# HIGH RESOLUTION COMPENSATED DENSITY SIDEWALL NEUTRON LOG

| | |
|---|---|
| Company | LAYNE ENERGY OPERATING, LLC. |
| Well | METZGER # 16M-34 WIW |
| Field | LAFONTAINE |
| County | WILSON |
| State | KANSAS |

Company LAYNE ENERGY OPERATING, LLC.
Well METZGER # 16M-34 WIW
Field LAFONTAINE
County WILSON State KANSAS

Location: API # : 15-205-27972-0000

NW SW SE SE
597' FSL & 1135' FEL

SEC 34 TWP 30S RGE 14E

Other Services
DIL

Permanent Datum GL Elevation 913' est
Log Measured From GL
Drilling Measured From GL

Elevation
K.B. ----
D.F. ----
G.L. 913' est

| | | | |
|---|---|---|---|
| Date | 9-29-2011 | | |
| Run Number | ONE | | |
| Depth Driller | 1287' | | |
| Depth Logger | 1282' | | |
| Bottom Logged Interval | 1280' | | |
| Top Log Interval | SURFACE | | |
| Casing Driller | 8.625" @ 40' | | |
| Casing Logger | 8.625" @ 40' | | |
| Bit Size | 6.75" | | |
| Type Fluid in Hole | WATER | | |
| Density / Viscosity | | | |
| pH / Fluid Loss | | | |
| Source of Sample | | | |
| Rm @ Meas. Temp | | | |
| Rmf @ Meas. Temp | | | |
| Rmc @ Meas. Temp | | | |
| Source of Rmf / Rmc | | | |
| Rm @ BHT | | | |
| Time Circulation Stopped | | | |
| Time Logger on Bottom | | | |
| Maximum Recorded Temperature | | | |
| Equipment Number | OW2 | | |
| Location | HOMINY, OK | | |
| Recorded By | LOWERY | | |
| Witnessed By | MR. McCLAIN | | |

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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

FILE # OW2-7918
MATRIX SANDSTONE 2.68 g/cc
ABHV COMPUTED WITH 4.5" CASING

CREW : JOHNSON

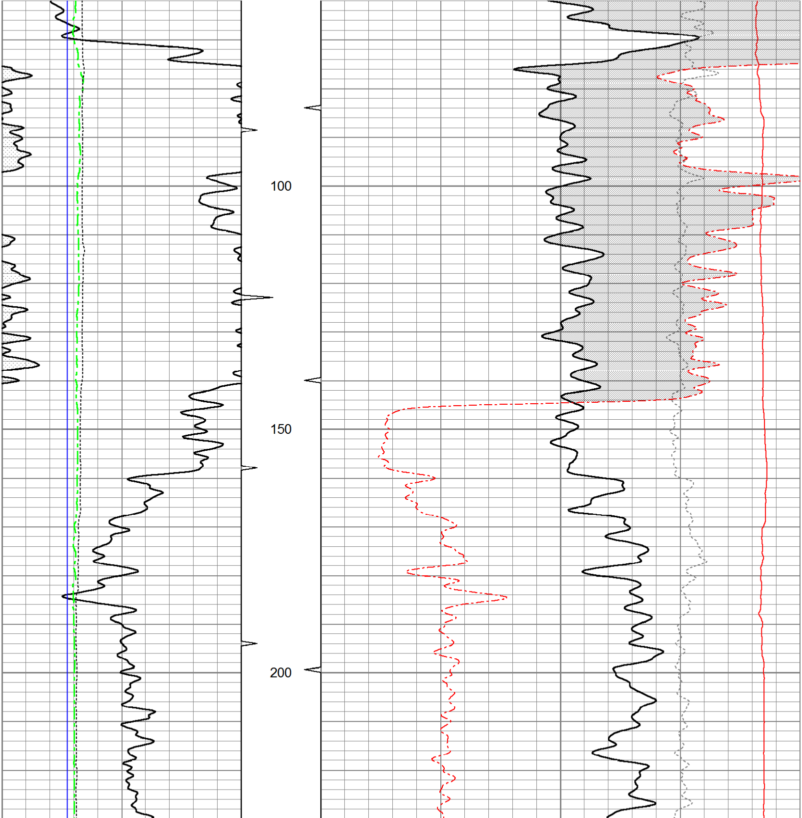
# 5" CDL/SWN SECTION

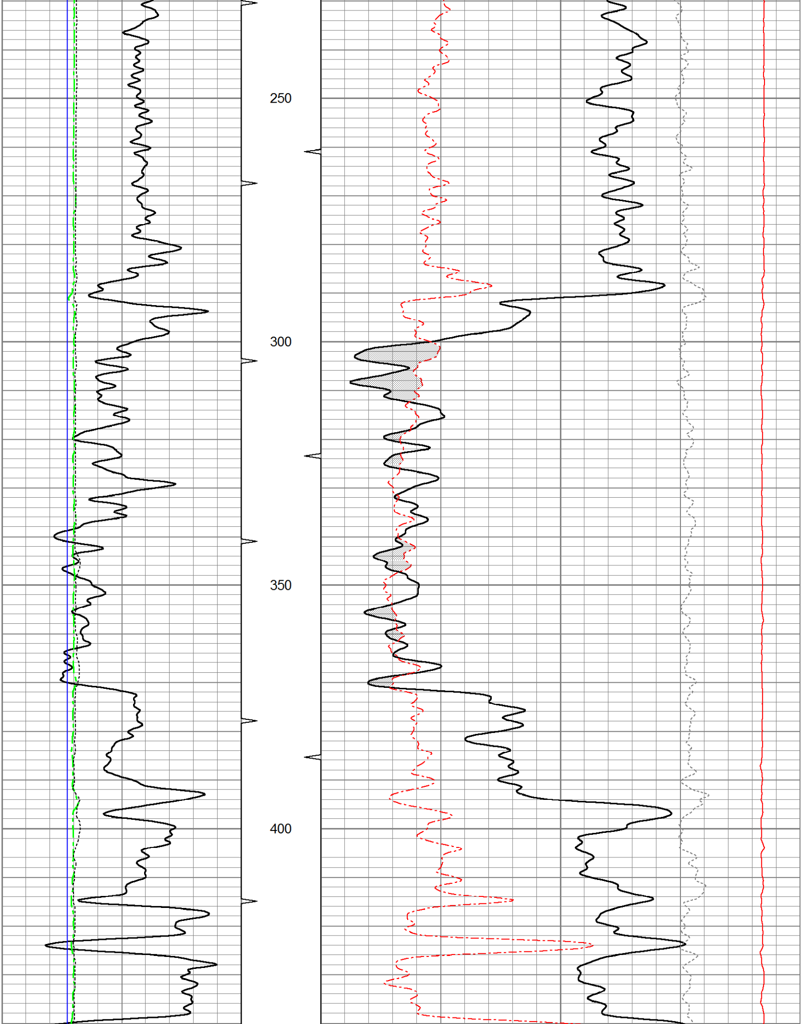
| | |
|---|---|
| Database File: | ow2-7918 layne energy.db |
| Dataset Pathname: | CDL/pass1.4 |
| Presentation Format: | _neu4 |
| Dataset Creation: | Thu Sep 29 08:21:24 2011 by Calc SOC 110722 |
| Charted by: | Depth in Feet scaled 1:240 |

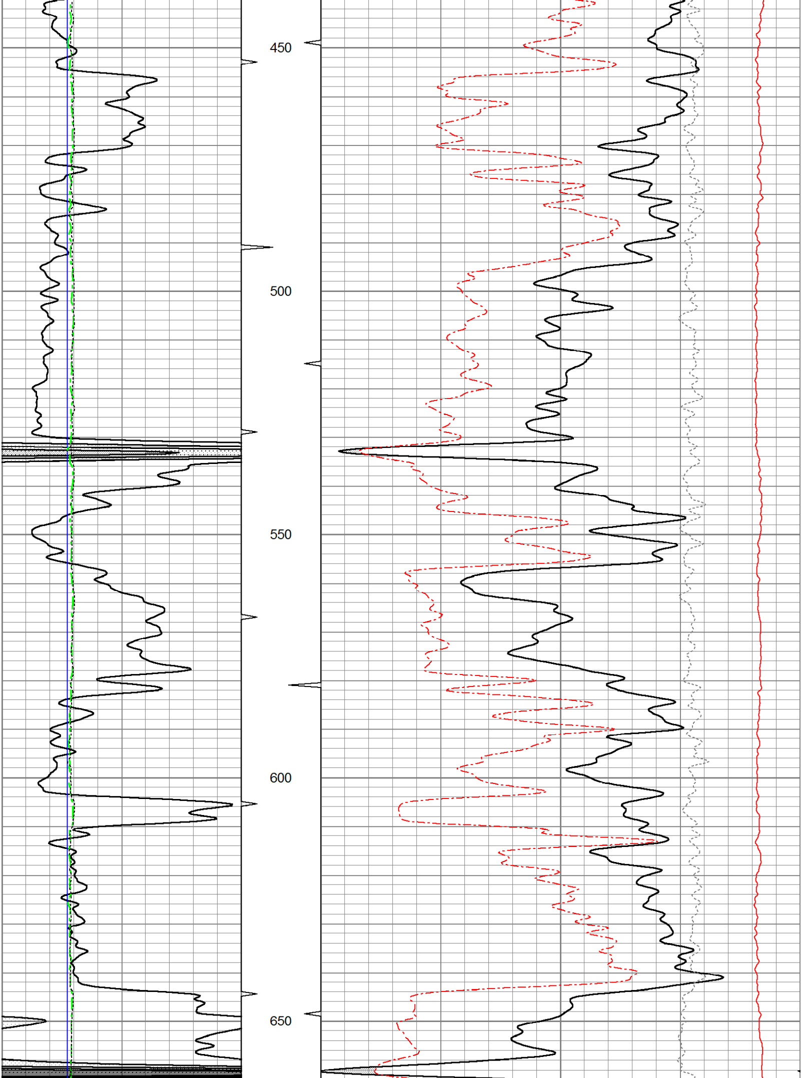
0 Gamma Ray (GAPI) 150
4 Bit size (in) 14
4 Neutron Caliper (in) 14
4 Density Caliper (in) 14

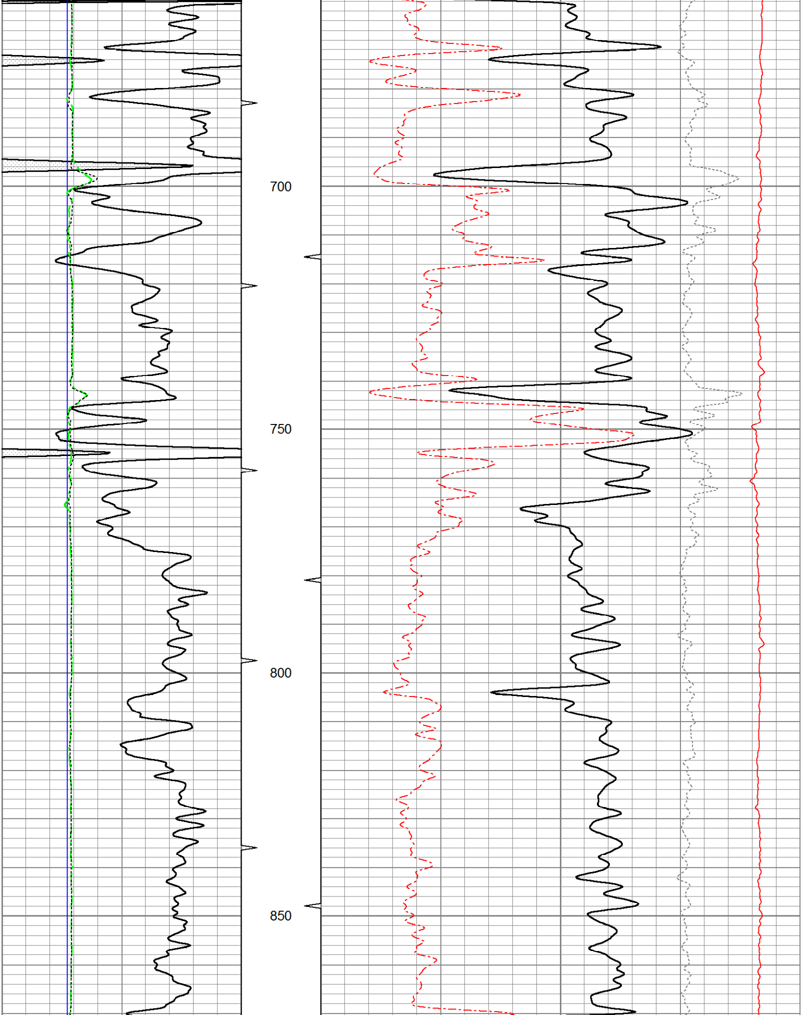
TBHV
ABHV

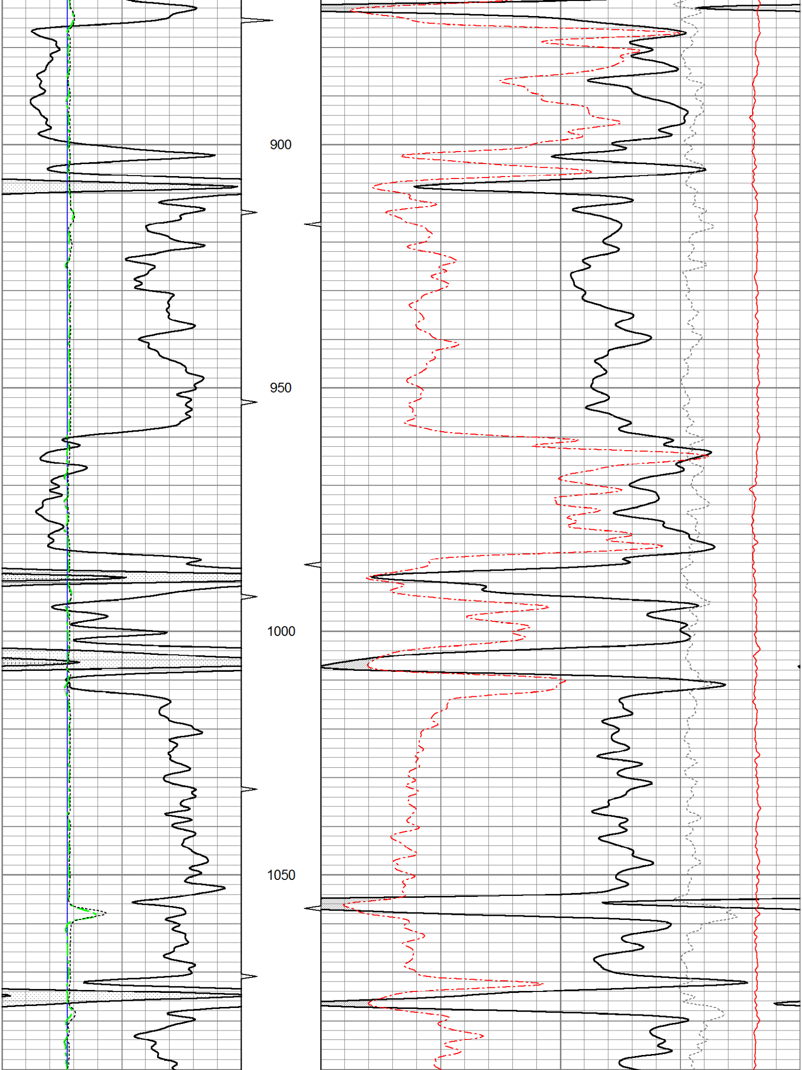
30 Density Porosity (pu) -10
30 Neutron Porosity (pu) -10
-0.5 Correction (g/cc) 0.5
5000 Line Tension (lb) 0

