PIONEER
Pioneer Energy Services

HIGH RESOLUTION INDUCTION
COMPENSATED DENSITY
COMPENSATED NEUTRON

Company	Whiting Oil & Gas Corporation		
Well	Razor Federal #26L-2302B		
Field	WildCat		
County	Weld	State	Colorado
Location:	API # : 05123383390000	Other Services	
	SHL: 2244' FSL & 593' FWL NWSW	Sonic	
	SEC 26 TWP 10N RGE 58W		
Permanent Datum	GL	Elevation 4737	Elevation
Log Measured From	KB		K.B. 4754
Drilling Measured From	KB		D.F. 4753 G.L. 4737

Company Whiting Oil & Gas Corporation
Well Razor Federal #26L-2302B
Field WildCat
County Weld
State Colorado

Date	April 5, 2014		
Run Number	1		
Depth Driller	6020		
Depth Logger	5732		
Bottom Logged Interval	5732		
Top Log Interval	Casing		
Casing Driller	1821		
Casing Logger	1821		
Bit Size	8.75"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	10.1 / 40		
pH / Fluid Loss	8.5 / 11		
Source of Sample	Flowline		
Rm @ Meas. Temp	3.35 @ 65 F		
Rmf @ Meas. Temp	2.51 @ 65 F		
Rmc @ Meas. Temp	4.19 @ 65 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	1.48 @ 147 F		
Time Circulation Stopped	1510		
Time Logger on Bottom	21:30		
Maximum Recorded Temperature	147 F		
Equipment Number	49		
Location	Ft. Morgan		
Recorded By	Clint Christensen		
Witnessed By	Corey Neuroth		

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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

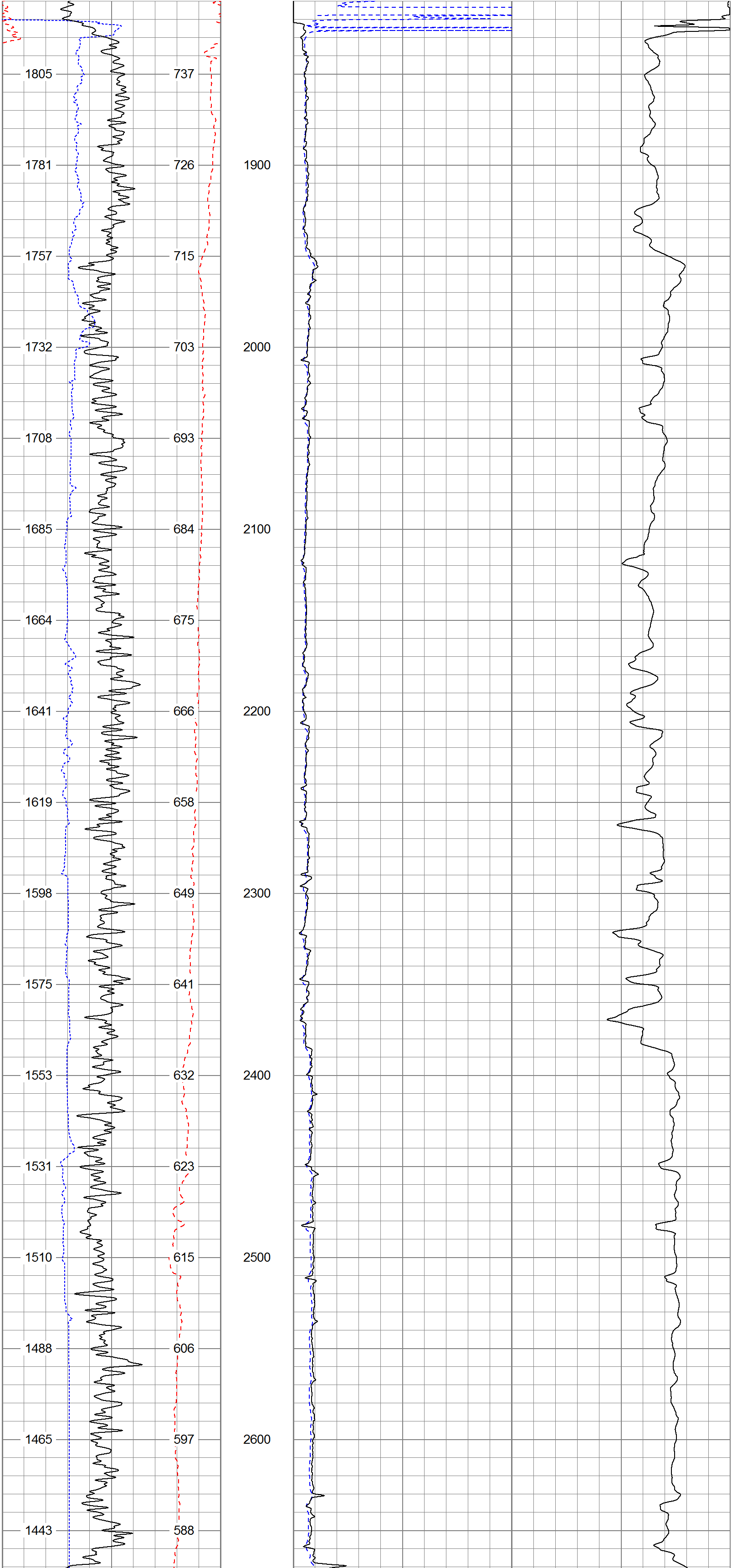
Annular volume calculated for 7" casing
Cade Drilling Rig 23
Thank you for using Pioneer Energy Services

