

Company: Aurora Power Resources Inc

Well: David Bender 1A

Field: Bijou West

County: Morgan State: Colorado

Platform Express									
Caliper									
Cement Volume									
Location:				SHL: NWSW 2441' FSL & 260' FWL		Elev.:		K.B. 4476.00 ft	
Log Measured From:				Section 12, Township 4N, Range 60W				G.L. 4462.00 ft	
Permanent Datum:				Lat: 40.326670, Long: -104.054240		D.F.		4475.00 ft	
Drilling Measured From:				Ground Level		Elev.:		4462.00 f	
API Serial No.				Kelly Bushing		14.00 ft		above Perm. Datum	
05-087-08178-00				Section:		Township:		Range:	
				12		4N		60W	
Logging Date				16-Feb-2014					
Run Number				Run 1: PEX-AIT					
Depth Driller				6585.00 ft					
Schlumberger Depth				6585.00 ft					
Bottom Log Interval				6590.00 ft					
Top Log Interval				536.00 ft					
Casing Driller Size @ Depth				8.625 in @ 500.00 ft					
Casing Schlumberger				500 ft					
Bit Size				7.875 in					
Type Fluid In Hole				Chemical Gel					
MUD	Density		Viscosity		34 s				
	Fluid Loss		PH		8.5				
	Source of Sample		Flowline						
RM @ Meas Temp				1.2 ohm.m @ 70 degF					
RMF @ Meas Temp				0.9 ohm.m @ 70 degF					
RMC @ Meas Temp				1.5 ohm.m @ 70 degF					
Source RMF				RMC		Calculated			
RMF @ BHT				RMF @ BHT		Calculated			
0.51 @ 175				0.38 @ 175					
Max Recorded Temperatures				175 degF					
Circulation Stopped				Time		15-Feb-2014		15:00:00	
Logger on Bottom				Time		16-Feb-2014		01:30:34	
Unit Number				Location:		2135		Fort Morgan, CO	
Recorded By				Max Pace					
Witnessed By				Ed Jones					

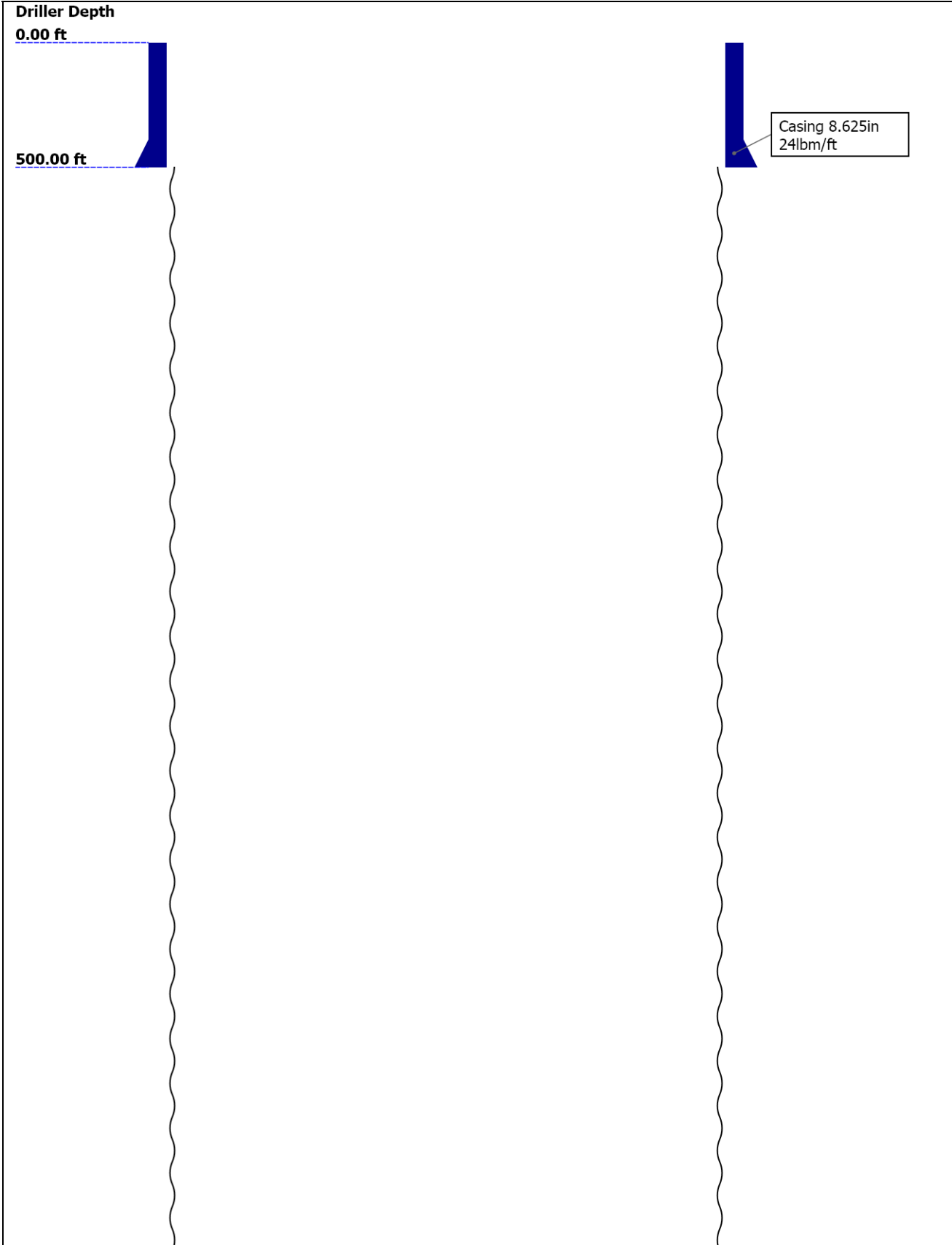
Disclaimer

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

- 1. Header
- 2. Disclaimer
- 3. Contents
- 4. Well Sketch
- 5. Borehole Size/Casing/Tubing Record
- 6. Borehole Fluids
- 7. Remarks and Equipment Summary
- 8. Depth Summary
- 9. Run 1: PEX-AIT 5" Cement Volume
 - 9.1 Integration Summary
 - 9.2 Software Version
 - 9.3 Composite Summary
 - 9.4 Log (Noble East Caliper)
 - 9.5 Parameter Listing
- 10. Tail

Well Sketch





Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	7.875					
Top Driller (ft)	500					
Top Logger (ft)	500					
Bottom Driller (ft)	6585					
Bottom Logger (ft)	6585					
Casing						
Size (in)	8.625					
Weight (lbm/ft)	24					
Inner Diameter (in)	8.097					
Grade	N80					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	500					
Bottom Logger (ft)	500					

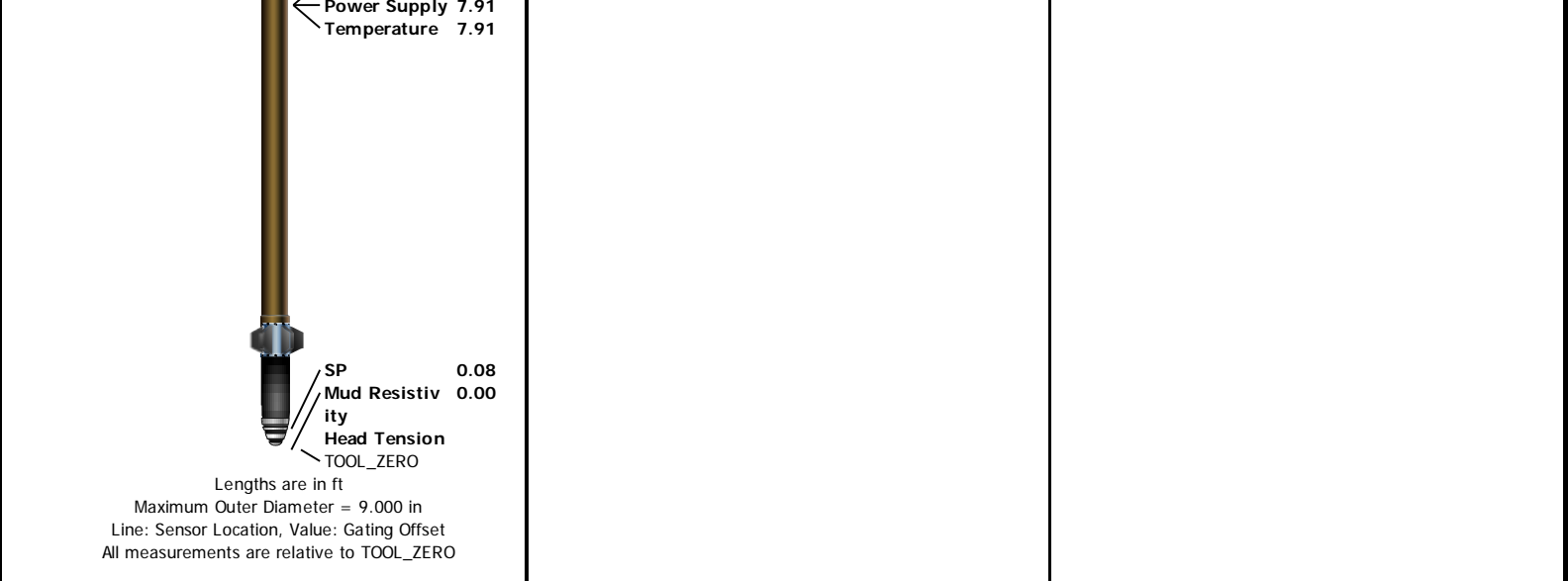
Borehole Fluids

Parameter(unit)	Run 1: PEX-AIT					
Fluid Type	Water					
Fluid Name	Chemical Gel					
Max Recorded Temperatures (degF)	175					
Source of Sample	Flowline					
Salinity (ppm)	0					
Density (lbm/gal)	9.1					
Funnel Viscosity (s)	34					
Fluid Loss (cm3)	10					
PH	8.5					
Date/Time Circulation Stopped	15-Feb-2014 15:00:00					
Date Logger on Bottom	16-Feb-2014					
Time Logger on Bottom	01:30:34					
Source RMF	Calculated					
RMC	Calculated					
RM @ Meas Temp (ohm.m@degF)	1.2 @ 70					
RMF @ Meas Temp (ohm.m@degF)	0.9 @ 70					

OHM.M @ Meas Temp (ohm.m@degF)	1.5 @ 70					
RM @ BHT (ohm.m@degF)	0.51 @ 175					
RMF @ BHT (ohm.m@degF)	0.38 @ 175					
RMC @ BHT (ohm.m@degF)	0.63 @ 175					
Total Solid (%)						
High Gravity Solids (%)						

Remarks and Equipment Summary

Run 1: PEX-AIT: Toolstring				Run 1: PEX-AIT: Remarks	
Equip name	Length	MP name	Offset	All Schlumberger depth control procedures followed	
LEH-QT	43.57				
LEH-QT					
				IDW used as primary depth reference	
				Z chart used as secondary depth reference	
DTC-H	40.65	CTEM	39.75	Matrix type and density zoned as per client request	
ECH-KC		HV	0.00		
DTC-H				Tool string run as per tool sketch	
		ToolStatus	37.65	Crew: Max Pace, Ian Derry, Jake Jump	
		TelStatus	37.65		
HGNS-H	37.65	Temperature	37.62	This is the first run in hole	
HGNH					
NPV-N		GR	36.91		
NSR-F:5215					
HACCZ-H:5955					
HGNS-H					
HMCA-H					



Depth Summary			
---------------	--	--	--

	Run 1: PEX-AIT		
--	----------------	--	--

Depth Measuring Device			
------------------------	--	--	--

Type	IDW-B		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Calibration Cable Type			
Wheel Correction 1	0		
Wheel Correction 2	0		

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		

Run 1: PEX-AIT:Depth Control Parameters	Depth Control Remarks
---	-----------------------

Log Sequence	First Log In the Well	
Rig Up Length At Surface		
Rig Up Length At Bottom		
Rig Up Length Correction		
Stretch Correction		
Tool Zero Check At Surface		

