Company	EnCana Oil & Gas (USA) Inc
Well	North Rinn 13-9
Field	Wattenberg
County	Weld
State	Colorado

PIONEER
Pioneer Energy Services

HIGH RESOLUTION INDUCTION
COMPENSATED DENSITY
COMPENSATED NEUTRON

Company EnCana Oil & Gas (USA) Inc
Well North Rinn 13-9
Field Wattenberg
County Weld State Colorado

Location: API # : 05123338920000
SHL: 1170' FSL & 1133' FWL SWSW
BHL: 1968' FSL & 700' FWL NWSW
SEC 9 TWP 2N RGE 68W

Other Services
None

Permanent Datum	GL	Elevation 4866	Elevation K.B. 4879 D.F. 4879 G.L. 4866
Log Measured From	KB		
Drilling Measured From	KB		

Date	July 27, 2013		
Run Number	1		
Depth Driller	8092		
Depth Logger	8090		
Bottom Logged Interval	8090		
Top Log Interval	Casing		
Casing Driller	796		
Casing Logger	796		
Bit Size	7-7/8"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	9.6 / 51		
pH / Fluid Loss	8.0 / 12		
Source of Sample	Flowline		
Rm @ Meas. Temp	3.41 @ 71 F		
Rmf @ Meas. Temp	2.73 @ 71 F		
Rmc @ Meas. Temp	4.09 @ 71 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	1.08 @ 224 F		
Time Circulation Stopped	2345 7/26/13		
Time Logger on Bottom	0645		
Maximum Recorded Temperature	224 F		
Equipment Number	50		
Location	Brighton, CO		
Recorded By	Clint Christensen		
Witnessed By	Scott Osborn		

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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 4-1/2" casing
Ensign Drilling Rig 122
Thank you for using Pioneer Energy Services.

Database File:	12820.db
Dataset Pathname:	final
Presentation Format:	dil5enc
Dataset Creation:	Sat Jul 27 08:39:55 2013
Charted by:	Depth in Feet scaled 1:600

50 SP (mV) 250
6 Caliper (in) 16
0 Gamma Ray (GAPI) 300
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

50 SP (mV) 250
6 Caliper (in) 16
0 Gamma Ray (GAPI) 300
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:	12820.db
Dataset Pathname:	final
Presentation Format:	encana
Dataset Creation:	Sat Jul 27 08:39:55 2013
Charted by:	Depth in Feet scaled 1:240

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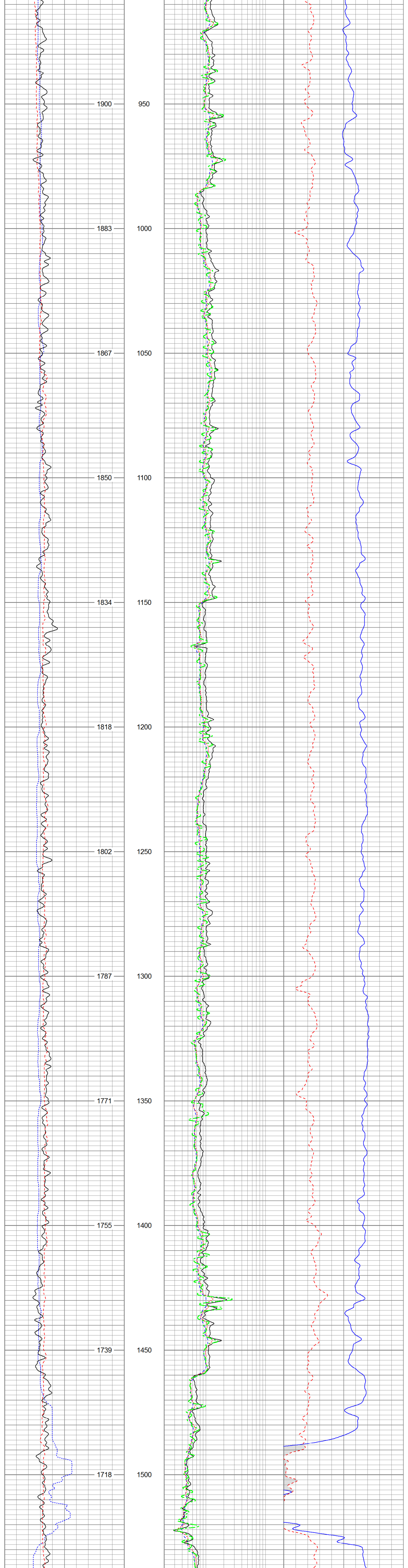
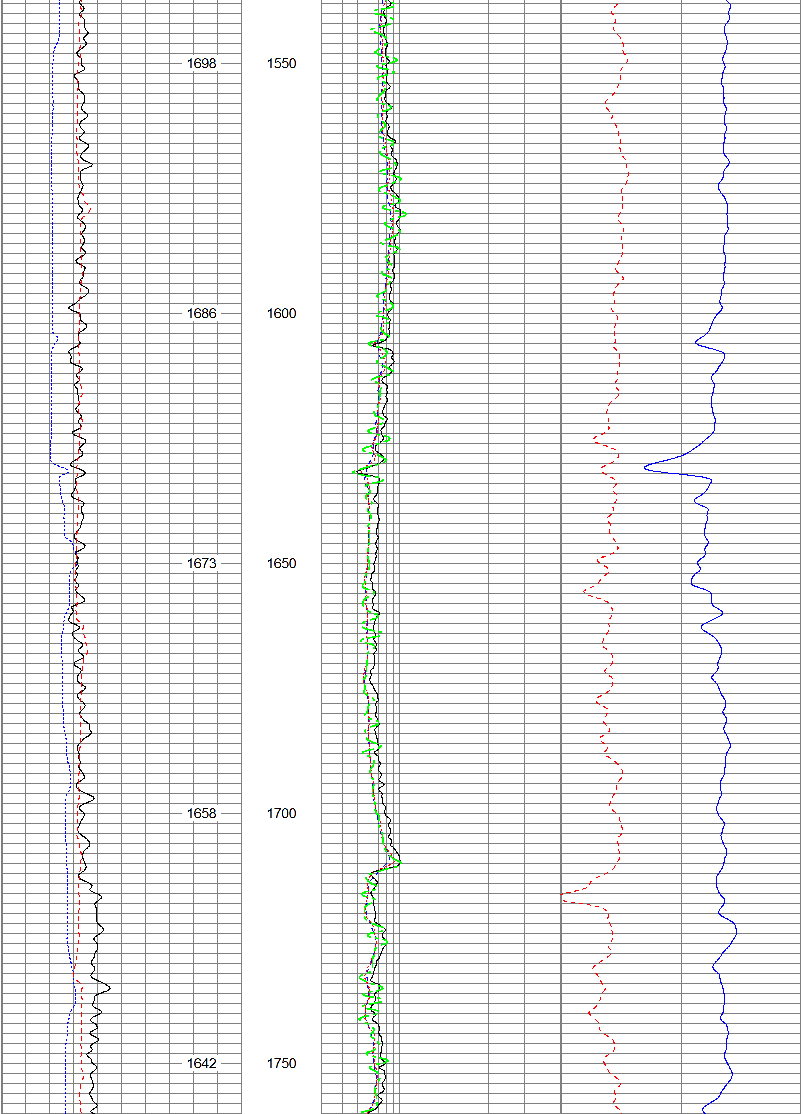
0 Gamma Ray (GAPI) 300
50 SP (mV) 250
ABHV (ft3)
2 Deep Resistivity (Ohm-m) 200
2 Medium Resistivity (Ohm-m) 200
2 Shallow Resistivity (Ohm-m) 200
2 Rt (Ohm-m) 200
40 Density Porosity (pu) 0
40 Neutron Porosity (pu) 0

