



Pioneer Energy Services

Dual Induction Log

API No.	15-015-24,006-00-00		
Company	Range Oil Company, Inc.		
Well	Entz Trust C #1		
Field	Potwin		
County	Butler	State	Kansas
Location	1550' FSL & 330' FEL		Other Services CNL/CDL
Sec: 9	Twp: 25S	Rge: 3E	Elevation K.B. 1381 D.F. 1371 G.L. 1371

Permanent Datum	Ground Level	Elevation 1371
Log Measured From	Kelly Bushing	10 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
Date	12/4/2013	
Run Number	One	
Depth Driller	2831	
Depth Logger	2826	
Bottom Logged Interval	2825	
Top Log Interval	200	
Casing Driller	8.625 @ 227	
Casing Logger	225	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	900	
Density / Viscosity	9.4 54	
pH / Fluid Loss	9.5 8.6	
Source of Sample	Flowline	
Rm @ Meas. Temp	0.65 @ 60	
Rmf @ Meas. Temp	0.49 @ 60	
Rmc @ Meas. Temp	0.88 @ 60	
Source of Rmf / Rmc	Charts	
Rm @ BHT	0.37 @ 104	
Operating Rig Time	3 Hours	
Max Rec. Temp. F	104	
Equipment Number	15	
Location	Hays	
Recorded By	D. Kerr	
Witnessed By	Frank Mize	

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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

Whitewater KS, 1/2 East to Butler RD,
6 South to 30 RD, 2 East to Medowlark, 1 1/2 North, West Into

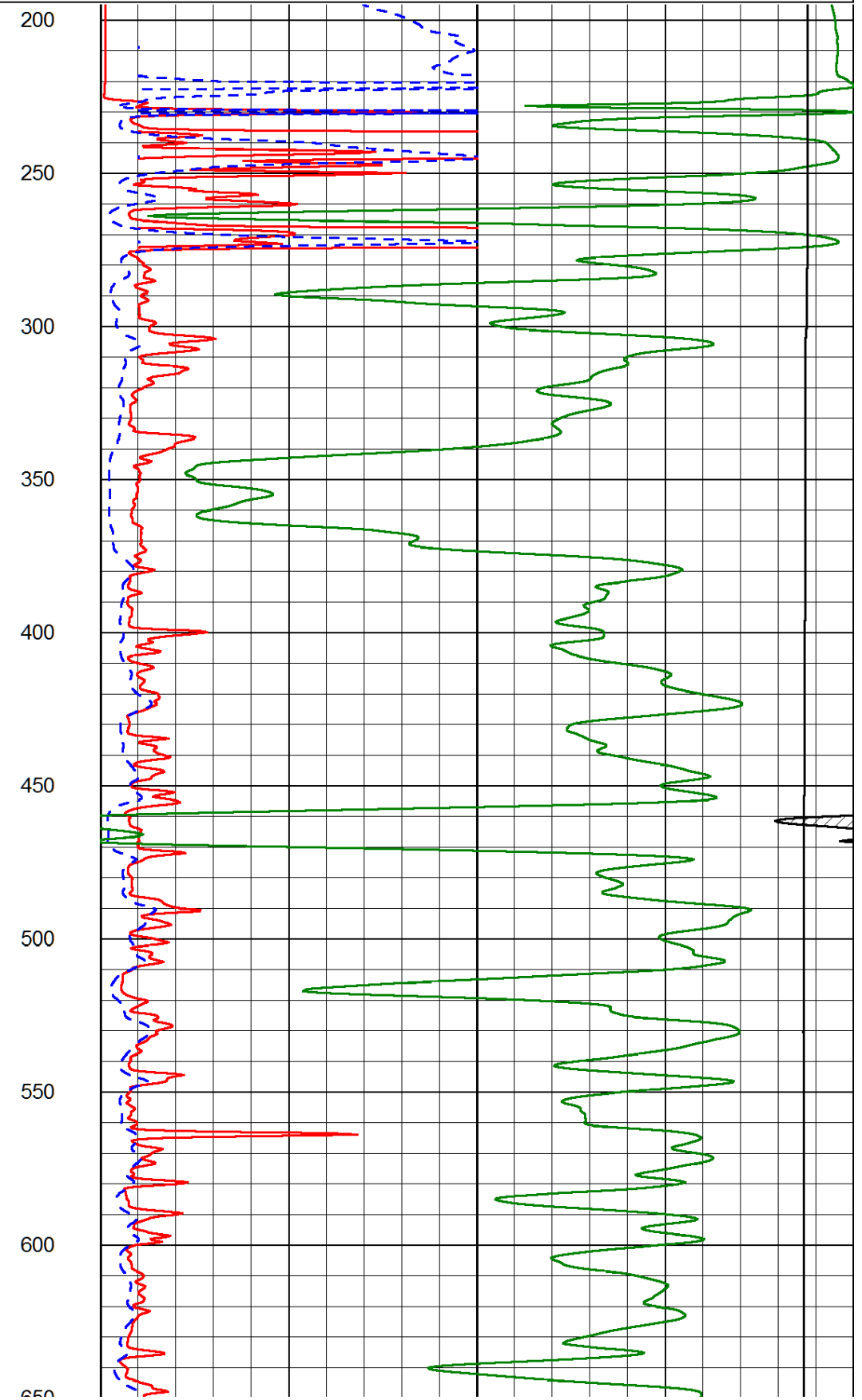
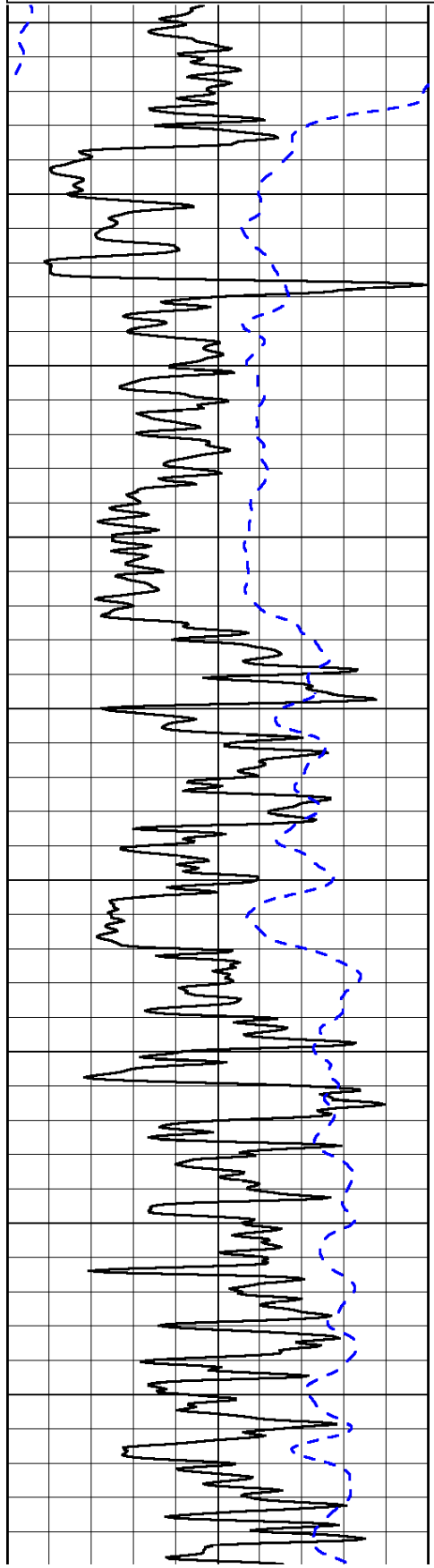
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 Presentation Format: dil2in
 Dataset Creation: Wed Dec 04 08:03:56 2013
 Charted by: Depth in Feet scaled 1:600

