

PHOENIX SURVEYS, INC.

HIGH RESOLUTION INDUCTION  
COMPENSATED DENSITY  
COMPENSATED NEUTRON

Company	Apollo Operating, LLC			Other Services
Well	E.L. Minch 24-4			None
Field	Wattenberg			
County	Weld	State/Province	Colorado	
Location	665' FSL & 1992' FWL SE SW Sec - 4, Twp - 3N, Rge - 68W			
Permanent Datum	GL	Elevation	5053	Elevation
Log Measured From	KB			K.B. 5069
Drilling Measured From	KB			D.F. 5068
				G.L. 5053
Date	April 7, 2012			
Run Number	1			
Depth Driller	7548			
Depth Logger	7543			
Bottom Logged Interval	7543			
Top Log Interval	Casing			
Casing Driller	735			
Casing Logger	735			
Bit Size	7-7/8"			
Type Fluid In Hole	Chem Gel			
Density / Viscosity	9.4 / 50			
pH / Fluid Loss	7.5 / 14.4			
Source of Sample	Flowline			
Rm @ Meas. Temp	3.15 @ 73 F			
Rmt @ Meas. Temp	2.36 @ 73 F			
Rmc @ Meas. Temp	3.93 @ 73 F			
Source of Rmt / Rmc	Measure / Calc			
Rm @ BHT	1.02 @ 226 F			
Time Circulation Stopped	0500			
Time Logger on Bottom	1330			
Maximum Recorded Temperature	226 F			
Equipment Number	52			
Location	Brighton, CO			
Recorded By	Randy Conley			
Mtressed By	Don Libhart			

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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

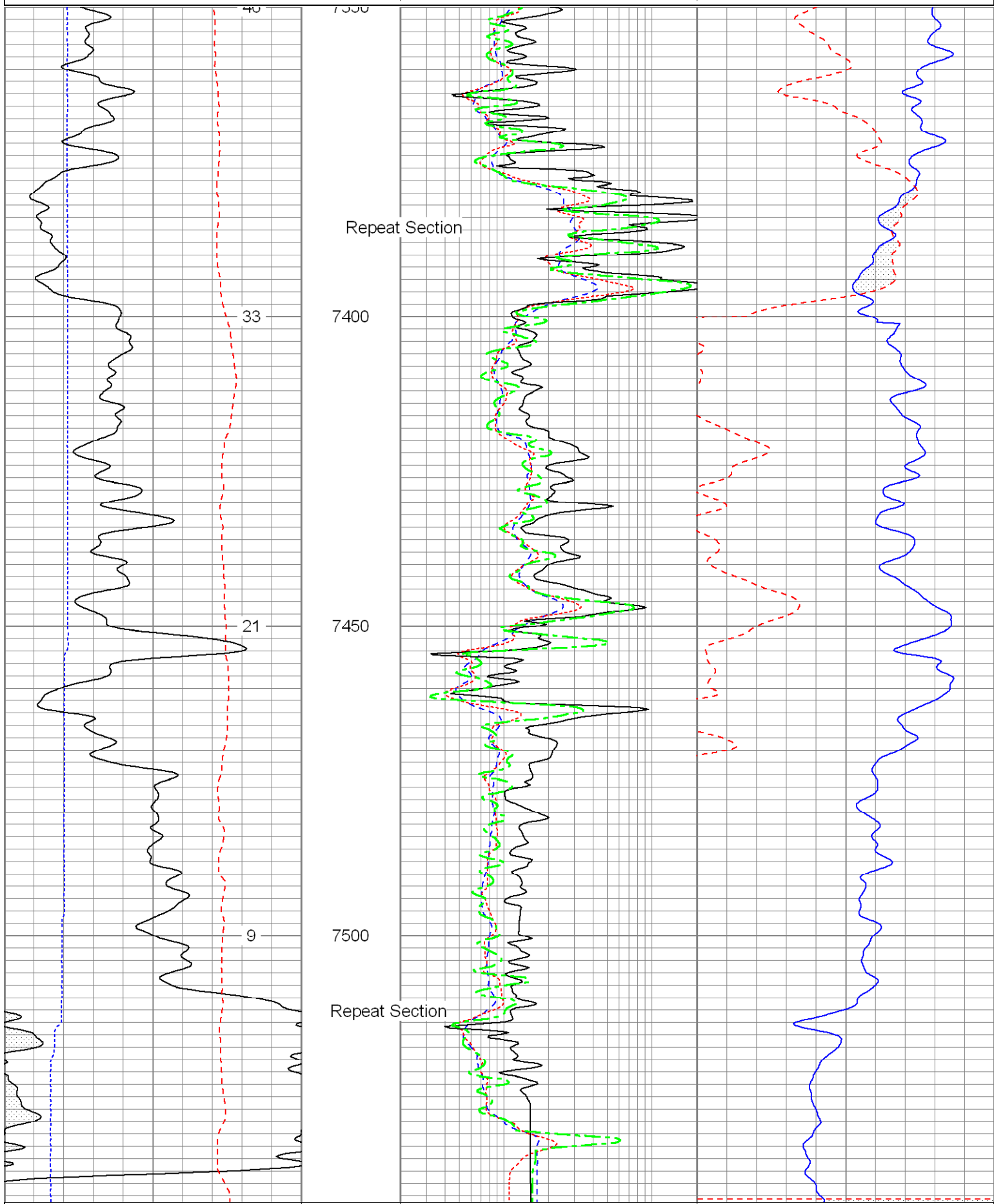
Annular volume calculated for 4.5" casing  
Ensign Drilling Rig 55  
Thank you for using Phoenix Surveys.  
API #: 05-123-33658-00

Database File: 12837.db  
Dataset Pathname: pass2.1  
Presentation Format: pdc  
Dataset Creation: Sat Apr 07 13:57:54 2012 by Calc Open-Cased 100827  
Charted by: Depth in Feet scaled 1:240

6	Caliper (in)	16
0	Gamma Ray (GAPI)	200
0	SP (mV)	200

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

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



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