



Dual Induction Log

Pioneer Energy Services

API No.	Company Range Oil Company, Inc.				
	Well Savage "A" #2				
	Field				
	County	Marion	State	Kansas	
15-115-21,441-00-00	Location	1,550' FNL & 1,700' FWL			Other Services CNL/CDL
	Sec: 22	Twp: 21S	Rge: 4E	Elevation K.B. 1301 D.F. 1291 G.L. 1291	
	Permanent Datum Log Measured From Drilling Measured From	Ground Level Kelly Bushing From Kelly Bushing	Elevation 1291 10 Ft. Above Perm. Datum		
Date	2/18/2013				
Run Number	One				
Depth Driller	2411				
Depth Logger	2409				
Bottom Logged Interval	2408				
Top Log Interval	00				
Casing Driller	8.625 @ 227				
Casing Logger	225				
Bit Size	7.875				
Type Fluid in Hole	Chemical				
Salinity, ppm CL	3900				
Density / Viscosity	9.3 52				
pH / Fluid Loss	9.0 18.2				
Source of Sample	Flowline				
Rm @ Meas. Temp	.70 @ 58				
Rmf @ Meas. Temp	.53 @ 58				
Rmc @ Meas. Temp	.95 @ 58				
Source of Rmf / Rmc	Charts				
Rm @ BHT	.41 @ 100				
Operating Rig Time	3 Hours				
Max Rec. Temp. F	100				
Equipment Number	108				
Location	Hays				
Recorded By	J. Long				
Witnessed By	John Washburn		Ken Wallace		

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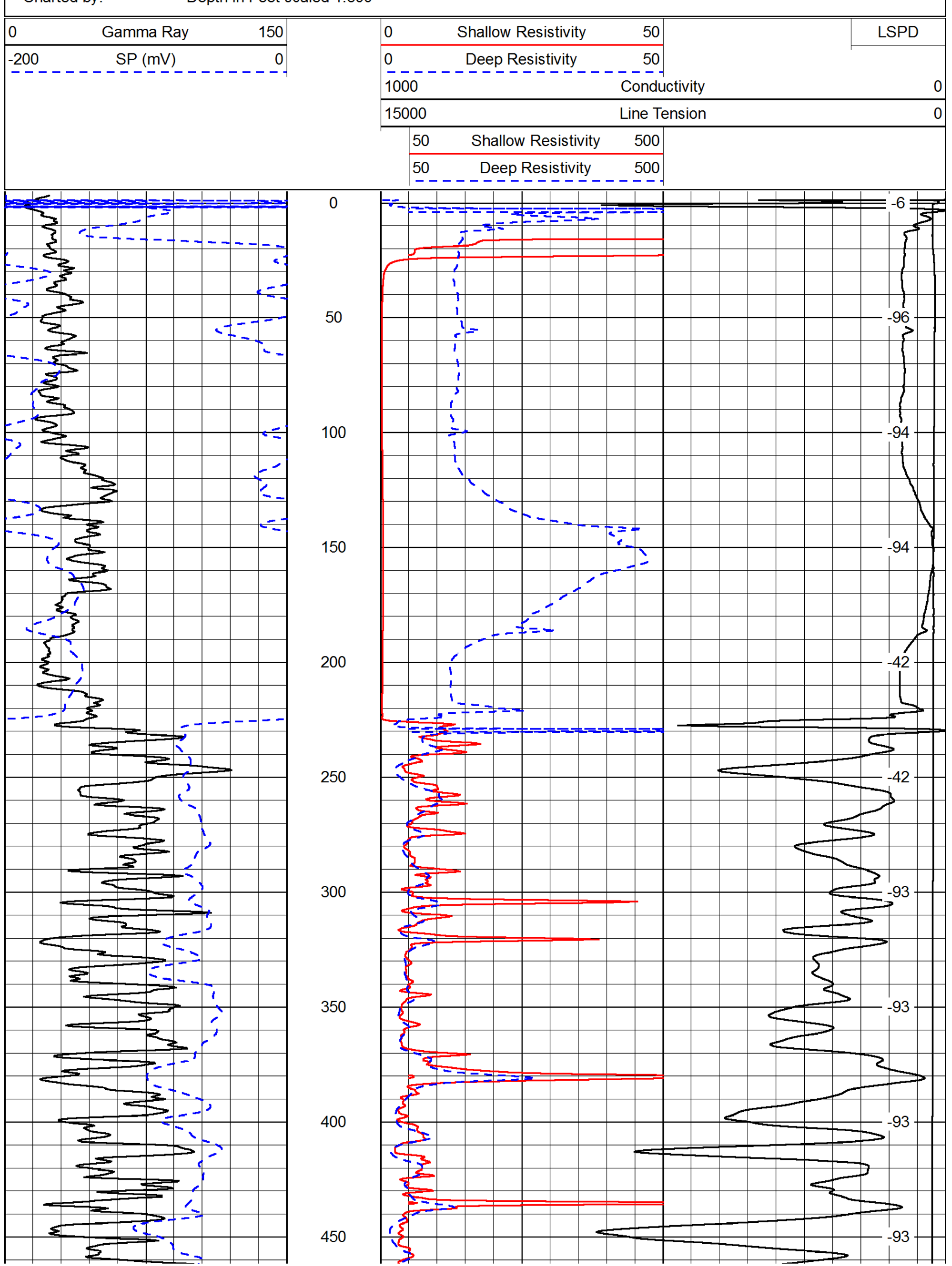
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

