

Company: Dorado E&P Partners, LLC

Well: Dealy 2-31 SWD

Field: Wildcat

County: Reno State: Kansas

PLATFORM EXPRESS

ARRAY INDUCTION

GAMMA RAY - SP

County: Reno
Field: Wildcat
Location: 150' FNL - 400' FEL
Well: Dealy 2-31 SWD
Company: Dorado E&P Partners, LLC

Location:		Elev.		K.B.	
150' FNL - 400' FEL				1730.00 ft	
Permanent Datum:		Ground Level		Elev.: 1718.00 f	
Log Measured From:		Kelly Bushing		12.00 ft	
Drilling Measured From:		Kelly Bushing		above Perm.Datum	
API Serial No.	Section:	Township:		Range:	
15-155-21614	31	24S		9W	

Logging Date 05-Dec-2012

Run Number One

Depth Driller 4265.00 ft

Schlumberger Depth 4254.00 ft

Bottom Log Interval 4254.00 ft

Top Log Interval 250.00 ft

Casing Driller Size @ Depth 13.375 in @ 250.00 ft

Casing Schlumberger 250 ft

Bit Size 12.25 in

Type Fluid In Hole Water

Density 9.35 lbm/gal

Fluid Loss PH 6.4 cm3

Source of Sample Active Tank

RM @ Meas Temp 0.85 ohm.m @ 58.7 degF

RMF @ Meas Temp 0.72 ohm.m @ 58.7 degF

RMC @ Meas Temp 1.18 ohm.m @ 58.7 degF

Source RMF RMC Calculated

RM @ BHT 0.44 @ 119 0.37 @ 119

Max Recorded Temperatures 119 degF 119 119

Circulation Stopped 05-Dec-2012 14:30:00

Logger on Bottom 05-Dec-2012 19:48:45

Unit Number 2281 Location: Elk City, OK

Recorded By Matt Cramer

Witnessed By John Conley

Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

Contents

- Header
- Disclaimer
- Contents
- Well Sketch
- Borehole Size/Casing/Tubing Record
- Borehole Fluids
- Remarks and Equipment Summary
- Depth Summary
- ONE Main Pass - 2"=100'
 - Integration Summary
 - Software Version
 - Composite Summary
 - Log (AIT MP 2 IN)
 - Parameter Listing
- ONE Main Pass 5" = 100'
 - Integration Summary
 - Software Version

- 11.4 Log (AIT 5)
- 11.5 Parameter Listing
- Calibration Report
- ONE Main Pass 1" = 100'
 - Integration Summary
 - Software Version
 - Composite Summary
 - Log (AIT Basic Log Two)
 - Parameter Listing
- Tail

10.3 Composite Summary
10.4 Log (AIT 5)
10.5 Parameter Listing
11. ONE Repeat Pass 5" = 100'
11.1 Integration Summary
11.2 Software Version
11.3 Composite Summary

Borehole Size/Casing/Tubing Record

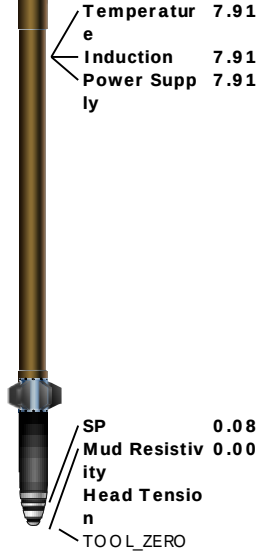
Bit						
Bit Size (in)	12.25					
Top Driller (ft)	250					
Top Logger (ft)	250					
Bottom Driller (ft)	4265					
Bottom Logger (ft)	4254					
Casing						
Size (in)	13.375					
Weight (lbm/ft)	48					
Inner Diameter (in)	12.701					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	250					
Bottom Logger (ft)	250					

Borehole Fluids

Parameter(unit)	ONE					
Fluid Type	Water					
Max Recorded Temperatures (degF)	119					
Source of Sample	Active Tank					
Salinity (ppm)	8360.5					
Density (lbm/gal)	9.35					
Funnel Viscosity (s)	60					
Fluid Loss (cm3)	6.4					
PH	10.5					
Date/Time Circulation Stopped	05-Dec-2012 14:30:00					
Date Logger on Bottom	05-Dec-2012					
Time Logger on Bottom	19:48:45					
Source RMF	Calculated					
RMC	Calculated					
RM @ Meas Temp (ohm.m@degF)	0.85 @ 58.7					
RMF @ Meas Temp (ohm.m@degF)	0.72 @ 58.7					
RMC @ Meas Temp (ohm.m@degF)	1.18 @ 58.7					
RM @ BHT (ohm.m@degF)	0.44 @ 119					
RMF @ BHT (ohm.m@degF)	0.37 @ 119					
RMC @ BHT (ohm.m@degF)	0.62 @ 119					
Total Solid (%)						
High Gravity Solids (%)						

Remarks and Equipment Summary

ONE: Toolstring				ONE: Remarks
Equip name LEH-QT:2519 LEH-QT:2519 Length 51.15 MP name Offset DTC-H:8497 ECH-KC:9614 DTC-H:8497 48.23 CTEM HV 47.33 0.00 ToolStatus TelStatus 45.23 45.23 MLT-B MLT-B 45.23 Microlog Pad 41.82 Microlog Station 37.65 HGNS-H:3964 HGNH:3715 NPV-N:5075 NSR-F:5075 HGNS-H:3964 HMCA-H HACCZ-H:4166 37.62 GR 36.91 CNL Porosity 30.57 HMCA 28.24 HGNS 28.24 Accelerometer 0.00 HDRS-H:4723 ECH-MEB:2972 HRCC-H:3965 HRMS-H:4723 GSR-J:5347 Short Spacing:27775 Long Spacing:28941 GPV-Q:5347 Backscatter HRGD-H:4770 24.24 HRCC 24.24 MCFL 18.81 Caliper 18.33 TLD Density 17.94 AIT-M:229 AMIS:229 AMRM:229 16.00 Tool ran per tool sketch All logs presented as per client request Logs computed on Limestone matrix (MDEN = 2.71 g/cc). Main Pass logged from SLB TD to CSG. Repeat Pass logged 400' from SLB TD. Hole-Cement Volume computed given a future casing diameter of 9.625". Maximum recorded temperature was 119 degF, obtained from HGNS temperature sensor Thank you for choosing Schlumberger of Elk City, OK. 580-225-4300 Your crew today was Jonathan, James, and Matt.				

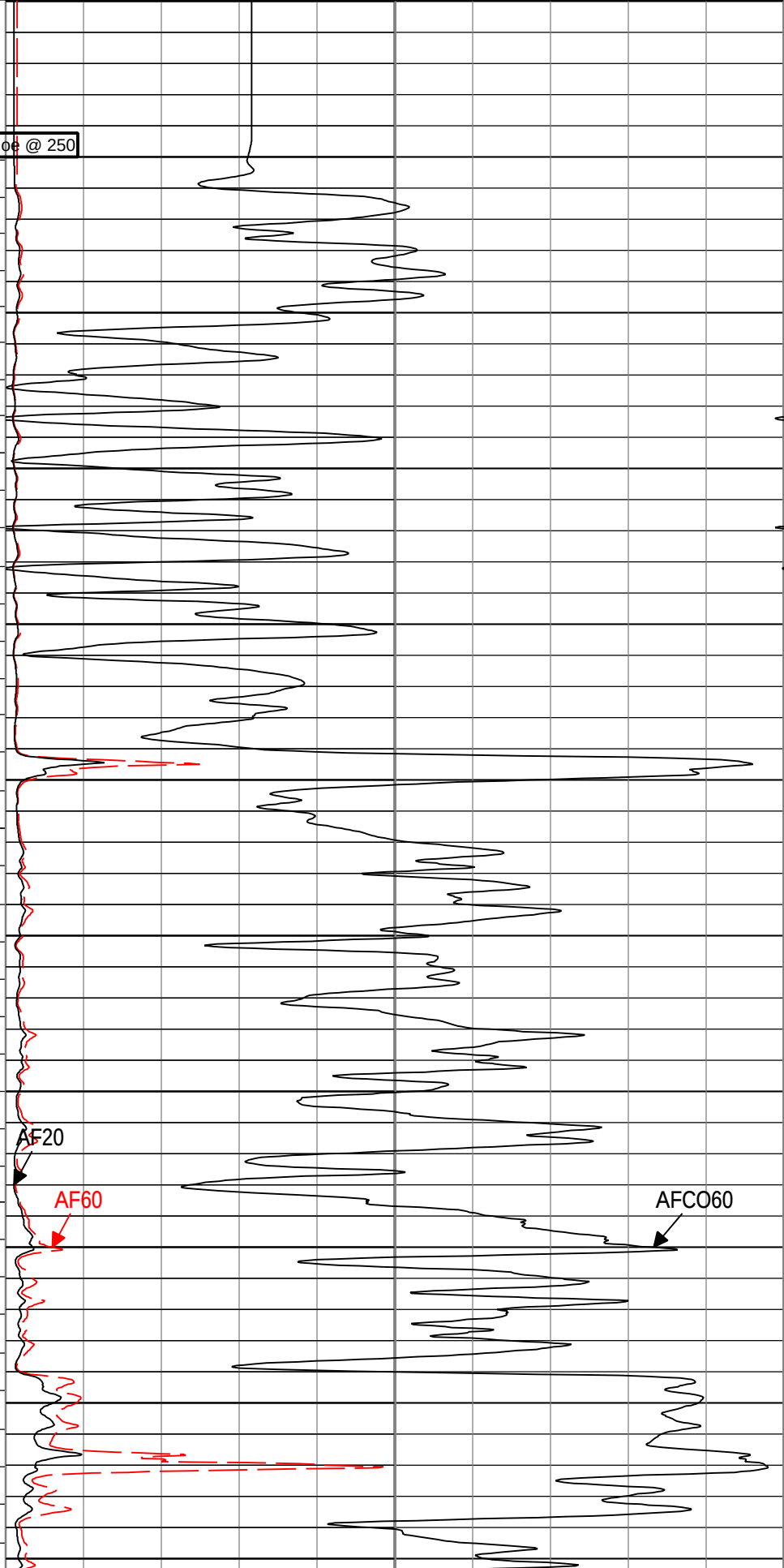
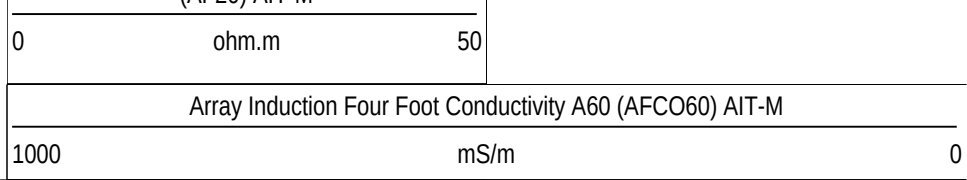
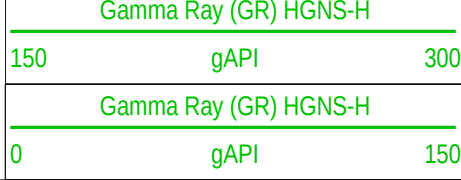


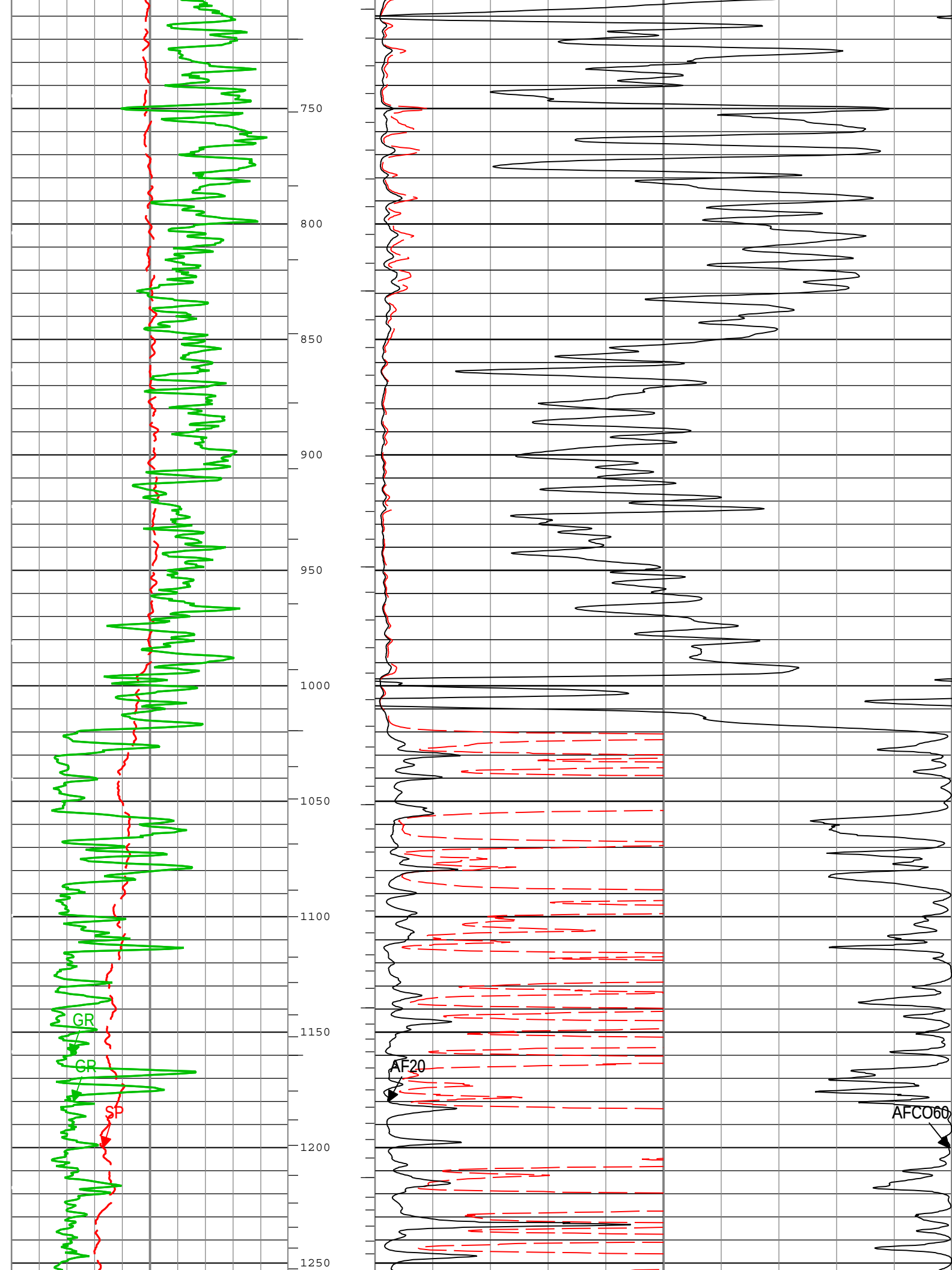
Lengths are in ft
Maximum Outer Diameter = 5.875 in
Line: Sensor Location, V value: Gating Offset
All measurements are relative to TOOL_ZERO

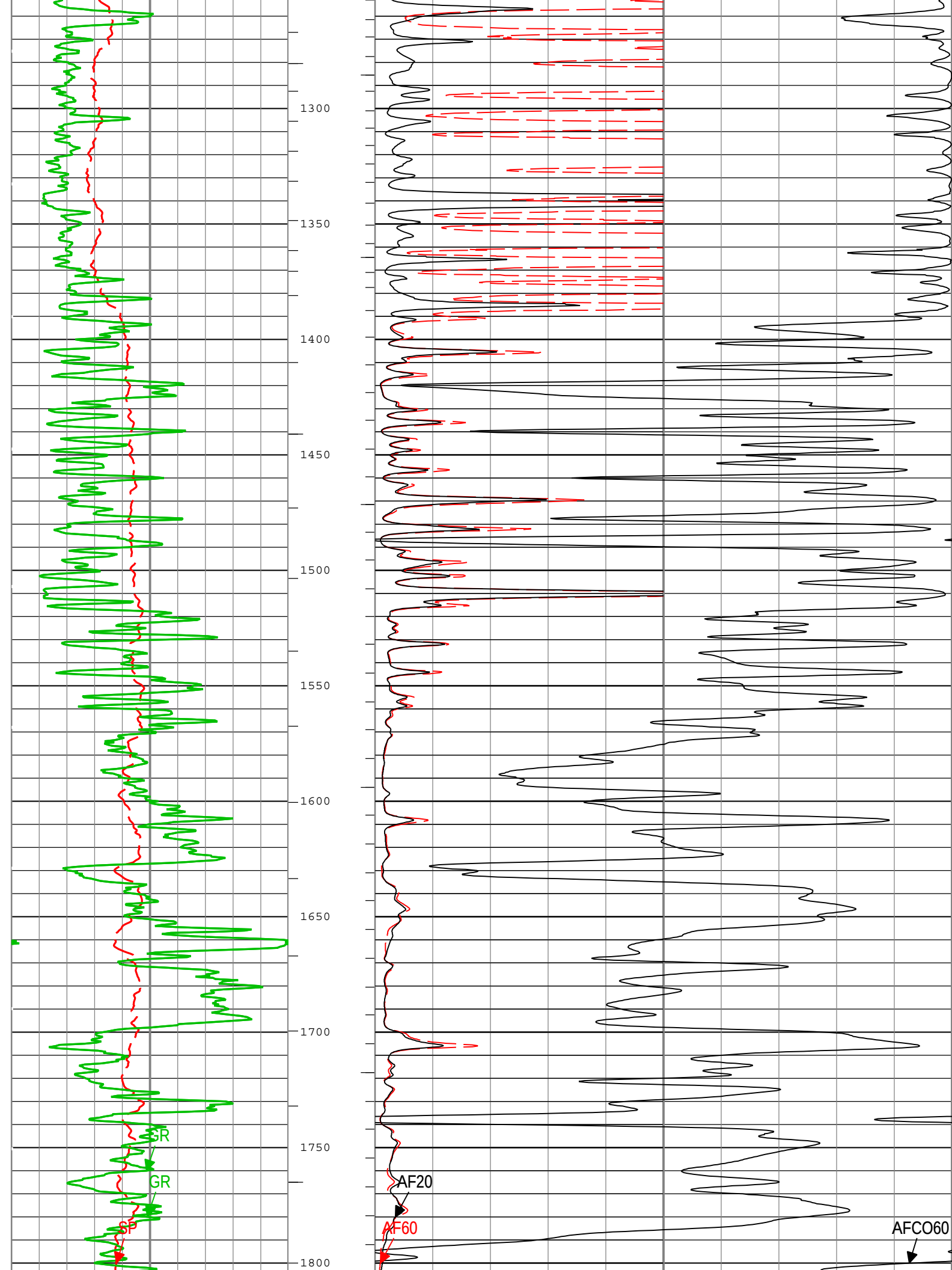
Depth Summary

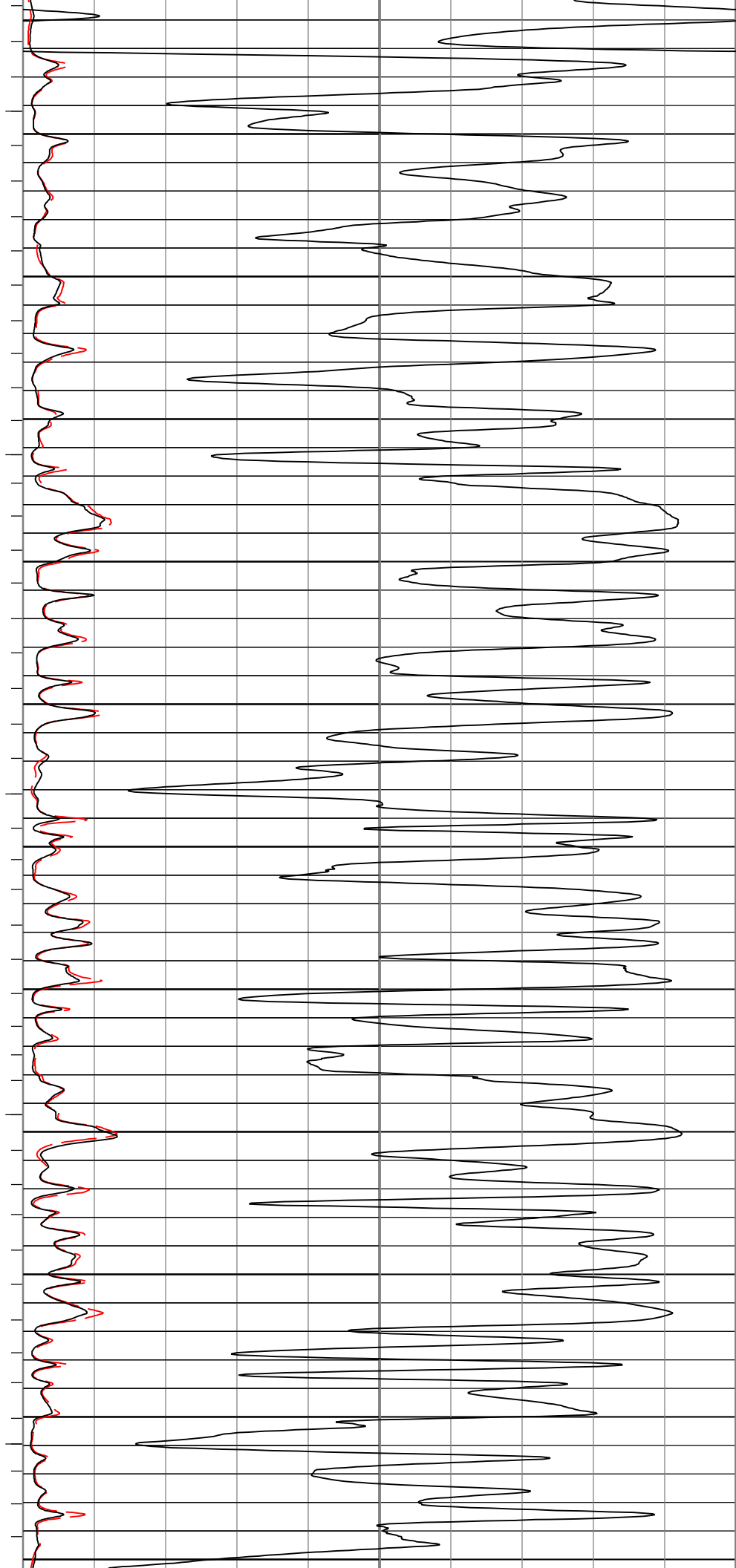
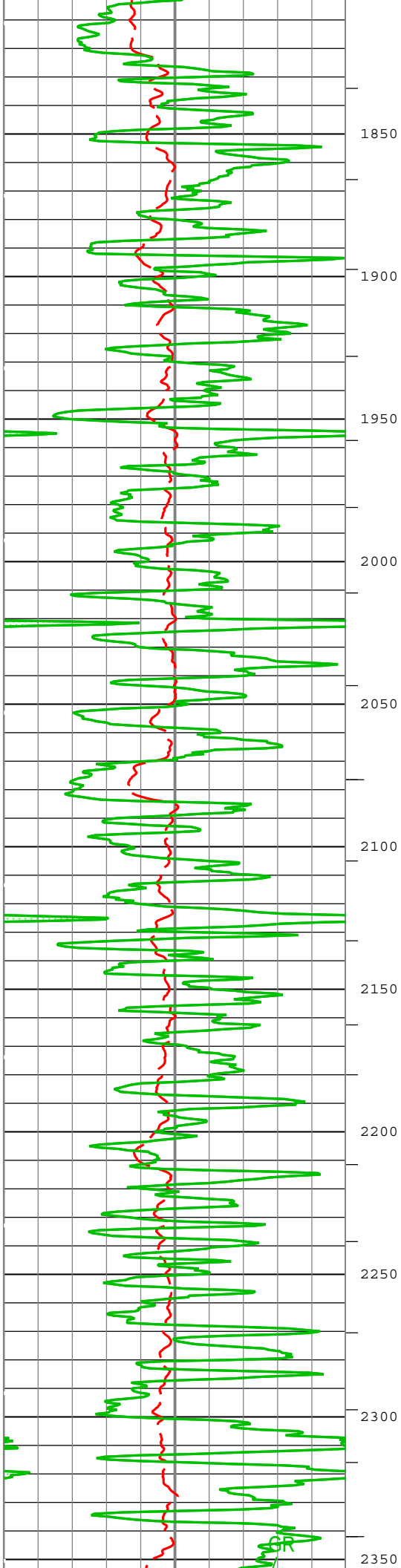
Depth Control Parameters	ONE		
Conveyance Type	Wireline		
Log Sequence	First Trip to Wellsite		
Rig Up Length at Surface (ft)	179.00		
Rig Up Length at Bottom (ft)	178.80		
Rig Up Length Correction (ft)	0.20		
Stretch Correction (ft)	1.20		
Tool Zero Reference Check at Surface (ft)	0.20		
Rig Type	Land Triple		
Depth Remark Parameters	ONE		
Depth Remark 1	All Schlumberger depth control policies and procedures were followed.		
Depth Remark 2	IDW used as primary depth control device. Z-Chart used as secondary depth control measure		
Depth Remark 3	First Trip to Wellsite. Logs correlated to down pass.		
Depth Measuring Device	ONE		
Type	IDW-JA		
Serial Number	5904		
Calibration Date	13-NOV-2012		
Calibrator Serial Number	NA		
Calibration Cable Type	7-46A-XS		
Wheel Correction 1	-8		
Wheel Correction 2	-6		
Tension Device	ONE		
Type	CMTD-B/A		
Serial Number	NA		
Calibration Date	22-Nov-2012		
Calibrator Serial Number	1018		
Calibration Points	10		
Calibration RMS	10		
Calibration Peak Error	16		
Logging Cable	ONE		

