Pioneer Energy Services

HIGH RESOLUTION INDUCTION
COMPENSATED DENSITY
COMPENSATED NEUTRON

Company Bayswater Exploration and Production LLC
Well Hirsch 17-24
Field Wattenberg
County Weld
State Colorado

Company	Bayswater Exploration and Production LLC		
Well	Hirsch 17-24		
Field	Wattenberg		
County	Weld	State	Colorado

Location: API # : 05123379230000

SHL: 1471' FNL & 2508' FWL SENW
BHL: 1306' FNL & 1291' FEL NENE
SEC 24 TWP 7N RGE 67W

Other Services
None

Permanent Datum	GL	Elevation	5035
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 5048
D.F. 5048
G.L. 5035

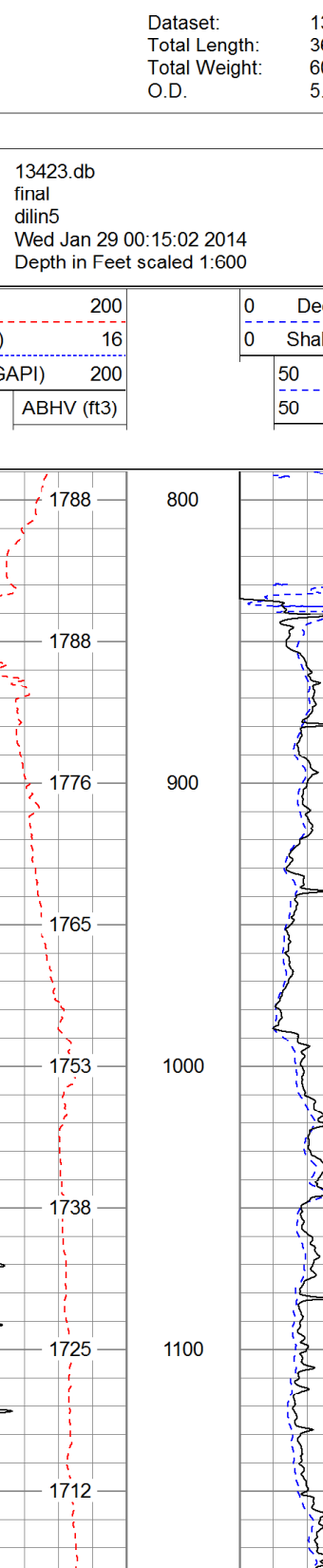
Date	January 28, 2014		
Run Number	1		
Depth Driller	7759		
Depth Logger	7758		
Bottom Logged Interval	7758		
Top Log Interval	Casing		
Casing Driller	836		
Casing Logger	836		
Bit Size	7-7/8"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	9.5 / 60		
pH / Fluid Loss	9.0 / 9.2		
Source of Sample	Flowline		
Rm @ Meas. Temp	3.75 @ 58 F		
Rmf @ Meas. Temp	3.00 @ 58 F		
Rmc @ Meas. Temp	4.50 @ 58 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	1.04 @ 209 F		
Time Circulation Stopped	1530		
Time Logger on Bottom	2330		
Maximum Recorded Temperature	209 F		
Equipment Number	49		
Location	Brighton, CO		
Recorded By	Matt Gill		
Witnessed By	Don Patton	Don B.	

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

Annular volume calculated for 4.5" casing
Ensign Drilling Rig 122
Thank you for using Pioneer Energy Services



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CHD (~0)	2.00	3.50	30.00
GR	0.00	GR-PSI (939)	2.92	3.50	40.00
CNLSC CNSSC	-3.67 -4.17	CNT-PSI (826)	5.00	3.50	70.00
DCAL LSD SSD	-11.84 -12.67 -13.17	CDL-PSI (998)	8.50	5.00	285.00
RLL3 CILD CILM SP	-17.52 -24.97 -28.42 -32.42	DIL-PSI (1011)	18.25	3.75	175.00

Dataset: 13423.db: field/well/run1/final
Total Length: 36.67 ft
Total Weight: 600.00 lb
O.D. 5.00 in

