PIONEER

Pioneer Energy Services

Dual Compensated Porosity Log

API No. 15-023-21408-00-00

Company Murfin Drilling Company, Inc.

Well Delay #1-21

Field Wildcat

County Cheyenne State Kansas

Location 1510' FSL & 330' FEL

Sec: 21 Twp: 1S Rge: 38W

Other Services
DIL
MEL/BHCS

Elevation
K.B. 3199
D.F.
G.L. 3194

Permanent Datum Ground Level Elevation 3194
Log Measured From Kelly Bushing 5 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Date	9/3/2014
Run Number	One
Type Log	CNL / CDL
Depth Driller	4750
Depth Logger	4753
Bottom Logged Interval	4732
Top Logged Interval	3450
Type Fluid In Hole	Chemical
Salinity, PPM CL	600
Density	9.2
Level	Full
Max. Rec. Temp. F	126
Operating Rig Time	5 Hours
Equipment -- Location	91 Hays
Recorded By	D. Schmidt
Witnessed By	Rocky Milford

Borehole Record

Run No.	Bit	From	To
1	12.25	00	218
2	7.875	218	4750

Casing Record

Size	Wgt.	From	To
8.625	24#	00	218

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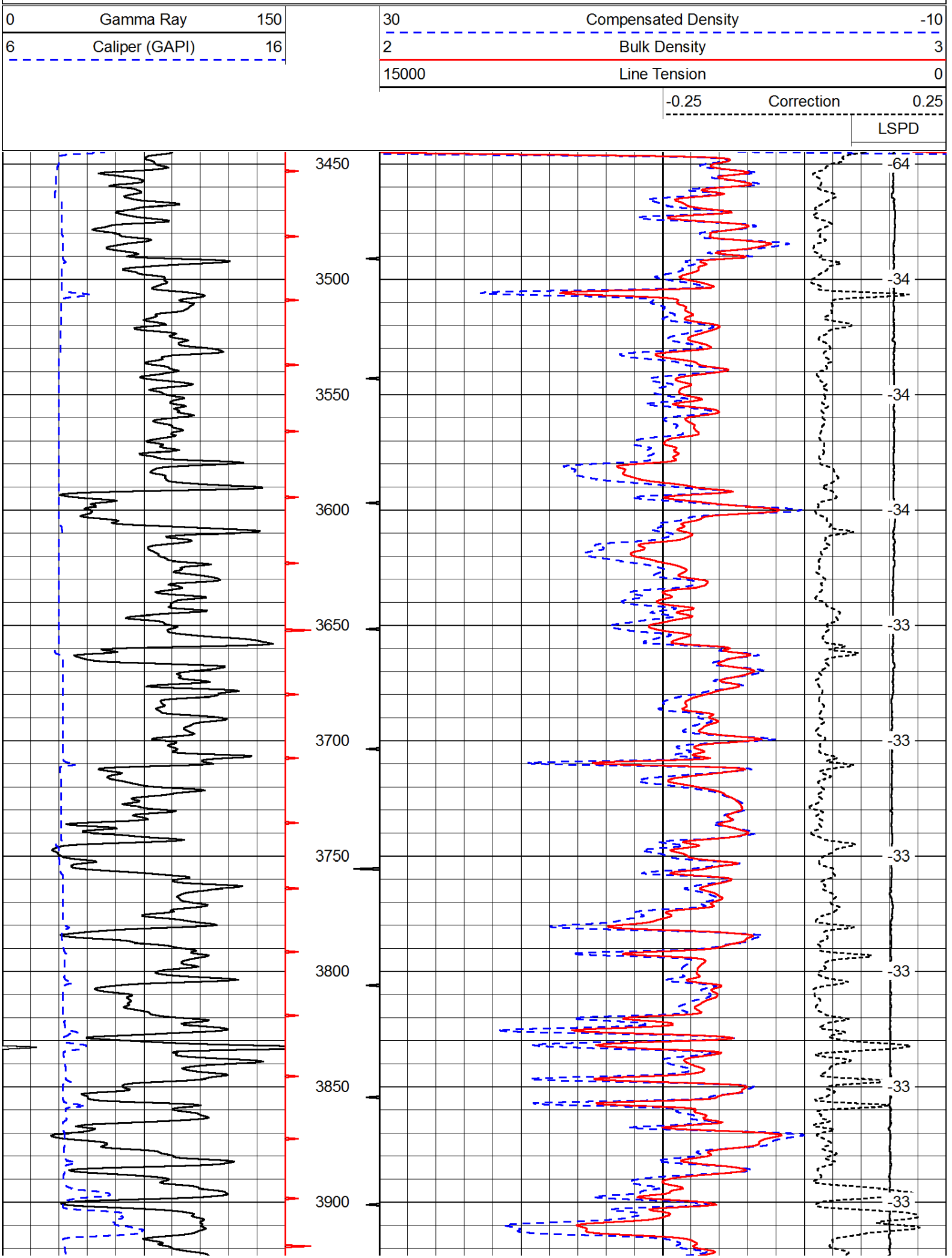
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

