PSI
PHOENIX SURVEYS, INC.

DUAL INDUCTION
GUARD LOG
GAMMA RAY

Company	**Noble Energy Inc.**
Well	**Wells Ranch AE 32-04**
Field	**Wattenberg**
County	**Weld**
State/Province	**Colorado**
Location	661' FNL & 650' FWL NW NW Sec. 32, Twp. 6N, Rge. 62W

Elevation 4750

Other Services
Density
Neutron
Microlog

Elevation
K.B. 4766
D.F. 4765
G.L. 4750

Company
Well
Field
County
State/Prv

Permanent Datum	GL	
Log Measured From	KB	
Drilling Measured From	KB	

Date	May 20, 2010			
Run Number	1			
Depth Driller	6835			
Depth Logger	6840			
Bottom Logged Interval	6840			
Top Log Interval	Casing			
Casing Driller	560			
Casing Logger	560			
Bit Size	7-7/8"			
Type Fluid in Hole	Chem Gel			
Density / Viscosity	9.1 / 30			
pH / Fluid Loss	8.0 / 20			
Source of Sample	Flowline			
Rm @ Meas. Temp	3.54 @ 63° F			
Rmf @ Meas. Temp	2.83 @ 63° F			
Rmc @ Meas. Temp	4.25 @ 63° F			
Source of Rmf / Rmc	Measure / Calc			
Rm @ BHT	1.19 @ 201° F			
Time Circulation Stopped	2015 5/19			
Time Logger on Bottom	0345			
Maximum Recorded Temperature	201° F			
Equipment Number	50			
Location	Brighton, CO			
Recorded By	Matt Gill			
Witnessed By	Mike Sitton			

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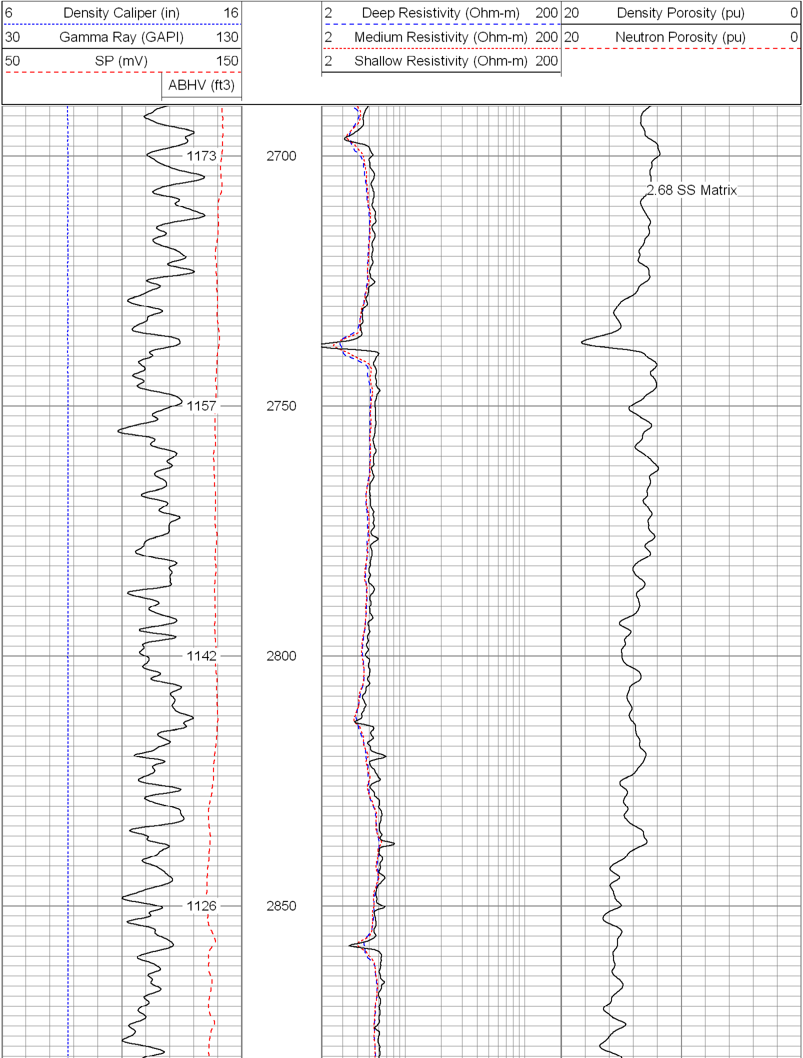
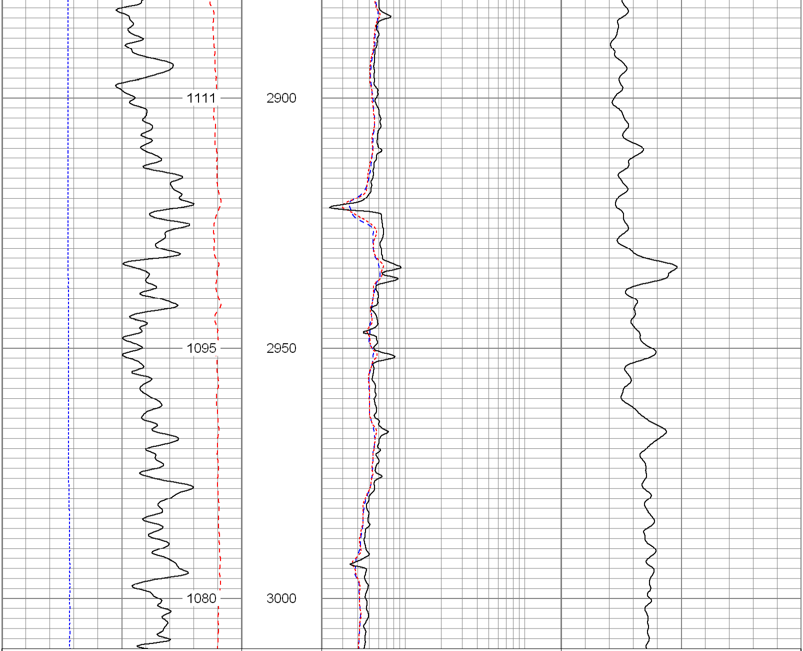
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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
Ensing Drilling Rig 55
Thank you for using Phoenix Surveys!!
API #: 05-123-30480-00

