PHOENIX SURVEYS, INC.

HIGH RESOLUTION INDUCTION

Company	Noble Energy Inc.
Well	Burman C05-23D
Field	Wattenberg
County	Weld
State/Province	Colorado

Location SHL: 1805' FSL & 988' FEL NE SE
BHL: 1369' FSL & 1332' FEL NE SE
Sec - 5, Twp - 4N, Rge - 64W

Other Services
Density
Neutron
Microlog

Company
Well
Field
County
State/Prv

Permanent Datum	GL	Elevation	4749
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 4763
D.F. 4763
G.L. 4749

Date	October 22, 2011		
Run Number	1		
Depth Driller	7628		
Depth Logger	7638		
Bottom Logged Interval	7638		
Top Log Interval	Casing		
Casing Driller	704		
Casing Logger	704		
Bit Size	7-7/8"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	9.3 / 55		
pH / Fluid Loss	7.0 / 12.8		
Source of Sample	Flowline		
Rm @ Meas. Temp	3.30 @ 79 F		
Rmf @ Meas. Temp	2.10 @ 79 F		
Rmc @ Meas. Temp	4.70 @ 79 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	0.88 @ 226 F		
Time Circulation Stopped	1445		
Time Logger on Bottom	2000		
Maximum Recorded Temperature	226 F		
Equipment Number	52		
Location	Brighton, CO		
Recorded By	Randy Conley	Josh Gorney	
Witnessed By	Mike McClelland		

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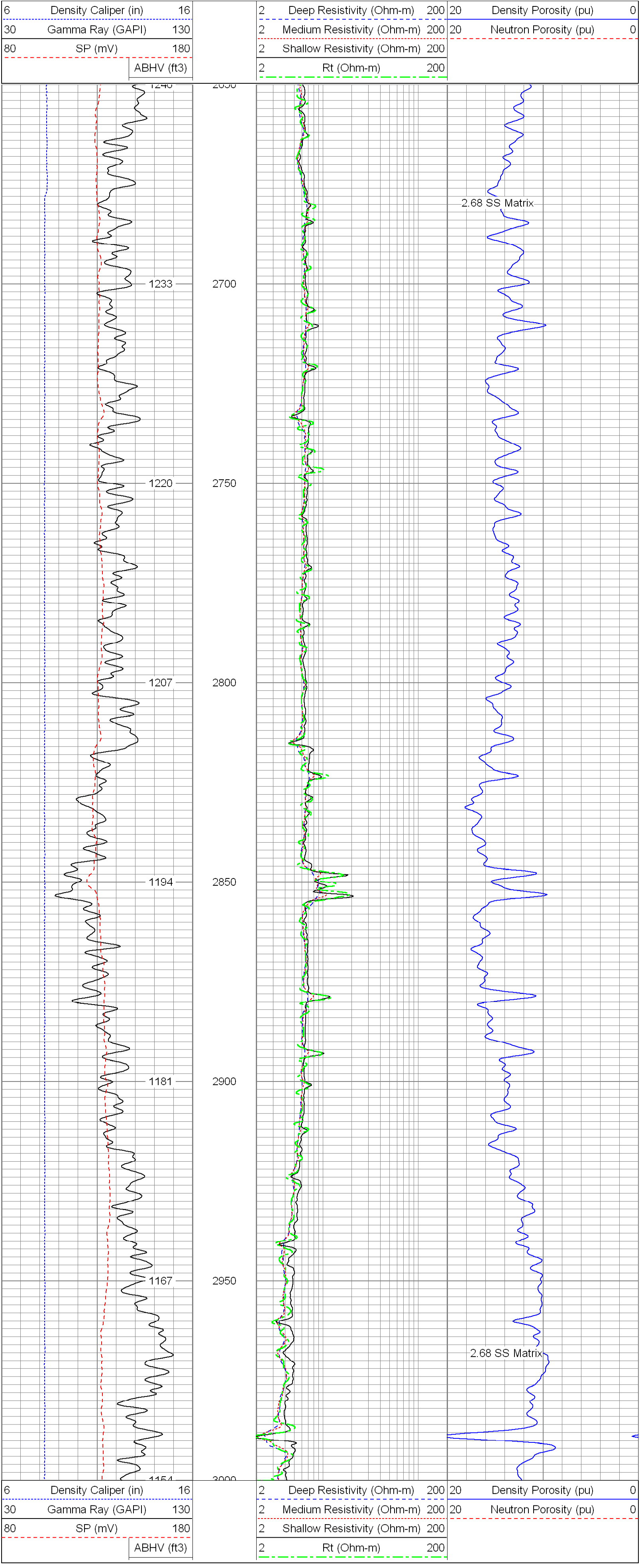
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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
Saxon Drilling Rig 143
Thank you for using Phoenix Surveys!!
API #: 05-123-34338-00

