

Upper Intermediate Casing Logs

- **Borehole Profile Log / Future Casing Diameter = 13.375"**
- **Platform Express / Compensated Neutron Log / Three Detector Litho-Density**
- **Platform Express / High Resolution Laterolog Array / Micro-CFL\HNGS**

**Borehole Profile Log /
Future Casing Diameter = 13.375”**

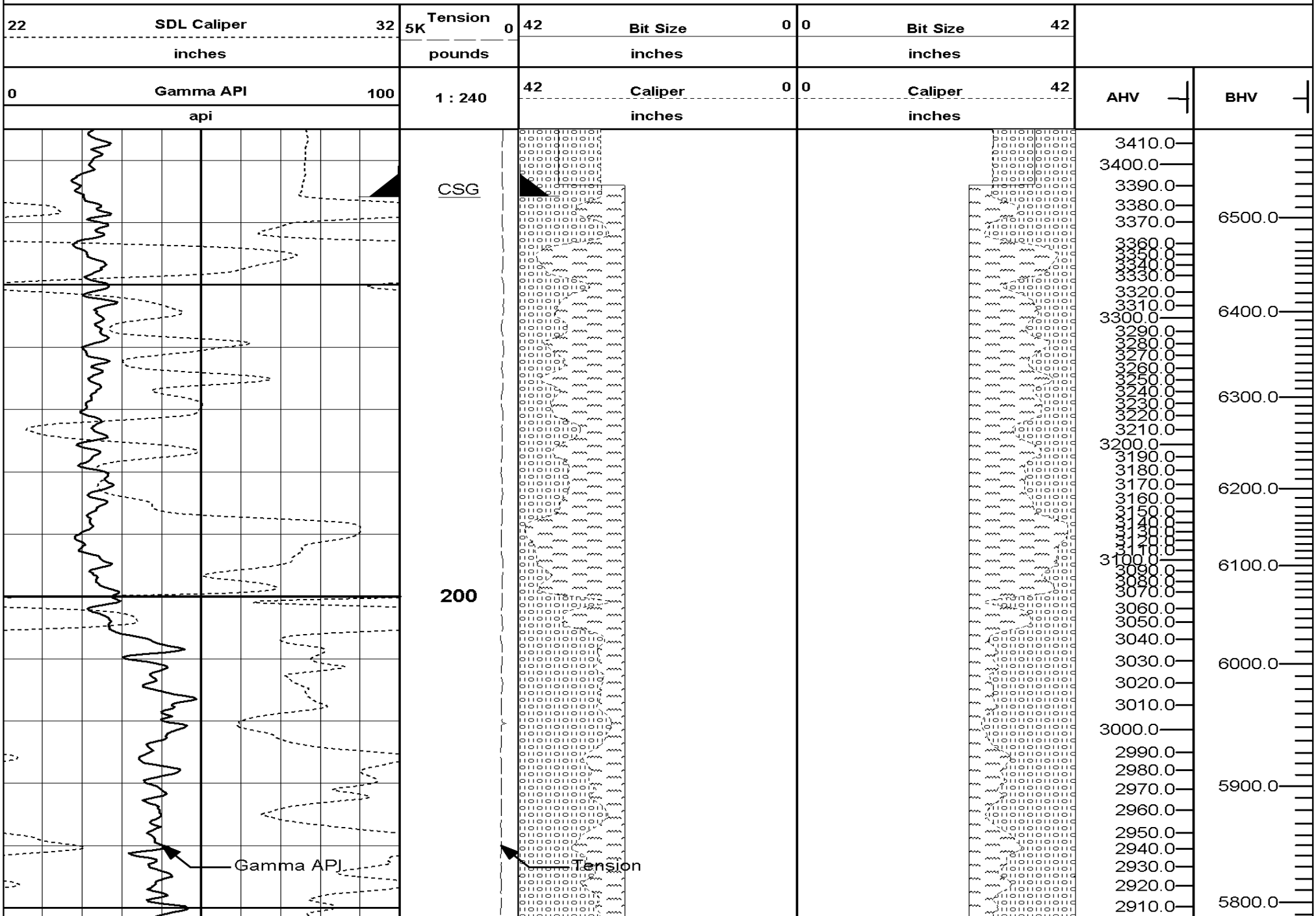
**BOREHOLE
VOLUME
PLOT**

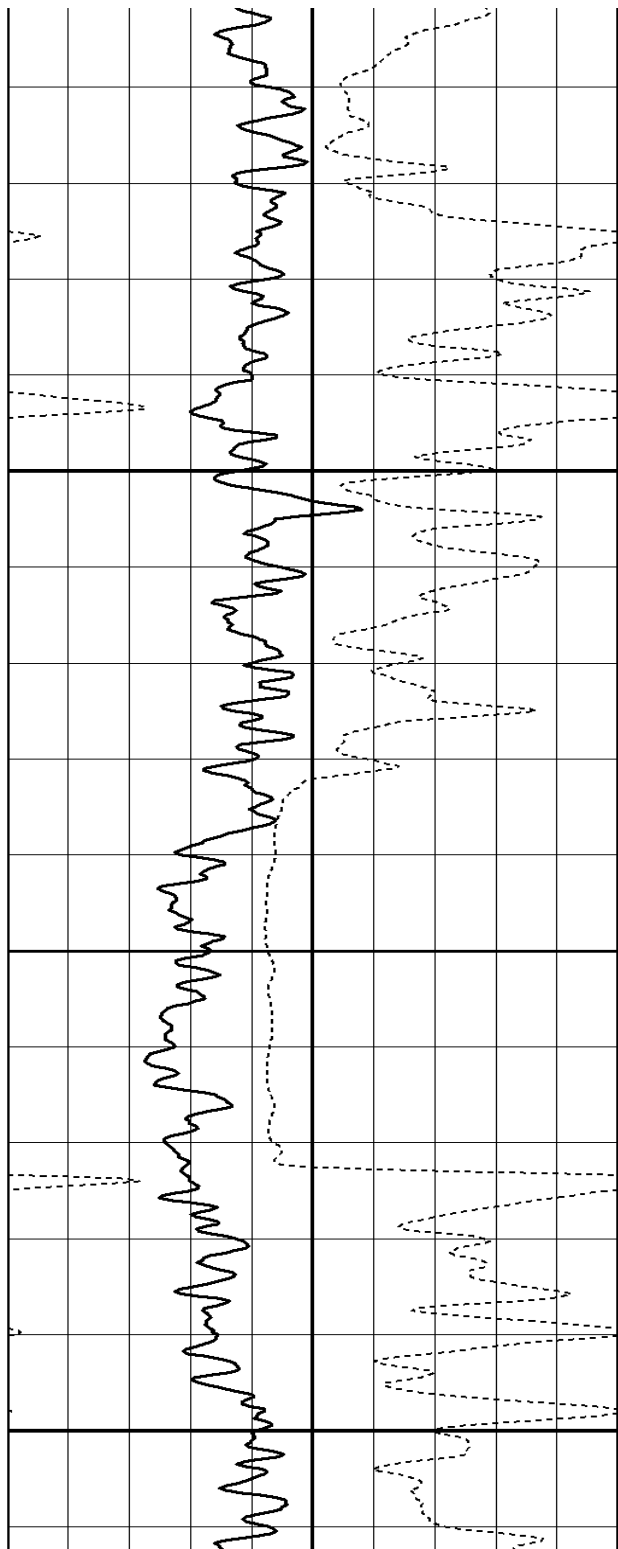
DCP MIDSTREAM, LLC LINAM AGI No 2 AGI; BONE SPRING - WOLFCAMP LEA NEW MEXICO				COMPANY DCP MIDSTREAM, LLC WELL LINAM AGI No 2 FIELD/BLOCK AGI; BONE SPRING - WOLFCAMP COUNTY LEA STATE NEW MEXICO			
COMPANY WELL FIELD/BLOCK COUNTY STATE				DCP MIDSTREAM, LLC LINAM AGI No 2 AGI; BONE SPRING - WOLFCAMP LEA NEW MEXICO			
API No. 30-025-42139 Location 1600' FSL AND 1750' FWL				Other Services: NONE			
Permanent Datum GL Log measured from KB Drilling measured from KB				Elev. 3738.0 ft Elev.: K.B. 3763.0 ft D.F. 3762.0 ft G.L. 3738.0 ft			
Date 20-Oct-14							
Run No. ONE							
Depth - Driller 1580.00 ft							
Depth - Logger 1574.0 ft							
Bottom - Logged Interval 1562 ft							
Top - Logged Interval 136 ft							
Casing - Driller 30.000 in @ 145.0 ft				@			
Casing - Logger 134.0 ft							
Bit Size 26.000 in				@			
Type Fluid in Hole Fresh Water							
Density		Viscosity	34.00 s/qt				
PH		Fluid Loss					
Source of Sample FLOWLINE							
Rm @ Meas. Temperature 1.750 ohmm @ 75.00 degF				@			
Rmt @ Meas. Temperature 1.54 ohmm @ 75.00 degF				@			
Rmc @ Meas. Temperature 1.960 ohmm @ 75.00 degF				@			
Source Rmt		Rmc	MEAS				
Rm @ BHT 1.38 ohmm @ 97.0 degF				@			
Time Since Circulation 8.0000 hr							
Time on Bottom 20-Oct-14 09:39:59.000							
Max. Rec. Temperature 97.0 degF @ 1574.0 ft				@			
Equipment		Location	HOBS, NM				
Recorded By CRAIG ISNER							
Witnessed By RUSSELL BENTLEY							

Fold here

Service Ticket No.: 901740028				API Serial No.: 30-025-42139				PGM Version: WL INSITE R4.4.1 (Build 9)			
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES					
Date	Sample No.					Type Log	Depth	Scale Up Hole	Scale Down Hole		
Depth-Driller											
Type Fluid in Hole											
Density	Viscosity										
Ph	Fluid Loss										
Source of Sample						RESISTIVITY EQUIPMENT DATA					
Rm @ Meas. Temp		@		@		Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other	

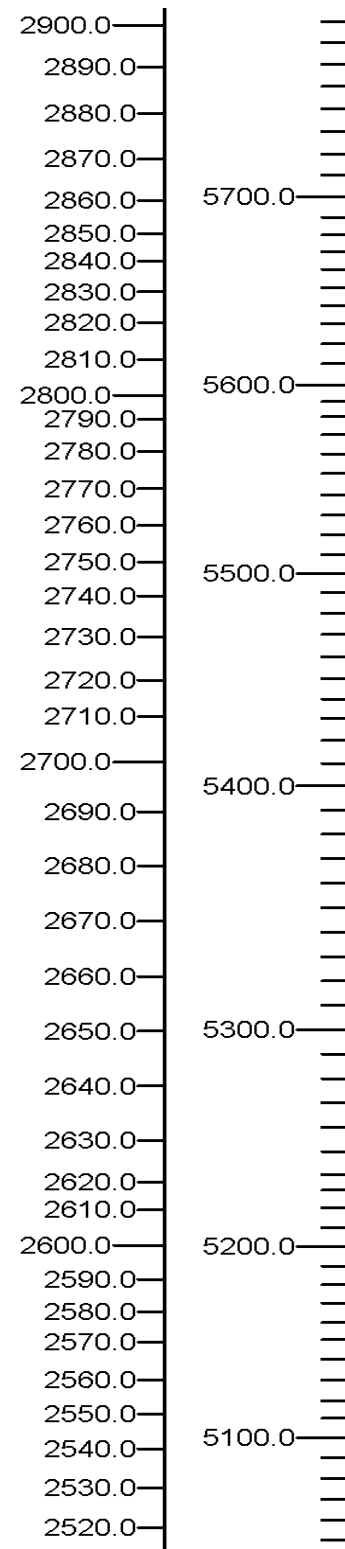
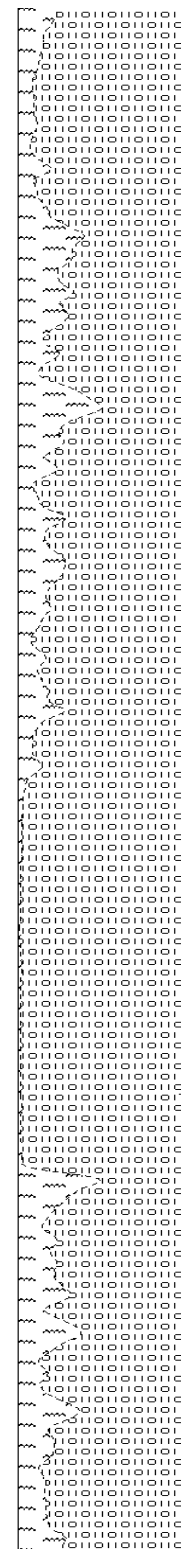
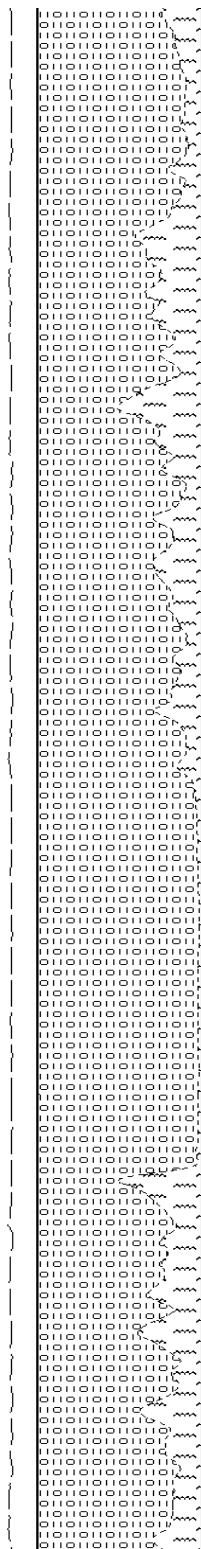
Rmf @ Meas. Temp.		@		@											
Rmc @ Meas. Temp.		@		@											
Source Rmf	Rmc														
Rm @ BHT		@		@											
Rmf @ BHT		@		@											
Rmc @ BHT		@		@											
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.		ONE		Run No.				Run No.				Run No.			
Serial No.		10778013		Serial No.				Serial No.				Serial No.			
Model No.		GTET		Model No.				Model No.				Model No.			
Diameter		3.625 in		No. of Cent.				Diameter				Diameter			
Detector Model No.		T-102A		Spacing				Log Type				Log Type			
Type		SCINT						Source Type				Source Type			
Length		8 in		LSA [Y/N]				Serial No.				Serial No.			
Distance to Source		N/A		FWDA [Y/N]				Strength				Strength			
LOGGING DATA															
GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON			
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix	
No.	From	To	ft/min	L	R	L	R		L	R		L	R		
ONE	1574	136	REC	0	100										
DIRECTIONAL INFORMATION															
Maximum Deviation @								KOP @							
Remarks: WELL SITE COORDINATES: LAT:32.72 deg N; LONG: 103.29 deg W															
TOOL STRING: GTET-ICT-CENT															
ANNULAR HOLE VOLUME CALCULATED USING 20 in CASING															
HES CREW: V. SOLIS, R. GRANGER															
ALL HALLIBURTON DEPTH CONTROL PROCEDURES FOLLOWED: FMM: 95.2 ft; LMM: 1495.4 ft															
THANK YOU FOR USING HALLIBURTON ENERGY SERVICES! 1-800-416-6081 (HOBBS, NM)															
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.															
HALLIBURTON															

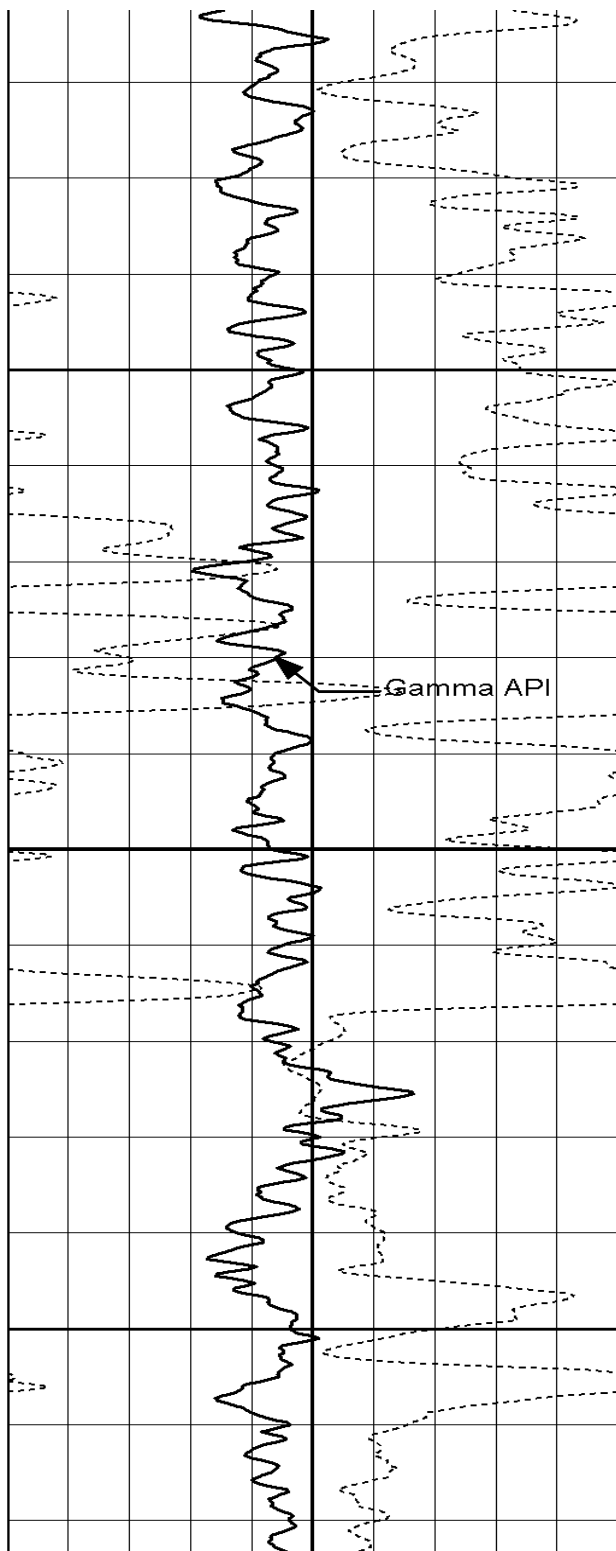




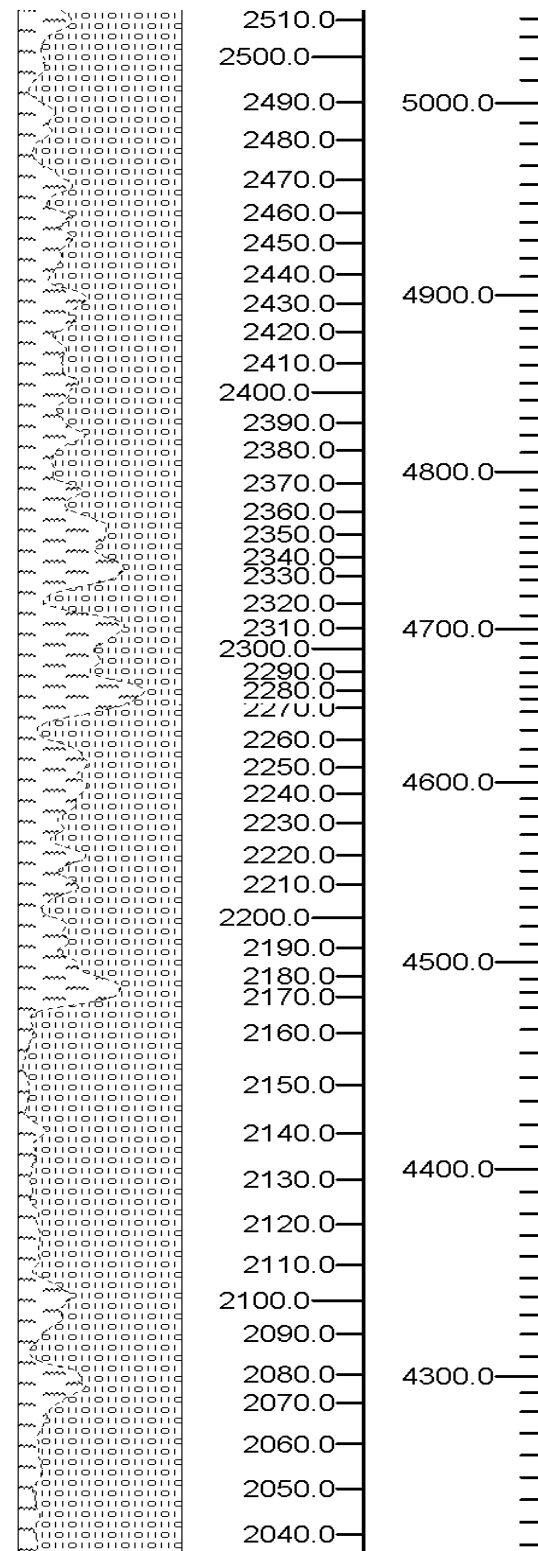
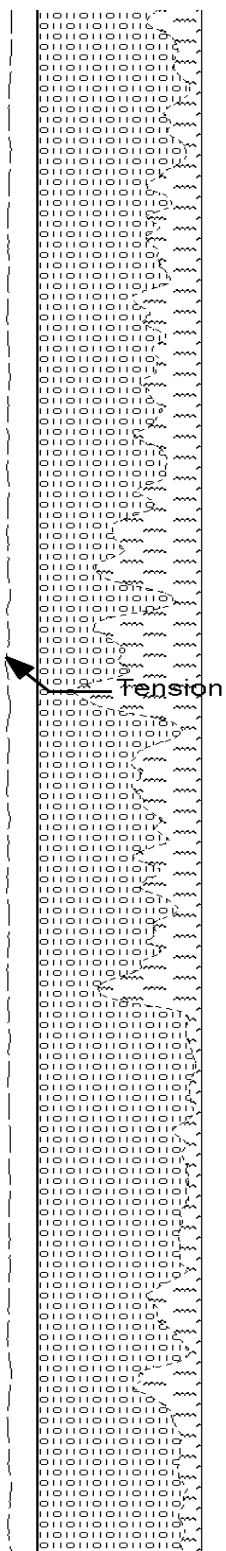
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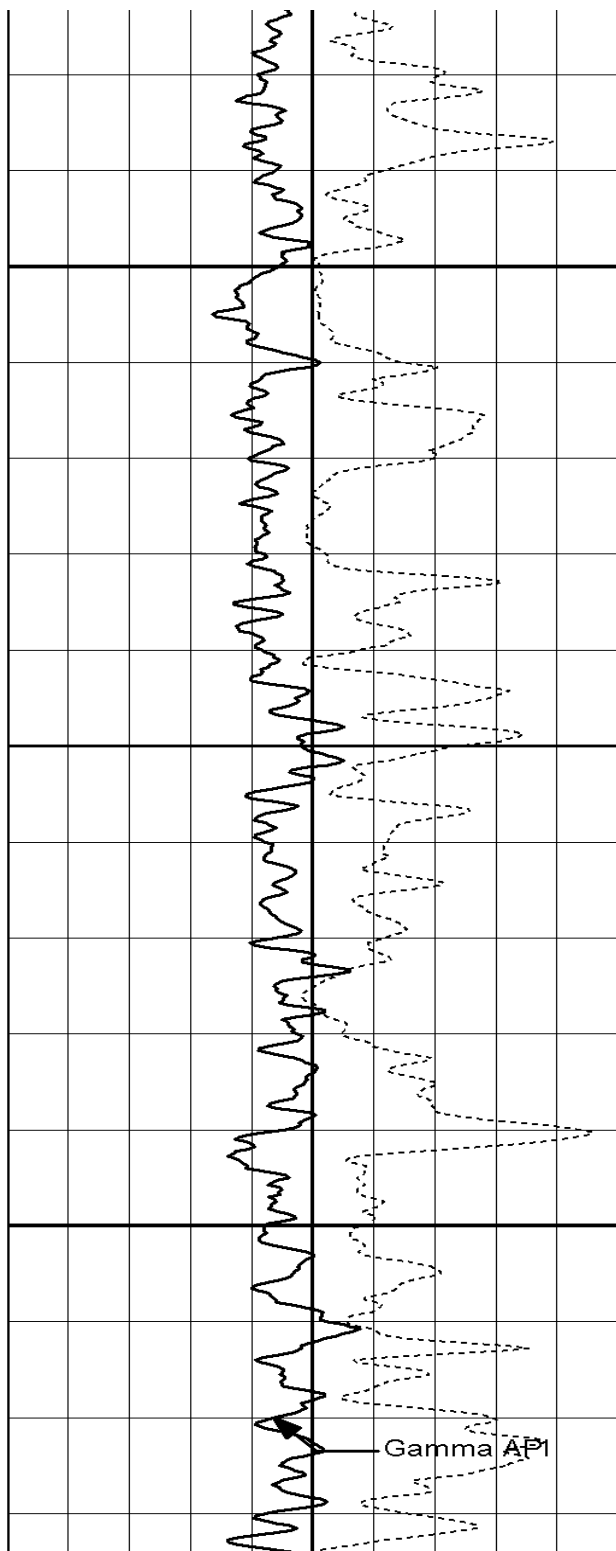
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500

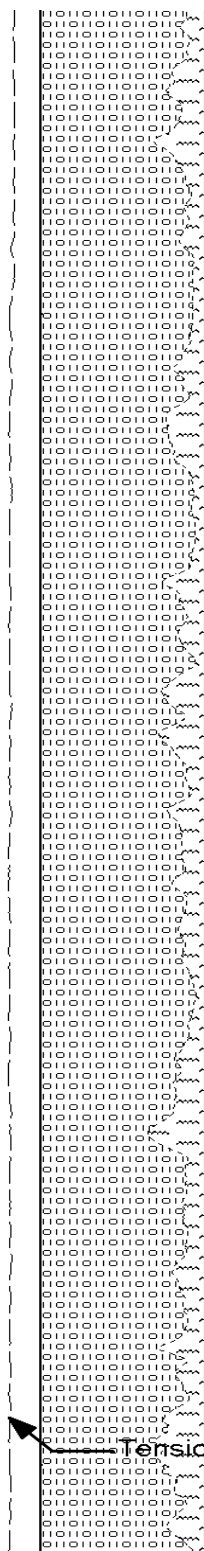




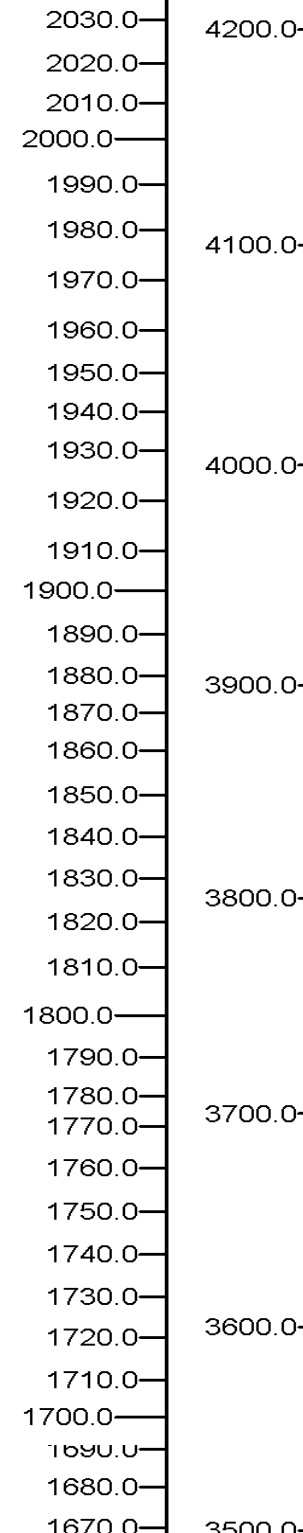
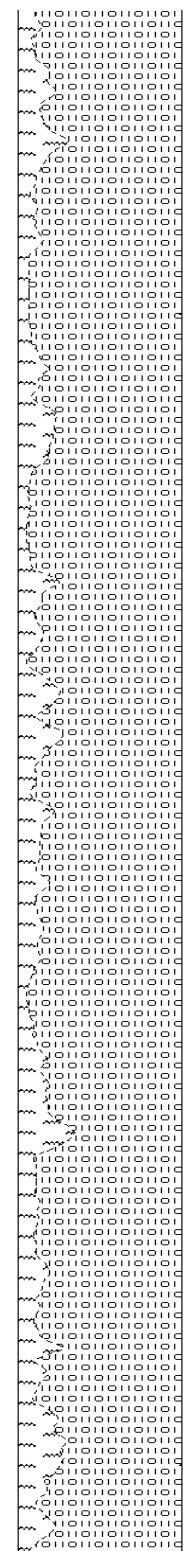
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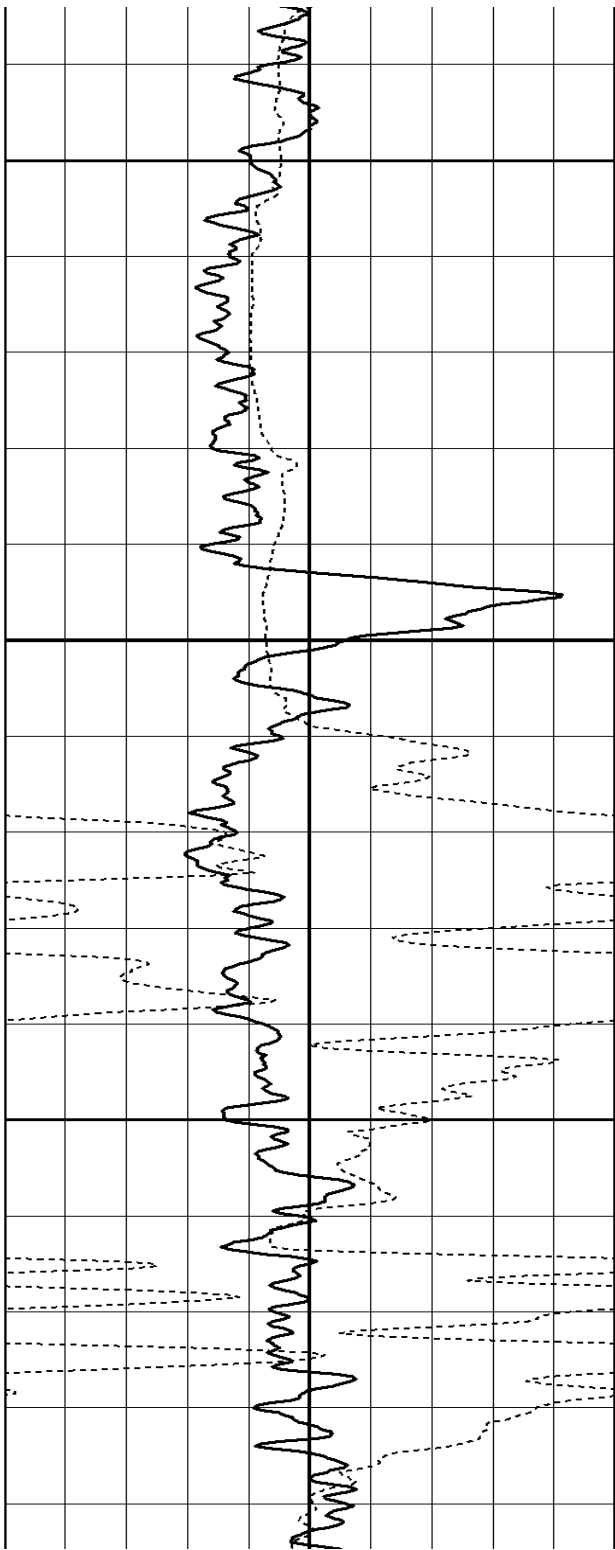
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Gamma AP1

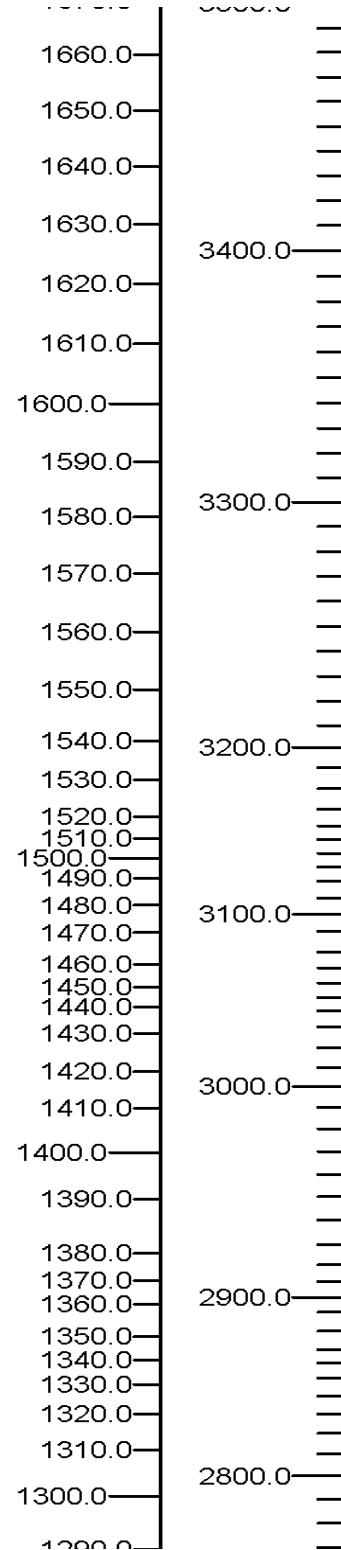
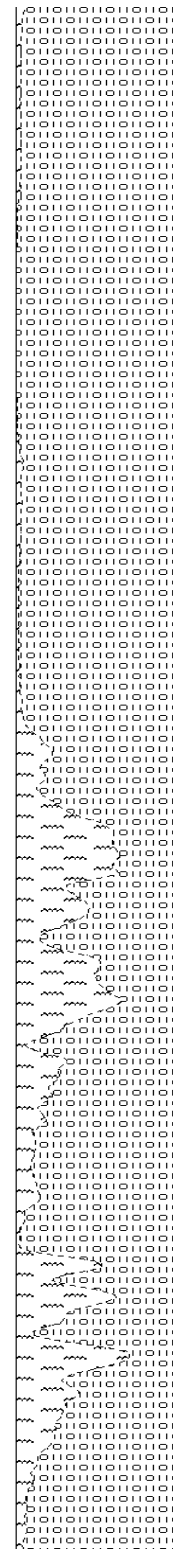
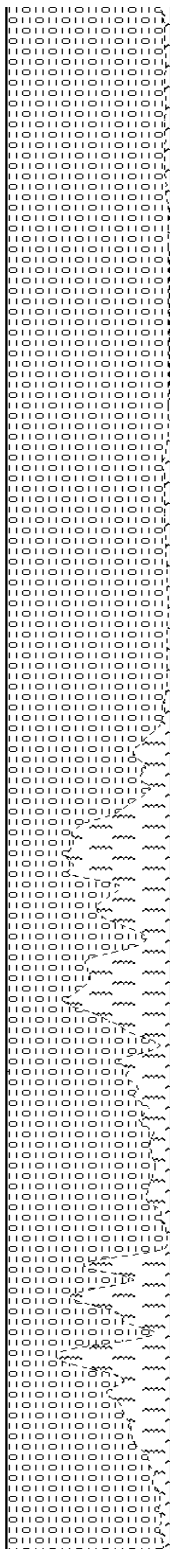


