Schlumberger

Company: Vecta Oil & Gas LTD

Well: Crestone

Field: Wildcat

County: Cheyenne State: Colorado

Platform Express

Compensated Neutron

Litho Density

County:	Cheyenne
Field:	Wildcat
Location:	NWSE Sec 17, Twn 14s, Rng 47w
Well:	Crestone
Company:	Vecta Oil & Gas LTD

Location:	NWSE Sec 17, Twn 14s, Rng 47w	Elev.	K.B.	4265.00 ft
	SHL: 2156' FSL, 2099' FEL		G.L.	4255.00 ft
	Lat 38.828900, Long -102.692470		D.F.	4264.00 ft
	Permanent Datum: Ground Level	Elev.:	4255.00 f	
	Log Measured From: Kelly Bushing	10.00 ft	above Perm.Datum	
	Drilling Measured From: Kelly Bushing			

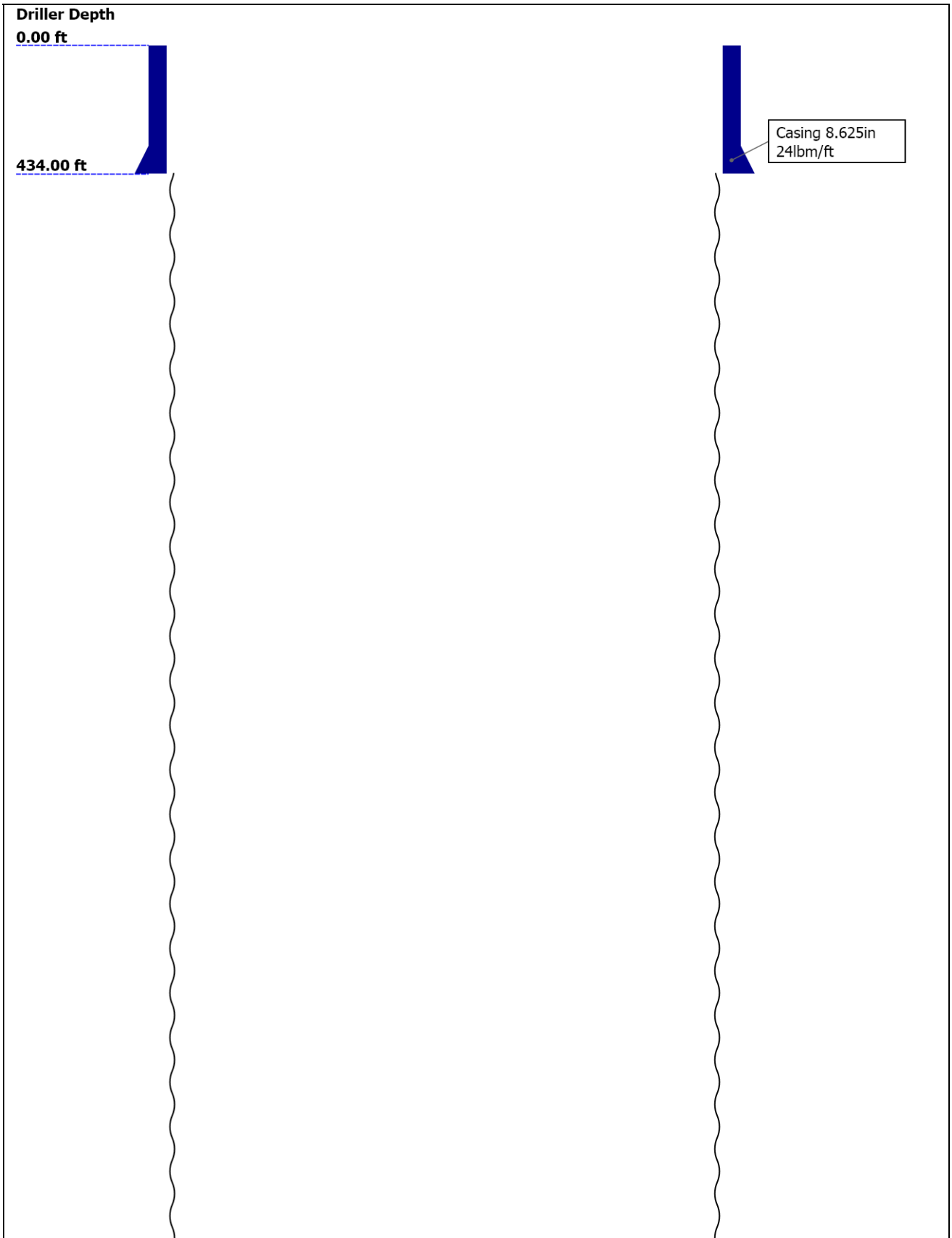
API Serial No.	Section:	Township:	Range:
05-017-07717-0000	17	14S	47W

Logging Date			03-Nov-2012			
Run Number			Run 1			
Depth Driller			5468.00 ft			
Schlumberger Depth			5464.00 ft			
Bottom Log Interval			5456.00 ft			
Top Log Interval			432.00 ft			
Casing Driller Size @ Depth			8.625 in @ 434.00 ft			
Casing Schlumberger			432 ft			
Bit Size			7.875 in			
Type Fluid In Hole			Chemical Gel			
MUD	Density	Viscosity	9.3 lbm/gal	69 s		
	Fluid Loss	PH				
	Source of Sample		Active Tank			
RM @ Meas Temp			1.1 ohm.m @ 68 degF			
RMF @ Meas Temp			1.82 ohm.m @ 86 degF			
RMC @ Meas Temp			1.65 ohm.m @ 86 degF			
Source RMF	RMC		Calculated	Calculated		
RM @ BHT	RMF @ BHT		0.53 @ 148	1.09 @ 148		
Max Recorded Temperatures			148.95 degF			
Circulation Stopped	Time		03-Nov-2012	10:30:00		
Logger on Bottom	Time		03-Nov-2012	17:30:21		
Unit Number	Location:		2135	Fort Morgan		
Recorded By			Megan Leone			
Witnessed By			Ryan Scribner			

Disclaimer

Contents

Well Sketch

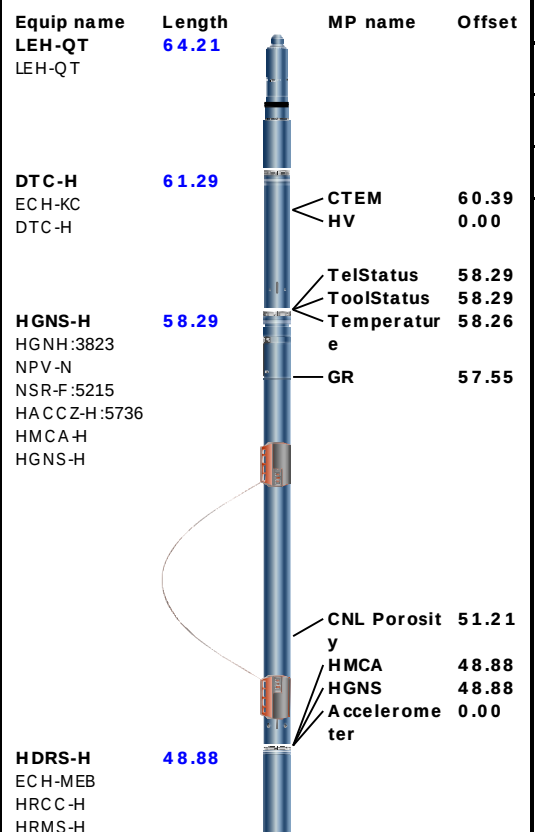


Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	7.875					
Top Driller (ft)	434					
Top Logger (ft)	432					
Bottom Driller (ft)	5468					
Bottom Logger (ft)	5464					
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)	432					

Remarks and Equipment Summary

Run 1: Toolstring



Run 1: Remarks

This is the first run in hole

Toolstring run as per tool sketch

Limestone Matrix 2.71 g/cc

Operators: Ian Derry and Troy Ocanas

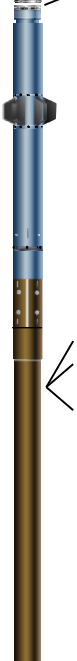
Long Spacing:28
732
Short Spacing:27
634
GSR-J:5240
Backscatter
GPV-Q
HRGD-H:3816

HRCC 44.88
MCFL 39.45
Caliper 38.96
TLD Density 38.57

DSLT-H:8318 **36.64**
ECH-KH
DSLC-H:8318
SLS-E:165

CBL 3ft 24.17
Upper-Near 24.17
VDL 5ft 23.17
Upper-Far 23.17
Delta-T 21.79
Lower-Far 20.42
Lower-Near 19.42
SLS-E 16.00

AIT-H:392 **16.00**
AHIS:392
AHRM:392



Induction 7.91
Power Supply 7.91
Temperature 7.91

Lengths are in ft
Maximum Outer Diameter = 9.000 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	This is the first run in the hole		
Stretch Correction (ft)	4.00		
Rig Type	Land		
Depth Remark Parameters	**Run 1**		
Depth Remark 1	All Schlumberger depth control procedures followed		
Depth Remark 2	IDW primary depth control device. Z -chart secondary depth control device		
Depth Measuring Device	**Run 1**		
Type	IDW-B		
Wheel Correction 1	1		
Wheel Correction 2	0		
Tension Device	**Run 1**		
Type	CMTD-B/A		
Calibration Points	0		
Logging Cable	**Run 1**		
Type	7-46NT-XS		
Logging Cable Length (ft)	24000.00		

Run 1

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
HENVIR	Computation Ensemble for the HGNS Neutron environmental corrections	3.1.9755.0
DepthCorrection	DepthCorrection	3.1.9755.0

Tool Elements	Description	Software Version	Firmware Version
HRCC-H	HILT High-Resolution Control Cartridge, 150 degC	3.1.9755.0	2.0
HGNS-H	HILT Gamma-Ray and Neutron Sonde, 150 degC	3.1.9755.0	2.0
HRGD-H	HILT Resistivity Gamma-Ray Density Device, 150 degC	3.1.9755.0	3.0

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel

								Data
Run 1	Log[3]:Up	Up	349.28 ft	5480.21 ft	03-Nov-2012 5:57:47 PM	03-Nov-2012 7:44:15 PM	0.00 ft	

All depths are referenced to toolstring zero

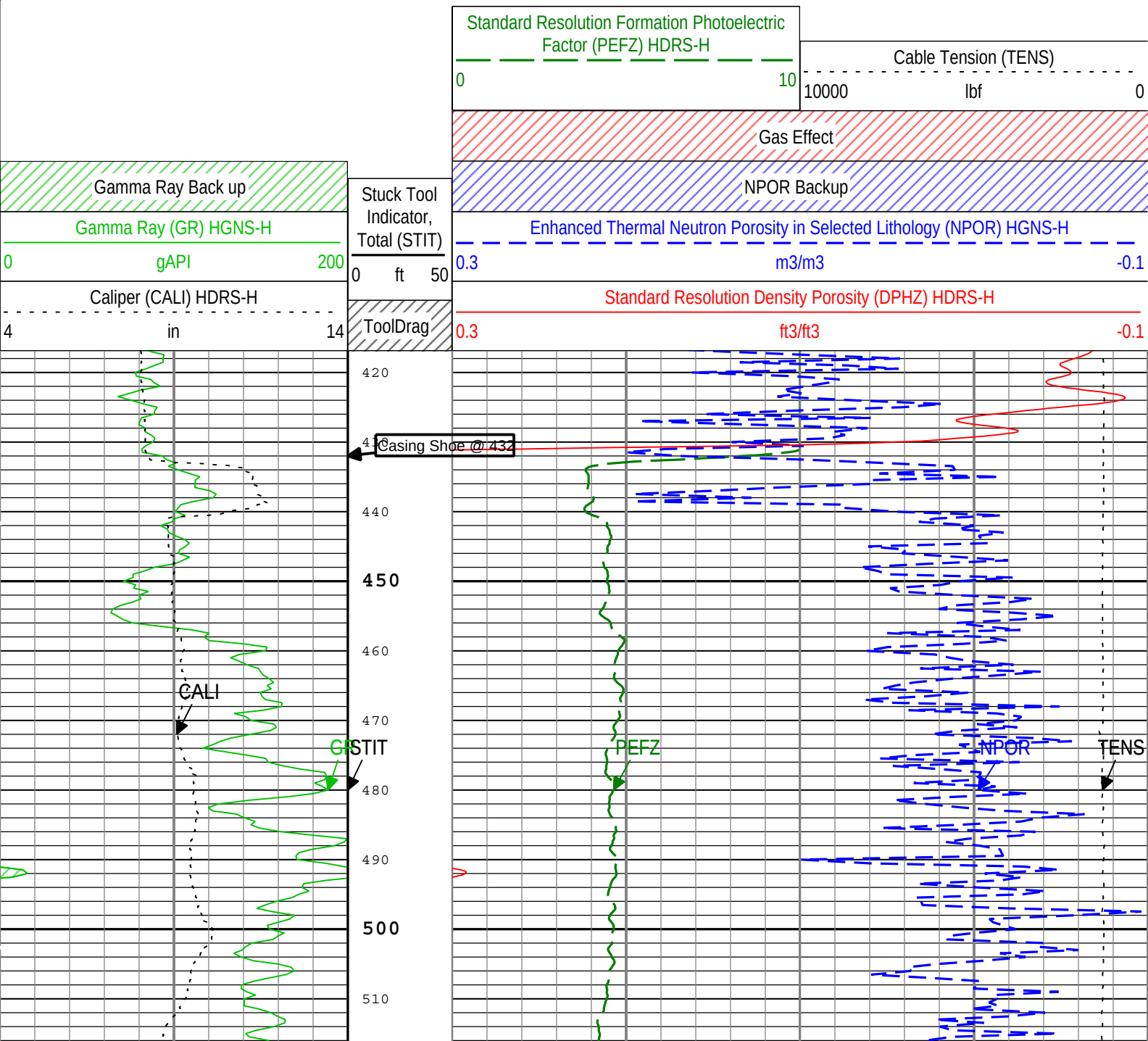
Log

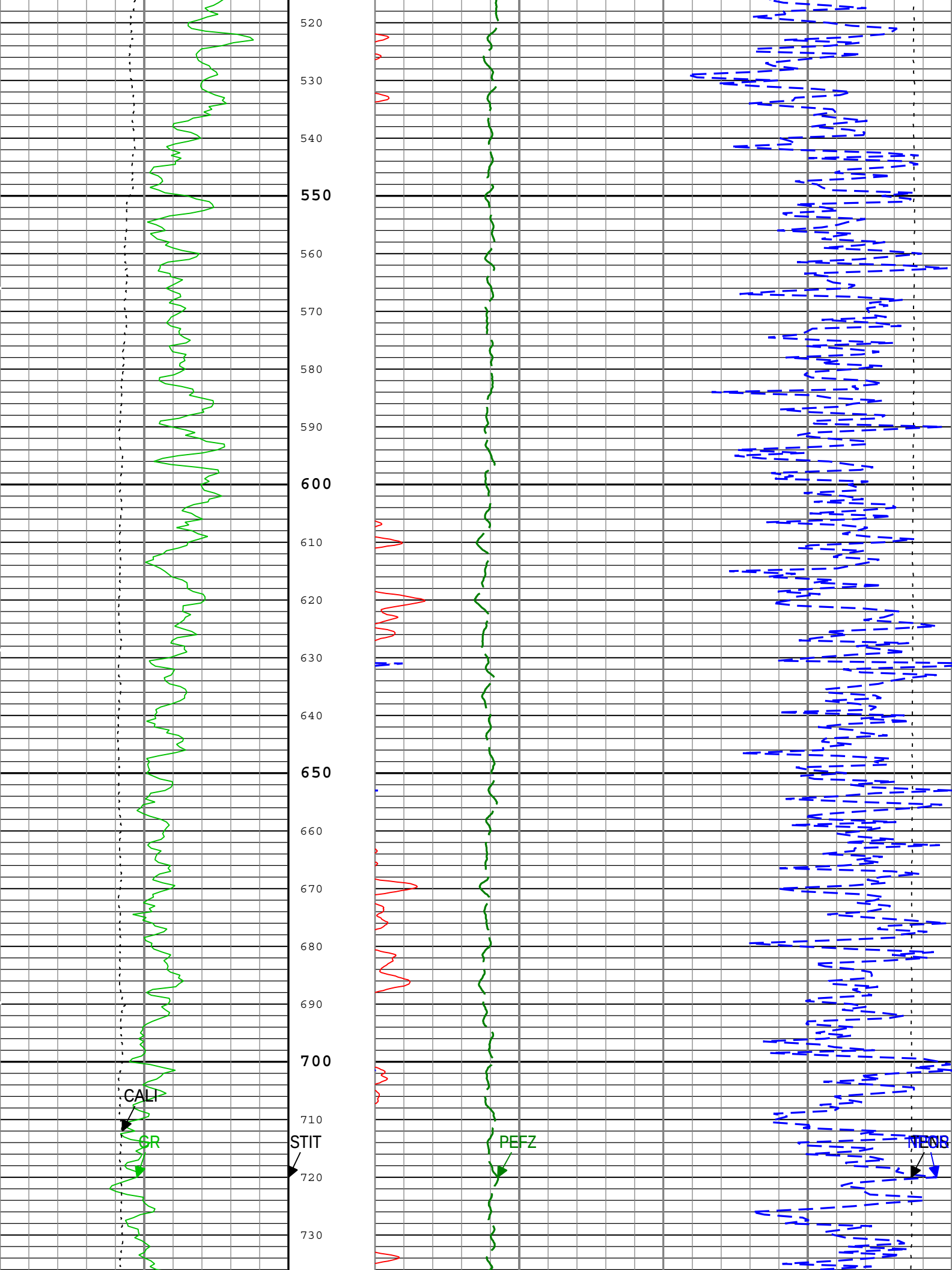
Run 1: Log[3]:Up

Description: HGNS standard resolution porosities for Platform Express Format: Log (EMD 5in Porosity) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Nov-2012 20:00:22

Channel	Source	Sampling
CALI	HDRS-H:HRCC-H:HRCC-H	1in
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in
GR	HGNS-H:HGNS-H:HGNS-H	6in
NPOR	HGNS-H:HGNS-H:HGNS-H	6in
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
STIT	DepthCorrection	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

TIME_1900 - Time Marked every 60.00 (s)

