PHOENIX SURVEYS, INC.

Company
Well
Field
County
State/Prv

COMPENSATED DENSITY
COMPENSATED NEUTRON
DUAL INDUCTION

Company	**Petroleum Development Corporation**
Well	**Guttersen 44-18**
Field	**Wattenberg**
County	**Weld**
State/Province	**Colorado**
Location	694' FSL & 699' FEL SESE Sec 18, Twp 3N, Rge 63W

Other Services
Directional
Survey

Elevation
K.B. 4819
D.F. 4818
G.L. 4805

Permanent Datum	GL	Elevation 4805
Log Measured From	KB	
Drilling Measured From	KB	

Date	August 15, 2010		
Run Number	1		
Depth Driller	7660		
Depth Logger	7655		
Bottom Logged Interval	7655		
Top Log Interval	Casing		
Casing Driller	717		
Casing Logger	717		
Bit Size	7-7/8"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	9.9 / 50		
pH / Fluid Loss	8.5 / 9.5		
Source of Sample	Flowline		
Rm @ Meas. Temp	2.75 @ 80 F		
Rmf @ Meas. Temp	2.00 @ 80 F		
Rmc @ Meas. Temp	3.50 @ 80 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	0.96 @ 230 F		
Time Circulation Stopped	2200		
Time Logger on Bottom	0745		
Maximum Recorded Temperature	230 F		
Equipment Number	52		
Location	Brighton, CO		
Recorded By	Schuman		
Witnessed By	Silva		

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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

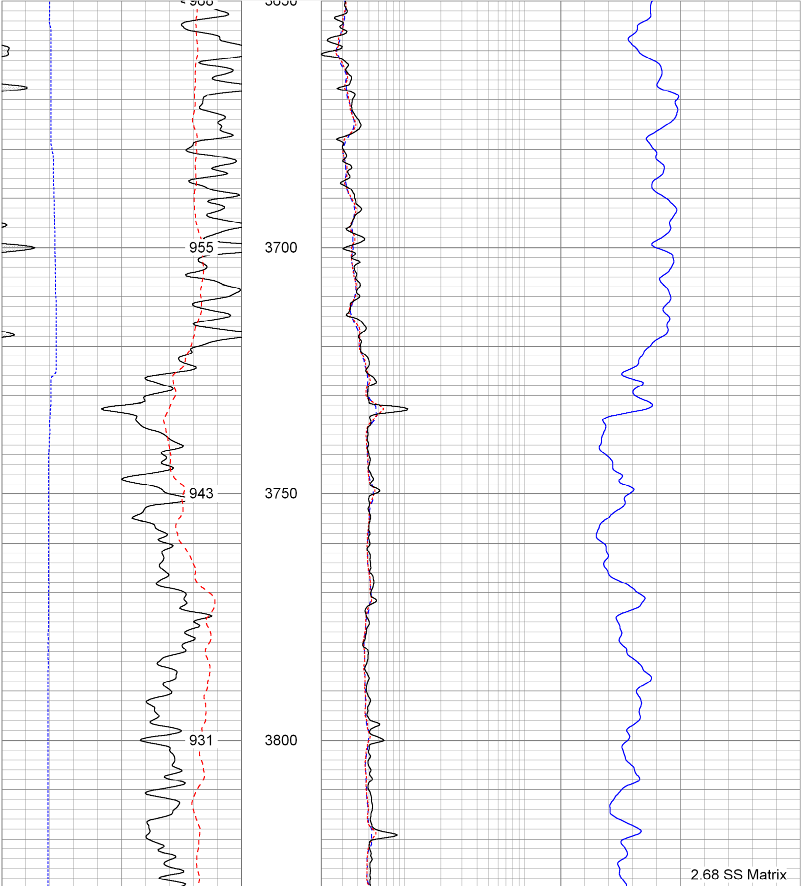
Annular volume calculated for 4.5" casing
Ensign Drilling Rig 5
Thank you for using Phoenix Surveys.
API #: 05-123-29320
No repeat due to hole conditions.