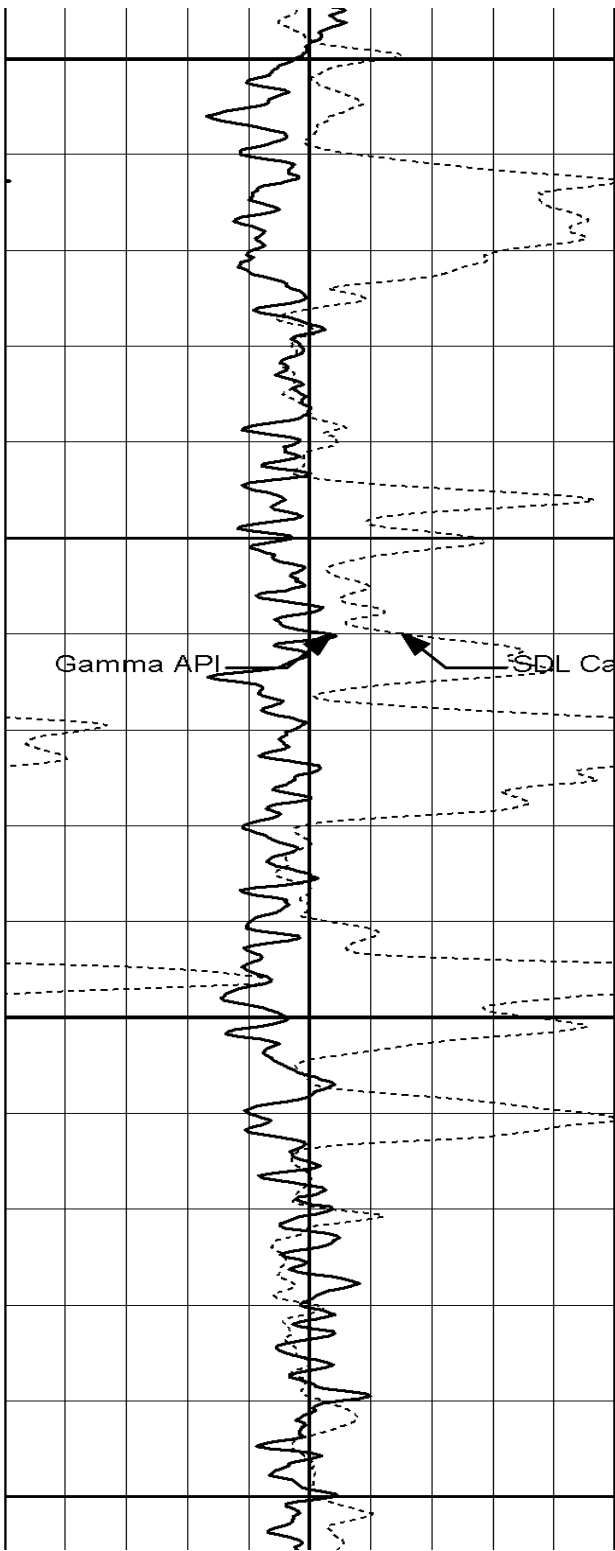
Tension





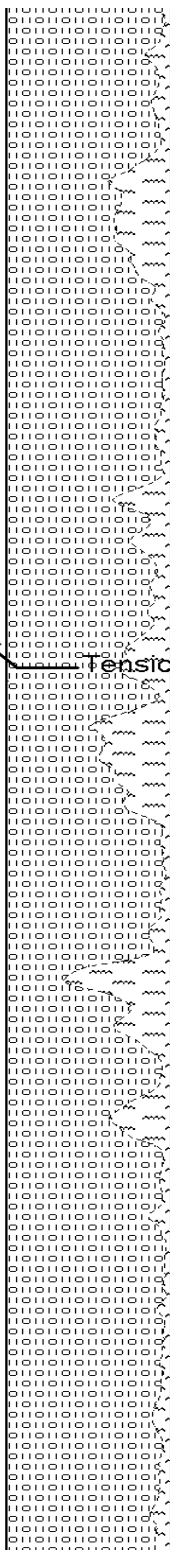
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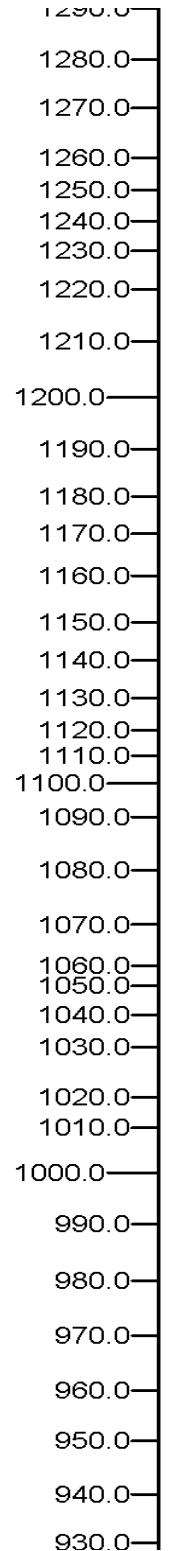
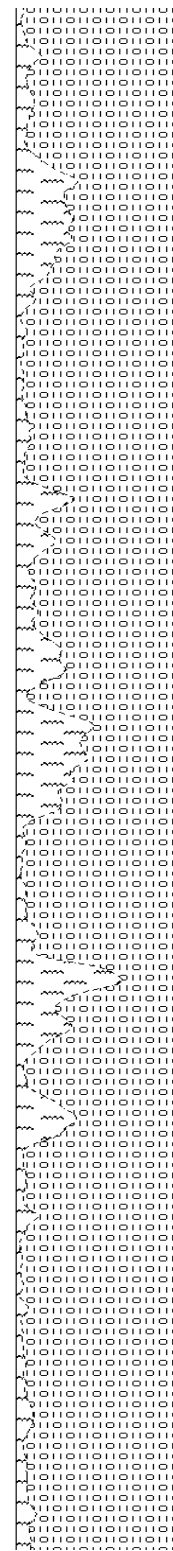


900

1000



ension



2700.0

2600.0

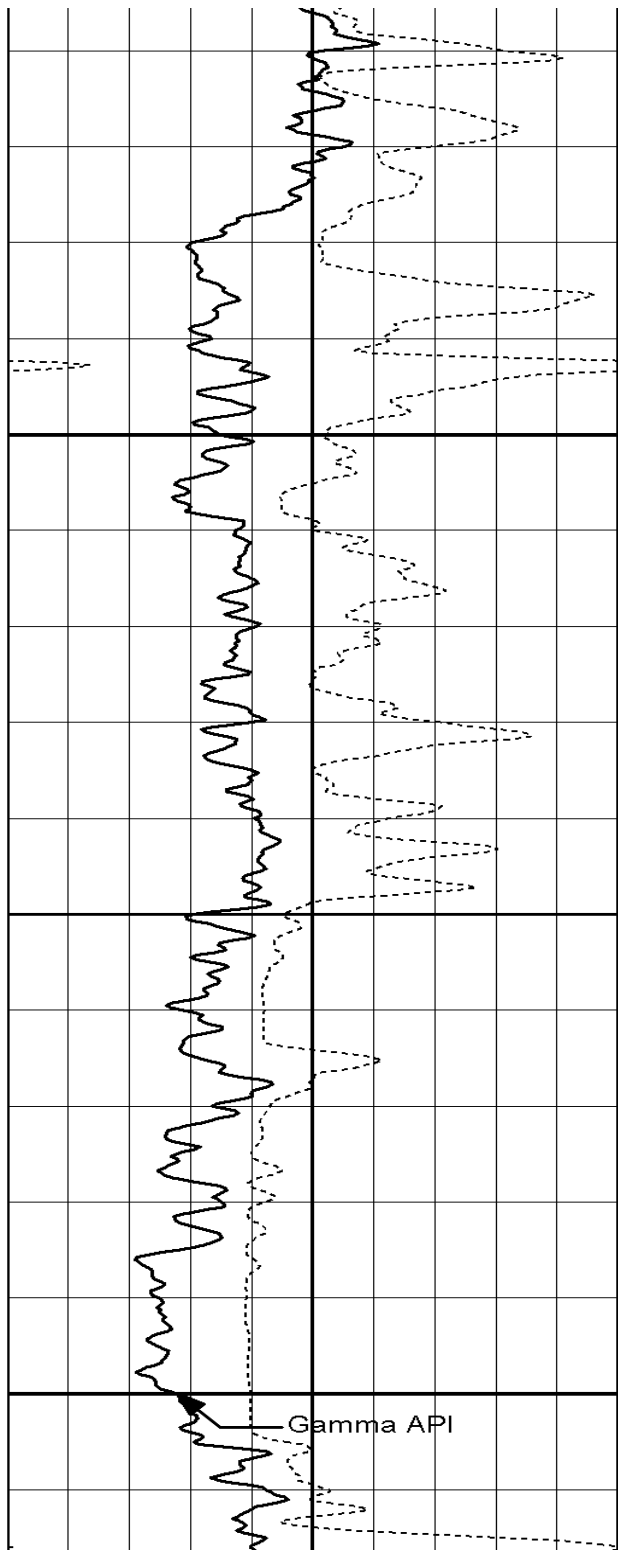
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2300.0

2200.0

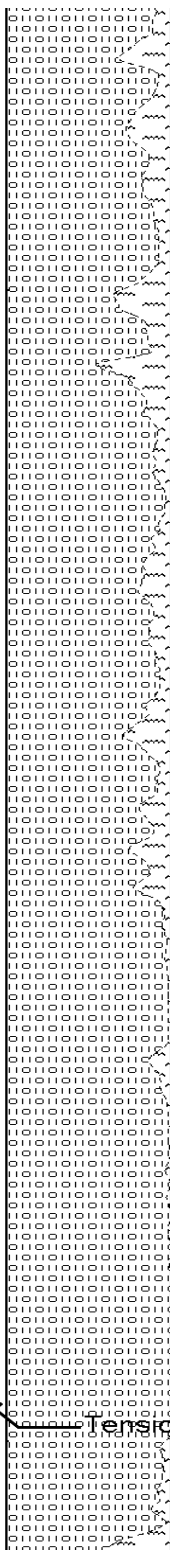
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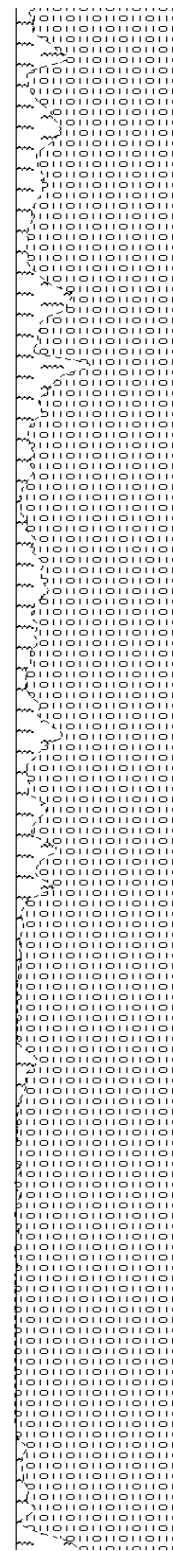
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1200

Gamma API

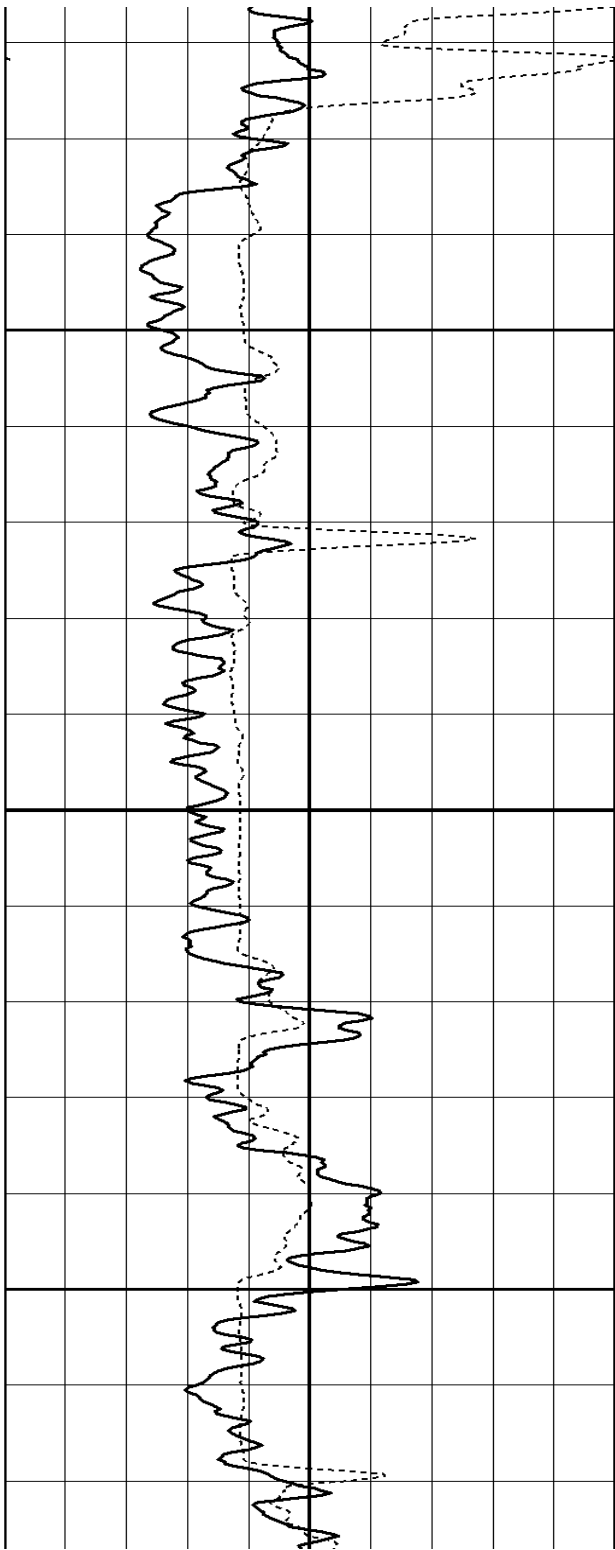


Gamma Tension

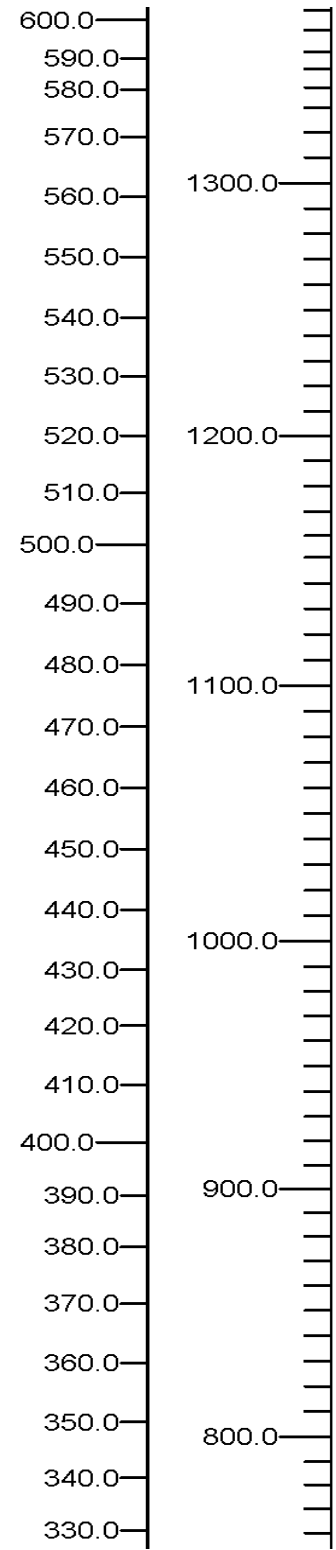
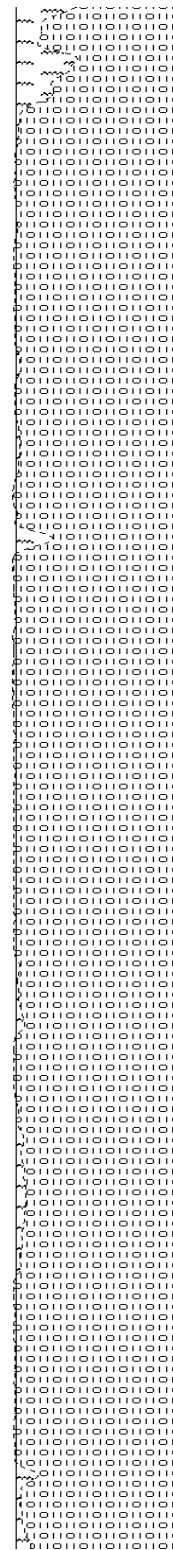
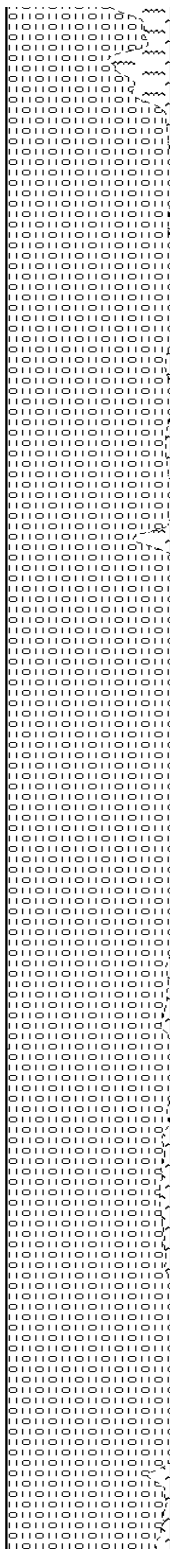


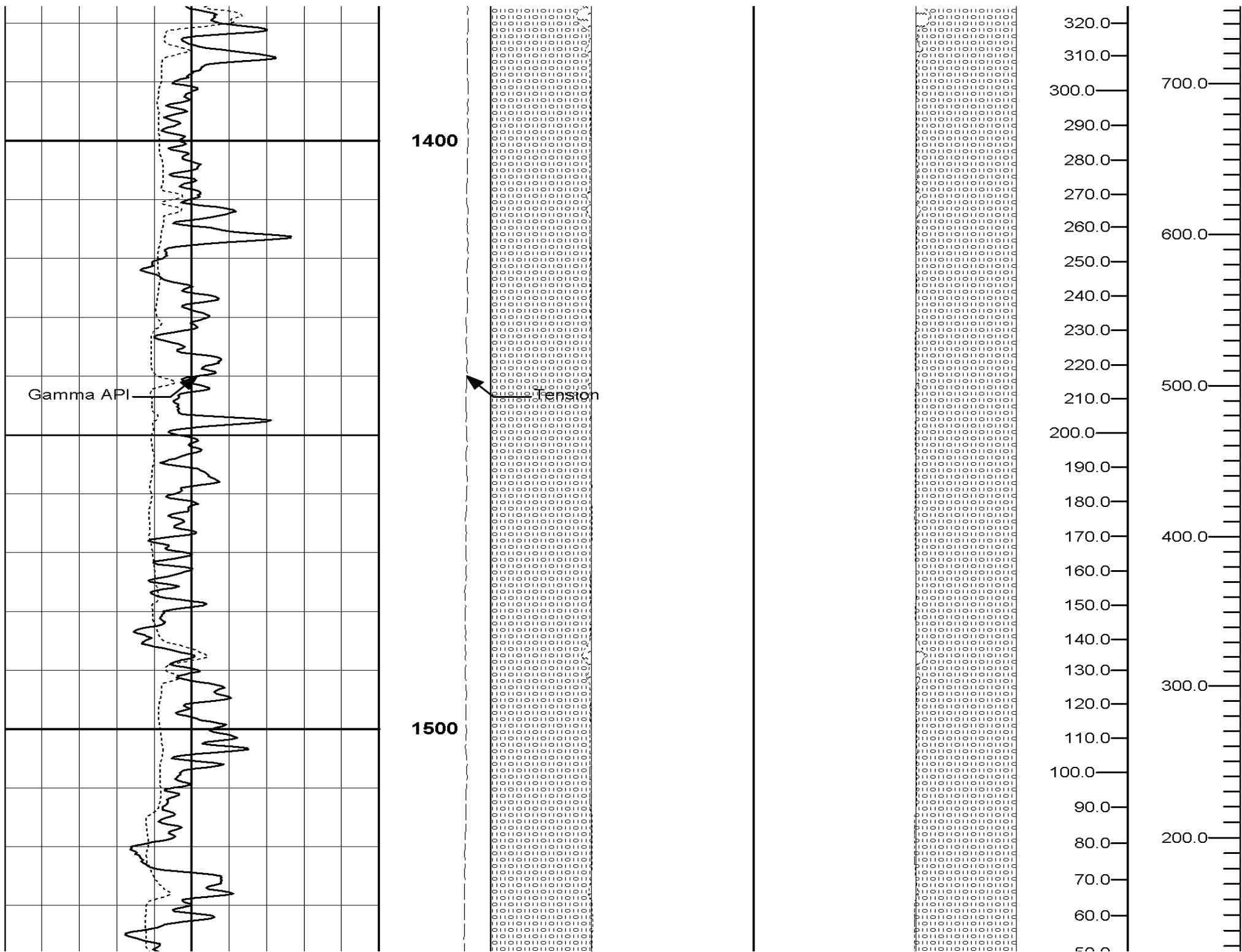
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610.0

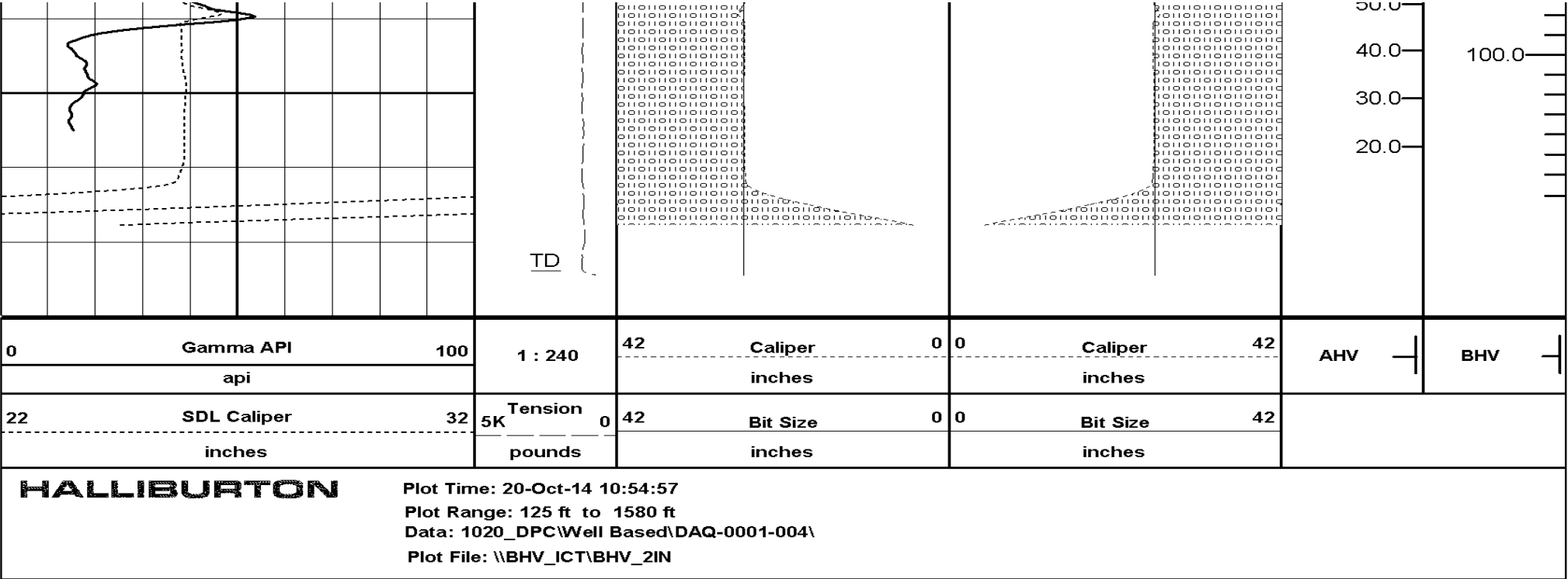
2000.0
1900.0
1800.0
1700.0
1600.0
1500.0
1400.0



1300







COMPANY	DCP MIDSTREAM, LLC
WELL	LINAM AGI No 2
FIELD	AGI; BONE SPRING - WOLFCAMP
COUNTY	LEA
STATE	NEW MEXICO
HALLIBURTON	BOREHOLE VOLUME PLOT

Platform Express /
Compensated Neutron Log /
Three Detector Litho-Density

Company: PB ENERGY STORAGE SERVICES, INC

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County: Lea State: New Mexico

Platform Express

Compensated Neutron Log

Three Detector Litho-Density

County:		Lea		
Field:		AGI; Bone Spring-Wolfcamp		
Location:		1600' FSL & 1750' FWL		
Well:		DCP Linam Ranch AGI #2		
Company:		PB ENERGY STORAGE SERVICES, INC		
API Serial No. 30-025-42139 Section: 30 Township: 18S Range: 37E		Location:		
		1600' FSL & 1750' FWL	Elev.:	K.B. 3763.00 ft
				G.L. 3738.00 ft
				D.F. 3762.00 ft
		Permanent Datum:	Ground Level	Elev.:
Log Measured From:	Kelly Bushing	25.00 ft	above Perm. Datum	
Drilling Measured From:	Kelly Bushing			

Run Number One

Depth Driller 3220.00 ft

Schlumberger Depth 3226.75 ft

Bottom Log Interval 3205.84 ft

Top Log Interval 1580.67 ft

Casing Driller Size @ Depth 20 in @ 1570.00 ft

Casing Schlumberger 1580.67 ft

Bit Size 17.5 in

Type Fluid In Hole Salt Brine

Density 9.8 lbm/gal 31 s

Fluid Loss PH 0 cm3 10

Source of Sample Active Tank

RM @ Meas Temp 0.06 ohm.m @ 64.5 degF

RMF @ Meas Temp 0.04 ohm.m @ 75 degF

RMC @ Meas Temp 0.06 ohm.m @ 75 degF

Source RMF Pressed

RM @ BHT 0.04 @ 107.3 0.03 @ 107.3

Max Recorded Temperatures 107.3 degF

Circulation Stopped 31-Oct-2014 19:00:00

Logger on Bottom 01-Nov-2014 05:26:09

Unit Number 2133

Recorded By Emil Ludick Roswell

Witnessed By Russell Bentley

Disclaimer

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 - Composite Summary

- One Main Pass 1" = 100'
 - Integration Summary
 - Composite Summary
 - Log (Porosity 1 inch General)

8.2 Log (Porosity_5_Inch RA)

9. One Repeat Pass 5" = 100'

9.1 Integration Summary

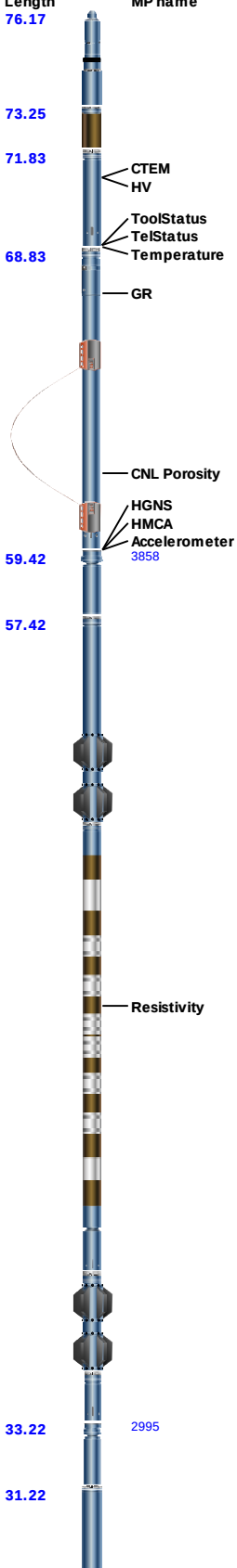
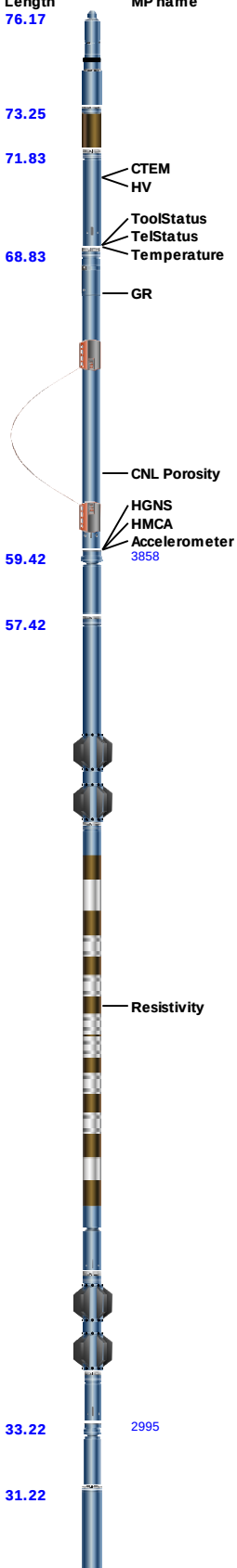
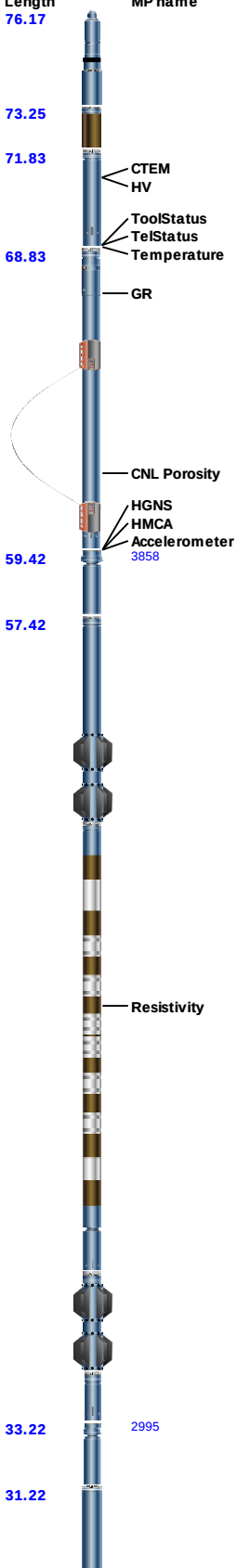
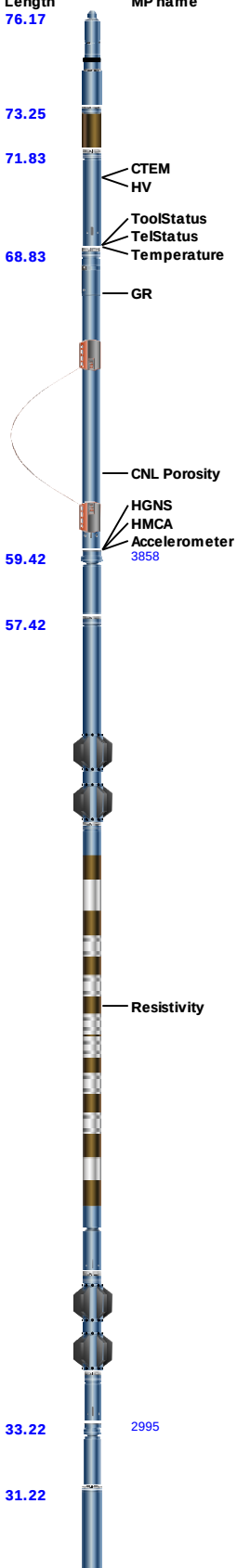
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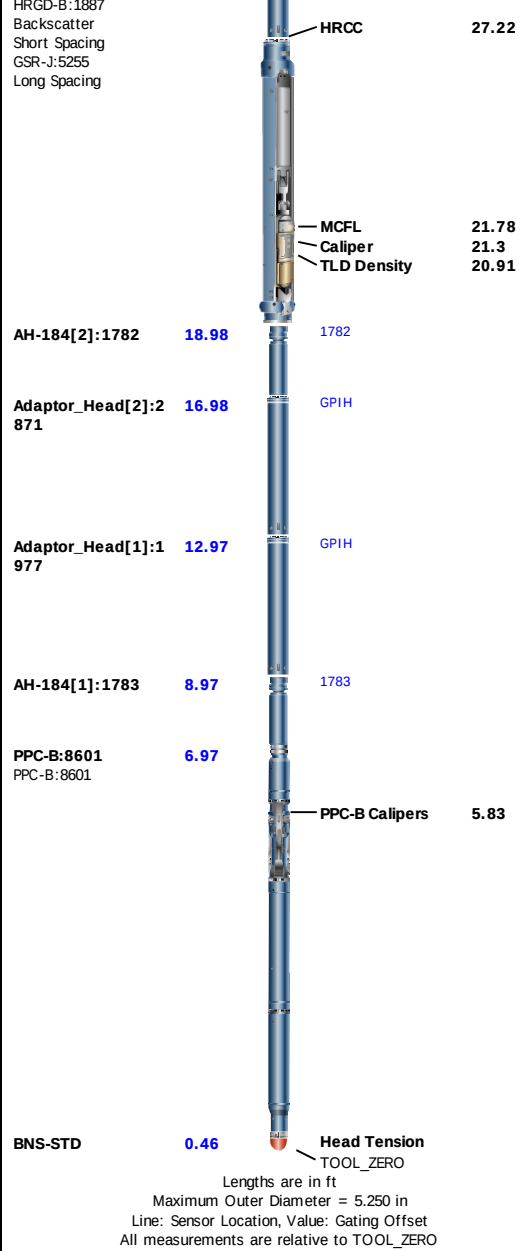
9.3 Log (Porosity_5_Inch)

10. Calibration Report

11. Tail

Remarks and Equipment Summary

One: Toolstring				One: Remarks
Equip name LEH-QT:3338 LEH-QT:3338	Length 76.17	MP name	Offset	THANK YOU FOR CHOOSING SCHLUMBERGER!
AH-369:1858	73.25		70.93 0.00	LOGGER REQUESTED: 00:00 01-NOV-2014 LOGGER ARRIVED: 18:00 31-OCT-2014 RIG READY: 03:00 01-NOV-2014 RIG: PRECISION 107
				CREW: E. LUDICK, M. MARTINEZ, J. MENDOZA
DTC-H:8131 ECH-KC:10149 DTC-H:8131	71.83		68.82 68.82 68.8	TOOLS RUN AS PER TOOL SKETCH AND PRESENTATIONS AS PER CLIENT REQUES
HGNS-B:3960 HGNS-B:3960 NPV-N NSR-F:5061 HMCA-B HGNS-B:3960 HACCZ-B:4001	68.83		68.82 68.82 68.8	CALIPERS CHECKED IN CASING WITH INNER CASING ID OF 19.00 INCHES.
				68.08
AH-107:3858	59.42		61.75 59.42 59.42 0.00	HGNS ECCENTRALIZED WITH STANDARD BOWSPRING. HGNS TEMP. SENSOR USED TO DETERMINE MAXIMUM BOREHOLE TEMPE
				HGNS WEAR RING 0.125".
HRLT-B:1884 HRUH-B:994 HRUC-B:979 HRLS-B:1884 HRLH-B:790 HRLC-B:790 AH-270:959	57.42			MATRIX LIMESTONE GIVEN BY CLIENT WITH LOGS PRESENTED ON LIMESTONE COMPATIBLE SCALE.
AH-184[3]:2995	33.22		45.65	MATRIX LIMESTONE DENSITY 2.71 g/cc AND FLUID DENSITY 1.1 g/cc.
				PPC USED TO DETERMIN HOLE VOLUME.
HDRS-B:1783 ECH-MEB:952 HRCC-B:952 HRMS-B:1783 GPV-Q	31.22			



Depth Summary			
		One	
Depth Measuring Device			
Type	IDW-B		
Serial Number	6307		
Calibration Date	02-SEP-2014		
Calibrator Serial Number			
Calibration Cable Type	7-46P-XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		
Tension Device			
Type	CMTD-B/A		
Serial Number	3872		
Calibration Date	03-OCT-2014		
Calibrator Serial Number	1019		
Number of Calibration Points	0		
Logging Cable			
Type	7-46P-XS		
Serial Number	U713011		
Length	19700.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		

One:Depth Control Parameters		Depth Control Remarks
Log Sequence	Subsequent Trip To the Well	IDW USED AS PRIMARY DEPTH CONTROL DEVICE.
Reference Log Name	AIT	Z-CHART USED AS SECONDARY DEPTH CONTROL DEVICE.
Reference Log Run Number	One	FOLLOWED SCHLUMBERGER FULL DEPTH CONTROL POLICY DATED APRIL 7TH, 2012.
Reference Log Date	12-Oct-2014	STRETCH CORRECTION OF 3.59 ft APPLIED BY COMPARING MAIN PASS TO CORRELATION LOG.
Subsequent Trip Down Log Correction		ALL LOGS CORRELATED CORRELATION LOG.