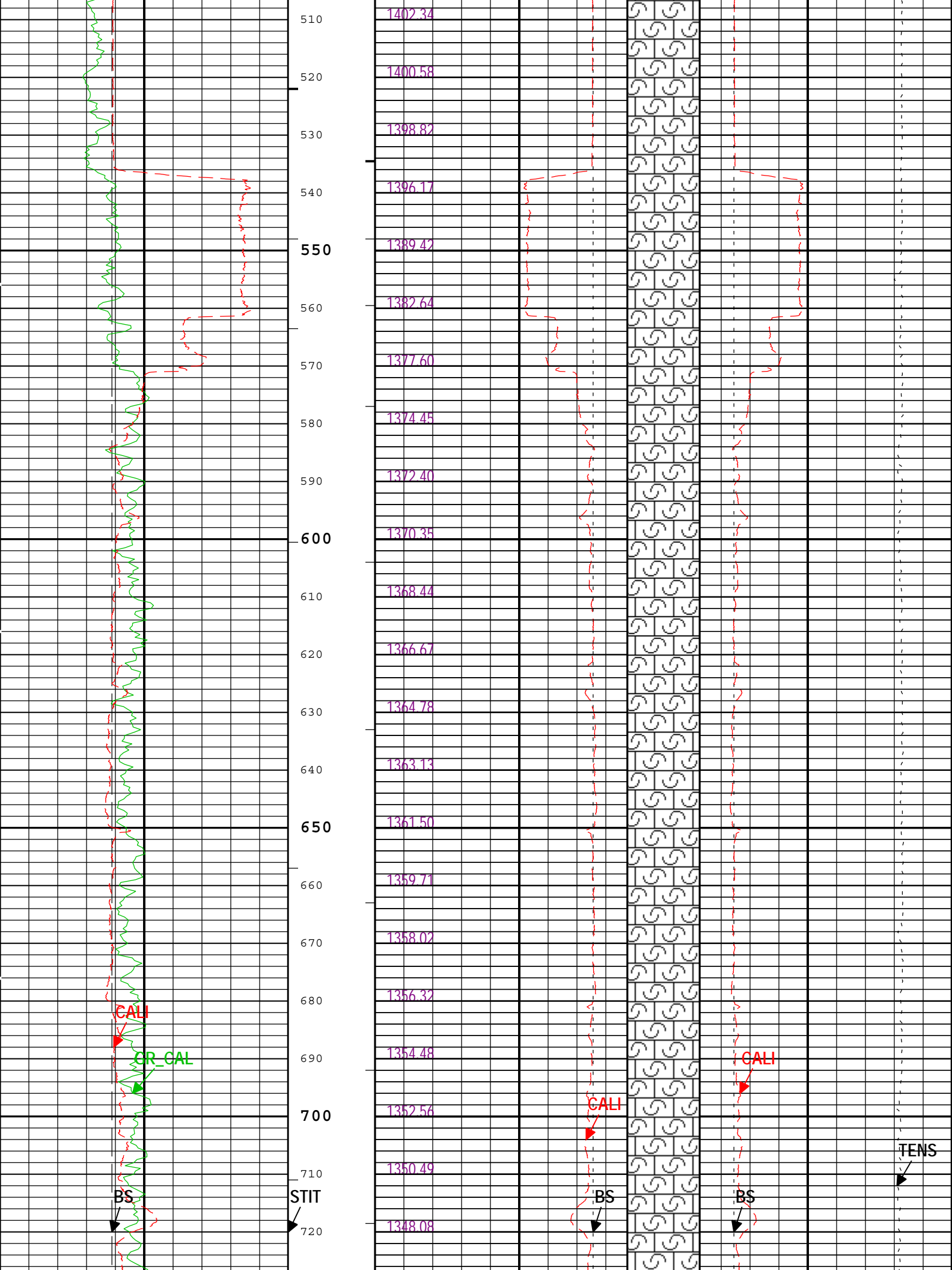
Run 1: PEX-AIT

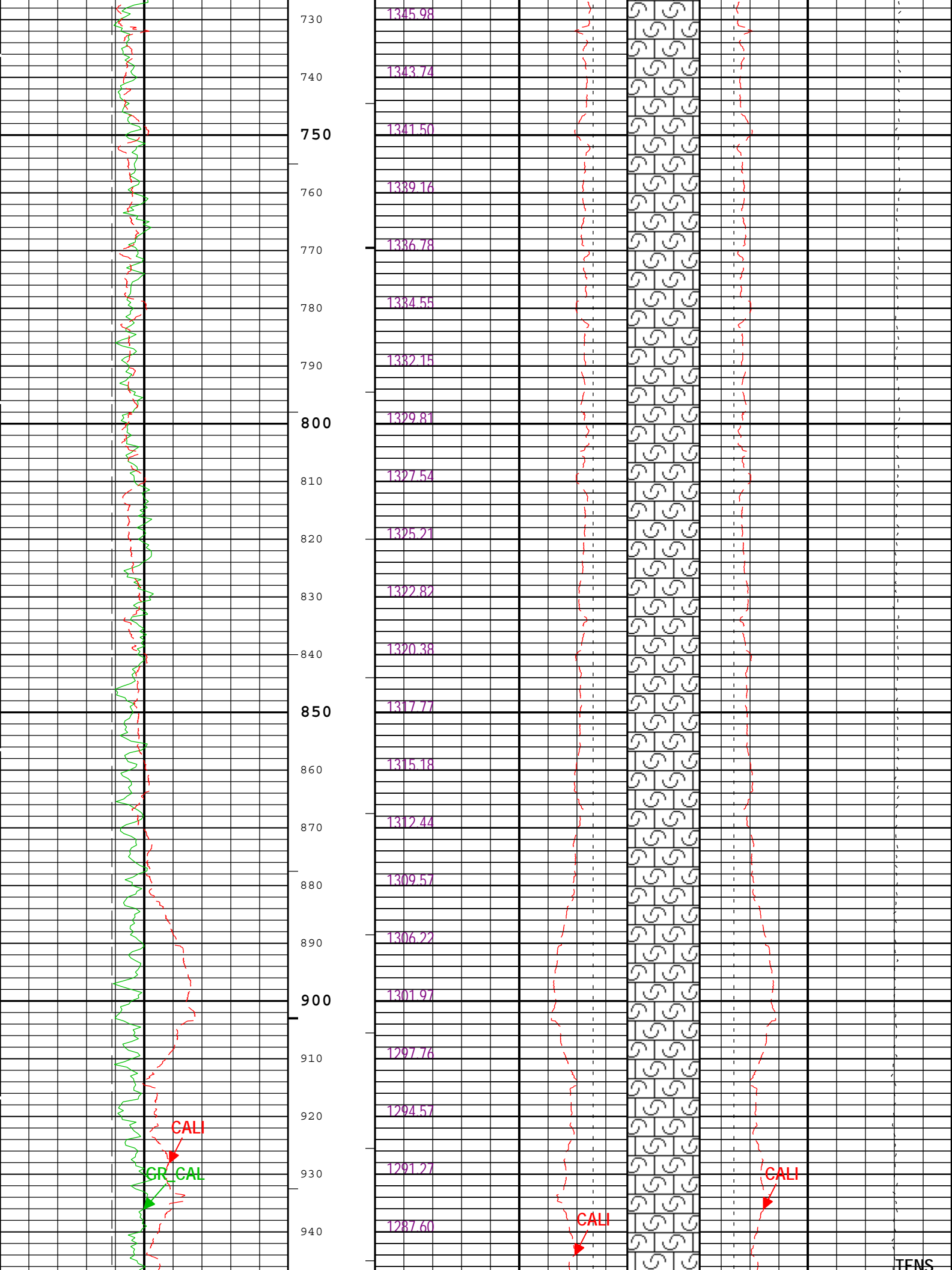
5" Cement Volume

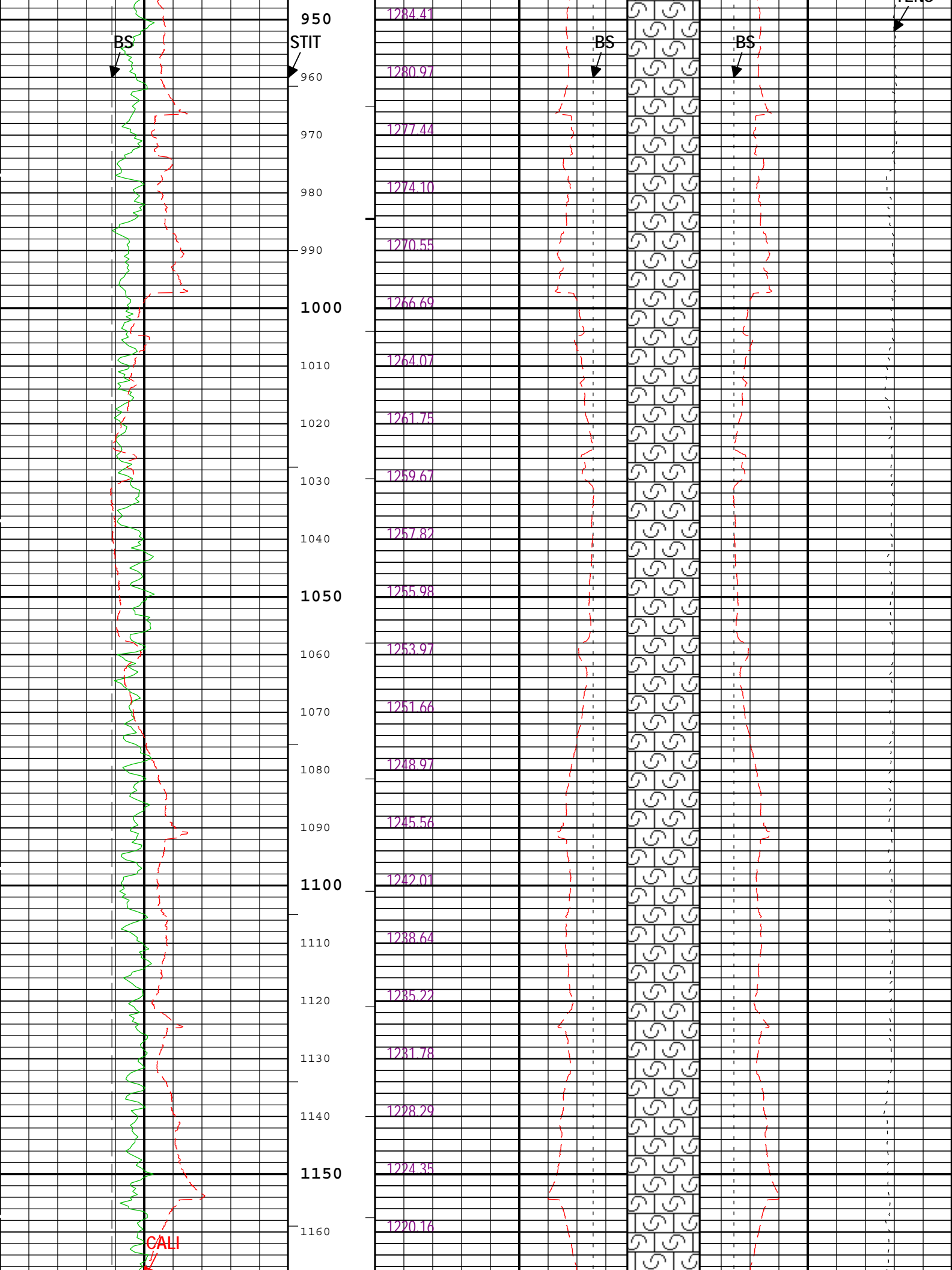
Integration Summary				
---------------------	--	--	--	--

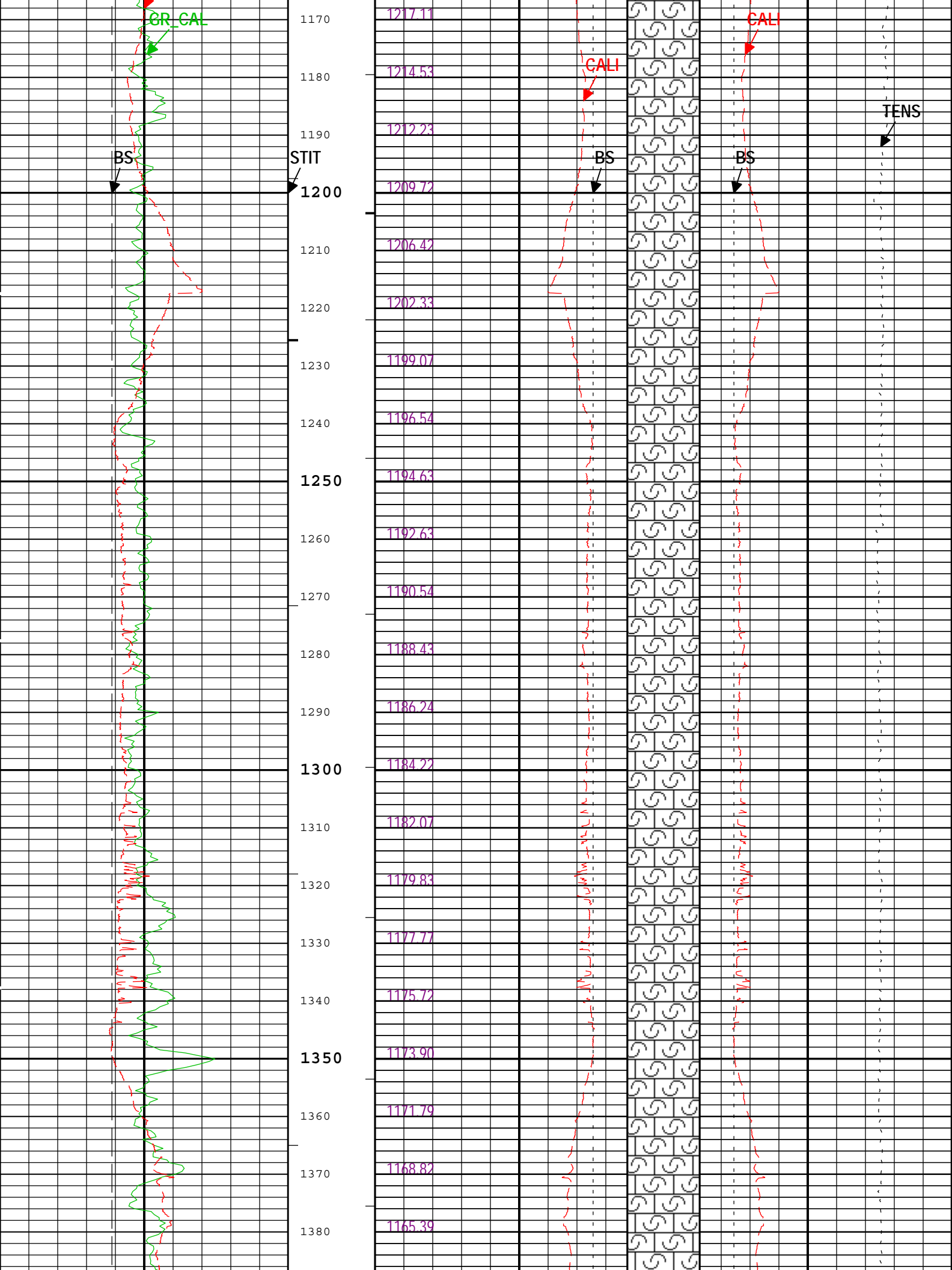
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1403.85	ft3
IHV	Integrated Hole Volume	GCSE_UP_PASS	2411.63	ft3

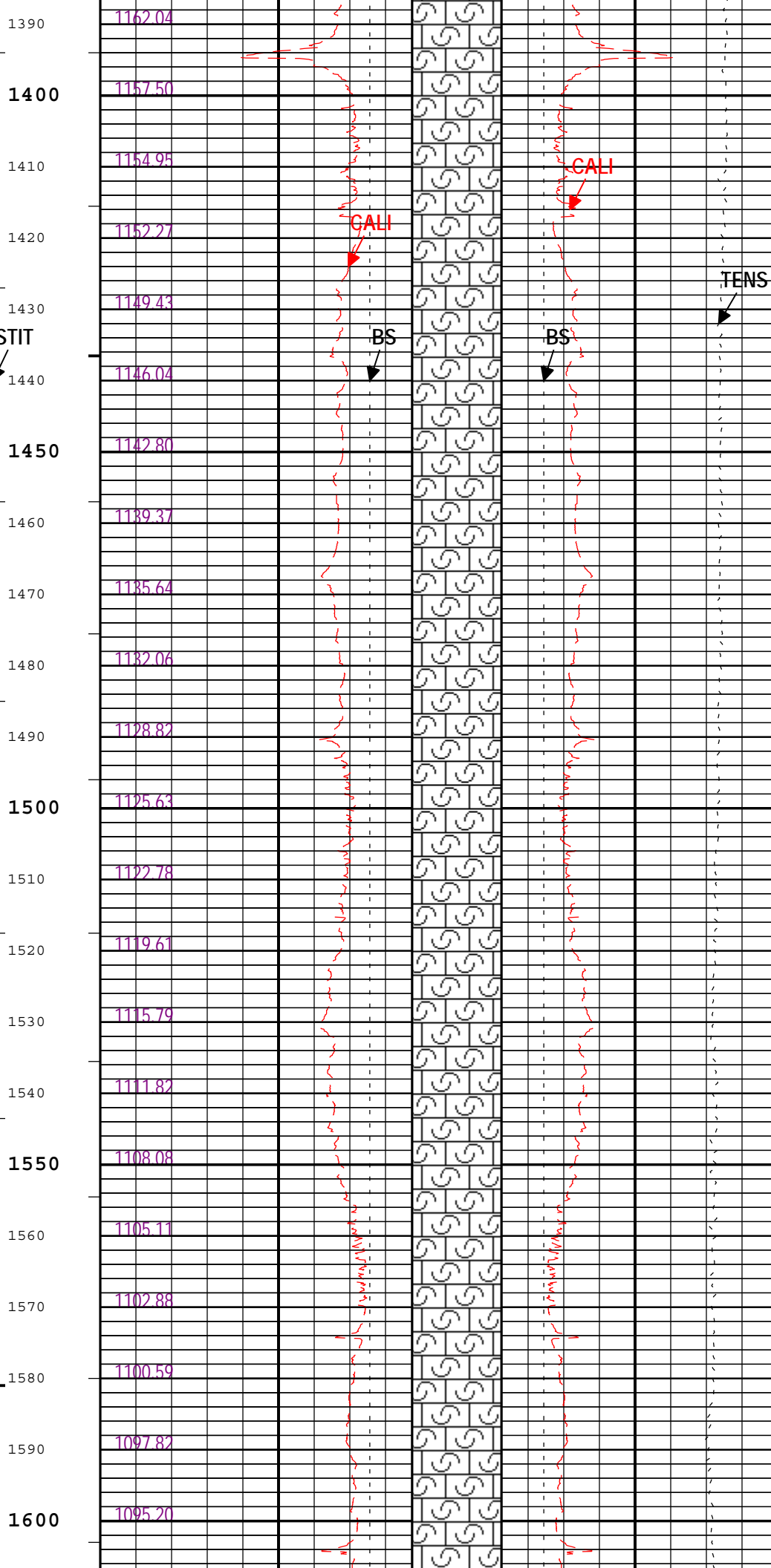
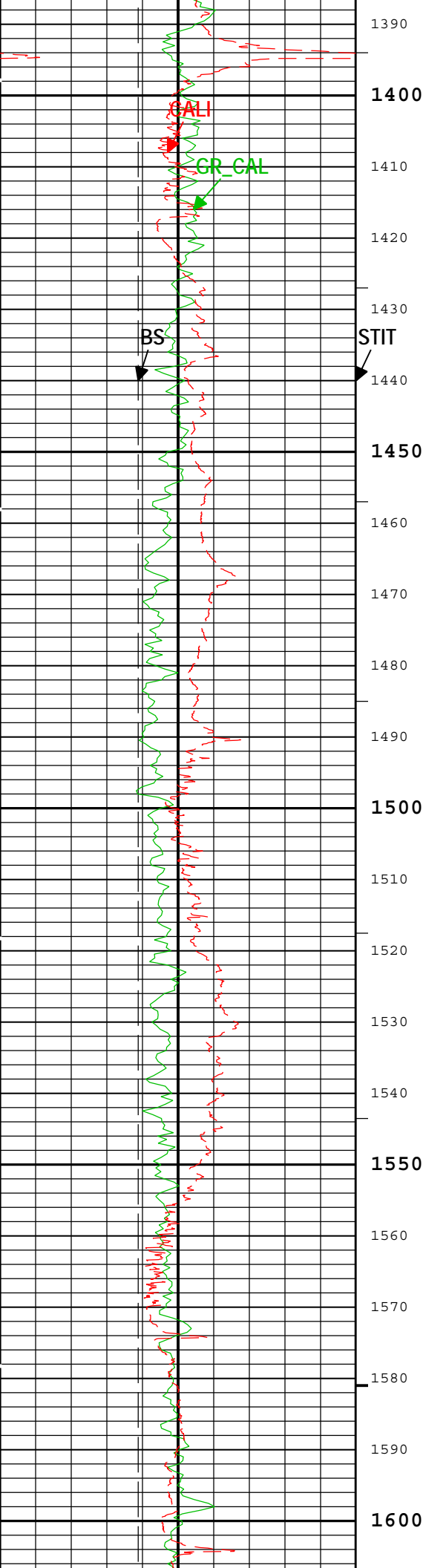
Software Version				
------------------	--	--	--	--

