



MICRORESISTIVITY LOG

Company VAL ENERGY, INC.
Well HORINEK #1-2
Field UNKNOWN
County THOMAS **State** KANSAS

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Well HORINEK #1-2
Field UNKNOWN
County THOMAS
State KANSAS

Location: API #: 15-193-20977-00-00
 1951' FNL & 2205' FWL
 SEC 2 TWP 8S RGE 36W
 Permanent Datum GROUND LEVEL Elevation 3321'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services: CNL/CDL DIL/BHCS
 Elevation: K.B. 3331', D.F. N/A, G.L. 3321'

| | |
|------------------------|---------------|
| Date | 11/10/2016 |
| Run Number | ONE |
| Depth Driller | 4850' |
| Depth Logger | 4851' |
| Bottom Logged Interval | 4850' |
| Top Log Interval | 3800' |
| Casing Driller | 8.625" @ 263' |
| Casing Logger | 264' |
| Bit Size | 7.875" |
| Type Fluid in Hole | CHEMICAL |
| Salinity, ppm CL | 6500 |
| Density / Viscosity | 9.3 67 |
| pH / Fluid Loss | 10.0 9.2 |
| Source of Sample | FLOWLINE |
| Rm @ Meas. Temp | 0.65 @ 42 |
| Rmt @ Meas. Temp | 0.49 @ 42 |
| Rmc @ Meas. Temp | 0.88 @ 42 |
| Source of Rmf / Rmc | CHARTS |
| Rm @ BHT | 0.22 @ 125 |
| Operating Rig Time | 3 HOURS |
| Max Rec. Temp. F | 125 |
| Equipment Number | 91 |
| Location | COLBY |
| Recorded By | D. SCHMIDT |
| Witnessed By | TIM PRIEST |

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

LEVANT,
 6 WEST ON FRONTAGE ROAD TO 5 RD,
 2 NORTH, 1/2 EAST,
 SOUTH INTO

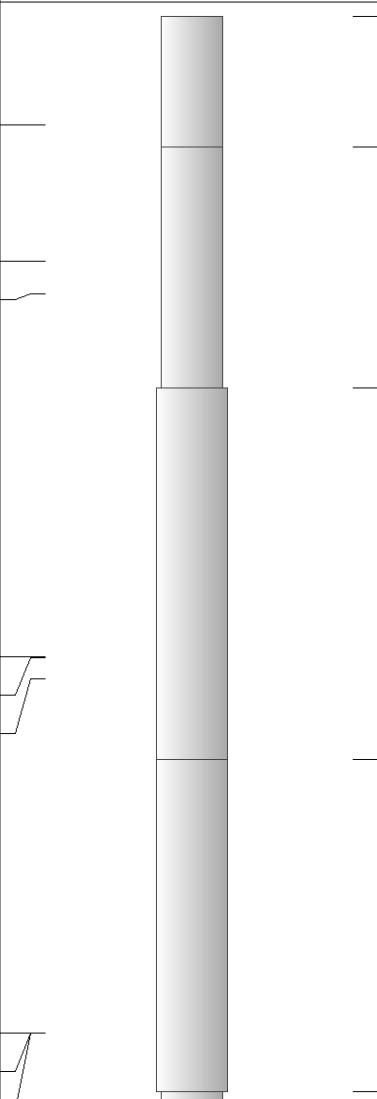
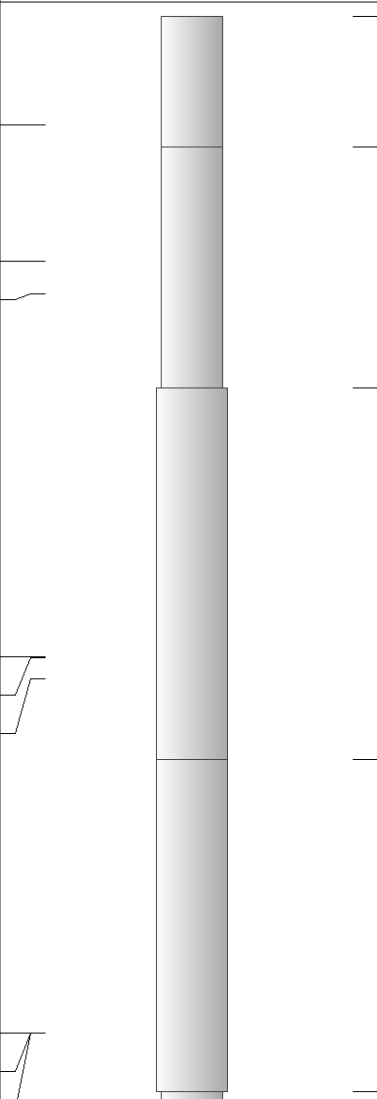
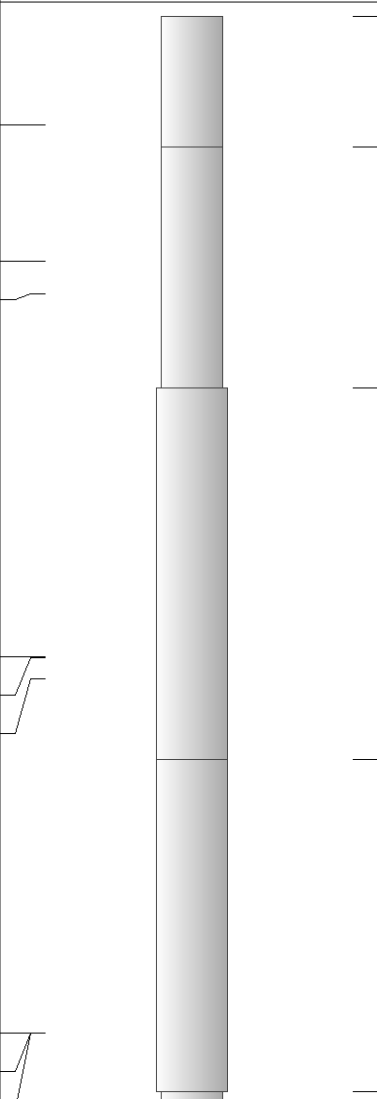
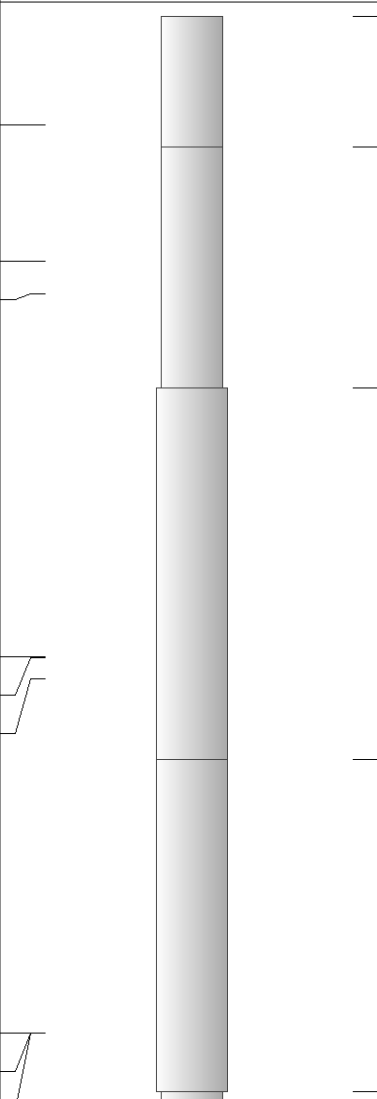
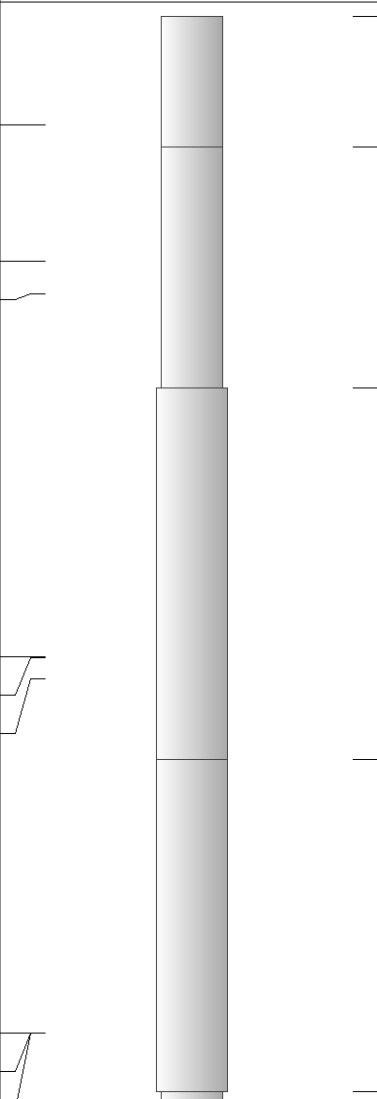
Log Measured From: KELLY BUSHING 10 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