One

Main Pass 2" = 100'

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	HVAS, FCD	1889.09	ft3
IHV	Integrated Hole Volume	HVAS	3507.4	ft3

Software Version

Acquisition System	Version
MaxWell	4.0.9163.3000
Application Patch	Patch-SP-10767_22480-4.0.9163.3001

Computation	Description	Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels	4.0.9469.3000
HENVIR	Computation Ensemble for the HGNS Neutron environmental corrections	4.0.9360.3000

Tool Elements	Description	Software Version	Firmware Version
HRGD-B	HILT Resistivity Gamma-Ray Density Device, 125 degC	4.0.9385.3000	3.0
HGNS-B	HILT Gamma-Ray and Neutron Sonde, 125 degC	4.0.9385.3000	2.0
HRCC-B	HILT High-Resolution Control Cartridge, 125 degC	4.0.9385.3000	2.0

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Main[5]:Up	Up	810.48 ft	3245.53 ft	01-Nov-2014 5:51:35 AM	01-Nov-2014 6:34:07 AM	ON	3.59 ft	Yes

All depths are referenced to toolstring zero

Log

Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2

One: Main[5]:Up:S012

Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:35

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
HDRA	HDRS-B:HRMS-B:HRGD-B	2in
ICV	Borehole	6in
IHV	Borehole	6in
RHOZ	HDRS-B:HRMS-B:HRGD-B	2in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in

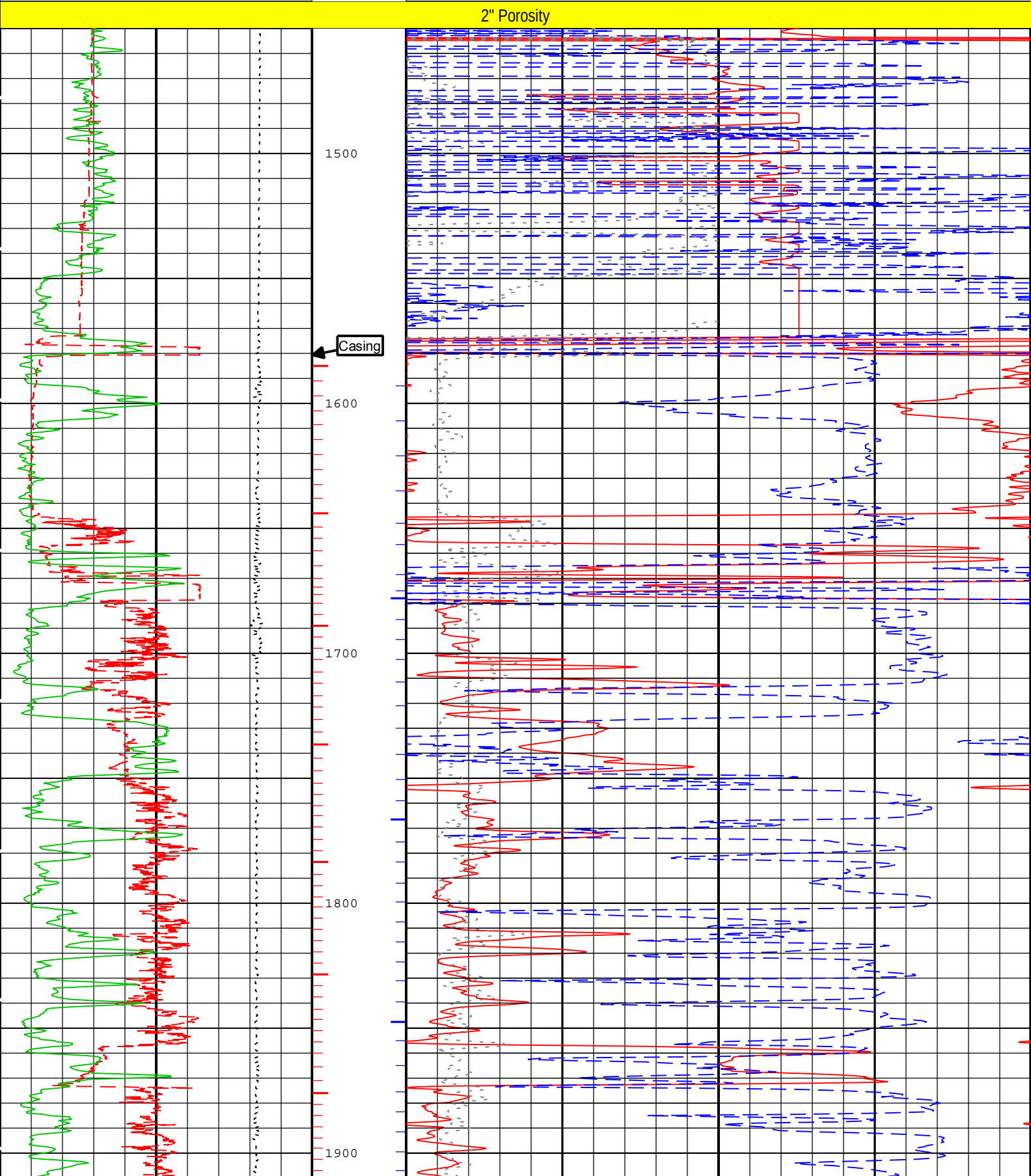
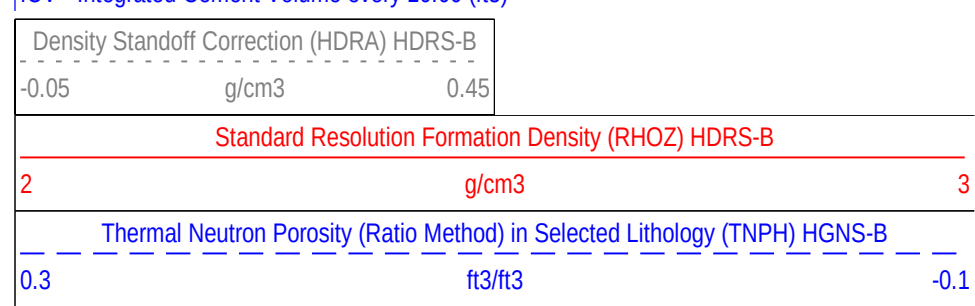
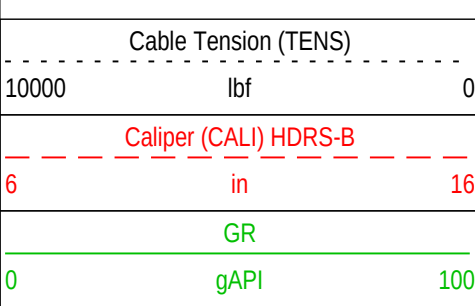
— IHV - Integrated Hole Volume every 100.00 (ft3)

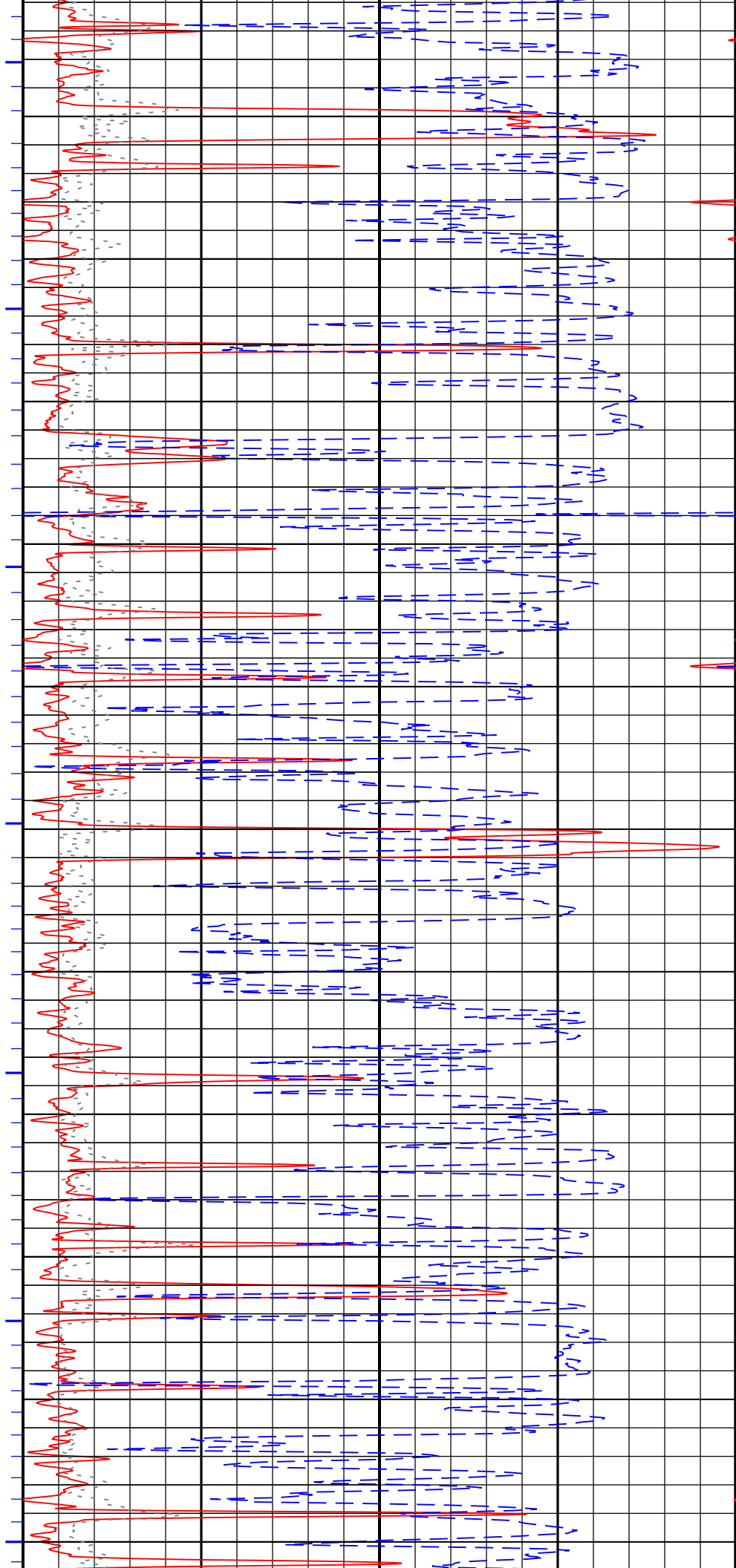
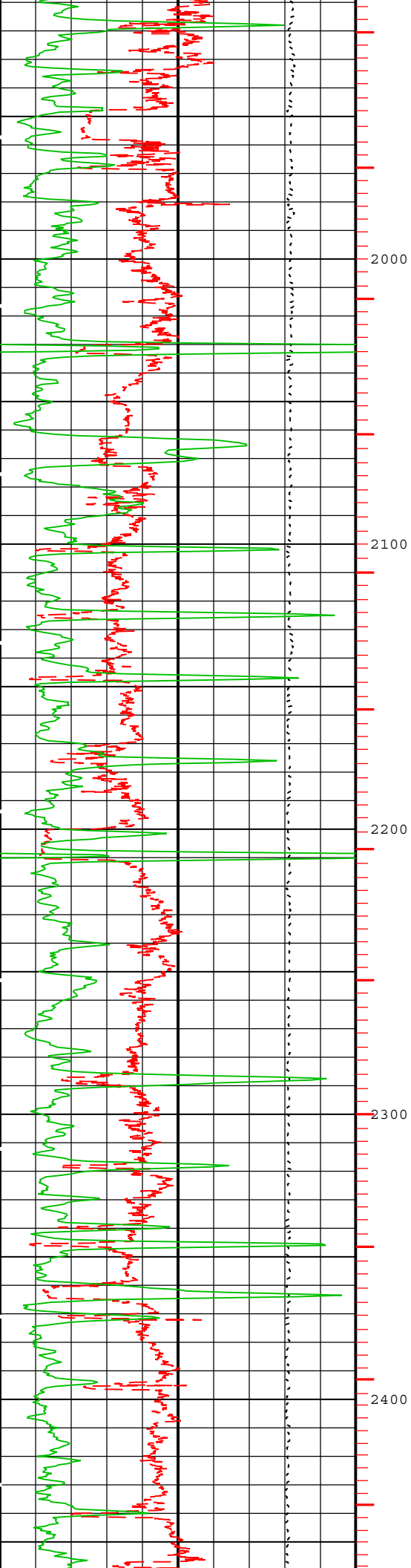
TIME 1900 - Time Marked every 60.00 (s)

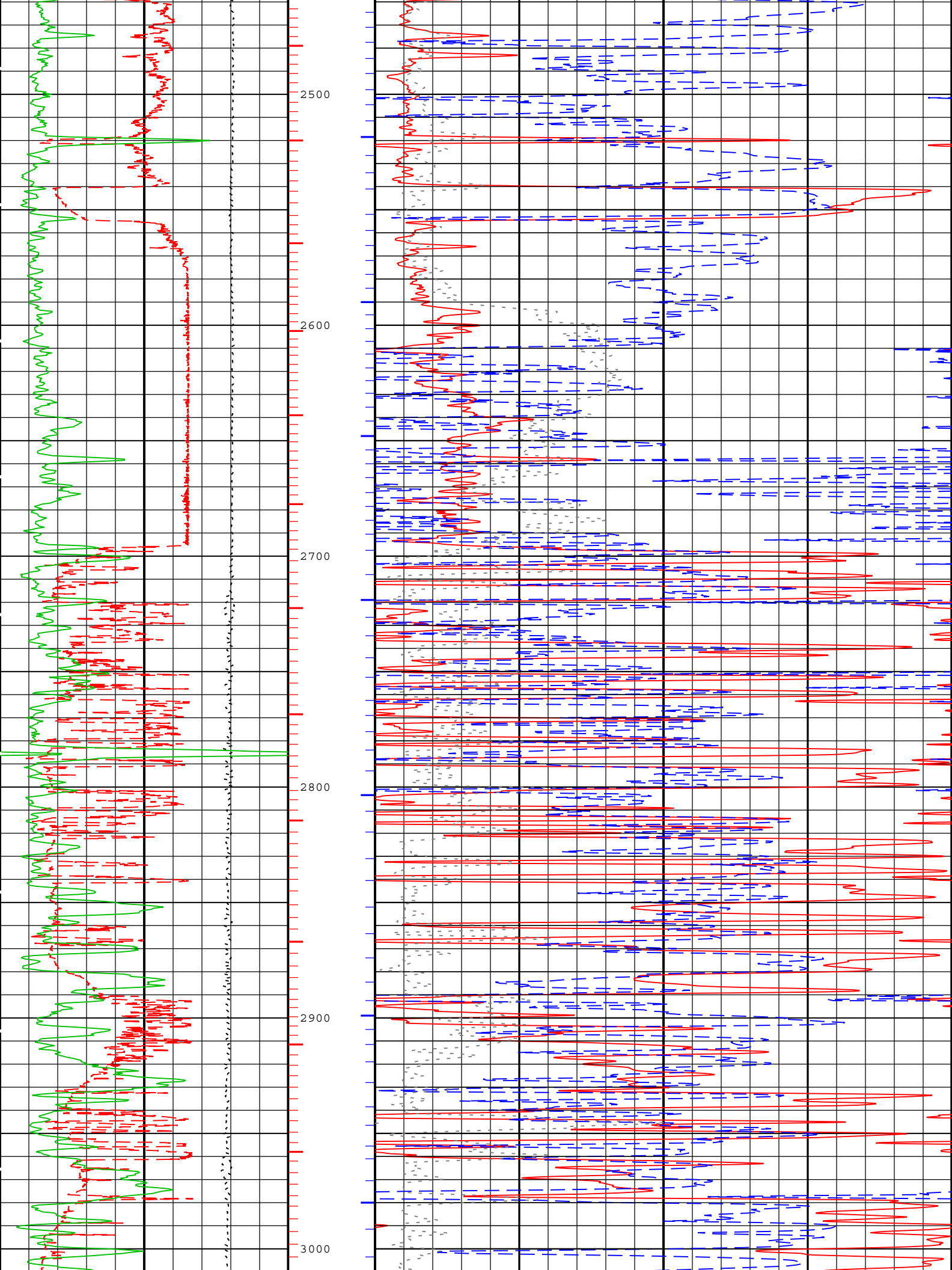
└ IHV - Integrated Hole Volume every 10.00 (ft3)

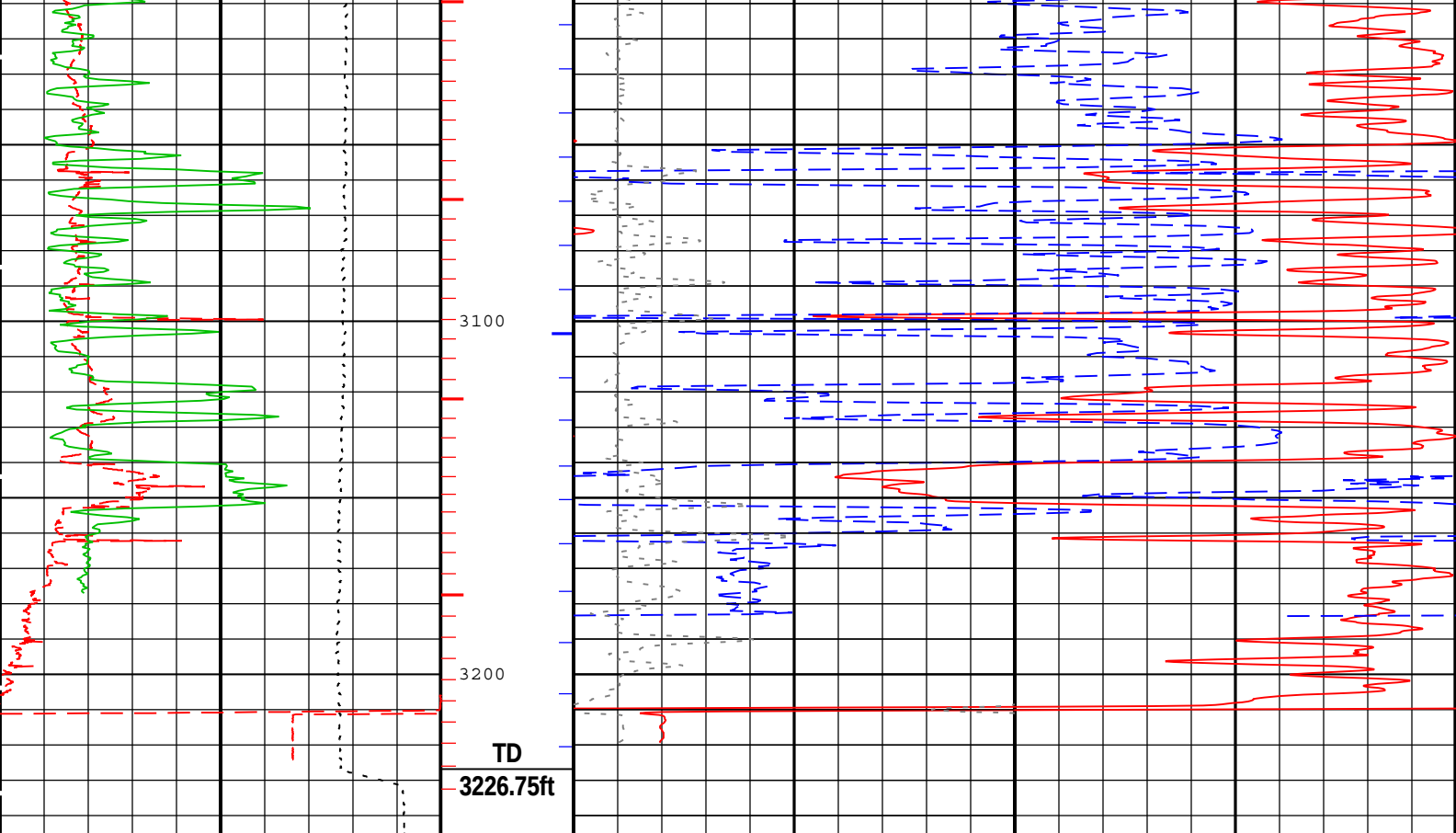
—ICV - Integrated Cement Volume every 100.00 (ft3)

—ICV - Integrated Cement Volume every 10.00 (ft3)









2" Porosity	
Cable Tension (TENS)	Standard Resolution Formation Density (RHOZ) HDRS-B
10000 lbf 0	2 g/cm3 3
Caliper (CALI) HDRS-B	Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-B
6 in 16	0.3 ft3/ft3 -0.1
GR	Density Standoff Correction (HDRA) HDRS-B
0 gAPI 100	-0.05 g/cm3 0.45
	ICV - Integrated Cement Volume every 10.00 (ft3)
	ICV - Integrated Cement Volume every 100.00 (ft3)
	IHV - Integrated Hole Volume every 10.00 (ft3)
	IHV - Integrated Hole Volume every 100.00 (ft3)
TIME_1900 - Time Marked every 60.00 (s)	

Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:35

One									
Main Pass 5" = 100'									
Integration Summary									
Output Channel(s)		Output Description		Input Parameter			Output Value		Unit
ICV		Integrated Cement Volume		HVAS, FCD			1889.09		ft3
IHV		Integrated Hole Volume		HVAS			3507.4		ft3
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Main[5]:Up	Up	810.48 ft	3245.53 ft	01-Nov-2014 5:51:35 AM	01-Nov-2014 6:34:07 AM	ON	3.59 ft	Yes

All depths are referenced to toolstring zero

Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:37

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
DPHZ	HDRS-B:HRMS-B:HRGD-B	2in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
HDRA	HDRS-B:HRMS-B:HRGD-B	2in
ICV	Borehole	6in
IHV	Borehole	6in
PEFZ	HDRS-B:HRMS-B:HRGD-B	2in
PXND	PEQL	6in
TENS	WLWorkflow	1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in

— IHV - Integrated Hole Volume every 100.00 (ft3)

— IHV - Integrated Hole Volume every 10.00 (ft3)

— ICV - Integrated Cement Volume every 100.00 (ft3)

— ICV - Integrated Cement Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

Density Standoff
Correction (HDRA)
HDRS-B

-0.05 g/cm3 0.45

Standard Resolution Formation Photoelectric
Factor (PEFZ) HDRS-B

0

10

Cable Tension (TENS)

10000

lbf

0

Caliper (CALI) HDRS-B

6

in

16

GR

0

gAPI

100

Crossplot Porosity for Neutron-Density (PXND)

0.3

ft3/ft3

-0.1

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

0.3

ft3/ft3

-0.1

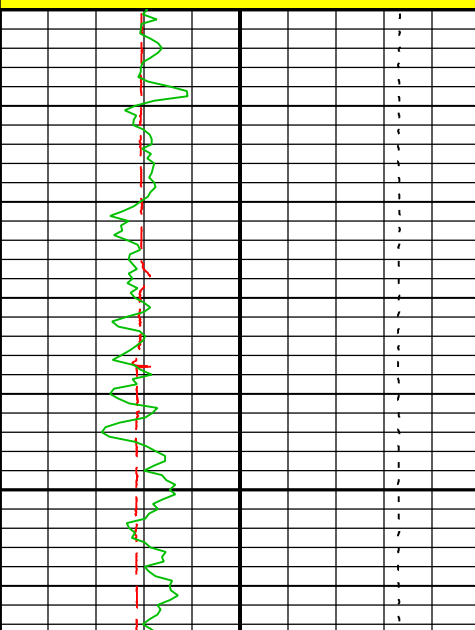
Standard Resolution Density Porosity (DPHZ) HDRS-B

0.3

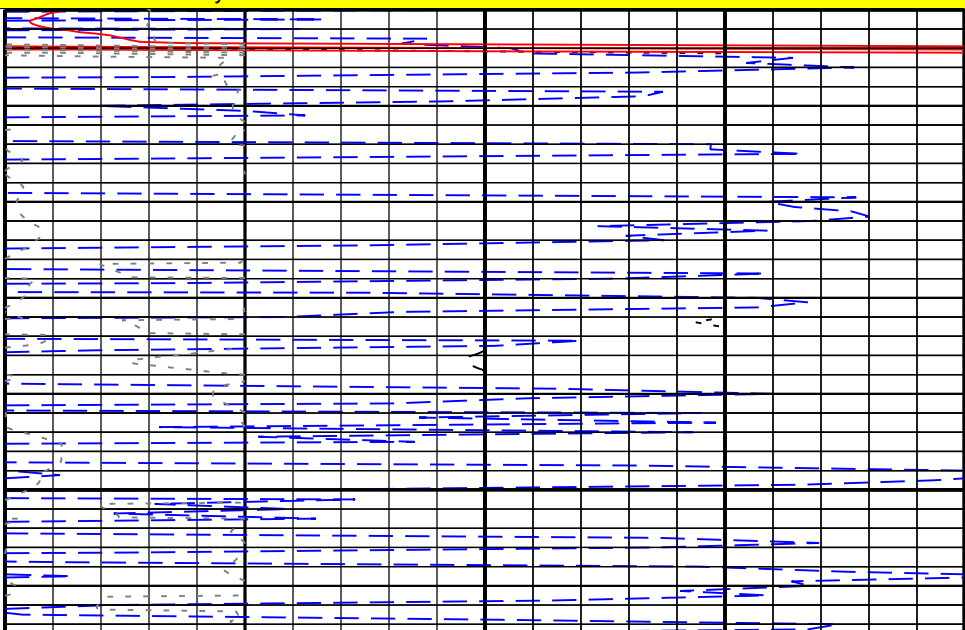
ft3/ft3

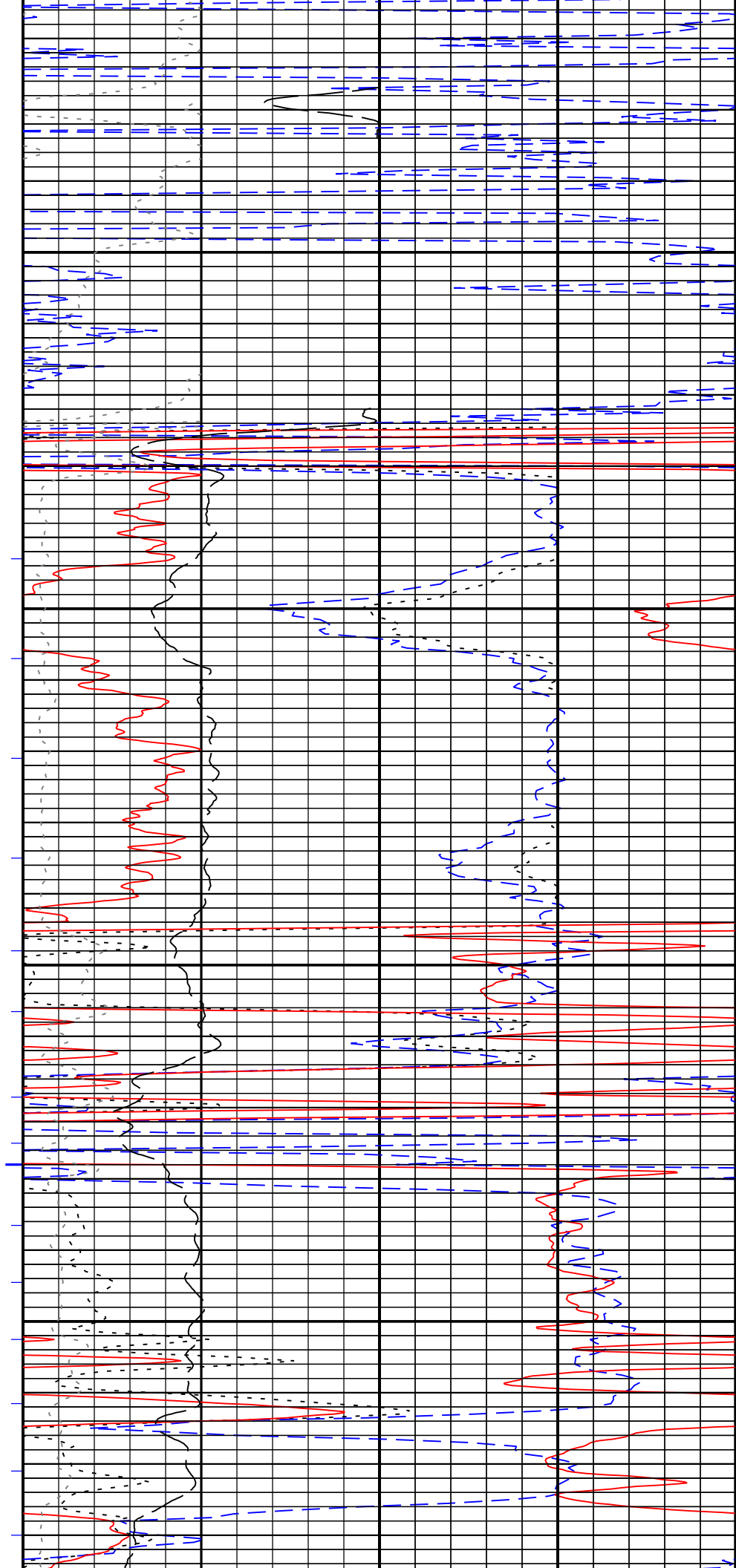
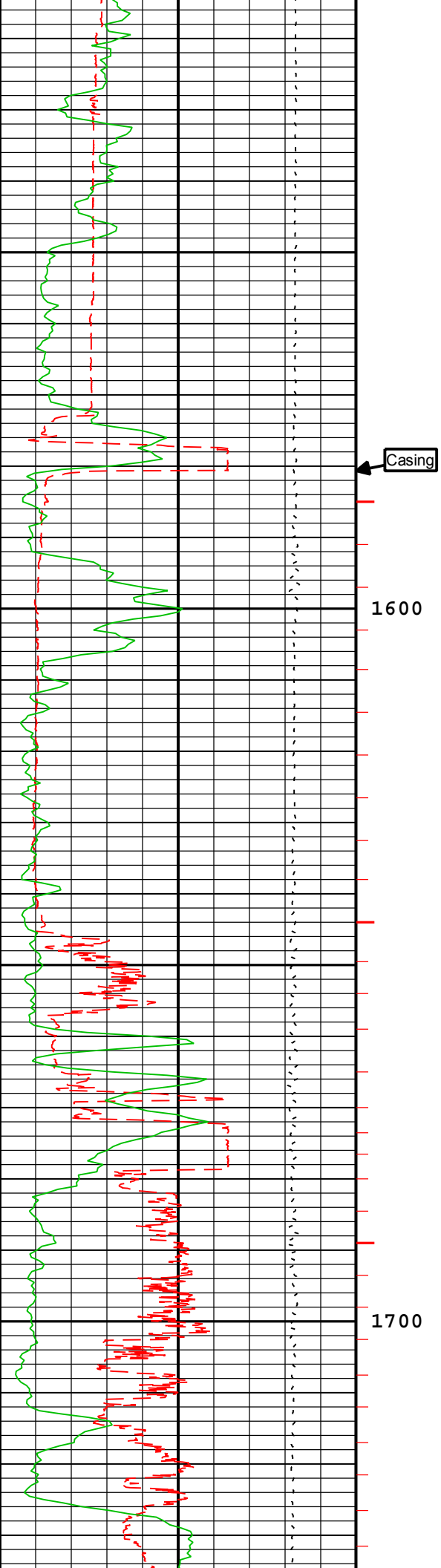
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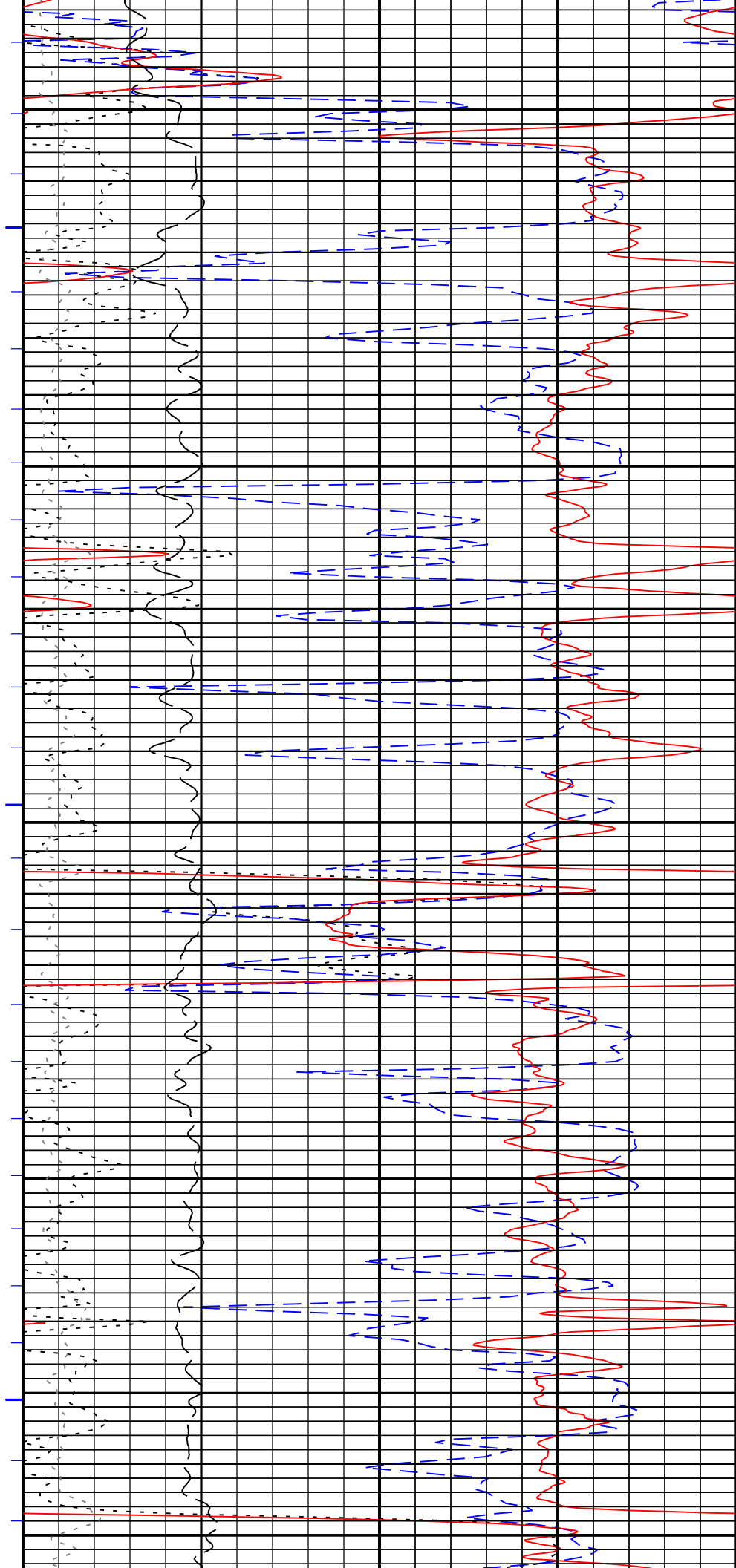
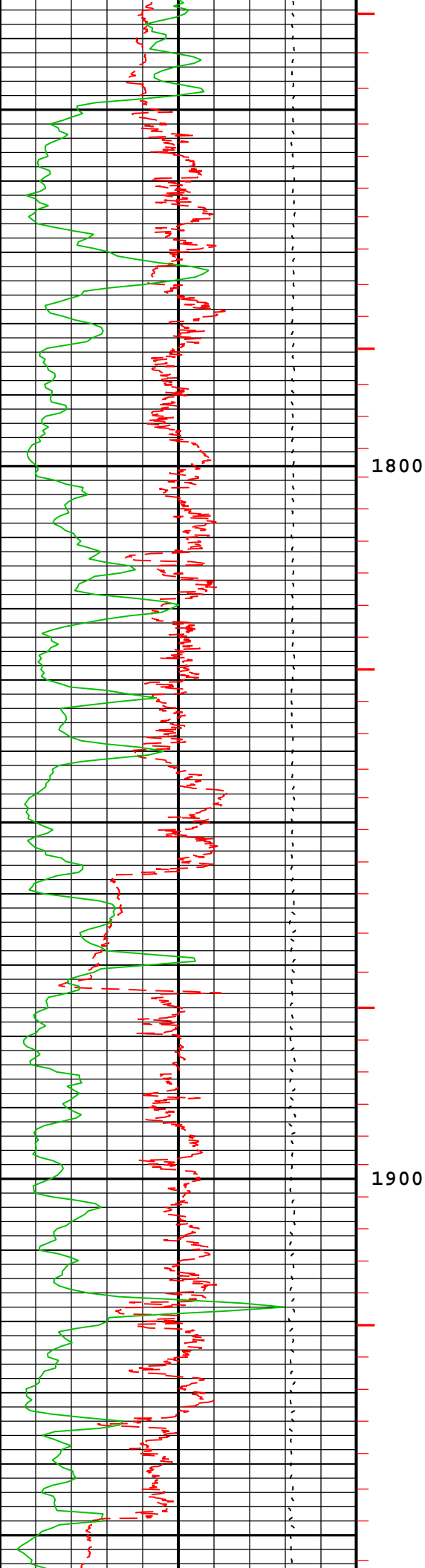
5" Porosity