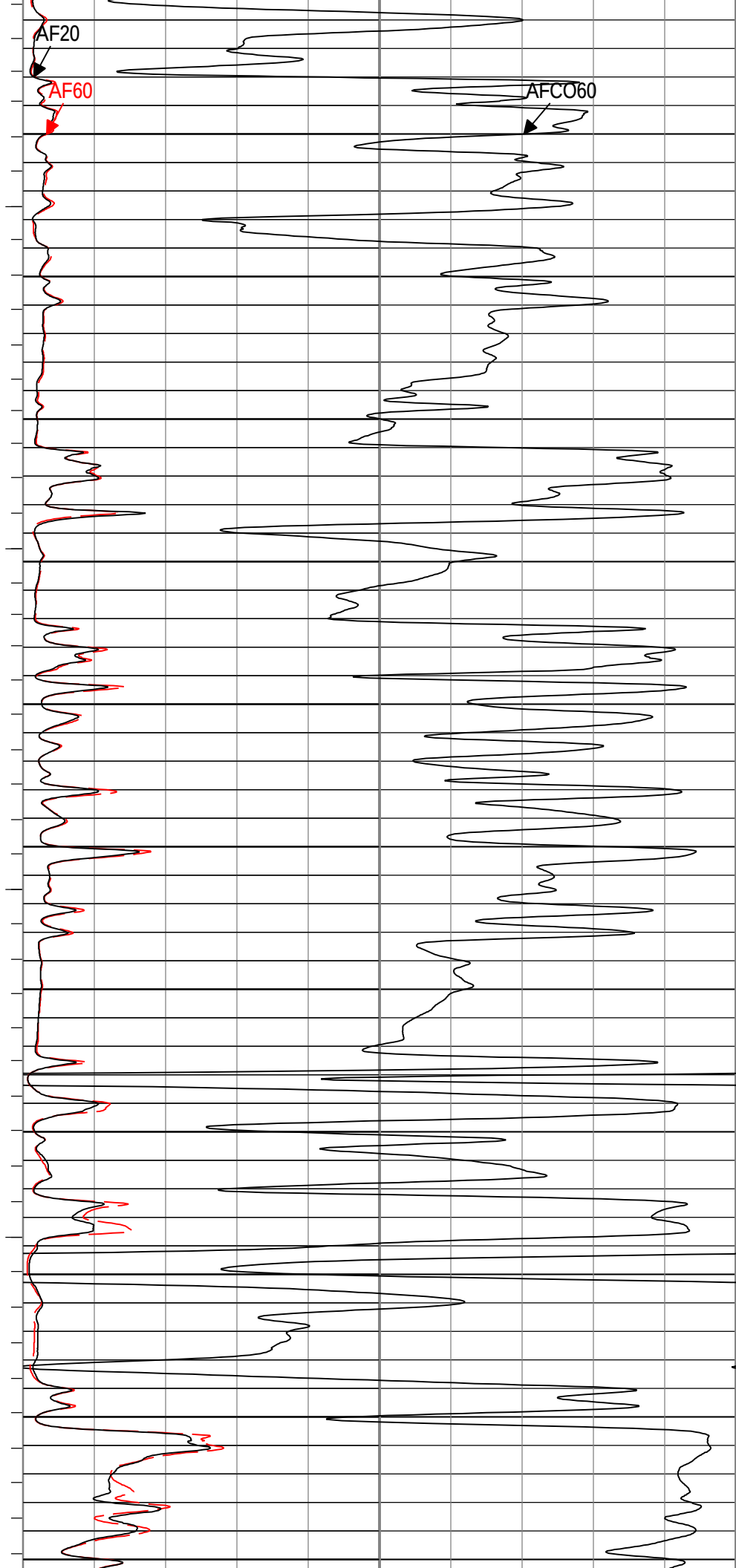
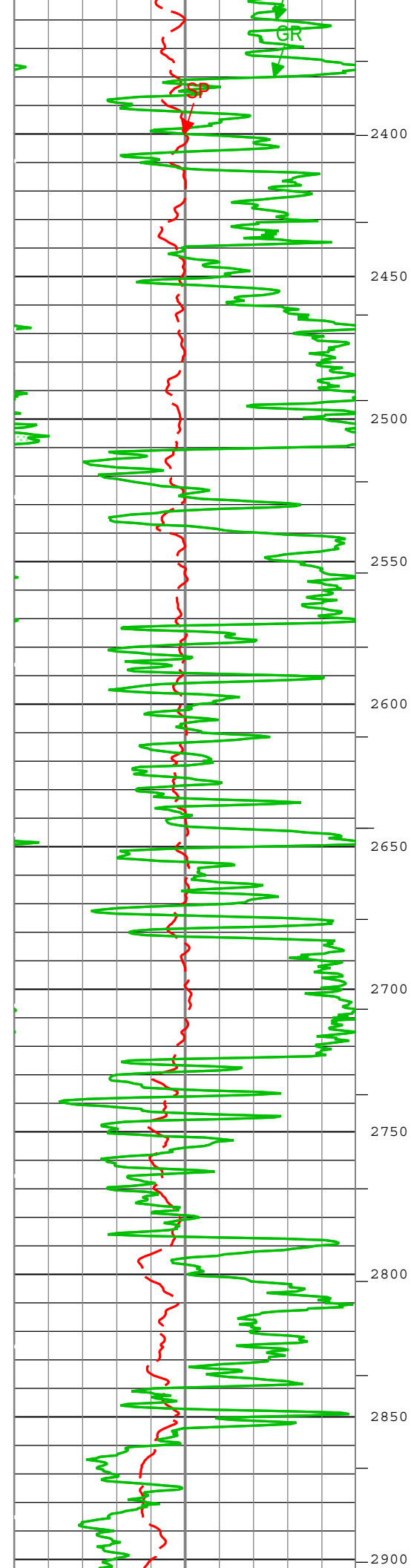
IHV - Integrated Hole Volume every 10.00 (ft3)									
IHV - Integrated Hole Volume every 100.00 (ft3)									
TIME_1900 - Time Marked every 60.00 (s)									
ICV - Integrated Cement Volume every 10.00 (ft3)									
ICV - Integrated Cement Volume every 100.00 (ft3)									
<table border="1"> <tr> <td colspan="2">Gamma Ray Backup</td></tr> <tr> <td colspan="2">Spontaneous Potential (SP) AIT-M</td></tr> <tr> <td>-260</td><td>140</td></tr> <tr> <td colspan="2">mV</td></tr> </table>		Gamma Ray Backup		Spontaneous Potential (SP) AIT-M		-260	140	mV	
Gamma Ray Backup									
Spontaneous Potential (SP) AIT-M									
-260	140								
mV									
<table border="1"> <tr> <td colspan="2">Array Induction Four Foot Resistivity A60 (AF60) AIT-M</td></tr> <tr> <td>0</td><td>50</td></tr> <tr> <td colspan="2">ohm.m</td></tr> <tr> <td colspan="2">Array Induction Four Foot Resistivity A20 (AF20) AIT-M</td></tr> </table>		Array Induction Four Foot Resistivity A60 (AF60) AIT-M		0	50	ohm.m		Array Induction Four Foot Resistivity A20 (AF20) AIT-M	
Array Induction Four Foot Resistivity A60 (AF60) AIT-M									
0	50								
ohm.m									
Array Induction Four Foot Resistivity A20 (AF20) AIT-M									

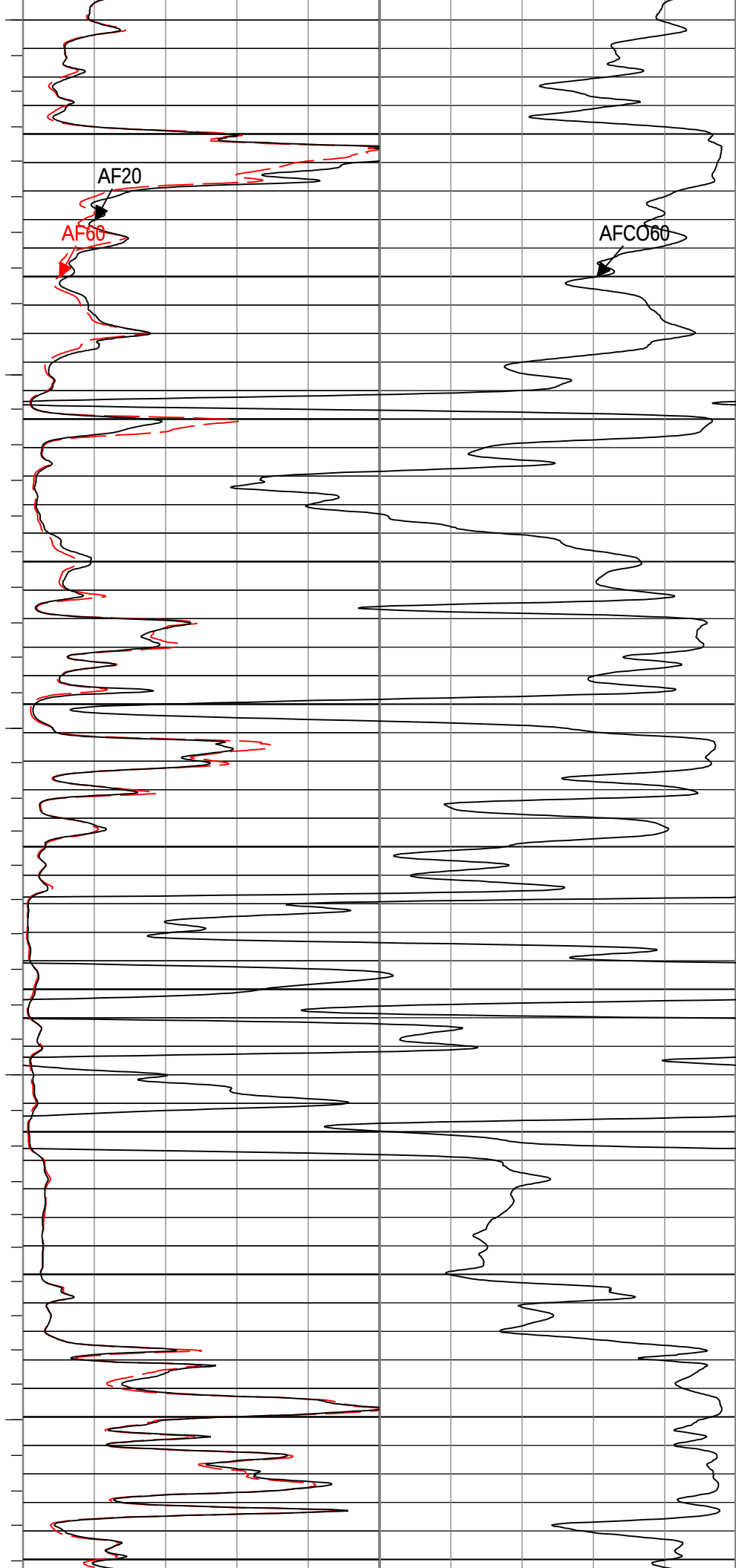
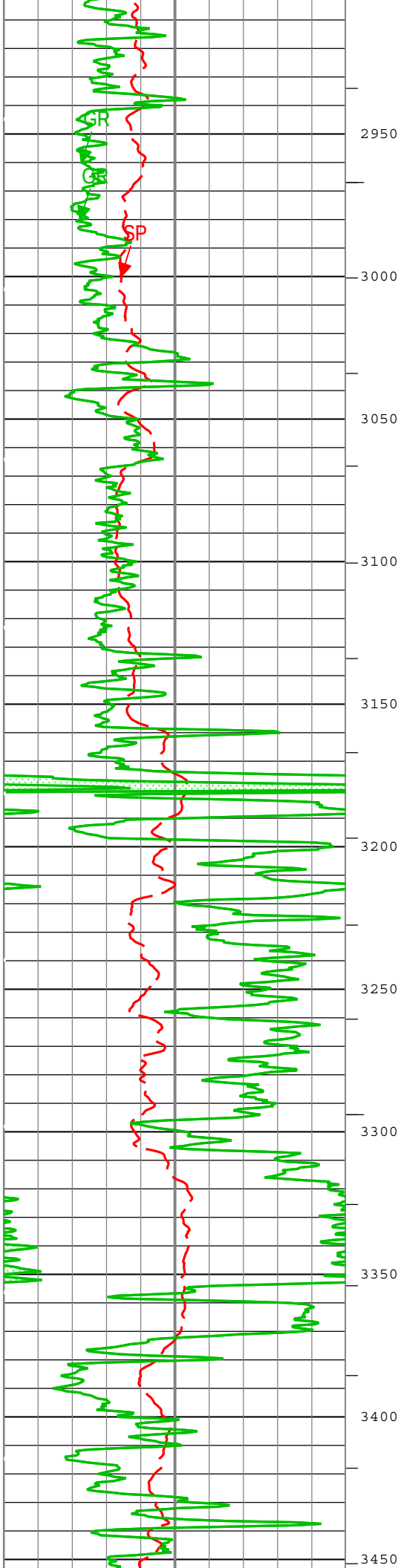


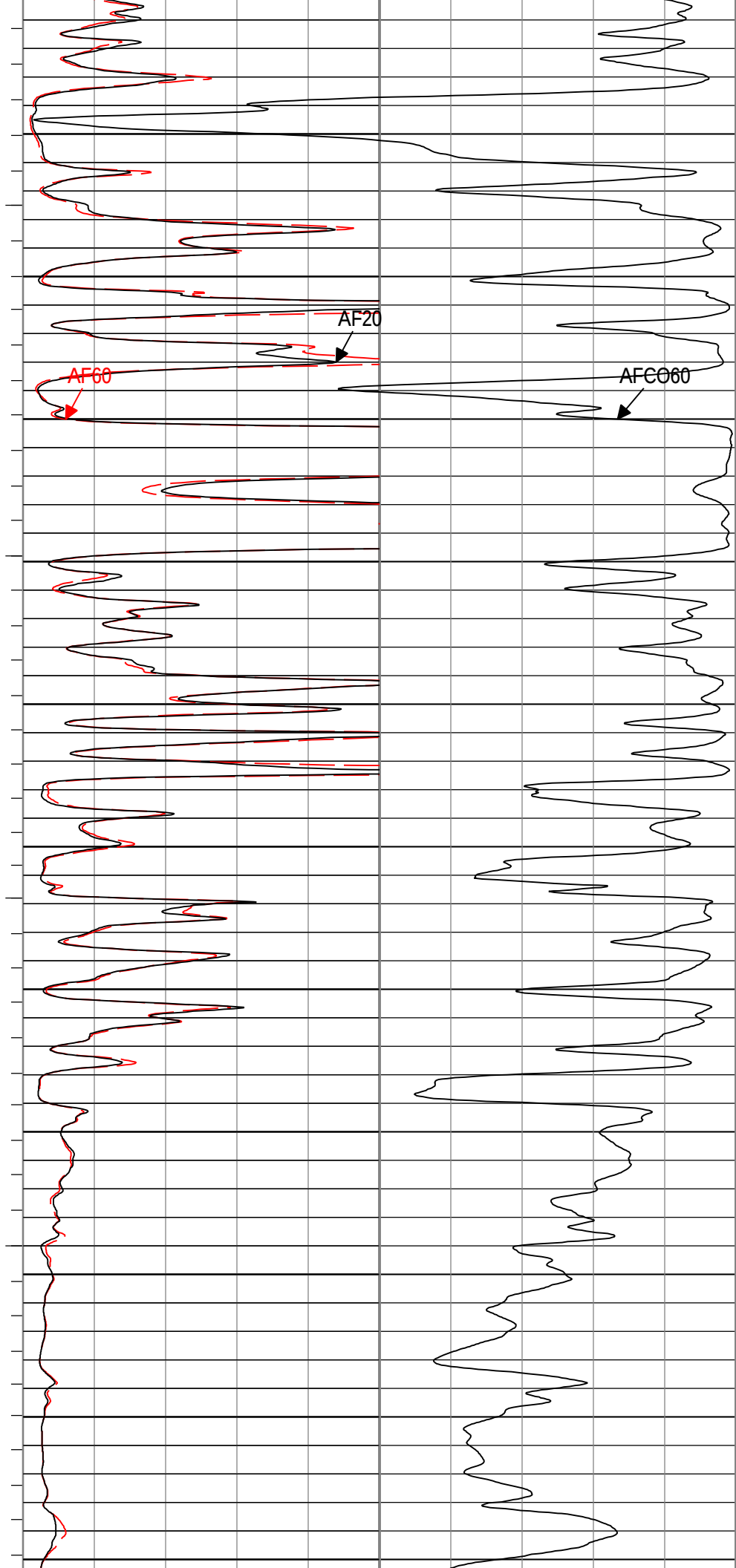
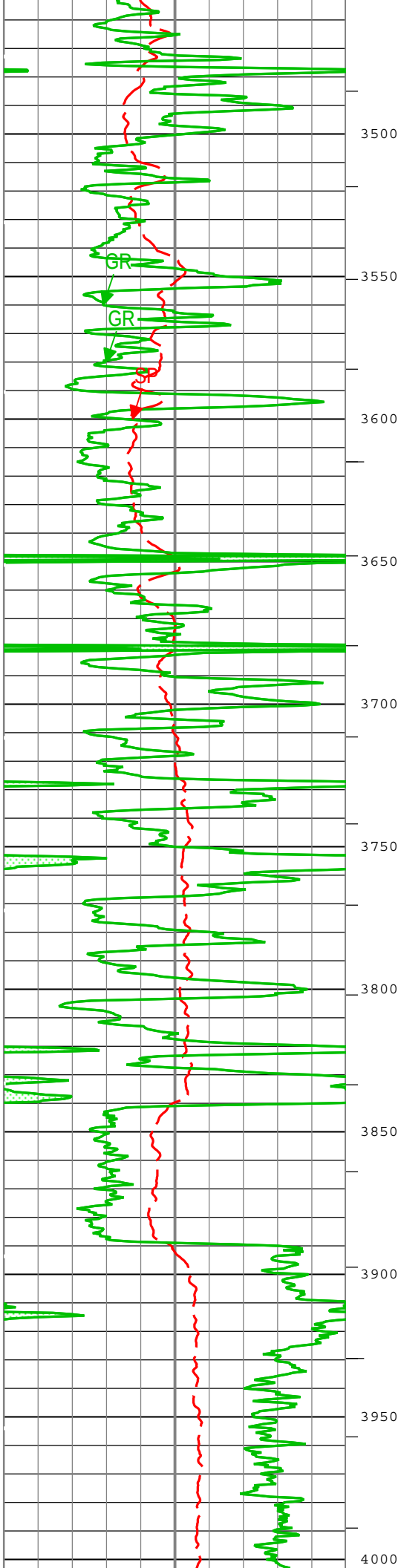


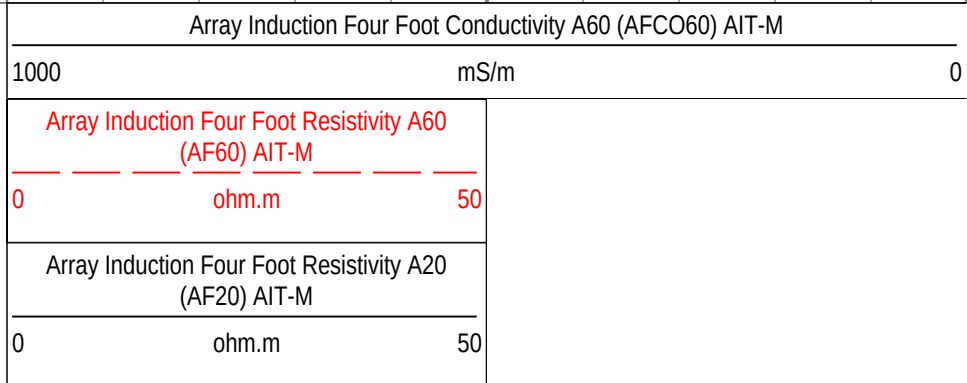
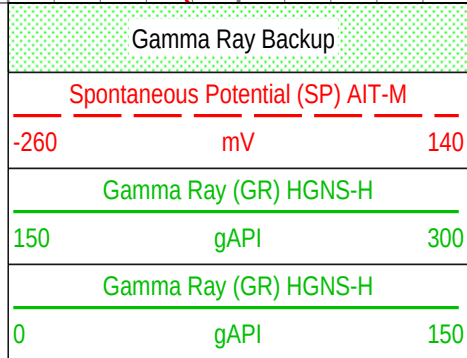
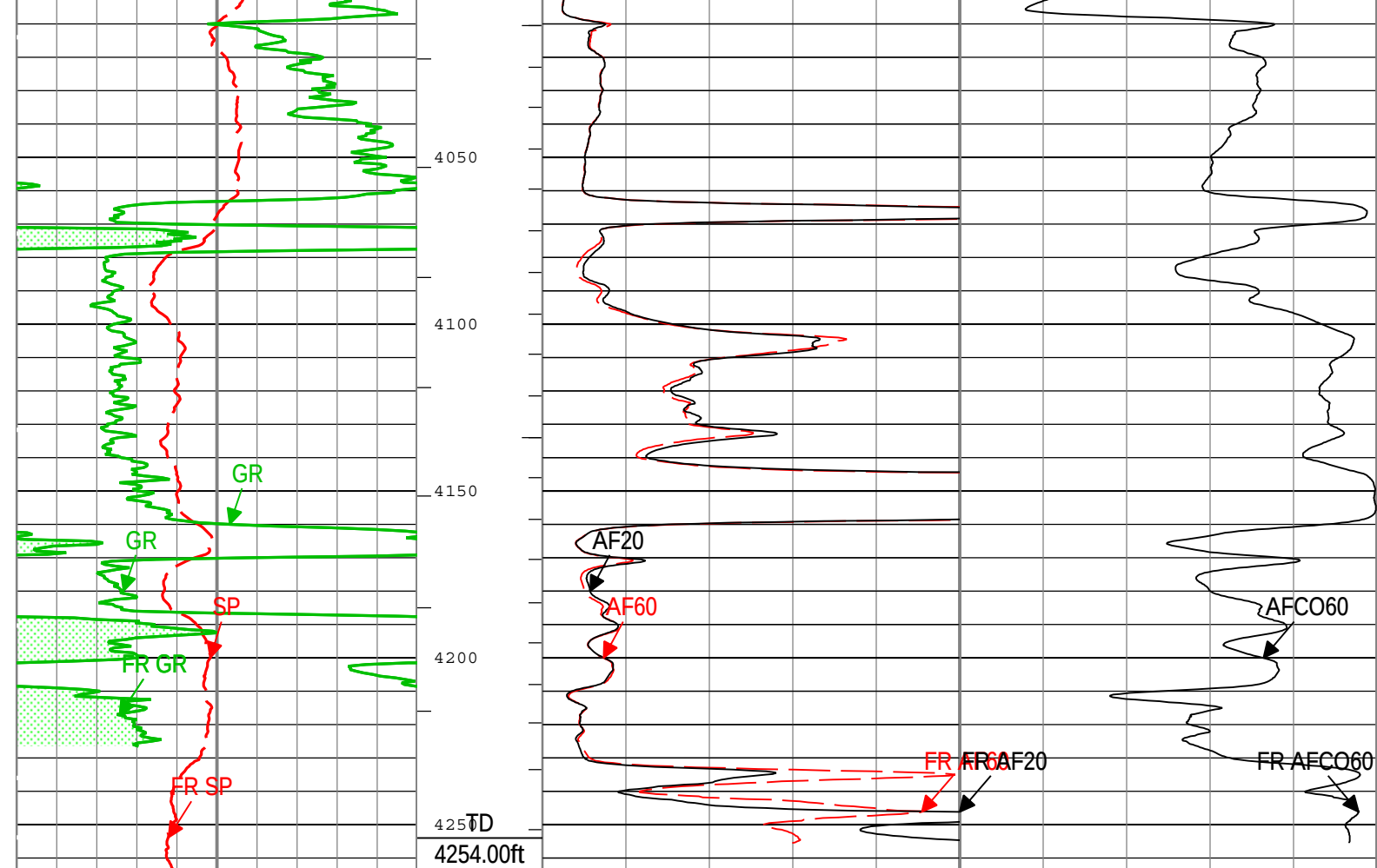












ICV - Integrated Cement Volume every 100.00 (ft3)

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 Four Format: Log (AIT MP 2 IN) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 07-Dec-2012 07:47:20

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	Yes	
ASTA	Array Induction Tool Standoff	AIT-M	1.625	in
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
CALL SHIF	CALL Supplementary Offset	HDRS-H	0.187	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	AMF	
SOCO	Standoff Correction Option	HGNS-H	Yes	
SP_SHIFT	SP Shift	AIT-M	85	mV
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	0	200	250
BS	12.25	250	4263.5

All depth are actual.

