PSI
PHOENIX SURVEYS, INC.

HIGH RESOLUTION INDUCTION

Company: Noble Energy Inc.
Well: IGO Farms J28-19D
Field: Wattenberg
County: Weld
State/Province: Colorado

Location
SHL: 1426' FNL & 1046' FWL SWNW
BHL: 1400' FNL & 1337' FWL SENW
Sec. 28, Twp. 5N, Rge. 66W

Other Services
Density
Neutron
Micrologh

Elevation
K.B. 4890
D.F. 4889
G.L. 4874

Company
Well
Field
County
State/Prv

Permanent Datum: GL   Elevation 4874
Log Measured From: KB
Drilling Measured From: KB

Date	December 27, 2010		
Run Number	1		
Depth Driller	7510		
Depth Logger	7504		
Bottom Logged Interval	7504		
Top Log Interval	Casing		
Casing Driller	615		
Casing Logger	615		
Bit Size	7-7/8"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	9.2 / 50		
pH / Fluid Loss	8.0 / 9.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	3.10 @ 75° F		
Rmf @ Meas. Temp	2.30 @ 75° F		
Rmc @ Meas. Temp	4.50 @ 75° F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	1.10 @ 211° F		
Time Circulation Stopped	0800		
Time Logger on Bottom	1415		
Maximum Recorded Temperature	211° F		
Equipment Number	51		
Location	Brighton, CO		
Recorded By	Schuman		
Witnessed By	Sutton		

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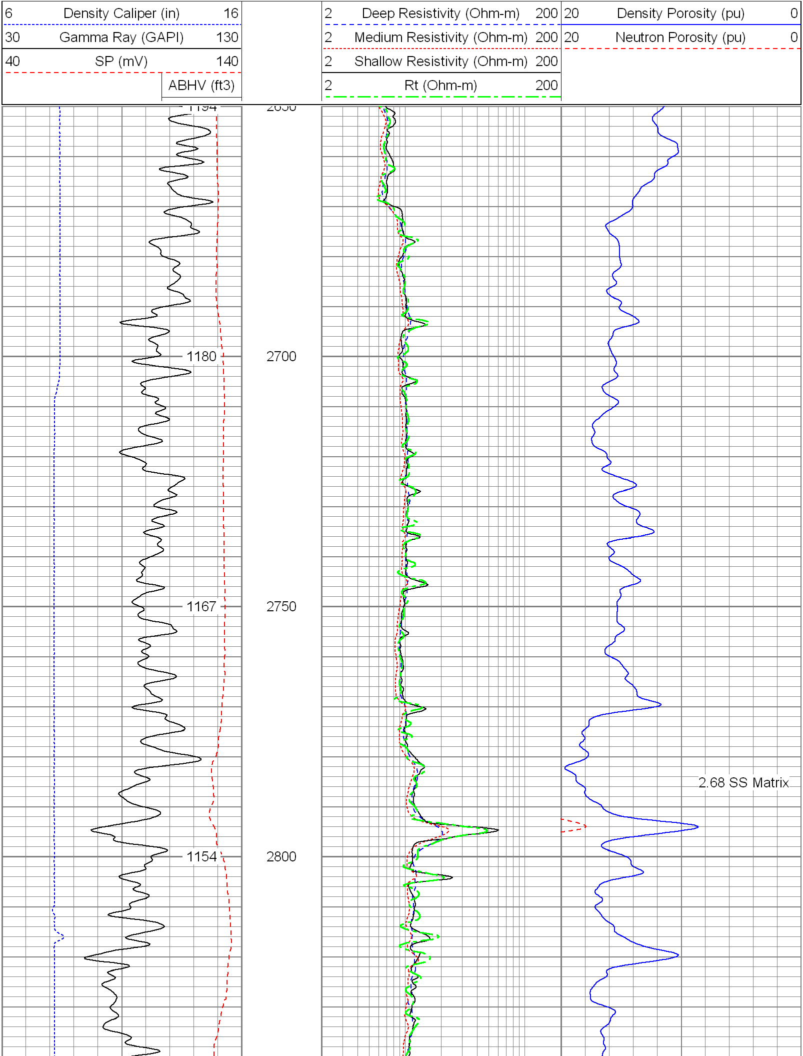
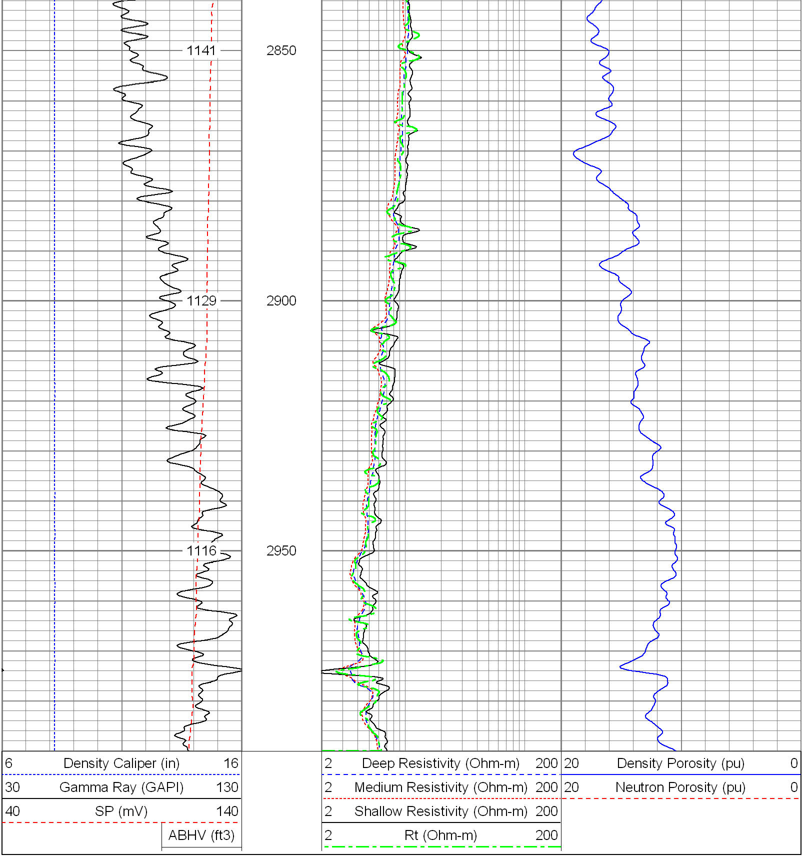
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 55
Thank you for using Phoenix Surveys!!
API #: 05-123-30887
No repeat pass due to hole conditions.

