

HALLIBURTON

ARRAY COMPESANTED
TRUE RESISTIVITY
LOG

SANDRIDGE ENERGY TERESIA 3509 1-16 AMORITA HARPER KANSAS				COMPANY SANDRIDGE ENERGY WELL TERESIA 3509 1-16 FIELD/BLOCK AMORITA COUNTY HARPER STATE KANSAS			
COMPANY	WELL	FIELD/BLOCK	COUNTY	STATE	API No.	15-077-21797	Other Services: MICROLOG DSNT, SDLT XRMI MRIL
Location	(SHL) 200' FSL & 860' FEL						
Perm anent Datum	GL	Sect. 16	Twp. 36S	Rge. 9W	Elev. 1230.00 ft	Elev. K.B.	1248.00 ft
Log measured from	KB				18.00 ft above perm. Datum	D.F.	1247.00 ft
Drilling measured from	KB					G.L.	1230.00 ft
Date	01-Aug-13						
Run No.	ONE						
Depth - Driller	5280.00 ft						
Depth - Logger	5266.00 ft						
Bottom - Logged Interval	5256.0 ft						
Top - Logged Interval	830.0 ft						
Casing - Driller	9.625 in @ 830.00 ft						
Casing - Logger	830.00 ft						
Bit Size	8.750 in						
Type Fluid in Hole	WATER BASED MUD						
Density	9.1 ppq	55.00 spq					
PH	9.00 pH	8 mpm					
Source of Sample	MUD PIT						
Rm @ Meas. Temperature	0.050 ohmm @ 75.00 degF						
Rmf @ Meas. Temperature	0.050 ohmm @ 75.00 degF						
Rmc @ Meas. Temperature	0.050 ohmm @ 75.00 degF						
Source Rmf	CALCULATED	CALCULATED					
Rm @ BHT	0.03 ohmm @ 140.0 degF						
Time Since Circulation	5.0 hr						
Time on Bottom	01-Aug-13 05:06						
Max. Rec. Temperature	140.0 degF @ 5286.0 ft						
Equipment	11072142	LIBERAL					
Recorded By	J. BOLLOM						
Witnessed By	T. WHITLOW						

Detector Model No.	1-102	Spacing		Log Type		Log Type	
Type	SCINT			Source Type		Source Type	
Length	8'	LSA [Y/N]		Serial No.		Serial No.	
Distance to Source	10'	FWDA [Y/N]		Strength		Strength	

LOGGING DATA

[illegible]

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@
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Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 7-INCH CASING

CHLORIDES REPORTED AT 22,000 MG/L

LCM REPORTED AT 7.5 LB/BBL

GTET-DSNT-SDLT-XRMI-ACRT RUN IN COMBINATION

TODAY'S CREW: M. GRAHAM & T. GRAYSON

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES LIBERAL, KS. 620-624-8123

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.

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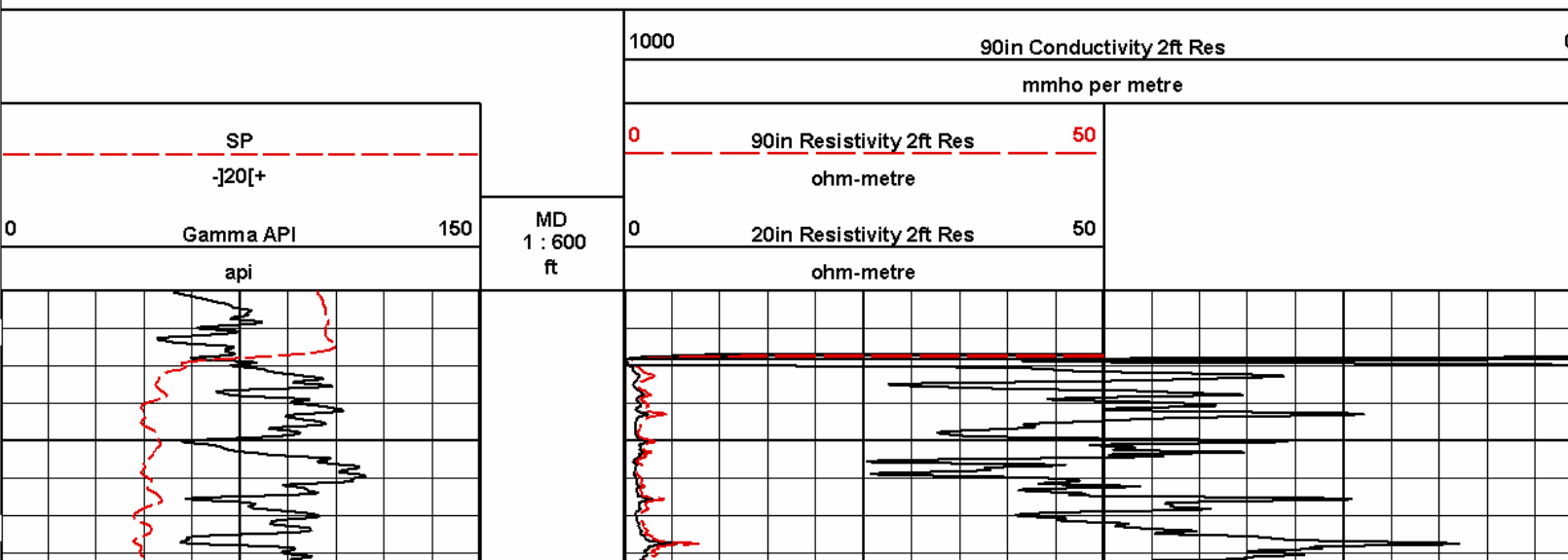
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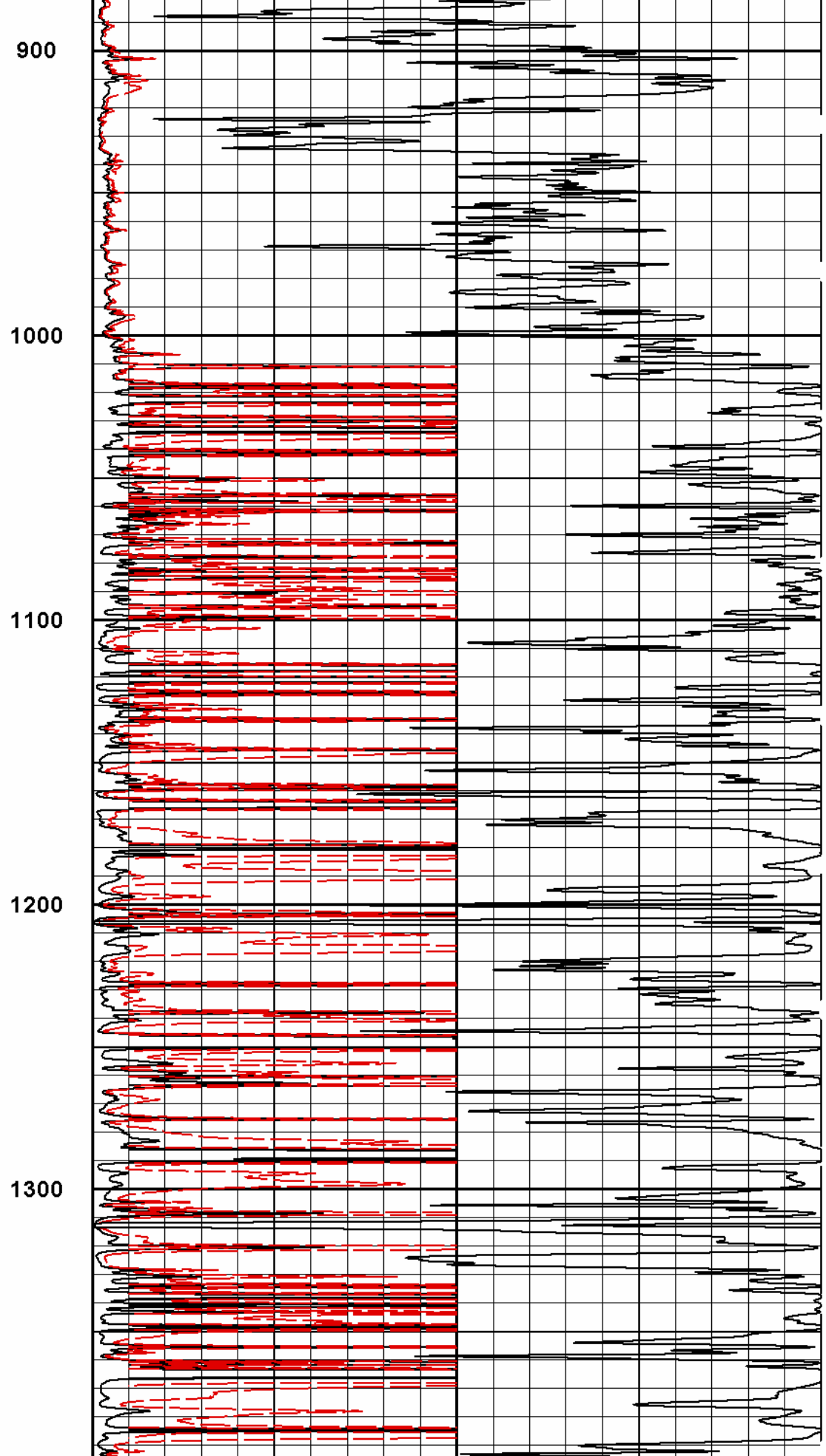
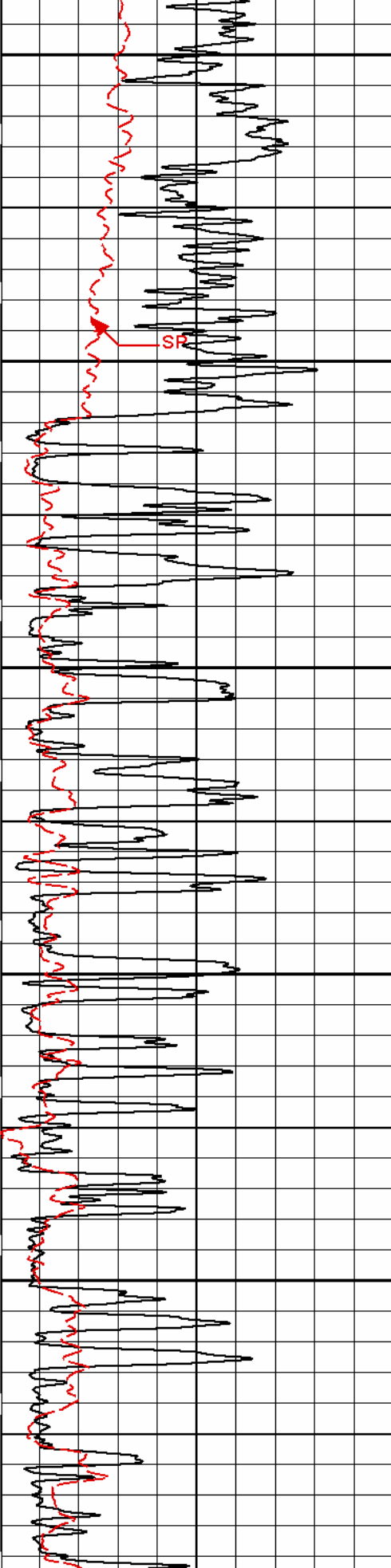
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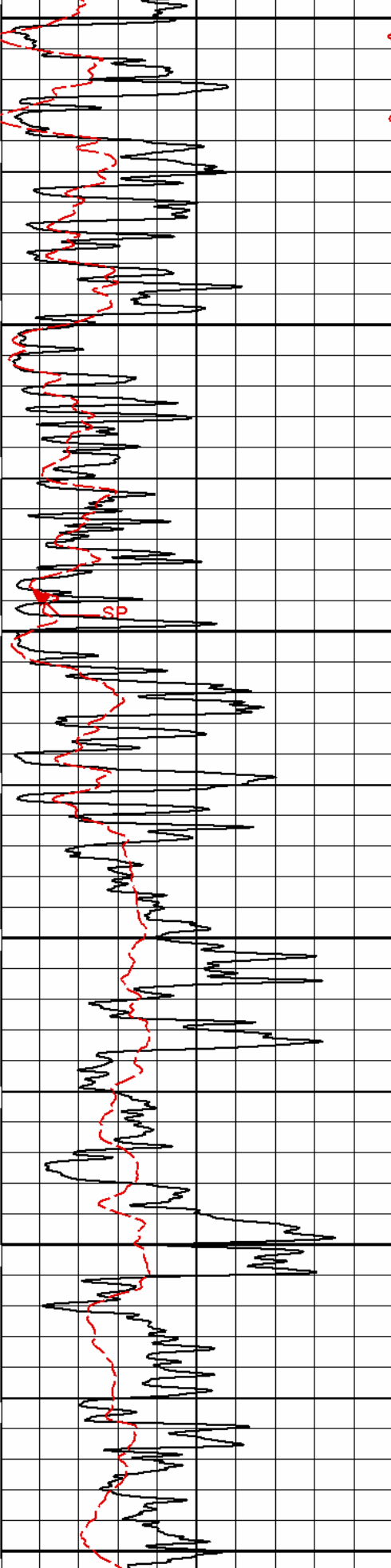
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Plot File: \\-LOCAL-\\TERESIA_3509\\0001 SP-GTET-DSN-SDL-FLEX-XRMI-ACRT-CH\\ACRT\\ACRT_2.lib

2 INCH MAIN LOG







1400

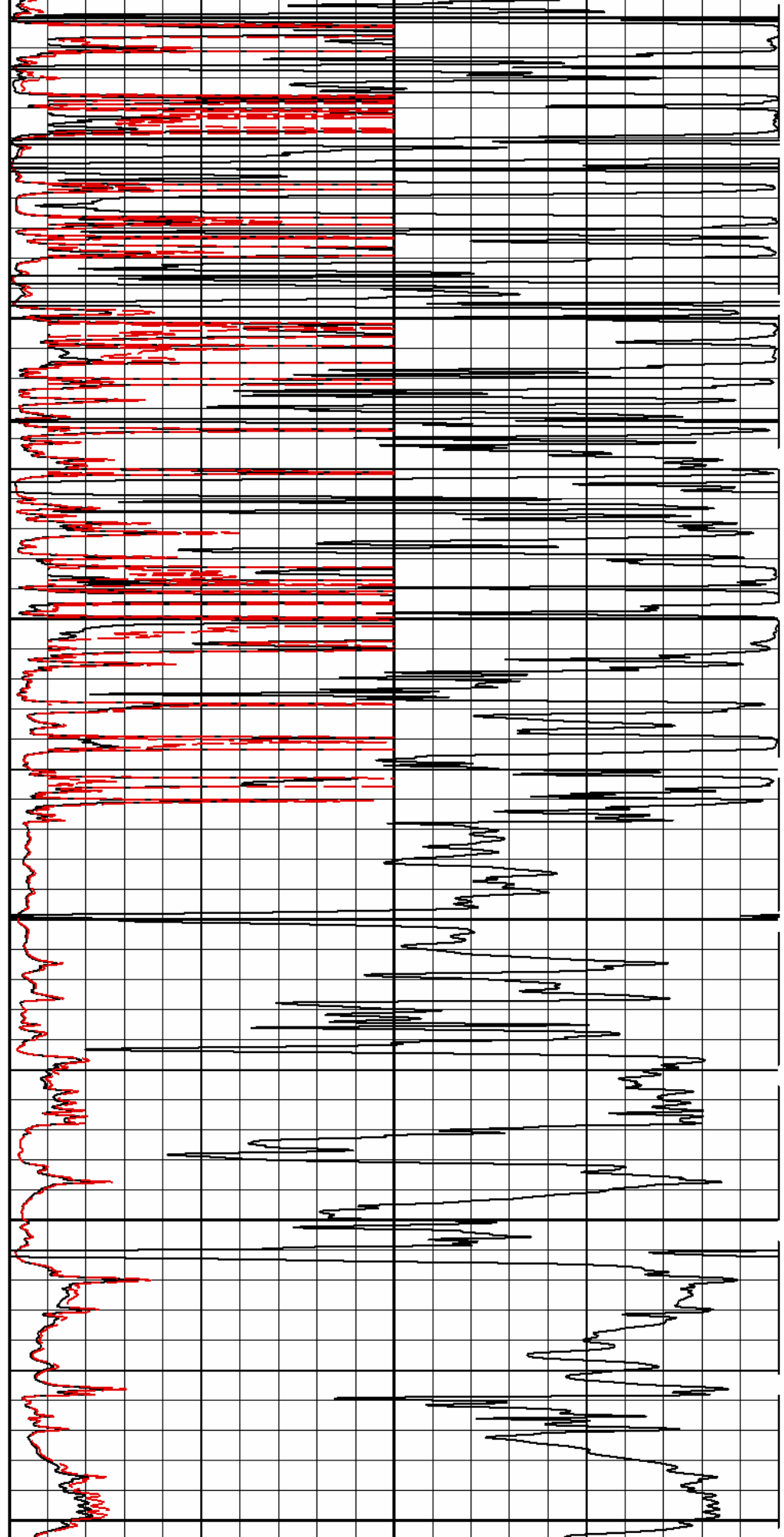
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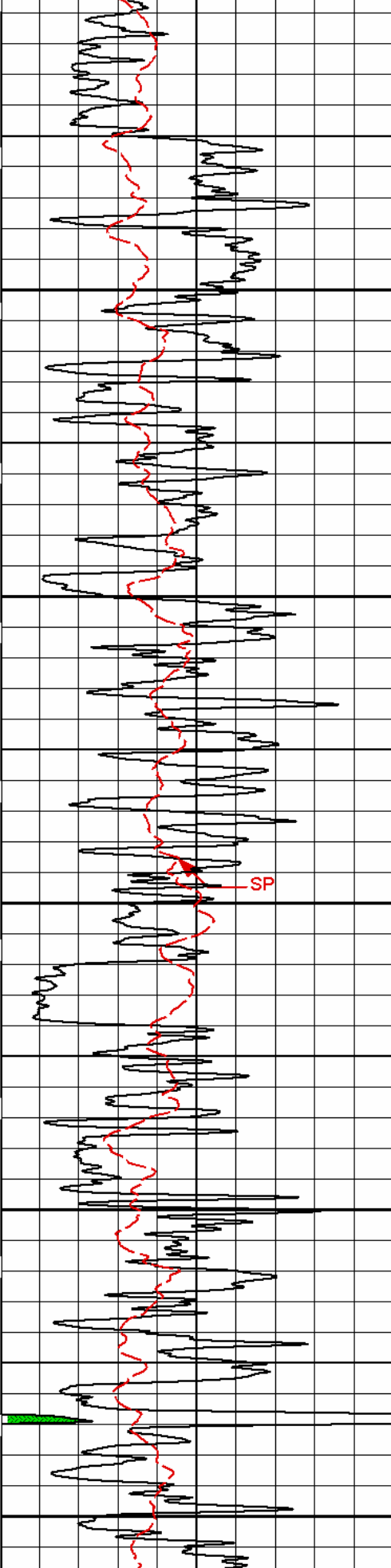
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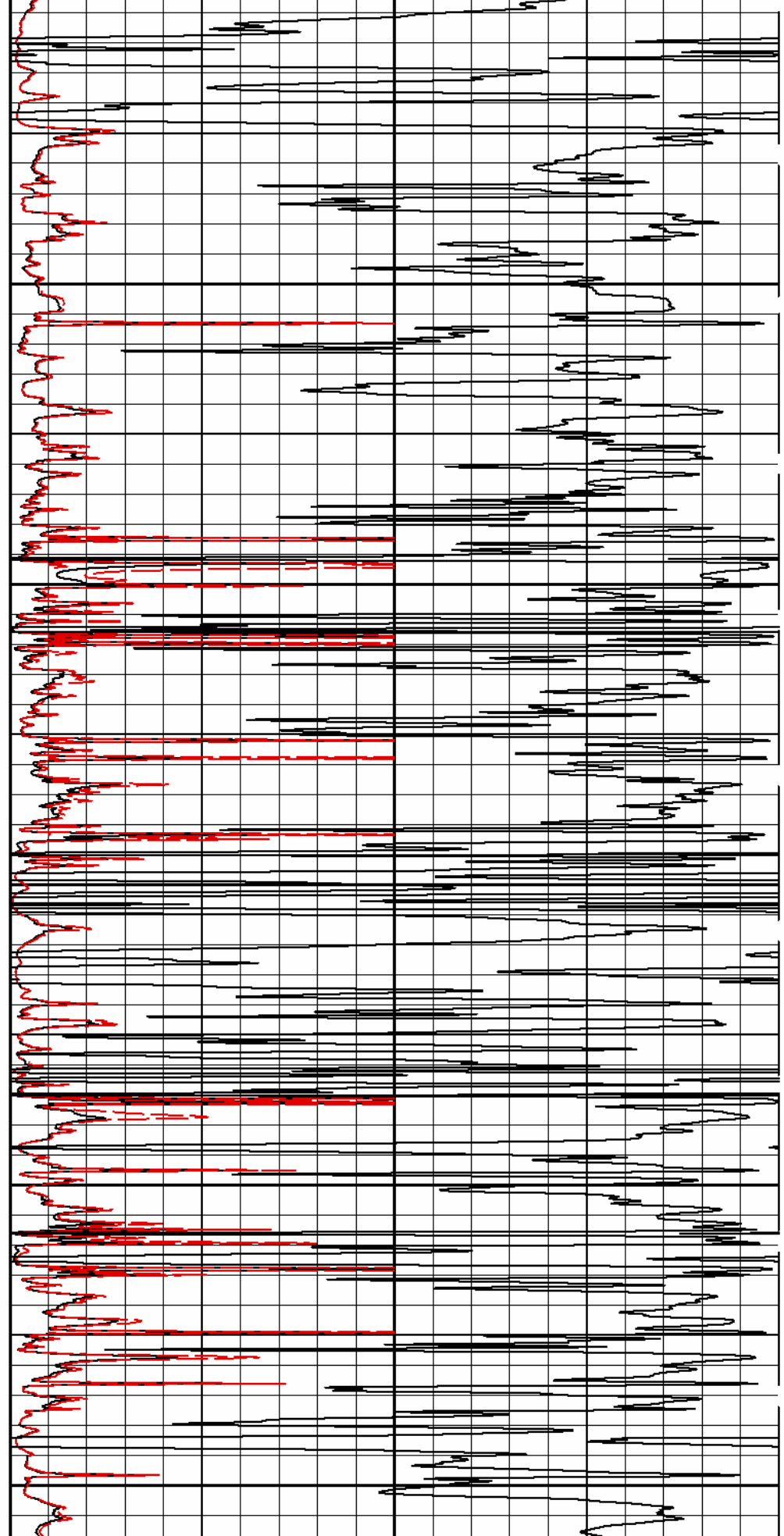
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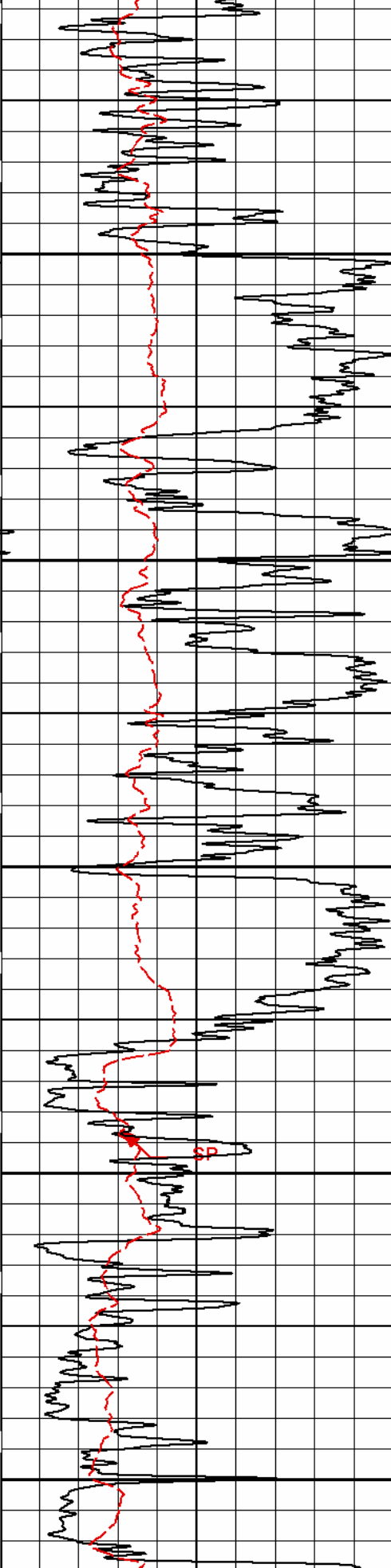
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2300

