PSI
PHOENIX SURVEYS, INC.

# DUAL INDUCTION
# GUARD LOG
# GAMMA RAY

Company
Well
Field
County
State/Prv

| | |
|---|---|
| Company | Noble Energy Inc. |
| Well | Nopens H24-08 |
| Field | Wattenberg |
| County | Weld |
| State/Province | Colorado |

Location
2060' FNL & 740' FEL
SENE
Sec. 24, Twp. 3N, Rge. 65W

Other Services
Density
Neutron
Micro Log

| | | | |
|---|---|---|---|
| Permanent Datum | GL | Elevation | 4802 |
| Log Measured From | KB | | |
| Drilling Measured From | KB | | |

Elevation
K.B. 4817
D.F. 4816
G.L. 4802

| | | | |
|---|---|---|---|
| Date | June 12, 2010 | | |
| Run Number | 1 | | |
| Depth Driller | 7285 | | |
| Depth Logger | 7279 | | |
| Bottom Logged Interval | 7279 | | |
| Top Log Interval | Casing | | |
| Casing Driller | 690 | | |
| Casing Logger | 690 | | |
| Bit Size | 7-7/8" | | |
| Type Fluid in Hole | Chem Gel | | |
| Density / Viscosity | 9.2 / 52 | | |
| pH / Fluid Loss | 8.5 / 10.0 | | |
| Source of Sample | Flowline | | |
| Rm @ Meas. Temp | 3.05 @ 75° F | | |
| Rmf @ Meas. Temp | 2.20 @ 75° F | | |
| Rmc @ Meas. Temp | 3.80 @ 75° F | | |
| Source of Rmf / Rmc | Measure / Calc | | |
| Rm @ BHT | 1.10 @ 208° F | | |
| Time Circulation Stopped | 2000 6-11-10 | | |
| Time Logger on Bottom | 0200 | | |
| Maximum Recorded Temperature | 208° F | | |
| Equipment Number | 49 | | |
| Location | Brighton, CO | | |
| Recorded By | Schuman | | |
| Witnessed By | Tawn | | |

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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

Annular volume calculated for 4.5" casing
Ensign Drilling Rig 128
Thank you for using Phoenix Surveys!!
API #: 05-123-30501
No repeat pass due to hole conditions.