Tool Control Parameters

ONE

Main Pass 5" = 100'

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1453.9	ft3
IHV	Integrated Hole Volume	GCSE_UP_PASS	3480.69	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
HRGD-H	HILT Resistivity Gamma-Ray Density Device, 150 degC	3.1.9755.0	3.0
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
ONE	Log[3]:Up	Up	144.03 ft	4263.83 ft	05-Dec-2012 7:48:19 PM	05-Dec-2012 9:08:23 PM	0.00 ft	

All depths are referenced to toolstring zero

Log

ONE: Log[3]:Up

Description: AIT Basic Log One Format: Log (AIT 5) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 07-Dec-2012 07:47:22

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

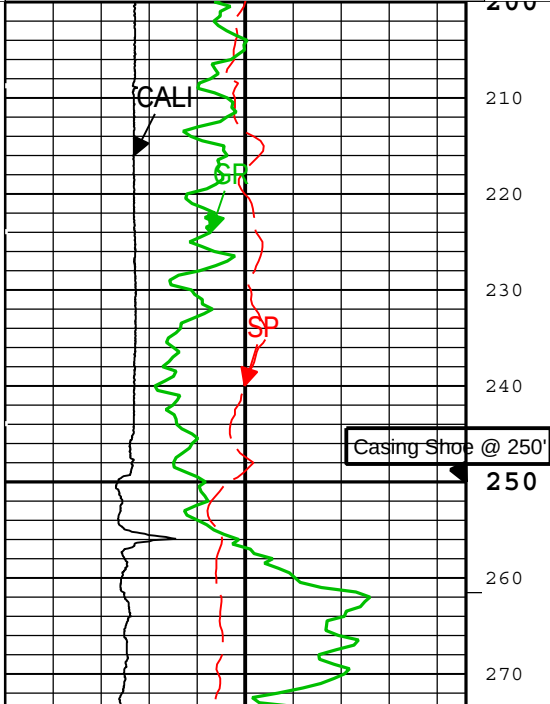
AT20	AIT-M:AMIS:AMIS	3in
AT30	AIT-M:AMIS:AMIS	3in
AT60	AIT-M:AMIS:AMIS	3in
AT90	AIT-M:AMIS:AMIS	3in
CALI	HDRS-H:HRCC-H:HRCC-H	1in
GR	HGNS-H:HGNS-H:HGNS-H	6in
ICV	Borehole	6in
IHV	Borehole	6in
RXOZ	HDRS-H:HRMS-H:HRGD-H	2in
SP	AIT-M:AMIS:AMIS	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

- | IHV - Integrated Hole Volume every 10.00 (ft3)
- | IHV - Integrated Hole Volume every 100.00 (ft3)

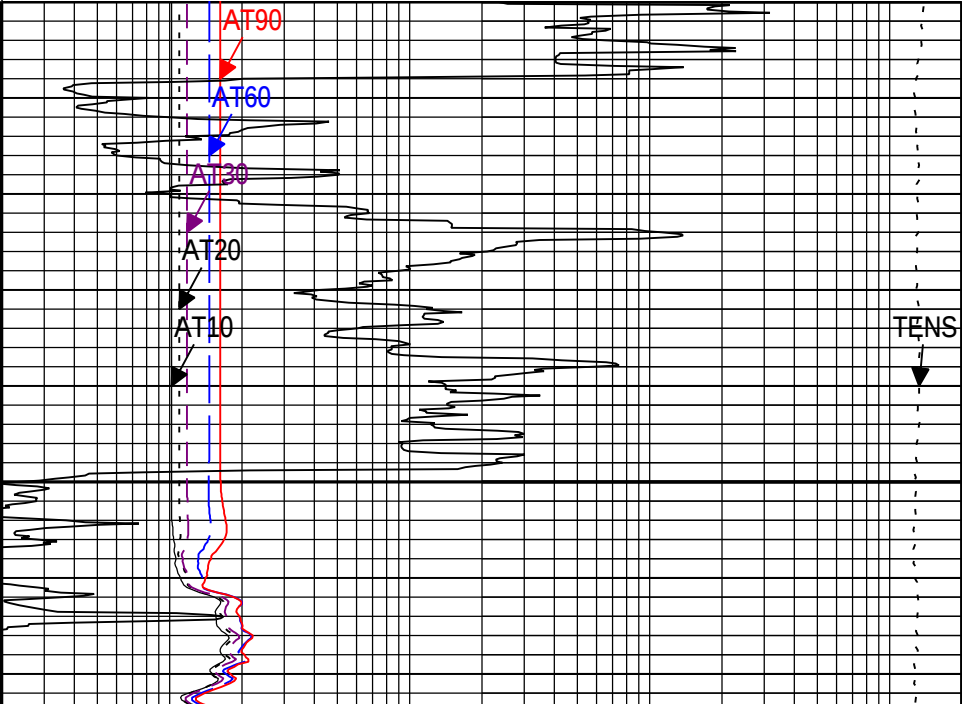
| TIME_1900 - Time Marked every 60.00 (s)

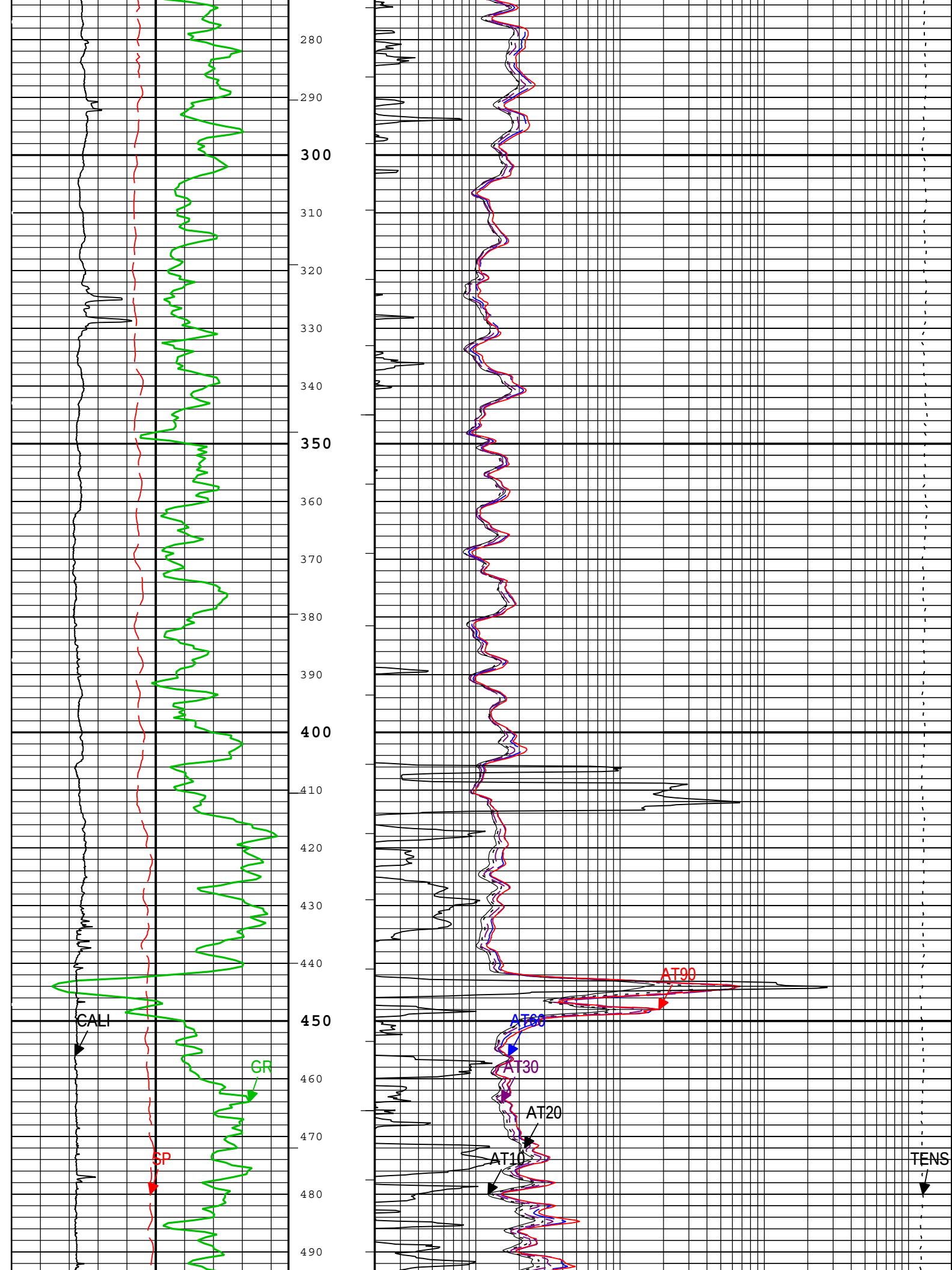
- | ICV - Integrated Cement Volume every 10.00 (ft3)
- | ICV - Integrated Cement Volume every 100.00 (ft3)

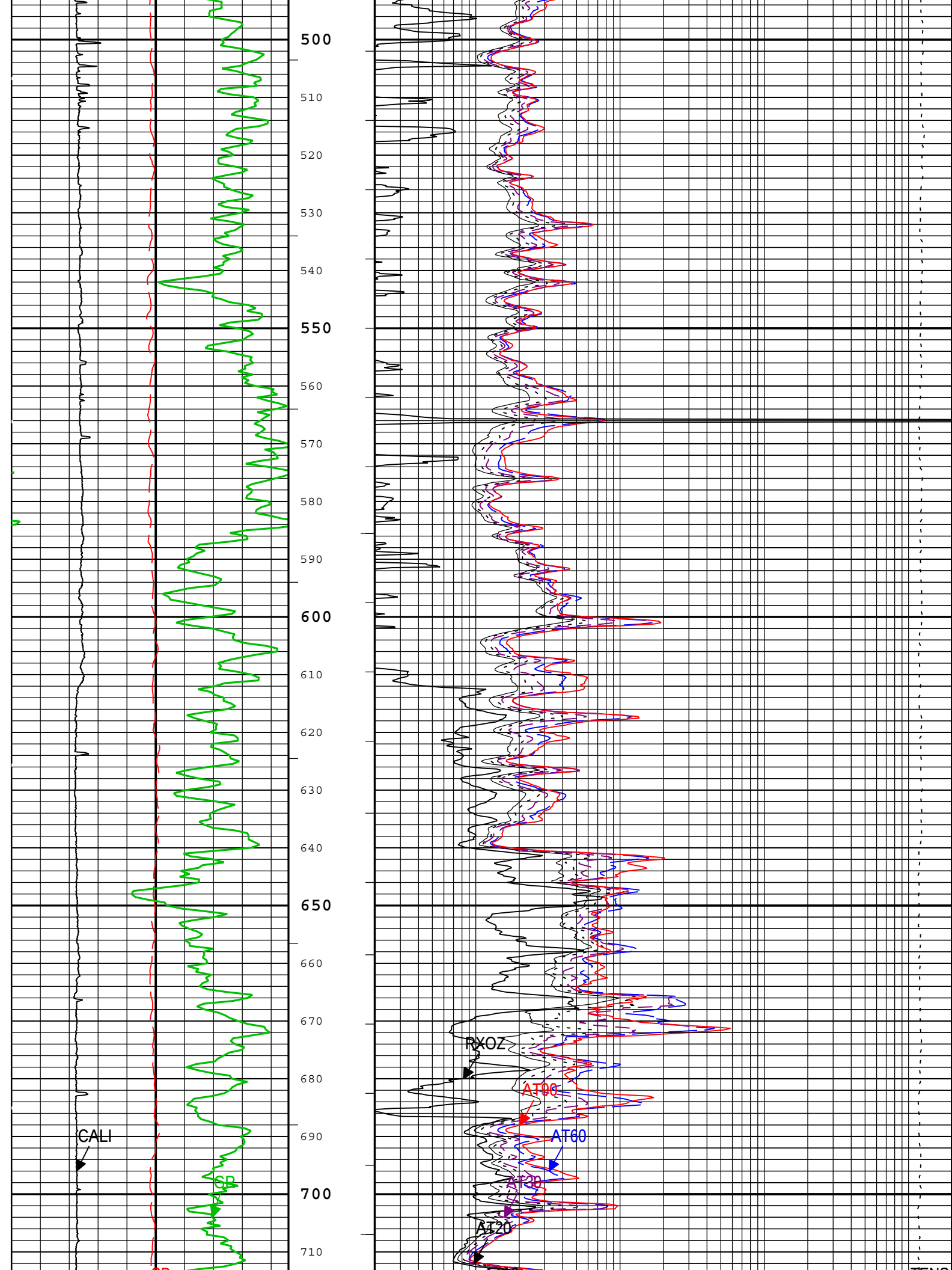
Gamma Ray Backup		
Spontaneous Potential (SP) AIT-M		
-260	mV	140
Gamma Ray (GR) HGNS-H		
150	gAPI	300
Gamma Ray (GR) HGNS-H		
0	gAPI	150
Caliper (CALI) HDRS-H		
10	in	20

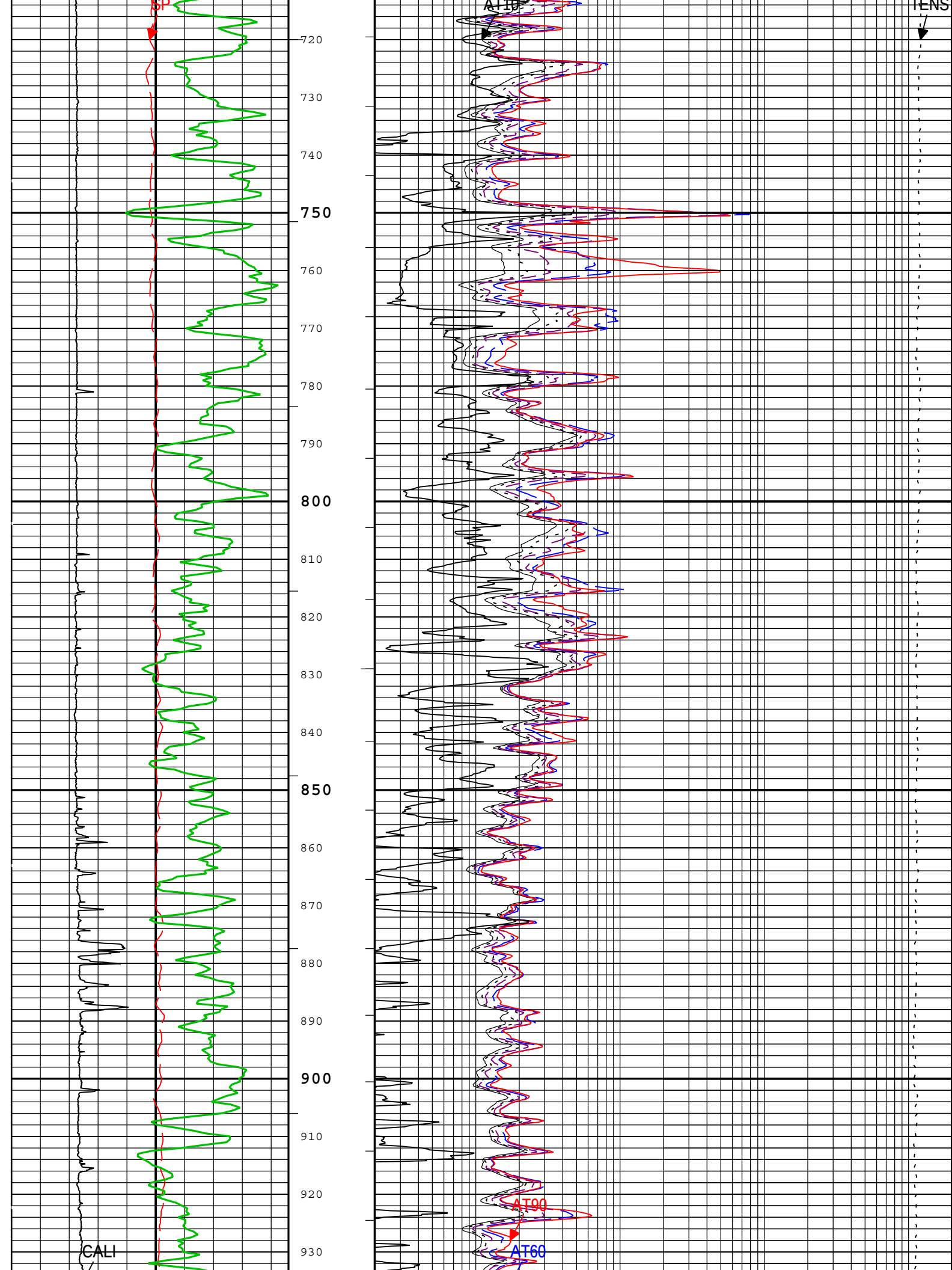


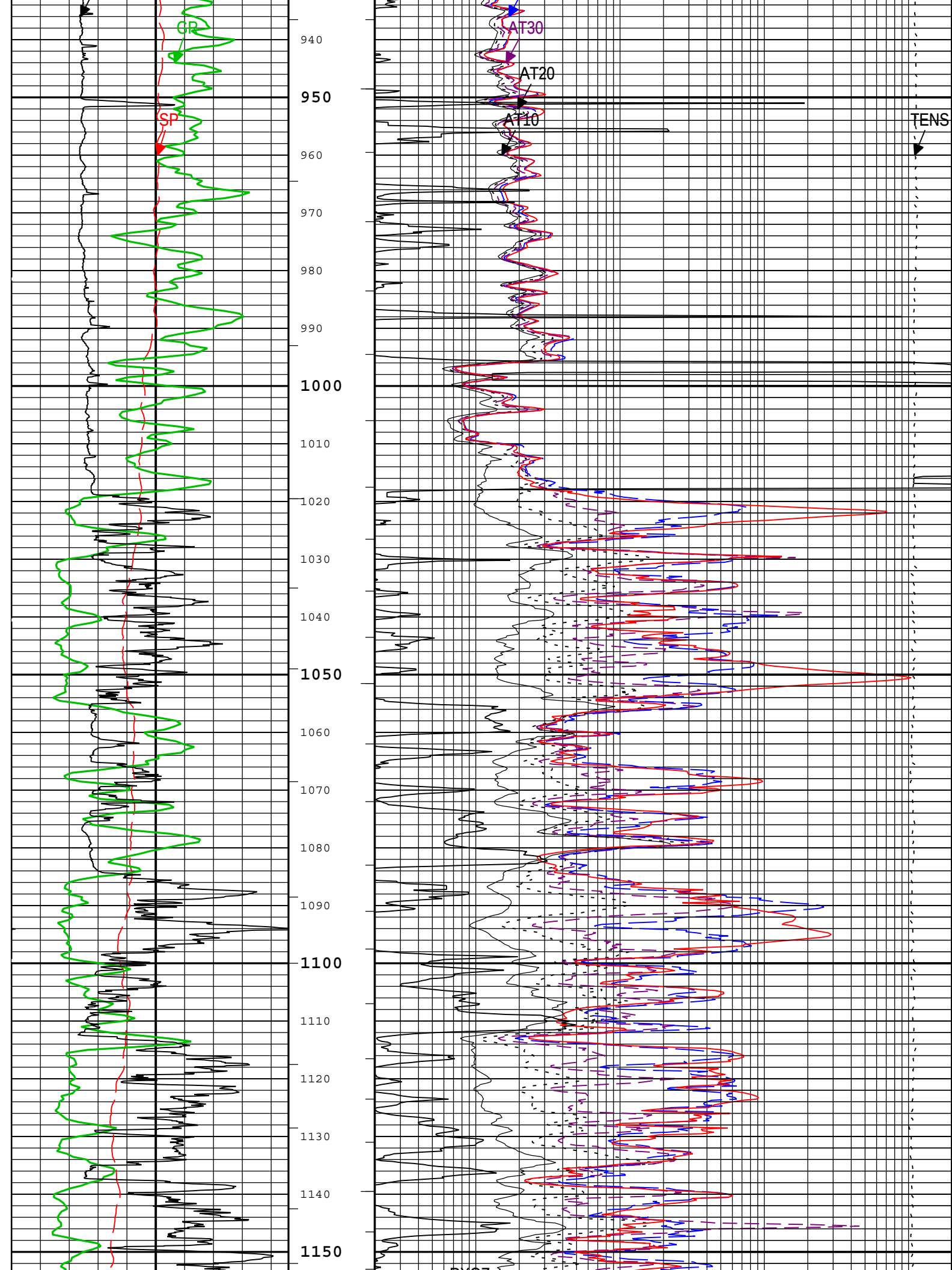
Cable Tension (TENS)		
10000	lbf	0
Array Induction Two Foot Resistivity A10 (AT10) AIT-M		
0.2	ohm.m	2000
Array Induction Two Foot Resistivity A20 (AT20) AIT-M		
0.2	ohm.m	2000
Array Induction Two Foot Resistivity A30 (AT30) AIT-M		
0.2	ohm.m	2000
Array Induction Two Foot Resistivity A60 (AT60) AIT-M		
0.2	ohm.m	2000
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

