Schlumberger

Company: Vecta Oil & Gas LTD

Well: Maroon 24-20

Field: Wildcat

County: Cheyenne State: Colorado

Platform Express

Borehole Compensated

Sonic Logging Tool

County: Cheyenne
Field: Wildcat
Location: SE/SW Sec. 20, Twn 14 S, Rng 47 W
Well: Maroon 24-20
Company: Vecta Oil & Gas LTD

Location:			
SE/SW Sec. 20, Twn 14 S, Rng 47 W SHL: 888' FSL & 1,499' FWL	Elev.	K.B.	4253.00 ft
		G.L.	4242.00 ft
		D.F.	4252.00 ft

Permanent Datum:	Ground Level	Elev.:	4242.00 f
Log Measured From:	Kelly Bushing	11.00 ft	above Perm.Datum
Drilling Measured From:	Kelly Bushing		

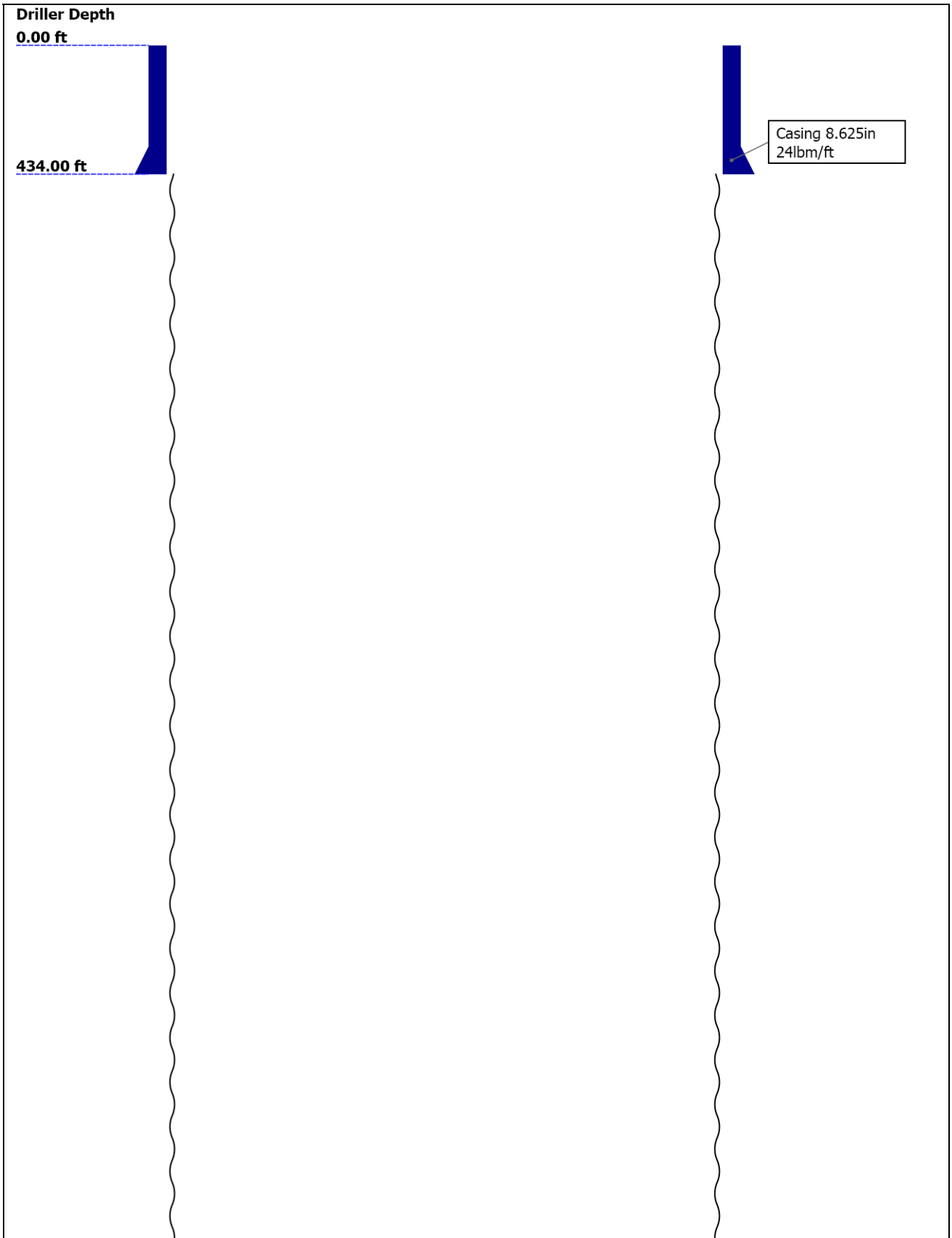
API Serial No.	Section:	Township:	Range:
05-017-07718-0000	20	47 W	47 W

Logging Date			19-Nov-2012			
Run Number			Run-1			
Depth Driller			5445.00 ft			
Schlumberger Depth			5442.00 ft			
Bottom Log Interval			5442.00 ft			
Top Log Interval			431.00 ft			
Casing Driller Size @ Depth			8.625 in @ 434.00 ft			
Casing Schlumberger			431 ft			
Bit Size			7.875 in			
Type Fluid In Hole			Gel Chemical			
MUD	Density	Viscosity	9.2 lbm/gal	58 s		
	Fluid Loss	PH	8.8 cm3	9		
	Source of Sample		Flowline			
RM @ Meas Temp			2.59 ohm.m @ 51.6 degF			
RMF @ Meas Temp			1.94 ohm.m @ 51.6 degF			
RMC @ Meas Temp			3.24 ohm.m @ 51.6 degF			
Source RMF	RMC			Calculated		
RM @ BHT	RMF @ BHT		0.81 @ 180	0.61 @ 180		
Max Recorded Temperatures			130 degF			
Circulation Stopped	Time		19-Nov-2012	14:00:00		
Logger on Bottom	Time					
Unit Number	Location:		2135	Fort Morgan, CO		
Recorded By			Stan Thompson			
Witnessed By			Larry Schneider & Ryan			

Disclaimer

Contents

Well Sketch

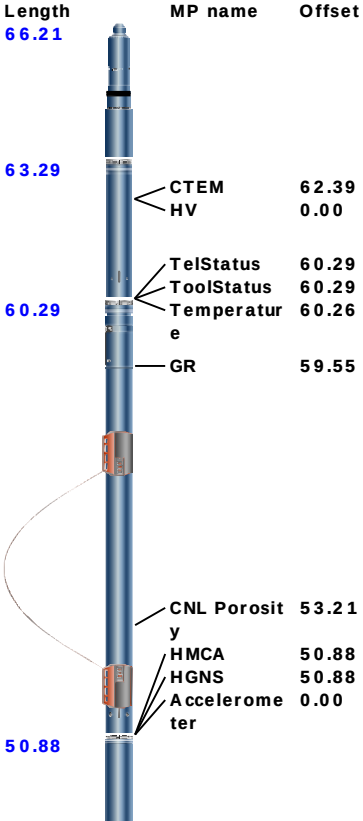


Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	7.875					
Top Driller (ft)	434					
Top Logger (ft)	434					
Bottom Driller (ft)	5445					
Bottom Logger (ft)	5442					
Casing						
Size (in)	8.625					
Weight (lbm/ft)	24					
Inner Diameter (in)	8.099					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	434					
Bottom Logger (ft)	431					

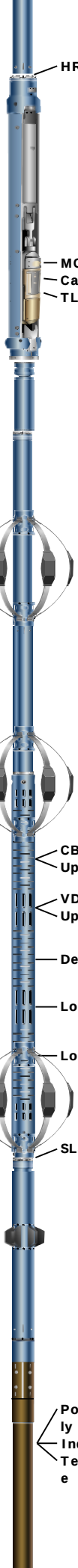
Remarks and Equipment Summary

Run-1: Toolstring



Run-1: Remarks
Toolstring run as per tool sketch.
High-res data acquisition from TD-3,900'
Matrix was set to Limestone: 2.71 g/cc
Crew: Ed Ponce & Matt Rocha

GSR-J:5094
GPV-Q
Long Spacing
HRGD-B:1849
Short Spacing
Backscatter



AH-184 38.64

DSLT-H:8152 36.64
ECH-KH:8152
DSLC-H:8152
SLS-E:8011

AIT-H:398 16.00
AHIS:398
AHRM:398

Lengths are in ft
Maximum Outer Diameter = 5.000 in
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

Depth Summary

Depth Control Parameters	Run-1		
Conveyance Type	Wireline		
Log Sequence	1		
Depth Remark Parameters	**Run-1**		
Depth Remark 1	All Schlumberger depth procedures followed.		
Depth Remark 2	IDW used as primary depth device, Z-chart used as secondary depth reference.		
Depth Measuring Device	**Run-1**		
Type	IDW-JA		
Serial Number	6515A		
Calibration Date	23-Oct-2012		
Calibrator Serial Number	1324		
Calibration Cable Type	7-46P LXS		
Wheel Correction 1	-7		
Wheel Correction 2	-5		
Tension Device	**Run-1**		
Type	CMTD-B/A		
Serial Number	1919		
Calibration Date	10-Nov-2012		
Calibrator Serial Number	78135		
Calibration Points	10		
Calibration RMS	6		
Calibration Peak Error	11		
Logging Cable	**Run-1**		
Type	7-46P-XS		
Serial Number	U7110		
Logging Cable Length (ft)	23450.00		

Composite 1

DSLT Sonic Log

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit

Software Version

Acquisition System	Version
MaxWell	3.1.9755.0
Application Patch	SP-20120723-3.1.9755.1112
	EXP_APL-MASTAXIS-3.1.9755.1221

Computation	Description	Version
Sonic Openhole Ensemble	Sonic Openhole Ensemble	3.1.9755.1112
DepthCorrection	DepthCorrection	3.1.9755.0

Tool Elements	Description	Software Version	Firmware Version
SLS-E	Sonic Logging Sonde E supports 3'-5'BHC DT and CBL/VDL	3.1.9755.1112	4.0
HGNS-B	HILT Gamma-Ray and Neutron Sonde, 125 degC	3.1.9755.0	2.0
HRCC-B	HILT High-Resolution Control Cartridge, 125 degC	3.1.9755.0	2.0

Composite Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
Run-1	Log[3]:Up	Up	2330.23 ft	5462.23 ft	19-Nov-2012 9:11:52 PM	19-Nov-2012 10:30:49 PM	0.00 ft	
Run-1	Log[4]:Up	Up	323.00 ft	2404.61 ft	19-Nov-2012 11:00:30 PM	19-Nov-2012 11:31:37 PM	0.00 ft	

