



Pioneer Energy Services

Microresistivity Log

15-063-22, 155-00-00

API No.

Company **Cobalt Energy, LLC**
 Well **Zerr 'A' #1-18**
 Field **Q-B West**
 County **Gove** State **Kansas**

Location **1262' FSL & 1403' FEL**
 Sec: **18** Twp: **11S** Rge: **26W**

Other Services
 CNL/CDL
 DIL

Permanent Datum **Ground Level** Elevation **2657**
 Log Measured From **Kelly Bushing** 11 Ft. Above Perm. Datum
 Drilling Measured From **Kelly Bushing**

Elevation
 K.B. 2668
 D.F. 2657
 G.L. 2657

Date	11/29/2013
Run Number	Two
Depth Driller	4615
Depth Logger	4620
Bottom Logged Interval	4619
Top Log Interval	3600
Casing Driller	8.625 @ 275
Casing Logger	275
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	2,900
Density / Viscosity	9.4 64
pH / Fluid Loss	10.0 6.0
Source of Sample	Flowline
Rm @ Meas. Temp	.68 @ 42
Rmf @ Meas. Temp	.51 @ 42
Rmc @ Meas. Temp	.92 @ 42
Source of Rmf / Rmc	Charts
Rm @ BHT	.23 @ 122
Operating Rig Time	4 Hours
Max Rec. Temp. F	122
Equipment Number	17
Location	Hays
Recorded By	C. Desai
Witnessed By	Bob Stolzie

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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

