



Pioneer Energy Services

# Dual Induction Log

15-009-25,842-00-00

API No.

Company **Hamby Oil, LLC**  
 Well **Miller #1**  
 Field **Unknown**  
 County **Barton** State **Kansas**

Location  
 NW SW NW NE  
 950' FNL & 2515' FEL

Sec: 16 Twp: 20S Rge: 11W

Other Services  
 CNL/CDL  
 MEL

Permanent Datum Ground Level Elevation 1766  
 Log Measured From Kelly Bushing 8 Ft. Above Perm. Datum  
 Drilling Measured From Kelly Bushing

Elevation  
 K.B. 1774  
 D.F. 1766  
 G.L. 1766

Date	5/18/2013	
Run Number	One	
Depth Driller	3340	
Depth Logger	3344	
Bottom Logged Interval	3343	
Top Log Interval	250	
Casing Driller	8.625 @ 271	
Casing Logger	270	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	6000	
Density / Viscosity	9.3 46	
pH / Fluid Loss	10.0 8.8	
Source of Sample	Flowline	
Rm @ Meas. Temp	0.55 @ 85	
Rmf @ Meas. Temp	0.41 @ 85	
Rmc @ Meas. Temp	0.74 @ 85	
Source of Rmf / Rmc	Charts	
Rm @ BHT	0.43 @ 109	
Operating Rig Time	3 1/2 Hours	
Max Rec. Temp. F	109	
Equipment Number	10	
Location	Hays	
Recorded By	D. Kerr	
Witnessed By	Kurt Talbott	

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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.pioneer.com  
 785 625 3858  
 Ellinwood Ks, Southeast to SE 100 Ave, South to 30 RD,  
 2 1/2 East, South Into

Database File: c:\warrior\data\hamby oil\_miller #1\hamby\_miller\_1hd.db  
 Dataset Pathname: DIL\hamstk  
 Presentation Format: dil2in  
 Dataset Creation: Sat May 18 21:48:44 2013  
 Charted by: Depth in Feet scaled 1:600

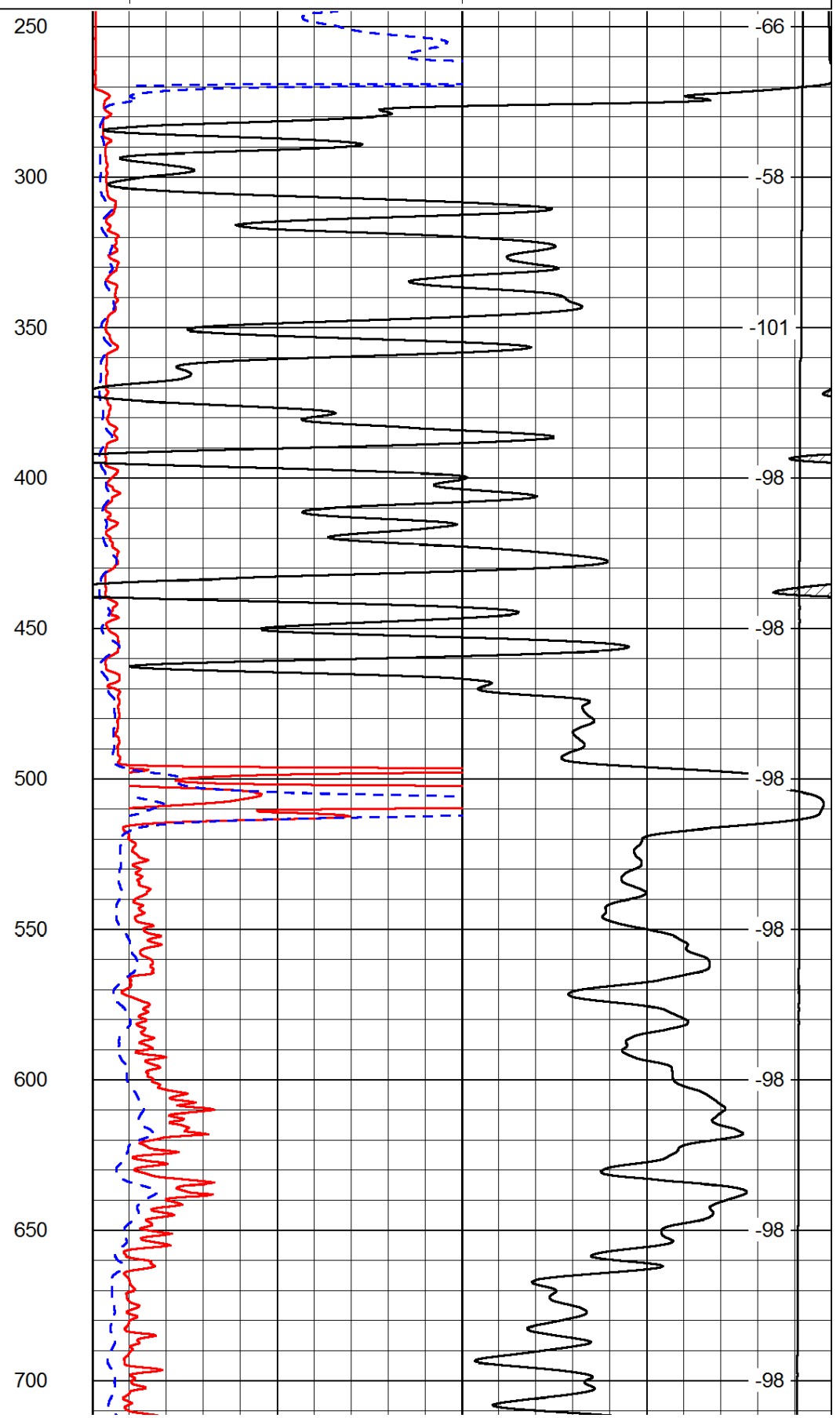
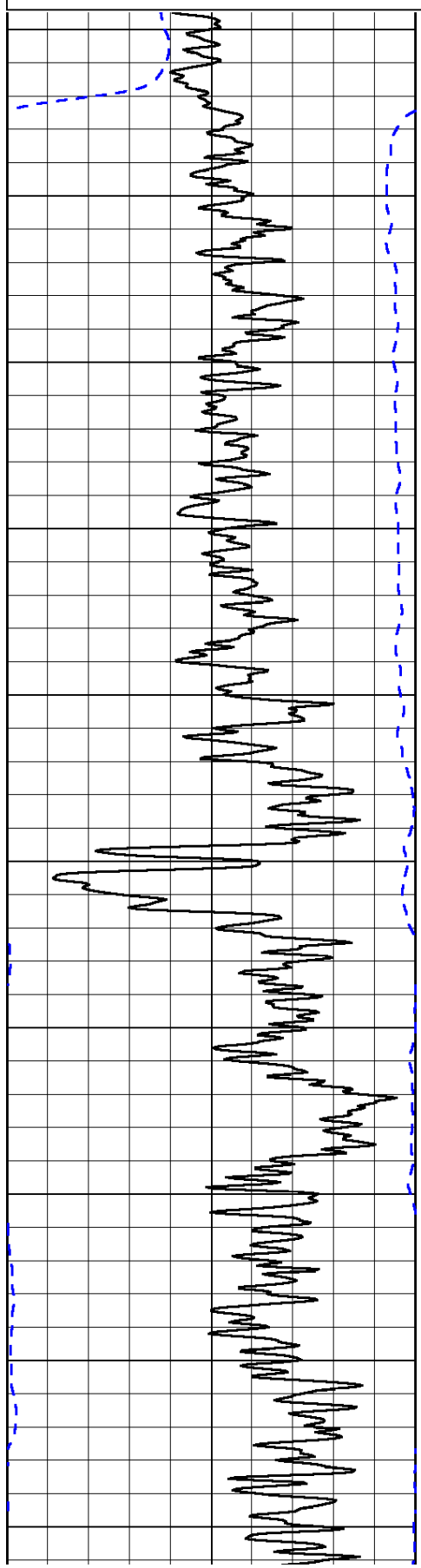
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-200	SP (mV)	0

