



Pioneer Energy Services

Microresistivity Log

15-165-22084-00-00

Company **Wausau Development Corporation**
 Well **Holoperik # 1**
 Field **Rush Center SE**
 County **Rush** State **Kansas**

Location **1080' FNL & 1980' FEL**
 Sec: **36** Twp: **18 S** Rge: **18 W**

Other Services
 CNL/CDL
 DIL/BHCS

Permanent Datum **Ground Level** Elevation **2023**
 Log Measured From **Kelly Bushing** **7** Ft. Above Perm. Datum
 Drilling Measured From **Kelly Bushing**

Elevation
 K.B. 2030
 D.F. G.I.L. 2023

| | |
|------------------------|------------------|
| Date | 07-20-2014 |
| Run Number | Two |
| Depth Driller | 3823 |
| Depth Logger | 3826 |
| Bottom Logged Interval | 3825 |
| Top Log Interval | 3400 |
| Casing Driller | 8.625 @ 1163 |
| Casing Logger | 1163 |
| Bit Size | 7.875 |
| Type Fluid in Hole | Chemical |
| Salinity, ppm CL | 4600 |
| Density / Viscosity | 9.2 55 |
| pH / Fluid Loss | 9.5 9.6 |
| Source of Sample | Flowline |
| Rm @ Meas. Temp | 0.80 @ 90 |
| Rmf @ Meas. Temp | 0.60 @ 90 |
| Rmc @ Meas. Temp | 1.08 @ 90 |
| Source of Rmf / Rmc | Charts |
| Rm @ BHT | 0.63 @ 114 |
| Operating Rig Time | 4 Hours |
| Max Rec. Temp. F | 114 |
| Equipment Number | 17 |
| Location | Hays |
| Recorded By | Y. Ruiz |
| Witnessed By | Steve VanBuskink |

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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

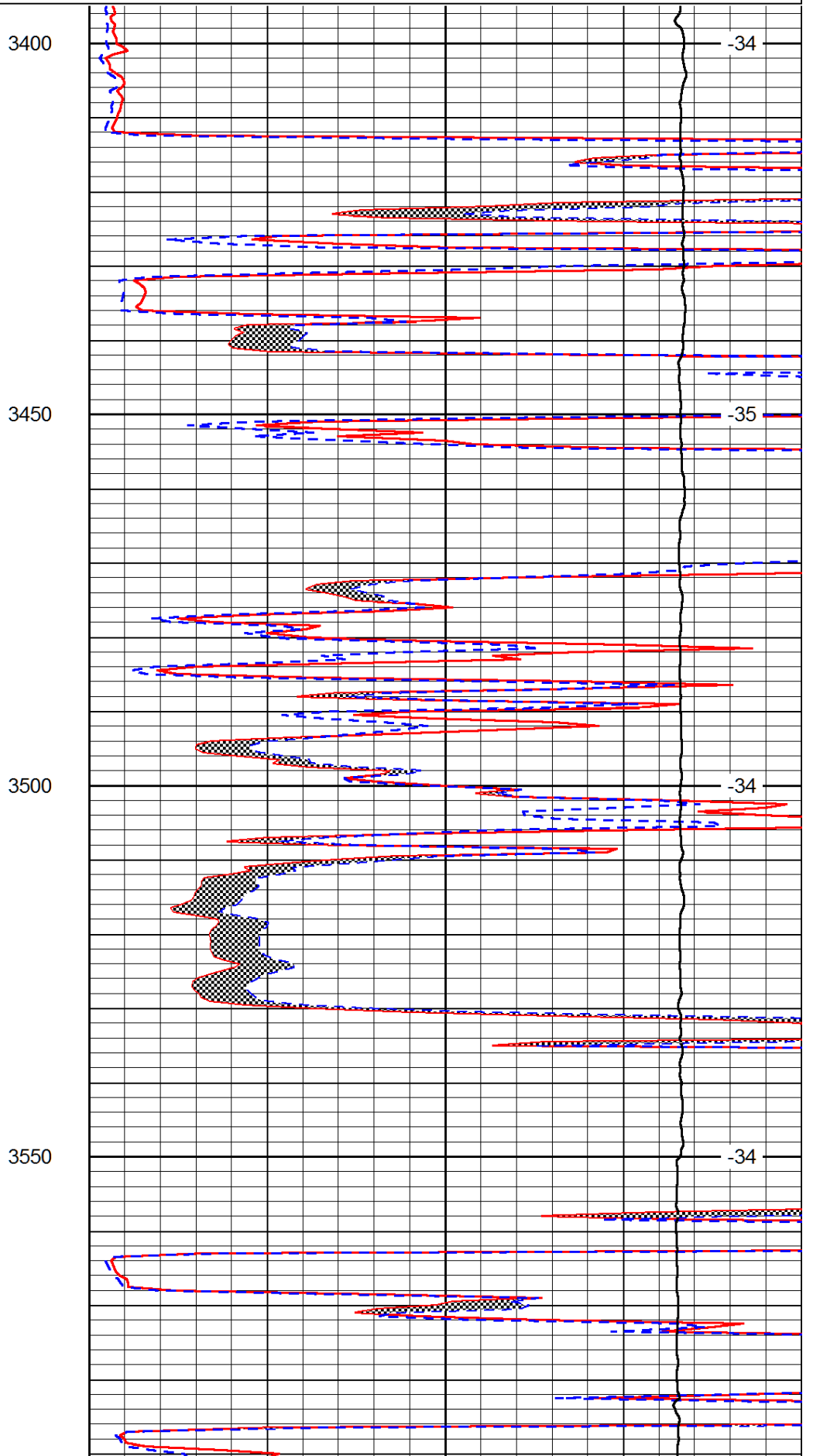
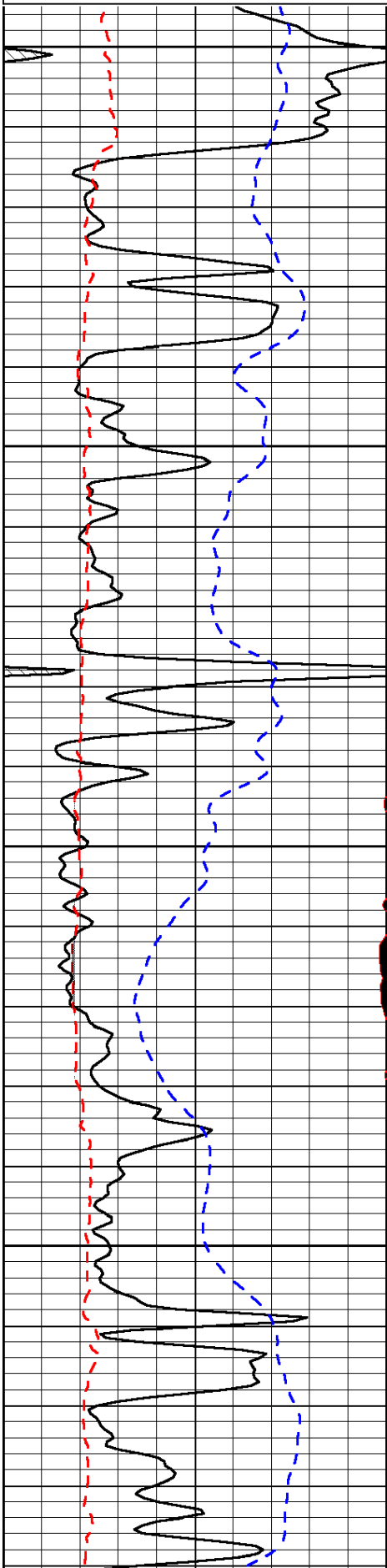
Thank you for using Log-Tech, Inc.
 (785) 625-3858
 Rush Center,
 3 East, 1 South, 1/2 West,
 South into

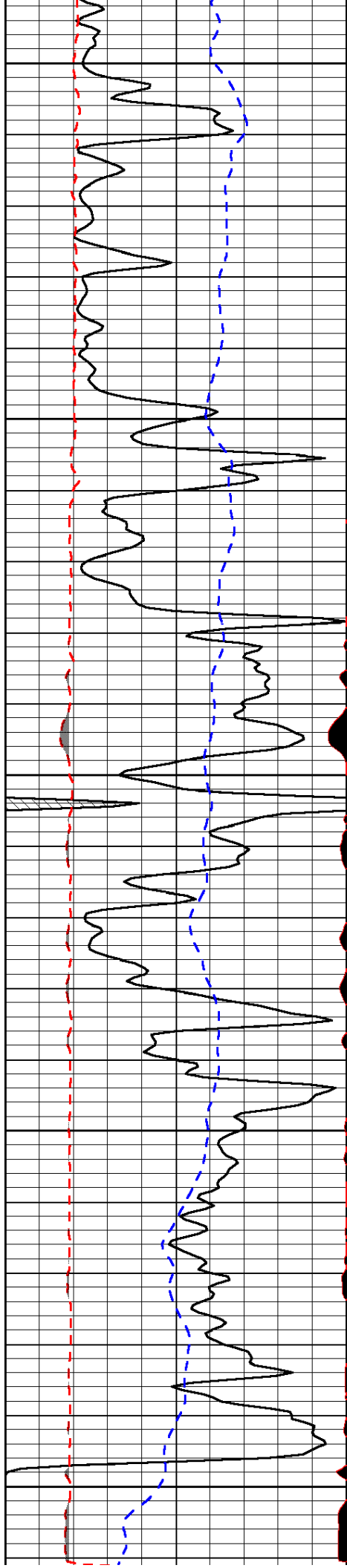
Database File: wausau_holoperik_1_hd.db
 Dataset Pathname: DIL/waustk
 Presentation Format: micro
 Dataset Creation: Sun Jul 20 20:34:35 2014
 Charted by: Depth in Feet scaled 1:240

| | | |
|-------|-----------------|-------|
| 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





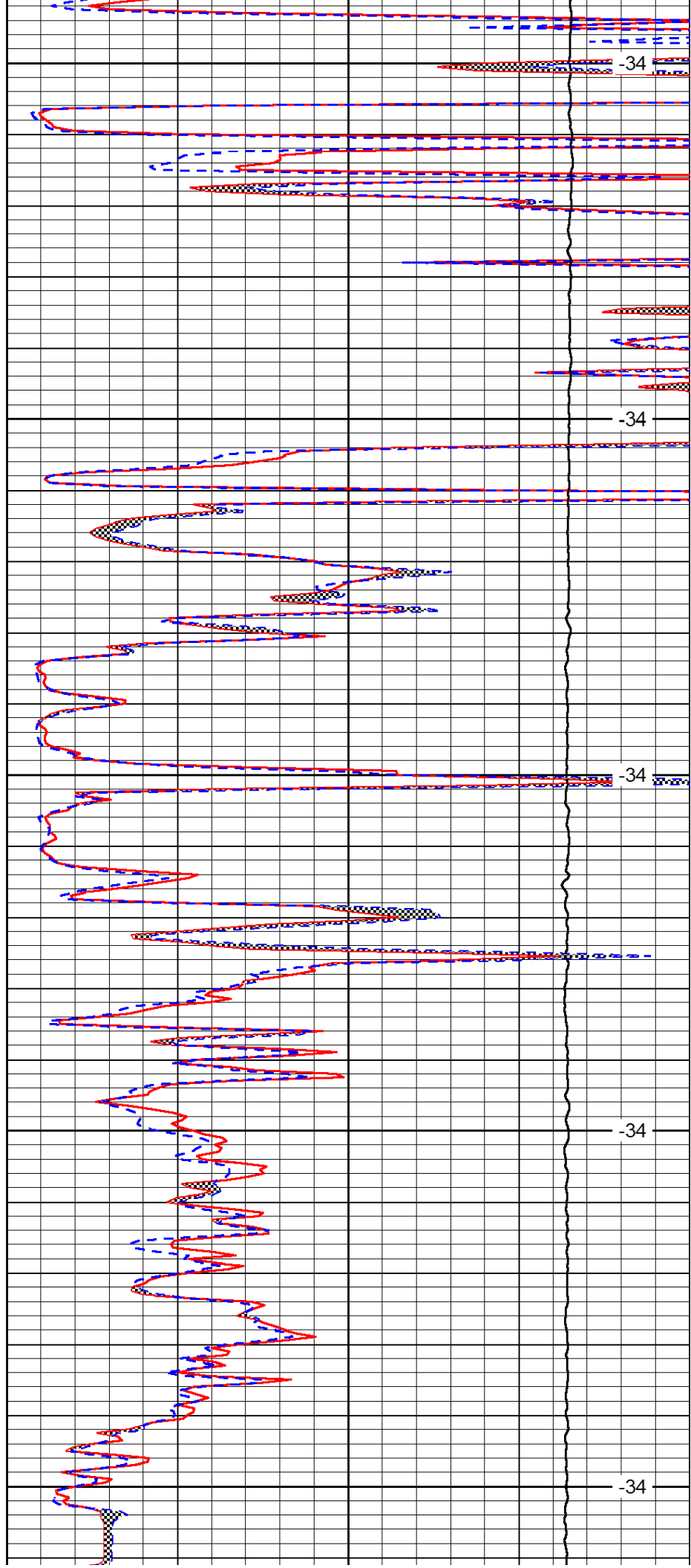
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3650

3700

3750

3800



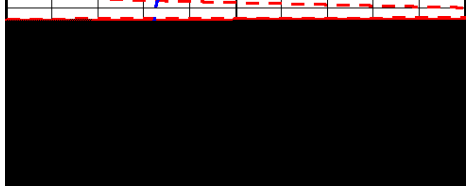
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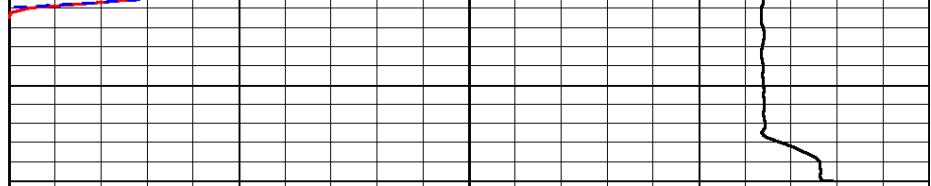
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