Company	Wepking-Fullerton Energy LLC
Well	Ma-State #16
Field	Wildcat
County	Lincoln
State	Colorado

PIONEER
Pioneer Energy Services

HIGH RESOLUTION INDUCTION

Company Wepking-Fullerton Energy LLC
Well Ma-State #16
Field Wildcat
County Lincoln State Colorado

Location: API # : 05 073 06644 0000
660' FNL & 2080' FWL NENW
SEC 24 TWP 10S RGE 56W

Other Services
Density
Neutron

Permanent Datum	GL	Elevation 5278	Elevation K.B. 5291 D.F. 5290 G.L. 5278
Log Measured From	KB		
Drilling Measured From	KB		

Date	September 16, 2014		
Run Number	1		
Depth Driller	8013		
Depth Logger	8000		
Bottom Logged Interval	8000		
Top Log Interval	Casing		
Casing Driller	318		
Casing Logger	318		
Bit Size	7-7/8"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	9.0 / 92		
pH / Fluid Loss	10.0 / 8.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	1.67 @ 72 F		
Rmf @ Meas. Temp	1.29 @ 72 F		
Rmc @ Meas. Temp	1.96 @ 72 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	0.52 @ 199 F		
Time Circulation Stopped	1600		
Time Logger on Bottom	2100		
Maximum Recorded Temperature	199 F		
Equipment Number	36		
Location	Ft. Morgan, CO		
Recorded By	Tracy Crane		
Witnessed By	Gregg Smith		

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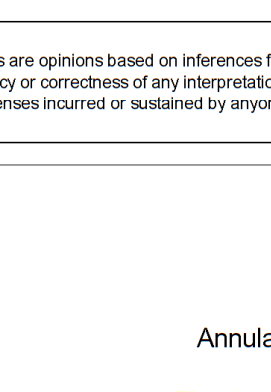
All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not be liable or responsible for any loss, costs, damages, 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 5.5" casing
Murfin Drilling Rig 25
Thank you for using Pioneer Energy Services



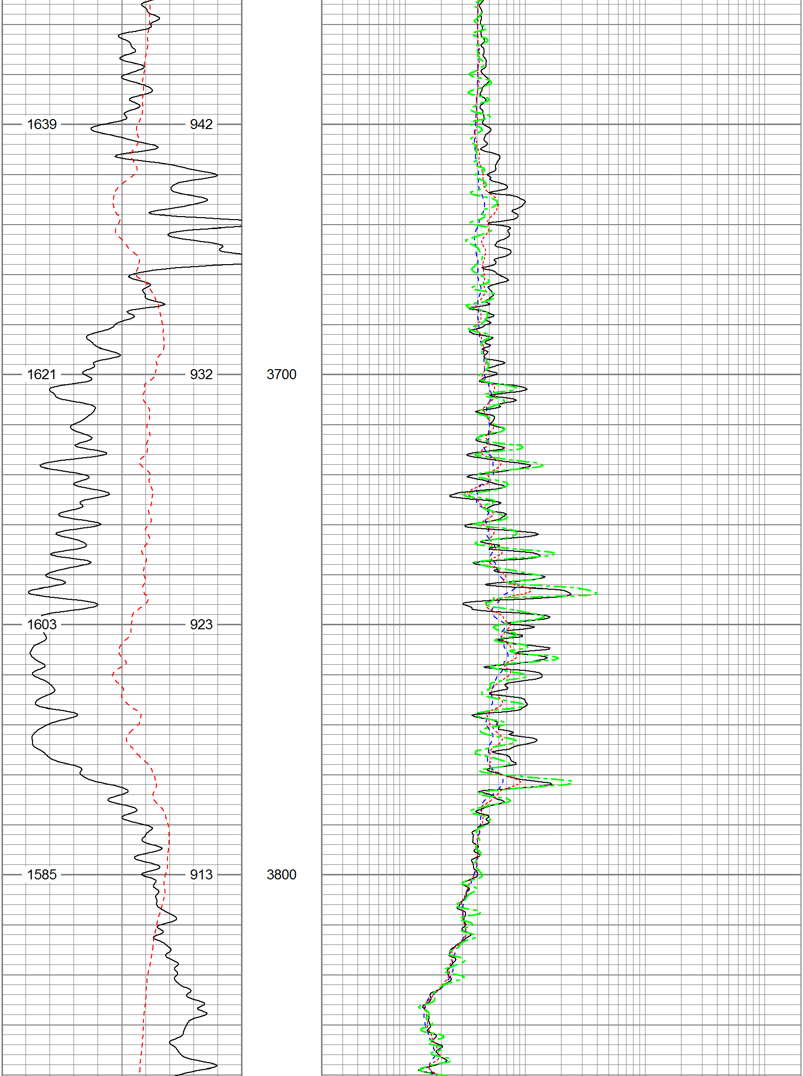
Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CHD (~0)	2.00	3.50	30.00
		GR-PSI (197)	2.92	3.50	40.00
GR	0.00				
		CNT-PSI (853)	5.00	3.50	70.00
CNLSC	-3.67				
CNSSC	-4.17				
		CDL-PSI (979)	8.50	5.00	285.00
DCAL	-11.84				
LSD	-12.67				
SSD	-13.17				
RLL3	-17.52				
		DIL-PSI (1010)	18.25	3.75	175.00
CILD	-24.97				
CILM	-28.42				
SP	-32.42				

Dataset: 13708.db: field/well/run1/pass3
Total Length: 36.67 ft
Total Weight: 600.00 lb
O.D. 5.00 in

Database File: 13708.db
Dataset Pathname: pass3
Presentation Format: dil
Dataset Creation: Wed Sep 17 21:10:41 2014 by Log Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	200
0	SP (mV)	200
TBHV (ft3)		ABHV (ft3)

