



**COMPACT  
MONOPOLE / CROSS DIPOLE  
SEMBLANCE**

COMPANY: <b>MARATHON OIL COMPANY</b>		
WELL: <b>596-31C-24</b>		
FIELD: <b>GRAND VALLEY</b>		
COUNTY: <b>GARFIELD</b>	STATE: <b>COLORADO</b>	
Location:	Latitude:	Other Services:
API: <b>05-045-16025</b>	Longitude:	
Licence:		
Permanent Datum: GL      Elevation: 8521 FT		Elevations: K.B.: 8545 FT
Log measured from KB 24      above Permanent Datum		D.F.: 8544 FT
Drilling measured from KB		G.L.: 8521 FT
Date	21-SEPT-2009	
Run Number	ONE	
Service Order	3516293	
Depth Driller	9744 ft	
Depth Logger	9713 ft	
First Reading	9513 ft	
Last Reading	6250 ft	
Casing Driller	@	
Casing Logger	@	
Bit Size	7.88 inch	
Hole Fluid Type	FRESH WATER	
Density	Viscosity	8.34 lb/USg
pH	Fluid Loss	
Sample Source		
Rm @ Measured Temperature	@	
Rmf @ Measured Temperature	@	
Rmc @ Measured Temperature	@	
Source Rmf	Rmc	
Rm @ BHT	@	
Time Since Circulation		
Maximum Recorded Temperature	258 ° F	@
Equipment No.	Location	13173.000 deg GDUCT
Recorded By	C.WRIGHT	
Witnessed By	J.PENNELL	

All interpretation of log data are opinions based on inferences from electrical or other measurements. We do not guarantee the accuracy or correctness of any interpretation or recommendation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from any interpretation or recommendation made by any of our employees or agents.		
Rig: Drilling Stopped Circulation Stopped Tool on Bottom BHT	Remarks:	Service Order # 3516293
Equipment Data		
Tool Type	Tool Type	Other

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REMARKS:

Project: 3516293  
API Number: 05-045-16025  
Company: MARATHON OIL COMPANY  
Well: 596-31C-24  
Field: GRAND VALLEY  
County: GARFIELD  
State: COLORADO  
Country: USA  
Log Date: 21-SEP-2009

Logging Unit 13173, GRAND JUNCTION

Recorded by C. WRIGHT.

Tool # 3

Data from this run has been depth shifted to match WFT OH run logged  
28-Jan-2009. Depth interval of OH run- 8325-9668 ft.

DTQC, DTPQ, DTXQ and DTYQ are flags for zones where the values of DTP, DTX  
and/or DTY may not be accurate. Caution should be excersised if DTP, DTX  
and DTY are used in analysis and interpretation where these flags occur.  
Any other curves that are dependent upon DTP, DTX and DTY should also be  
usec with caution. These include VPVSX, VPVSY, POIS, SPHI, ITTP, ITTX and  
ITTY.

Another flag of potentially inaccurate responses is the borehole rugosity  
as indicated by the caliper(s).

Bond quality will affect data accuracy.

Poisson's Ratio:

$POIS = (2 - (DTX/DTP)^2) / (2 * (1 - (DTX/DTP)^2))$

$VPVSX = DTX/DTP$

$VPVSY = DTY/DTP$

XX DIPOLE Shear Processing

Receiver levels:

R1, R2, R3, R4, R5, R6, R7, R8. First receiver offset 8.5 feet.

Frequency pre-filtered 3000 - 5000 Hz butter worth filter.

Slowness filter 60 - 270 usec/ft.

Used guided semblance @ x32 resolution, variable wave tracking with  
width @ 280 usec.

YY DIPOLE Shear Processing

Receiver levels:

R1, R2, R3, R4, R5, R6, R7, R8. First receiver offset 7.8 feet.

Frequency pre-filtered 3000 - 5000 Hz butter worth filter.

Slowness filter 60 - 270 usec/ft.

Used guided semblance @ x32 resolution, variable wave tracking with  
width @ 280 usec.

MONOPOLE Compressional Processing

Receiver levels:

R1, R2, R3, R4, R5, R6, R7, R8. First receiver offset 6.8 feet.

Frequency pre-filtered 8000 - 16000 Hz bell filter.

Slowness filter 40 - 210 usec/ft.

Used Guided Semblance map @ x32 resolution, start 480 usec, stop 4040 usec  
with width @ 100 usec.

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CURVE DESCRIPTIONS:

CURVE LEGEND:

XSEM = XX Dipole Semblance  
XWAVE = XX Dipole Waveform - First Receiver  
DTX = Delta Time Shear, From XX Dipole Semblance  
VPVSX = Velocity Ratio, Compressional Velocity VP to XX Shear Velocity Vx  
ITTX = Shear Integrated Travel Time from DTX  
DTXQ = Delta T XX Shear Quality Flag  
BS = Bit Size  
GRGC = Gamma Ray from Compact Tool.  
CALI = Caliper  
POIS = Poisson's Ratio  
DTPQ = Delta T Compressional Quality Flag  
ITTS = Shear Integrated Travel Time from DTS  
ITTP = Compressional Integrated Travel Time from DTP  
DTP = Delta T Compressional, From Monopole Semblance  
DTS = Delta Time Shear, From Monopole Semblance  
MWAVE = Monopole Waveform - First Receiver  
MSEM = Monopole Compressional Semblance

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PARAMETERS:

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BOREHOLE ENVIRONMENT:

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ANALYST: C. SHEAR

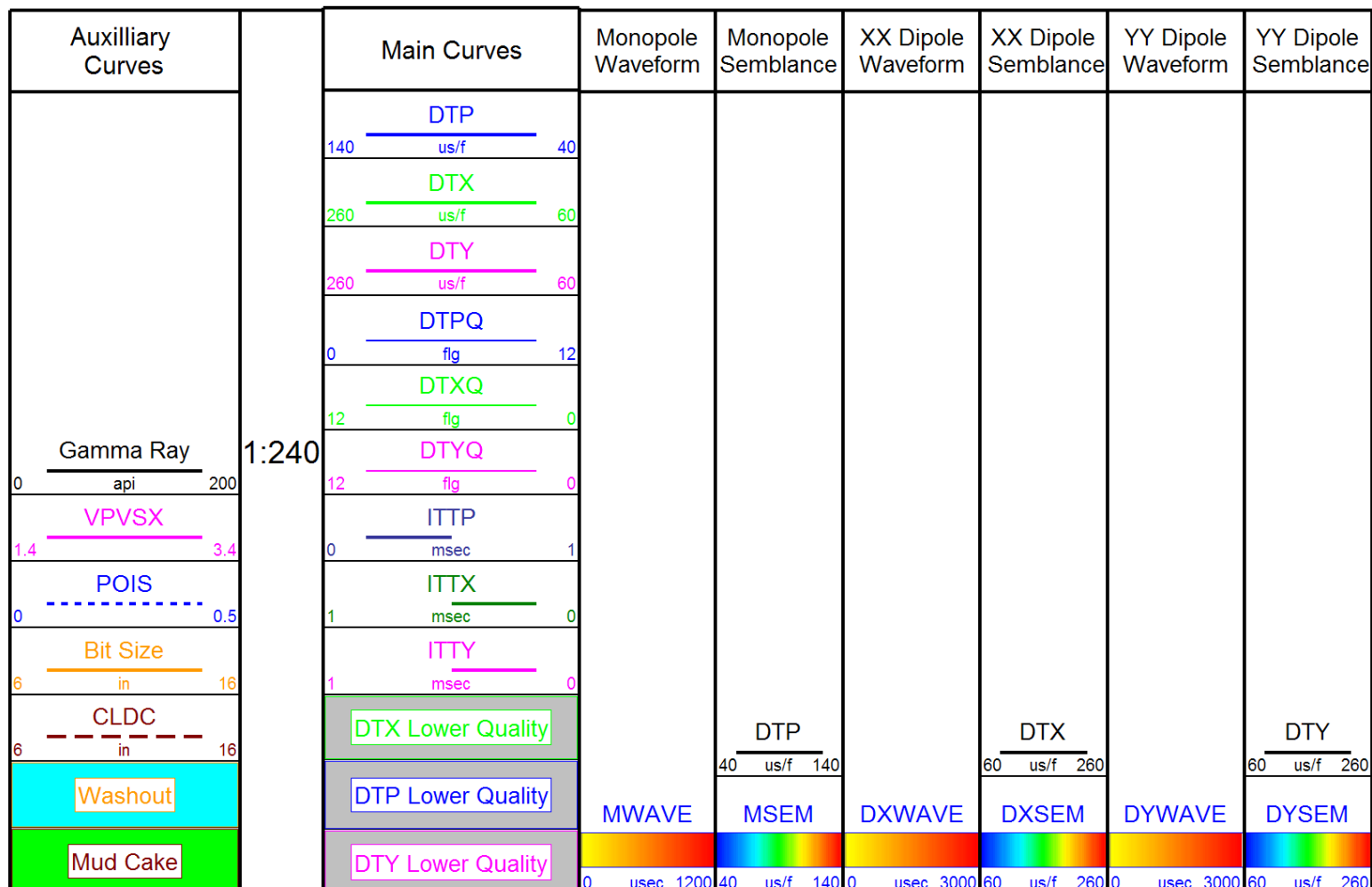
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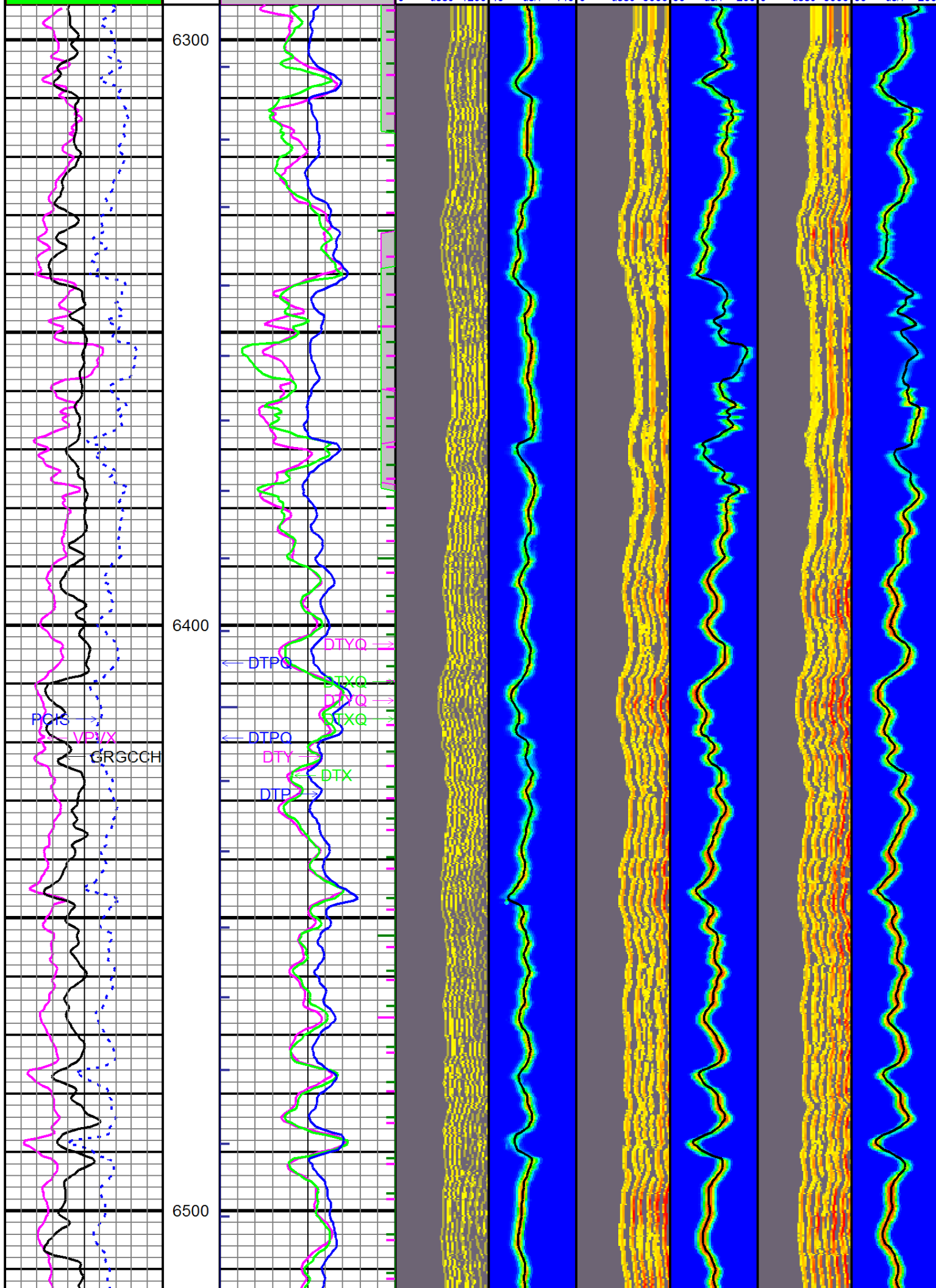
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