Database File:	12136.db
Dataset Pathname:	final
Presentation Format:	pdc1
Dataset Creation:	Sat Oct 22 20:26:29 2011
Charted by:	Depth in Feet scaled 1:240



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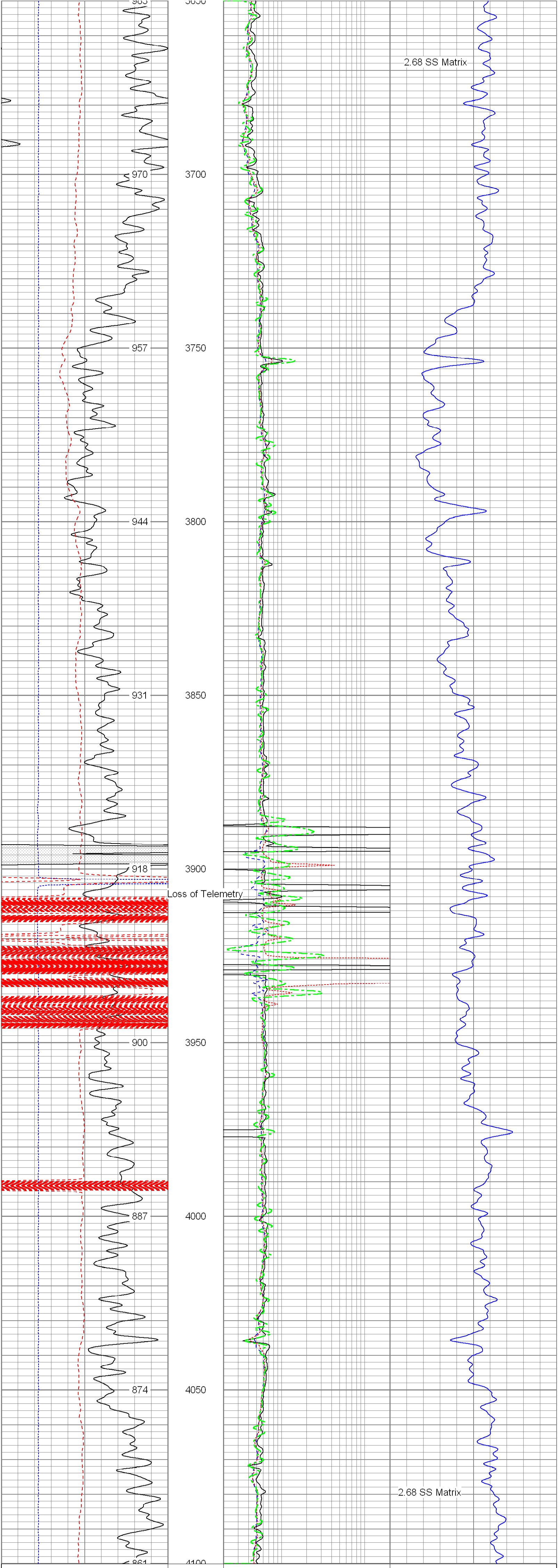
6 Density Caliper (in) 16	2 Deep Resistivity (Ohm-m) 200	20 Density Porosity (pu) 0
30 Gamma Ray (GAPI) 130	2 Medium Resistivity (Ohm-m) 200	20 Neutron Porosity (pu) 0
80 SP (mV) 180	2 Shallow Resistivity (Ohm-m) 200	
ABHV (ft3)	2 Rt (Ohm-m) 200	



