

PHOENIX SURVEYS, INC.					
Company	Noble Energy Inc.	Well	Dechant 7-1-17	Field	Waterberg
County	Weld	State/Province	Colorado	Location	200 FNL & 1466 FEL NWNE Sec. 7, Twp. 3N, R9e. 64W
Log Measured from	KB	SL		Offshore Services	Density Neutron Mudlogging Elevations
Log Measured from	KB	Elevation	4786	KB Elevation	K/E 4891 D/L 4788 SL 4788
Date	April 26, 2011	Run Number	1	Depth	
Depth Drilled	7220	Bottom Logged Interval	7220	Casing	
Total Interval	7220	Coring Depth	661	Bit Size	7 7/8"
Type Fluid in Hole	Chemical	Density / Viscosity	9.3 / 46	Pressure of Sample	3.70 @ 65 F
Run @ Meas Temp	2.40 @ 65 F	Run @ Corr Temp	14.00 @ 65 F	Time Circulation Stopped	2:10
Run @ BHT	1.18 @ 204 F	Temperature	50	Equipment/Variety	Brighton CO Schuman
Records By	Schuman	Reviewed By	Cousins	Notes	

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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 validity 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 incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are subject to our general terms and conditions set out in our current Price Schedule.

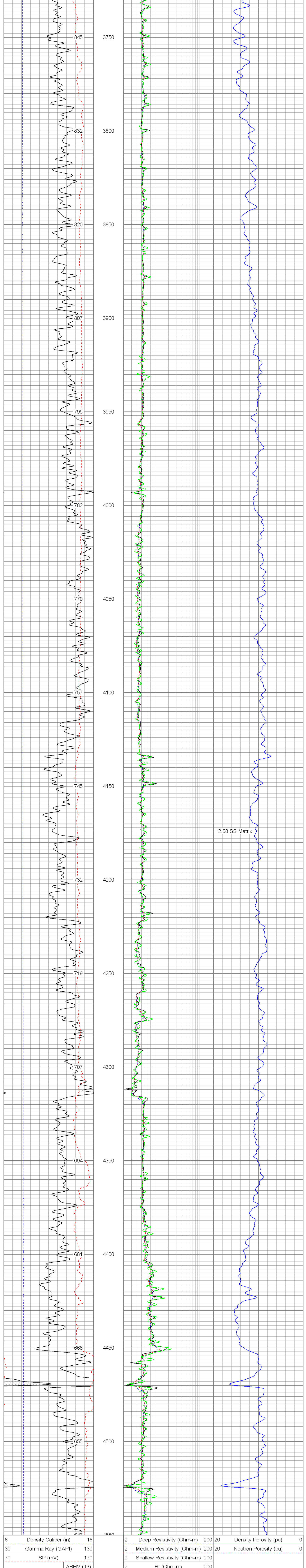
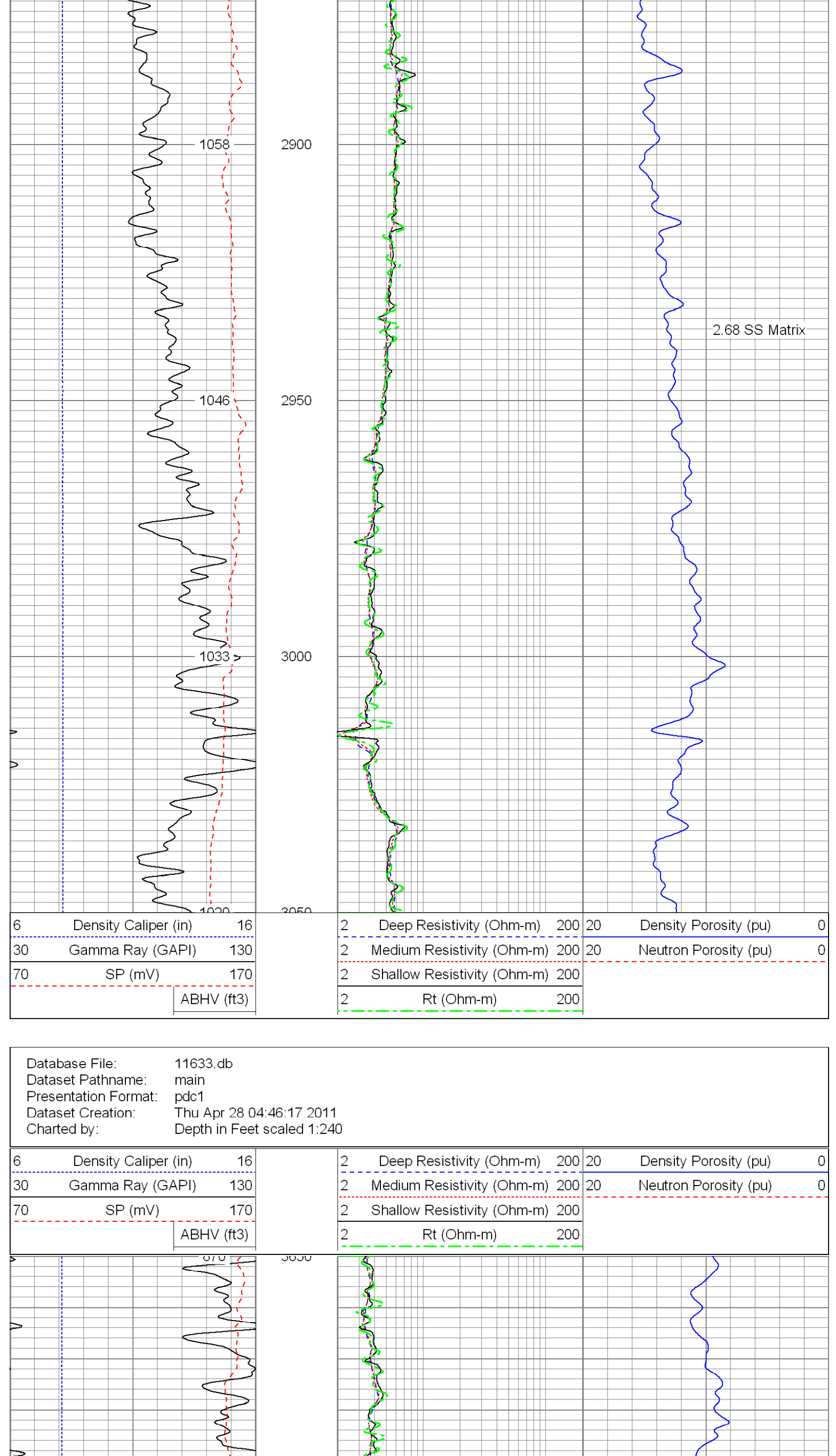
Comments

