

HALLIBURTON

ARRAY COMPENSATED  
TRUE RESISTIVITY

COMPANY		MCELVAIN ENERGY INC.			
WELL		PARGIN RANCH #11			
FIELD/BLOCK		IGNACIO BLANCO			
COUNTY		LA PLATA			
STATE		CO			
Permanent Datum		GL		Elev. 6450.0 ft	
Log measured from		KB		Elev. 6466.5 ft	
Drilling measured from		KB		D.F. 6466.5 ft	
				G.L. 6450.0 ft	
Date		13-Jan-14			
Run No.		ONE			
Depth - Driller		2928.00 ft			
Depth - Logger		2922.0 ft			
Bottom - Logged Interval		2290.0 ft			
Top - Logged Interval		50.0 ft			
Casing - Driller		9.625 in @ 472.0 ft		@	
Casing - Logger		471.0 ft			
Bit Size		8.750 in		@	
Type Fluid in Hole		WATER-BASED MUD			
Density		9.2 ppq		57.00 s/qt	
PH		9.50 pH		8.4 cphm	
Source of Sample		MUD TANK			
Rm @ Meas. Temperature		2.630 ohmm @ 71.50 degF		@	
Rmf @ Meas. Temperature		0.67 ohmm @ 65.50 degF		@	
Rmc @ Meas. Temperature		2.610 ohmm @ 75.00 degF		@	
Source Rmf		MEASURED		MEASURED	
Rm @ BHT		1.68 ohmm @ 116.0 degF		@	
Time Since Circulation		6.3 hr			
Time on Bottom		13-Jan-14 04:47			
Max. Rec. Temperature		116.0 degF @ 2922.0 ft		@	
Equipment		11871076		GL CO	
Recorded By		B. RIDDEL			
Witnessed By		MARK WOLFE			

Fold here

Service Ticket No.: 901027348				API Serial No.: 05067098960000				PGM Version: WL INSITE R3.8.4 (Build 5)							
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.		@		@		ONE		ACRt 11585787		N/A		ECCENTERED		N/A	
Rmc @ Meas. Temp.		@		@				S-11585797							
Source Rmf		Rmc													
Rm @ BHT		@		@											
Rmf @ BHT		@		@											
Rmc @ BHT		@		@											
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.		ONE		Run No.				Run No.		ONE		Run No.		ONE	
Serial No.		11958949		Serial No.				Serial No.		10951300		Serial No.		10993888	
Model No.		GTET		Model No.				Model No.		SDLT		Model No.		DSNT	
Diameter		3.625"		No. of Cent.				Diameter		4.5"		Diameter		3.625"	
Detector Model No.		GTET		Spacing				Log Type		GAMMA-GAMMA		Log Type		NEU-THERM	
Type		SCINT						Source Type		Cs137		Source Type		Am241Be	
Length		8"		LSA [Y/N]				Serial No.		5153GW		Serial No.		DSN388	
Distance to Source		9'		FWDA [Y/N]				Strength		1.5Ci		Strength		15Ci	
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	2292	471	REC	0 API	200 API				30%	-10%	2.65 g/cc	30%	-10%	SAND
ONE	471	50	REC	0 API	200 API									
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: RUN ONE: RWCH-GTET-DSNT-SDLT-ACRT-BN														
BORHOLE RUGOSITY, TENSION PULLS AND WASHOUTS MAY EFFECT LOG QUALITY AND REPEATABILITY														
CHLORIDES REPORTED TO BE 600 ppm														
ANNULAR HOLE VOLUME CALCULATED FOR 7" PRODUCTION CASING														
YOU CREW TODAY: B. CALDWELL, J. VIGIL								RIG: D & J RIG#1						
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES, GRAND JUNCTION, CO (970) 523-3600														
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														



# PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	8.750	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.200	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	600.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	2.630	ohmm
	SHARED	TRM	Temperature of Mud	71.5	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	7.000	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	2922.00	ft
	SHARED	BHT	Bottom Hole Temperature	116.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	Temperature Master Tool	NONE	
	SHARED	BHSM	Borehole Size Master Tool	NONE	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	Rwa /	AEAC	Archie A factor	0.6200	

CrossPlot	AFAC	Archie A factor	0.0200	
Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.250	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Sandstone	
DSNT	DSNO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.650	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt Sonde	TPOS	Tool Position	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
BOTTOM				
Data: MCELV_PARGIN_11\0002 TRIPLEVIDLE				Date: 13-Jan-14 06:37:08



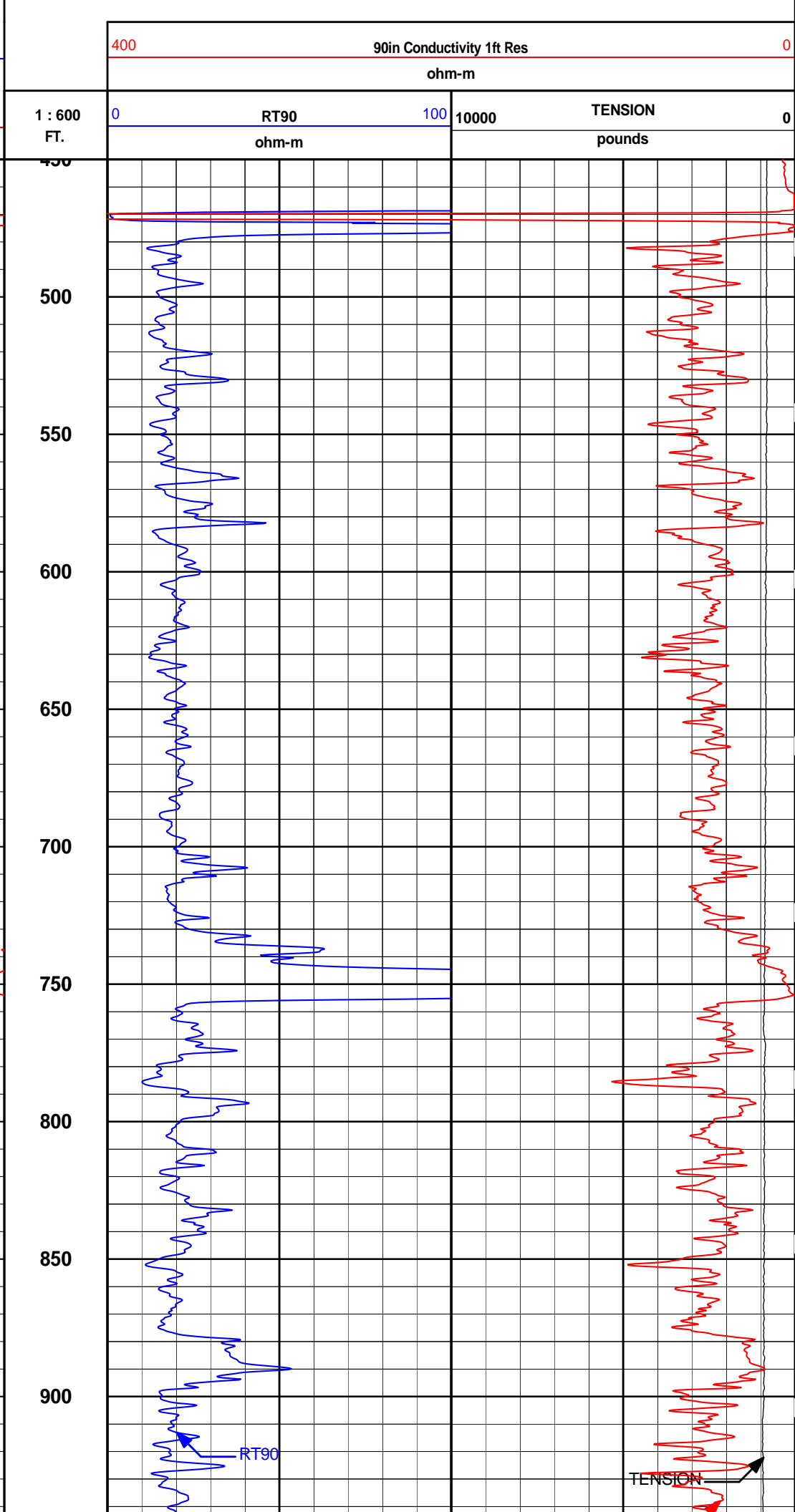
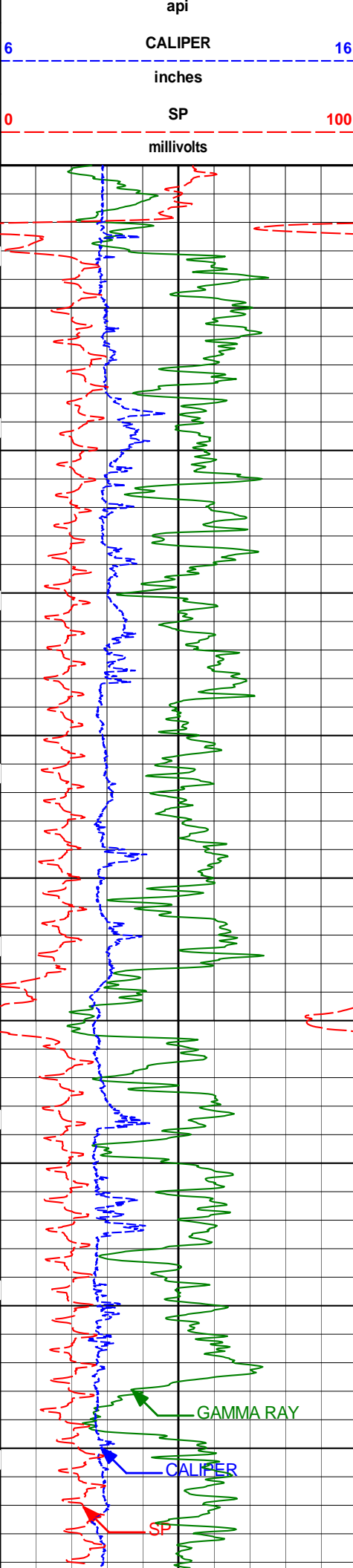
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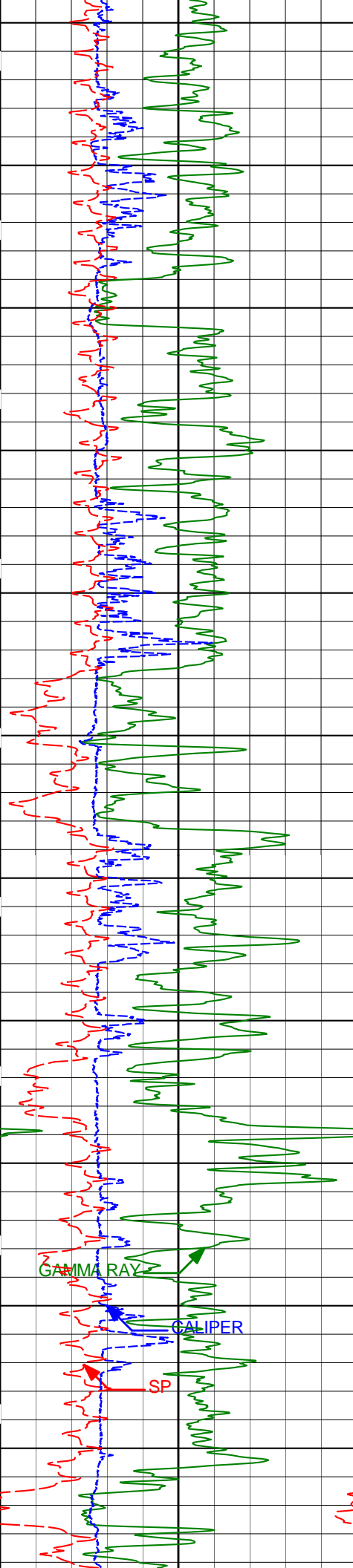
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Data: MCELV\_PARGIN\_11\Well BasedMAIN

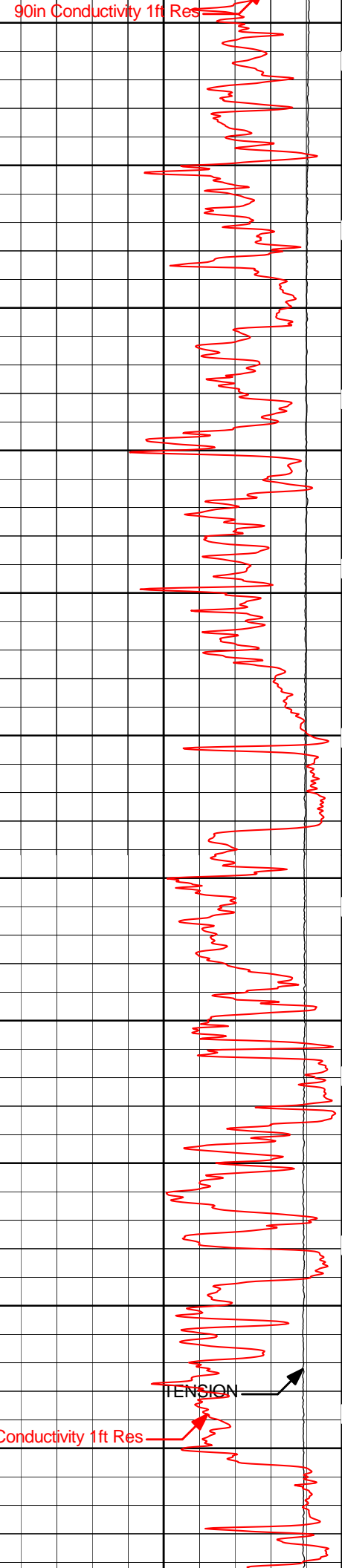
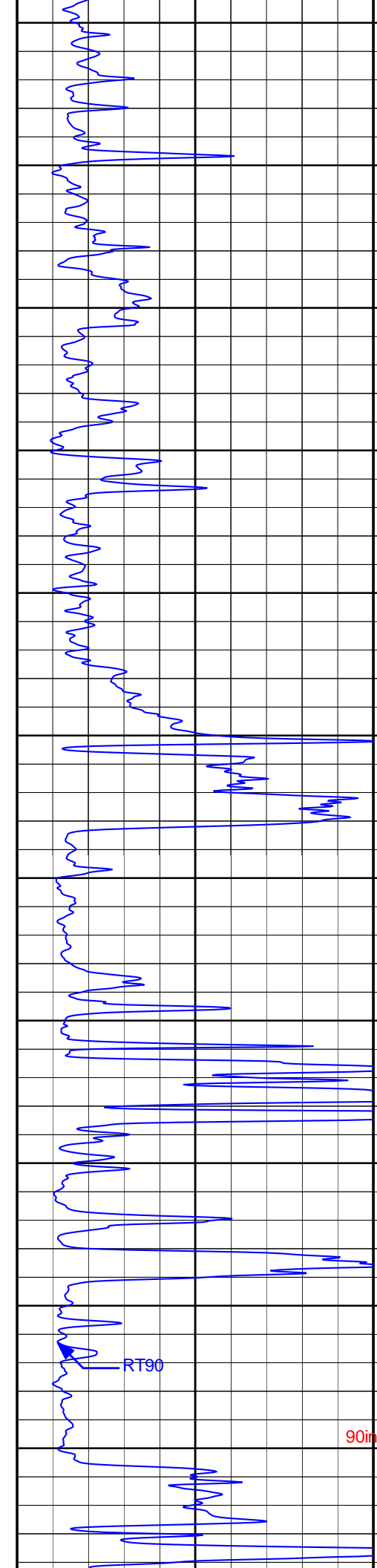
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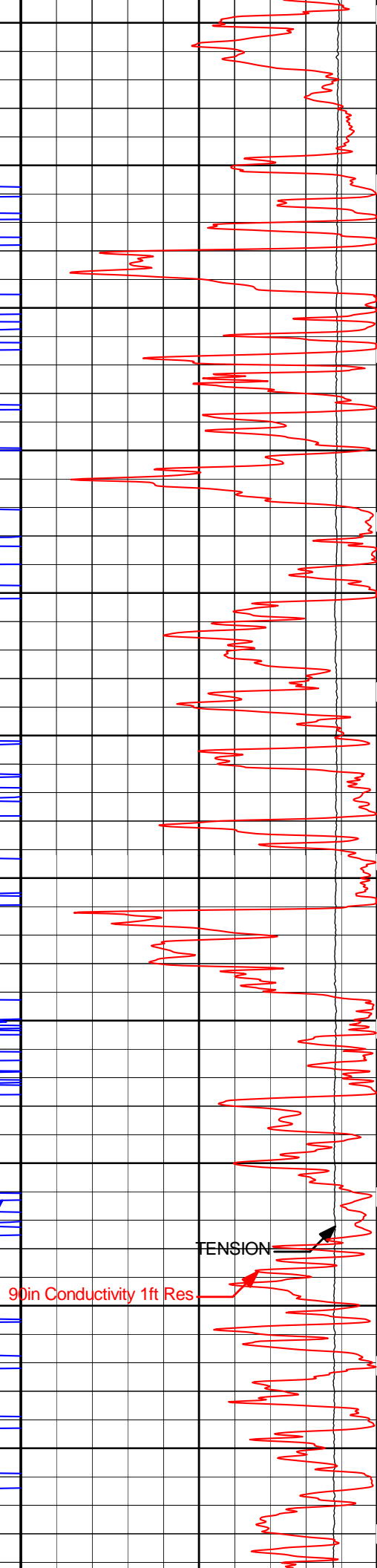
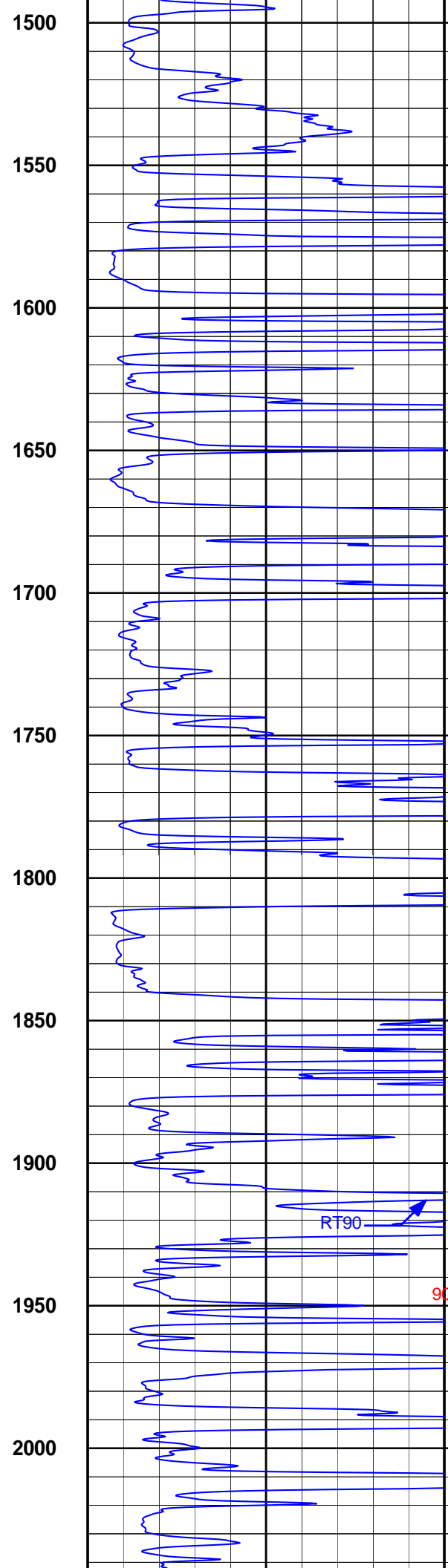
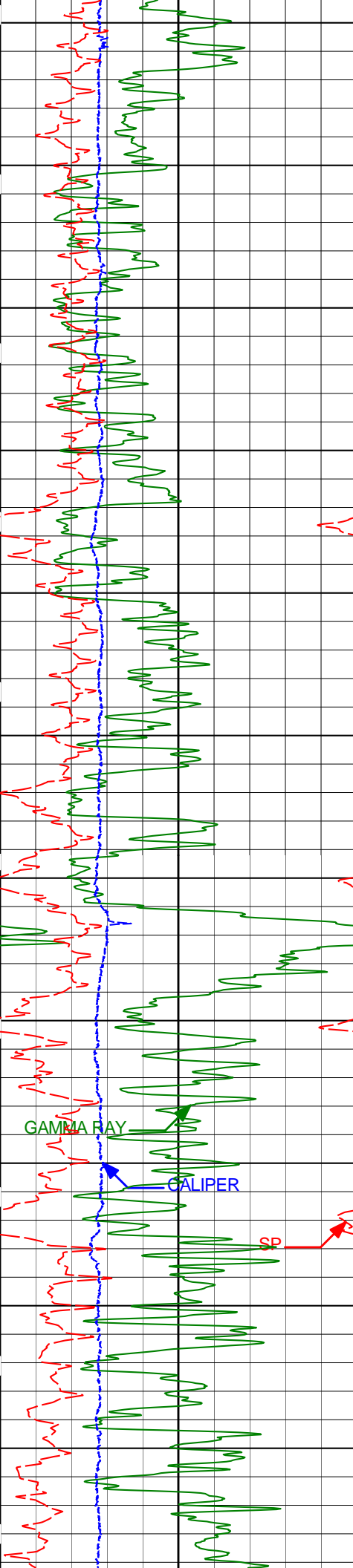
MAIN PASS 2" = 100'

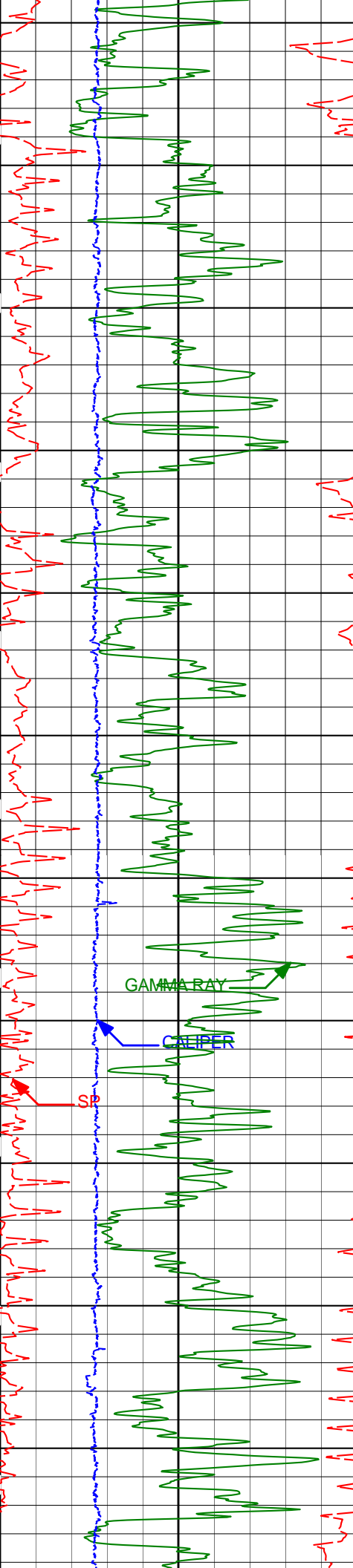




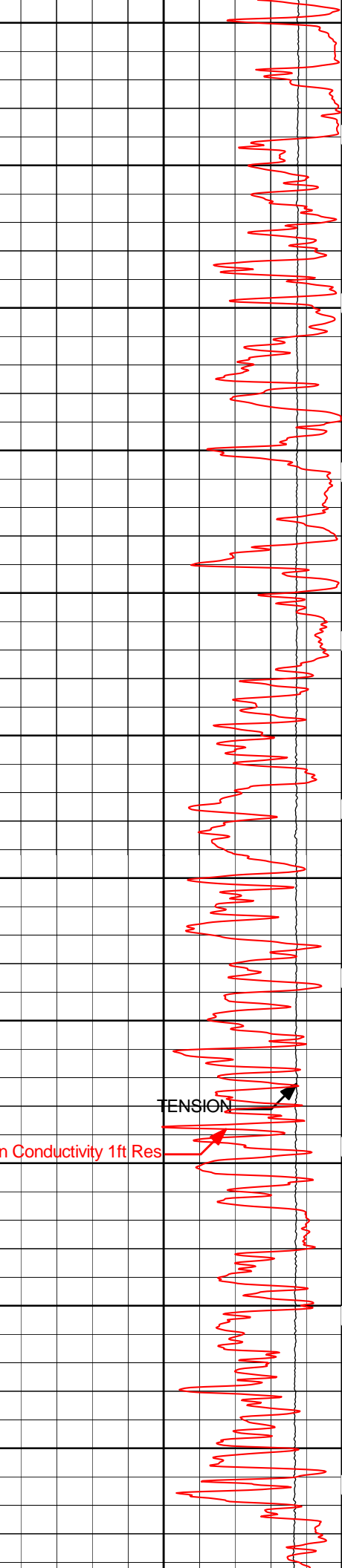
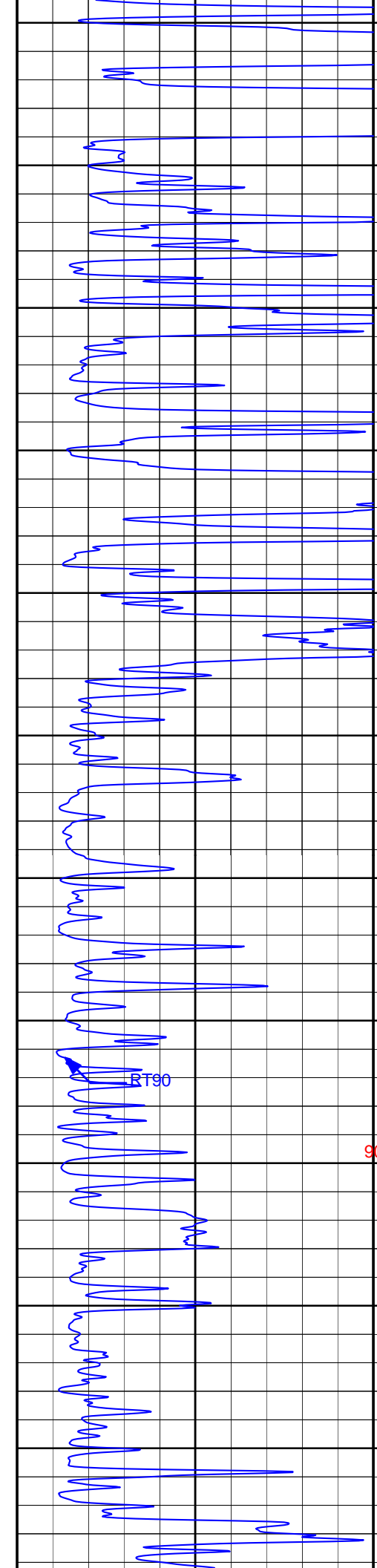
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1000  
1050  
1100  
1150  
1200  
1250  
1300  
1350  
1400  
1450

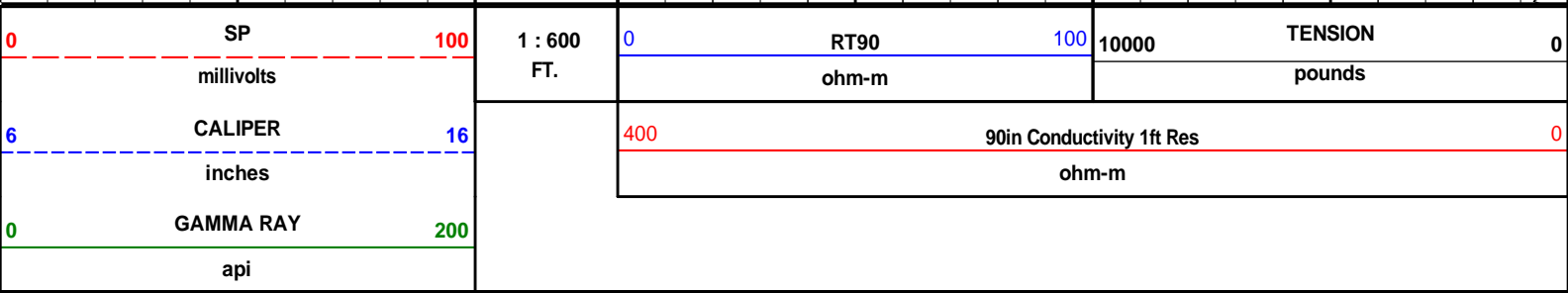
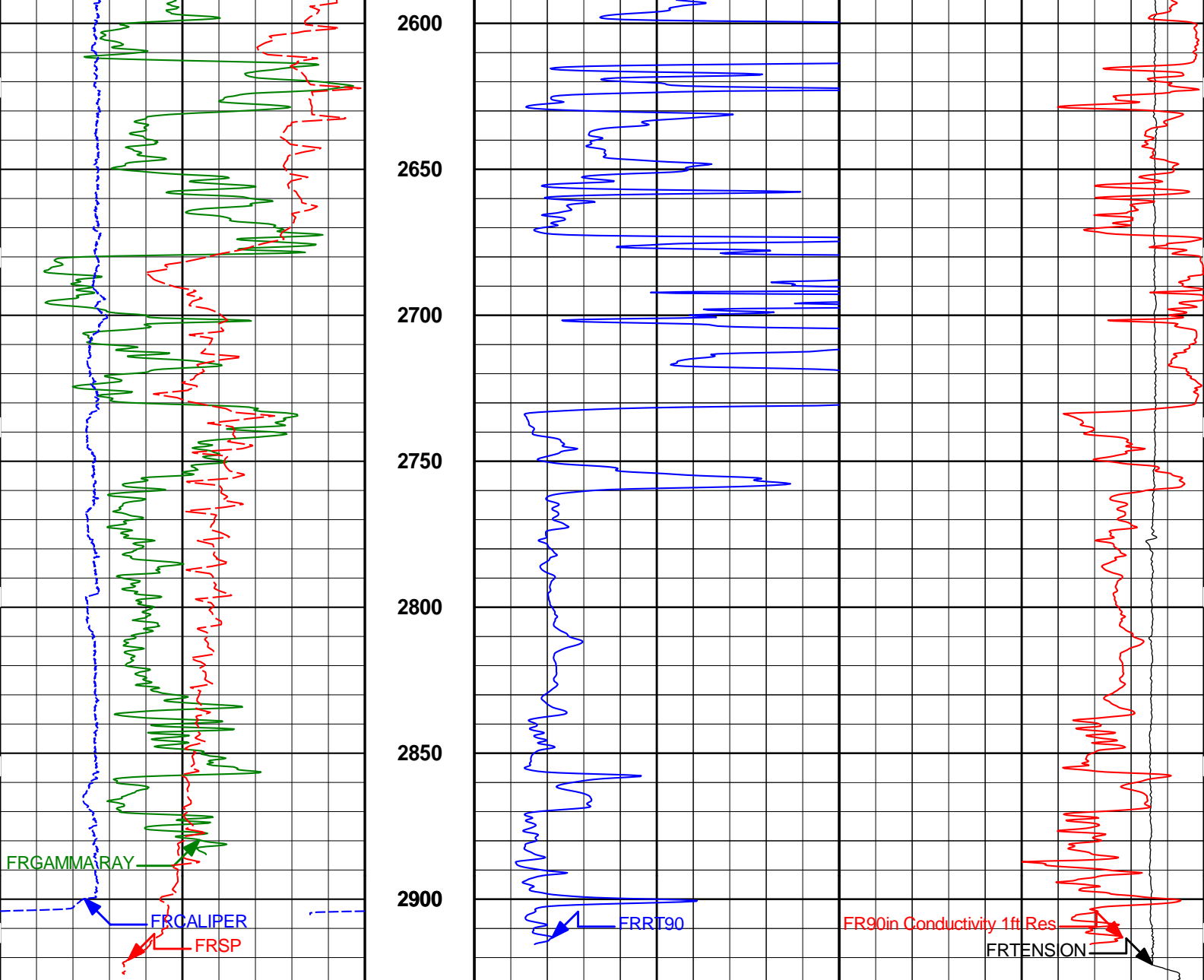






2050  
2100  
2150  
2200  
2250  
2300  
2350  
2400  
2450  
2500  
2550





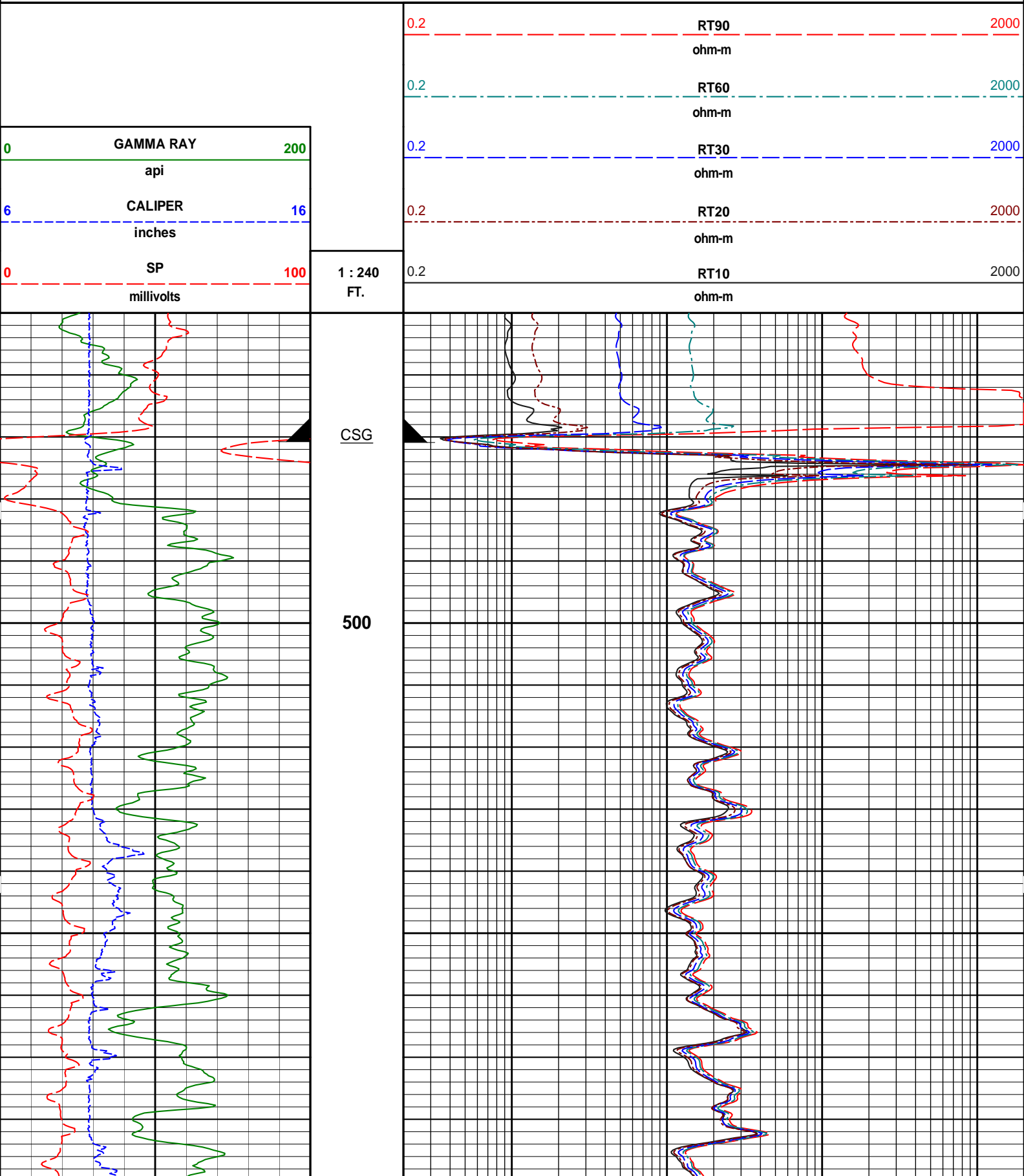
**HALLIBURTON** Plot Time: 13-Jan-14 07:37:28  
Plot Range: 450 ft to 2928.42 ft  
Data: MCELV\_PARGIN\_11\Well Based\MAIN  
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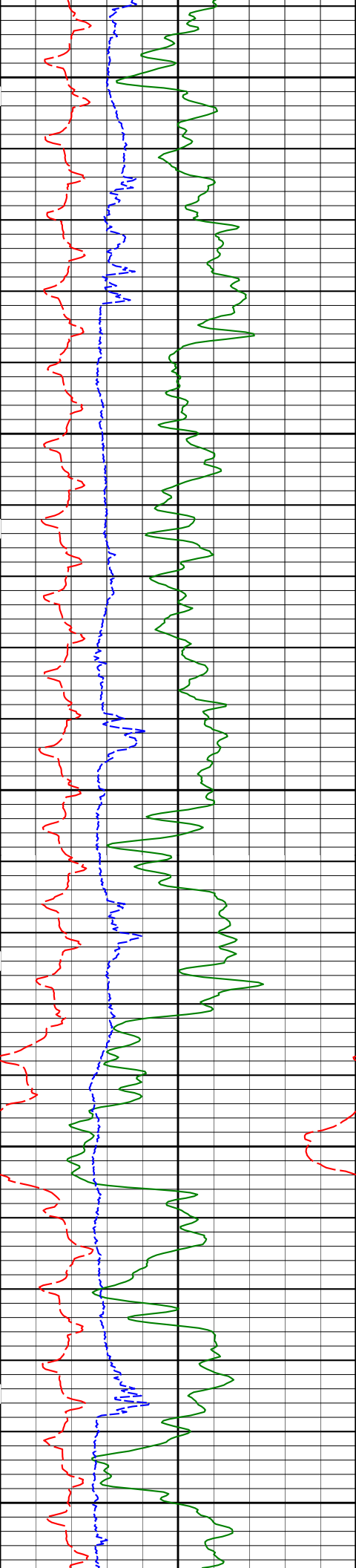
**MAIN PASS 2" = 100'**

**HALLIBURTON** Plot Time: 13-Jan-14 07:37:28  
Plot Range: 450 ft to 2928.42 ft  
Data: MCELV\_PARGIN\_11\Well Based\MAIN  
Plot File: \\ACRT\ACRT\_600



MAIN PASS 5" = 100'

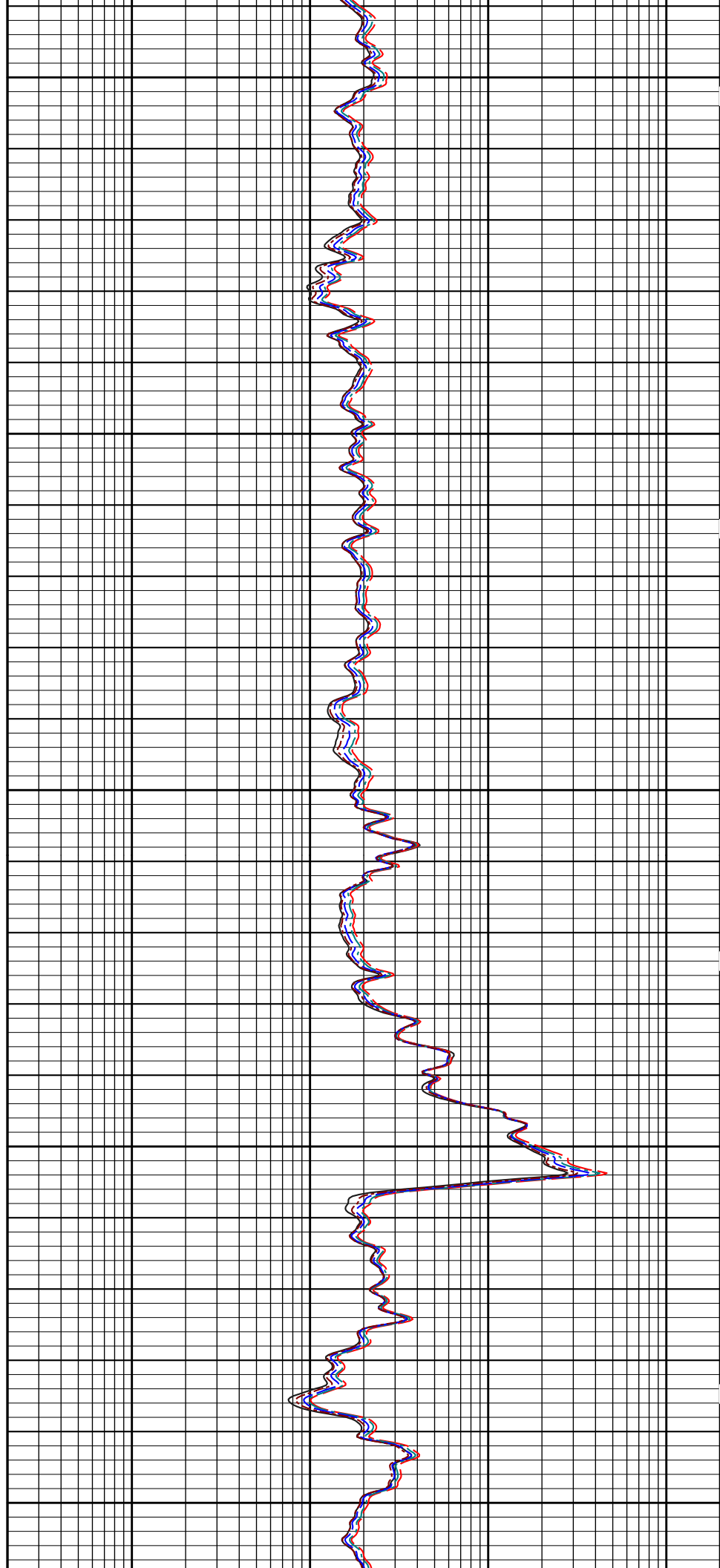


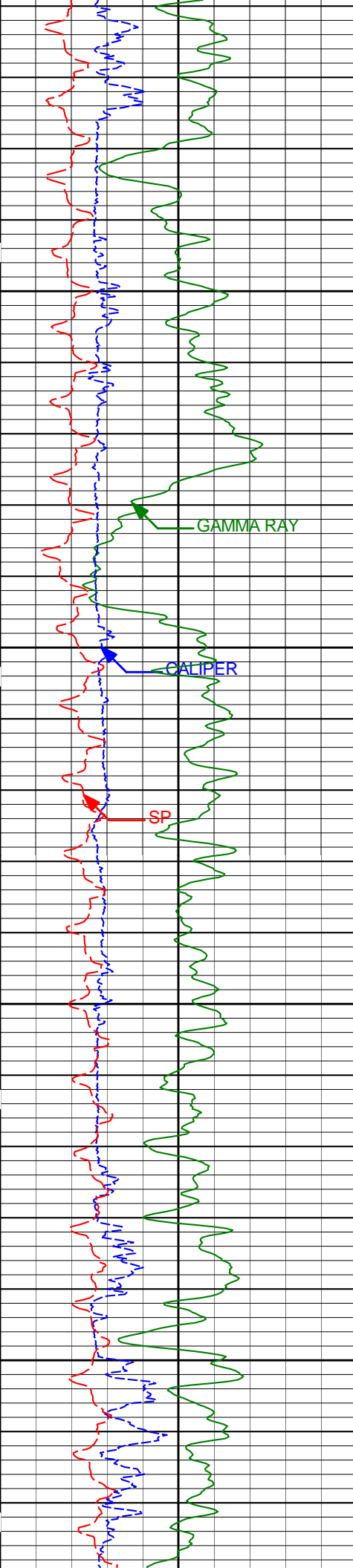


600

700

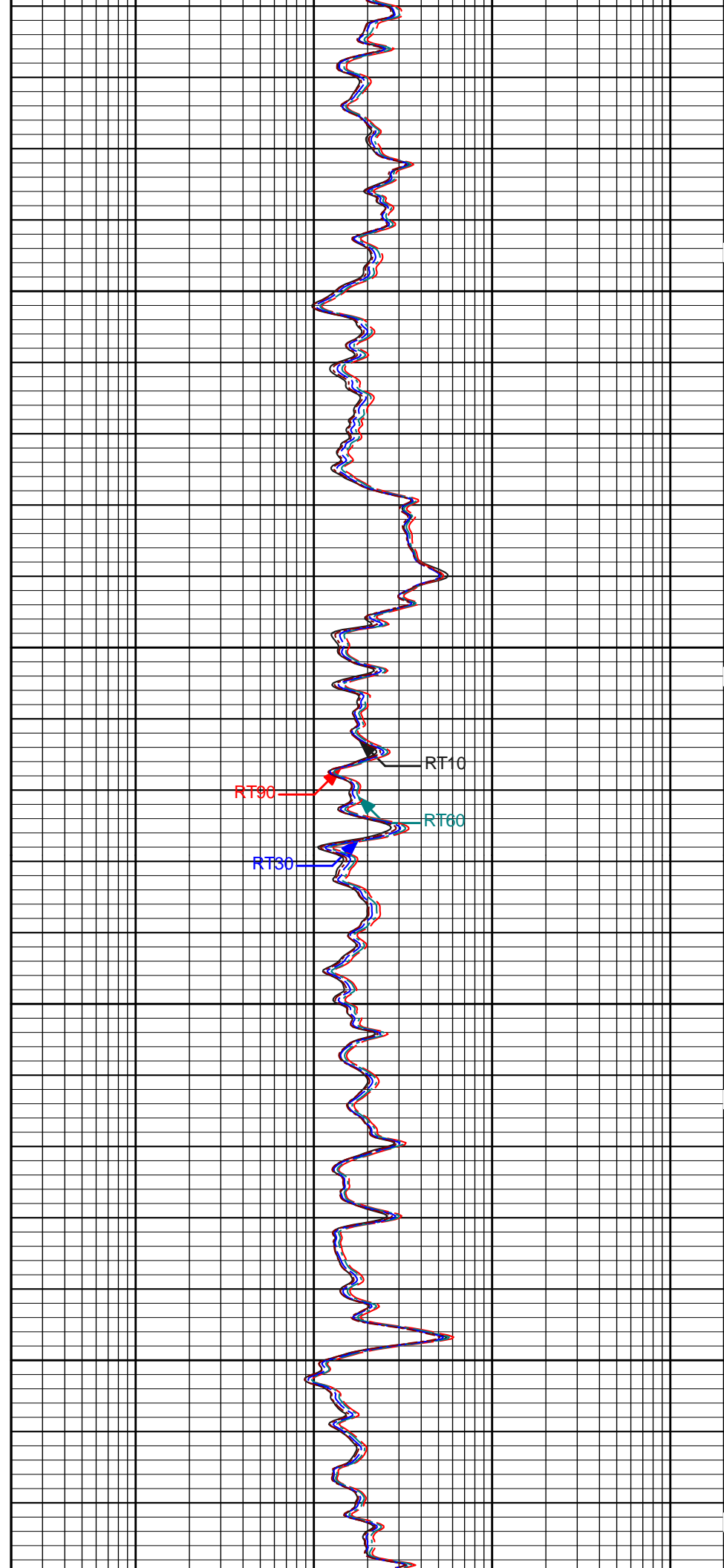
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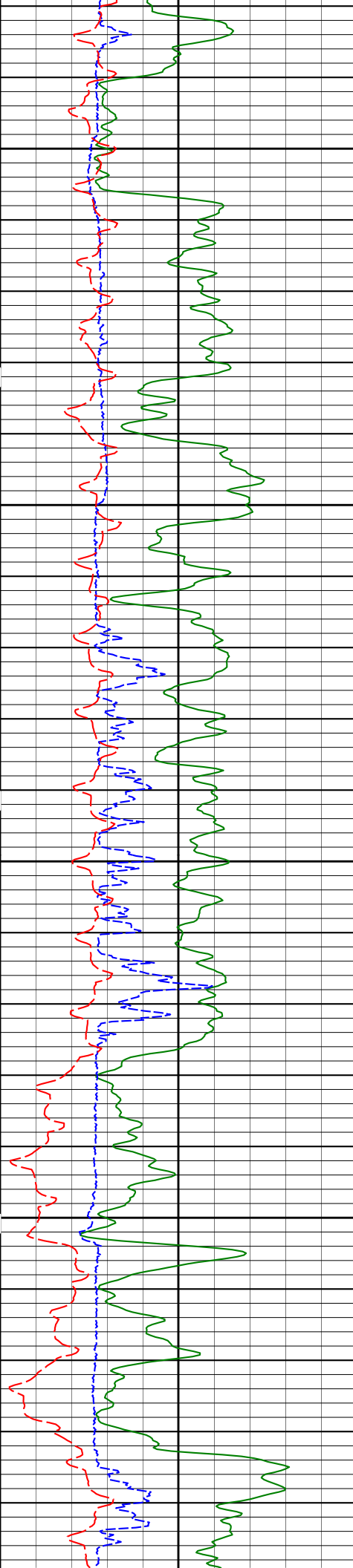




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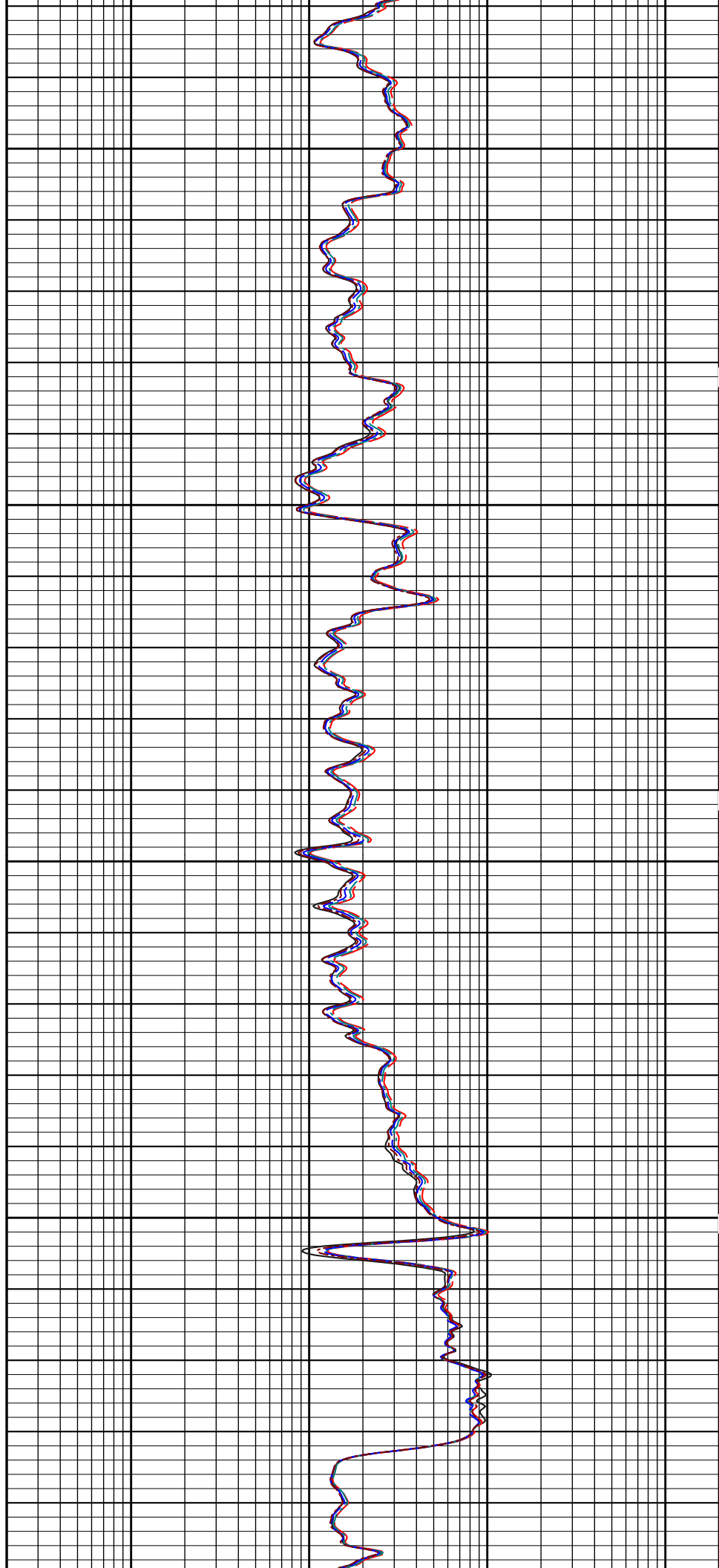
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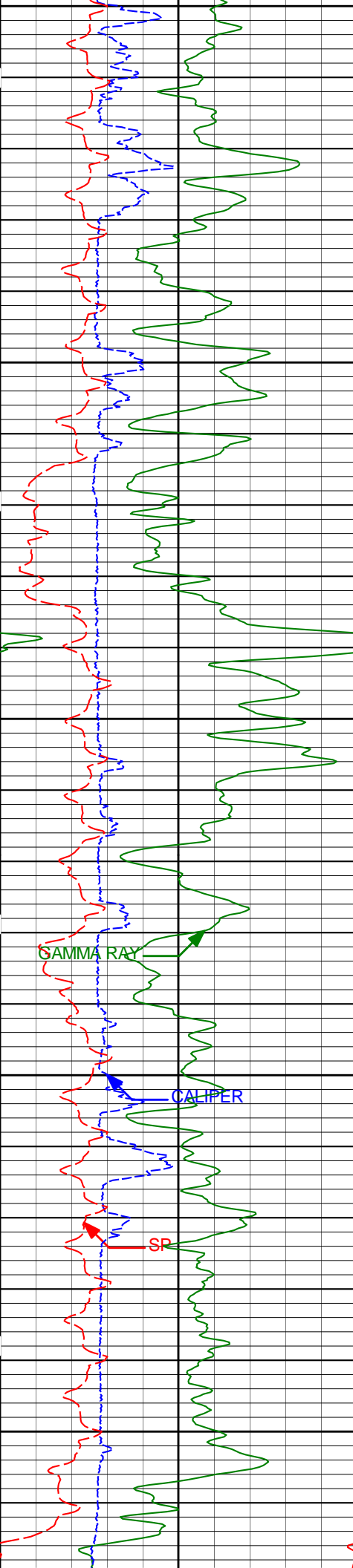




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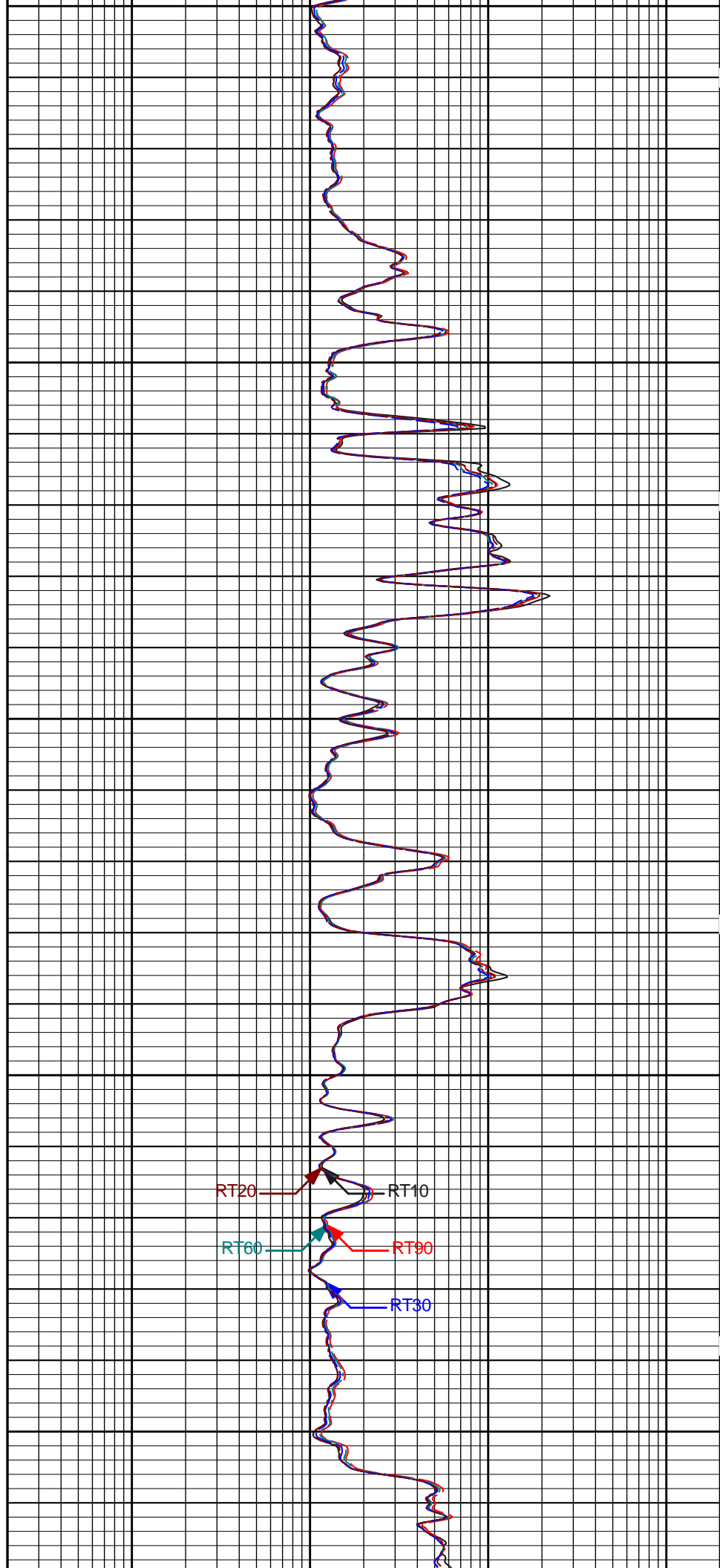
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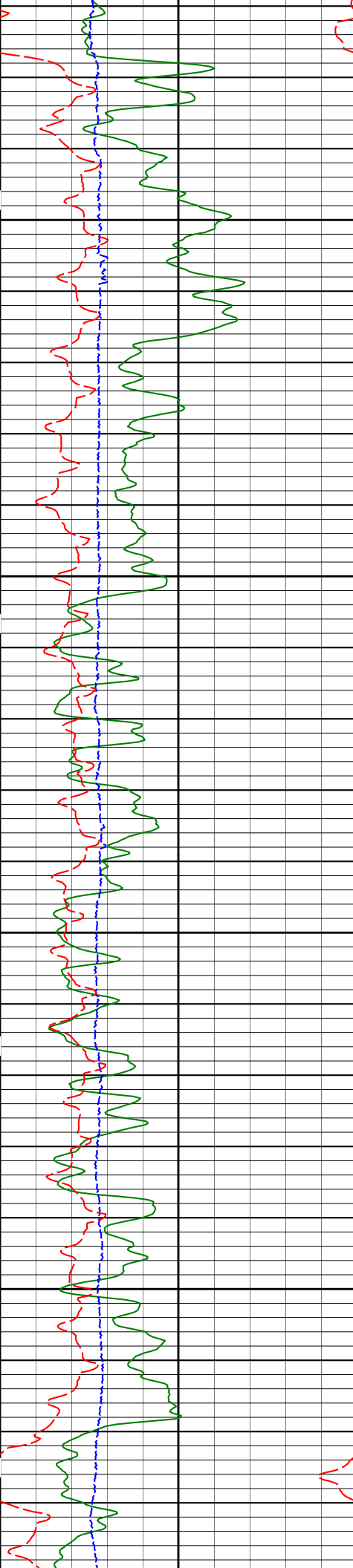




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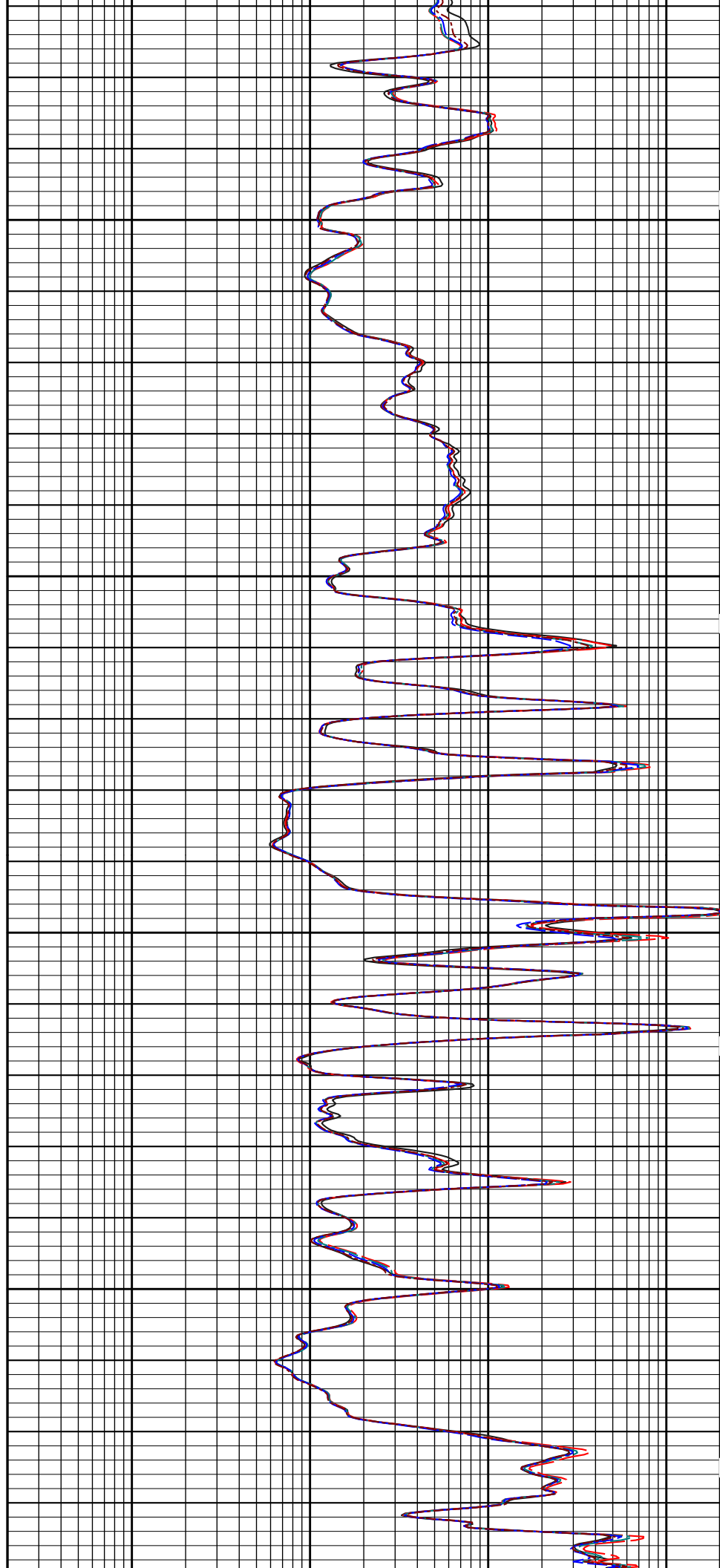
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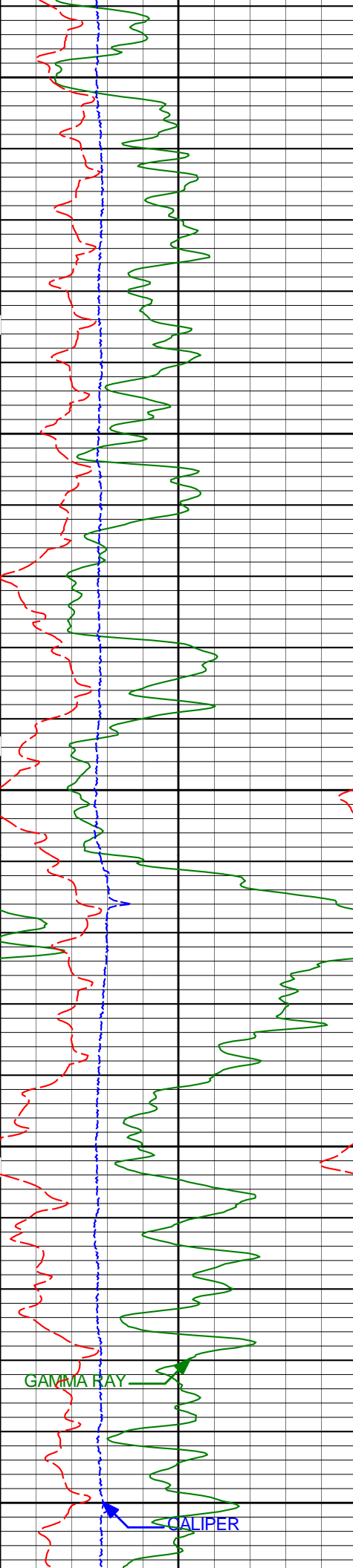




1500

1600

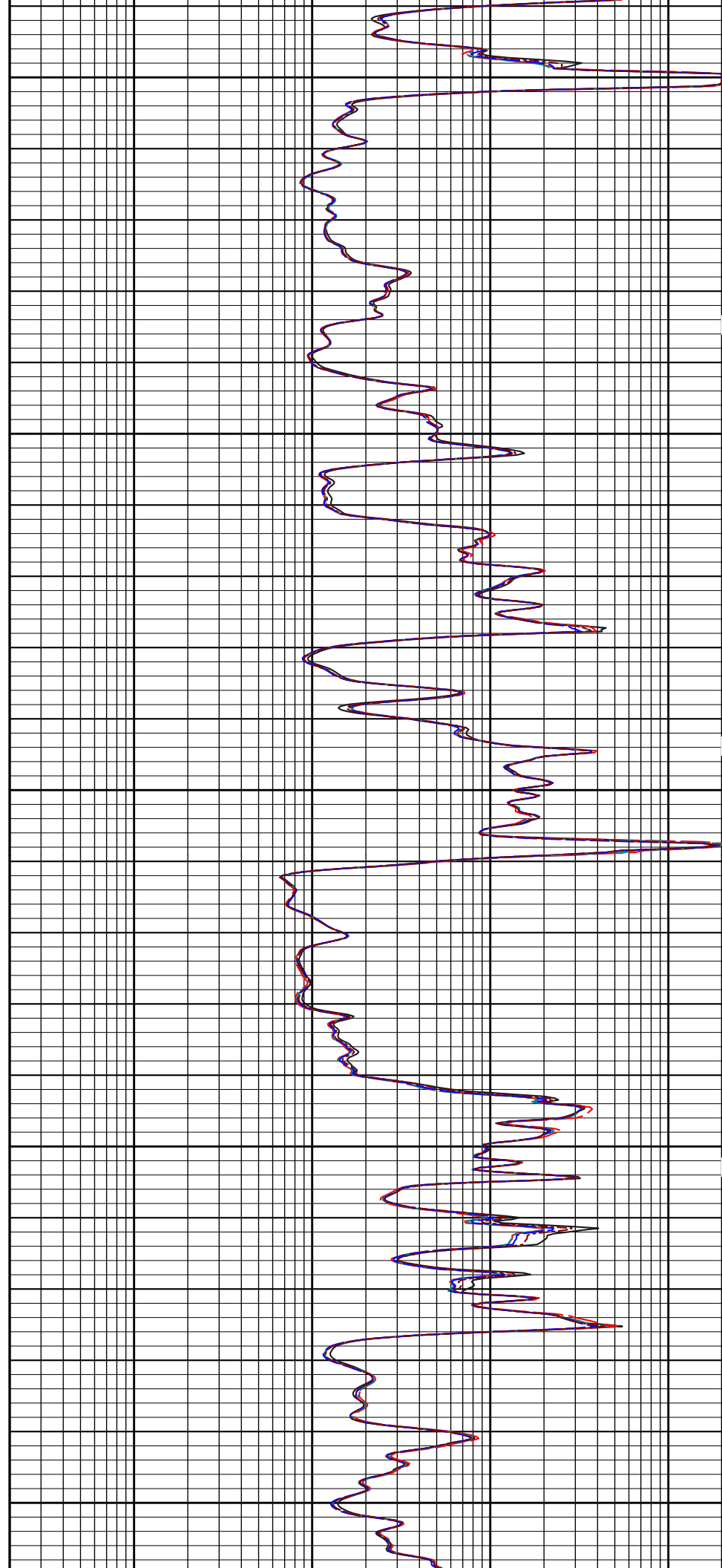


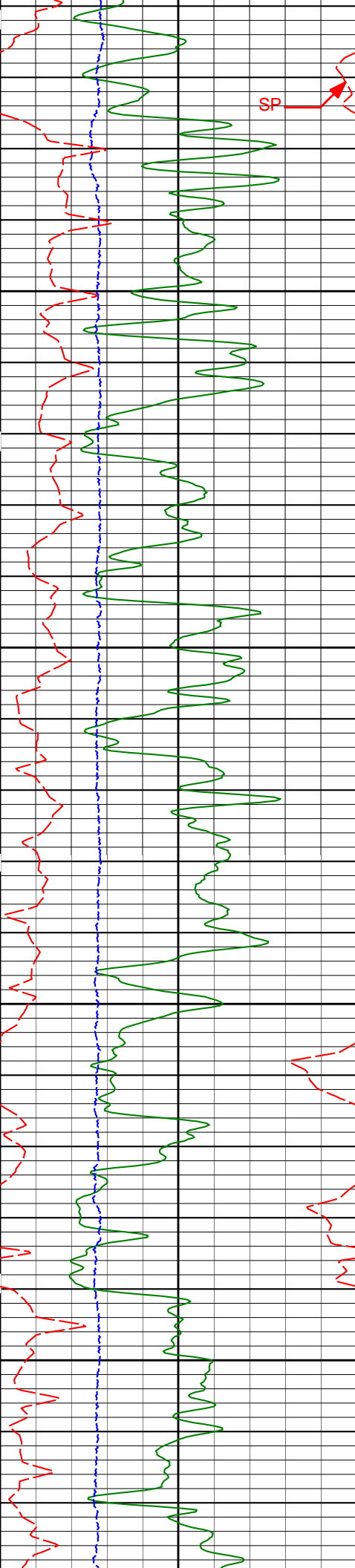


1700

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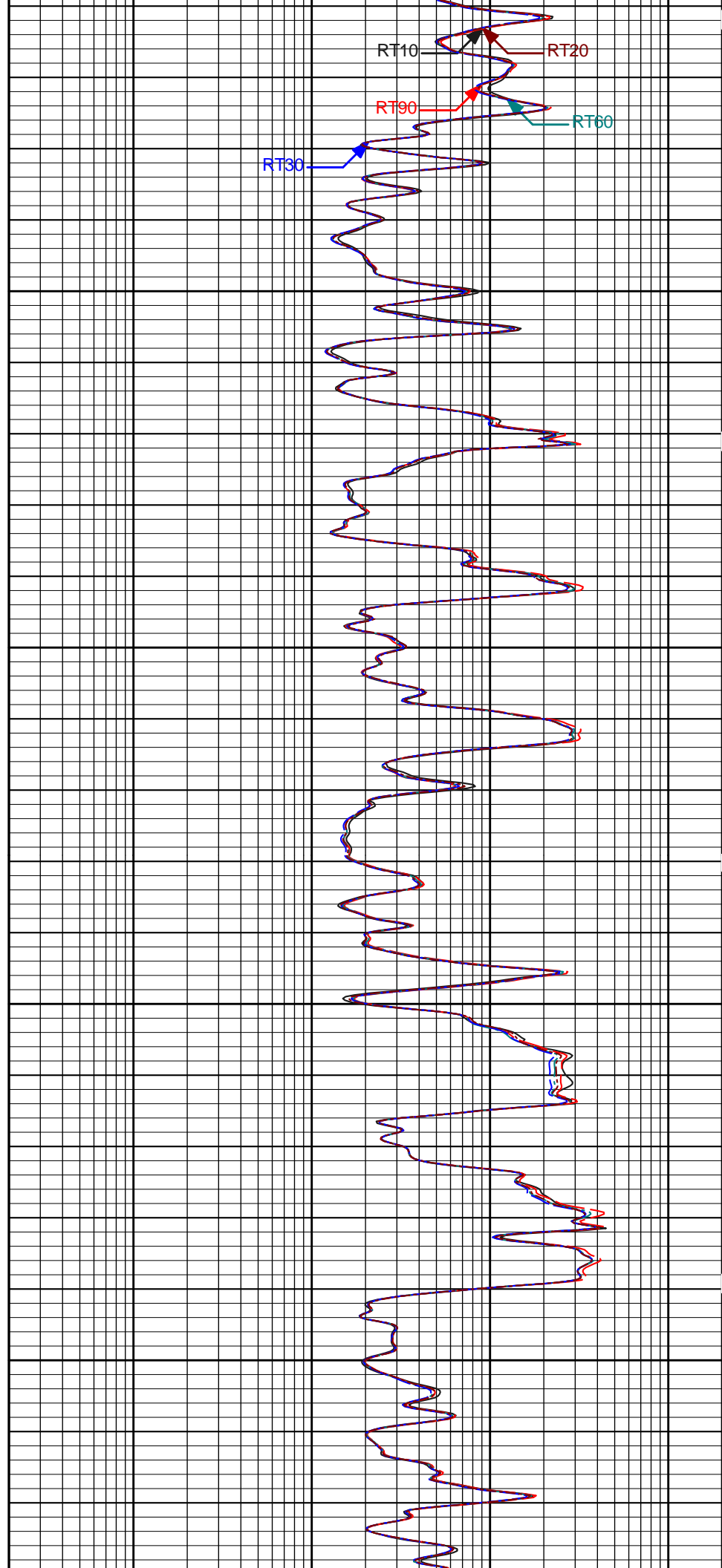
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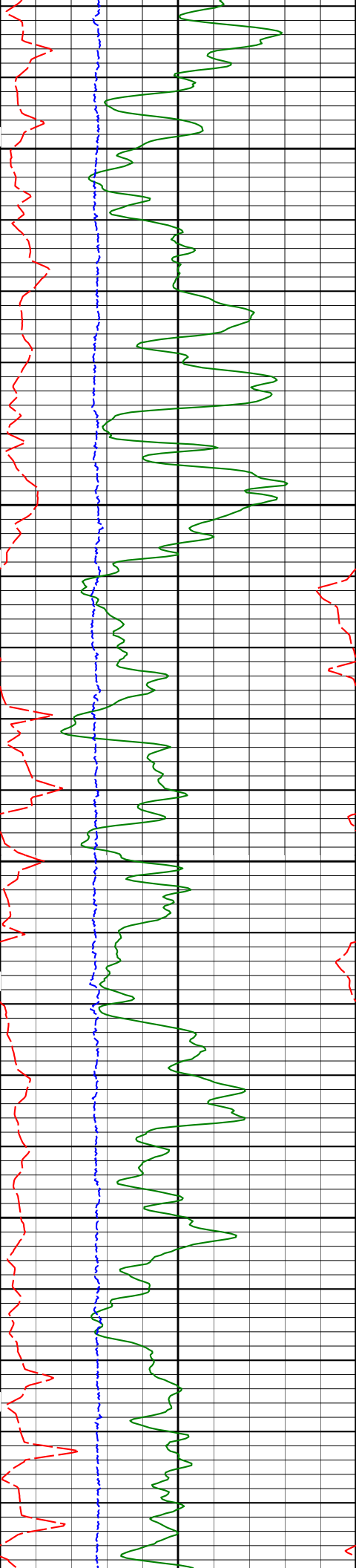


2000

2100

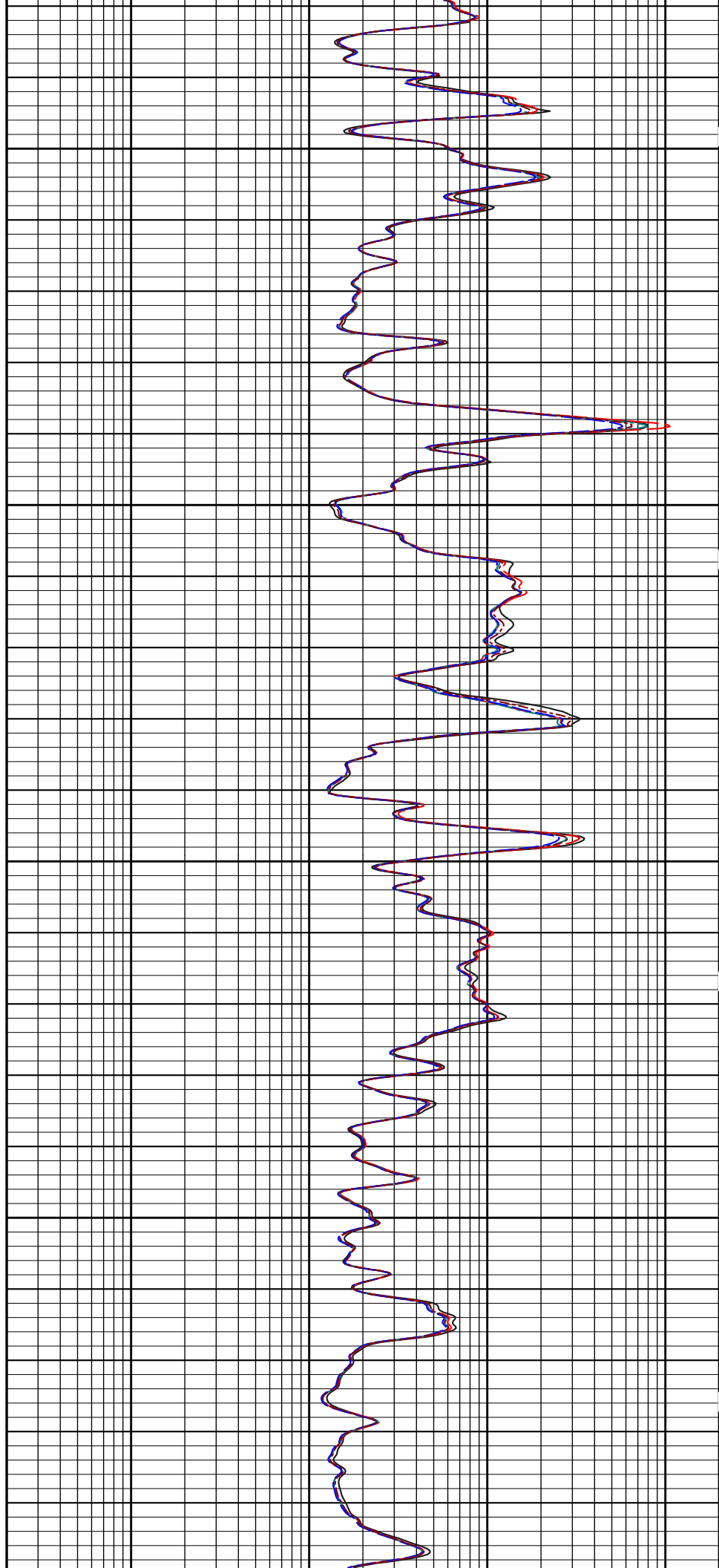


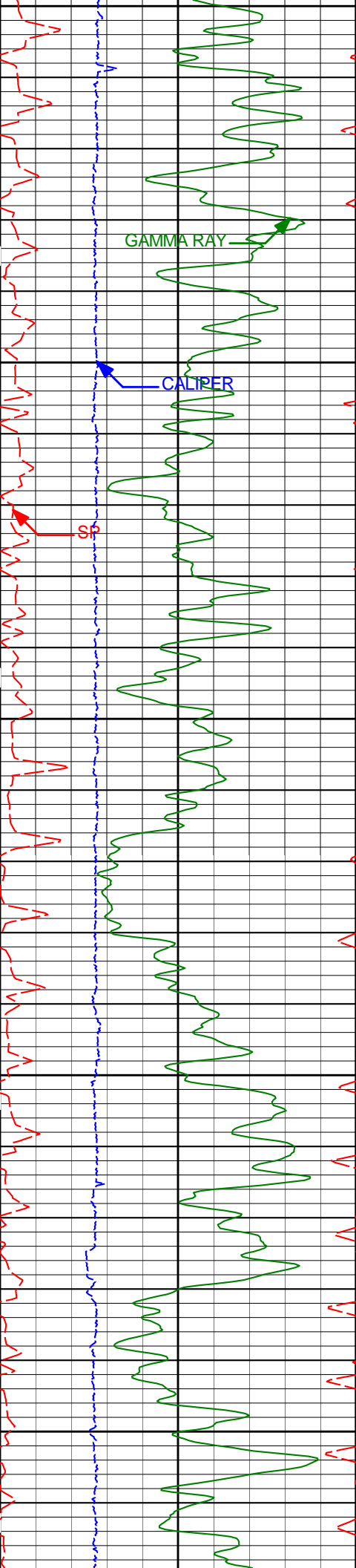




2200

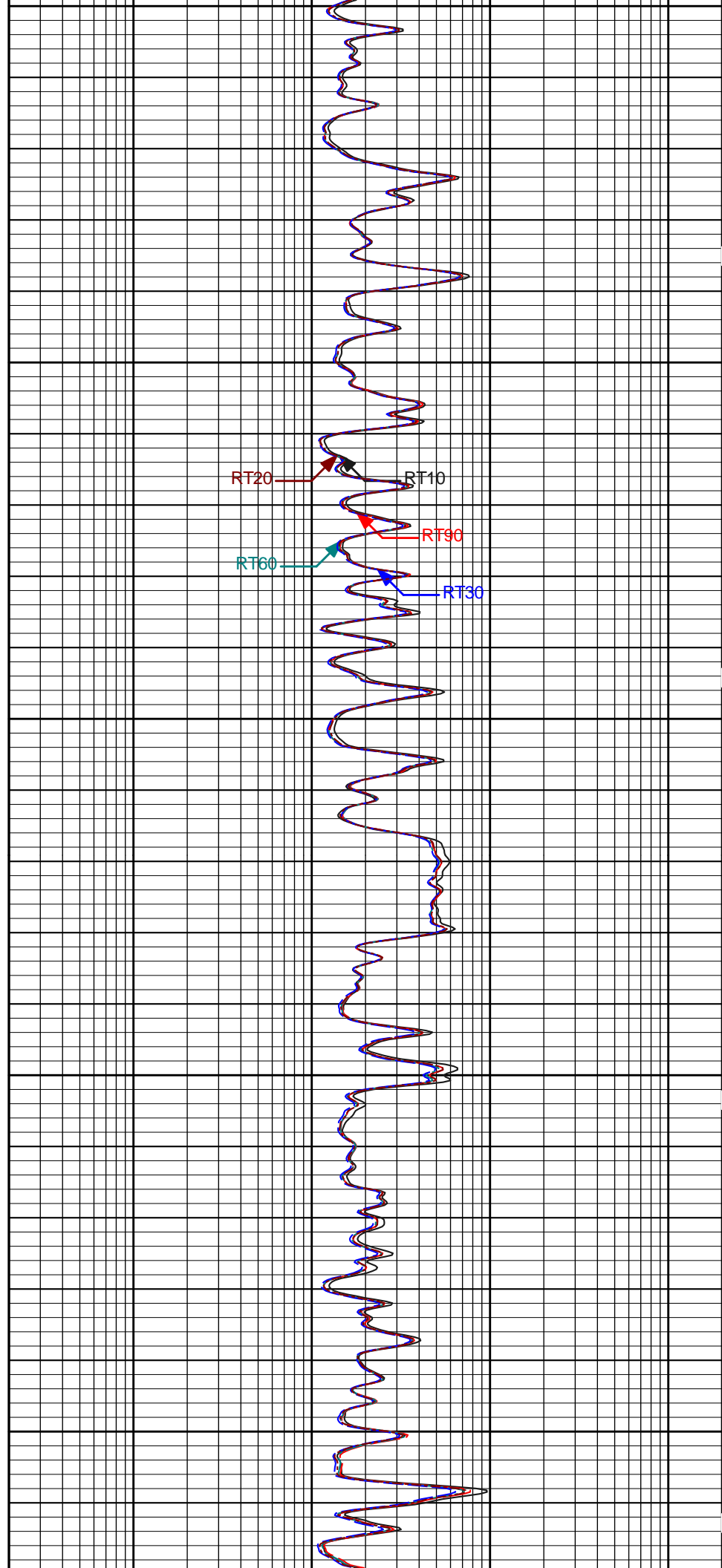
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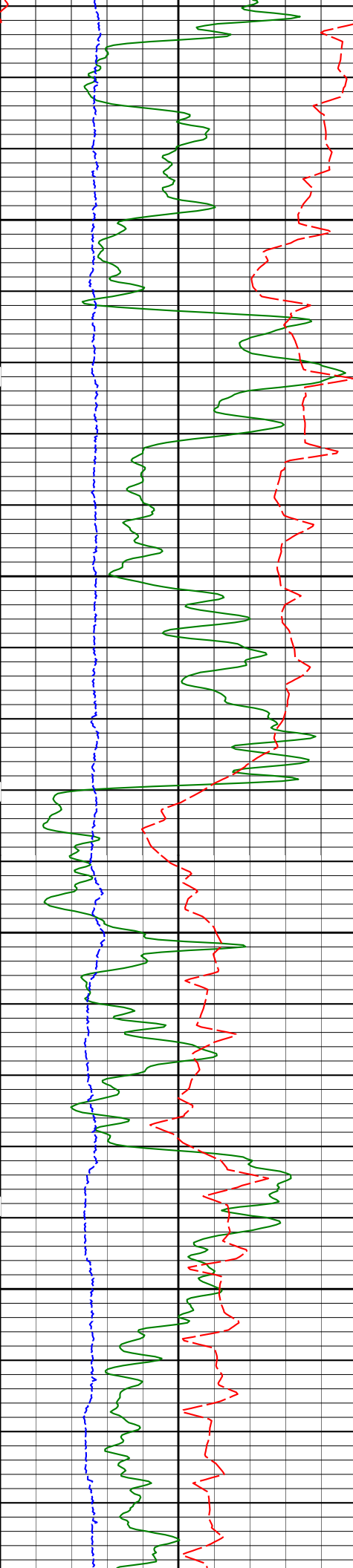




2400

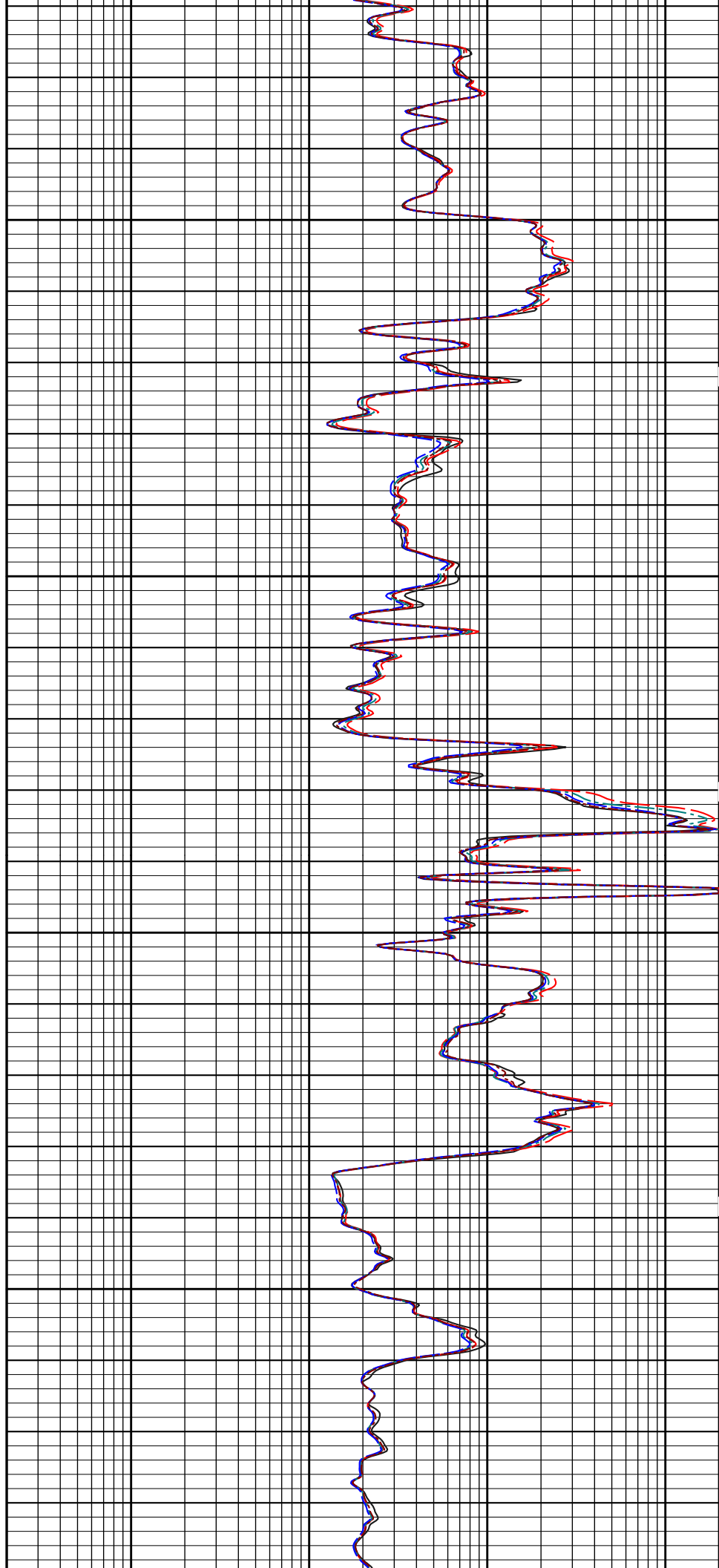
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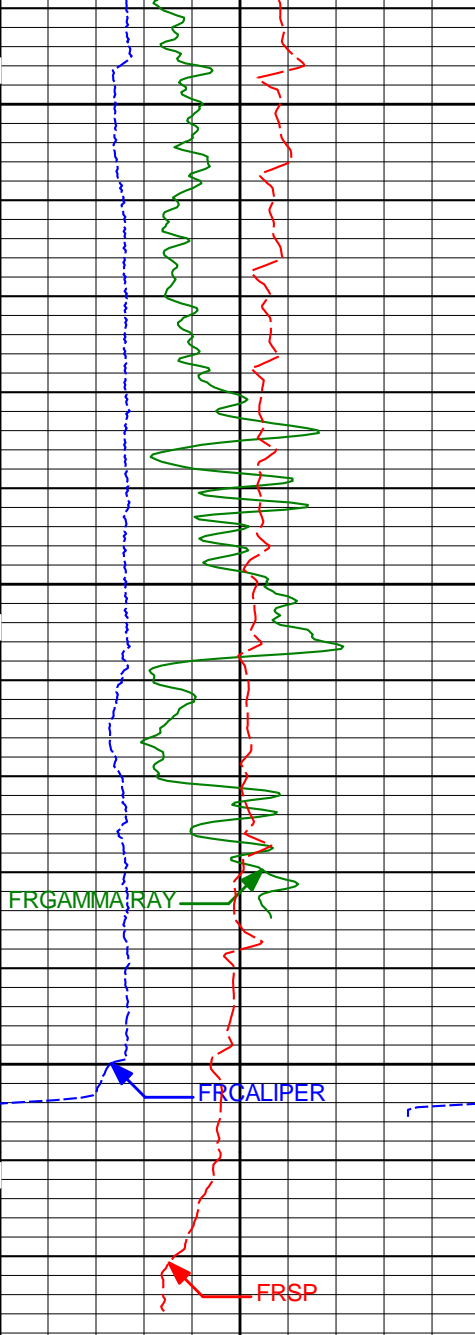




2600

2700

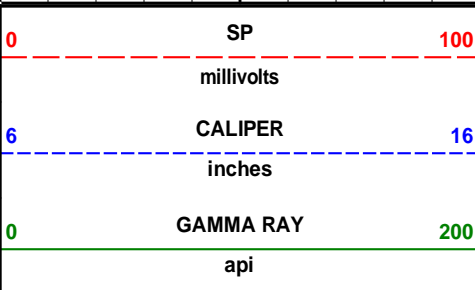




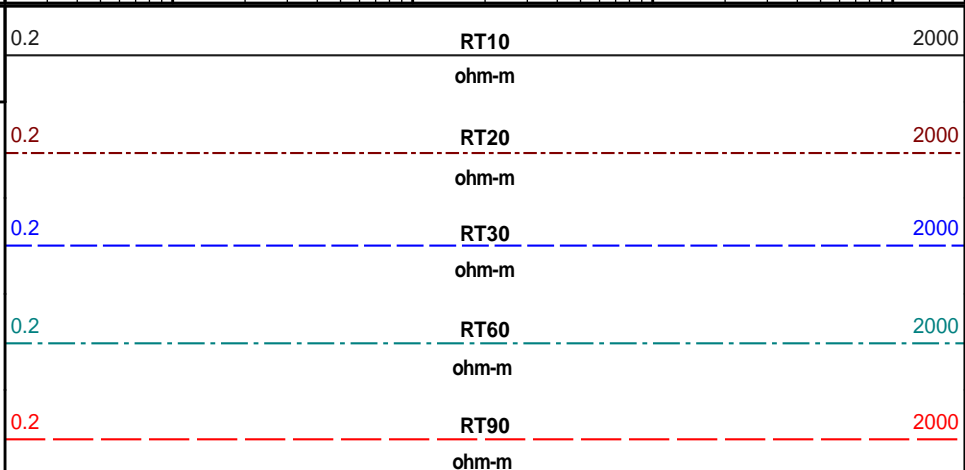
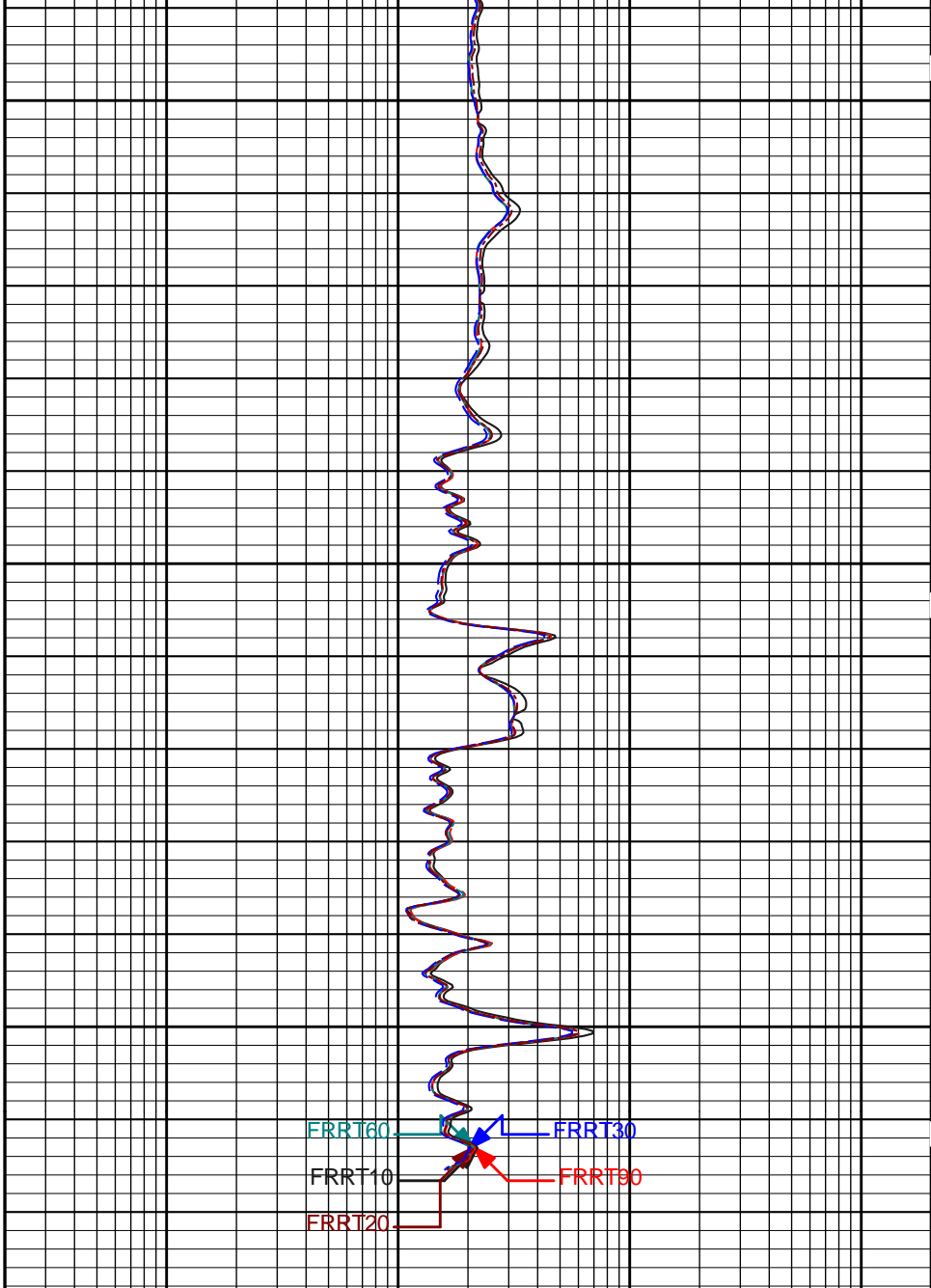
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2900

TD



1 : 240  
FT.



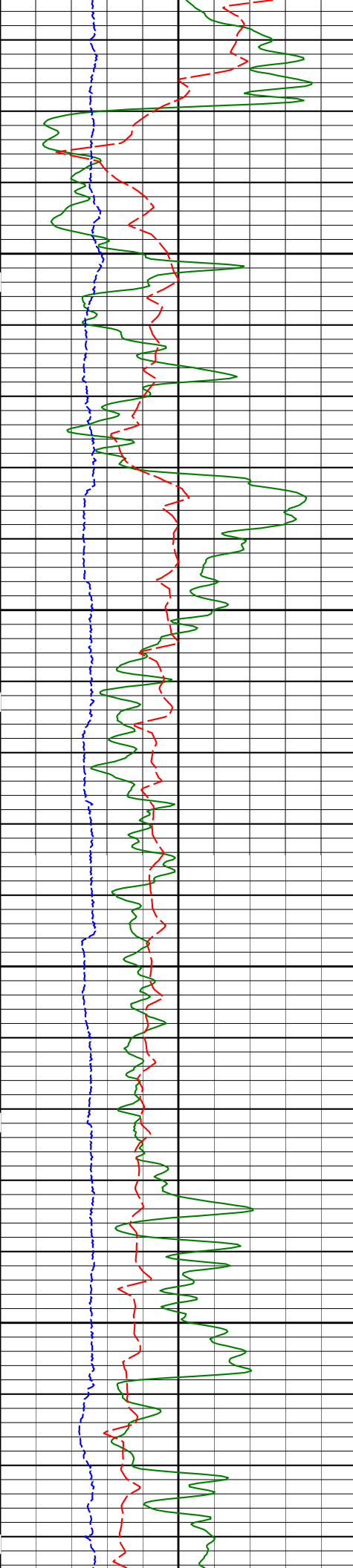
**HALLIBURTON**

Plot Time: 13-Jan-14 07:37:32  
 Plot Range: 450 ft to 2928.42 ft  
 Data: MCELV\_PARGIN\_11\Well Based\MAIN\  
 Plot File: \ACRT\ACRT\_5IN\_M

**MAIN PASS 5" = 100'**

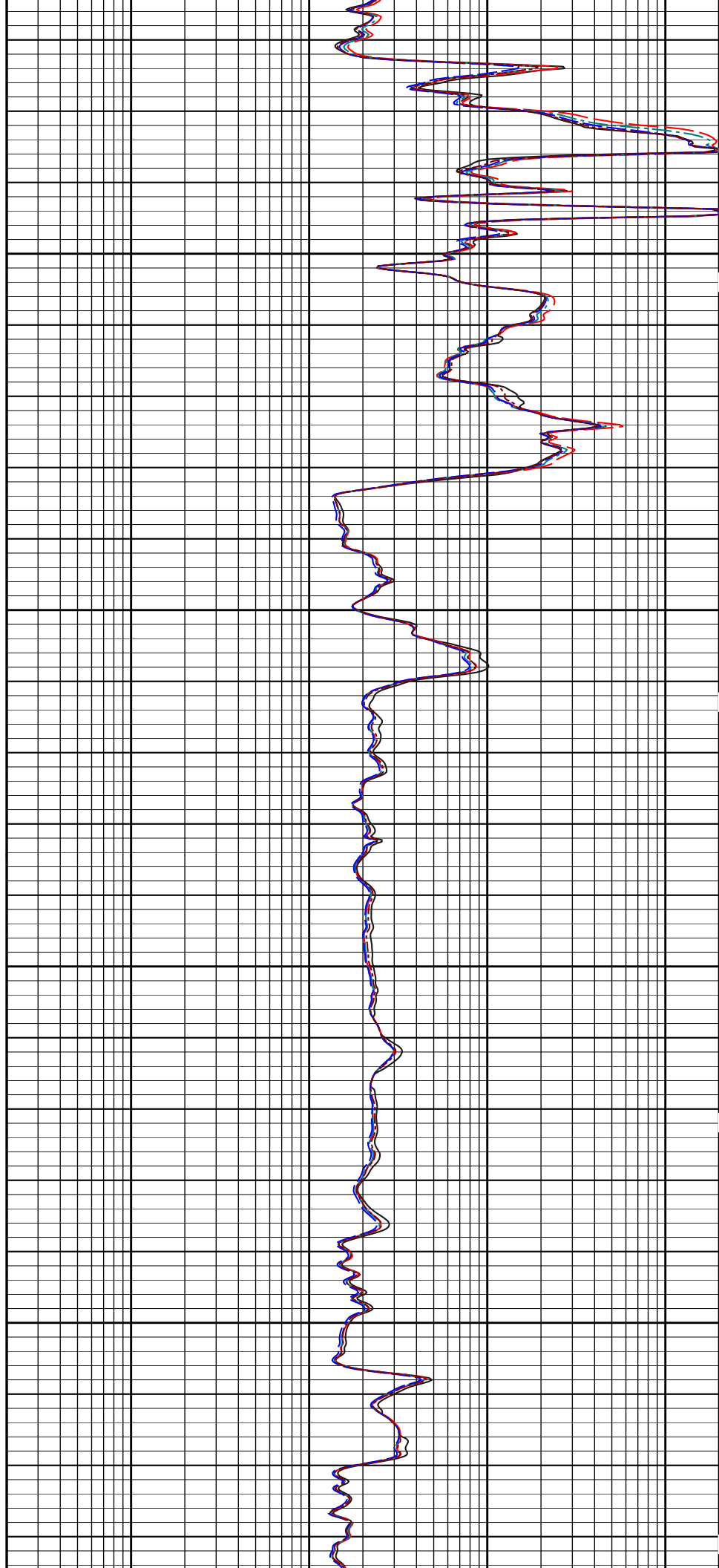
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Data: MCELV\_PARGIN\_11\Well Based\REPEAT\  
Plot File: \\ACRT\ACRT\_5IN\_R

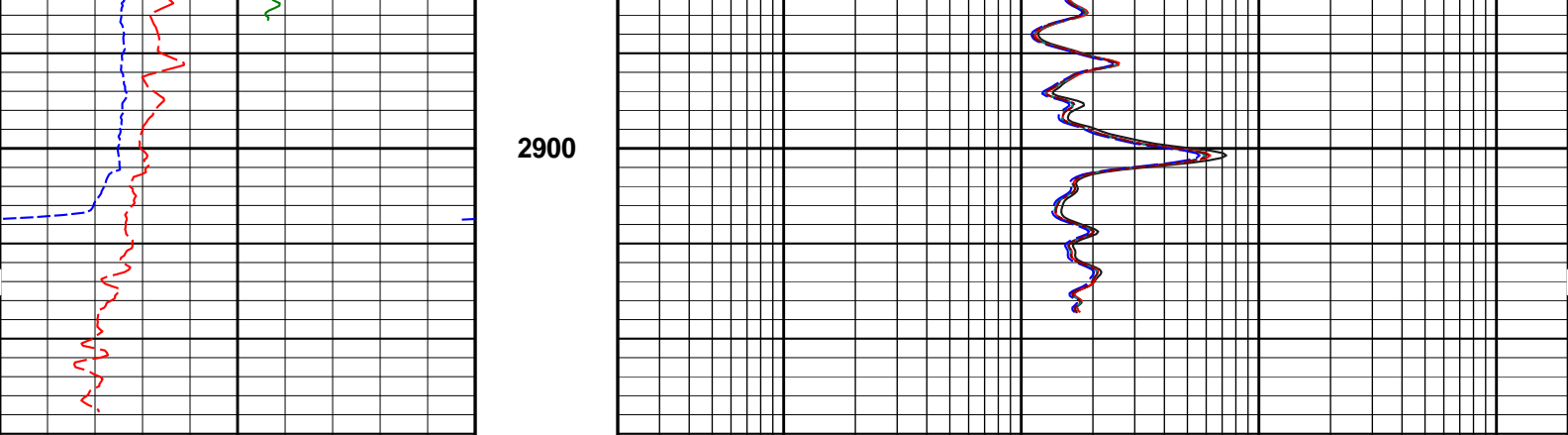
		<div>0.2</div> <div>RT90</div> <div>ohm-m</div> <div>2000</div>	
		<div>0.2</div> <div>RT60</div> <div>ohm-m</div> <div>2000</div>	
		<div>0.2</div> <div>RT30</div> <div>ohm-m</div> <div>2000</div>	
		<div>0.2</div> <div>RT20</div> <div>ohm-m</div> <div>2000</div>	
		<div>0.2</div> <div>RT10</div> <div>ohm-m</div> <div>2000</div>	
<div>0</div> <div>GAMMA RAY</div> <div>api</div> <div>200</div>		<div>1 : 240</div> <div>FT.</div>	<div>2600</div>
<div>6</div> <div>CALIPER</div> <div>inches</div> <div>16</div>			
<div>0</div> <div>SP</div> <div>millivolts</div> <div>100</div>			



2700

2800





0	SP	100	1 : 240 FT.	0.2	RT10	2000
	millivolts				ohm-m	
6	CALIPER	16		0.2	RT20	2000
	inches				ohm-m	
0	GAMMA RAY	200		0.2	RT30	2000
	api				ohm-m	
				0.2	RT60	2000
					ohm-m	
				0.2	RT90	2000
					ohm-m	

<b>HALLIBURTON</b>	Plot Time: 13-Jan-14 07:37:36 Plot Range: 2550 ft to 2930.33 ft Data: MCELV_PARGIN_11\Well Based\REPEAT\ Plot File: \\ACRT\ACRT_5IN_R
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MAIN PASS 5" = 100'

**HALLIBURTON**

**CALIBRATION REPORT**

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 11958949	Reference Calibration Date:	31-Oct-13 00:01:46
Engineer:	P. DIMPFL	Calibration Date:	13-Dec-13 21:11:20
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1
Calibrator Source S/N: MP051807-04 Calibrator API Reference:239.00 api Equivalent Calibrator API Reference:243.2 api			
Measurement	Measured	Calibrated	Units
Background	49.7	48.8	api
Background + Calibrator	297.3	292.0	api
Calibrator	247.6	243.2	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 11958949	Reference Calibration Date:	13-Dec-13 21:11:20
Engineer:	B. RIDDEL	Calibration Date:	12-Jan-14 15:38:26

Software Version: WL INSITE R3.8.4 (Build 5)		Calibration Version: 1		
Calibrator Source S/N: MP051807-04				
Calibrator API Reference:239.00 api				
Equivalent Calibrator API Reference:243.2 api				
Field Verification		Shop	Field	Units
Background		48.8	70.7	api
Background + Calibrator		292.0	311.5	api
Calibrator		243.2	240.8	api
Shop		Field	Difference	Tolerance
243.2		240.8	2.4	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION			
Tool Name:	DSNT - 10993888	Reference Calibration Date:	21-Nov-13 09:58:47
Engineer:	B.RIDDEL	Calibration Date:	10-Jan-14 14:47:19
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Logging Source S/N: DSN-388			
Tank Serial Number: GJ-WATERTANK			
Reference value assigned to Tank: 52.750			
Snow Block S/N: GJ			
Calibration Tank Water Temperature: 65 degF			
Min. Tool Housing Outside Diameter: 3.625 in			

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.996	0.999	0.900 - 1.100
WATER TANK SUMMARY (Horizontal Water Tank)			
Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change
Porosity (decp):	0.2163	0.2169	0.0006
Calibrated Ratio:	9.91	9.93	0.021
			Control Limit On Change
			+/- 0.0020
			+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0657	0.02000 - 0.09000
PASS/FAIL SUMMARY		
Background Check:		Passed
Gain-Range Check:		Passed
Snow-Block Check:		Passed

DUAL SPACED NEUTRON FIELD CALIBRATION			
Tool Name:	DSNT - 10993888	Reference Calibration Date:	10-Jan-14 14:47:19
Engineer:	B. RIDDEL	Calibration Date:	12-Jan-14 15:33:45
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Logging Source S/N: DSN-388			
Snow Block S/N: GJ			
NEUTRON FIELD-CHECK SUMMARY			
Shop		Field	Difference
			Control Limit On Change



PASS/FAIL SUMMARY	
Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	SDLT - 10951300	Reference Calibration Date:	12-Jan-14 15:24:41
Engineer:	B. RIDDEL	Calibration Date:	12-Jan-14 15:29:10
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1
Host Tool Name:	DSNT - 10993888		

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1507.04	-1557.53	-7000.00 - -1000.00
Pad Gain	0.0003694	0.0003684	0.000200 - 0.000600
Arm Offset	-3960.21	-3955.77	-5000.00 - 3000.00
Arm Gain	0.0005429	0.0005438	0.000300 - 0.000700
Arm Power	-0.000004063	-0.000004070	-0.000010000 - 0.000010000

The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER

Tool Diameter: 4.50 in

CALIBRATION RINGS				
Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.02	2.00	-0.02	+/- 0.20
Medium Ring (in)	3.78	3.75	-0.03	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.51	6.50	-0.01	+/- 0.20
Medium Ring (in)	8.26	8.25	-0.01	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 0.20

PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed

PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed

SDLT CALIPER FIELD CALIBRATION

Tool Name:	SDLT - 10951300	Reference Calibration Date:	12-Jan-14 15:29:10
Engineer:	B. RIDDEL	Calibration Date:	12-Jan-14 15:30:25
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.75	0.00	+/- 0.10
Ring Diameter	8.25	8.24	-0.01	+/- 0.15

PASS/FAIL SUMMARY	
Pad Extension Check:	Passed
Diameter Check:	Passed

## SPECTRAL DENSITY SHOP CALIBRATION

Tool Name: SDLT Pad - 10746390

Reference Calibration Date: 22-Nov-13 14:07:55

Engineer: P. DIMPFL

Calibration Date: 27-Dec-13 15:59:46

Software Version: WL INSITE R3.8.4 (Build 5)

Calibration Version: 1

Logging Source S/N: 5153 GW

Aluminum Block S/N: 63094

Density: 2.608g/cc

Pe: 3.230

Magnesium Block S/N: 63387

Density: 1.681g/cc

Pe: 2.600

## DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0306	1.0282	0.90 - 1.10
Near Dens Gain	0.9973	1.0064	0.90 - 1.10
Near Peak Gain	0.9904	0.9832	0.90 - 1.10
Near Lith Gain	0.9597	0.9716	0.90 - 1.10
Far Bar Gain	1.0117	1.0111	0.90 - 1.10
Far Dens Gain	0.9999	1.0018	0.90 - 1.10
Far Peak Gain	0.9919	0.9955	0.90 - 1.10
Far Lith Gain	0.9686	0.9704	0.90 - 1.10
Near Bar Offset	-0.0894	-0.0814	NONE
Near Dens Offset	0.1984	0.1081	NONE
Near Peak Offset	0.2321	0.2825	NONE
Near Lith Offset	0.4615	0.3564	NONE
Far Bar Offset	0.0053	-0.0024	NONE
Far Dens Offset	0.0932	0.0662	NONE
Far Peak Offset	0.1393	0.1005	NONE
Far Lith Offset	0.2783	0.2554	NONE
Near Bar Background	881.08	878.56	700 - 1450
Near Dens Background	294.44	294.52	230 - 480
Near Peak Background	129.50	130.66	100 - 210
Near Lith Background	159.16	159.07	125 - 260
Far Bar Background	545.03	543.60	450 - 900
Far Dens Background	212.50	211.74	175 - 345
Far Peak Background	83.25	83.47	70 - 140
Far Lith Background	87.08	87.03	75 - 145

## CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.683	1.681	-0.002	+/- 0.015
Pe	2.586	2.558	-0.028	+/- 0.150
ALUMINUM				
Density (g/cc)	2.606	2.608	0.002	+/- 0.01500
Pe	3.209	3.179	-0.030	+/- 0.150

## TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0007	+/- 0.0110	-0.0003	+/- 0.0140

Magnesium Block	-0.0004	+/- 0.0110	-0.0022	+/- 0.0140
Aluminum Block	-0.0008	+/- 0.0110	0.0006	+/- 0.0140
Resolution	8.98	6.00 - 11.50	9.67	6.00 - 11.50
Internal Verifier(B+D+P+L)	1463	1200 - 2700	926	800 - 1700

#### PASS/FAIL SUMMARY

Background Quality Check:	Passed
Background Range Check:	Passed
Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

#### SPECTRAL DENSITY FIELD CHECK

Tool Name:	SDLT Pad - 10746390	Reference Calibration Date:	27-Dec-13 15:59:46
Engineer:	B. RIDDEL	Calibration Date:	12-Jan-14 15:18:29
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Pad Temperature: 54.3 degF

#### DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1462.812	1454.656	-8.156	15.424
Far (B+D+P+L) cps	925.838	924.223	-1.615	16.475
Near Resolution	8.98	9.00	0.020	0.50
Far Resolution	9.67	9.74	0.070	1.00

#### PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

#### ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	ACRt Sonde - 11585797	Reference Calibration Date:	30-Dec-13 11:20:40
Engineer:	P. DIMPFL	Calibration Date:	30-Dec-13 11:28:43
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1
Host Tool Name:	ACRt Instrument - 11585787		

#### TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.01	1.05
A2 (50")	0.95	1.02	1.05	0.95	1.02	1.05	0.95	1.01	1.05
A3 (29")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.00	1.05
A4 (17")	0.95	1.00	1.05	0.95	0.99	1.05	0.95	1.00	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.00	1.05	0.95	1.00	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.99	1.05	0.95	0.99	1.05

#### TYPICAL SONDE OFFSET RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper

A1 (80")	-5	-2.86	2	-6	-4.61	-2	-8	-5.84	-2
A2 (50")	-7	-1.30	0	-7	-3.40	0	-7	-4.67	0
A3 (29")	-27	-16.33	-9	-9	-4.48	-3	-7	-3.32	-1
A4 (17")	-180	-120.55	-60	-45	-35.95	-15	-39	-27.38	-13
A5 (10")	N/A	N/A	N/A	-150	-93.40	-50	-80	-48.43	-10
A6 (6")	N/A	N/A	N/A	175	306.57	525	90	155.95	270

TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION			
Signal	Lower	R	Upper		Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.83	1.3		Mud Cell	0.95	1.00	1.05
36K	1.0	1.84	2.0					
72K	1.0	1.08	2.0					

PASS/FAIL SUMMARY	
GAIN RANGE CHK	PASS
SONDE OFFSET RANGE CHK	PASS
Tx CURRENT GAIN	PASS
Rmud VERIFICATION	PASS


TOOL OK TO LOG

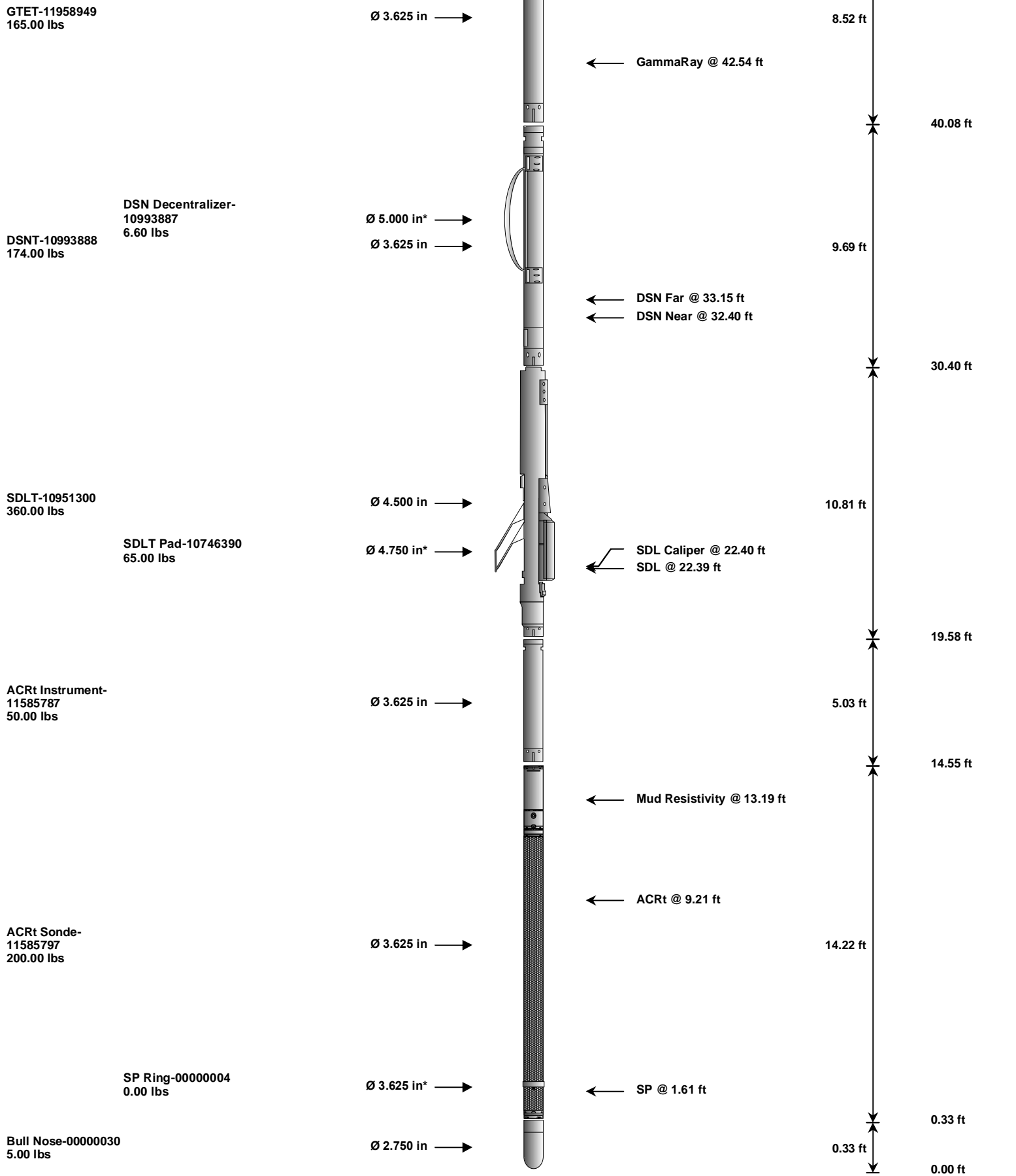
CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11958949						
Gamma Ray Calibrator	243.2	240.8	-----	2.4	+/- 9.00	api
DSNT-10993888						
Snow-Block Porosity	0.0657	0.0571	-----	0.0086	+/- 0.0150	decp
SDLT-10951300						
Pad Extension	3.75	3.75	-----	0.00	+/-0.10	in
Ring Diameter	8.25	8.24	-----	0.01	+/-0.15	in
SDLT Pad-10746390						
Near(B+D+P+L)	1462.812	1454.656	-----	8.156	+/-15.424	cps
Far(B+D+P+L)	925.838	924.223	-----	1.615	+/-16.475	cps
ACRt Sonde-11585797						
Mud Cell	1.00	-----	-----	0.00	-----	ohm-m

Data: MCELV\_PARGIN\_11\0002 TRIPLEVDLEDate: 13-Jan-14 06:37:50

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-A032 135.00 lbs		Ø 3.625 in →		← Load Cell @ 51.17 ft ← BH Temperature @ 50.60 ft	6.25 ft	54.85 ft  48.60 ft



Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head		A032	135.00	6.25	48.60	300.00
GTET	Gamma Telemetry Tool		11958949	165.00	8.52	40.08	60.00
DSNT	Dual Spaced Neutron		10993888	174.00	9.69	30.40	60.00
DCNT	DSN Decentralizer		10993887	6.60	5.13	*	33.73
SDLT	Spectral Density Tool		10951300	360.00	10.81	19.58	60.00
SDI P	Density Insite Pad		10746390	65.00	2.55	*	21.79
							60.00

ODEI	Density Inside Pad	10740330	00.00	2.33	21.73	00.00
ACRt	Array Compensated True Resistivity Instrument Section	11585787	50.00	5.03	14.55	300.00
ACRt	Array Compensated True Resistivity Sonde Section	11585797	200.00	14.22	0.33	300.00
SP	SP Ring	00000004	0.00	0.25 *	1.61	300.00
BLNS	Bull Nose	00000030	5.00	0.33	0.00	300.00
Total			1,160.60	54.85		
* Not included in Total Length and Length Accumulation.						
Data: MCELV_PARGIN_11\0001 TRIPLEVDLE					Date: 13-Jan-14 03:46:59	

COMPANY	MCELVAIN ENERGY INC.		
WELL	PARGIN RANCH #11		
FIELD	IGNACIO BLANCO		
COUNTY	LA PLATA	STATE	CO
HALLIBURTON		ARRAY COMPENSATED TRUE RESISTIVITY	