

Company: Expedition Water Solution LLC

Well: EWS 1

Field: Wildcat

County: Weld State: Colorado

Platform Express

Mico Log

Mico Log				
Location:				
NWNW Sec. 26, T8N, R60W		Elev.: K.B. 4926.50 ft		
SHL: 325' FNL X 372' FWL		G.L. 4913.00 ft		
		D.F. 4925.50 ft		
Permanent Datum:	Ground Level	Elev.: 4913.00 f		
Log Measured From:	Kelly Bushing	13.50 ft above Perm.Datum		
Drilling Measured From:	Kelly Bushing			
API Serial No.	Section:	Township:	Range:	
05-123-39770-0000	26	8N	60W	

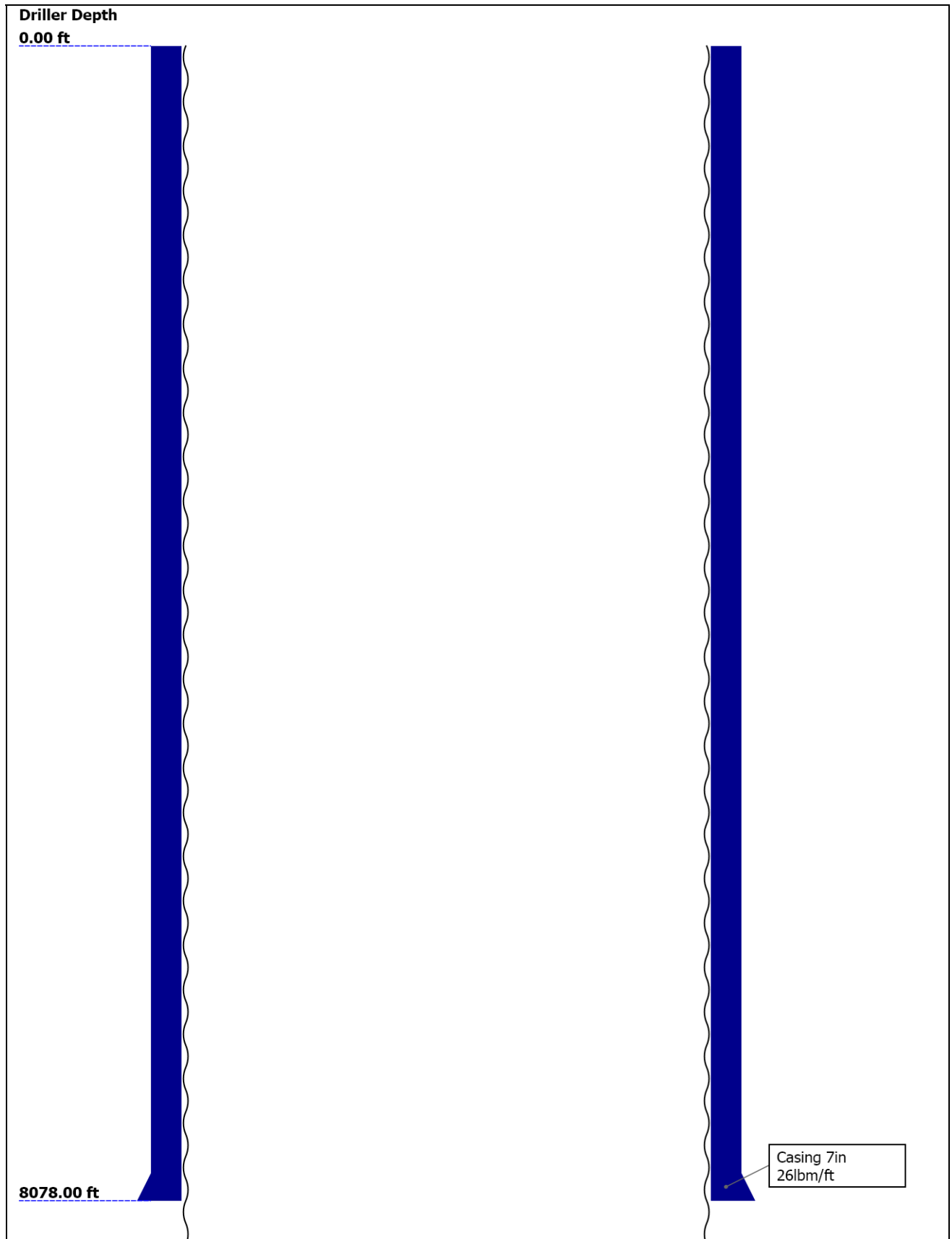
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Well Sketch





Borehole Size/Casing/Tubing Record










Bit						
Bit Size (in)	6.125					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	9900					
Bottom Logger (ft)	9894					
Casing						
Size (in)	7					
Weight (lbm/ft)	26					
Inner Diameter (in)	6.276					
Grade	N/A					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	8078					
Bottom Logger (ft)	8084					

Operational Run Summary

Parameter (unit)	Run1: PEX-AIT					
Date Log Started	25-Aug-2014					
Time Log Started	18:26:08					
Date Log Finished	25-Aug-2014					
Time Log Finished	20:05:00					
Top Log Interval (ft)	7600.00					
Bottom Log Interval (ft)	9894.00					
Total Depth (ft)	9894.00					
Max Hole Deviation (deg)	0.00					
Azimuth of Max Deviation (deg)	0.00					
Bit Size (in)	6.125					
Logging Unit Number	3022					
Logging Unit Location	Ft. Morgan, CO					
Recorded By	Tim Hoffman					
Witnessed By	Erasmo Parras					

Service Order Number	CXQ3-00097				
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Remarks and Equipment Summary

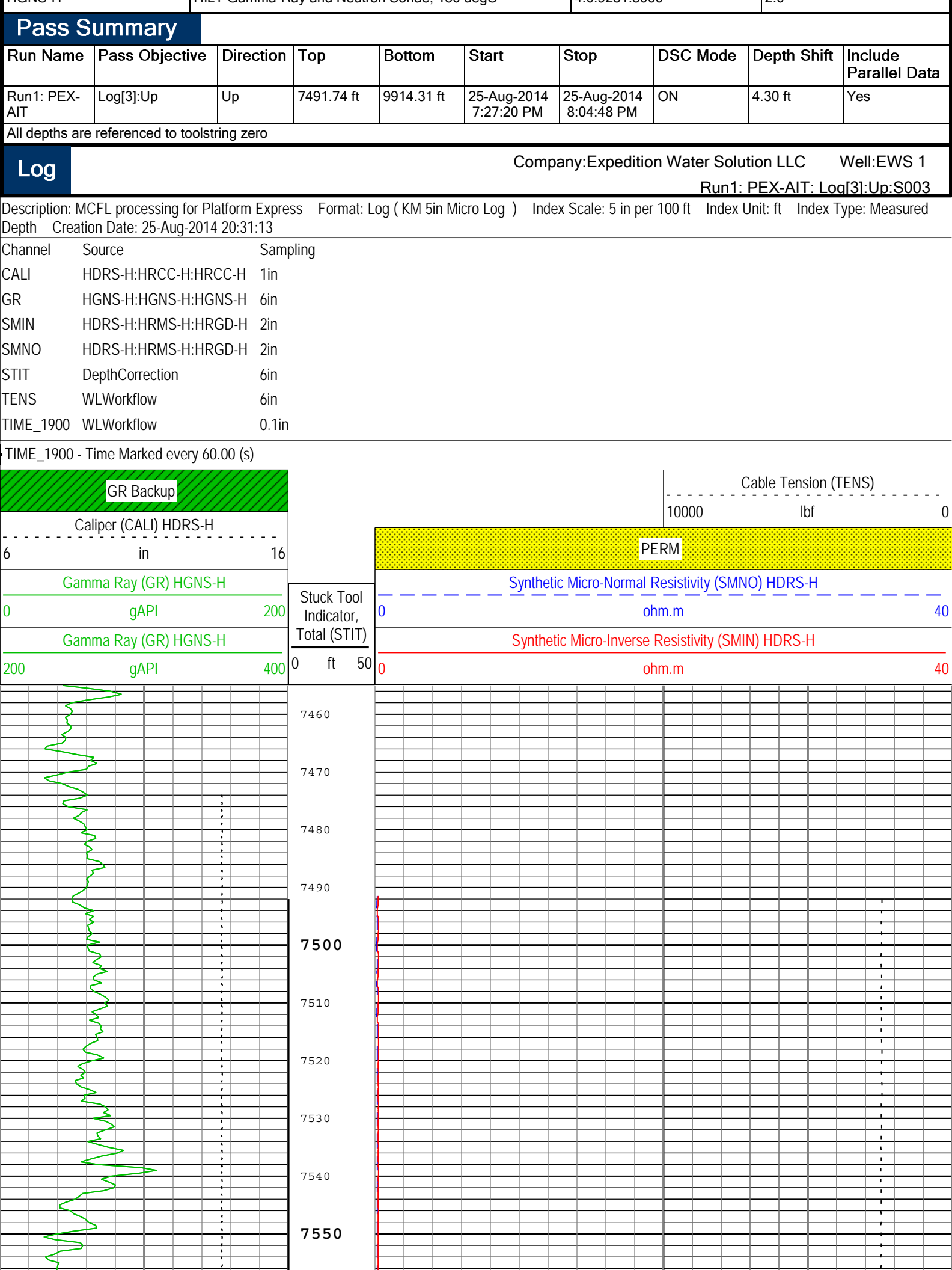
Run1: PEX-AIT: Toolstring				Run1: PEX-AIT: Remarks
<div> <div>Equip name</div> <div>LEH-QT</div> <div>LEH-QT</div> </div>	<div> <div>Length</div> <div>43.57</div> </div>		<div> <div>MP name</div> <div></div> </div> <div> <div>Offset</div> <div></div> </div>	This is the first run in hole
				Toolstring run as per tool sketch
				Matrix changes are noted in the parameters section
<div> <div>DTC-H</div> <div>ECH-KC:9469</div> <div>DTC-H</div> </div>	<div> <div>40.65</div> </div>		<div> <div>CTEM</div> <div>HV</div> </div> <div> <div>39.75</div> <div>0.00</div> </div>	Crew: Jay Musgrave, Ian Derry
<div> <div>HGNS-H:3985</div> <div>HGNH:3785</div> <div>NPV-N</div> <div>NSR-F:5068</div> <div>HMCA-H</div> <div>HACCZ-H:4269</div> <div>HGNS-H:3985</div> </div>	<div> <div>37.65</div> </div>		<div> <div>ToolStatus</div> <div>TelStatus</div> <div>Temperature</div> </div> <div> <div>37.65</div> <div>37.65</div> <div>37.62</div> </div>	
<div> <div>GR</div> </div>			<div> <div>36.91</div> </div>	
<div> <div>CNL Porosity</div> <div>HGNS</div> <div>HMCA</div> <div>Accelerometer</div> </div>			<div> <div>30.57</div> <div>28.24</div> <div>28.24</div> <div>0.00</div> </div>	
<div> <div>HRCC</div> </div>	<div> <div>28.24</div> </div>		<div> <div>24.24</div> </div>	
<div> <div>MCFL</div> <div>Caliper</div> <div>TLD Density</div> </div>			<div> <div>18.81</div> <div>18.33</div> <div>17.94</div> </div>	
<div> <div>AIT-M:208</div> <div>AMIS:208</div> <div>AMRM</div> </div>	<div> <div>16.00</div> </div>			
<div> <div>Temperature</div> <div>Induction</div> <div>Power Supply</div> </div>			<div> <div>7.91</div> <div>7.91</div> <div>7.91</div> </div>	

