



Pioneer Energy Services

Dual Induction Log

15-051-26,501-00-00

API No.

Company **TDI, Inc.**

Well **Warren #1**

Field **Schoenchen**

County **Ellis** State

Kansas

Location **2310' FNL & 975' FEL**

Sec: **22** Twp: **15S** Rge: **18W**

Permanent Datum **Ground Level** Elevation **2027**

Log Measured From **Kelly Bushing** **10 Ft. Above Perm. Datum**

Drilling Measured From **Kelly Bushing**

Other Services
CNL/CDL
MEL

Elevation
K.B. 2037
D.F. 2027
G.L. 2027

Date	5/4/2013	
Run Number	One	
Depth Driller	3750	
Depth Logger	3752	
Bottom Logged Interval	3751	
Top Log Interval	200	
Casing Driller	8.625 @ 222	
Casing Logger	221	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	5,000	
Density / Viscosity	9.5 59	
pH / Fluid Loss	10.5 7.8	
Source of Sample	Flowline	
Rm @ Meas. Temp	.45 @ 51	
Rmf @ Meas. Temp	.34 @ 51	
Rmc @ Meas. Temp	.61 @ 51	
Source of Rmf / Rmc	Charts	
Rm @ BHT	.2 @ 114	
Operating Rig Time	4 Hours	
Max Rec. Temp. F	114	
Equipment Number	17	
Location	Hays	
Recorded By	C. Desai	
Witnessed By	Tom Denning	Herb Deines

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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.pioneerenergy.com
 785 625 3858

Hays KS, S on Hwy 183 to Mack Dealership,
 1 E, 1/2 S, W Into

Database File: c:\warrior\data\tdi_warren #1\tdihd.db
 Dataset Pathname: dil\tdistk
 Presentation Format: dil2in
 Dataset Creation: Sat May 04 11:01:33 2013
 Charted by: Depth in Feet scaled 1:600

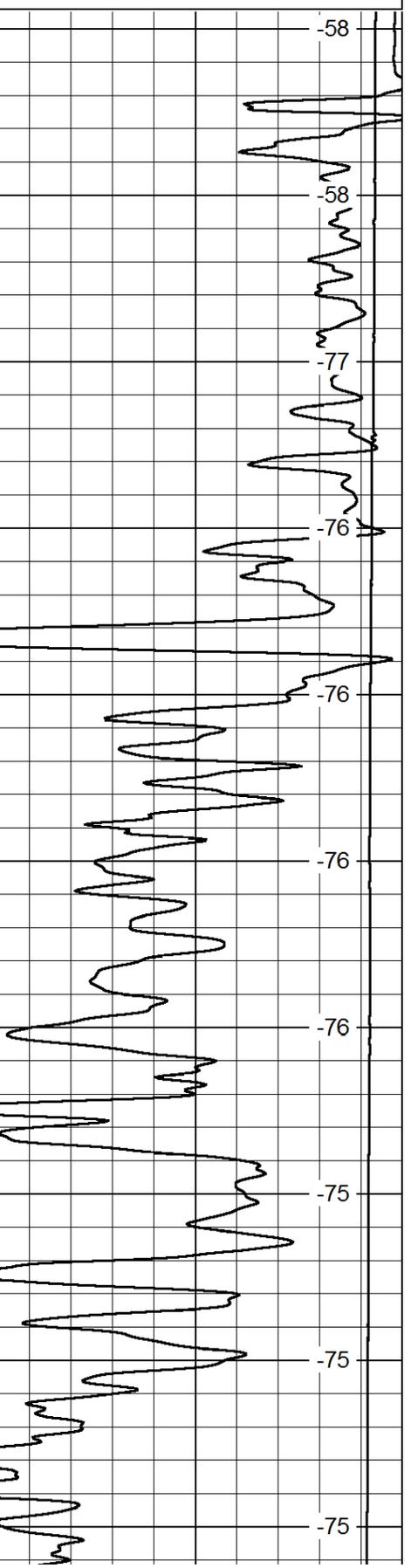
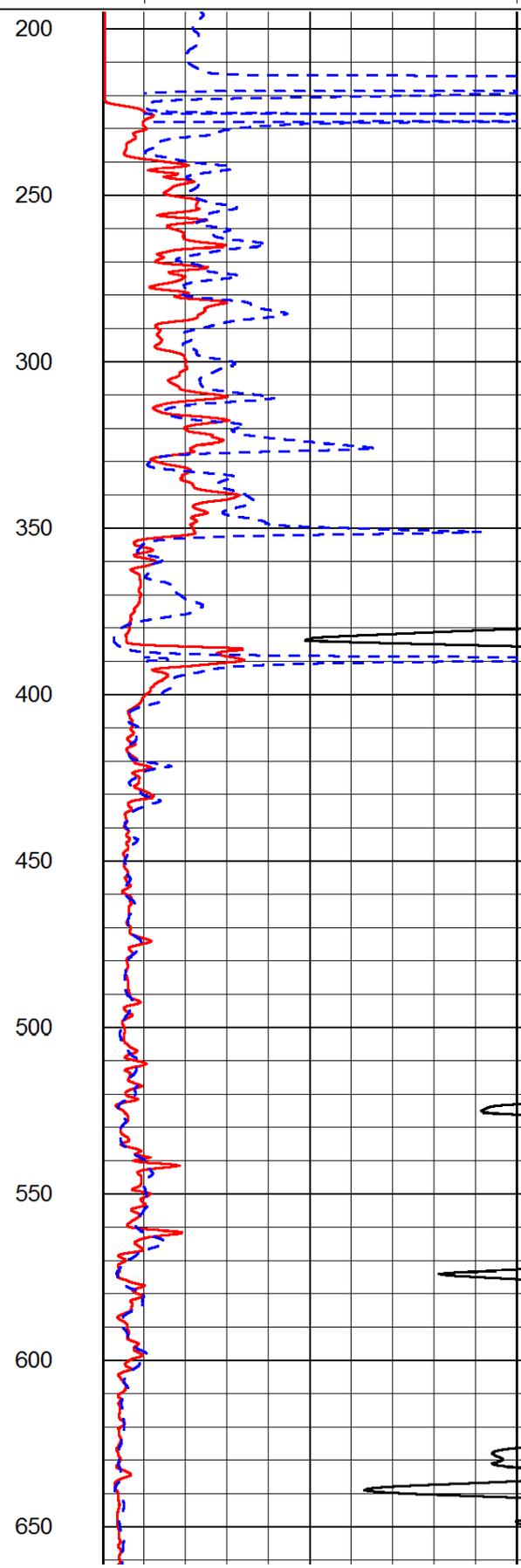
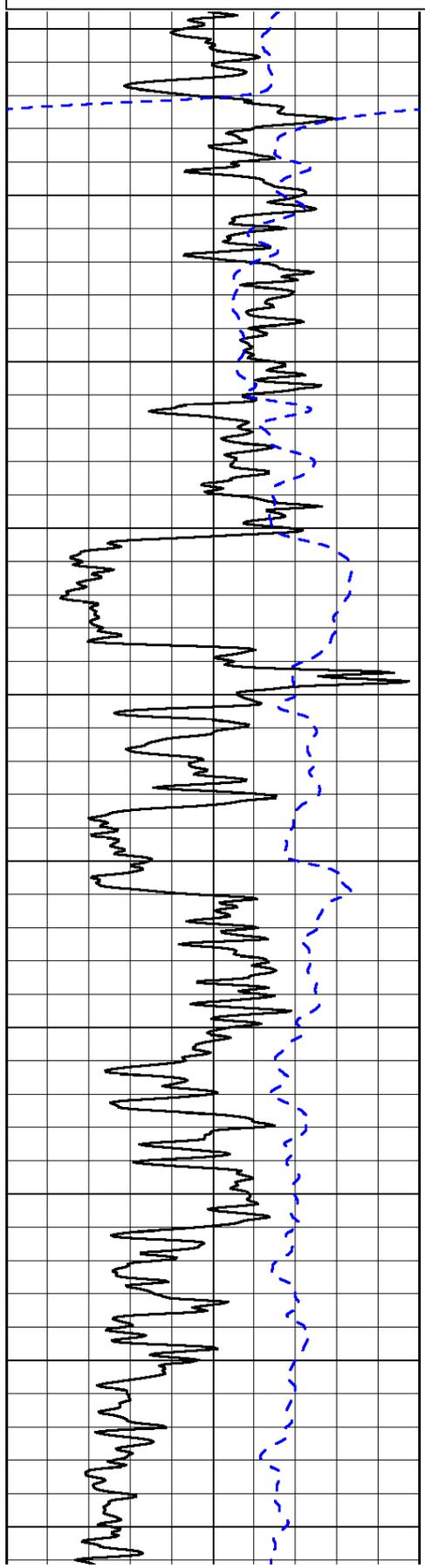
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-200	SP (mV)	0