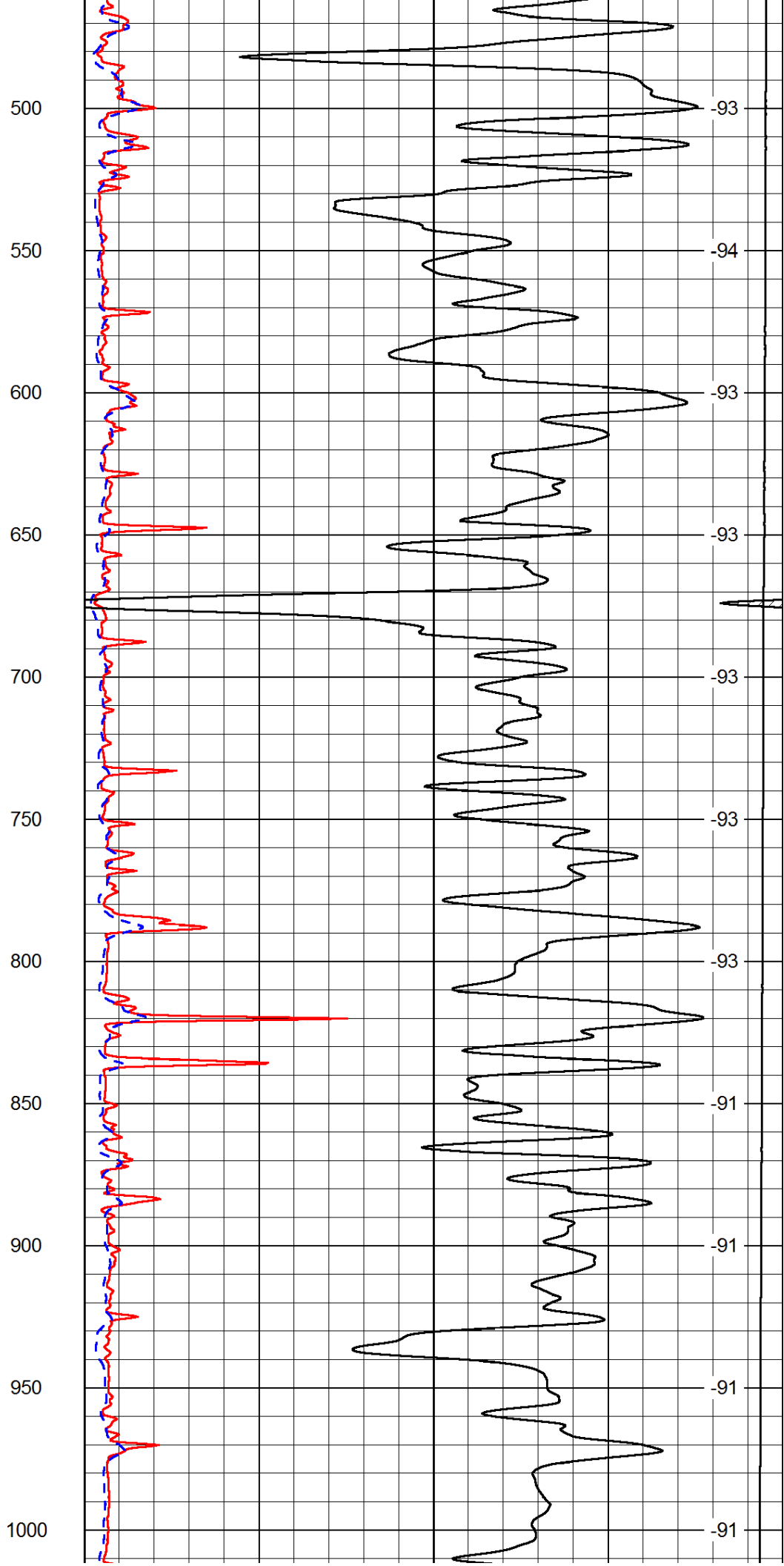
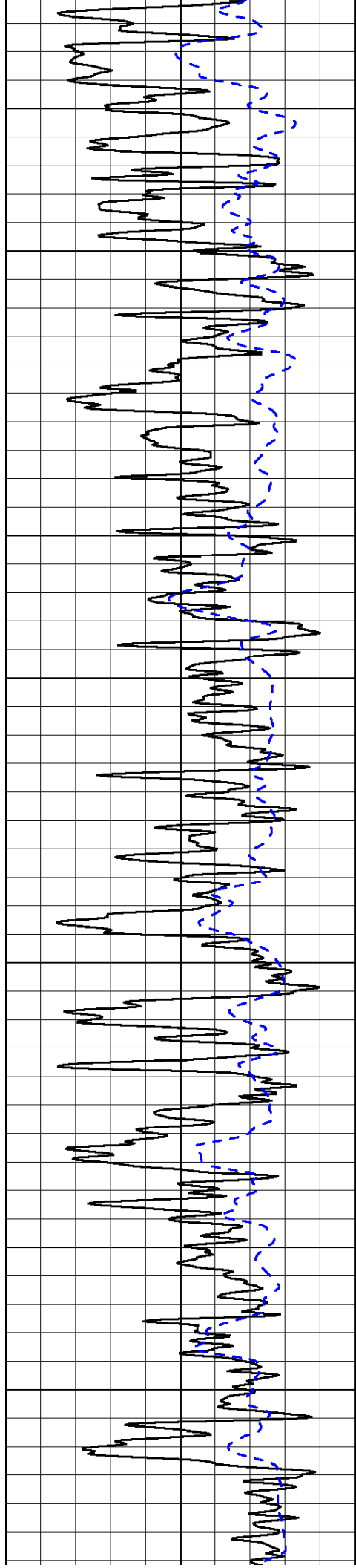
Comments

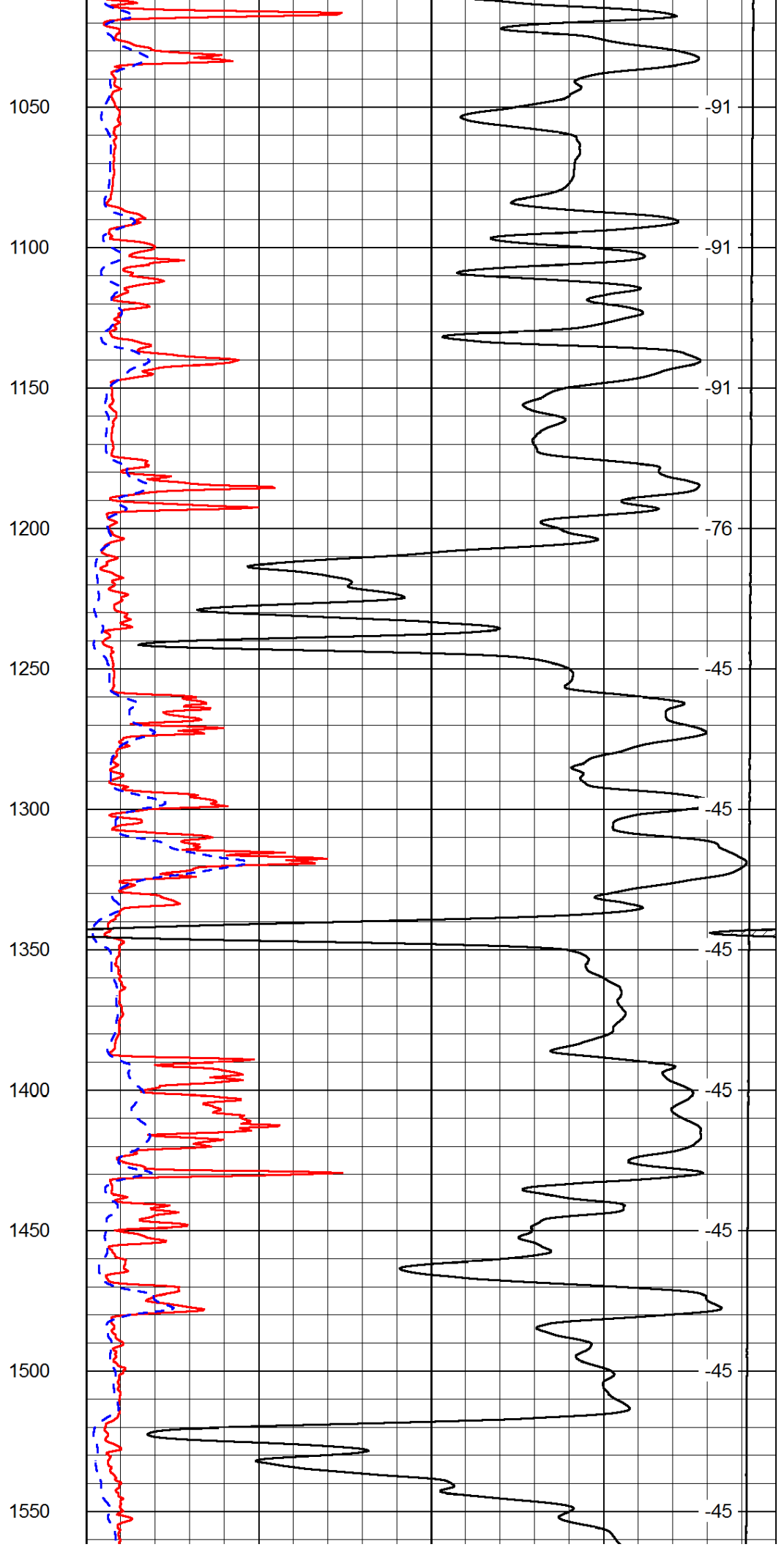