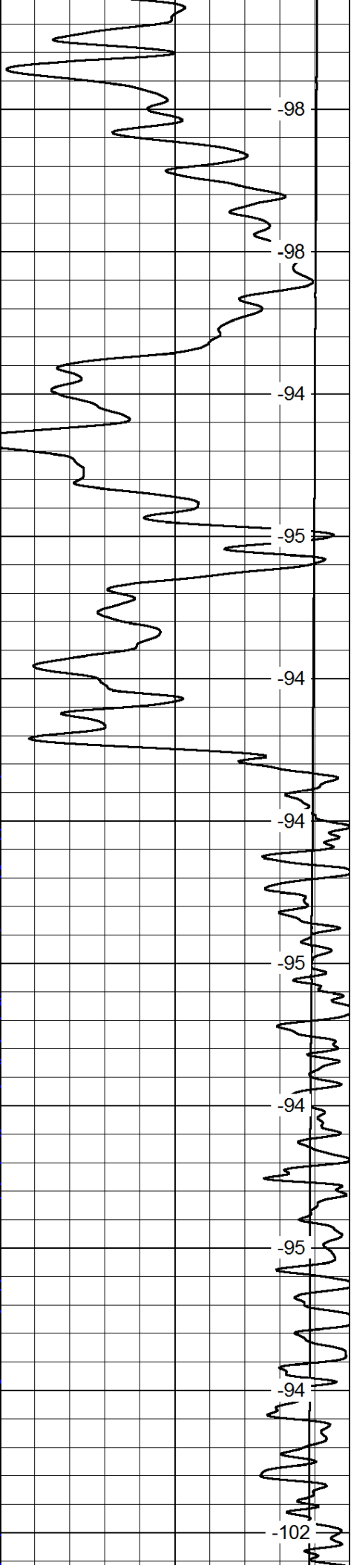
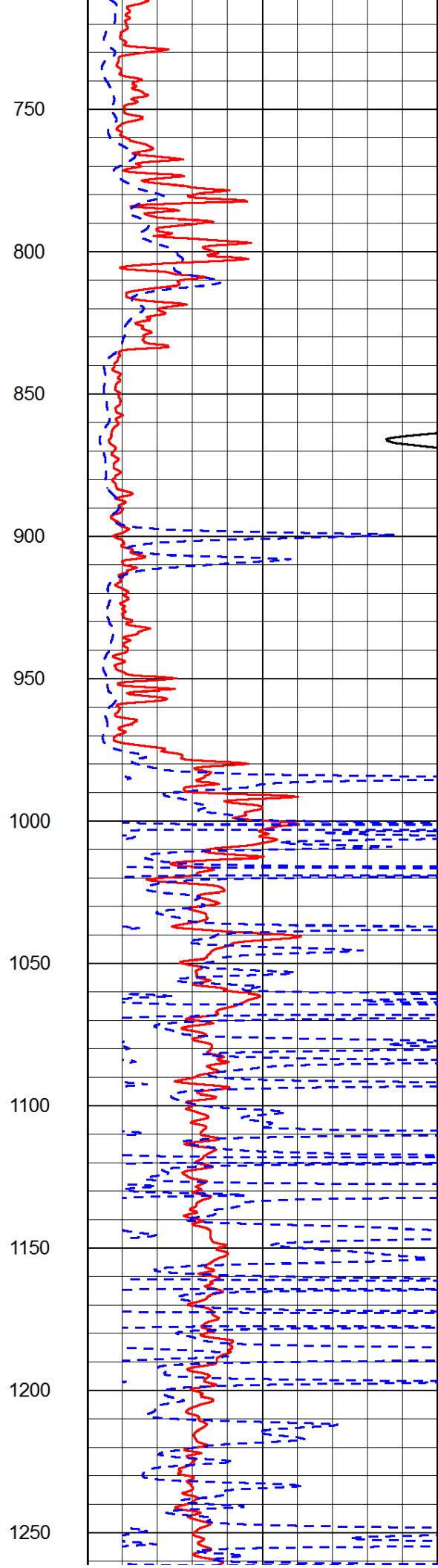
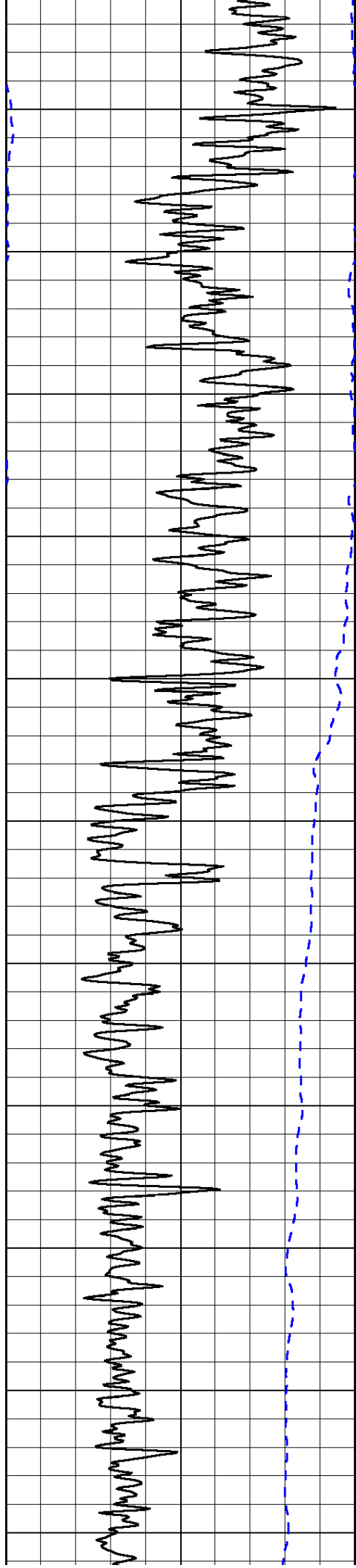
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0	Deep Resistivity	50