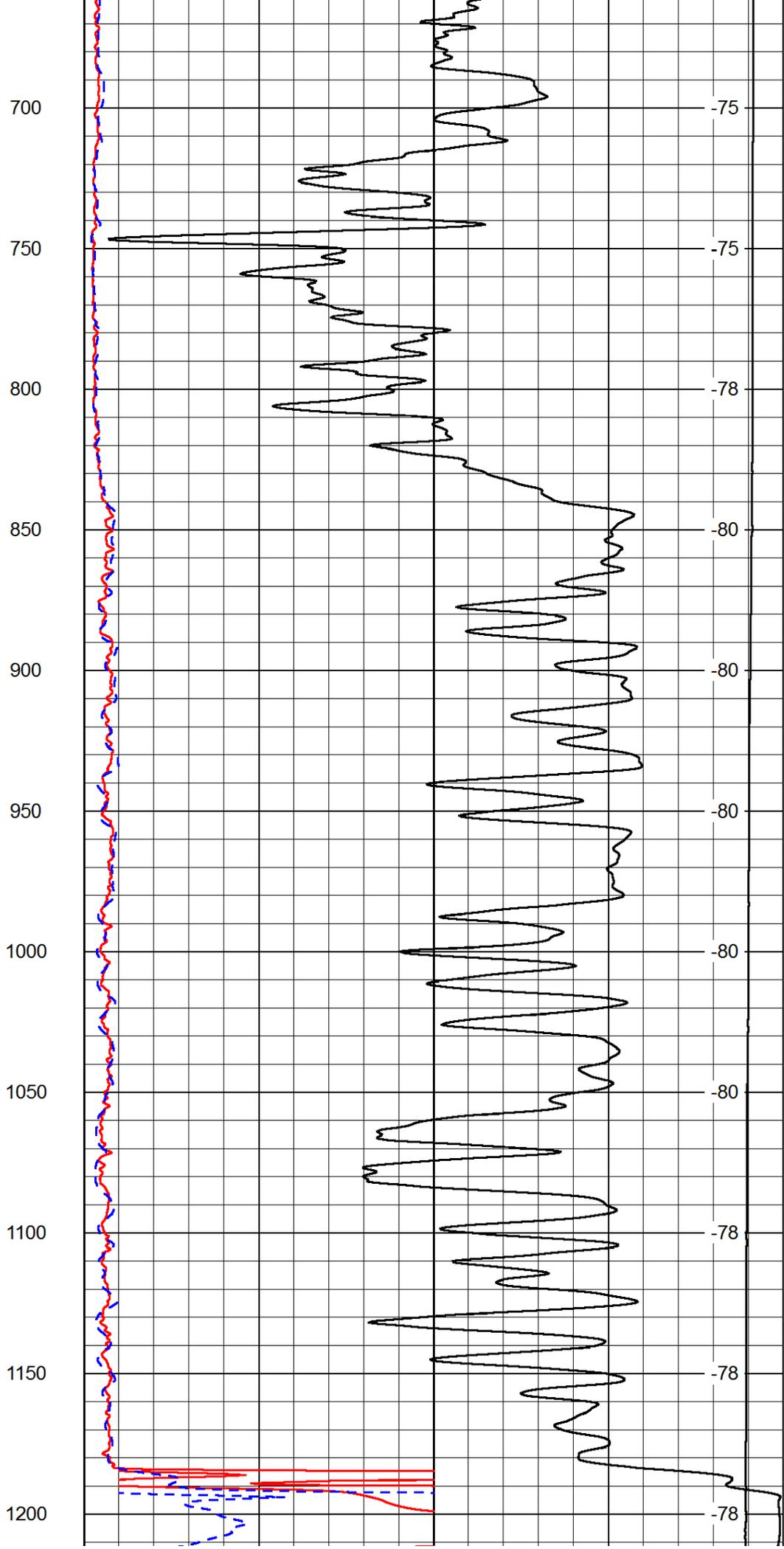
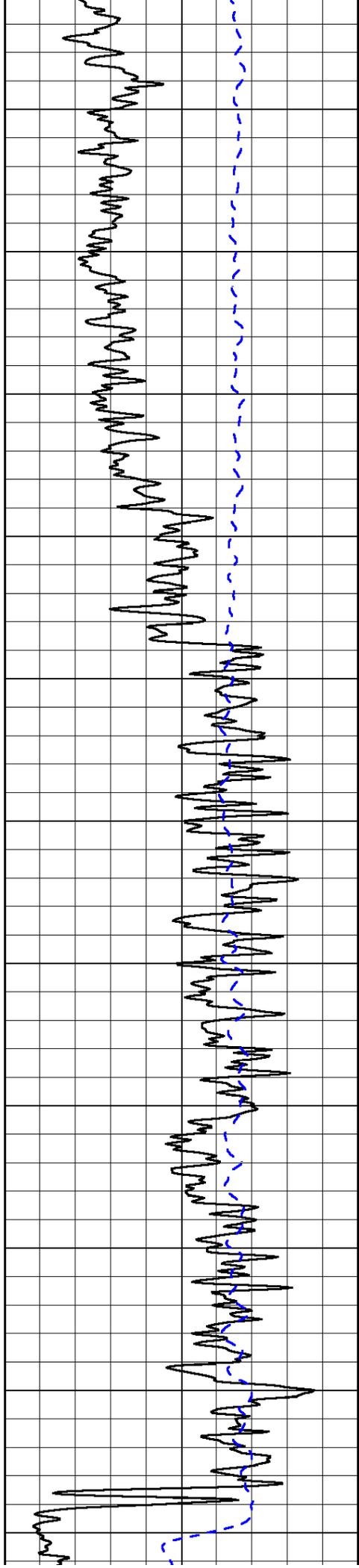
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0	Deep Resistivity	50