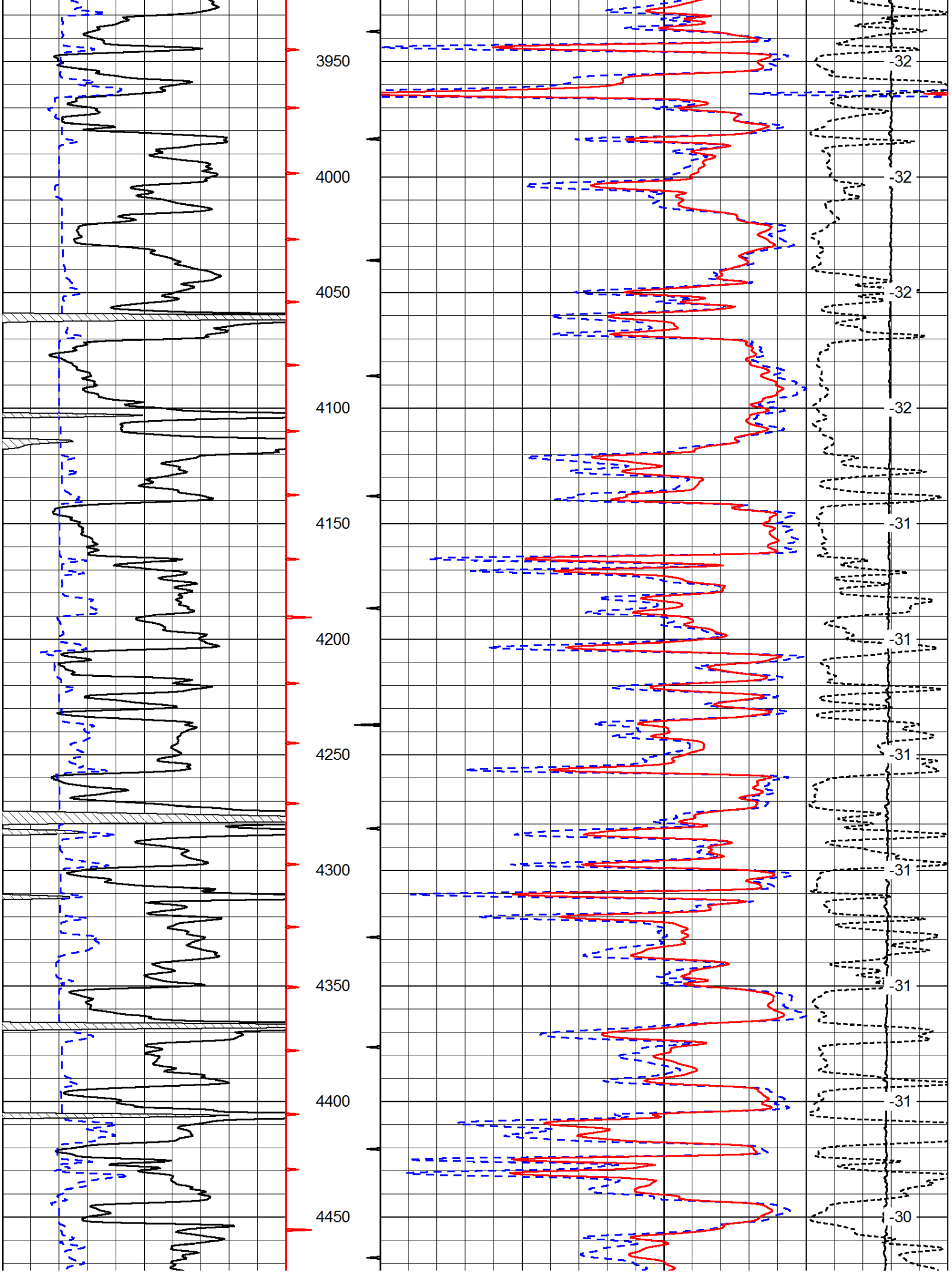
Comments

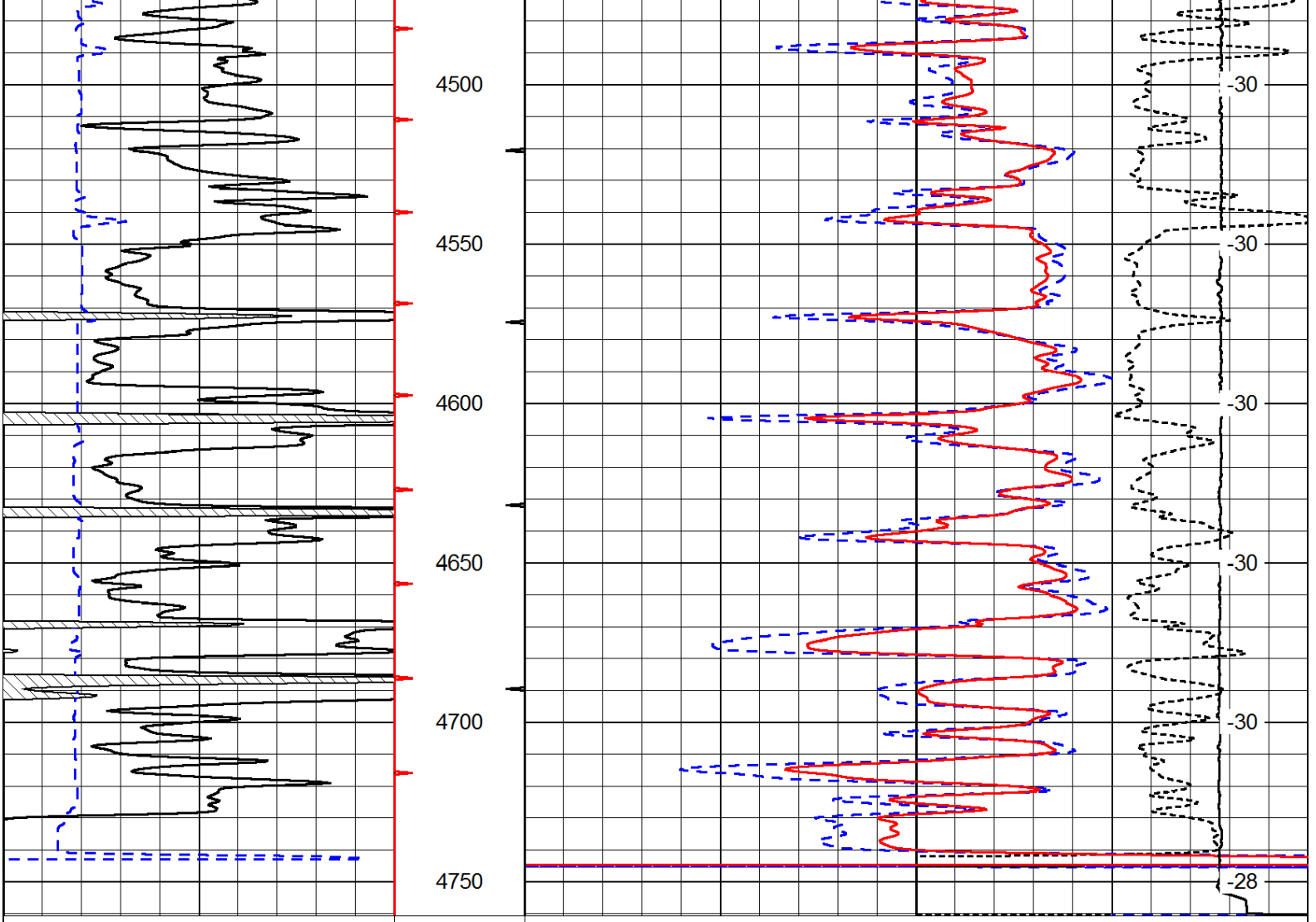
Thank you for using Pioneer Energy Services
www.pioneeres.com
785 625 3858

Bird City,
North on Hwy 161 to BB Rd, 2 West to 26 Rd,