All depths are referenced to toolstring zero

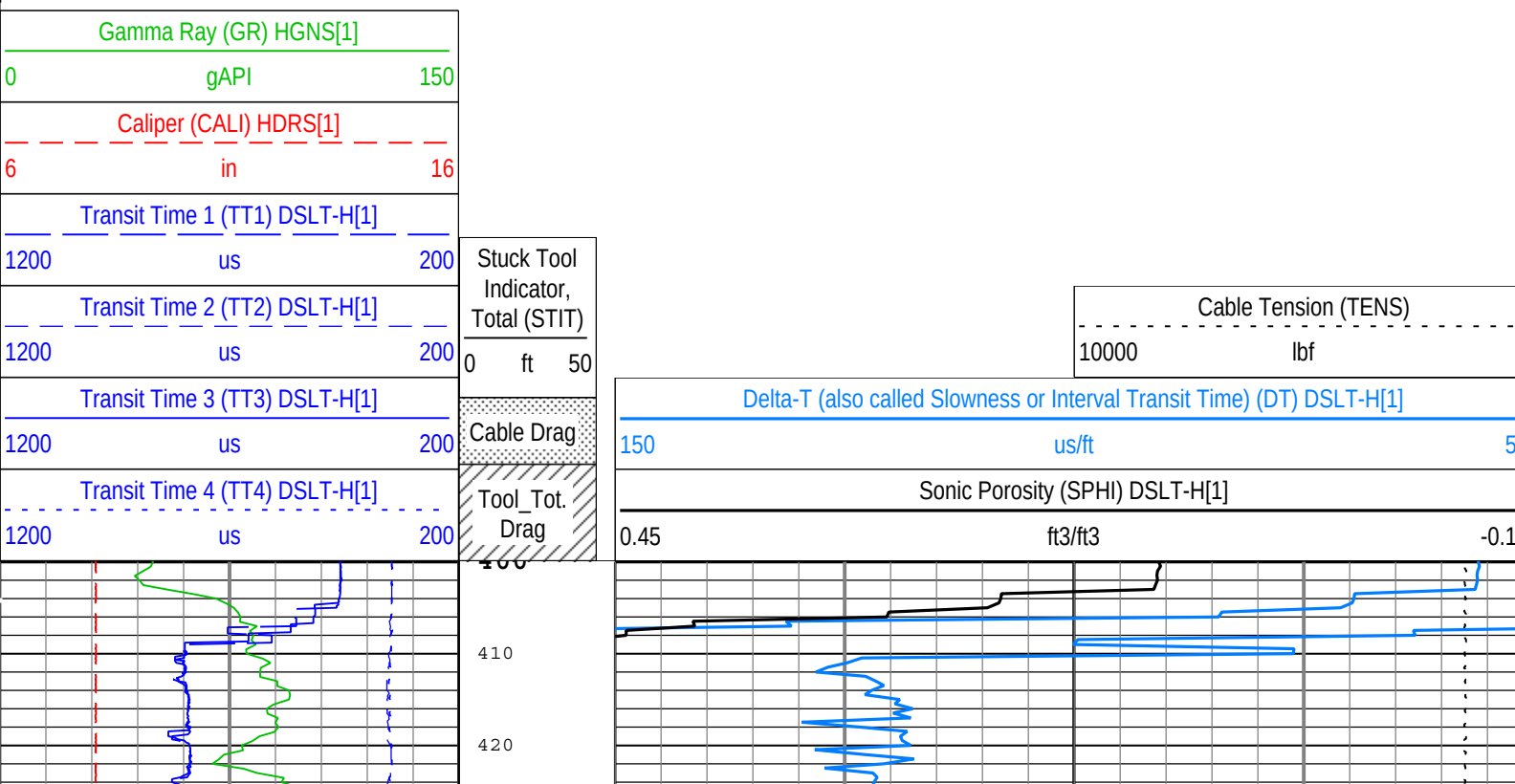
Log

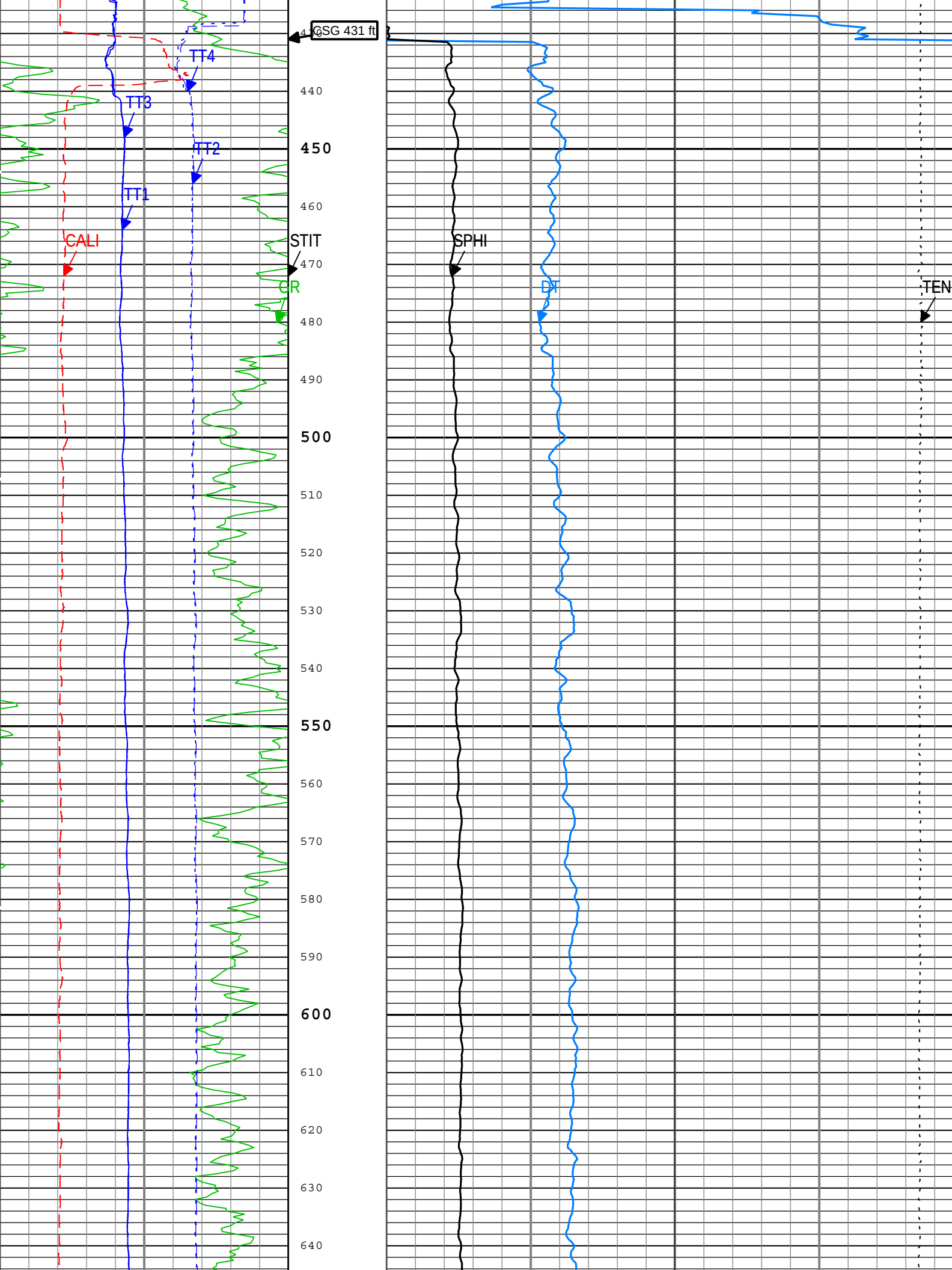
Composite 1

Description: DSST P&S Format: Log (EMD Sonic DSST) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 19-Nov-2012 23:47:00

Channel	Source	Sampling
CALI	HDRS[1]:HRCC-B[1]:HRCC-B[1]	1in
DT	DSLT-H[1]:SLS-E[1]:SLS-E[1]	6in
GR	HGNS[1]:HGNS-B[1]:HGNS-B[1]	6in
SPHI	DSLT-H[1]:SLS-E[1]:SLS-E[1]	6in
STIT	DepthCorrection	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TT1	DSLT-H[1]:SLS-E[1]:SLS-E[1]	2in
TT2	DSLT-H[1]:SLS-E[1]:SLS-E[1]	2in
TT3	DSLT-H[1]:SLS-E[1]:SLS-E[1]	2in
TT4	DSLT-H[1]:SLS-E[1]:SLS-E[1]	2in

TIME_1900 - Time Marked every 60.00 (s)