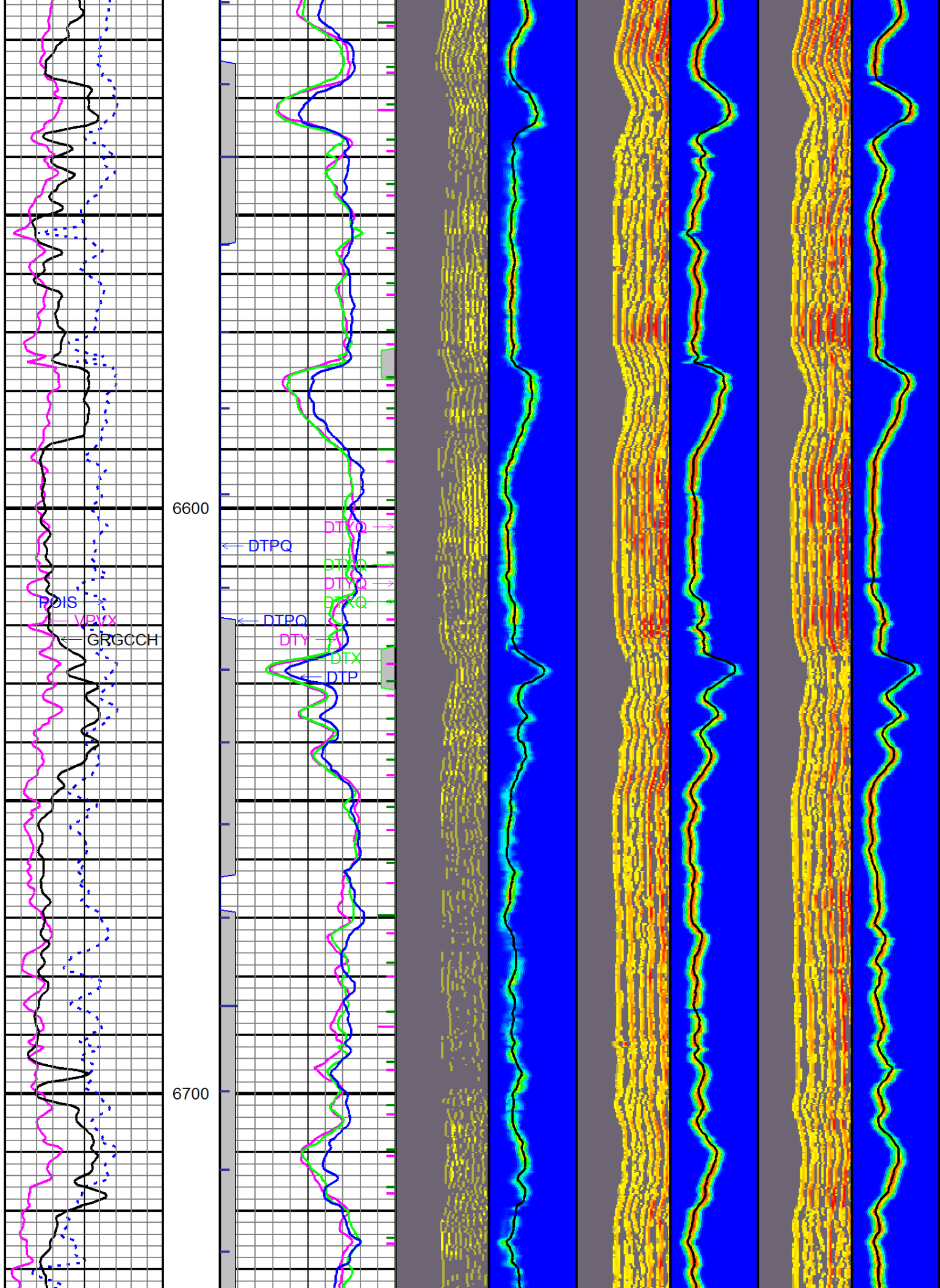
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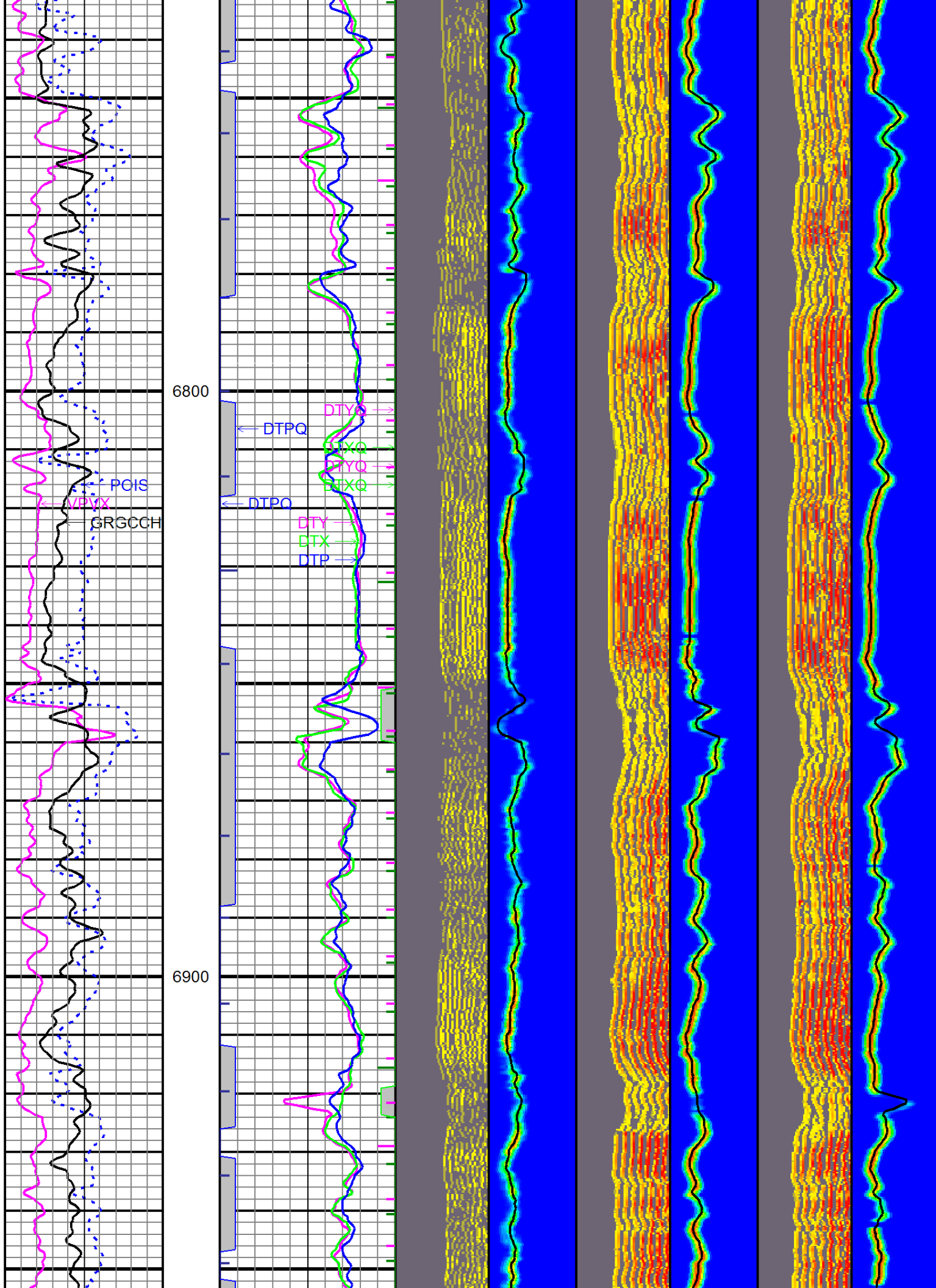
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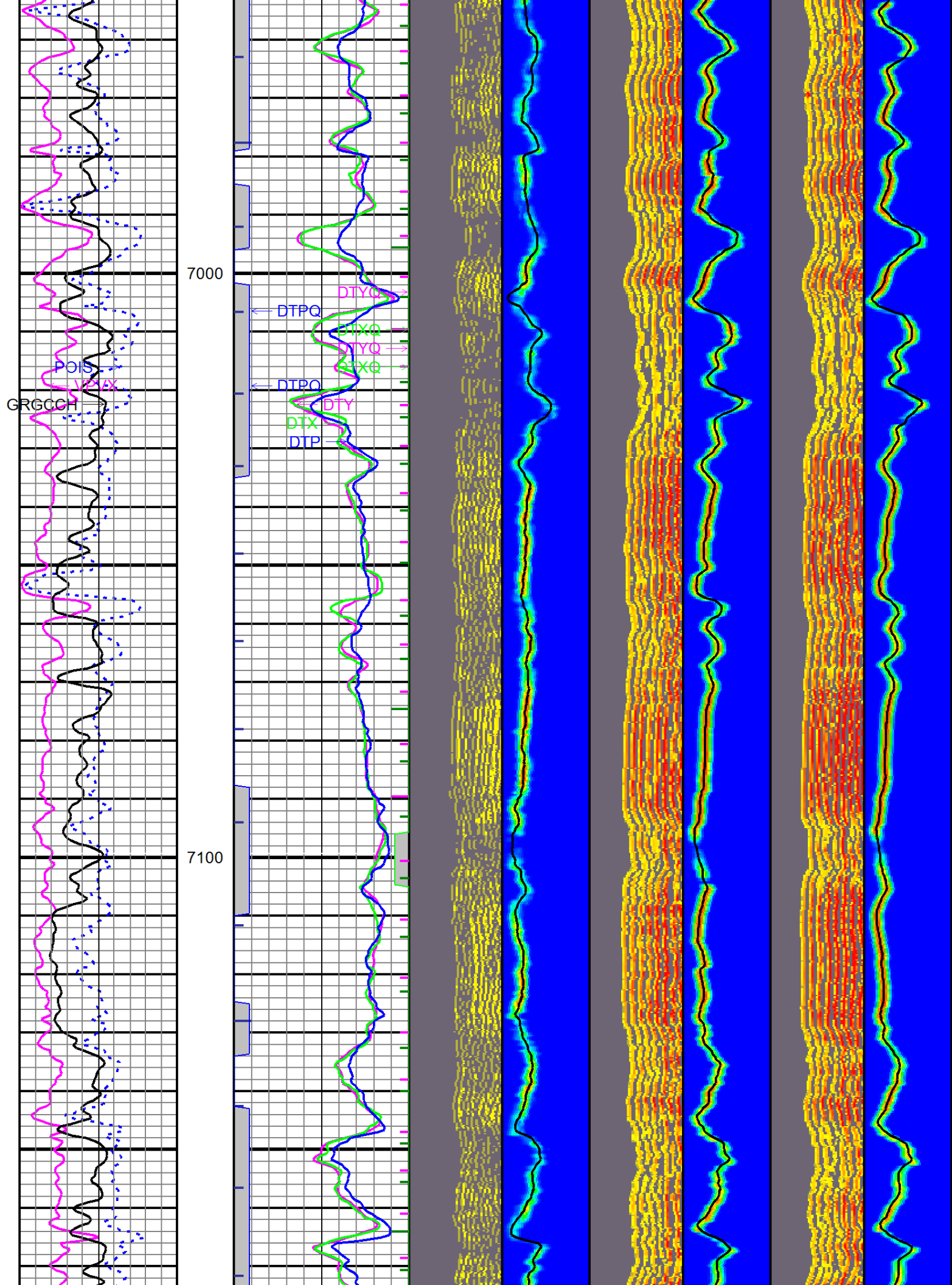