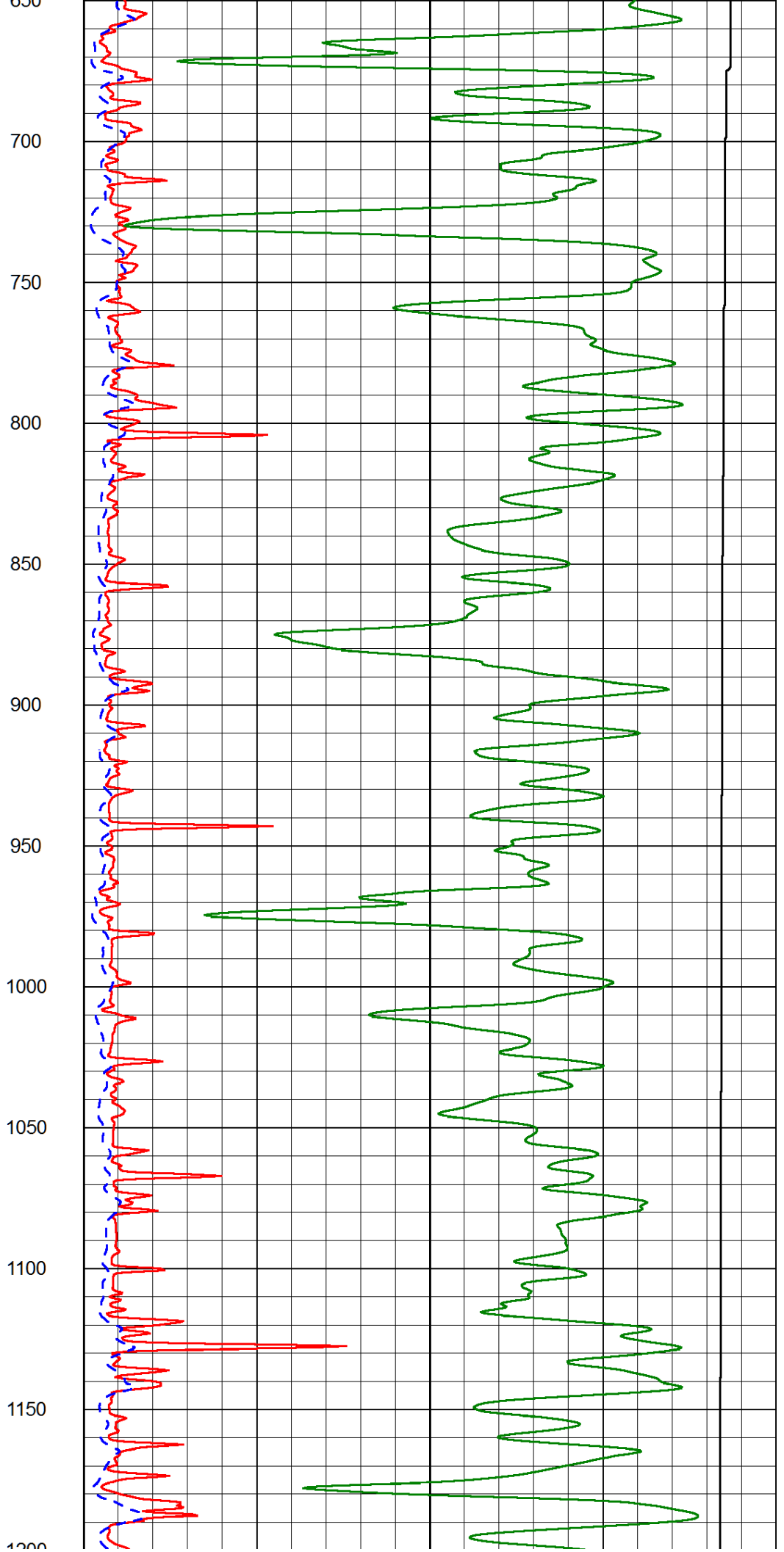
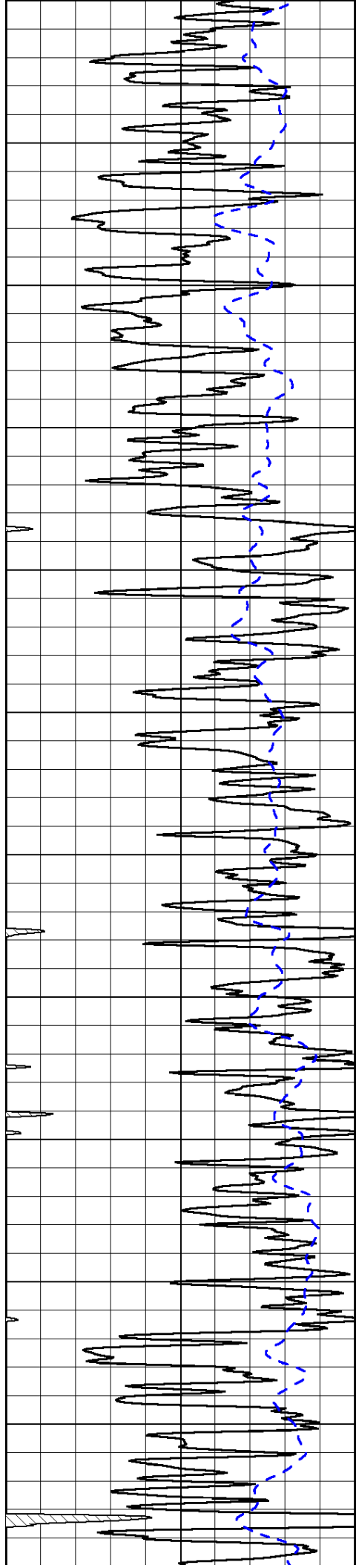
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