Database File: 10698.db
Dataset Pathname: final
Presentation Format: pdc1
Dataset Creation: Thu May 20 04:25:47 2010
Charted by: Depth in Feet scaled 1:240





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)		

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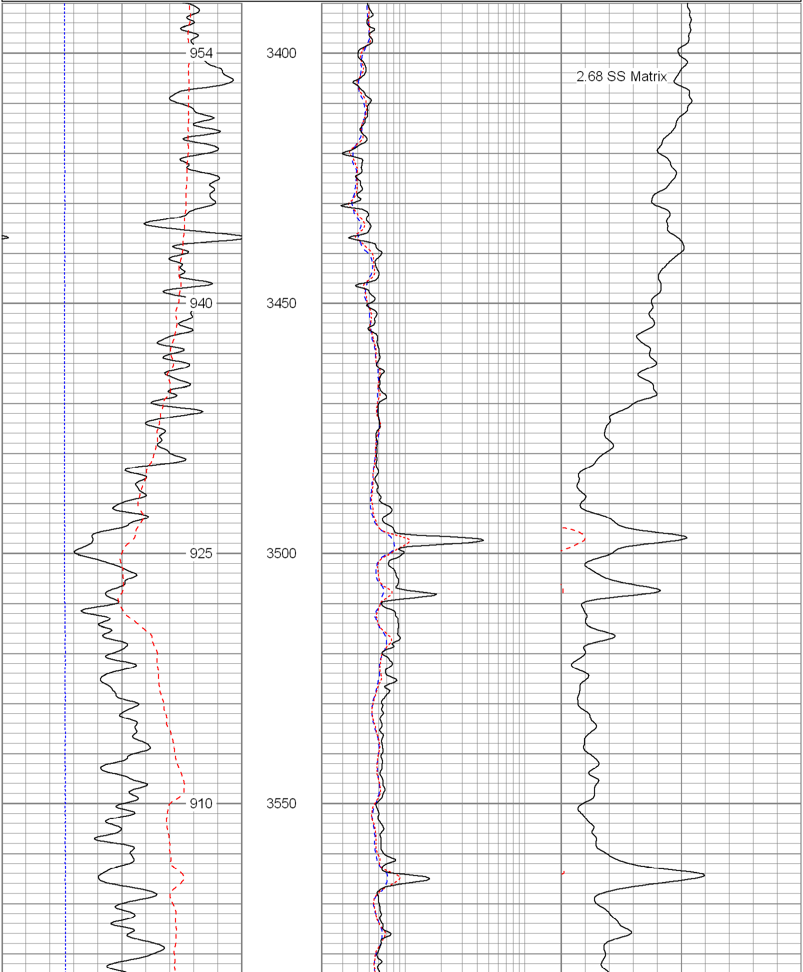

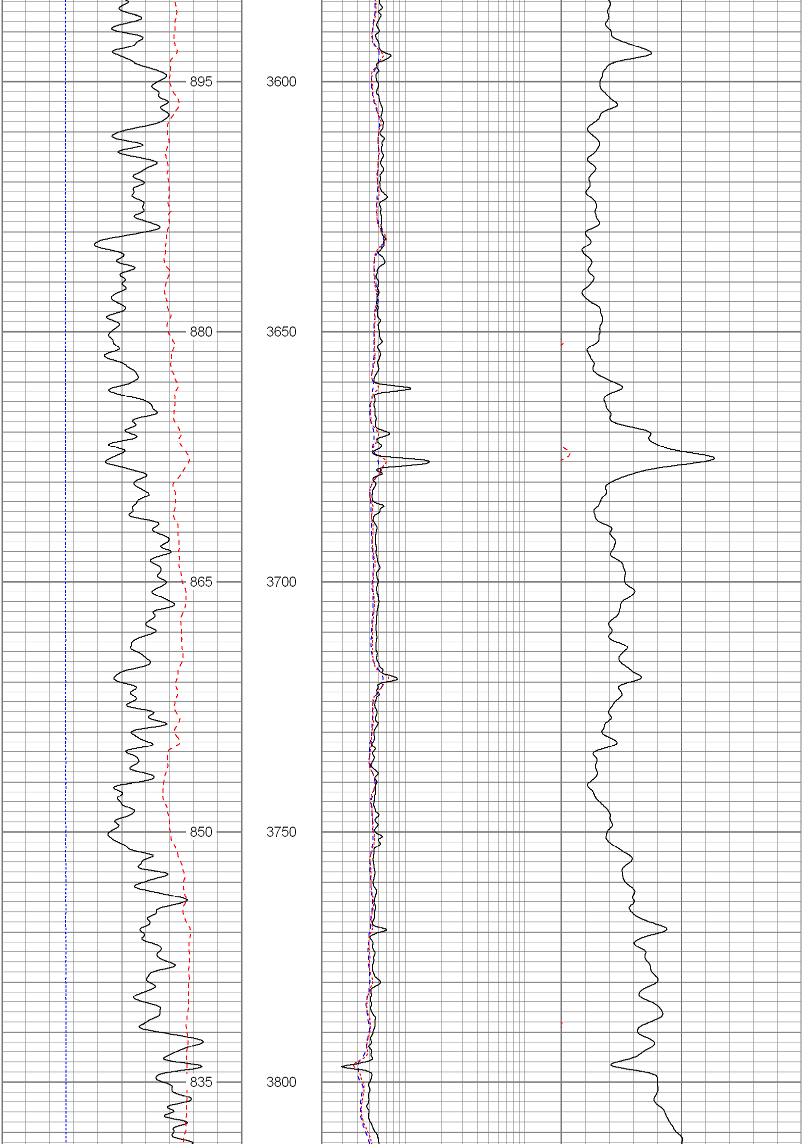

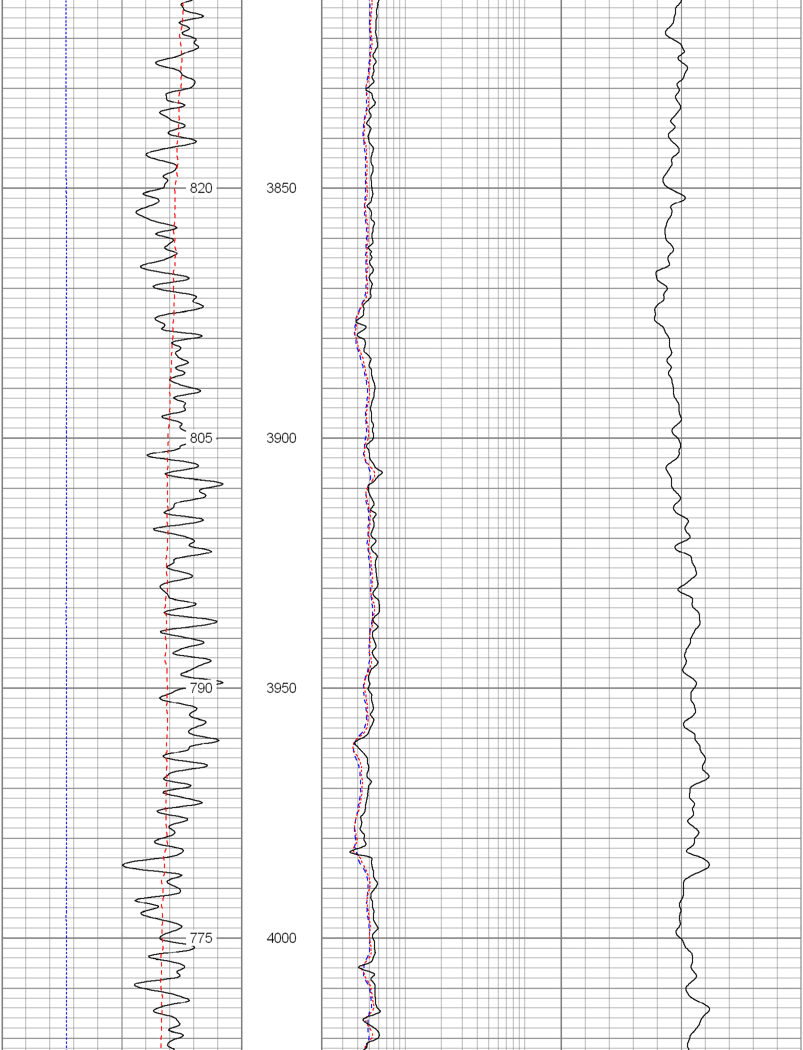