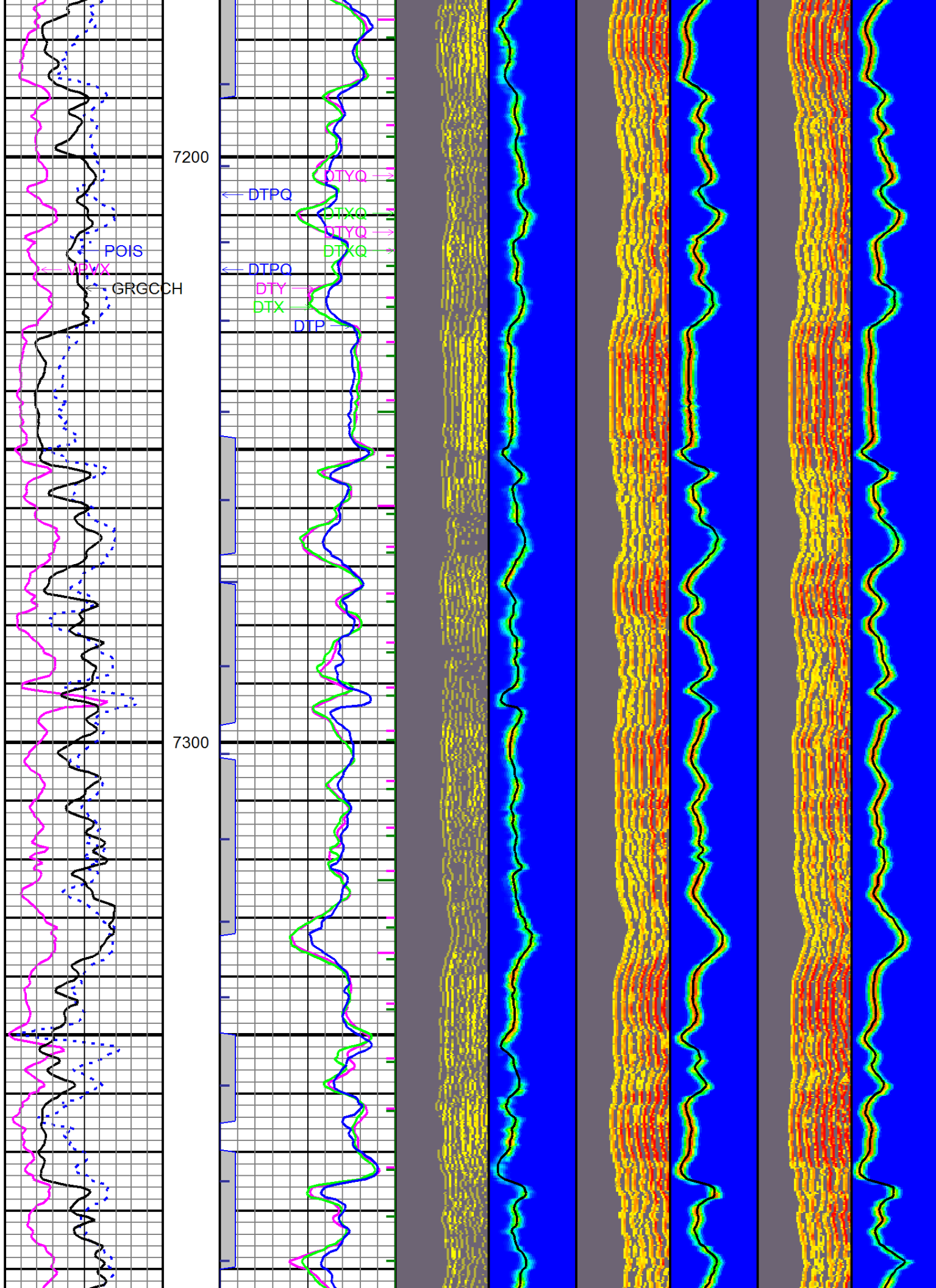




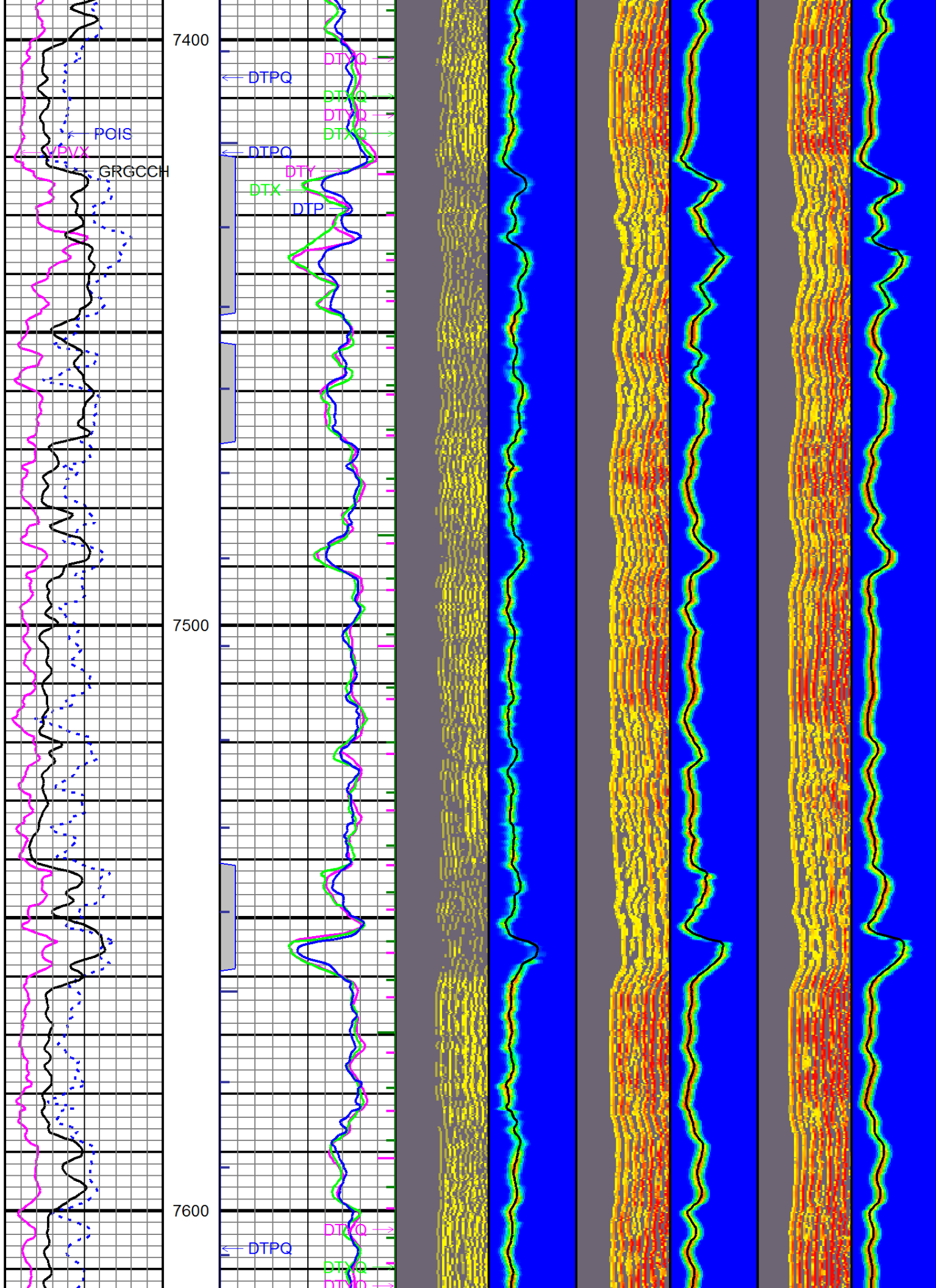


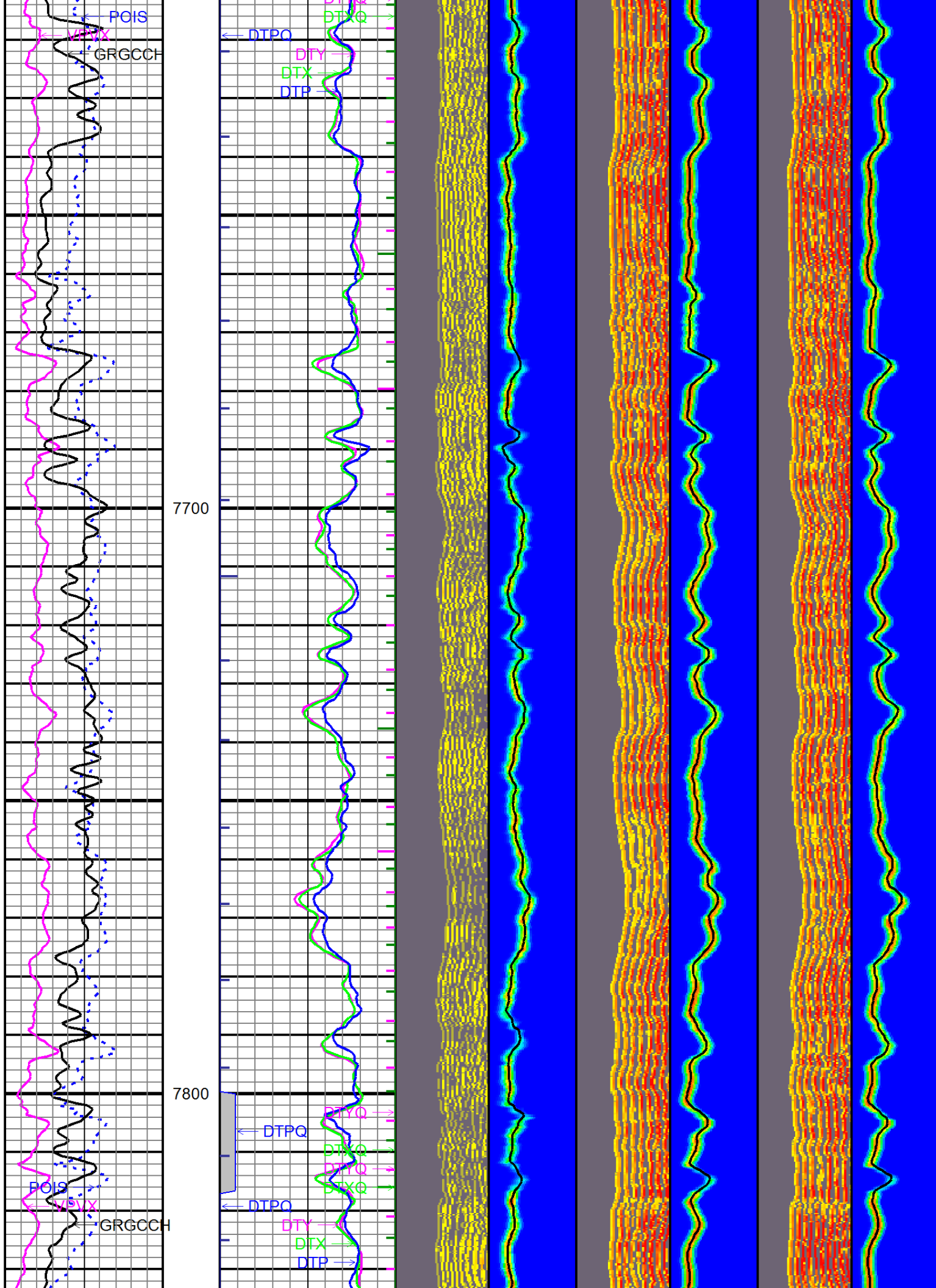


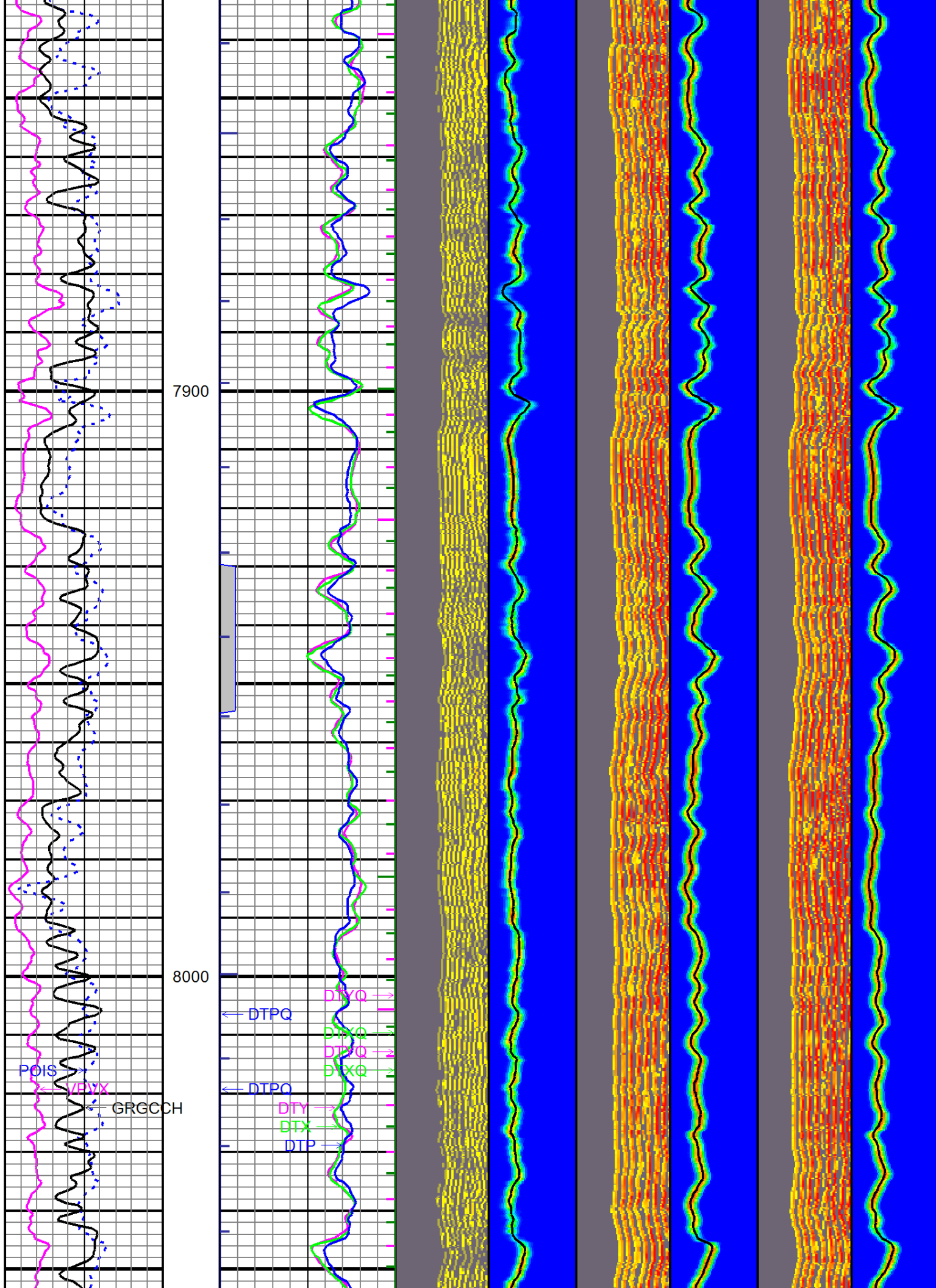


