Schlumberger

Company: Vecta Oil & Gas Ltd

Well: Bierstadt 32-33

Field: Wildcat

County: Cheyenne Country:

Platform Express

Array Induction

with Linear Correlation

County: Cheyenne
Field: Wildcat
Location: SWNE, Sec. 33, T.13S
Well: Bierstadt 32-33
Company: Vecta Oil & Gas Ltd

Location:			
SWNE, Sec. 33, T.13S 1562 FNL X 2055 FEL R47W	Elev.	K.B.	4341.00 ft
		G.L.	4330.00 ft
		D.F.	4340.00 ft

Permanent Datum:	Ground Level	Elev.:	4330.00 f
Log Measured From:	Kelly Bushing	11.00 ft	above Perm.Datum
Drilling Measured From:	Kelly Bushing		

API Serial No.	Max.Hole Deviation	Longitude:	Latitude:
05-017-07733-0000	0 deg	-102.67432 degrees	38.876890 degrees

Logging Date			11-Dec-2012			
Run Number			PEX-AIT			
Depth Driller			5565.00 ft			
Schlumberger Depth			5565.00 ft			
Bottom Log Interval			5561.00 ft			
Top Log Interval			442.00 ft			
Casing Driller Size @ Depth			8.625 in @ 441.00 ft			
Casing Schlumberger			441 ft			
Bit Size			7.875 in			
Type Fluid In Hole			Water			
MUD	Density	Viscosity	9.3 lbm/gal	61 s		
	Fluid Loss	PH				
	Source of Sample		Active Tank			
RM @ Meas Temp			1.12 ohm.m @ 90.6 degF			
RMF @ Meas Temp			0.84 ohm.m @ 68 degF			
RMC @ Meas Temp			1.68 ohm.m @ 68 degF			
Source RMF	RMC			Calculated		
RM @ BHT	RMF @ BHT		0.74 @ 140	0.43 @ 140		
Max Recorded Temperatures			140 degF			
Circulation Stopped	Time		11-Dec-2012	08:00:00		
Logger on Bottom	Time		11-Dec-2012	17:00:00		
Unit Number	Location:		3022	Fort Morgan, CO		
Recorded By			Heather Bennett			
Witnessed By			Ryan Scribner			

Disclaimer

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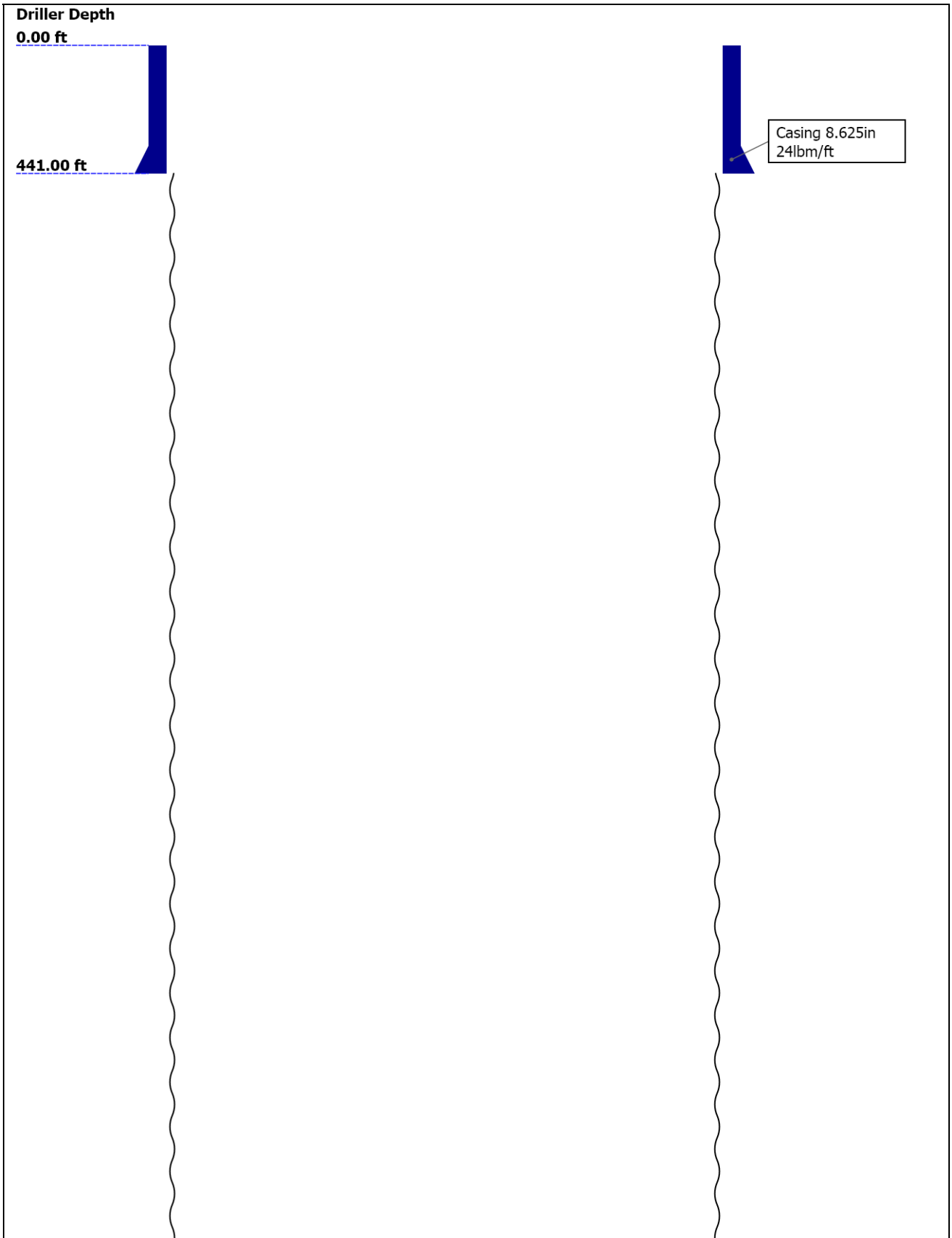
Well Sketch

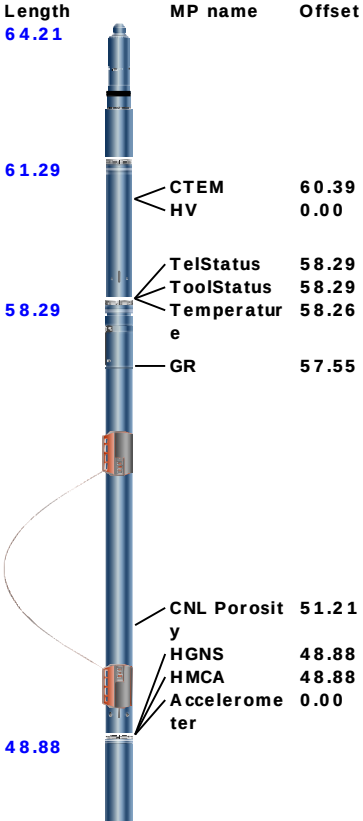


Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	7.875					
Top Driller (ft)	441					
Top Logger (ft)	441					
Bottom Driller (ft)	5565					
Bottom Logger (ft)	5565					
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)	441					
Bottom Logger (ft)	441					

Remarks and Equipment Summary

PEX-AIT: Toolstring



PEX-AIT: Remarks

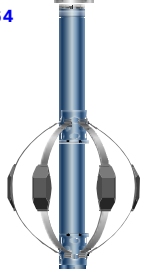
This is the first run in hole
Toolstring run as per tool sketch
Matrix: Limestone 2.71 (g/cc)
Crew:Ian Derry, Jake Jump

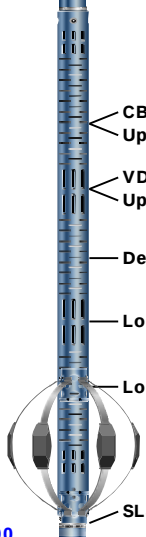
Long Spacing:28
926
HRGD-H:3775
GPV-Q
Backscatter:2640
4
Short Spacing
GSR-J:5240

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

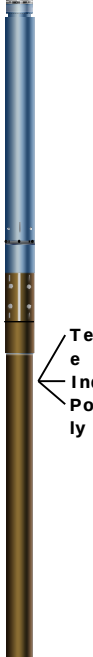
Delta-T 21.79

Lower-Far 20.42

Lower-Near 19.42

SLS-E 16.00

AIT-M:1372 **16.00**
AMIS:1372
AMRM:1372



Temperatur e 7.91
Induction 7.91
Power Supp ly 7.91

Lengths are in ft
Maximum Outer Diameter = 6.000 in
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

Depth Summary

Depth Control Parameters	**PEX-AIT**		
Conveyance Type	Wireline		
Depth Measuring Device	**PEX-AIT**		
Type	IDW-B		
Wheel Correction 1	1		
Wheel Correction 2	0		
Tension Device	**PEX-AIT**		
Type	CMTD-B/A		
Calibration Points	0		
Logging Cable	**PEX-AIT**		
Type	7-46NT-XS		
Logging Cable Length (ft)	24000.00		

PEX-AIT

2" Induction

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1213.63	ft3

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
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels	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
AMIS	Array Induction Sonde - M	3.1.9755.1112	1

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
PEX-AIT	Log[3]:Up	Up	365.61 ft	5571.09 ft	11-Dec-2012 4:54:22 PM	11-Dec-2012 6:41:38 PM	5.00 ft	

All depths are referenced to toolstring zero

Log

PEX-AIT: Log[3]:Up

Description: AIT Basic Log Two Format: Log (Import of Kerr McGee 2in Induction) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 11-Dec-2012 18:56:08

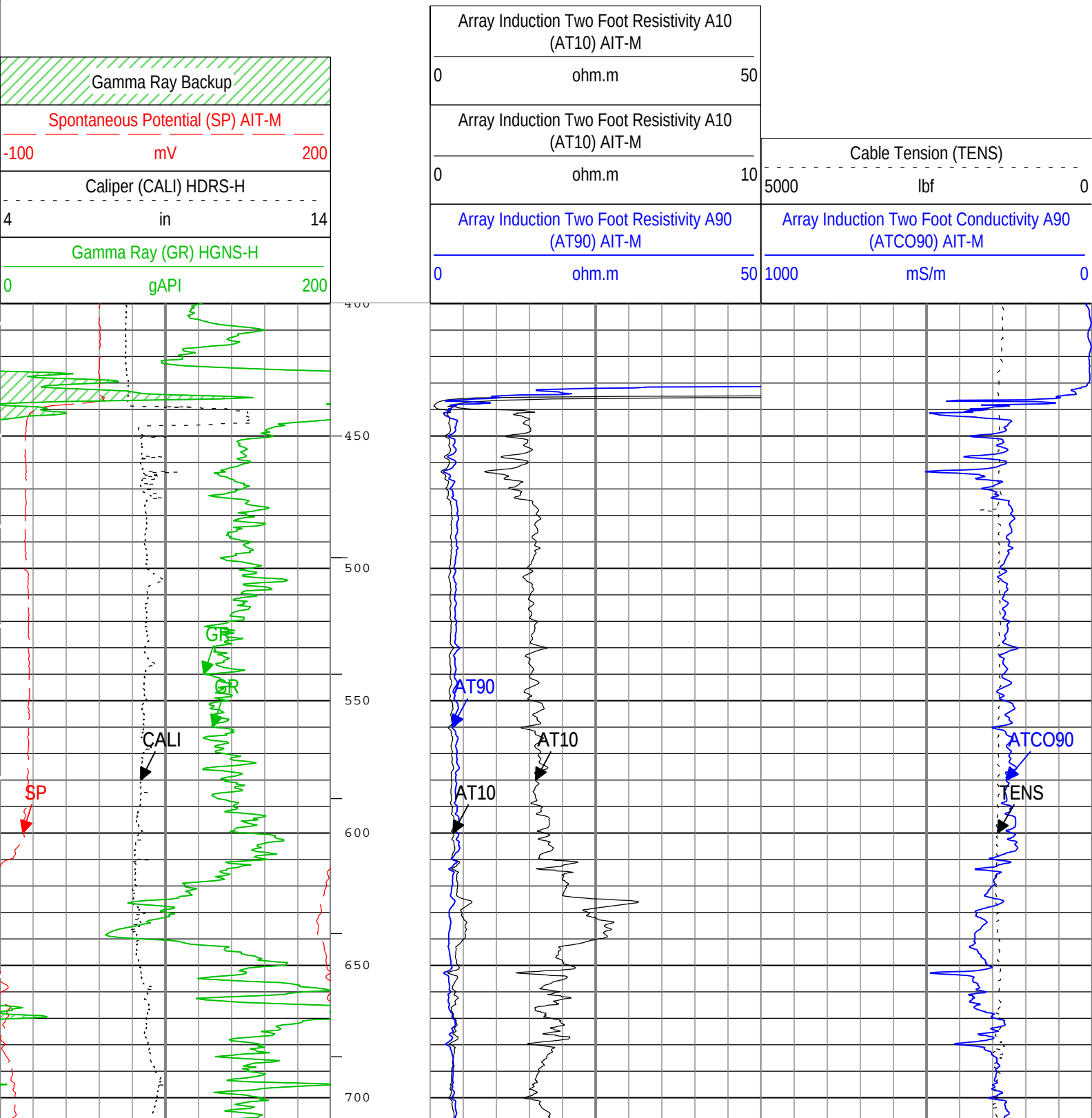
Channel	Source	Sampling
AT10	AIT-M:AMIS:AMIS	3in

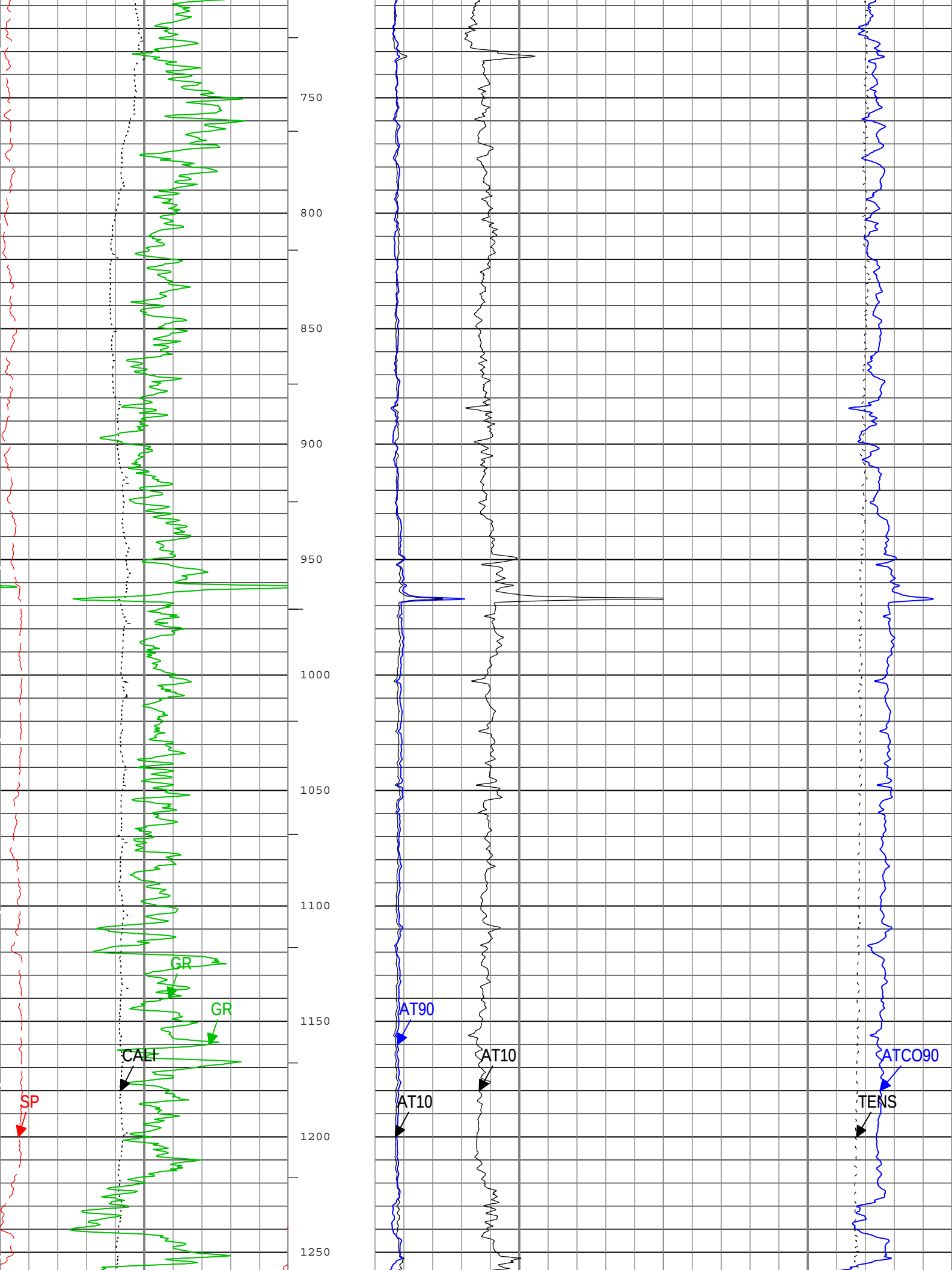
AT90	AIT-M:AMIS:AMIS	3in
ATCO90	AIT-M:AMIS:AMIS	3in
CALI	HDRS-H:HRCC-H:HRCC-H	1in
GR	HGNS-H:HGNS-H:HGNS-H	6in
ICV	Borehole	6in
SP	AIT-M:AMIS:AMIS	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

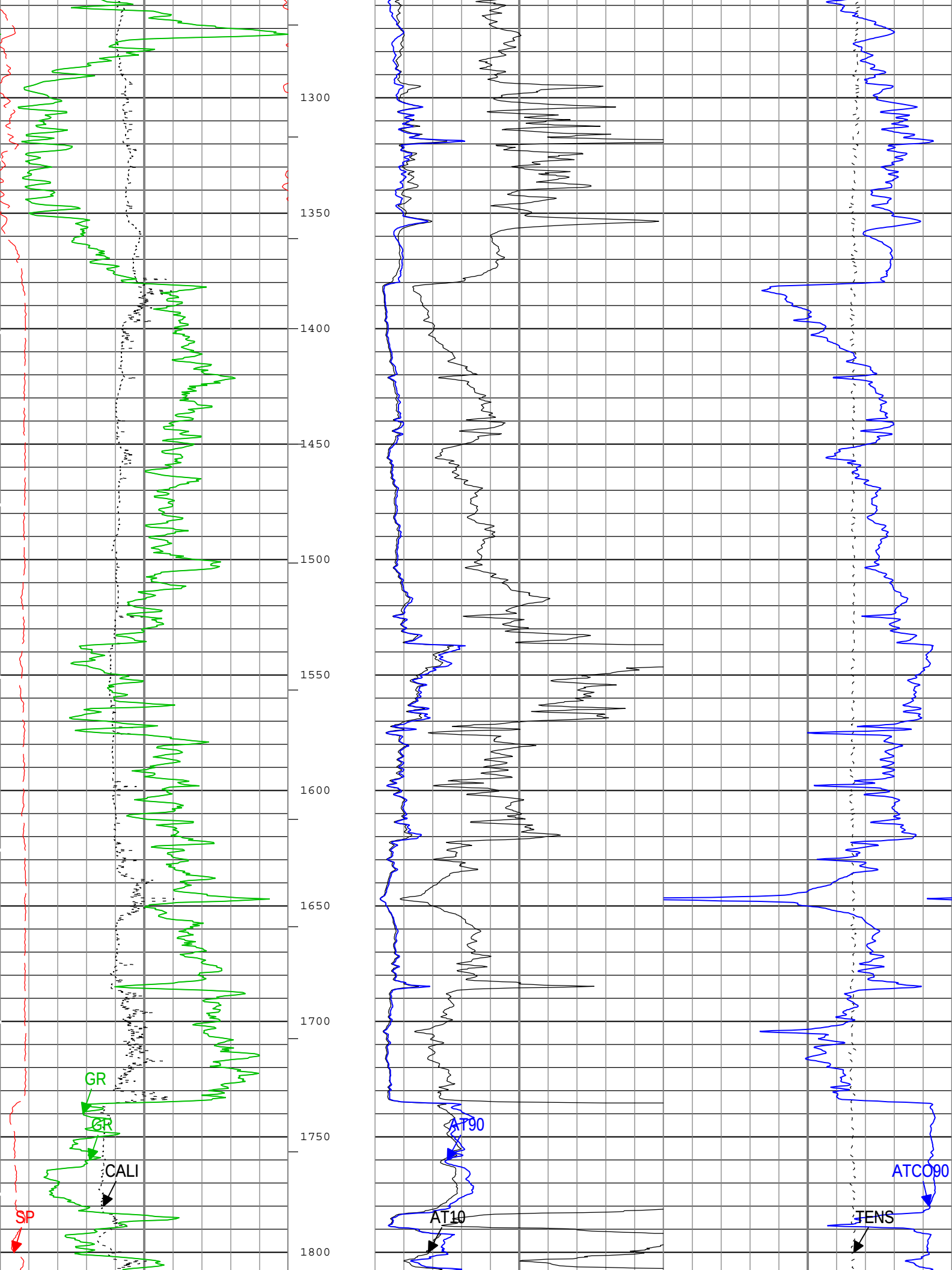
ICV - Integrated Cement Volume every 10.00 (ft3)

