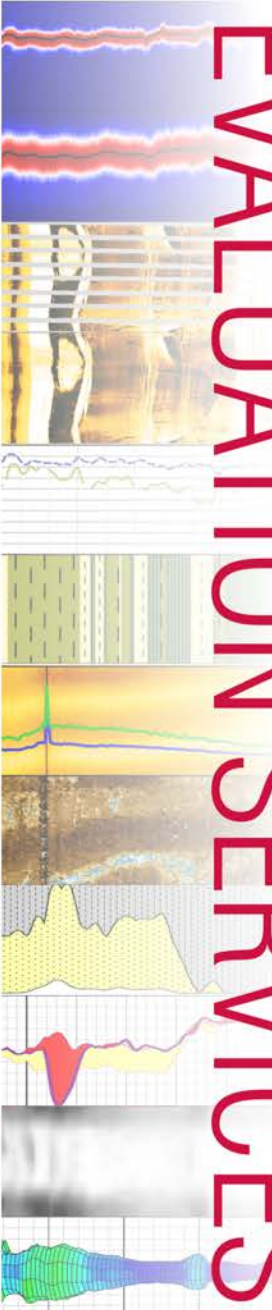




MULTIMINERAL ANALYSIS

Weatherford[®]

INTERPRETATION & EVALUATION SERVICES



Company	CATOOSA TEST FACILITY
Well	T-BIRD #5G
Field	
County	PAWNEE
State	OKLAHOMA
Country	United States
UWI/API	---
Log Date	27-Sep-2021
Location	---

Permanent Datum GL, Elevation 997.19 FT	
Log Measured from 22.81 FT Perm. Datum	
Drilling measured from KB	
Elevations	
KB	1020.00 FT
DF	1019.00 FT
GL	997.19 FT

Date	27-Sep-2021
Run Number	ONE
Depth Driller	6567.00 FT
Depth Logger	6573.00 FT
First Reading	6532.00 FT
Last Reading	780.00 FT
Casing Driller	789.00 FT
Casing Logger	788.00 FT
Bit Size	8.75 IN
Hole Fluid Type	BRINE
Density/Viscosity	8.70 lb/gal / 3
PH/Fluid Loss	9.00 / 9.50 ml/
Sample Source	WELLBORE
Rm @ Measured Temp	0.144 Ohm.m @
Rmf @ Measured Temp	0.108 Ohm.m @
Rmc @ Measured Temp	0.181 Ohm.m @
Rm @ BHT	0.066 Ohm.m @
Max Recorded Temp	168.00 degF
Engineer	MRATHS
Base	MTX
Service Order	T7-212709

In interpreting, communicating or providing information or other data, type or amount of material, or results to be obtained, the Contractor will give and will perform all such Work in a good and recommendation or reservoir description measurements and empirical relationships and to which professional engineers and analysts r

ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION OF THE CONTRACTOR CANNOT BE MADE UNDER ANY CIRCUMSTANCES OF WELL TREATMENT, PRODUCTION OR FINANCIAL DRILLING ACTIVITY, DRILLING RIG OR ITS CREW. THE CONTRACTOR ASSUMES NO LIABILITY FOR DECISIONS CONCERNING THE SERVICES.

MULTIMINERAL ANALYSIS

VSh computed from Gamma Ray

Formation Water Salinity:

780-1027 ft: 55,000 ppm

1027- 6535 ft: 110,000 ppm

Saturation equation: Simadoux

a: 1; m: 1.8; n:2

Lithology: VSH (Volume of Shale), VQIZ (Volume of Quartz), VCALC Volume of Calcite), VE

 Program: Techlog 2018

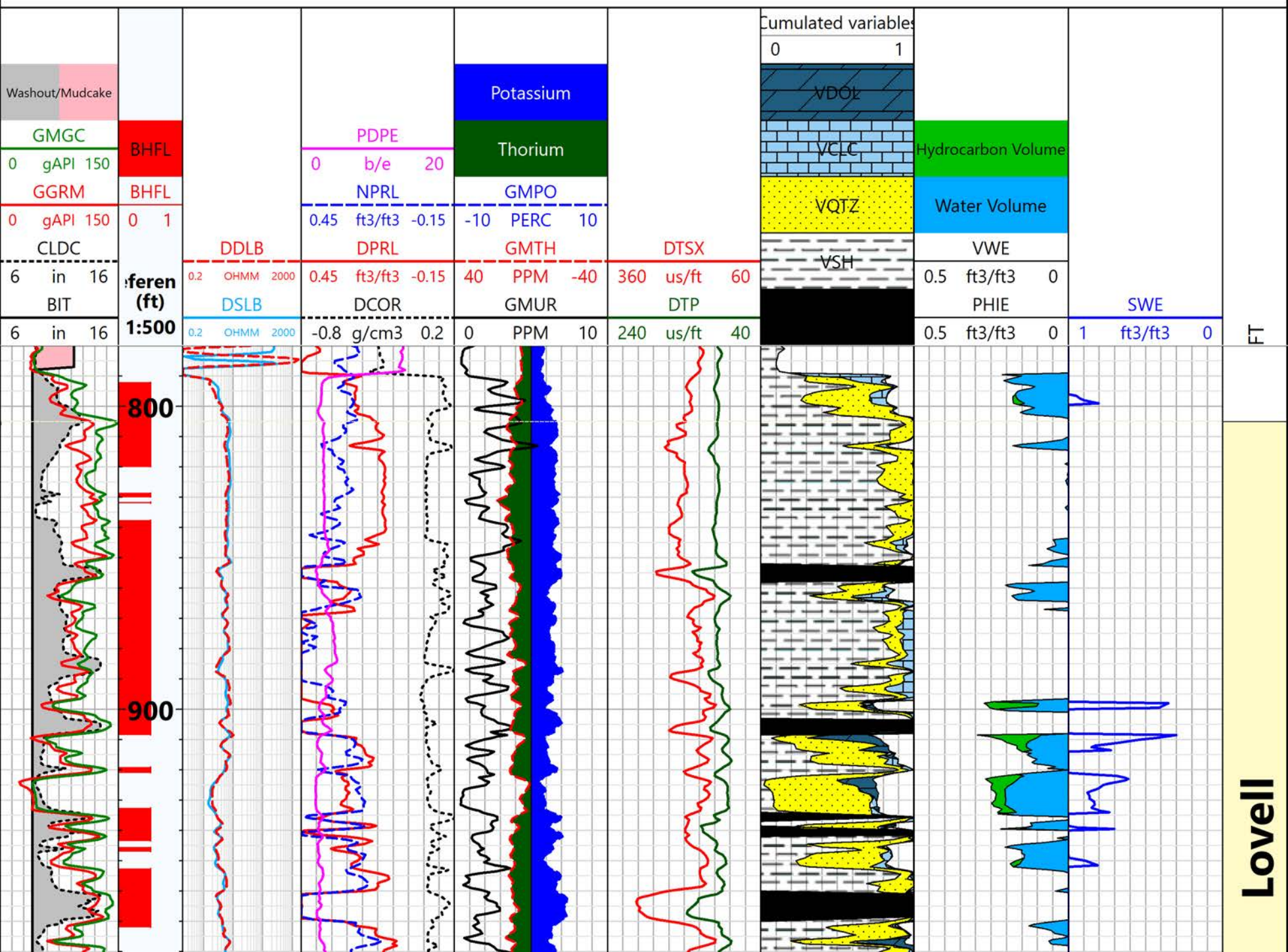
5.00 s/ct
 30min
 @ 72.00 degF
 @ 72.00 degF
 @ 72.00 degF
 @ 168.00 degF