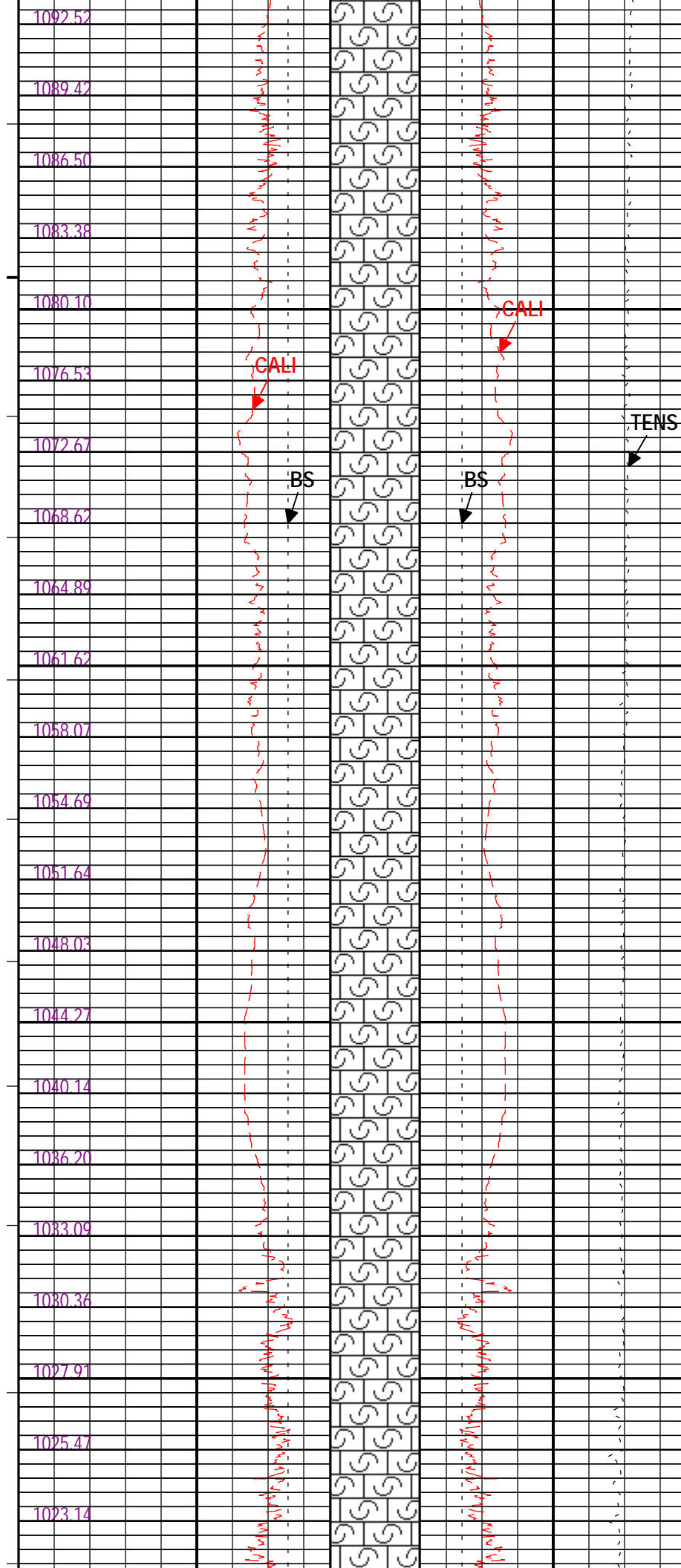
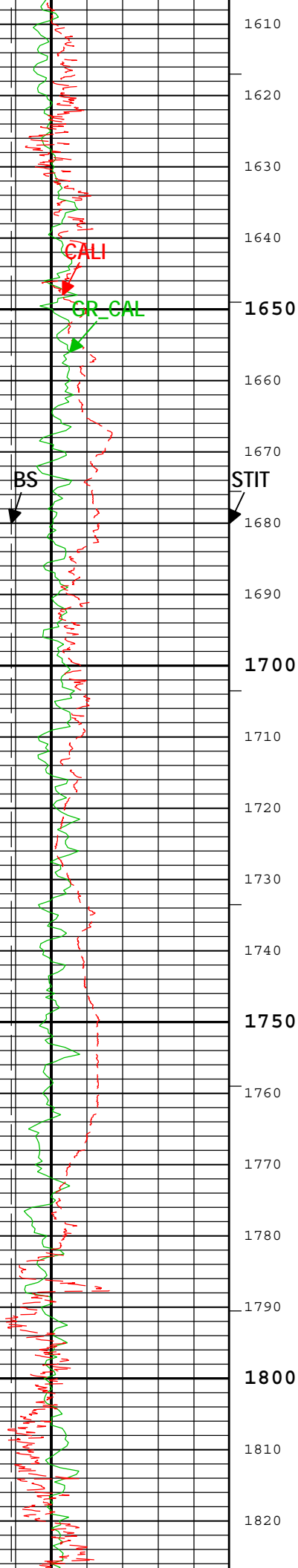