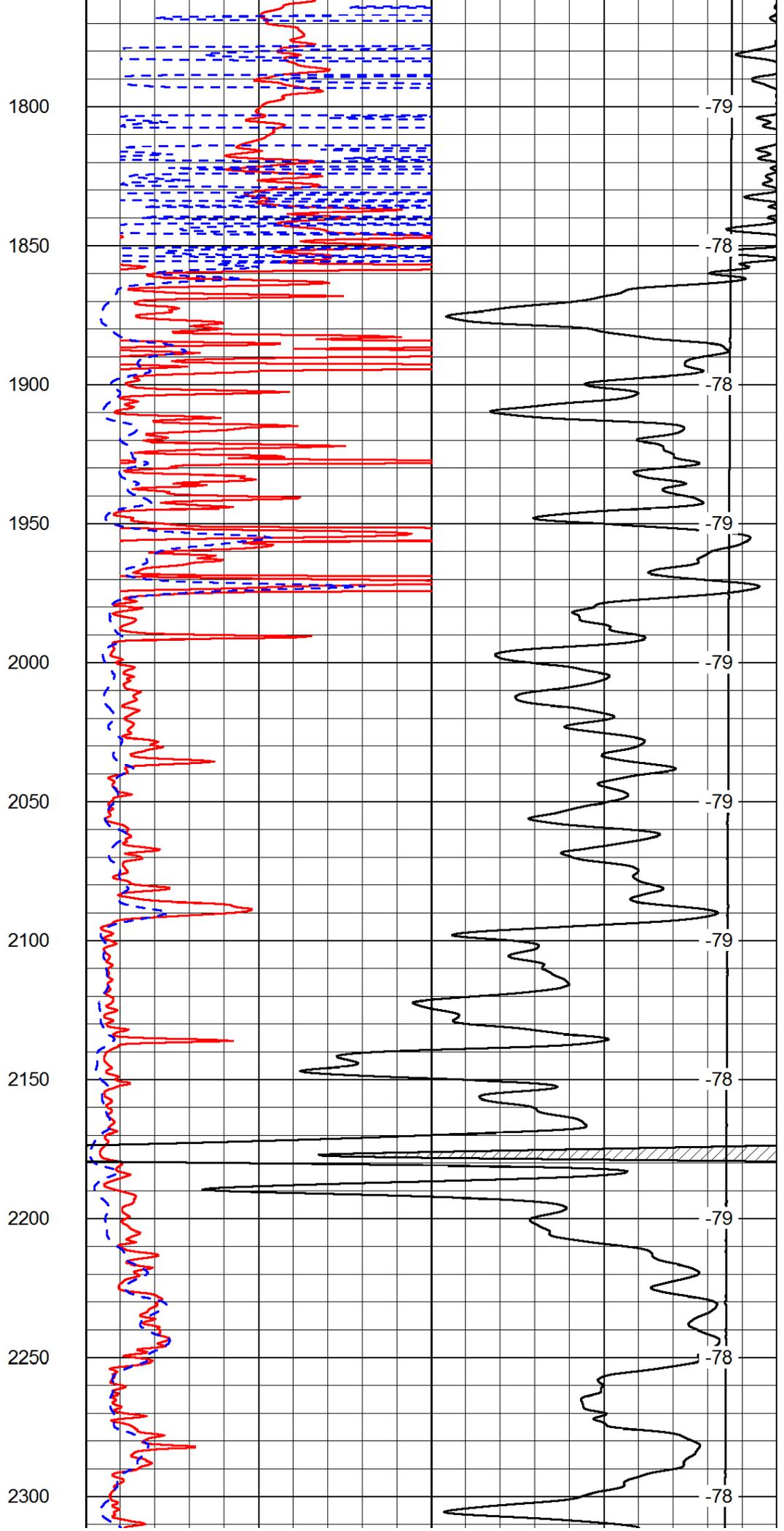
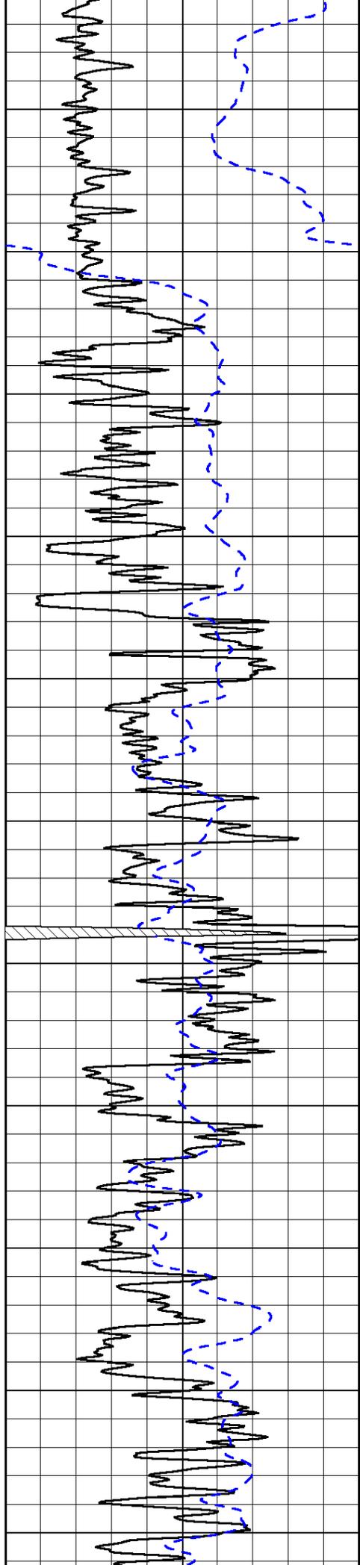
LSPD