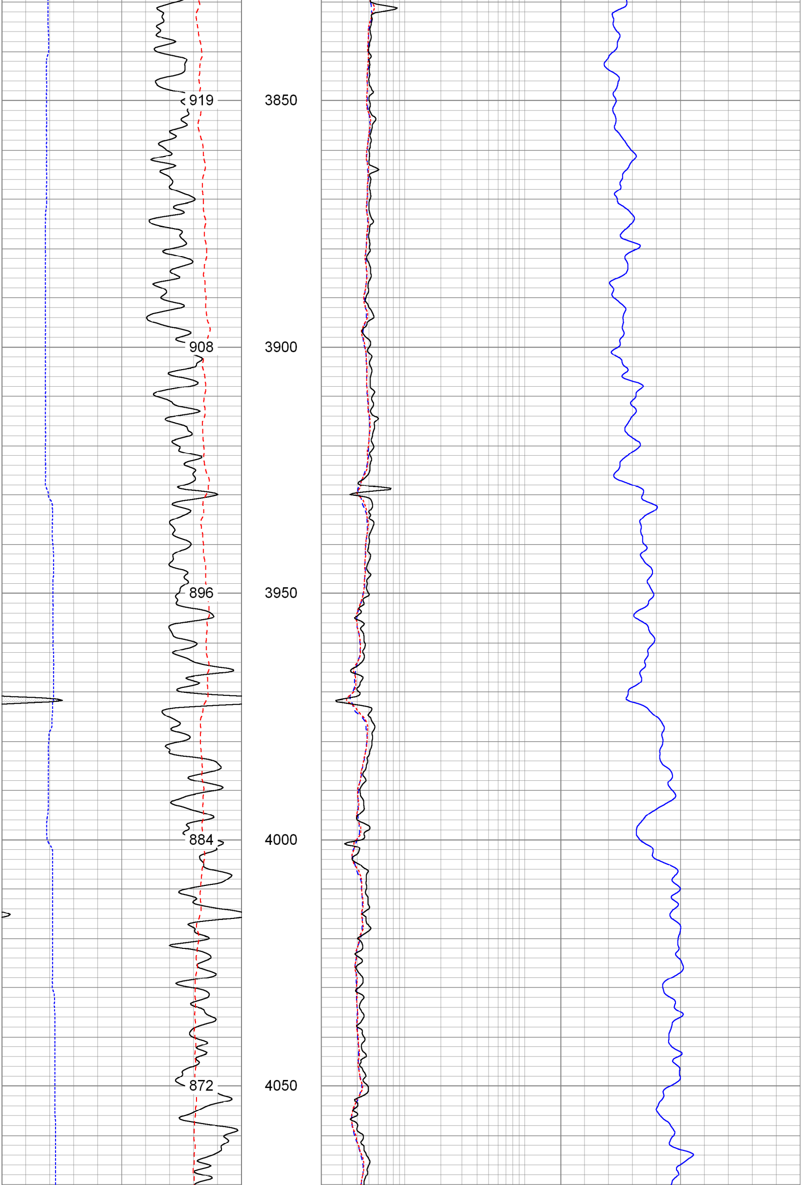
Database File:	10871.db
Dataset Pathname:	main
Presentation Format:	pdc1
Dataset Creation:	Sun Aug 15 08:37:27 2010
Charted by:	Depth in Feet scaled 1:240

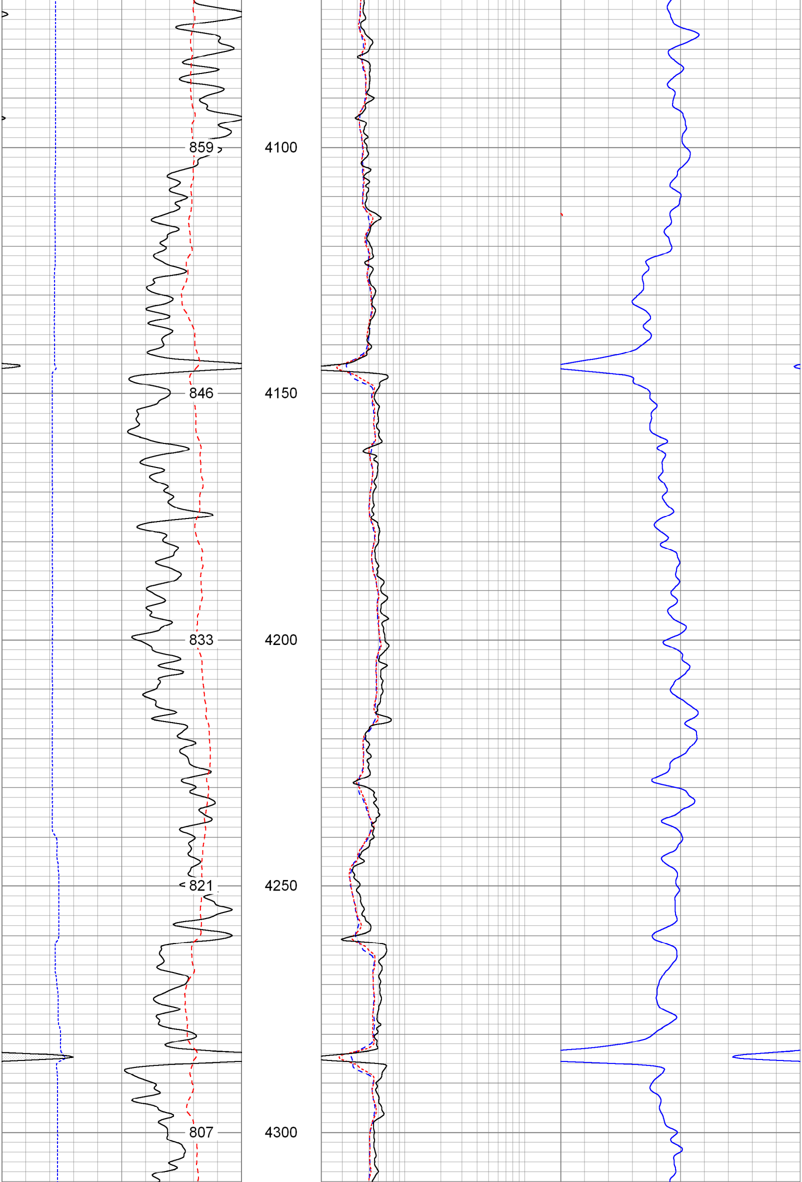
6 Density Caliper (in) 16
30 Gamma Ray (GAPI) 130
50 SP (mV) 150
ABHV (ft3)