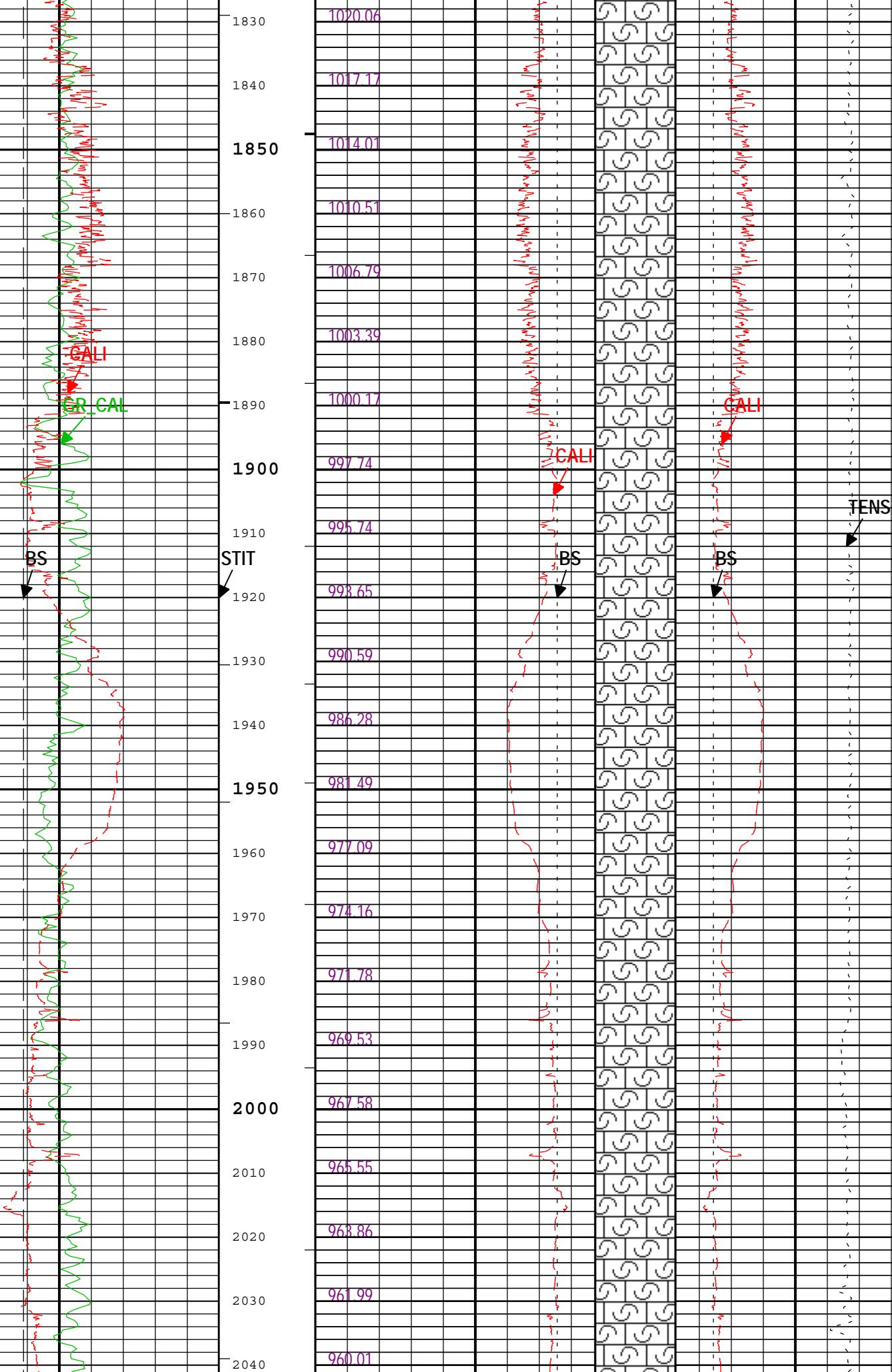


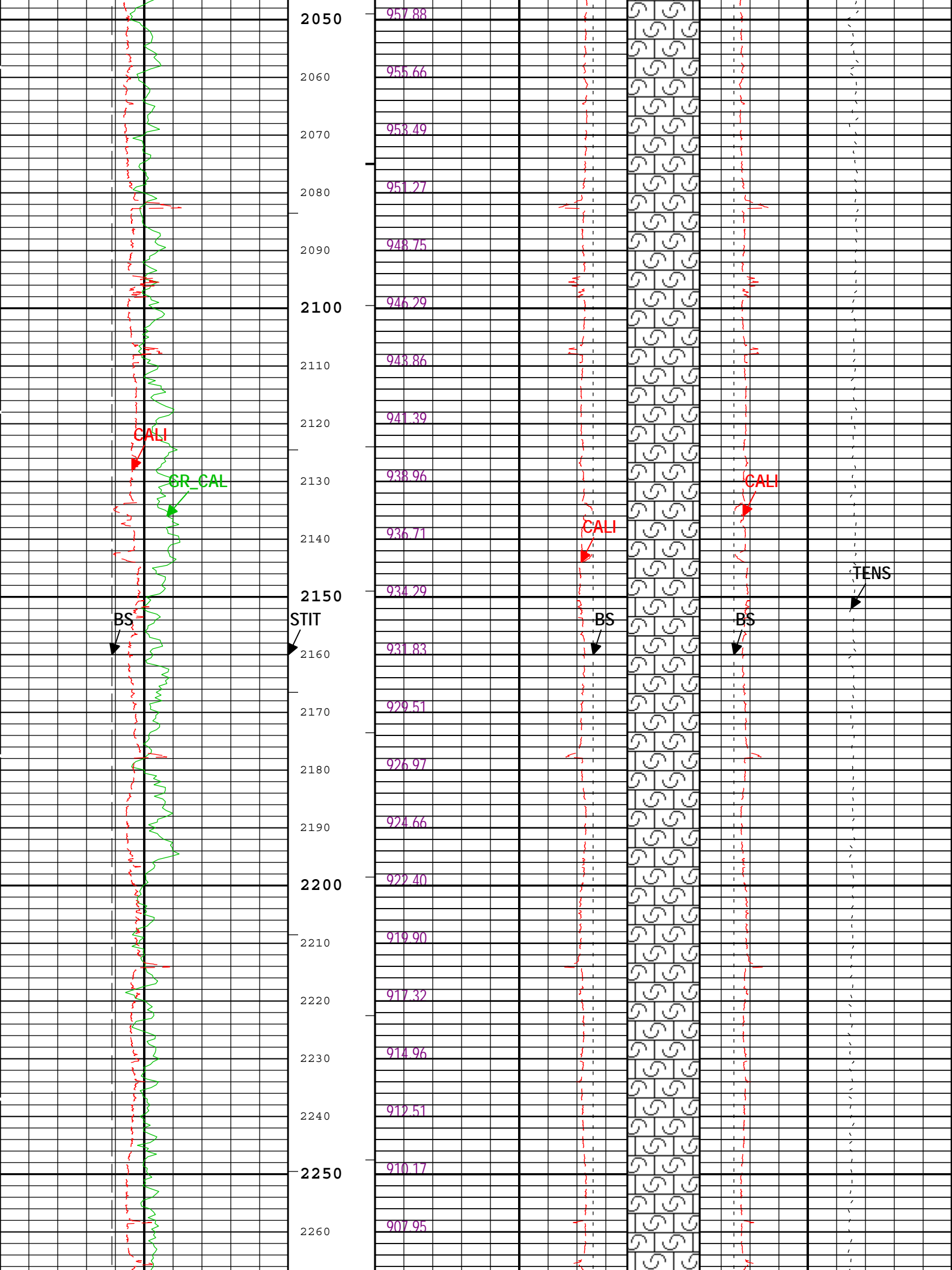


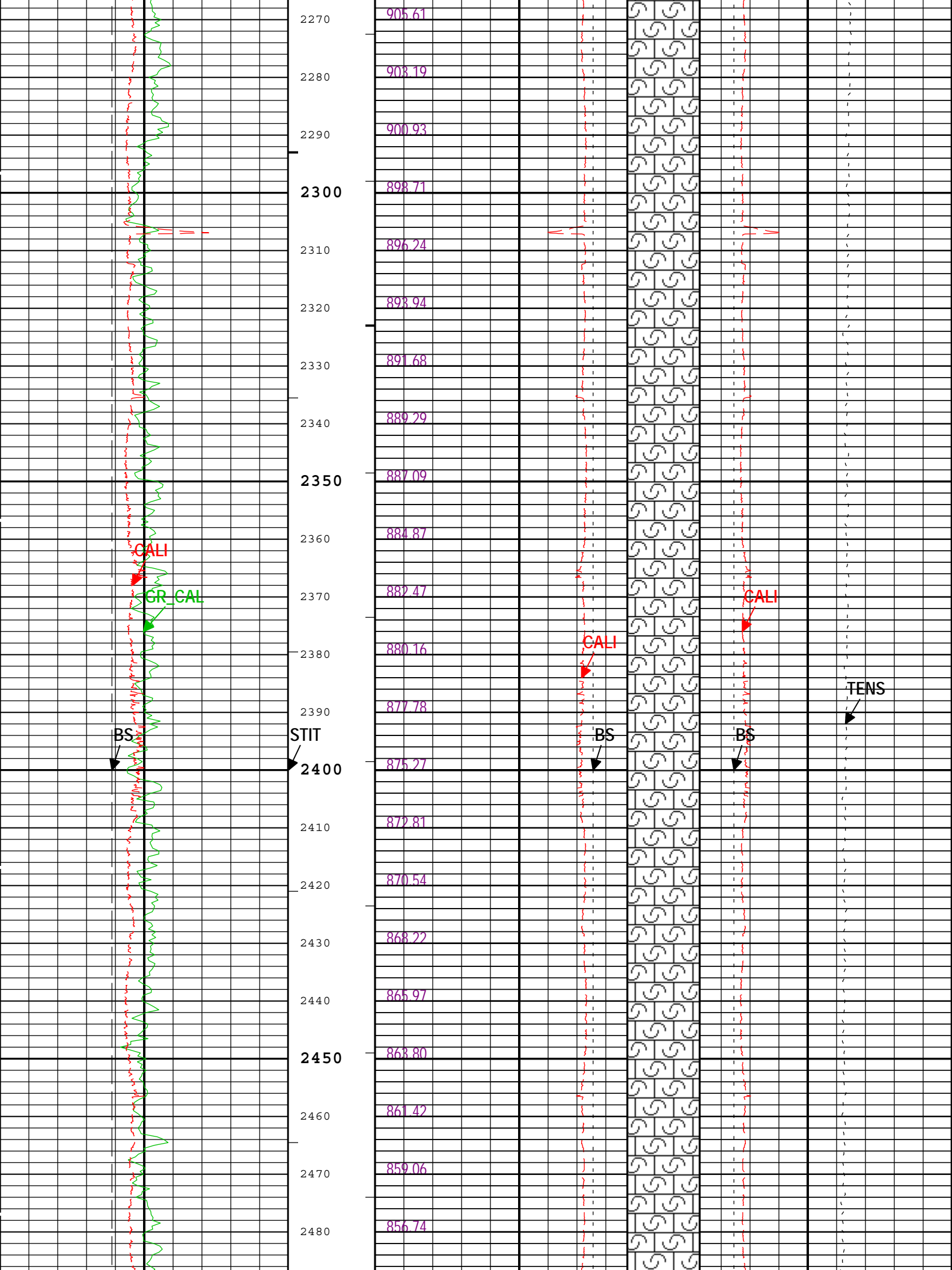


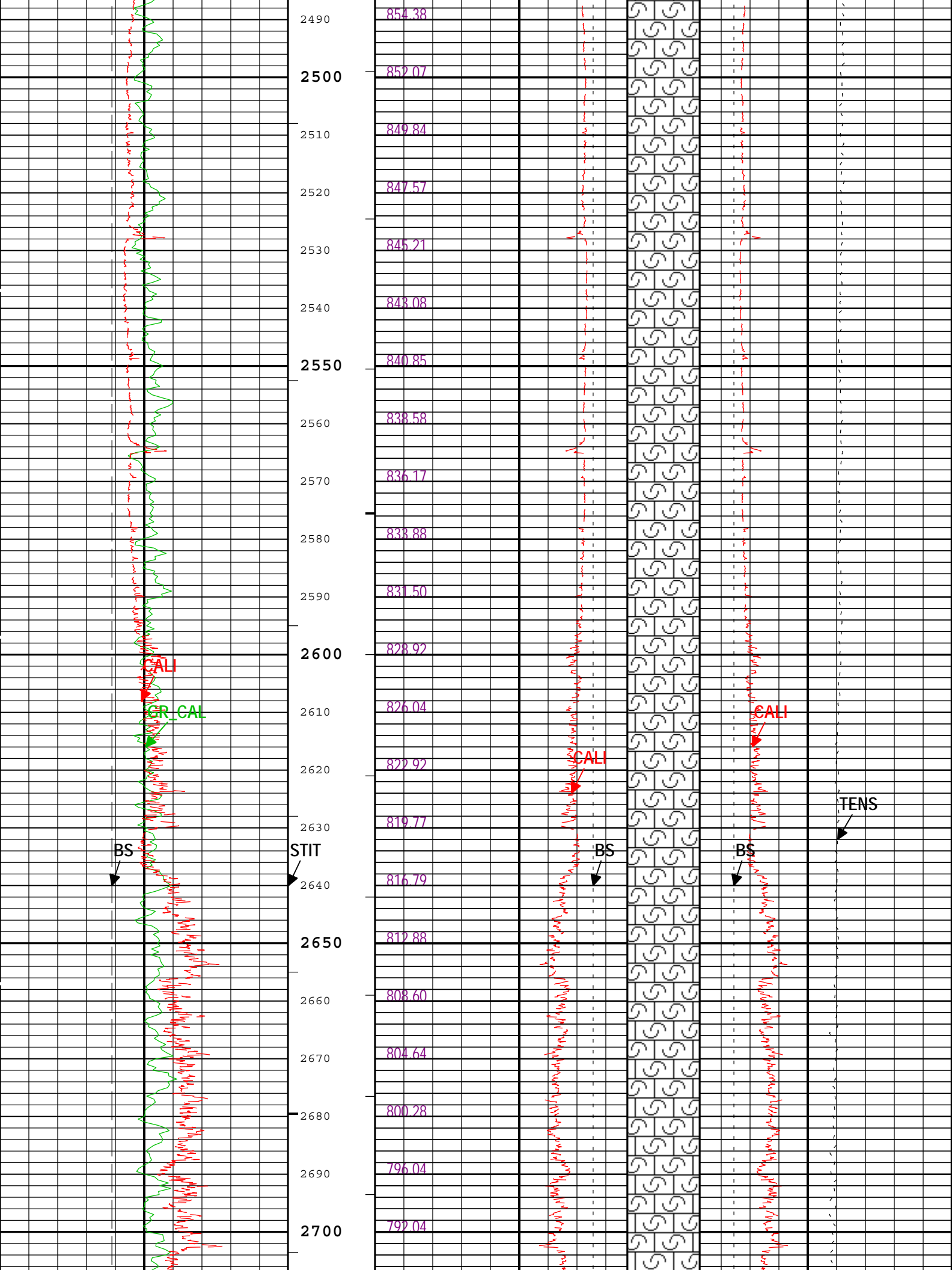


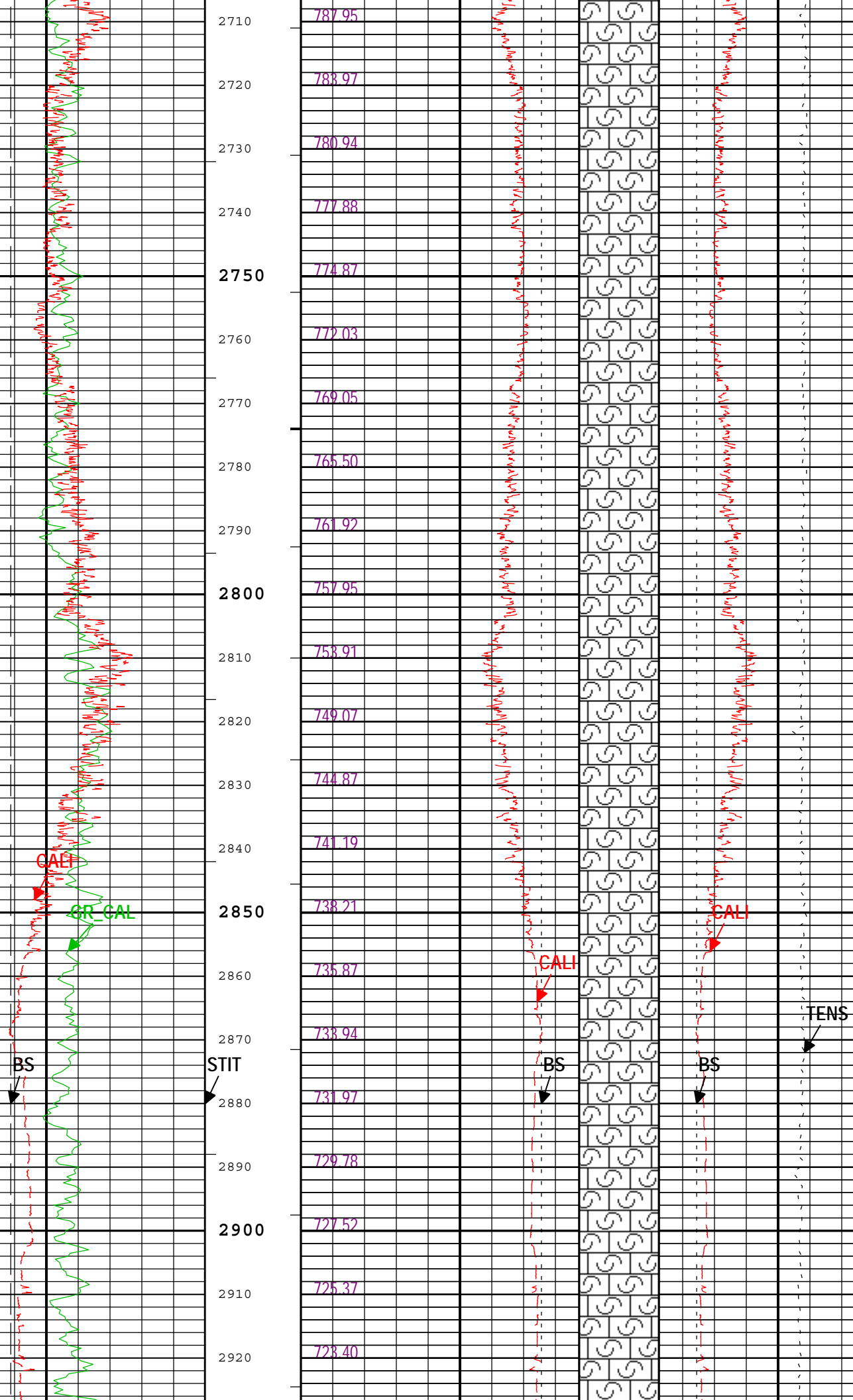


