



Dual Induction Log

Pioneer Energy Services

API No.

15-167-23,903-00-00

Company Yale Oil Association, Inc.

Well Bernard #1-31

Field Trapp

County Russell

State

Kansas

Location

1980' FSL & 1980' FEL

Sec: 31

Twp: 15s

Rge: 13w

Permanent Datum Ground Level
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation 1901
10 Ft. Above Perm. Datum

Other Services
CNL/CDL
MEL

Elevation
K.B. 1911
D.F. 1901
G.L. 1901

Date

9/22/2013

Run Number

One

Depth Driller

3315

Depth Logger

3307

Bottom Logged Interval

3306

Top Log Interval

450

Casing Driller

8.625 @ 477

Casing Logger

477

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

4.900

Density / Viscosity

9.2 53

pH / Fluid Loss

9.0 8.0

Source of Sample

Flowline

Rm @ Meas. Temp

1.1 @ 78

Rmf @ Meas. Temp

.83 @ 78

Rmc @ Meas. Temp

1.49 @ 78

Source of Rmf / Rmc

Charts

Rm @ BHT

.79 @ 109

Operating Rig Time

3 1/2 Hours

Max Rec. Temp. F

109

Equipment Number

17

Location

Hays

Recorded By

C. Desaire

Witnessed By

Kurt Talbott

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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.

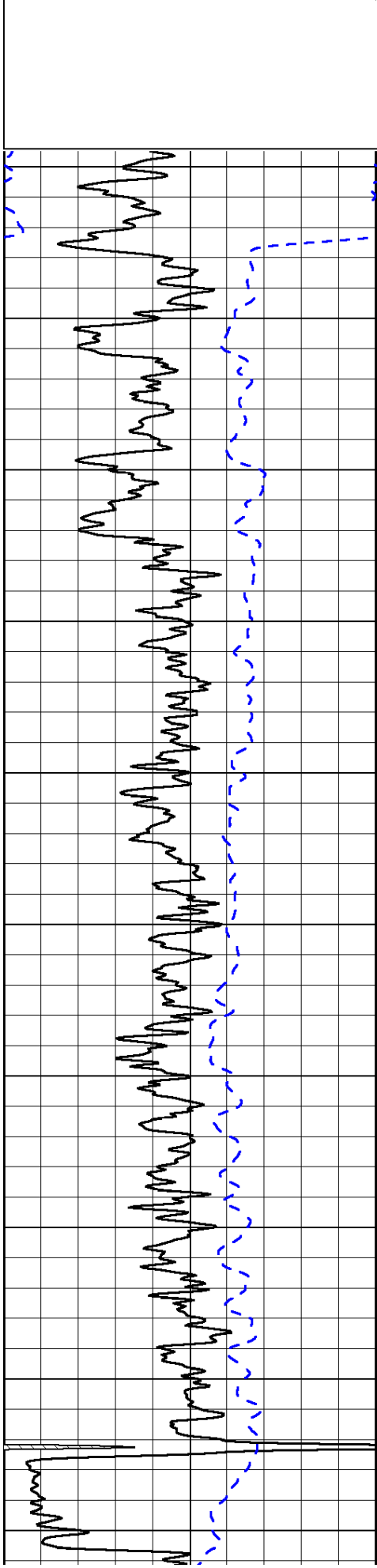
Comments

Thank you for using Pioneer Energy Services
www.pioneerres.com
785 625 3858

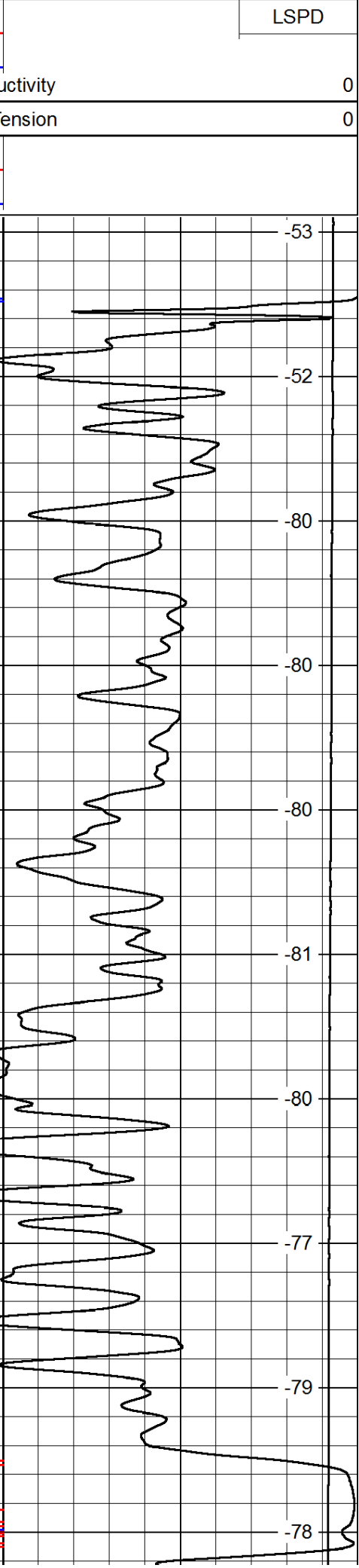
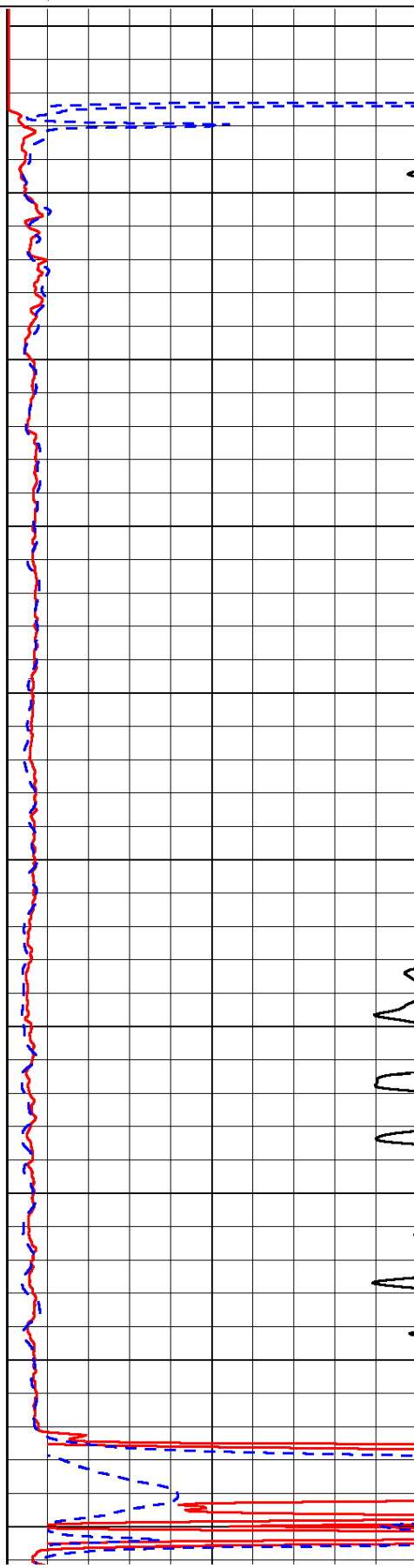
Russell KS, 11 1/2 S to County Line,
2 E, 1/8 N, E Into 1/2

