GAMMA RAY CCL
CEMENT BOND SECTOR VDL

Company NOBLE ENERGY INC.
Well SPIKE STATE D16-09
Field WATTENBERG
County WELD
State COLORADO

Company	NOBLE ENERGY INC.
Well	SPIKE STATE D16-09
Field	WATTENBERG
County	WELD
State	COLORADO

Location: API # : 05-123-15911

NE/SE

SEC 16 TWP 3N RGE 64W

Permanent Datum	GL	Elevation	4775
Log Measured From	KB		
Drilling Measured From	KB		

Other Services

Elevation
K.B. 4785
D.F. 4784
G.L. 4775

Date	MARCH 21, 2019		
Run Number	ONE		
Depth Driller	7570		
Depth Logger	4200		
Bottom Logged Interval	4200		
Top Log Interval	SURFACE		
Open Hole Size	7-7/8		
Type Fluid	WATER		
Density / Viscosity	N/A		
Max. Recorded Temp.	N/A		
Estimated Cement Top	SURFACE		
Time Well Ready	ROA		
Time Logger on Bottom	11:00		
Equipment Number	200099		
Location	FORT LUPTON		
Recorded By	GREG NOLAN		
Witnessed By	JEREMIE SCHNEIDER		

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8-5/8	24#	SURFACE	350
Prot. String				
Production String	3-1/2	9.3#	SURFACE	7563
Liner				

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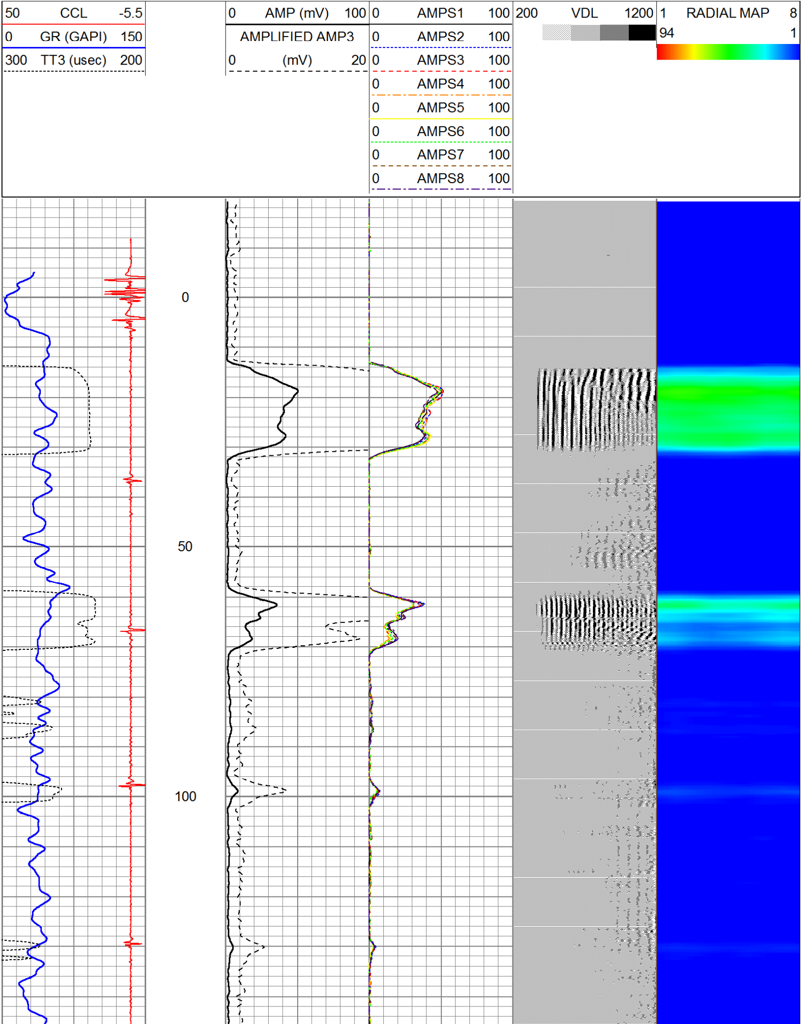
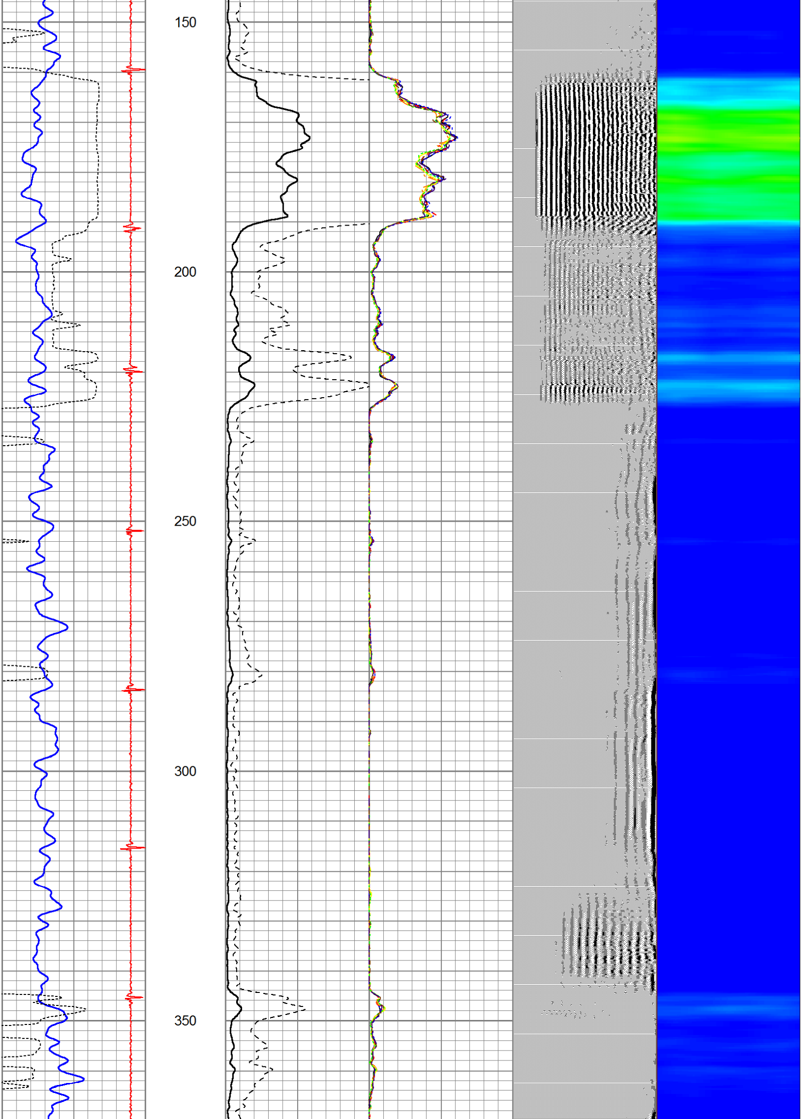
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