2400





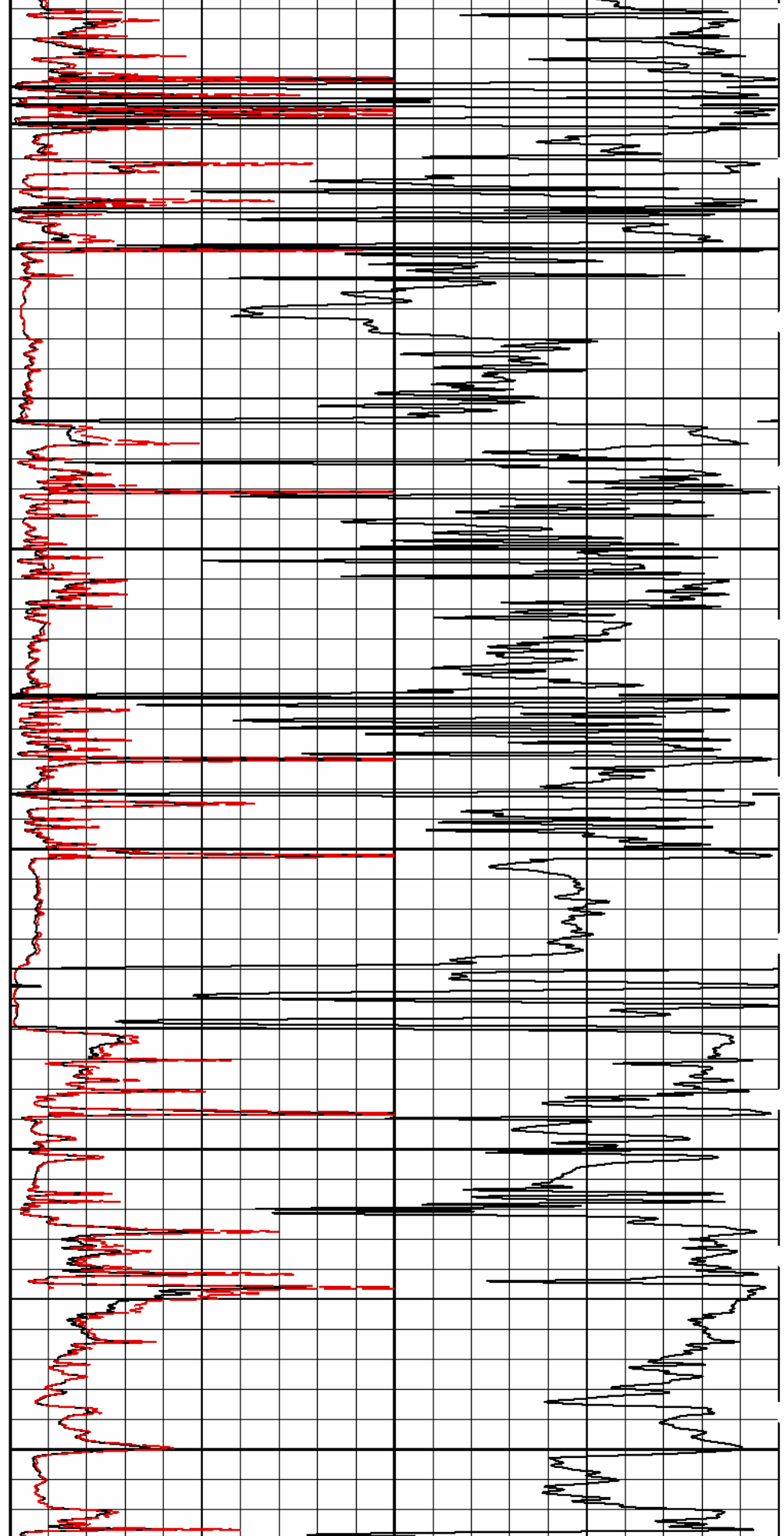
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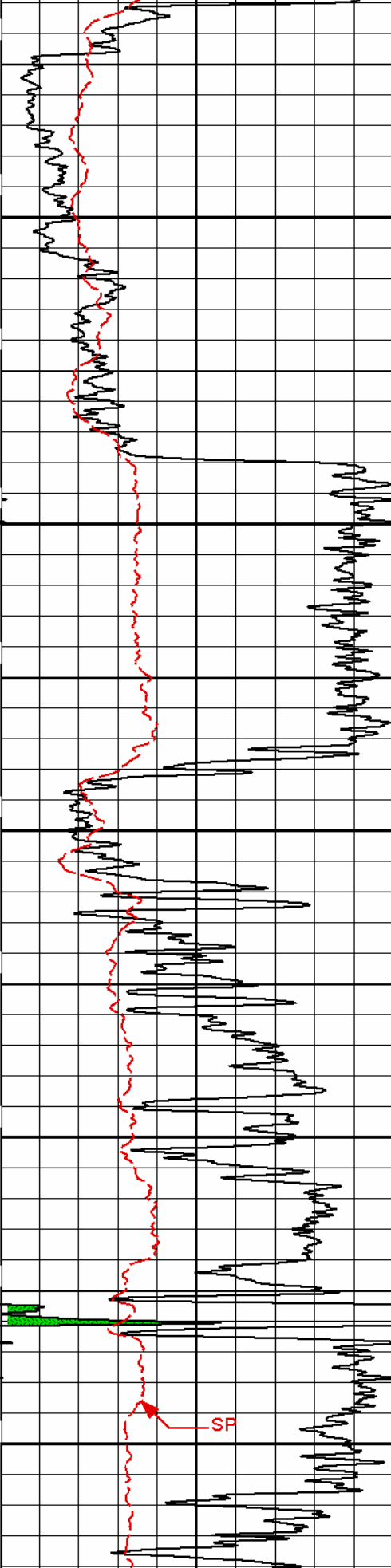
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2900





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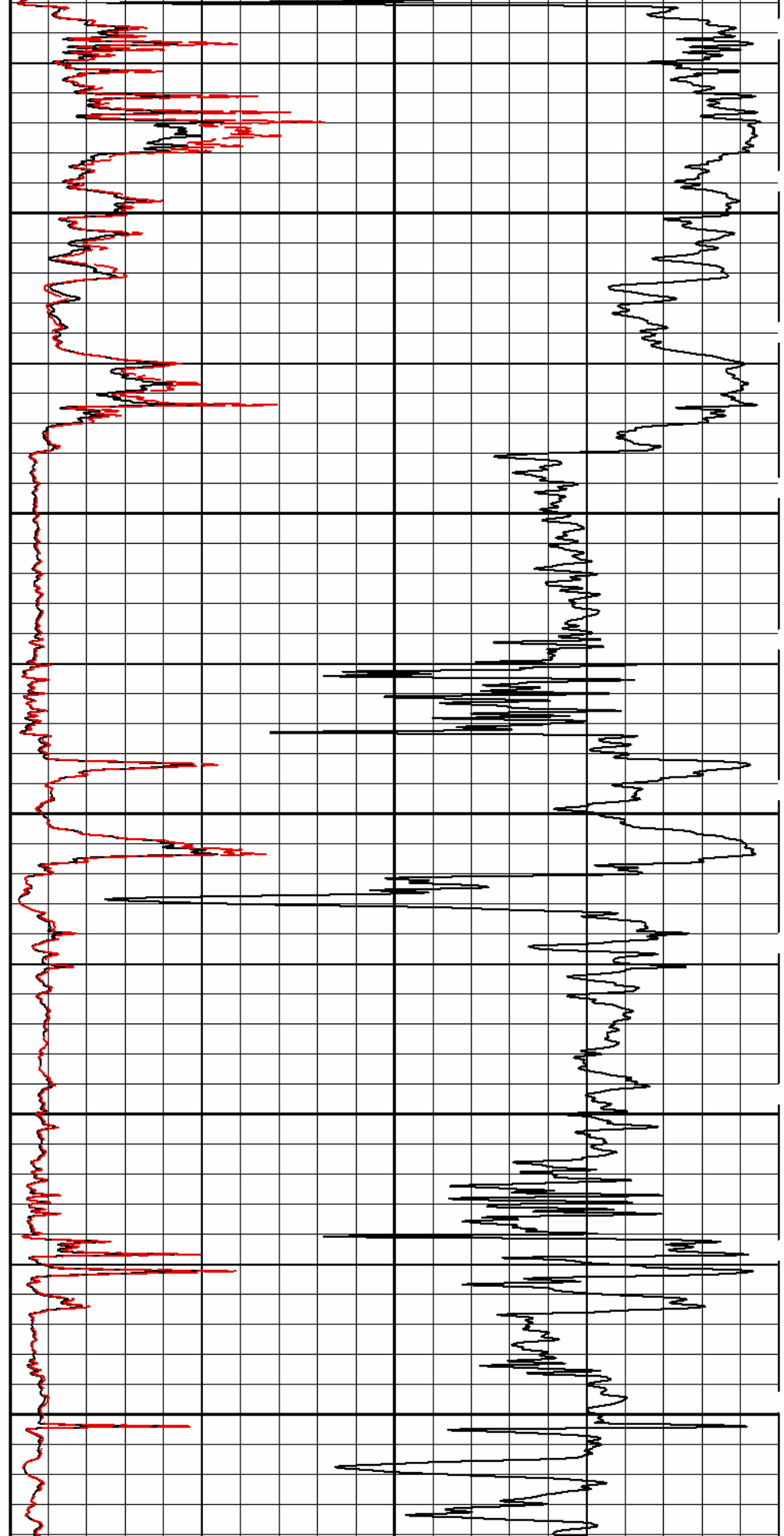
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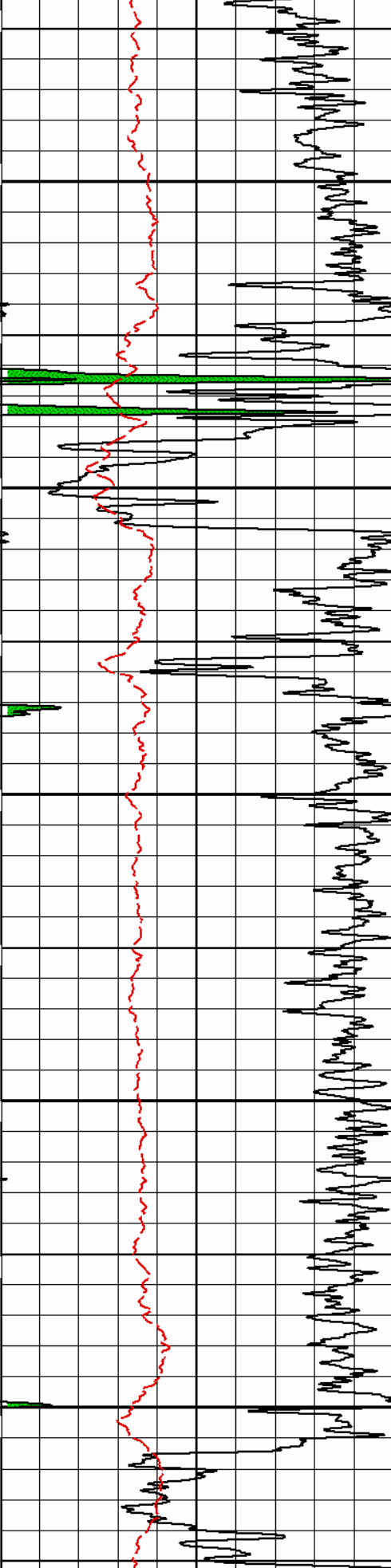
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SP





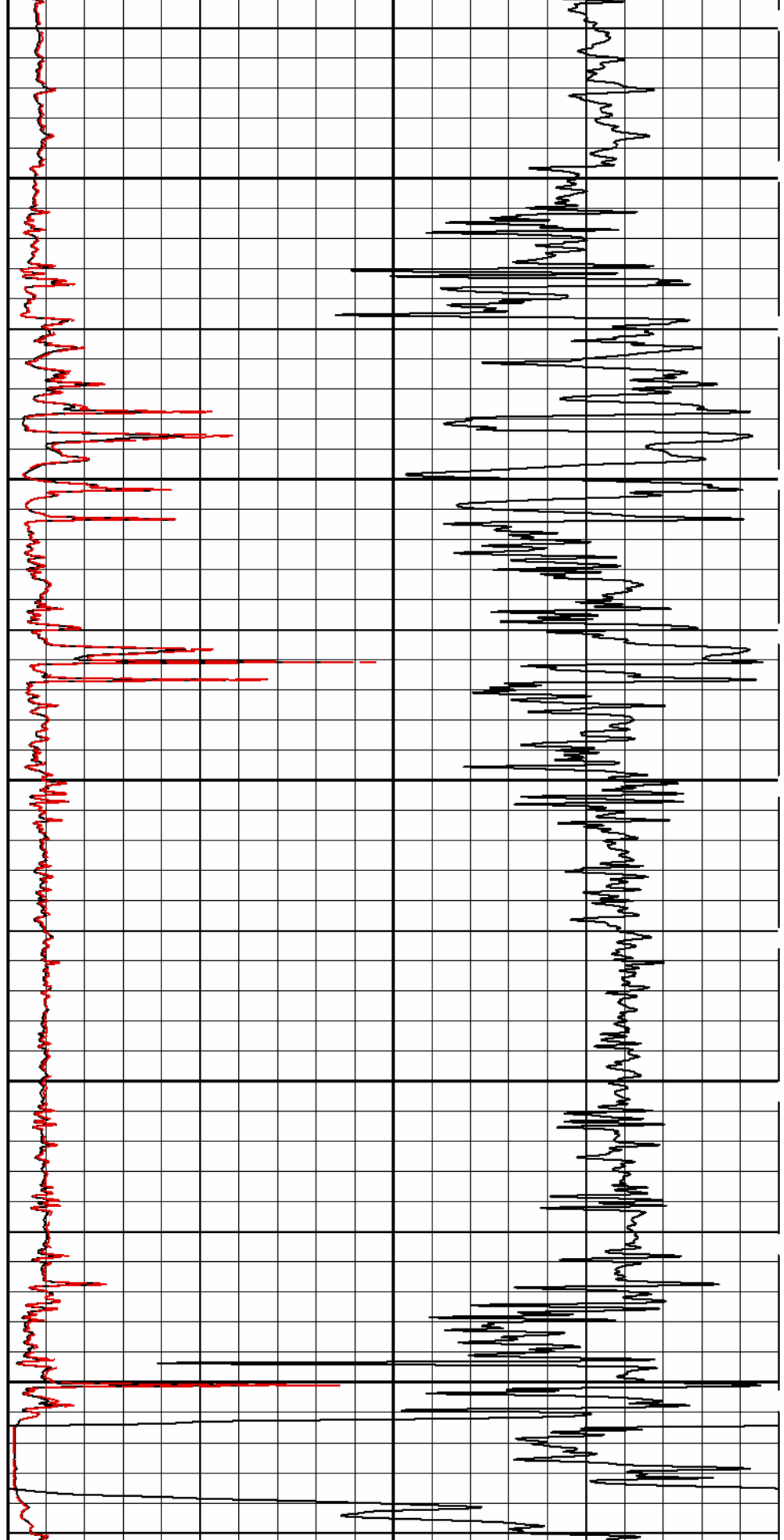
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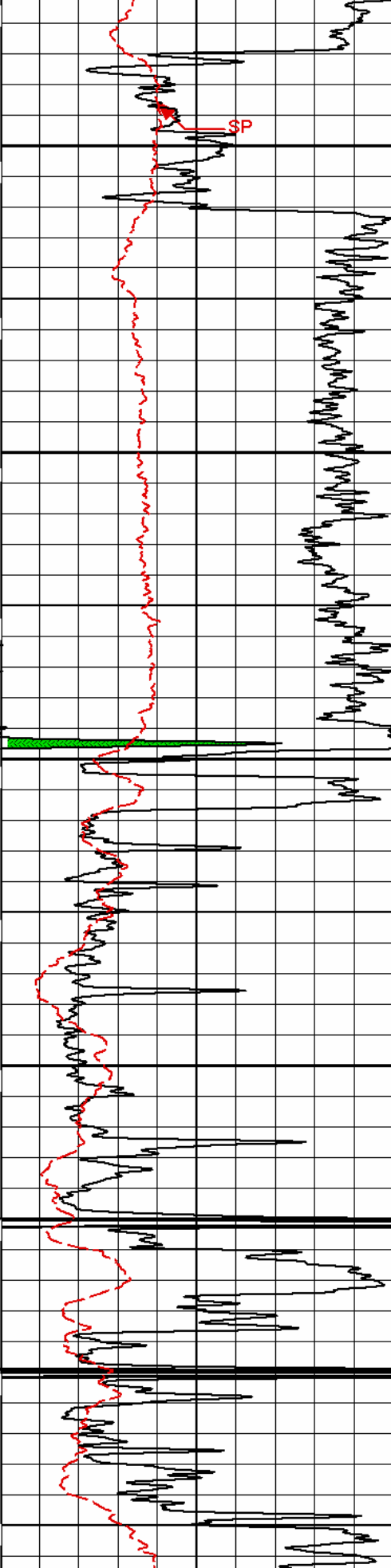
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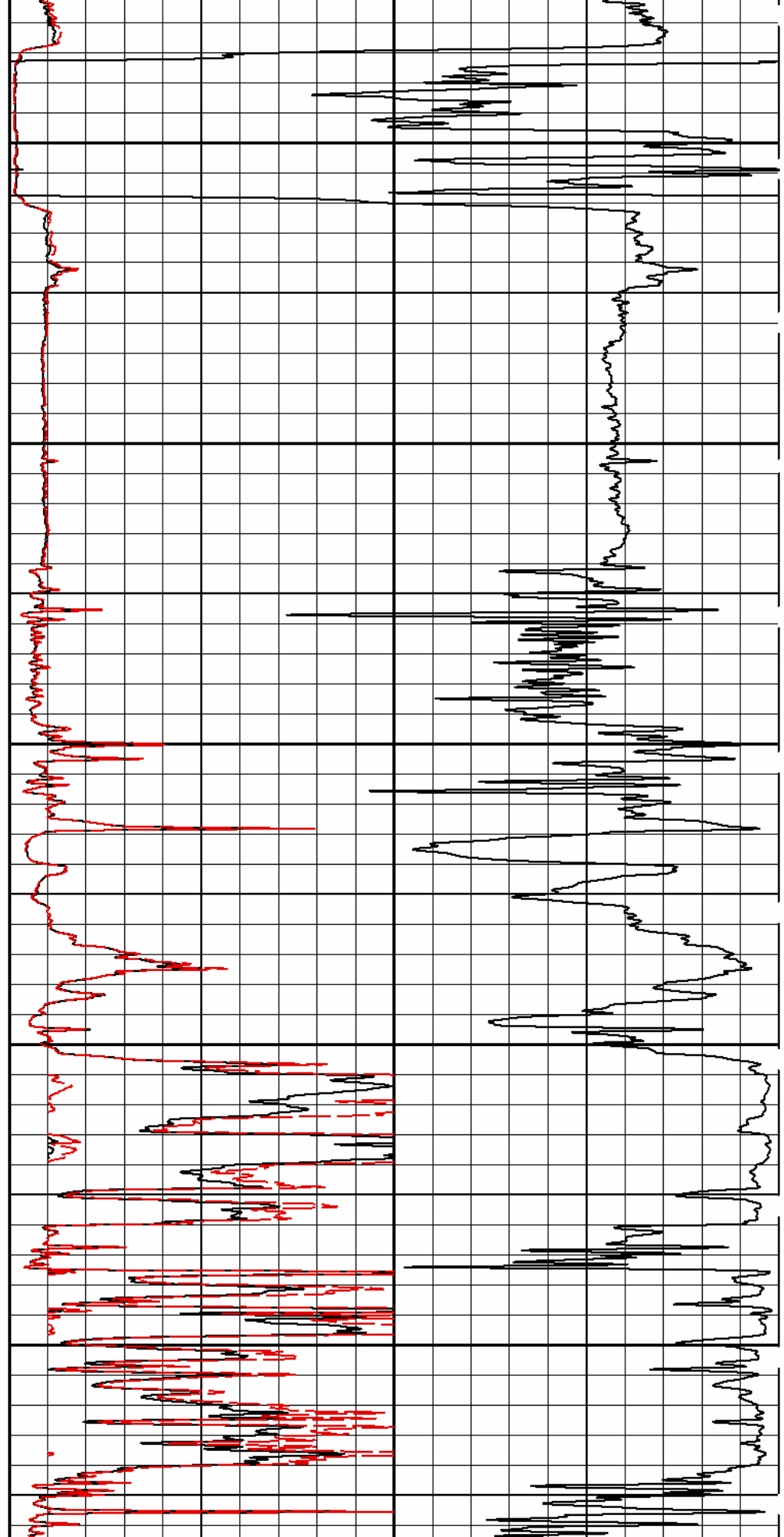
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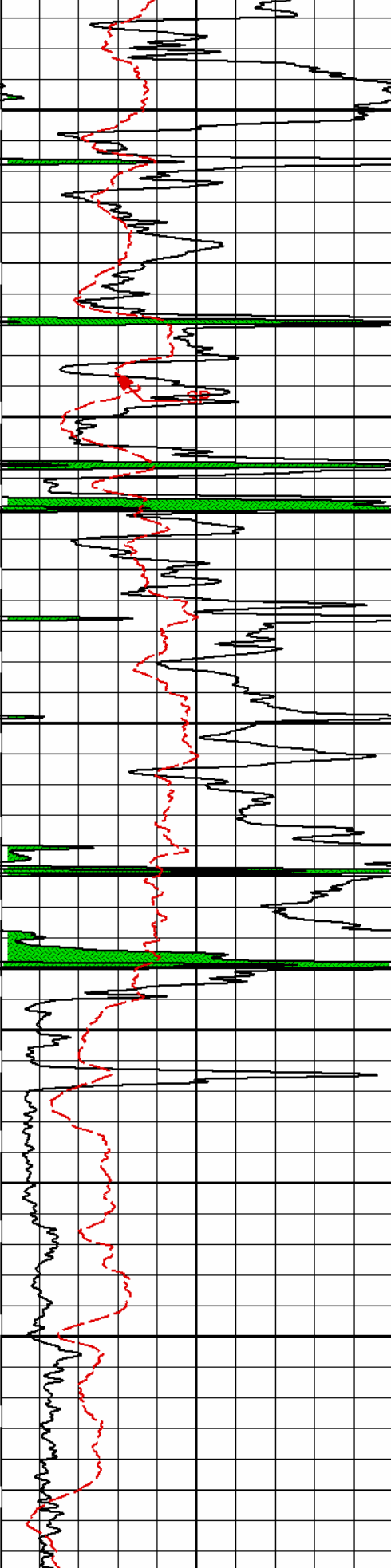
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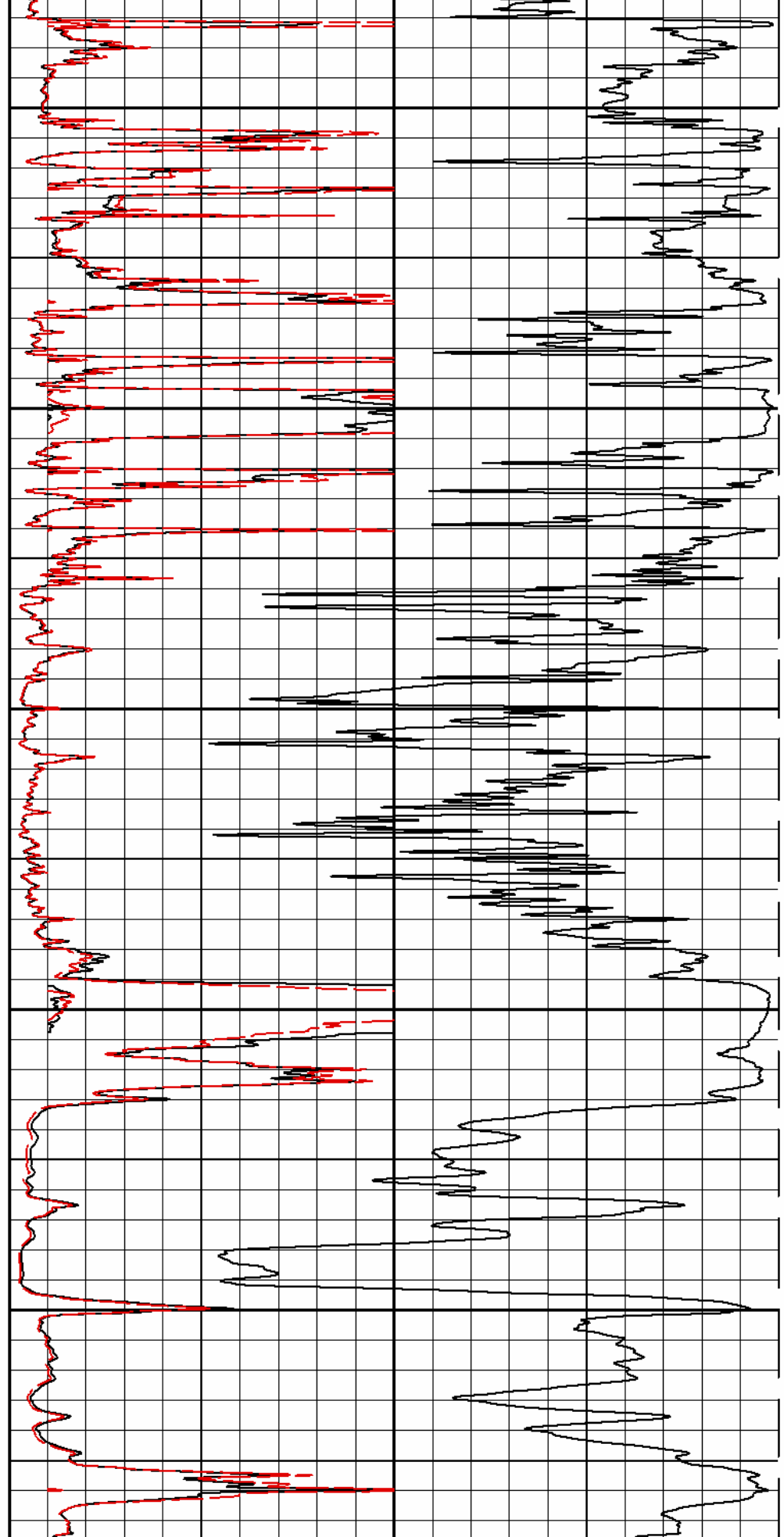
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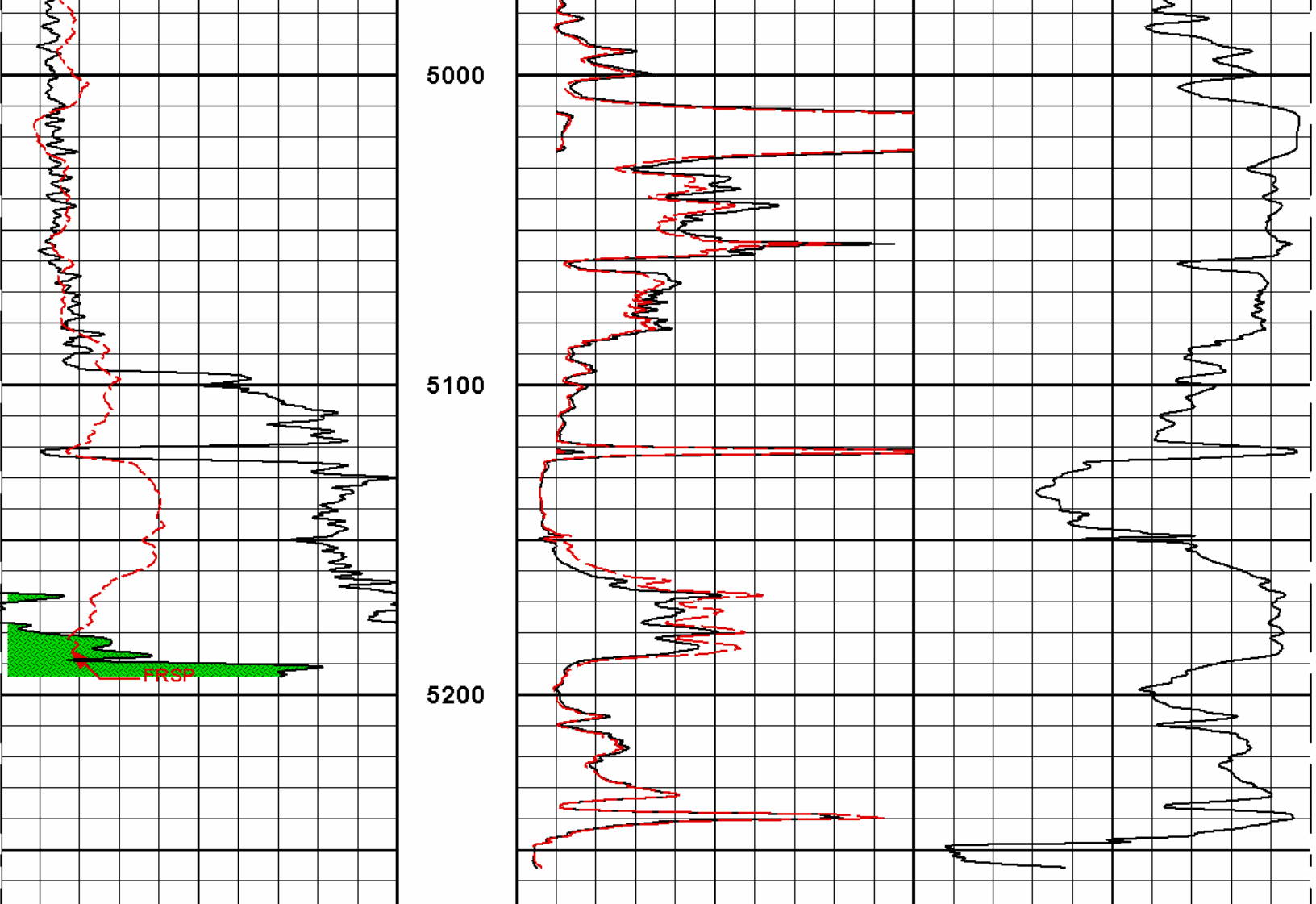
4600

