



## Dual Induction Log

Pioneer Energy Services

API No.

15-101-22,554-00-00

Company **Larson Engineering, Inc.**

Well **Paris-Hineman #2-7**

Field **Wildcat**

County **Lane** State **Kansas**

Location **128' FNL & 2010' FWL**

Other Services  
CNL/CDL  
MEL

Sec: **7** Twp: **19S** Rge: **28W**

Permanent Datum **Ground Level** Elevation **2782**

Log Measured From **Kelly Bushing** 9 Ft. Above Perm. Datum

Drilling Measured From **Kelly Bushing** K.B. 2791  
D.F. G.L. 2782

Date **1/11/2015**

Run Number **One**

Depth Driller **4455**

Depth Logger **4455**

Bottom Logged Interval **4454**

Top Log Interval **250**

Casing Driller **8.625 @ 256**

Casing Logger **260**

Bit Size **7.875**

Type Fluid in Hole **Chemical**

Salinity, ppm CL **3.100**

Density / Viscosity **9.3 58**

pH / Fluid Loss **10.0 6.8**

Source of Sample **Flowline**

Rm @ Meas. Temp **.6 @ 45**

Rmf @ Meas. Temp **.45 @ 45**

Rmc @ Meas. Temp **.81 @ 45**

Source of Rmf / Rmc **Charts**

Rm @ BHT **.22 @ 121**

Operating Rig Time **4 Hours**

Max Rec. Temp. F **121**

Equipment Number **51**

Location **Hays**

Recorded By **C. Desaire**

Witnessed By **Vern Schrag**

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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](http://www.pioneerres.com)  
785 625 3858

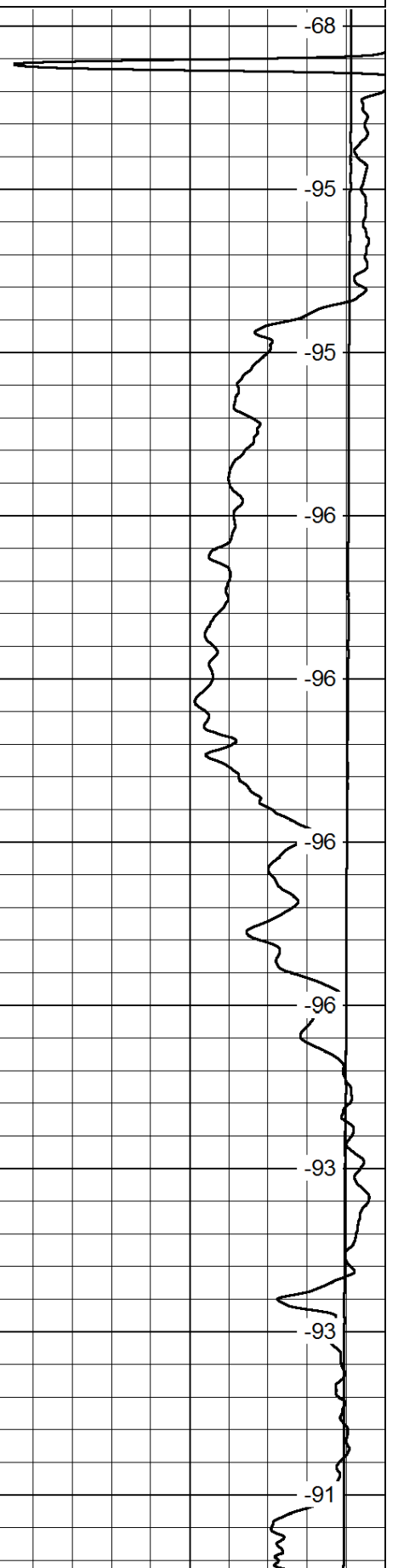
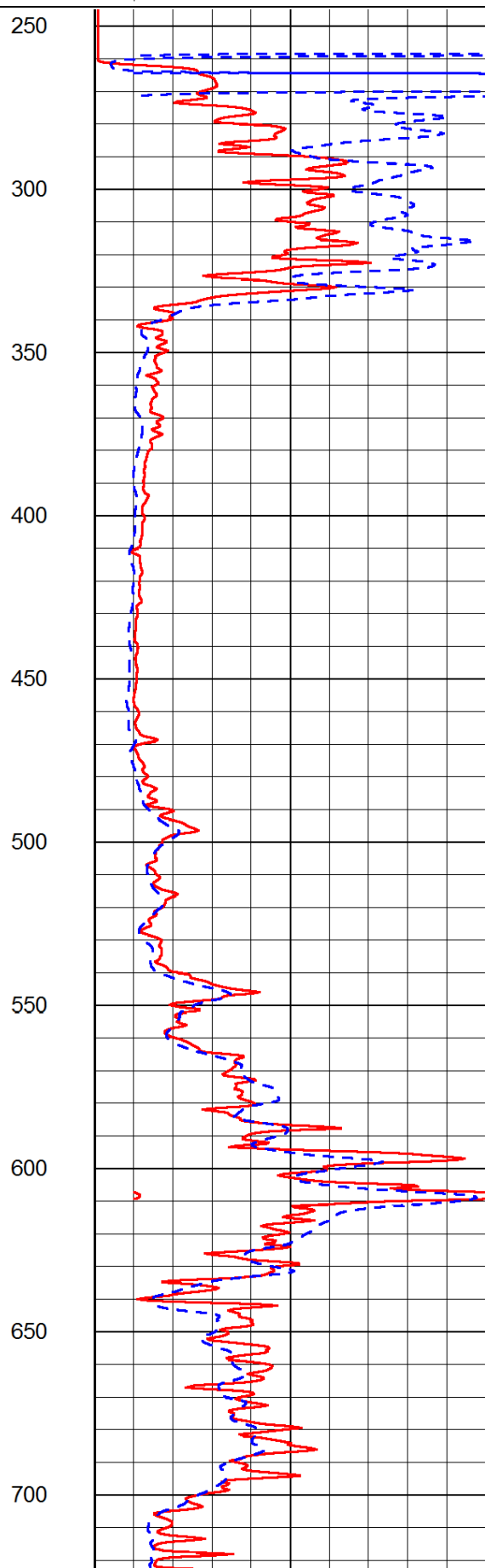
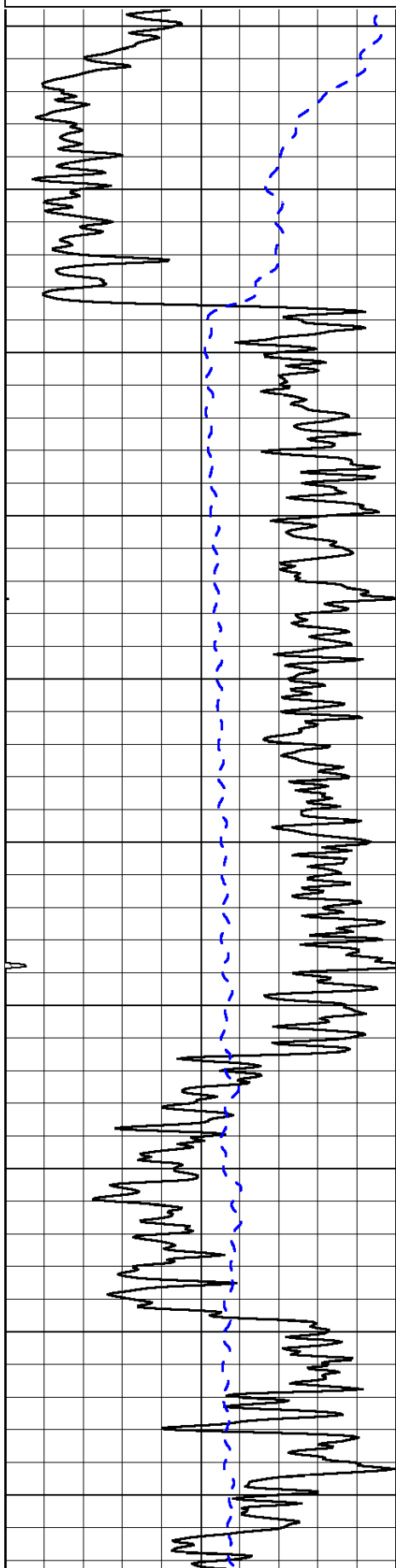
Dighton KS,  
4 S, E Into