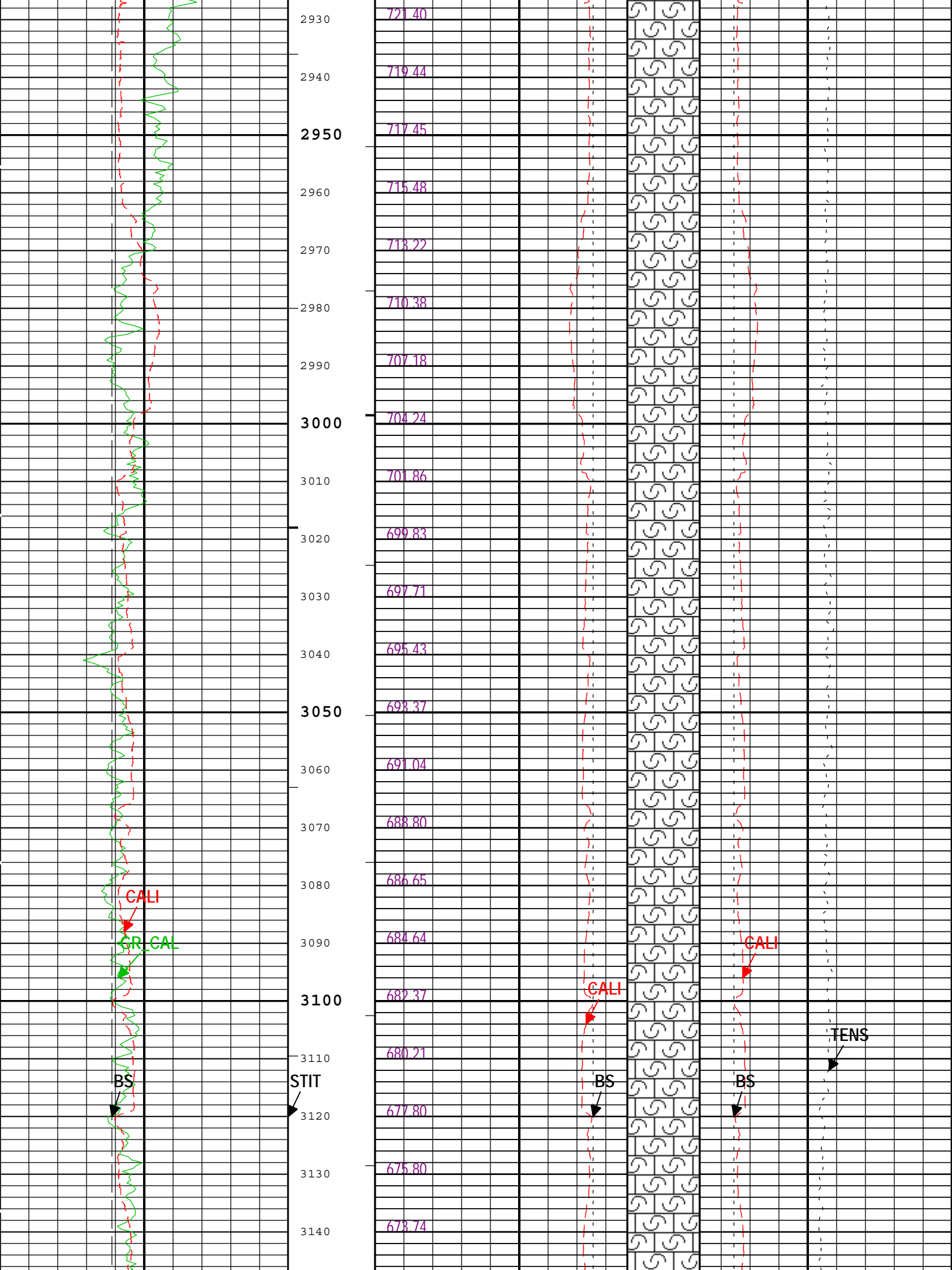


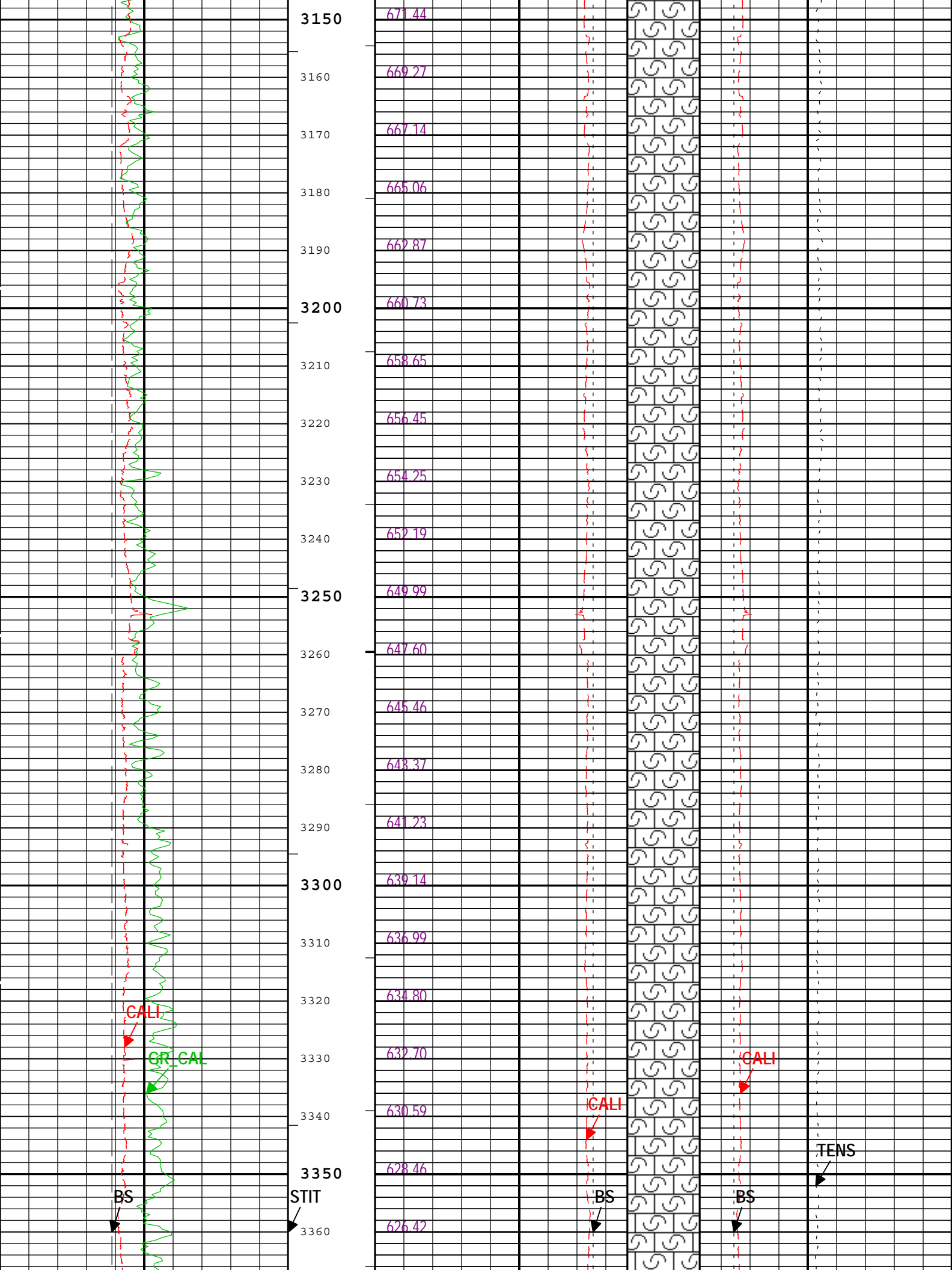


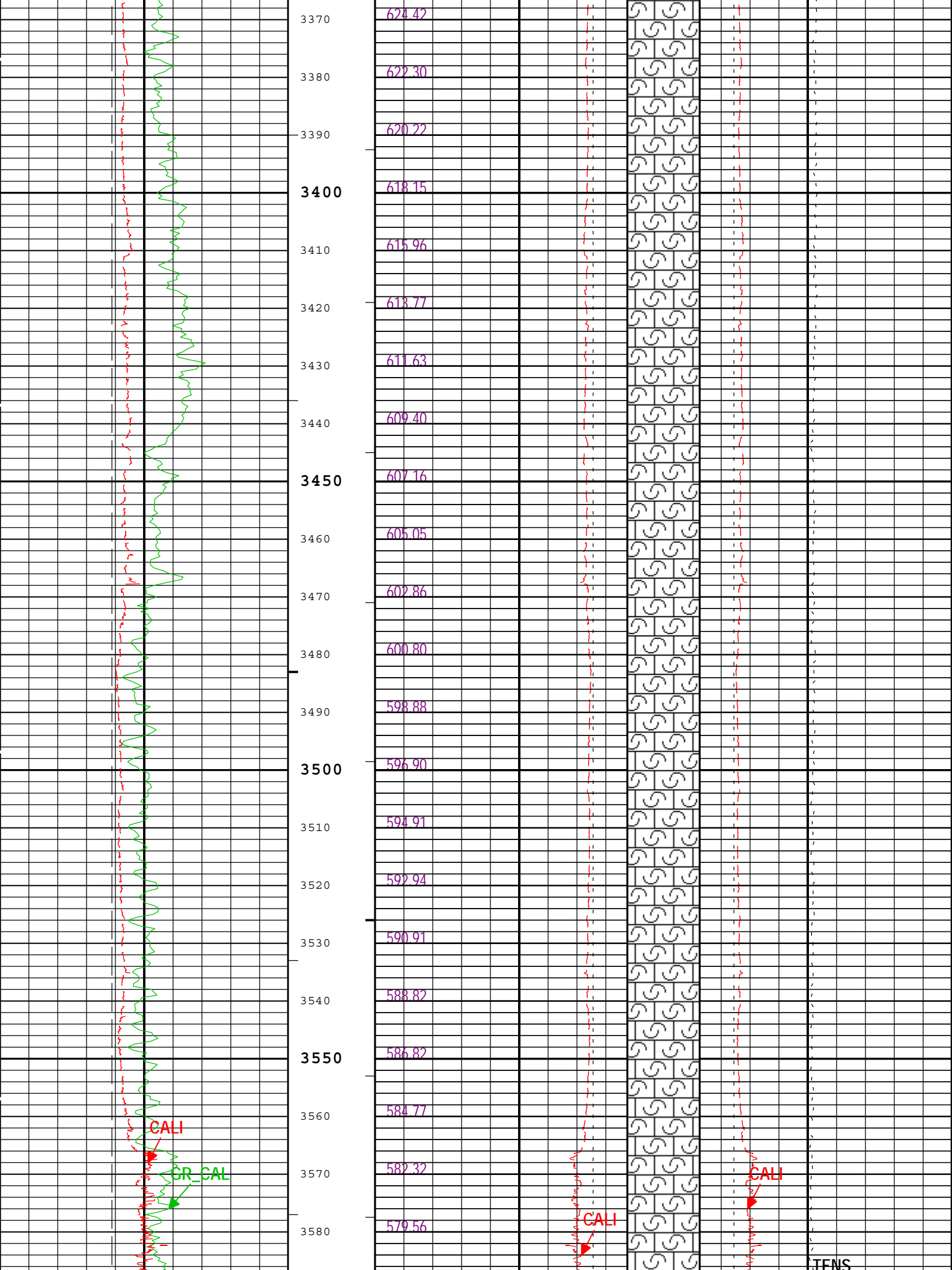


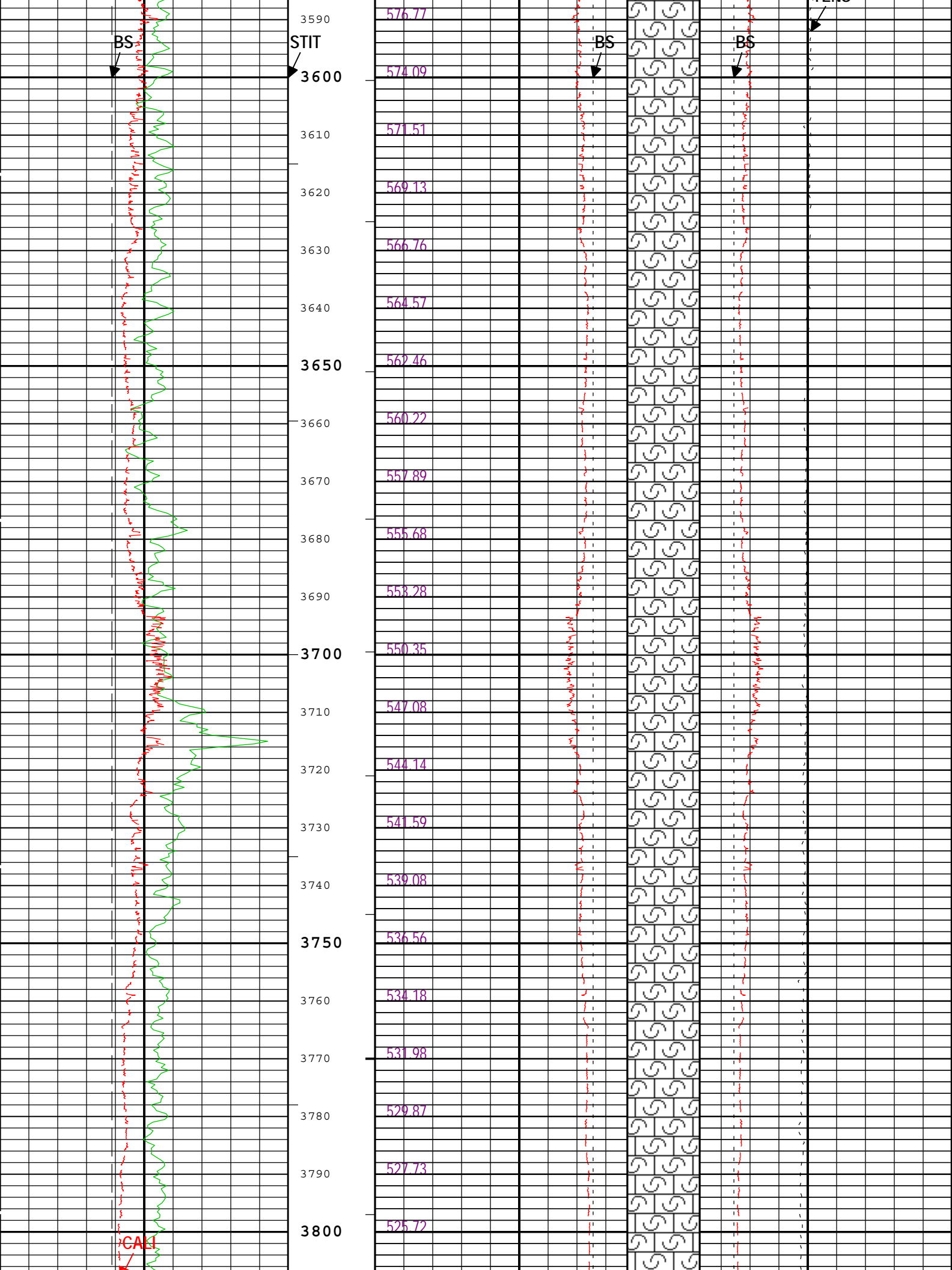


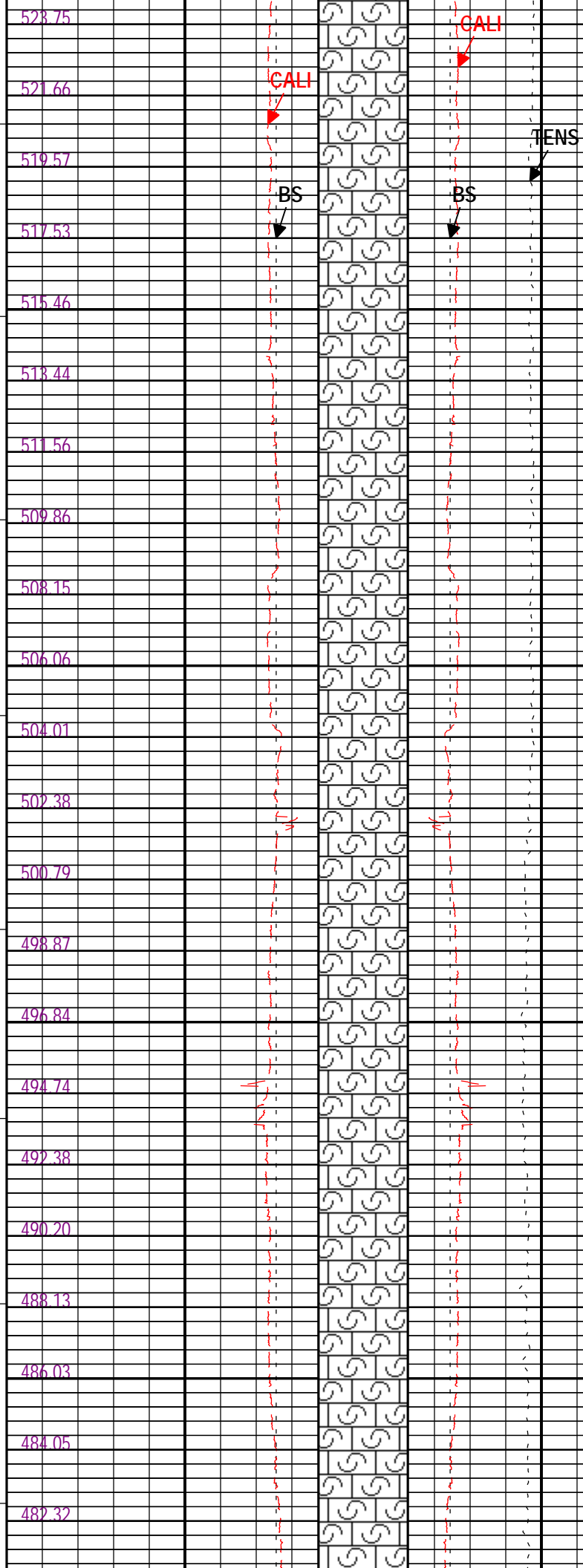
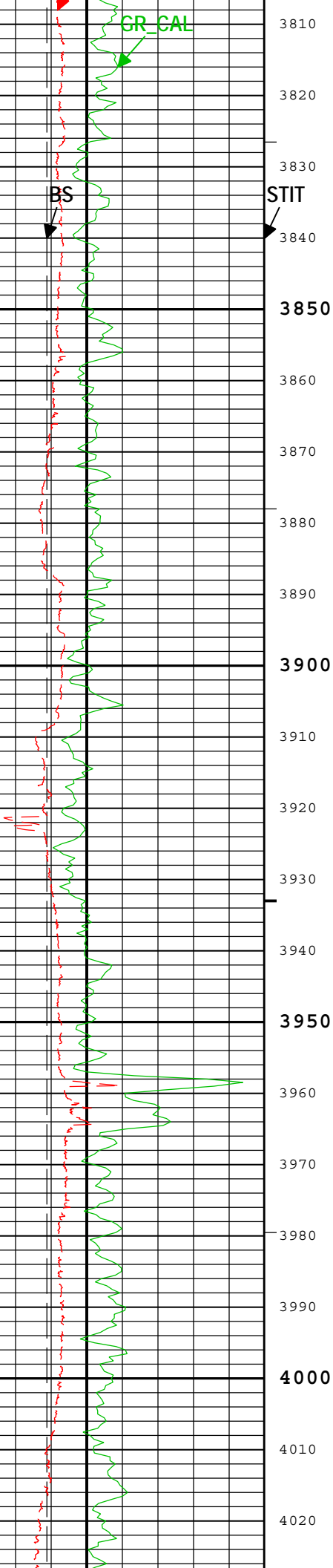