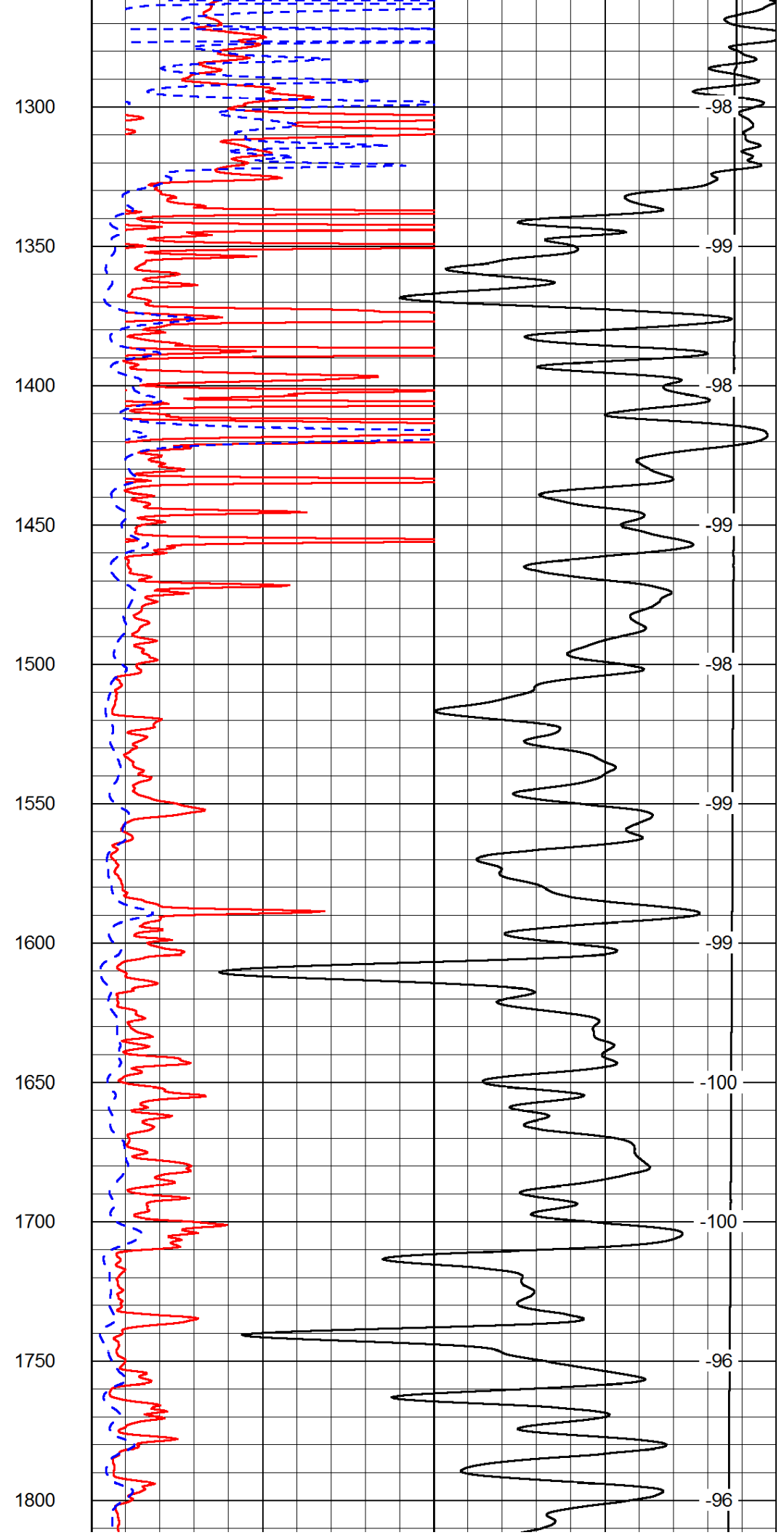
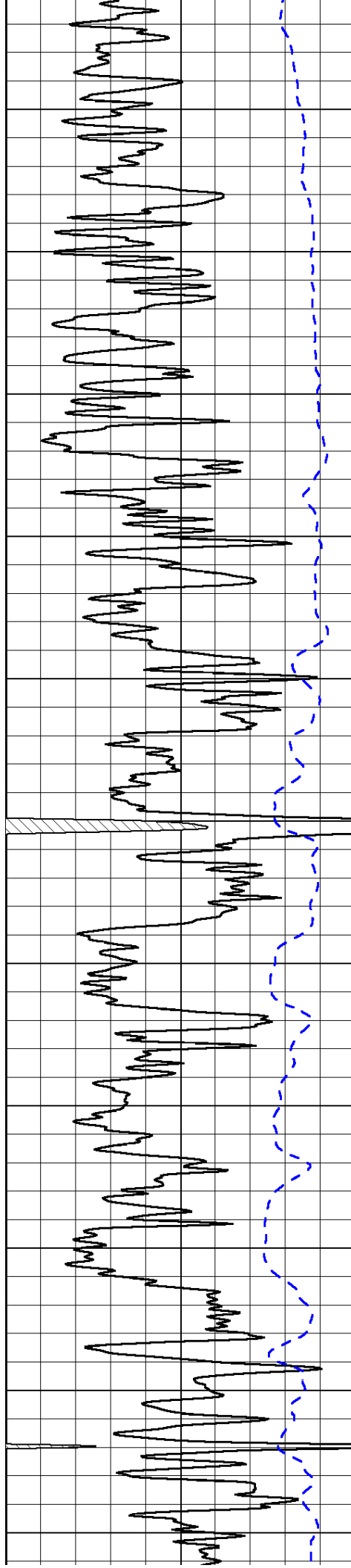
LSPD

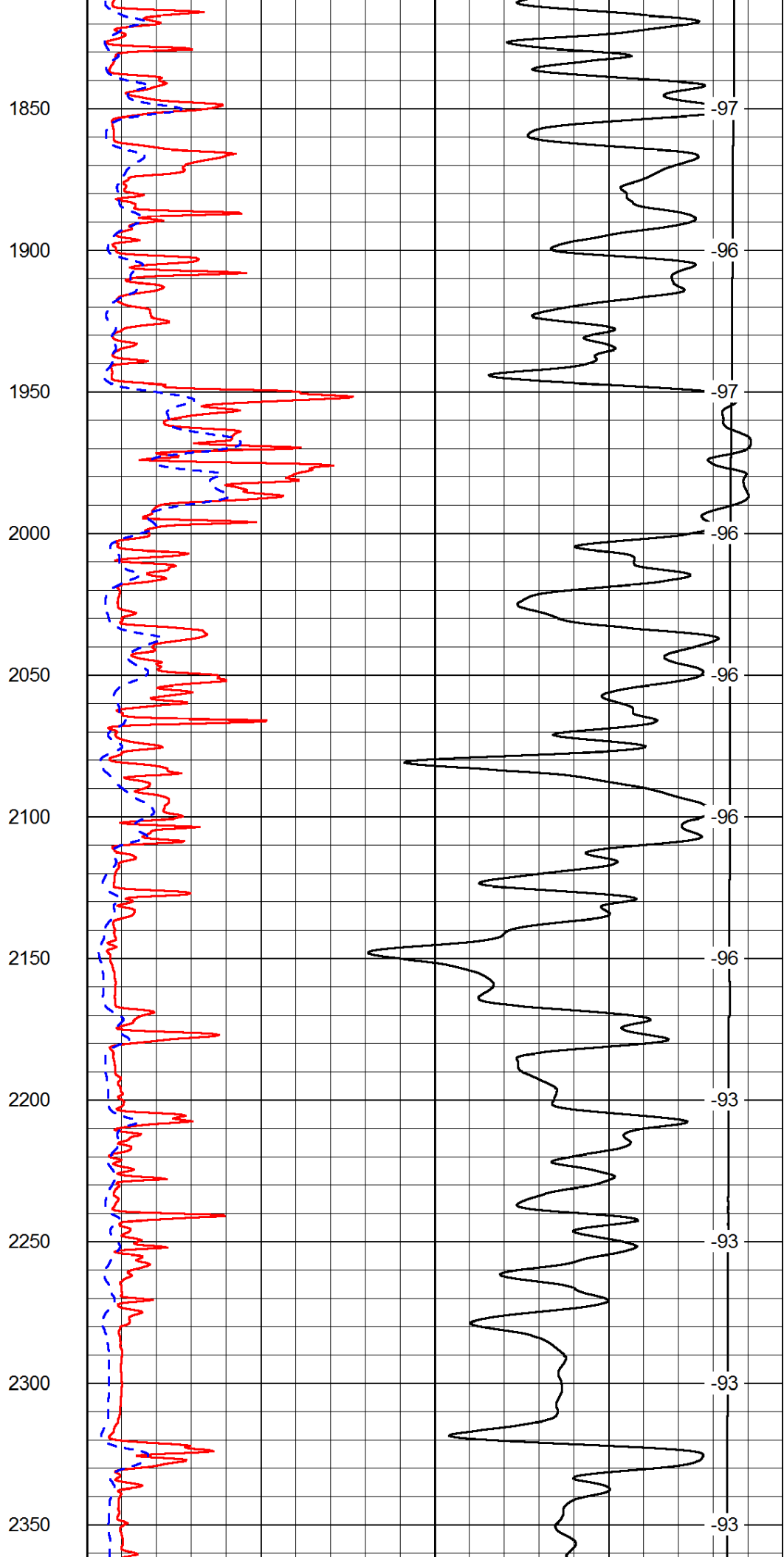
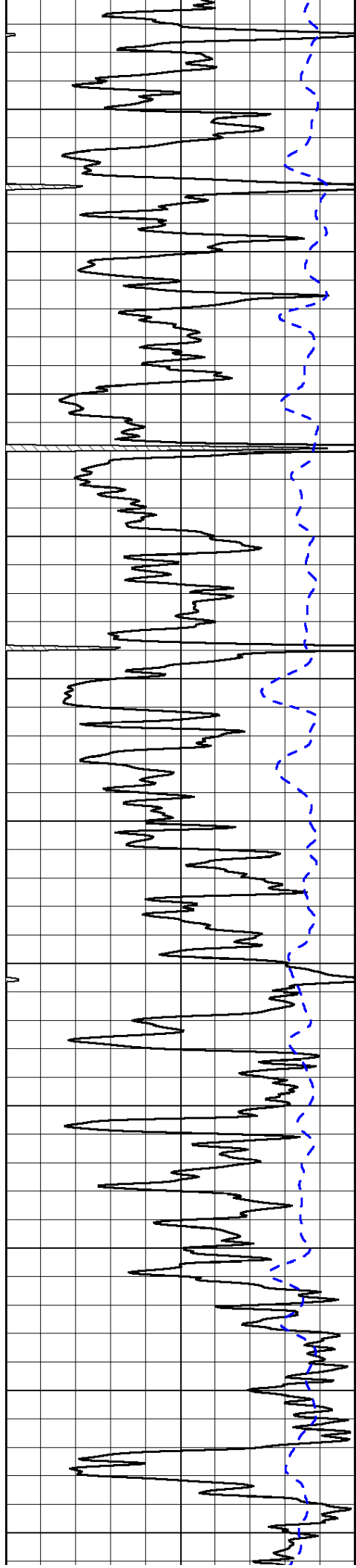
1000	Conductivity	0
15000	Line Tension	0