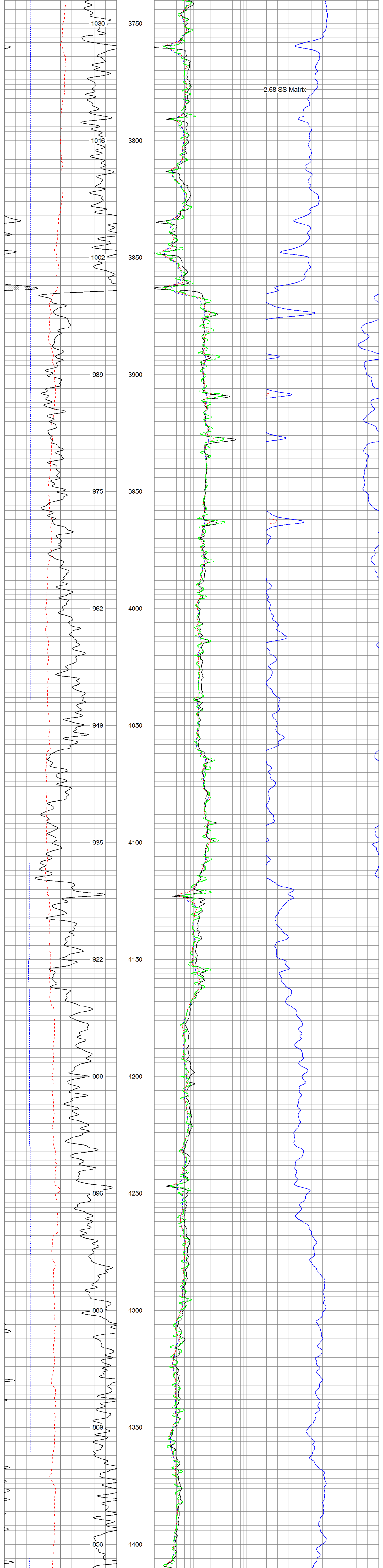
Database File: 13423.db
Dataset Pathname: final
Presentation Format: dilin5
Dataset Creation: Wed Jan 29 00:15:02 2014
Charted by: Depth in Feet scaled 1:600

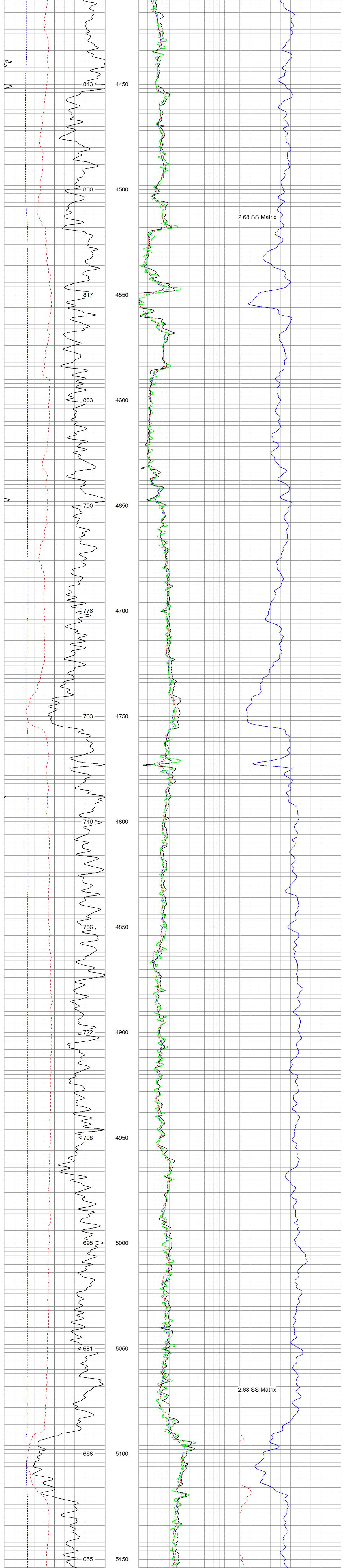
0 SP (mV) 200		0 Deep Resistivity (Ohm-m) 50	1000 CILD (mmho/m) 0
6 Caliper (in) 16		0 Shallow Resistivity (Ohm-m) 50	
0 Gamma Ray (GAPI) 200		50 RILD (Ohm-m) 500	
TBHV (ft3)	ABHV (ft3)	50 RLL3 (Ohm-m) 500	