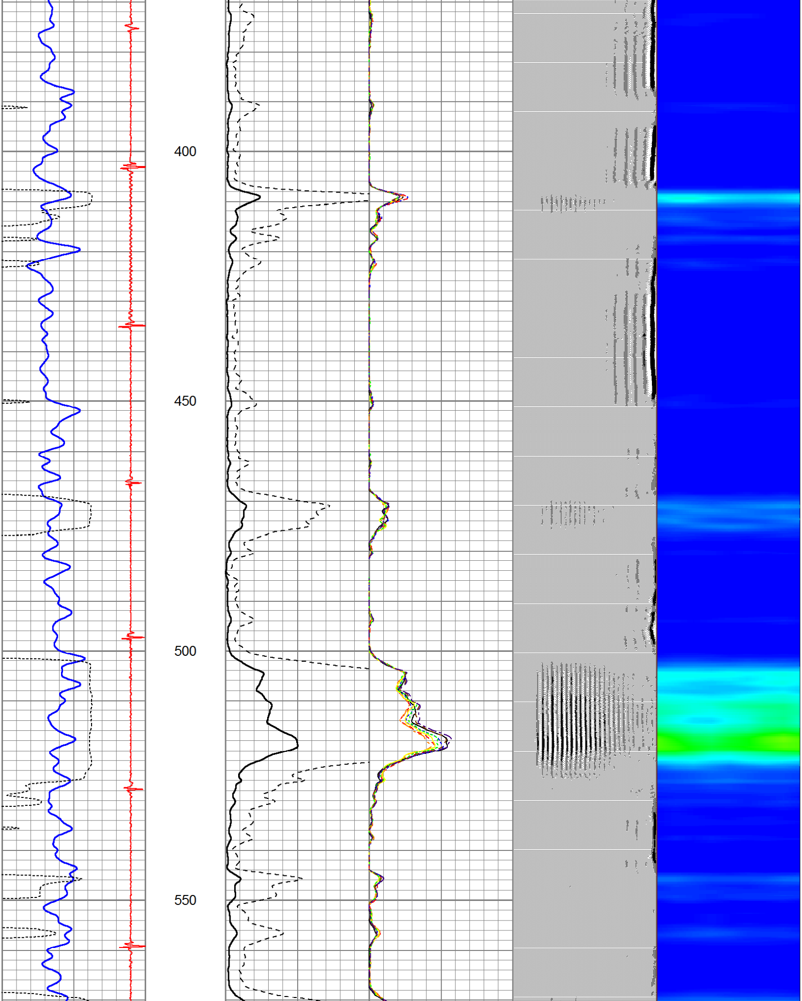
Comments

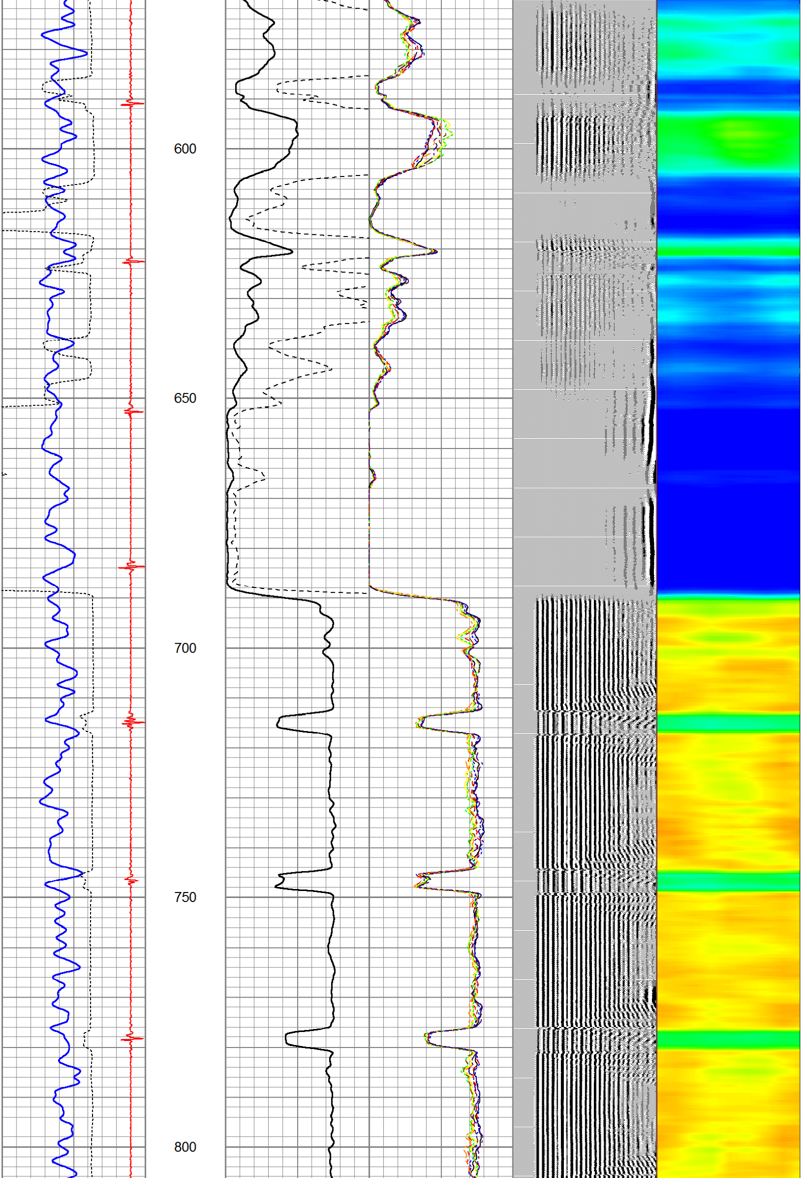
THANK YOU FOR CHOOSING CHS!!!!
LOG CORRELATED TO GOODWELL PERFORATORS
SONIC CEMENT BOND LOG DATED 08 10 92

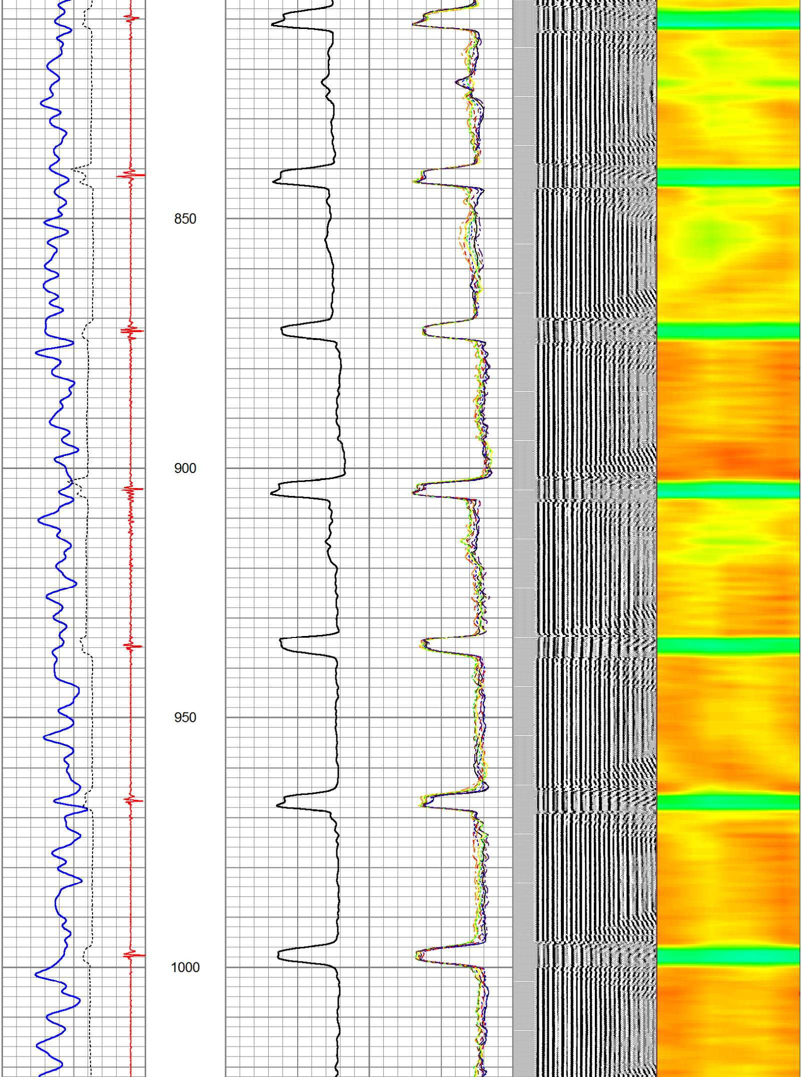
Database File: cbl noble spike state d16-09.db
Dataset Pathname: pass5
Presentation Format: zwag
Dataset Creation: Thu Mar 21 11:08:55 2019 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