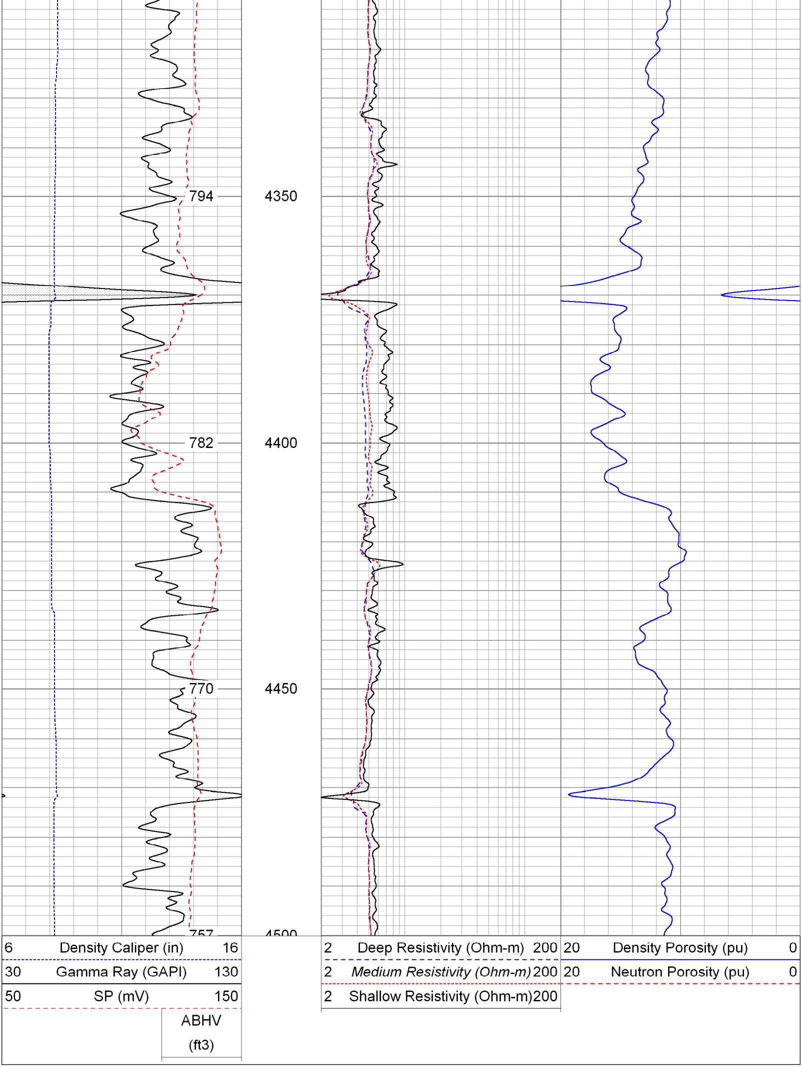
2 Deep Resistivity (Ohm-m) 200
2 *Medium Resistivity (Ohm-m)* 200
2 Shallow Resistivity (Ohm-m) 200