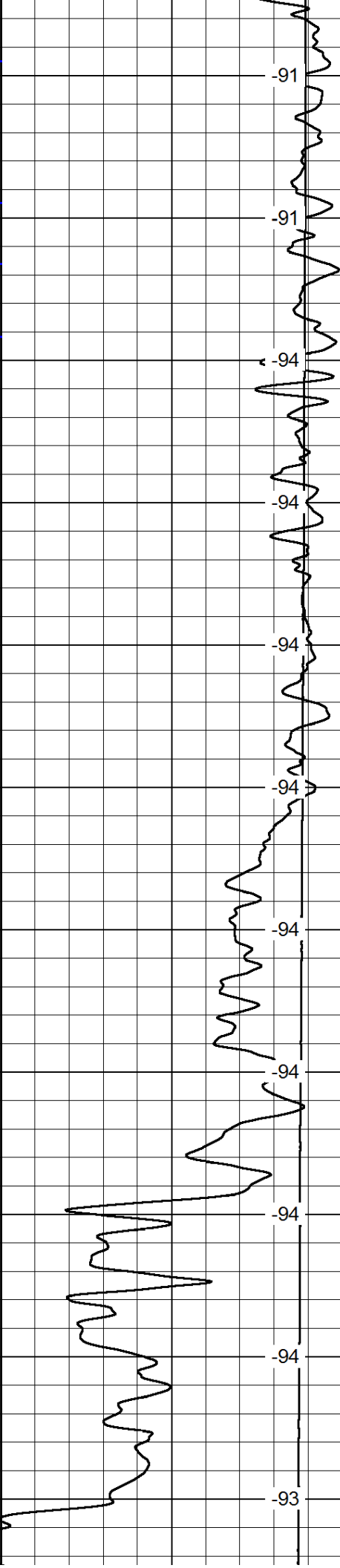
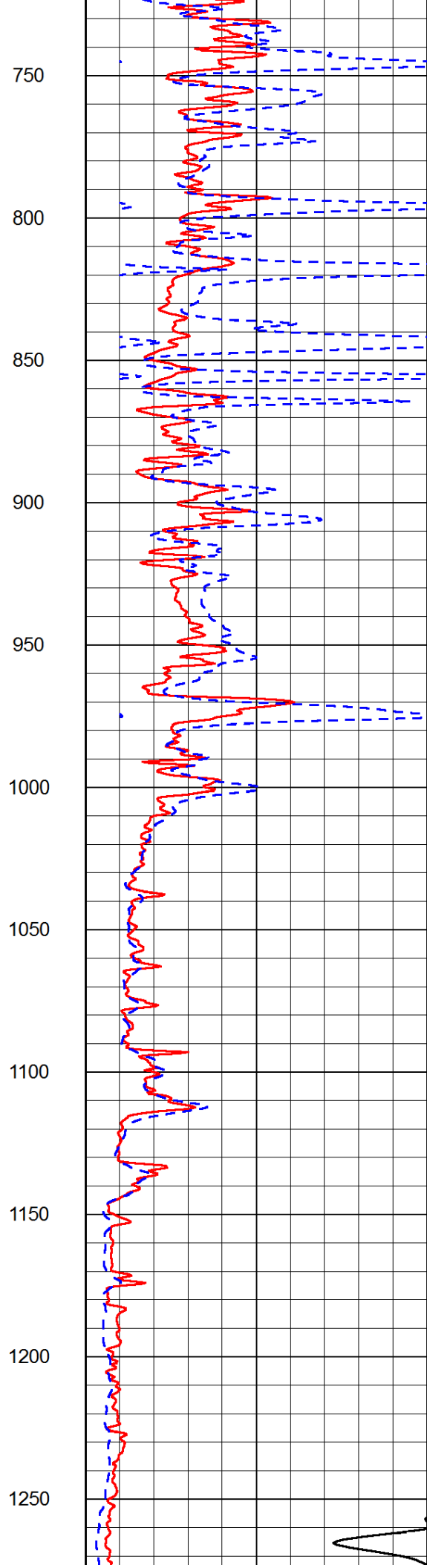
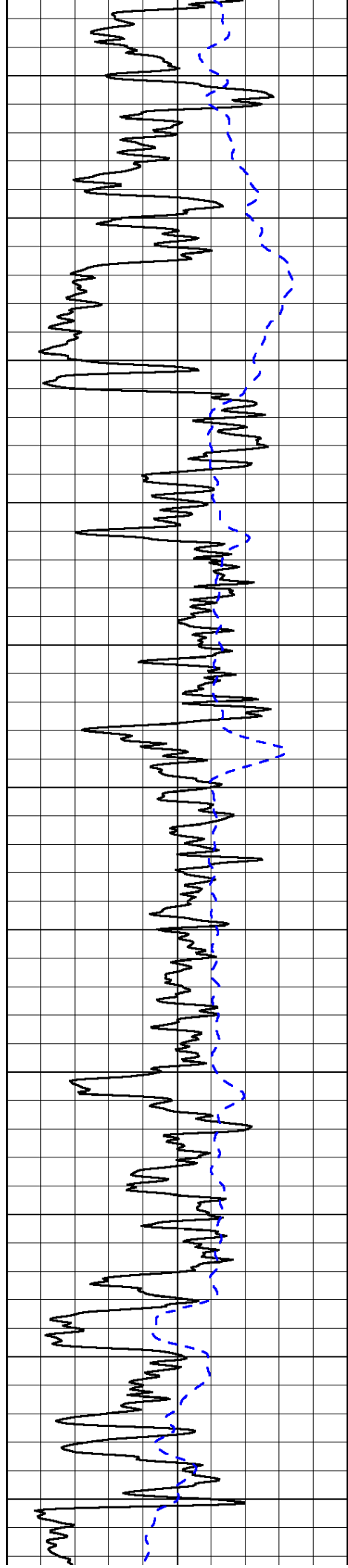
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Dataset Creation: Sun Jan 11 01:43:35 2015  
Charted by: Depth in Feet scaled 1:600

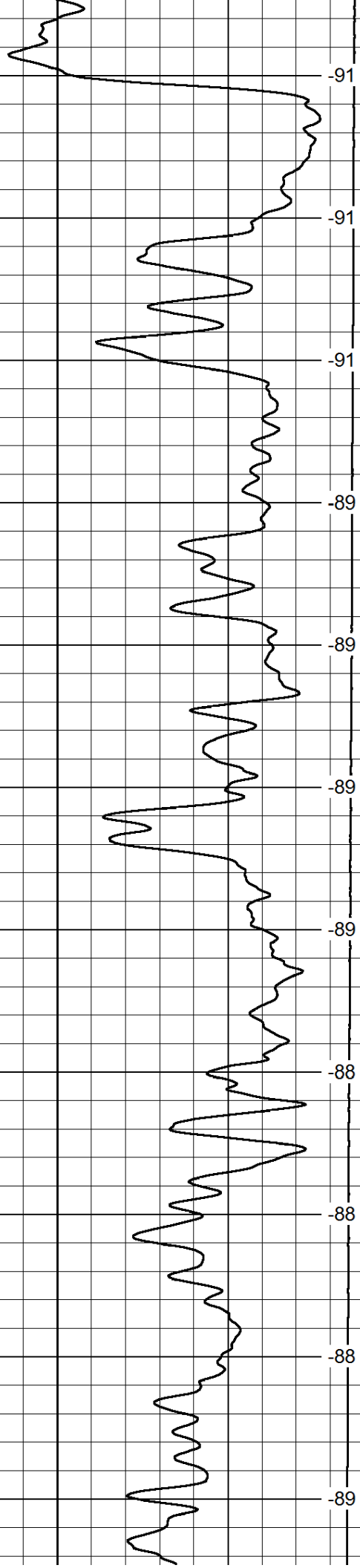
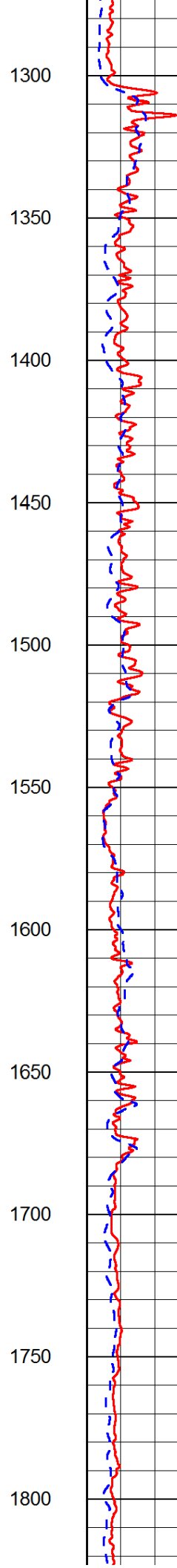
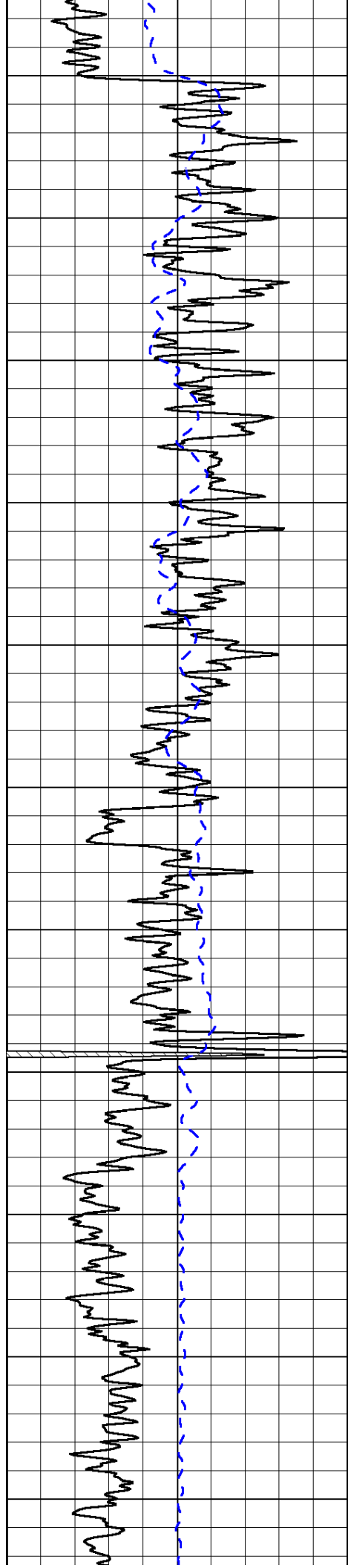
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|------|-----------|-----|
| 0    | Gamma Ray | 150 |
| -200 | SP (mV)   | 0   |