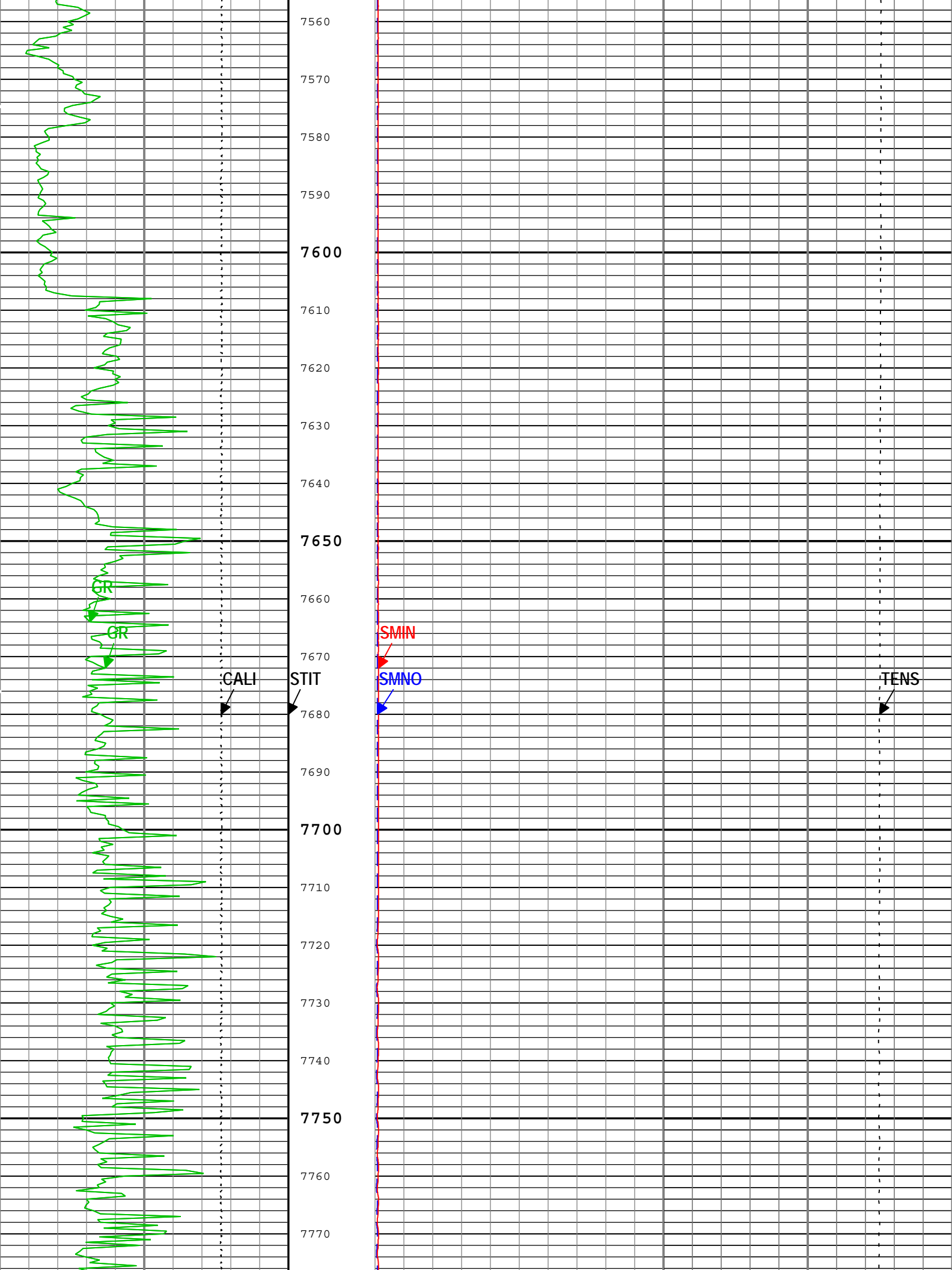
 <p>Lengths are in ft Maximum Outer Diameter = 4.625 in Line: Sensor Location, Value: Gating Offset All measurements are relative to TOOL_ZERO</p>		
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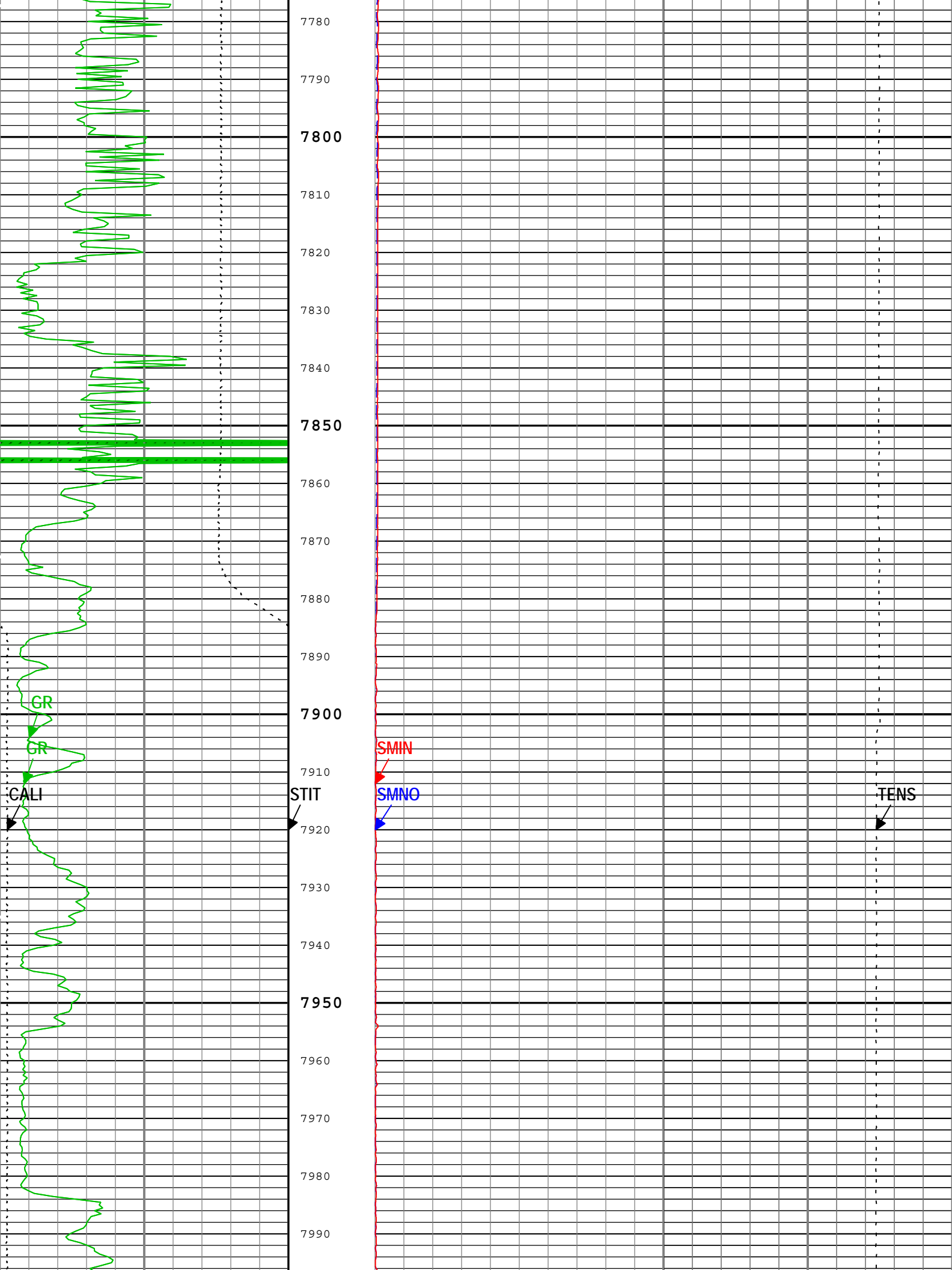
Depth Summary			
		Run1: PEX-AIT	
Depth Measuring Device			
Type	IDW-B		
Serial Number	5896		
Calibration Date	13-Aug-2014		
Calibrator Serial Number			
Calibration Cable Type	7-39P LXS		
Wheel Correction 1	-3		
Wheel Correction 2	-2		
Tension Device			
Type	CMTD-B/A		
Serial Number	1109		
Calibration Date	08-Aug-2014		
Calibrator Serial Number	78135		
Number of Calibration Points	10		
Calibration Root Mean Square Error	8		
Calibration Peak Error	15		
Logging Cable			
Type	7-39P-LXS		
Serial Number			
Length	11800.00 ft		
Conveyance Type	Wireline		
Rig Type			
Run1: PEX-AIT:Depth Control Parameters		Depth Control Remarks	
Log Sequence	First Log In the Well	All Schlumberger depth control policies followed	
Rig Up Length At Surface		IDW used as primary depth reference. Z-chart used as secondary	
Rig Up Length At Bottom			
Rig Up Length Correction			
Stretch Correction			
Tool Zero Check At Surface			