20 Density Porosity (pu) 0
20 Neutron Porosity (pu) 0









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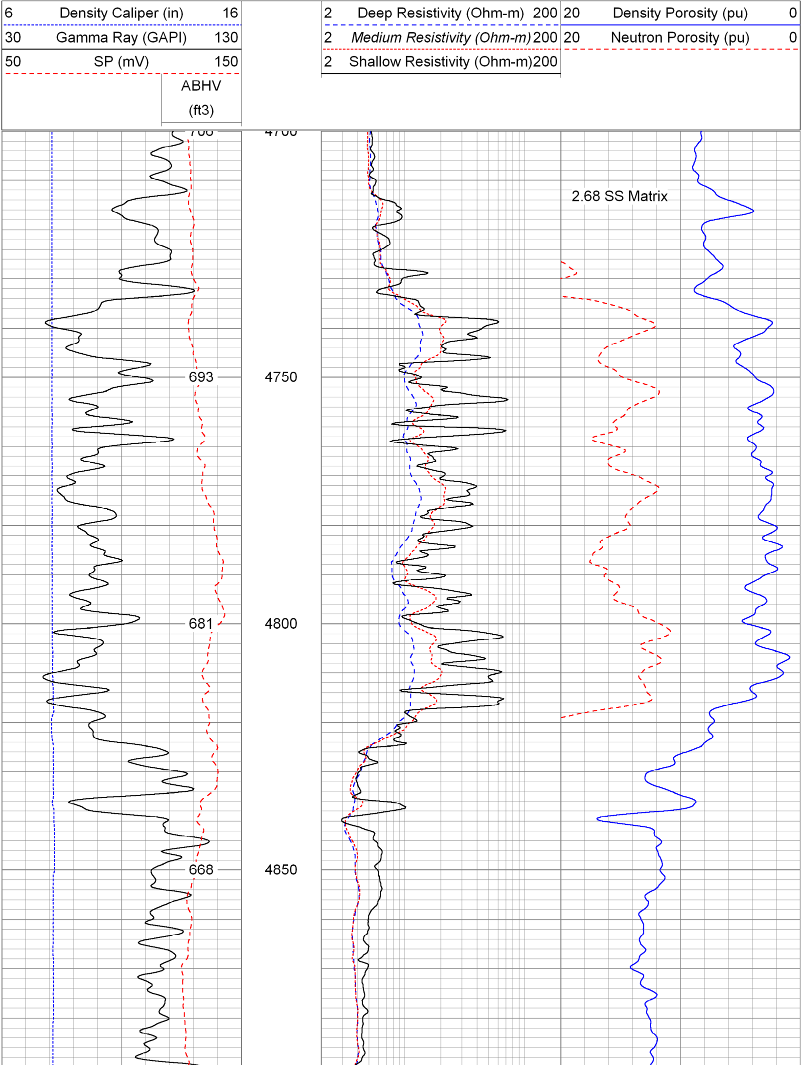