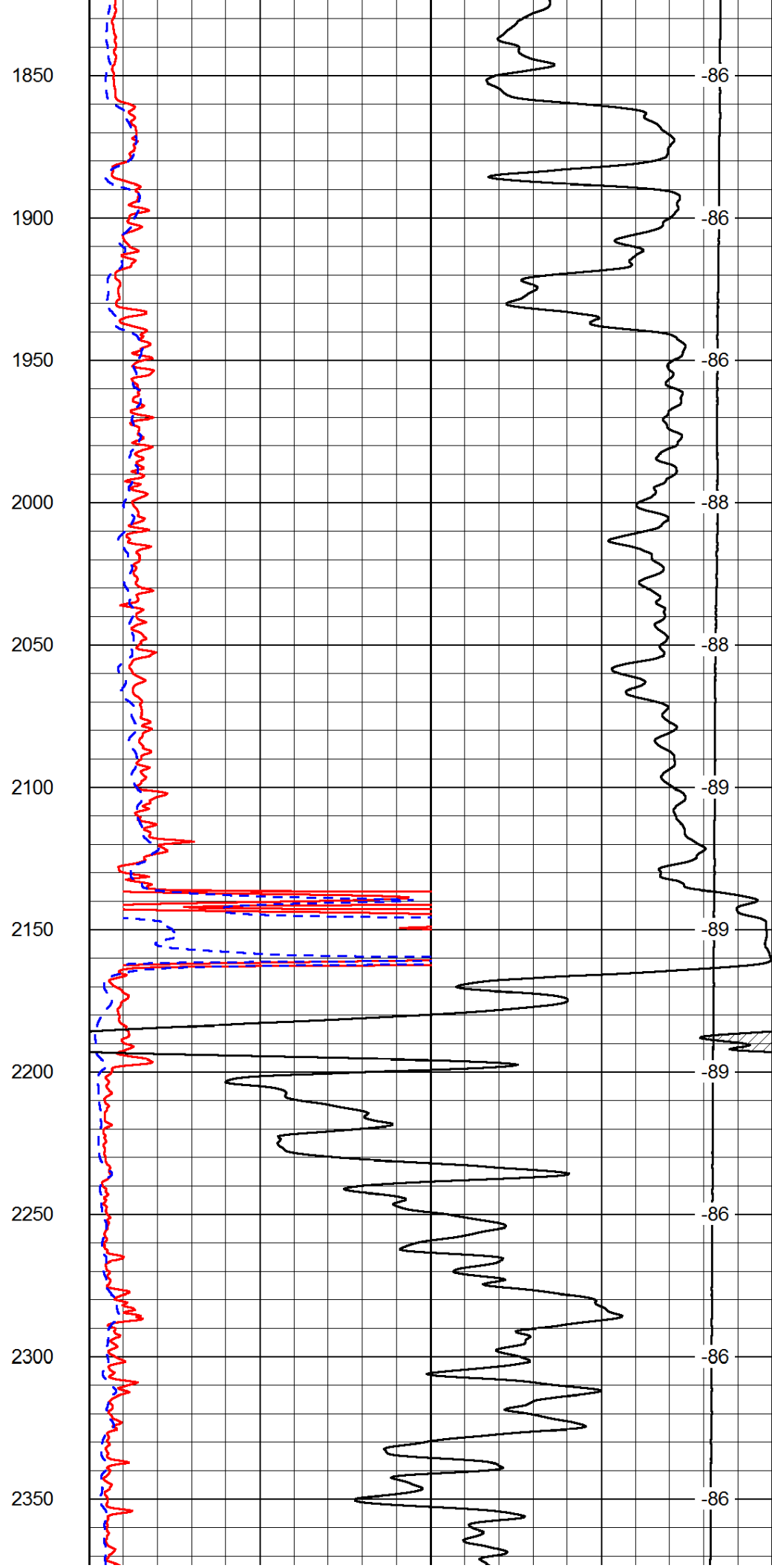
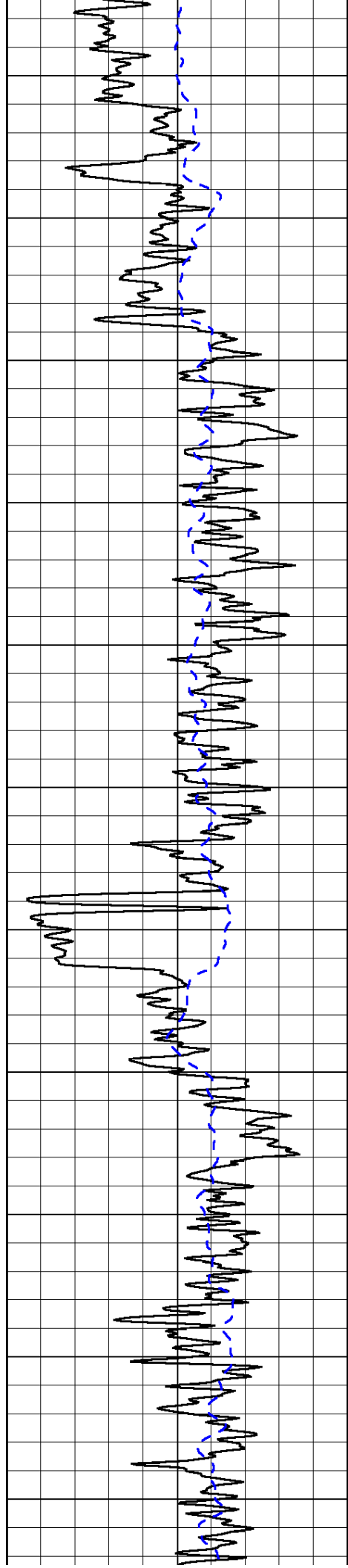
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|-------|---------------------|-----|
| 0     | Shallow Resistivity | 50  |
| 0     | Deep Resistivity    | 50  |
| 1000  | Conductivity        | 0   |
| 15000 | Line Tension        | 0   |
| 50    | Shallow Resistivity | 500 |
| 50    | Deep Resistivity    | 500 |