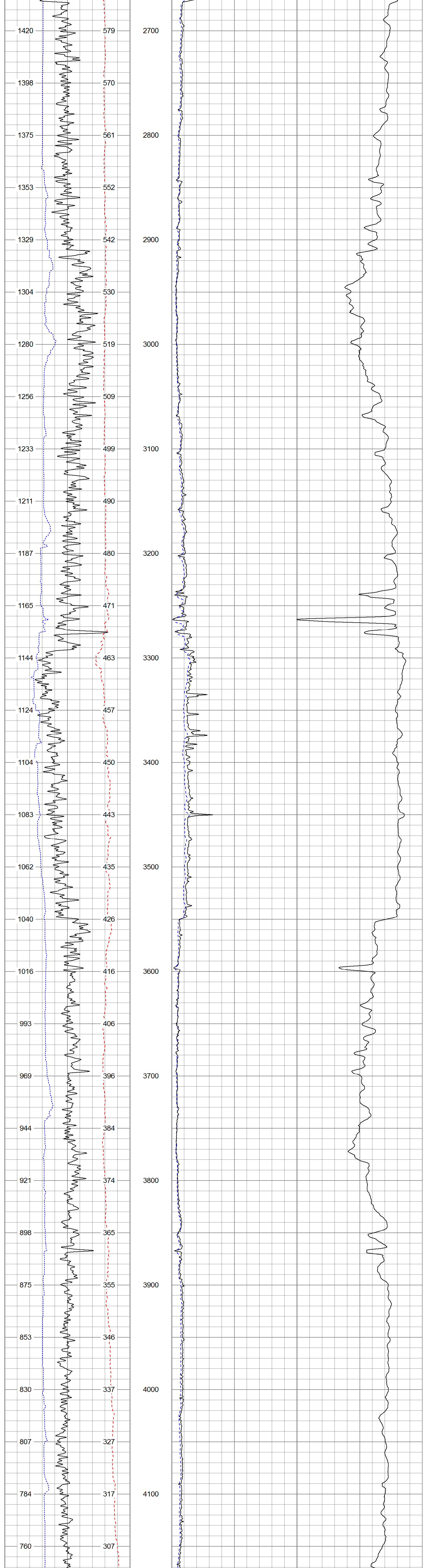
Database File: 13528.db
Dataset Pathname: Final
Presentation Format: dilin5
Dataset Creation: Sat Apr 05 22:50:13 2014
Charted by: Depth in Feet scaled 1:600

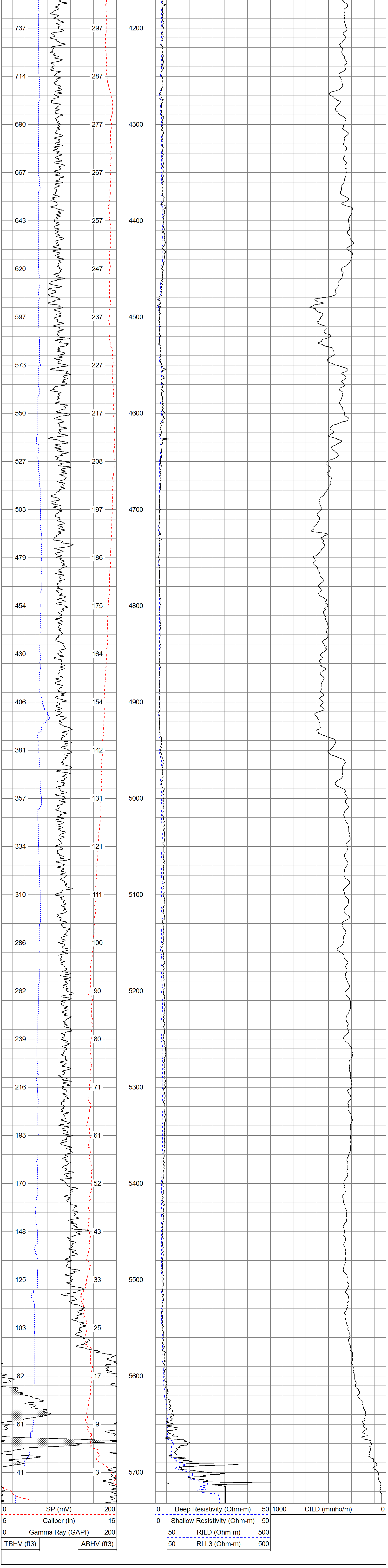
0 SP (mV) 200
6 Caliper (in) 16
0 Gamma Ray (GAPI) 200
TBHV (ft3) ABHV (ft3)