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Rt (Ohm-m)	2000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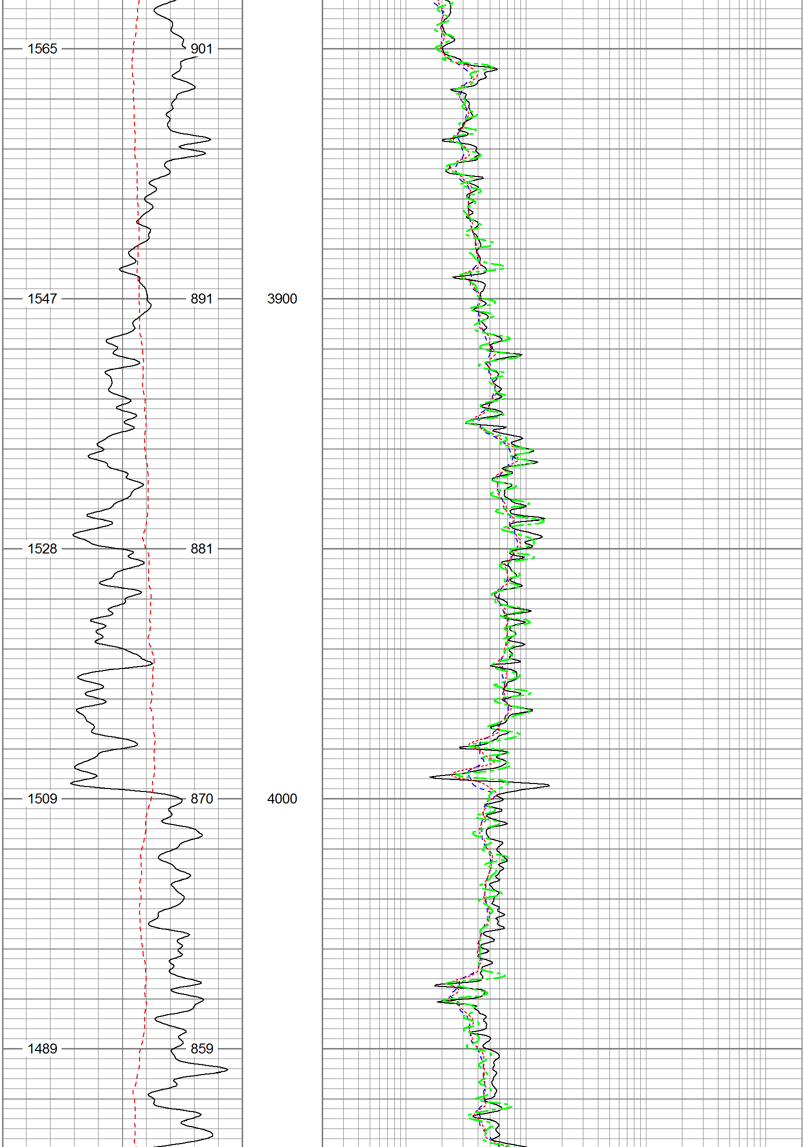
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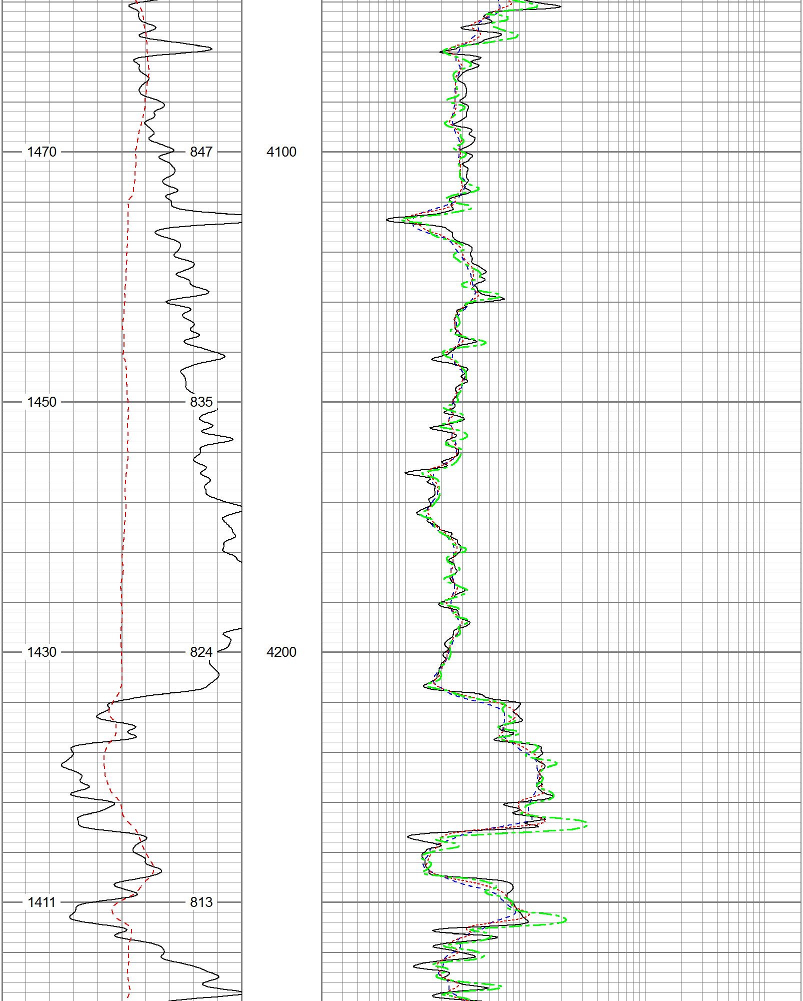
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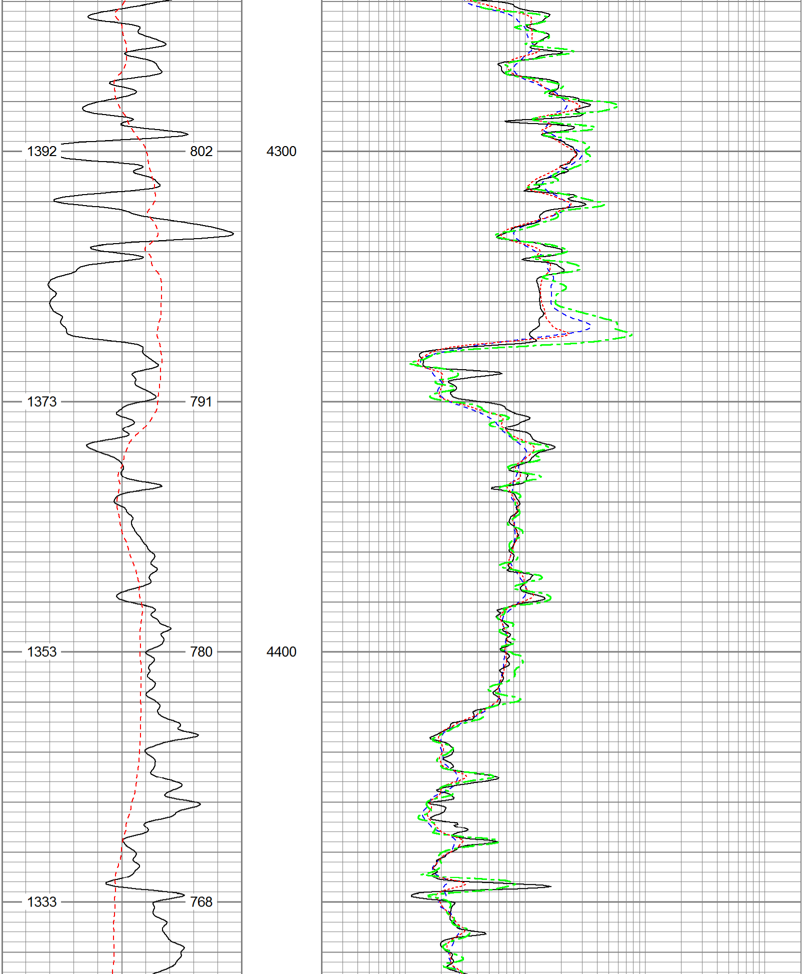
