CEMENT BOND LOG

Company EXTRACTION OIL AND GAS
Well UNITED B S16-20-16C
Field WATTENBERG
County BROOMFIELD
State COLORADO Country USA

Company	EXTRACTION OIL AND GAS
Well	UNITED B S16-20-16C
Field	WATTENBERG
County	BROOMFIELD
State	COLORADO Country USA

Location: API # : 05-014-20810

NENE

SEC 9 TWP 1S RGE 68W

Permanent Datum	GROUND LEVEL Elevation	5254
Log Measured From	KELLY BUSHING 28'	
Drilling Measured From	KELLY BUSHING	

Other Services

NONE

Elevation

K.B. 5282
D.F.
G.L. 5254

Date	07-JAN-2022		
Run Number	ONE		
Depth Driller	18127		
Depth Logger	8424		
Bottom Logged Interval	8420		
Top Log Interval	SURFACE		
Open Hole Size	8 3/4		
Type Fluid	WATER		
Density / Viscosity	---		
Max. Recorded Temp.	248		
Estimated Cement Top	606'		
Time Well Ready	ROA		
Time Logger on Bottom	1045		
Equipment Number	803		
Location	KERSEY		
Recorded By	JIM McKIE		
Witnessed By	KRIS PETERSON		

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 1/2"	17#	SURFACE	TOTAL DEPTH
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

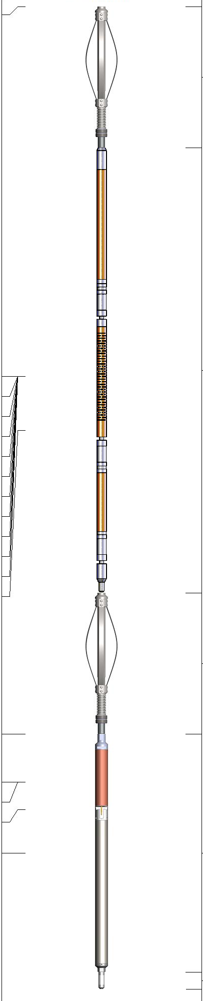
FINAL

LOG MEASURED FROM KB AT 28'

FLOAT TOOL FOUND @ 7414'

Sensor	Offset (ft)
ErrCt	19.69
WVFSYNC	12.27
WVFS8	12.27
WVFS7	12.27
WVFS6	12.27
WVFS5	12.27
WVFS4	12.27
WVFS3	12.27
WVFS2	12.27
WVFS1	12.27
WVFCAL	12.27
WVF3FT	12.27
WVF5FT	11.19
GCT_HV	5.10
CCL$2	4.14
CCL$1	4.14
GCT_Temp	3.59
GR	2.72

Schematic



Description	Length (ft)	O.D. (in)	Weight (lb
CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
RBT-Probe (FW1905-055) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
GC-GCT275-0000 (FW1905-098) Probe Gamma Ray - CCL w/ Temp	4.77	2.75	55.00
Plug-FA108-0000 1.38" Bull Plug	0.33	1.38	1.00

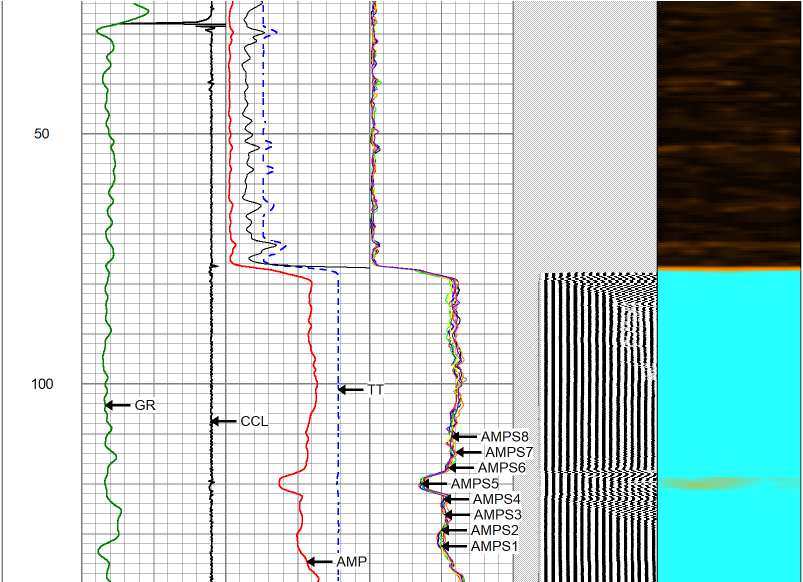
Dataset:	cicitas united b s16-20-16c.db: field/well/run1/pass5
Total length:	19.69 ft
Total weight:	194.00 lb
O.D.:	2.75 in

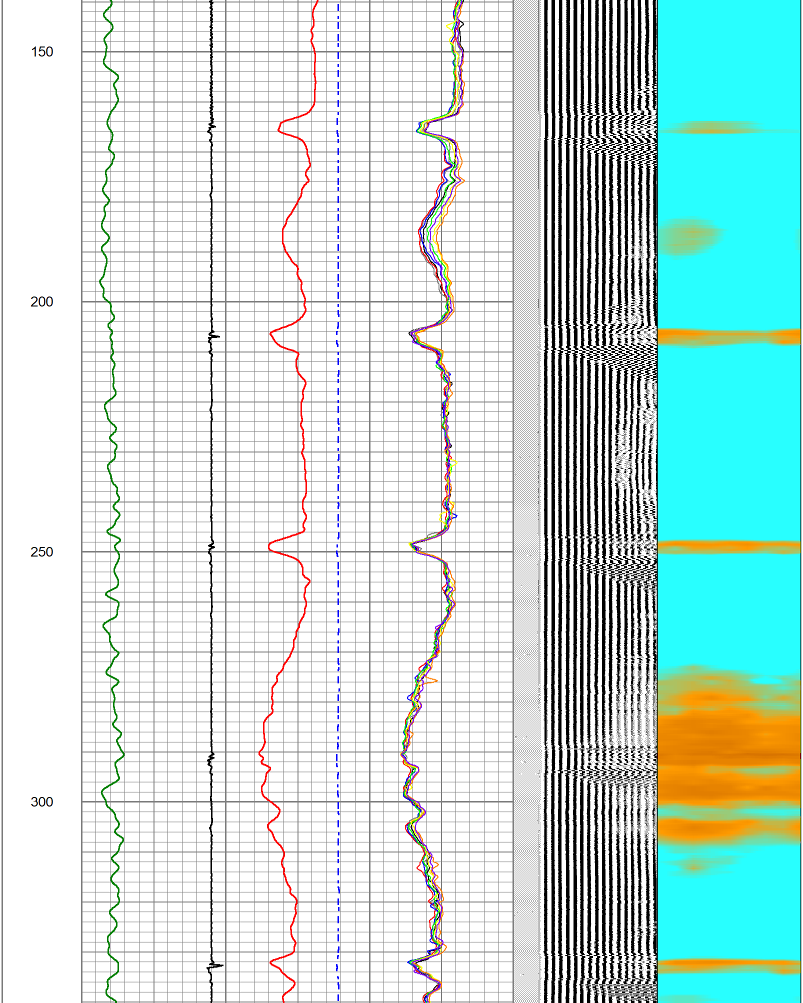
SureFire WIRELINE WEST LLC

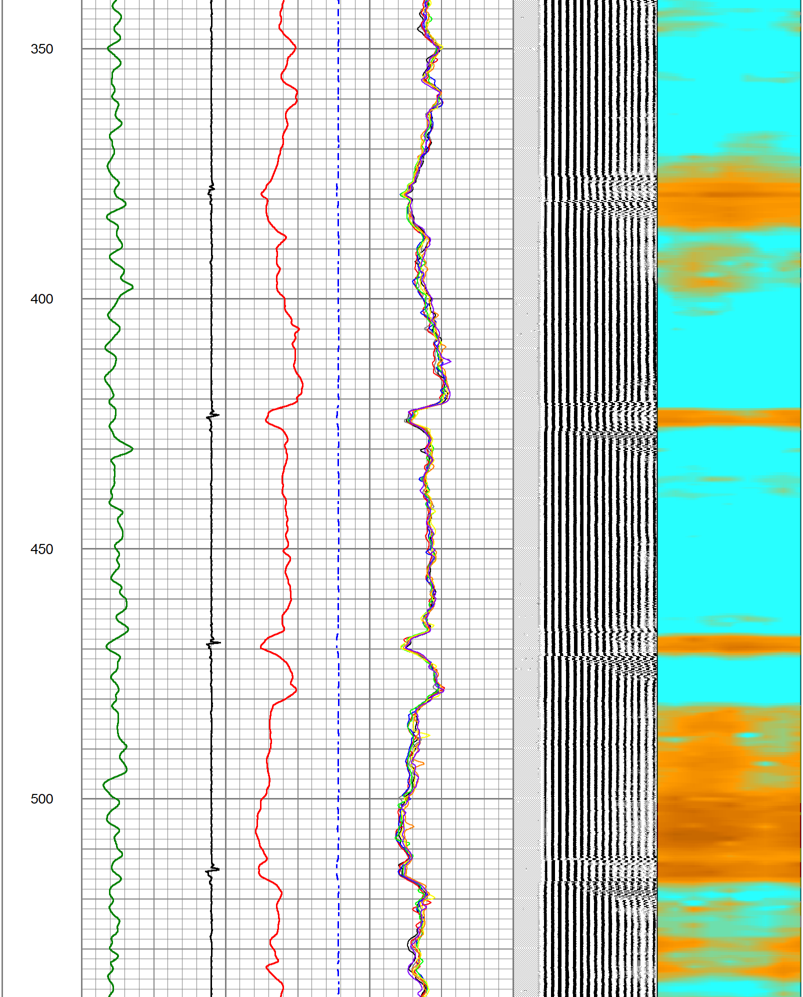
MAIN LOG

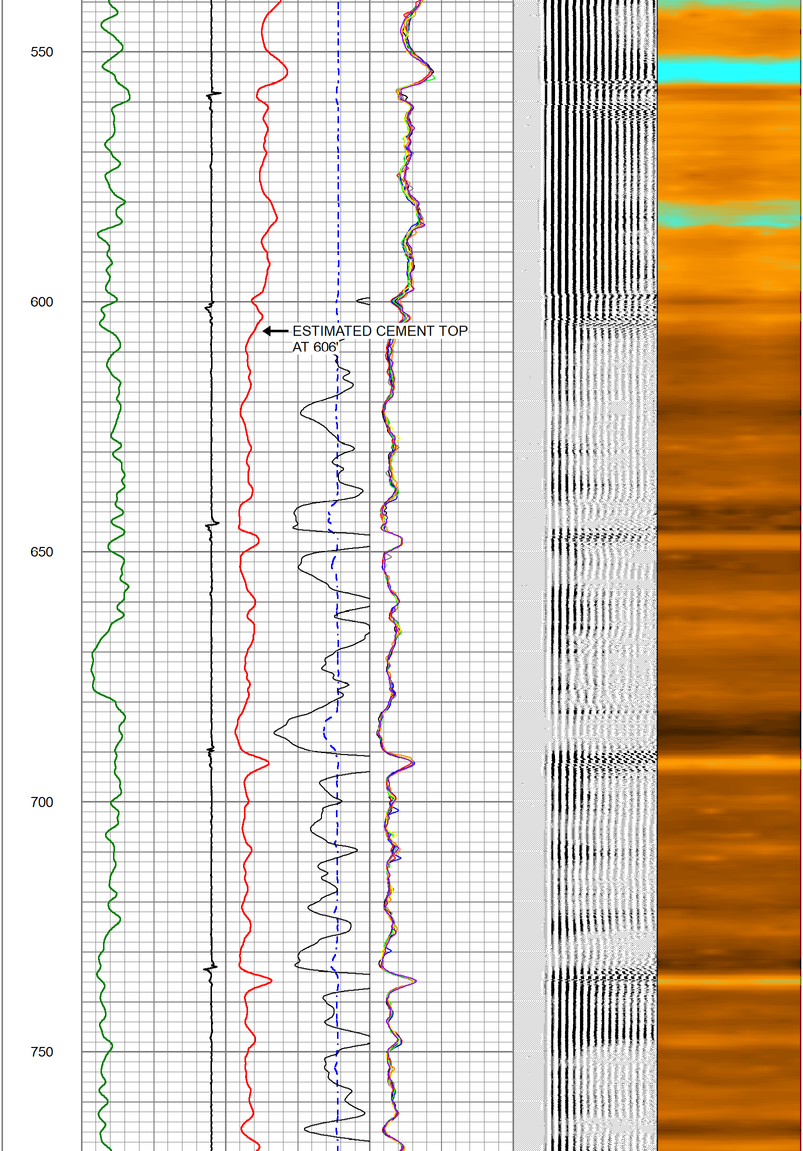
Database File	cicitas united b s16-20-16c.db
Dataset Pathname	pass5.3
Presentation Format	sfww_cbl_oasis-sectors (2)
Dataset Creation	Sun Jan 09 09:25:41 2022
Charted by	Depth in Feet scaled 1:240