1/2 South into

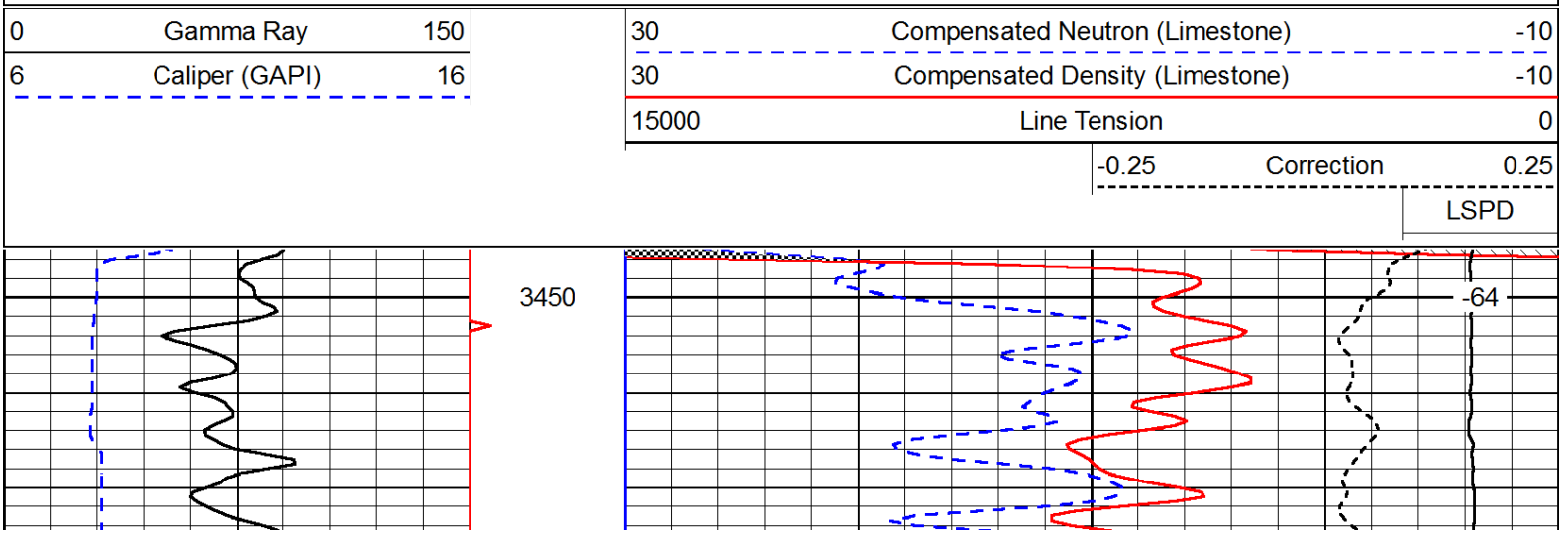
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Presentation Format:	cdl
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Charted by:	Depth in Feet scaled 1:600