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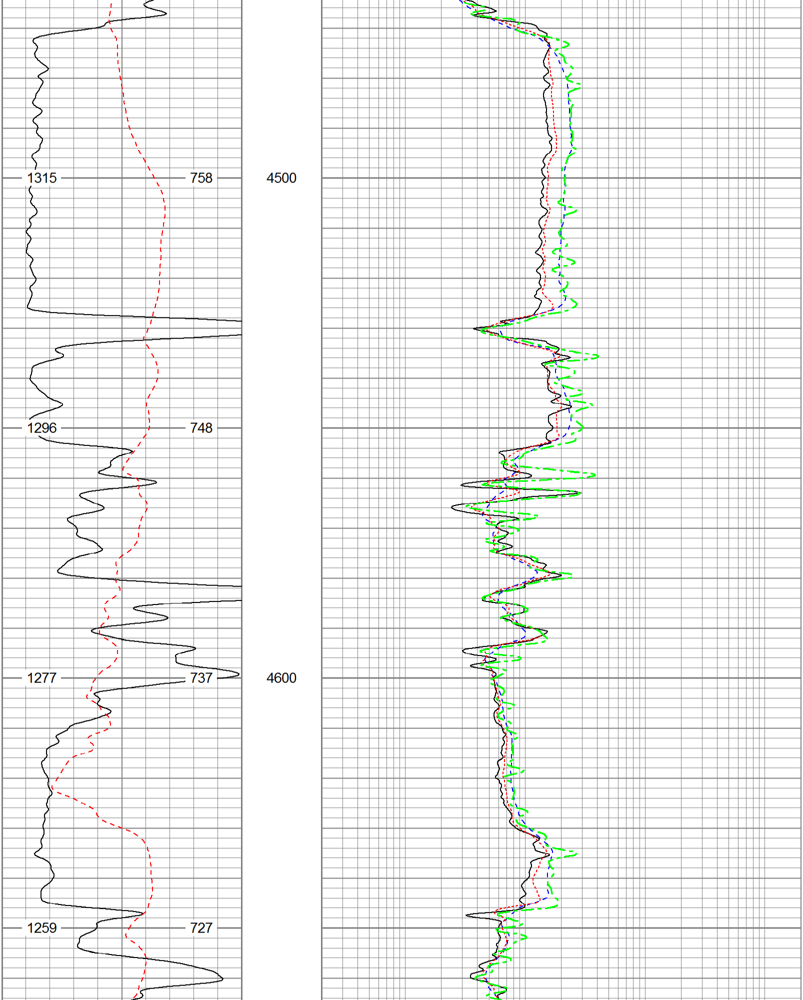
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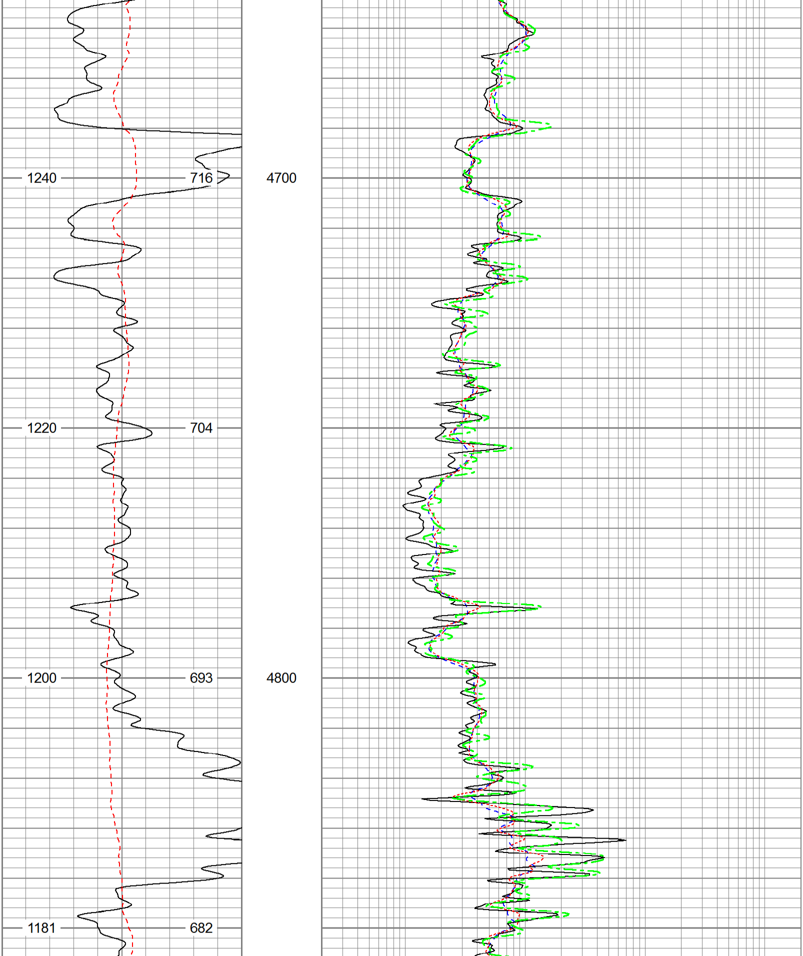
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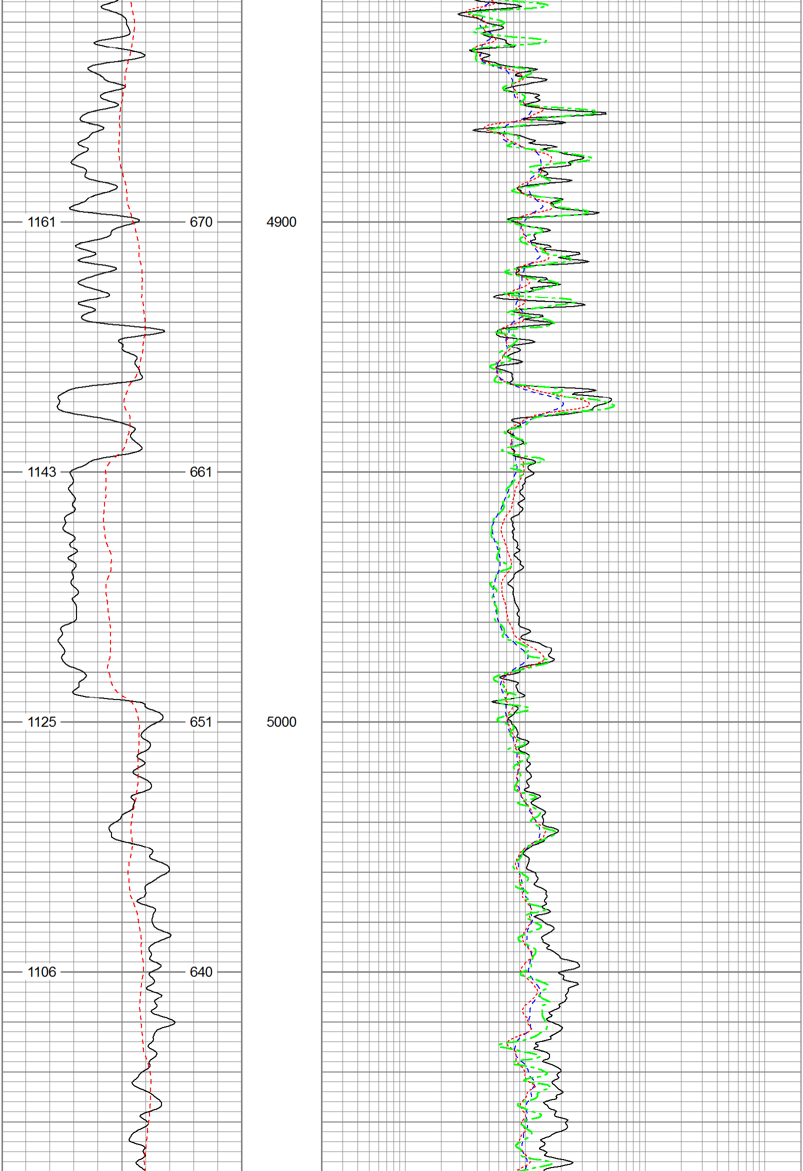
