PHOENIX SURVEYS, INC.

HIGH RESOLUTION INDUCTION
COMPENSATED DENSITY
COMPENSATED NEUTRON

Company	Noble Energy Inc.
Well	REI H 09-31 D
Field	Wattenberg
County	Weld
State/Province	Colorado
Location	SHL: 1443' FNL & 1406' FWL SENW Sec. 9 BHL: 1341' FNL & 120' FEL SENE Sec - 8, Twp - 3N, Rge - 65W
Other Services	Microlog
Elevation	K.B. 4843 D.F. 4843 G.L. 4830

Permanent Datum	GL	Elevation	4830
Log Measured From	KB		
Drilling Measured From	KB		

Date	April 22, 2012			
Run Number	1			
Depth Driller	8063			
Depth Logger	8054			
Bottom Logged Interval	8054			
Top Log Interval	Casing			
Casing Driller	737			
Casing Logger	737			
Bit Size	7-7/8"			
Type Fluid in Hole	Chem Gel			
Density / Viscosity	9.7 / 55			
pH / Fluid Loss	8.0 / 16.0			
Source of Sample	Flowline			
Rm @ Meas. Temp	3.35 @ 78 F			
Rmf @ Meas. Temp	2.68 @ 78 F			
Rmc @ Meas. Temp	4.02 @ 78 F			
Source of Rmf / Rmc	Measure / Calc			
Rm @ BHT	1.14 @ 230 F			
Time Circulation Stopped	0200			
Time Logger on Bottom	0845			
Maximum Recorded Temperature	230 F			
Equipment Number	52			
Location	Brighton, CO			
Recorded By	Matt Gill			
Witnessed By	Bryant Dear			

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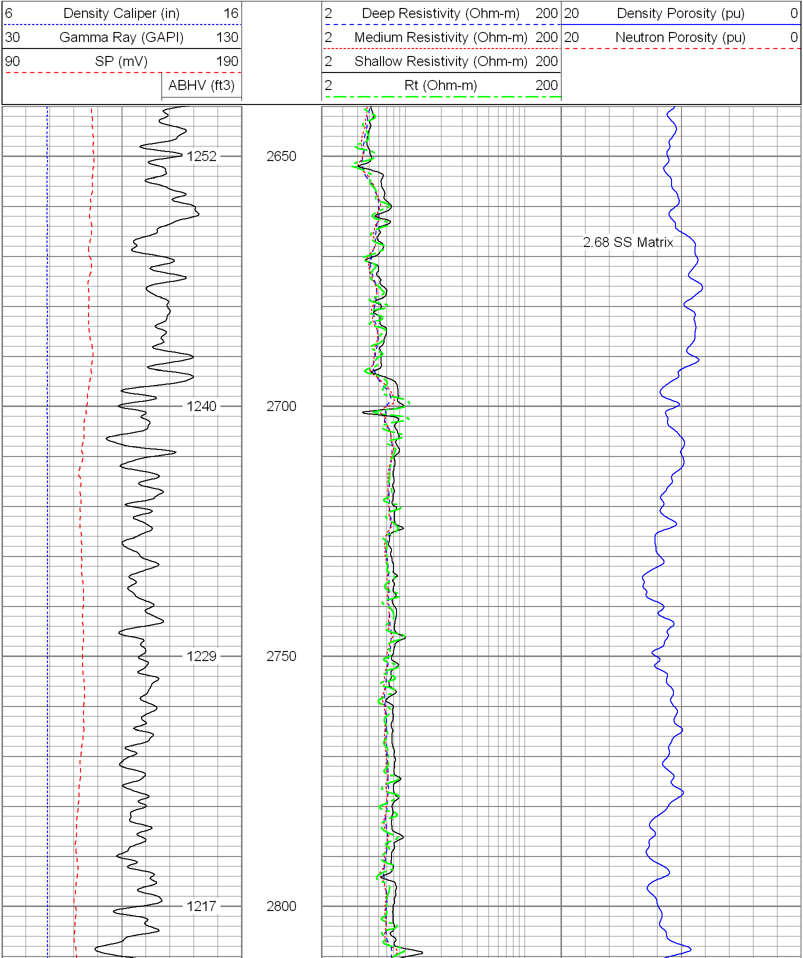
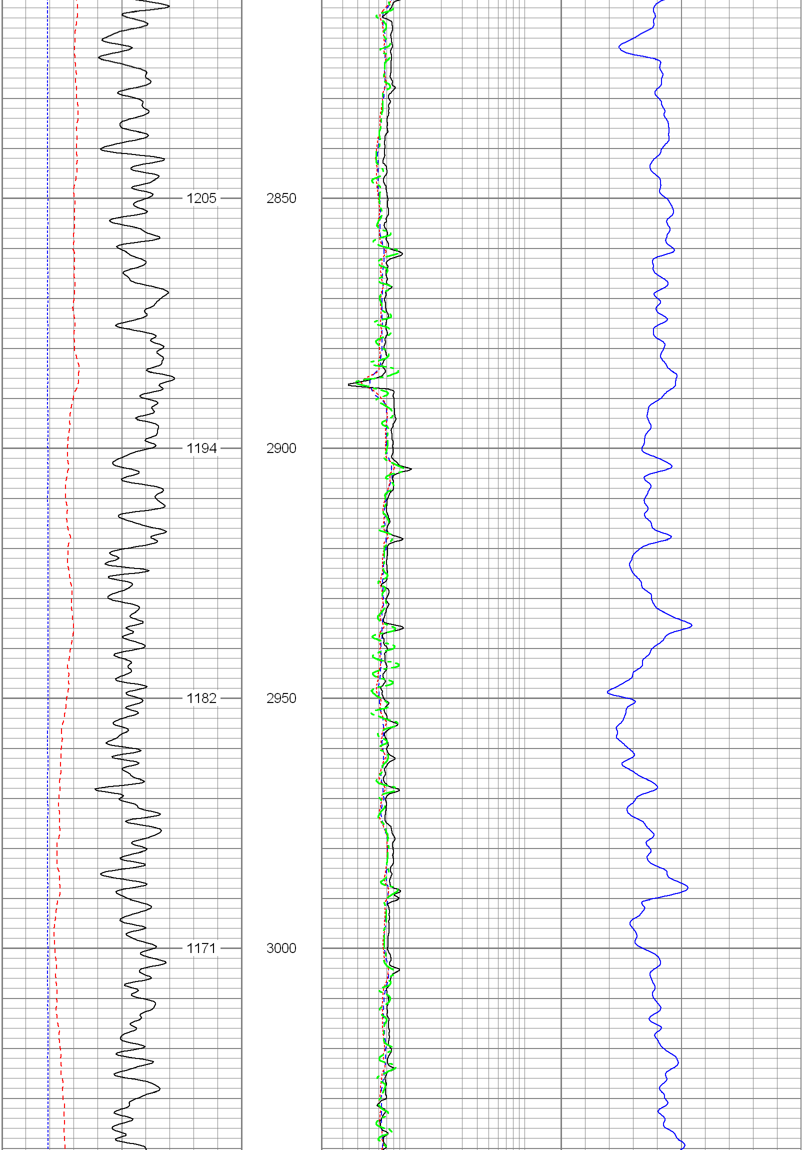
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