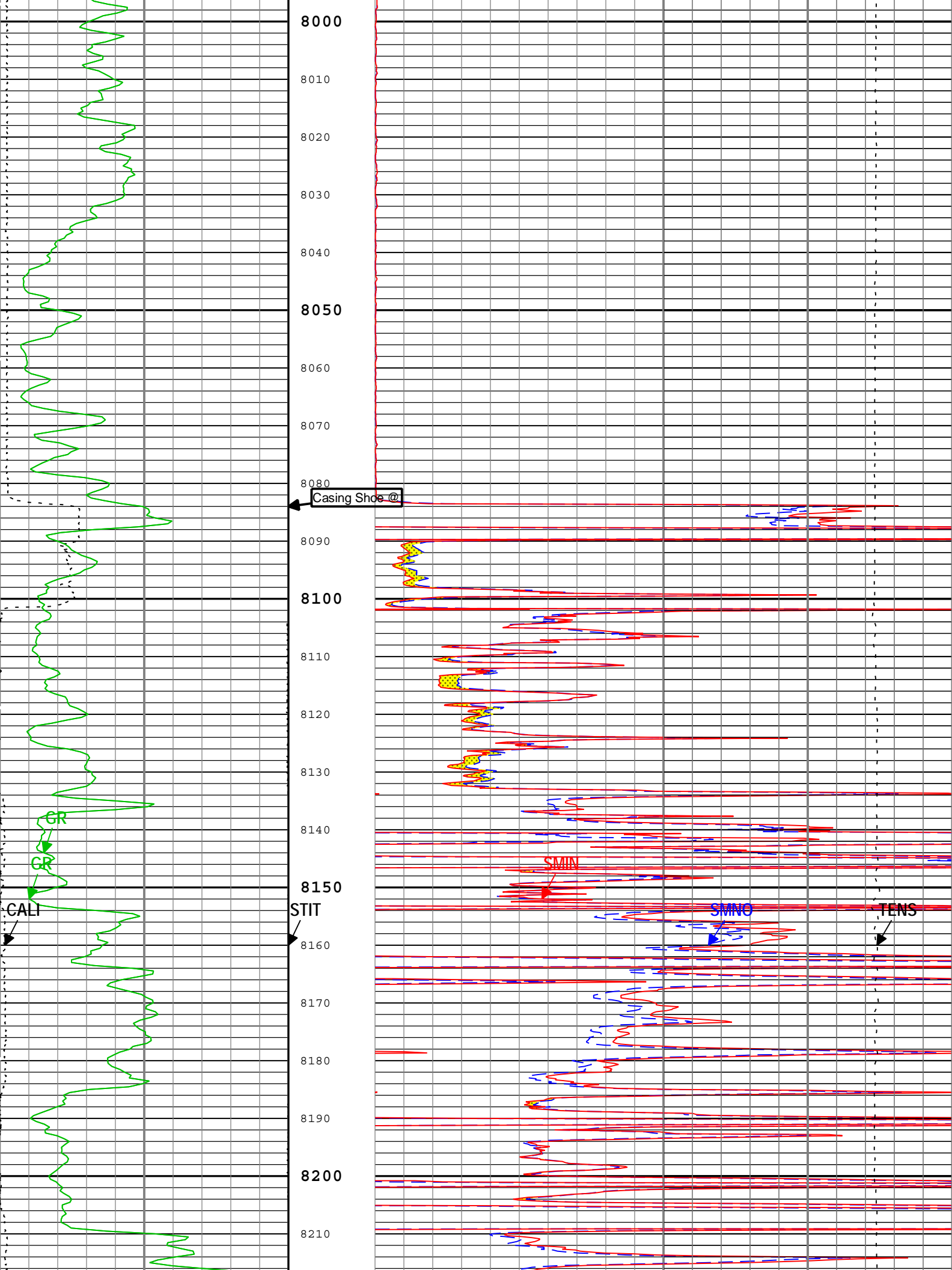
Run1: PEX-AIT			
5" Micro Log			

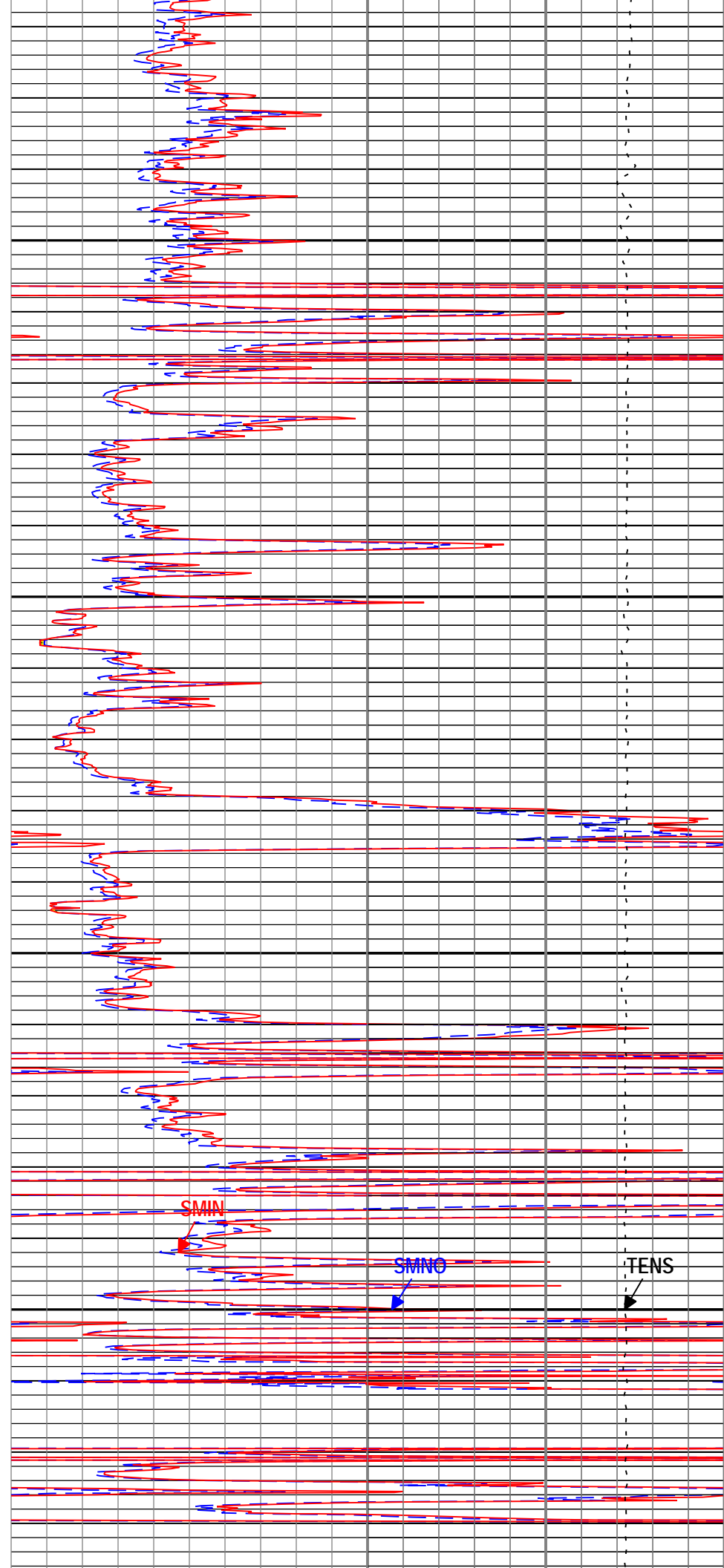
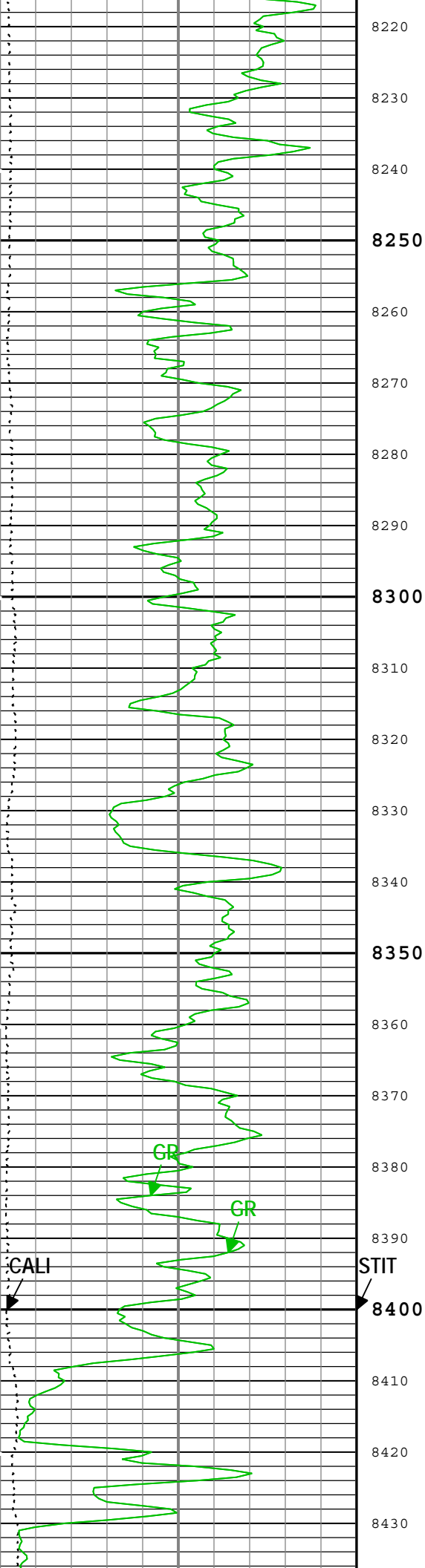
Software Version			
Acquisition System		Version	
MaxWell		4.0.9163.3000	
Application Patch		Patch-SP-10767_13393-4.0.9163.3001	
Computation	Description		Version
DepthCorrection	DepthCorrection		4.0.9213.3000
Tool Elements	Description	Software Version	Firmware Version
HRCC-H	HILT High-Resolution Control Cartridge, 150 degC	4.0.9231.3000	2.0
HRGD-H	HILT Resistivity Gamma-Ray Density Device, 150 degC	4.0.9231.3000	3.0
HGNS-H	HILT Gamma-Ray and Neutron Sonde, 150 degC	4.0.9231.3000	2.0

