



Pioneer Energy Services

# Dual Induction Log

15-159-22806-00-00

API No.

Company **American Warrior, Inc.**

Well **Hoelscher # 3-10**

Field **Unknown**

County **Rice** State **Kansas**

Location **1991' FSL & 2284' FEL**

Sec: **10** Twp: **18 S** Rge: **10 W**

Permanent Datum **Ground Level** Elevation **1785**  
 Log Measured From **Kelly Bushing** 8 Ft. Above Perm. Datum  
 Drilling Measured From **Kelly Bushing**

Other Services  
 CNL/CDL  
 MEL  
 Elevation  
 K.B. 1793  
 D.F. 1785  
 G.L. 1785

Date	10-21-2014
Run Number	One
Depth Driller	3400
Depth Logger	3397
Bottom Logged Interval	3396
Top Log Interval	400
Casing Driller	8.625 @ 413
Casing Logger	406
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	3.700
Density / Viscosity	9.4 68
pH / Fluid Loss	11.0 8.0
Source of Sample	Flowline
Rm @ Meas. Temp	0.42 @ 80
Rmf @ Meas. Temp	0.32 @ 80
Rmc @ Meas. Temp	0.57 @ 80
Source of Rmf / Rmc	Charts
Rm @ BHT	0.31 @ 110
Operating Rig Time	4 Hours
Max Rec. Temp. F	110
Equipment Number	15
Location	Hays
Recorded By	Y. Ruiz
Witnessed By	Clint Musgrove

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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  
 Bushton,  
 West to 4th Rd, 1 1/2 South,  
 East into

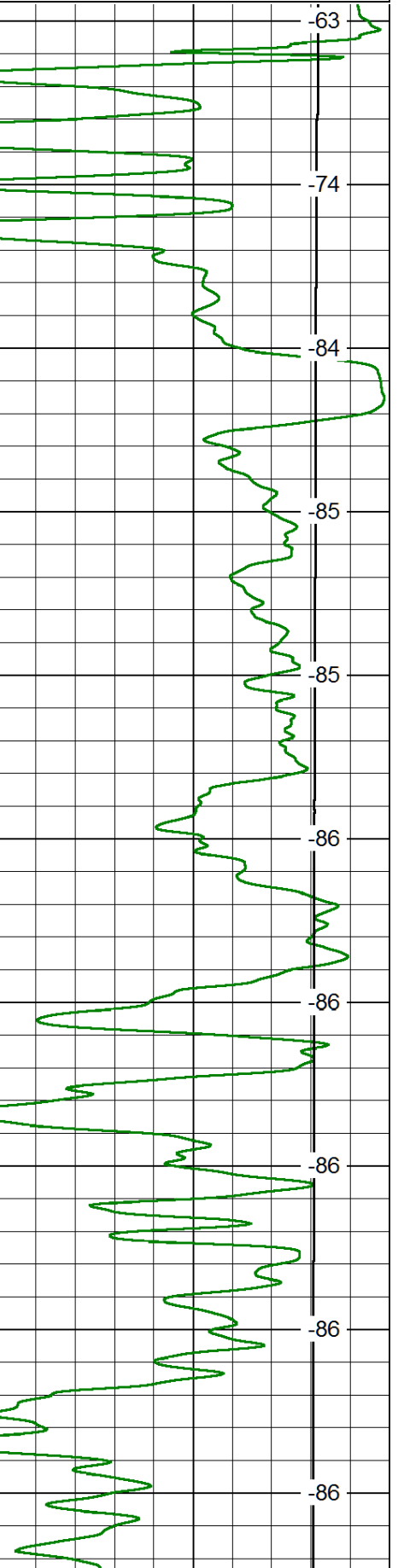
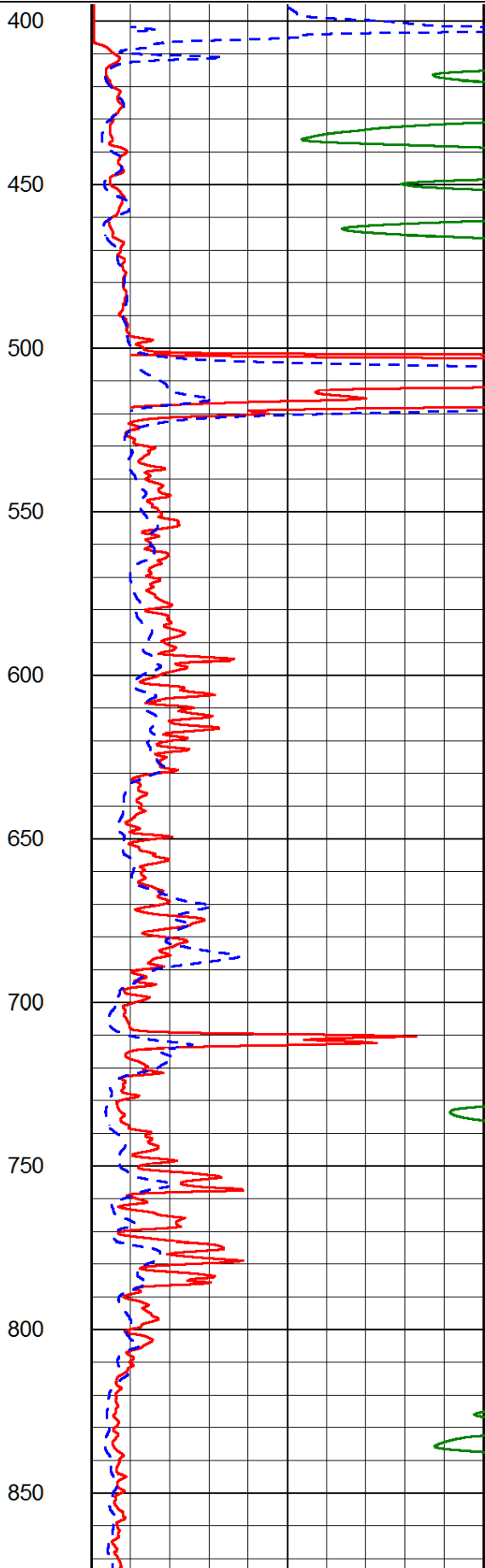
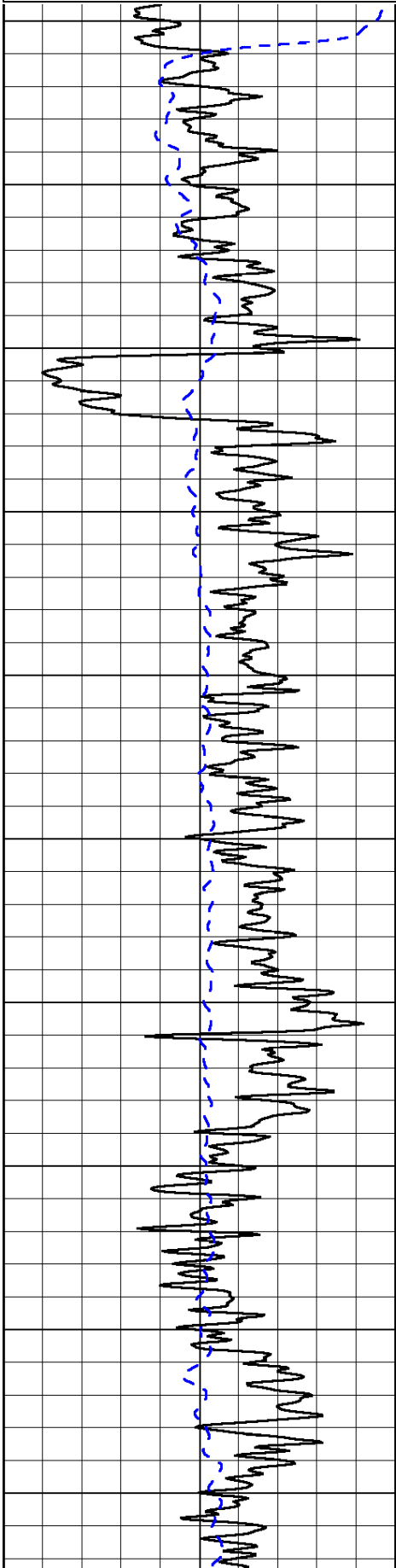
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 Presentation Format: dil2in  
 Dataset Creation: Tue Oct 21 20:50:04 2014  
 Charted by: Depth in Feet scaled 1:600