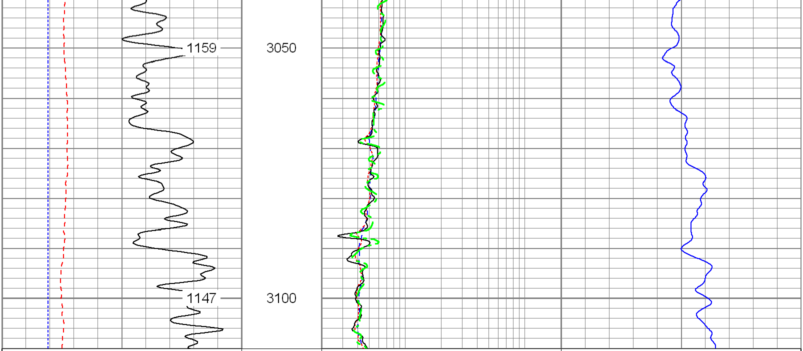
Comments

Annular volume calculated for 4.5" casing
Ensign Drilling Rig 136
Thank you for using Phoenix Surveys!!
API #: 05-123-35042-00

Database File:	12879.db
Dataset Pathname:	final
Presentation Format:	pdc1
Dataset Creation:	Sun Apr 22 08:57:33 2012
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
90	SP (mV)	190	2	Shallow Resistivity (Ohm-m)	200			
	ABHV (ft3)		2	Rt (Ohm-m)	200			

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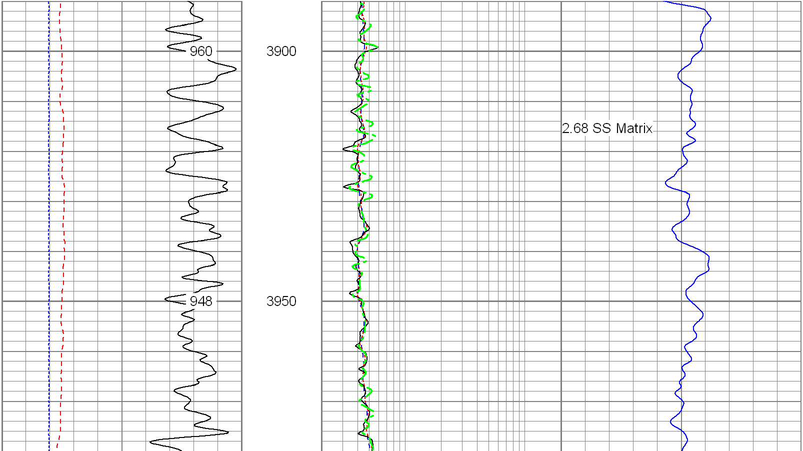