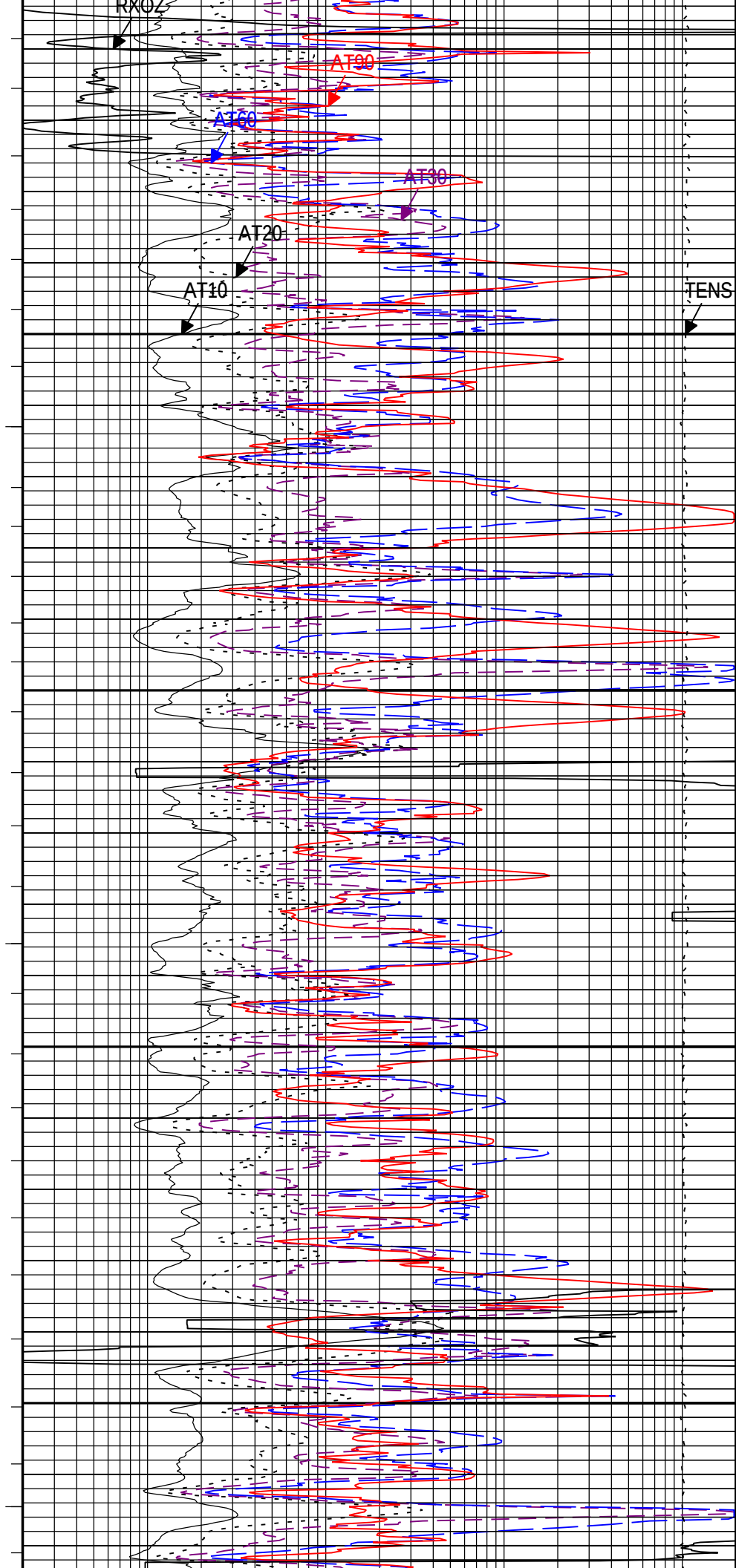
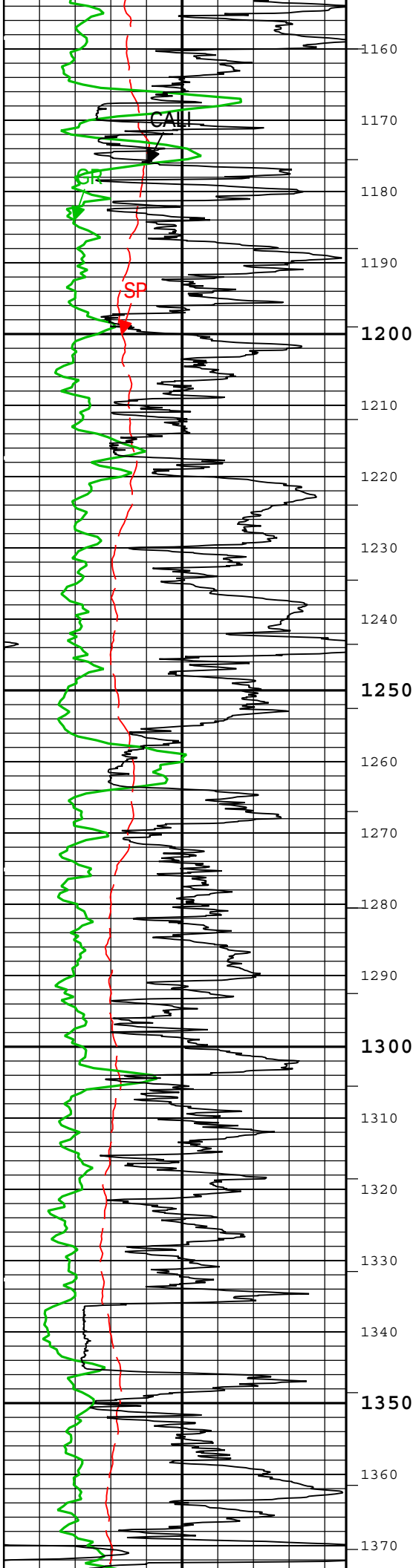


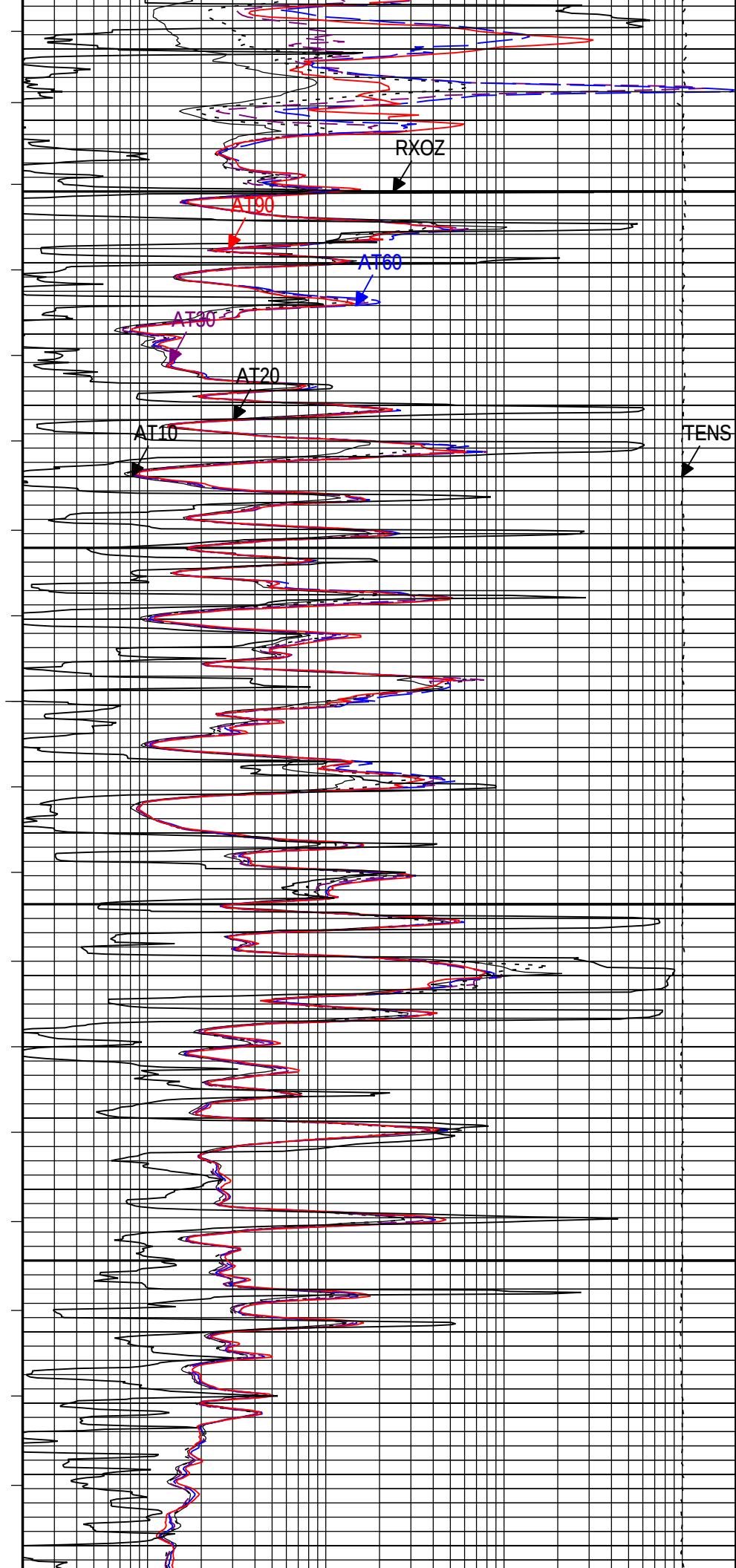
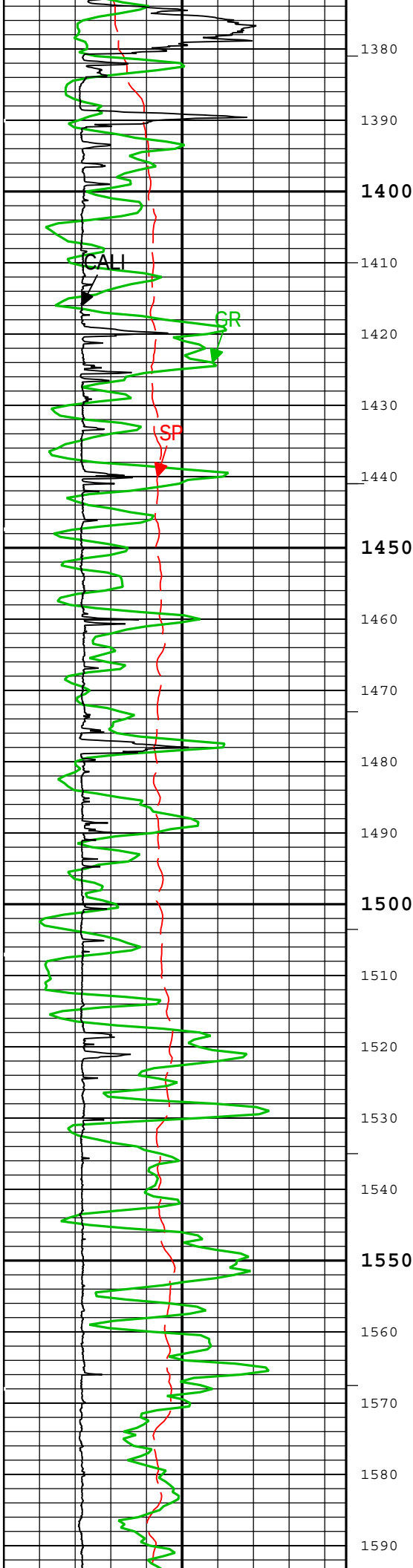


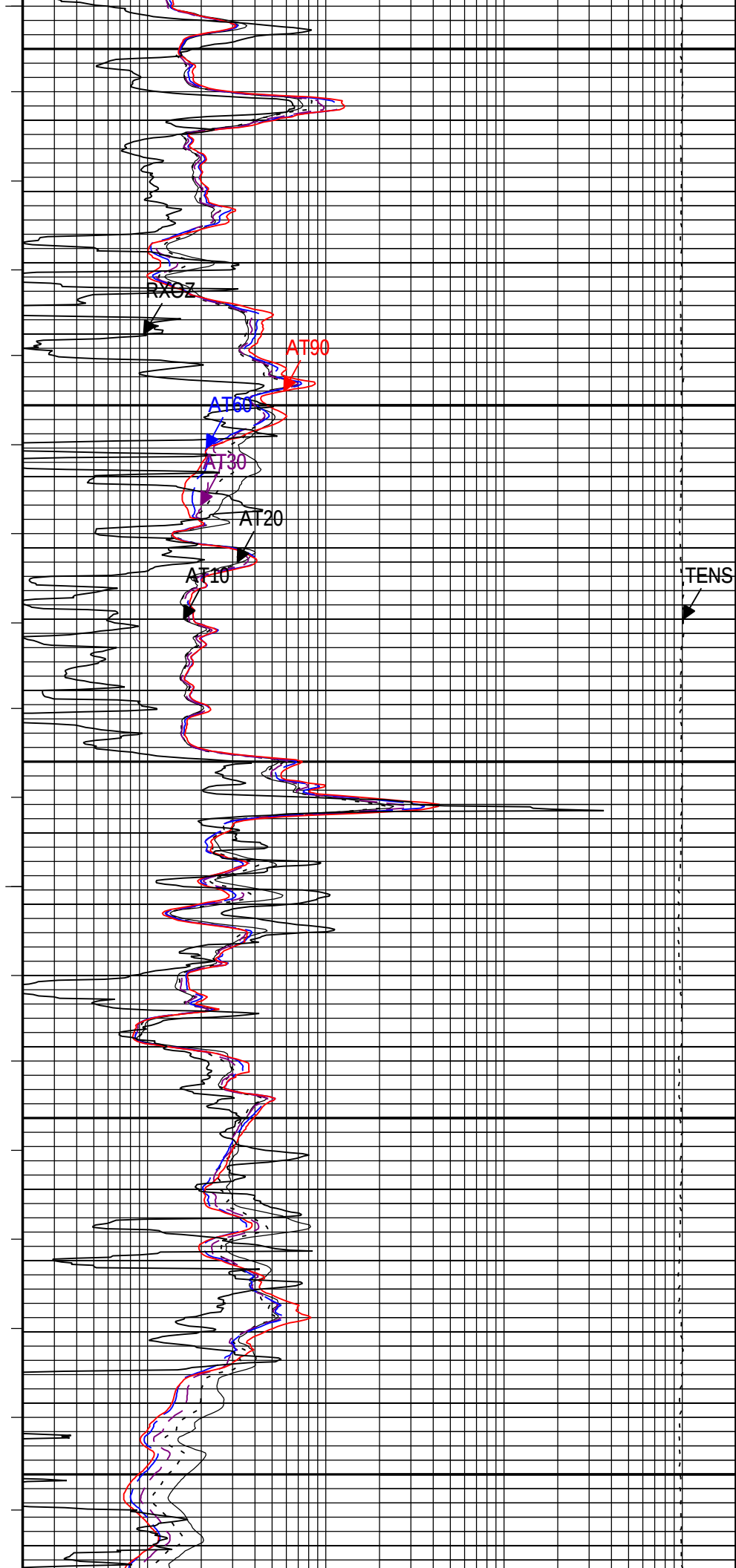
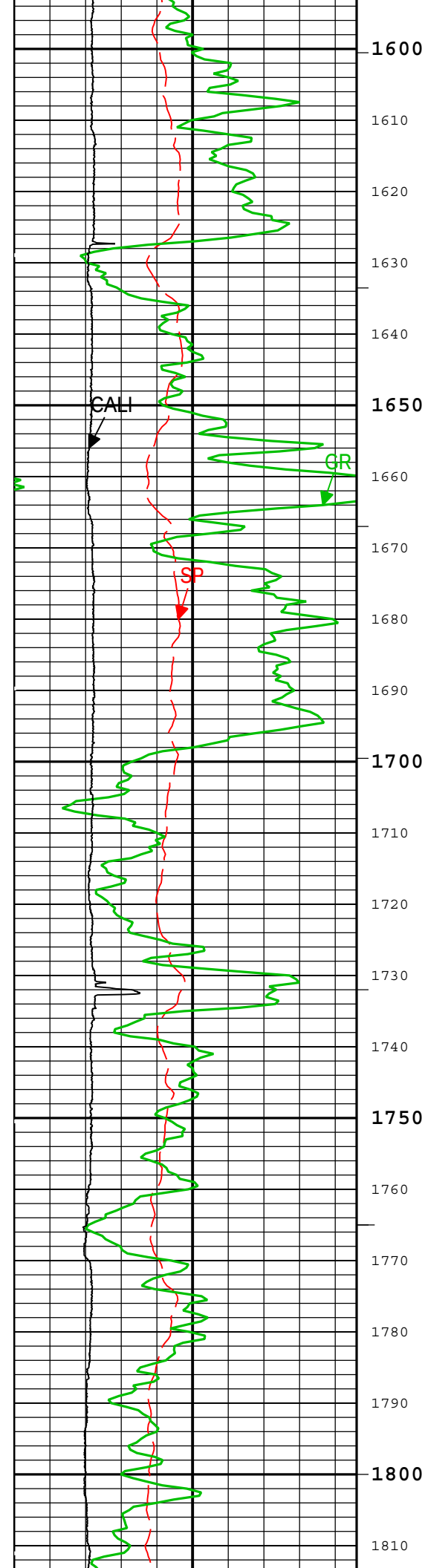


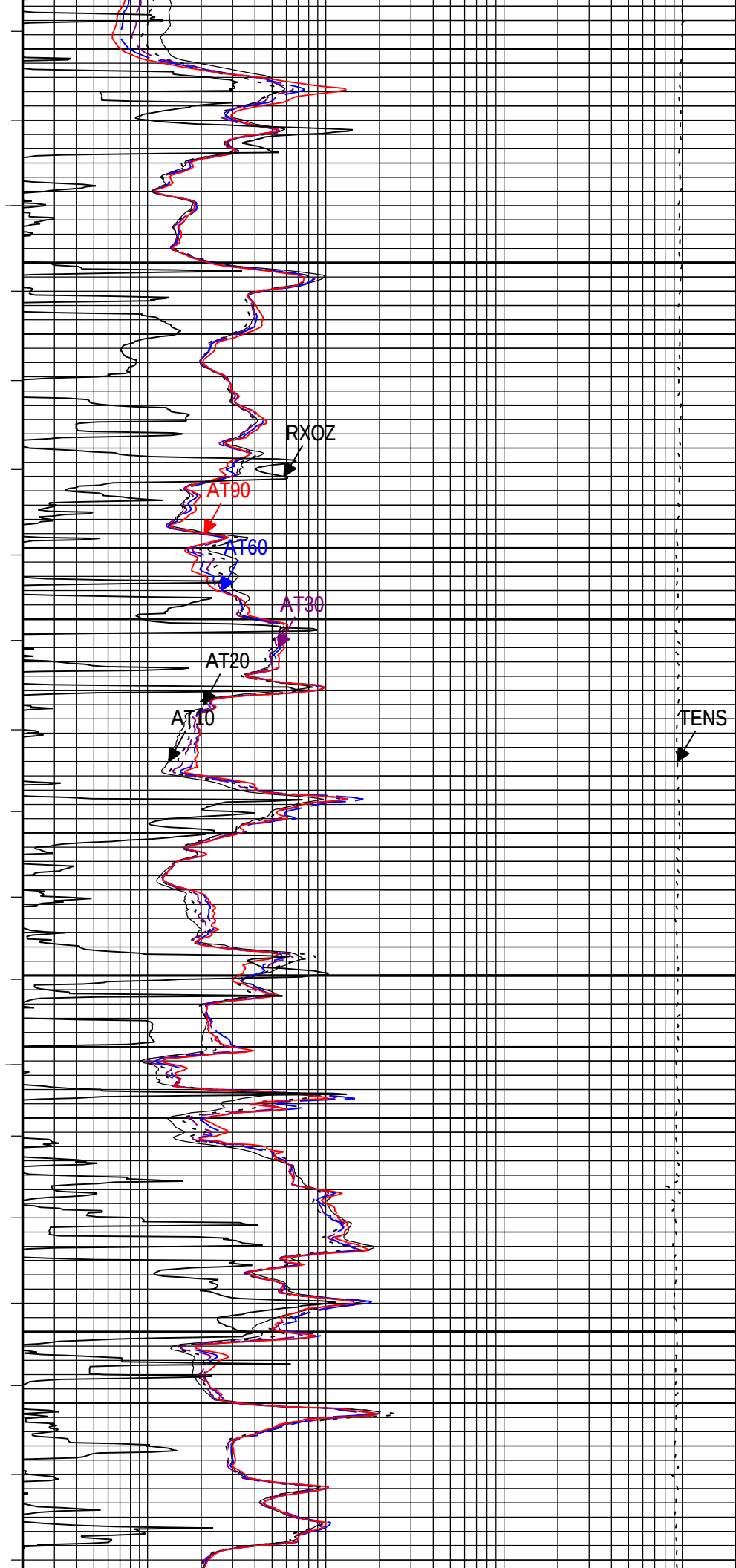
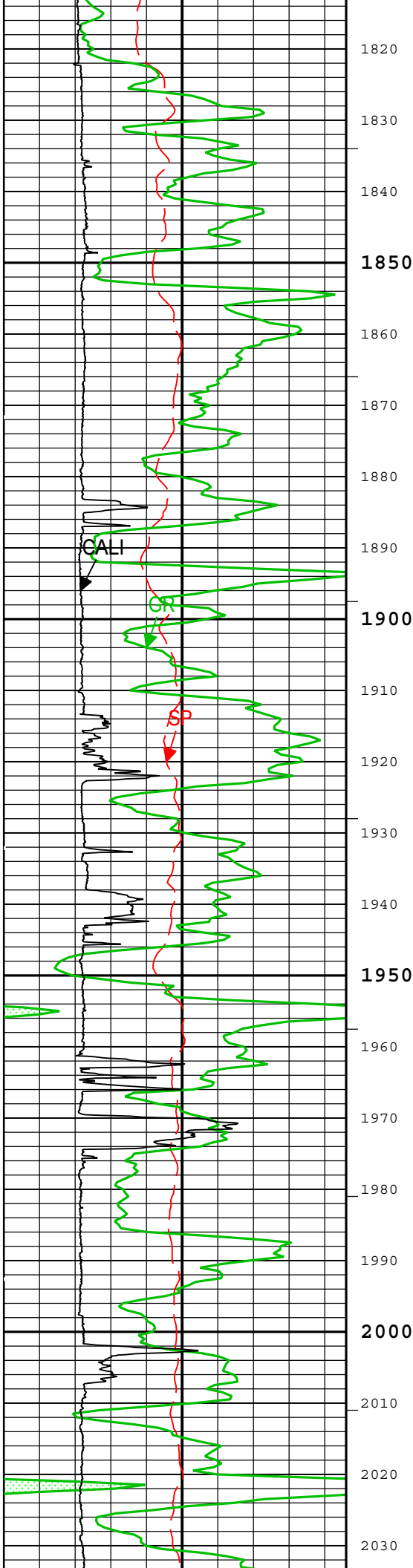


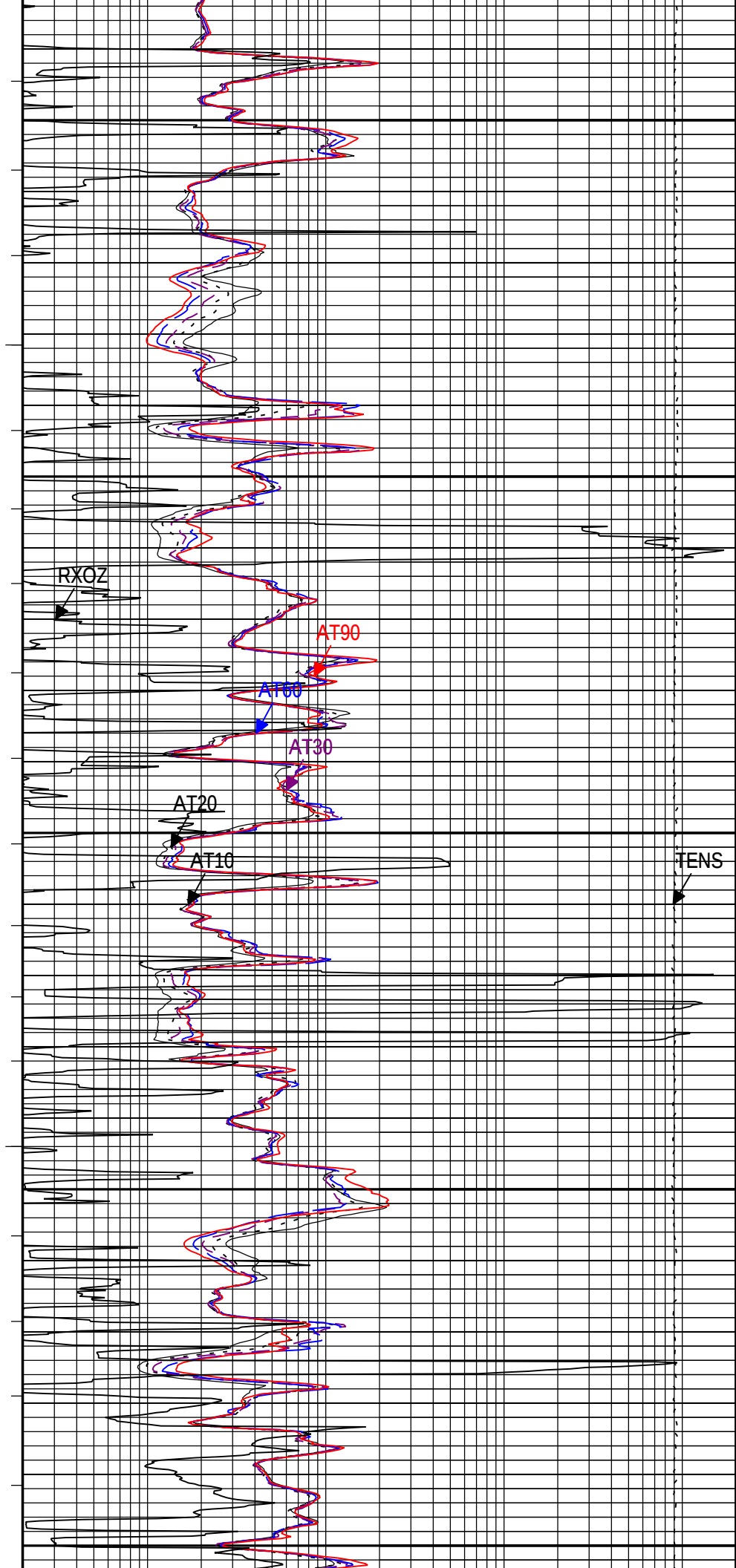
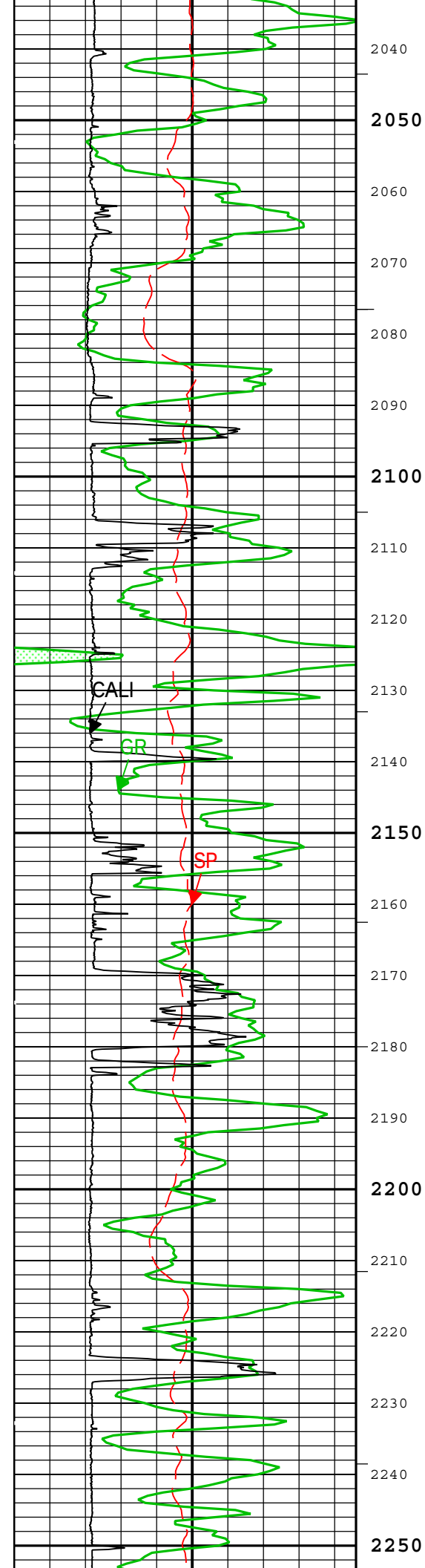


