C&J ENERGY SERVICES

GAMMA RAY C.C.L. CEMENT BOND V.D.L.

Company PDC Energy
Well Popham 12N
Field Wattenberg
County Weld
State CO

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Well Popham 12N
Field Wattenberg
County Weld State CO

Location: API #: 05-123-47814
1044' FSL & 2356' FWL
SE / SW
SEC 3 TWP 4N RGE 64W

Other Services

Permanent Datum
Log Measured From
Drilling Measured From
Elevation
Elevation

Date	June 11, 2019
Run Number	1
Depth Driller	12,105'
Depth Logger	6900'
Bottom Logged Interval	6900'-0'
Top Log Interval	
Casing Size	
Type Fluid	Water
Max. Recorded Temp.	232°
Estimated Cement Top	
Time Well Ready	
Time Logger On Bottom	
Unit Number	
Tool Size / ID Number	Probe 2-3/4" Radii
Location	WCRs48+55,e4/10,ninto
Recorded By	Meisner
Witnessed By	B. Myers

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	5.5"			
Liner				

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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.

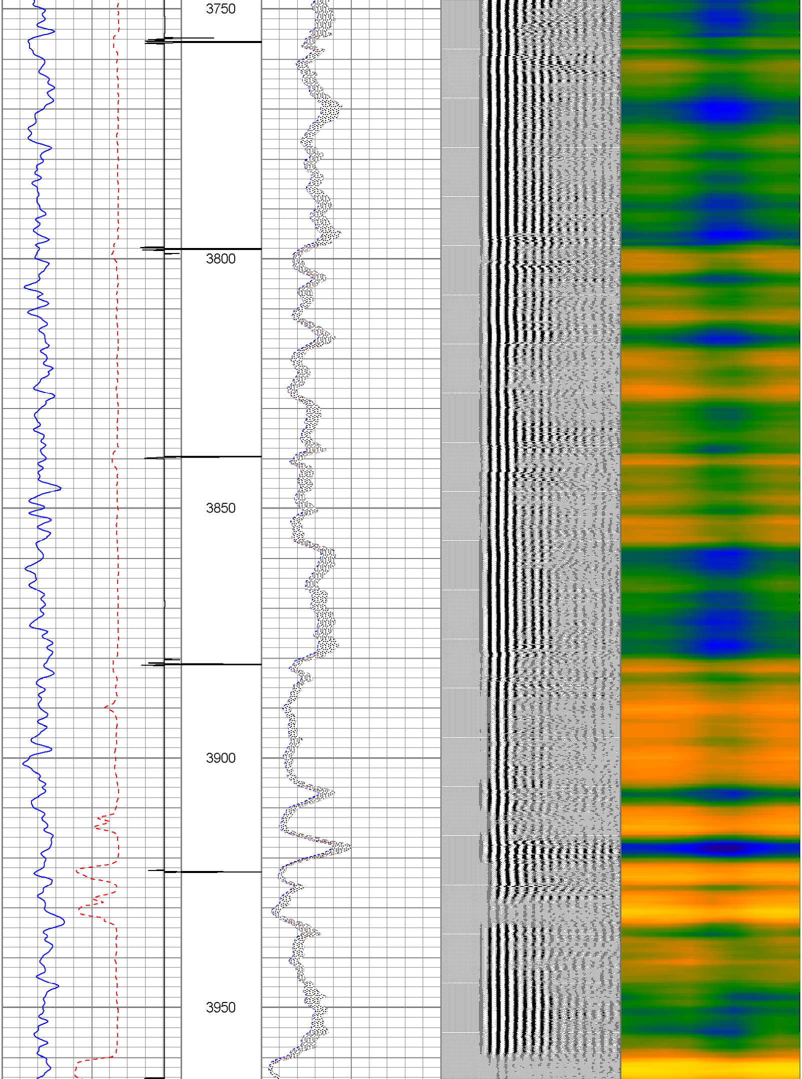
Comments

Popham 20 Well Pad

```
          <NORTH>
          O     O