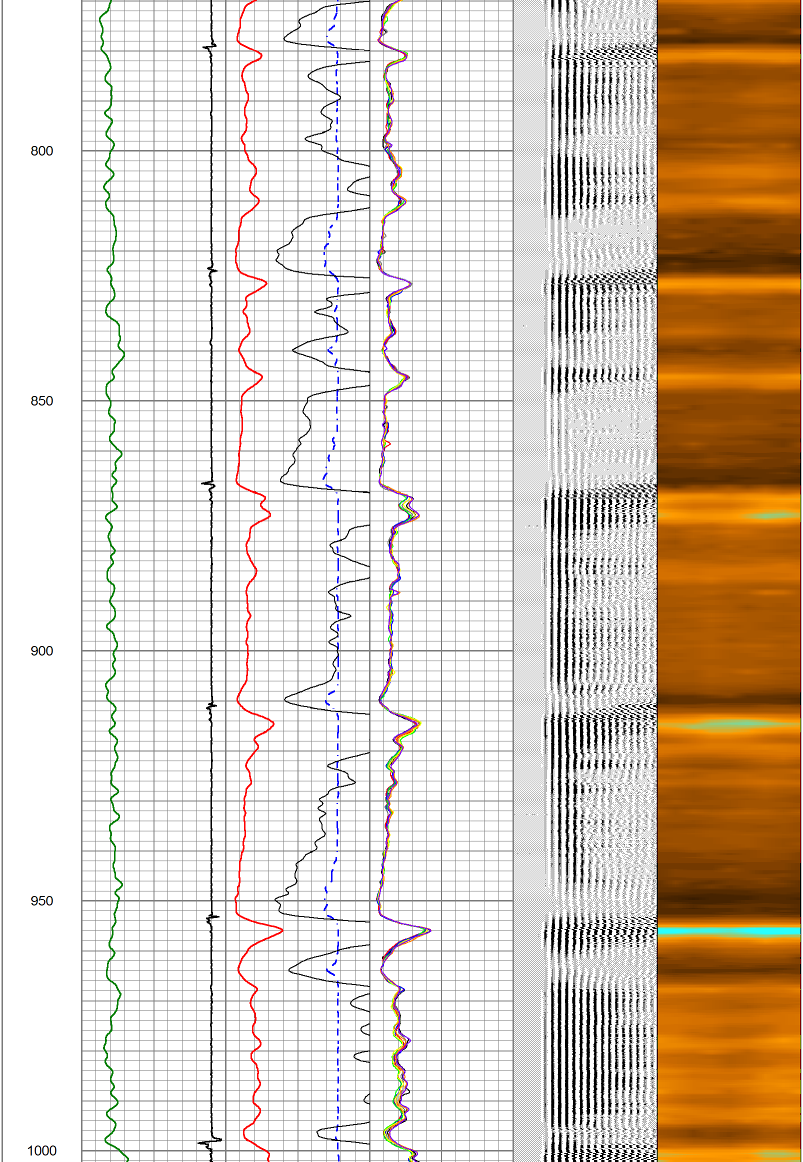
-7 CCL 3	0 AMP (mV) 100	0 AMPS1 100	200 VDL (usec) 1200	1 RADIAL MAP 8
0 GR (GAPI) 150	650 TT (usec) 150	0 AMPS2 100		
	0 AMPx5 (mV) 20	0 AMPS3 100		
		0 AMPS4 100		
		0 AMPS5 100		
		0 AMPS6 100		
		0 AMPS7 100		
		0 AMPS8 100		