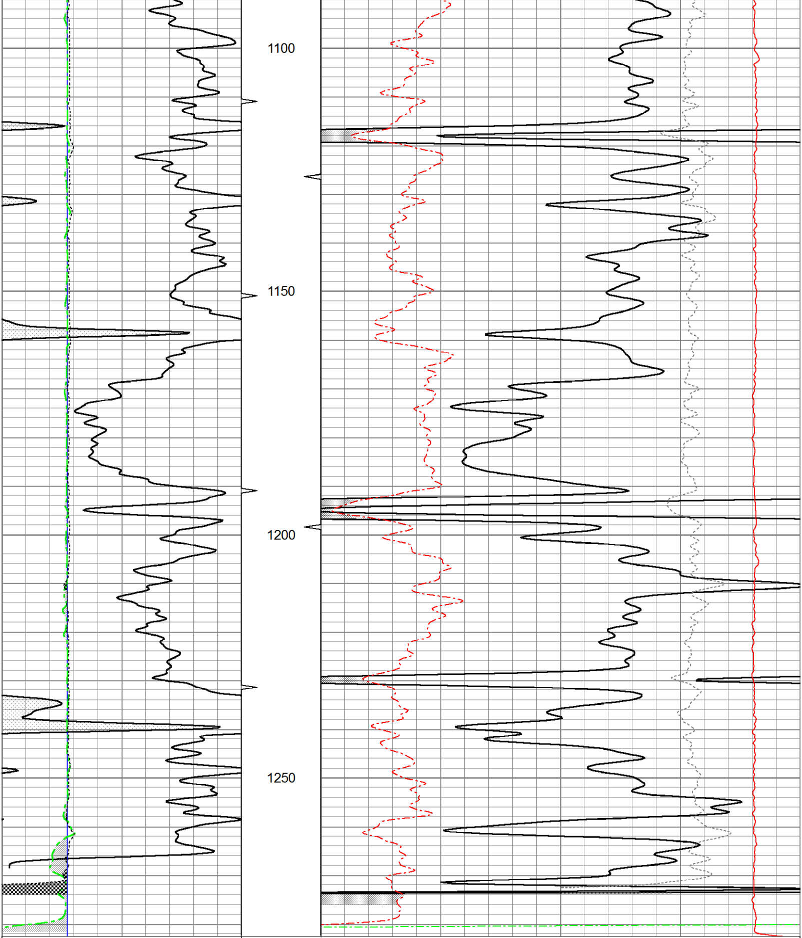












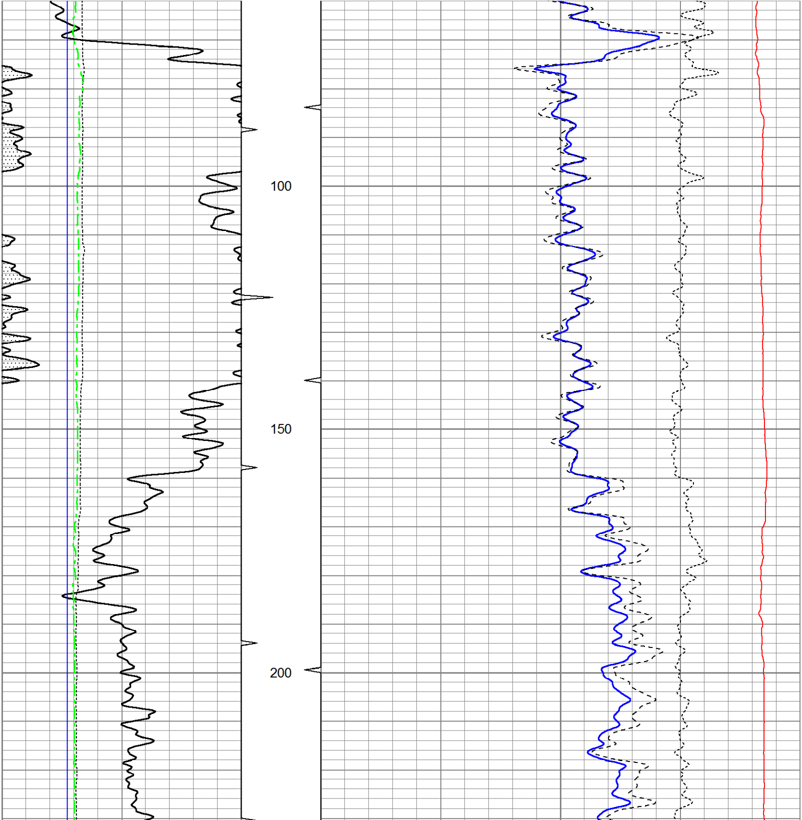
| | | | | |
|---|---|---|---|---|
| 0 Gamma Ray (GAPI) 150 | TBHV | 30 Density Porosity (pu) -10 | | |
| 4 Bit size (in) 14 | ABHV | 30 Neutron Porosity (pu) -10 | | |
| 4 Neutron Caliper (in) 14 | | | -0.5 Correction (g/cc) 0.5 | |
| 4 Density Caliper (in) 14 | | | 5000 Line Tension (lb) 0 | |

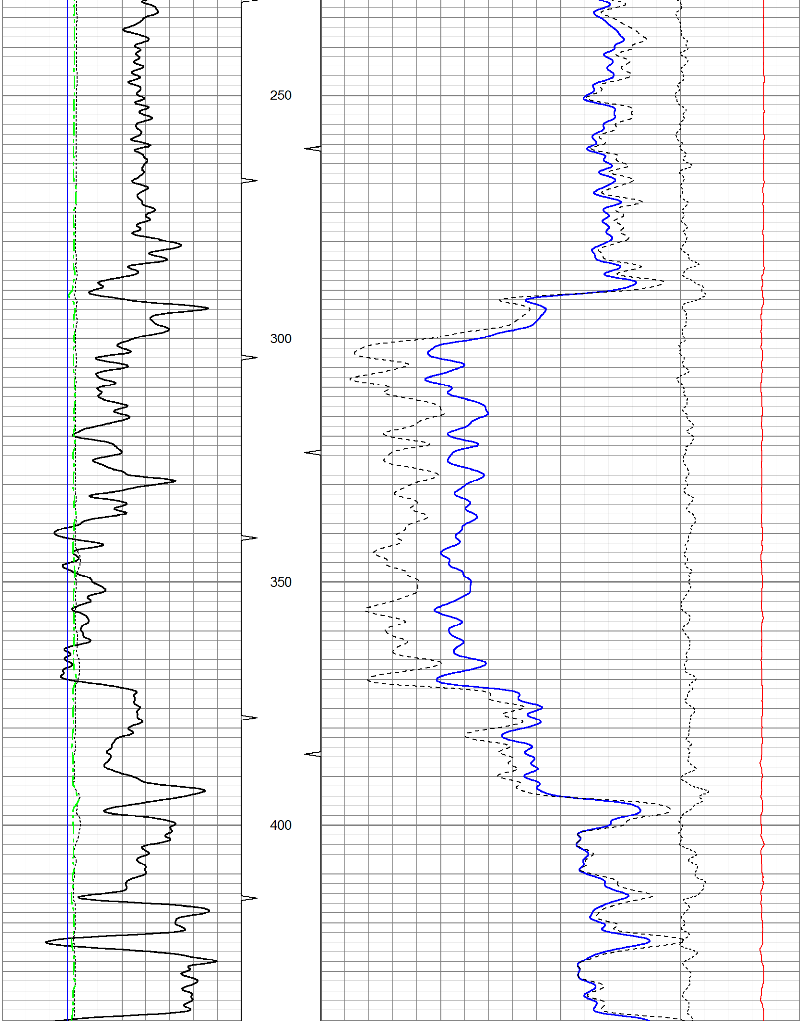
OSAGE WIRELINE

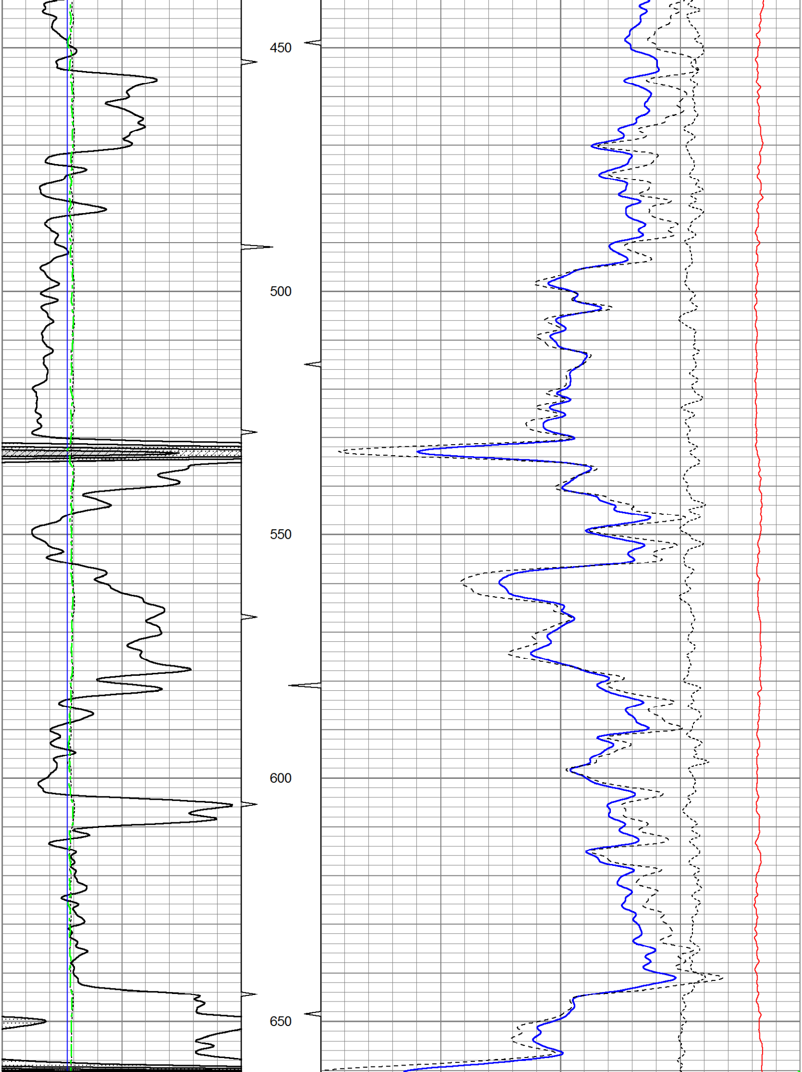
# 5" CDL SECTION

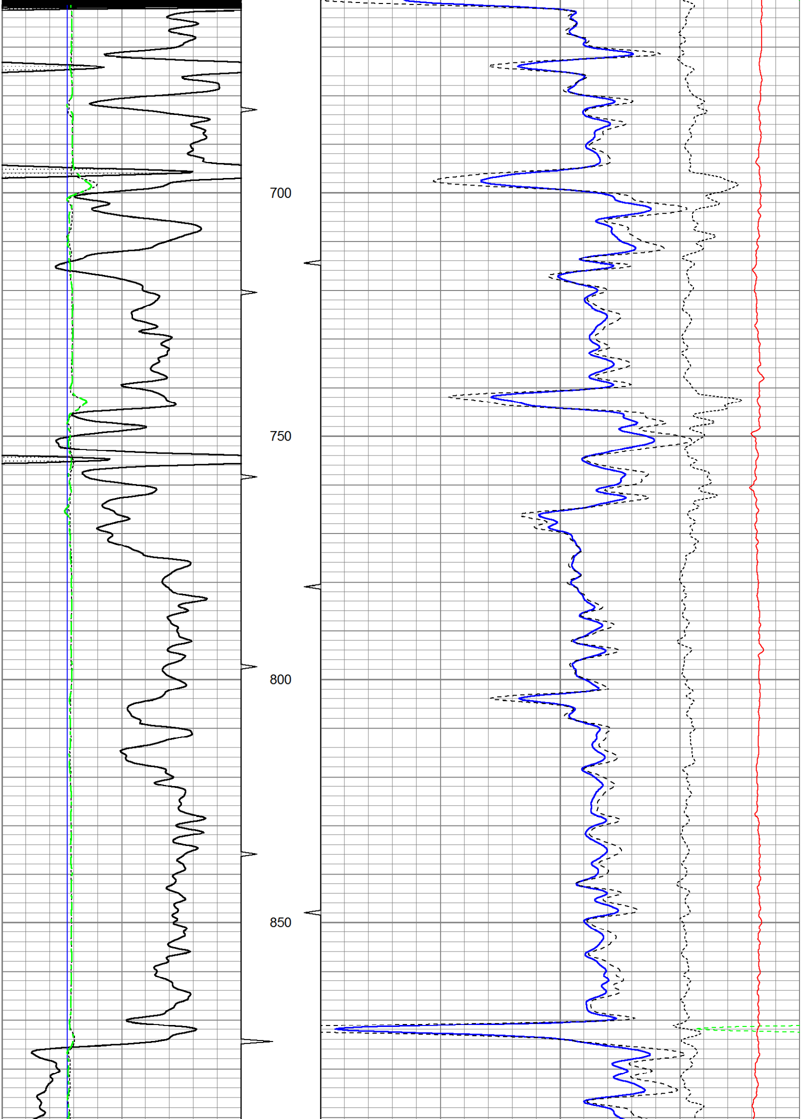
| | |
|---|---|
| Database File: | ow2-7918 layne energy.db |
| Dataset Pathname: | CDL/pass1.3 |
| Presentation Format: | bulk4 |
| Dataset Creation: | Thu Sep 29 08:21:19 2011 by Calc SOC 110722 |
| Charted by: | Depth in Feet scaled 1:240 |

