



# Microresistivity Log

Pioneer Energy Services

API No.

15-051-26,502-00-00

Company TDI, Inc.

Well Zimmerman Unit No.1

Field Schoenchen

County Ellis State

Kansas

Location 1480' FNL & 1725' FEL

Sec: 22

Twp: 15S

Rge: 18W

Elevation

Permanent Datum Ground Level

Log Measured From Kelly Bushing

Drilling Measured From Kelly Bushing

Elevation 2028

Date

5/12/2013

Run Number

Two

Depth Driller

3750

Depth Logger

3750

Bottom Logged Interval

3749

Top Log Interval

2900

Casing Driller

8.625 @ 222

Casing Logger

222

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

3,500

Density / Viscosity

9.5 @ 52

pH / Fluid Loss

10.5 @ 7.8

Source of Sample

Flowline

Rm @ Meas. Temp

.65 @ 71

Rmf @ Meas. Temp

.49 @ 71

Rmc @ Meas. Temp

.88 @ 71

Source of Rmf / Rmc

Charts

Rm @ BHT

.41 @ 114

Operating Rig Time

3 1/2 Hours

Max Rec. Temp. F

114

Equipment Number

10

Location

Hays

Recorded By

C. Desaire

Witnessed By

Tom Denning

Herb Deines

<<< Fold Here >>>

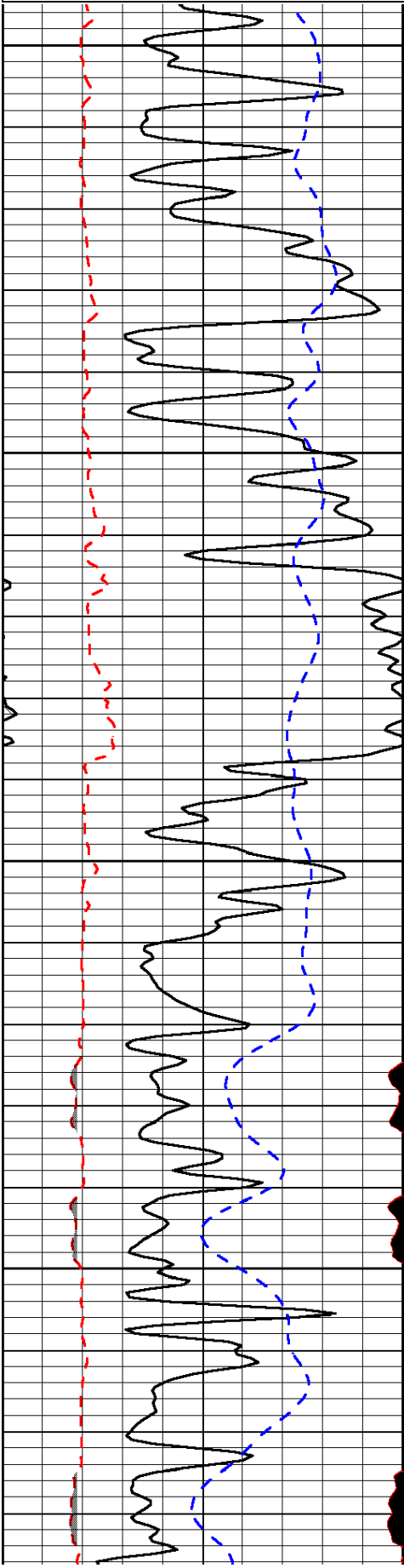
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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