| | |
|---|--|
| Your Pioneer Energy Services Crew Engineer: D. SCHMIDT Operator: Operator: Operator: | This Log Record Was Witnessed By Primary Witness: TIM PRIEST Secondary Witness: Secondary Witness: Secondary Witness: |
|---|--|

Top - Bottom

| | | | | | | | |
|------------------|-----------------|----------------|--------------|------------------|------------------|-----------------|-------------------|
| M | A | SZCOR | NPORSEL | FLUIDDEN g/cc | MATRXDEN g/cc | SPSHIFT mV | SNDERRM mmho/m |
| 2 | 1 | Off | Limestone | 1 | 2.71 | -120 | 0 |
| SNDERR mmho/m | SRFTEMP degF | CASETHCK in | CASEOD in | PERFS | TDEPTH ft | BOTTEMP degF | BOREID in |
| 0 | 40 | 0 | 5.5 | 0 | 4851 | 125 | 7.875 |

| Sensor | Offset (ft) | Schematic | Description | Length (ft) | O.D. (in) | Weight (lb) |
|--------------------|-------------------------|--|--|-------------|-----------|-------------|
| GR | 40.58 |  | GR-M&W (89) | 3.00 | 3.50 | 50.00 |
| CNLSC CNSSC | 37.48 36.73 |  | CNT-M&W (207-MW) | 5.50 | 3.50 | 100.00 |
| LSD DCAL SSD | 28.43 28.42 27.93 |  | CDL-M&W (90-1031) | 8.50 | 4.00 | 250.00 |
| MCAL MI MN | 19.83 19.83 19.83 |  | ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics | 7.58 | 4.00 | 65.00 |
| RLL3F RLL3 | 15.80 15.80 |  | | | | |

| | | | | | | |
|---------------|------|---|---------------------|-------|------|--------|
| CILD | 8.00 | | DIL-M&W-75 (PSI 75) | 18.50 | 3.50 | 220.00 |
| CILM | 4.70 | | | | | |
| SP | 0.20 | | | | | |
| Dataset: | | val_horinek_1-12.db: field/well/stkml/pass3.6 | | | | |
| Total length: | | 43.08 ft | | | | |
| Total weight: | | 685.00 lb | | | | |
| O.D.: | | 4.00 in | | | | |