4700

4800

4900





0	Gamma API	150	MD 1 : 600 ft	0	20in Resistivity 2ft Res	50	
	api				ohm-metre		
	SP			0	90in Resistivity 2ft Res	50	
	-J20[+				ohm-metre		
				1000	90in Conductivity 2ft Res		0
					mmho per metre		

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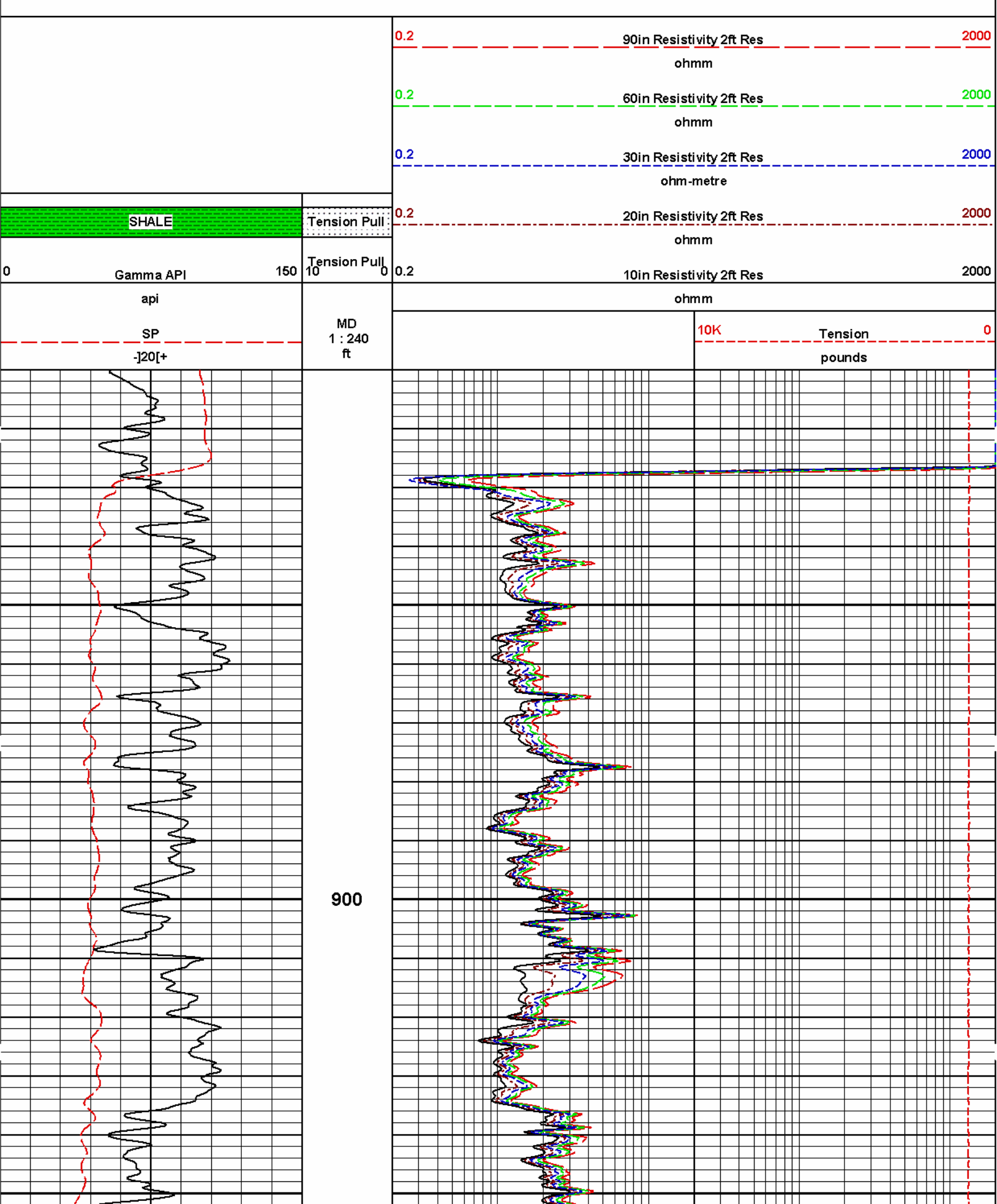
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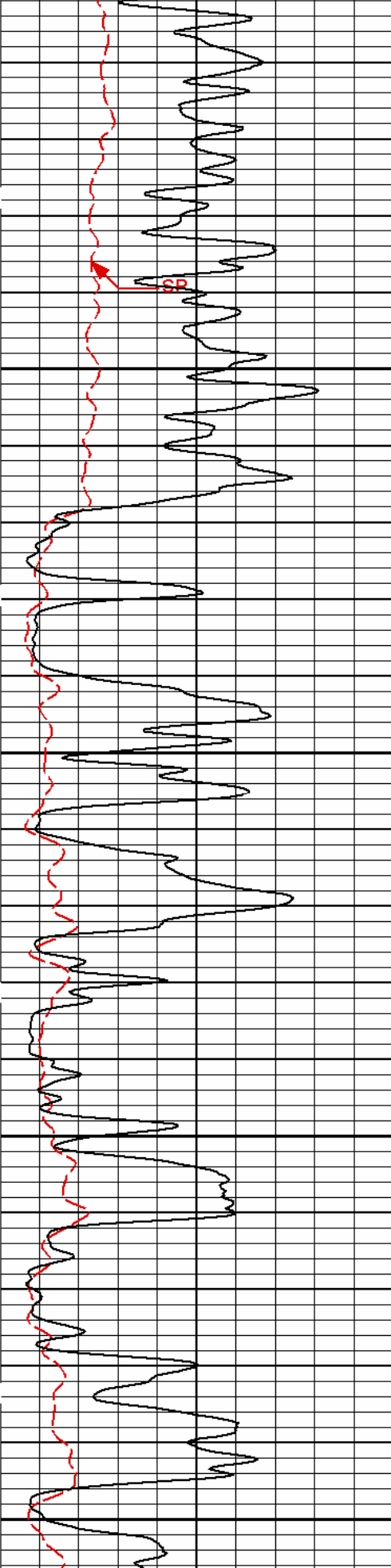
2 INCH MAIN LOG

HALLIBURTON

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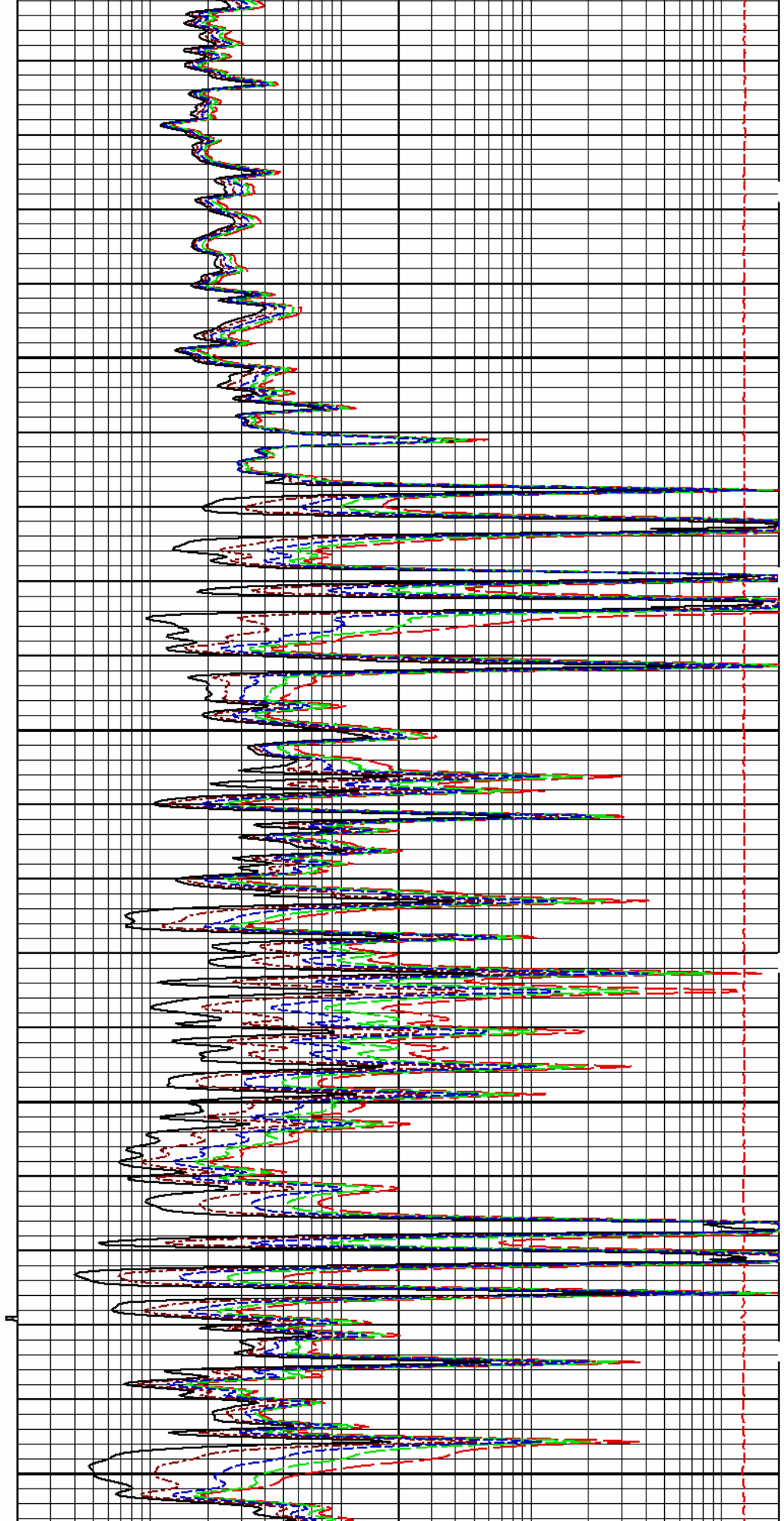
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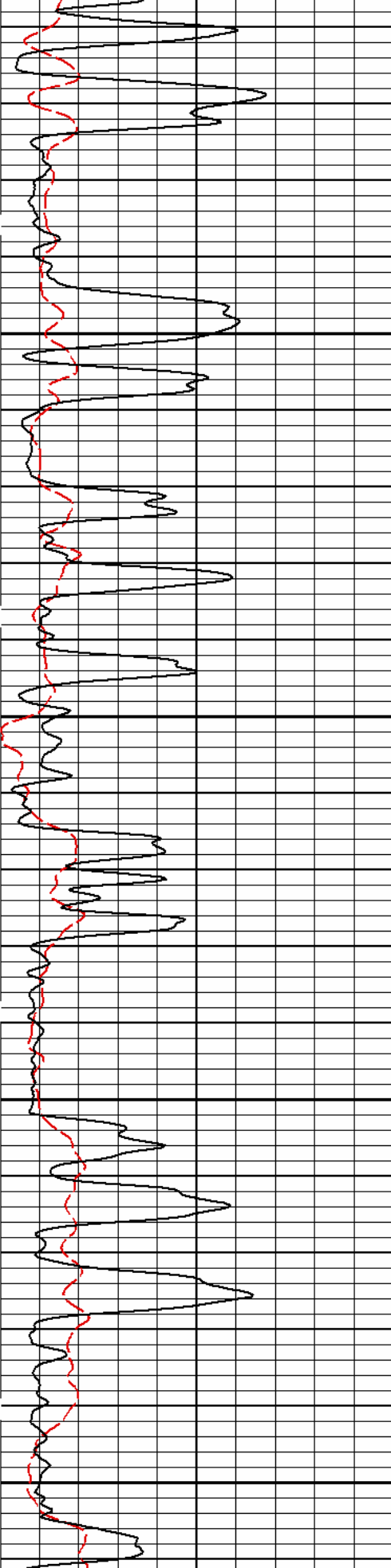




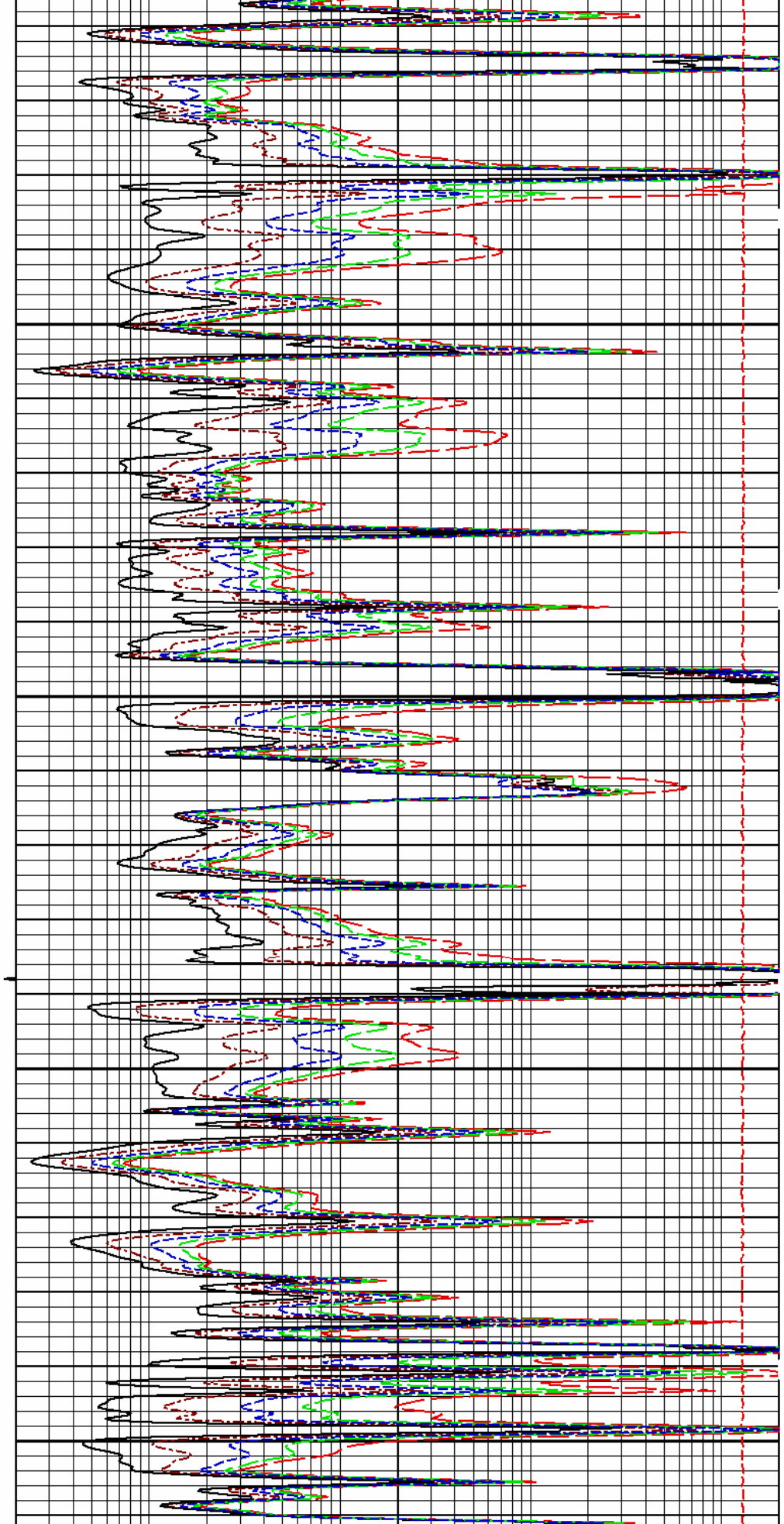
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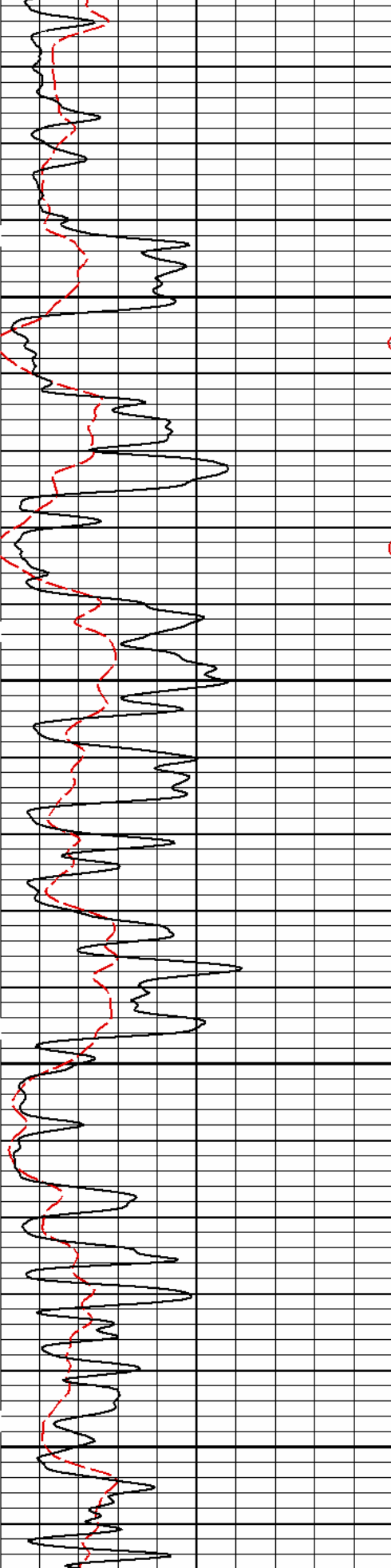




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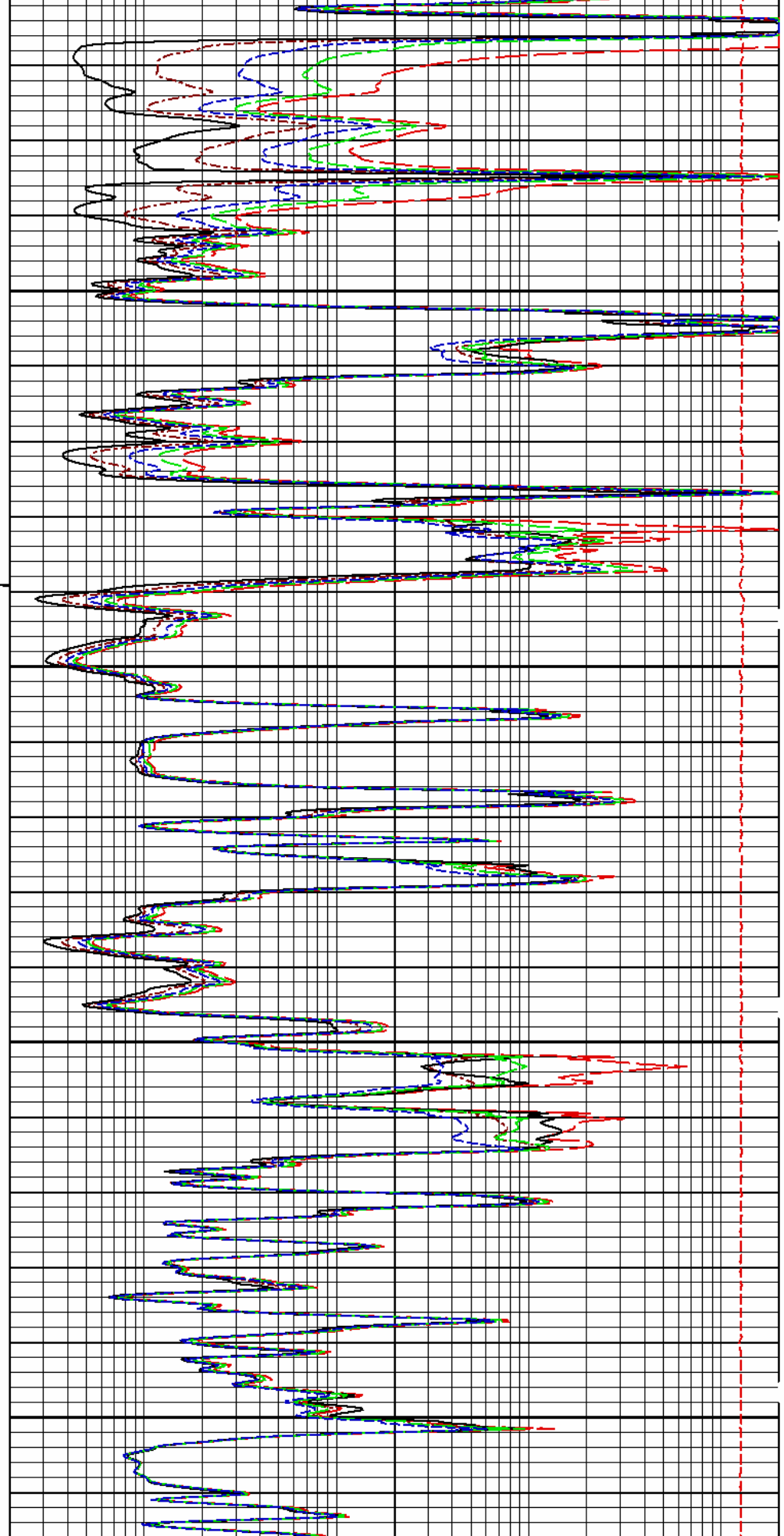


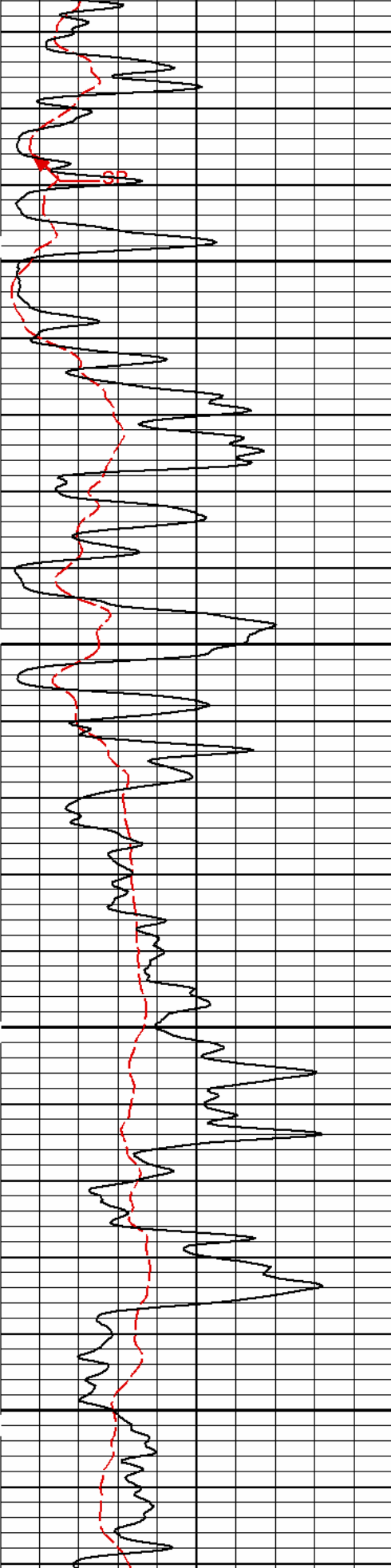
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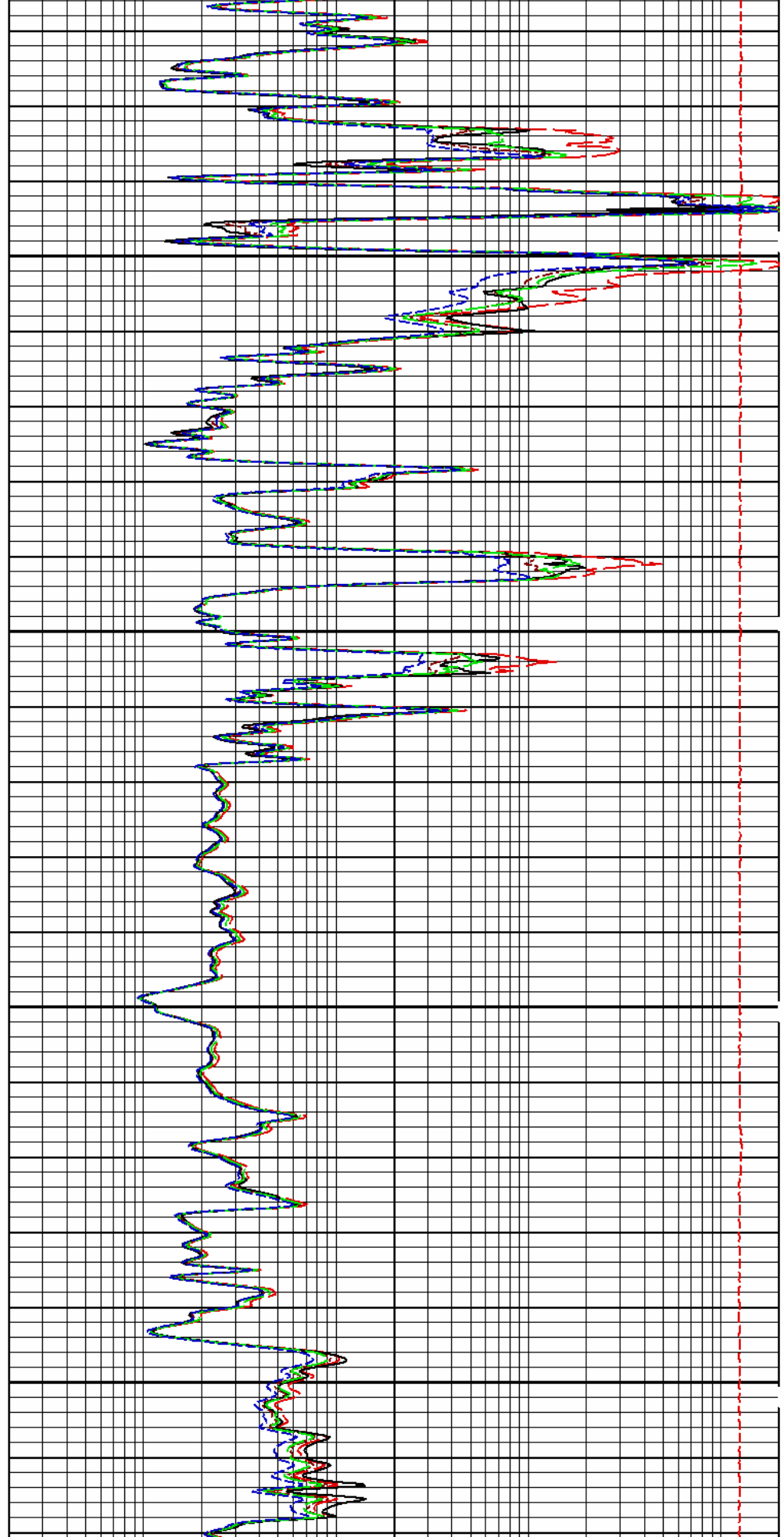
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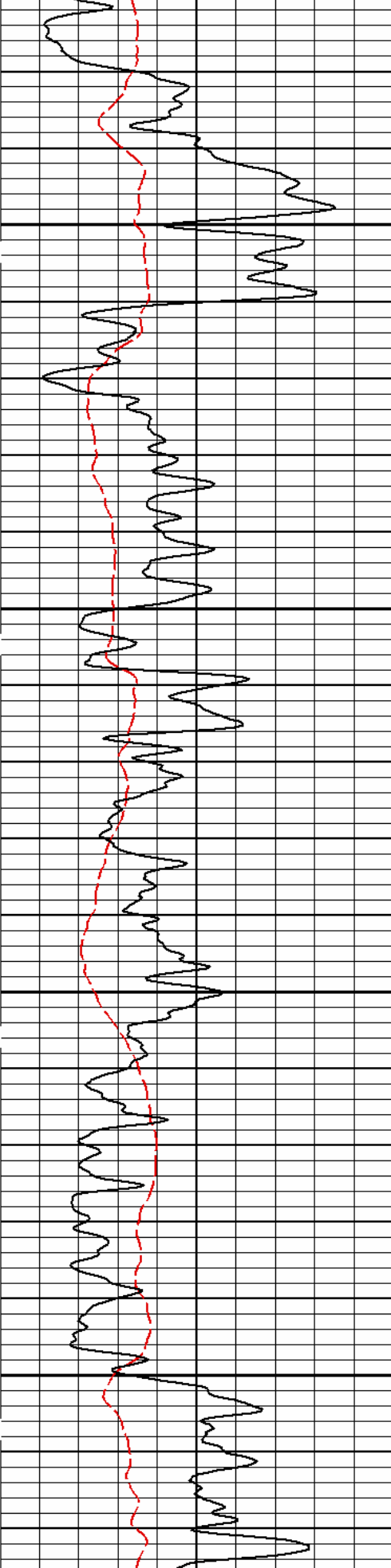