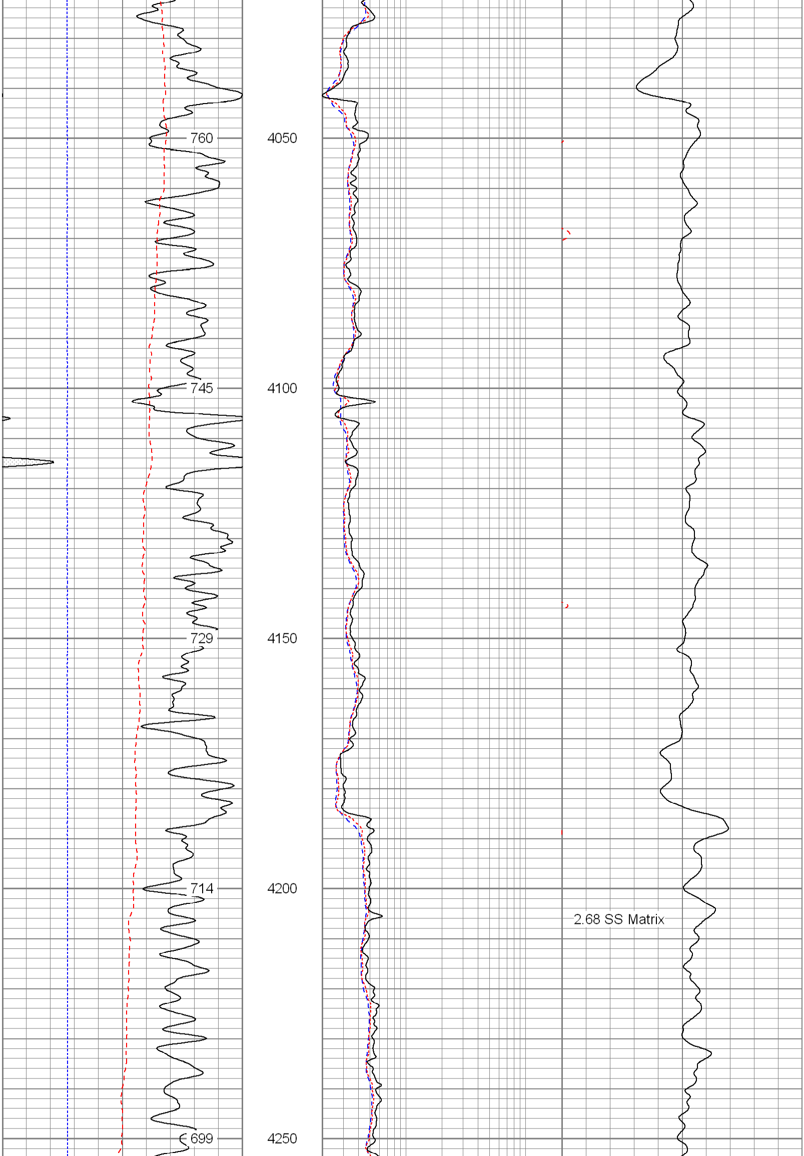

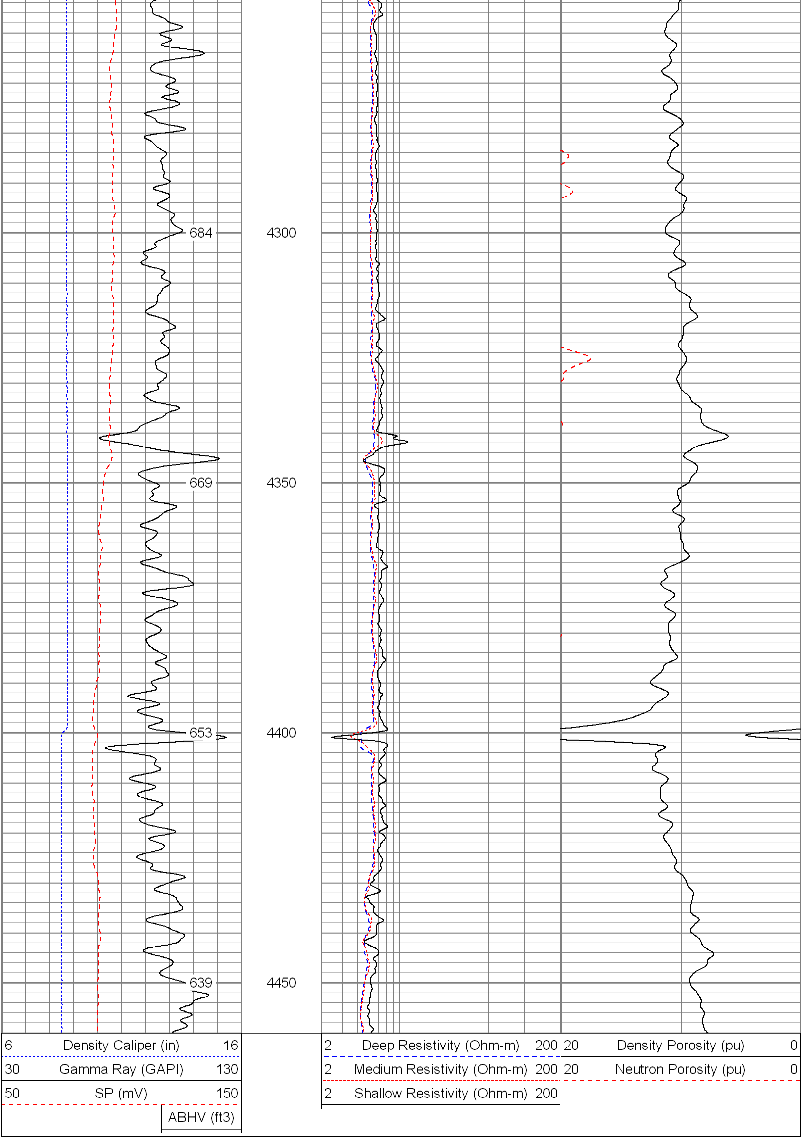

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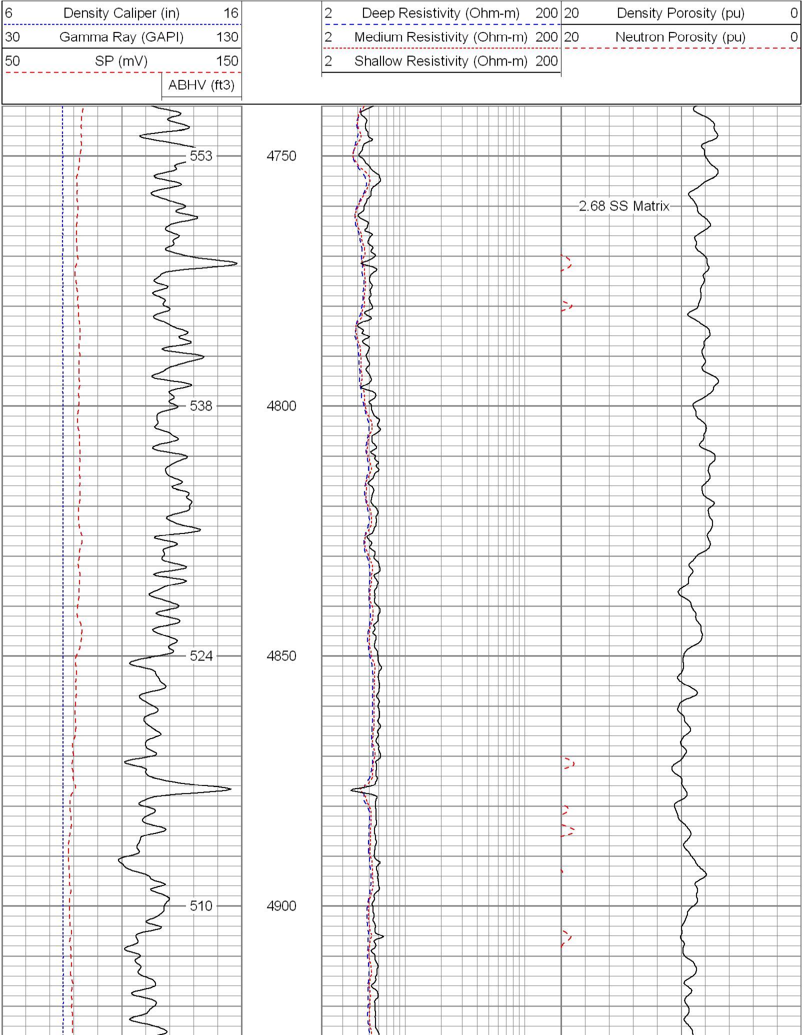

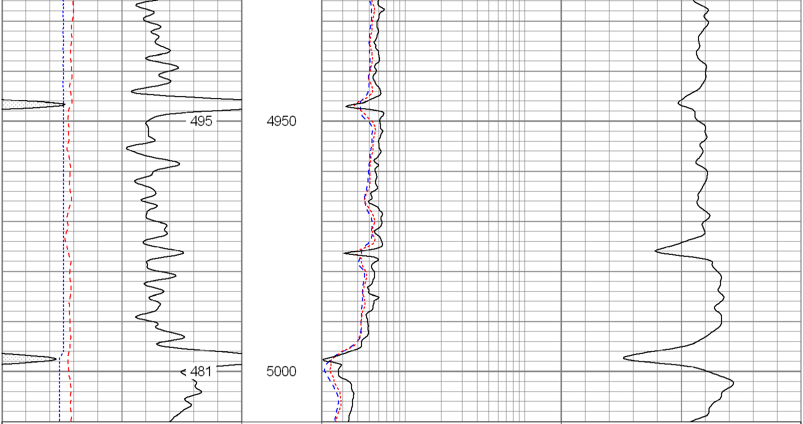

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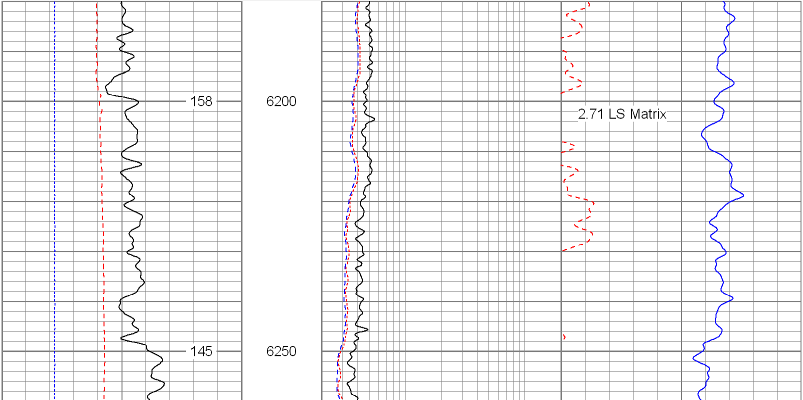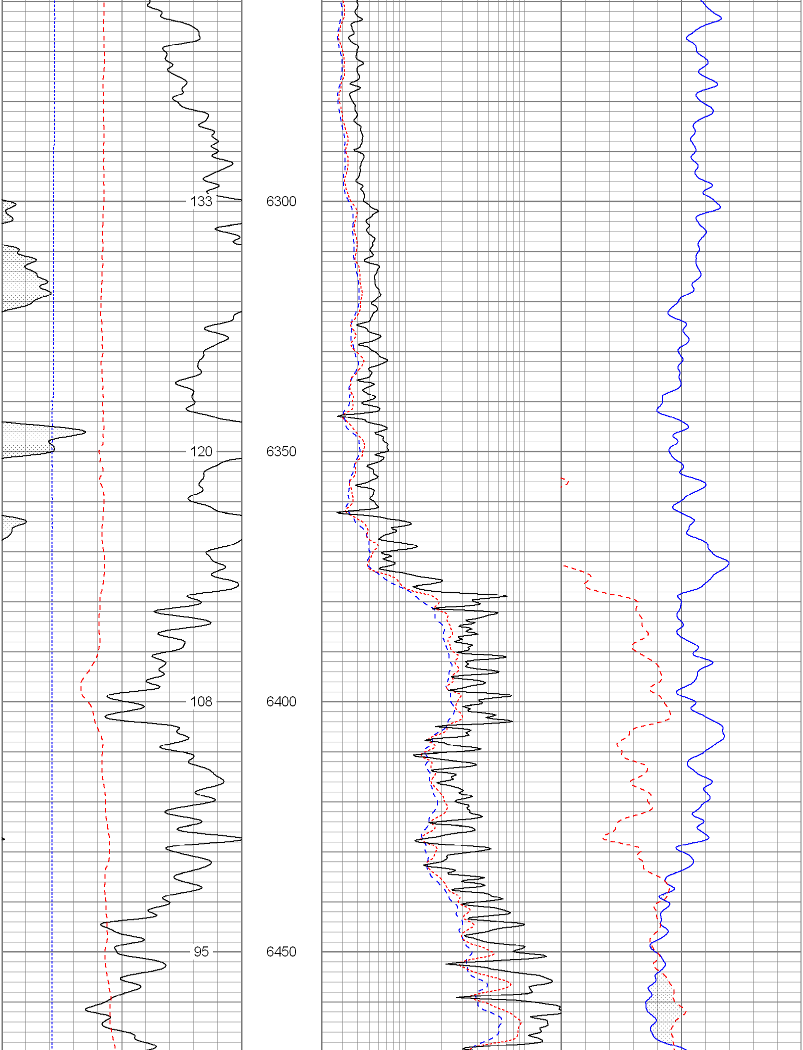