



PIONEER

Pioneer Energy Services

Microresistivity Log

API No.

15-113-21,371-00-00

Company Torchlight Energy Operating, LLC

Well Hudson #9-1T

Field Lindsborg

County McPherson State

Kansas

Location 660' FNL & 1654' FWL

Sec: 9 Twp: 17S Rge: 3W

Other Services
CNL/CDL
DIL

Permanent Datum Ground Level Elevation 1332
Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

K.B. 1342
D.F.
G.L. 1332

Date 7/16/2014

Run Number Two

Depth Driller 3520

Depth Logger 3515

Bottom Logged Interval 3514

Top Log Interval 2800

Casing Driller 8.625 @ 519

Casing Logger 518

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 2600

Density / Viscosity 8.7 46

pH / Fluid Loss 9.0 9.2

Source of Sample Flowline

Rm @ Meas. Temp 1.10 @ 82

Rmf @ Meas. Temp 0.83 @ 82

Rmc @ Meas. Temp 1.49 @ 82

Source of Rmf / Rmc Charts

Rm @ BHT 0.81 @ 111

Operating Rig Time 4 Hours

Max Rec. Temp. F 111

Equipment Number 15

Location Hays

Recorded By D.Kerr

Witnessed By John Worley

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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

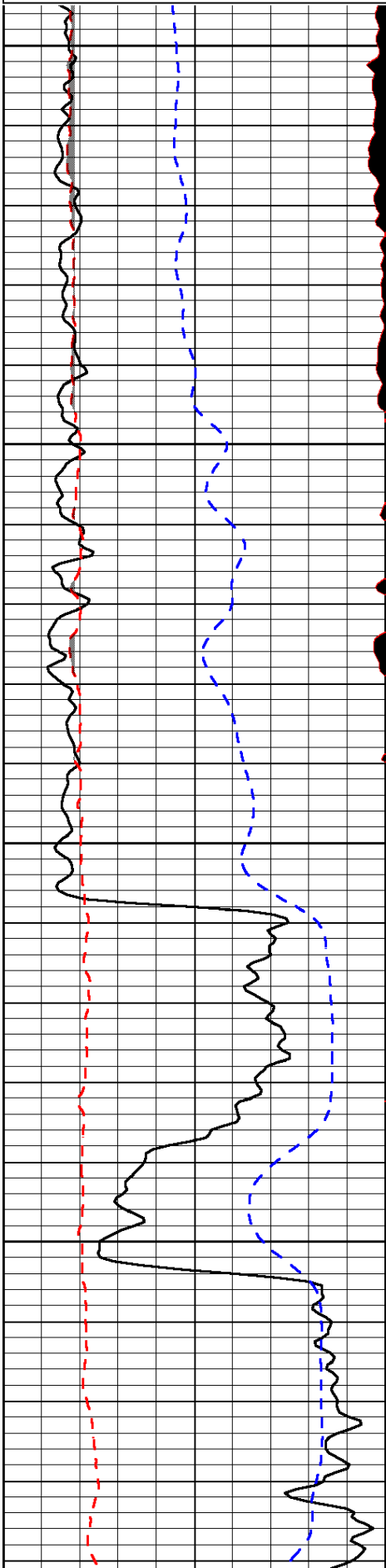
Thank you for using Log-Tech, Inc.
(785) 625-3858

Lindsborg KS, East to Wheatridge RD,
3/4 West, South Into

Database File: torchlight_hudson_9_1thd.db
Dataset Pathname: DIL/tlstk
Presentation Format: micro
Dataset Creation: Thu Jul 17 01:13:29 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

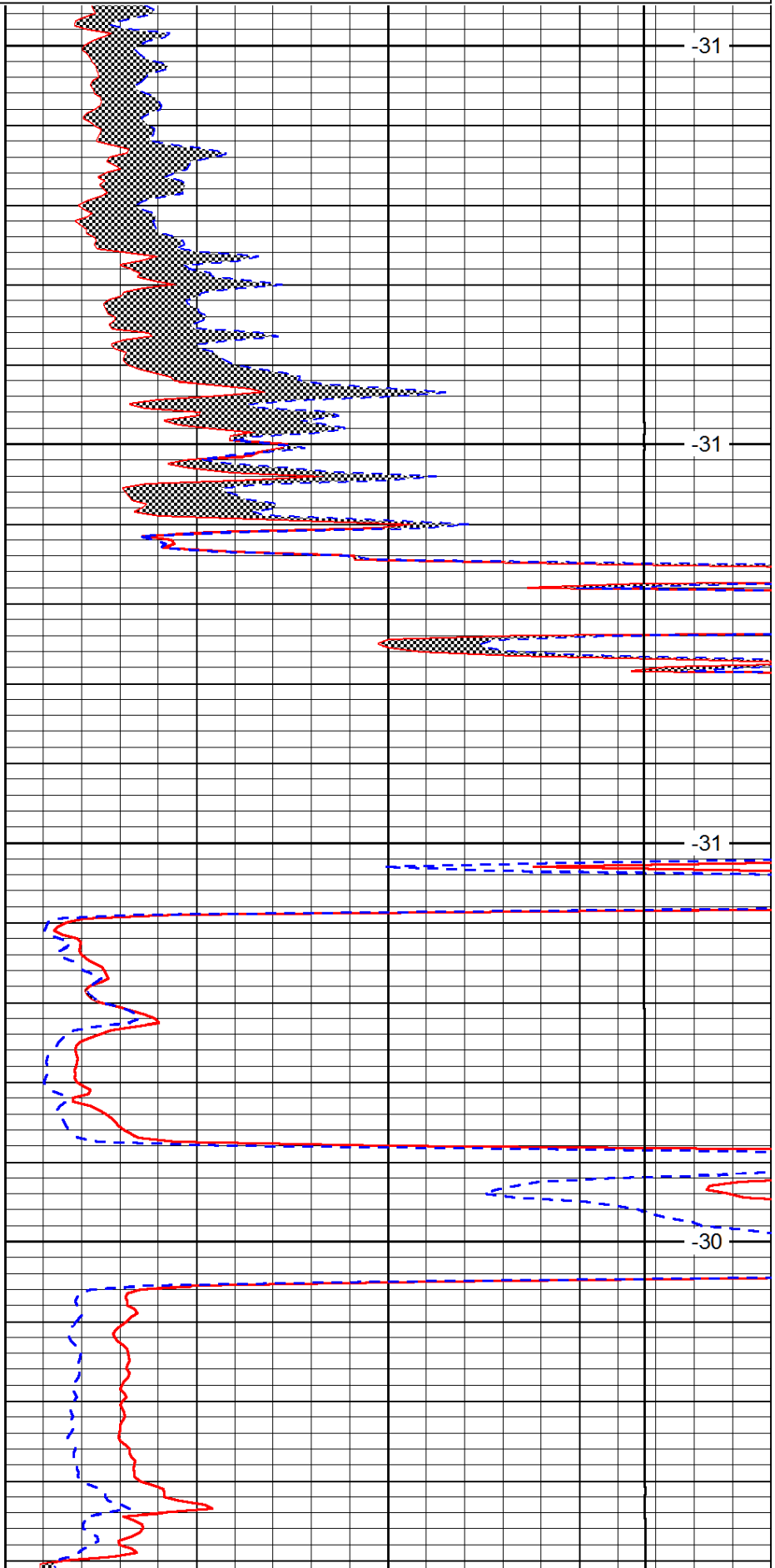


3000

3050

3100

3150

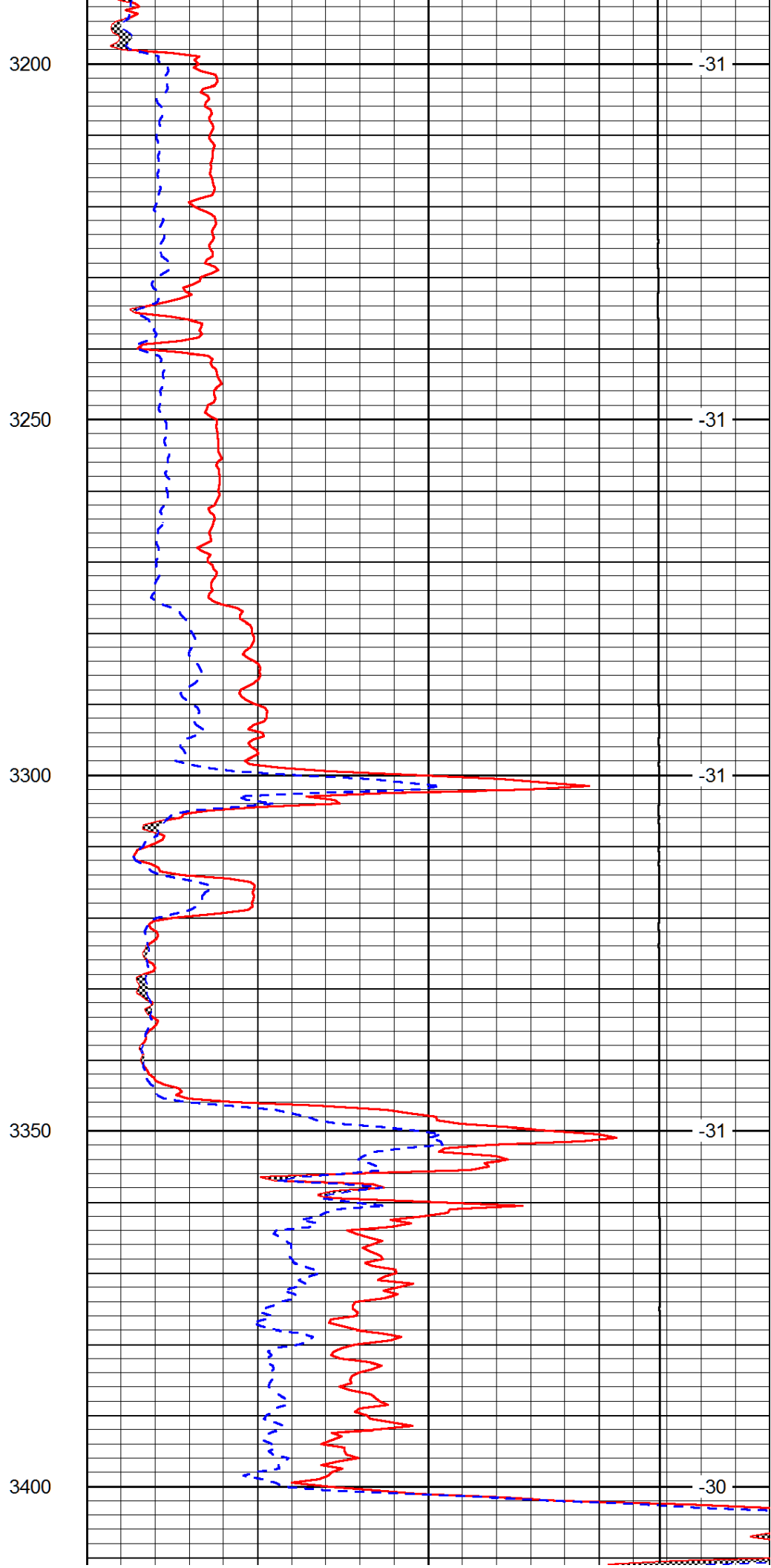
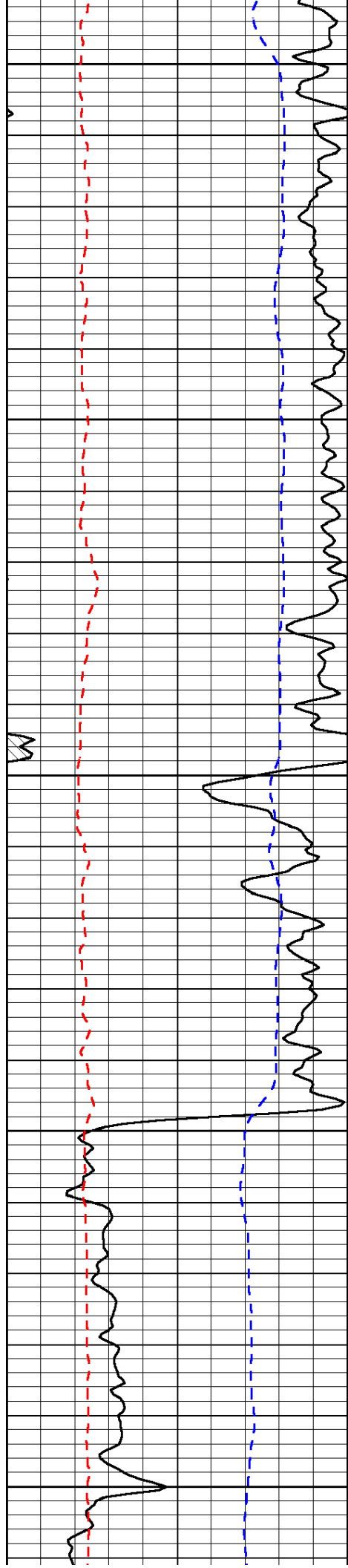


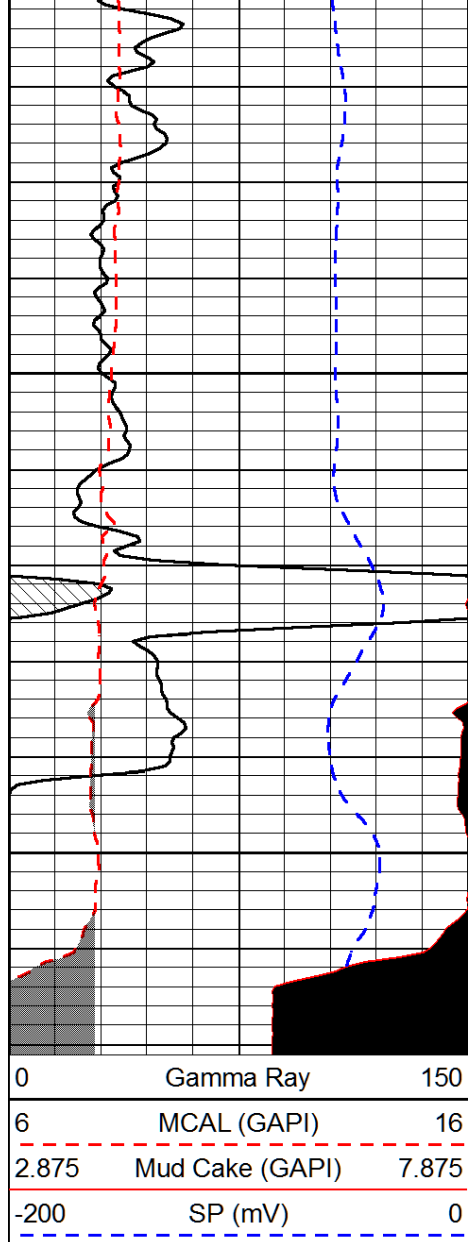
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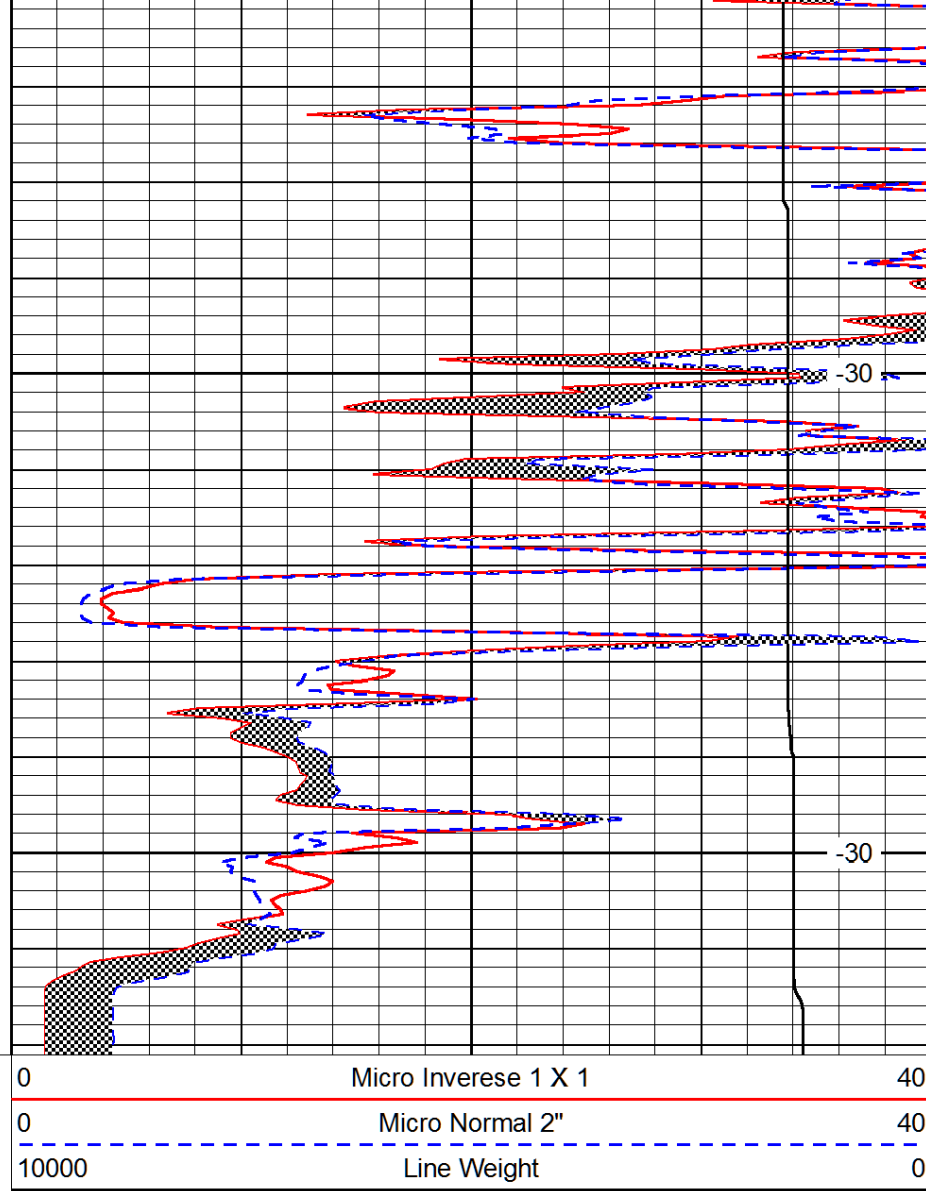
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3450

3500



LSPD