|      |   |
|------|---|
| LSPD | 0 |
|------|---|

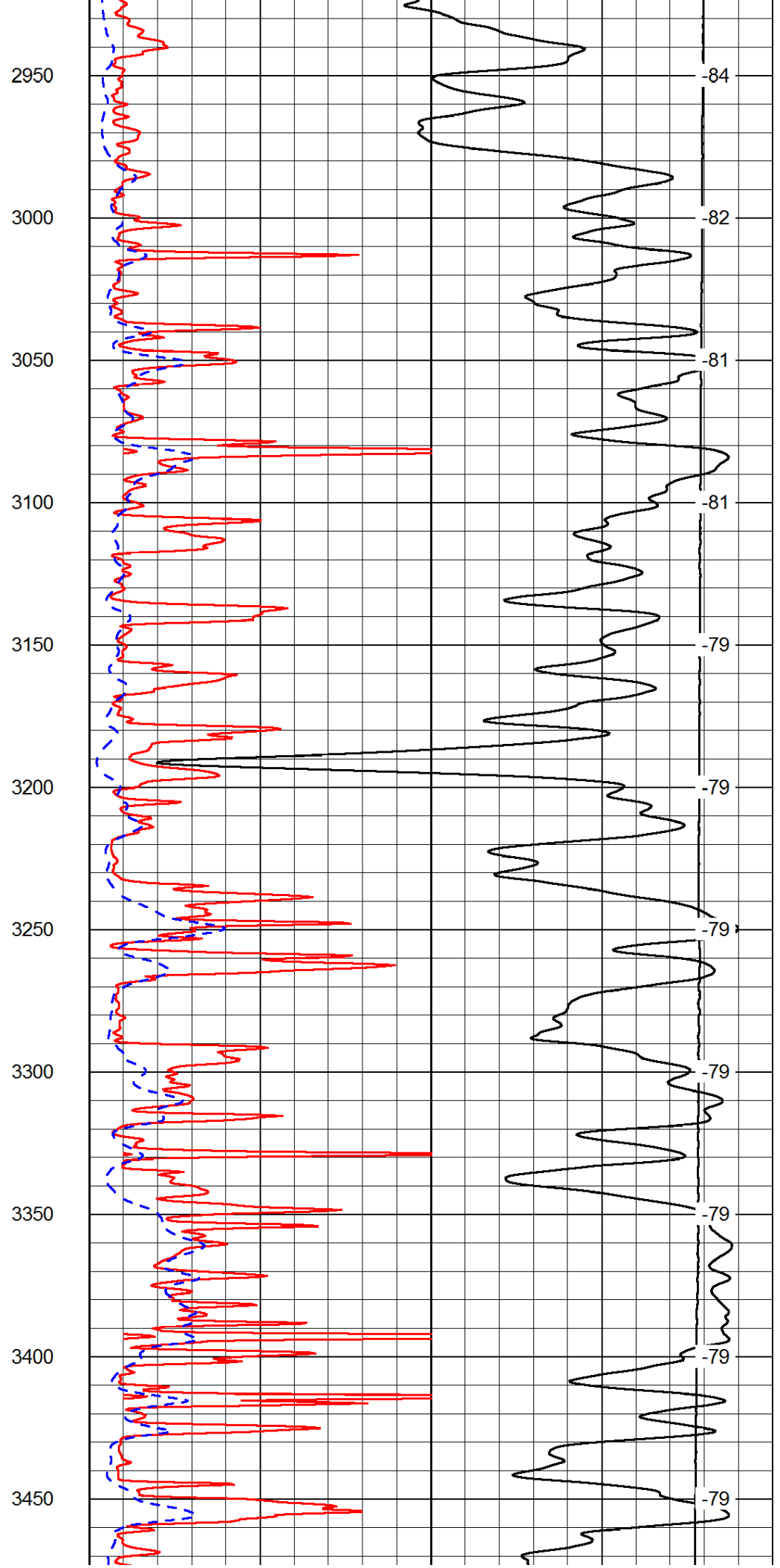
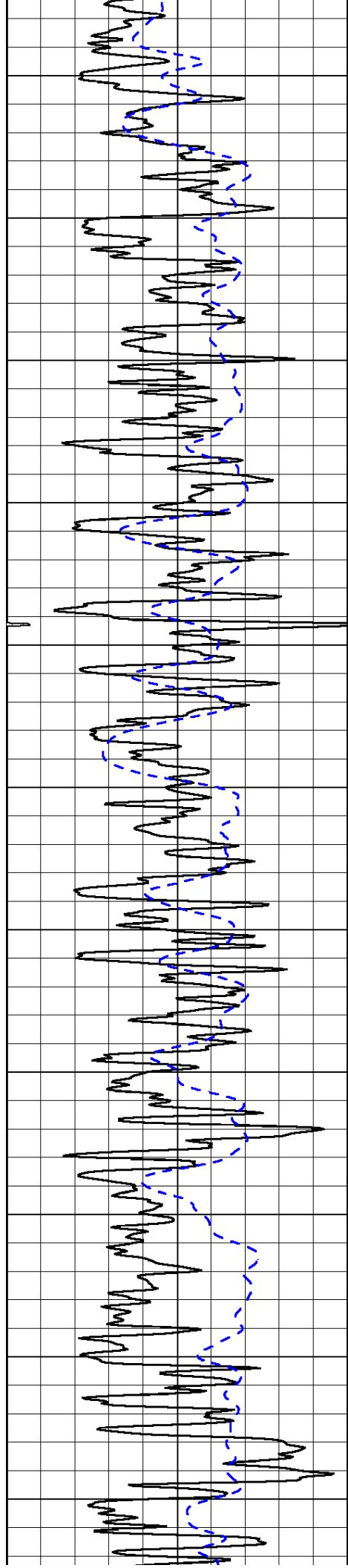


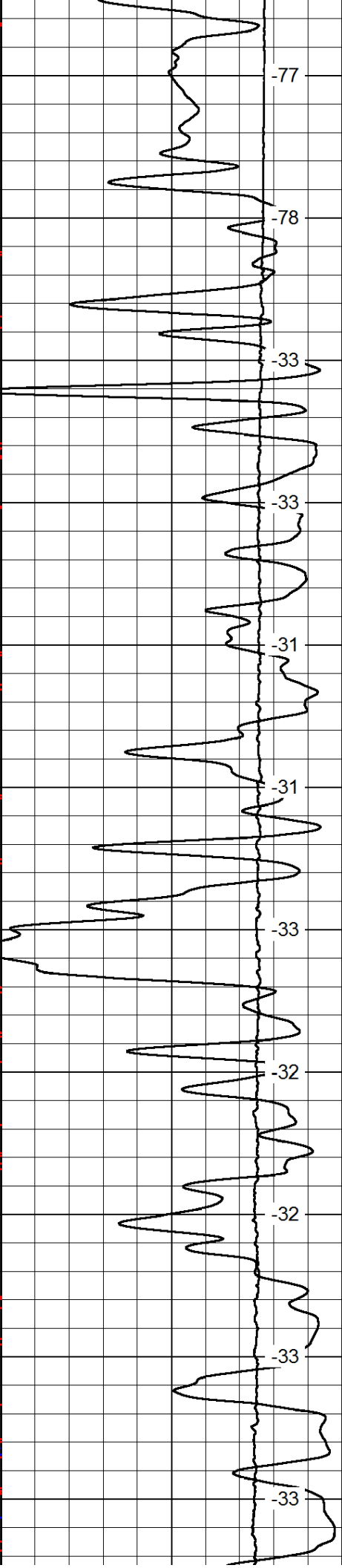
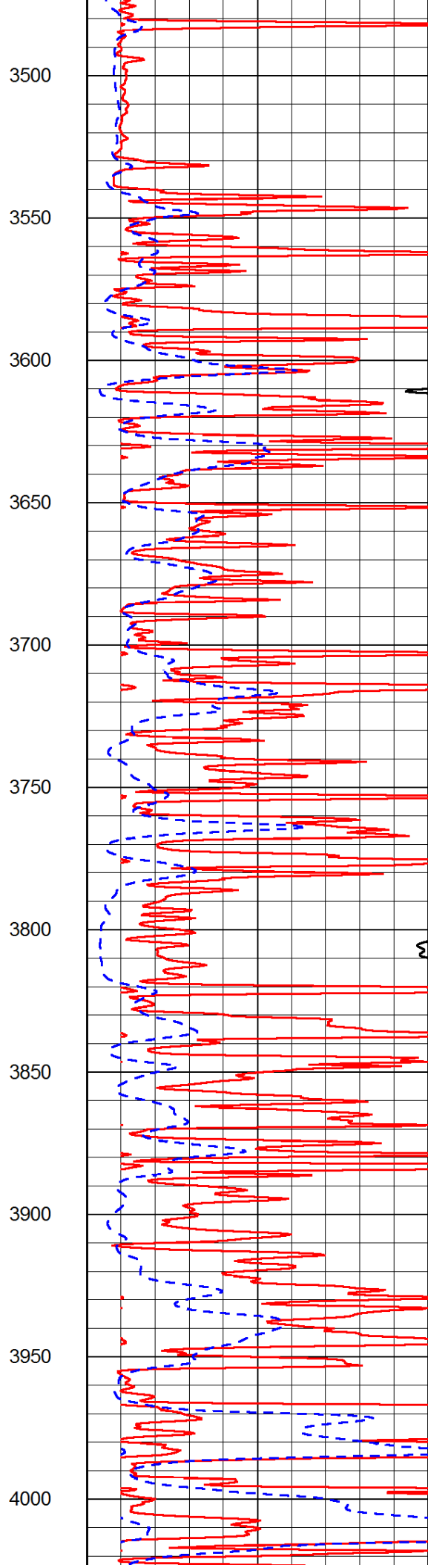
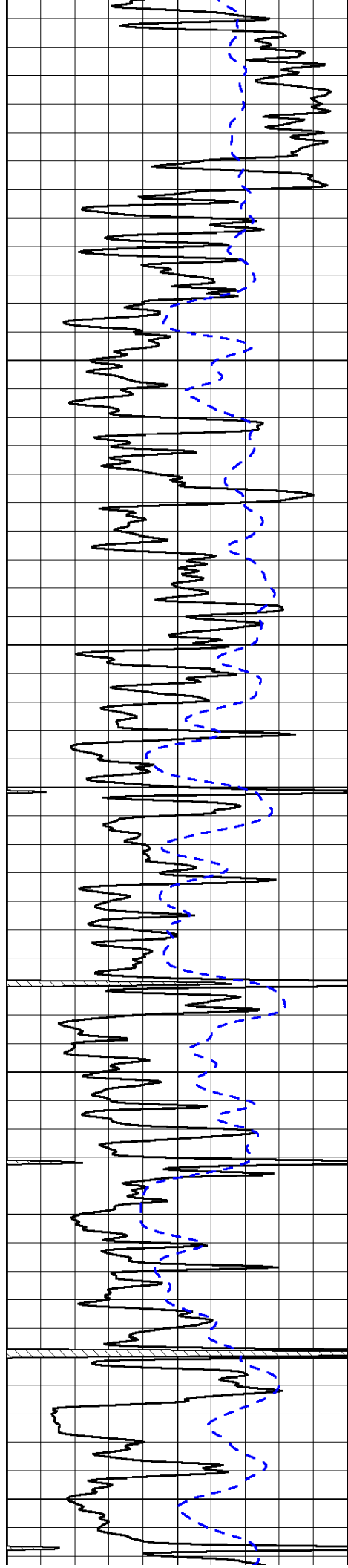