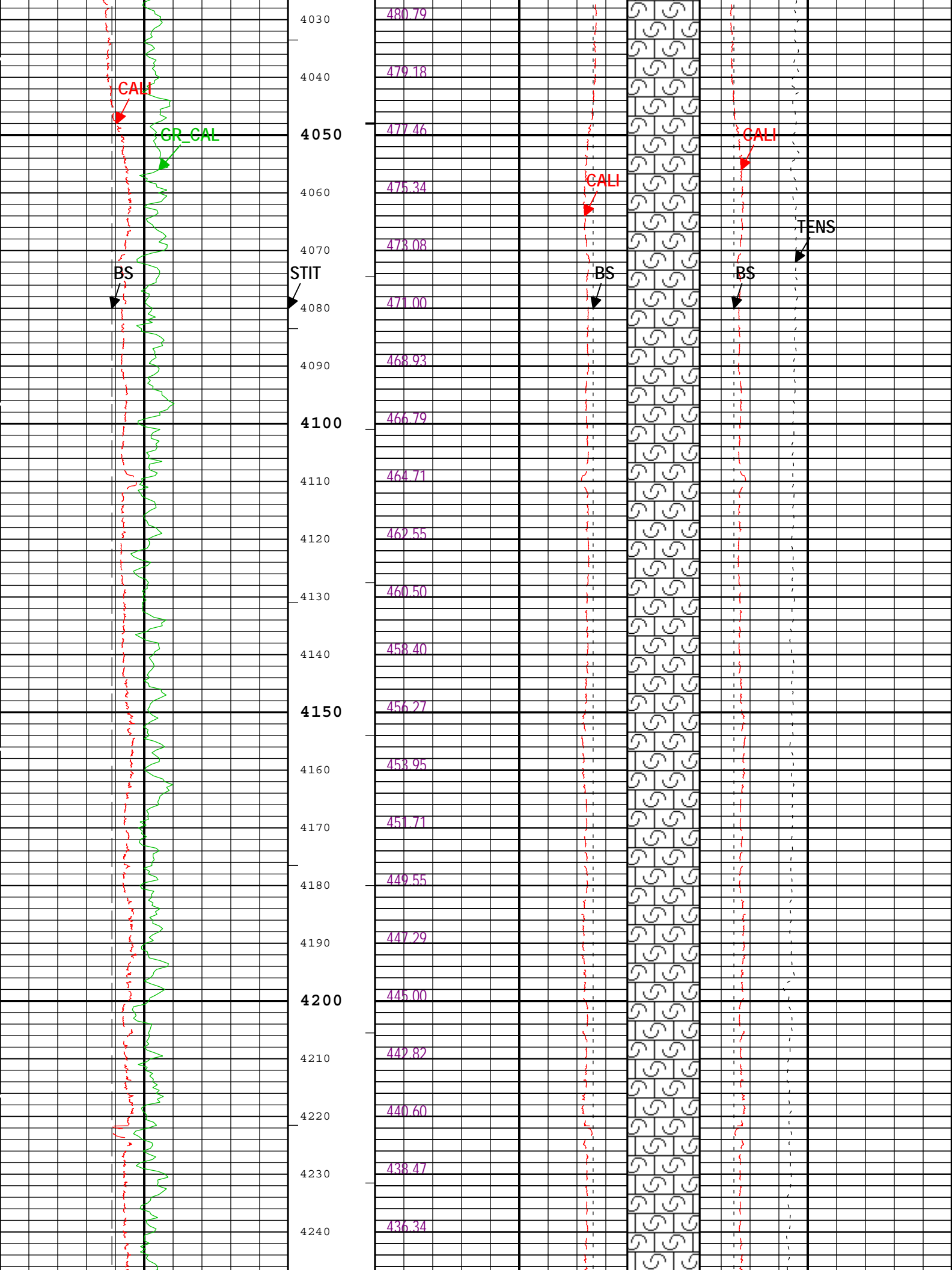


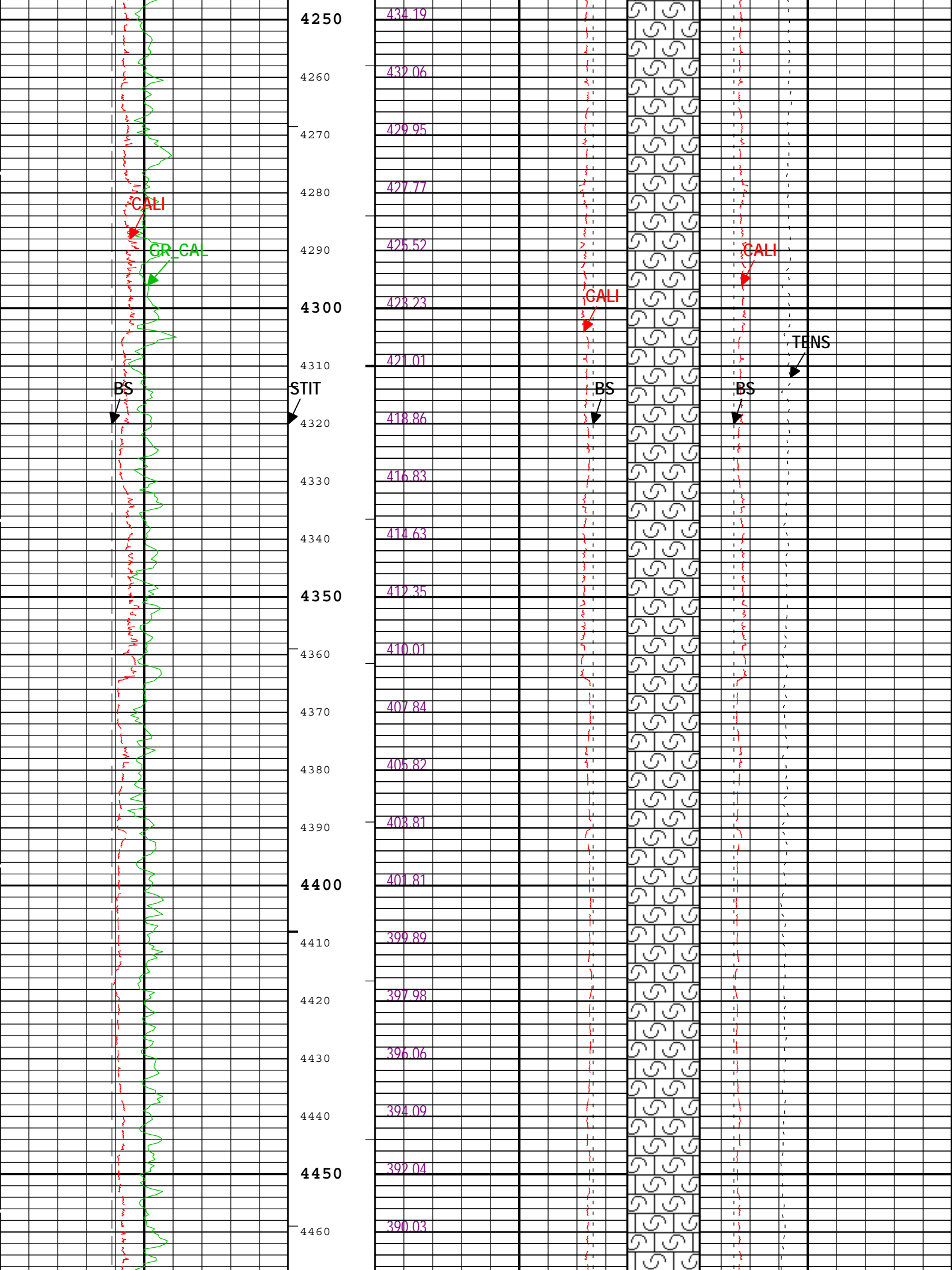


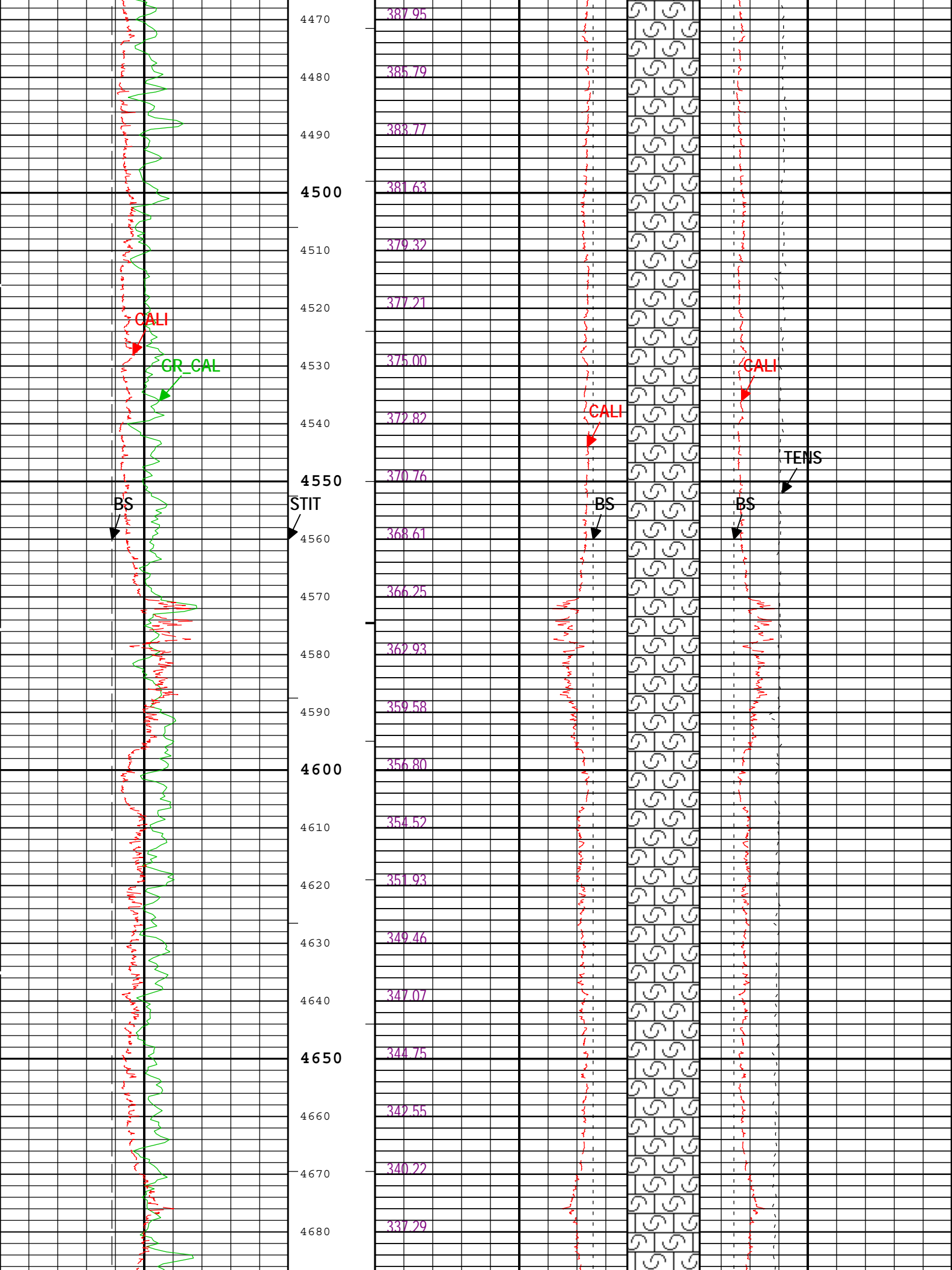


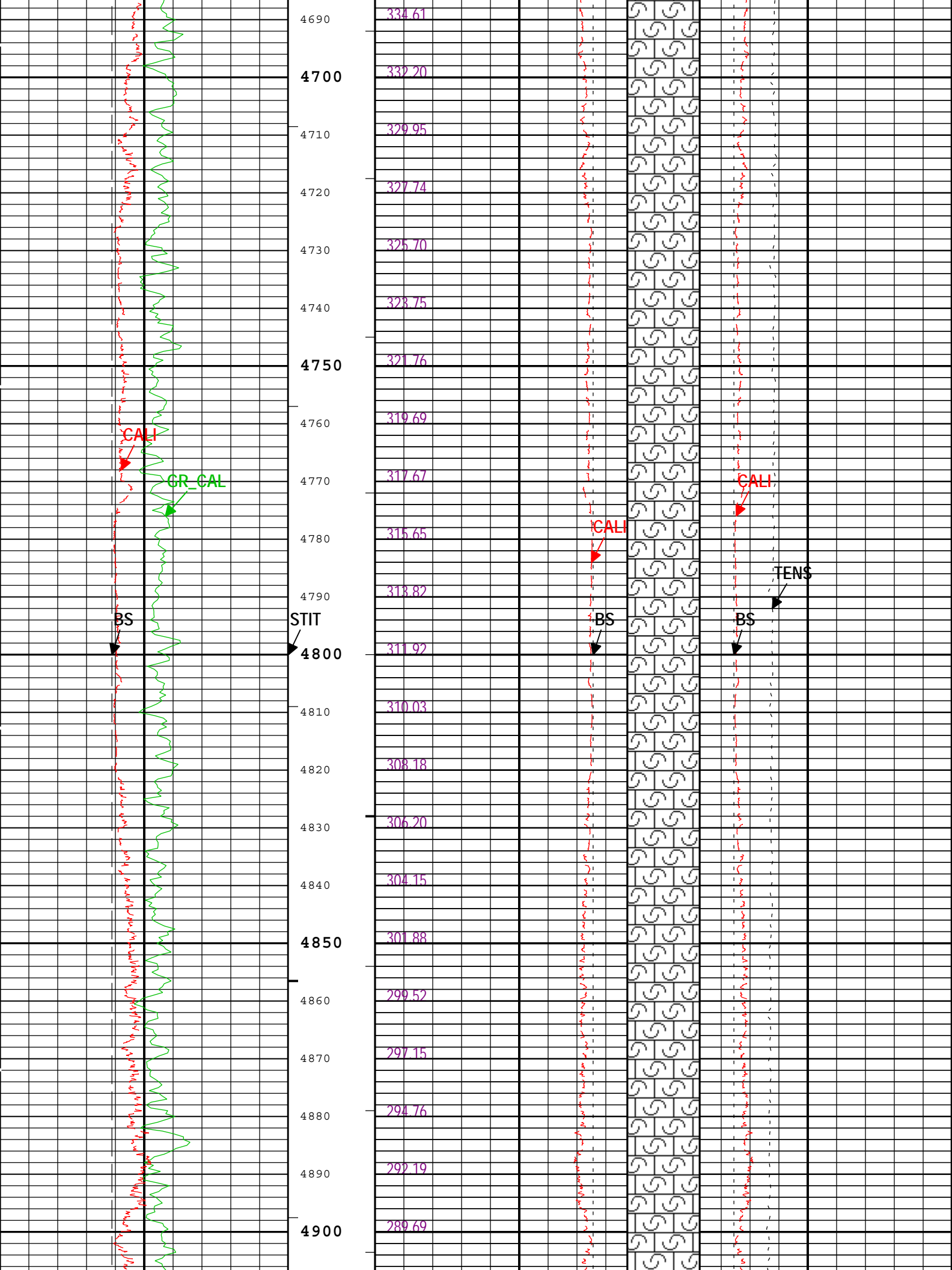


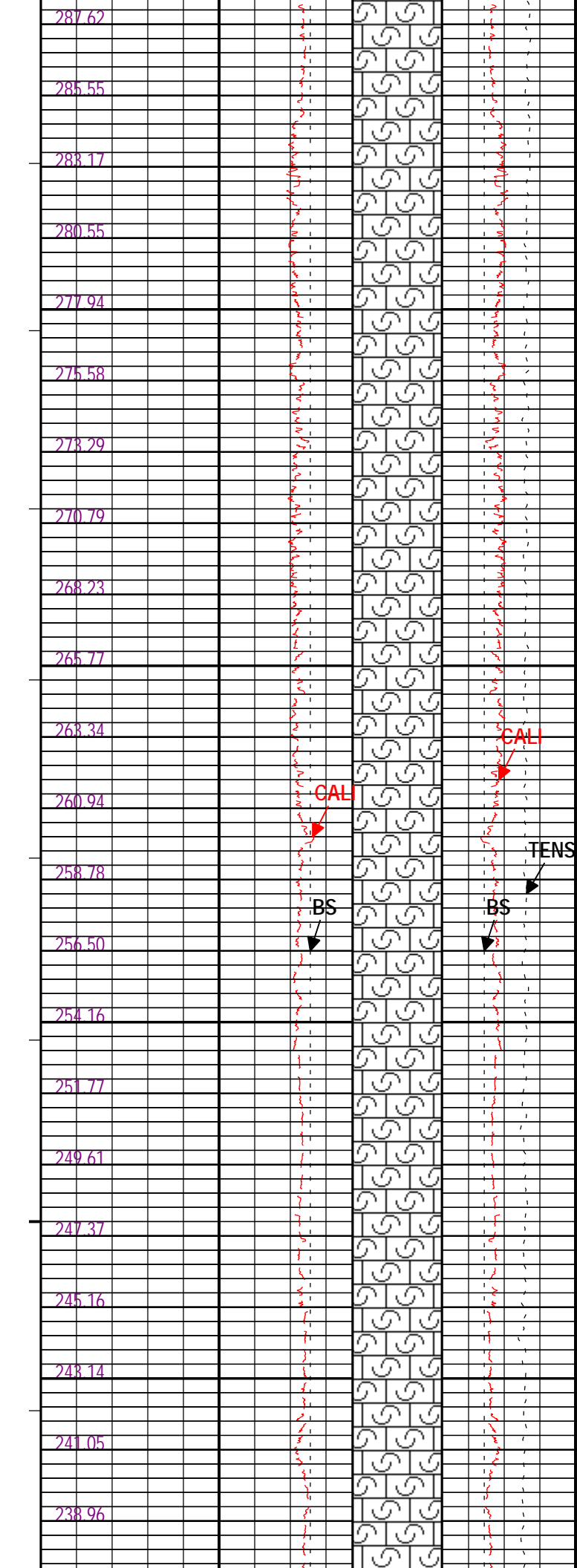
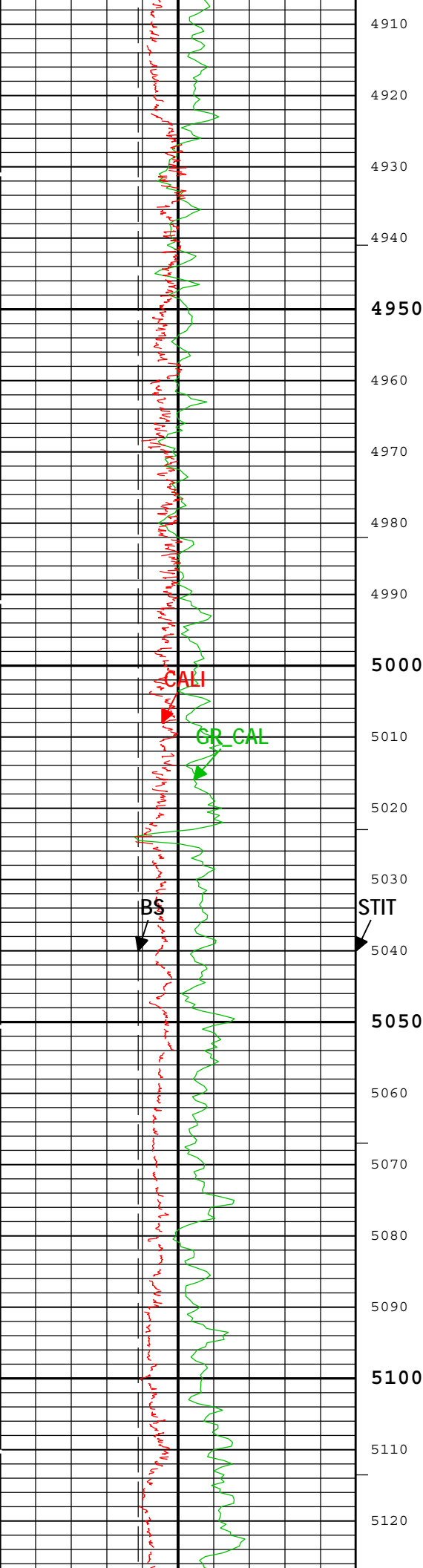