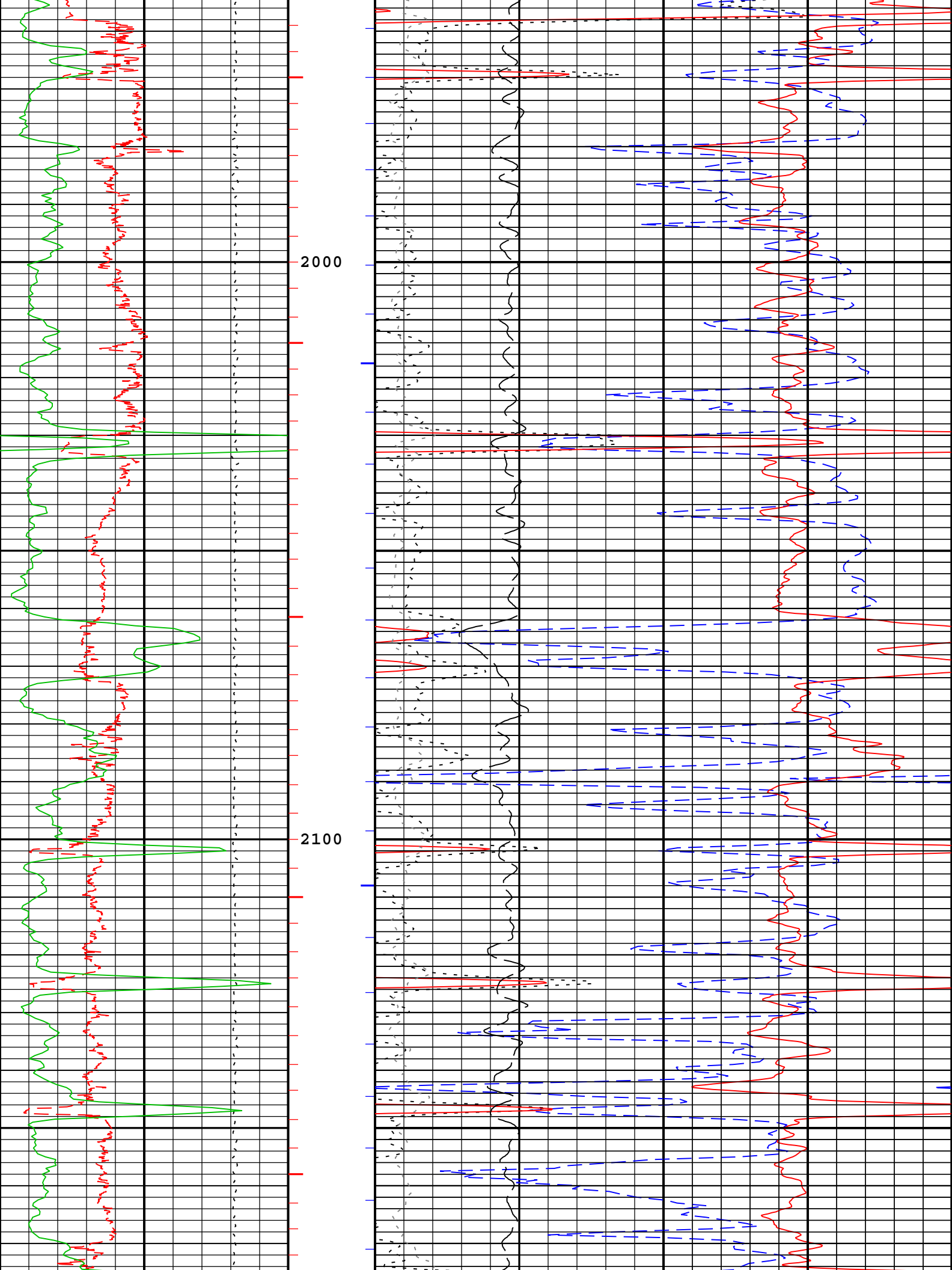


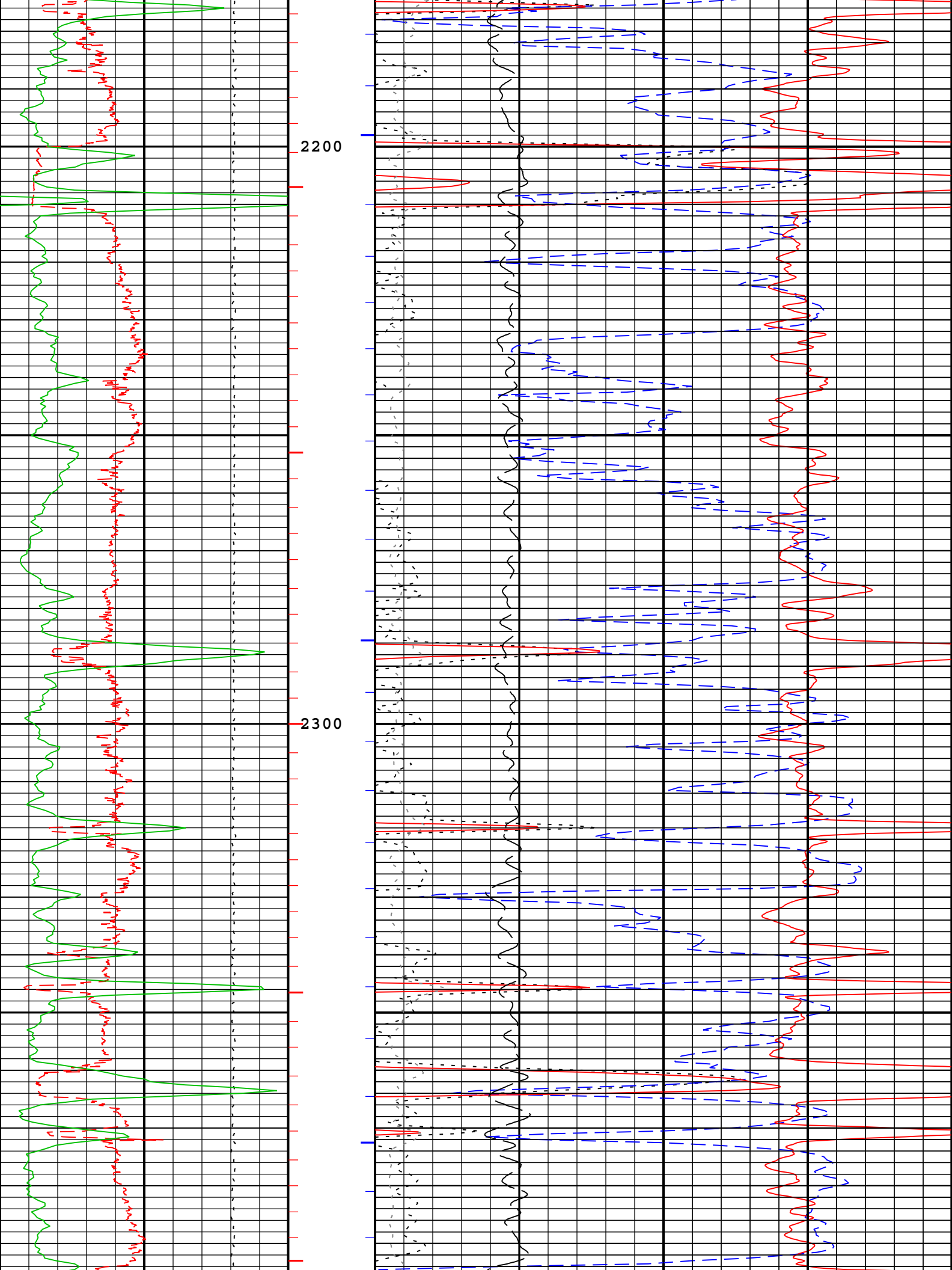
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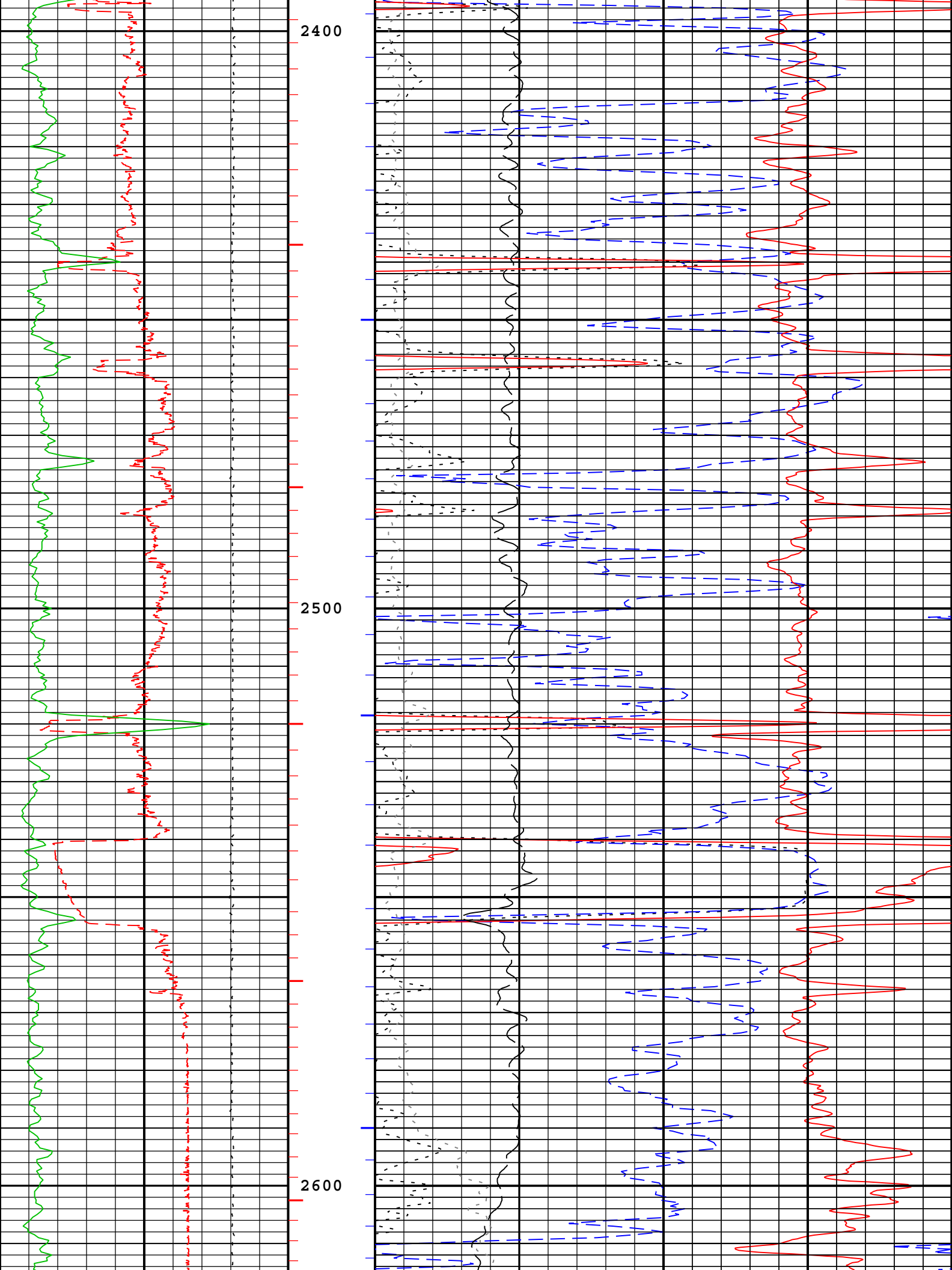


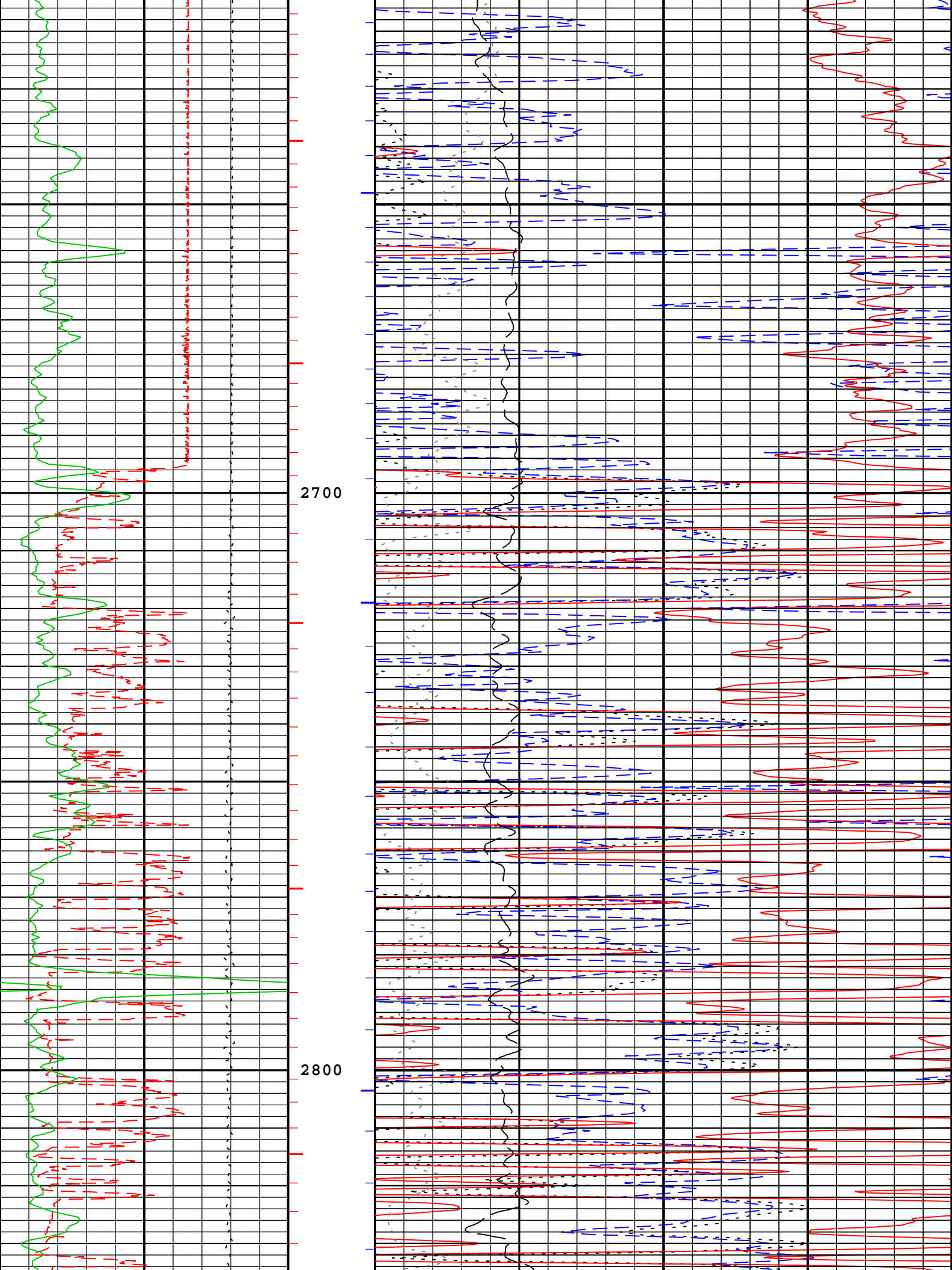


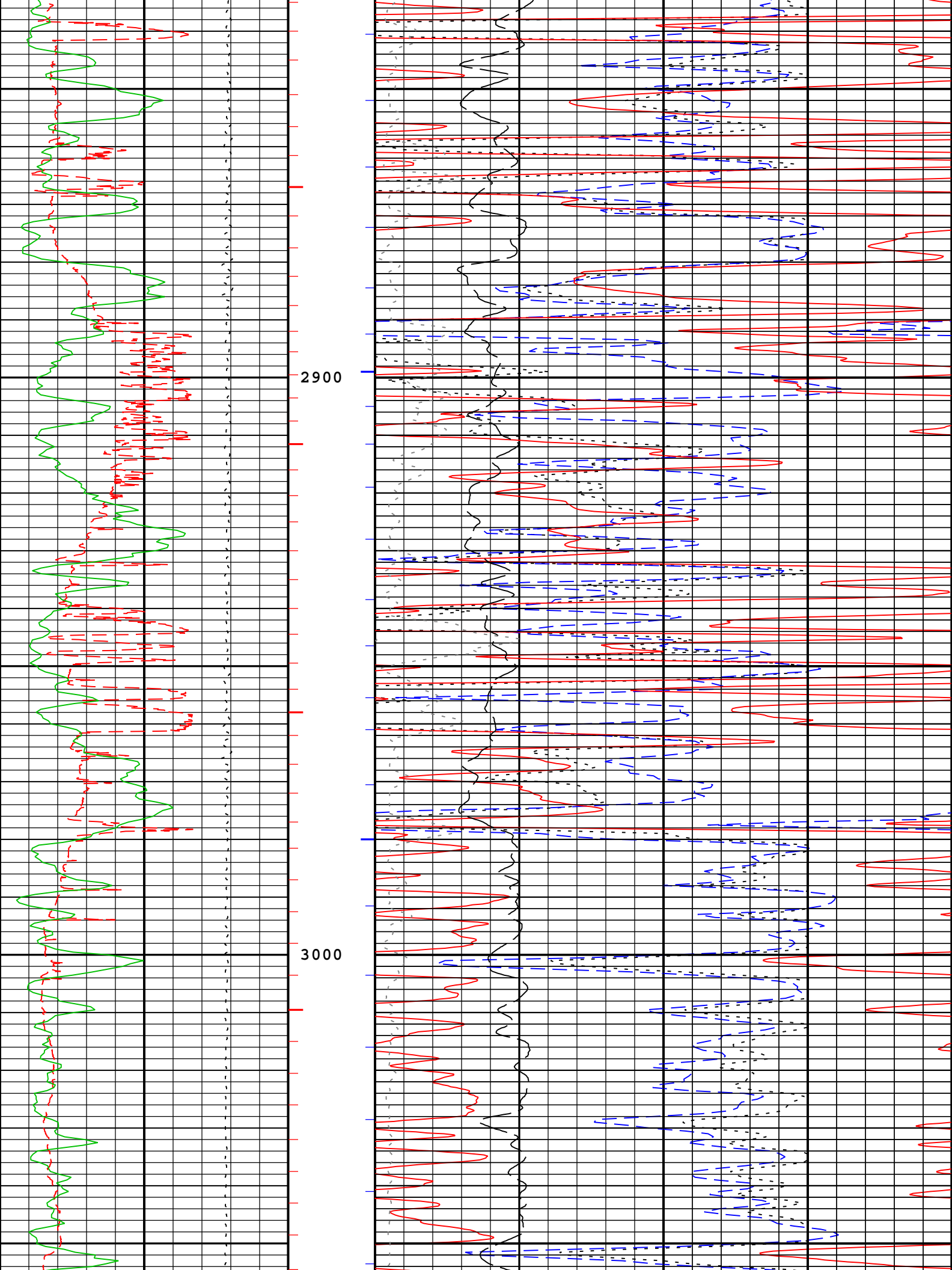


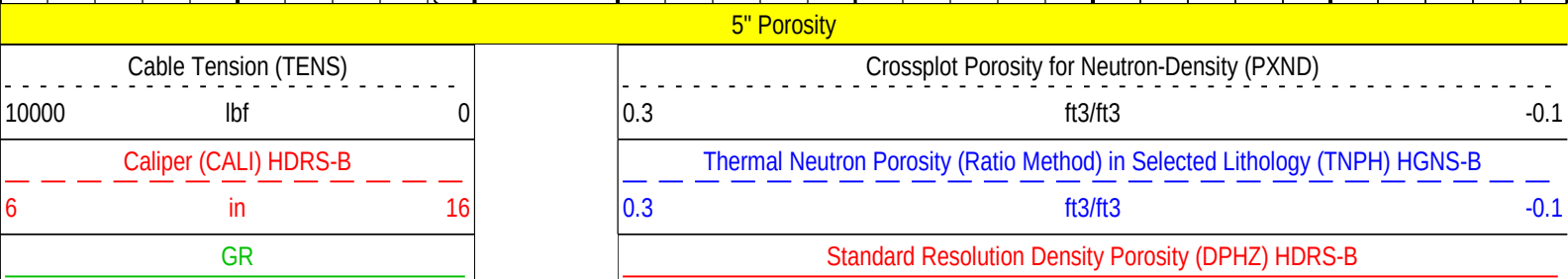
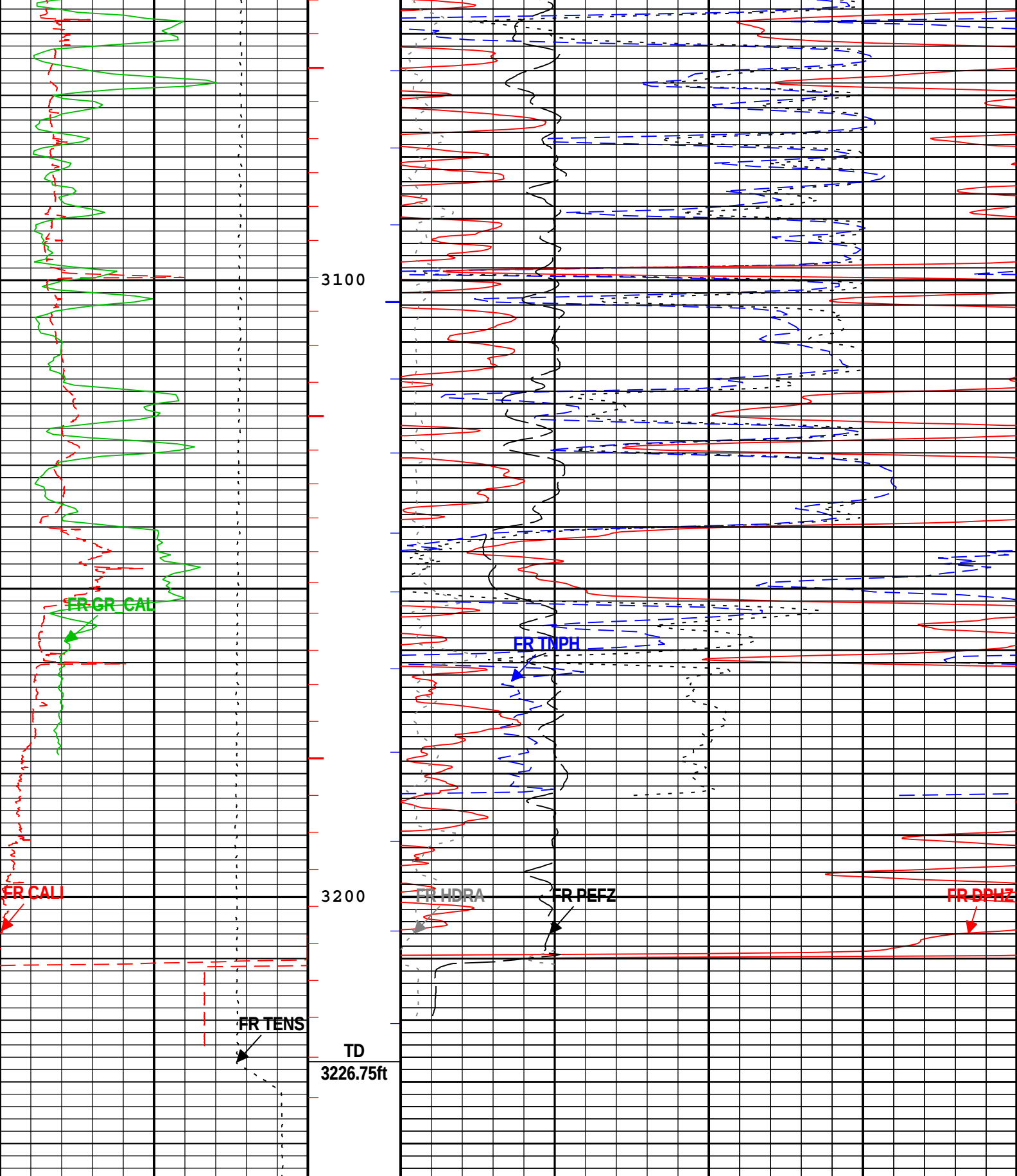












0gAPI100

0.3ft3/ft3-0.1

Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-B

010

Density Standoff Correction (HDRA) HDRS-B

-0.05g/cm30.45

TIME_1900 - Time Marked every 60.00 (s)

ICV - Integrated Cement Volume every 10.00 (ft3)

ICV - Integrated Cement Volume every 100.00 (ft3)

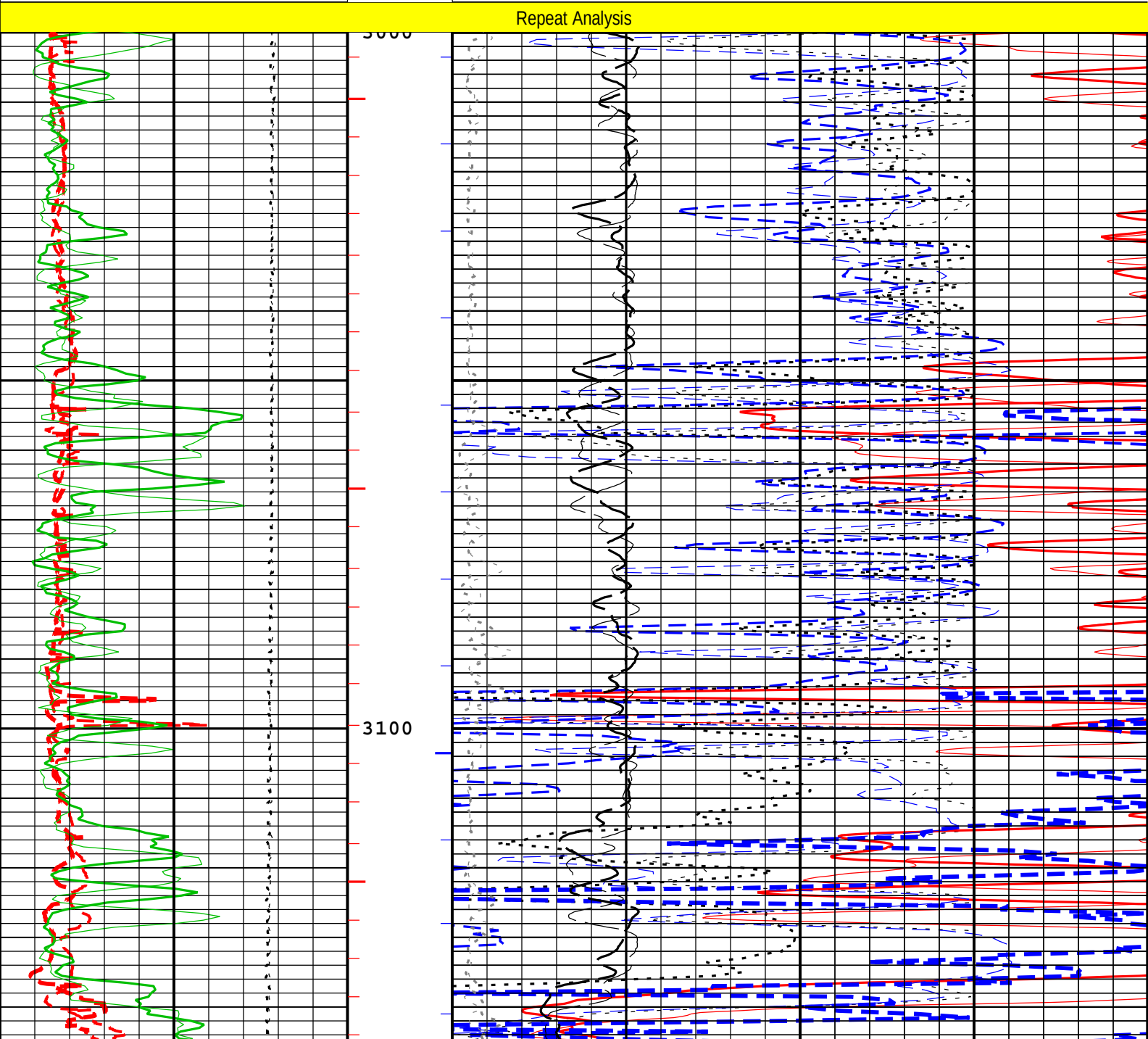
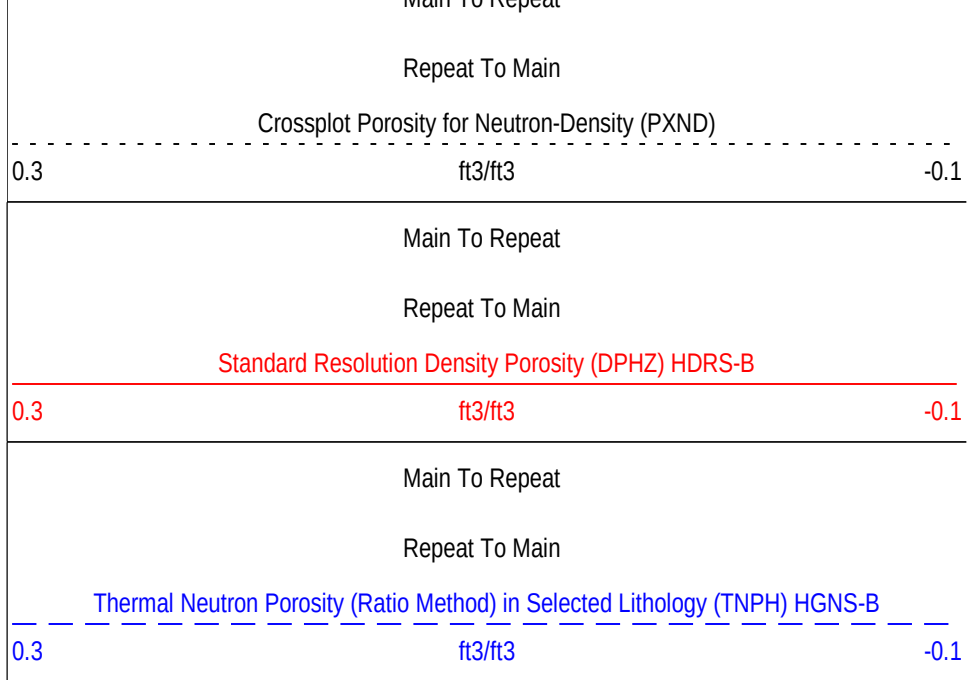
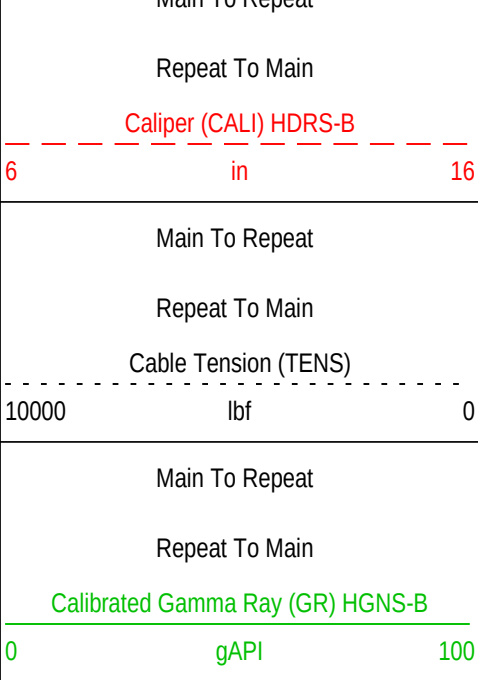
IHV - Integrated Hole Volume every 10.00 (ft3)

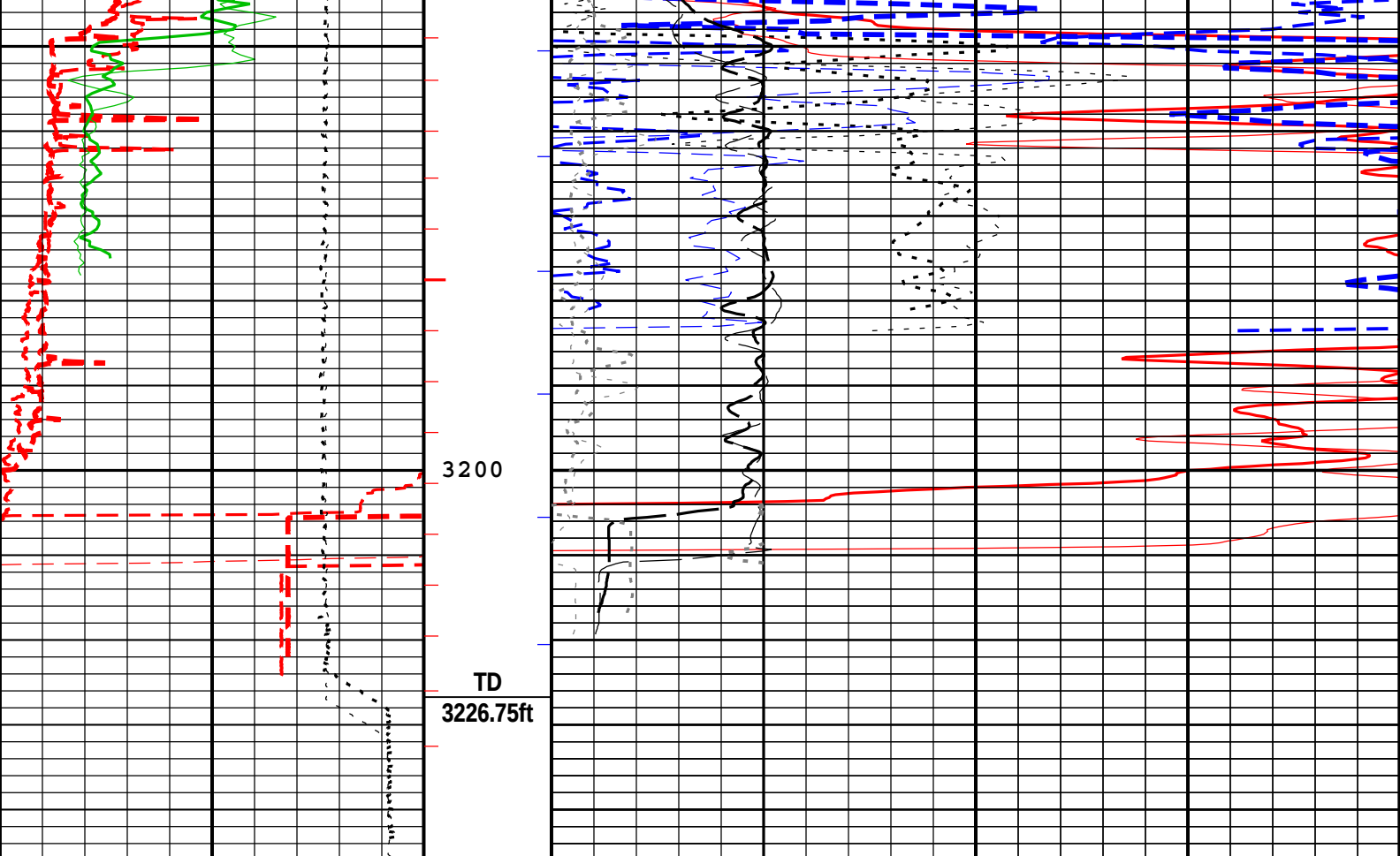
IHV - Integrated Hole Volume every 100.00 (ft3)

Description: HRLT BASIC LOGFormat: Log (Porosity_5_Inch)Index Scale: 5 in per 100 ftIndex Unit: ftIndex Type: Measured DepthCreation Date: 01-Nov-2014 06:53:37