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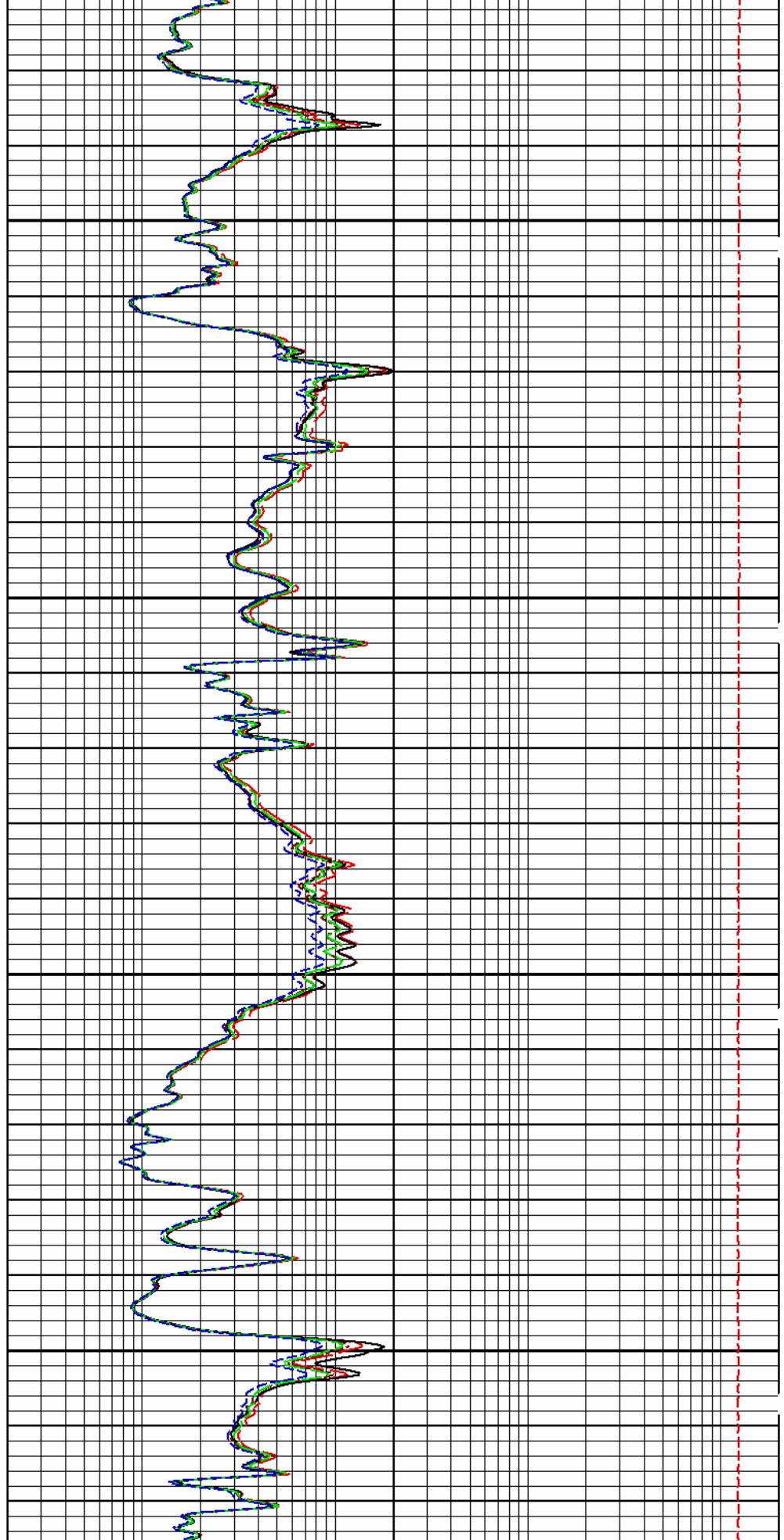
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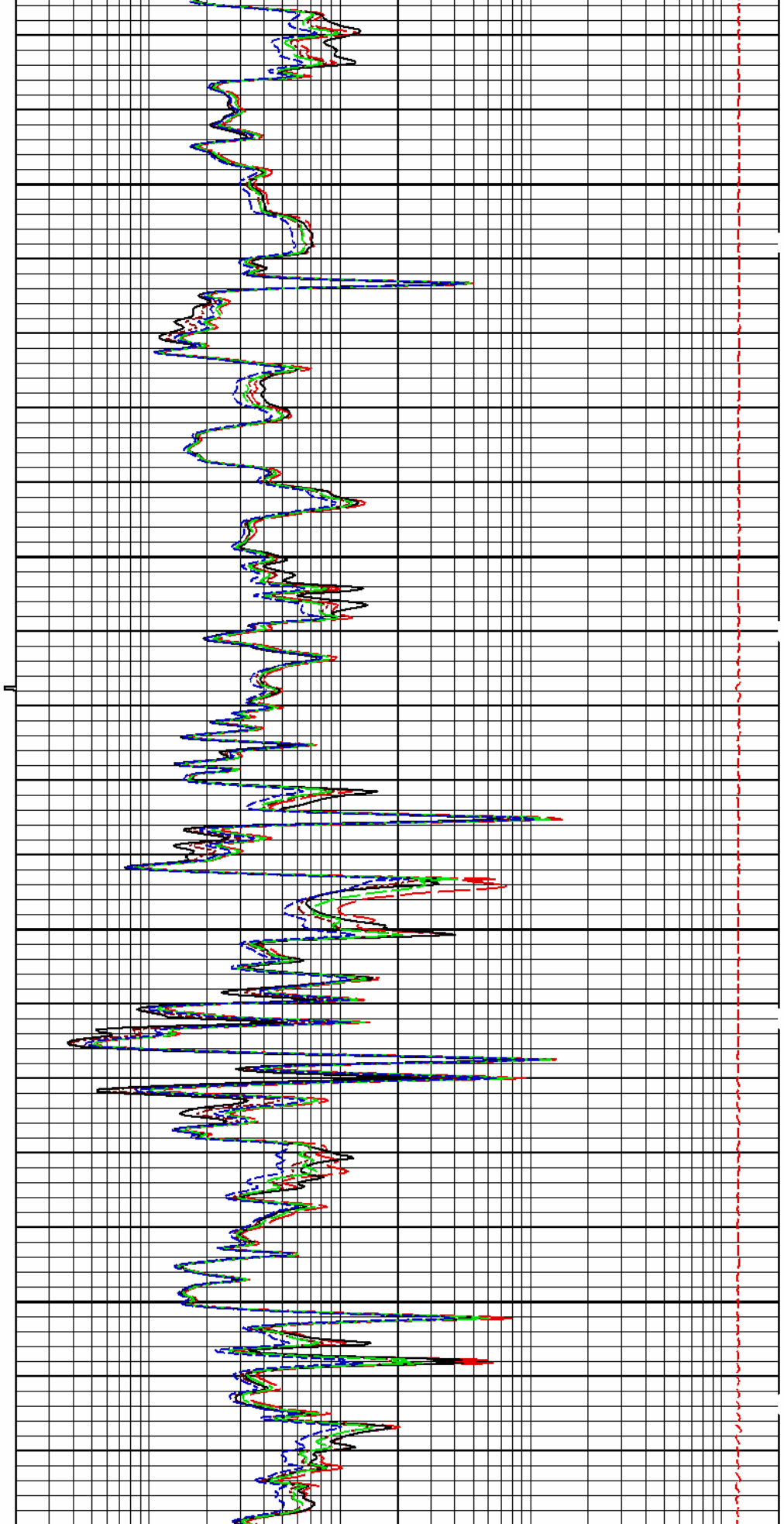
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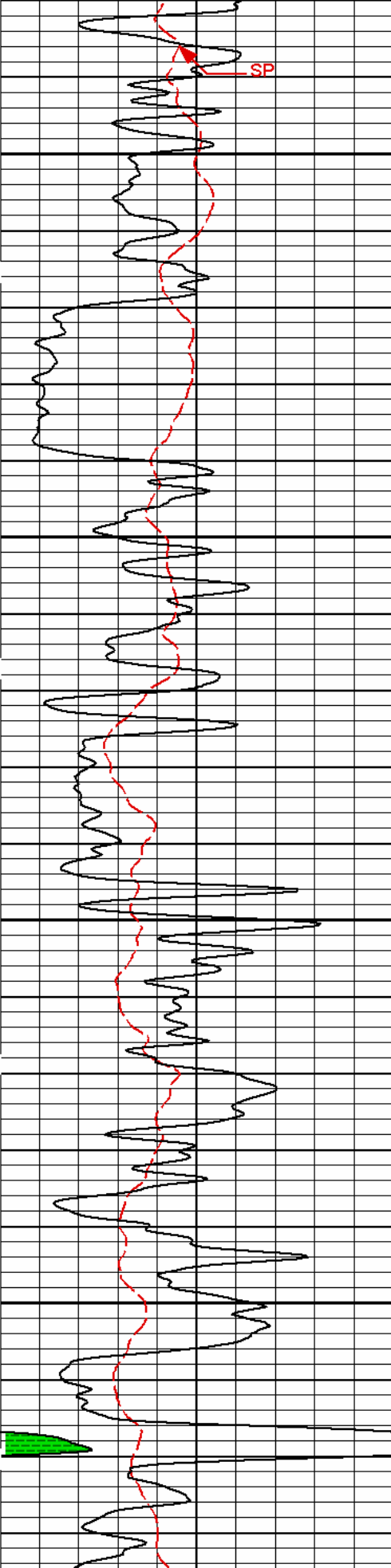




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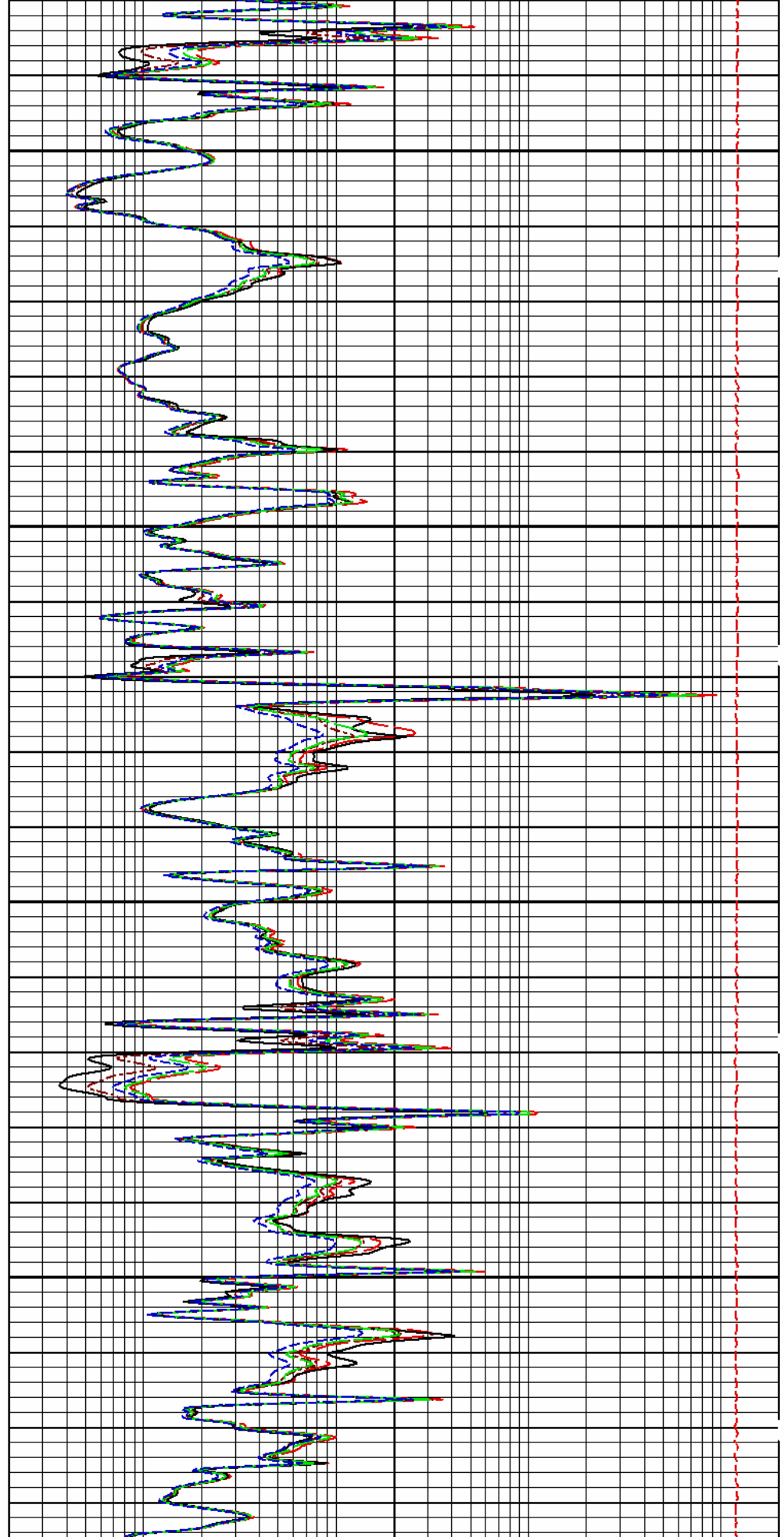
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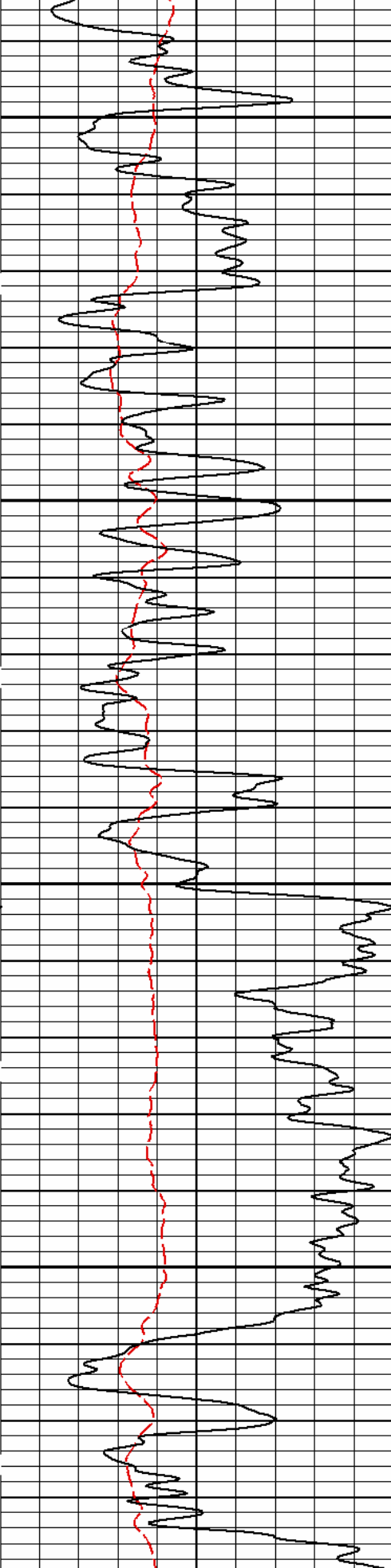




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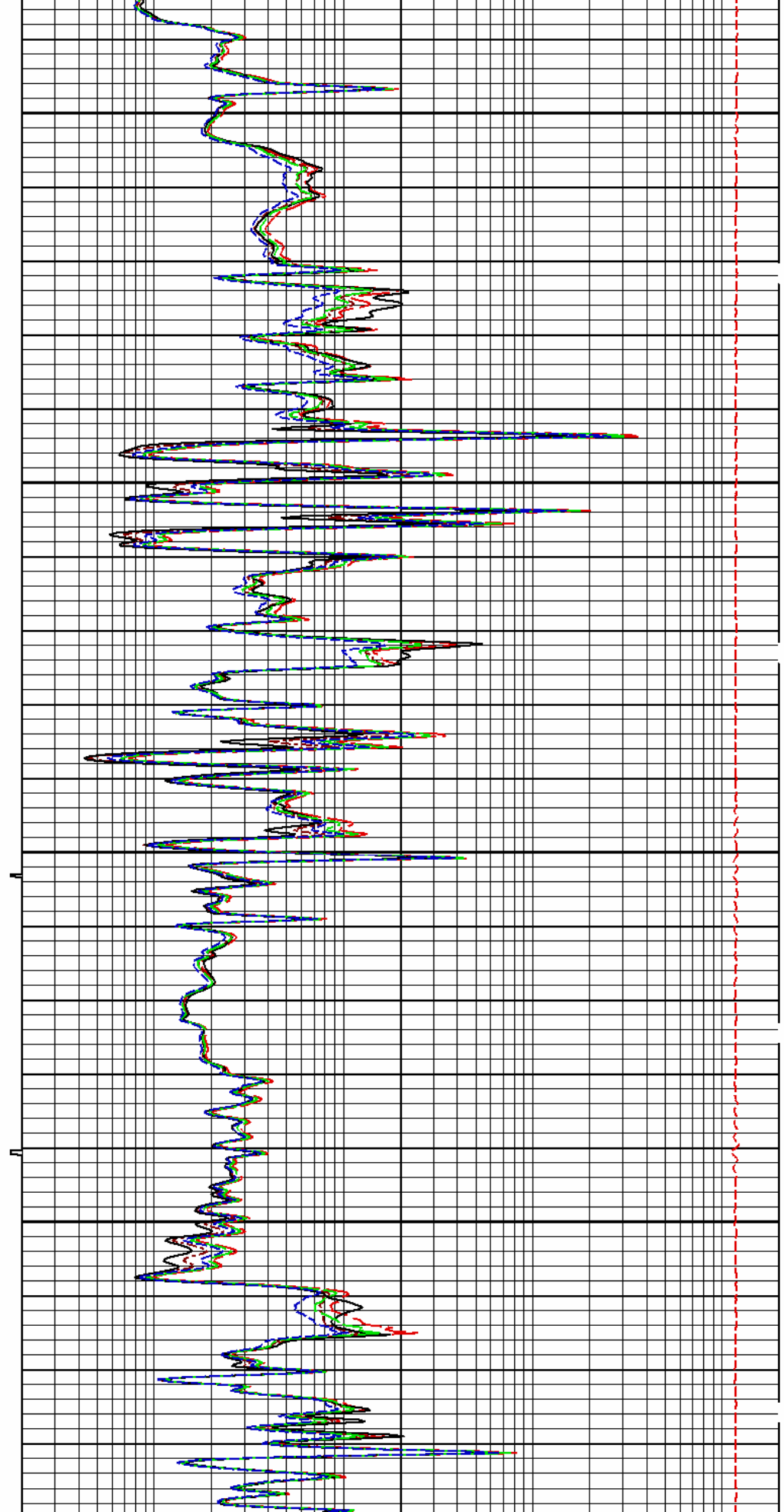
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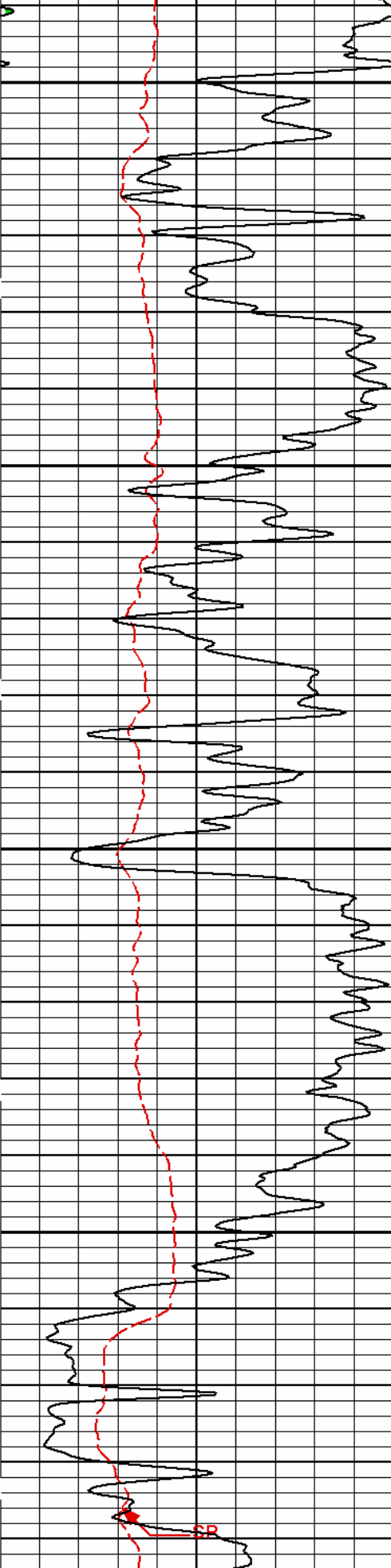




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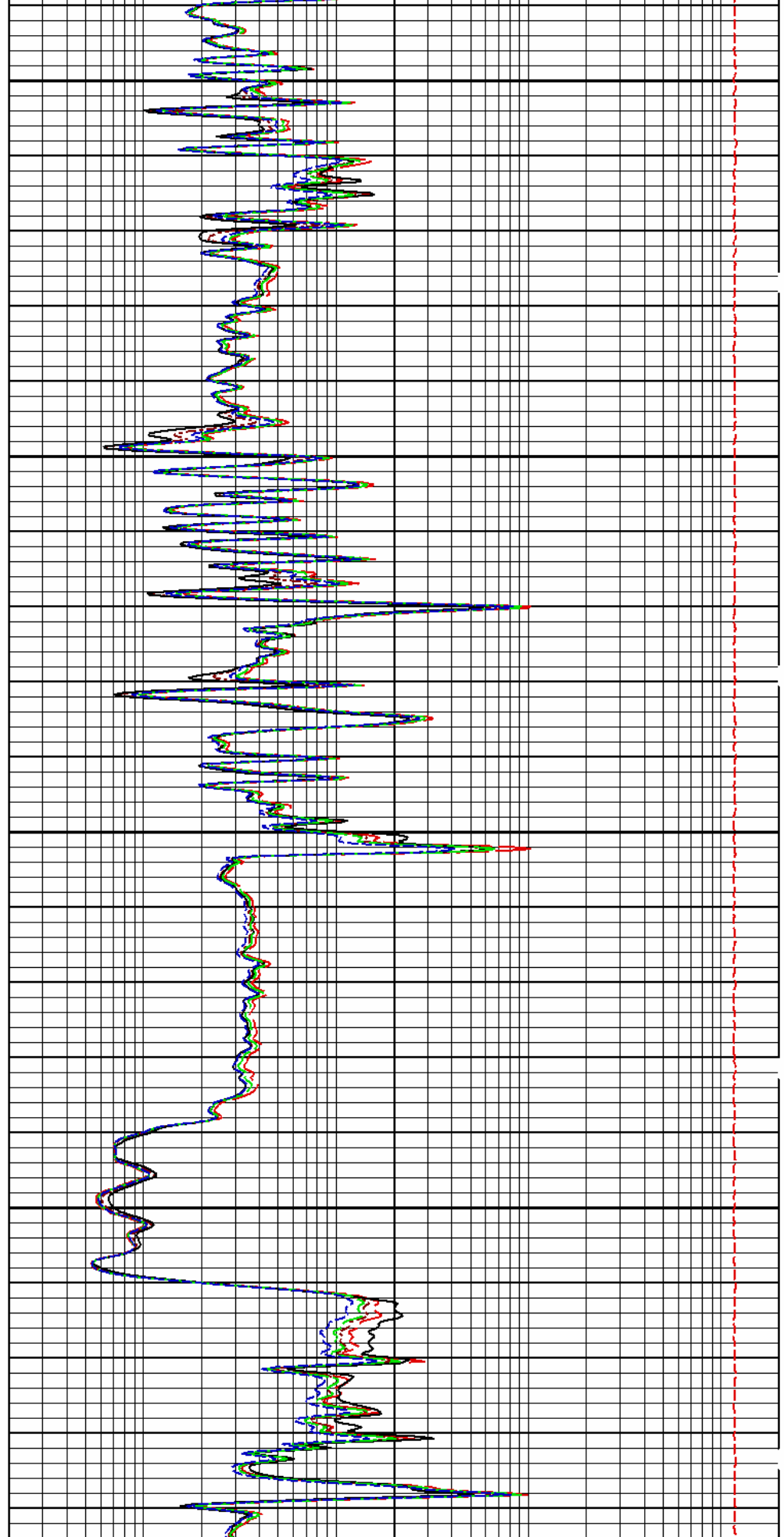
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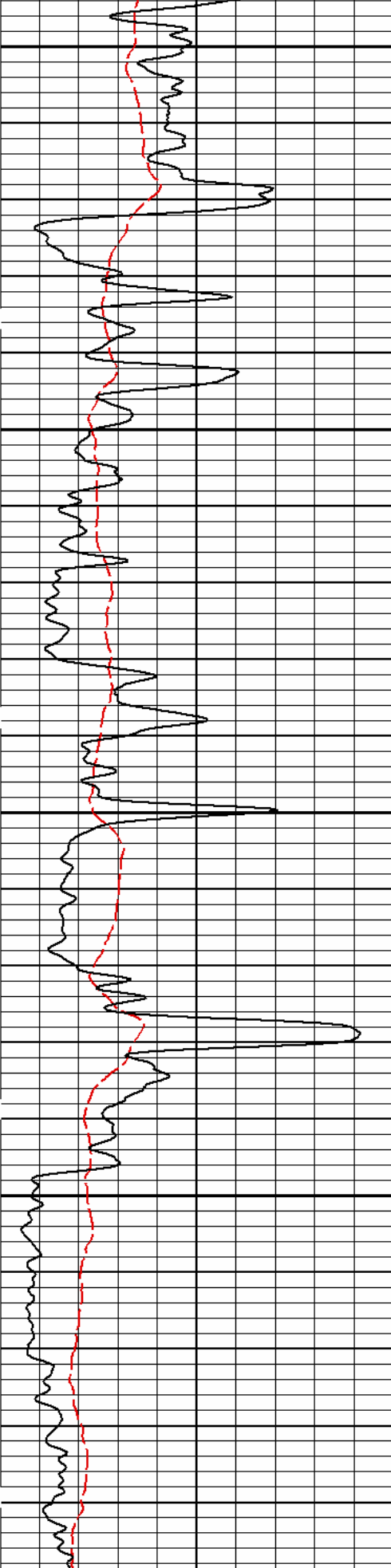