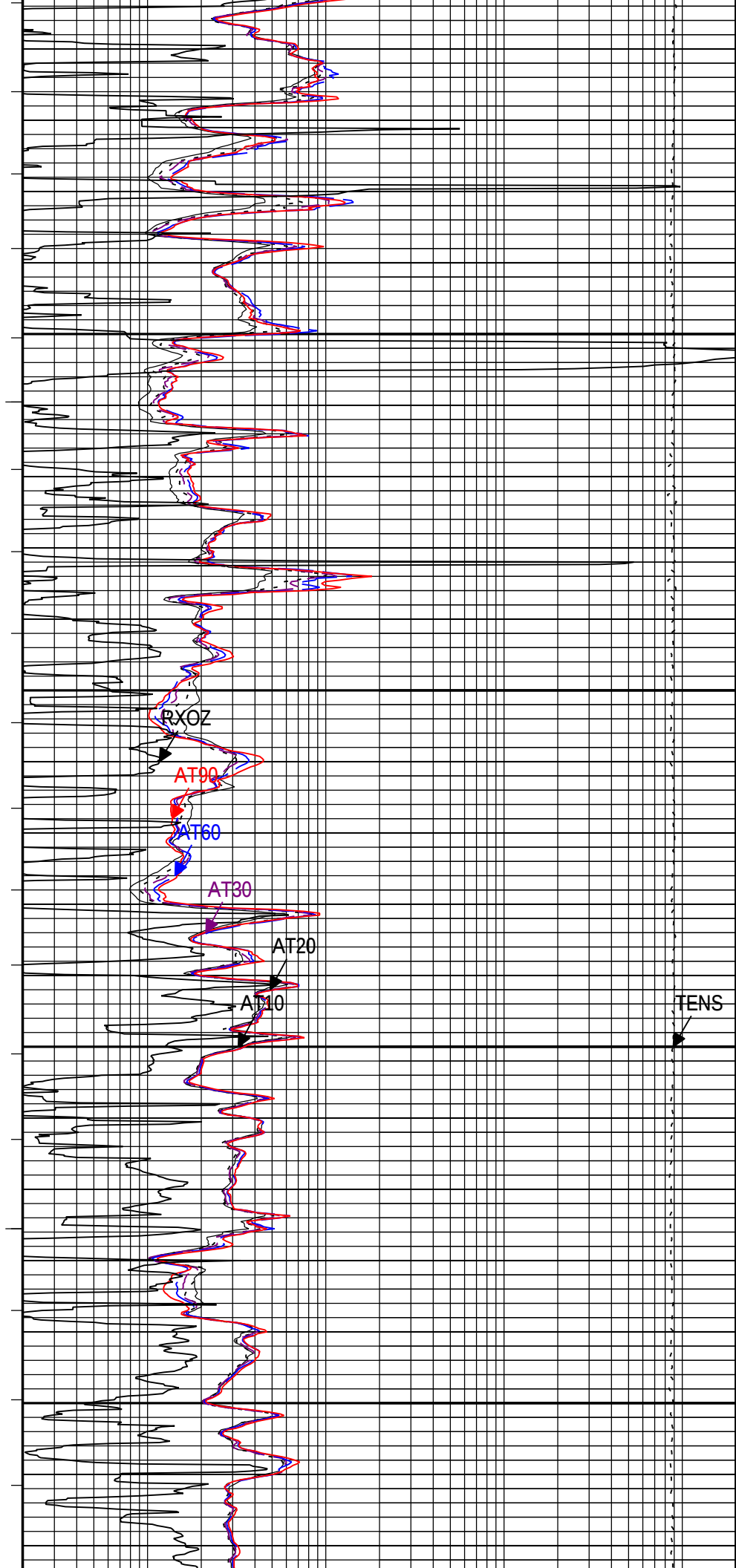
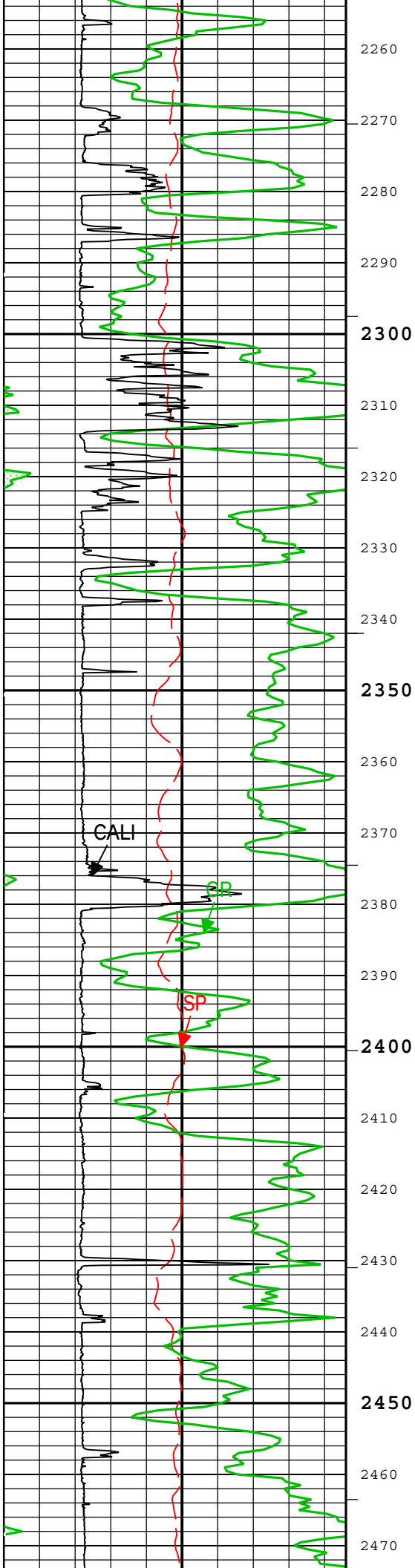


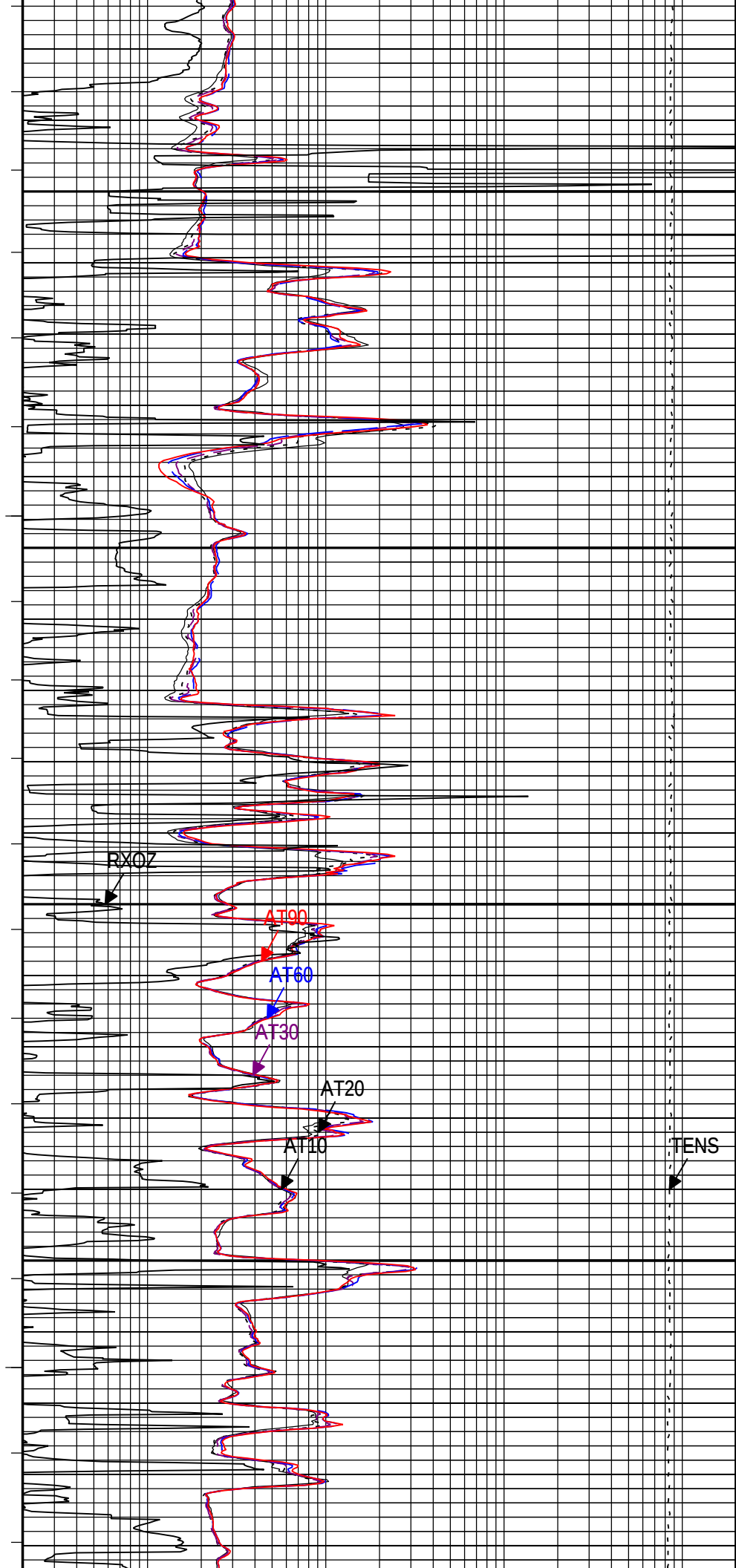
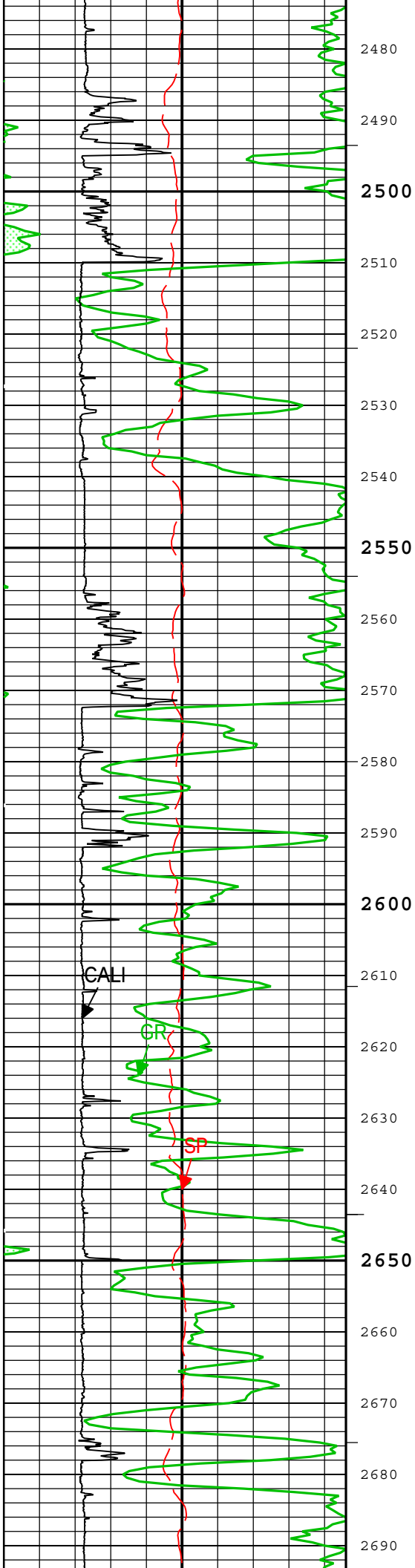