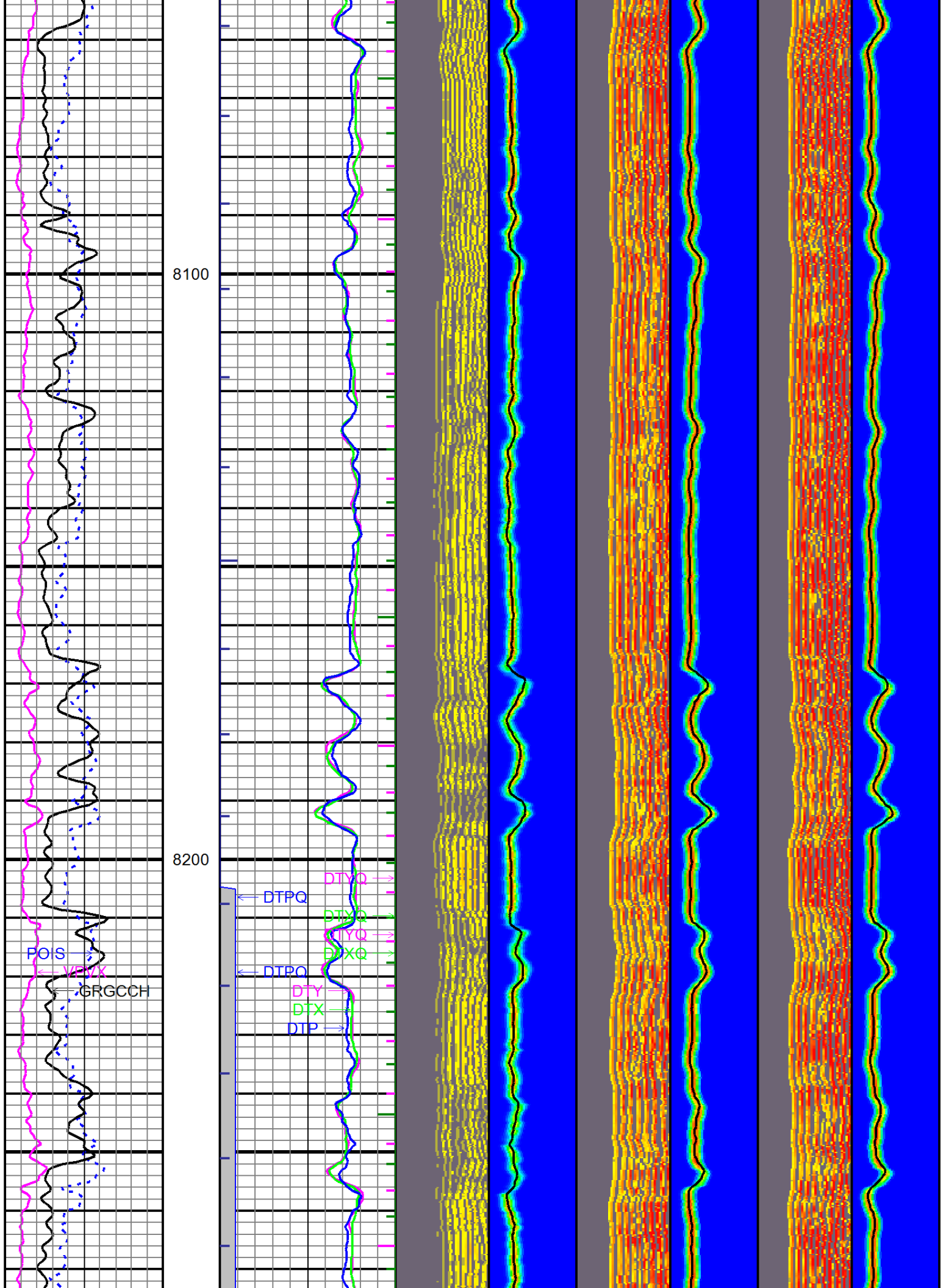




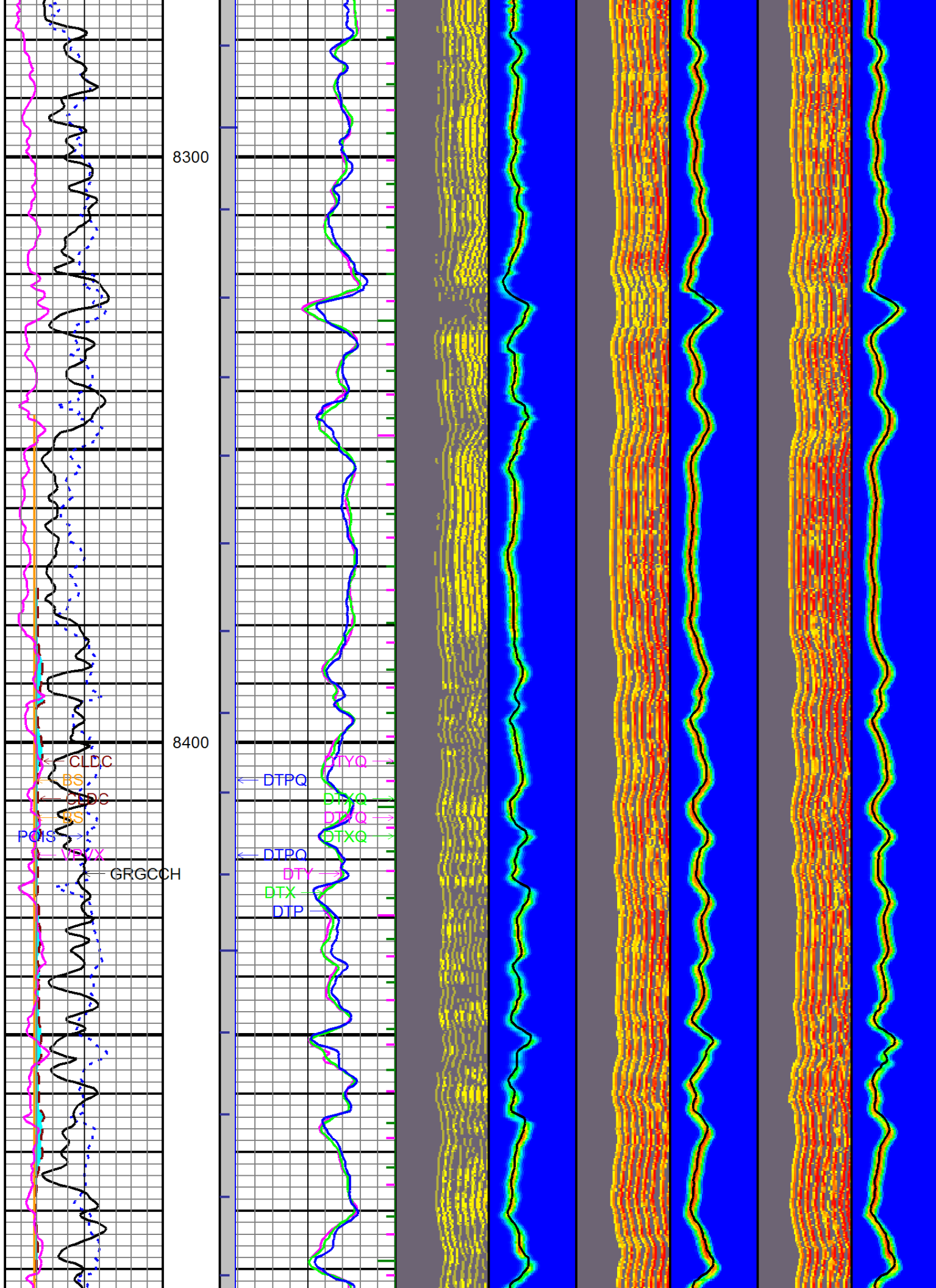




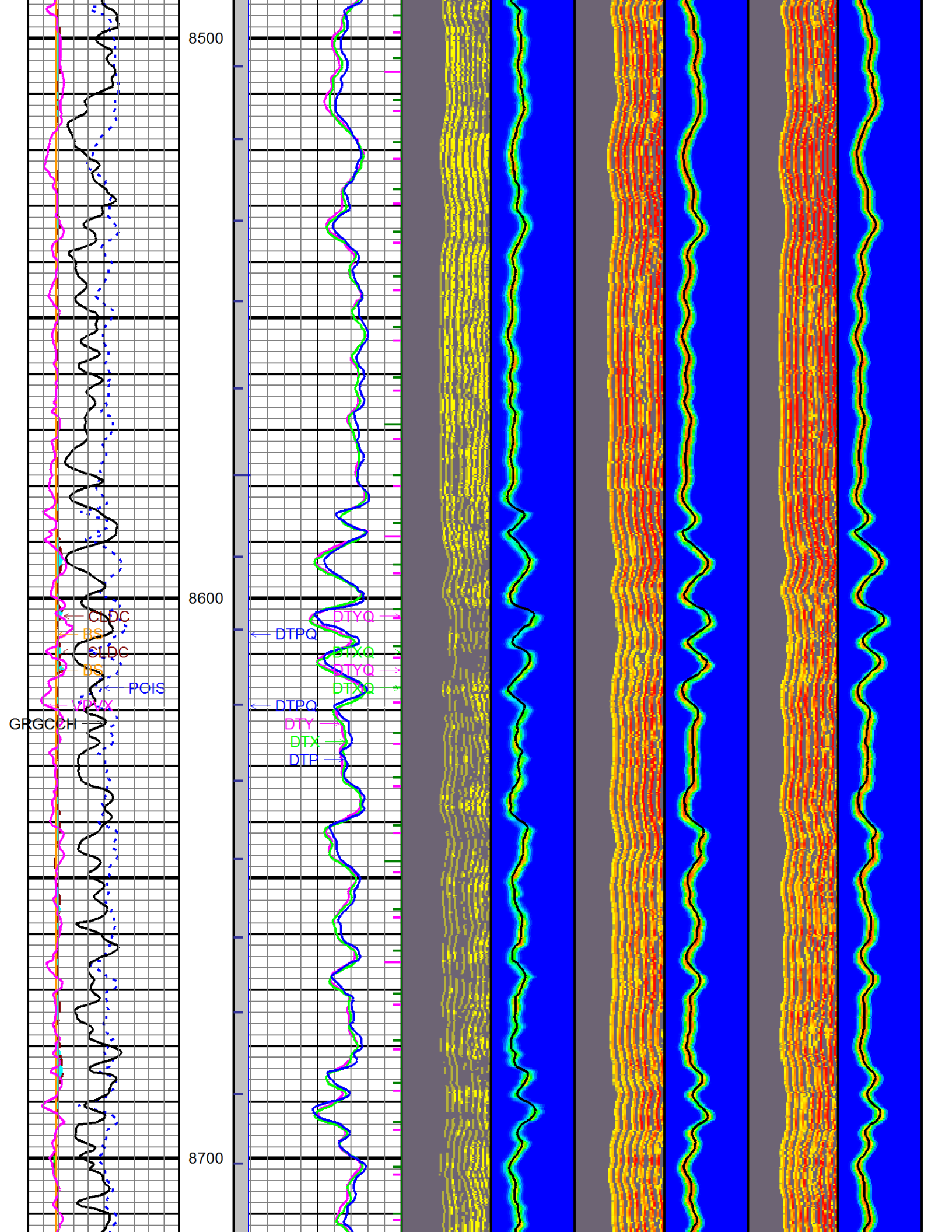