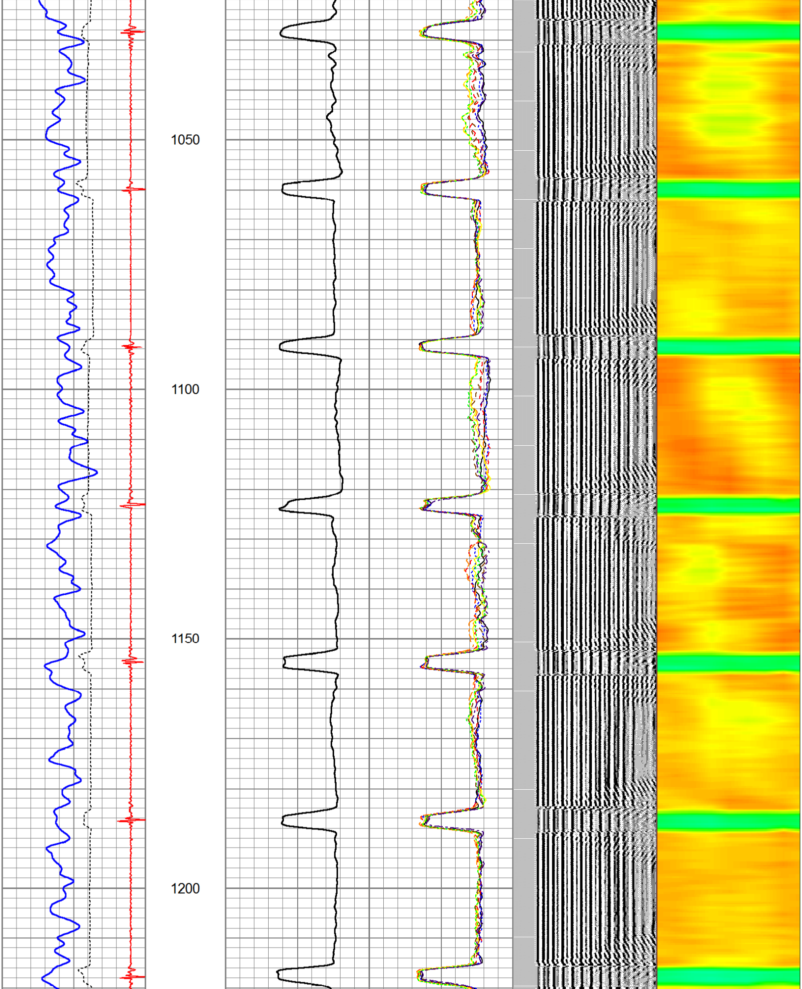


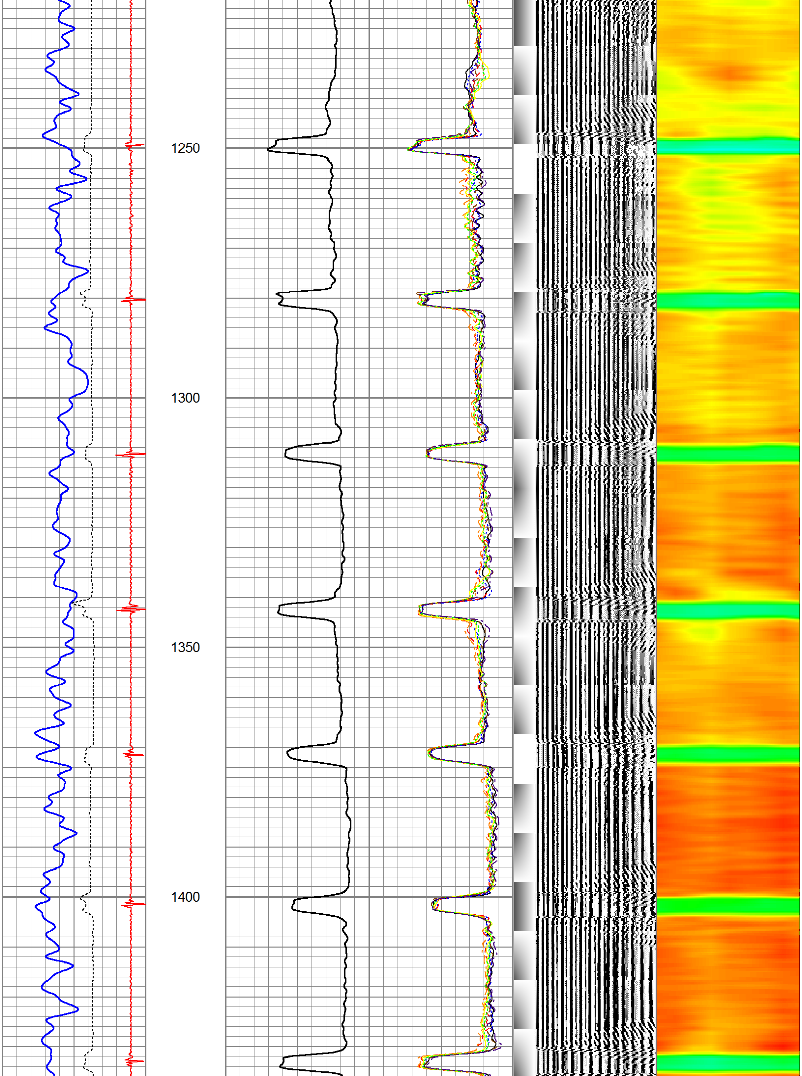


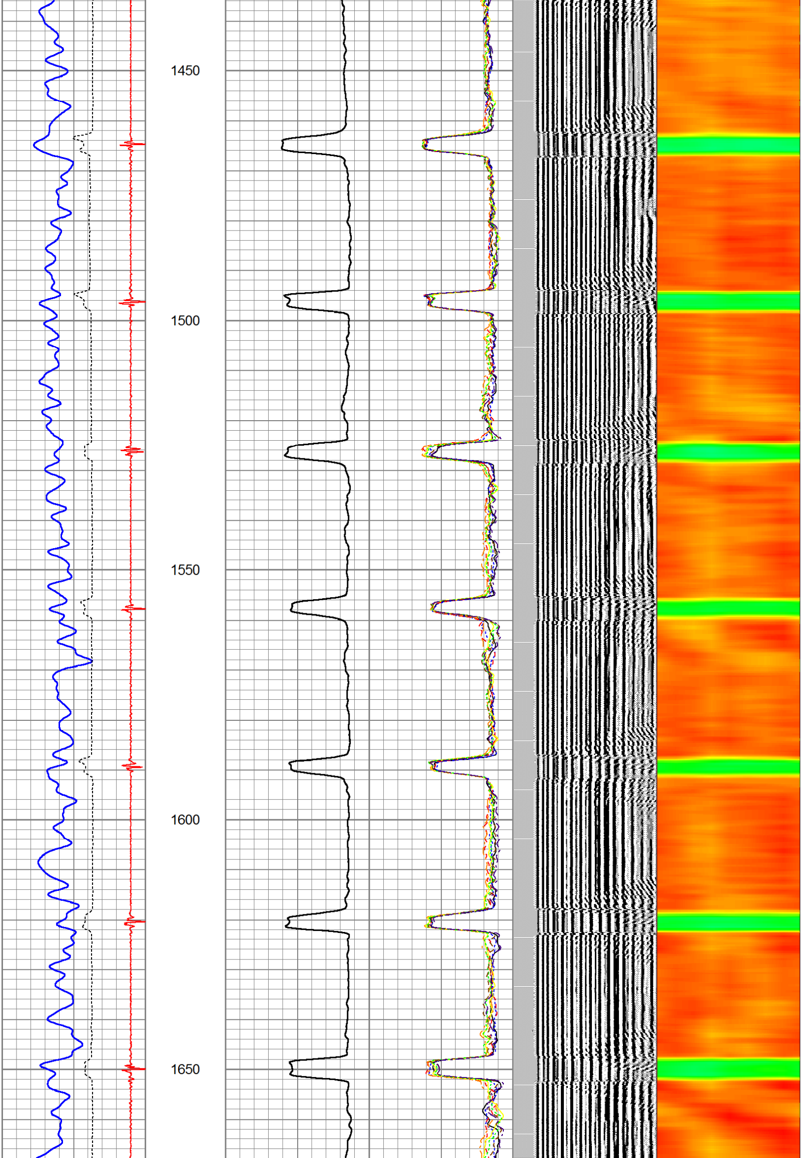


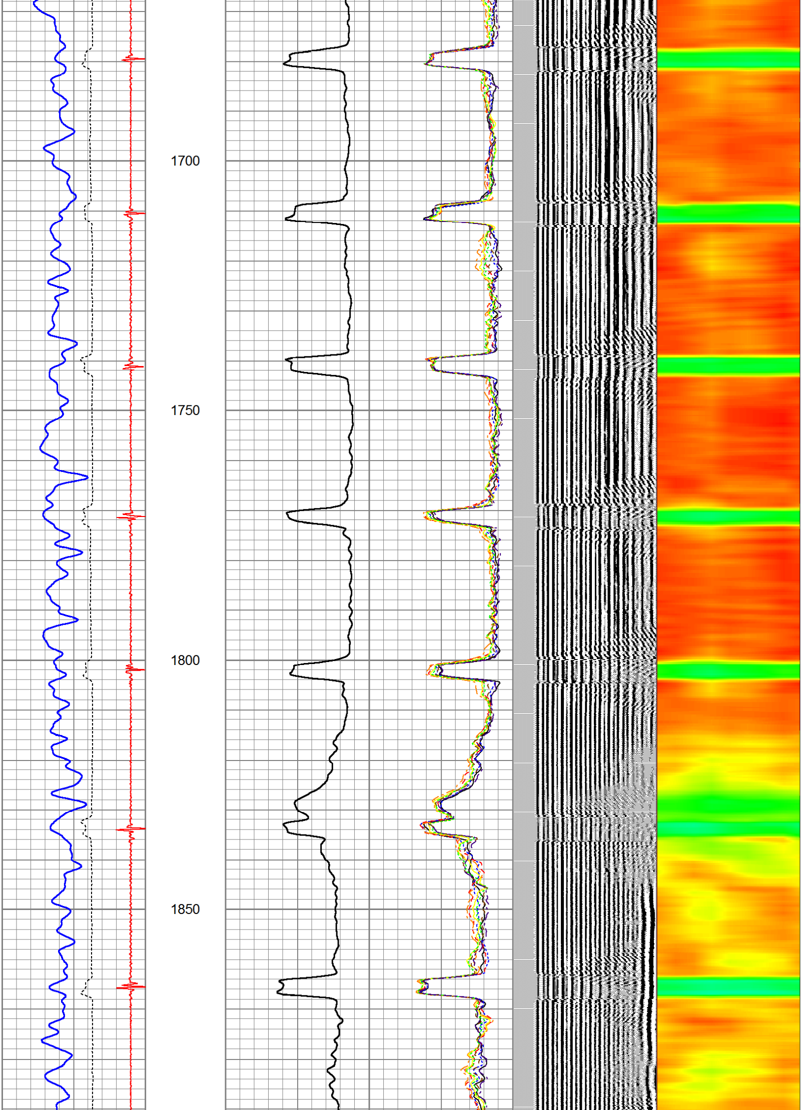


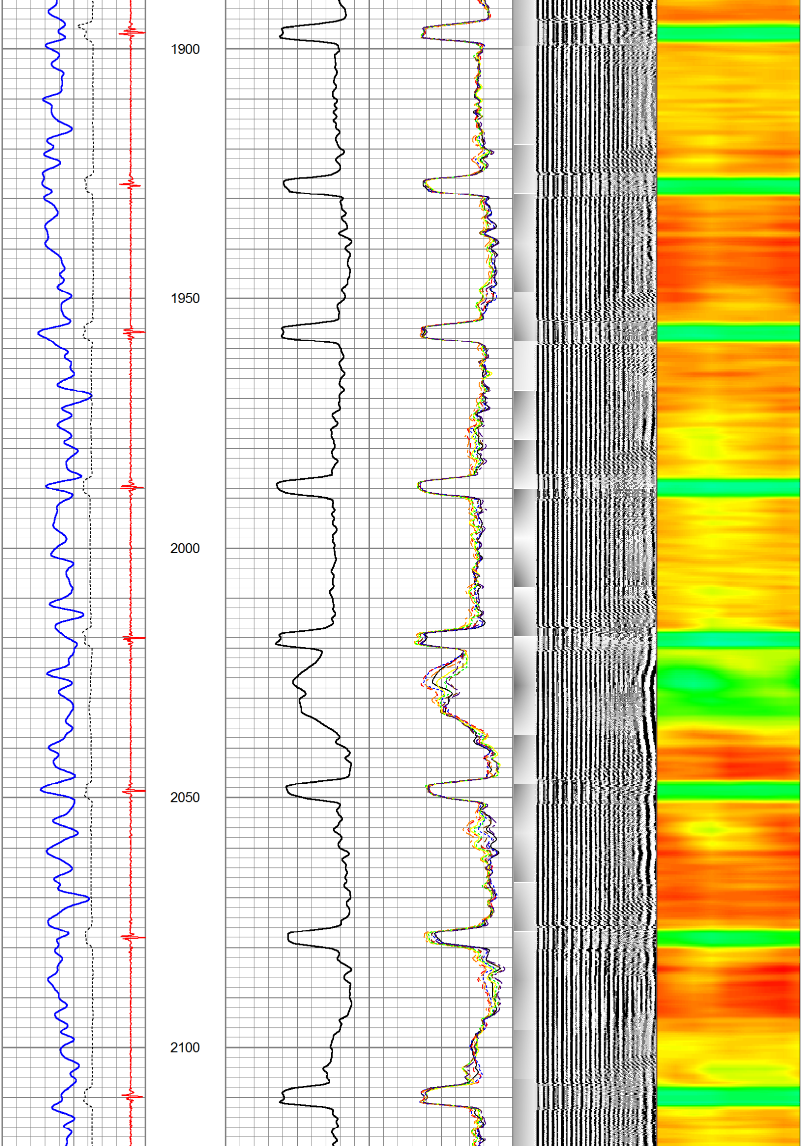


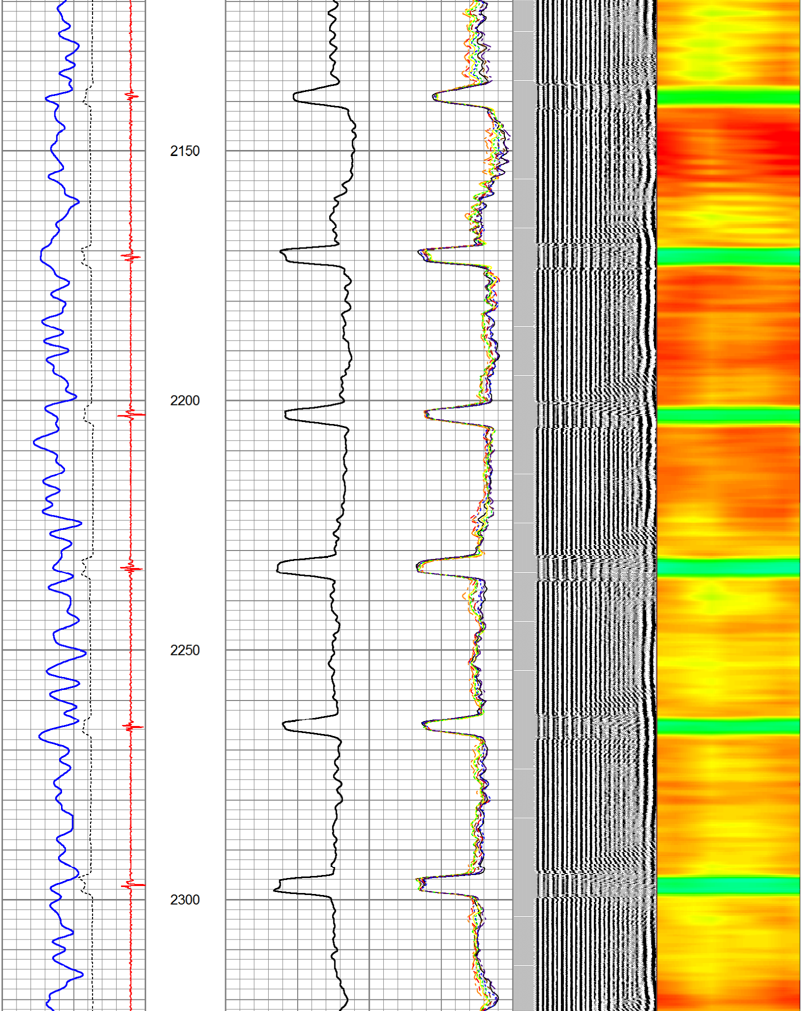


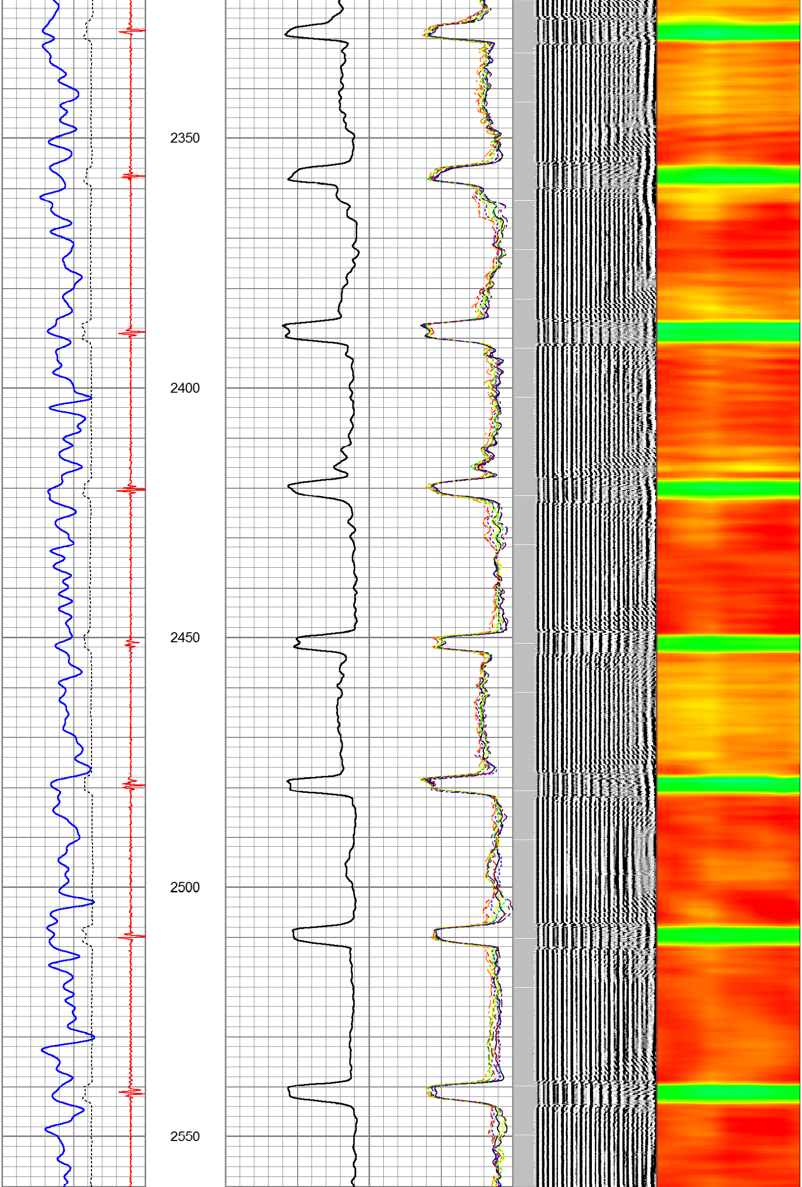


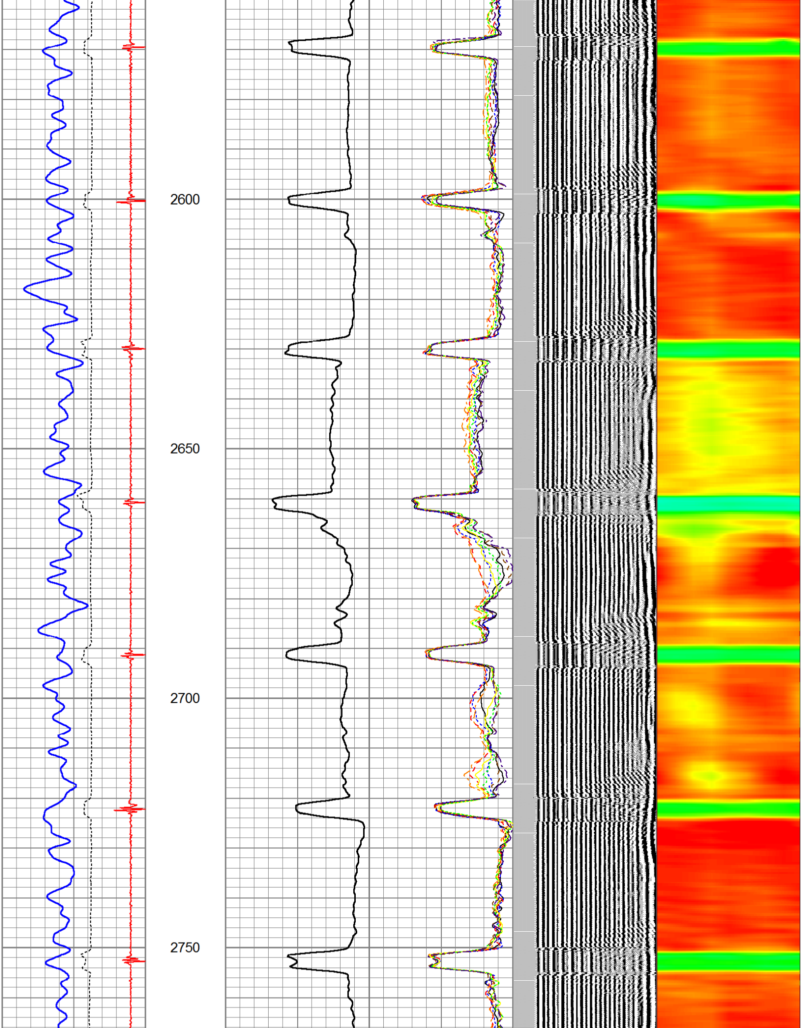


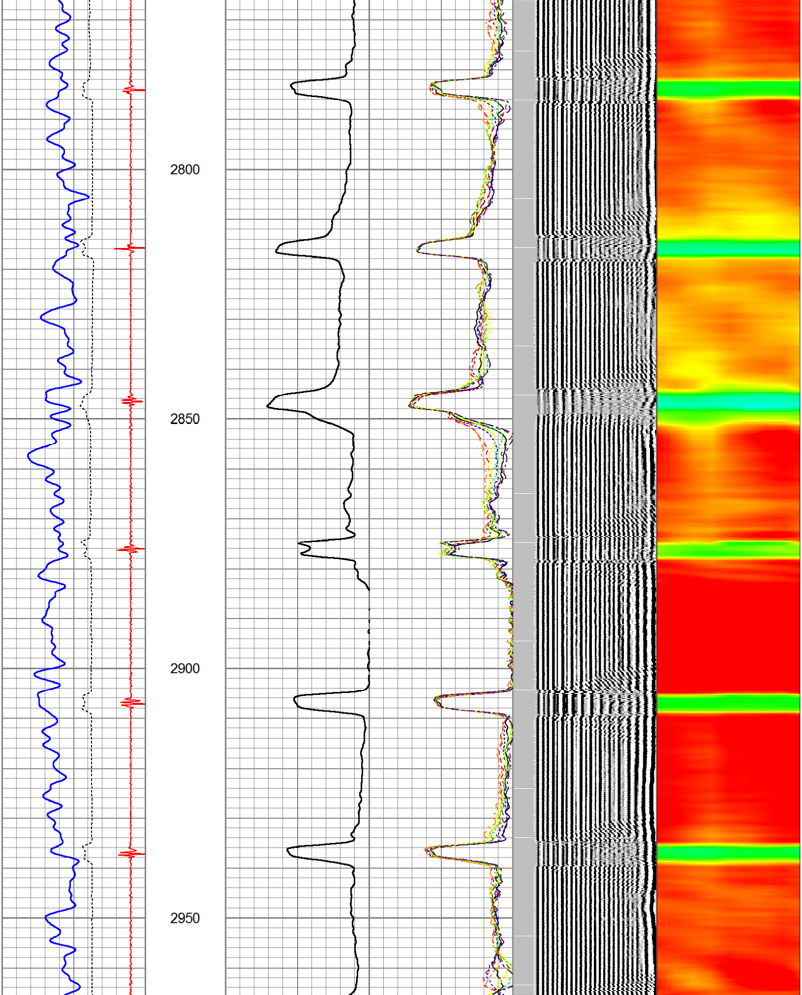