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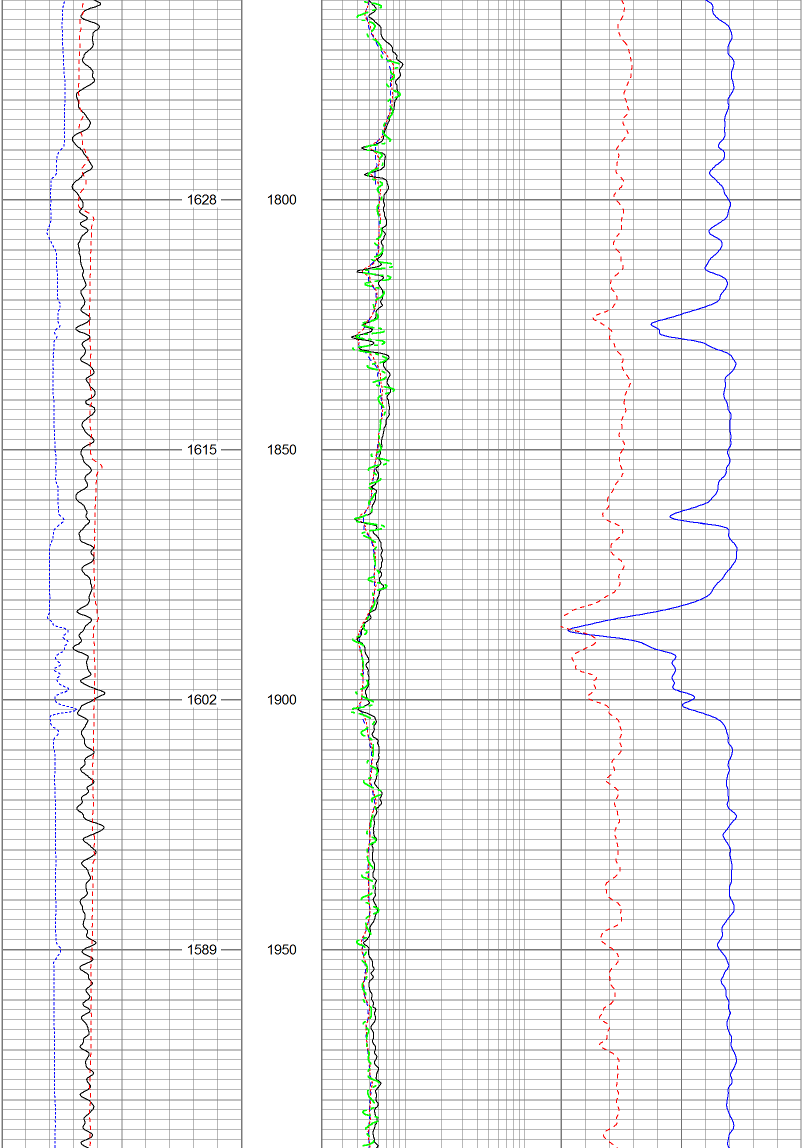
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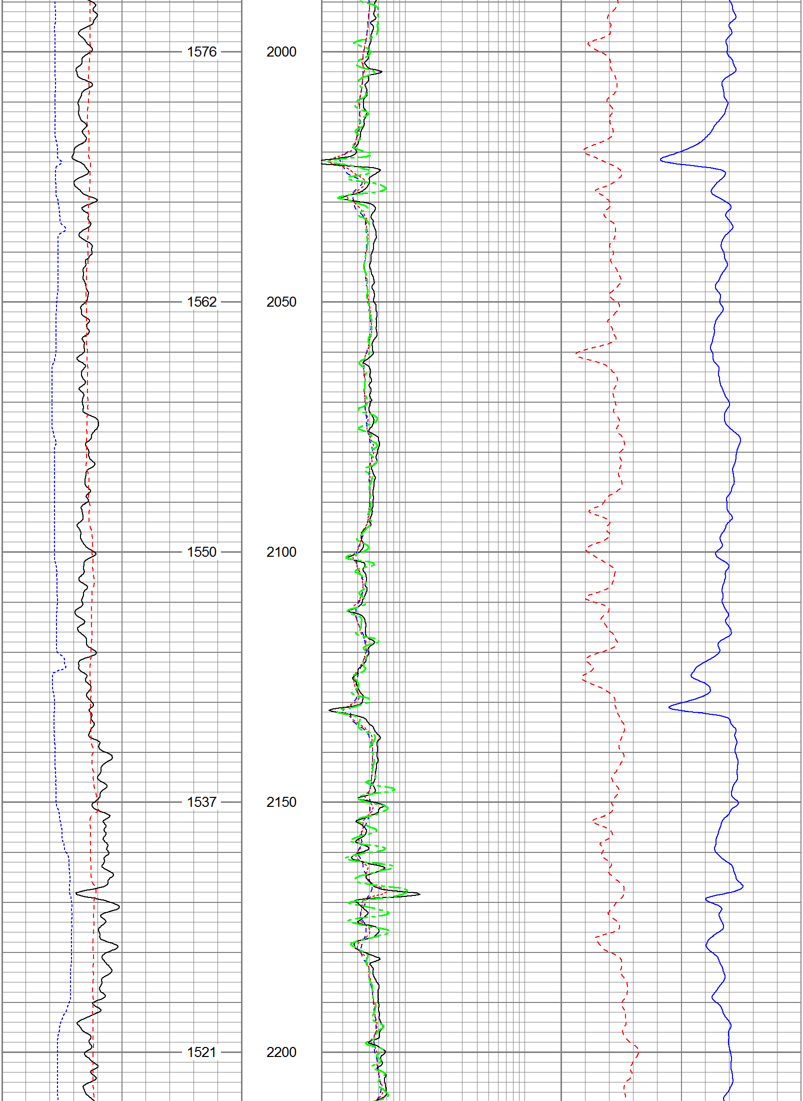
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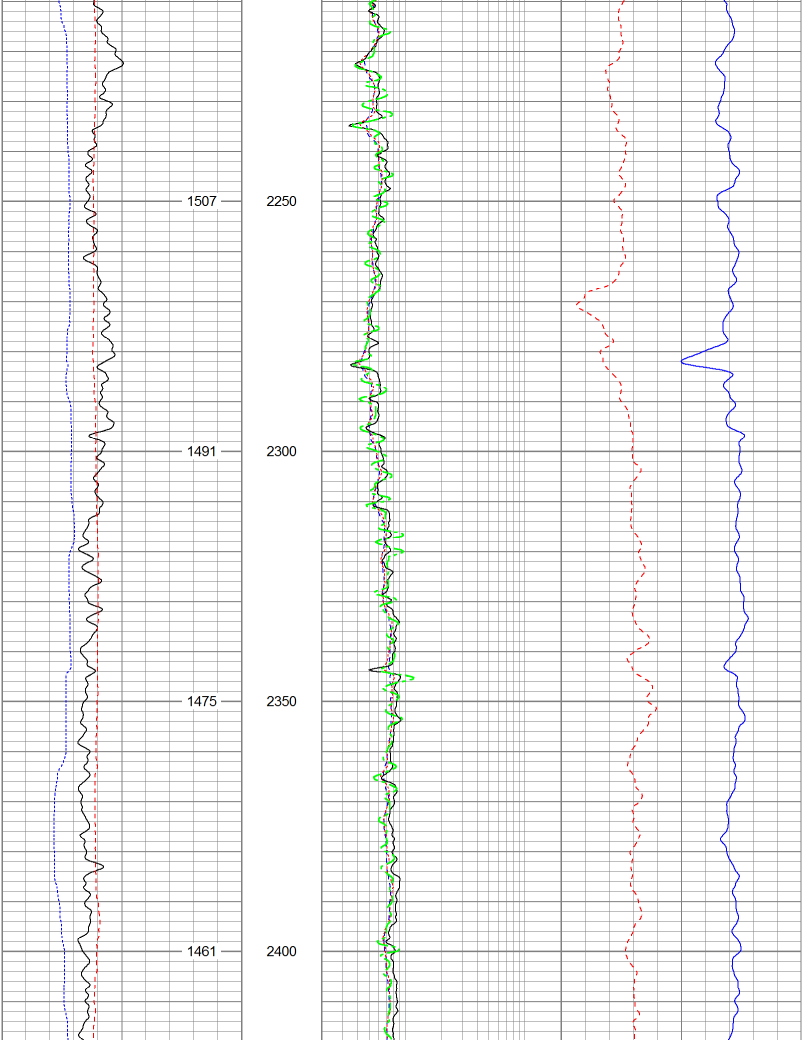
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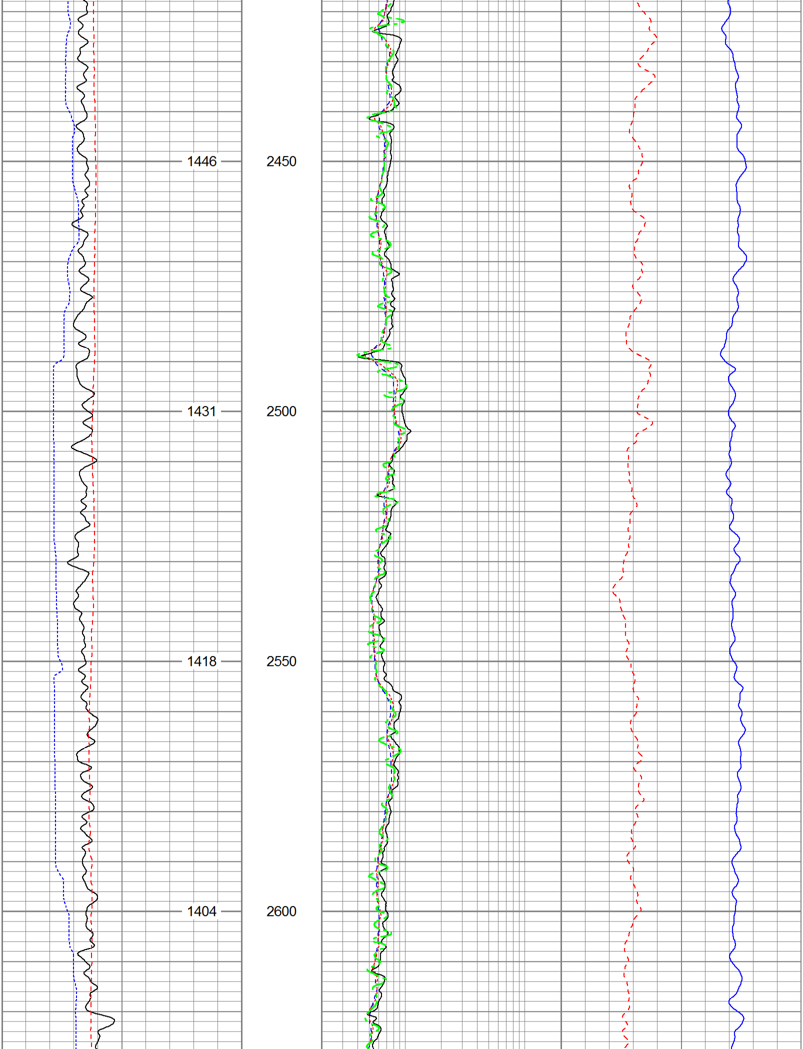
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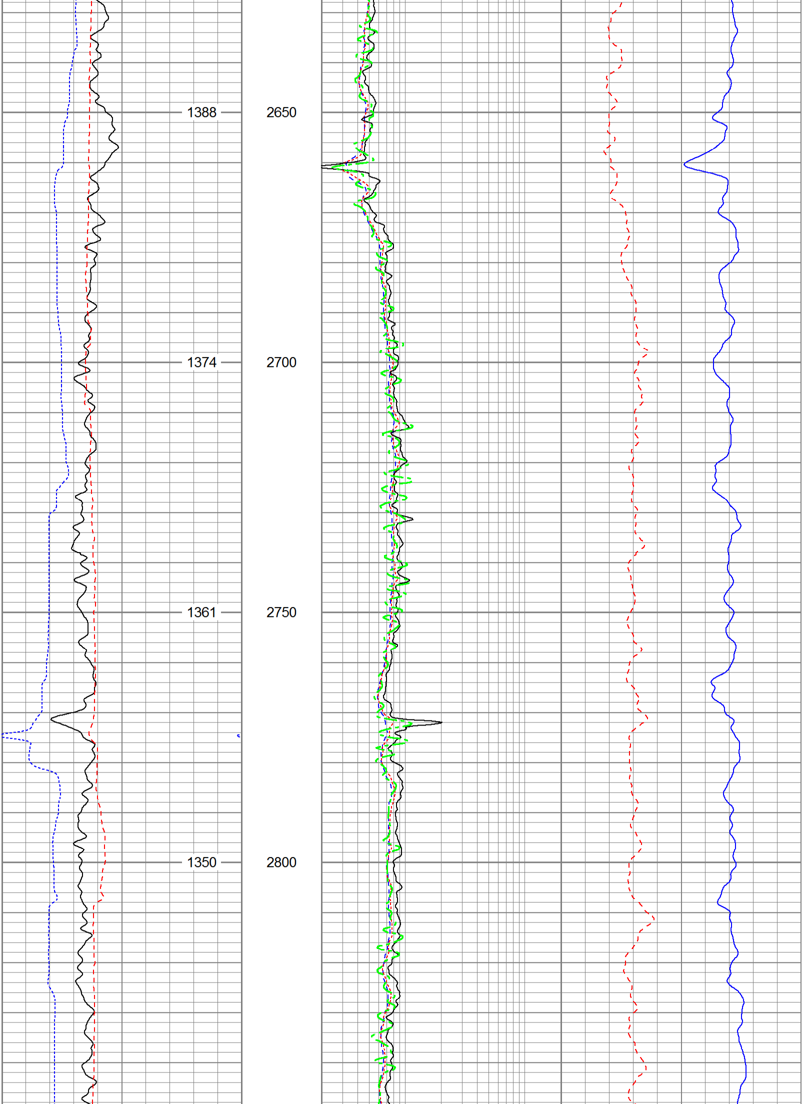
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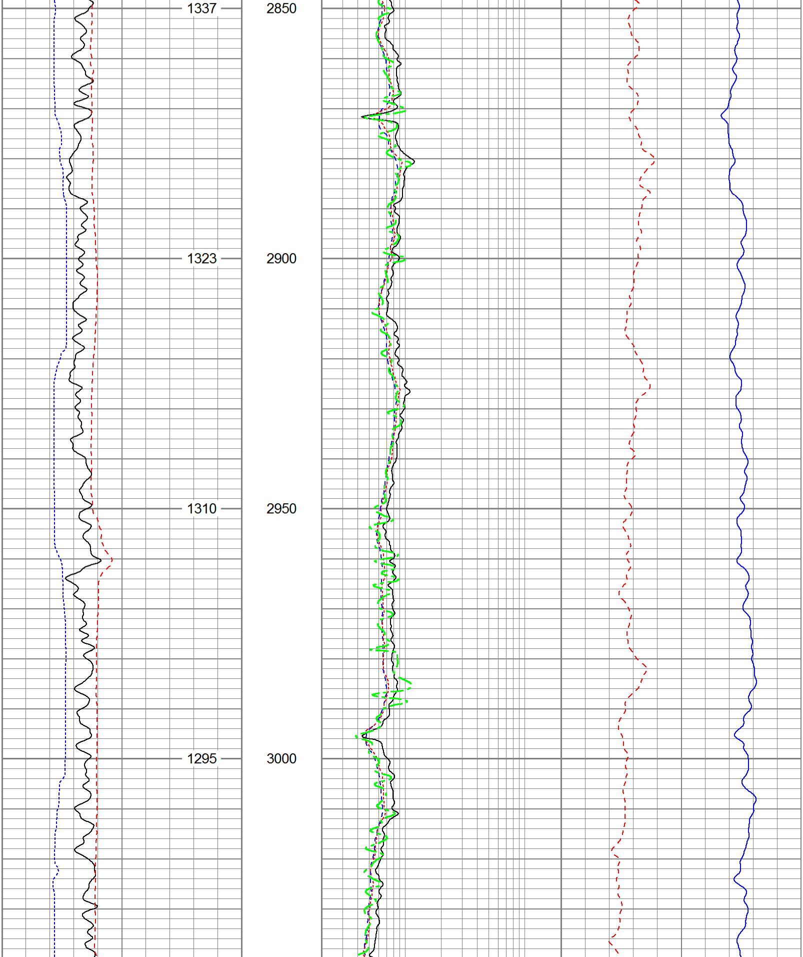