0 SP (mV) 200		0 Deep Resistivity (Ohm-m) 50	1000 CILD (mmho/m) 0
6 Caliper (in) 16		0 Shallow Resistivity (Ohm-m) 50	
0 Gamma Ray (GAPI) 200		50 RILD (Ohm-m) 500	
TBHV (ft3)	ABHV (ft3)	50 RLL3 (Ohm-m) 500	

Database File: 13423.db
Dataset Pathname: final
Presentation Format: pdc1
Dataset Creation: Wed Jan 29 00:15:02 2014
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
50 SP (mV) 150		2 Shallow Resistivity (Ohm-m) 200	
	ABHV (ft3)	2 Rt (Ohm-m) 200	

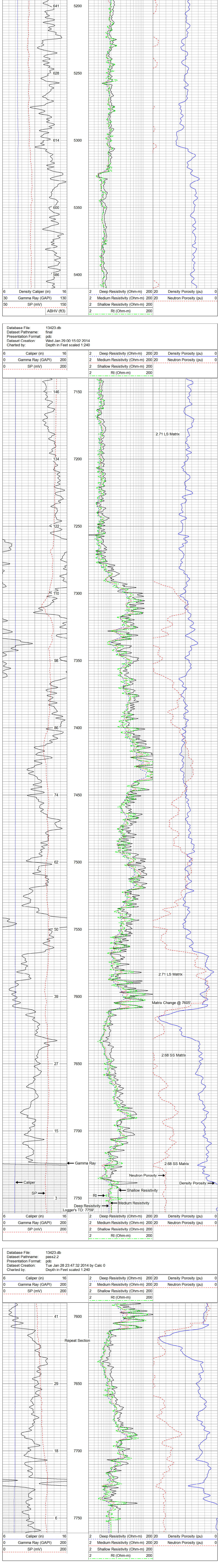




6 Density Caliper (in) 16	2 Deep Resistivity (Ohm-m) 200	20 Density Porosity (pu) 0
30 Gamma Ray (GAPI) 130	2 Medium Resistivity (Ohm-m) 200	20 Neutron Porosity (pu) 0
50 SP (mV) 150	2 Shallow Resistivity (Ohm-m) 200	
ABHV (ft3)	2 Rt (Ohm-m) 200	

Database File: 13423.db
Dataset Pathname: final
Presentation Format: pdc
Dataset Creation: Wed Jan 29 00:15:02 2014
Charted by: Depth in Feet scaled 1:240