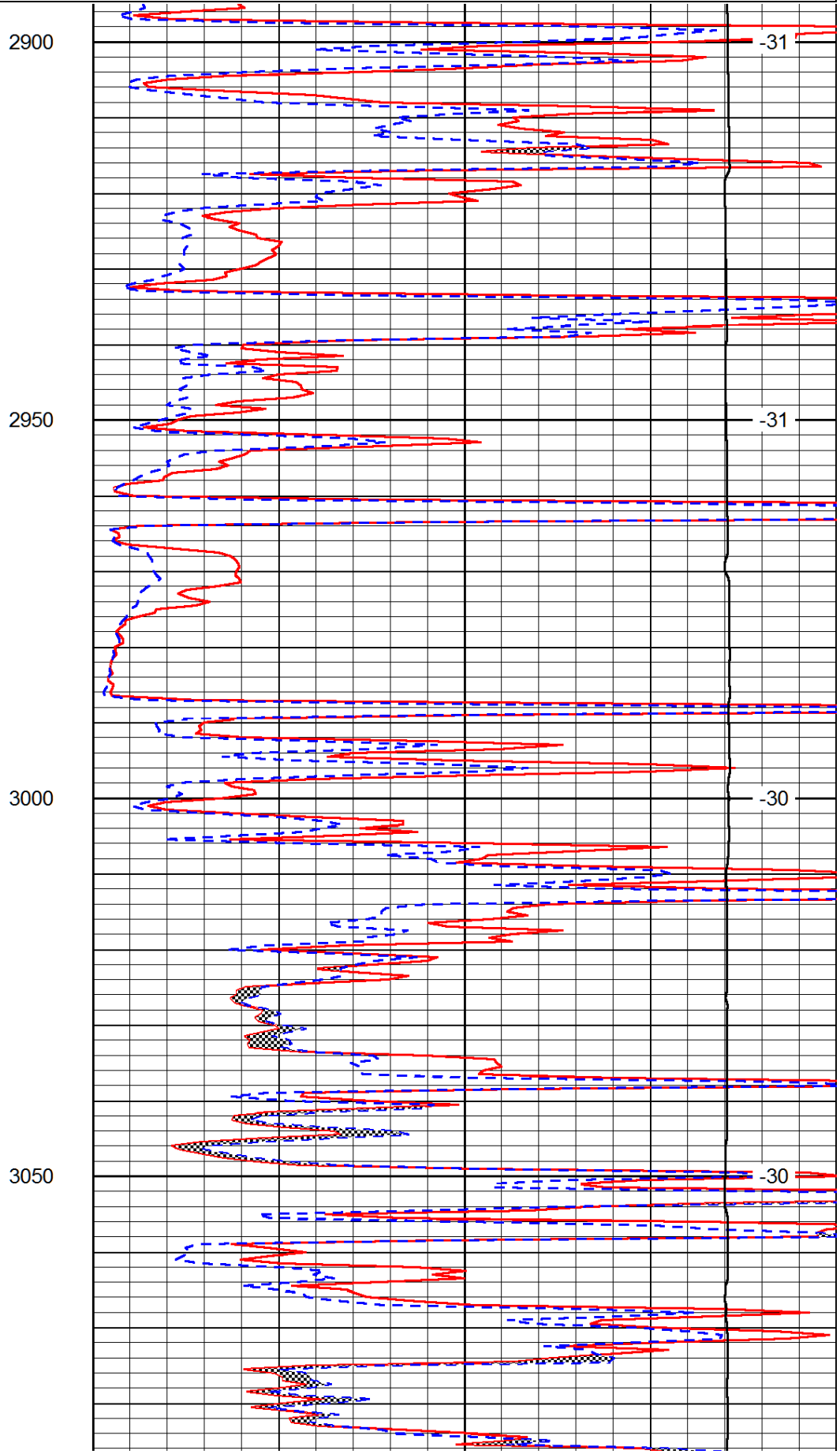
Thank you for using Log-Tech, Inc.  
(785) 625-3858