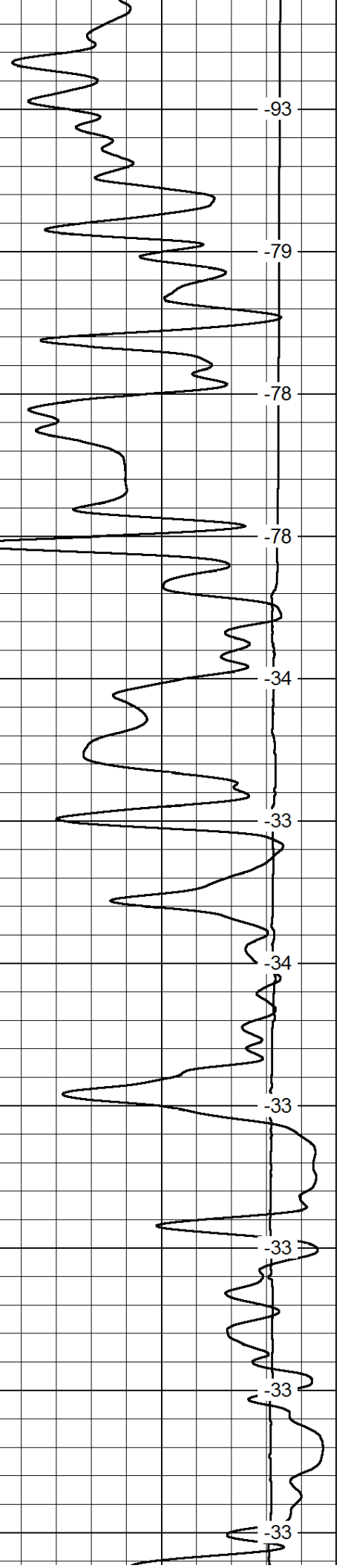
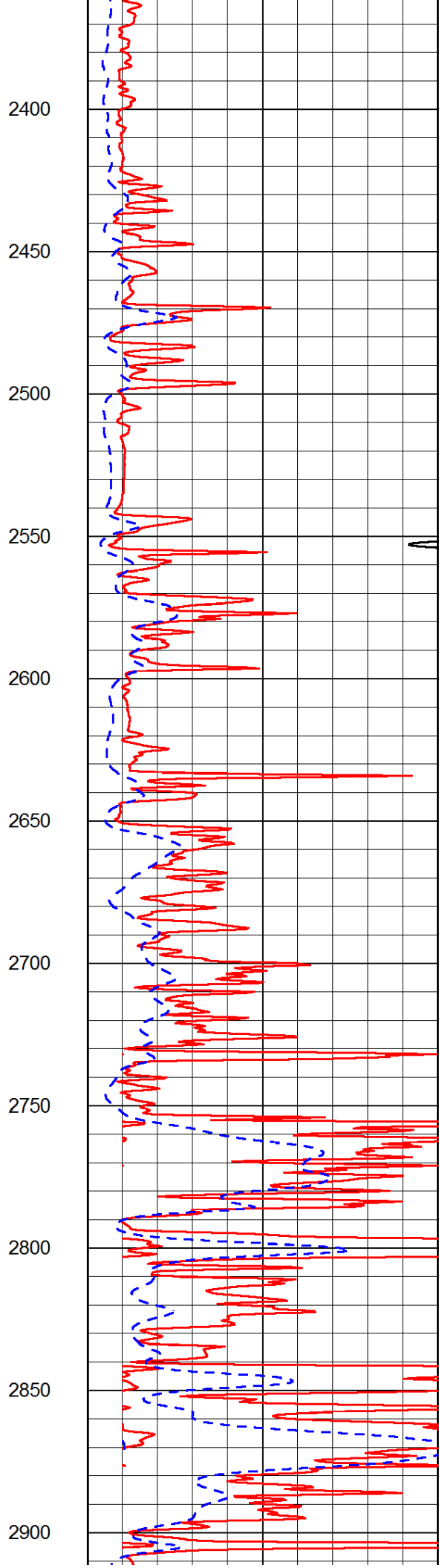
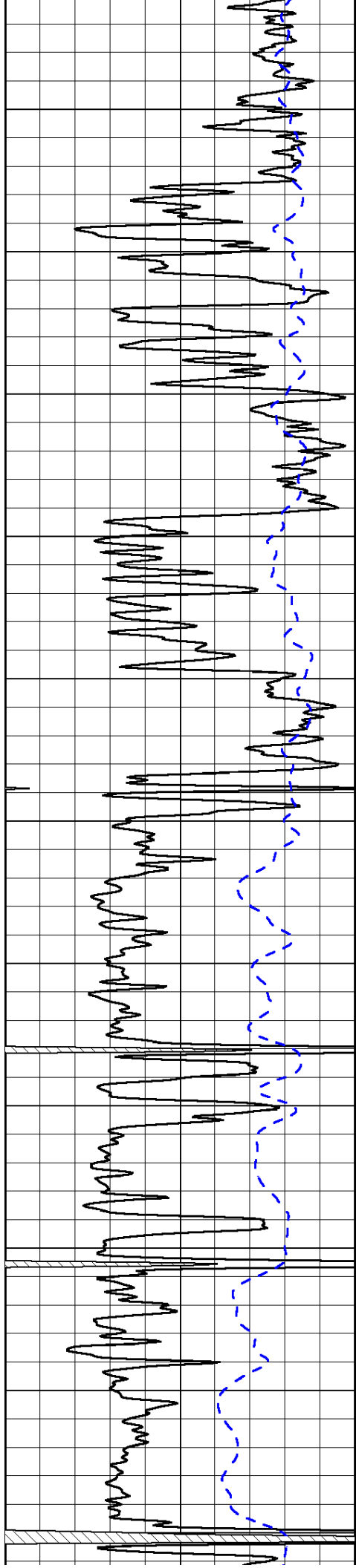
50	Shallow Resistivity	500
50	Deep Resistivity	500