0 Deep Resistivity (Ohm-m) 50
0 Shallow Resistivity (Ohm-m) 50
50 RILD (Ohm-m) 500
50 RLL3 (Ohm-m) 500

1000 CILD (mmho/m) 0

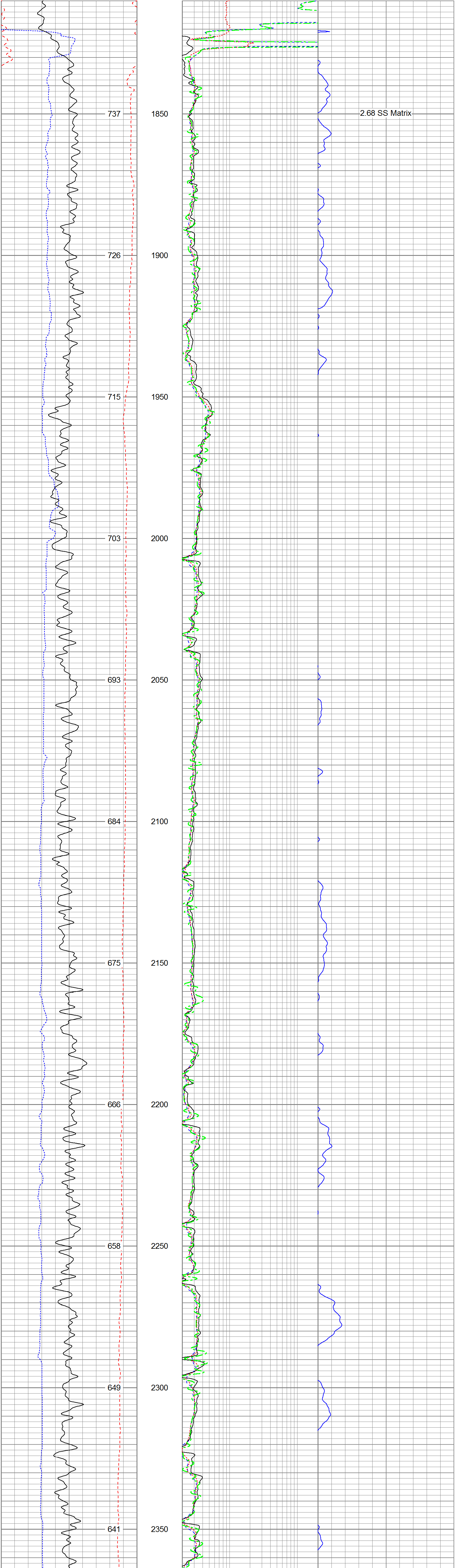


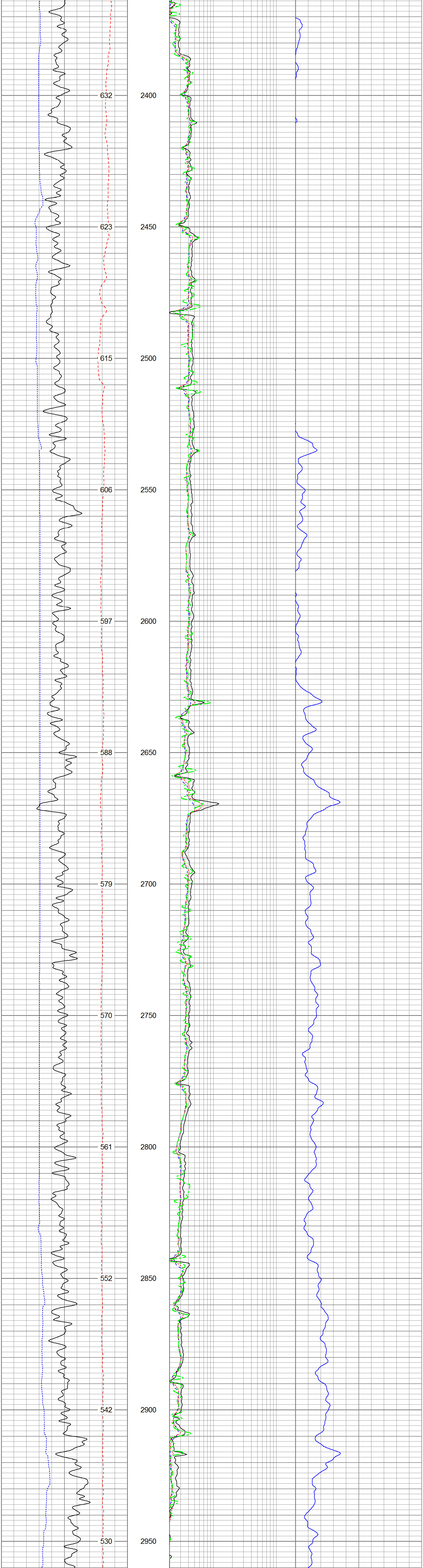


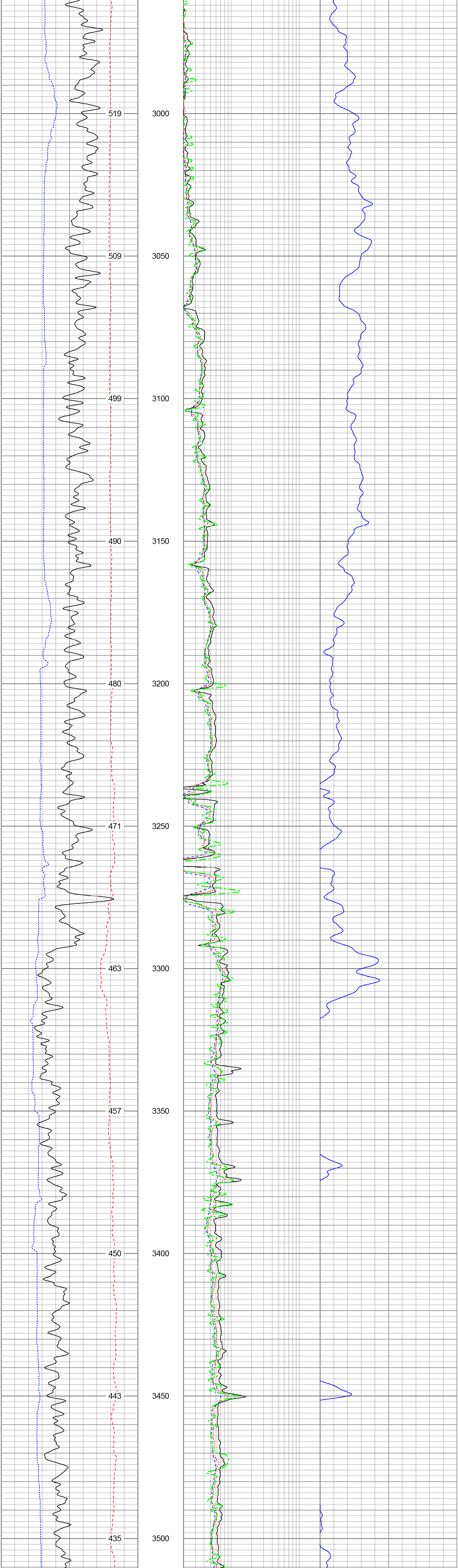


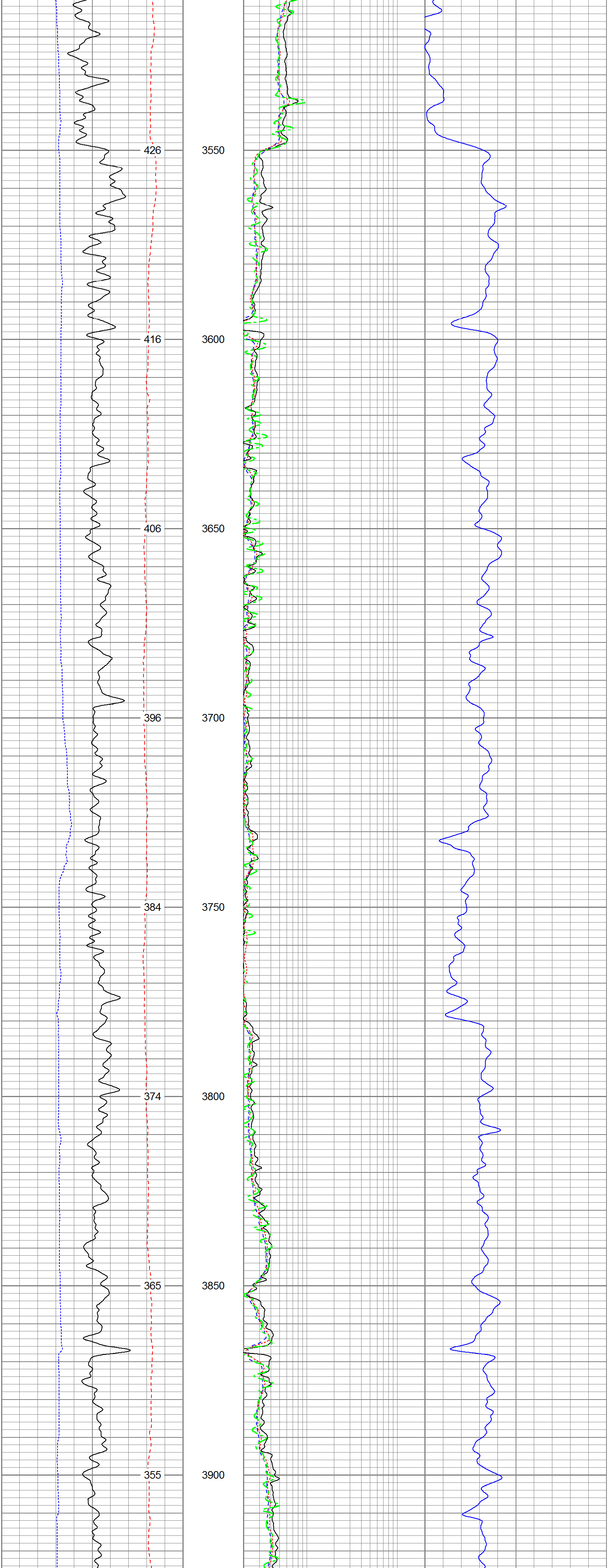
Database File: 13528.db
Dataset Pathname: Final
Presentation Format: pdc