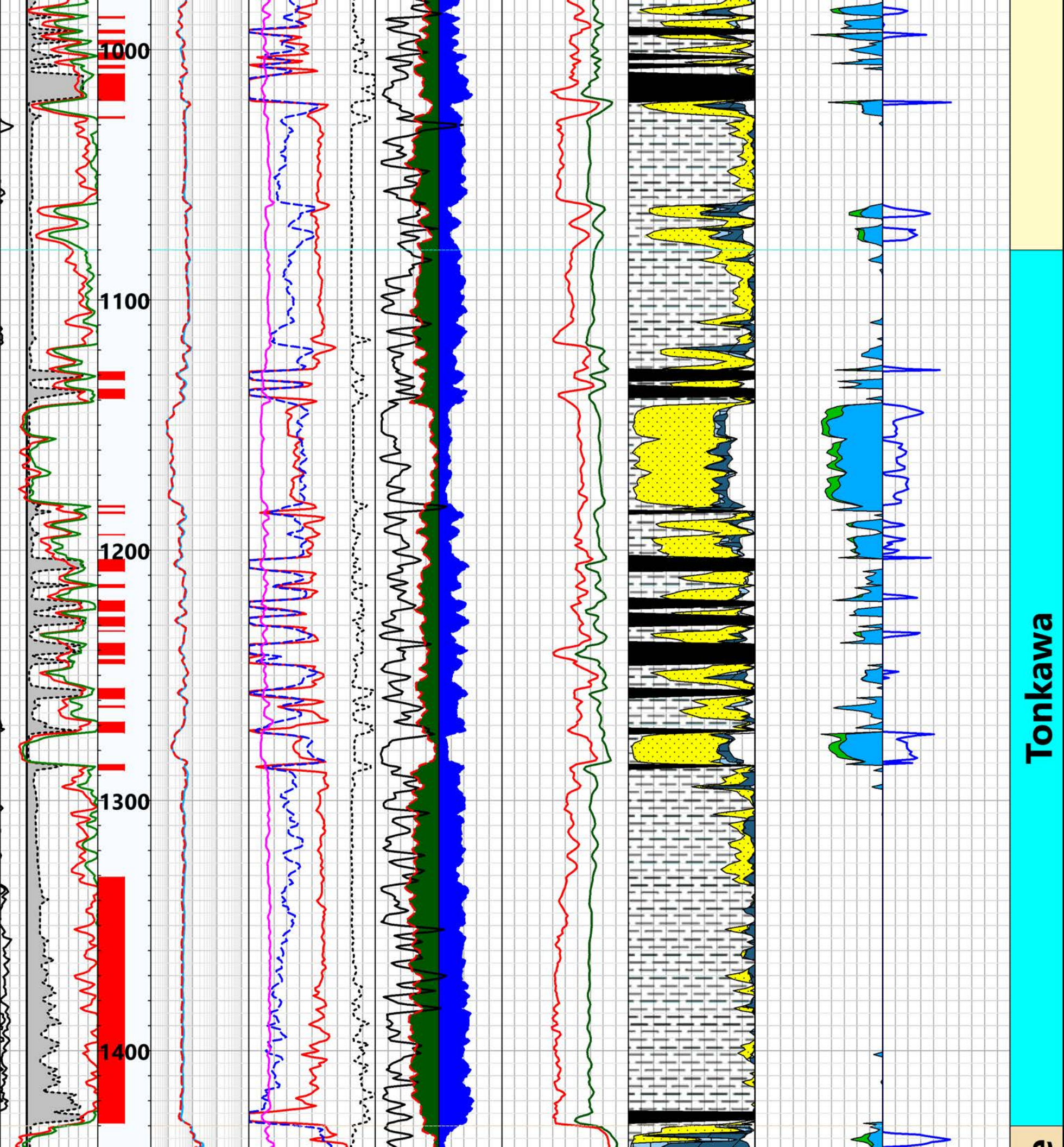
Information and/or making recommendations, either written or oral, as to logs or test
 Work or other service to be furnished, or manner of performance, or in predicting
 the Company the benefit of the Contractor's best judgment based on its experience
 and workmanlike manner. Any interpretation of test or other data, and any
 based upon such interpretations, are opinions based upon inferences from
 and assumptions, which inferences and assumptions are not infallible, and with respect
 may differ.

COMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE
 AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF
 ENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT,
 BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION,
 IAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY
 W OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL

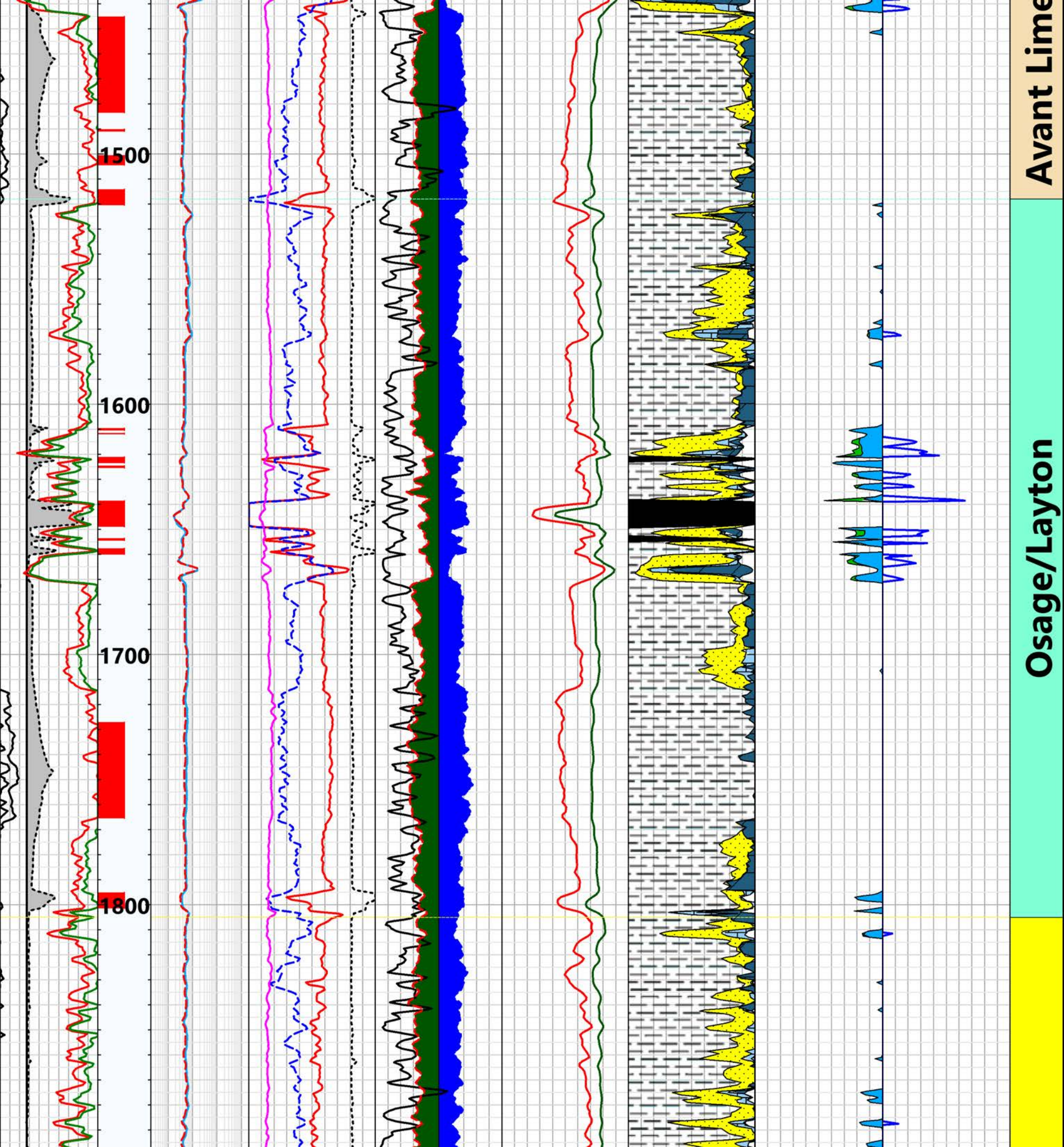
Analysis Date	Log Analyst
10/06/2021	L.RAMOS

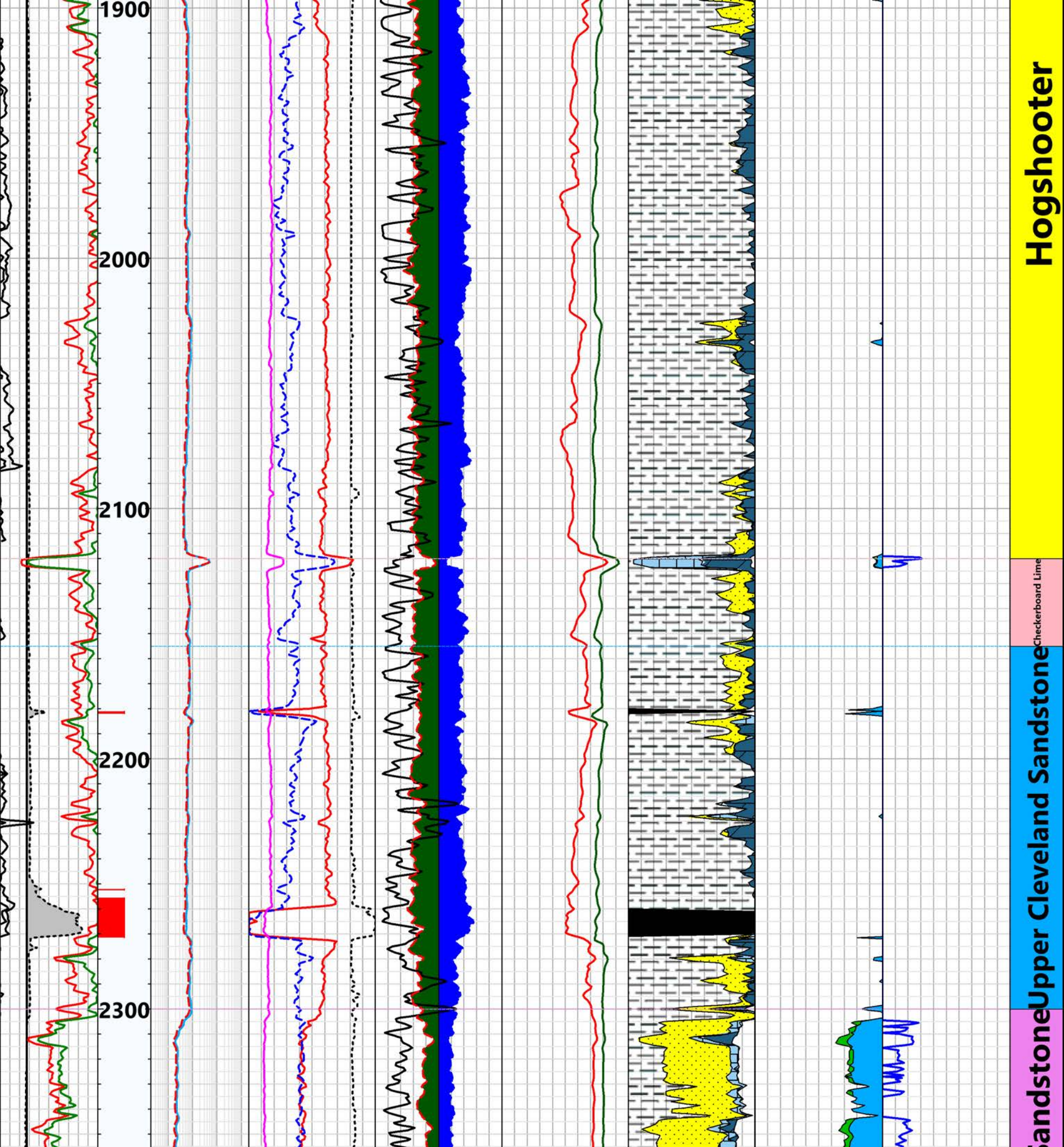
HOUSTON TX	Location
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Tonkawa