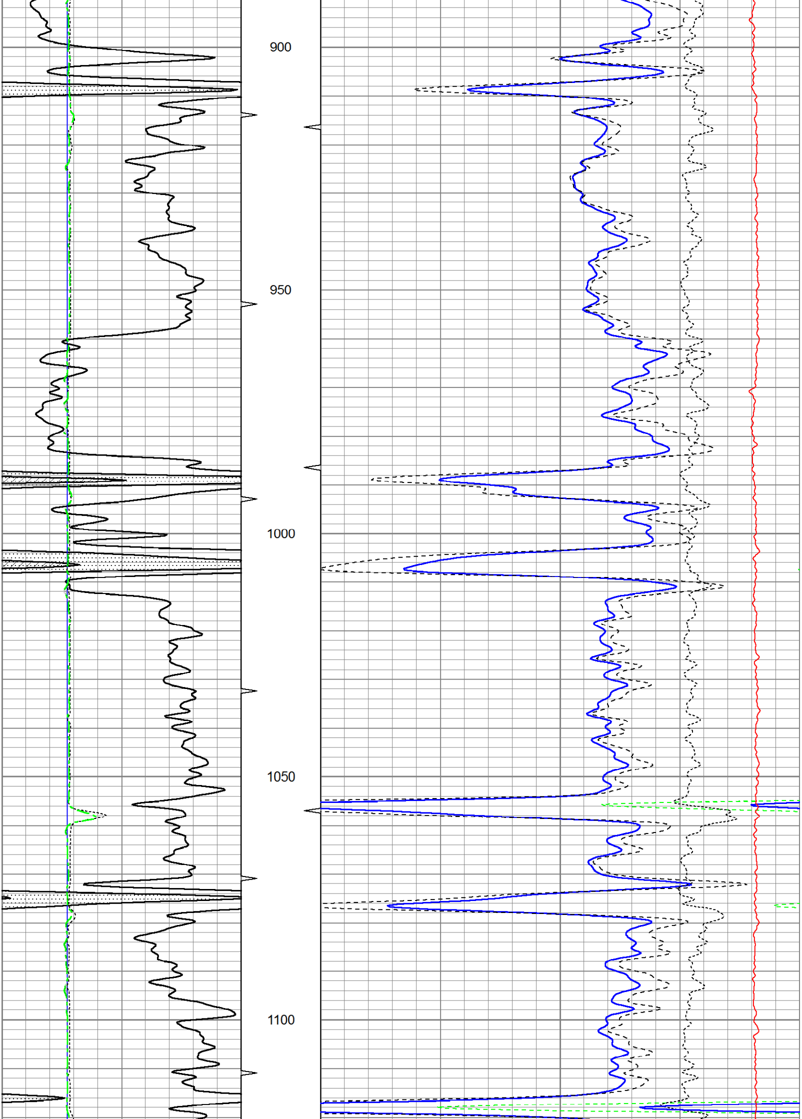
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | Gamma Ray (GAPI) | 150 | TBHV | 2 | Bulk Density (g/cc) | | | 3 |
| 4 | Bit size (in) | 14 | ABHV | 30 | Density porosity (pu) | | | -10 |
| 4 | Density Caliper (in) | 14 | | | | -0.5 | Correction (g/cc) | 0.5 |
| 4 | Neutron Caliper (in) | 14 | | | | 5000 | Line Tension (lb) | 0 |

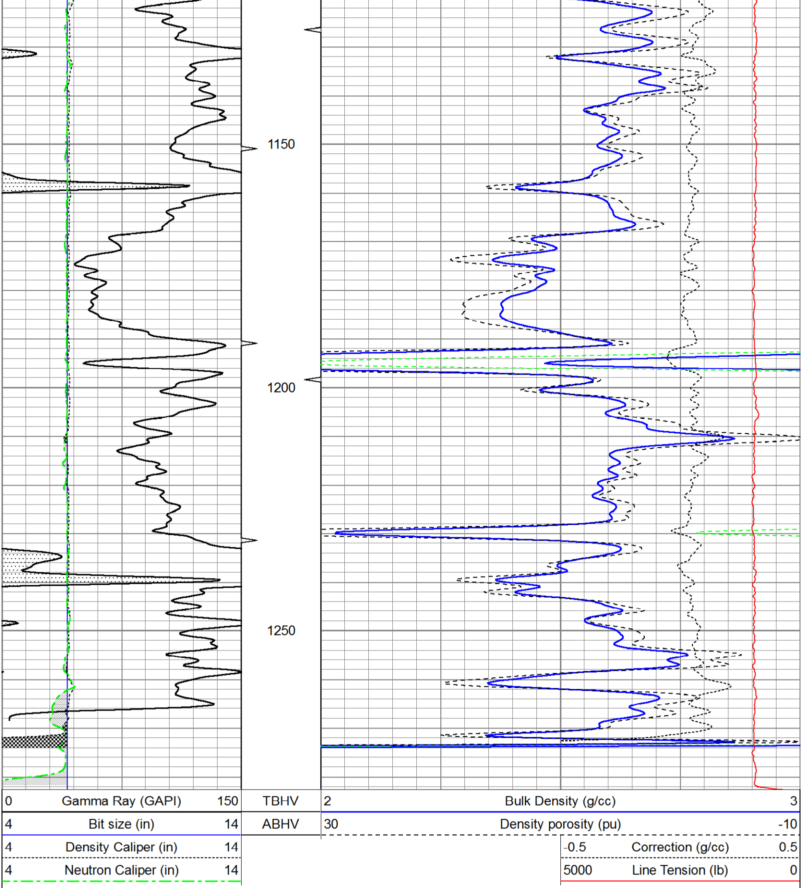












# 25" HR CDL SECTION

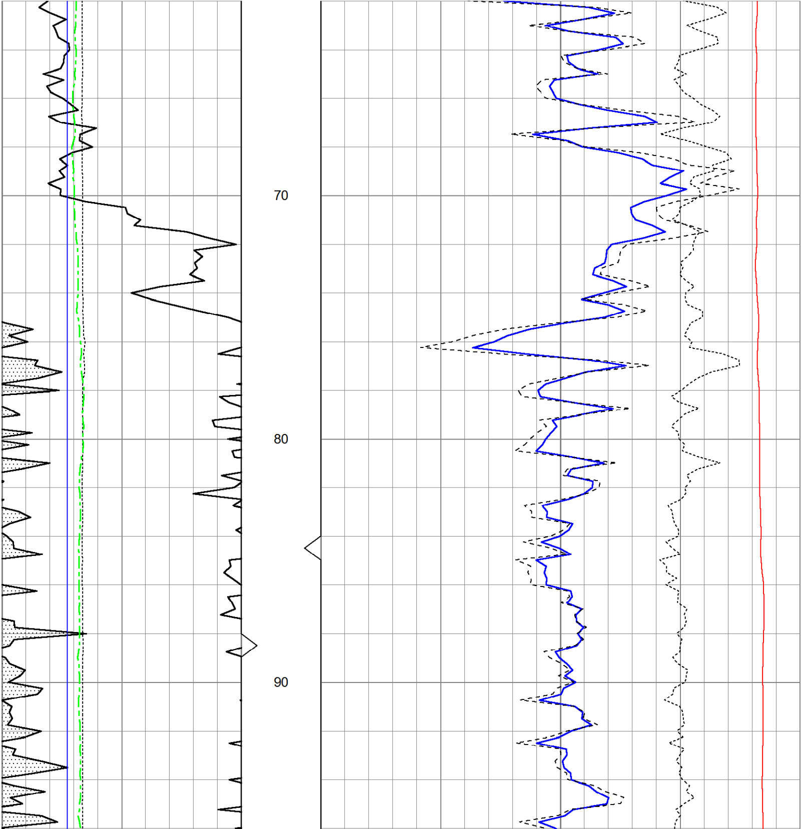
Database File: ow2-7918 layne energy.db
Dataset Pathname: CDL/pass1.5
Presentation Format: bulk4hr
Dataset Creation: Thu Sep 29 08:21:37 2011 by Calc SOC 110722
Charted by: Depth in Feet scaled 1:48

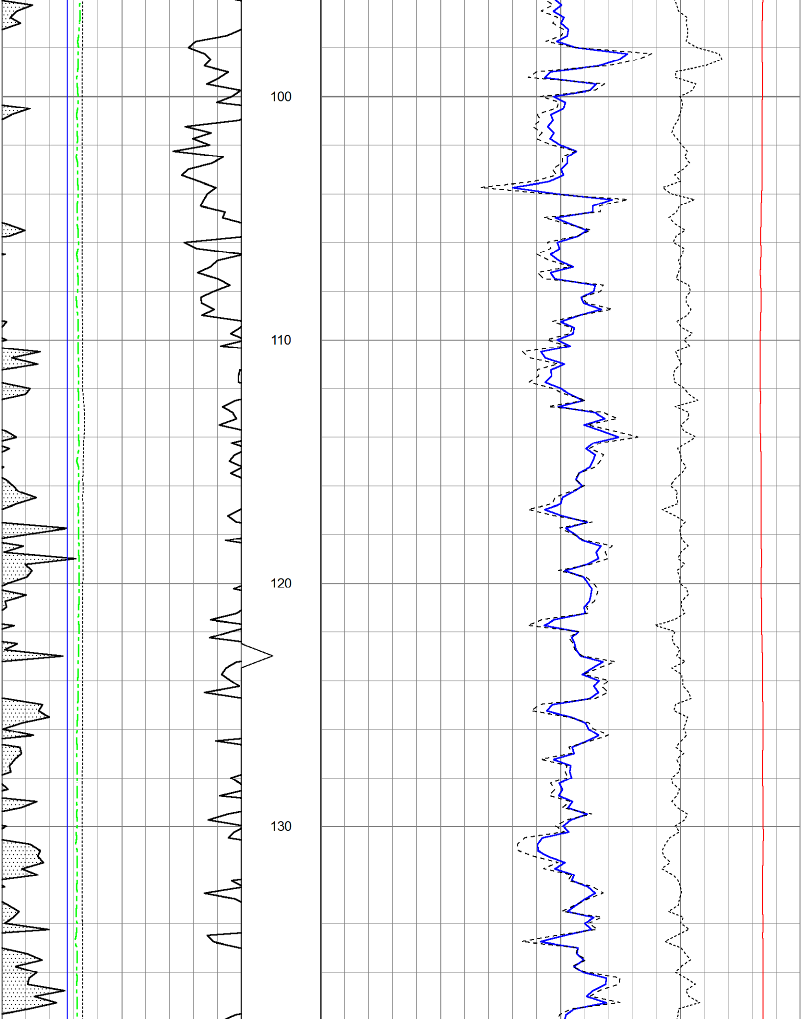
| | | |
|---|---|---|
| 0 | Gamma Ray (GAPI) | 150 |
| 4 | Bit size (in) | 14 |
| 4 | Density Caliper (in) | 14 |
| 4 | Neutron Caliper (in) | 14 |

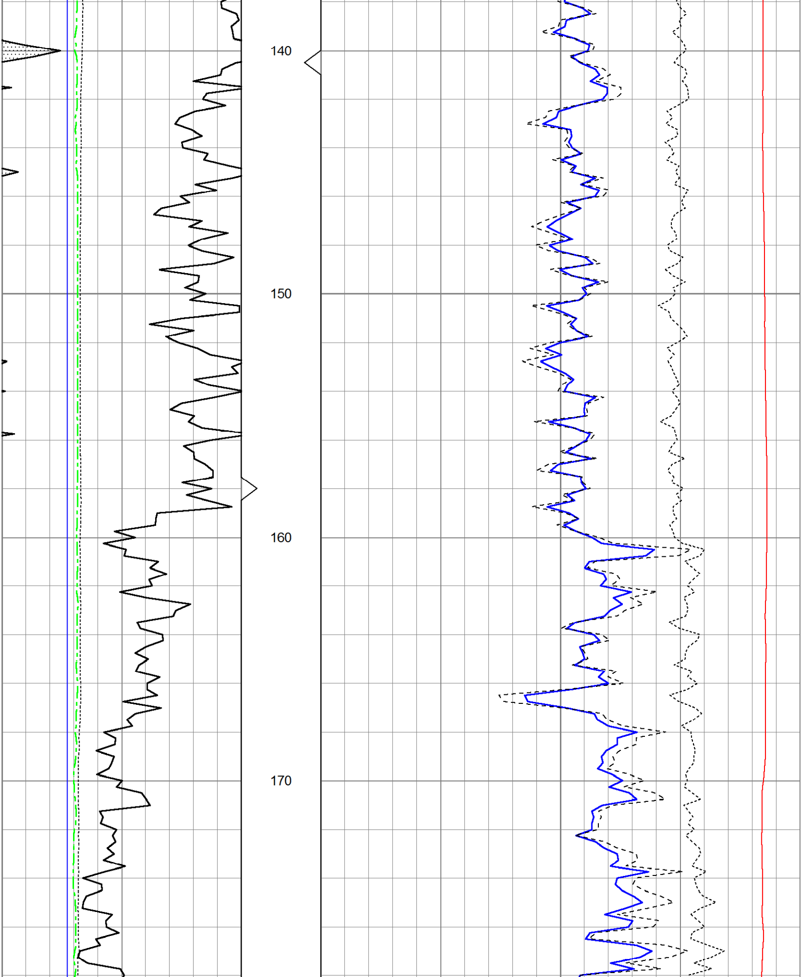
TBHV

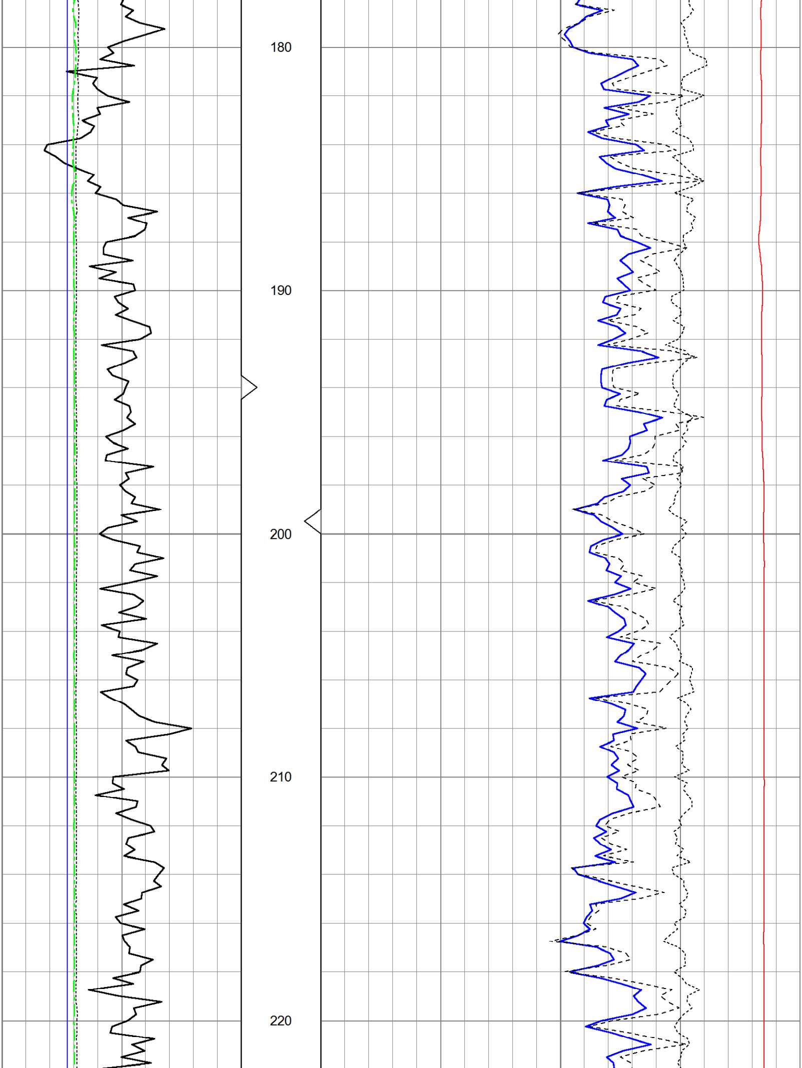
ABHV

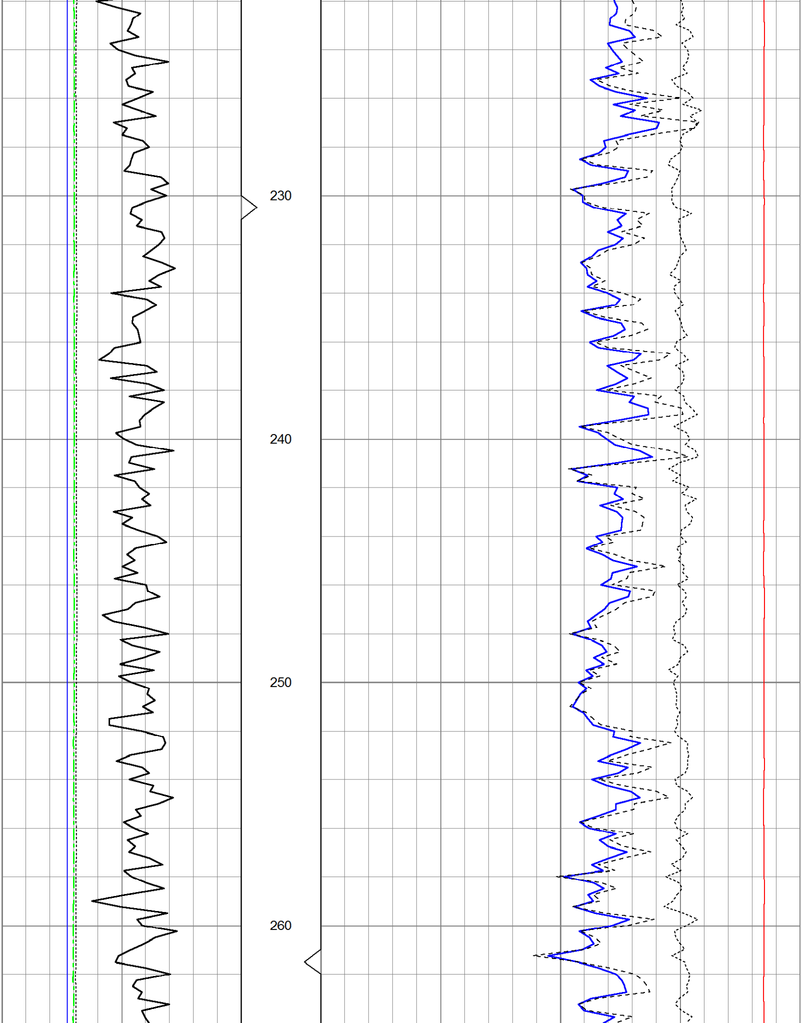
| | | |
|---|---|---|
| 2 | Bulk Density (g/cc) | 3 |
| 30 | Density porosity (pu) | -10 |
| -0.5 | Correction (g/cc) | 0.5 |
| 5000 | Line Tension (lb) | 0 |

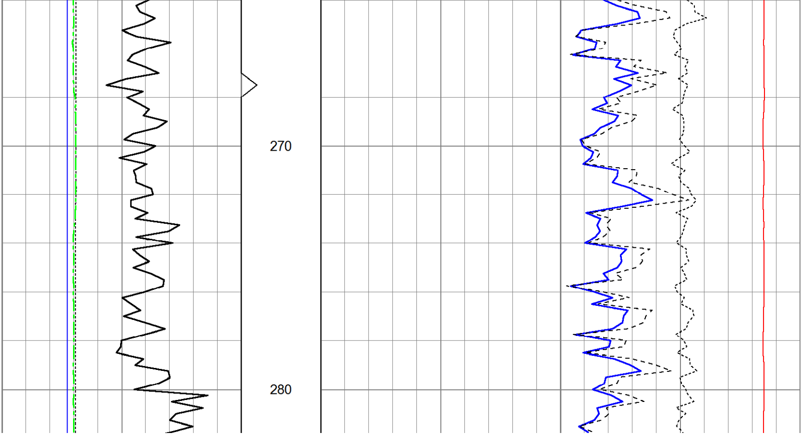


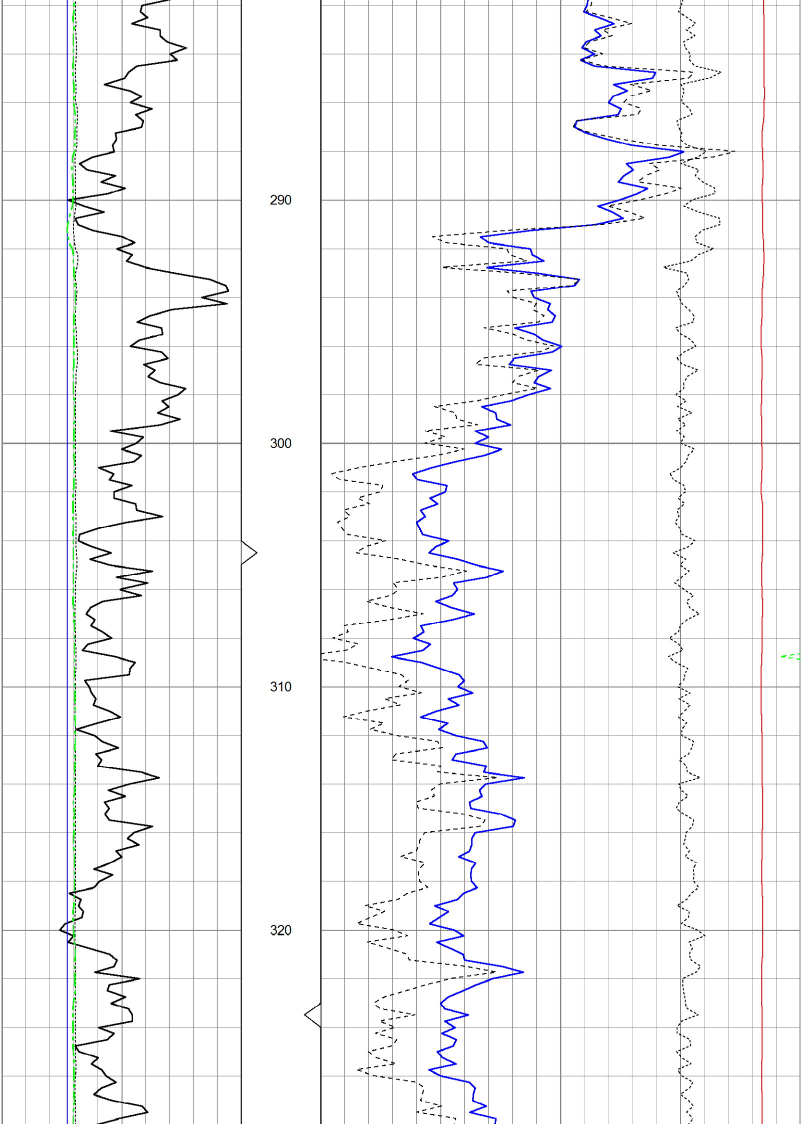








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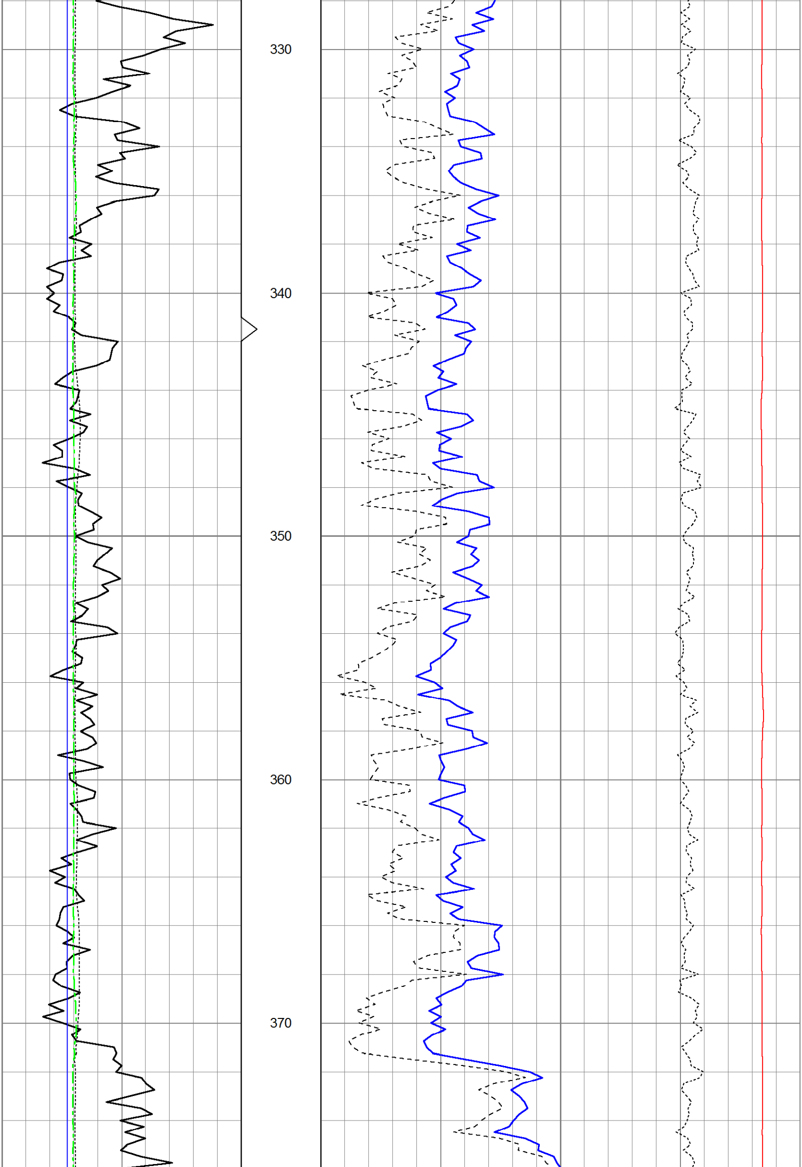
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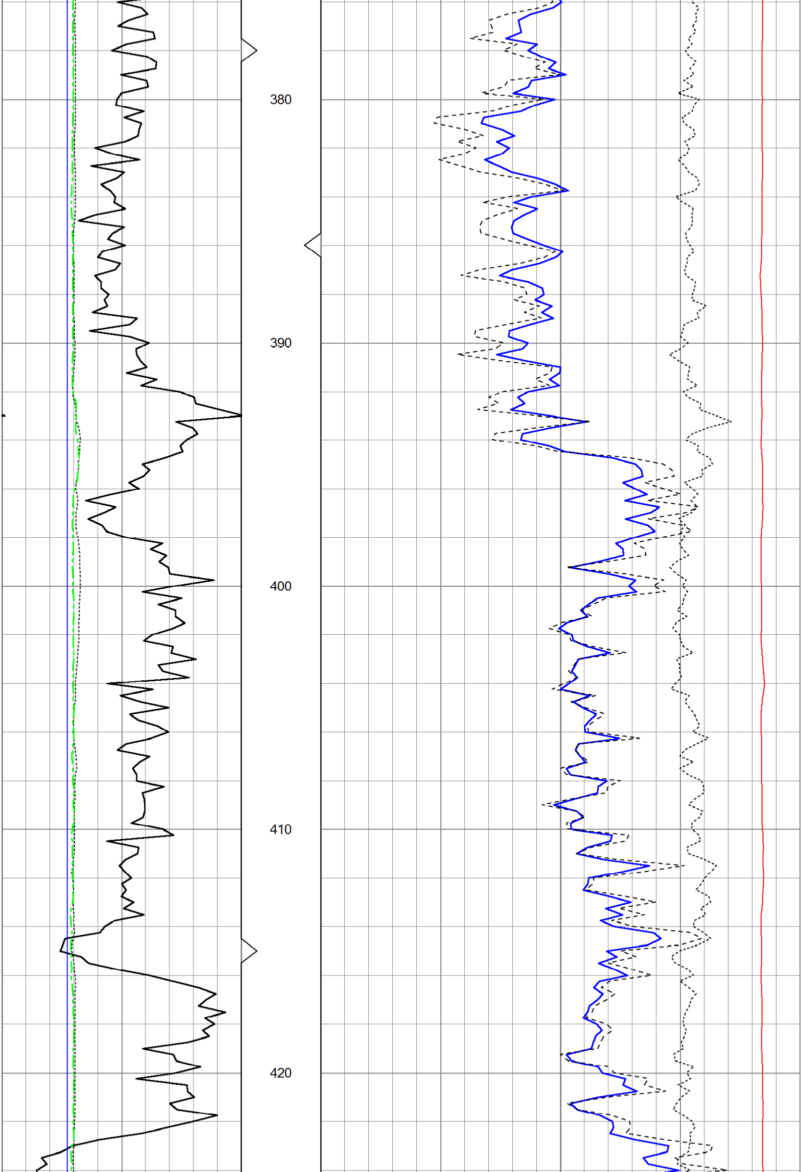
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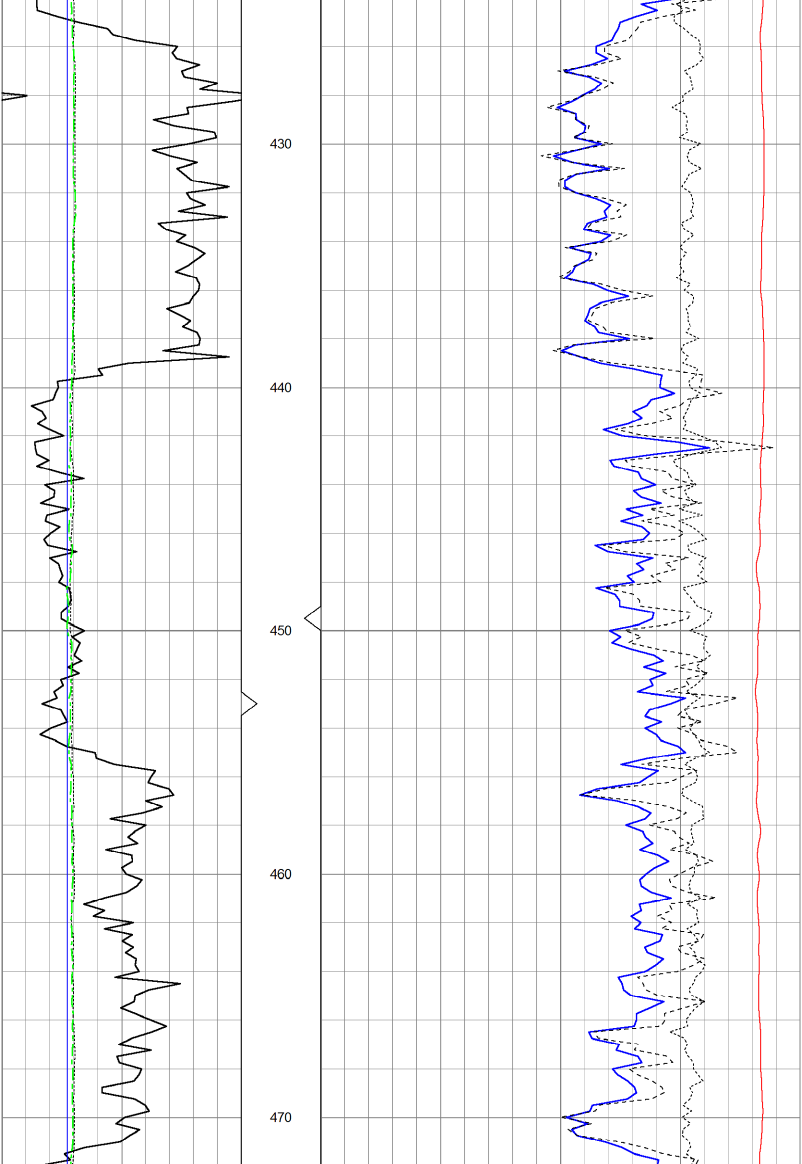
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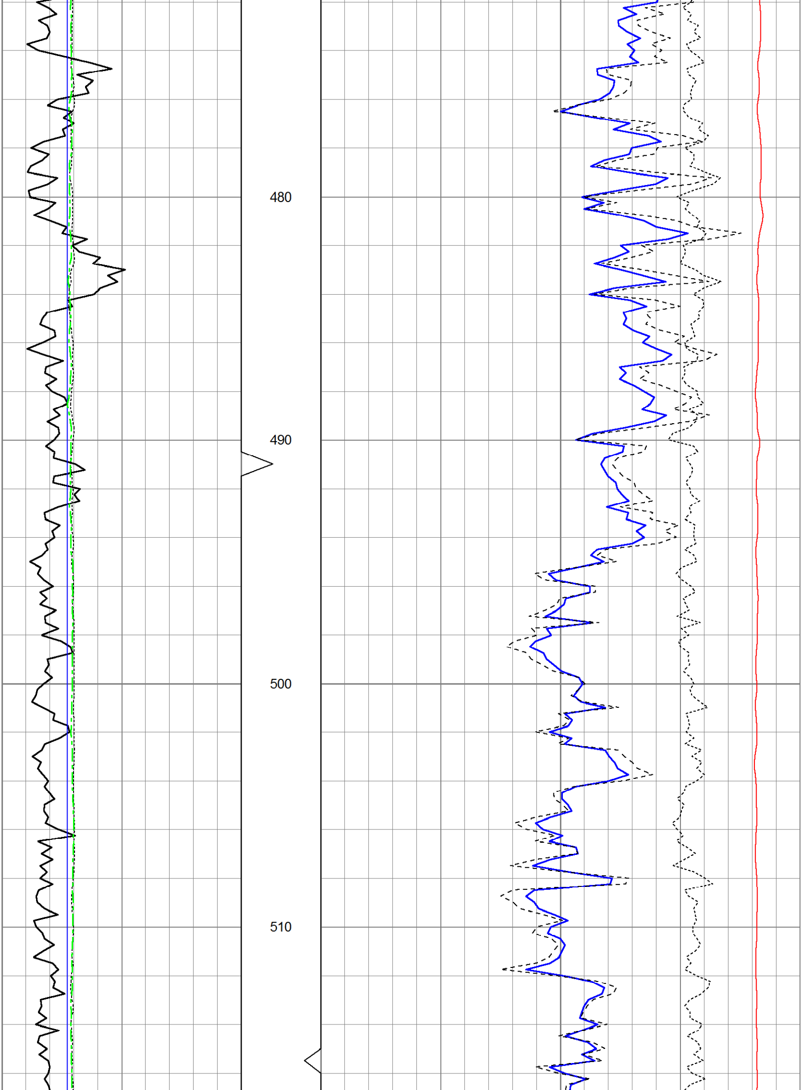
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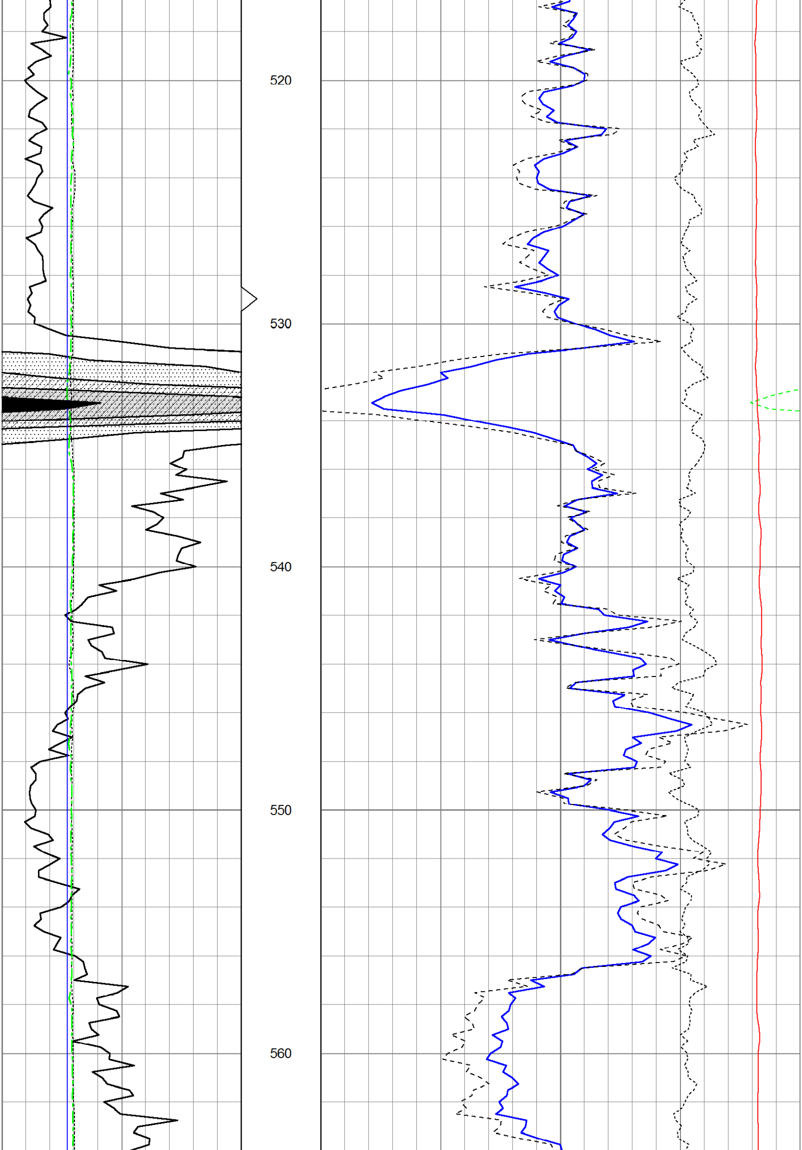
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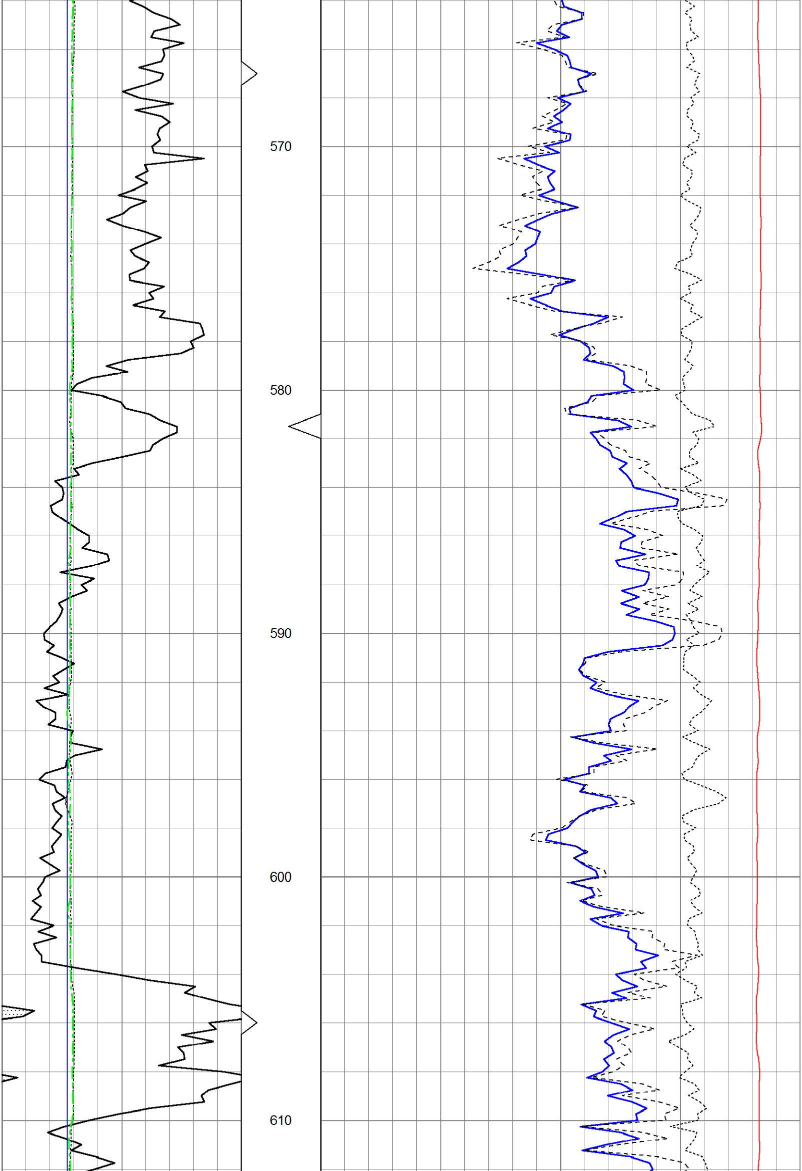
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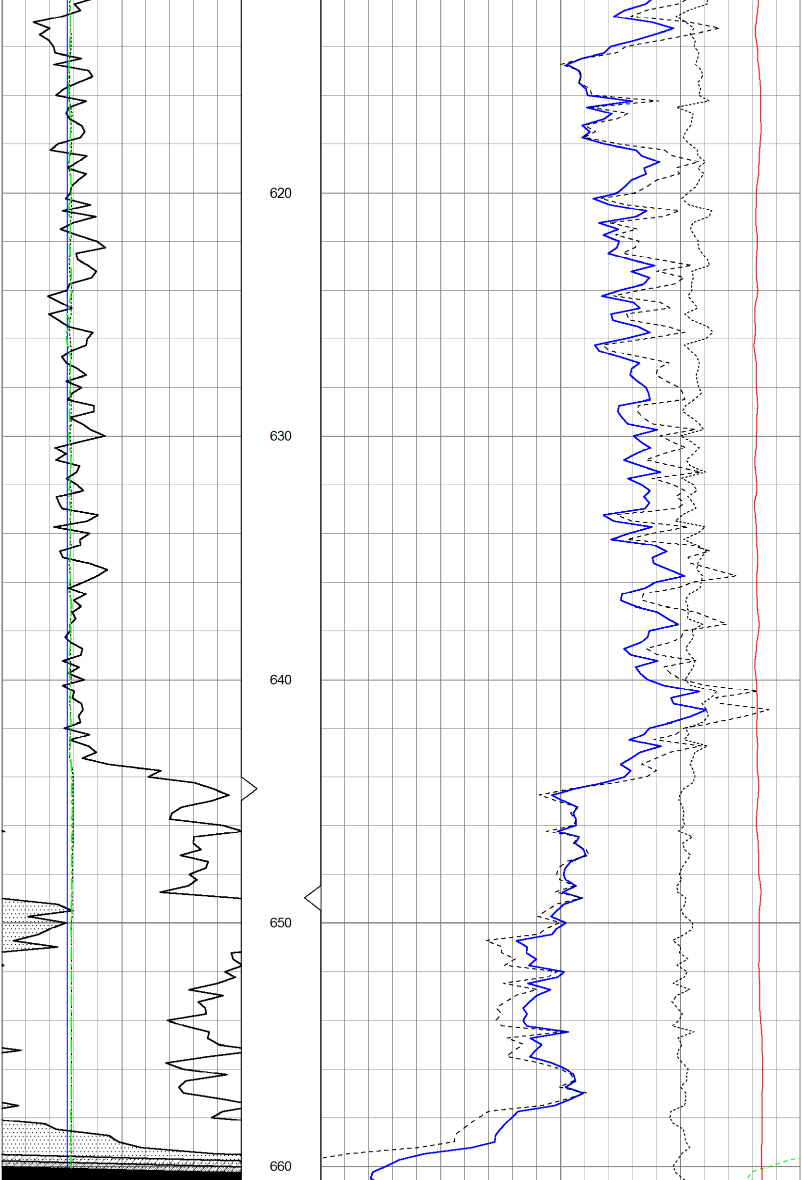
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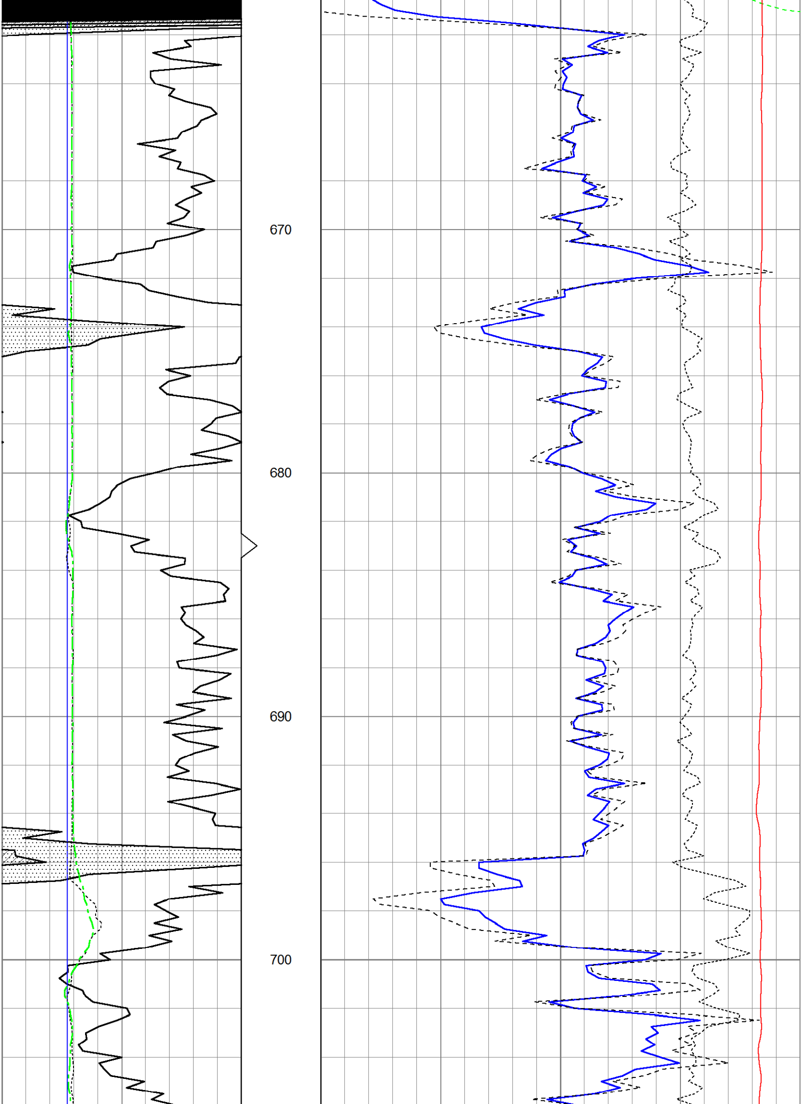
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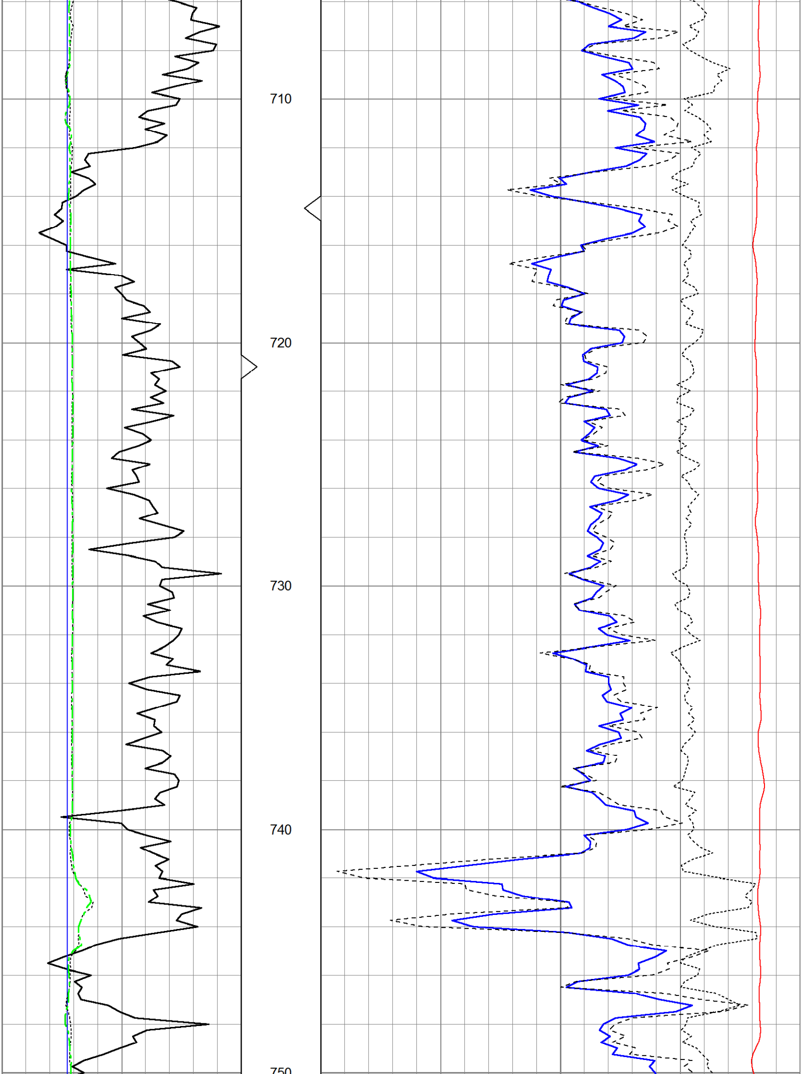
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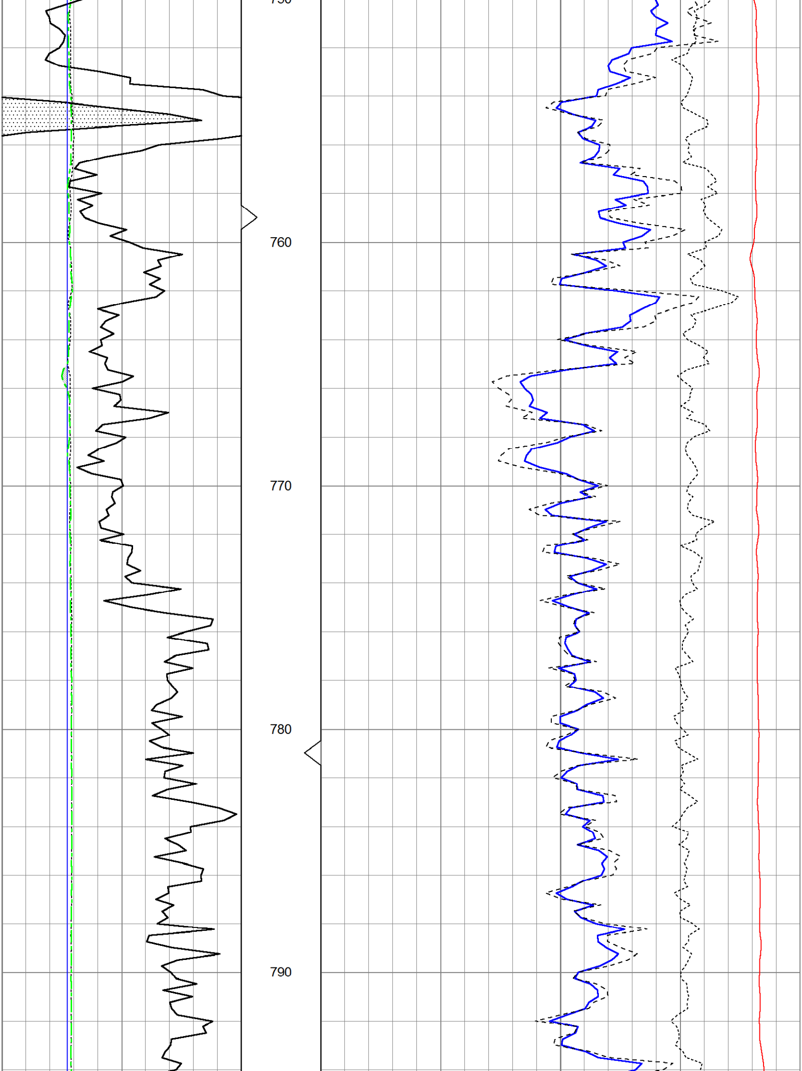
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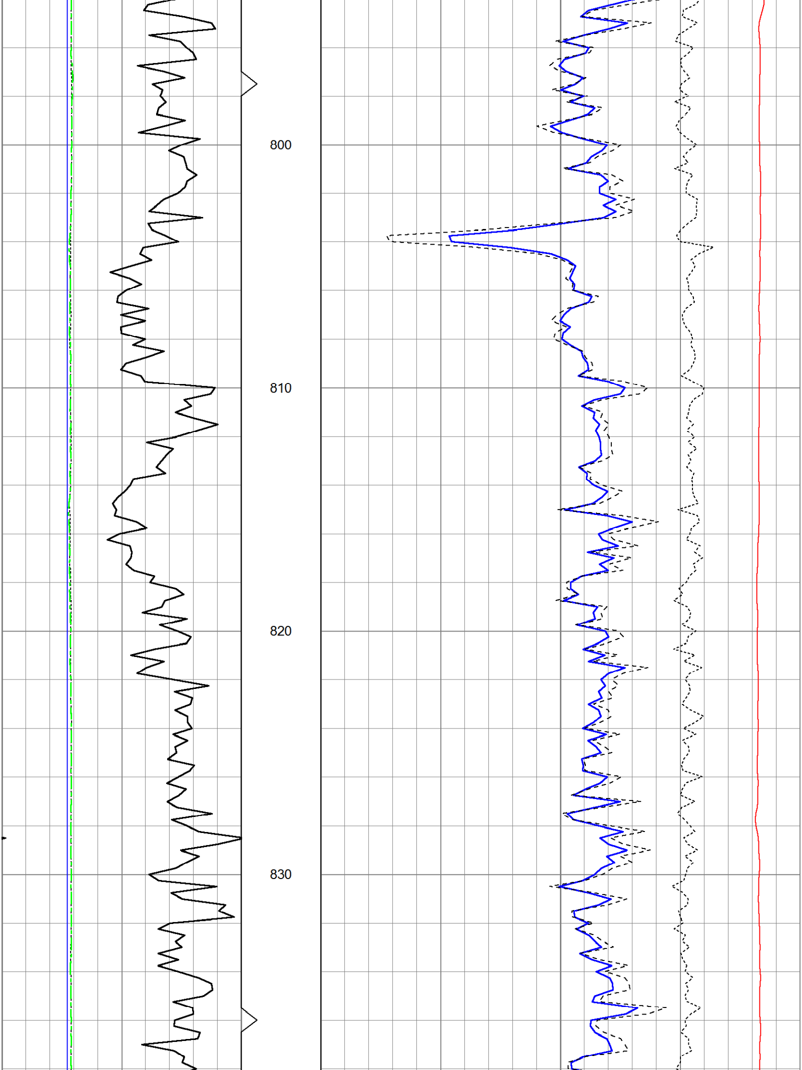
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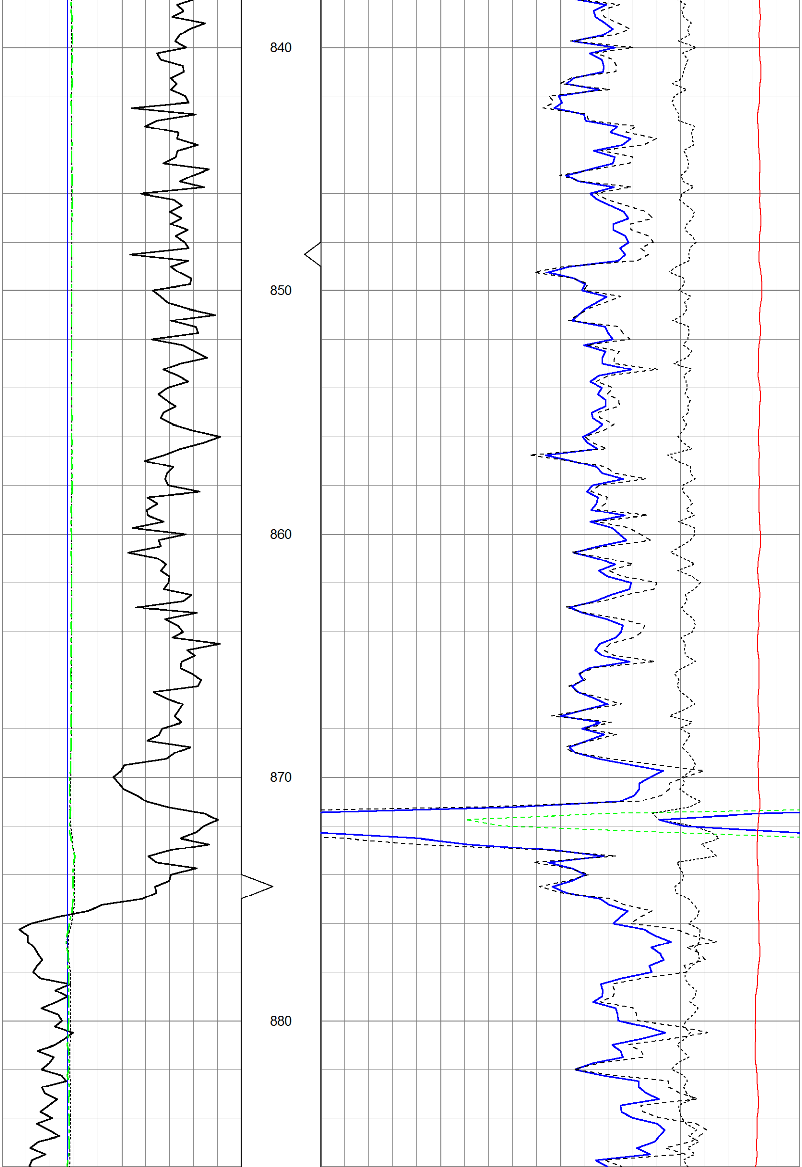
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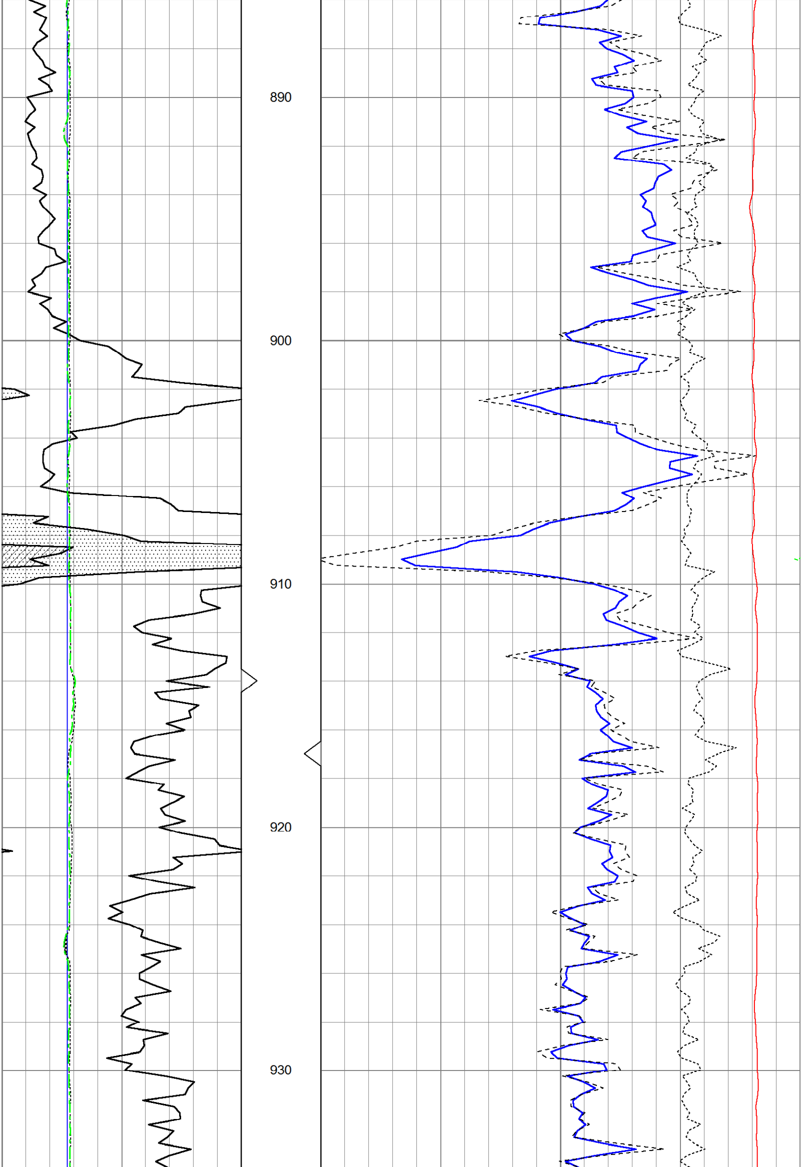
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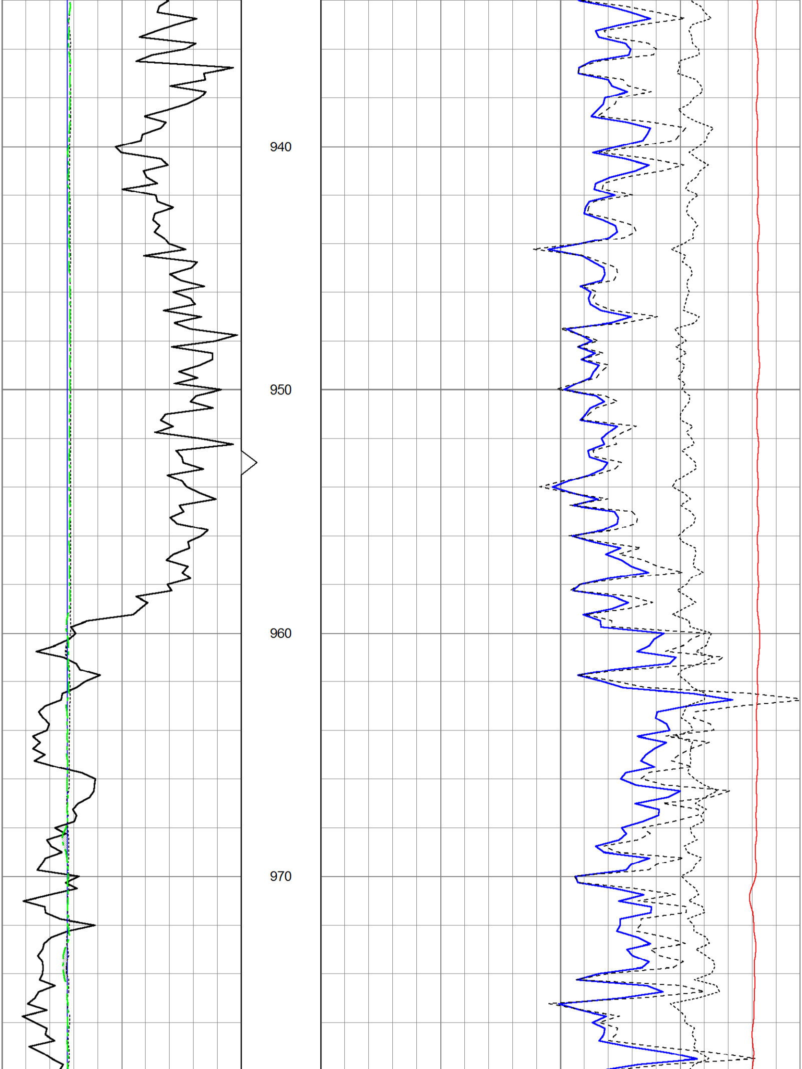
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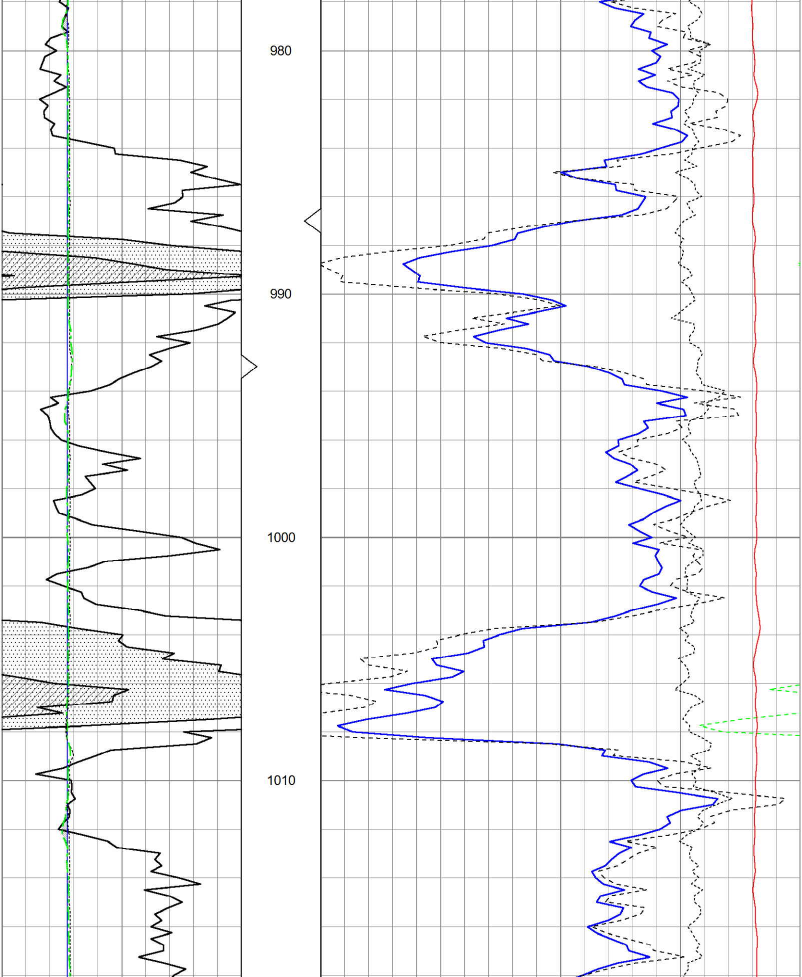
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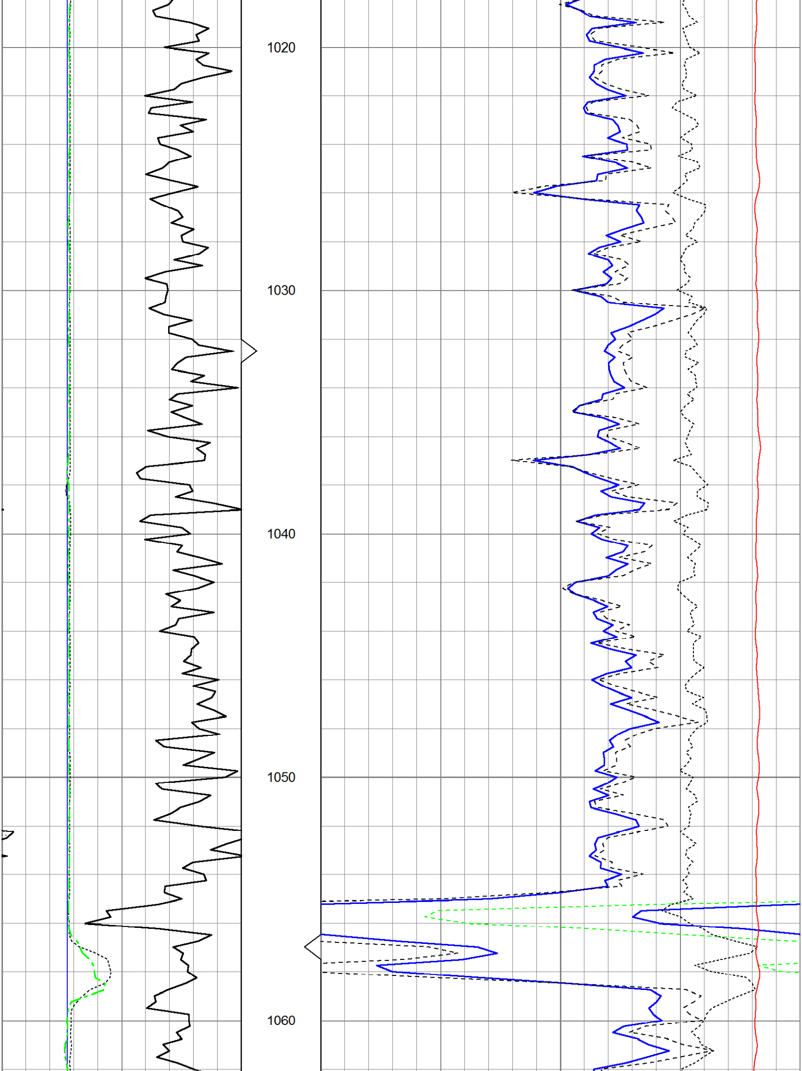
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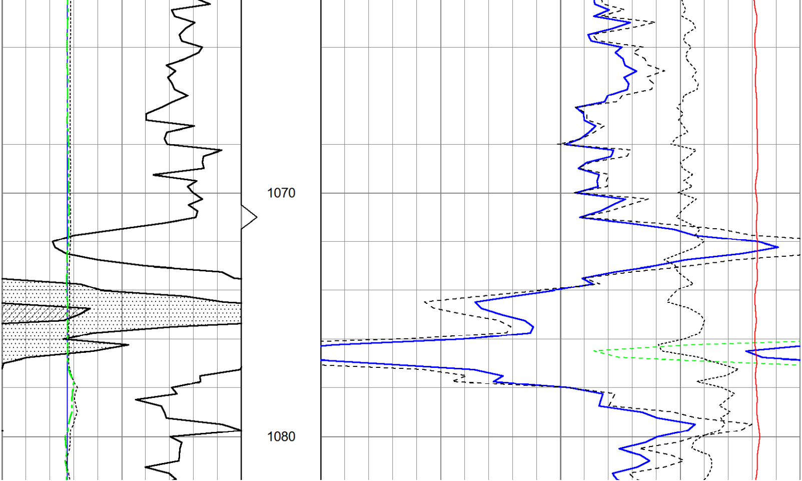
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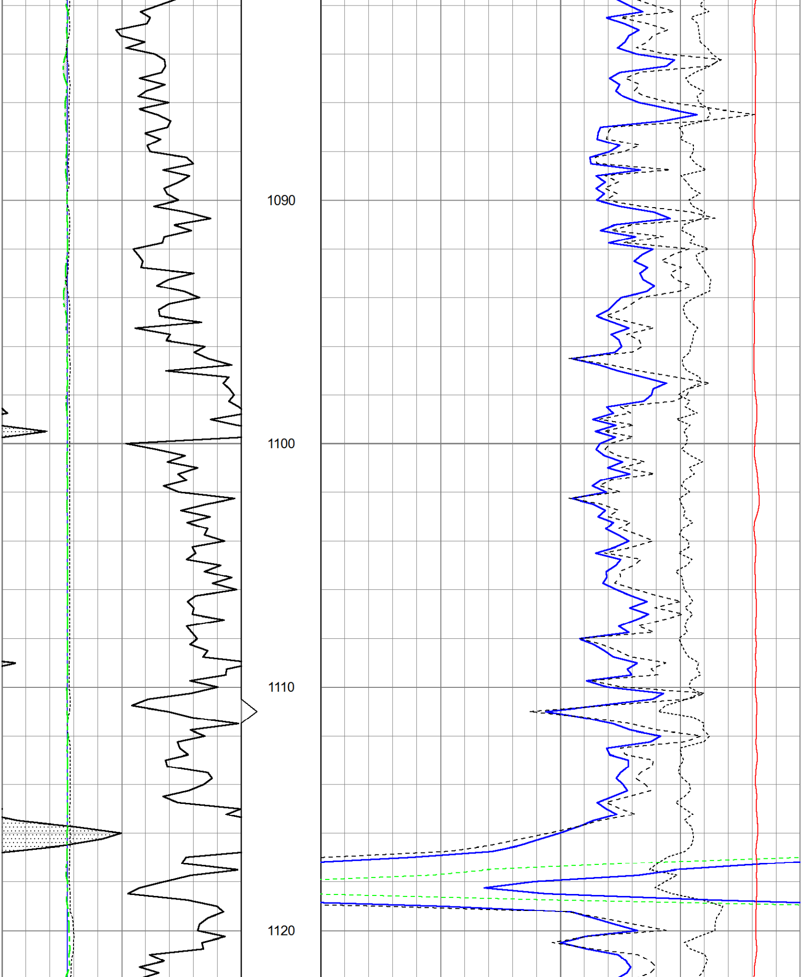
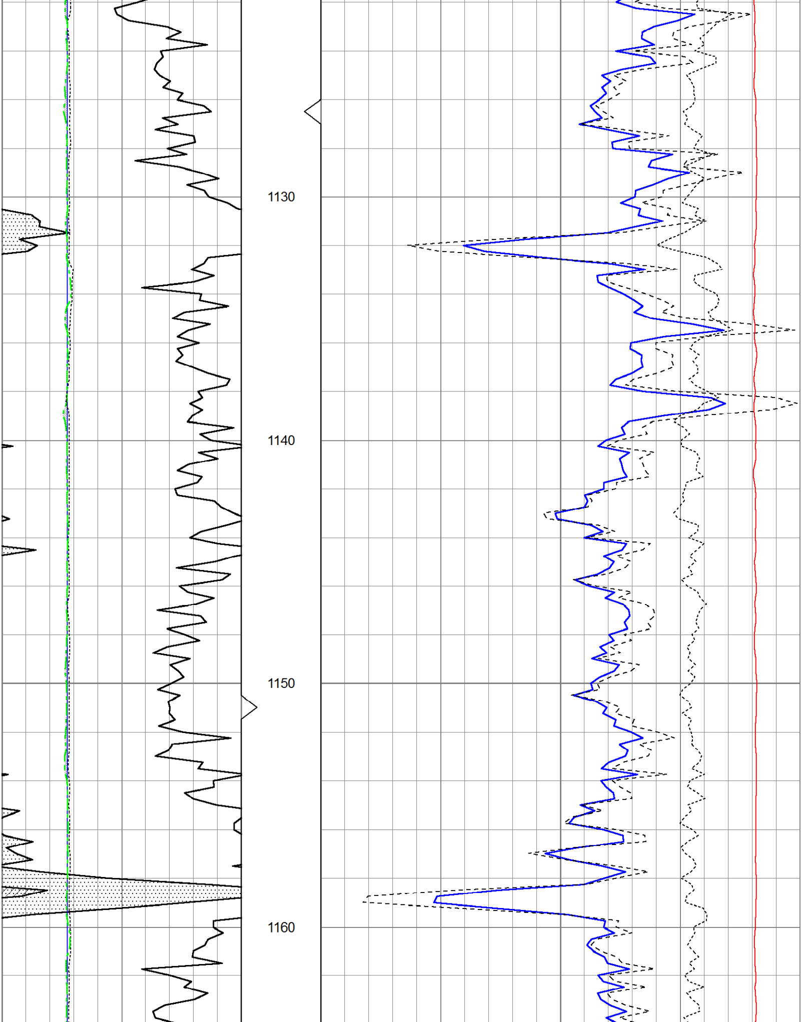
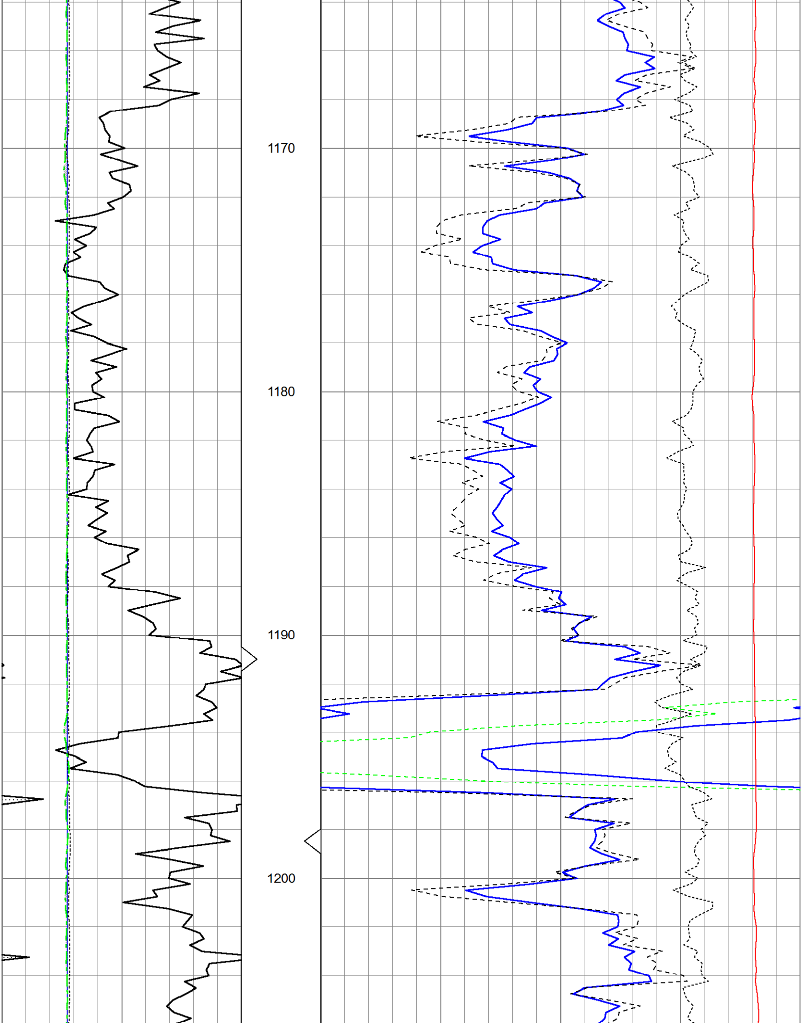
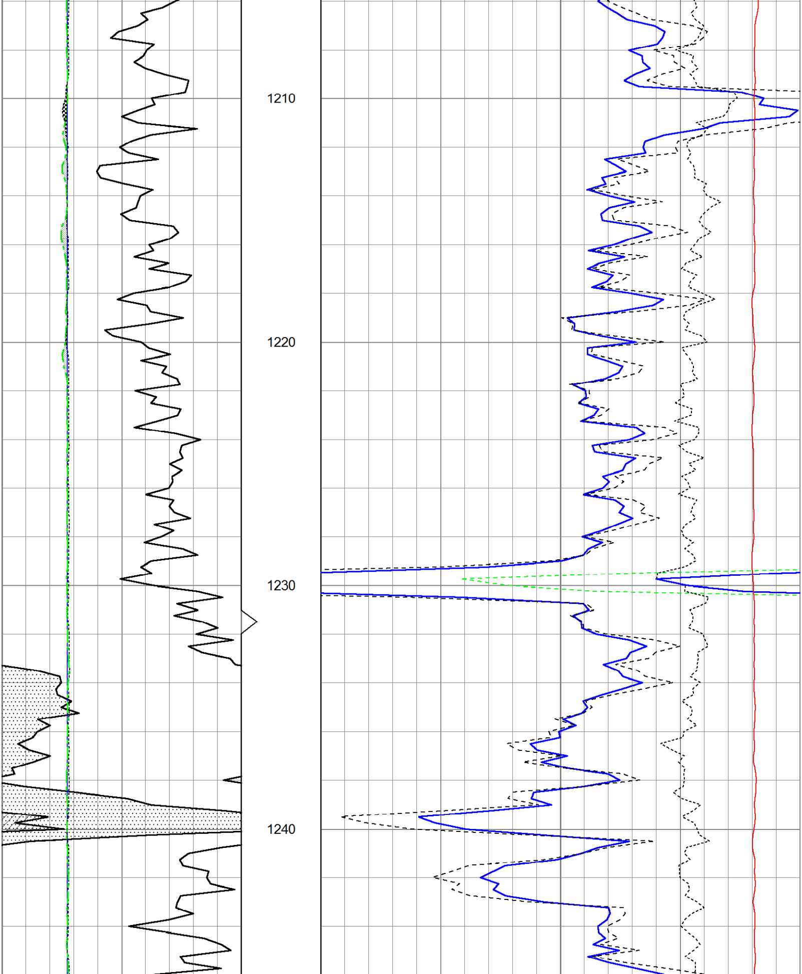
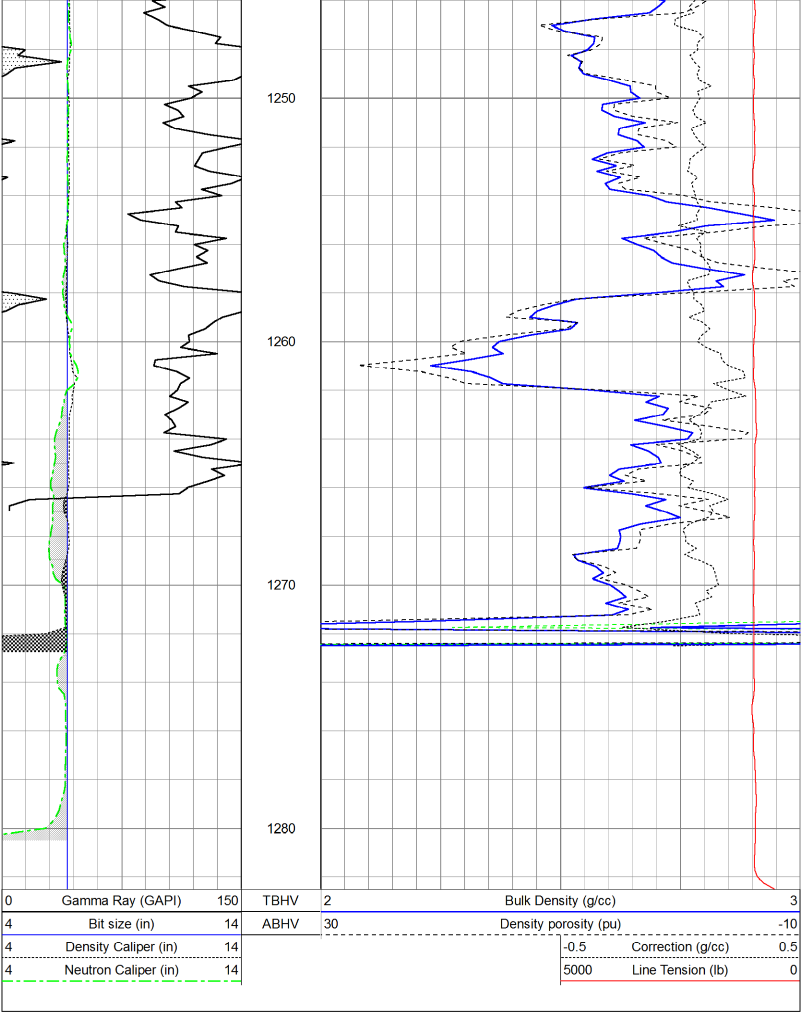
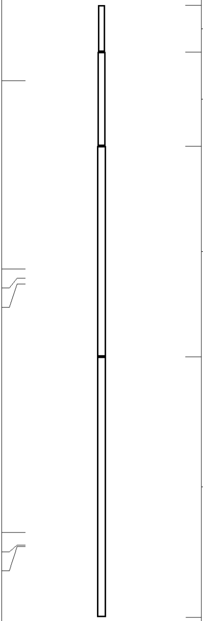










| Sensor | Offset (ft) | Schematic | Description | Len (ft) | OD (in) | Wt (lb) |
|---|---|---|---|---|---|---|
| | |  | CableHead<br>Isulation Sub | 1.42 | 3.00 | 20.00 |
| GR | 16.06 | | | | | |
| | | | Gamma-Oilex3006 (3006)<br>Gamma Ray Section | 2.81 | 3.50 | 75.00 |
| | | | Density-Oilex3006 (280)<br>Density Section | 6.29 | 4.00 | 200.00 |
| LSD | 10.44 | | | | | |
| DCAL | 10.15 | | | | | |
| SSD | 9.98 | | | | | |
| | | | Neutron-Sidewall3015 (3015)<br>Sidewall Neutron Section | 7.81 | 4.00 | 150.00 |
| SCAL | 2.54 | | | | | |
| SWN | 2.17 | | | | | |
| NEU | 2.13 | | | | | |

| | |
|---|---|
| Dataset: | ow2-7918 layne energy.db: field/well/CDL/pass1 |
| Total Length: | 18.33 ft |
| Total Weight: | 445.00 lb |
| O.D. | 4.00 in |