



Pioneer Energy Services

Dual Induction Log

| | | |
|------------------------|--------------------------|-------------------------------|
| API No. | 15-101-22542-00-00 | |
| Company | Larson Engineering, Inc. | |
| Well | Ehmke-Fisher # 1-19 | |
| Field | North Fork | |
| County | Lane | State |
| Location | 2572' FNL & 2017' FWL | |
| | Sec: 19 | Twp: 17S Rge: 29W |
| Permanent Datum | Ground Level | Elevation 2829 |
| Log Measured From | Kelly Bushing | 9 Ft. Above Perm. Datum |
| Drilling Measured From | Kelly Bushing | K.B. 2838 D.F. G.I.L. 2829 |

| | | |
|------------------------|-------------|------------|
| Run Number | One | 12/2/2014 |
| Depth Driller | 4620 | |
| Depth Logger | 4620 | |
| Bottom Logged Interval | 4619 | |
| Top Log Interval | 250 | |
| Casing Driller | 8.625 @ 253 | |
| Casing Logger | 255 | |
| Bit Size | 7.875 | |
| Type Fluid in Hole | Chemical | |
| Salinity, ppm CL | 1500 | |
| Density / Viscosity | 9.1 52 | |
| pH / Fluid Loss | 10.5 6.8 | |
| Source of Sample | Flowline | |
| Rm @ Meas. Temp | 0.70 @ 52 | |
| Rmf @ Meas. Temp | 0.52 @ 52 | |
| Rmc @ Meas. Temp | 0.94 @ 52 | |
| Source of Rmf / Rmc | Charts | |
| Rm @ BHT | 0.29 @ 124 | |
| Operating Rig Time | 3 Hours | |
| Max Rec. Temp. F | 124 | |
| Equipment Number | 91 | |
| Location | Hays | |
| Recorded By | M. Beougher | D. Schmidt |
| 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 Log-Tech, Inc.
 (785) 625-3858
 Dighton,
 7 West to Eagle RD,
 5 North to 200 RD,
 1 East to Frontier RD,
 1/2 North,
 East Into

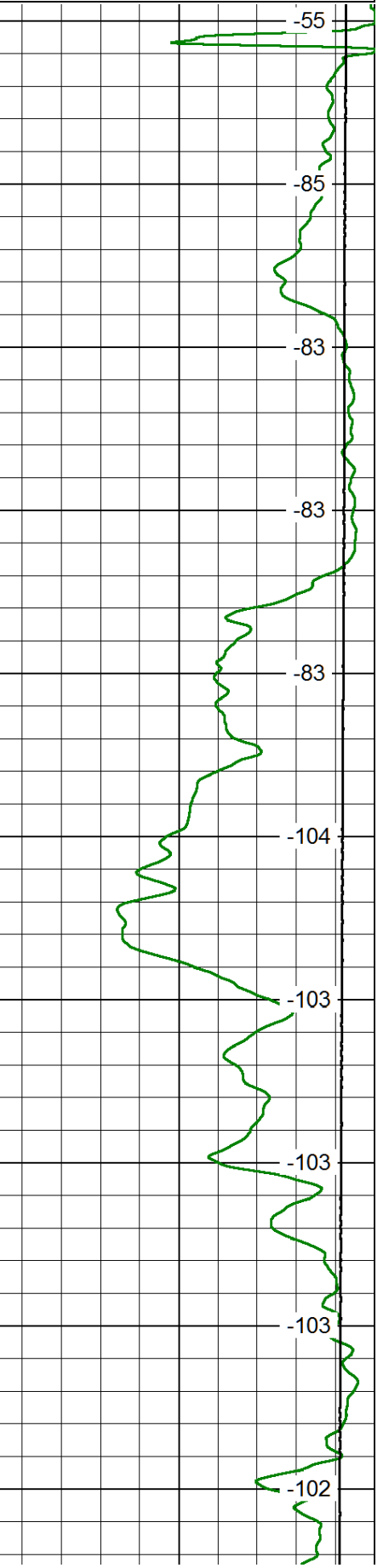
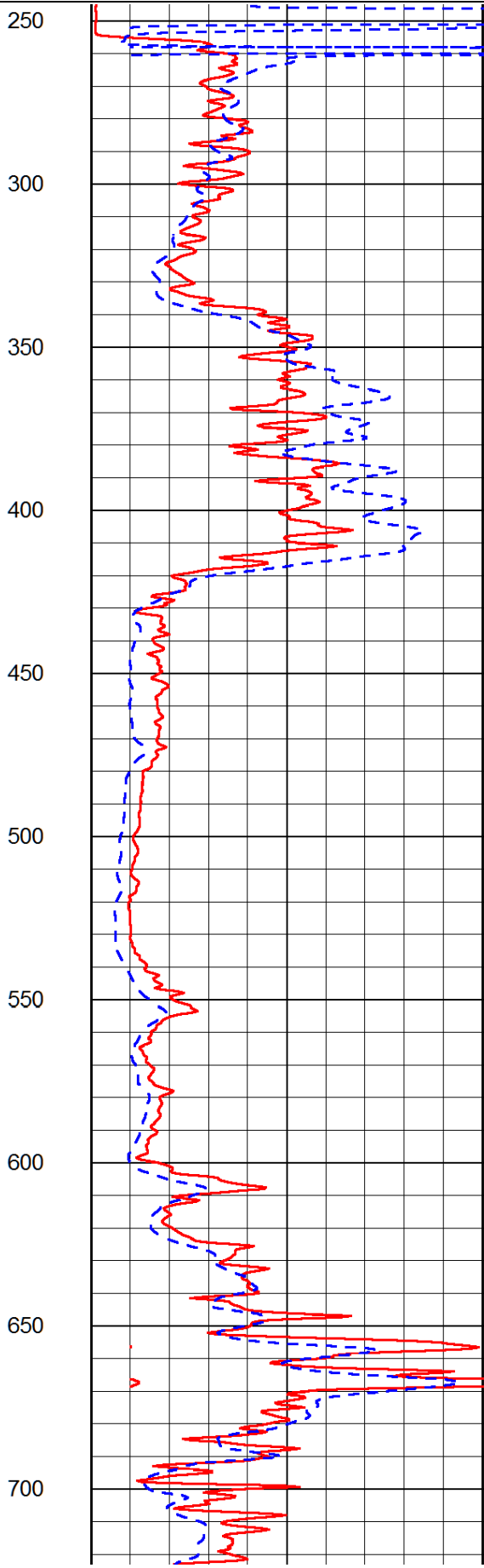
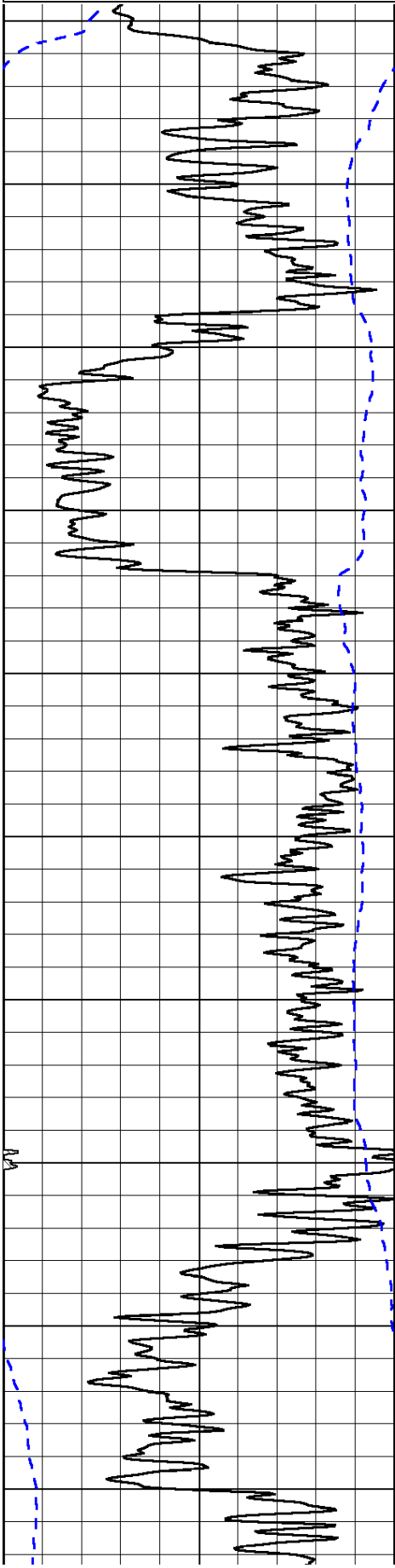
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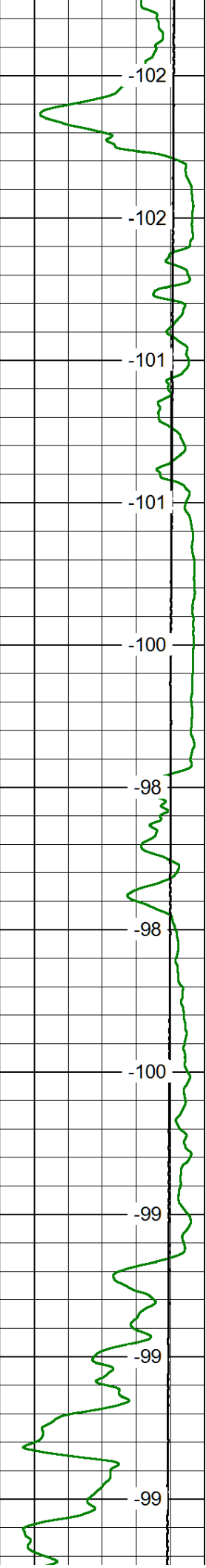
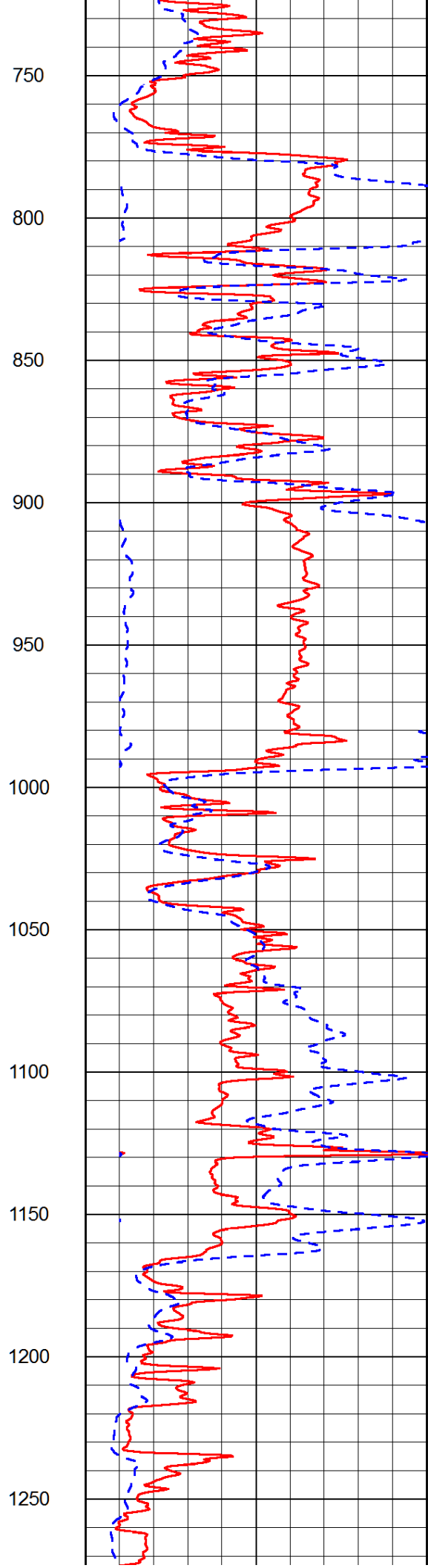
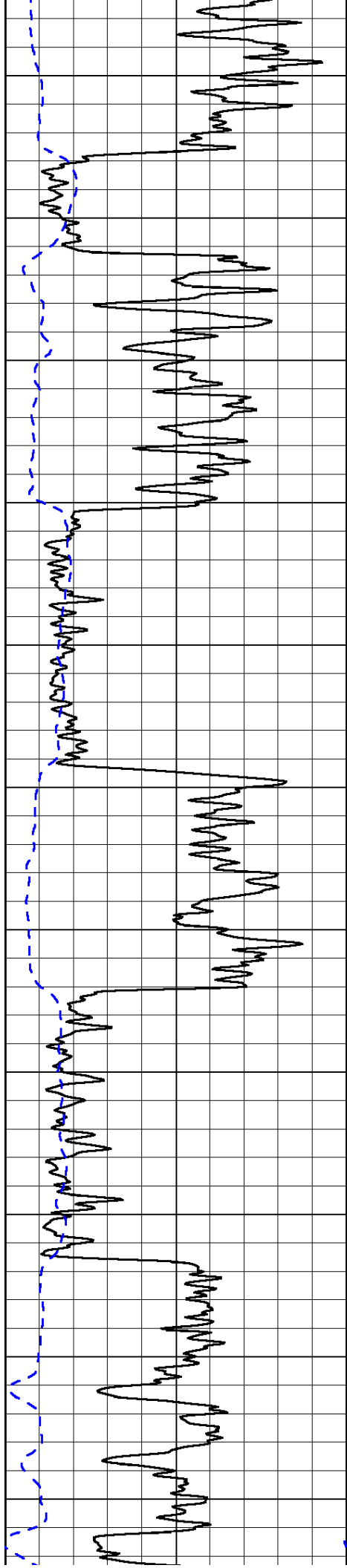
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|------|-----------|-----|
| 0 | Gamma Ray | 150 |
| -200 | SP (mV) | 0 |