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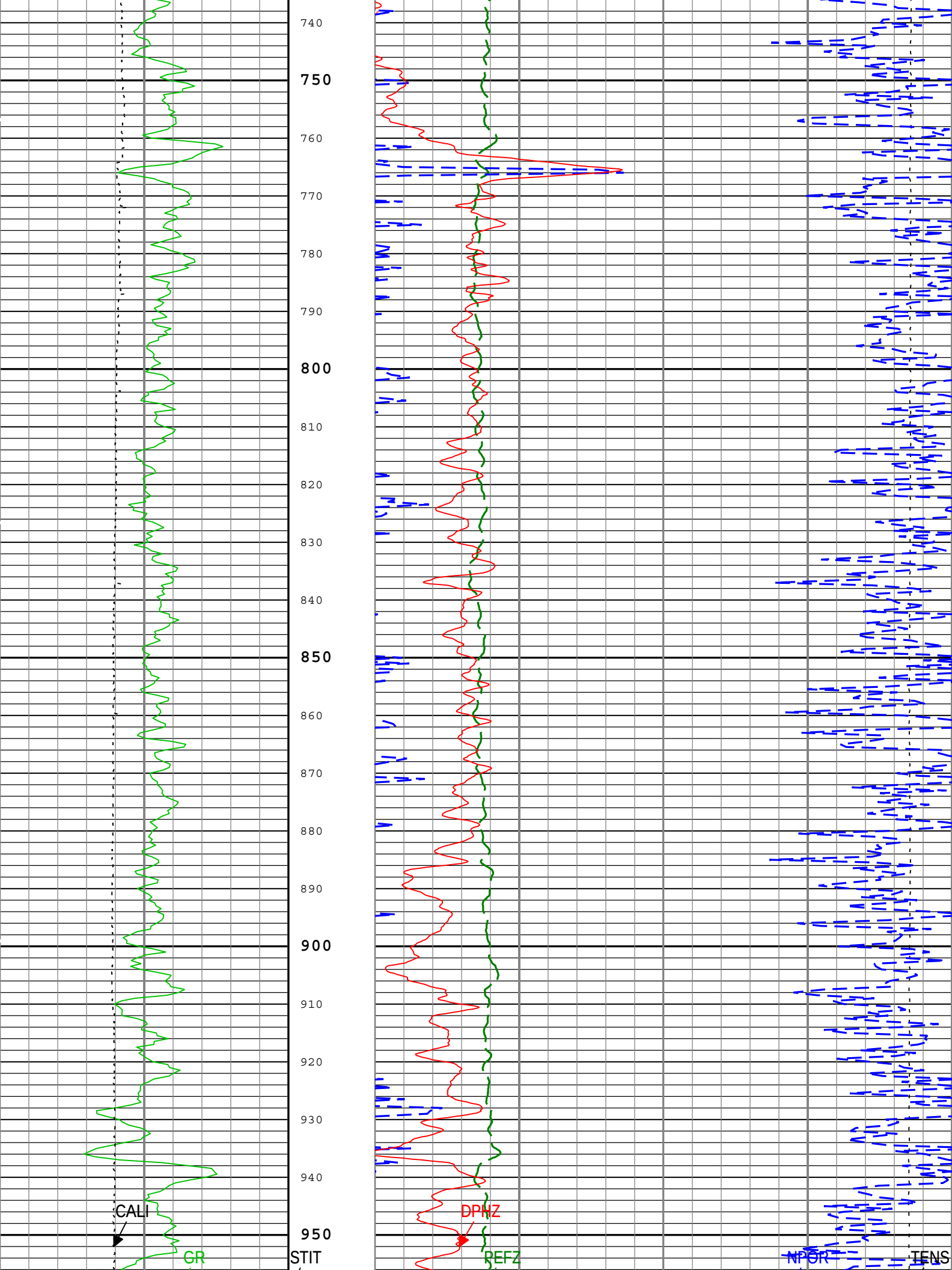
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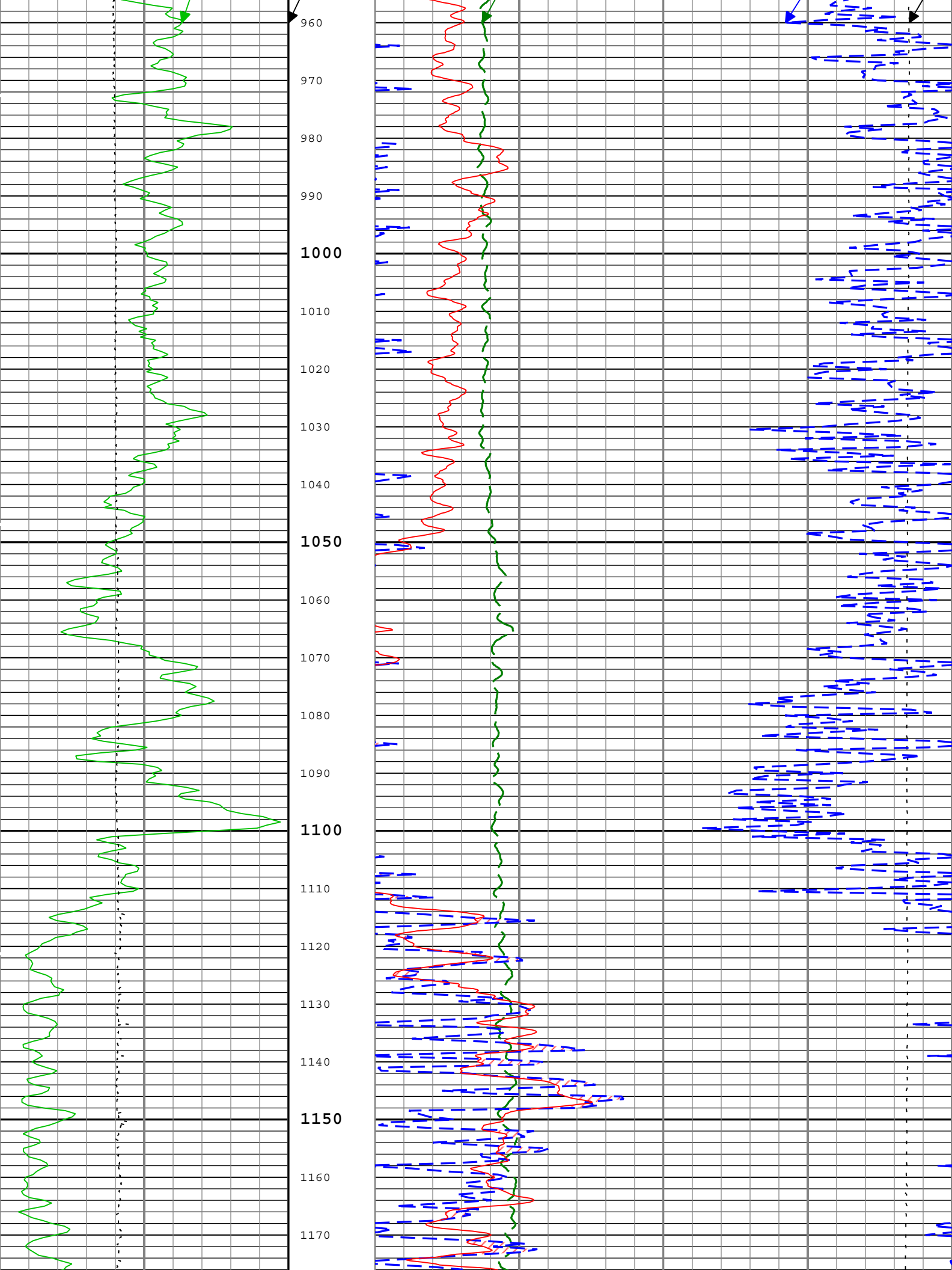
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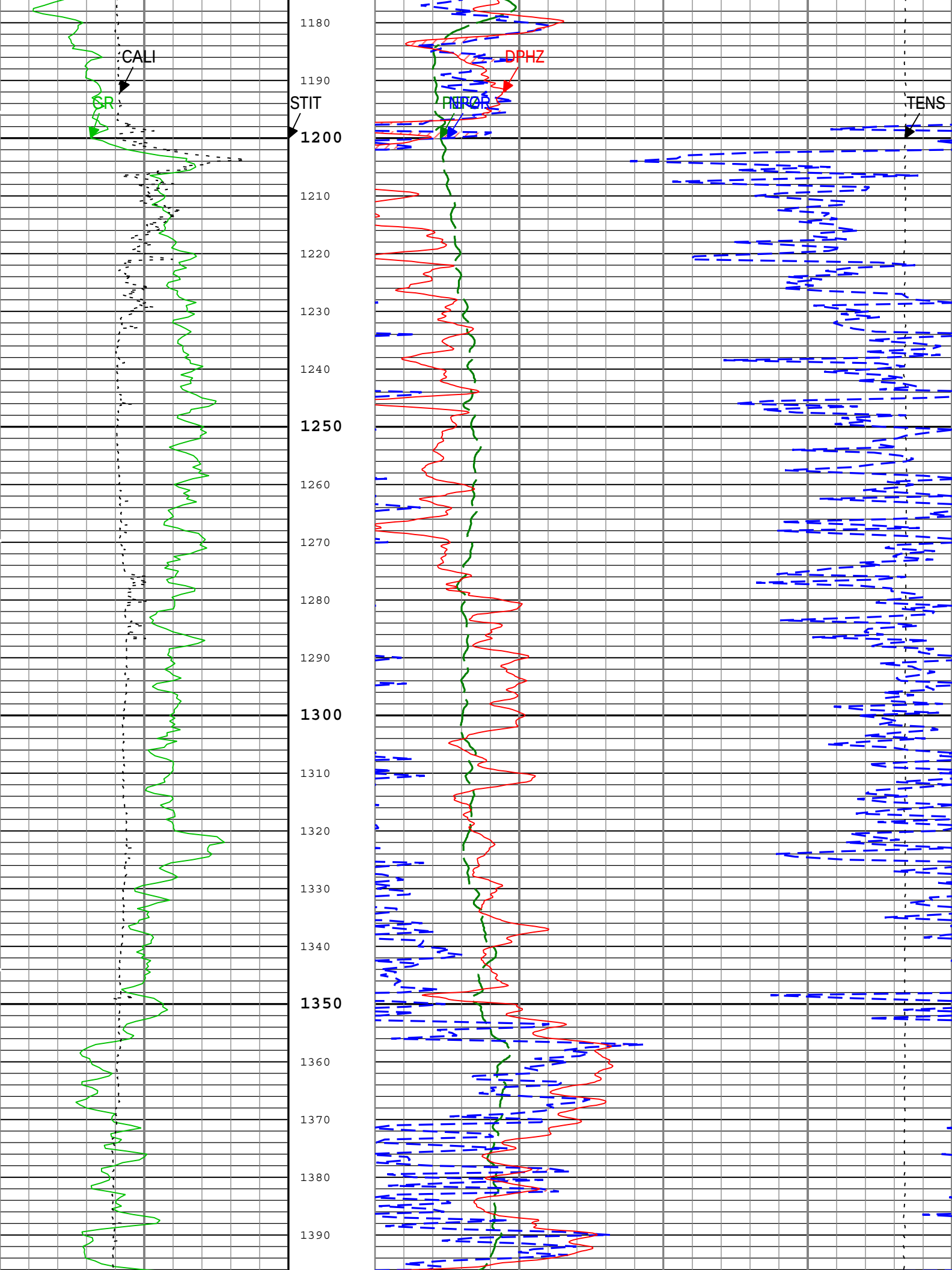
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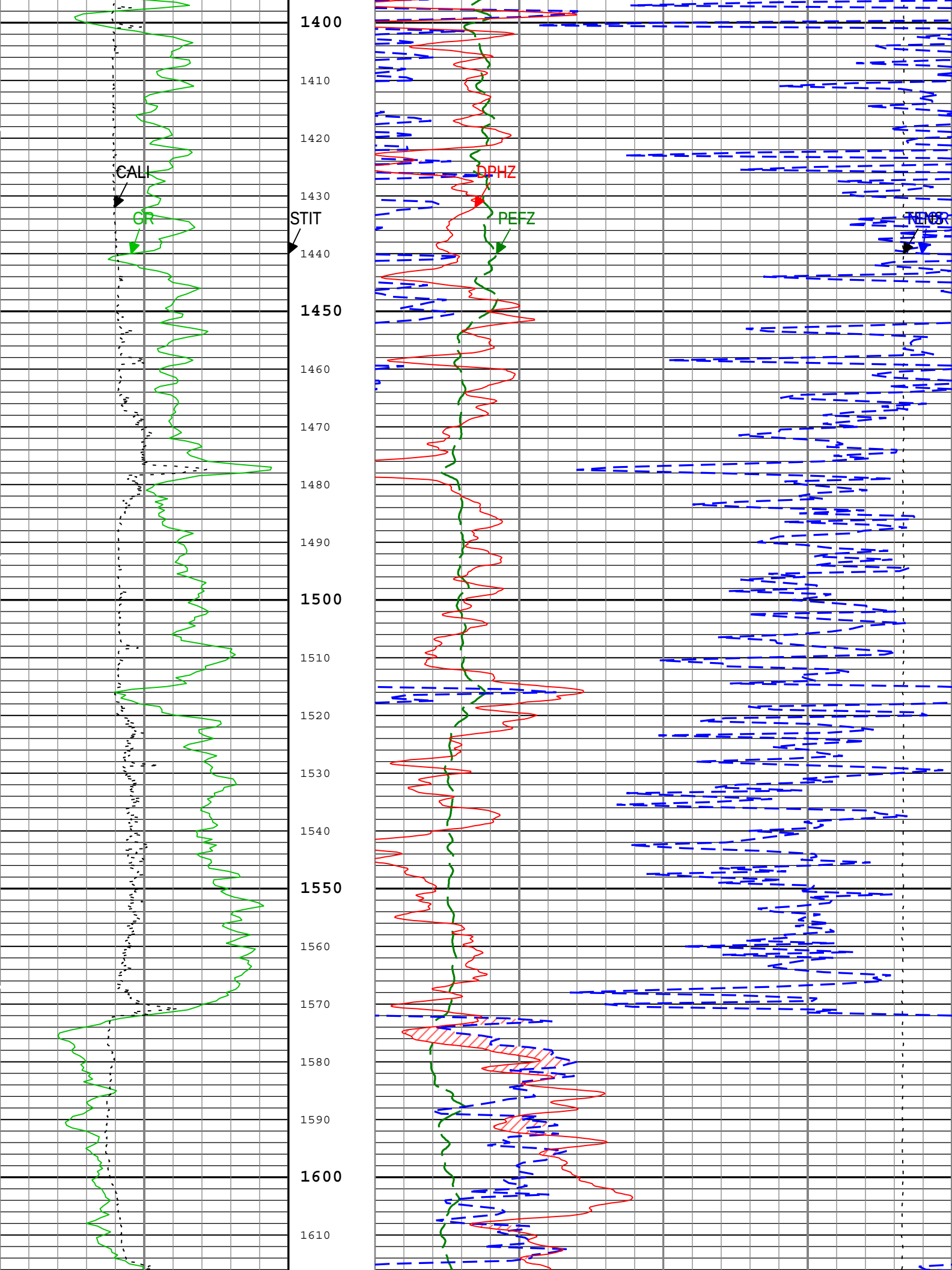
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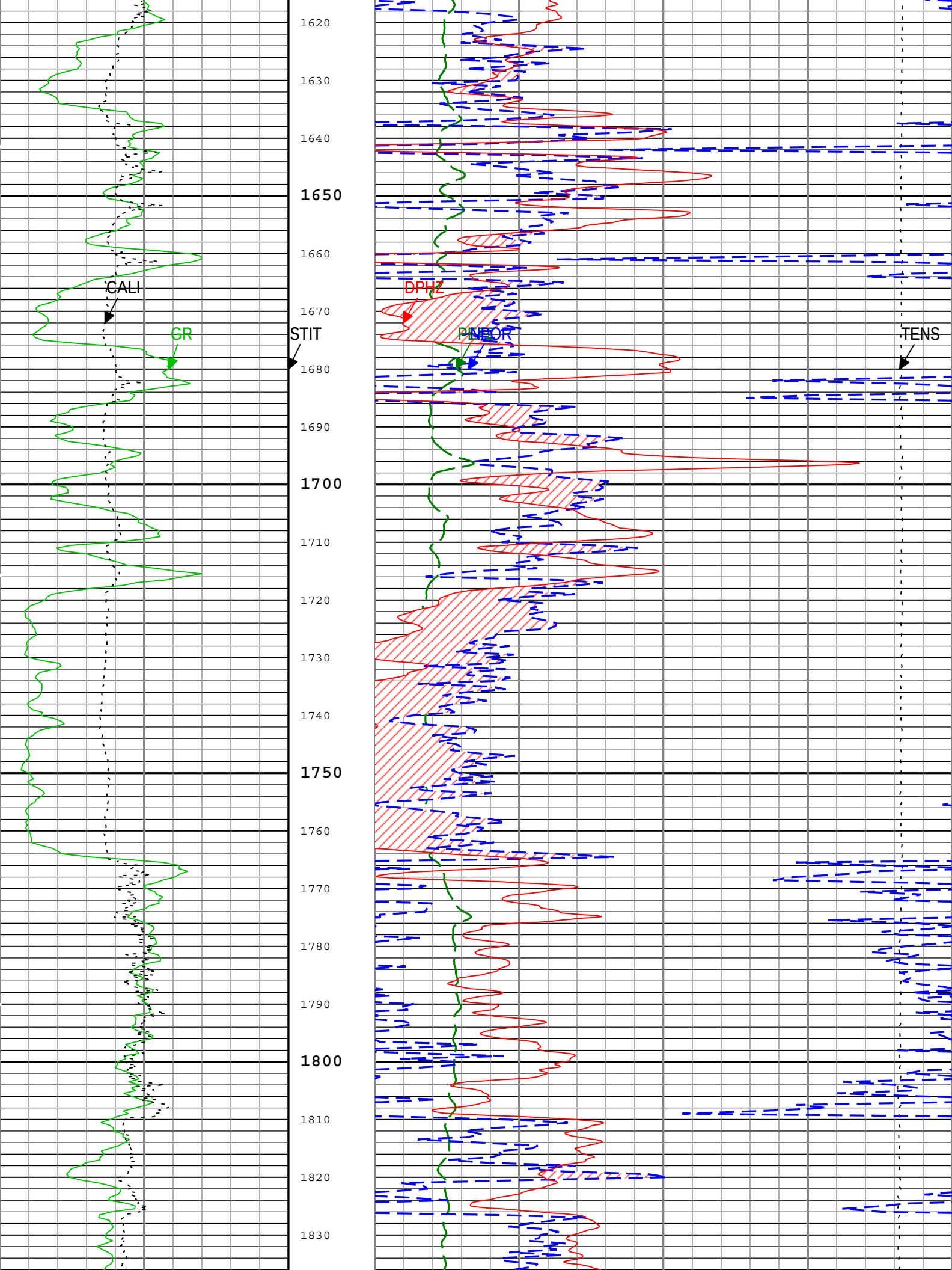
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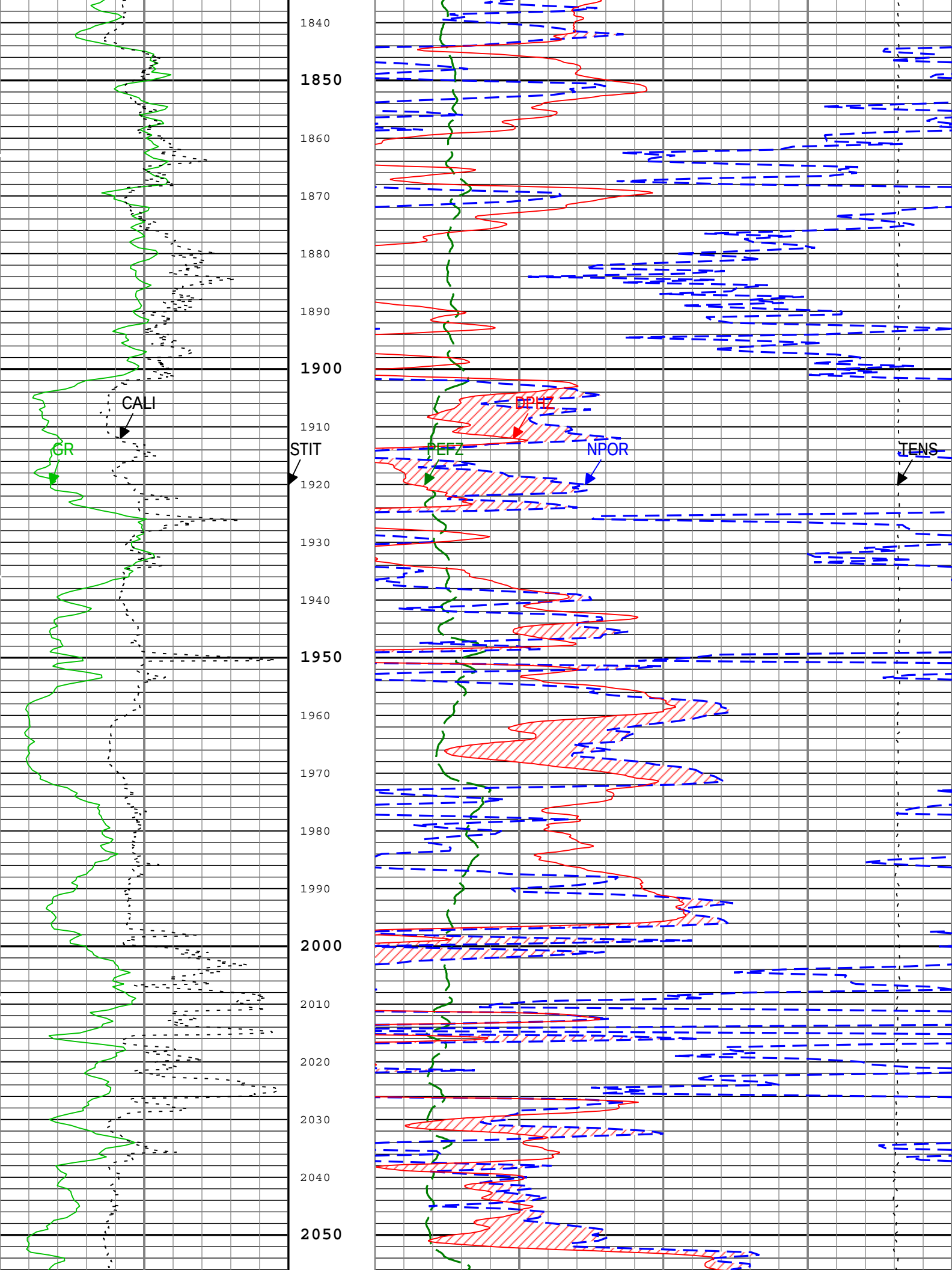
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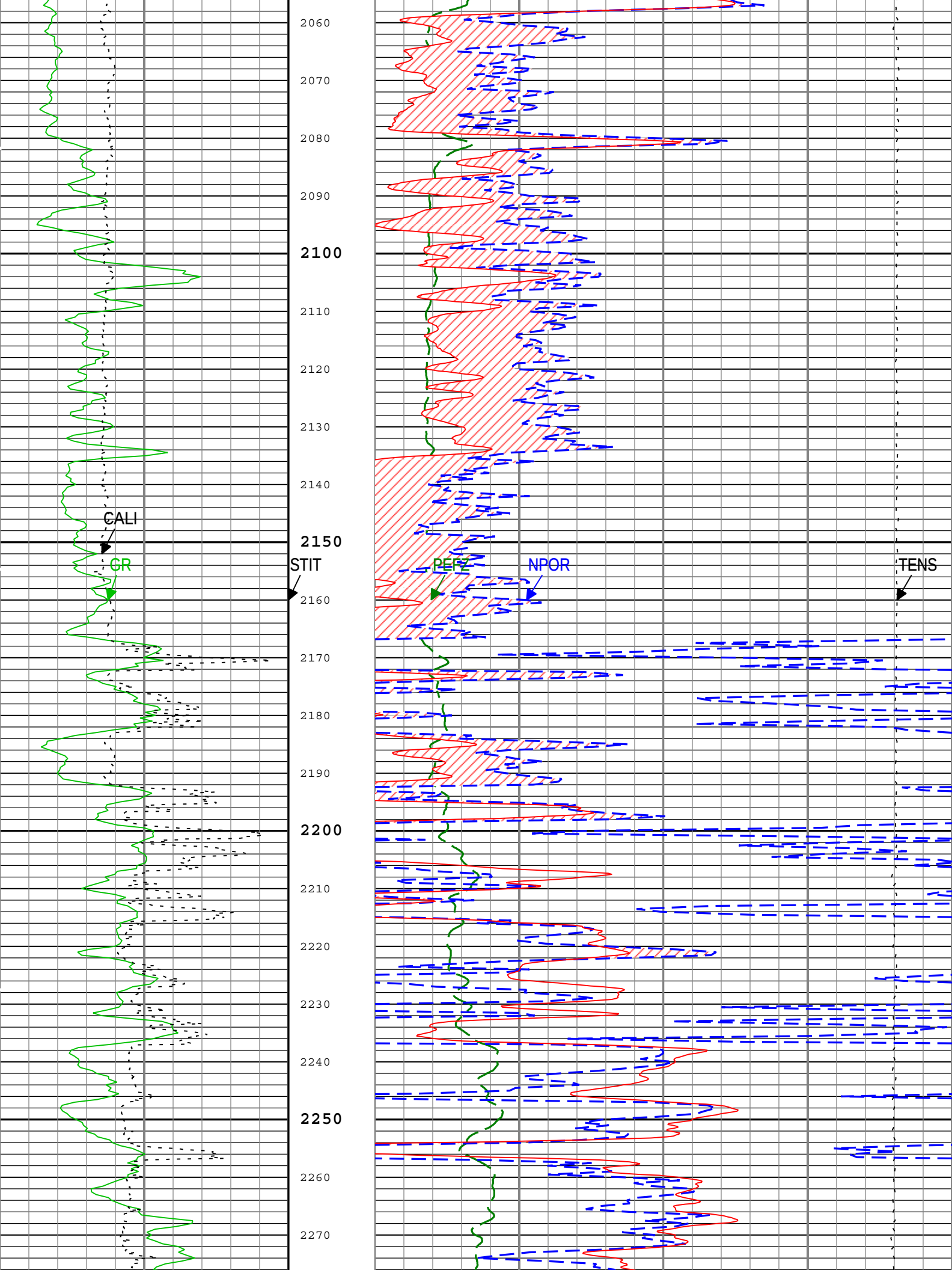
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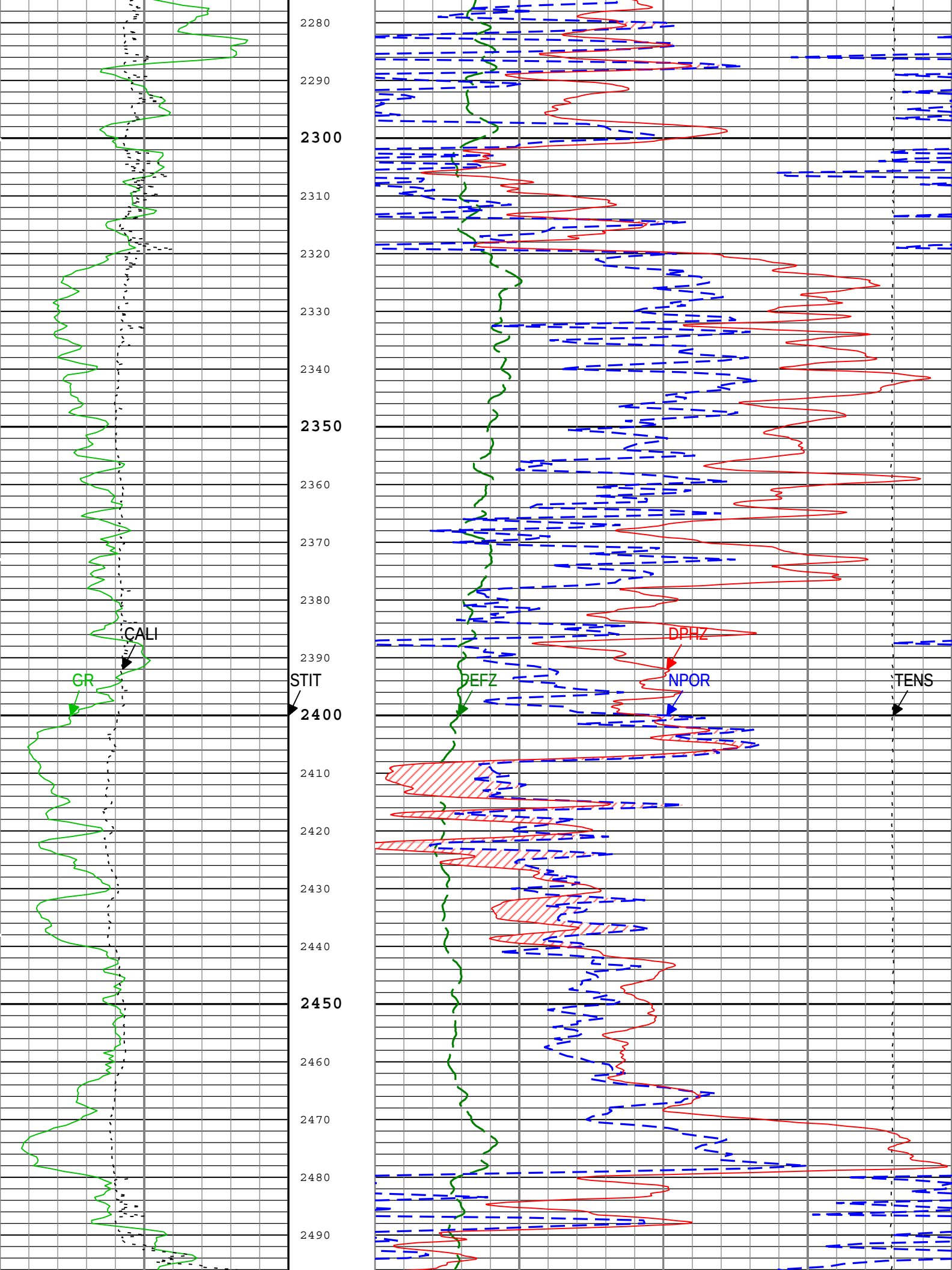
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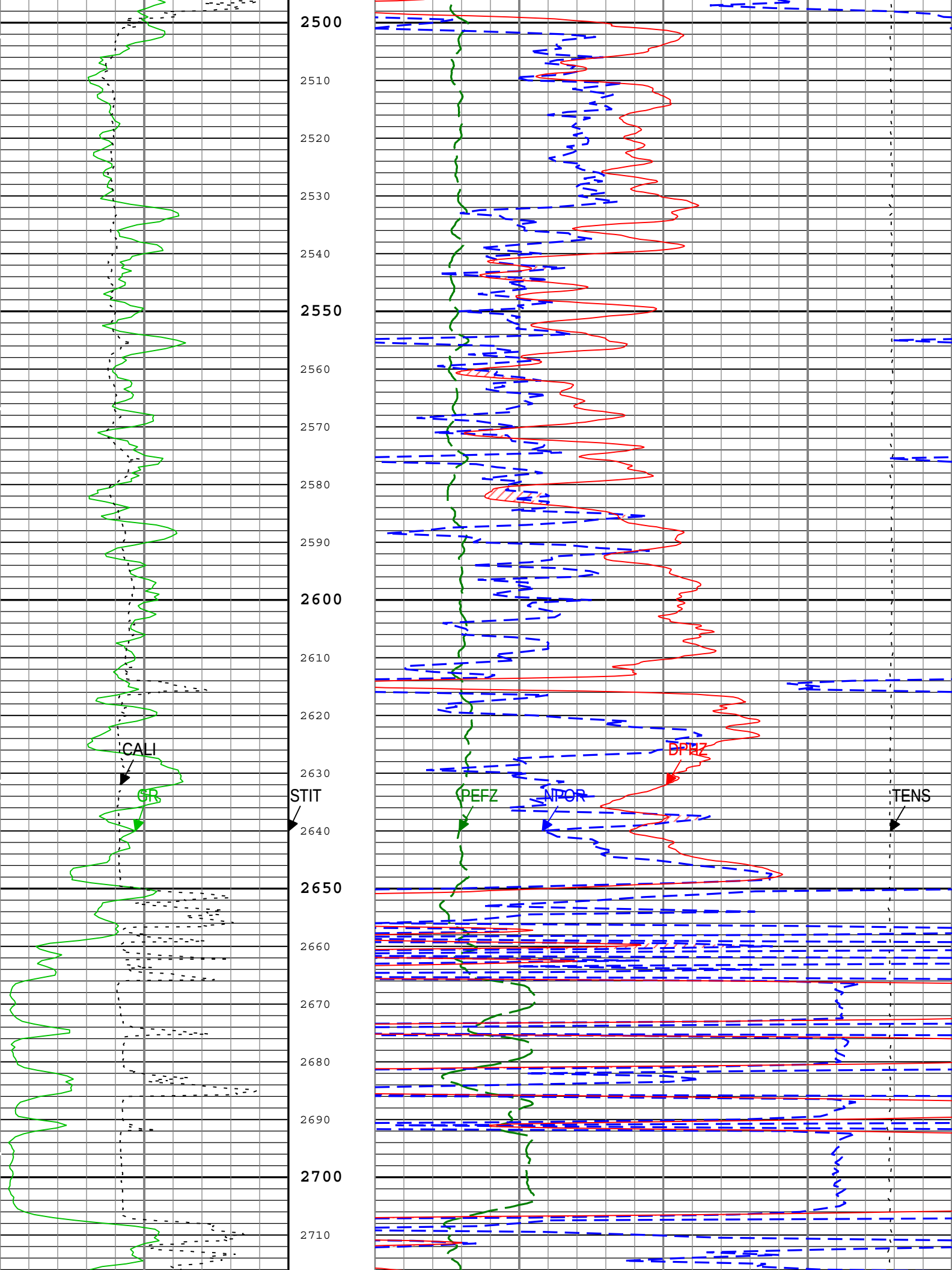
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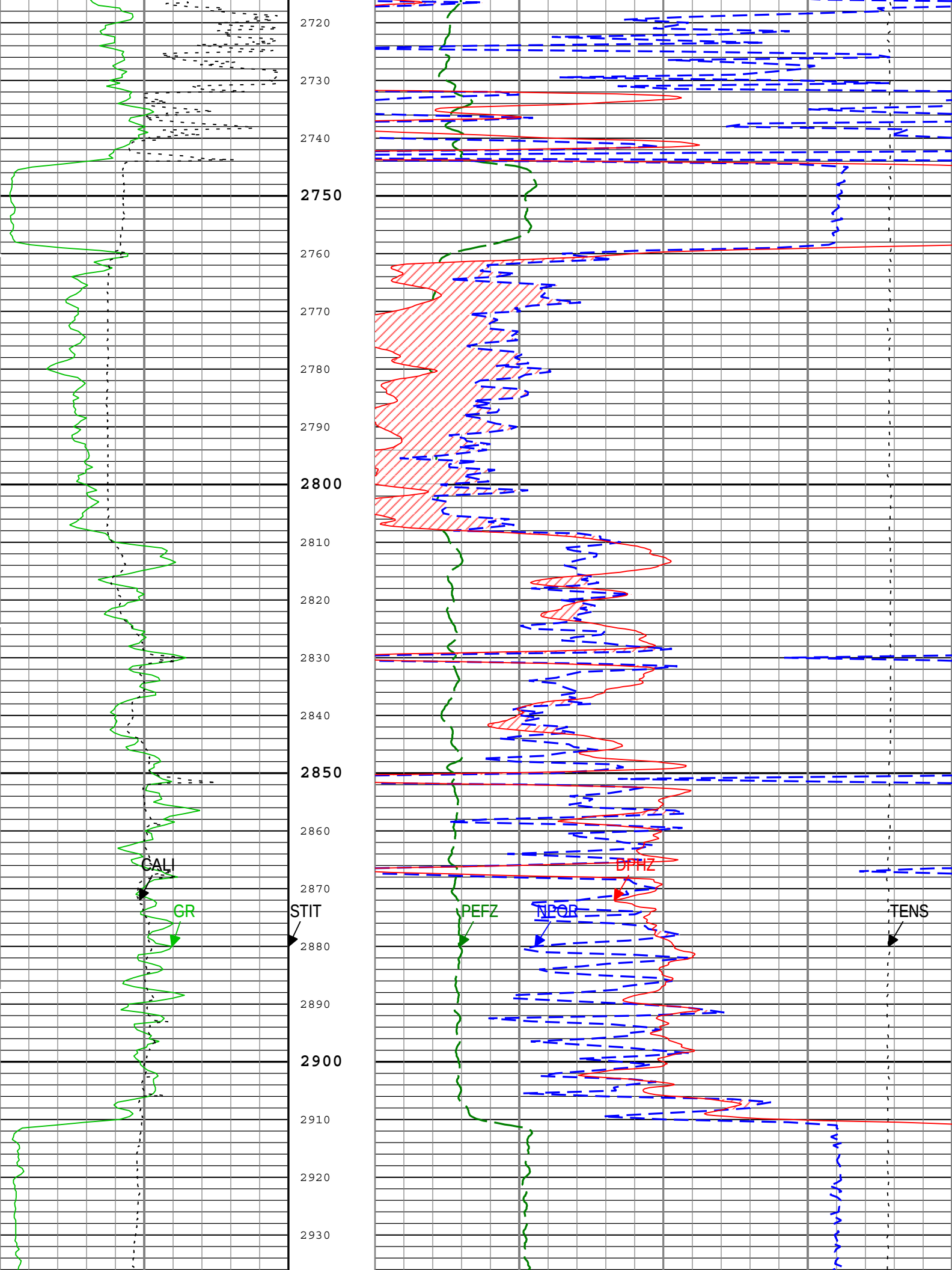
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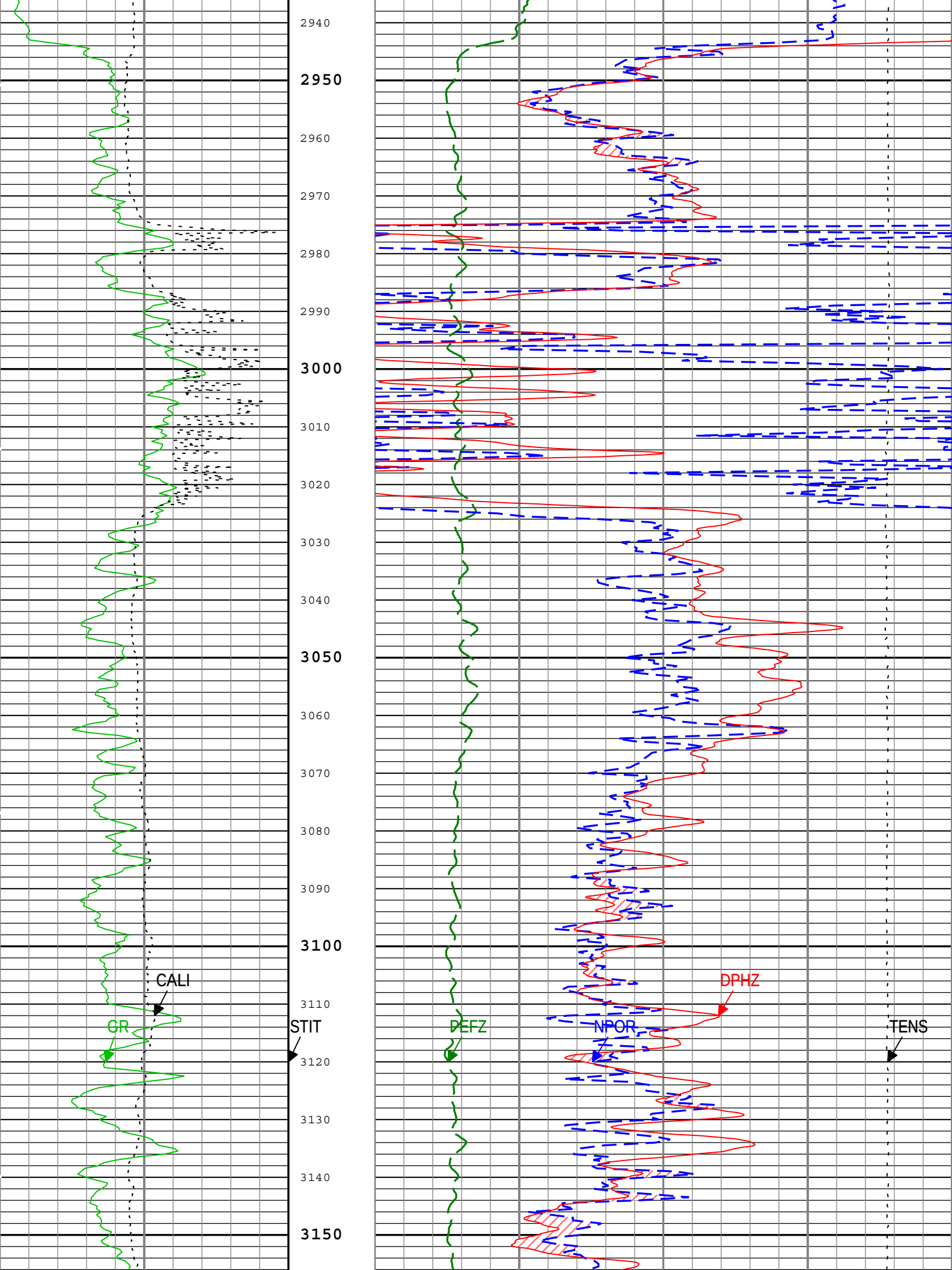
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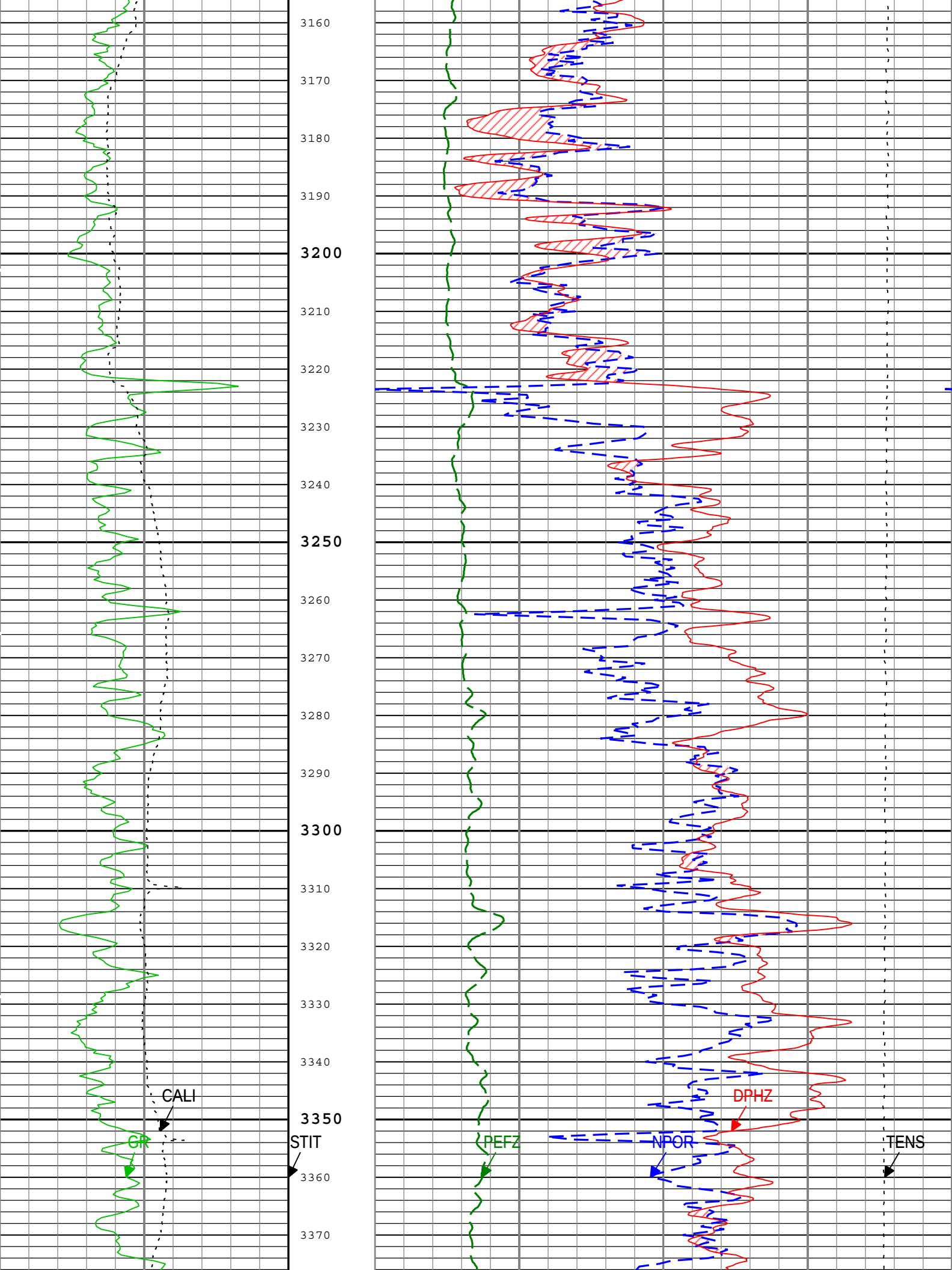
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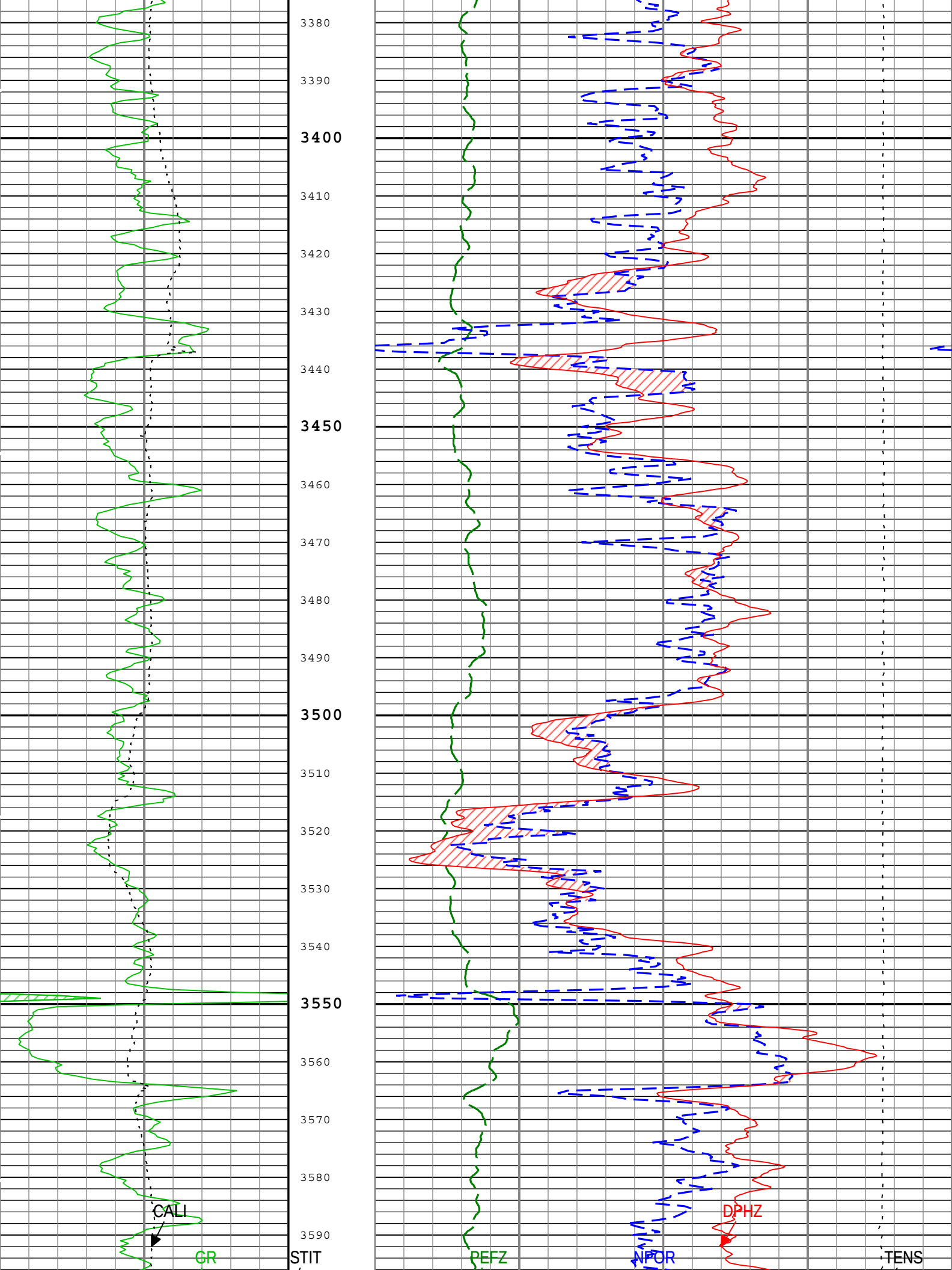
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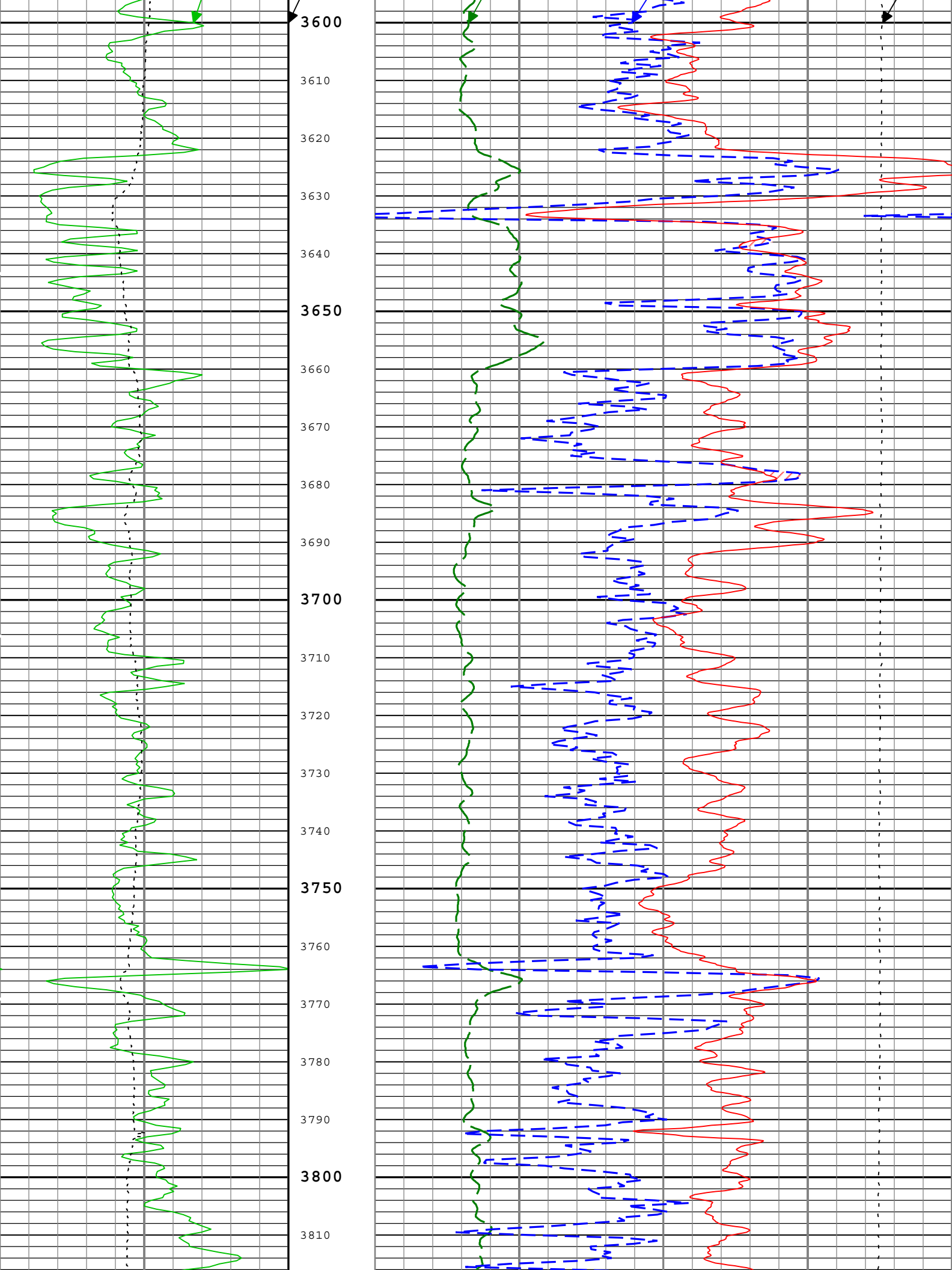
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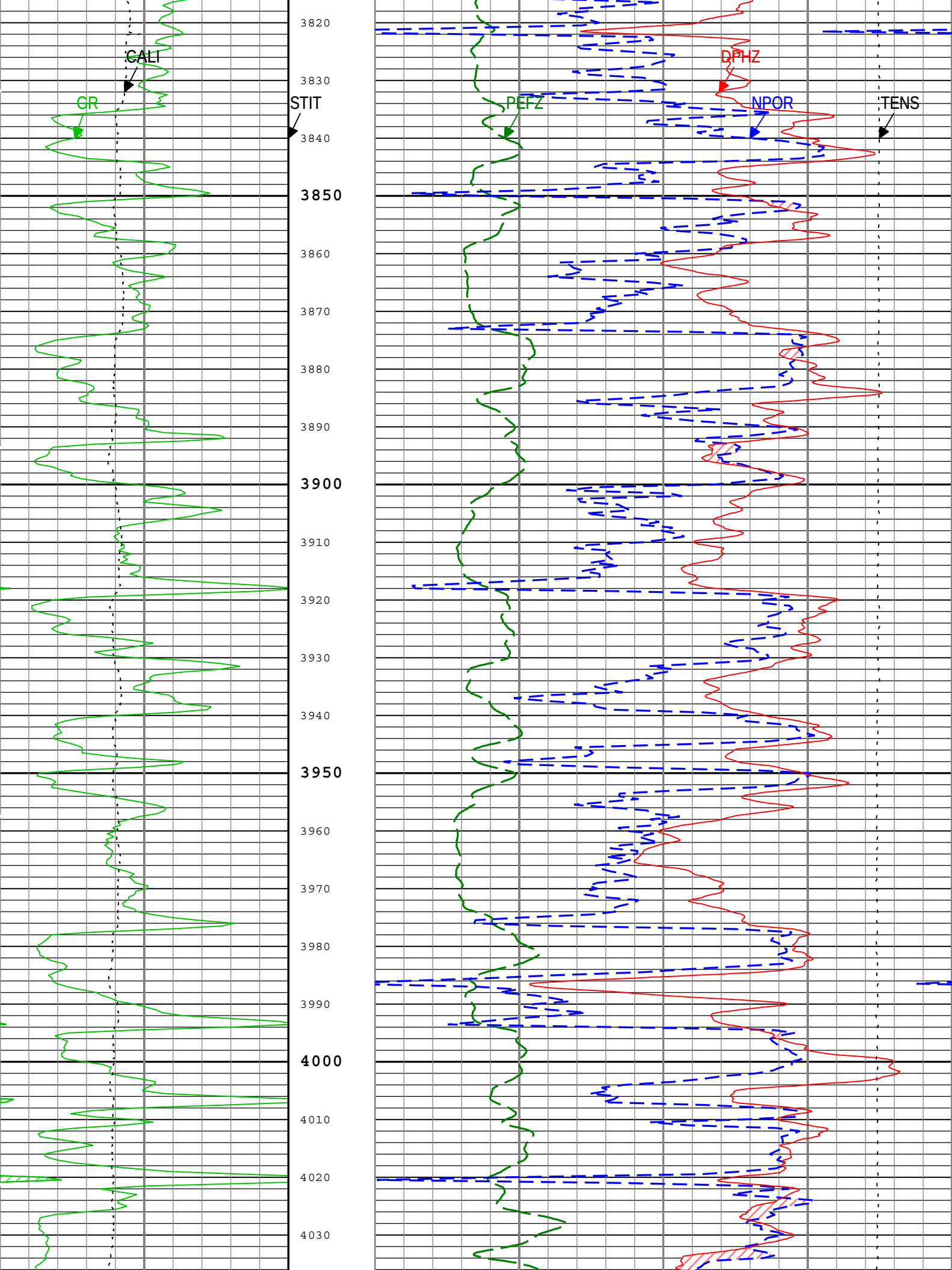
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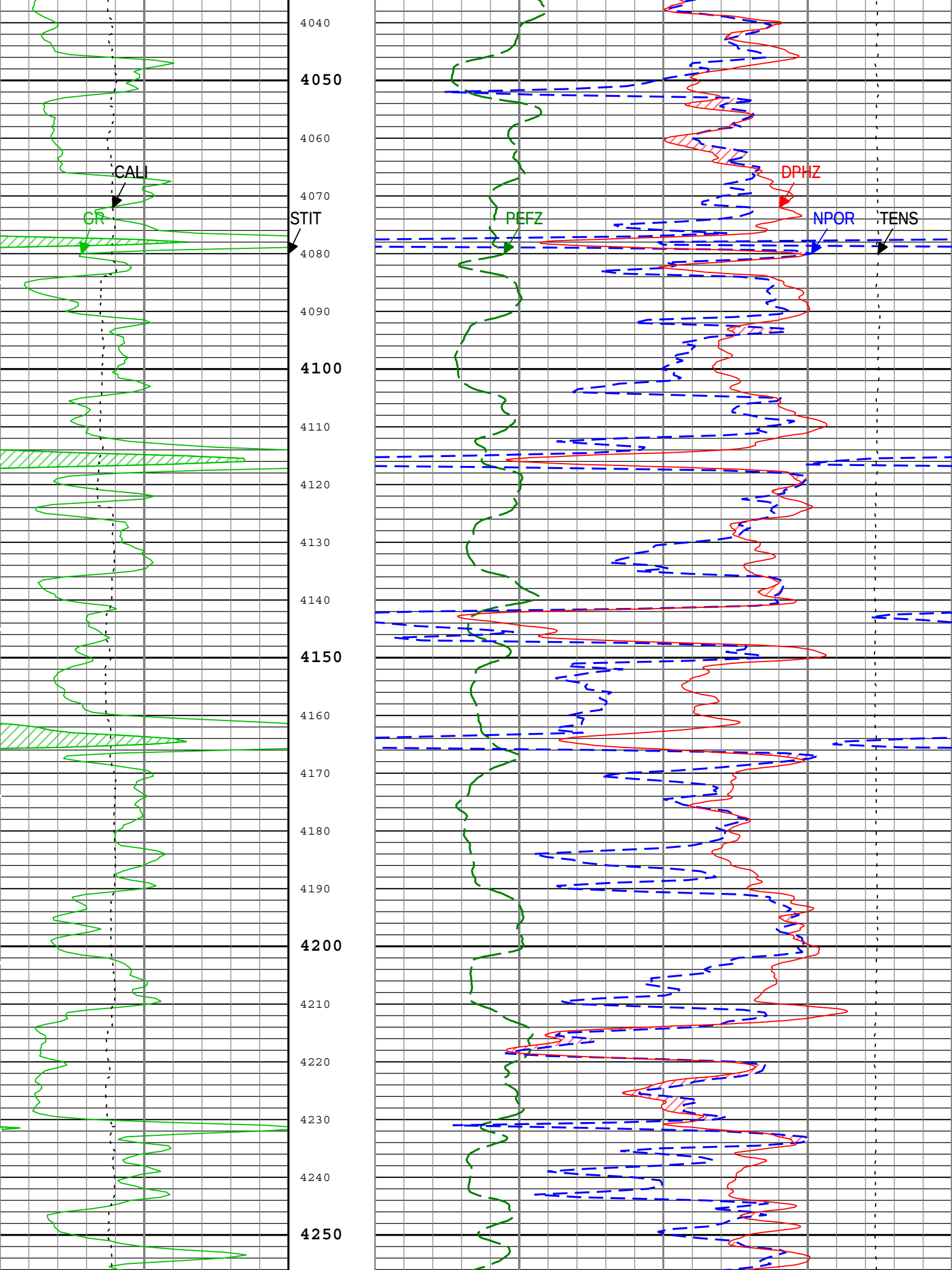
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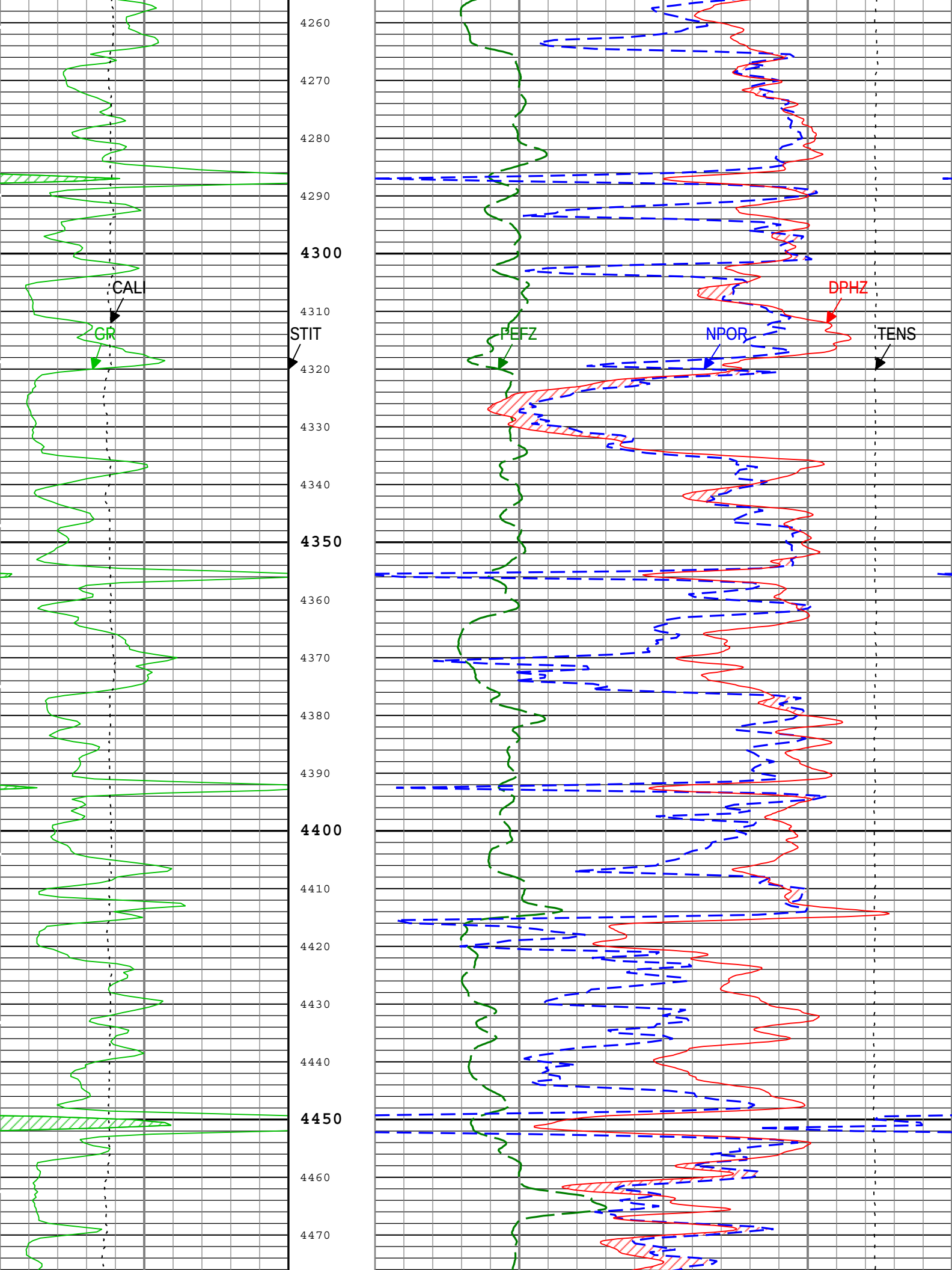
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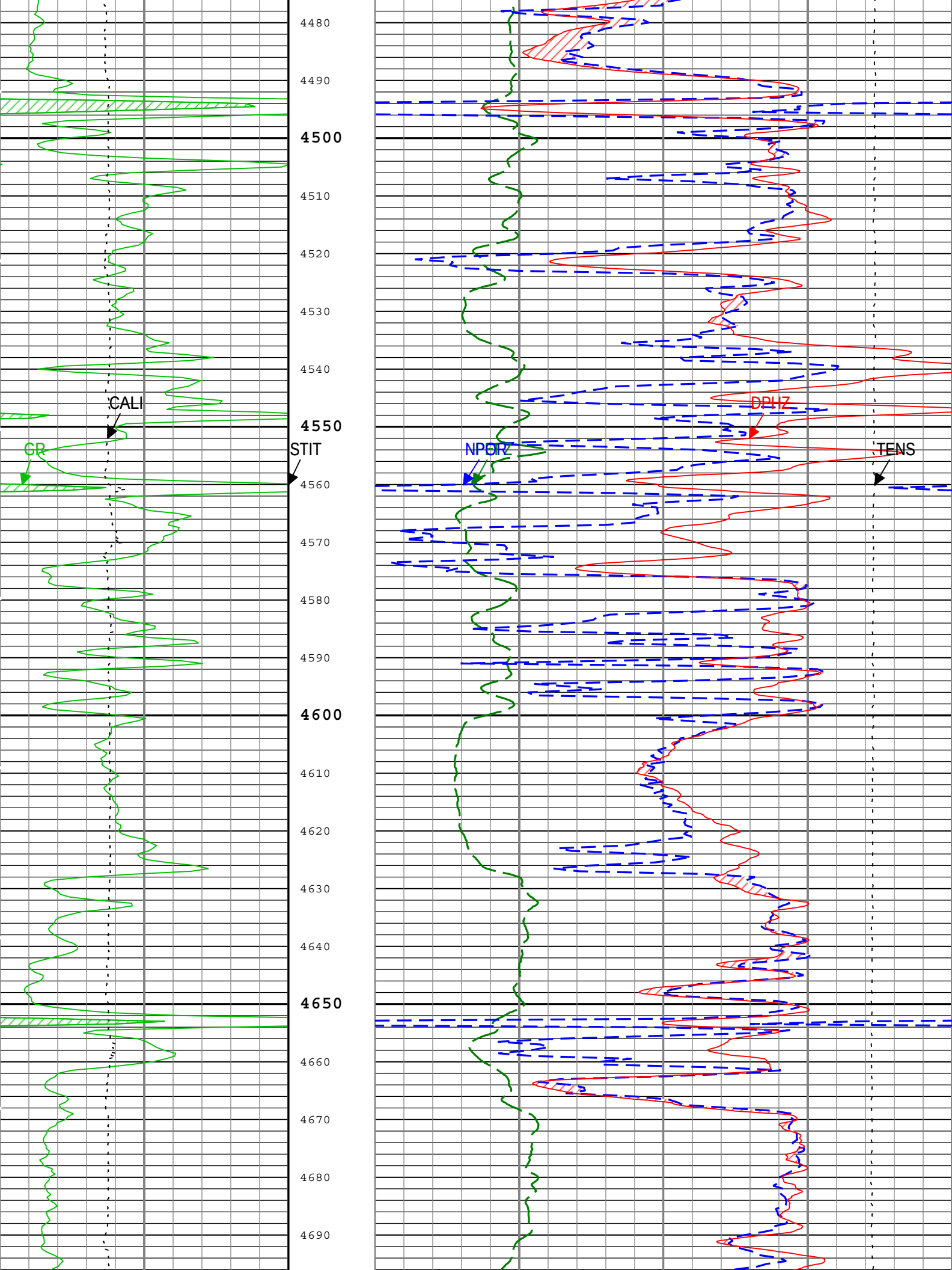
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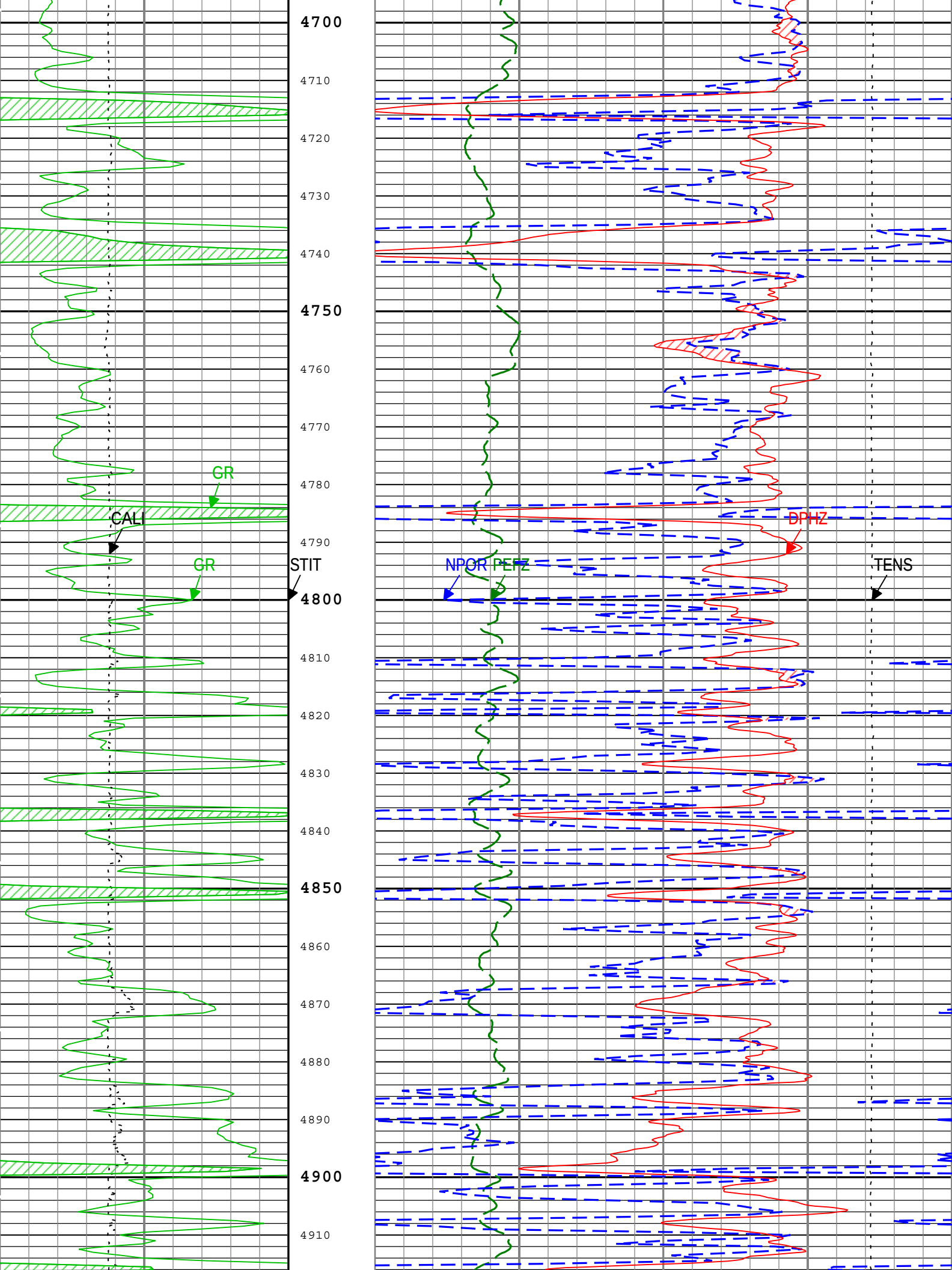
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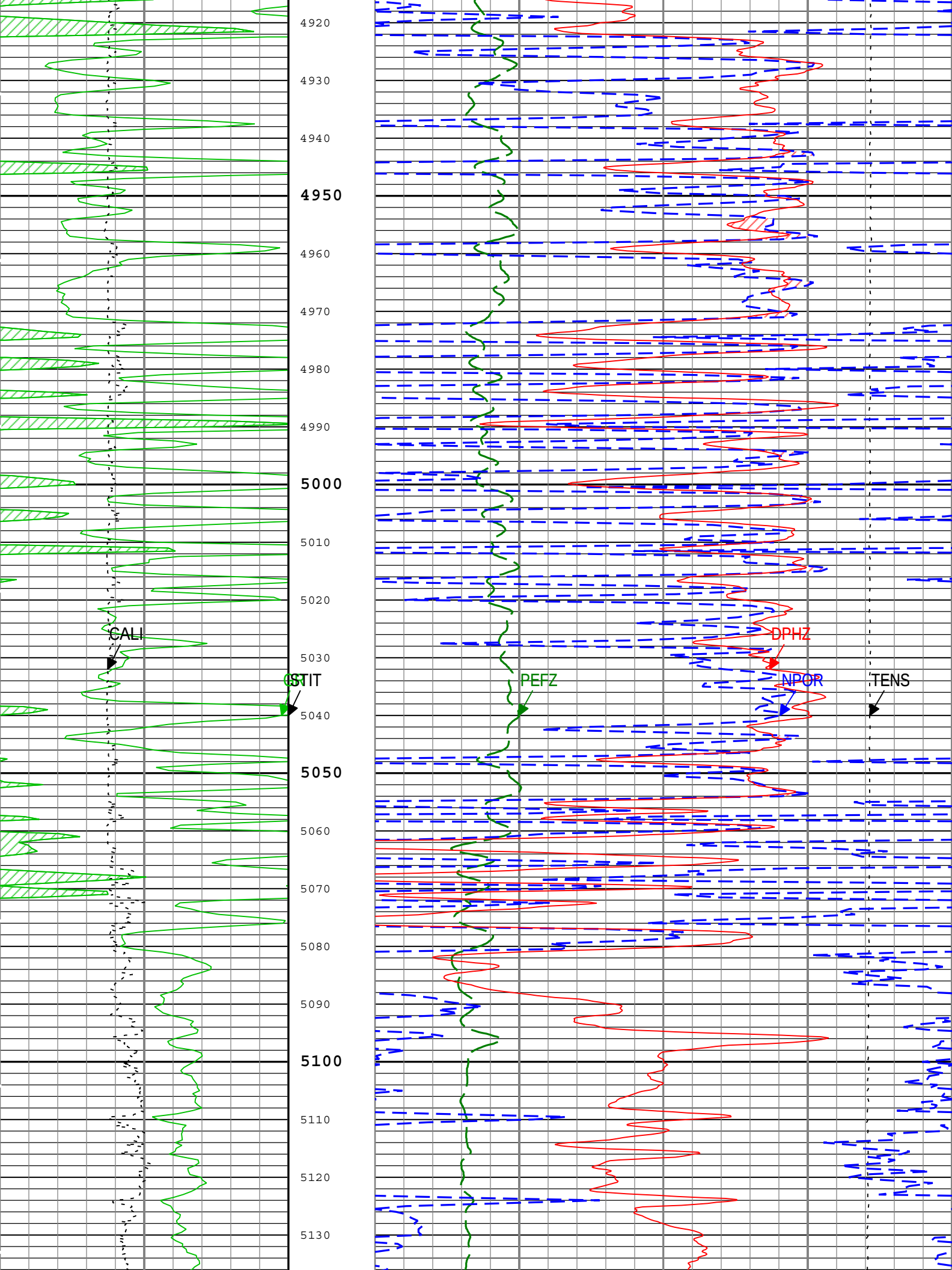
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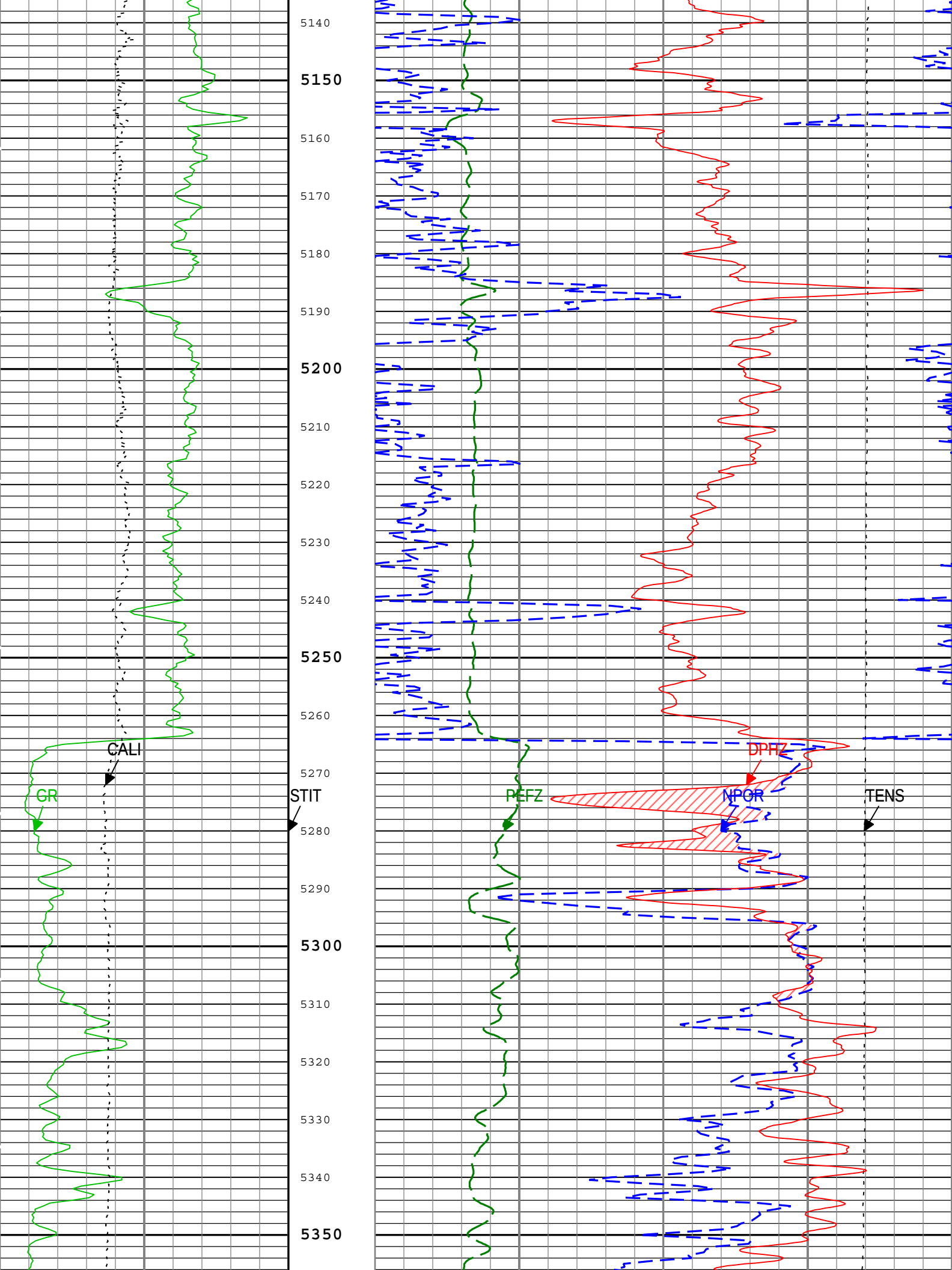
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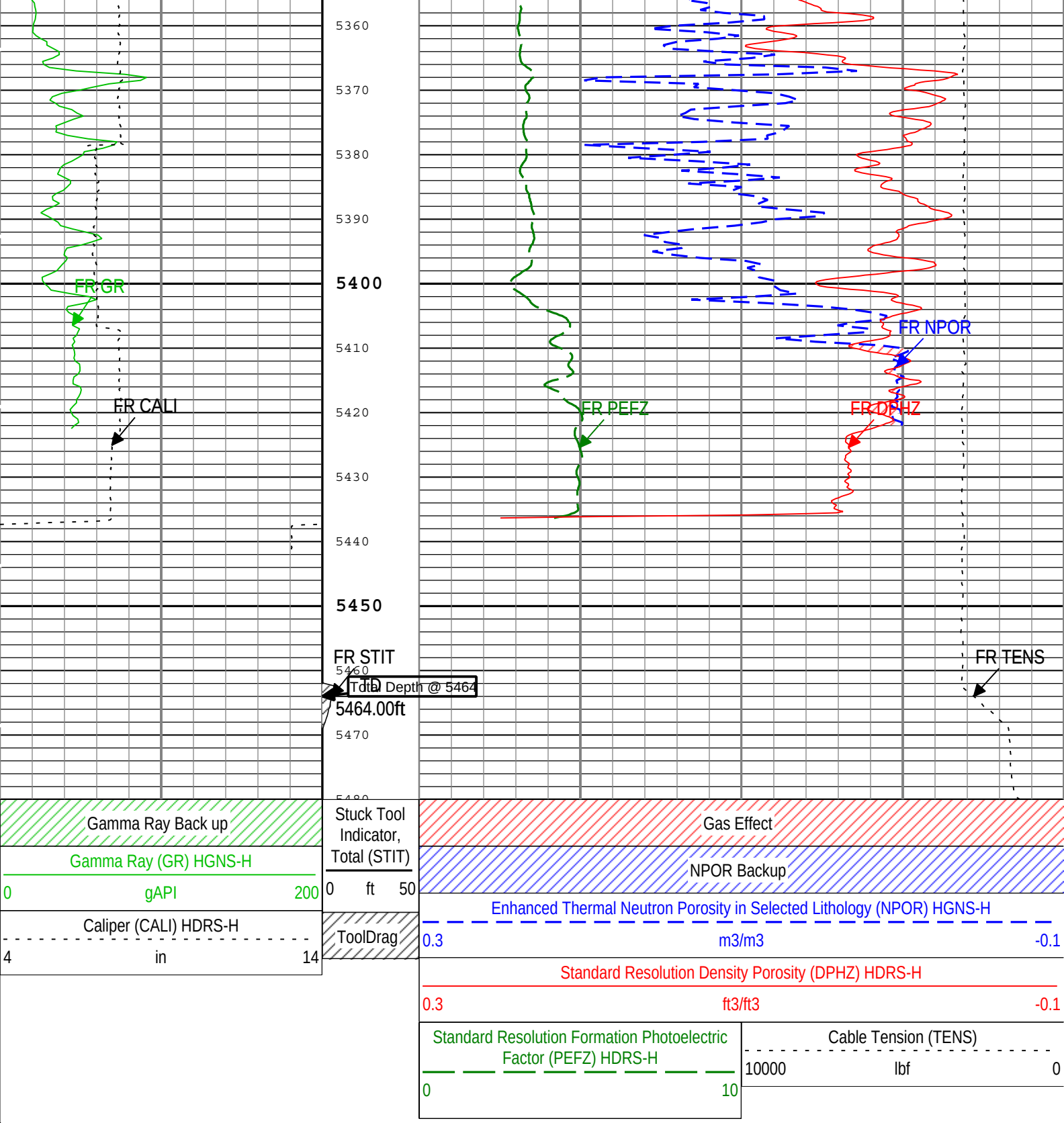