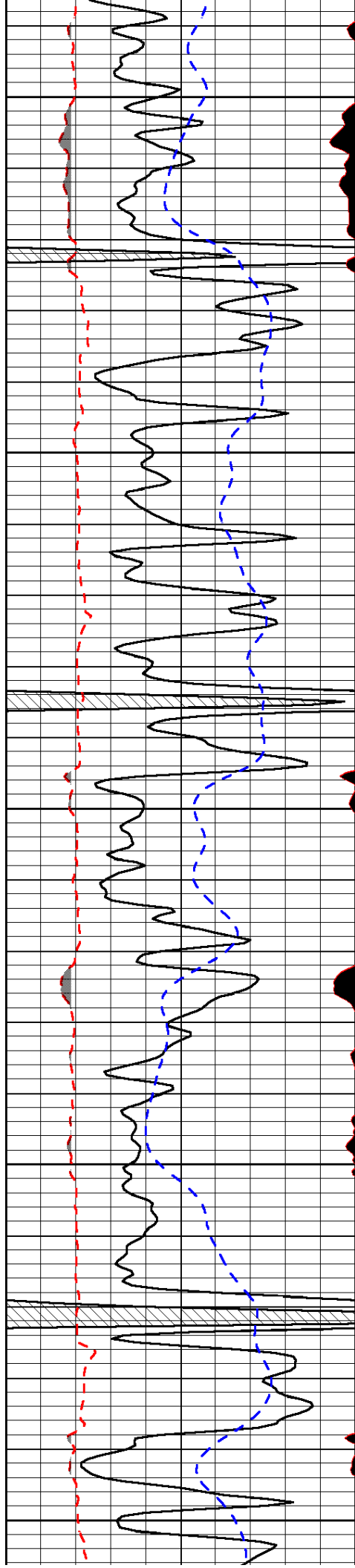
Hays KS, S to Mack Dealer,  
1 E, 1/2 S, W-NW Into

|       |                  |       |
|-------|------------------|-------|
| 0     | Gamma Ray (GAPI) | 150   |
| 6     | MCAL (in)        | 16    |
| 2.875 | Mud Cake (in)    | 7.875 |
| -200  | SP (mV)          | 0     |



|       |                             |               |
|-------|-----------------------------|---------------|
| 0     | Micro Inverse 1 X 1 (Ohm-m) | 40            |
| 0     | Micro Normal 2" (Ohm-m)     | 40            |
| 10000 | Line Weight (lb)            | 0             |
|       |                             | LSPD (ft/min) |