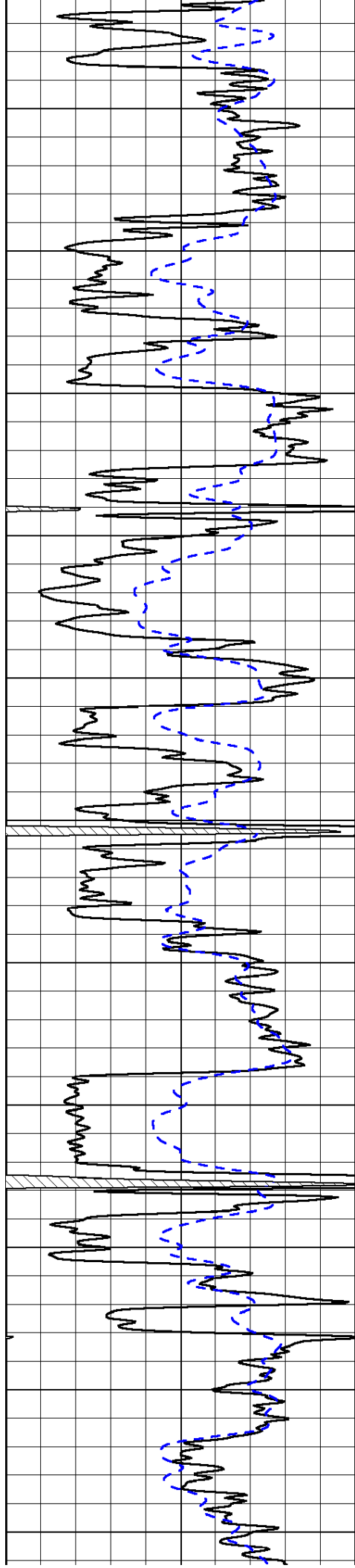
Thank you for using Pioneer Energy Services
www.pioneerres.com
785 625 3858

