

HALLIBURTON

MICROLOG

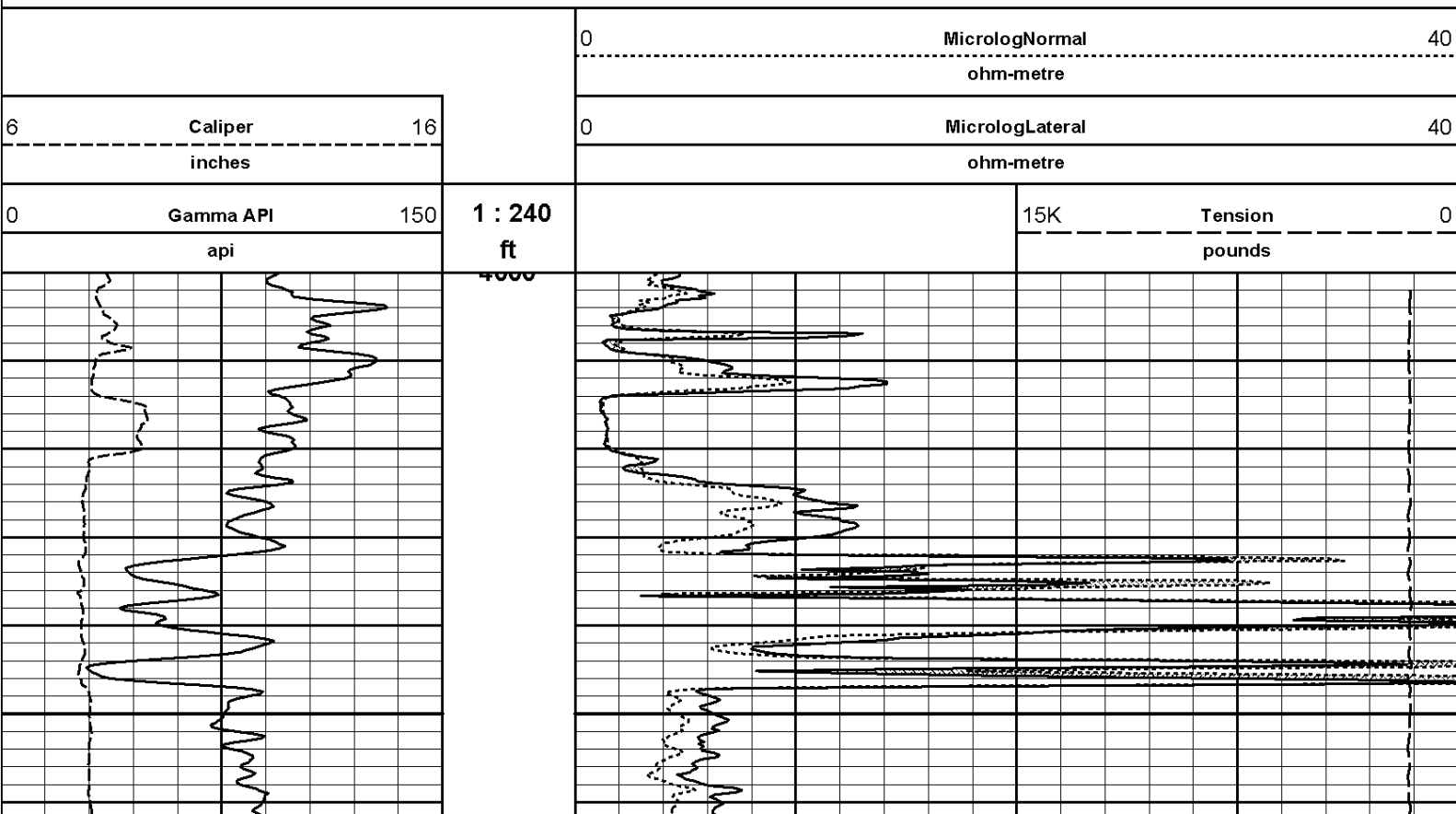
RAYDON EXPLORATION INC.				COMPANY				RAYDON EXPLORATION INC.			
PARITY 1-27				WELL				PARITY 1-27			
WILDCAT				FIELD/BLOCK				WILDCAT			
SEWARD				COUNTY				SEWARD			
KANSAS				STATE				STATE KANSAS			
AP I No. 15-175-22249-00-00				Location (SHL) E2 SW SW 660' FSL & 990' FWL				Other Services: SDLT DSNT MICROLOG BSAT ACRT			
Permanent Datum GL				Sect 27 Twp 33S Rge 31W				Elev. 2727.0 ft			
Log measured from KB								Elev. 2737.0 ft			
Drilling measured from KB								Elev. 2727.0 ft			
Date 18-Oct-16											
Run No. ONE											
Depth - Driller 6293.0 ft											
Depth - Logger 6293.0 ft											
Bottom - Logged Interval 6293.00 ft											
Top - Logged Interval 4000.00 ft											
Casing - Driller 8.625 in @ 1675.0 ft											
Casing - Logger 1668.0 ft											
Bit Size 7.875 in											
Type Fluid in Hole Water Based Mud											
Density 8.8 ppg				Viscosity 58.00 s/qt							
PH 10.00 pH				Fluid Loss 5.2 cph							
Source of Sample FLOWLINE											
Rm @ Meas. Temperature 1.29 ohmm @ 80.00 degF											
Rmf @ Meas. Temperature 1.09 ohmm @ 60.00 degF											
Rmc @ Meas. Temperature 1.61 ohmm @ 60.00 degF											
Source Rmf Rmc MEAS											
Rm @ BHT 0.86 ohmm @ 123.0 degF											
Time Since Circulation 8.0 hrs hr											
Time on Bottom 18-Oct-16 17:16											
Max Rec. Temperature 123.00 degF @ 6293.0 ft											
Equipment Location 12156883 EL RENO, OK											
Recorded By COTHREN											
Witnessed By EDWIN GRIEVES											

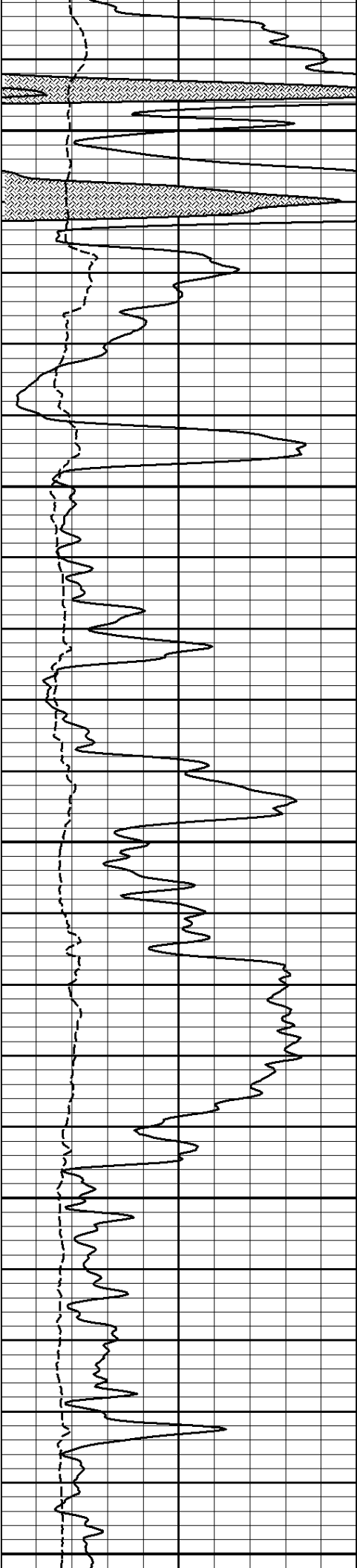
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Service Ticket No.: 903584926				API No.: 15-175-22249-00-00				PGM Version: WL INSITE R5.0.5 (Build 8)							
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE				RESISTIVITY SCALE CHANGES											
Date	Sample No.			Type Log	Depth	Scale Up Hole	Scale Down 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 156	N/A	1.5" STANDOFF	N/A							
Rmc @ Meas. Temp.	@		@												
Source Rmf	Rmc														
Rm @ BHT	@		@												
Rmf @ BHT	@		@												
Rmc @ BHT	@		@												
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.	ONE		Run No.	ONE	Run No.	ONE	Run No.	ONE							
Serial No.	11021139		Serial No.	10939049	Serial No.	10951315	Serial No.	11020487							
Model No.	GTET		Model No.	BSAT	Model No.	SDLT	Model No.	DSNT							
Diameter	3.625"		No. of Cent.	2	Diameter	4.5"	Diameter	3.625"							
Detector Model No.	A-102		Spacing	4	Log Type	GAM-GAM	Log Type	NEU-NEU							
Type	SCINT.				Source Type	Cs 137	Source Type	AM241Be							
Length	8"		LSA [Y/N]	N	Serial No.	5155GW	Serial No.	DSN 436							
Distance to Source	10'		FWDA [Y/N]	N	Strength	1.5 Ci	Strength	15 Ci							

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	TD	4000	REC	0	150	30	-10	47.5	30	-10	2.71	30	-10	LIME	
DIRECTIONAL INFORMATION															
Maximum Deviation								@	KOP				@		
Remarks: THANKS FOR USING HALLIBURTON LOGGING SERVICES.															
ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.															
CHLORIDES REPORTED AT 1700 mg/L															
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															