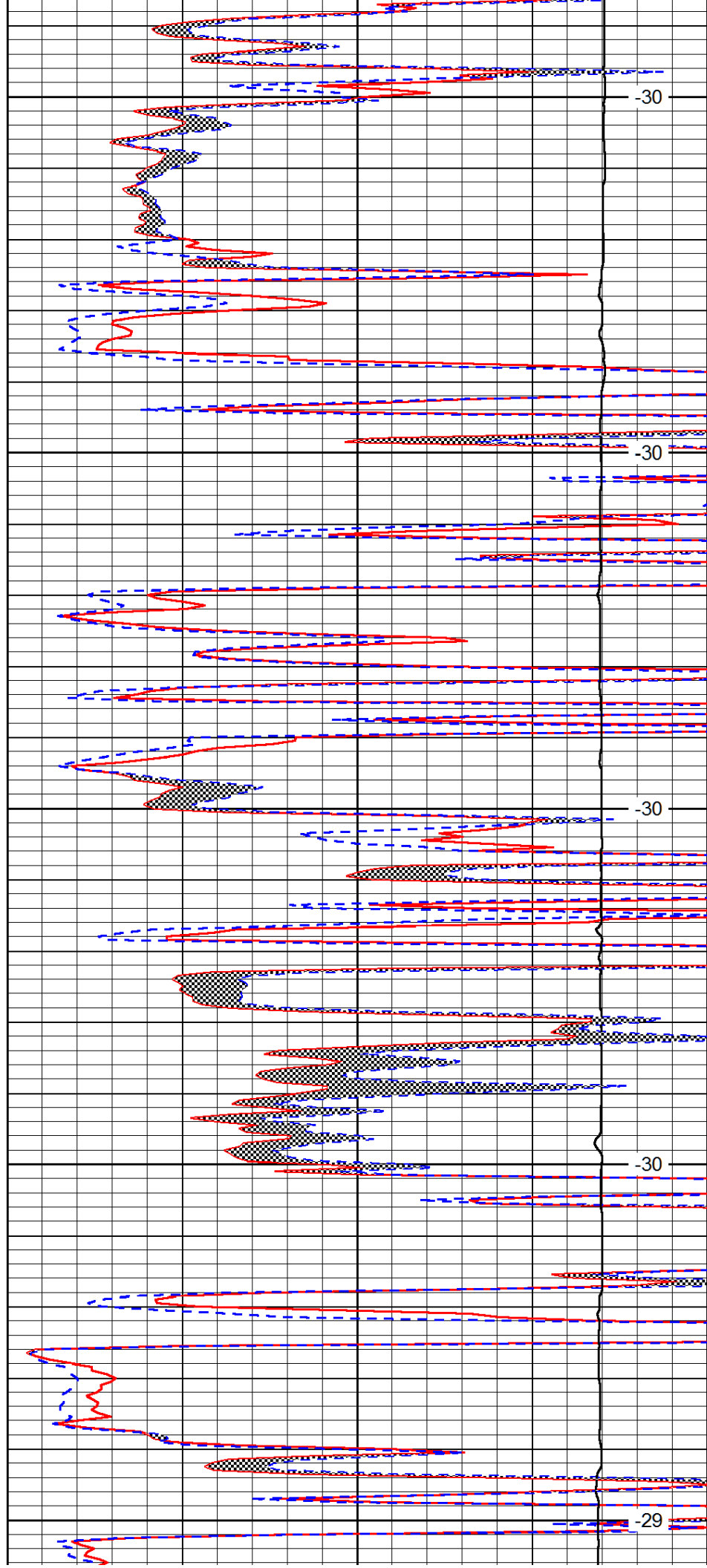
3100

3150

3200

3250

3300



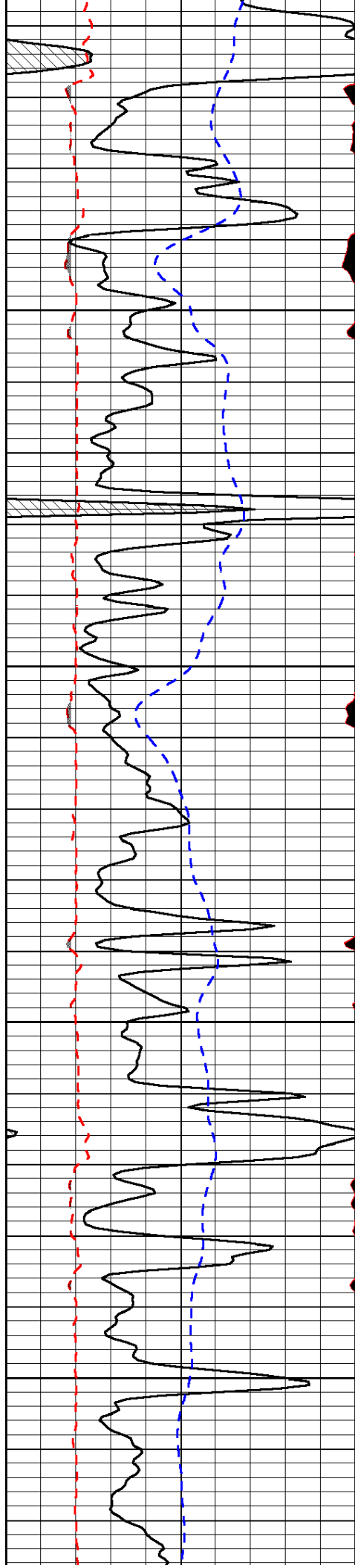
-30

-30

-30

-30

-29

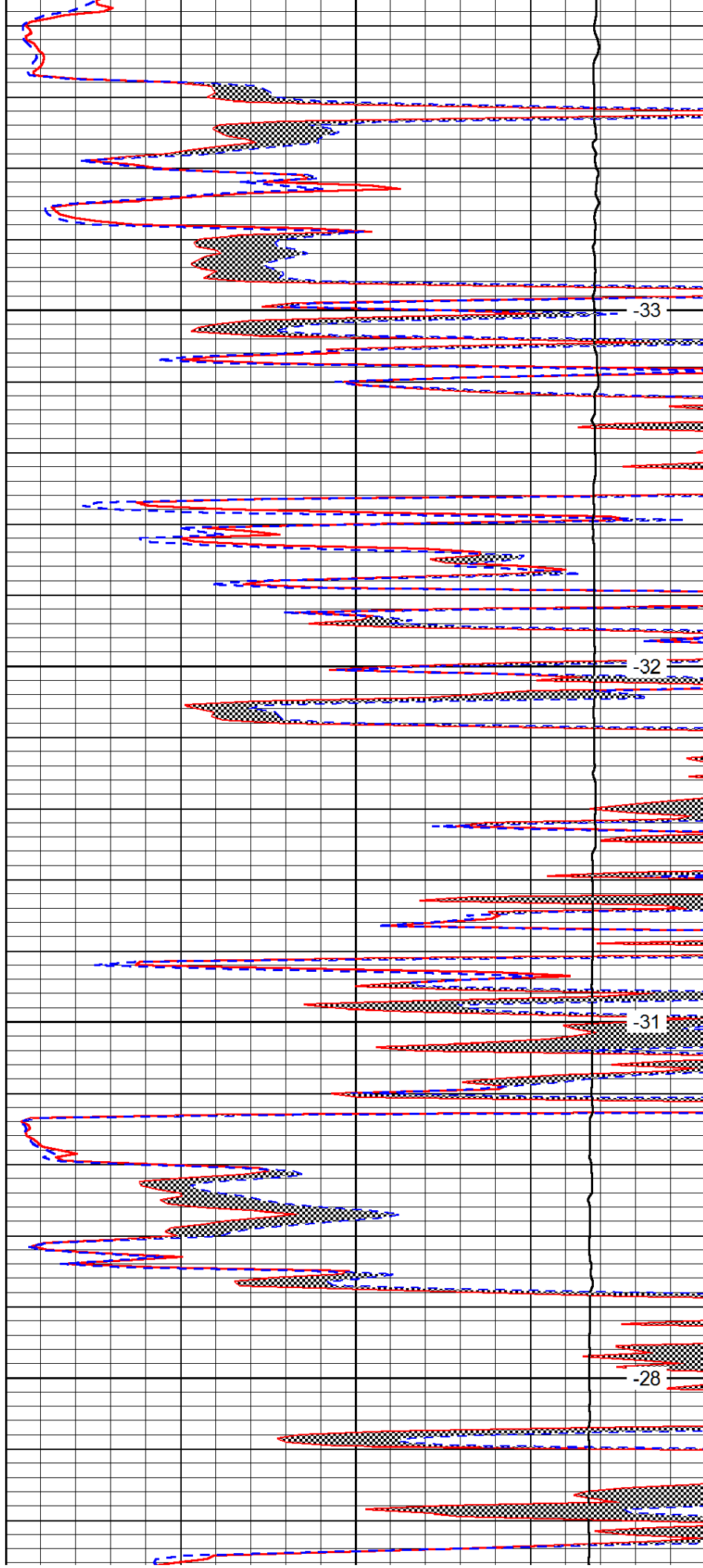


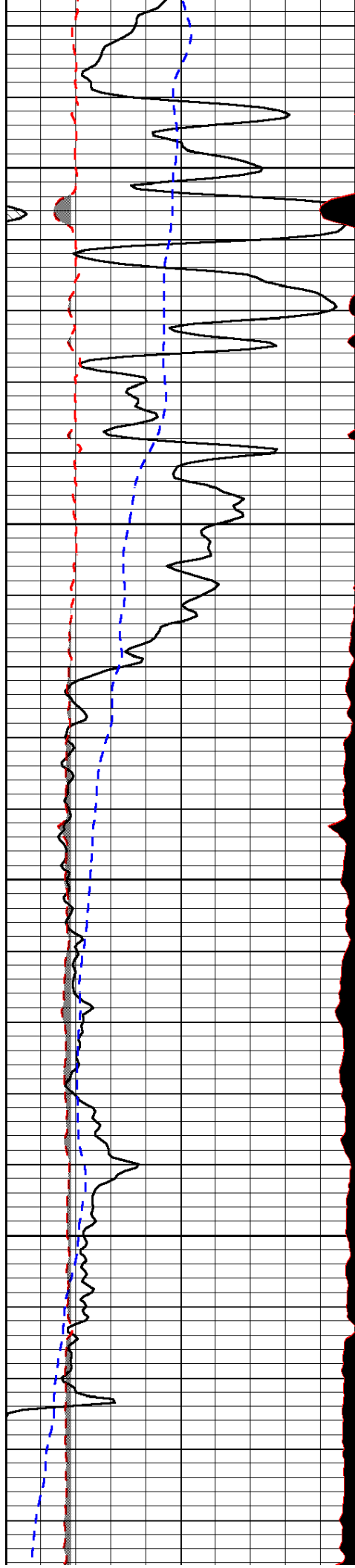