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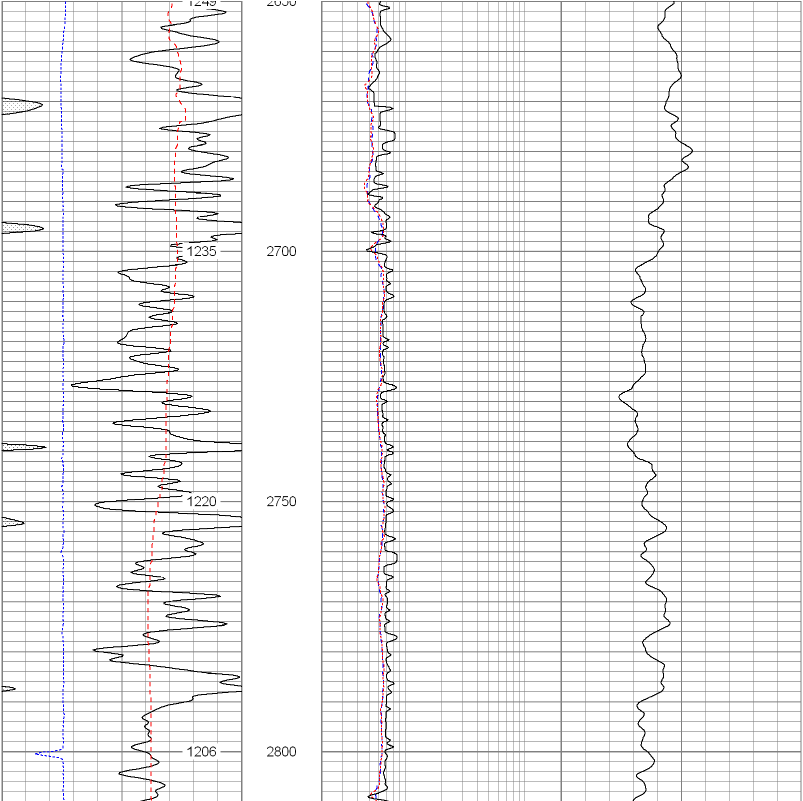
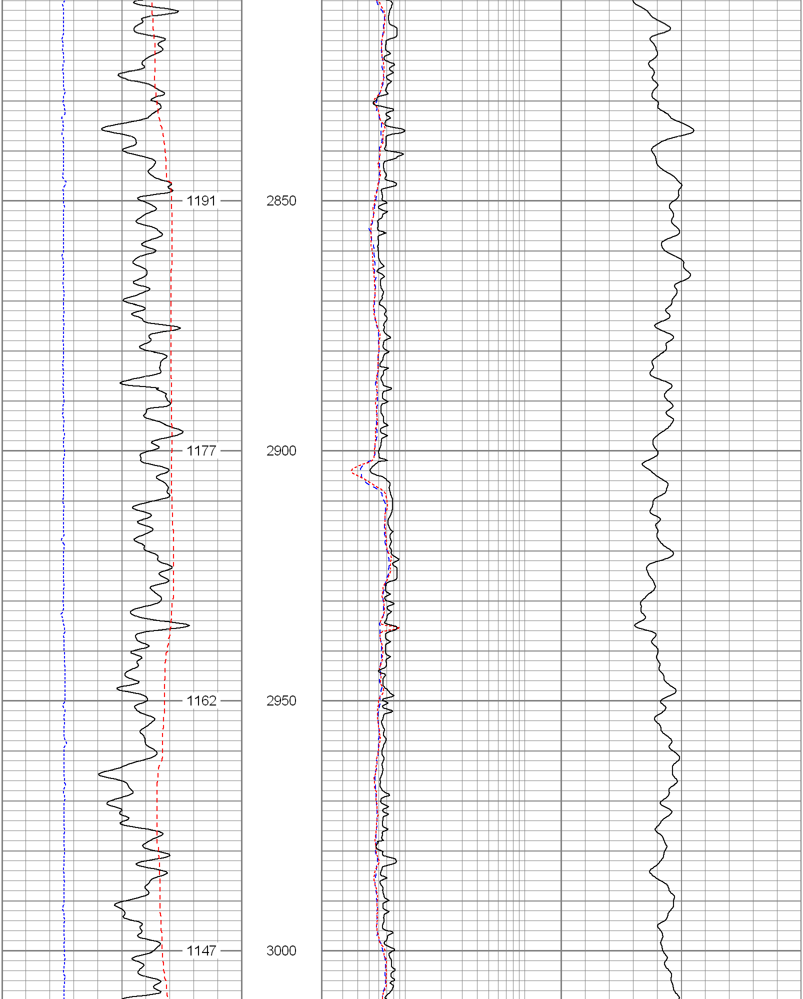
|---|---|
| Database File: | 10664.db |
| Dataset Pathname: | main1 |
| Presentation Format: | pdc1 |
| Dataset Creation: | Sat Jun 12 08:34:50 2010 |
| Charted by: | Depth in Feet scaled 1:240 |

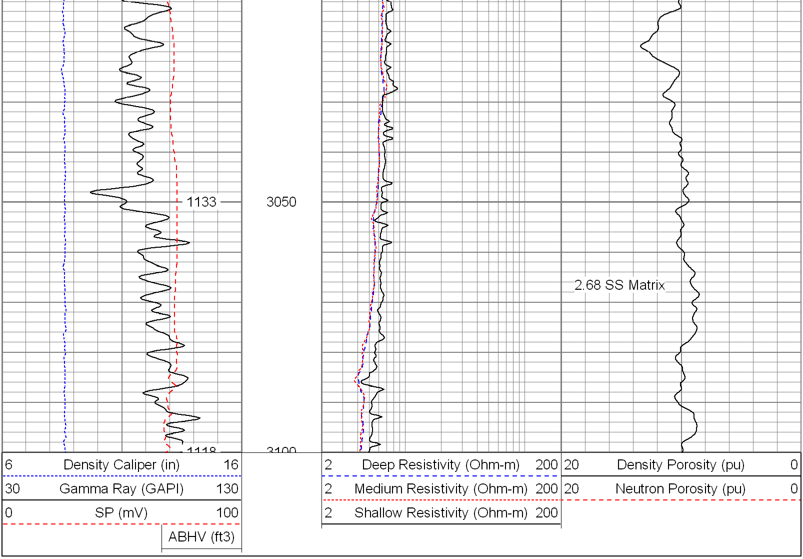
6 Density Caliper (in) 16
30 Gamma Ray (GAPI) 130
0 SP (mV) 100
ABHV (ft3)