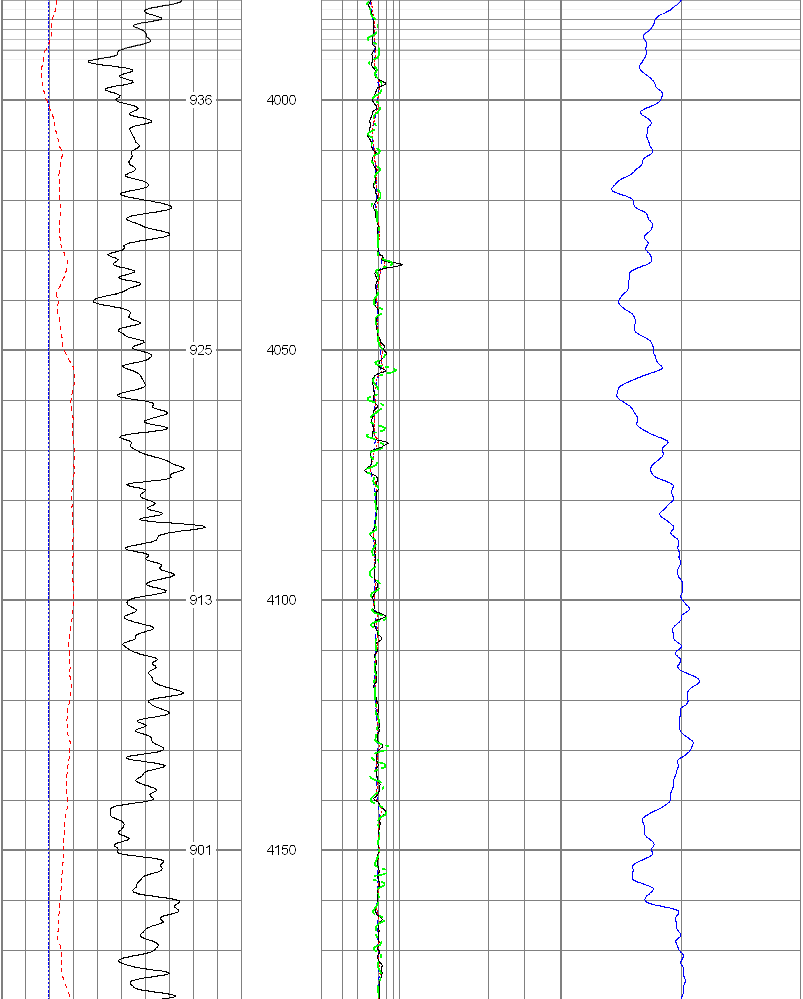

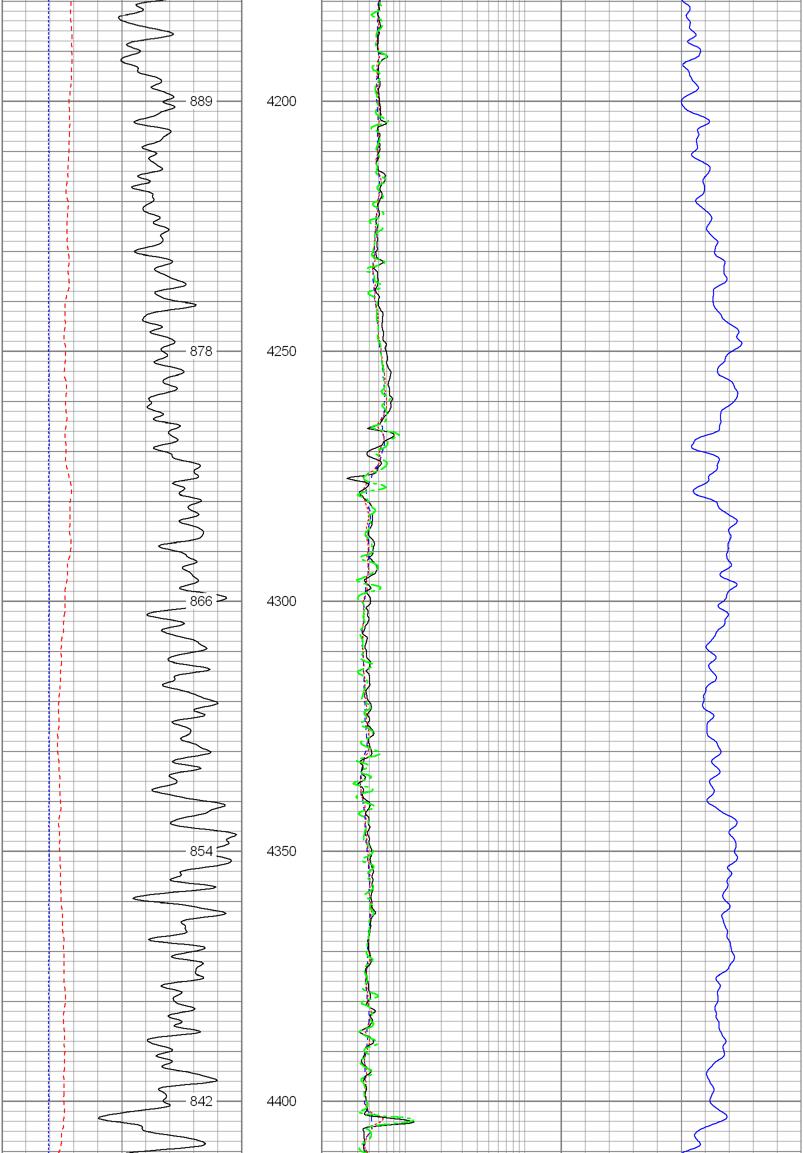