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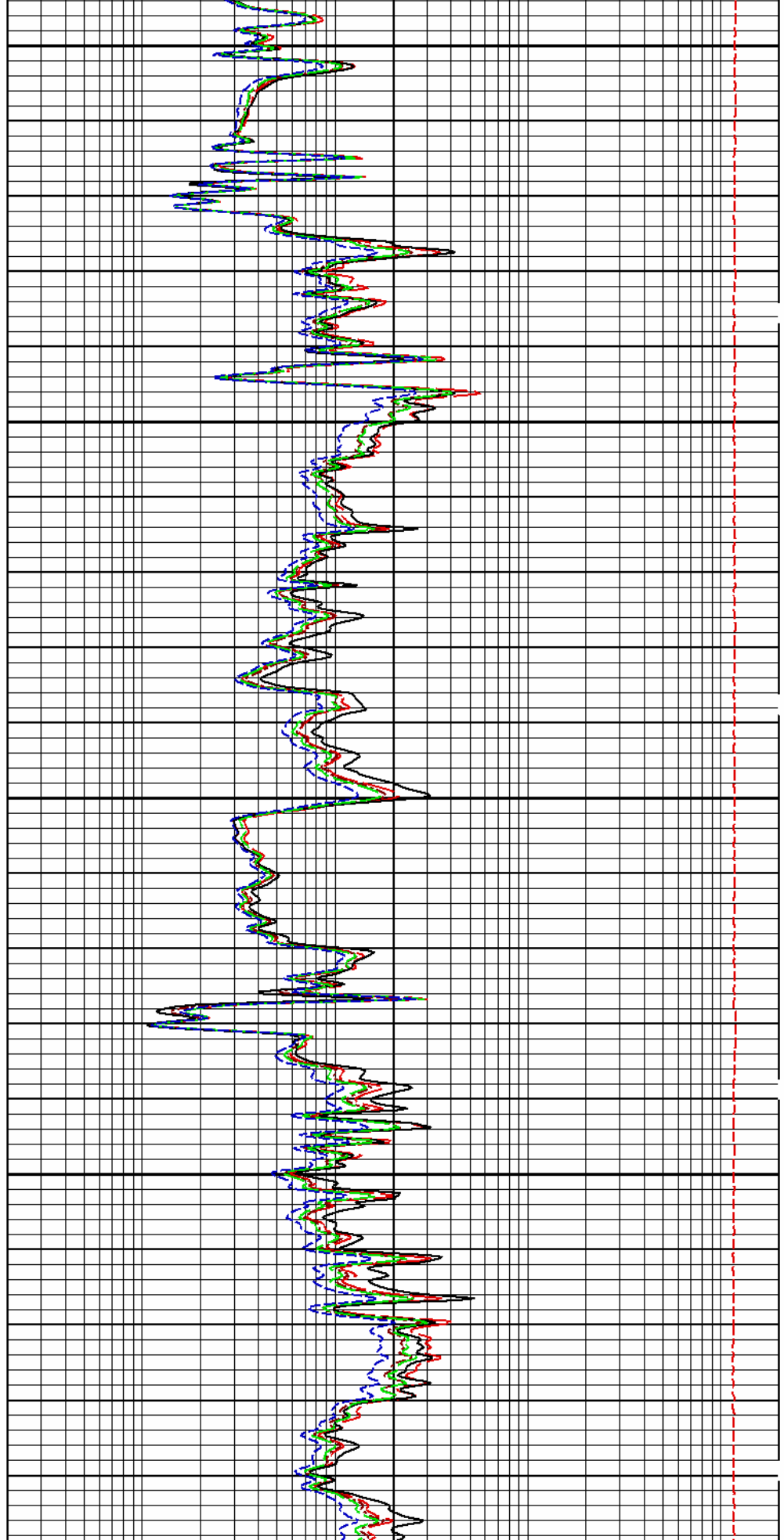
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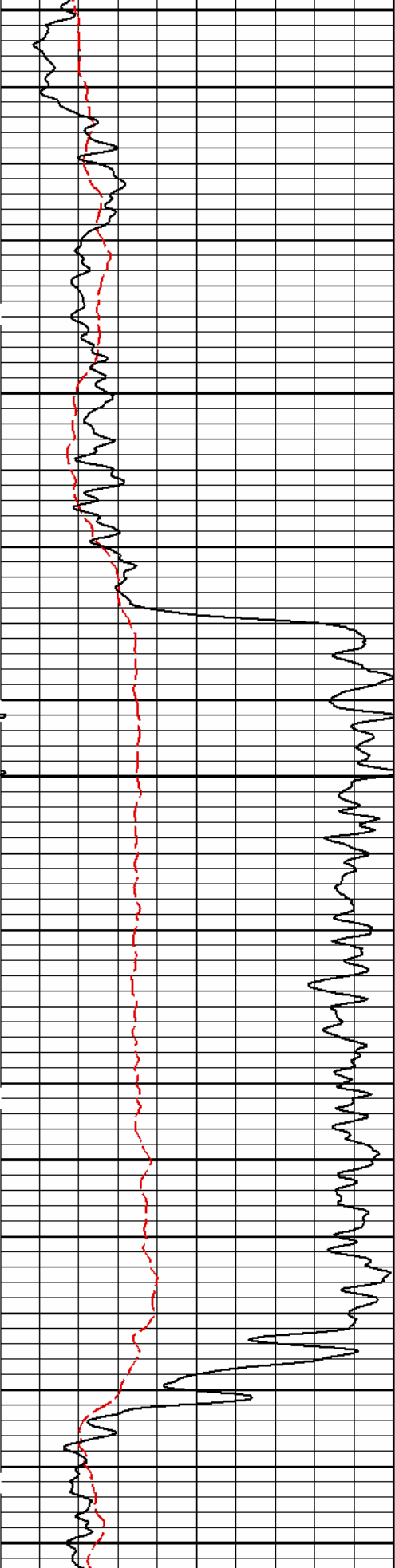




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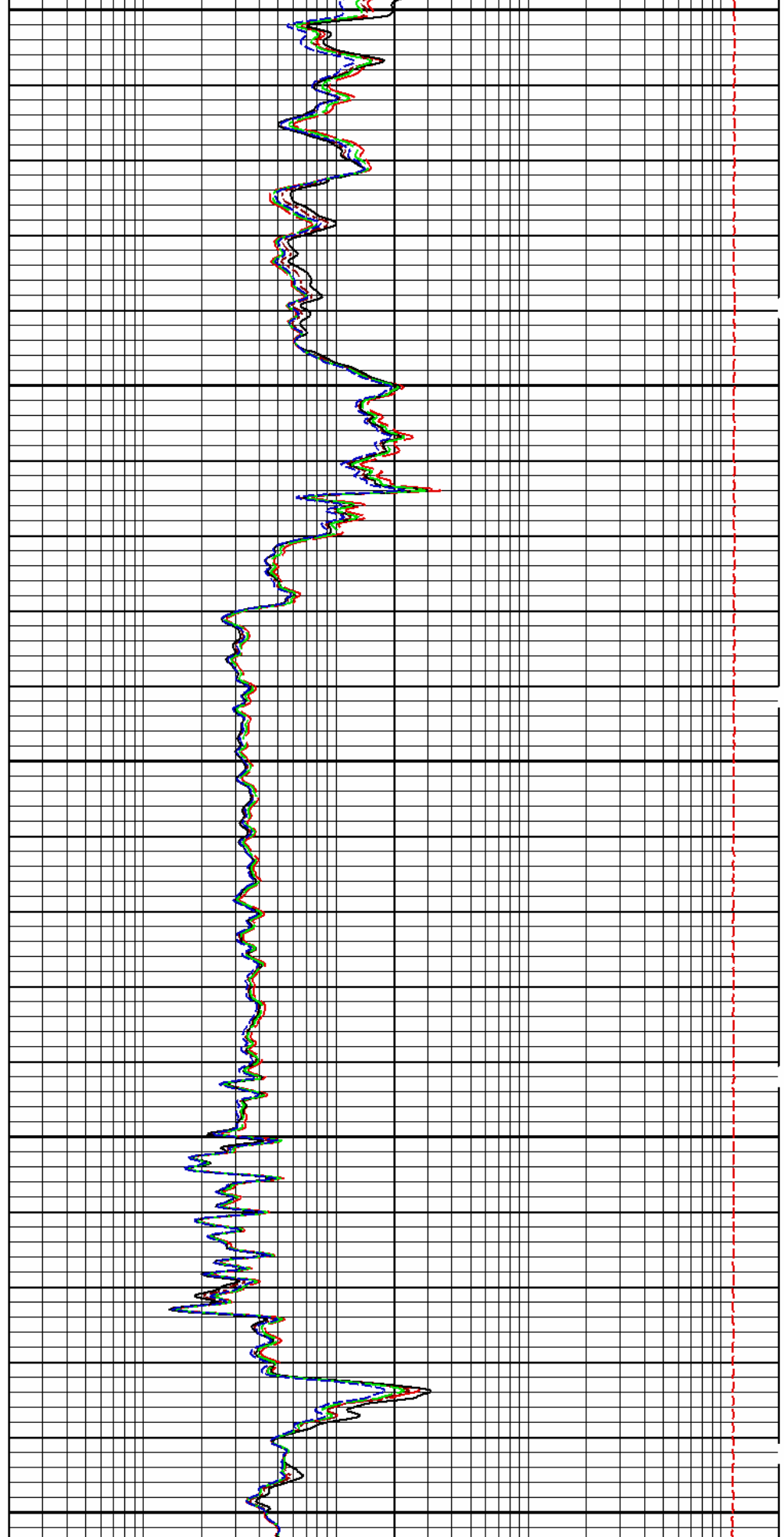


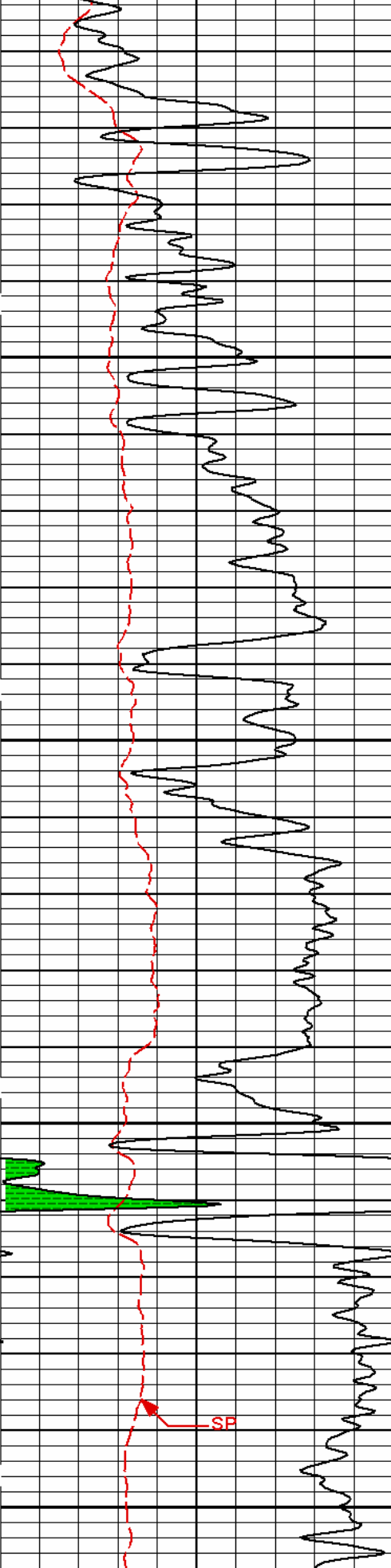


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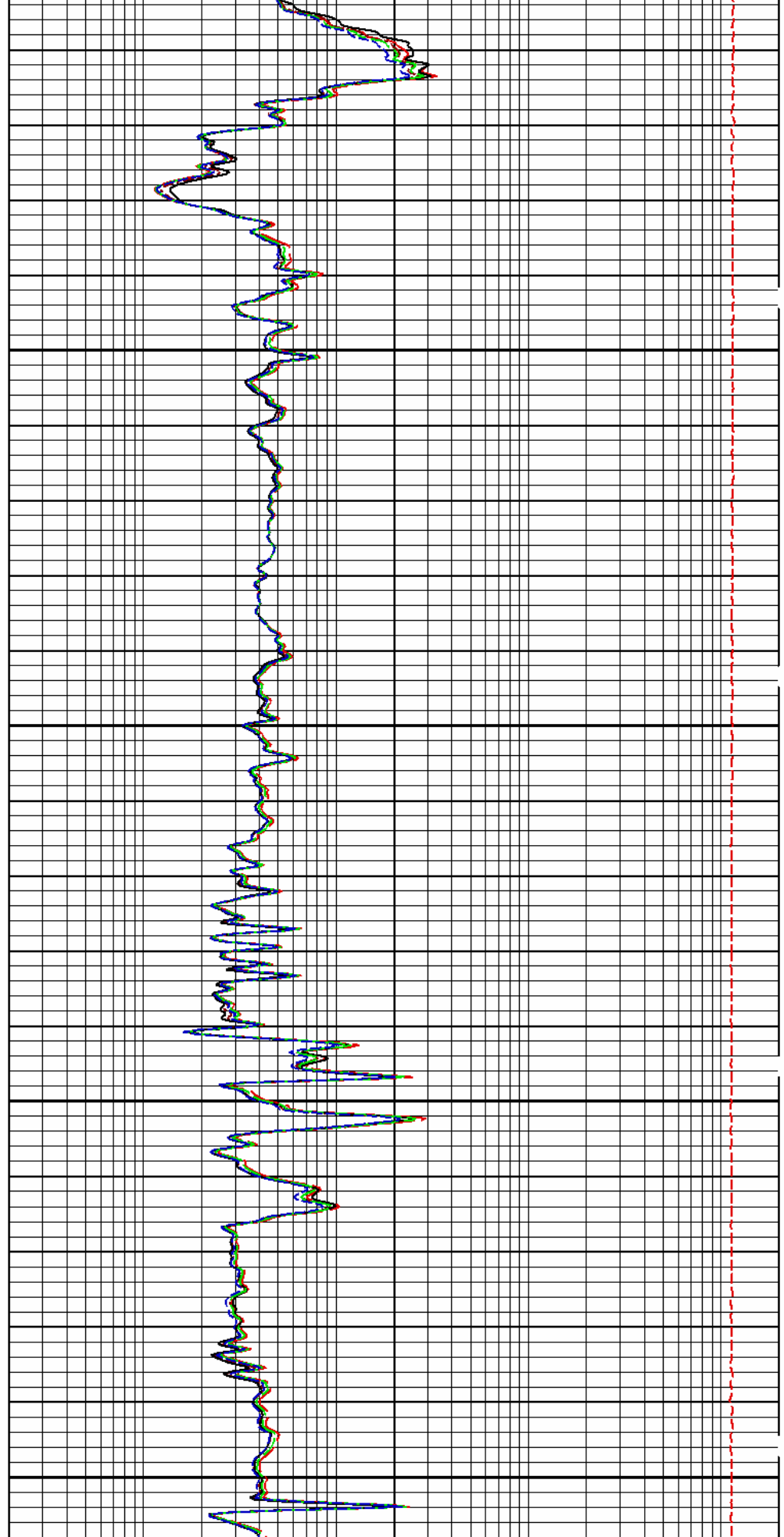
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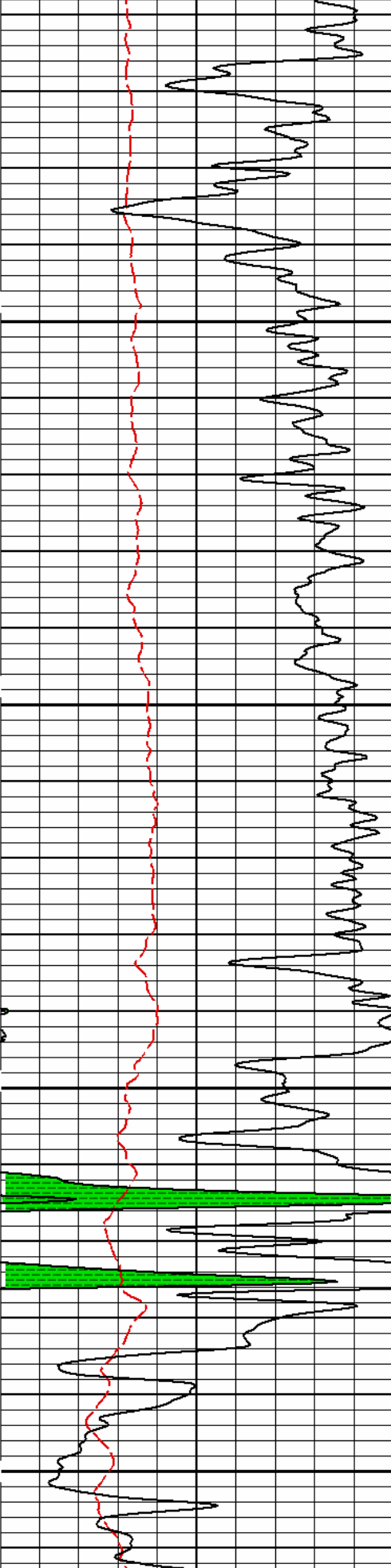




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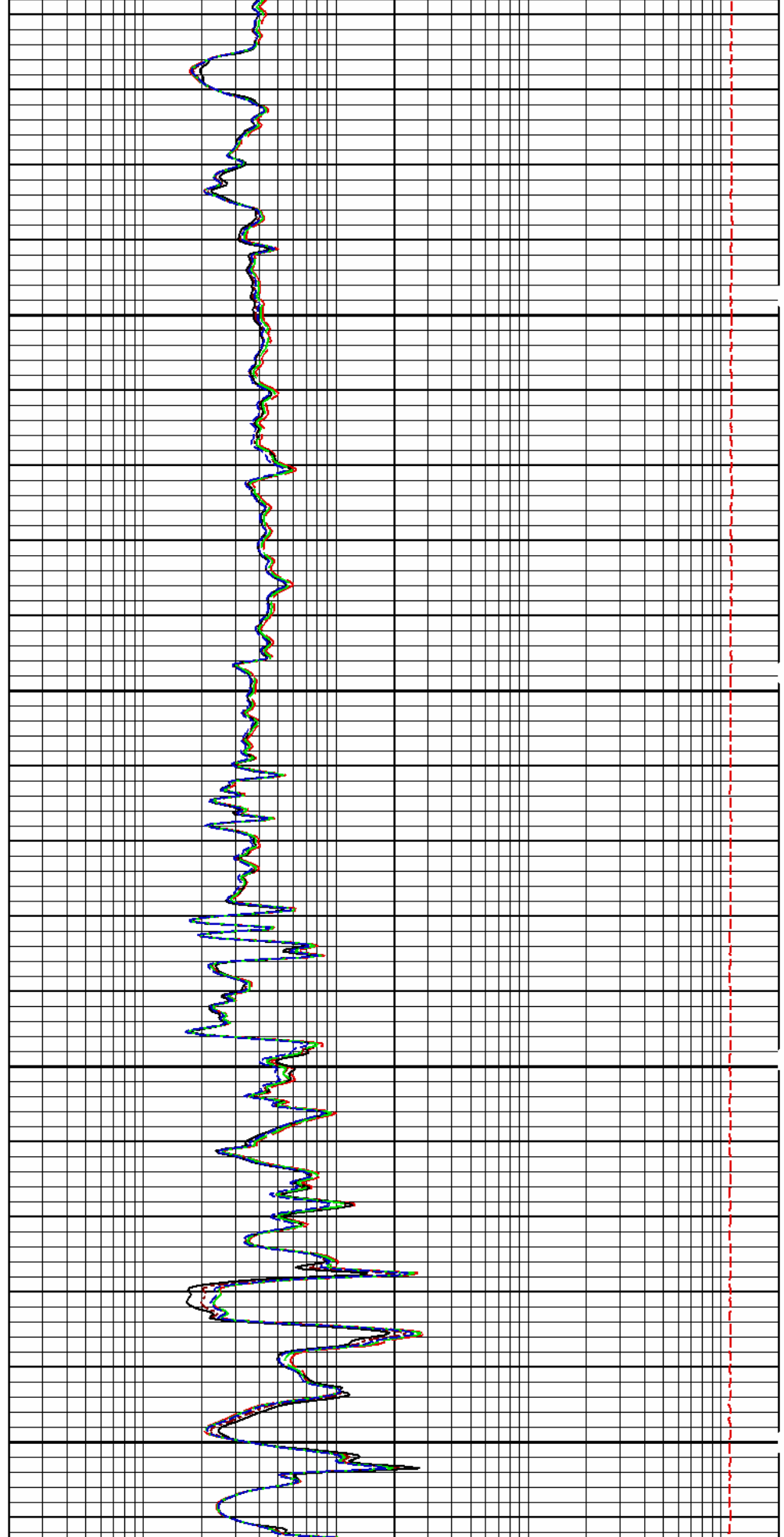
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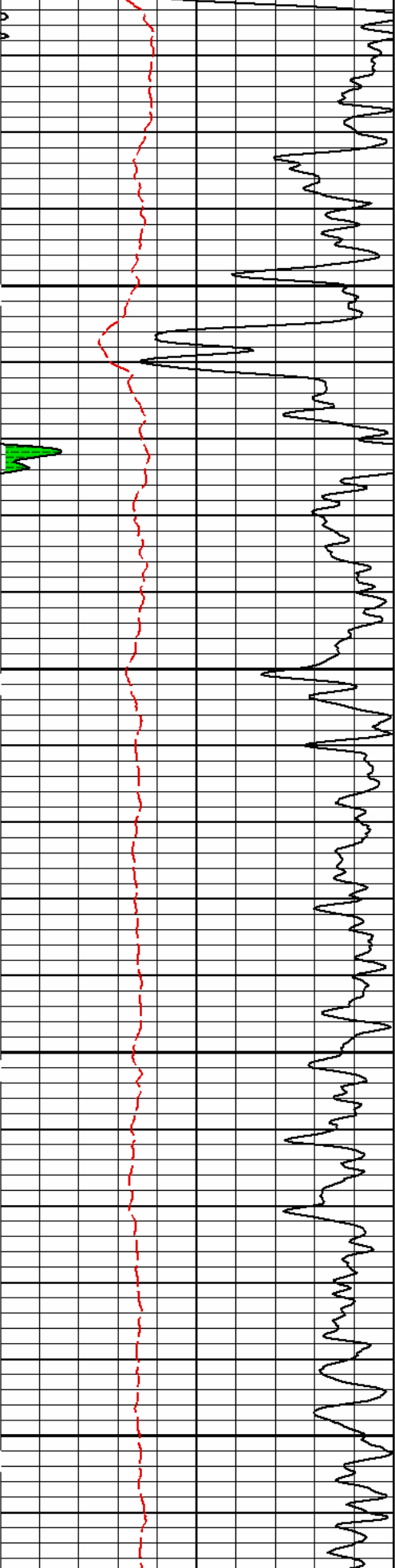




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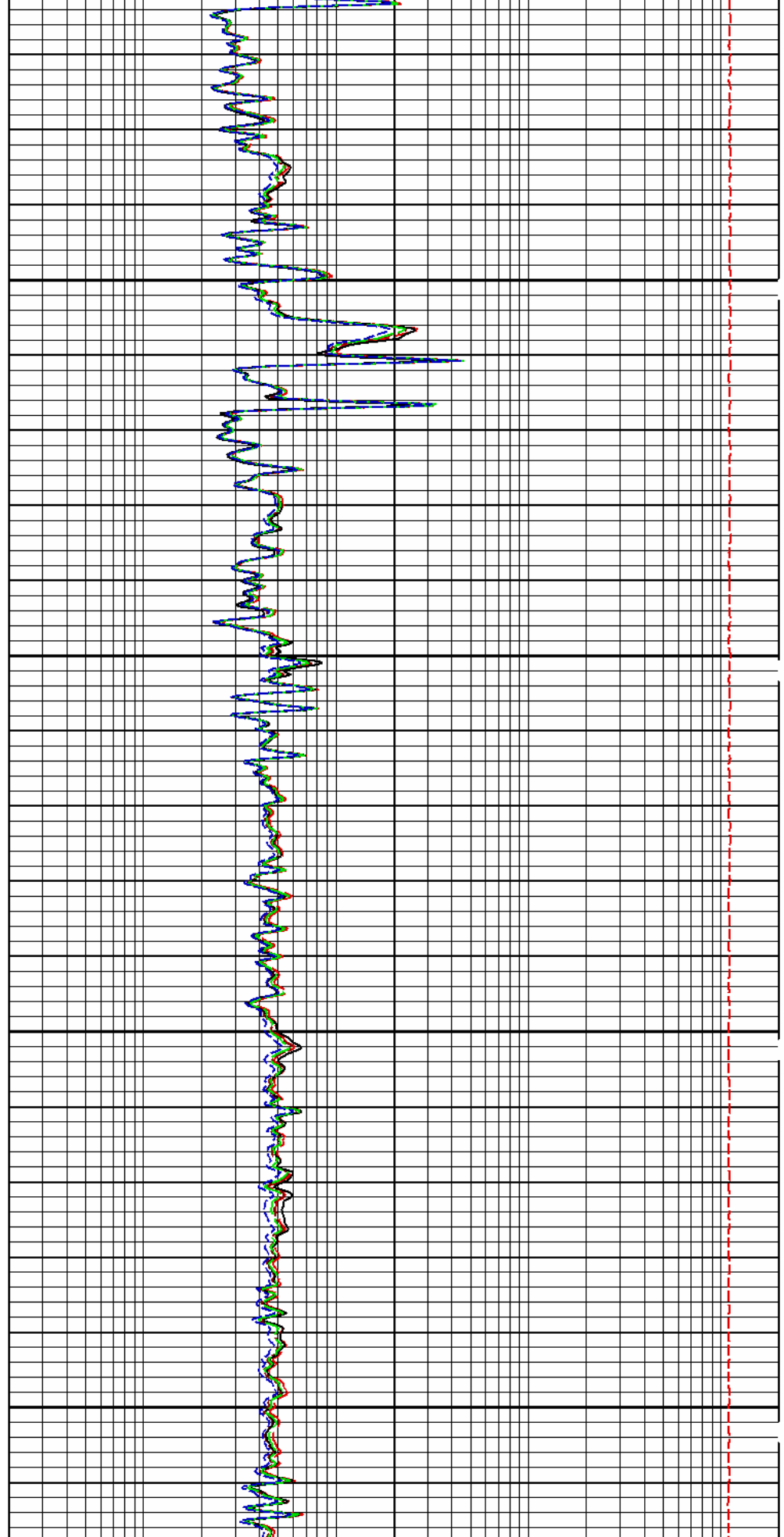
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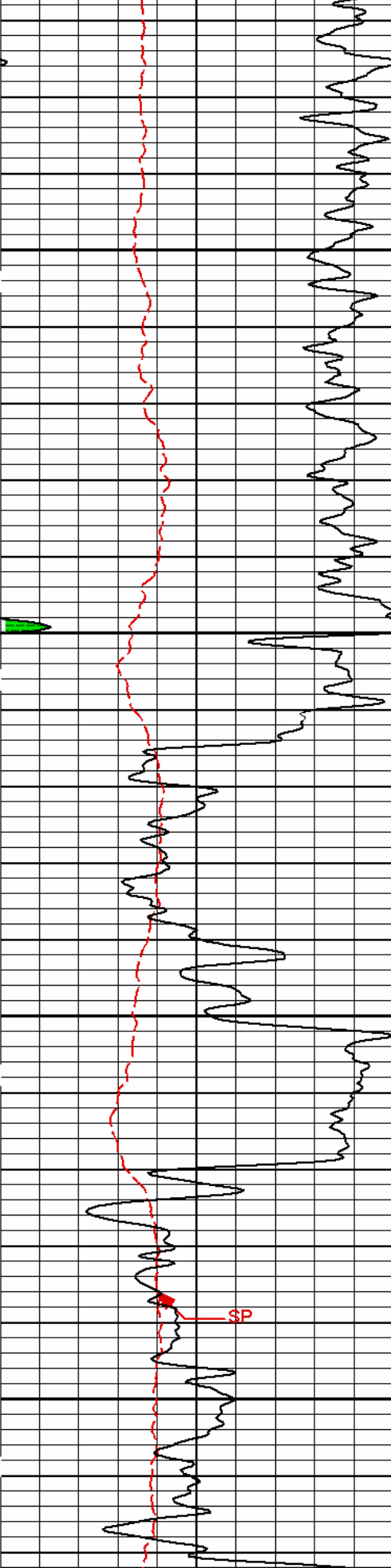