Database File:	11352.db
Dataset Pathname:	main
Presentation Format:	pdc1
Dataset Creation:	Mon Dec 27 19:44:18 2010
Charted by:	Depth in Feet scaled 1:240





Database File: 11352.db
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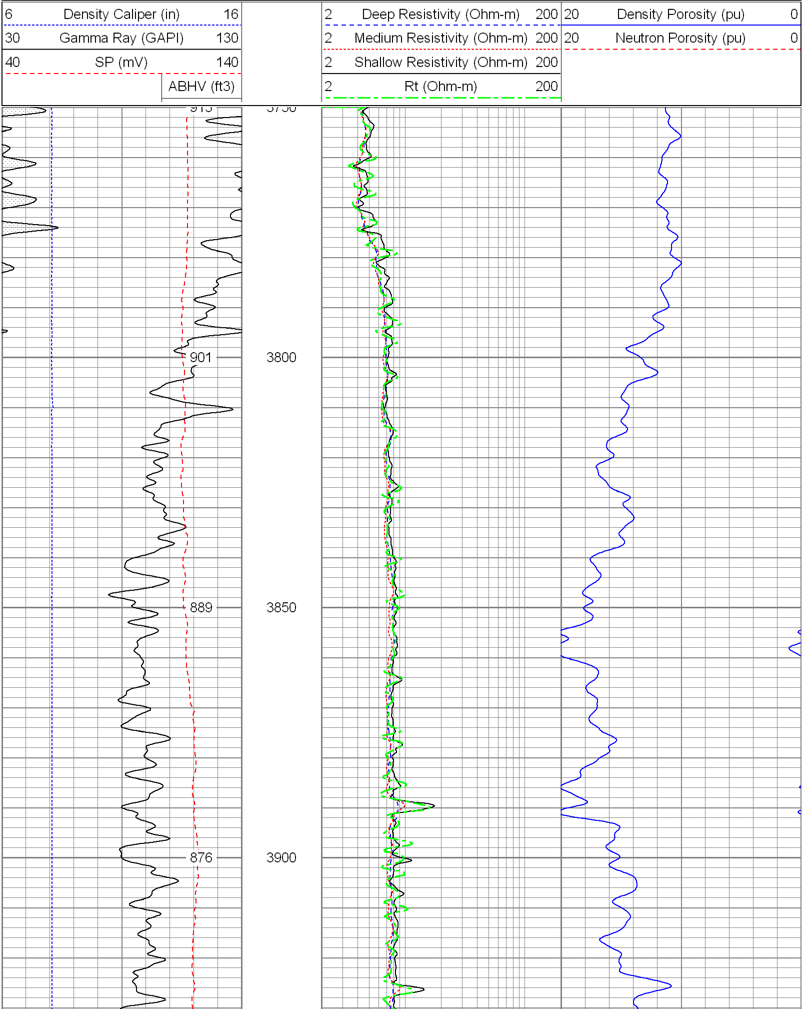
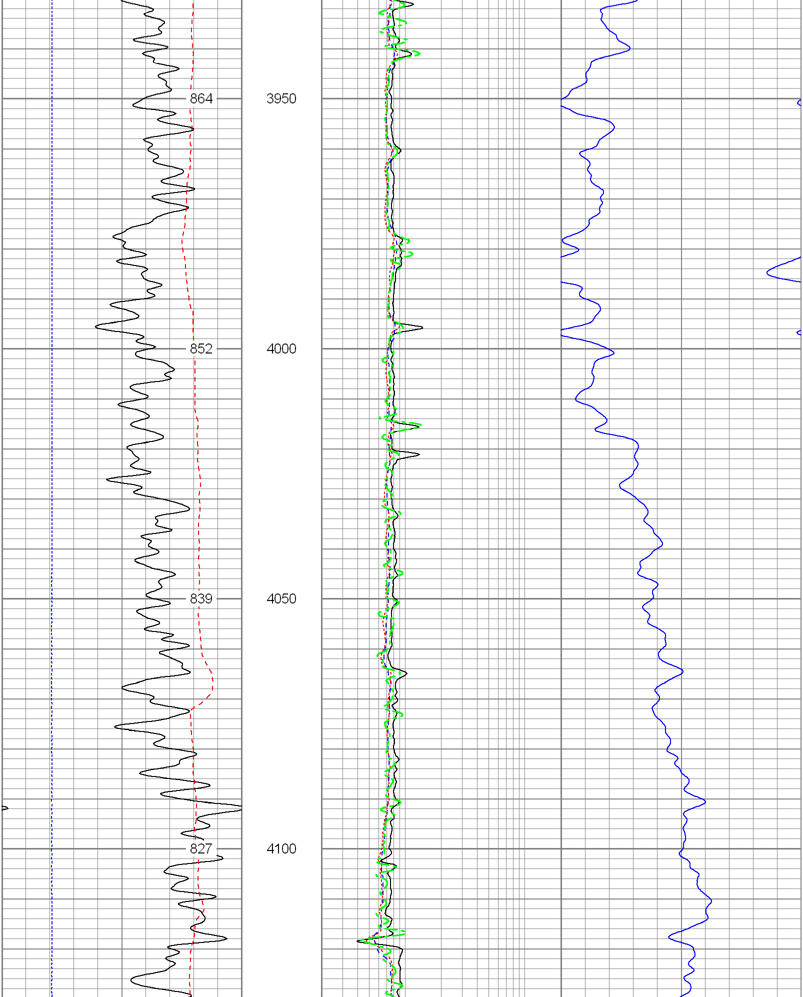
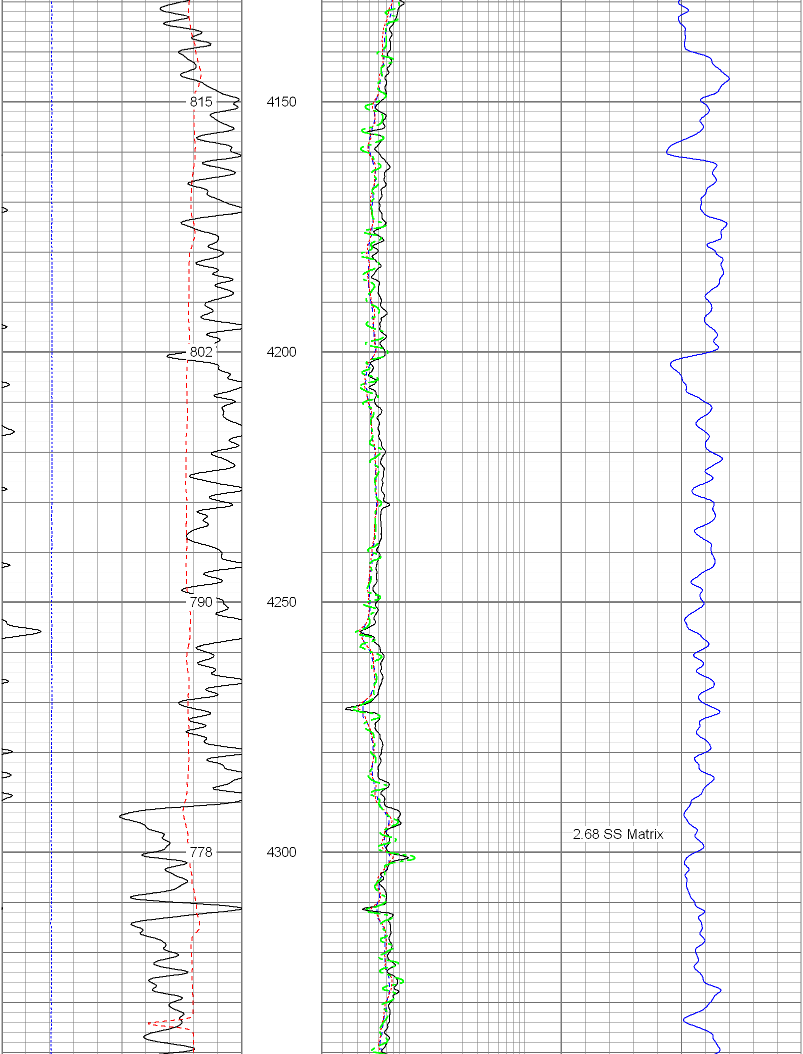