5 INCH MAIN LOG

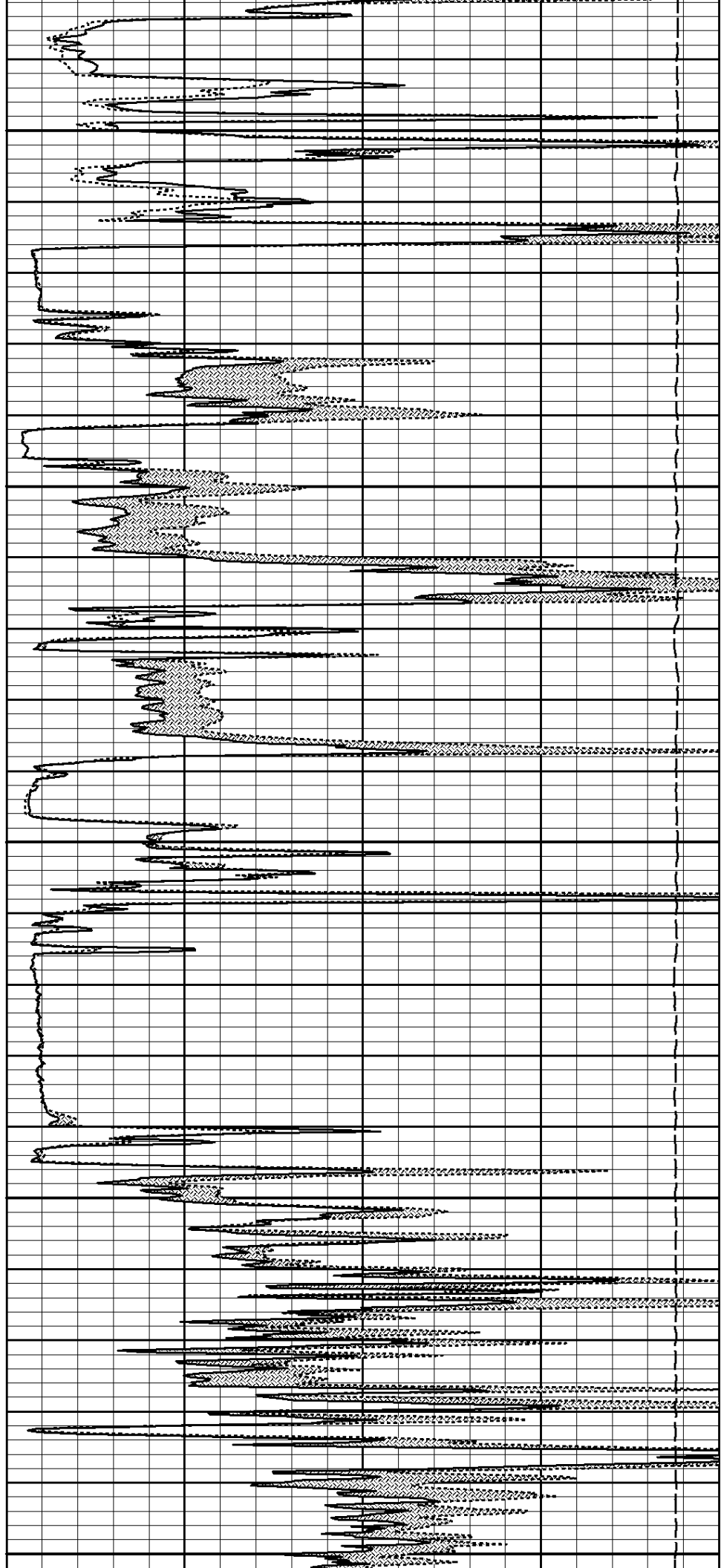


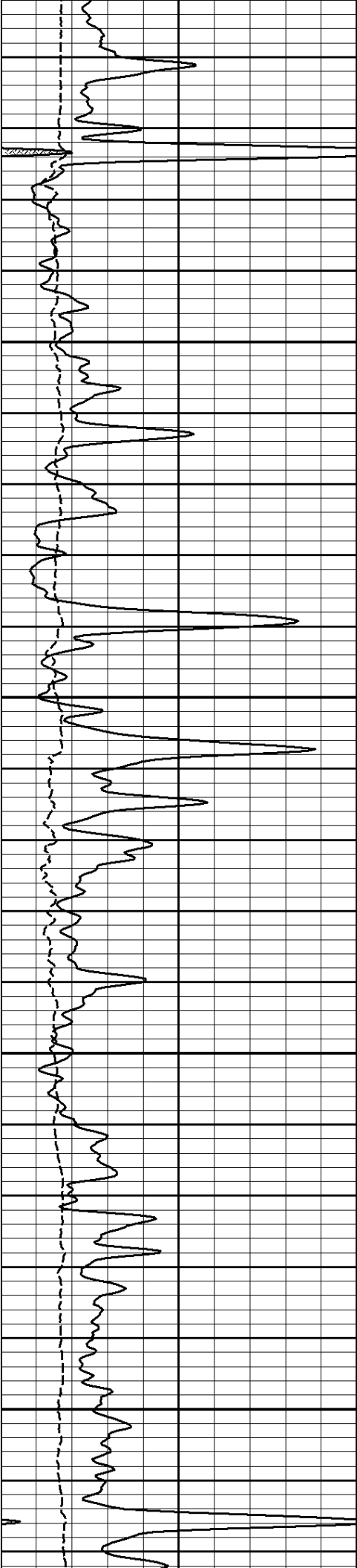


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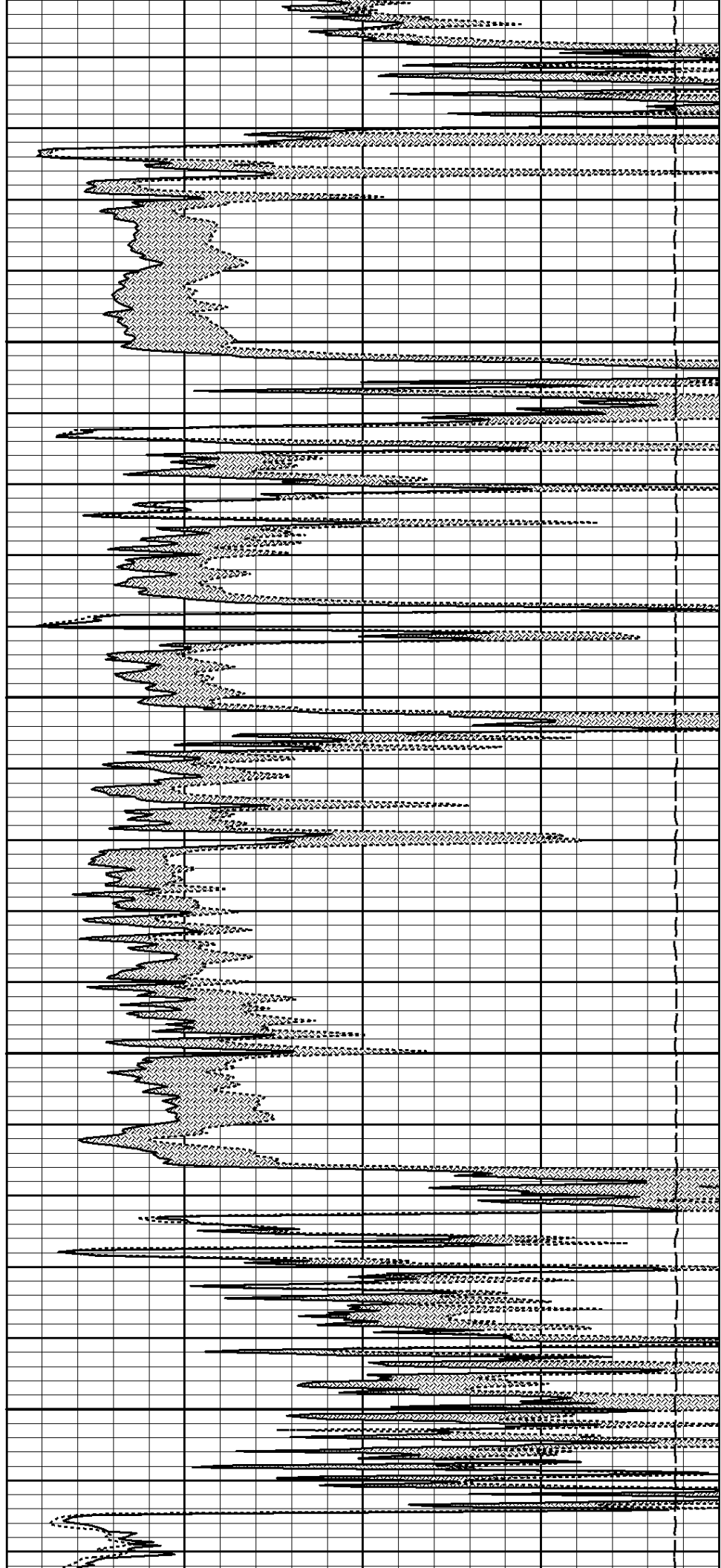
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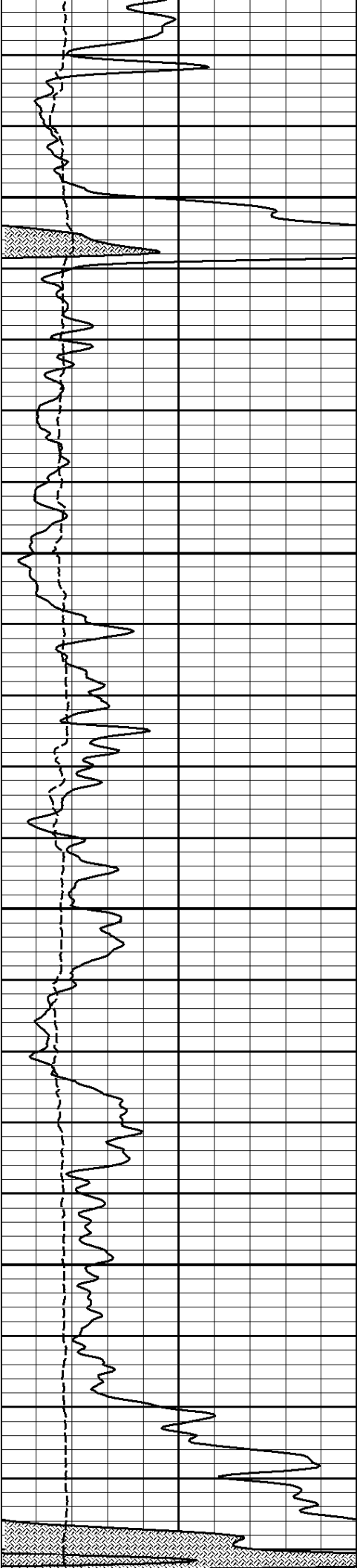