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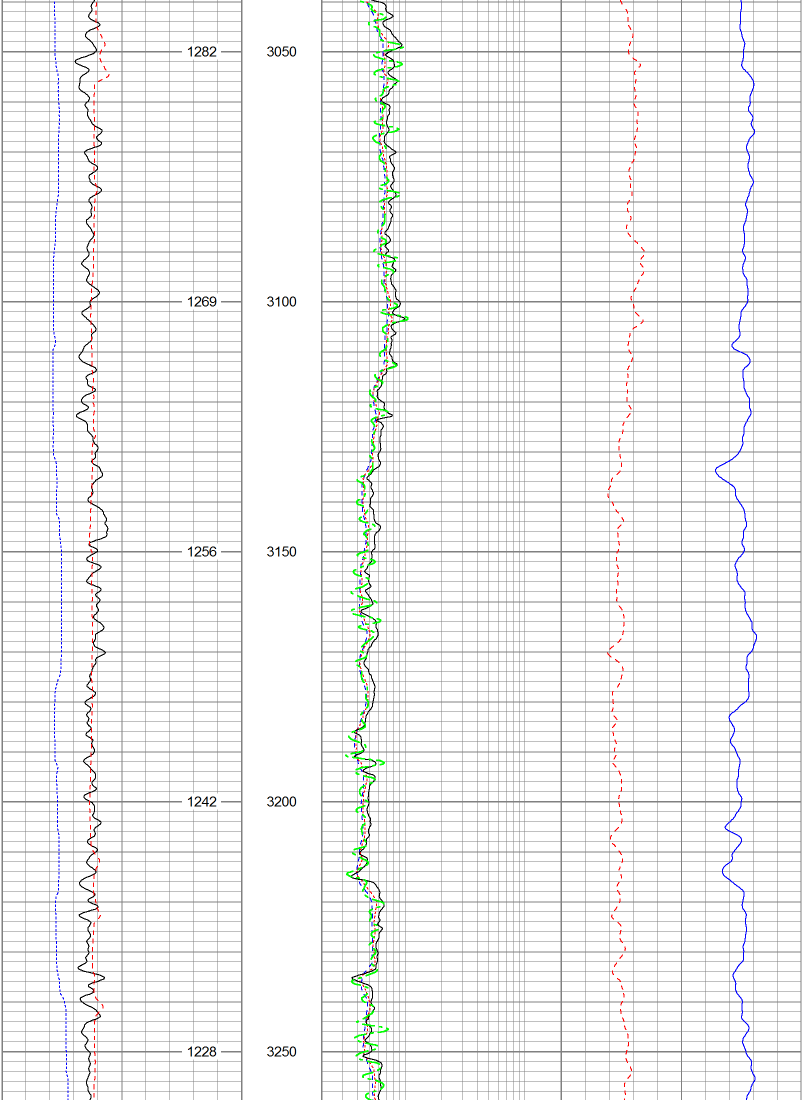
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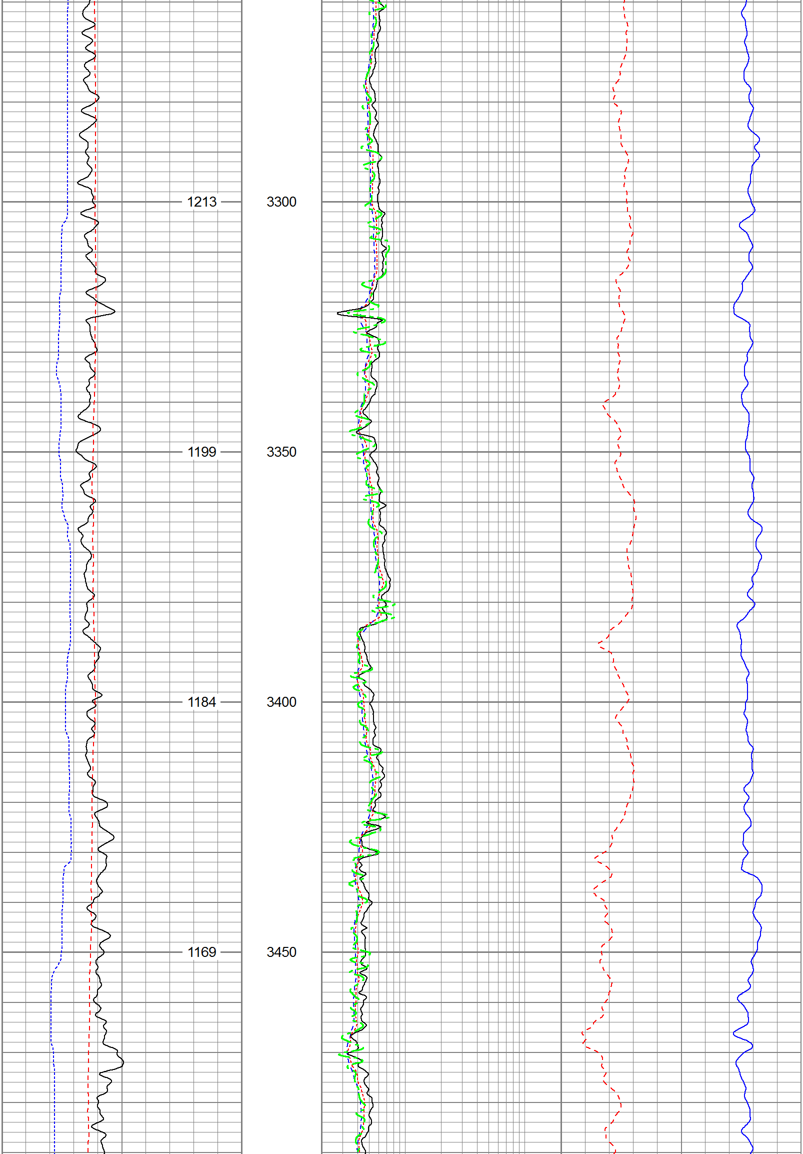
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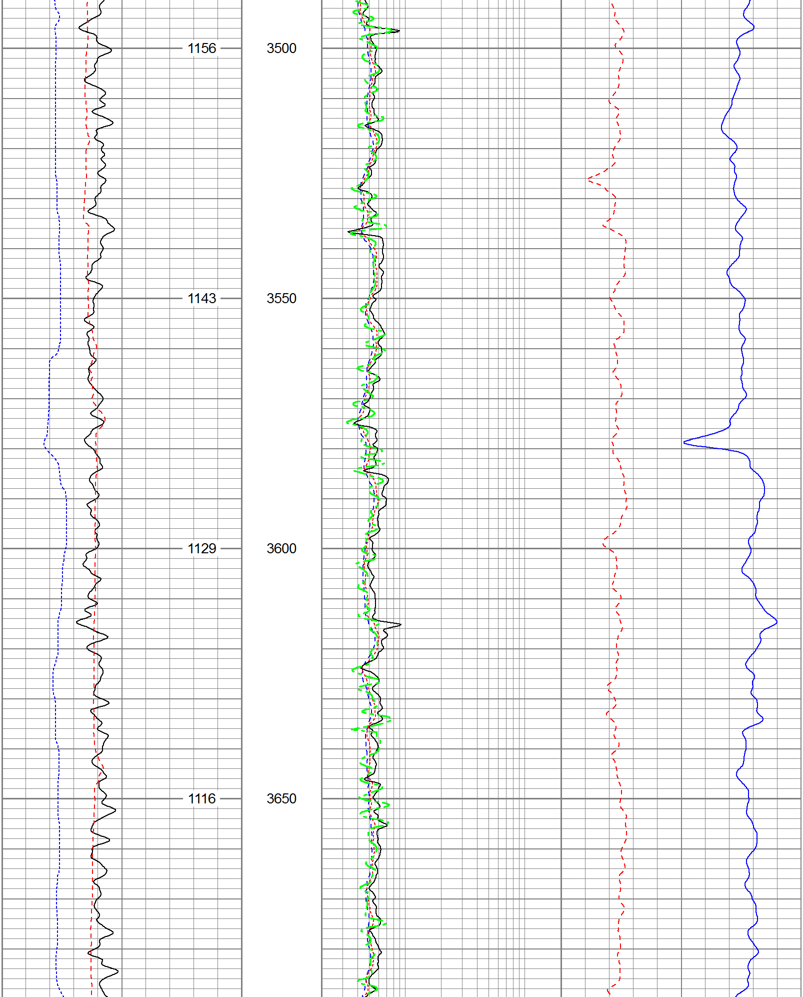
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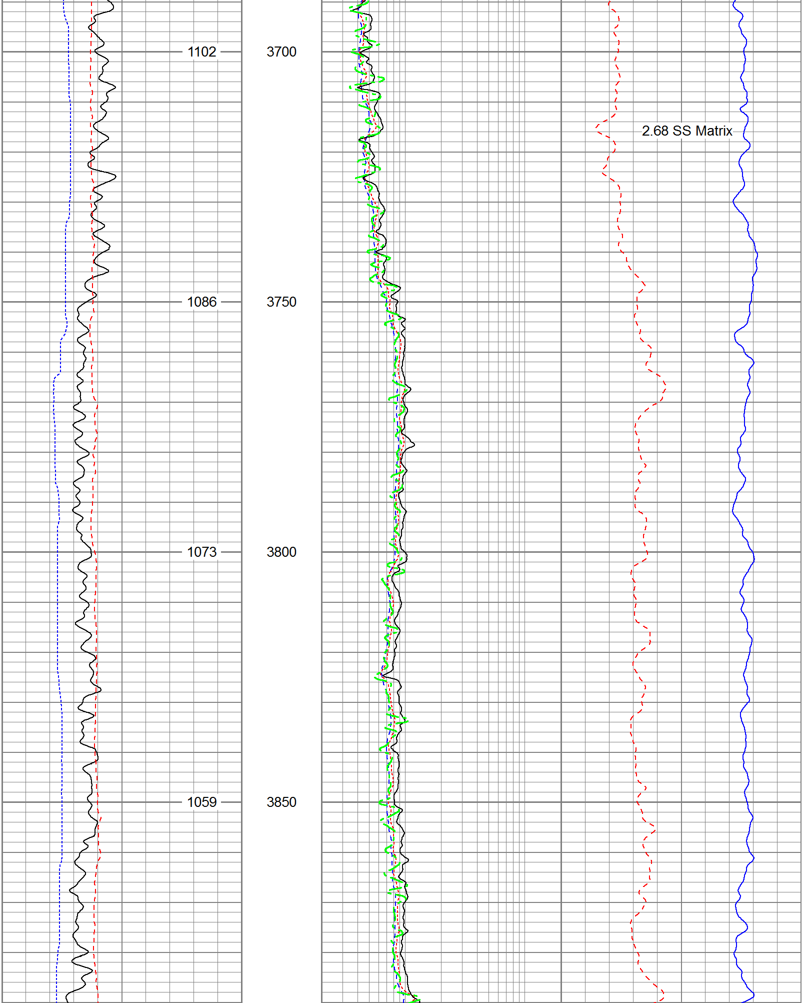
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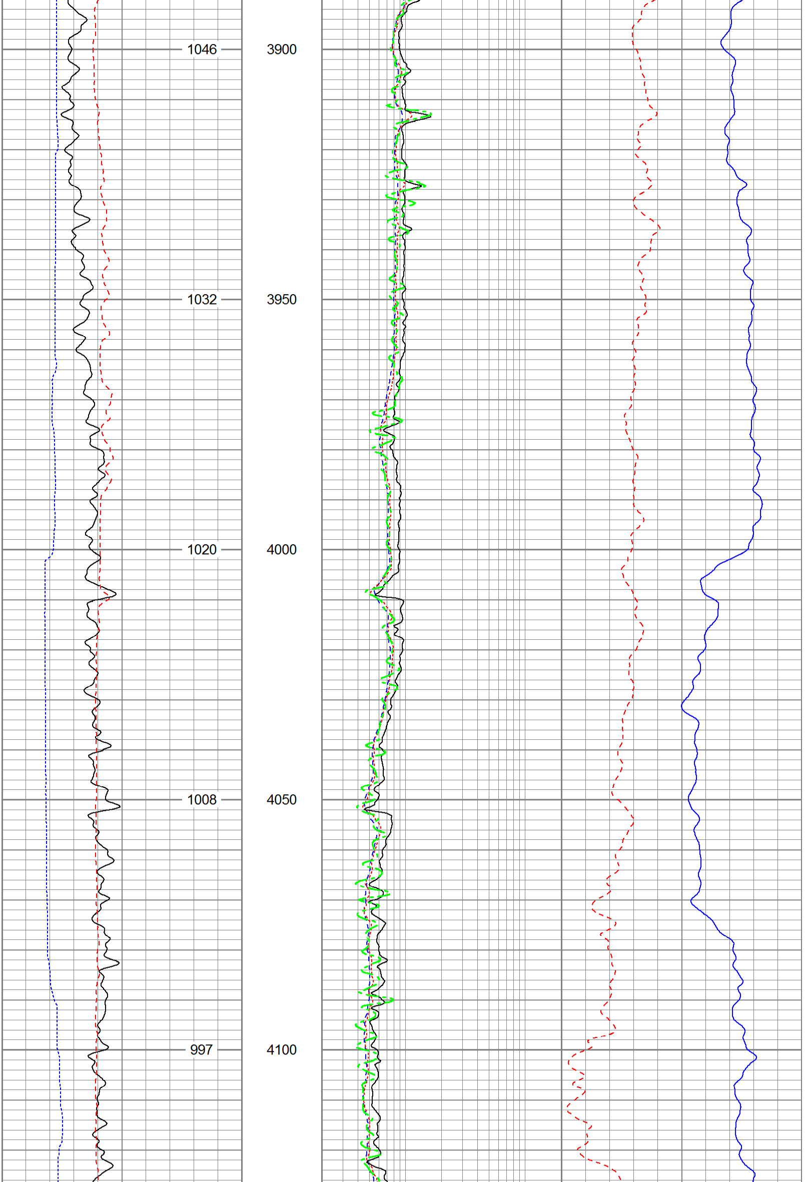