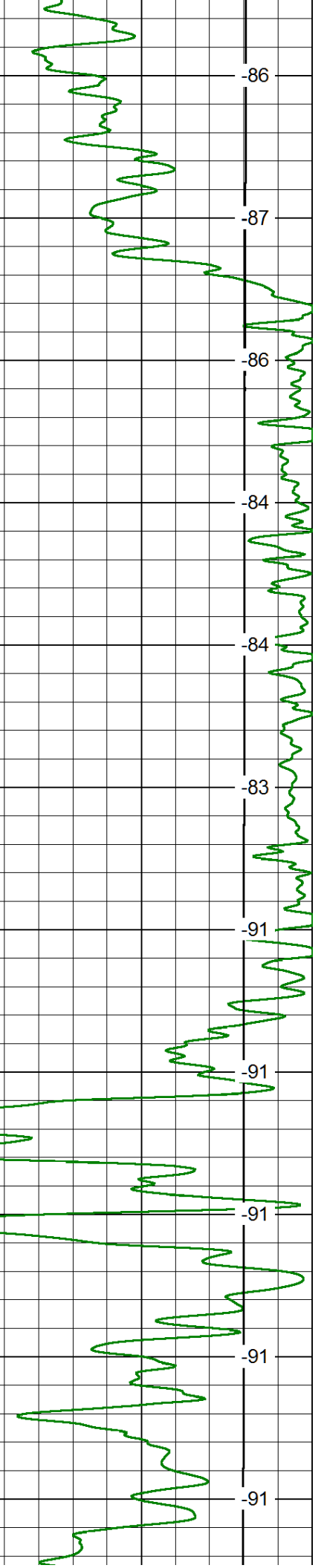
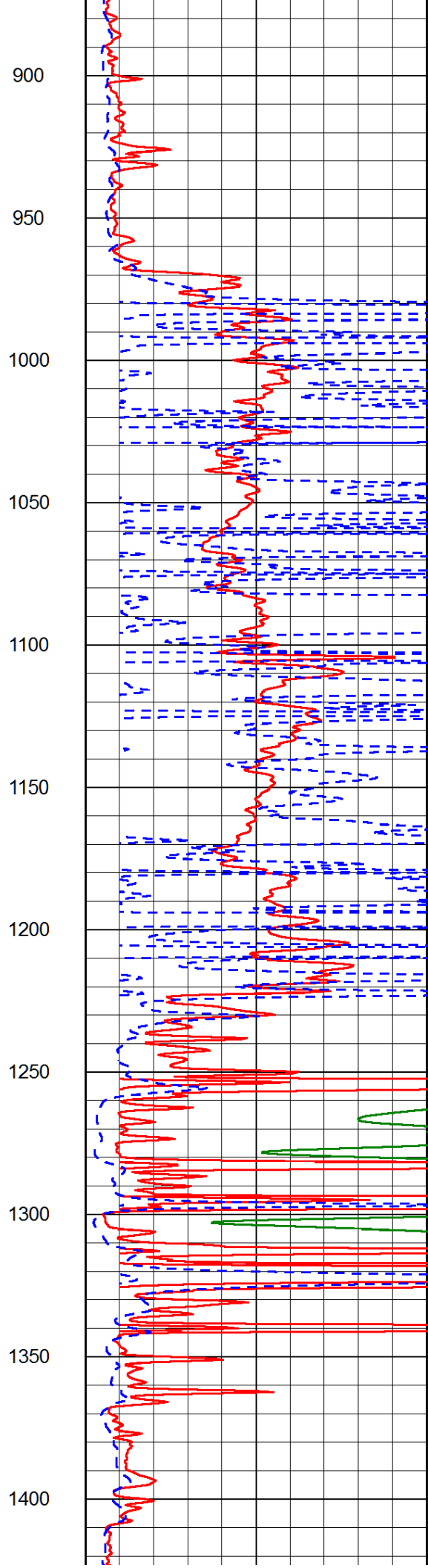
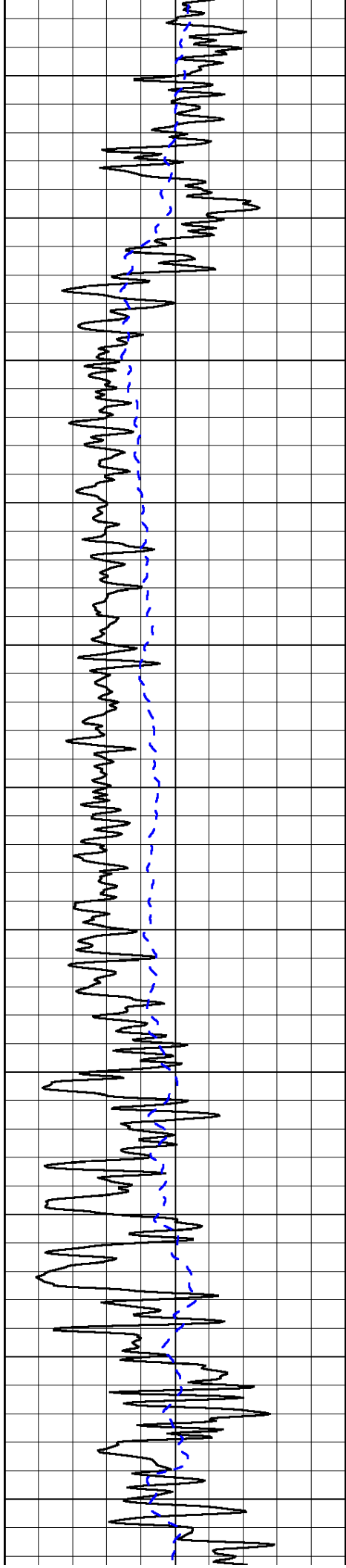
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-200	SP (mV)	0