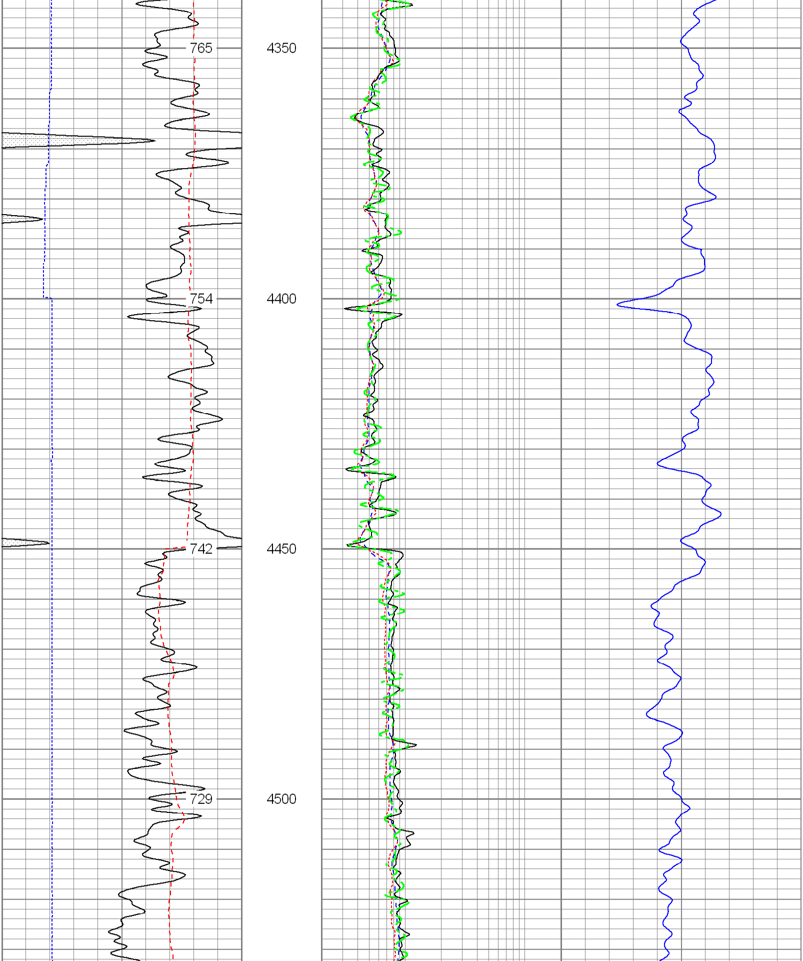
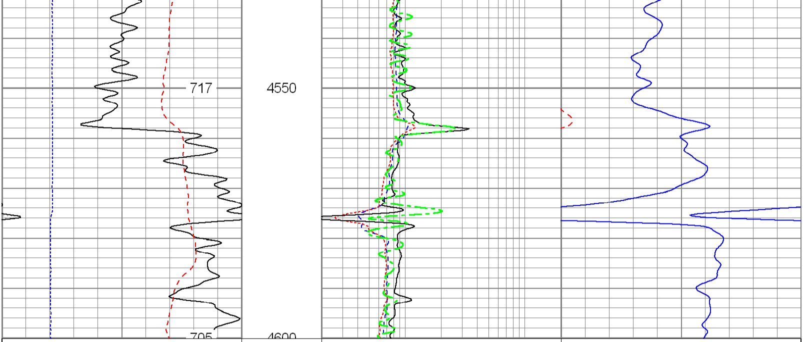
Presentation Format: pdc1
Dataset Creation: Mon Dec 27 19:44:18 2010
Charted by: Depth in Feet scaled 1:240