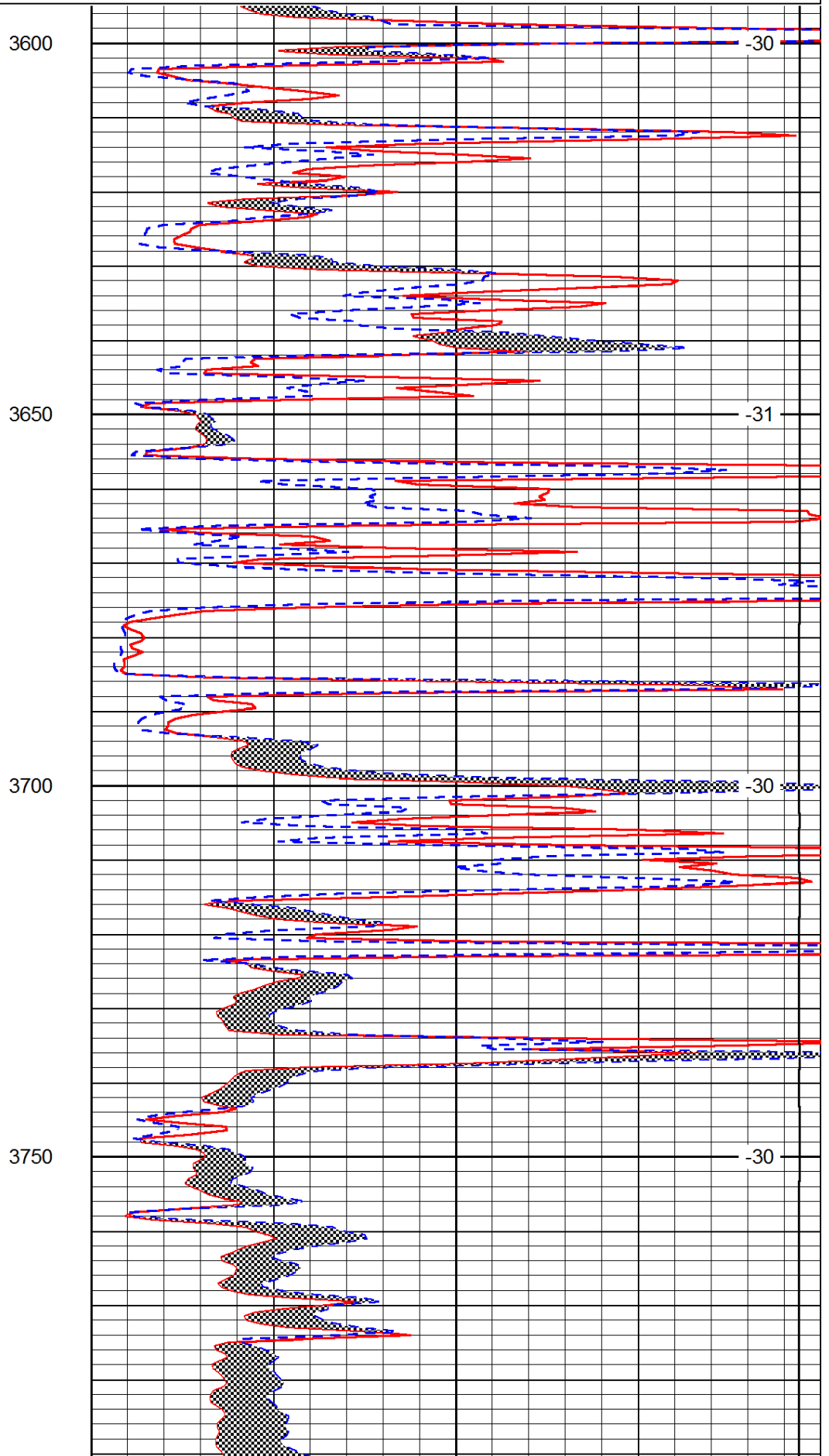
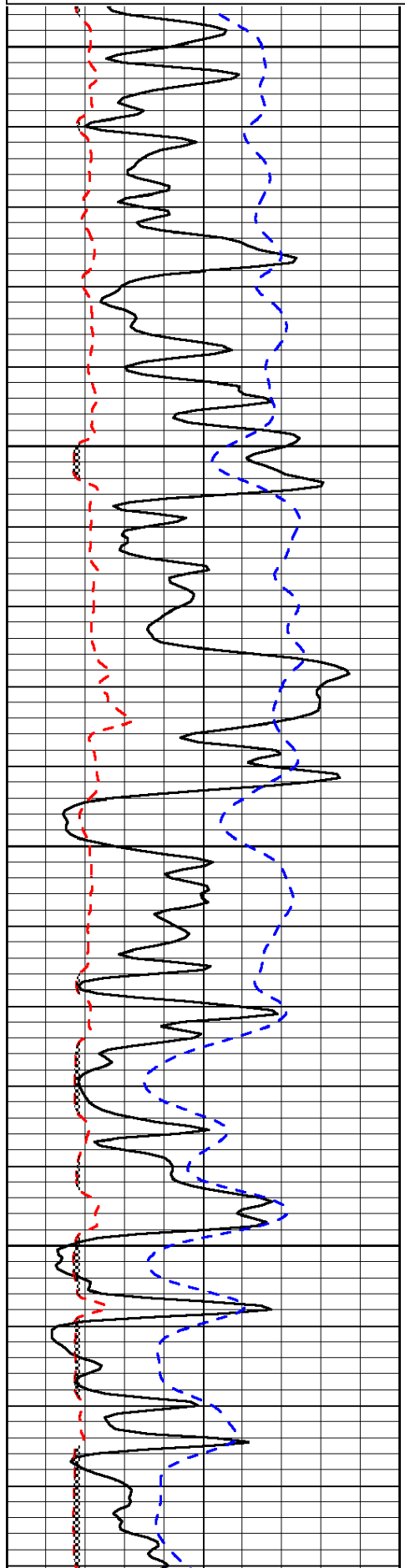
Quinter KS, N to Stop Sign,
 1 N to BB Rd, 1/4 W, N Into

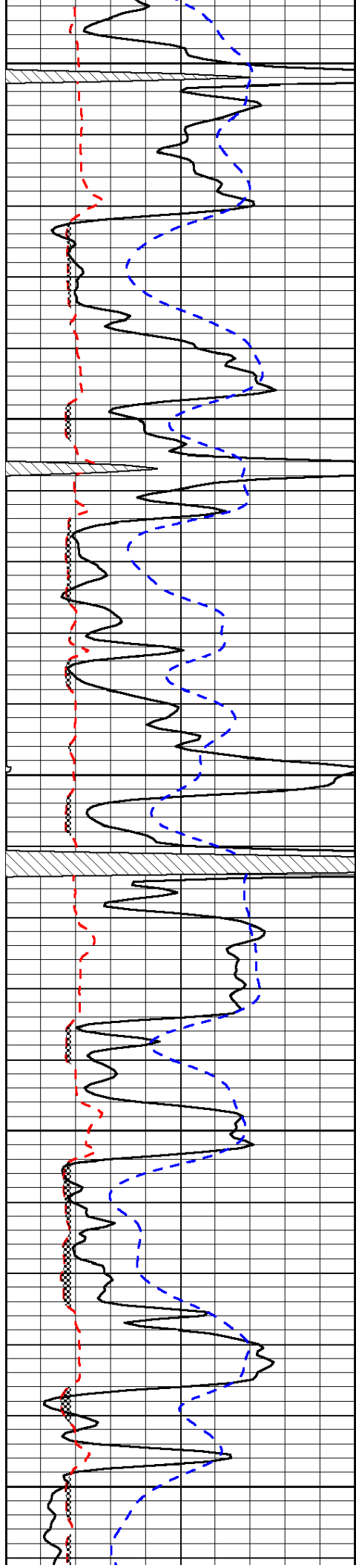
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 Dataset Pathname: dil/cobstk
 Presentation Format: micro
 Dataset Creation: Fri Nov 29 22:52:55 2013
 Charted by: Depth in Feet scaled 1:240