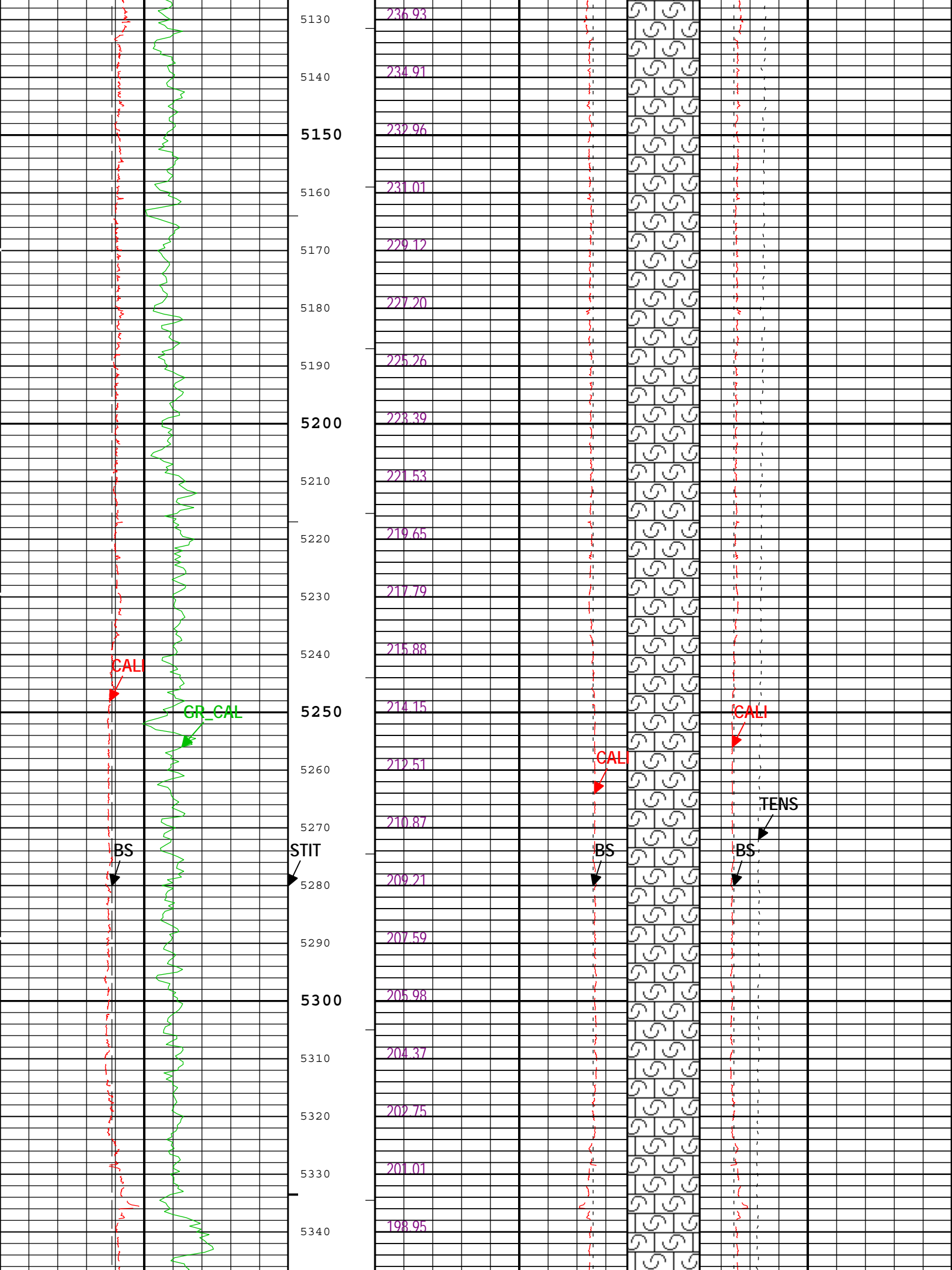


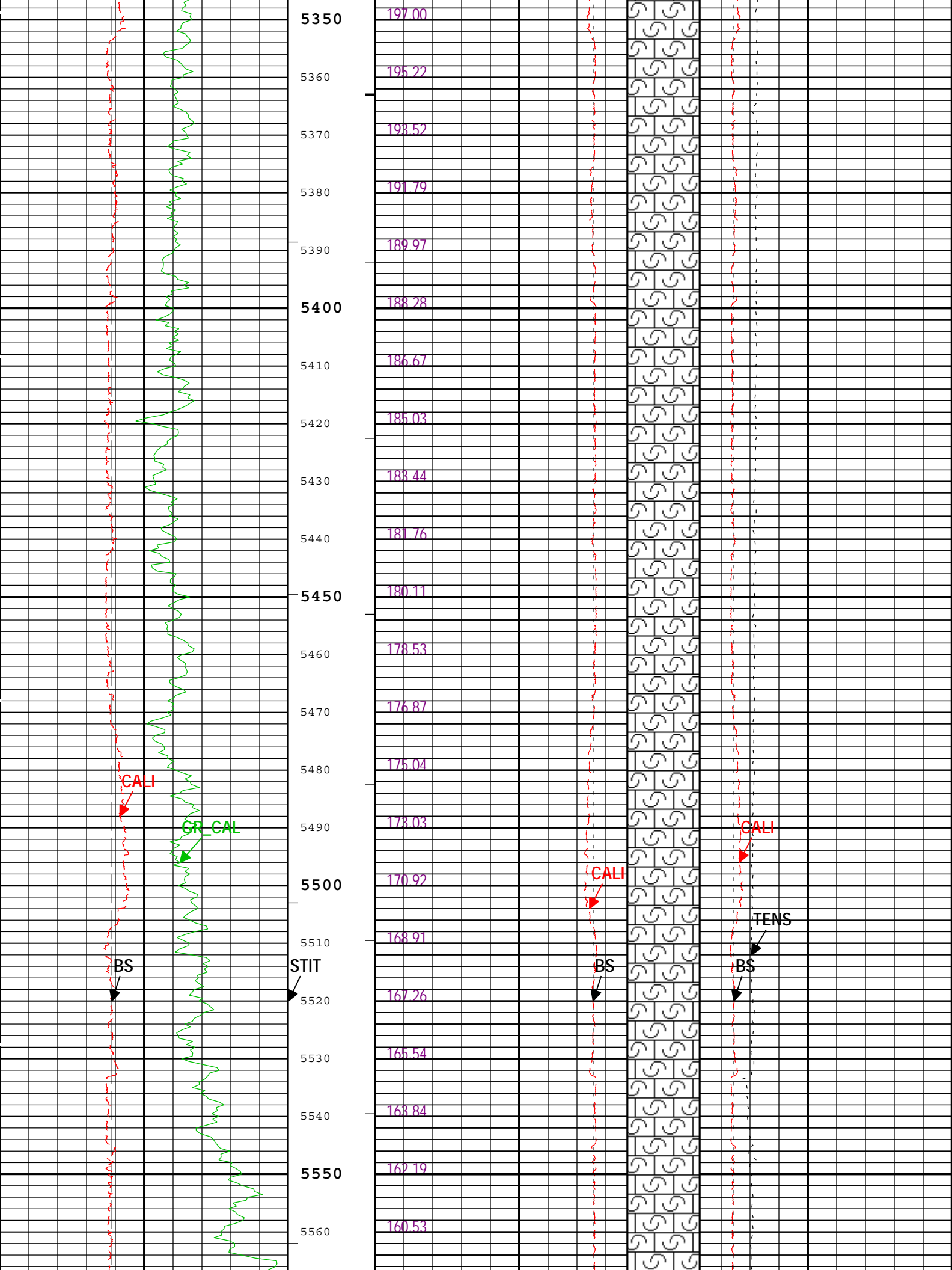


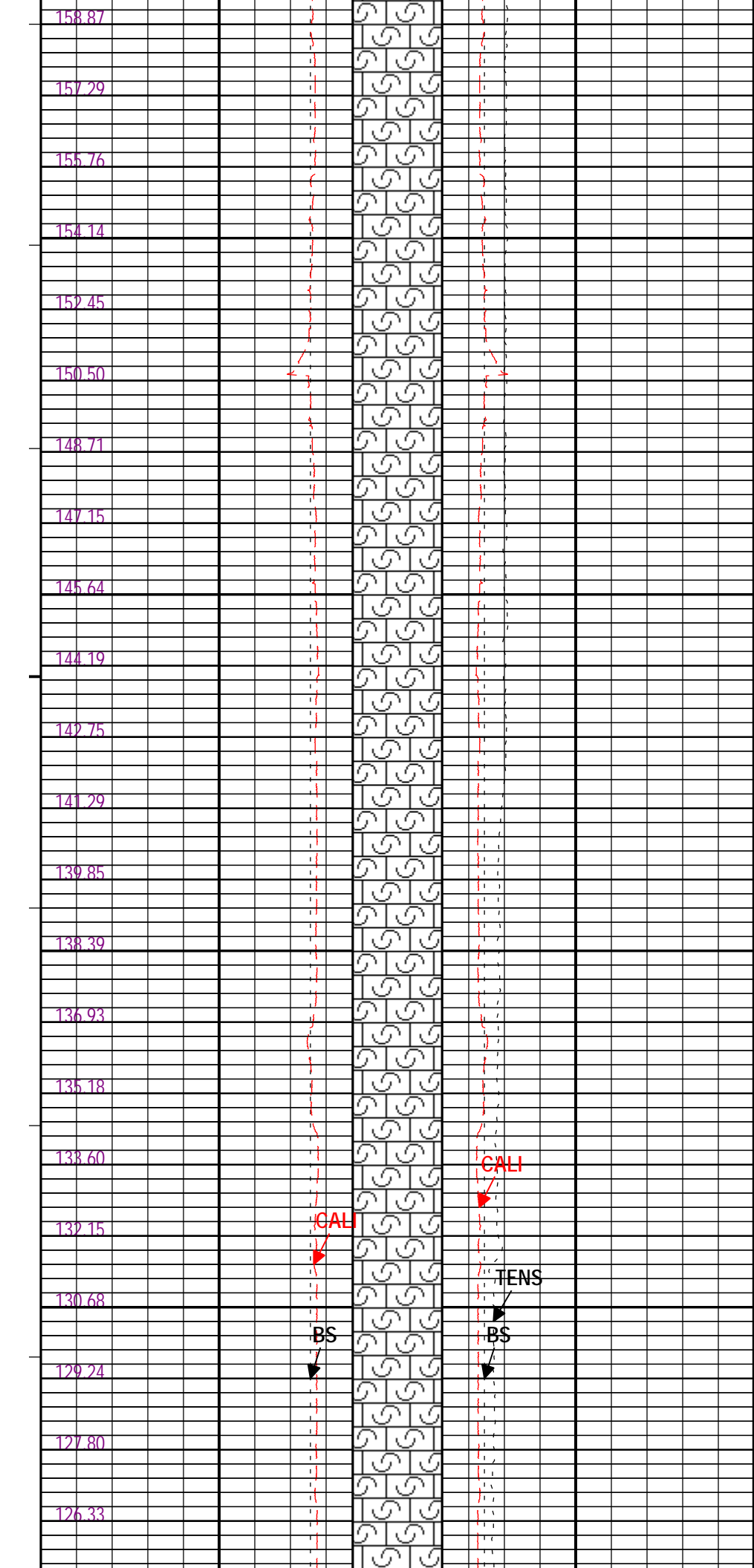
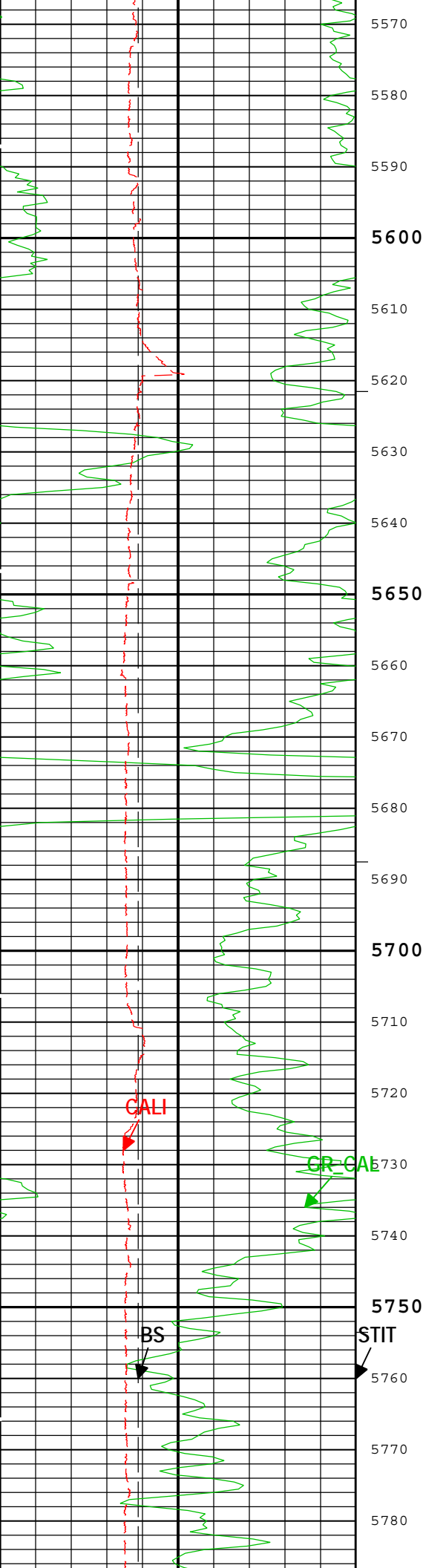