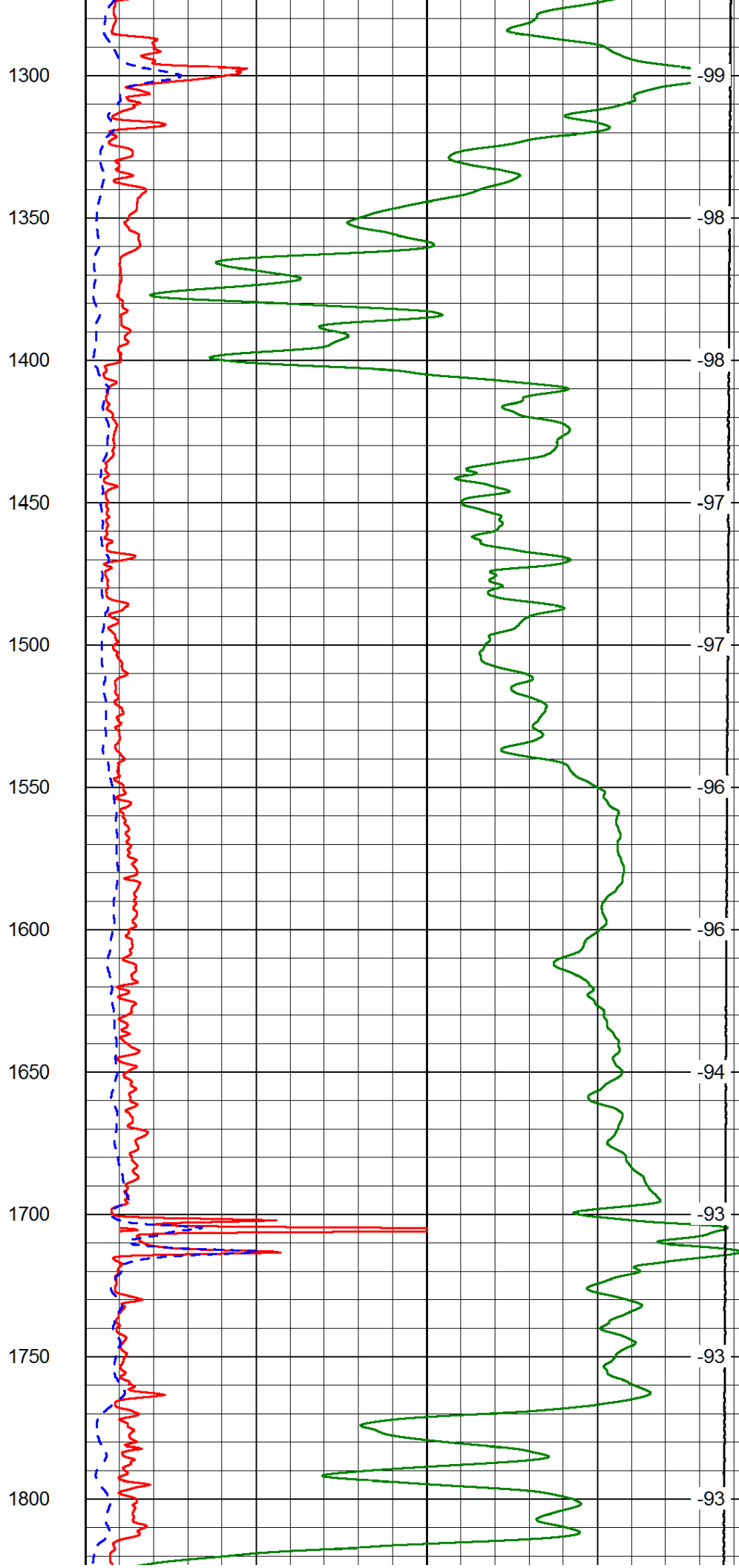
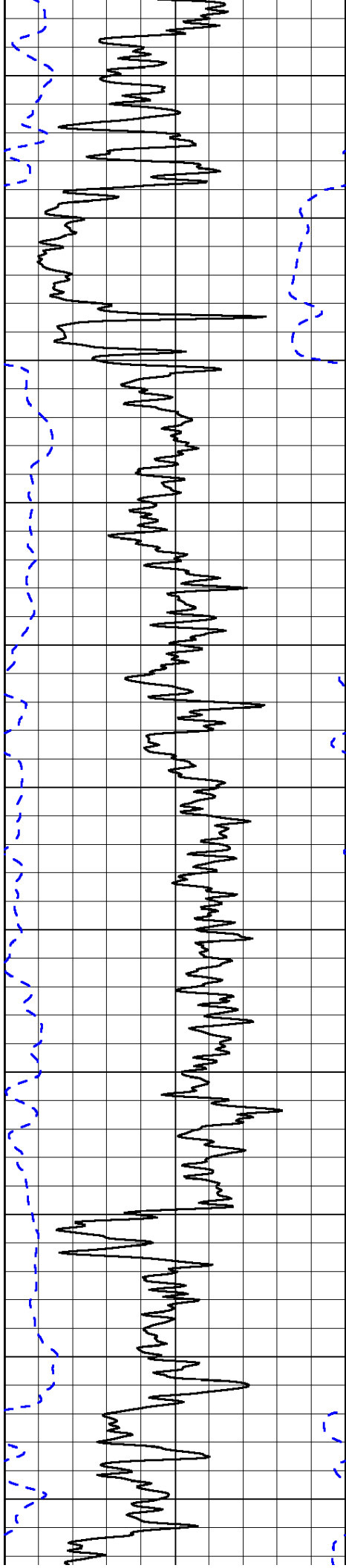
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|-------|---------------------|----|
| 0 | Shallow Resistivity | 50 |
| 0 | Deep Resistivity | 50 |
| 1000 | Conductivity | 0 |
| 15000 | Line Tension | 0 |