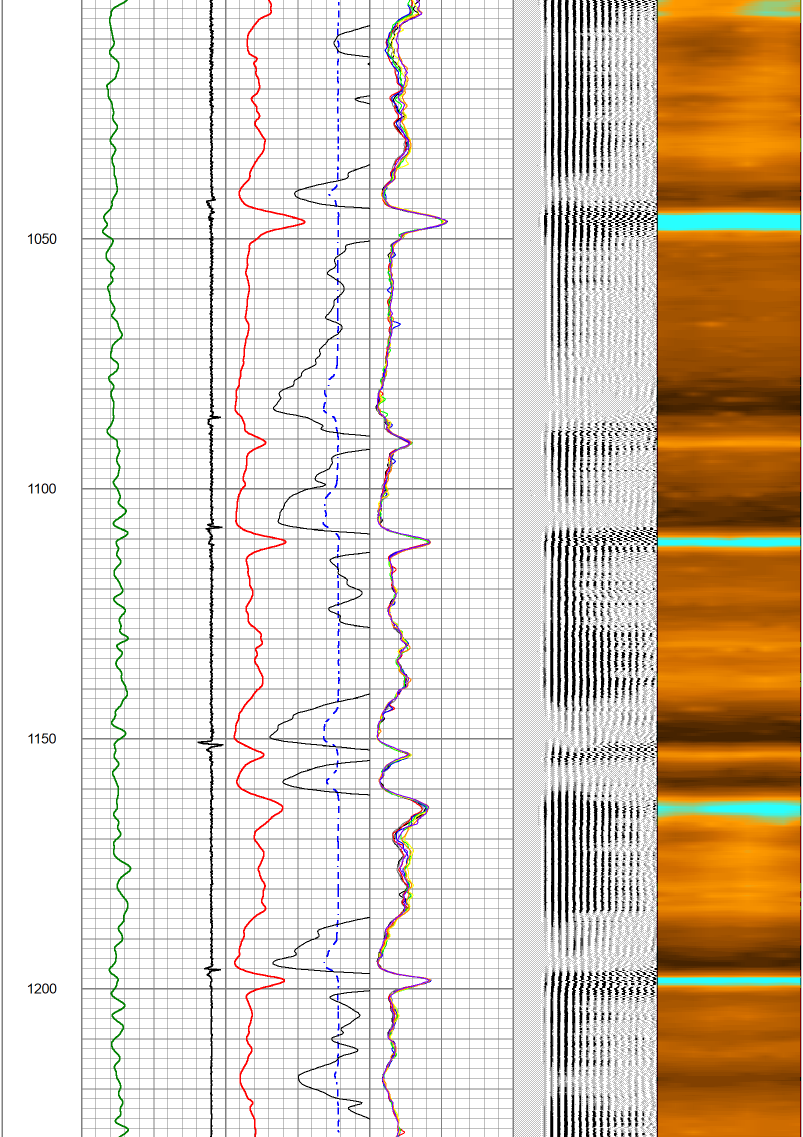


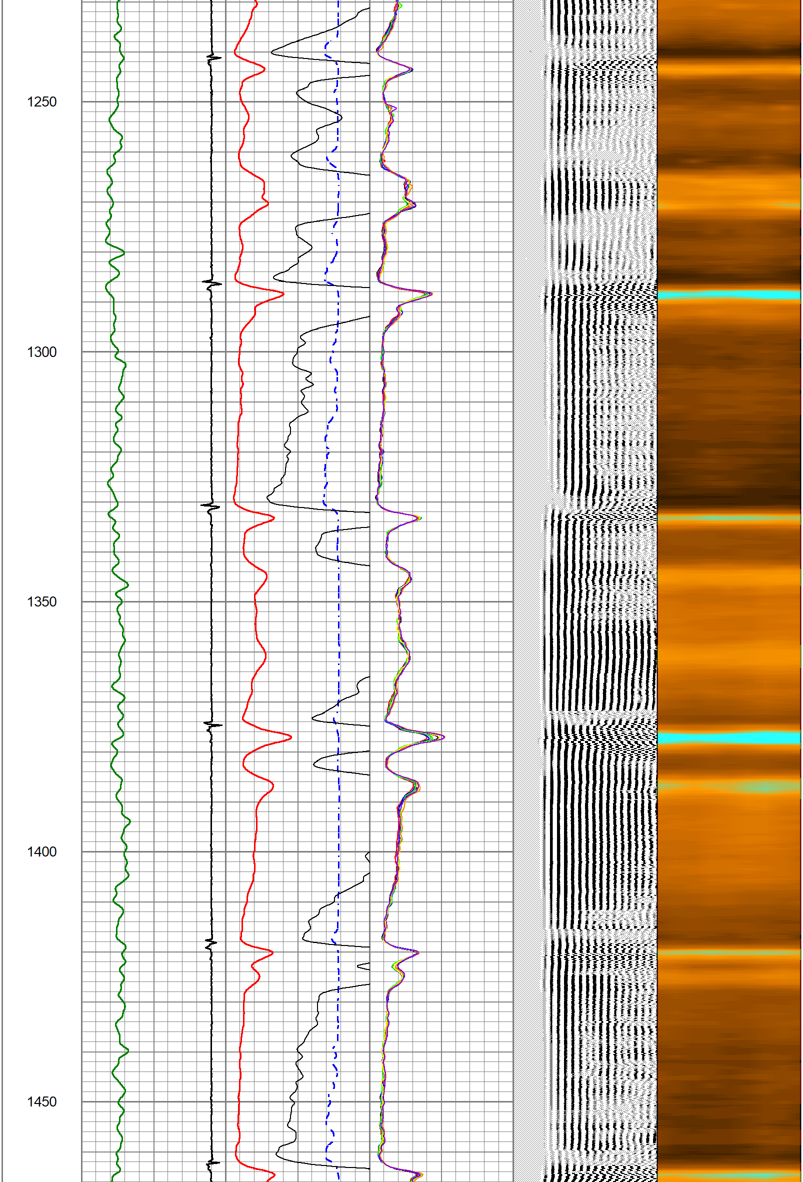


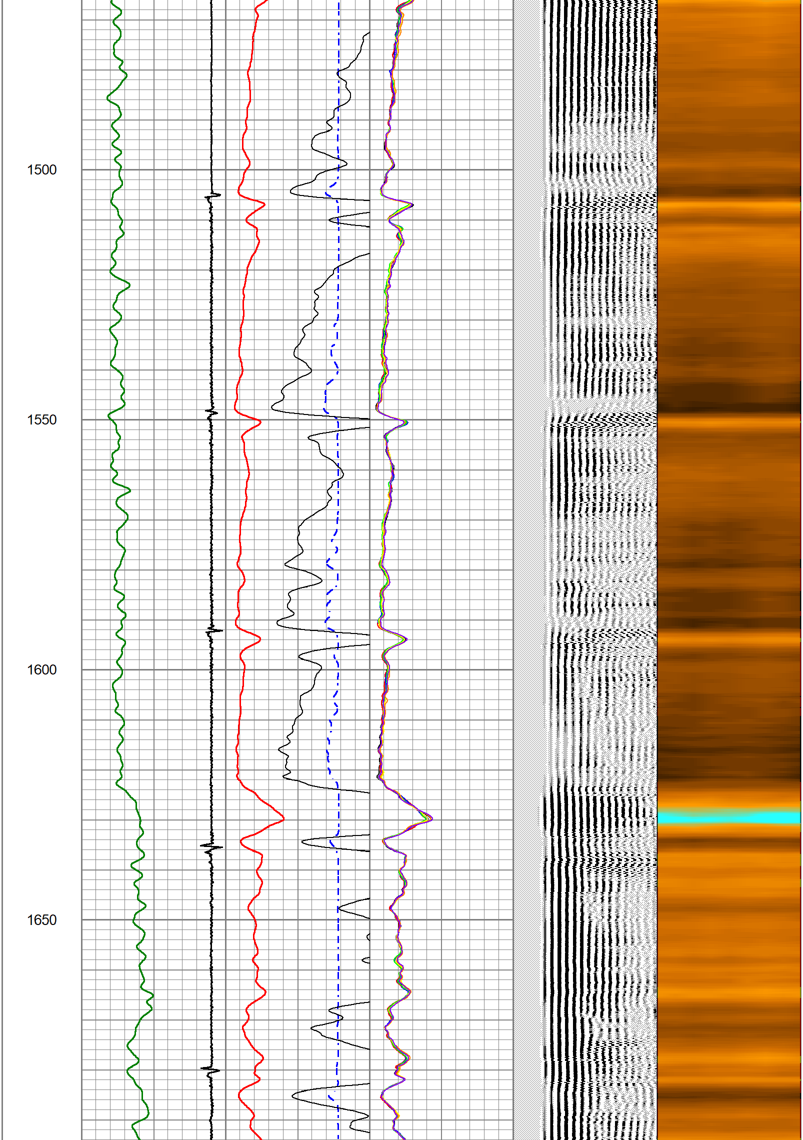


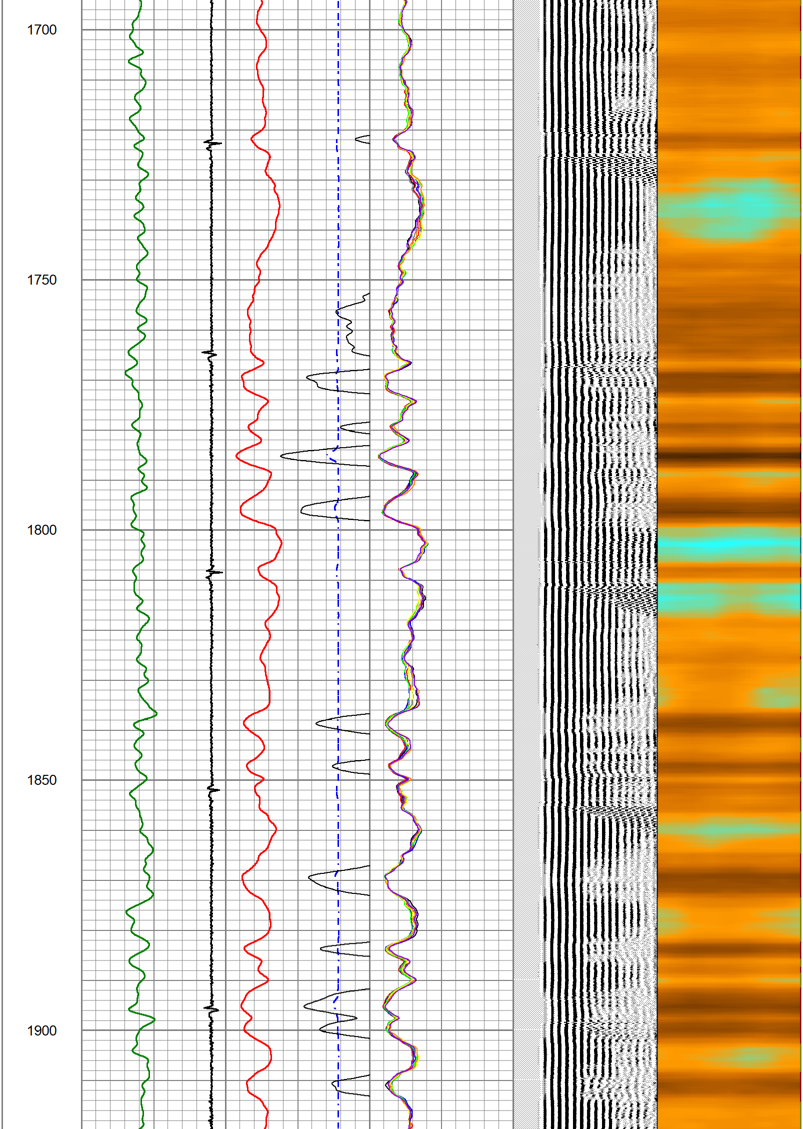


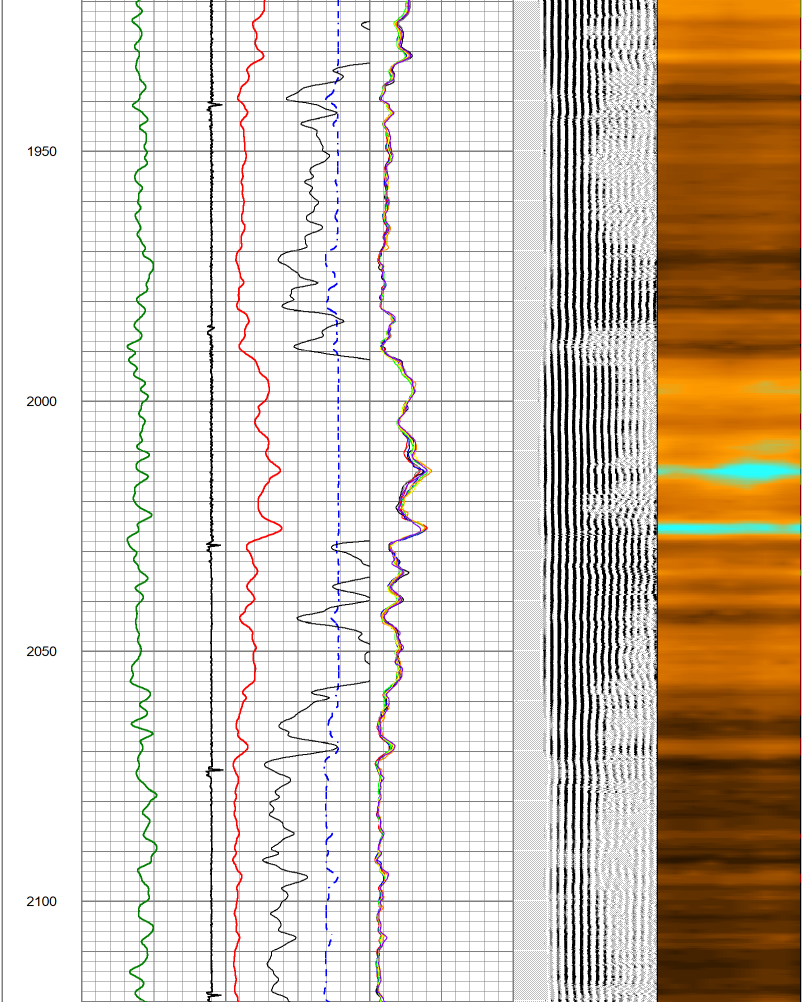


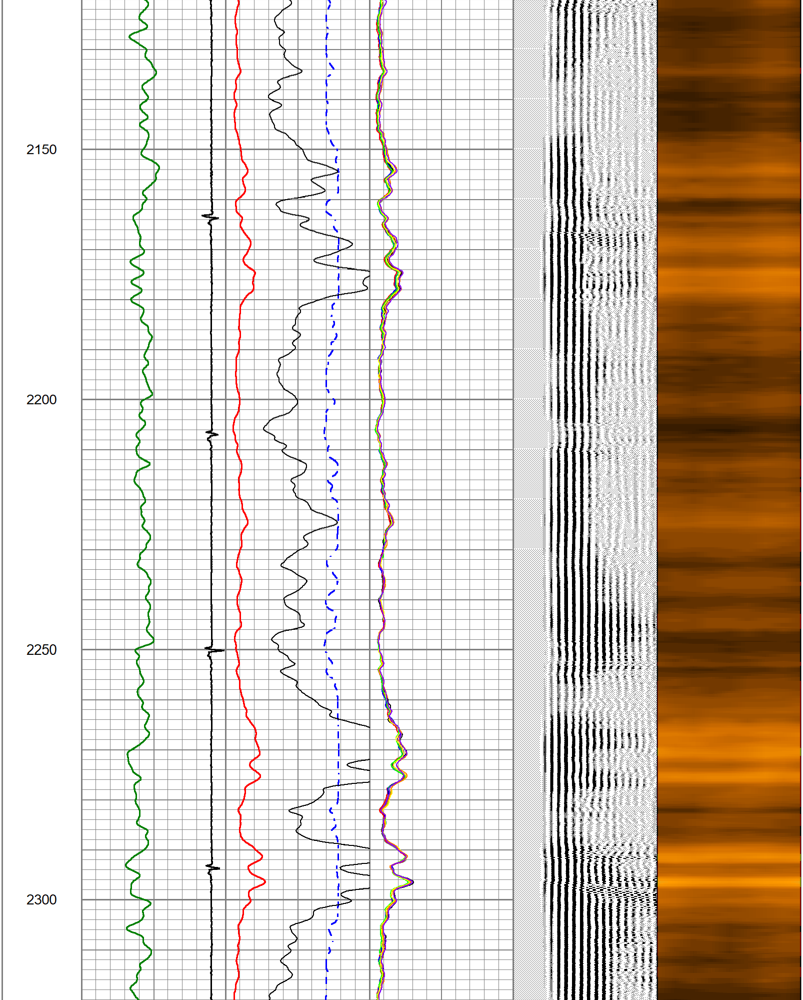


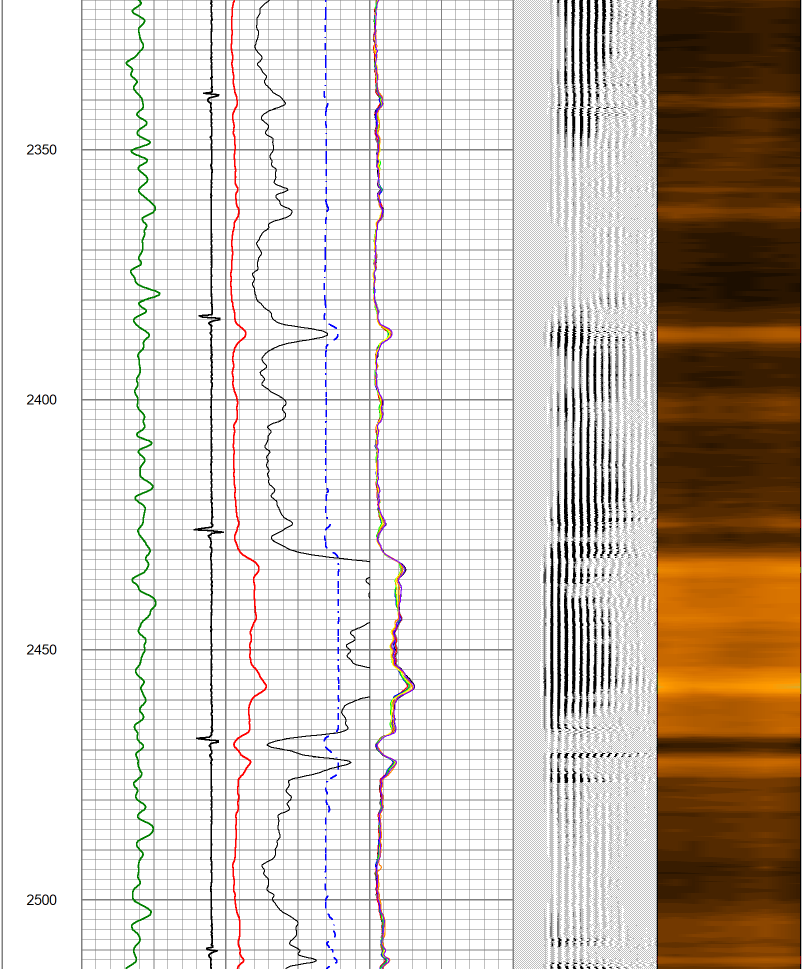


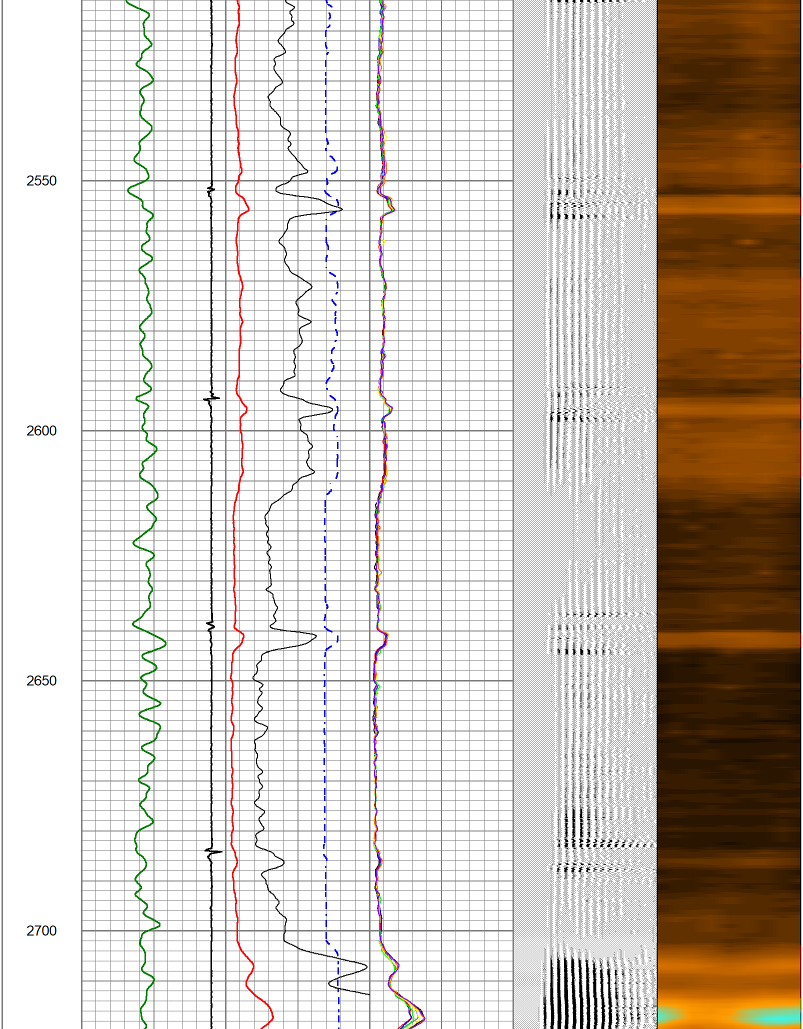


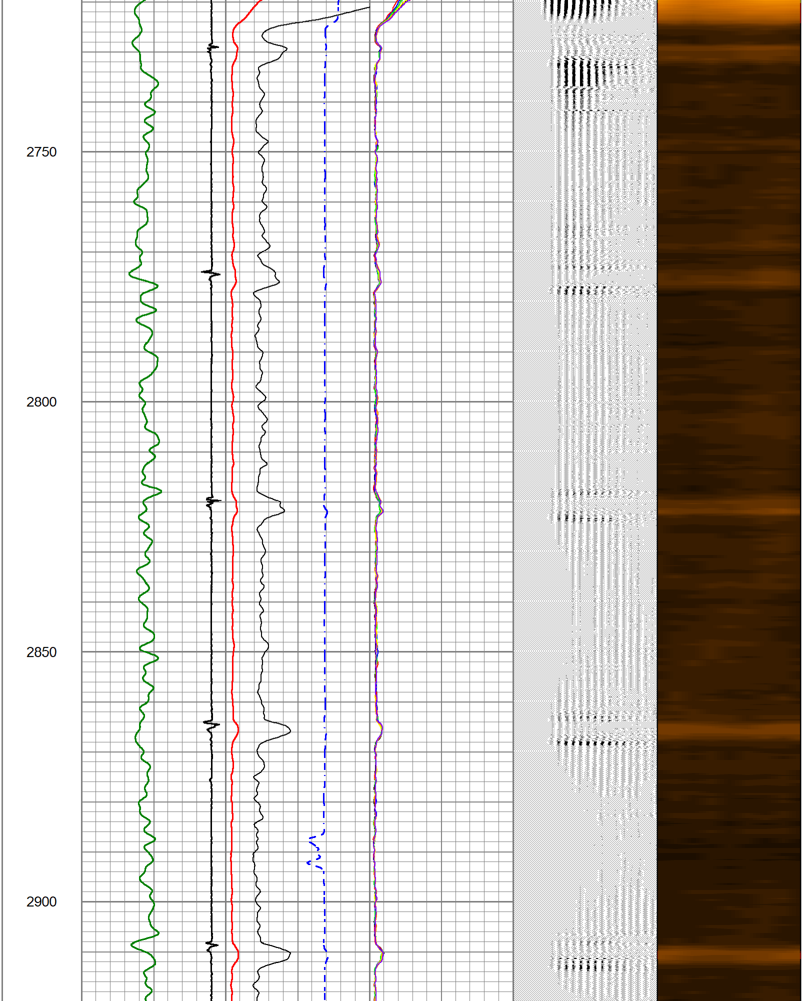


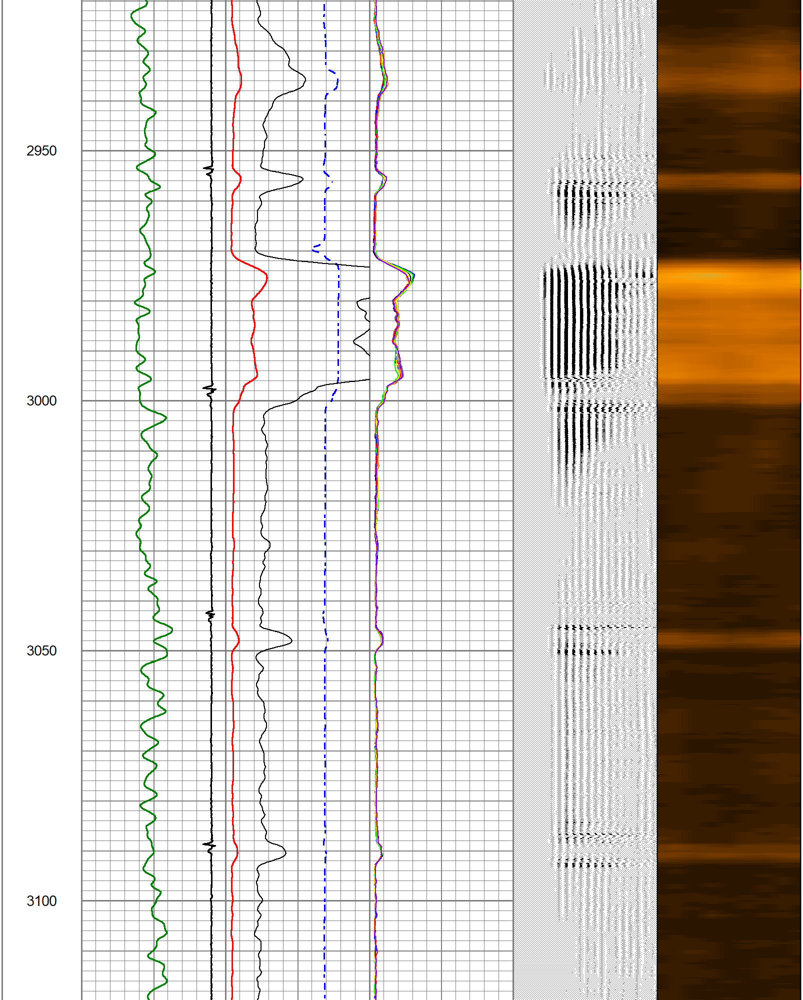


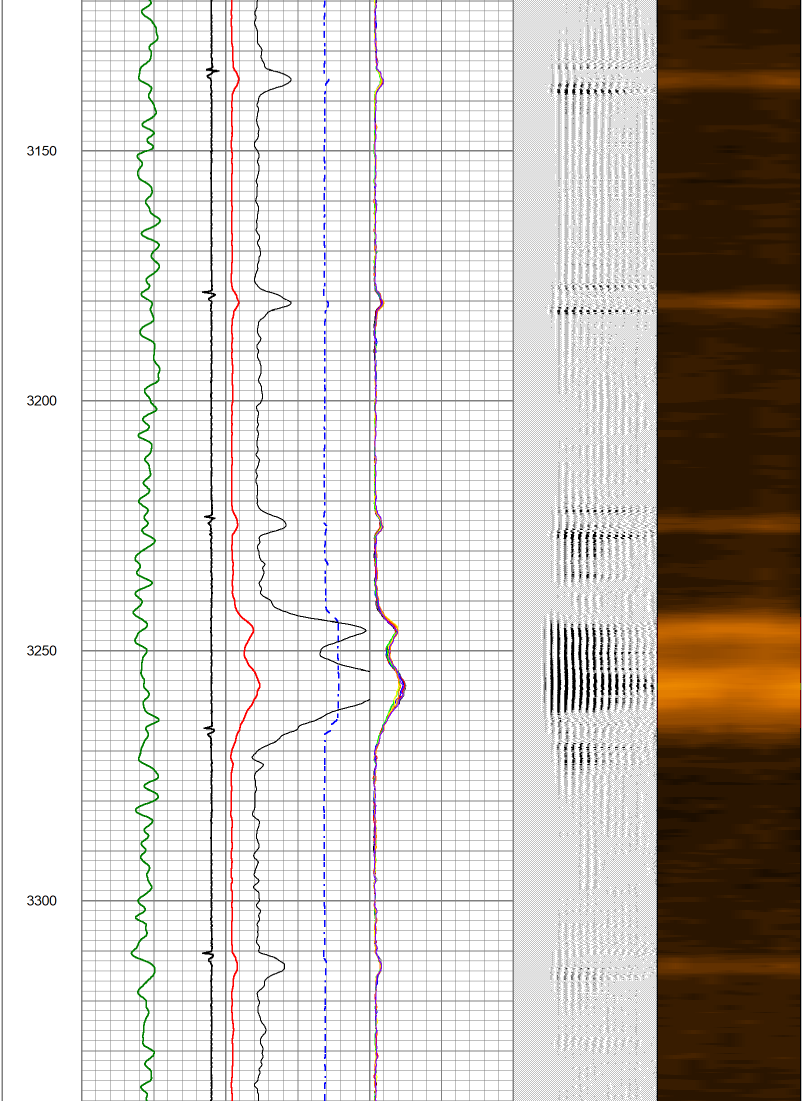


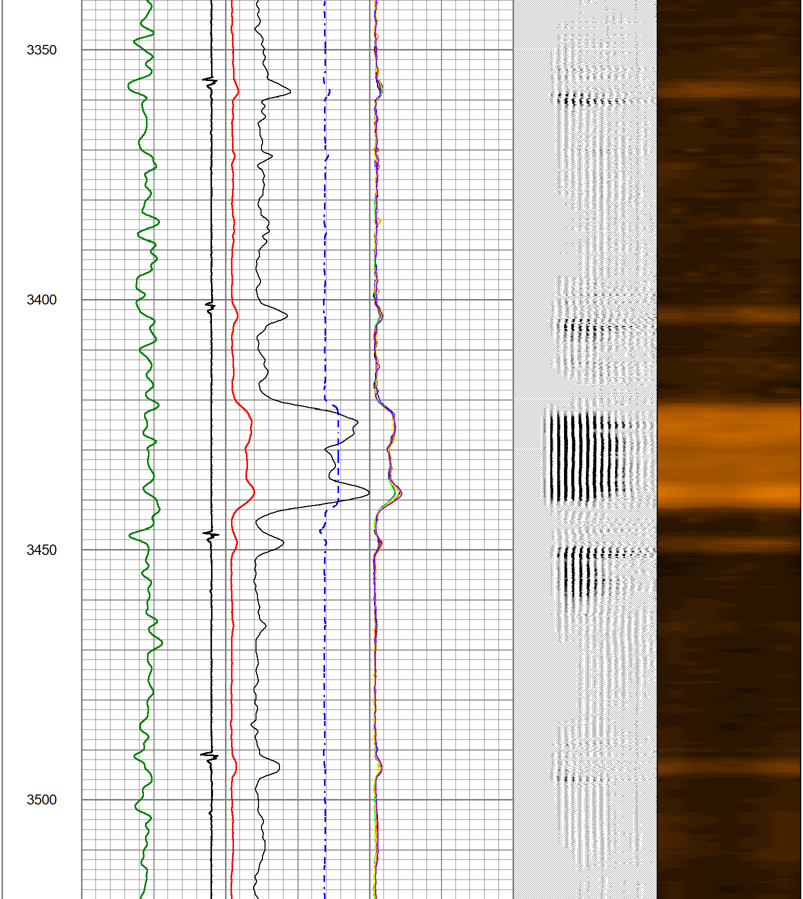