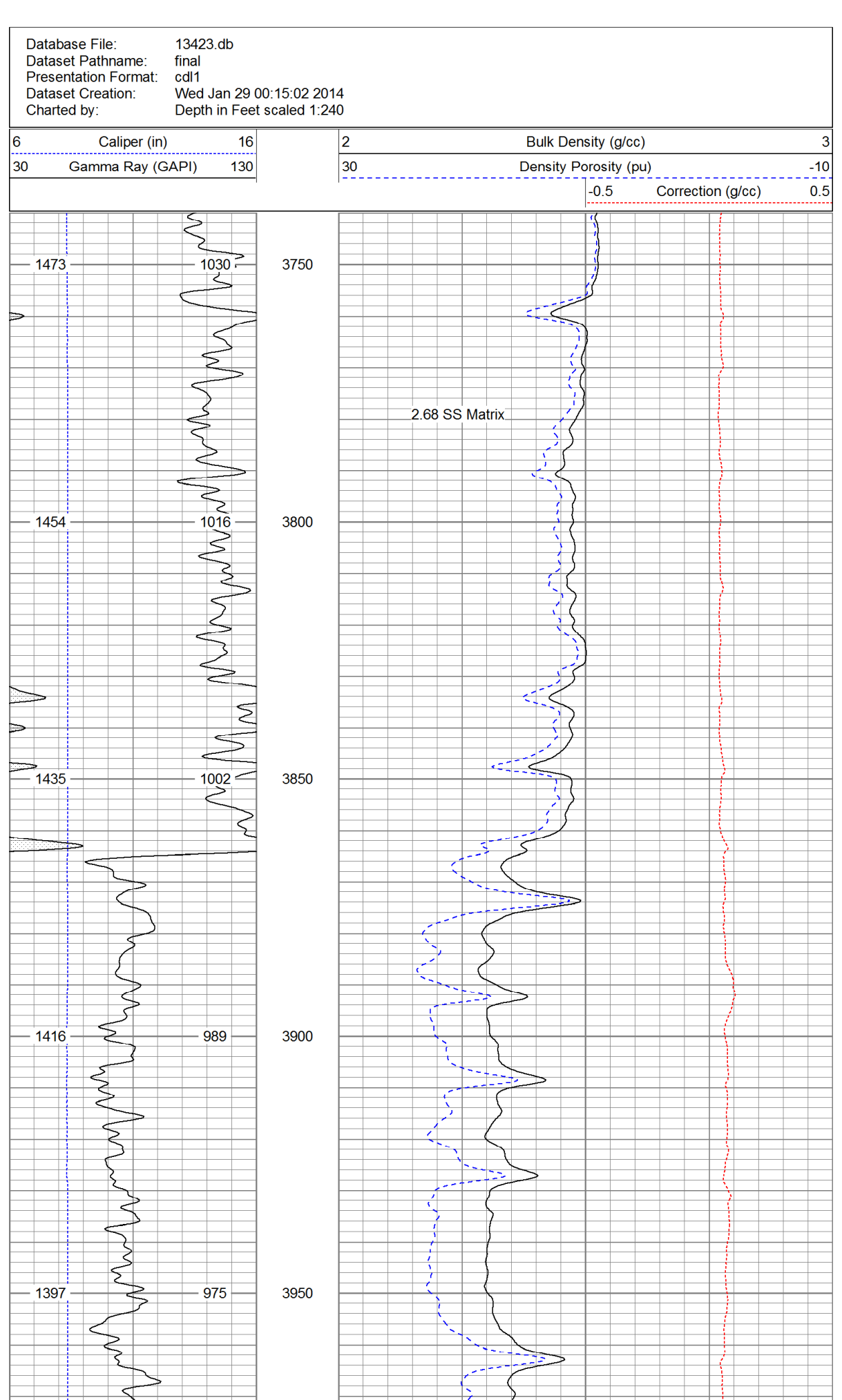
6 Caliper (in) 16	2 Deep Resistivity (Ohm-m) 200	20 Density Porosity (pu) 0
30 Gamma Ray (GAPI) 200	2 Medium Resistivity (Ohm-m) 200	20 Neutron Porosity (pu) 0
0 SP (mV) 200	2 Shallow Resistivity (Ohm-m) 200	
	2 Rt (Ohm-m) 200	



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

Database File: 13423.db
Dataset Pathname: pass1.2
Presentation Format: pdc
Dataset Creation: Tue Jan 28 23:47:32 2014 by Calc 0
Charted by: Depth in Feet scaled 1:240