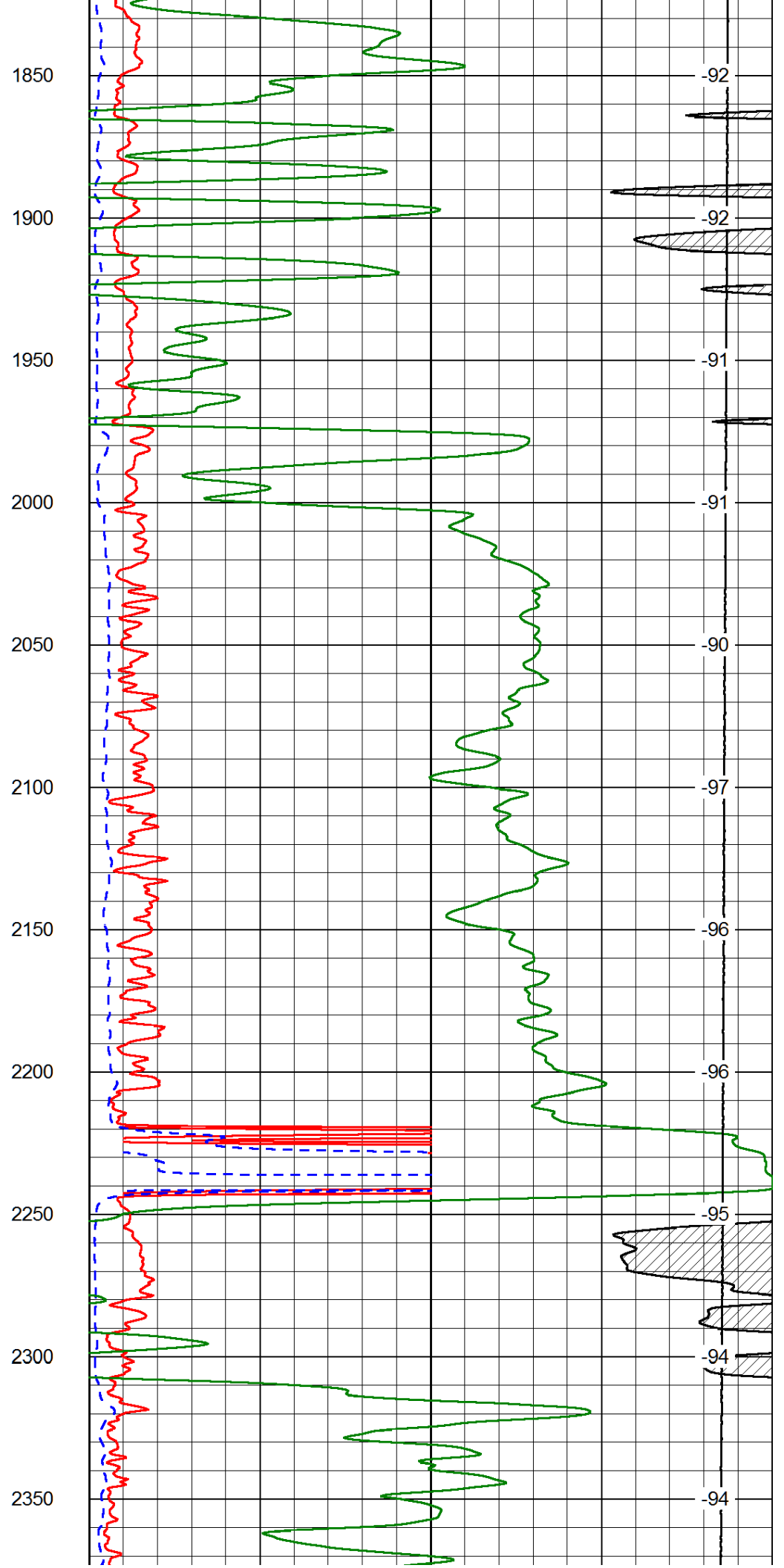
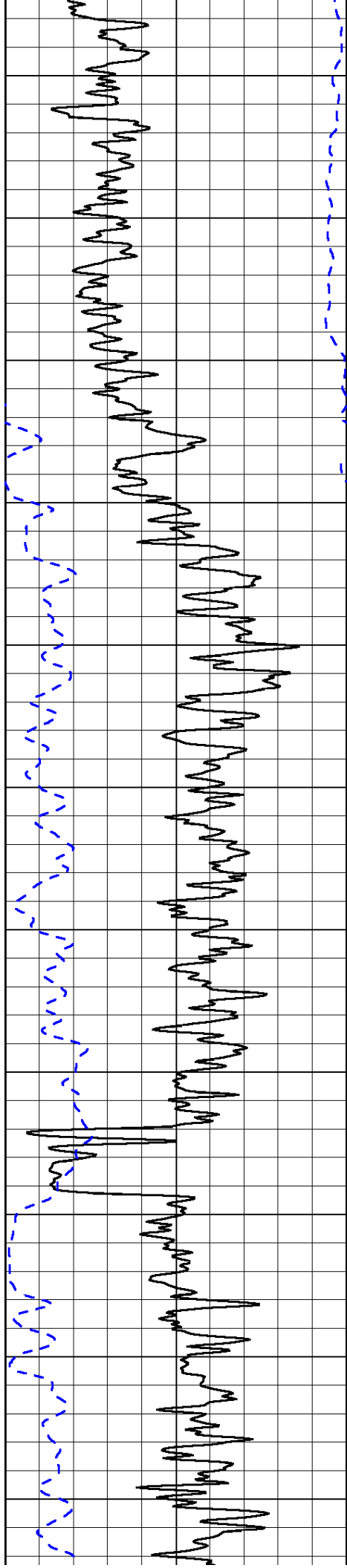
| |
|------|
| LSPD |
|------|

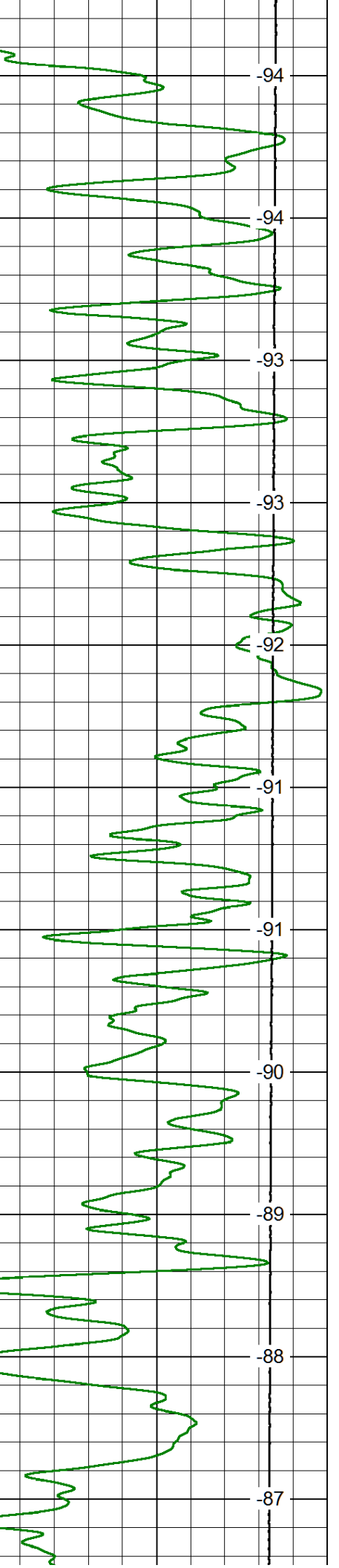
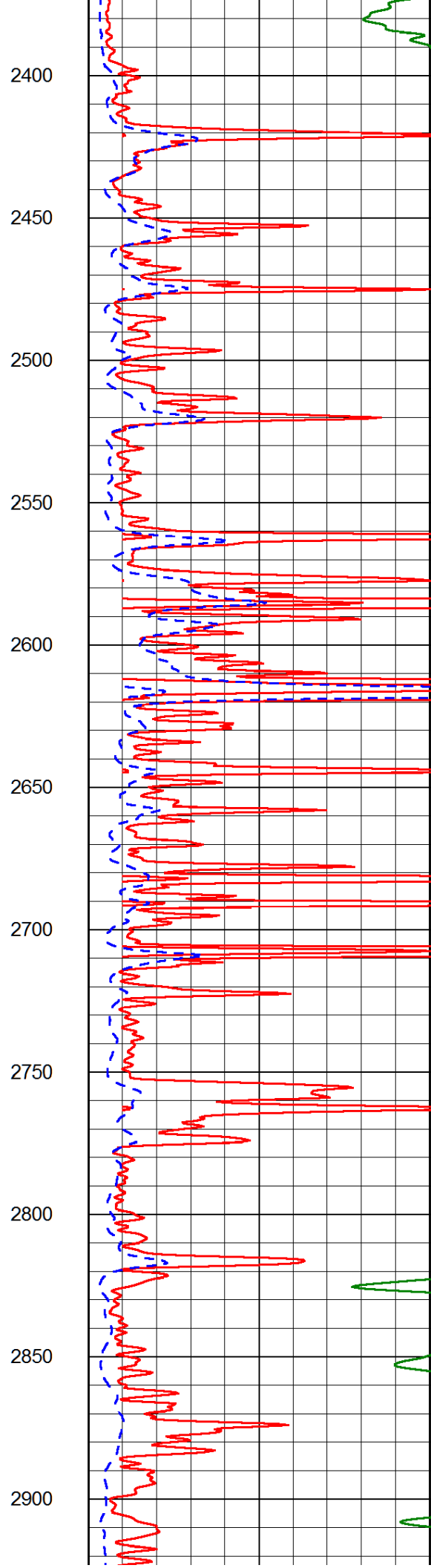
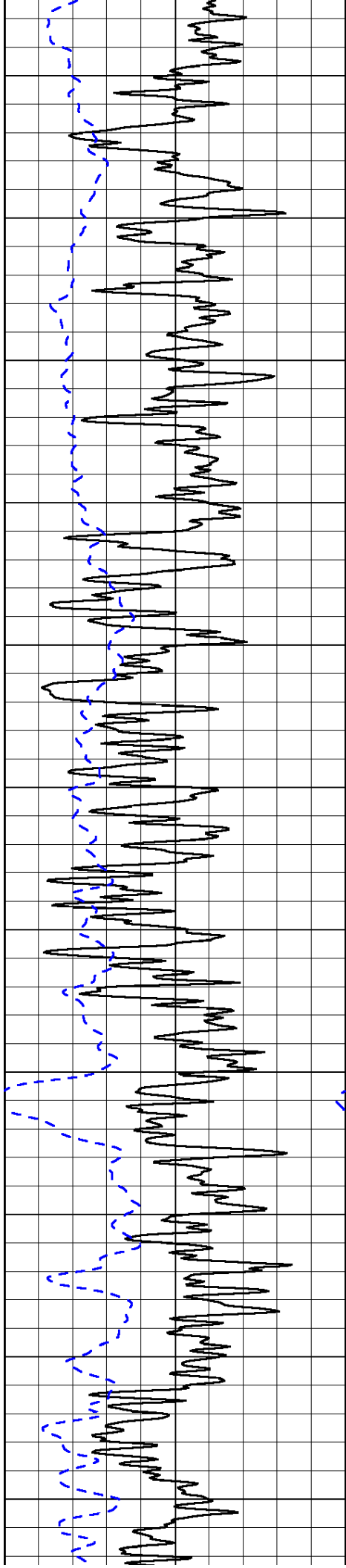
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|----|---------------------|-----|
| 50 | Shallow Resistivity | 500 |
| 50 | Deep Resistivity | 500 |