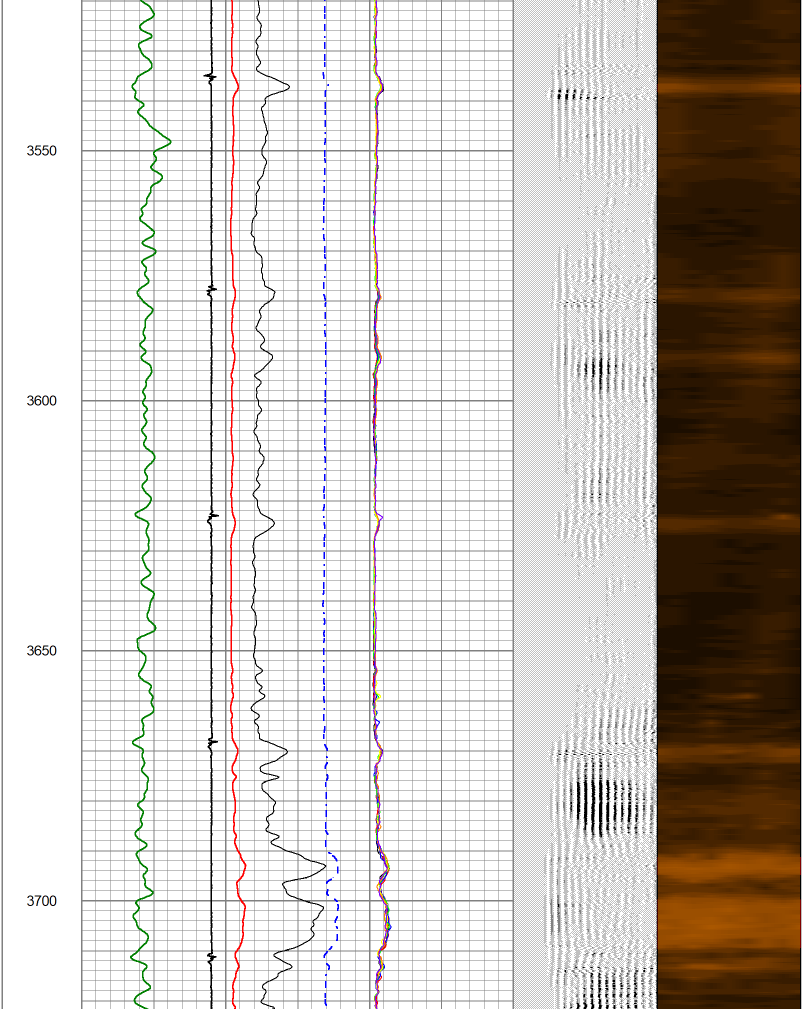








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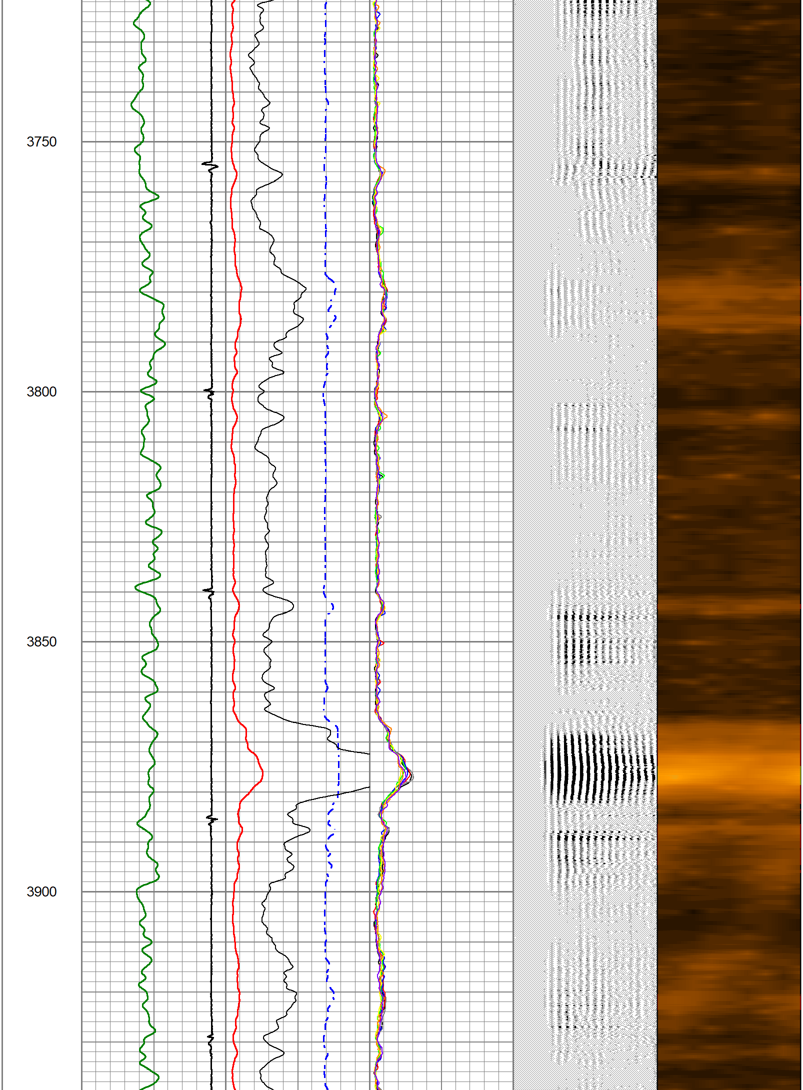
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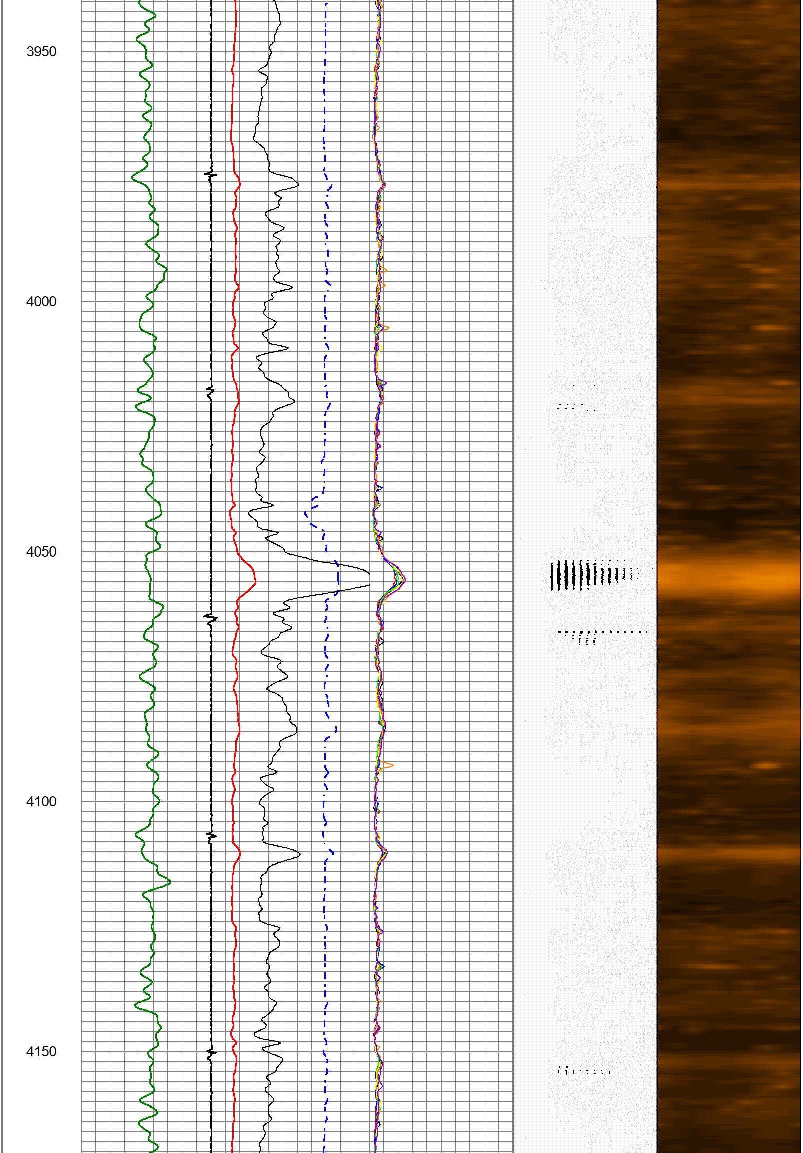
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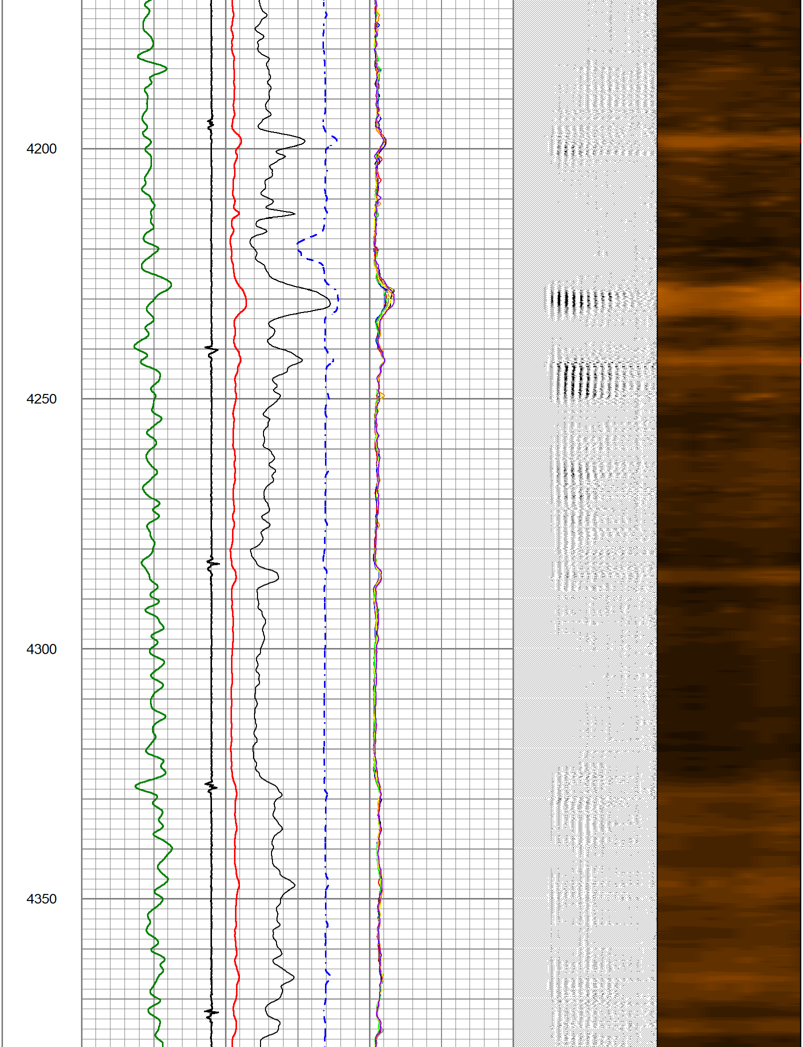
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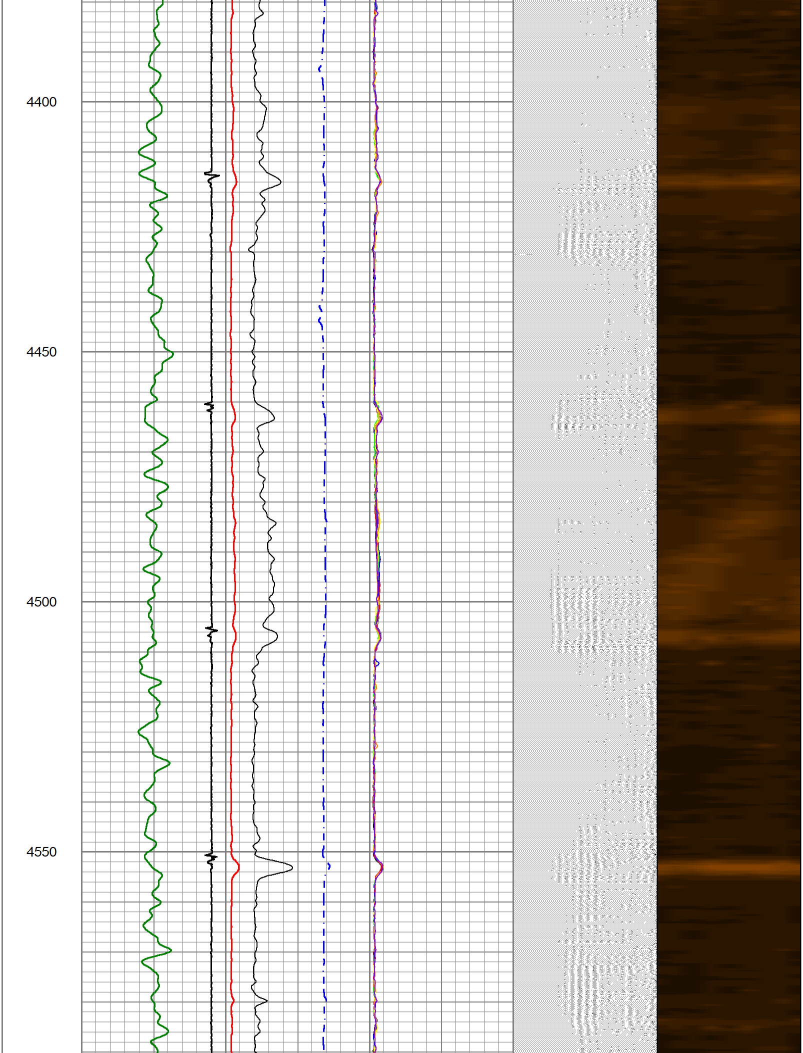
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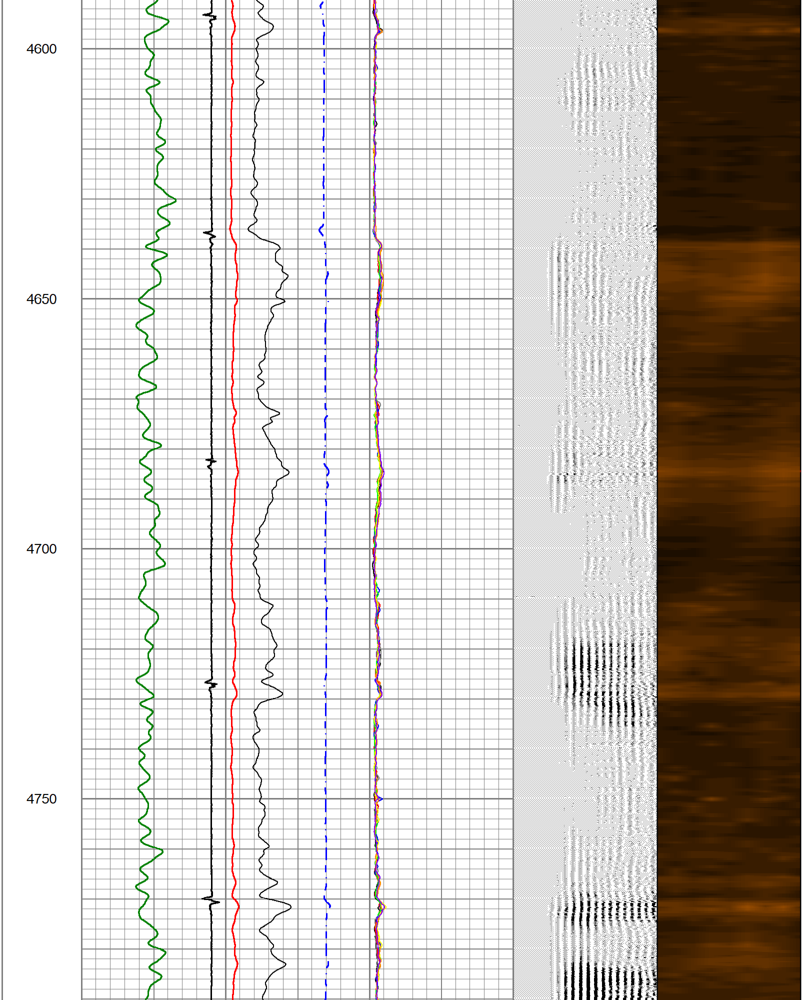