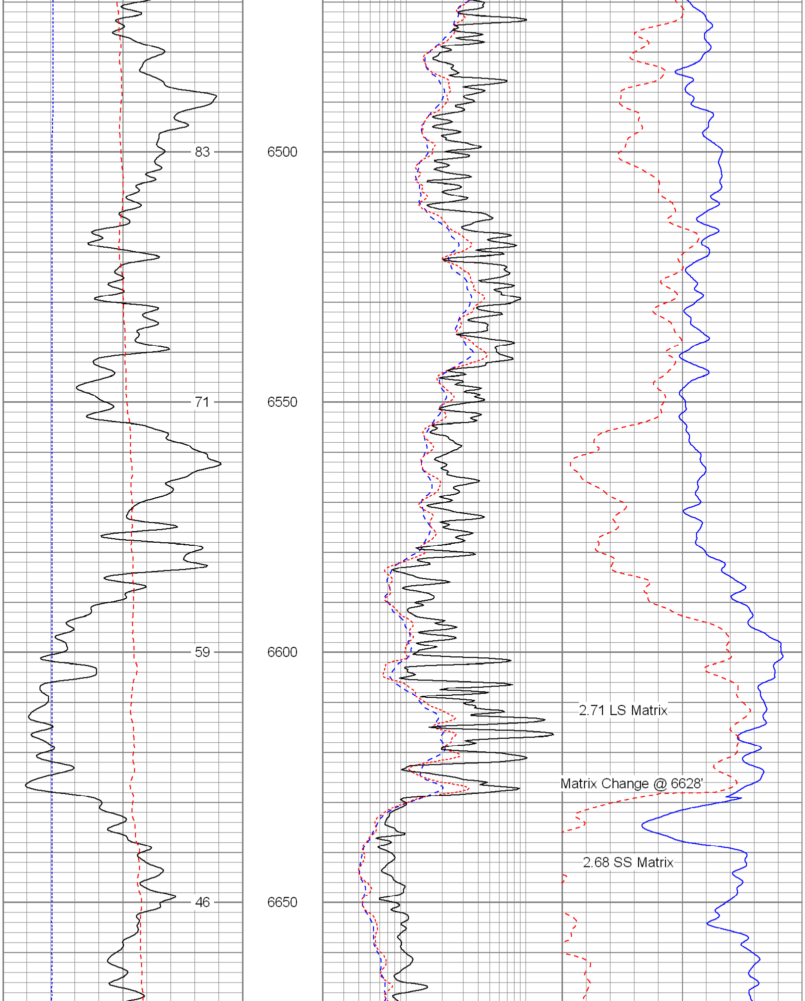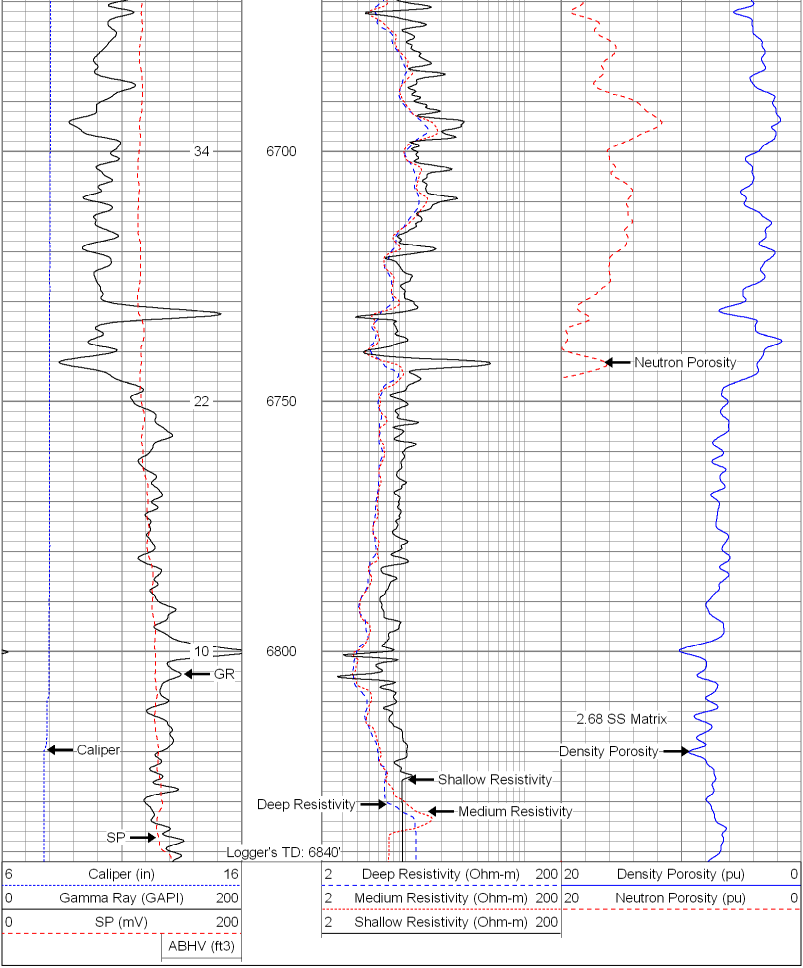6 Caliper (in) 16	2 Deep Resistivity (Ohm-m) 200	20 Density Porosity (pu) 0
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