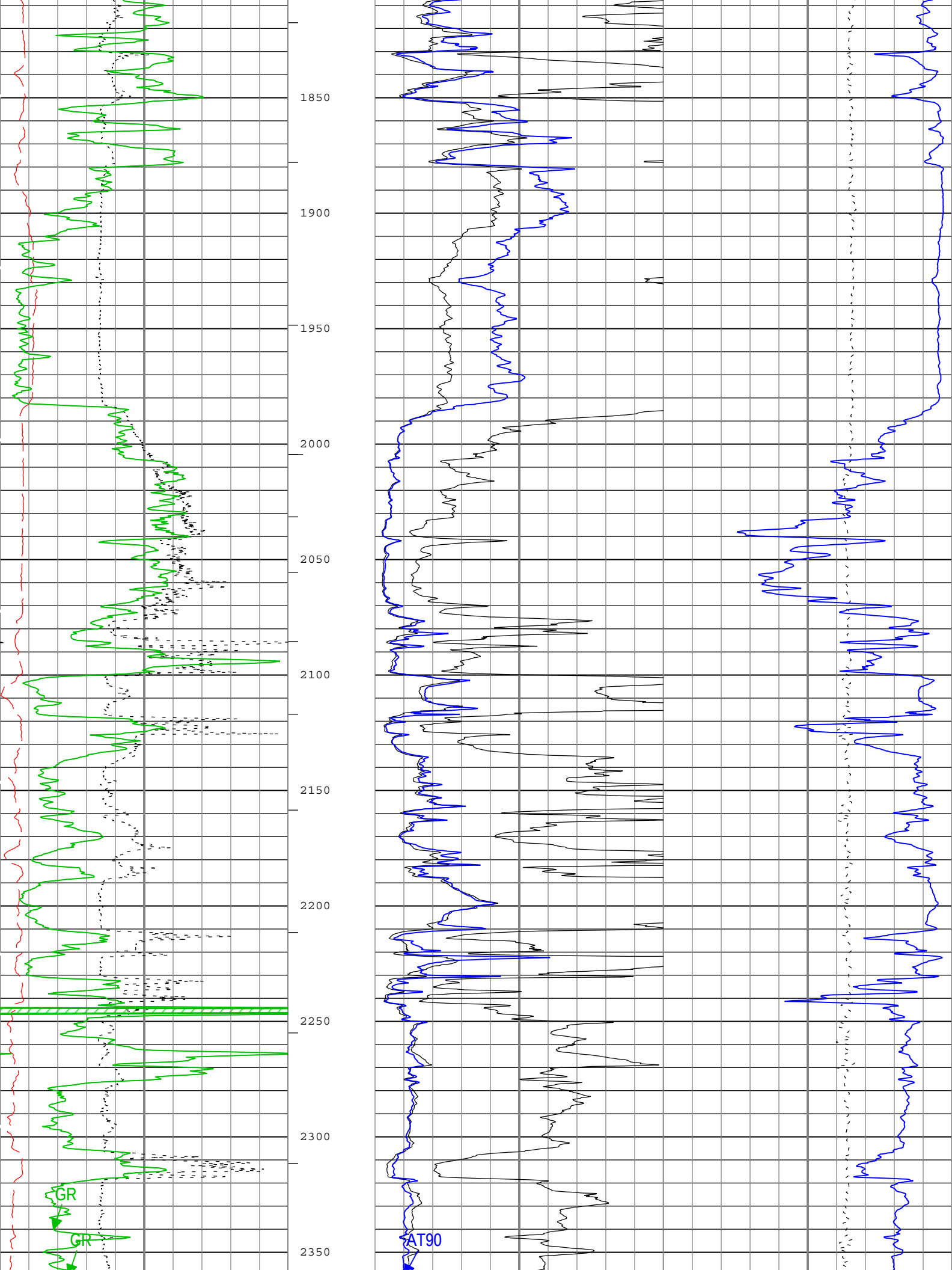
ICV - Integrated Cement Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)




750
800
850
900
950
1000
1050
1100
1150
1200
1250
GR
GR
CALI
SP
AT90
AT10
AT10
ATCO90
TENS


1300
1350
1400
1450
1500
1550
1600
1650
1700
1750
1800
GR
GR
CALI
SP
AT90
AT10
ATCO90
TENS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1900
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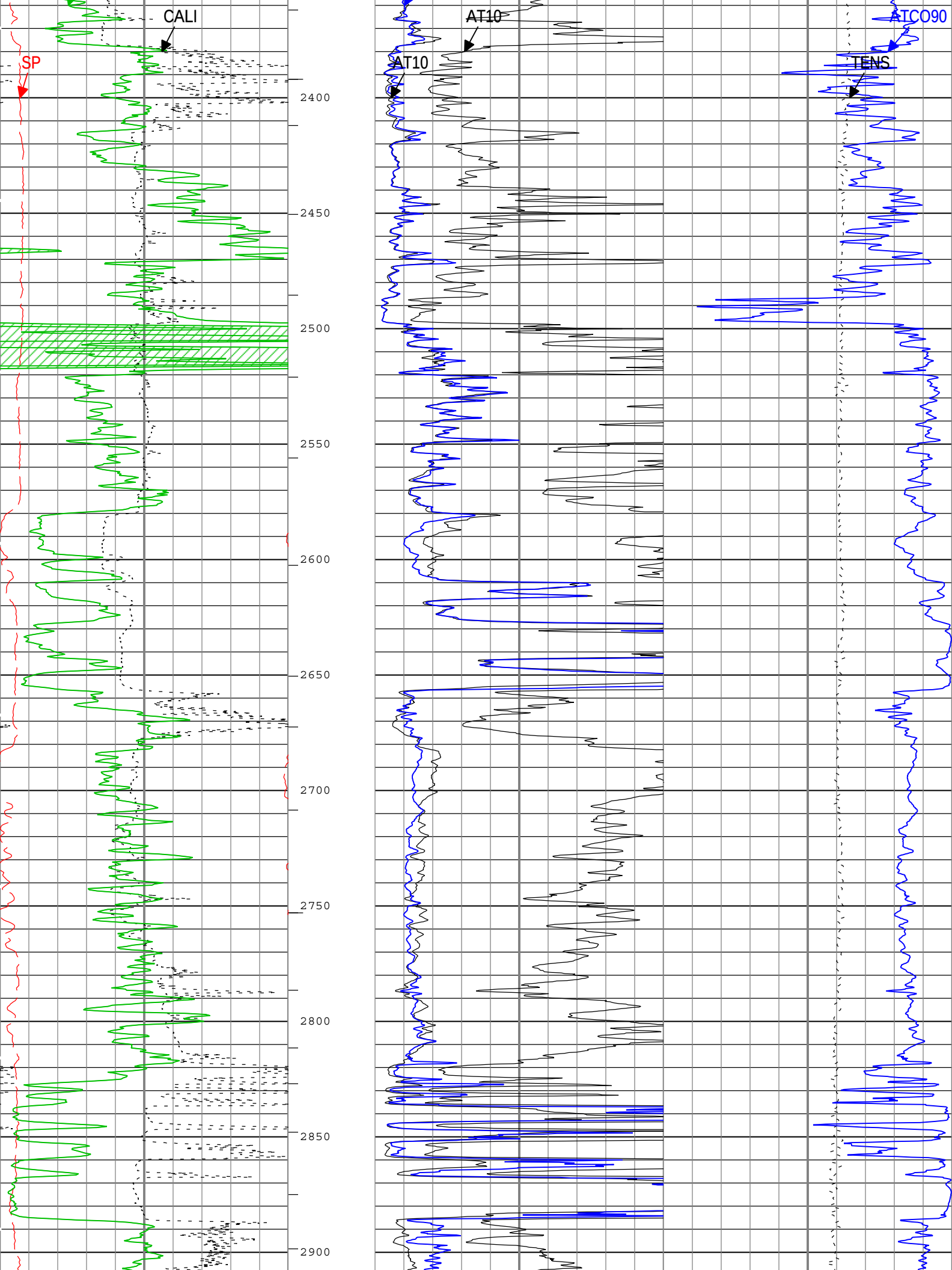
2000
2050
2100
2150
2200
2250
2300
2350
GR
GR
AT90


CALI
SP
AT10
AT10
TENS
ATCO90
2400
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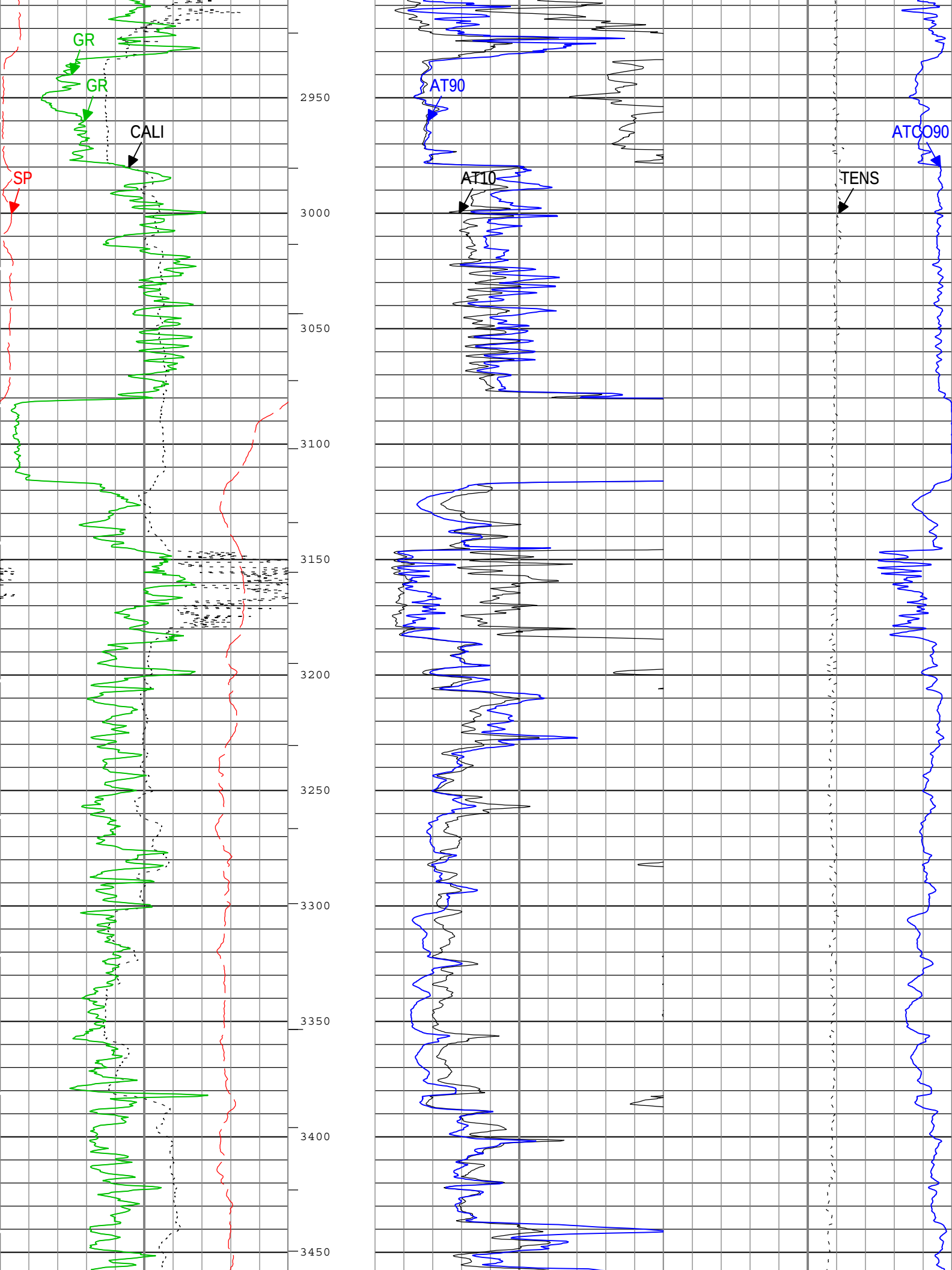
2500
2550
2600
2650
2700
2750
2800
2850
2900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GR
CALI
SP
AT90
AT10
ATCO90
TENS
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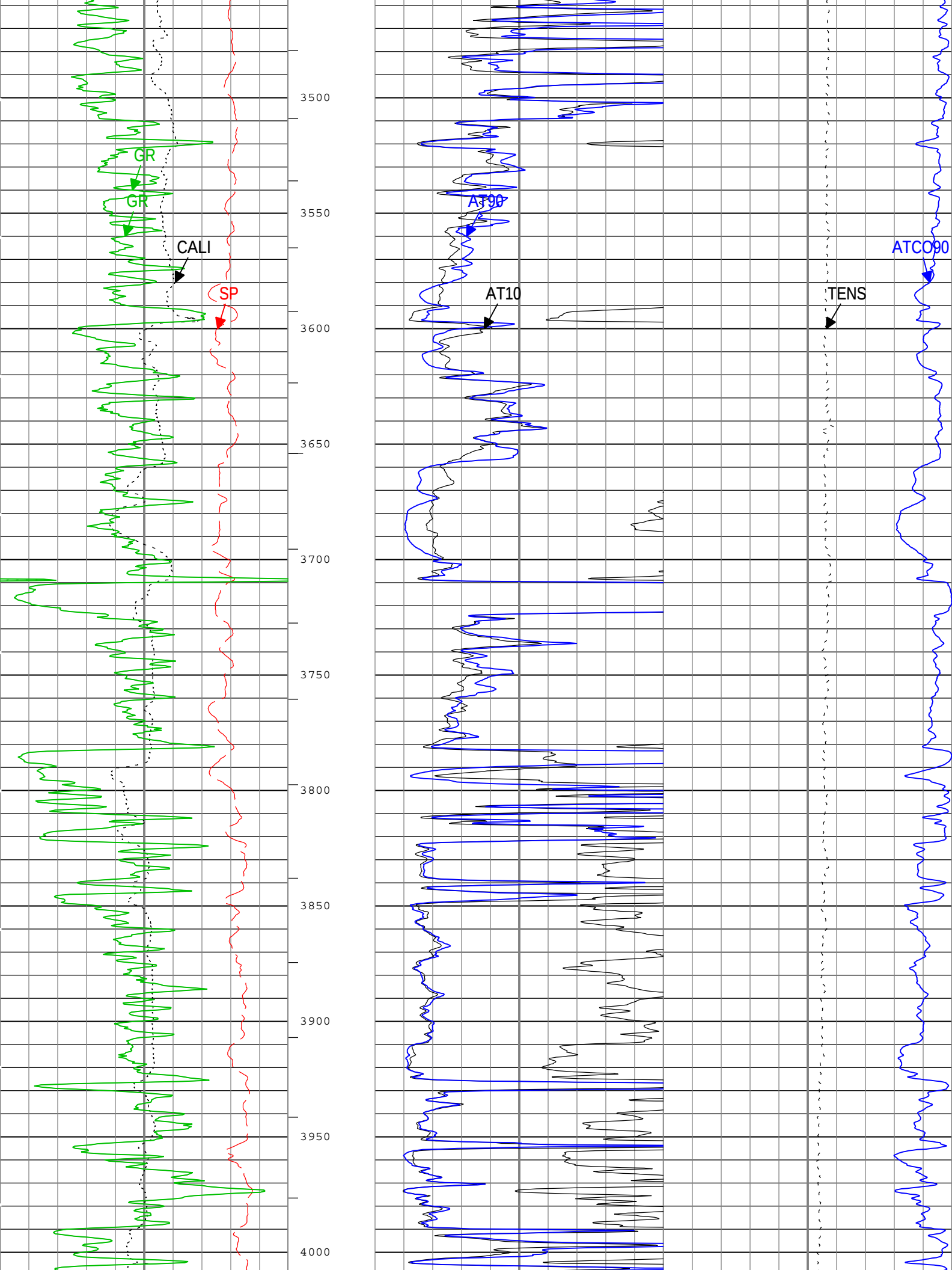
3250
3300
3350
3400
3450