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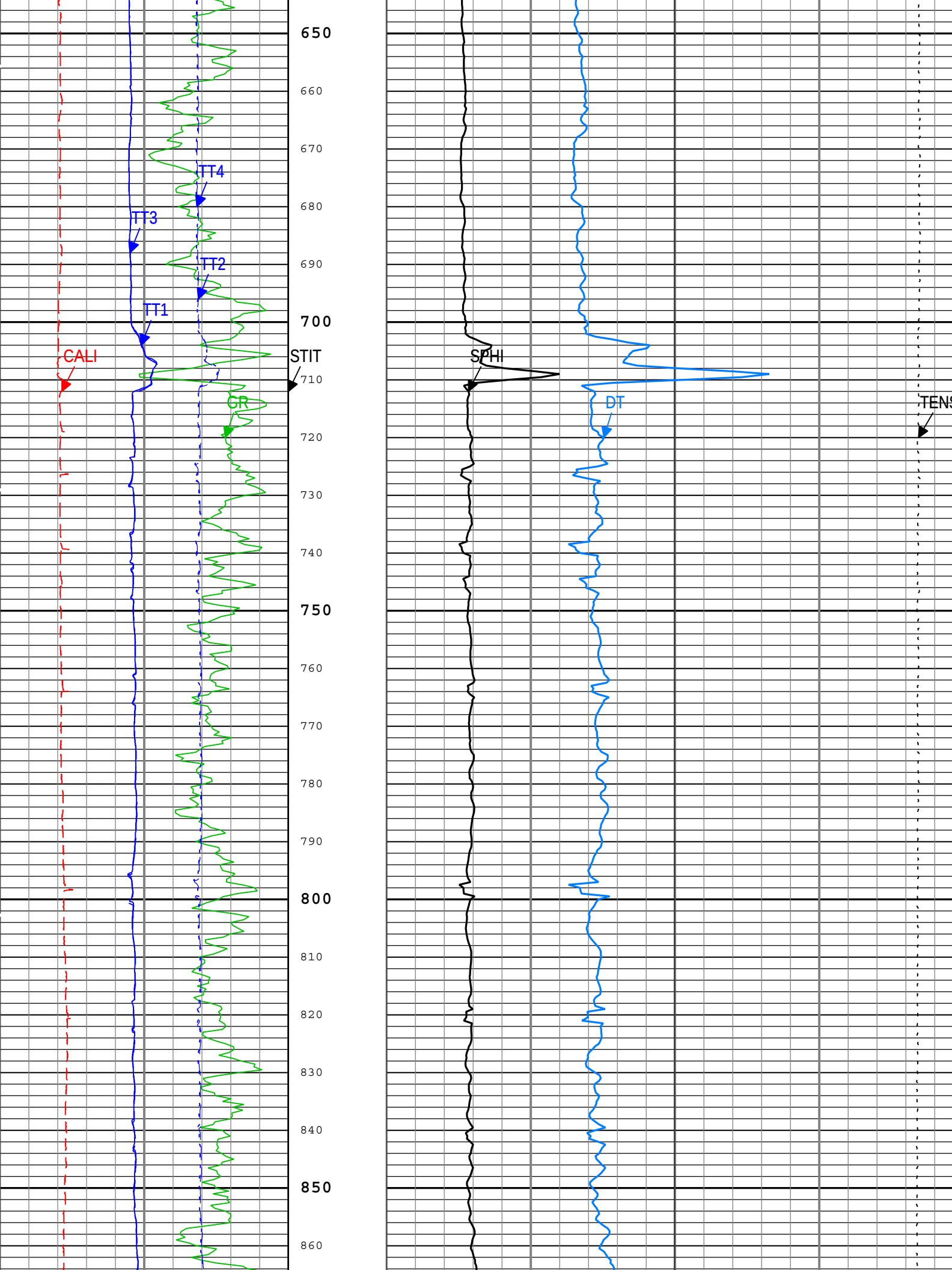
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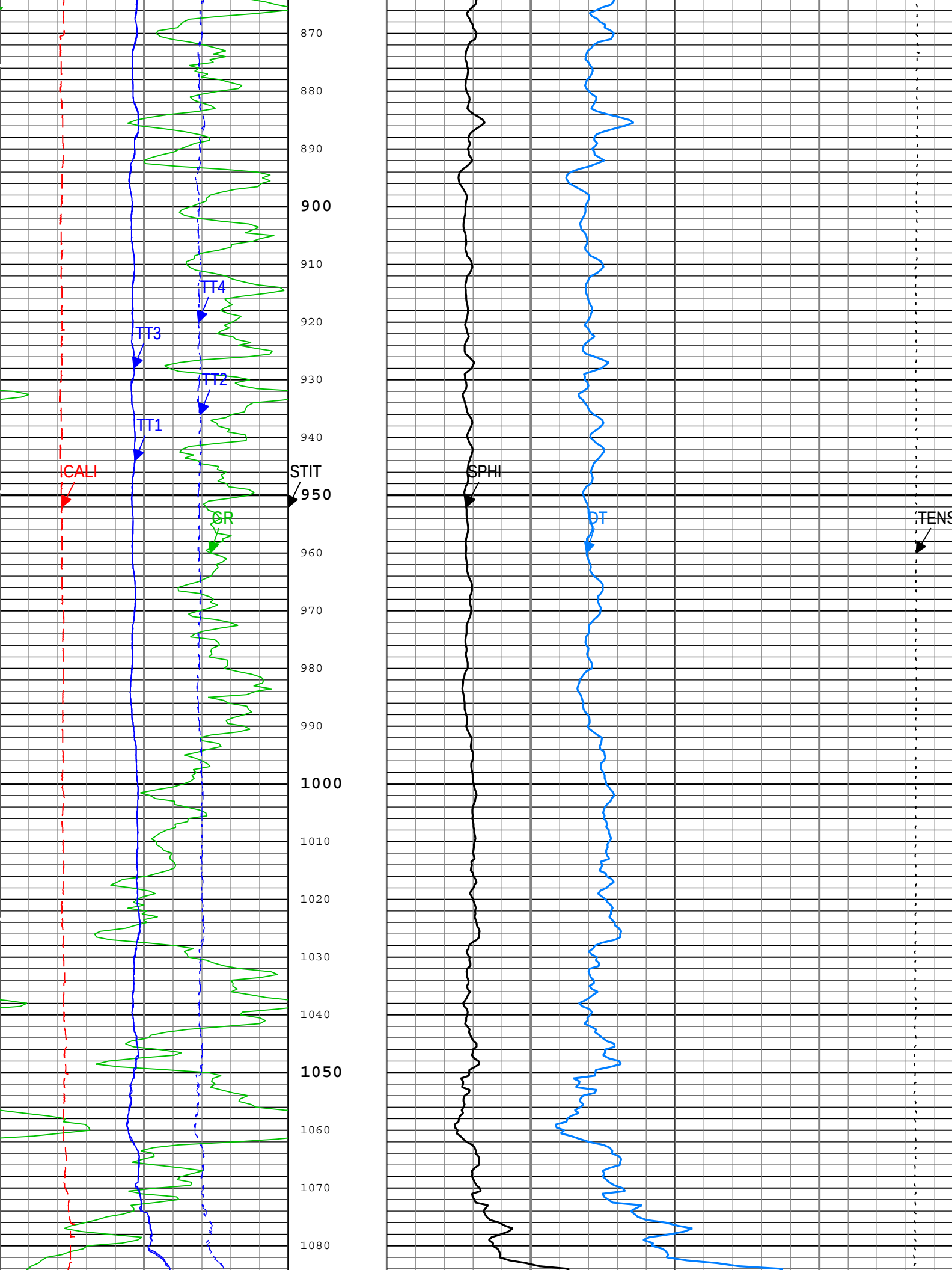
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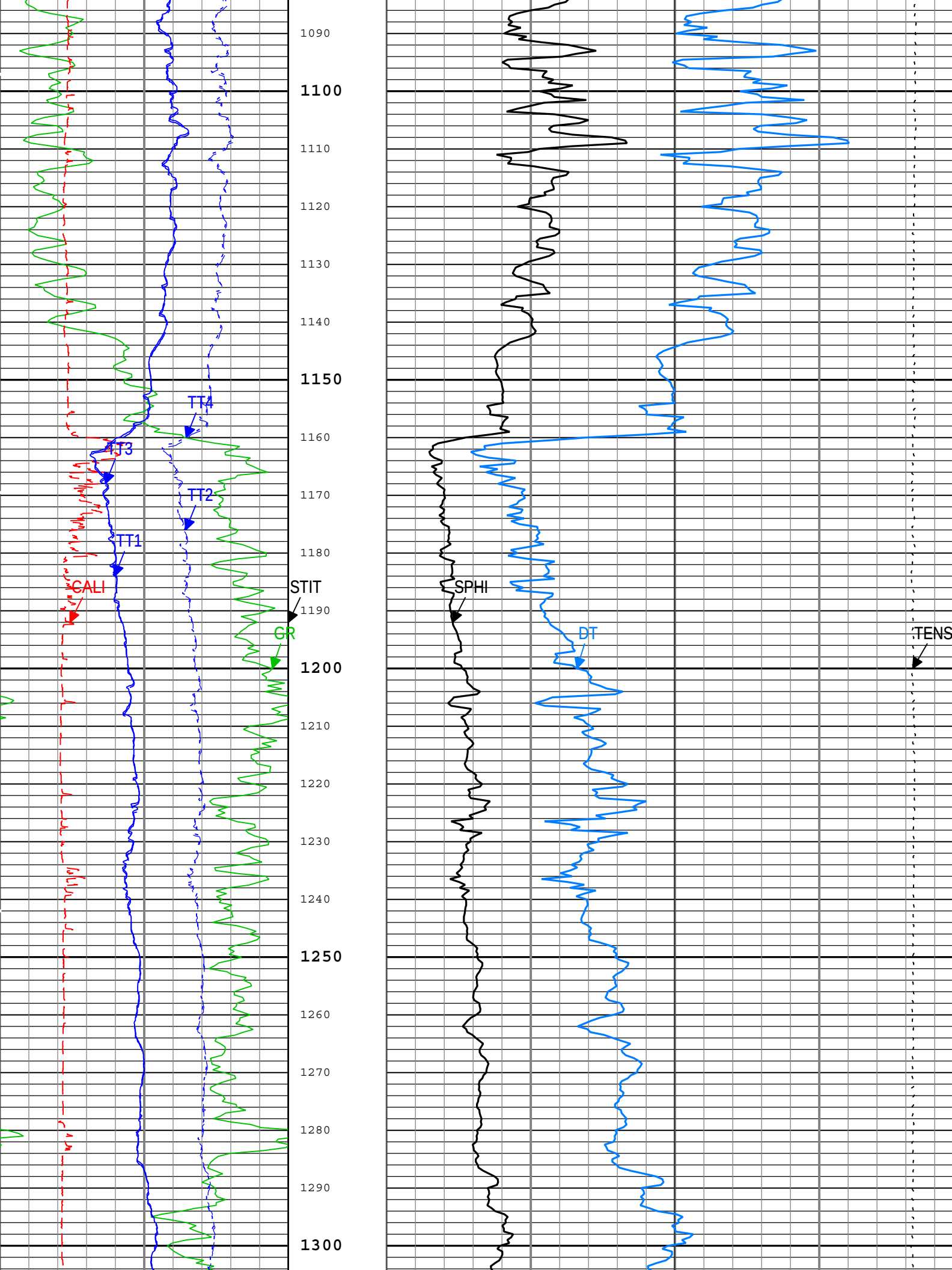
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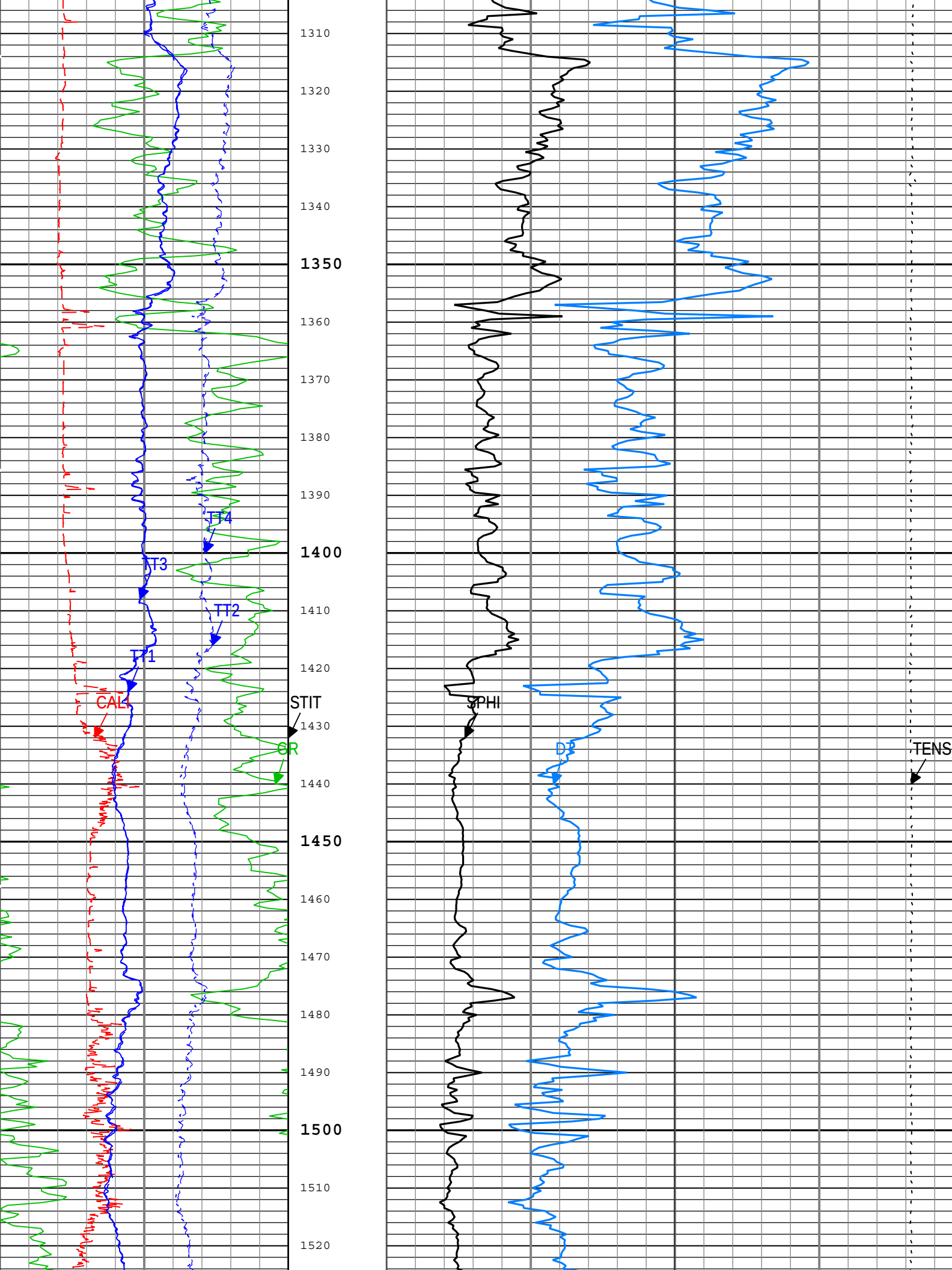