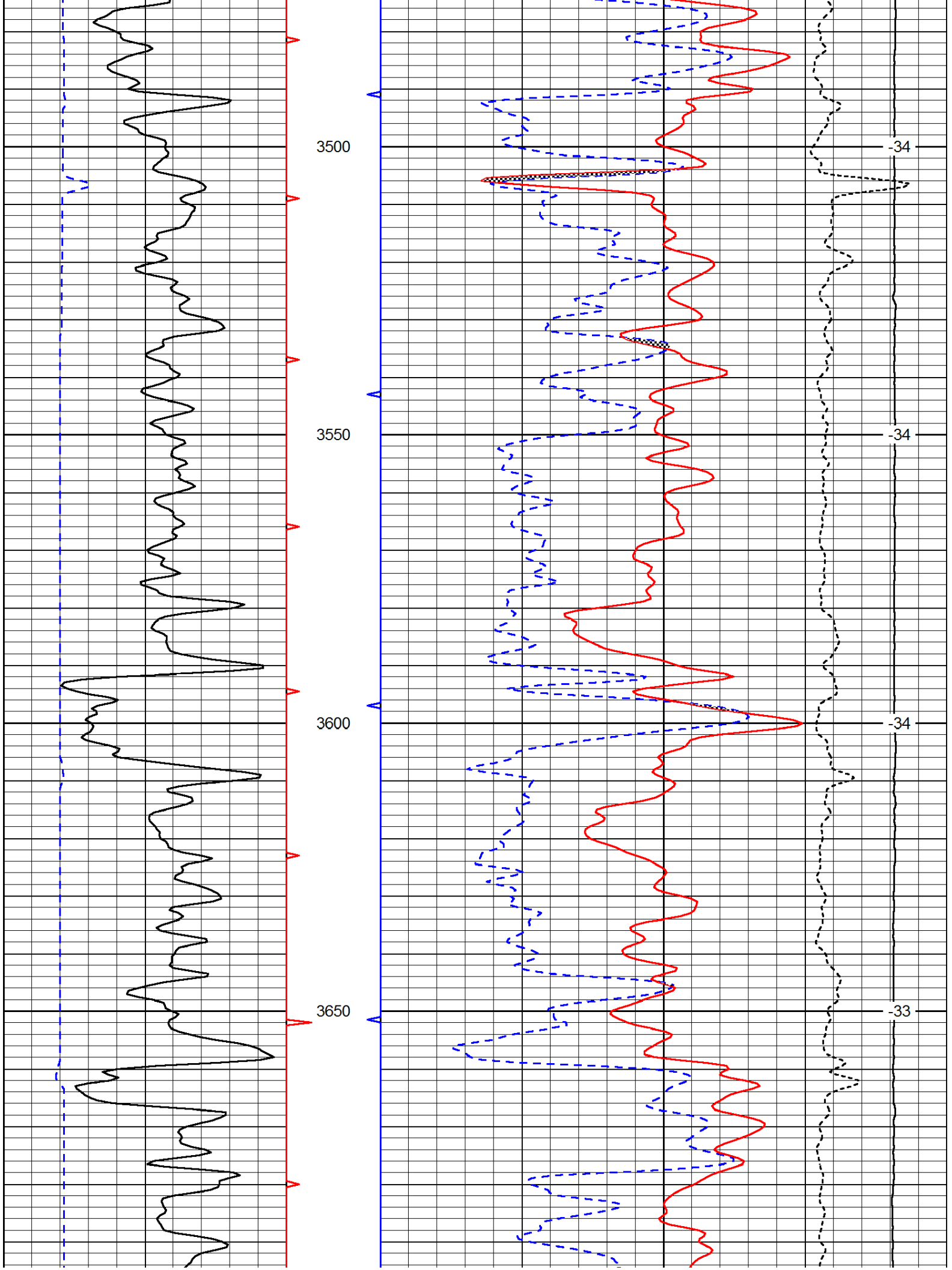

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Gamma Ray
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Caliper (GAPI)
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Compensated Density