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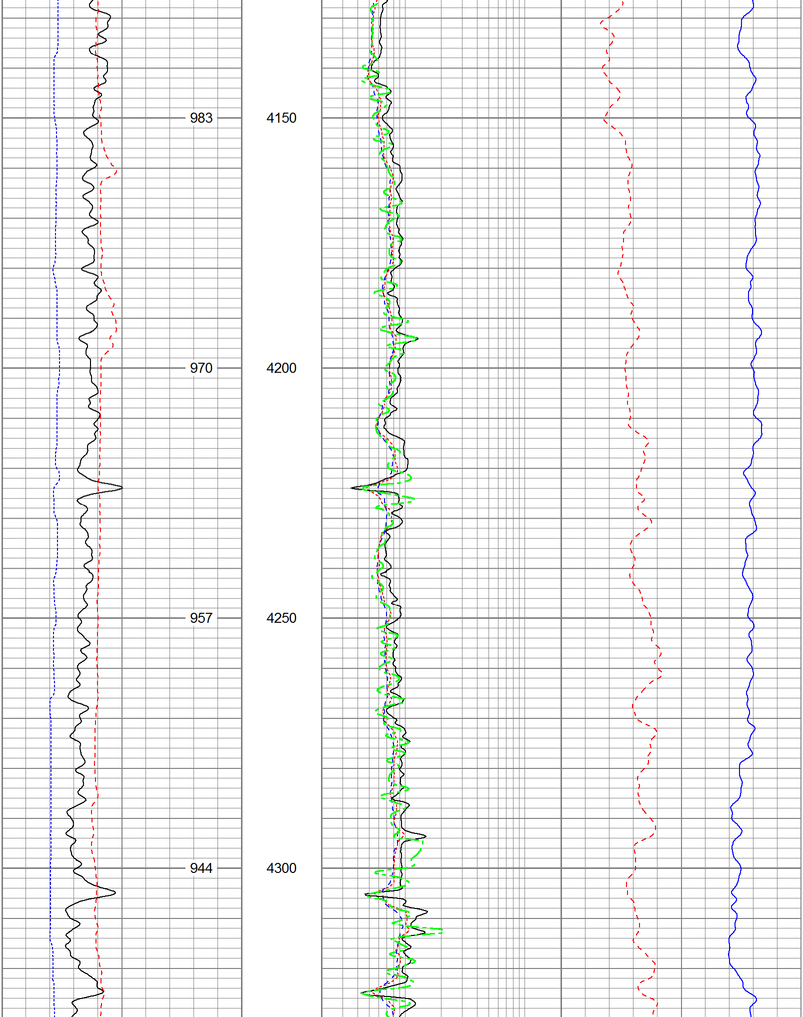
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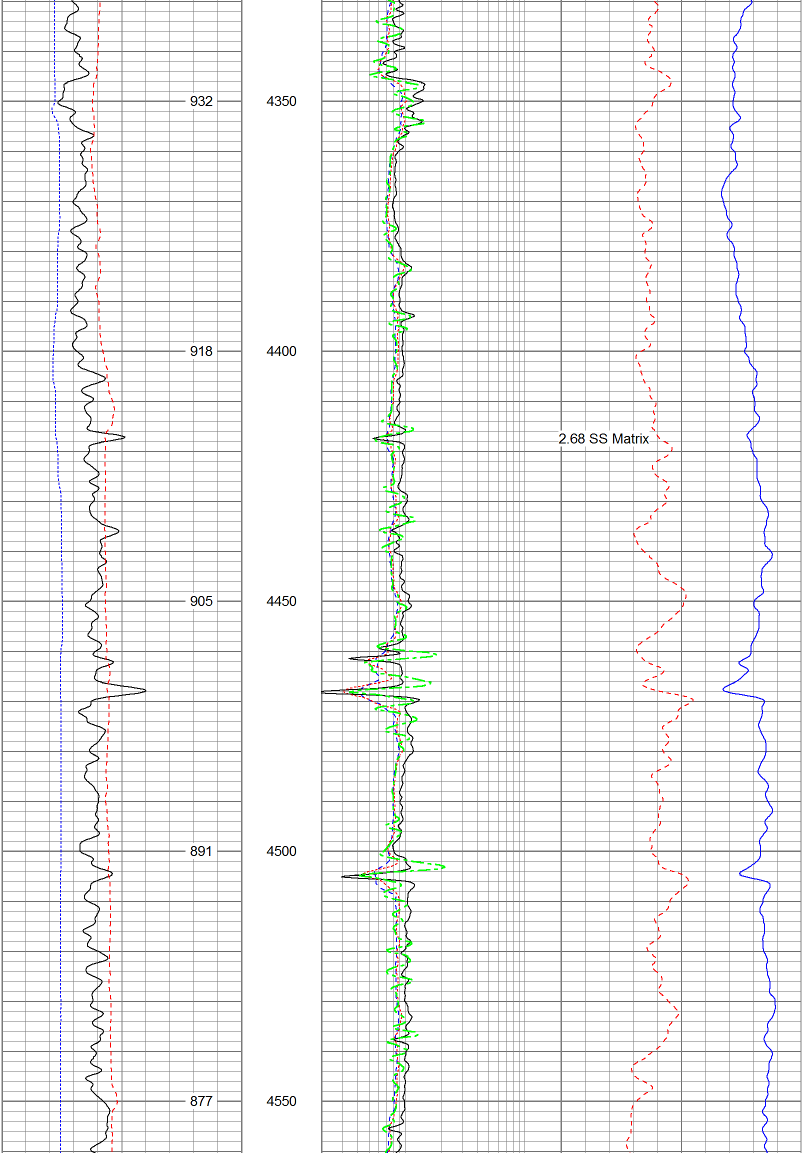
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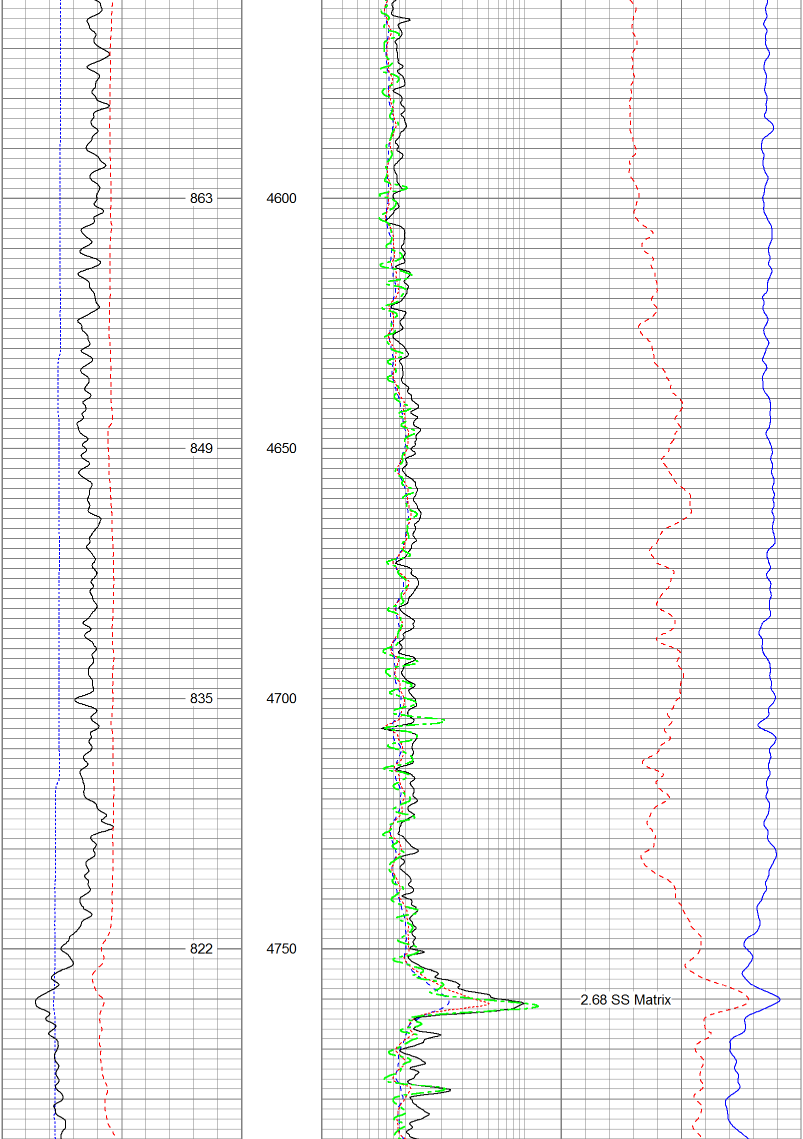
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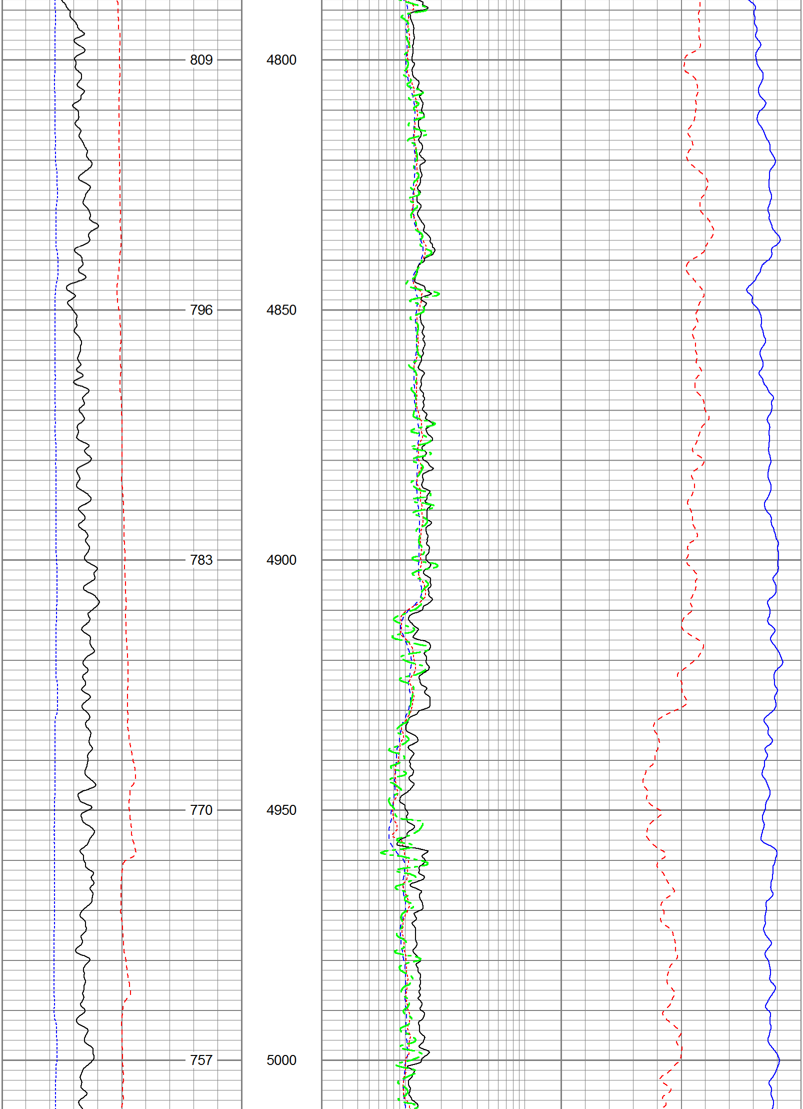
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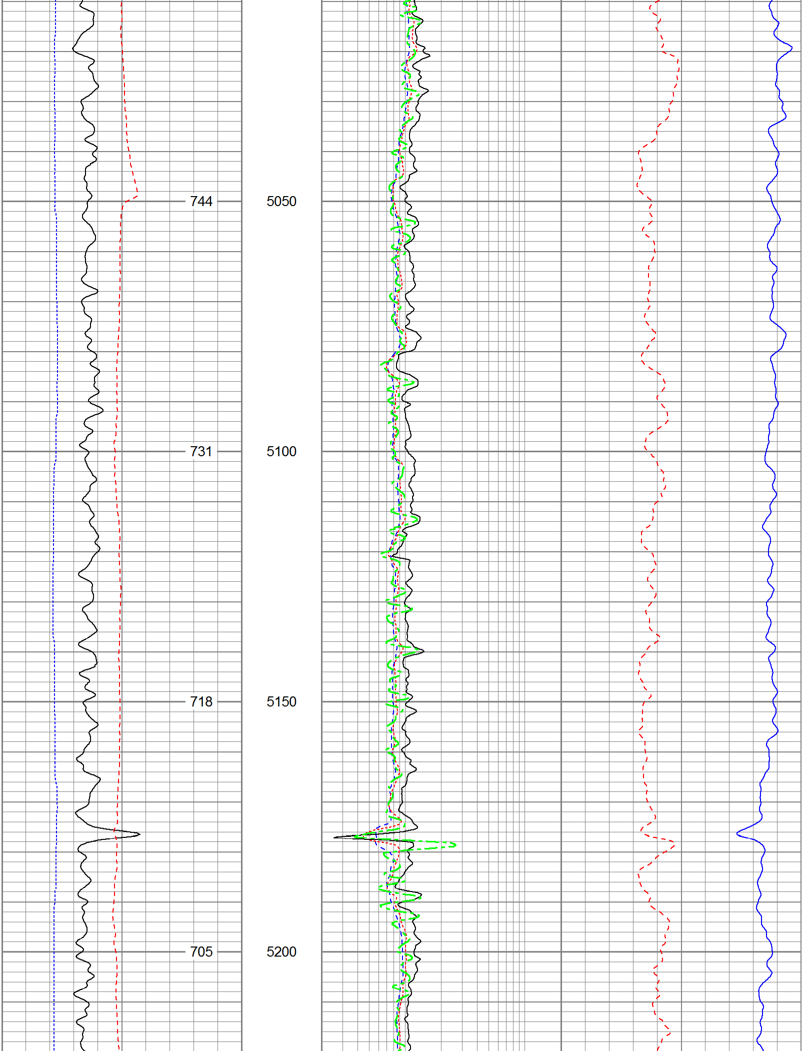
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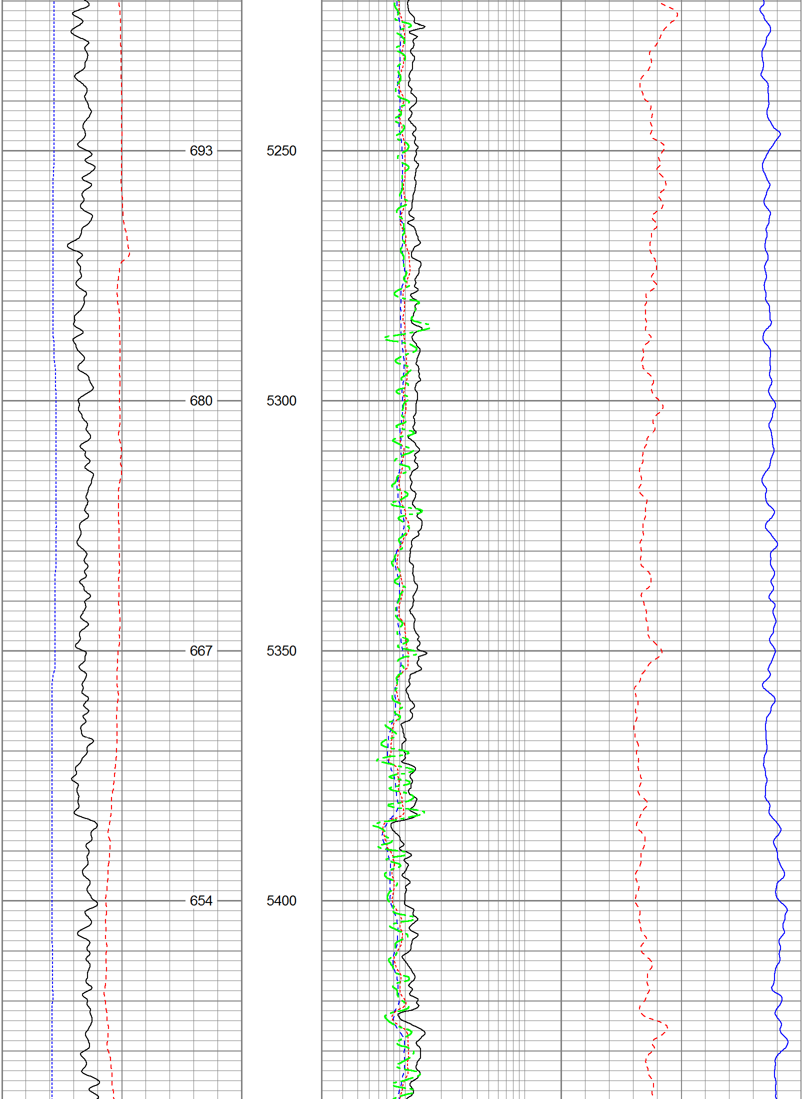