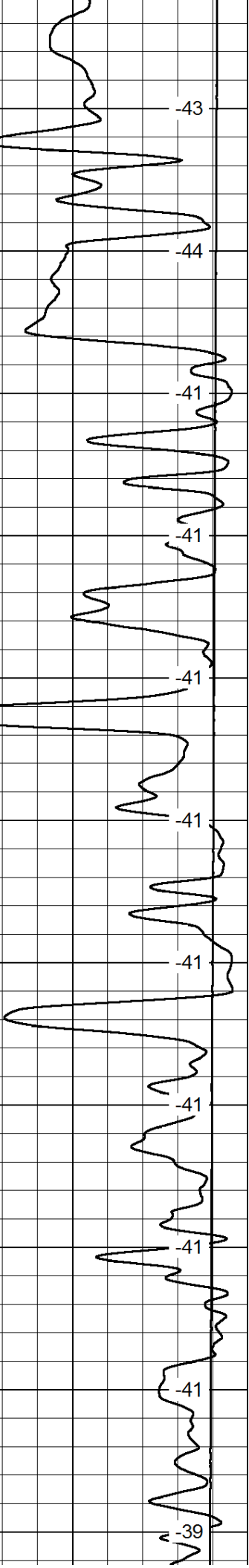
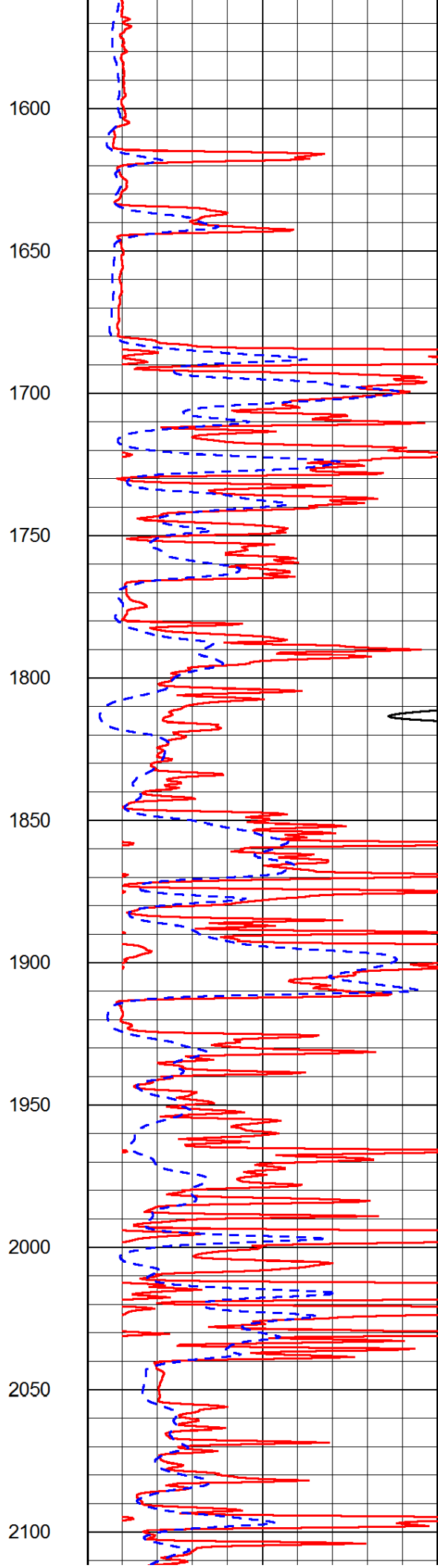
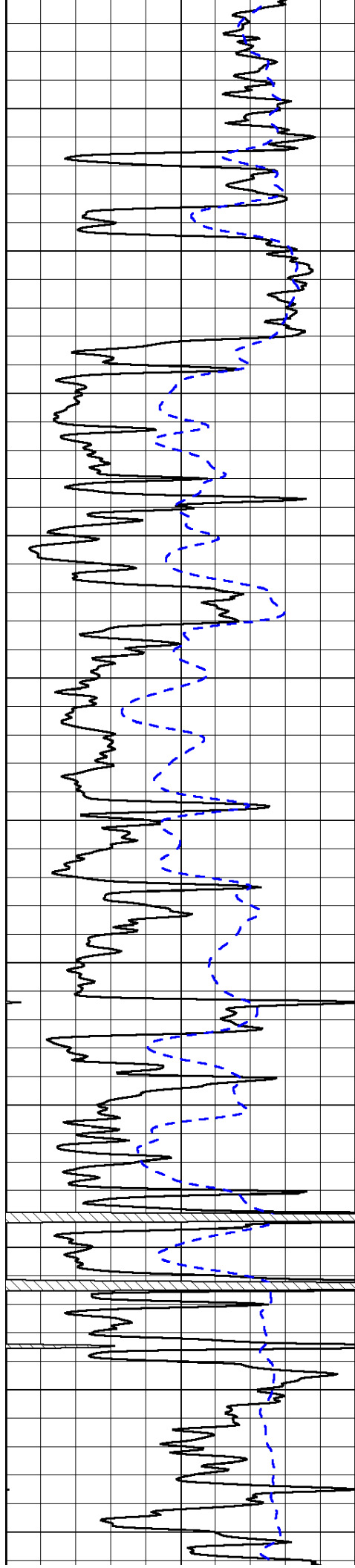
Peabody, 6 1/2 East on Highway 50 to 298 mm, South across RR tracks, South across river,
East and North Into