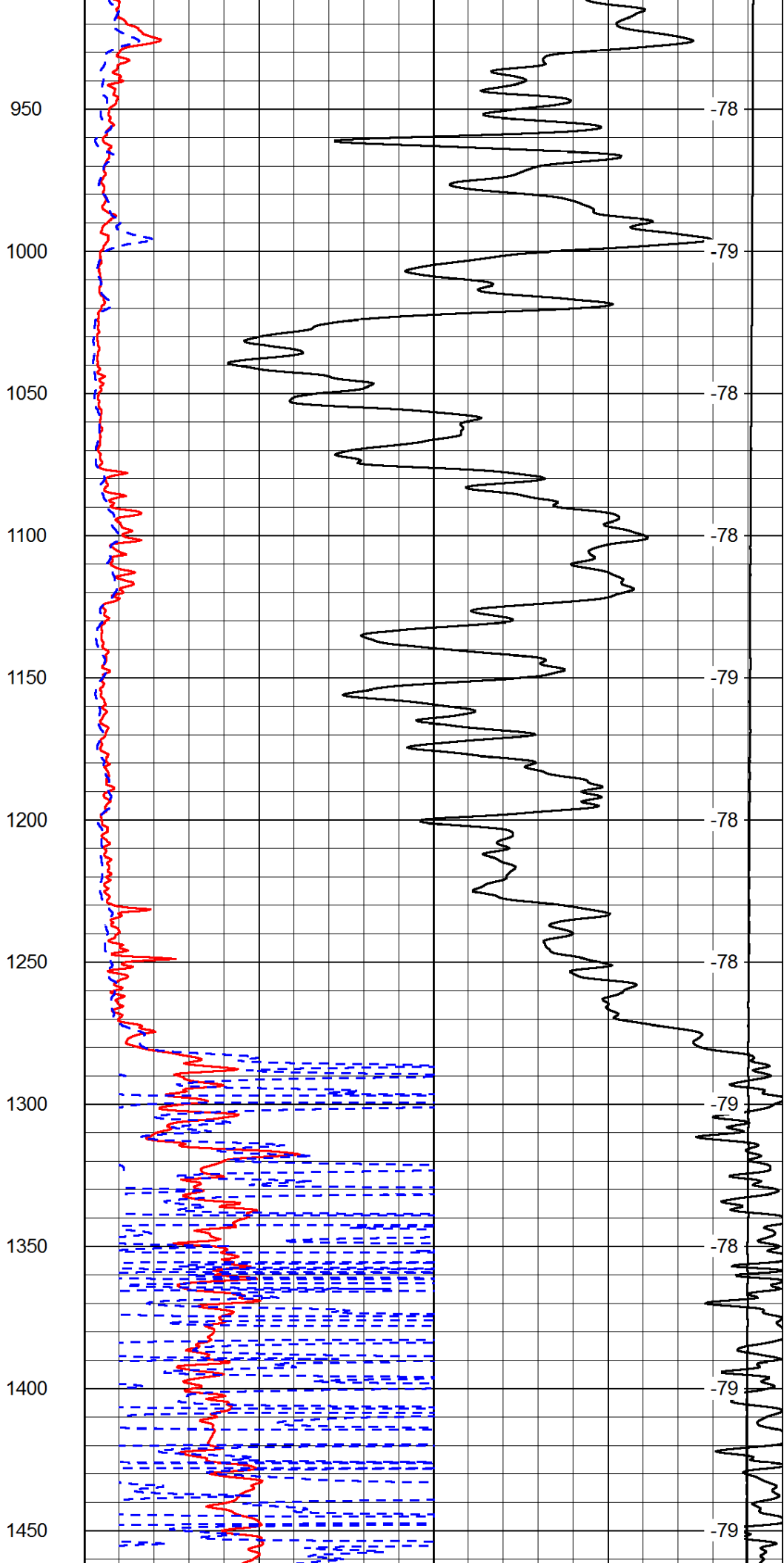
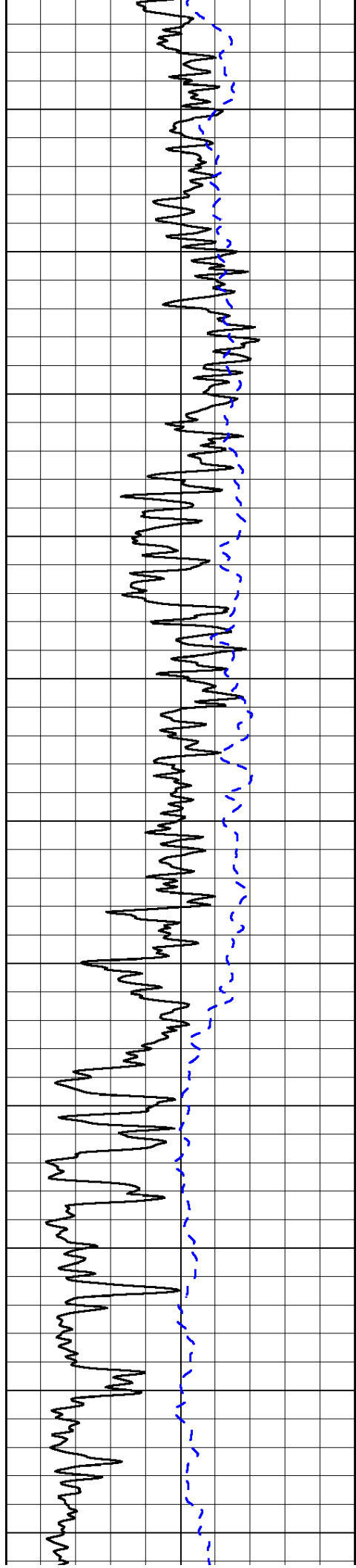
Database File: c:\warrior\data\yale_bernard #1-31\yalehd.db
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Presentation Format: dil2in
Dataset Creation: Sun Sep 22 16:23:11 2013
Charted by: Depth in Feet scaled 1:600

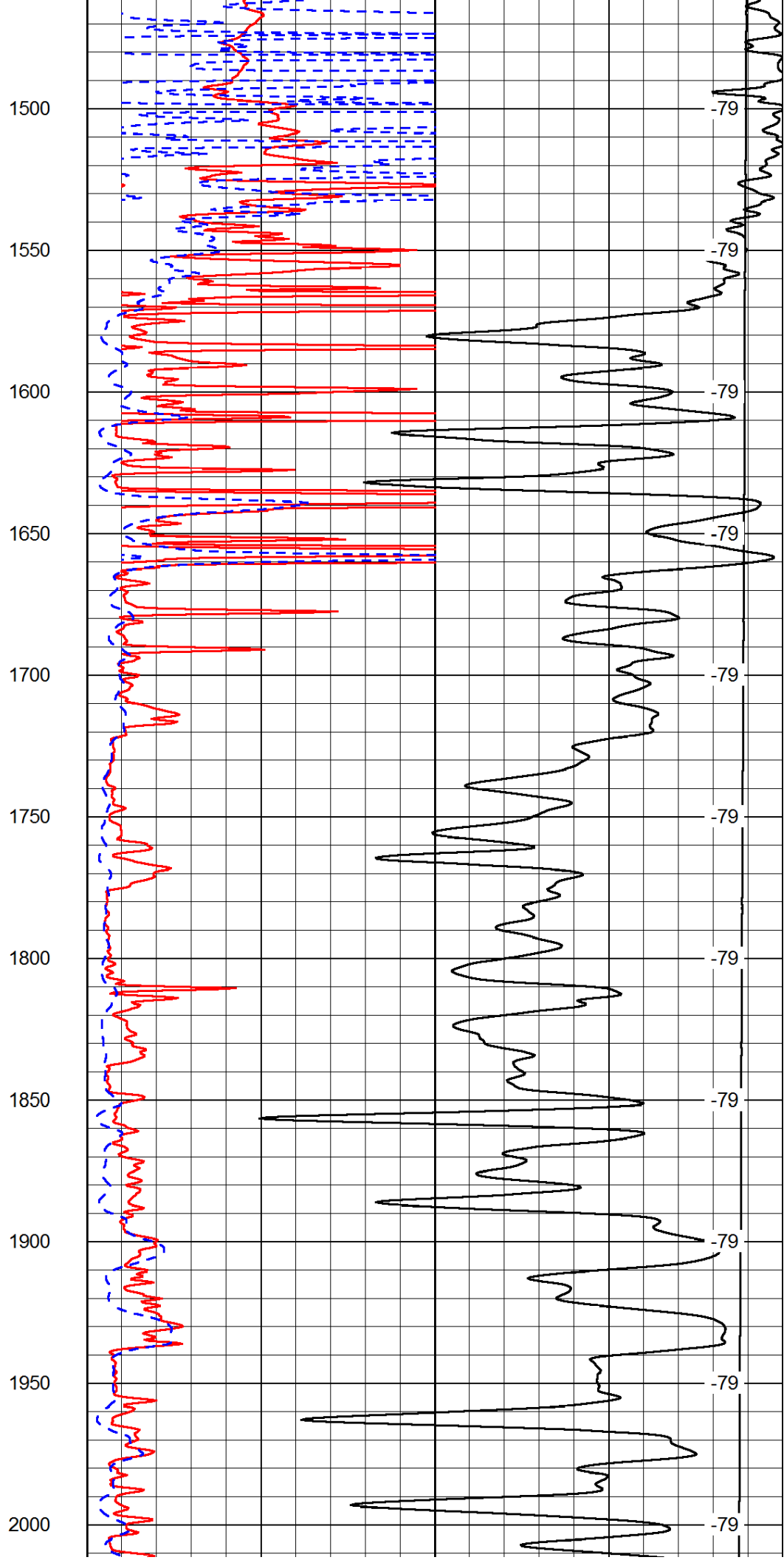
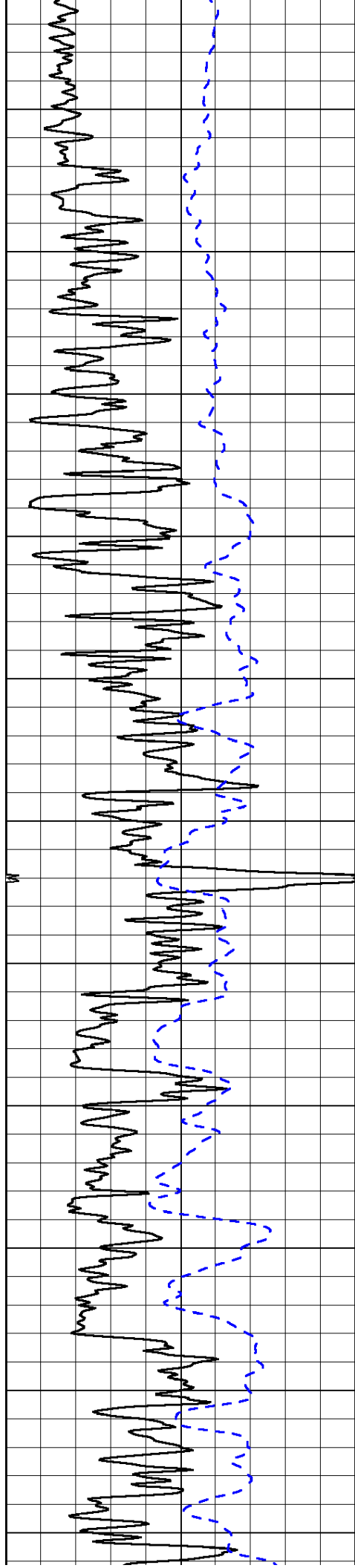
0	Gamma Ray	150
-200	SP (mV)	0

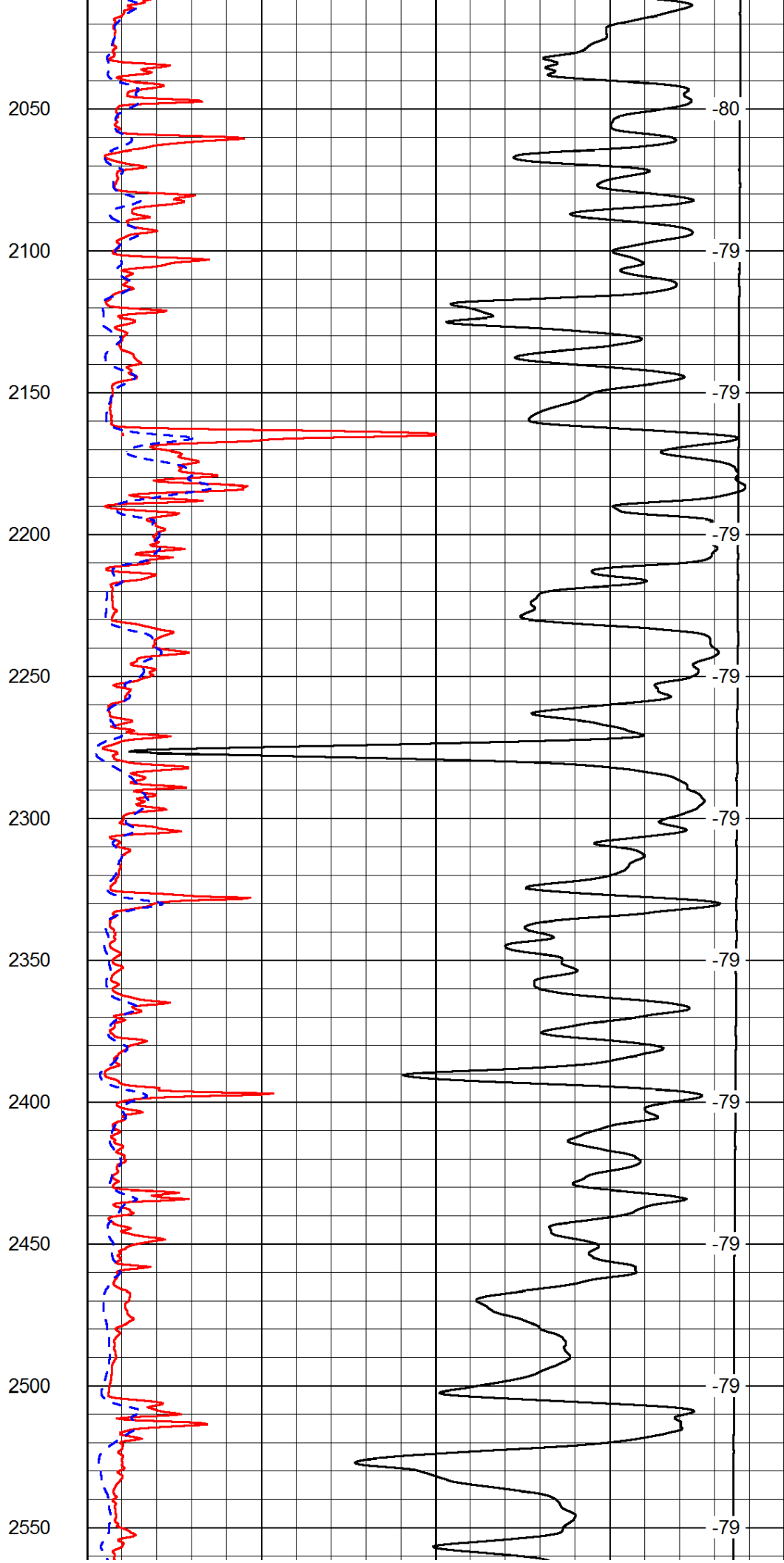
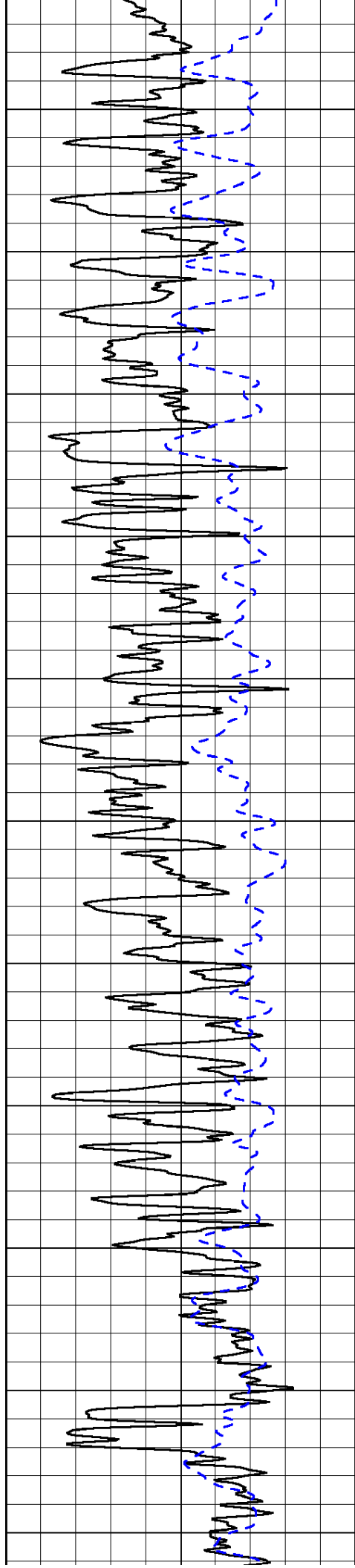


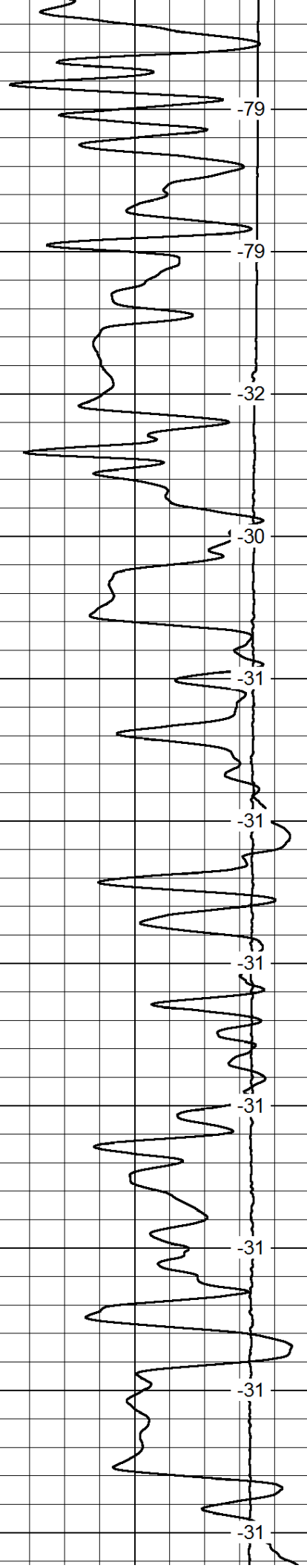
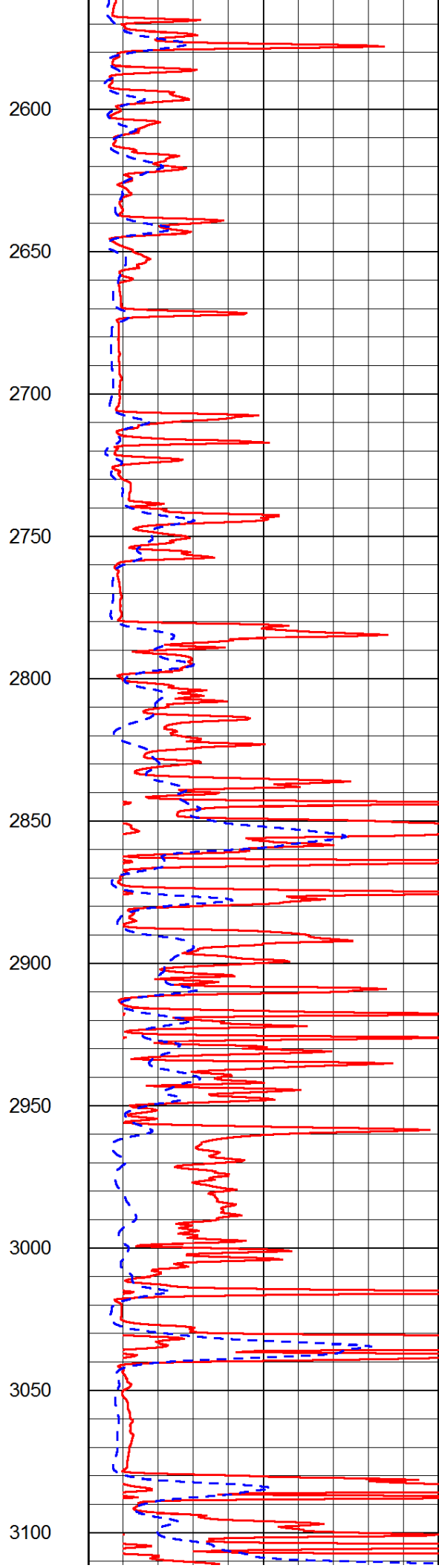
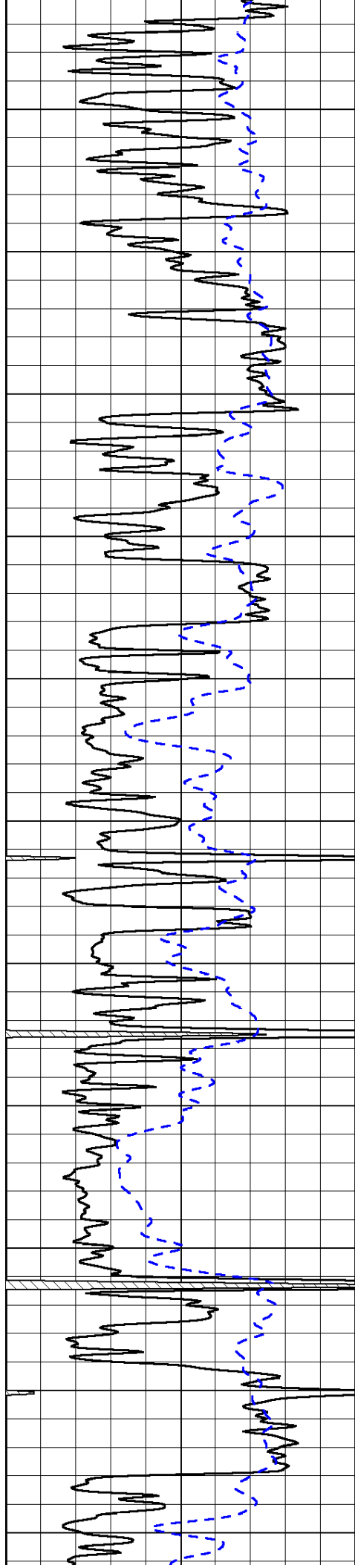
0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

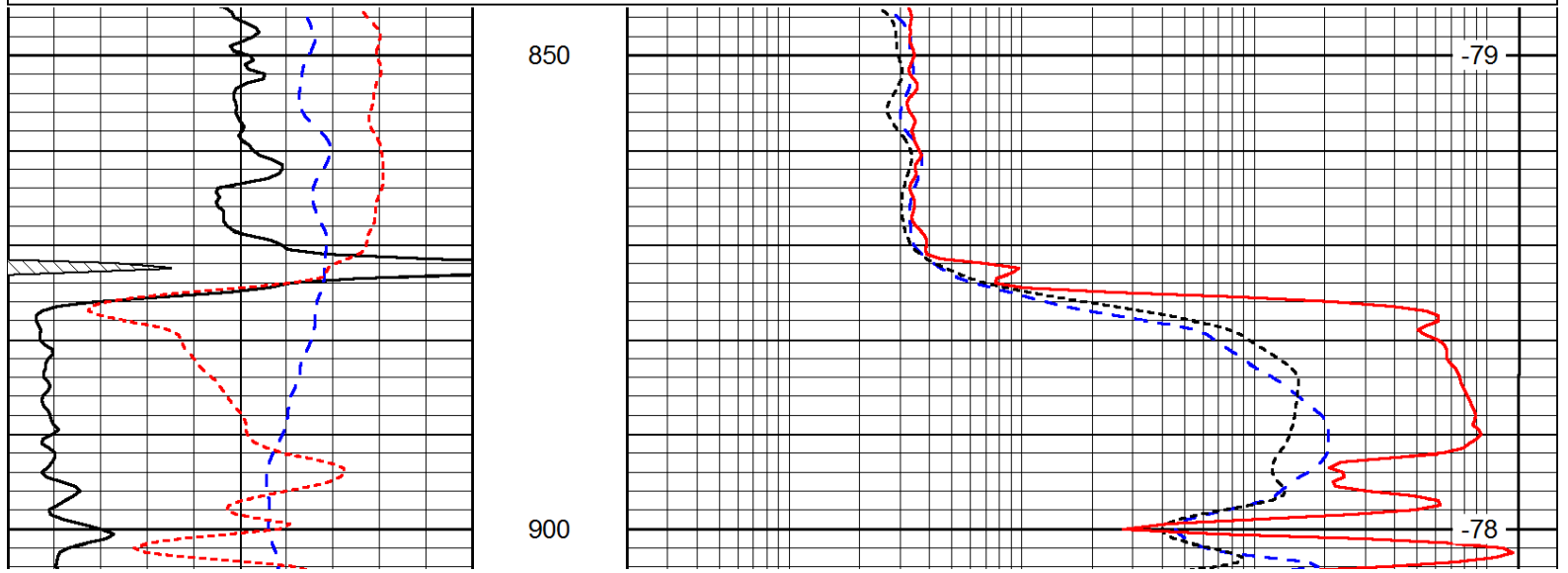
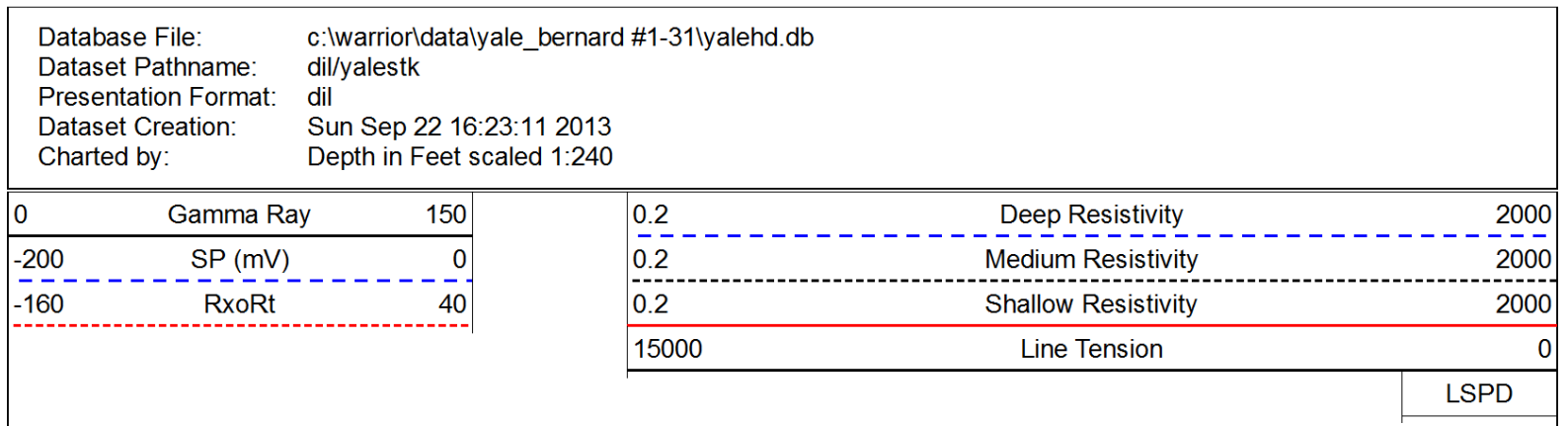
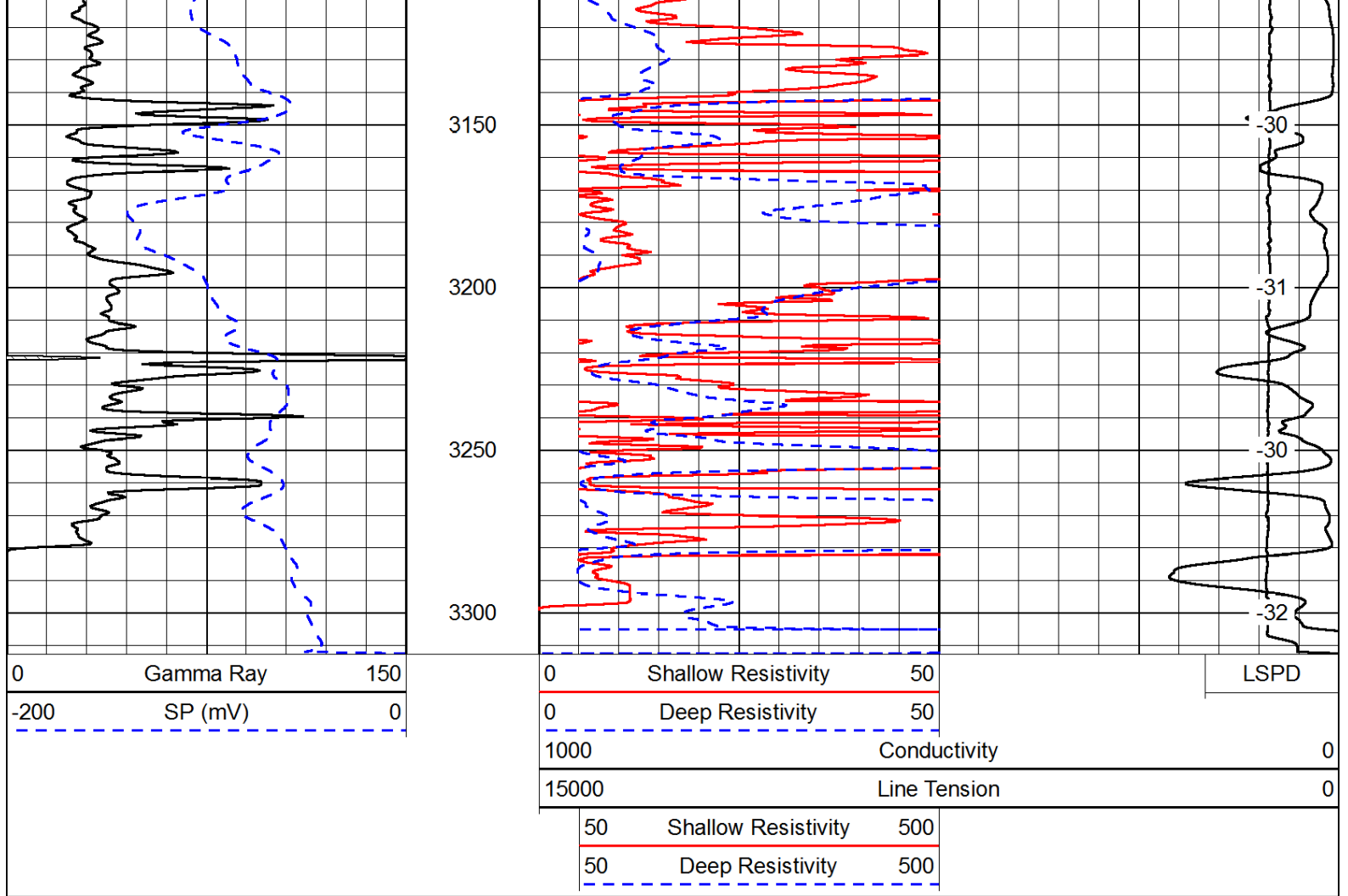


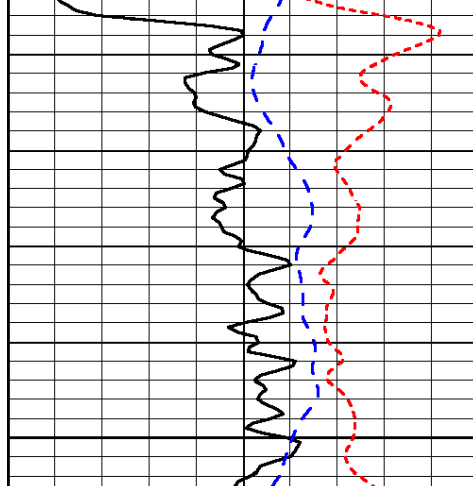






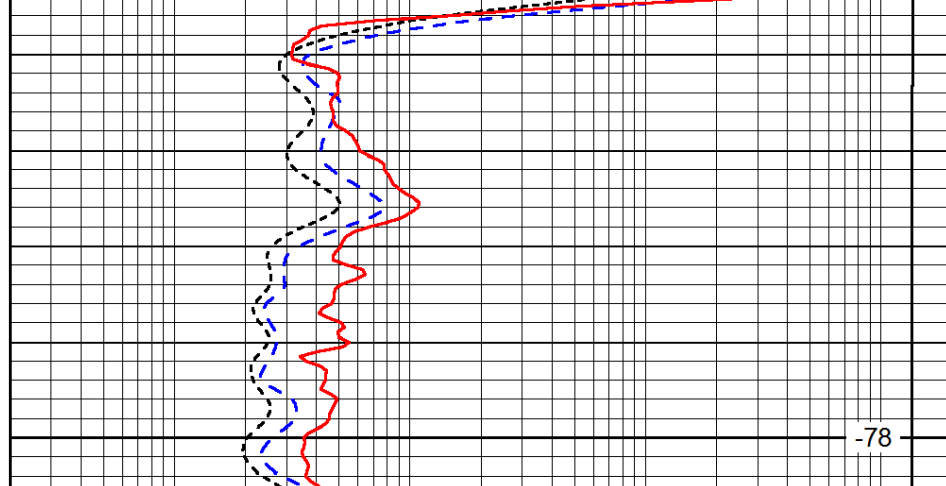






950

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



-78

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

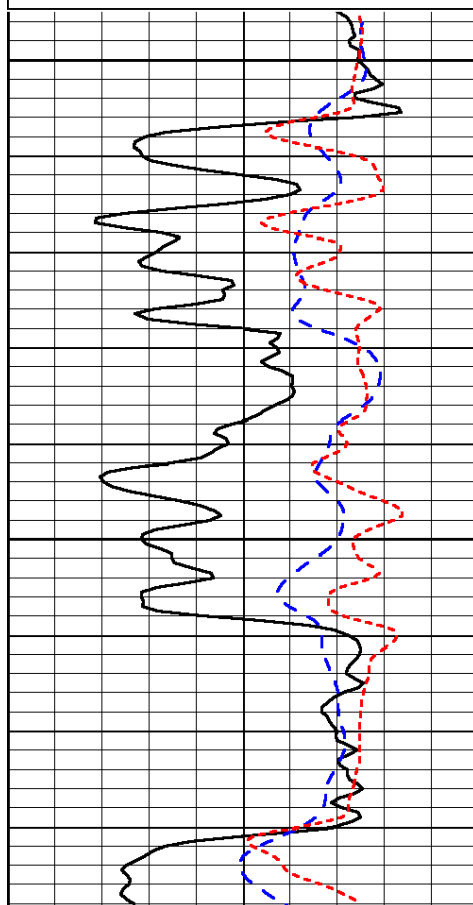
LSPD

Database File: c:\warrior\data\yale_bernard #1-31\yalehd.db
 Dataset Pathname: dil/yalestk
 Presentation Format: dil
 Dataset Creation: Sun Sep 22 16:23:11 2013
 Charted by: Depth in Feet scaled 1:240

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

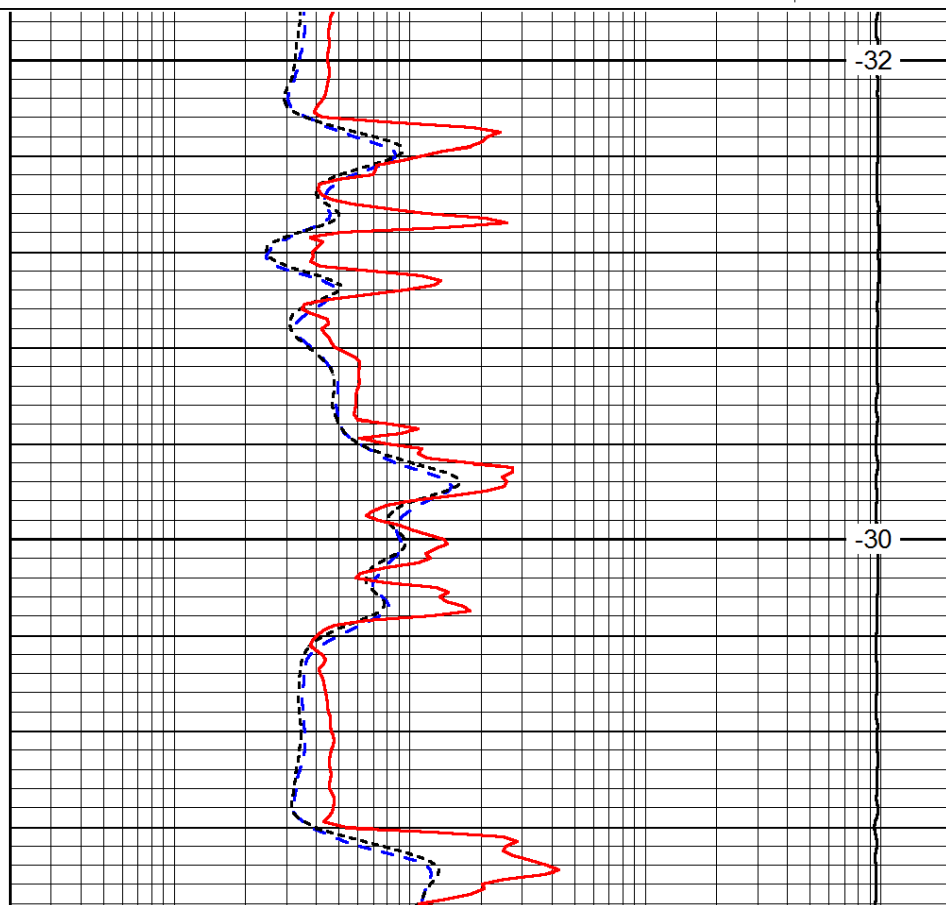
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0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD



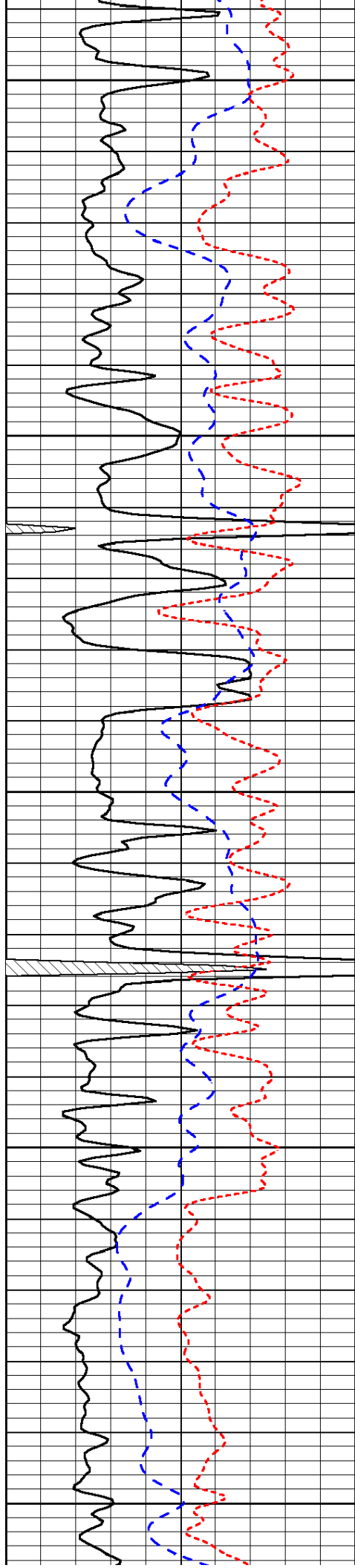
2700

2750



-32

-30



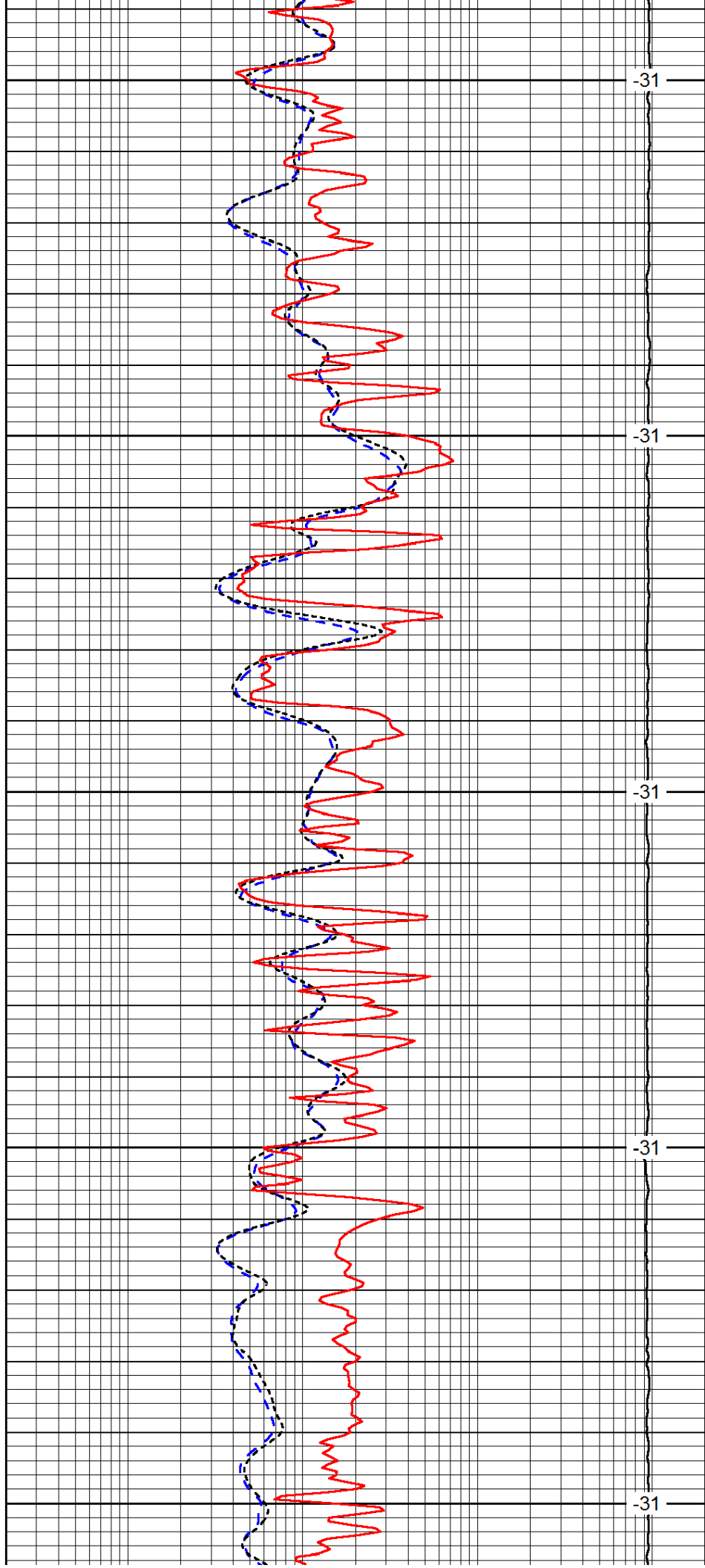
2800

2850

2900

2950

3000



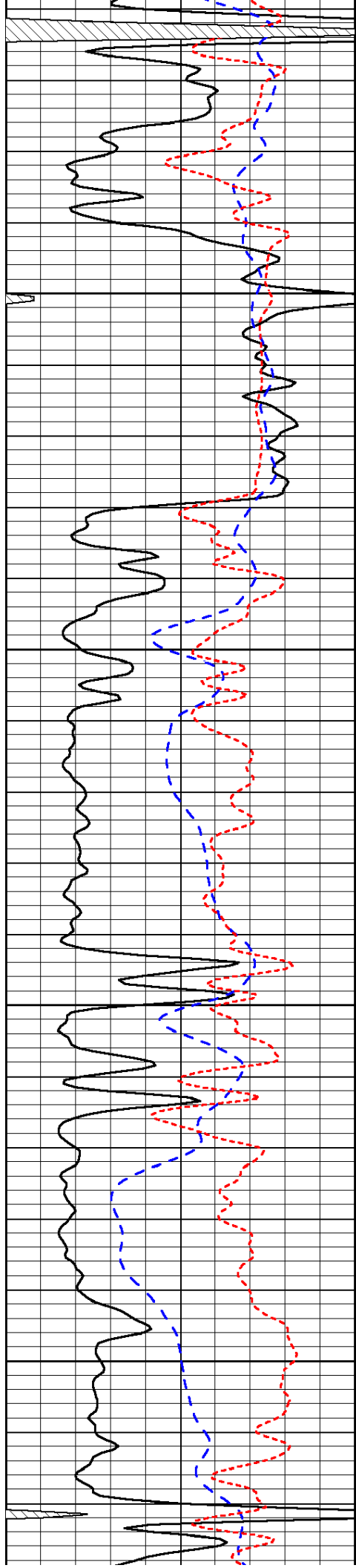
-31

-31

-31

-31

-31

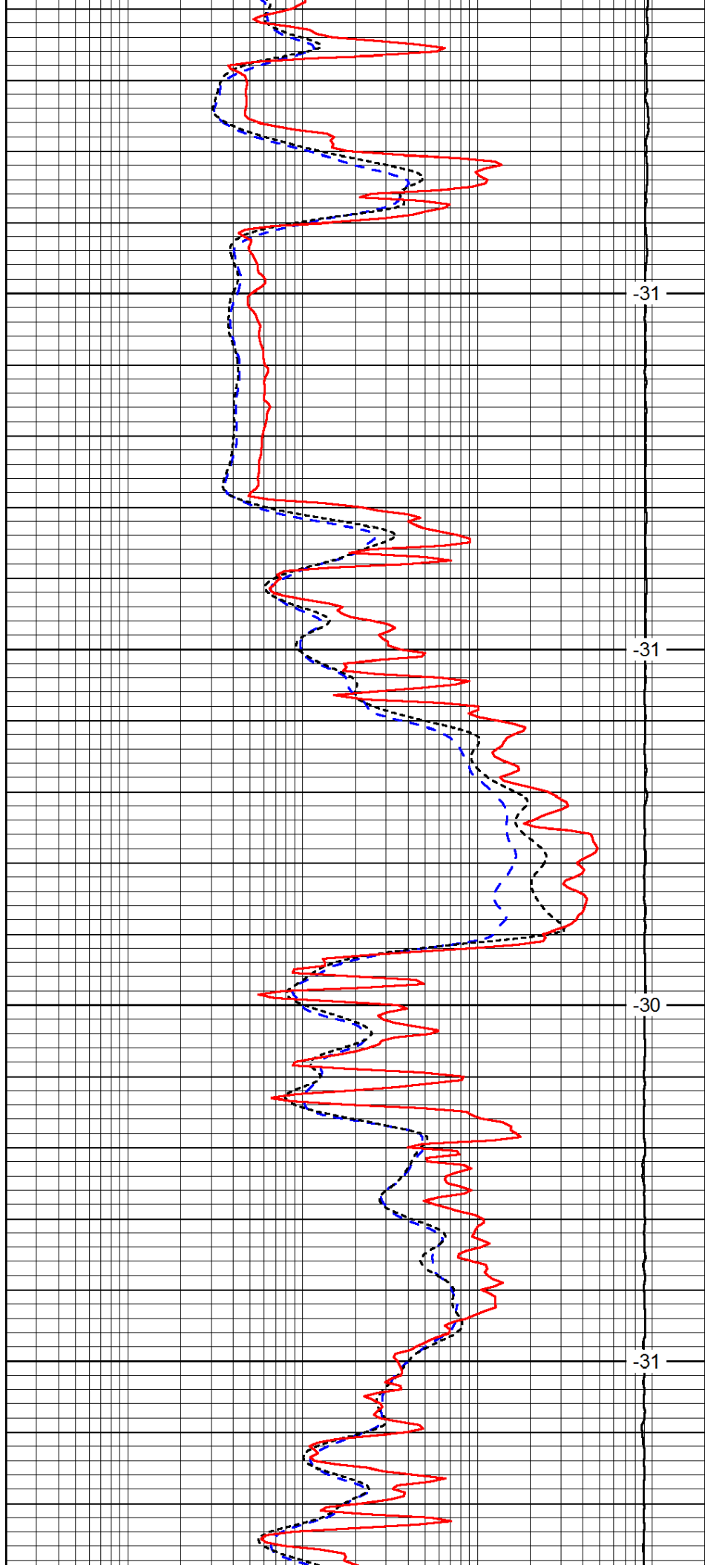


3050

3100

3150

3200

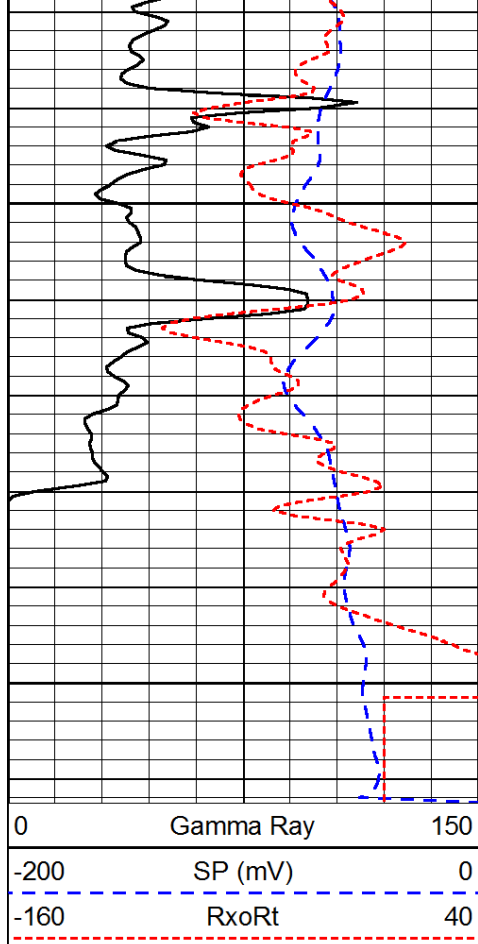


-31

-31

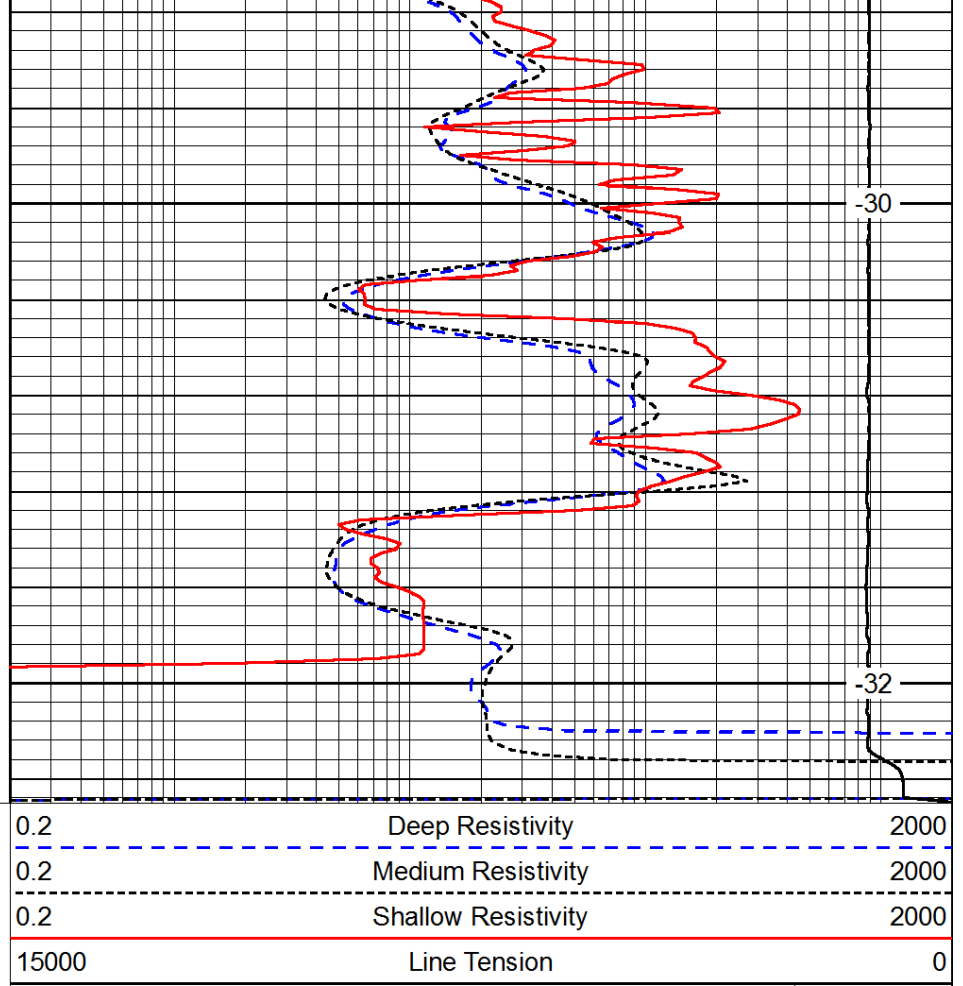
-30

-31



3250

3300



-30

-32

LSPD