PHOENIX SURVEYS, INC.

HIGH RESOLUTION INDUCTION

Company
Well
Field
County
State/Prv

Company Noble Energy Inc.
Well Foss 6-31
Field Wattenberg
County Weld **State/Province** Colorado

Location 2187' FSL & 1886' FWL
NE SW
Sec - 6, Twp - 6N, Rge - 63W

Other Services
Density
Neutron
Microlog

Permanent Datum	GL	Elevation	4707
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 4720
D.F. 4719
G.L. 4707

Date	January 30, 2012		
Run Number	1		
Depth Driller	7061		
Depth Logger	7061		
Bottom Logged Interval	7061		
Top Log Interval	Casing		
Casing Driller	530		
Casing Logger	530		
Bit Size	7-7/8"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	9.3 / 44		
pH / Fluid Loss	7.5 / 10		
Source of Sample	Flowline		
Rm @ Meas. Temp	3.15 @ 77 F		
Rmf @ Meas. Temp	2.08 @ 77 F		
Rmc @ Meas. Temp	3.88 @ 77 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	0.98 @ 208 F		
Time Circulation Stopped	0100		
Time Logger on Bottom	0715		
Maximum Recorded Temperature	208 F		
Equipment Number	52		
Location	Brighton, CO		
Recorded By	Randy Conley		
Witnessed By	Lloyd Rowell		

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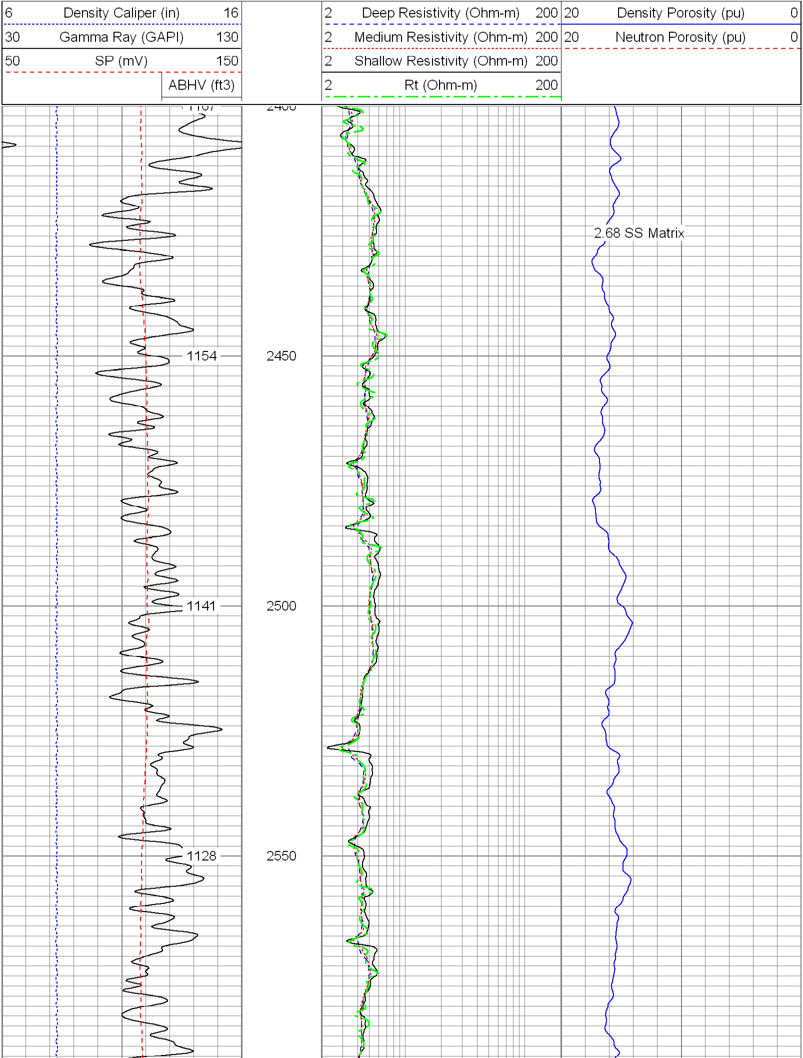
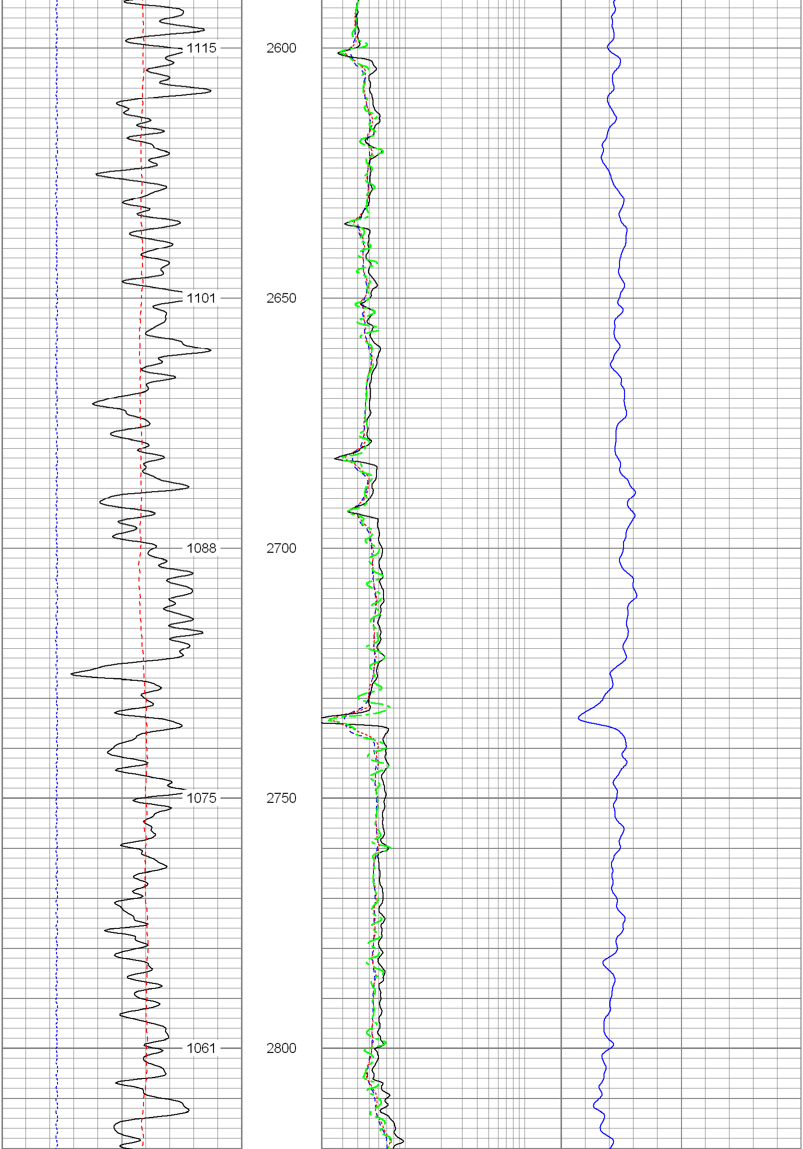
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

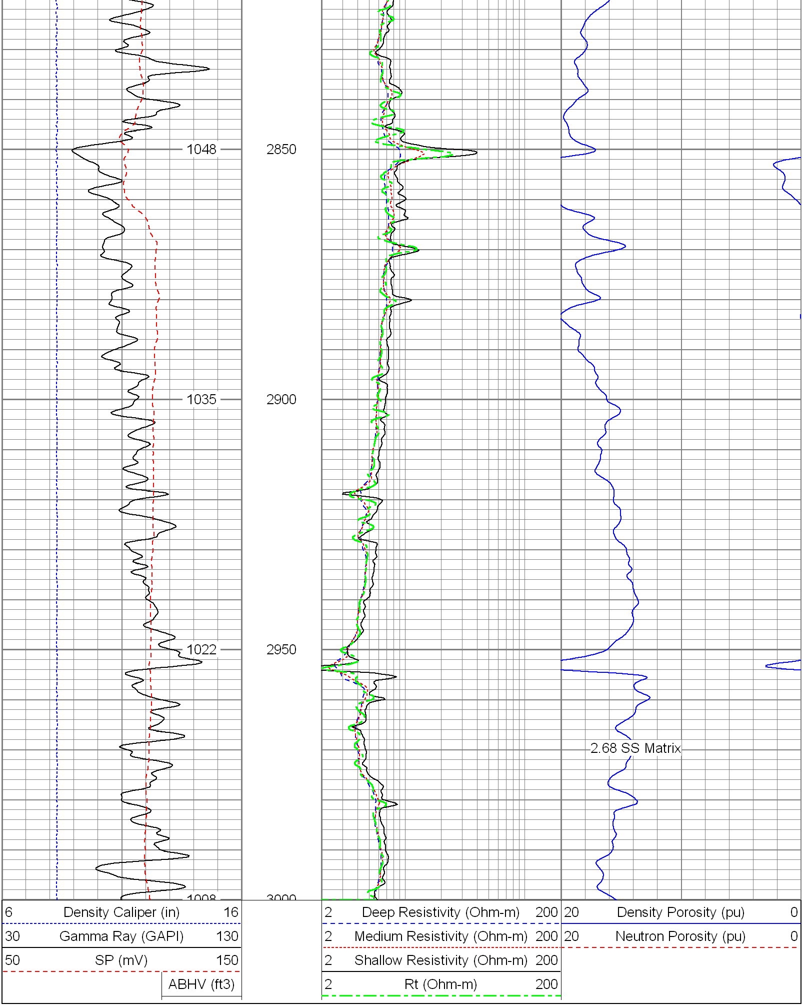
Comments

Annular volume calculated for 4.5" casing
Cade Drilling Rig 21
Thank you for using Phoenix Surveys!!
API #: 05-123-24290-00

Database File: 12600.db
Dataset Pathname: final
Presentation Format: pdc1
Dataset Creation: Mon Jan 30 07:40:00 2012
Charted by: Depth in Feet scaled 1:240







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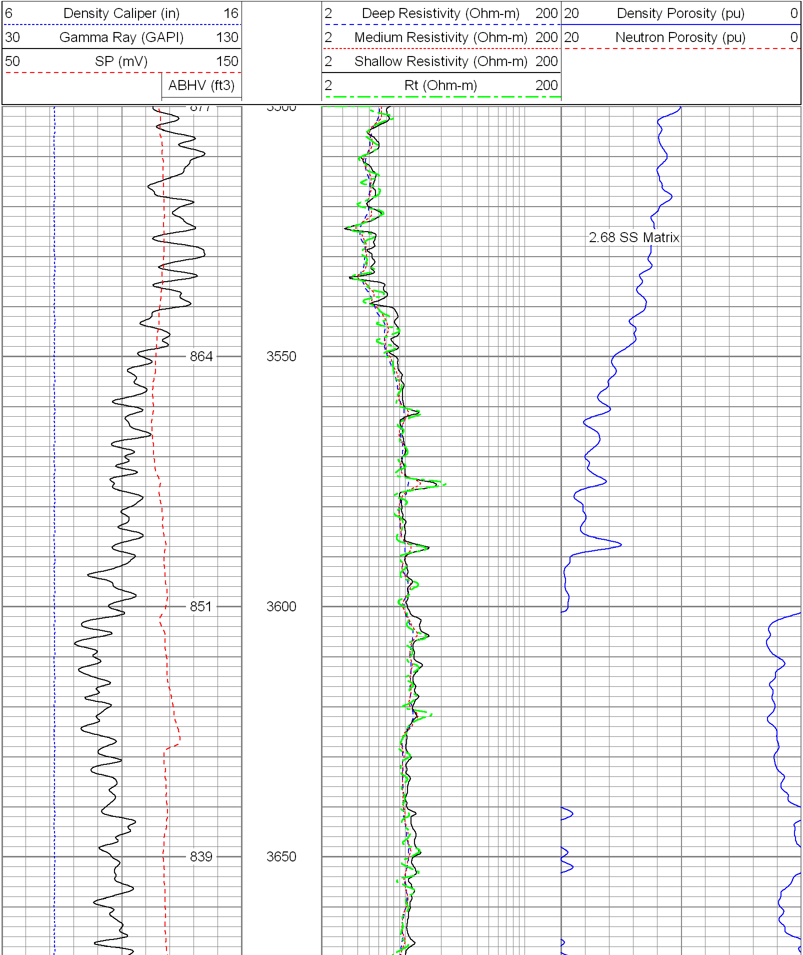

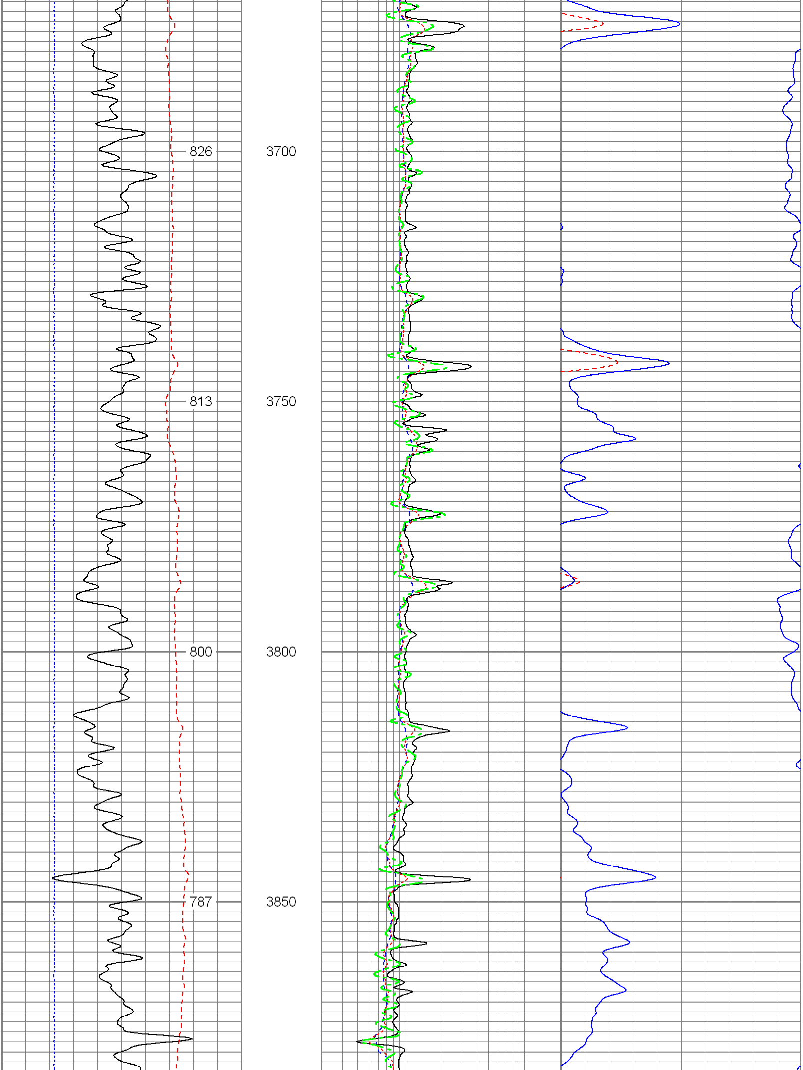

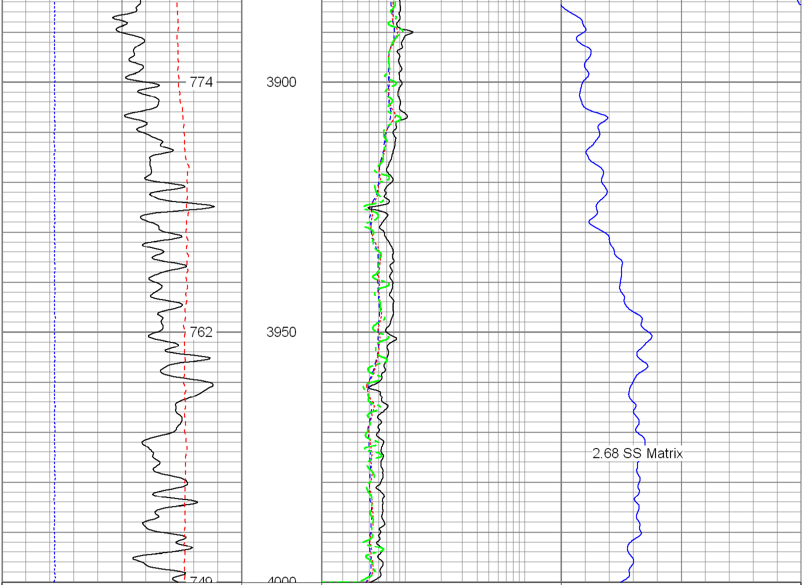

6 Density Caliper (in) 16		2 Deep Resistivity (Ohm-m) 200	20 Density Porosity (pu) 0
30 Gamma Ray (GAPI) 130		2 Medium Resistivity (Ohm-m) 200	20 Neutron Porosity (pu) 0
50 SP (mV) 150		2 Shallow Resistivity (Ohm-m) 200	
ABHV (ft3)		2 Rt (Ohm-m) 200	

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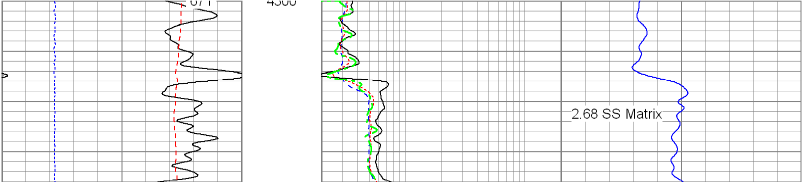

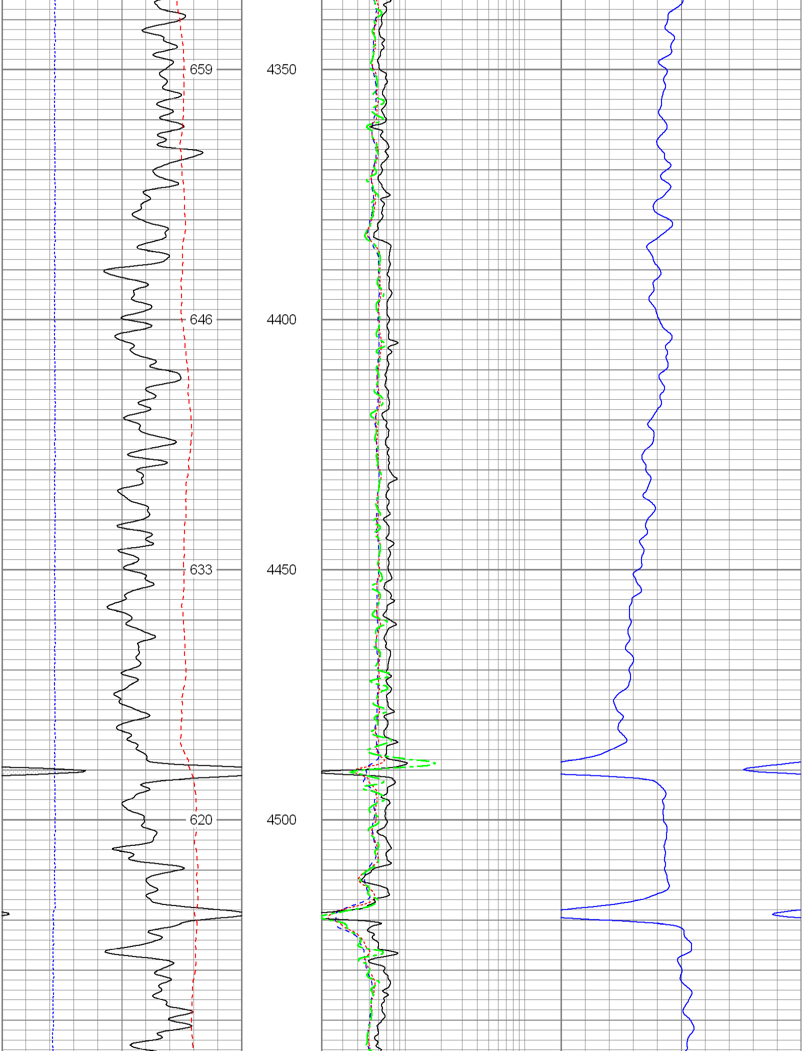

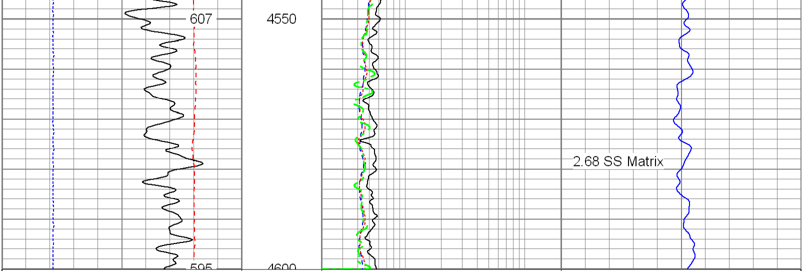

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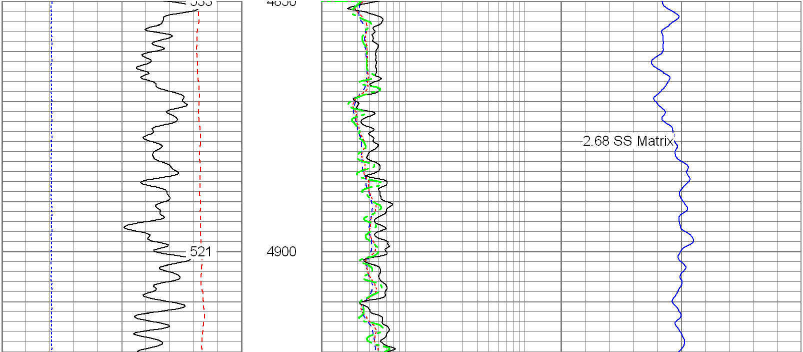

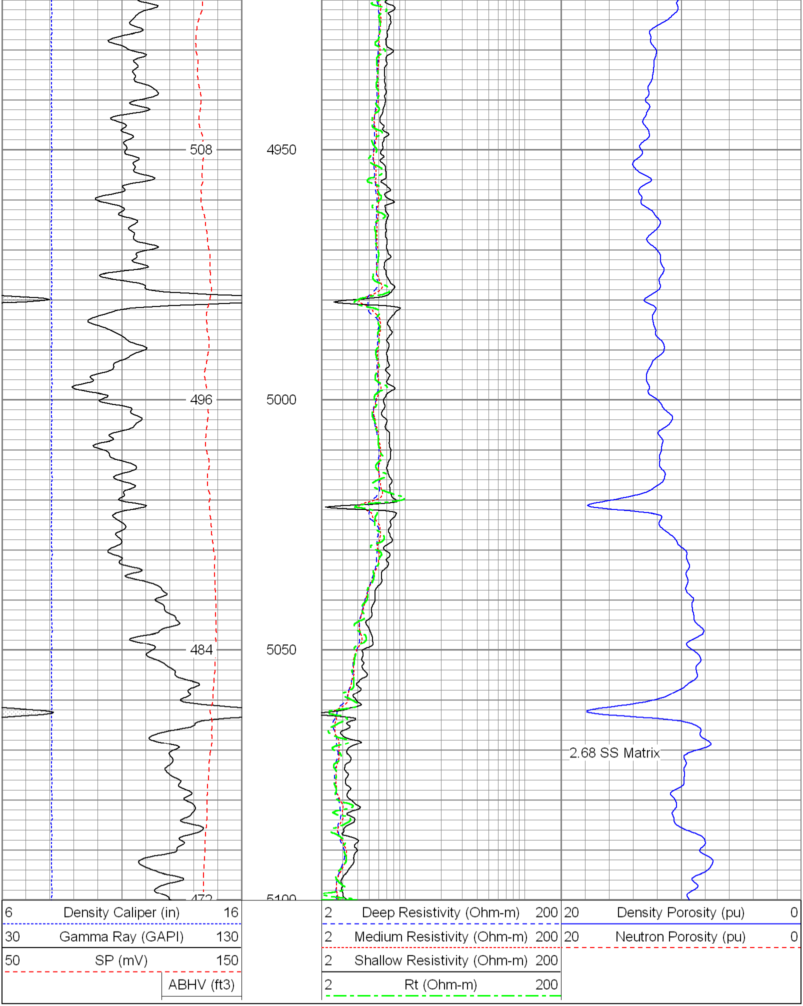

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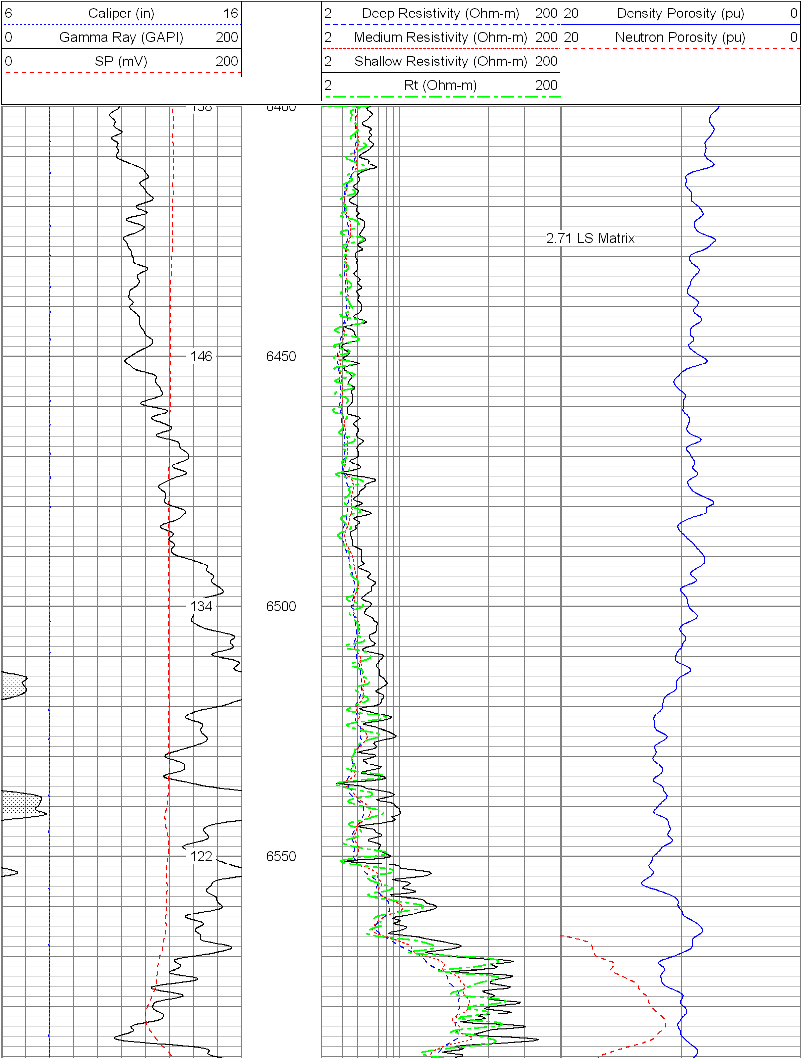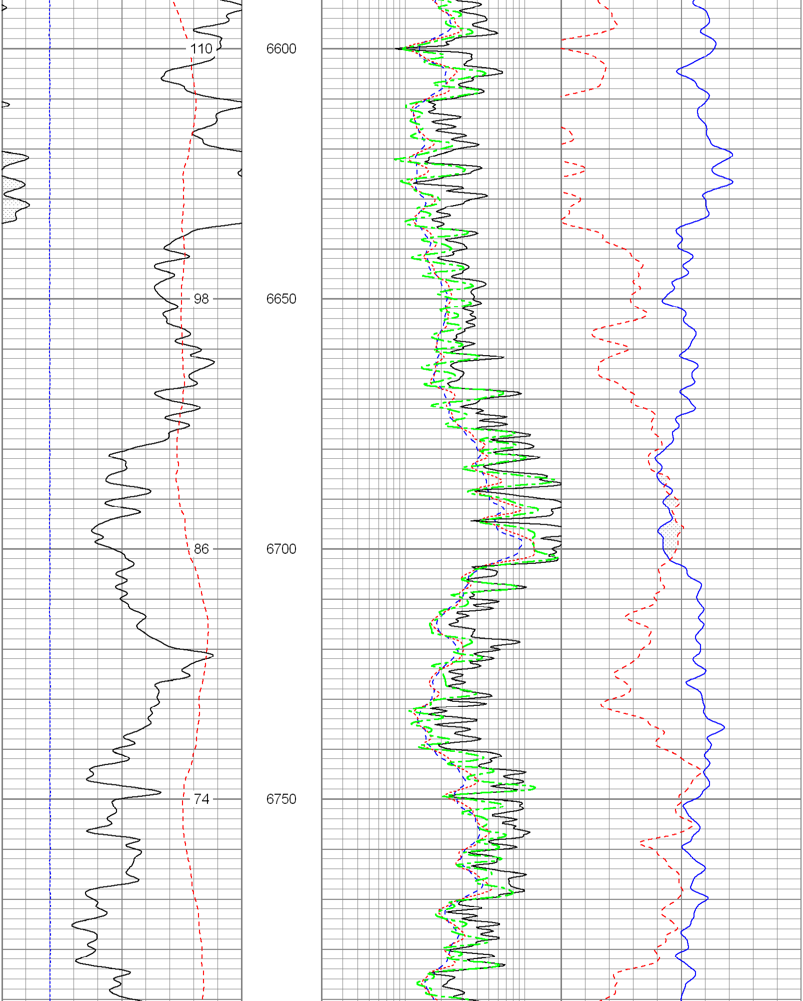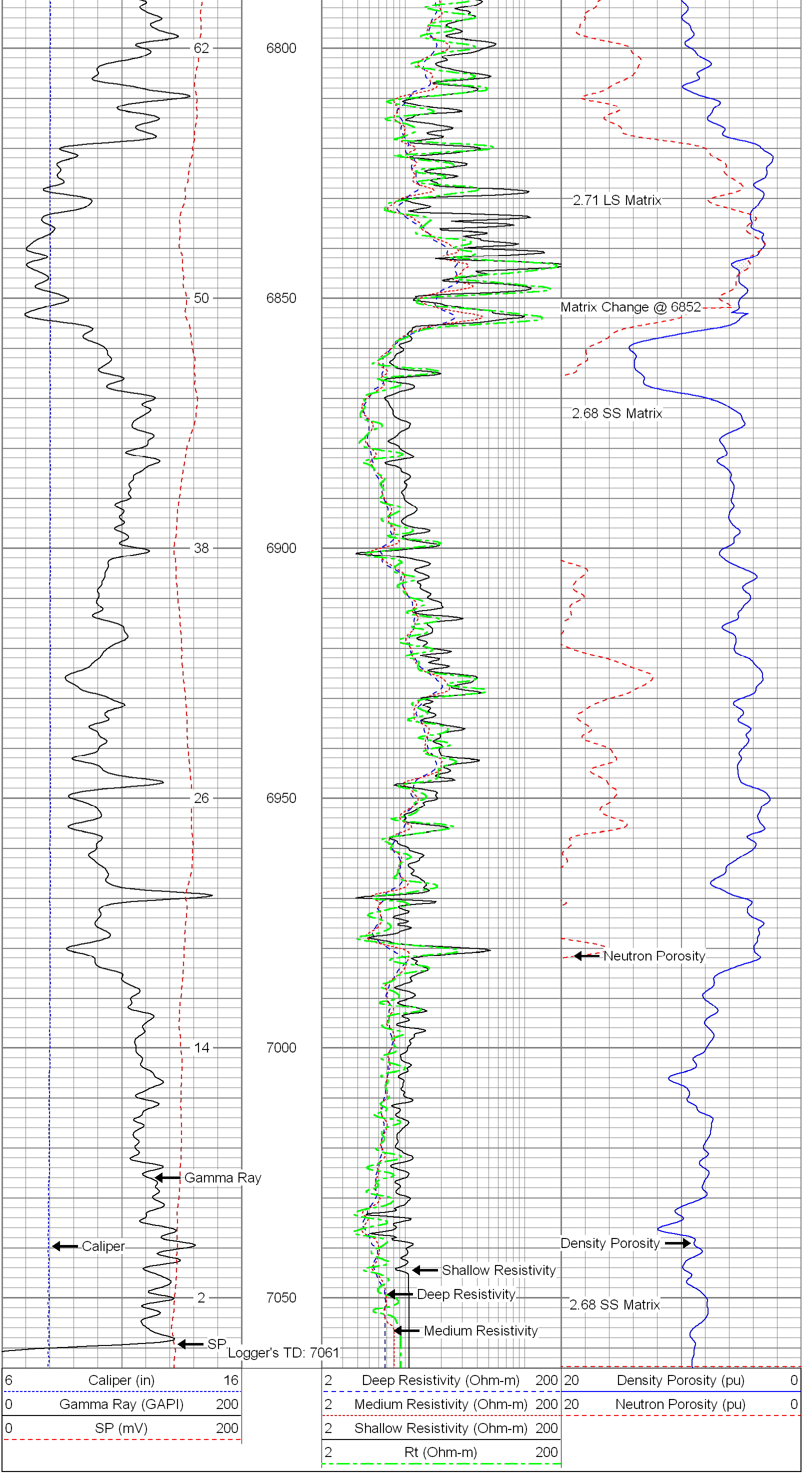
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0 Gamma Ray (GAPI) 200
0 SP (mV) 200
2 Deep Resistivity (Ohm-m) 200
2 Medium Resistivity (Ohm-m) 200
2 Shallow Resistivity (Ohm-m) 200
2 Rt (Ohm-m) 200
20 Density Porosity (pu) 0
20 Neutron Porosity (pu) 0
2.71 LS Matrix
146
6450
134
6500
122
6550