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

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

LSPD





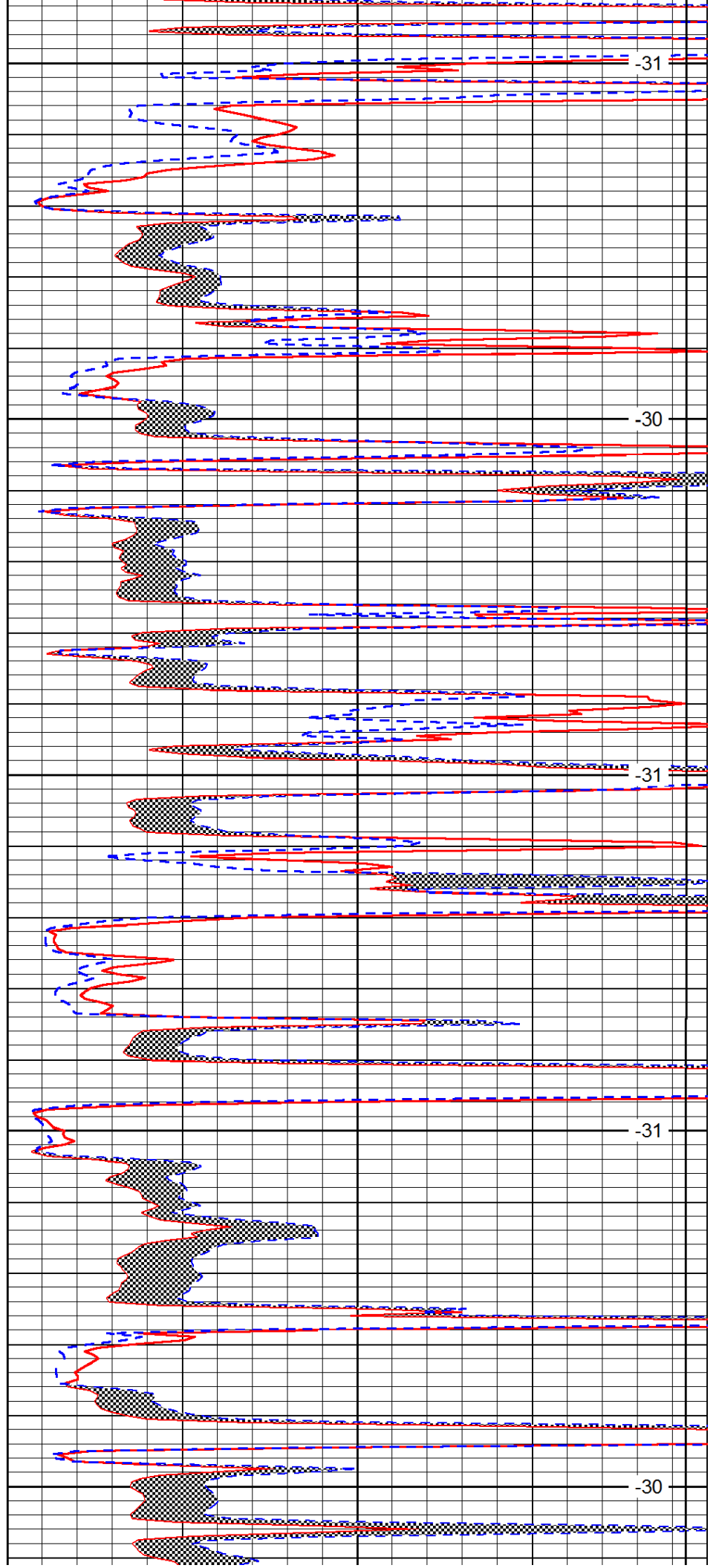
3800

3850