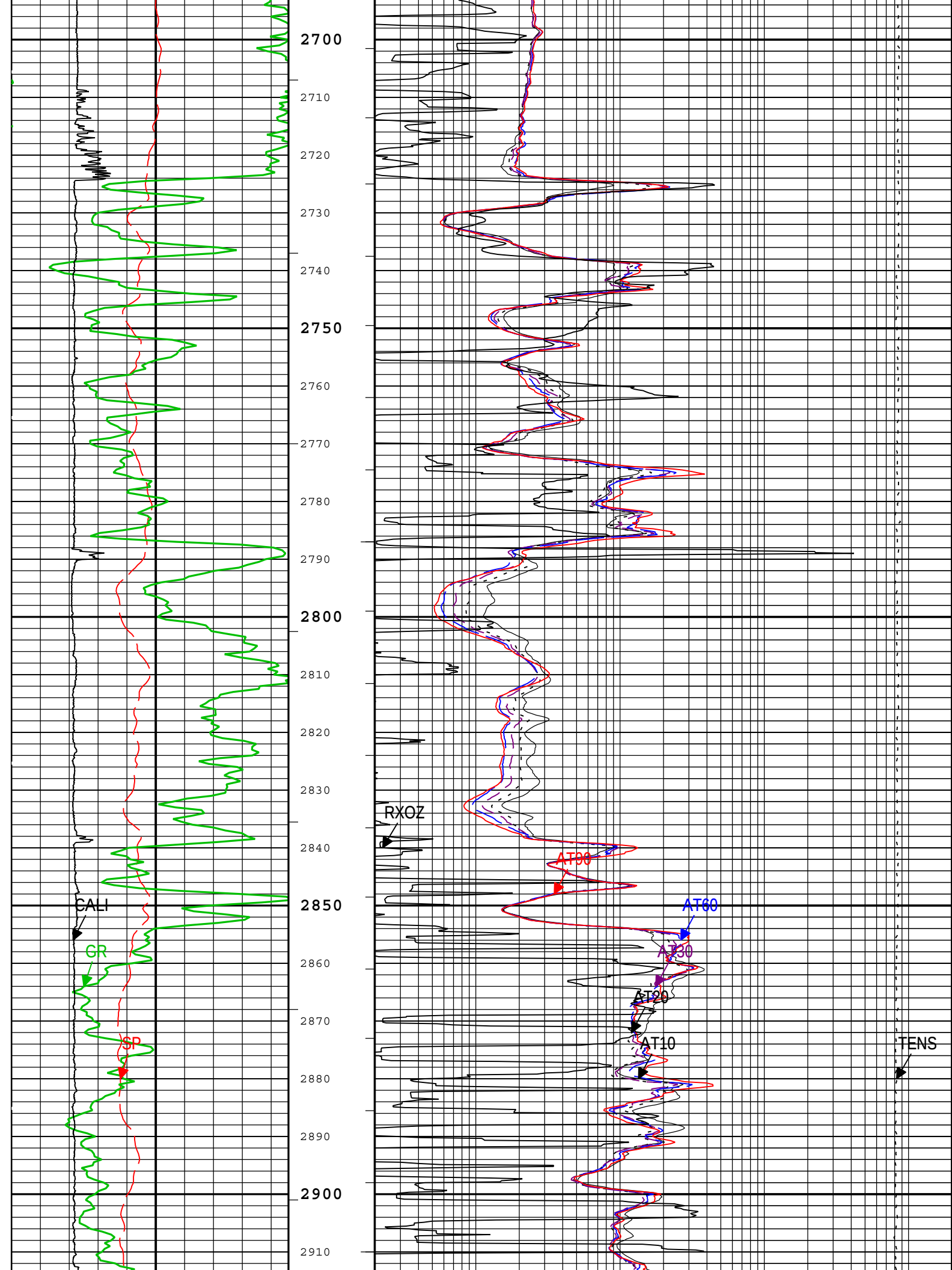


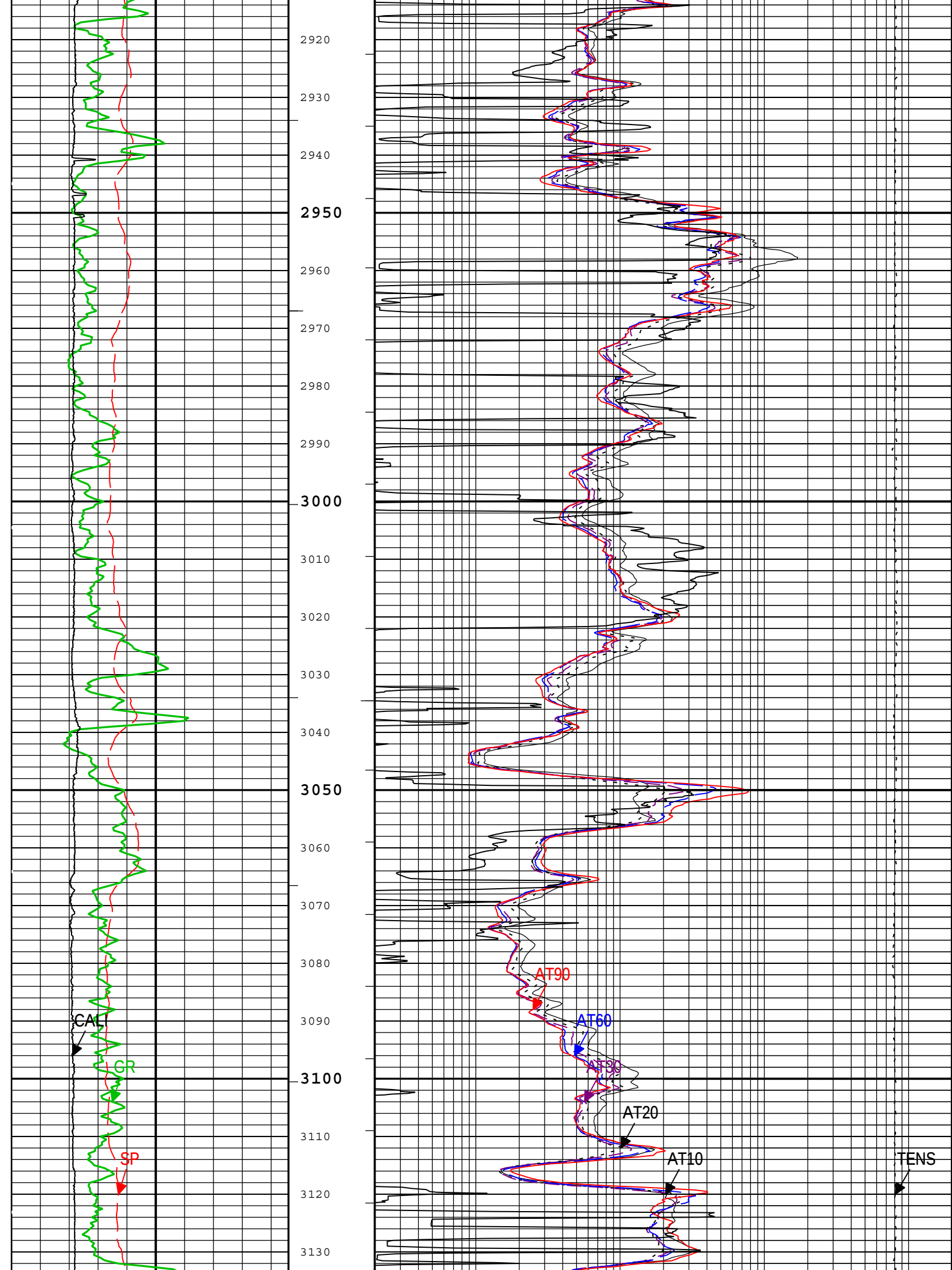


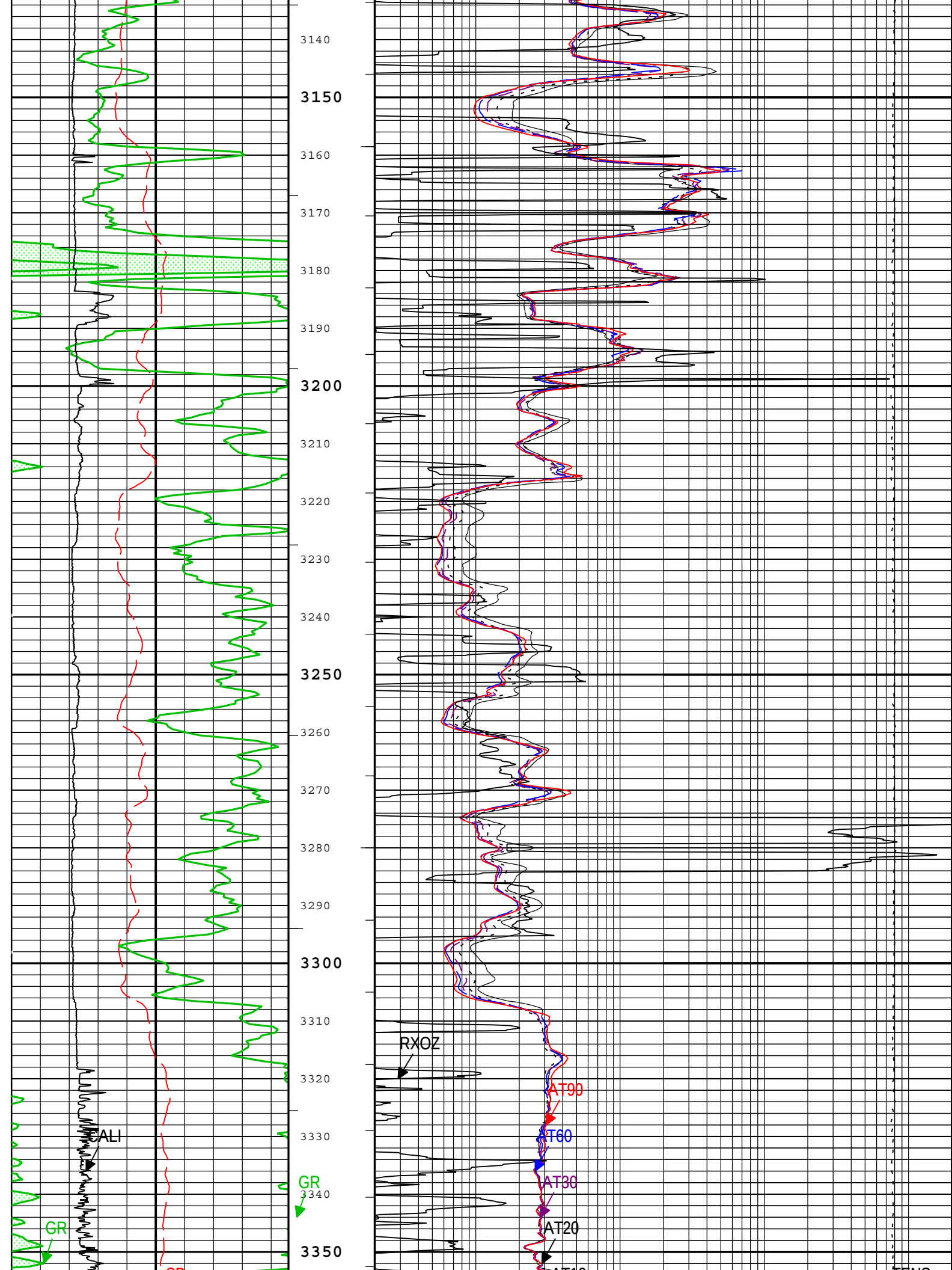


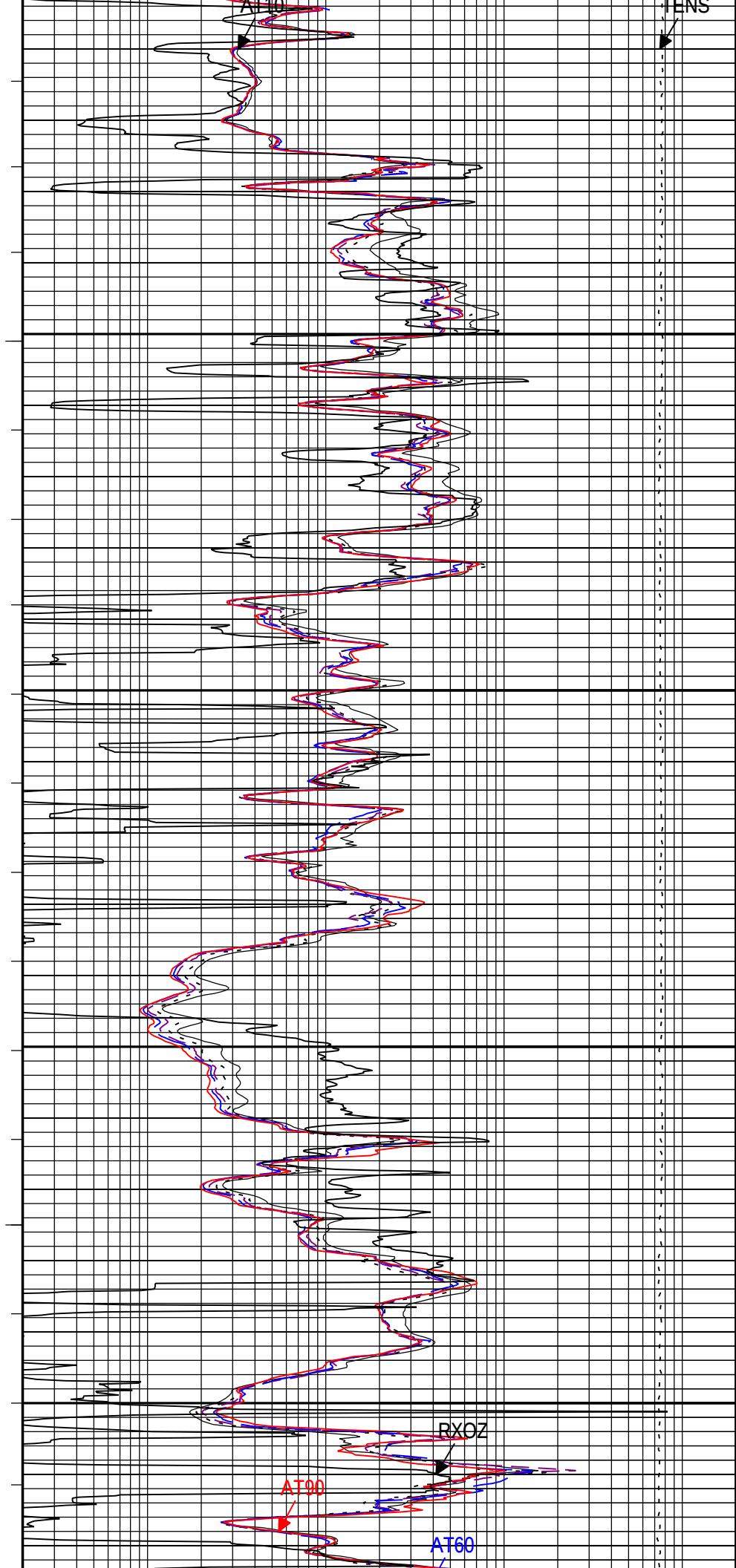
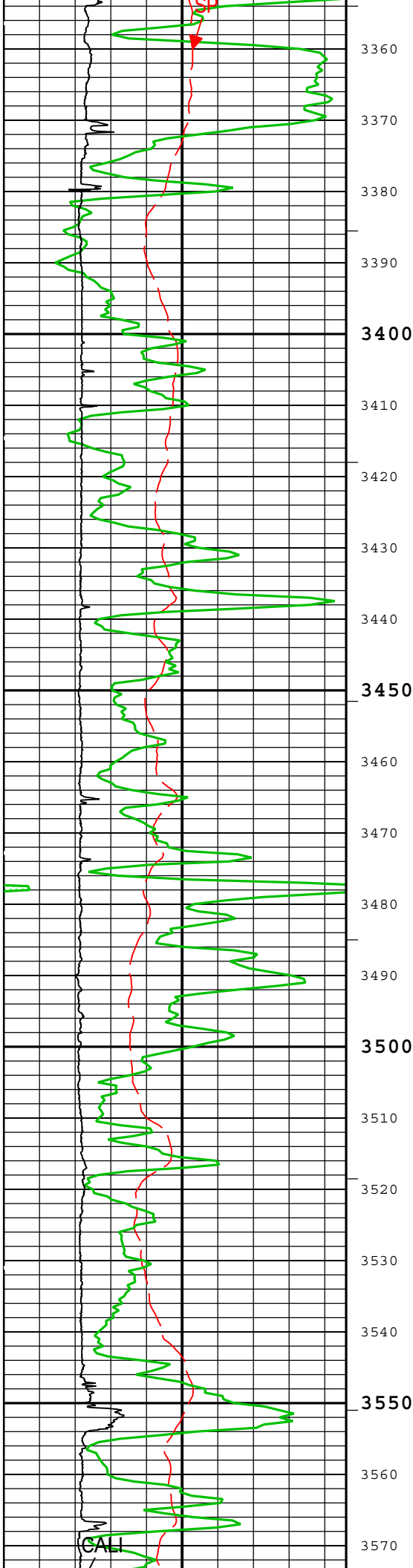


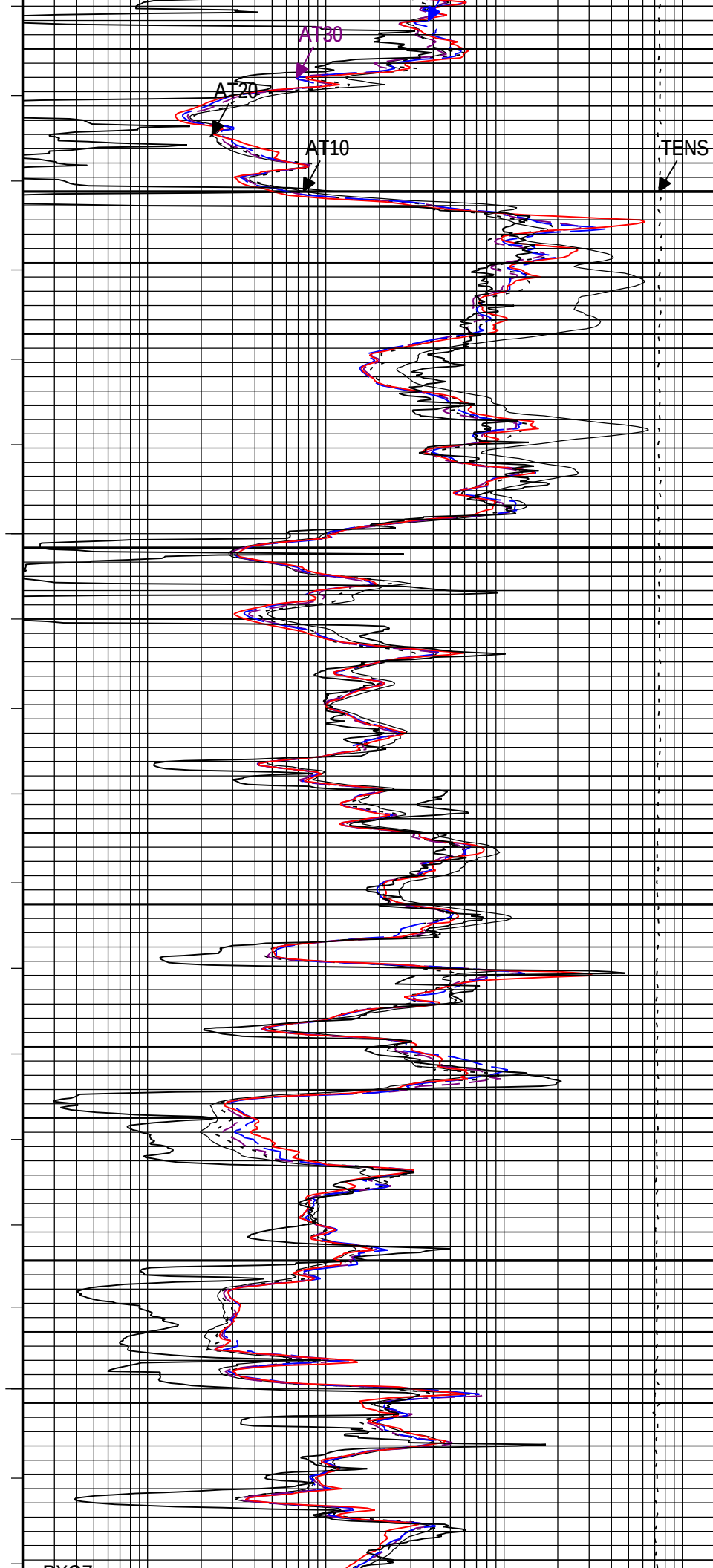
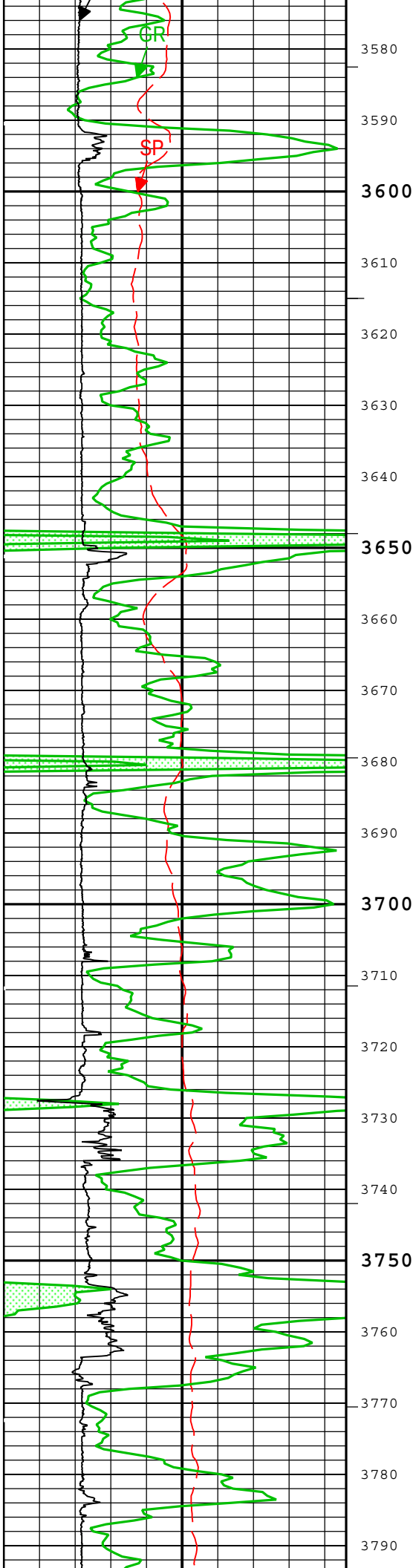


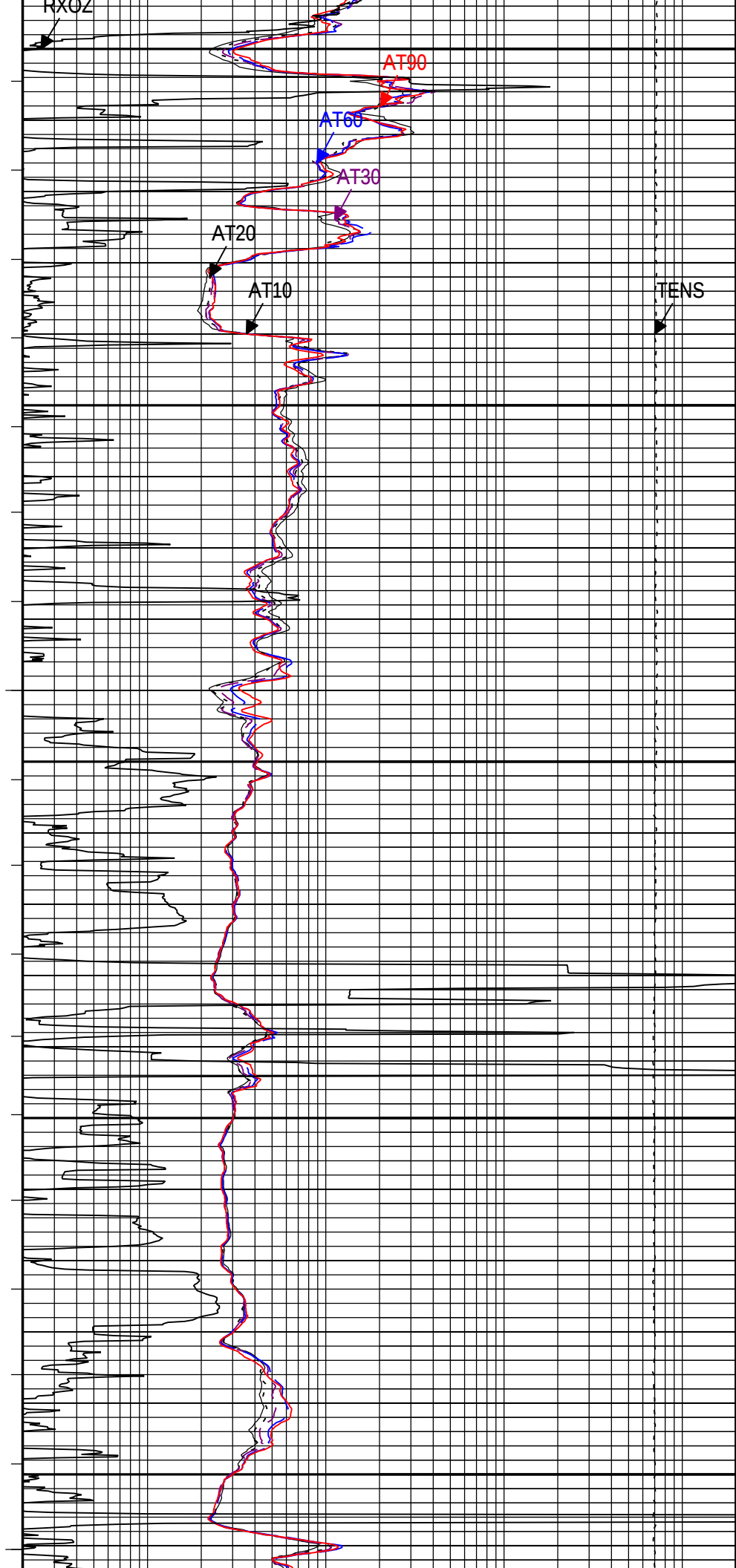
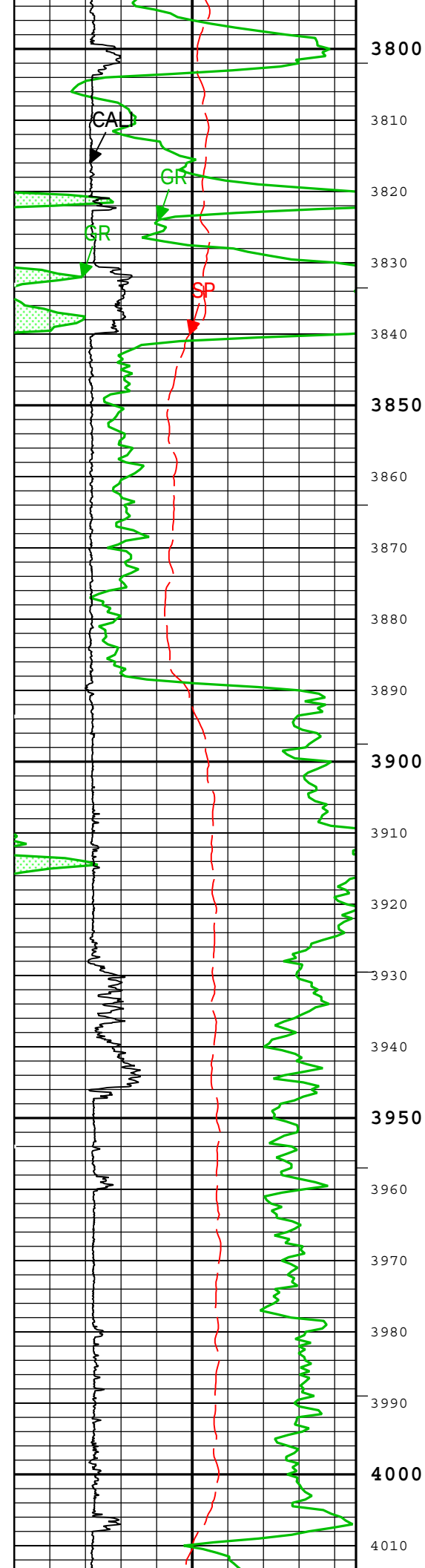


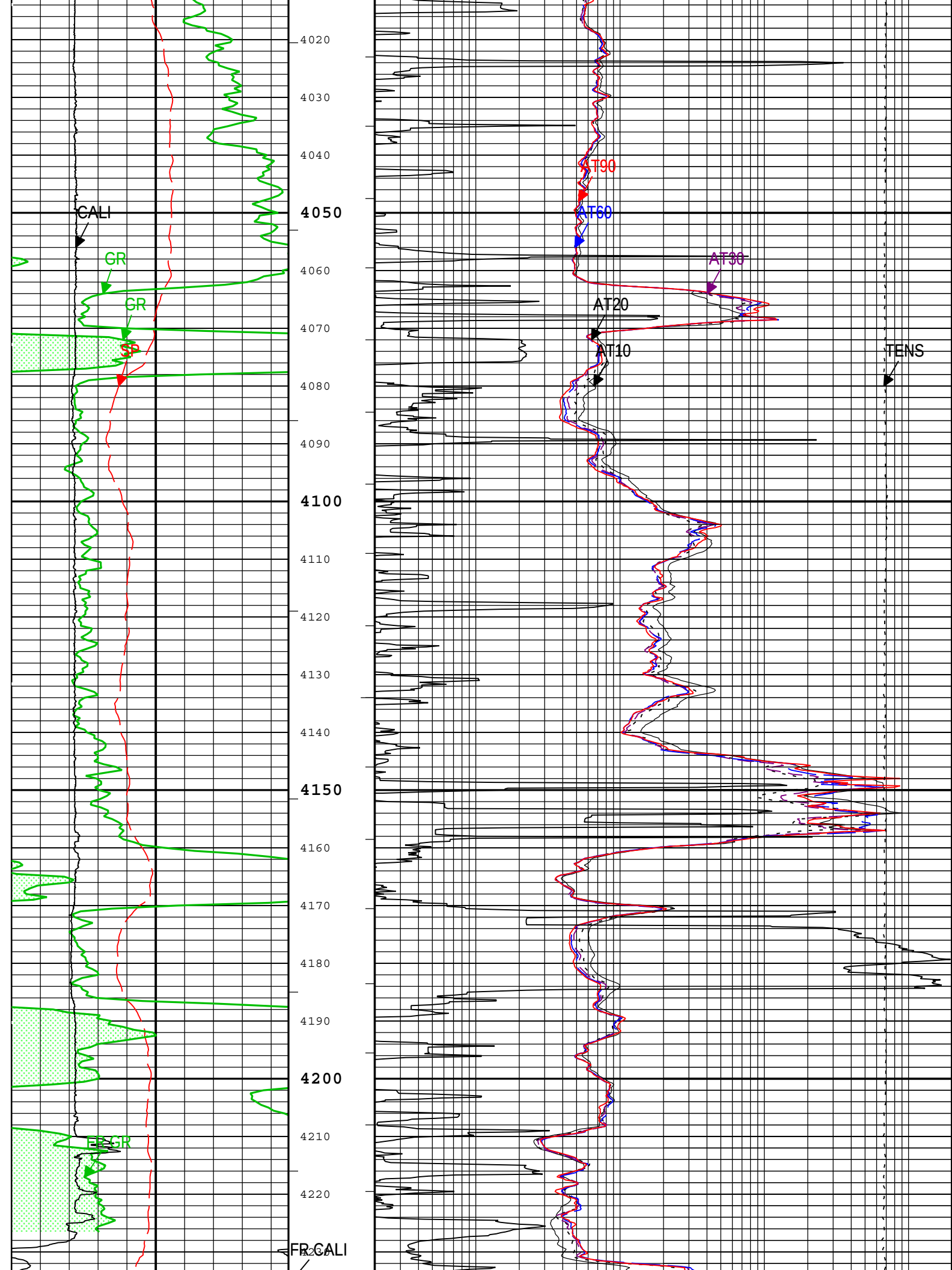


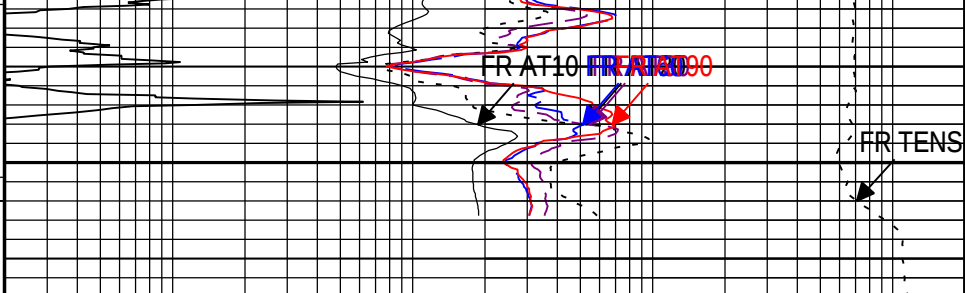
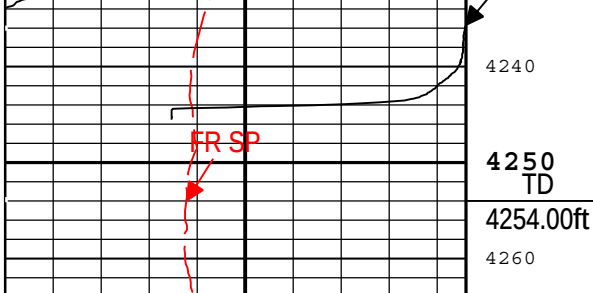












Gamma Ray Backup		
Spontaneous Potential (SP) AIT-M		
-260	mV	140
Gamma Ray (GR) HGNS-H		
150	gAPI	300
Gamma Ray (GR) HGNS-H		
0	gAPI	150
Caliper (CALI) HDRS-H		
10	in	20

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

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 One Format: Log (AIT 5) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 07-Dec-2012 07:47:22

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	Yes	
ASTA	Array Induction Tool Standoff	AIT-M	1.625	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	0.187	in
CBLO	Casing Bottom (Logger)	WLSESSION	250	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	13.375	in
DFD	Drilling Fluid Density	Borehole	9.35	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	9.625	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	AMF	
SOCO	Standoff Correction Option	HGNS-H	Yes	