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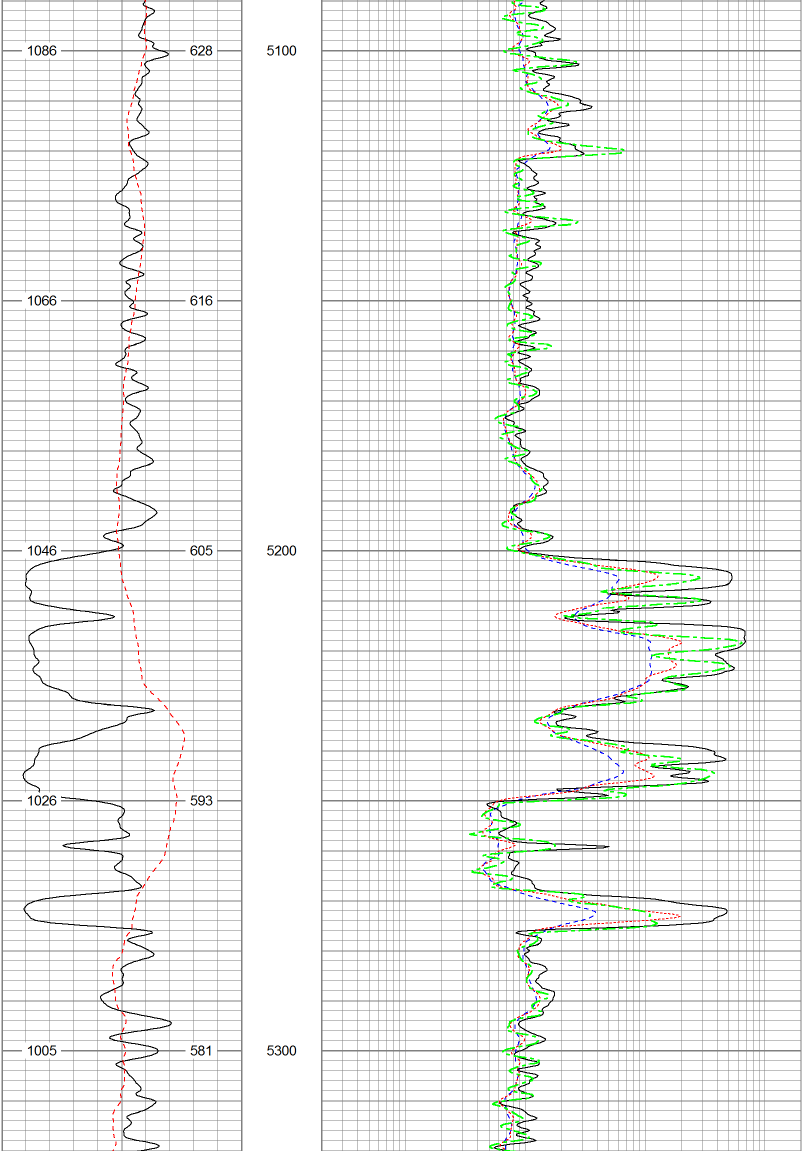
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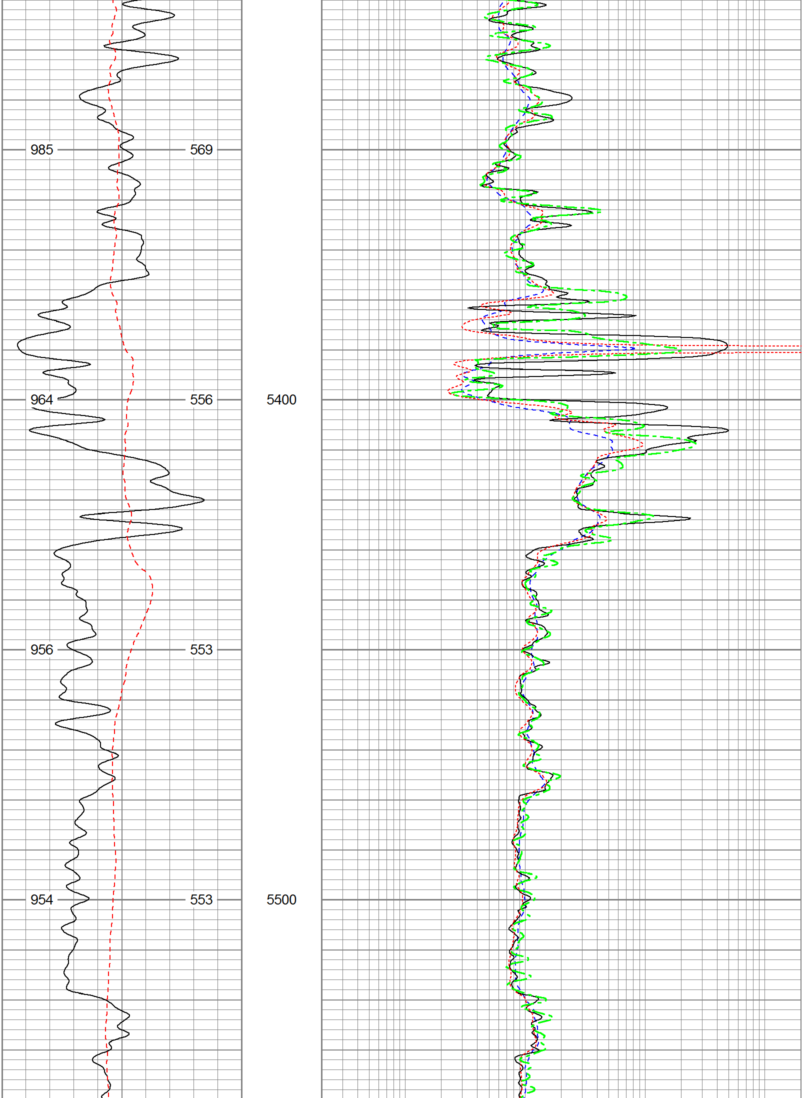
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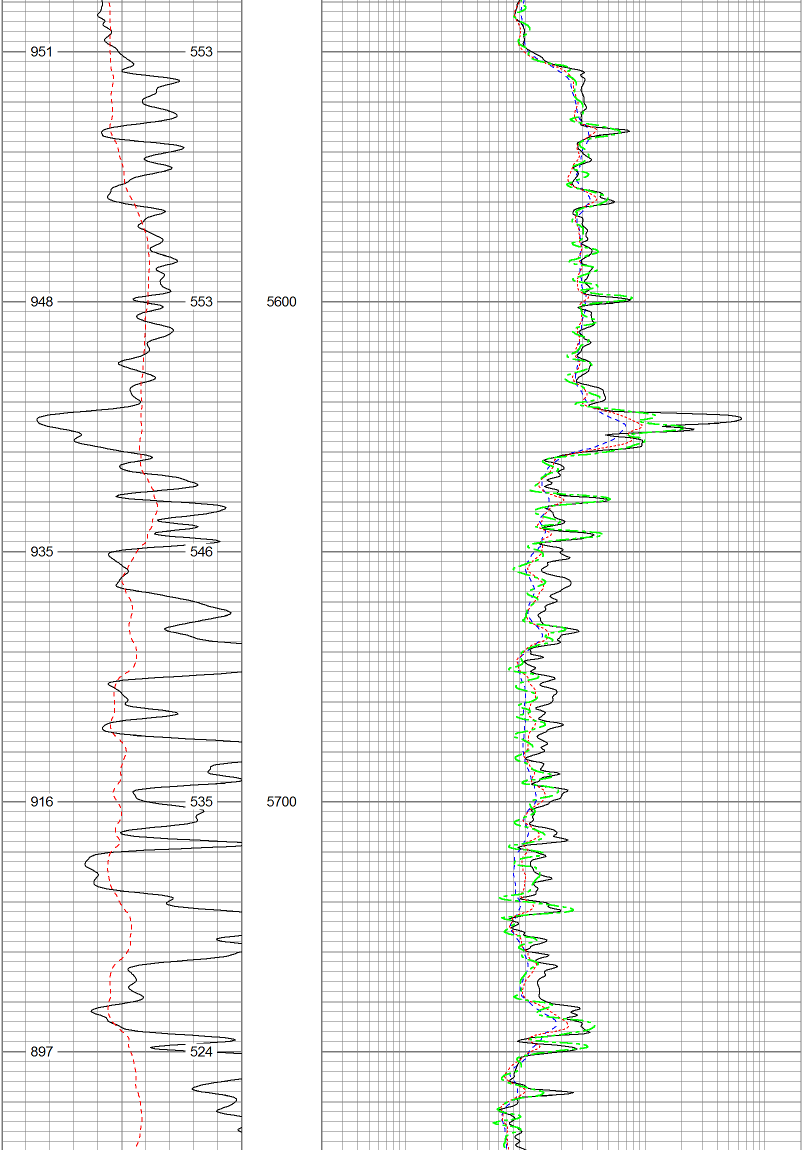