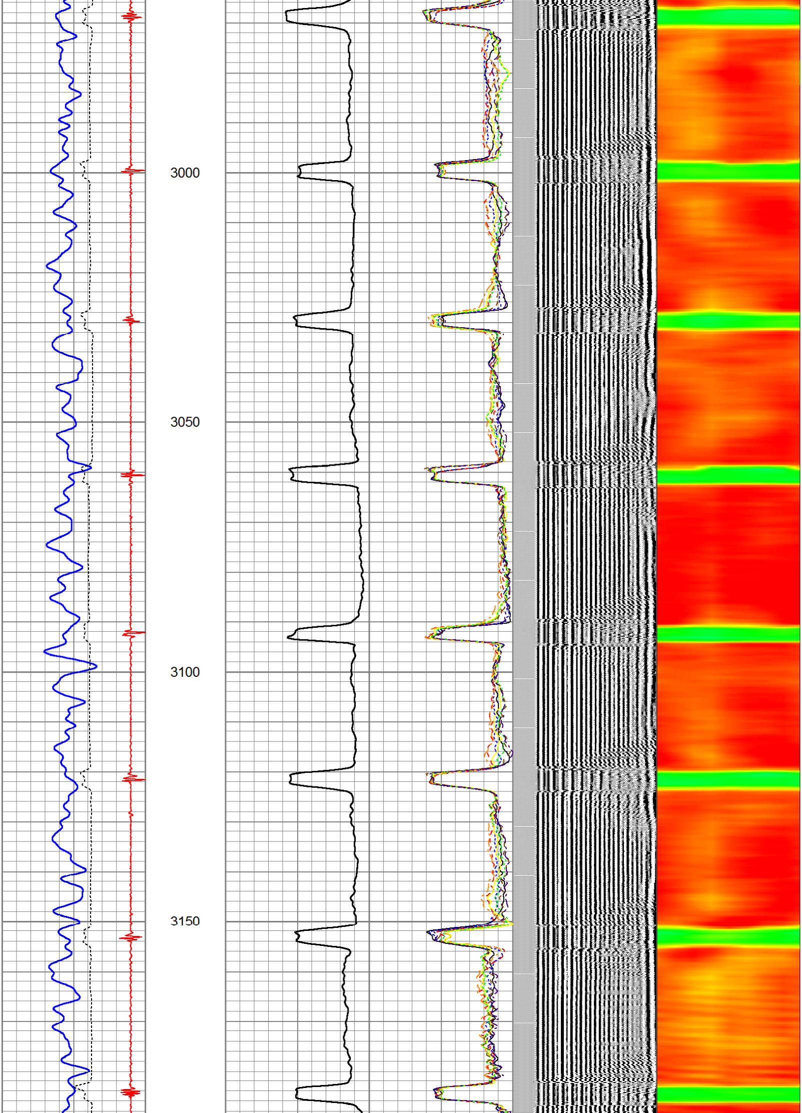


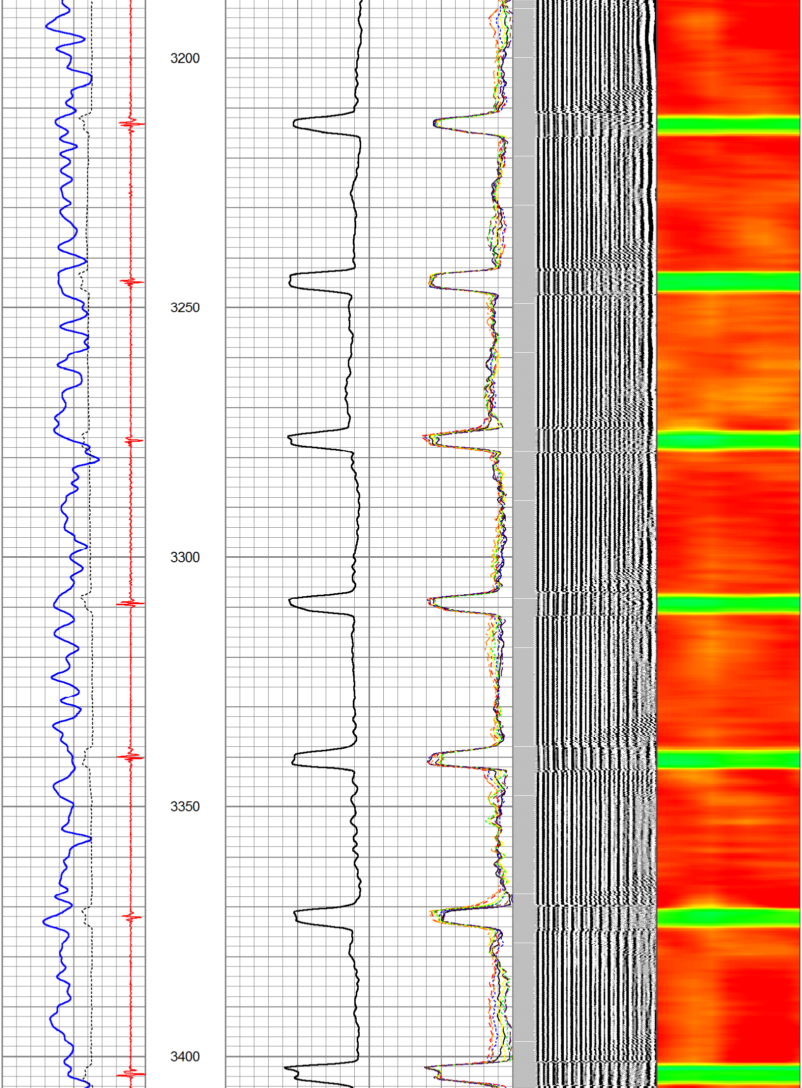


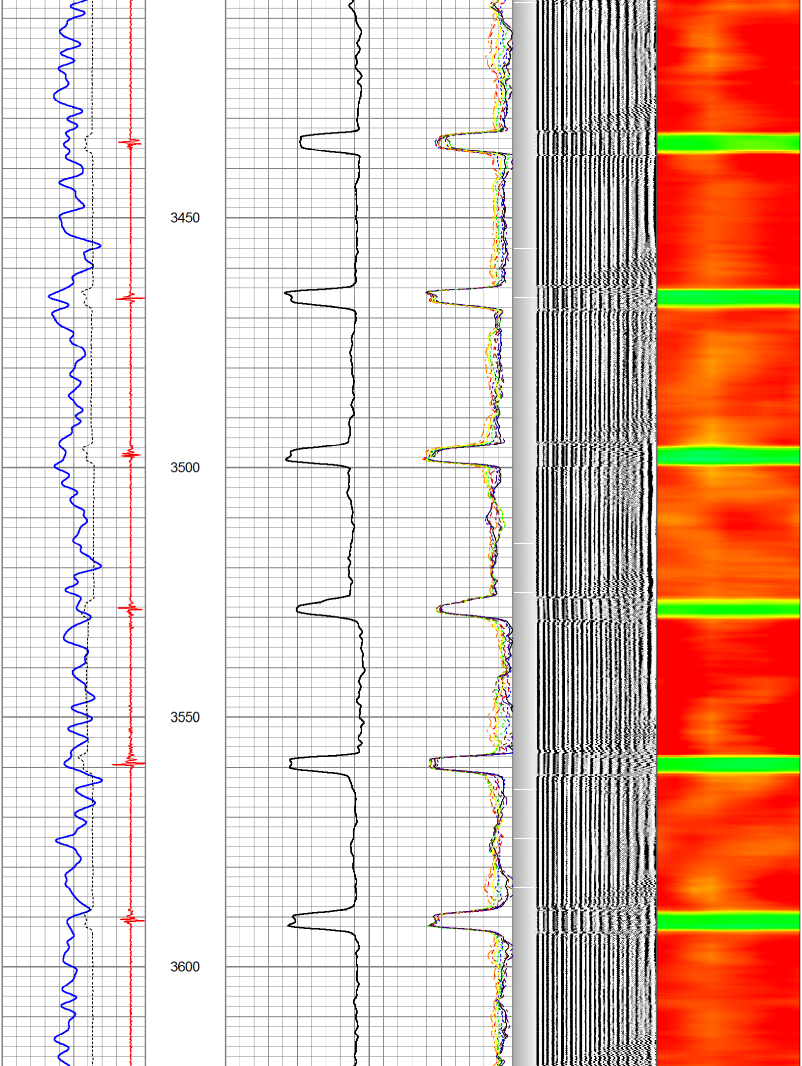


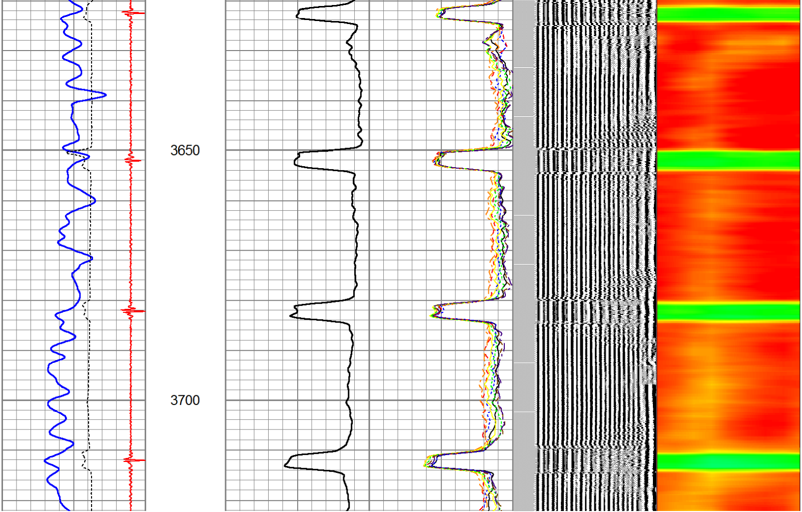


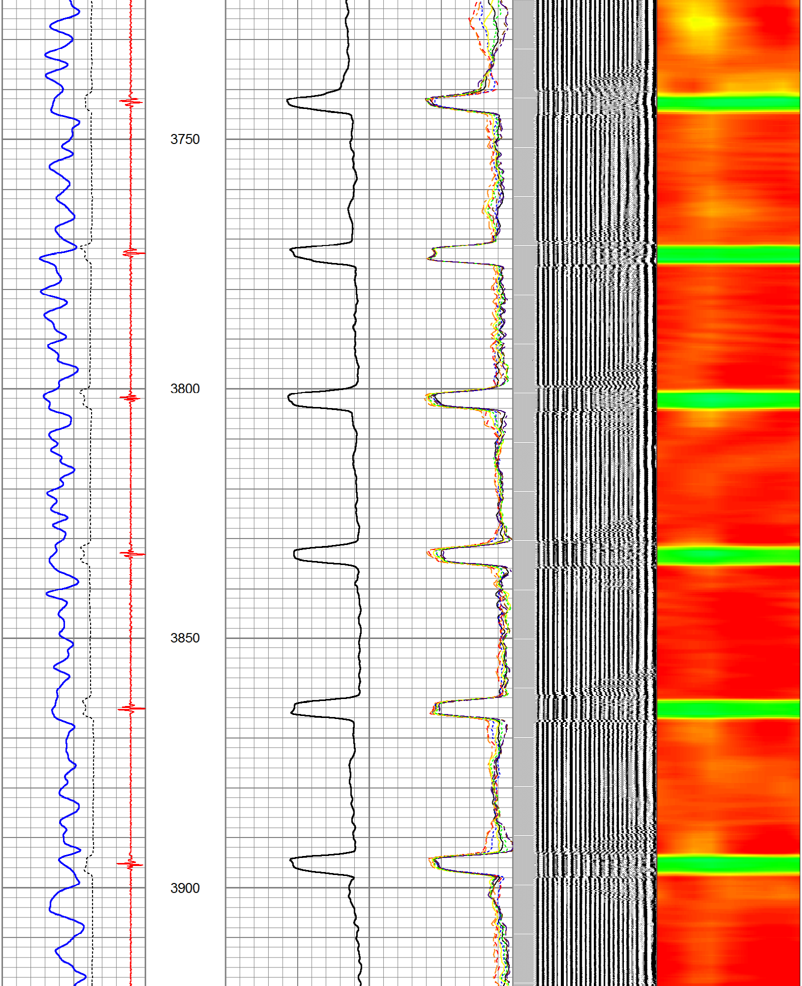


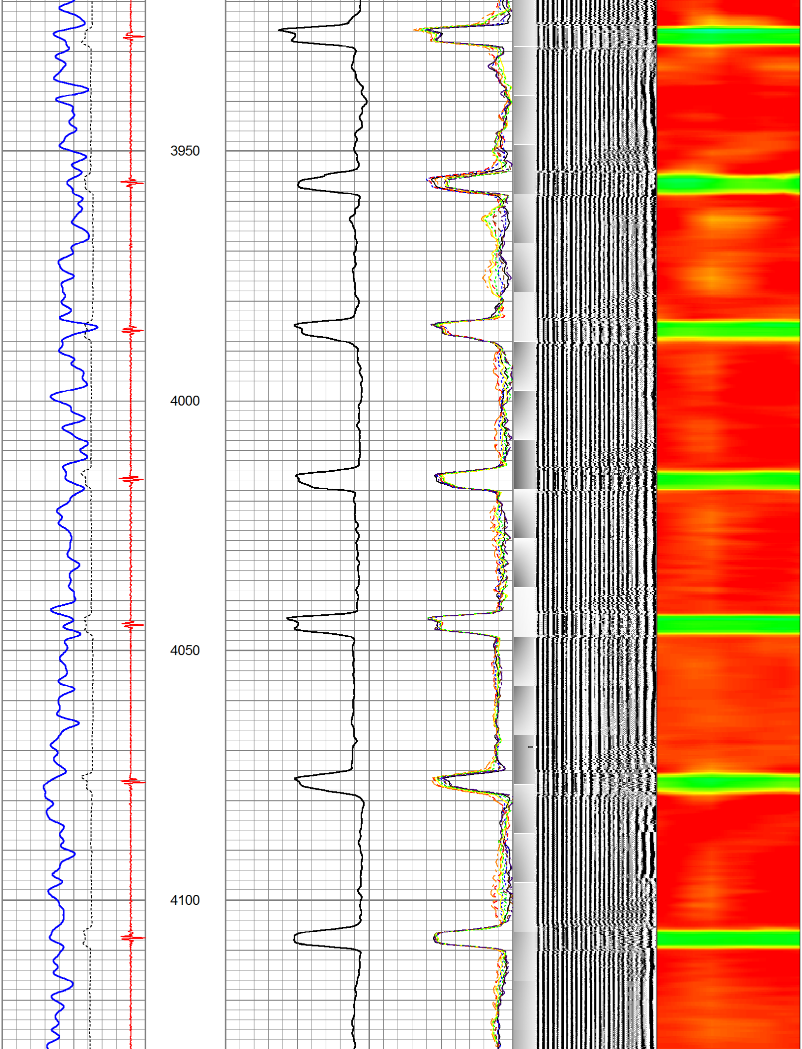


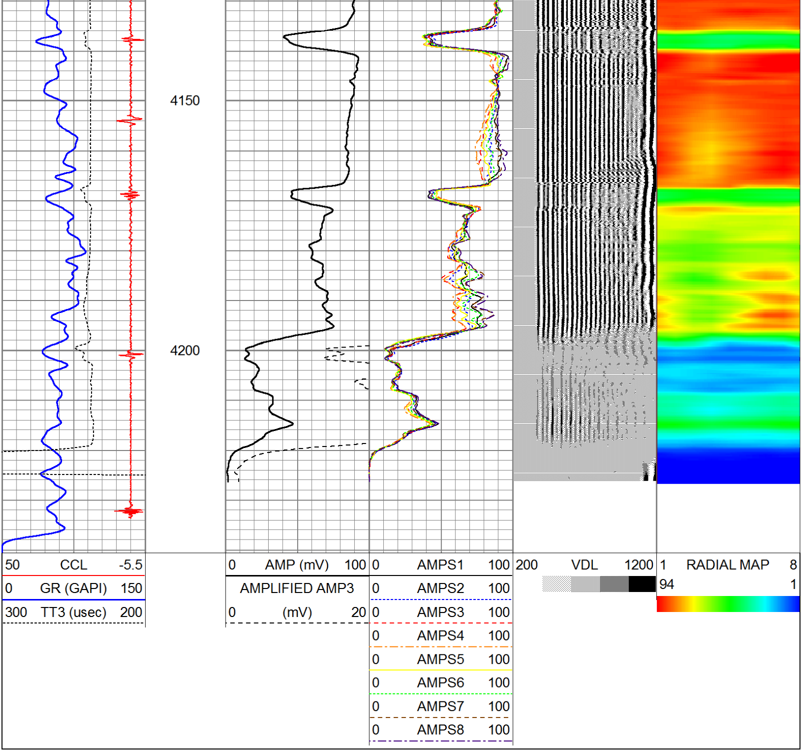












Calibration Report

Database File: cbl noble spike state d16-09.db
Dataset Pathname: pass5