TIME_1900 - Time Marked every 60.00 (s)

Description: HGNS standard resolution porosities for Platform Express Format: Log (EMD 5in Porosity) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Nov-2012 20:00:22

Channel Processing 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
BSAL	Borehole Salinity	Borehole	5536.59	ppm
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0	in
CBLO	Casing Bottom (Logger)	WLSESSION	432	ft

CBLO	Casing Bottom (Logger)	WLSESSION	432	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
DFD	Drilling Fluid Density	Borehole	9.3	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	Chemical Gel	
DHC	Density Hole Correction	HDRS-H	Bit Size	
FD	Fluid Density	Borehole	1	g/cm3
FSAL	Formation Salinity	Borehole	0	ppm
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	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	AMF	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
HSCO	Hole Size Correction Option	HGNS-H	Yes	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	LIMESTONE	
MDEN	Matrix Density for Density Porosity	Borehole	2.71	g/cm3
MFST	Mud Filtrate Sample Temperature	Borehole	86	degF
NPRM	HRDD Nuclear Processing Mode	HDRS-H	High Resolution	
RMFS	Resistivity of Mud Filtrate Sample	Borehole	1.83	ohm.m
SOCO	Standoff Correction Option	HGNS-H	Yes	
TD	Total Measured Depth	Borehole	5464	ft

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	0	417	432
BS	7.875	432	5480

All depth are actual.

Tool Control Parameters

Parameter	Description	Tool	Value	Unit
HMCA_BRD_TYPE	HMCA Board Type	HGNS-H	1	
HRGD_BRD_TYPE	HRGD Board Type	HDRS-H	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h

Run 1

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
Run 1	Log[2]:Up	Up	4972.35 ft	5482.79 ft	03-Nov-2012 5:32:43 PM	03-Nov-2012 5:50:43 PM	4.00 ft	
Run 1	Log[3]:Up	Up	349.28 ft	5480.21 ft	03-Nov-2012 5:57:47 PM	03-Nov-2012 7:44:15 PM	0.00 ft	

All depths are referenced to toolstring zero

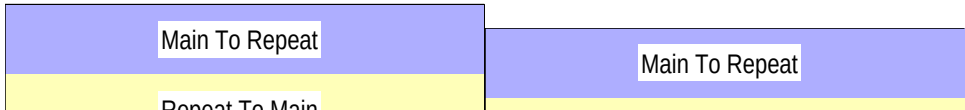
Log

Run 1: Log[2]:Up

Description: HGNS standard resolution porosities for Platform Express Format: EMD 5in Porosity RA Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Nov-2012 20:00:25

Channel	Source	Sampling
TIME_1900	WLWorkflow	0.1in

TIME_1900 - Time Marked every 60.00 (s)



Repeat To Main

Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H

0 10

Repeat To Main

Cable Tension (TENS)

10000 lbf 0

Main To Repeat

Repeat To Main

Caliper (CALI) HDRS-H

4 in 14

Main To Repeat

Repeat To Main

Enhanced Thermal Neutron Porosity in Selected Lithology (NPOR) HGNS-H

-0.1 ft3/ft3 -0.5

Main To Repeat

Repeat To Main

Gamma Ray (GR) HGNS-H

200 gAPI 400

Main To Repeat

Repeat To Main

Standard Resolution Density Porosity (DPHZ) HDRS-H

0.3 ft3/ft3 -0.1

Main To Repeat

Repeat To Main

Gamma Ray (GR) HGNS-H

0 gAPI 200

Repeat To Main

Stuck Tool Indicator, Total (STIT)

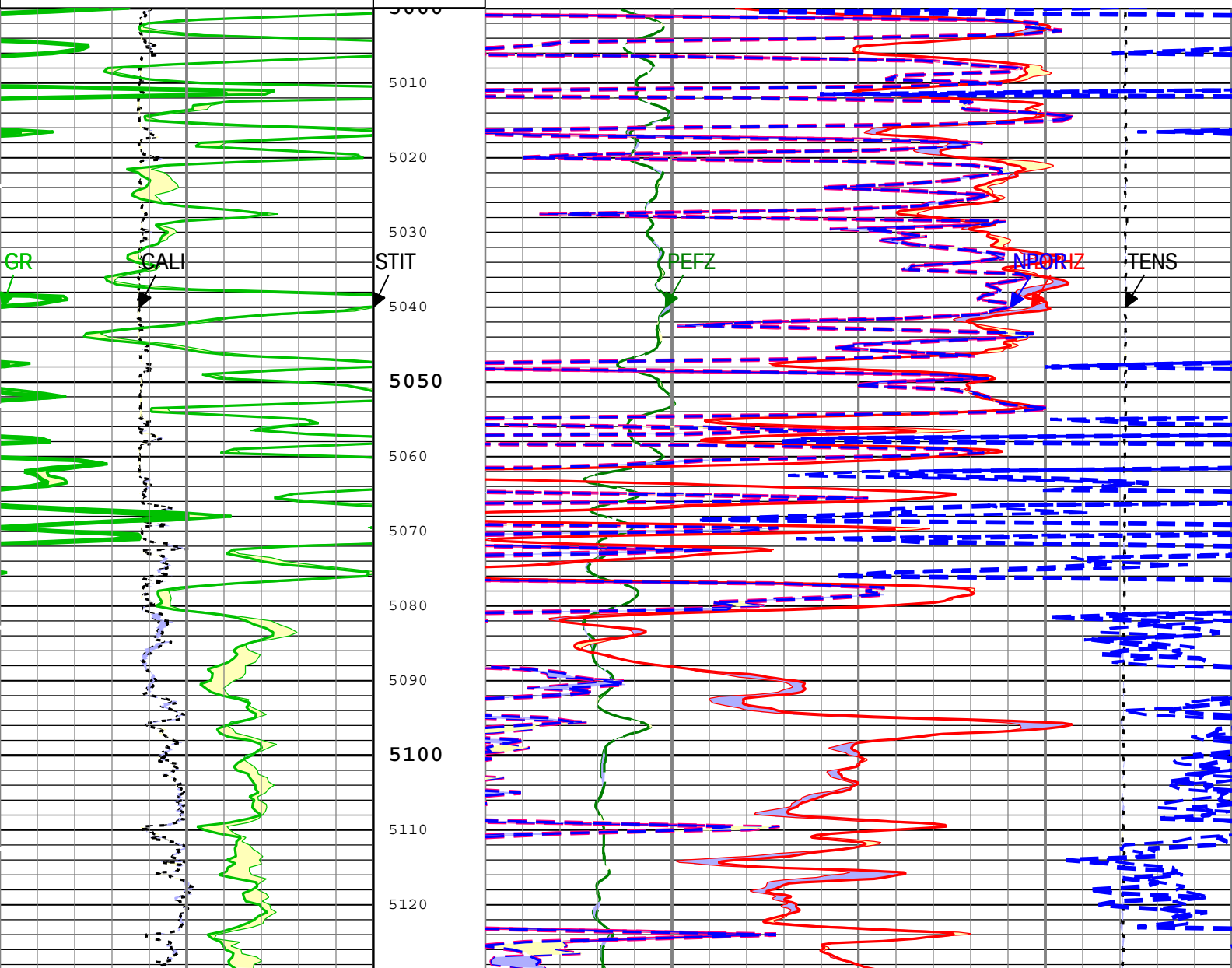
0 ft 50

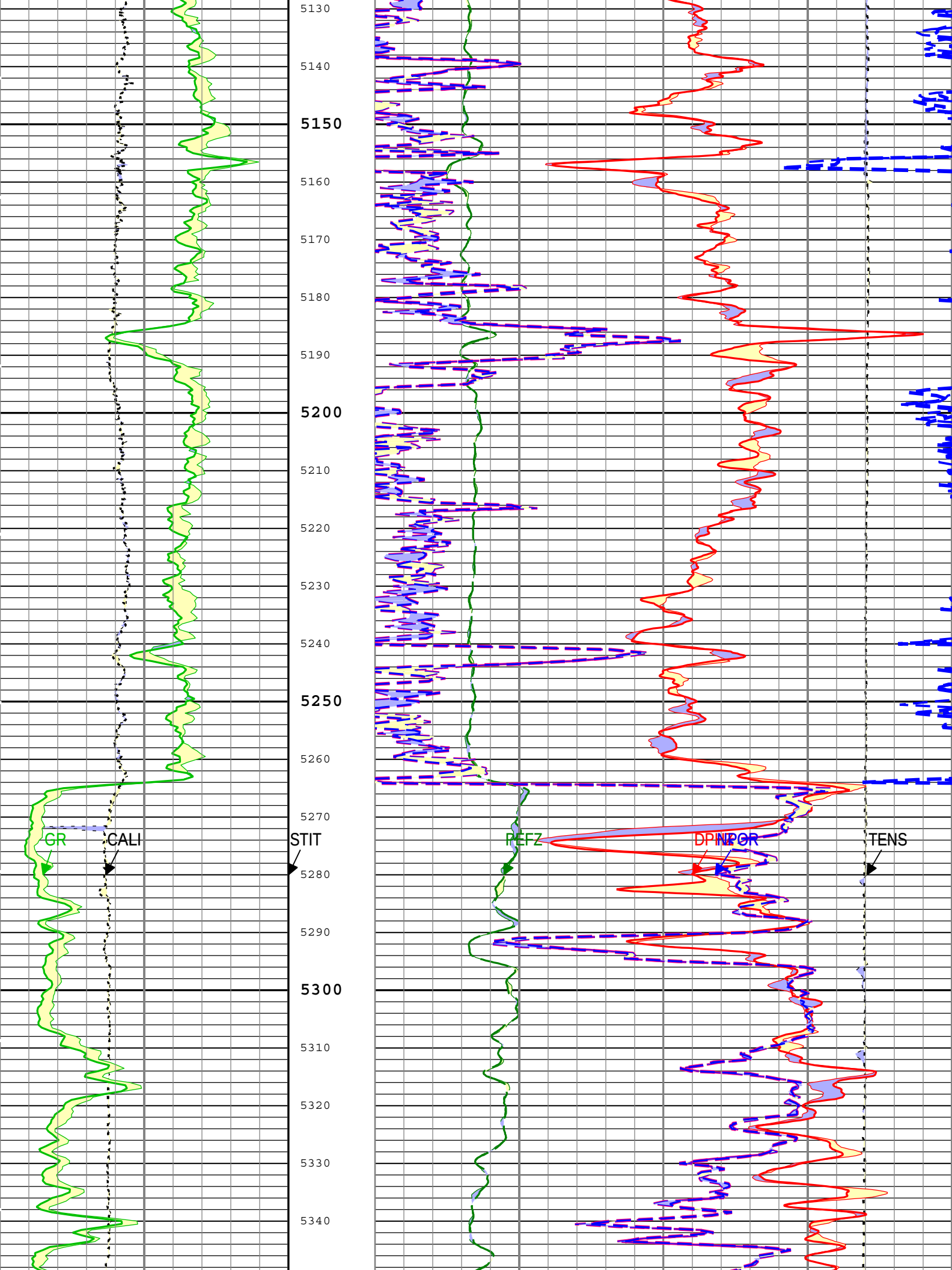
Main To Repeat

Repeat To Main

Enhanced Thermal Neutron Porosity in Selected Lithology (NPOR) HGNS-H

0.3 m3/m3 -0.1

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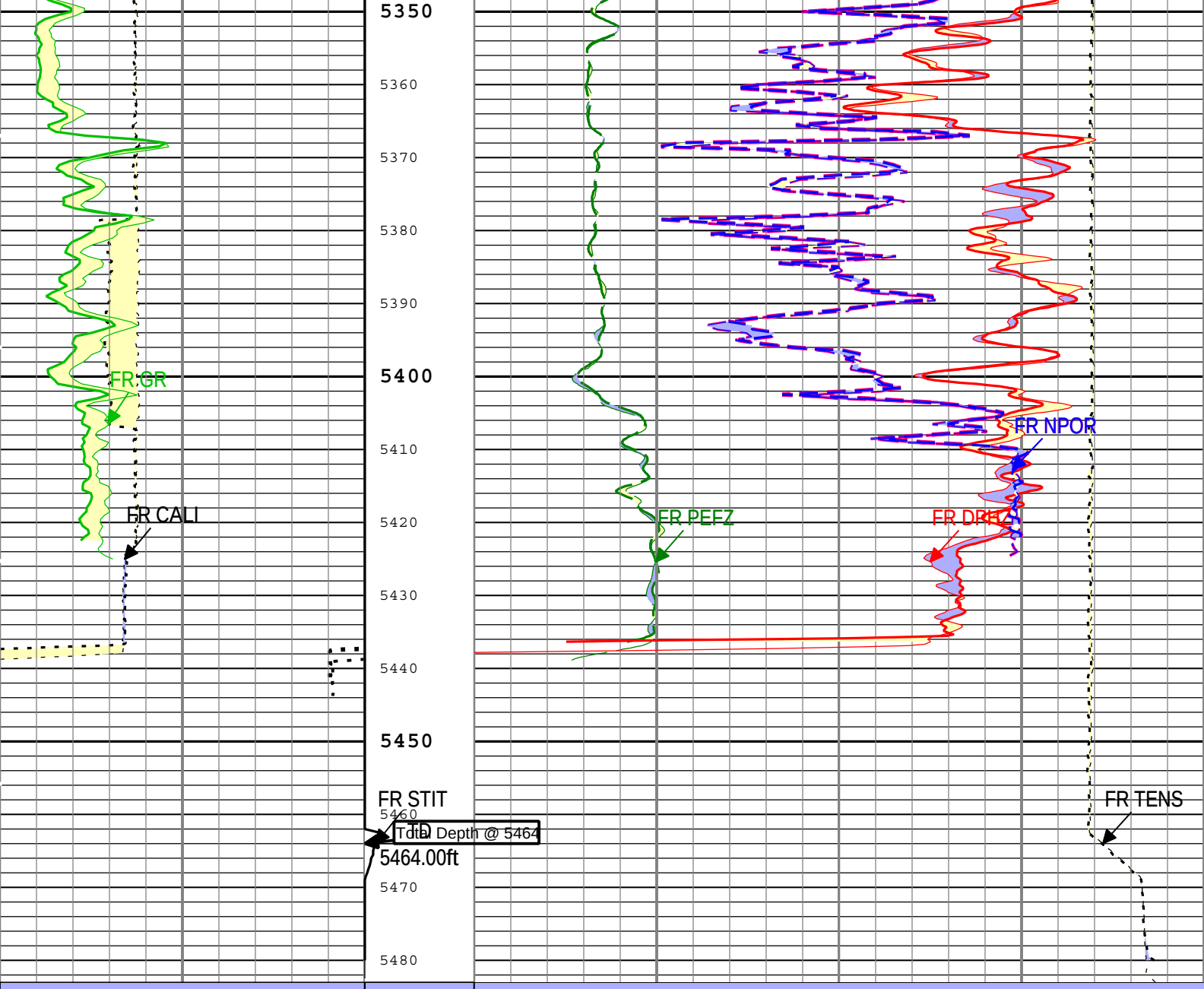
GR
CALI
STIT
PEFZ
DPHZ
NPOR
TENS