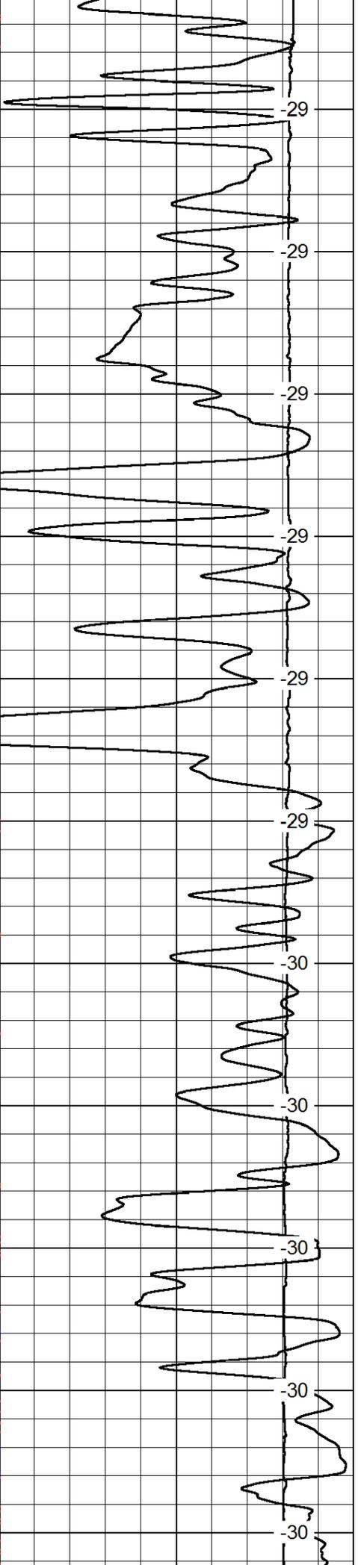
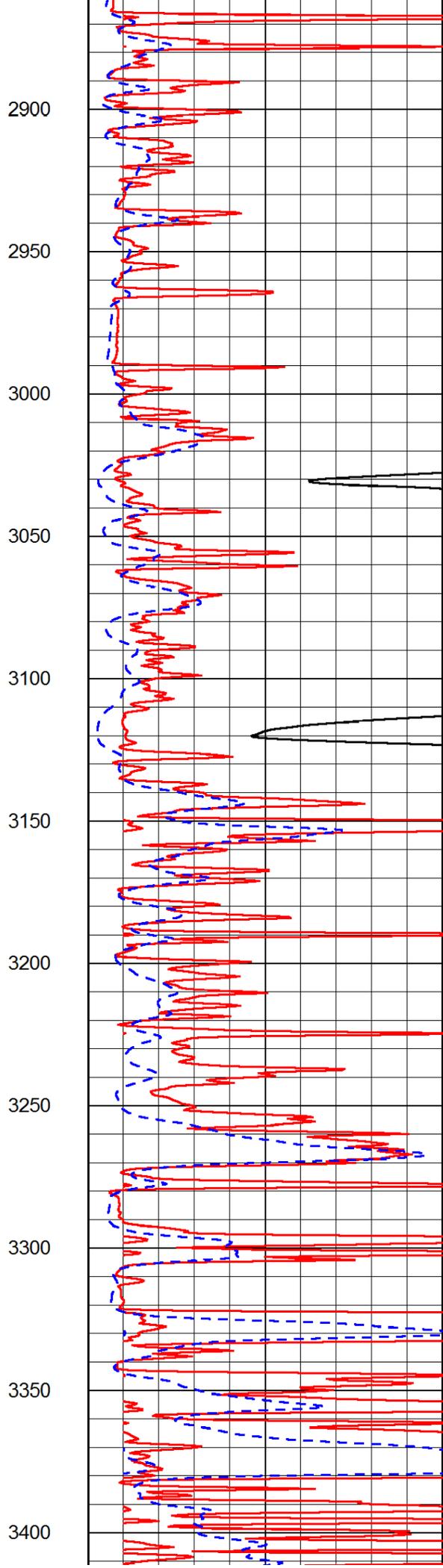
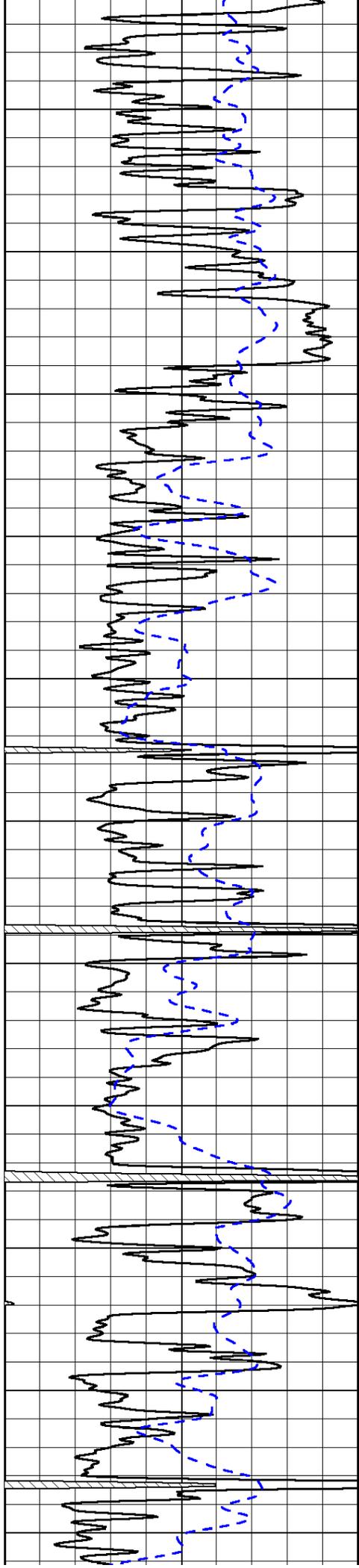
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15000	Line Tension	0

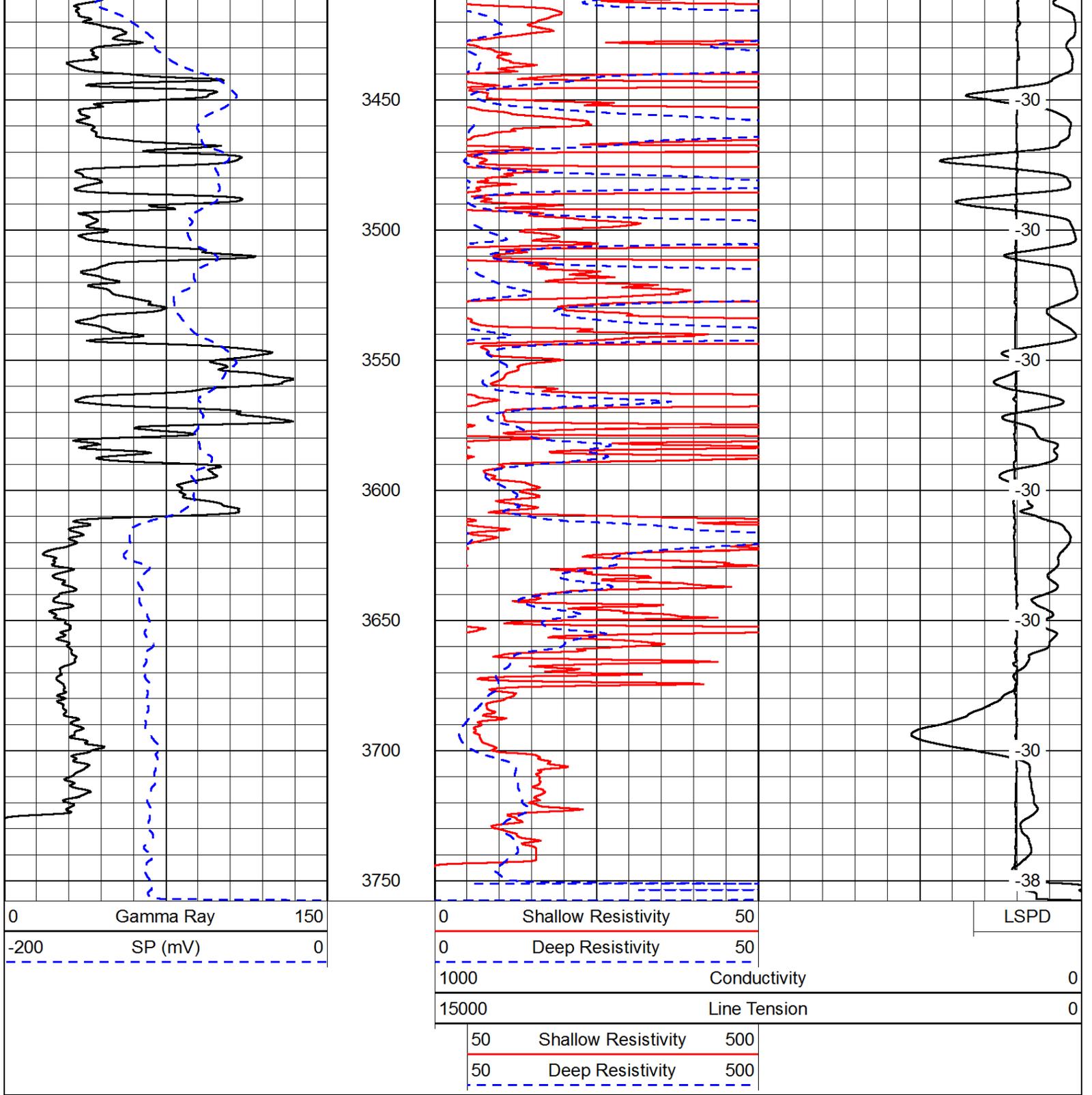
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50	Deep Resistivity	500