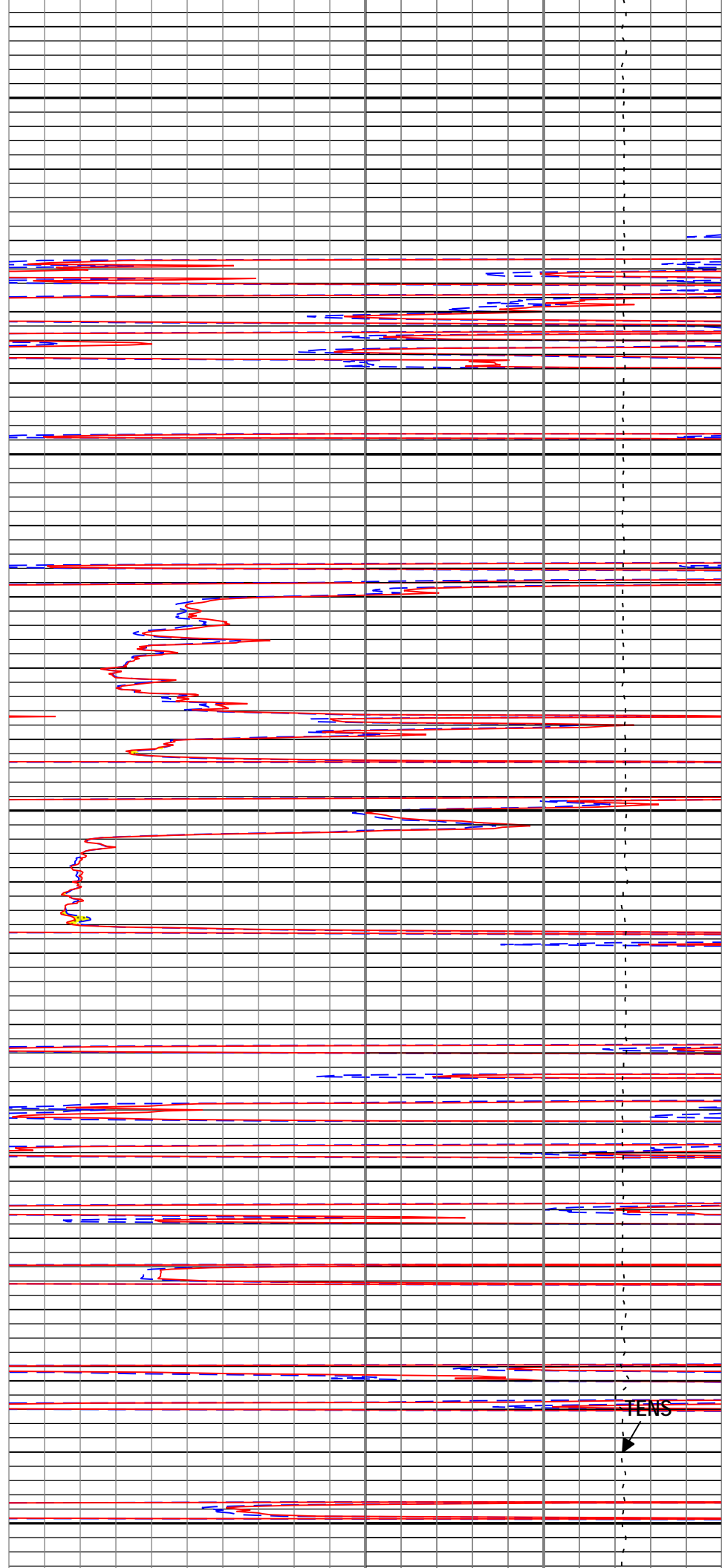
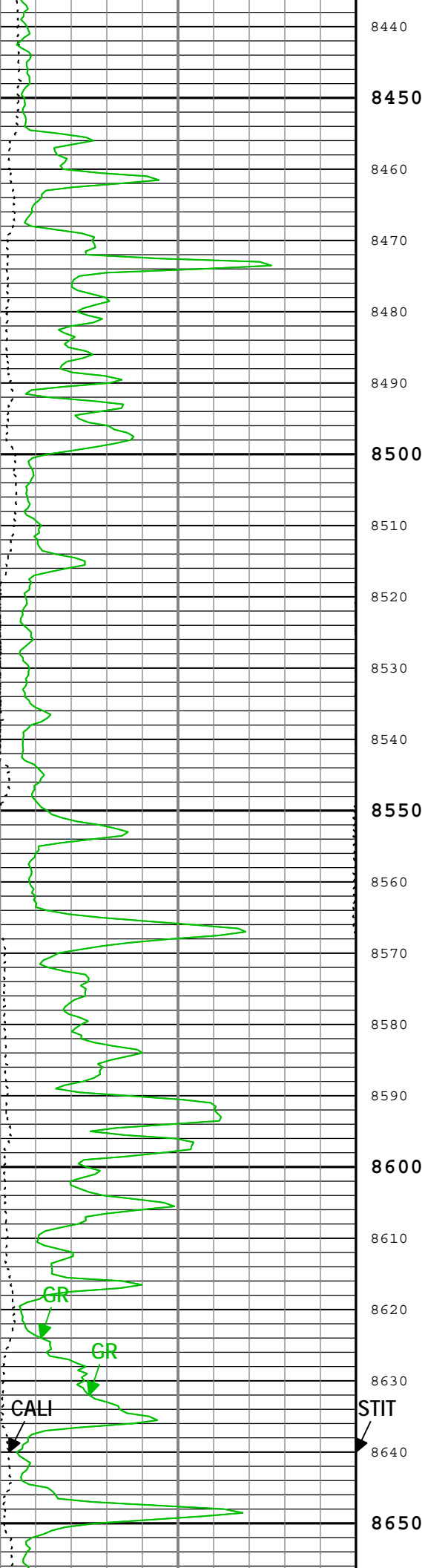