GR
GR
CALI
SP
AT90
AT10
TENS
ATCO90
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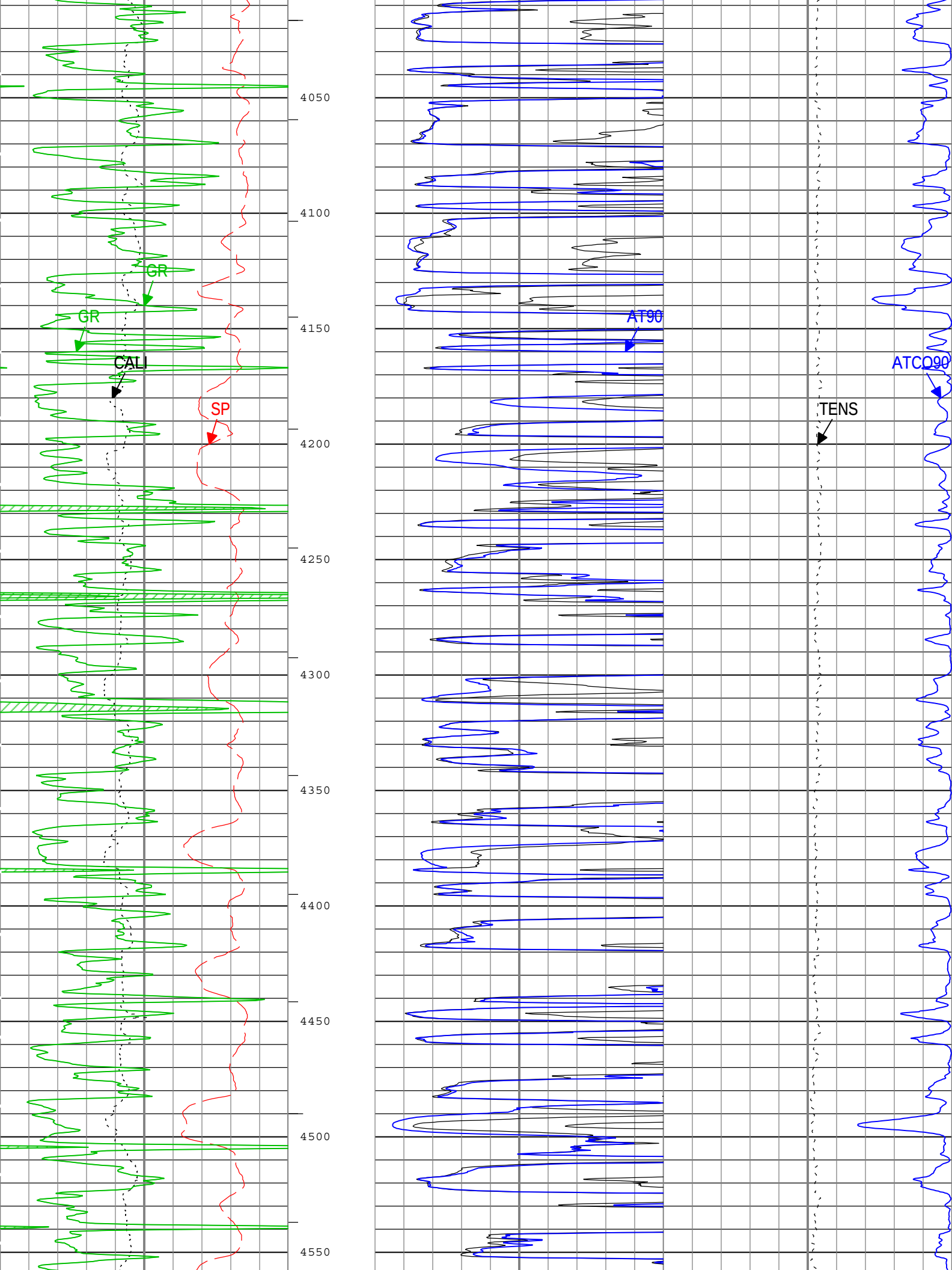
3600
3650
3700
3750
3800
3850
3900
3950
4000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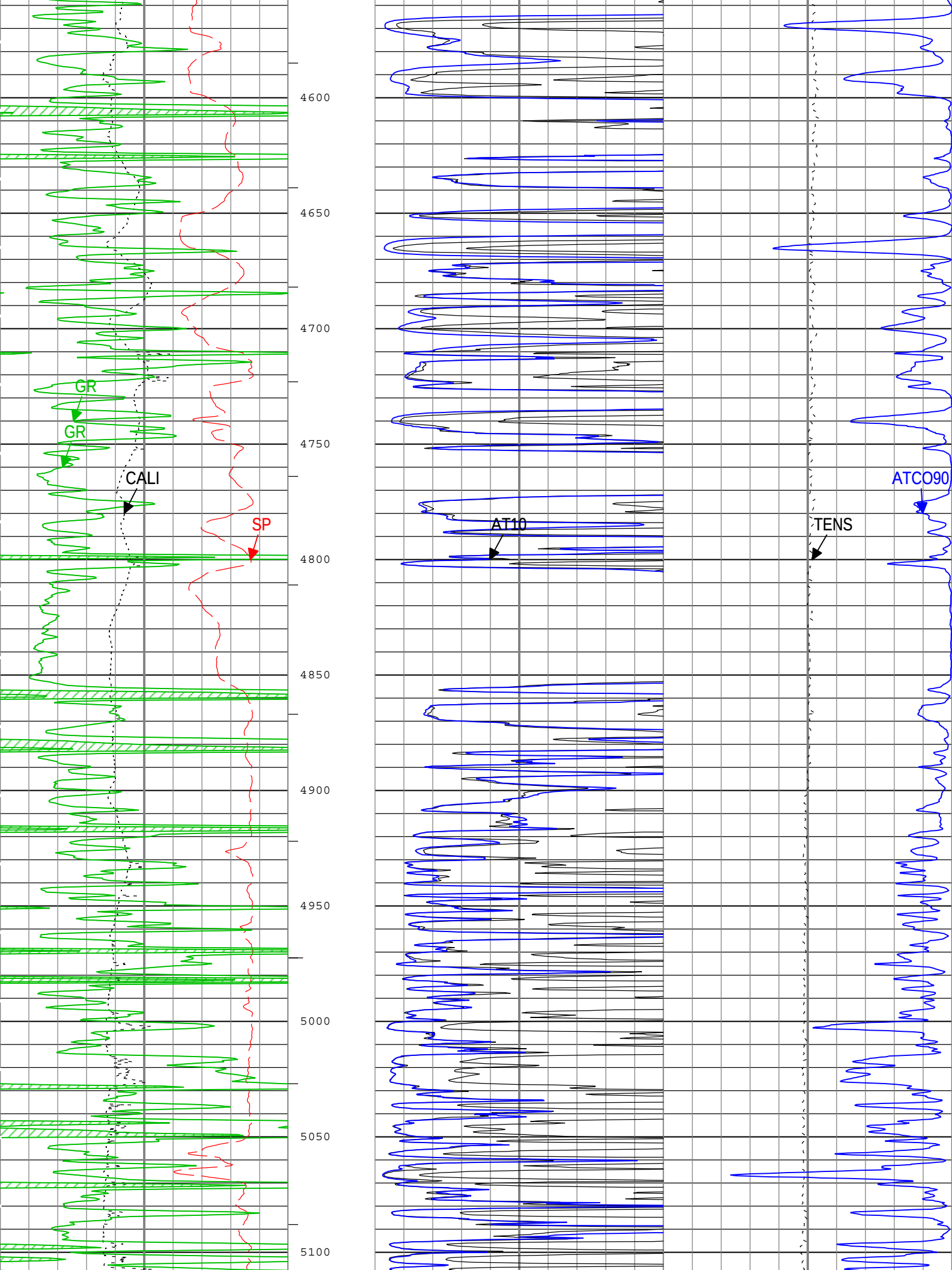
CALI
SP
AT90
ATCO90
TENS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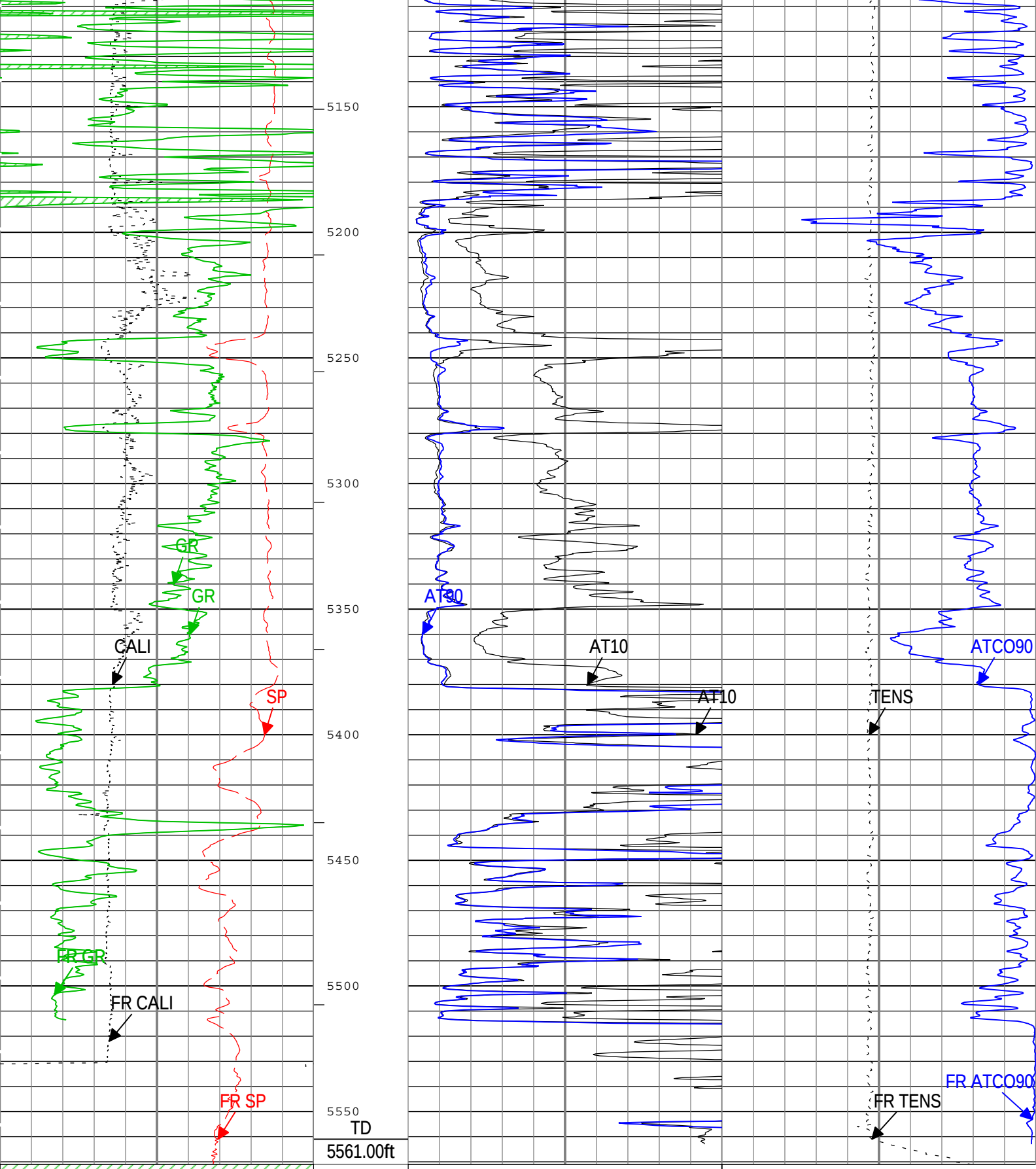
TENS
ATCO90



Gamma Ray Backup

Spontaneous Potential (SP) AIT-M

-100 mV 200

Caliper (CALI) HDRS-H

4 in 14

Gamma Ray (GR) HGNS-H

0 gAPI 200

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

0 ohm.m 50

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

0 ohm.m 10

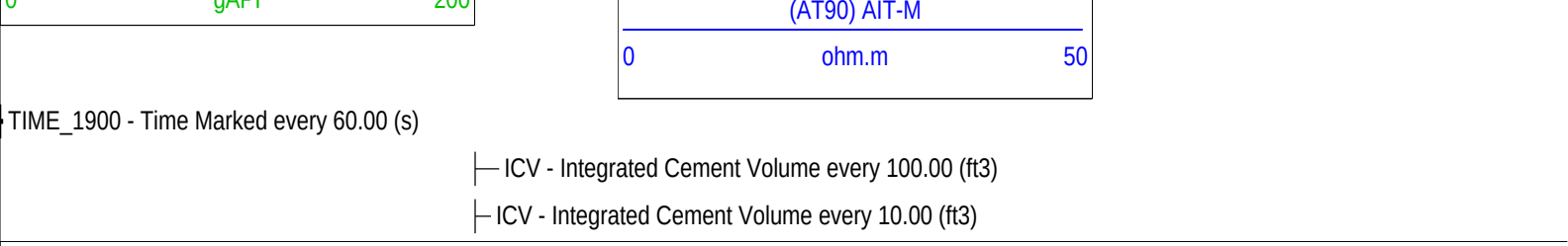
Array Induction Two Foot Resistivity A90

Cable Tension (TENS)

5000 lbf 0

Array Induction Two Foot Conductivity A90 (ATCO90) AIT-M

1000 mS/m 0



Description: AIT Basic Log Two Format: Log (Import of Kerr McGee 2in Induction) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 11-Dec-2012 18:56:08

Channel Processing Parameters

Parameter	Description	Tool	Value	Unit
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Standoff	
ABLM	Array Induction Basic Logs Mode	AIT-M	Normal	
ACDE	Array Induction Casing Detection Enable	AIT-M	No	
ASTA	Array Induction Tool Standoff	AIT-M	0.75	in
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	-0.005	in
CBLO	Casing Bottom (Logger)	WLSESSION	441	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	8.625	in
DFD	Drilling Fluid Density	Borehole	9.3	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	5.5	in
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	REMS	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
MST	Mud Sample Temperature	Borehole	90.6	degF
RMS	Resistivity of Mud Sample	Borehole	1.12	ohm.m
SOCO	Standoff Correction Option	HGNS-H	Yes	
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	0	400	441
BS	7.875	441	5571

All depth are actual.

Tool Control Parameters

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

PEX-AIT

5" Induction

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1213.63	ft3
IHV	Integrated Hole Volume	GCSE_UP_PASS	2059.87	ft3

Software Version

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
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels	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
AMIS	Array Induction Sonde - M	3.1.9755.1112	1

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
PEX-AIT	Log[3]:Up	Up	365.61 ft	5571.09 ft	11-Dec-2012 4:54:22 PM	11-Dec-2012 6:41:38 PM	5.00 ft	
All depths are referenced to toolstring zero								

Log

PEX-AIT: Log[3]:Up

Description: AIT Basic Log Two Format: Log (EMD 5in Induction) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 11-Dec-2012 18:56:10

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
GR	HGNS-H:HGNS-H:HGNS-H	6in
ICV	Borehole	6in
IHV	Borehole	6in
SP	AIT-M:AMIS:AMIS	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

IHV - Integrated Hole Volume every 10.00 (ft3)

IHV - Integrated Hole Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

ICV - Integrated Cement Volume every 10.00 (ft3)

ICV - Integrated Cement Volume every 100.00 (ft3)

Cable Tension (TENS)