Dataset Creation: Sat Apr 05 22:50:13 2014
Charted by: Depth in Feet scaled 1:240

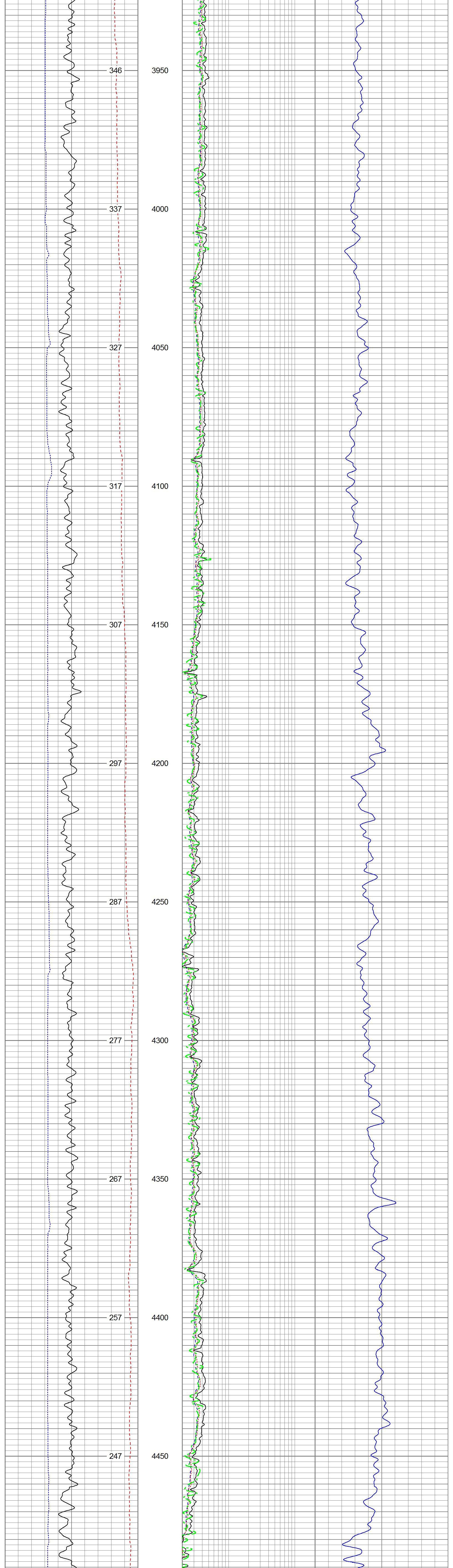
6	Caliper (in)	16	2	Deep Resistivity (Ohm-m)	200	20	Density Porosity (pu)	0
0	Gamma Ray (GAPI)	200	2	Medium Resistivity (Ohm-m)	200	20	Neutron Porosity (pu)	0
0	SP (mV)	200	2	Shallow Resistivity (Ohm-m)	200			
			2	Rt (Ohm-m)	200			