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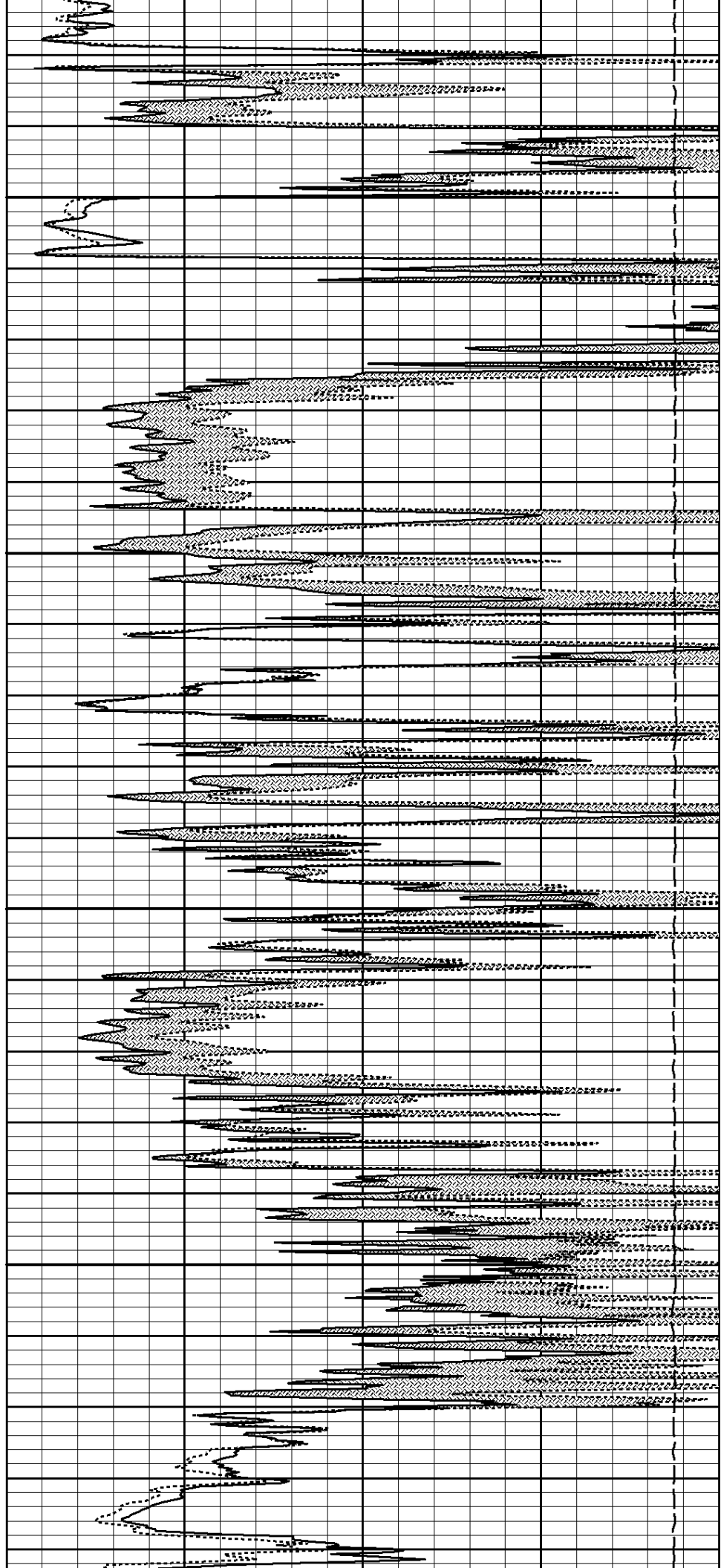
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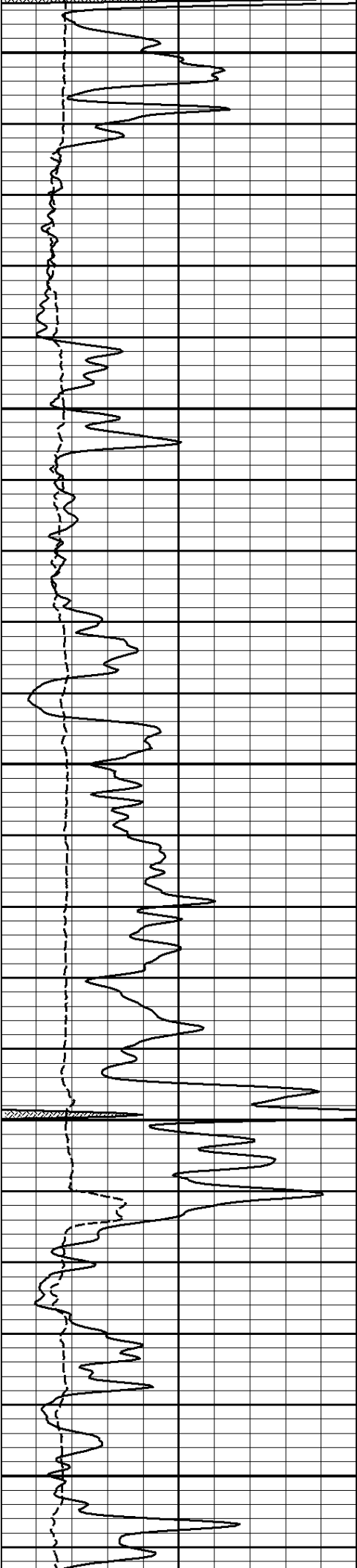




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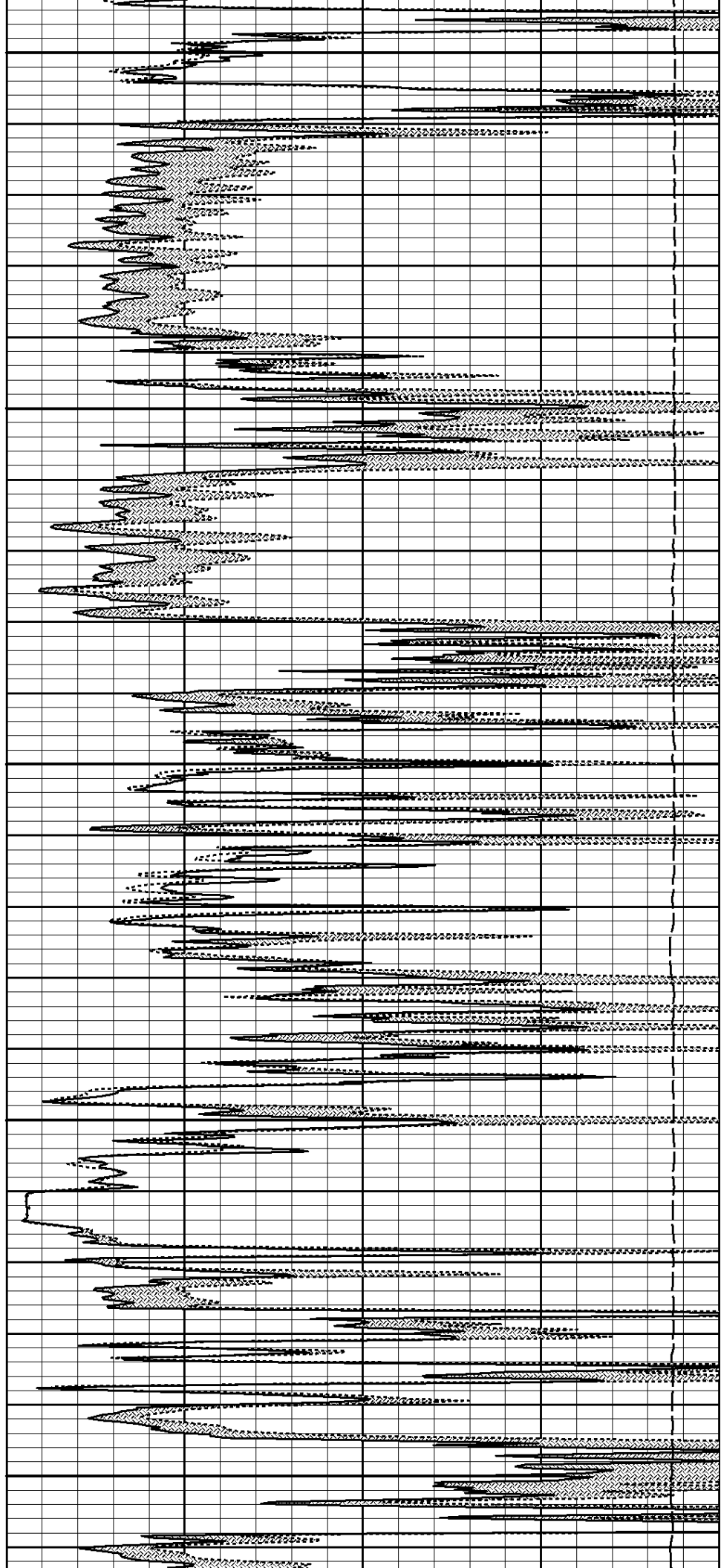
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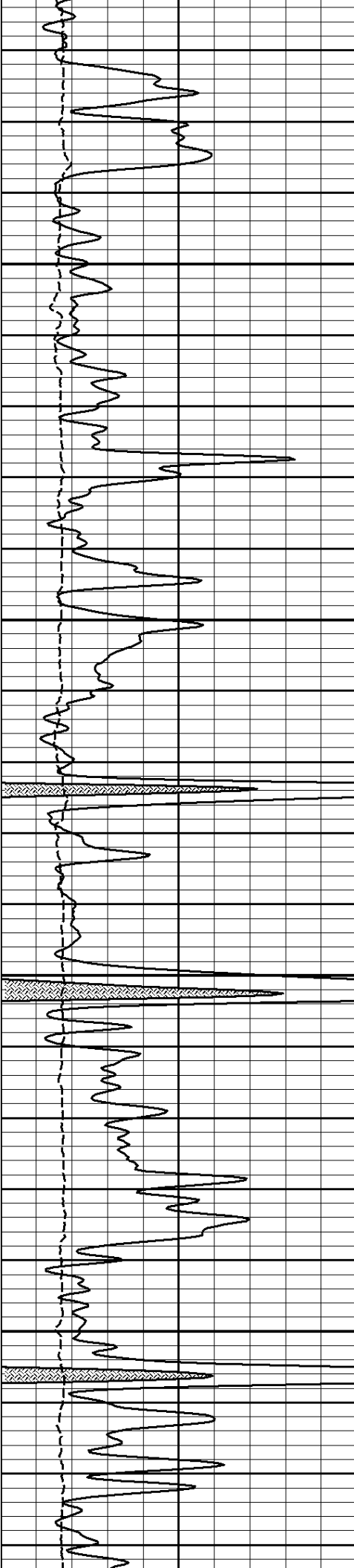