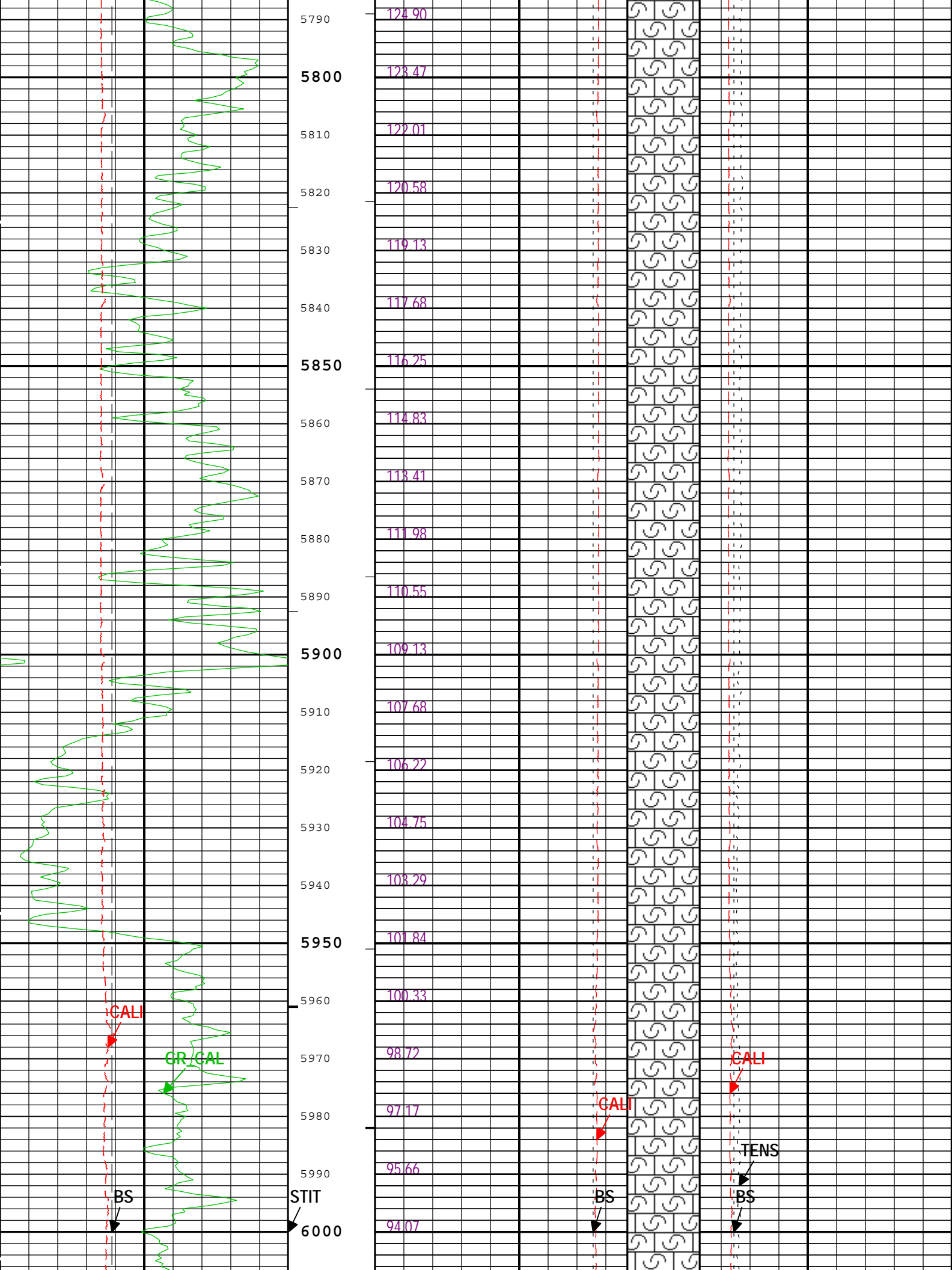
4910
4920
4930
4940
4950
4960
4970
4980
4990
5000
5010
5020
5030
5040
5050
5060
5070
5080
5090
5100
5110
5120

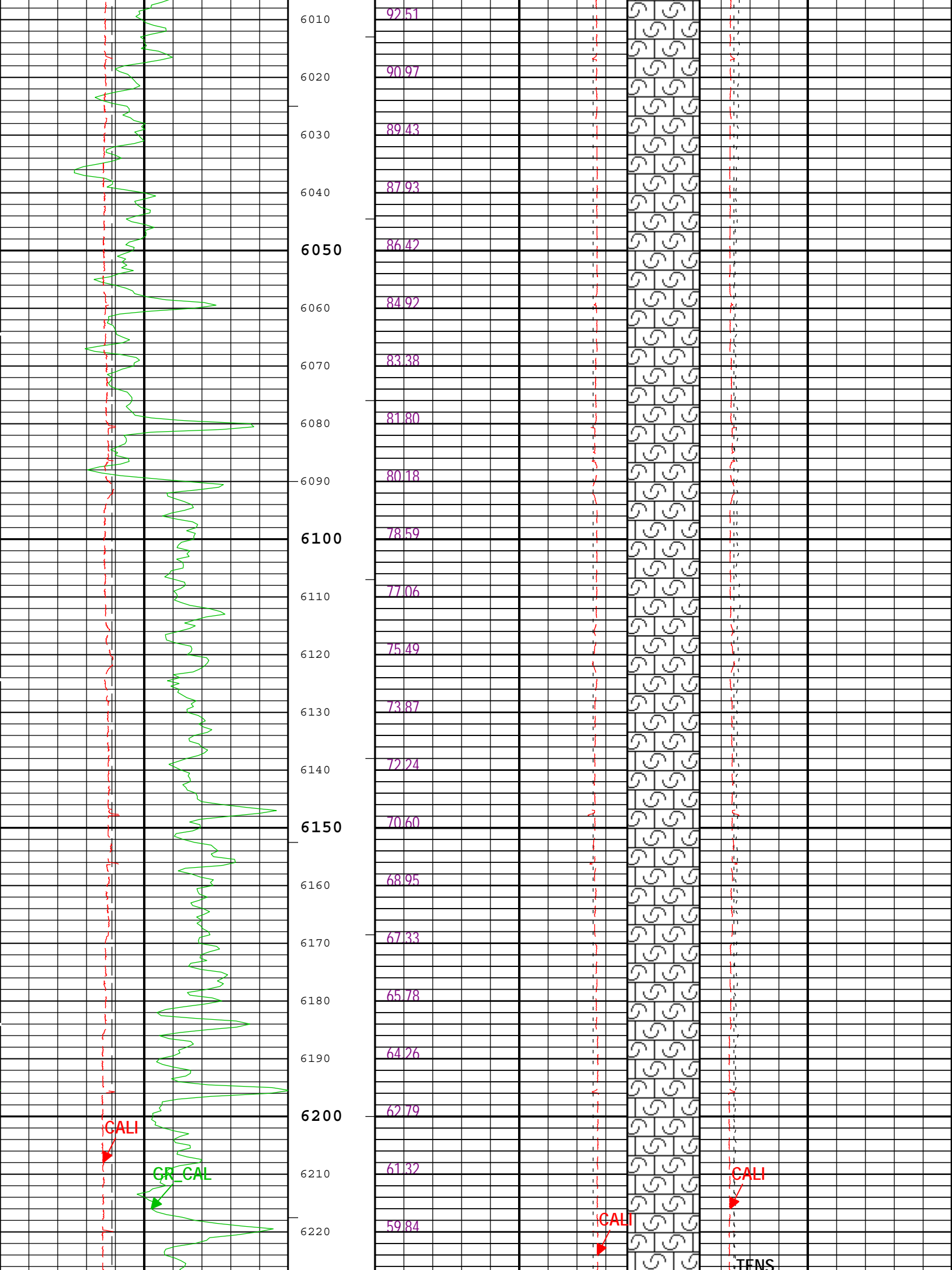
287.62
285.55
283.17
280.55
277.94
275.58
273.29
270.79
268.23
265.77
263.34
260.94
258.78
256.50
254.16
251.77
249.61
247.37
245.16
243.14
241.05
238.96

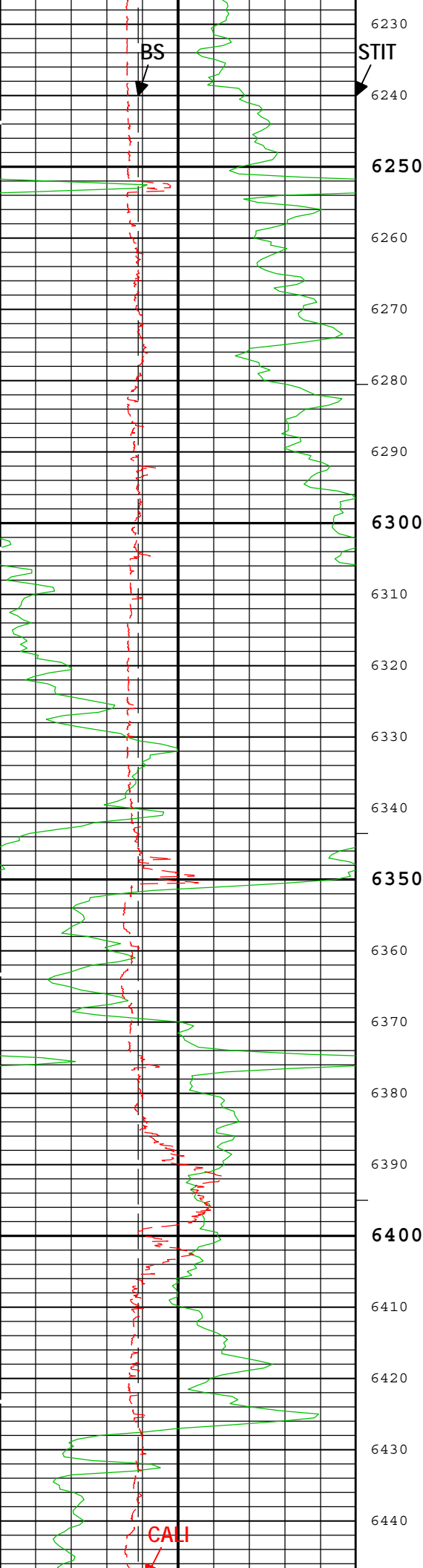






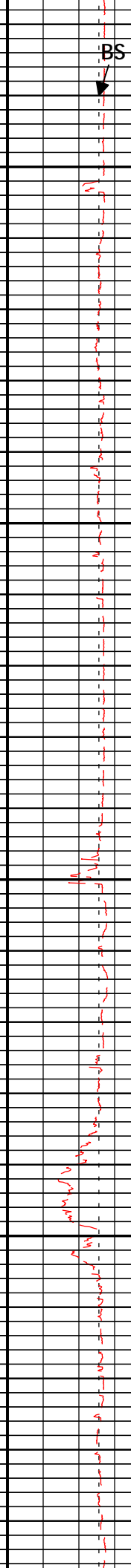






6230
6240
6250
6260
6270
6280
6290
6300
6310
6320
6330
6340
6350
6360
6370
6380
6390
6400
6410
6420
6430
6440

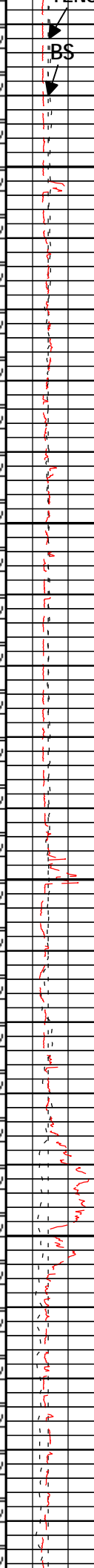
5836
5688
5538
5376
5208
5029
4867
4694
4530
4375
4224
4072
3901
3724
3574
3409
3211
2878
2669
2507
2345
2172

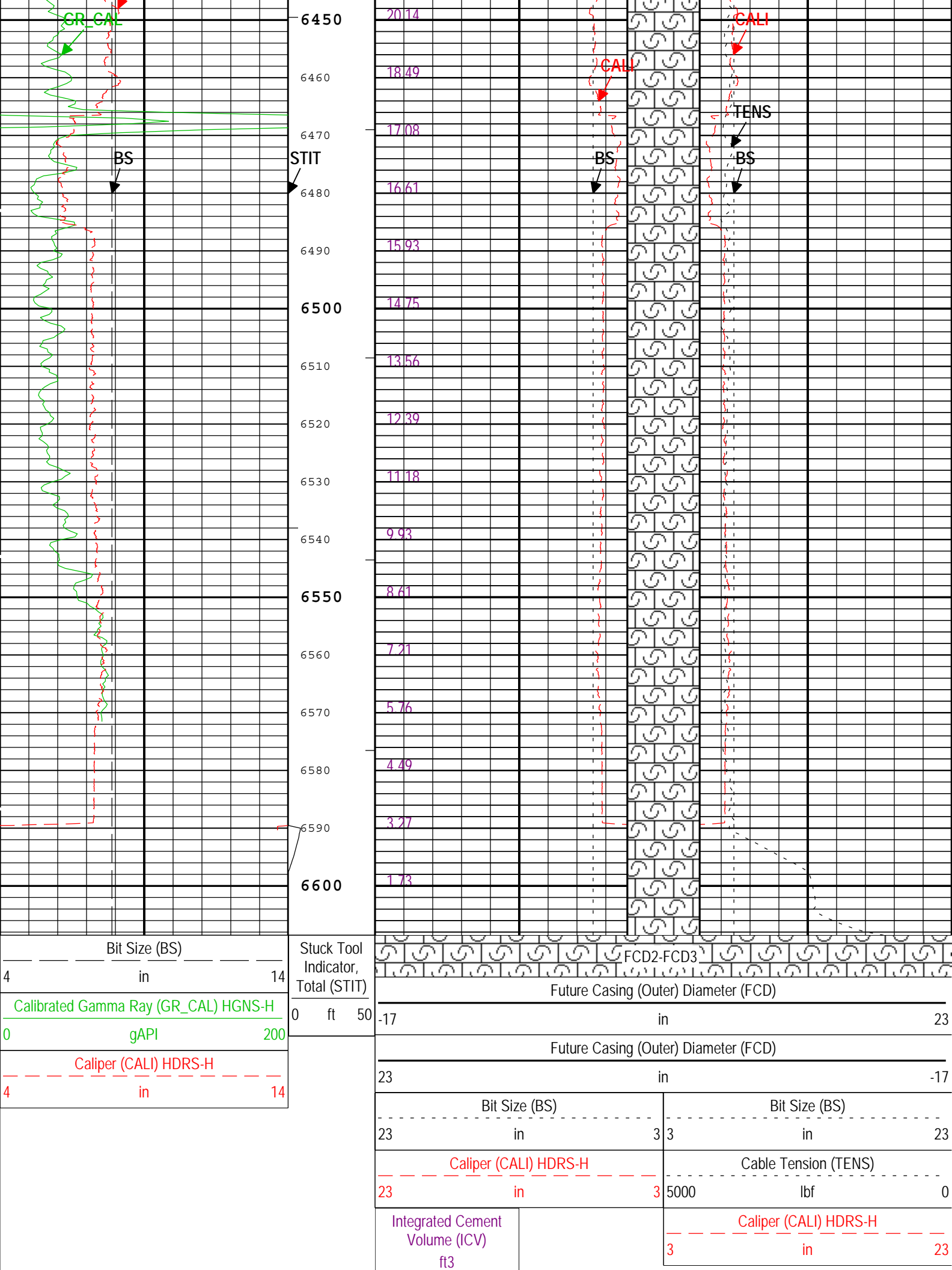


BS



BS





ICV - Integrated Cement Volume every 10.00 (ft3)

IHV - Integrated Hole 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 100.00 (ft3)

Description: Format: Log (Noble East Caliper) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 16-Feb-2014 04:44:20

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	7.875	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0	in
CBLO	Casing Bottom (Logger)	WLSESSION	500	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	8.625	in
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
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	

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	3600	ft/h

Field:	Bijou West
County:	Morgan
State:	Colorado
Platform Express	
Caliper	
Cement Volume	