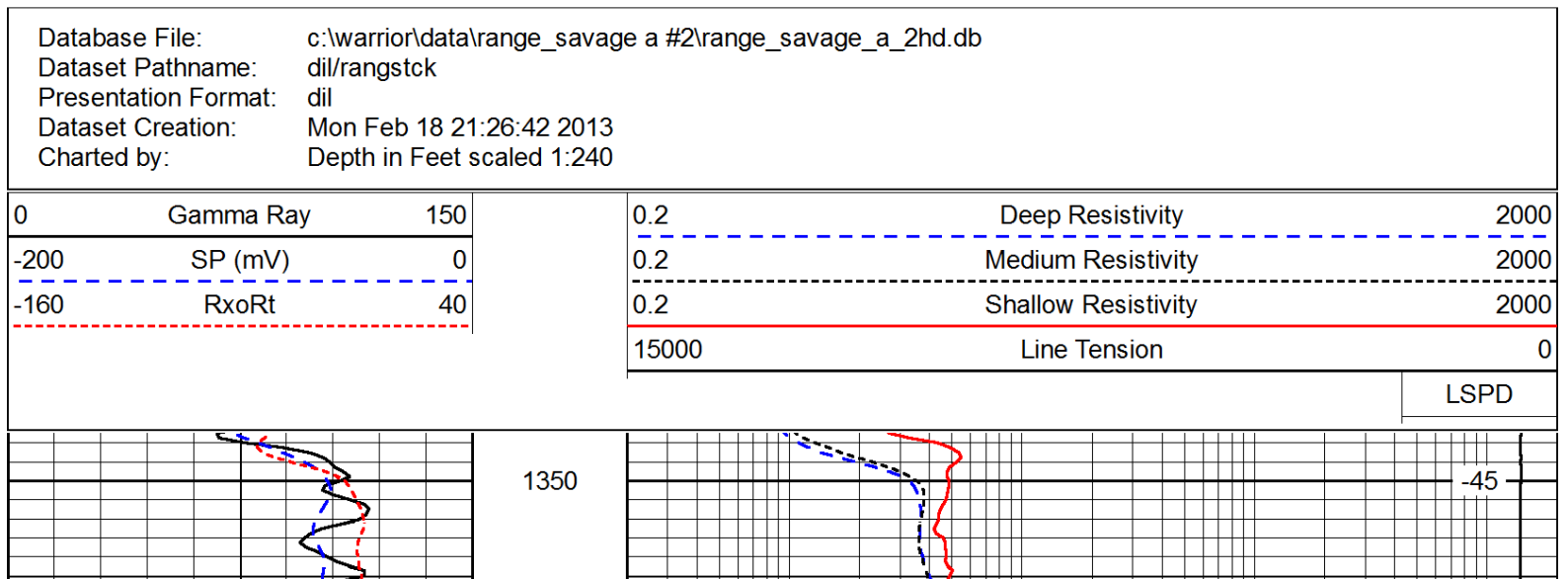
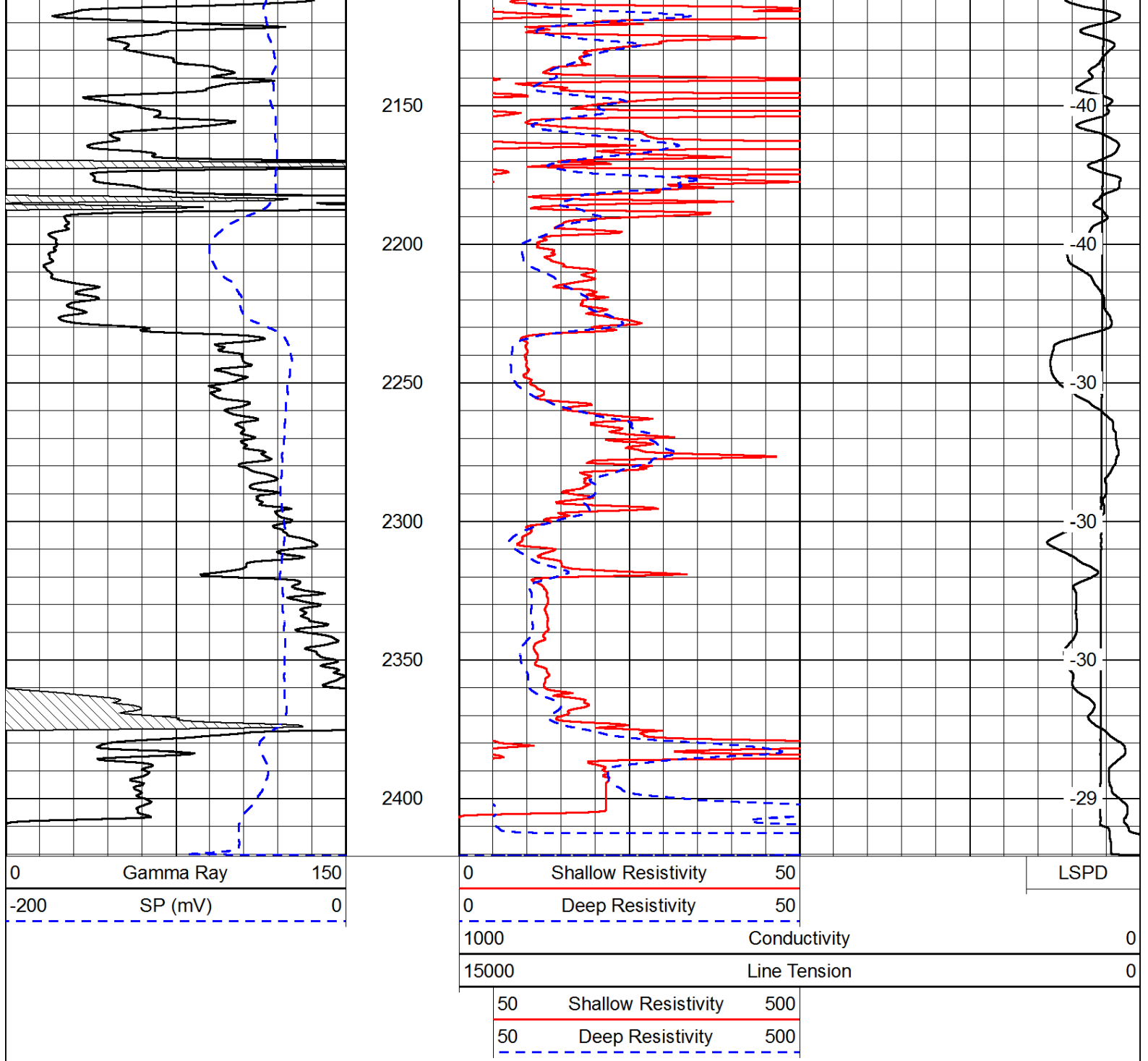
Database File: c:\warrior\data\range_savage a #2\range_savage_a_2hd.db
Dataset Pathname: dil\rangstck
Presentation Format: dil2in
Dataset Creation: Mon Feb 18 21:26:42 2013
Charted by: Depth in Feet scaled 1:600