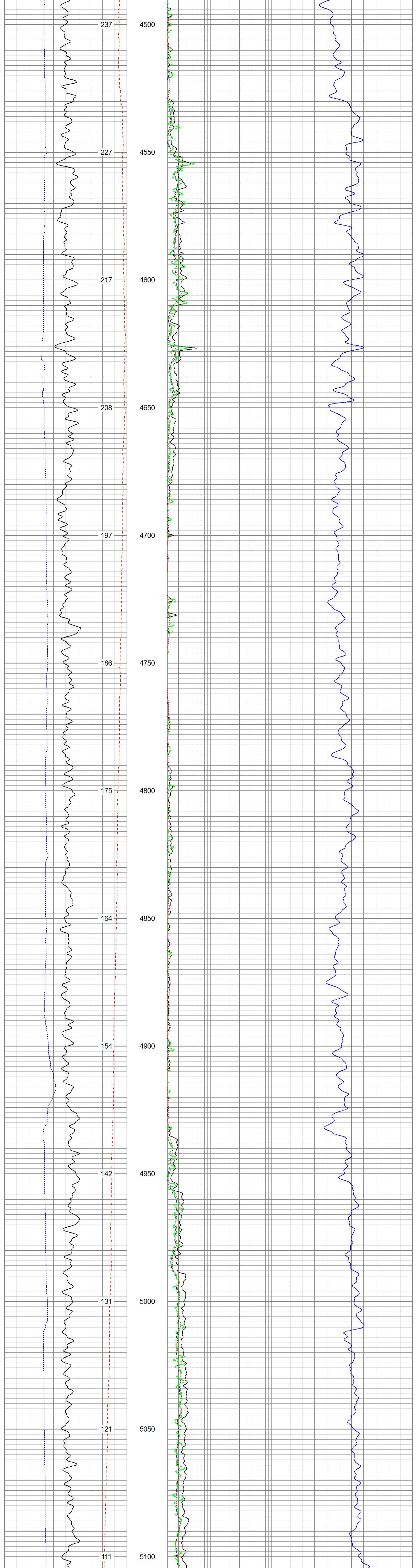


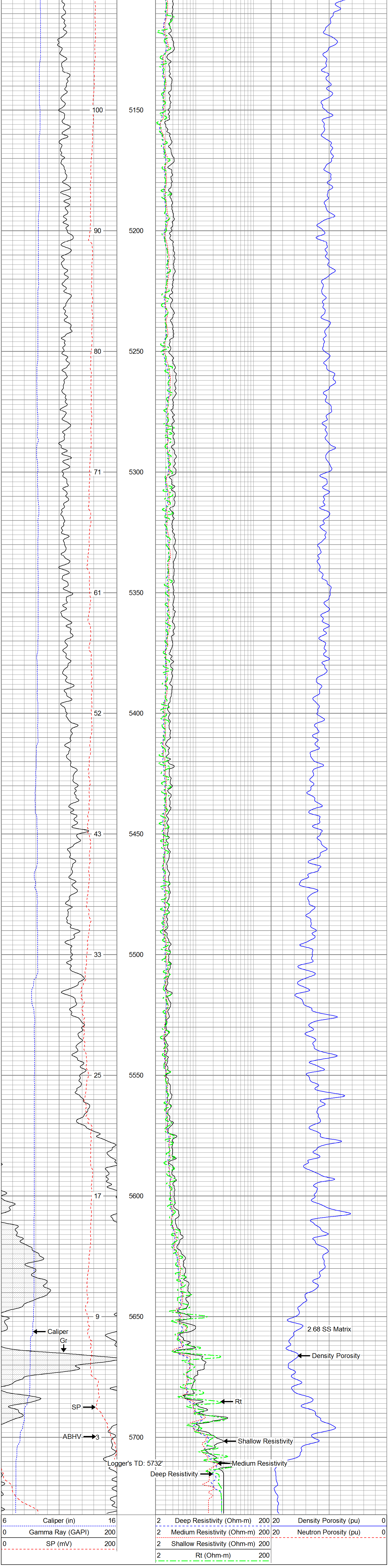




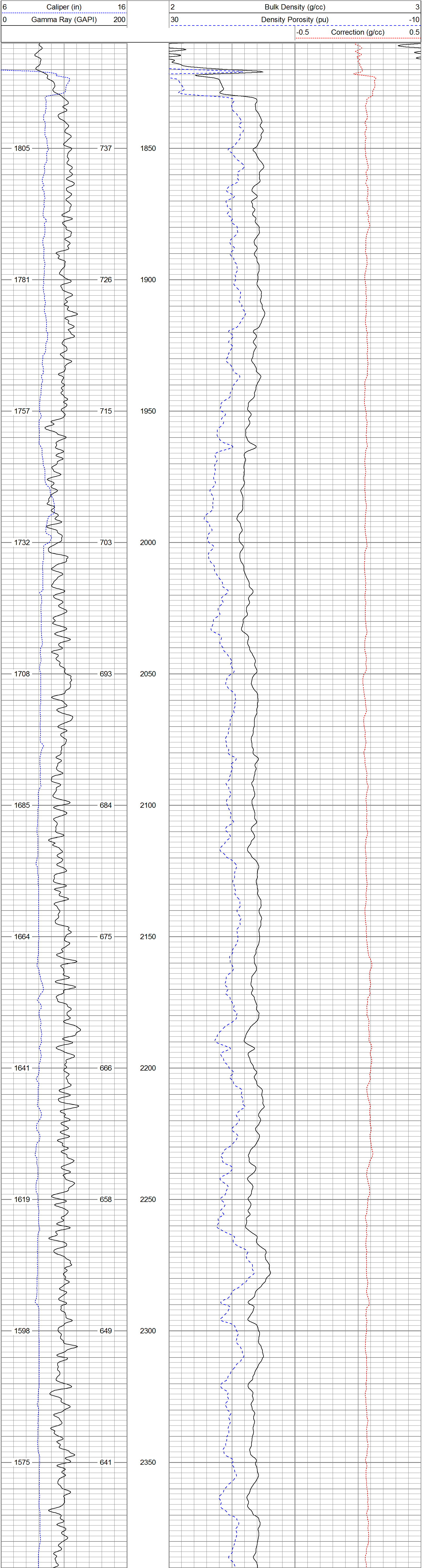