10000 lbf 0

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

Gamma Ray Backup

Spontaneous Potential (SP) AIT-M

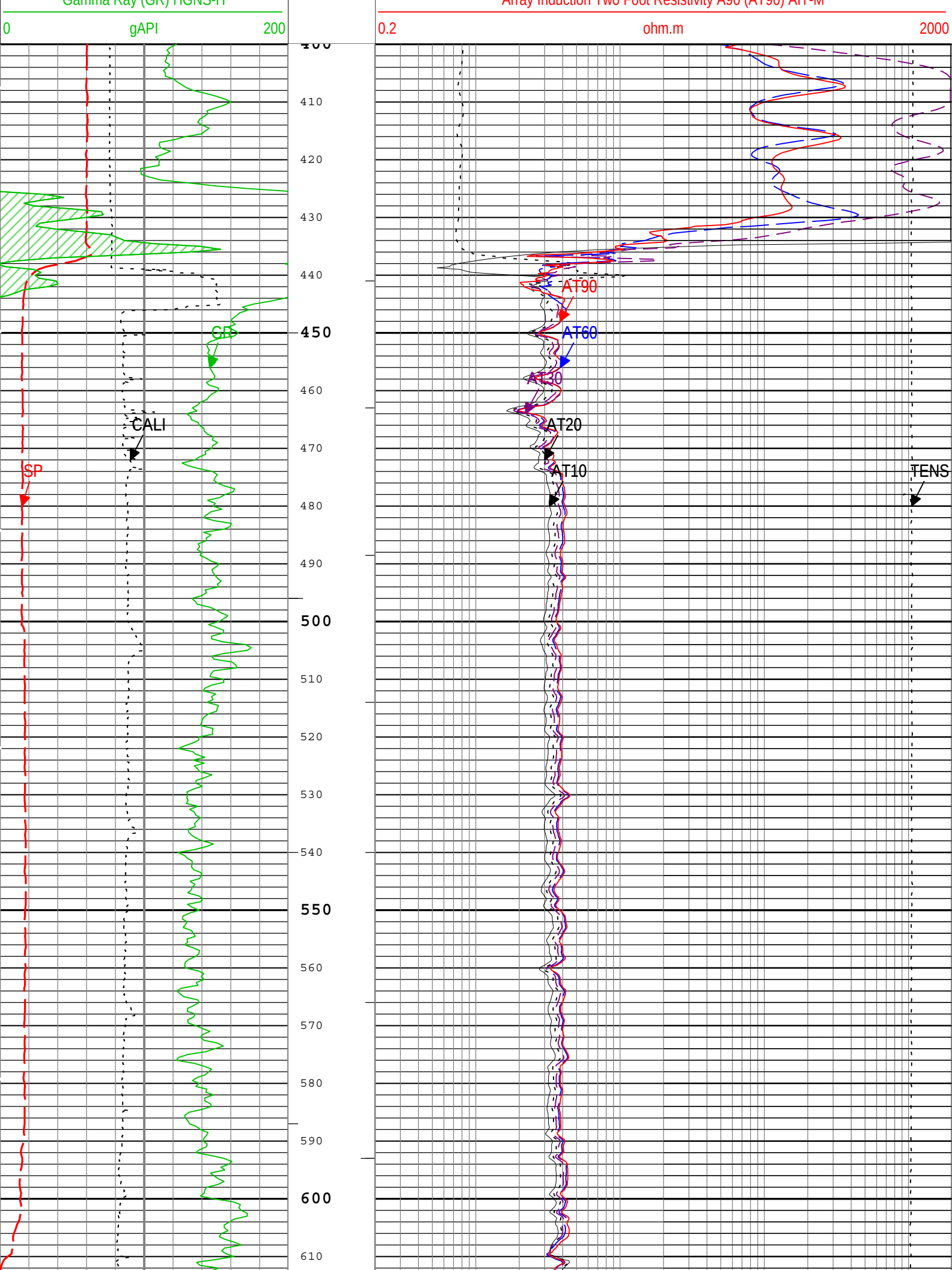
-100 mV 200

Caliper (CALI) HDRS-H

4 in 14

Gamma Ray (GR) HGNS-H

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


Gamma Ray (GR) HGNS-H
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gAPI
200
Array Induction Two Foot Resistivity A90 (AT90) AH-M
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410
420
430
440
450
460
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490
500
510
520
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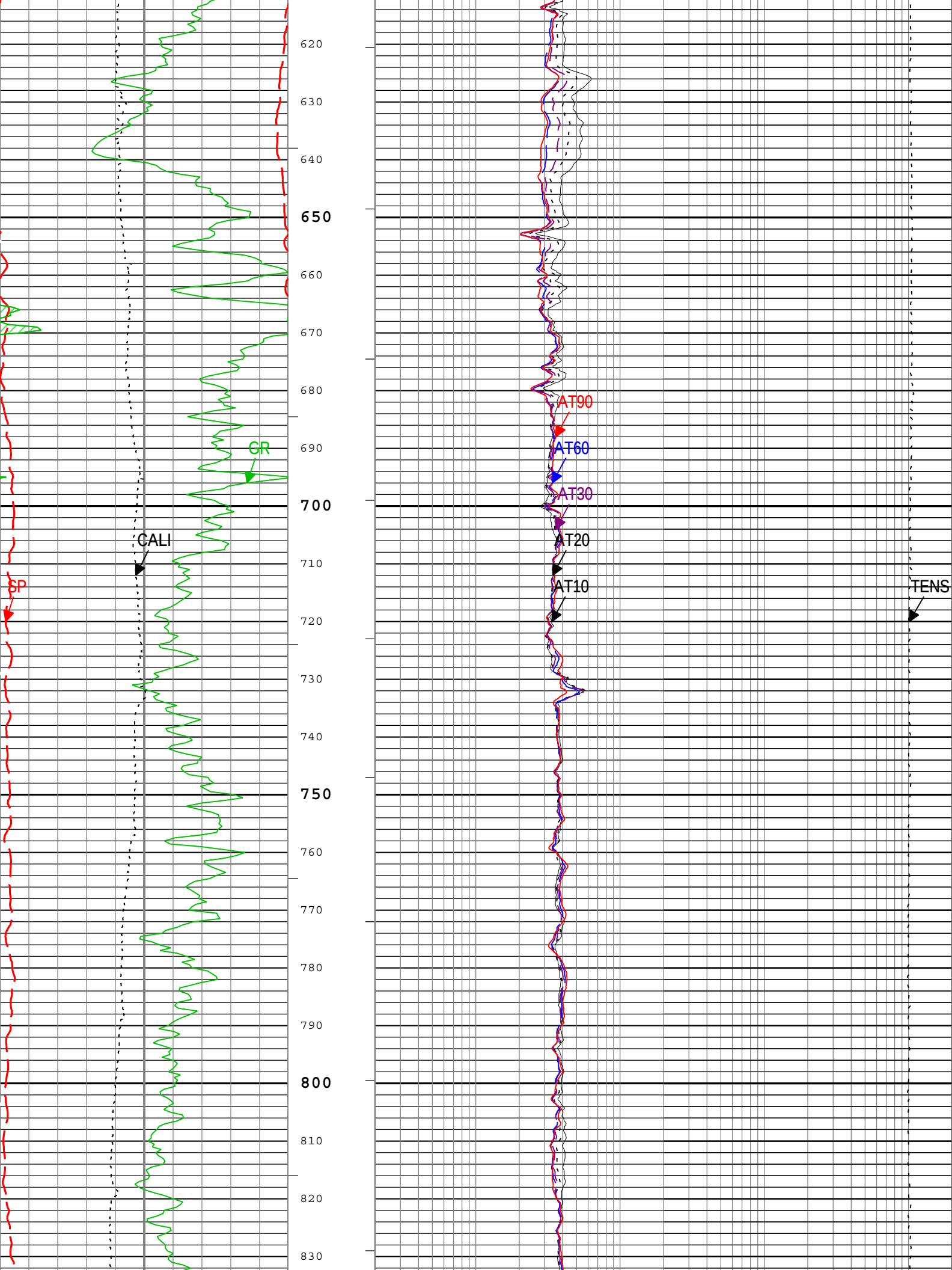
SP
TENS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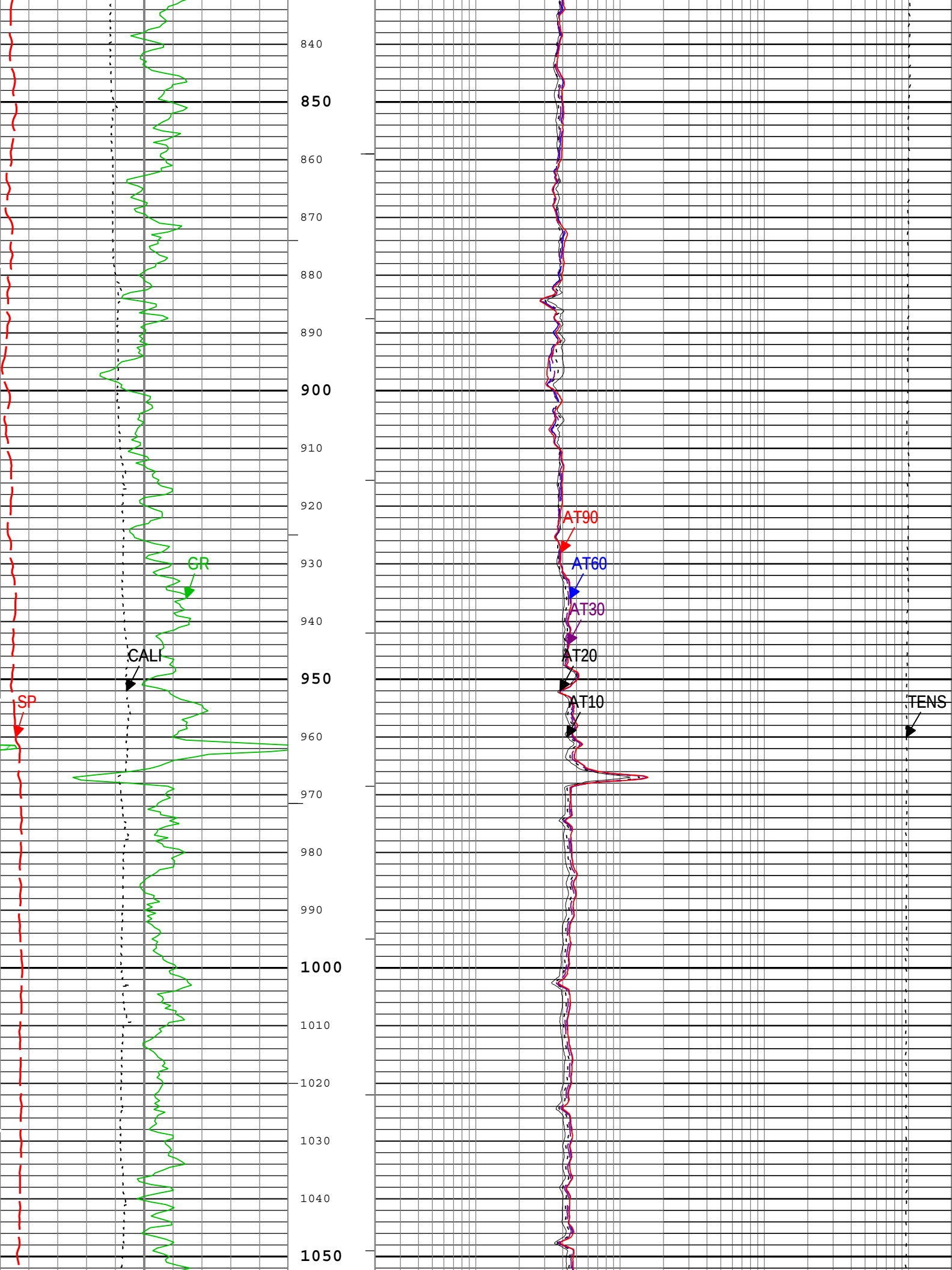
TENS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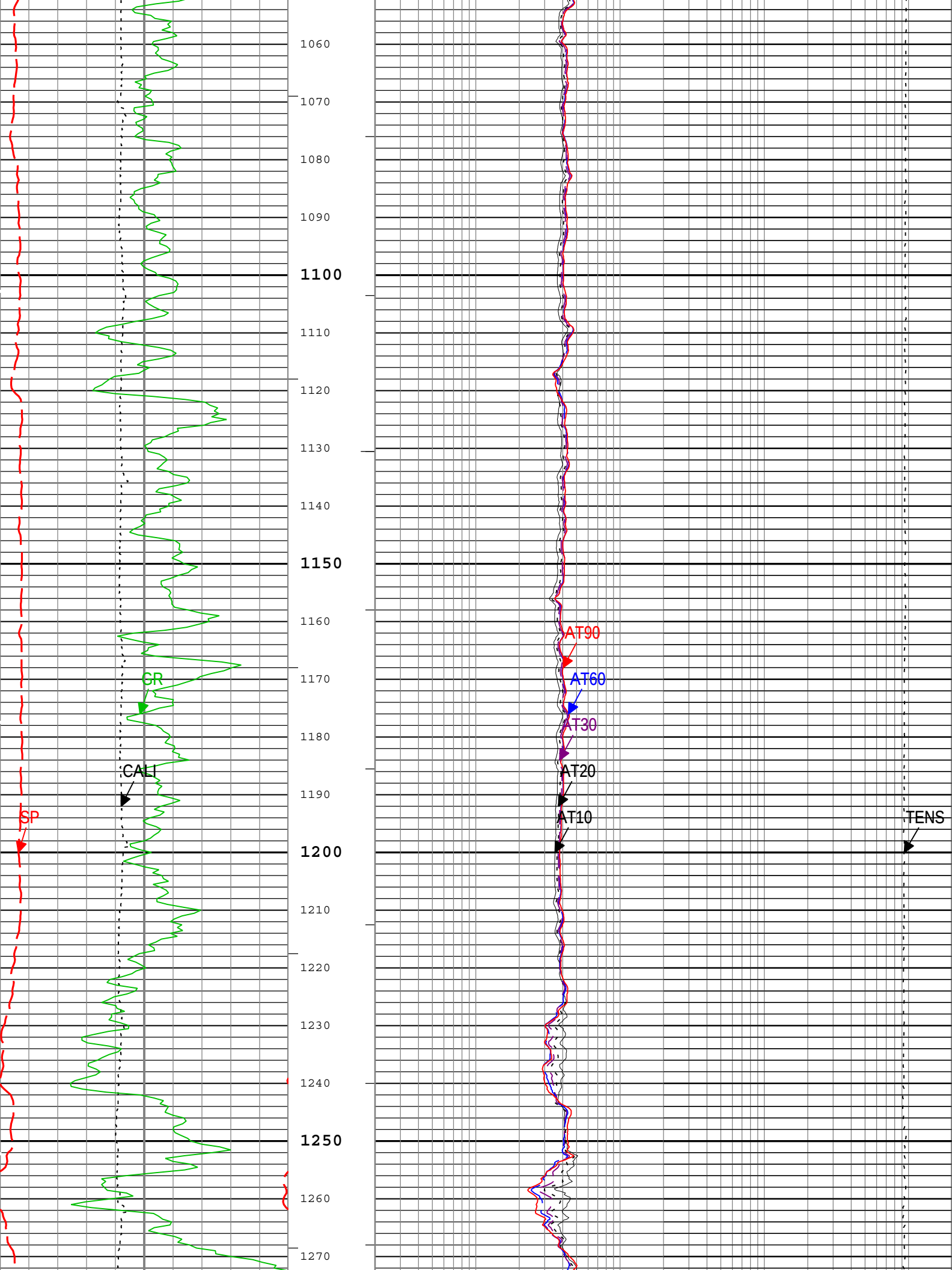
AT10
TENS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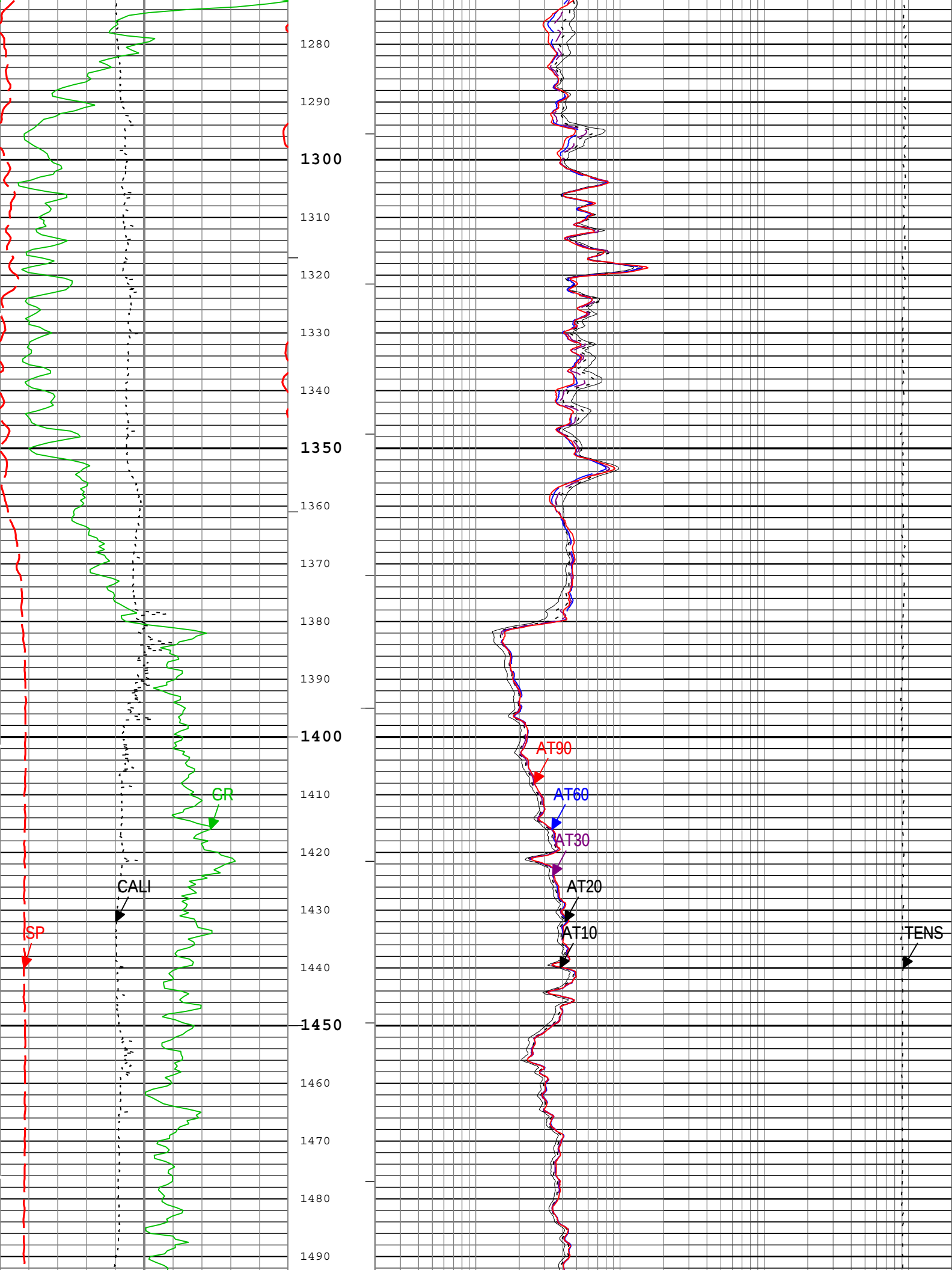
AT30
AT20
AT10
TENS