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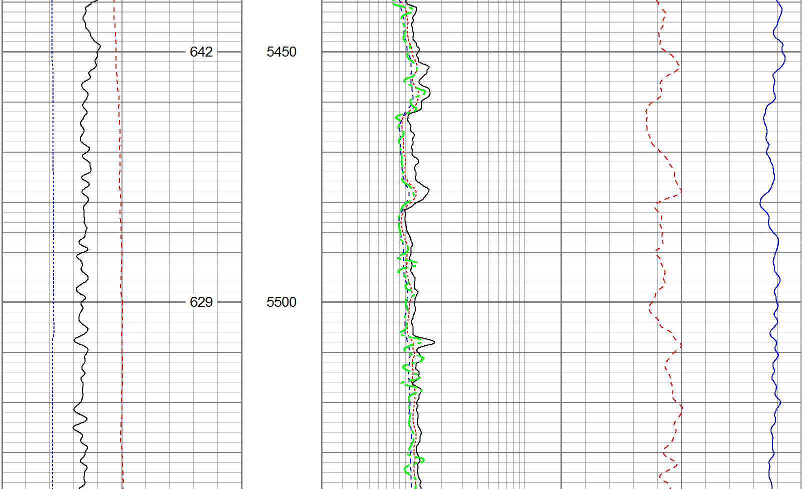
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629
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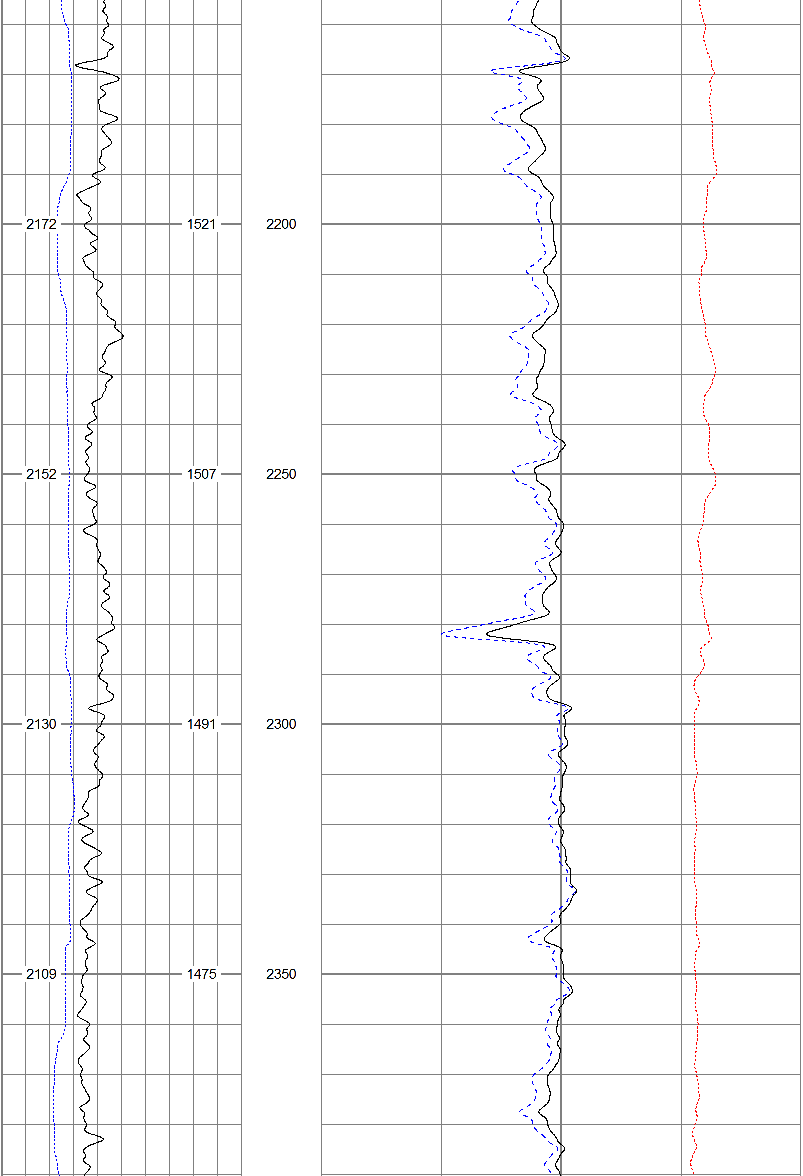
6 Caliper (in) 16	2 Deep Resistivity (Ohm-m) 200	40 Density Porosity (pu) 0
0 Gamma Ray (GAPI) 300	2 Medium Resistivity (Ohm-m) 200	40 Neutron Porosity (pu) 0
50 SP (mV) 250	2 Shallow Resistivity (Ohm-m) 200	
ABHV (ft3)	2 Rt (Ohm-m) 200	