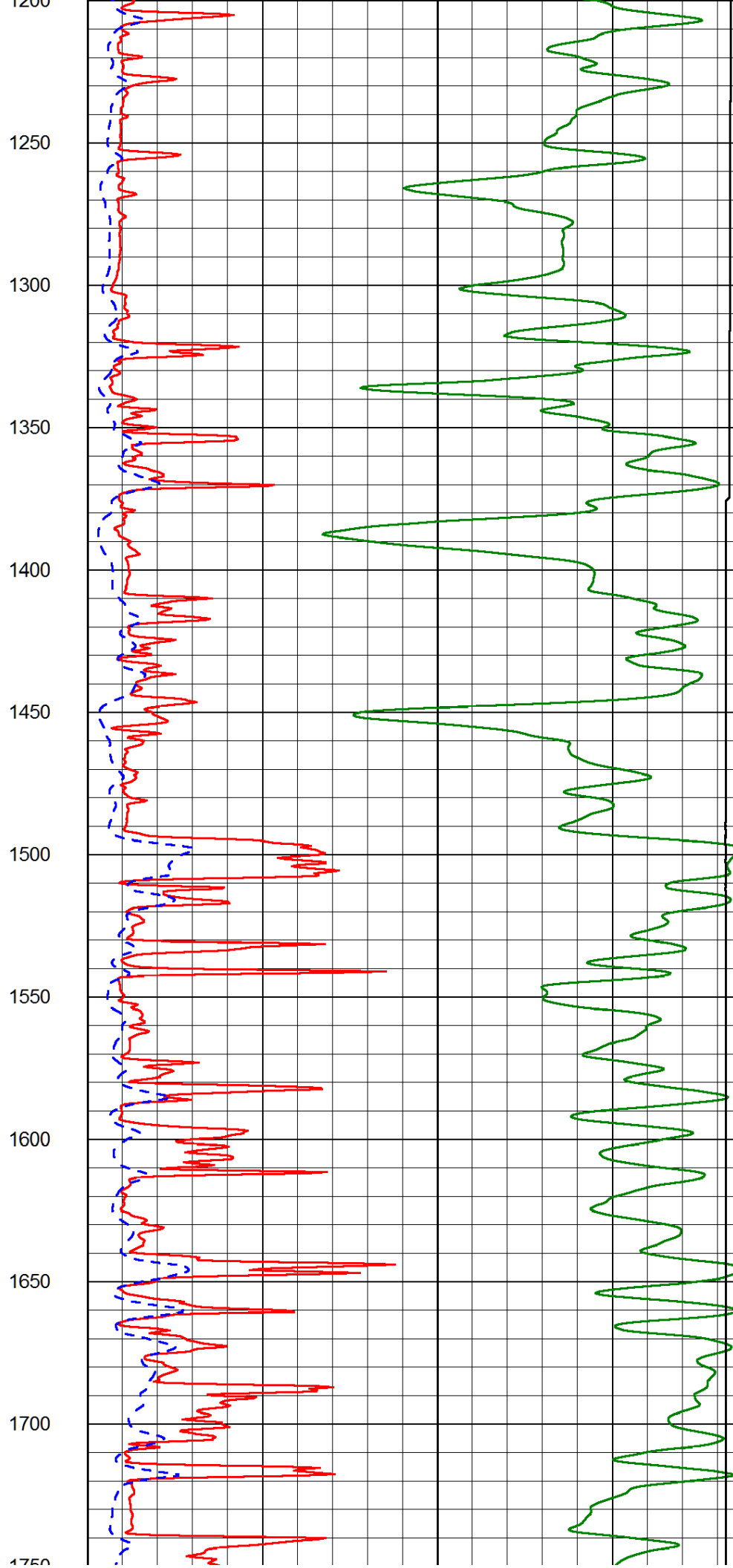
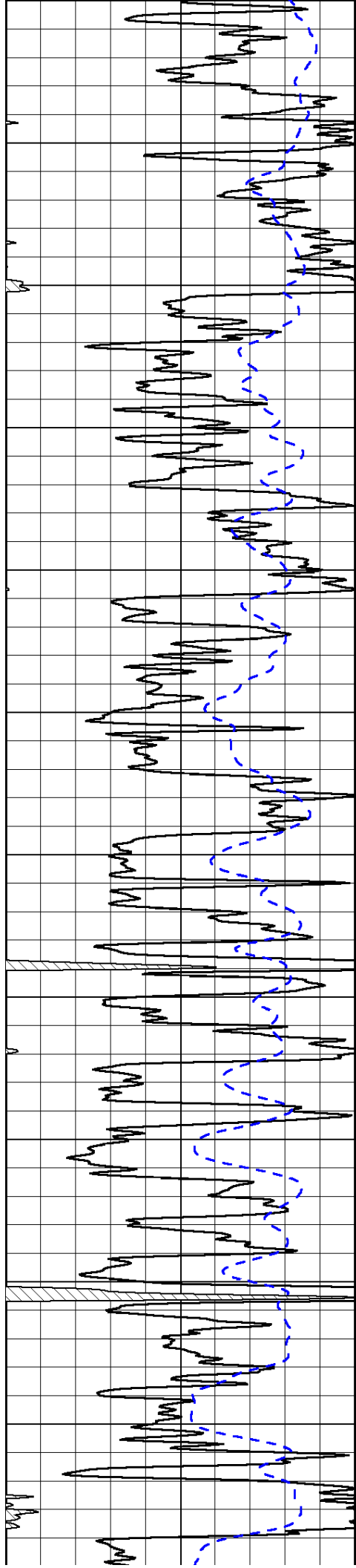
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0	Deep Resistivity (Ohm-m)	50

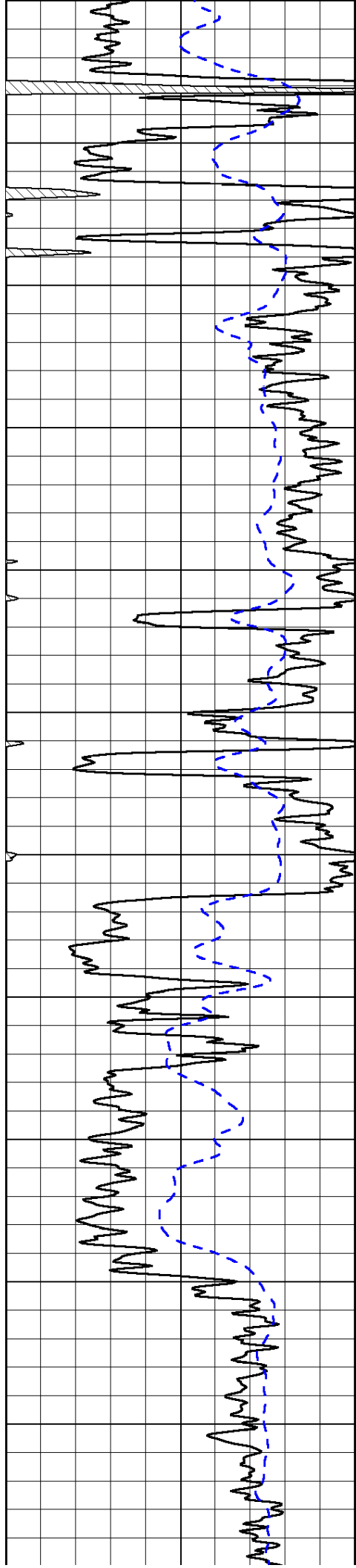
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0

