Schlumberger

Company: Confluence DJ LLC

Well: Judy 3-4

Field: Wattenberg

County: Weld State: Colorado

TCOM

County: Weld
Field: Wattenberg
Location: 620' FSL & 743' FWL
Well: Judy 3-4
Company: Confluence DJ LLC

Location: 620' FSL & 743' FWL
Section 3, Township 1S, Range 65W

Elev.: K.B. 5152.00 ft
G.L. 5139.00 ft
D.F. 5151.00 ft

Permanent Datum:	Ground Level	Elev.:	5139.00 f
Log Measured From:	Kelly Bushing	13.00 ft	above Perm.Datum
Drilling Measured From:	Kelly Bushing		

API Serial No.	Section:	Township:	Range:
05-123-50294	3	1 S	65 W

Logging Date			12-Sep-2019			
Run Number			1A			
Depth Driller			7730.00 ft			
Schlumberger Depth			7720.00 ft			
Bottom Log Interval			7720.00 ft			
Top Log Interval			1546.00 ft			
Casing Driller Size @ Depth			8.625 in @ 1546.00 ft			
Casing Schlumberger			1546 ft			
Bit Size			7.875 in			
Type Fluid In Hole			Water			
MUD	Density	Viscosity	9.7 lbm/gal	41 s		
	Fluid Loss	PH	6.4 cm3	9.8		
	Source of Sample		Active Tank			
RM @ Meas Temp			0.2 ohm.m @ 68 degF			
RMF @ Meas Temp			0.15 ohm.m @ 68 degF			
RMC @ Meas Temp						
Source RMF	RMC			Pressed		
RM @ BHT	RMF @ BHT		0.07 @ 204	0.05 @ 204		
Max Recorded Temperatures			204 degF			
Circulation Stopped	Time		11-Sep-2019	20:00:00		
Logger on Bottom	Time		12-Sep-2019	07:00:00		
Unit Number	Location:		9115	Fort Morgan		
Recorded By			Caroline Ibrahim			
Witnessed By			Rob Sterling			

Disclaimer

Contents

Remarks and Equipment Summary

1A: Toolstring

Equip name	Length	MP name	Offset
LEH-QC	**118.93**		
EDTC-B:8951	**116.47**		
EDTH-B:8609			
EDTG-B:79123			
EDTC-B:8951		**CTEM**	**112.97**
		ACCZ	**0.00**
		HV	**0.00**
		Gamma Ray	**111.1**
		TelStatus	**109.97**
HGNS-H:3730	**109.97**	**Temperature**	**109.94**
HGNH:27423		**GR**	**109.23**
NPV-N			
NSR-F:5203			
HGNS-H:3730			
HACCZ-H:1537			
HMCA-H			
		CNL Porosity	**102.89**
		HMCA	**100.56**
		HGNS	**100.56**
		Accelerometer	**0.00**
HDRS-H:5735	**100.56**		
ECH-MEB:4852			
HRCC-H:5800			
HRMS-H:5735			
GPV-Q			
Backscatter			
Long Spacing			
GSR-J:5259			
Short Spacing :27732			
HRGD-H:3921			
		HRCC	**96.56**
		MCFL	**91.13**
		Caliper	**90.64**
		TLD Density	**90.25**
AH-184[3]	**88.32**	3709	
AH-184[2]	**86.32**	3763	
Adaptor_Head[2]	**84.32**		

1A: Remarks

Thank you for choosing Schlumberger.
Density caliper closed near TD due to hole conditions.
PPC centralizing arms were not opened until approximately 7450' due to hole conditions.
No repeat logged due to hole conditions.
Limestone matrix used, 2.71 g/cc
Sonic scanner logged in standard mode.
Toolstring run as per toolsketch.

GPIT-F:871 80.32
GPIH-B:2840
GPIC-F:871
DHRU-F:849

GPIT-F Inclinometer 78.9

GPIT 0.00

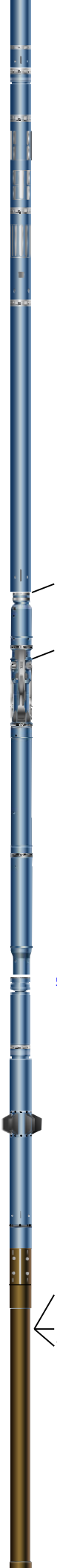
Adaptor_Head[1] 76.32

PPC-B[2]:8199 72.32
PPC-B:8199

PPC-B Calipers 71.17

MAST-B:8491 65.8
ECH-SF:8185
MAPC-BA:8187
MAMS-CA:8491
MASS-BA:8381
MAXS-BA:8010

MAMS 50.36



PPC-B[1]:8152 **24.52**
PPC-B:8152

MAXS **24.52**

PPC-B Calipers **23.37**

AH-184[1] **18.00**

5941

AIT-M:189 **16.00**
AMIS:189
AMRM:189

Power Supply **7.91**

Induction **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

	1A		
Depth Measuring Device			
Type	IDW-B		
Serial Number	6360		
Calibration Date	09-Apr-2019		
Calibrator Serial Number			
Calibration Cable Type			
Wheel Correction 1	0		
Wheel Correction 2	-2		
Tension Device			
Type	CMTD-B/A		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Number of Calibration Points	0		
Logging Cable			
Type	7-46NT-XS		
Serial Number			
Length	24000.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		

1A:Depth Control Parameters		Depth Control Remarks
Log Sequence	First Log In the Well	All Schlumberger depth control procedures followed.
Rig Up Length At Surface		IDW used as primary depth device.
Rig Up Length At Bottom		Z-chart used as secondary depth device.
Rig Up Length Correction		
Stretch Correction		
Tool Zero Check At Surface		

1A

Main Pass 2" = 100'

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
IHV	Integrated Hole Volume	GCSE_UP_PASS	2124.1	ft3
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1440.1	ft3

Software Version

Acquisition System	Version
Maxwell 2018 SP2	8.2.104493.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1A	Log[2]:Up	Up	1417.53 ft	7746.57 ft	12-Sep-2019 7:22:57 AM	12-Sep-2019 11:34:10 AM	ON	14.06 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Confluence DJ LLC Well:Judy 3-4

1A: Log[2]:Up:S003

Description: Triple Combo standard resolution template for Platform Express Format: Log (TCOM 2in) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 12-Sep-2019 12:12:13

Channel	Source	Sampling
AT10	AIT-M:AMIS:AMIS	3in
AT20	AIT-M:AMIS:AMIS	3in
AT30	AIT-M:AMIS:AMIS	3in
AT60	AIT-M:AMIS:AMIS	3in
AT90	AIT-M:AMIS:AMIS	3in
CALI	HDRS-H:HRCC-H:HRCC-H	1in
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in
DSOZ	HDRS-H:HRMS-H:HRGD-H	2in
GR_CAL	HGNS-H:HGNS-H:HGNS-H	6in
HDRA	HDRS-H:HRMS-H:HRGD-H	2in
ICV	Borehole	6in - RT
IHV	Borehole	6in - RT
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
PXND	PEQL	6in
RSOZ	HDRS-H:HRMS-H:HRGD-H	2in
RXOZ	HDRS-H:HRMS-H:HRGD-H	2in
SP	AIT-M:AMIS:AMIS	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-H:HGNS-H:HGNS-H	6in

IHV - Integrated Hole Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)

ICV - Integrated Cement Volume every 100.00 (ft3)

IHV - Integrated Hole Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

Array Induction Two Foot Resistivity A10 (AT10) AIT-M

0.2 ohm.m 2000

Array Induction Two Foot Resistivity A20 (AT20) AIT-M

0.2 ohm.m 2000

Array Induction Two Foot Resistivity A30 (AT30) AIT-M

0.2 ohm.m 2000

Array Induction Two Foot Resistivity A60 (AT60) AIT-M

0.2 ohm.m 2000

Array Induction Two Foot Resistivity A90

Density Standoff Correction (HDRA) HDRS-H

-0.05 g/cm3 0.45

Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H

0 10

Standard Resolution Density Standoff (DSOZ) HDRS-H

2.5 in 0

Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H

0.3 ft3/ft3 -0.1

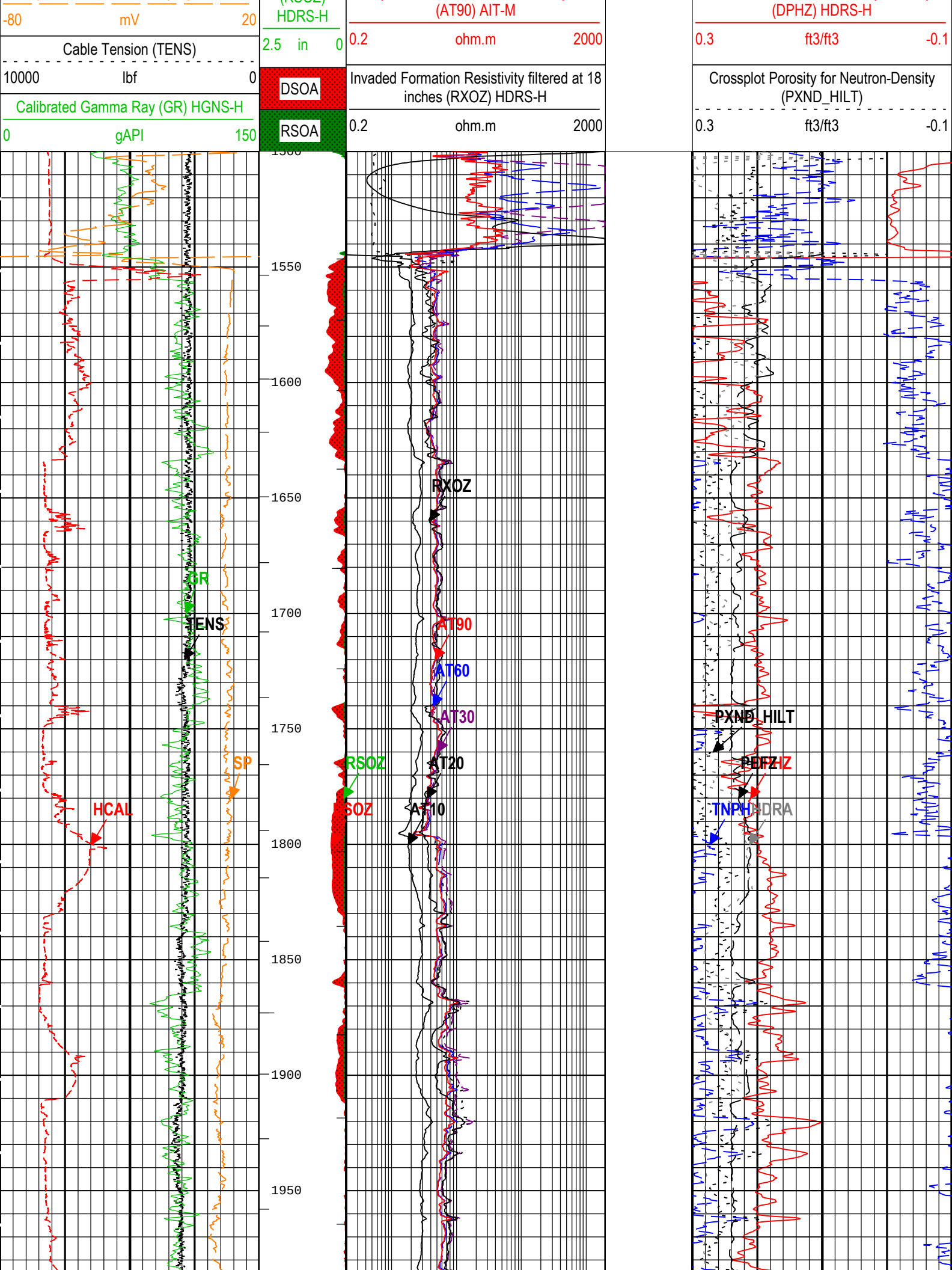
Caliper (HCAL) HDRS-H

6 in 16

Resistivity Standoff Standard Resolution (RSOZ)