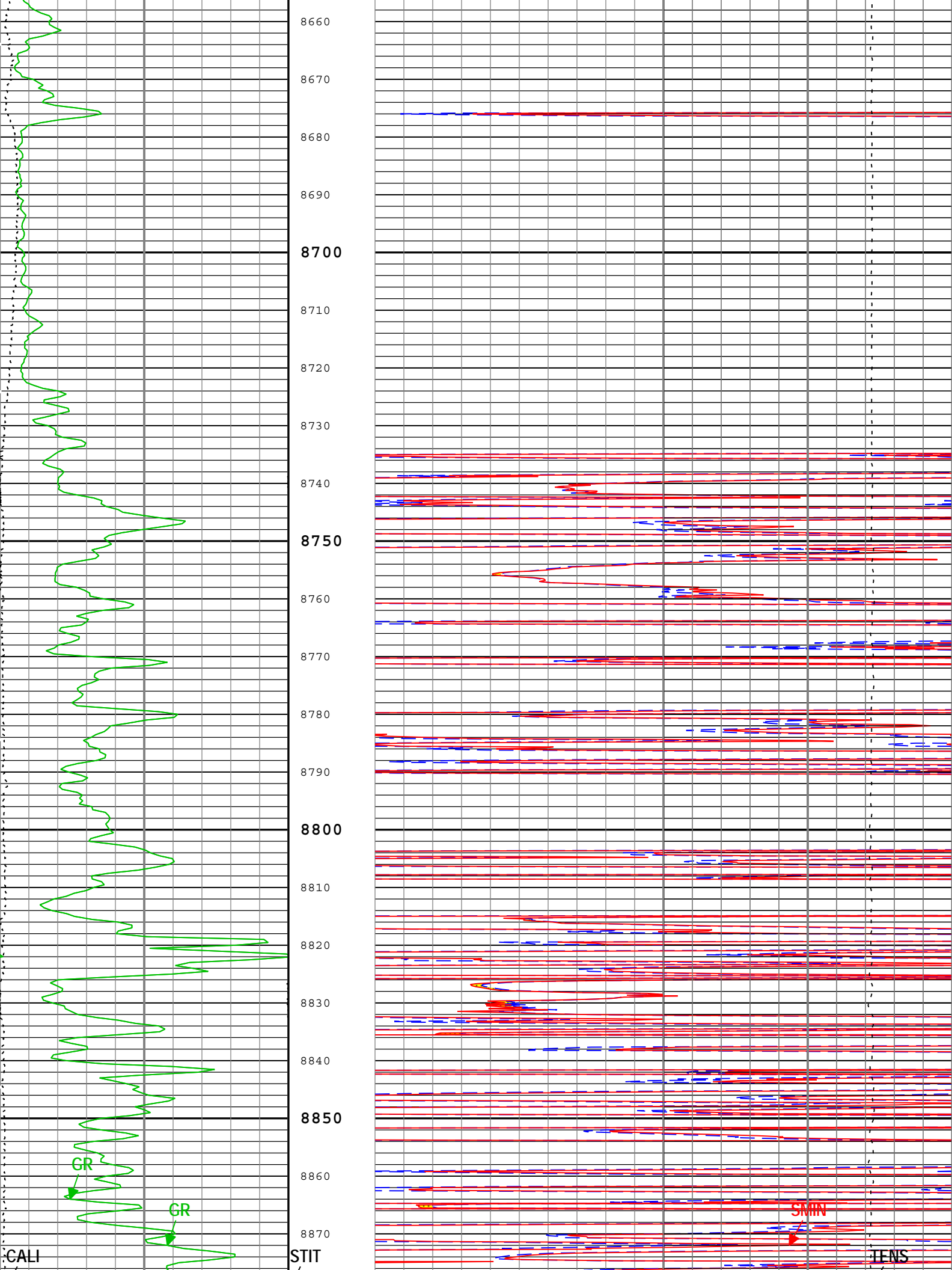


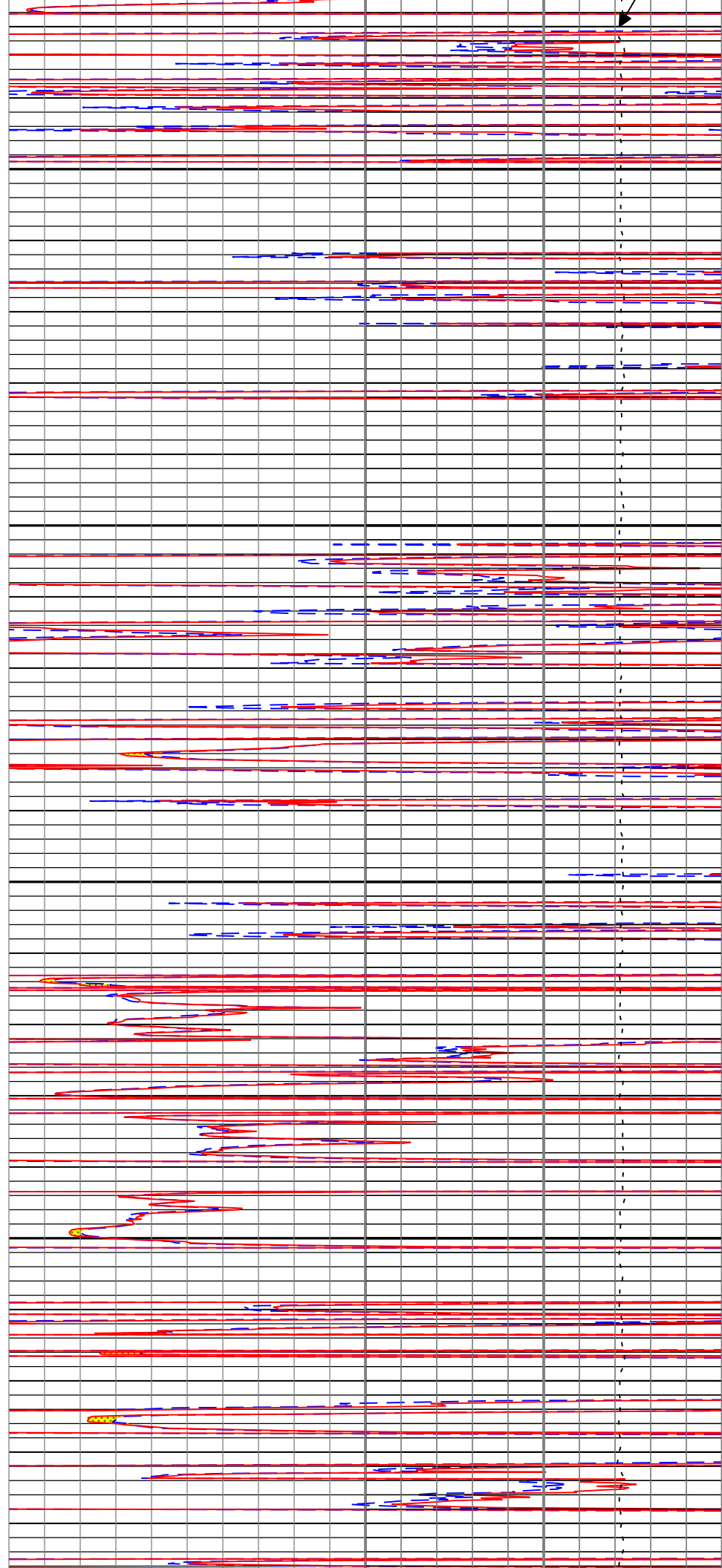
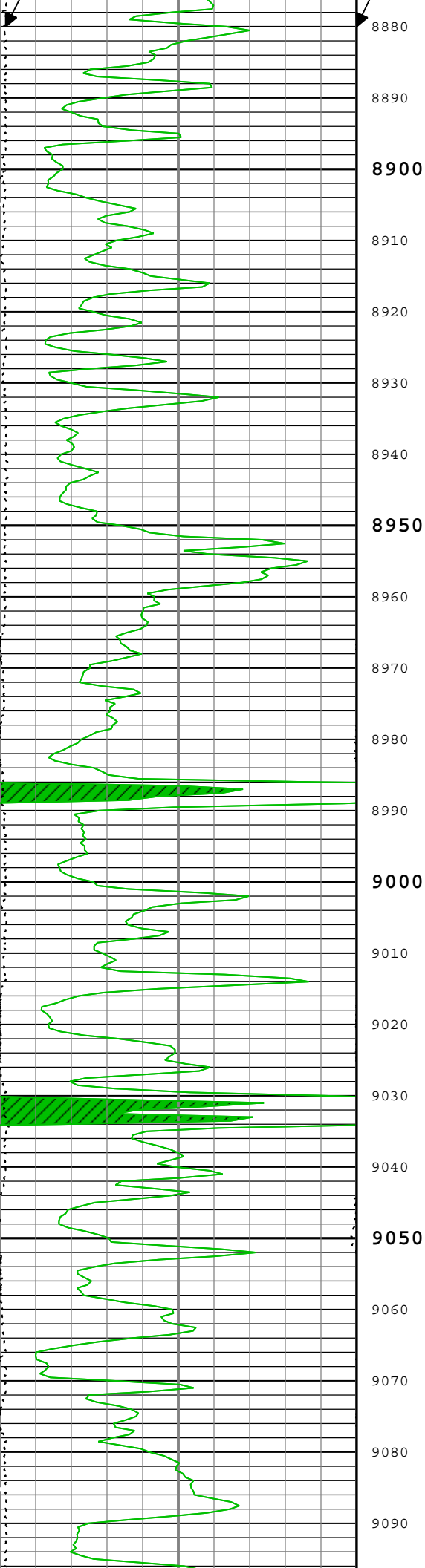


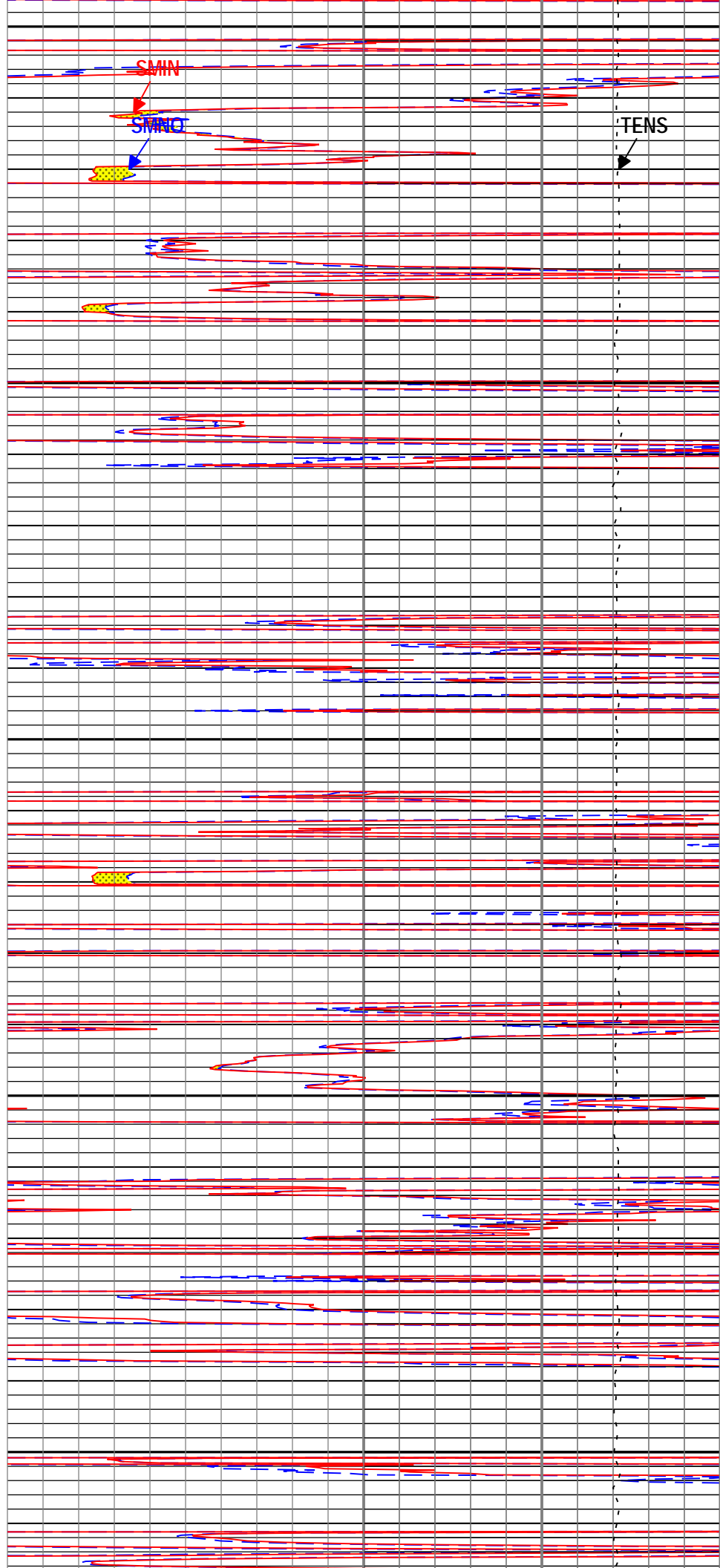
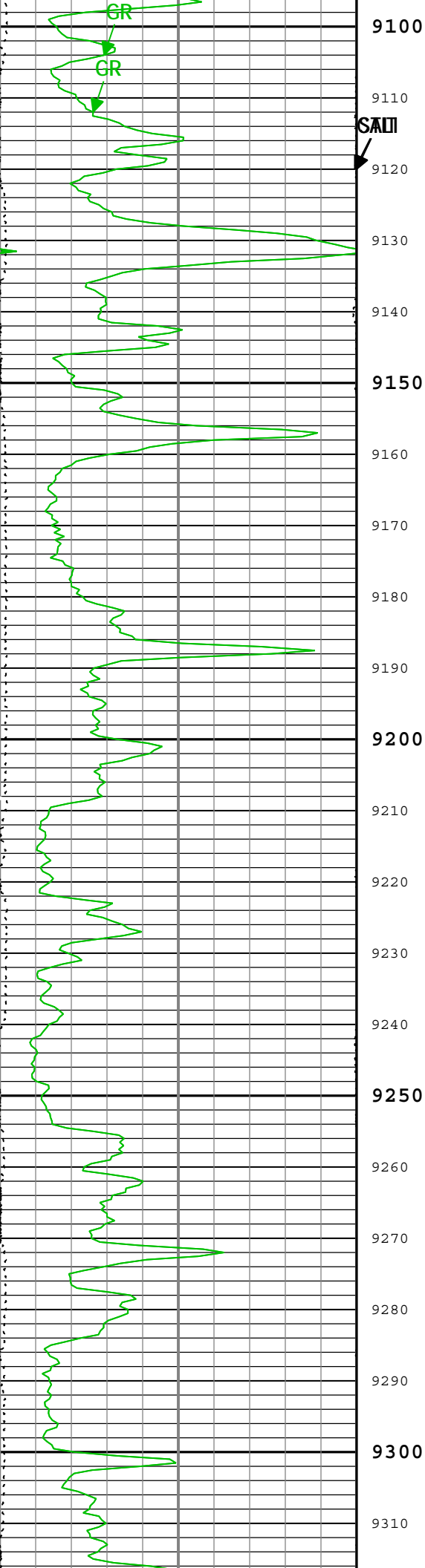