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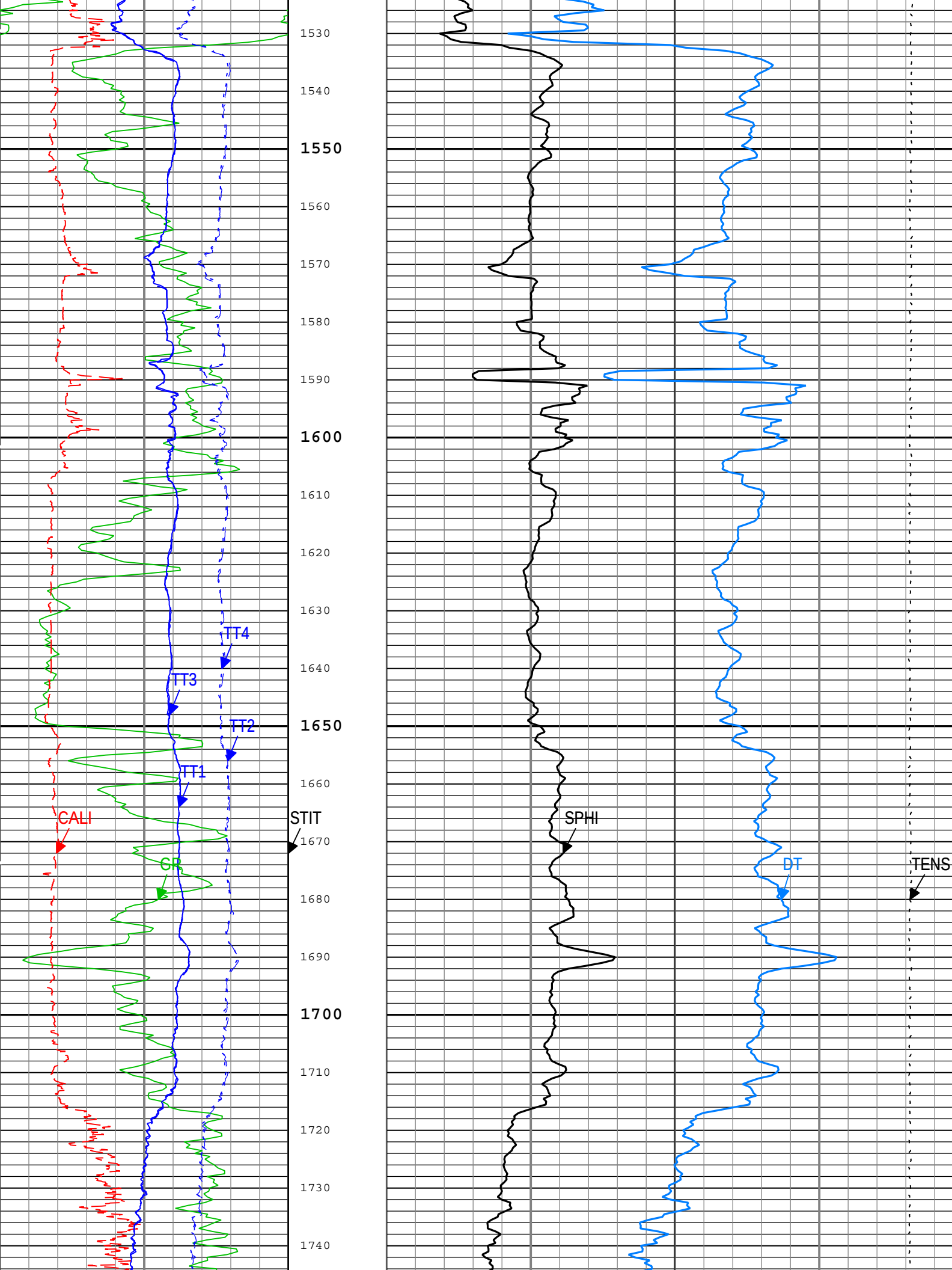
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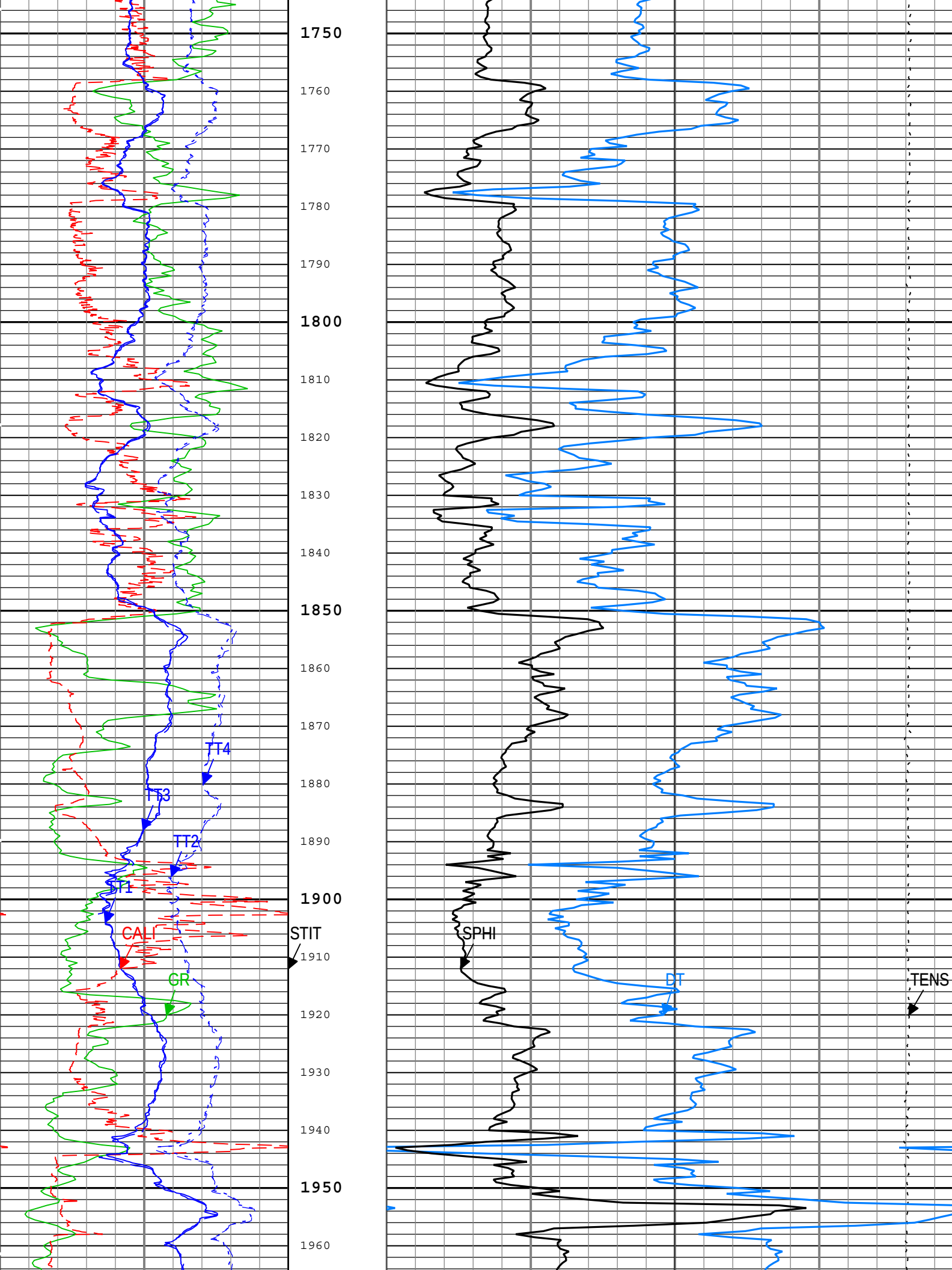
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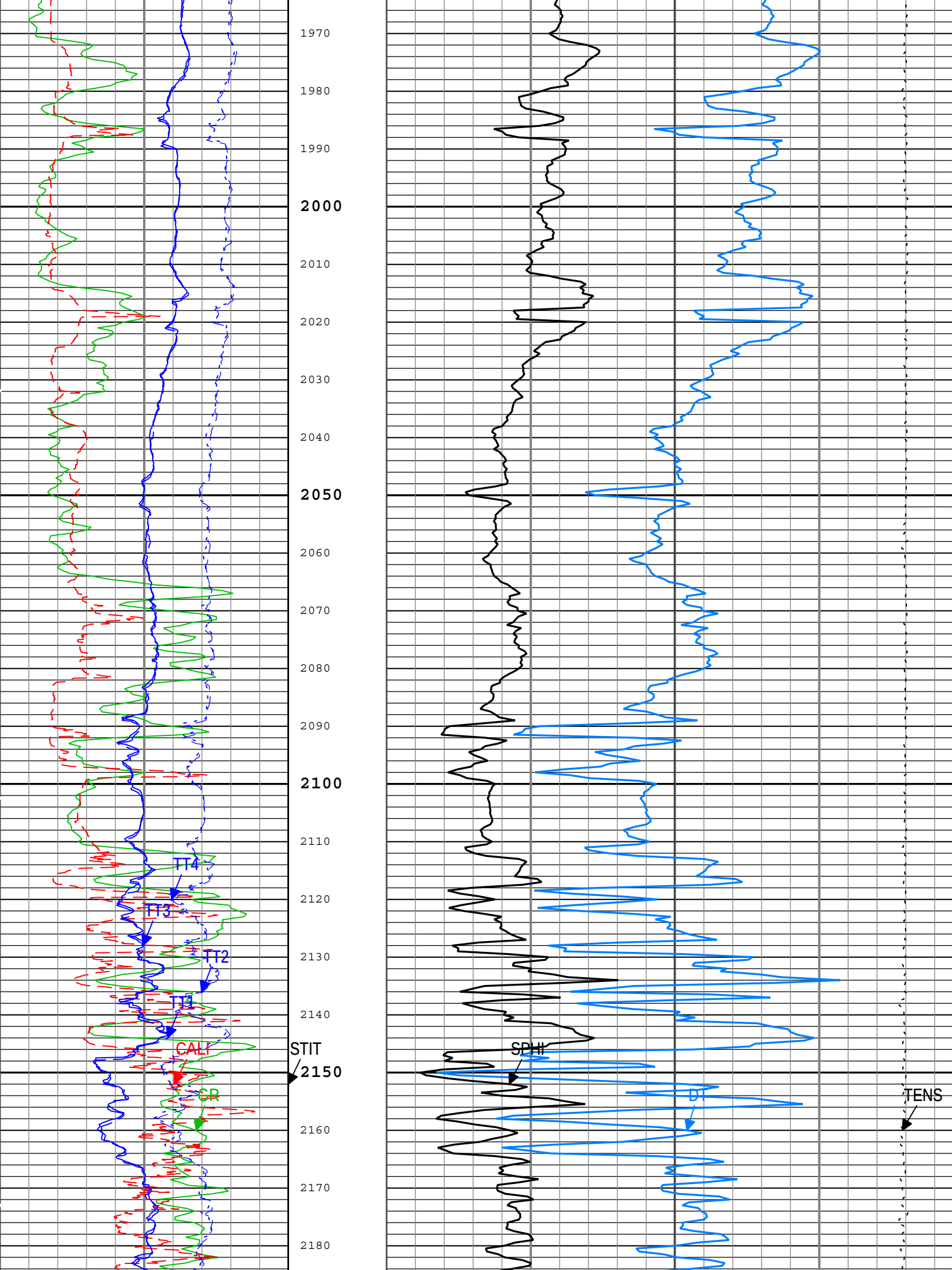
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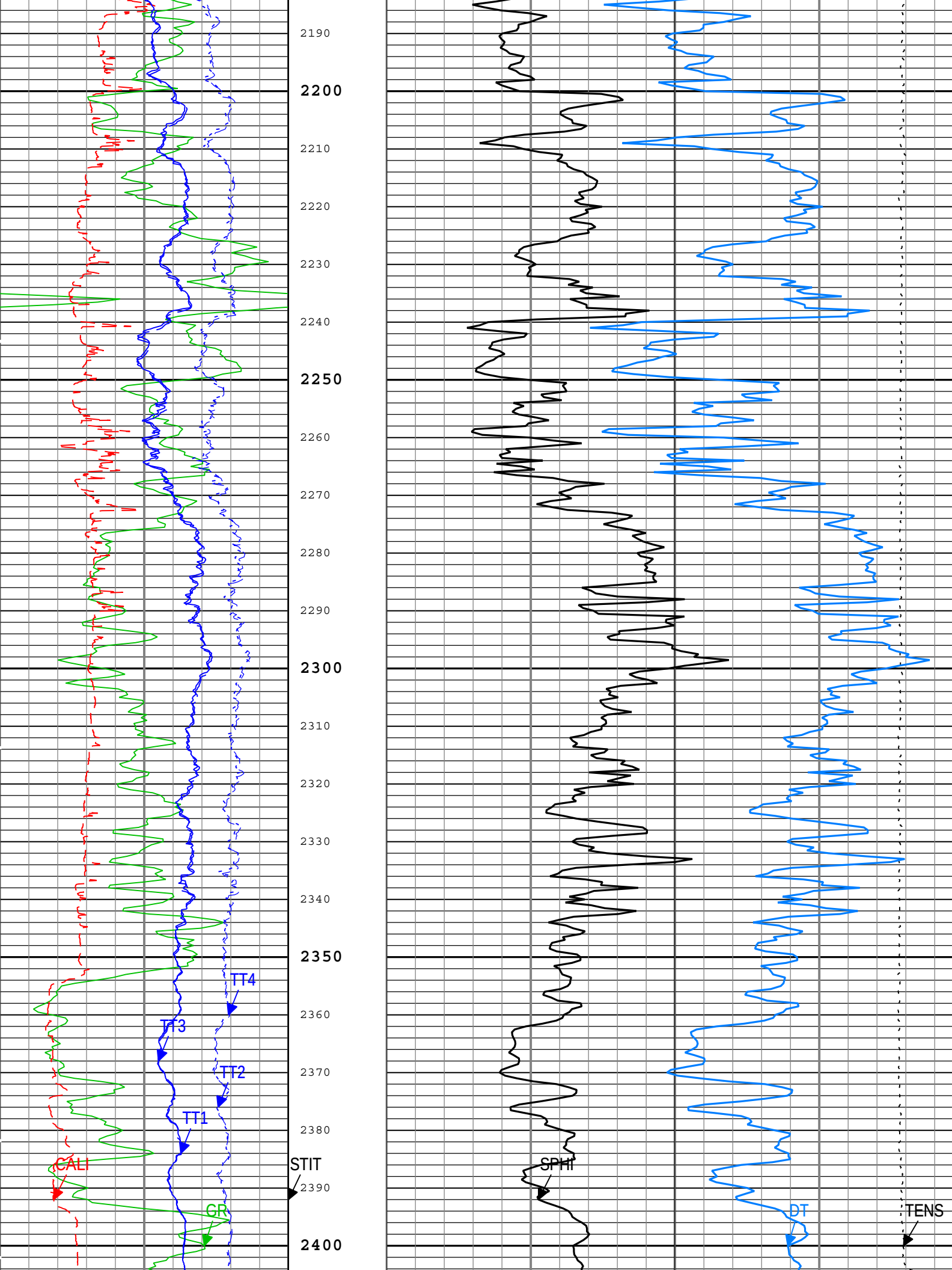
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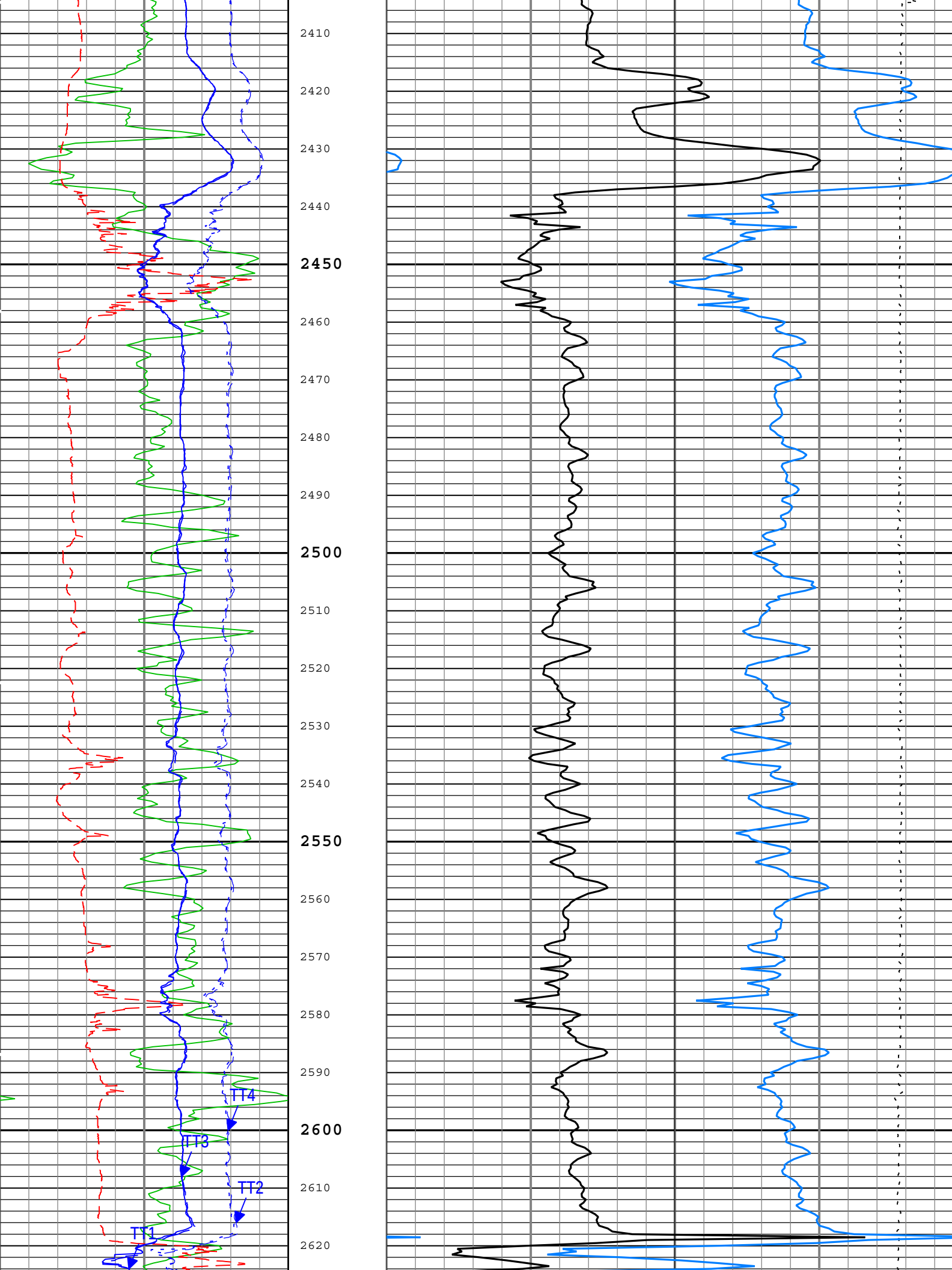