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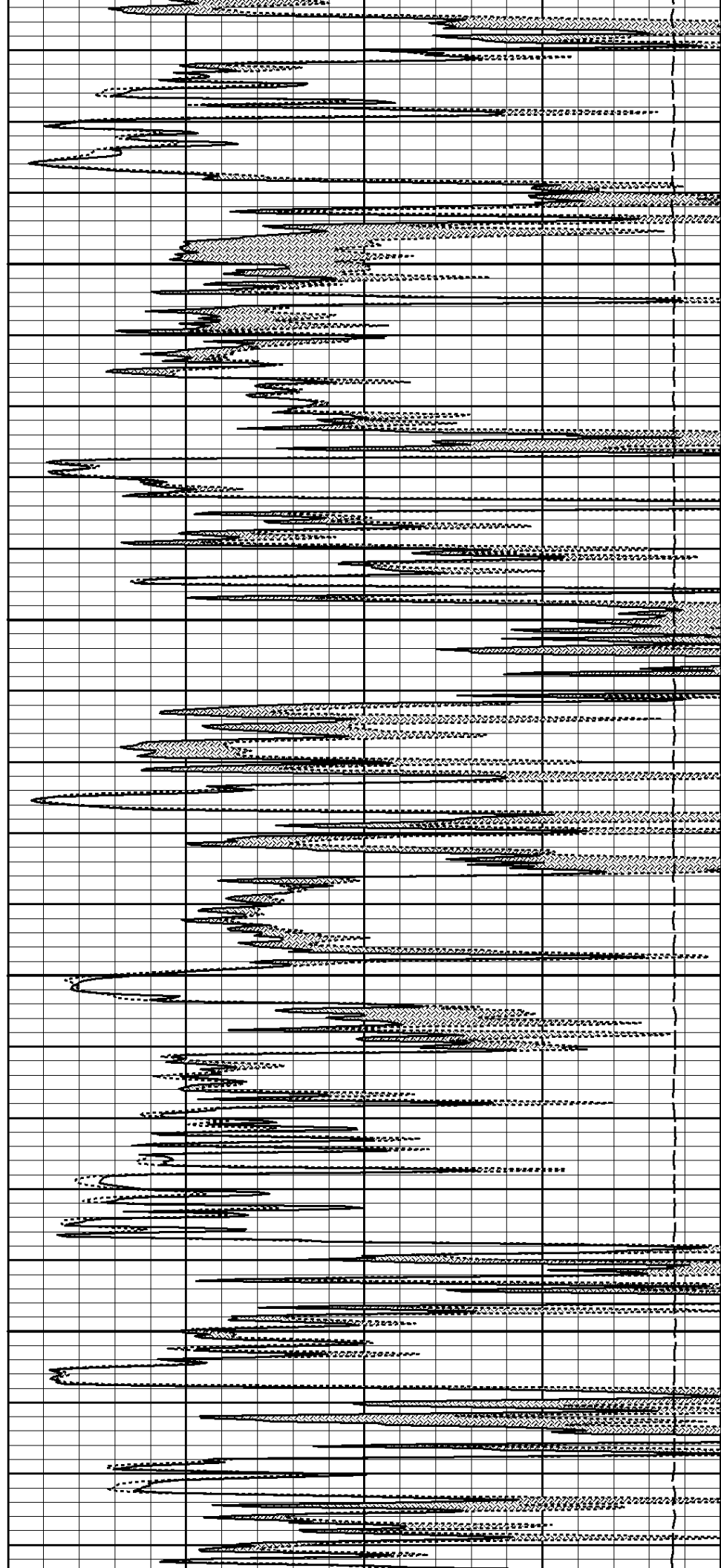
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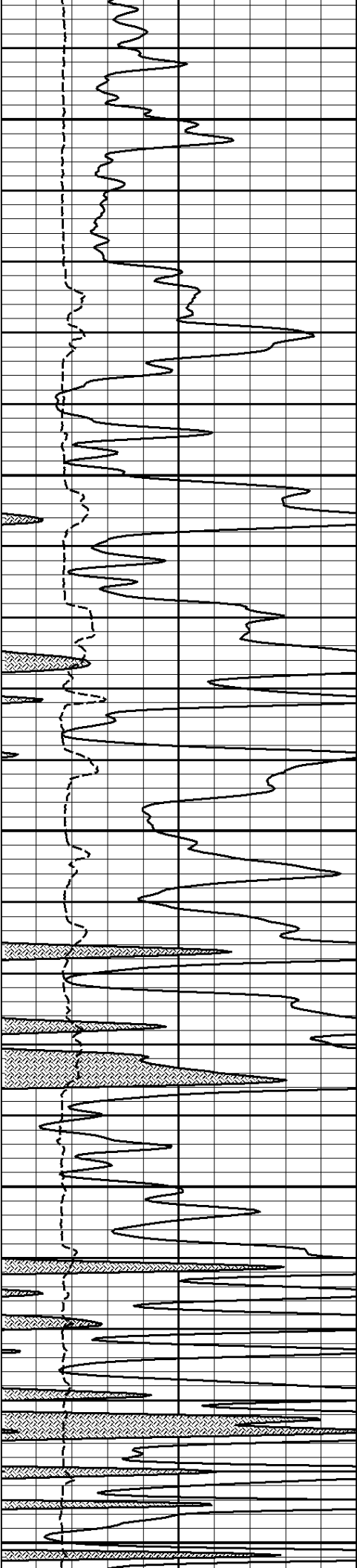




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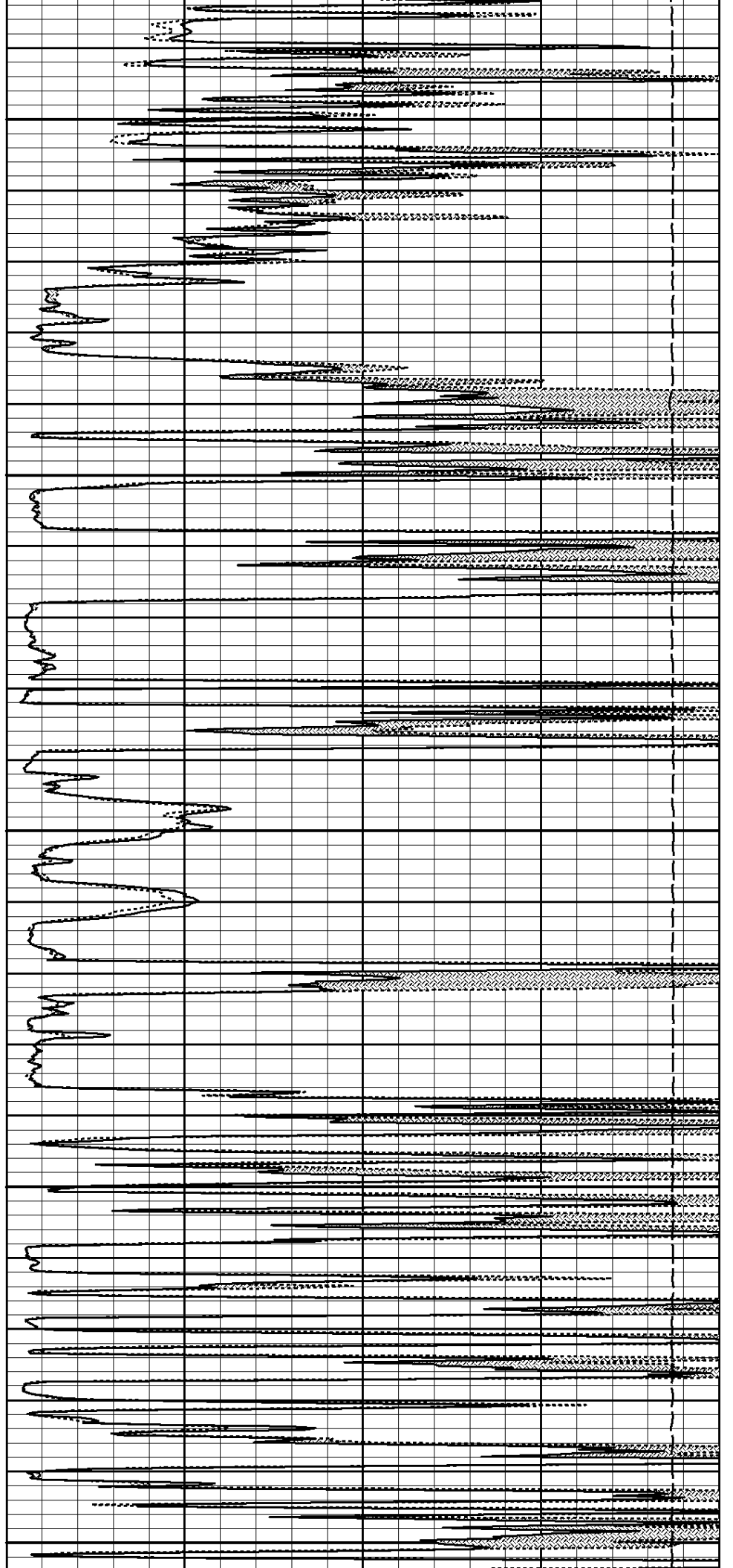