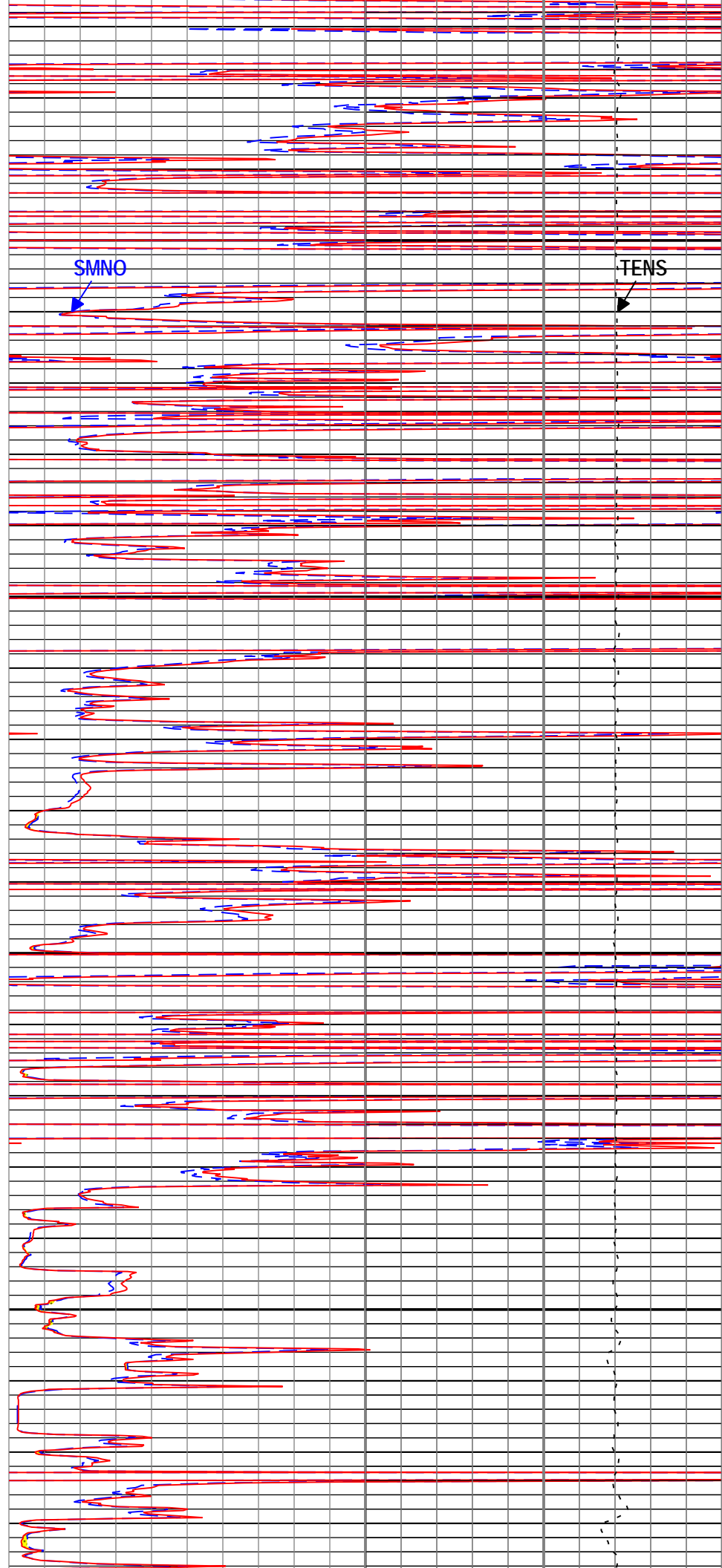
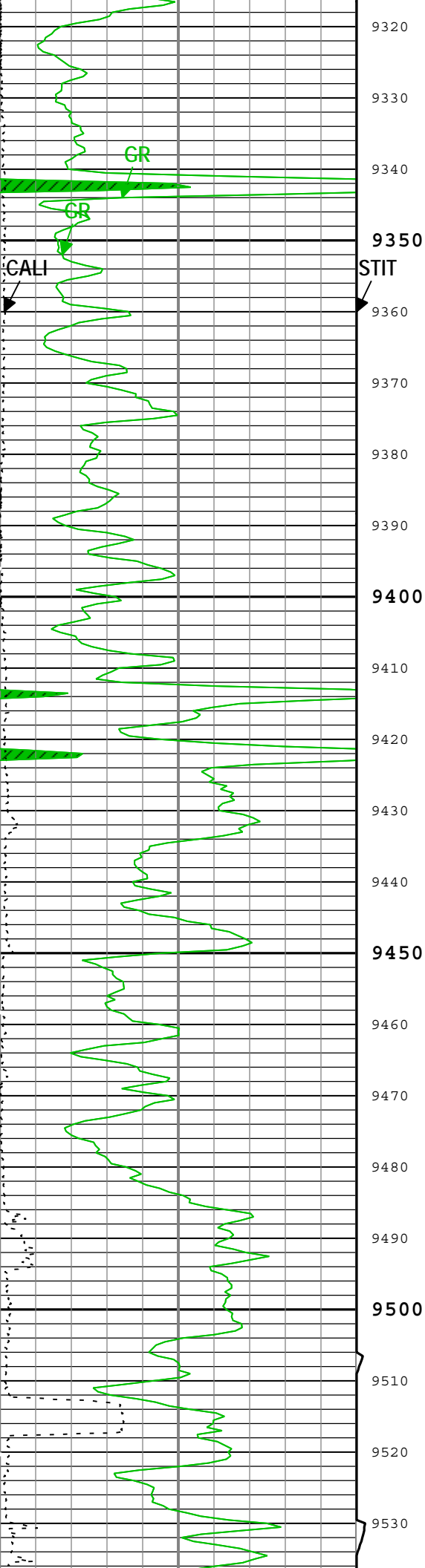


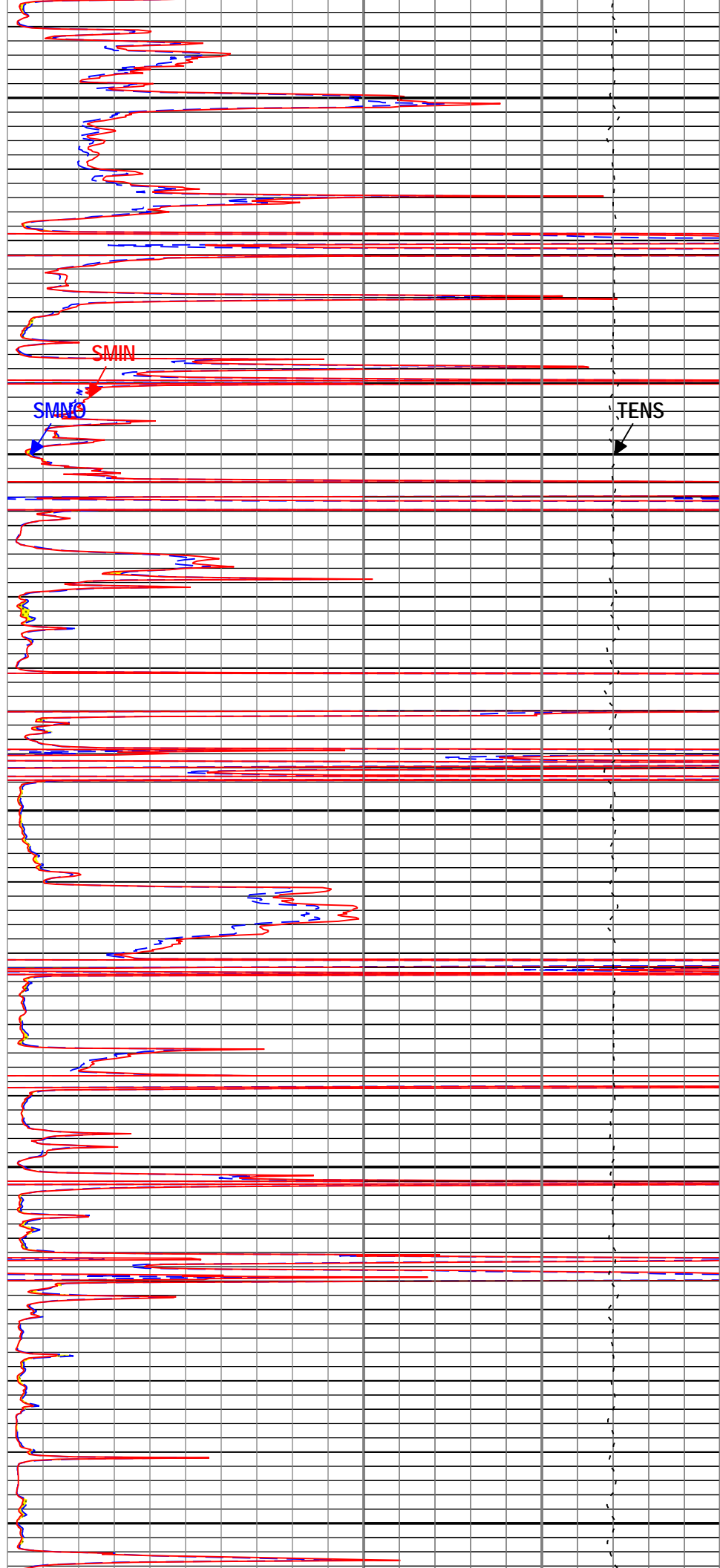
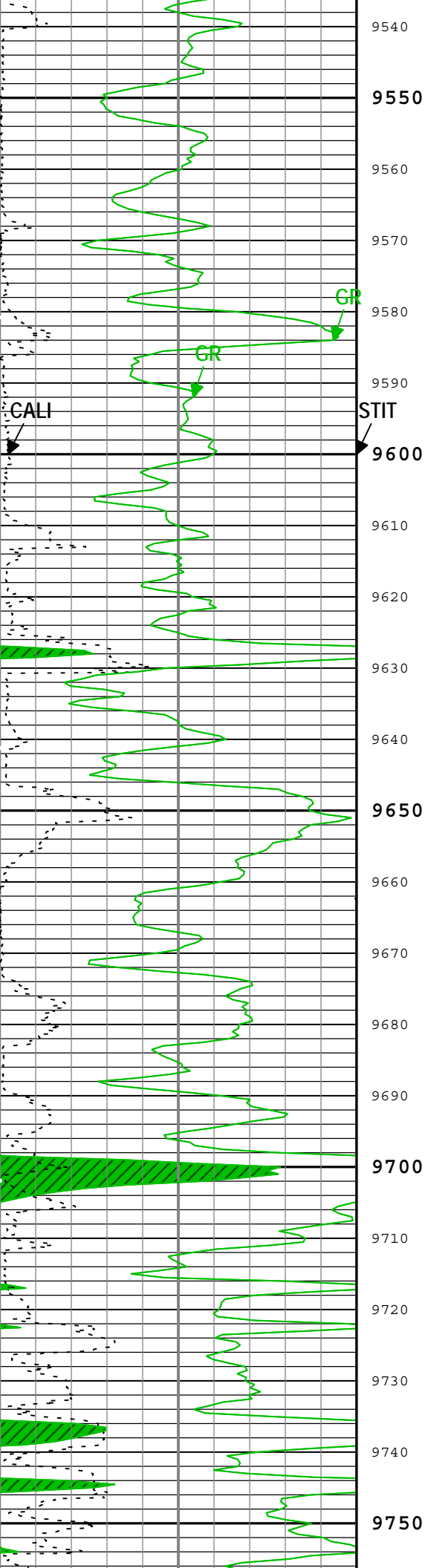