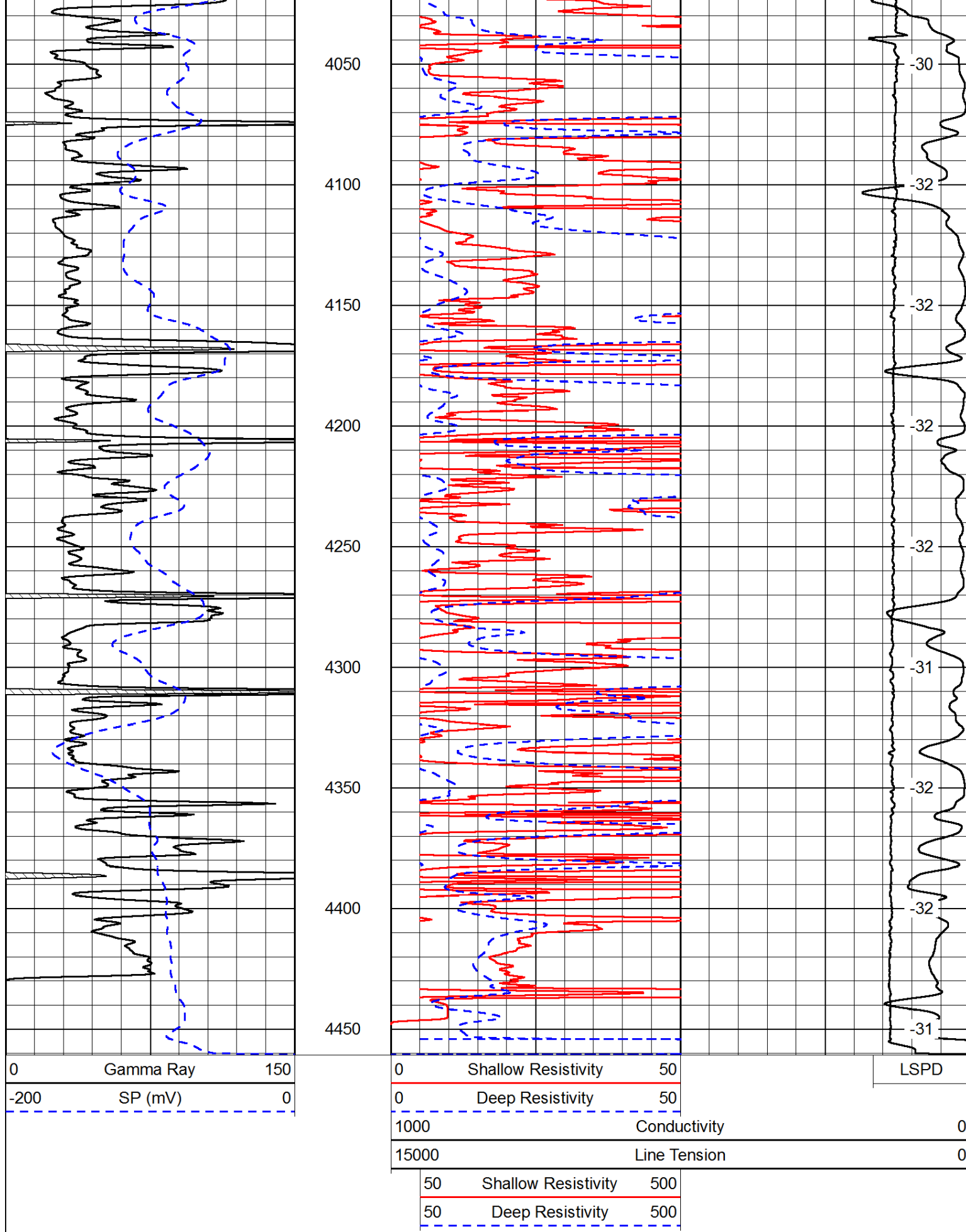










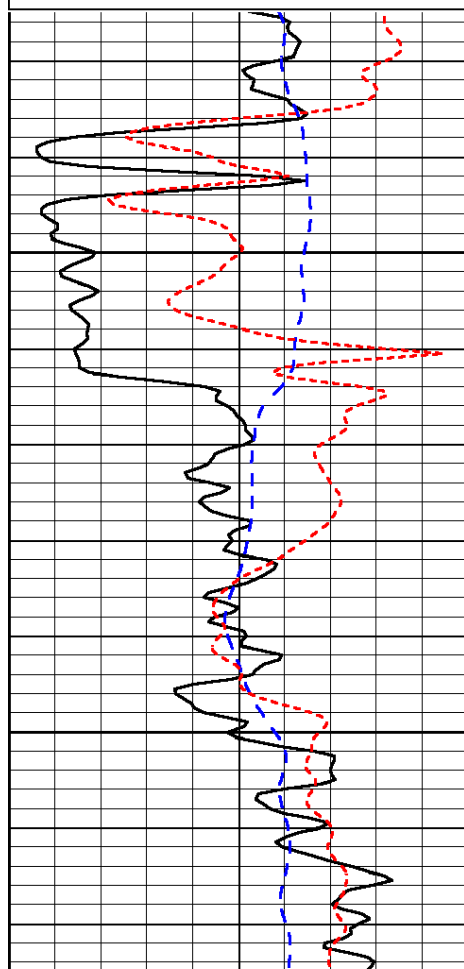


Presentation Format: dil  
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Charted by: Depth in Feet scaled 1:240