0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0

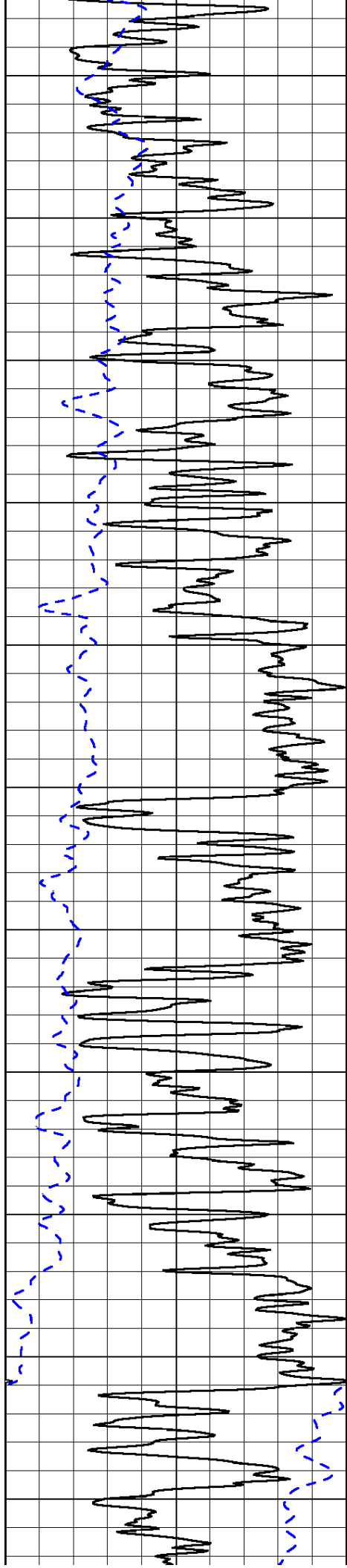
LSPD

50	Shallow Resistivity	500
50	Deep Resistivity	500

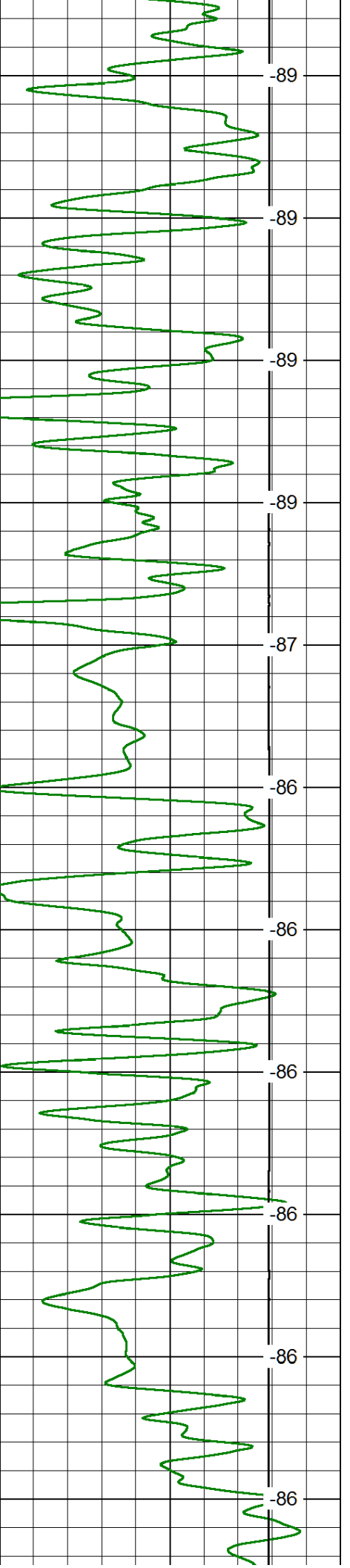
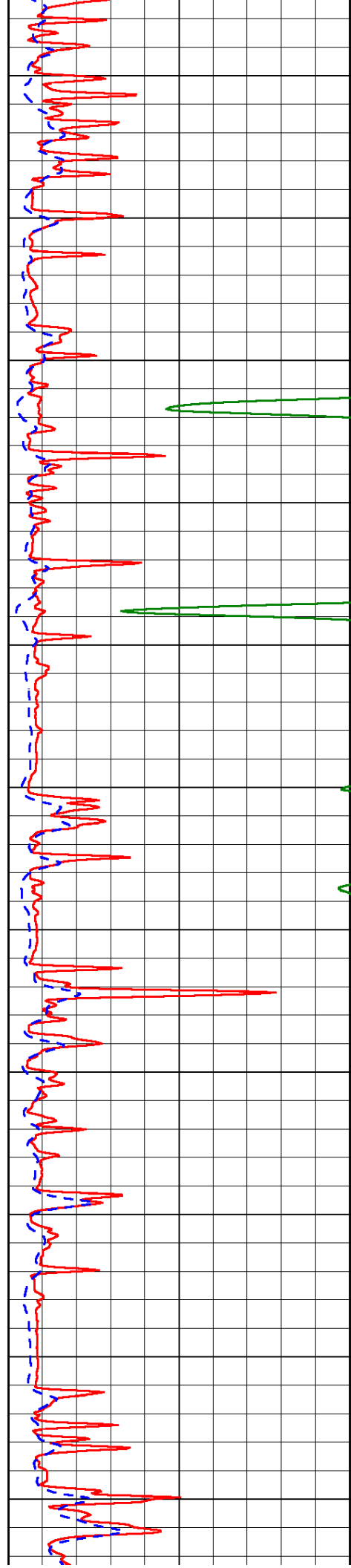