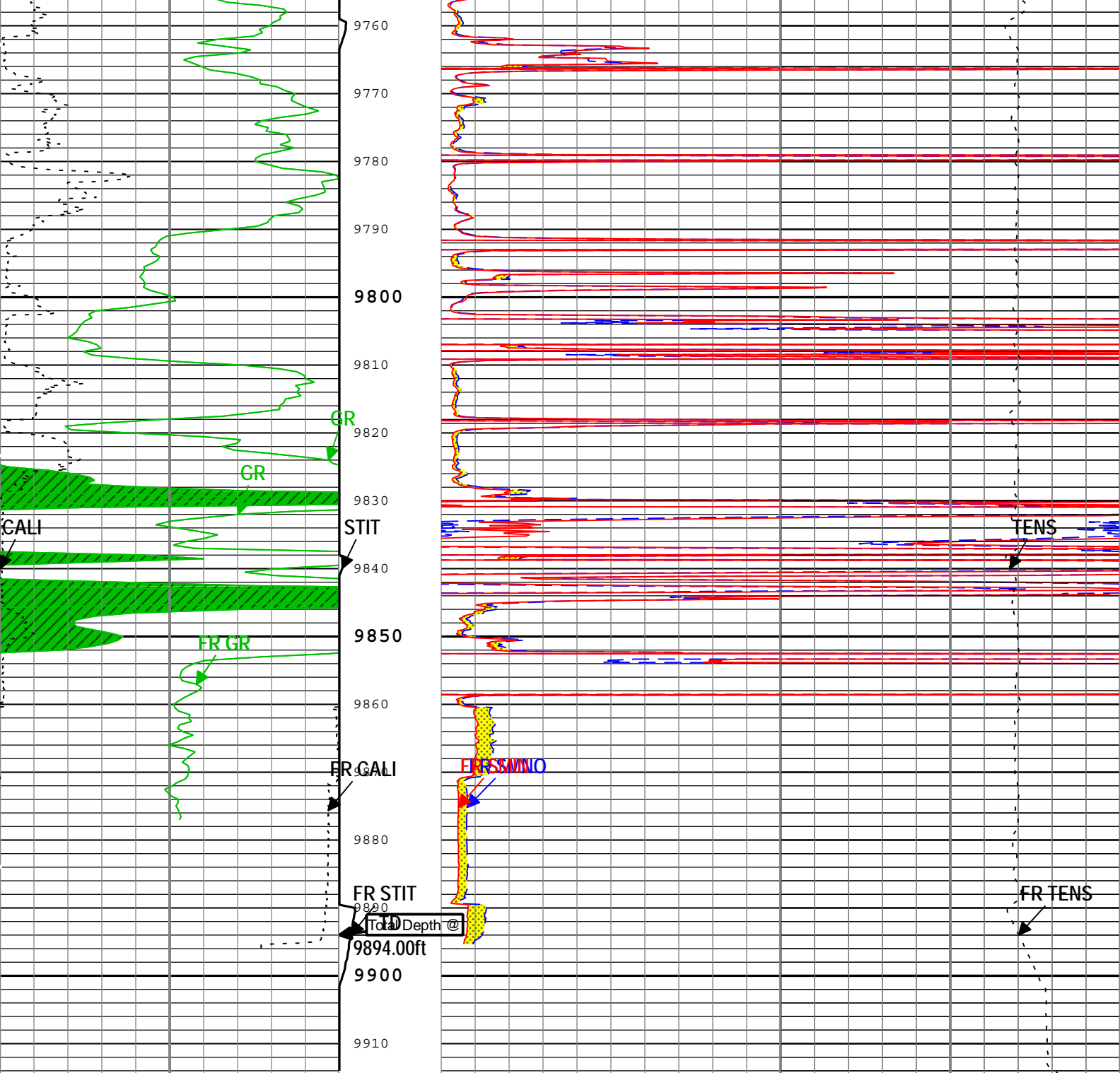












GR Backup		Stuck Tool Indicator, Total (STIT)	PERM	
Caliper (CALI) HDRS-H			Synthetic Micro-Normal Resistivity (SMNO) HDRS-H	
6	in	0	ft	50
Gamma Ray (GR) HGNS-H		0		
gAPI		ohm.m		
Gamma Ray (GR) HGNS-H		0		
gAPI		ohm.m		
200		Cable Tension (TENS)		
400		10000		
TIME_1900 - Time Marked every 60.00 (s)		0		

Description: MCFL processing for Platform Express Format: Log (KM 5in Micro Log) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured
Depth Creation Date: 25-Aug-2014 20:31:13

Channel Processing Parameters

Parameter	Description	Tool	Value	Unit
PAR1	Positive Mod Process Flag	Depth	No	

BARK	Bante Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	6.125	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.3	in
CBLO	Casing Bottom (Logger)	WLSESSION	8084	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
DFD	Drilling Fluid Density	Borehole	8.8	lbm/gal
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	
TD	Total Measured Depth	Borehole	9894	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

Run1: PEX-AIT

5" Micro Log Repeat

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run1: PEX-AIT	Log[2]:Up	Up	9584.94 ft	9919.91 ft	25-Aug-2014 7:17:46 PM	25-Aug-2014 7:24:23 PM	ON	4.04 ft	Yes
Run1: PEX-AIT	Log[3]:Up	Up	7491.74 ft	9914.31 ft	25-Aug-2014 7:27:20 PM	25-Aug-2014 8:04:48 PM	ON	4.30 ft	Yes

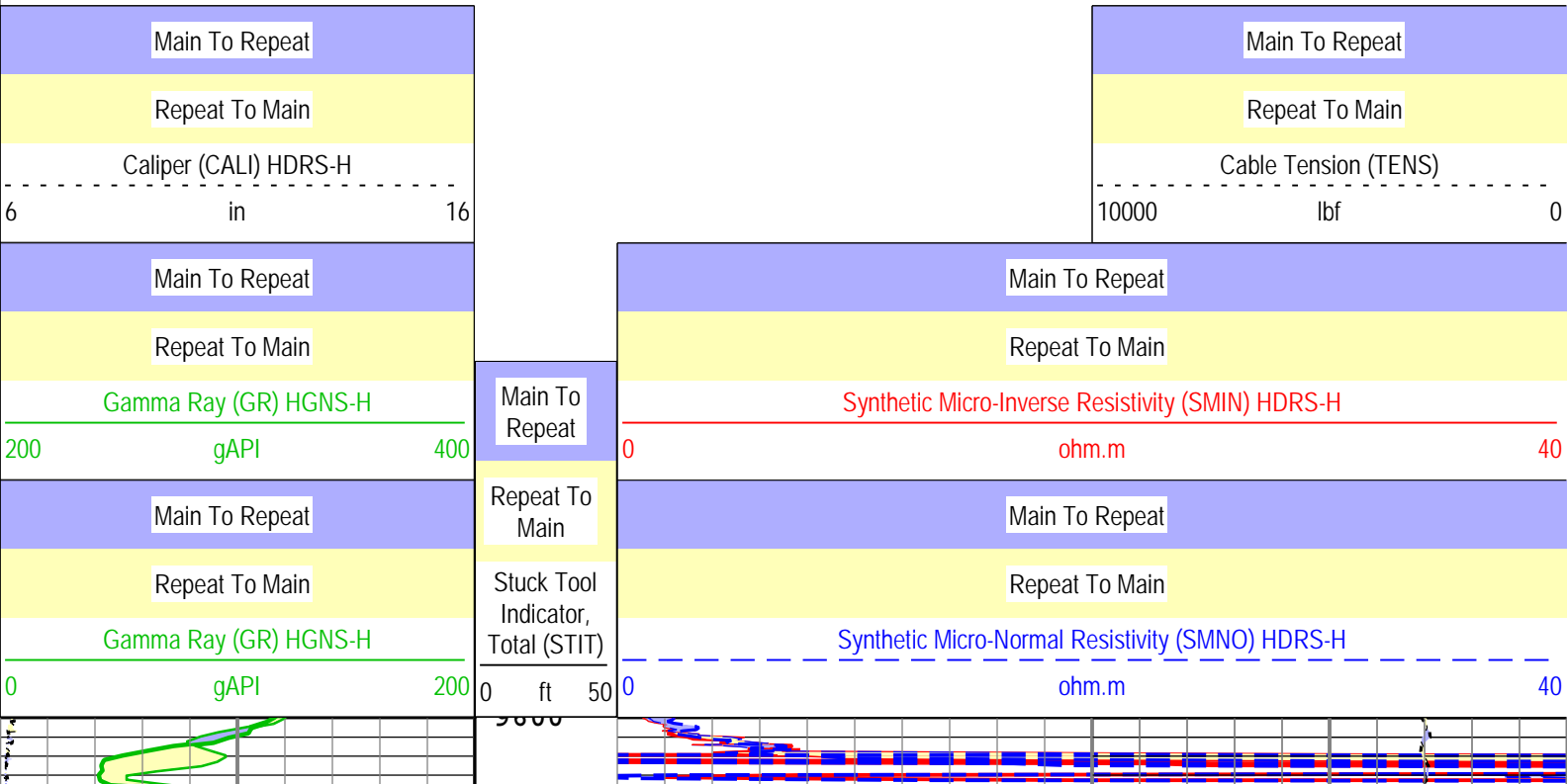
All depths are referenced to toolstring zero