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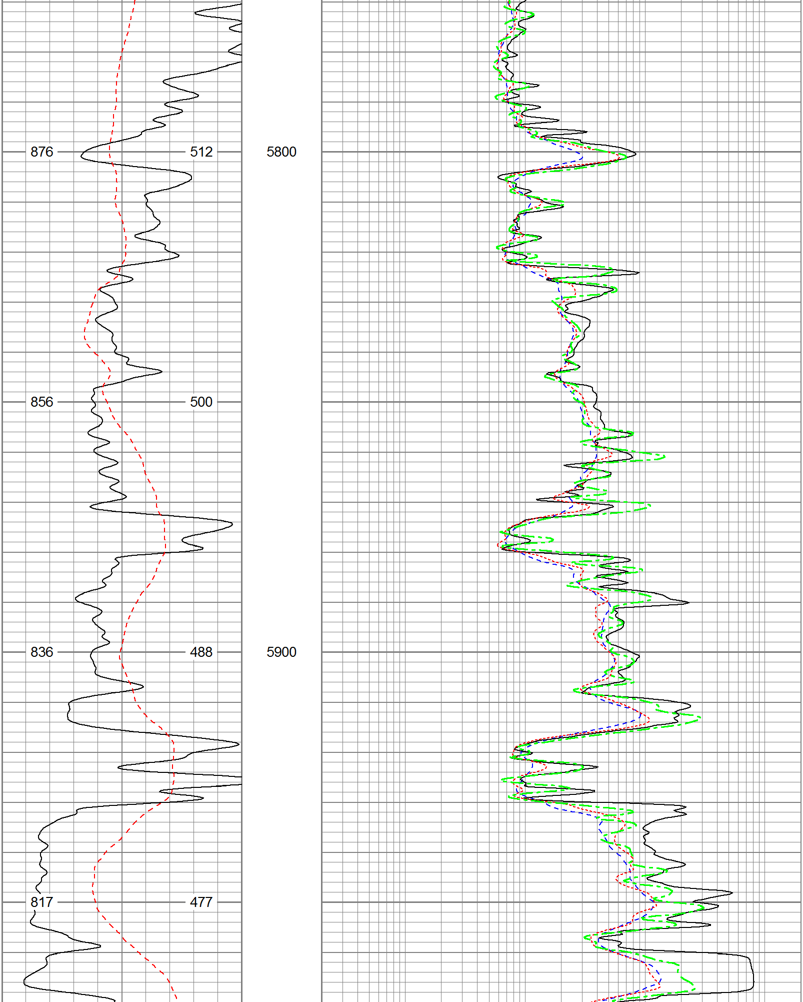
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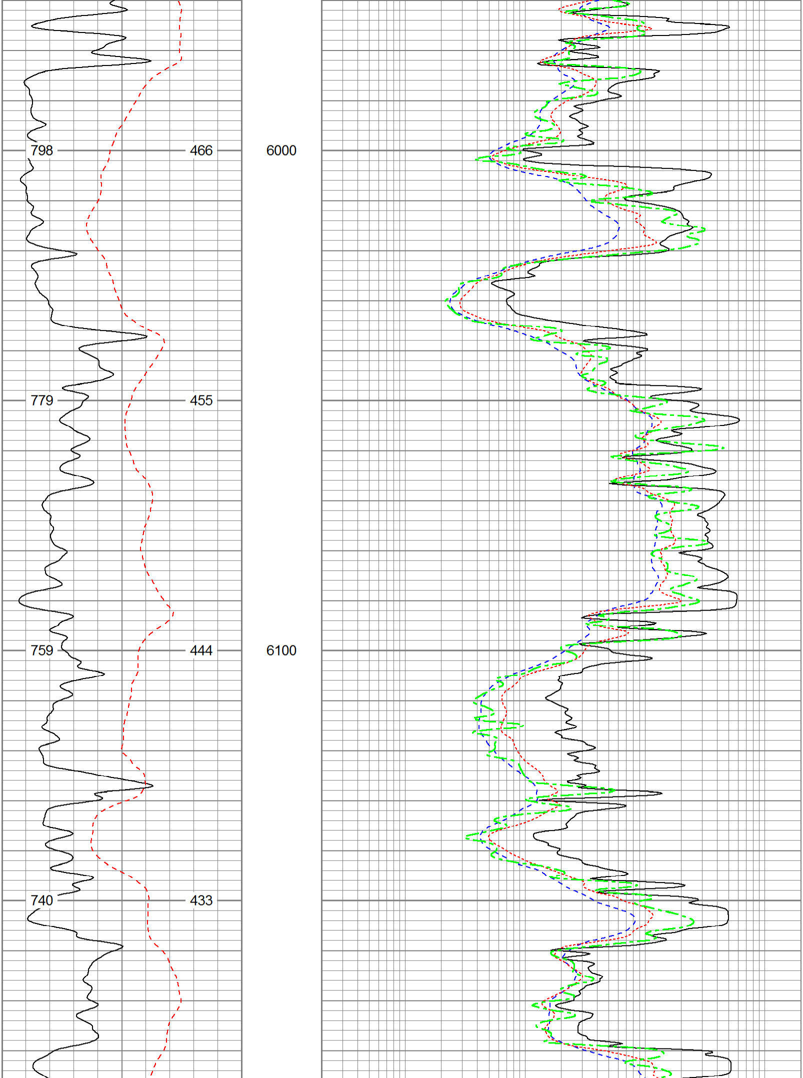
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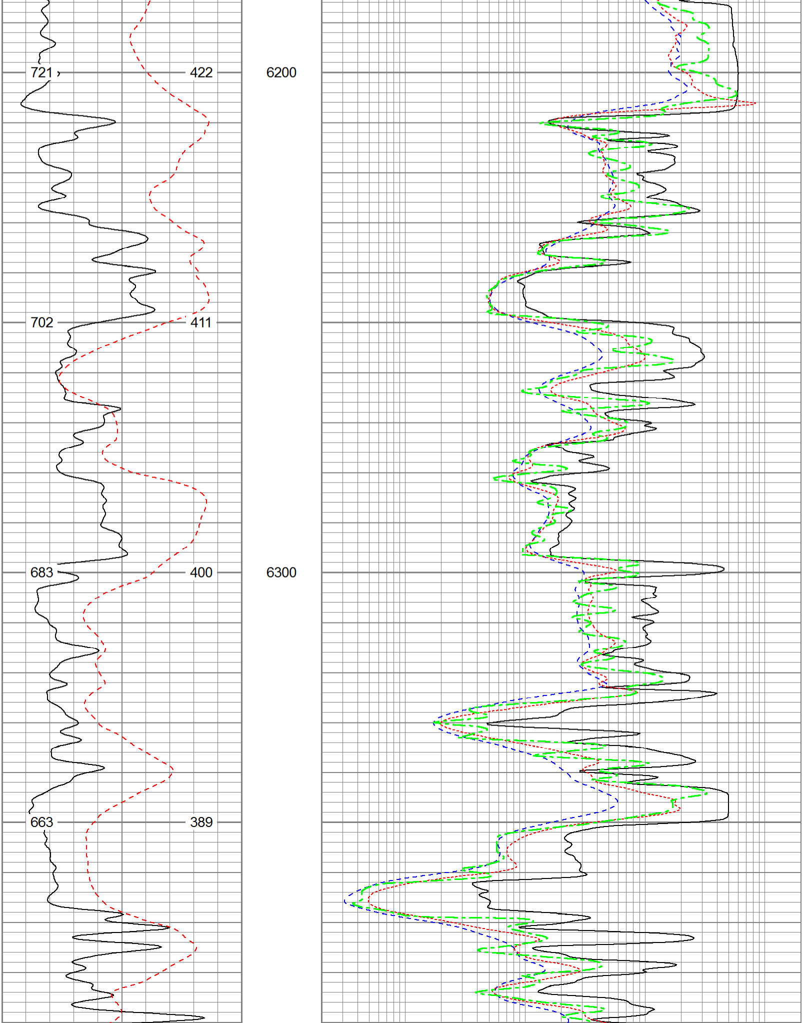
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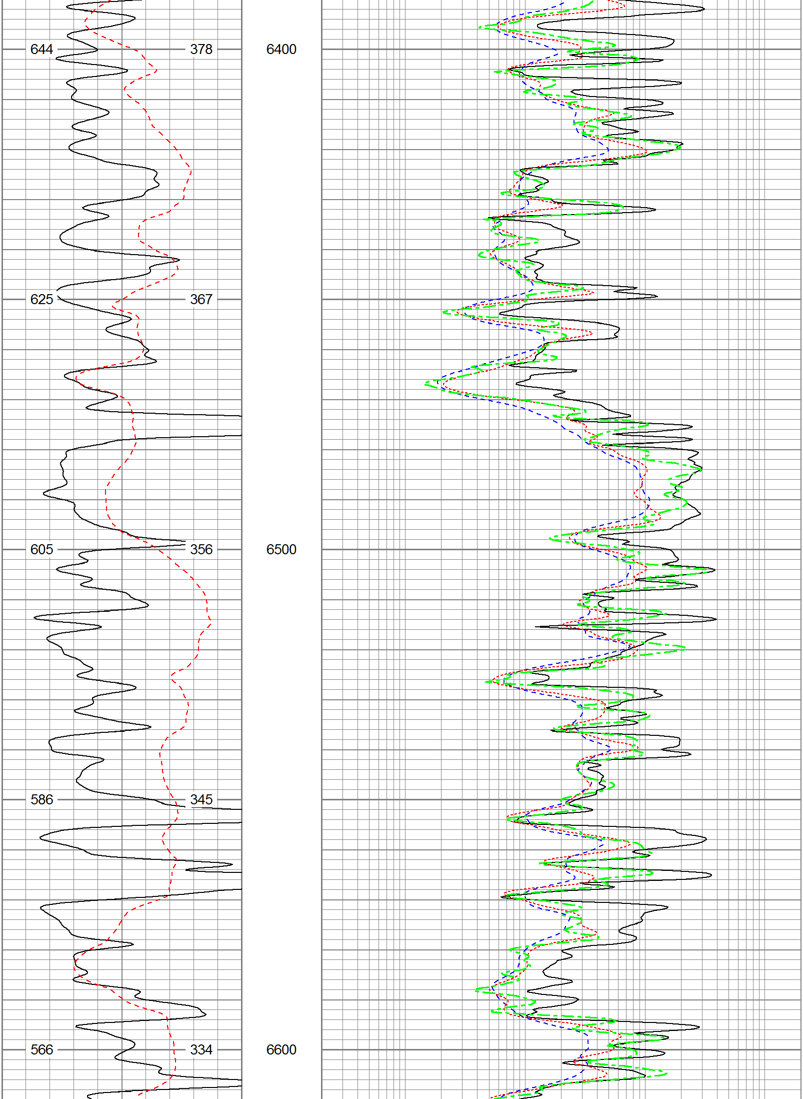