Main To Repeat

Repeat To Main

Caliper (CALI) HDRS-H

4 in 14

Main To Repeat

Repeat To Main

Gamma Ray (GR) HGNS-H

200 gAPI 400

Main To Repeat

Repeat To Main

Gamma Ray (GR) HGNS-H

0 gAPI 200

Main To Repeat

Repeat To Main

Stuck Tool Indicator, Total (STIT)

0 ft 50

Main To Repeat

Repeat To Main

Enhanced Thermal Neutron Porosity in Selected Lithology (NPOR) HGNS-H

-0.1 ft3/ft3 -0.5

Main To Repeat

Repeat To Main

Standard Resolution Density Porosity (DPHZ) HDRS-H

0.3 ft3/ft3 -0.1

Main To Repeat

Repeat To Main

Enhanced Thermal Neutron Porosity in Selected Lithology (NPOR) HGNS-H

0.3 m3/m3 -0.1

Main To Repeat

Main To Repeat

Repeat To Main

Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H

0 10

Repeat To Main

Cable Tension (TENS)

10000 lbf 0

TIME_1900 - Time Marked every 60.00 (s)

Description: HGNS standard resolution porosities for Platform Express Format: EMD 5in Porosity RA Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Nov-2012 20:00:25

Run 1

5" Density

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
DepthCorrection	DepthCorrection	3.1.9755.0

Tool Elements	Description	Software Version	Firmware Version
HRCC-H	HILT High-Resolution Control Cartridge, 150 degC	3.1.9755.0	2.0
HGNS-H	HILT Gamma-Ray and Neutron Sonde, 150 degC	3.1.9755.0	2.0
HRGD-H	HILT Resistivity Gamma-Ray Density Device, 150 degC	3.1.9755.0	3.0

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
Run 1	Log[3]:Up	Up	349.28 ft	5480.21 ft	03-Nov-2012 5:57:47 PM	03-Nov-2012 7:44:15 PM	0.00 ft	

All depths are referenced to toolstring zero

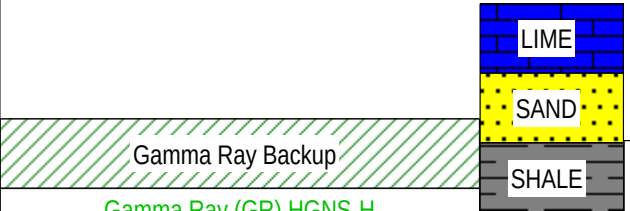
Log

Run 1: Log[3]:Up

Description: HGNS standard resolution porosities for Platform Express Format: Log (EMD 5in Density) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Nov-2012 20:00:26

Channel	Source	Sampling
CALI	HDRS-H:HRCC-H:HRCC-H	1in
GR	HGNS-H:HGNS-H:HGNS-H	6in
HDRA	HDRS-H:HRMS-H:HRGD-H	2in
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
RHOZ	HDRS-H:HRMS-H:HRGD-H	2in
SMIN	HDRS-H:HRMS-H:HRGD-H	2in
SMNO	HDRS-H:HRMS-H:HRGD-H	2in
STIT	DepthCorrection	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

TIME_1900 - Time Marked every 60.00 (s)



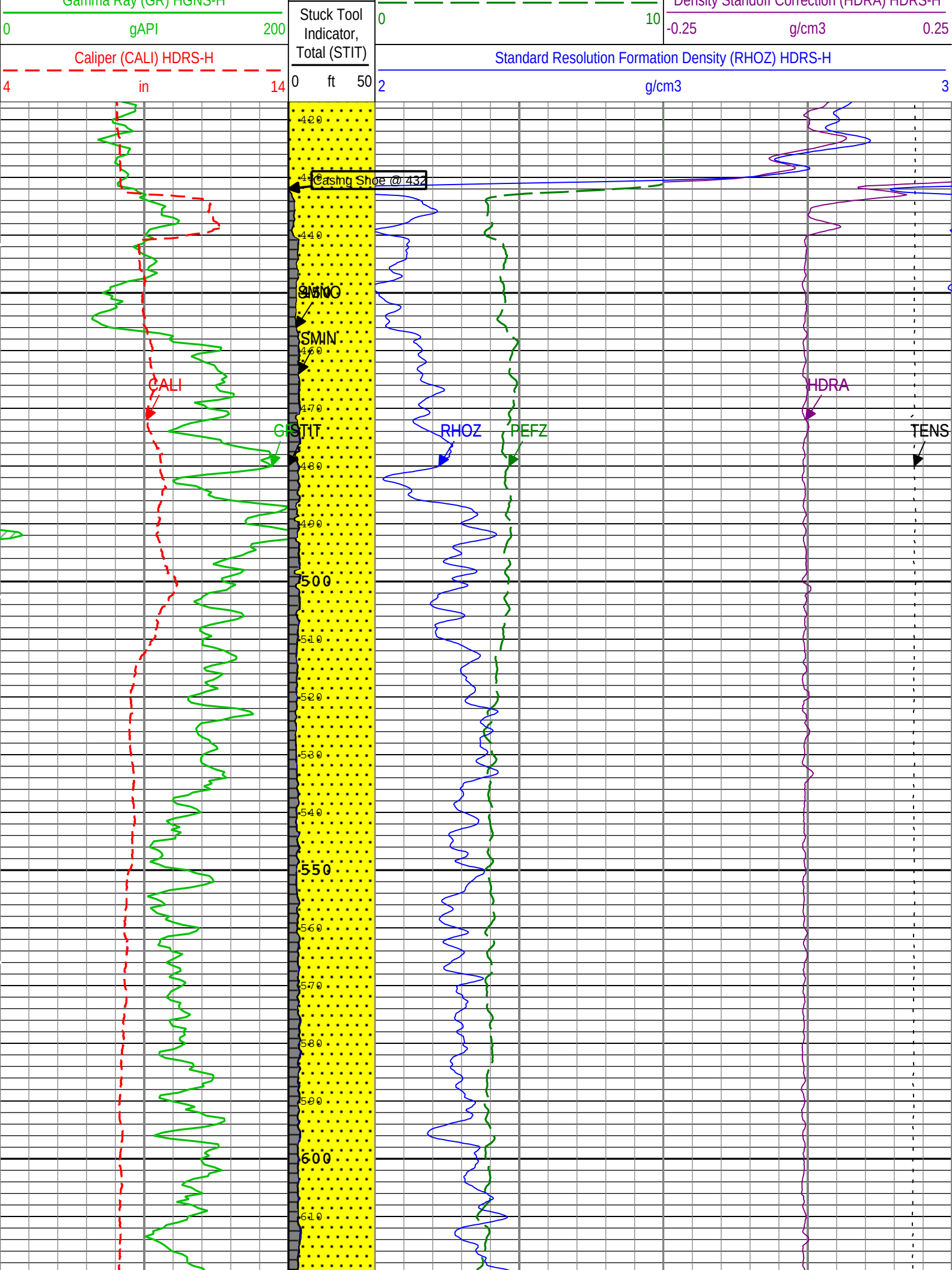
Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H

Cable Tension (TENS)