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Bulk Density
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Line Tension
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Correction
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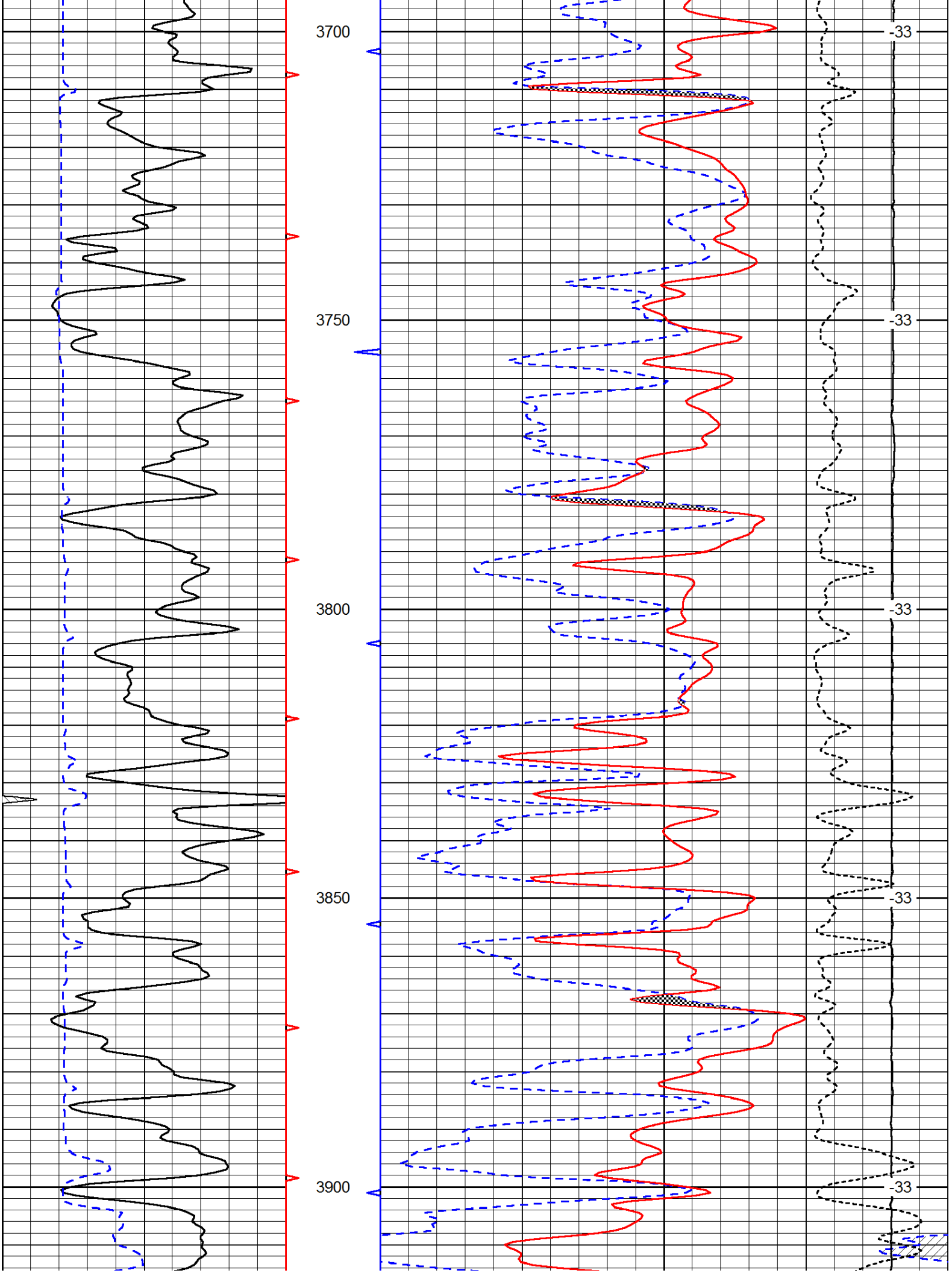