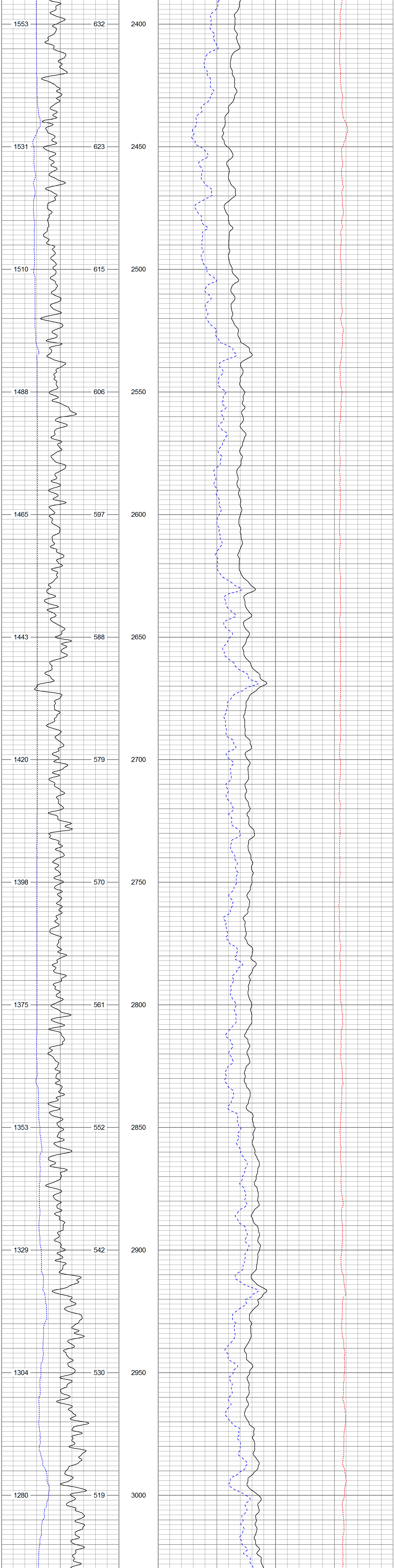


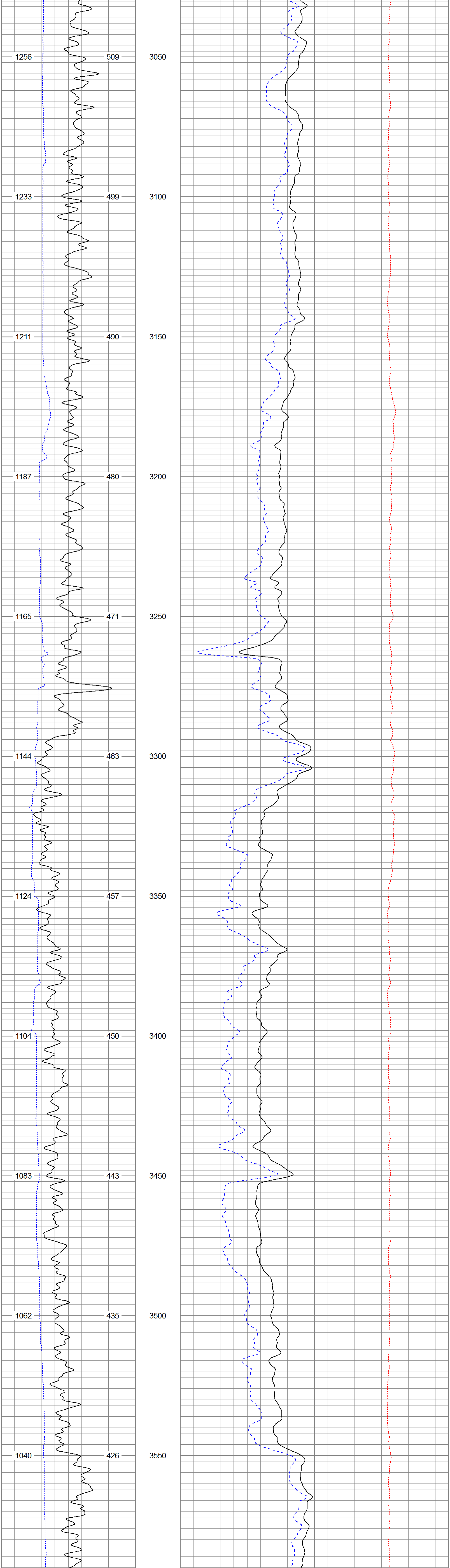


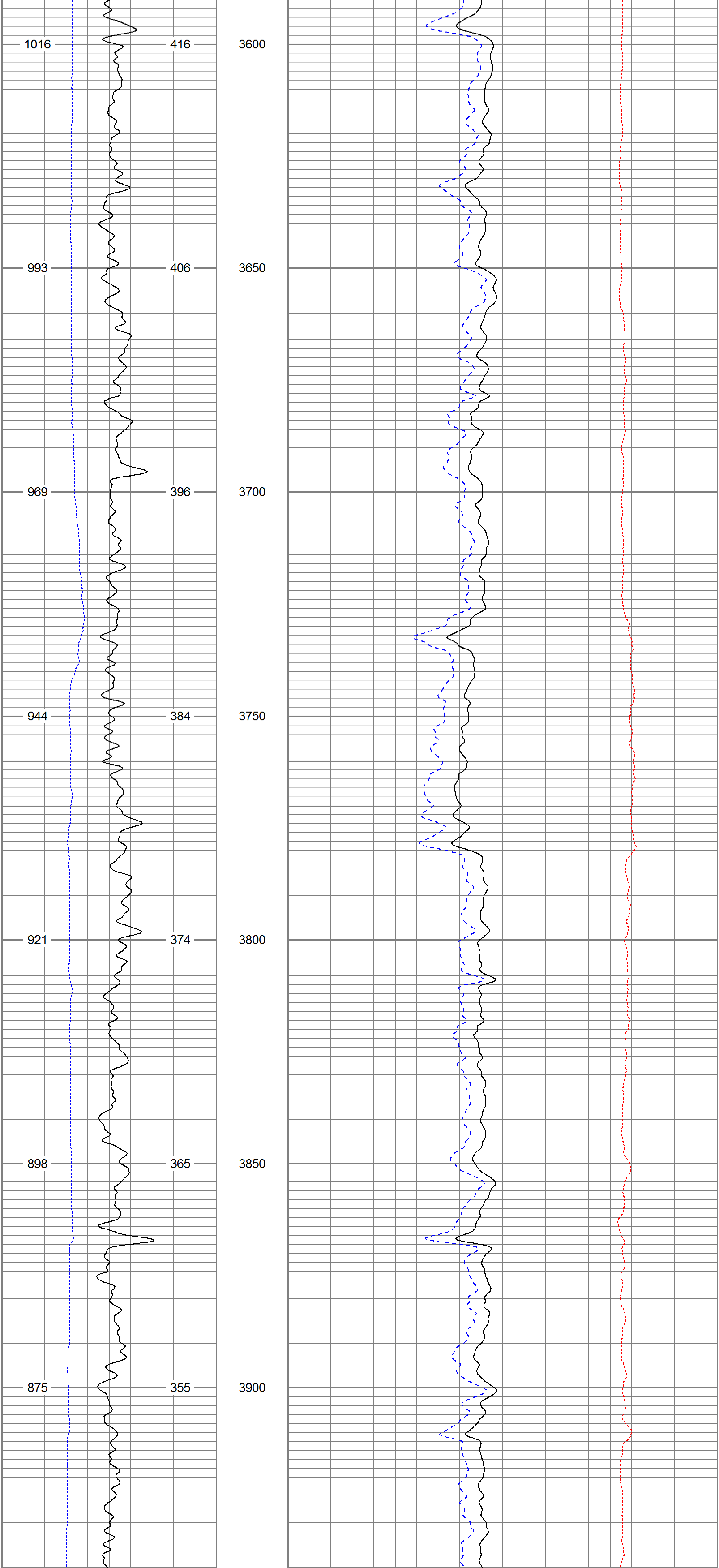


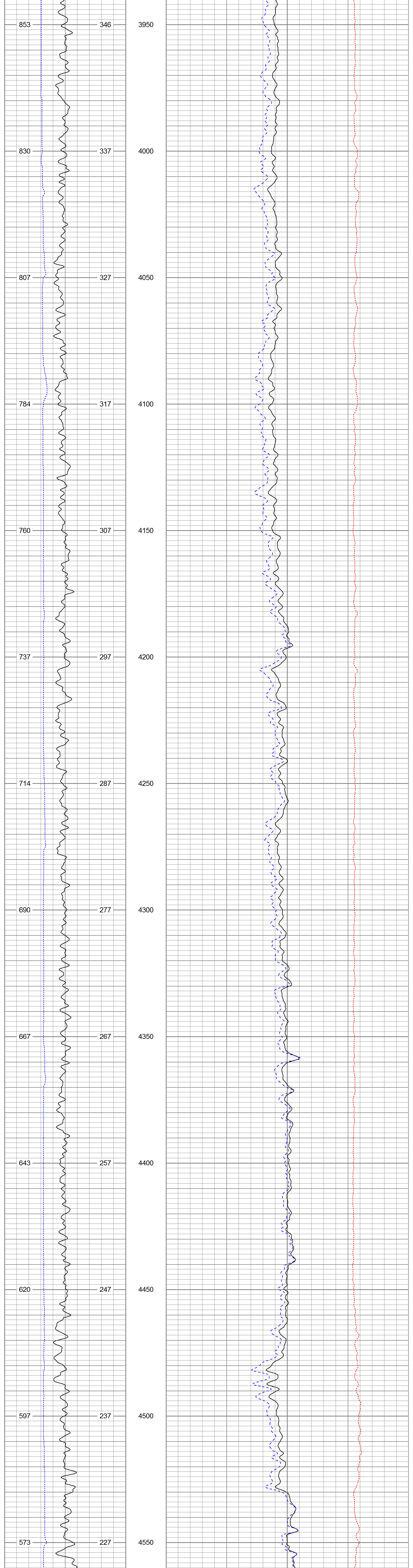
Database File:	13528.db
Dataset Pathname:	Final
Presentation Format:	cdl
Dataset Creation:	Sat Apr 05 22:50:13 2014
Charted by:	Depth in Feet scaled 1:240