Shallow Resistivity		
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

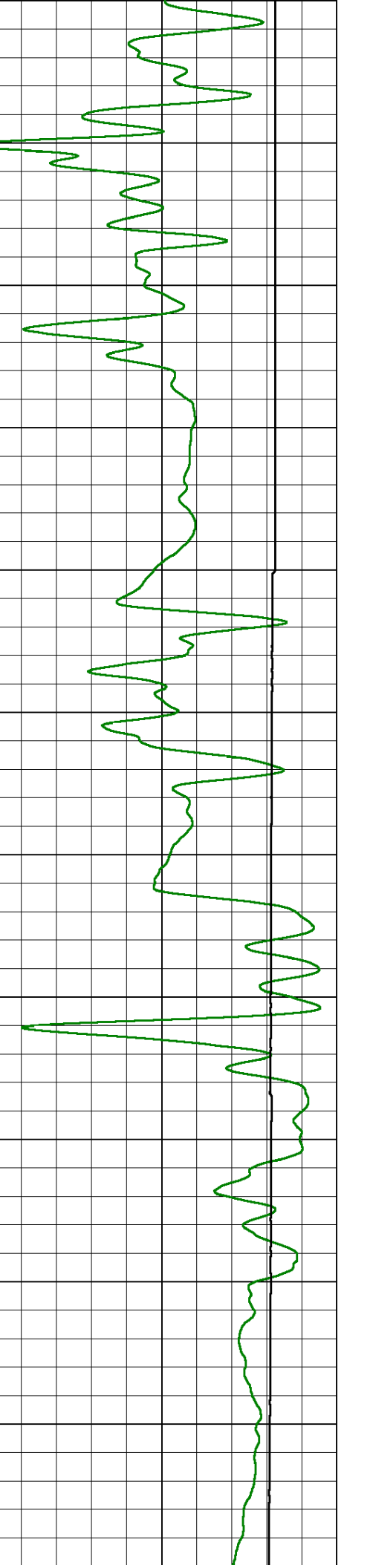
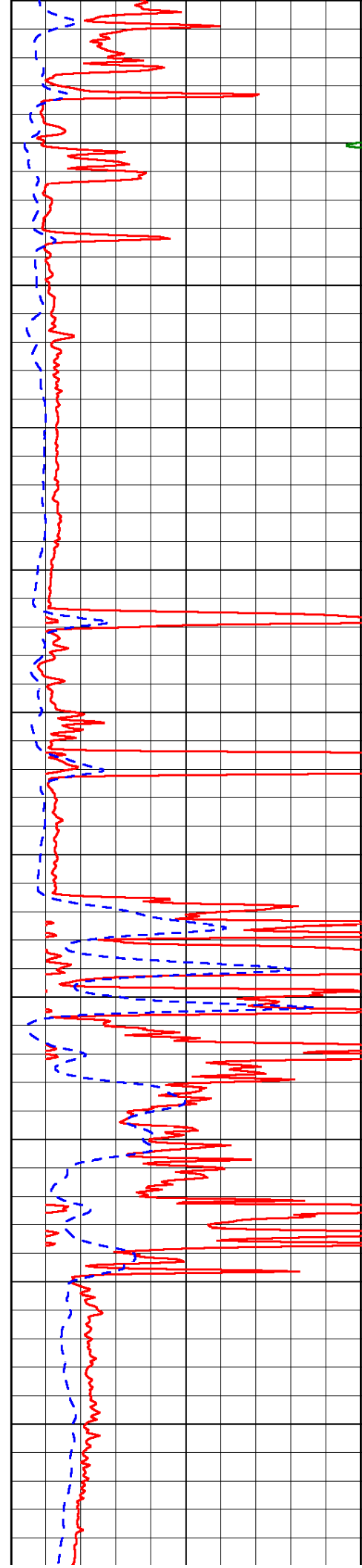


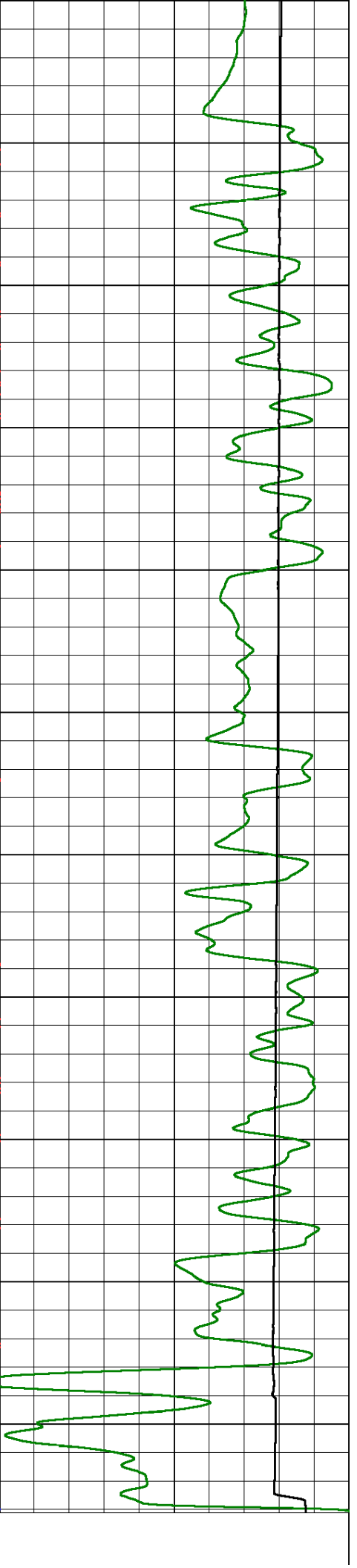
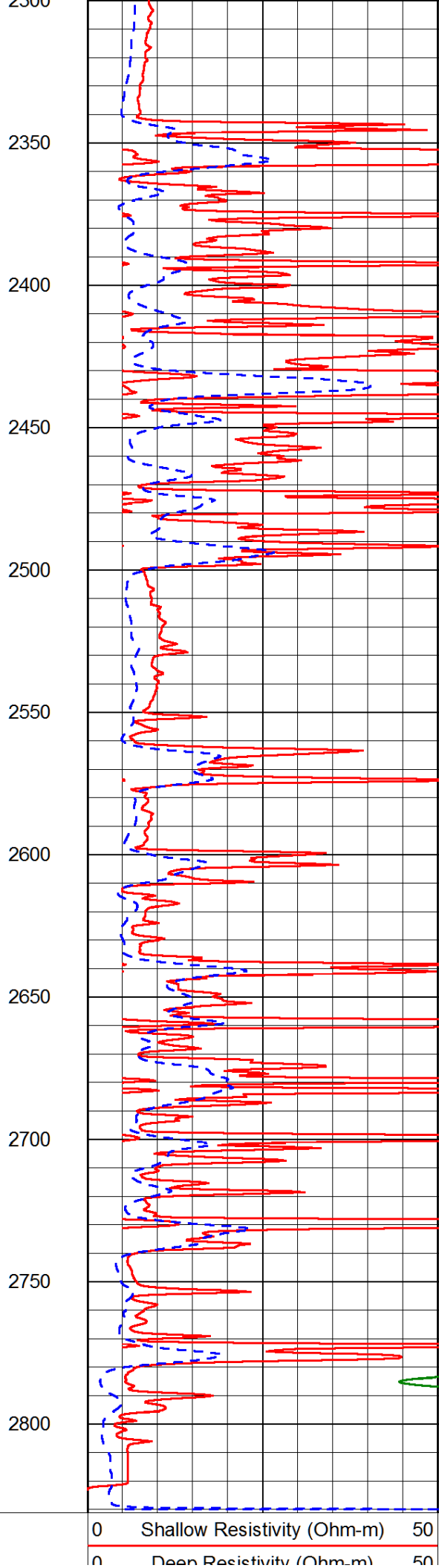
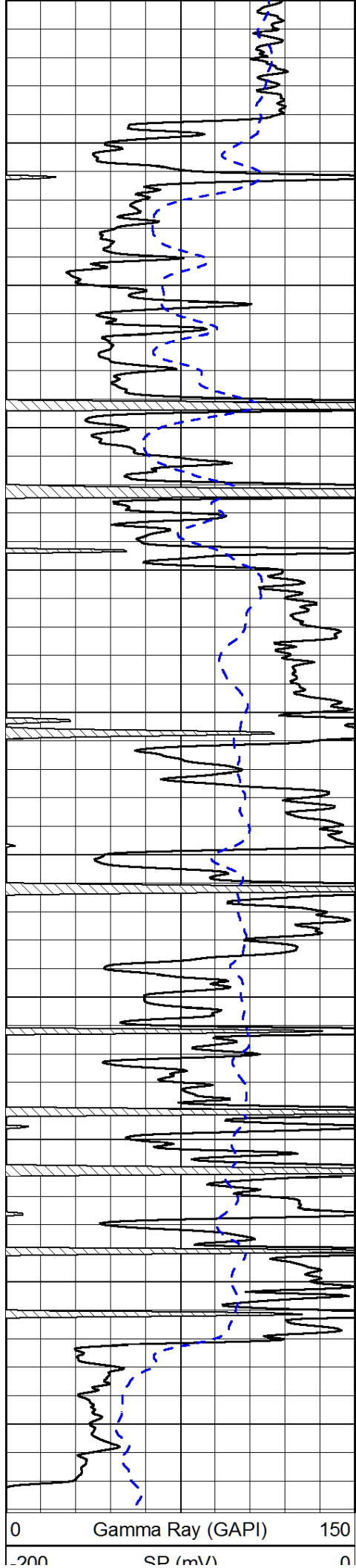






1750
1800
1850
1900
1950
2000
2050
2100
2150
2200
2250
2300





200	SP (mV)	0
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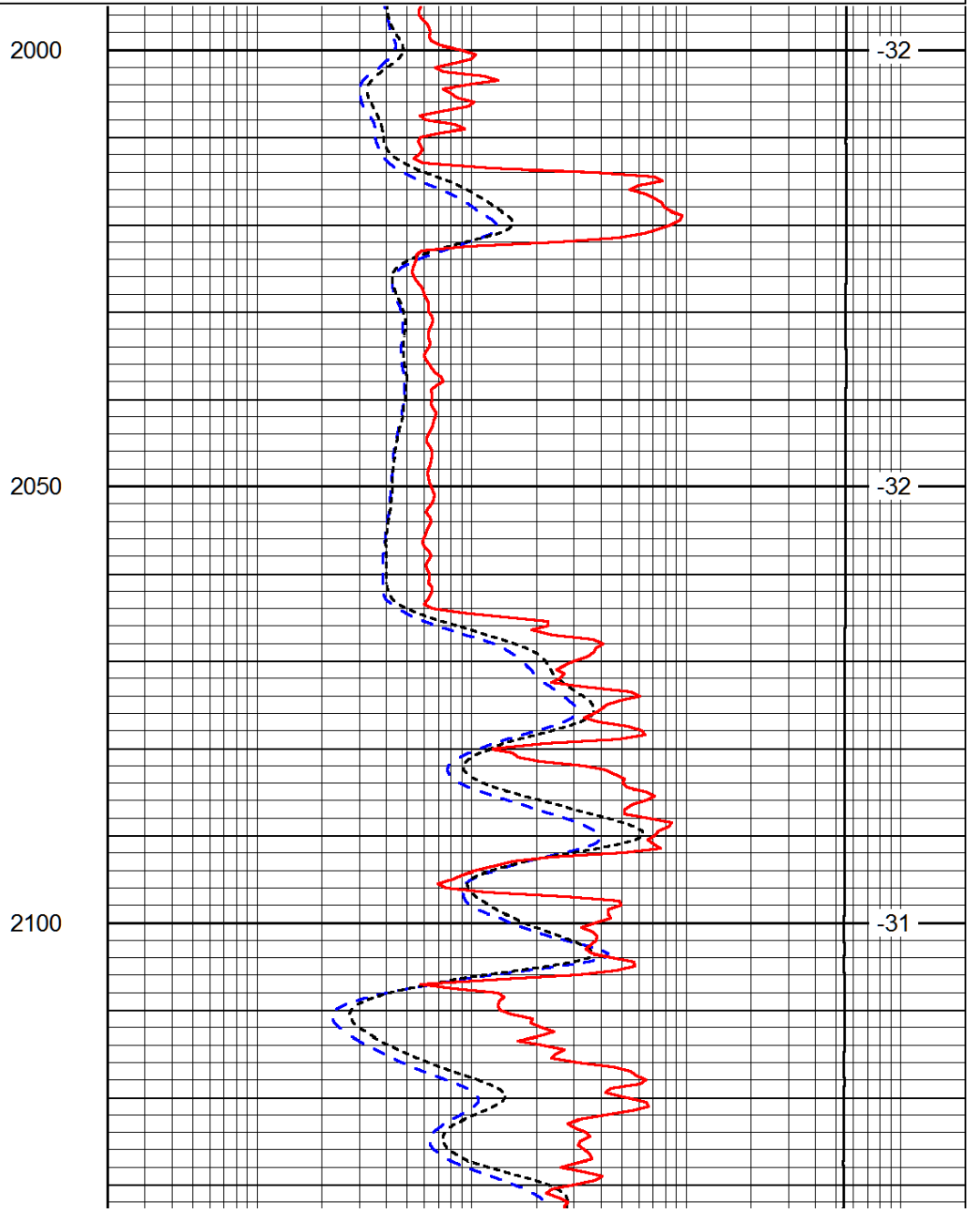
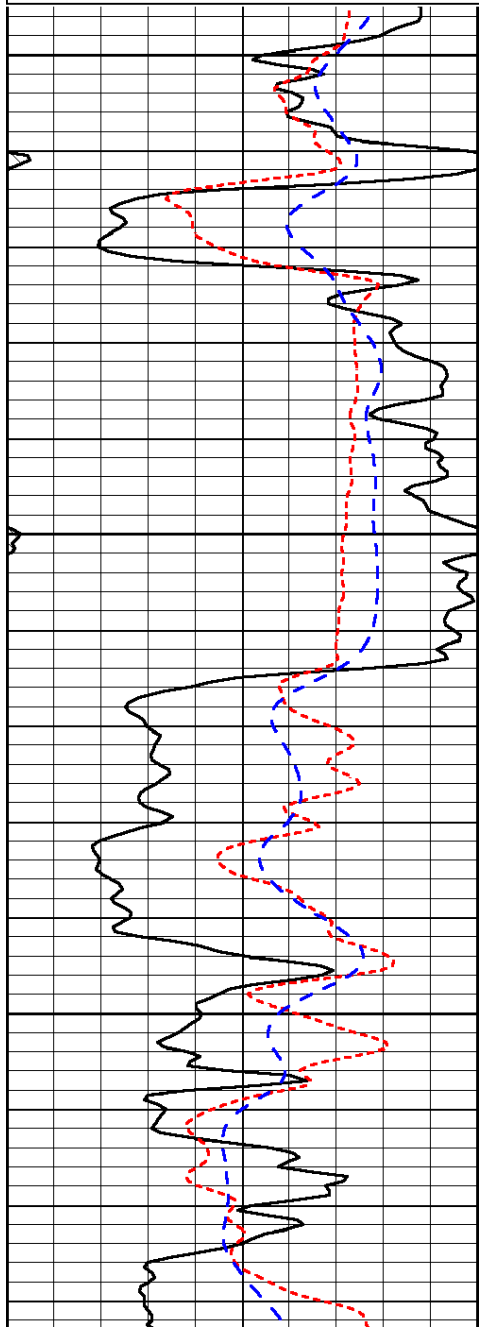
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0
Shallow Resistivity		
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

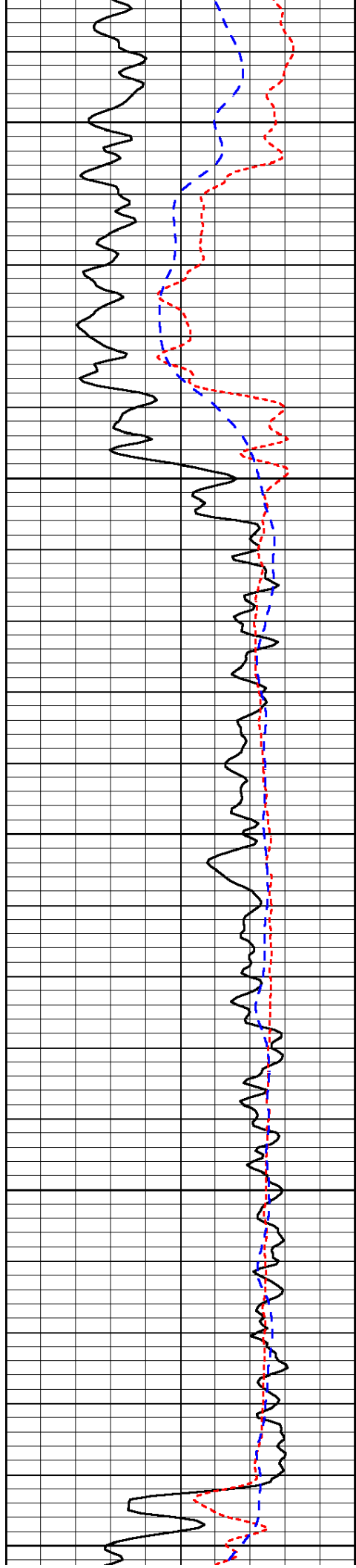
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 Presentation Format: dil
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 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD
(ft/min)