GR
CALI
SP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1490
GR
CALI
SP
AT90
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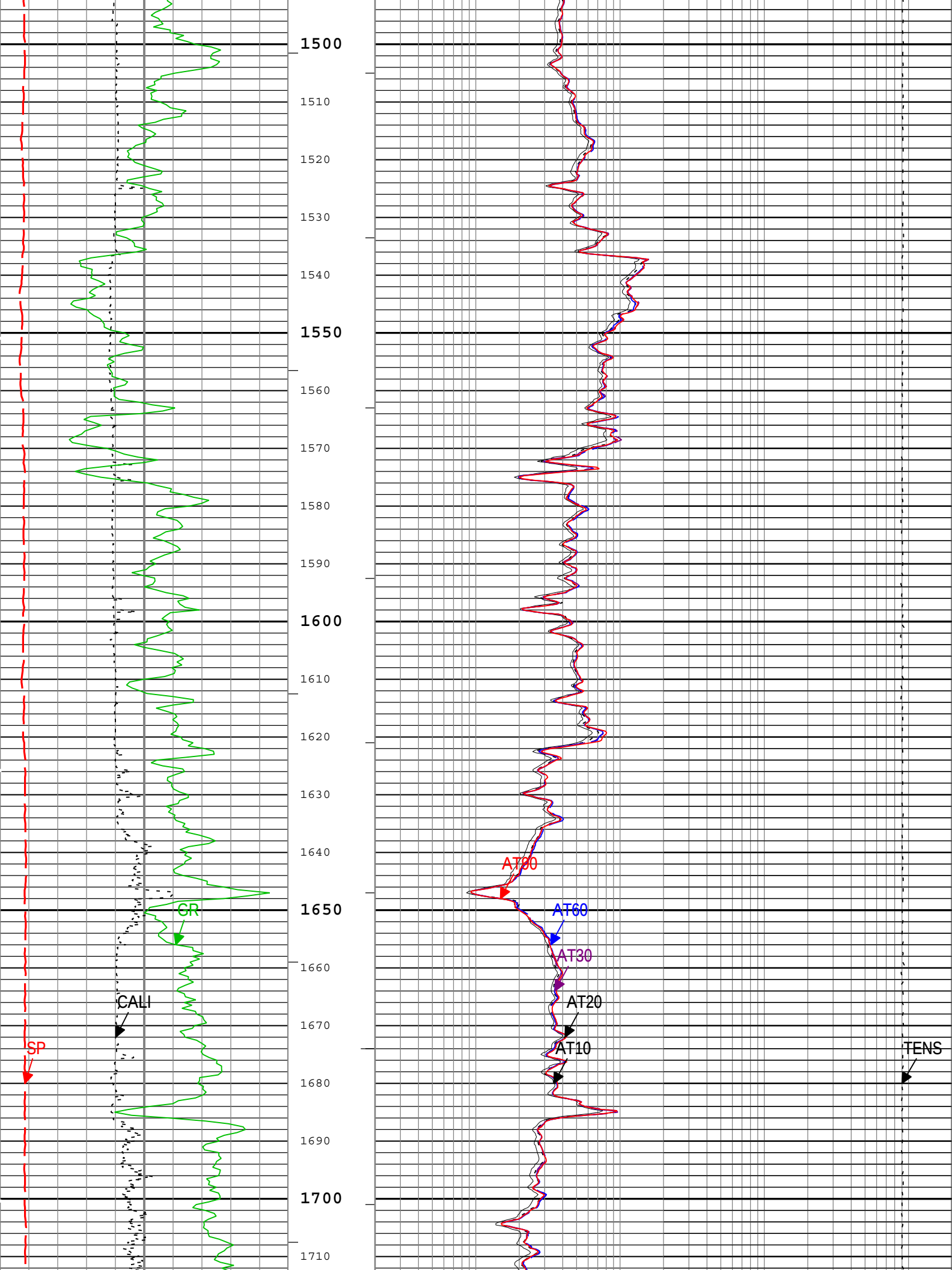
AT30
AT20
AT10
TENS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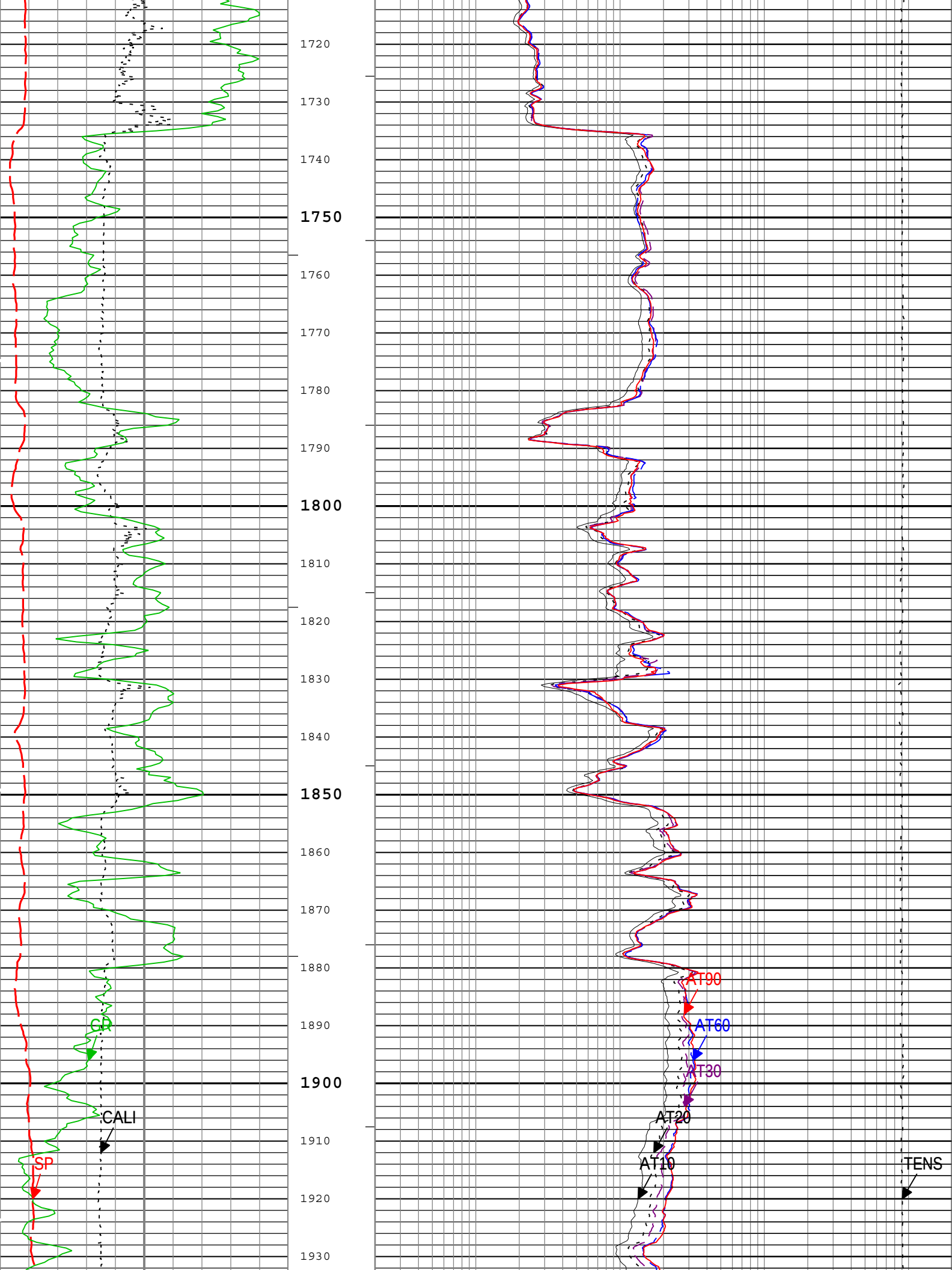
1660
1670
1680
1690
1700
1710
SP
CALI
GR
AT90
AT60
AT30
AT20
AT10
TENS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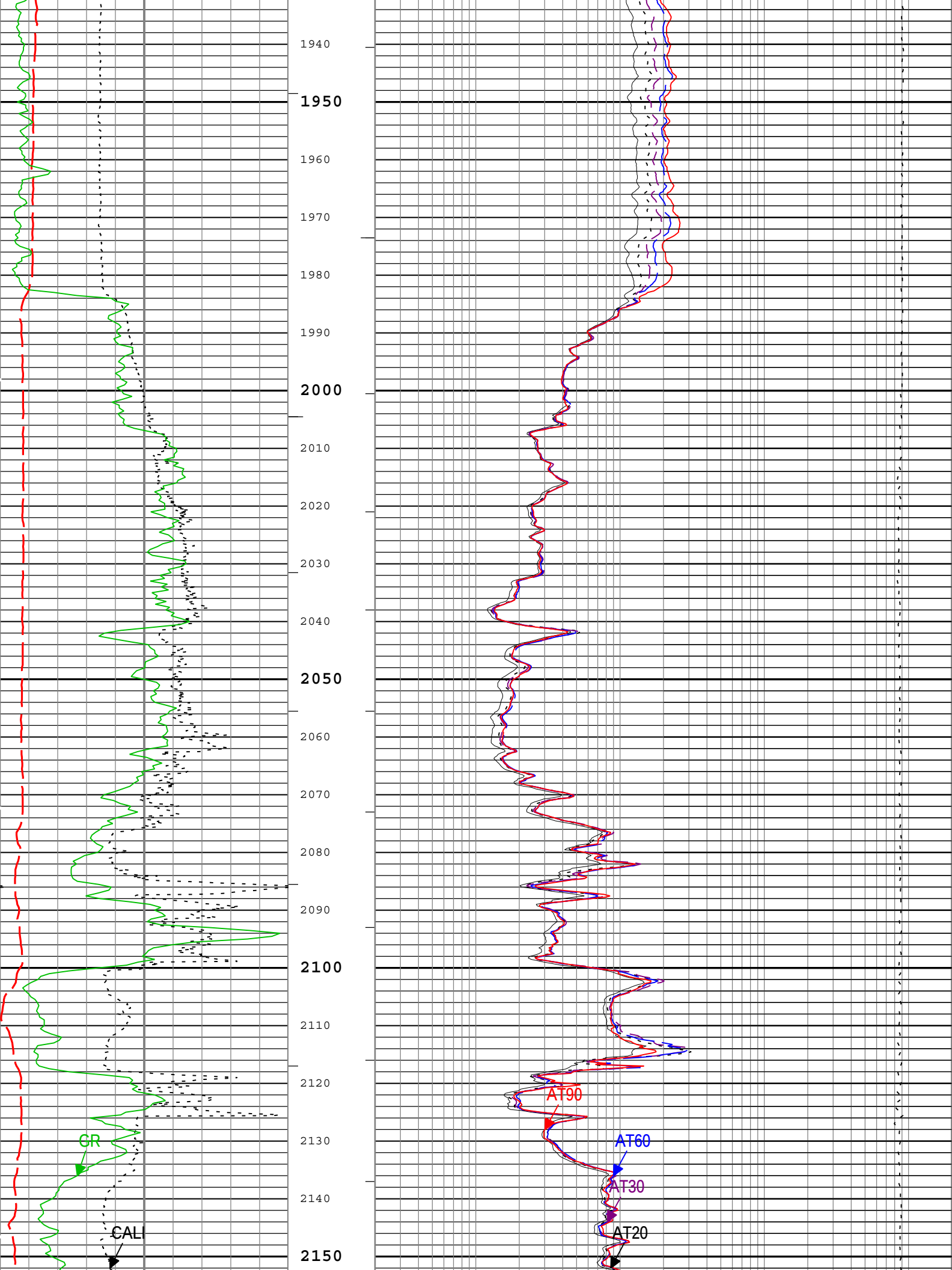
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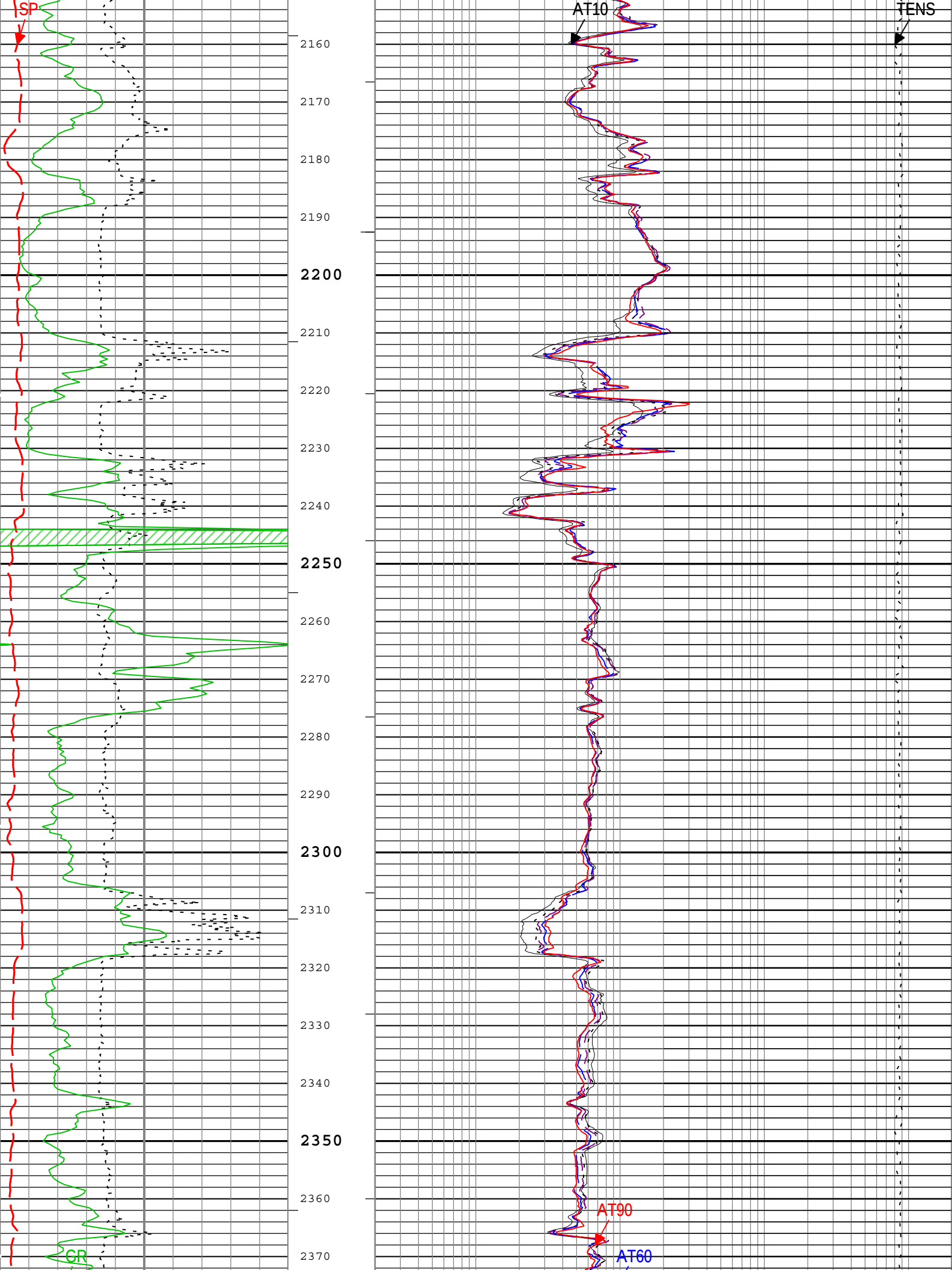
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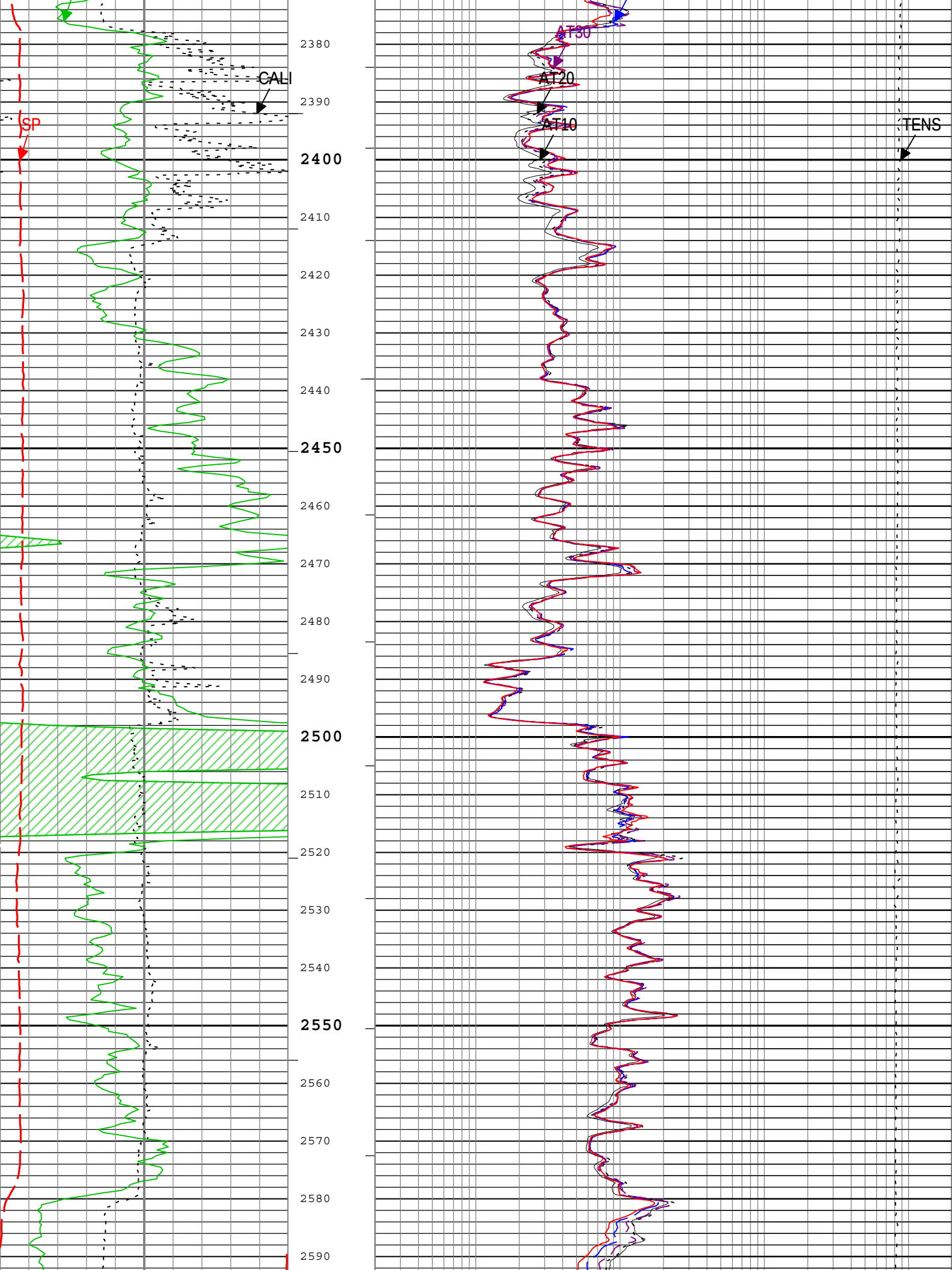
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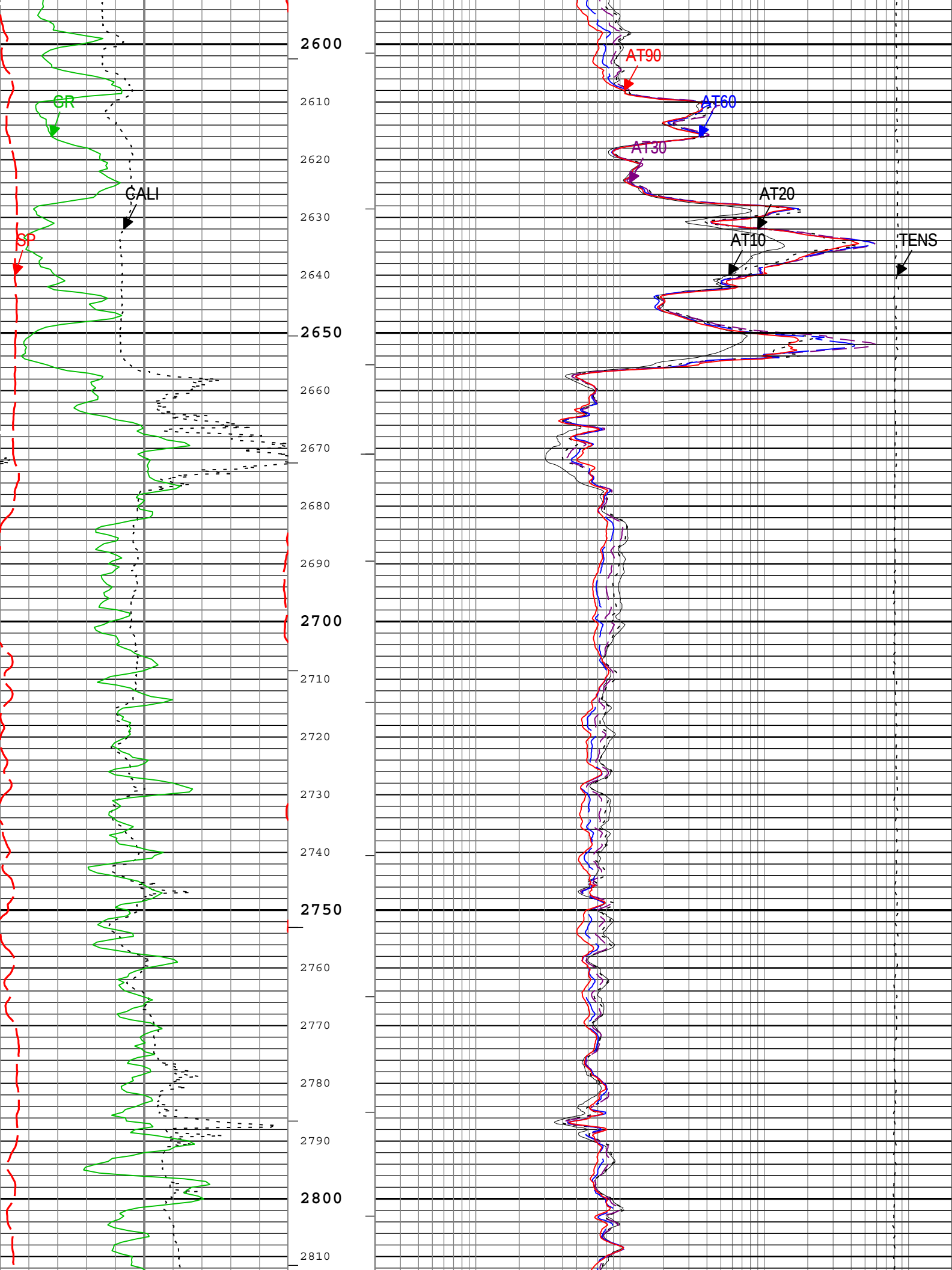
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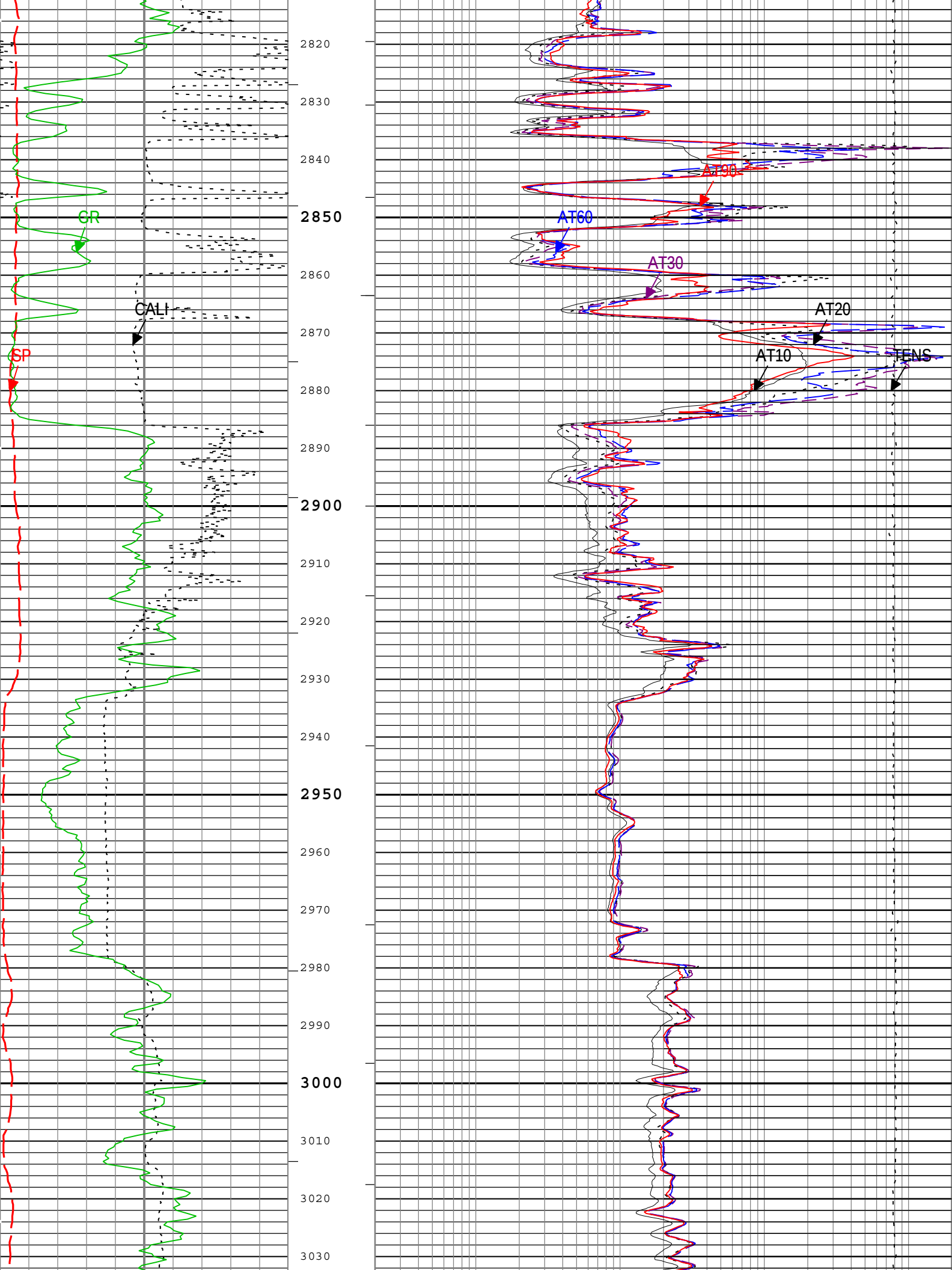
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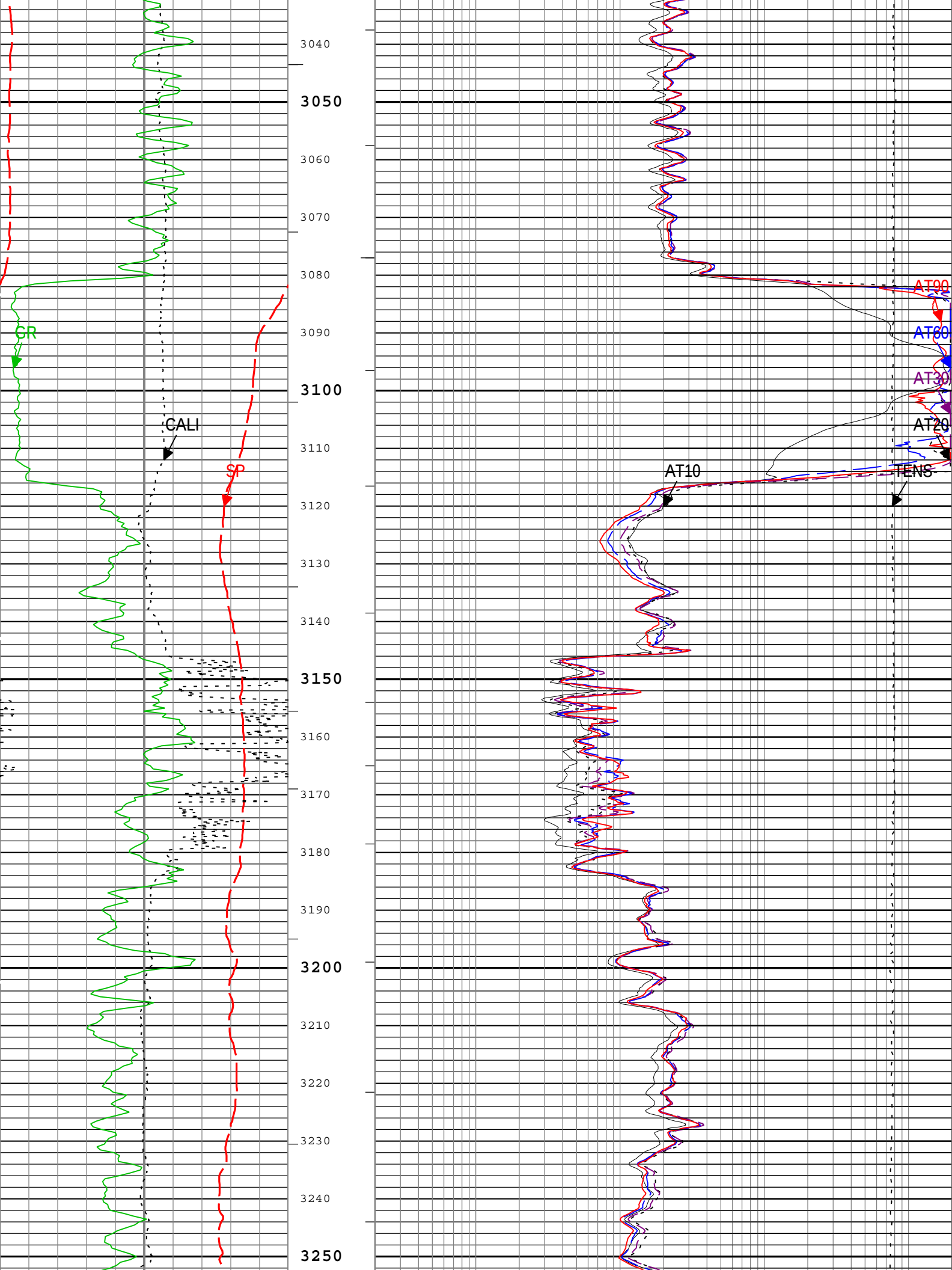
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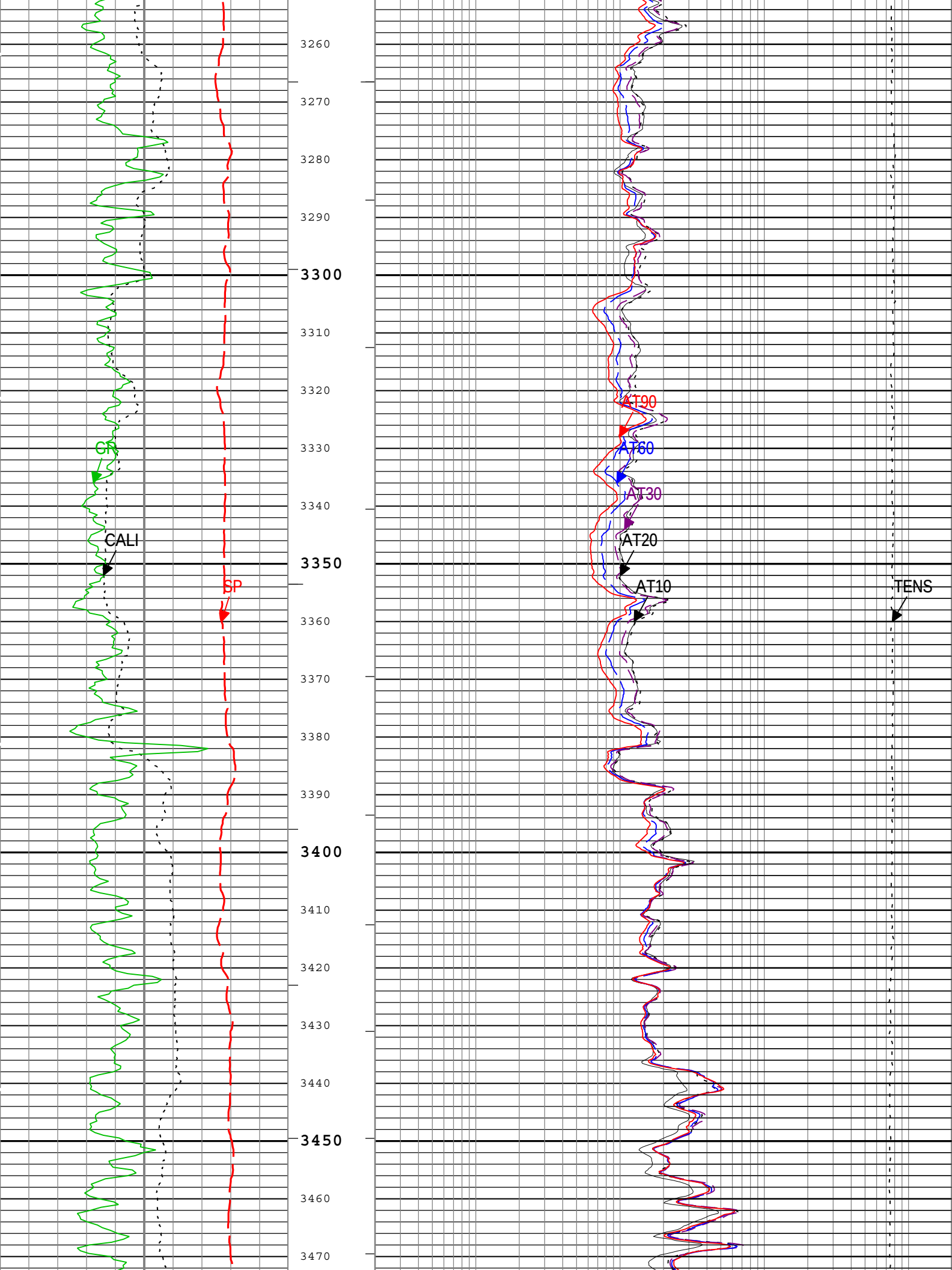
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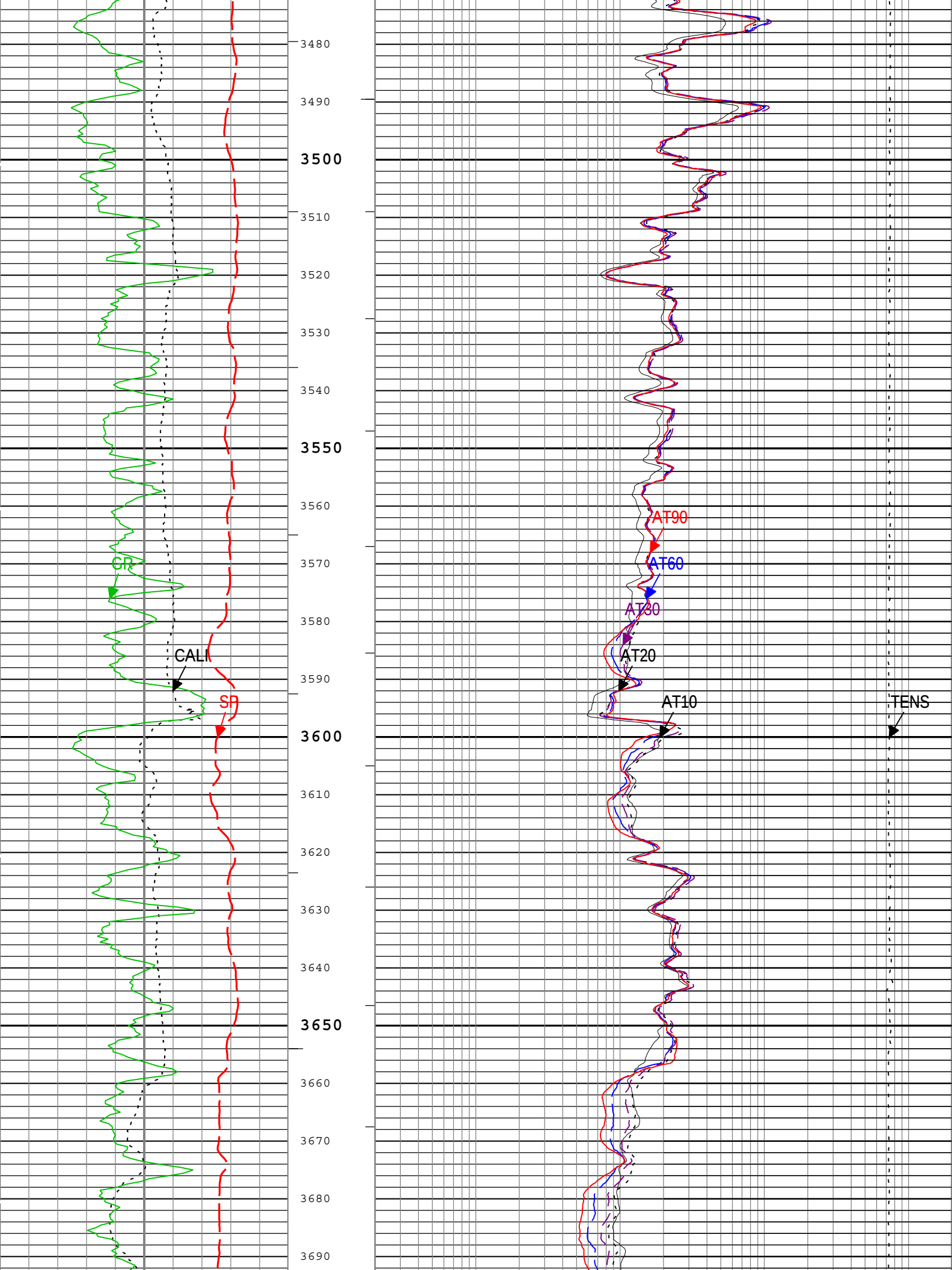
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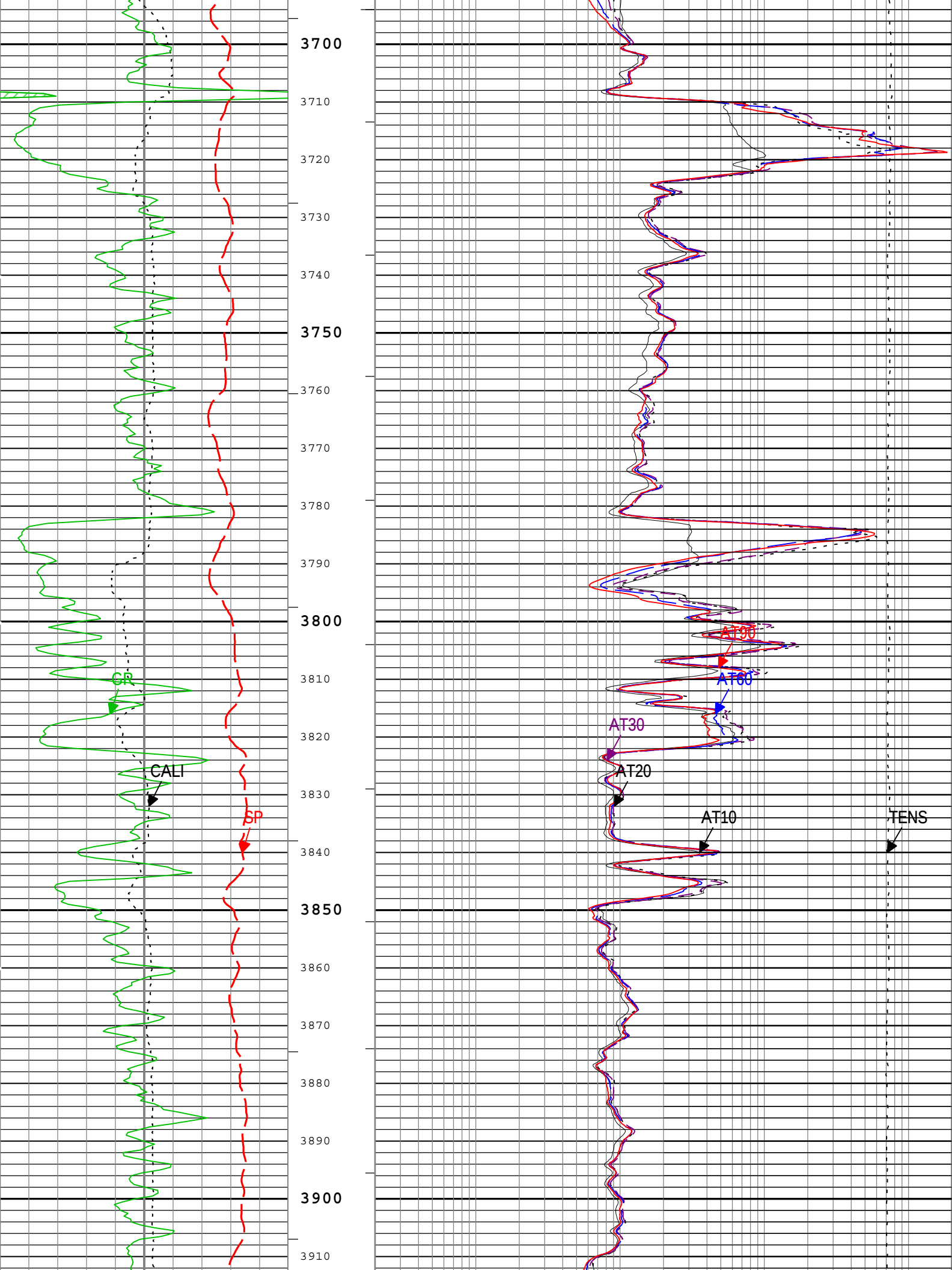
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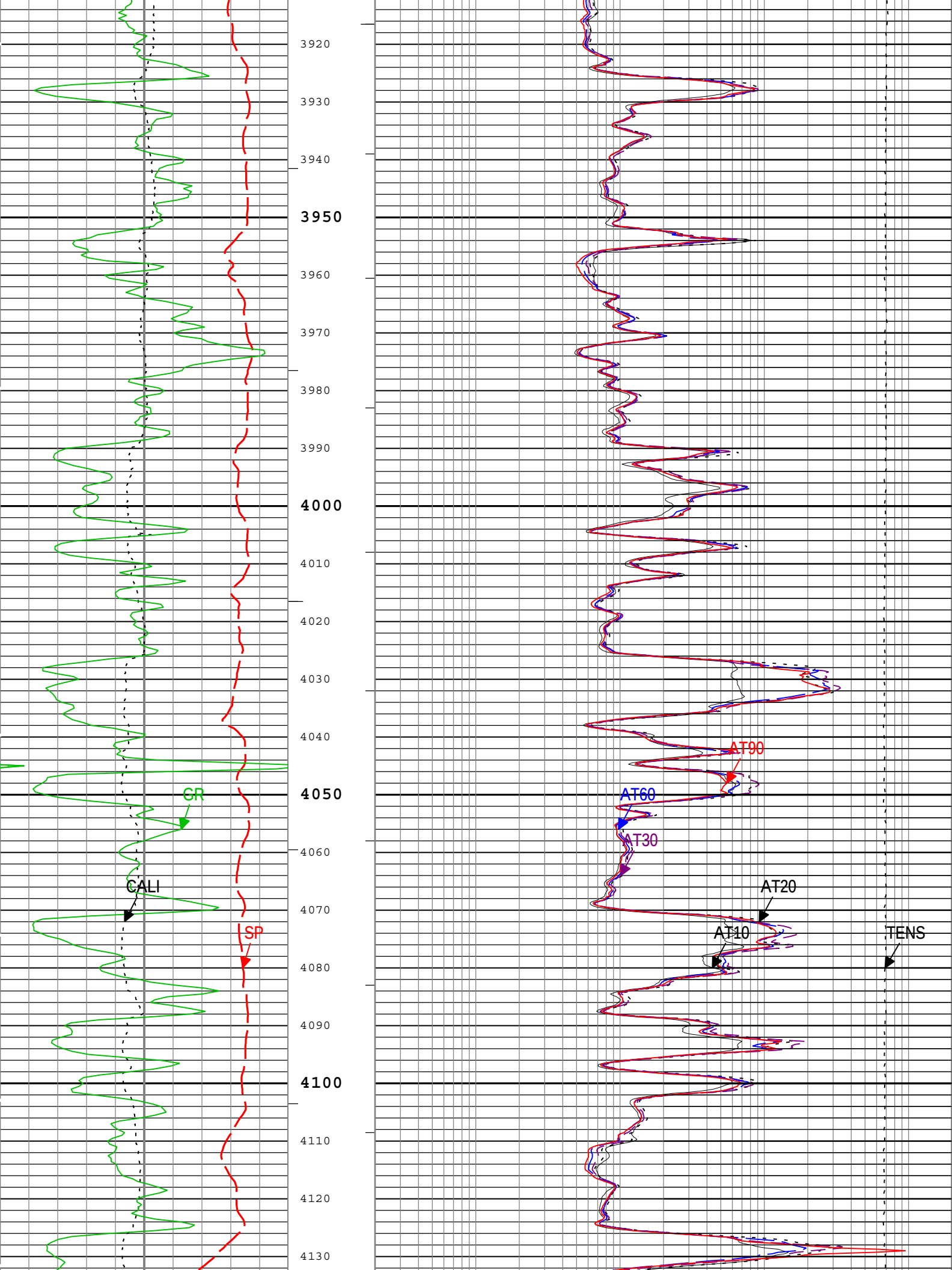
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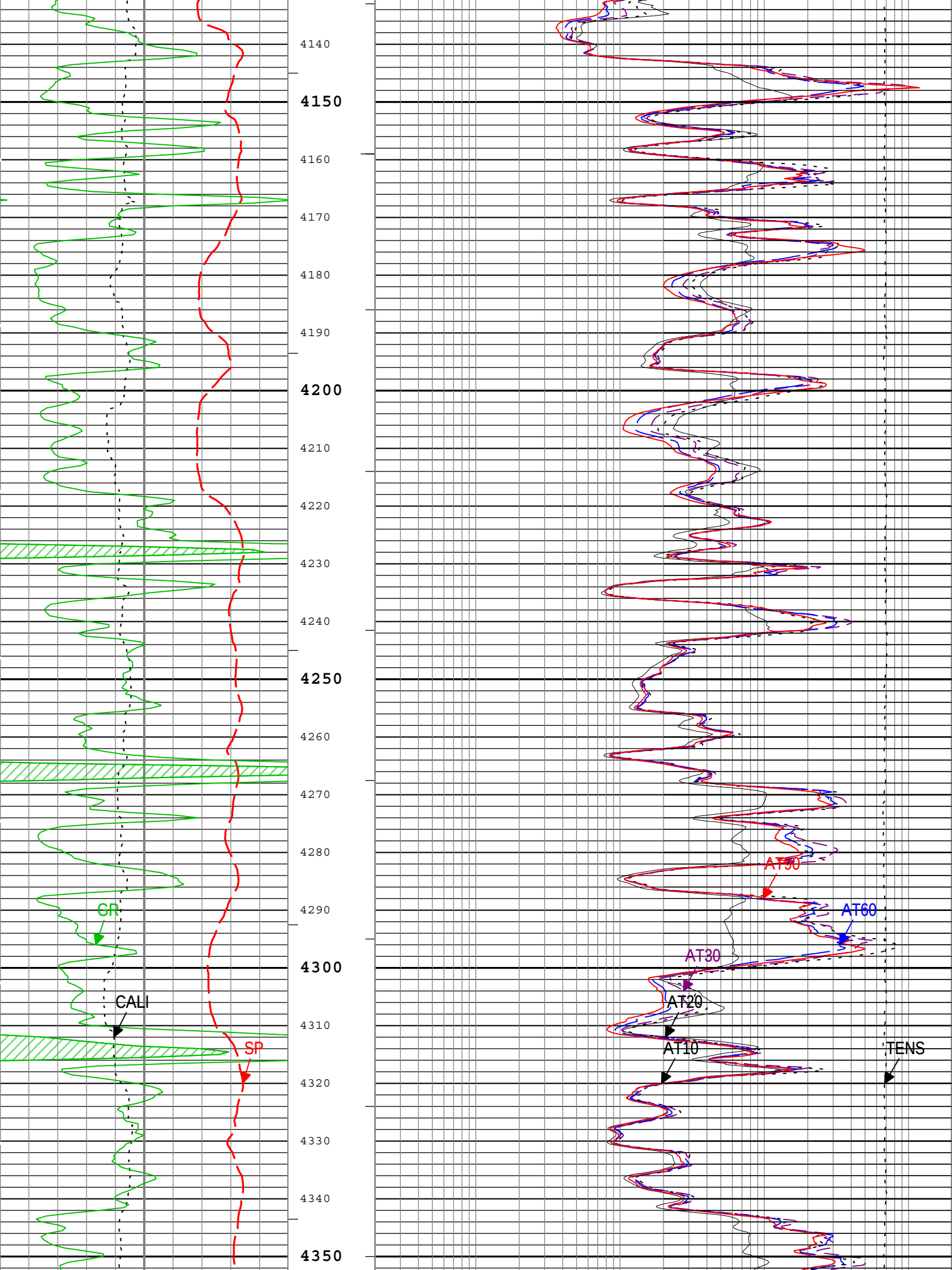
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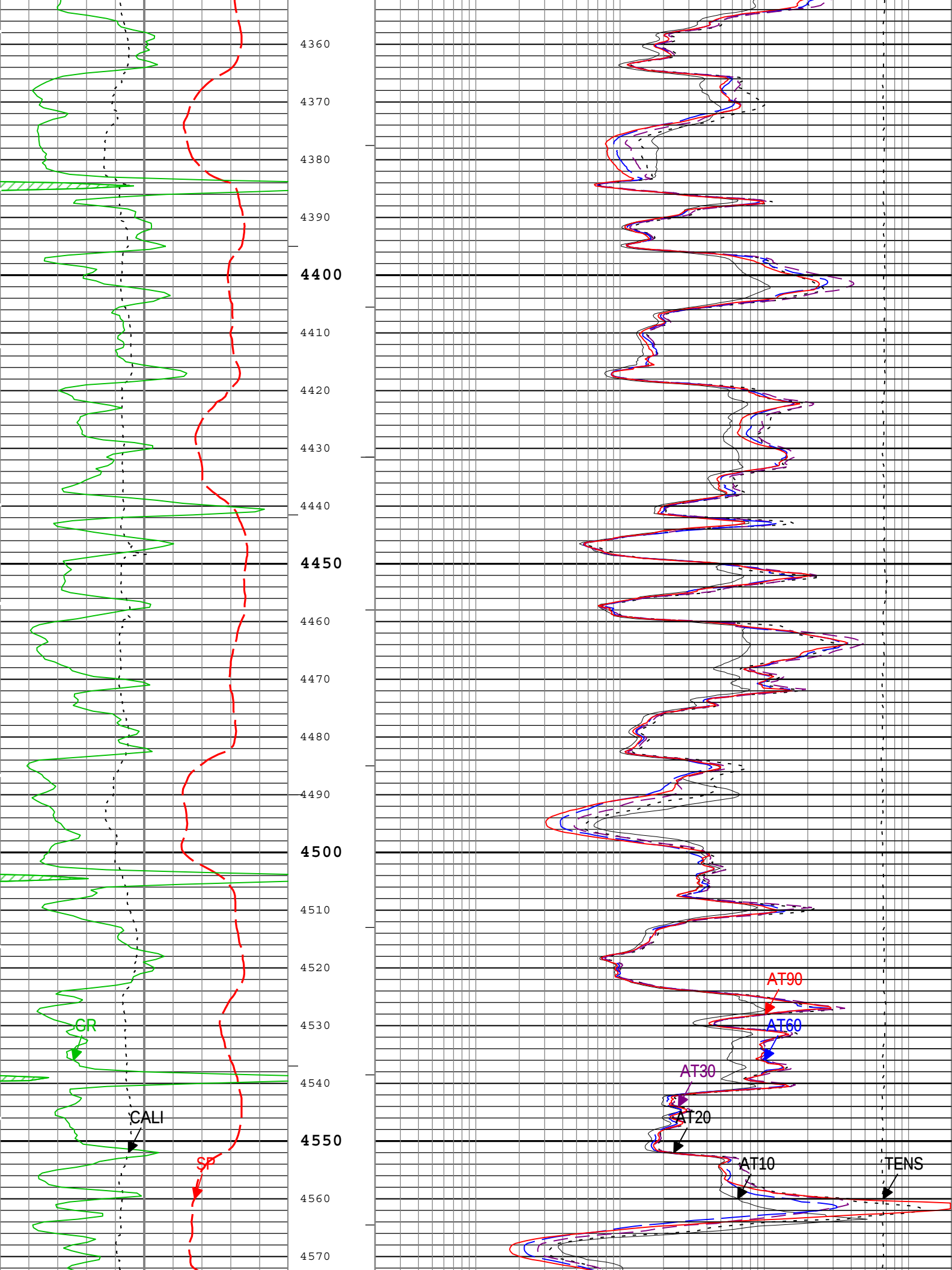
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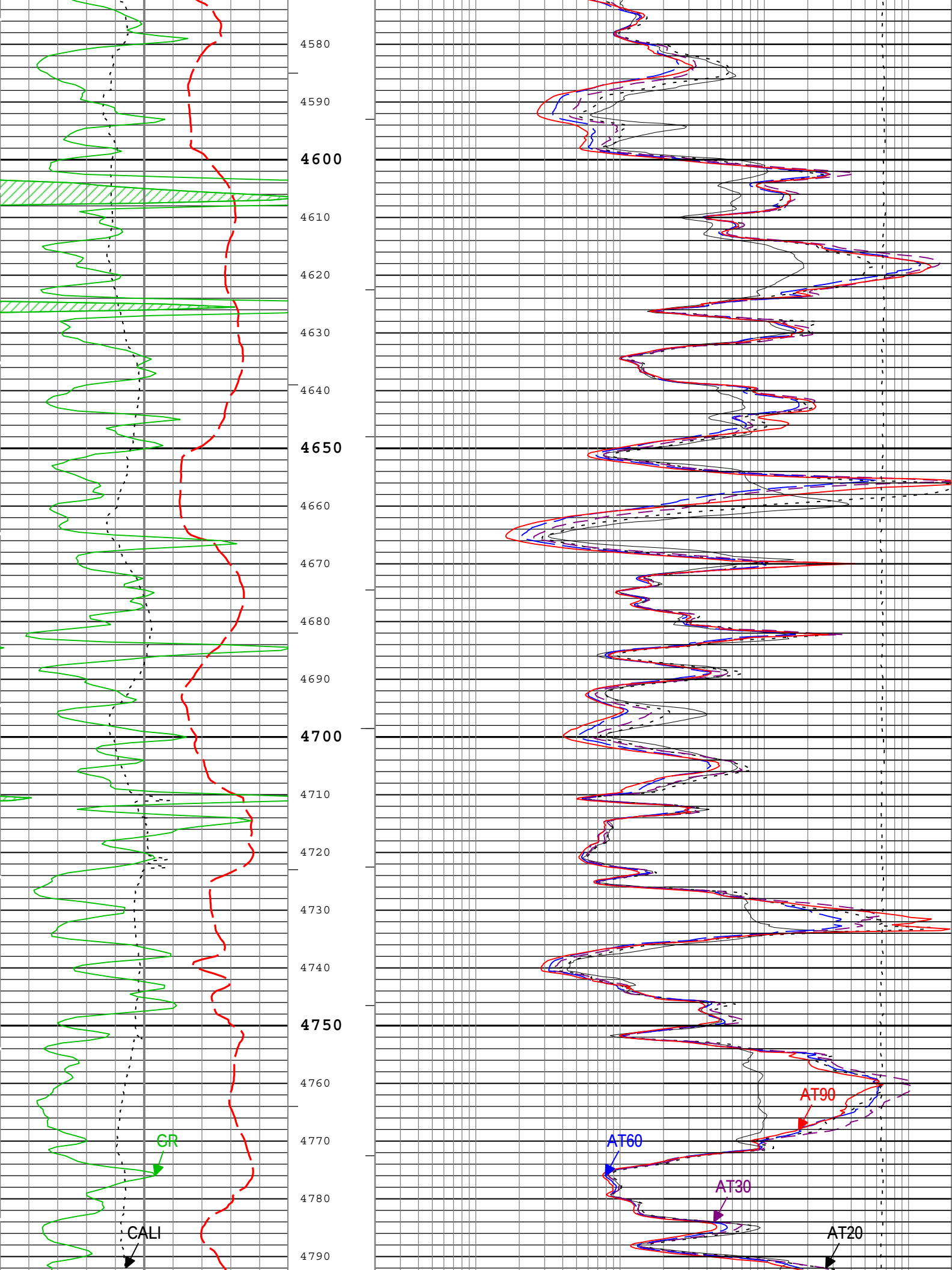
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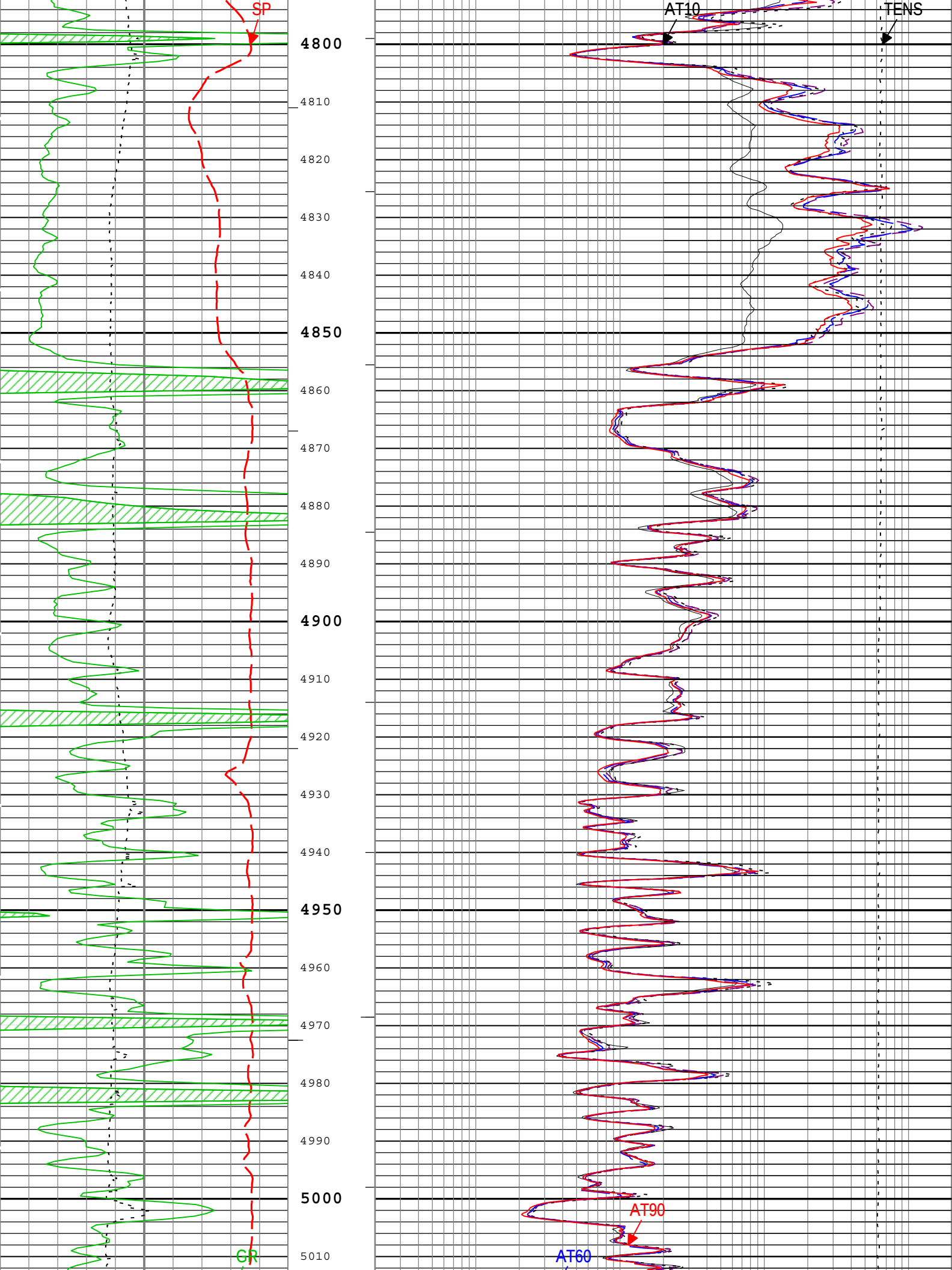
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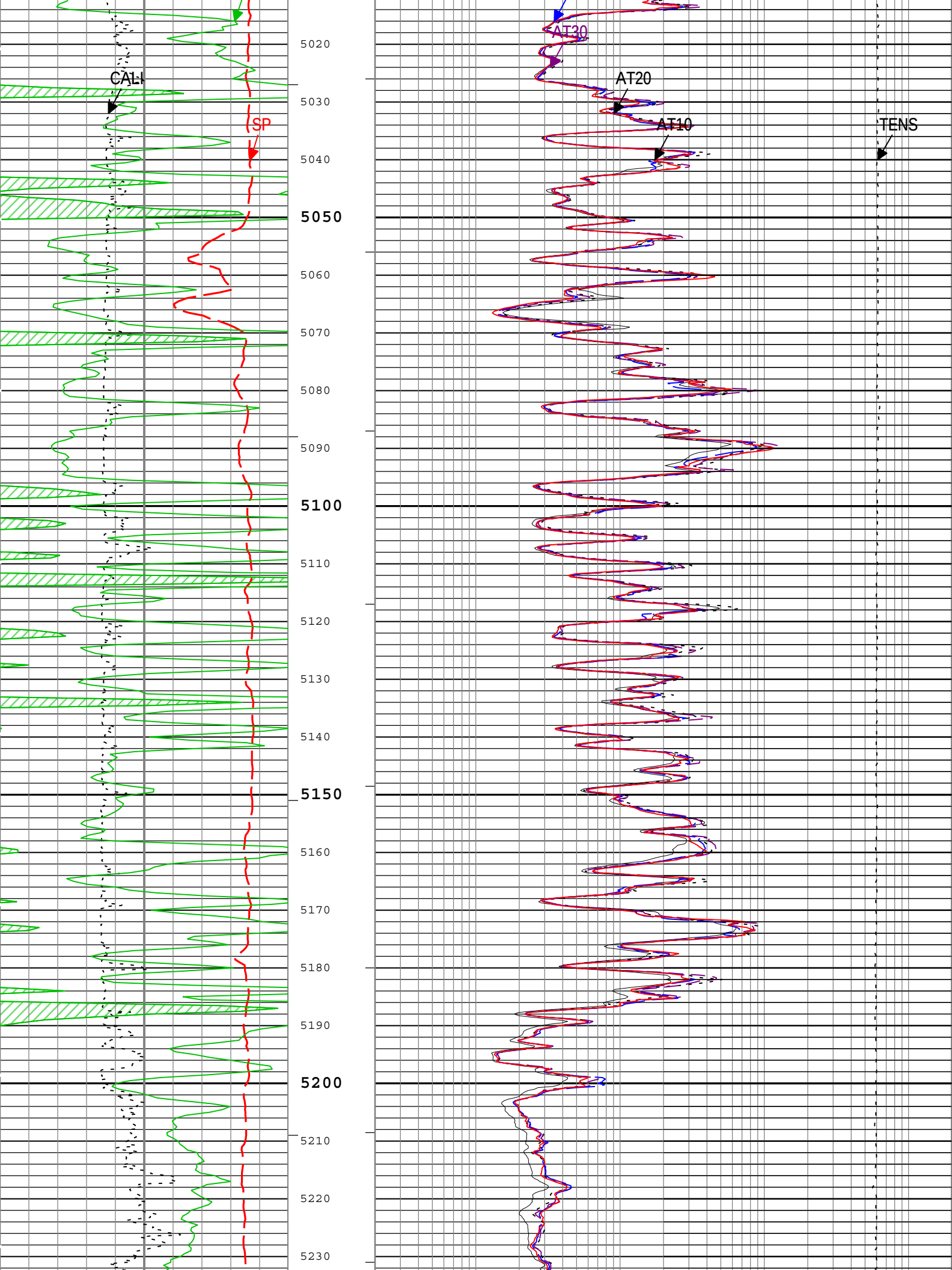
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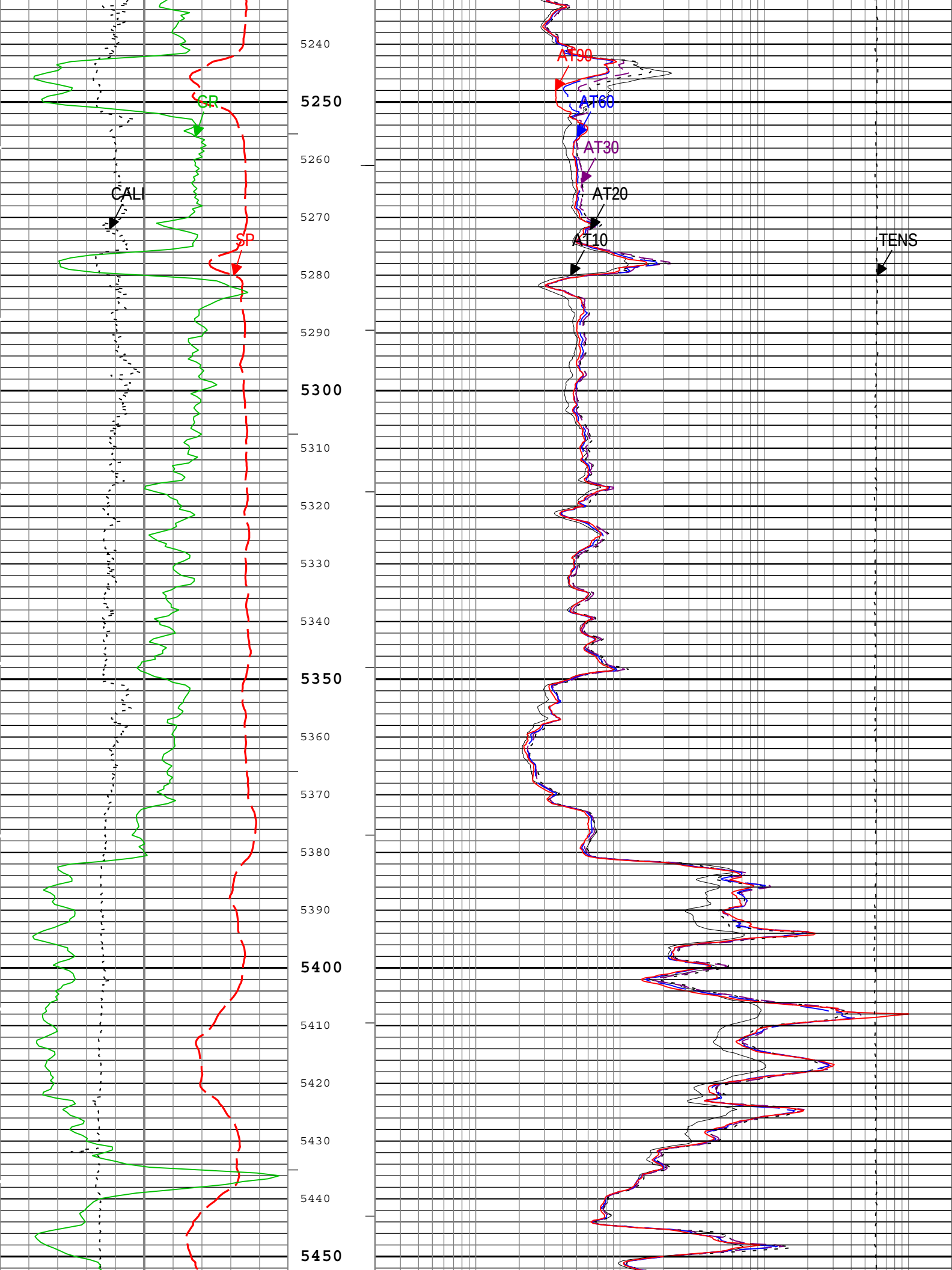
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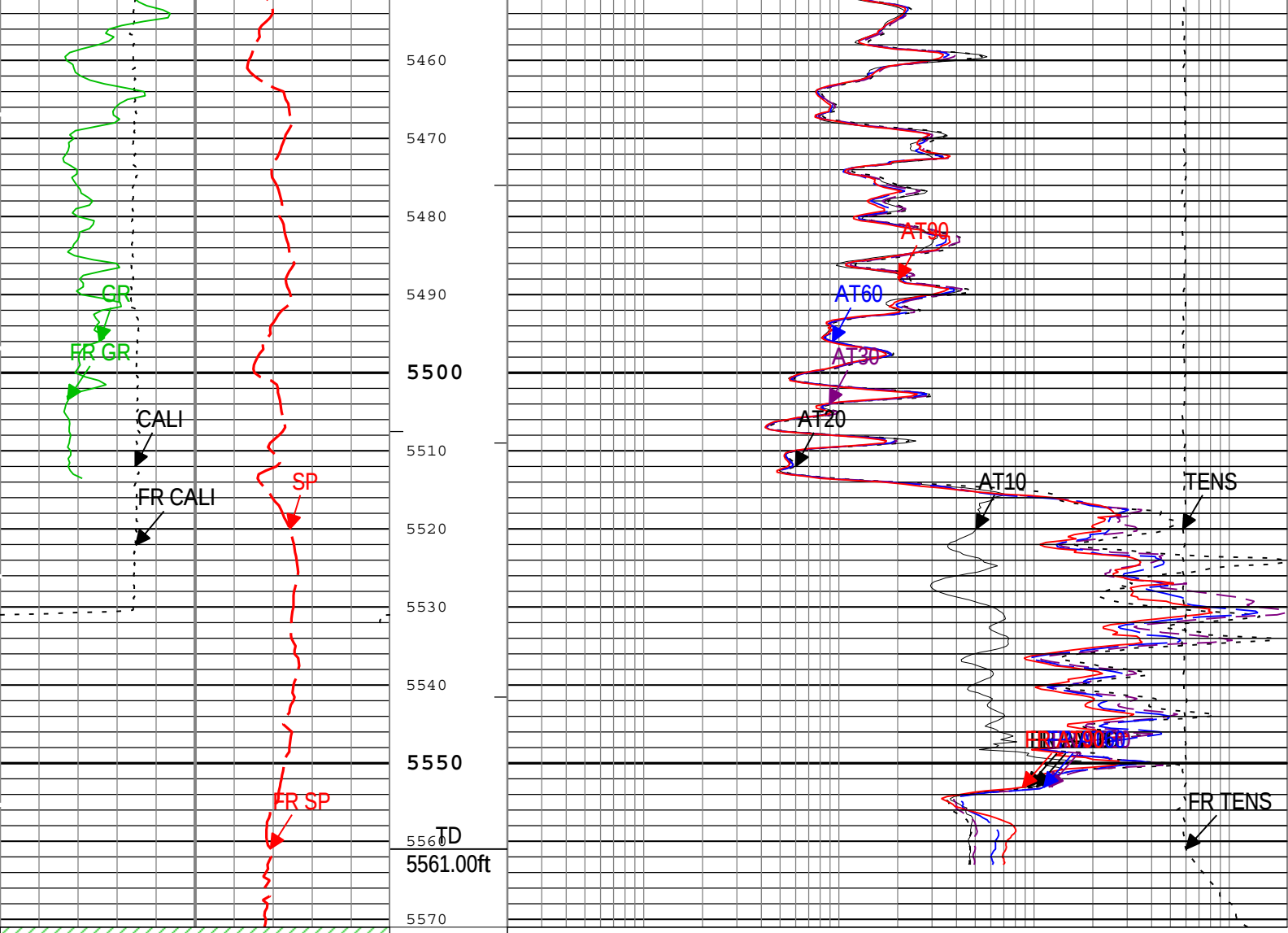


Gamma Ray Backup

Spontaneous Potential (SP) AIT-M

-100 mV 200

Caliper (CALI) HDRS-H

4 in 14

Gamma Ray (GR) HGNS-H

0 gAPI 200

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

Cable Tension (TENS)

10000 lbf 0

ICV - Integrated Cement Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

IHV - Integrated Hole Volume every 100.00 (ft3)

IHV - Integrated Hole Volume every 10.00 (ft3)

Description: AIT Basic Log Two Format: Log (EMD 5in Induction) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 11-Dec-2012 18:56:10

Channel Processing Parameters

Parameter	Description	Tool	Value	Unit

ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Standoff	
ABLM	Array Induction Basic Logs Mode	AIT-M	Normal	
ACDE	Array Induction Casing Detection Enable	AIT-M	No	
ASTA	Array Induction Tool Standoff	AIT-M	0.75	in
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	-0.005	in
CBLO	Casing Bottom (Logger)	WLSESSION	441	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	8.625	in
DFD	Drilling Fluid Density	Borehole	9.3	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	5.5	in
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	REMS	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
MST	Mud Sample Temperature	Borehole	90.6	degF
RMS	Resistivity of Mud Sample	Borehole	1.12	ohm.m
SOCO	Standoff Correction Option	HGNS-H	Yes	
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	0	400	441
BS	7.875	441	5571

All depth are actual.

Tool Control Parameters

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

PEX-AIT

5" Induction

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
PEX-AIT	Log[2]:Up	Up	5215.32 ft	5572.13 ft	11-Dec-2012 4:35:33 PM	11-Dec-2012 4:47:42 PM	5.00 ft	
PEX-AIT	Log[3]:Up	Up	365.61 ft	5571.09 ft	11-Dec-2012 4:54:22 PM	11-Dec-2012 6:41:38 PM	5.00 ft	

All depths are referenced to toolstring zero

Log

PEX-AIT: Log[3]:Up

Description: AIT Basic Log Two Format: EMD 5in Induction RA Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 11-Dec-2012 18:56:13

Channel	Source	Sampling
ICV	Borehole	6in
IHV	Borehole	6in
TIME_1900	WLWorkflow	0.1in

IHV - Integrated Hole Volume every 10.00 (ft3)

IHV - Integrated Hole Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

ICV - Integrated Cement Volume every 10.00 (ft3)

ICV - Integrated Cement Volume every 100.00 (ft3)

Main To Repeat

Repeat To Main

Cable Tension (TENS)

10000 lbf 0

Main To Repeat

Repeat To Main

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

0.2 ohm.m 2000

Main To Repeat

Repeat To Main

Caliper (CALI) HDRS-H

4 in 14

Main To Repeat

Repeat To Main

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

0.2 ohm.m 2000

Main To Repeat

Repeat To Main

Spontaneous Potential (SP) AIT-M

-100 mV 200

Main To Repeat

Repeat To Main

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

0.2 ohm.m 2000

Main To Repeat

Repeat To Main

Gamma Ray (GR) HGNS-H

200 gAPI 400

Main To Repeat

Repeat To Main

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

0.2 ohm.m 2000

Main To Repeat

Repeat To Main

Gamma Ray (GR) HGNS-H

0 gAPI 200

Main To Repeat

Repeat To Main

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

0.2 ohm.m 2000

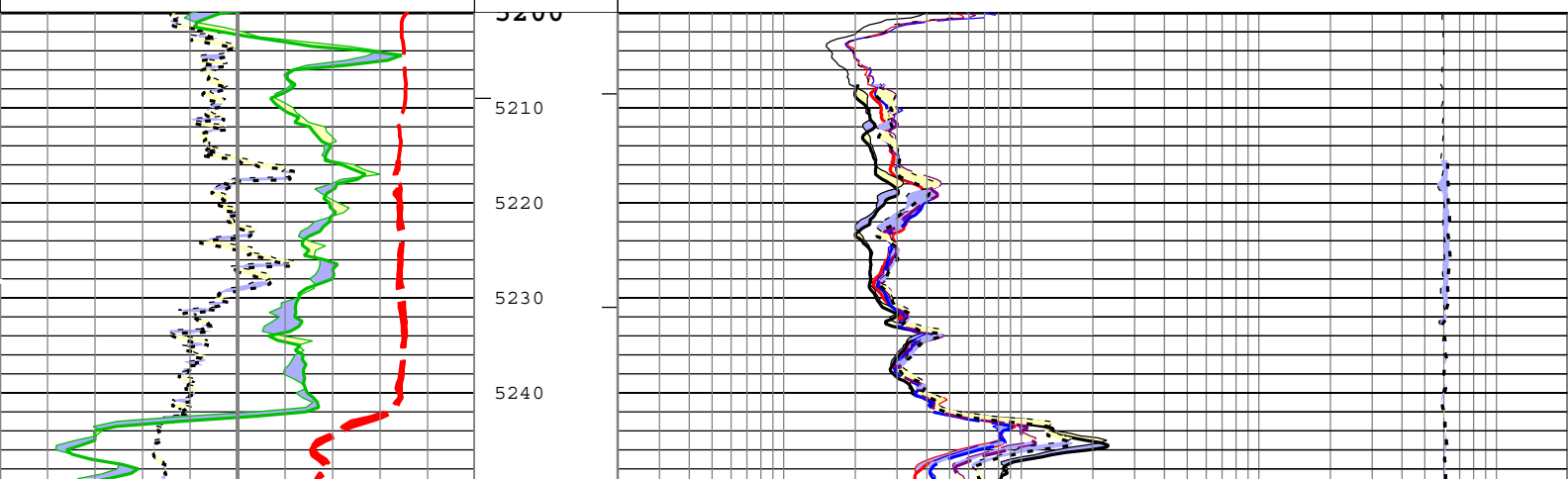
5200

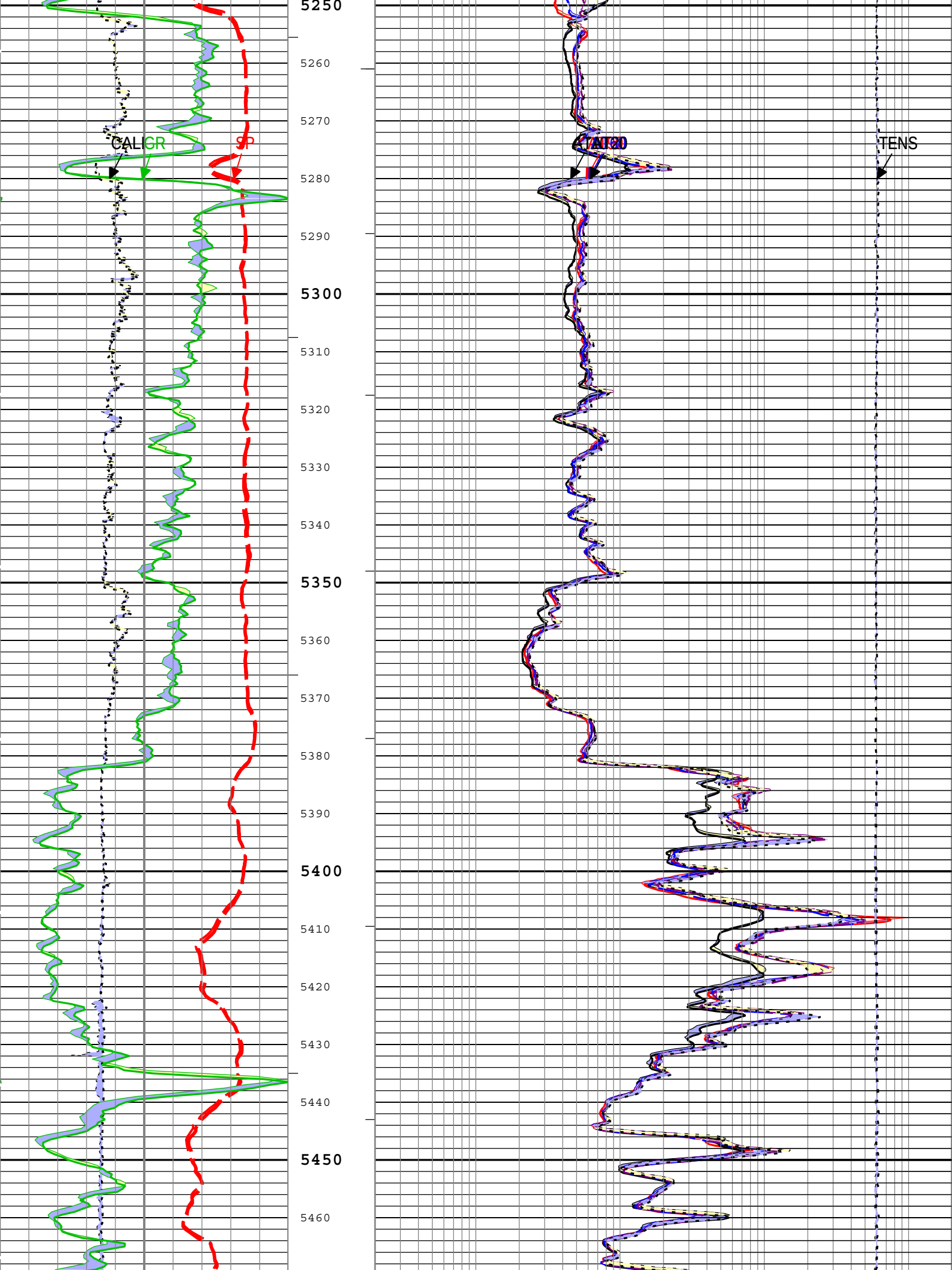
5210

5220

5230

5240

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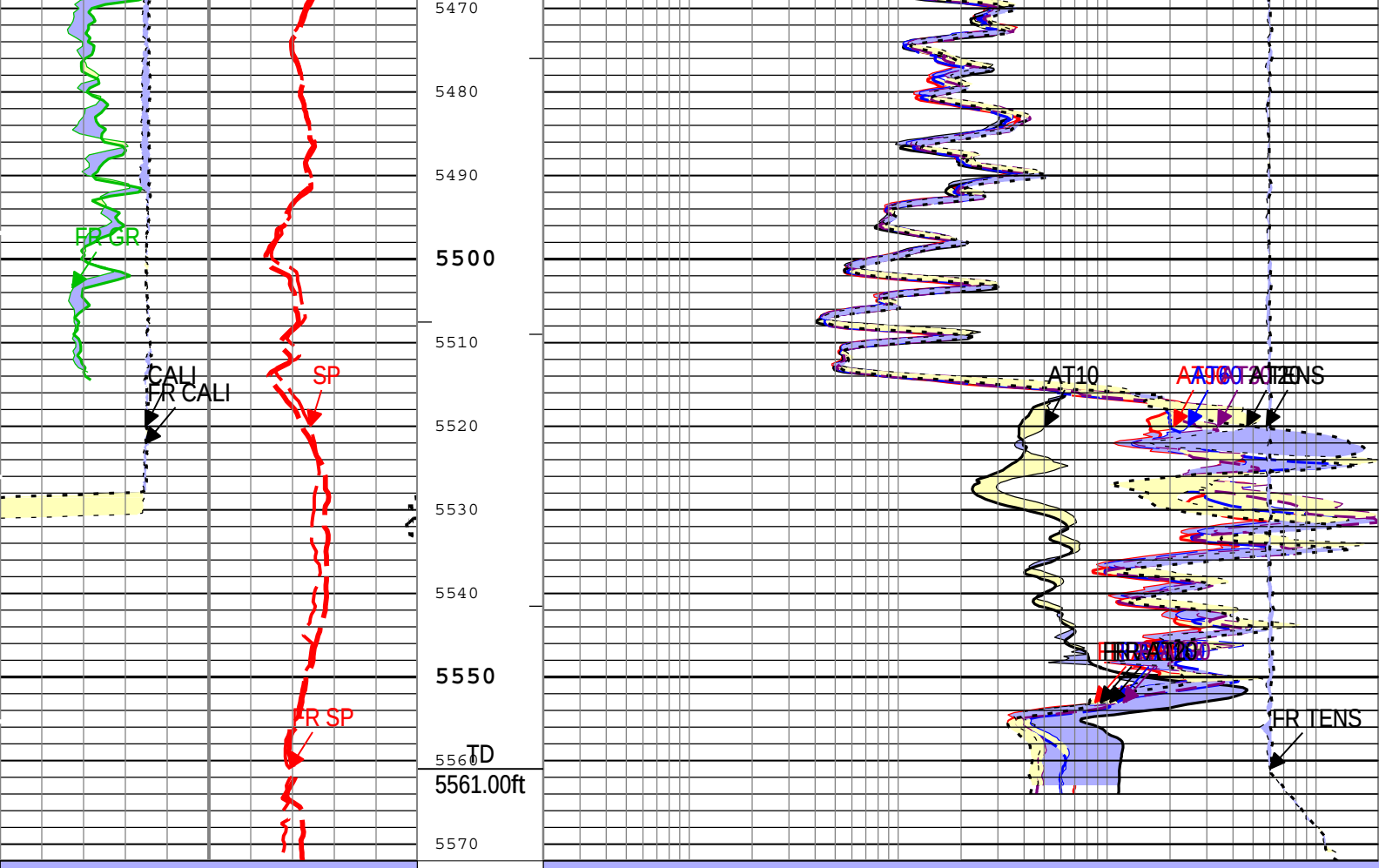

Main To Repeat

Repeat To Main

Caliper (CALI) HDRS-H

4 in 14

Main To Repeat

Repeat To Main

Spontaneous Potential (SP) AIT-M

-100 mV 200

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

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

0.2 ohm.m 2000

Main To Repeat

Repeat To Main

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

0.2 ohm.m 2000

Main To Repeat

Repeat To Main

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

0.2 ohm.m 2000

Main To Repeat

Repeat To Main

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

0.2 ohm.m 2000

Main To Repeat

Repeat To Main

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

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

0.2 ohm.m 2000

Main To Repeat

Repeat To Main

Cable Tension (TENS)

10000 lbf 0

ICV - Integrated Cement Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

IHV - Integrated Hole Volume every 100.00 (ft3)

IHV - Integrated Hole Volume every 10.00 (ft3)

Description: AIT Basic Log Two Format: EMD 5in Induction RA Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 11-Dec-2012 18:56:13

Calibration Report

AIT-M (Array Induction Tool - M) Calibration - Run PEX-AIT

Primary Equipment :

Array Induction Sonde - M	AMIS	1372

Auxiliary Equipment :

AITM Rm/SP Bottom Nose	AMRM	1372

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM): 15:21:45 19-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Test Loop Gain - 0		Master	1.000	0.950	1.017	1.050
Test Loop Phase - 0	deg	Master	0	-3.000	0.558	3.000
Test Loop Gain - 1		Master	1.000	0.950	1.012	1.050
Test Loop Phase - 1	deg	Master	0	-3.000	0.586	3.000
Test Loop Gain - 2		Master	1.000	0.950	1.015	1.050
Test Loop Phase - 2	deg	Master	0	-3.000	0.039	3.000
Test Loop Gain - 3		Master	1.000	0.950	1.011	1.050
Test Loop Phase - 3	deg	Master	0	-3.000	0.110	3.000
Test Loop Gain - 4		Master	1.000	0.950	0.993	1.050
Test Loop Phase - 4	deg	Master	0	-3.000	0.086	3.000
Test Loop Gain - 5		Master	1.000	0.950	0.988	1.050
Test Loop Phase - 5	deg	Master	0	-3.000	-0.130	3.000
Test Loop Gain - 6		Master	1.000	0.950	1.004	1.050
Test Loop Phase - 6	deg	Master	0	-3.000	0.258	3.000
Test Loop Gain - 7		Master	1.000	0.950	1.006	1.050
Test Loop Phase - 7	deg	Master	0	-3.000	-0.057	3.000

AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM): 15:21:45 19-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-68.090	119.000
Sonde Error Correction Quad - 0		Master	-----	-2250.000	-545.377	2250.000
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	173.000	204.000
Sonde Error Correction Quad - 1		Master	-----	-625.000	62.317	625.000
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	118.031	156.000
Sonde Error Correction Quad - 2		Master	-----	-350.000	21.210	350.000
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	64.682	89.000
Sonde Error Correction Quad - 3		Master	-----	-250.000	-45.117	250.000
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	26.068	35.000
Sonde Error Correction Quad - 4		Master	-----	-63.000	10.809	63.000
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	11.329	24.000
Sonde Error Correction Quad - 5		Master	-----	-50.000	-17.563	50.000
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	9.470	15.000
Sonde Error Correction Quad - 6		Master	-----	-30.000	-7.318	30.000

Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-0.364	5.000
Sonde Error Correction Quad - 7		Master	-----	-30.000	-14.172	30.000

AIT Mud Calibration - Mud Calibration Gain

Master (EEPROM): 15:21:45 19-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
Coarse Gain		Master	1.000	0.800	1.126	1.200
Fine Gain		Master	1.000	0.800	1.125	1.200

AIT Electronics Check - Thru Calibration Check

Master (EEPROM): 15:21:45 19-Nov-2012 Before (Measured): 09:37:11 11-Dec-2012 After:

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
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 0	deg	Master	-----	137.000	-179.340	-103.000
		Before	-----	137.000	-179.627	-103.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.287	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 1	V	Master	-----	0.762	1.271	1.778
		Before	-----	0.762	1.271	1.778
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 1	deg	Master	-----	136.000	179.582	-104.000
		Before	-----	136.000	179.296	-104.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.286	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 2	V	Master	-----	0.372	0.632	0.868
		Before	-----	0.372	0.632	0.868
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 2	deg	Master	-----	132.000	176.025	-108.000
		Before	-----	132.000	175.739	-108.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.286	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 3	V	Master	-----	0.420	0.713	0.980
		Before	-----	0.420	0.713	0.980
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.000	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 3	deg	Master	-----	131.000	175.273	-109.000
		Before	-----	131.000	174.987	-109.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.286	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 4	V	Master	-----	0.804	1.335	1.876
		Before	-----	0.804	1.334	1.876
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.001	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 4	deg	Master	-----	125.000	169.130	-115.000
		Before	-----	125.000	168.845	-115.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.285	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 5	V	Master	-----	1.176	1.955	2.744
		Before	-----	1.176	1.954	2.744
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.001	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 5	deg	Master	-----	122.000	167.427	-118.000
		Before	-----	122.000	167.139	-118.000

		Before	-----	122.000	167.139	-118.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.288	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 6	V	Master	-----	1.176	1.951	2.744
		Before	-----	1.176	1.950	2.744
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.001	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 6	deg	Master	-----	121.000	167.455	-119.000
		Before	-----	121.000	167.167	-119.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.288	-----
		After-Before	-----	-----	-----	-----
Thru Cal Mag - 7	V	Master	-----	0.846	1.423	1.974
		Before	-----	0.846	1.424	1.974
		After	-----	-----	-----	-----
		Before-Master	-----	-----	0.001	-----
		After-Before	-----	-----	-----	-----
Thru Cal Phase - 7	deg	Master	-----	115.000	166.651	-125.000
		Before	-----	115.000	166.356	-125.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.295	-----
		After-Before	-----	-----	-----	-----
SPA Zero	mV	Master		-50.000	0.168	50.000
		Before		-50.000	0.145	50.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.023	-----
		After-Before	-----	-----	-----	-----
SPA Plus	mV	Master		941.000	991.929	1040.000
		Before		941.000	991.853	1040.000
		After	-----	-----	-----	-----
		Before-Master	-----	-----	-0.076	-----
		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	-----	-----	-----	-----

Company: Vecta Oil & Gas Ltd

Schlumberger

Well: Bierstadt 32-33

Field: Wildcat

County: Cheyenne

Country:

Platform Express
Array Induction
with Linear Correlation