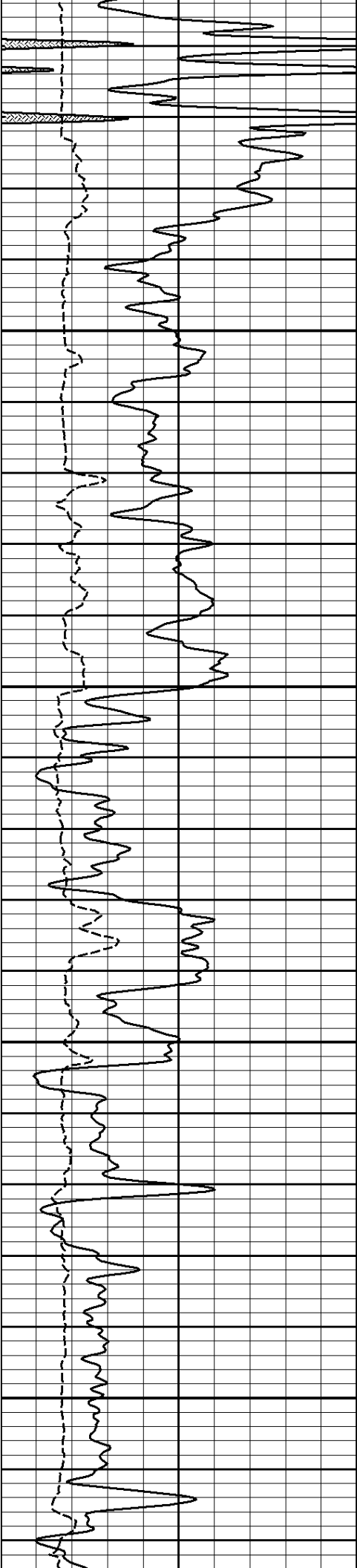


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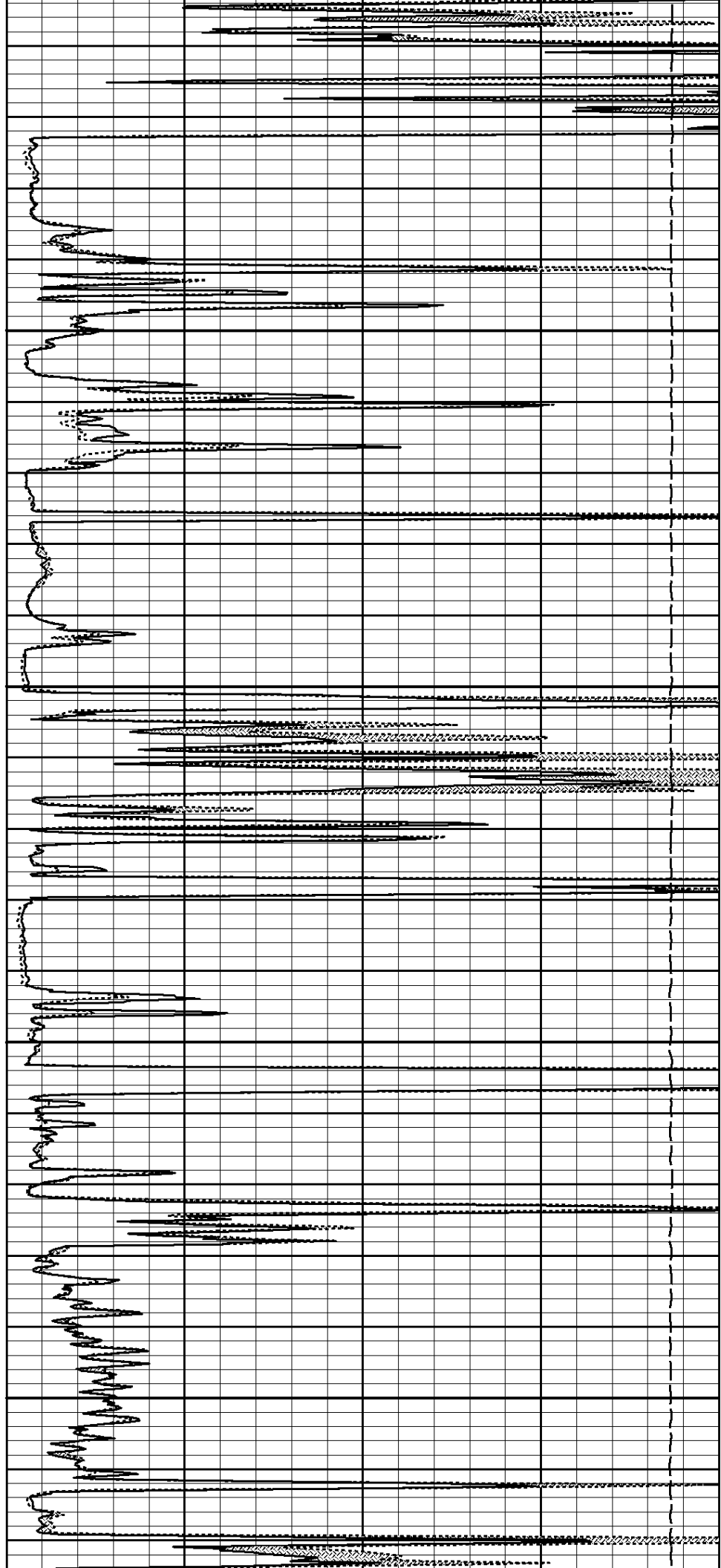
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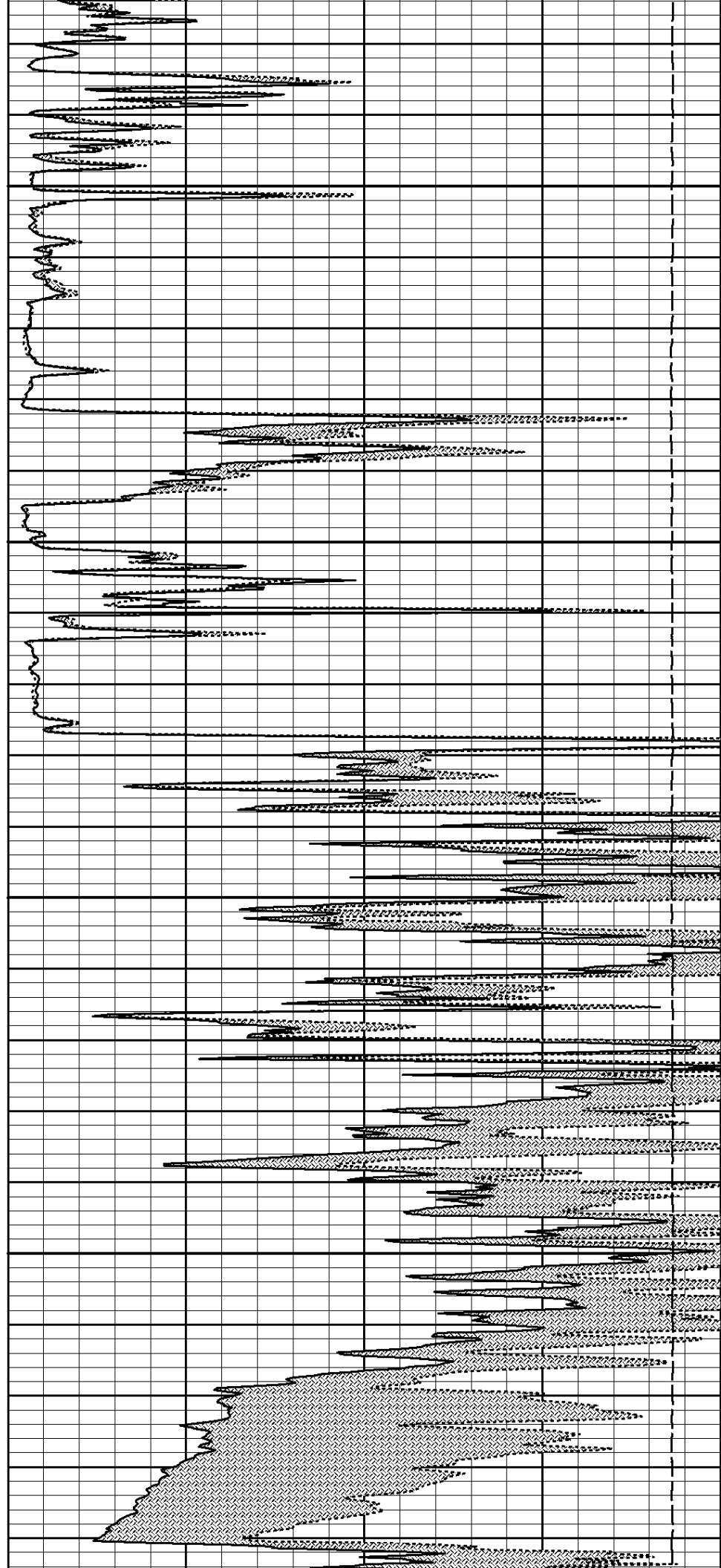
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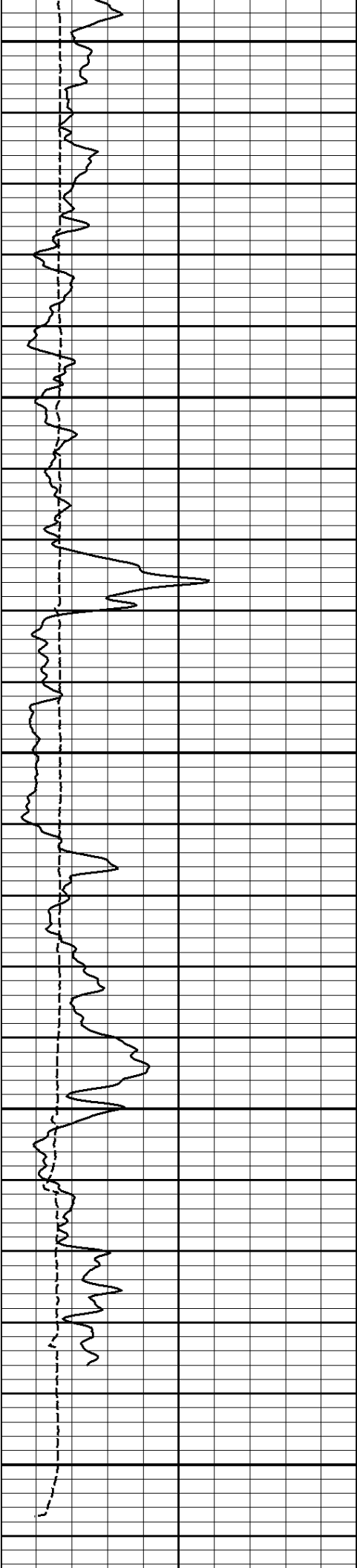