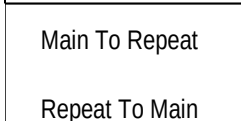
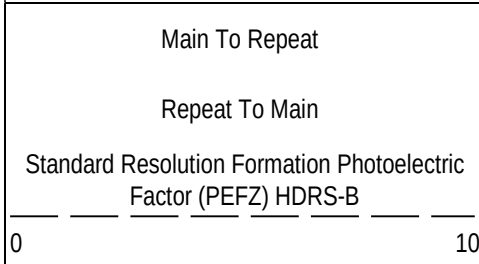
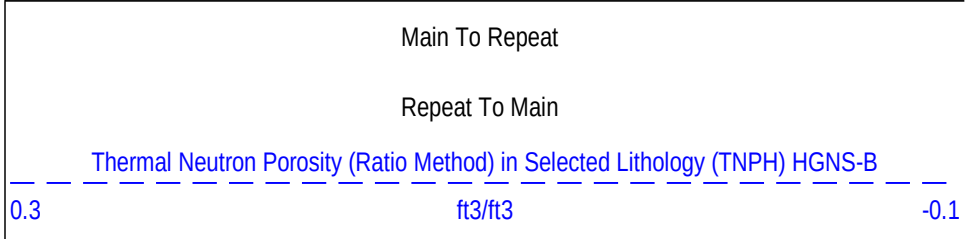
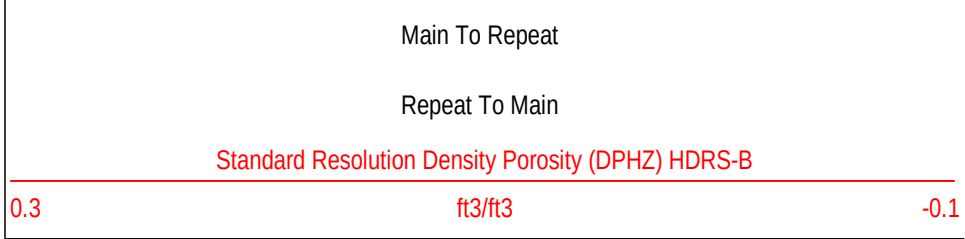
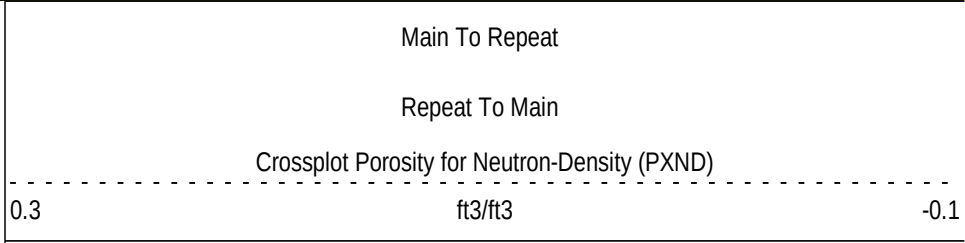
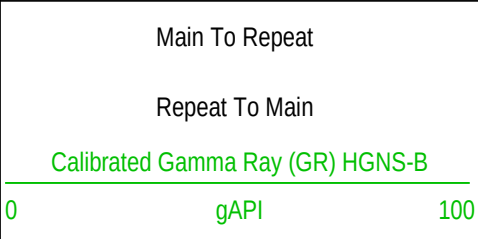
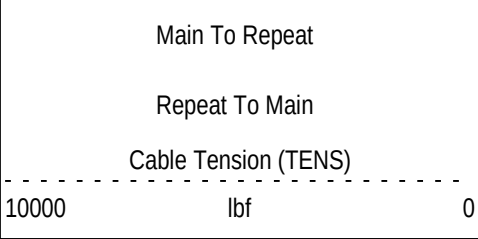
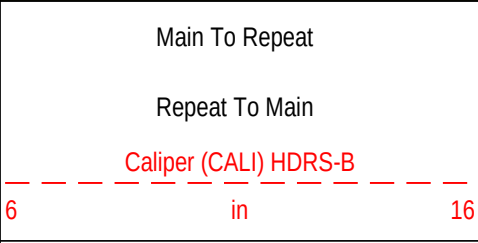
Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BHT	Bottom Hole Temperature	Borehole	107.3	degF
BS	Bit Size	WLSESSION	Depth Zoned	in
BSAL	Borehole Salinity	Borehole	160000	ppm
CALI_SHIFT	CALI Supplementary Offset	HDRS-B	-0.285	in
CBLO	Casing Bottom (Logger)	WLSESSION	1580.67	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	20	in
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	9.8	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	Salt Brine	
DHC	Density Hole Correction	HDRS-B	Bit Size	
FCD	Future Casing (Outer) Diameter	WLSESSION	13.375	in
FD	Fluid Density	Borehole	1.1	g/cm3
FSAL	Formation Salinity	Borehole	0	ppm
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	MRES	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
HRLT_PROCRM	Mud Resistivity Select	HRLT-B	HRLT Compute	
HSCO	Hole Size Correction Option	HGNS-B	Yes	
HVAS	Borehole area measurement selector for hole volume computation	Borehole	AREA	
HVCS	Integrated Hole Volume Caliper Selection	Borehole	Measured Area	
KFAC_HRLT	HRLT Geometrical Factor Option	HRLT-B	Sonde	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	LIMESTONE	
MDEN	Matrix Density for Density Porosity	Borehole	2.71	g/cm3
MFST	Mud Filtrate Sample Temperature	Borehole	75	degF
NPRM	HRDD Nuclear Processing Mode	HDRS-B	High Resolution	
PROCMSO	Mechanical Standoff Size	HRLT-B	1.5	in
PROCSP0	Sonde Position	HRLT-B	Eccentered	

Main To Repeat	Main To Repeat
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Repeat Analysis



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

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

TIME_1900 - Time Marked every 60.00 (s)

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

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

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

Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:38

One									
Repeat Pass 5" = 100'									

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

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	HVAS, FCD	179.24	ft3
IHV	Integrated Hole Volume	HVAS	410.05	ft3

Pass Summary	
--------------	--

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Repeat[3]:Up	Up	2765.83 ft	3243.33 ft	01-Nov-2014 5:23:07 AM	01-Nov-2014 5:34:18 AM	ON	0.00 ft	Yes

All depths are referenced to toolstring zero

Log	Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2 One: Repeat[3]:Up:S012
-----	---

Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:39

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
DPHZ	HDRS-B:HRMS-B:HRGD-B	2in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
HDRA	HDRS-B:HRMS-B:HRGD-B	2in
ICV	Borehole	6in
IHV	Borehole	6in
PEFZ	HDRS-B:HRMS-B:HRGD-B	2in
PXND	PEQL	6in
TENS	WLWorkflow	1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in

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

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

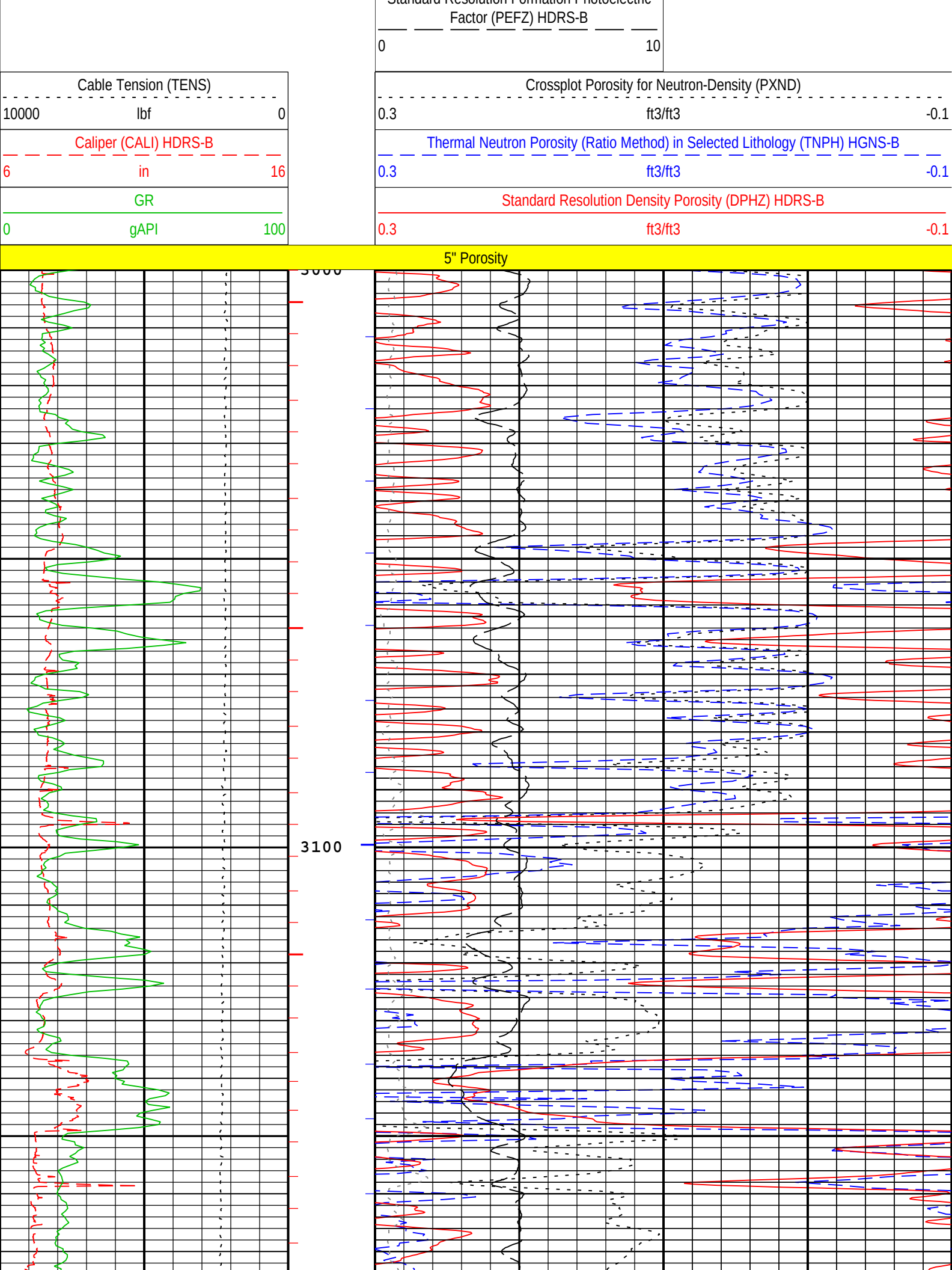
TIME_1900 - Time Marked every 60.00 (s)

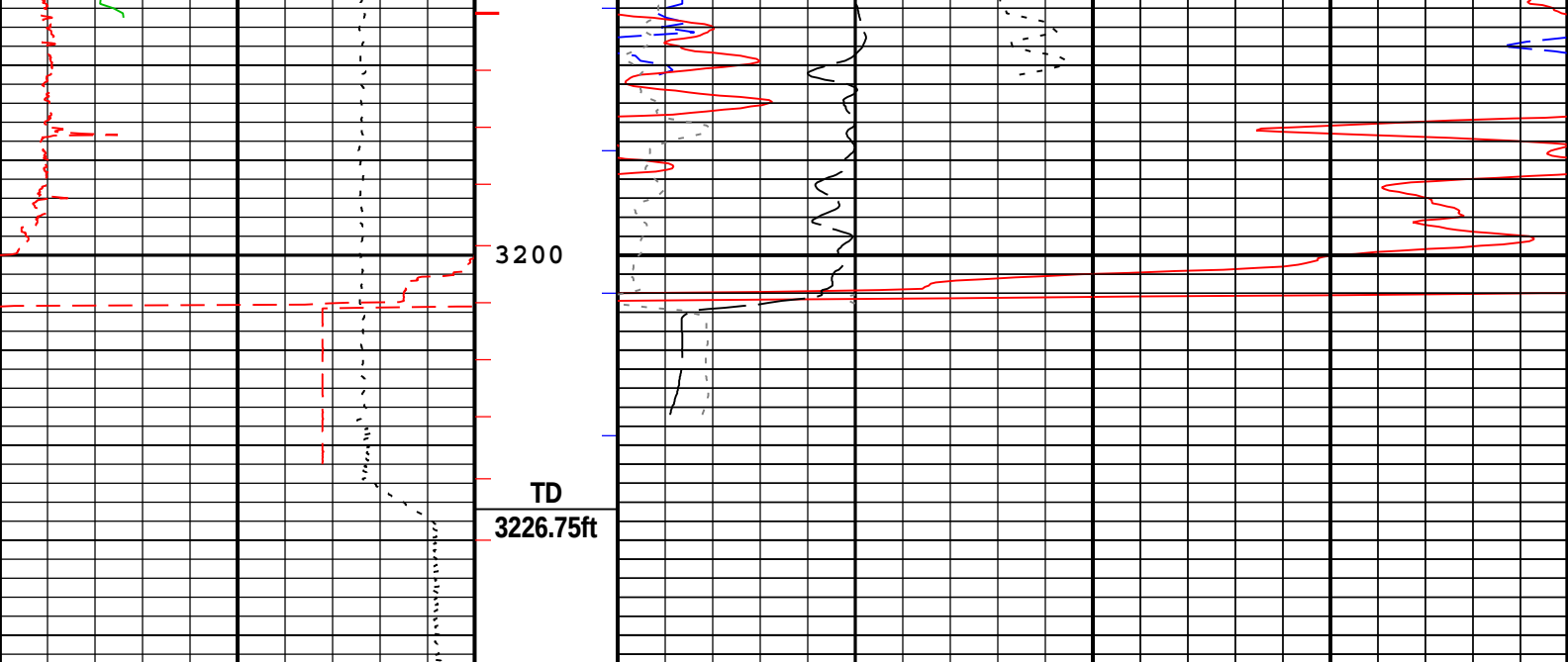
—|ICV - Integrated Cement Volume every 100.00 (ft3)

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

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

Standard Resolution Formation Photoelectric





5" Porosity

Cable Tension (TENS)	Crossplot Porosity for Neutron-Density (PXND)
10000 lbf 0	0.3 ft3/ft3 -0.1
Caliper (CALI) HDRS-B	Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-B
6 in 16	0.3 ft3/ft3 -0.1
GR	Standard Resolution Density Porosity (DPHZ) HDRS-B
0 gAPI 100	0.3 ft3/ft3 -0.1

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

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

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

TIME_1900 - Time Marked every 60.00 (s)

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

Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:39

Calibration Report

HDRS-B (HILT Density and Rxo Sonde, 125 degC) Calibration - Run One

Primary Equipment :

HILT High-Resolution Control Cartridge, 125 degC	HRCC-B	952
15 kpsi, tungsten shielding	HRGD-B	1887

Auxiliary Equipment :

HRDD Backscatter Detector	Backscatter	
HRDD Long Spacing Detector	Long Spacing	
HRDD Short Spacing Detector	Short Spacing	
Cesium 137 Gamma-Ray Logging Source	GSR-J	5255
HILT High-Resolution Control Cartridge, 125 degC	HRCC-B	952

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): 16:50:42 28-Oct-2014 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	in	Before	8.00	6.00	8.56	10.00	
Large Ring	in	Before	12.00	9.00	12.69	15.00	

HDRS Density Calibration - Inversion Results

Master (EEPROM): 11:44:00 05-Oct-2014

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Rho Aluminum	g/cm3	Master	2.596	2.586	2.601	2.606	
Rho Magnesium	g/cm3	Master	1.686	1.676	1.688	1.696	
Pe Aluminum		Master	2.570	2.470	2.569	2.670	
Pe Magnesium		Master	2.650	2.550	2.613	2.750	

HDRS Density Calibration - Deviation Summary

Master (EEPROM): 11:44:00 05-Oct-2014

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Average Deviation	%	Master	0	-0.6000	0.5757	0.6000	
BS Max Deviation	%	Master	0	-1.6000	1.0025	1.6000	
SS Average Deviation	%	Master	0	-1.0000	0.3376	1.0000	
SS Max Deviation	%	Master	0	-2.5000	1.2887	2.5000	
LS Average Deviation	%	Master	0	-1.5000	0.7484	1.5000	
LS Max Deviation	%	Master	0	-3.5000	1.7239	3.5000	

HDRS Density Calibration - Background Summary

Master (EEPROM): 11:44:00 05-Oct-2014

Before (Measured): 16:52:00 28-Oct-2014 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Master	1.0000		0.7501		
		Before	0.7501	0.7126	0.7496	0.7876	
		Before-Master	----	----	-0.0005	----	
BS Window Sum	1/s	Master	1		9803		
		Before	9803	9313	9788	10294	
		Before-Master	----	----	-15	----	
SS Window Ratio		Master	1.0000		0.4876		
		Before	0.4876	0.4633	0.4877	0.5120	
		Before-Master	----	----	0.0001	----	
SS Window Sum	1/s	Master	1		9586		
		Before	9586	9106	9561	10065	
		Before-Master	----	----	-25	----	
LS Window Ratio		Master	1.0000		0.2943		
		Before	0.2943	0.2796	0.2917	0.3090	
		Before-Master	----	----	-0.0026	----	
LS Window Sum	1/s	Master	1		1003		
		Before	1003	953	997	1053	
		Before-Master	----	----	-6	----	

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM): 11:44:00 05-Oct-2014

Before (Measured): 16:52:00 28-Oct-2014 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Master		1000	1649	2400	
		Before		1000	1653	2400	
		Before-Master	----	-100	4	100	
SS PM High Voltage	V	Master		1000	1717	2400	
		Before		1000	1741	2400	
		Before-Master	----	-100	24	100	
LS PM High Voltage	V	Master		1000	1421	2400	
		Before		1000	1428	2400	
		Before-Master	----	-100	7	100	

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM): 11:44:00 05-Oct-2014

Before (Measured): 16:52:00 28-Oct-2014 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Crystal Resolution	%	Master		5.00	10.62	25.00	

		Before-Master	-----	-----	-----	-----	
Near Corrected Plus Measurement	1/s	Master Before Before-Master	----- ----- -----	4700.0 ----- -----	5109.0 ----- -----	6900.0 ----- -----	
Far Corrected Plus Measurement	1/s	Master Before Before-Master	----- ----- -----	1900.0 ----- -----	2098.0 ----- -----	2900.0 ----- -----	

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations

Before (Measured): 16:56:26 28-Oct-2014 Expired by 2 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before	30.0	0	41.2	120.0	
RGR Plus Measurement	gAPI	Before	185.4	157.1	159.4	206.3	
GR Calibration Gain		Before	0.89	0.80	1.04	1.05	

Well: DCP Linam Ranch AGI #2
Field: AGI; Bone Spring-Wolfcamp
County: Lea
State: New Mexico

Platform Express
Compensated Neutron Log
Three Detector Litho-Density

One
Main Pass 1" = 100'

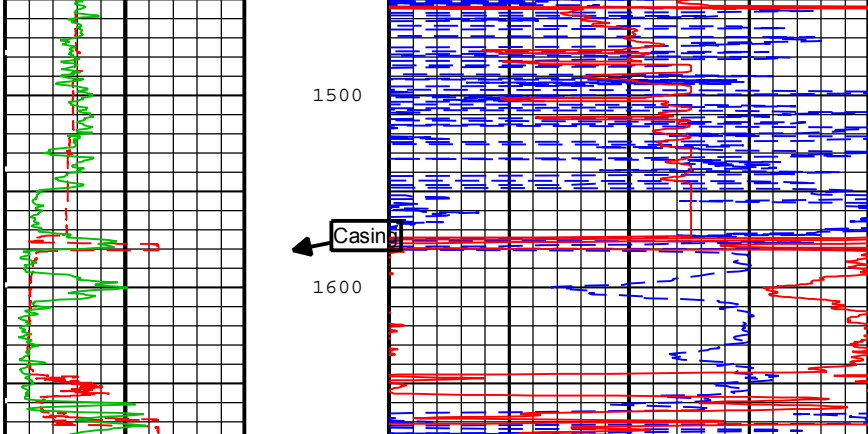
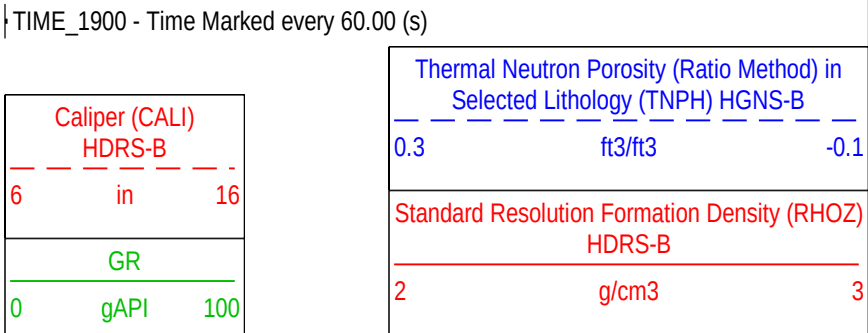
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Main[5]:Up	Up	810.48 ft	3245.53 ft	01-Nov-2014 5:51:35 AM	01-Nov-2014 6:34:07 AM	ON	3.59 ft	Yes

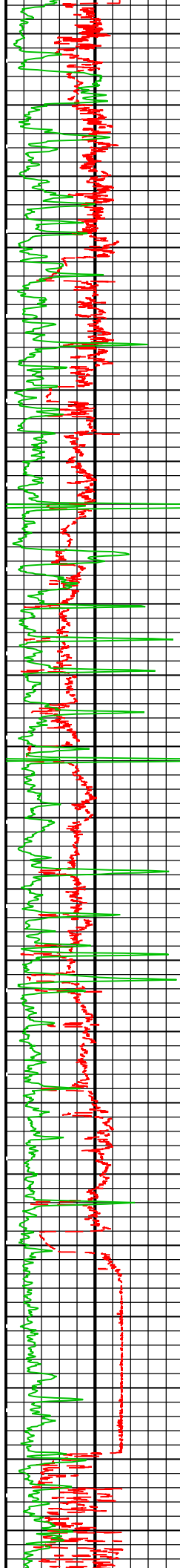
All depths are referenced to toolstring zero

Log Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2
One: Main[5]:Up:S012

Description: HRLT BASIC LOG Format: Log (Porosity 1 inch General) Index Scale: 1 in per 100 ft
Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:42

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
RHOZ	HDRS-B:HRMS-B:HRGD-B	2in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in





1700

1800

1900

2000

2100

2200

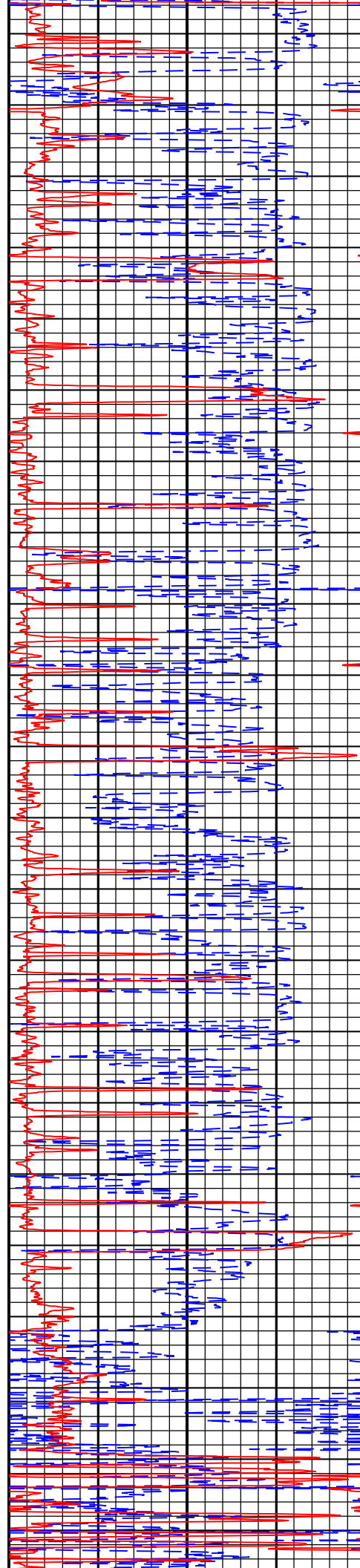
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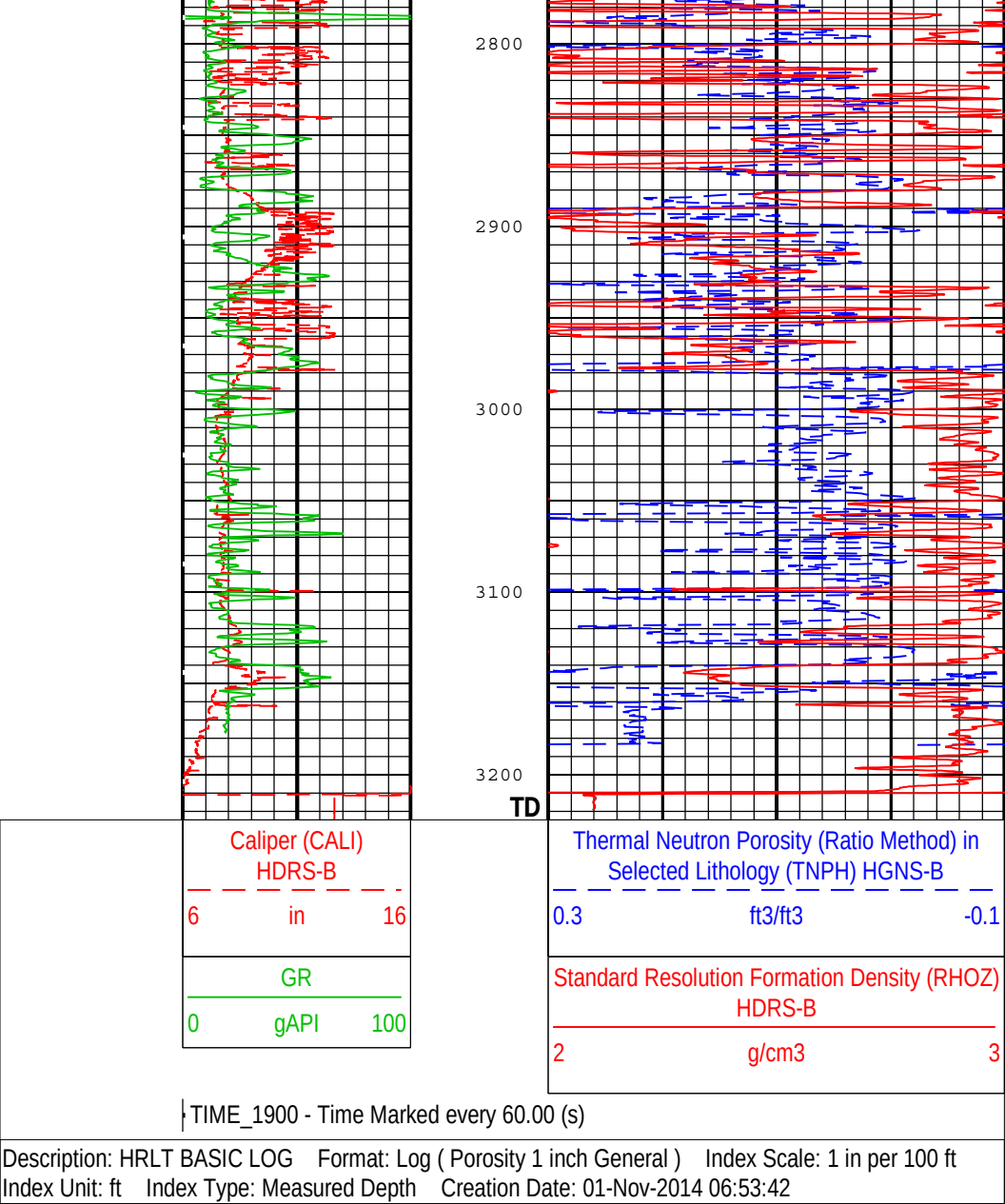
2400

2500

2600

2700





Platform Express /
High Resolution Laterolog Array /
Micro-CFL\HNGS

Company: PB ENERGY STORAGE SERVICES, INC

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County: Lea State: New Mexico

County: Lea
Field: AGI; Bone Spring-Wolfcamp
Location: 1600' FSL & 1750' FWL
Well: DCP Linam Ranch AGI #2
Company: PB ENERGY STORAGE SERVICES, INC

Platform Express
High Resolution Laterolog Array
Micro-CFLHNGS

Location:		1600' FSL & 1750' FWL	Elev.:	K.B.	3763.00 ft
Permanent Datum:				G.L.	3738.00 ft
Log Measured From:				D.F.	3762.00 ft
Drilling Measured From:					
API Serial No.	Section:				
30-025-42139	30				
		Township:		Range:	
		18S		37E	

Logging Date	01-Nov-2014				
Run Number	One				
Depth Driller	3220.00 ft				
Schlumberger Depth	3226.75 ft				
Bottom Log Interval	3181.10 ft				
Top Log Interval	1580.67 ft				
Casing Driller Size @ Depth	20 in @ 1570.00 ft				
Casing Schlumberger	1580.67 ft				
Bit Size	17.5 in				
Type Fluid In Hole	Salt Brine				
Density	Viscosity	31 s			
Fluid Loss	PH	0 cm3	10		
MUD					
Source of Sample	Active Tank				
RM @ Meas Temp	0.06 ohm.m @ 64.5 degF				
RMF @ Meas Temp	0.04 ohm.m @ 75 degF				
RMC @ Meas Temp	0.06 ohm.m @ 75 degF				
Source RMF	RMC	Pressed	Pressed		
RM @ BHT	RMF @ BHT	0.04 @ 107.3	0.03 @ 107.3		
Max Recorded Temperatures					
Circulation Stopped		Time	19:00:00		
Logger on Bottom		Time	05:26:09		
Unit Number	Location:	2133	Roswell		
Recorded By	Emil Ludick				
Witnessed By	Russell Bentley				

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.

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 - 7.3 Log (HRLA_5_Inch)
 - 7.4 Parameter Listing
- 8. One Repeat Analysis 5"=100'
 - 8.1 Composite Summary

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 - 12.1 Integration Summary
 - 12.2 Composite Summary
 - 12.3 Log (HRLA_1_inch)

8.2 Log (HRLA_5_Inch RA)

9. One Repeat Pass 5"=100'

9.1 Integration Summary

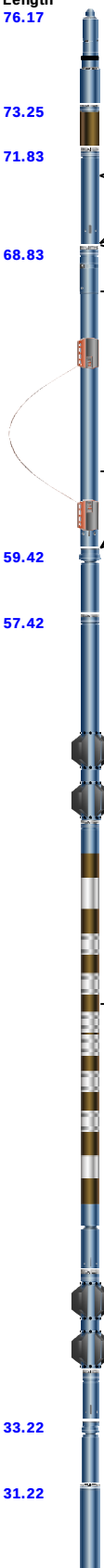
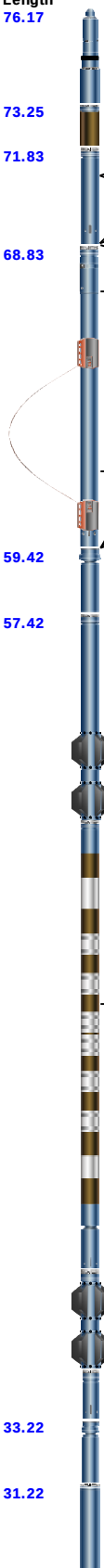
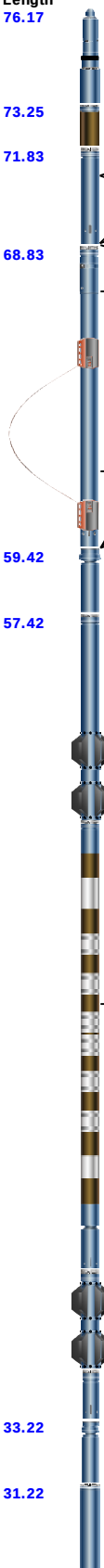
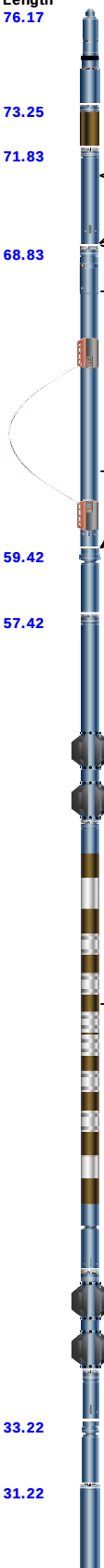
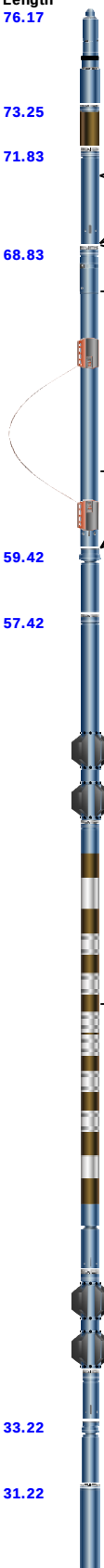
9.2 Composite Summary

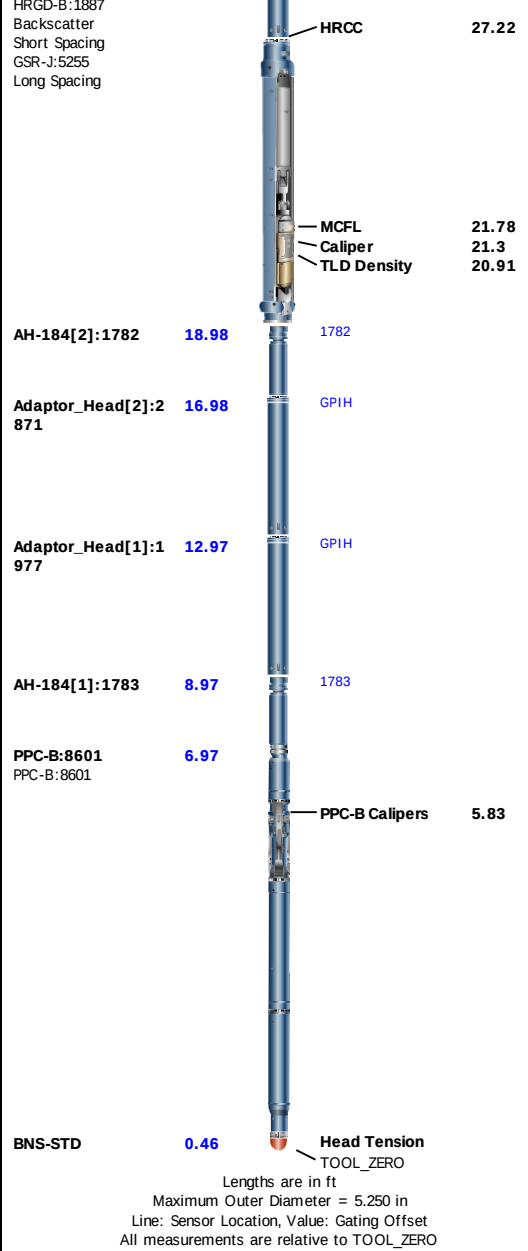
9.3 Log (HRLA_5_Inch)

10. Calibration Report

11. Tail

Remarks and Equipment Summary

One: Toolstring				One: Remarks
Equip name LEH-QT:3338 LEH-QT:3338	Length 76.17	MP name	Offset	THANK YOU FOR CHOOSING SCHLUMBERGER!
AH-369:1858 DTC-H:8131 ECH-KC:10149 DTC-H:8131	73.25		70.93 0.00	LOGGER REQUESTED: 00:00 01-NOV-2014 LOGGER ARRIVED: 18:00 31-OCT-2014 RIG READY: 03:00 01-NOV-2014 RIG: PRECISION 107
				CREW: E. LUDICK, M. MARTINEZ, J. MENDOZA
HGNS-B:3960 HGNS-B:3960 NPV-N NSR-F:5061 HMCA-B HGNS-B:3960 HACCZ-B:4001	68.83		68.82 68.82 68.8	TOOLS RUN AS PER TOOL SKETCH AND PRESENTATIONS AS PER CLIENT REQUES
				CALIPERS CHECKED IN CASING WITH INNER CASING ID OF 19.00 INCHES.
AH-107:3858 HRLT-B:1884 HRUH-B:994 HRUC-B:979 HRLS-B:1884 HRLH-B:790 HRLC-B:790 AH-270:959	59.42		61.75 59.42 59.42 0.00	HRLA RUN WITH 4 FOUR FIN 1.5 INCH STANDOFFS.
				HGNS ECCENTRALIZED WITH STANDARD BOWSPRING. HGNS TEMP. SENSOR USED TO DETERMINE MAXIMUM BOREHOLE TEMPE
AH-184[3]:2995 HDRS-B:1783 ECH-MEB:952 HRCC-B:952 HRMS-B:1783 GPV-Q	33.22		45.65	HGNS WEAR RING 0.125".
				MATRIX LIMESTONE GIVEN BY CLIENT WITH LOGS PRESENTED ON LIMESTONE COMPATIBLE SCALE.
AH-184[3]:2995 HDRS-B:1783 ECH-MEB:952 HRCC-B:952 HRMS-B:1783 GPV-Q	31.22			MATRIX LIMESTONE DENSITY 2.71 g/cc AND FLUID DENSITY 1.1 g/cc.
				PPC USED TO DETERMIN HOLE VOLUME.