10000 lbf 0

Gamma Ray (GR) HGNS-H

Density Standoff Correction (HDRA) HDRS-H


Gamma Ray (GR) HGNS-H
0
gAPI
200
Caliper (CALI) HDRS-H
4
in
14
Stuck Tool Indicator, Total (STIT)
0
ft
50
0
10
Density Standoff Correction (HDRA) HDRS-H
-0.25
g/cm3
0.25
Standard Resolution Formation Density (RHOZ) HDRS-H
2
g/cm3
3
Casing Shoe @ 432
SMIN
CALI
HDRA
RHOZ
PEFZ
TENS
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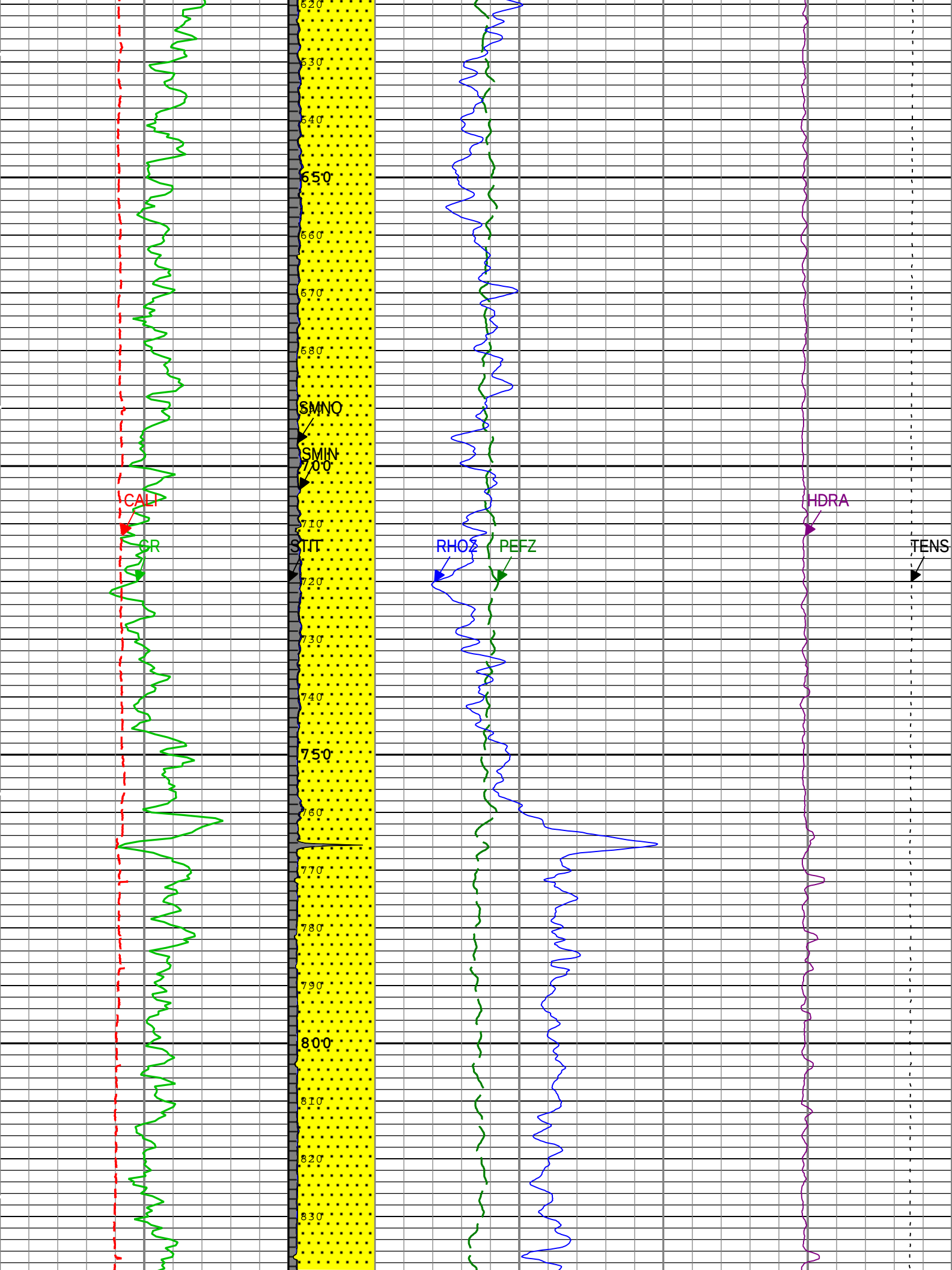
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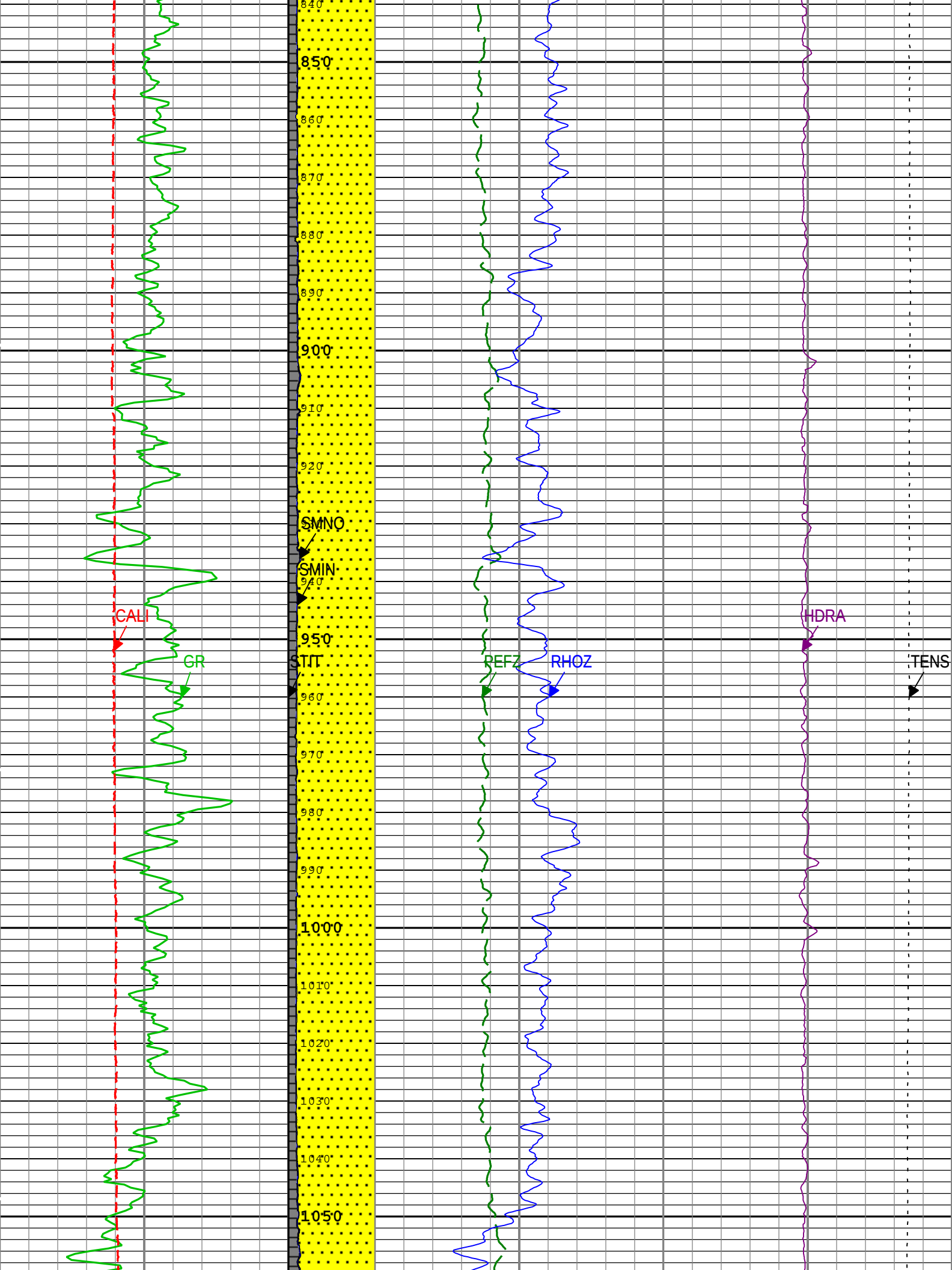
PEFZ
HDRA
TENS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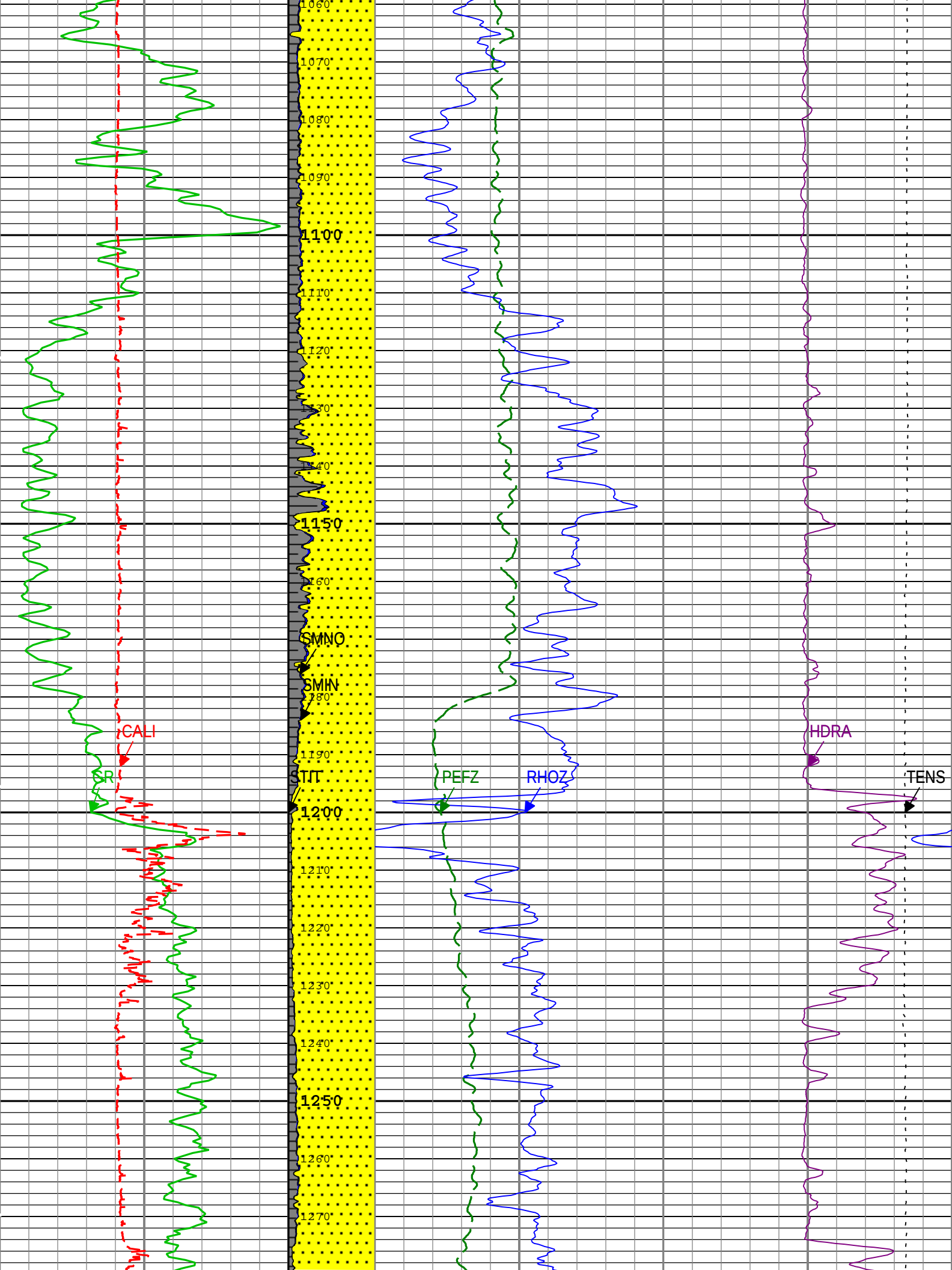
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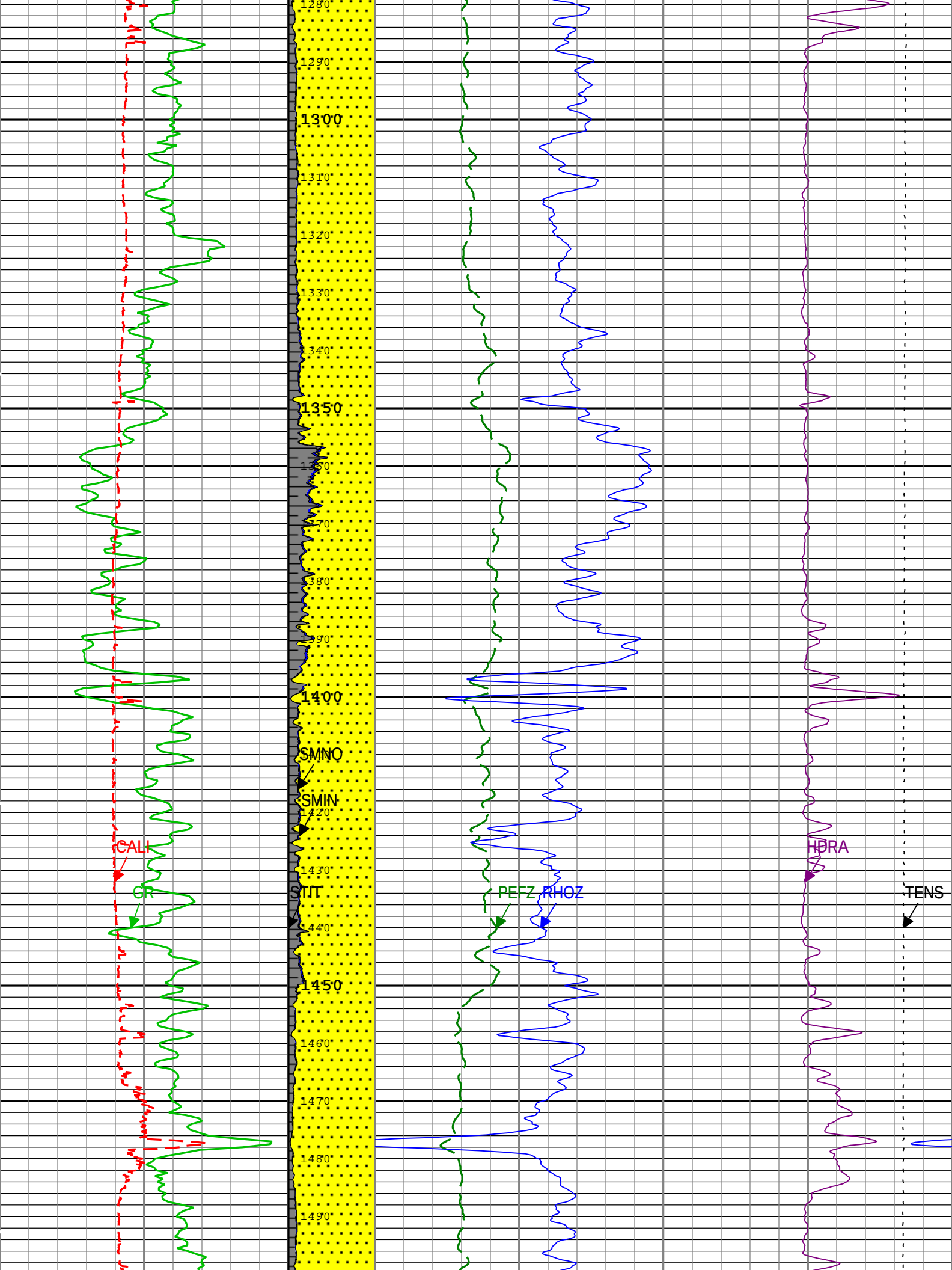
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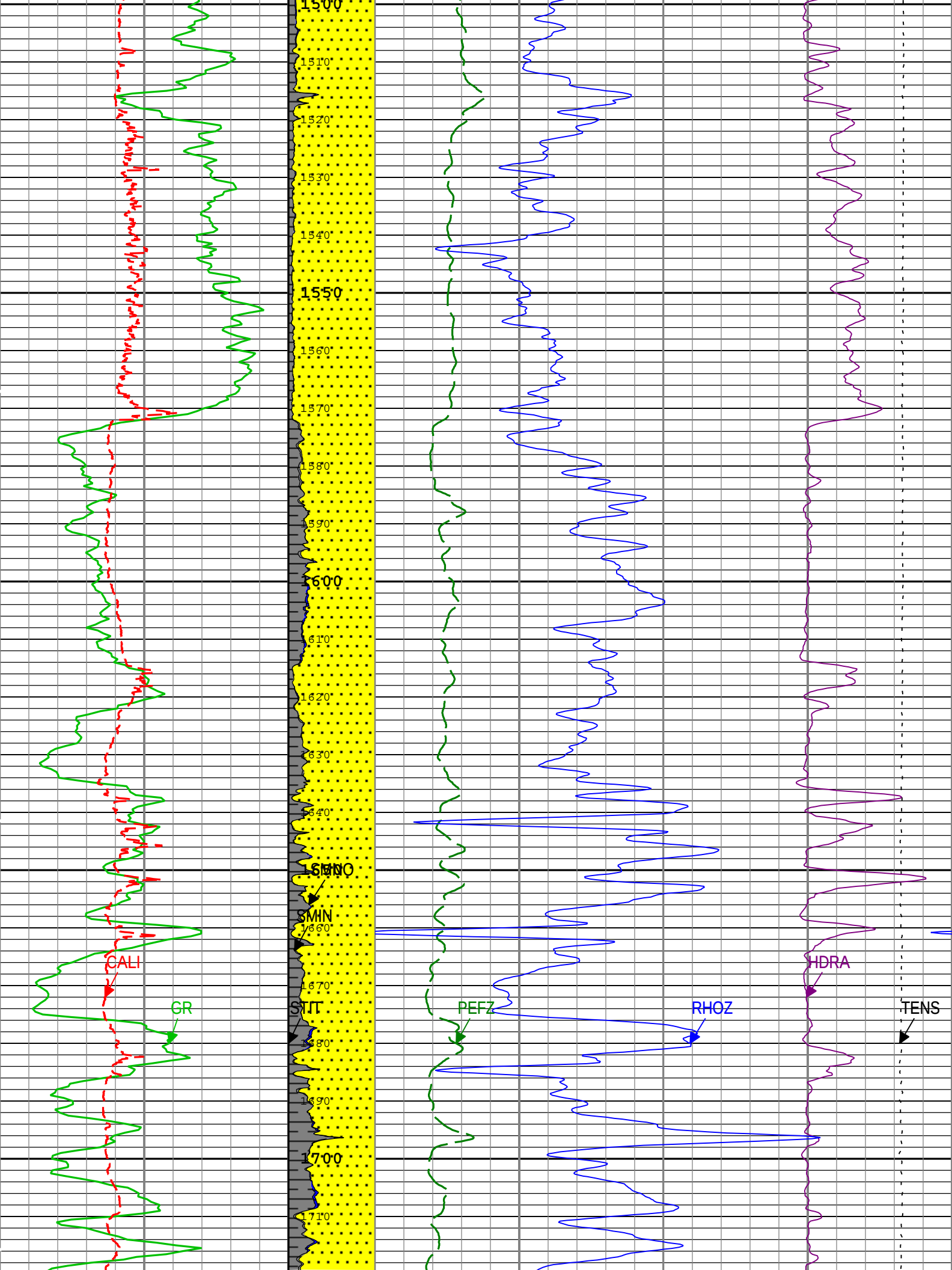
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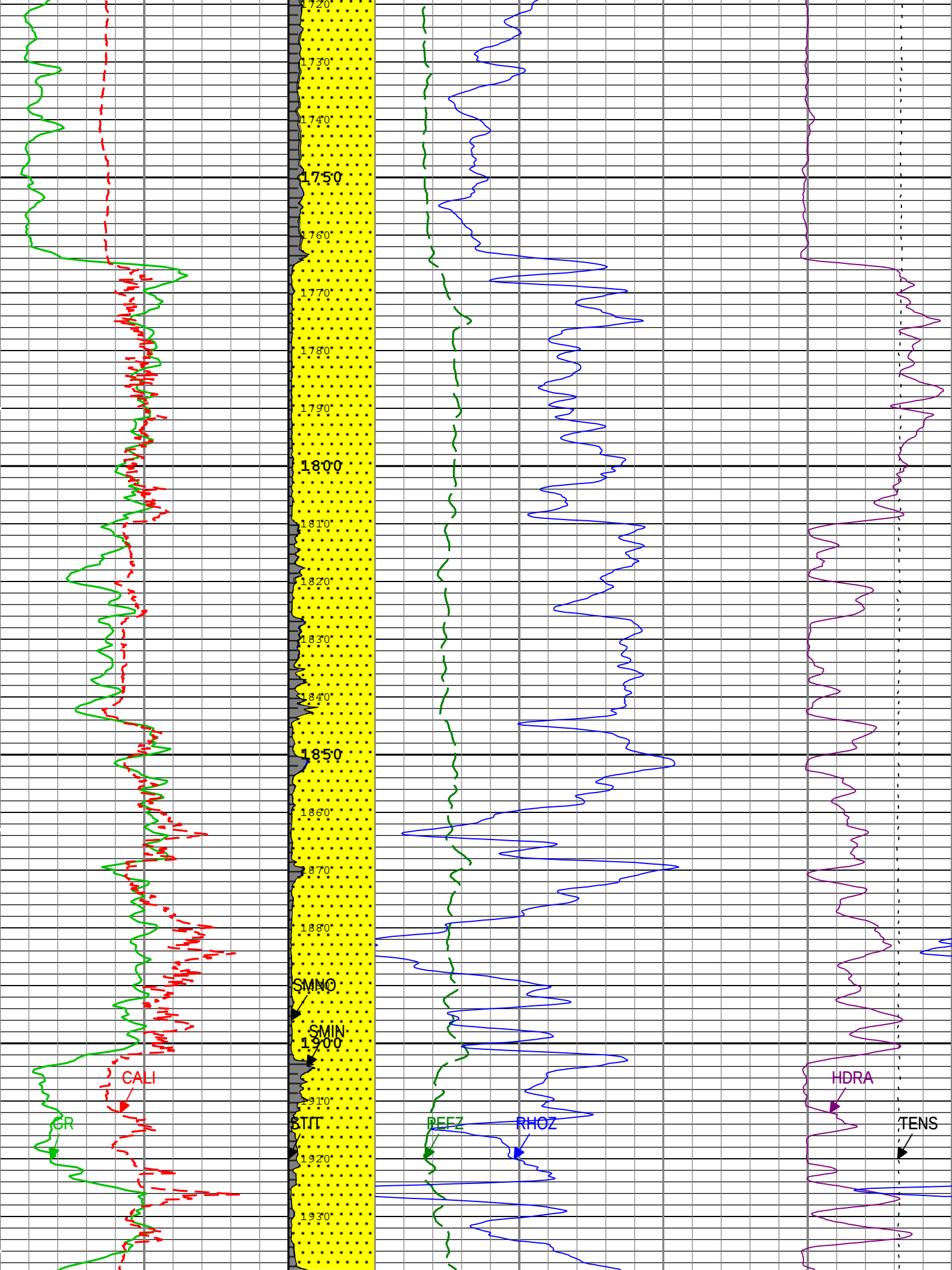
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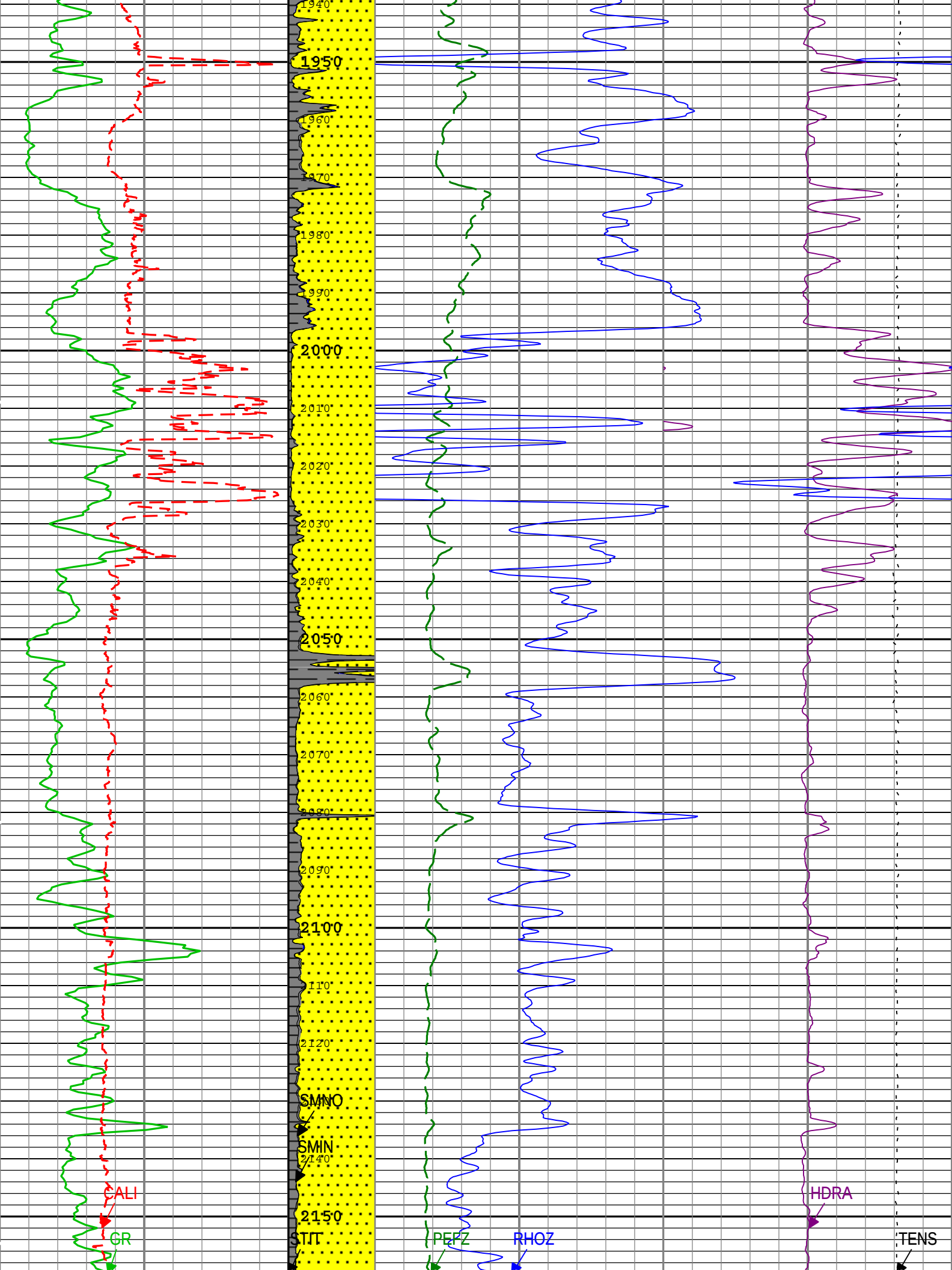
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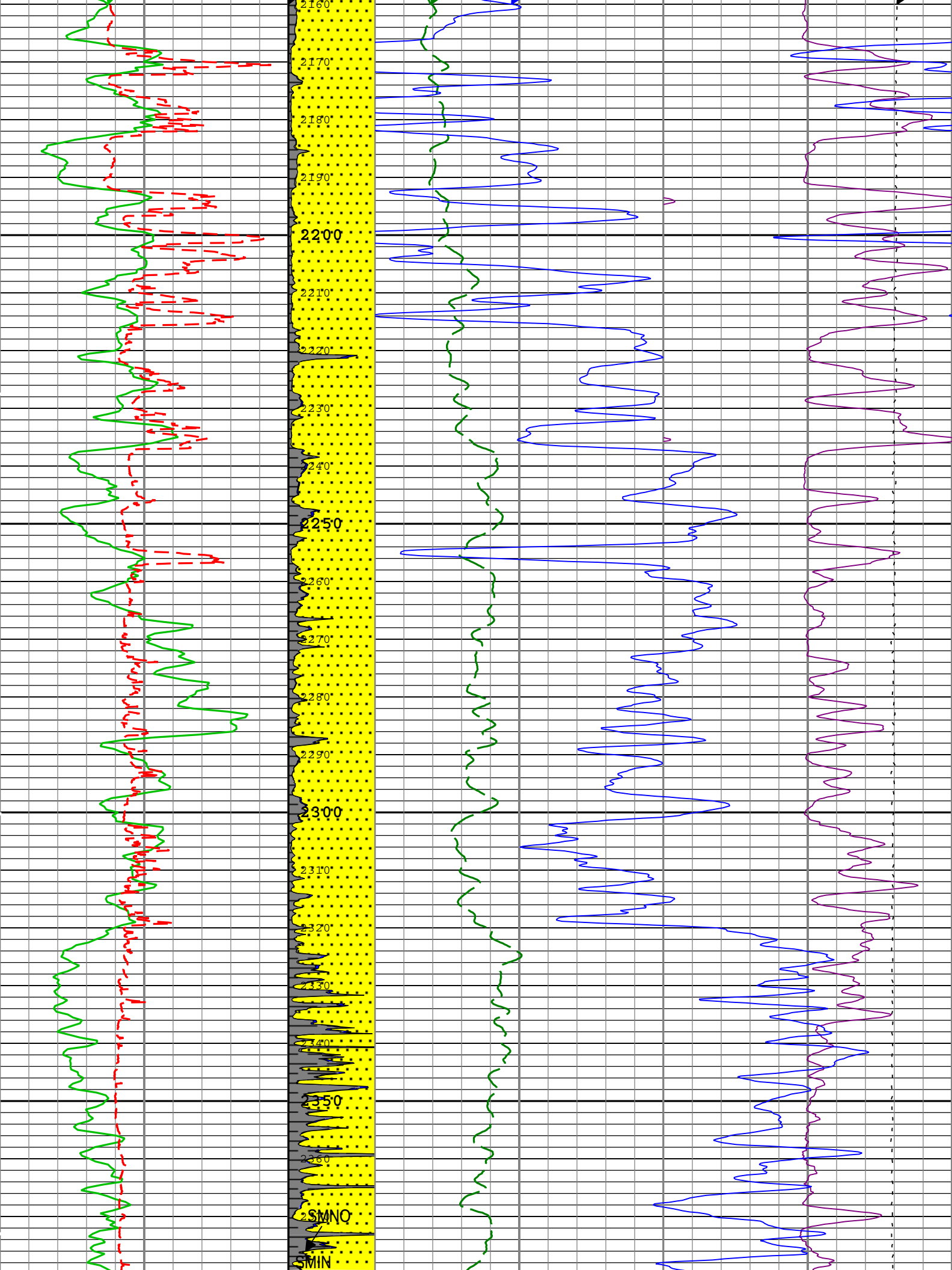
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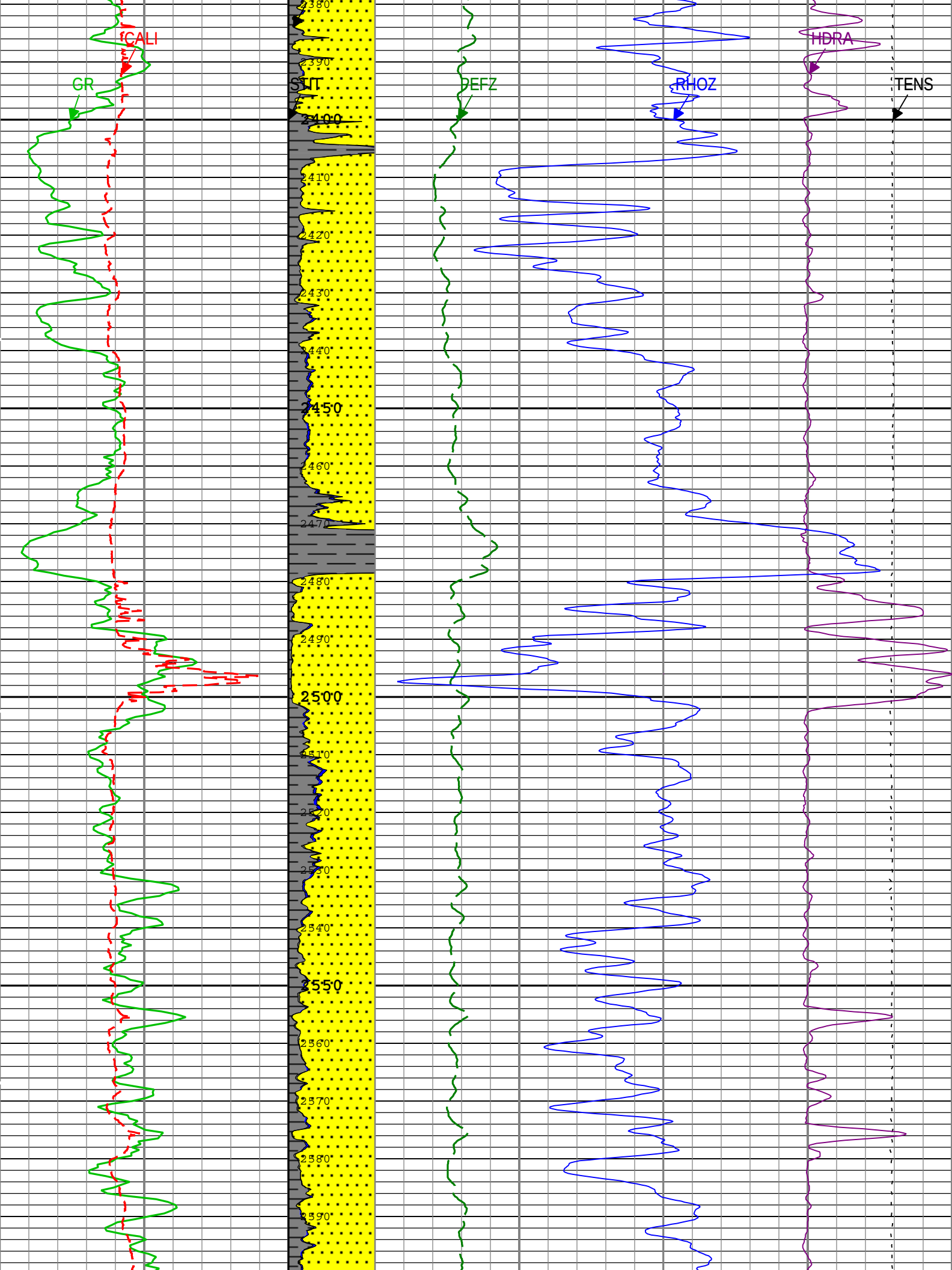