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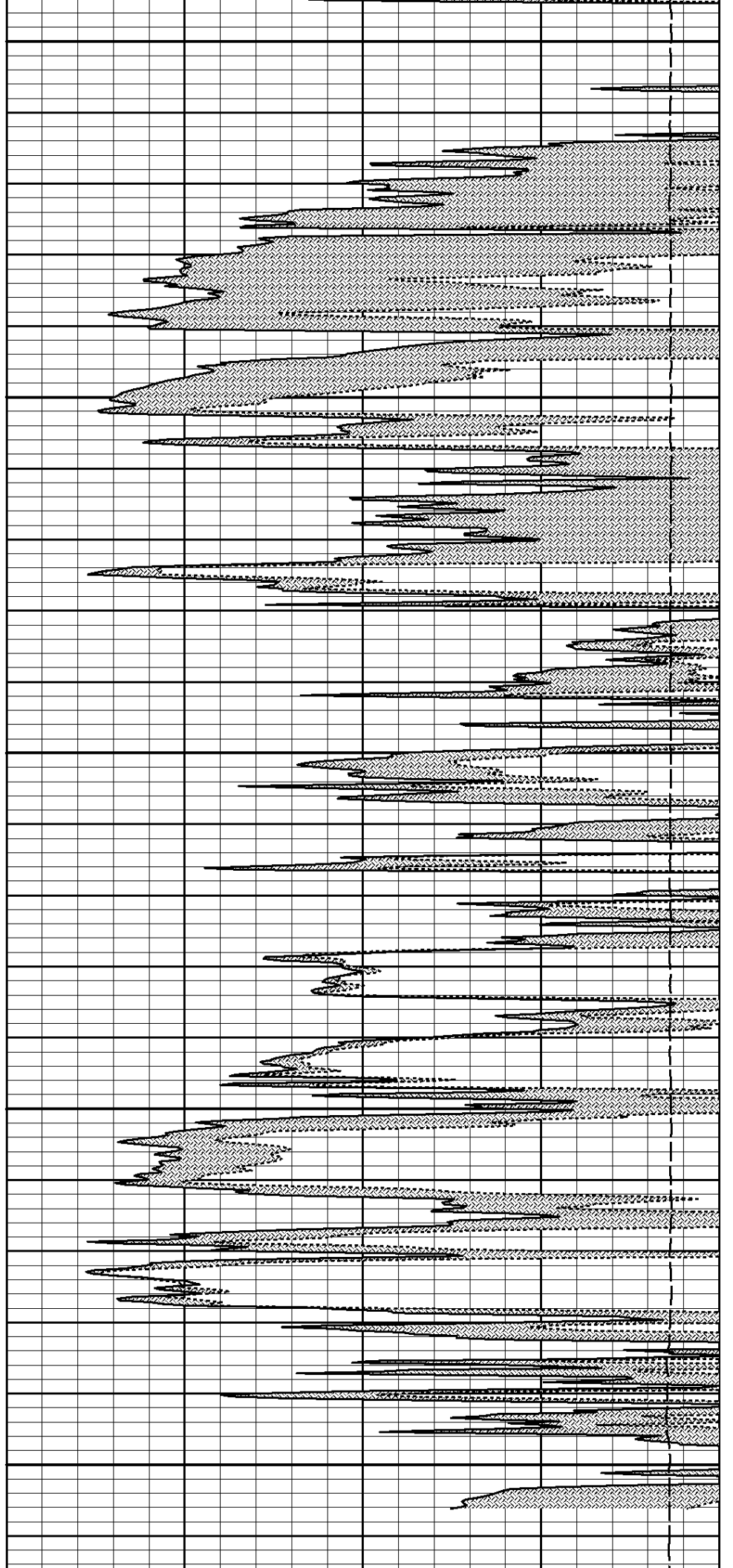
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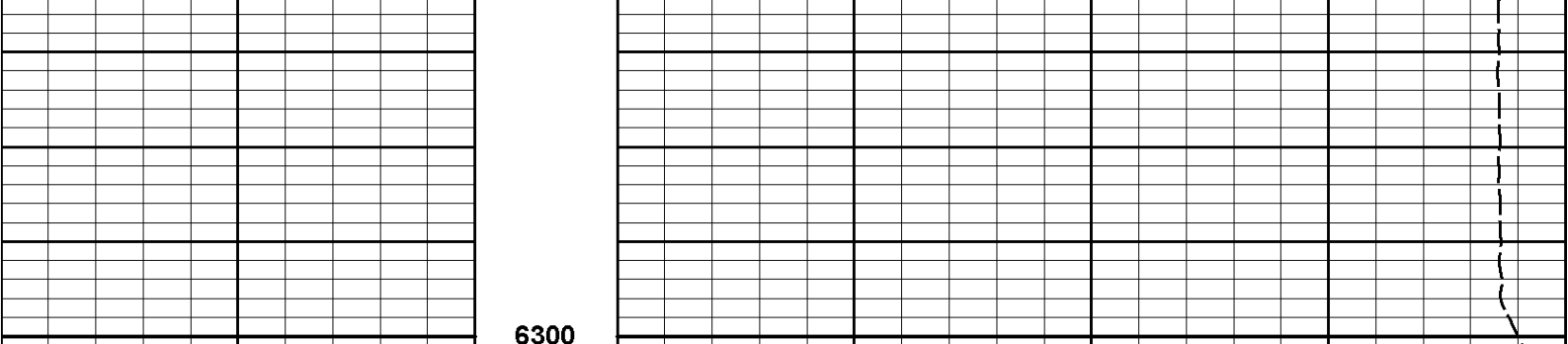




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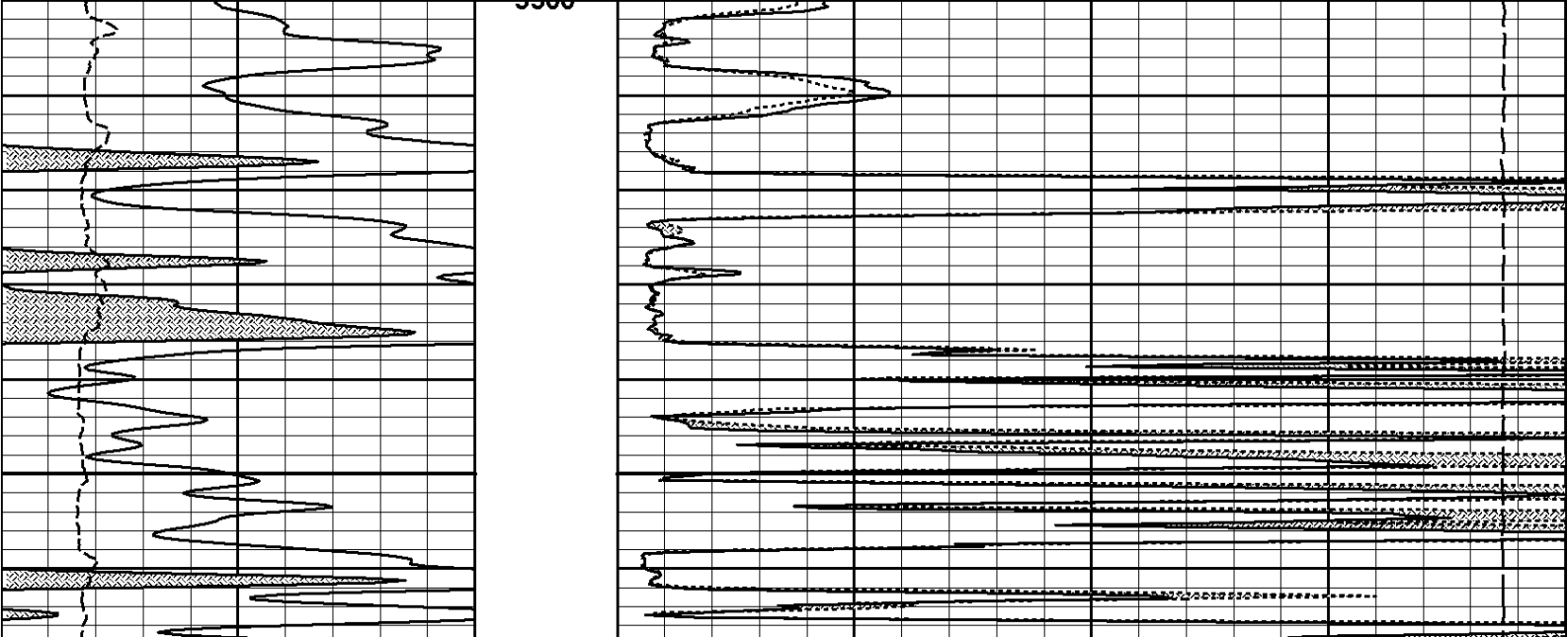


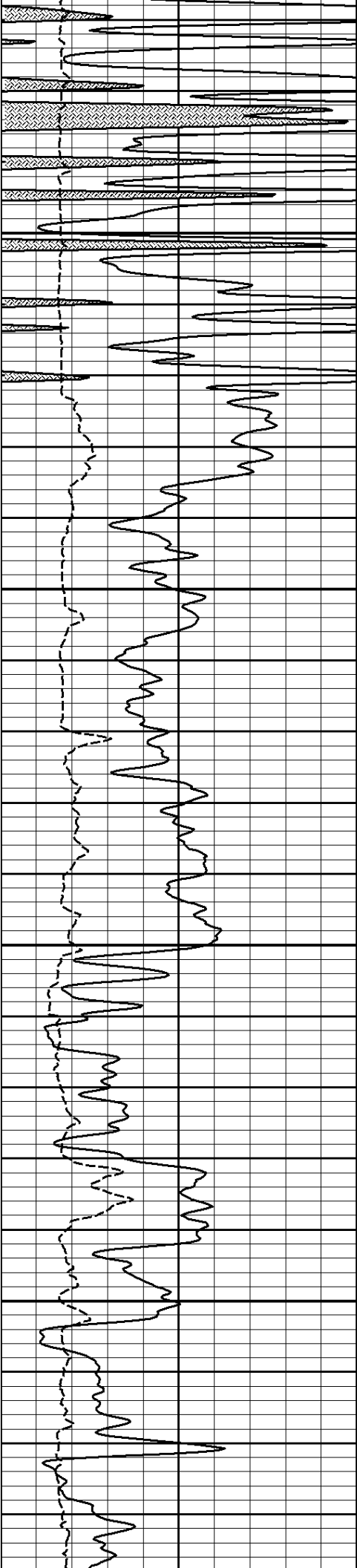
0		Gamma API	150	1 : 240 ft		15K	Tension	0
		api					pounds	
6		Caliper	16		0	MicrologLateral		40
		inches				ohm-metre		
					0	MicrologNormal		40
						ohm-metre		

5 INCH MAIN LOG

REPEAT SECTION

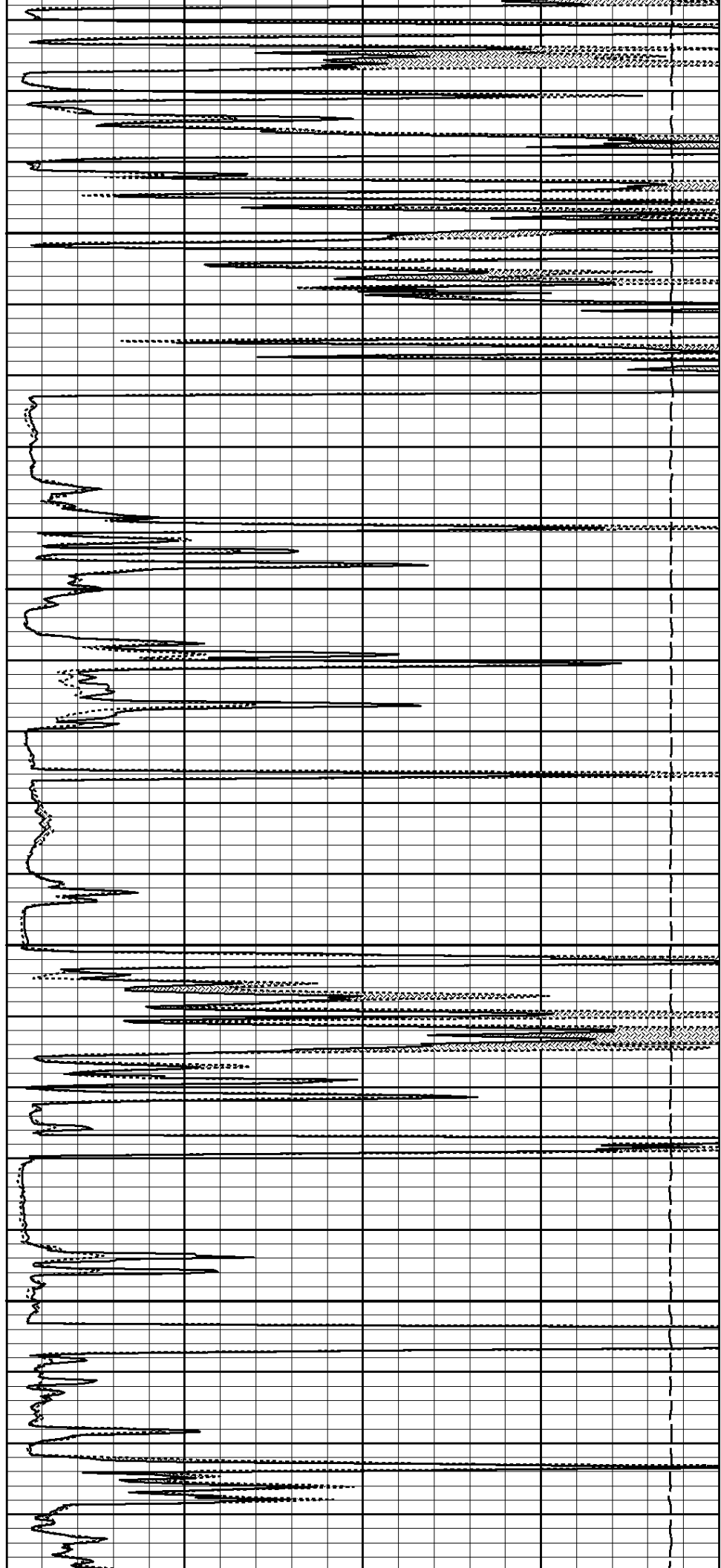
			0		MicrologNormal		40
			ohm-metre				
6	Caliper	16	1 : 240 ft	0	MicrologLateral		40
inches		ohm-metre					
0	Gamma API	150			15K	Tension	0
api		pounds					