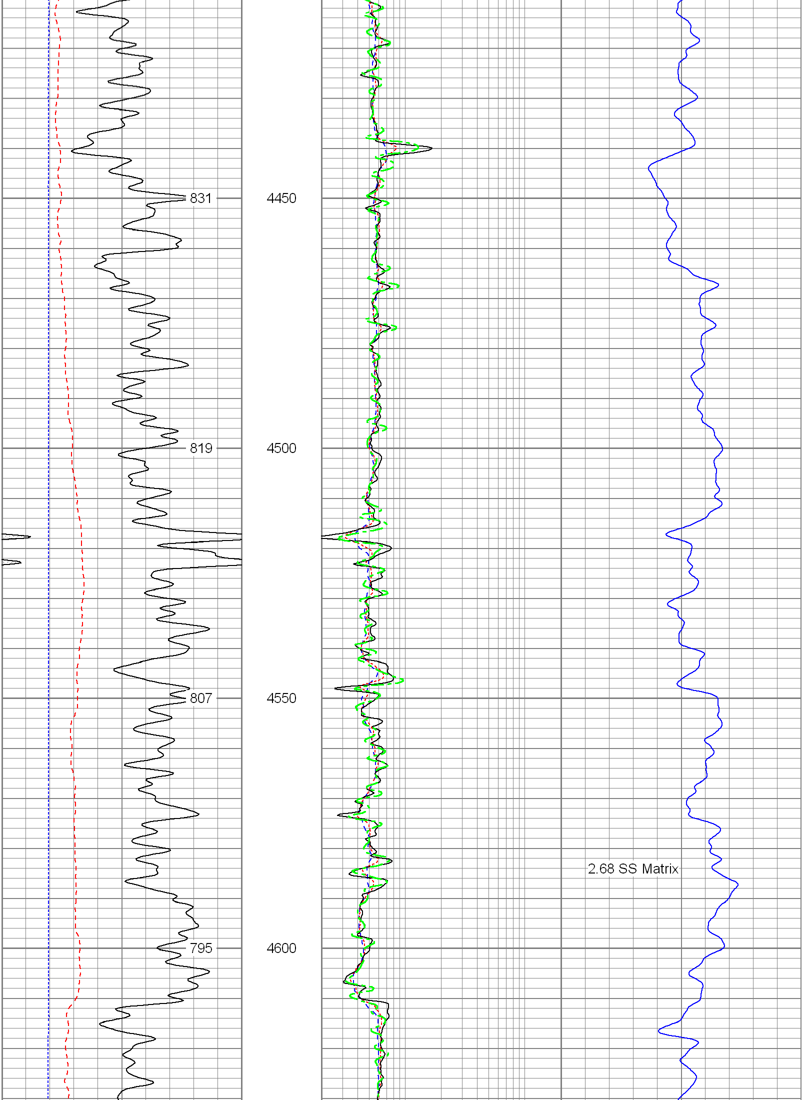

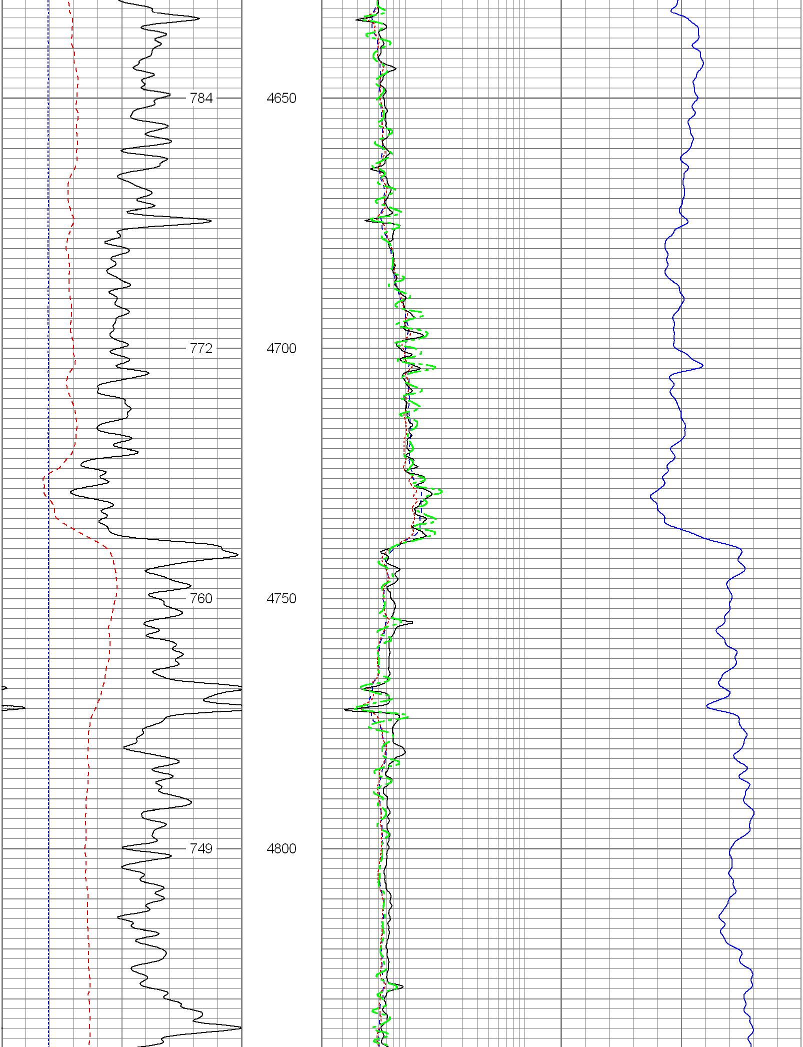

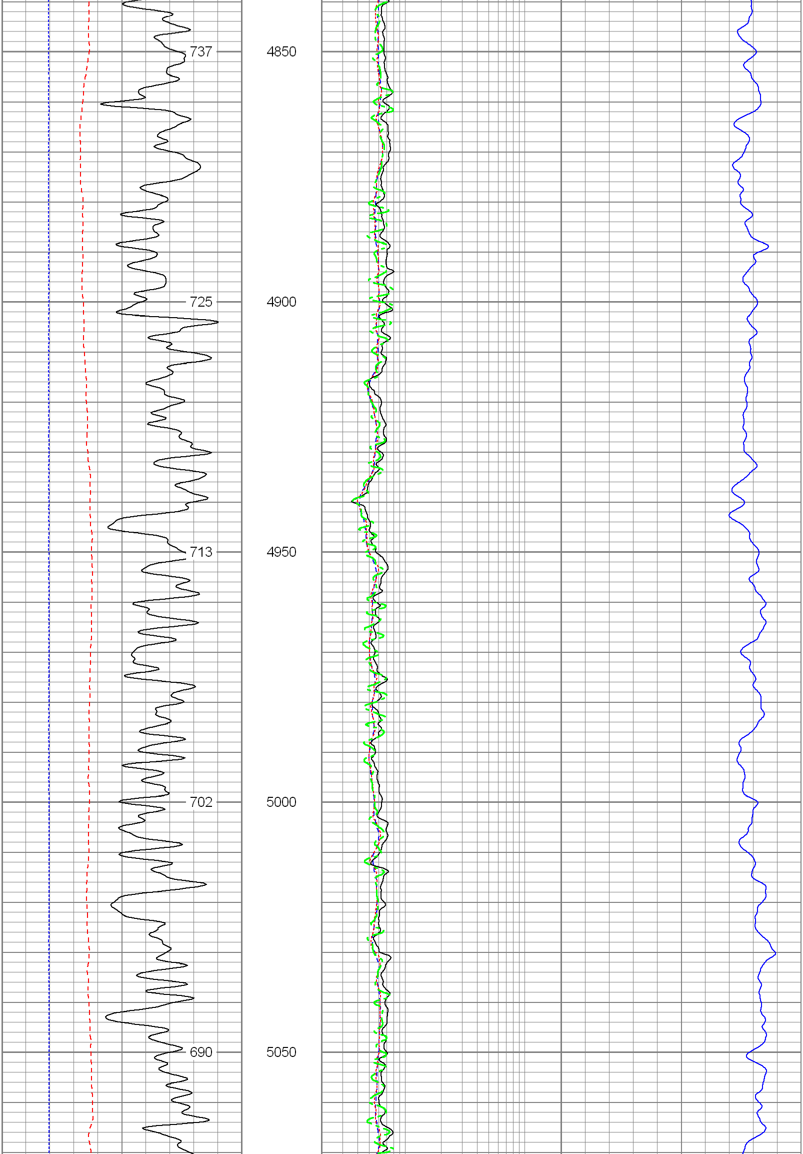