Depth Summary			
		One	
Depth Measuring Device			
Type	IDW-B		
Serial Number	6307		
Calibration Date	02-SEP-2014		
Calibrator Serial Number			
Calibration Cable Type	7-46P-XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		
Tension Device			
Type	CMTD-B/A		
Serial Number	3872		
Calibration Date	03-OCT-2014		
Calibrator Serial Number	1019		
Number of Calibration Points	0		
Logging Cable			
Type	7-46P-XS		
Serial Number	U713011		
Length	19700.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		

One:Depth Control Parameters		Depth Control Remarks
Log Sequence	Subsequent Trip To the Well	IDW USED AS PRIMARY DEPTH CONTROL DEVICE.
Reference Log Name	AIT	Z-CHART USED AS SECONDARY DEPTH CONTROL DEVICE.
Reference Log Run Number	One	FOLLOWED SCHLUMBERGER FULL DEPTH CONTROL POLICY DATED APRIL 7TH, 2012.
Reference Log Date	12-Oct-2014	STRETCH CORRECTION OF 3.59 ft APPLIED BY COMPARING MAIN PASS TO CORRELATION LOG.
Subsequent Trip Down Log Correction		ALL LOGS CORRELATED CORRELATION LOG.

One

Main Pass 2"=100'

Software Version

Acquisition System	Version
MaxWell	4.0.9163.3000
Application Patch	Patch-SP-10767_22480-4.0.9163.3001

Computation	Description	Version
DepthCorrection	DepthCorrection	4.0.9469.3000

Tool Elements	Description	Software Version	Firmware Version
HRLS-B	HRLT-B Sonde	4.0.9401.3000	DSP: 2.1 HOST: 0.a
HGNS-B	HILT Gamma-Ray and Neutron Sonde, 125 degC	4.0.9385.3000	2.0
HRCC-B	HILT High-Resolution Control Cartridge, 125 degC	4.0.9385.3000	2.0

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Main[5]:Up	Up	810.48 ft	3245.53 ft	01-Nov-2014 5:51:35 AM	01-Nov-2014 6:34:07 AM	ON	3.59 ft	Yes

All depths are referenced to toolstring zero

Log

Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2

One: Main[5]:Up:S012

Description: HRLT BASIC LOG Format: Log (HRLA_2_inch) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:52:53

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
RLA3	HRLT-B:HRLS-B:HRLS-B	2in
RLA5	HRLT-B:HRLS-B:HRLS-B	2in
STIT	DepthCorrection	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

TIME_1900 - Time Marked every 60.00 (s)

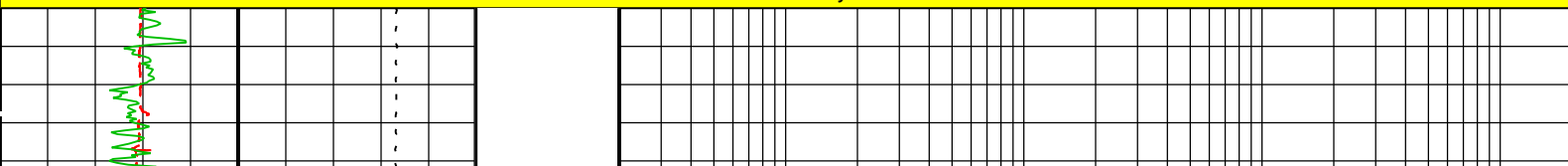
The diagram illustrates the cable tensioning process with the following steps:

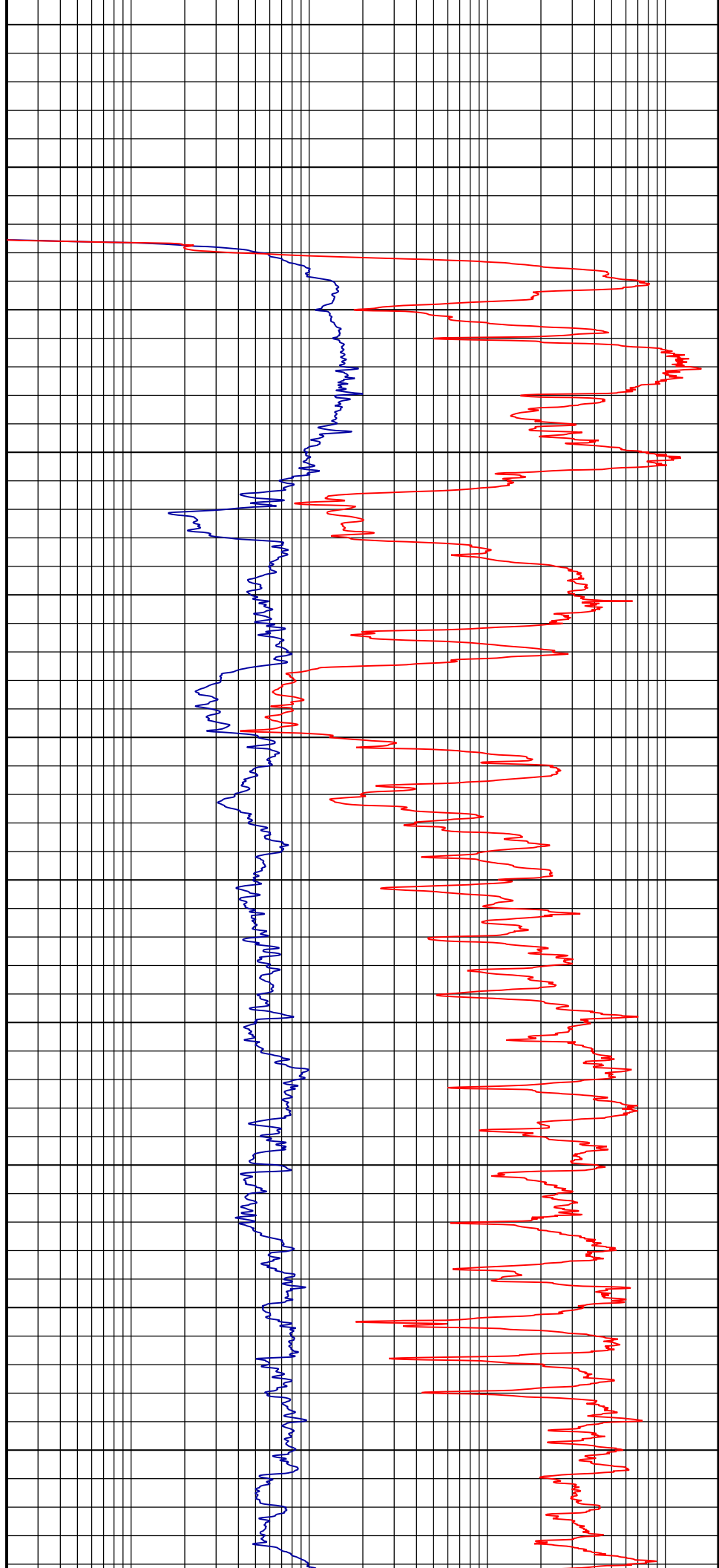
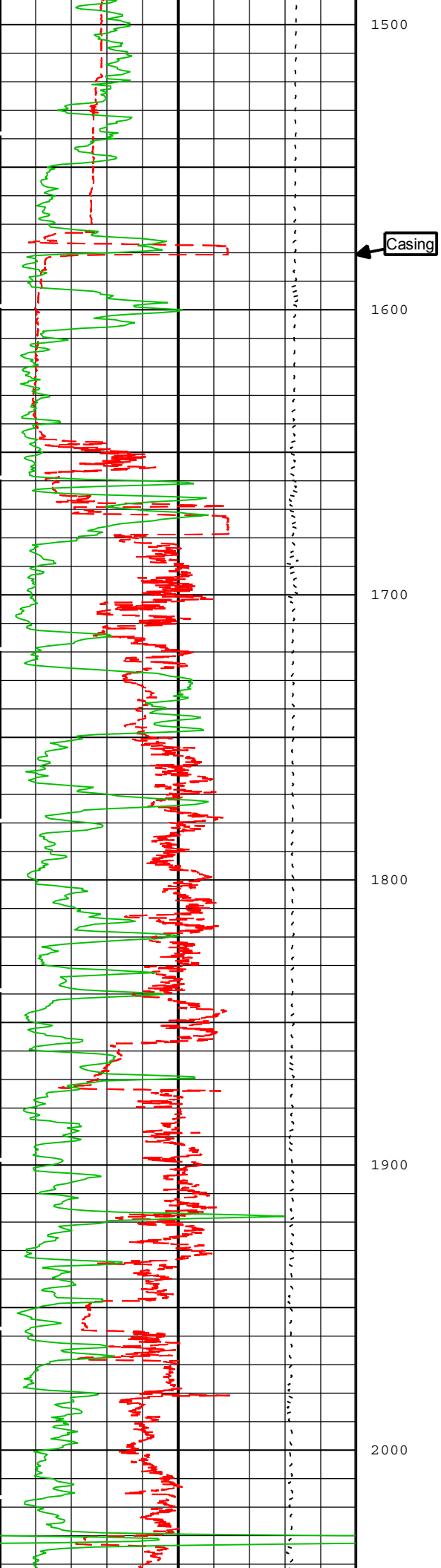
- Cable Tension (TENS)**: 10000 lbf
- Caliper (CALI) HDRS-B**: 6 in
- GR**: 0 gAPI
- 16 in**

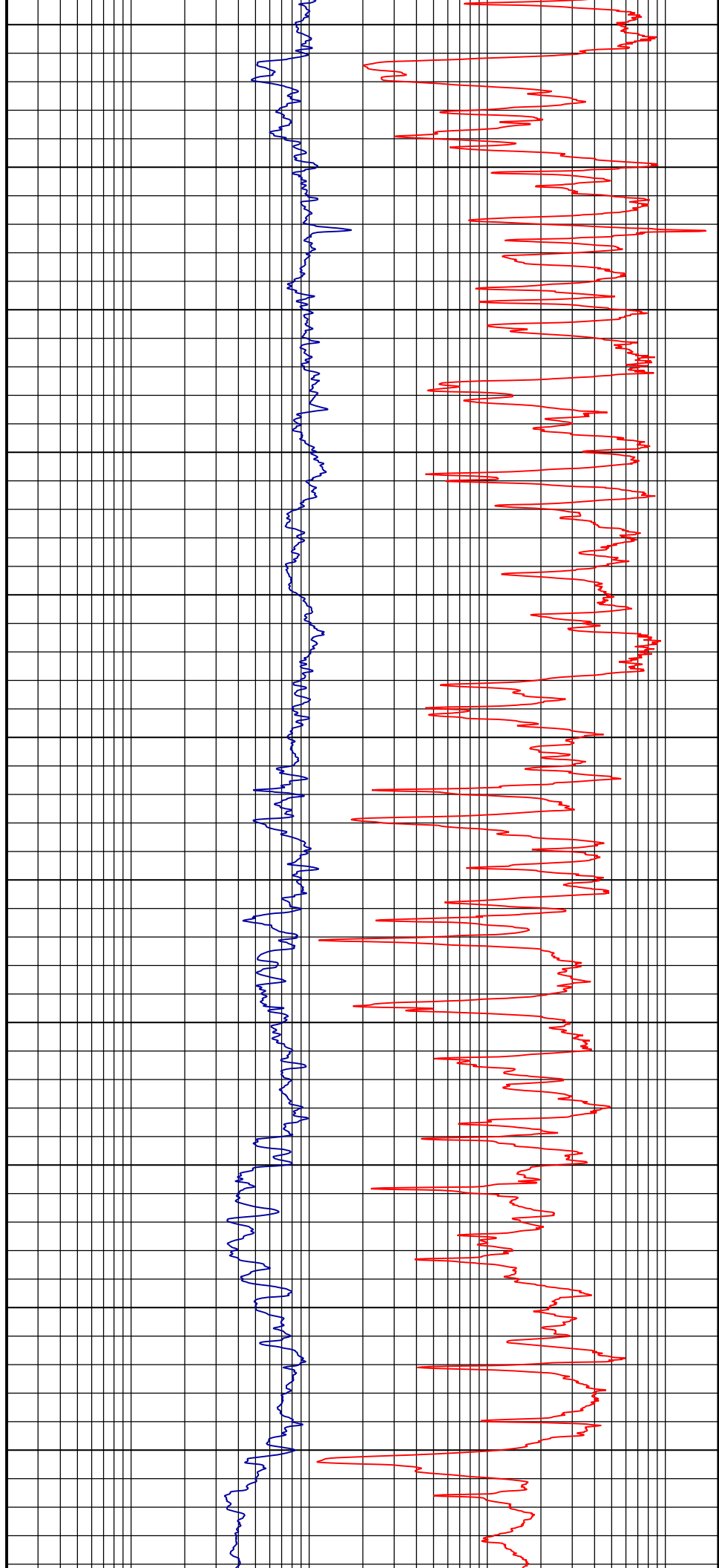
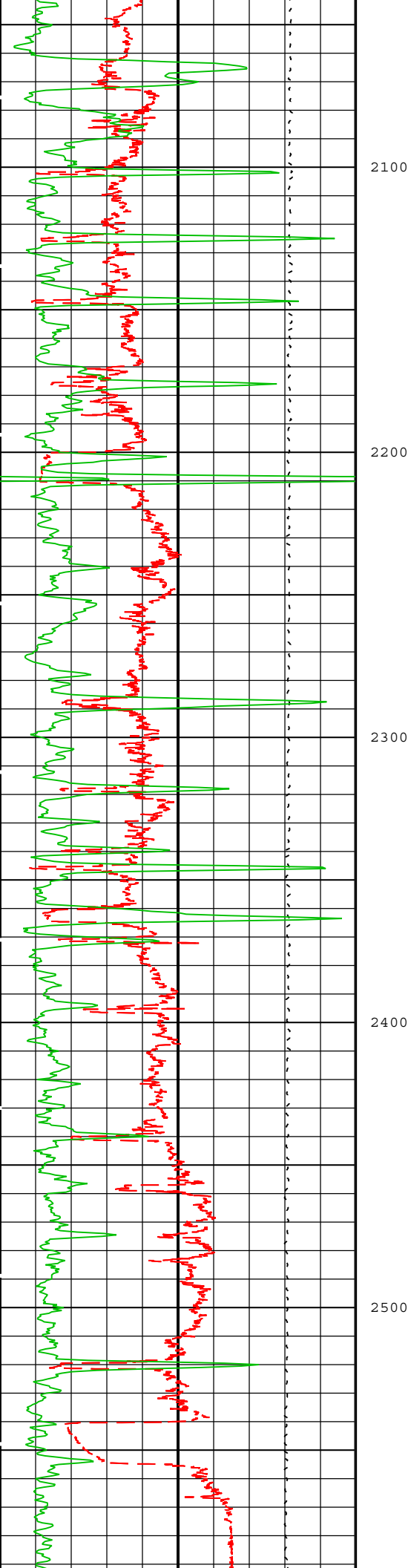
Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B		
0.2	ohm.m	2000

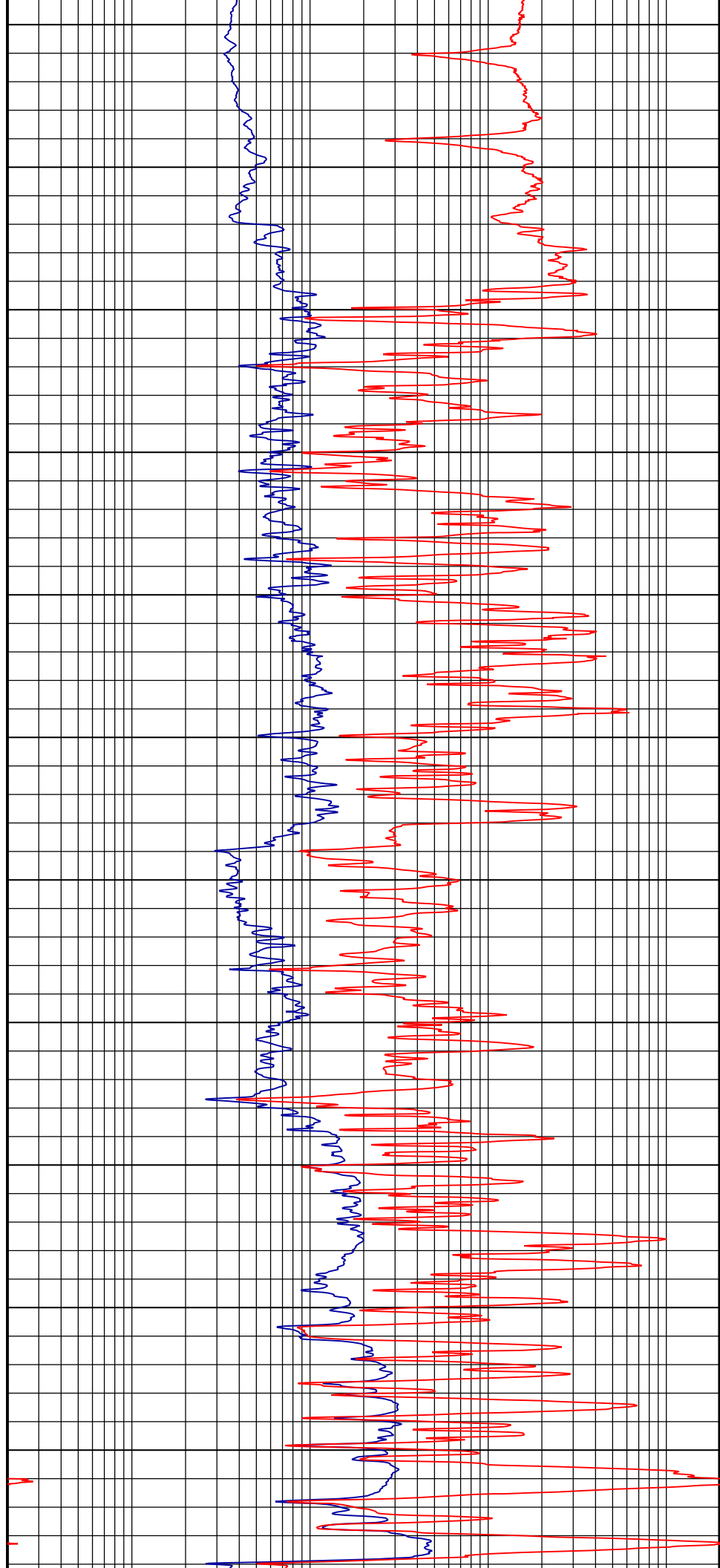
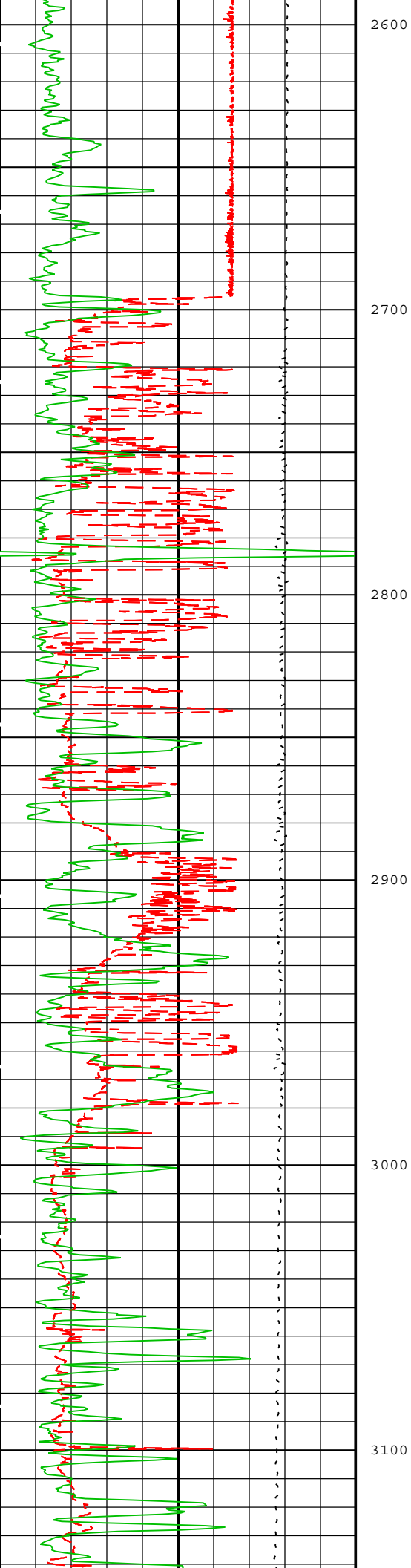
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B

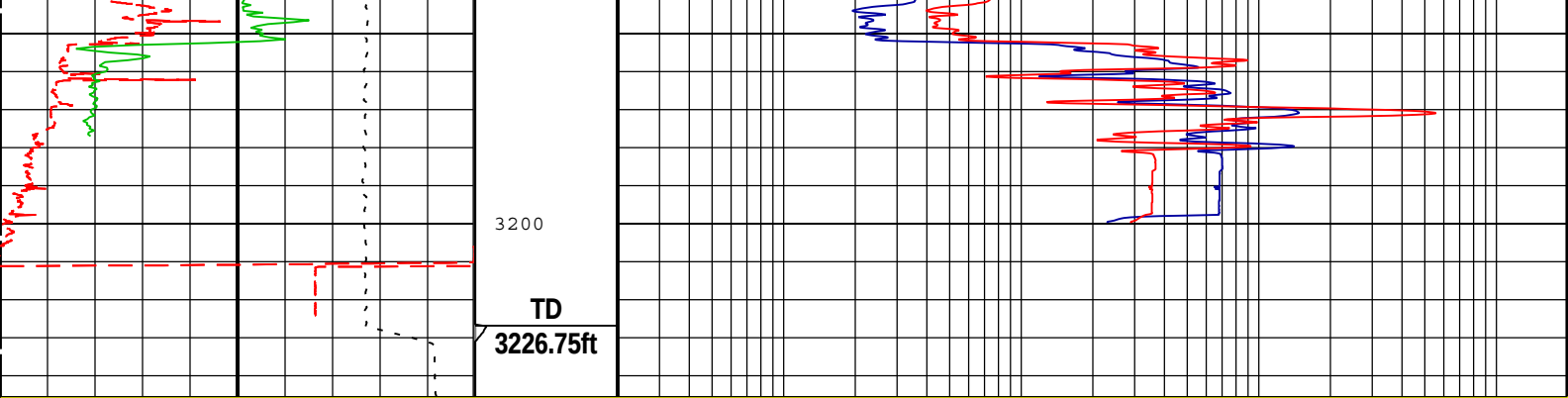
2" Resistivity











2" Resistivity

Cable Tension (TENS)		
10000	lbf	0
Caliper (CALI) HDRS-B		
6	in	16
GR		
0	gAPI	100

Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B		
0.2	ohm.m	2000

Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000

TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (HRLA_2_inch) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:52:53

One

Main Pass 5"=100'

Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Main[5]:Up	Up	810.48 ft	3245.53 ft	01-Nov-2014 5:51:35 AM	01-Nov-2014 6:34:07 AM	ON	3.59 ft	Yes

All depths are referenced to toolstring zero

Log	Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2 One: Main[5]:Up:S012
-----	---

Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:52:55

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
MRES	HRLT-B:HRLS-B:HRLS-B	2in
RLA3	HRLT-B:HRLS-B:HRLS-B	2in
RLA5	HRLT-B:HRLS-B:HRLS-B	2in
RXOZ	HDRS-B:HRMS-B:HRGD-B	2in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

TIME_1900 - Time Marked every 60.00 (s)

Cable Tension (TENS)		
10000	lbf	0
Caliper (CALI) HDRS-B		
6	in	16
GR		

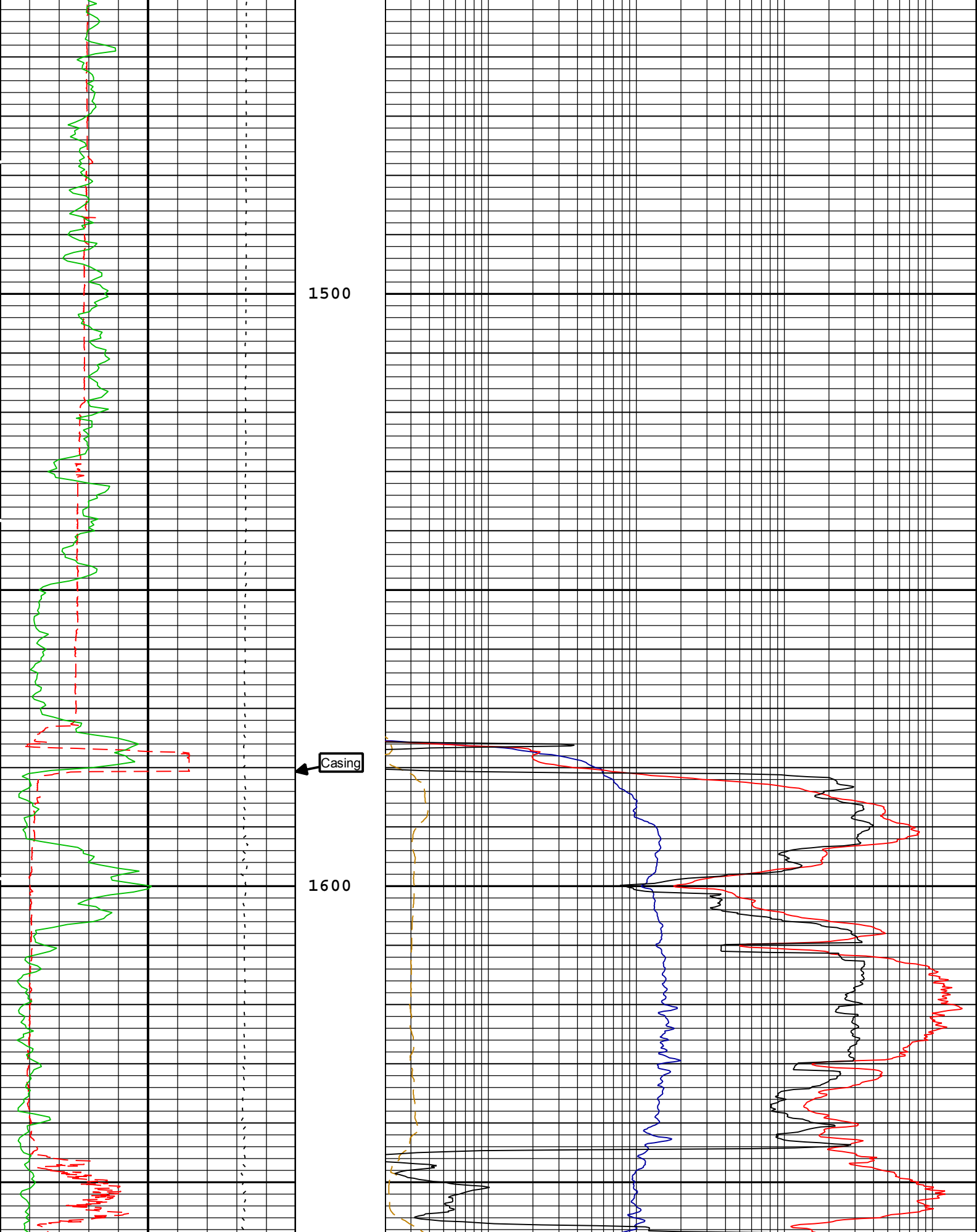
Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B		
0.2	ohm.m	2000

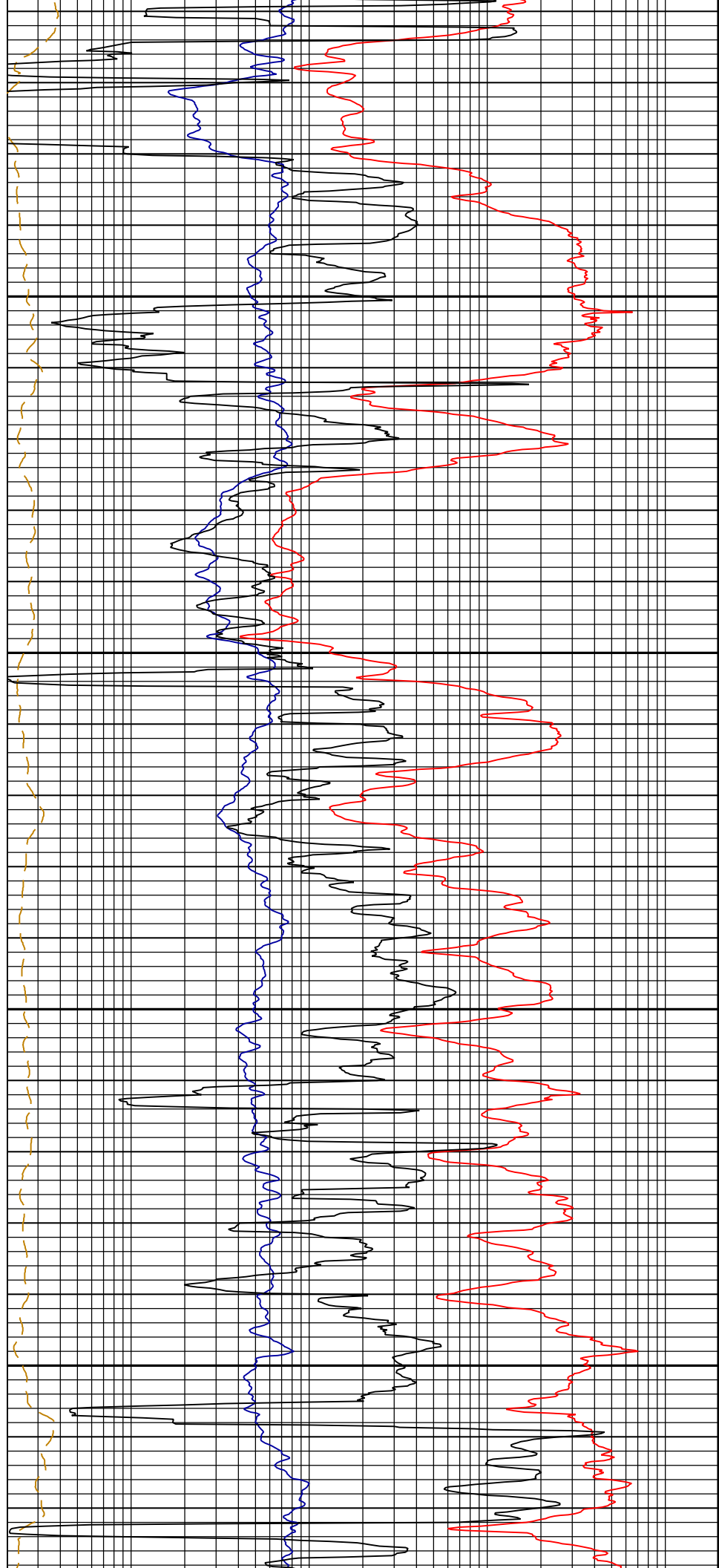
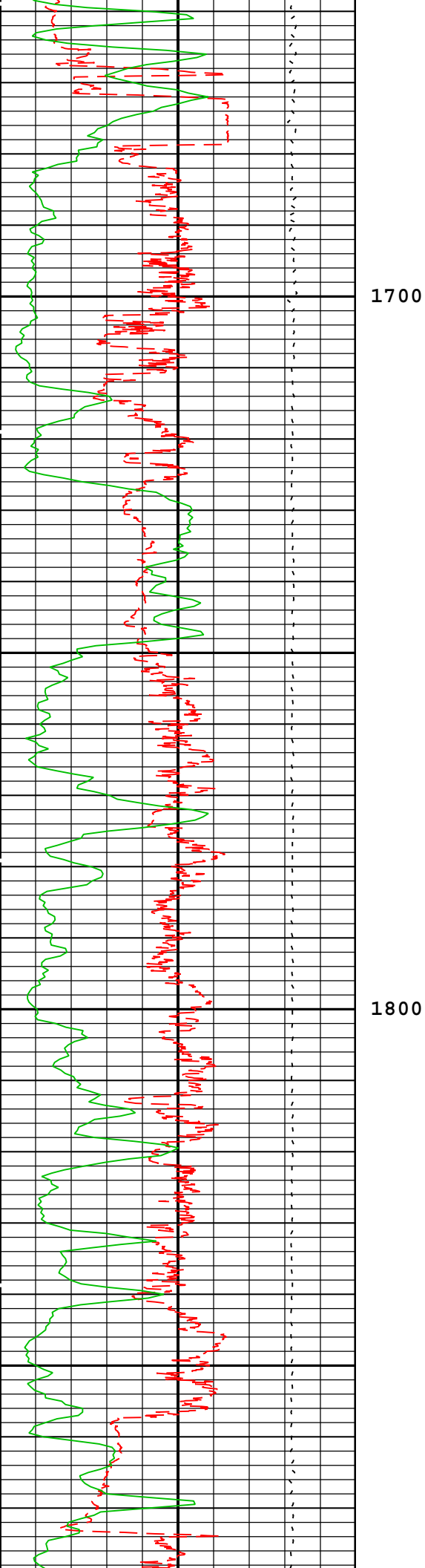
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000

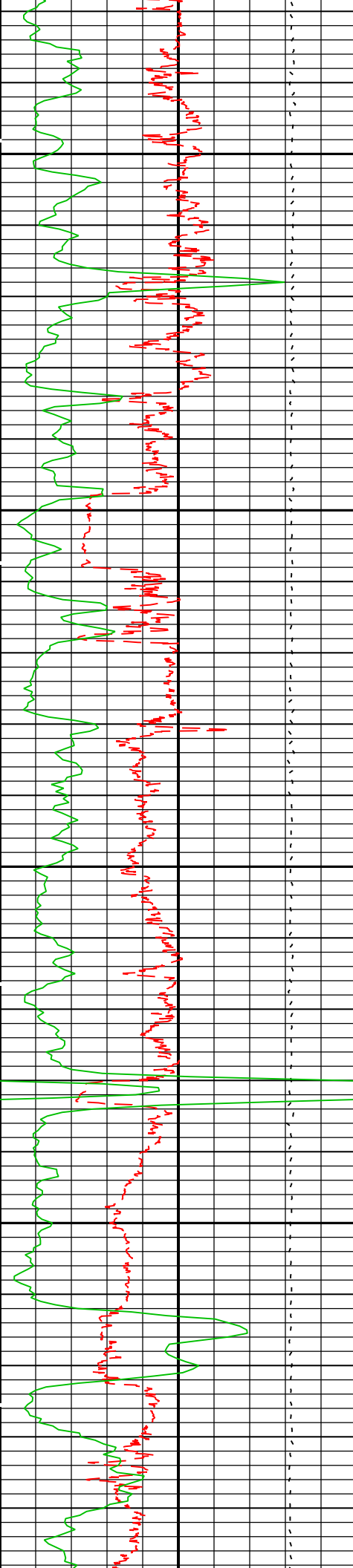
Mud Resistivity (MRES) HRLT-B		
0.02	ohm.m	200