Spontaneous Potential (SP) AIT-M

Standard Resolution Density Porosity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mV
20
Cable Tension (TENS)
10000
lbf
0
Calibrated Gamma Ray (GR) HGNS-H
0
gAPI
150
(RSOZ) HDRS-H
2.5
in
0
DSOA
RSOA
(AT90) AIT-M
0.2
ohm.m
2000
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H
0.2
ohm.m
2000
(DPHZ) HDRS-H
0.3
ft3/ft3
-0.1
Crossplot Porosity for Neutron-Density (PXND_HILT)
0.3
ft3/ft3
-0.1
1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
RXOZ
GR
TENS
AT90
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AT30
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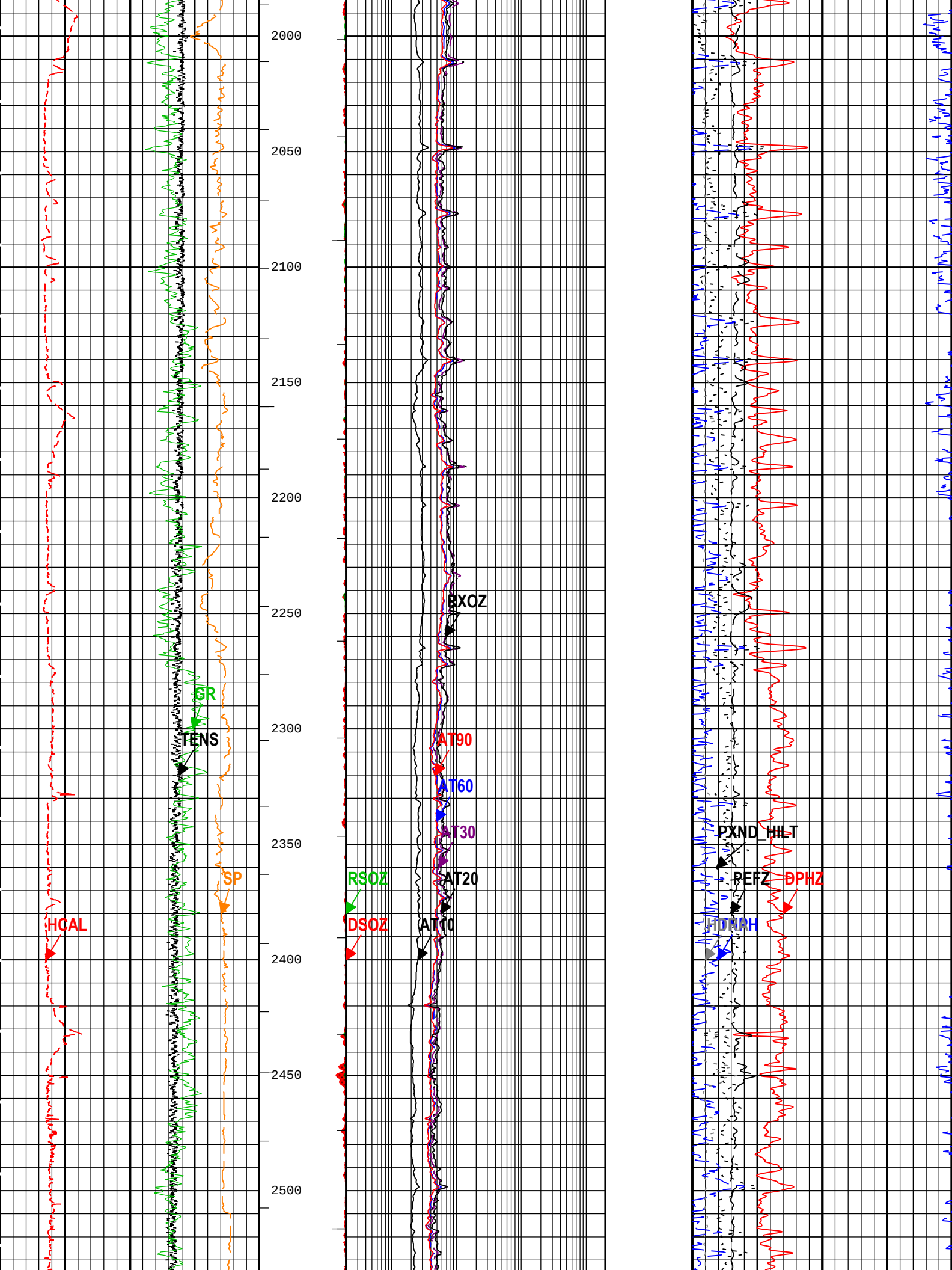
RHOZ
HDRA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GR
TENS
AT90
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AT20
AT10
SP
RSOZ
DSOZ
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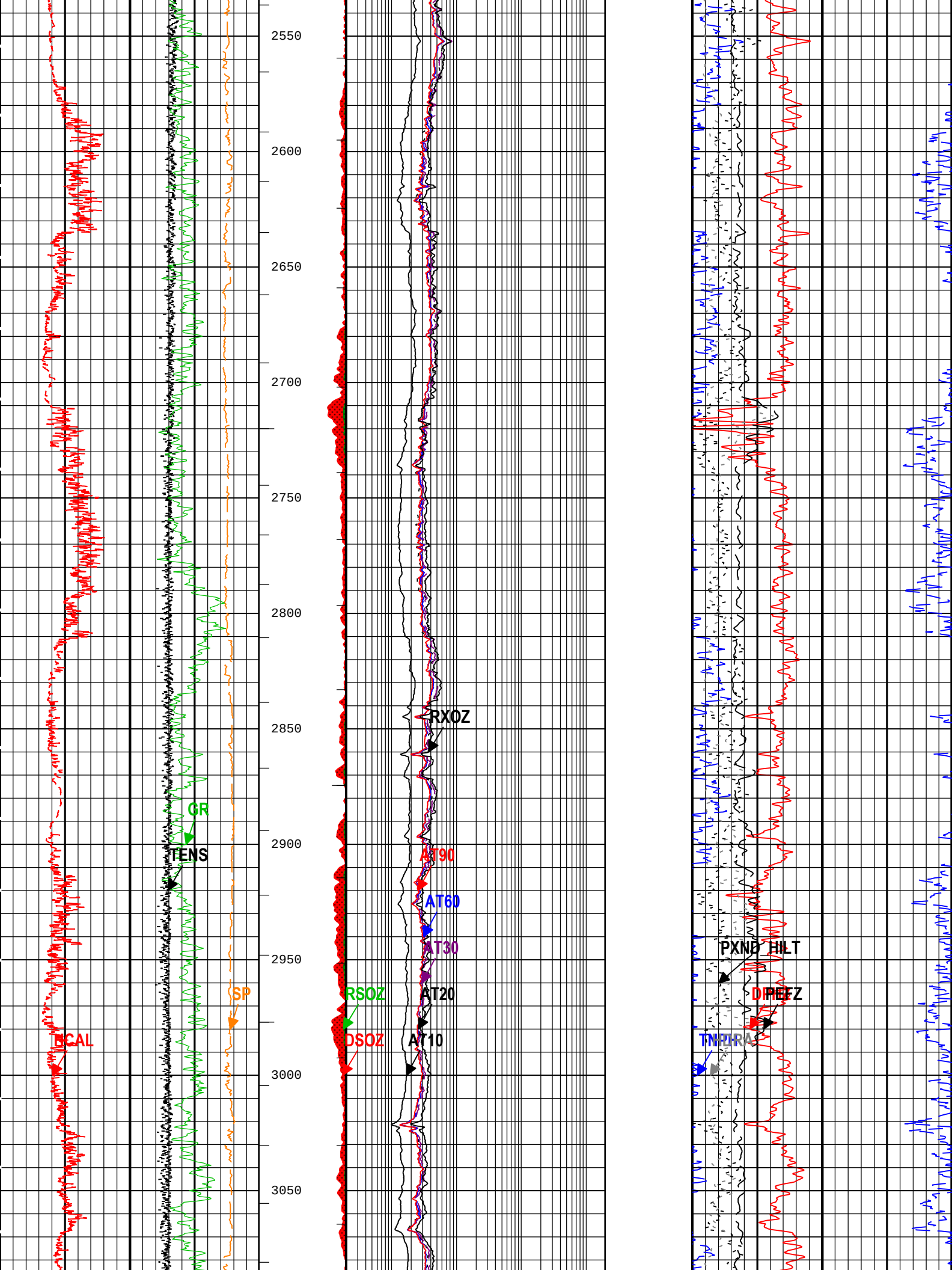
PXND_HILT
PEFZ
DPHZ
HDRH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AT20
AT10
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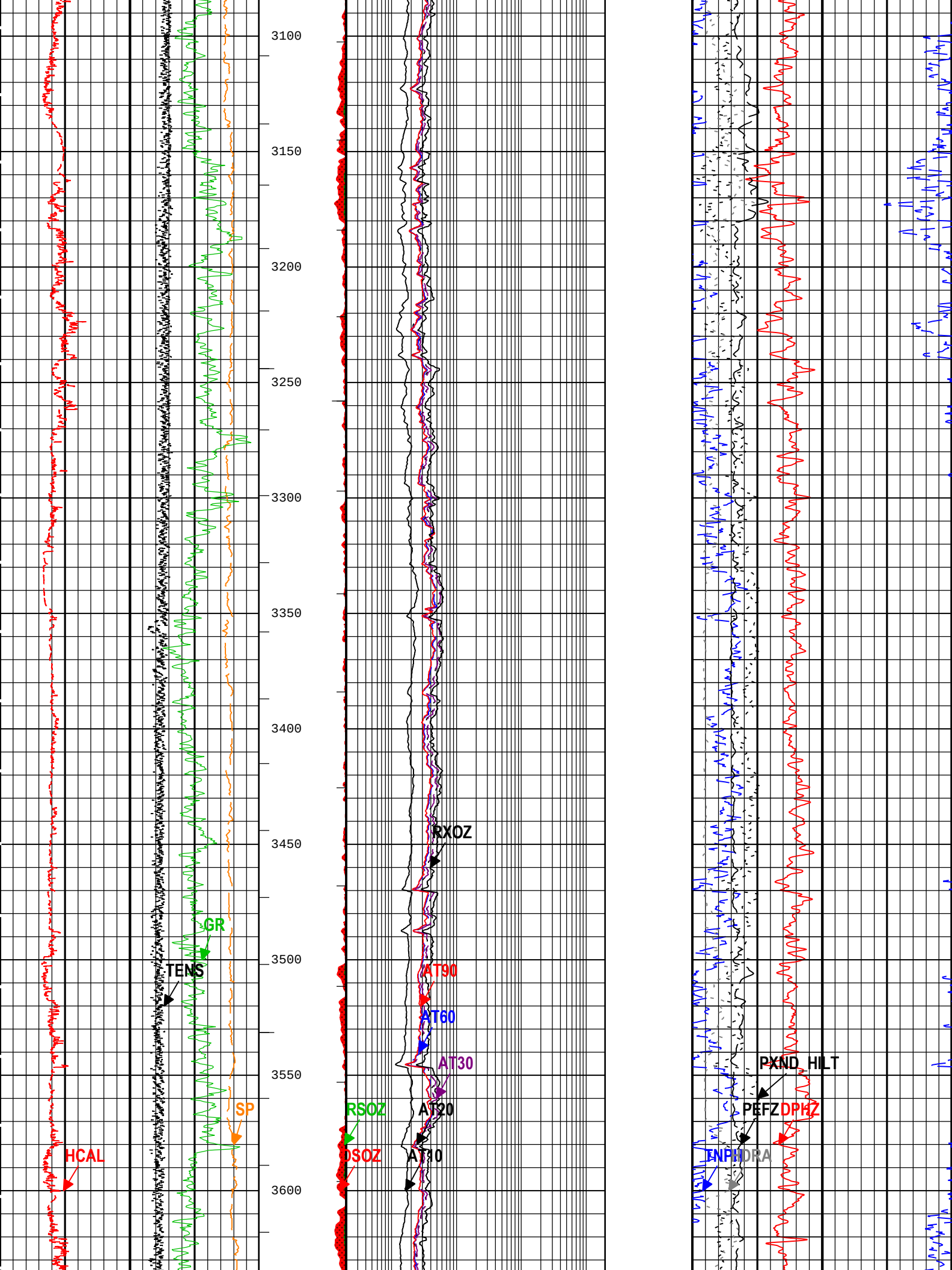
DSOZ
CALI
PXND
HILT
PEFZ
TNPH
RHOZ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GR
TENS
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RSOZ
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PEFZ
DPHZ
TNPH
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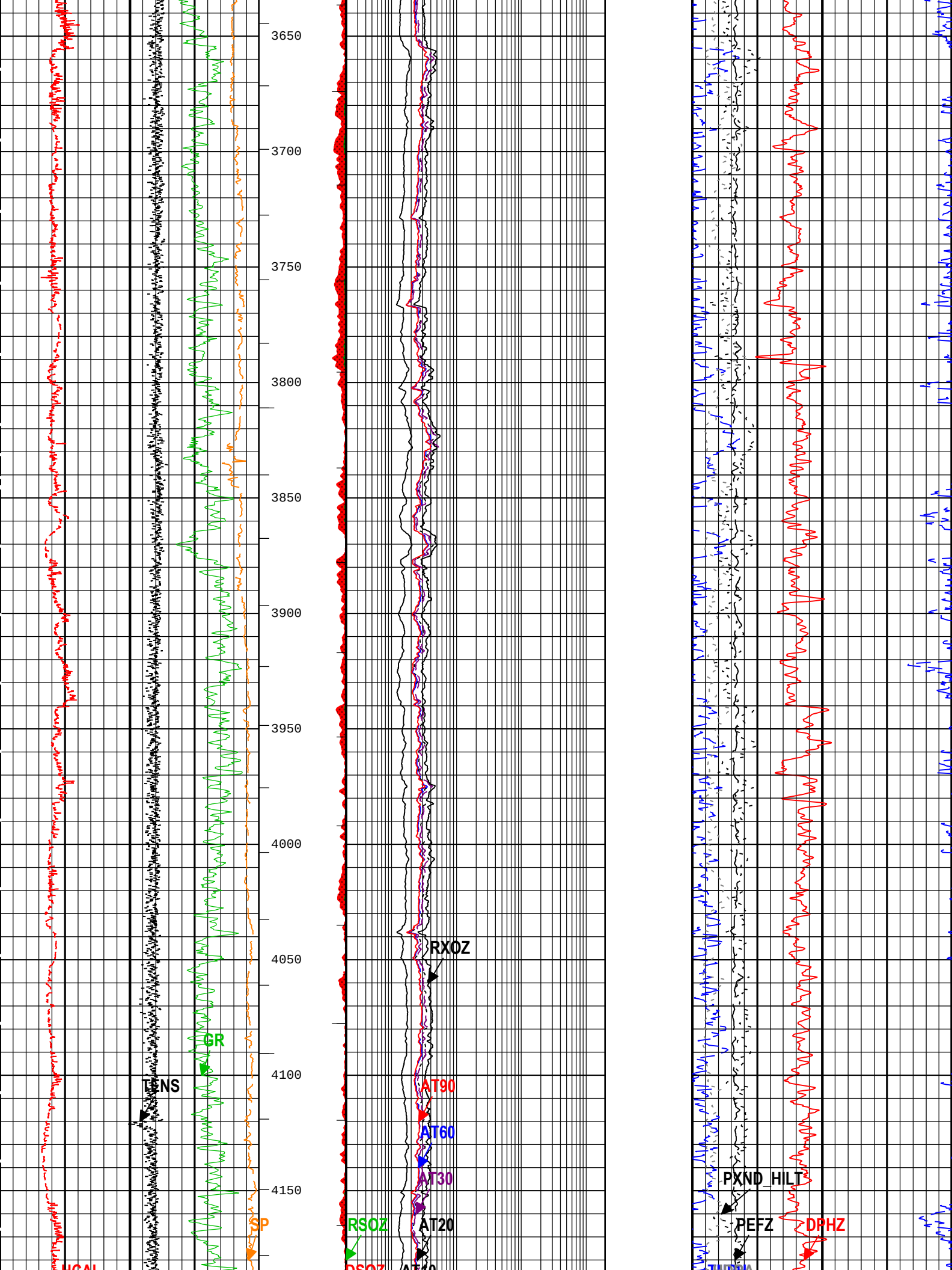
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SP
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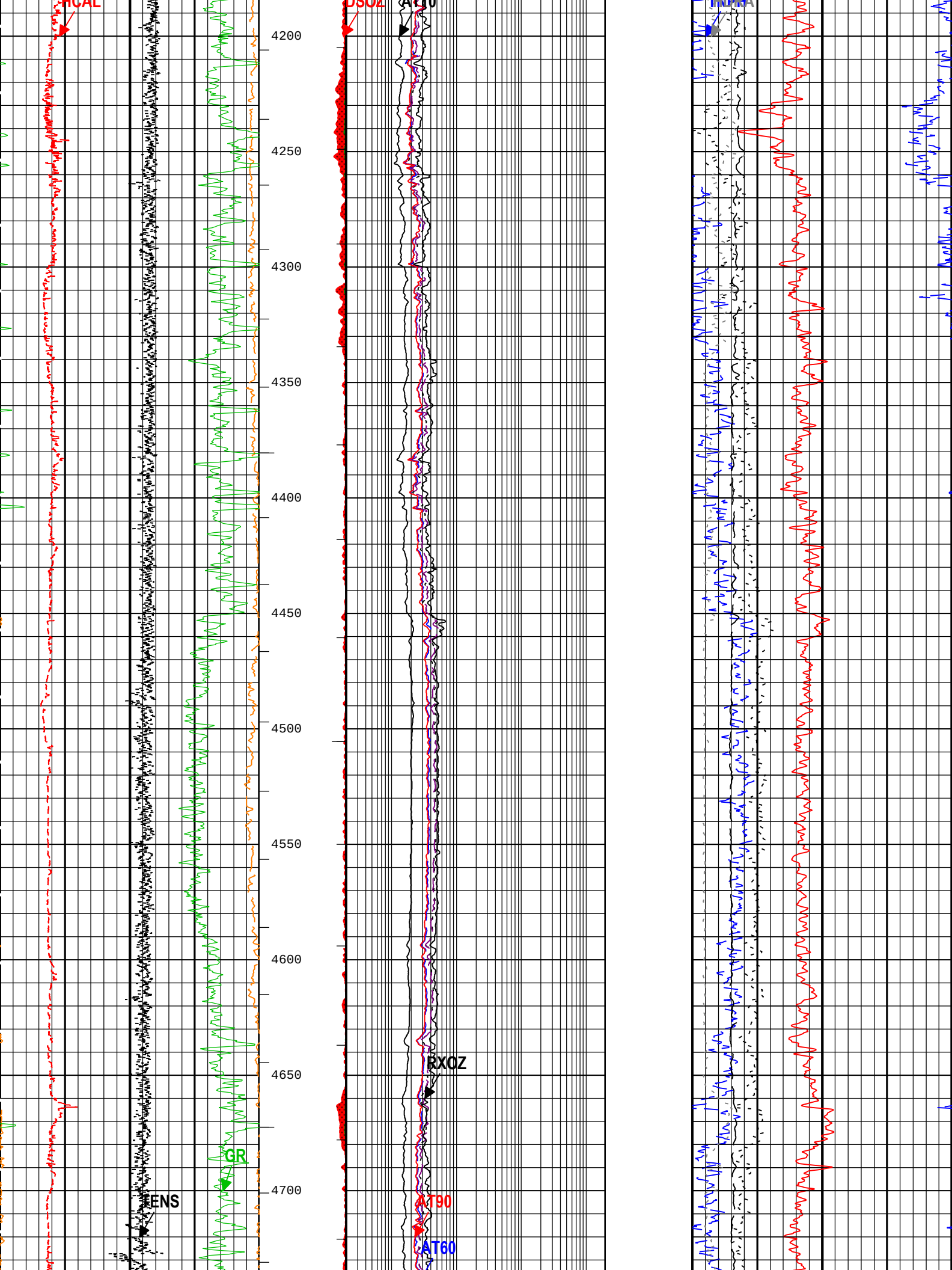
PEFZ
DPHZ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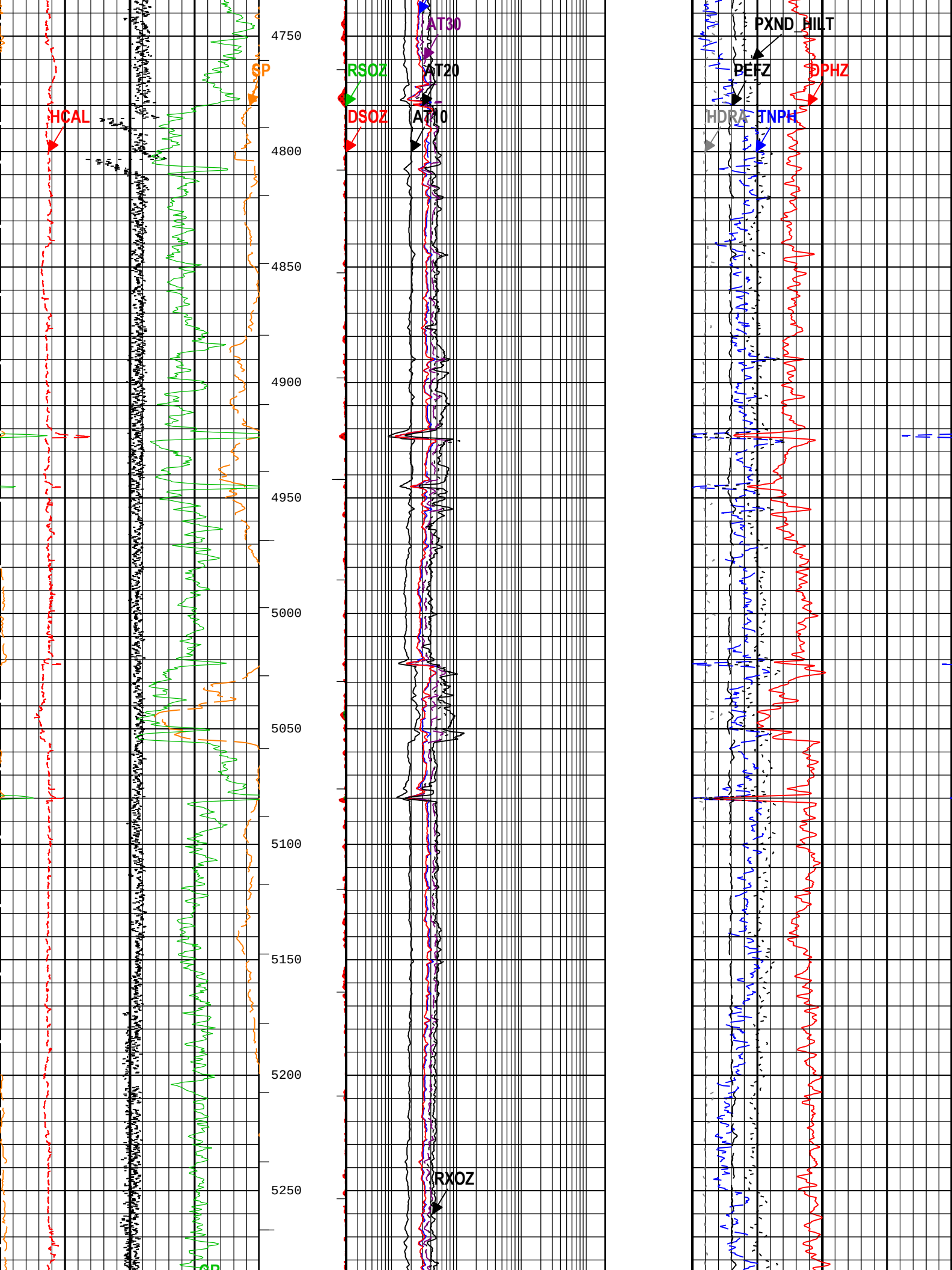
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SP
RSOZ
DSOZ
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RXOZ
PXND_HILT
PEFZ
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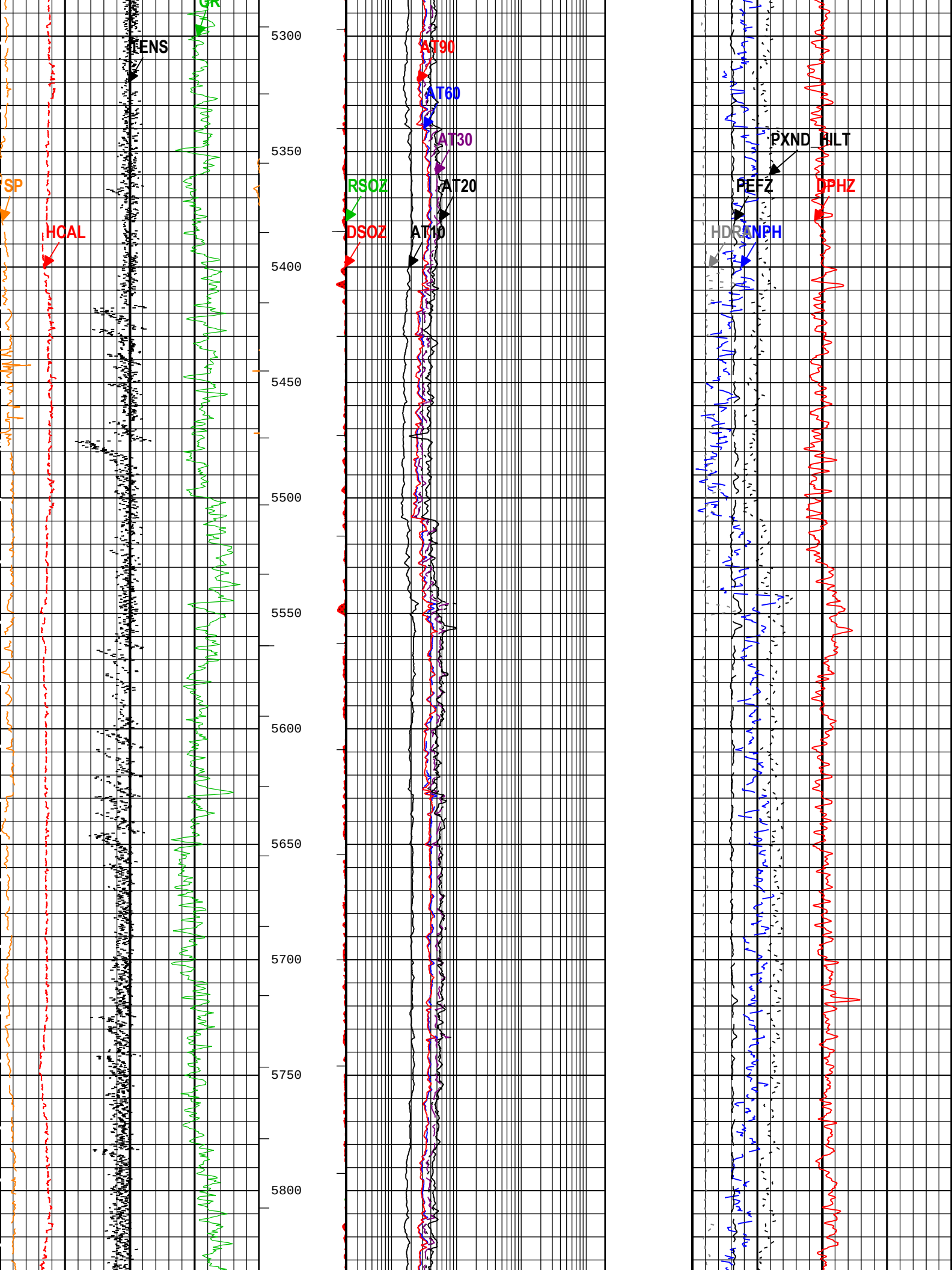
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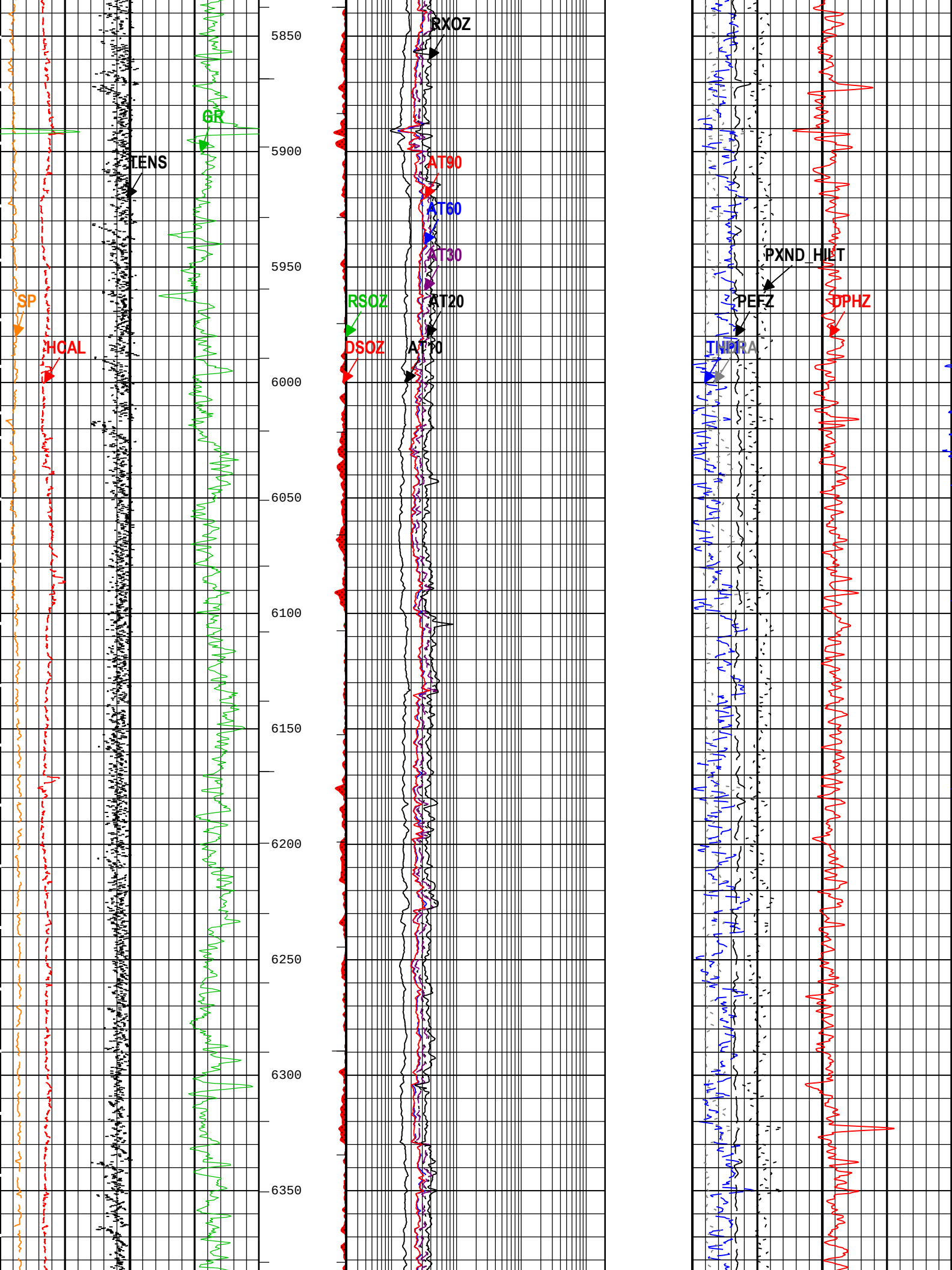
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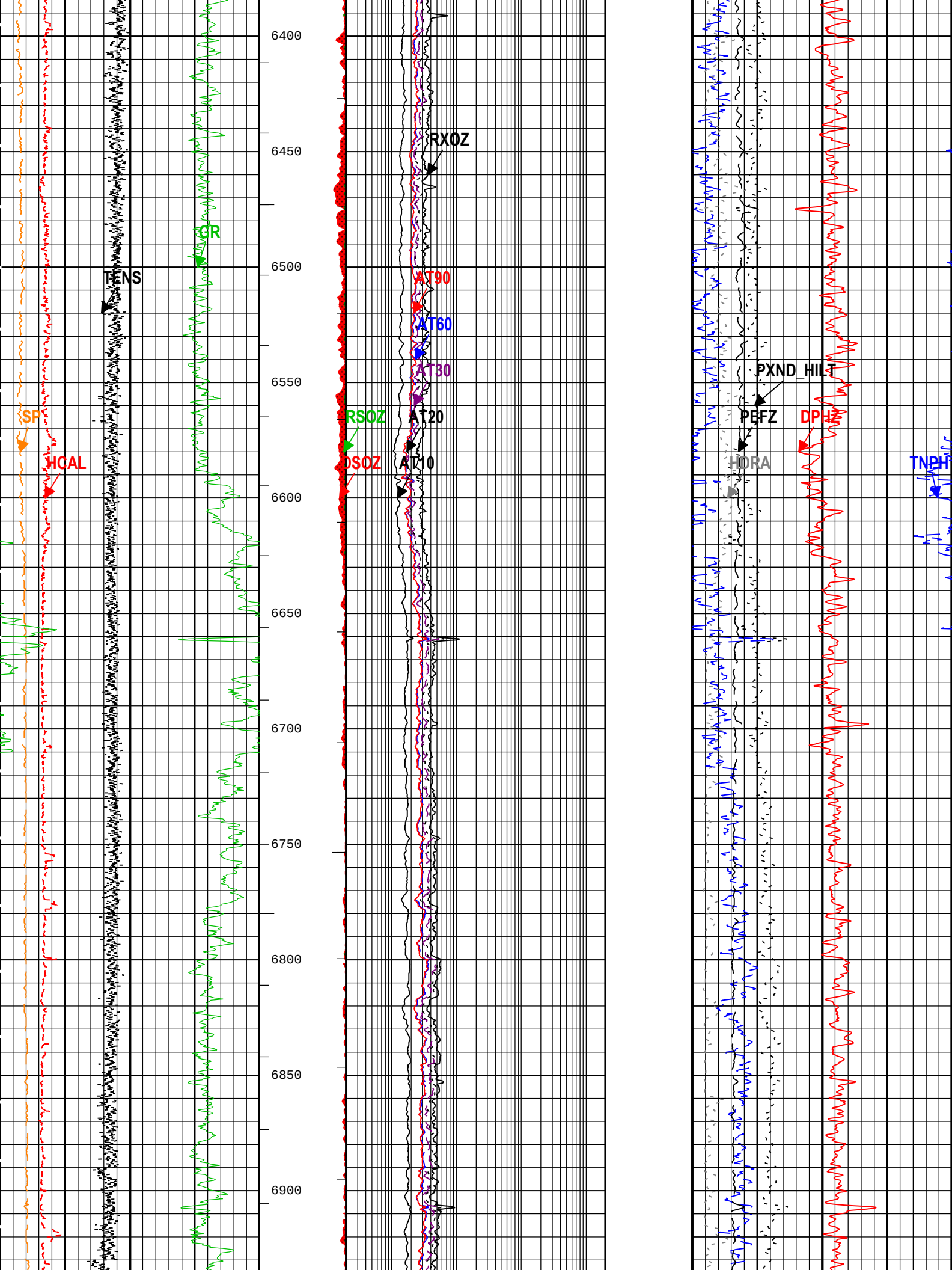
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PEFZ
DPHZ
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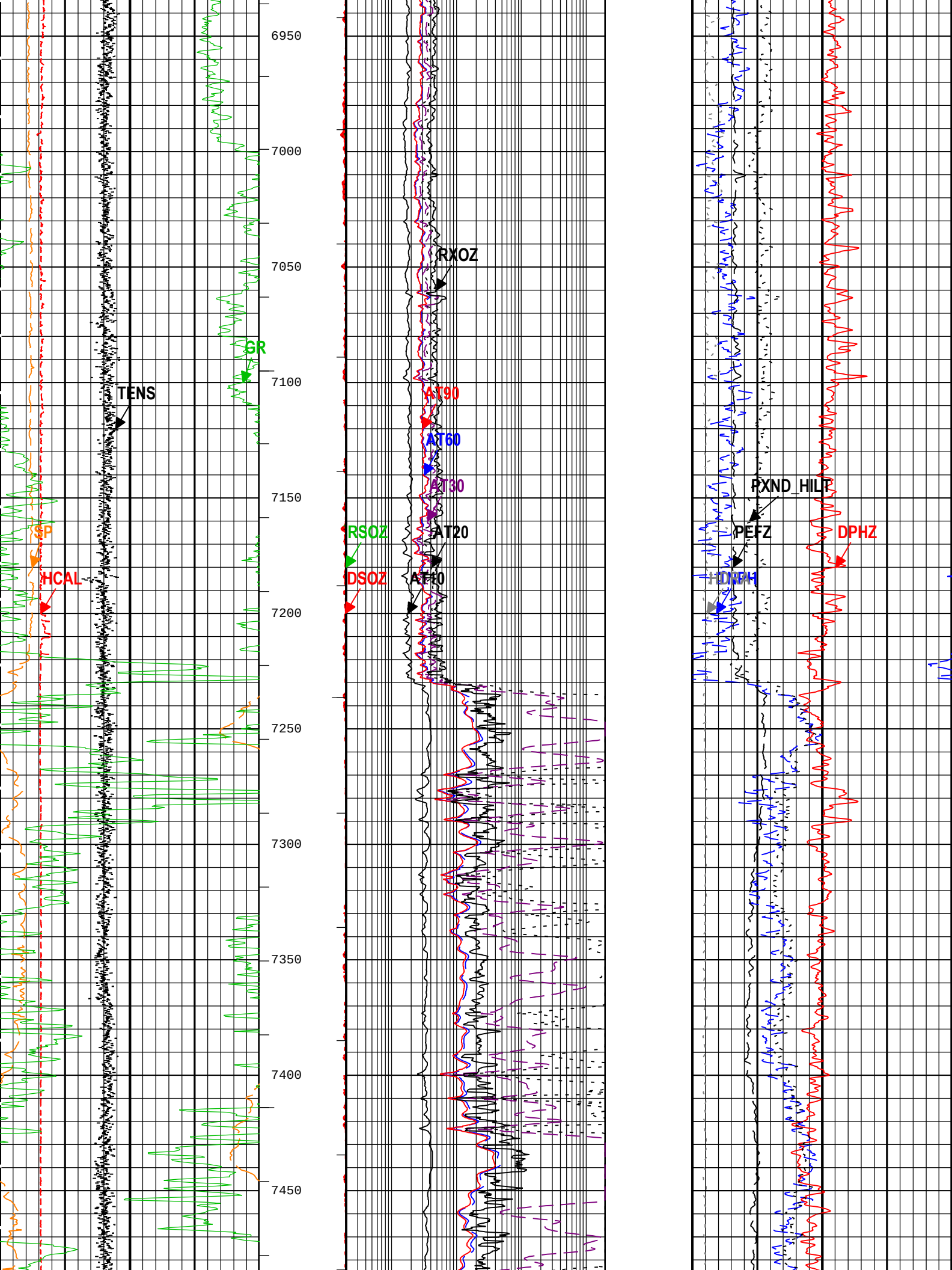
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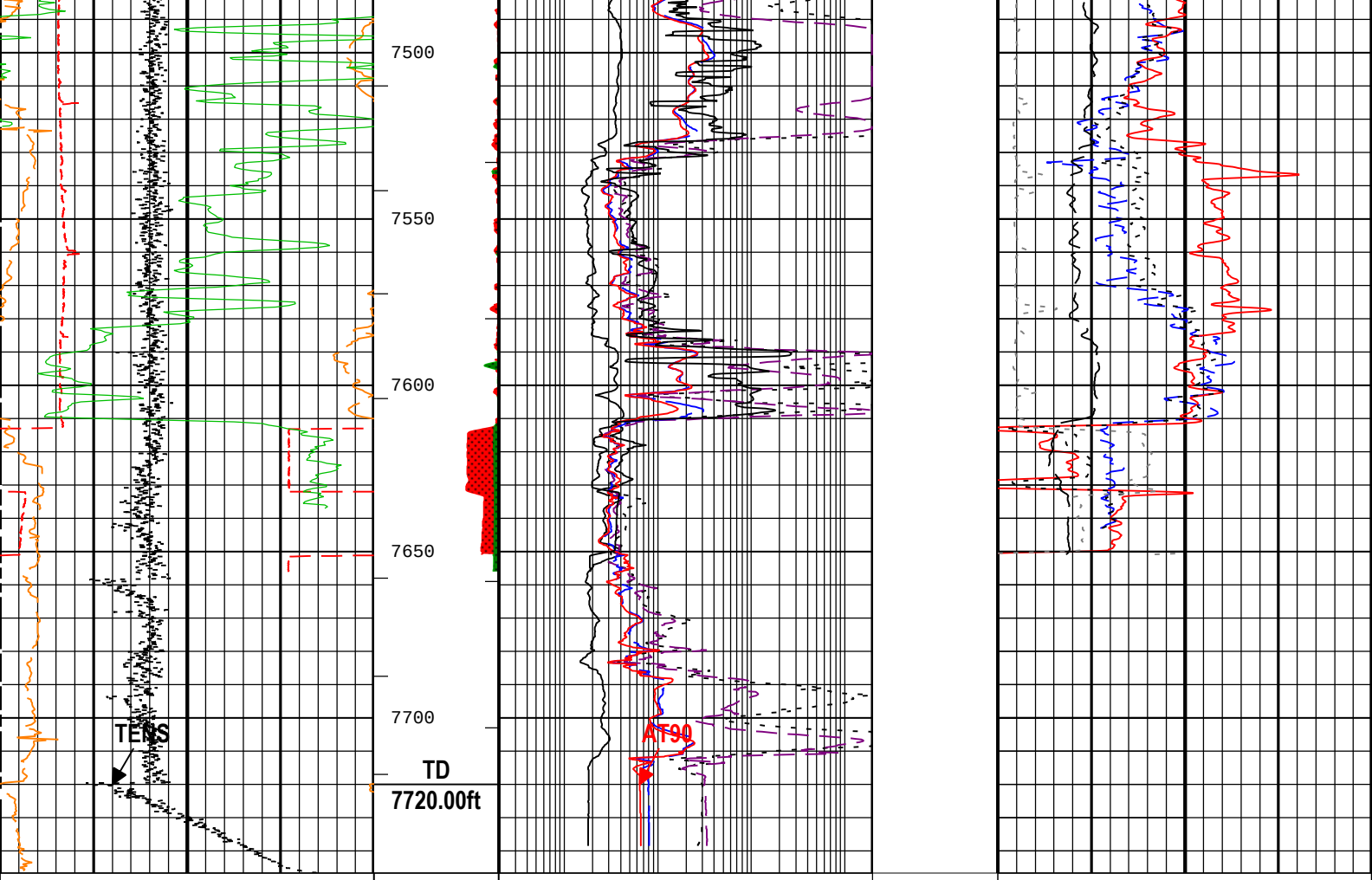
DPHZ



Caliper (HCAL) HDRS-H
6 in 16

Spontaneous Potential (SP) AIT-M
-80 mV 20

Cable Tension (TENS)
10000 lbf 0

Calibrated Gamma Ray (GR) HGNS-H
0 gAPI 150

Standard Resolution Density Standoff (DSOZ) HDRS-H
2.5 in 0

Resistivity Standoff Standard Resolution (RSOZ) HDRS-H
2.5 in 0

DSOA

RSOA

Array Induction Two Foot Resistivity A10 (AT10) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A20 (AT20) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A30 (AT30) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A60 (AT60) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A90 (AT90) AIT-M
0.2 ohm.m 2000

Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H
0.2 ohm.m 2000

Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H
0.3 ft3/ft3 -0.1

Standard Resolution Density Porosity (DPHZ) HDRS-H
0.3 ft3/ft3 -0.1

Crossplot Porosity for Neutron-Density (PXND_HILT)
0.3 ft3/ft3 -0.1

Density Standoff Correction (HDRA) HDRS-H
-0.05 g/cm3 0.45

Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H
0 10

TIME_1900 - Time Marked every 60.00 (s)

IHV - Integrated Hole Volume every 10.00 (ft3)

ICV - Integrated Cement Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)

IHV - Integrated Hole Volume every 100.00 (ft3)

Description: Triple Combo standard resolution template for Platform Express Format: Log (TCOM 2in) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 12-Sep-2019 12:12:13

1A

Main Pass 5" = 100'

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
IHV	Integrated Hole Volume	GCSE_UP_PASS	2124.1	ft3
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1440.1	ft3

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1A	Log[2]:Up	Up	1417.53 ft	7746.57 ft	12-Sep-2019 7:22:57 AM	12-Sep-2019 11:34:10 AM	ON	14.06 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Confluence DJ LLC Well:Judy 3-4

1A: Log[2]:Up:S003

Description: Triple Combo standard resolution template for Platform Express Format: Log (TCOM 5in) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 12-Sep-2019 12:12:17

Channel	Source	Sampling
AT10	AIT-M:AMIS:AMIS	3in
AT20	AIT-M:AMIS:AMIS	3in
AT30	AIT-M:AMIS:AMIS	3in
AT60	AIT-M:AMIS:AMIS	3in
AT90	AIT-M:AMIS:AMIS	3in
CALI	HDRS-H:HRCC-H:HRCC-H	1in
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in
DSOZ	HDRS-H:HRMS-H:HRGD-H	2in
GR_CAL	HGNS-H:HGNS-H:HGNS-H	6in
HDRA	HDRS-H:HRMS-H:HRGD-H	2in
ICV	Borehole	6in - RT
IHV	Borehole	6in - RT
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
PXND	PEQL	6in
RSOZ	HDRS-H:HRMS-H:HRGD-H	2in
RXOZ	HDRS-H:HRMS-H:HRGD-H	2in
SP	AIT-M:AMIS:AMIS	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-H:HGNS-H:HGNS-H	6in

IHV - Integrated Hole Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)

ICV - Integrated Cement Volume every 100.00 (ft3)

IHV - Integrated Hole Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

Array Induction Two Foot Resistivity A10 (AT10) AIT-M

0.2 ohm.m 2000

Array Induction Two Foot Resistivity A20 (AT20) AIT-M

Density Standoff Correction (HDRA) HDRS-H

-0.05 g/cm3 0.45

Standard

Caliper (HCAL) HDRS-H
6 in 16

Spontaneous Potential (SP) AIT-M
-80 mV 20

Cable Tension (TENS)
10000 lbf 0

Calibrated Gamma Ray (GR) HGNS-H
0 gAPI 150

Standard Resolution Density Standoff (DSOZ) HDRS-H
2.5 in 0

Resistivity Standoff Standard Resolution (RSOZ) HDRS-H
2.5 in 0

DSOA

RSOA

0.2 ohm.m 2000

Array Induction Two Foot Resistivity A30 (AT30) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A60 (AT60) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A90 (AT90) AIT-M
0.2 ohm.m 2000

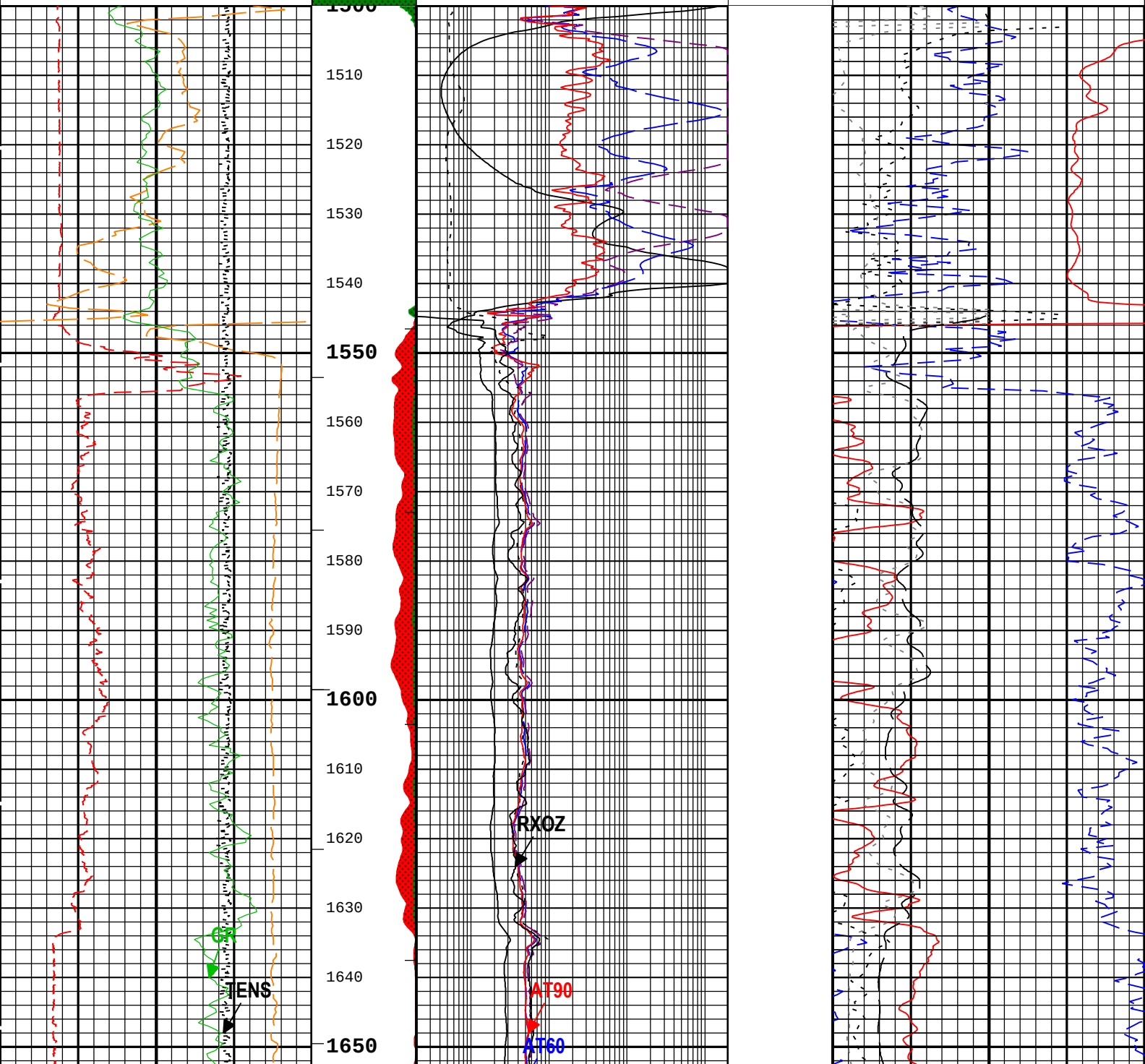
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H
0.2 ohm.m 2000

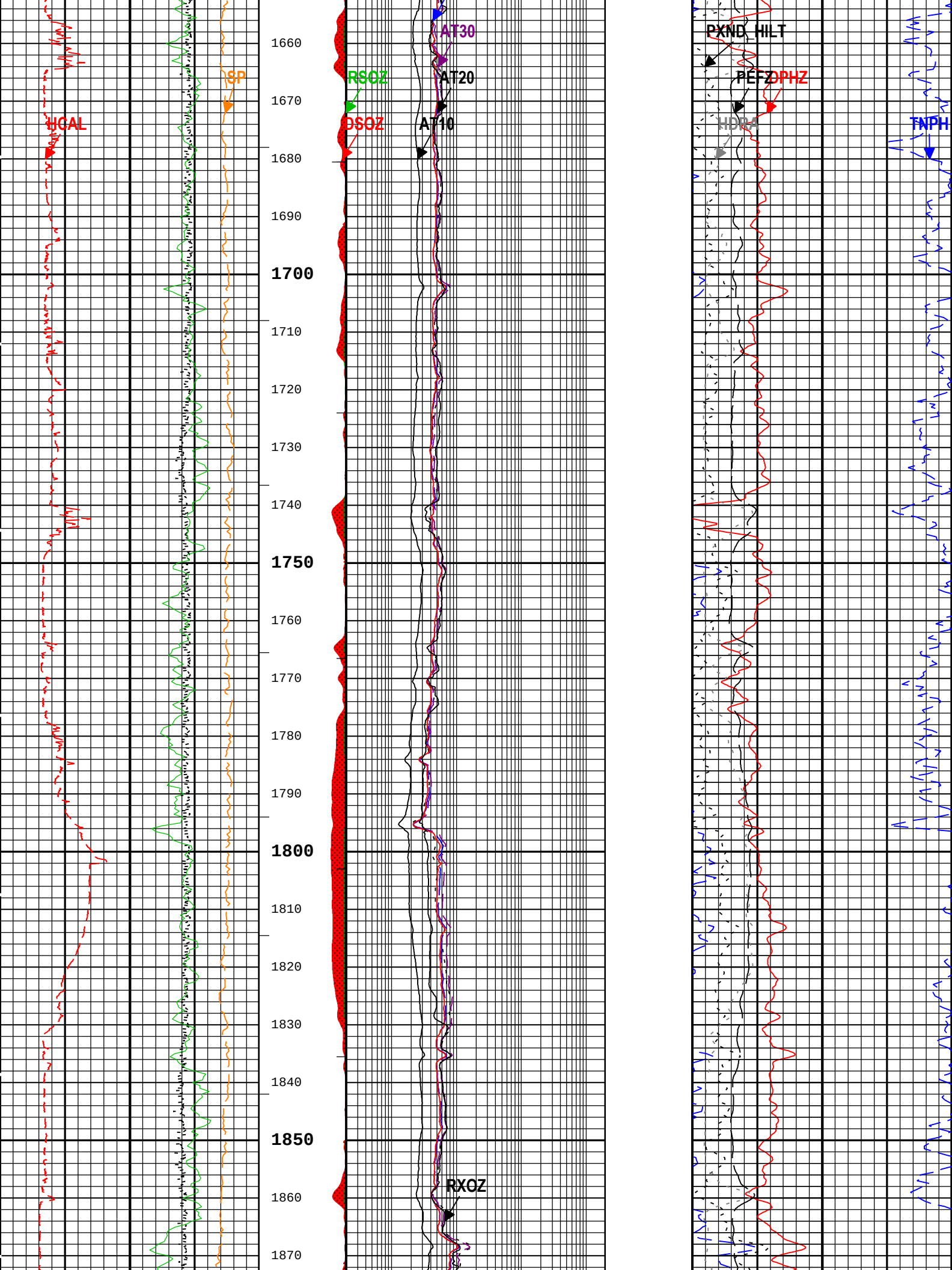
Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H
0 10

Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H
0.3 ft3/ft3 -0.1

Standard Resolution Density Porosity (DPHZ) HDRS-H
0.3 ft3/ft3 -0.1

Crossplot Porosity for Neutron-Density (PXND_HILT)
0.3 ft3/ft3 -0.1

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AT30
AT20
AT10
RXOZ
PXND_HILT
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1670
1680
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1720
1730
1740
1750
1760
1770
1780
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1800
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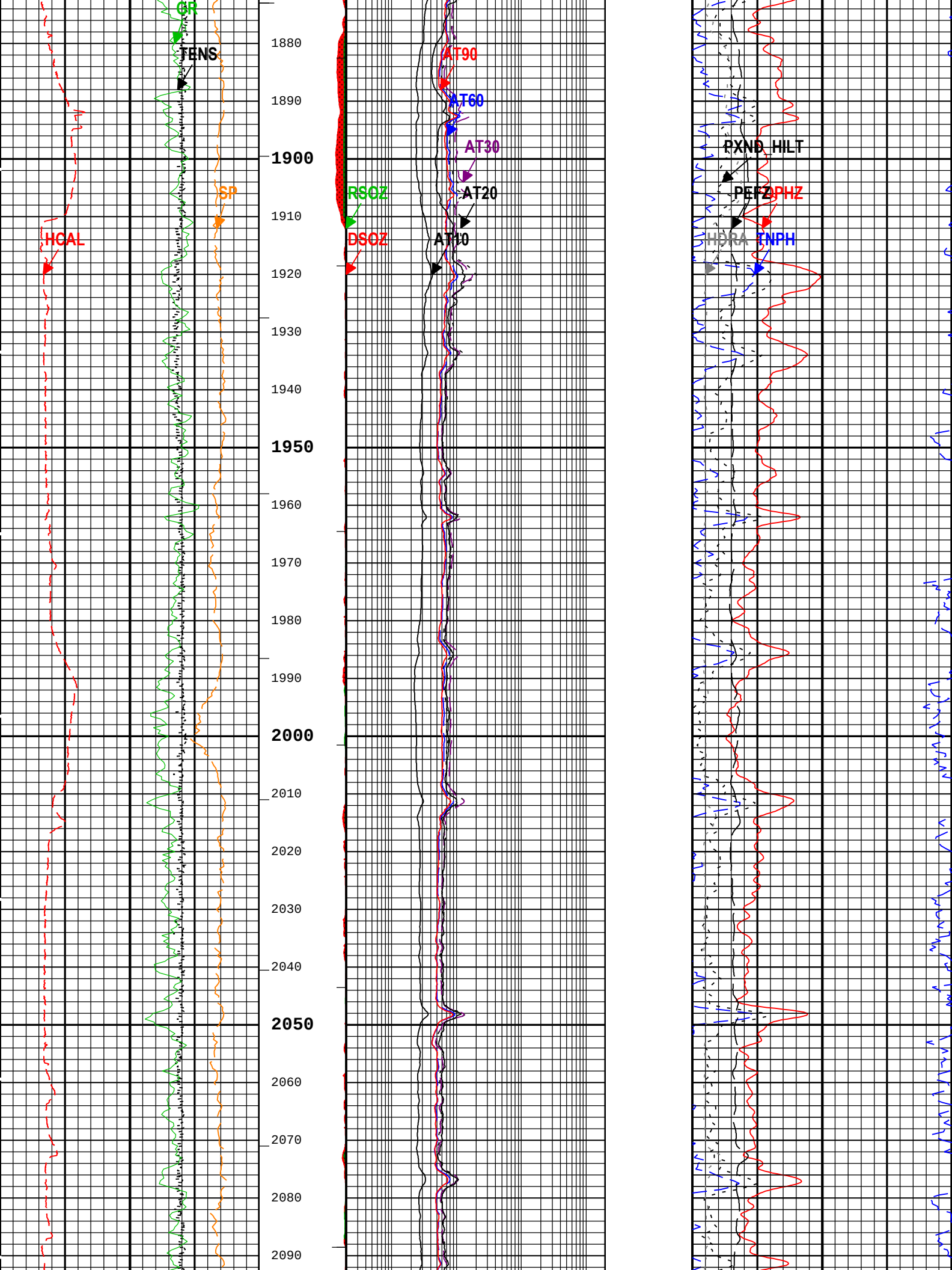
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HDRA TNPH
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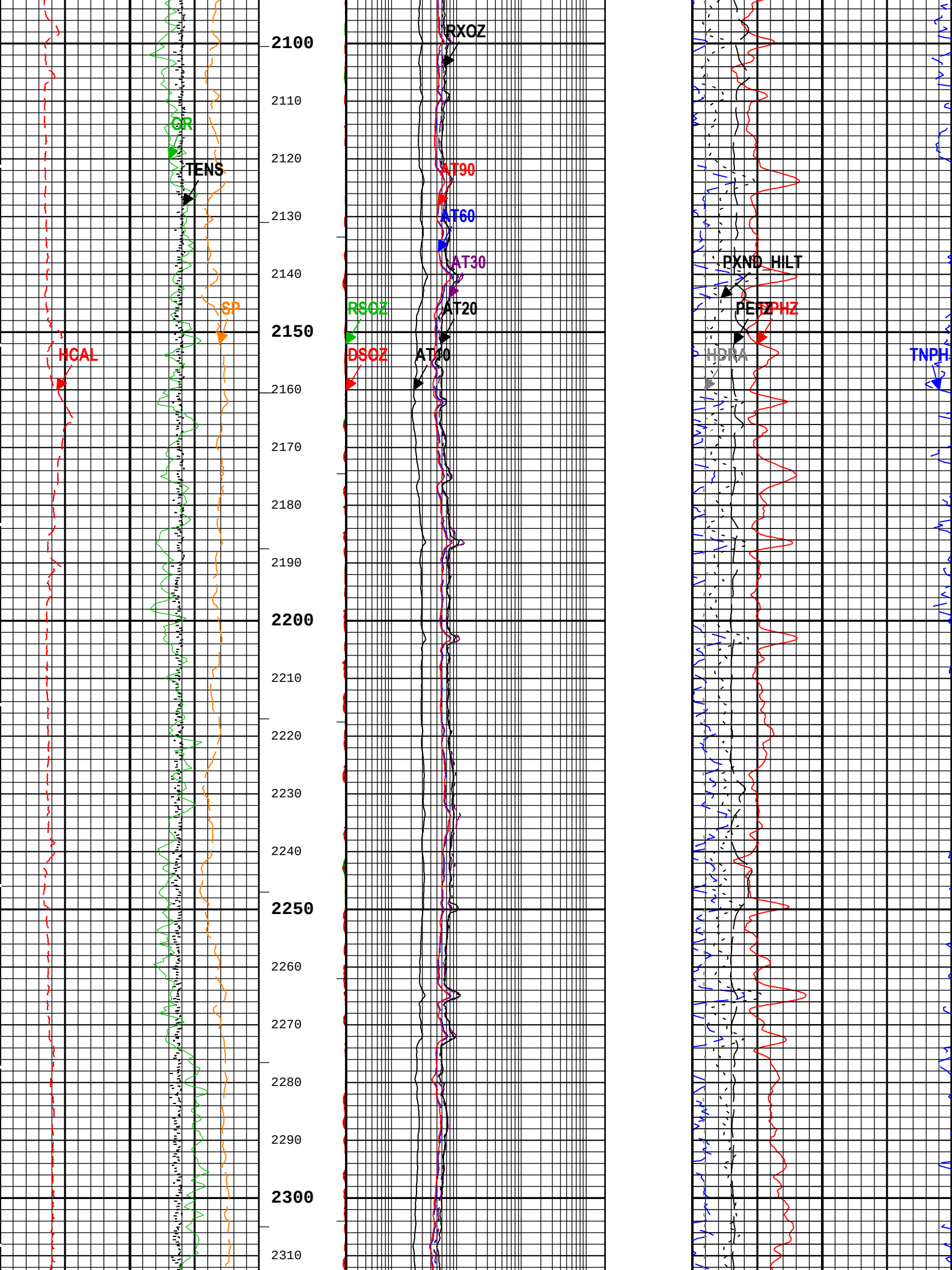
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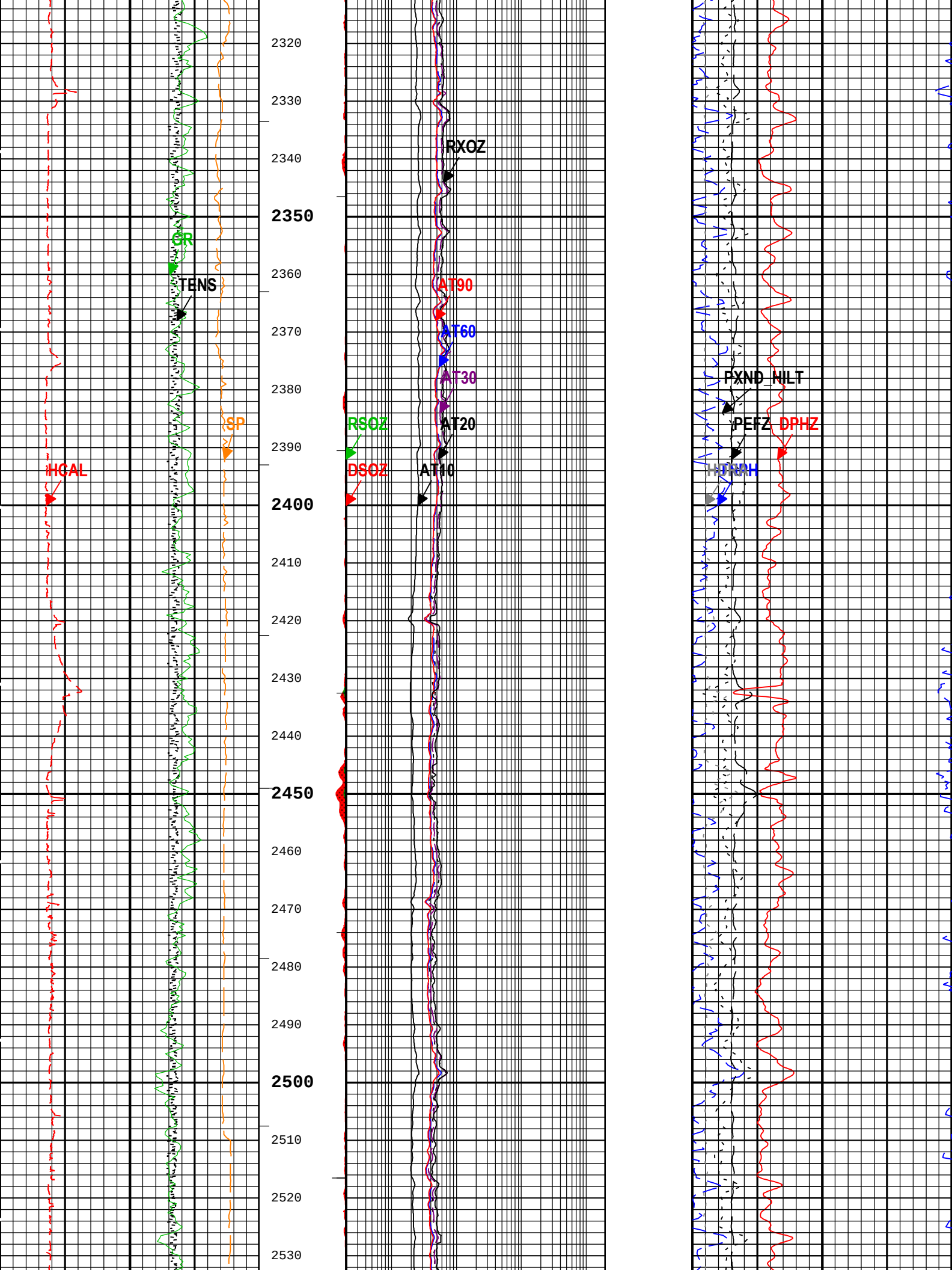
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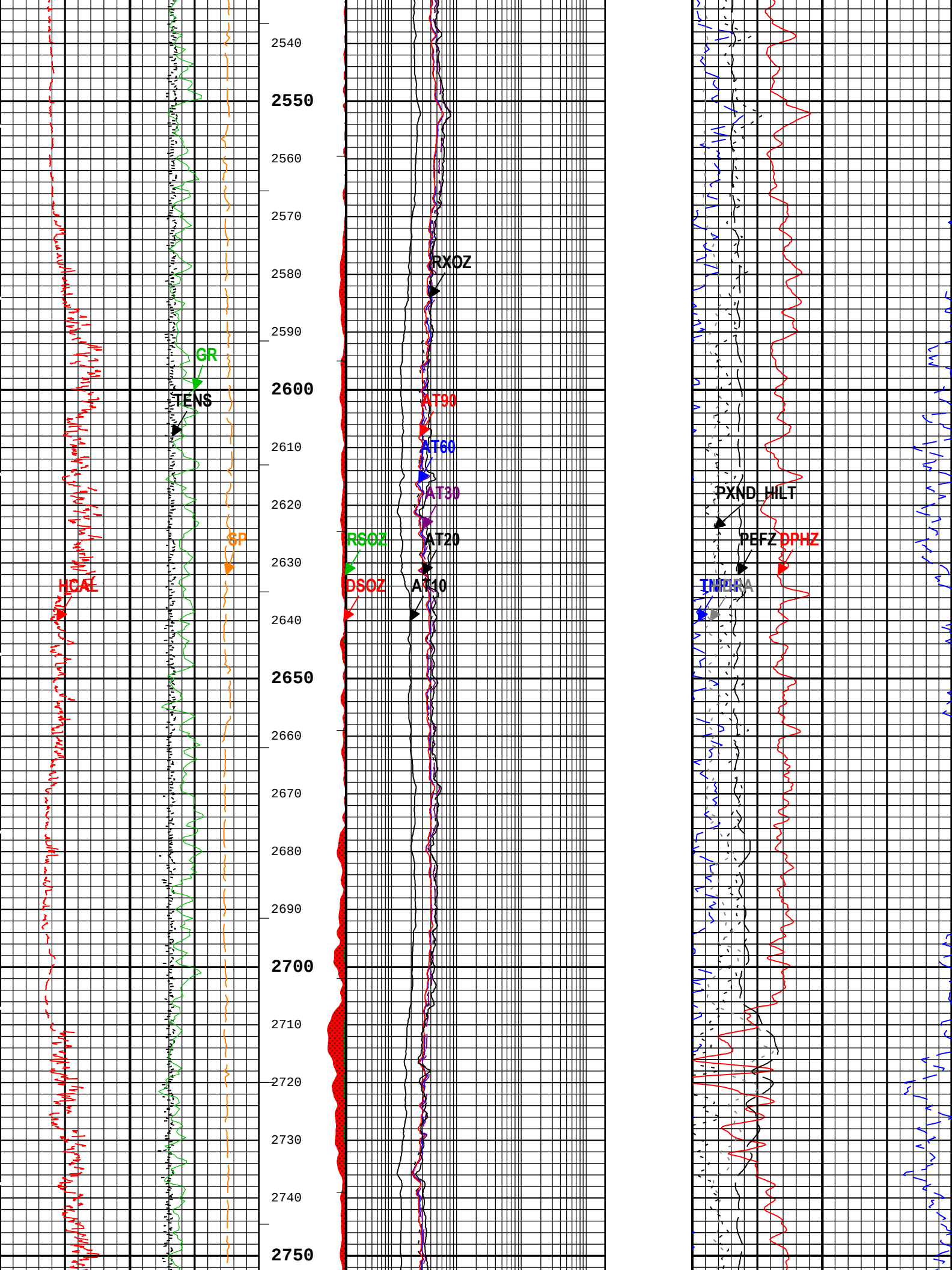
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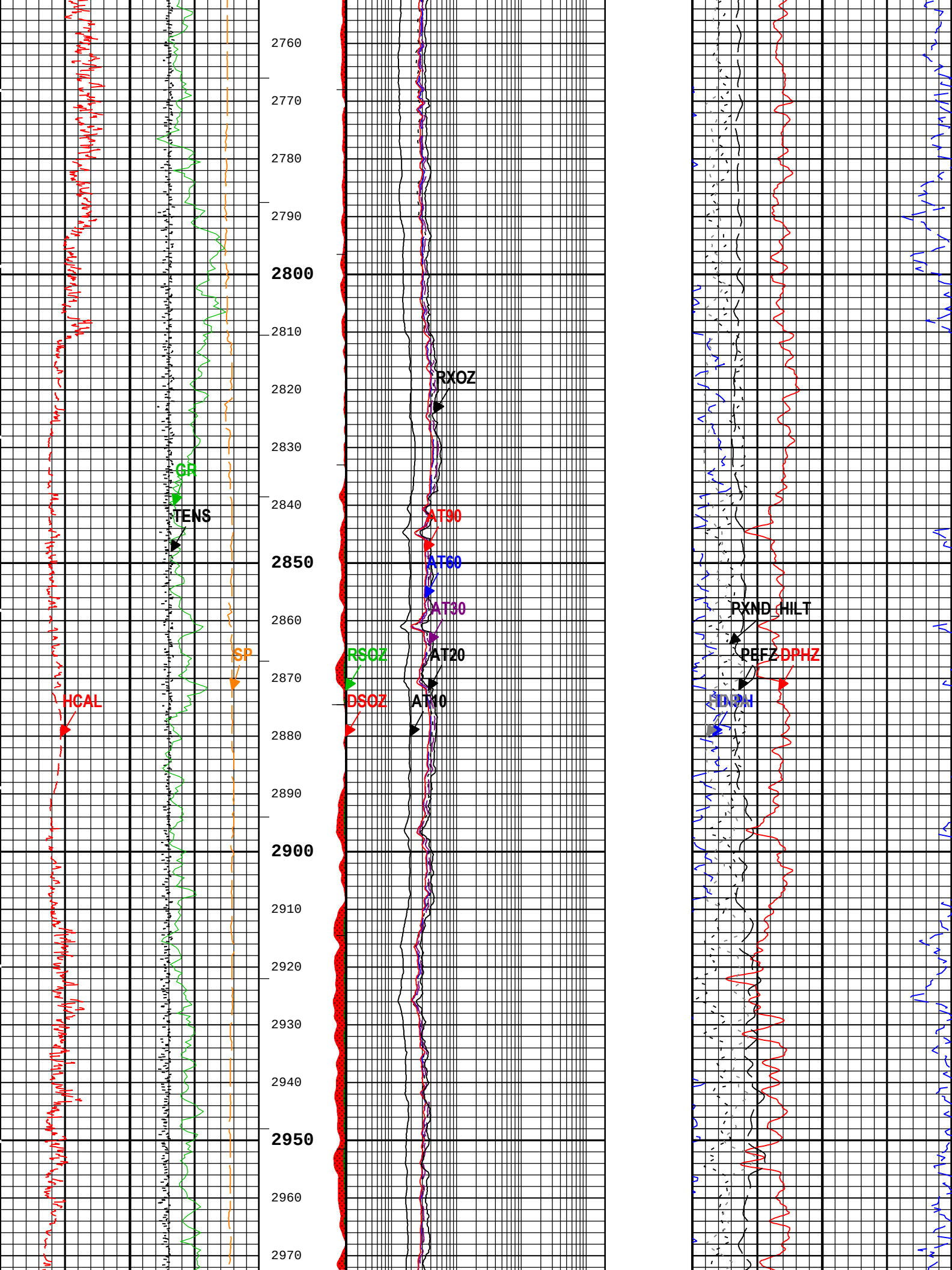
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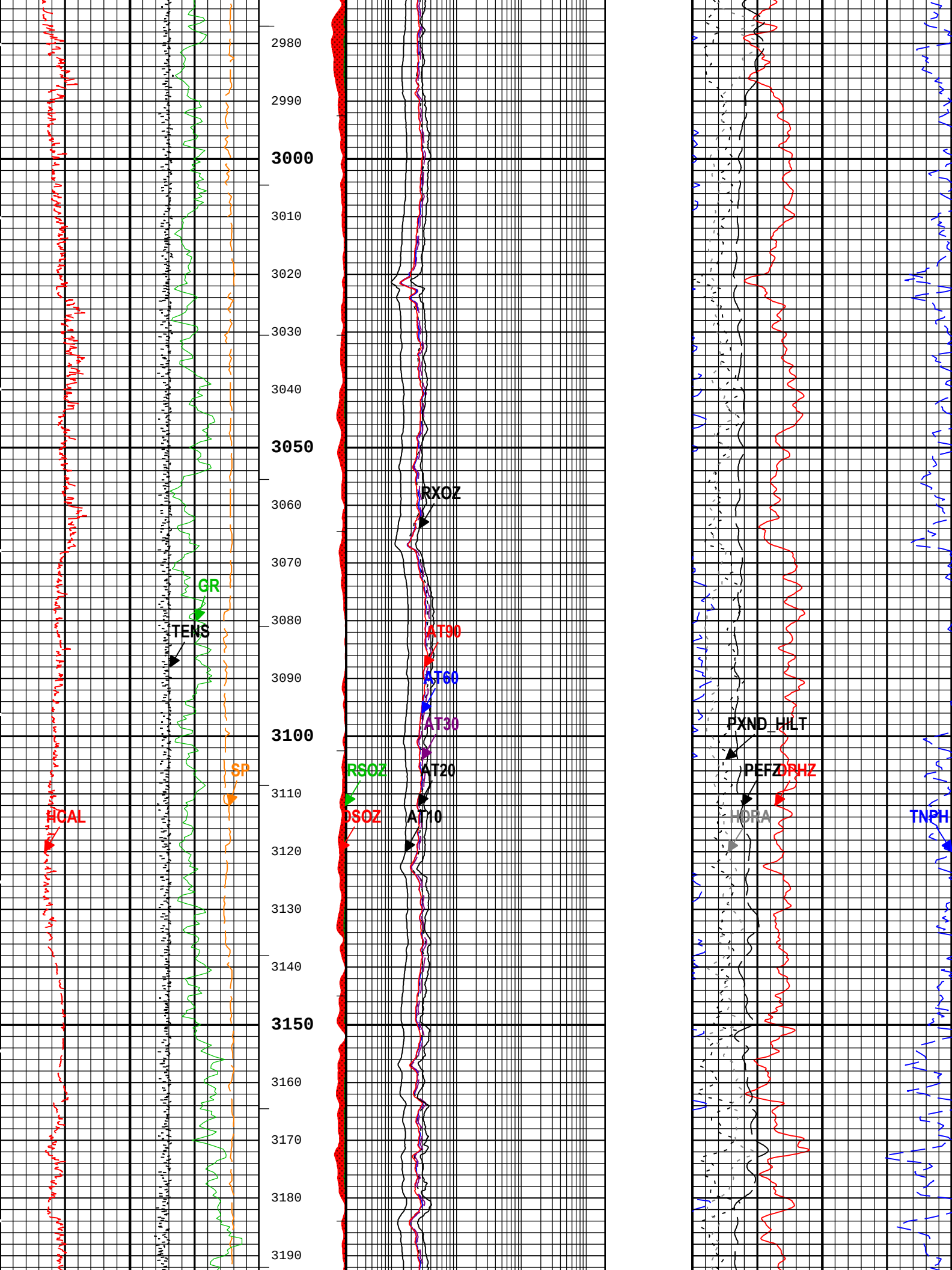
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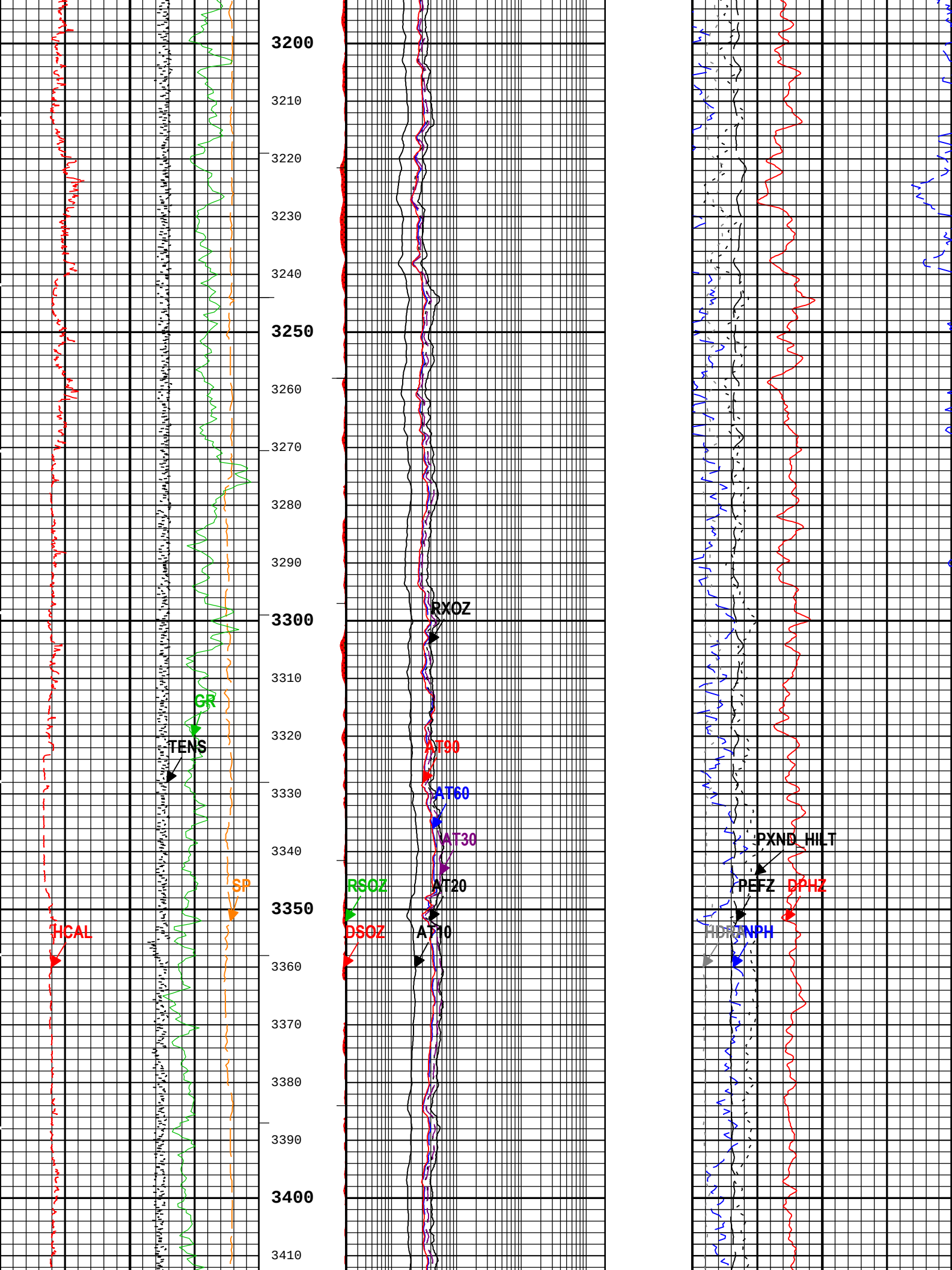
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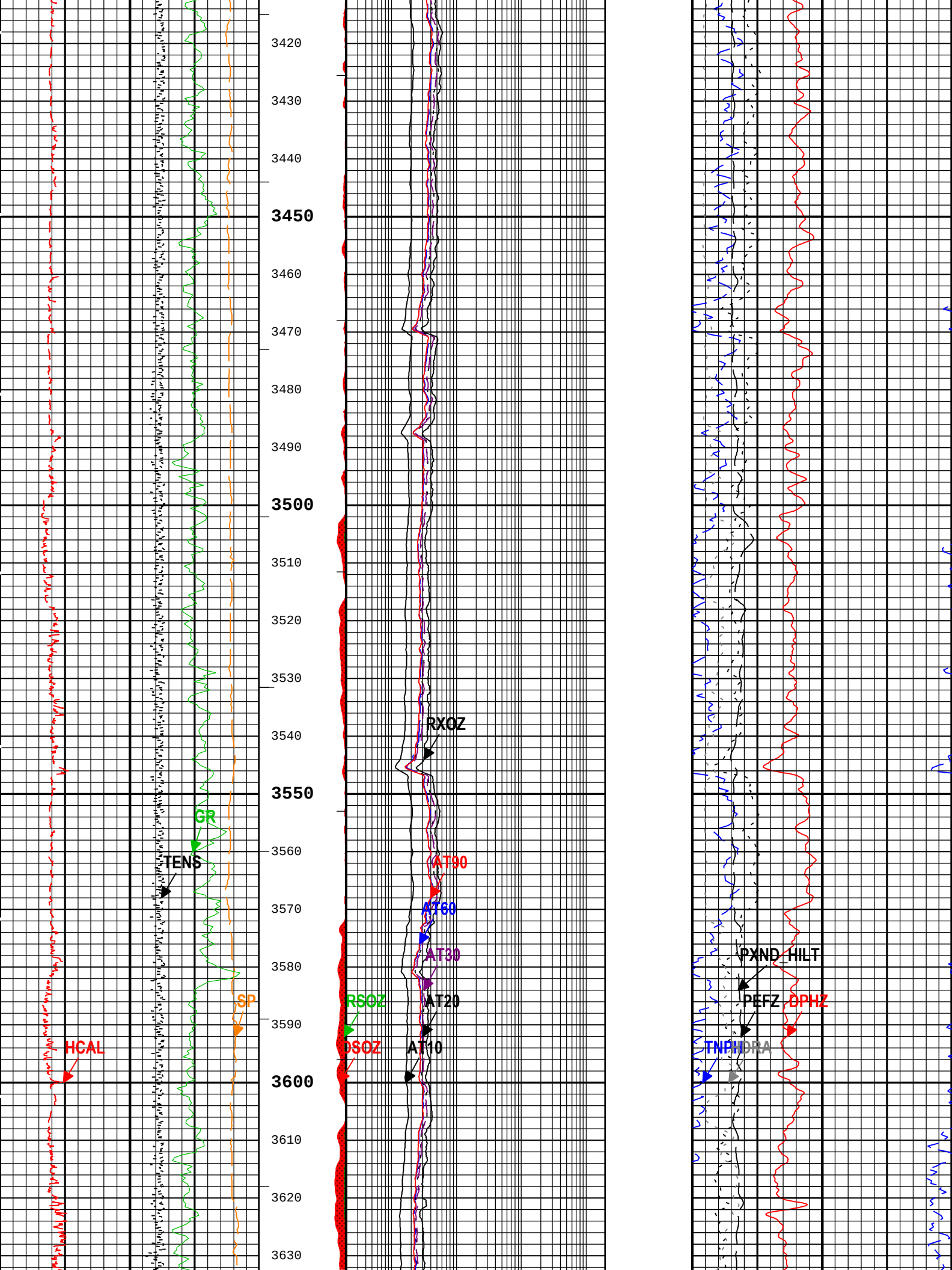
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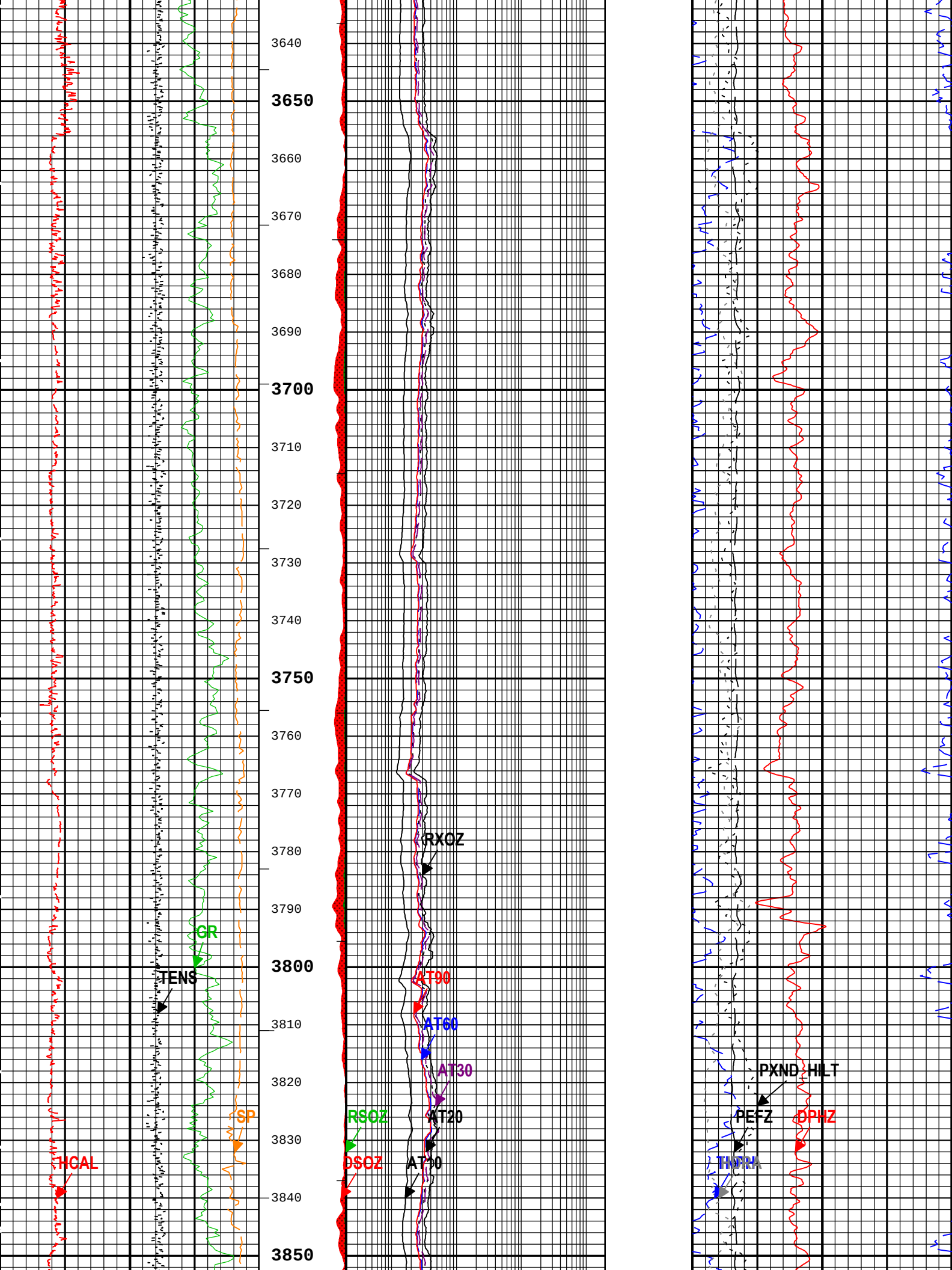
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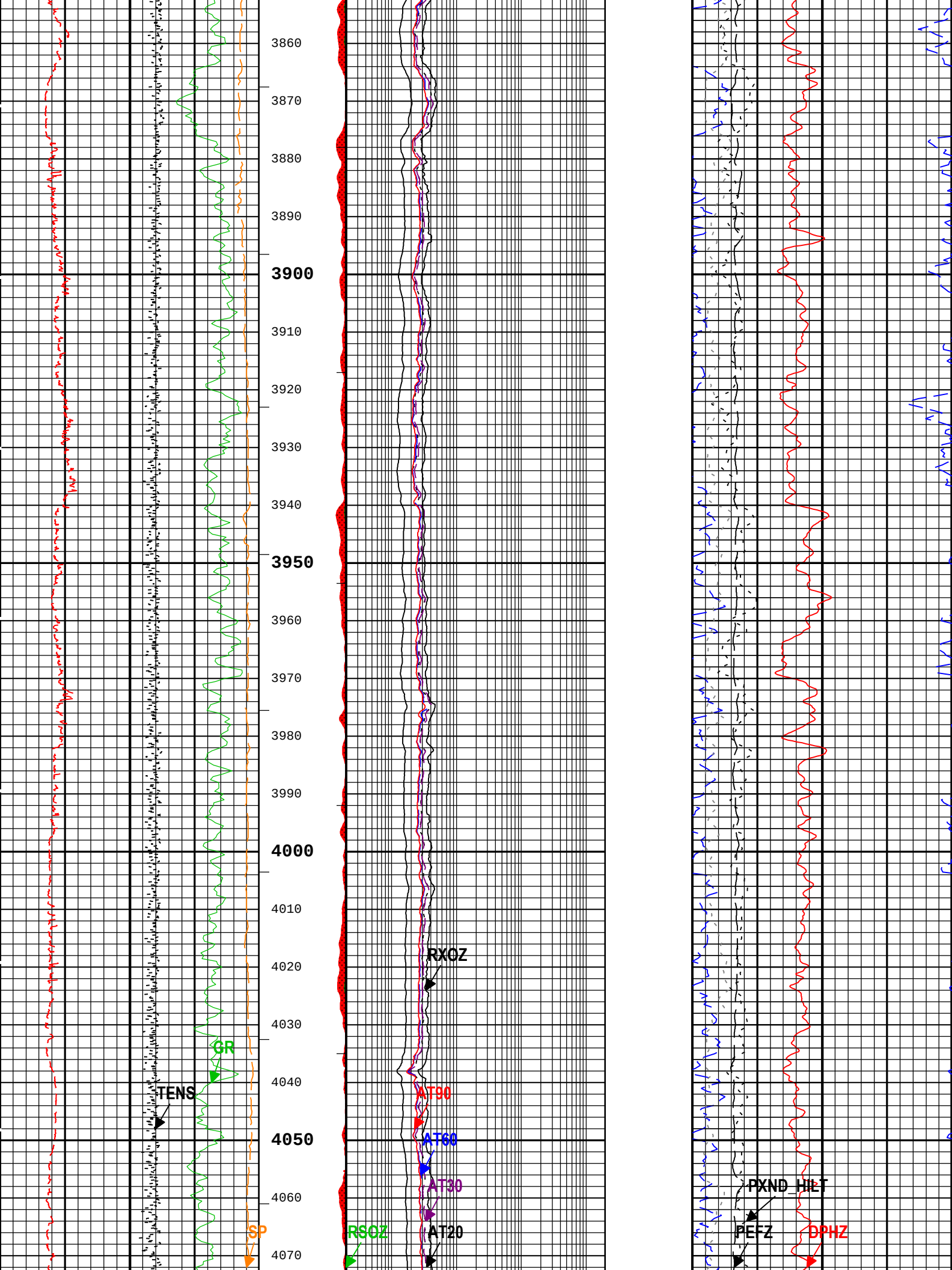
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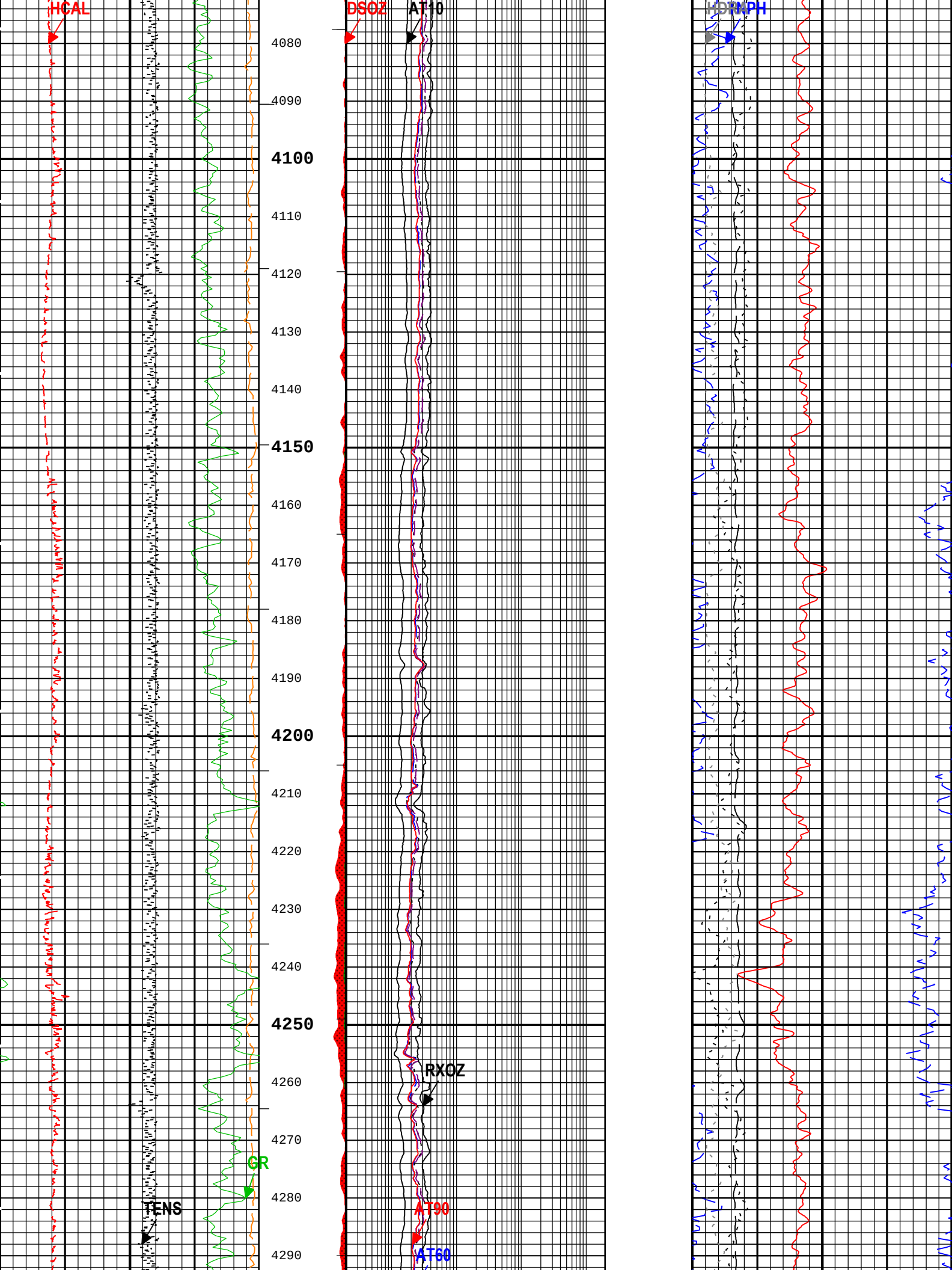
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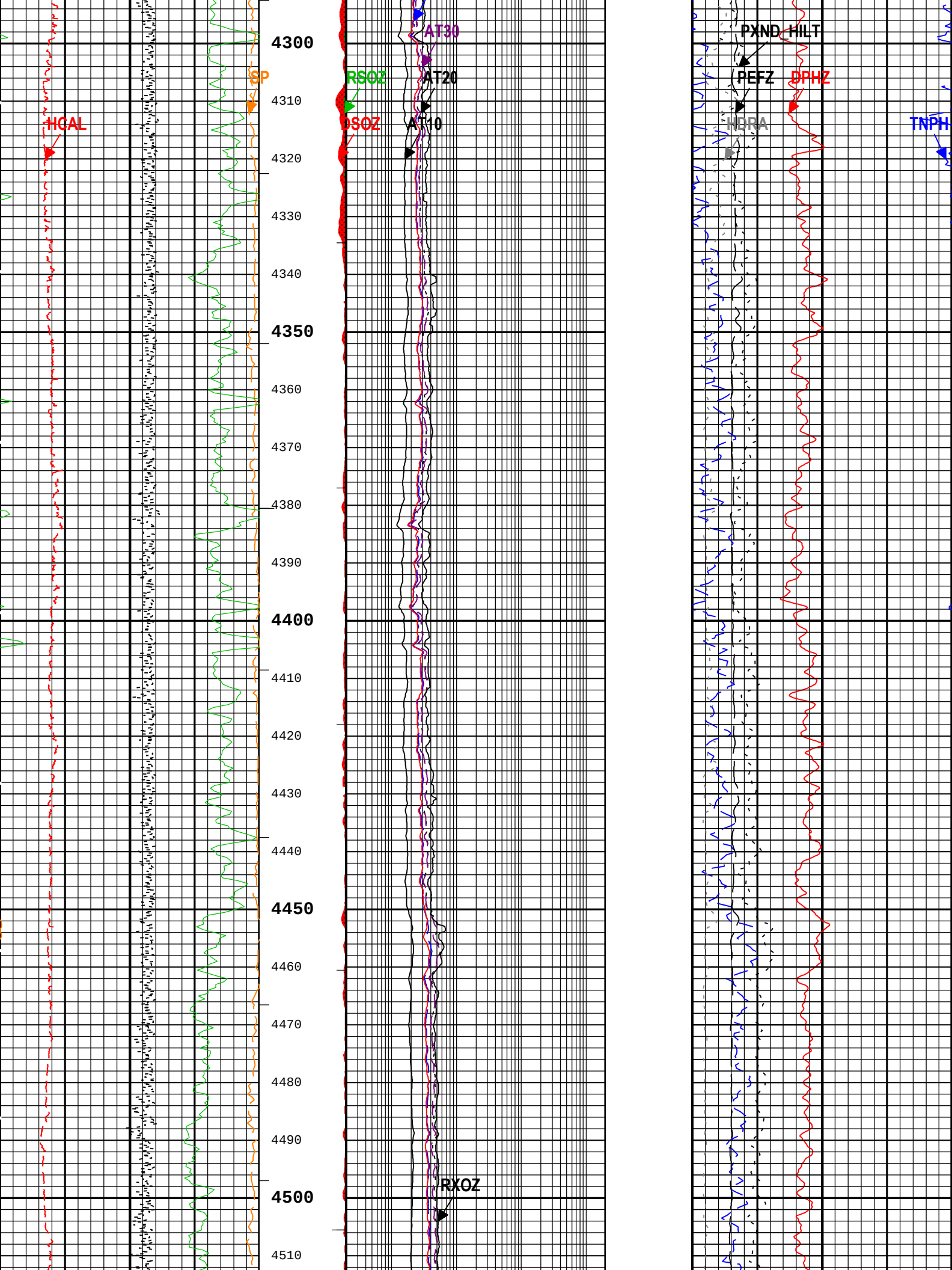
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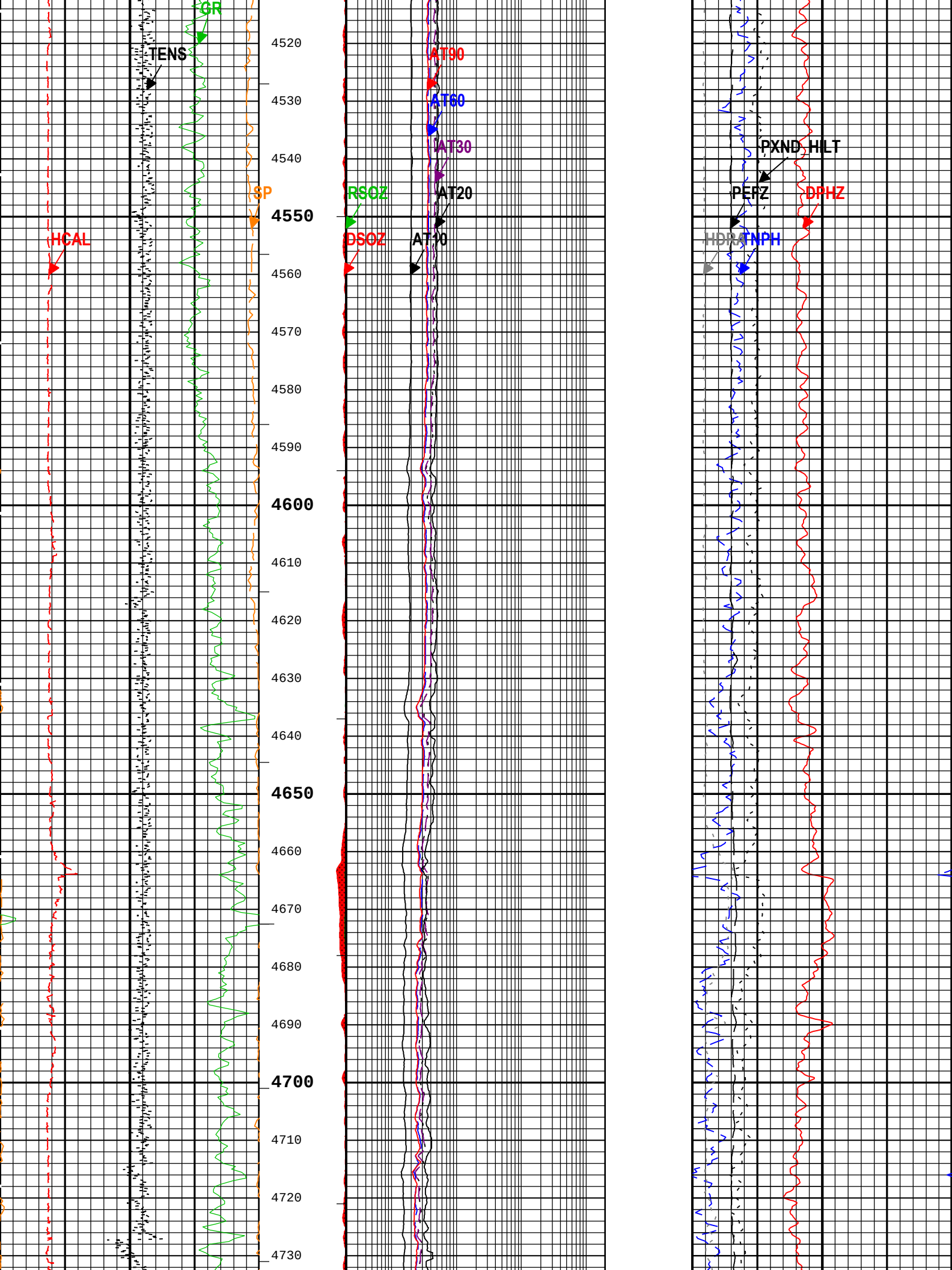
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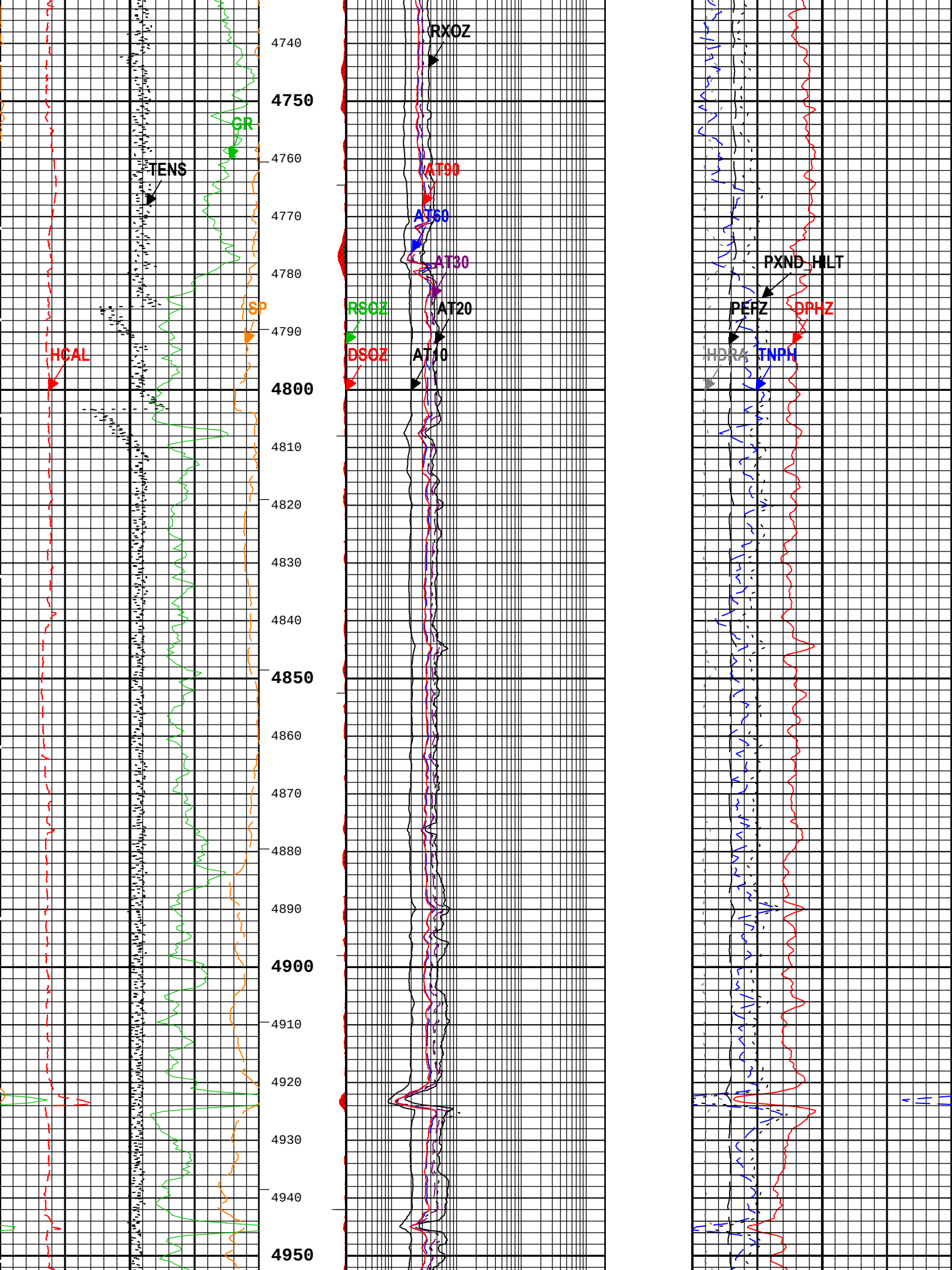
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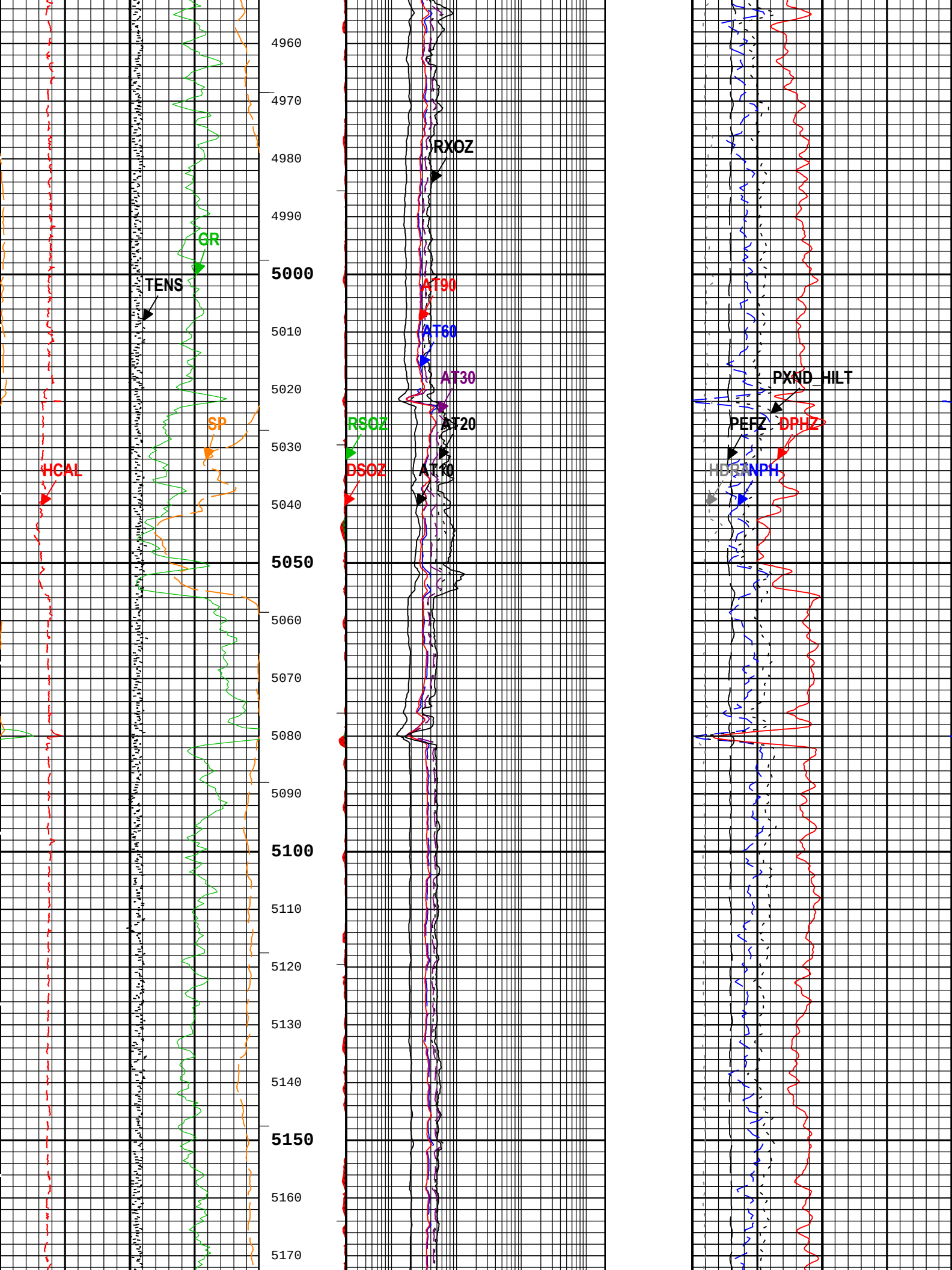
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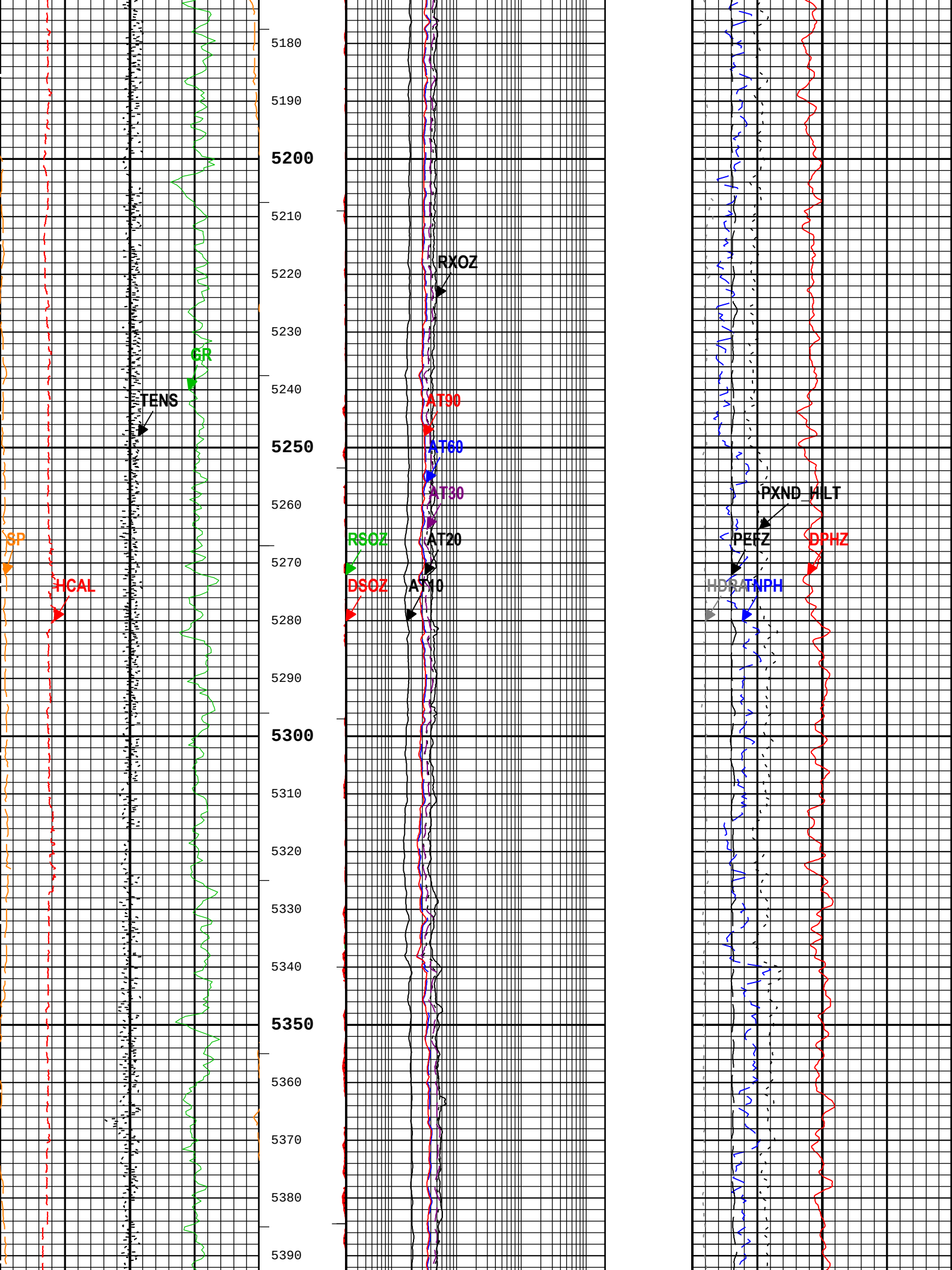
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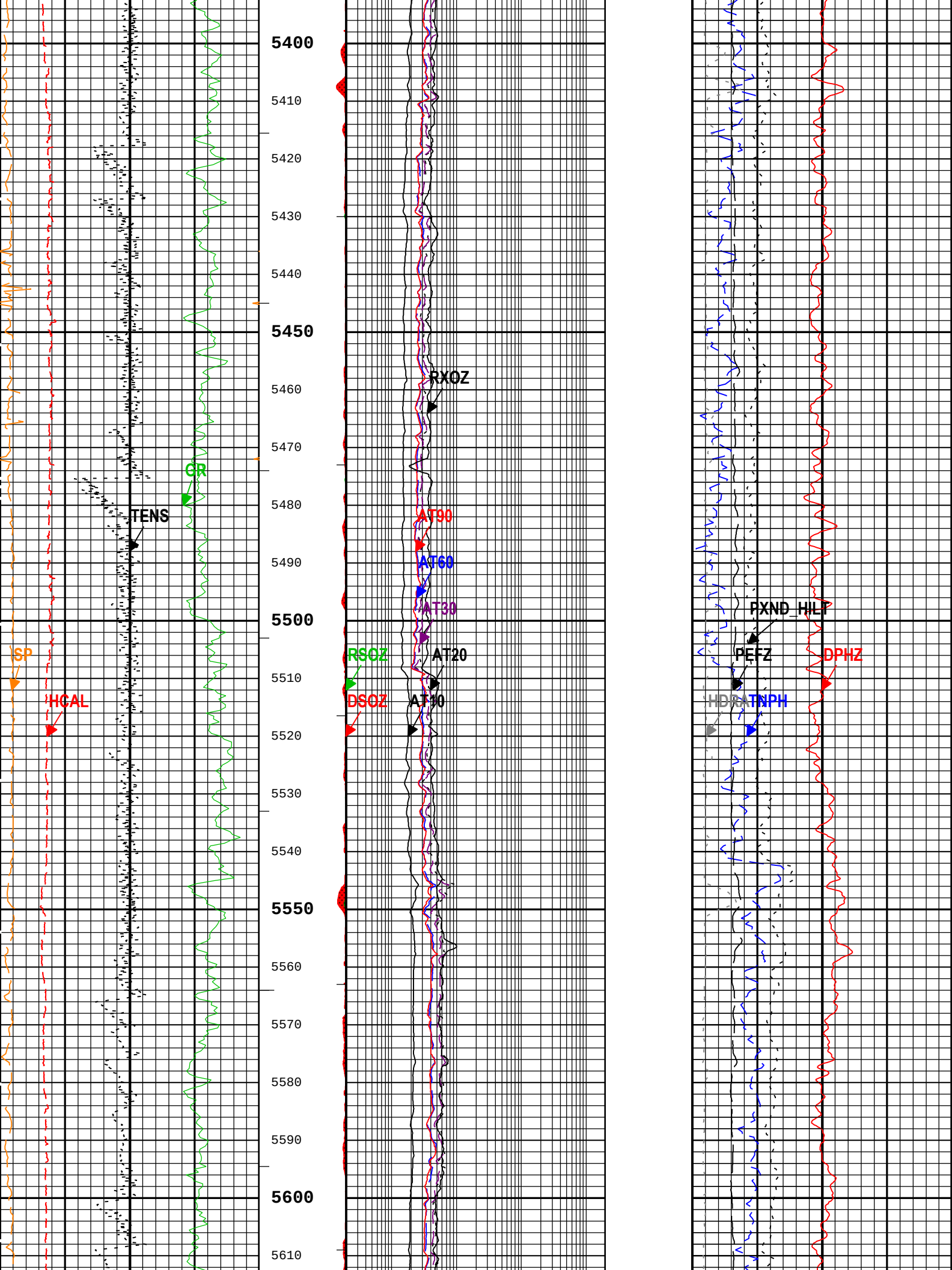
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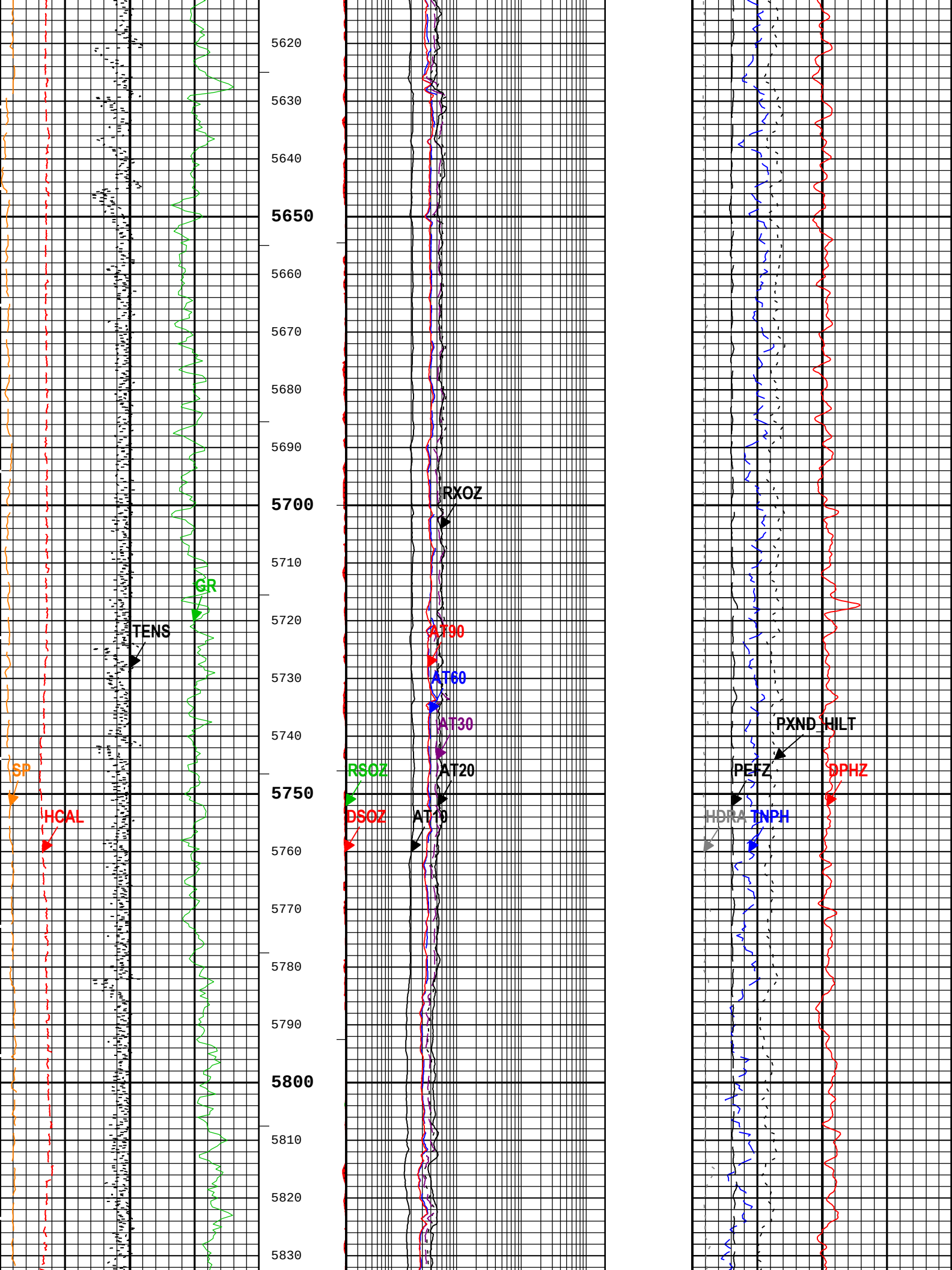
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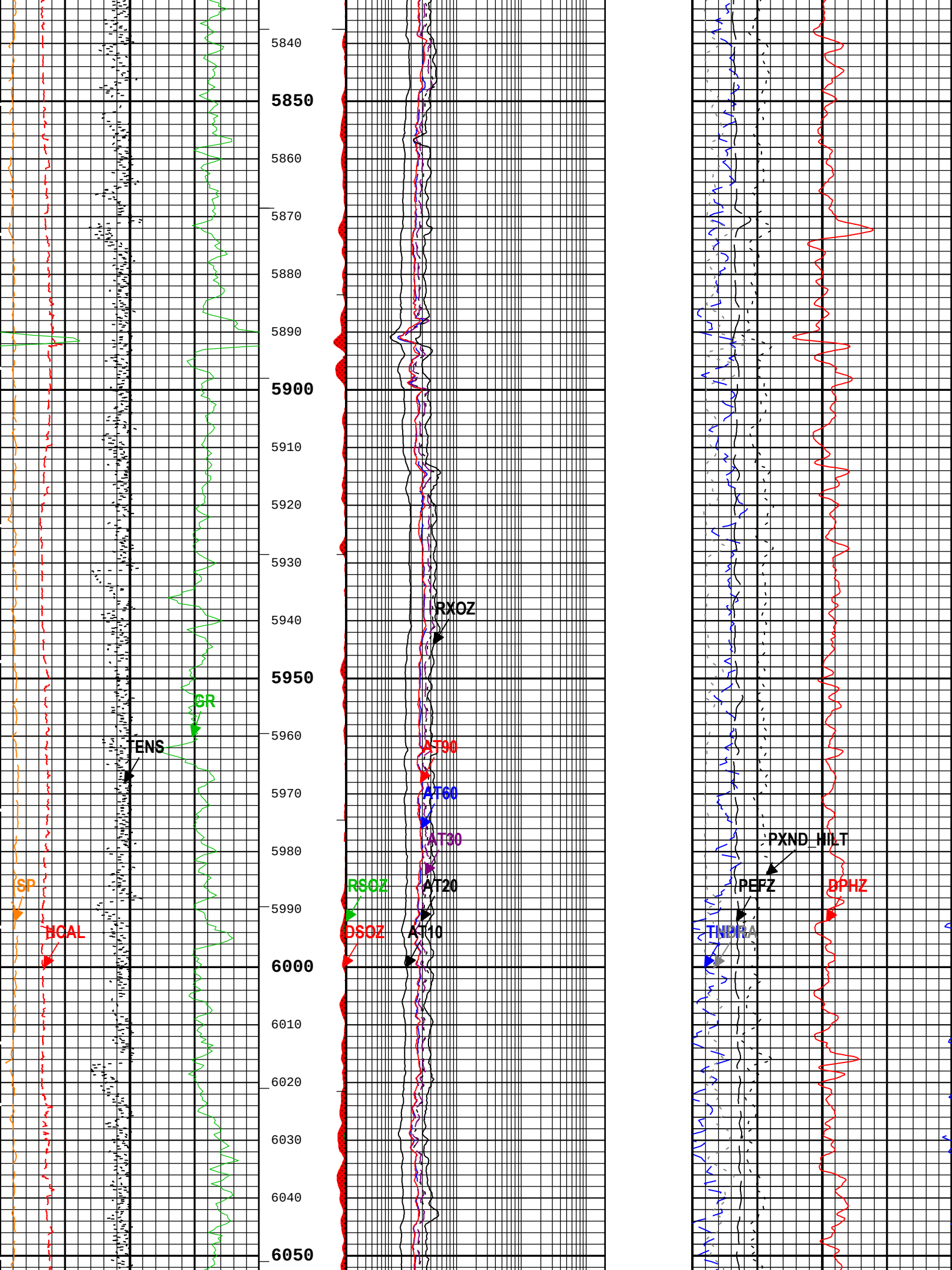
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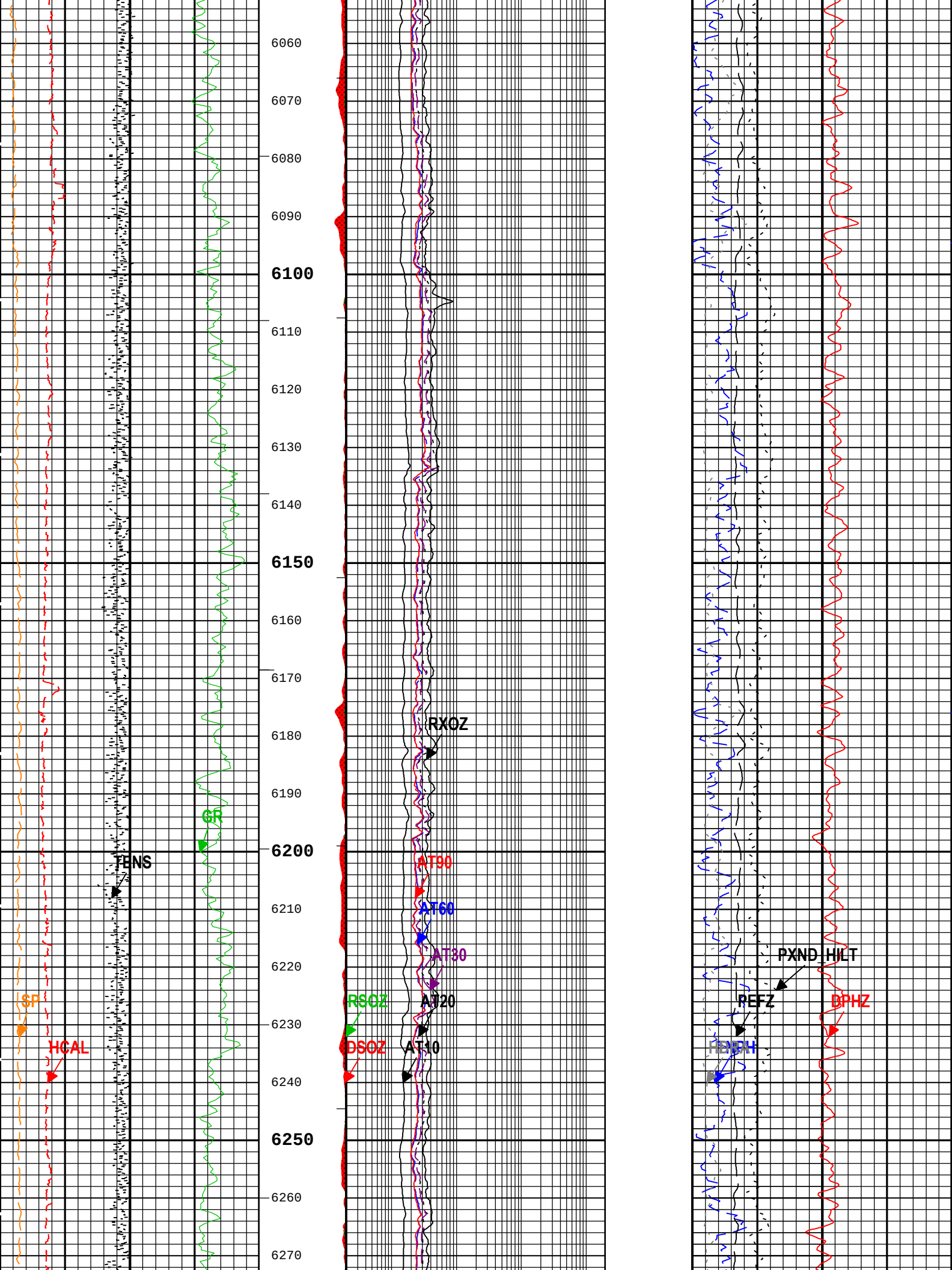
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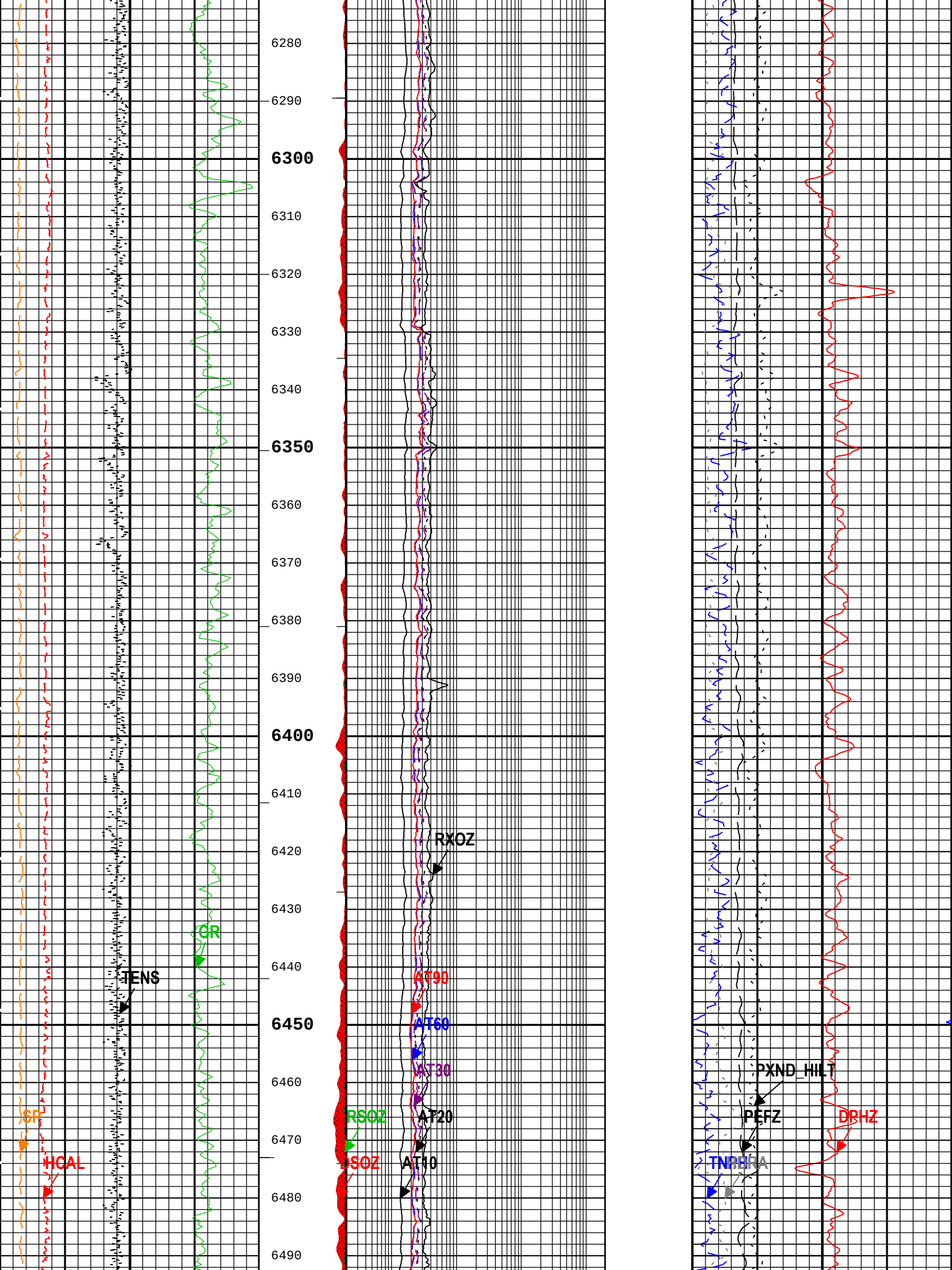
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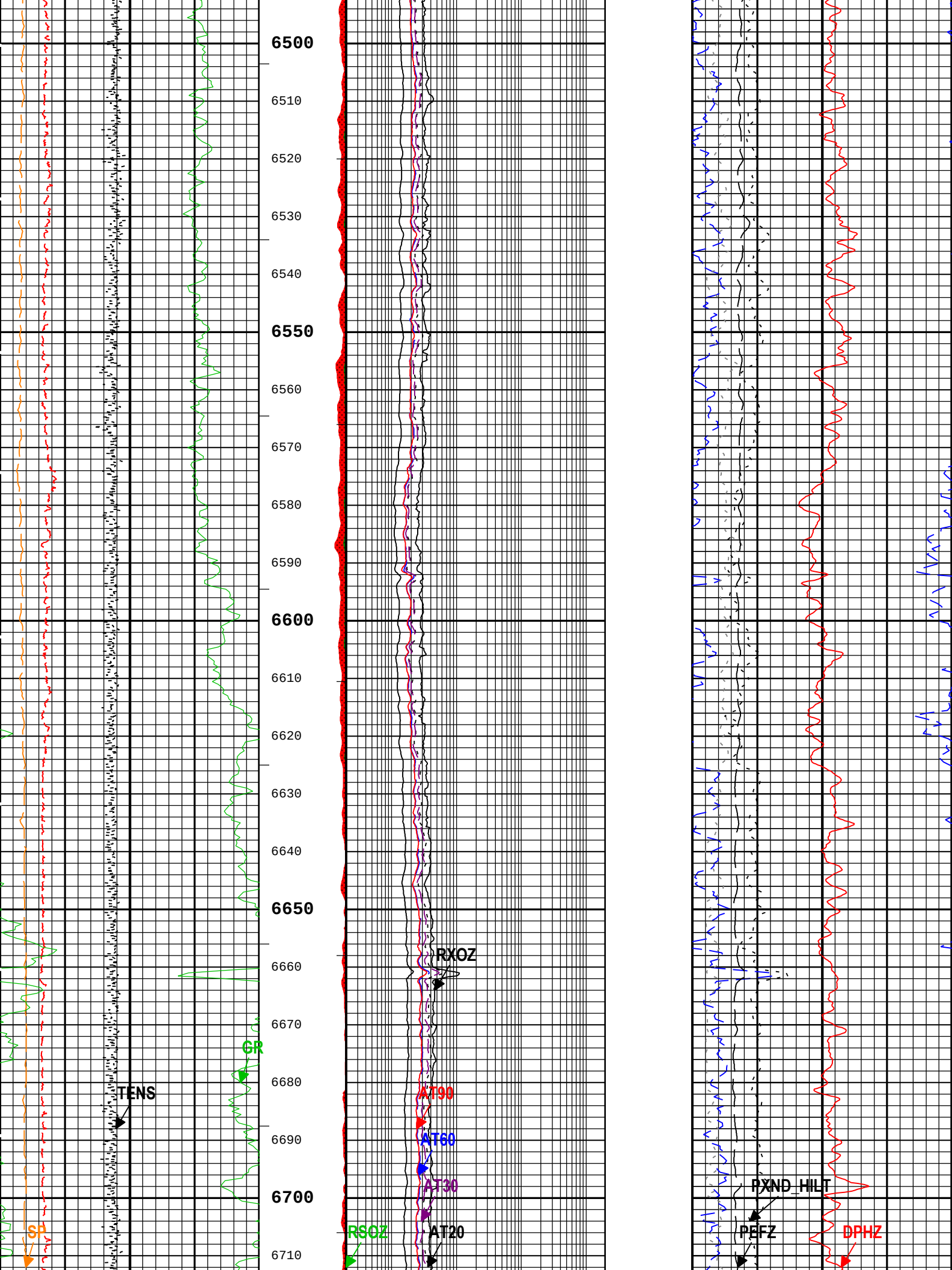
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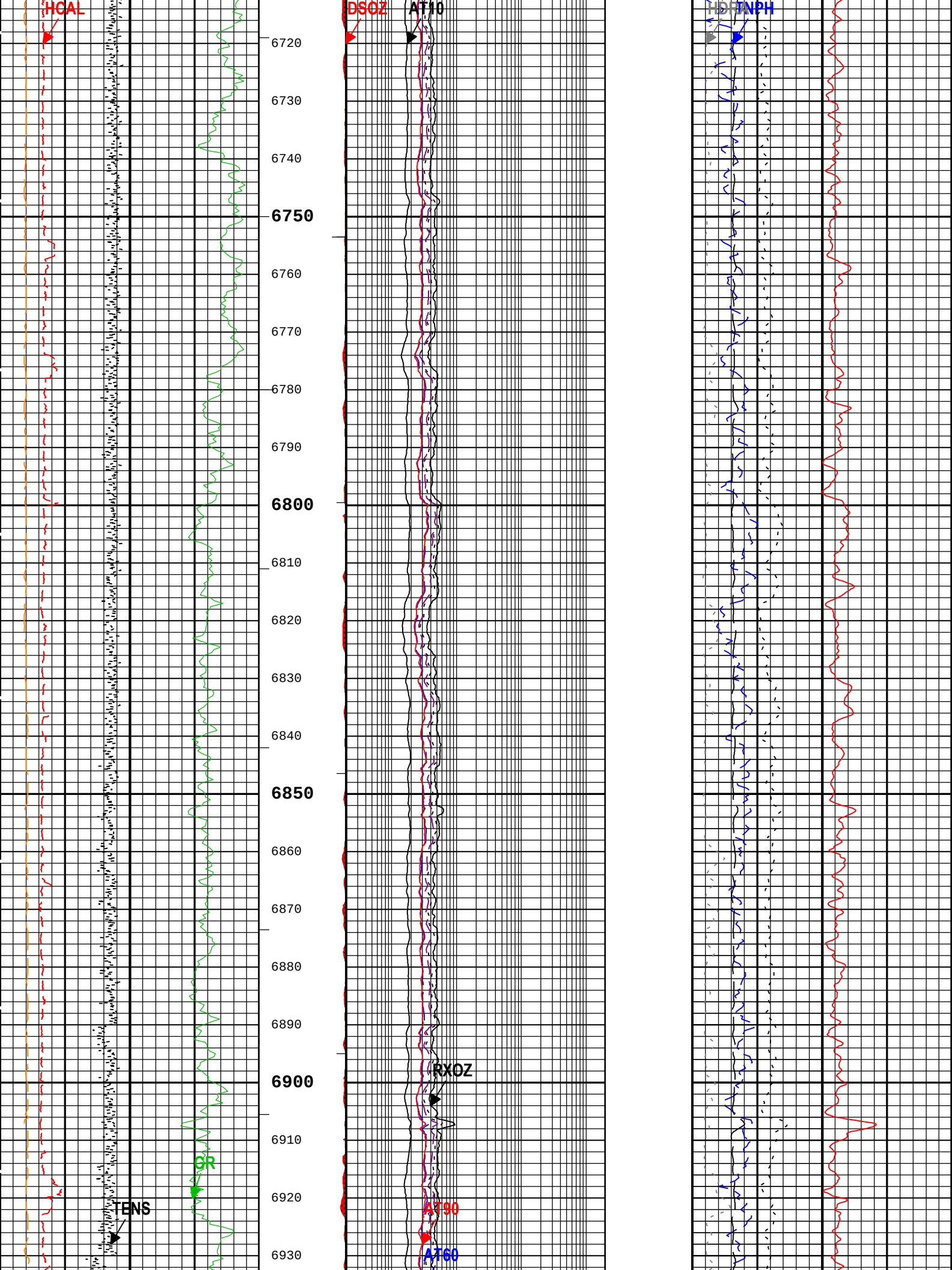
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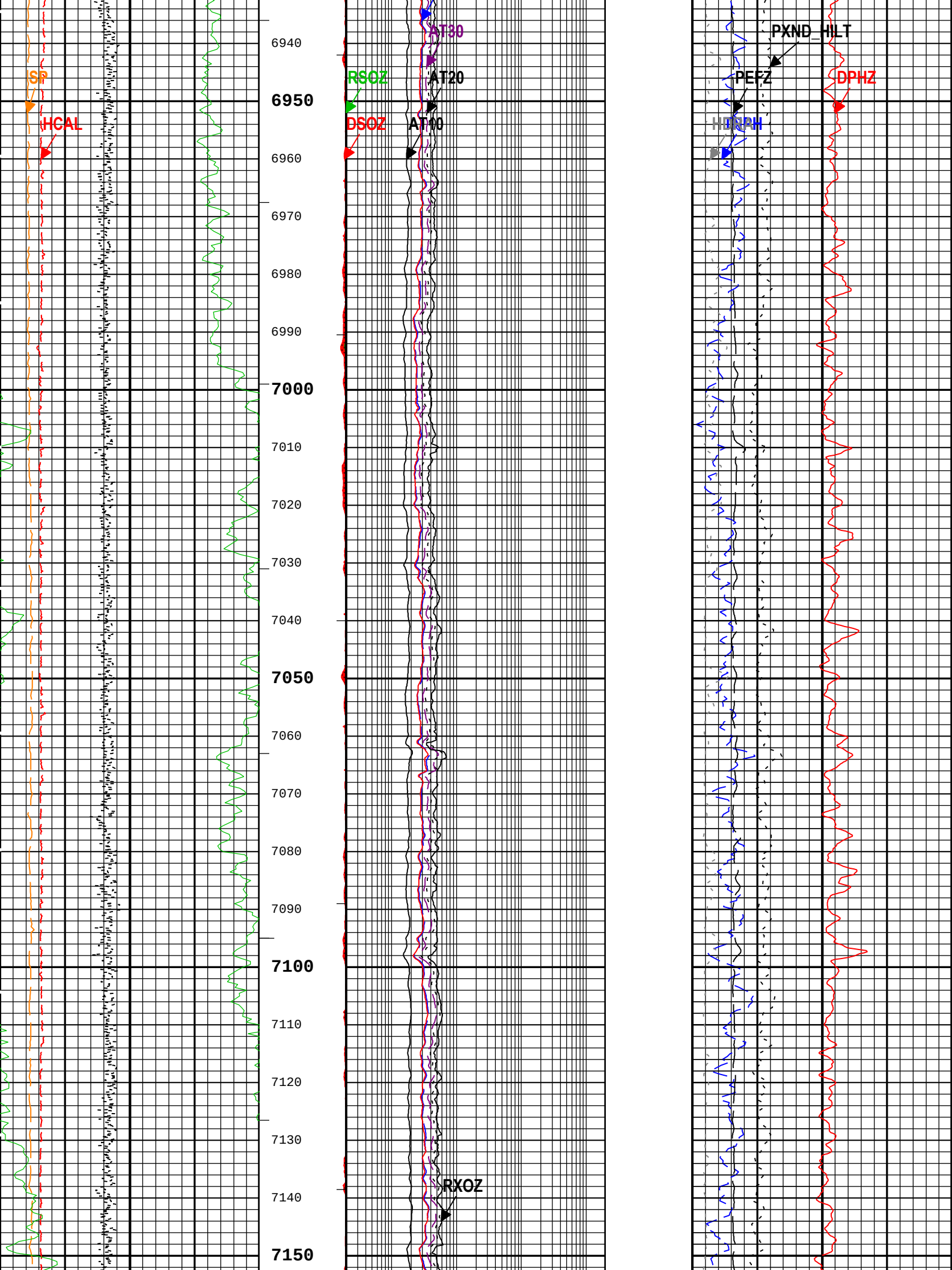
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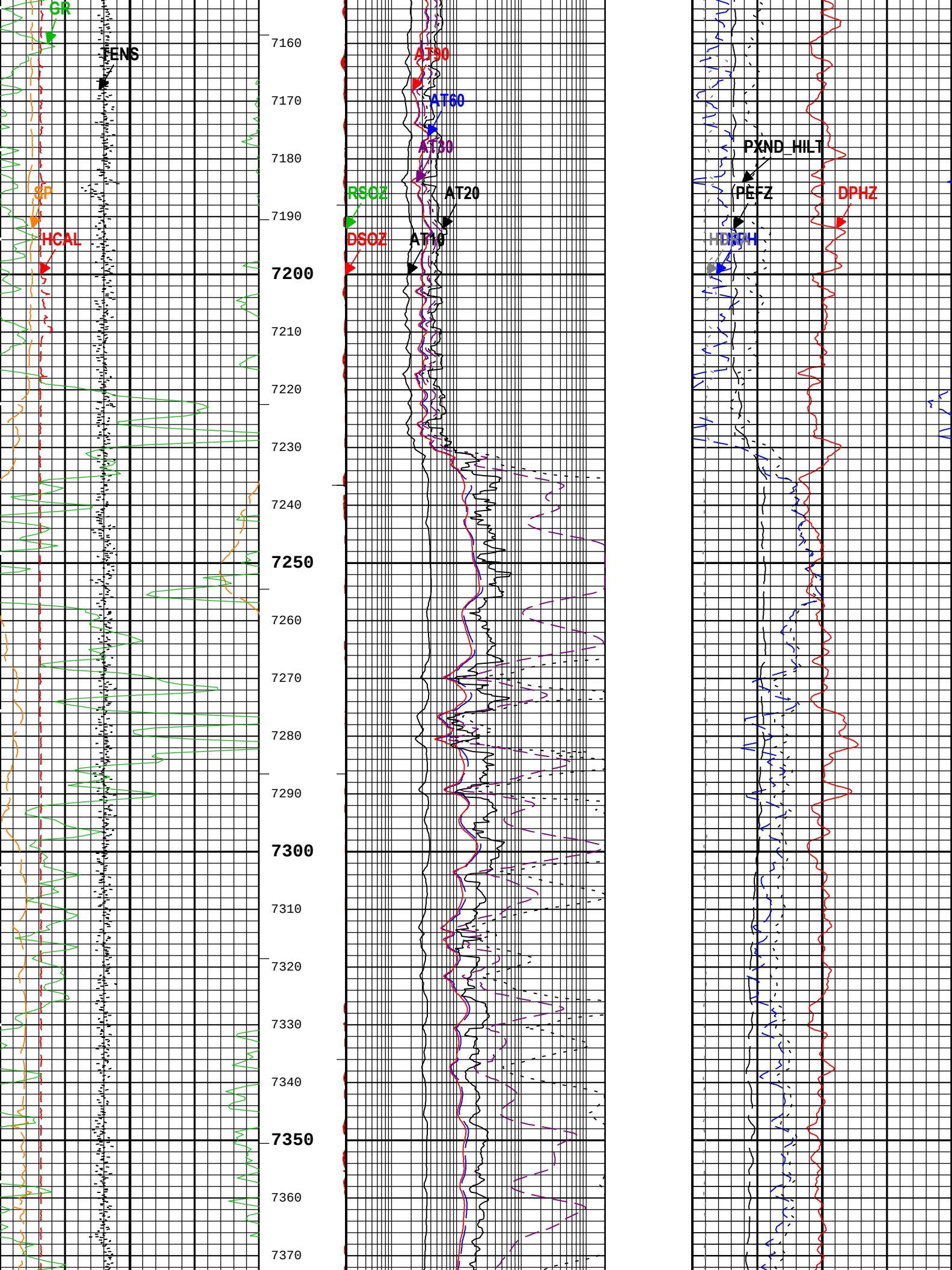
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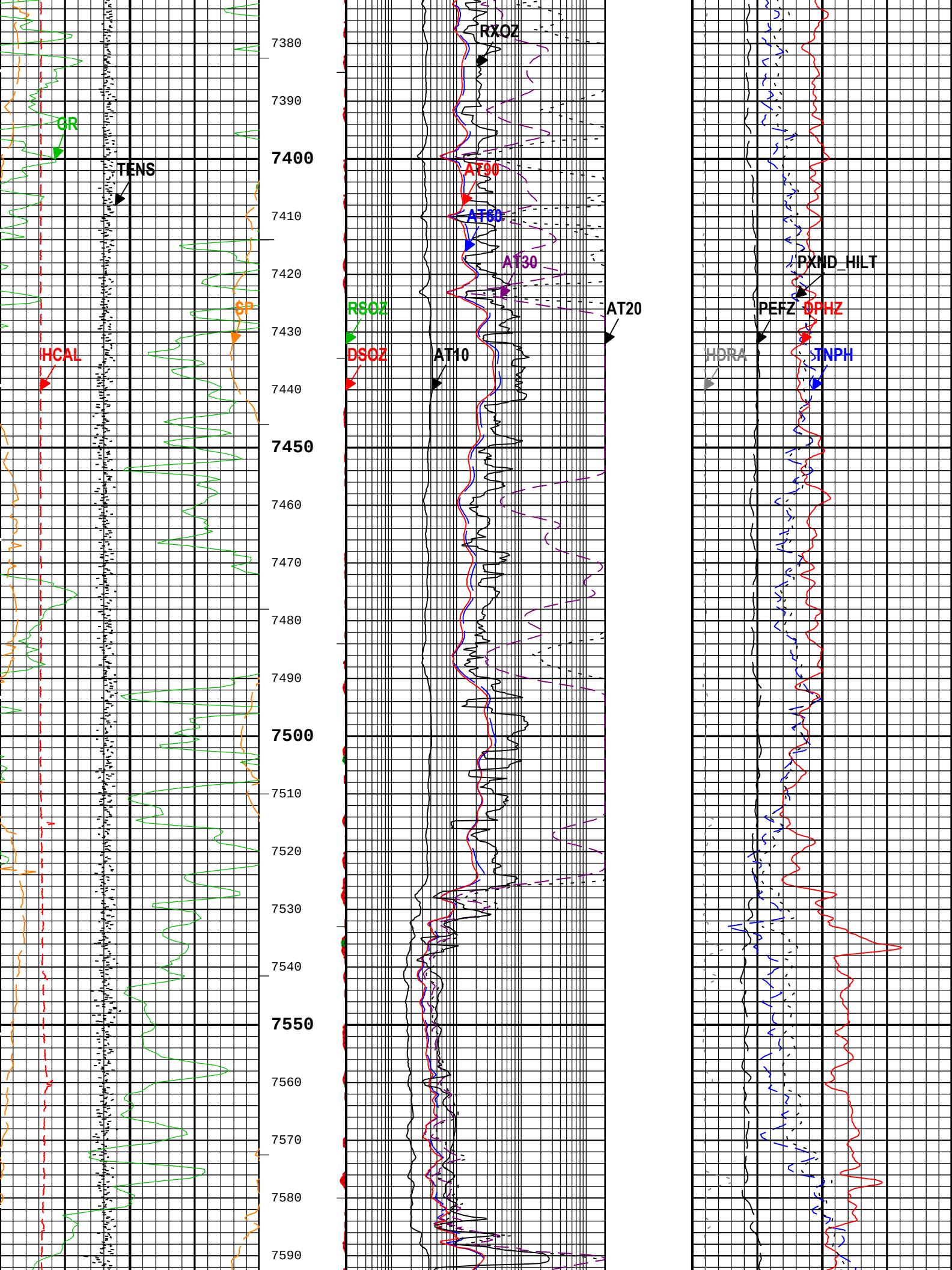
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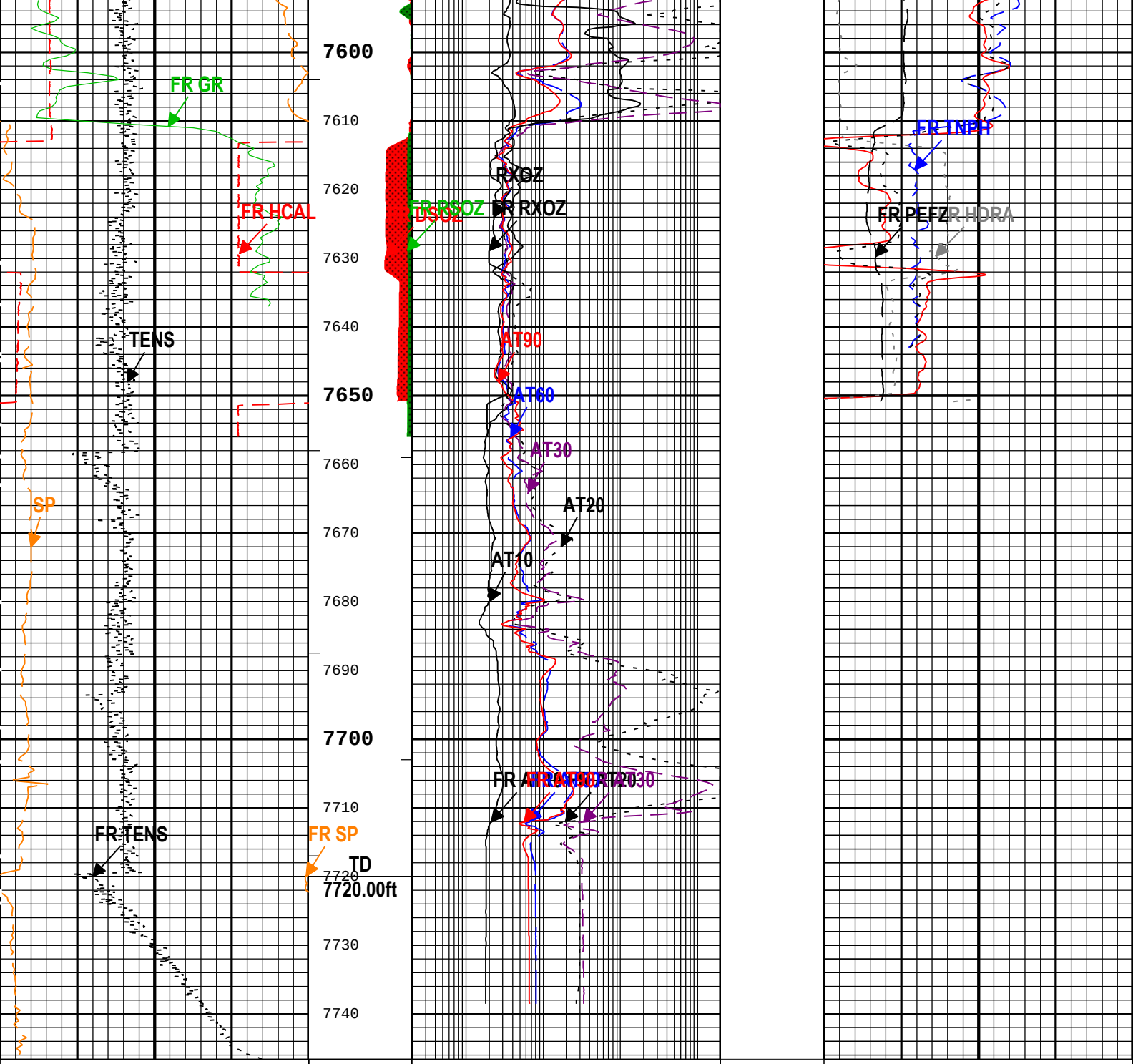


Caliper (HCAL) HDRS-H
6 in 16

Spontaneous Potential (SP) AIT-M
-80 mV 20

Cable Tension (TENS)
10000 lbf 0

Calibrated Gamma Ray (GR) HGNS-H
0 gAPI 150

Standard Resolution Density Standoff (DSOZ) HDRS-H
2.5 in 0

Resistivity Standoff Standard Resolution (RSOZ) HDRS-H
2.5 in 0

DSOA

RSOA

Array Induction Two Foot Resistivity A10 (AT10) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A20 (AT20) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A30 (AT30) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A60 (AT60) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A90 (AT90) AIT-M

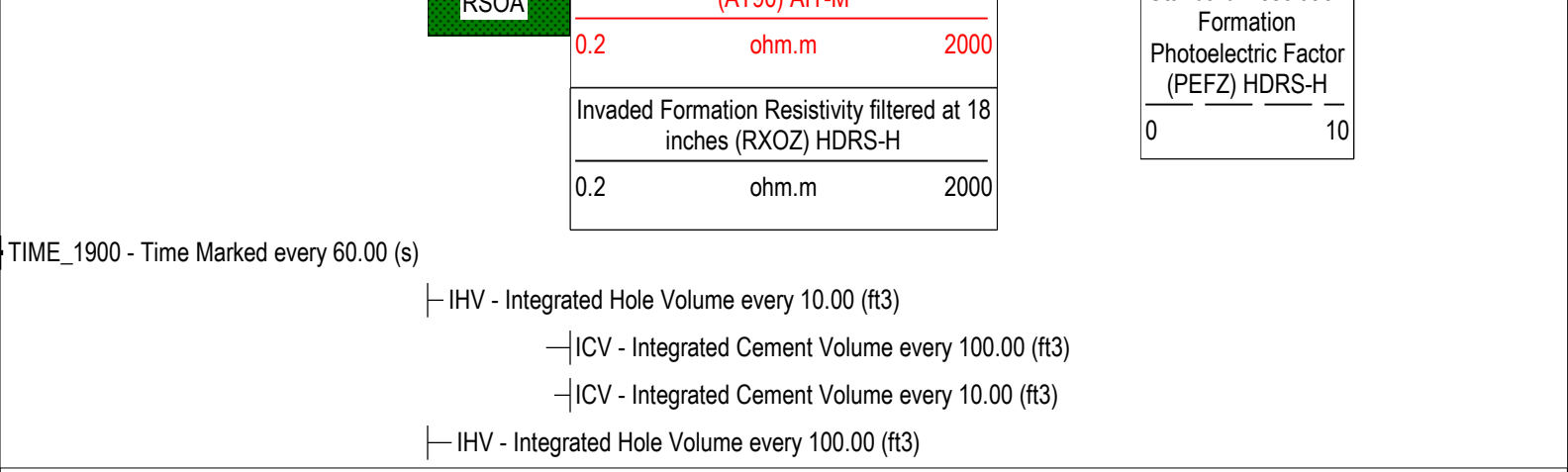
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H
0.3 ft3/ft3 -0.1

Standard Resolution Density Porosity (DPHZ) HDRS-H
0.3 ft3/ft3 -0.1

Crossplot Porosity for Neutron-Density (PXND_HILT)
0.3 ft3/ft3 -0.1

Density Standoff Correction (HDRA) HDRS-H
-0.05 g/cm3 0.45

Standard Resolution



Description: Triple Combo standard resolution template for Platform Express Format: Log (TCOM 5in) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 12-Sep-2019 12:12:17

Channel Processing Parameters

1A: Parameters

Parameter	Description	Tool	Value	Unit
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Standoff	
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BHT	Bottom Hole Temperature	Borehole	204	degF
BS	Bit Size	WLSESSION	7.875	in
BSAL	Borehole Salinity	Borehole	950	ppm
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0	in
CBLO	Casing Bottom (Logger)	WLSESSION	1546	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	8.625	in
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	9.7	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DHC	Density Hole Correction	HDRS-H	Bit Size	
EDF	Elevation of Derrick Floor Above Permanent Datum	WLSESSION	12	ft
EPD	Elevation of Permanent Datum (PDAT) above Mean Sea Level	WLSESSION	5139	ft
FCD	Future Casing (Outer) Diameter	WLSESSION	4.5	in
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(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GGRD	Geothermal Gradient	Borehole	1	0.01 degF/ft
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	REMS(RT)	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	GTEM_LINEST(RT)	
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	68	degF
MST	Mud Sample Temperature	Borehole	68	degF
PDAT	Permanent Datum	WLSESSION	GL	
RMFS	Resistivity of Mud Filtrate Sample	Borehole	0.15	ohm.m
RMS	Resistivity of Mud Sample	Borehole	0.2	ohm.m
SHT	Surface Hole Temperature	Borehole	68	degF
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft

TD	Total Measured Depth	Borehole	7720	ft

Tool Control Parameters

1A: Parameters

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

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
MAX_LOG_SPEED	1719	12-Sep-2019 07:22:57	12-Sep-2019 07:24:04	7746.57	7723.56
MAX_LOG_SPEED	1840	12-Sep-2019 07:24:04	12-Sep-2019 07:39:21	7723.56	7644.3
MAX_LOG_SPEED	1690	12-Sep-2019 07:39:21	12-Sep-2019 07:43:26	7644.3	7592.79
MAX_LOG_SPEED	1777	12-Sep-2019 07:43:26	12-Sep-2019 07:55:43	7592.79	7255.78
MAX_LOG_SPEED	1884	12-Sep-2019 07:55:43	12-Sep-2019 07:58:47	7255.78	7183.46
MAX_LOG_SPEED	1979	12-Sep-2019 07:58:47	12-Sep-2019 08:34:31	7183.46	6248.69
MAX_LOG_SPEED	1803	12-Sep-2019 08:34:31	12-Sep-2019 08:35:32	6248.69	6221.64
MAX_LOG_SPEED	1921	12-Sep-2019 08:35:32	12-Sep-2019 08:52:52	6221.64	5799.11
MAX_LOG_SPEED	1810	12-Sep-2019 08:52:52	12-Sep-2019 09:04:08	5799.11	5523.87
MAX_LOG_SPEED	1914	12-Sep-2019 09:04:08	12-Sep-2019 09:10:16	5523.87	5444.74
MAX_LOG_SPEED	1782	12-Sep-2019 09:10:16	12-Sep-2019 09:33:48	5444.74	4787.97
MAX_LOG_SPEED	1925	12-Sep-2019 09:33:48	12-Sep-2019 09:40:57	4787.97	4602.55
MAX_LOG_SPEED	1755	12-Sep-2019 09:40:57	12-Sep-2019 09:44:02	4602.55	4513.32
MAX_LOG_SPEED	1843	12-Sep-2019 09:44:02	12-Sep-2019 09:50:10	4513.32	4334.5
MAX_LOG_SPEED	1954	12-Sep-2019 09:50:10	12-Sep-2019 09:58:21	4334.5	4096.8
MAX_LOG_SPEED	1829	12-Sep-2019 09:58:21	12-Sep-2019 09:59:22	4096.8	4066.6
MAX_LOG_SPEED	1947	12-Sep-2019 09:59:22	12-Sep-2019 10:15:41	4066.6	3824.33
MAX_LOG_SPEED	2045	12-Sep-2019 10:15:41	12-Sep-2019 10:20:48	3824.33	3669.97
MAX_LOG_SPEED	1901	12-Sep-2019 10:20:48	12-Sep-2019 10:29:59	3669.97	3388.12
MAX_LOG_SPEED	1777	12-Sep-2019 10:29:59	12-Sep-2019 10:31:00	3388.12	3357.62
MAX_LOG_SPEED	1919	12-Sep-2019 10:31:00	12-Sep-2019 10:37:08	3357.62	3179.87
MAX_LOG_SPEED	2052	12-Sep-2019 10:37:08	12-Sep-2019 10:45:17	3179.87	2941.22
MAX_LOG_SPEED	1895	12-Sep-2019 10:45:17	12-Sep-2019 10:49:23	2941.22	2816.71
MAX_LOG_SPEED	1991	12-Sep-2019 10:49:23	12-Sep-2019 10:57:32	2816.71	2567.84
MAX_LOG_SPEED	1811	12-Sep-2019 10:57:32	12-Sep-2019 11:00:36	2567.84	2473.71
MAX_LOG_SPEED	1928	12-Sep-2019 11:00:36	12-Sep-2019 11:08:46	2473.71	2221.39
MAX_LOG_SPEED	1823	12-Sep-2019 11:08:46	12-Sep-2019 11:09:48	2221.39	2189.41
MAX_LOG_SPEED	1974	12-Sep-2019 11:09:48	12-Sep-2019 11:13:53	2189.41	2062.97
MAX_LOG_SPEED	1854	12-Sep-2019 11:13:53	12-Sep-2019 11:18:58	2062.97	1902.55
MAX_LOG_SPEED	1957	12-Sep-2019 11:18:58	12-Sep-2019 11:22:02	1902.55	1806.44
MAX_LOG_SPEED	2094	12-Sep-2019 11:22:02	12-Sep-2019 11:31:12	1806.44	1513.78
MAX_LOG_SPEED	1973	12-Sep-2019 11:31:12	12-Sep-2019 11:34:10	1513.78	1417.52

All depth are at tool zero.

Calibration Report

AIT-M (Array Induction Tool - M) Calibration - Run 1A

Primary Equipment :

Primary Equipment :

File code for AIT-MA Sonde Tool Element	AMIS	189

Auxiliary Equipment :

AITM Rm/SP Bottom Nose	AMRM	189

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM): 10:34:14 03-Jun-2019

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Test Loop Gain - 0		Master	1.000	0.950	1.021	1.050
Test Loop Phase - 0	deg	Master	0	-3.000	0.507	3.000
Test Loop Gain - 1		Master	1.000	0.950	1.020	1.050
Test Loop Phase - 1	deg	Master	0	-3.000	0.559	3.000
Test Loop Gain - 2		Master	1.000	0.950	1.020	1.050
Test Loop Phase - 2	deg	Master	0	-3.000	0.043	3.000
Test Loop Gain - 3		Master	1.000	0.950	1.010	1.050
Test Loop Phase - 3	deg	Master	0	-3.000	0.107	3.000
Test Loop Gain - 4		Master	1.000	0.950	0.997	1.050
Test Loop Phase - 4	deg	Master	0	-3.000	0.054	3.000
Test Loop Gain - 5		Master	1.000	0.950	0.990	1.050
Test Loop Phase - 5	deg	Master	0	-3.000	-0.163	3.000
Test Loop Gain - 6		Master	1.000	0.950	0.997	1.050
Test Loop Phase - 6	deg	Master	0	-3.000	0.183	3.000
Test Loop Gain - 7		Master	1.000	0.950	1.008	1.050
Test Loop Phase - 7	deg	Master	0	-3.000	-0.133	3.000

AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM): 10:34:14 03-Jun-2019

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-34.892	119.000
Sonde Error Correction Quad - 0		Master	-----	-2250.000	-6.393	2250.000
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	163.341	204.000
Sonde Error Correction Quad - 1		Master	-----	-625.000	-94.645	625.000
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	104.798	156.000
Sonde Error Correction Quad - 2		Master	-----	-350.000	56.093	350.000
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	64.071	89.000
Sonde Error Correction Quad - 3		Master	-----	-250.000	16.642	250.000
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	25.056	35.000
Sonde Error Correction Quad - 4		Master	-----	-63.000	23.787	63.000
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	13.646	24.000
Sonde Error Correction Quad - 5		Master	-----	-50.000	16.264	50.000
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	9.376	15.000
Sonde Error Correction Quad - 6		Master	-----	-30.000	12.564	30.000
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-1.784	5.000
Sonde Error Correction Quad - 7		Master	-----	-30.000	5.595	30.000

AIT Mud Calibration - Mud Calibration Gain

Master (EEPROM): 10:34:14 03-Jun-2019

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Coarse Gain		Master	1.000	0.800	0.808	1.200
Fine Gain		Master	1.000	0.800	0.809	1.200

AIT Electronics Check - Thru Calibration Check

Master (EEPROM): 10:34:14 03-Jun-2019 Before (Measured): 05:32:33 12-Sep-2019

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Thru Cal Mag - 0	V	Master	-----	0.366	0.620	0.854
		Before	-----	0.366	0.620	0.854
		Before-Master	-----	-----	0.000	-----
Thru Cal Phase - 0	deg	Master	-----	137.000	179.277	-103.000
		Before	-----	137.000	-171.217	-103.000
		Before-Master	-----	-----	-350.494	-----
Thru Cal Mag - 1	V	Master	-----	0.762	1.270	1.778
		Before	-----	0.762	1.269	1.778
		Before-Master	-----	-----	-0.001	-----

Thru Cal Phase - 1	deg	Master	-----	136.000	178.197	-104.000	
		Before	-----	136.000	-172.300	-104.000	
		Before-Master	-----	-----	-350.497	-----	
Thru Cal Mag - 2	V	Master	-----	0.372	0.629	0.868	
		Before	-----	0.372	0.628	0.868	
		Before-Master	-----	-----	-0.001	-----	
Thru Cal Phase - 2	deg	Master	-----	132.000	174.625	-108.000	
		Before	-----	132.000	-175.876	-108.000	
		Before-Master	-----	-----	-350.501	-----	
Thru Cal Mag - 3	V	Master	-----	0.420	0.710	0.980	
		Before	-----	0.420	0.710	0.980	
		Before-Master	-----	-----	0.000	-----	
Thru Cal Phase - 3	deg	Master	-----	131.000	173.856	-109.000	
		Before	-----	131.000	-176.645	-109.000	
		Before-Master	-----	-----	-350.501	-----	
Thru Cal Mag - 4	V	Master	-----	0.804	1.331	1.876	
		Before	-----	0.804	1.330	1.876	
		Before-Master	-----	-----	-0.001	-----	
Thru Cal Phase - 4	deg	Master	-----	125.000	167.658	-115.000	
		Before	-----	125.000	177.150	-115.000	
		Before-Master	-----	-----	9.492	-----	
Thru Cal Mag - 5	V	Master	-----	1.176	1.940	2.744	
		Before	-----	1.176	1.939	2.744	
		Before-Master	-----	-----	-0.001	-----	
Thru Cal Phase - 5	deg	Master	-----	122.000	166.009	-118.000	
		Before	-----	122.000	175.496	-118.000	
		Before-Master	-----	-----	9.487	-----	
Thru Cal Mag - 6	V	Master	-----	1.176	1.940	2.744	
		Before	-----	1.176	1.938	2.744	
		Before-Master	-----	-----	-0.002	-----	
Thru Cal Phase - 6	deg	Master	-----	121.000	166.028	-119.000	
		Before	-----	121.000	175.516	-119.000	
		Before-Master	-----	-----	9.488	-----	
Thru Cal Mag - 7	V	Master	-----	0.846	1.394	1.974	
		Before	-----	0.846	1.393	1.974	
		Before-Master	-----	-----	-0.001	-----	
Thru Cal Phase - 7	deg	Master	-----	115.000	165.221	-125.000	
		Before	-----	115.000	174.685	-125.000	
		Before-Master	-----	-----	9.464	-----	
SPA Zero	mV	Master		-50.000	0.028	50.000	
		Before		-50.000	0.013	50.000	
		Before-Master	-----	-----	-0.015	-----	
SPA Plus	mV	Master		941.000	991.311	1040.000	
		Before		941.000	991.285	1040.000	
		Before-Master	-----	-----	-0.026	-----	
Temperature Zero	V	Master		-0.050	0.000	0.050	
		Before		-0.050	0.000	0.050	
		Before-Master	-----	-----	0.000	-----	
Temperature Plus	V	Master		0.870	0.918	0.960	
		Before		0.870	0.918	0.960	
		Before-Master	-----	-----	0.000	-----	

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

Primary Equipment :

HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	5800
HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H	3921

Auxiliary Equipment :

HRDD Backscatter Detector	Backscatter	
HRDD Long Spacing Detector	Long Spacing	
HRDD Short Spacing Detector	Short Spacing	27732

Cesium 137 Gamma-Ray Logging Source	GSR-J	5259
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	5800
HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H	5735

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): 11:06:52 08-Sep-2019 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Small Ring	in	Before	8.00	6.00	7.16	10.00
Large Ring	in	Before	12.00	9.00	11.57	15.00

HDRS Density Calibration - Inversion Results

Master (EEPROM): 08:17:32 16-Aug-2019

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	1.687	1.696
Pe Aluminum		Master	2.570	2.470	2.595	2.670
Pe Magnesium		Master	2.650	2.550	2.609	2.750

HDRS Density Calibration - Deviation Summary

Master (EEPROM): 08:17:32 16-Aug-2019

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
BS Average Deviation	%	Master	0	-0.6000	0.3940	0.6000
BS Max Deviation	%	Master	0	-1.6000	1.0011	1.6000
SS Average Deviation	%	Master	0	-1.0000	0.3791	1.0000
SS Max Deviation	%	Master	0	-2.5000	0.9873	2.5000
LS Average Deviation	%	Master	0	-1.5000	0.6263	1.5000
LS Max Deviation	%	Master	0	-3.5000	2.2720	3.5000

HDRS Density Calibration - Background Summary

Master (EEPROM): 08:17:32 16-Aug-2019 Before (Measured): 11:01:57 08-Sep-2019 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
BS Window Ratio		Master	1.0000		0.7356	
		Before	0.7356	0.6988	0.7359	0.7723
		Before-Master	-----	-----	0.0003	-----
BS Window Sum	1/s	Master	1		23442	
		Before	23442	22270	23436	24614
		Before-Master	-----	-----	-6	-----
SS Window Ratio		Master	1.0000		0.4821	
		Before	0.4821	0.4580	0.4844	0.5062
		Before-Master	-----	-----	0.0023	-----
SS Window Sum	1/s	Master	1		11278	
		Before	11278	10714	11278	11841
		Before-Master	-----	-----	0	-----
LS Window Ratio		Master	1.0000		0.2976	
		Before	0.2976	0.2827	0.3000	0.3125
		Before-Master	-----	-----	0.0024	-----
LS Window Sum	1/s	Master	1		1192	
		Before	1192	1132	1189	1252
		Before-Master	-----	-----	-3	-----

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM): 08:17:32 16-Aug-2019 Before (Measured): 11:01:57 08-Sep-2019 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
BS PM High Voltage	V	Master		1000	1370	2400
		Before		1000	1371	2400
		Before-Master	-----	-100	1	100
SS PM High Voltage	V	Master		1000	1479	2400
		Before		1000	1505	2400
		Before-Master	-----	-100	26	100
LS PM High Voltage	V	Master		1000	1313	2400

		Before	1000	1330	2400	
		Before-Master	-----	-100	17	100

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM): 08:17:32 16-Aug-2019 Before (Measured): 11:01:57 08-Sep-2019 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
BS Crystal Resolution	%	Master		5.00	12.42	25.00
		Before		5.00	12.40	25.00
		Before-Master	-----	-1.00	-0.02	1.00
SS Crystal Resolution	%	Master		5.00	9.73	20.00
		Before		5.00	9.80	20.00
		Before-Master	-----	-1.00	0.07	1.00
LS Crystal Resolution	%	Master		5.00	8.57	20.00
		Before		5.00	8.60	20.00
		Before-Master	-----	-1.00	0.03	1.00

HDRS MCFL Calibration - MCFL Accumulations

Before (Measured): 05:31:11 12-Sep-2019

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Main Resistivity	ohm.m	Before	3875	3565	3904	4185
Deep Resistivity	ohm.m	Before	3830	3524	3833	4136
Shallow Resistivity	ohm.m	Before	3830	3524	3851	4136

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

Primary Equipment :

HILT Gamma-Ray and Neutron Sonde, 150 degC	HGNS-H	3730

Auxiliary Equipment :

HGNS Accelerometer, 150 degC	HACCZ-H	1537
AmBe Neutron Logging Source	NSR-F	5203

Calibration Parameter :

Water Temperature	
Housing Size	
JIG-BKG (Jig minus background reference)	155

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured): 05:32:12 12-Sep-2019

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): 18:00:00 14-Mar-2002

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	-----	-----	-530.200	-----
Accelerometer Coefficients - 1		Master	-----	-----	-13.059	-----
Accelerometer Coefficients - 2		Master	-----	-----	-0.001	-----
Accelerometer Coefficients - 3		Master	-----	-----	0.000	-----
Accelerometer Coefficients - 4		Master	-----	-----	2.721	-----
Accelerometer Coefficients - 5		Master	-----	-----	0.000	-----
Accelerometer Coefficients - 6		Master	-----	-----	0.000	-----
Accelerometer Coefficients - 7		Master	-----	-----	0.000	-----
Accelerometer Coefficients - 8		Master	-----	-----	298.900	-----
Accelerometer Coefficients - 9		Master	-----	-----	1.007	-----

HGNS Neutron Calibration - HGNS Neutron Accumulations

Master (EEPROM): 16:28:16 06-Aug-2019 Before (Measured): 11:02:00 08-Sep-2019 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Near Zero Measurement	1/s	Master	0	5.0	27.8	40.0
		Before	0	5.0	27.5	40.0

		Before-Master	-----	-4.2	-0.3	4.2	
Far Zero Measurement	1/s	Master	0	5.0	29.7	40.0	
		Before	0	5.0	27.4	40.0	
		Before-Master	-----	-4.5	-2.3	4.5	
Near Plus Measurement	1/s	Master	6031.0	4700.0	5270.0	6900.0	
		Before	-----	-----	-----	-----	
		Before-Master	-----	-----	-----	-----	
Far Plus Measurement	1/s	Master	2793.0	1900.0	2280.0	2900.0	
		Before	-----	-----	-----	-----	
		Before-Master	-----	-----	-----	-----	
Near Corrected Plus Measurement	1/s	Master		4700.0	5237.0	6900.0	
		Before	-----	-----	-----	-----	
		Before-Master	-----	-----	-----	-----	
Far Corrected Plus Measurement	1/s	Master		1900.0	2247.0	2900.0	
		Before	-----	-----	-----	-----	
		Before-Master	-----	-----	-----	-----	

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations

Before (Measured): 11:12:18 08-Sep-2019 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before	30.0	0	91.4	120.0	
RGR Plus Measurement	gAPI	Before	174.2	147.6	157.3	193.8	
GR Calibration Gain		Before	0.89	0.80	0.99	1.05	

Company: Confluence DJ LLC

Schlumberger

Well: Judy 3-4

Field: Wattenberg

County: Weld

State: Colorado

TCOM

1A

Main Pass 1" = 100'

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
IHV	Integrated Hole Volume	GCSE_UP_PASS	2124.1	ft3
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1440.1	ft3

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1A	Log[2]:Up	Up	1417.53 ft	7746.57 ft	12-Sep-2019 7:22:57 AM	12-Sep-2019 11:34:10 AM	ON	14.06 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Confluence DJ LLC Well:Judy 3-4

1A: Log[2]:Up:S003

Description: Triple Combo standard resolution template for Platform Express Format: Log (TCOM 1in) Index Scale: 1 in per 100 ft Index Unit: ft Index

Type: Measured Depth Creation Date: 12-Sep-2019 12:12:28

Channel	Source	Sampling
AT10	AIT-M:AMIS:AMIS	3in
AT20	AIT-M:AMIS:AMIS	3in
AT30	AIT-M:AMIS:AMIS	3in
AT60	AIT-M:AMIS:AMIS	3in
AT90	AIT-M:AMIS:AMIS	3in
CALI	HDRS-H:HRCC-H:HRCC-H	1in
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in
DSOZ	HDRS-H:HRMS-H:HRGD-H	2in
GR_CAL	HGNS-H:HGNS-H:HGNS-H	6in
HDRA	HDRS-H:HRMS-H:HRGD-H	2in
ICV	Borehole	6in - RT
IHV	Borehole	6in - RT
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
PXND	PEQL	6in
RSOZ	HDRS-H:HRMS-H:HRGD-H	2in
RXOZ	HDRS-H:HRMS-H:HRGD-H	2in
SP	AIT-M:AMIS:AMIS	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-H:HGNS-H:HGNS-H	6in