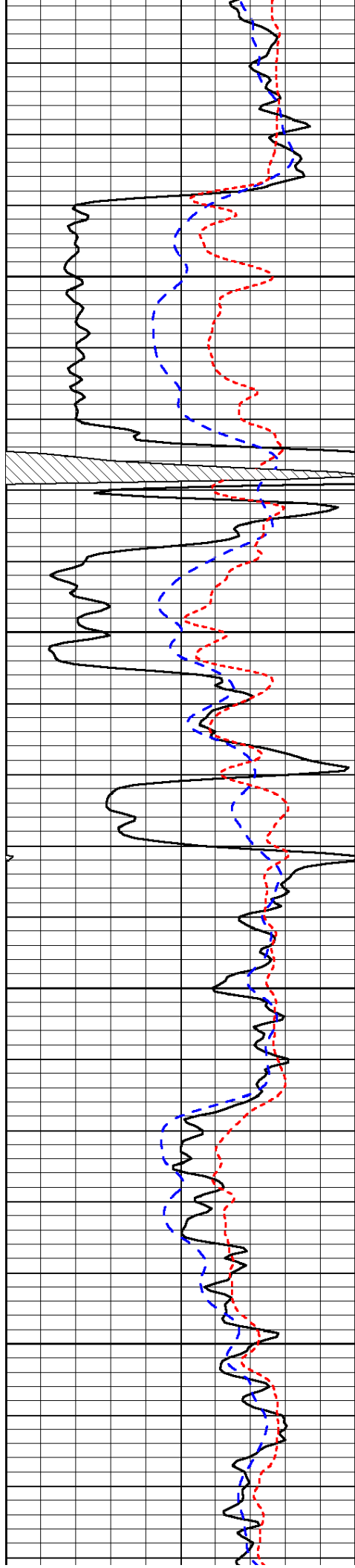










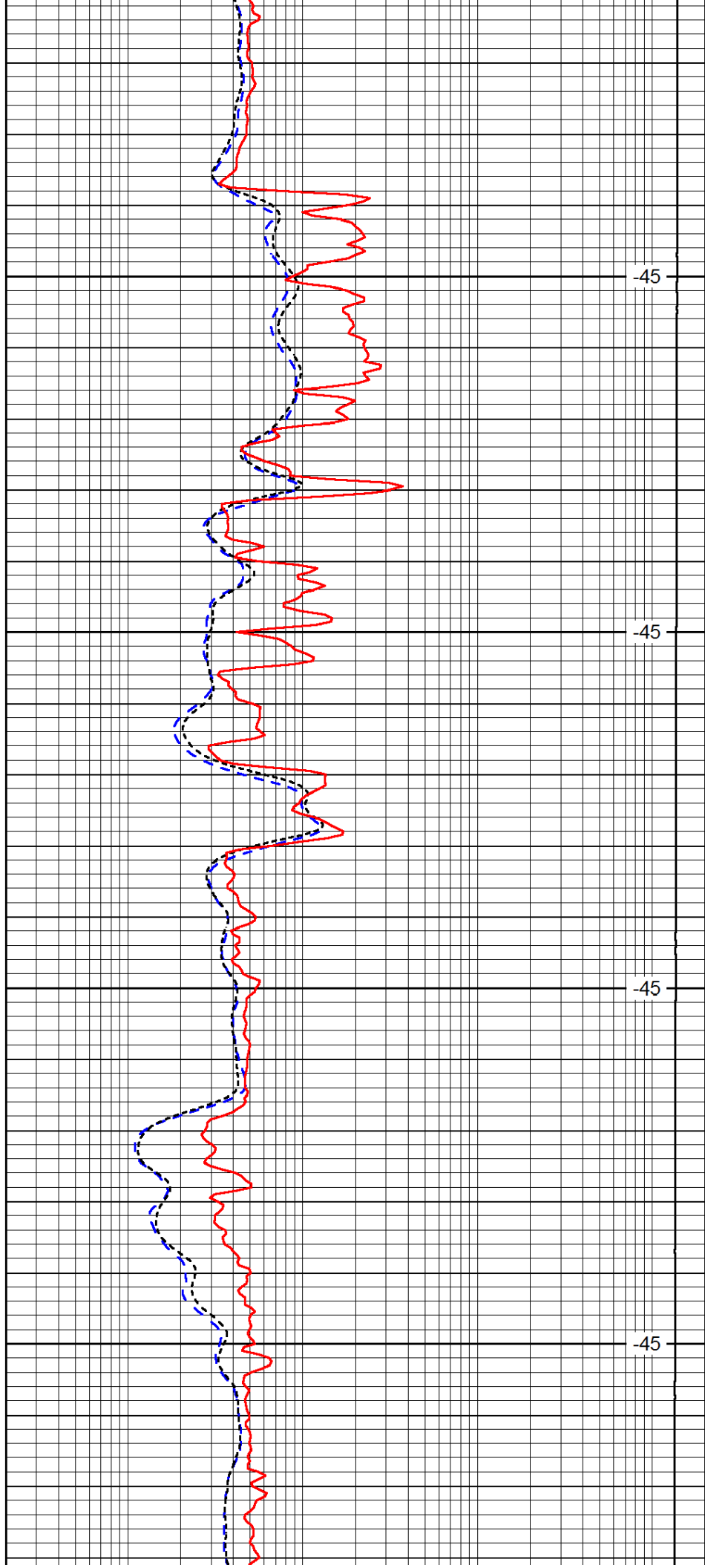


1400

1450

1500

1550

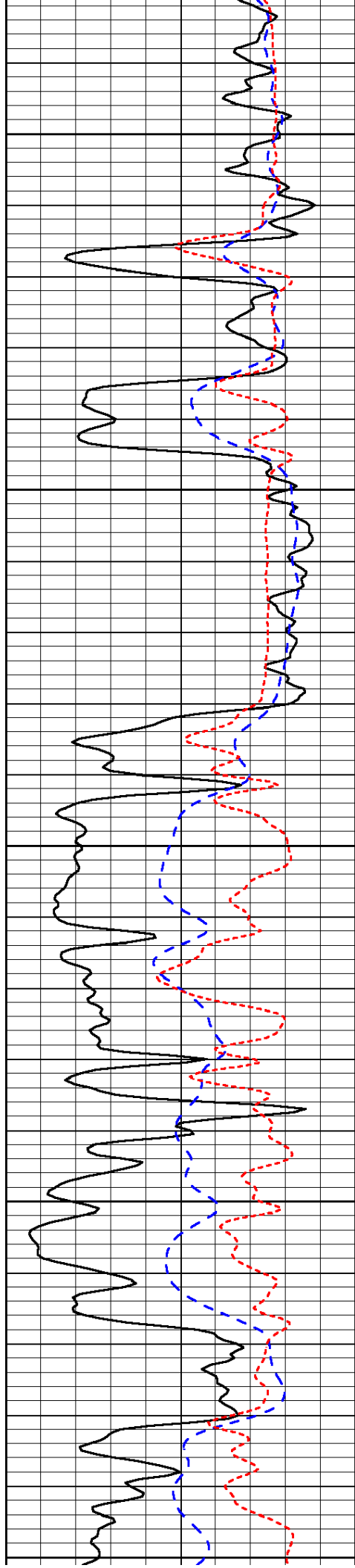


-45

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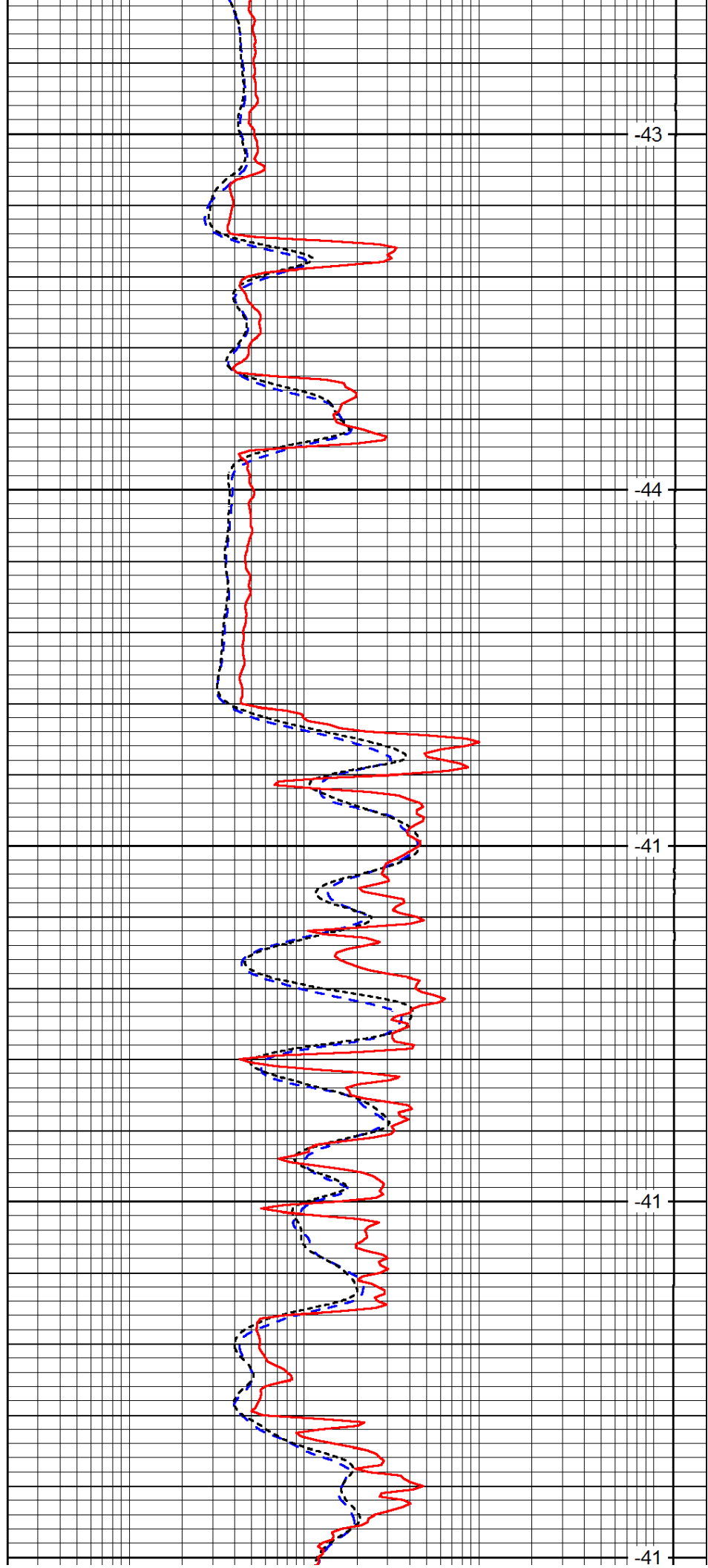
1600

1650

1700

1750

1800



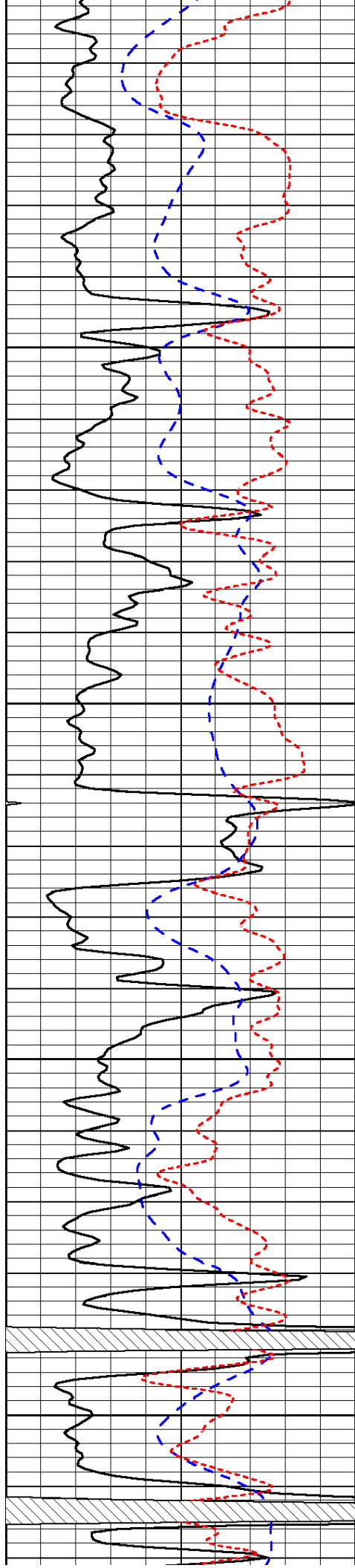
-43

-44

-41

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-41

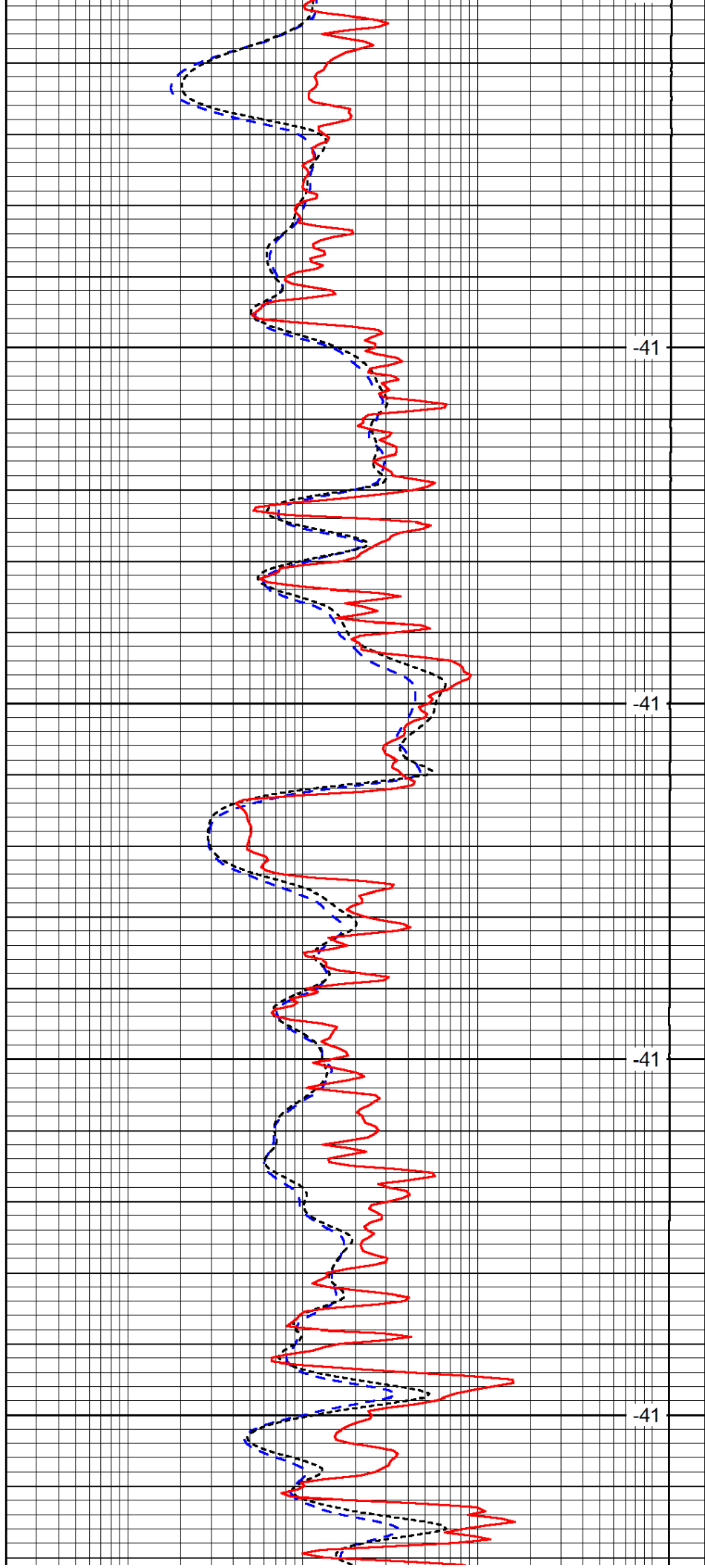


1850

1900

1950

2000

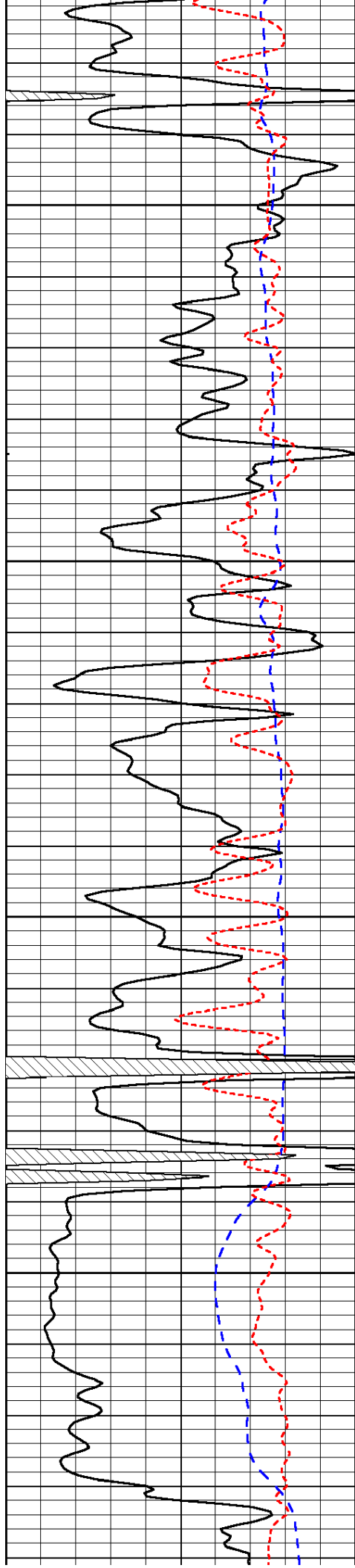


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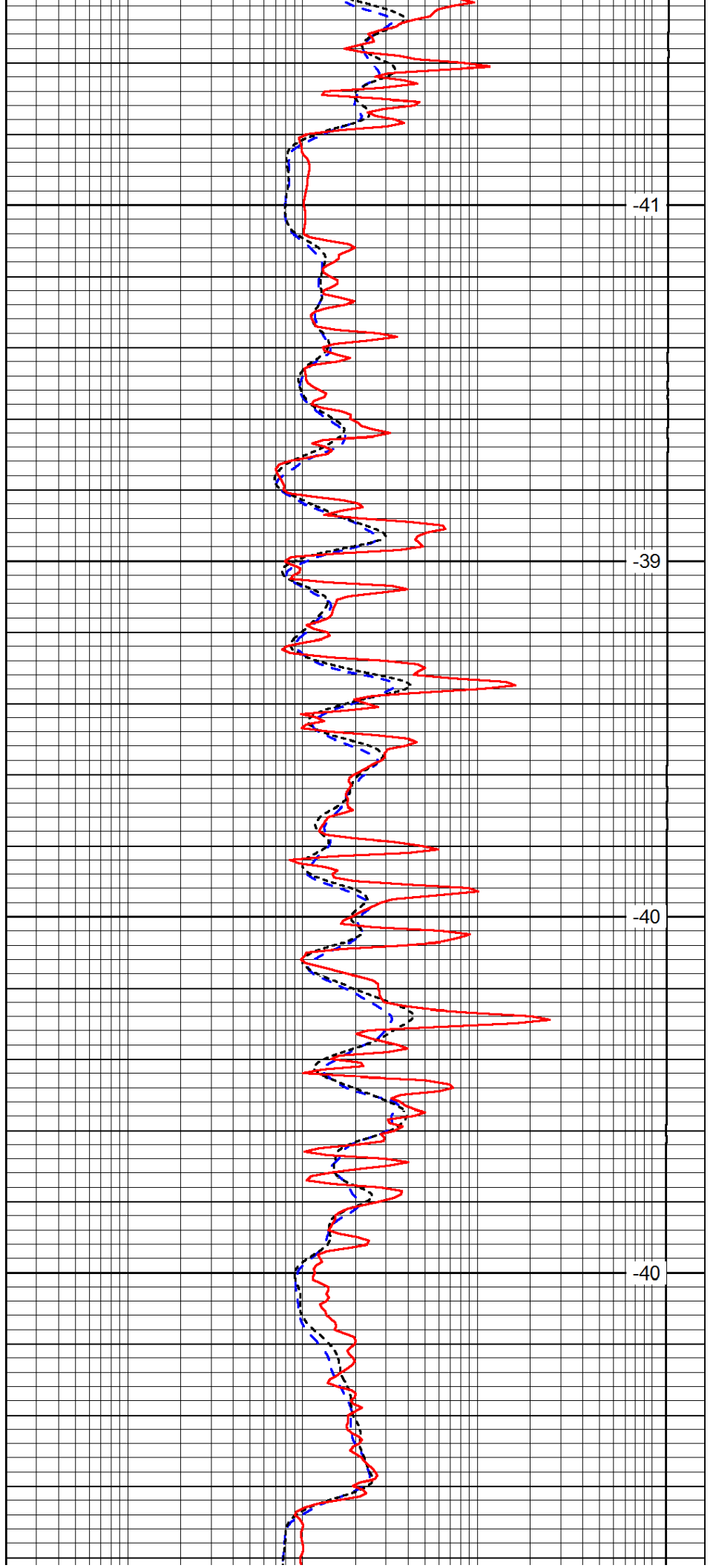


2050

2100

2150

2200

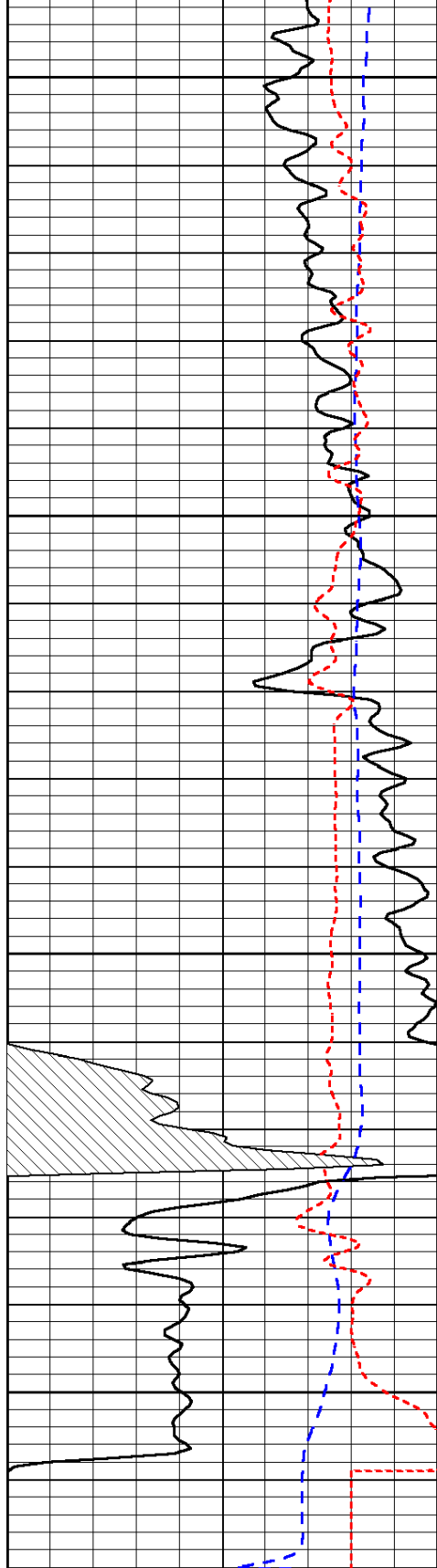


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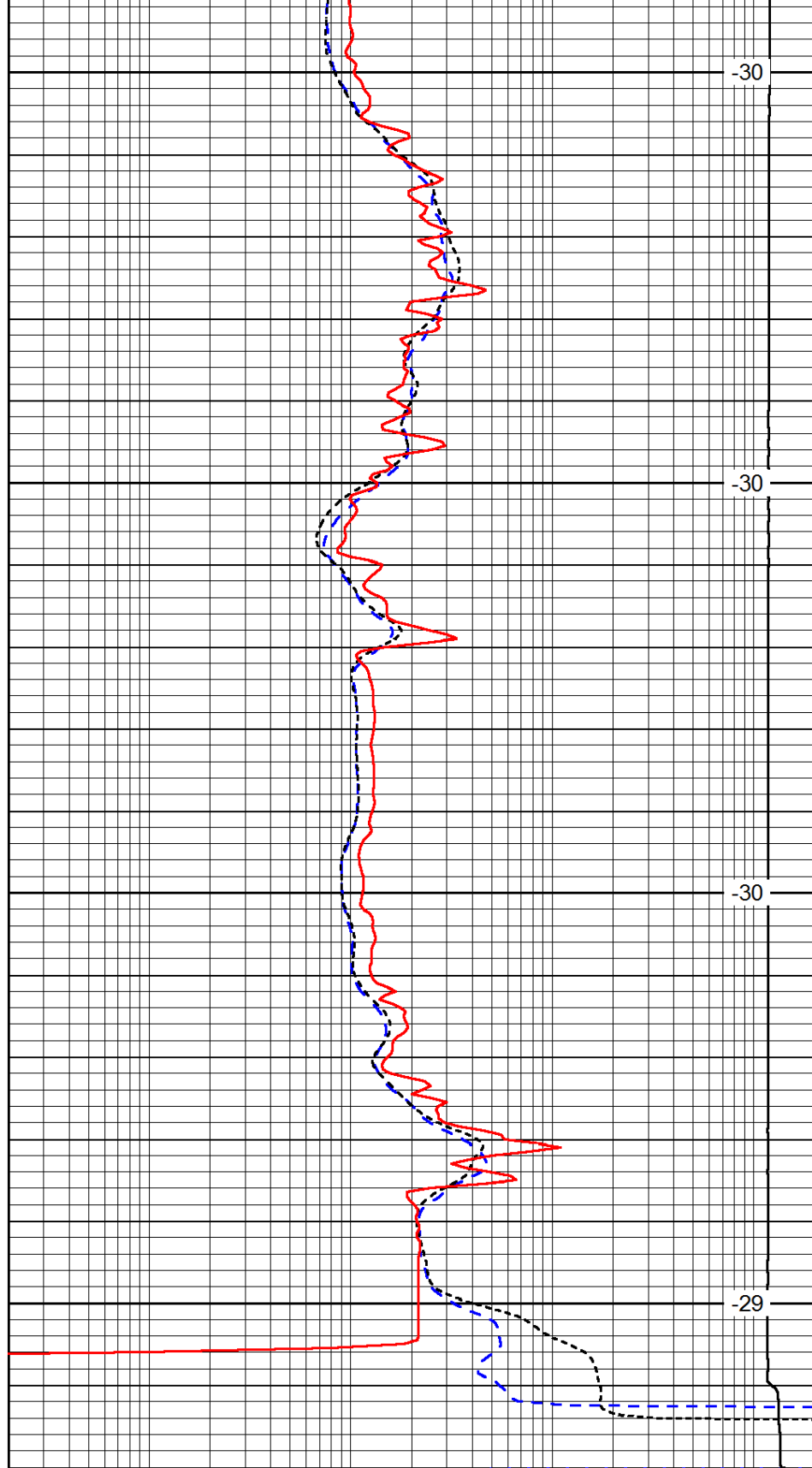
0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

2250

2300

2350

2400



0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD