



Microresistivity Log

Pioneer Energy Services

API No.

15-065-23,947-00-00

Company H&C Oil Operating, Inc.

Well Michele No.13-1

Field Keith

County Graham

State

Kansas

Location

1650' FSL & 2310' FWL

Sec: 13

Twp: 9S

Rge: 25W

Elevation

Permanent Datum Ground Level

Log Measured From Kelly Bushing

Drilling Measured From Kelly Bushing

Elevation 2543
K.B. 2548
D.F. 2543
G.L. 2543

Date

7/3/2013

Run Number

Two

Depth Driller

4170

Depth Logger

4172

Bottom Logged Interval

4171

Top Log Interval

3500

Casing Driller

8.625 @ 258

Casing Logger

257

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity,ppm CL

1,800

Density / Viscosity

9.1 60
10.0 7.2

pH / Fluid Loss

Flowline

Source of Sample

1.45 @ 75

Rm @ Meas. Temp

1.09 @ 75

Rmc @ Meas. Temp

1.96 @ 75

Source of Rmf / Rmc

Charts

Rm @ BHT

.92 @ 118

Operating Rig Time

4 Hours

Max Rec. Temp. F

118

Equipment Number

17

Location

Hays

Recorded By

C. Desaire

Witnessed By

Mike Bair

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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.

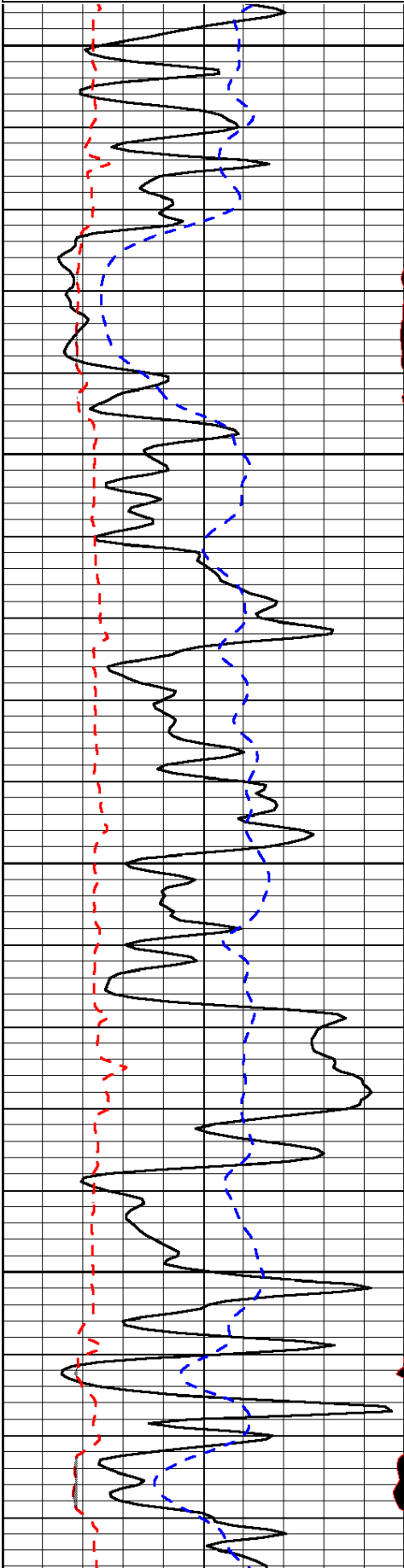
Comments

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

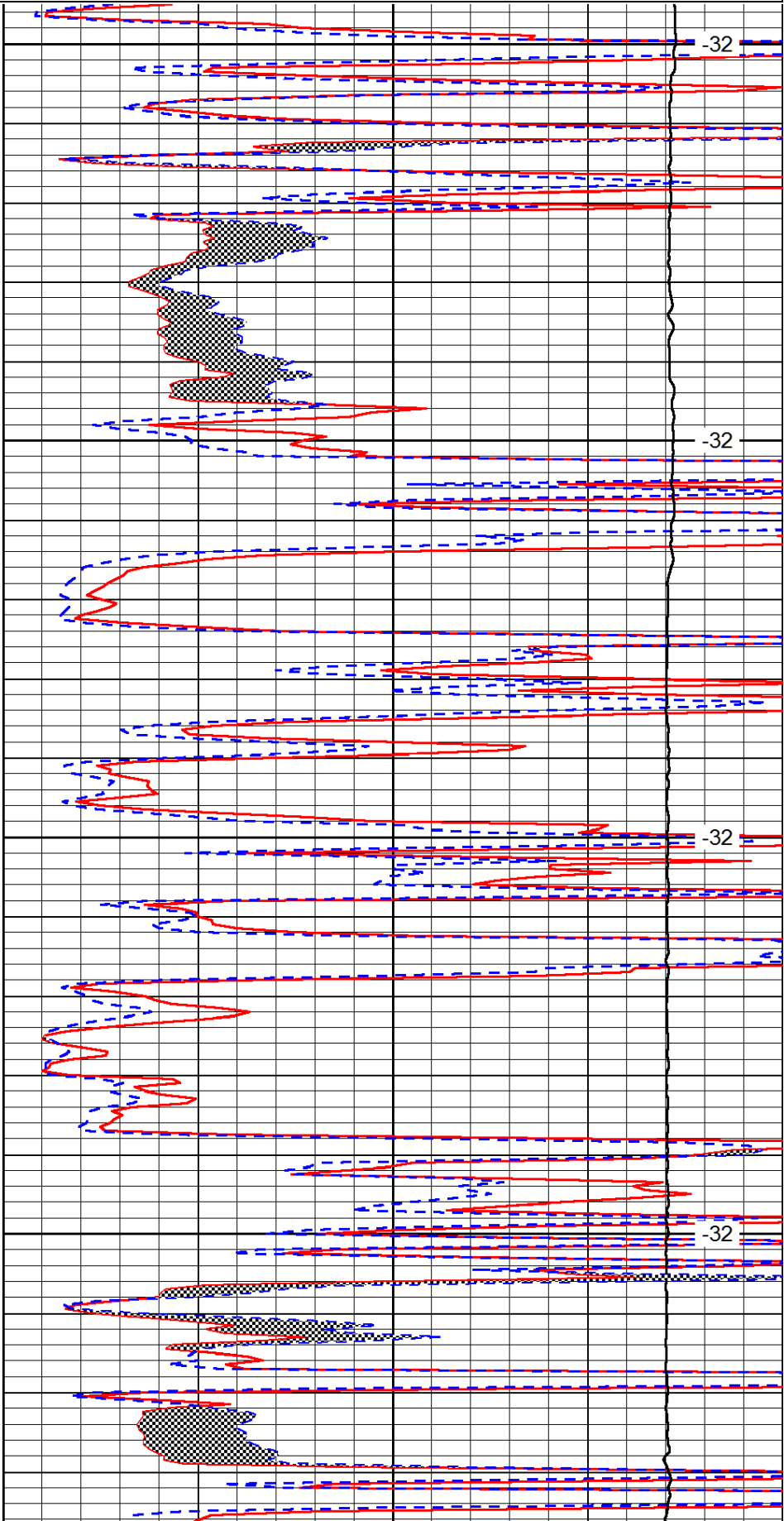
Wakeeney KS, N to H Rd, 11 W to 150 Rd,
3 N, 1/2 E, 3/4 S Into

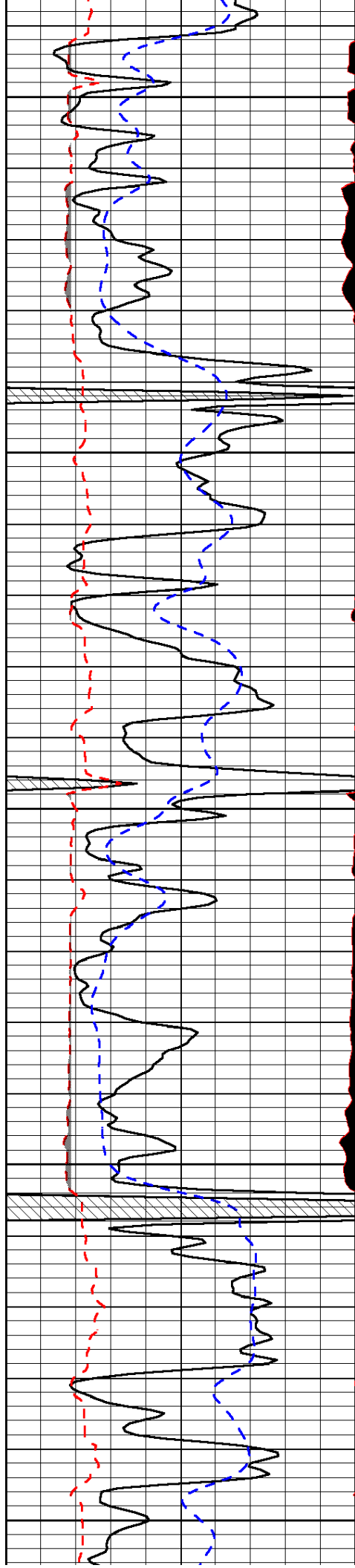
Charted by: Depth in Feet scaled 1:2.15

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)





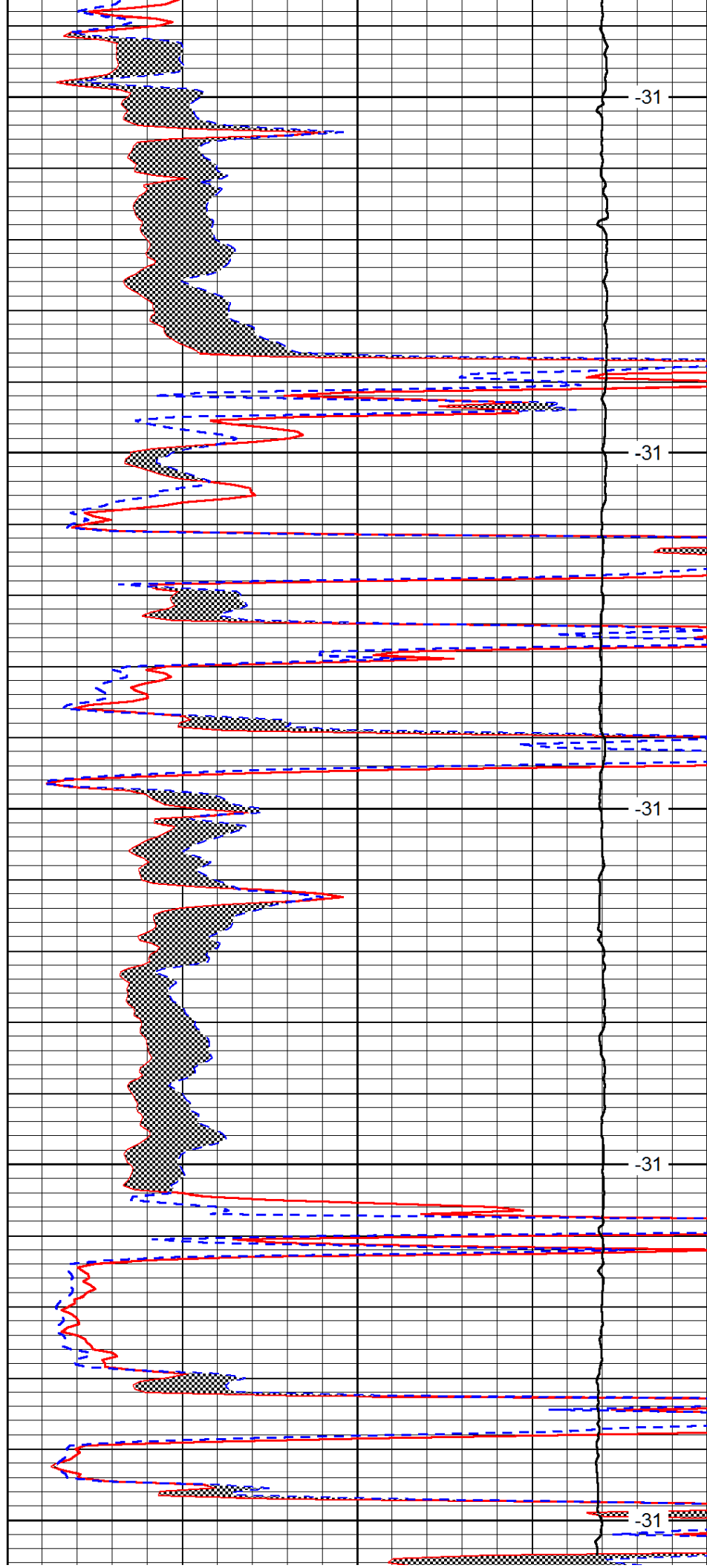
3700

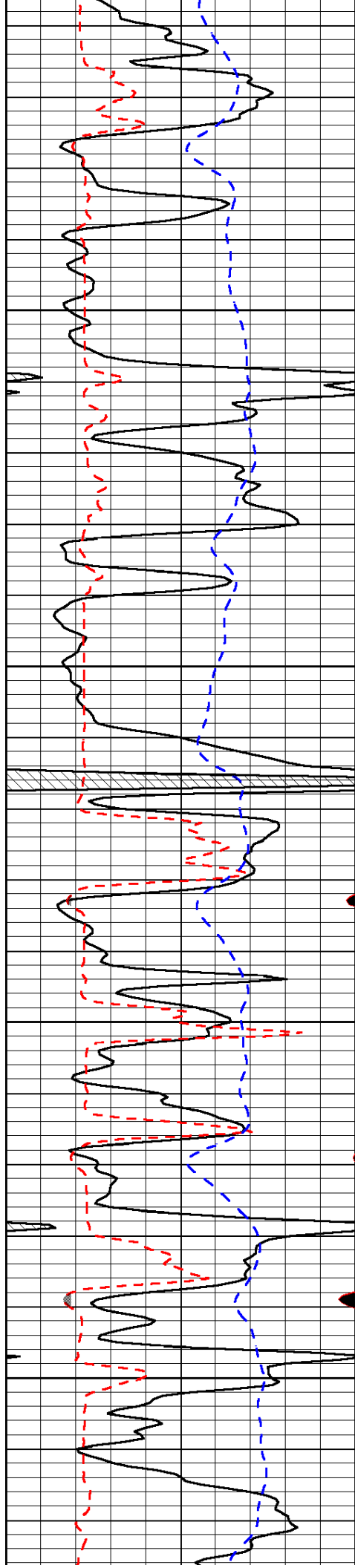
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3800

3850

3900



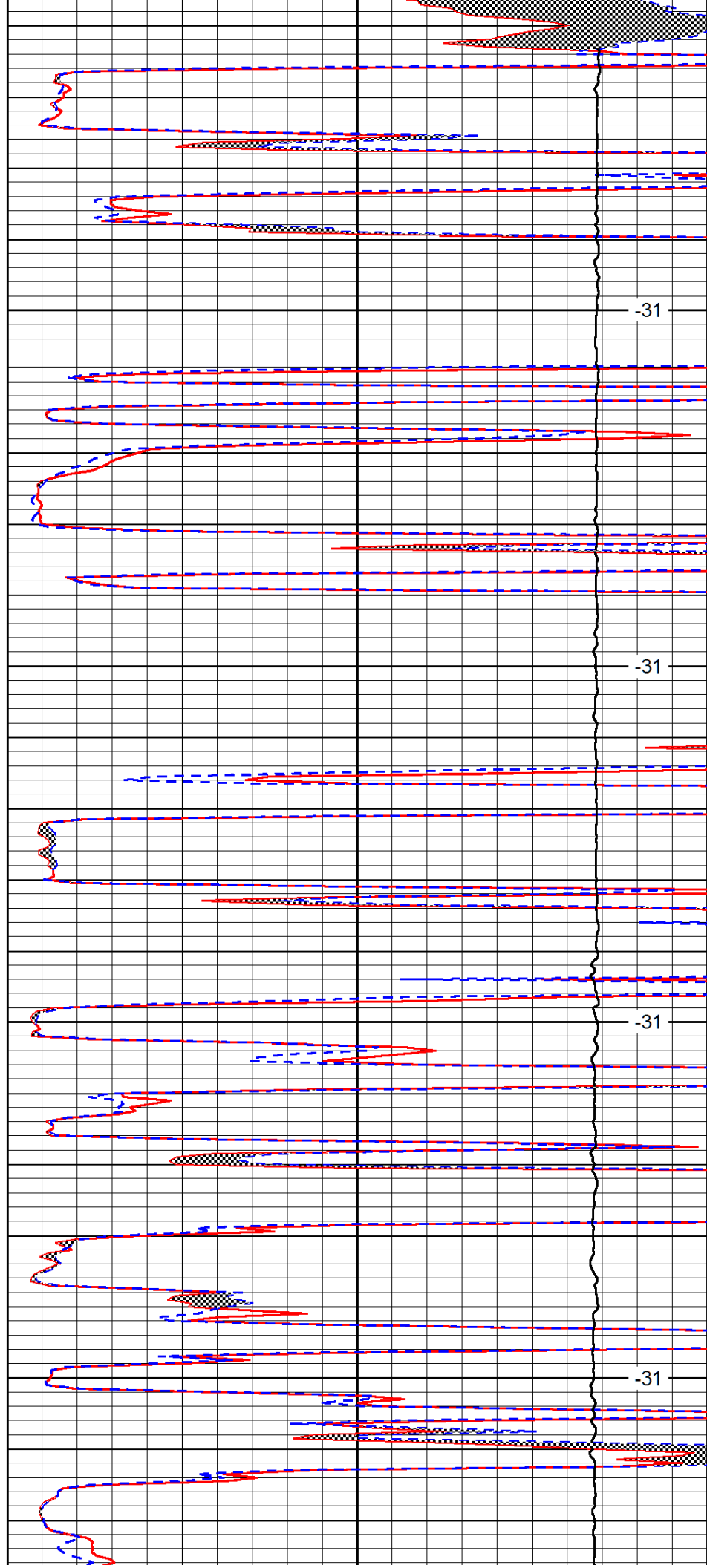


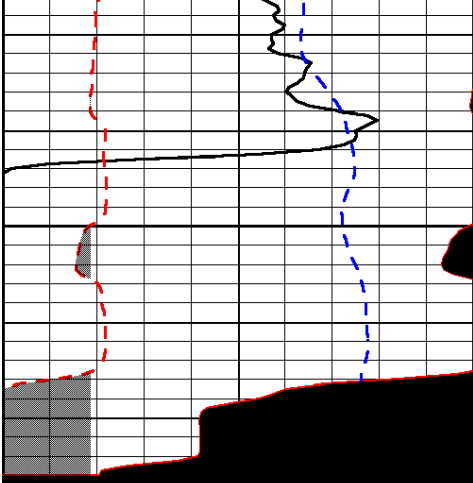
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4000

4050

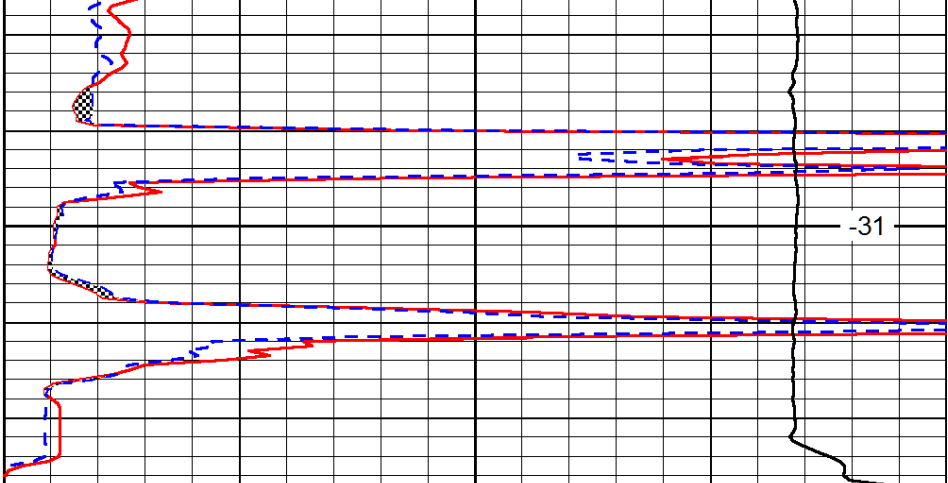
4100





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

4150



0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

LSPD
(ft/min)