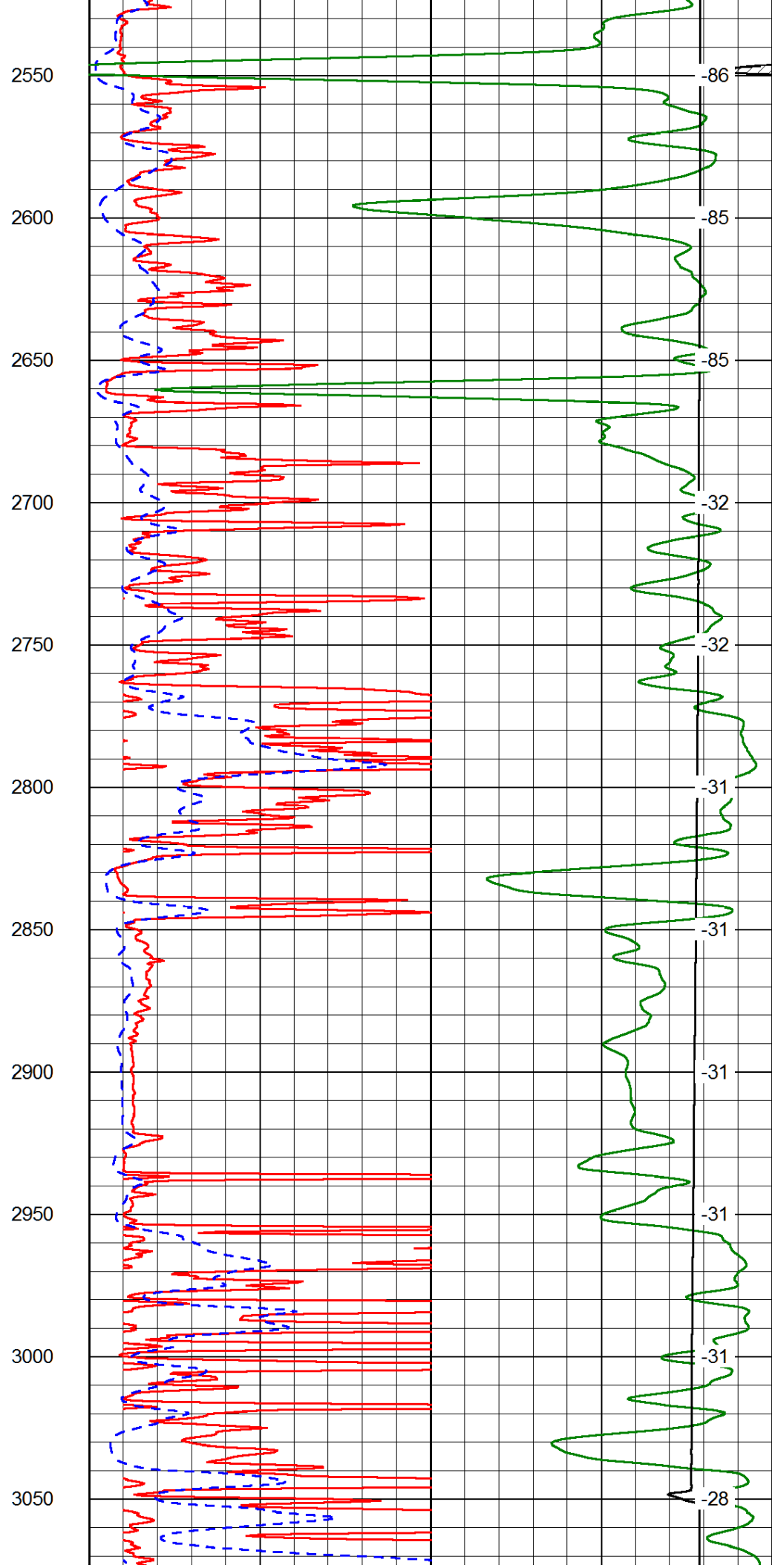
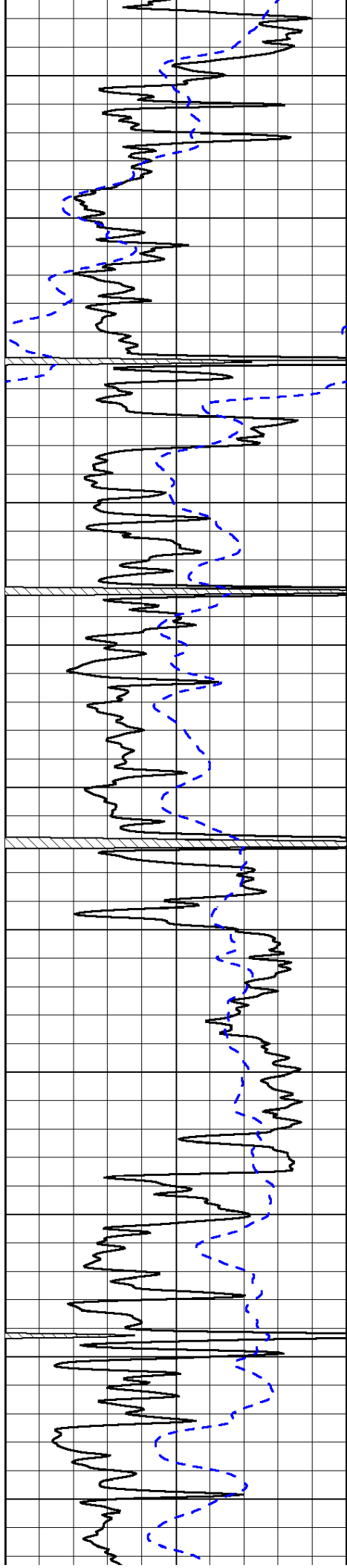