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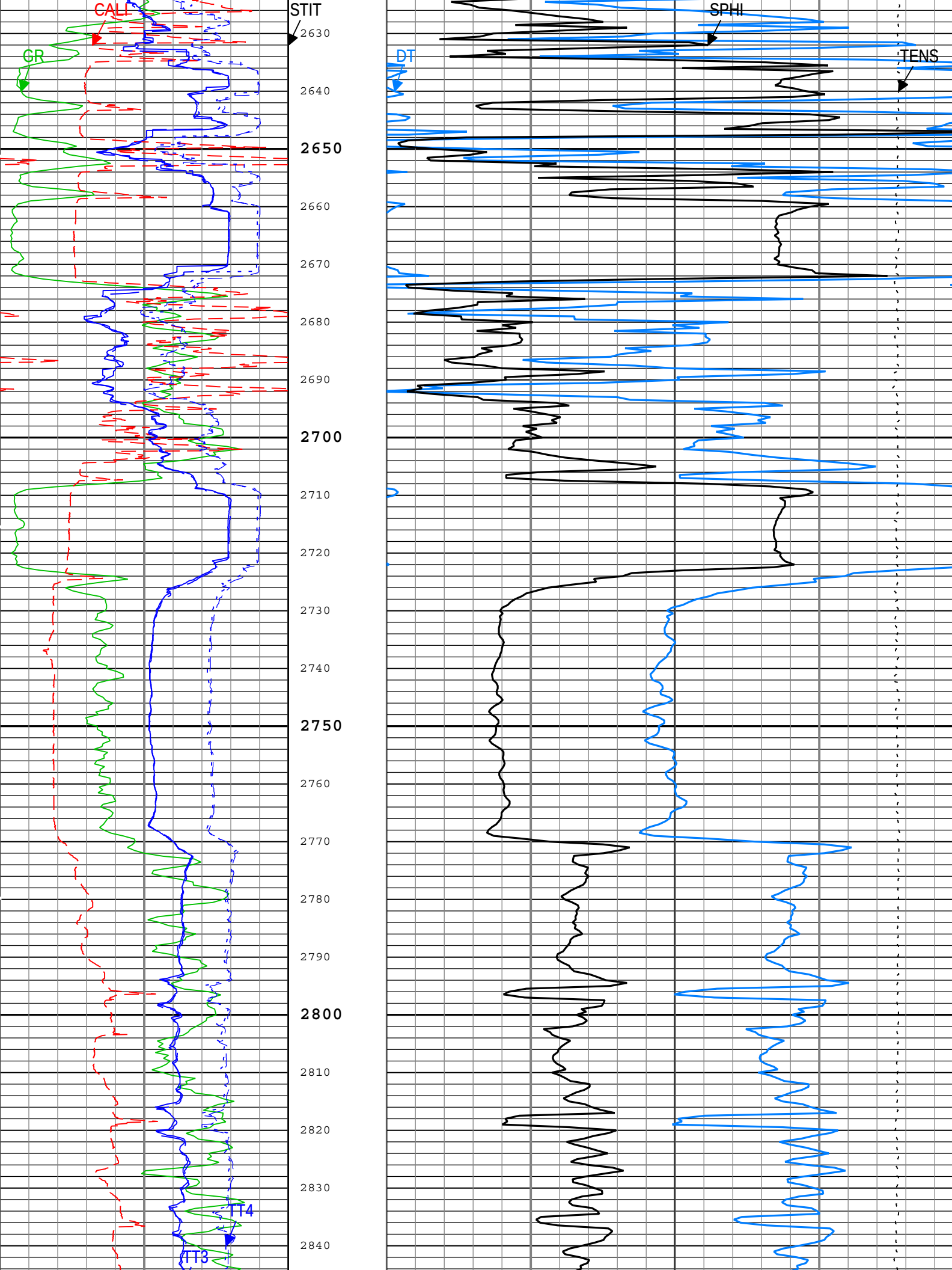
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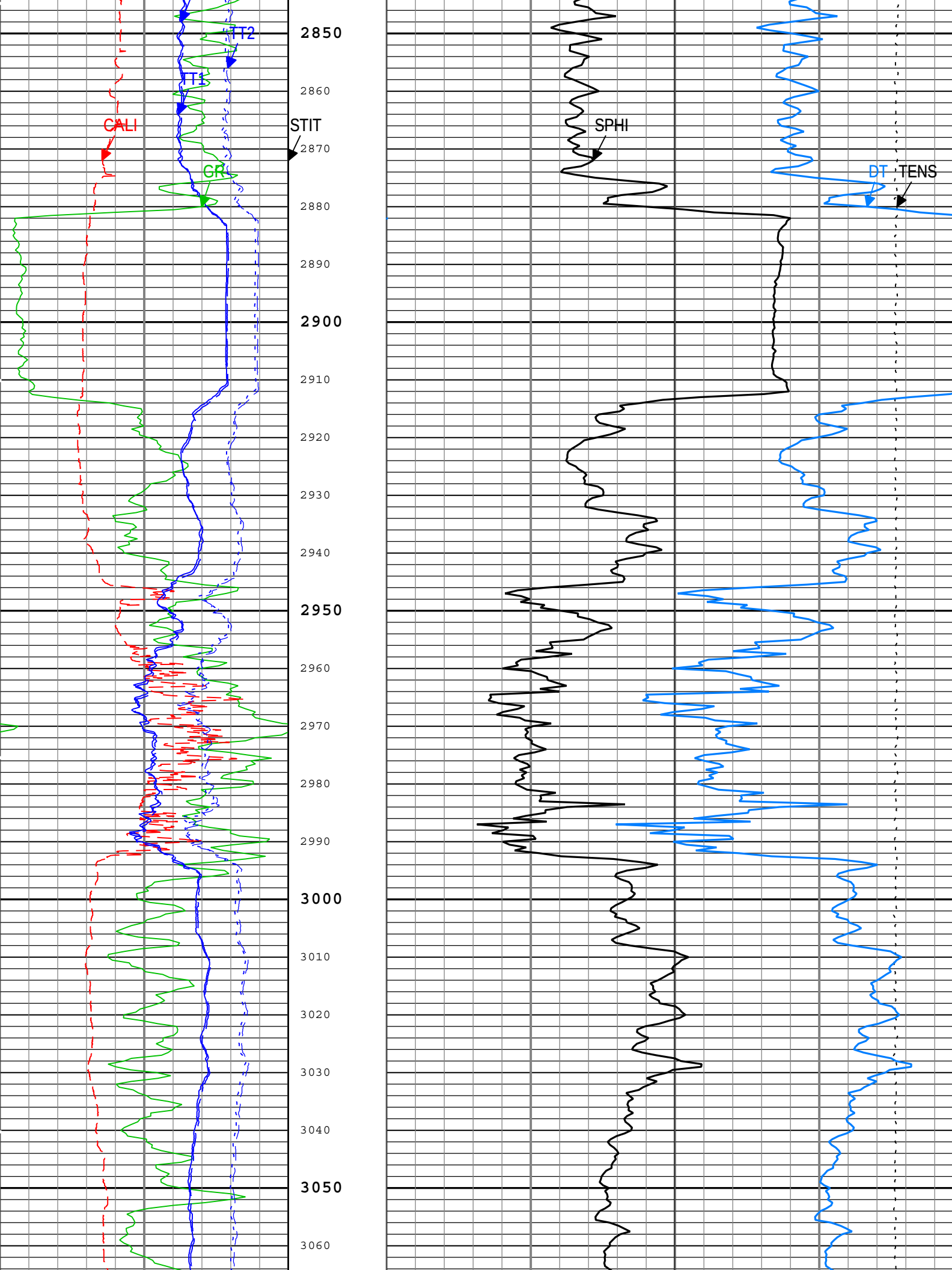
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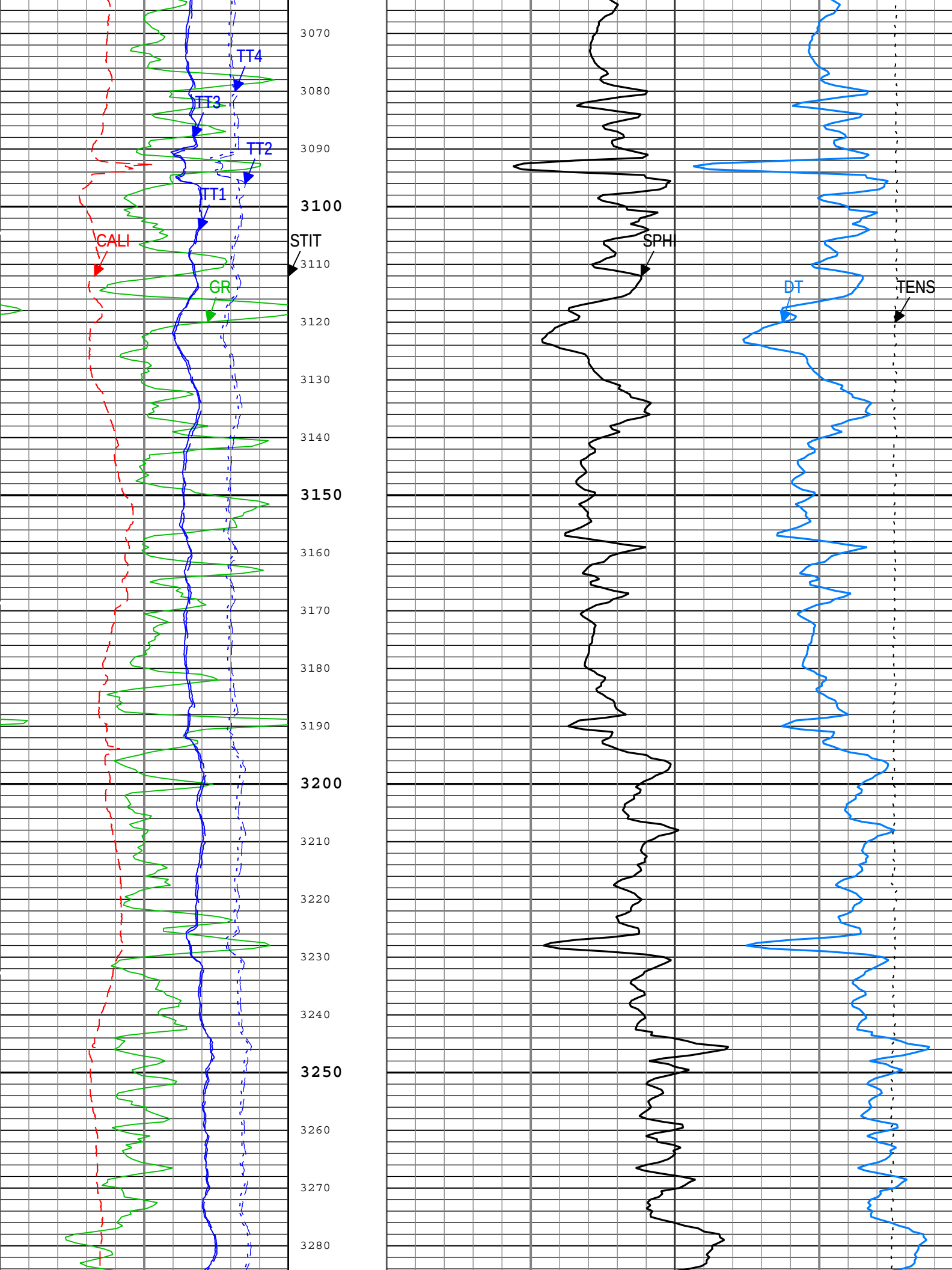
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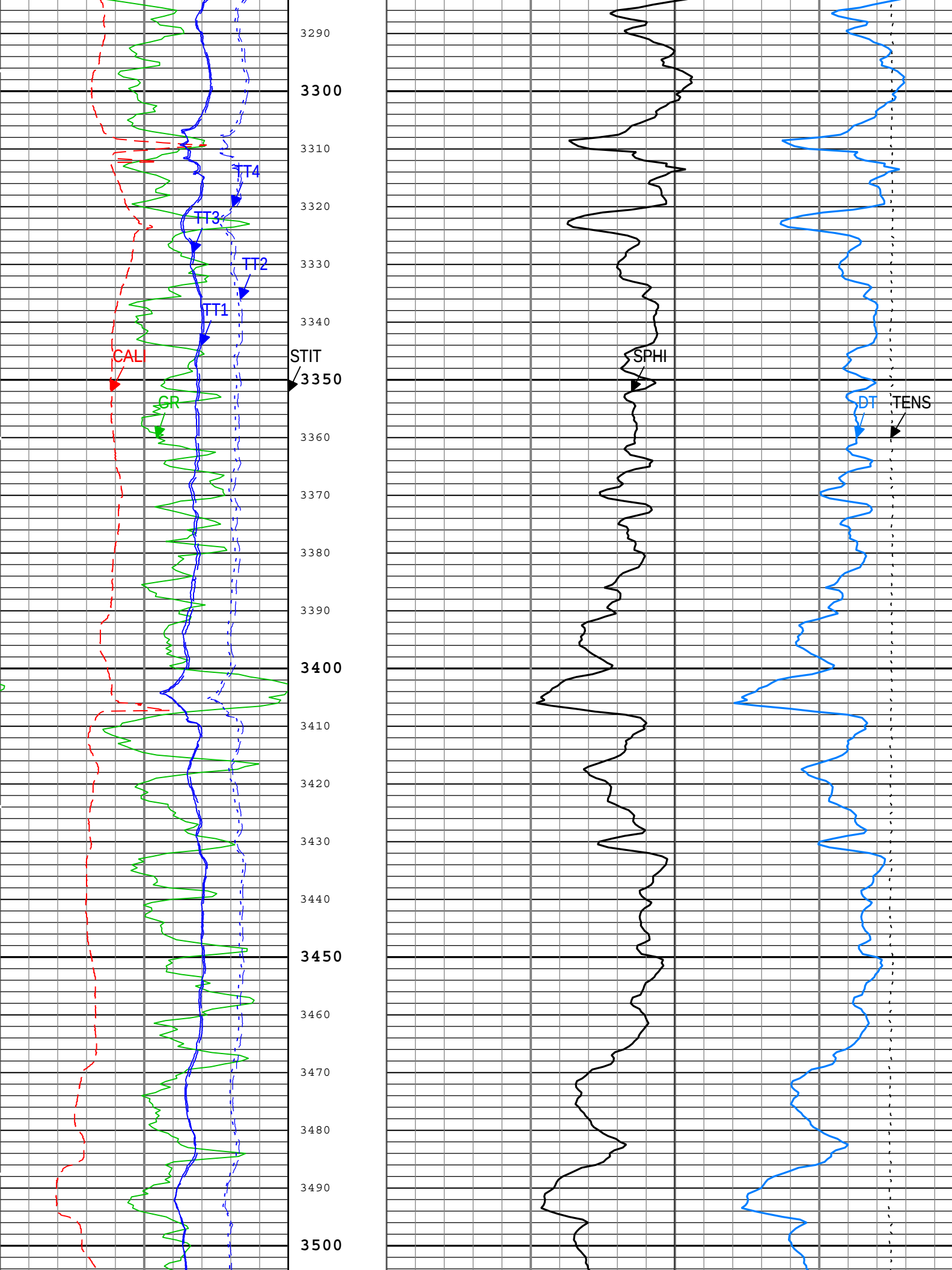