Database File: 12820.db
Dataset Pathname: final
Presentation Format: cdlenc
Dataset Creation: Sat Jul 27 08:39:55 2013
Charted by: Depth in Feet scaled 1:240

6 Caliper (in) 16	2 Bulk Density (g/cc) 3	
0 Gamma Ray (GAPI) 300	30 Density Porosity (pu) -10	
TBHV (ft3) ABHV (ft3)		-0.5 Correction (g/cc) 0.5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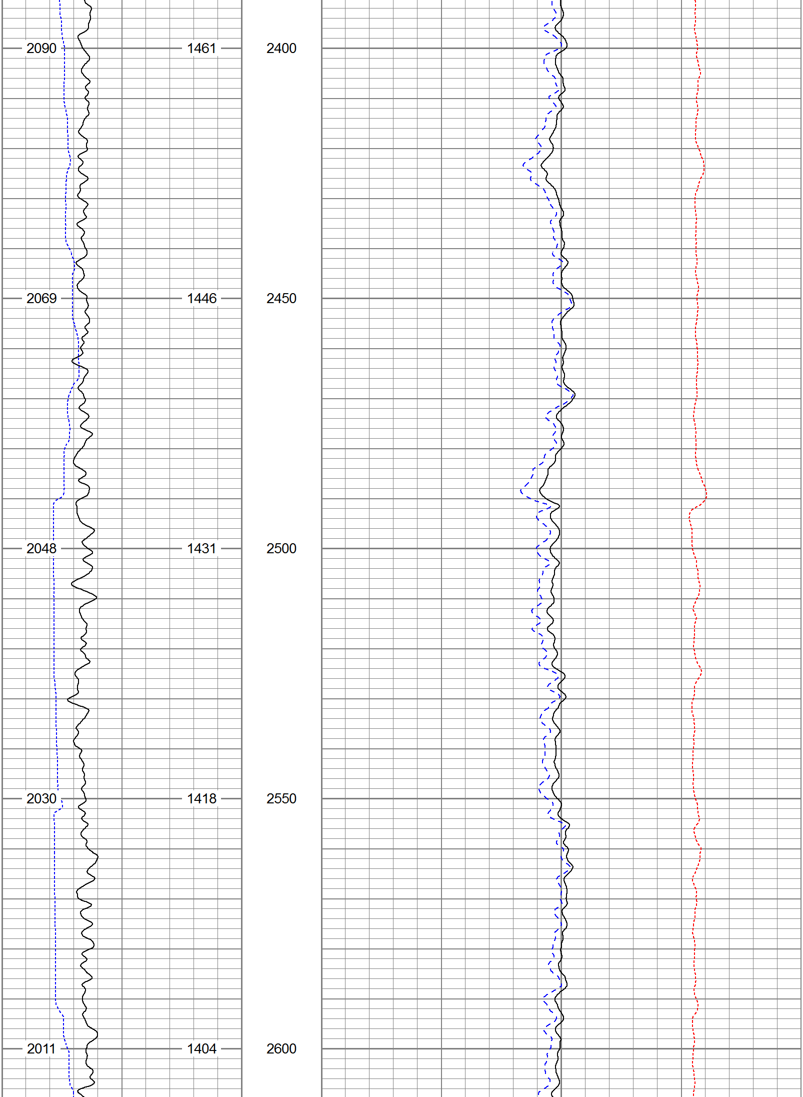
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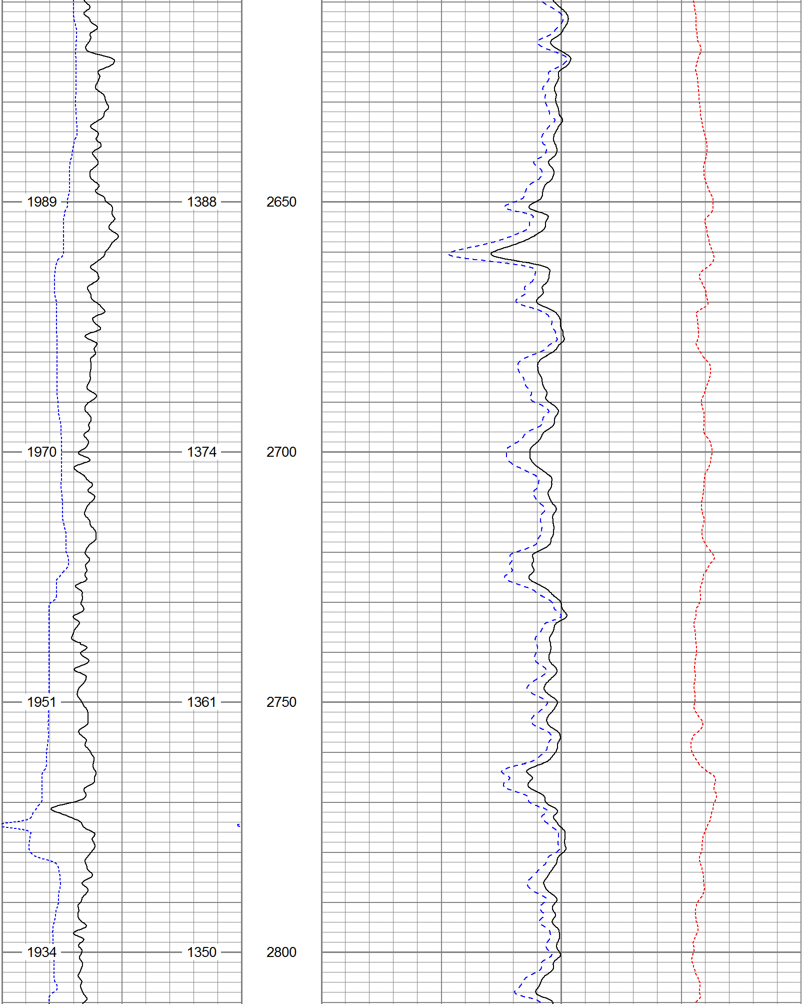
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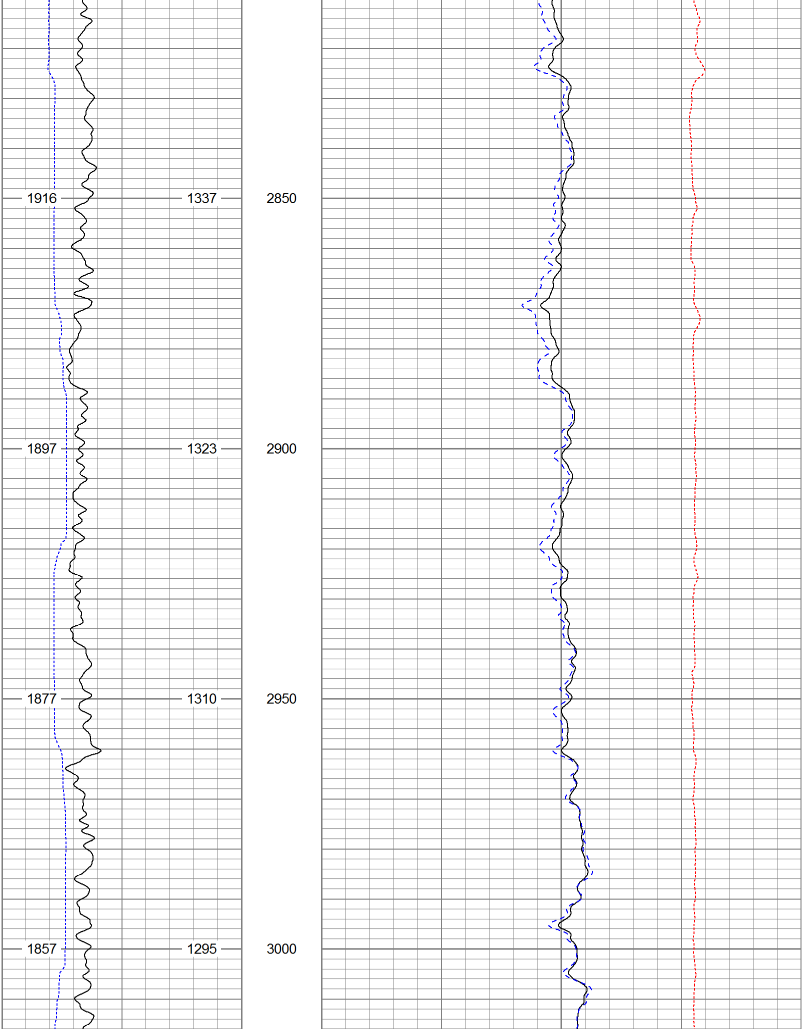
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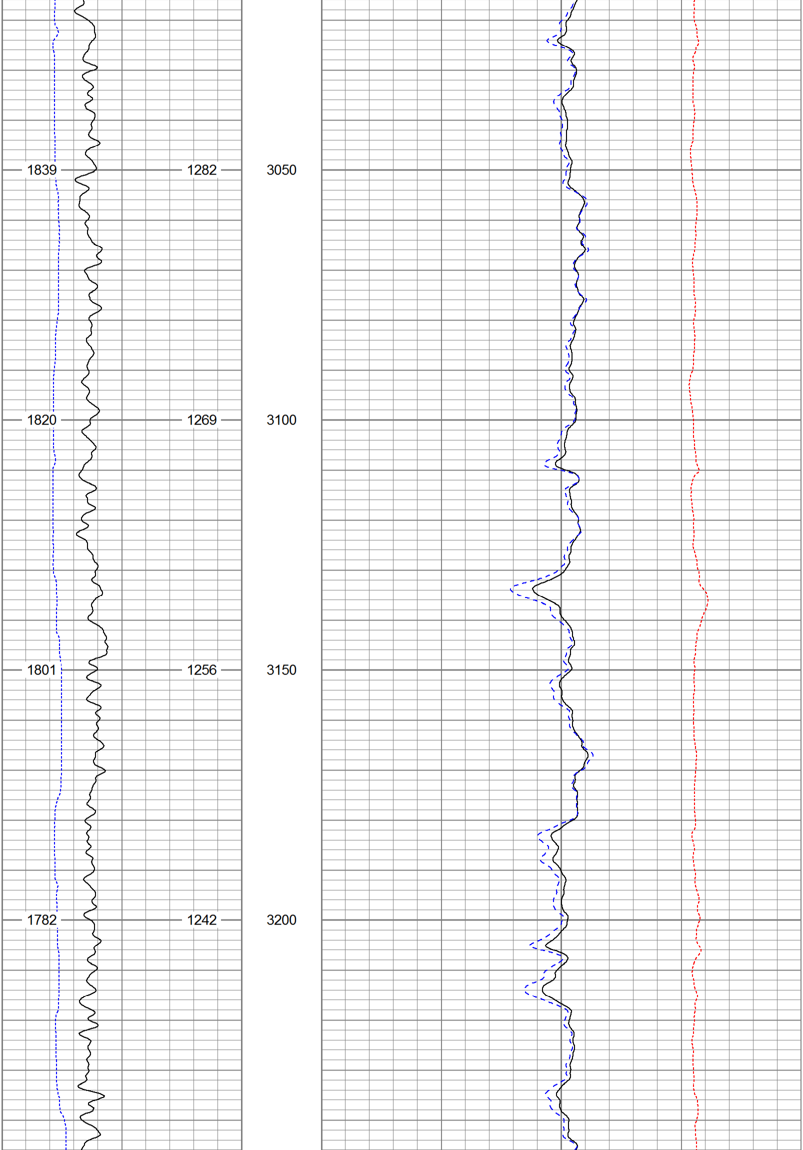
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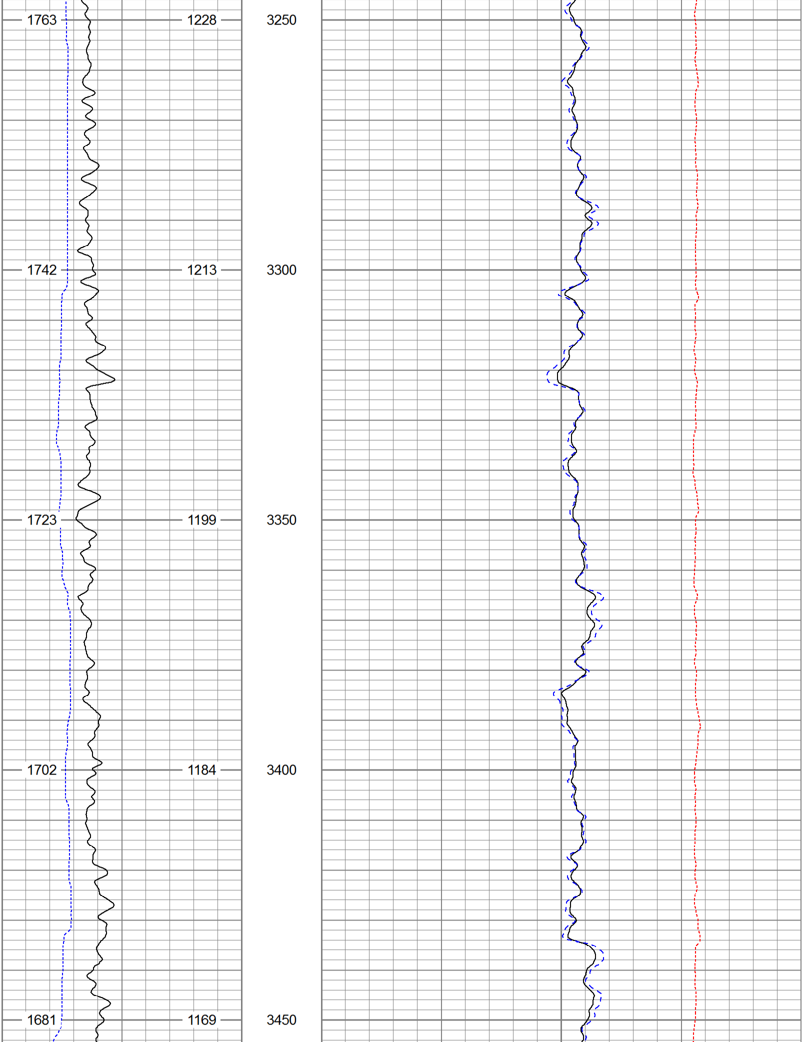
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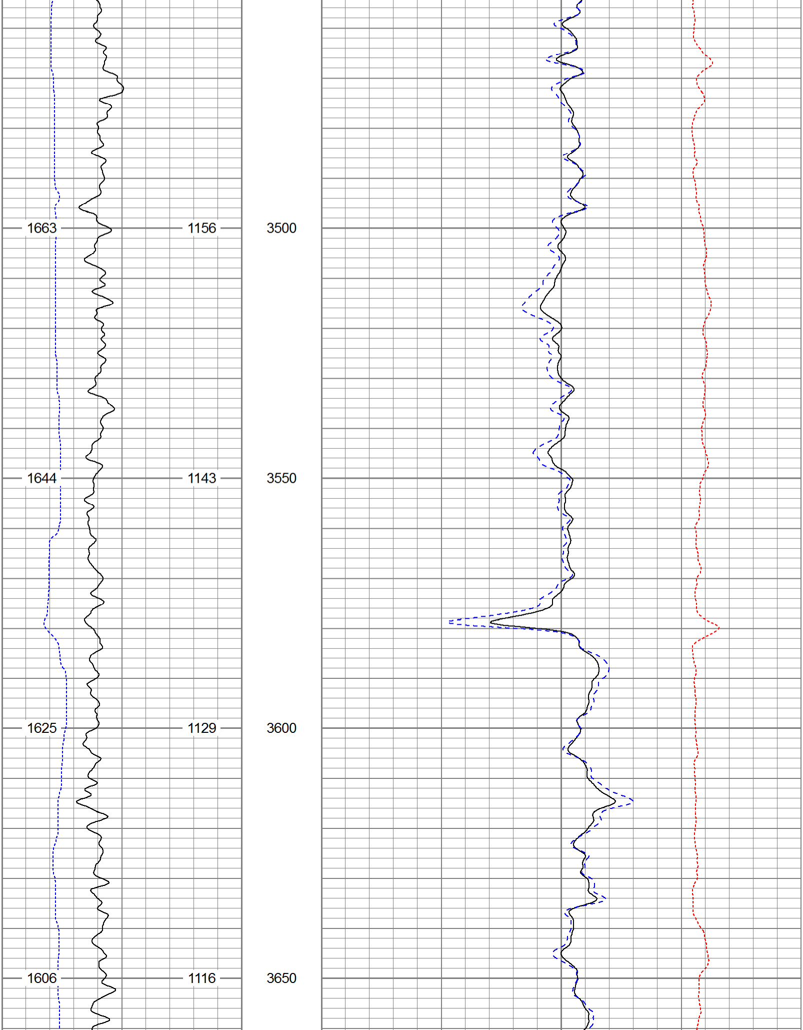
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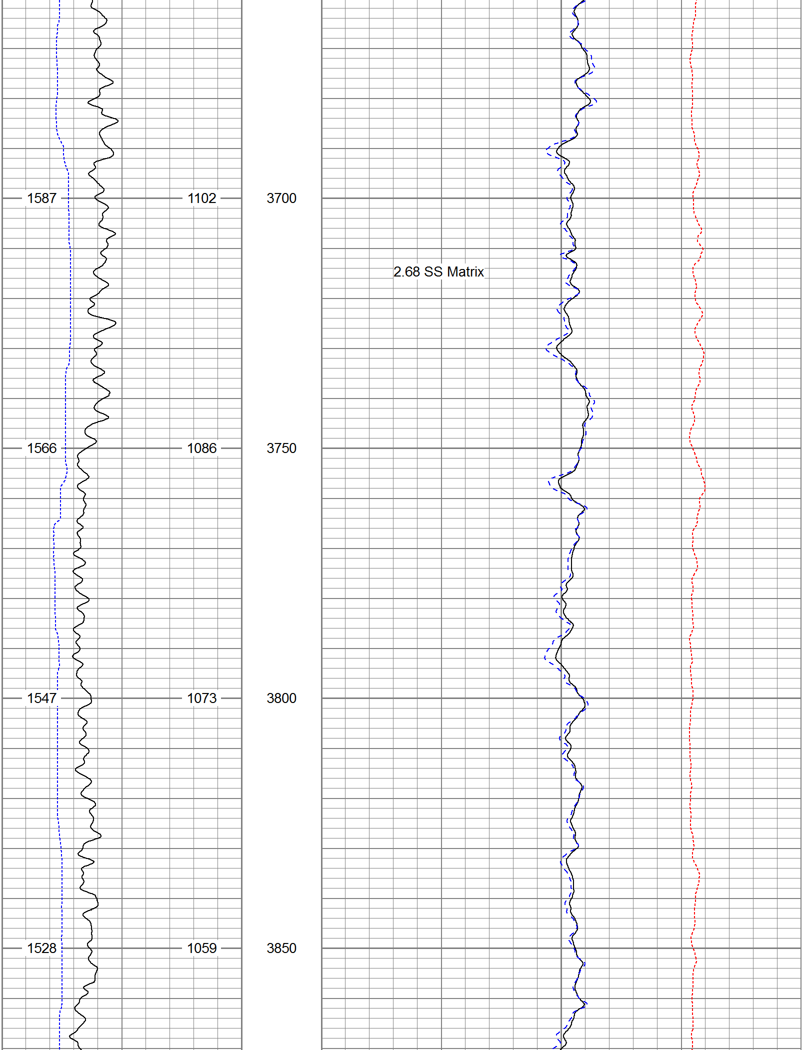