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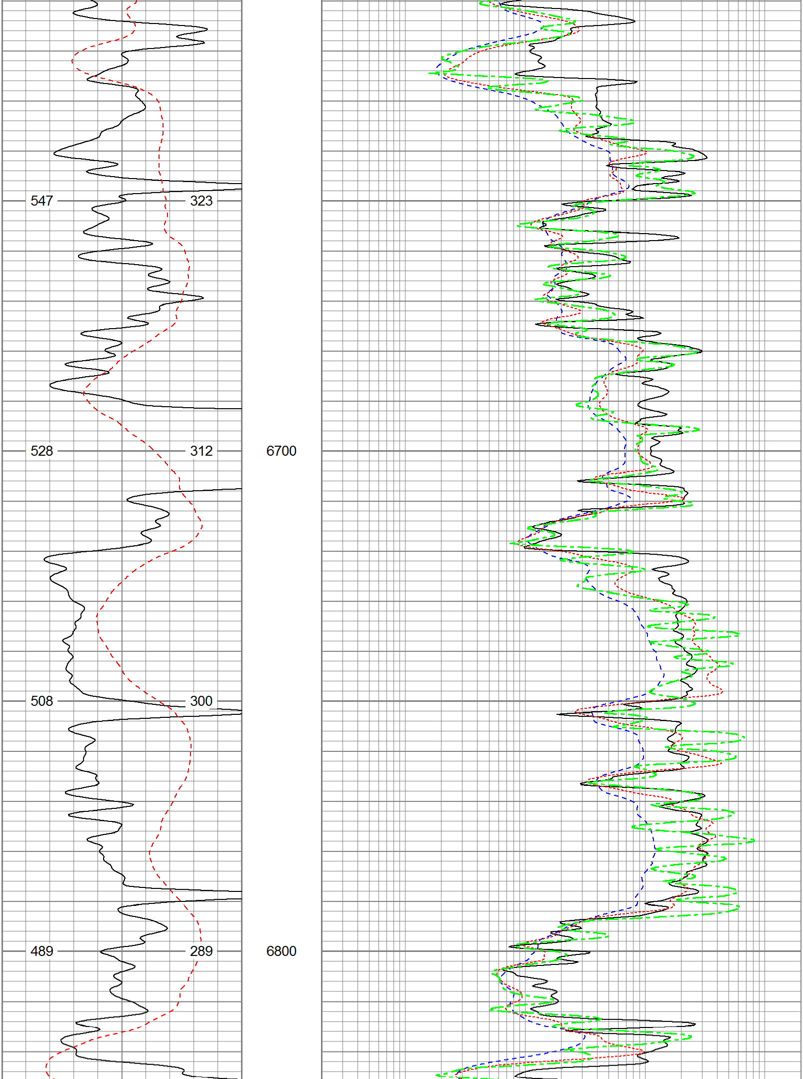
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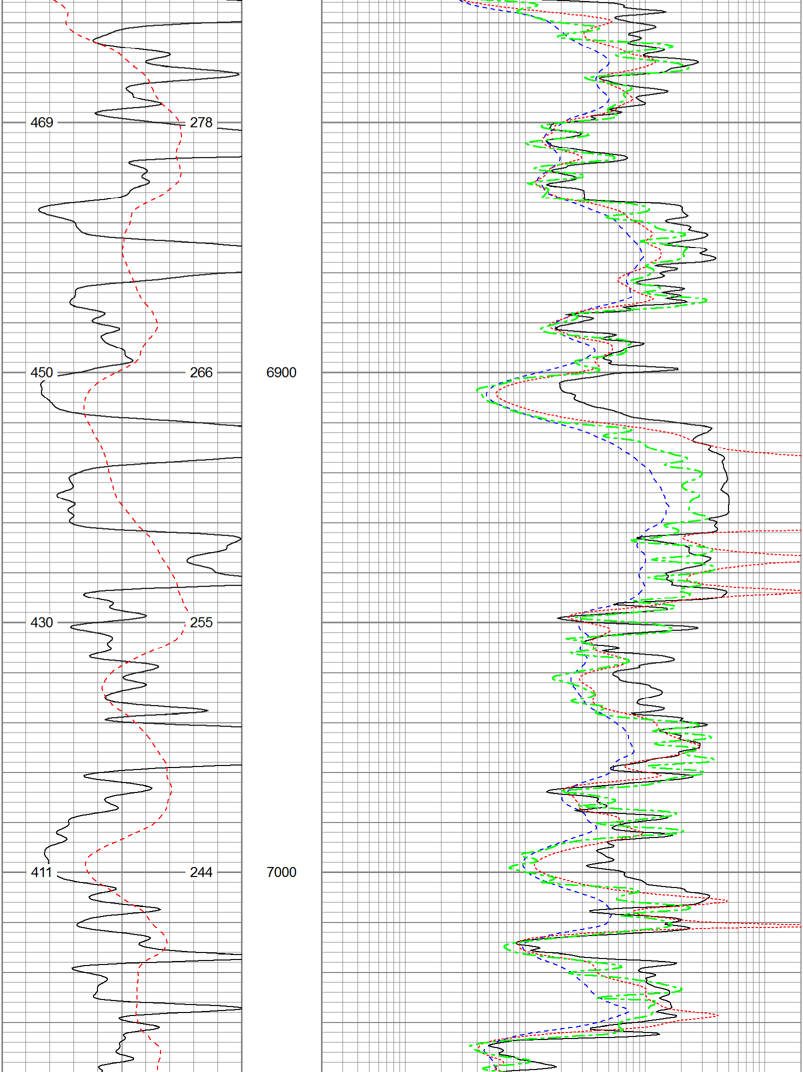
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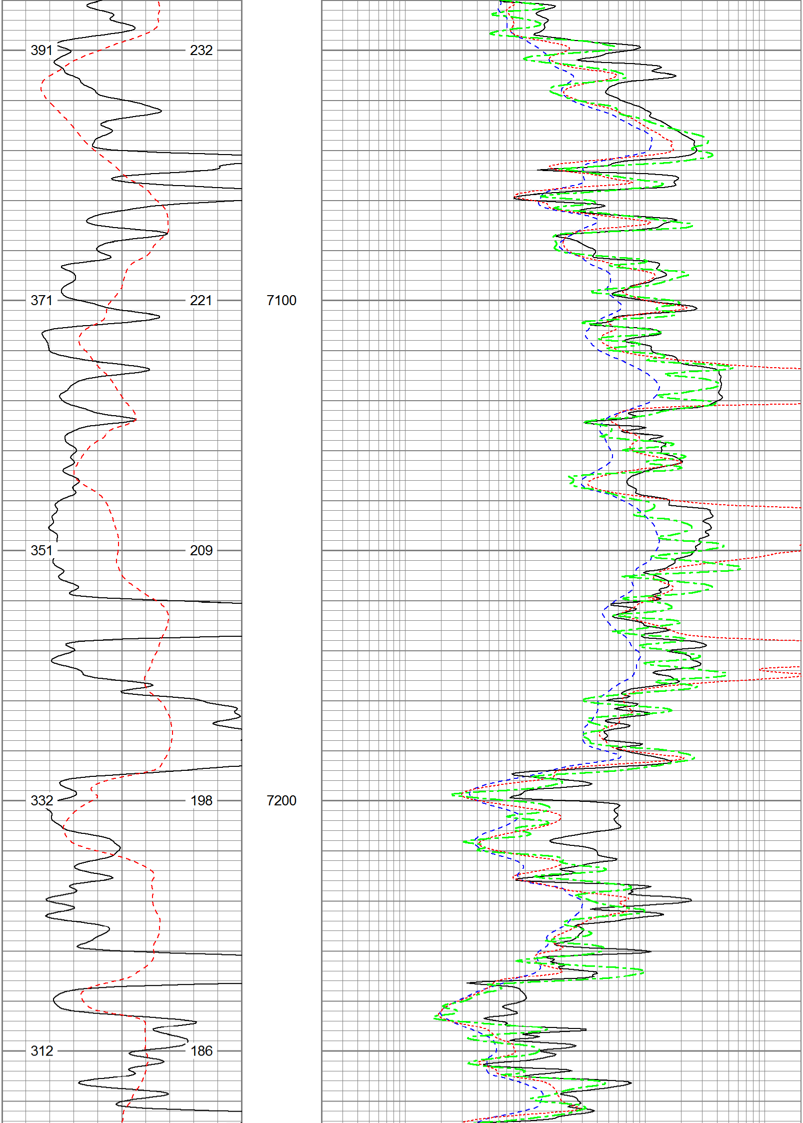