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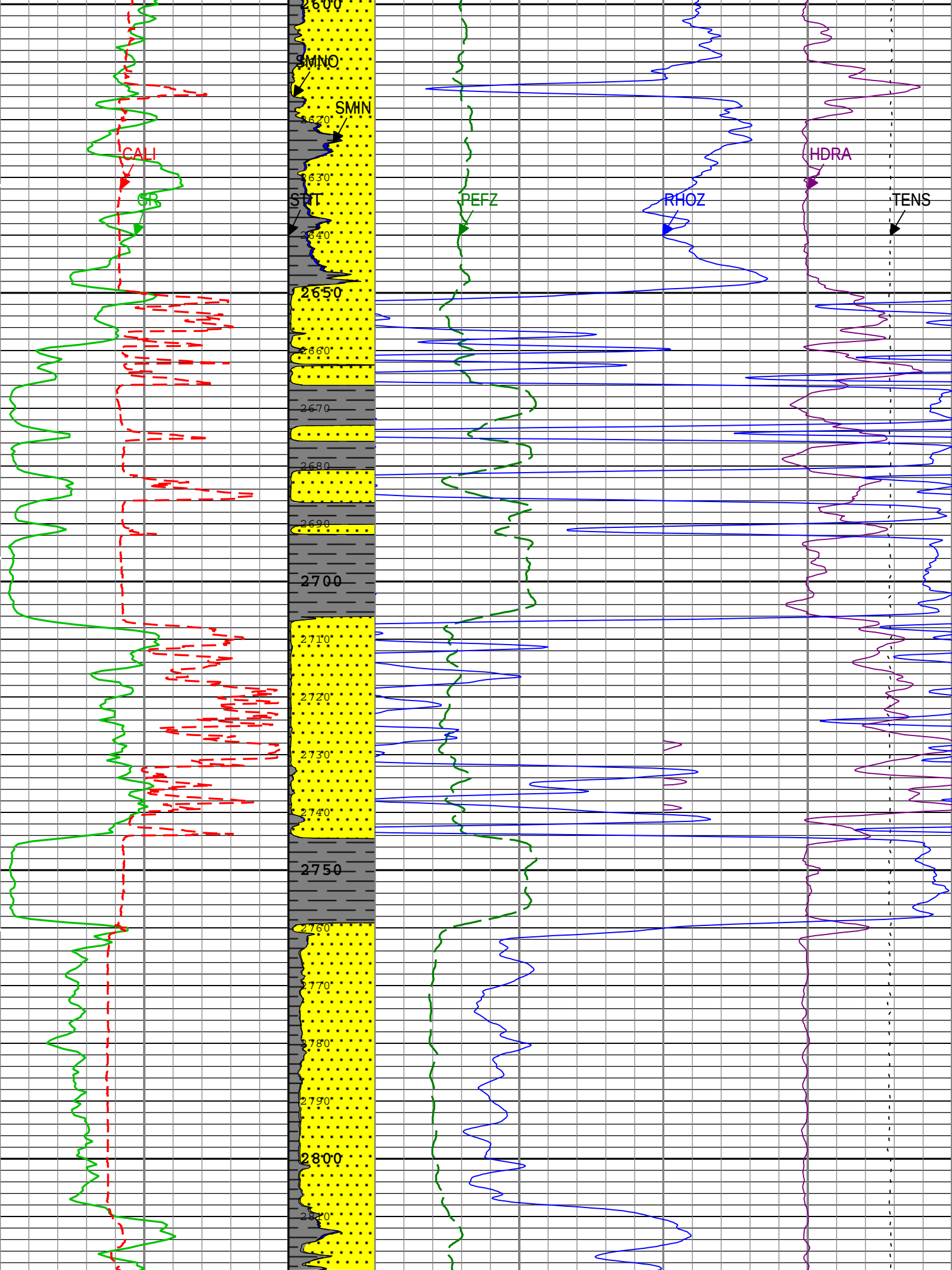
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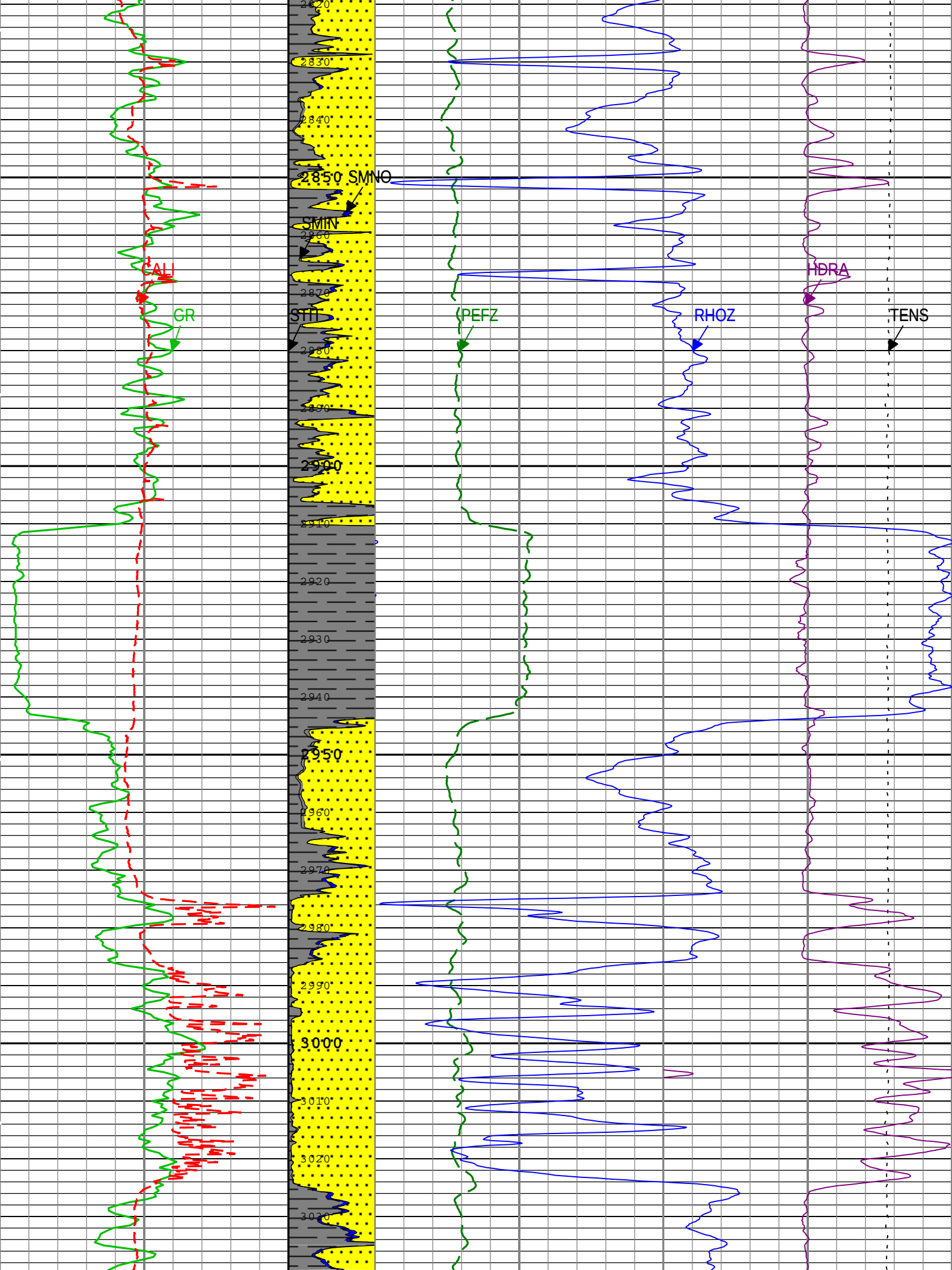
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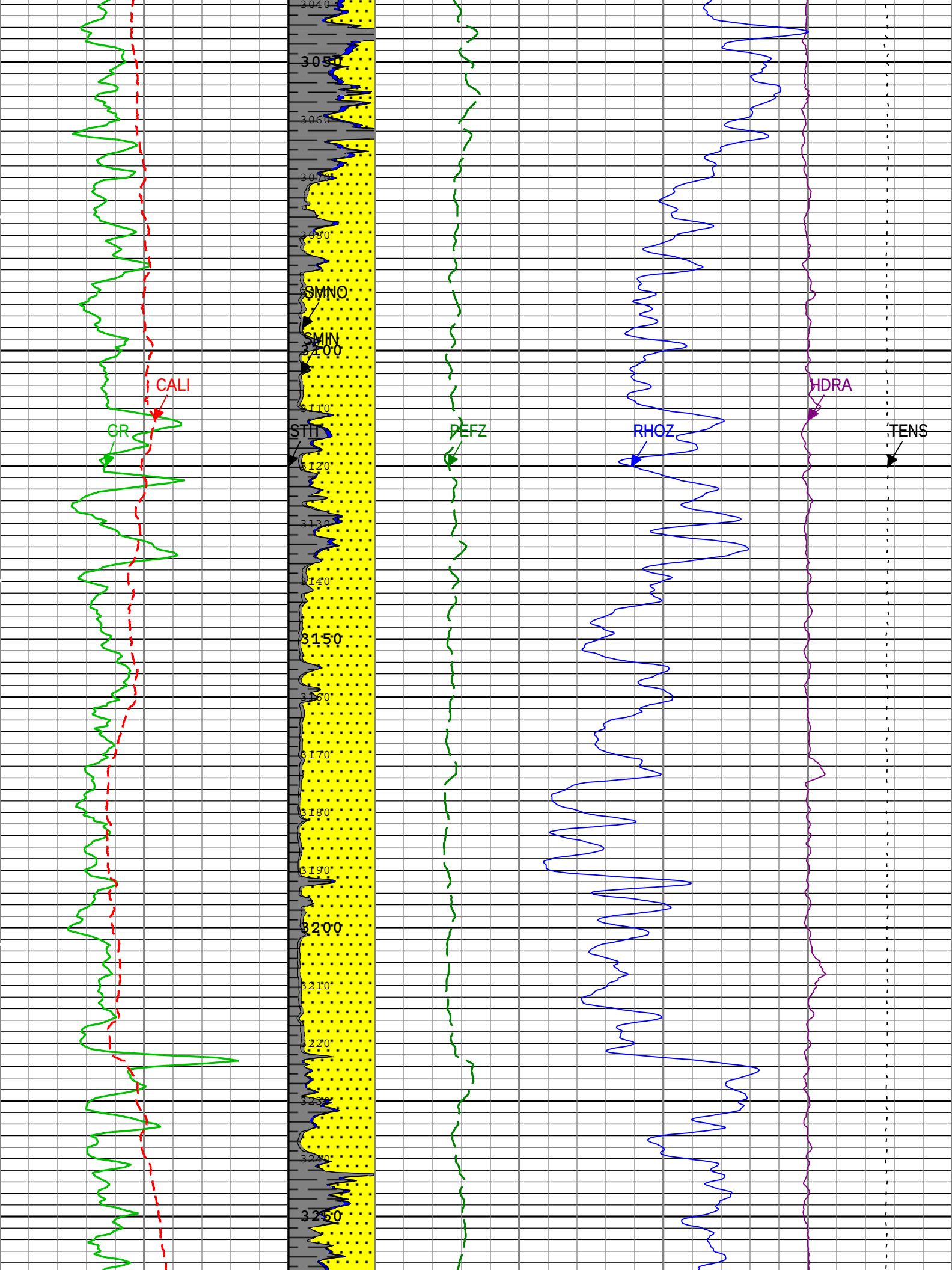
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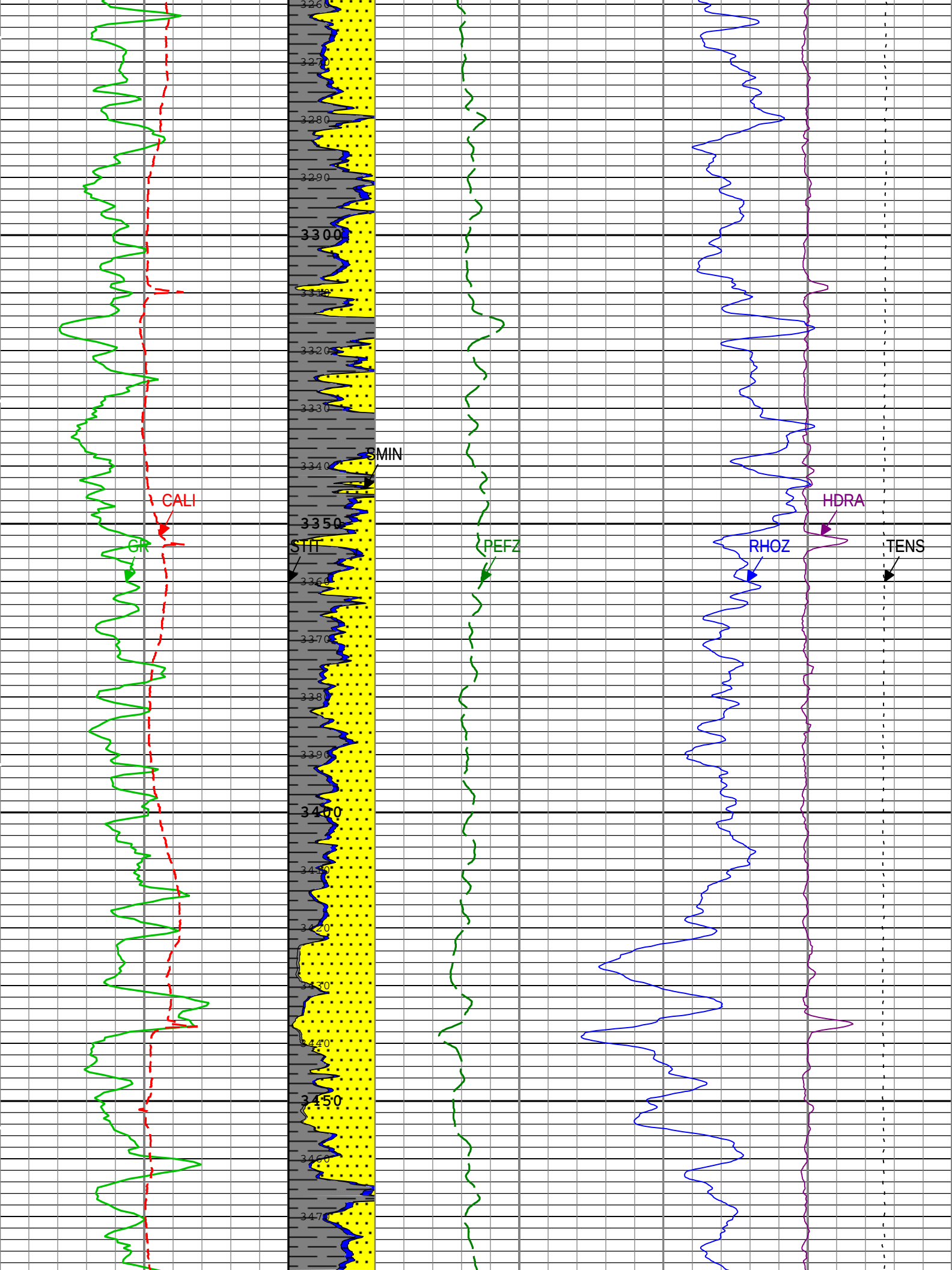
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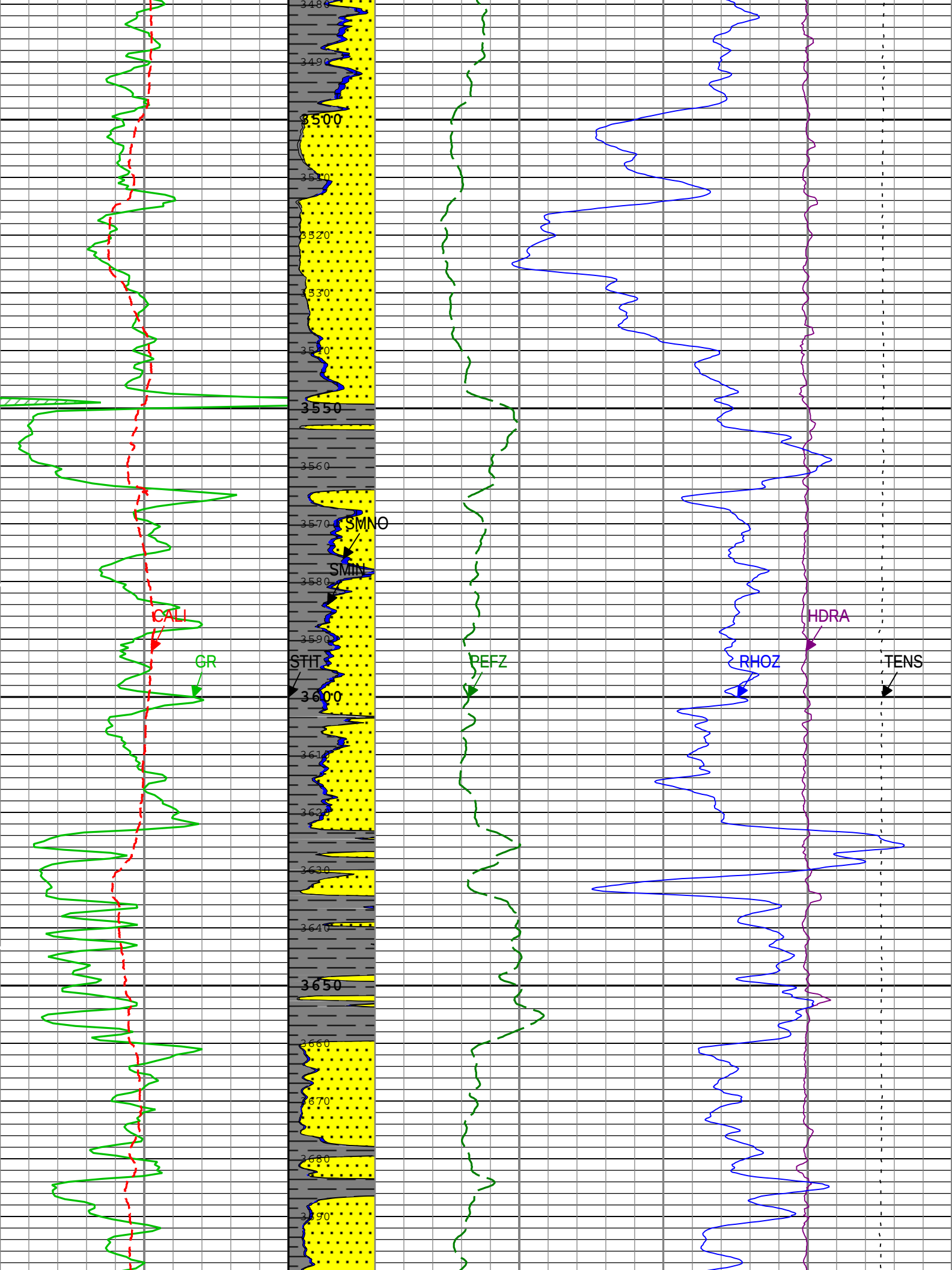
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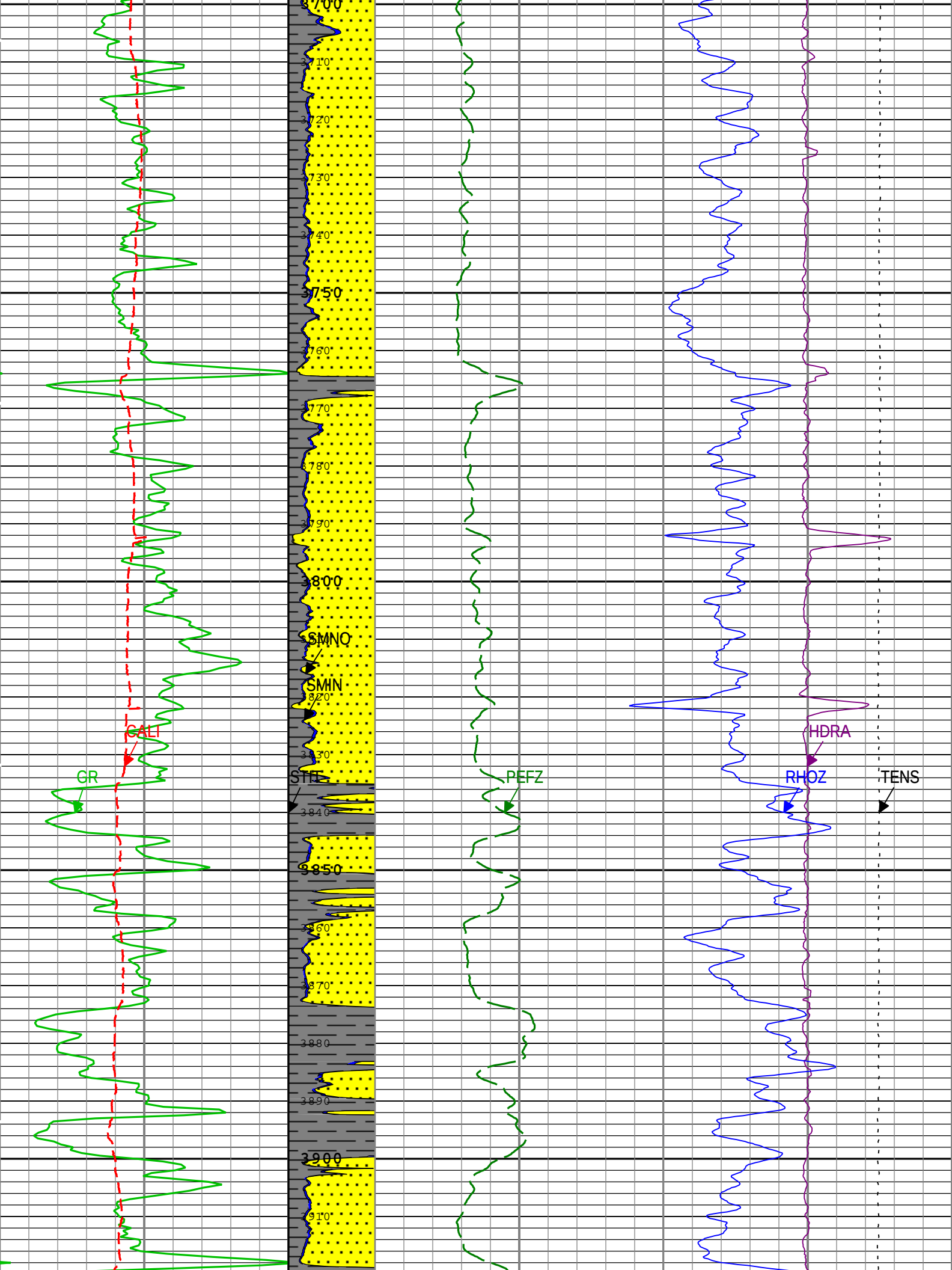
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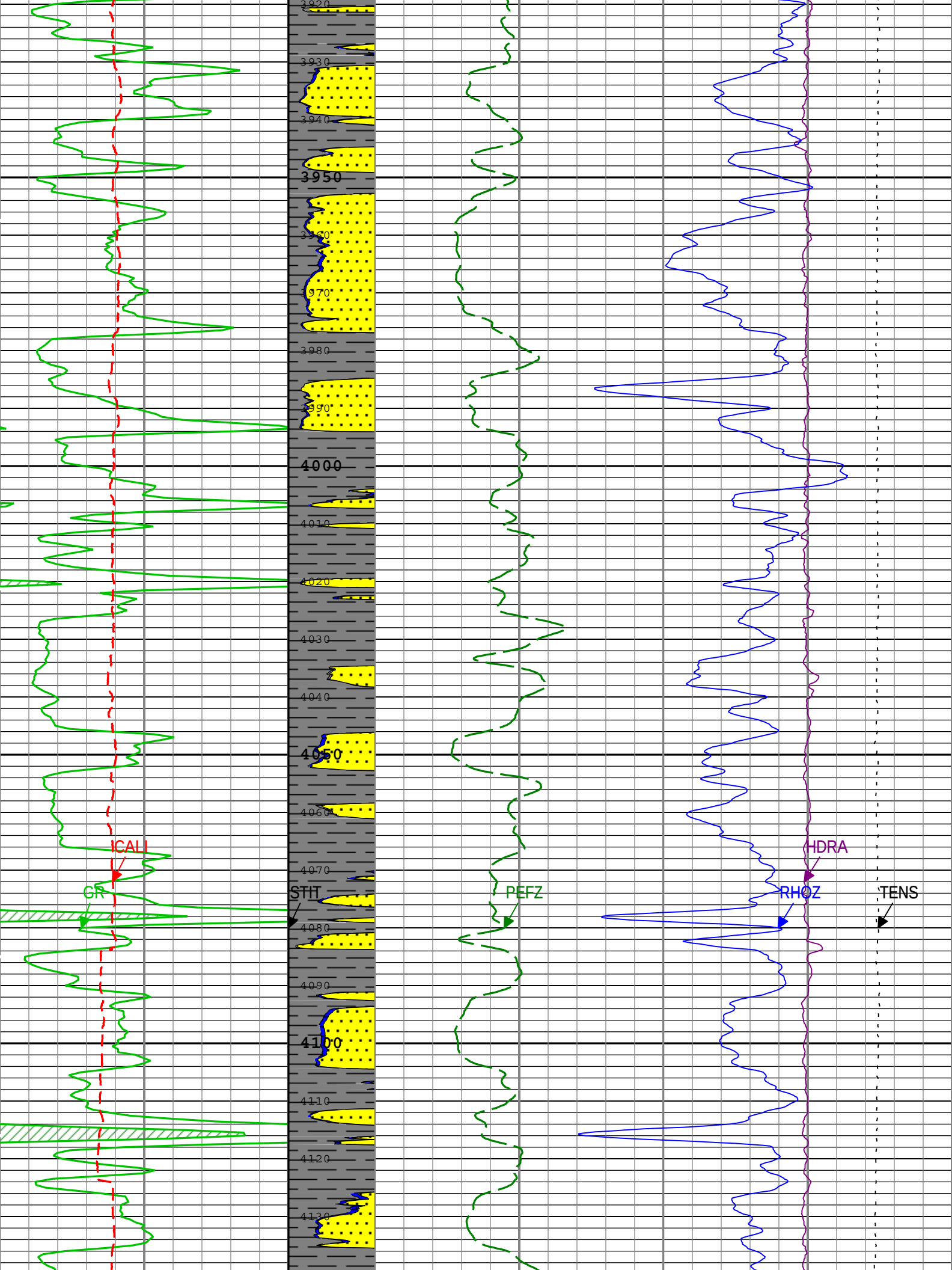
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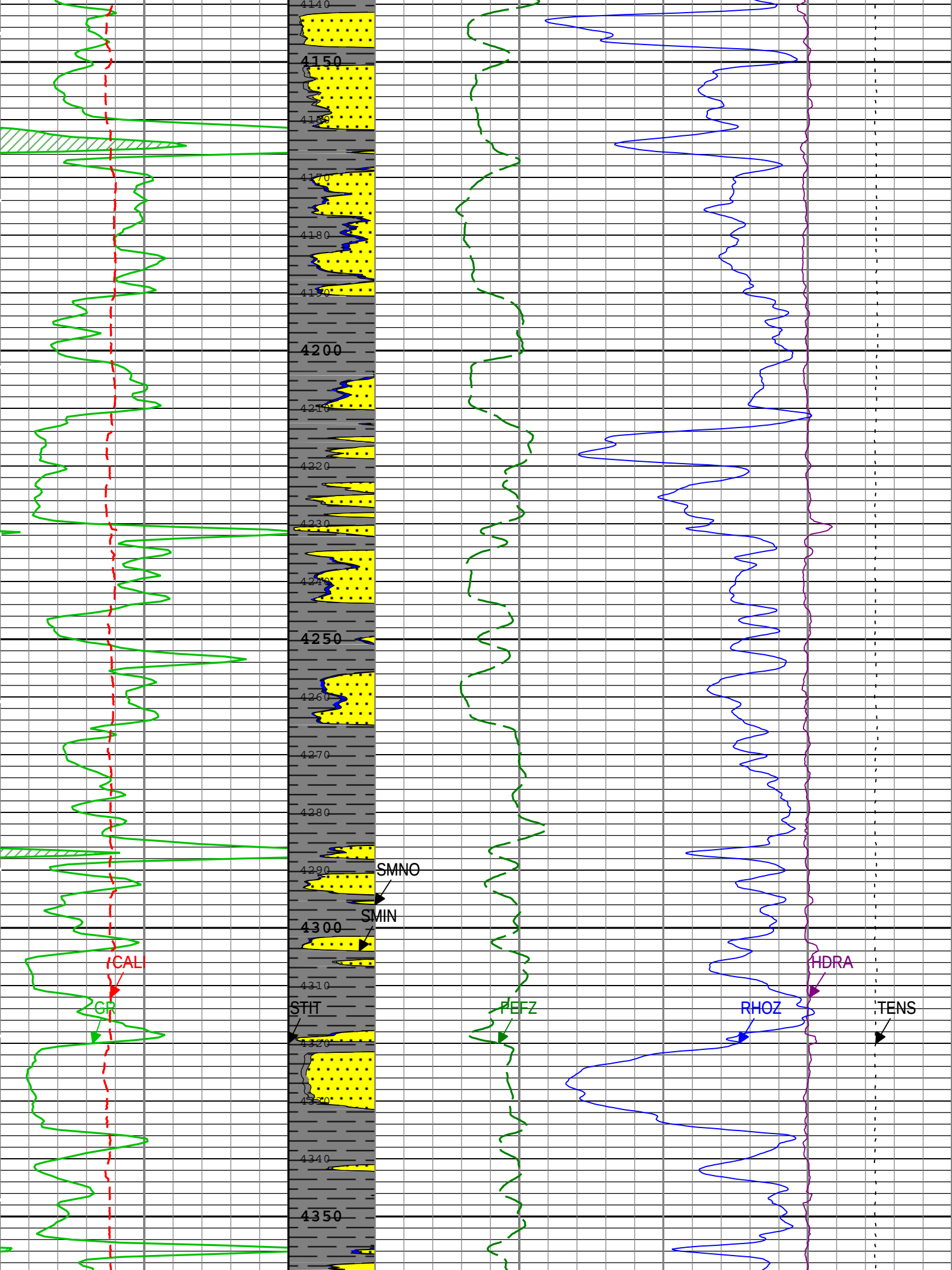
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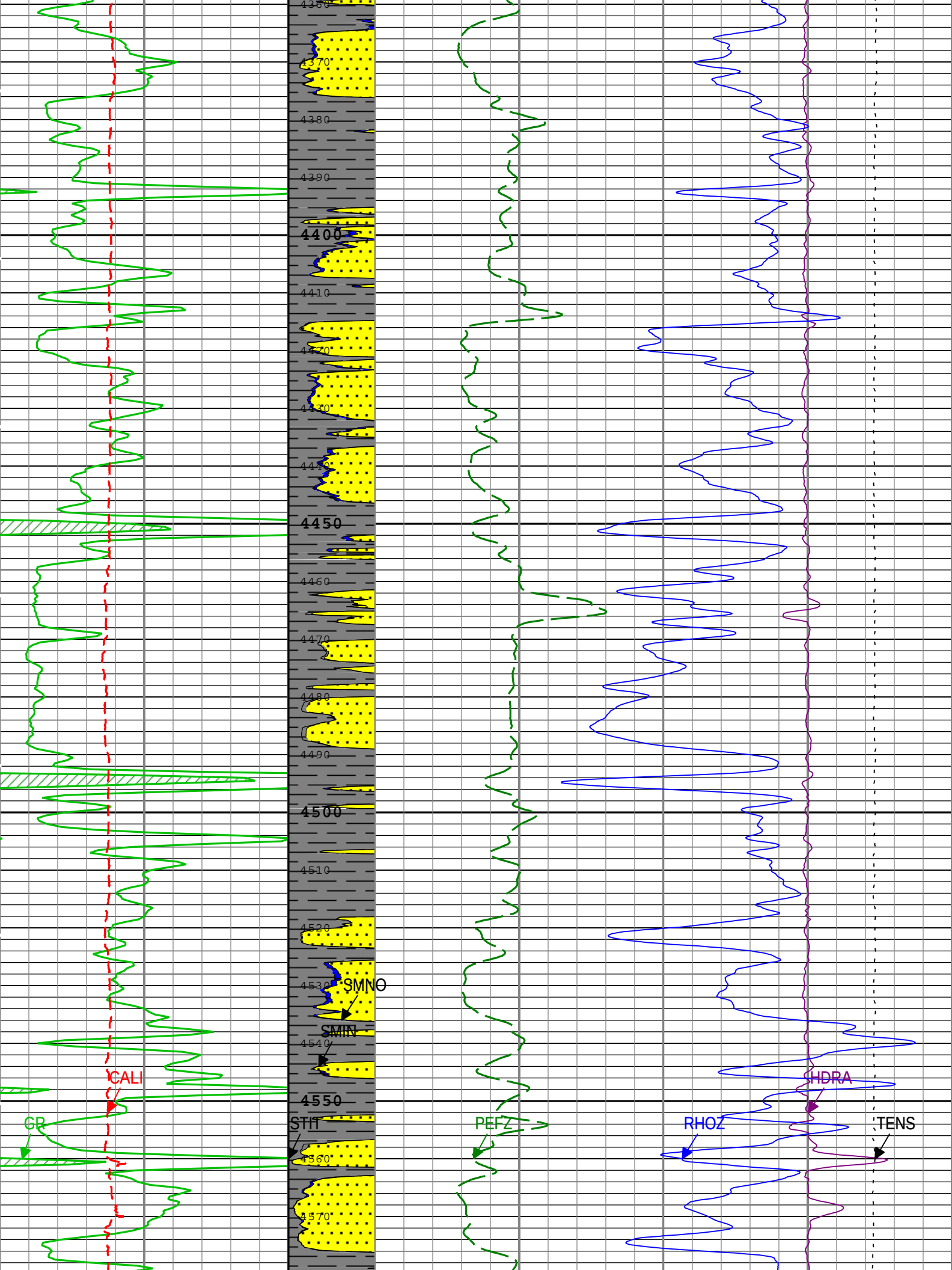
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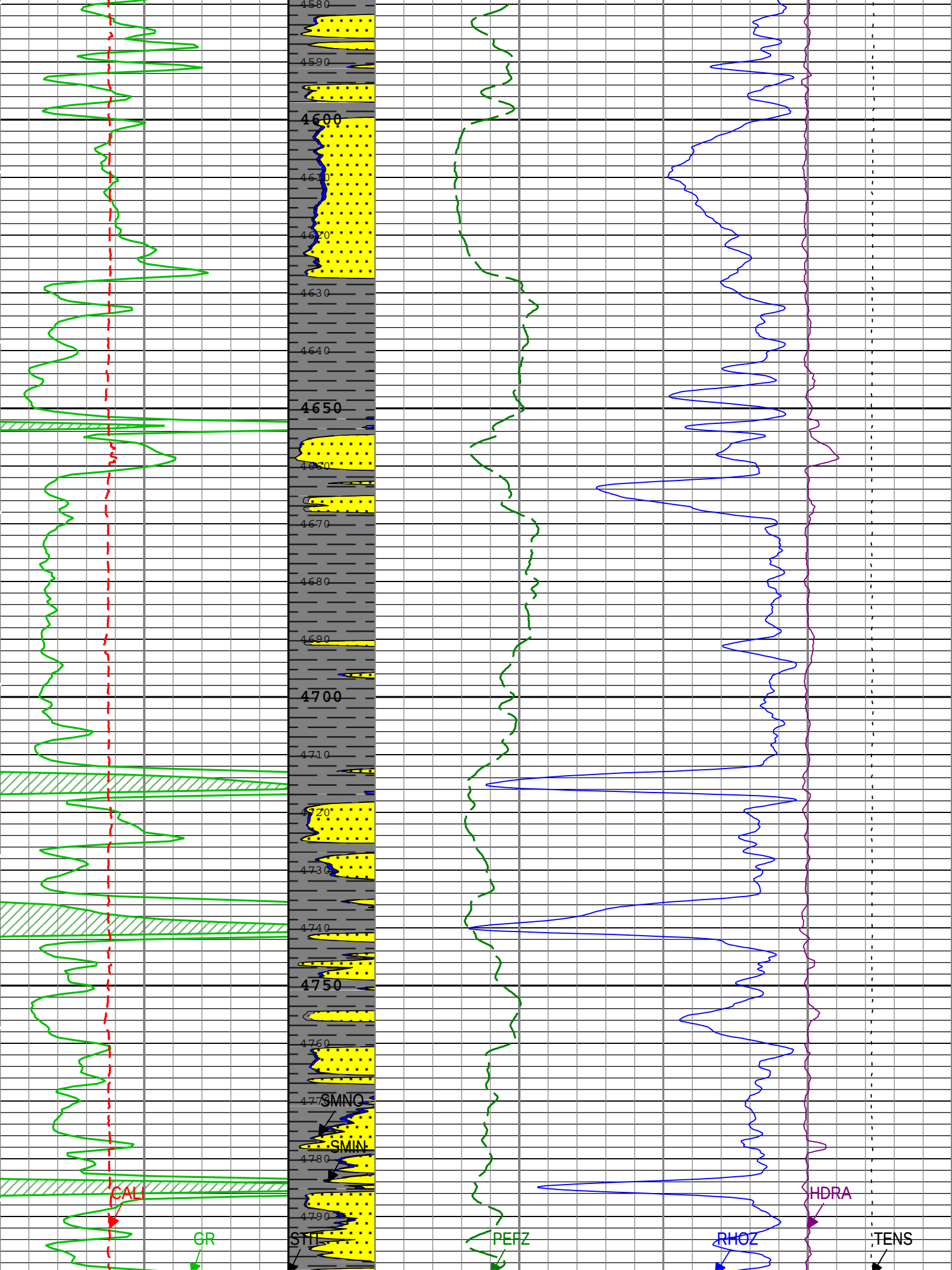
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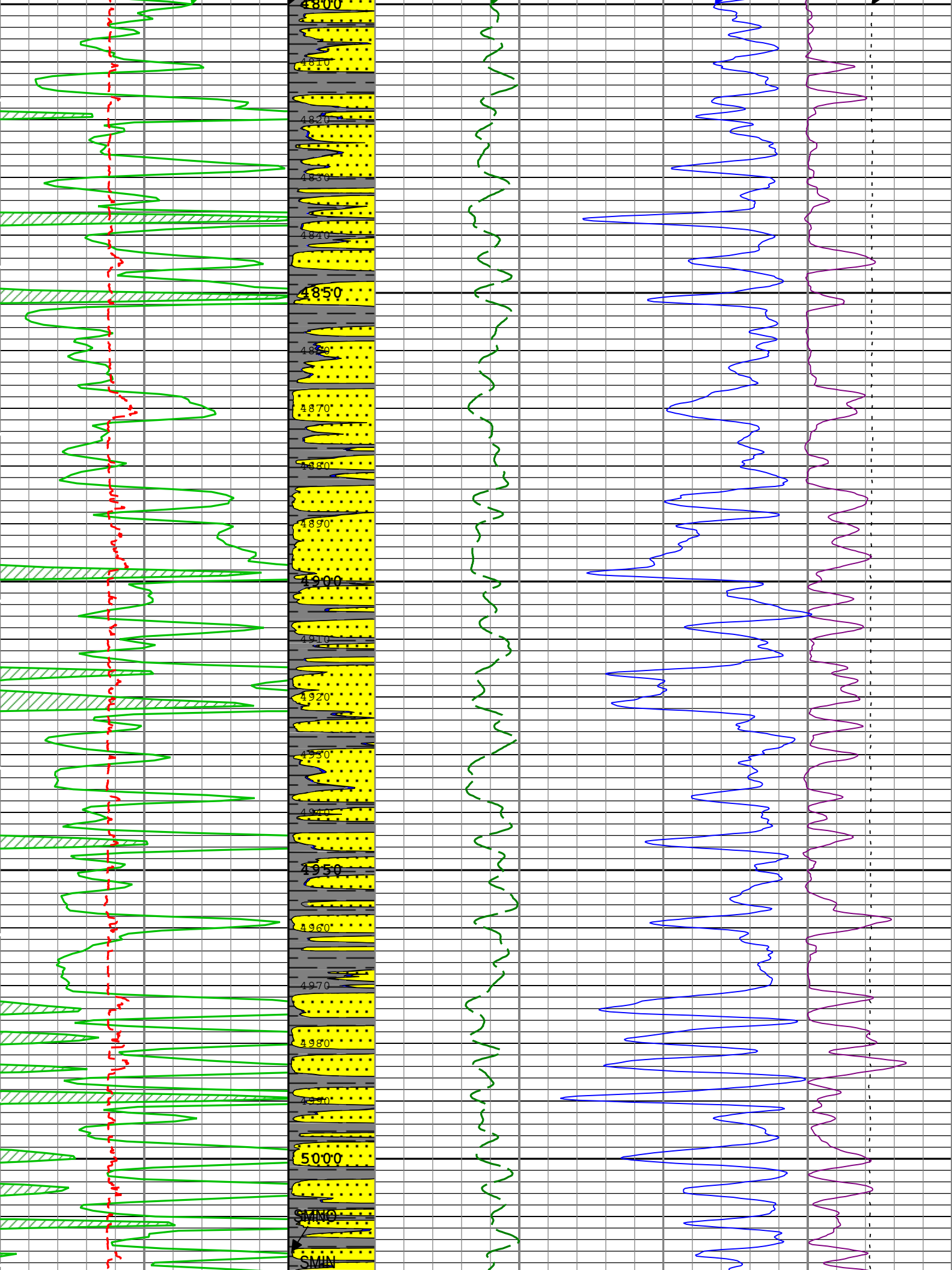
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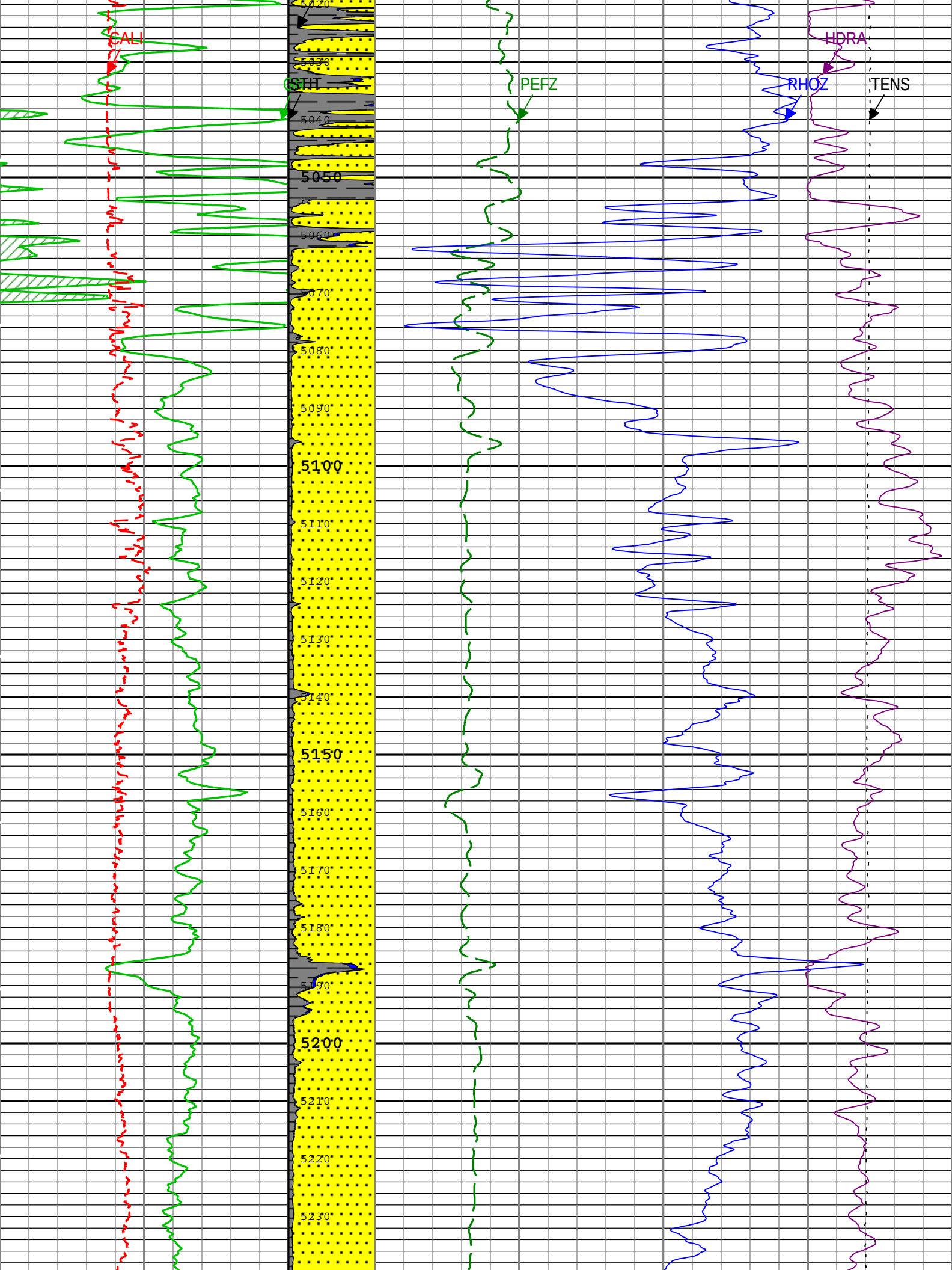
CALI
GSTH
PEFZ
RHOZ
HDRA
TENS
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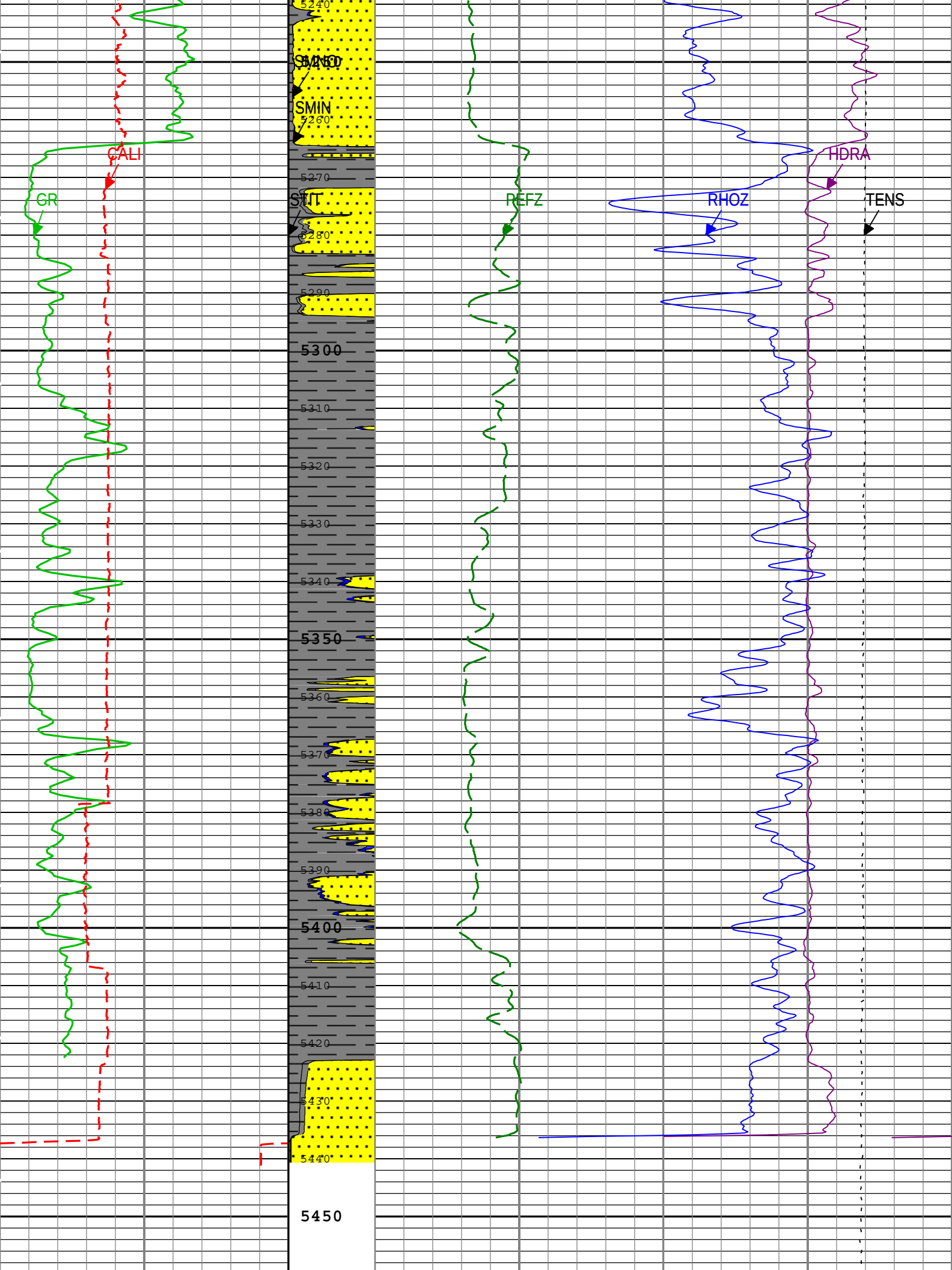
5150
5200