          O     O
          O     O
          O     O
<WEST>    O     O    <EAST>
          O     O
          O     O
          O     O
          O     X
          O     O
          <SOUTH>
```

X = Popham 12N

Database File: pdcp12n.db
Dataset Pathname: pass1
Presentation Format: sector2
Dataset Creation: Tue Jun 11 14:28:11 2019 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240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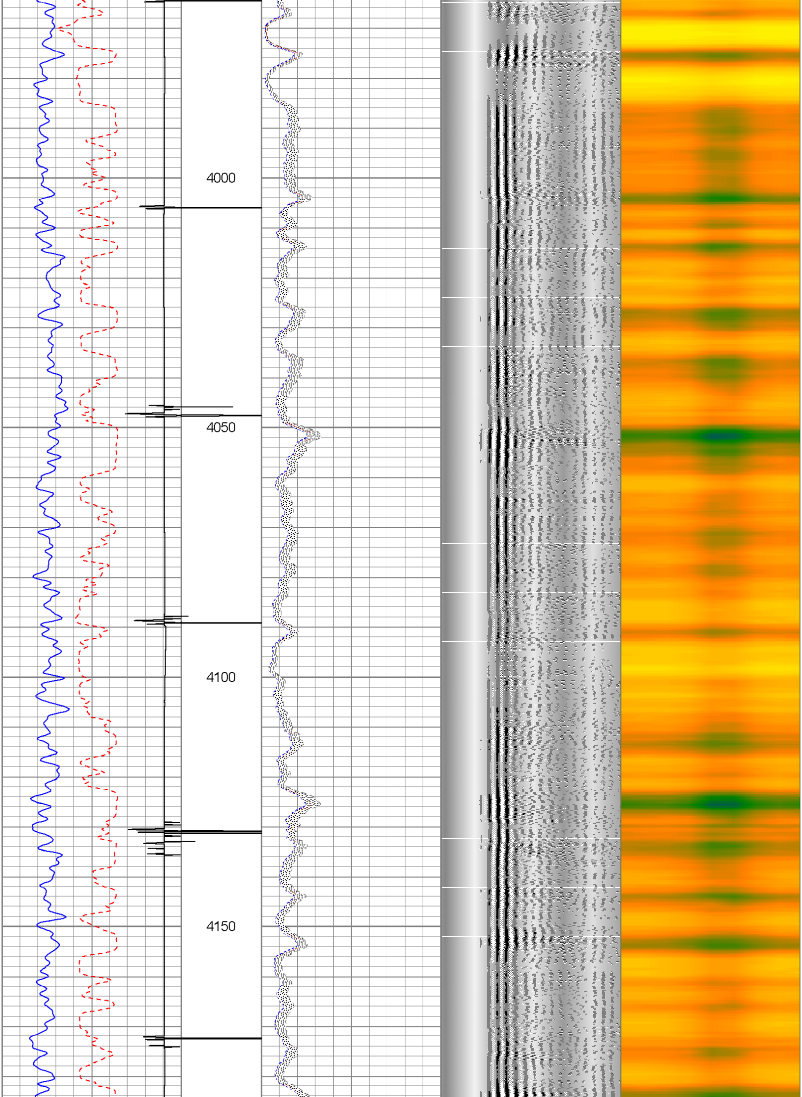
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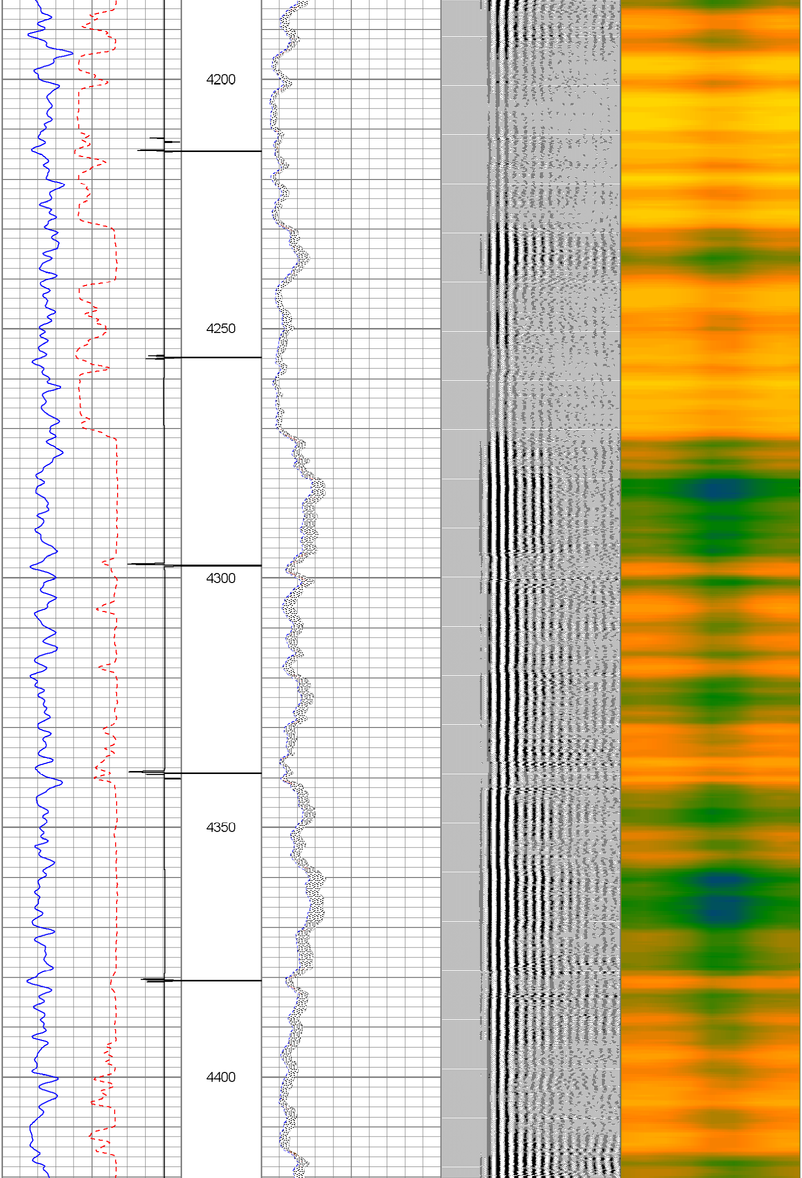
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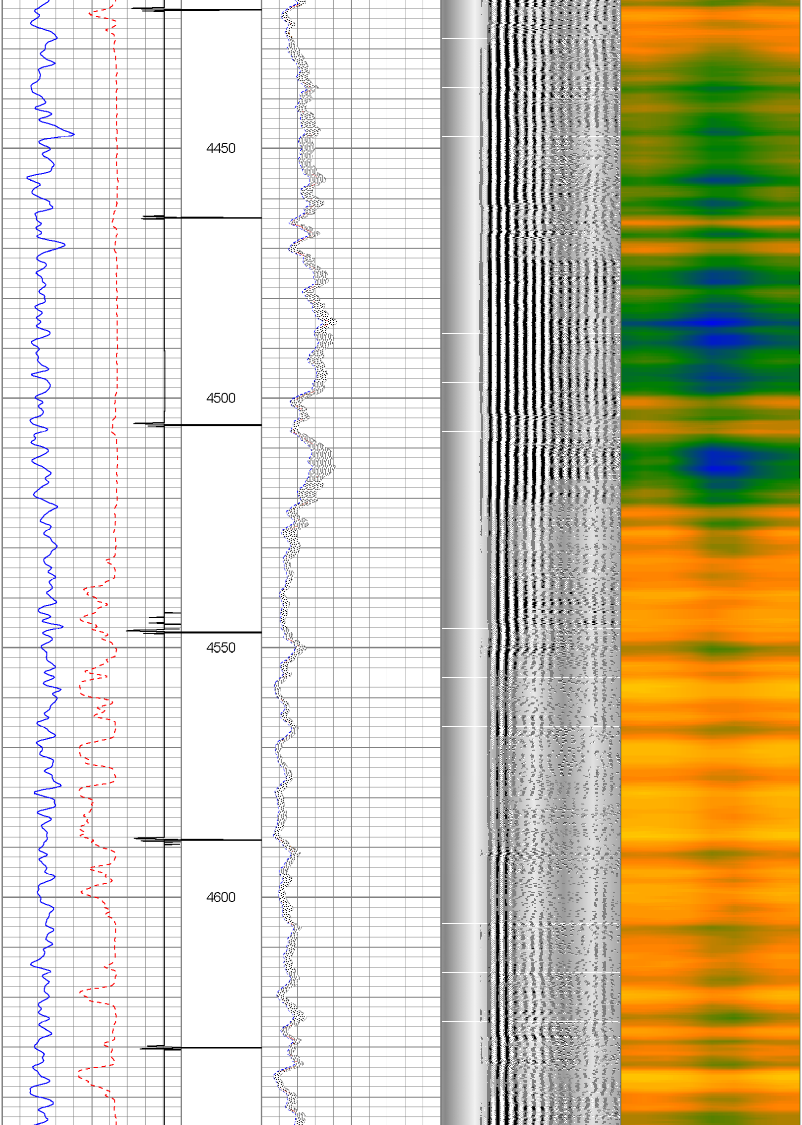
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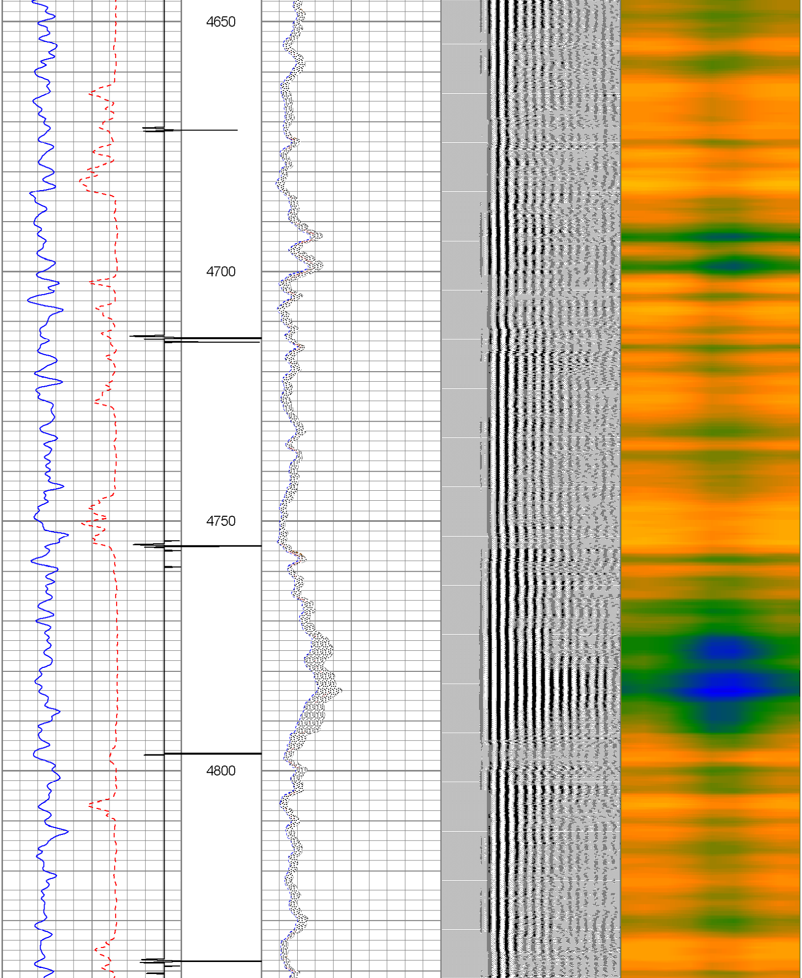