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
40 SP (mV) 140		2 Shallow Resistivity (Ohm-m) 200	
ABHV (ft3)		2 Rt (Ohm-m) 200	

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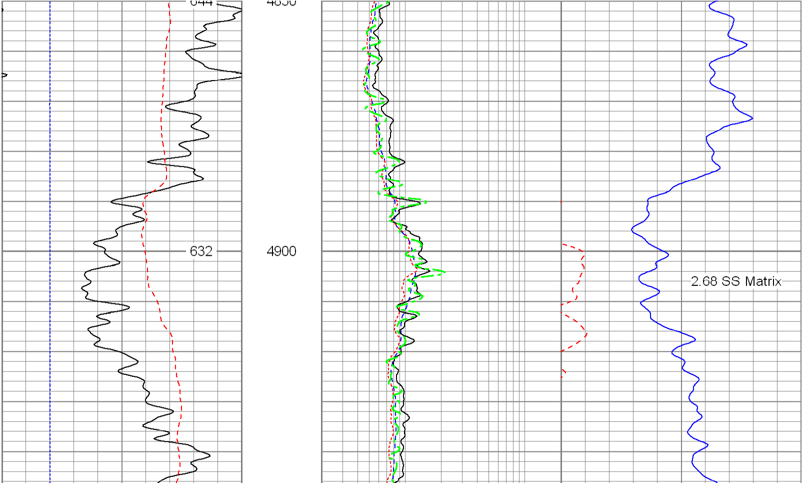