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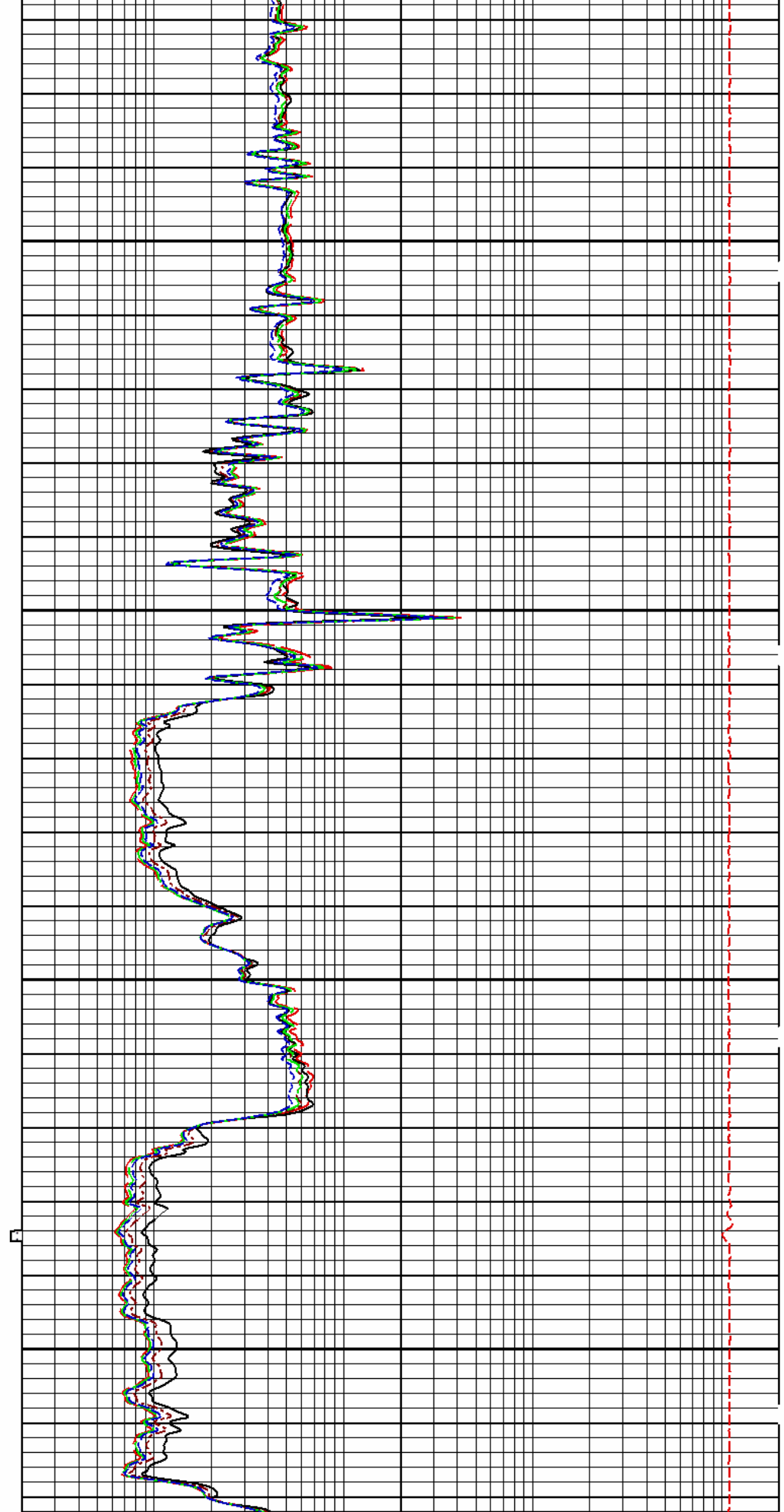
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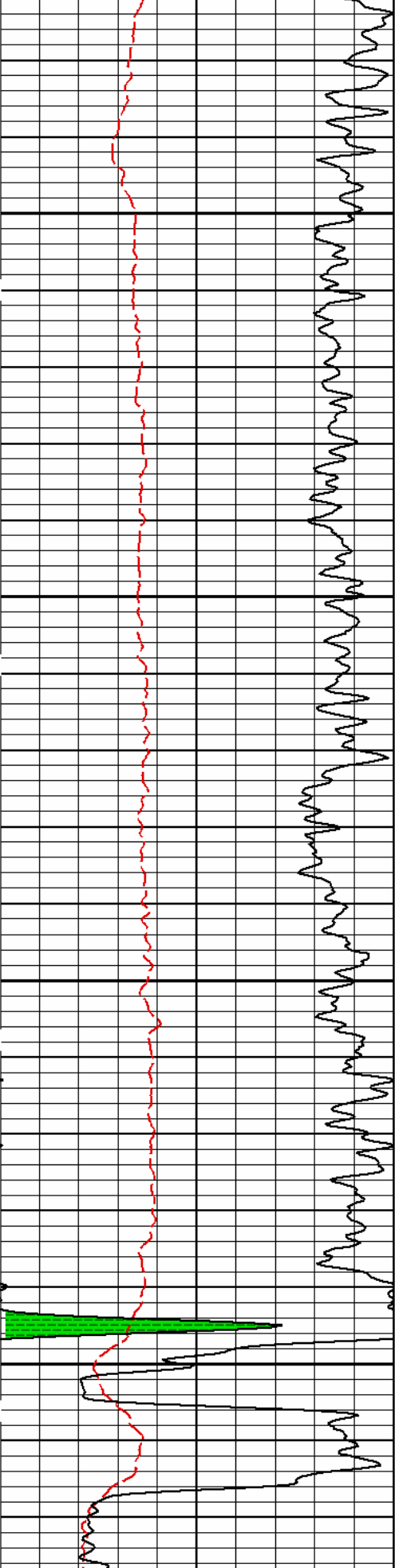




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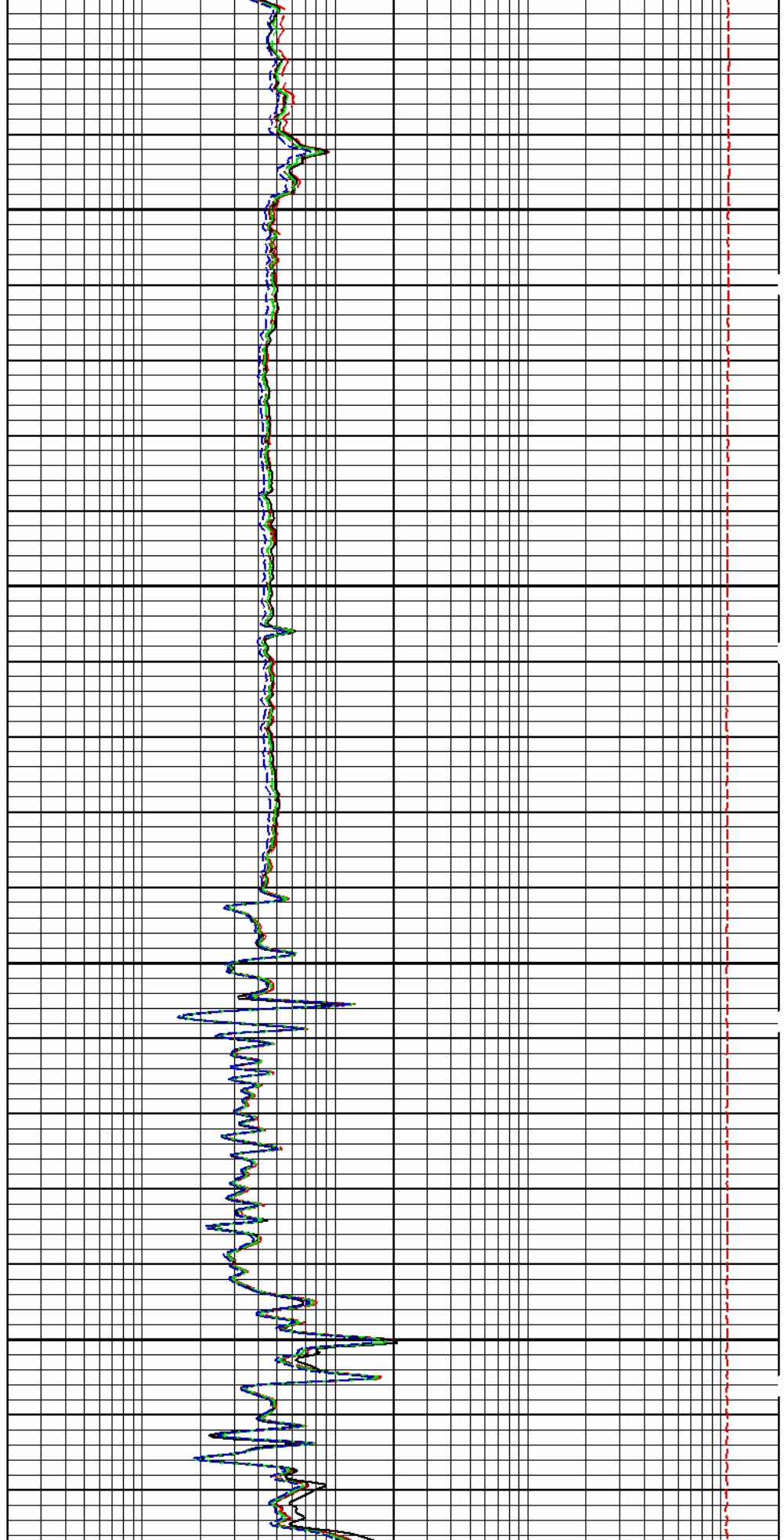
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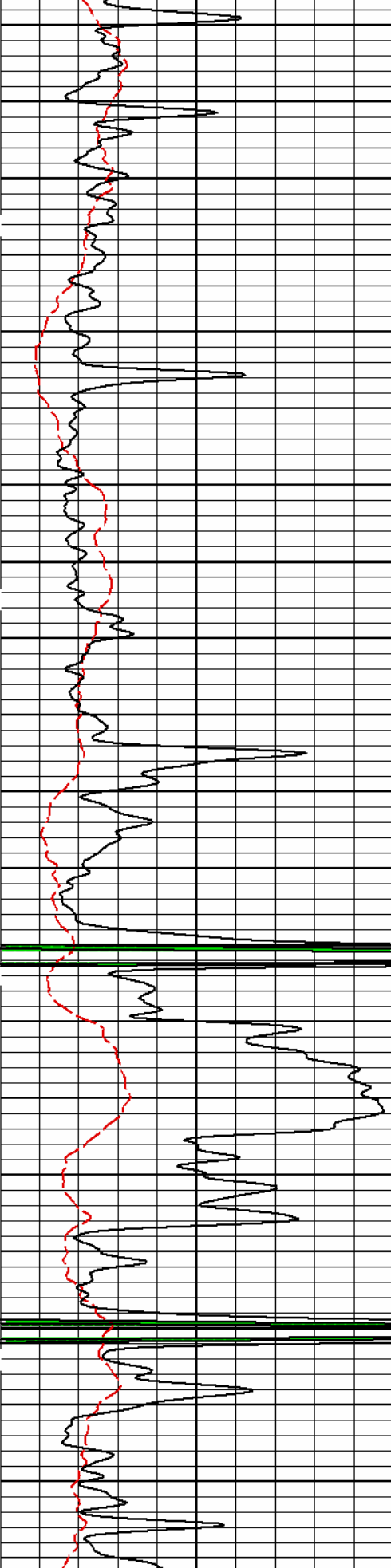




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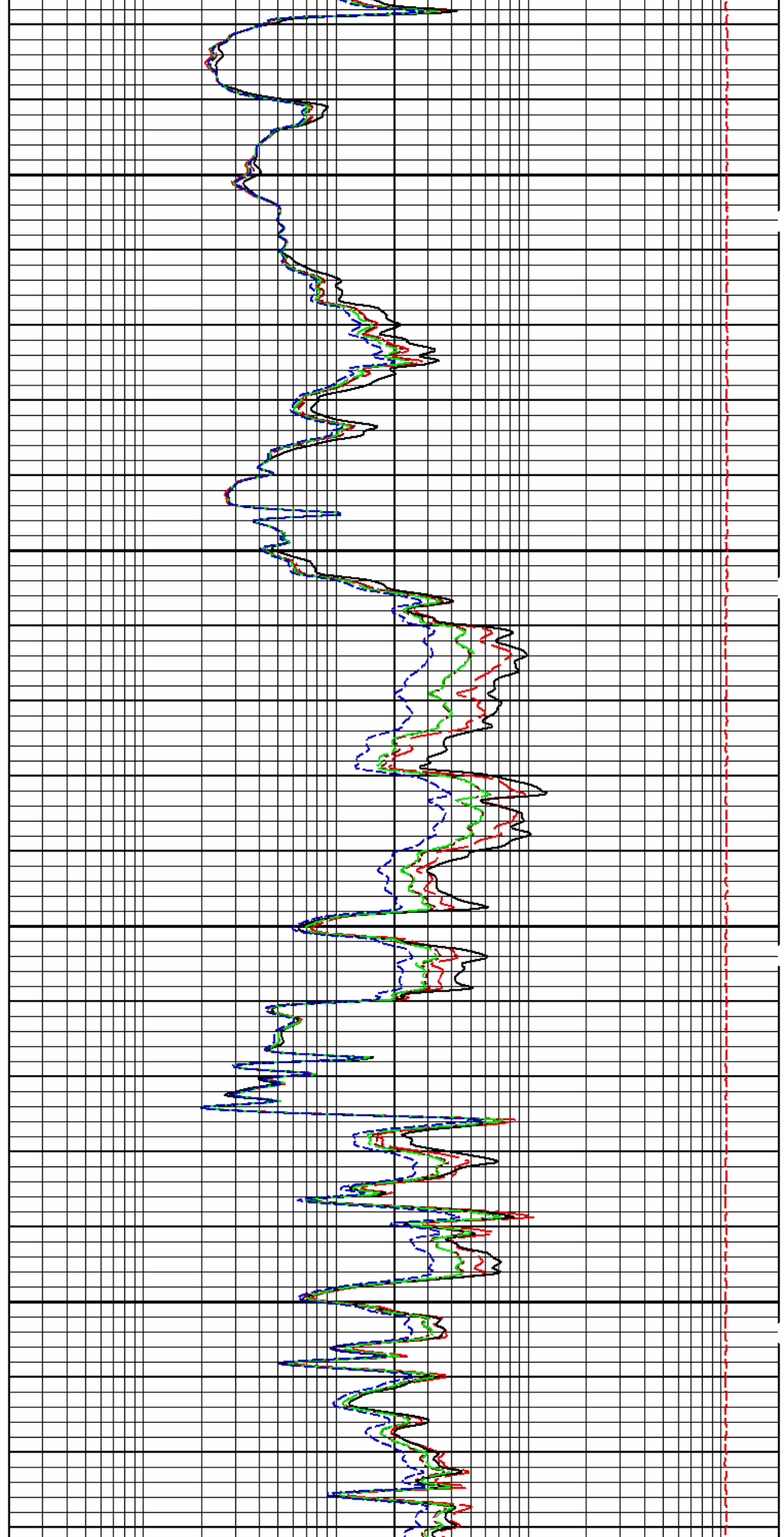
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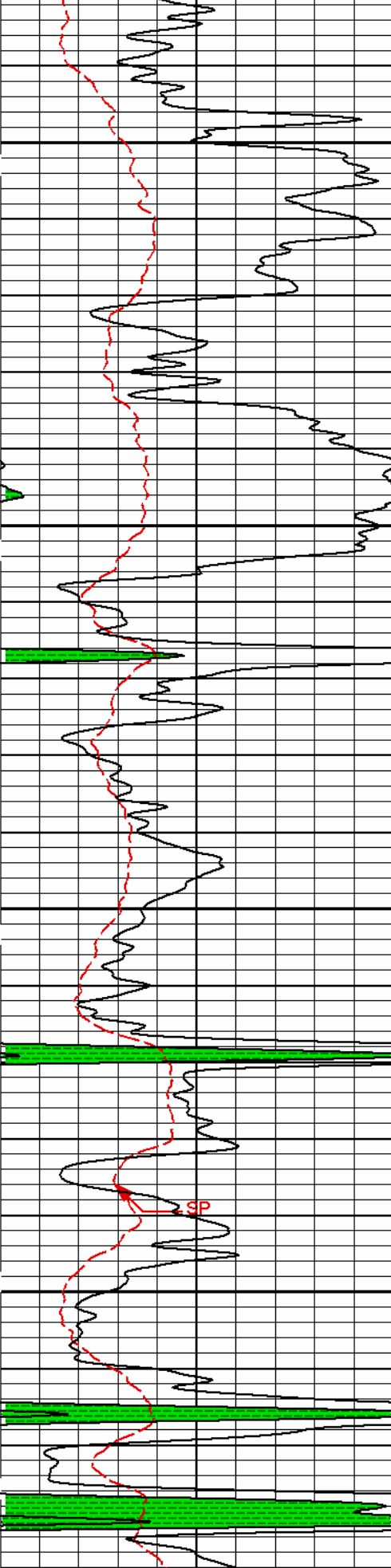




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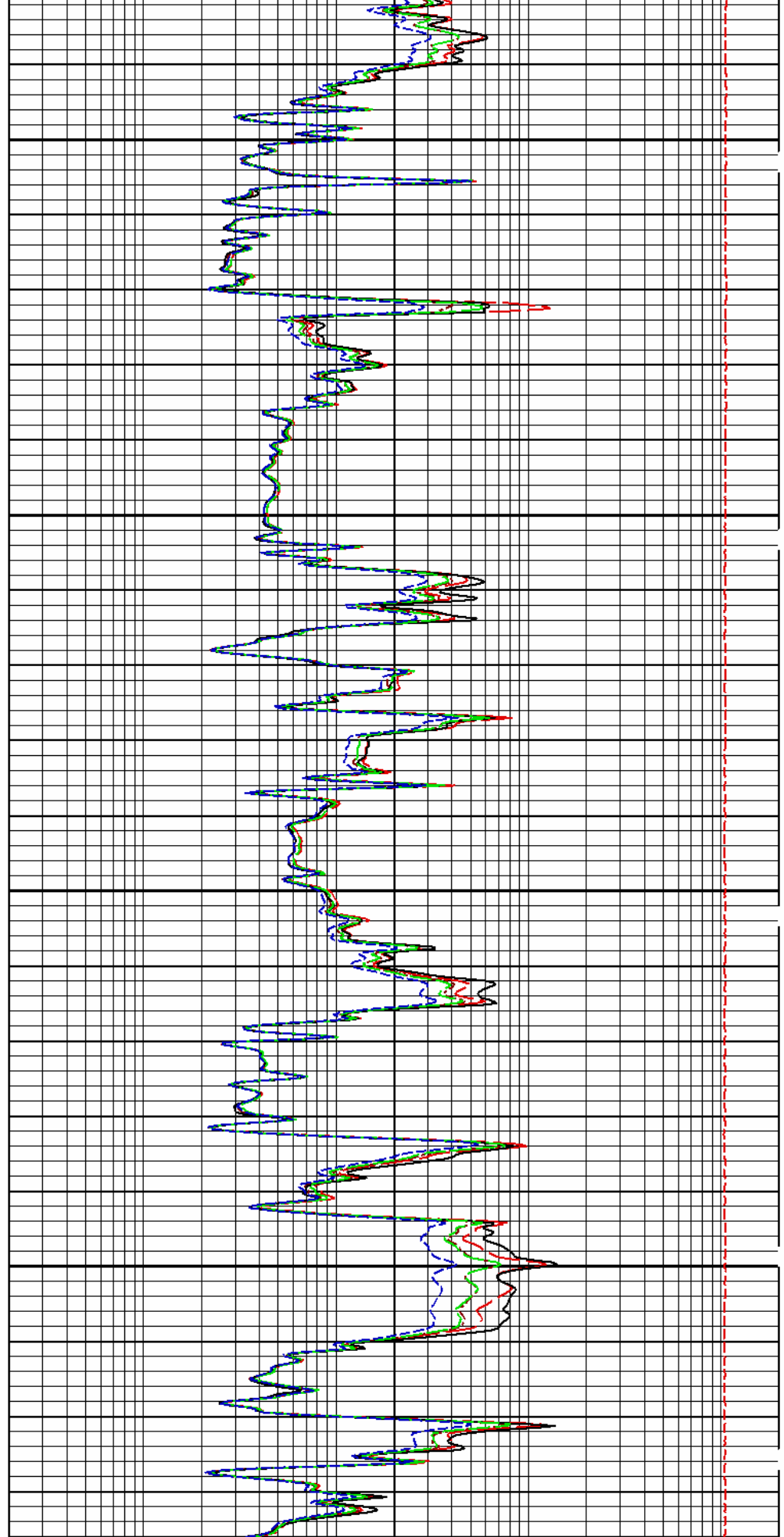
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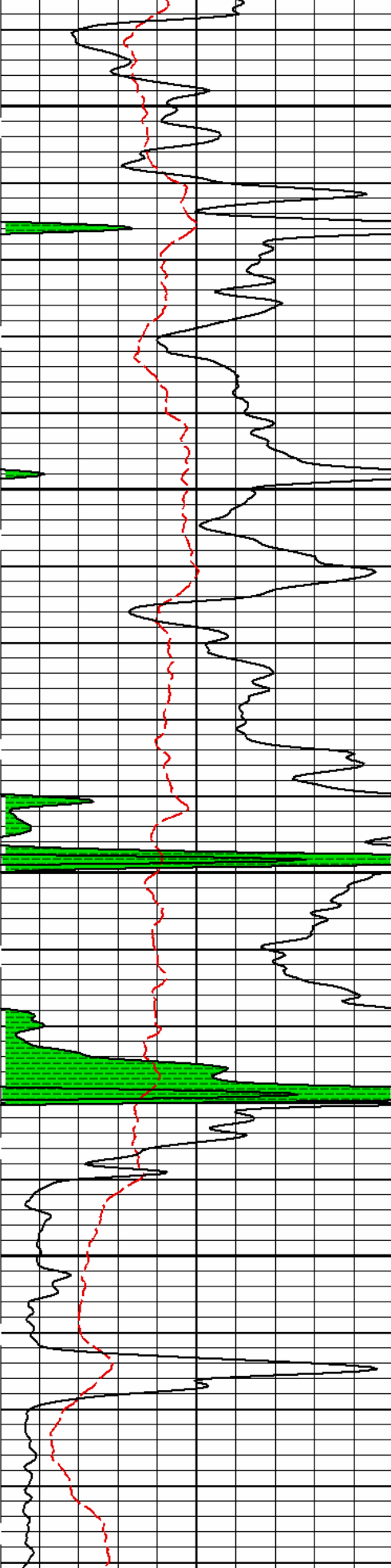




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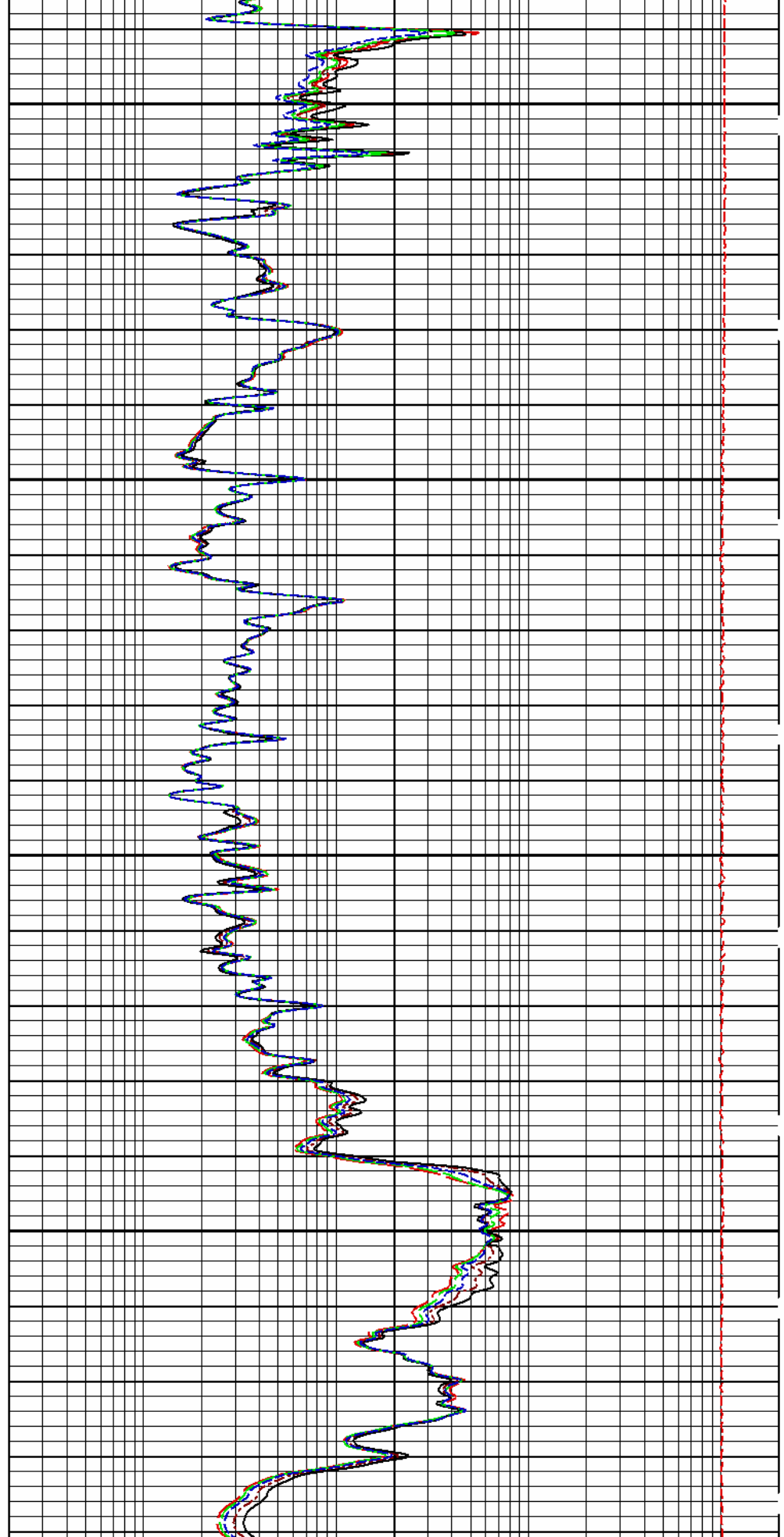
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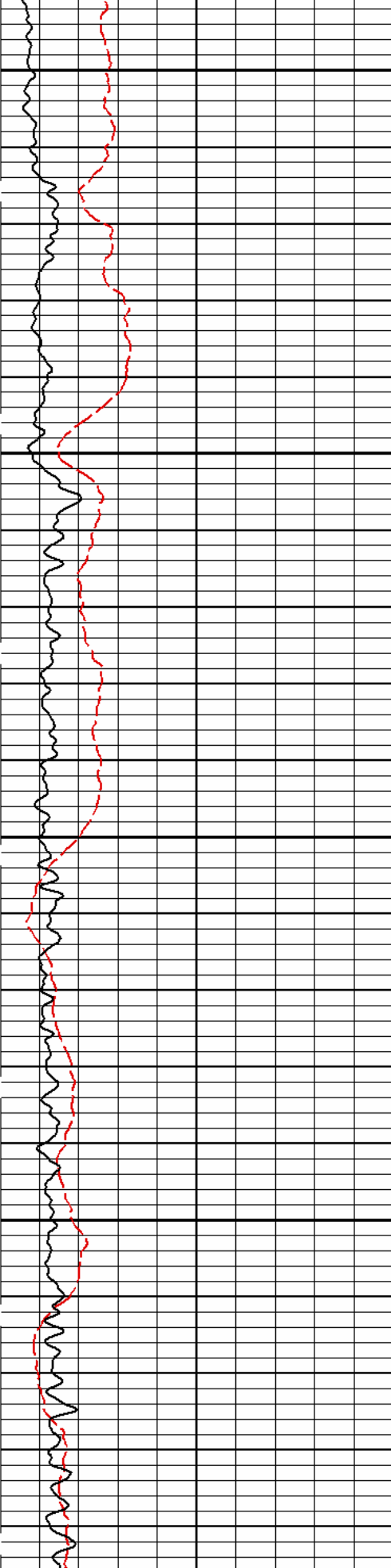