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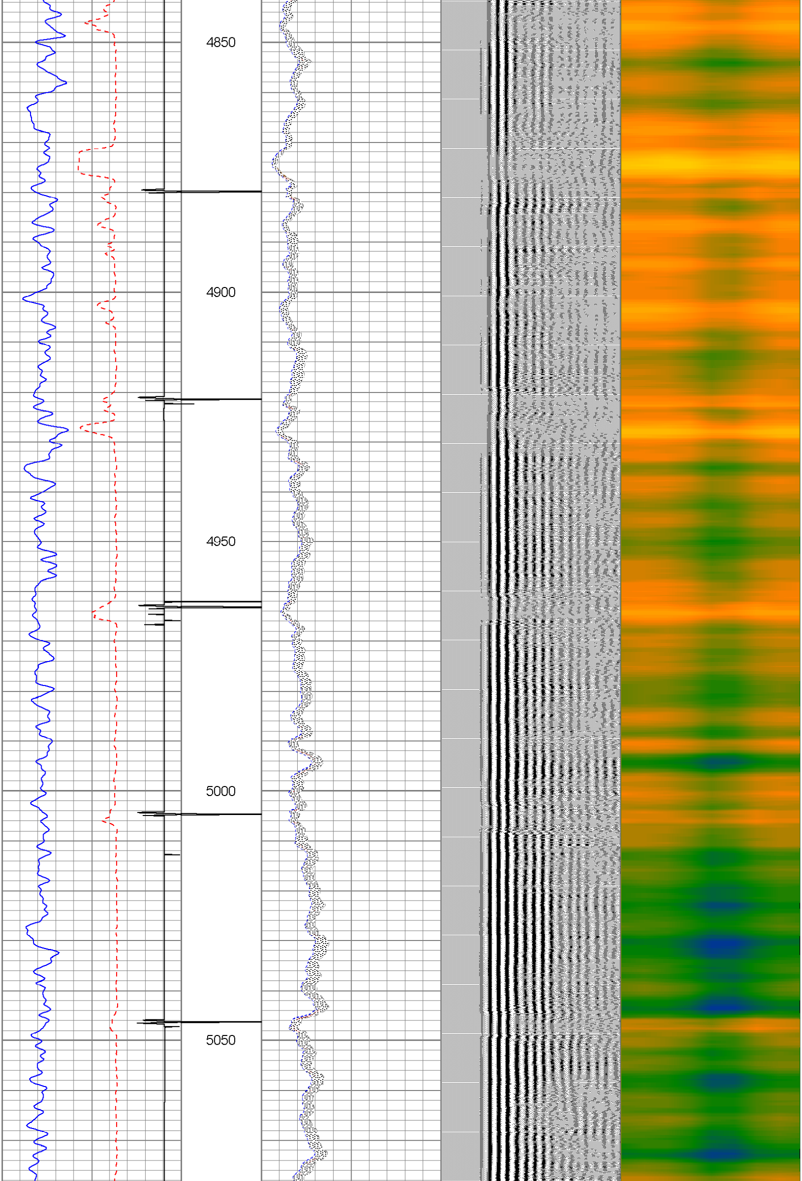
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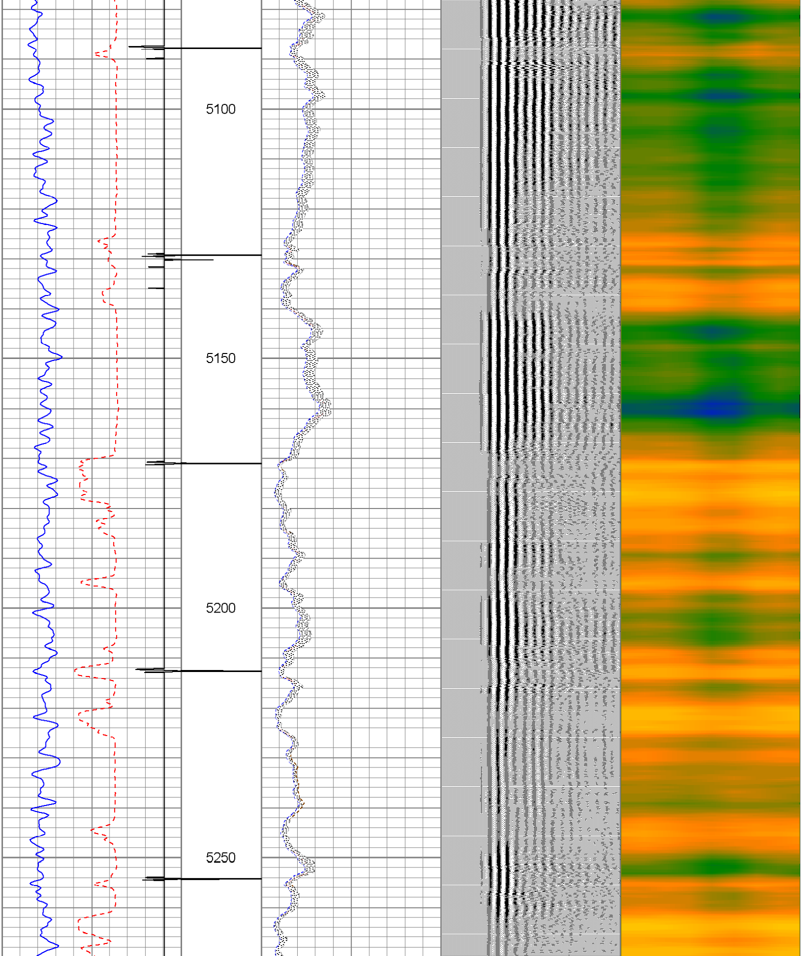
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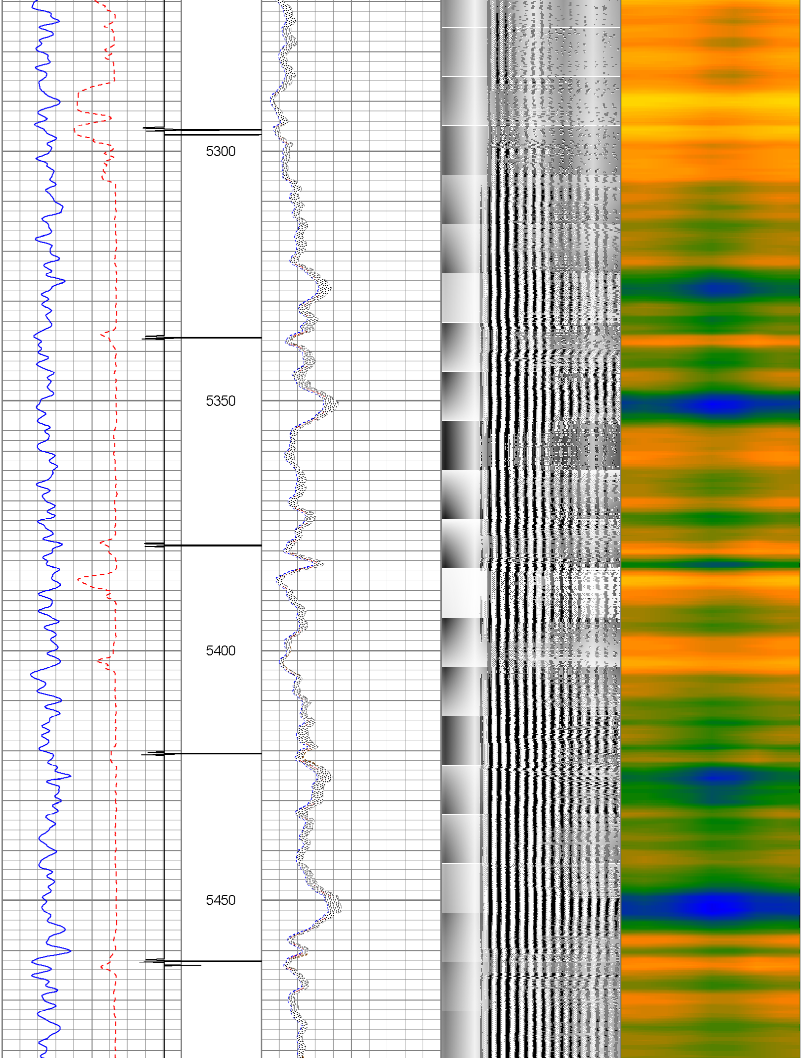