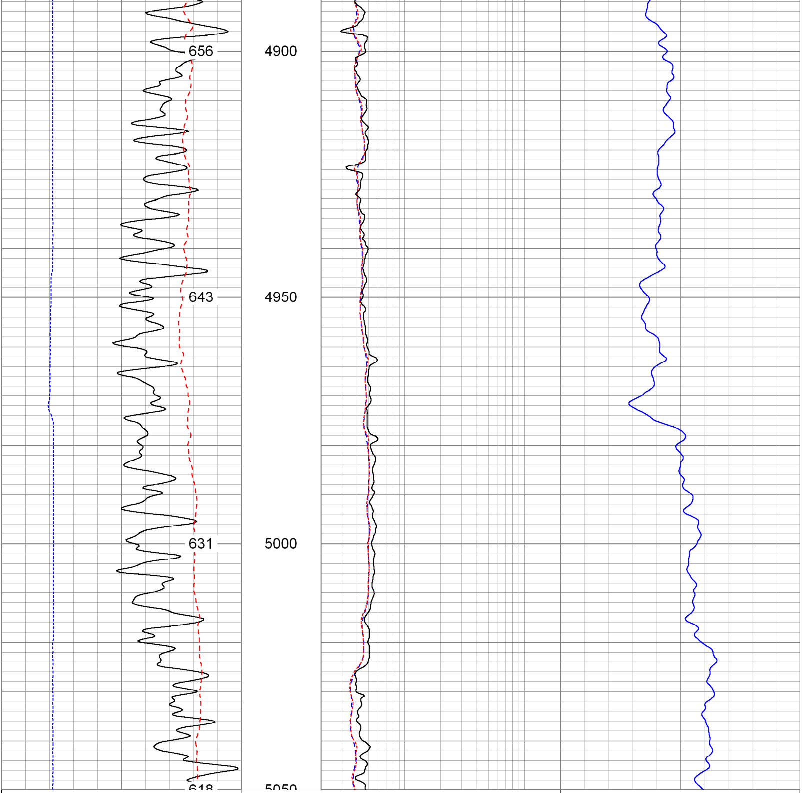

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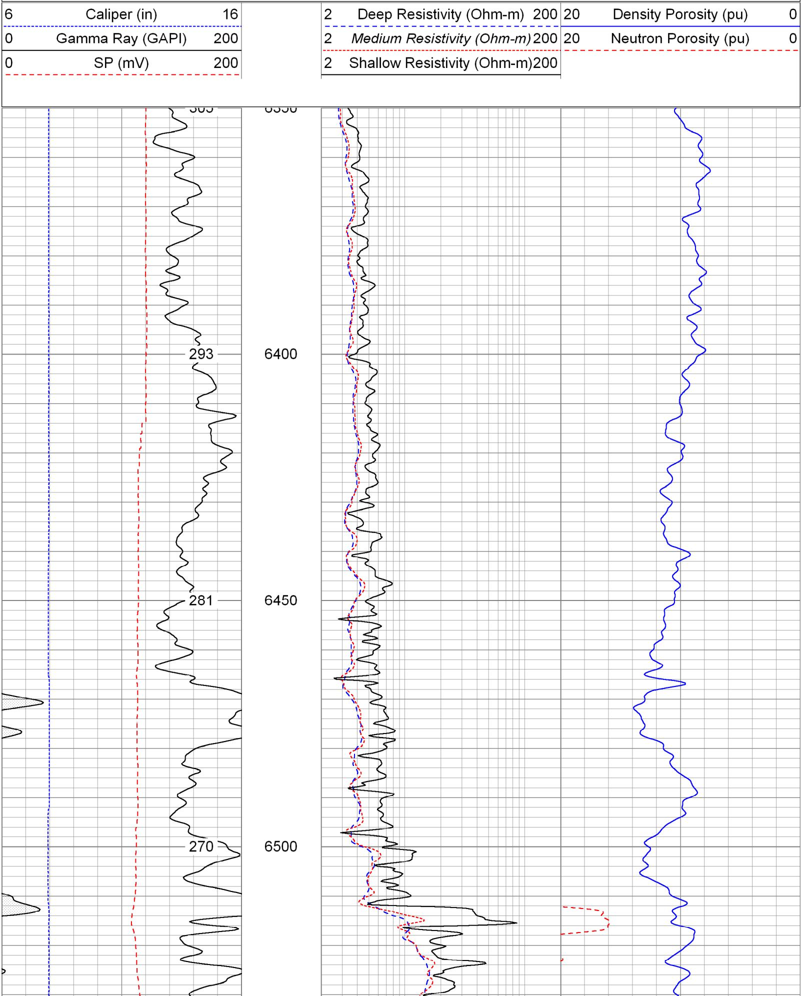