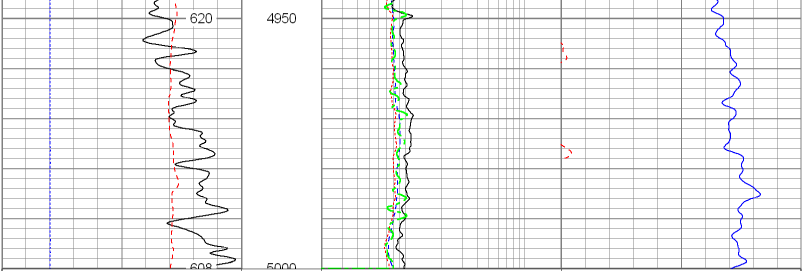

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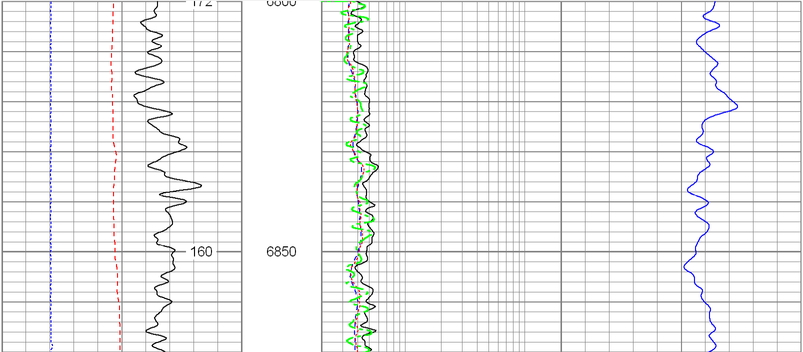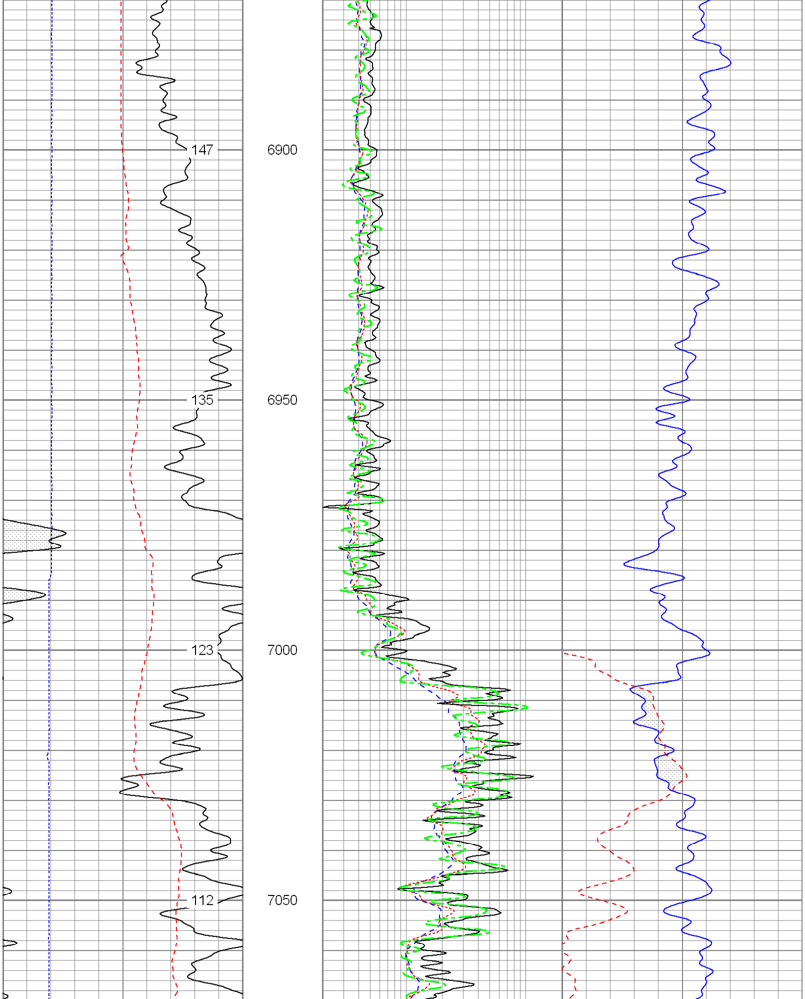