3350

3400

3450

3500



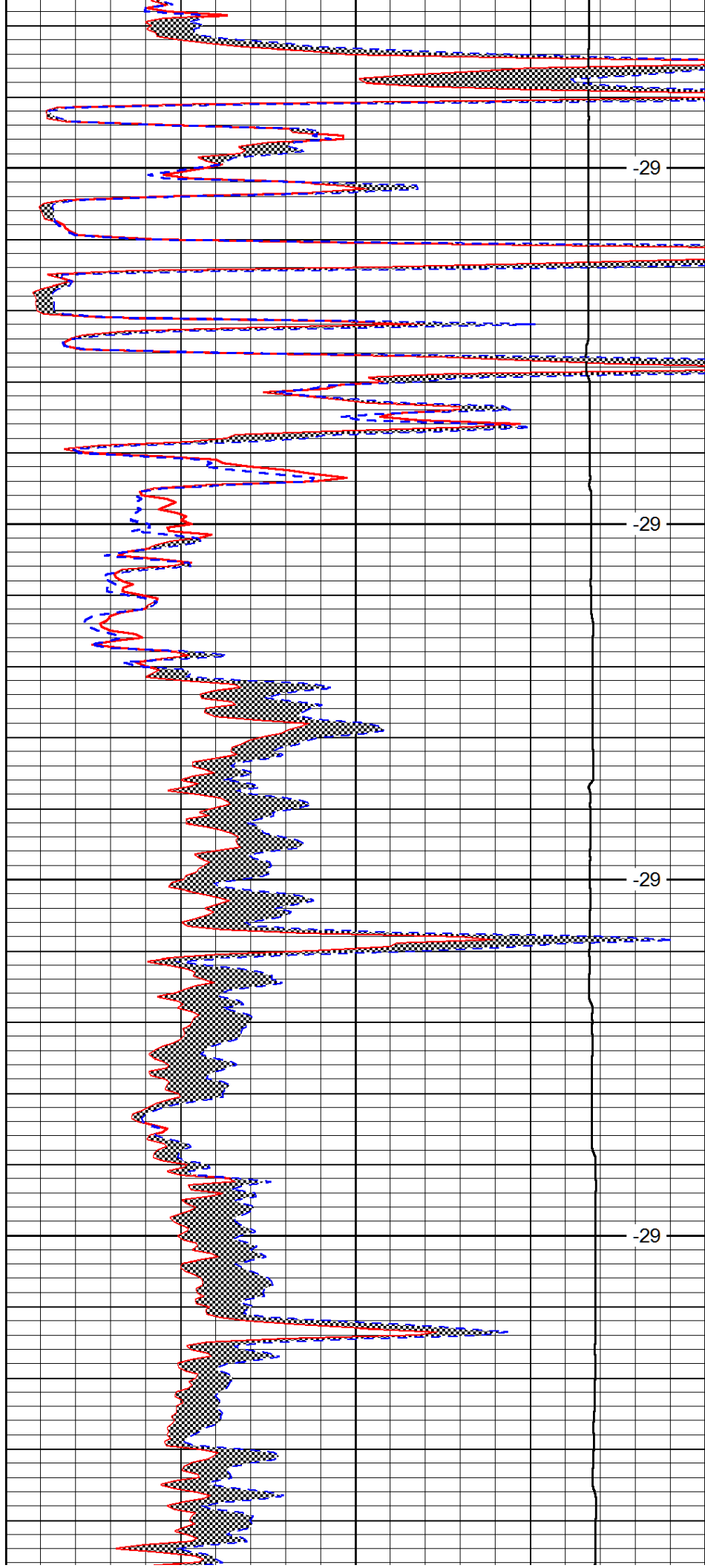


3550

3600

3650

3700



-29

-29

-29

-29