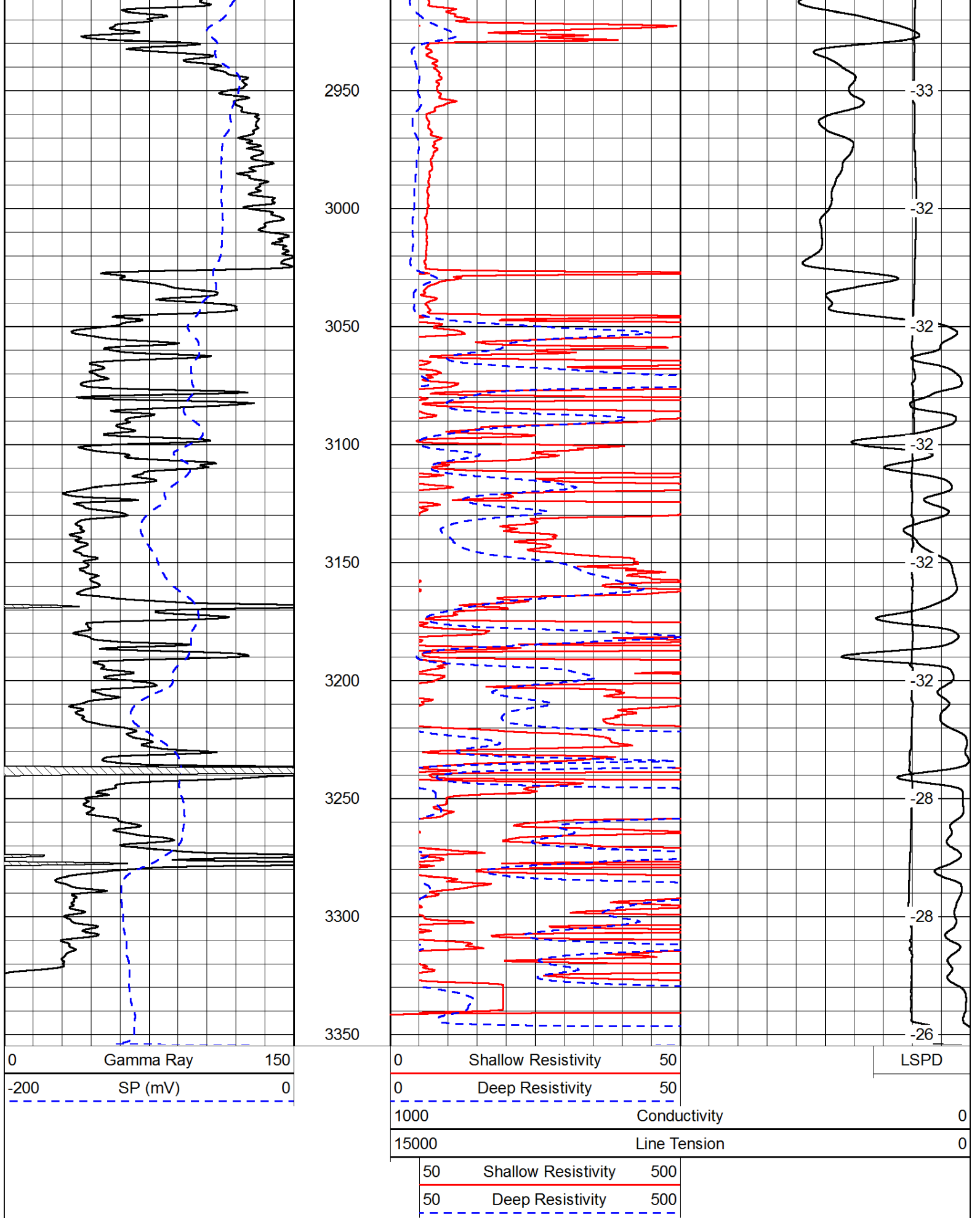










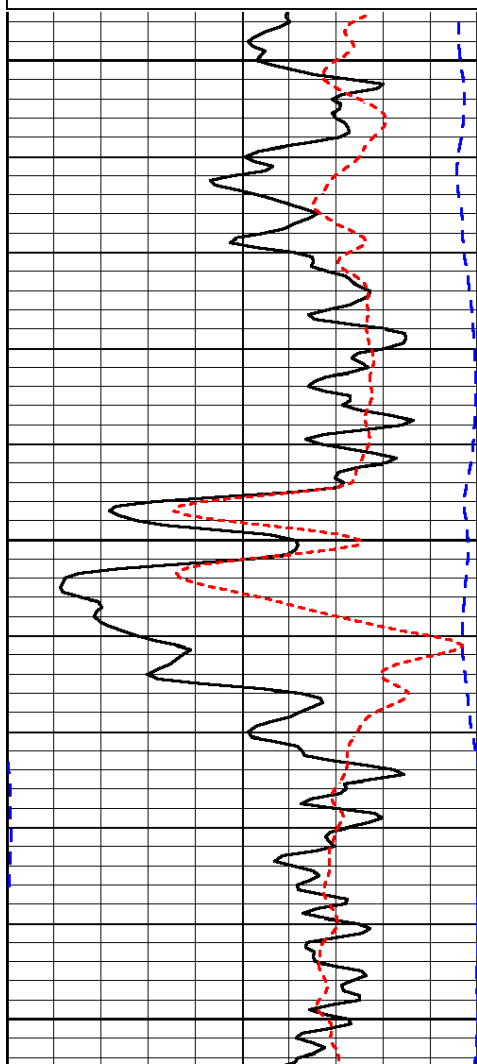


Presentation Format: dil  
 Dataset Creation: Sat May 18 21:48:44 2013  
 Charted by: Depth in Feet scaled 1:240