2 Deep Resistivity (Ohm-m) 200
2 Medium Resistivity (Ohm-m) 200
2 Shallow Resistivity (Ohm-m) 200

20 Density Porosity (pu) 0
20 Neutron Porosity (pu) 0







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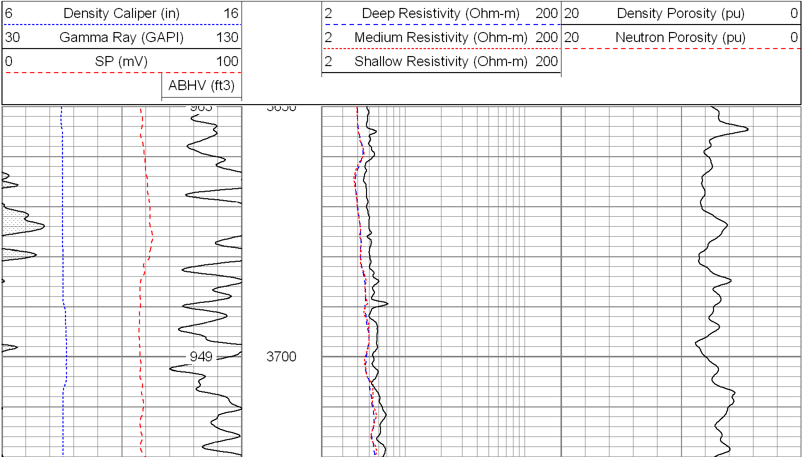

