



Pioneer Energy Services

Microresistivity Log

API No.

15-017-20,918-00-00

Company Range Oil Company, Inc.

Well Madden A Unit No.1

Field Panther Ranch SW

County Chase State Kansas

Location 330' FNL & 2190' FWL

Sec: 31 Twp: 19S Rge: 6E

Other Services
CNL/CDL
DIL

Elevation

Permanent Datum Ground Level Elevation 1452
Log Measured From Kelly Bushing 6 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

K.B. 1458
D.F.
G.L. 1452

Date 10/13/2014

Run Number Two

Depth Driller 2315

Depth Logger 2313

Bottom Logged Interval 2312

Top Log Interval 1600

Casing Driller 8.625 @ 220

Casing Logger 218

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 900

Density / Viscosity 9.2 53

pH / Fluid Loss 9.0 8.8

Source of Sample Flowline

Rm @ Meas. Temp 1.4 @ 63

Rmf @ Meas. Temp 1.05 @ 63

Rmc @ Meas. Temp 1.89 @ 63

Source of Rmf / Rmc Charts

Rm @ BHT .89 @ 99

Operating Rig Time 3 1/2 Hours

Max Rec. Temp. F 99

Equipment Number 10

Location Hays

Recorded By C. Desaire

Witnessed By Ken Wallace

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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.

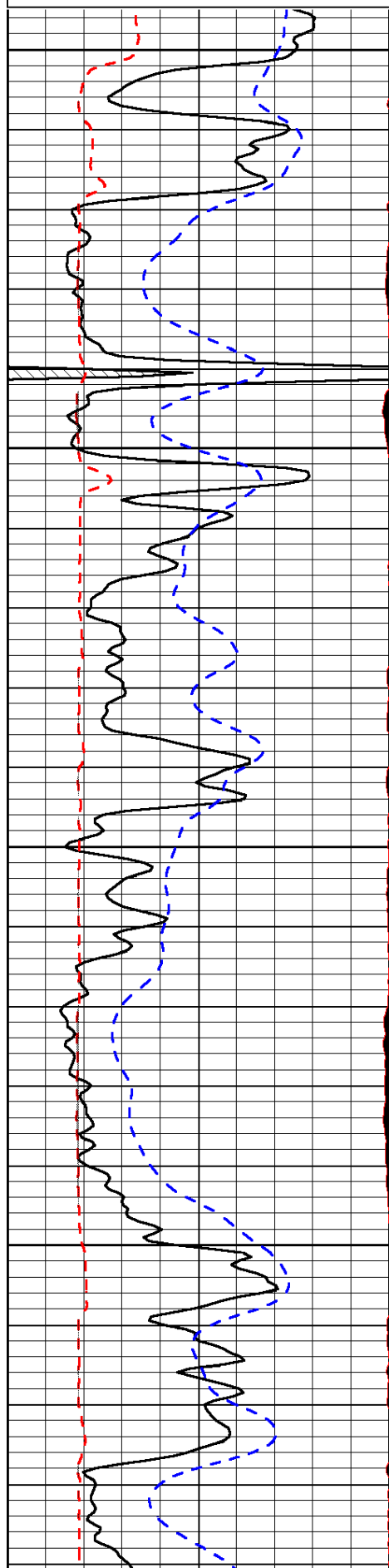
Comments

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

Marion KS, Hwy 77 & Hwy 50,
8 E, 200 yds S, E Into

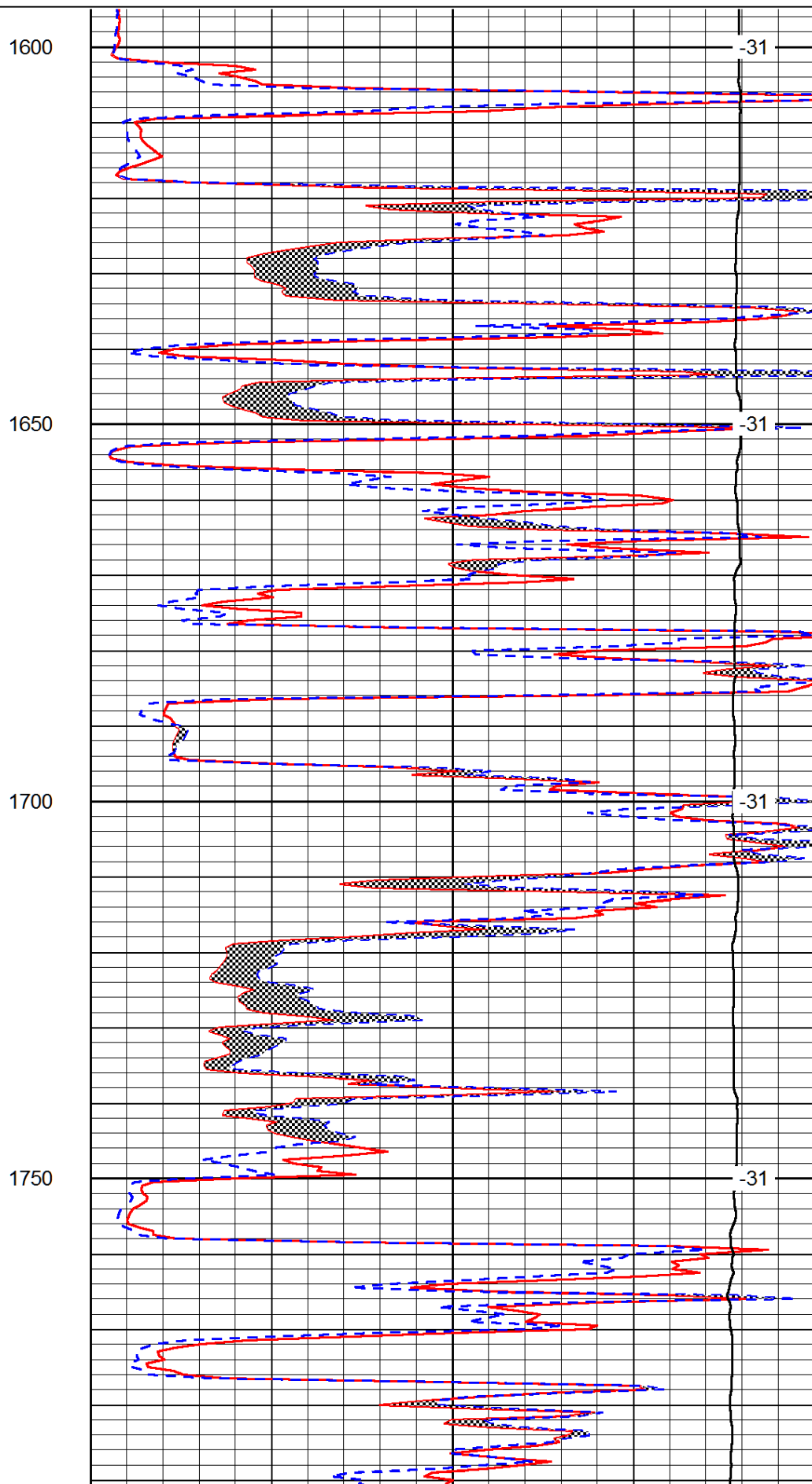
Database File: rangehd.db
Dataset Pathname: dil/rngstk
Presentation Format: micro
Dataset Creation: Mon Oct 13 08:23:59 2014
Charted by: Depth in Feet scaled 1:240

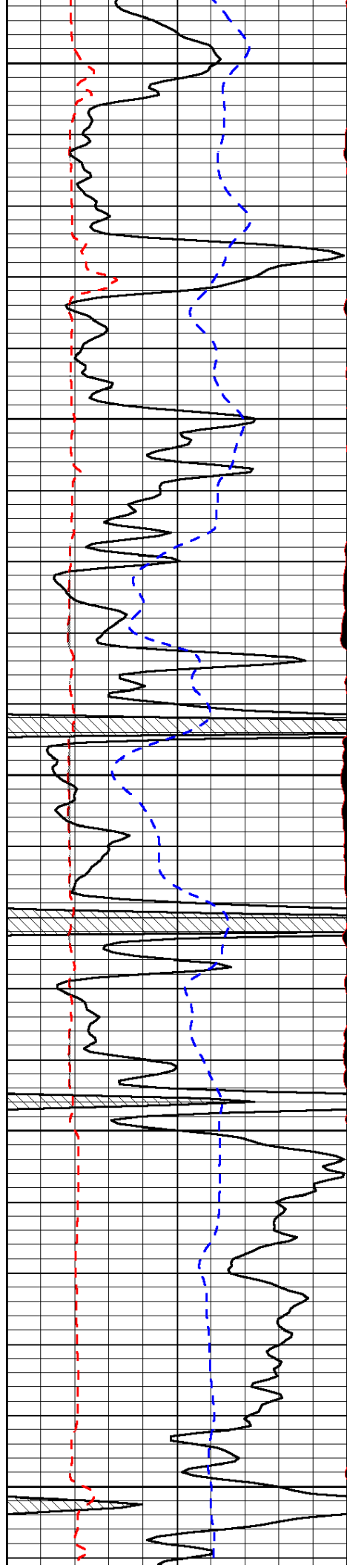
0	Gamma Ray	150
6	MCAL (GAPI)	16
2.875	Mud Cake (GAPI)	7.875
-200	SP (mV)	0



0	Micro Inverse 1 X 1	40
0	Micro Normal 2"	40
10000	Line Weight	0

LSPD





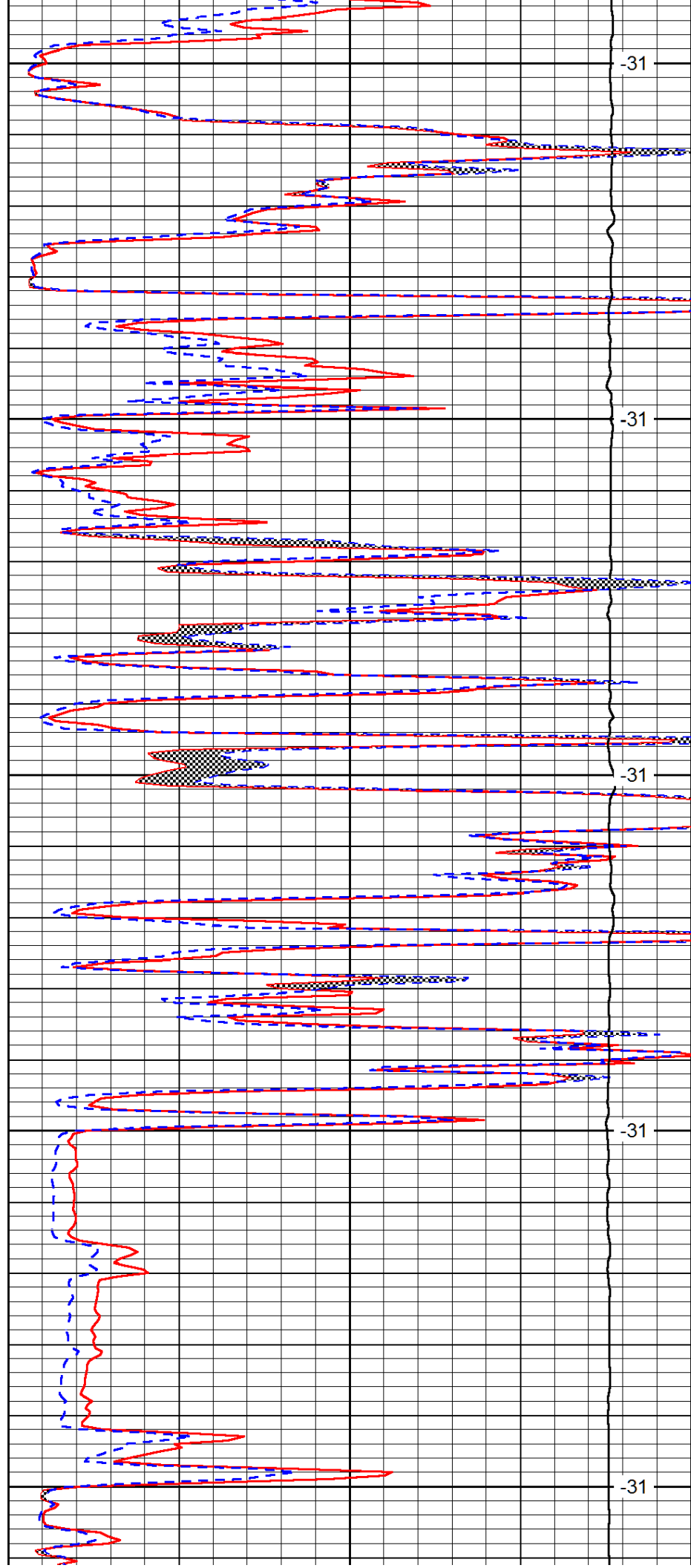
1800

1850

1900

1950

2000



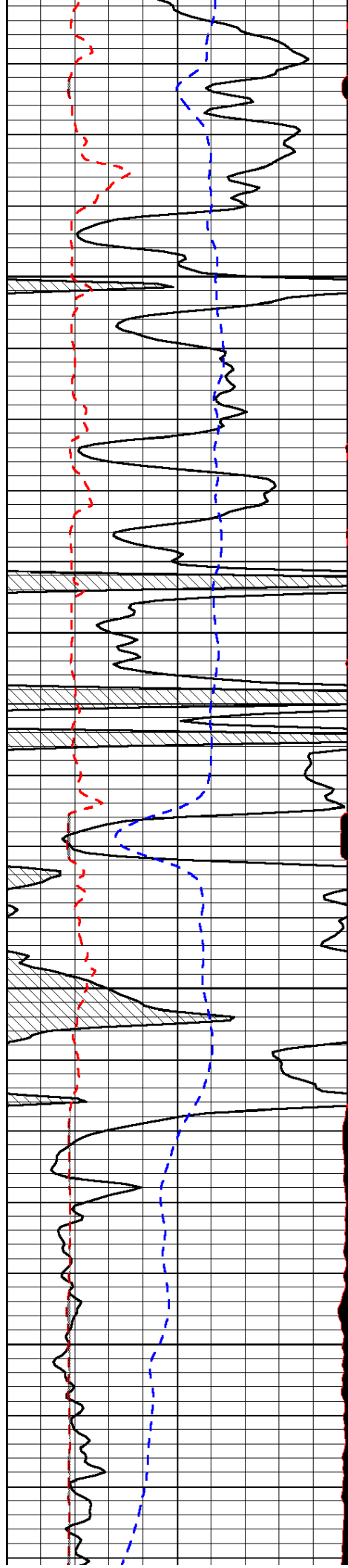
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-31

-31

-31

-31

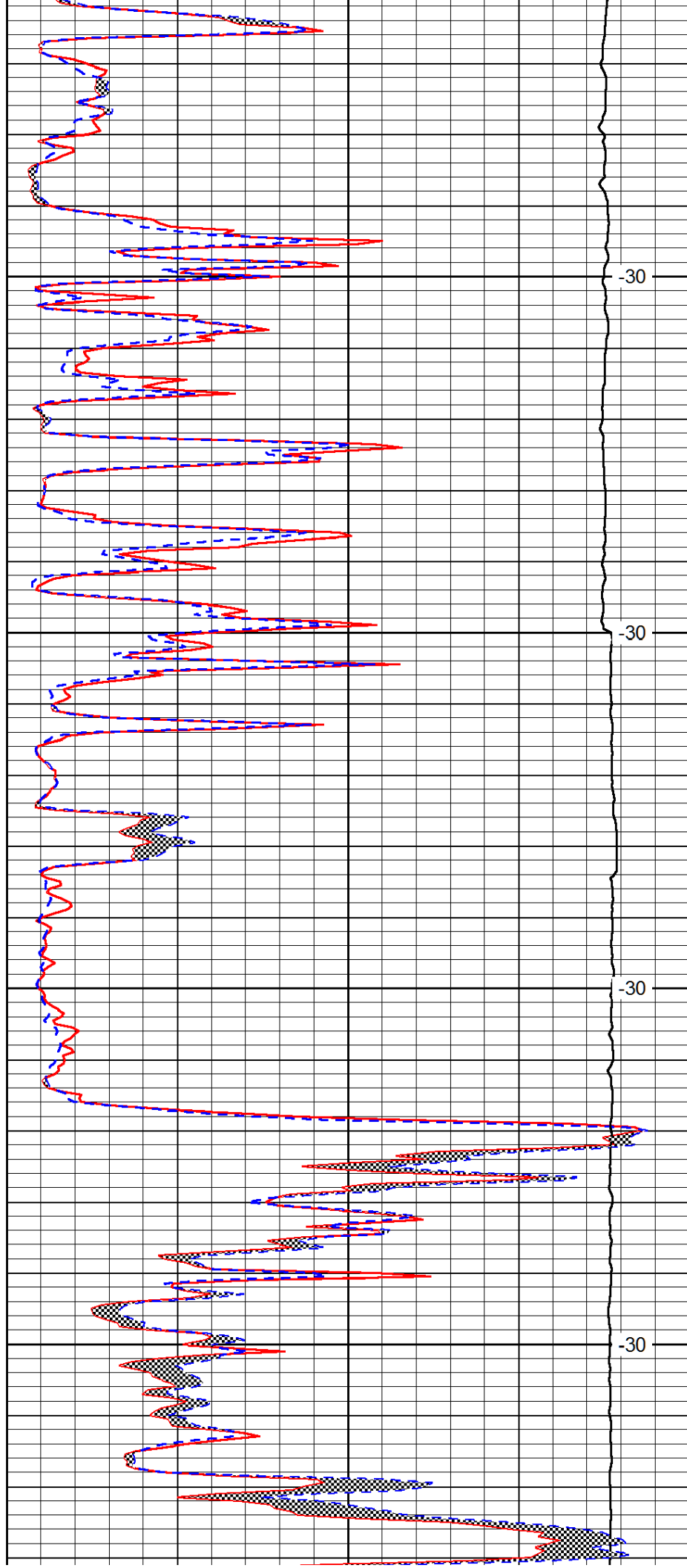


2050

2100

2150

2200

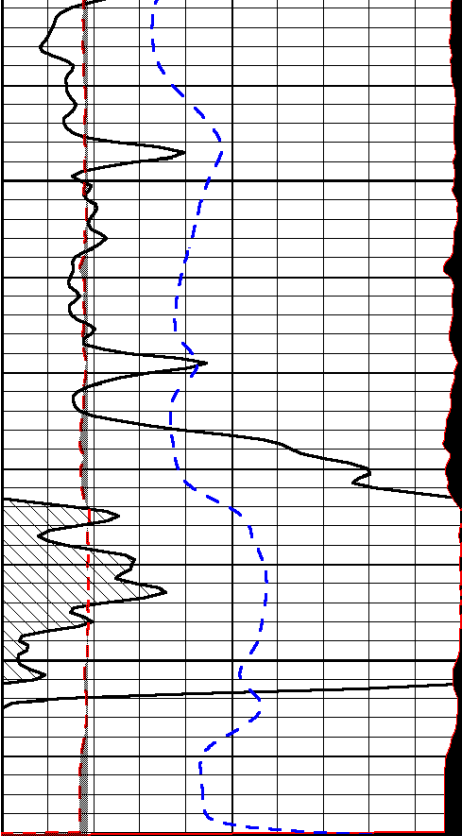


-30

-30

-30

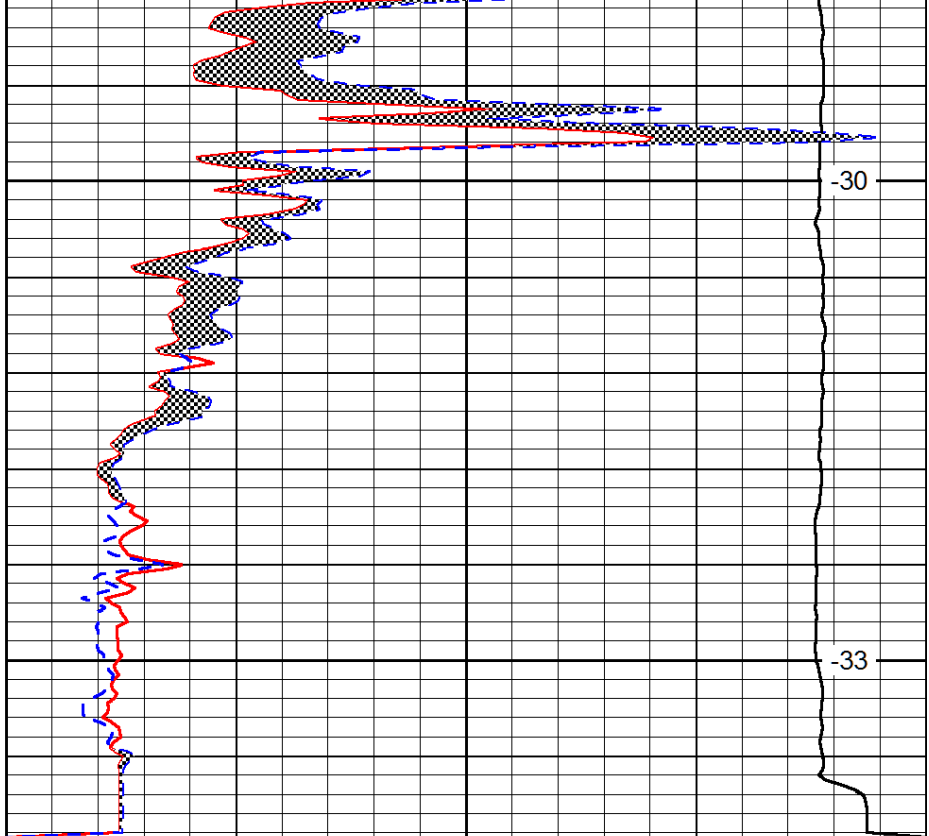
-30



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

2250

2300



0	Micro Inverse 1 X 1	40
0	Micro Normal 2"	40
10000	Line Weight	0

LSPD