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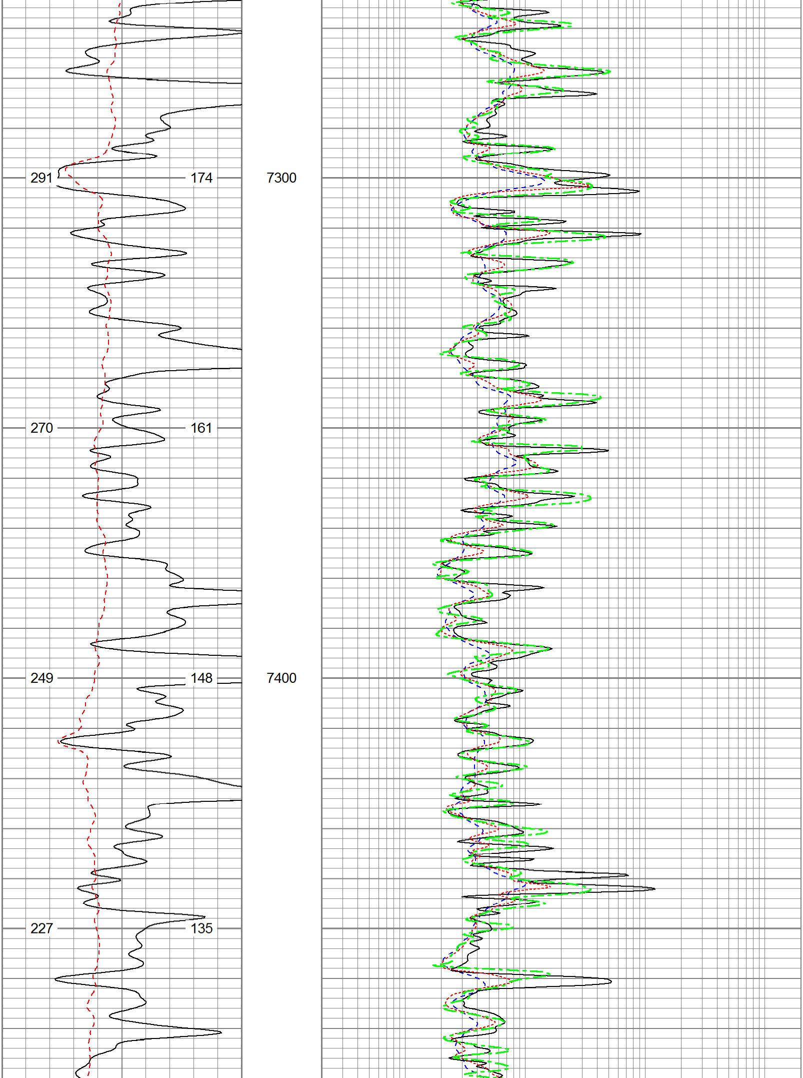
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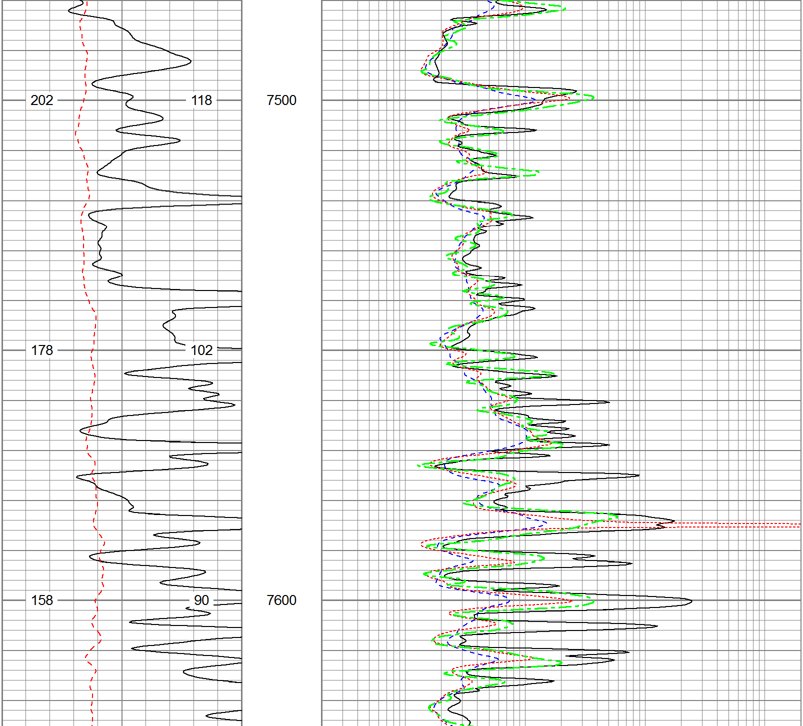
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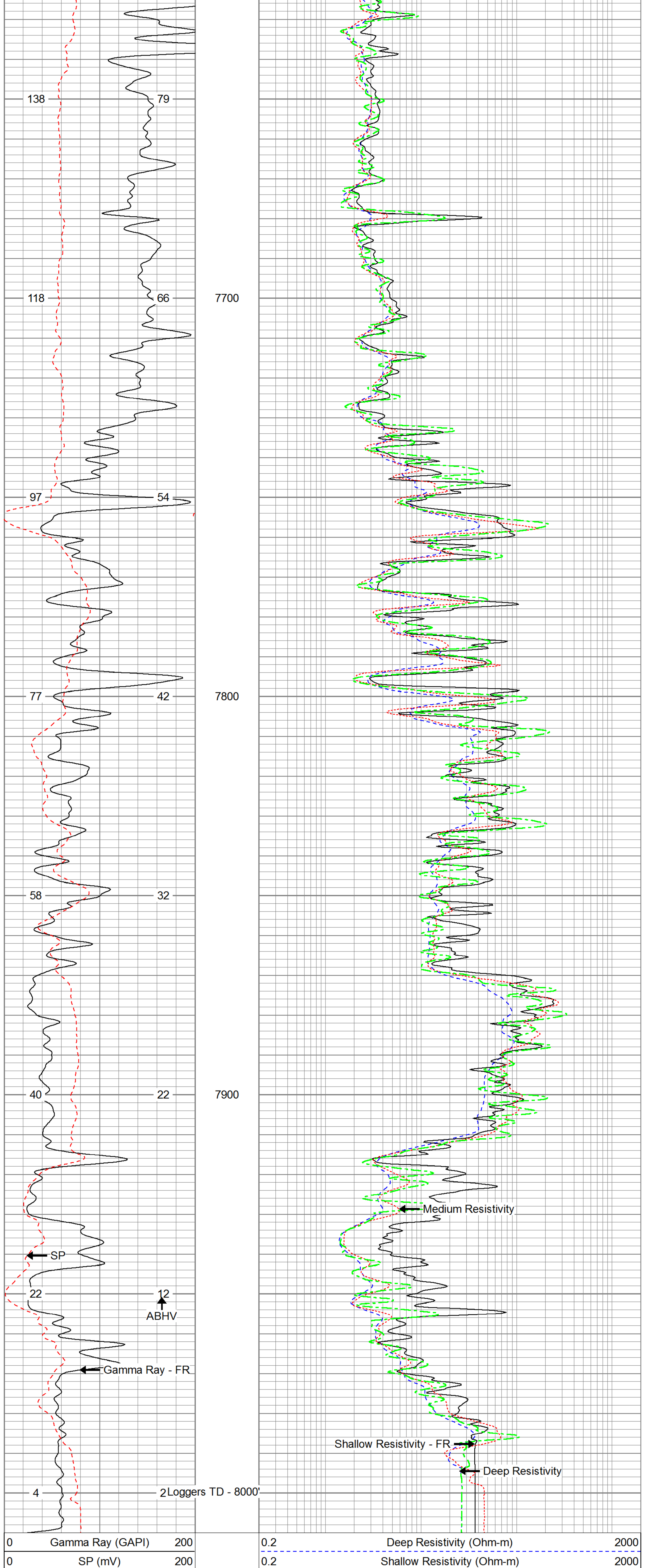
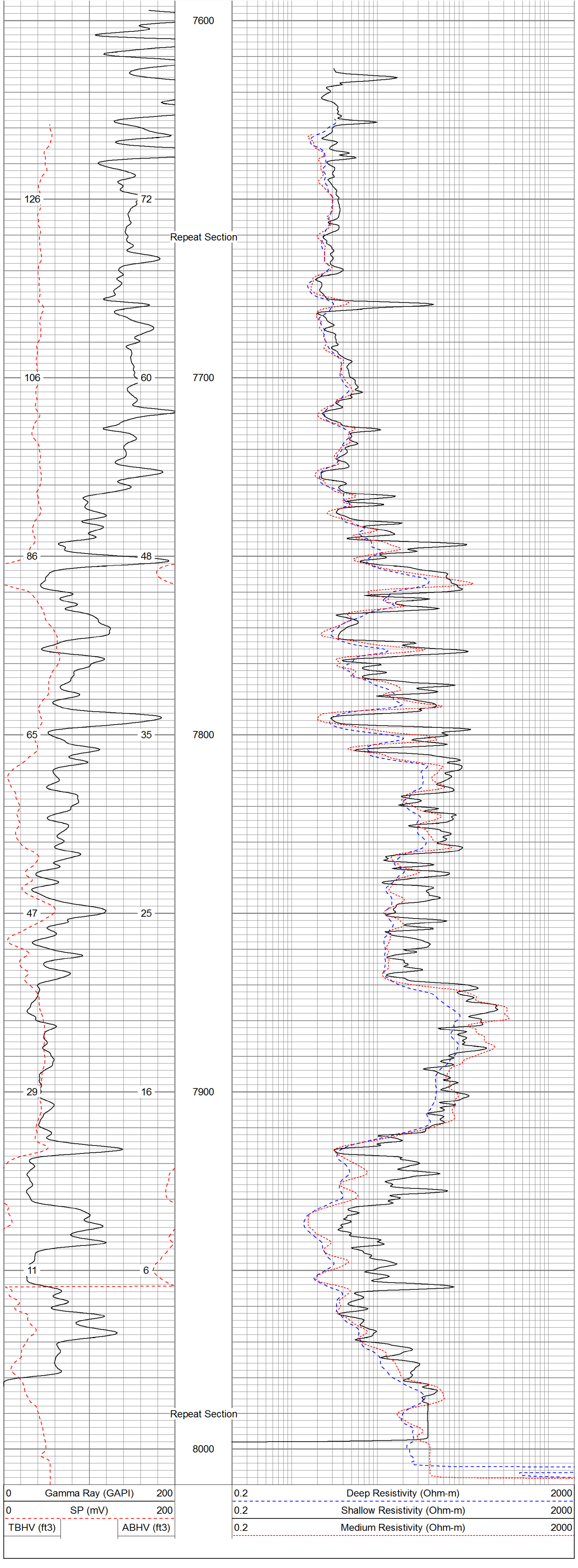