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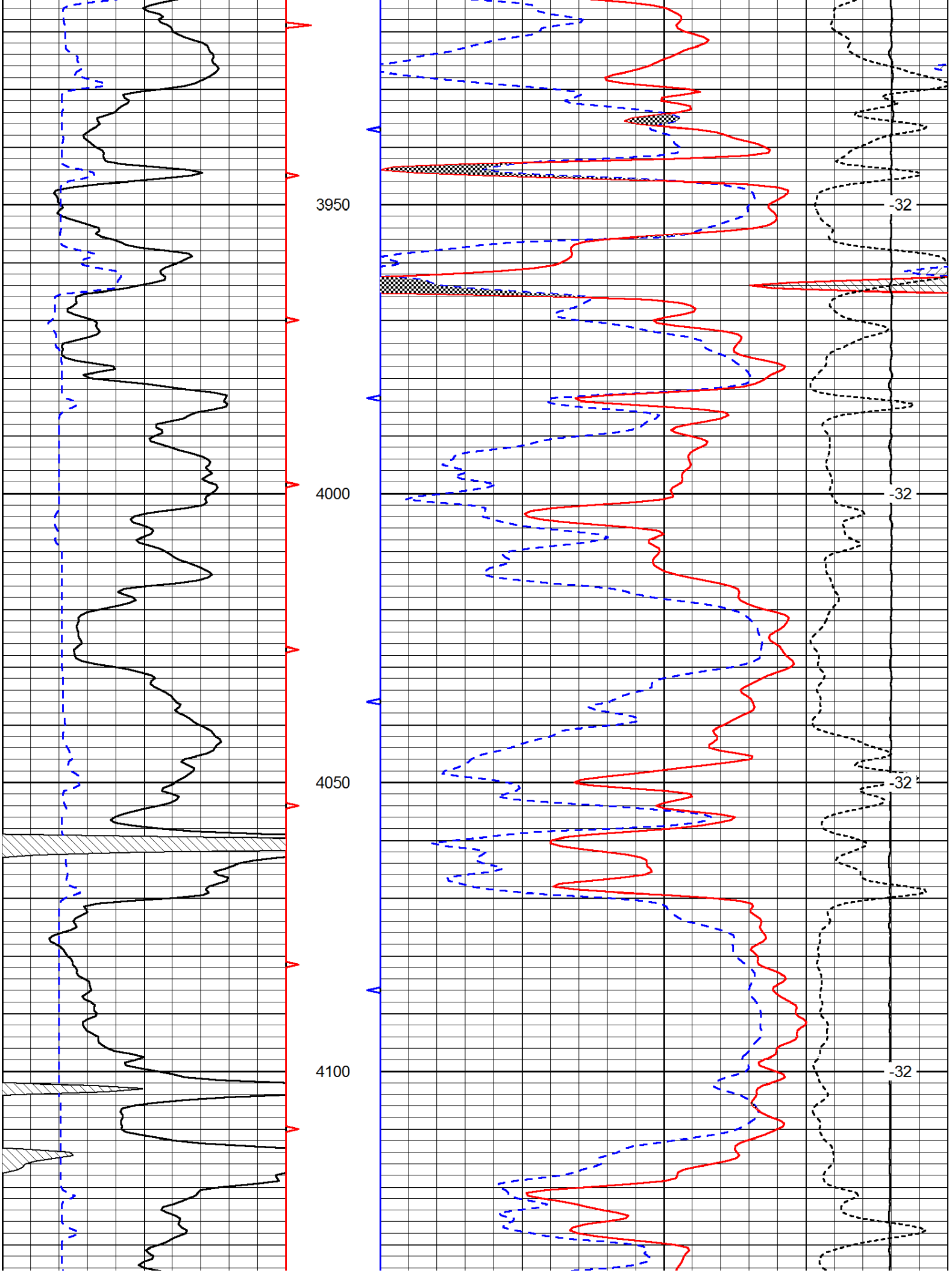