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

5" Resistivity

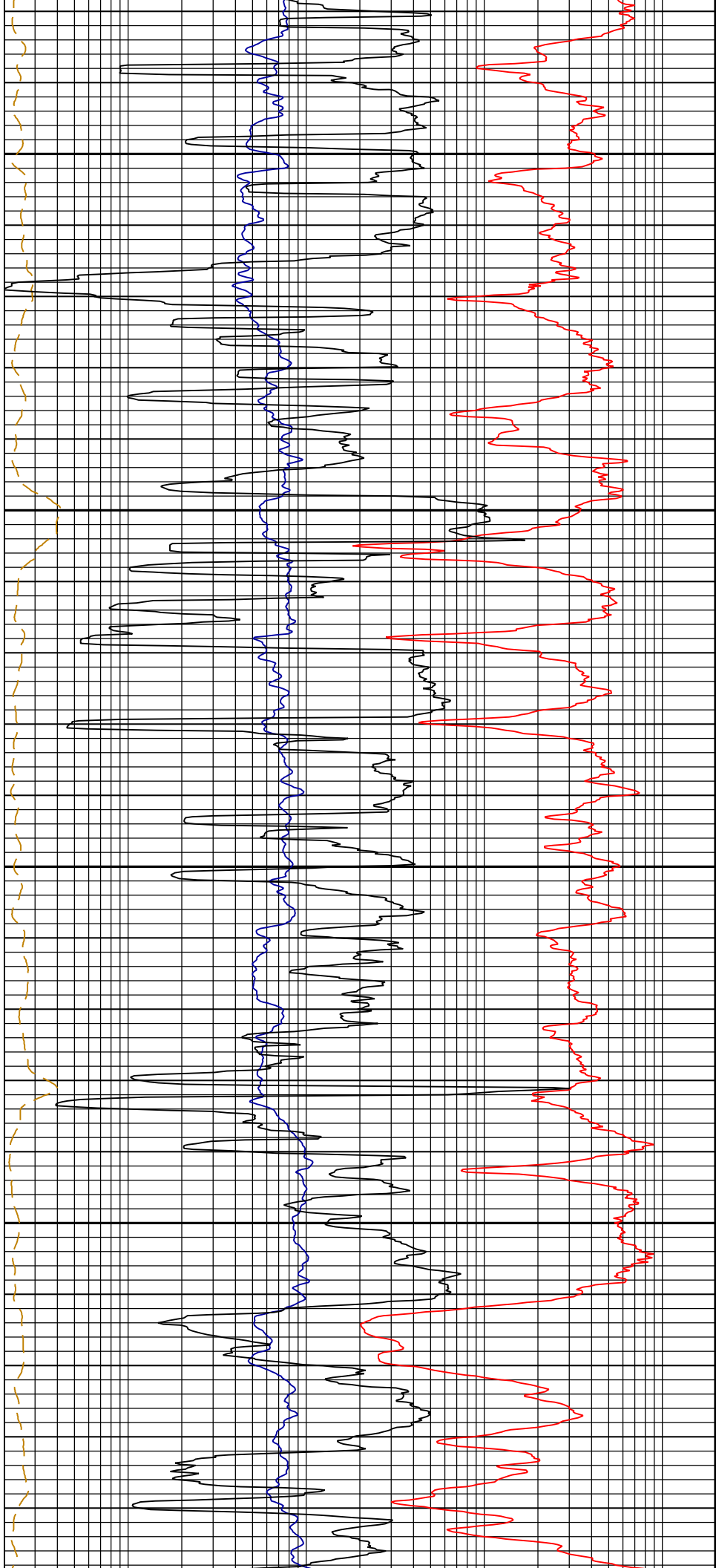


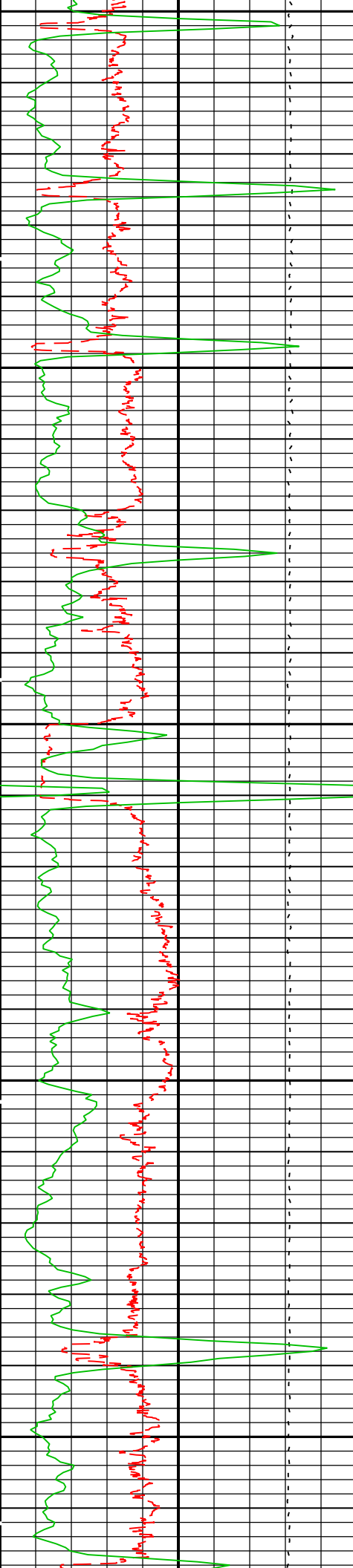




1900

2000

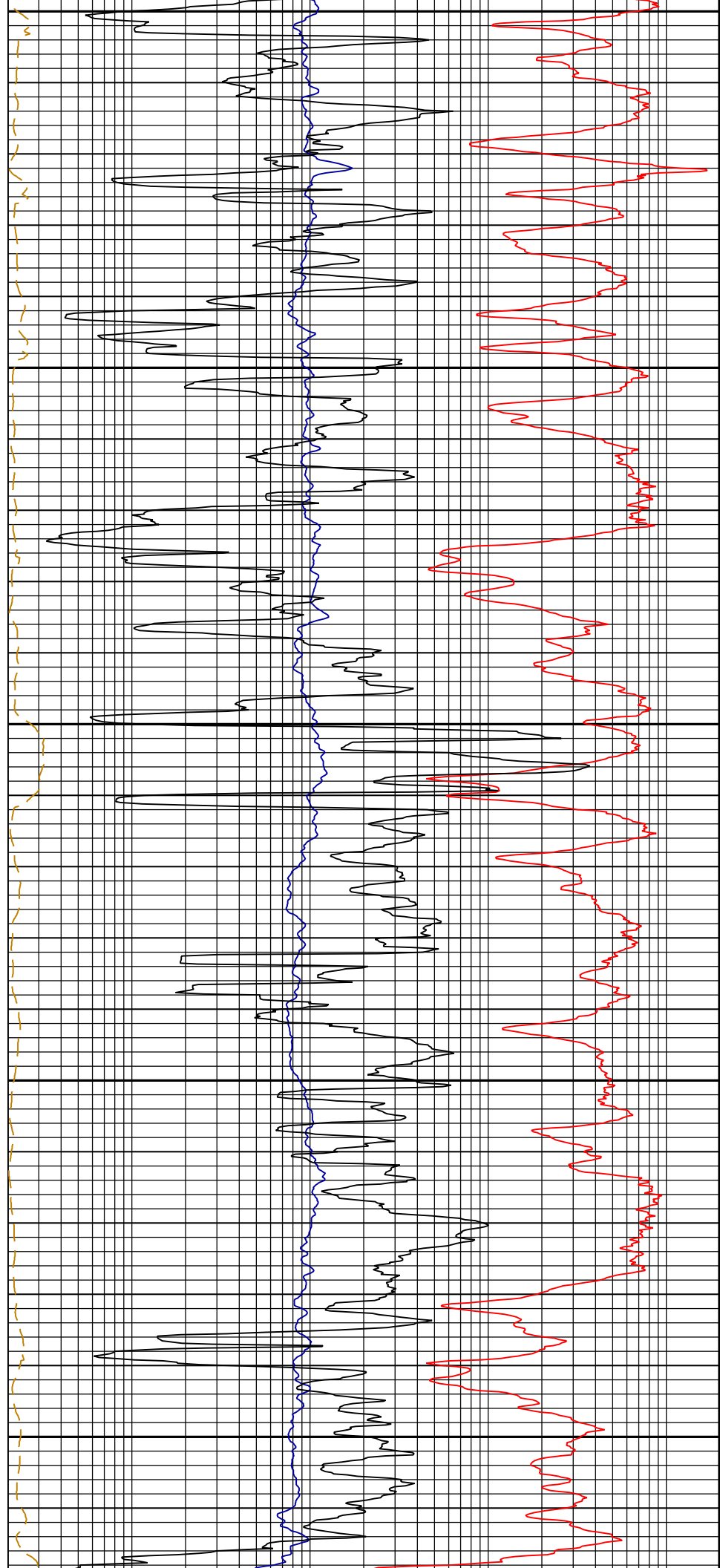


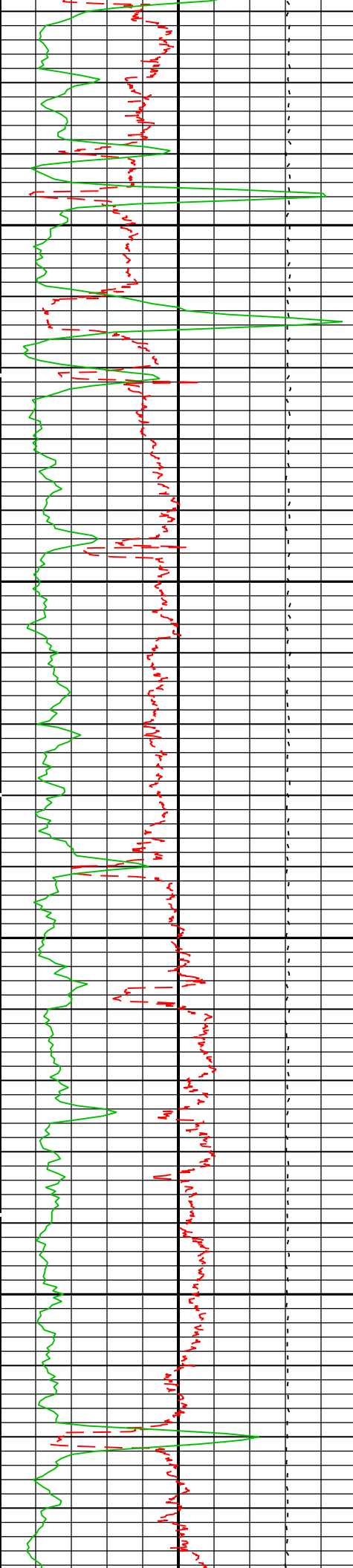


2100

2200

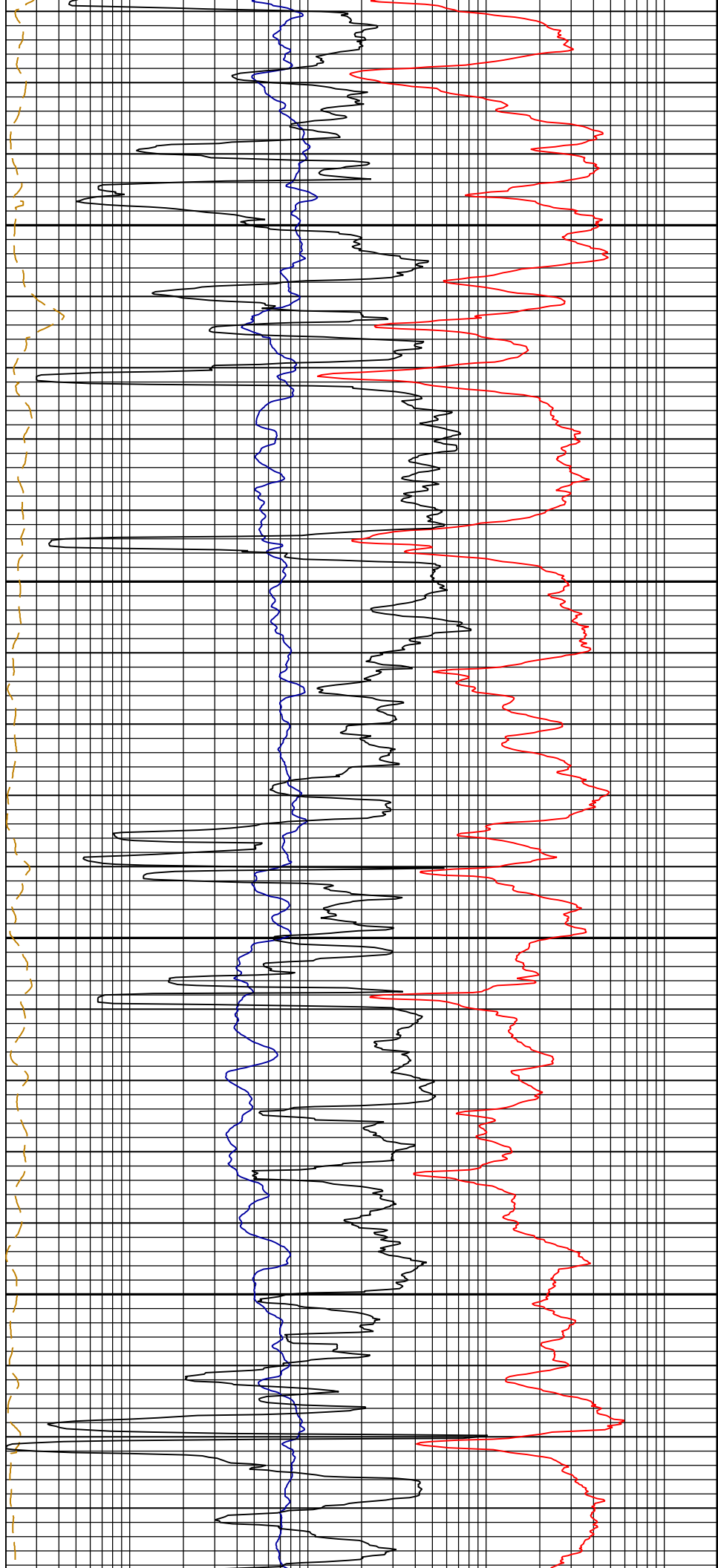
2300

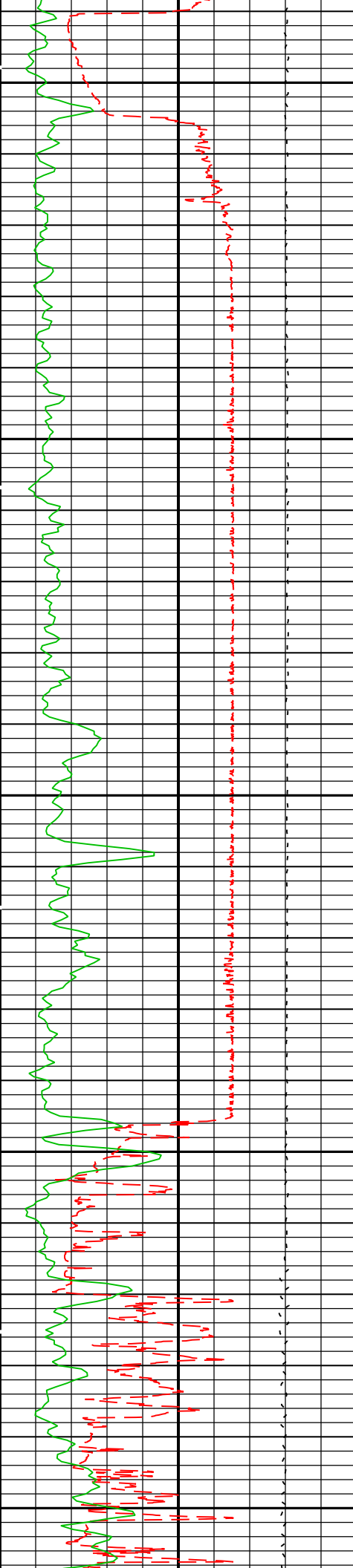




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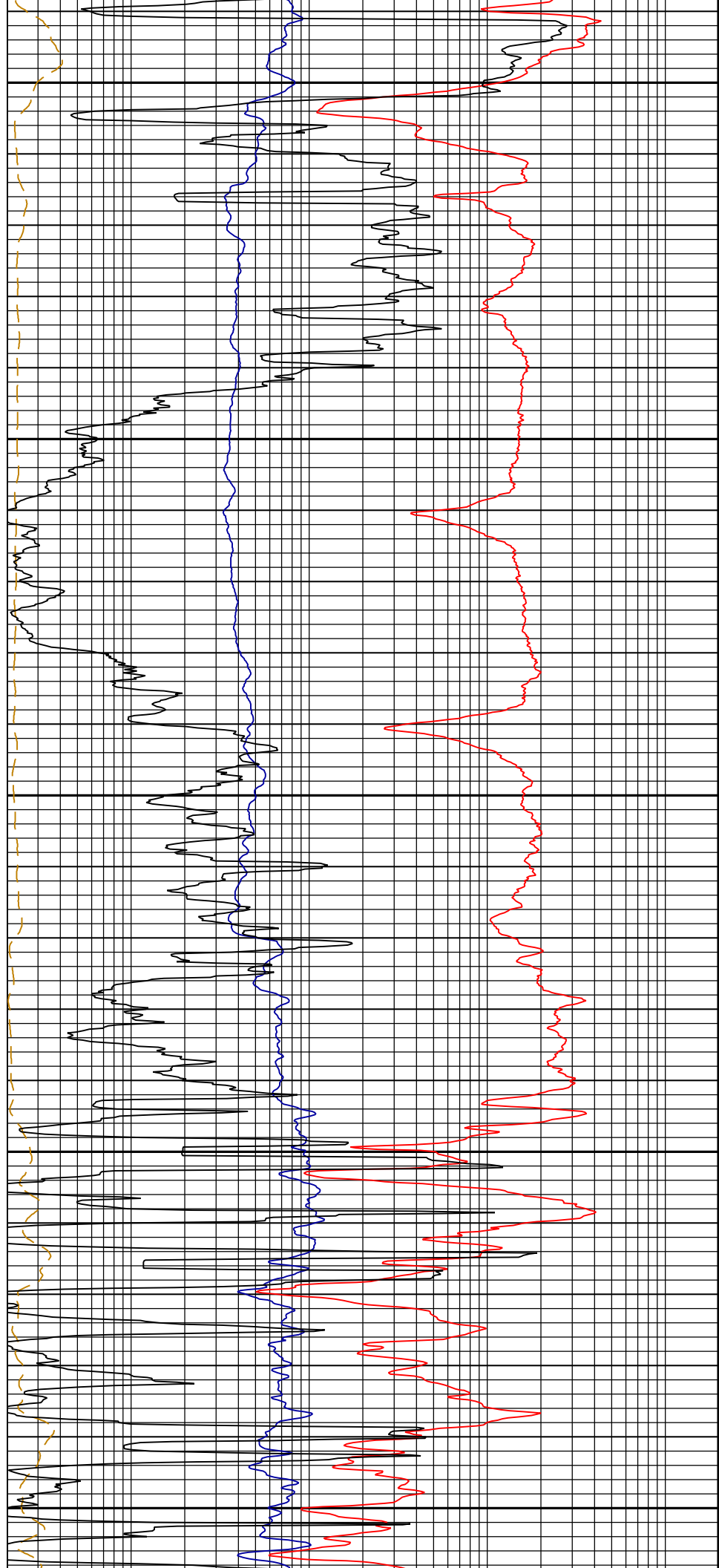
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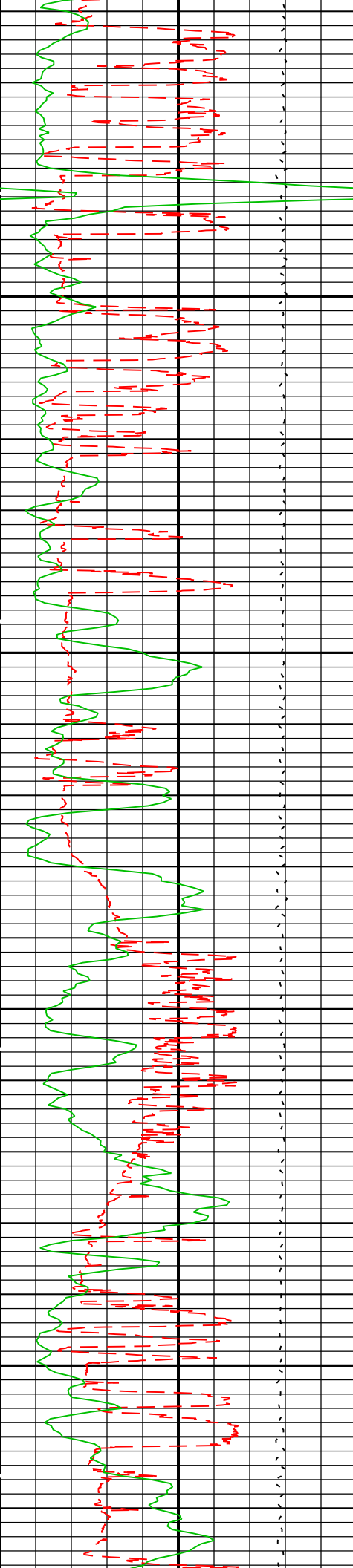




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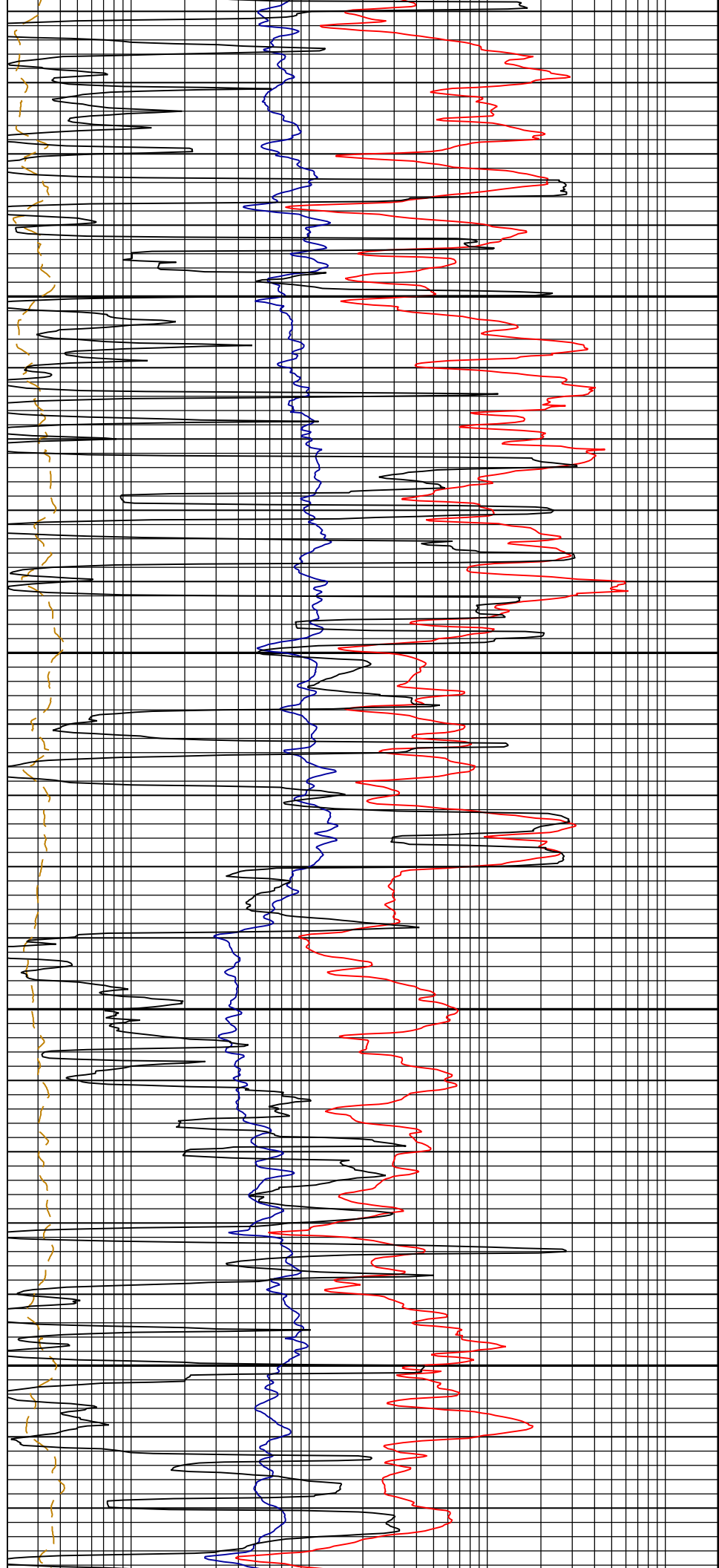
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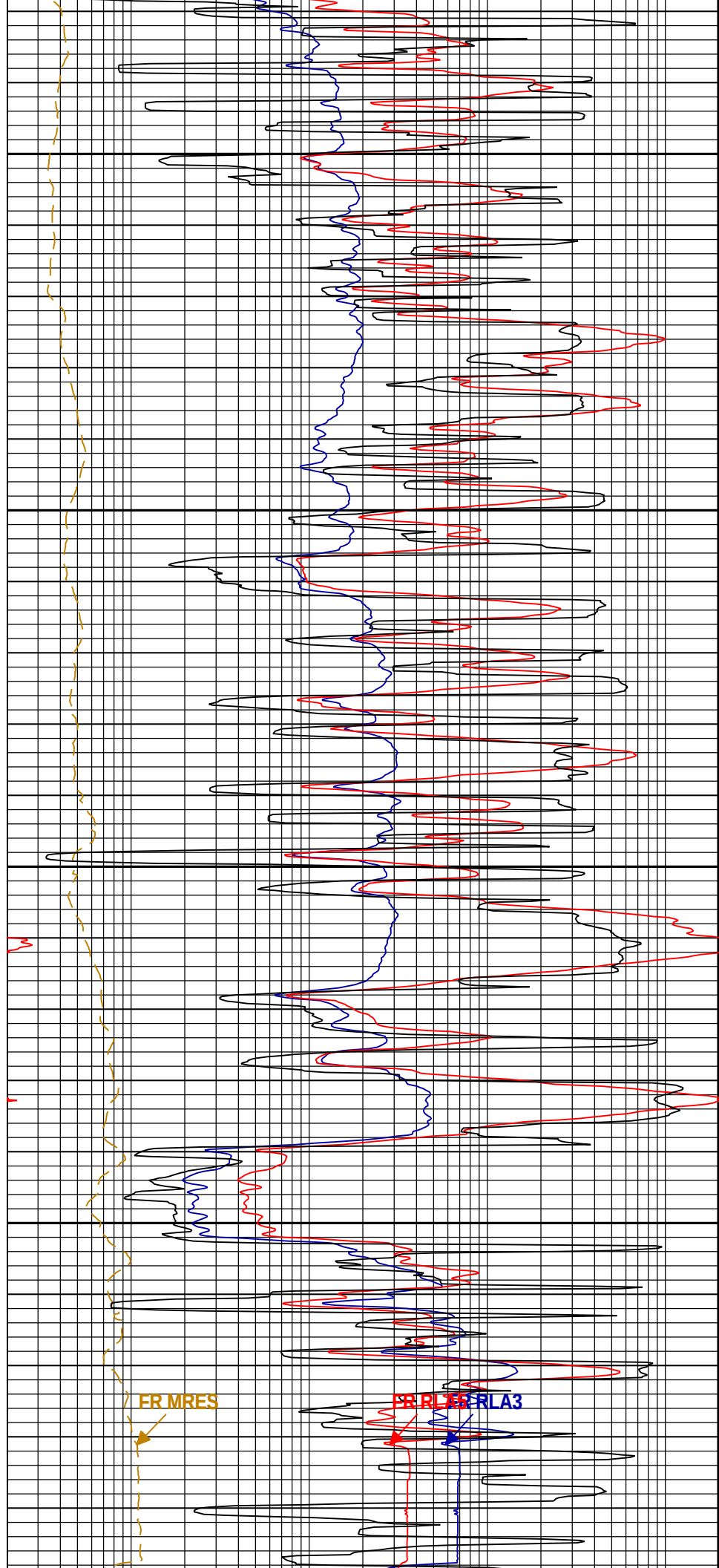
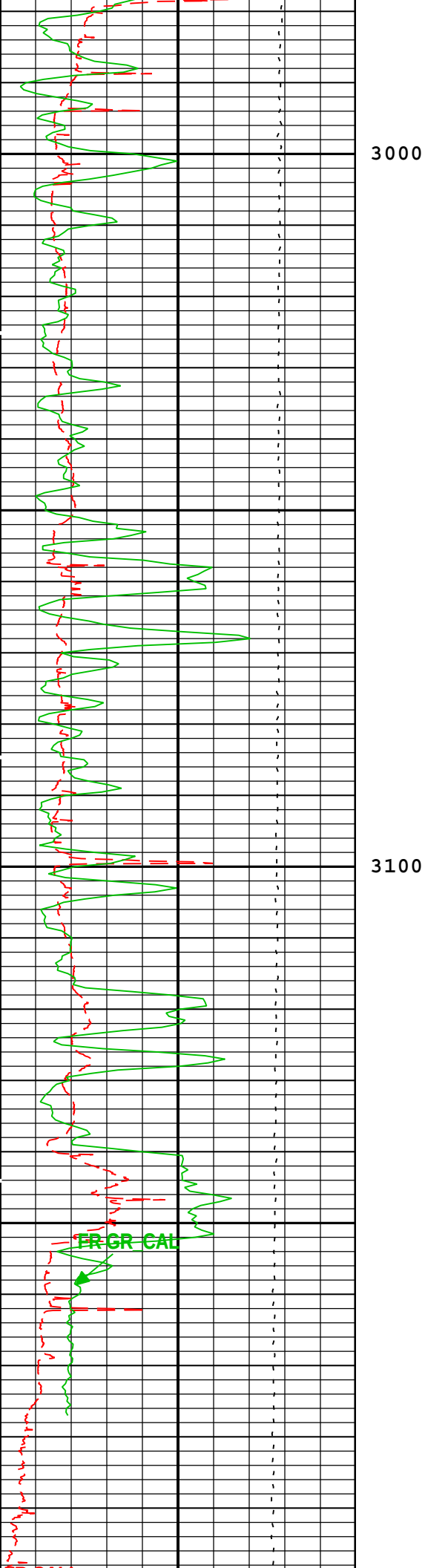


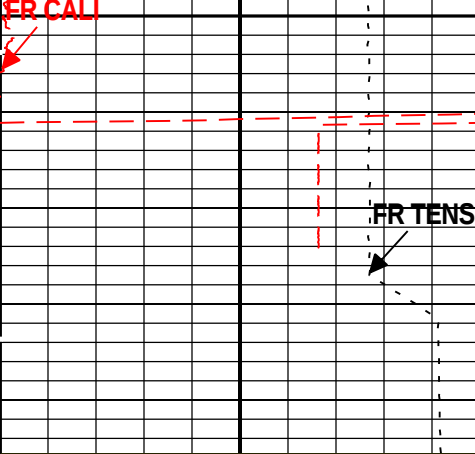


2800

2900







3200
TD
3226.75ft

5" Resistivity

Cable Tension (TENS)		
10000	lbf	0
Caliper (CALI) HDRS-B		
6	in	16
GR		
0	gAPI	100

Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B		
0.2	ohm.m	2000
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000
Mud Resistivity (MRES) HRLT-B		
0.02	ohm.m	200
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-B		
0.2	ohm.m	2000

TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:52:55

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-B	-0.285	in
CBLO	Casing Bottom (Logger)	WLSESSION	1580.67	ft
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	MRES	
HRLT_PROCRM	Mud Resistivity Select	HRLT-B	HRLT Compute	
KFAC_HRLT	HRLT Geometrical Factor Option	HRLT-B	Sonde	
PROCMSO	Mechanical Standoff Size	HRLT-B	1.5	in
PROCSP0	Sonde Position	HRLT-B	Eccentered	

Depth Zone Parameters			
Parameter	Value	Start (ft)	Stop (ft)
BHS	Cased	1450	1580.67
BHS	Open	1580.67	3245.5
BS	26	1450	1570
BS	17.5	1570	3226.75

All depth are actual.