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

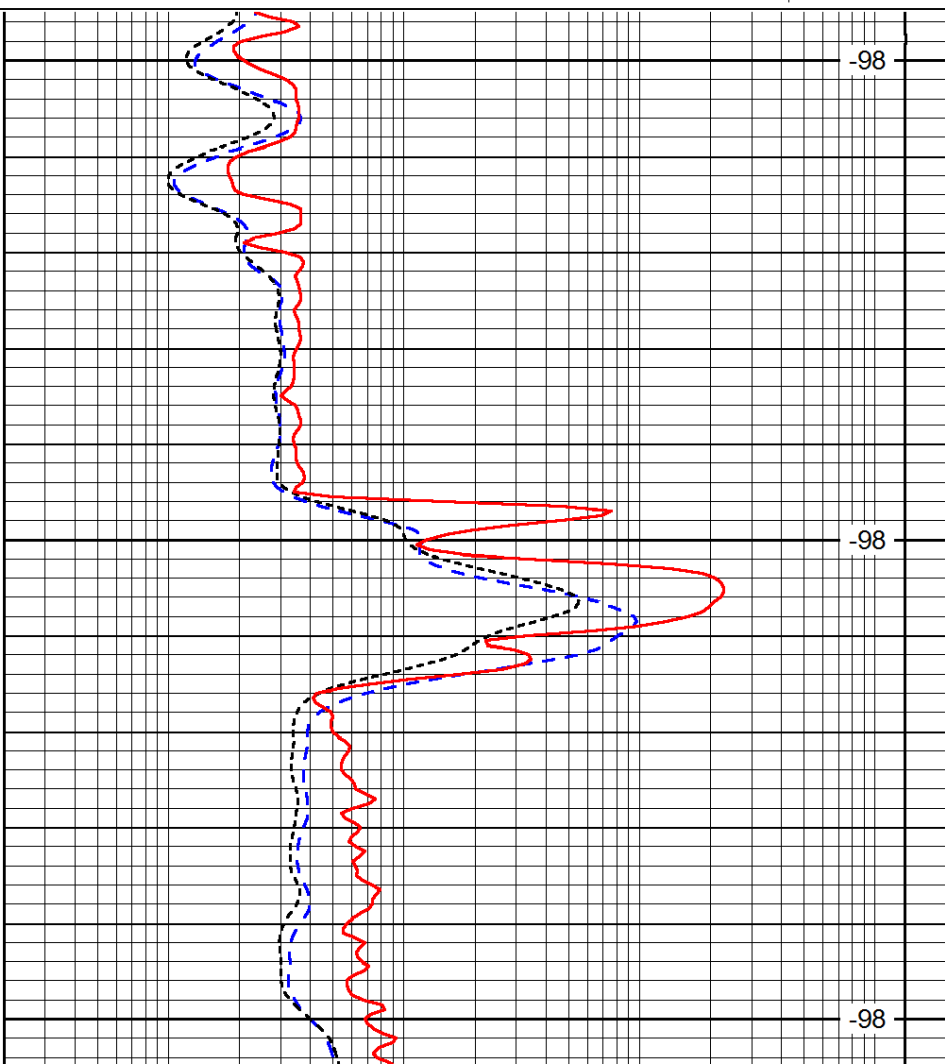
LSPD



450

500

550



-98

-98

-98

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

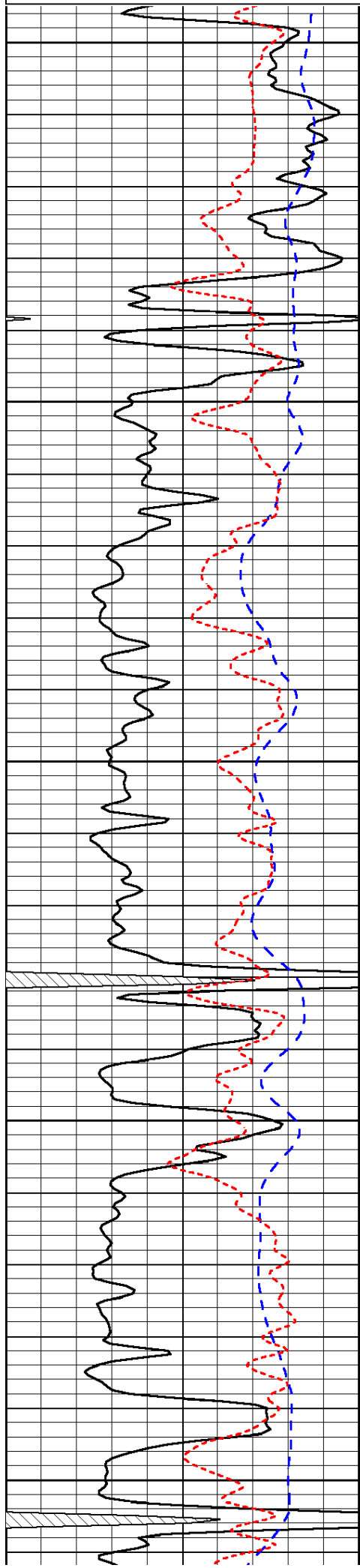
LSPD

Database File: c:\warrior\data\hamby oil\_miller #1\hamby\_miller\_1hd.db  
 Dataset Pathname: DIL/hamstk  
 Presentation Format: dil  
 Dataset Creation: Sat May 18 21:48:44 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



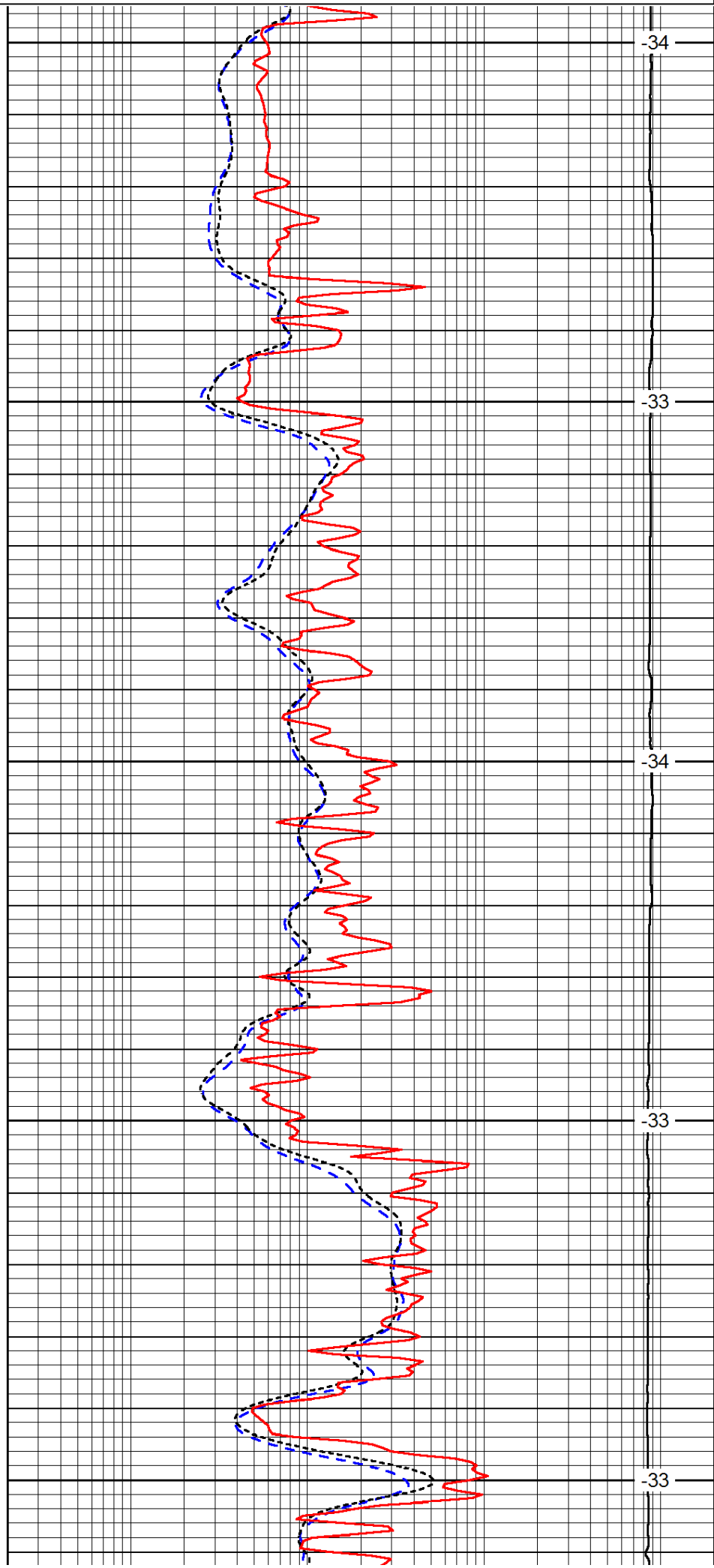
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2650

2700

2750

2800



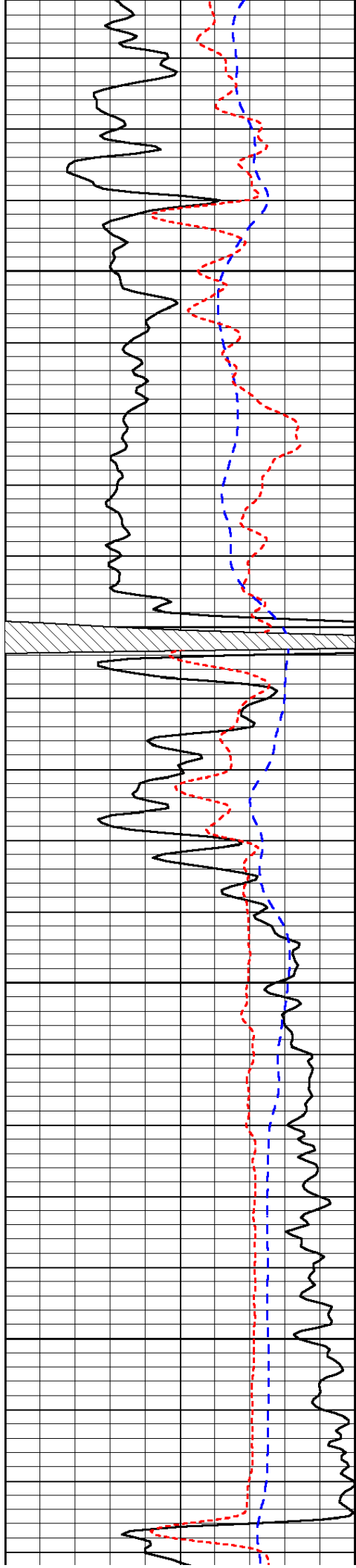
-34

-33

-34

-33

-34

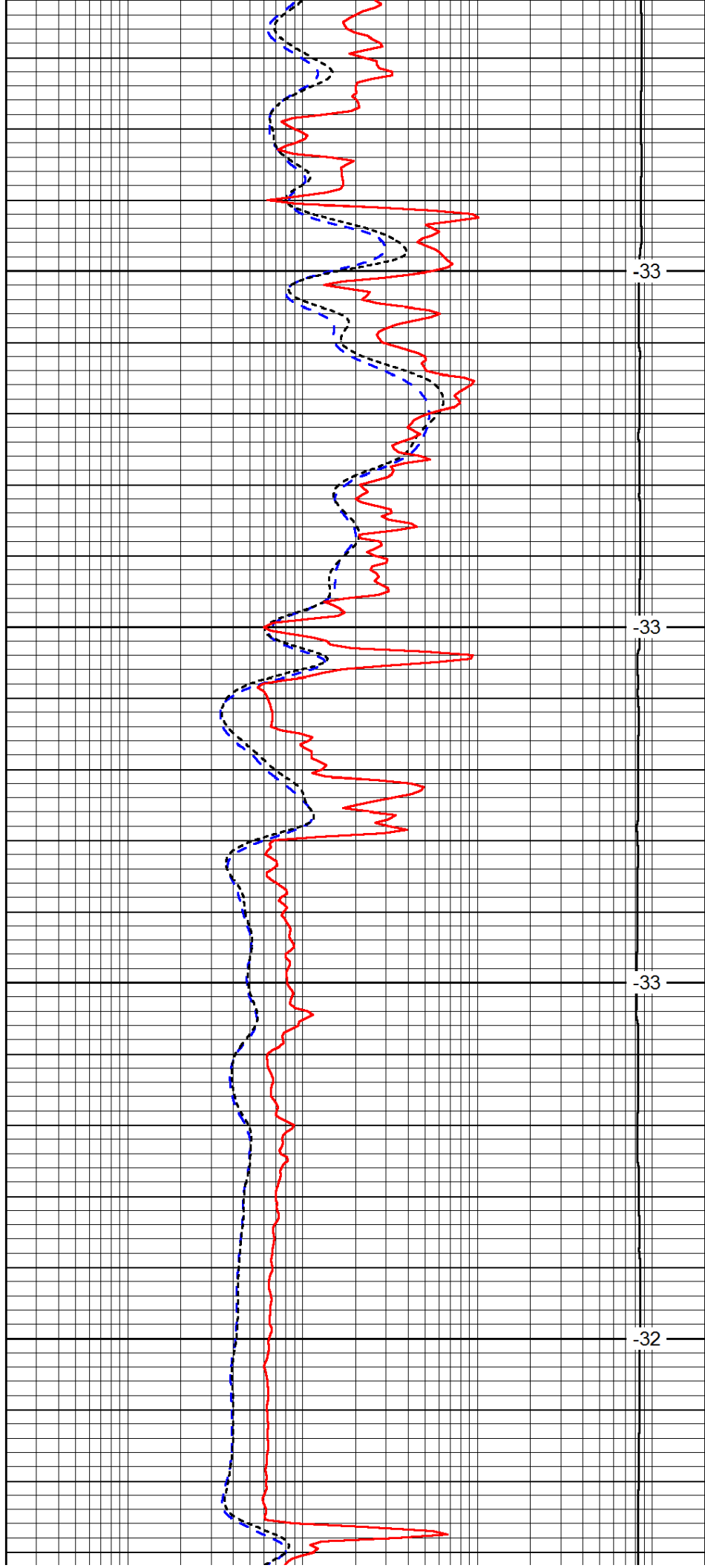


2850

2900

2950

3000

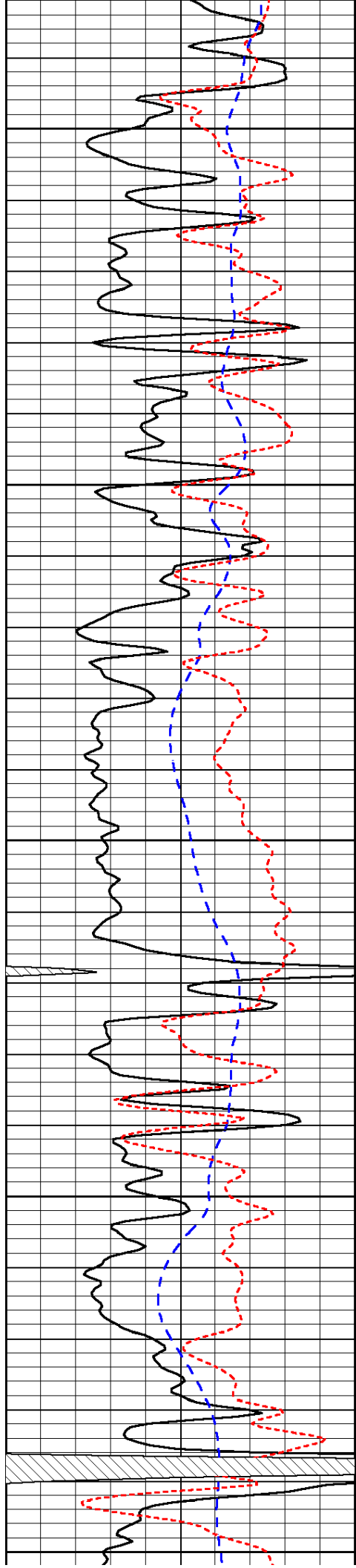


-33

-33

-33

-32



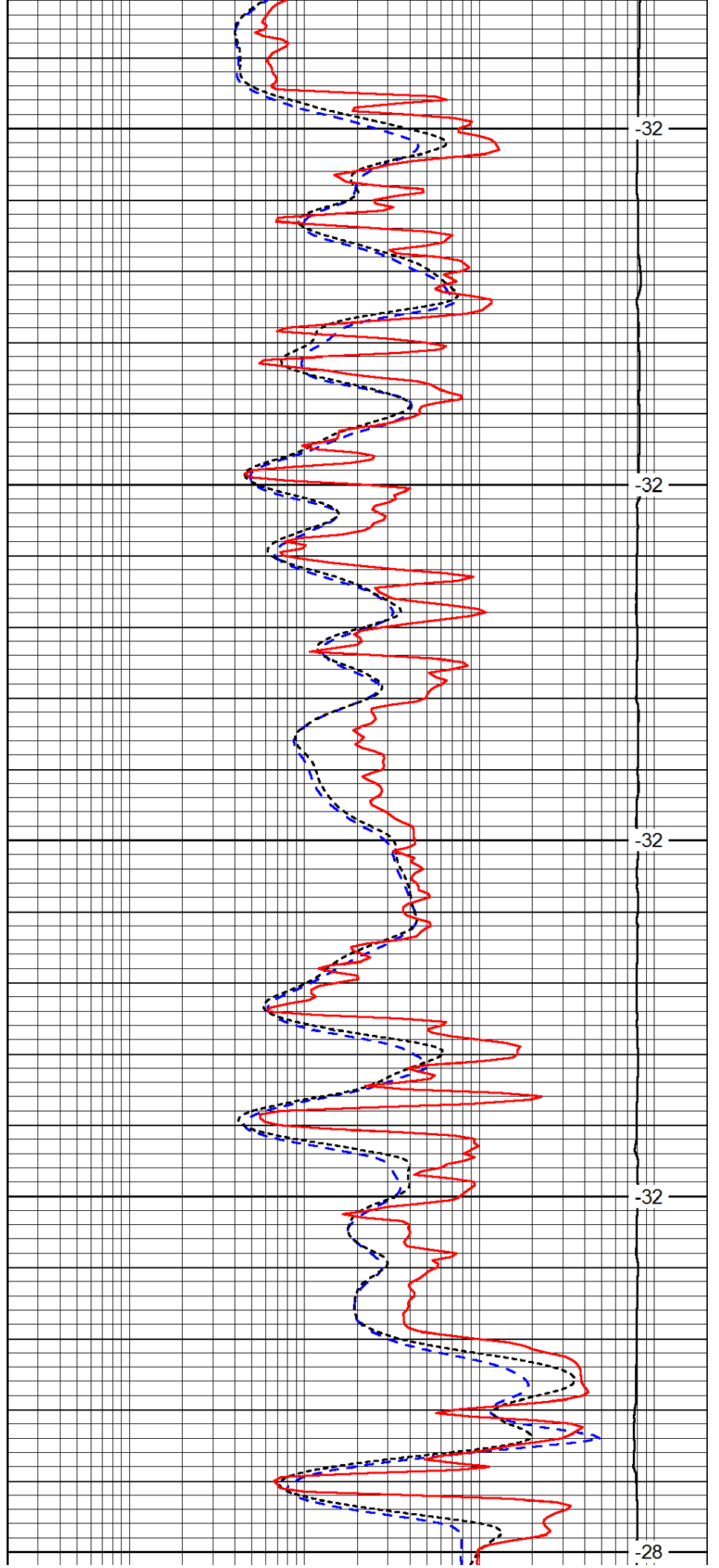
3050

3100

3150

3200