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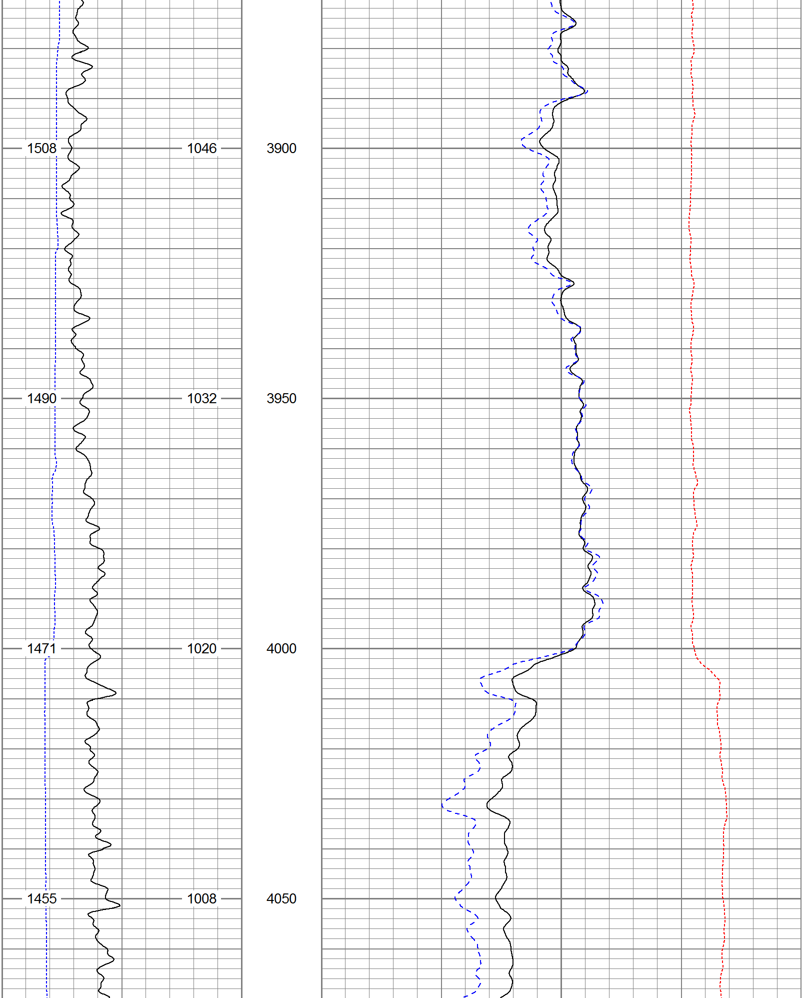
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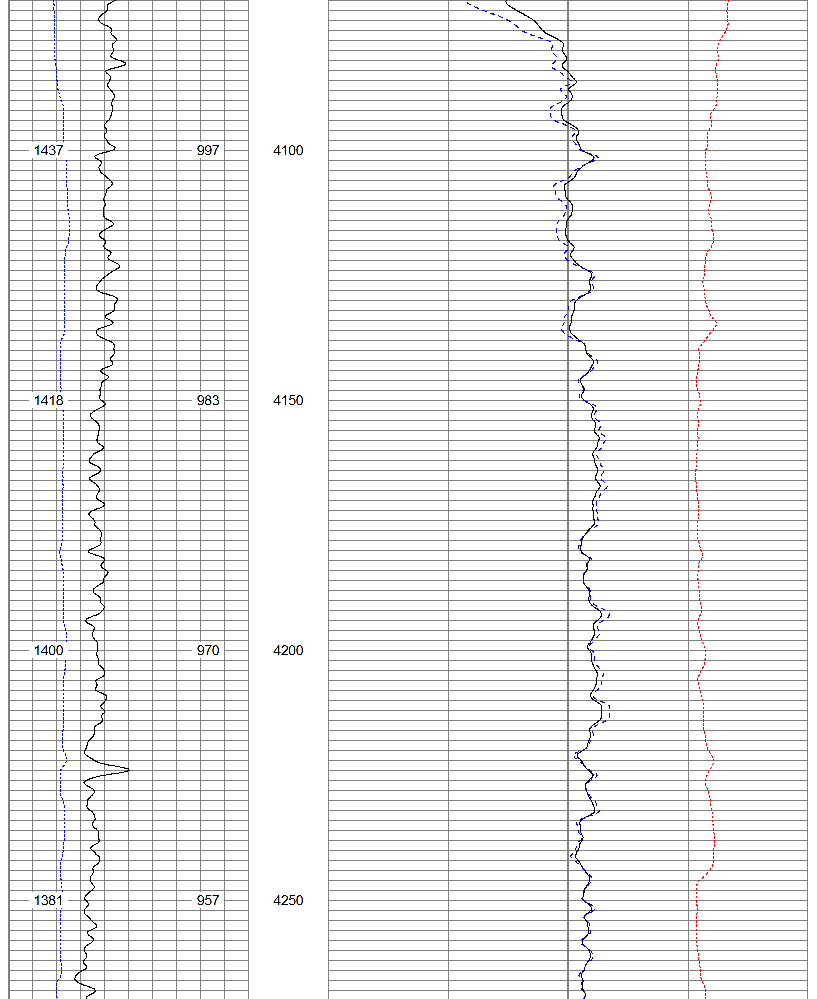
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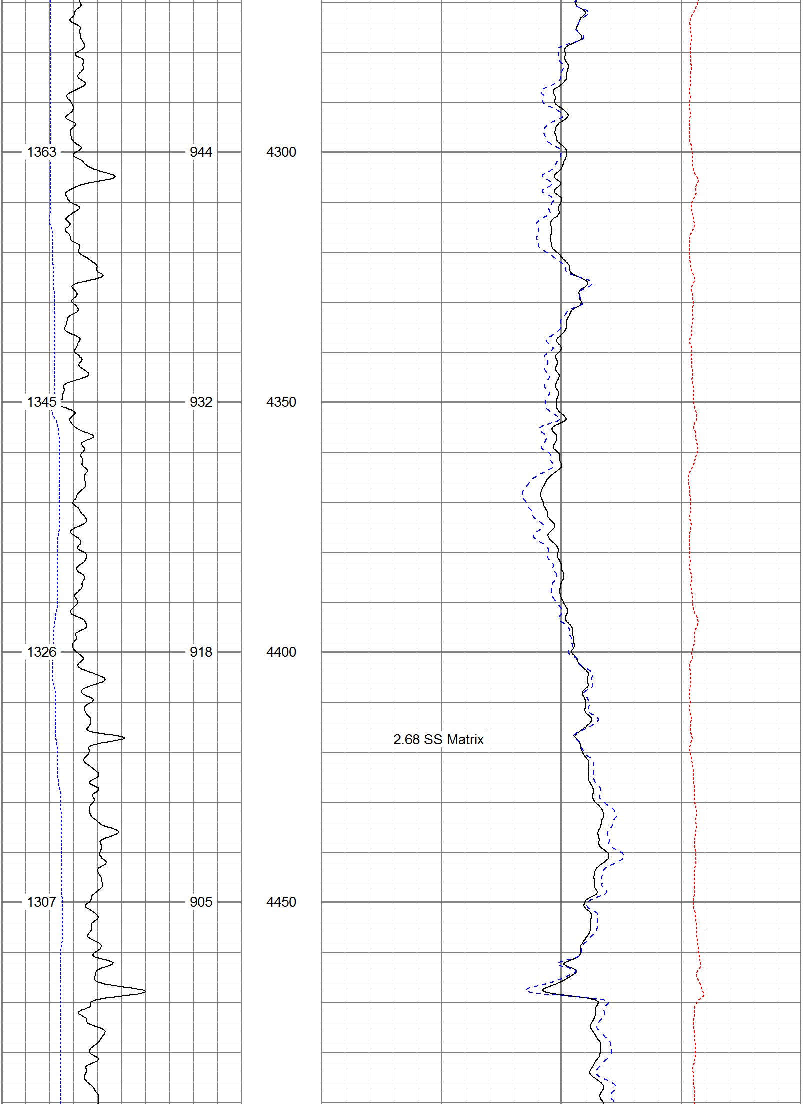
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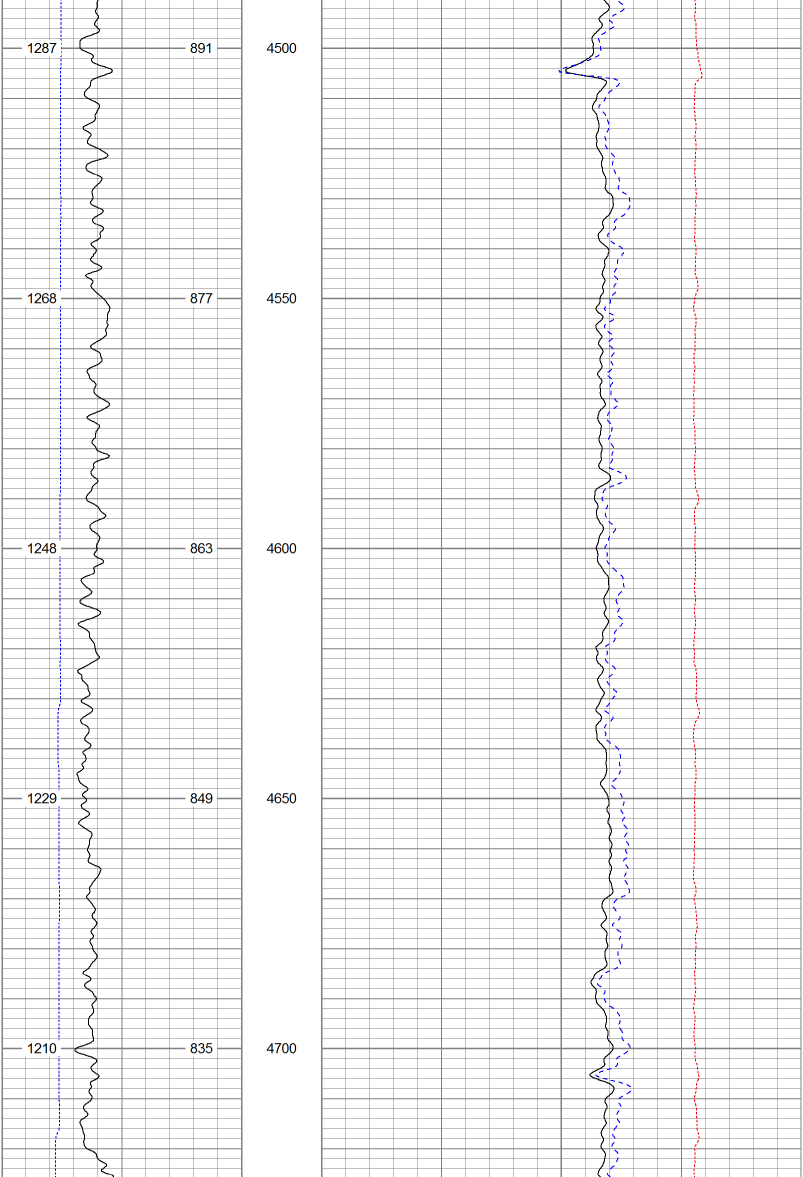
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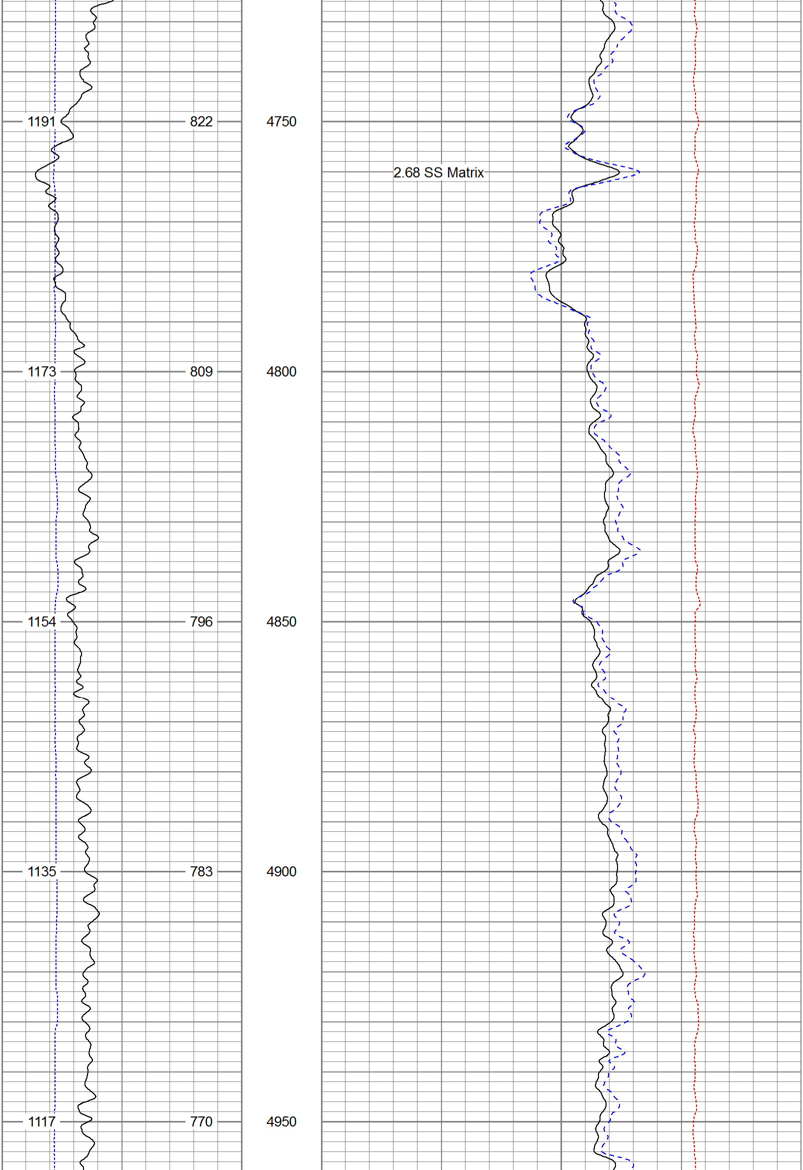
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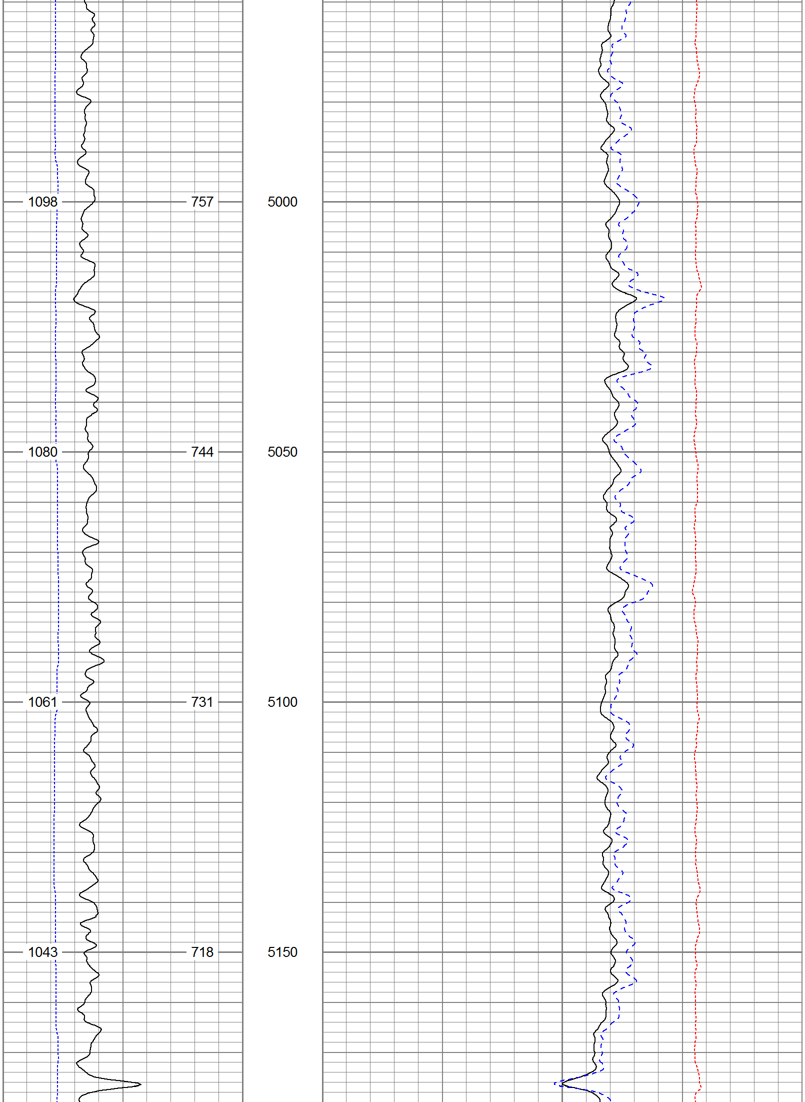
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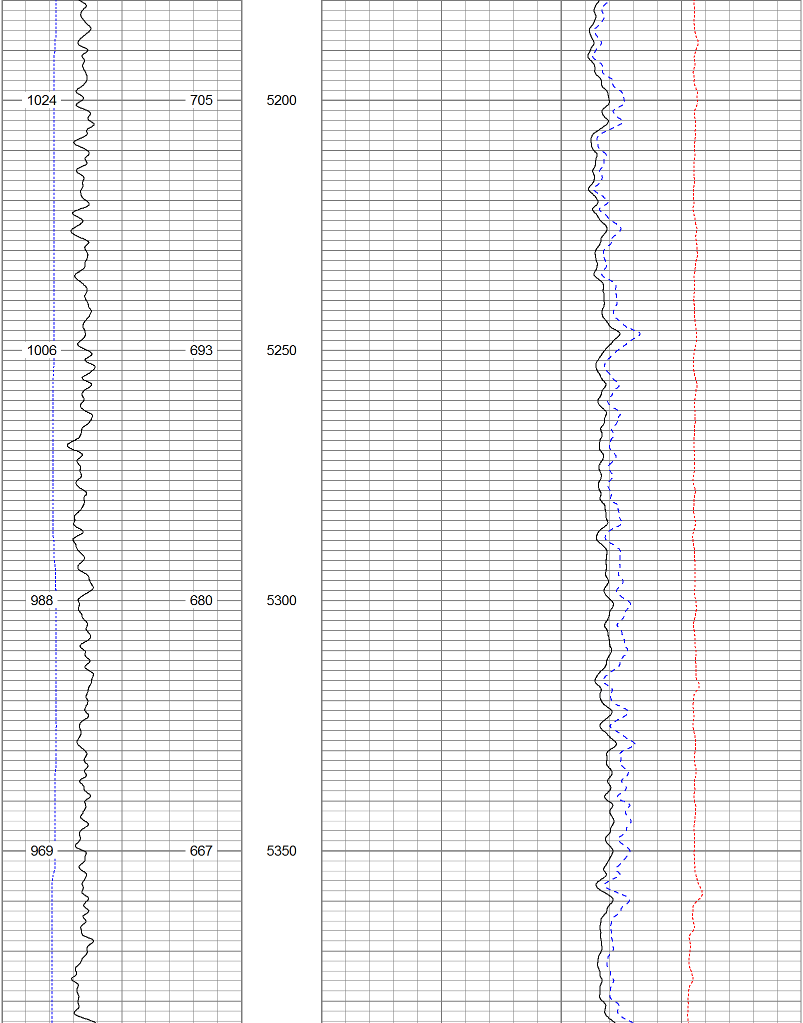
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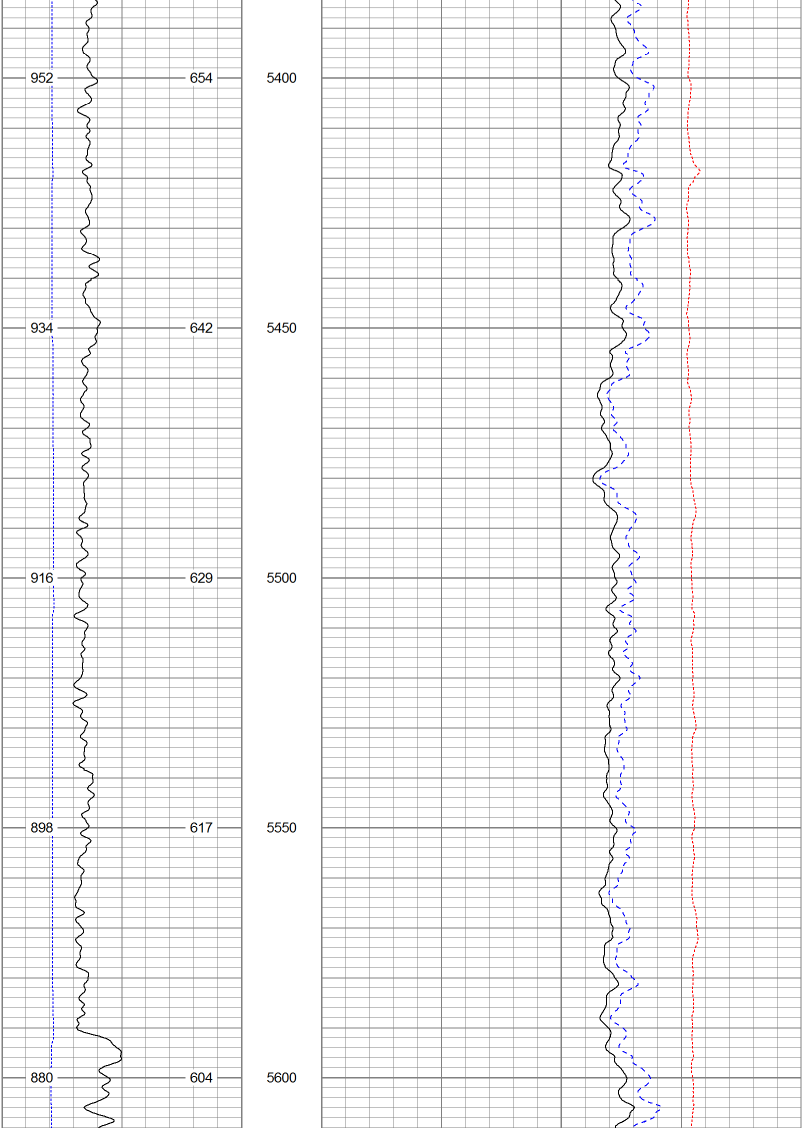
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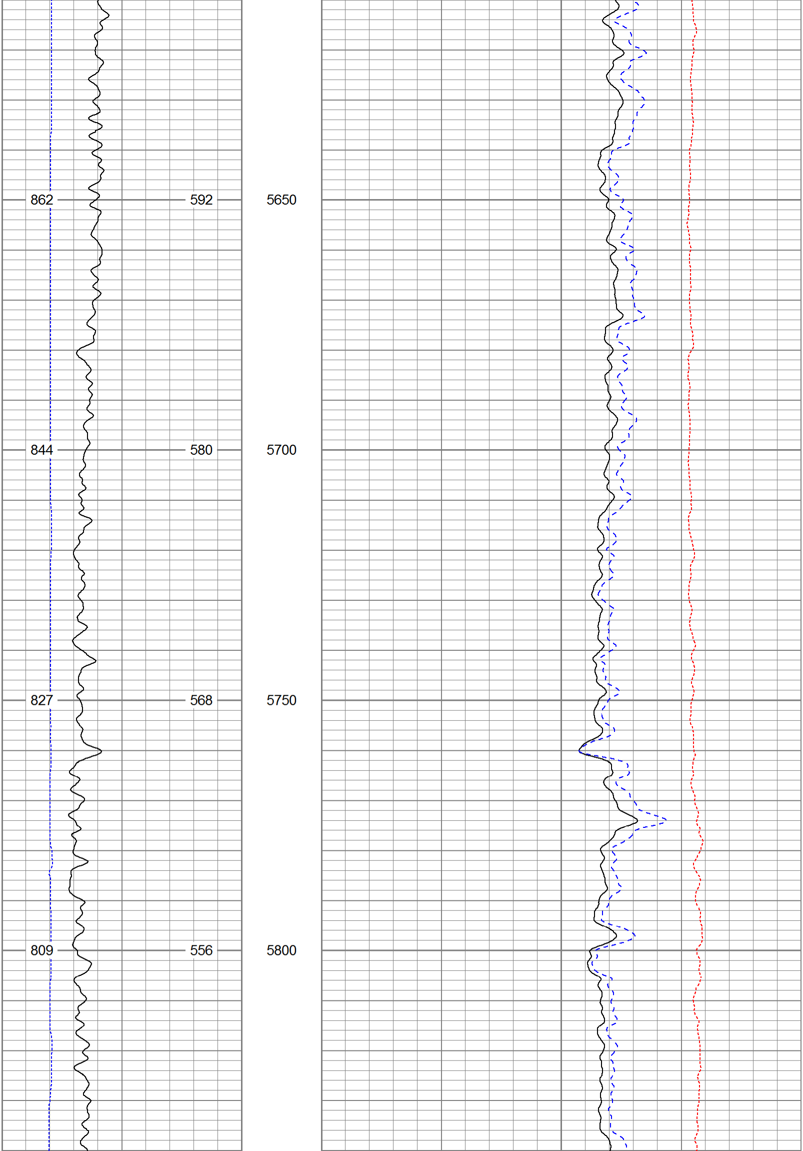
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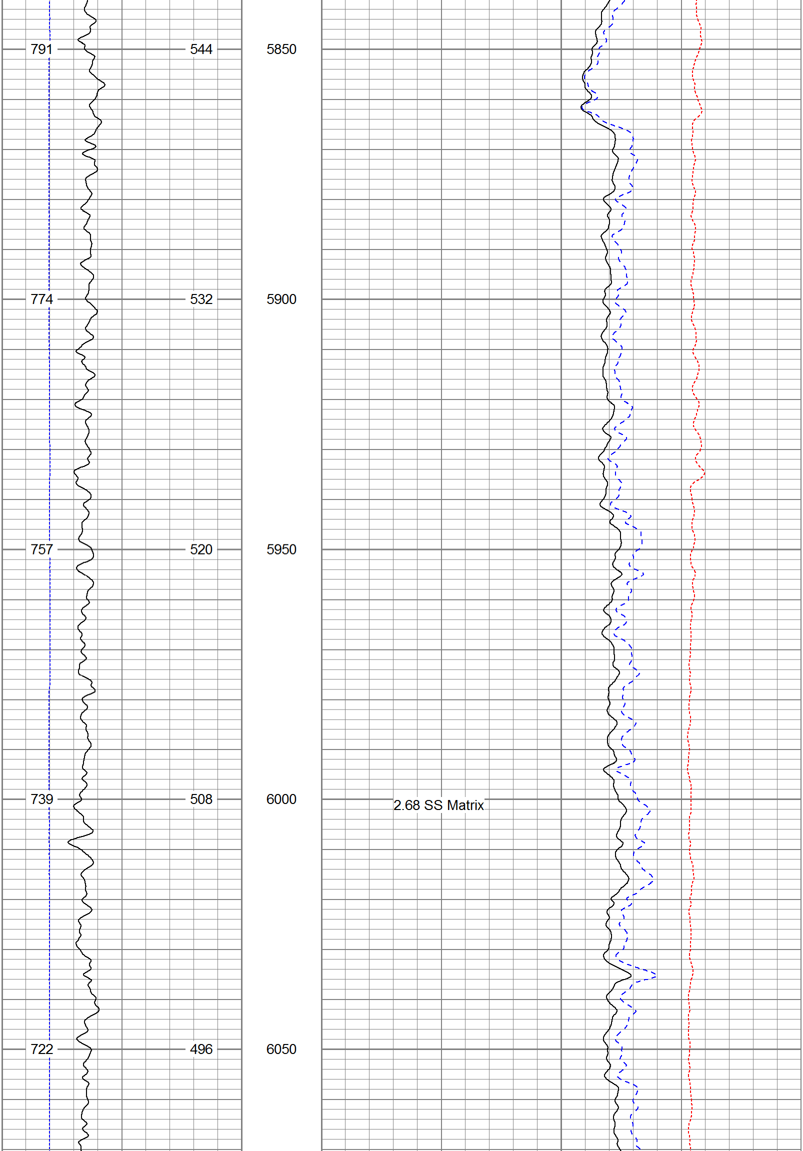