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
HRGD_BRD_TYPE	HRGD Board Type	HDRS-B	WITHOUT_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h
STSO_HRDD	Temperature Source for the Density Algorithm	HDRS-B	Decaytime algorithm	

One

Repeat Analysis 5"=100'

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Repeat[3]:Up	Up	2765.83 ft	3243.33 ft	01-Nov-2014 5:23:07 AM	01-Nov-2014 5:34:18 AM	ON	0.00 ft	Yes
One	Main[5]:Up	Up	810.48 ft	3245.53 ft	01-Nov-2014 5:51:35 AM	01-Nov-2014 6:34:07 AM	ON	3.59 ft	Yes

All depths are referenced to toolstring zero

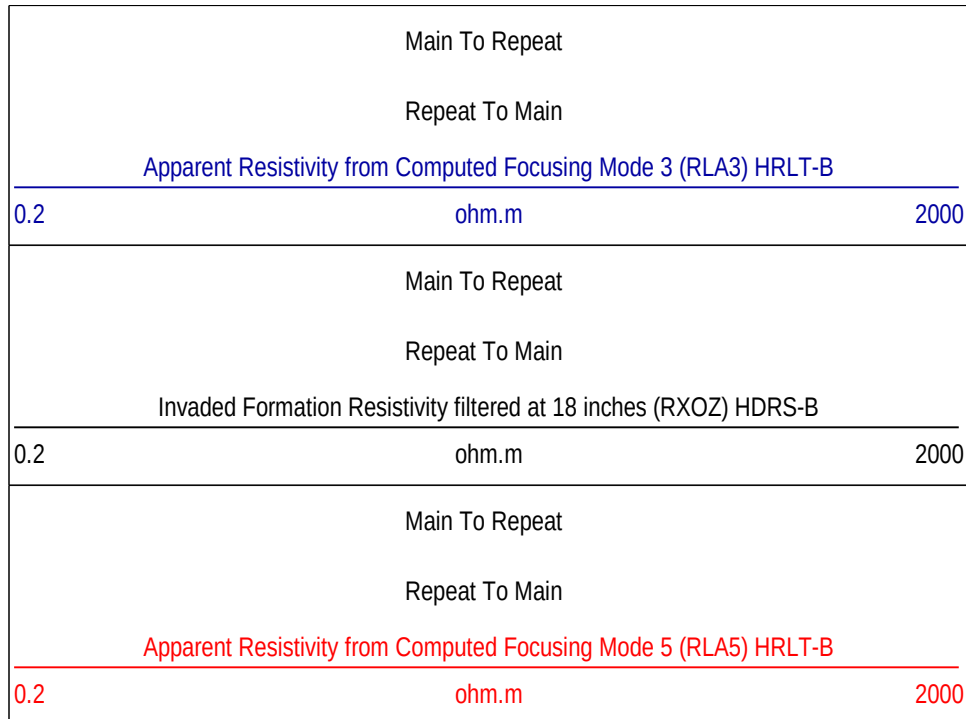
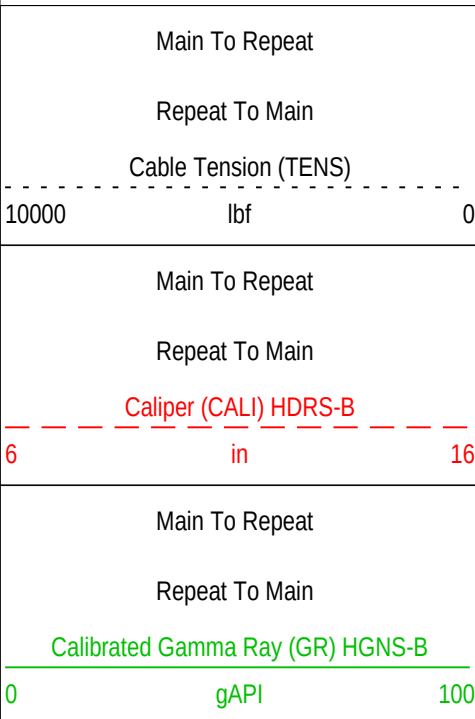
Log

Company:PB ENERGY STORAGE SERVICES, INC Well:DCP Linam Ranch AGI #2

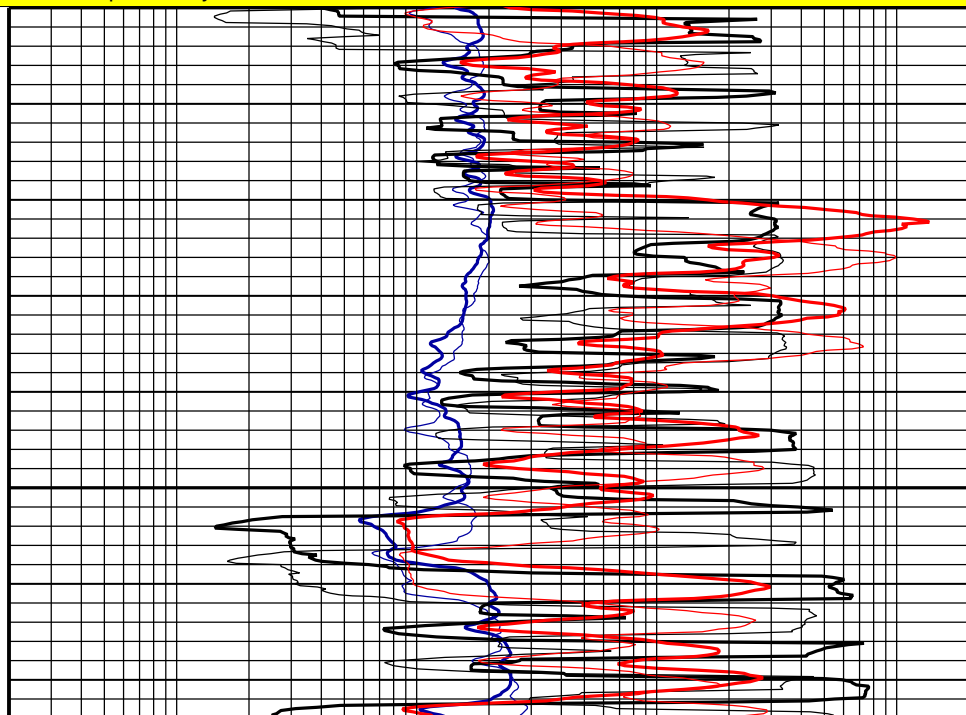
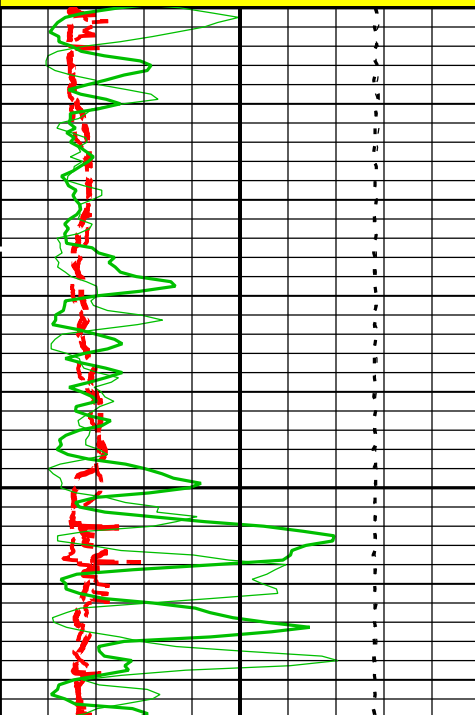
One: Main[5]:Up:S012

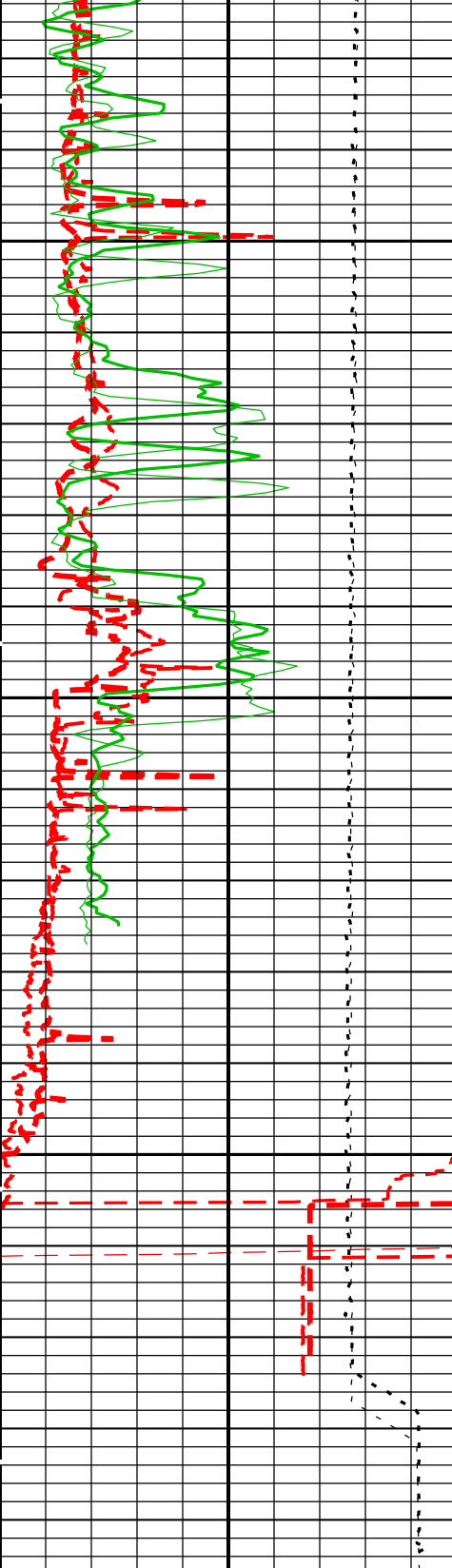
Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:52:56

TIME_1900 - Time Marked every 60.00 (s)



Repeat Analysis: 5"

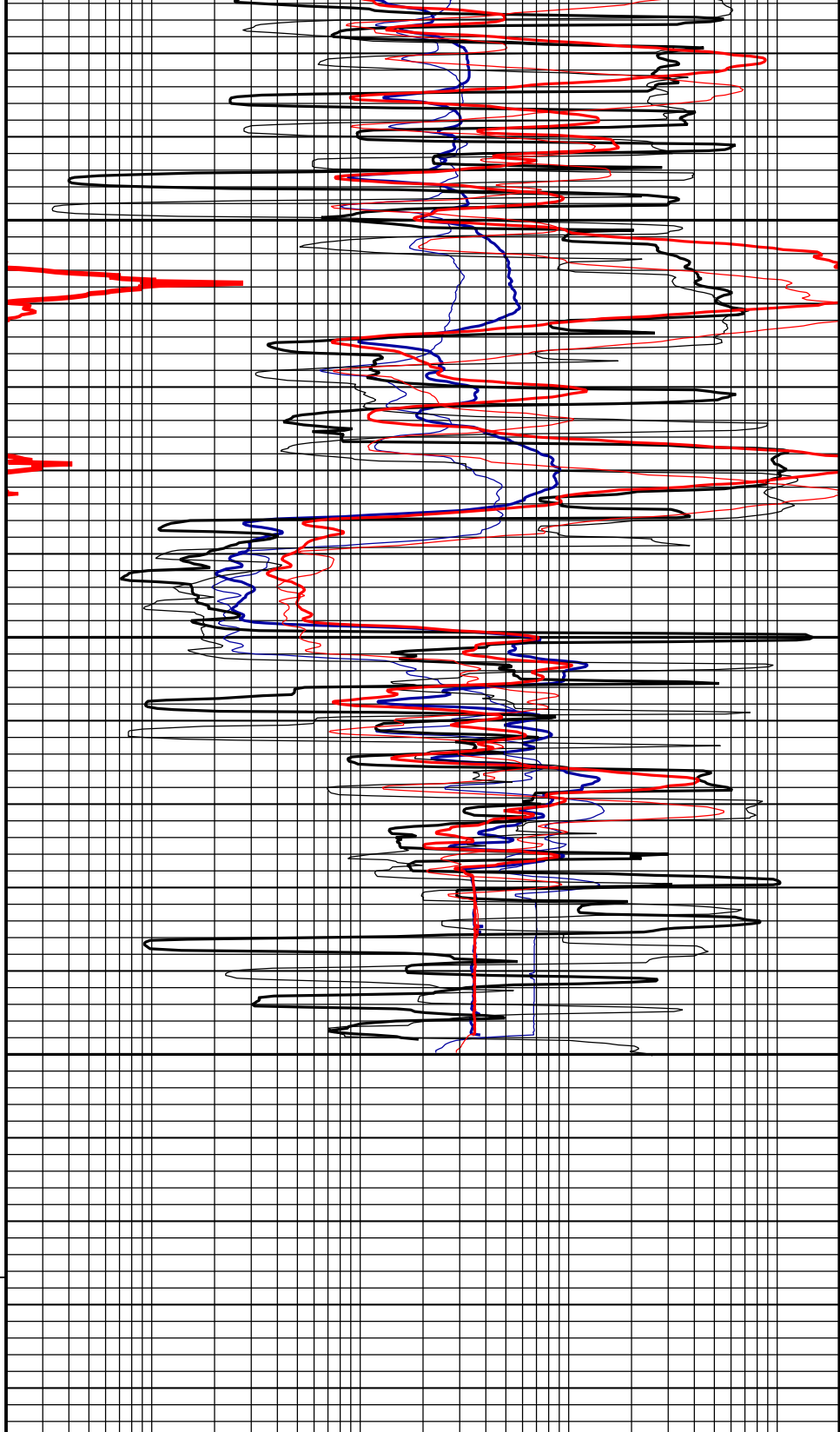




3100

3200

TD
3226.75ft



Repeat Analysis: 5"			
Main To Repeat Repeat To Main Cable Tension (TENS) ----- 10000 lbf 0		Main To Repeat	
		Repeat To Main	
		Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B ----- 0.2 ohm.m 2000	
Main To Repeat		Main To Repeat	
Repeat To Main		Repeat To Main	
Caliper (CALI) HDRS-B		Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-B	

6	in	16
Main To Repeat		
Repeat To Main		
Calibrated Gamma Ray (GR) HGNS-B		
0	gAPI	100

TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:52:56

One									
Repeat Pass 5"=100'									
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Repeat[3]:Up	Up	2765.83 ft	3243.33 ft	01-Nov-2014 5:23:07 AM	01-Nov-2014 5:34:18 AM	ON	0.00 ft	Yes
All depths are referenced to toolstring zero									
Log	Company:PB ENERGY STORAGE SERVICES, INC						Well:DCP Linam Ranch AGI #2		
One: Repeat[3]:Up:S012									

Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:52:57

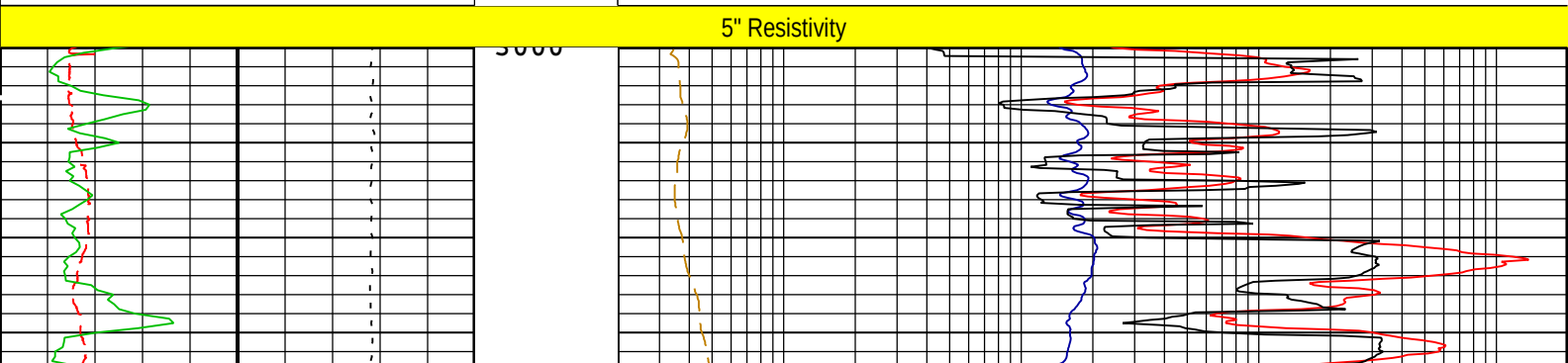
Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
MRES	HRLT-B:HRLS-B:HRLS-B	2in
RLA3	HRLT-B:HRLS-B:HRLS-B	2in
RLA5	HRLT-B:HRLS-B:HRLS-B	2in
RXOZ	HDRS-B:HRMS-B:HRGD-B	2in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

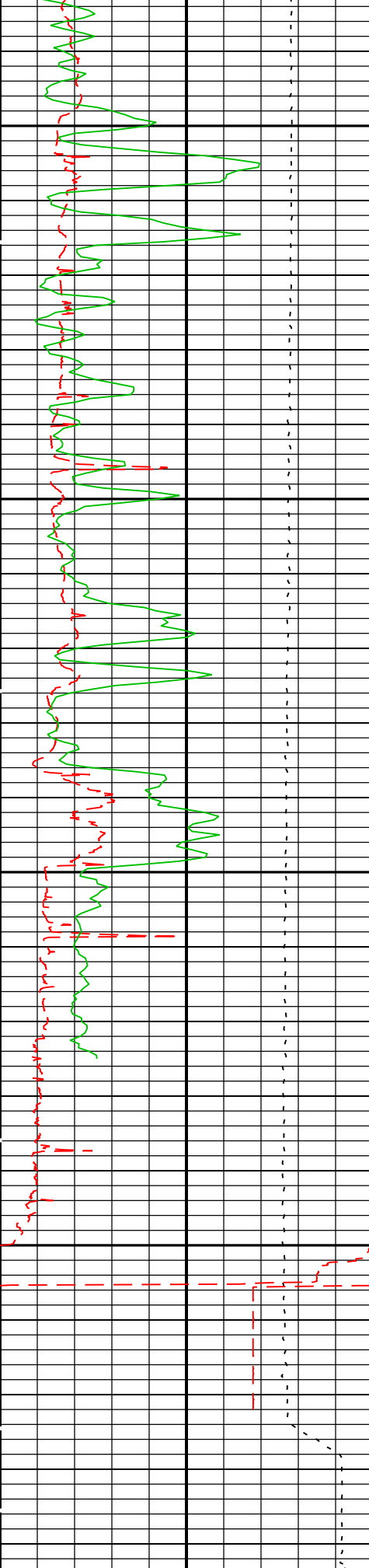
TIME_1900 - Time Marked every 60.00 (s)

Cable Tension (TENS)		
10000	lbf	0
Caliper (CALI) HDRS-B		
6	in	16
GR		
0	gAPI	100

0.2	ohm.m	2000
Main To Repeat		
Repeat To Main		
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000

Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B		
0.2	ohm.m	2000
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000
Mud Resistivity (MRES) HRLT-B		
0.02	ohm.m	200
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-B		
0.2	ohm.m	2000

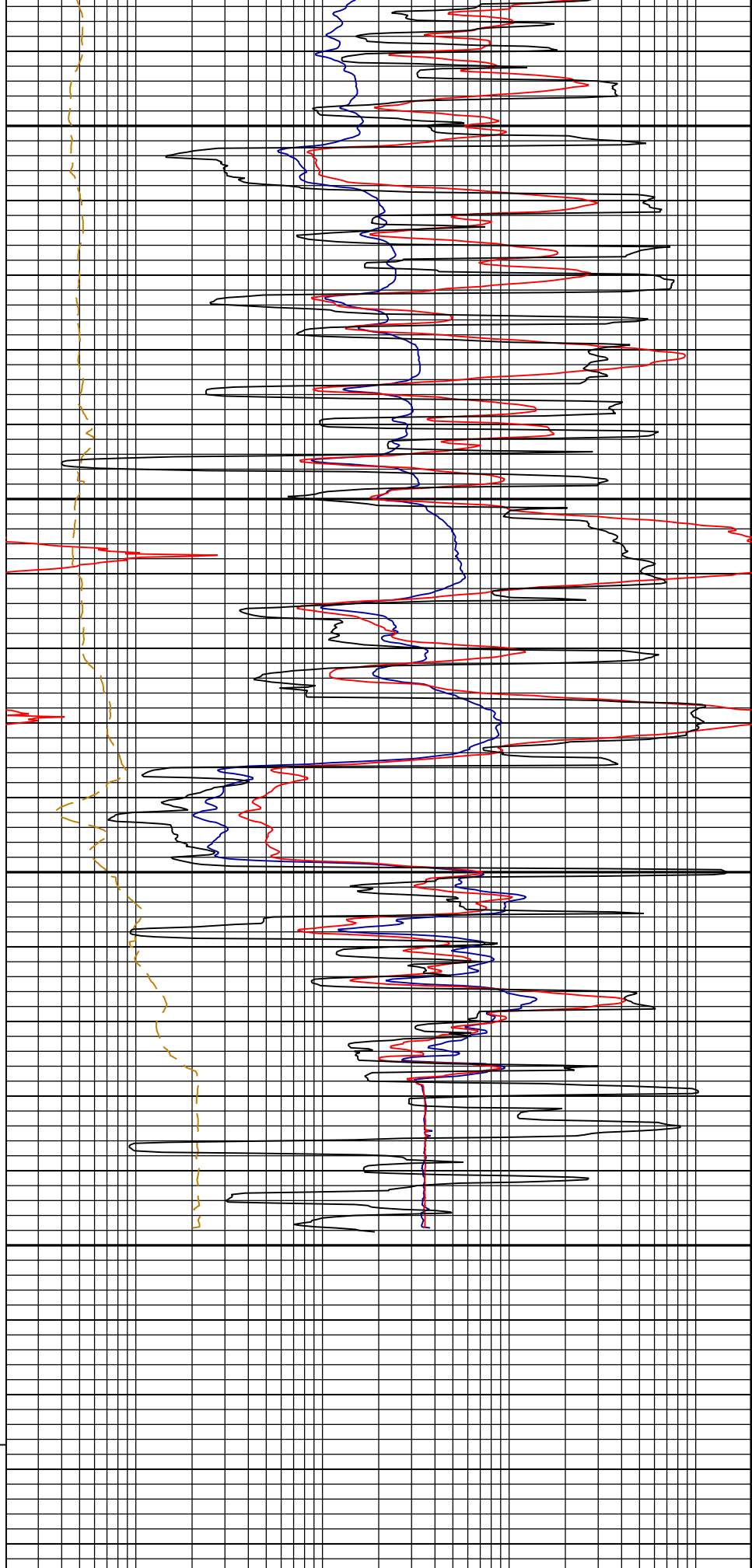




3100

3200

TD
3226.75ft



5" Resistivity

Cable Tension (TENS)

Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B

10000	lbf	0
Caliper (CALI) HDRS-B		
6	in	16
GR		
0	gAPI	100

0.2	ohm.m	2000
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000
Mud Resistivity (MRES) HRLT-B		
0.02	ohm.m	200
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-B		
0.2	ohm.m	2000

TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:52:57

Calibration Report							
HDRS-B (HILT Density and Rxo Sonde, 125 degC) Calibration - Run One							
Primary Equipment :							
HILT High-Resolution Control Cartridge, 125 degC			HRCC-B		952		
15 kpsi, tungsten shielding			HRGD-B		1887		
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): 16:50:42 28-Oct-2014 Expired by 2 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	in	Before	8.00	6.00	8.56	10.00	
Large Ring	in	Before	12.00	9.00	12.69	15.00	
HDRS Density Calibration - Background Summary							
Before (Measured): 16:52:00 28-Oct-2014 Expired by 2 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Before	0.7501	0.7126	0.7496	0.7876	
BS Window Sum	1/s	Before	9803	9313	9788	10294	
SS Window Ratio		Before	0.4876	0.4633	0.4877	0.5120	
SS Window Sum	1/s	Before	9586	9106	9561	10065	
LS Window Ratio		Before	0.2943	0.2796	0.2917	0.3090	
LS Window Sum	1/s	Before	1003	953	997	1053	
HDRS Density Calibration - Photo-multiplier High Voltages							
Before (Measured): 16:52:00 28-Oct-2014 Expired by 2 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Before		1000	1653	2400	
SS PM High Voltage	V	Before		1000	1741	2400	
LS PM High Voltage	V	Before		1000	1428	2400	
HDRS Density Calibration - Crystal Quality Resolutions							
Before (Measured): 16:52:00 28-Oct-2014 Expired by 2 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Crystal Resolution	%	Before		5.00	10.56	25.00	
SS Crystal Resolution	%	Before		5.00	9.09	20.00	
LS Crystal Resolution	%	Before		5.00	8.90	20.00	
HDRS MCFL Calibration - MCFL Accumulations							
Before (Measured): 04:49:11 01-Nov-2014							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Main Resistivity	ohm.m	Before	3875	3565	3832	4185	
Deep Resistivity	ohm.m	Before	3830	3524	3840	4136	
Shallow Resistivity	ohm.m	Before	3830	3524	3864	4136	

HRLT-B (High Resolution Laterolog Array) Calibration - Run One							
Primary Equipment :							
HRLS-B				HRLS-B		1884	

HRLT-B Calibration - HRLT M0-M1 Voltage Plus

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT M01 - 0	uV	Before	-322.7	-379.6	-318.8	-280.6	
HRLT M01 - 1	uV	Before	-322.7	-379.6	-362.0	-280.6	
HRLT M01 - 2	uV	Before	-322.7	-379.6	-325.3	-280.6	
HRLT M01 - 3	uV	Before	-322.7	-379.6	-319.7	-280.6	
HRLT M01 - 4	uV	Before	-322.7	-379.6	-310.3	-280.6	
HRLT M01 - 5	uV	Before	-322.7	-379.6	-321.3	-280.6	
HRLT M01 - 6	uV	Before	322.7	280.6	309.3	379.6	

HRLT-B Calibration - HRLT M1-M2 Voltage Plus

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT M12 - 0	uV	Before	1781.0	1548.7	1751.9	2095.3	
HRLT M12 - 1	uV	Before	1781.0	1548.7	1982.9	2095.3	
HRLT M12 - 2	uV	Before	1781.0	1548.7	1778.2	2095.3	
HRLT M12 - 3	uV	Before	1781.0	1548.7	1748.7	2095.3	
HRLT M12 - 4	uV	Before	1781.0	1548.7	1698.8	2095.3	
HRLT M12 - 5	uV	Before	1781.0	1548.7	1761.1	2095.3	
HRLT M12 - 6	uV	Before	-1781.0	-2095.3	-1702.2	-1548.7	

HRLT-B Calibration - HRLT M2-M3 Voltage Plus

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT M23 - 0	uV	Before	1781.0	1548.7	1735.9	2095.3	
HRLT M23 - 1	uV	Before	1781.0	1548.7	1971.3	2095.3	
HRLT M23 - 2	uV	Before	1781.0	1548.7	1770.6	2095.3	
HRLT M23 - 3	uV	Before	1781.0	1548.7	1745.7	2095.3	
HRLT M23 - 4	uV	Before	1781.0	1548.7	1692.1	2095.3	
HRLT M23 - 5	uV	Before	1781.0	1548.7	1755.5	2095.3	
HRLT M23 - 6	uV	Before	-1781.0	-2095.3	-1681.4	-1548.7	

HRLT-B Calibration - HRLT A3-A4 Voltage Plus

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT V34 - 0	uV	Before	70000.0	60869.6	68578.6	82352.9	
HRLT V34 - 1	uV	Before	70000.0	60869.6	78038.9	82352.9	
HRLT V34 - 2	uV	Before	70000.0	60869.6	70305.6	82352.9	
HRLT V34 - 3	uV	Before	70000.0	60869.6	69453.8	82352.9	
HRLT V34 - 4	uV	Before	70000.0	60869.6	67189.5	82352.9	
HRLT V34 - 5	uV	Before	70000.0	60869.6	69666.3	82352.9	
HRLT V34 - 6	uV	Before	-70000.0	-82352.9	-65622.0	-60869.6	

HRLT-B Calibration - HRLT A4-A5 Voltage Plus

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT V45 - 0	uV	Before	70000.0	60869.6	68499.4	82352.9	
HRLT V45 - 1	uV	Before	70000.0	60869.6	77853.9	82352.9	
HRLT V45 - 2	uV	Before	70000.0	60869.6	70165.3	82352.9	
HRLT V45 - 3	uV	Before	70000.0	60869.6	69351.2	82352.9	
HRLT V45 - 4	uV	Before	70000.0	60869.6	67128.2	82352.9	
HRLT V45 - 5	uV	Before	70000.0	60869.6	69608.1	82352.9	
HRLT V45 - 6	uV	Before	-70000.0	-82352.9	-65459.1	-60869.6	

HRLT-B Calibration - HRLT A5-A6 Voltage Plus

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT V56 - 0	uV	Before	70000.0	60869.6	68584.8	82352.9	
HRLT V56 - 1	uV	Before	70000.0	60869.6	78296.0	82352.9	
HRLT V56 - 2	uV	Before	70000.0	60869.6	70478.3	82352.9	
HRLT V56 - 3	uV	Before	70000.0	60869.6	69579.6	82352.9	
HRLT V56 - 4	uV	Before	70000.0	60869.6	67237.0	82352.9	
HRLT V56 - 5	uV	Before	70000.0	60869.6	69701.4	82352.9	
HRLT V56 - 6	uV	Before	-70000.0	-82352.9	-65854.3	-60869.6	

HRLT-B Calibration - HRLT Torpedo-M0 Voltage

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT VTP - 0	uV	Before	-70000.0	-82352.9	-68144.6	-60869.6	
HRLT VTP - 1	uV	Before	-70000.0	-82352.9	-77823.8	-60869.6	
HRLT VTP - 2	uV	Before	-70000.0	-82352.9	-70133.6	-60869.6	
HRLT VTP - 3	uV	Before	-70000.0	-82352.9	-69382.4	-60869.6	
HRLT VTP - 4	uV	Before	-70000.0	-82352.9	-67198.5	-60869.6	
HRLT VTP - 5	uV	Before	-70000.0	-82352.9	-69698.2	-60869.6	
HRLT VTP - 6	uV	Before	70000.0	60869.6	65384.0	82352.9	

HRLT-B Calibration - HRLT Bridle#9-M0 Voltage

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT VBD - 0	uV	Before	-70000.0	-82352.9	-68167.1	-60869.6	
HRLT VBD - 1	uV	Before	-70000.0	-82352.9	-77937.0	-60869.6	
HRLT VBD - 2	uV	Before	-70000.0	-82352.9	-70227.8	-60869.6	
HRLT VBD - 3	uV	Before	-70000.0	-82352.9	-69463.8	-60869.6	
HRLT VBD - 4	uV	Before	-70000.0	-82352.9	-67252.0	-60869.6	
HRLT VBD - 5	uV	Before	-70000.0	-82352.9	-69734.2	-60869.6	
HRLT VBD - 6	uV	Before	70000.0	60869.6	65492.2	82352.9	

HRLT-B Calibration - HRLT Source Current Plus

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT ISO - 0	uA	Before	284.0	247.0	284.6	334.1	
HRLT ISO - 1	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 2	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 3	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 4	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 5	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 6	uA	Before	281.1	244.4	281.1	330.7	

HRLT-B Calibration - HRLT Vertical Voltage PI

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT MV - 0	uV	Before	-322.7	-379.6	-320.4	-280.6	
HRLT MV - 1	uV	Before	-322.7	-379.6	-353.3	-280.6	
HRLT MV - 2	uV	Before	-322.7	-379.6	-317.2	-280.6	
HRLT MV - 3	uV	Before	-322.7	-379.6	-310.6	-280.6	
HRLT MV - 4	uV	Before	-322.7	-379.6	-299.1	-280.6	
HRLT MV - 5	uV	Before	-322.7	-379.6	-325.0	-280.6	
HRLT MV - 6	uV	Before	322.7	280.6	314.3	379.6	

HRLT-B Calibration - HRLT Calibration Temperature

Before (Measured):		05:48:45 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CTEM_HRLT	degF	Before			112.8		

HGNS-B (HILT Gamma-Ray and Neutron Sonde, 125 degC) Calibration - Run One

Primary Equipment :			
HILT Gamma-Ray and Neutron Sonde, 125 degC		HGNS-B	3960
Auxiliary Equipment :			
Calibration Parameter :			
Water Temperature			
Housing Size			
JIG-BKG (Jig minus background reference)		165	

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured):		04:47:29 01-Nov-2014					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.2	31.5	32.1	32.8	

HGNS Neutron Calibration - HGNS Neutron Accumulations

Before (Measured):		10:48:00 01-Nov-2014					
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Before (Measured):

16:48:20 28-Oct-2014 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Near Zero Measurement	1/s	Before	0	5.0	25.8	40.0	
Far Zero Measurement	1/s	Before	0	5.0	27.0	40.0	
Near Plus Measurement - 0	1/s	Before	----	----	----	----	
Far Plus Measurement - 0	1/s	Before	----	----	----	----	
Near Corrected Plus Measurement - 0	1/s	Before	----	----	----	----	
Far Corrected Plus Measurement - 0	1/s	Before	----	----	----	----	

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations

Before (Measured): 16:56:26 28-Oct-2014 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before	30.0	0	41.2	120.0	
RGR Plus Measurement	gAPI	Before	185.4	157.1	159.4	206.3	
GR Calibration Gain		Before	0.89	0.80	1.04	1.05	

Company: PB ENERGY STORAGE SERVICES, INC

Schlumberger

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County: Lea

State: New Mexico

Platform Express

High Resolution Laterolog Array

Micro-CFL\HNGS

Main Pass 1"=100'

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Main[5]:Up	Up	810.48 ft	3245.53 ft	01-Nov-2014 5:51:35 AM	01-Nov-2014 6:34:07 AM	ON	3.59 ft	Yes

All depths are referenced to toolstring zero

Log

Company:PB ENERGY STORAGE SERVICES, INC

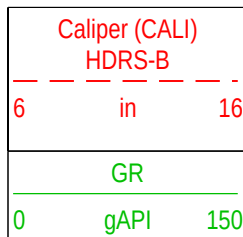
Well:DCP Linam Ranch AGI #2

One: Main[5]:Up:S012

Description: HRLT BASIC LOG Format: Log (HRLA_1_inch) Index Scale: 1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:03

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
RLA3	HRLT-B:HRLS-B:HRLS-B	2in
RLA5	HRLT-B:HRLS-B:HRLS-B	2in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

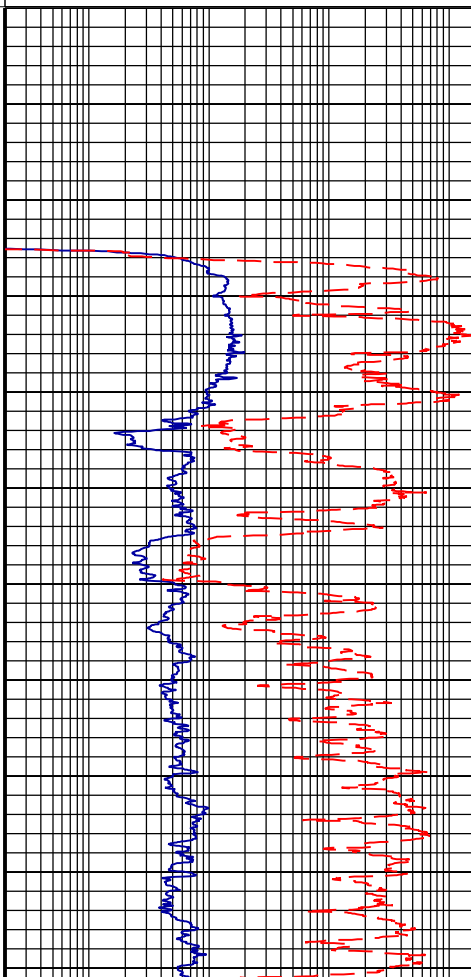
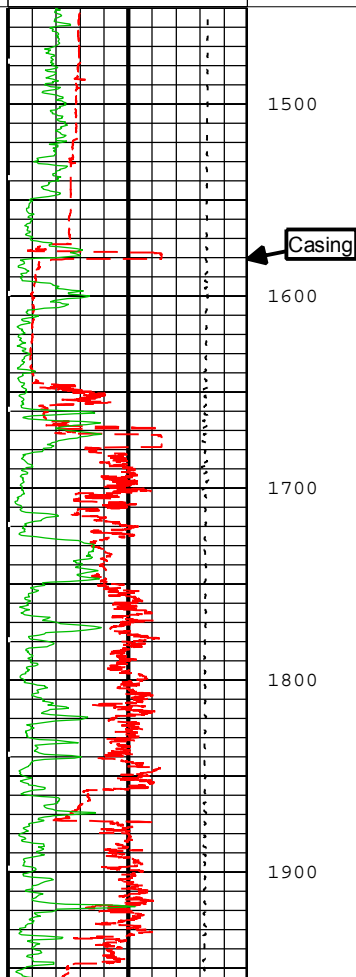
TIME_1900 - Time Marked every 60.00 (s)

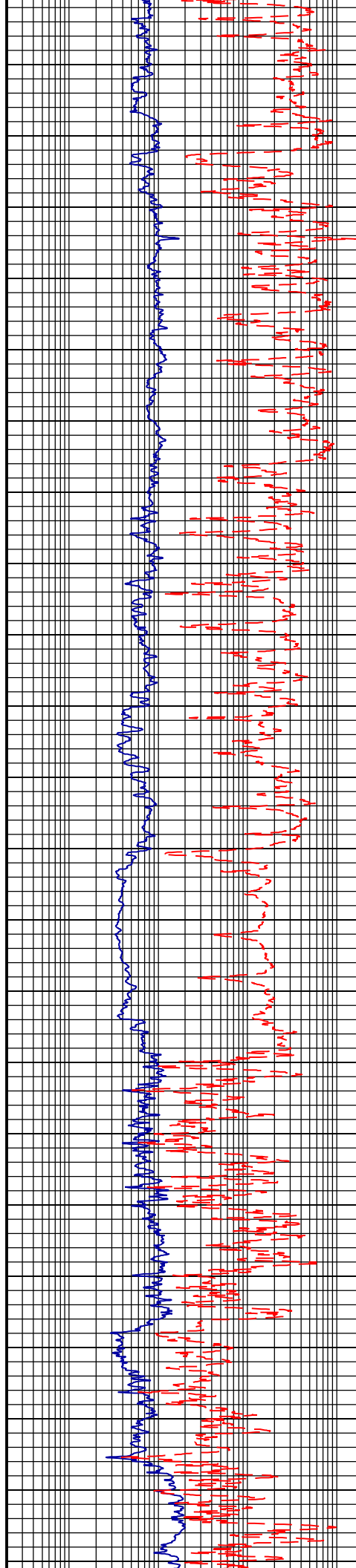
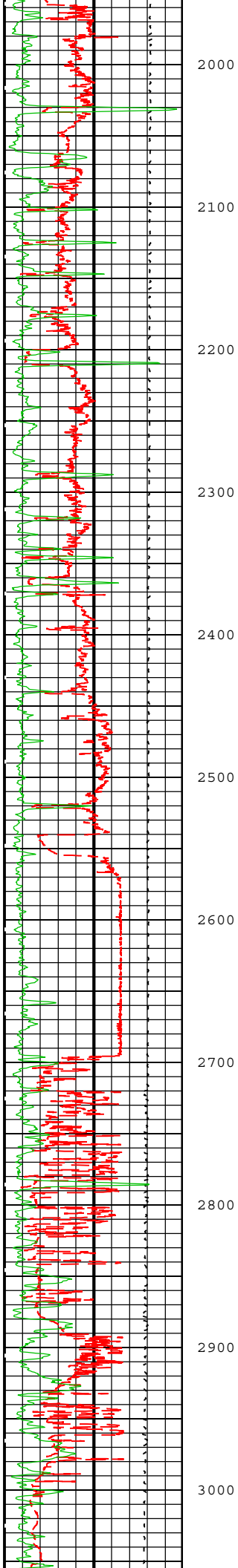
Apparent Resistivity from Computed Focusing
Mode 3 (RLA3) HRLT-B

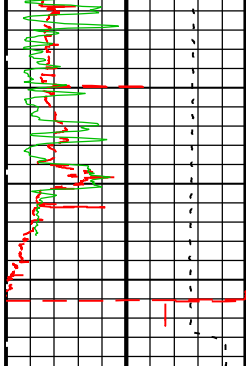
0.2 ohm.m 2000

Apparent Resistivity from Computed Focusing
Mode 5 (RLA5) HRLT-B

0.2 ohm.m 2000





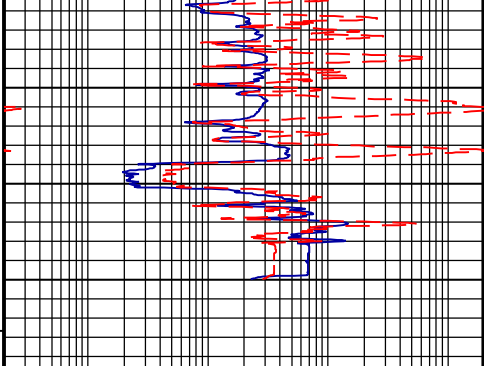


3100

3200

TD

3226.75ft



Caliper (CALI) HDRS-B		
6	in	16
GR		
0	gAPI	150

Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B		
0.2	ohm.m	2000
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000

| TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (HRLA_1_inch) Index Scale: 1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:03