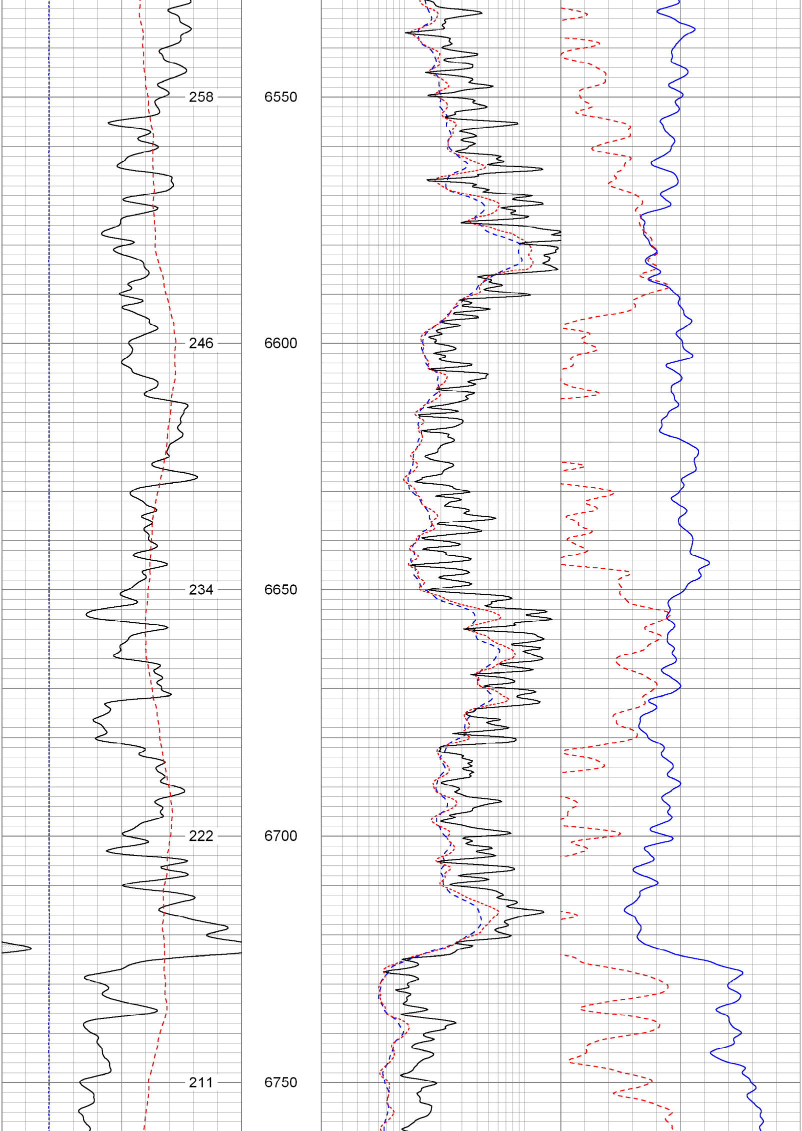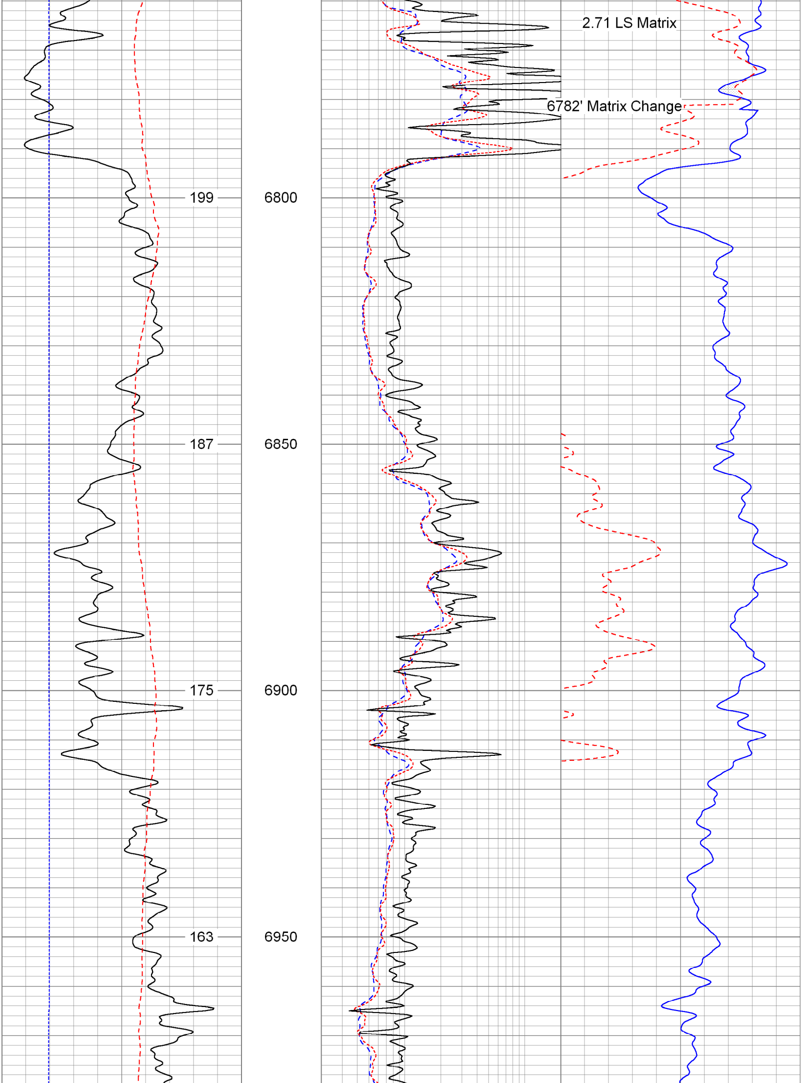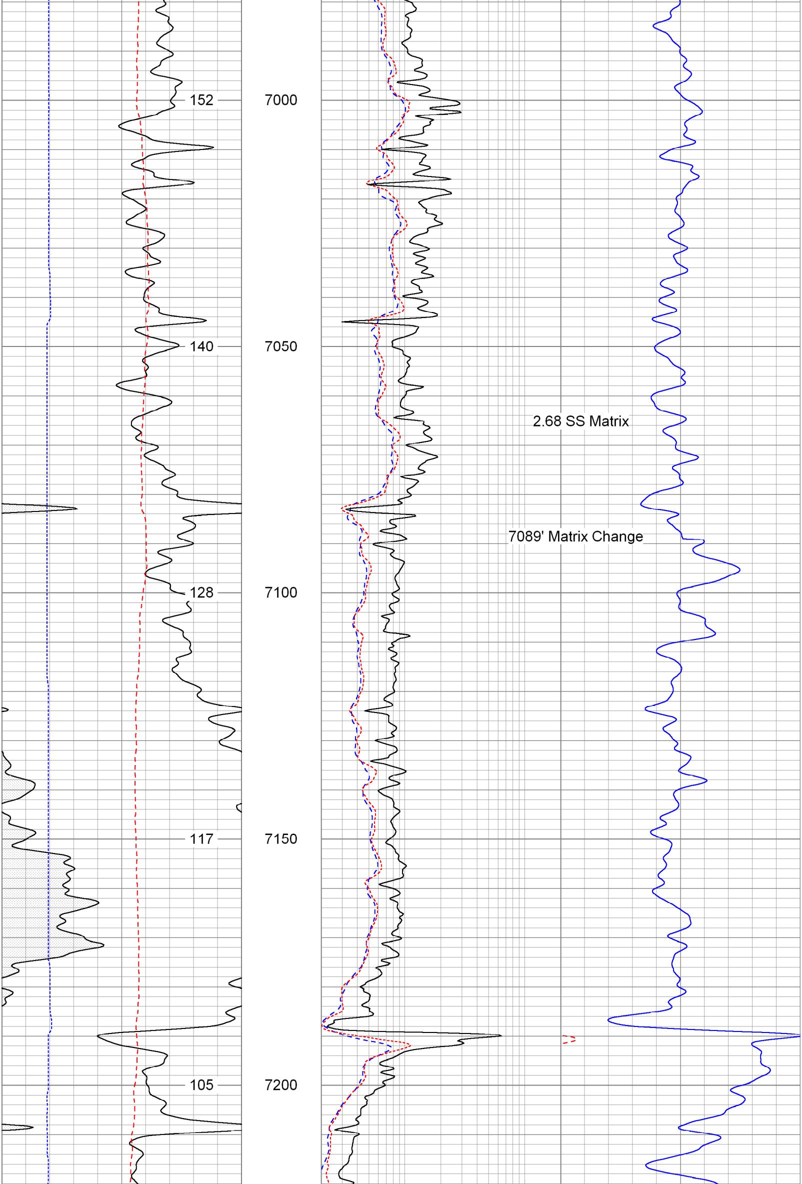