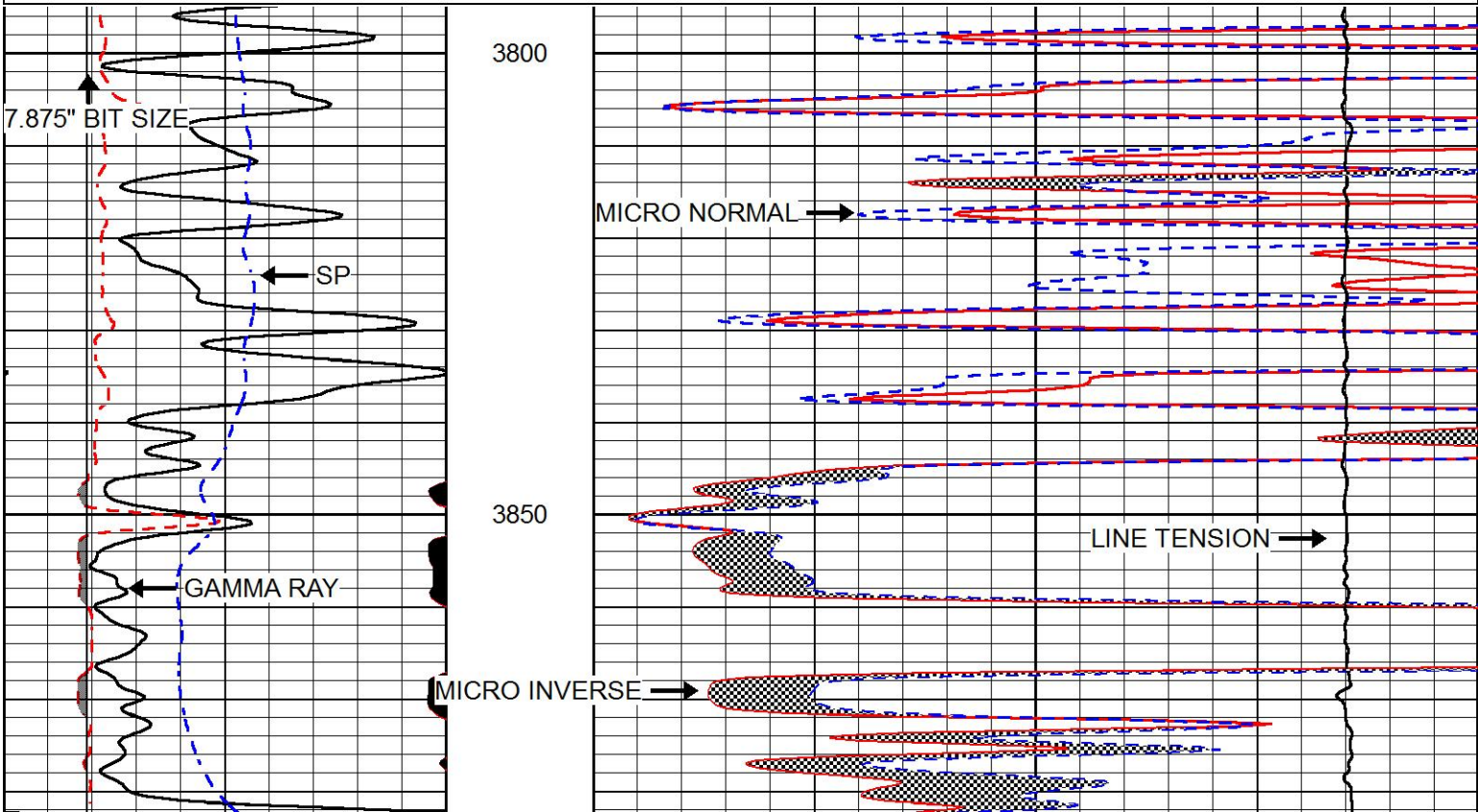


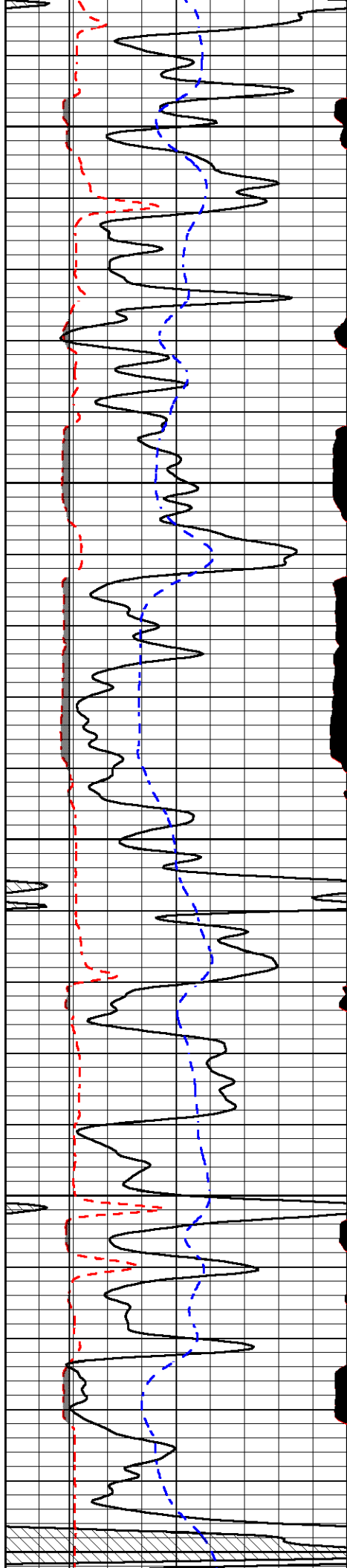
MAIN PASS

| | |
|---------------------|----------------------------|
| Database File | val_horinek_1-12.db |
| Dataset Pathname | stkml/pass3.1 |
| Presentation Format | micro |
| Dataset Creation | Thu Nov 10 02:12:46 2016 |
| Charted by | Depth in Feet scaled 1:240 |

| | | |
|-------|------------------|-------|
| 0 | Gamma Ray (GAPI) | 150 |
| 6 | MCAL (in) | 16 |
| 2.875 | mcal (in) | 7.875 |
| 6 | Bit Size (in) | 16 |
| -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 |





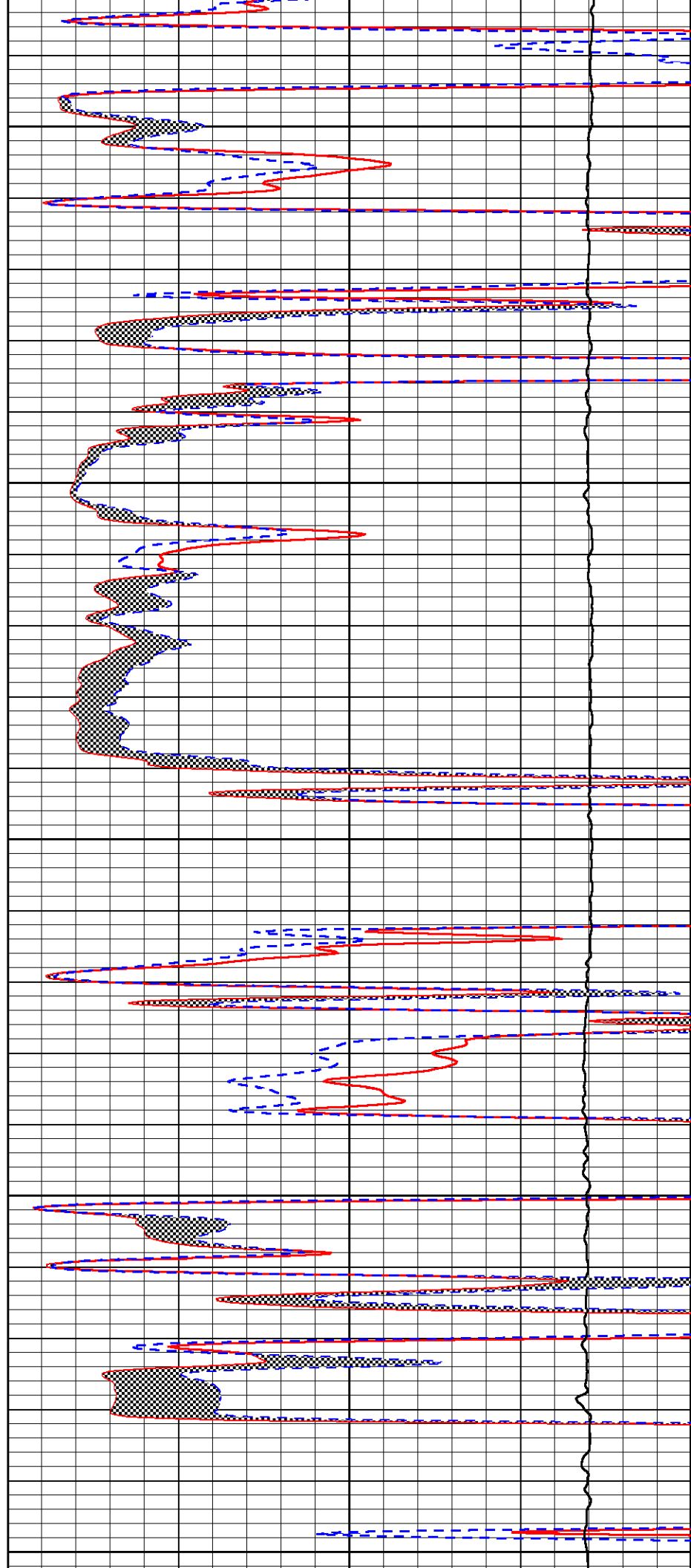
3900

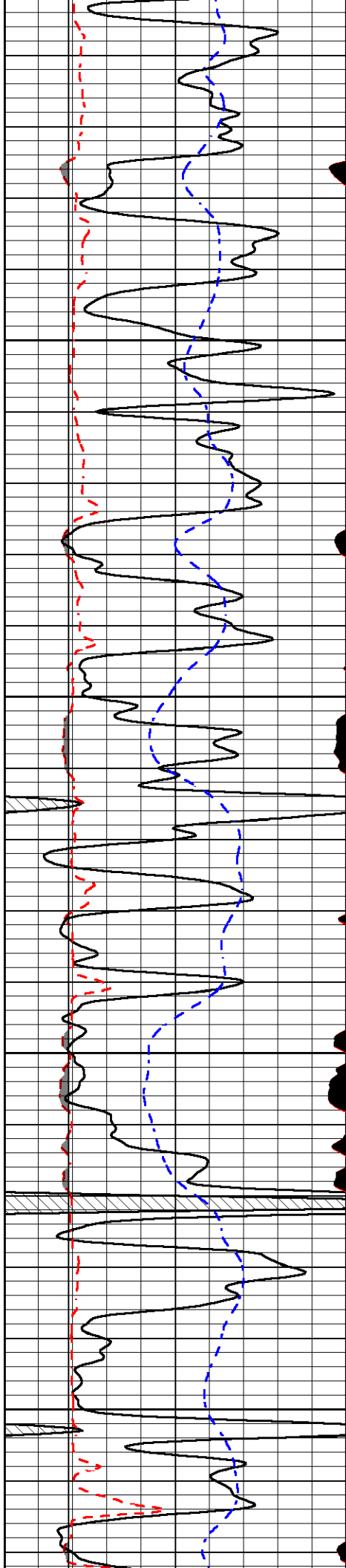
3950

4000

4050

4100



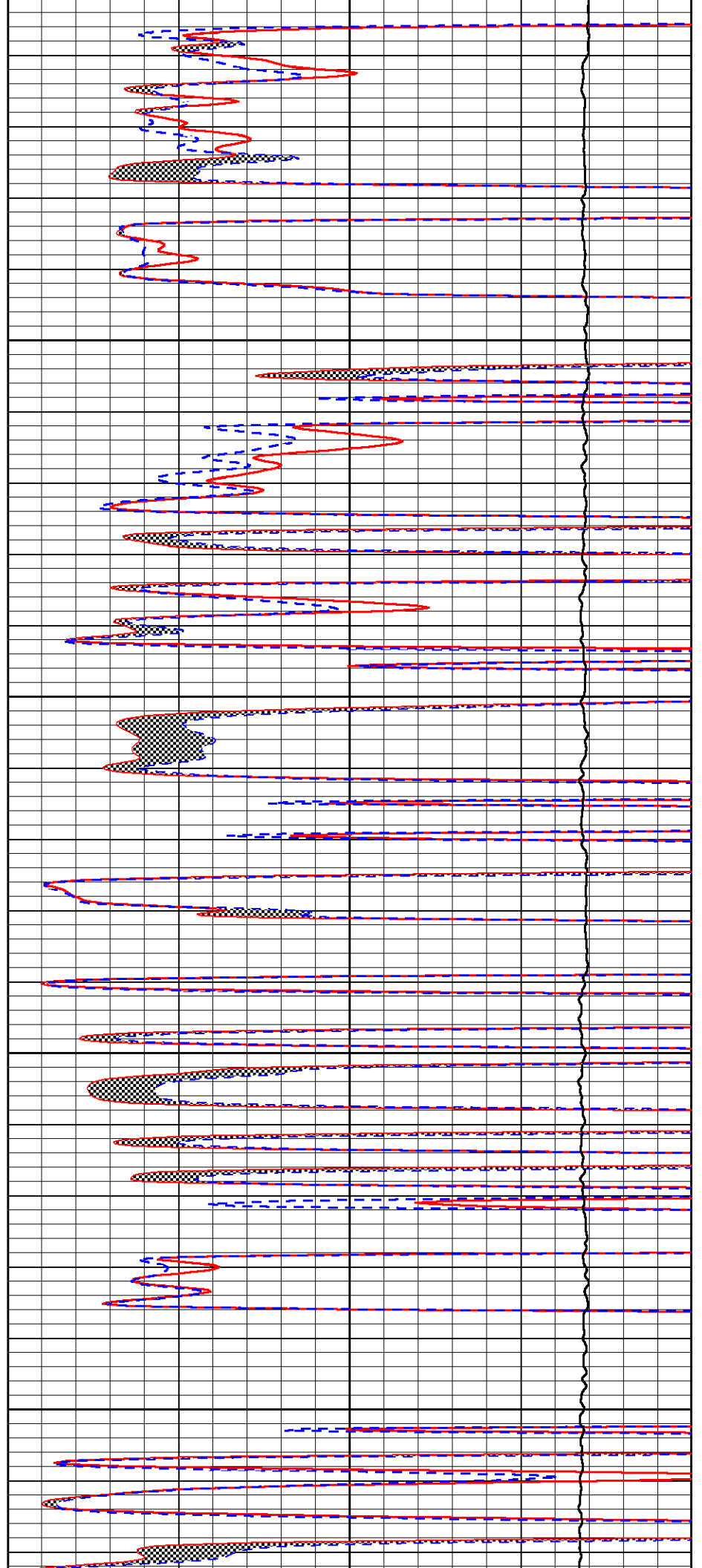


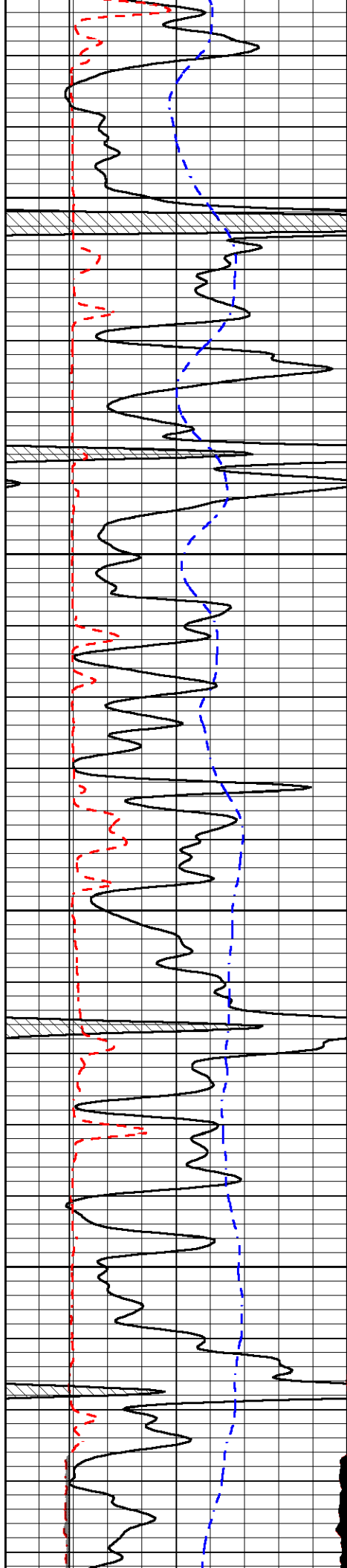
4150

4200

4250

4300



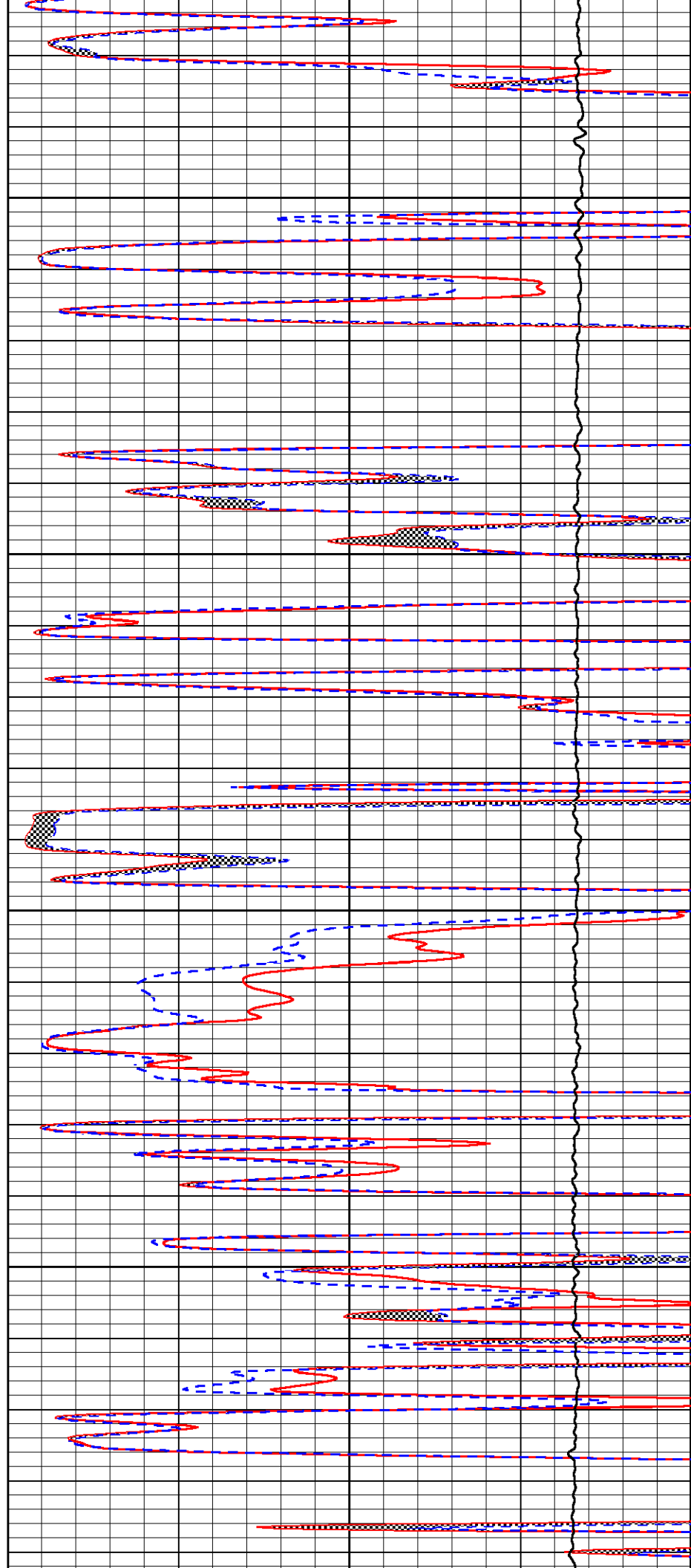


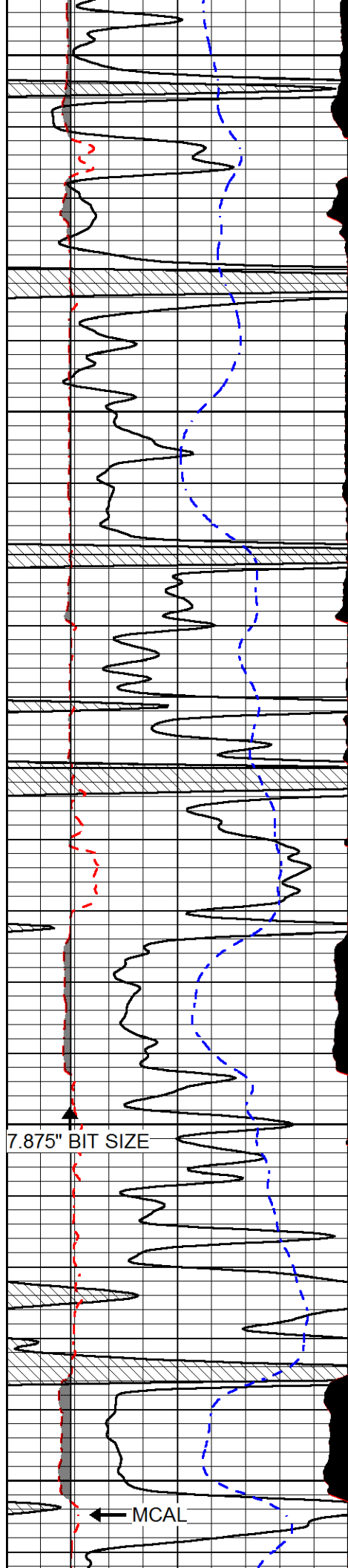
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4400

4450

4500





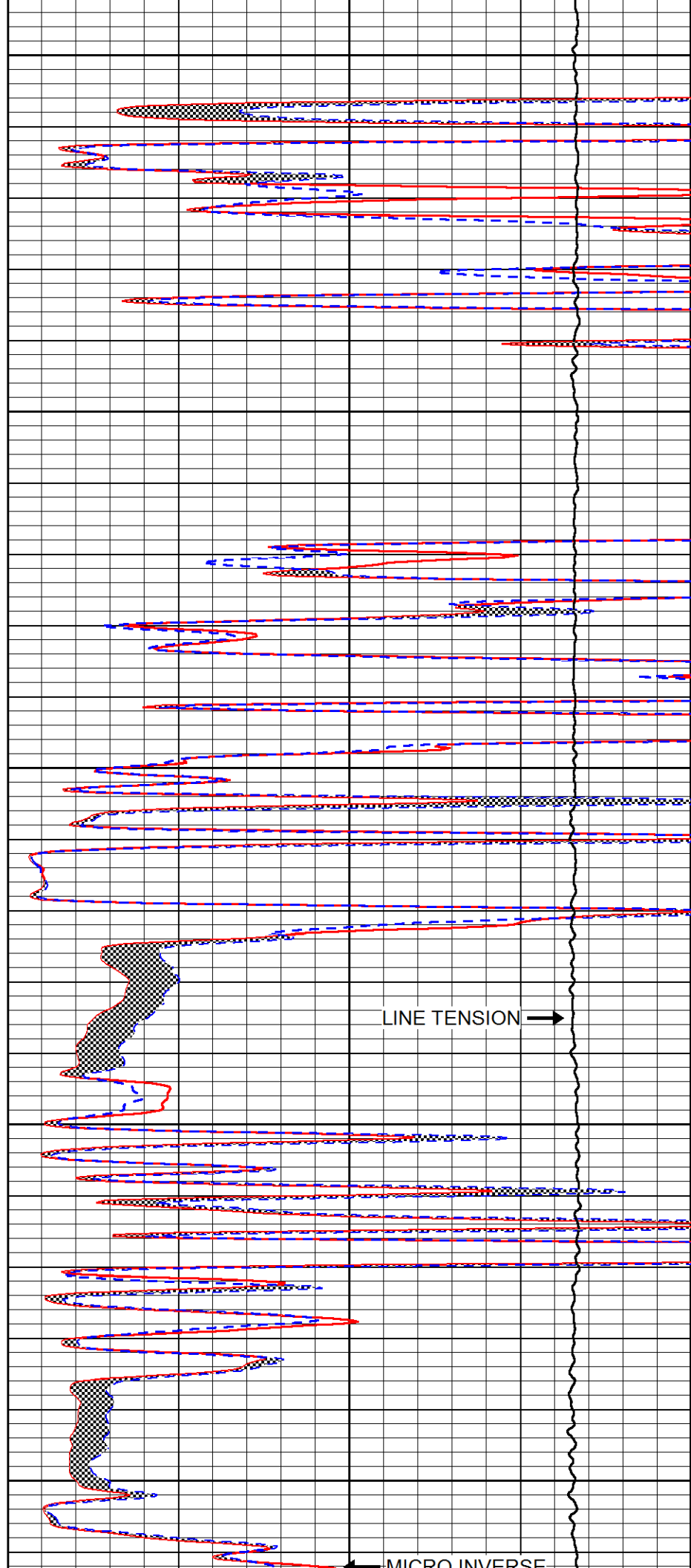
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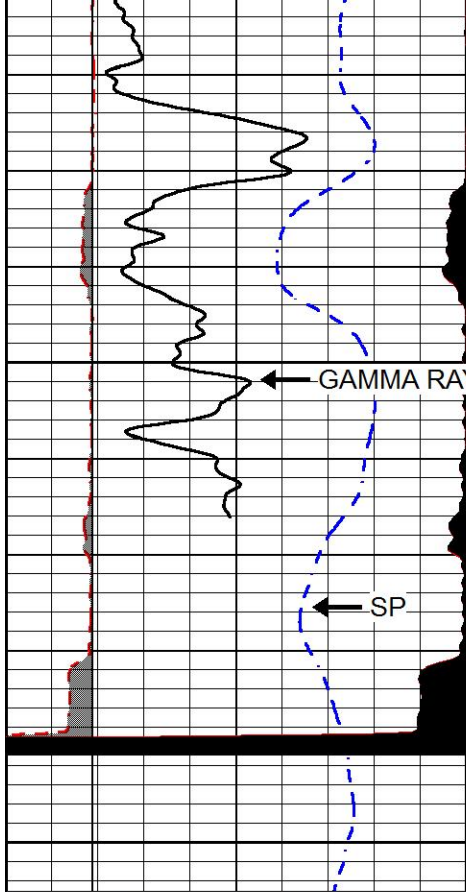
4600

4650

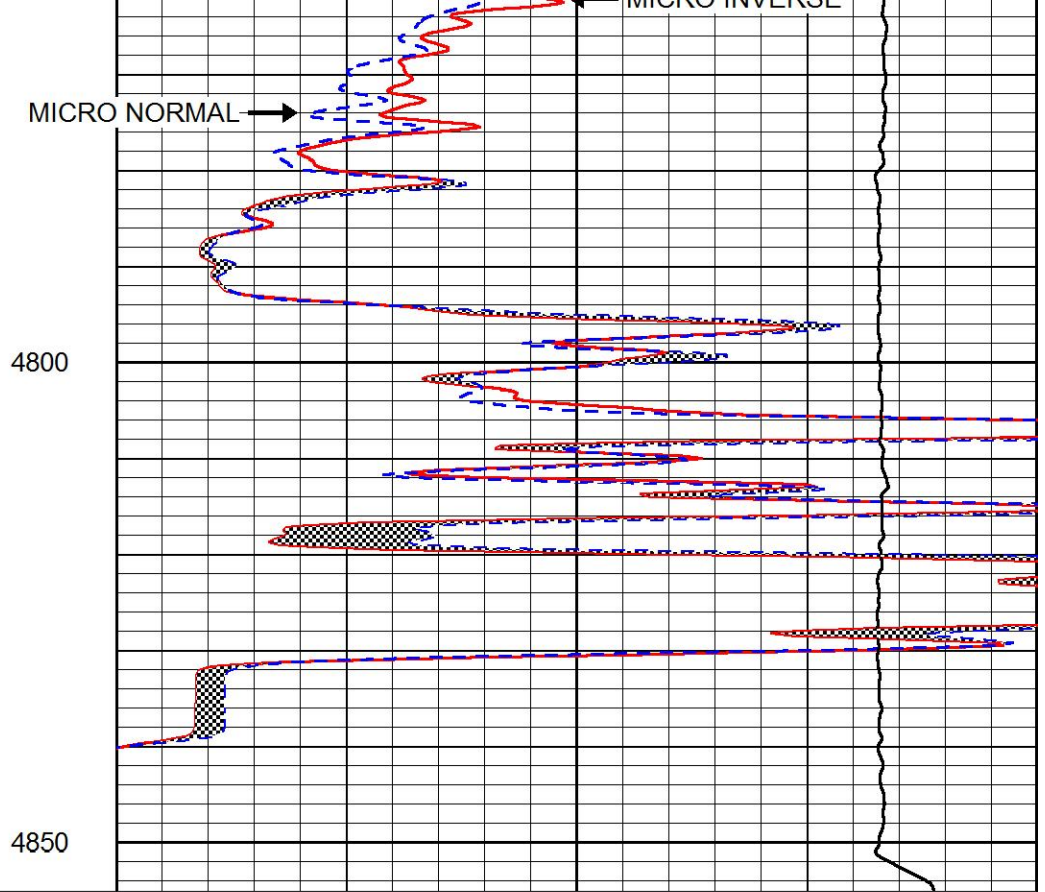
4700

4750





| | | |
|-------|------------------|-------|
| 0 | Gamma Ray (GAPI) | 150 |
| 6 | MCAL (in) | 16 |
| 2.875 | mcal (in) | 7.875 |
| 6 | Bit Size (in) | 16 |
| -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 |

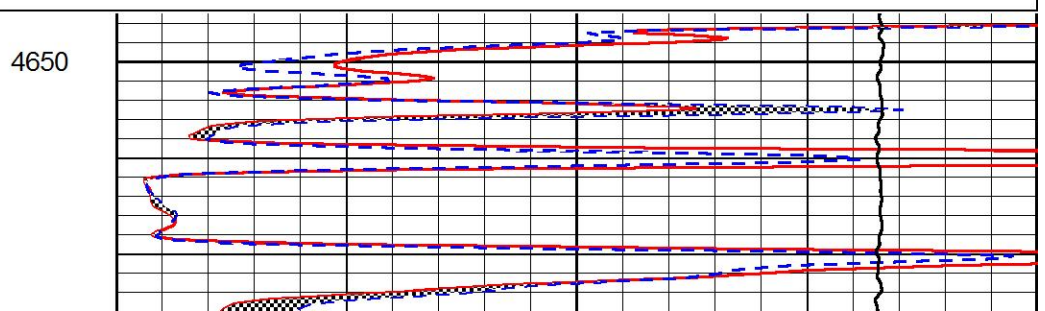
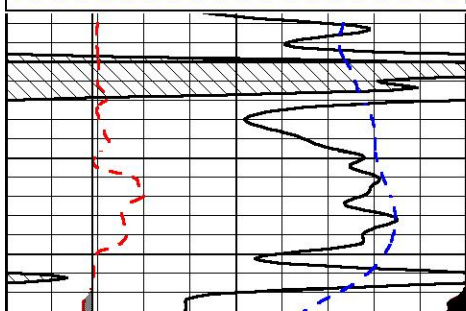


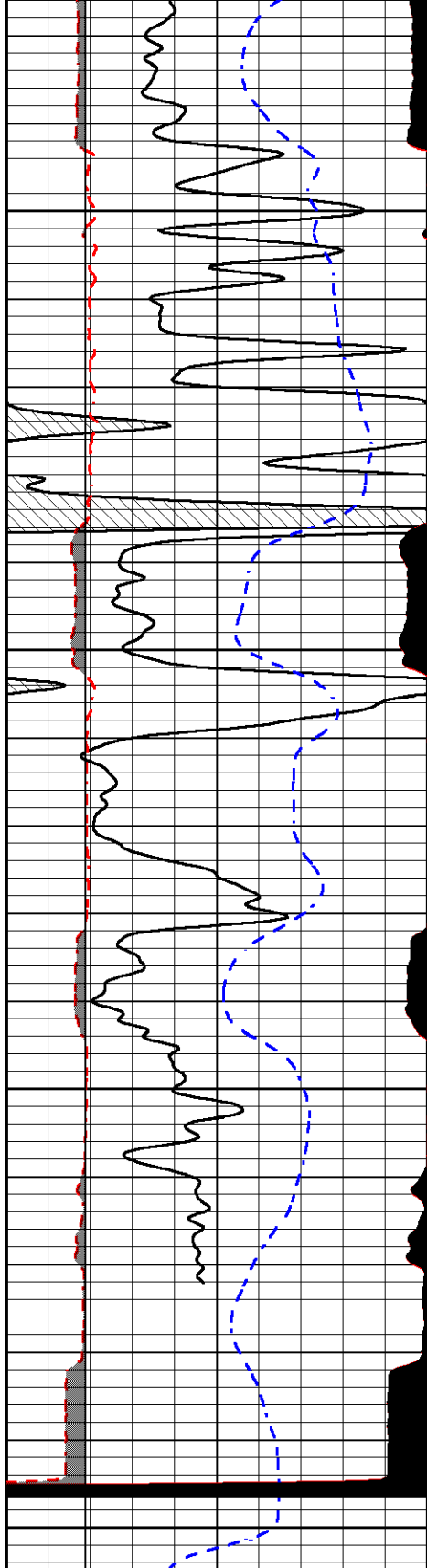
REPEAT SECTION

Database File val_horinek_1-12.db
 Dataset Pathname stkml/pass2.1
 Presentation Format micro
 Dataset Creation Thu Nov 10 01:52:25 2016
 Charted by Depth in Feet scaled 1:240

| | | |
|-------|------------------|-------|
| 0 | Gamma Ray (GAPI) | 150 |
| 6 | MCAL (in) | 16 |
| 2.875 | mcal (in) | 7.875 |
| 6 | Bit Size (in) | 16 |
| -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 |





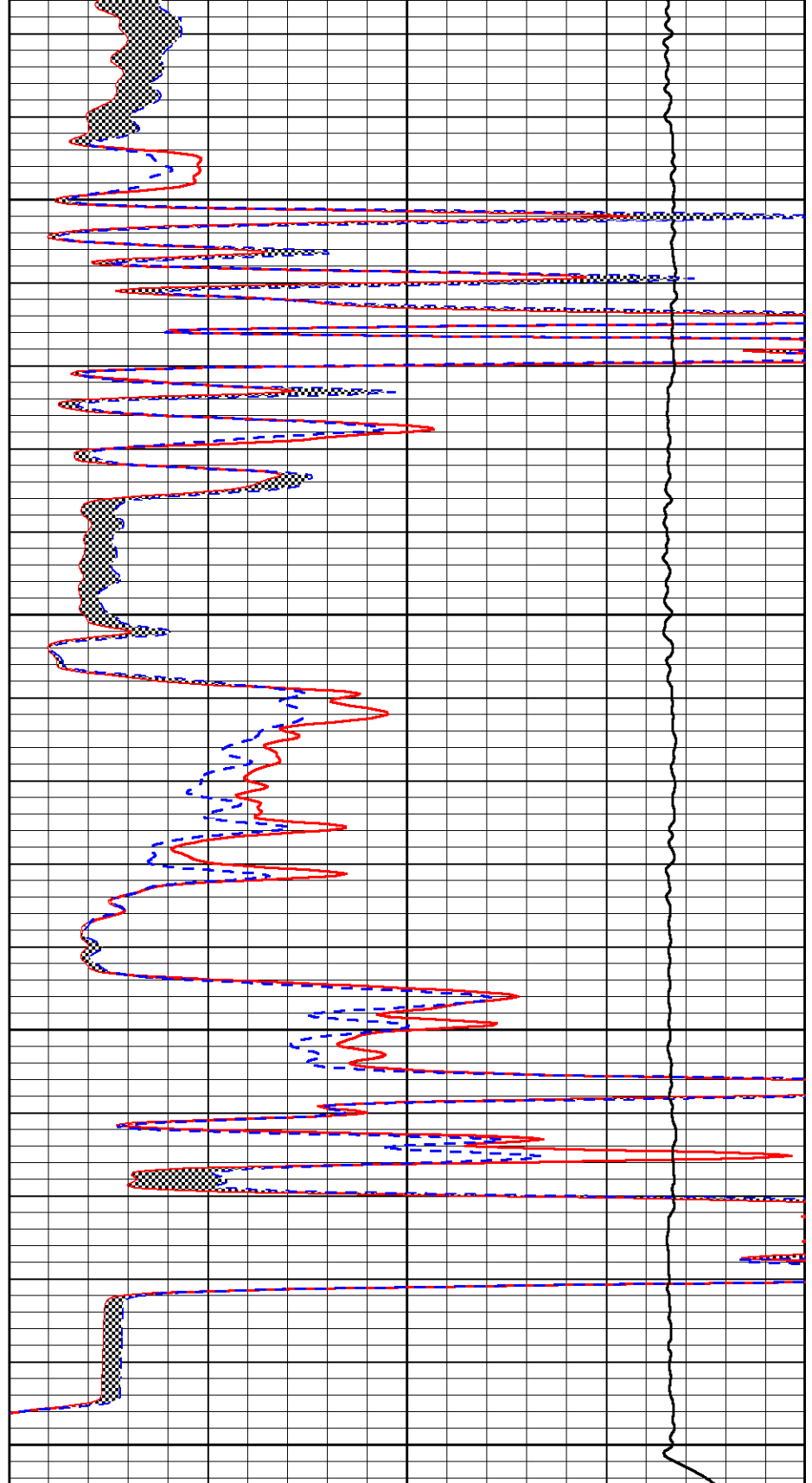
4700

4750

4800

4850

| | | |
|-------|------------------|-------|
| 0 | Gamma Ray (GAPI) | 150 |
| 6 | MCAL (in) | 16 |
| 2.875 | mcal (in) | 7.875 |
| 6 | Bit Size (in) | 16 |
| -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 |

Calibration Report

Database File val_horinek_1-12.db
 Dataset Pathname stkl/pass3.6

Dual Induction Calibration Report

Serial-Model: PSI 75-M&W-75
 Calibration Performed: Mon Nov 03 10:20:39 2014

| Loop: | Readings | | References | | | Results | |
|--------|----------|----------|------------|---------|--------|---------|---------|
| | Air | Loop | Air | Loop | | Gain | Offset |
| Deep | 166.796 | 835.089 | 0.000 | 255.800 | mmho/m | 0.620 | -45.500 |
| Medium | 142.009 | 1348.560 | 0.000 | 255.800 | mmho/m | 0.600 | -15.000 |

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Thu Sep 29 18:47:00 2016

| | Readings | | References | | | Results | |
|---------|----------|--------|------------|---------|-------|------------|----------|
| | Zero | Cal | Zero | Cal | | m | b |
| Normal | 0.0000 | 1.0000 | 0.0000 | 1.0000 | Ohm-m | 50000.0000 | -0.8000 |
| Inverse | 0.0000 | 1.0000 | 0.0000 | 1.0000 | Ohm-m | 57500.0000 | -0.5000 |
| Caliper | 1.0001 | 1.1397 | 6.5000 | 18.5000 | in | 70.0000 | -65.6500 |

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Sun Oct 23 06:26:18 2016

Master Calibration

| | Density | | Far Detector | Near Detector | |
|---------------------|---------|------|-----------------------------|---------------|-----|
| Magnesium | 1.755 | g/cc | 5174.18 | 6425.27 | cps |
| Aluminum | 2.665 | g/cc | 963.17 | 4037.42 | cps |
| Spine Angle = 74.55 | | | Density/Spine Ratio = 0.522 | | |
| | Size | | Reading | | |
| Small Ring | 6.00 | in | 1.83 | | |
| Large Ring | 16.00 | in | 1.48 | | |

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: Wed Sep 28 10:30:30 2016

| Detector | Readings | Target | Normalization |
|-------------|-------------|-------------|---------------|
| Short Space | 6240.00 cps | 1000.00 cps | 1.6025 |
| Long Space | 460.00 cps | 1000.00 cps | 1.9500 |

Gamma Ray Calibration Report

Serial Number: 89

| | | |
|------------------------|--------------------------|----------|
| Tool Model: | M&W | |
| Calibration Performed: | Thu Nov 10 00:16:26 2016 | |
| Calibrator Value: | 1.0 | GAPI |
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |
| Sensitivity: | 1.0800 | GAPI/cps |



PIONEER

Pioneer Energy Services

| | |
|---------|------------------|
| Company | VAL ENERGY, INC. |
| Well | HORINEK #1-2 |
| Field | UNKNOWN |
| County | THOMAS |
| State | KANSAS |