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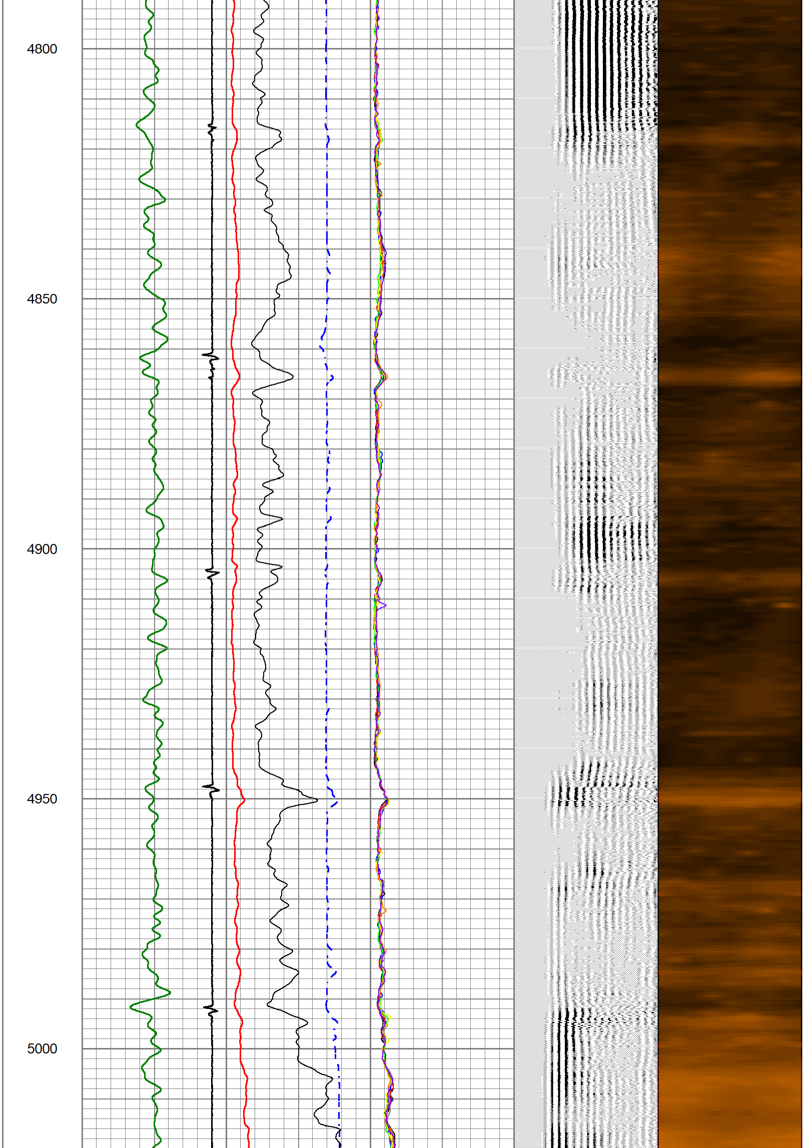
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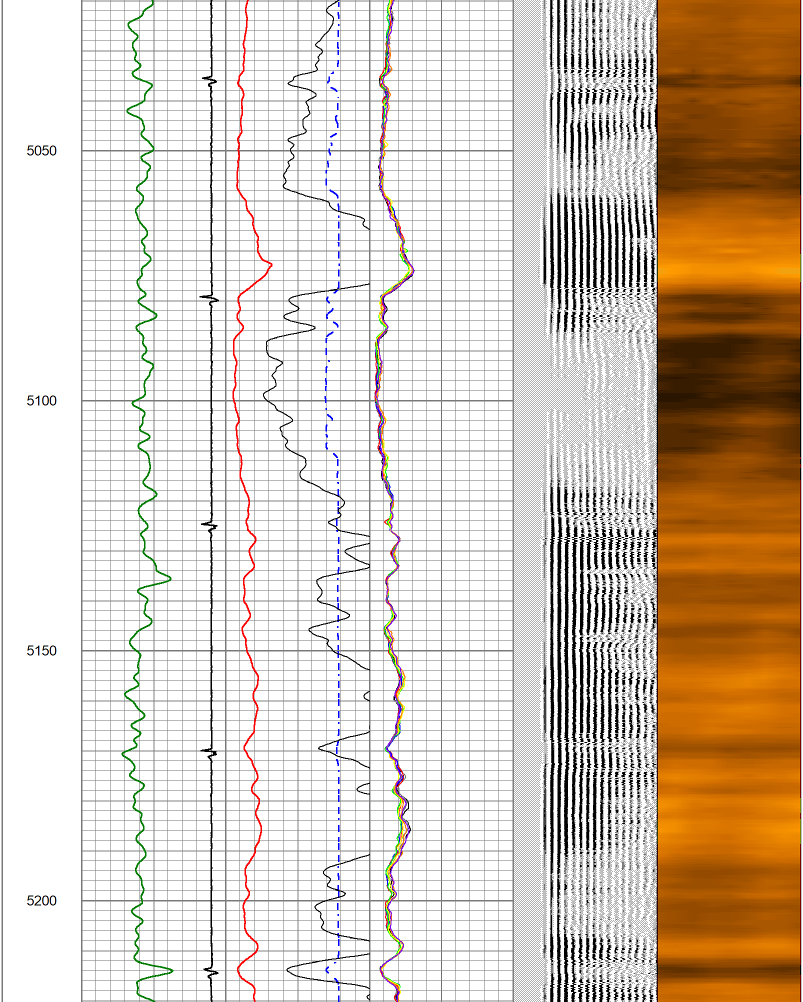
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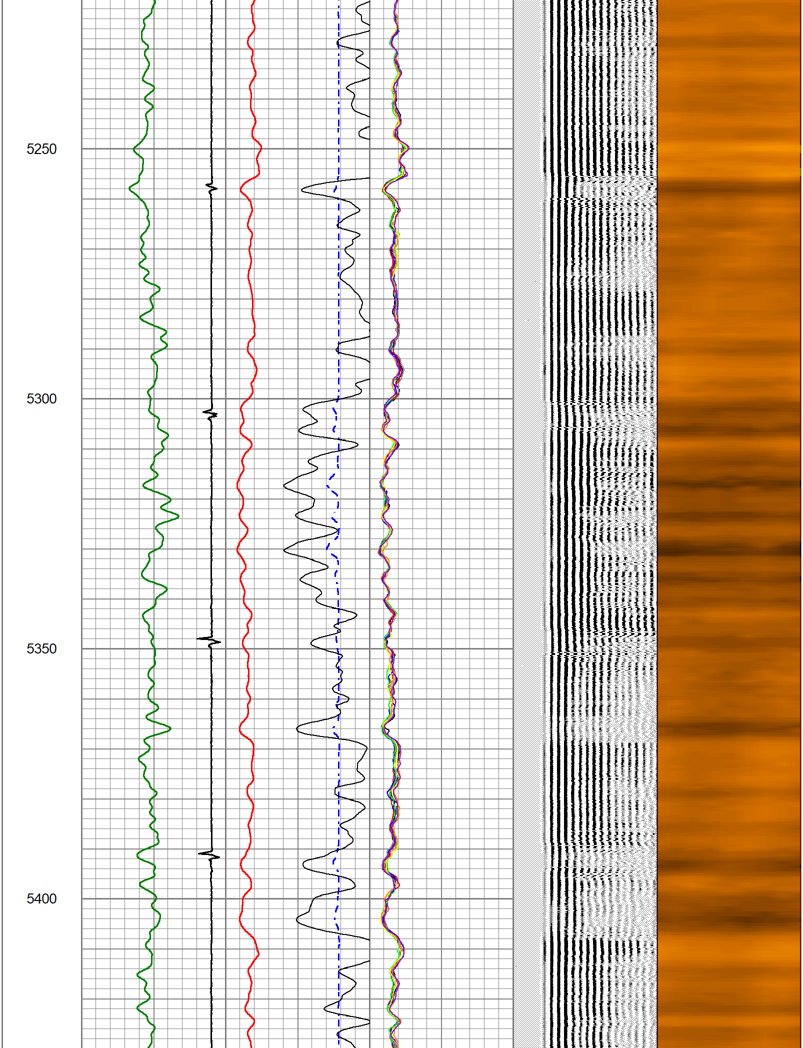
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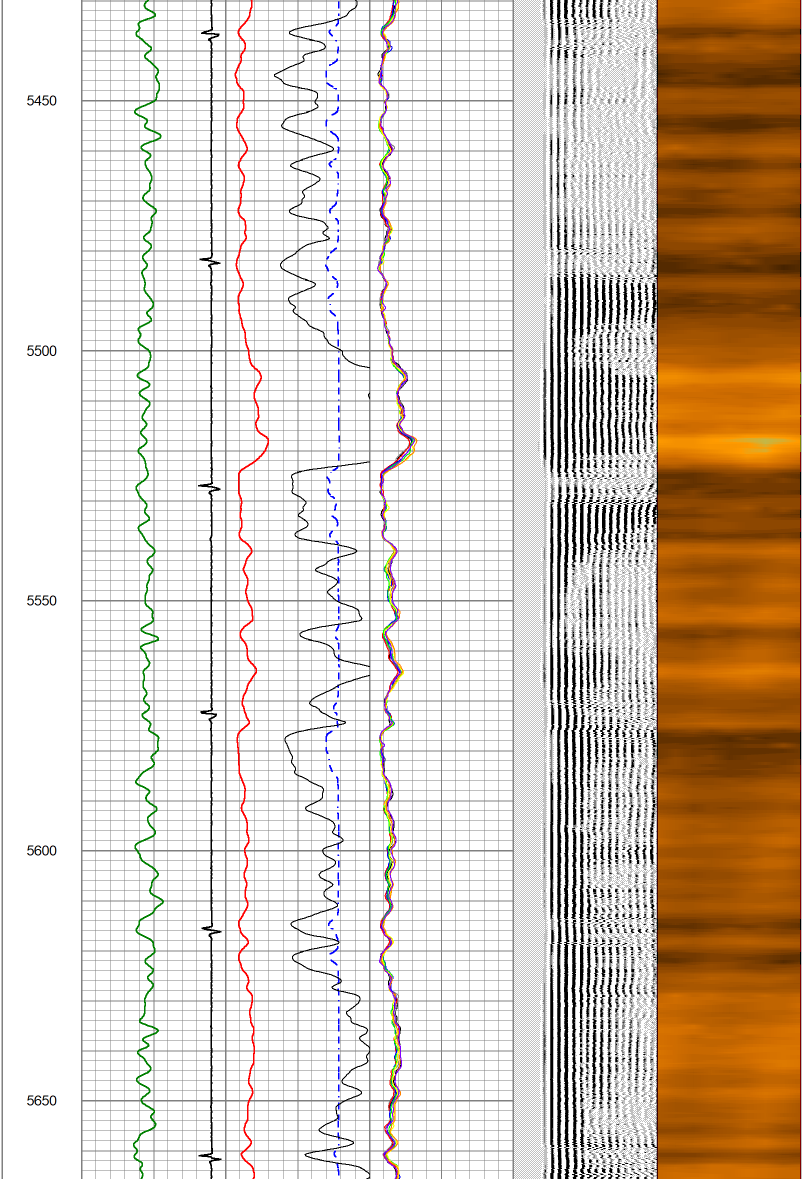
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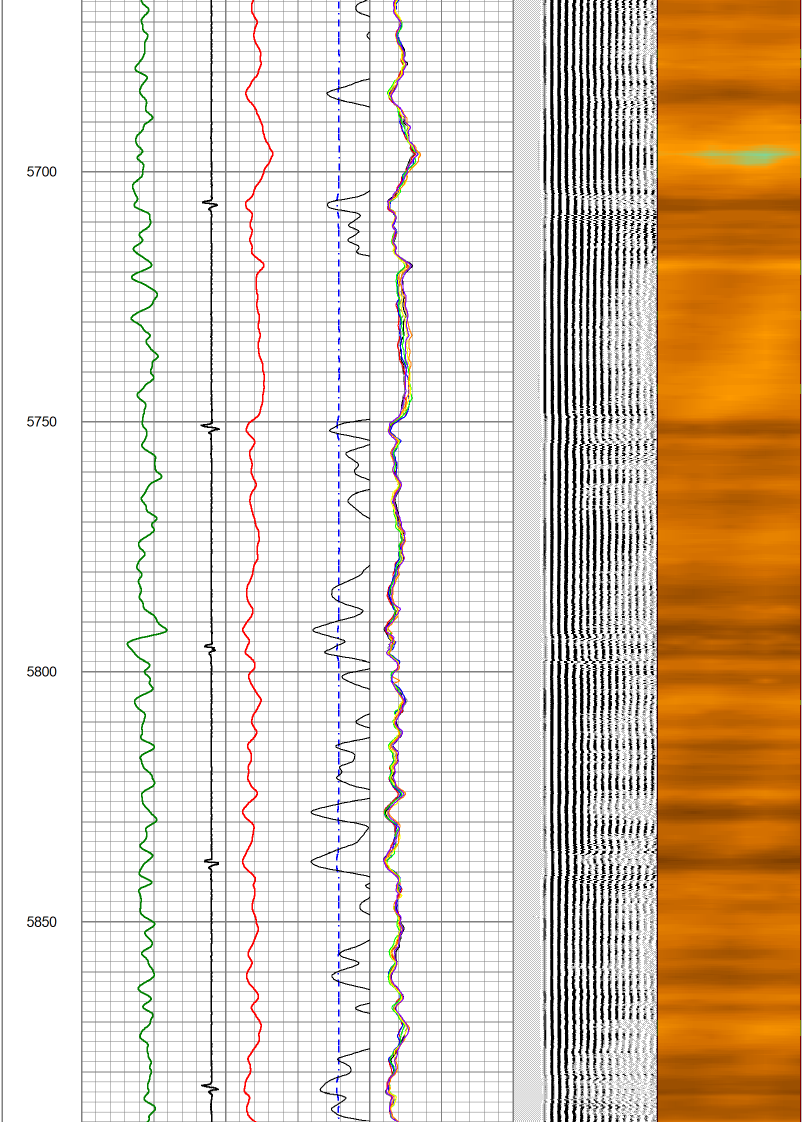