Annular volume calculated for 4.5" casing
Ensign Rig 136
Thank you for using Phoenix Surveys!!
API # : 05-123-28077
No repeat due to hole conditions.

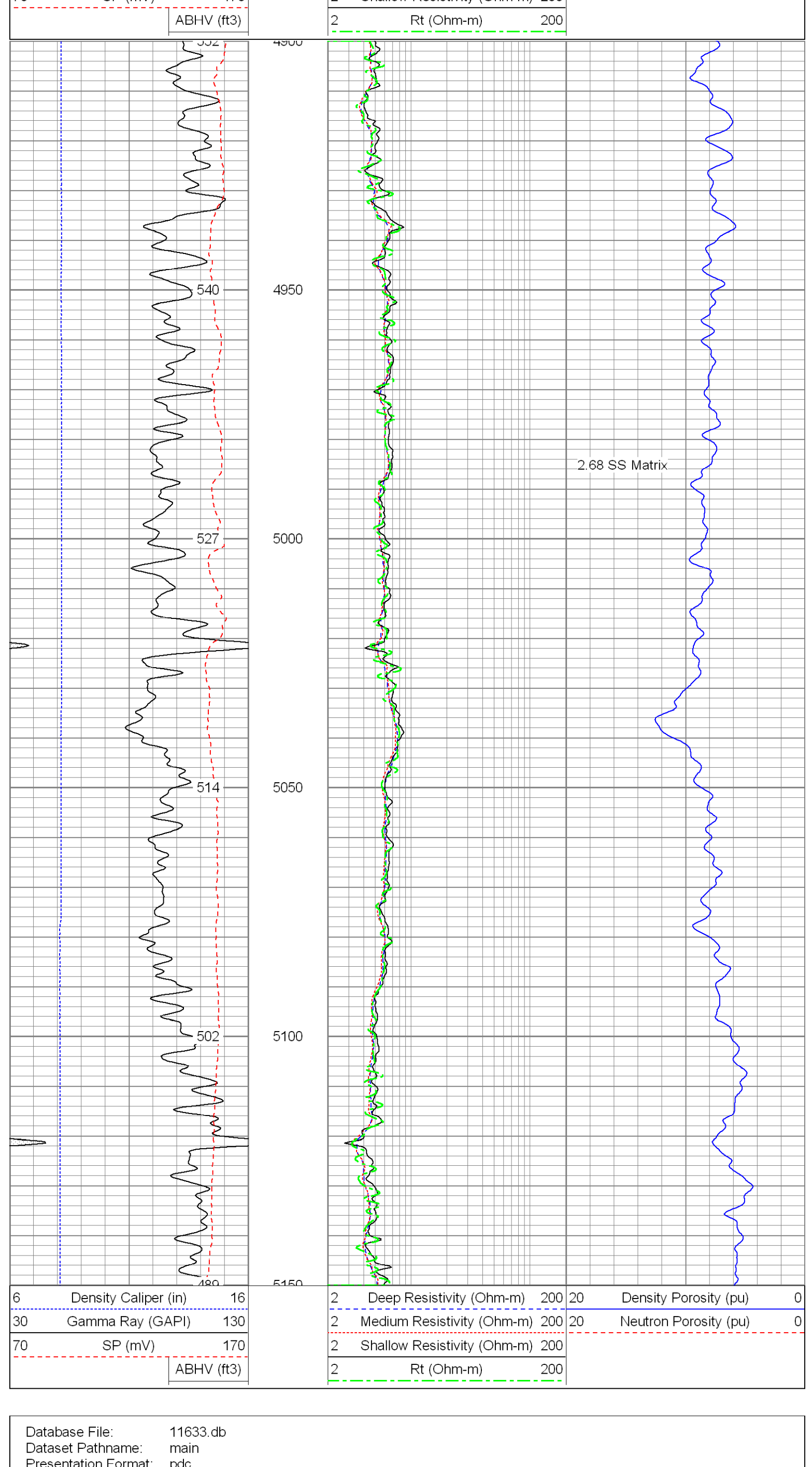
Database File: 11633.db
Dataset Pathname: main
Presentation Format: pdc1
Dataset Creation: Thu Apr 28 04:46:17 2011

40

16	2	Deep Resistivity (Ohm-m)	200	20
30	2	Medium Resistivity (Ohm-m)	200	20
70	2	Shallow Resistivity (Ohm-m)	200	20
3)	2	Rt (Ohm-m)	200	



Database File: 11633 db			
Dataset Pathname: main			
Presentation Format: pdc1			
Dataset Creation: Thu Apr 28 04:46:17 2011			
Charted by: Depth in Feet scaled 1:240			
6	Density Caliper (in)	16	
30	Gamma Ray (GAPI)	130	
70	SP (mV)	170	
2	Deep Resistivity (Ohm-m)	200	Density Porosity (pu)
2	Medium Resistivity (Ohm-m)	200	Neutron Porosity (pu)
2	Shallow Resistivity (Ohm-m)	200	



Dataset Creation:		Thu Apr 28 04:46:17 2011							
Charted by:		Depth in Feet scaled 1:240							
6	Caliper (in)	16		2	Deep Resistivity (Ohm-m)	200	20	Density Porosity (pu)	0
	Gamma Ray (GAPI)	200		2	Medium Resistivity (Ohm-m)	200	20	Neutron Porosity (pu)	0
0	SP (mV)	200		2	Shallow Resistivity (Ohm-m)	200			
				2	Rt (Ohm-m)	200			

The image displays a well log plot with multiple tracks. The top track is a table listing the data series: Caliper (in), Gamma Ray (GAPI), SP (mV), Deep Resistivity (Ohm-m), Medium Resistivity (Ohm-m), Shallow Resistivity (Ohm-m), Rt (Ohm-m), Density Porosity (pu), and Neutron Porosity (pu). The plot area shows the corresponding data curves. The Caliper track shows a single curve. The Gamma Ray track shows a single curve. The SP track shows a single curve. The Resistivity tracks show multiple curves. The Porosity tracks show multiple curves. The plot area is divided into sections by vertical lines. The top section is labeled '6' and the bottom section is labeled '0'. The x-axis is labeled 'Depth in Feet scaled 1:240'.