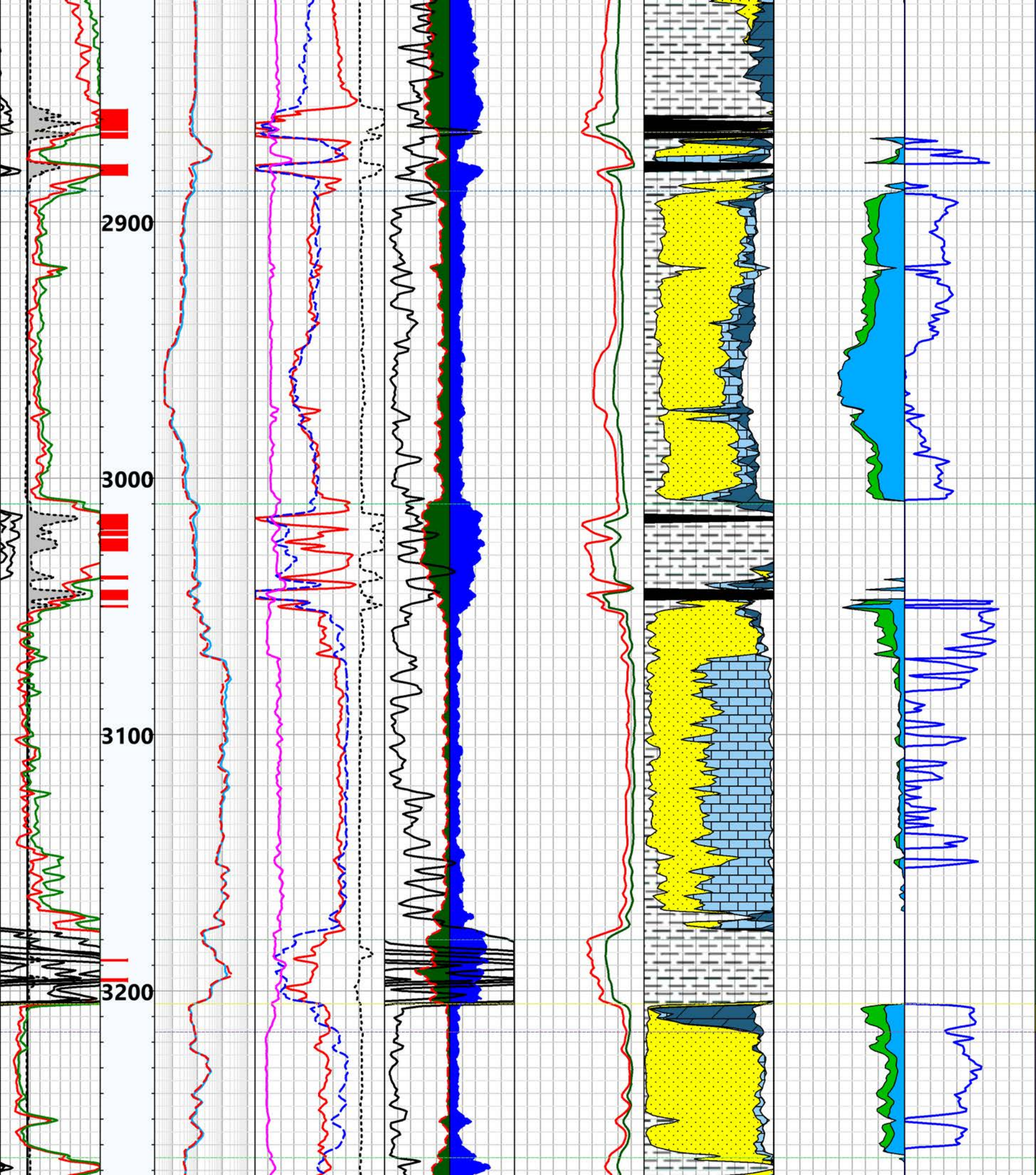


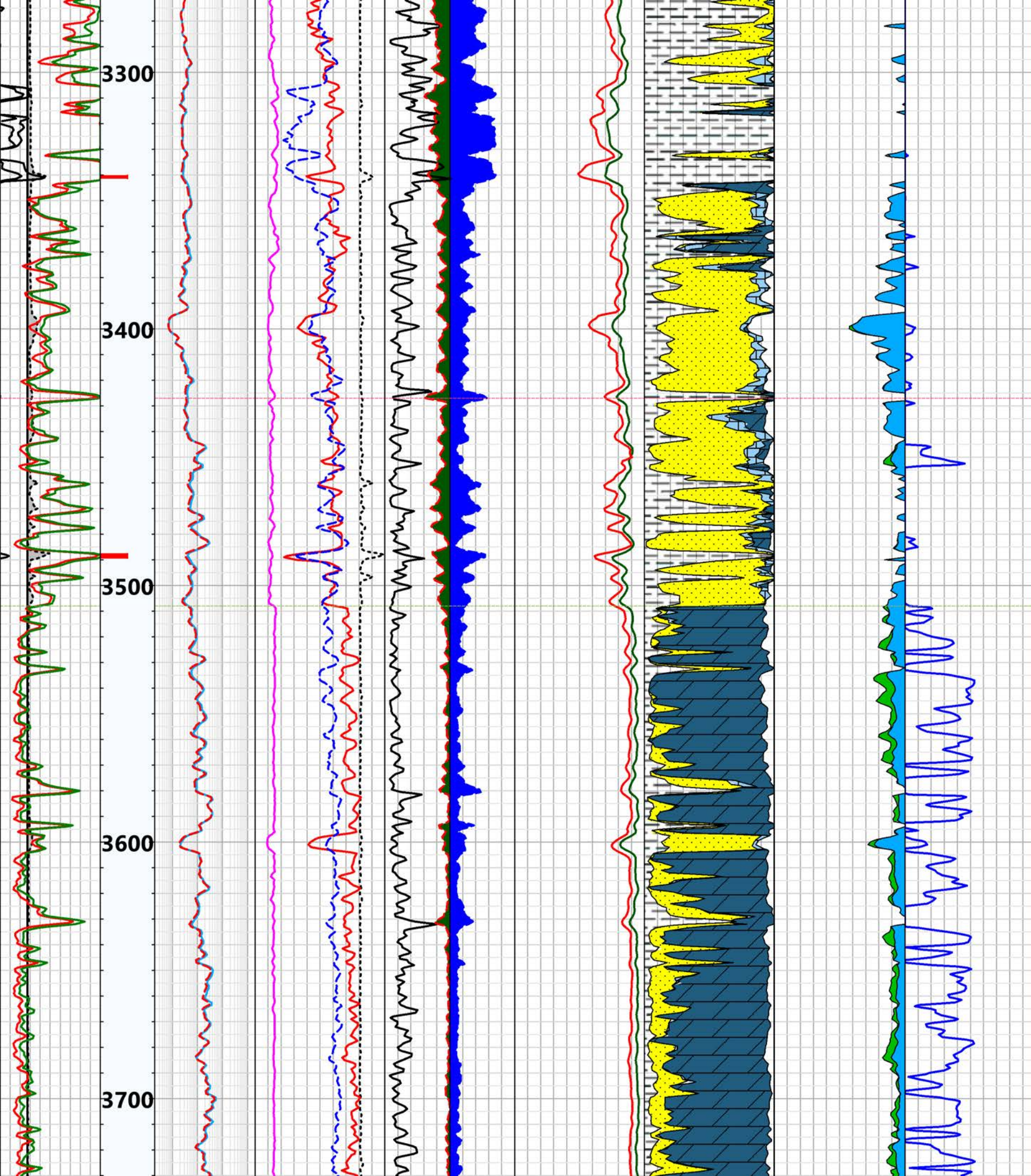


Hogshooter

Checkerboard Lime

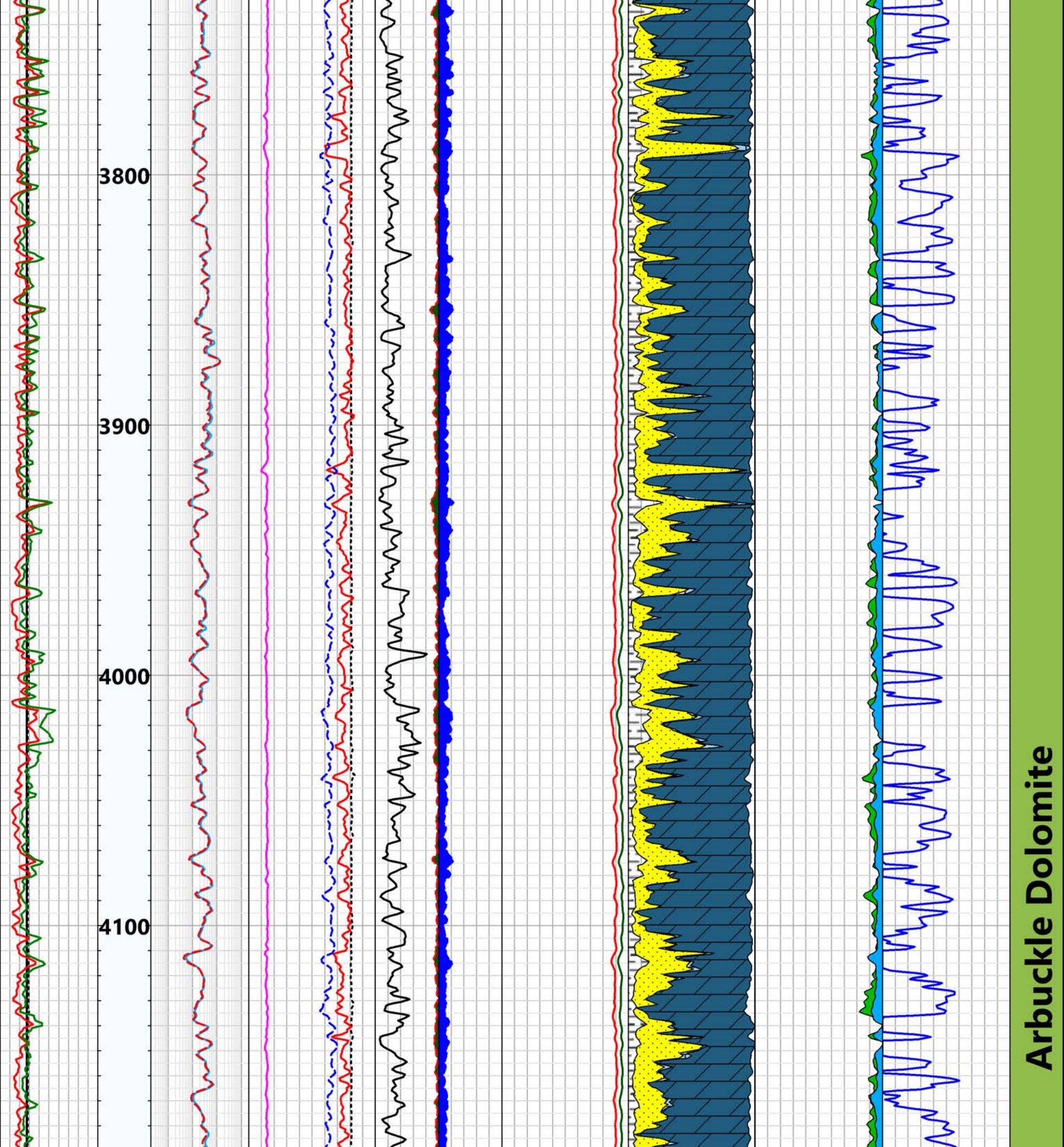
Sandstone Upper Cleveland Sandstone



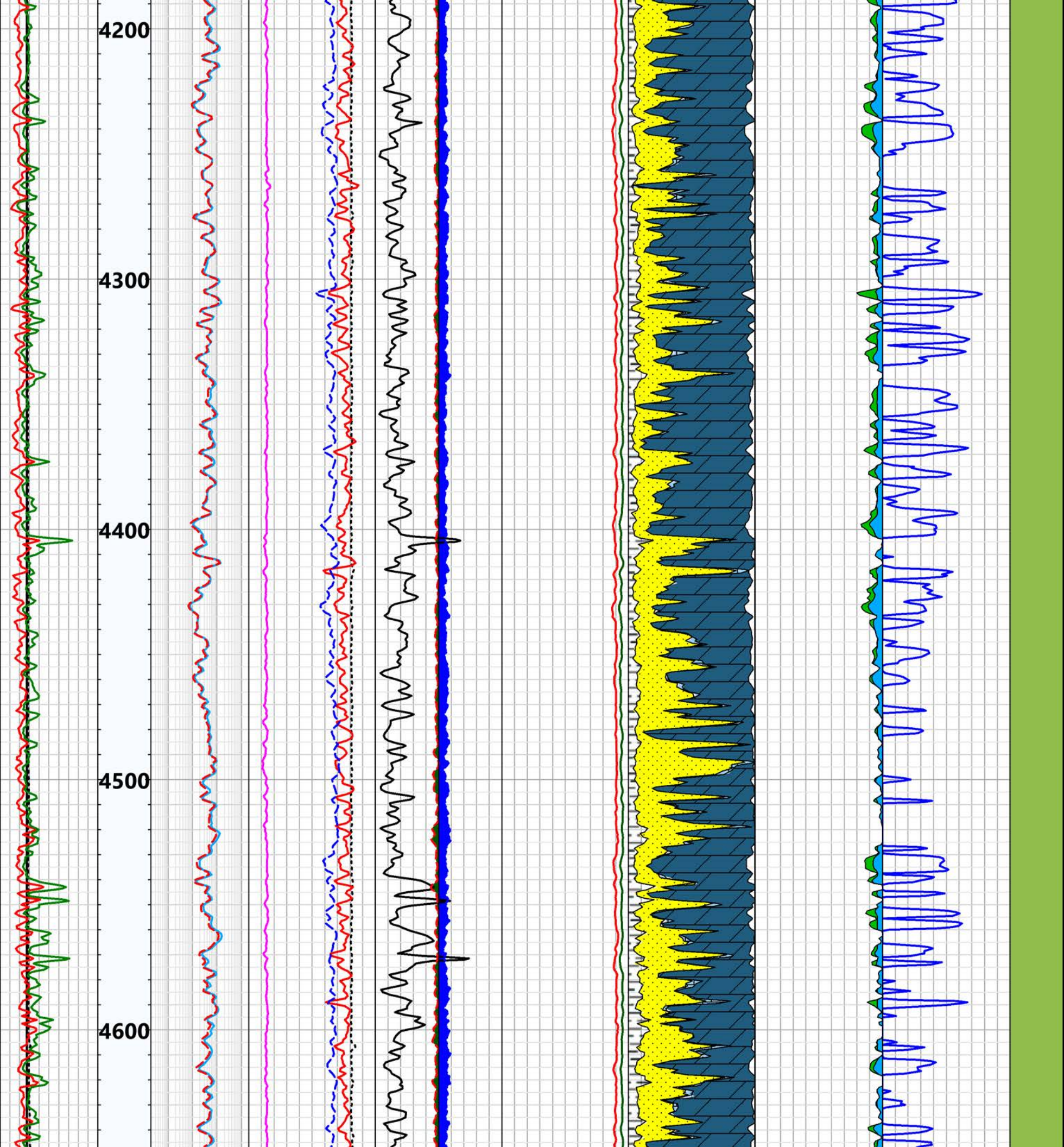