IHV - Integrated Hole Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

ICV - Integrated Cement Volume every 100.00 (ft3)

IHV - Integrated Hole Volume every 10.00 (ft3)

Caliper (HCAL) HDRS-H
6 in 16

Spontaneous Potential (SP) AIT-M
-80 mV 20

Cable Tension (TENS)
10000 lbf 0

Calibrated Gamma Ray (GR) HGNS-H
0 gAPI 150

Standard Resolution Density Standoff (DSOZ) HDRS-H
2.5 in 0

Resistivity Standoff Standard Resolution (RSOZ) HDRS-H
2.5 in 0

DSOA

RSOA

Array Induction Two Foot Resistivity A10 (AT10) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A20 (AT20) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A30 (AT30) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A60 (AT60) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A90 (AT90) AIT-M
0.2 ohm.m 2000

Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H
0.2 ohm.m 2000

Density Standoff Correction (HDRA) HDRS-H
-0.05 g/cm3 0.45

Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H
0 10

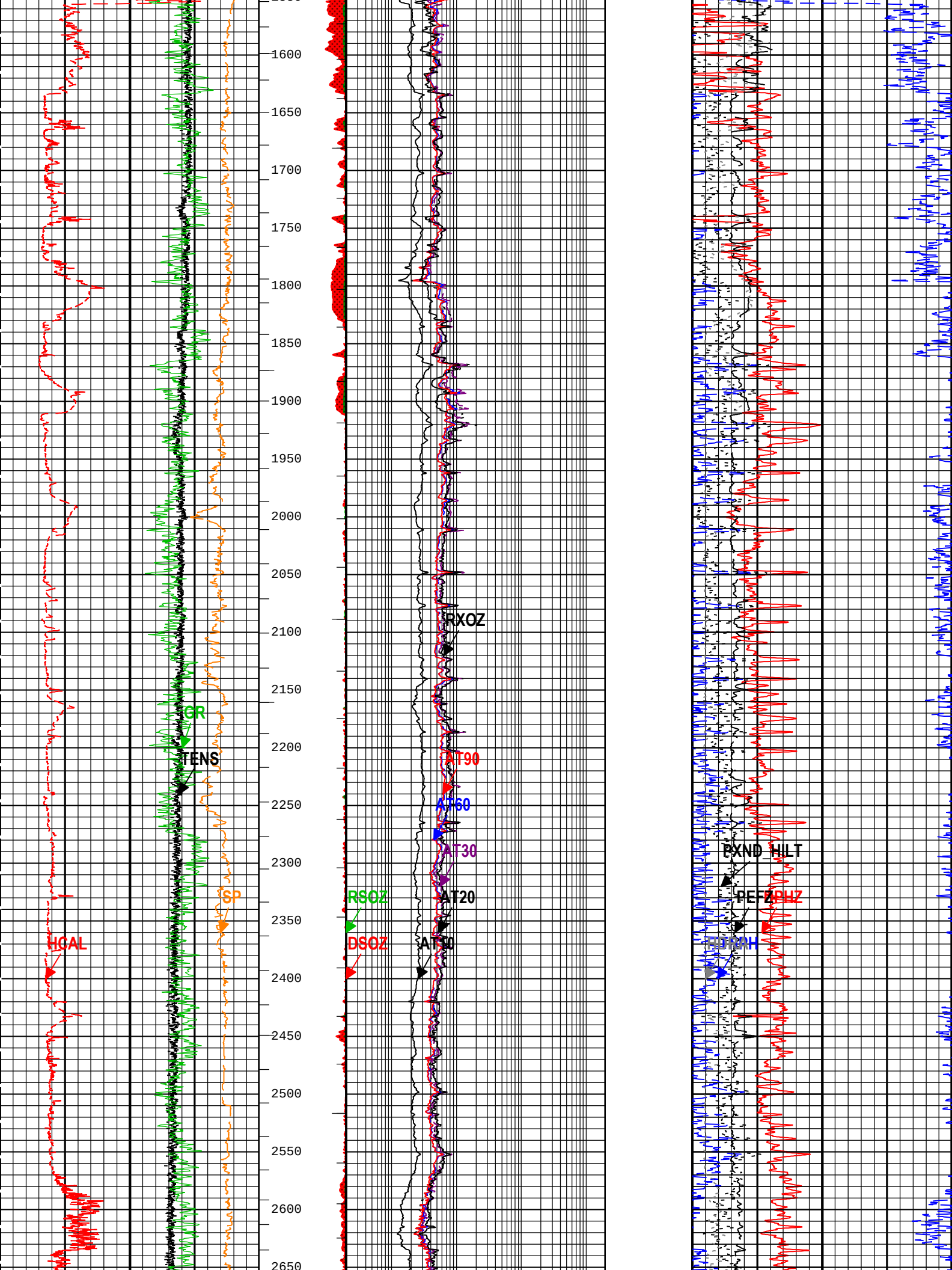
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H
0.3 ft3/ft3 -0.1

Standard Resolution Density Porosity (DPHZ) HDRS-H
0.3 ft3/ft3 -0.1

Crossplot Porosity for Neutron-Density (PXND_HILT)
0.3 ft3/ft3 -0.1

1500

1550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2500
2550
2600
2650
HCAL
GR
TENS
SP
RSOZ
DSOZ
IRXOZ
AT90
AT60
AT30
AT20
AT10
PEXND_HILT
PEFZ
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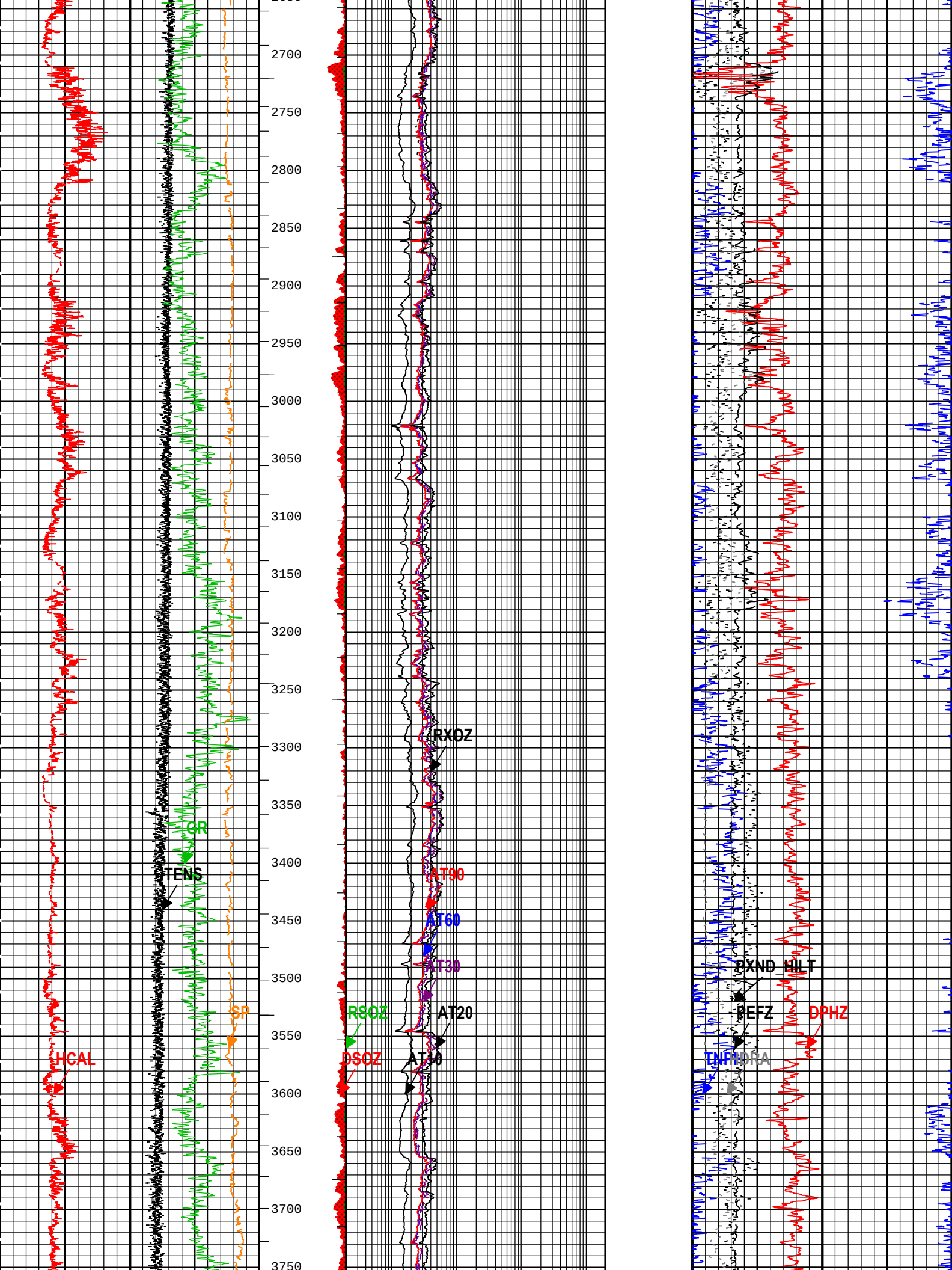
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3700
3750
HCAL
GR
TENS
SP
RXOZ
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AT60
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DPHZ
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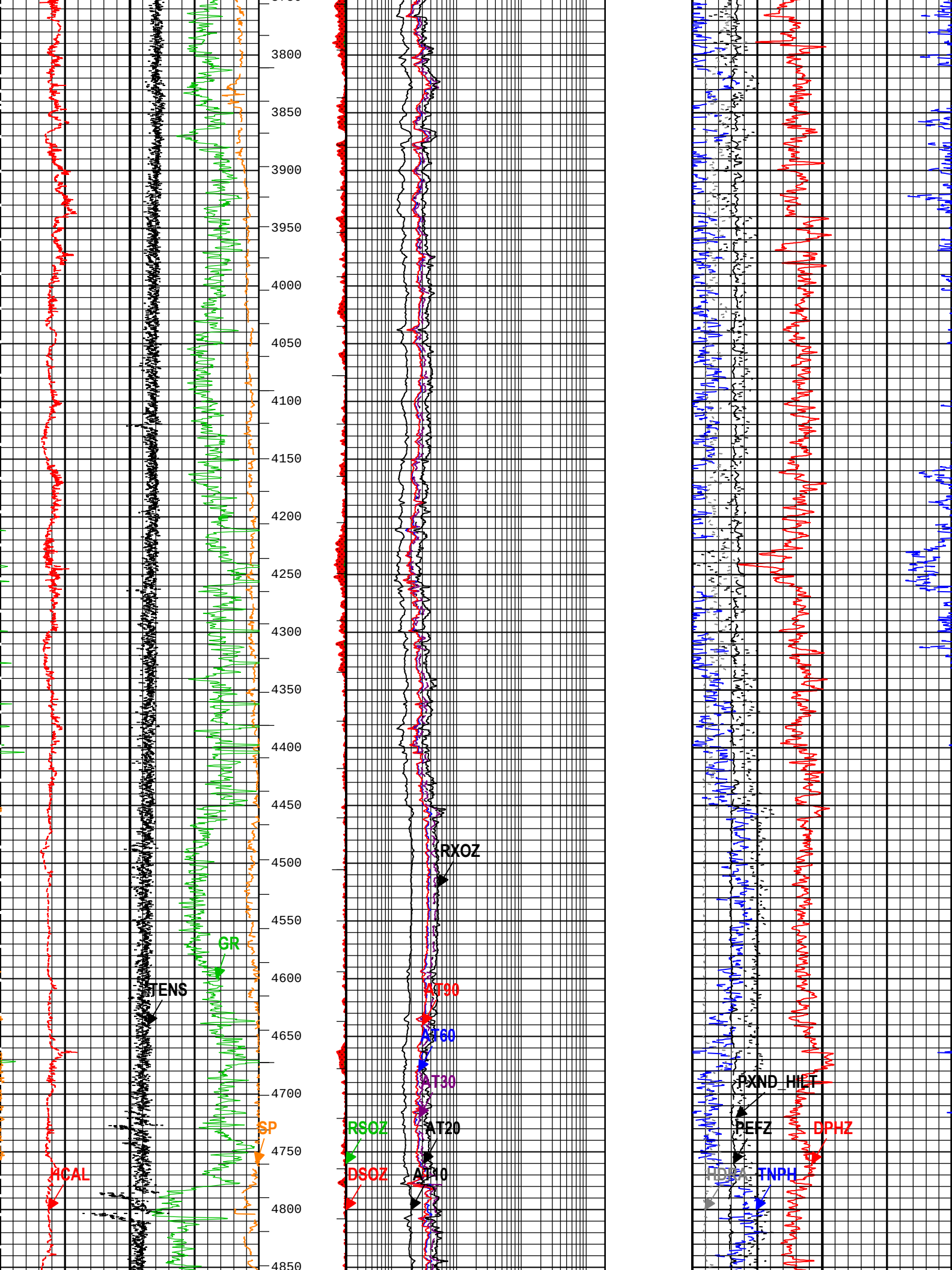
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HCAL
TENS
GR
SP
RSOZ
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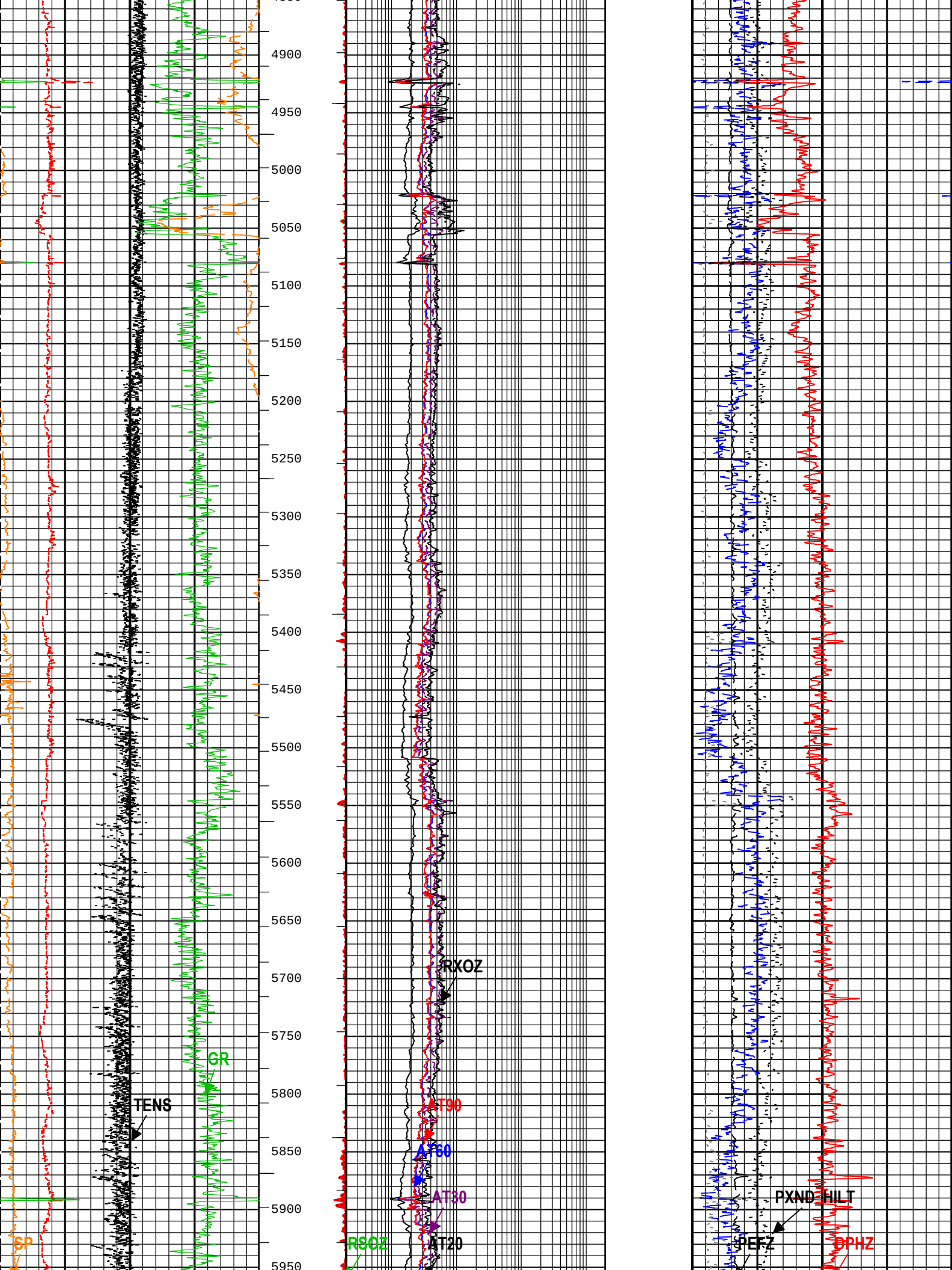
DPHZ
RHOB
TNPH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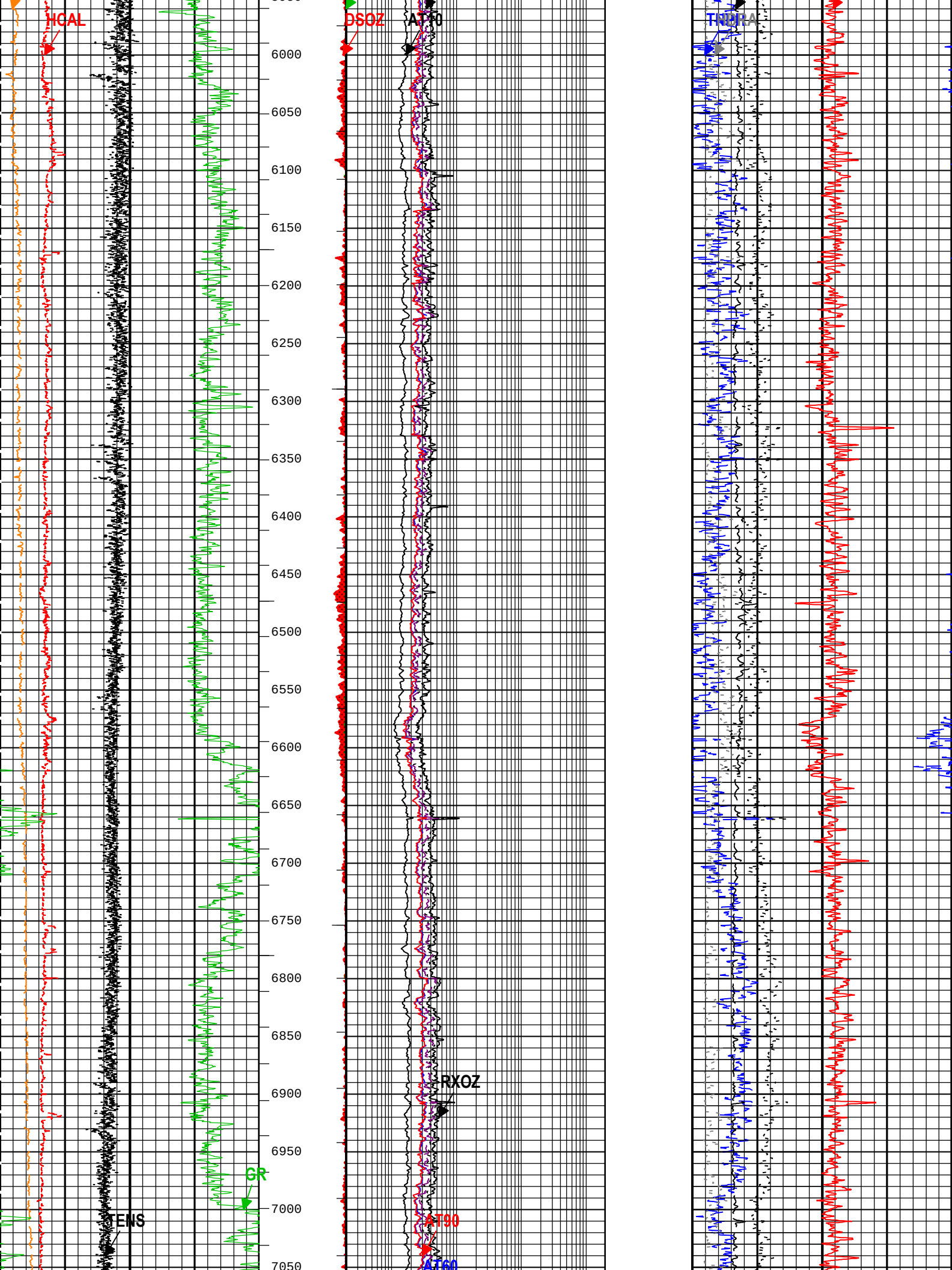
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TENS
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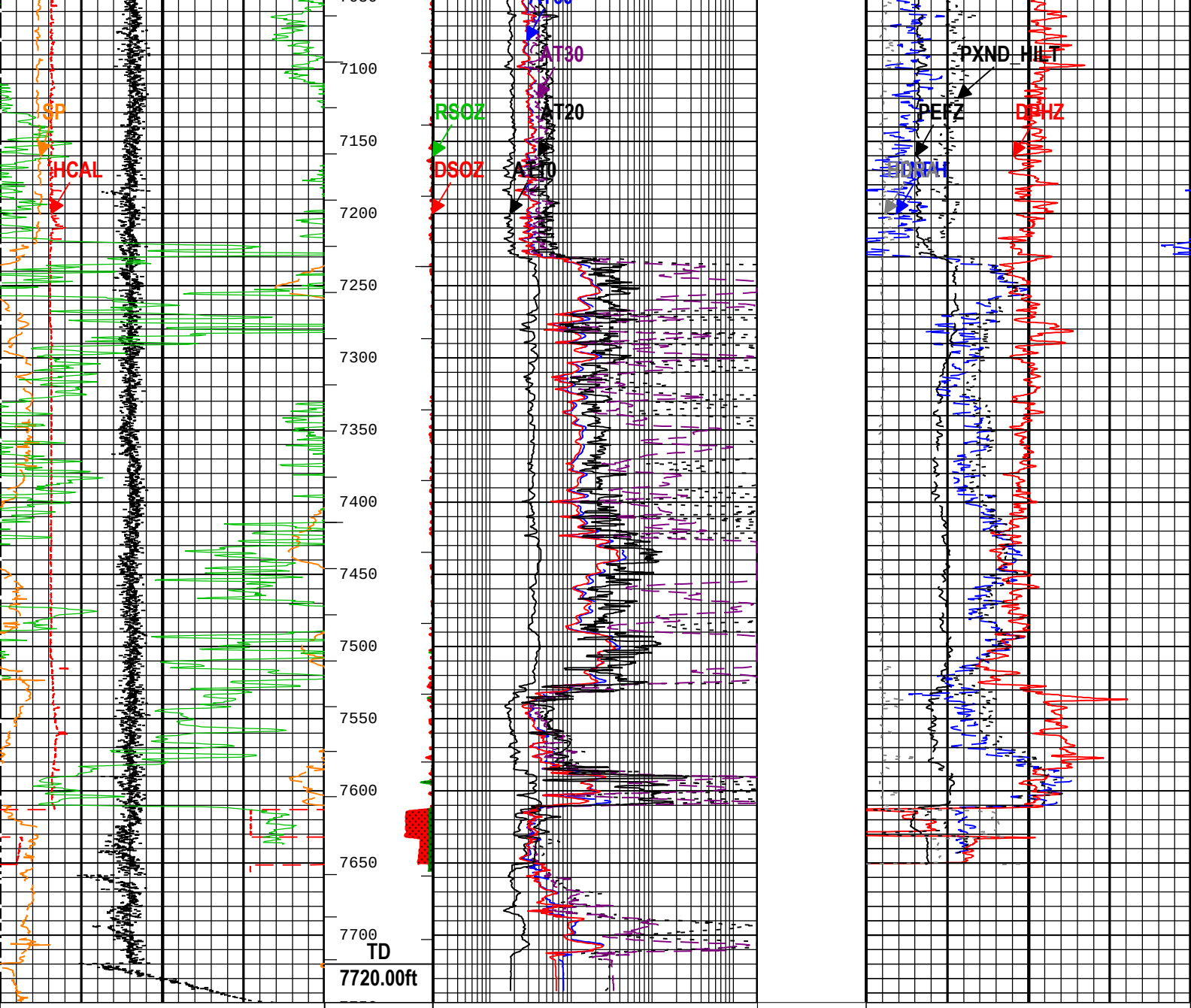


Caliper (HCAL) HDRS-H
6 in 16

Spontaneous Potential (SP) AIT-M
-80 mV 20

Cable Tension (TENS)
10000 lbf 0

Calibrated Gamma Ray (GR) HGNS-H
0 gAPI 150

Standard Resolution Density Standoff (DSOZ) HDRS-H
2.5 in 0

Resistivity Standoff Standard Resolution (RSOZ) HDRS-H
2.5 in 0

DSOA

RSOA

Array Induction Two Foot Resistivity A10 (AT10) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A20 (AT20) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A30 (AT30) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A60 (AT60) AIT-M
0.2 ohm.m 2000

Array Induction Two Foot Resistivity A90 (AT90) AIT-M
0.2 ohm.m 2000

Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H

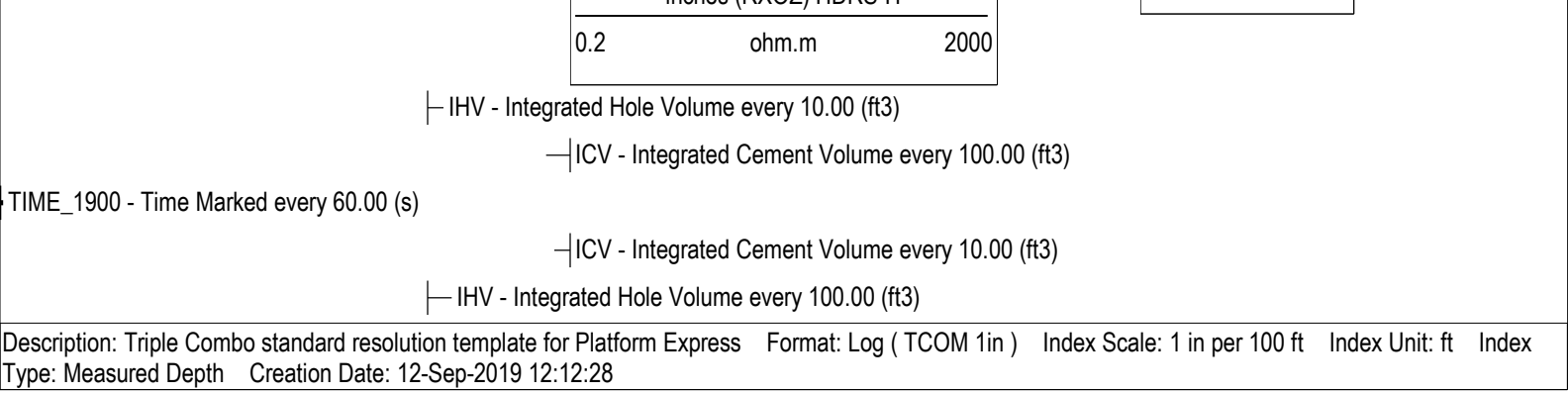
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H
0.3 ft3/ft3 -0.1

Standard Resolution Density Porosity (DPHZ) HDRS-H
0.3 ft3/ft3 -0.1

Crossplot Porosity for Neutron-Density (PXND_HILT)
0.3 ft3/ft3 -0.1

Density Standoff Correction (HDRA) HDRS-H
-0.05 g/cm3 0.45

Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H
0 10



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