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



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

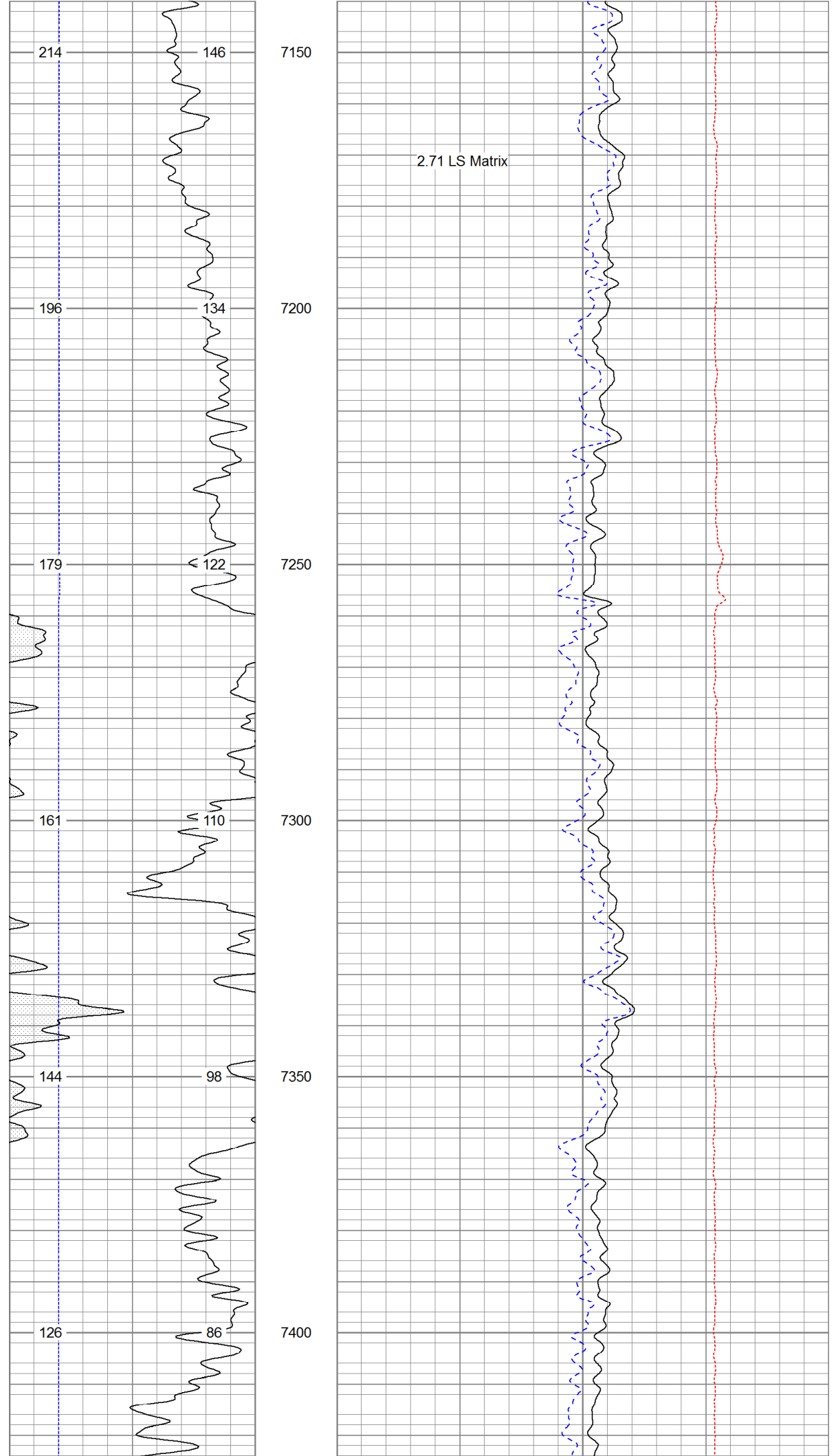
Database File: 13423.db
Dataset Pathname: final
Presentation Format: cdl
Dataset Creation: Wed Jan 29 00:15:02 2014
Charted by: Depth in Feet scaled 1:240