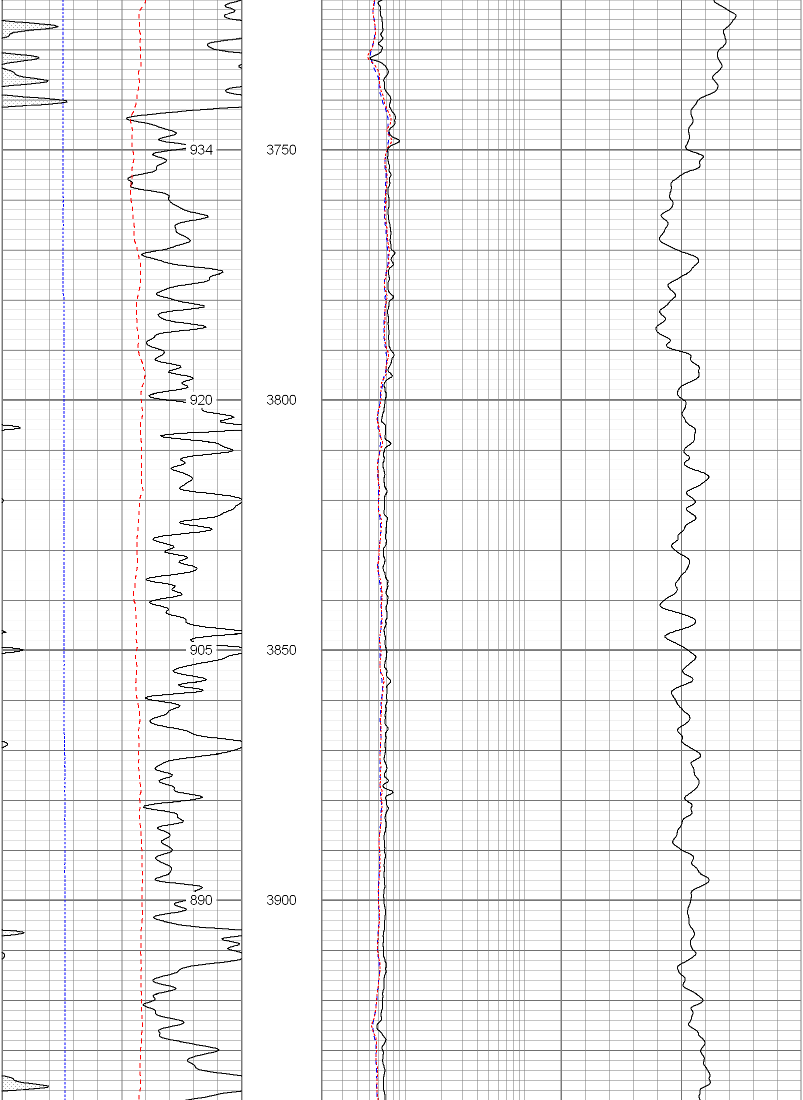

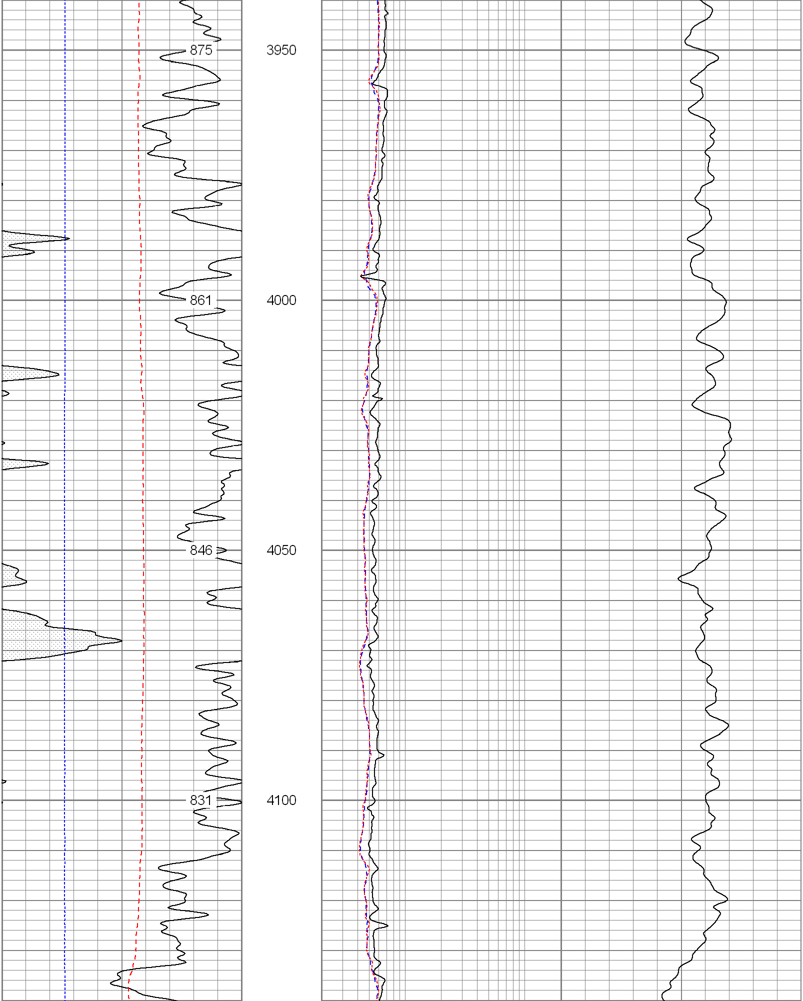

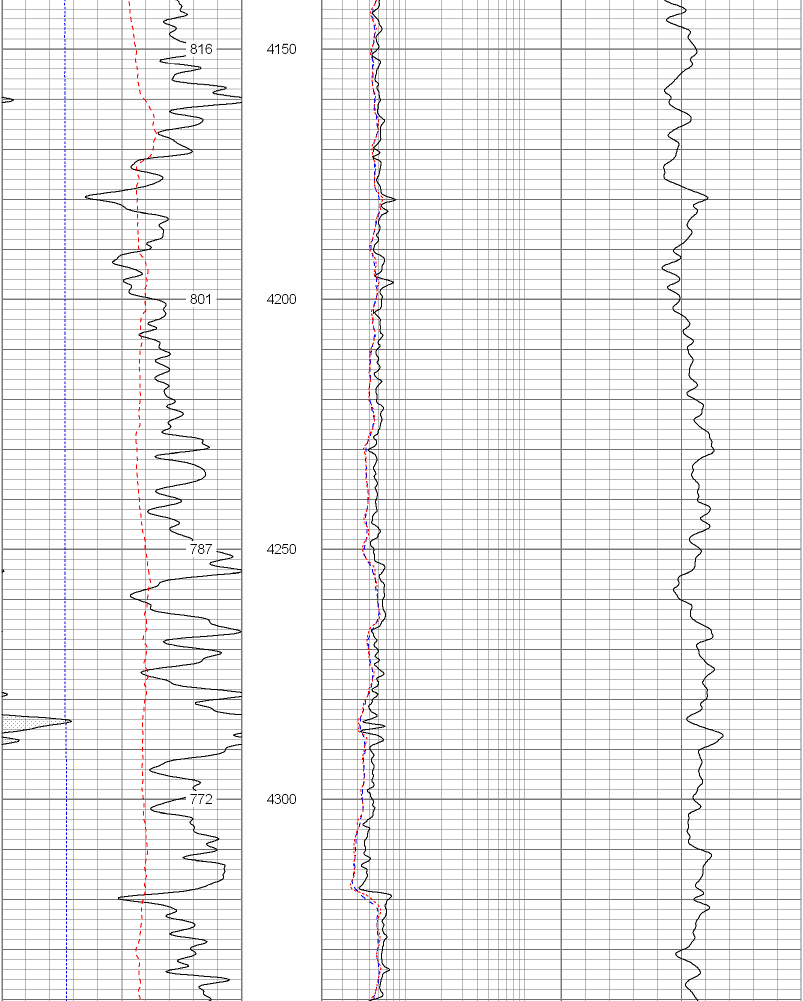

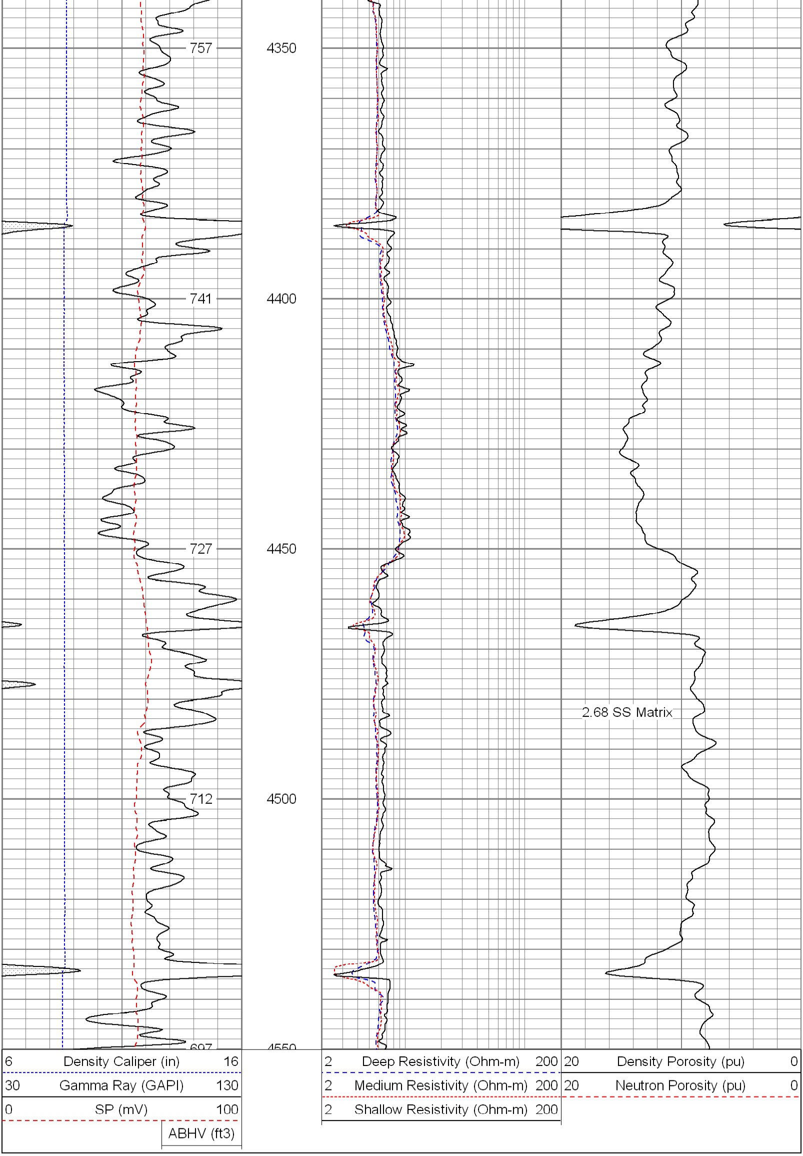

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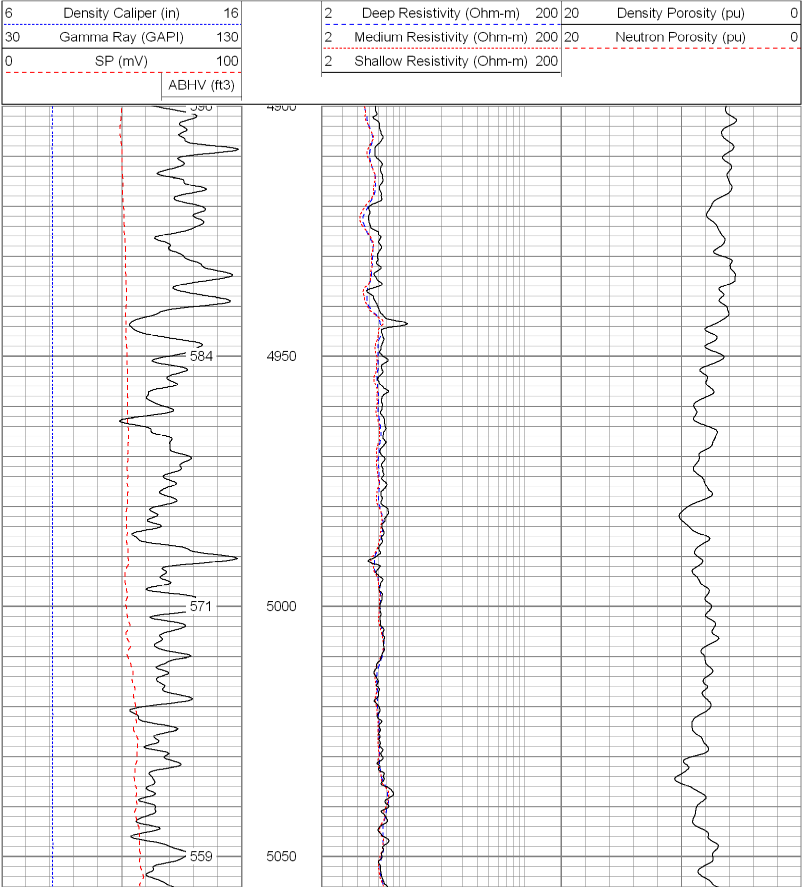

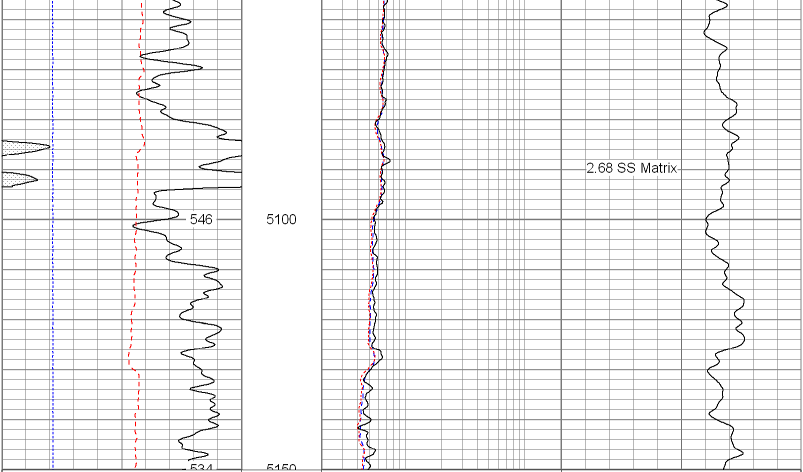

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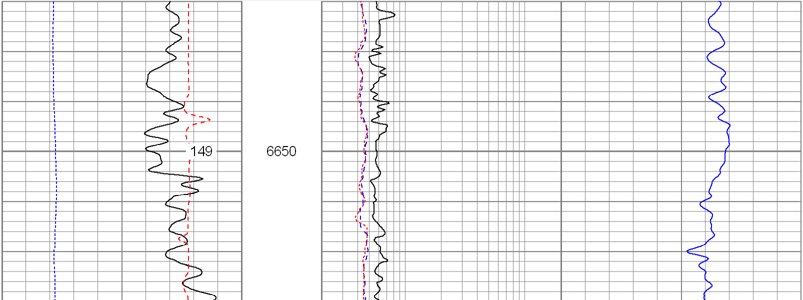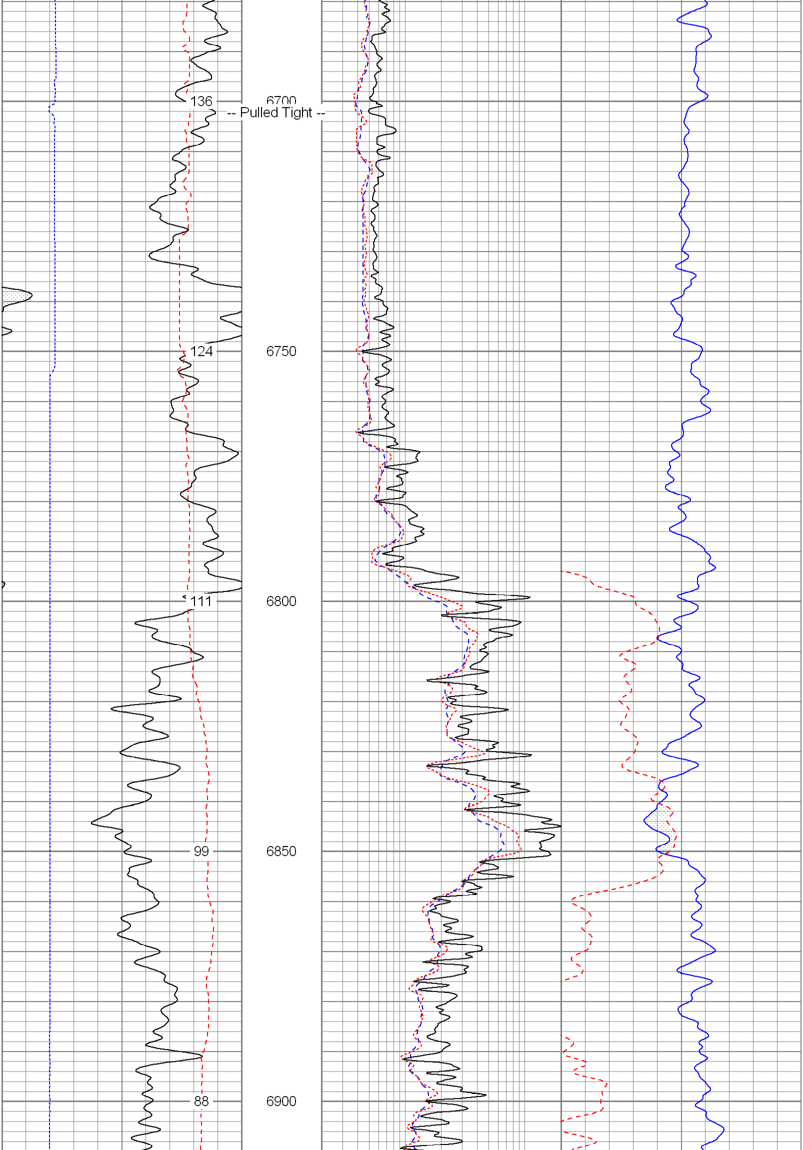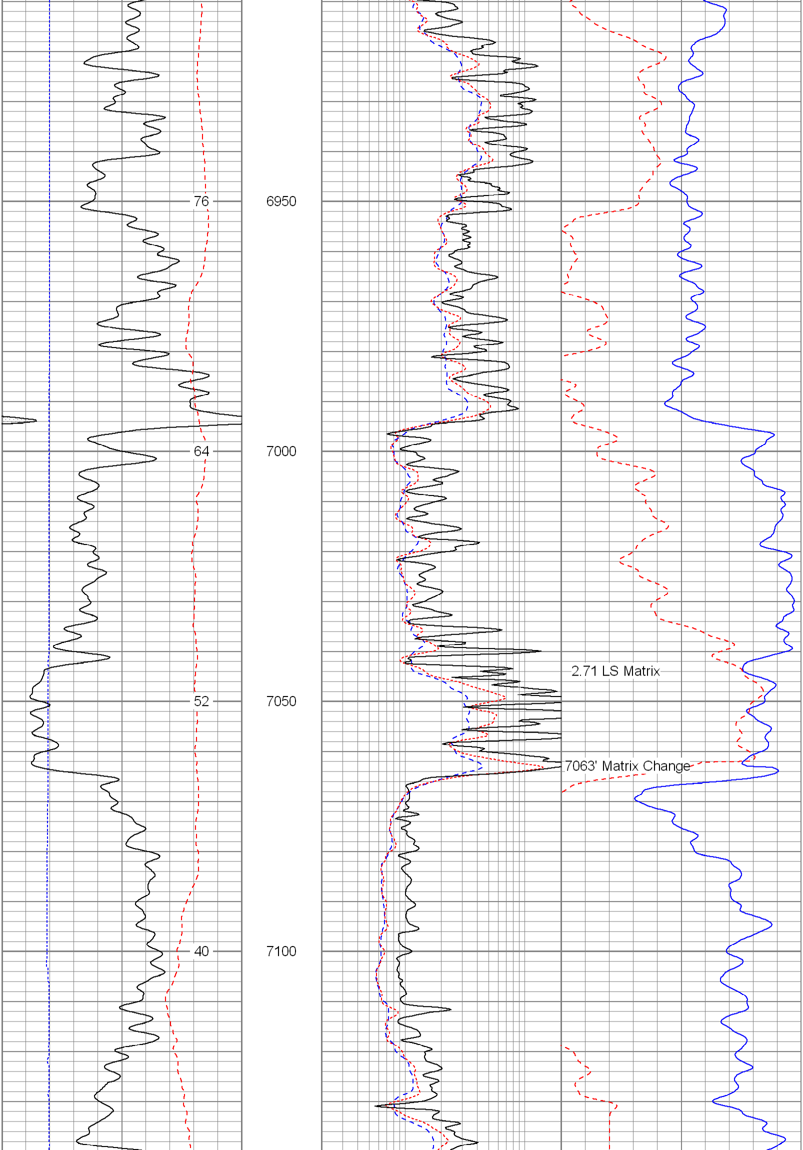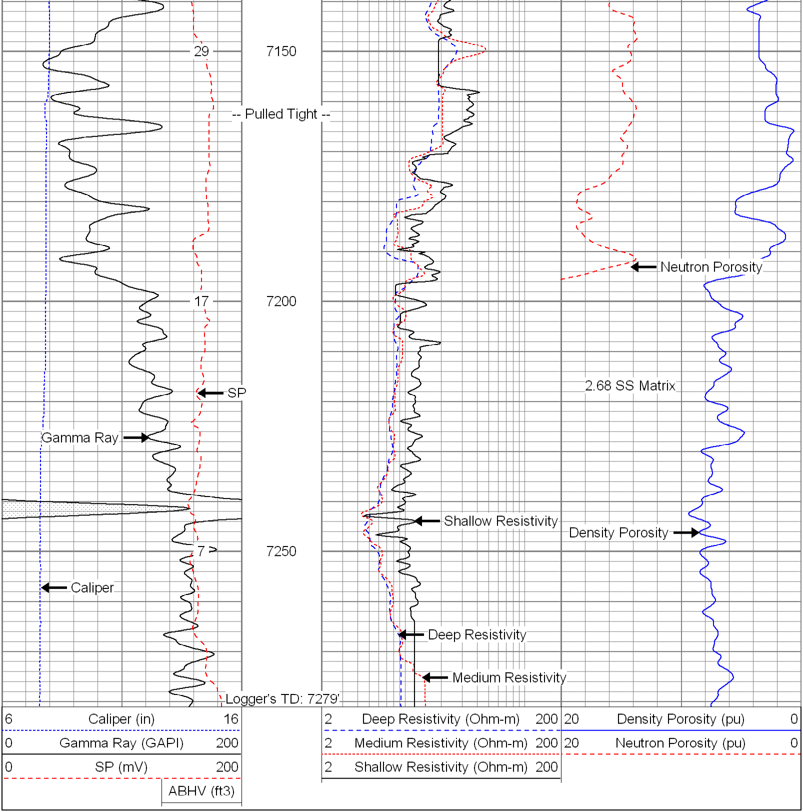| | | |
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