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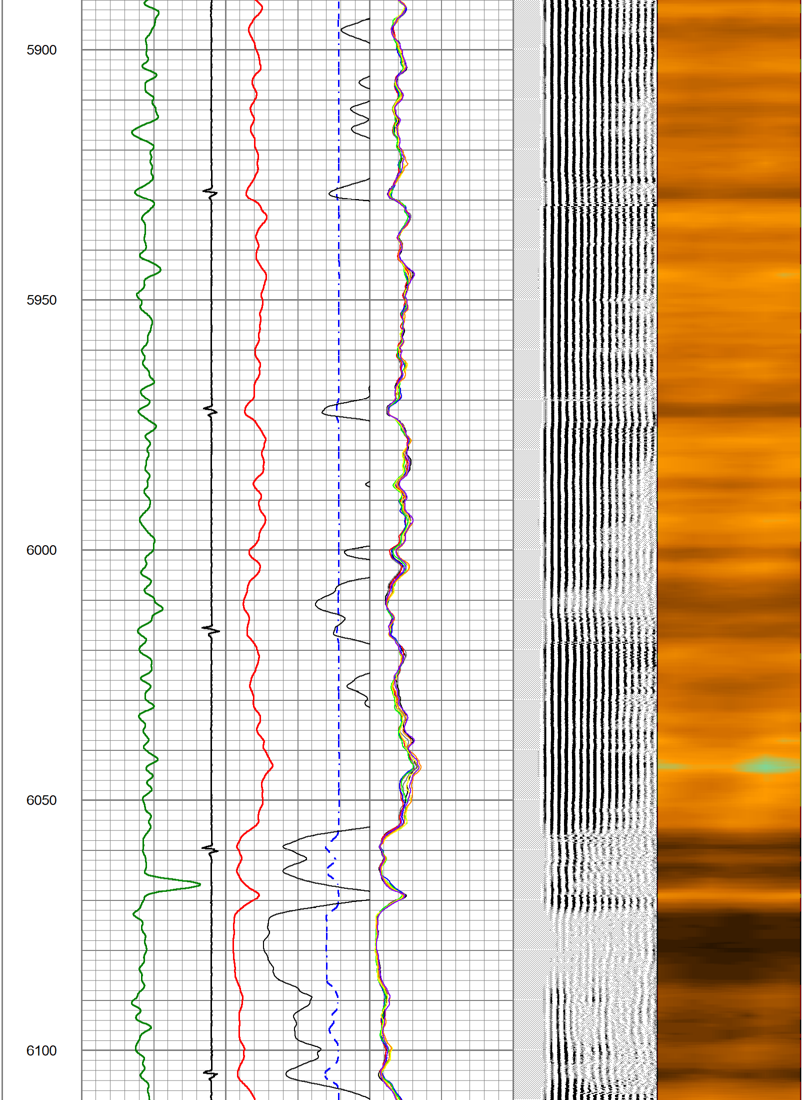
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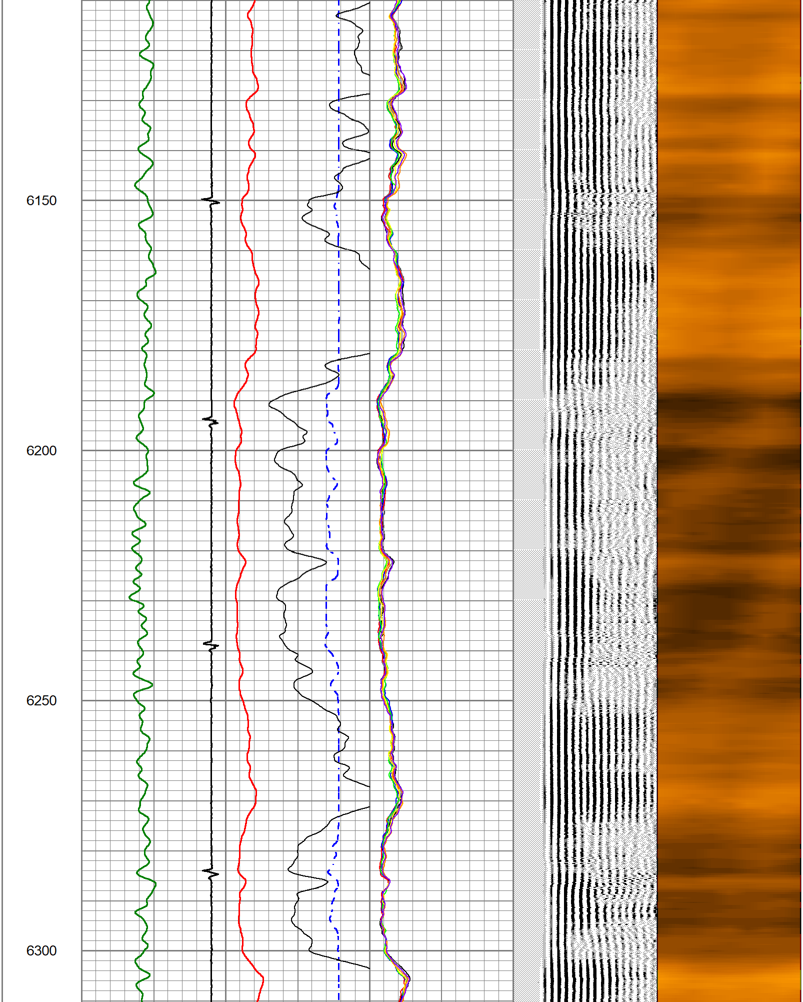
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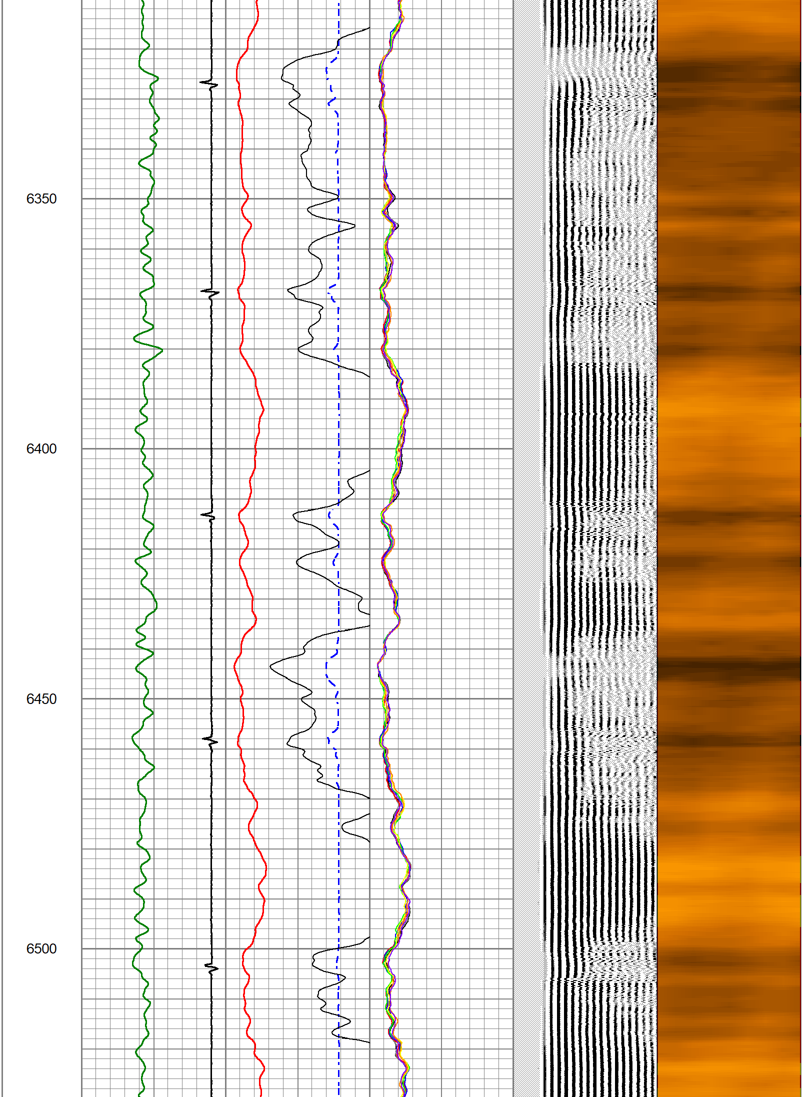
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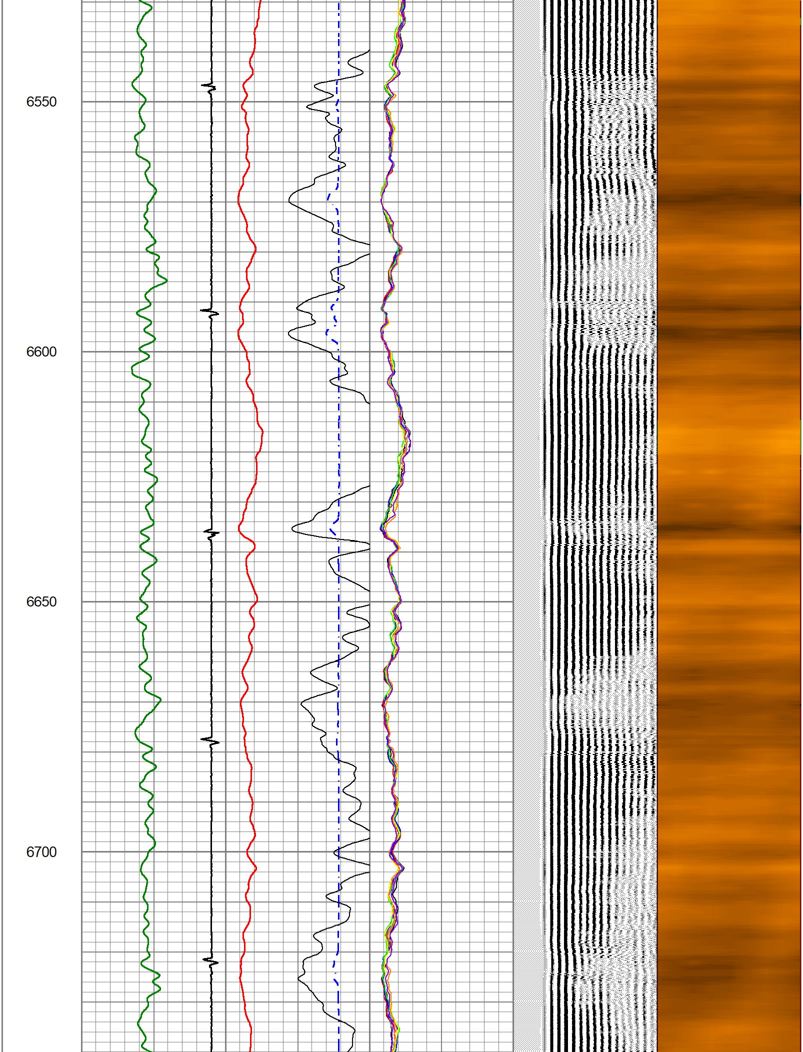
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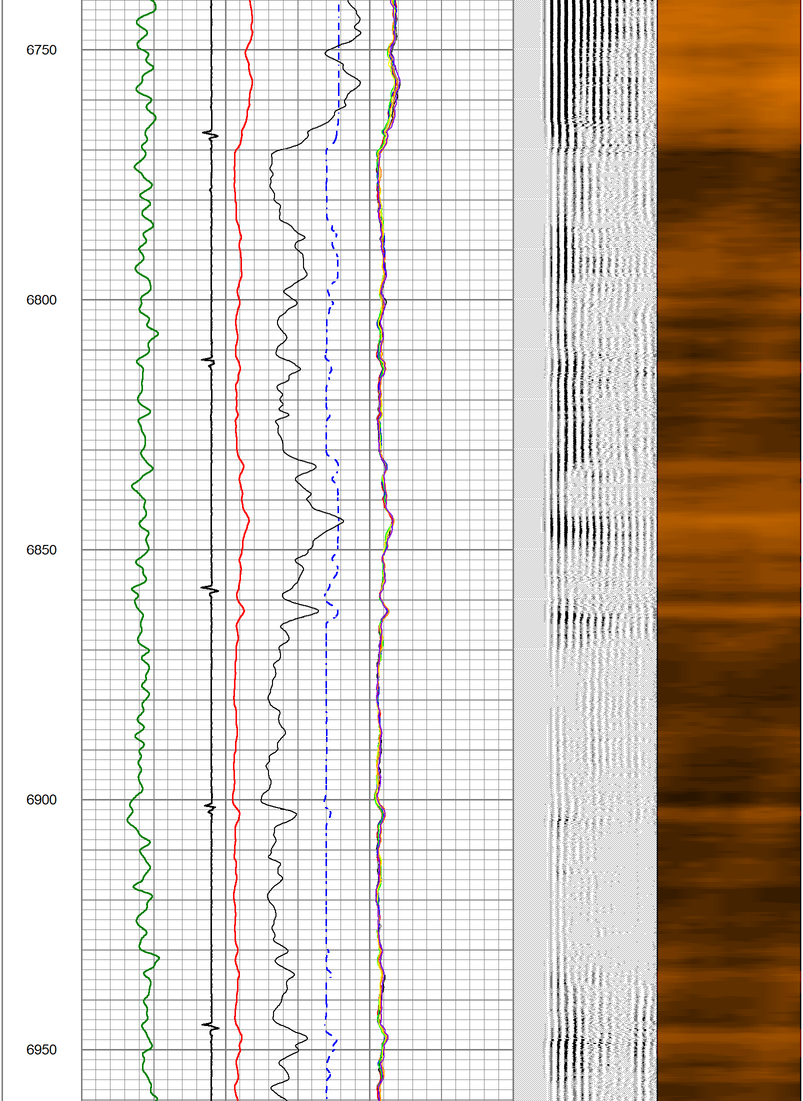
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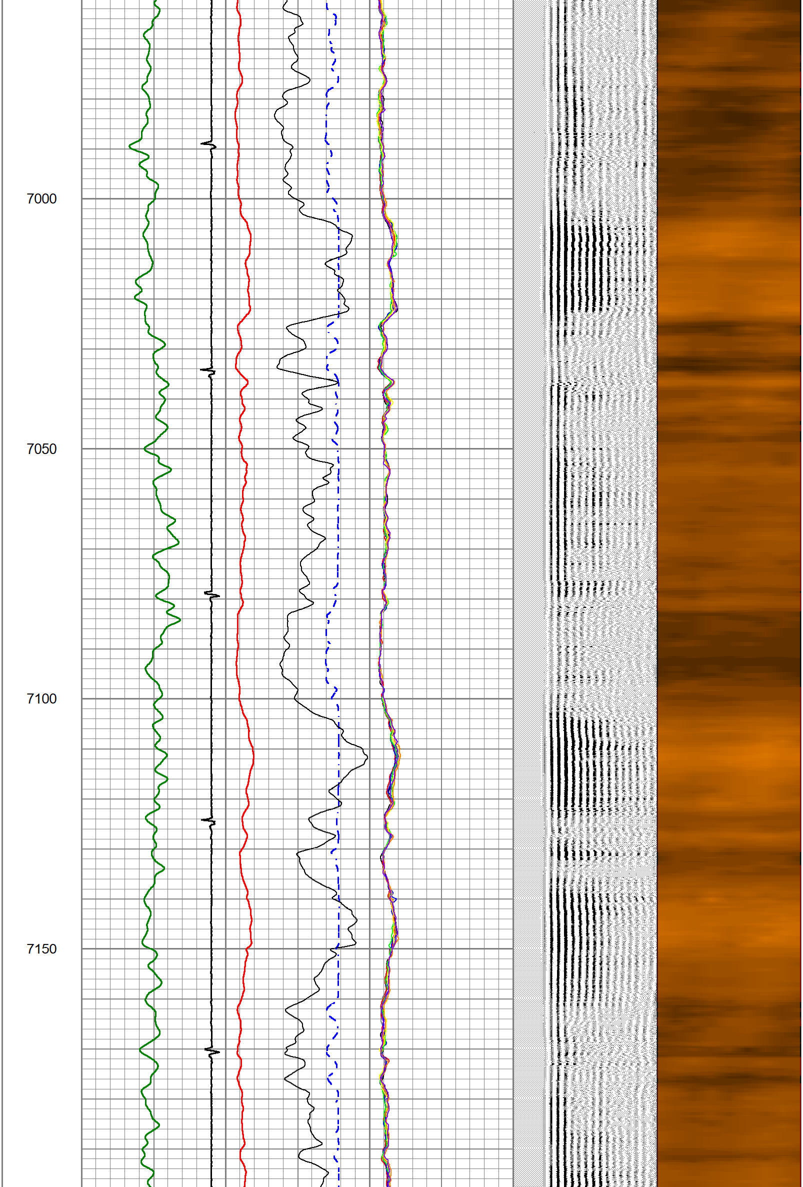