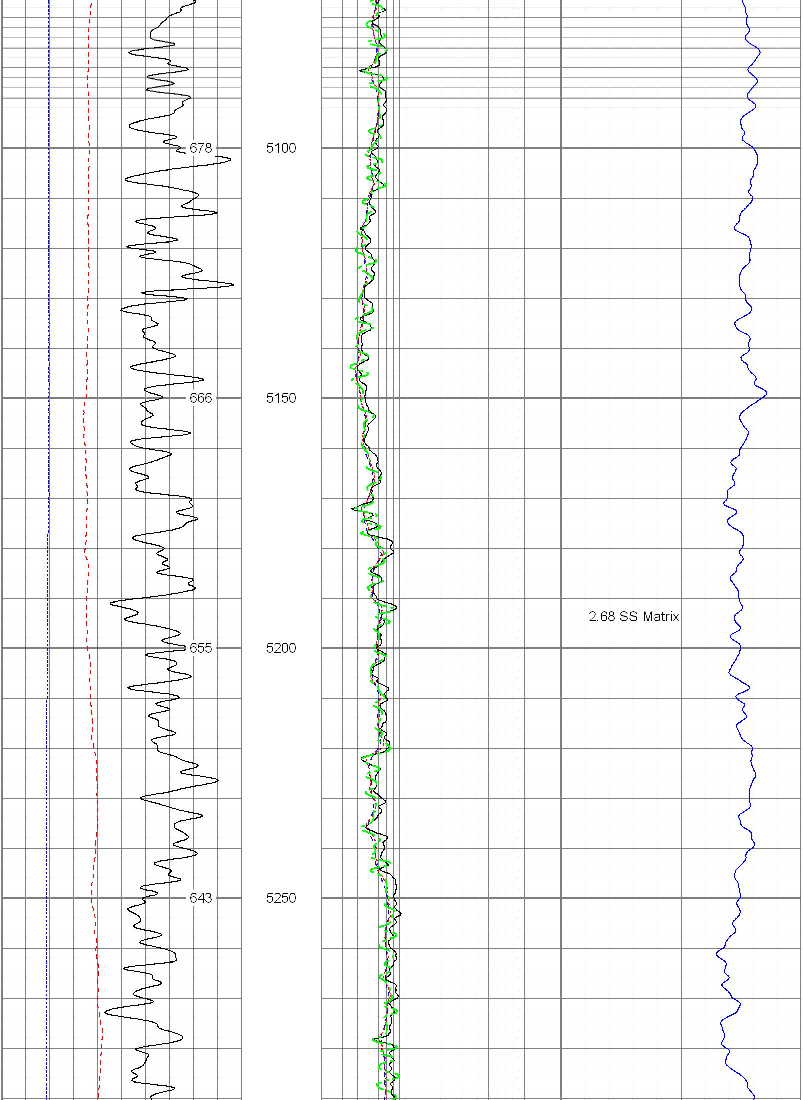

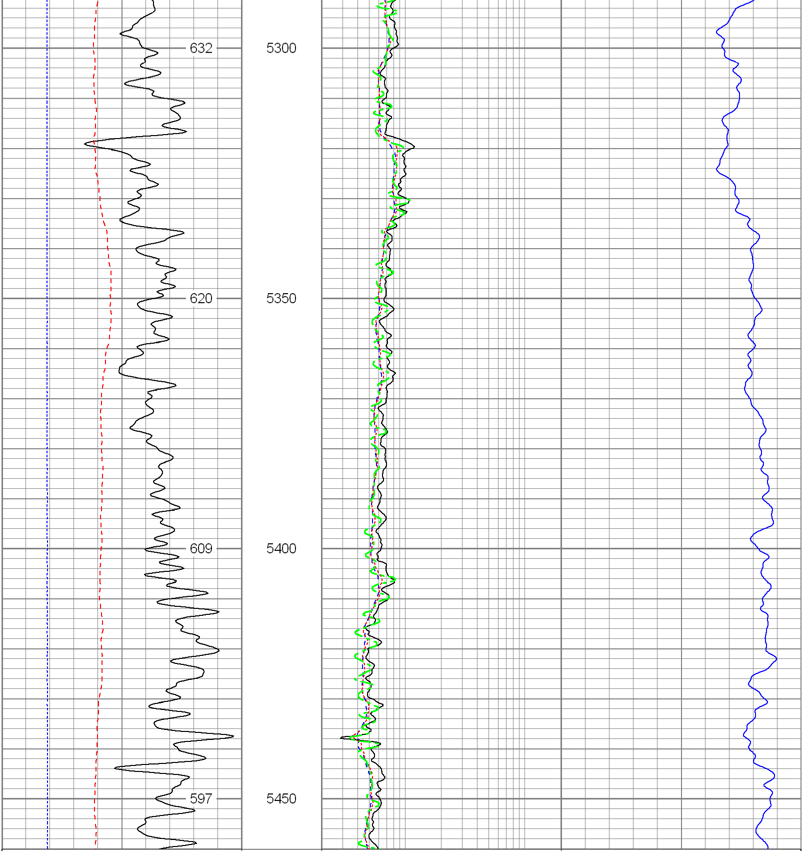