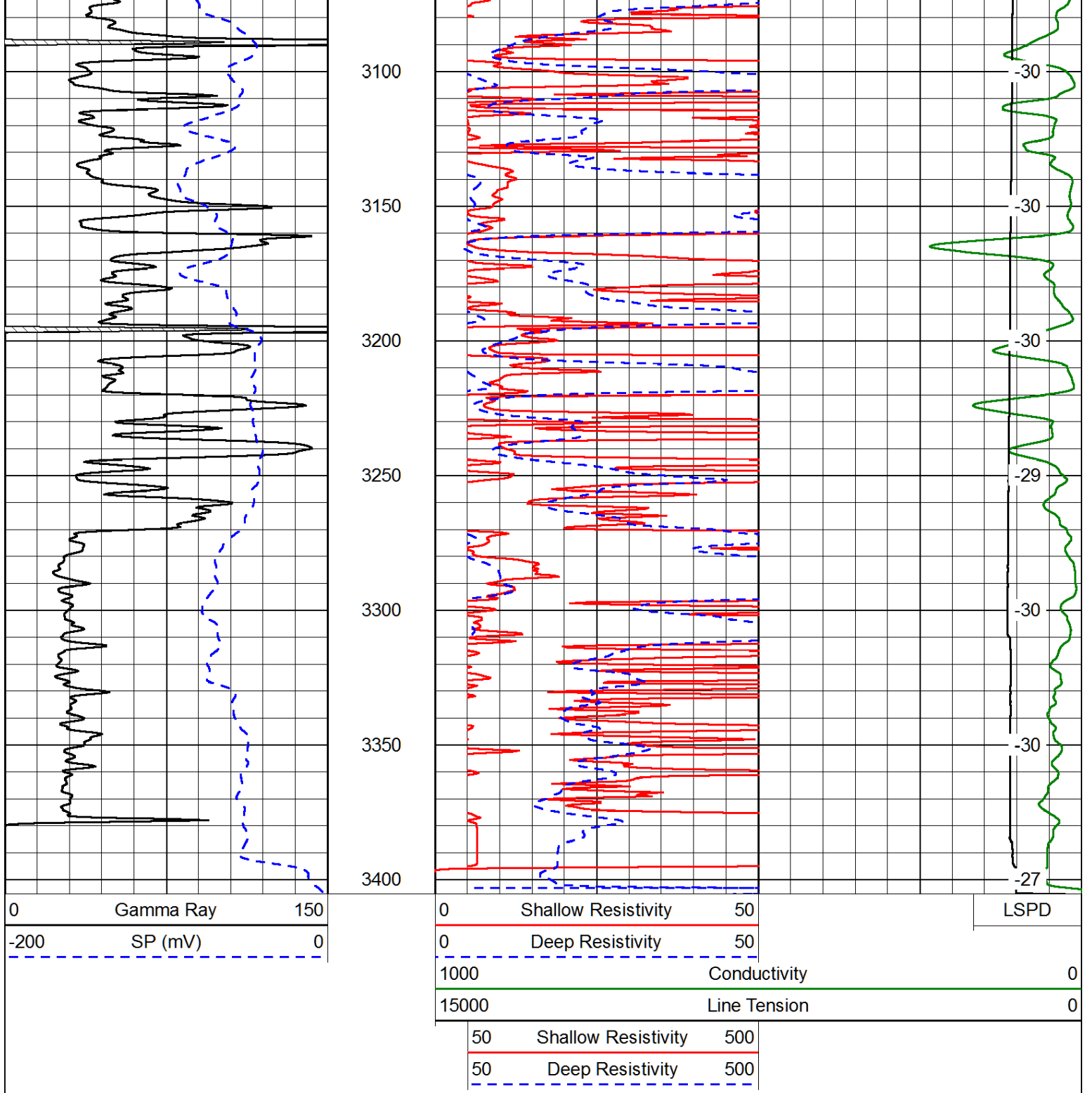


2000  
2050  
2100  
2150  
2200  
2250  
2300  
2350  
2400  
2450  
2500

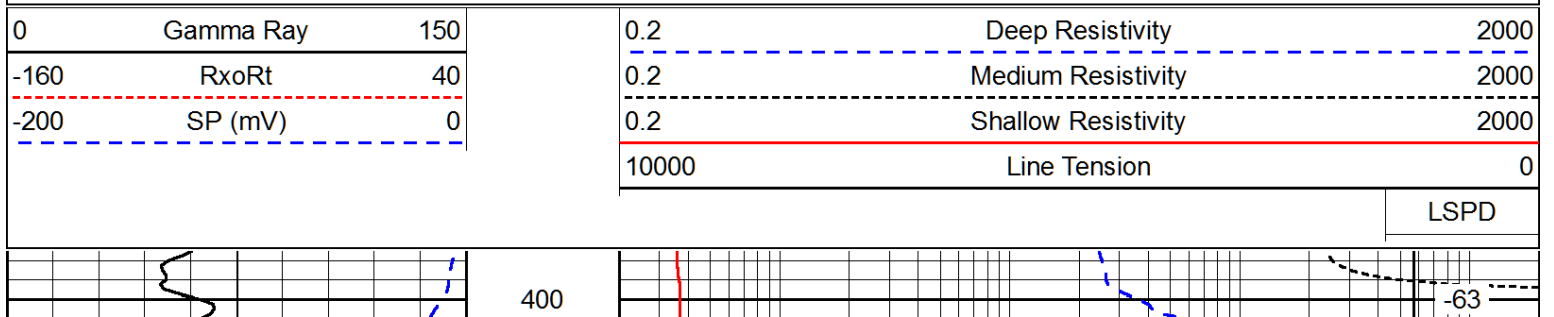


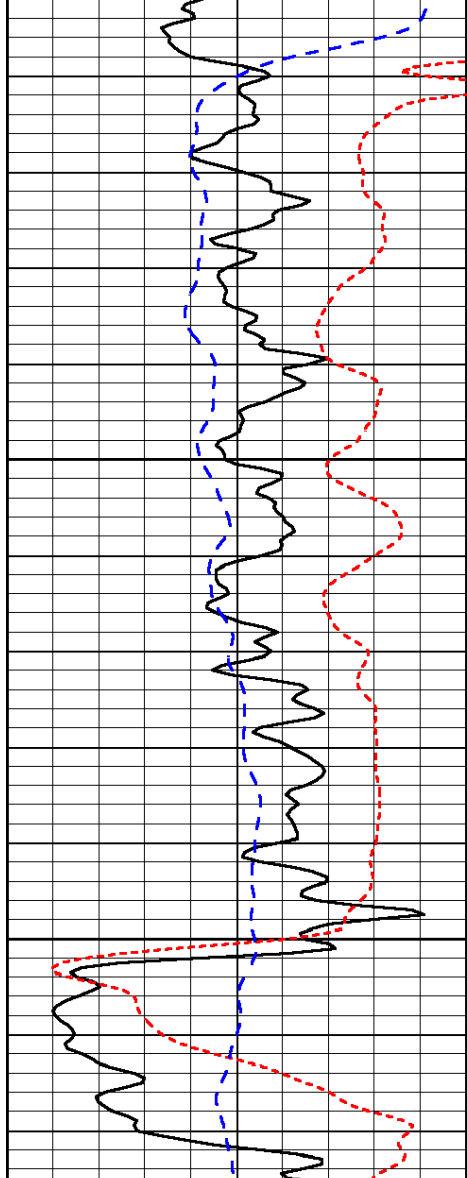
-89  
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-86  
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-86  
-86