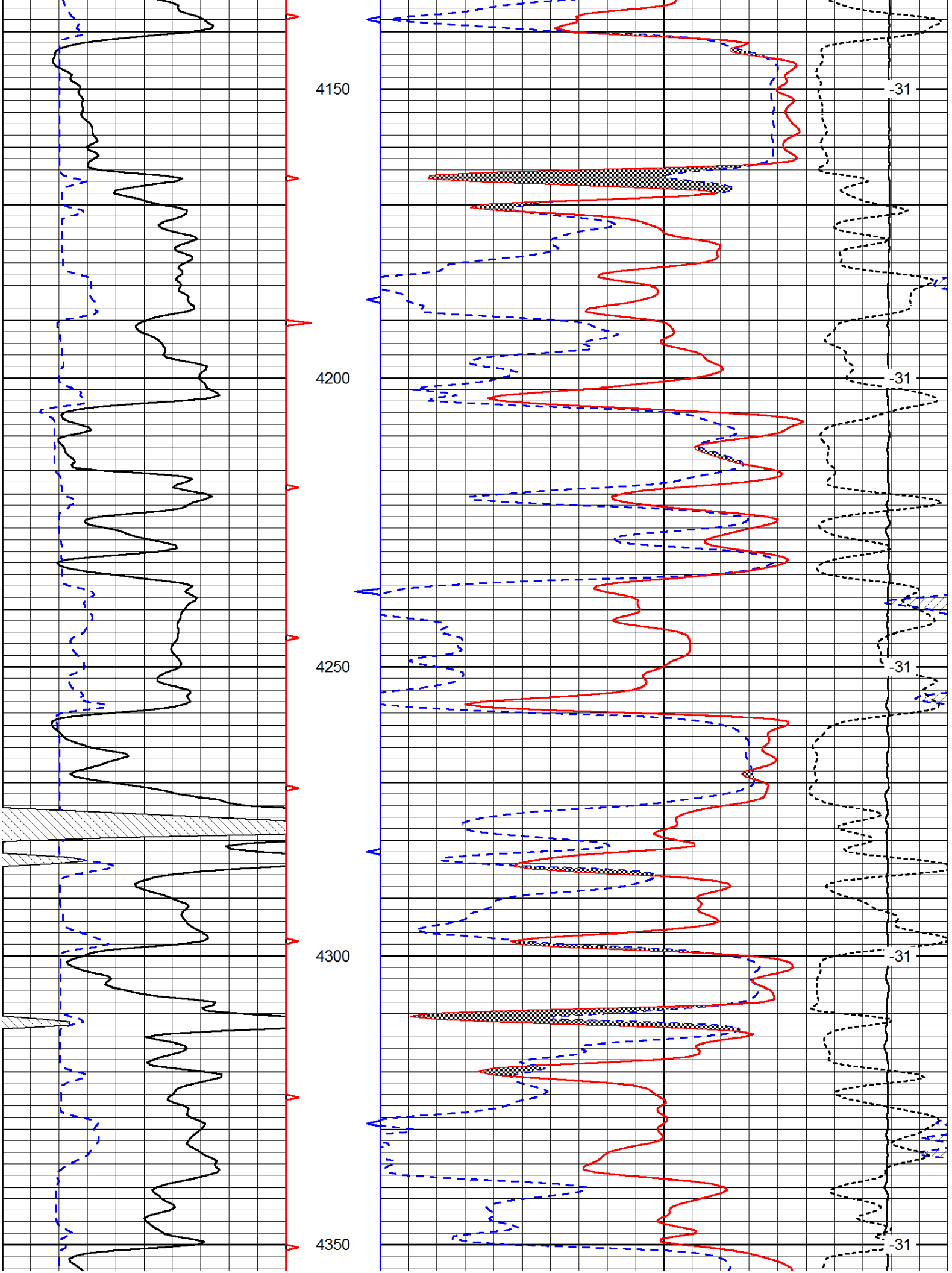
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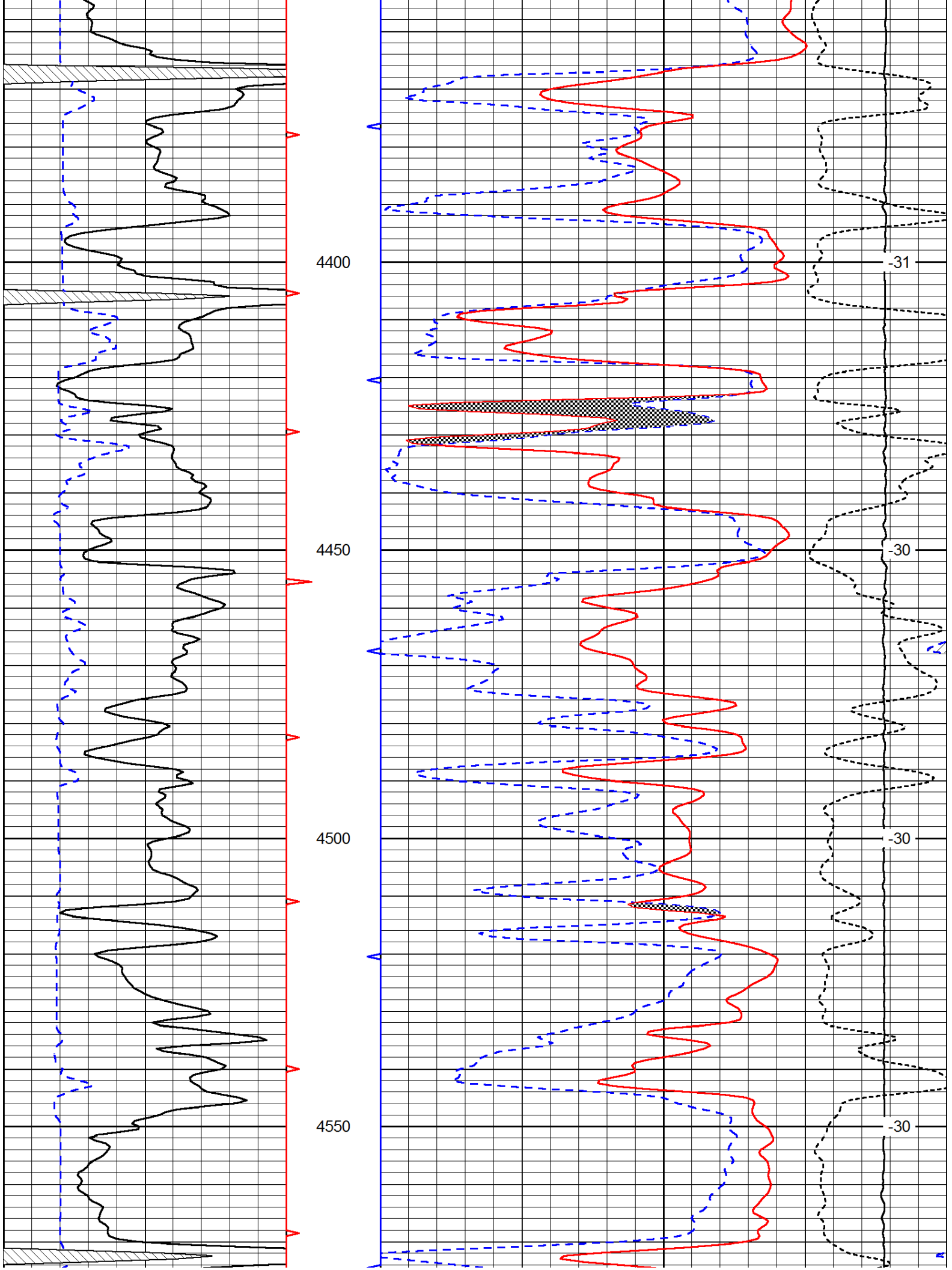