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

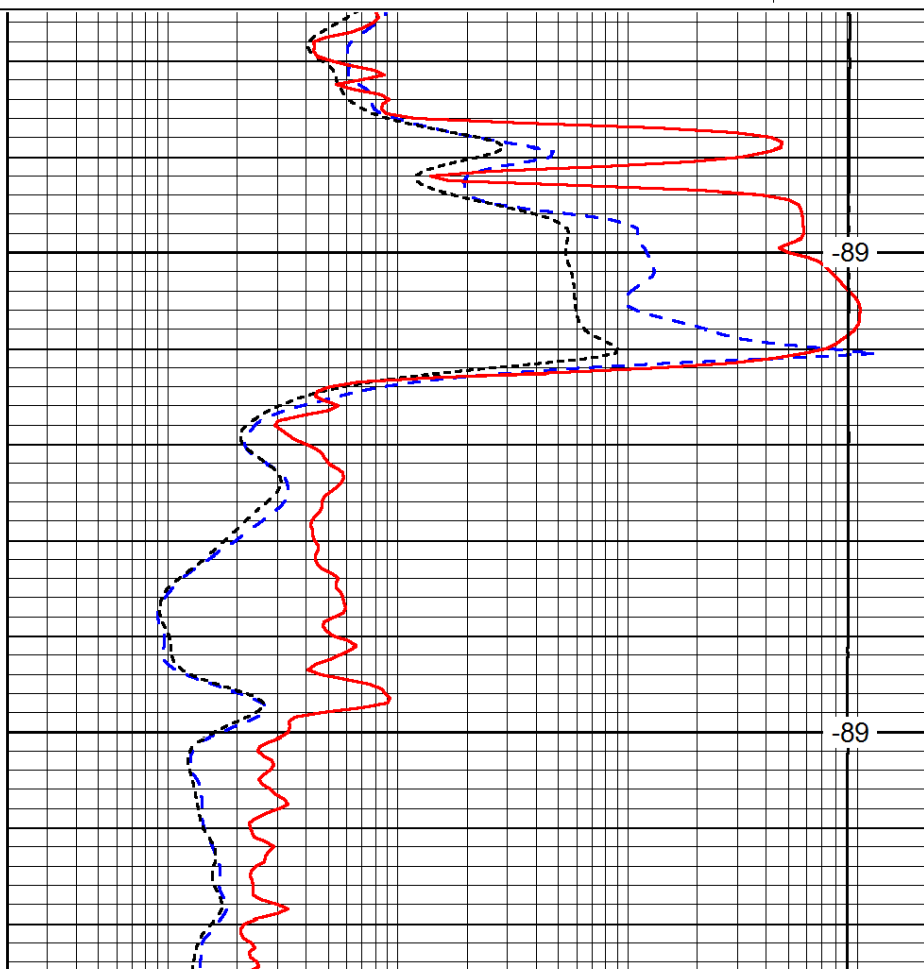
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| 0.2   | Deep Resistivity    | 2000 |
| 0.2   | Medium Resistivity  | 2000 |
| 0.2   | Shallow Resistivity | 2000 |
| 15000 | Line Tension        | 0    |

LSPD



2150

2200



89

89

|      |           |     |
|------|-----------|-----|
| 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    |

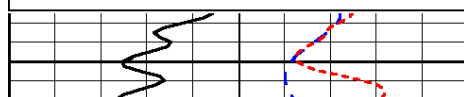
LSPD

Database File: c:\warrior\data\larson\_paris-hineman #2-7\larhd.db  
Dataset Pathname: dil\larstk  
Presentation Format: dil  
Dataset Creation: Sun Jan 11 01:43:35 2015  
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    |