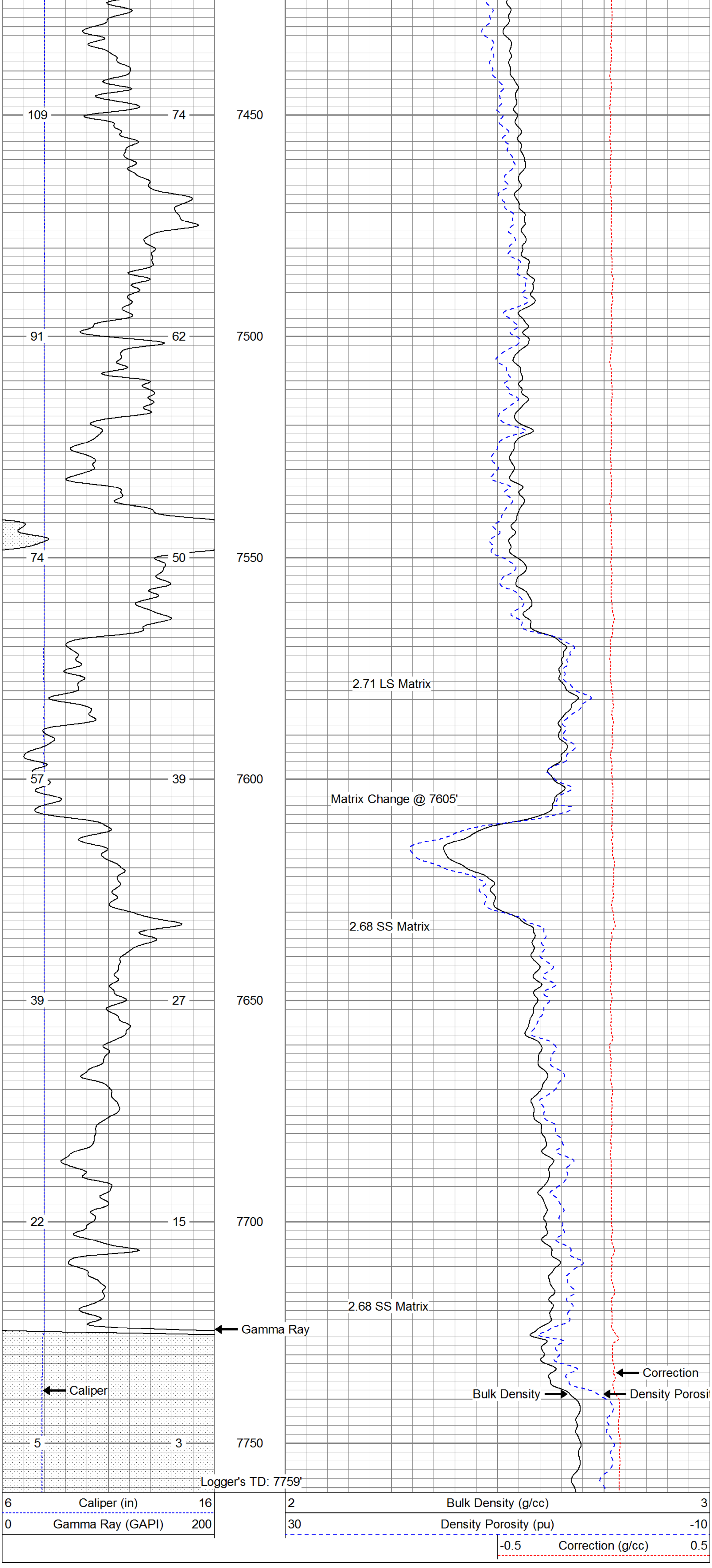
6 Caliper (in) 16	2 Bulk Density (g/cc) 3
30 Gamma Ray (GAPI) 130	30 Density Porosity (pu) -10
	-0.5 Correction (g/cc) 0.5

6 Caliper (in) 16	2 Bulk Density (g/cc) 3
30 Gamma Ray (GAPI) 130	30 Density Porosity (pu) -10
	-0.5 Correction (g/cc) 0.5

Database File: 13423.db
Dataset Pathname: final
Presentation Format: cdl
Dataset Creation: Wed Jan 29 00:15:02 2014
Charted by: Depth in Feet scaled 1:240

6 Caliper (in) 16	2 Bulk Density (g/cc) 3
0 Gamma Ray (GAPI) 200	30 Density Porosity (pu) -10
	-0.5 Correction (g/cc) 0.5





Calibration Report

Database File: 13423.db
Dataset Pathname: pass2.2
Dataset Creation: Tue Jan 28 23:47:32 2014 by Calc 0

Dual Induction Calibration Report

Serial-Model: 1011-PSI
Surface Cal Performed:

Loop:	Readings Air	Readings Loop	References Air	References Loop		Results m	Results b
Deep	0.000	1.000	0.000	1.000	mmho/m	0.510	-28.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.440	-28.000

Compensated Density Calibration Report

Serial-Model: 998-PSI
Master Calibration Performed: Wed Jan 15 08:01:34 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	7210.00	9816.00	cps
Aluminum	2.690	g/cc	1326.00	6231.00	cps

	Size		Reading
Small Ring		in	
Medium Ring		in	
Large Ring		in	

Compensated Neutron Calibration Report

Serial Number: 826
Tool Model: PSI

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.9000
Long Space	1.00	cps	1.00	cps	2.0900

Gamma Ray Calibration Report

Serial Number: 939
Tool Model: PSI
Performed: Wed Jan 15 08:01:44 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6200 GAPI/cps