Database File:	13708.db
Dataset Pathname:	pass2
Presentation Format:	dil
Dataset Creation:	Wed Sep 17 20:53:18 2014 by Log Open-Cased 110302
Charted by:	Depth in Feet scaled 1:240



Calibration Report

Database File:	13708.db
Dataset Pathname:	pass2
Dataset Creation:	Wed Sep 17 20:53:18 2014 by Log Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: 1010-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	0.550	-33.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.480	-27.000

Compensated Density Calibration Report

Serial-Model: 979-PSI
Master Calibration Performed: Wed Aug 20 14:34:48 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	11187.10	15127.80	cps
Aluminum	2.690	g/cc	2023.73	9655.31	cps

	Size		Reading
Small Ring		in	
Medium Ring		in	
Large Ring		in	

Compensated Neutron Calibration Report

Serial Number: 853
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	1.9200

Gamma Ray Calibration Report

Serial Number:	197	
Tool Model:	PSI	
Performed:	Tue Oct 18 17:42:20 2011	
Calibrator Value:	275.0	GAPI
Background Reading:	32.0	cps
Calibrator Reading:	340.0	cps
Sensitivity:	0.6000	GAPI/cps

Log Variables

Database:C:\Warrior\Data\13708.db
Dataset: field/well/run1/pass3

Top - 4210.00 ft

SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m	SNDERR mmho/m	CASEOD in
On	Limestone	1	2.71	0	0	0	5.5
PERFS	**TDEPTH ft**	**BOTTEMP degF**	**BOREID in**				
0	0	199	7.875				

4210.00 ft - 4665.00 ft

SZCOR	**NPORSEL**	FLUIDDEN g/cc	**MATRXDEN g/cc**	SPSHIFT mV	SNDERRM mmho/m	SNDERR mmho/m	CASEOD in
On	**Sandstone**	1	**2.68**	0	0	0	5.5
PERFS	TDEPTH ft	BOTTEMP degF	BOREID in				
0	0	199	7.875				

4665.00 ft - 7650.00 ft

SZCOR	**NPORSEL**	FLUIDDEN g/cc	**MATRXDEN g/cc**	SPSHIFT mV	SNDERRM mmho/m	SNDERR mmho/m	CASEOD in
On	**Limestone**	1	**2.71**	0	0	0	5.5
PERFS	TDEPTH ft	BOTTEMP degF	BOREID in				
0	0	199	7.875				

7650.00 ft - 7800.00 ft

SZCOR	**NPORSEL**	FLUIDDEN g/cc	**MATRXDEN g/cc**	SPSHIFT mV	SNDERRM mmho/m	SNDERR mmho/m	CASEOD in
On	**Sandstone**	1	**2.68**	0	0	0	5.5
PERFS	TDEPTH ft	BOTTEMP degF	BOREID in				
0	0	199	7.875				

7800.00 ft - Bottom

SZCOR	**NPORSEL**	FLUIDDEN g/cc	**MATRXDEN g/cc**	SPSHIFT mV	SNDERRM mmho/m	SNDERR mmho/m	CASEOD in
On	**Limestone**	1	**2.71**	0	0	0	5.5
PERFS	TDEPTH ft	BOTTEMP degF	BOREID in				
0	0	199	7.875				