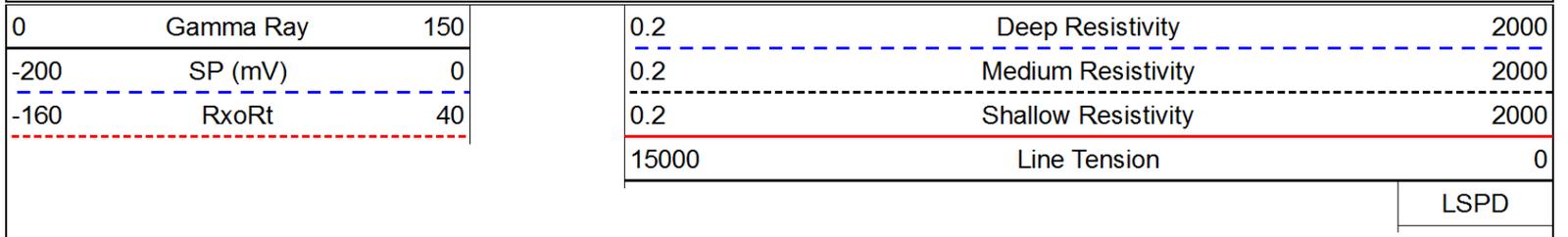


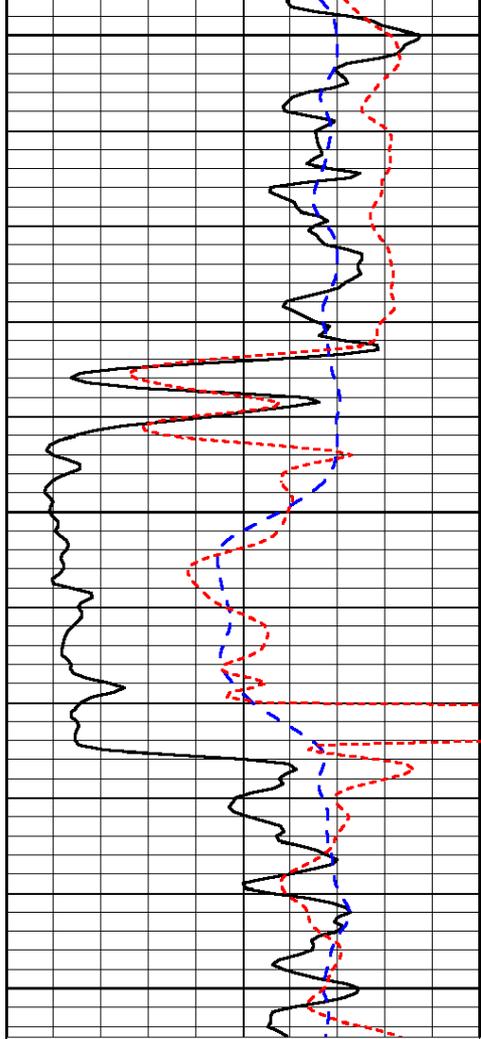




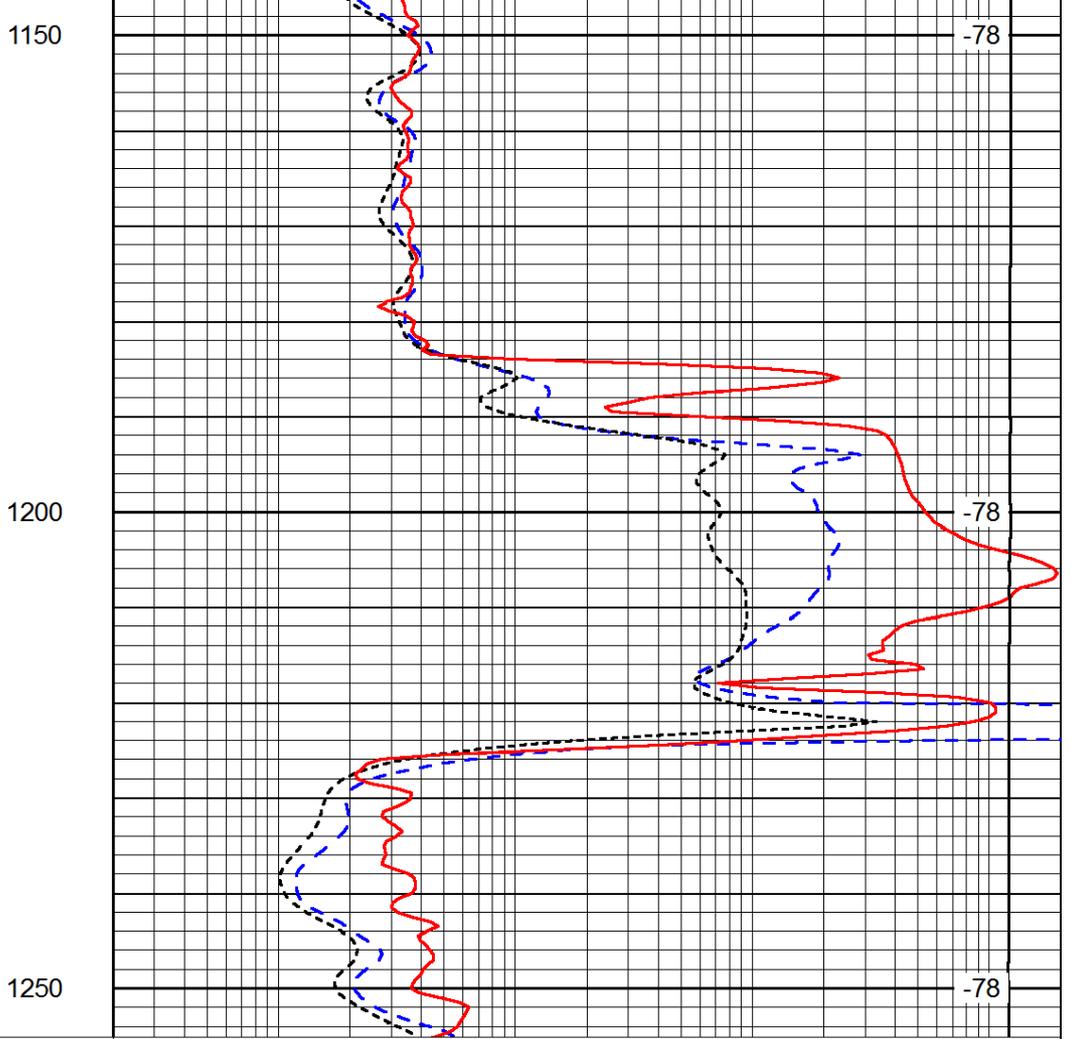


Database File: c:\warrior\data\tdi_warren #1\tdihd.db
Dataset Pathname: dil/tdistk
Presentation Format: dil
Dataset Creation: Sat May 04 11:01:33 2013
Charted by: Depth in Feet scaled 1:240





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



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

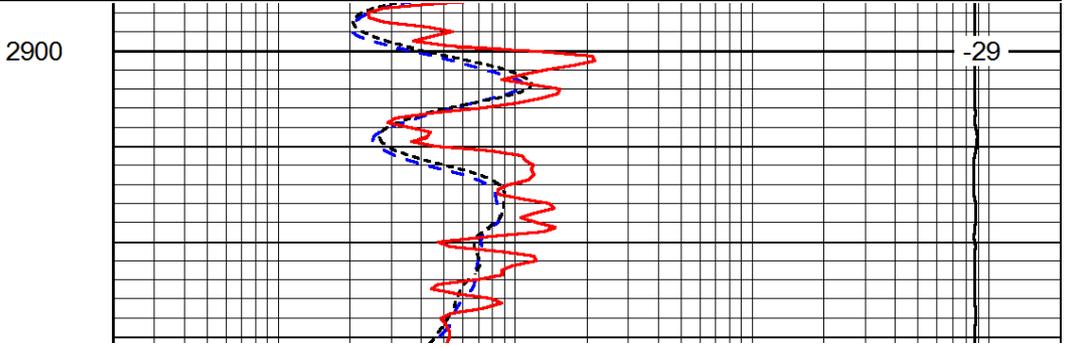
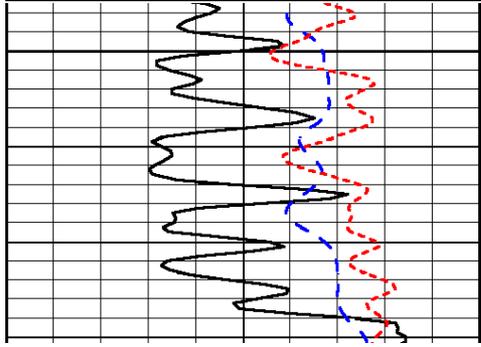
LSPD