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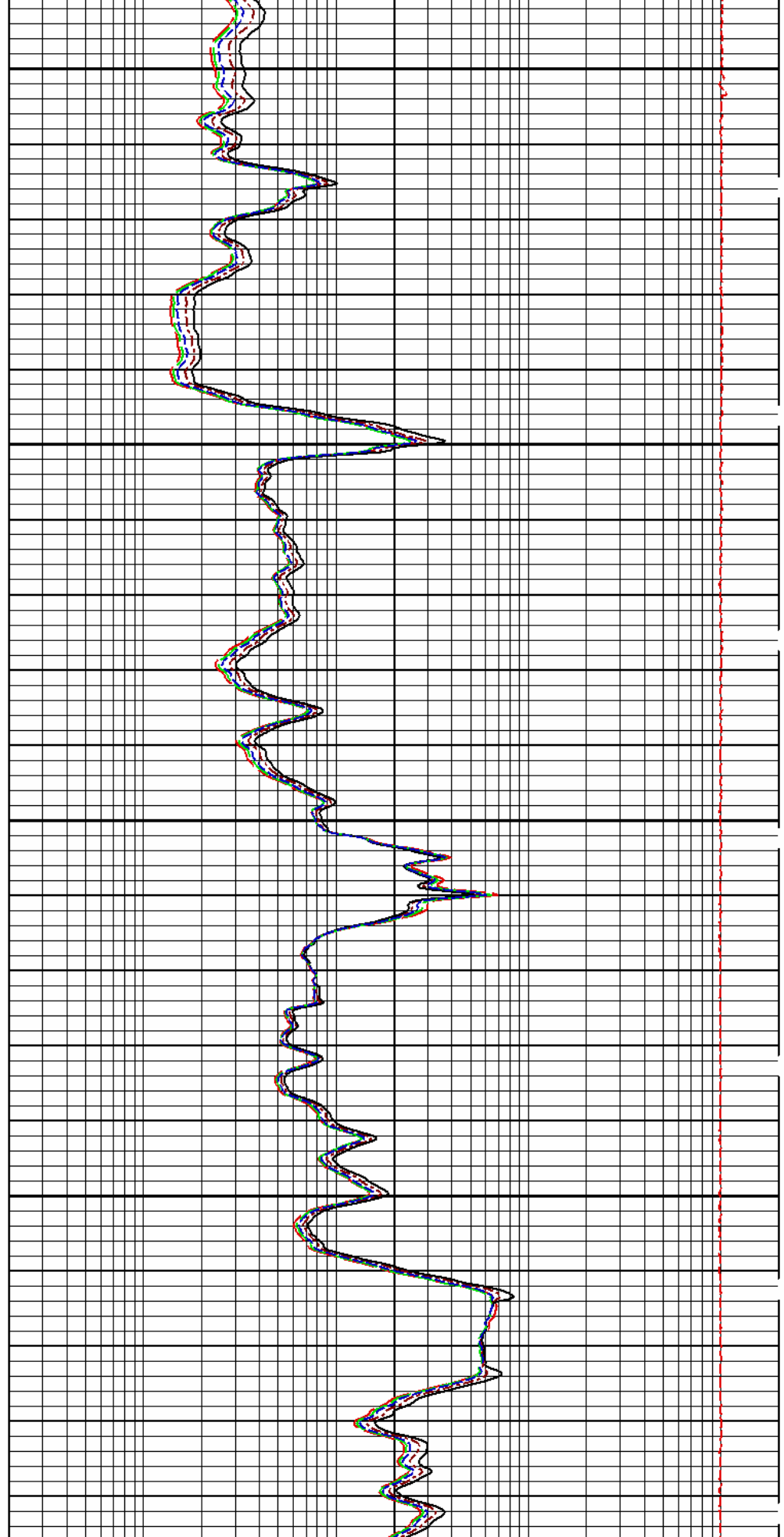
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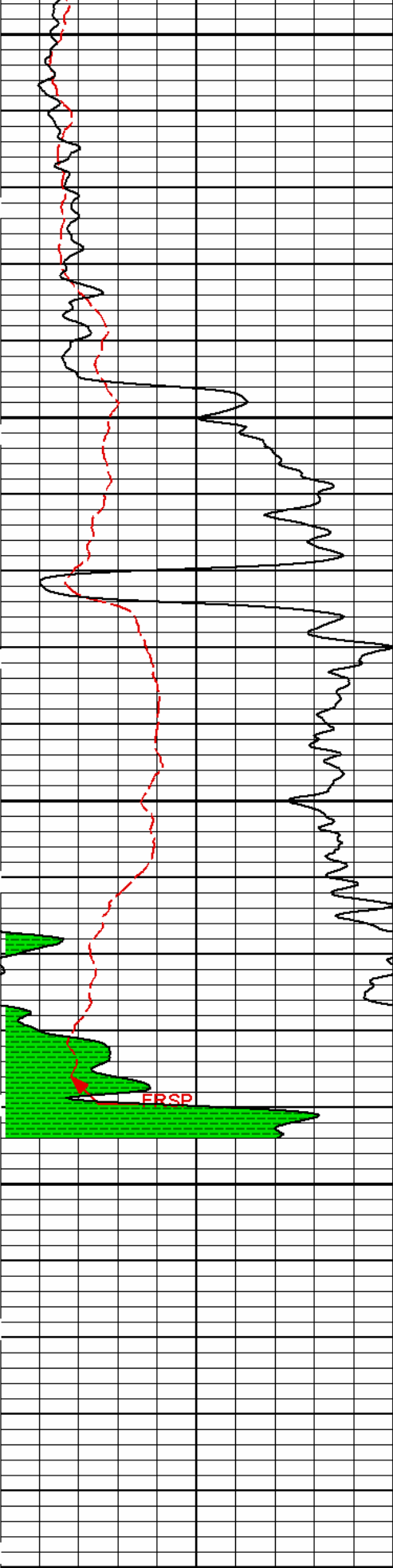




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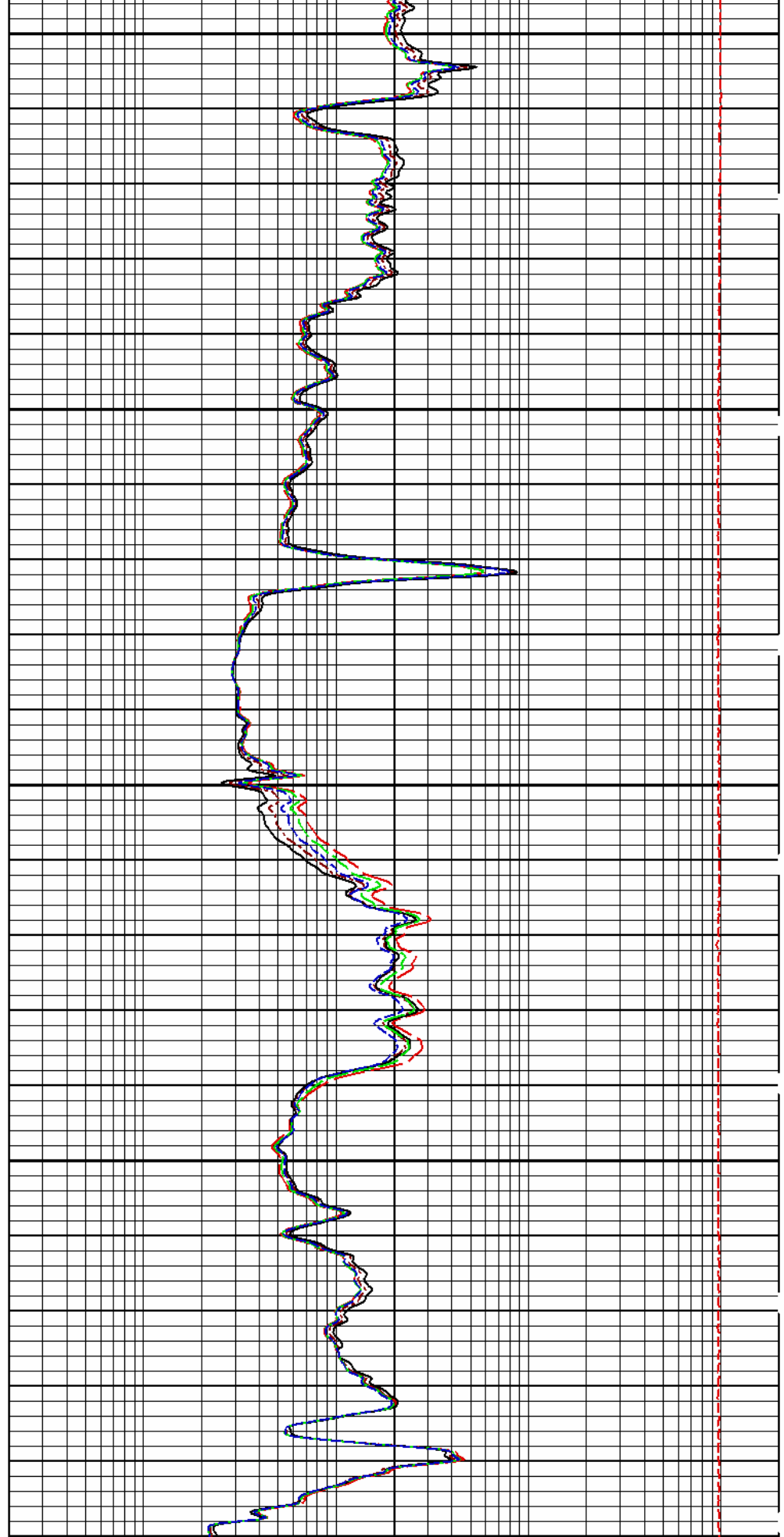
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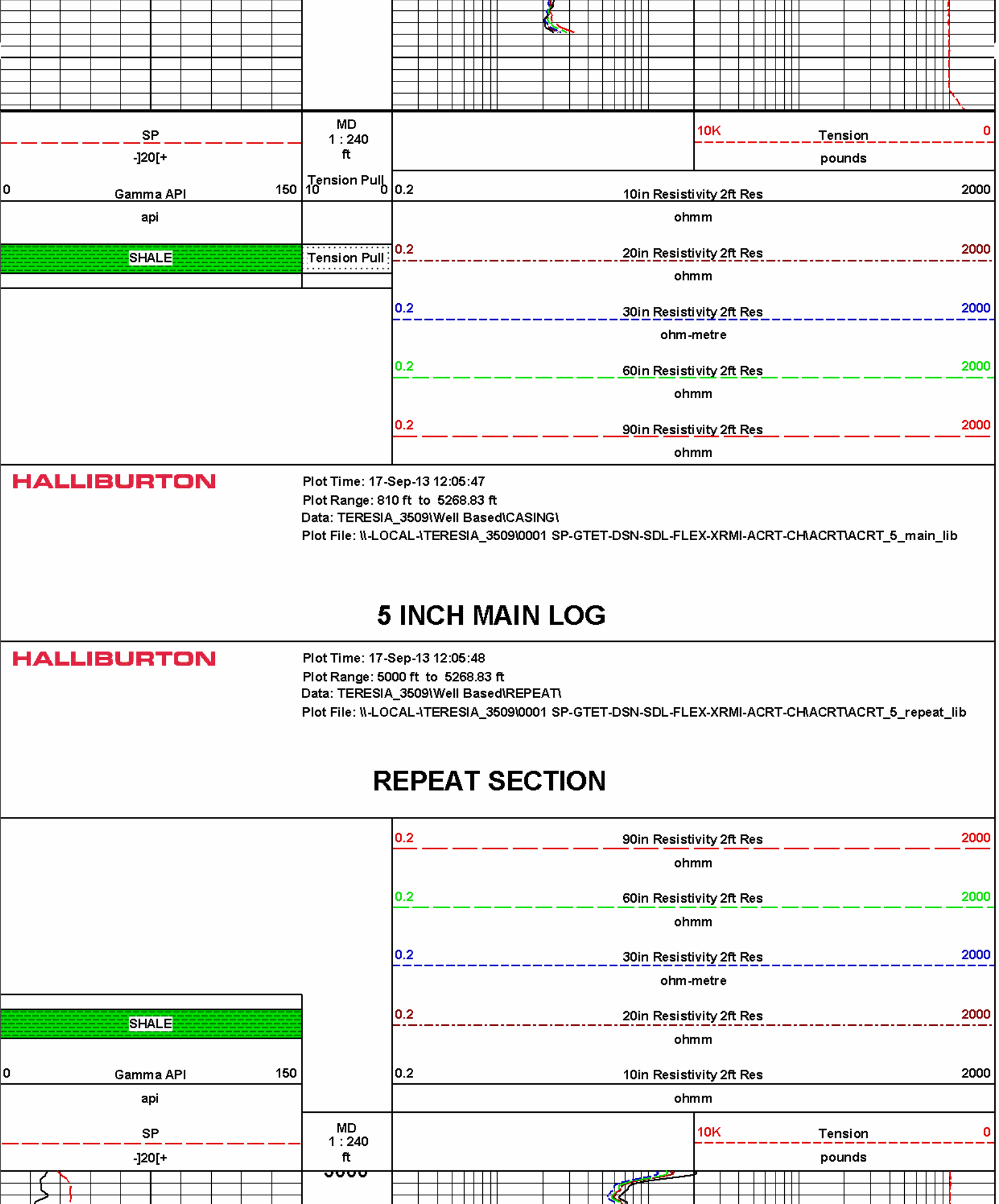


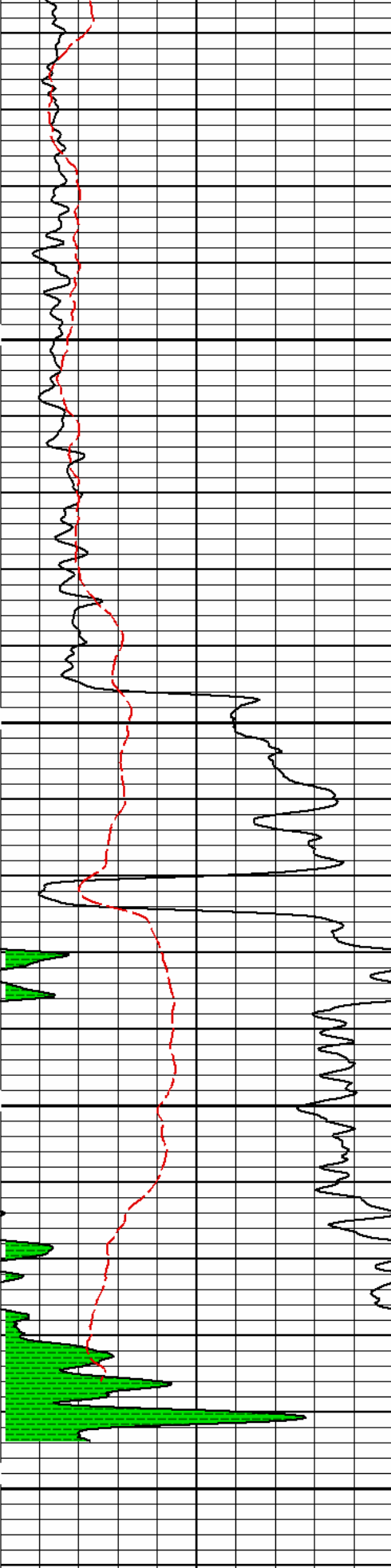


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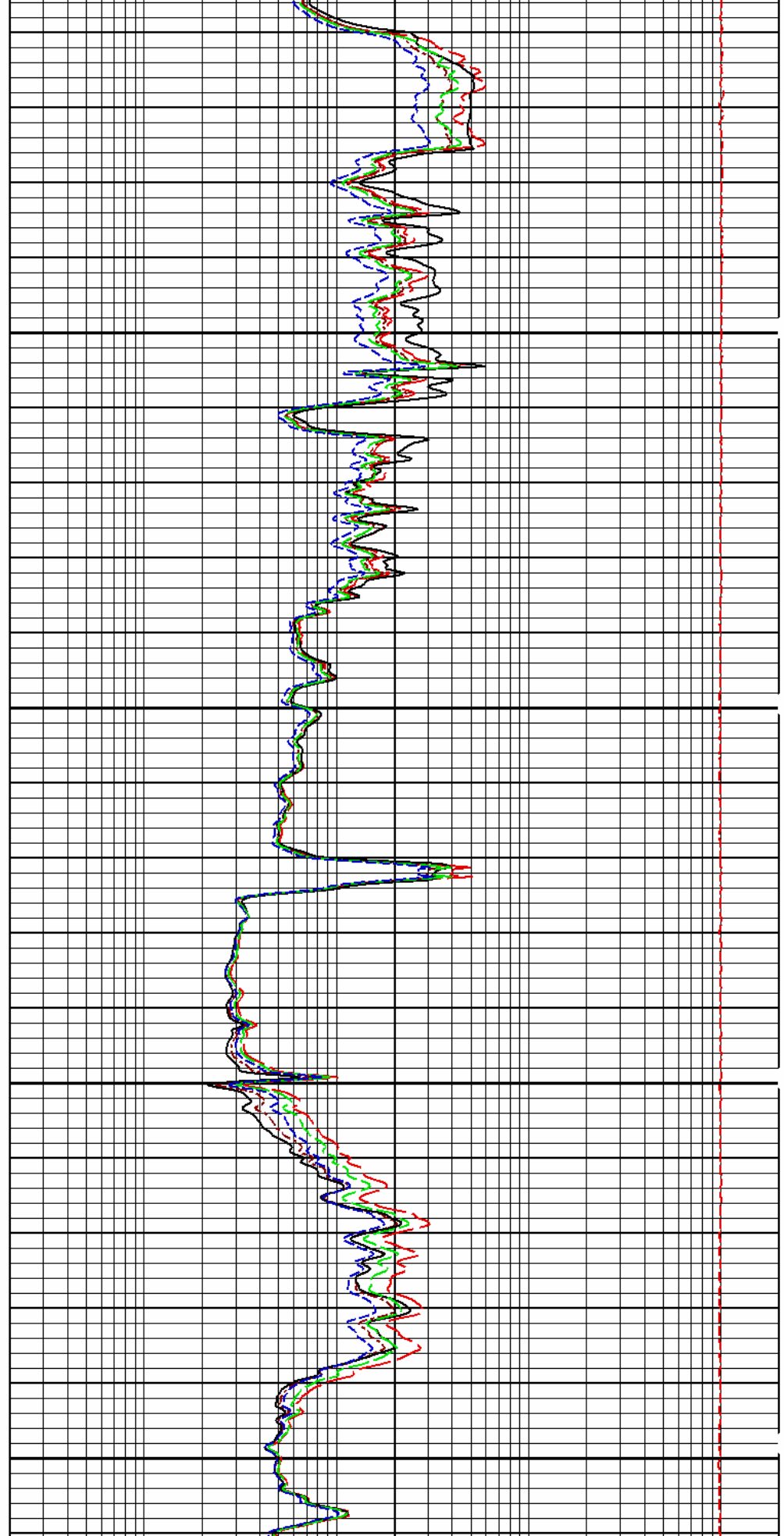


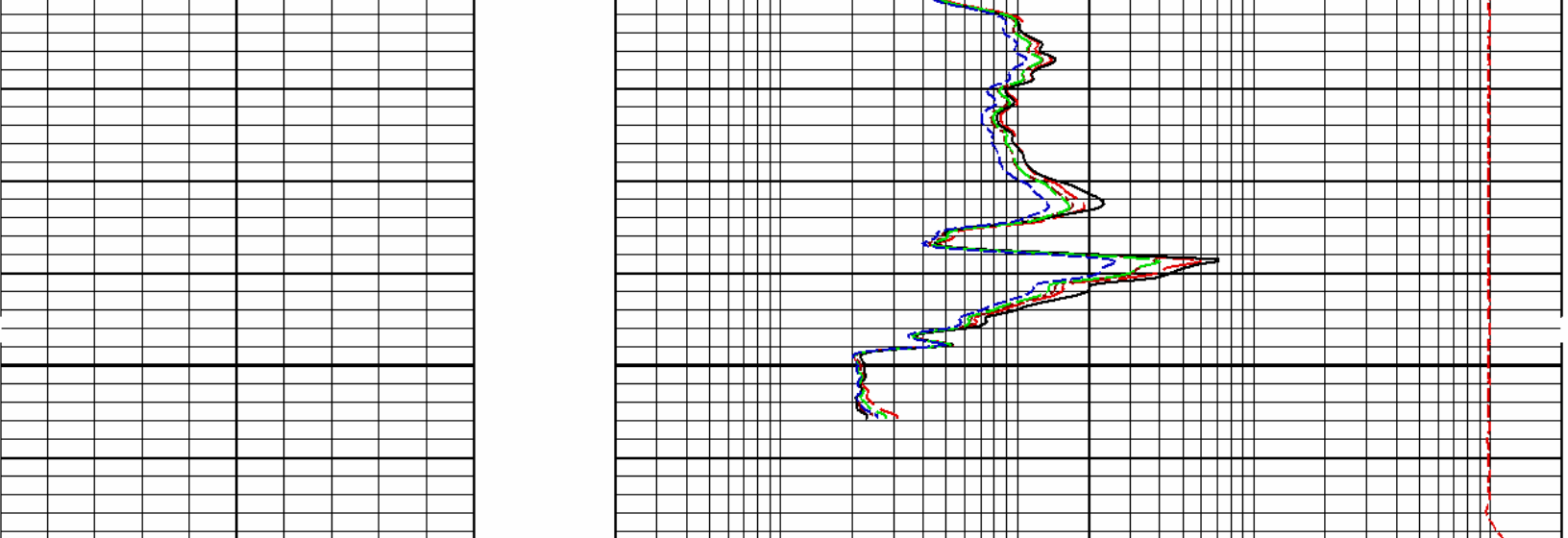




5100

5200





SP -120[+ 0 Gamma API 150 api SHALE	MD 1 : 240 ft	10K Tension 0 pounds	
		0.2	10in Resistivity 2ft Res 2000 ohmm
		0.2	20in Resistivity 2ft Res 2000 ohmm
		0.2	30in Resistivity 2ft Res 2000 ohm-metre
		0.2	60in Resistivity 2ft Res 2000 ohmm
		0.2	90in Resistivity 2ft Res 2000 ohmm

HALLIBURTON

Plot Time: 17-Sep-13 12:05:49
Plot Range: 5000 ft to 5268.83 ft
Data: TERESIA_3509\Well Based\REPEAT\
Plot File: \\LOCAL-1\TERESIA_3509\0001 SP-GTET-DSN-SDL-FLEX-XRMI-ACRT-CHACRT\ACRT_5_repeat_lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head- 00000021 30.00 lbs		Ø 3.625 in →			1.92 ft	85.64 ft
						83.72 ft
SP Sub-11441455 60.00 lbs		Ø 3.625 in →		← SP @ 81.94 ft	3.74 ft	79.98 ft

GTET-11048627
165.00 lbs

Ø 3.625 in →

8.52 ft

← GammaRay @ 73.92 ft

71.46 ft

DSNT-11055304
174.00 lbs

DSN Decentralizer-
11005605
6.60 lbs

Ø 5.000 in* →

Ø 3.625 in →

9.69 ft

← DSN Far @ 64.53 ft
← DSN Near @ 63.78 ft

61.78 ft

SDLT-11014296
360.00 lbs

SDLT Pad-10865884
65.00 lbs
Microlog Pad-11014296
8.00 lbs

Ø 4.500 in →

Ø 4.750 in* →

Ø 4.750 in* →

10.81 ft

Microlog @ 53.96 ft
SDL Caliper @ 53.78 ft
SDL @ 53.77 ft

50.96 ft

IQ Flex-00000696
140.00 lbs

Ø 3.625 in →

5.67 ft

45.29 ft

XRMI Isolator-
00000029
32.50 lbs

Ø 4.500 in →

1.30 ft

43.99 ft

XRMI-I Instrument-
10967399
290.00 lbs

Ø 4.500 in →

13.00 ft

30.99 ft

XRMI-I Mandrel-
262-90296662
206.00 lbs

Ø 5.000 in →

Ø 4.500 in →

11.16 ft



Pads 2, 4, 6 @ 22.60 ft

Pads 1, 3, 5 @ 22.37 ft

ACRt Instrument-
11022962
50.00 lbs

Regal Standoff 6_75-
00000044
20.00 lbs

Ø 6.750 in*

Ø 3.625 in →

5.03 ft

19.83 ft

14.80 ft

← Mud Resistivity @ 13.44 ft

← ACRt @ 9.46 ft

ACRt Sonde-
11005909
200.00 lbs

Ø 3.625 in →

14.22 ft

Cabbage Head-
TRK696
10.00 lbs

Ø 3.625 in →

Ø 6.000 in →

0.58 ft

0.58 ft

0.00 ft

Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH	Standard OH Cable Head	00000021	30.00	1.92	83.72	300.00
SP	SP Sub	11441455	60.00	3.74	79.98	300.00
GTET	Gamma Telemetry Tool	11048627	165.00	8.52	71.46	60.00
DSNT	Dual Spaced Neutron	11055304	174.00	9.69	61.78	60.00
DCNT	DSN Decentralizer	11005605	6.60	5.13	* 65.11	300.00
SDLT	Spectral Density Tool	11014296	360.00	10.81	50.96	60.00
SDLP	Density Insite Pad	10865884	65.00	2.55	* 53.17	60.00
MICP	Microlog Pad	11014296	8.00	1.00	* 53.46	60.00
IQF	IQ Flex tool	00000696	140.00	5.67	45.29	300.00
	Isolator for the XRMI tool	00000029	32.50	1.30	43.99	300.00
XRMI	XRMI Navigation - Insite	10967399	290.00	13.00	30.99	30.00
XRMI-I	XRMI Imager - Insite	262-90296662	206.00	11.16	19.83	30.00
ACRt	Array Compensated True Resistivity Instrument Section	11022962	50.00	5.03	14.80	300.00
RSOF	Regal Standoff 6.75in	00000044	20.00	0.52	* 17.17	300.00
ACRt	Array Compensated True Resistivity Sonde Section	11005909	200.00	14.22	0.58	300.00
CBHD	Cabbage Head	TRK696	10.00	0.58	0.00	300.00

Total

1,817.10

85.64

* Not included in Total Length and Length Accumulation.