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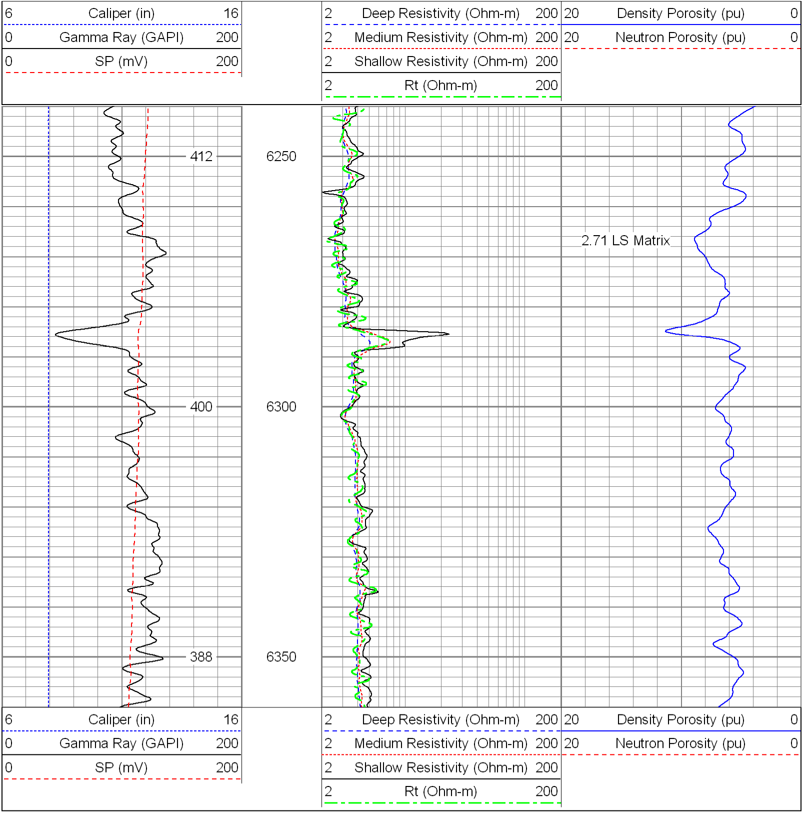