3900

3950

4000



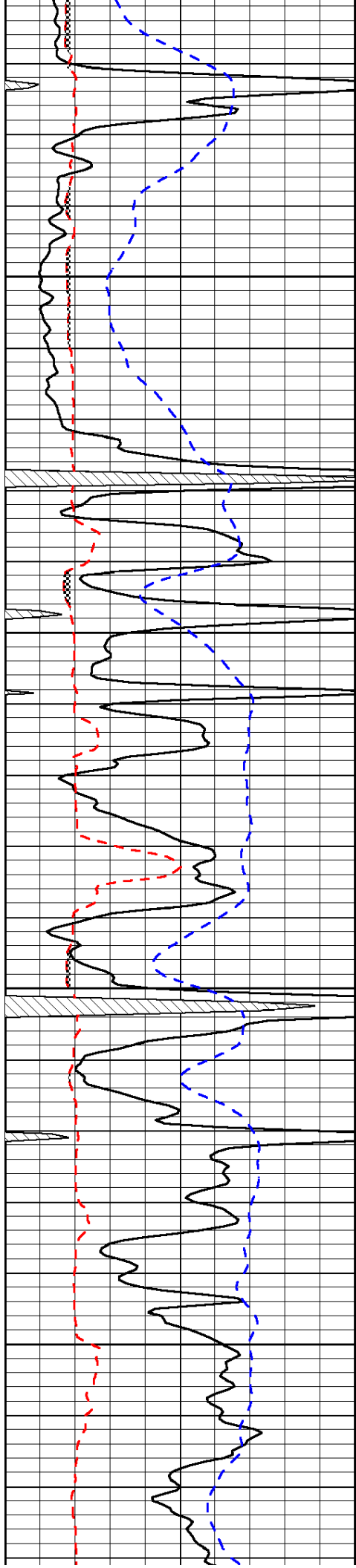
-31

-30

-31

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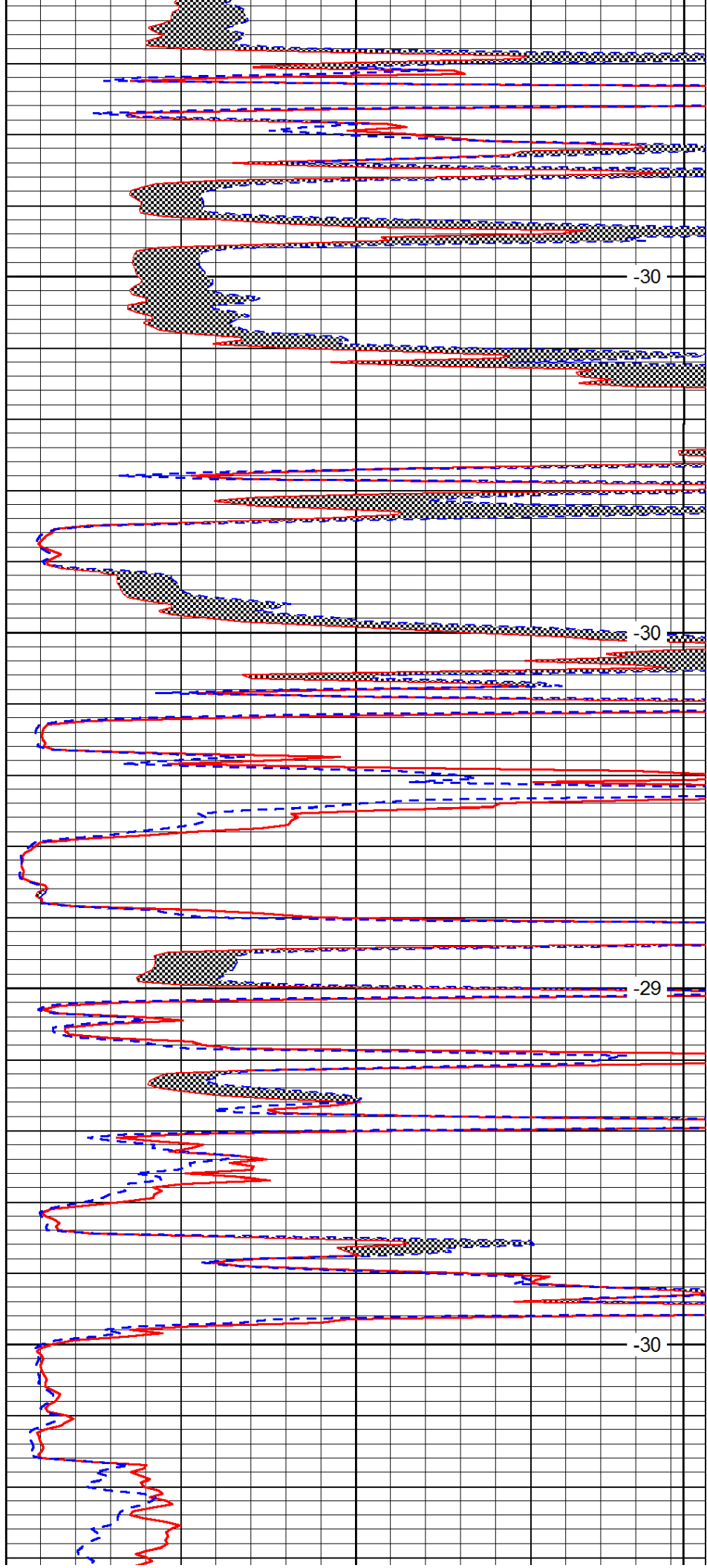