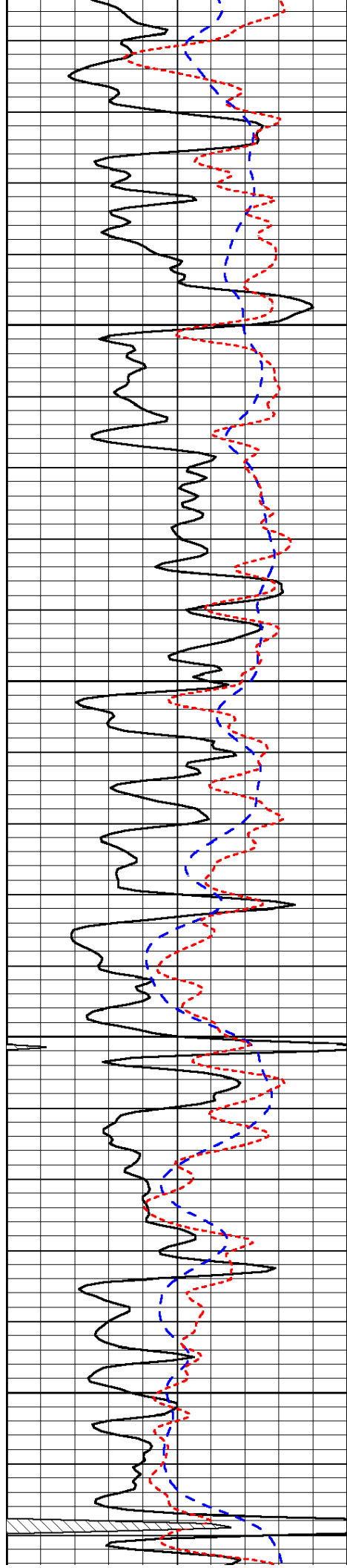
LSPD



3600



33

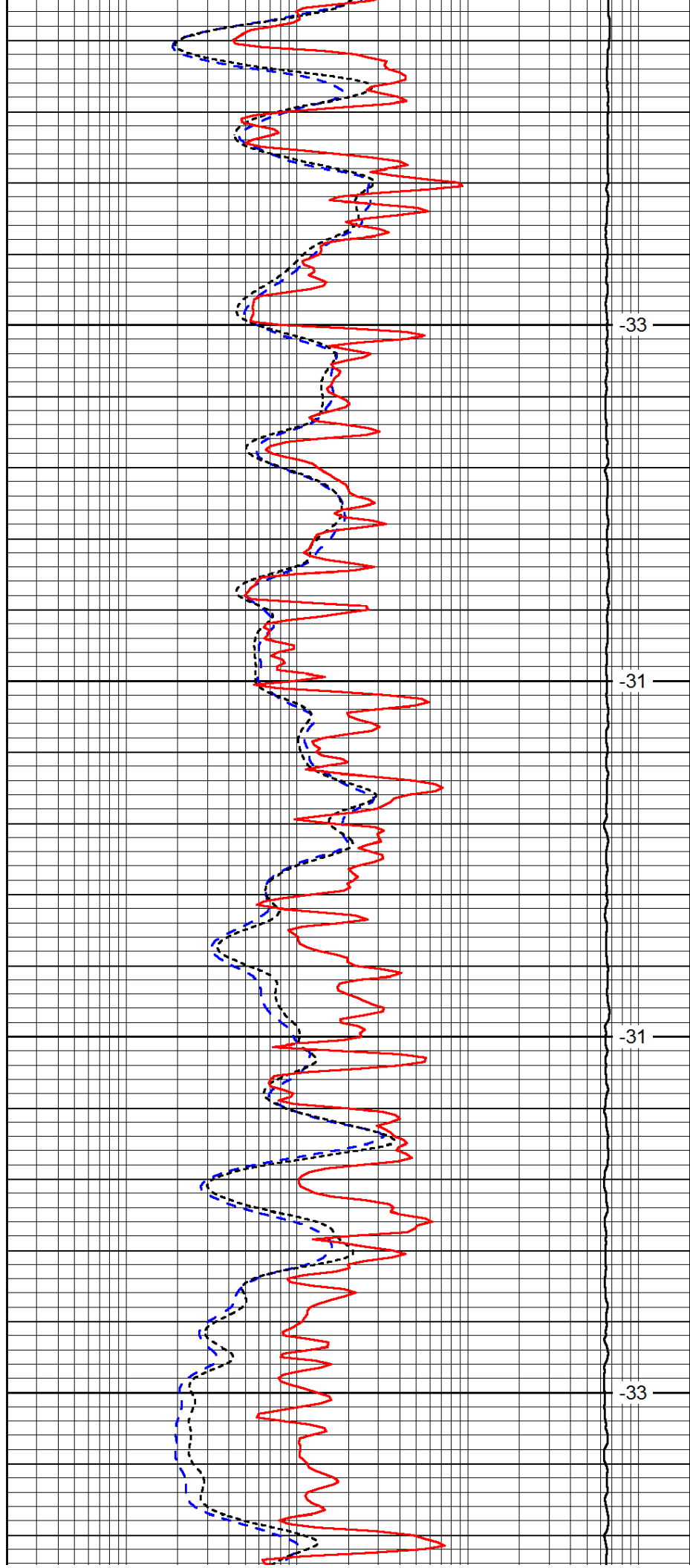


3650

3700

3750

3800

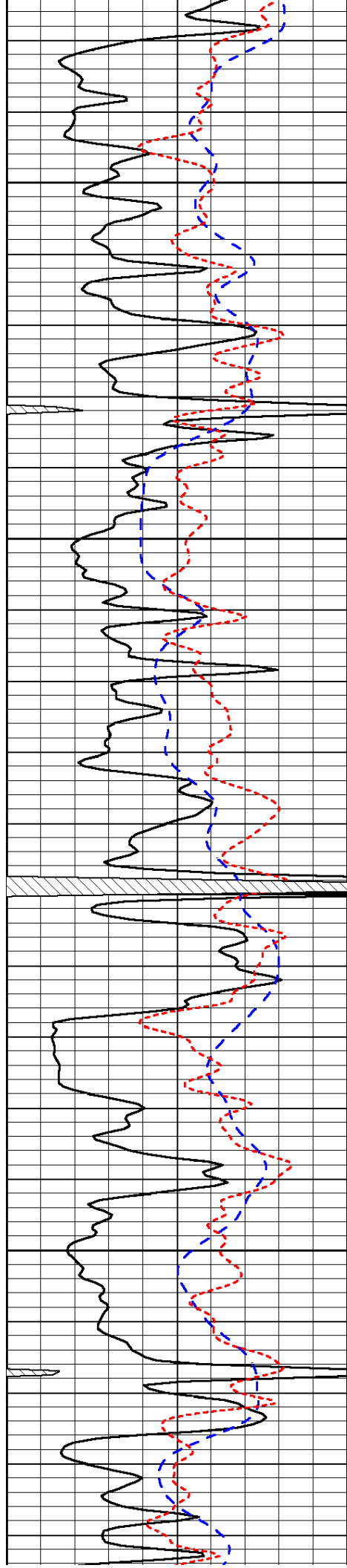


-33

-31

-31

-33

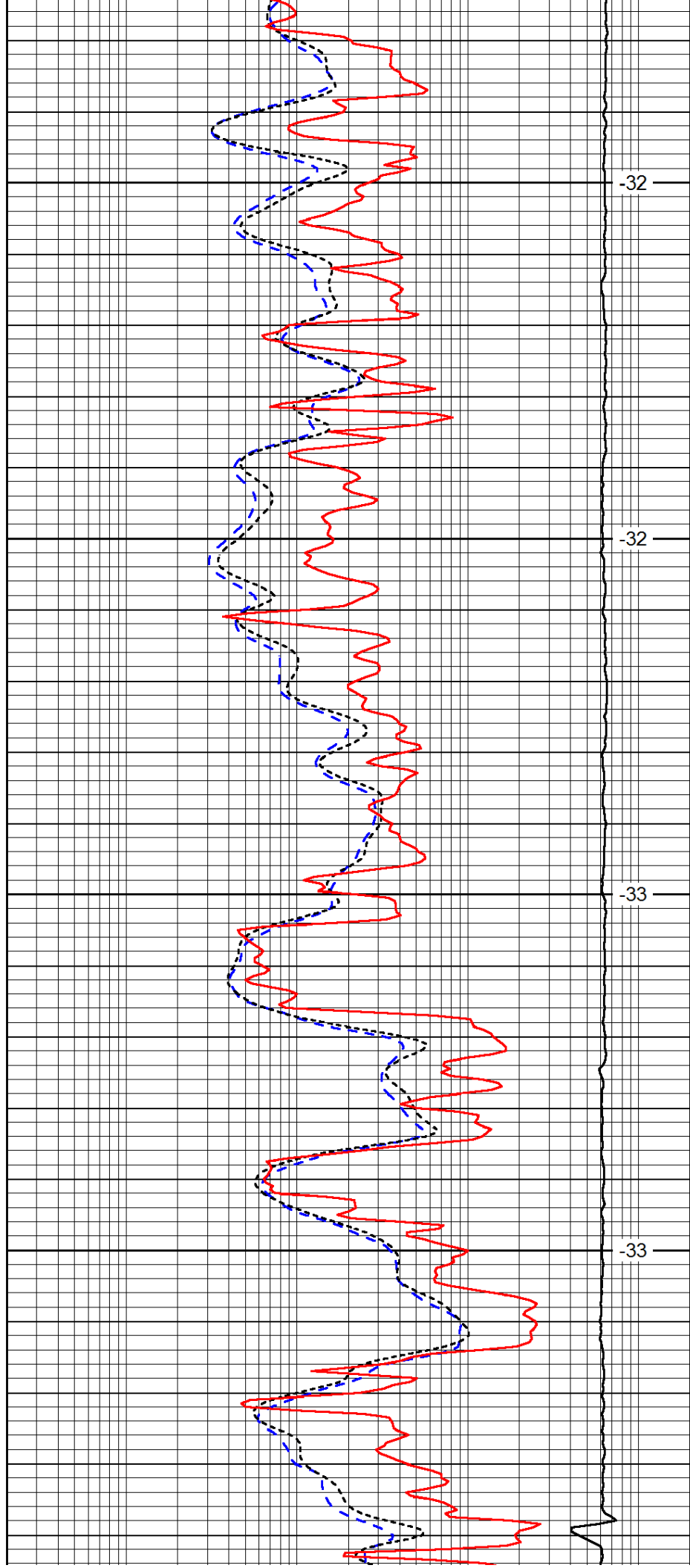


3850

3900

3950

4000

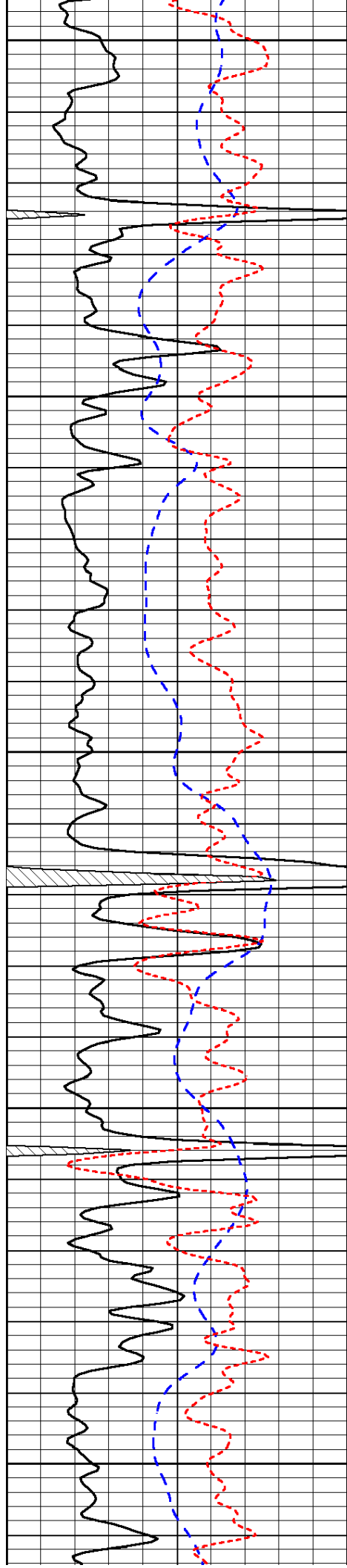


-32

-32

-33

-33



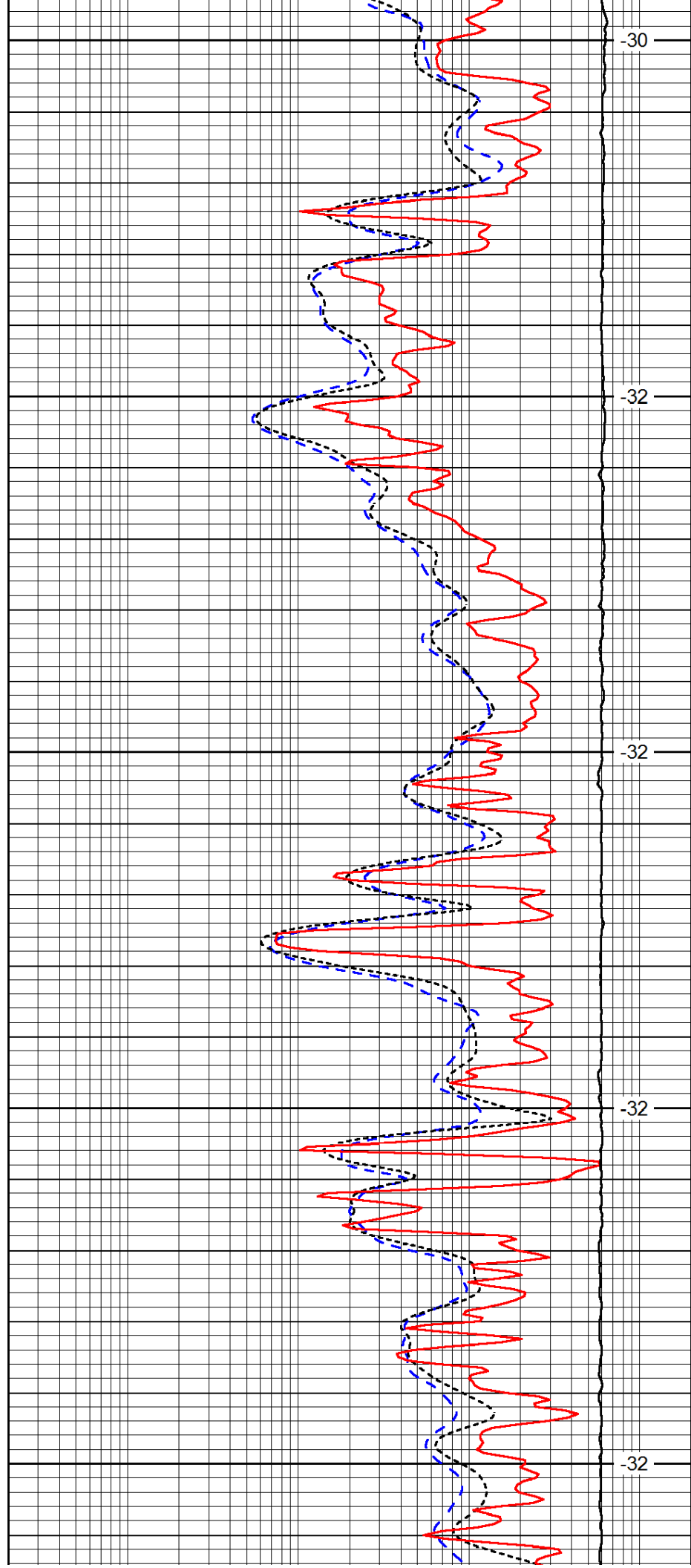