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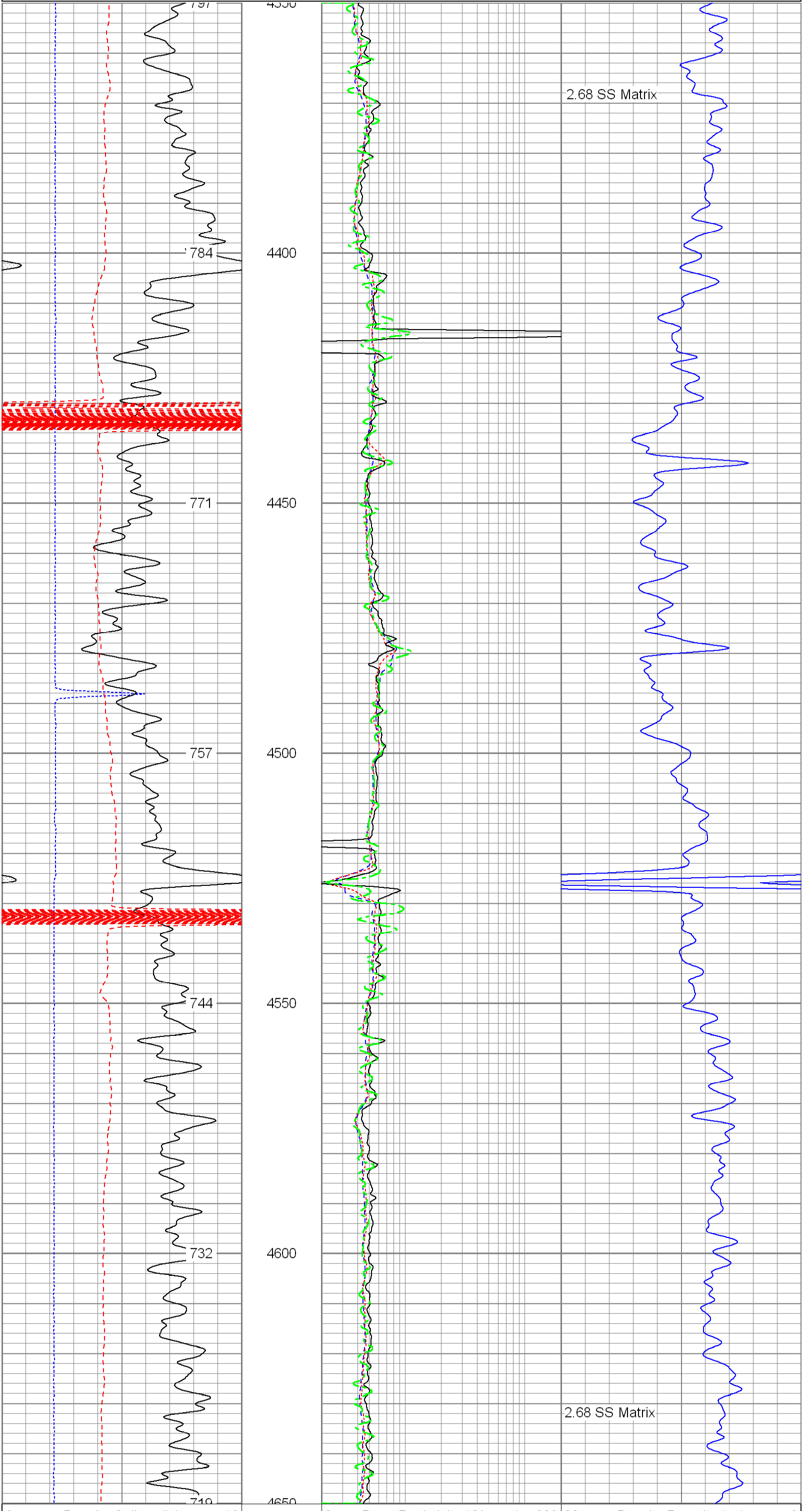