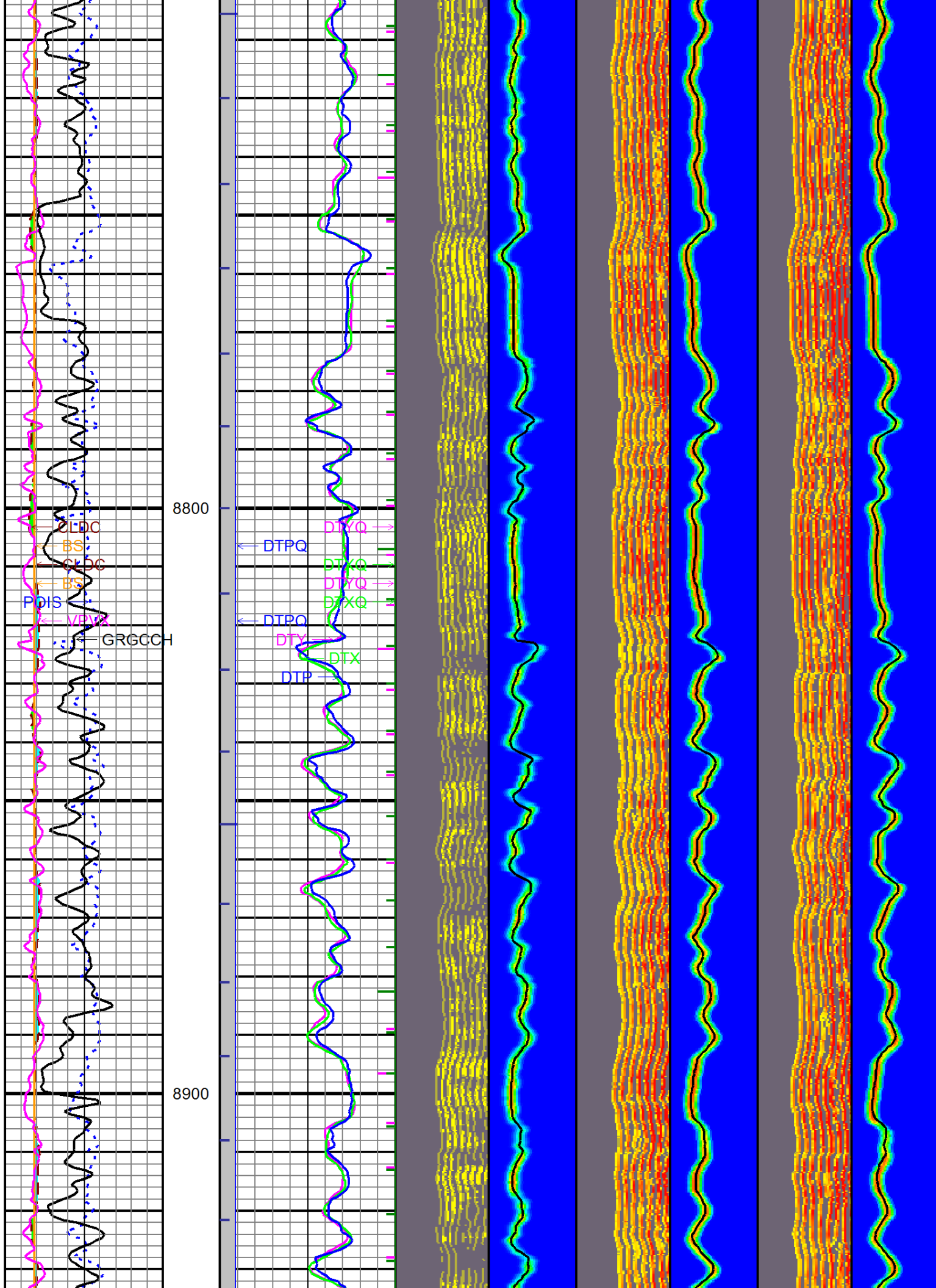


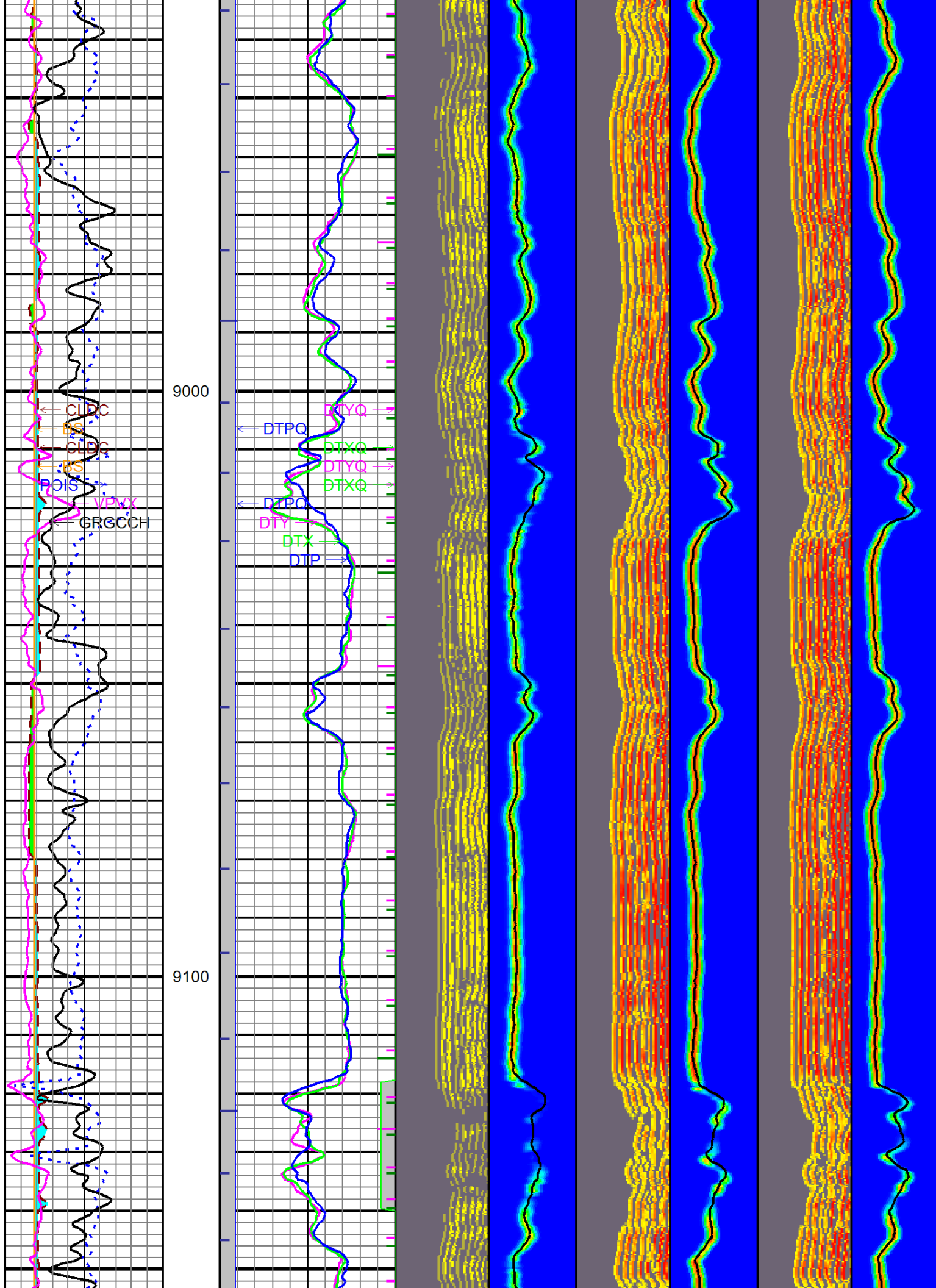


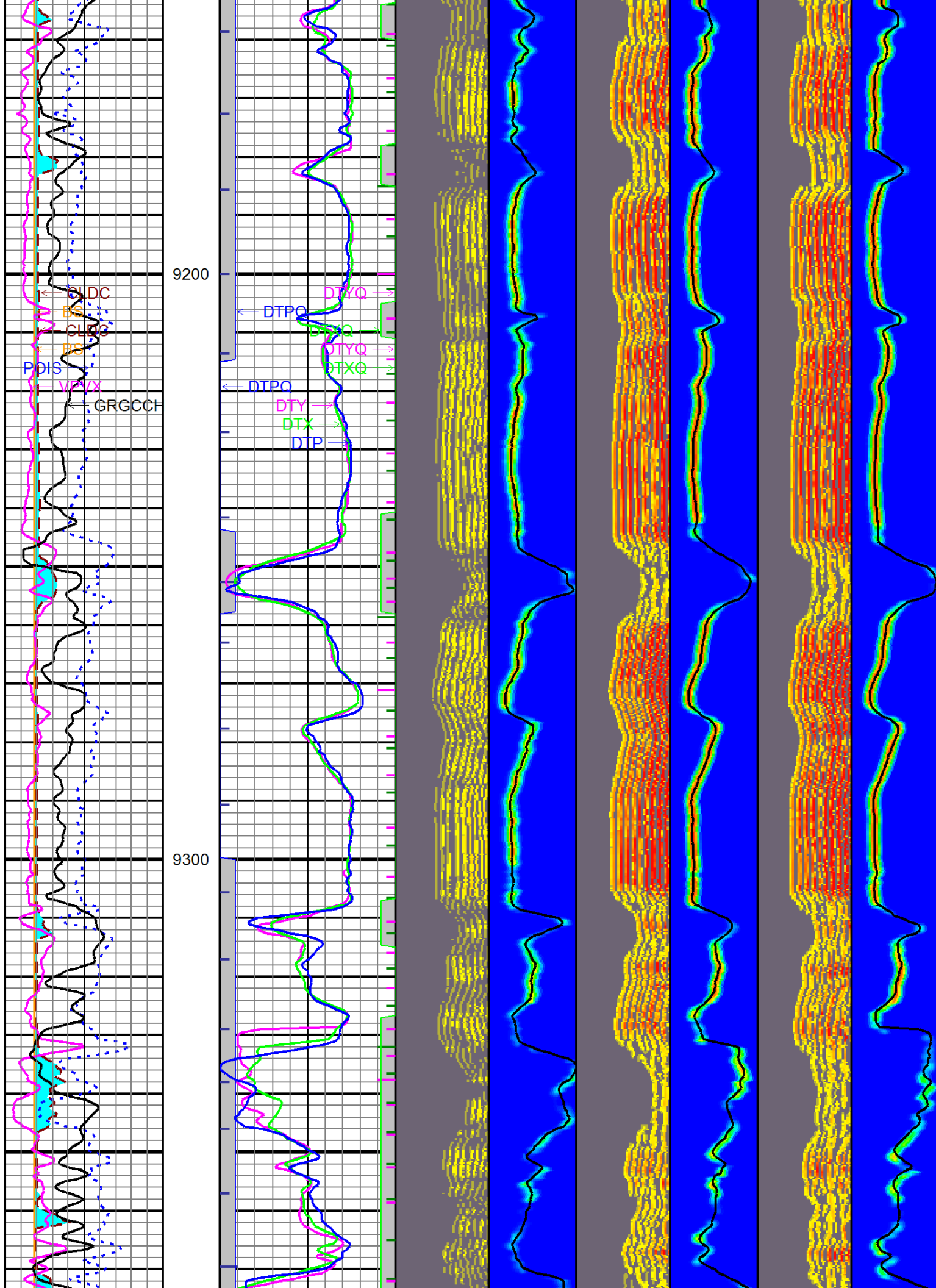




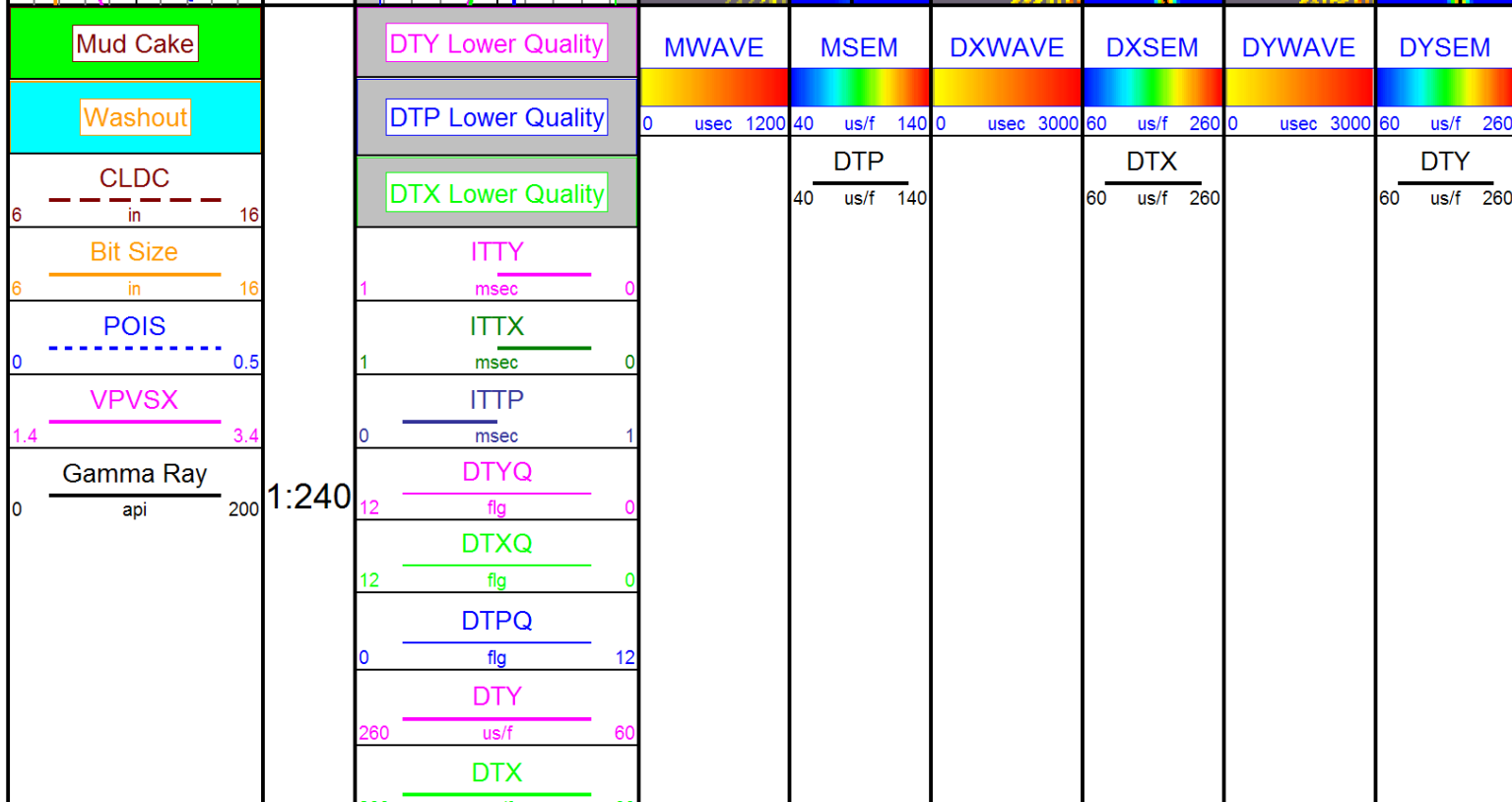
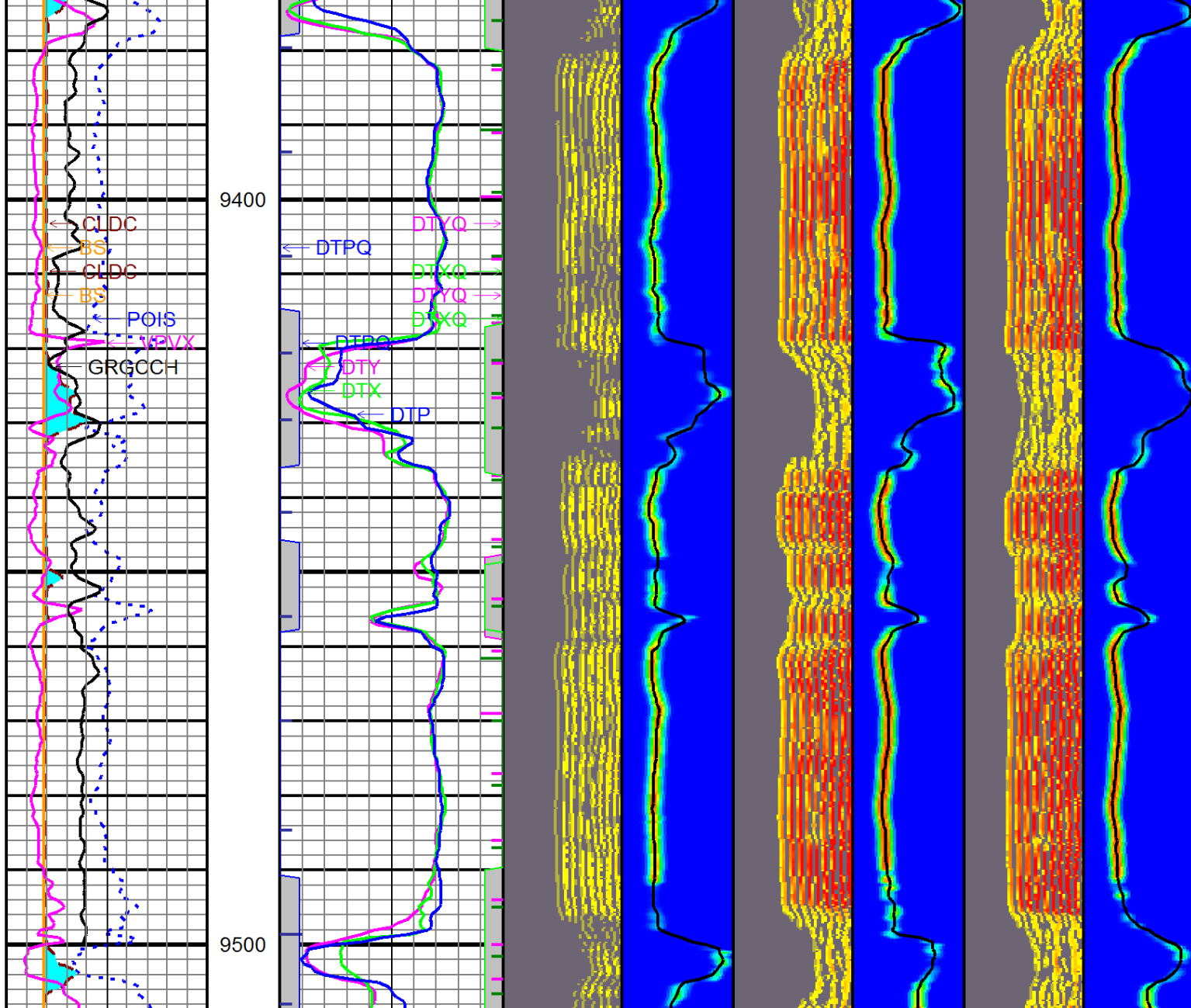














		260 us/f 60						
		DTP 140 ————— 40 us/f						
Auxilliary Curves		Main Curves	Monopole Waveform	Monopole Semblance	XX Dipole Waveform	XX Dipole Semblance	YY Dipole Waveform	YY Dipole Semblance

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