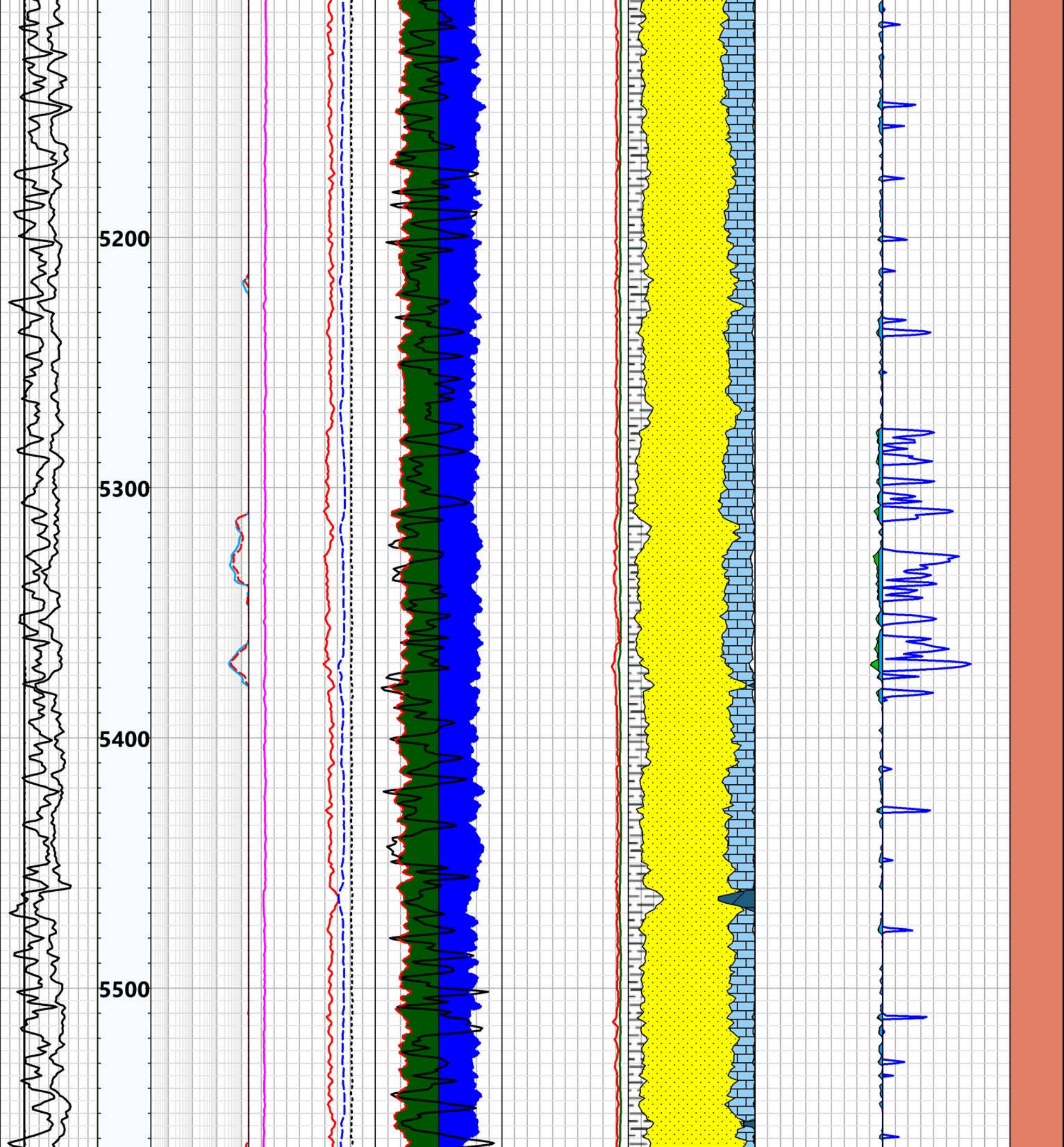
Lower Tyner Sandstone

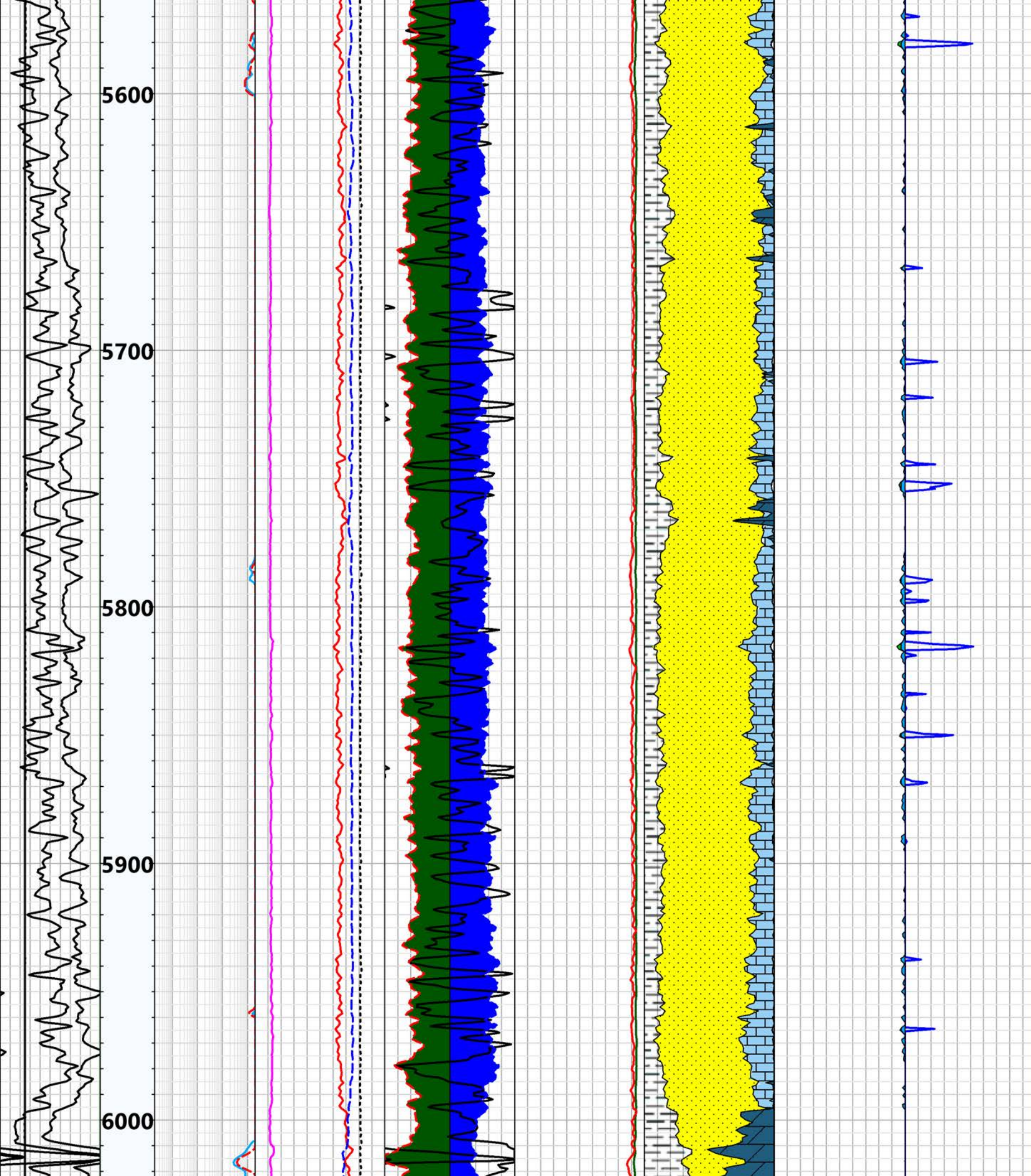
Middle Tyner Sandstone



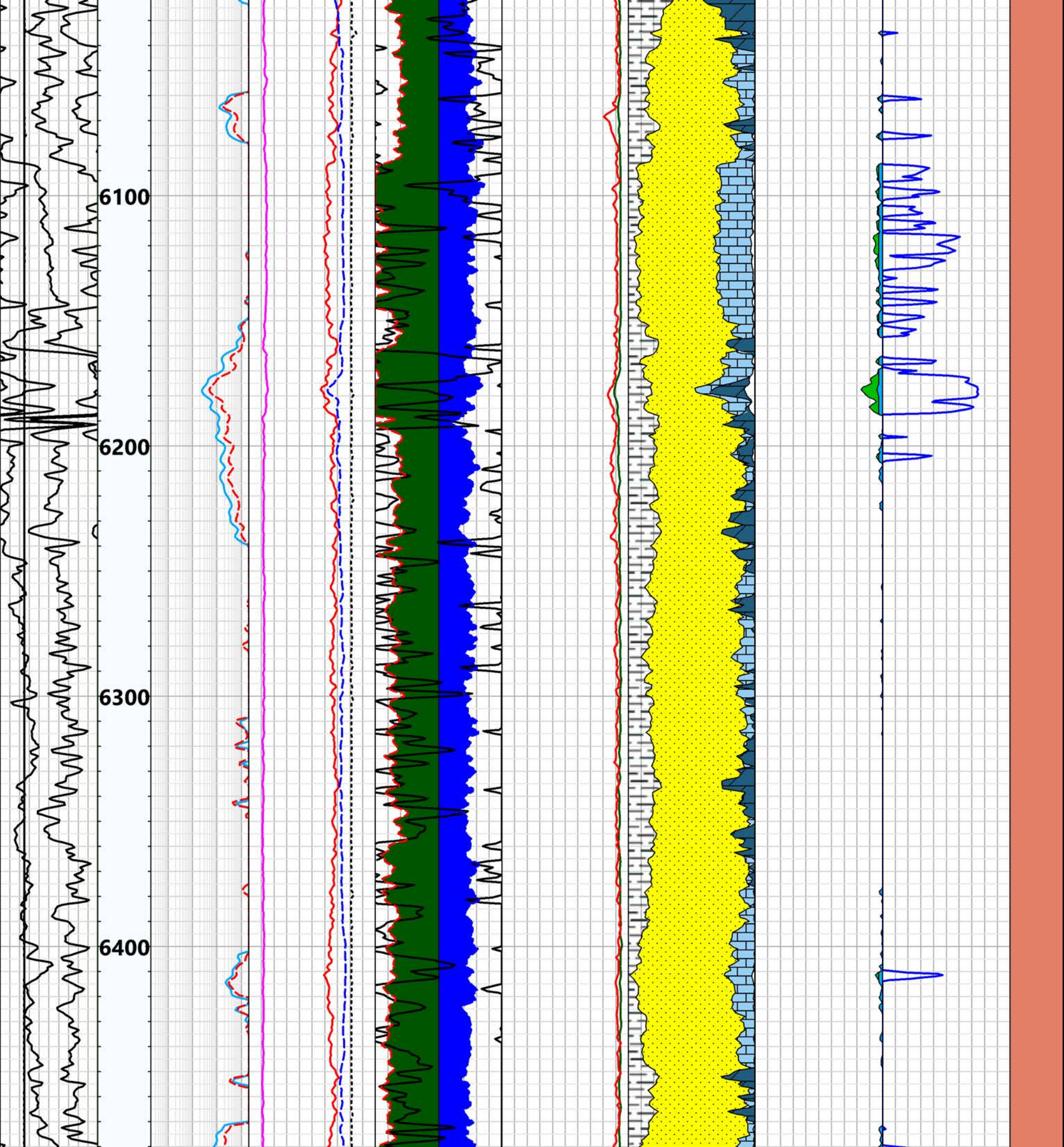
Arbuckle Dolomite

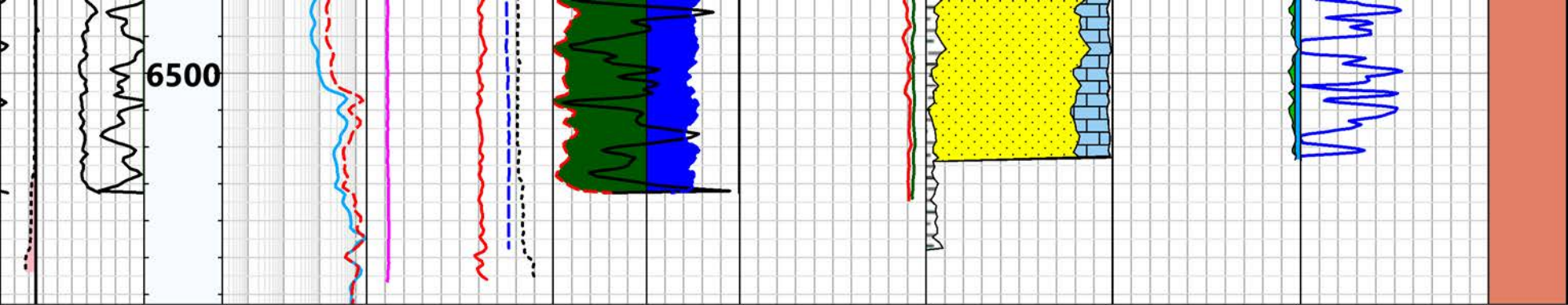






Spavinaw Granite





Washout/Mudcake				Potassium		Cumulated variables			
GMGC		BHFL		Thorium		VDOz		Hydrocarbon Volume	
0	gAPI 150	BHFL		0	b/e 20	VCLC			
GGRM		BHFL		NPRL		VQTZ		Water Volume	
0	gAPI 150	0	1	0.45	ft3/ft3 -0.15	-10	PERC 10		
CLDC		DDLB		DPRL		GMTH		VWE	
6	in 16	OHMM 2000		0.45	ft3/ft3 -0.15	40	PPM -40	360	us/ft 60
BIT		DSLb		DCOR		GMUR		DTP	
6	in 16	0.2	OHMM 2000	-0.8	g/cm3 0.2	0	PPM 10	240	us/ft 40
:feren (ft)								VSH	
1:500								PHIE	
								SWE	
								1	
								ft3/ft3 0	
								0	
								ft	

Company	CATOOSA TEST FACILITY
Well	T-BIRD #5G
Field	---
State	OKLAHOMA
UWI/API	---



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