Dataset Creation: Thu Mar 21 11:08:55 2019 by Log 7.0 B1

Gamma Ray Calibration Report

Type / Serial: GCT / FW1806-050

SHOP CALIBRATION Tue Mar 12 07:53:22 2019

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.7000			GAPI/cps

PRIMARY VERIFICATION

Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

BEFORE SURVEY VERIFICATION

Background	0.0		cps
Calibrator	0.0		cps
Difference		0.0	GAPI

AFTER SURVEY VERIFICATION

Background	0.0		cps
Calibrator	0.0		cps
Difference		0.0	GAPI

Temperature Calibration Report

Serial Number:	FW1806-050
Tool Model:	GCT
Performed:	Fri Aug 24 13:22:34 2018

	Reference	Reading
Low Reference:	100.00 degF	6176.05degF
High Reference:	350.00 degF	26317.70degF

Gain:	0.01
Offset:	23.34
Delta Spacing	1

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1804-090	
Tool Model:	1.70	
Calibration Casing Diameter:	3.500	in
Calibration Depth:	4088.758	ft

Master Calibration, performed Thu Mar 21 11:07:48 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.006	1.502	1.500	94.517	61.705	1.852
CAL	-0.006	0.182				
5'	-0.006	1.102	1.500	94.517	83.953	2.005
SUM						
S1	-0.007	1.521	0.000	94.517	61.858	0.418
S2	-0.006	1.598	0.000	94.517	58.914	0.354
S3	-0.006	1.579	0.000	94.517	59.636	0.364
S4	-0.006	1.509	0.000	94.517	62.363	0.384
S5	-0.006	1.348	0.000	94.517	69.798	0.415
S6	-0.006	1.306	0.000	94.517	72.041	0.437
S7	-0.006	1.438	0.000	94.517	65.476	0.395
S8	-0.006	1.496	0.000	94.517	62.933	0.382

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.006	0.182	1.000	0.000

Air Zero Calibration, performed Thu Mar 21 10:54:58 2019:

	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