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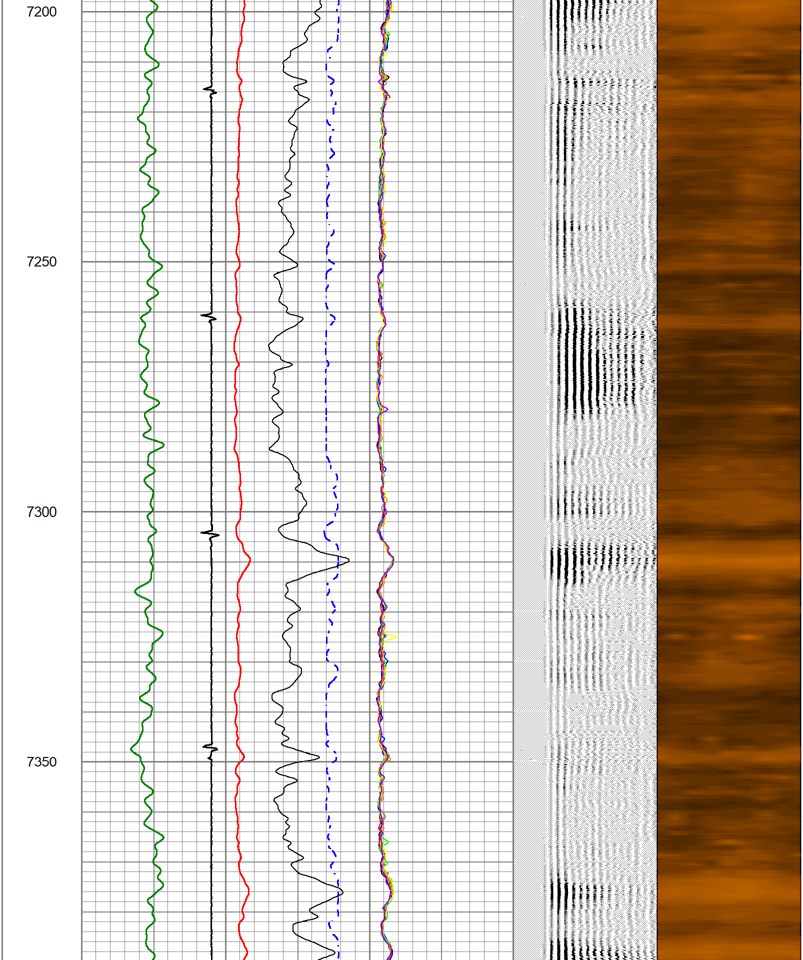
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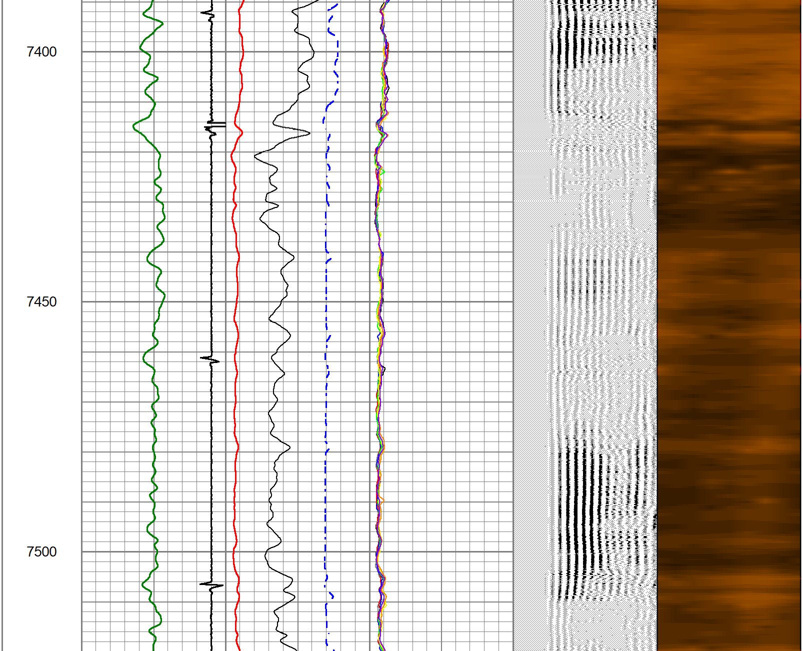
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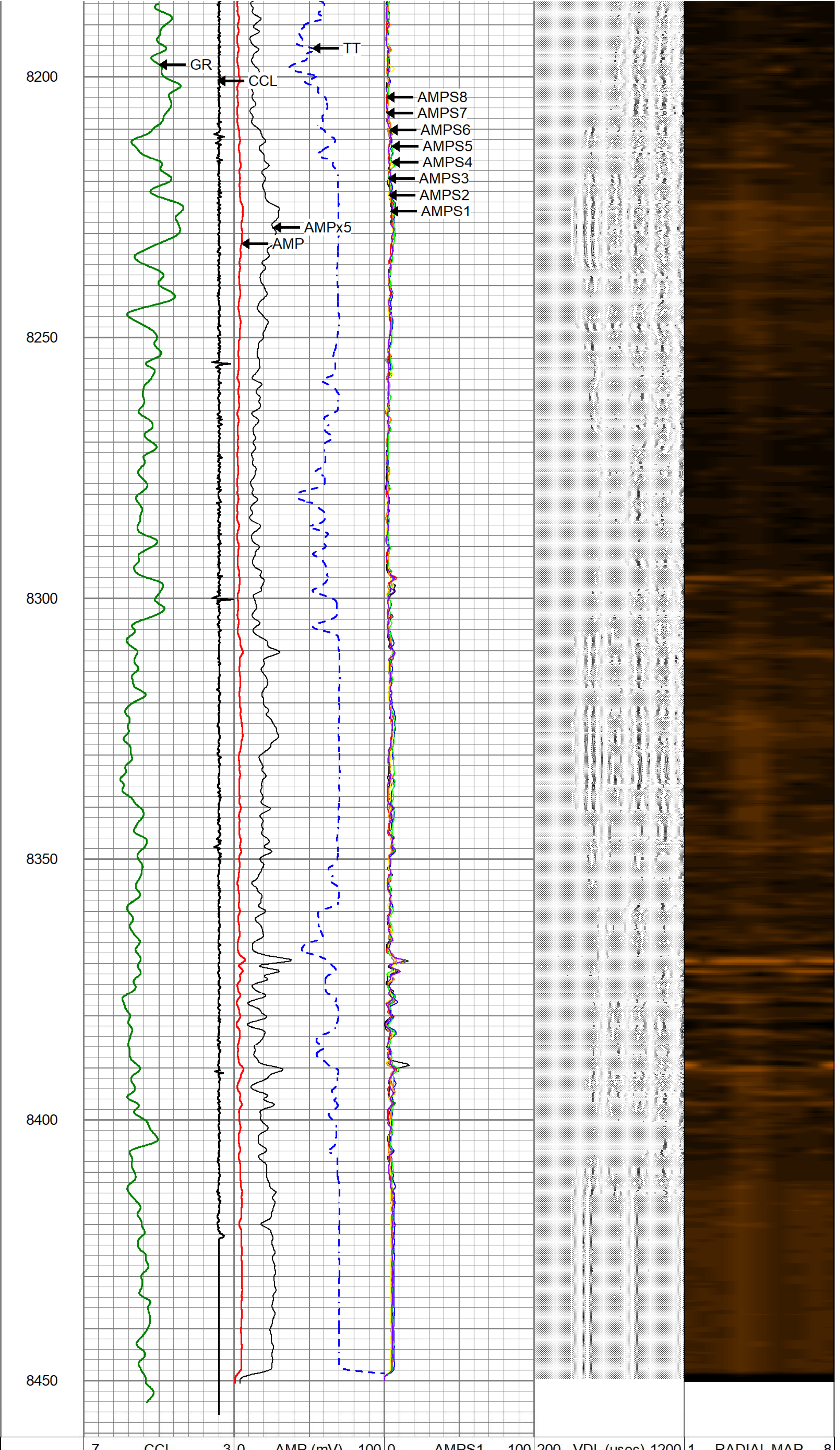
-7 CCL 3	0 AMP (mV) 100	0 AMPS1 100	200 VDL (usec) 1200	1 RADIAL MAP 8
0 GR (GAPI) 150	650 TT (usec) 150	0 AMPS2 100		
	0 AMPx5 (mV) 20	0 AMPS3 100		
		0 AMPS4 100		
		0 AMPS5 100		
		0 AMPS6 100		
		0 AMPS7 100		
		0 AMPS8 100		