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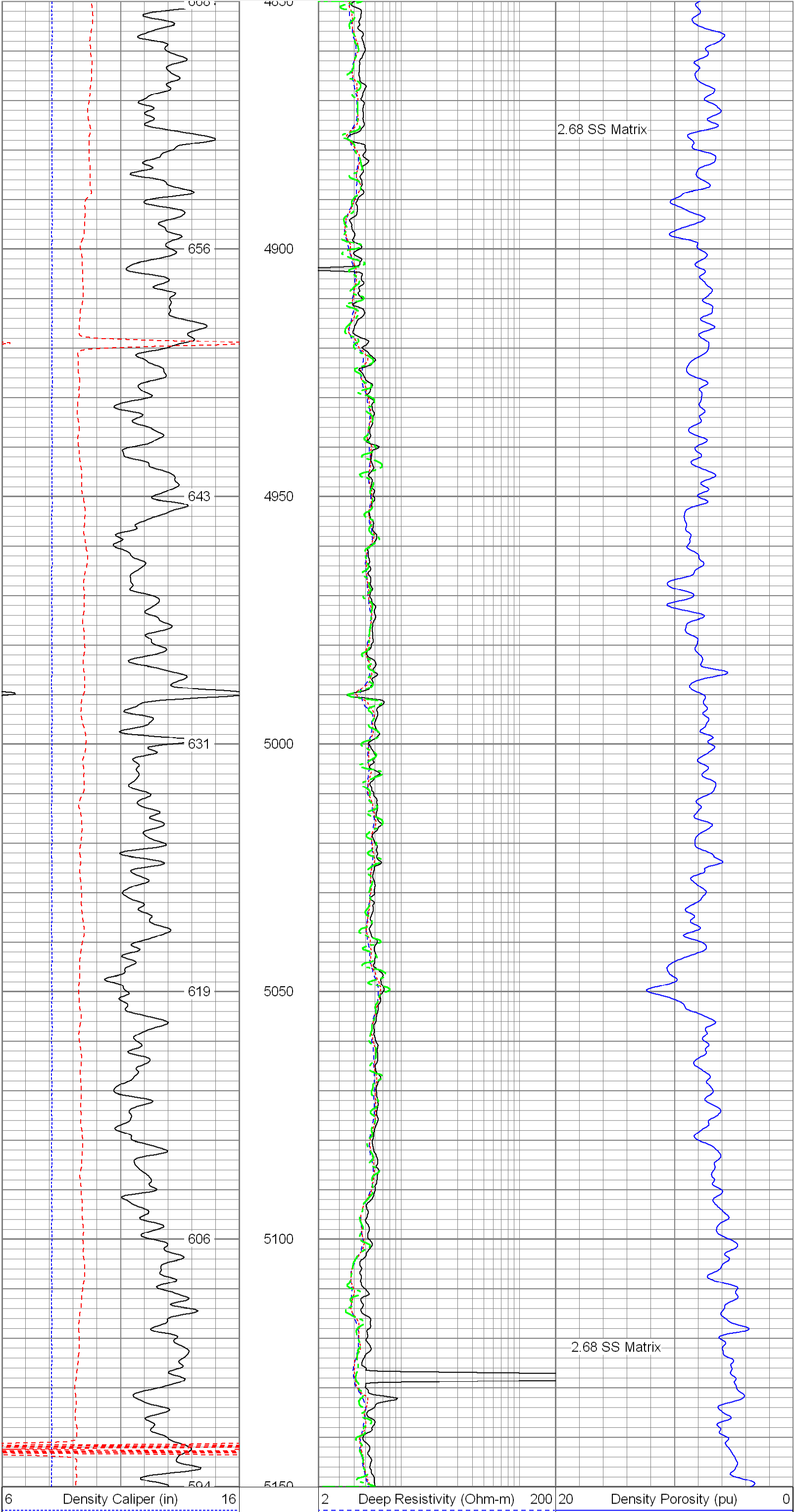