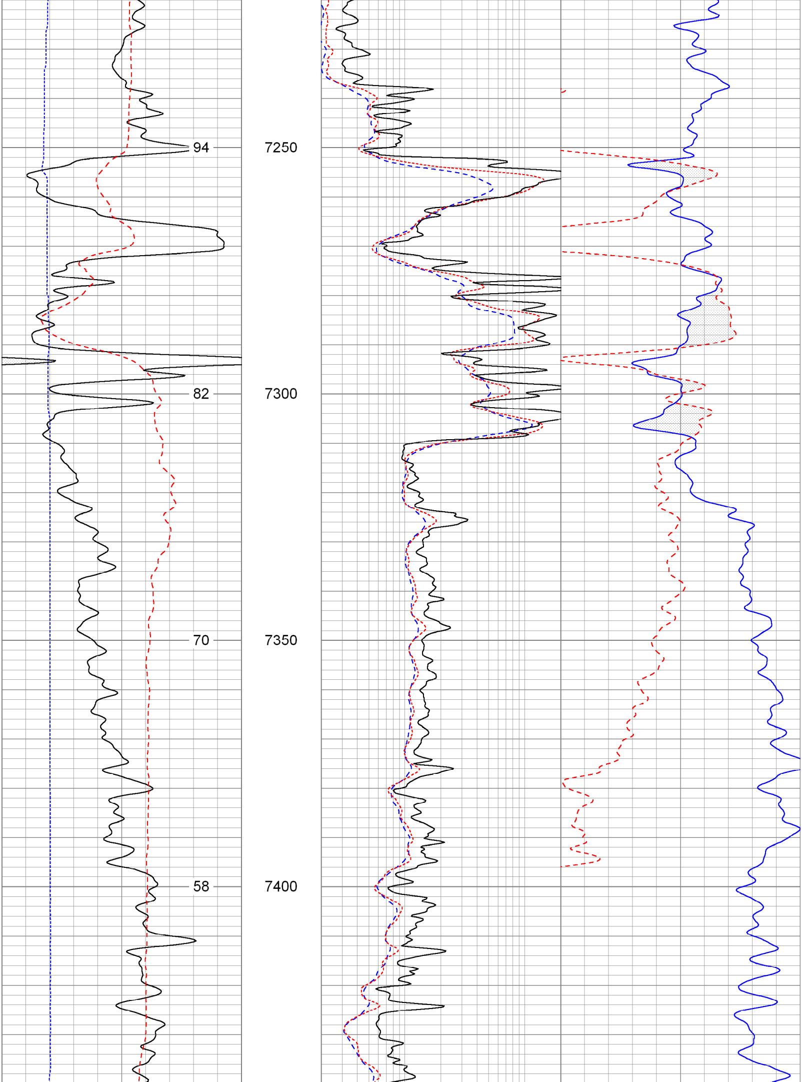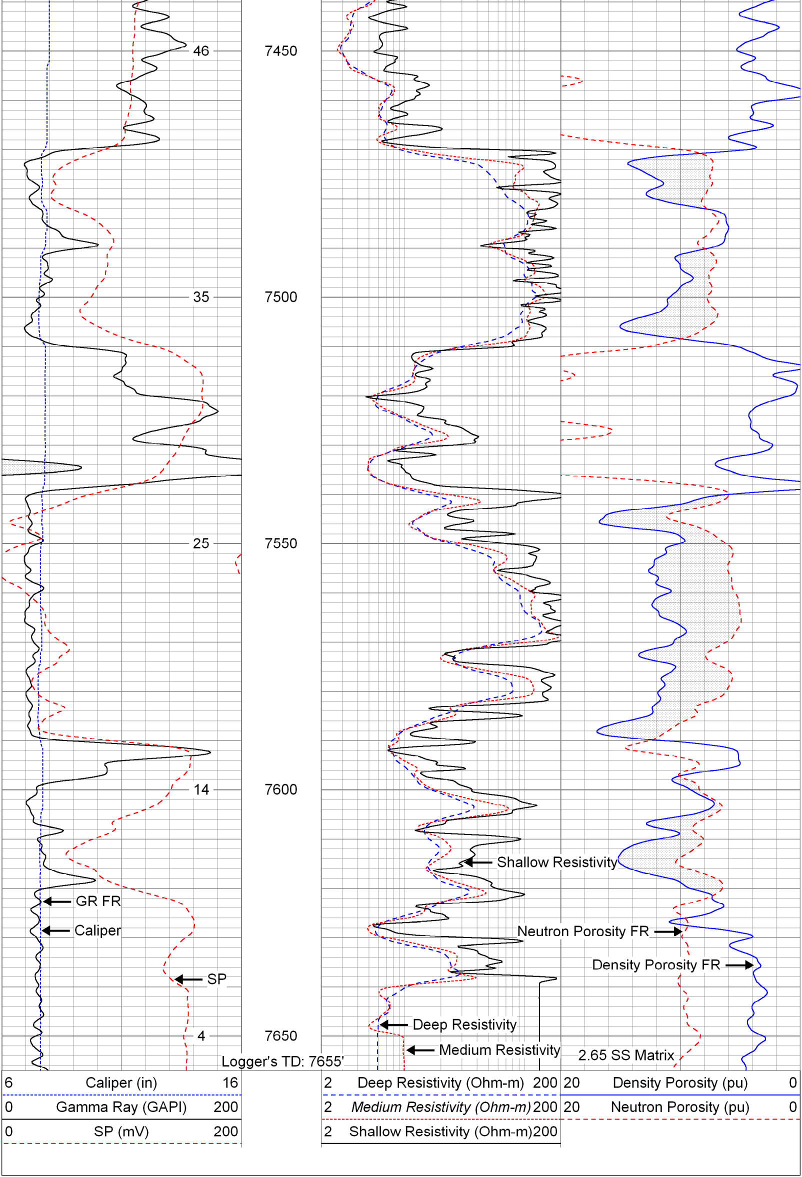
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2 *Medium Resistivity (Ohm-m)* 200
2 Shallow Resistivity (Ohm-m) 200
20 Density Porosity (pu) 0
20 Neutron Porosity (pu) 0
293
6400
281
6450
270
6500