Data: TERESIA_3509\0001 SP-GTET-DSN-SDL-FLEX-XRMI-ACRT-CHWDLE

Date: 01-Aug-13 04:29:53

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11048627

Engineer: THOMAS HYDE

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

Reference Calibration Date: 17-Jun-13 14:38:32

Calibration Date: 02-Jul-13 07:19:00

Calibration Version: 1

Calibrator Source S/N: TB146
Calibrator API Reference:265.00 api
Equivalent Calibrator API Reference:269.6 api

Measurement	Measured	Calibrated	Units
Background	51.2	51.2	api
Background + Calibrator	320.3	320.9	api
Calibrator	269.2	269.6	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 11048627

Engineer: SHELDON INGERSOLL

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

Reference Calibration Date: 02-Jul-13 07:19:00

Calibration Date: 30-Jul-13 18:30:49

Calibration Version: 1

Calibrator Source S/N: TB146
Calibrator API Reference:265.00 api
Equivalent Calibrator API Reference:269.6 api

Field Verification	Shop	Field	Units
Background	51.2	53.6	api
Background + Calibrator	320.9	320.7	api
Calibrator	269.6	267.2	api

Shop	Field	Difference	Tolerance
269.6	267.2	2.4	+/- 9.00

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name: ACRt Sonde - 11005909

Engineer: J. BOLLUM

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

Host Tool Name: ACRt Instrument - I962

Reference Calibration Date: 20-Apr-13 10:26:49

Calibration Date: 21-Jun-13 10:49:39

Calibration Version: 1

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	1.02	1.05	0.95	1.02	1.05
A2 (50")	0.95	1.01	1.05	0.95	1.02	1.05	0.95	1.02	1.05
A3 (29")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.01	1.05
A4 (17")	0.95	1.01	1.05	0.95	1.02	1.05	0.95	1.02	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	-0.25	2	-6	-3.43	-2	-8	-4.75	-2
A2 (50")	-7	-1.29	0	-7	-3.27	0	-7	-4.27	0
A3 (29")	-27	-15.53	-9	-9	-4.61	-3	-7	-2.76	-1
A4 (17")	-180	-101.70	-60	-45	-31.05	-15	-39	-26.54	-13
A5 (10")	N/A	N/A	N/A	-150	-98.53	-50	-80	-44.97	-10
A6 (6")	N/A	N/A	N/A	175	287.44	525	90	151.15	270

TRANSMITTER CURRENT GAIN				R-MUD VERIFICATION			
Signal	Lower	R	Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.91	1.3	Mud Cell	0.95	1.00	1.05
36K	1.0	1.36	2.0				
72K	1.0	1.58	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-11048627						
Gamma Ray Calibrator	269.6	267.2	-----	2.4	+/- 9.00	api
ACRt Sonde-11005909						
Mud Cell	1.00	-----	-----	0.00	-----	ohm-m

Data: TERESIA_3509\0001 SP-GTET-DSN-SDL-FLEX-XRMI-ACRT-CHMDLE	Date: 01-Aug-13 04:51:21
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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	9.100	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	0.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	2.000	ohmm
	SHARED	TRM	Temperature of Mud	75.0	degF

SHARED	TRM	Temperature of Mud	70.0	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	5280.00	ft
SHARED	BHT	Bottom Hole Temperature	200.0	degF
SHARED	SVTM	Navigation and Survey Master Tool	XRMI-I Instrument	
SHARED	AZTM	High Res Z Accelerometer Master Tool	XRMI-I Instrument	
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 / CrossPlot	AFAC	Archie A factor	0.6200	
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	0.000	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	Limestone	
DSNT	DNNO	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	
Microlog Pad	MLOK	Process MicroLog 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	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
XRMI-I Instrument	WRTI	Survey Writing Interval	30	ft
XRMI-I Instrument	SOPT	Smoothing Option	None	
XRMI-I Mandrel	DIMG	Process XRMI?	Yes	
XRMI-I Mandrel	ROTI	Rotate Image (N-E-S-W-N)?	Yes	
XRMI-I Mandrel	AGN	Use Button Auto Gain?	Yes	
XRMI-I Mandrel	BCLR	Button Auto Gain Color	127	
XRMI-I Mandrel	BFIL	Button Auto Gain Filter	0.020	

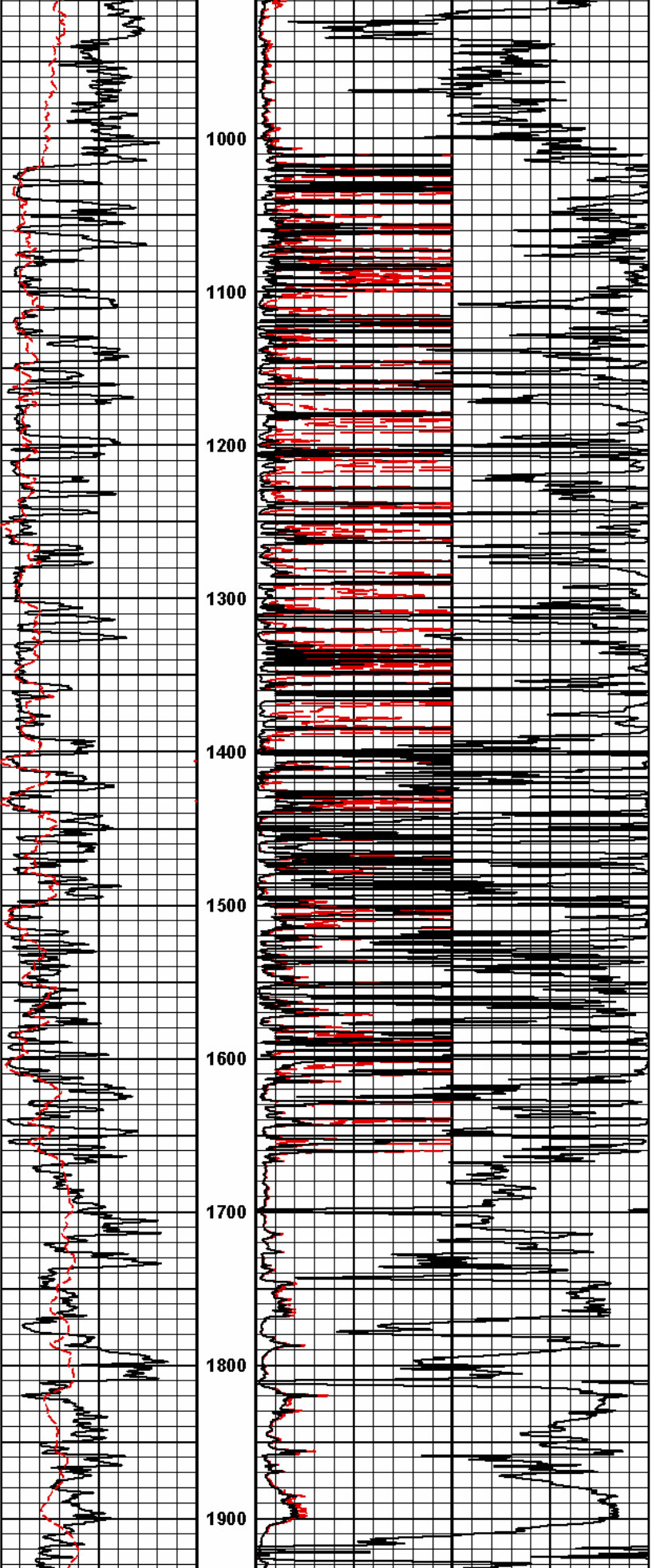
ERNDD	Near Detector Telemetry Counts EVR	63.78	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	64.53	BLK	0.000
ENTM	DSN Tool Temperature EVR	63.78	NO	
SDLT				
TPUL	Tension Pull	53.78	NO	
PCAL	Pad Caliper	53.78	TRI	0.250
ACAL	Arm Caliper	53.78	TRI	0.250
XRMI-I Mandrel				
TPUL	Tension Pull	22.60	NO	
PAD1	XRMI Pad 1 values	22.36	NO	
PAD2	XRMI Pad 2 values	22.36	NO	
PAD3	XRMI Pad 3 values	22.36	NO	
PAD4	XRMI Pad 4 values	22.36	NO	
PAD5	XRMI Pad 5 values	22.36	NO	
PAD6	XRMI Pad 6 values	22.36	NO	
OD1	EMI Odd Button Values Pad 1	22.36	NO	
OD2	EMI Odd Button Values Pad 2	22.60	NO	
OD3	EMI Odd Button Values Pad 3	22.36	NO	
OD4	EMI Odd Button Values Pad 4	22.60	NO	
OD5	EMI Odd Button Values Pad 5	22.36	NO	
OD6	EMI Odd Button Values Pad 6	22.60	NO	
EV1	EMI Even Button Values Pad 1	22.39	NO	
EV2	EMI Even Button Values Pad 2	22.57	NO	
EV3	EMI Even Button Values Pad 3	22.39	NO	
EV4	EMI Even Button Values Pad 4	22.57	NO	
EV5	EMI Even Button Values Pad 5	22.39	NO	
EV6	EMI Even Button Values Pad 6	22.57	NO	
ITMP	Instrument Temperature	19.83	NO	
EMIM	Tool Mode	19.83	NO	
HAZI	Hole Azimuth	22.11	NO	
HAZI	Hole Azimuth - Down Delay	22.61	NO	
ZACC	Accelerometer Z	22.36	NO	
TPUL	Tension Pull	22.60	NO	
FIR1	Current Button R - Pad 1	22.36	NO	
FIR2	Current Button R - Pad 2	22.60	NO	
FIR3	Current Button R - Pad 3	22.36	NO	
FIR4	Current Button R - Pad 4	22.60	NO	
FIR5	Current Button R - Pad 5	22.36	NO	
FIR6	Current Button R - Pad 6	22.60	NO	
FIX1	Current Button X - Pad 1	22.36	NO	
FIX2	Current Button X - Pad 2	22.60	NO	
FIX3	Current Button X - Pad 3	22.36	NO	
FIX4	Current Button X - Pad 4	22.60	NO	
FIX5	Current Button X - Pad 5	22.36	NO	
FIX6	Current Button X - Pad 6	22.60	NO	
SIR1	Current Slow Button R - Pad 1	22.36	BLK	3.000
SIR2	Current Slow Button R - Pad 2	22.60	BLK	3.000
SIR3	Current Slow Button R - Pad 3	22.36	BLK	3.000
SIR4	Current Slow Button R - Pad 4	22.60	BLK	3.000
SIR5	Current Slow Button R - Pad 5	22.36	BLK	3.000

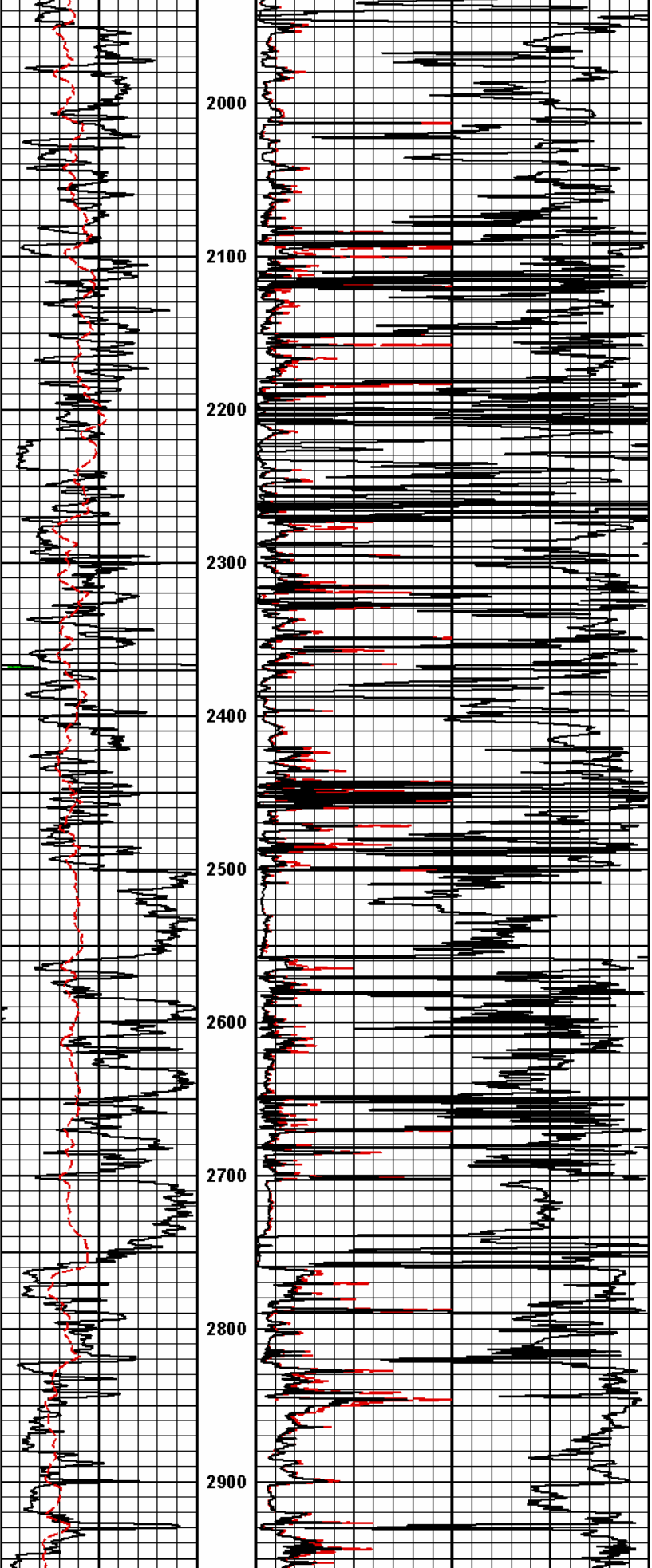
SIR6	Current Slow Button R - Pad 6	22.60	BLK	3.000
SIX1	Current Slow Button X - Pad 1	22.36	BLK	3.000
SIX2	Current Slow Button X - Pad 2	22.60	BLK	3.000
SIX3	Current Slow Button X - Pad 3	22.36	BLK	3.000
SIX4	Current Slow Button X - Pad 4	22.60	BLK	3.000
SIX5	Current Slow Button X - Pad 5	22.36	BLK	3.000
SIX6	Current Slow Button X - Pad 6	22.60	BLK	3.000
EMMR	Phasor Voltage - Real Part	22.36	NO	
EMMX	Phasor Voltage - Imaginary Part	22.36	NO	
PADV	Pad Voltage	19.83	BLK	0.250
ITMP	Instrument Temperature	19.83	BLK	0.000
CON1	Conductivity Pad 1	22.36	BLK	3.000
CON2	Conductivity Pad 2	22.60	BLK	3.000
CON3	Conductivity Pad 3	22.36	BLK	3.000
CON4	Conductivity Pad 4	22.60	BLK	3.000
CON5	Conductivity Pad 5	22.36	BLK	3.000
CON6	Conductivity Pad 6	22.60	BLK	3.000
UIR2	Current Button R No Delay - Pad 2	22.36	NO	
UIR4	Current Button R No Delay - Pad 4	22.36	NO	
UIR6	Current Button R No Delay - Pad 6	22.36	NO	
UIX2	Current Button X No Delay - Pad 2	22.36	NO	
UIX4	Current Button X No Delay - Pad 4	22.36	NO	
UIX6	Current Button X No Delay - Pad 6	22.36	NO	
TPUL	Tension Pull	22.60	NO	
ARM1	Caliper 1 measurement	22.36	BLK	0.000
ARM2	Caliper 2 measurement	22.36	BLK	0.000
ARM3	Caliper 3 measurement	22.36	BLK	0.000
ARM4	Caliper 4 measurement	22.36	BLK	0.000
ARM5	Caliper 5 measurement	22.36	BLK	0.000
ARM6	Caliper 6 measurement	22.36	BLK	0.000
MOTV	Motor Voltage Monitor 1	22.36	BLK	0.000
PRES	Caliper percentage of total compression of the spring	19.83	BLK	0.000
HAZI	Hole Azimuth	22.36	NO	
RB	Relative Bearing	22.36	NO	
AZI1	PAD1 Azimuth	22.36	NO	
DEVI	Inclination	22.36	NO	

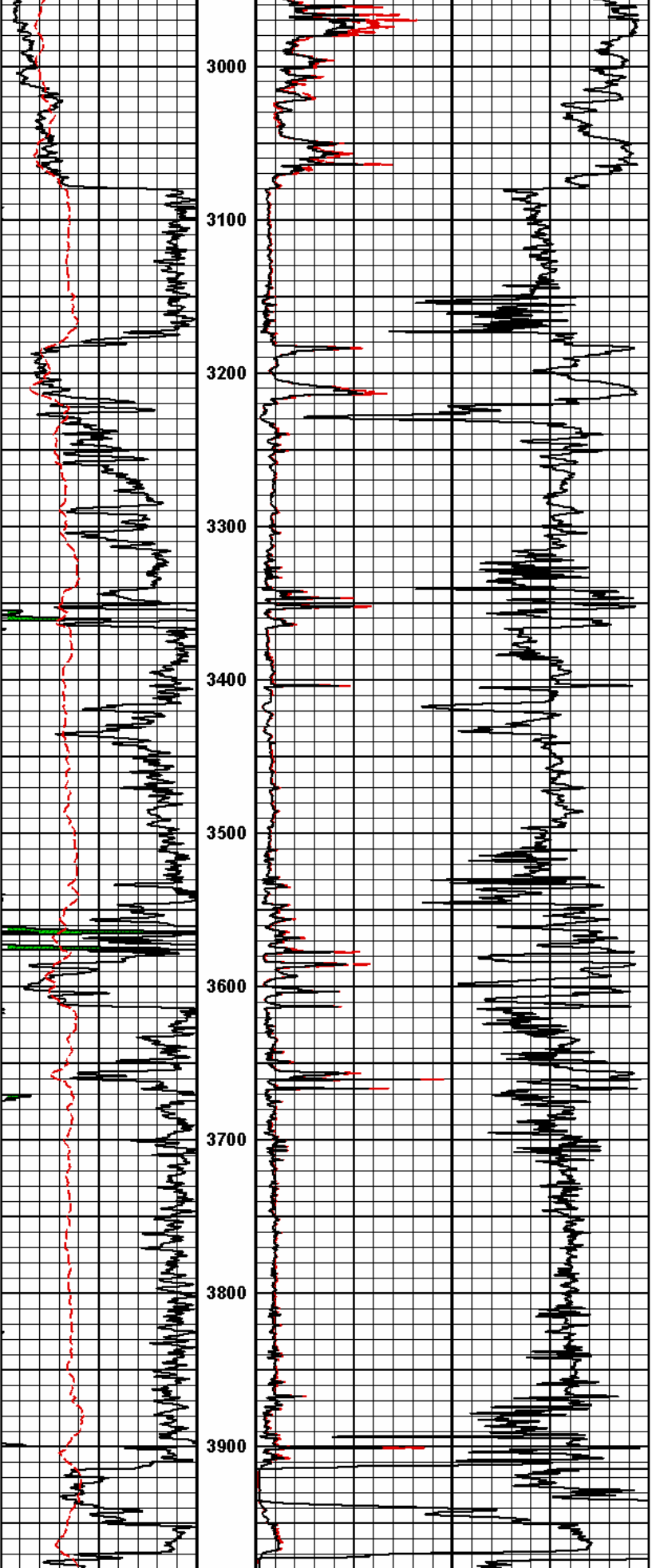
ACRt Sonde

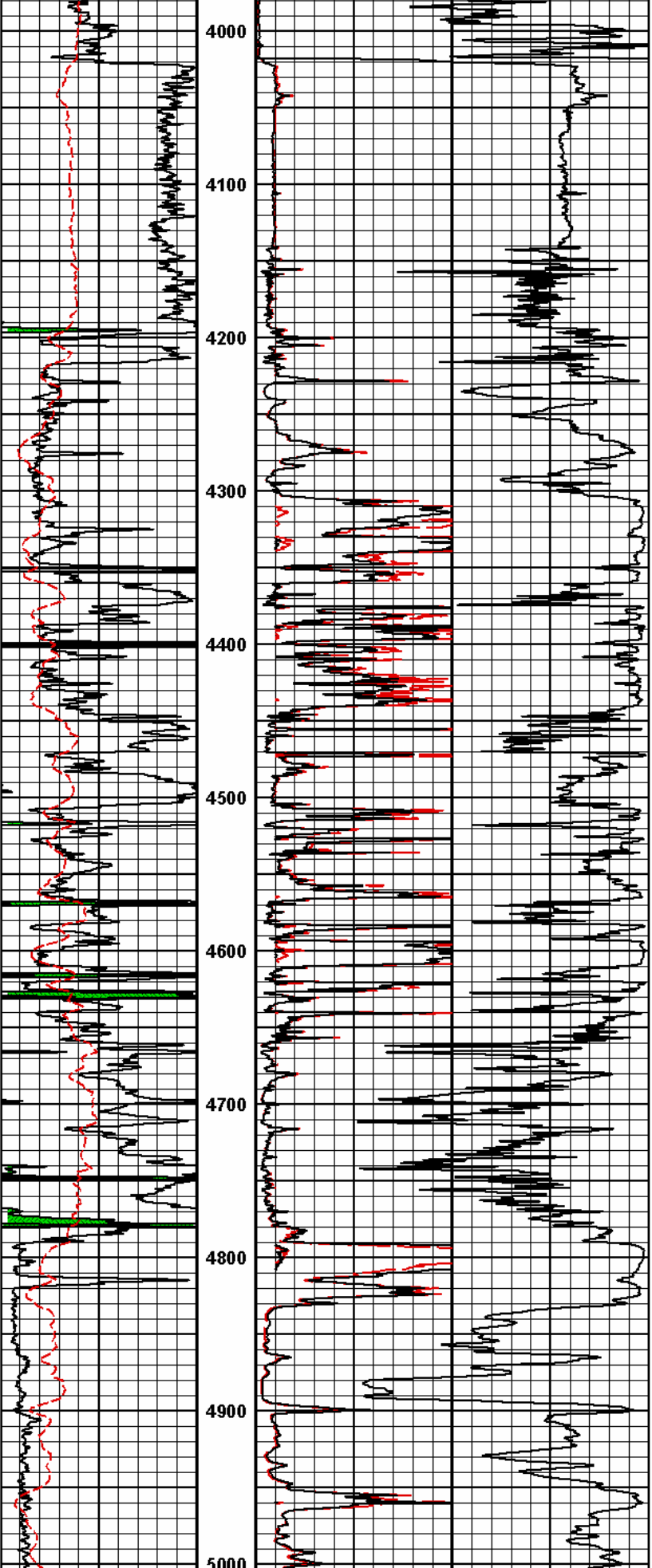
TPUL	Tension Pull	2.97	NO	
F1R1	ACRT 12KHz - 80in R value	9.22	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	9.22	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.72	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.72	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	5.22	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	5.22	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	4.22	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	4.22	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.72	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.72	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.47	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.47	BLK	0.000

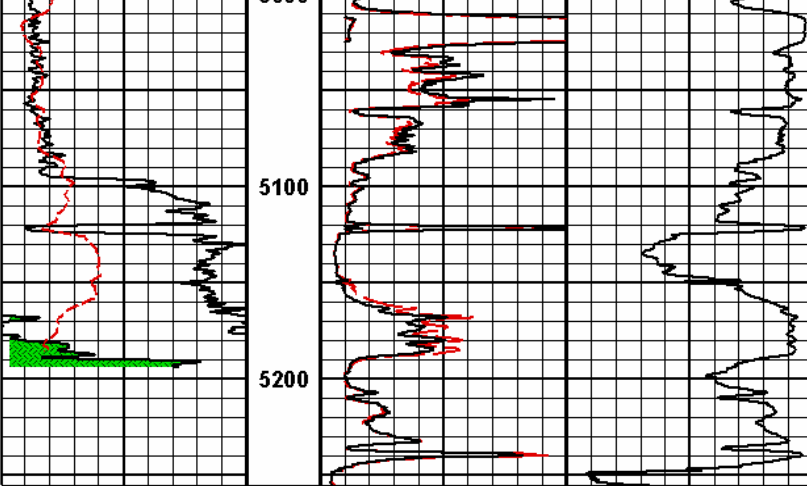
F2R1	ACRT 36KHz - 80in R value	9.22	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	9.22	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.72	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.72	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	5.22	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	5.22	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	4.22	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	4.22	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.72	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.72	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.47	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.47	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	9.22	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	9.22	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.72	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.72	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	5.22	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	5.22	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	4.22	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	4.22	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.72	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.72	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.47	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.47	BLK	0.000
RMUD	Mud Resistivity	12.76	BLK	0.000
F1RT	Transmitter Current Raw 12K X Receiver	2.97	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.97	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.97	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.97	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.97	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.97	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.97	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.97	BLK	0.000
ITMP	Instrument Temperature	2.97	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.97	NO	
TIDV	Instrument Temperature Derivative	2.97	NO	
TUDV	Upper Temperature Derivative	2.97	NO	
TLDV	Lower Temperature Derivative	2.97	NO	
TRBD	Receiver Board Temperature	2.97	NO	
Microlog Pad				
TPUL	Tension Pull	53.96	NO	
MINV	Microlog Lateral	53.96	BLK	0.750
MNOR	Microlog Normal	53.96	BLK	0.750
SDLT Pad				
TPUL	Tension Pull	53.77	NO	
NAB	Near Above	53.59	BLK	0.920
NHI	Near Cesium High	53.59	BLK	0.920
NLO	Near Cesium Low	53.59	BLK	0.920
NVA	Near Valley	53.59	BLK	0.920
NBA	Near Barite	53.59	BLK	0.920











0	Gamma API	150	MD 1 : 1200 ft	20in Resistivity 2ft Res				
				0 50 ohm-metre				
	api	SP		90in Resistivity 2ft Res				
				0 50 ohm-metre				
				1000 90in Conductivity 2ft Res	0			
				mmho per metre				

HALLIBURTON

Plot Time: 17-Sep-13 12:05:52
Plot Range: 810 ft to 5255.75 ft
Data: TERESIA_3509\Well Based\CASING\
Plot File: \\-LOCAL-TERESIA_3509\...ACRT_1.lib

1 INCH MAIN LOG