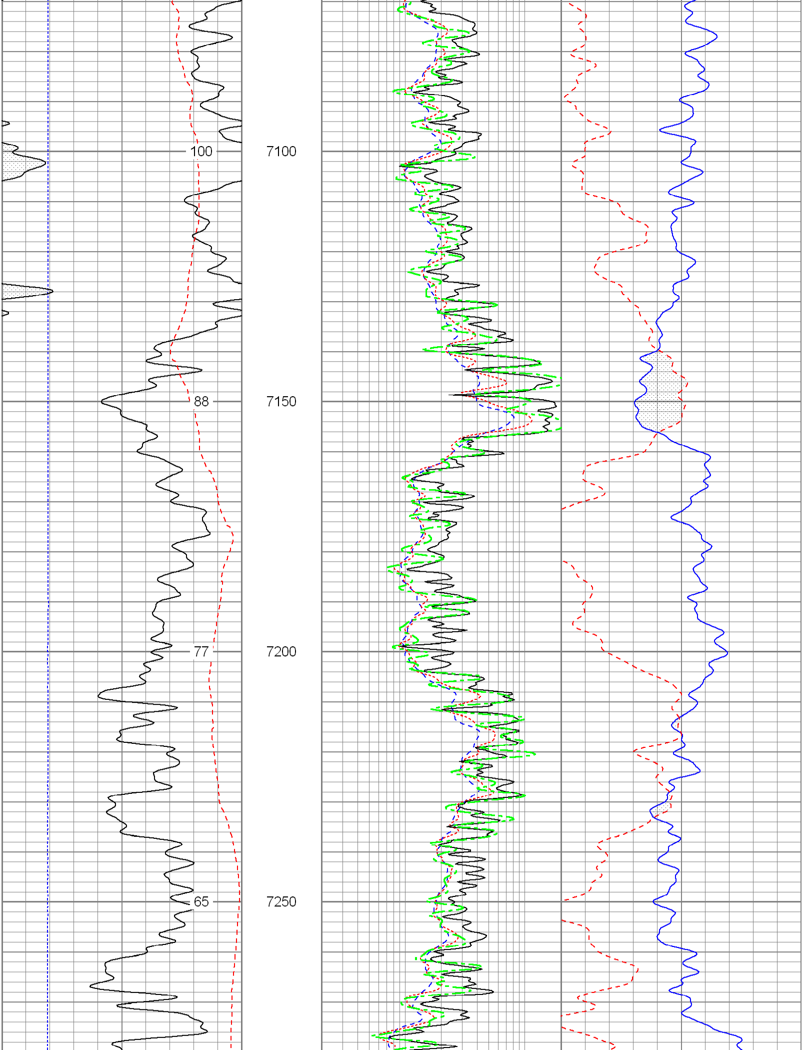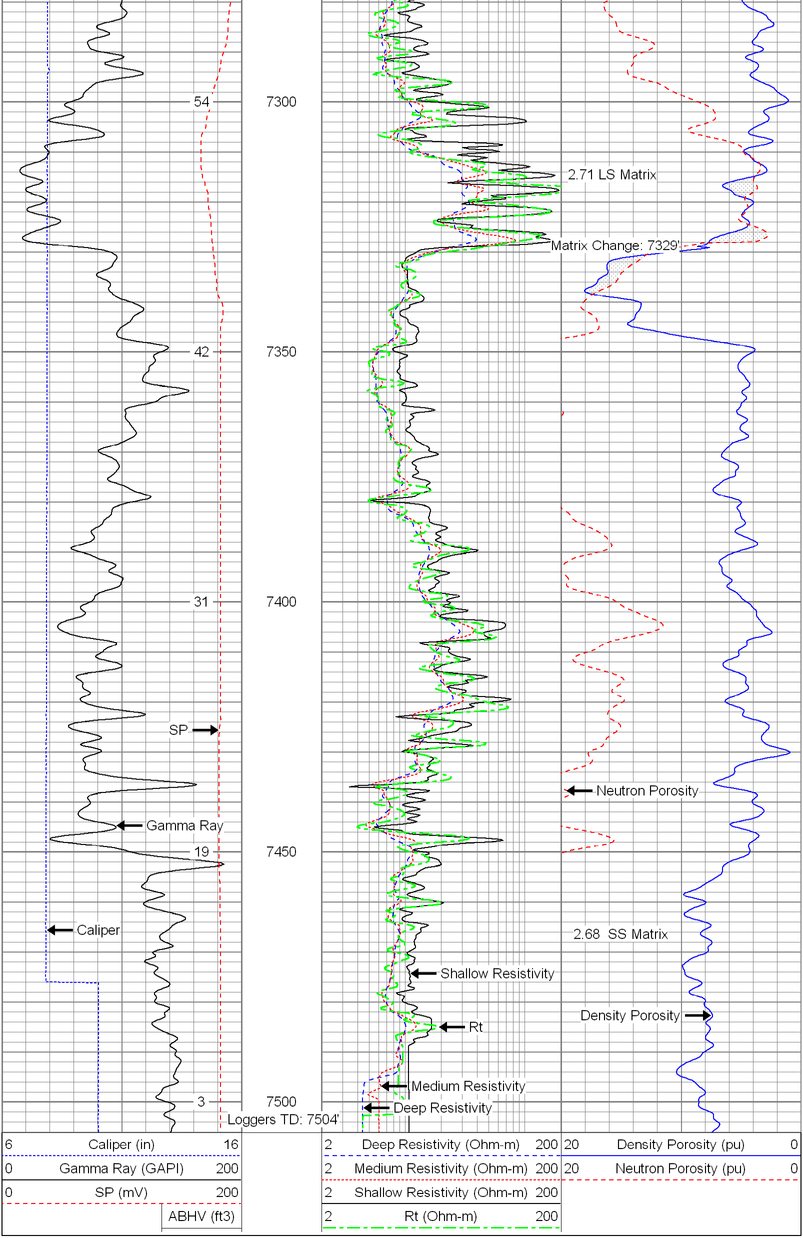6	Caliper (in)	16	2	Deep Resistivity (Ohm-m)	200	20	Density Porosity (pu)	0
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