Database File: c:\warrior\data\tdi_warren #1\tdihd.db
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 Charted by: Depth in Feet scaled 1:240

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

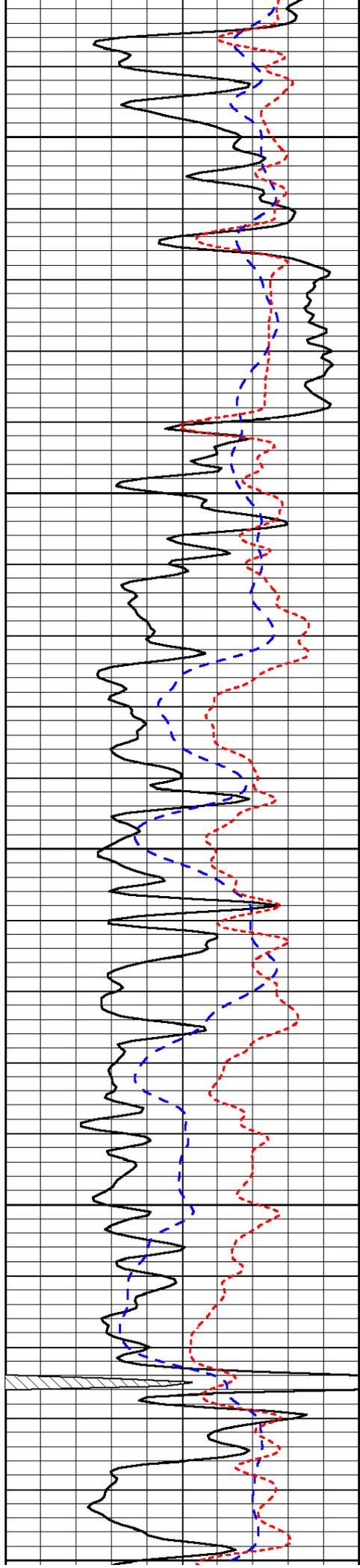
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0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD



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

LSPD



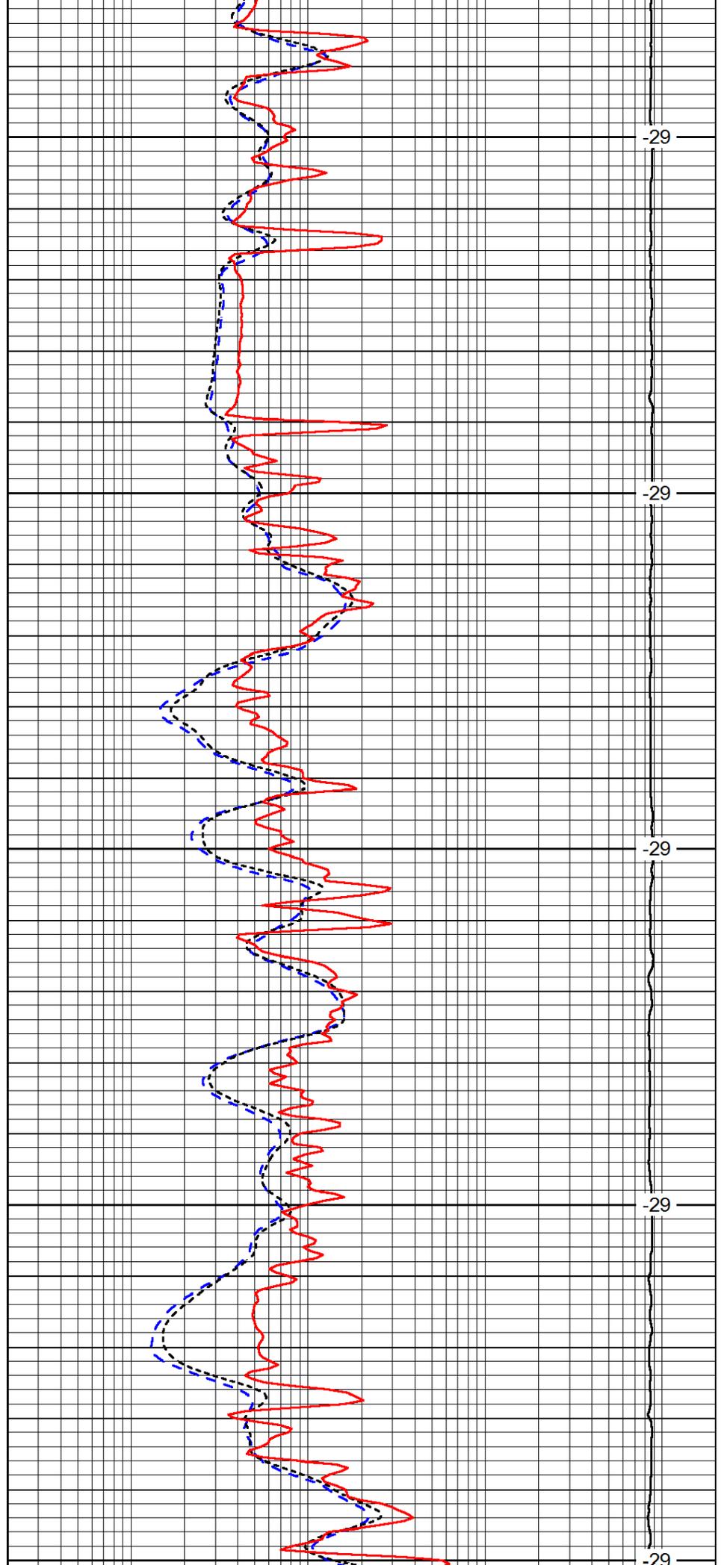
2950

3000

3050

3100

3150



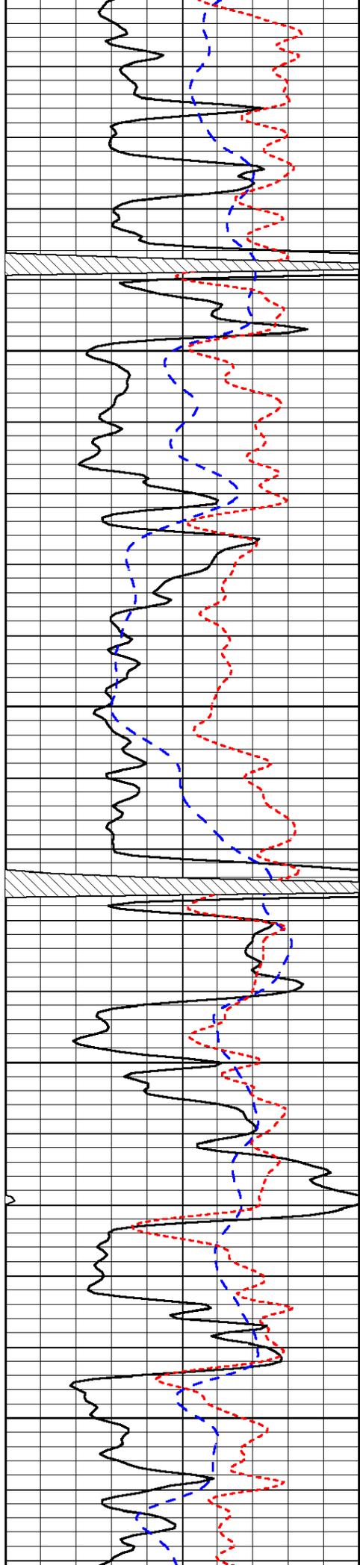
-29

-29

-29

-29

-29

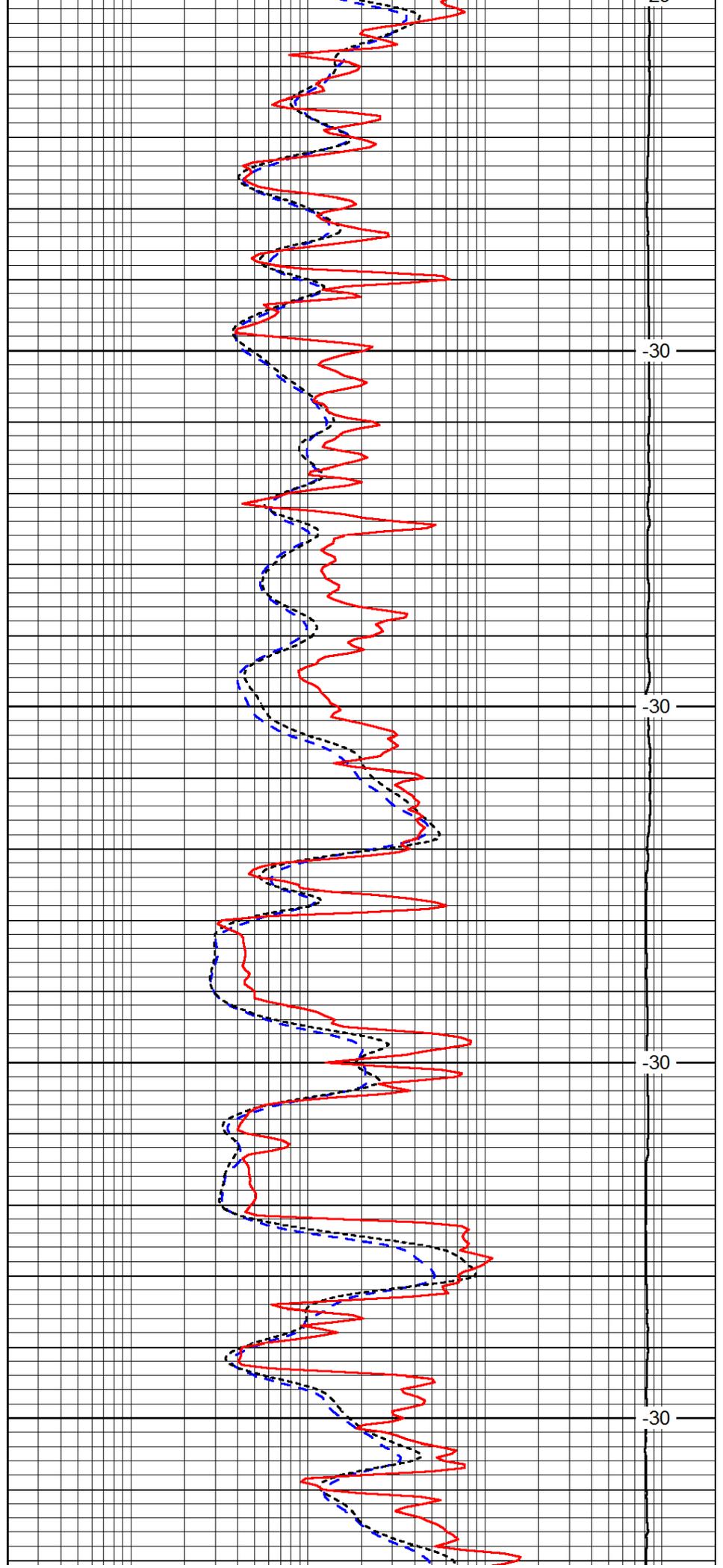


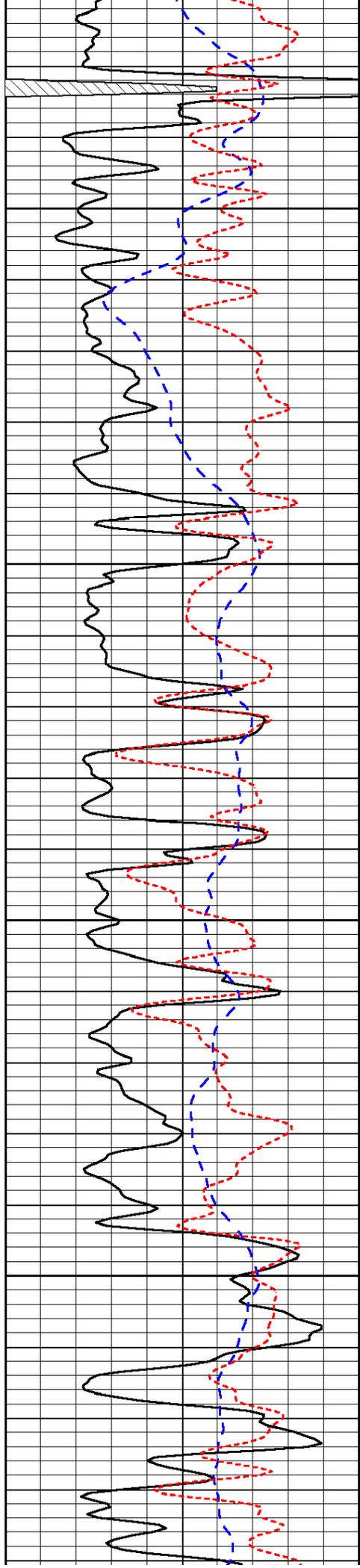
3200

3250

3300

3350