Database File: aw\_hoelscher\_3\_10hd.db  
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 Presentation Format: dil  
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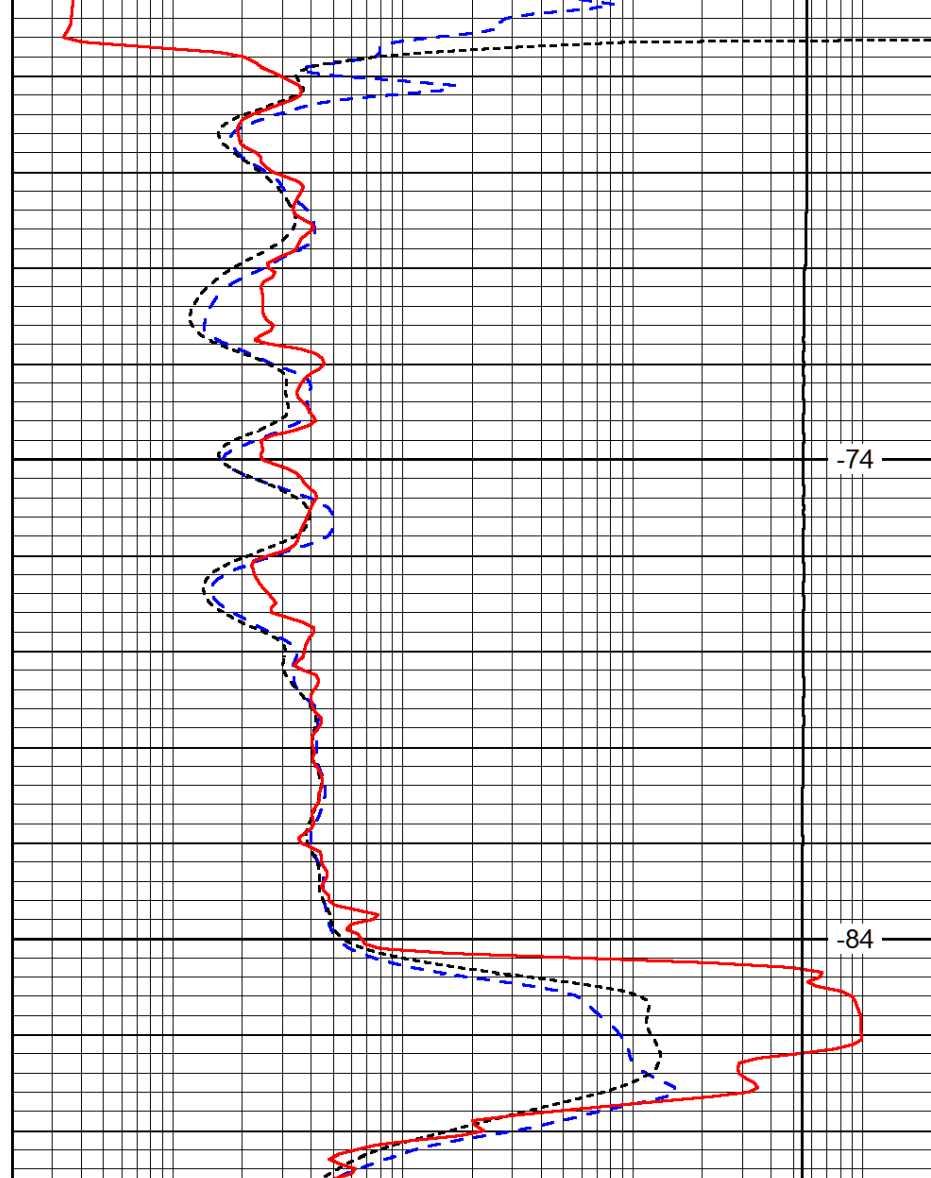




0	Gamma Ray	150
-160	RxoRt	40
-200	SP (mV)	0

450

500



0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

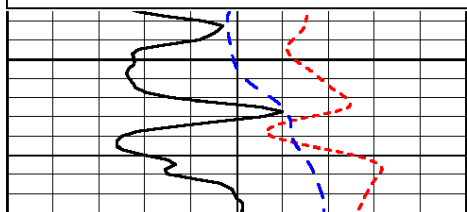
LSPD

Database File: aw\_hoelscher\_3\_10hd.db  
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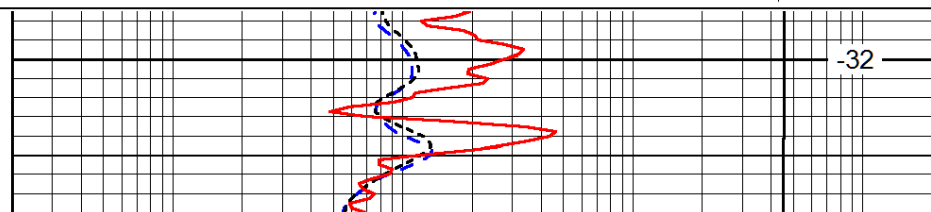
0	Gamma Ray	150
-160	RxoRt	40
-200	SP (mV)	0