REPEAT SECTION

Database File	cicitas united b s16-20-16c.db
Dataset Pathname	pass4.1
Presentation Format	sfww_cbl_oasis-sectors (2)
Dataset Creation	Sat Jan 08 11:54:53 2022
Charted by	Depth in Feet scaled 1:240

-7 CCL 3	0 AMP (mV) 100	0 AMPS1 100	200 VDL (usec) 1200	1 RADIAL MAP 8
0 GR (GAPI) 150	650 TT (usec) 150	0 AMPS2 100		
	0 AMPx5 (mV) 20	0 AMPS3 100		
		0 AMPS4 100		
		0 AMPS5 100		
		0 AMPS6 100		
		0 AMPS7 100		
		0 AMPS8 100		



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0 GR (GAPI) 150	650 TT (usec) 150	0 AMPS2 100		
	0 AMPx5 (mV) 20	0 AMPS3 100		
		0 AMPS4 100		
		0 AMPS5 100		
		0 AMPS6 100		
		0 AMPS7 100		
		0 AMPS8 100		

Calibration Report

Database File	cicitas united b s16-20-16c.db
Dataset Pathname	pass5.1
Dataset Creation	Sat Jan 08 11:46:06 2022

Gamma Ray Calibration Report

Serial Number:	FW1905-098	
Tool Model:	GCT275-0000	
Performed:	Mon May 4 14:03:10 2020	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.5800	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1905-055	
Tool Model:	Probe	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	350.617	ft

Master Calibration, performed Fri Jan 7 08:13:25 2022:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	1.074	0.800	71.921	66.273	0.774
CAL	-0.000	1.194				
5'	-0.000	0.800	0.800	71.921	88.892	0.829
SUM						
S1	0.001	1.055	0.000	71.921	68.243	-0.050
S2	0.001	1.087	0.000	71.921	66.183	-0.040
S3	0.000	1.091	0.000	71.921	65.932	-0.015
S4	-0.001	1.052	0.000	71.921	68.314	0.050
S5	0.000	1.038	0.000	71.921	69.315	-0.011
S6	0.001	1.006	0.000	71.921	71.543	-0.081
S7	0.000	1.002	0.000	71.921	71.822	-0.033
S8	0.000	1.058	0.000	71.921	68.026	-0.031

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.000	1.194	1.000	0.000

Air Zero Calibration, performed Tue Sep 21 11:19:14 2021:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Log Variables

DatabaseC:\ProgramData\Warrior\Data\cicitas united b s16-20-16c.db
Dataset field/well/run1/pass5.3/_vars_

Top - Bottom

BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft
7.875	100	5.5	0.304	17	71.9	1	0.8

PERFS	PPT usec	SRFTEMP degF	TDEPTH ft
No	0	0	0

Variable Description

BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
CASEWGHT : Casing Weight
MAXAMPL : Maximum Amplitude
MINAMPL : Minimum Amplitude
MINATTN : Minimum Attenuation
PERFS : Perforation Flag
PPT : Predicted Pipe Time
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

Company	EXTRACTION OIL AND GAS
Well	UNITED B S16-20-16C
Field	WATTENBERG
County	BROOMFIELD
State	COLORADO
Country	USA