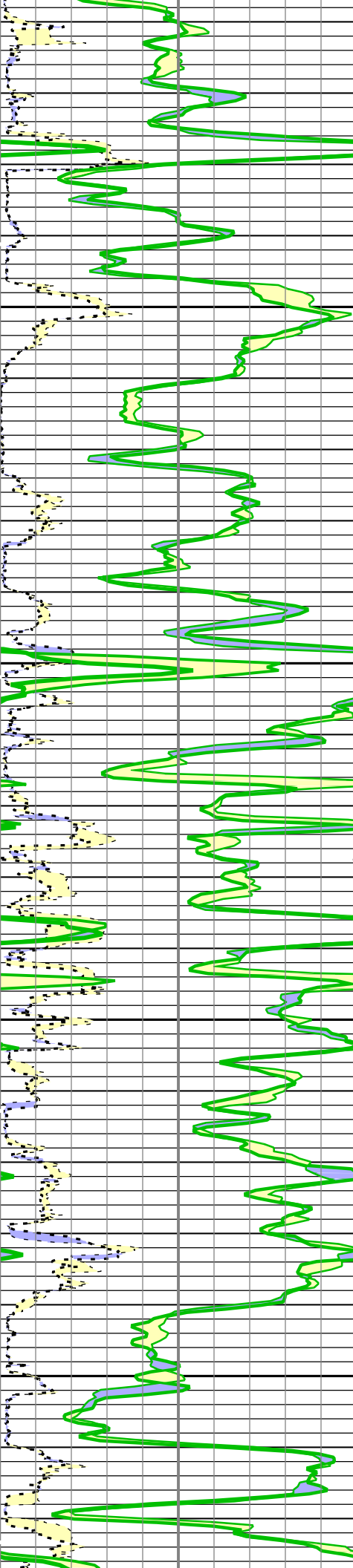
Log

Company:Expedition Water Solution LLC Well:EWS 1
Run1: PEX-AIT: Log[3]:Up:S003

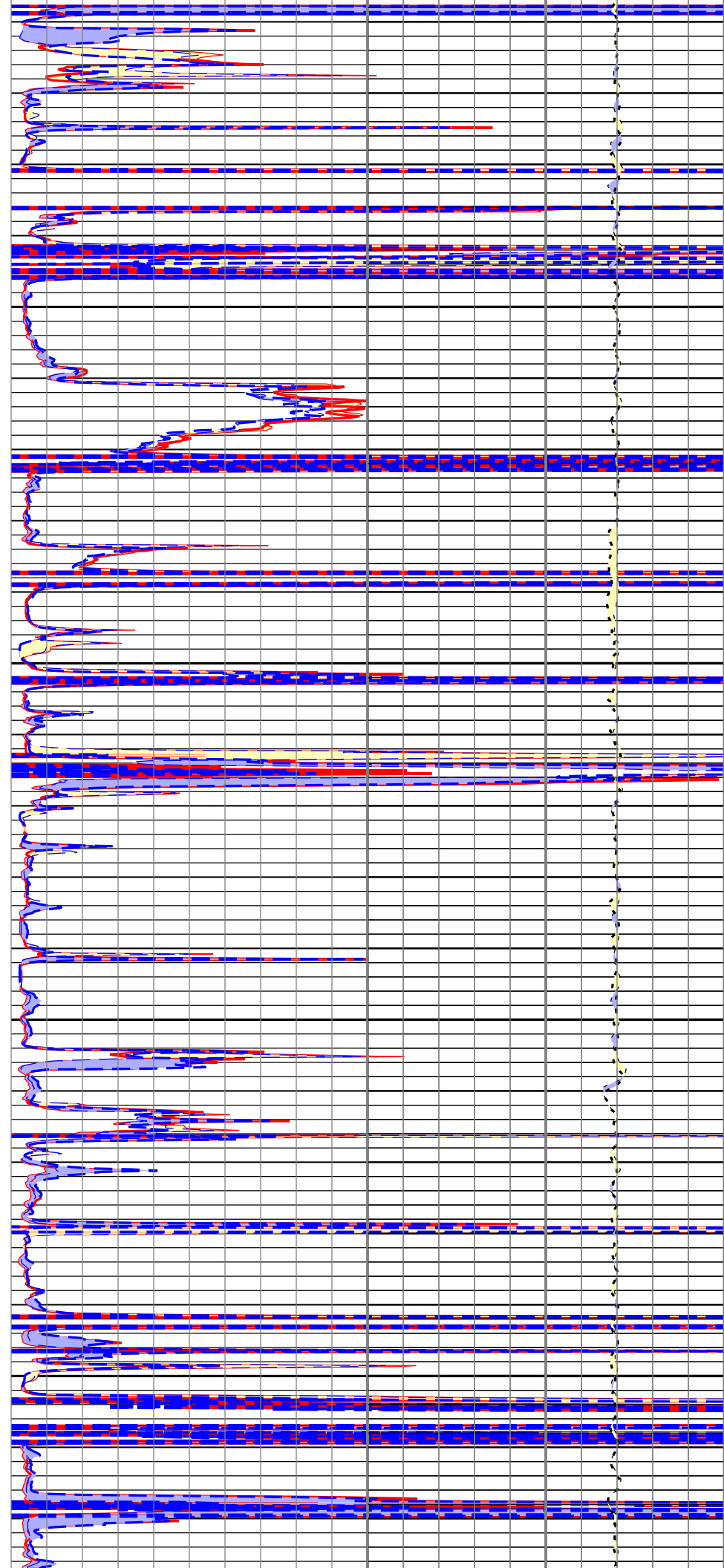
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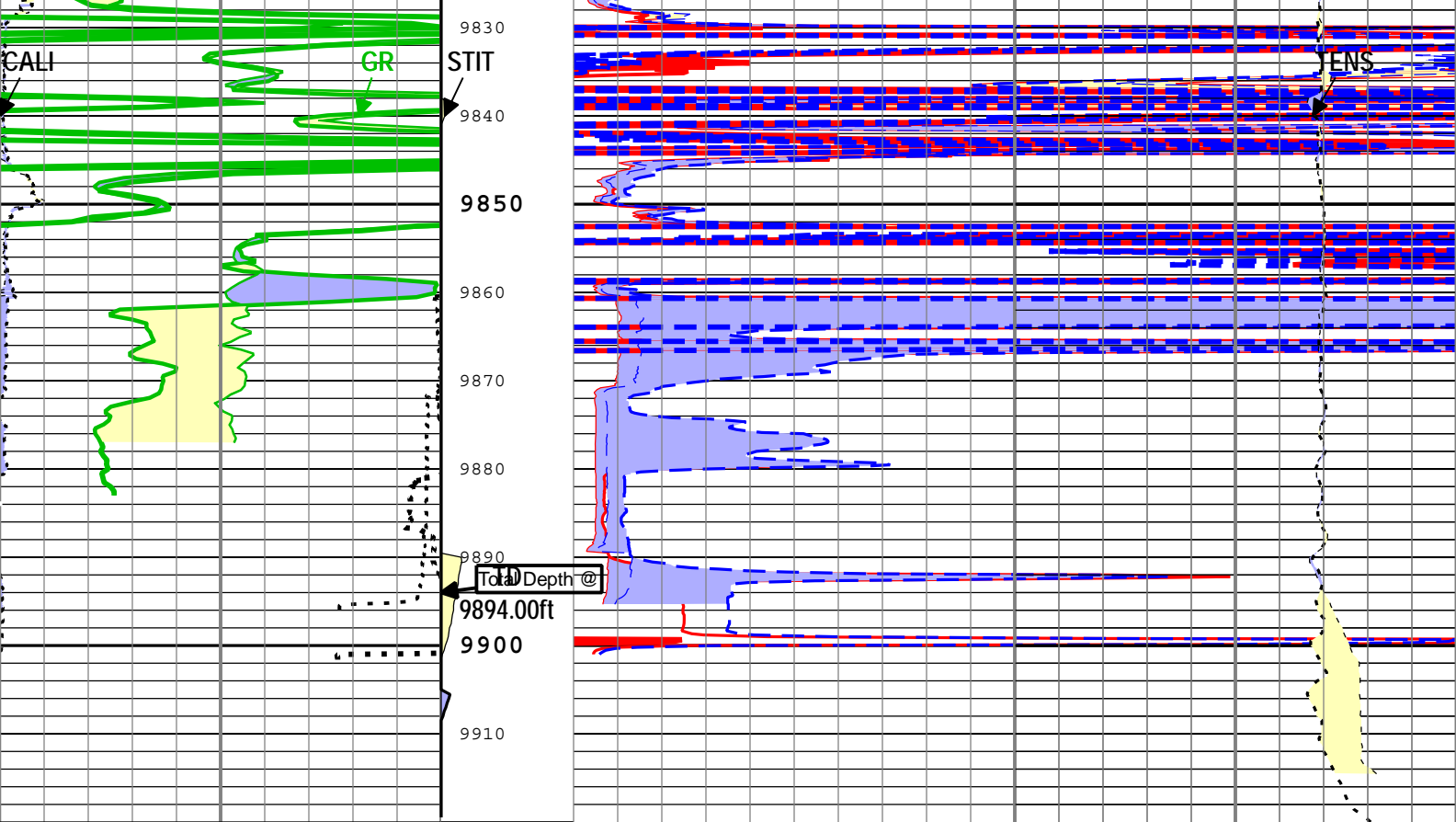
TIME_1900 - Time Marked every 60.00 (s)





9610
9620
9630
9640
9650
9660
9670
9680
9690
9700
9710
9720
9730
9740
9750
9760
9770
9780
9790
9800
9810
9820





Main To Repeat		Main To Repeat		Main To Repeat	
Repeat To Main		Repeat To Main		Repeat To Main	
Caliper (CALI) HDRS-H		Stuck Tool Indicator, Total (STIT)		Synthetic Micro-Inverse Resistivity (SMIN) HDRS-H	
6	in	0	ft	0	ohm.m
Main To Repeat		Main To Repeat		Main To Repeat	
Repeat To Main		Repeat To Main		Repeat To Main	
Gamma Ray (GR) HGNS-H				Synthetic Micro-Normal Resistivity (SMNO) HDRS-H	
200	gAPI			0	ohm.m
Main To Repeat				Main To Repeat	
Repeat To Main				Repeat To Main	
Gamma Ray (GR) HGNS-H				Cable Tension (TENS)	
0	gAPI			10000	lbf

TIME_1900 - Time Marked every 60.00 (s)

Description: MCFL processing for Platform Express Format: Log (KM 5in Micro Log RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 25-Aug-2014 20:31:14

Company:	Expedition Water Solution LLC	Schlumberger
Well:	EWS 1	
Field:	Wildcat	
County:	Weld	
State:	Colorado	
Platform Express		
Mico Log		