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD

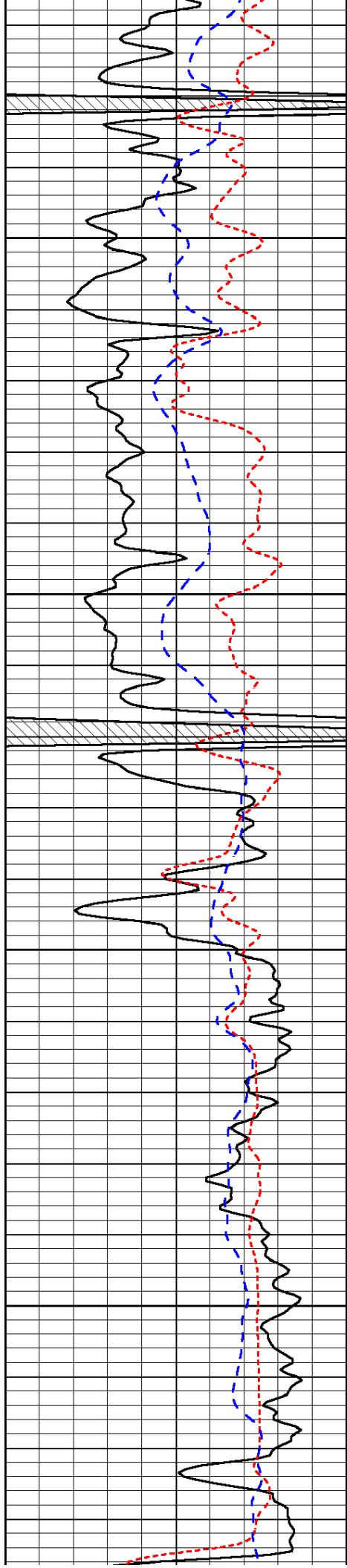


2700



-32



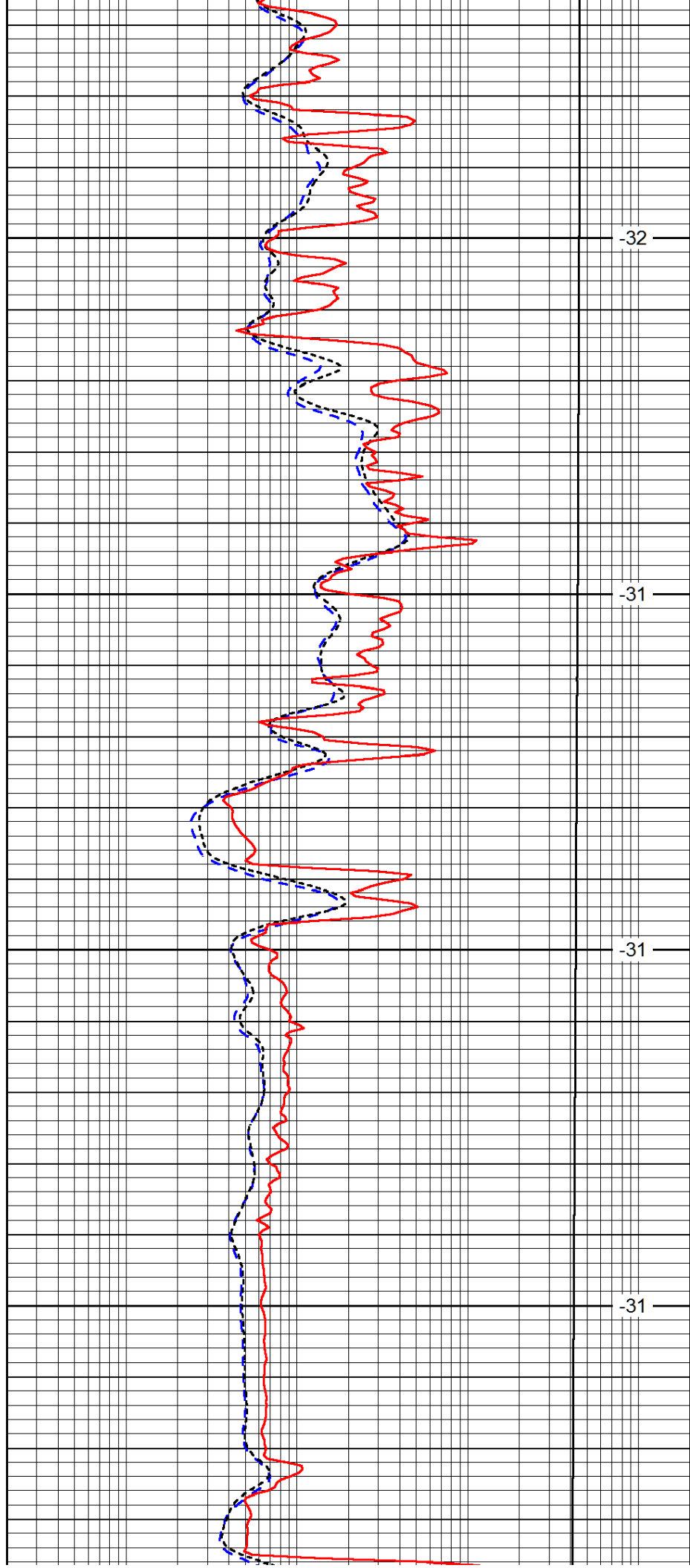


2750

2800

2850

2900

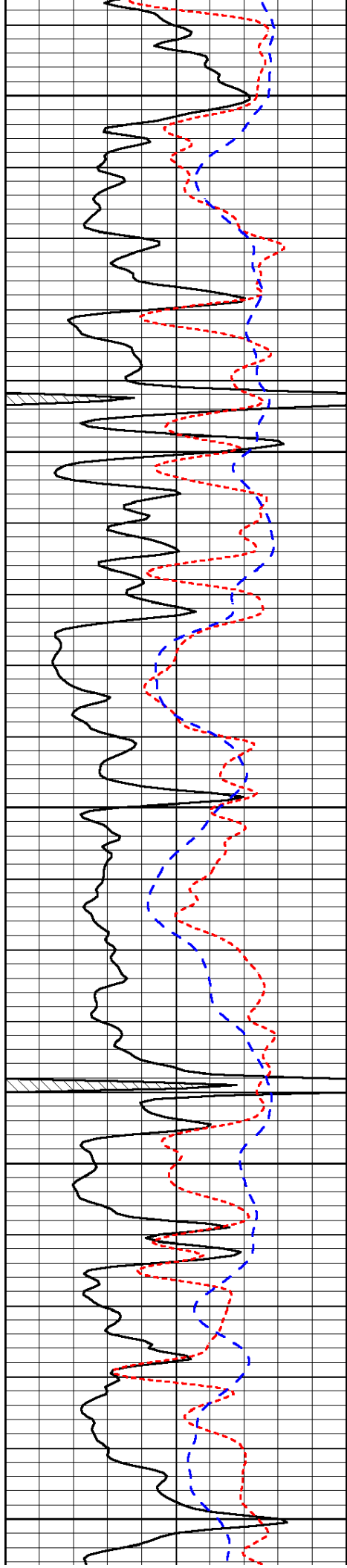


-32

-31

-31

-31



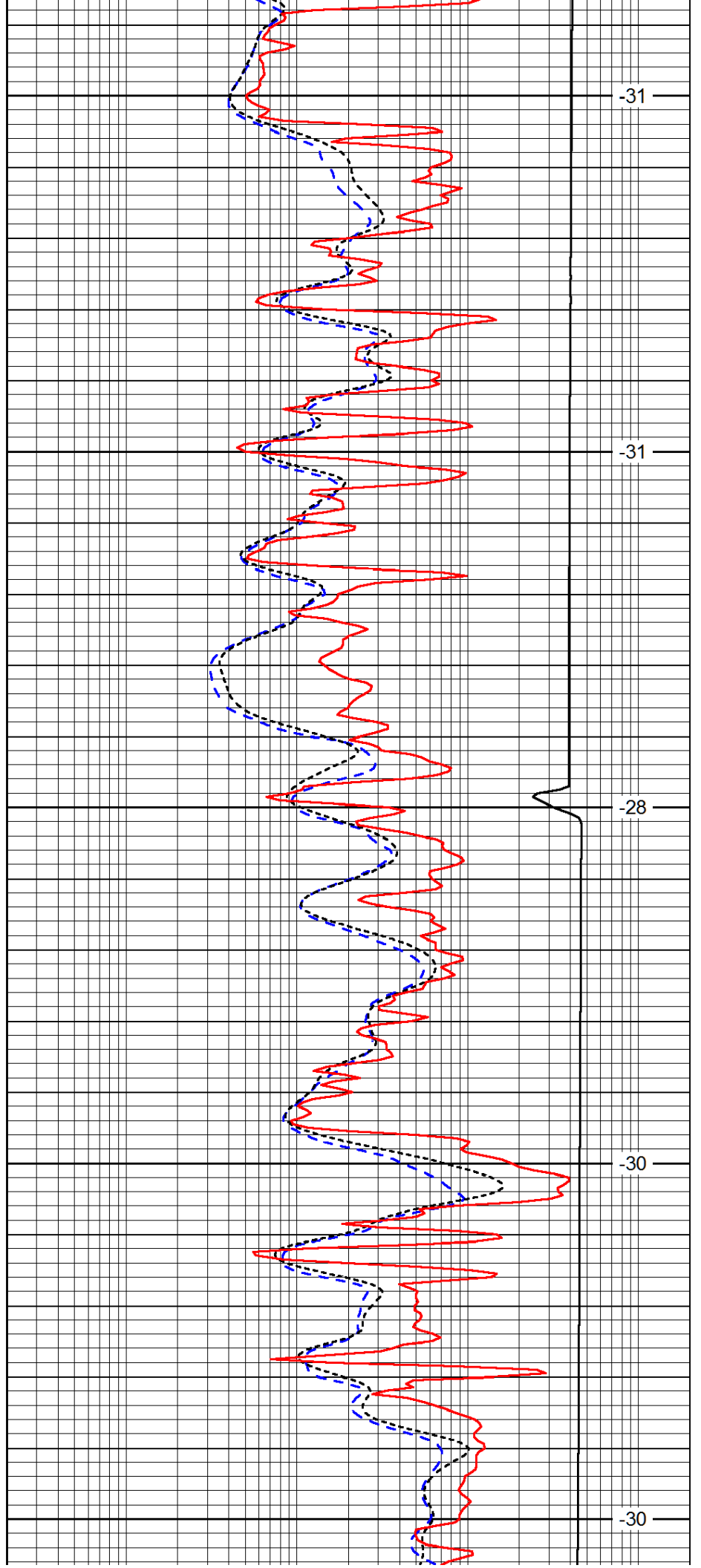
2950

3000

3050

3100

3150



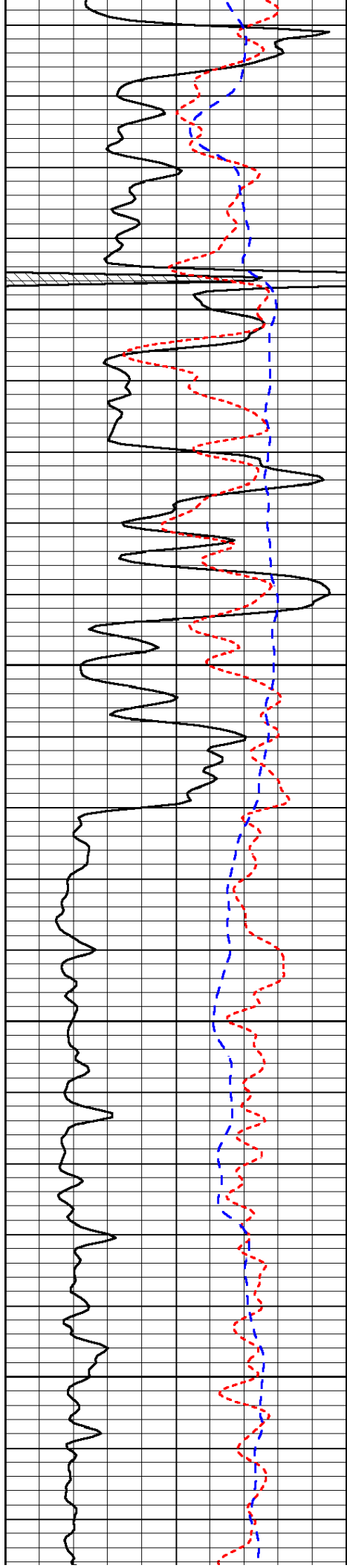