GR
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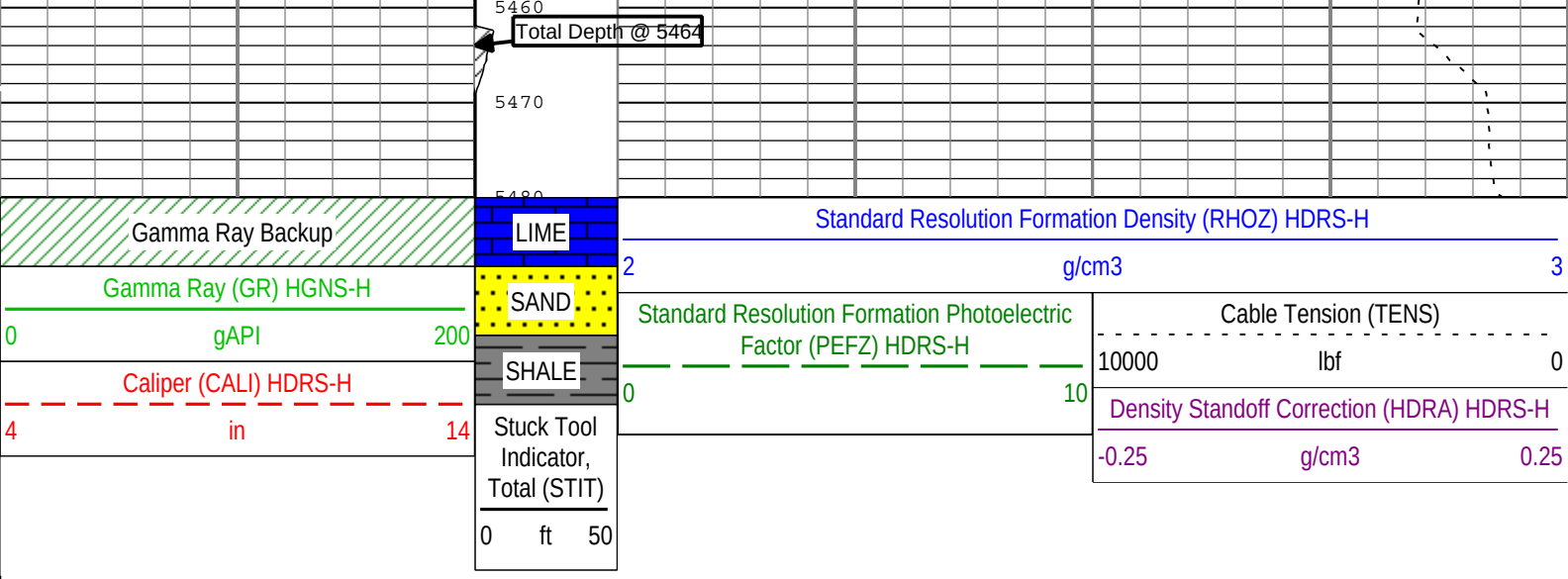


TIME_1900 - Time Marked every 60.00 (s)

Description: HGNS standard resolution porosities for Platform Express Format: Log (EMD 5in Density) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Nov-2012 20:00:26

Channel Processing 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-H	0	in
CBLO	Casing Bottom (Logger)	WLSESSION	432	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
DFD	Drilling Fluid Density	Borehole	9.3	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DHC	Density Hole Correction	HDRS-H	Bit Size	
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	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	AMF	
NPRM	HRDD Nuclear Processing Mode	HDRS-H	High Resolution	
SOCO	Standoff Correction Option	HGNS-H	Yes	
TD	Total Measured Depth	Borehole	5464	ft

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	0	417	432
BS	7.875	432	5480

All depth are actual.

Tool Control Parameters

Parameter	Description	Tool	Value	Unit
HRGD_BRD_TYPE	HRGD Board Type	HDRS-H	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h

Calibration Report

AIT-H (Array Induction Tool - H) Calibration - Run 1

Primary Equipment :

Array Induction Sonde - H	AHIS	392

Auxiliary Equipment :

AITH Rm/SP Bottom Nose	AHRM	392

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM): 16:00:26 25-Oct-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Test Loop Gain - 0		Master	1.000	0.950	1.011	1.050
Test Loop Phase - 0	deg	Master	0	-3.000	0.278	3.000
Test Loop Gain - 1		Master	1.000	0.950	1.011	1.050
Test Loop Phase - 1	deg	Master	0	-3.000	0.501	3.000
Test Loop Gain - 2		Master	1.000	0.950	1.020	1.050
Test Loop Phase - 2	deg	Master	0	-3.000	0.020	3.000
Test Loop Gain - 3		Master	1.000	0.950	1.010	1.050
Test Loop Phase - 3	deg	Master	0	-3.000	0.015	3.000
Test Loop Gain - 4		Master	1.000	0.950	0.997	1.050
Test Loop Phase - 4	deg	Master	0	-3.000	-0.018	3.000
Test Loop Gain - 5		Master	1.000	0.950	0.990	1.050
Test Loop Phase - 5	deg	Master	0	-3.000	-0.170	3.000
Test Loop Gain - 6		Master	1.000	0.950	1.000	1.050
Test Loop Phase - 6	deg	Master	0	-3.000	0.148	3.000
Test Loop Gain - 7		Master	1.000	0.950	0.995	1.050
Test Loop Phase - 7	deg	Master	0	-3.000	-0.296	3.000

AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM): 16:00:26 25-Oct-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-81.800	119.000
Sonde Error Correction Quad - 0		Master	-----	-2250.000	-332.860	2250.000
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	188.030	204.000
Sonde Error Correction Quad - 1		Master	-----	-625.000	-104.997	625.000
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	107.809	156.000
Sonde Error Correction Quad - 2		Master	-----	-350.000	-112.075	350.000
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	64.783	89.000
Sonde Error Correction Quad - 3		Master	-----	-250.000	37.536	250.000
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	25.356	35.000
Sonde Error Correction Quad - 4		Master	-----	-63.000	-42.081	63.000
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	13.811	24.000
Sonde Error Correction Quad - 5		Master	-----	-50.000	4.249	50.000
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	10.072	15.000
Sonde Error Correction Quad - 6		Master	-----	-30.000	-4.592	30.000
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-0.281	5.000
Sonde Error Correction Quad - 7		Master	-----	-30.000	-5.939	30.000

AIT Mud Calibration - Mud Calibration Gain

Master (EEPROM): 16:00:26 25-Oct-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Coarse Gain		Master	1.000	0.800	1.099	1.200
Fine Gain		Master	1.000	0.800	1.100	1.200

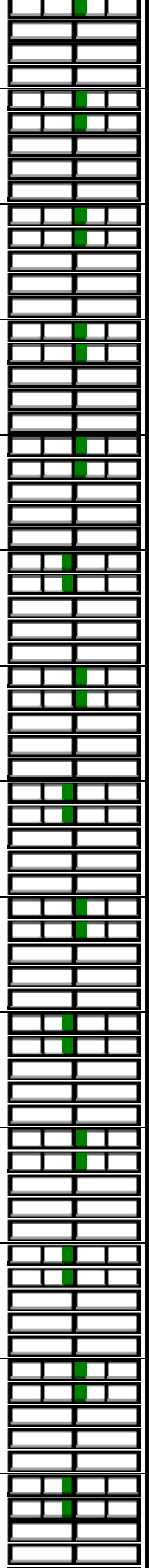
AIT Electronics Check - Thru Calibration Check

Master (EEPROM): 16:00:26 25-Oct-2012 Before (Measured): 16:25:44 01-Nov-2012 After:

Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Thru Cal Mag - 0	V	Master	-----	0.363	0.618	0.847
		Before	-----	0.363	0.618	0.847
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 0	deg	Master	-----	11.000	73.112	131.000
		Before	-----	11.000	73.068	131.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.044	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 1	V	Master	-----	0.762	1.263	1.778
		Before	-----	0.762	1.263	1.778
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 1	deg	Master	-----	10.000	72.006	130.000

		Before	-----	10.000	71.958	130.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.048	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 2	V	Master	-----	0.374	0.630	0.872
		Before	-----	0.374	0.630	0.872
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 2	deg	Master	-----	6.000	68.269	126.000
		Before	-----	6.000	68.220	126.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.049	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 3	V	Master	-----	0.422	0.712	0.986
		Before	-----	0.422	0.712	0.986
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 3	deg	Master	-----	5.000	67.481	125.000
		Before	-----	5.000	67.429	125.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.052	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 4	V	Master	-----	0.802	1.327	1.872
		Before	-----	0.802	1.327	1.872
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 4	deg	Master	-----	-1.000	61.213	119.000
		Before	-----	-1.000	61.154	119.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.059	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 5	V	Master	-----	1.173	1.933	2.737
		Before	-----	1.173	1.933	2.737
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 5	deg	Master	-----	-3.000	59.316	117.000
		Before	-----	-3.000	59.251	117.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.065	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 6	V	Master	-----	1.173	1.932	2.737
		Before	-----	1.173	1.932	2.737
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 6	deg	Master	-----	-3.000	59.327	117.000
		Before	-----	-3.000	59.264	117.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.063	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 7	V	Master	-----	0.849	1.381	1.981
		Before	-----	0.849	1.380	1.981
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.001	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 7	deg	Master	-----	-7.000	55.850	113.000
		Before	-----	-7.000	55.732	113.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.118	-----
		After-Before	-----	-----	-----	-----
SPA Zero	mV	Master		-50.000	-0.201	50.000
		Before		-50.000	-0.217	50.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.016	-----



		After-Before	-----	-----	-----	-----	
SPA Plus	mV	Master		941.000	991.790	1040.000	
		Before		941.000	992.062	1040.000	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.272	-----	
		After-Before	-----	-----	-----	-----	
Temperature Zero	V	Master		-0.050	0.000	0.050	
		Before		-0.050	0.000	0.050	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.000	-----	
		After-Before	-----	-----	-----	-----	
Temperature Plus	V	Master		0.870	0.919	0.960	
		Before		0.870	0.919	0.960	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.000	-----	
		After-Before	-----	-----	-----	-----	

DSLT-H (Digitizing Sonic Logging Tool - H) Calibration - Run 1

Primary Equipment :

Sonic Logging Sonde E supports 3'-5'BHC DT and CBL/VDL	SLS-E	165

CBL Normalization - CBL Accumulations

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Upper Far Amplitude - 0		Master	-----	-----	-----	-----
Upper Near Raw Amplitude - 0	mV	Master	-----	-----	-----	-----
Lower Far Amplitude - 0		Master	-----	-----	-----	-----
Lower Near Raw Amplitude - 0	mV	Master	-----	-----	-----	-----

CBL Normalization - CBL/VDL Coefficients

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
CBL Correction Factor for UT		Master	3.500	2.700	NOT DONE	4.300
CBL Correction Factor for LT		Master	2.500	1.700	NOT DONE	4.300
VDL Ratio between UT and LT for CBLB Mode		Master	1.000		NOT DONE	

CBL Free Pipe Adjustment - Free Pipe Measurement

Before:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
CBL Amplitude - 0	mV	Before	-----	-----	-----	-----
CBL Reference Amplitude (CBRA) - 0	mV	Before	-----	-----	-----	-----
Measurement Depth - 0	ft	Before	-----	-----	-----	-----

CBL Free Pipe Adjustment - CBL Amplitude Coefficient

Before:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
CBL Adjustment Factor		Before	1.000	0.200	NOT DONE	5.000
Depth of Before Calibration	ft	Before			NOT DONE	

HDRS-H (HILT Density and Rxo Sonde, 150 degC) Calibration - Run 1

Primary Equipment :

HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	
HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H	3816

Auxiliary Equipment :

HRDD Backscatter Detector	Backscatter	
HRDD Long Spacing Detector	Long Spacing	28732
HRDD Short Spacing Detector	Short Spacing	27634
Cesium 137 Gamma-Ray Logging Source	GSR-J	5240
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	
HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H	

Calibration Parameter :

Small Ring Size (Caliper Calibration Small Ring)	8.00

Large Ring Size (Caliper Calibration Large Ring)	12.00

HDRS Caliper Calibration - Caliper Accumulations

Before (Measured): 16:23:18 01-Nov-2012 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Small Ring	in	Before	8.00	6.00	8.74	10.00
Large Ring	in	Before	12.00	9.00	13.10	15.00

HDRS Density Calibration - Inversion Results

Master (EEPROM): 12:02:16 27-Oct-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Rho Aluminum	g/cm3	Master	2.596	2.586	2.599	2.606
Rho Magnesium	g/cm3	Master	1.686	1.676	1.685	1.696
Pe Aluminum		Master	2.570	2.470	2.534	2.670
Pe Magnesium		Master	2.650	2.550	2.642	2.750

HDRS Density Calibration - Deviation Summary

Master (EEPROM): 12:02:16 27-Oct-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
BS Average Deviation	%	Master	0	-0.6000	0.5313	0.6000
BS Max Deviation	%	Master	0	-1.6000	1.0019	1.6000
SS Average Deviation	%	Master	0	-1.0000	0.3341	1.0000
SS Max Deviation	%	Master	0	-2.5000	1.1387	2.5000
LS Average Deviation	%	Master	0	-1.5000	0.7415	1.5000
LS Max Deviation	%	Master	0	-3.5000	2.3181	3.5000

HDRS Density Calibration - Background Summary

Master (EEPROM): 12:02:16 27-Oct-2012 Before (Measured): 16:24:27 01-Nov-2012 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
BS Window Ratio		Master	1.0000		0.7507	
		Before	0.7507	0.7131	0.7495	0.7882
		Before-Master	-----	-----	-0.0012	-----
BS Window Sum	1/s	Master	1		26052	
		Before	26052	24749	26225	27355
		Before-Master	-----	-----	173	-----
SS Window Ratio		Master	1.0000		0.4792	
		Before	0.4792	0.4552	0.4825	0.5031
		Before-Master	-----	-----	0.0033	-----
SS Window Sum	1/s	Master	1		10312	
		Before	10312	9797	10298	10828
		Before-Master	-----	-----	-14	-----
LS Window Ratio		Master	1.0000		0.3034	
		Before	0.3034	0.2882	0.3033	0.3186
		Before-Master	-----	-----	-0.0001	-----
LS Window Sum	1/s	Master	1		1214	
		Before	1214	1153	1201	1275
		Before-Master	-----	-----	-13	-----

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM): 12:02:16 27-Oct-2012 Before (Measured): 16:24:27 01-Nov-2012 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
BS PM High Voltage	V	Master		1000	1580	2400
		Before		1000	1584	2400
		Before-Master	-----	-100	4	100
SS PM High Voltage	V	Master		1000	1401	2400
		Before		1000	1407	2400
		Before-Master	-----	-100	6	100
LS PM High Voltage	V	Master		1000	1216	2400
		Before		1000	1225	2400
		Before-Master	-----	-100	9	100

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM): 12:02:16 27-Oct-2012 Before (Measured): 16:24:27 01-Nov-2012 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
BS Crystal Resolution	%	Master		5.00	11.79	25.00
		Before		5.00	11.88	25.00
		Before-Master	-----	-1.00	0.09	1.00
SS Crystal Resolution	%	Master		5.00	9.89	20.00

		Before		5.00	10.02	20.00
		Before-Master	-----	-1.00	0.13	1.00
LS Crystal Resolution	%	Master		5.00	8.16	20.00
		Before		5.00	8.23	20.00
		Before-Master	-----	-1.00	0.07	1.00

HDRS MCFL Calibration - MCFL Accumulations

Before (Measured): 16:25:07 01-Nov-2012 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Main Resistivity	ohm.m	Before	3875	3565	3877	4185
Deep Resistivity	ohm.m	Before	3830	3524	3826	4136
Shallow Resistivity	ohm.m	Before	3830	3524	3829	4136

HGNS-H (HILT Gamma-Ray and Neutron Sonde, 150 degC) Calibration - Run 1

Primary Equipment :

HILT Gamma-Ray and Neutron Sonde, 150 degC	HGNS-H	

Auxiliary Equipment :

HGNS Accelerometer, 150 degC	HACCZ-H	5736
AmBe Neutron Logging Source	NSR-F	5215

Calibration Parameter :

Water Temperature	
Housing Size	
JIG-BKG (Jig minus background reference)	165

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured): 17:09:28 03-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
AZ Vertical Measurement	ft/s2	Before	32.2	31.5	32.1	32.8

HGNS Accelerometer EEPROM - Accelerometer EEPROM Read

Master (EEPROM): 00:00:00 15-Mar-2006

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Accelerometer Manufacturer		Master			QAT_160	
Accelerometer Reference Temperature	degF	Master		30.2	77.0	122.0
Accelerometer Coefficients - 0		Master	-----	-----	8084.000	-----
Accelerometer Coefficients - 1		Master	-----	-----	-8.467	-----
Accelerometer Coefficients - 2		Master	-----	-----	0.009	-----
Accelerometer Coefficients - 3		Master	-----	-----	0.000	-----
Accelerometer Coefficients - 4		Master	-----	-----	2.722	-----
Accelerometer Coefficients - 5		Master	-----	-----	0.000	-----
Accelerometer Coefficients - 6		Master	-----	-----	0.000	-----
Accelerometer Coefficients - 7		Master	-----	-----	0.000	-----
Accelerometer Coefficients - 8		Master	-----	-----	298.700	-----
Accelerometer Coefficients - 9		Master	-----	-----	0.995	-----

HGNS Neutron Calibration - HGNS Neutron Accumulations

Master (EEPROM): 10:52:24 11-Oct-2012 Before (Measured): 16:23:03 01-Nov-2012 Expired by 1 days After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Near Zero Measurement	1/s	Master	0	5.0	25.2	40.0
		Before	0	5.0	25.2	40.0
		After	-----	-----	-----	-----
		Before-Master	-----	-3.8	0.0	3.8
		After-Before	-----	-----	-----	-----
Far Zero Measurement	1/s	Master	0	5.0	28.4	40.0
		Before	0	5.0	27.8	40.0
		After	-----	-----	-----	-----
		Before-Master	-----	-4.3	-0.6	4.3
		After-Before	-----	-----	-----	-----
Near Plus Measurement - 0	1/s	Master	6031.0	4700.0	5278.0	6900.0
		Before	-----	-----	-----	-----
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-----	-----

		After-Before	-----	-----	-----	-----	
Far Plus Measurement - 0	1/s	Master	2793.0	1900.0	2189.0	2900.0	
		Before	-----	-----	-----	-----	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
Near Corrected Plus Measurement - 0	1/s	Master		4700.0	5228.0	6900.0	
		Before	-----	-----	-----	-----	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
Far Corrected Plus Measurement - 0	1/s	Master		1900.0	2143.0	2900.0	
		Before	-----	-----	-----	-----	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations

Before (Measured): 16:23:53 01-Nov-2012 Expired by 1 days After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
RGR Zero Measurement	gAPI	Before	30.0	0	76.9	120.0
		After	-----	-----	-----	-----
		After-Before	-----	-----	-----	-----
RGR Plus Measurement	gAPI	Before	185.4	157.1	177.6	206.3
		After			NOT DONE	
		After-Before	-----	-----	-----	-----
GR Calibration Gain		Before	0.89	0.80	0.93	1.05
		After	-----	-----	-----	-----
		After-Before	-----	-----	-----	-----

LEH-QT (Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor) Calibration - Run 1

Primary Equipment :

Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor LEH-QT

HTEN Master Calibration - HTEN Master Calibration

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
HTEN Shop Gain		Master	1.000	0.800	NOT DONE	4.500
HTEN Shop Offset	lbf	Master	0	-1000.000	NOT DONE	1000.000

HTEN Before Calibration - HTEN Before Calibration

Before:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
RHTE Zero Measurement - 0	lbf	Before	-----	-----	-----	-----
RHTE Plus Measurement - 0	lbf	Before	-----	-----	-----	-----
HTEN Gain - 0		Before	-----	-----	-----	-----
HTEN Offset - 0	lbf	Before	-----	-----	-----	-----

Company: Vecta Oil & Gas LTD

Schlumberger

Well: Crestone

Field: Wildcat

County: Cheyenne

State: Colorado

Platform Express

Compensated Neutron

Compensated Neutron

Litho Density