4050

4100

4150

4200

4250



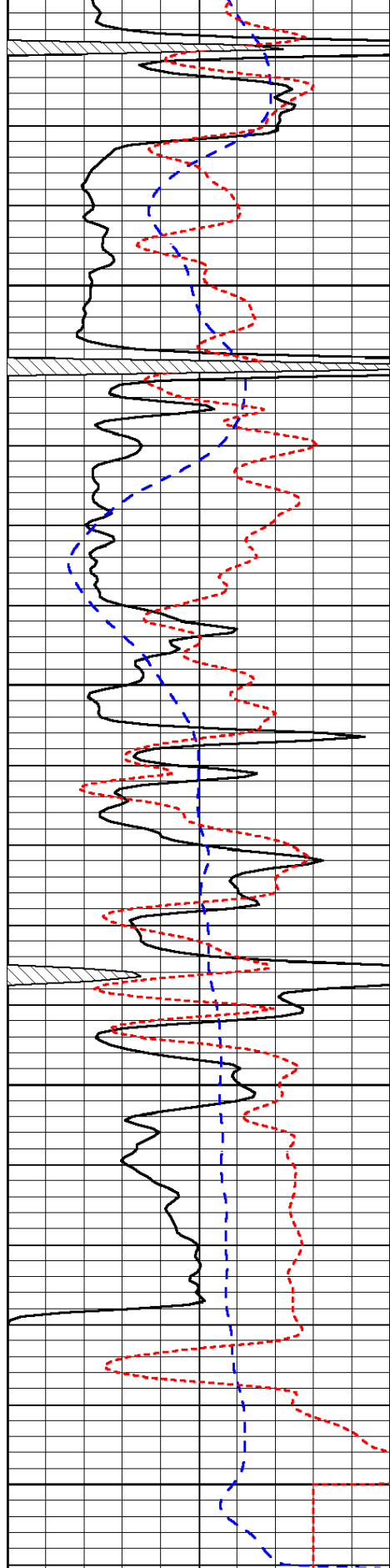
-30

-32

-32

-32

-32



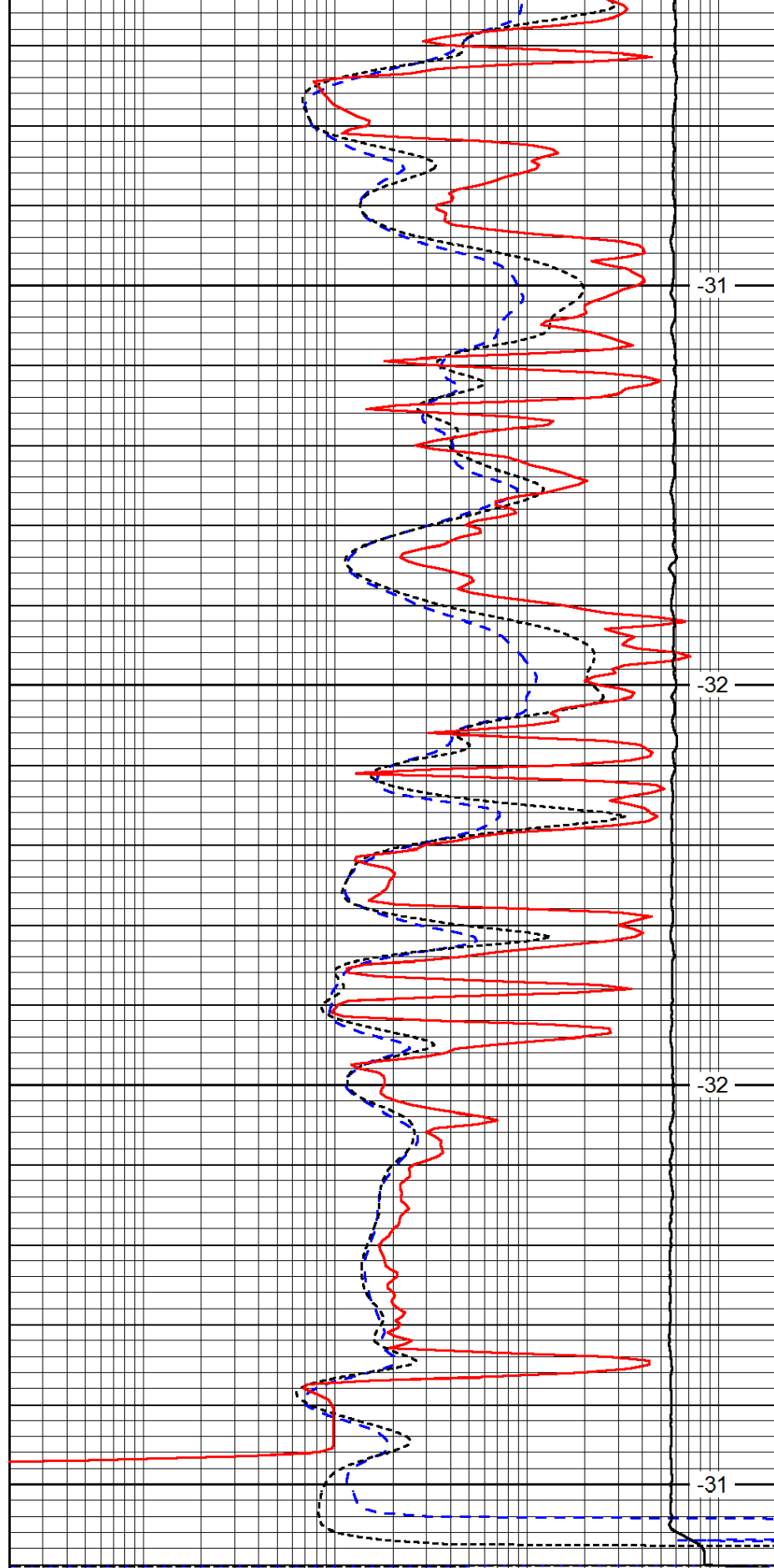
|      |           |     |
|------|-----------|-----|
| 0    | Gamma Ray | 150 |
| -200 | SP (mV)   | 0   |
| -160 | RxoRt     | 40  |

4300

4350

4400

4450



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