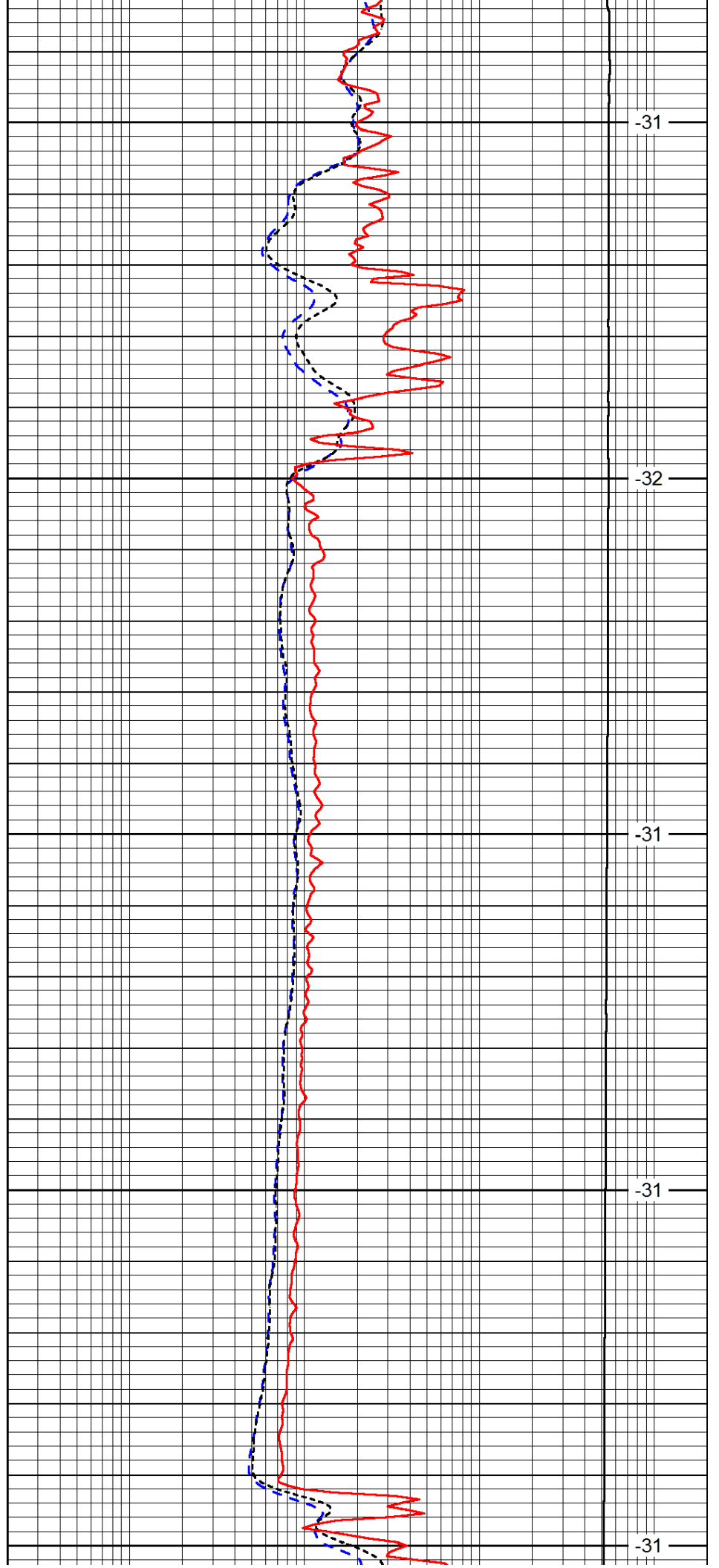
2150

2200

2250

2300

2350



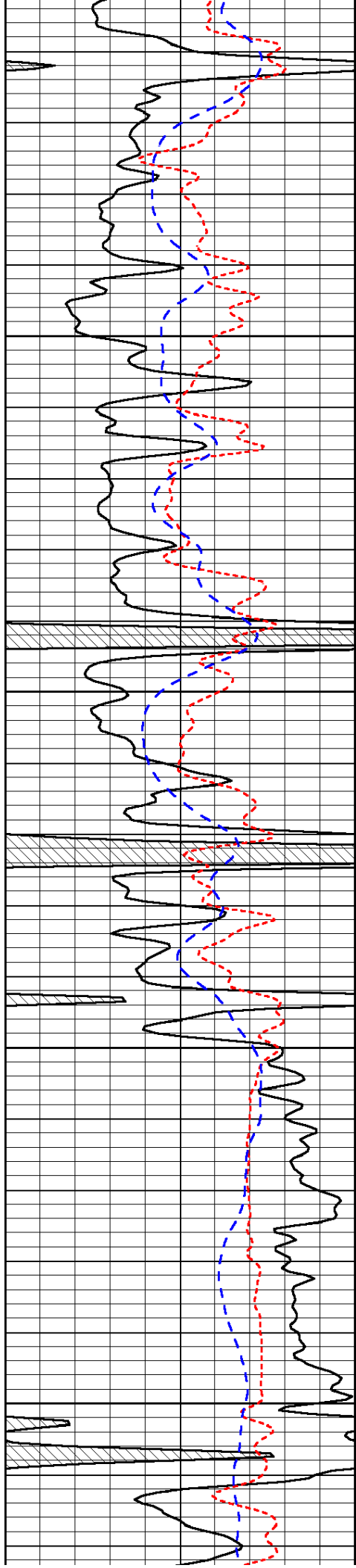
-31

-32

-31

-31

-31

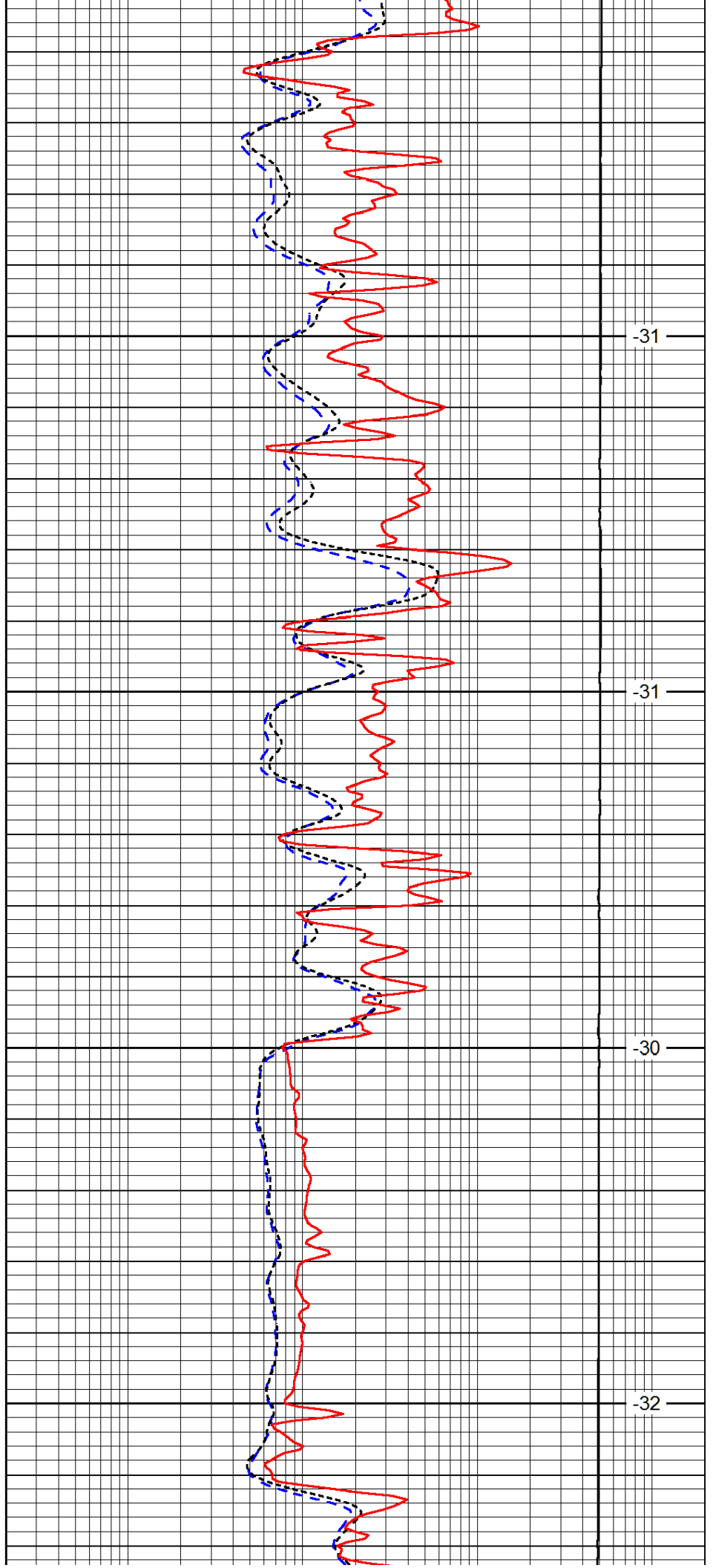


2400

2450

2500

2550

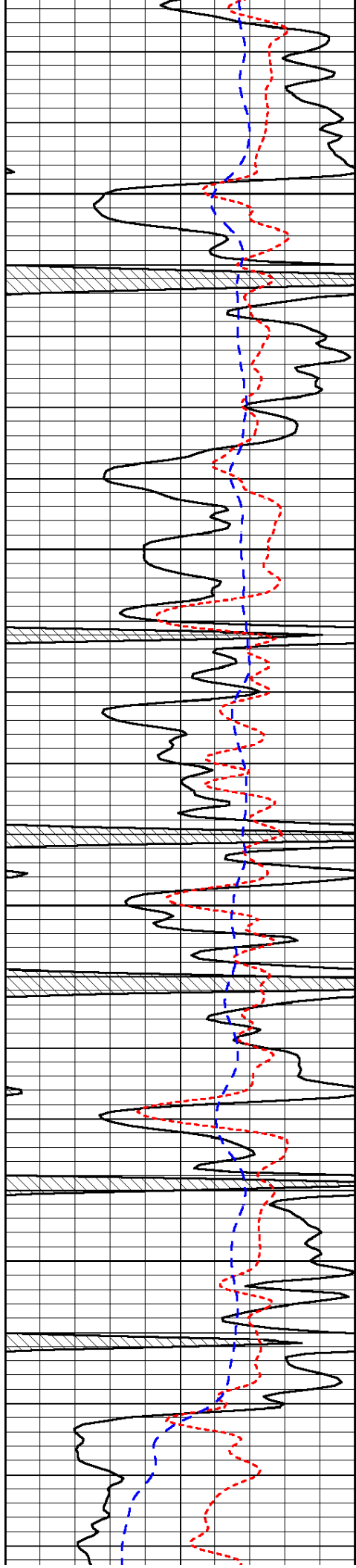


-31

-31

-30

-32

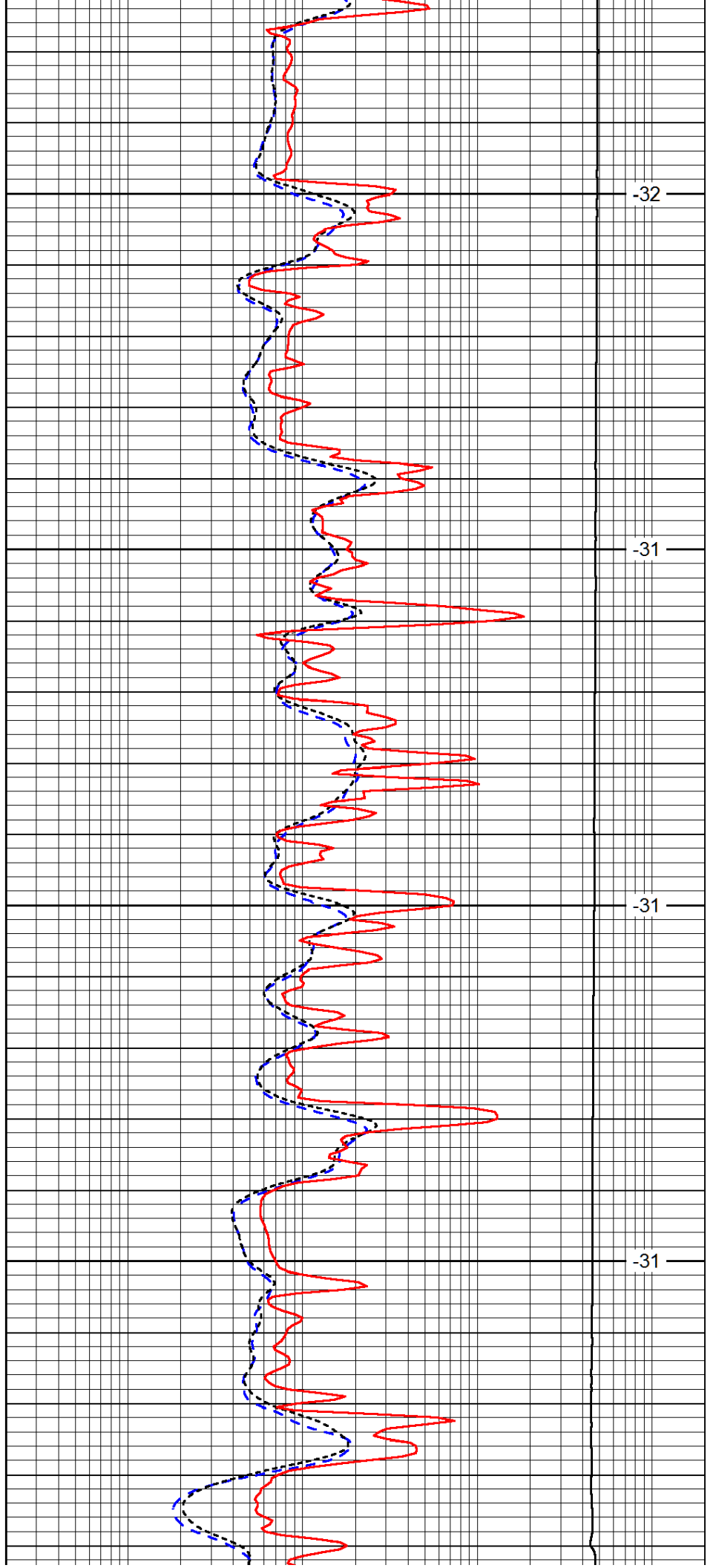


2600

2650

2700

