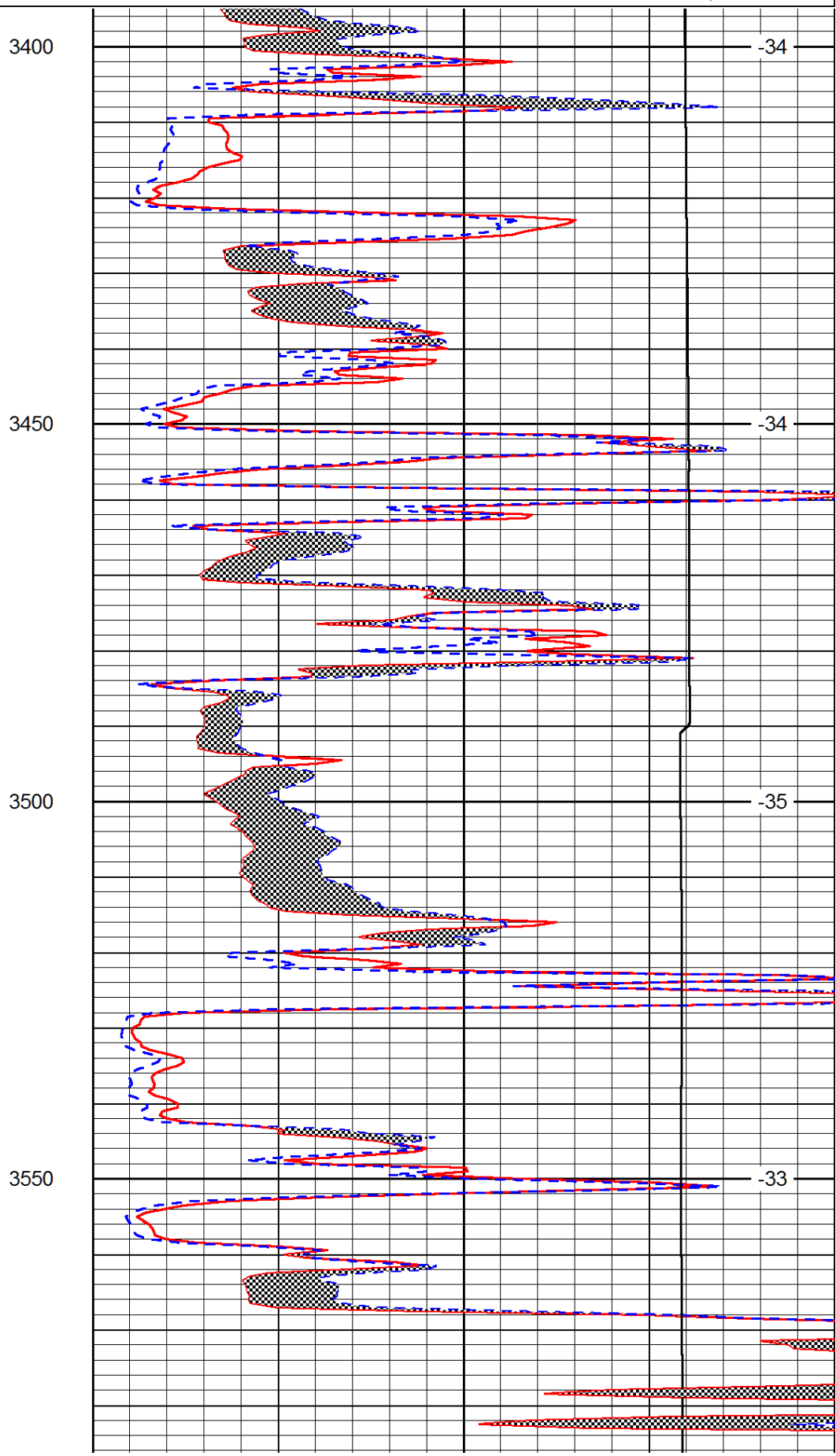
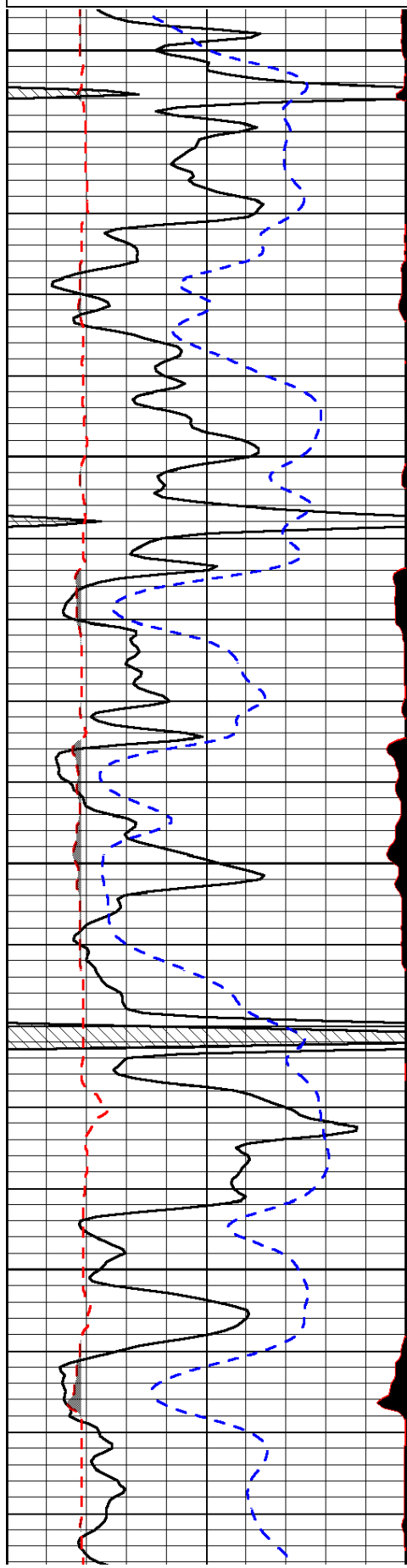
Thank you for using Log-Tech, Inc.
(785) 625-3858

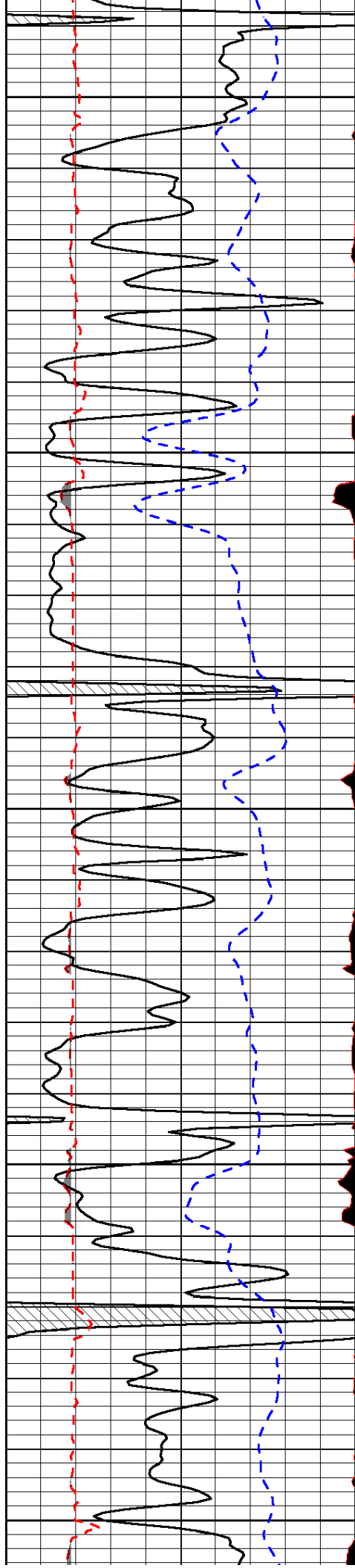
Palco Kansas
South to Y Rd, 4 West to Church, 1 South, 1/2 West, North Into

Database File: spiral_kueunl_2hd.db
Dataset Pathname: RAG/spirrag
Presentation Format: micro
Dataset Creation: Fri Aug 30 15:58:49 2013
Charted by: Depth in Feet scaled 1:240

Charted by: Depth in Feet scaled 1:2.15		
0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	Mud Cake (in)	7.875
-200	SP (mV)	0

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





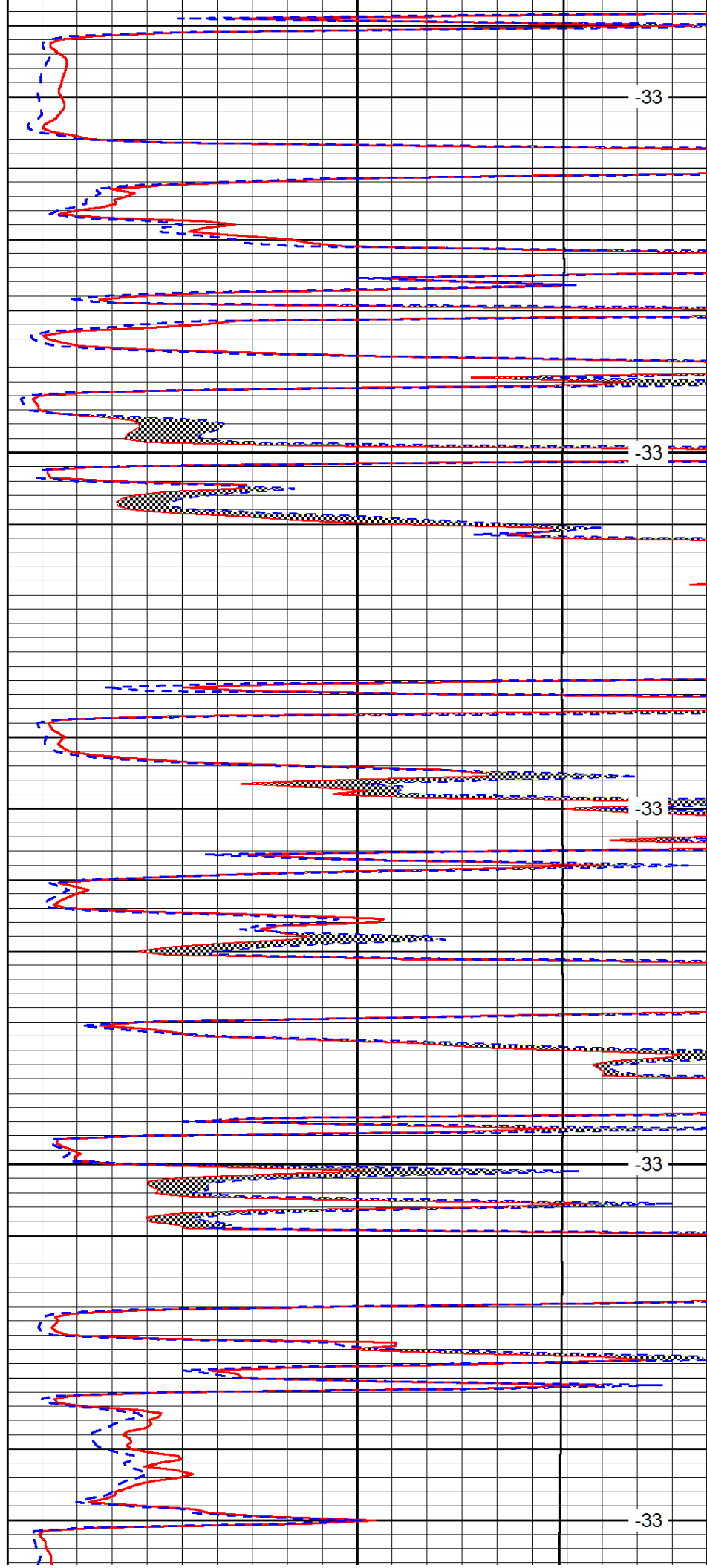
3600

3650

3700

3750

3800



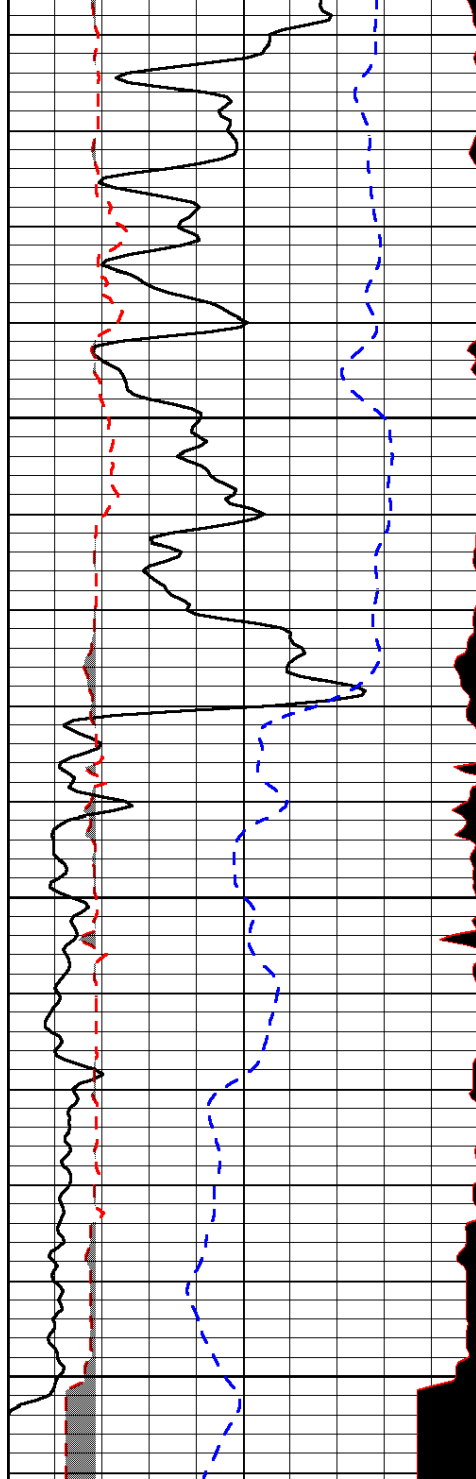
-33

-33

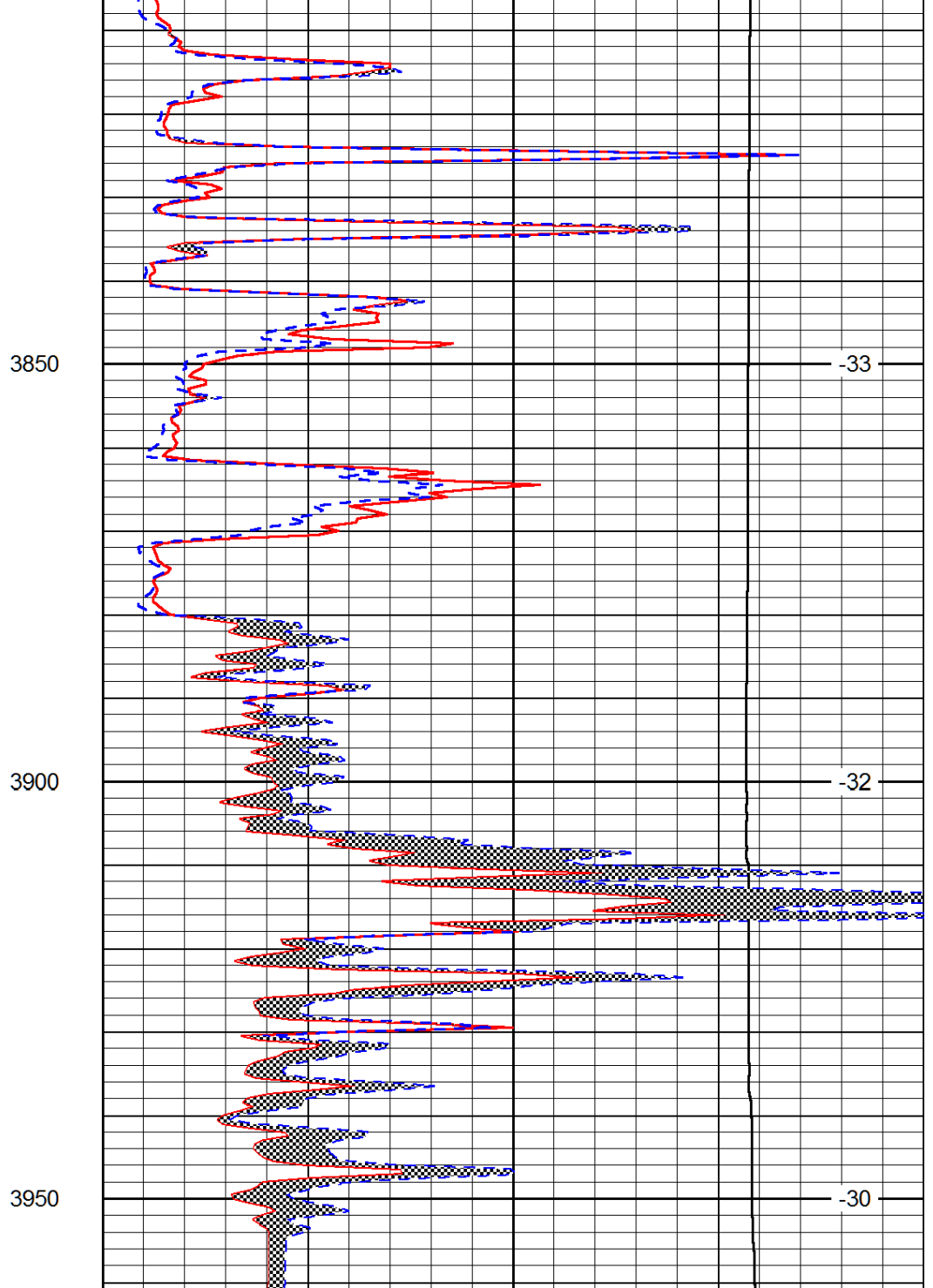
-33

-33

-33



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