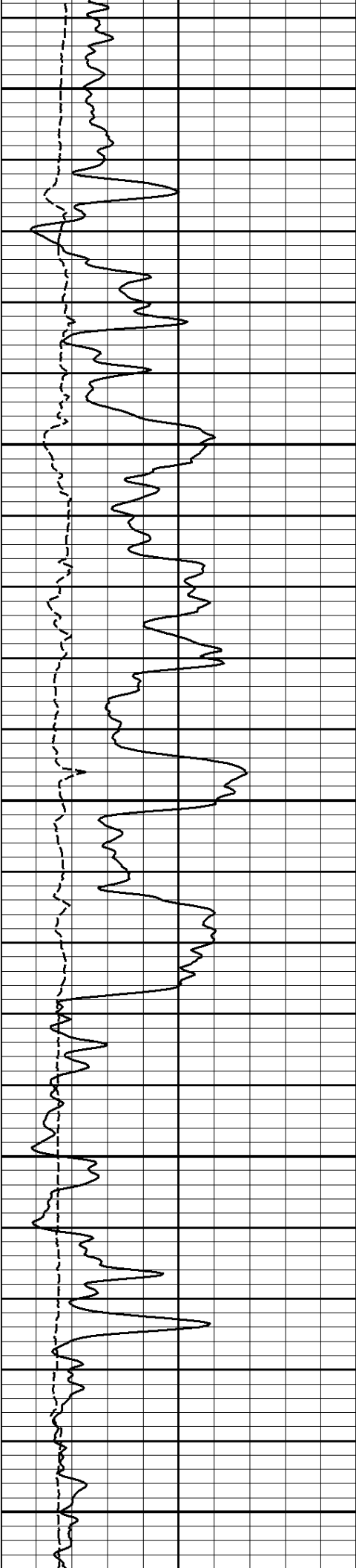




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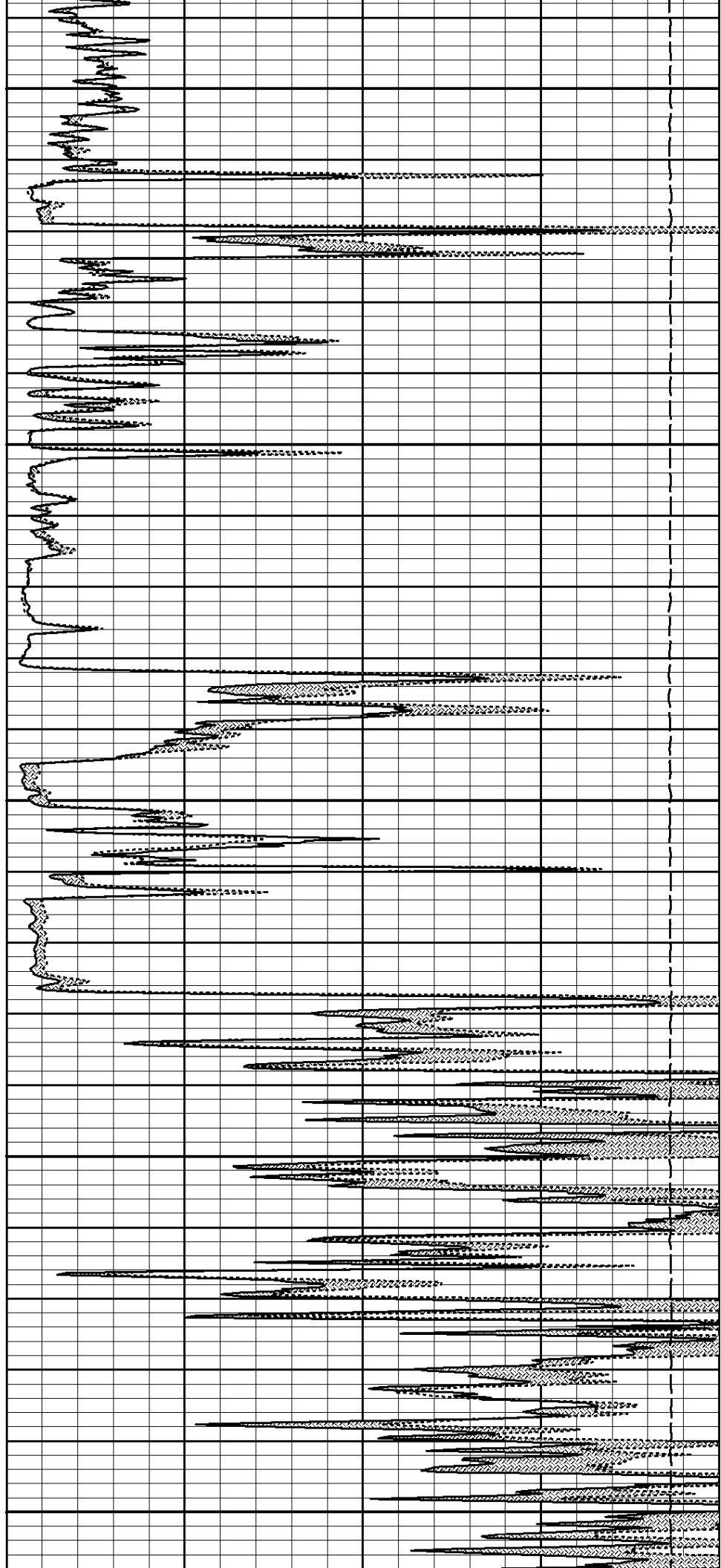