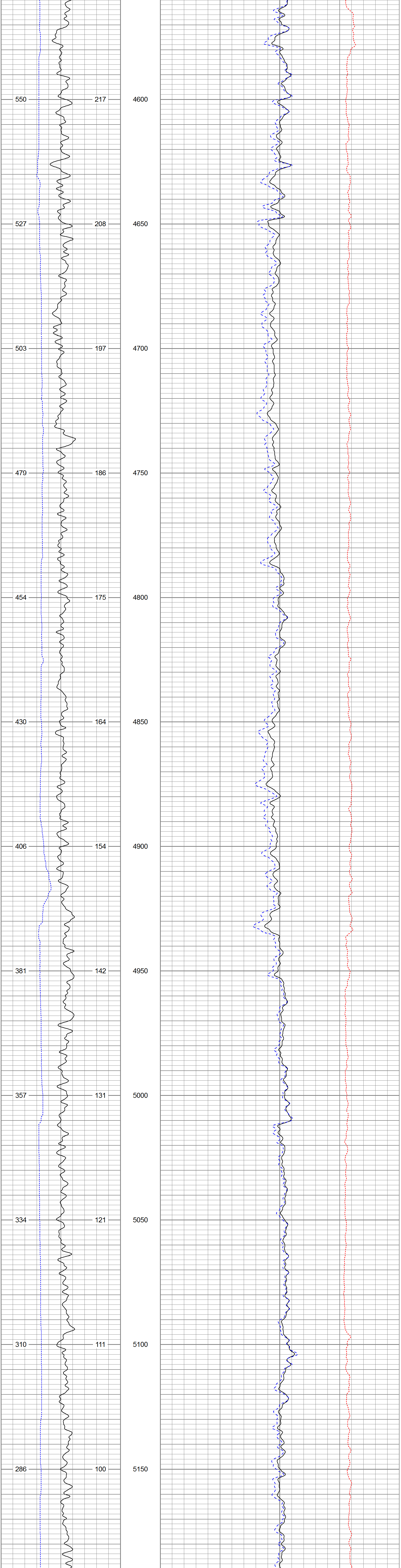


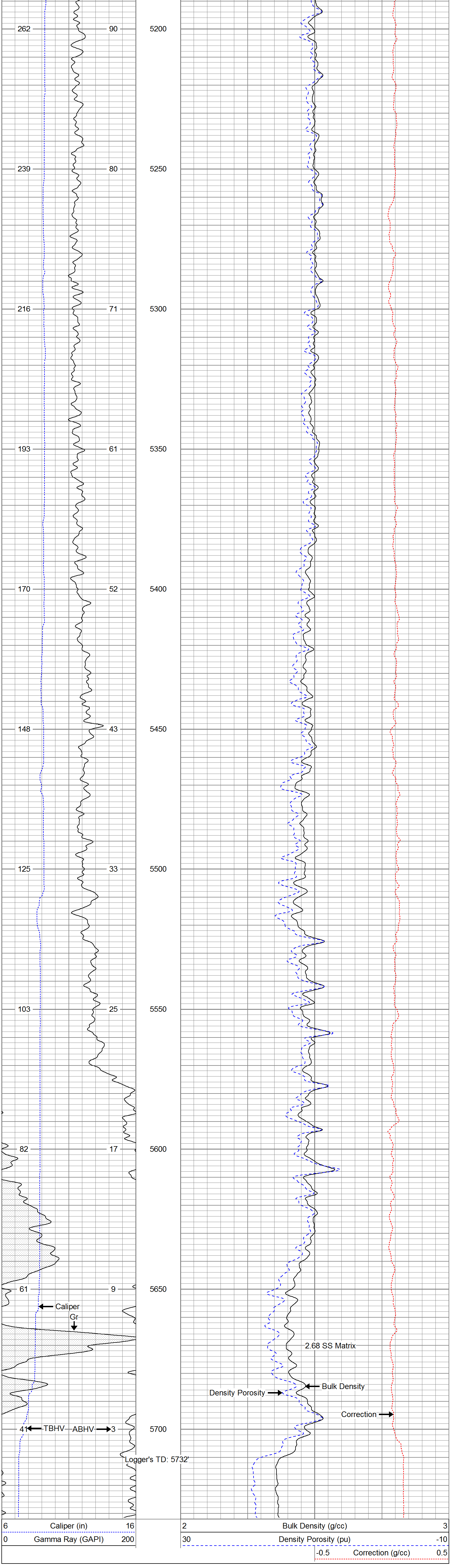












Calibration Report

Database File: 13528.db
Dataset Pathname: pass1
Dataset Creation: Sat Apr 05 20:39:36 2014 by Log 0

Dual Induction Calibration Report

Serial-Model: 1011-PSI
Surface Cal Performed:

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	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: Sat Apr 05 19:16:59 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:	Sat Apr 05 19:17:16 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6200	GAPI/cps