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

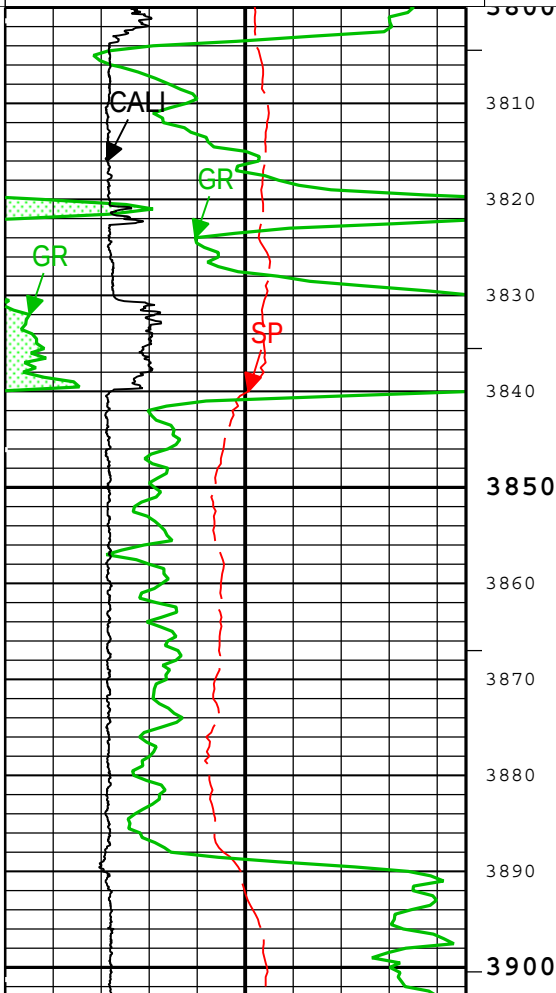
IHV	Borehole	6in
RXOZ	HDRS-H:HRMS-H:HRGD-H	2in
SP	AIT-M:AMIS:AMIS	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

| IHV - Integrated Hole Volume every 10.00 (ft3)
| IHV - Integrated Hole Volume every 100.00 (ft3)

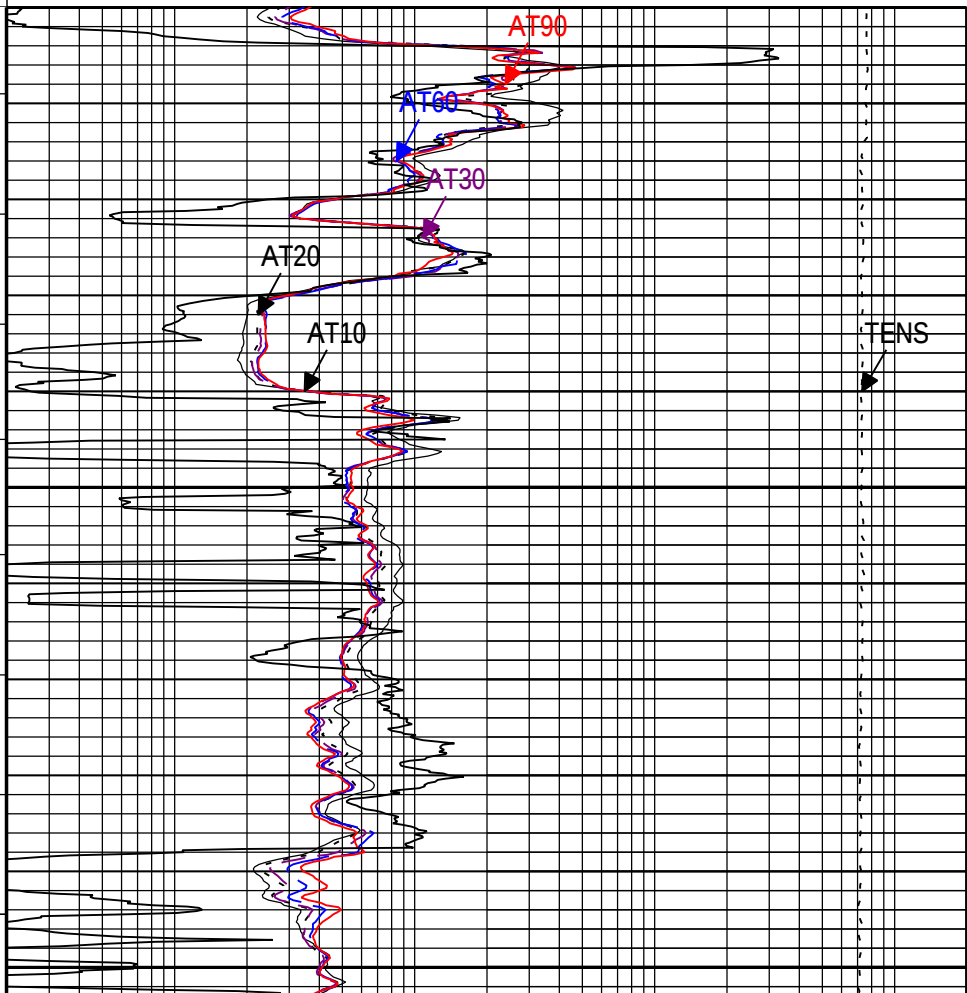
| ICV - Integrated Cement Volume every 10.00 (ft3)
| ICV - Integrated Cement Volume every 100.00 (ft3)

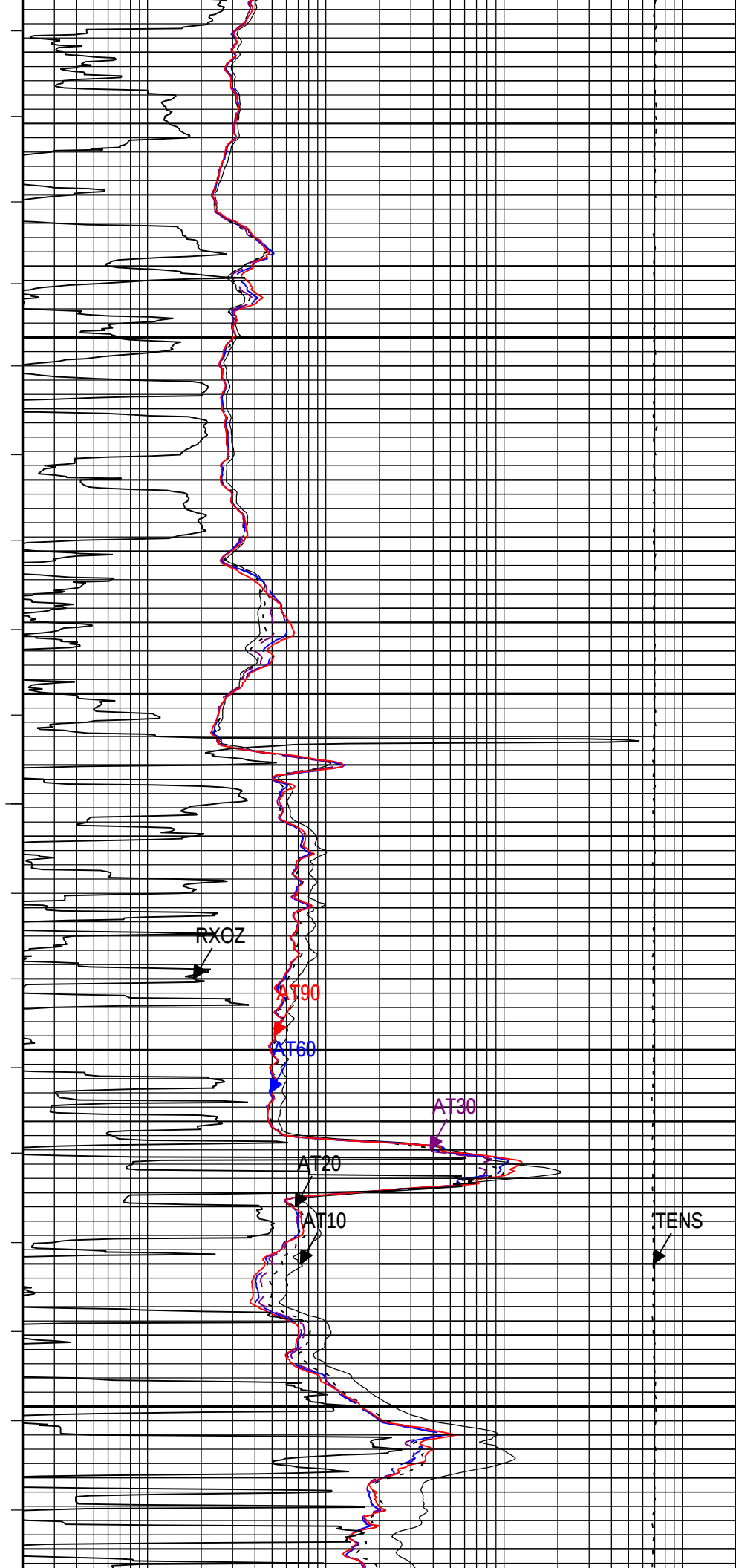
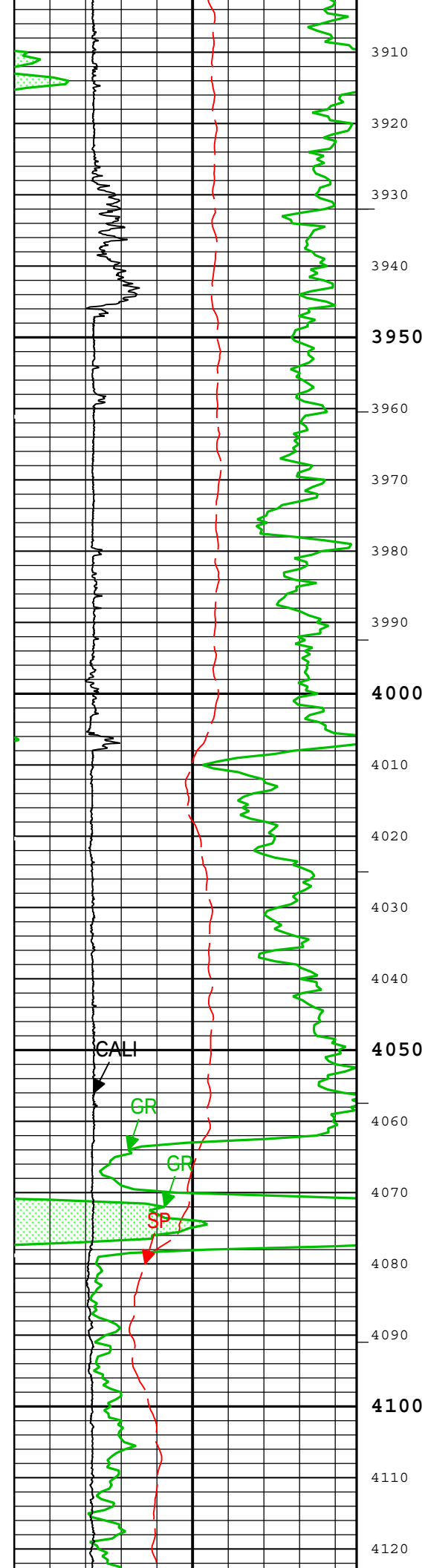
| TIME_1900 - Time Marked every 60.00 (s)
| ICV - Integrated Cement Volume every 100.00 (ft3)

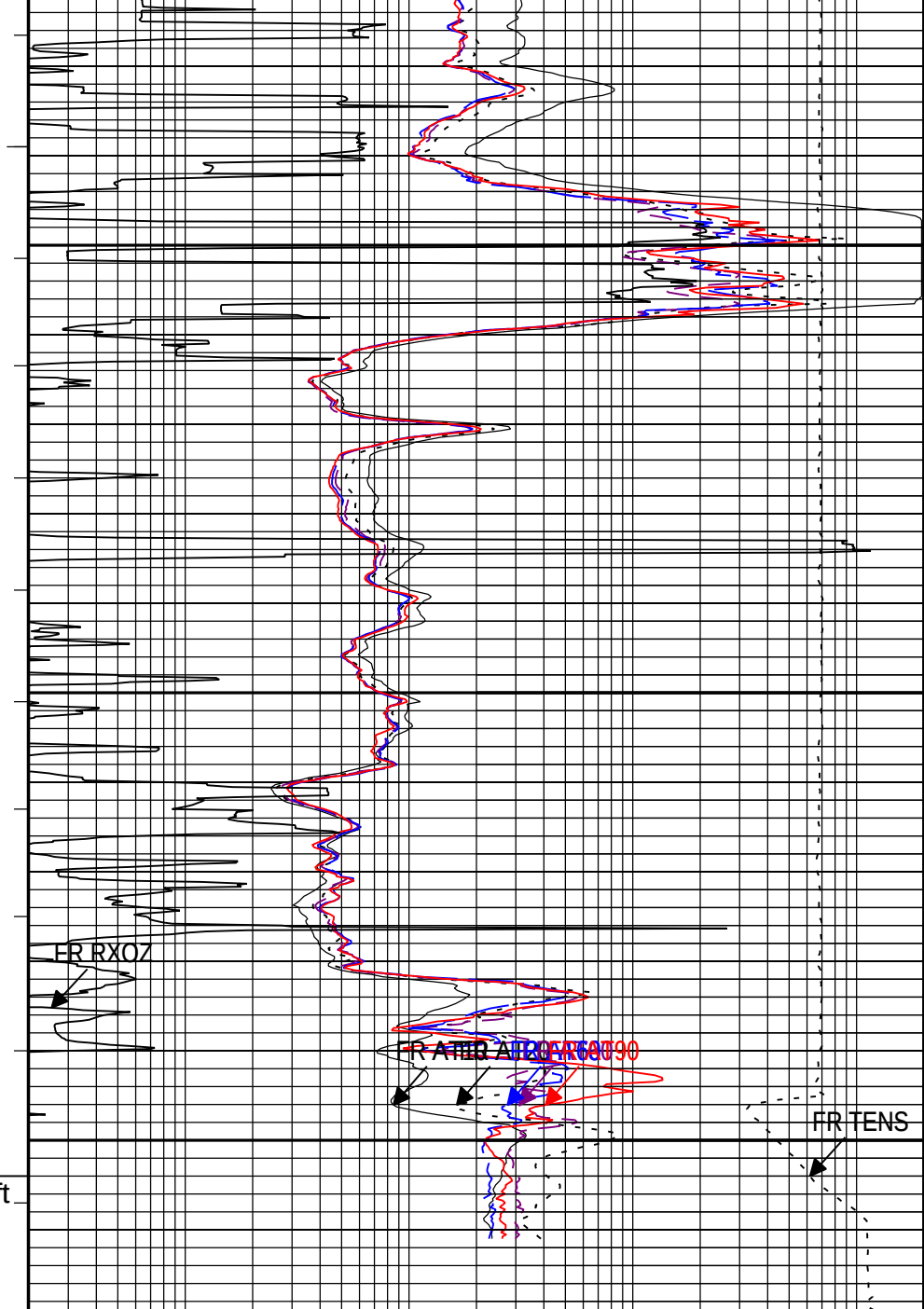
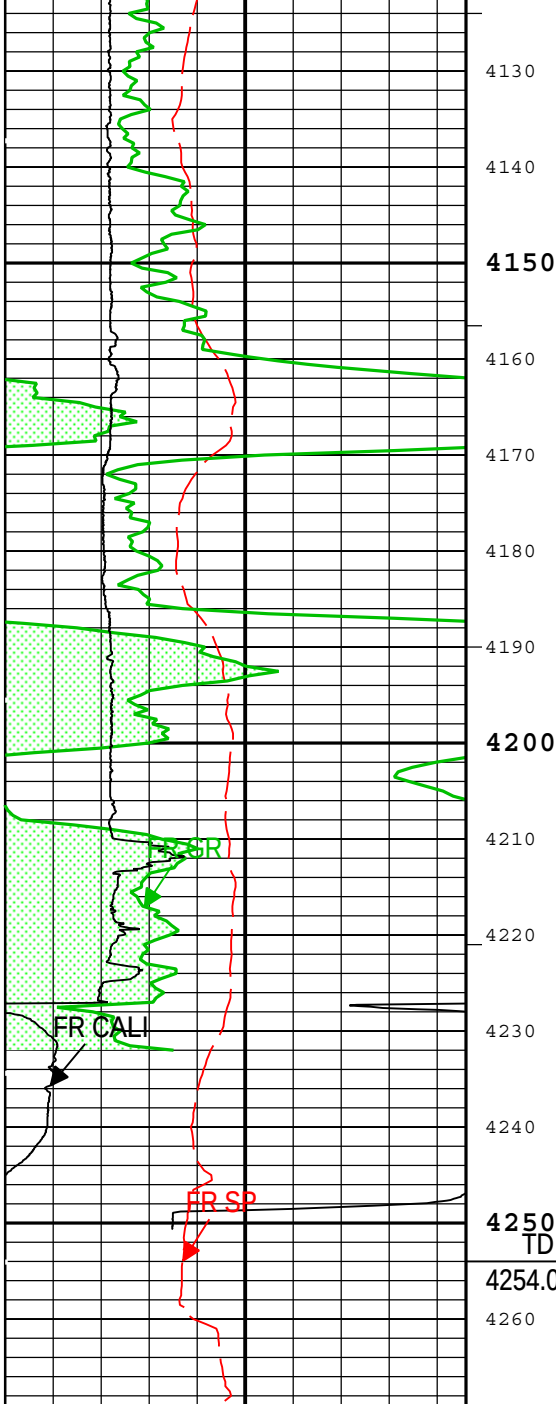
Gamma Ray Backup		
Spontaneous Potential (SP) AIT-M		
-260	mV	140
Gamma Ray (GR) HGNS-H		
150	gAPI	300
Gamma Ray (GR) HGNS-H		
0	gAPI	150
Caliper (CALI) HDRS-H		
10	in	20



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
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







Gamma Ray Backup		
Spontaneous Potential (SP) AIT-M		
-260	mV	140
Gamma Ray (GR) HGNS-H		
150	gAPI	300
Gamma Ray (GR) HGNS-H		
0	gAPI	150
Caliper (CALI) HDRS-H		
10	in	20

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
Cable Tension (TENS)		
10000	lbf	0

TIME_1900 - Time Marked every 60.00 (s)

ICV - Integrated Cement Volume every 10.00 (ft3)

IHV - Integrated Hole Volume every 100.00 (ft3)

IHV - Integrated Hole Volume every 10.00 (ft3)

Description: AIT Basic Log One Format: Log (AIT 5) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 07-Dec-2012 07:47:25

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	Yes	
ASTA	Array Induction Tool Standoff	AIT-M	1.625	in
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	12.25	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.187	in
CBLO	Casing Bottom (Logger)	WLSESSION	250	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
DFD	Drilling Fluid Density	Borehole	9.35	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	9.625	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	AMF	
SOCO	Standoff Correction Option	HGNS-H	Yes	
SP_SHIFT	SP Shift	AIT-M	85	mV
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft

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	3600	ft/h

Calibration Report

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

Primary Equipment :			
Array Induction Sonde - M	AMIS	229	
Auxiliary Equipment :			
AITM Rm/SP Bottom Nose	AMRM	229	

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM):		11:43:11 26-Oct-2012					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.012	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	0.560	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.014	1.050	
Test Loop Phase - 1	deg	Master	0	-3.000	0.718	3.000	
Test Loop Gain - 2		Master	1.000	0.950	1.016	1.050	
Test Loop Phase - 2	deg	Master	0	-3.000	0.140	3.000	
Test Loop Gain - 3		Master	1.000	0.950	1.011	1.050	
Test Loop Phase - 3	deg	Master	0	-3.000	0.142	3.000	
Test Loop Gain - 4		Master	1.000	0.950	0.994	1.050	
Test Loop Phase - 4	deg	Master	0	-3.000	0.108	3.000	
Test Loop Gain - 5		Master	1.000	0.950	0.986	1.050	
Test Loop Phase - 5	deg	Master	0	-3.000	-0.078	3.000	

Test Loop Gain - 6		Master	1.000	0.950	0.994	1.050	
Test Loop Phase - 6	deg	Master	0	-3.000	0.243	3.000	
Test Loop Gain - 7		Master	1.000	0.950	1.006	1.050	
Test Loop Phase - 7	deg	Master	0	-3.000	-0.041	3.000	

AIT Sonde Calibration - Sonde Error Correction							
Master (EEPROM):		11:43:11 26-Oct-2012					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-95.532	119.000	
Sonde Error Correction Quad - 0		Master	-----	-2250.000	-1082.545	2250.000	
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	161.893	204.000	
Sonde Error Correction Quad - 1		Master	-----	-625.000	164.135	625.000	
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	109.218	156.000	
Sonde Error Correction Quad - 2		Master	-----	-350.000	-146.182	350.000	
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	49.795	89.000	
Sonde Error Correction Quad - 3		Master	-----	-250.000	-21.815	250.000	
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	27.091	35.000	
Sonde Error Correction Quad - 4		Master	-----	-63.000	1.553	63.000	
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	13.215	24.000	
Sonde Error Correction Quad - 5		Master	-----	-50.000	-0.906	50.000	
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	9.873	15.000	
Sonde Error Correction Quad - 6		Master	-----	-30.000	0.685	30.000	
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-0.825	5.000	
Sonde Error Correction Quad - 7		Master	-----	-30.000	0.214	30.000	

AIT Mud Calibration - Mud Calibration Gain							
Master (EEPROM):		11:43:11 26-Oct-2012					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coarse Gain		Master	1.000	0.800	1.031	1.200	
Fine Gain		Master	1.000	0.800	1.026	1.200	

AIT Electronics Check - Thru Calibration Check							
Master (EEPROM):		11:43:11 26-Oct-2012	Before (Measured):	20:28:42 17-Jan-2013	After:		
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Thru Cal Mag - 0	V	Master	-----	0.366	0.613	0.854	
		Before	-----	0.366	0.613	0.854	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.000	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Phase - 0	deg	Master	-----	137.000	-170.542	-103.000	
		Before	-----	137.000	-170.076	-103.000	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.466	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Mag - 1	V	Master	-----	0.762	1.256	1.778	
		Before	-----	0.762	1.257	1.778	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.001	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Phase - 1	deg	Master	-----	136.000	-171.609	-104.000	
		Before	-----	136.000	-171.142	-104.000	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.467	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Mag - 2	V	Master	-----	0.372	0.622	0.868	
		Before	-----	0.372	0.622	0.868	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.000	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Phase - 2	deg	Master	-----	132.000	-175.163	-108.000	
		Before	-----	132.000	-174.699	-108.000	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.464	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Mag - 3	V	Master	-----	0.420	0.703	0.980	
		Before	-----	0.420	0.703	0.980	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.000	-----	

		After-Before	----	----	----	----			
Thru Cal Phase - 3	deg	Master	----	131.000	-175.925	-109.000			
		Before	----	131.000	-175.461	-109.000			
		After	----	----	----	----			
		Before-Master	----	----	0.464	----			
		After-Before	----	----	----	----			
Thru Cal Mag - 4	V	Master	----	0.804	1.315	1.876			
		Before	----	0.804	1.315	1.876			
		After	----	----	----	----			
		Before-Master	----	----	0.000	----			
		After-Before	----	----	----	----			
Thru Cal Phase - 4	deg	Master	----	125.000	177.964	-115.000			
		Before	----	125.000	178.425	-115.000			
		After	----	----	----	----			
		Before-Master	----	----	0.461	----			
		After-Before	----	----	----	----			
Thru Cal Mag - 5	V	Master	----	1.176	1.915	2.744			
		Before	----	1.176	1.915	2.744			
		After	----	----	----	----			
		Before-Master	----	----	0.000	----			
		After-Before	----	----	----	----			
Thru Cal Phase - 5	deg	Master	----	122.000	176.323	-118.000			
		Before	----	122.000	176.781	-118.000			
		After	----	----	----	----			
		Before-Master	----	----	0.458	----			
		After-Before	----	----	----	----			
Thru Cal Mag - 6	V	Master	----	1.176	1.911	2.744			
		Before	----	1.176	1.911	2.744			
		After	----	----	----	----			
		Before-Master	----	----	0.000	----			
		After-Before	----	----	----	----			
Thru Cal Phase - 6	deg	Master	----	121.000	176.366	-119.000			
		Before	----	121.000	176.824	-119.000			
		After	----	----	----	----			
		Before-Master	----	----	0.458	----			
		After-Before	----	----	----	----			
Thru Cal Mag - 7	V	Master	----	0.846	1.378	1.974			
		Before	----	0.846	1.378	1.974			
		After	----	----	----	----			
		Before-Master	----	----	0.000	----			
		After-Before	----	----	----	----			
Thru Cal Phase - 7	deg	Master	----	115.000	175.636	-125.000			
		Before	----	115.000	176.064	-125.000			
		After	----	----	----	----			
		Before-Master	----	----	0.428	----			
		After-Before	----	----	----	----			
SPA Zero	mV	Master		-50.000	-0.093	50.000			
		Before		-50.000	-0.076	50.000			
		After	----	----	----	----			
		Before-Master	----	----	0.017	----			
		After-Before	----	----	----	----			
SPA Plus	mV	Master		941.000	994.921	1040.000			
		Before		941.000	994.842	1040.000			
		After	----	----	----	----			
		Before-Master	----	----	-0.079	----			
		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	0.922	0.960			
		Before		0.870	0.922	0.960			
		After	----	----	----	----			
		Before-Master	----	----	0.000	----			
		After-Before	----	----	----	----			

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

Primary Equipment :

HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	3965
HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H	4770