3250



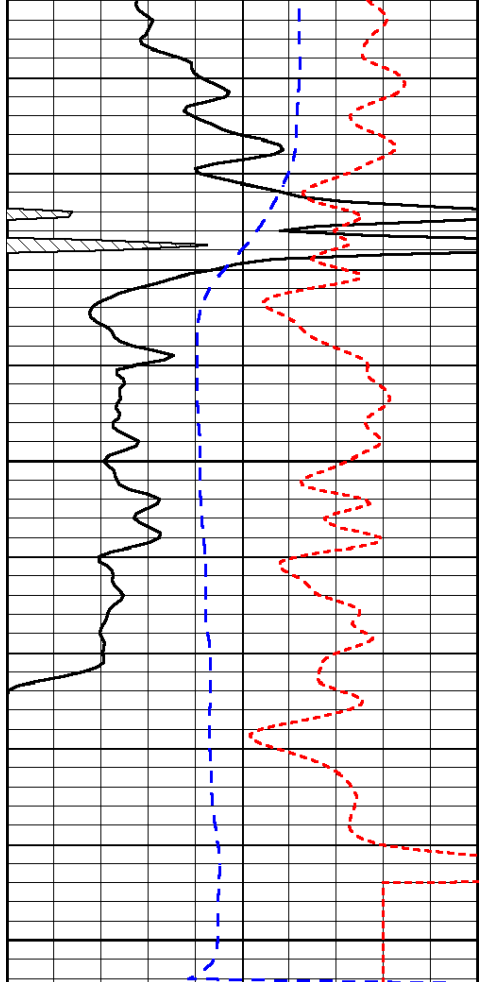
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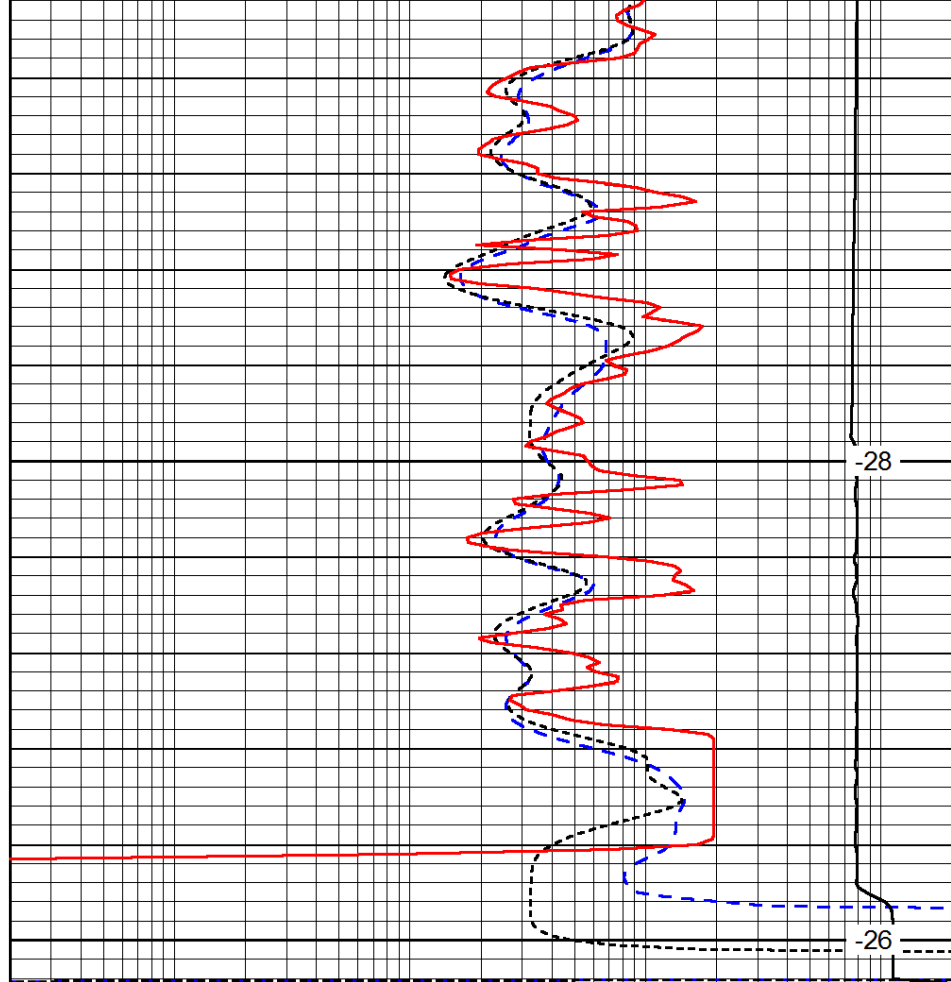
-28



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

3300

3350



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

-28

-26

LSPD