2750

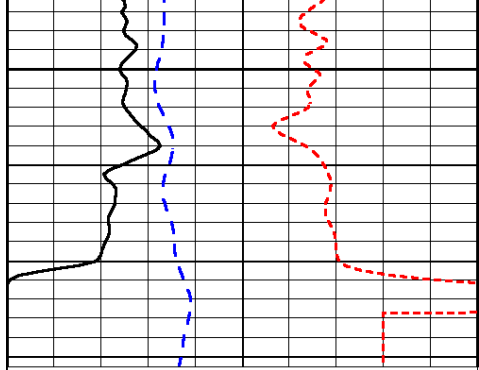


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-31

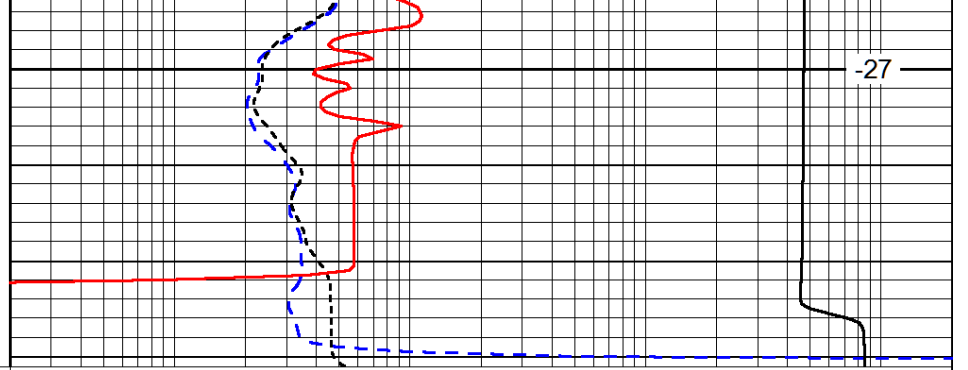
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-31



0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

2800



0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD
(ft/min)