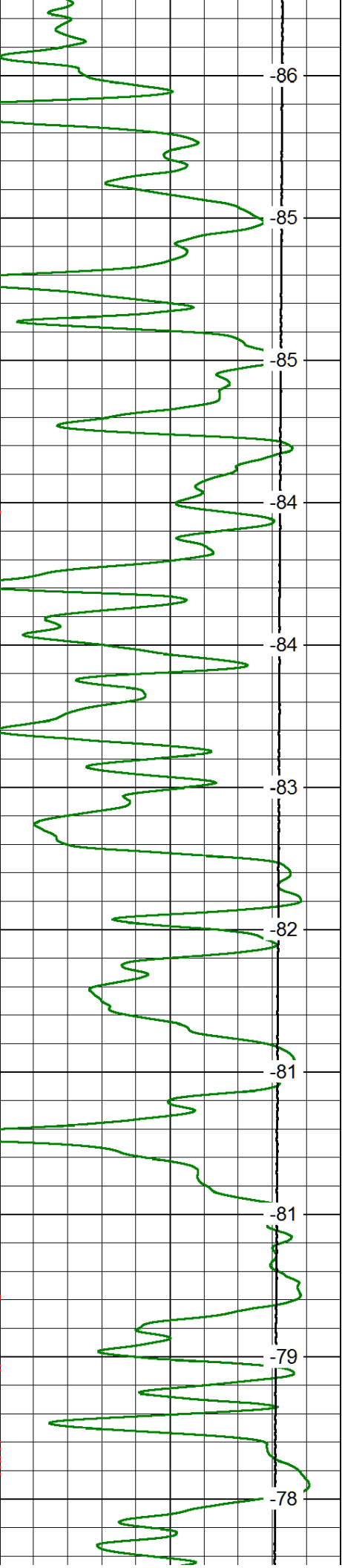
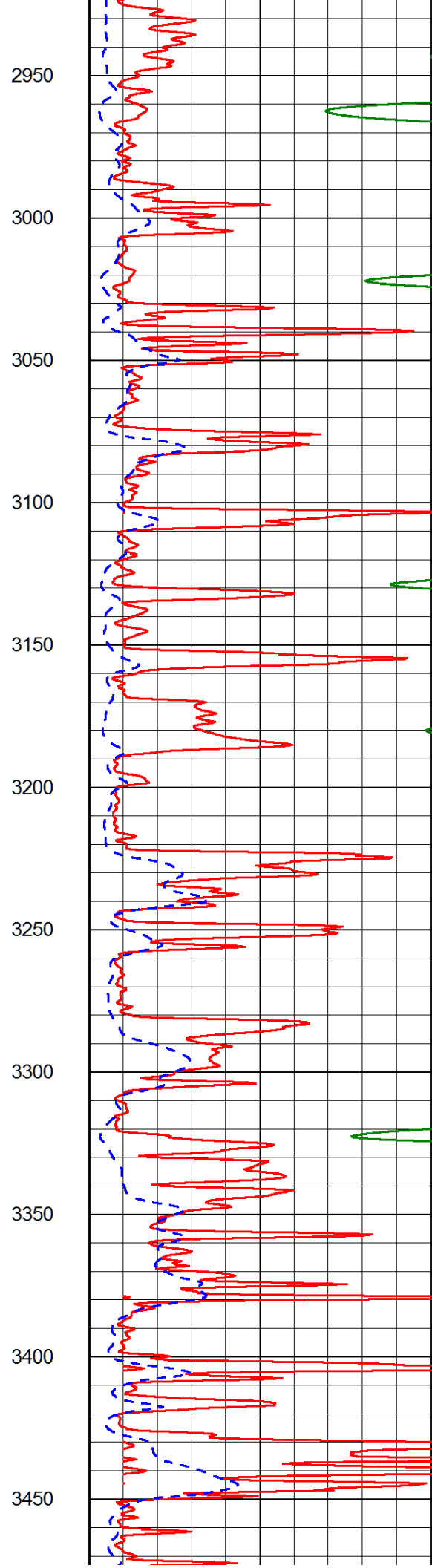
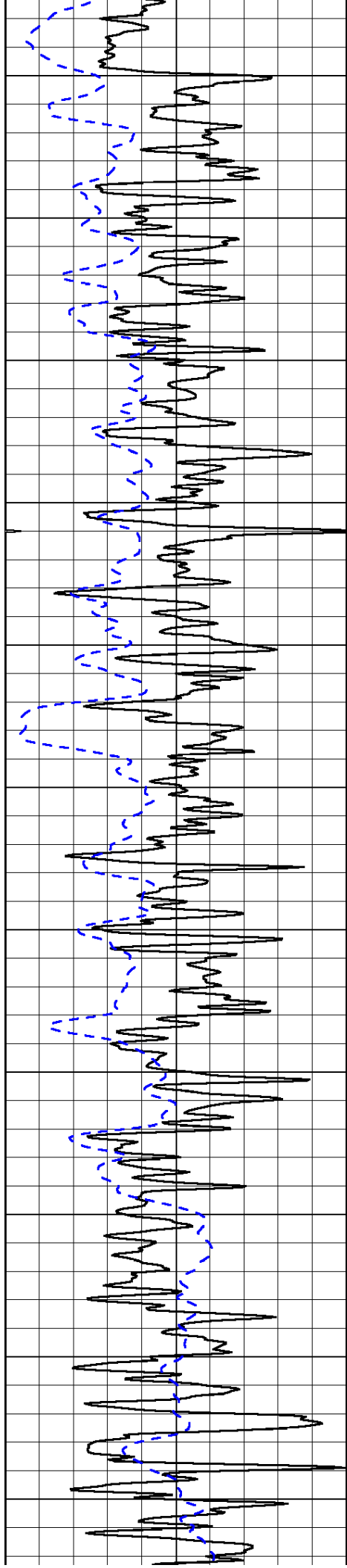


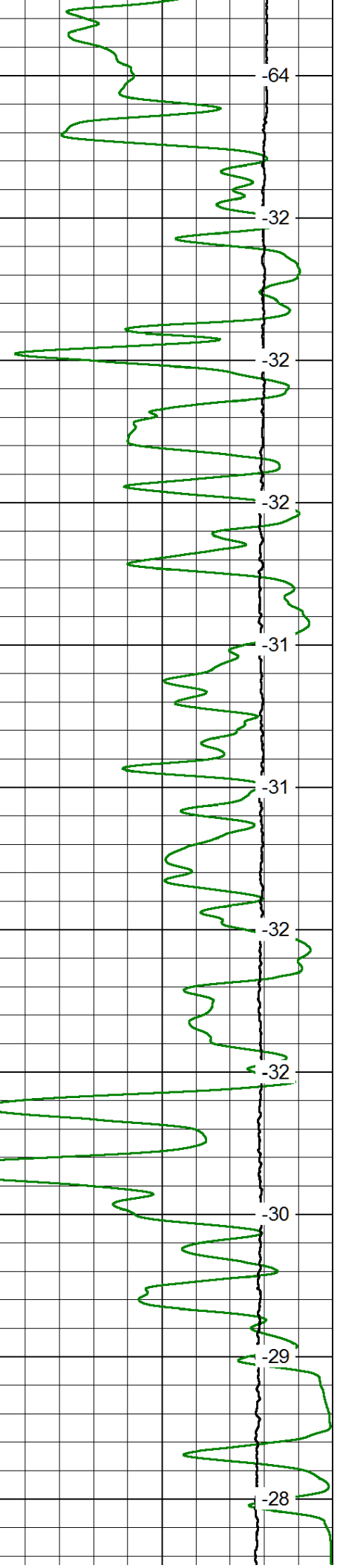
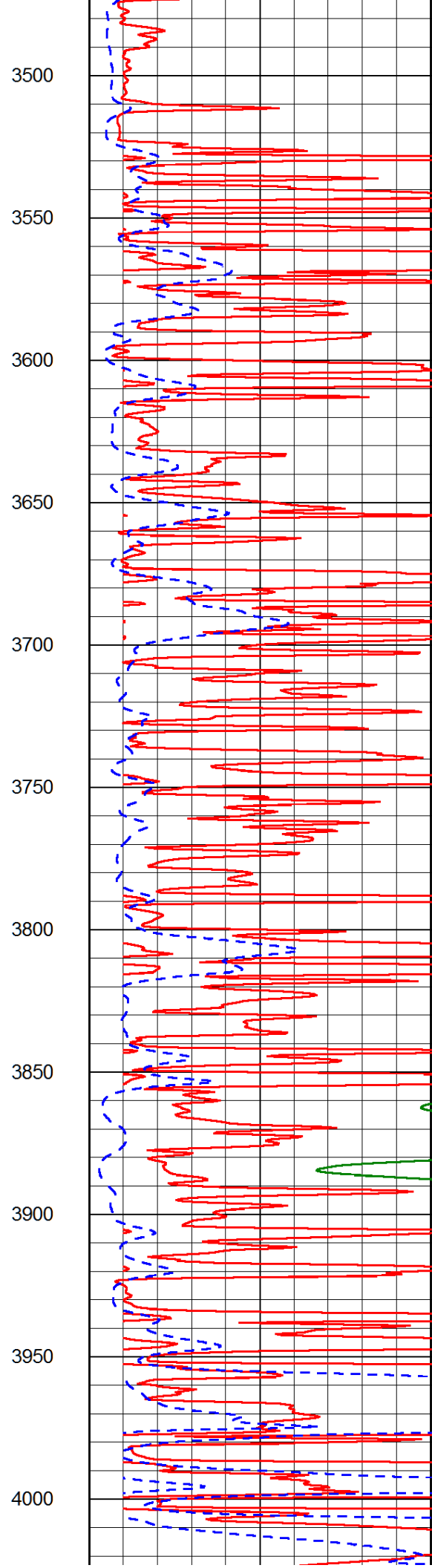
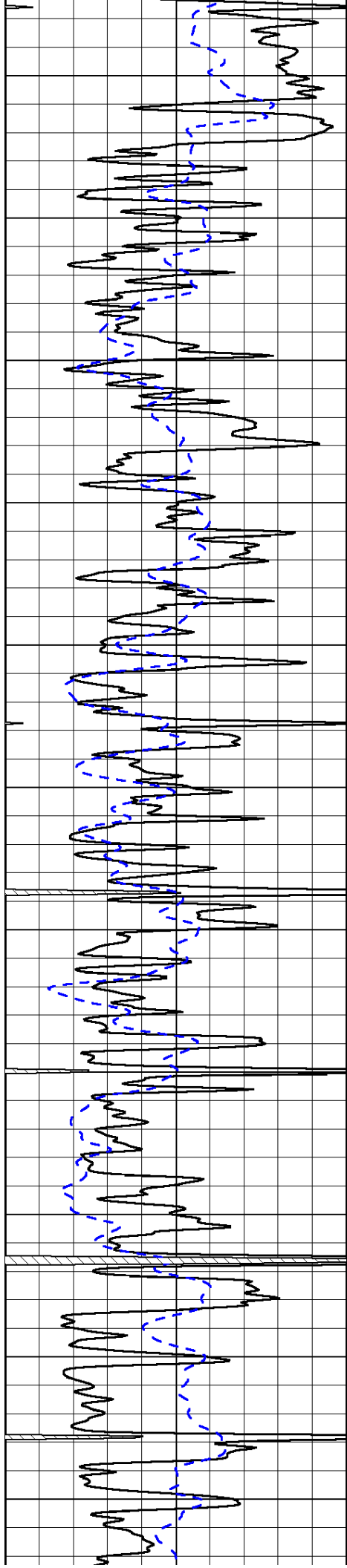