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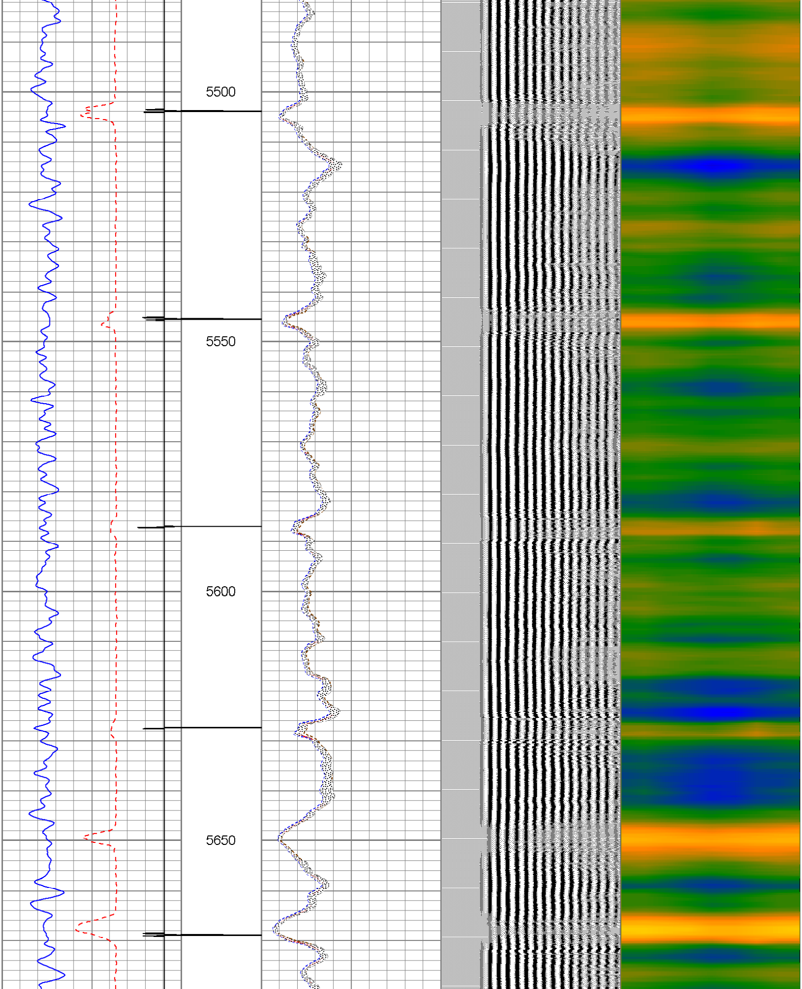
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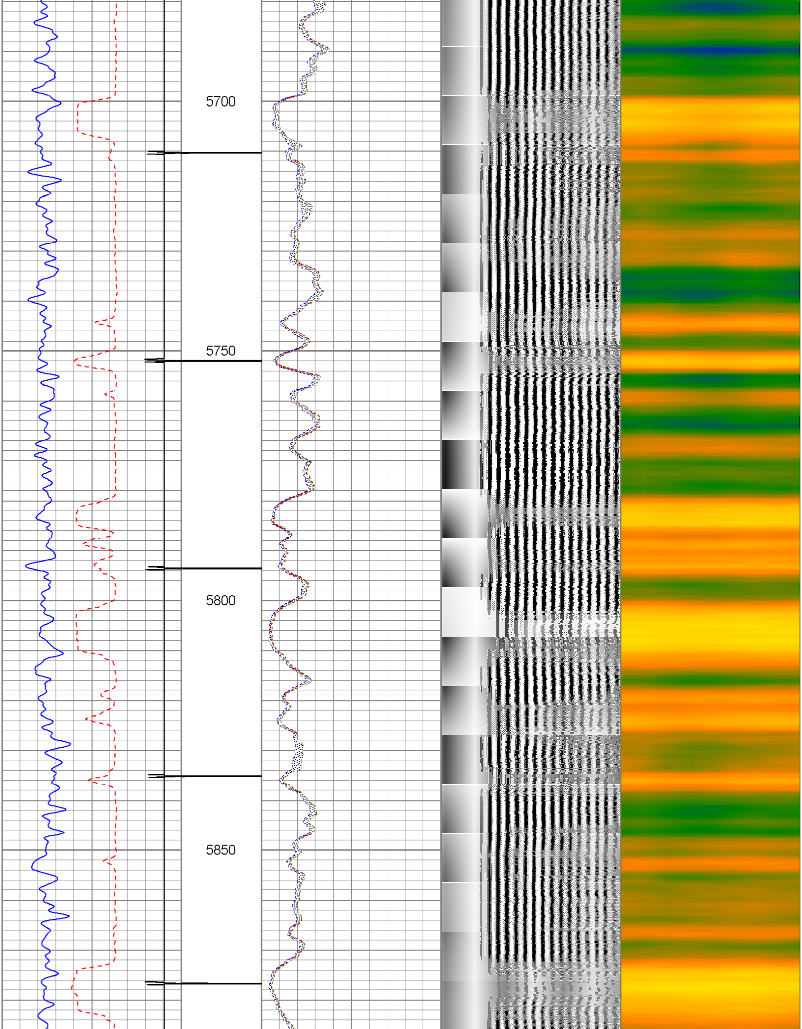
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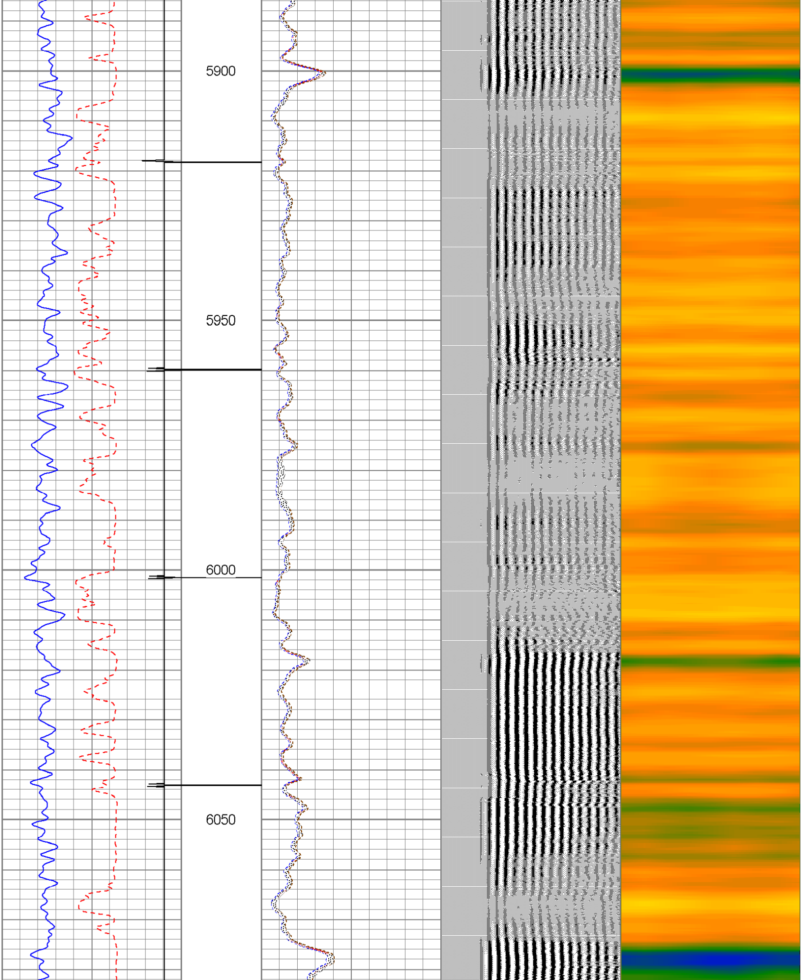
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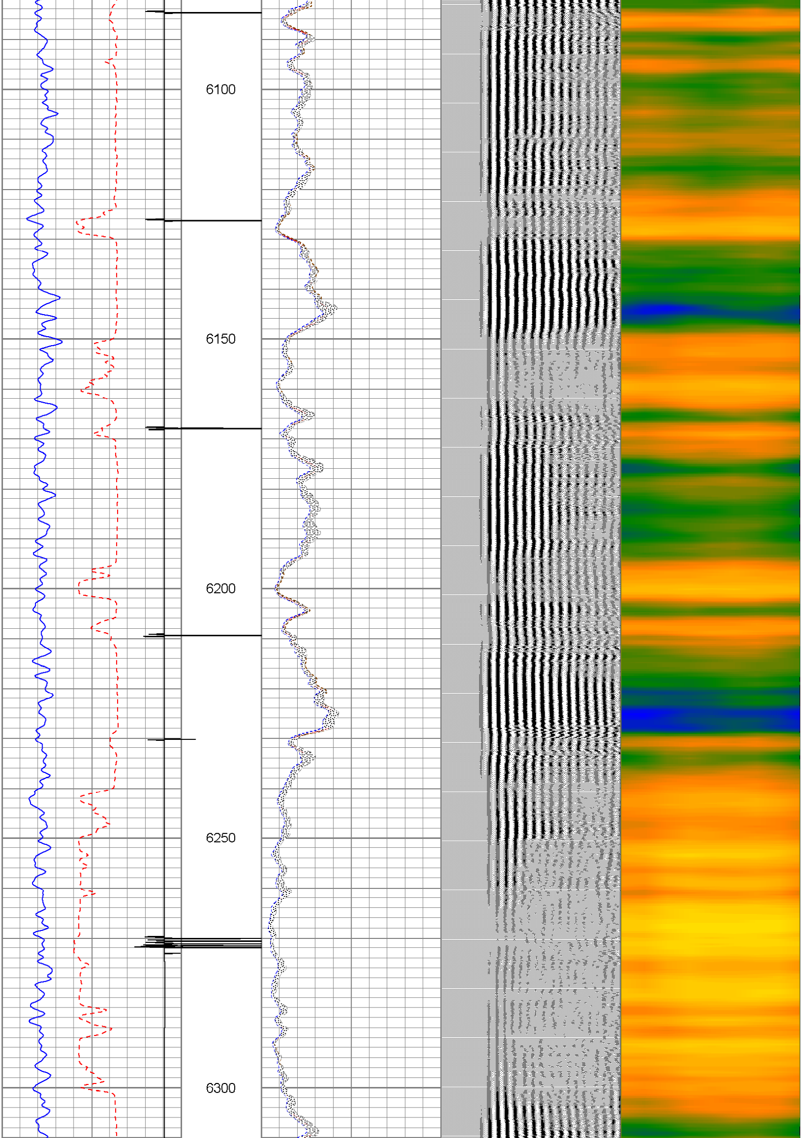