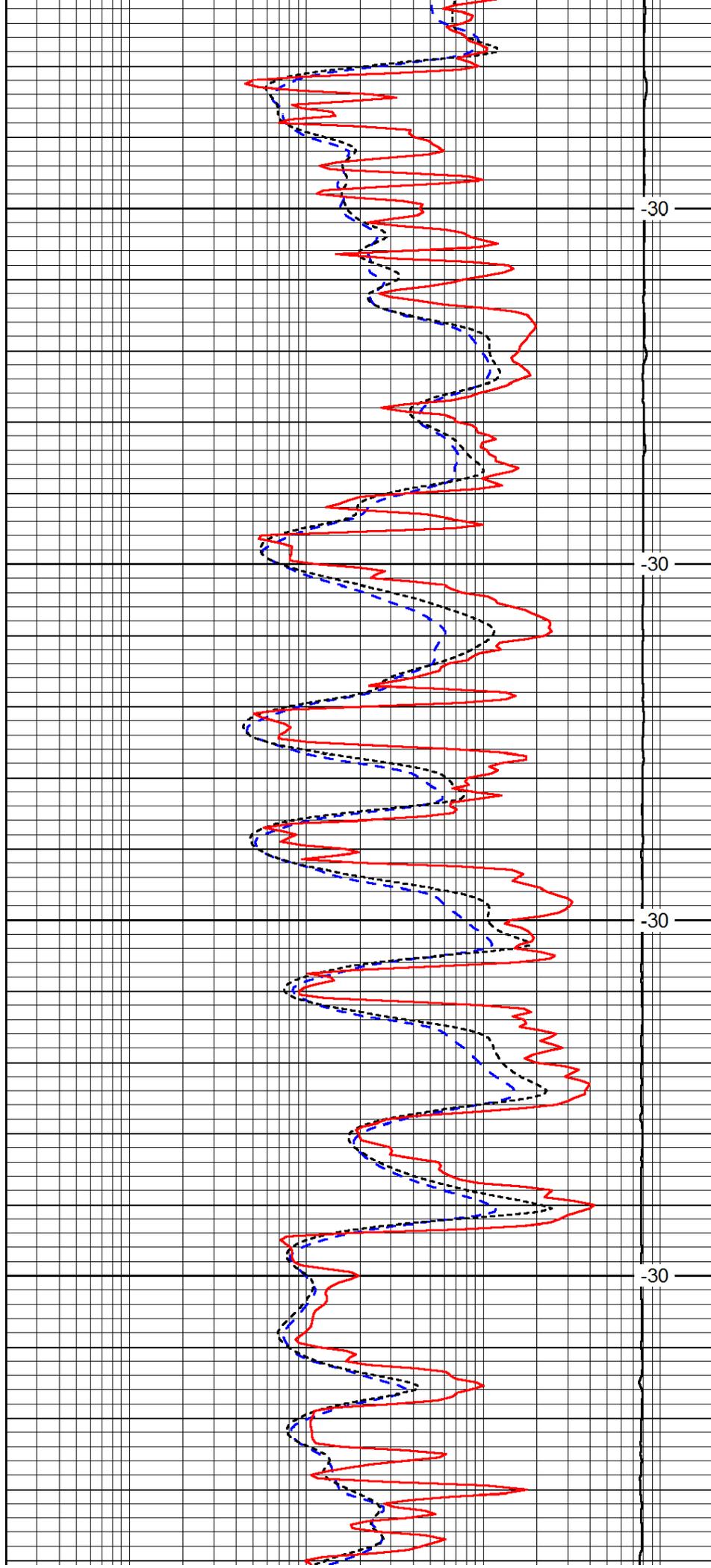


3400

3450

3500

3550

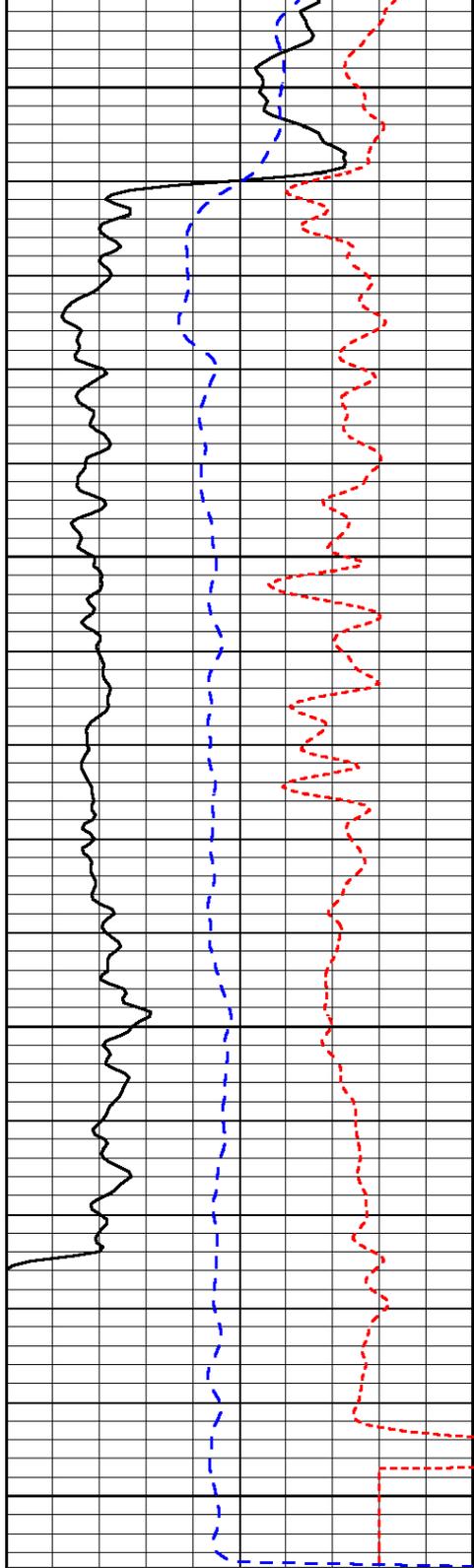


-30

-30

-30

-30



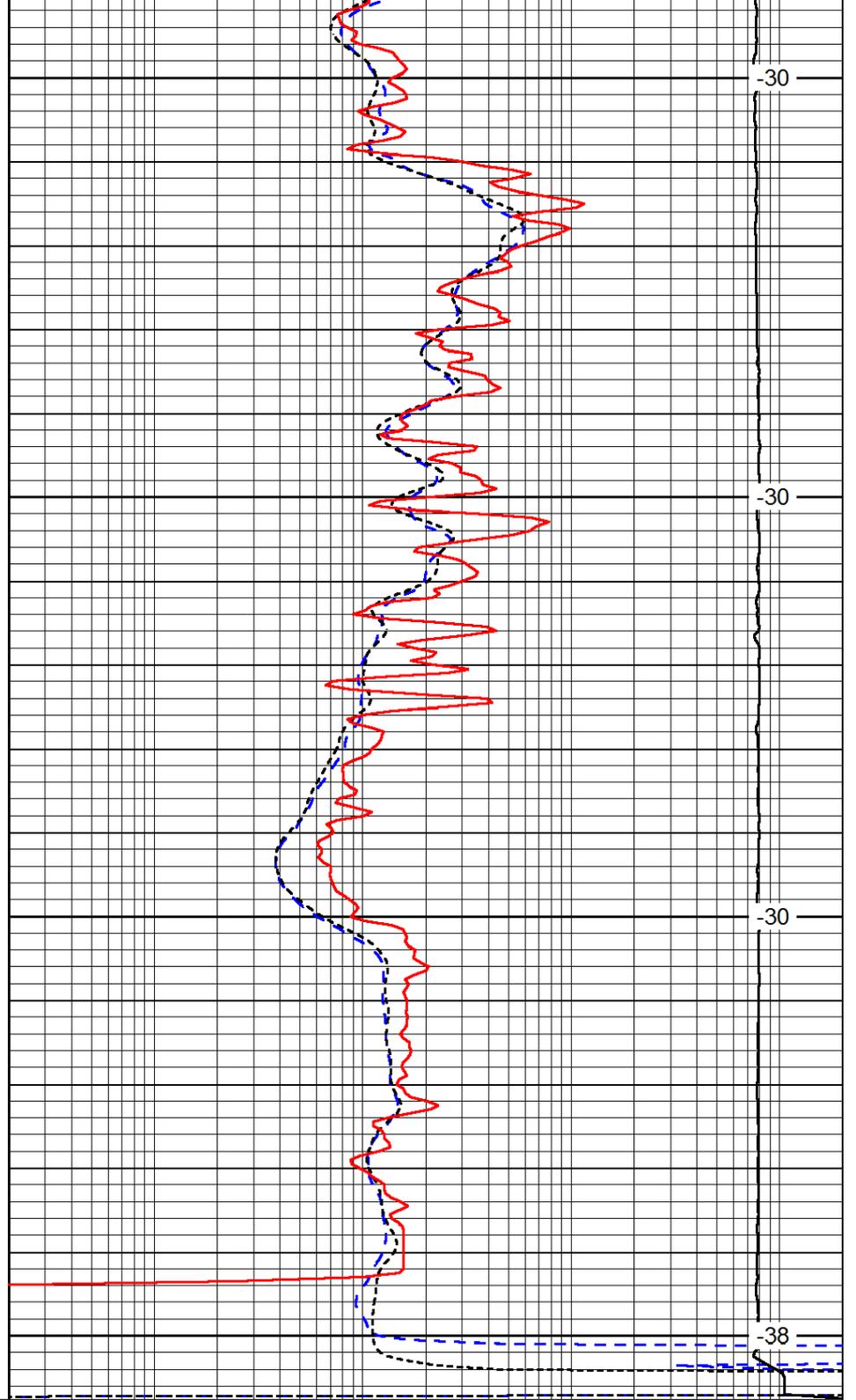
3600

3650

3700

3750

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



-30

-30

-30

-38

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

LSPD