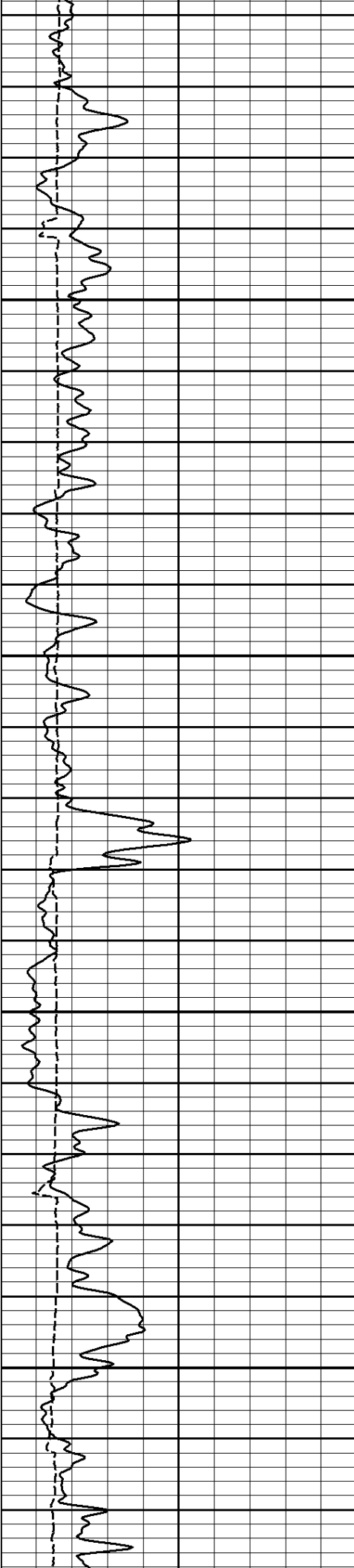


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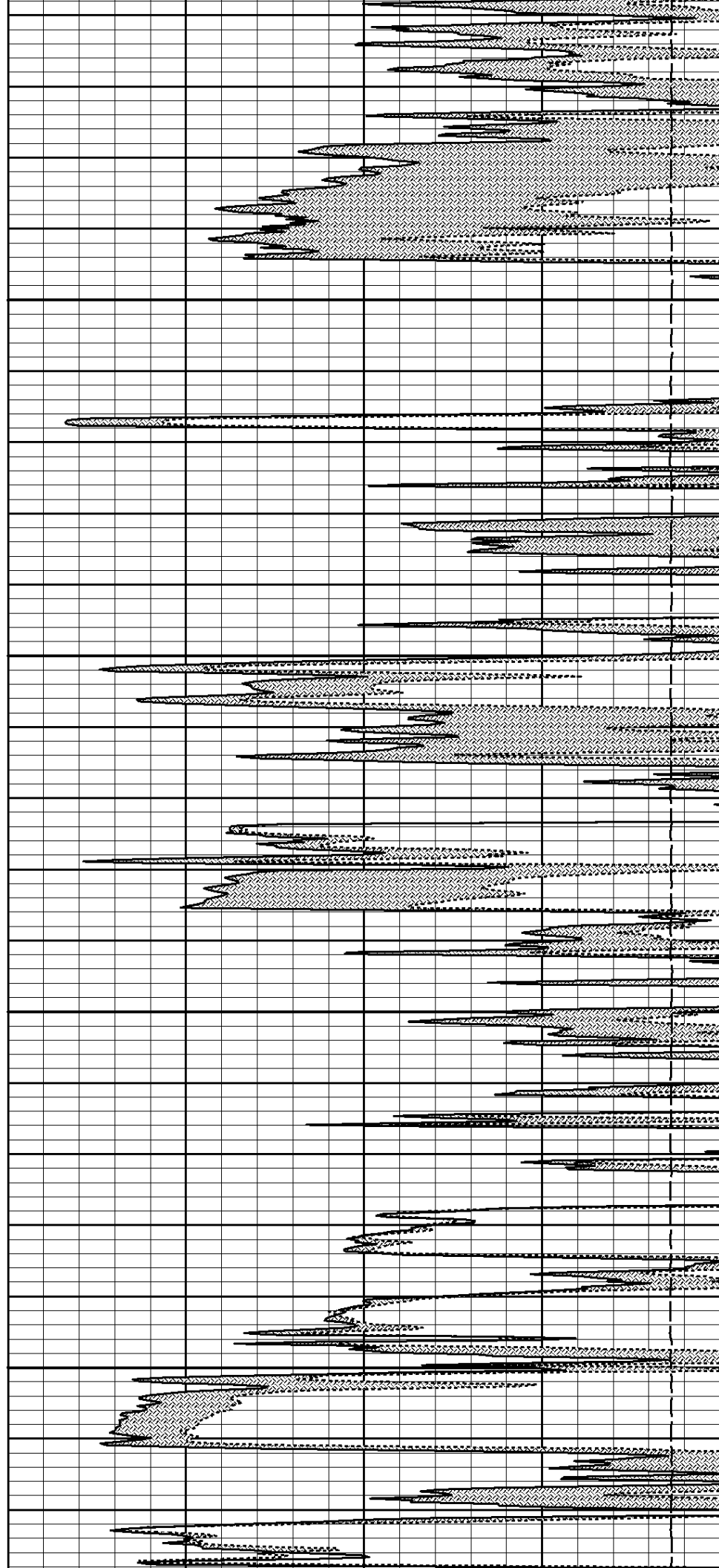
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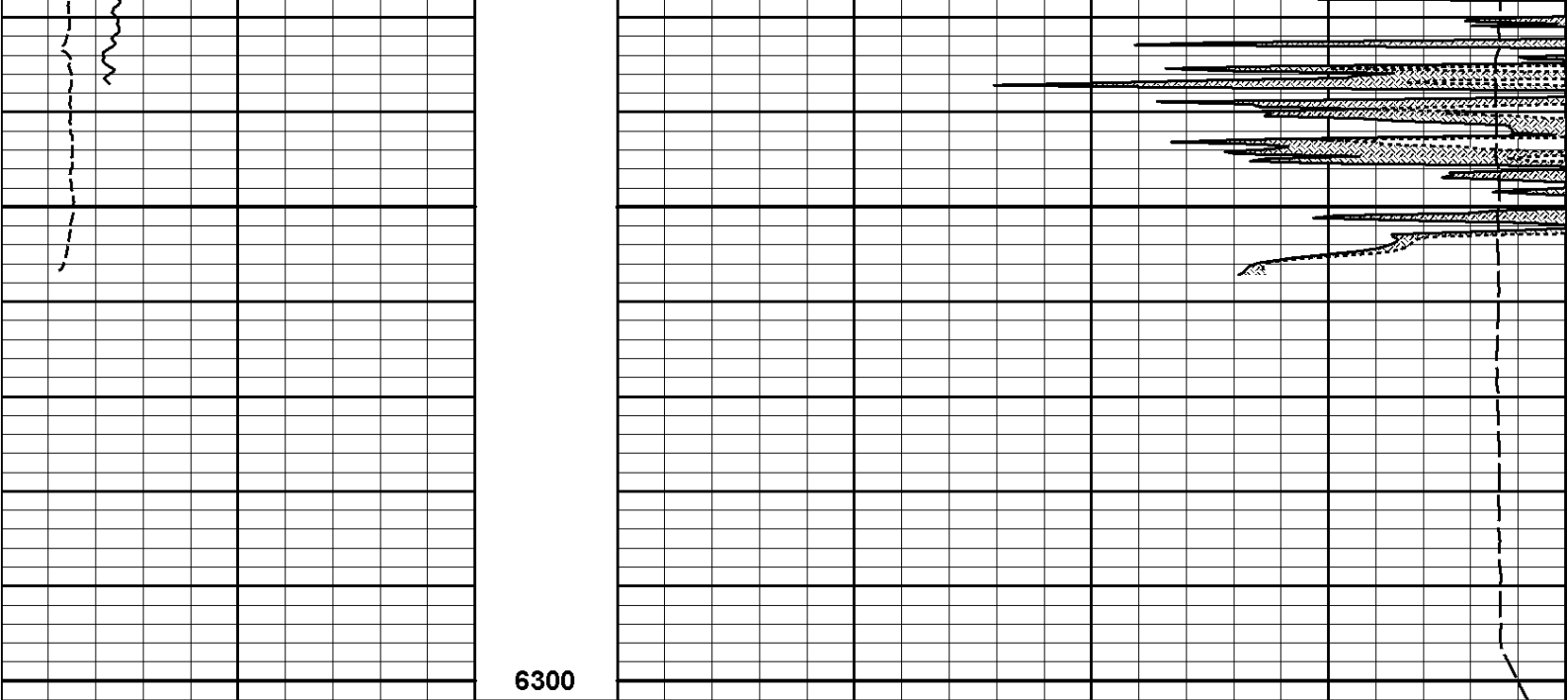




6100

6200





0	Gamma API	150	1 : 240	15K	Tension	0
	api		ft		pounds	
6	Caliper	16		0	MicrologLateral	40
	inches				ohm-metre	
				0	MicrologNormal	40
					ohm-metre	

REPEAT SECTION

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	8.800	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	1800.00	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	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	CSTR	Compressive Strength	1000.00	psia
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	6293.00	ft

SHARED	BHT	Bottom Hole Temperature	150.0	degF
SHARED	SVTM	Navigation and Survey Master Tool	NONE	
SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
SHARED	TEMM	CBM Temperature Master Tool	GTET	
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	
Rwa / CrossPlot	BHSM	Borehole Size Source Tool	SDLT	
Rwa / CrossPlot	ROIN	Input for RO Calculation	Rwa	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
GTET	BHSM	Borehole Size Source Tool	SDLT	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTT	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	
DSNT	BHSM	Borehole Size Source Tool	SDLT	
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
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Pore Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	Limestone 47.6	
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wyllie	
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	RMAX	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
ACRt Sonde	BHSM	Borehole Size Source Tool	SDLT	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	

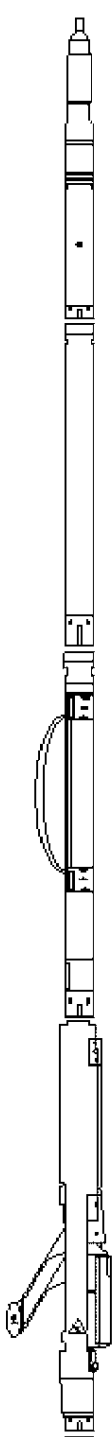
BOTTOM_____

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Date: 18-Oct-16 16:39:29

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS_I 37.50 lbs		Ø 2.750 in		Temperature @ 76.98 ft	2.25 ft	77.23 ft
XOHD-12345678 20.00 lbs		Ø 2.750 in Ø 3.625 in			0.95 ft	74.98 ft
						74.03 ft
SP Sub-10904995 60.00 lbs		Ø 3.625 in		SP @ 72.26 ft	3.74 ft	
				Z-Accelerometer @ 69.84 ft		70.30 ft
GTET-11021139 165.00 lbs		Ø 3.625 in		GammaRay @ 64.23 ft	8.52 ft	
						61.78 ft
DSNT-11020487 174.00 lbs	DSN Decentralizer- 10993115 6.60 lbs	Ø 5.000 in* Ø 3.625 in		DSN Far @ 54.84 ft DSN Near @ 54.09 ft	9.69 ft	
						52.09 ft
SDLT-10951315 360.00 lbs	SDLT Pad-10865873 65.00 lbs Microlog Pad-10951315 8.00 lbs RAM-Cs137-00005155 1.00 lbs	Ø 4.500 in Ø 4.500 in* Ø 4.750 in* Ø 0.800 in*		Microlog @ 44.28 ft SDL Caliper @ 44.09 ft SDL @ 44.08 ft	10.81 ft	
						41.28 ft

IQ Flex-10973274
140.00 lbs

Ø 3.625 in →

5.67 ft

35.61 ft

Centralizer 25-00000001
8.00 lbs

Ø 4.000 in* →



BSAT-10939049
300.00 lbs

Ø 3.625 in →

← **Receiver Array @ 27.09 ft**
← **Sonic Receivers @ 27.09 ft**

15.77 ft

19.83 ft

ACRt Instrument-10996989
50.00 lbs

Centralizer 25-00000002
8.00 lbs

Ø 4.000 in* →
Ø 3.625 in →



5.03 ft

14.80 ft

← **Mud Resistivity @ 13.44 ft**

← **ACRt @ 9.46 ft**

ACRt Sonde-11000156
200.00 lbs

Ø 3.625 in →

14.22 ft

Cabbage Head-00000001
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_HOS	Hostile Cable Head with Load Cell		CH_HOS_I	37.50	2.25	74.98	300.00
XOHD	Hostile to Dits Cross Over		12345678	20.00	0.95	74.03	300.00
SP	SP Sub		10904995	60.00	3.74	70.30	300.00
GTET	Gamma Telemetry Tool		11021139	165.00	8.52	61.78	60.00
DSNT	Dual Spaced Neutron		11020487	174.00	9.69	52.09	60.00
DCNT	DSN Decentralizer		10993115	6.60	5.13	* 55.42	300.00
SDLT	Spectral Density Tool		10951315	360.00	10.81	41.28	60.00
SDLP	Density Insite Pad		10865873	65.00	2.55	* 43.49	60.00
Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137		00005155	1.00	0.80	* 43.72	300.00
MICP	Microlog Pad		10951315	8.00	1.00	* 43.78	60.00
IQF	IQ Flex tool		10973274	140.00	5.67	35.61	300.00
BSAT	Borehole Sonic Array Tool		10939049	300.00	15.77	19.83	60.00
ORCFN	Centralizer - 25 in. Overbody		00000001	8.00	2.08	* 32.31	300.00

OBCEN	Centralizer - 25 in. Overbody	00000001	5.00	2.08	32.87	300.00
ACRt	Array Compensated True Resistivity Instrument Section	10996989	50.00	5.03	14.80	120.00
OBCEN	Centralizer - 25 in. Overbody	00000002	8.00	2.08 *	16.56	300.00
ACRt	Array Compensated True Resistivity Sonde Section	11000156	200.00	14.22	0.58	120.00
CBHD	Cabbage Head	00000001	10.00	0.58	0.00	300.00
Total			1,613.10	77.23		
* Not included in Total Length and Length Accumulation.						
Data: PARITY_1_27\0001 QUAD_1\IDLE					Date: 18-Oct-16 16:41:48	

COMPANY	RAYDON EXPLORATION INC.		
WELL	PARITY 1-27		
FIELD	WILDCAT		
COUNTY	SEWARD	STATE	KANSAS
HALLIBURTON		MICROLOG	