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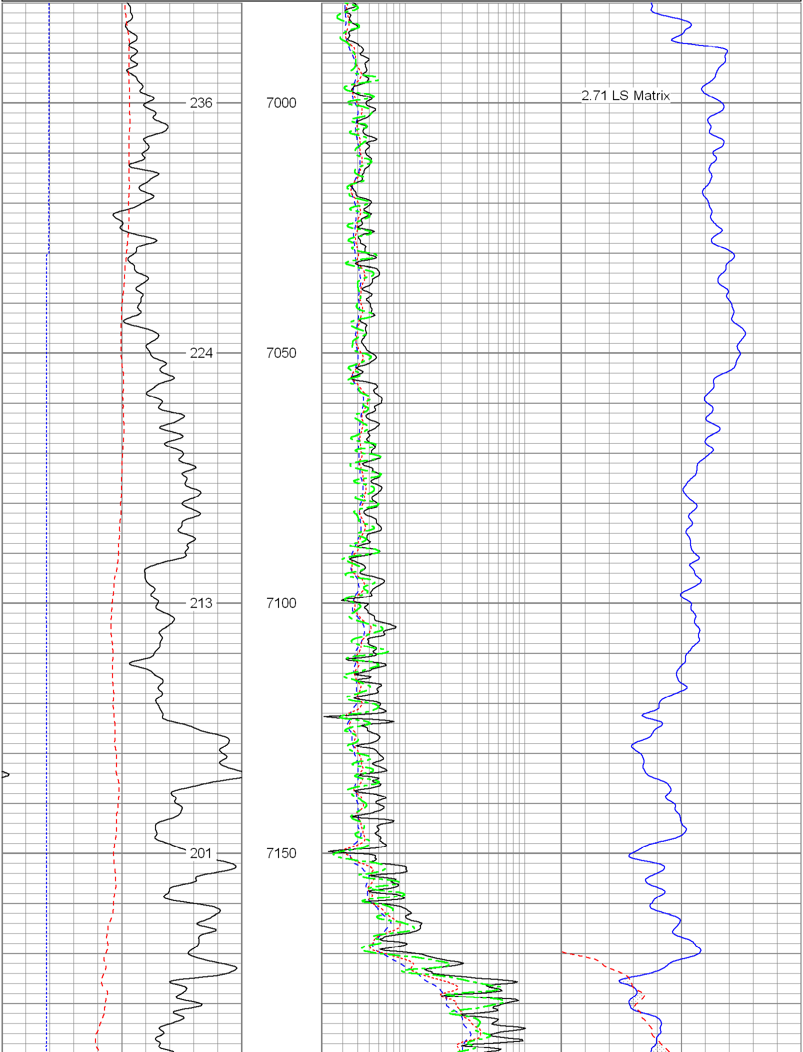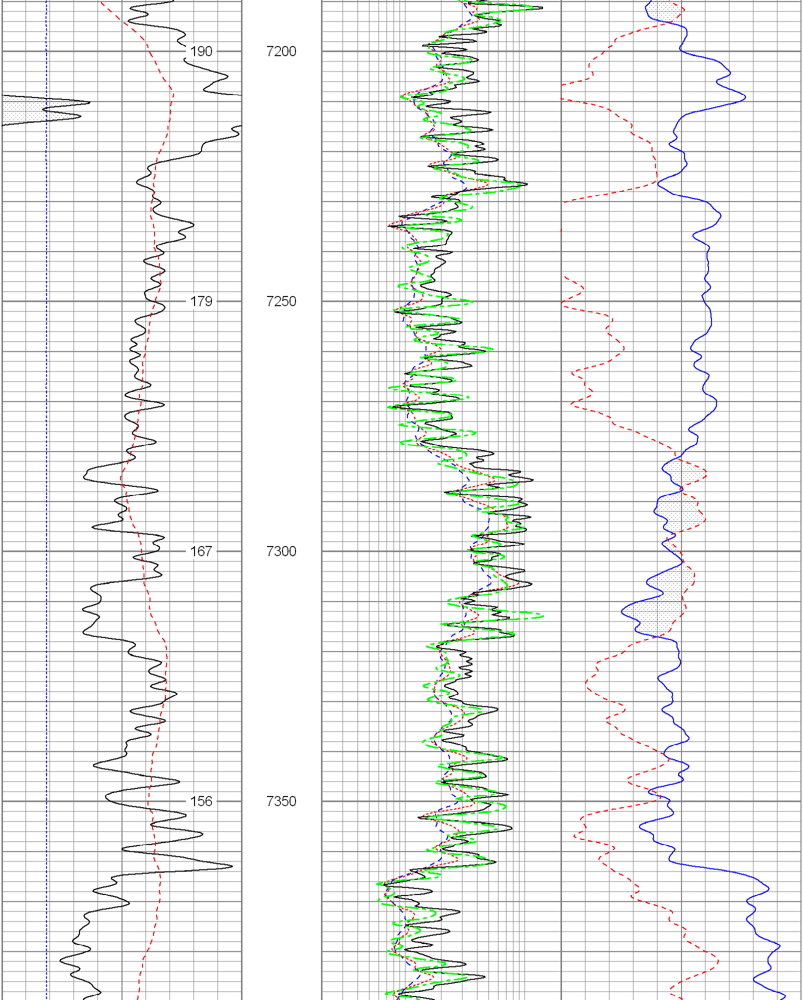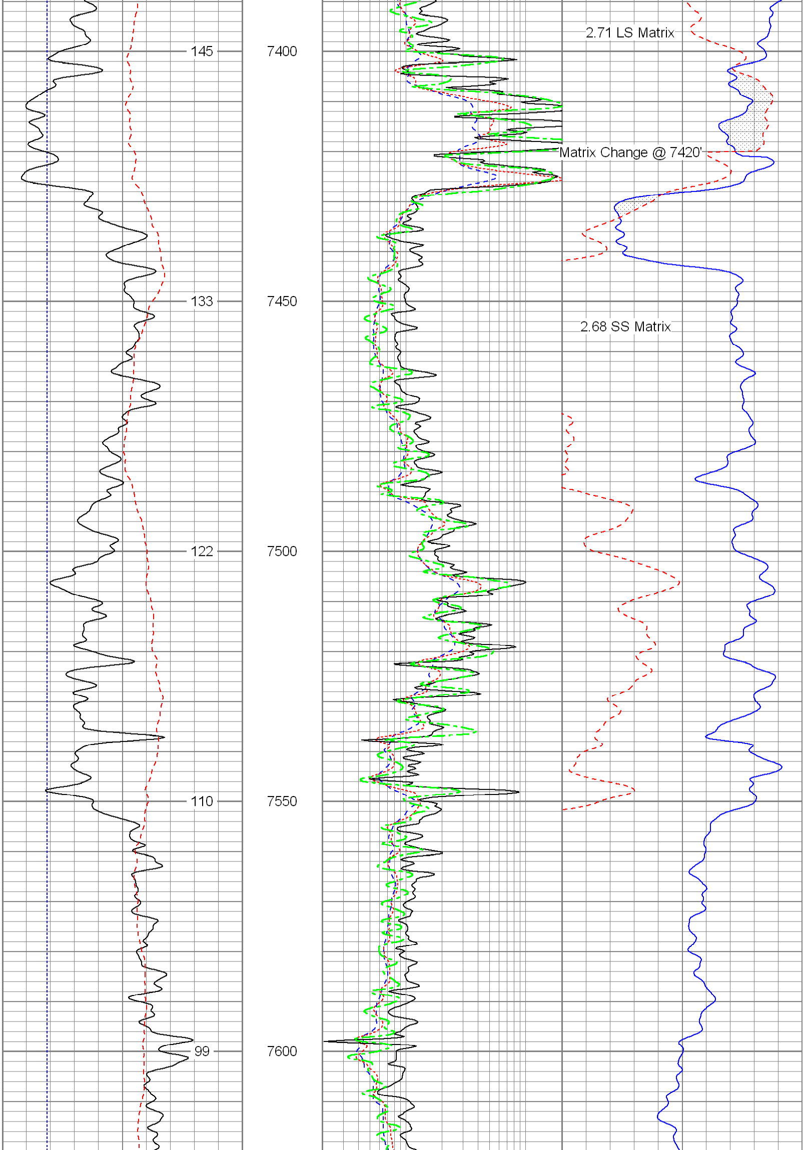