4050

4100

4150

4200

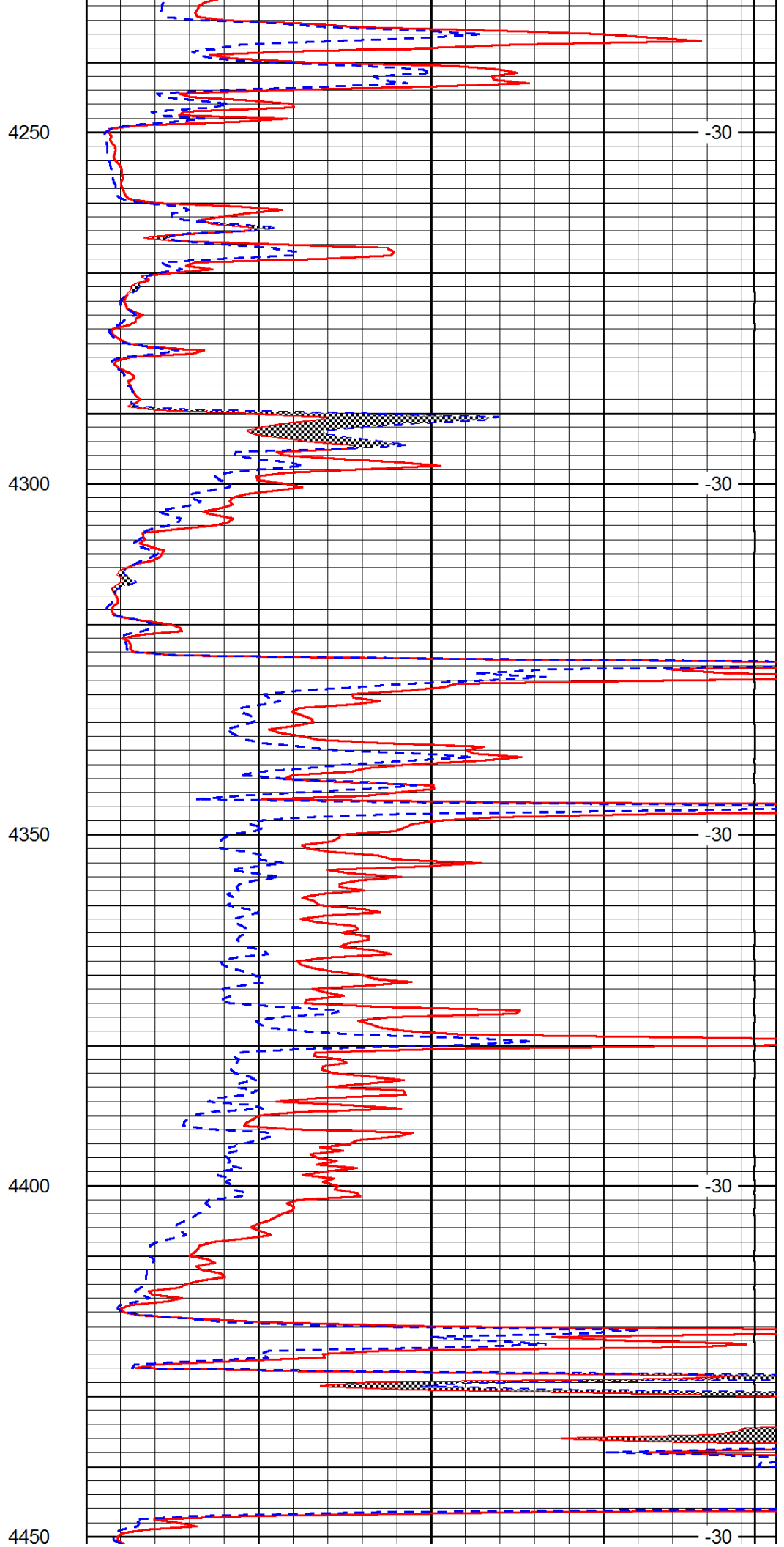
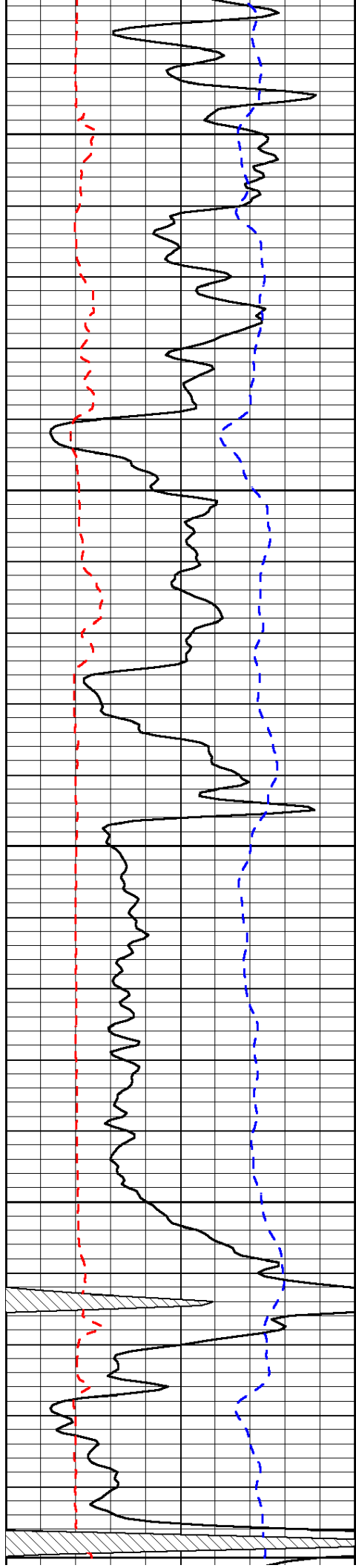