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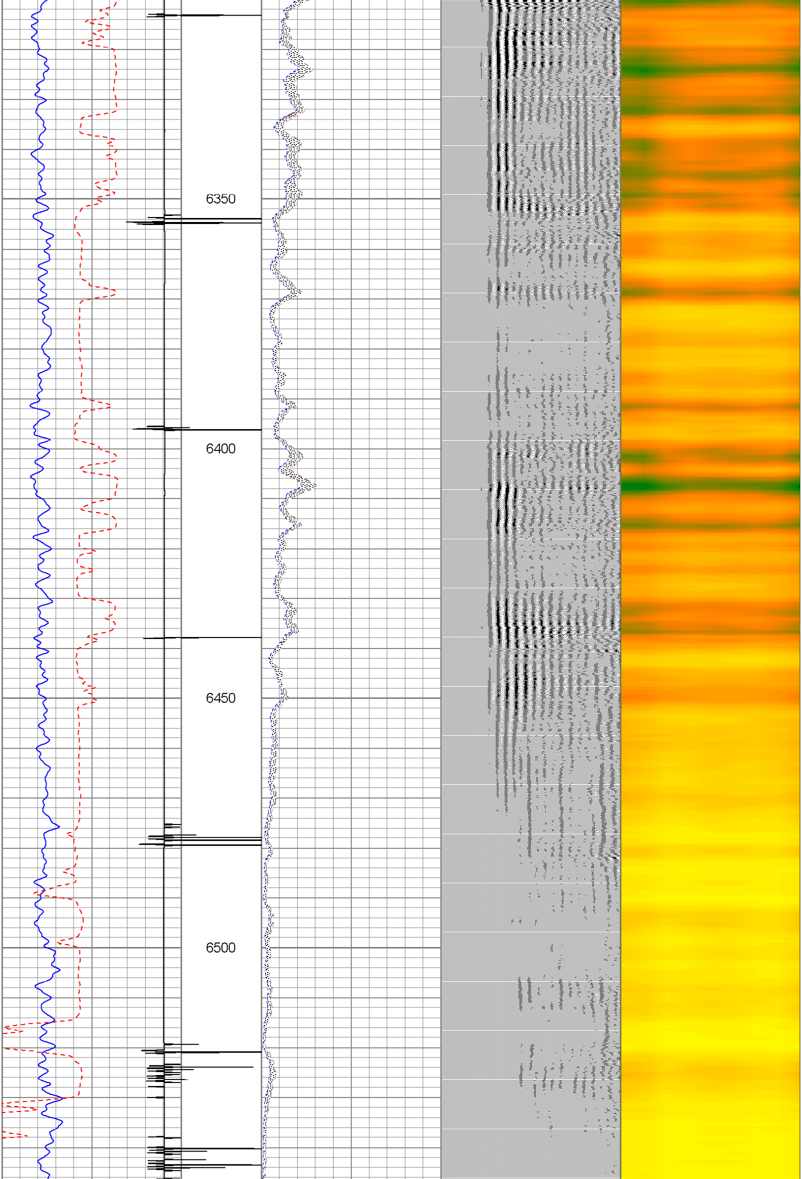
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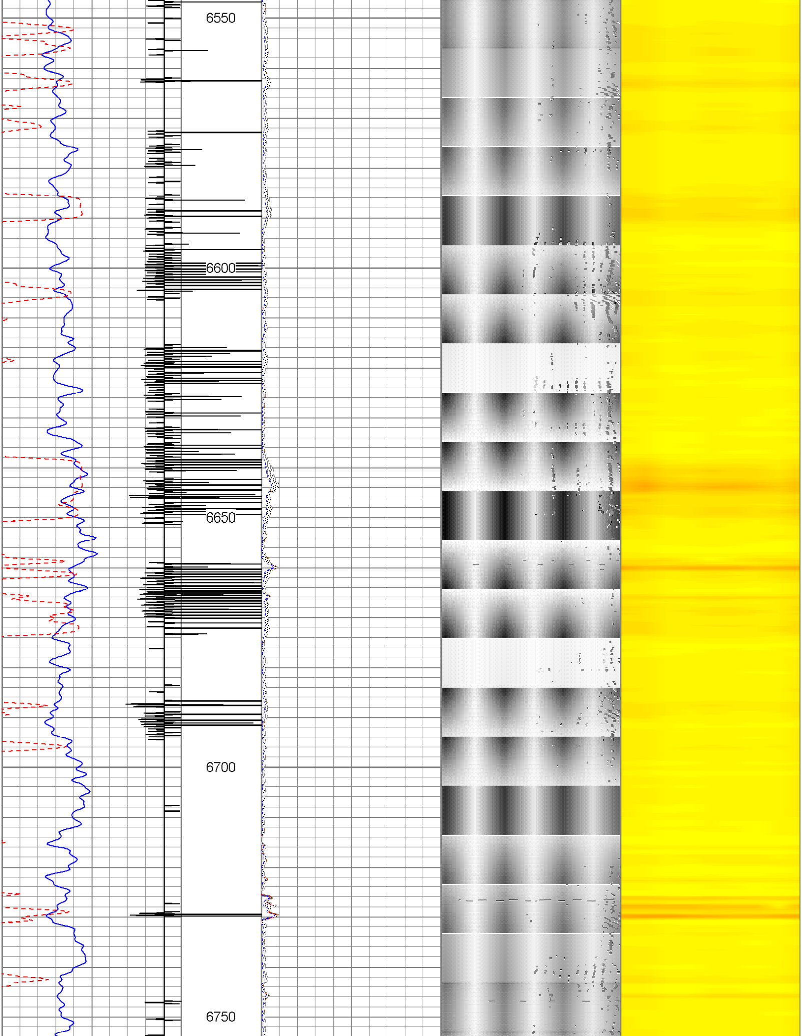
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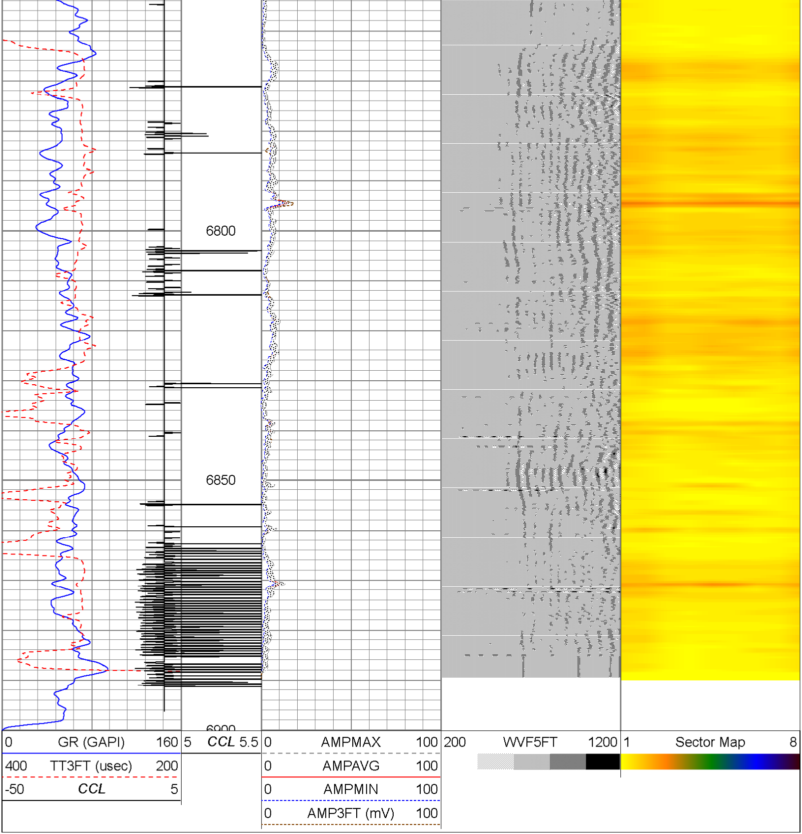
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0 AMP3FT (mV) 100
200 WVF5FT 1200
1 Sector Map 8