Auxiliary Equipment :

HRDD Backscatter Detector	Backscatter	
HRDD Long Spacing Detector	Long Spacing	28941
HRDD Short Spacing Detector	Short Spacing	27775
Cesium 137 Gamma-Ray Logging Source	GSR-J	5347
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	3965
HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H	4723

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): 22:12:27 04-Dec-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	in	Before	8.00	6.00	7.89	10.00	
Large Ring	in	Before	12.00	9.00	12.36	15.00	

HDRS Density Calibration - Inversion Results

Master (EEPROM): 17:14:08 03-Dec-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Rho Aluminum	g/cm3	Master	2.596	2.586	2.597	2.606	
Rho Magnesium	g/cm3	Master	1.686	1.676	1.688	1.696	
Pe Aluminum		Master	2.570	2.470	2.530	2.670	
Pe Magnesium		Master	2.650	2.550	2.629	2.750	

HDRS Density Calibration - Deviation Summary

Master (EEPROM): 17:14:08 03-Dec-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Average Deviation	%	Master	0	-0.6000	0.1742	0.6000	
BS Max Deviation	%	Master	0	-1.6000	0.4458	1.6000	
SS Average Deviation	%	Master	0	-1.0000	0.3212	1.0000	
SS Max Deviation	%	Master	0	-2.5000	0.8660	2.5000	
LS Average Deviation	%	Master	0	-1.5000	0.6301	1.5000	
LS Max Deviation	%	Master	0	-3.5000	1.4093	3.5000	

HDRS Density Calibration - Background Summary

Master (EEPROM): 17:14:08 03-Dec-2012 Before (Measured): 22:14:47 04-Dec-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Master	1.0000		0.7415		
		Before	0.7415	0.7044	0.7424	0.7786	
		Before-Master	-----	-----	0.0009	-----	
BS Window Sum	1/s	Master	1		28726		
		Before	28726	27290	28791	30162	
		Before-Master	-----	-----	65	-----	
SS Window Ratio		Master	1.0000		0.4819		
		Before	0.4819	0.4578	0.4829	0.5060	
		Before-Master	-----	-----	0.0010	-----	
SS Window Sum	1/s	Master	1		11309		
		Before	11309	10743	11305	11874	
		Before-Master	-----	-----	-4	-----	
LS Window Ratio		Master	1.0000		0.3002		
		Before	0.3002	0.2852	0.2999	0.3152	
		Before-Master	-----	-----	-0.0003	-----	
LS Window Sum	1/s	Master	1		1345		
		Before	1345	1278	1336	1412	
		Before-Master	-----	-----	-9	-----	

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM): 17:14:08 03-Dec-2012 Before (Measured): 22:14:47 04-Dec-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
-------------	------	-------	---------	-----------	--------	------------	--

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Master		1000	1522	2400	
		Before		1000	1517	2400	
		Before-Master	-----	-100	-5	100	
SS PM High Voltage	V	Master		1000	1423	2400	
		Before		1000	1433	2400	
		Before-Master	-----	-100	10	100	
LS PM High Voltage	V	Master		1000	1615	2400	
		Before		1000	1625	2400	
		Before-Master	-----	-100	10	100	

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM):		17:14:08 03-Dec-2012		Before (Measured):		22:14:47 04-Dec-2012	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Crystal Resolution	%	Master		5.00	10.87	25.00	
		Before		5.00	10.82	25.00	
		Before-Master	-----	-1.00	-0.05	1.00	
SS Crystal Resolution	%	Master		5.00	9.29	20.00	
		Before		5.00	9.48	20.00	
		Before-Master	-----	-1.00	0.19	1.00	
LS Crystal Resolution	%	Master		5.00	9.03	20.00	
		Before		5.00	8.86	20.00	
		Before-Master	-----	-1.00	-0.17	1.00	

HDRS MCFL Calibration - MCFL Accumulations

Before (Measured):		22:15:20 04-Dec-2012					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Main Resistivity	ohm.m	Before	3875	3565	3756	4185	
Deep Resistivity	ohm.m	Before	3830	3524	3794	4136	
Shallow Resistivity	ohm.m	Before	3830	3524	3800	4136	

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

Primary Equipment :			
HILT Gamma-Ray and Neutron Sonde, 150 degC		HGNS-H	3964
Auxiliary Equipment :			
HGNS Accelerometer, 150 degC		HACCZ-H	4166
AmBe Neutron Logging Source		NSR-F	5075
Calibration Parameter :			
Water Temperature			
Housing Size			
JIG-BKG (Jig minus background reference)		160	

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured):		18:56:24 05-Dec-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-Jul-2005					
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	-----	-----	11397.000	-----	
Accelerometer Coefficients - 1		Master	-----	-----	-4.294	-----	
Accelerometer Coefficients - 2		Master	-----	-----	-0.010	-----	
Accelerometer Coefficients - 3		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 4		Master	-----	-----	2.740	-----	
Accelerometer Coefficients - 5		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 6		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 7		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 8		Master	-----	-----	299.000	-----	
Accelerometer Coefficients - 9		Master	-----	-----	0.994	-----	

HGNS Neutron Calibration - HGNS Neutron Accumulations

Master (EEPROM):		17:02:00 26-Nov-2012		Before (Measured):		22:11:14 04-Dec-2012		After:	
Measurement		Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Near Zero Measurement		1/s	Master	0	5.0	28.2	40.0		
			Before	0	5.0	27.5	40.0		
			After	----	----	----	----		
			Before-Master	----	-4.2	-0.7	4.2		
			After-Before	----	----	----	----		
Far Zero Measurement		1/s	Master	0	5.0	29.2	40.0		
			Before	0	5.0	27.6	40.0		
			After	----	----	----	----		
			Before-Master	----	-4.4	-1.6	4.4		
			After-Before	----	----	----	----		
Near Plus Measurement - 0		1/s	Master	6031.0	4700.0	5254.0	6900.0		
			Before	----	----	----	----		
			After	----	----	----	----		
			Before-Master	----	----	----	----		
			After-Before	----	----	----	----		
Far Plus Measurement - 0		1/s	Master	2793.0	1900.0	2187.0	2900.0		
			Before	----	----	----	----		
			After	----	----	----	----		
			Before-Master	----	----	----	----		
			After-Before	----	----	----	----		
Near Corrected Plus Measurement - 0		1/s	Master		4700.0	5286.0	6900.0		
			Before	----	----	----	----		
			After	----	----	----	----		
			Before-Master	----	----	----	----		
			After-Before	----	----	----	----		
Far Corrected Plus Measurement - 0		1/s	Master		1900.0	2197.0	2900.0		
			Before	----	----	----	----		
			After	----	----	----	----		
			Before-Master	----	----	----	----		
			After-Before	----	----	----	----		

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations								
Before (Measured):		22:12:48 04-Dec-2012		After:				
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
RGR Zero Measurement	gAPI	Before	30.0	0	23.8	120.0		
		After	----	----	----	----		
		After-Before	----	----	----	----		
RGR Plus Measurement	gAPI	Before	179.8	152.4	164.9	200.0		
		After	----	----	NOT DONE	----		
		After-Before	----	----	----	----		
GR Calibration Gain		Before	0.89	0.80	0.97	1.05		
		After	----	----	----	----		
		After-Before	----	----	----	----		

ONE				
Main Pass 1" = 100'				
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1453.9	ft3
IHV	Integrated Hole Volume	GCSE_UP_PASS	3480.69	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
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
ONE	Log[3]:Up	Up	144.03 ft	4263.83 ft	05-Dec-2012 7:48:19 PM	05-Dec-2012 9:08:23 PM	0.00 ft	

All depths are referenced to toolstring zero

Log

ONE: Log[3]:Up

Description: AIT Basic Log Two Format: Log (AIT Basic Log Two) Index Scale: 1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 07-Dec-2012 07:47:33

Channel	Source	Sampling
AF20	AIT-M:AMIS:AMIS	3in
AF60	AIT-M:AMIS:AMIS	3in
AFCO60	AIT-M:AMIS:AMIS	3in
GR	HGNS-H:HGNS-H:HGNS-H	6in
ICV	Borehole	6in
IHV	Borehole	6in
SP	AIT-M:AMIS:AMIS	6in
TIME_1900	WLWorkflow	0.1in

- IHV - Integrated Hole Volume every 10.00 (ft3)
- IHV - Integrated Hole Volume every 100.00 (ft3)
- ICV - Integrated Cement Volume every 10.00 (ft3)
- ICV - Integrated Cement Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

Gamma Ray Backup

Spontaneous Potential
(SP) AIT-M

-260	mV	140
------	----	-----

Gamma Ray (GR)
HGNS-H

150	gAPI	300
-----	------	-----

Gamma Ray (GR)
HGNS-H

0	gAPI	150
---	------	-----

Array Induction Four Foot Resistivity A20 (AF20) AIT-M

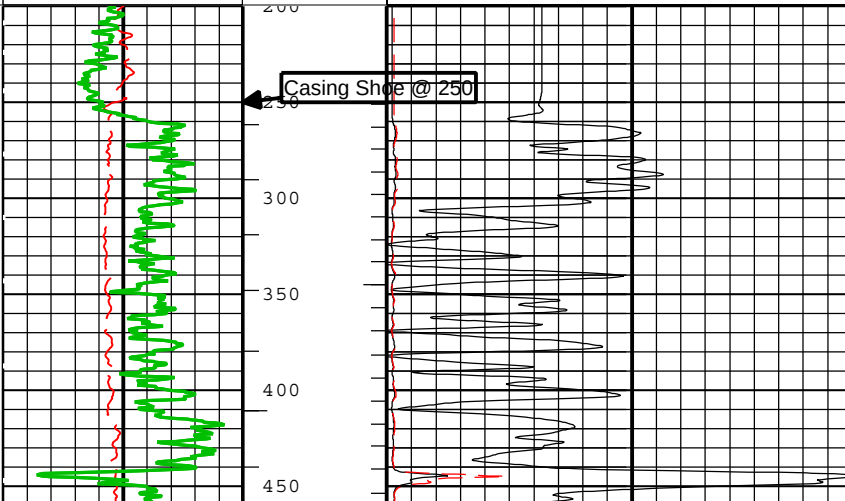
0	ohm.m	50
---	-------	----

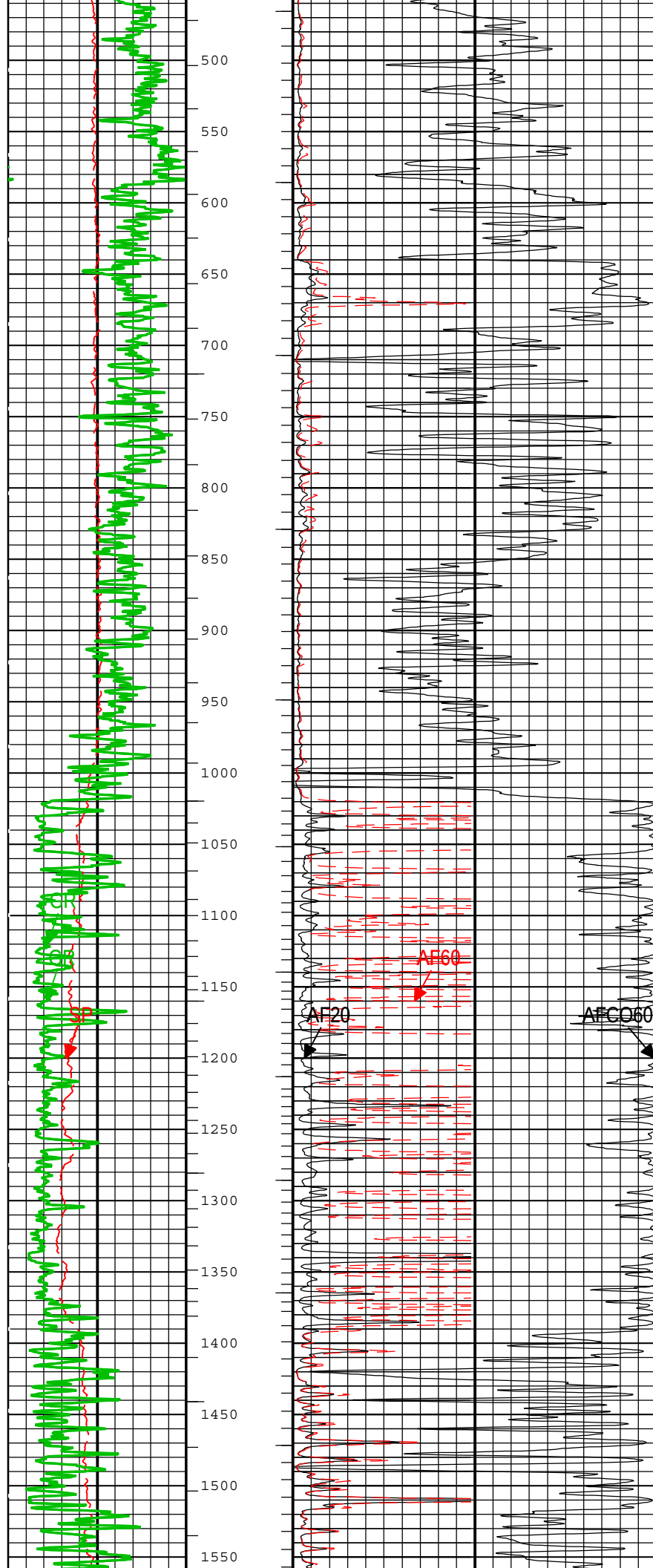
Array Induction Four Foot Resistivity A60 (AF60) AIT-M

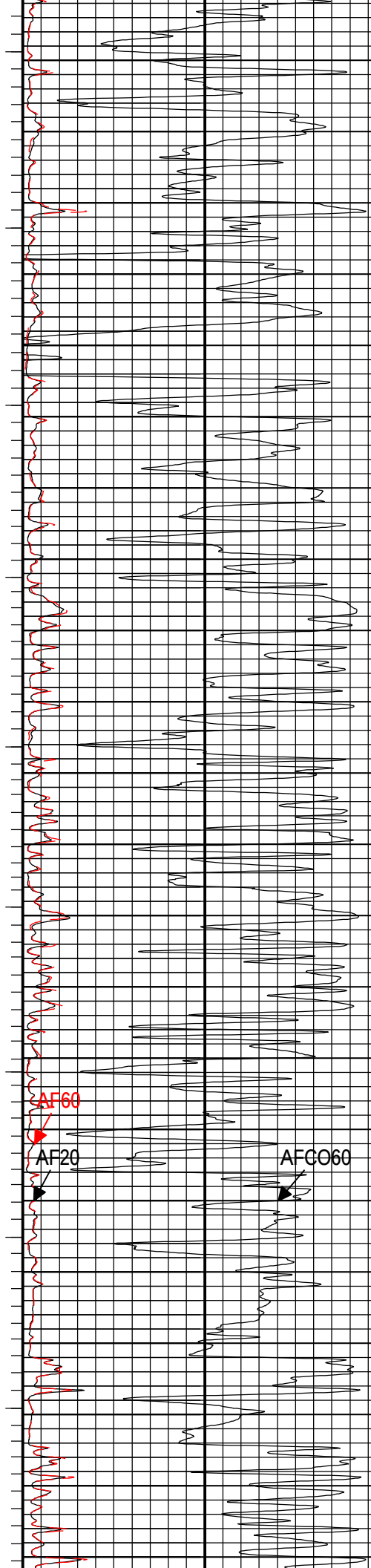
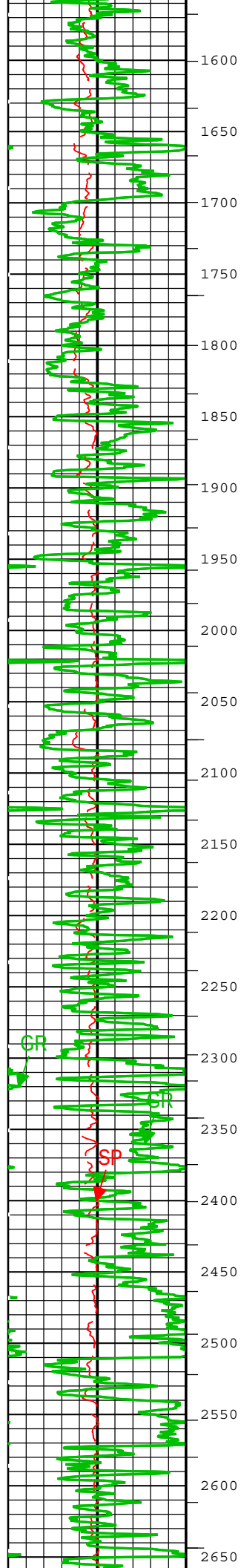
0	ohm.m	50
---	-------	----

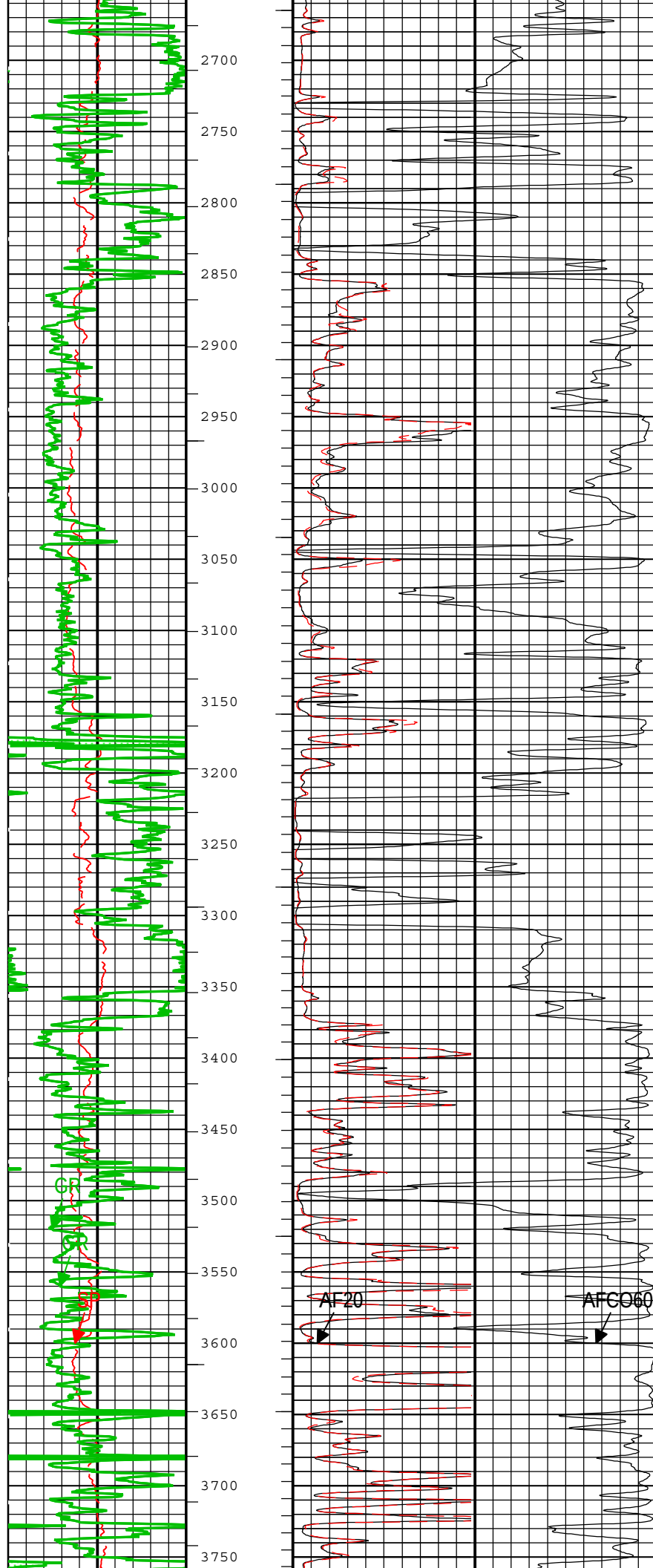
Array Induction Four Foot Conductivity A60 (AFCO60) AIT-M

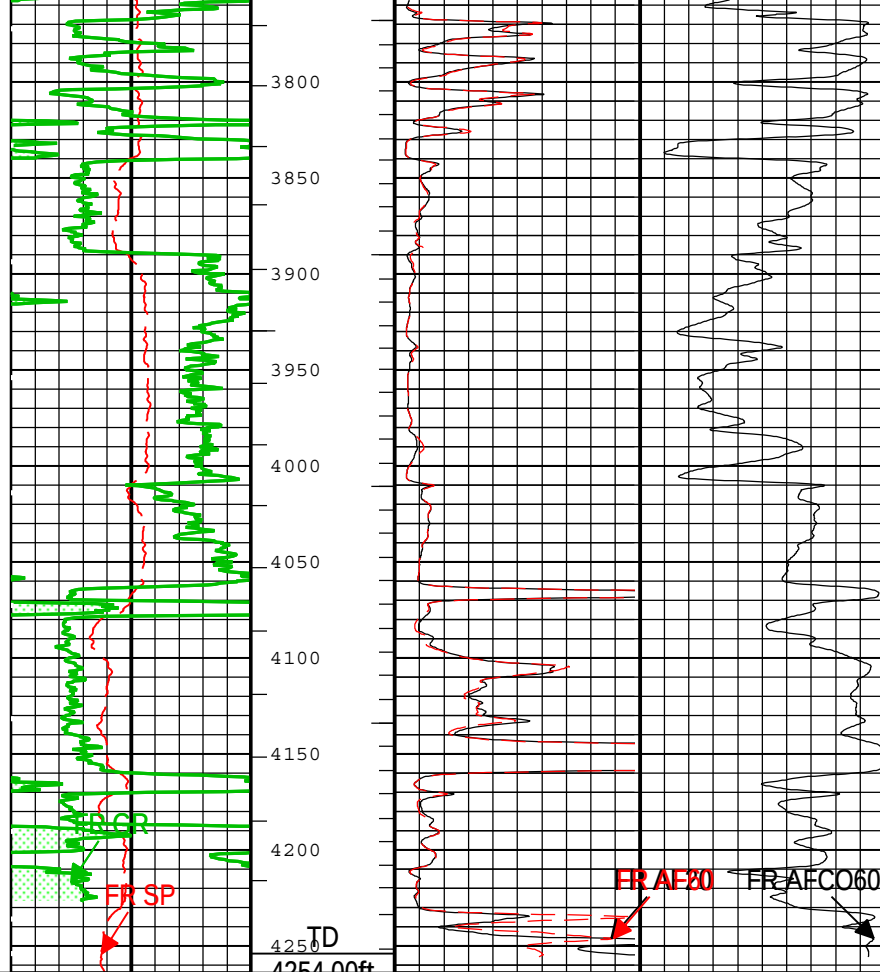
1000	mS/m	0
------	------	---











Gamma Ray Backup	Array Induction Four Foot Conductivity A60 (AFCO60) AIT-M
Spontaneous Potential (SP) AIT-M	1000 mS/m 0
-260 mV 140	Array Induction Four Foot Resistivity A20 (AF20) AIT-M
Gamma Ray (GR) HGNS-H	0 ohm.m 50
150 gAPI 300	Array Induction Four Foot Resistivity A60 (AF60) AIT-M
Gamma Ray (GR) HGNS-H	0 ohm.m 50
0 gAPI 150	

TIME_1900 - Time Marked every 60.00 (s)

ICV - Integrated Cement Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)

IHV - Integrated Hole Volume every 100.00 (ft3)

IHV - Integrated Hole Volume every 10.00 (ft3)

Description: AIT Basic Log Two Format: Log (AIT Basic Log Two) Index Scale: 1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 07-Dec-2012 07:47:33

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	Yes	
ASTA	Array Induction Tool Standoff	AIT-M	1.625	in
BARI	Barite Mud Presence Flag	Borehole	No	
BUS	Borehole Status (Open or Closed Hole)	Borehole	Open	

BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.187	in
CBLO	Casing Bottom (Logger)	WLSESSION	250	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	13.375	in
DFD	Drilling Fluid Density	Borehole	9.35	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	9.625	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	AMF	
SOCO	Standoff Correction Option	HGNS-H	Yes	
SP_SHIFT	SP Shift	AIT-M	85	mV
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft

Depth Zone Parameters			
Parameter	Value	Start (ft)	Stop (ft)
BS	0	200	250
BS	12.25	250	4263.5
All depth are actual.			

Tool Control Parameters	
Company:	Dorado E&P Partners, LLC Schlumberger
Well:	Dealy 2-31 SWD
Field:	Wildcat
County:	Reno
State:	Kansas
PLATFORM EXPRESS ARRAY INDUCTION GAMMA RAY - SP	