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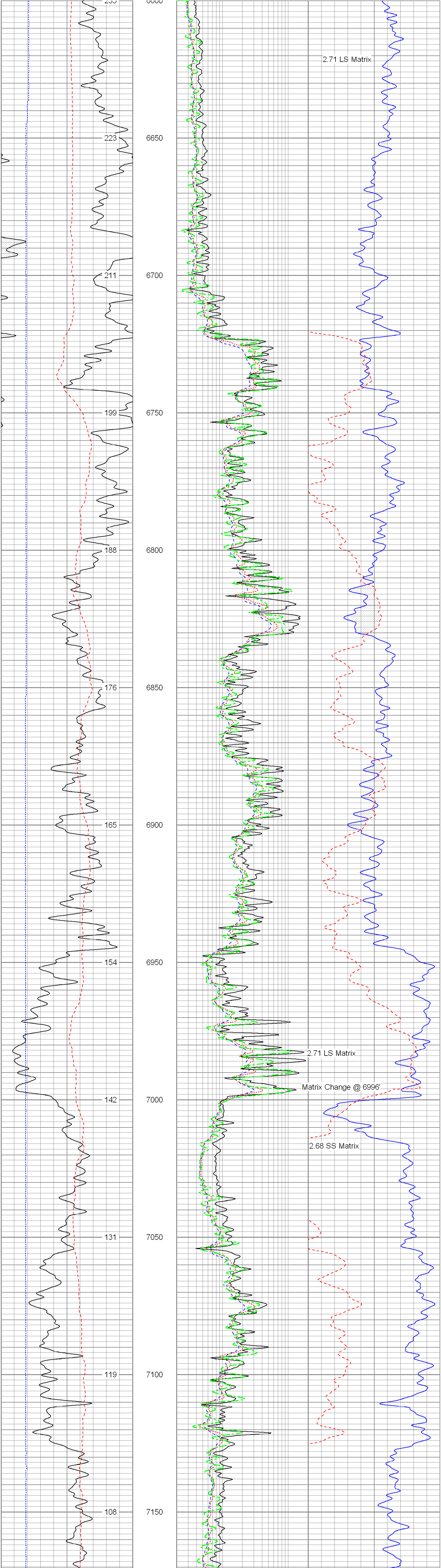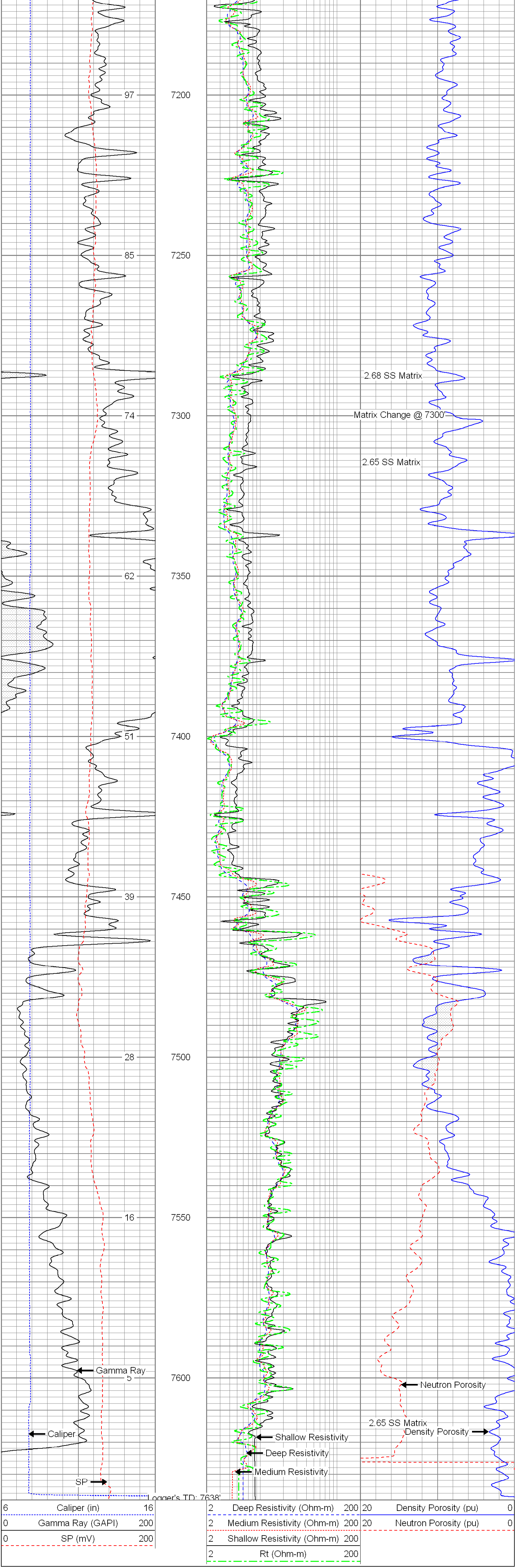20 Density Porosity (pu) 0
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