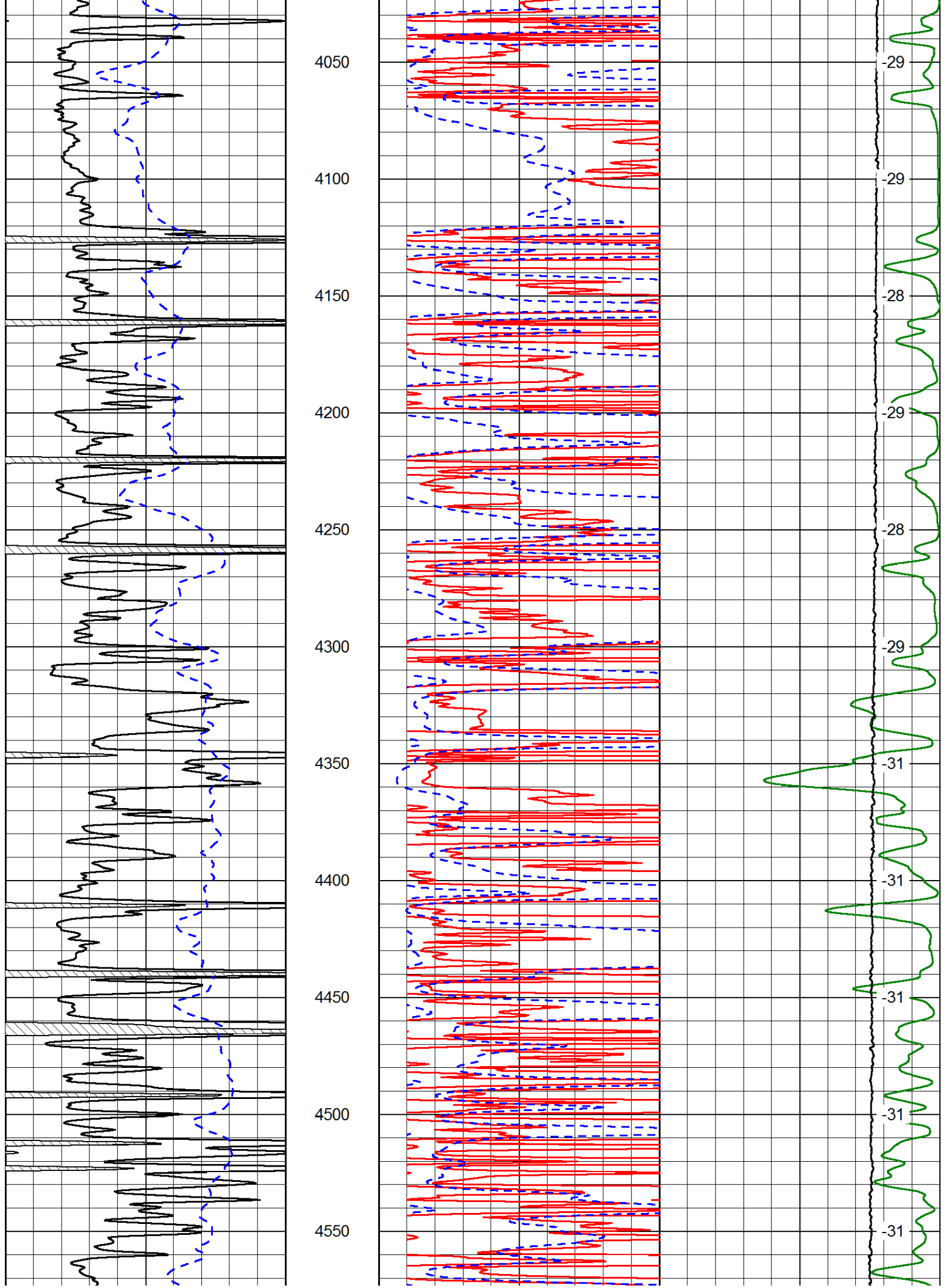


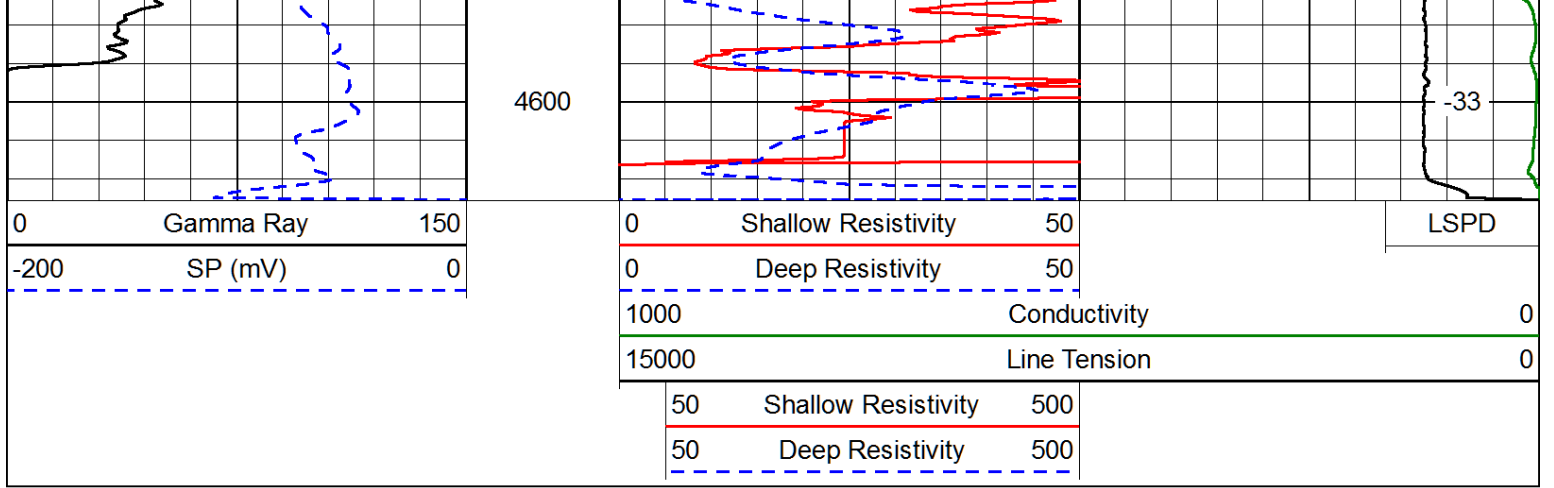




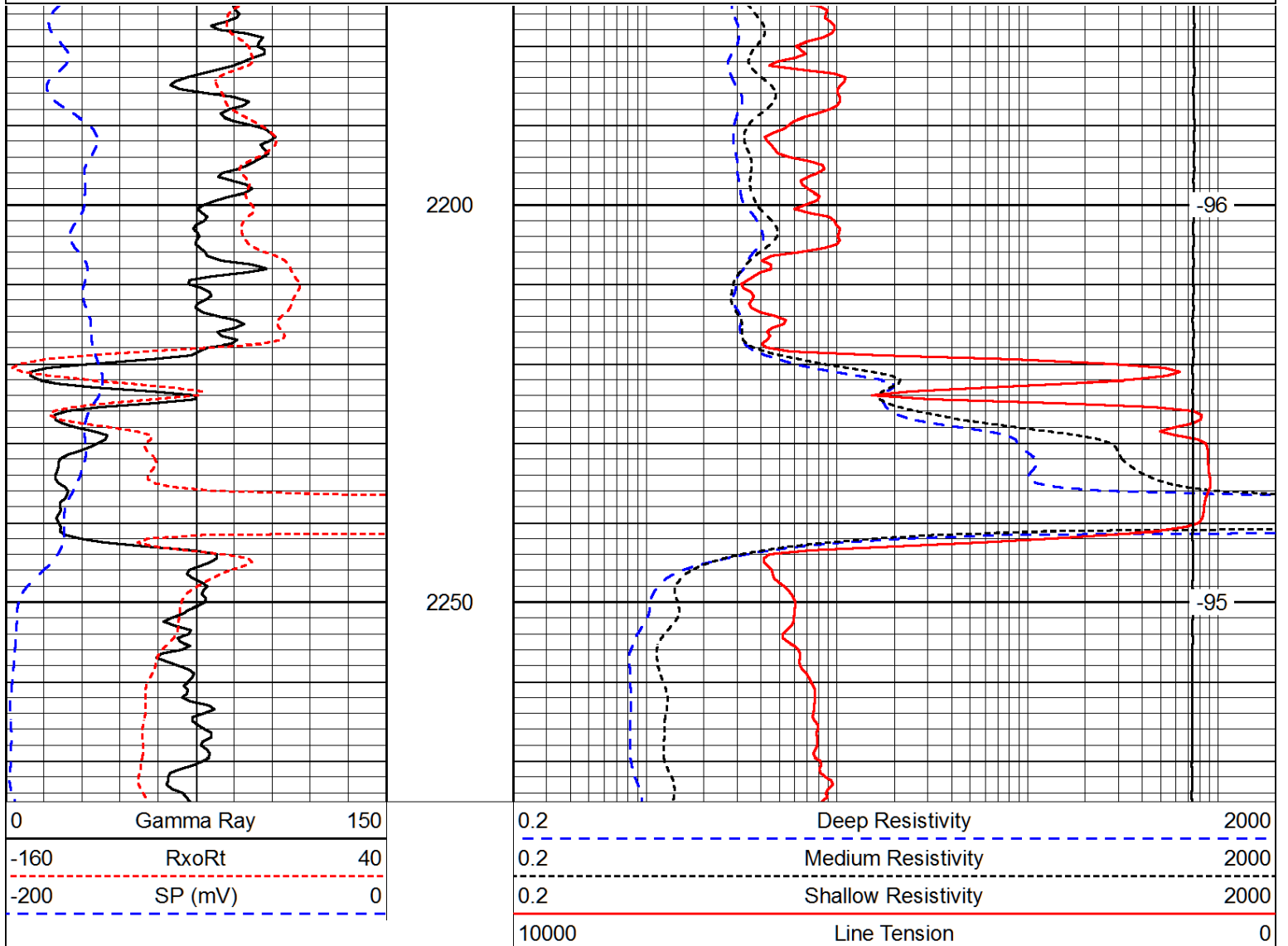
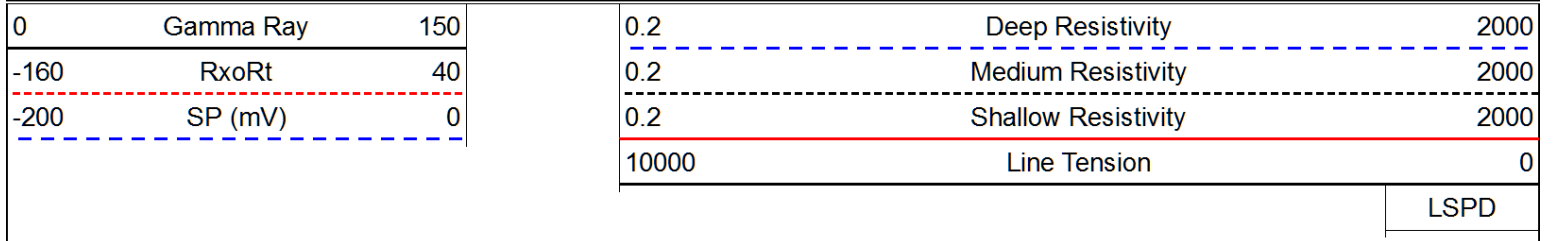








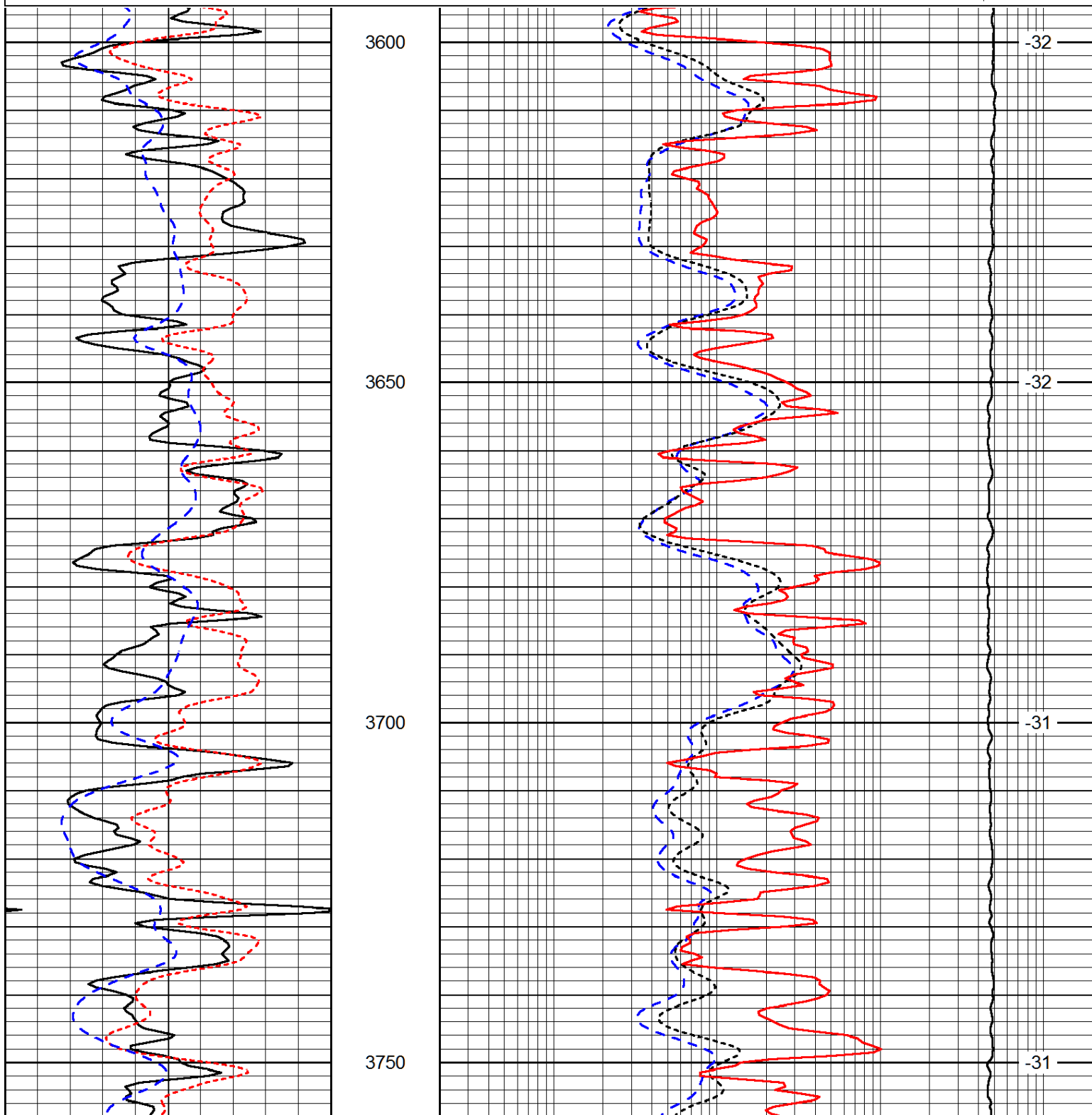