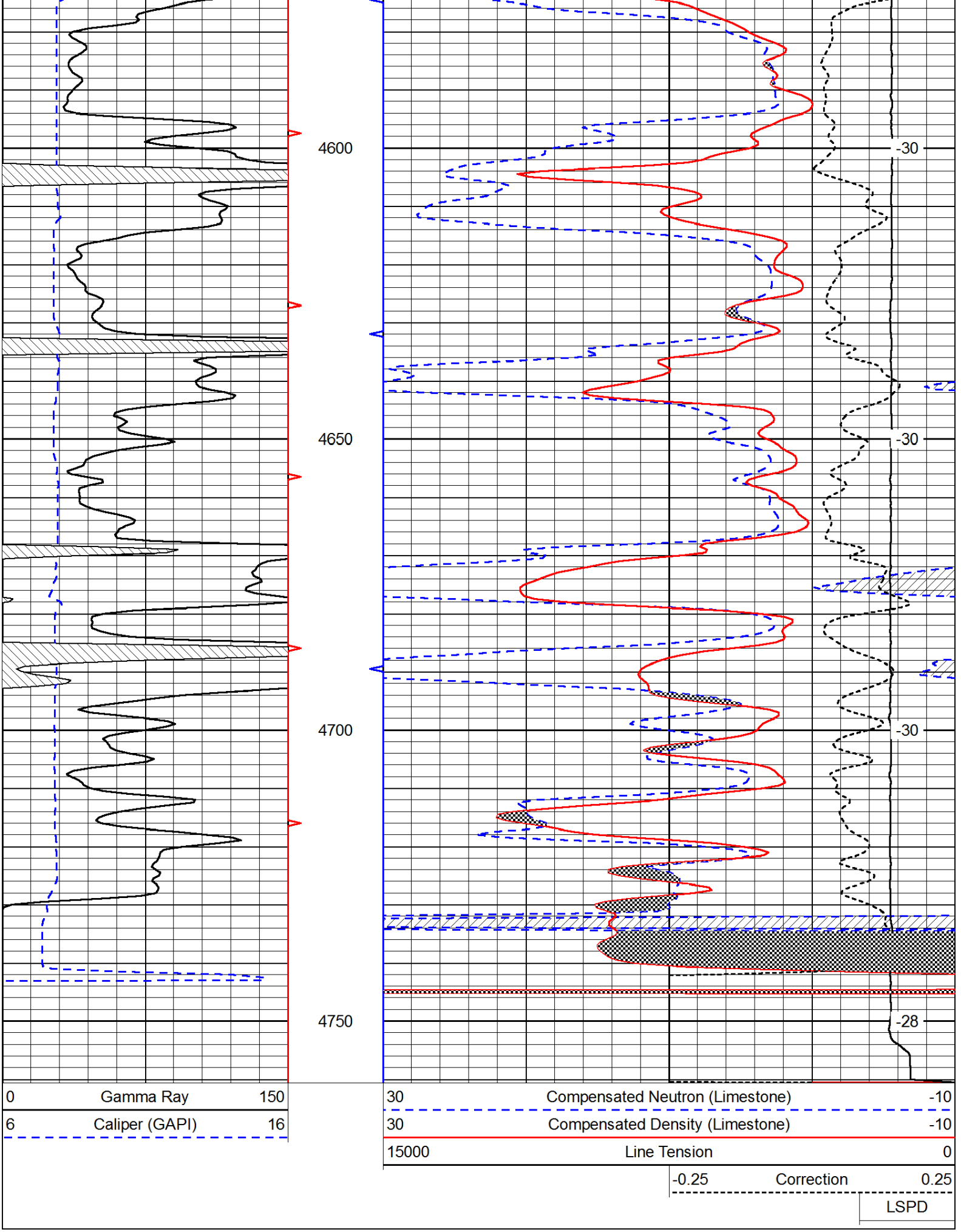

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30 Compensated Neutron (Limestone) -10
30 Compensated Density (Limestone) -10
15000 Line Tension 0
-0.25 Correction 0.25
LSPD