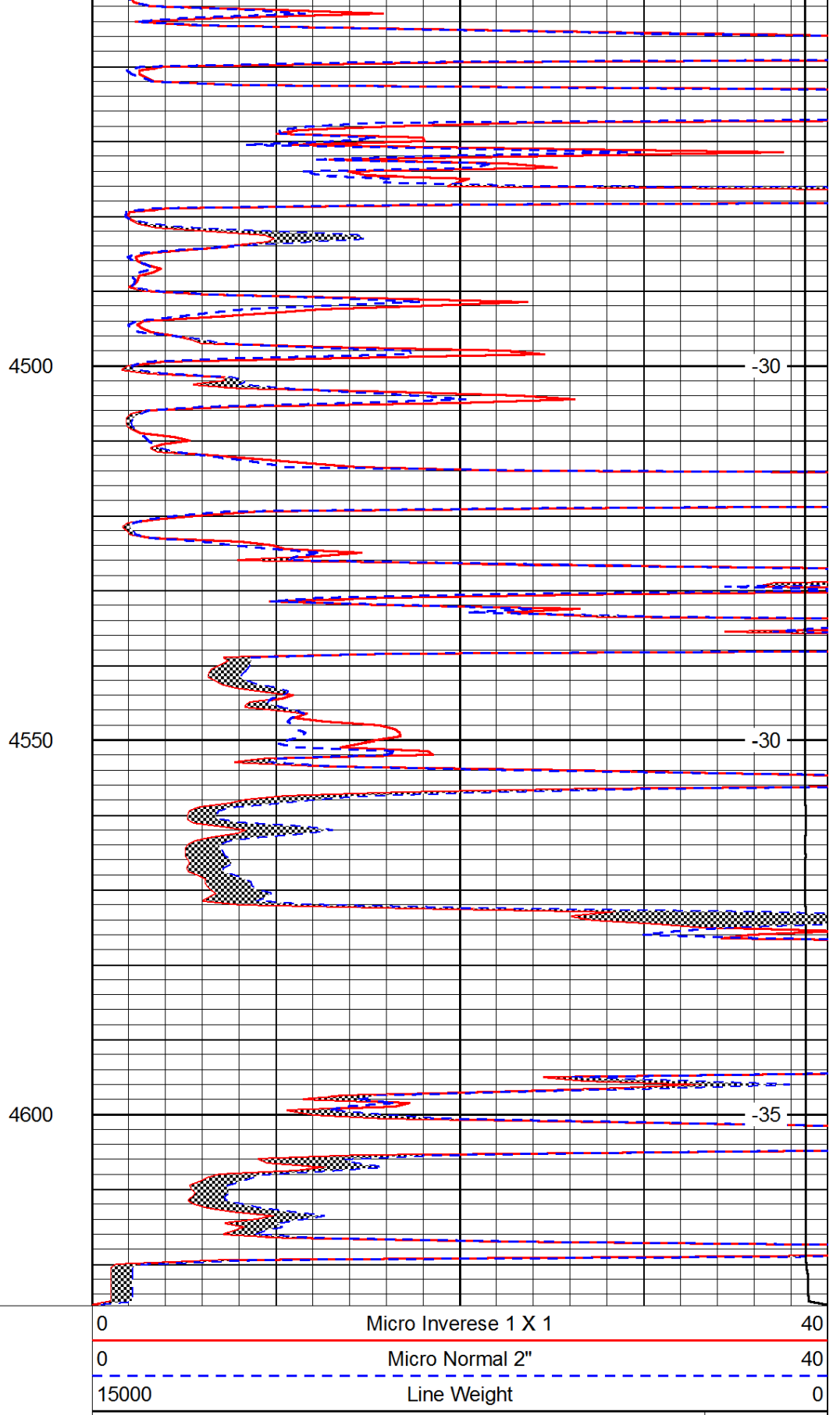
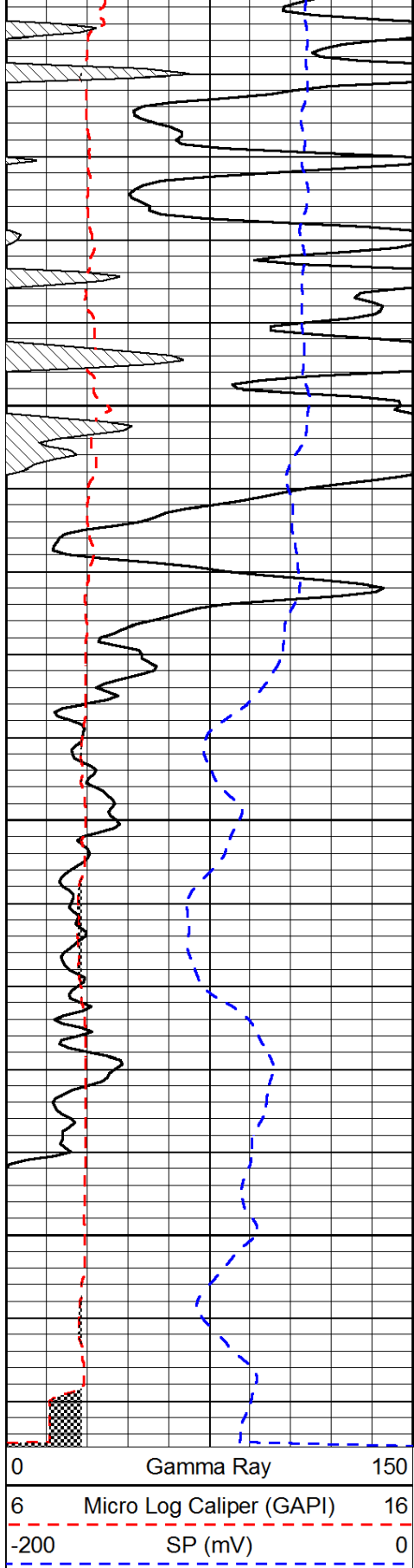
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LSPD