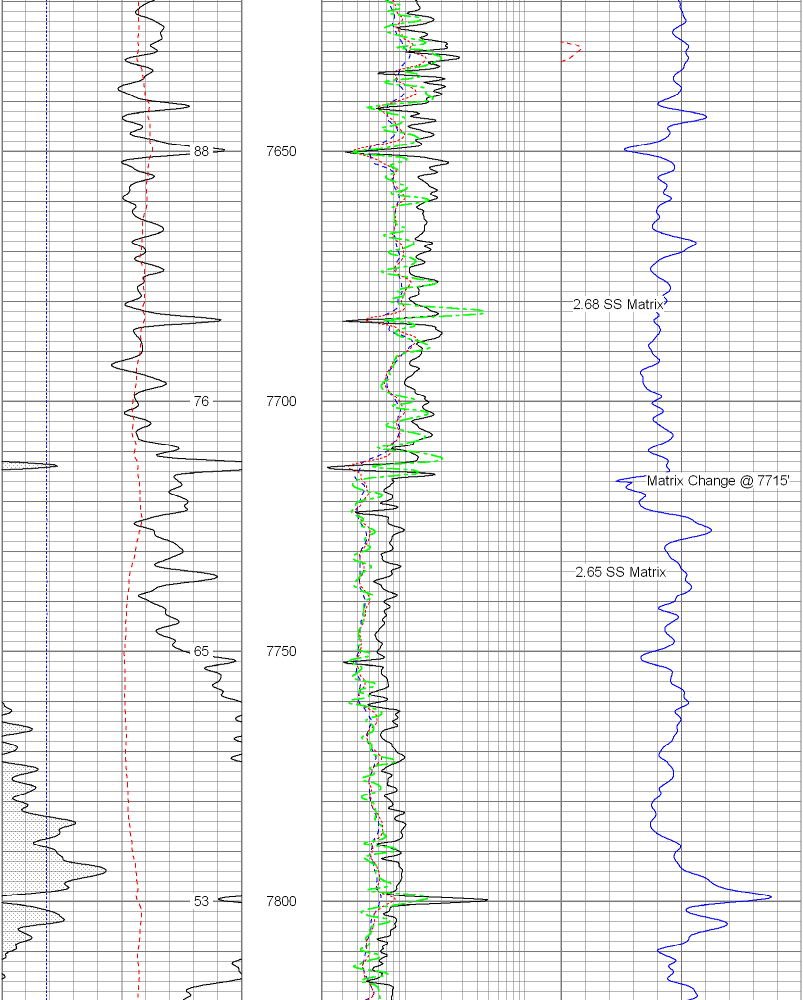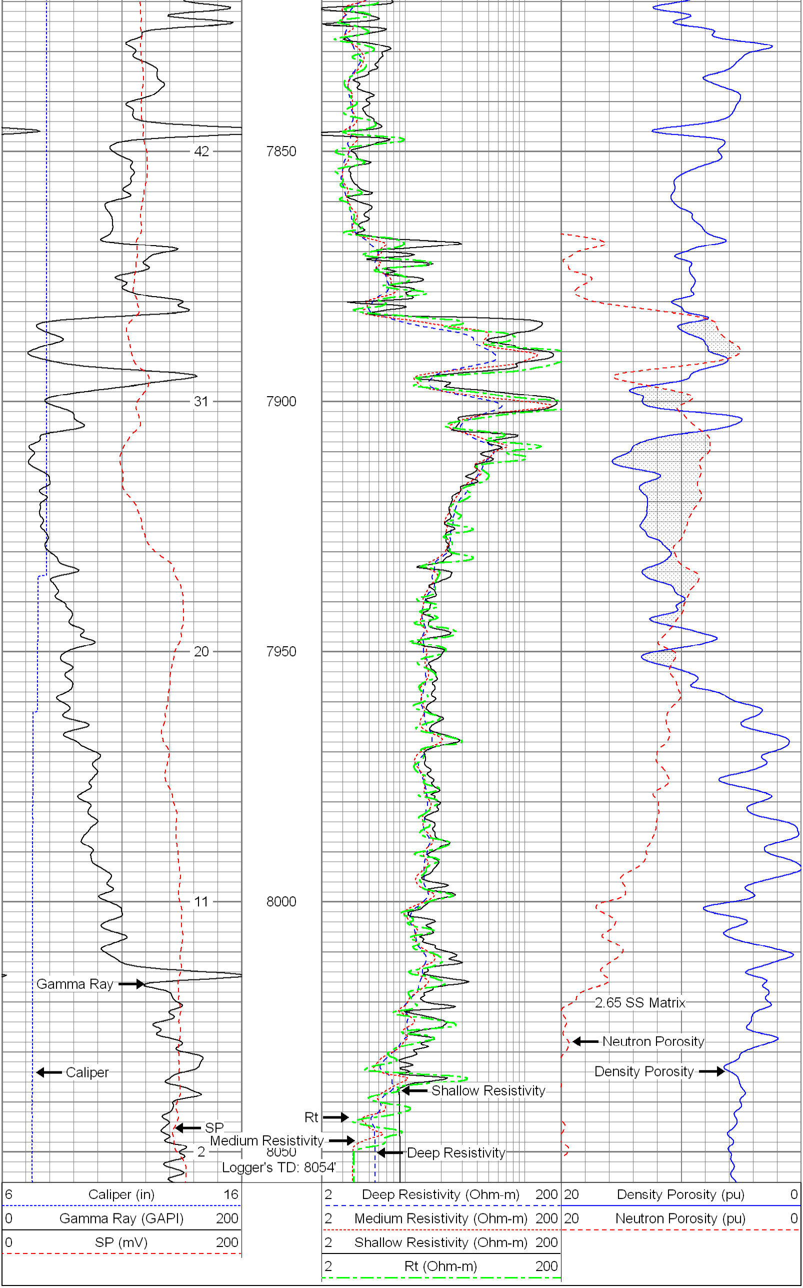6 Caliper (in) 16
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