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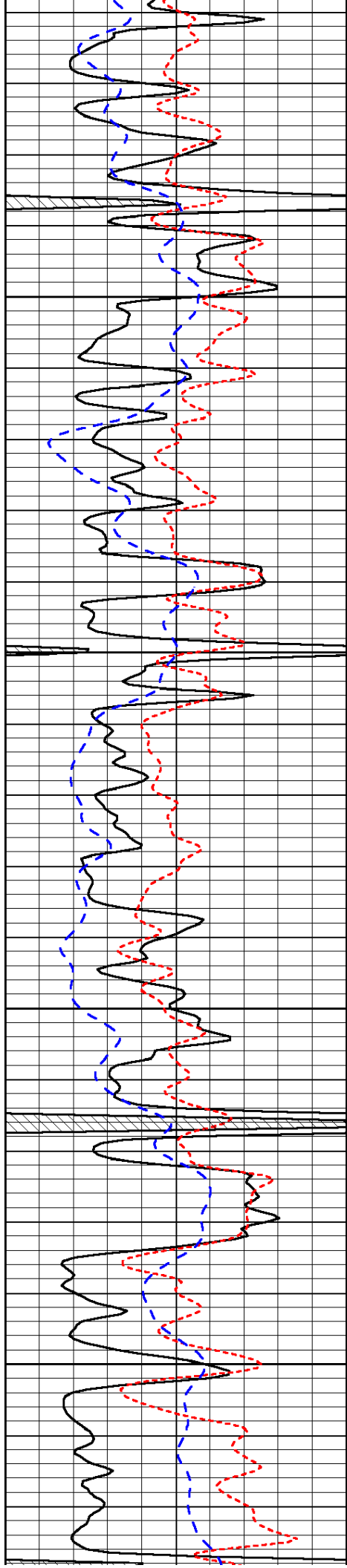


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 Charted by: Depth in Feet scaled 1:240