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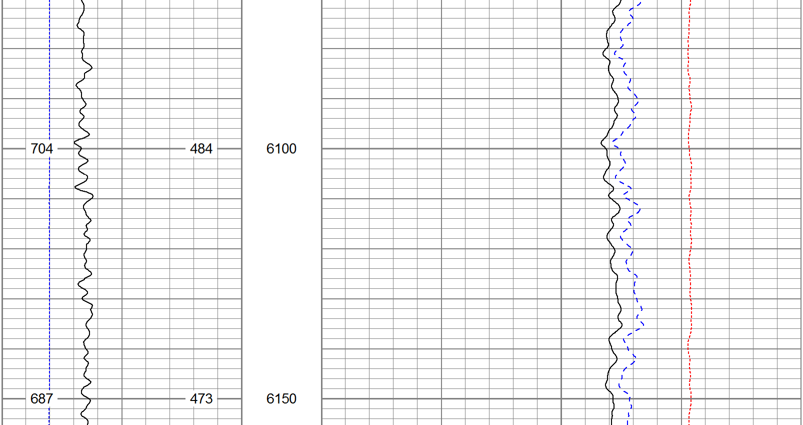
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Calibration Report

Database File: 12820.db
Dataset Pathname: pass1
Dataset Creation: Sat Jul 27 06:04:48 2013 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	-27.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.450	-26.000

Compensated Density Calibration Report

Serial-Model: 998-PSI
Master Calibration Performed: Sat Jul 27 06:28:17 2013

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	6632.06	8836.58	cps
Aluminum	2.690	g/cc	1242.07	5664.54	cps

	Size		Reading
Small Ring		in	
Medium Ring		in	
Large Ring		in	

Compensated Neutron Calibration Report

Serial Number: 856
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	2.1700

Gamma Ray Calibration Report

Serial Number: 939
Tool Model: PSI
Performed: Sat Jul 27 06:28:39 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6200 GAPI/cps