



# PIONEER

Pioneer Energy Services

## Dual Compensated Porosity Log

API No.

15-035-24,628-00-00

Company **AAS Oil Company, Inc.**

Well **Warner A #1**

Field **Murphy**

County **Cowley**

State **Kansas**

Location

**1650' FSL & 3960' FEL**

Sec: **19** Twp: **34S**

Rge: **3E**

Other Services

DIL  
MEL

Permanent Datum Ground Level Elevation **1150**

Log Measured From Kelly Bushing **8** Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

K.B. **1158**  
D.F. **1150**  
G.L. **1150**

Date **12/12/2014**

Run Number **One**

Type Log **CNL / CDL**

Depth Driller **3499**

Depth Logger **3499**

Bottom Logged Interval **3478**

Top Logged Interval **2800**

Type Fluid In Hole **Chemical**

Salinity, PPM CL **450**

Density **9.2**

Level **Full**

Max. Rec. Temp. F **111**

Operating Rig Time **4 Hours**

Equipment -- Location **51 Hays**

Recorded By **C. Desaire**

Witnessed By **Dan Johnson**

Borehole Record

Casing Record

Run No

Bit

From

To

Size

Wgt.

24#

From

To

317

317

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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

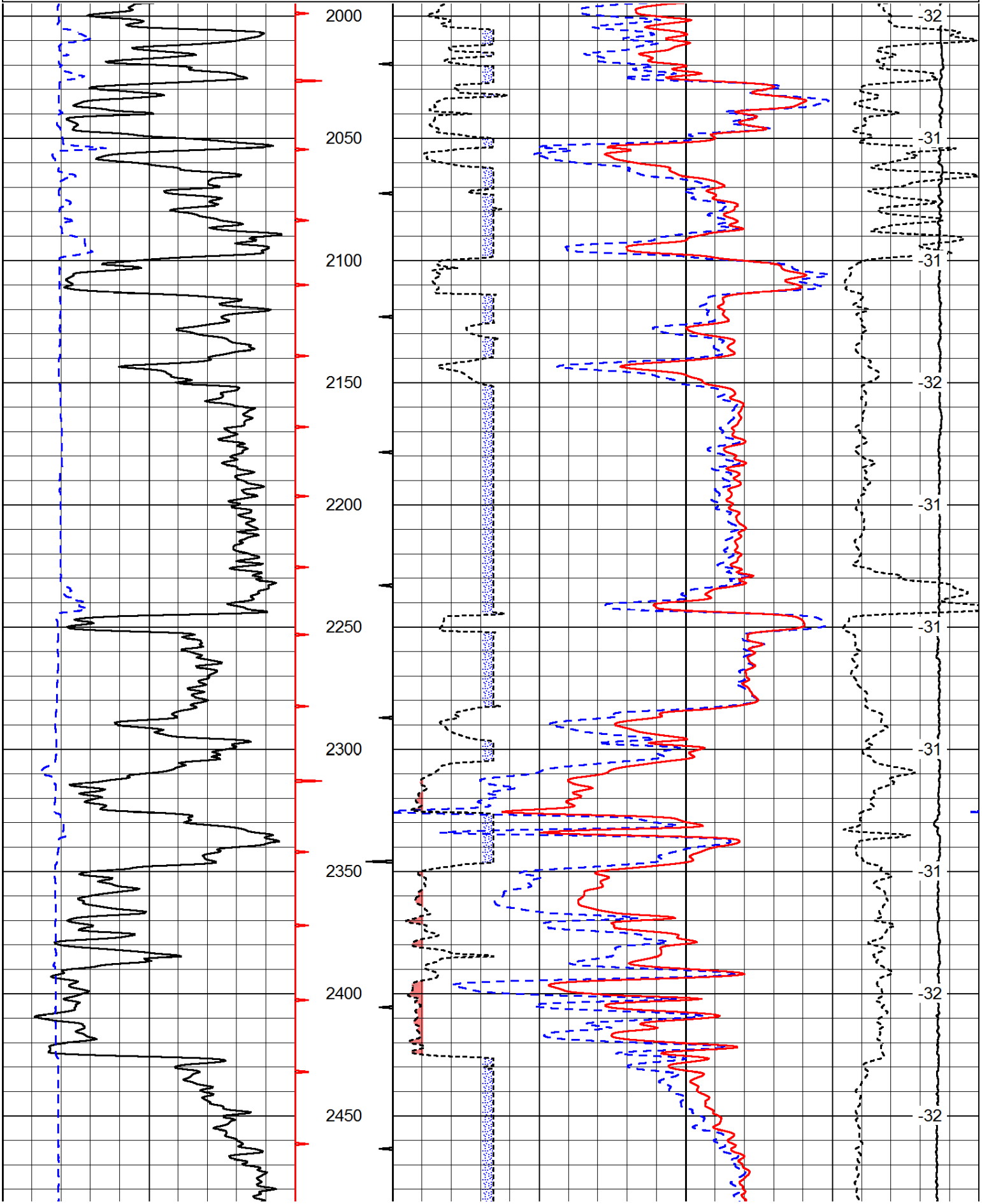
Thank you for using Pioneer Energy Services  
[www.pioneerres.com](http://www.pioneerres.com)  
785 625 3858

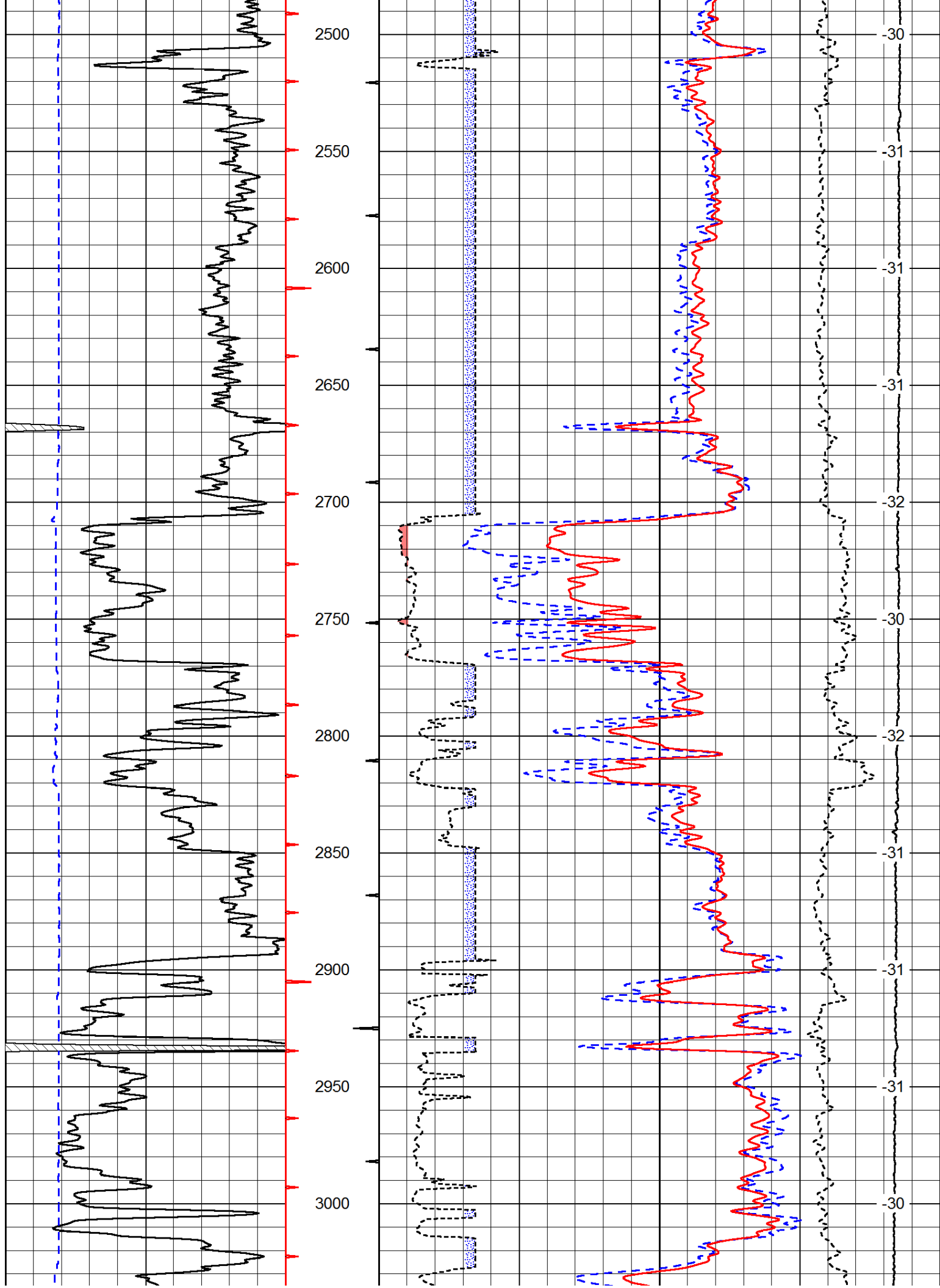
South Haven Exit, 10 E to County Line,  
1 N to 282 Rd, 1/4 E, N Into

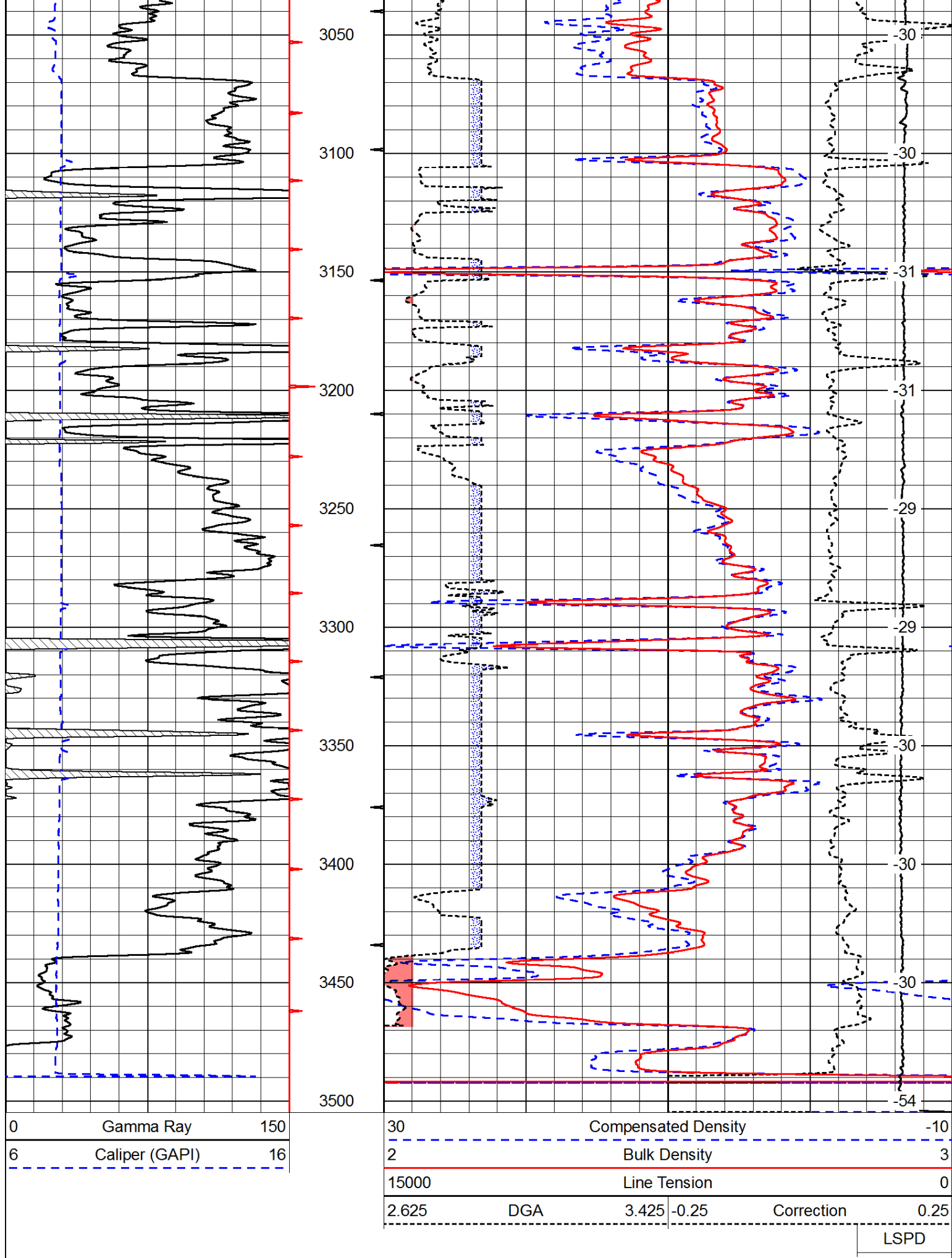
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Dataset Pathname: dil/aasstk  
Presentation Format: cdl  
Dataset Creation: Fri Dec 12 07:41:58 2014  
Charted by: Depth in Feet scaled 1:600

|   |                |     |
|---|----------------|-----|
| 0 | Gamma Ray      | 150 |
| 6 | Caliper (GAPI) | 16  |

|            |                     |       |       |
|------------|---------------------|-------|-------|
| 30         | Compensated Density |       | -10   |
| 2          | Bulk Density        |       | 3     |
| 15000      | Line Tension        |       | 0     |
| 2.625      | DGA                 | 3.425 | -0.25 |
| Correction |                     |       | 0.25  |
| LSPD       |                     |       |       |

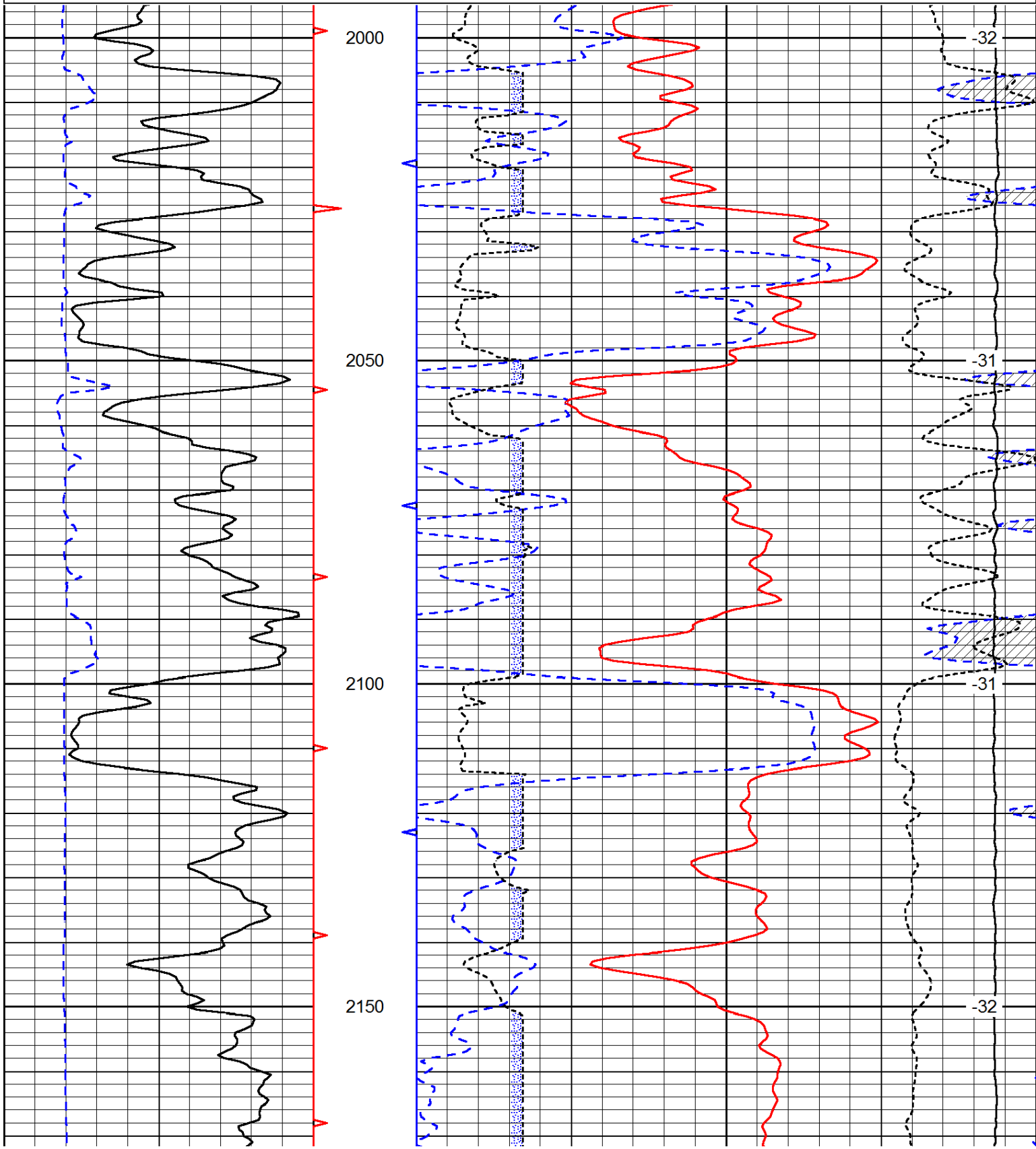


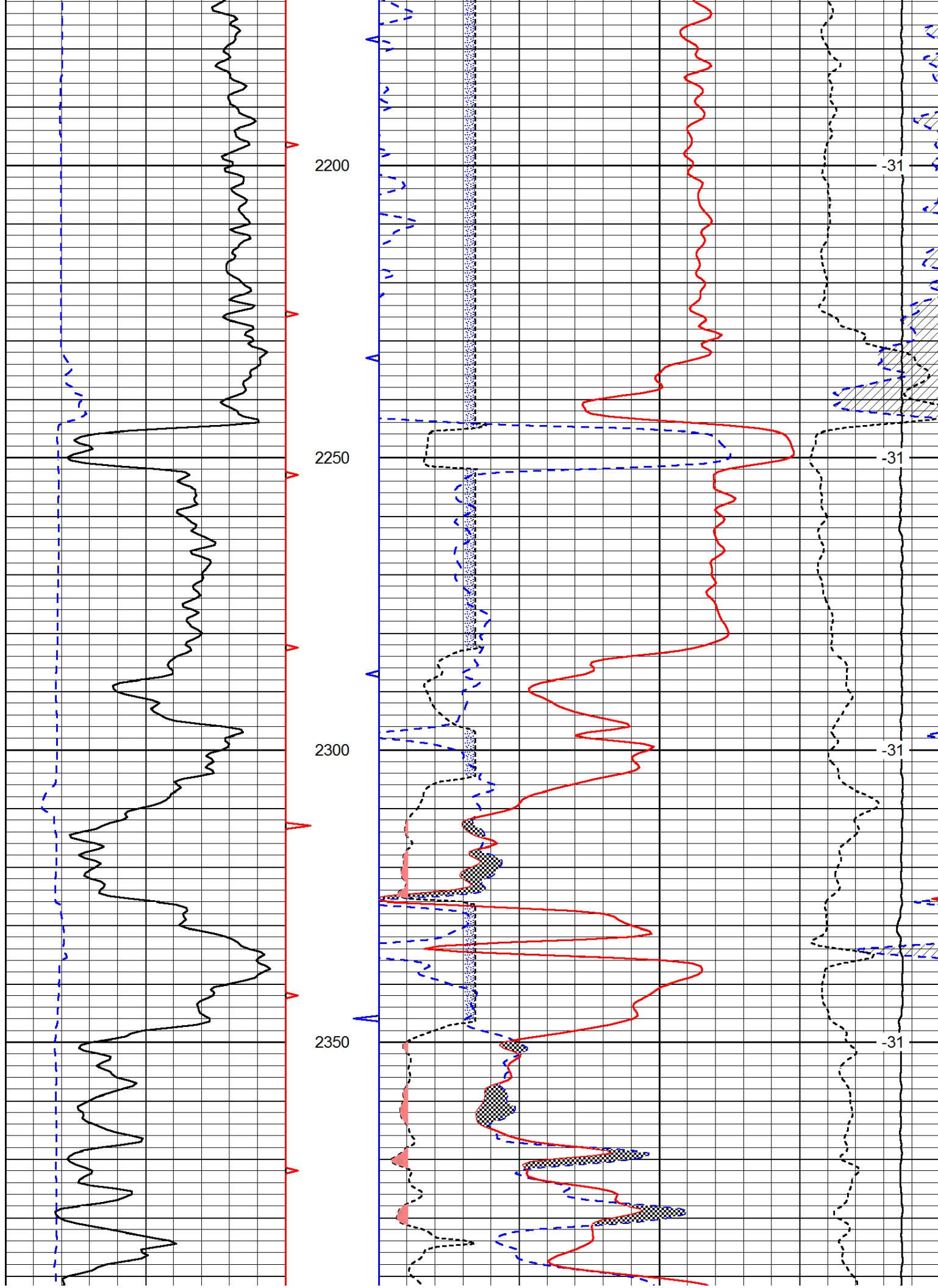


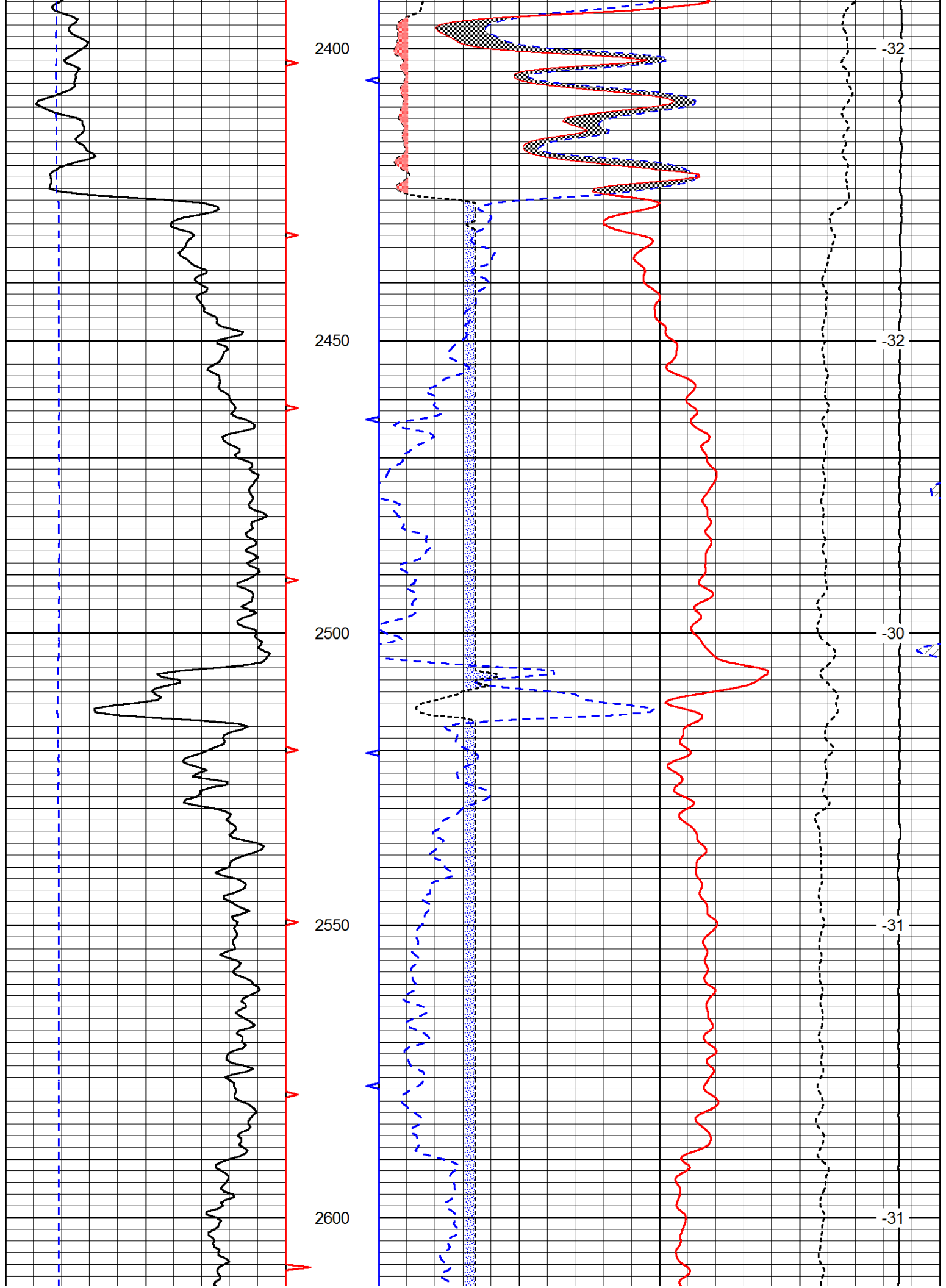


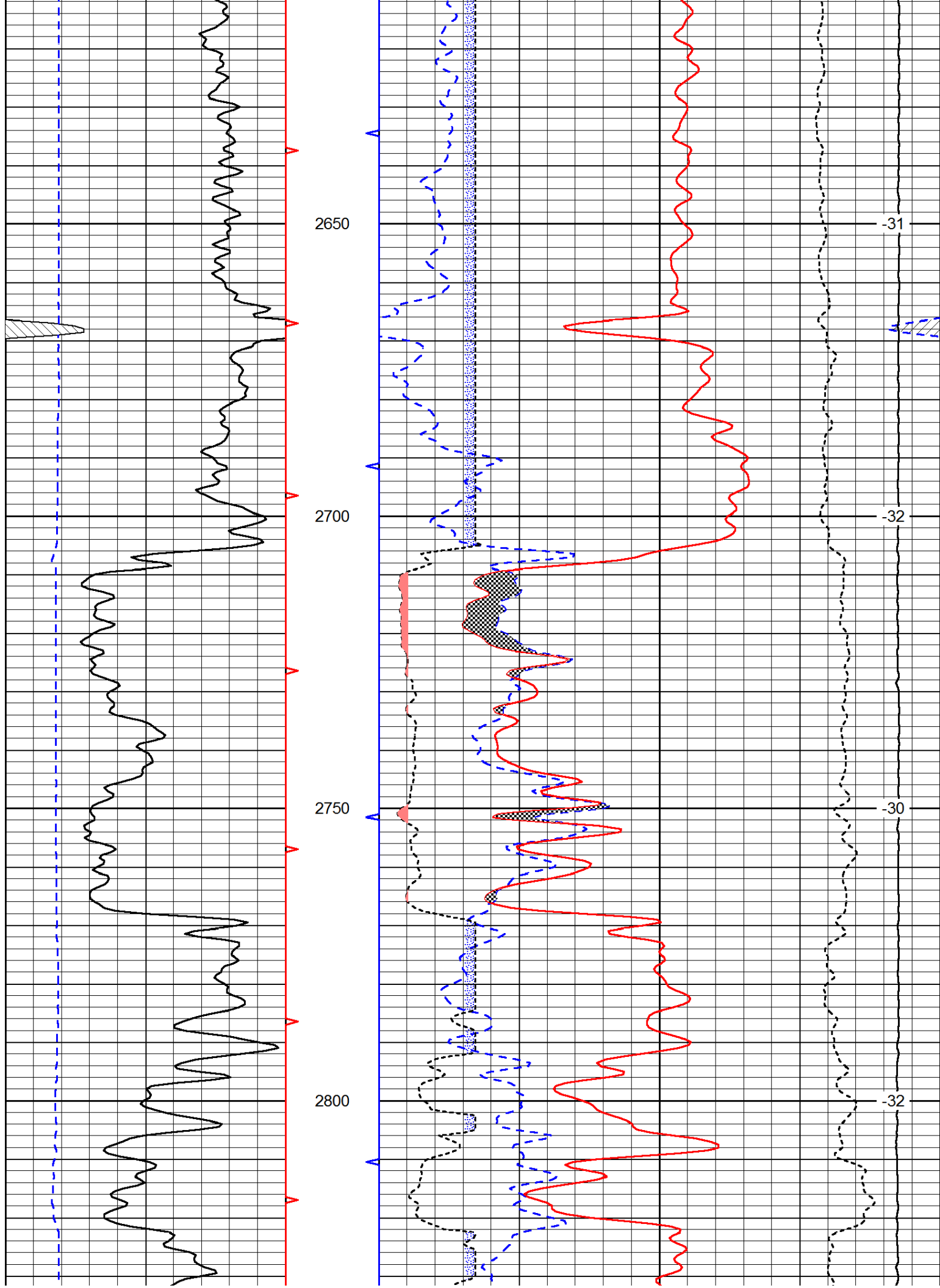
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Charted by: Depth in Feet scaled 1:240

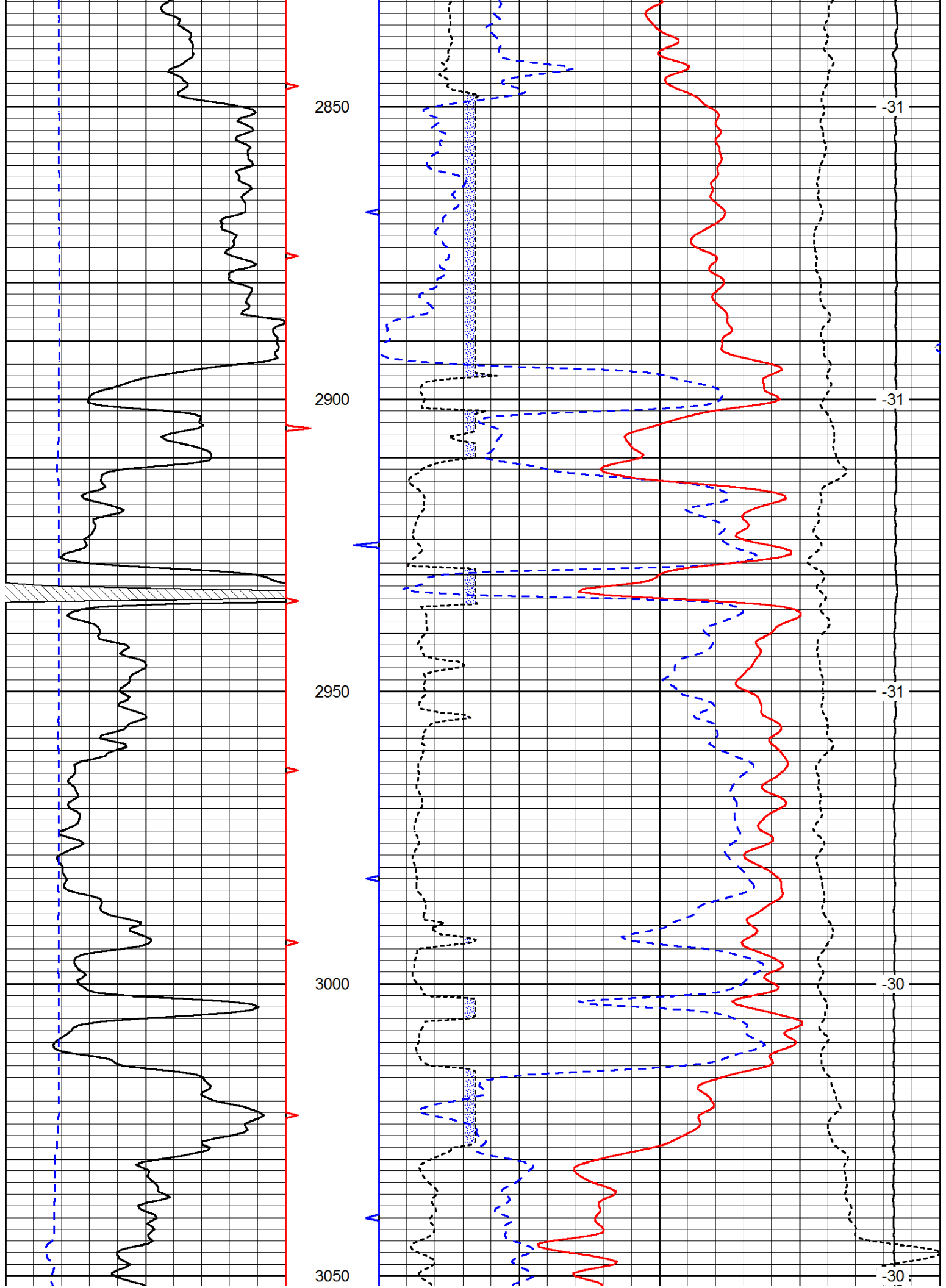
|   |                |     |       |                                 |       |       |            |      |
|---|----------------|-----|-------|---------------------------------|-------|-------|------------|------|
| 0 | Gamma Ray      | 150 | 30    | Compensated Neutron (Limestone) |       |       | -10        |      |
| 6 | Caliper (GAPI) | 16  | 30    | Compensated Density (Limestone) |       |       | -10        |      |
|   |                |     | 2.625 | DGA                             | 3.425 | -0.25 | Correction | 0.25 |
|   |                |     | 15000 | Line Tension                    |       |       | 0          |      |
|   |                |     |       |                                 |       |       | LSPD       |      |

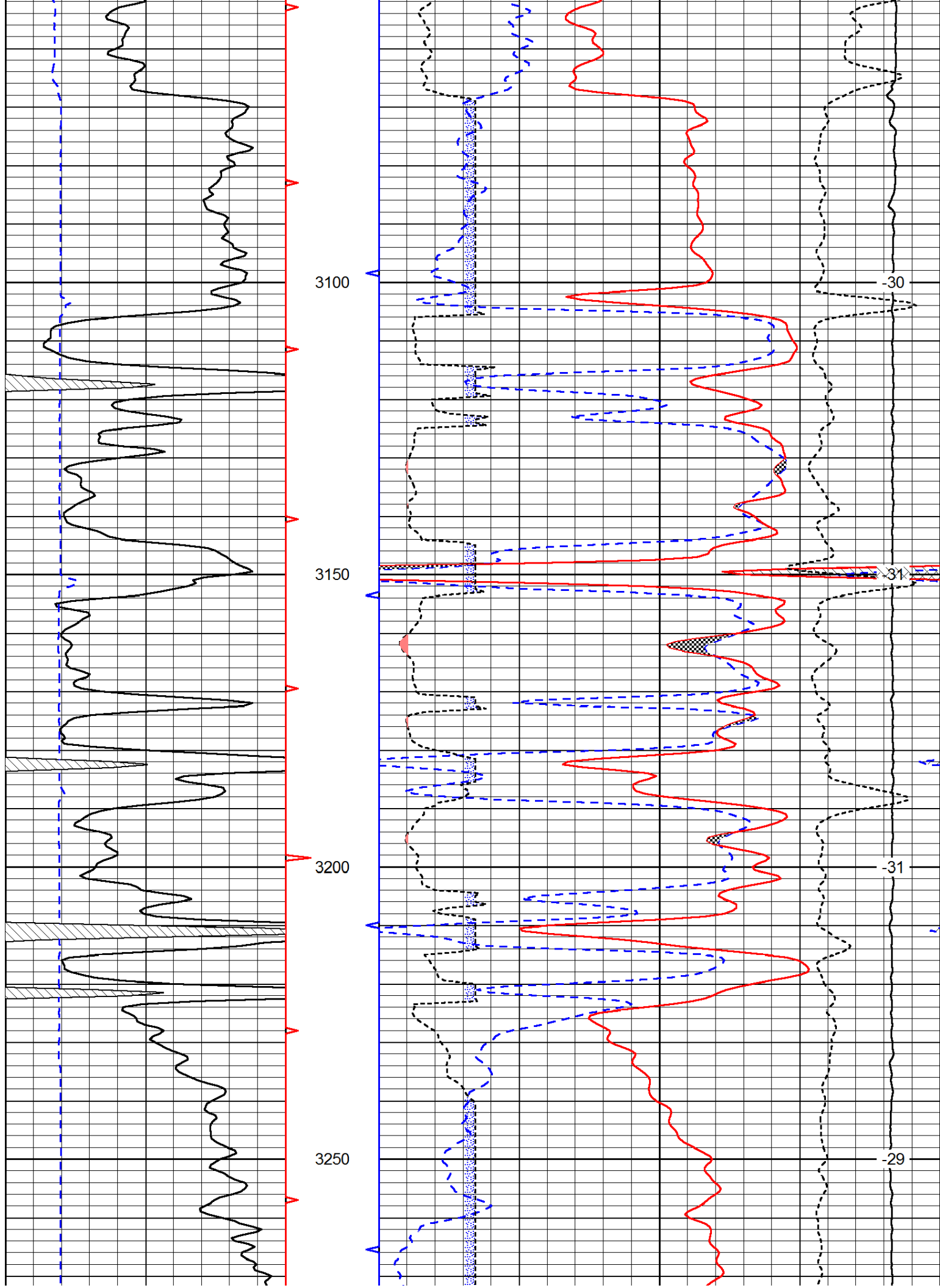


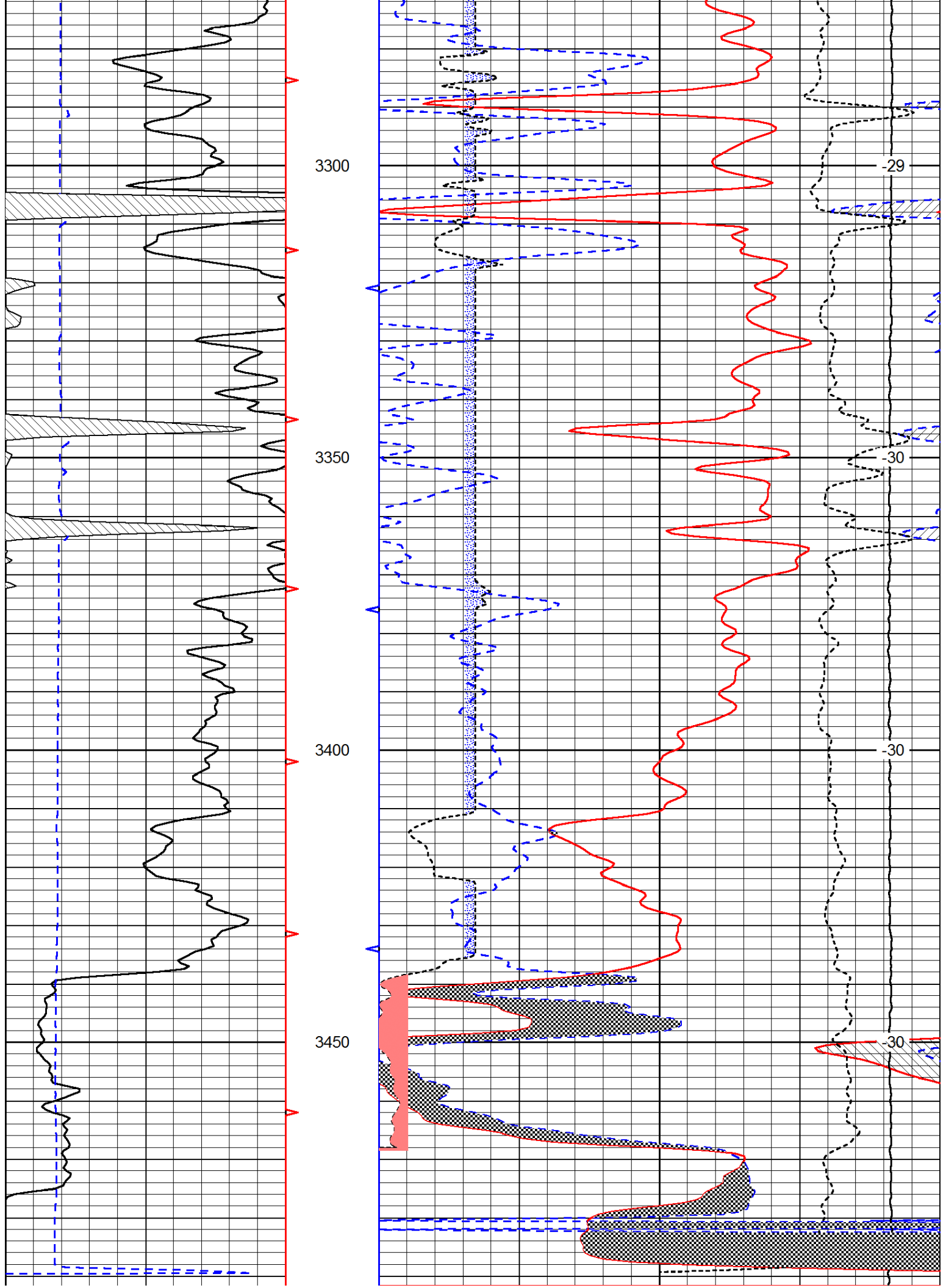


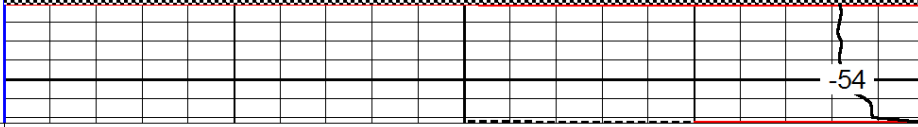










|   |                |     |       |                                 |       |                                                                                  |                 |  |
|---|----------------|-----|-------|---------------------------------|-------|----------------------------------------------------------------------------------|-----------------|--|
|   |                |     | 3500  |                                 |       |  |                 |  |
| 0 | Gamma Ray      | 150 | 30    | Compensated Neutron (Limestone) |       | -10                                                                              |                 |  |
| 6 | Caliper (GAPI) | 16  | 30    | Compensated Density (Limestone) |       | -10                                                                              |                 |  |
|   |                |     | 2.625 | DGA                             | 3.425 | -0.25                                                                            | Correction 0.25 |  |
|   |                |     | 15000 | Line Tension                    |       |                                                                                  | 0               |  |
|   |                |     |       |                                 |       |                                                                                  | LSPD            |  |