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



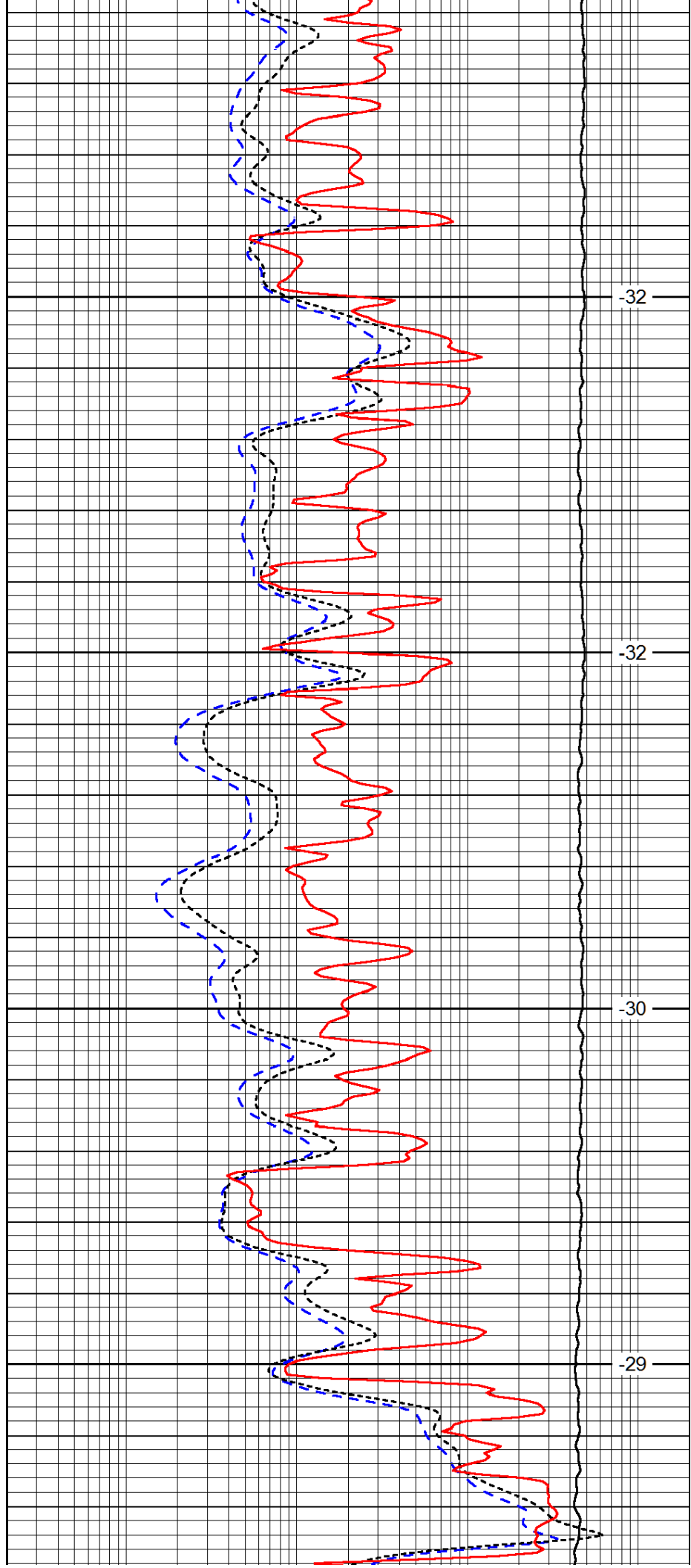


3800

3850

3900

3950

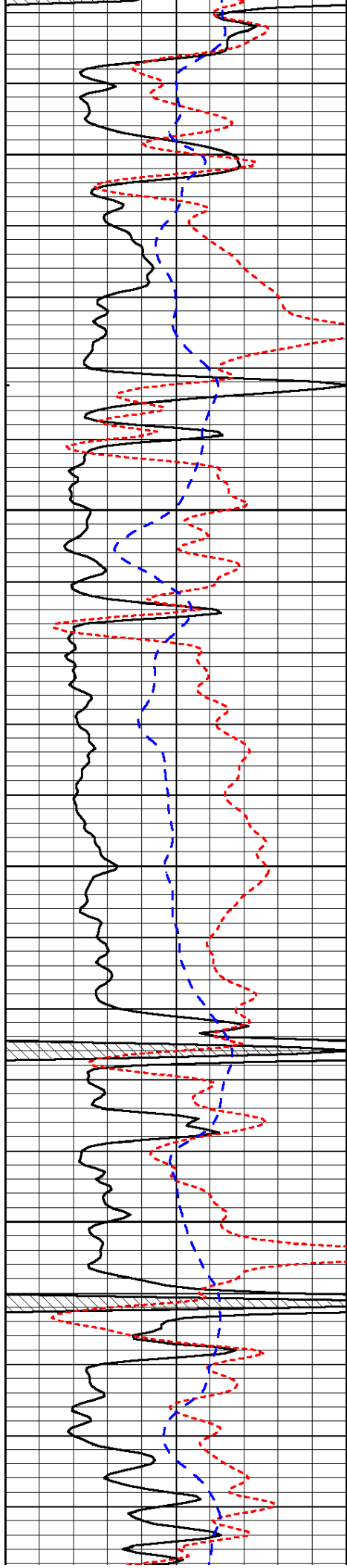


-32

-32

-30

-29

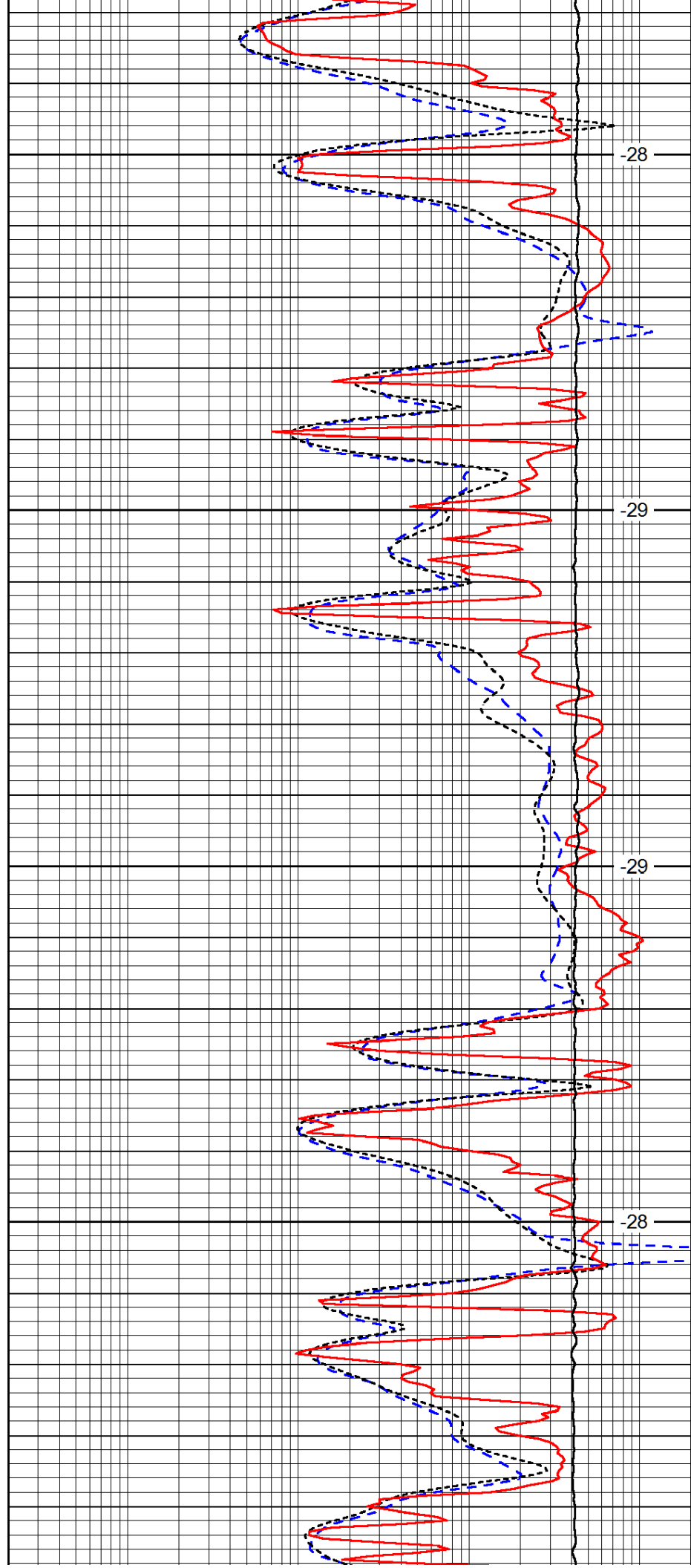


4000

4050

4100

4150

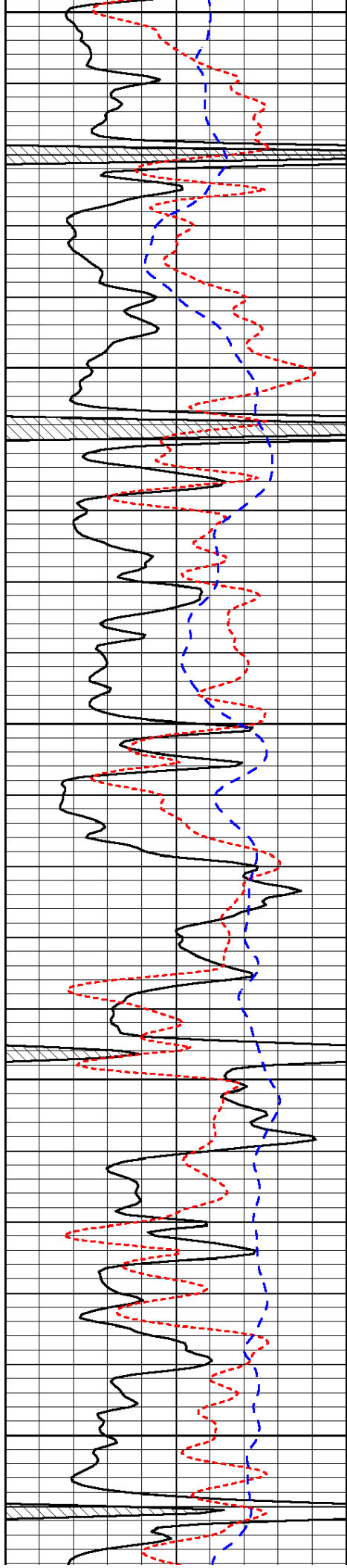


-28

-29

-29

-28



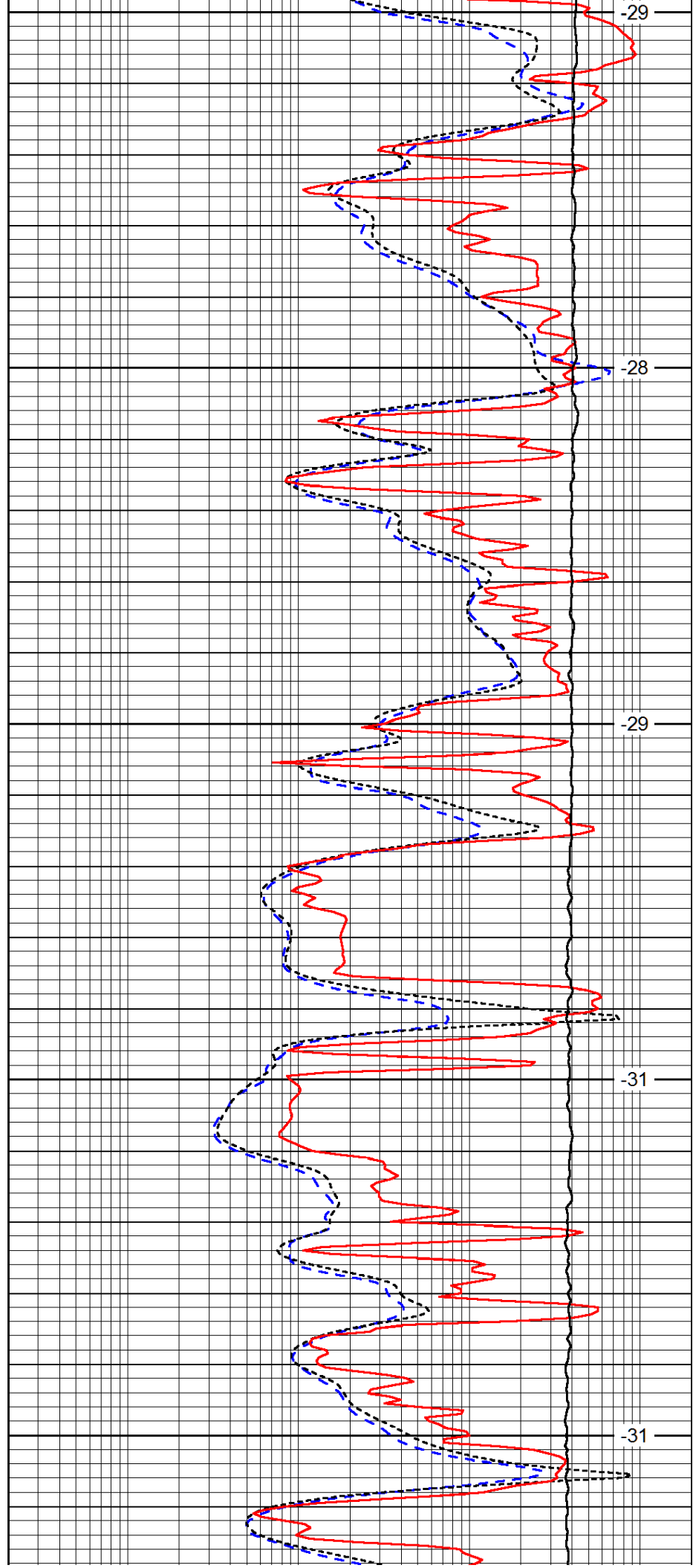
4200

4250

4300

4350

4400



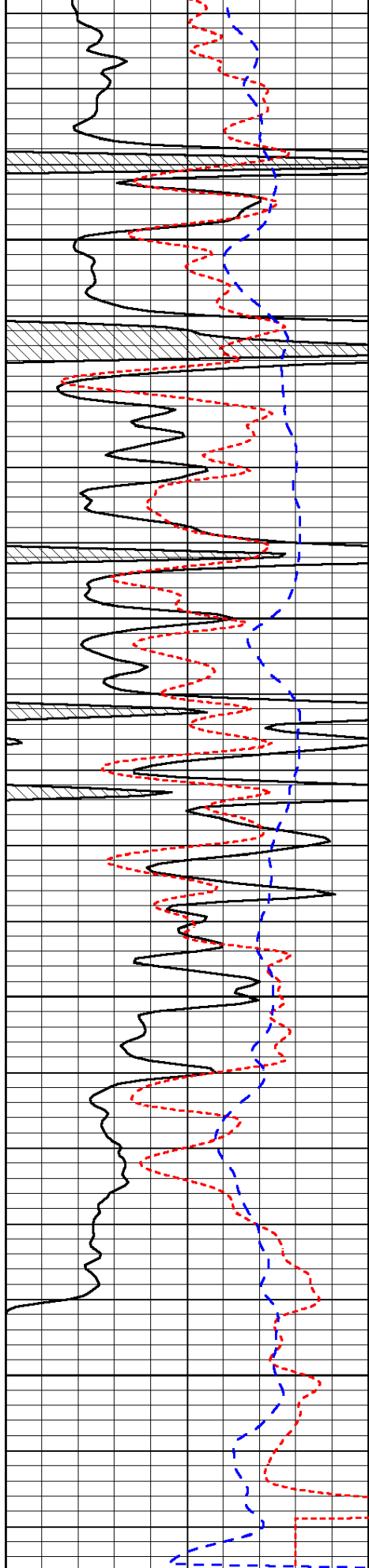
-29

-28

-29

-31

-31



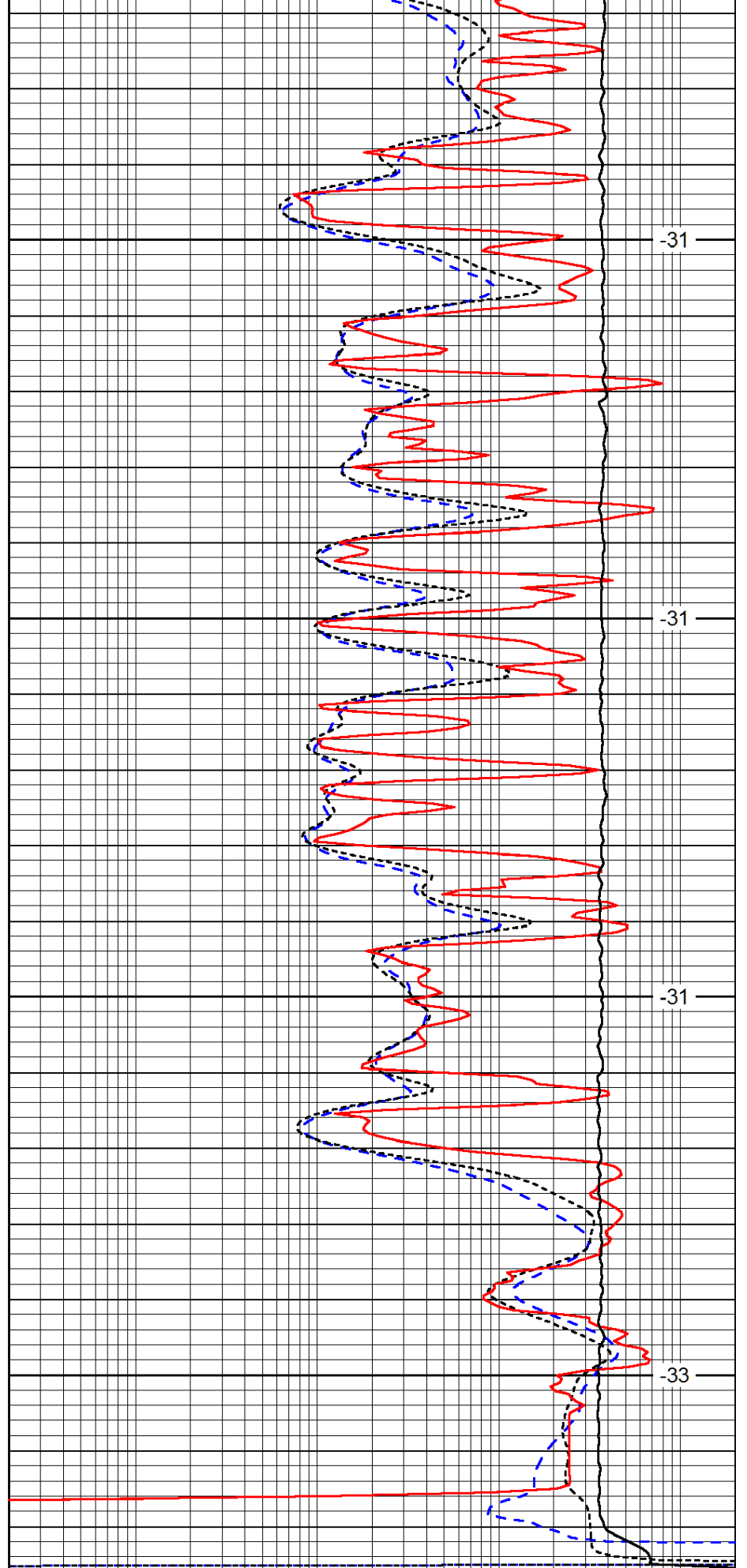
| | | |
|------|-----------|-----|
| 0 | Gamma Ray | 150 |
| -160 | RxoRt | 40 |
| -200 | SP (mV) | 0 |

4450

4500

4550

4600



-31

-31

-31

-33

| | | |
|-----|---------------------|------|
| 0.2 | Deep Resistivity | 2000 |
| 0.2 | Medium Resistivity | 2000 |
| 0.2 | Shallow Resistivity | 2000 |

10000

Line Tension

0

LSPD