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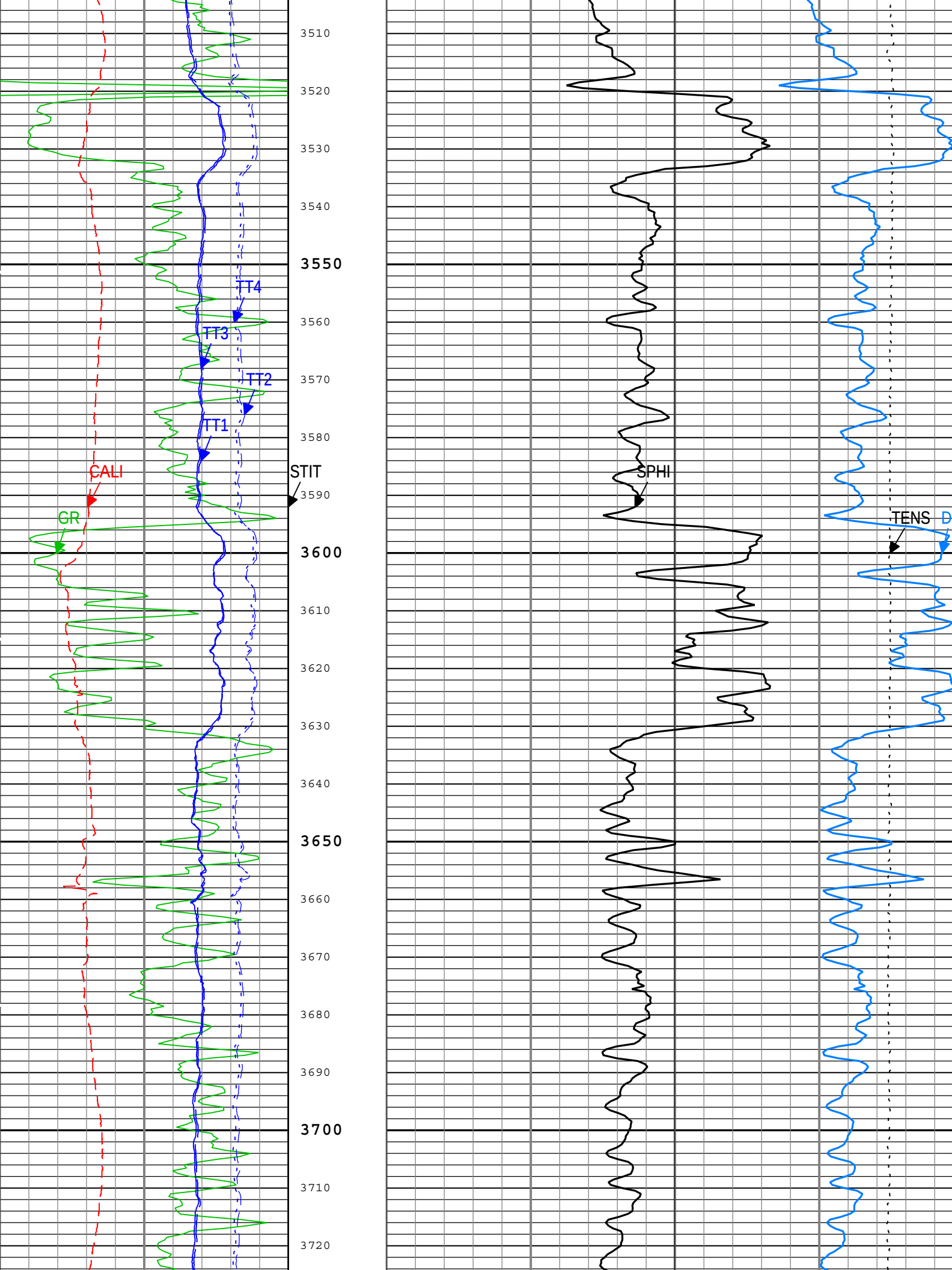
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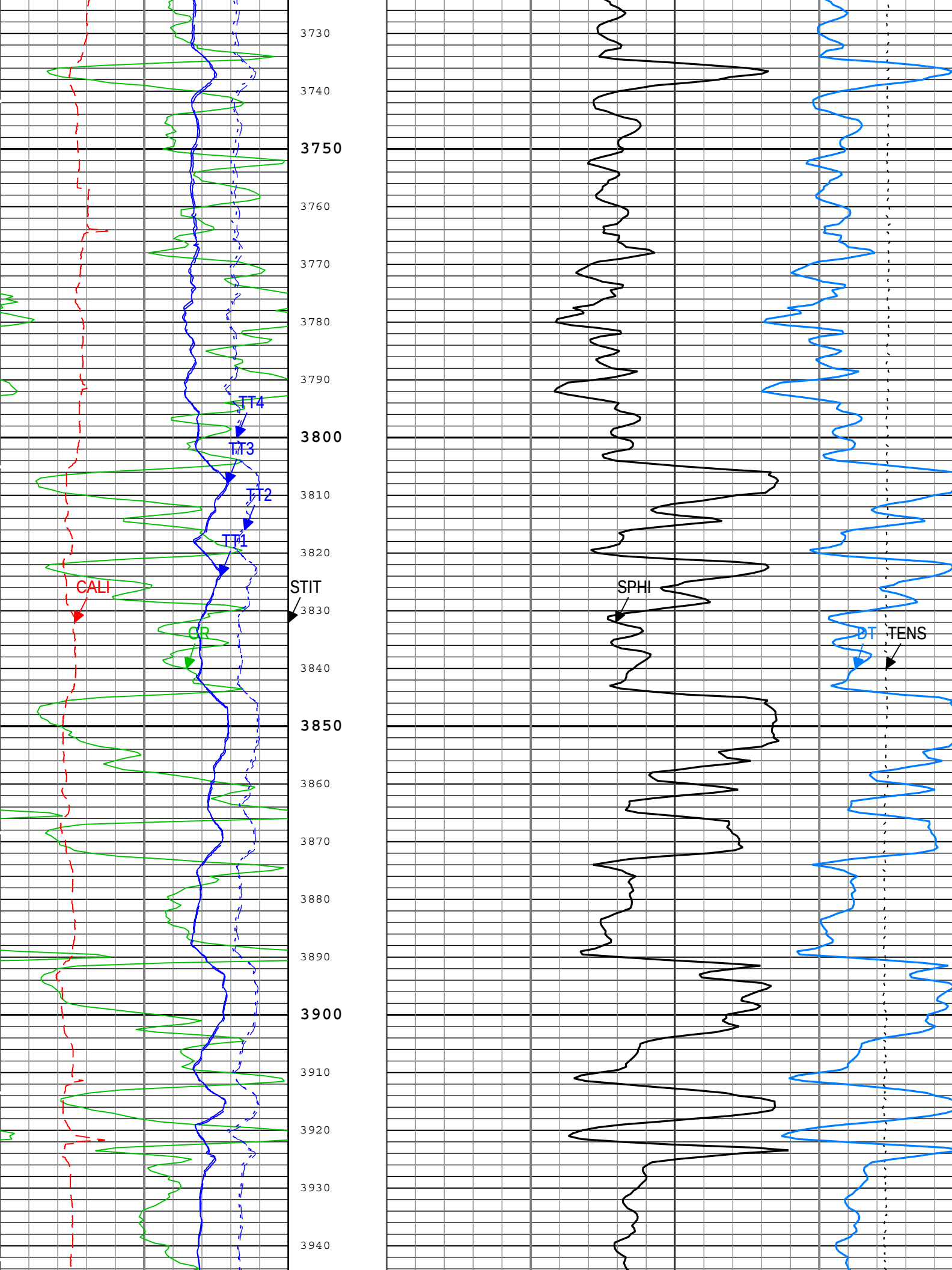
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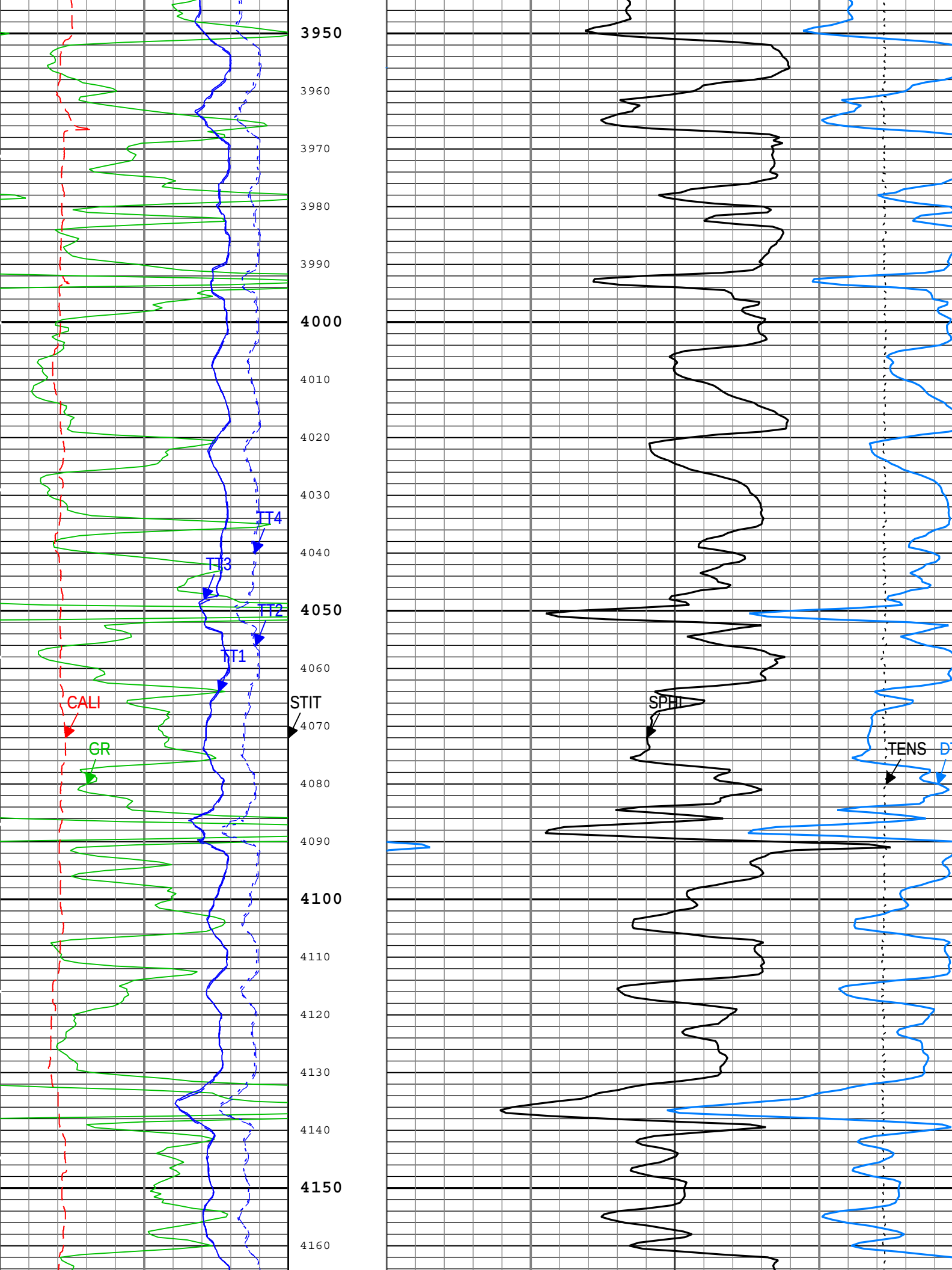
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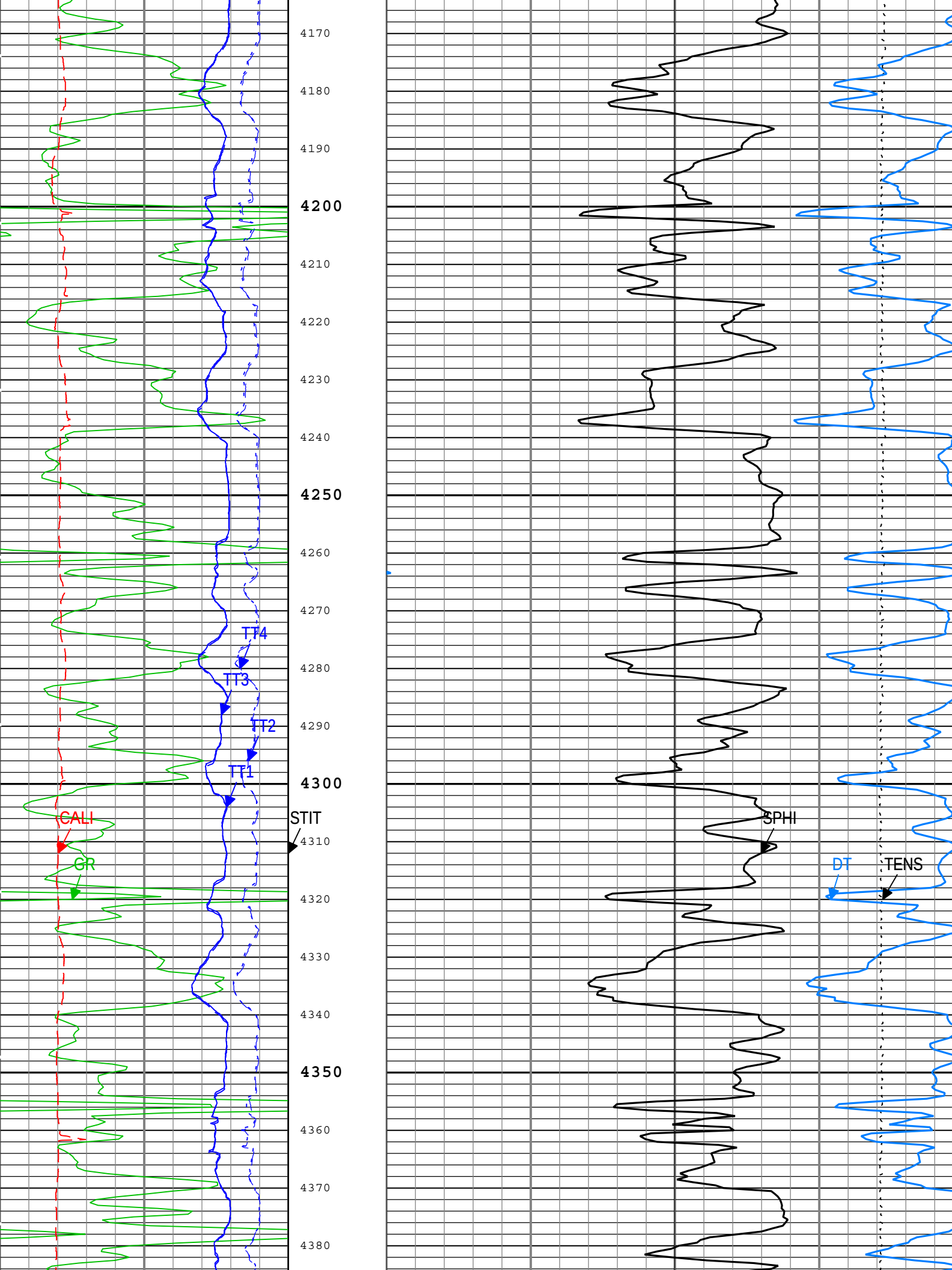
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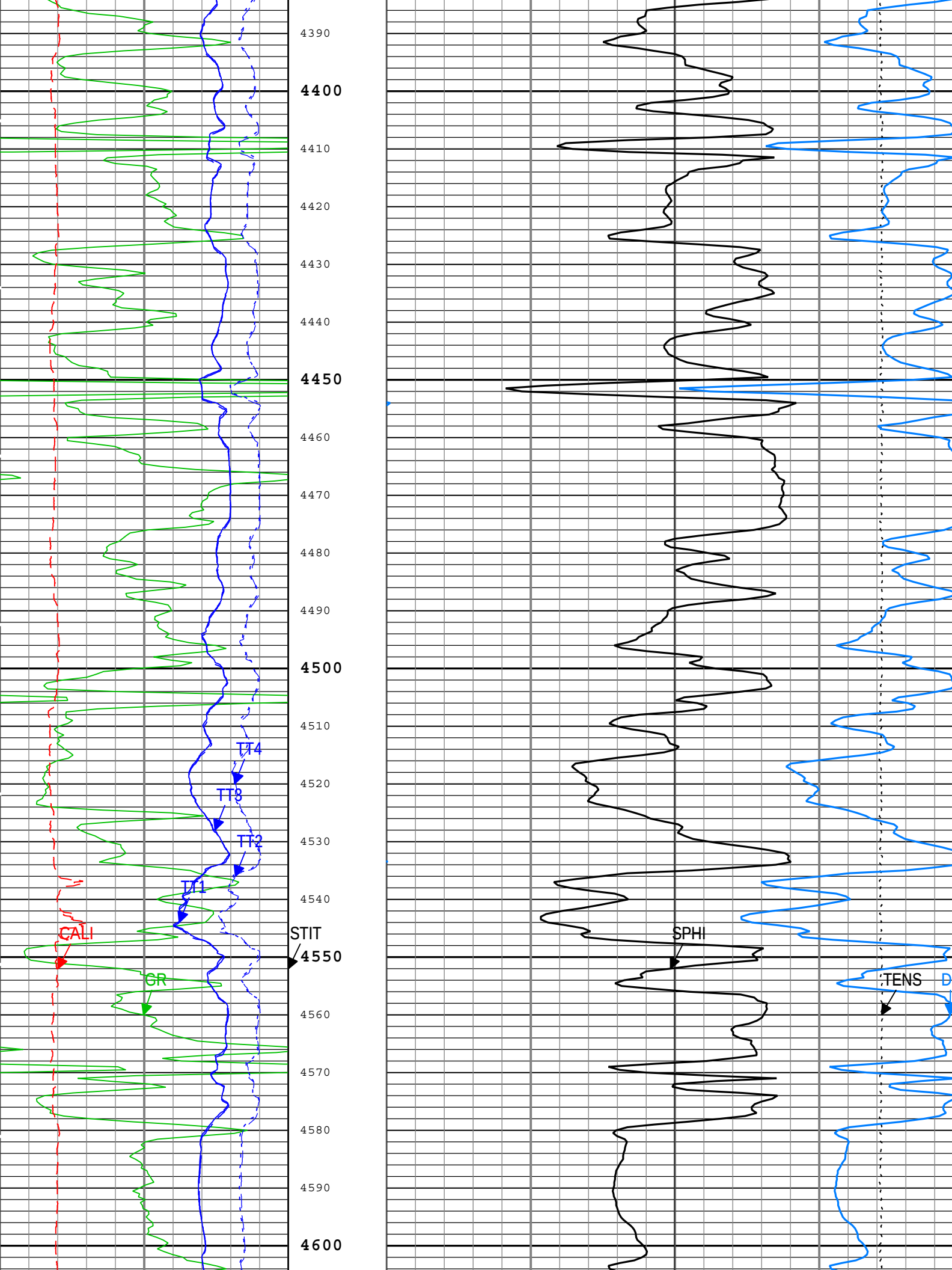
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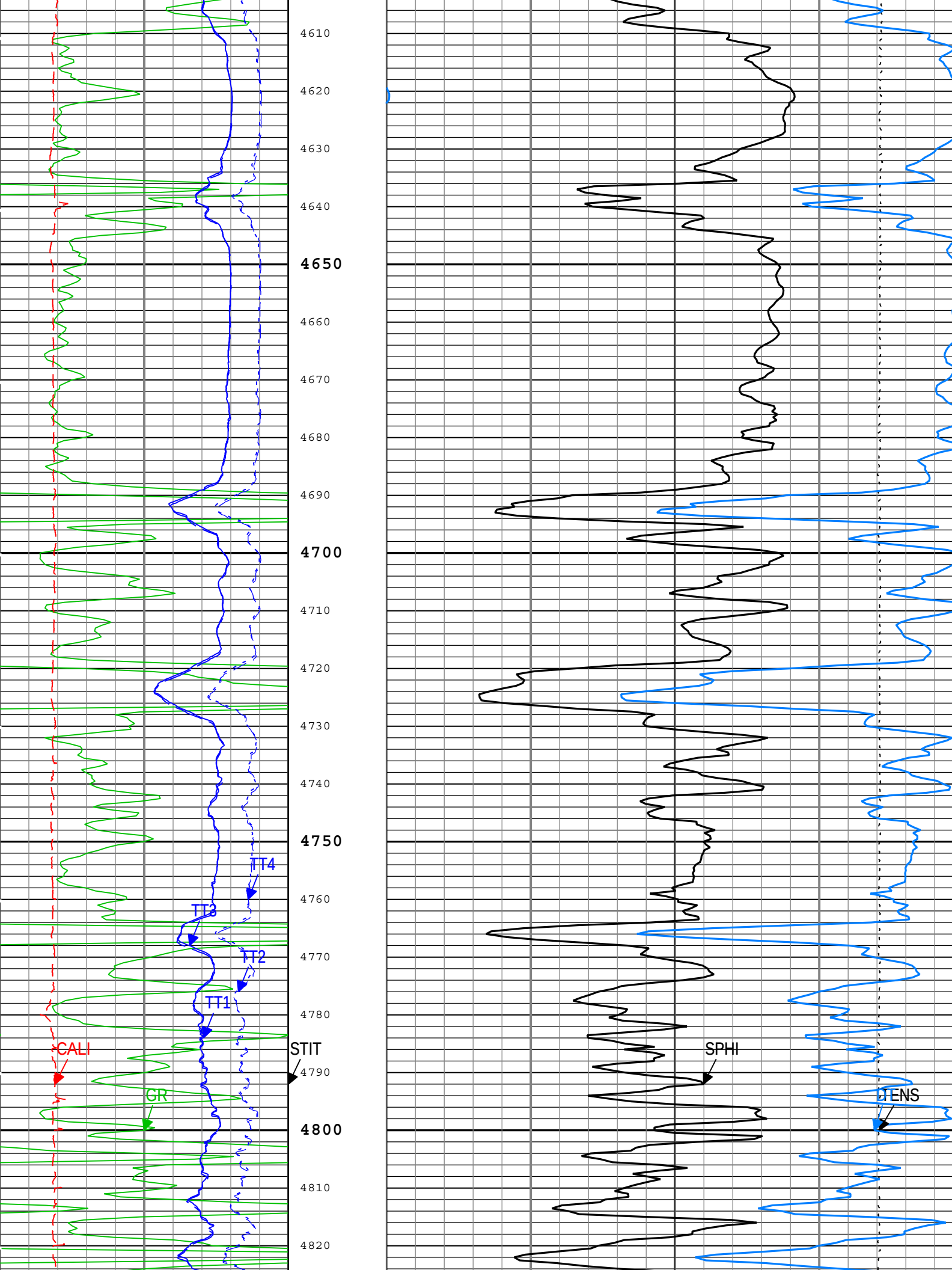
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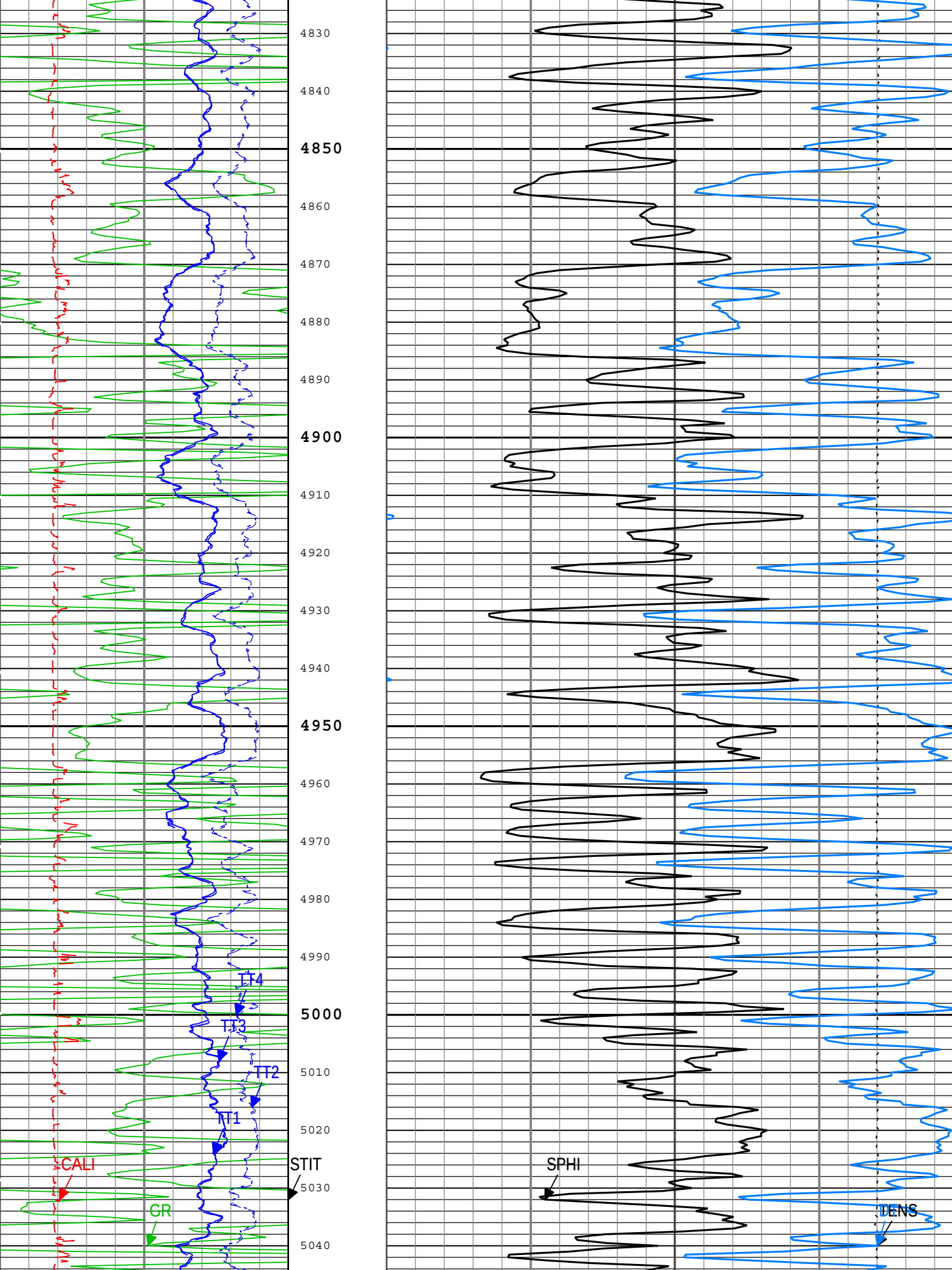
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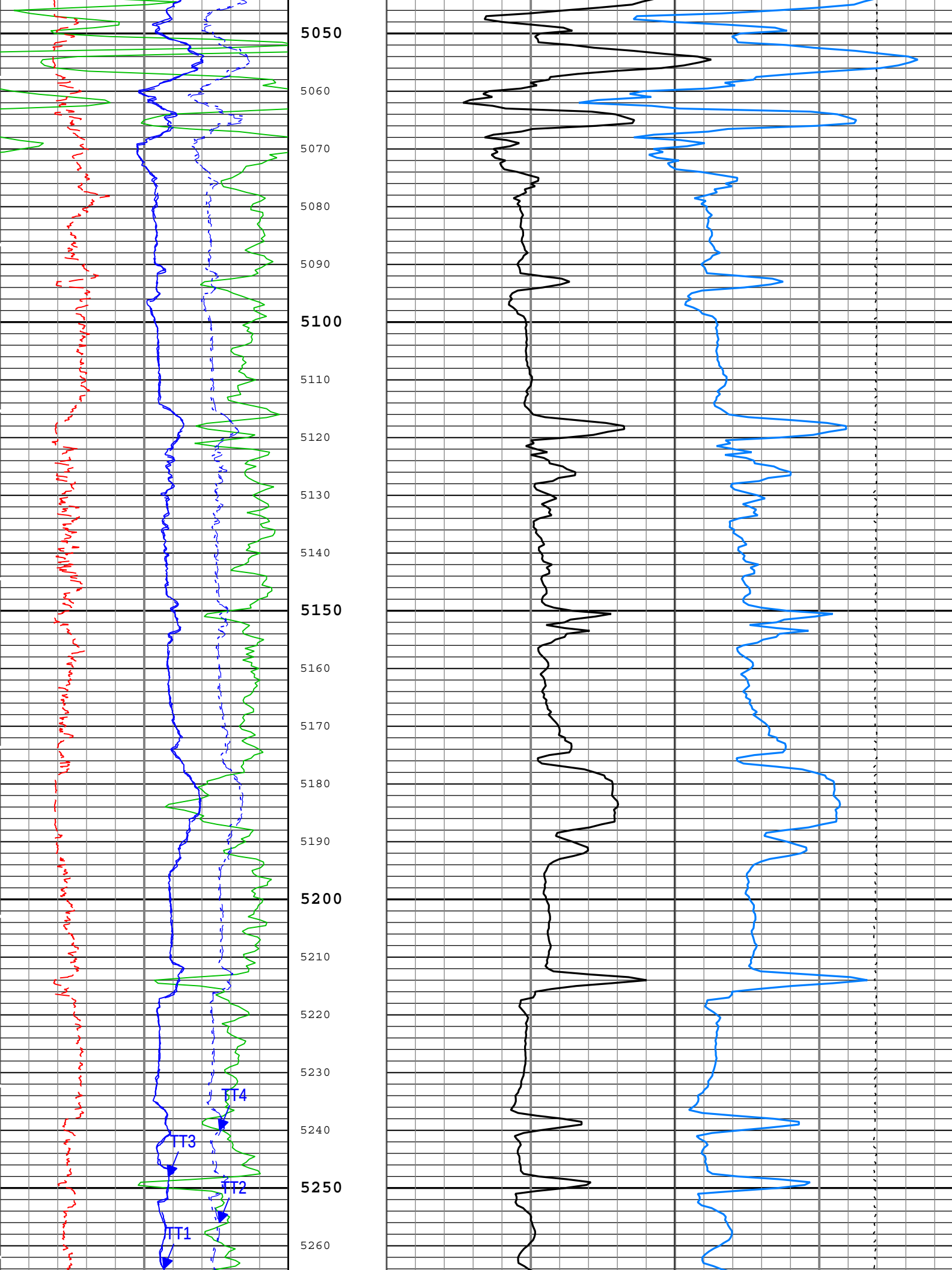
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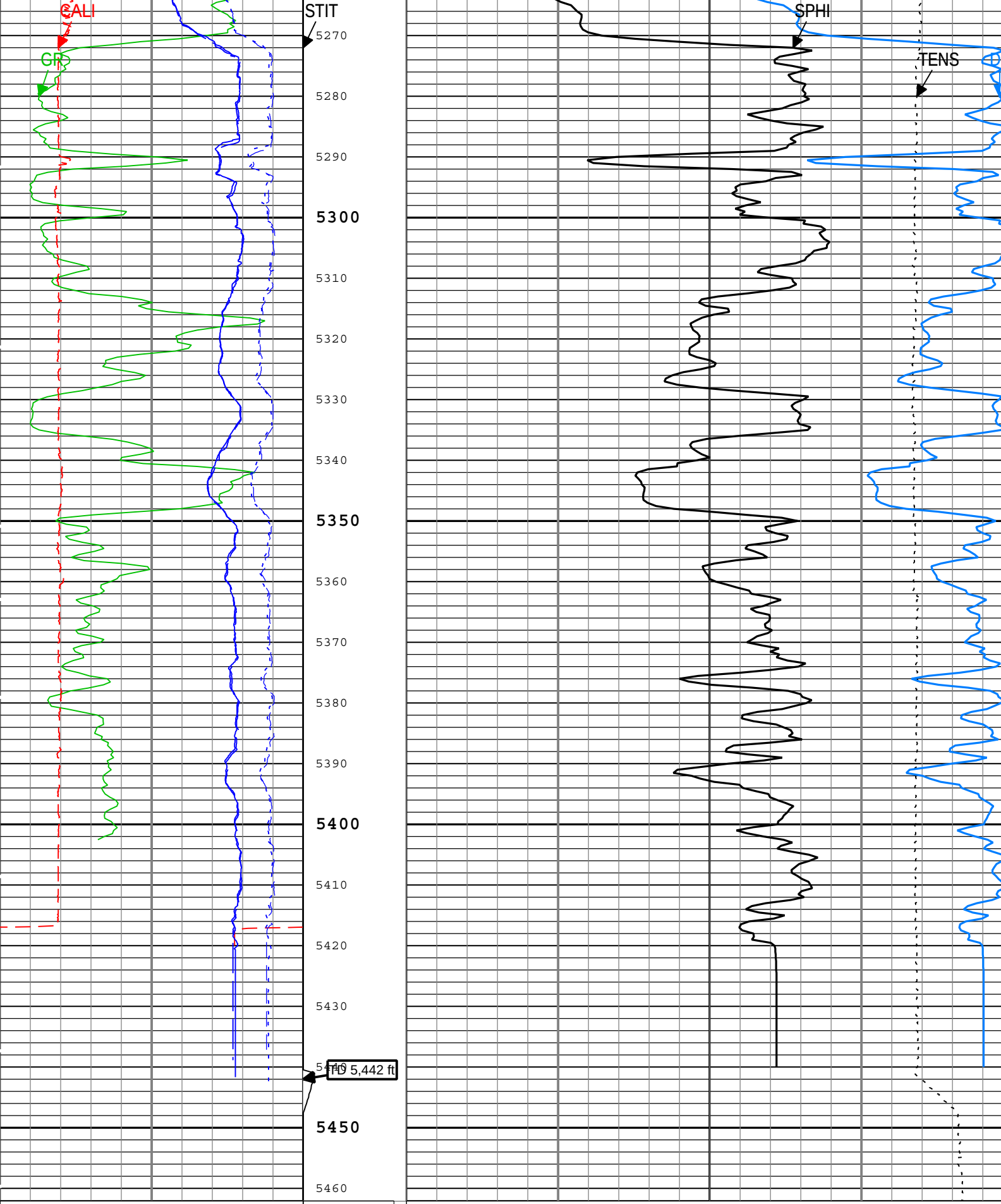
TT2
TT1



Gamma Ray (GR) HGNS[1]

0 gAPI 150

Caliper (CALI) HDRS[1]

6 in 16

Stuck Tool Indicator, Total (STIT)

0 ft 50

Cable Drag

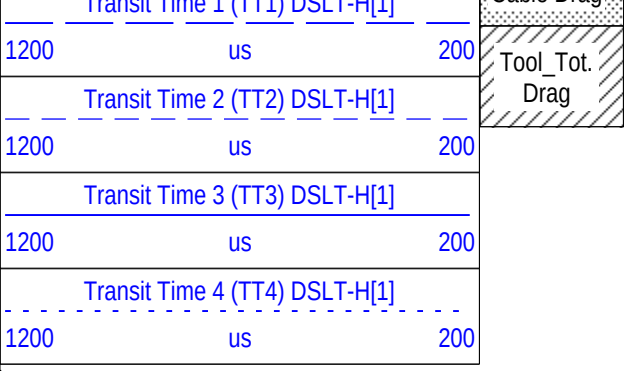
Delta-T (also called Slowness or Interval Transit Time) (DT) DSLT-H[1]

150 us/ft 5

Sonic Porosity (SPHI) DSLT-H[1]

0.45 ft3/ft3 -0.1

Cable Tension (TENS)



TIME_1900 - Time Marked every 60.00 (s)

Description: DSST P&S Format: Log (EMD Sonic DSST) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 19-Nov-2012 23:47:00

Channel Processing Parameters

Run-1: Parameters

Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-B	0.109	in
CBLO	Casing Bottom (Logger)	WLSESSION	431	ft
CDEN	Cement Density	HGNS-B	2	g/cm3
CDTS	Correction for Delta-T Shale, Empirical	Borehole	100	us/ft
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DETE	Delta-T Detection	DSLT-H	E2	
DFD	Drilling Fluid Density	Borehole	9.2	lbm/gal
DTCM	Delta-T Computation Mode	DSLT-H	Full	
DTF	Delta-T Fluid	Borehole	189	us/ft
DTM	Delta-T Matrix	Borehole	47.5	us/ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
MAHTR	Manual High Threshold Reference for first arrival detection	DSLT-H	120	
MNHTR	Minimum High Threshold Reference for first arrival detection	DSLT-H	100	
NMSG	Near Minimum Sliding Gate	DSLT-H	140	us
SGAD	Sliding Gate Status	DSLT-H	On	
SOCO	Standoff Correction Option	HGNS-B	Yes	
SPFS	Sonic Porosity Formula	Borehole	Raymer-Hunt	
SPSO	Sonic Porosity Source	DSLT-H	DT	
TD	Total Measured Depth	Borehole	5442	ft

Run-1Depth Zoned Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	0	400	434
BS	7.875	434	5462.08

All depth are actual.

Tool Control Parameters

Run-1: Parameters

Parameter	Description	Tool	Value	Unit
DSLT_MODE	DSLT Acquisition Mode	DSLT-H	BHC	
DSLT_RATE	DSLT Firing Rate	DSLT-H	15 Hz	
DTFS	DSLT Telemetry Frame Size	DSLT-H	536	

DTPS	DUET Telemetry Frame Size	DUET-T	350	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h

Company: Vecta Oil & Gas LTD

Schlumberger

Well: Maroon 24-20

Field: Wildcat

County: Cheyenne

State: Colorado

Platform Express

Borehole Compensated

Sonic Logging Tool