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-30

-30

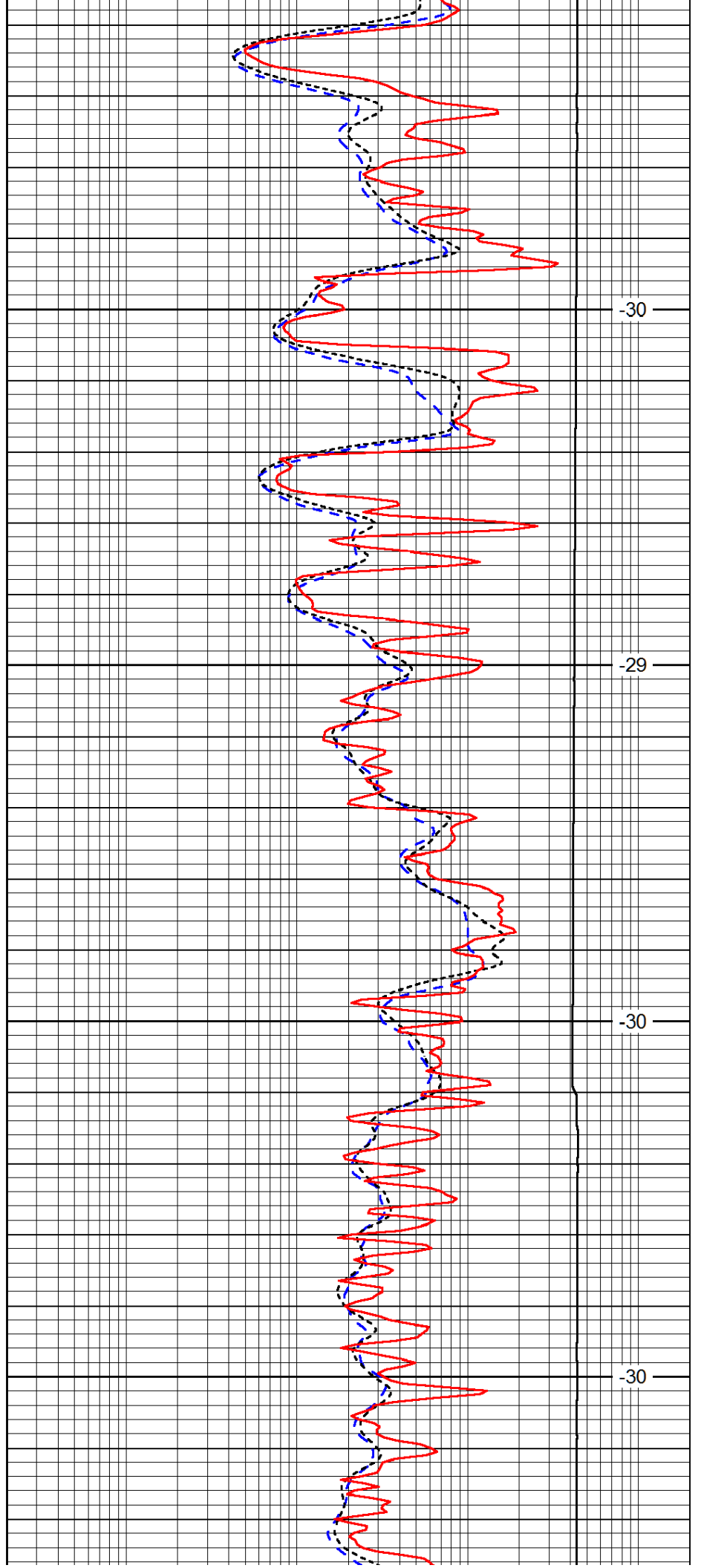


3200

3250

3300

3350

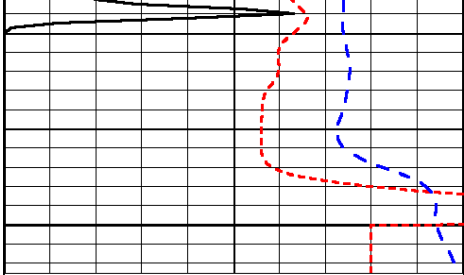


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-29

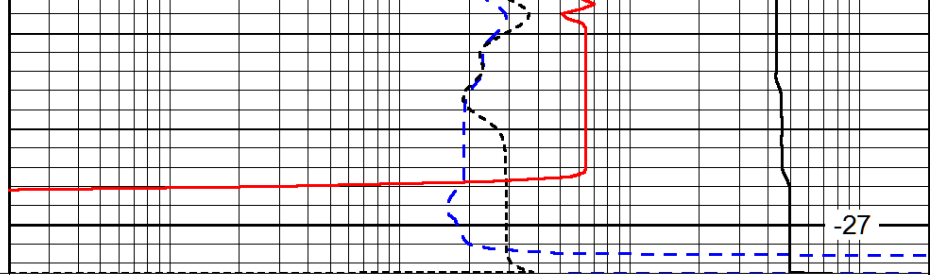
-30

-30



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

3400



0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD