

HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY LOG

COMPANY		OXY USA INC	
WELL		GARDEN CITY V-3	
FIELD		GARDEN CITY	
COUNTY		FINNEY	
STATE		KANSAS	
Permanent Datum		GL	
Log measured from		KB	
Drilling measured from		KB	
Date		20-Dec-12	
Run No.		ONE	
Depth - Driller		5133.00 ft	
Depth - Logger		5130.0 ft	
Bottom - Logged Interval		5120.0 ft	
Top - Logged Interval		1811.0 ft	
Casing - Driller		8.625 in @ 1812.0 ft	
Casing - Logger		1811.0 ft	
Bit Size		7.875 in @	
Type Fluid in Hole		WATER BASED MUD	
Density		8.8 ppq 45.00 s/qt	
PH		9.20 pH 12.4 cp/m	
Source of Sample		FLOWLINE	
Rm @ Meas. Temperature		1.200 ohmm @ 65.00 degF	
Rmf @ Meas. Temperature		1.05 ohmm @ 65.00 degF	
Rmc @ Meas. Temperature		1.400 ohmm @ 65.00 degF	
Source Rmf		MEASURED	
Rm @ BHT		0.72 ohmm @ 113.0 degF	
Time Since Circulation		8.0 hr	
Time on Bottom		20-Dec-12 21:32	
Max. Rec. Temperature		113.0 degF @ 5130.0 ft	
Equipment		10782954 LIBERAL	
Recorded By		T. HYDE	
Witnessed By		J. GILL	

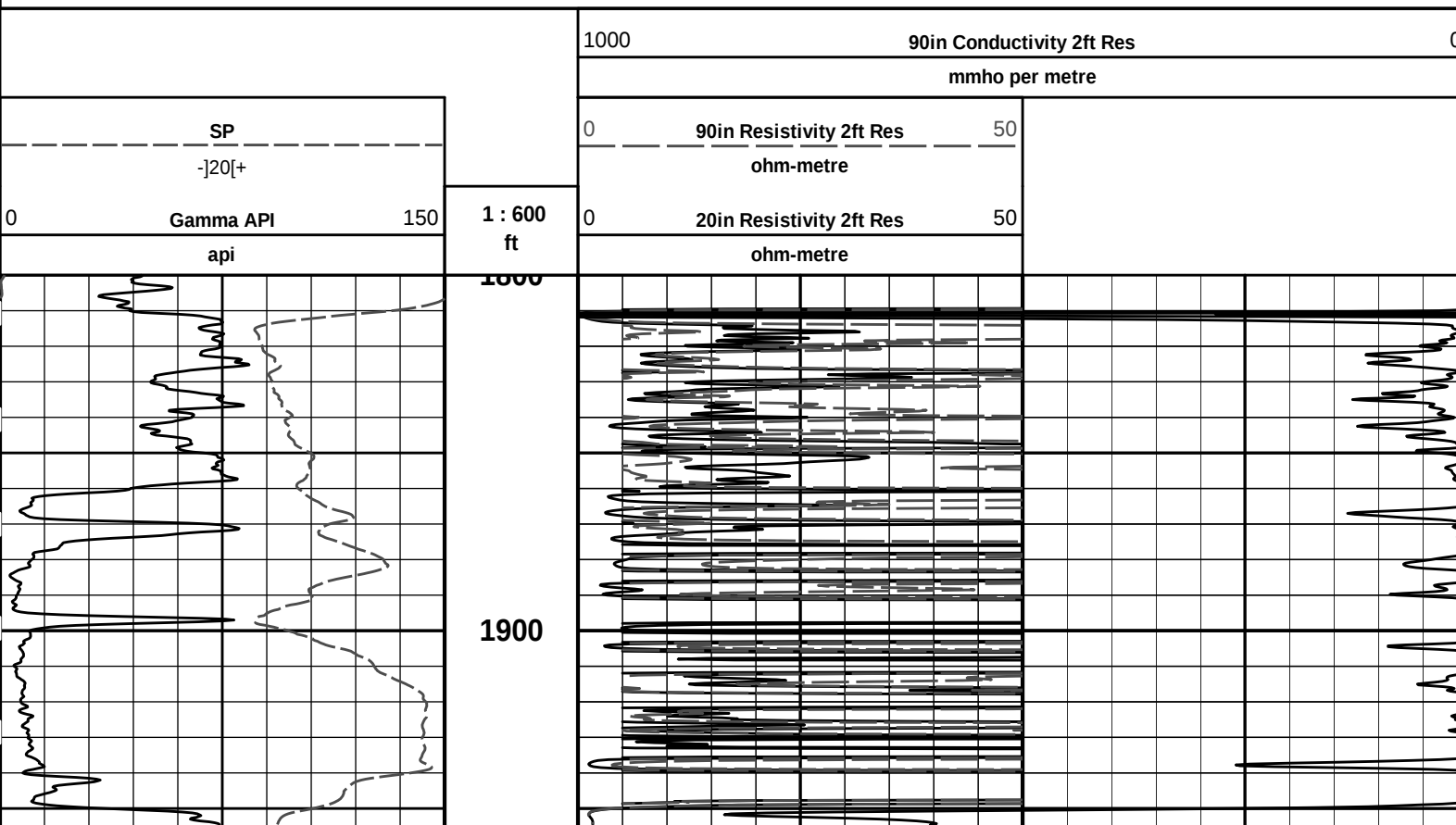
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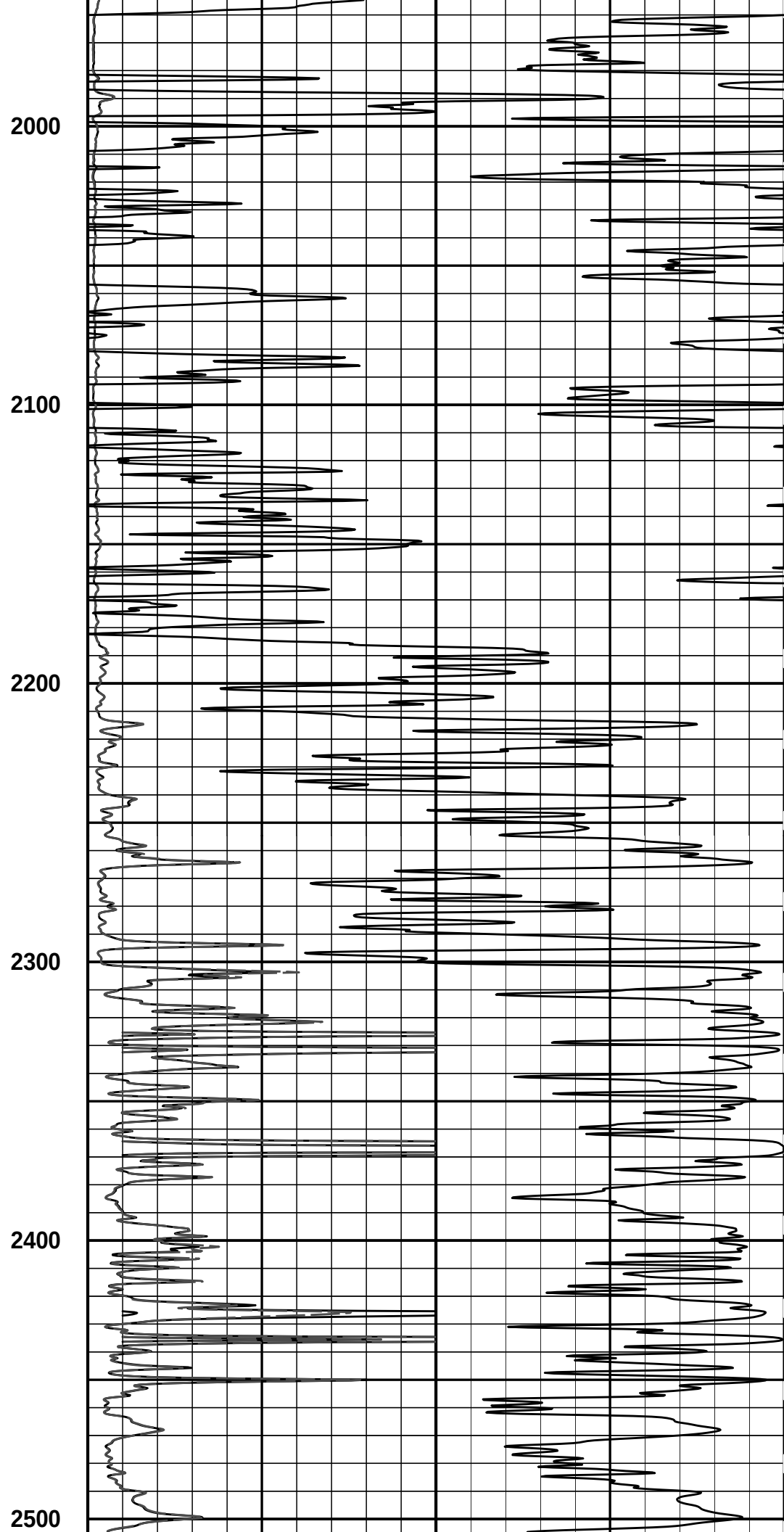
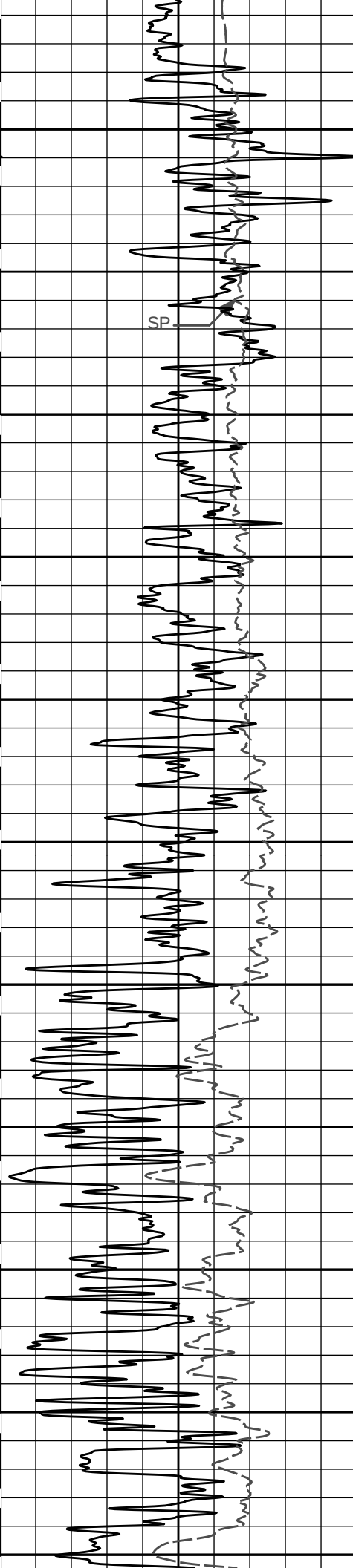
Service Ticket No.: 900078355				API Serial No.: 15-055-22175-00-00				PGM Version: WL INSITE R3.6.0 (Build 3)											
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES													
Date		Sample No.				Type Log		Depth		Scale Up Hole		Scale Down Hole							
Depth-Driller																			
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		N/A		1.5" S.O.		N/A					
Rmc @ Meas. Temp.		@		@				I776											
Source Rmf		Rmc						S10929775											
Rm @ BHT		@		@															
Rmf @ BHT		@		@															
Rmc @ BHT		@		@															
EQUIPMENT DATA																			
GAMMA				ACOUSTIC				DENSITY				NEUTRON							
Run No.		ONE		Run No.				Run No.				Run No.							
Serial No.		10811258		Serial No.				Serial No.				Serial No.							
Model No.		GTET		Model No.				Model No.				Model No.							
Diameter		3.625"		No. of Cent.				Diameter				Diameter							
Detector Model No.		T-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																			
GENERAL				GAMMA				ACOUSTIC				DENSITY				NEUTRON			

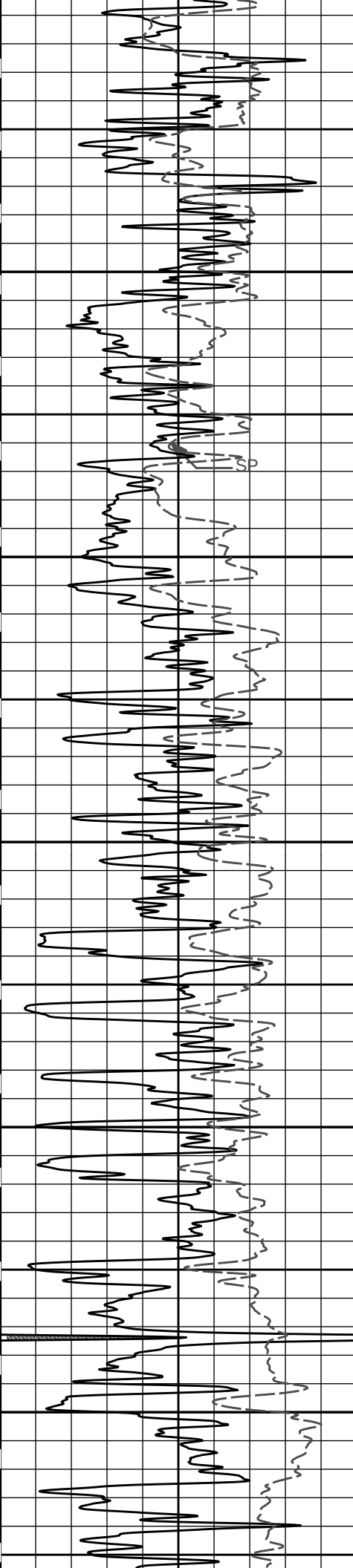
GENERAL			GAMMA	ACOUSTIC				DENSITY		NEUTRON				
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	5130	1811	REC	0	150									
DIRECTIONAL INFORMATION														
Maximum Deviation @									KOP @					
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING														
CHLORIDES REPORTED AT 3800 MG/L														
TODAY'S CREW V. JAIME M. GRAHAM														
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES LIBERAL, KANSAS 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.														
HALLIBURTON														

HALLIBURTON	Plot Time: 20-Dec-12 23:25:42 Plot Range: 1800 ft to 5133.25 ft Data: GARDEN_CTY_V3\Well Based\DAQ-0001-004\ Plot File: \\LOCAL-1\GARDEN_CTY_V3\0001 SP-GTET-DSNT-SDLT-FLEX-BSAT-ACRT-CH\ACRT\ACRT_2.lib
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2 INCH MAIN LOG







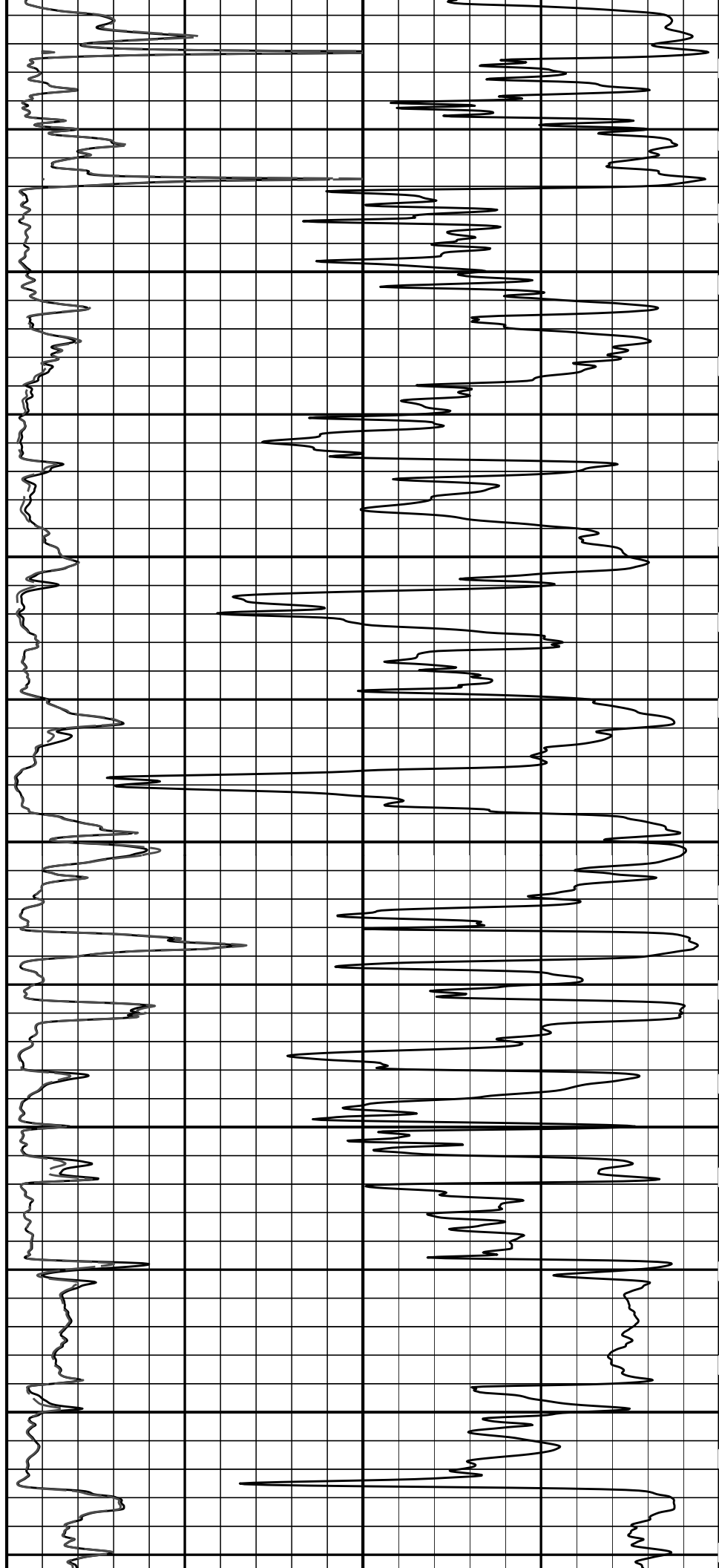
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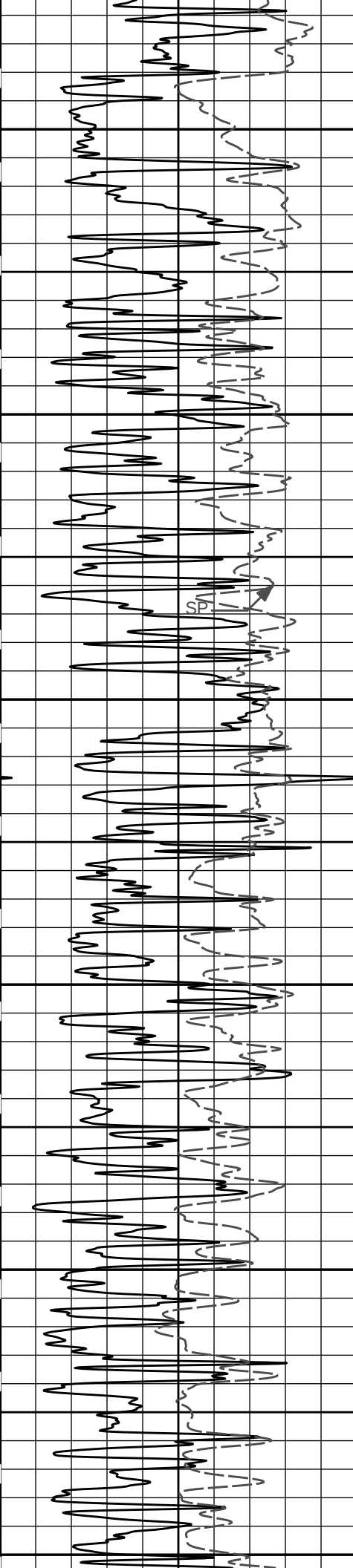
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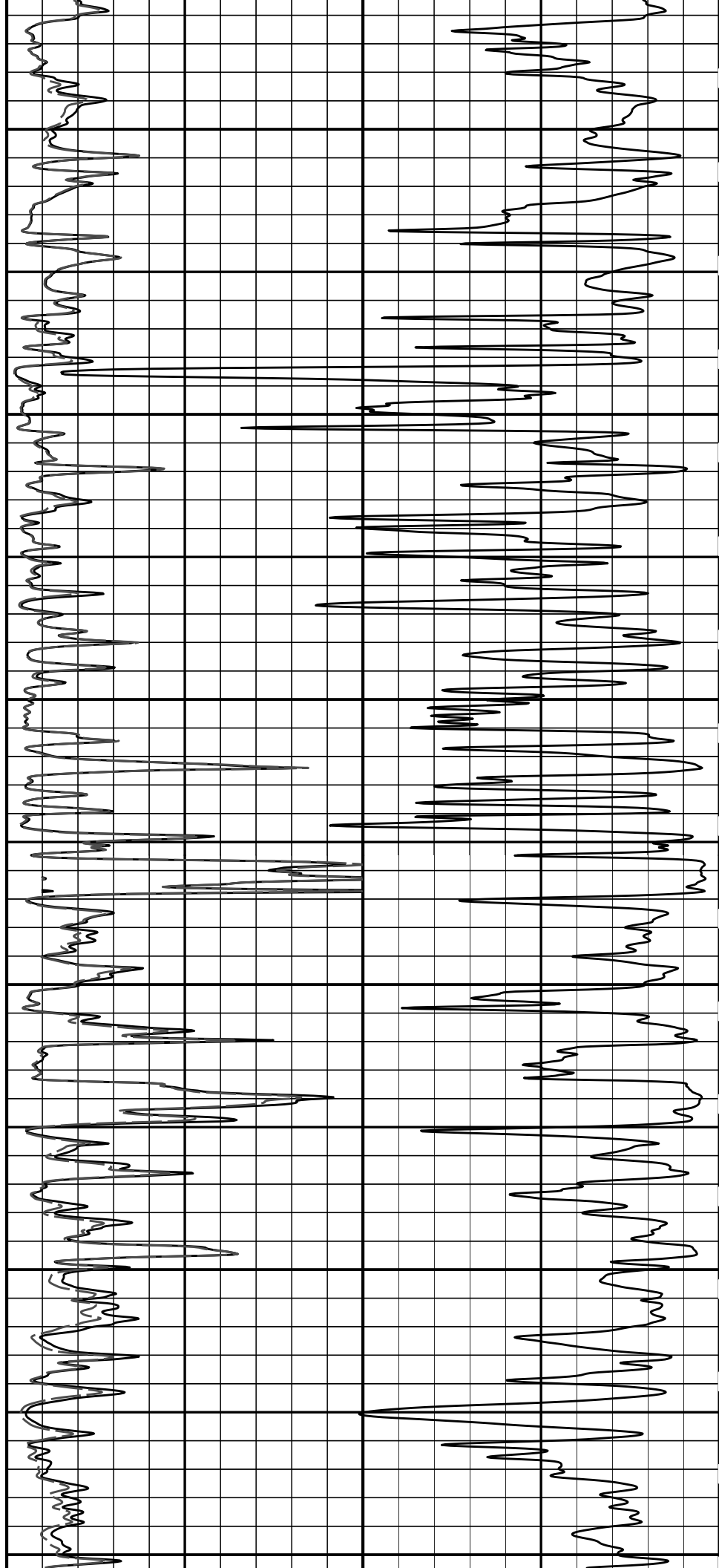
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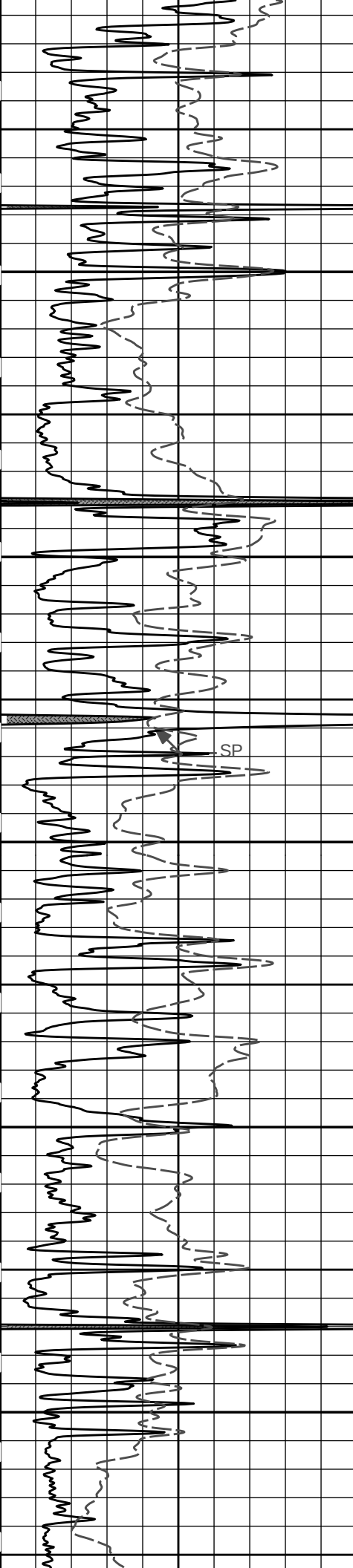
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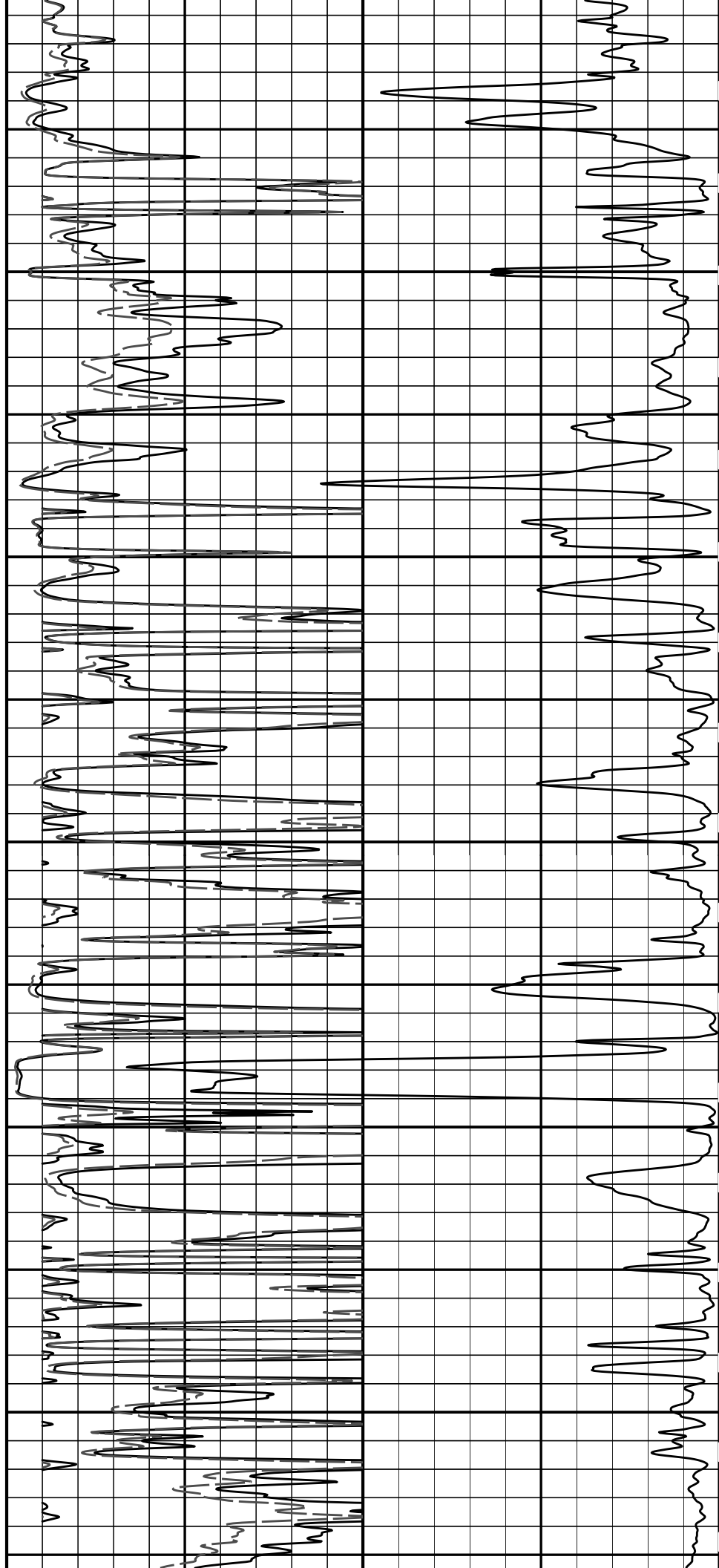
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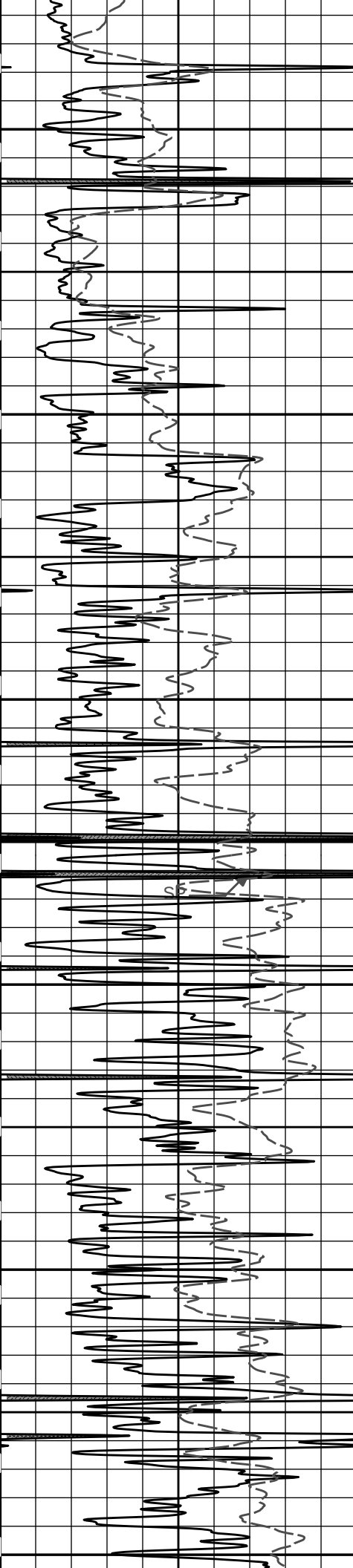
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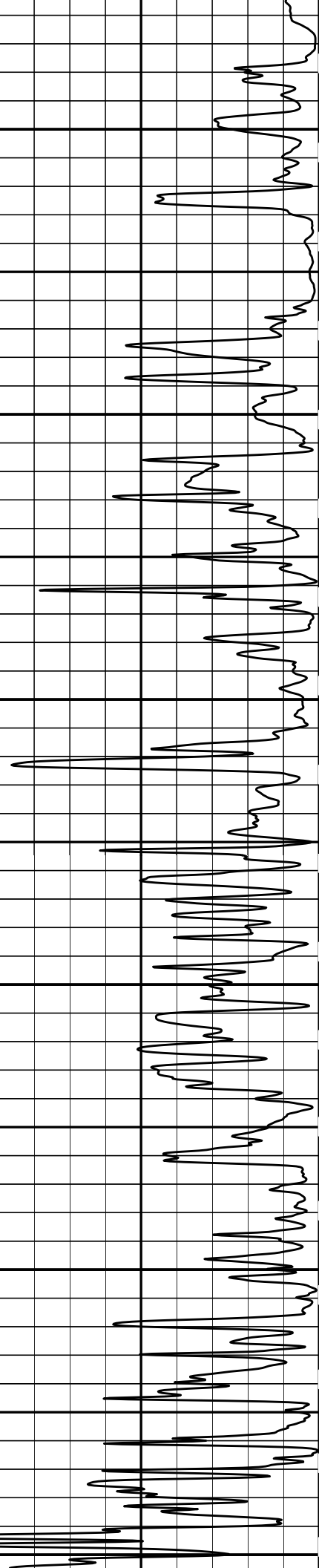
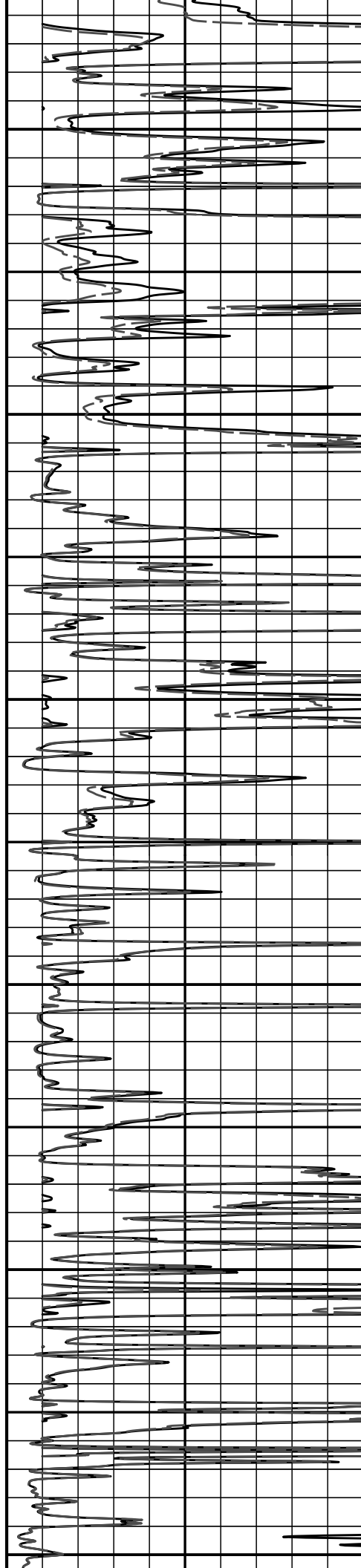
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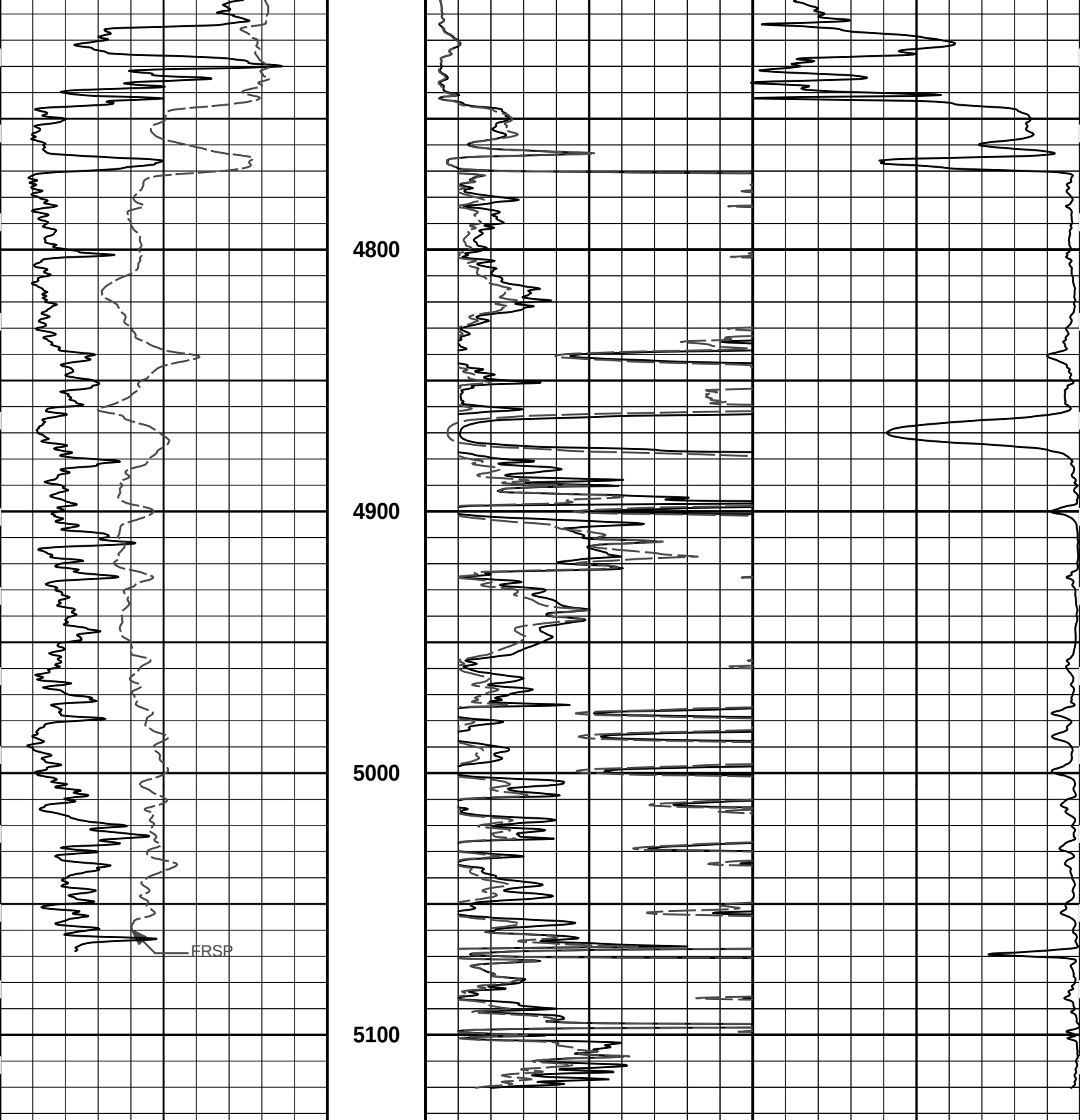
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4600

4700





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

HALLIBURTON

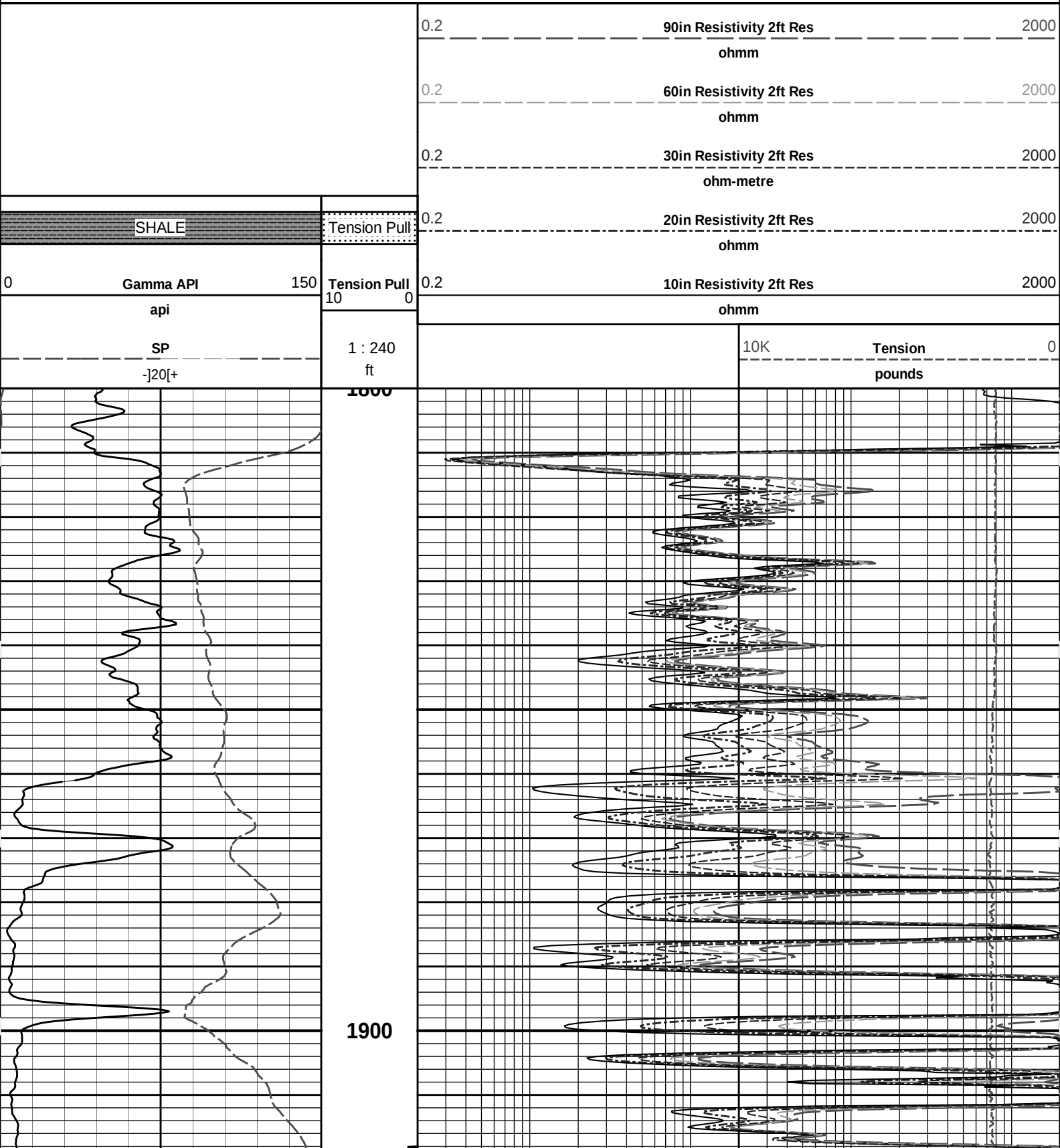
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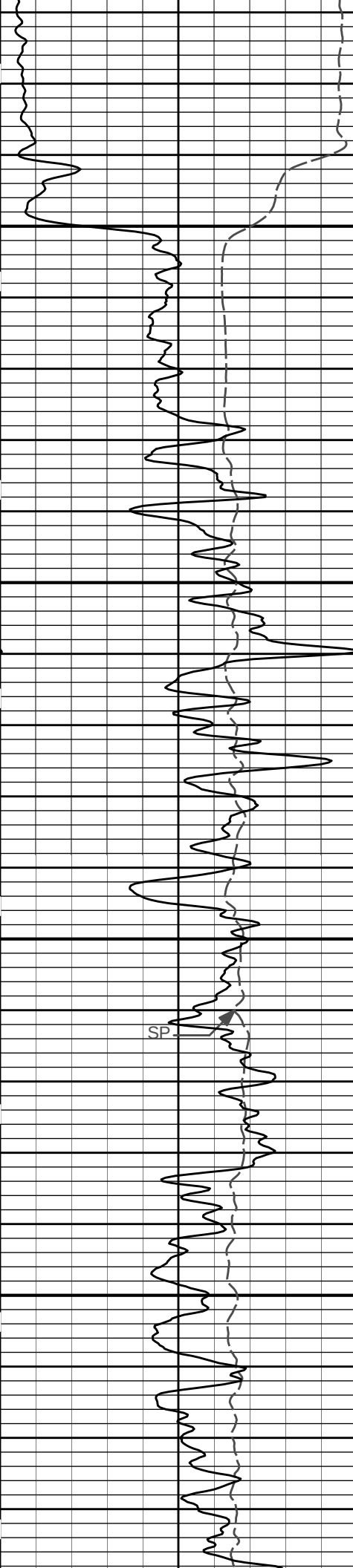
2 INCH MAIN LOG

HALLIBURTON

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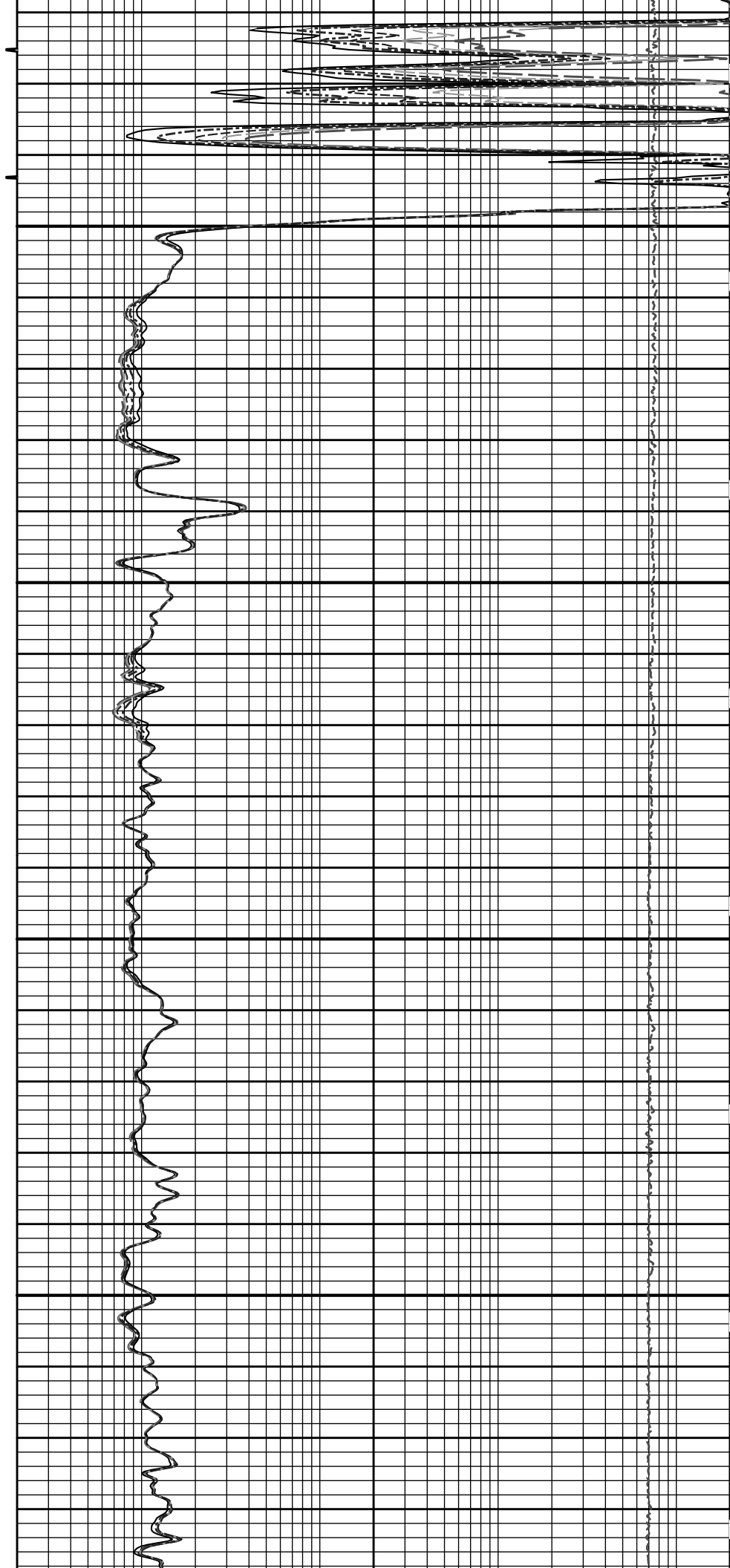
5 INCH MAIN LOG

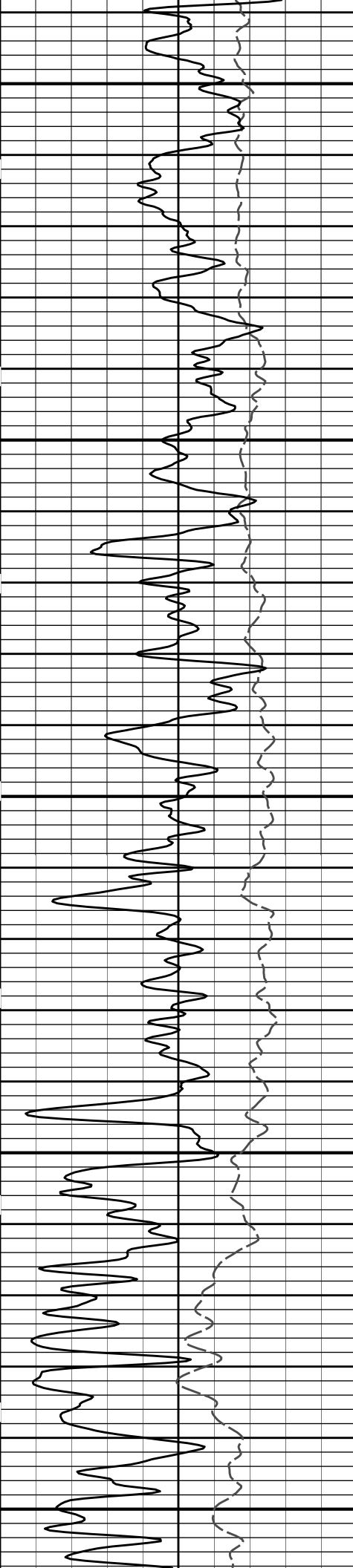




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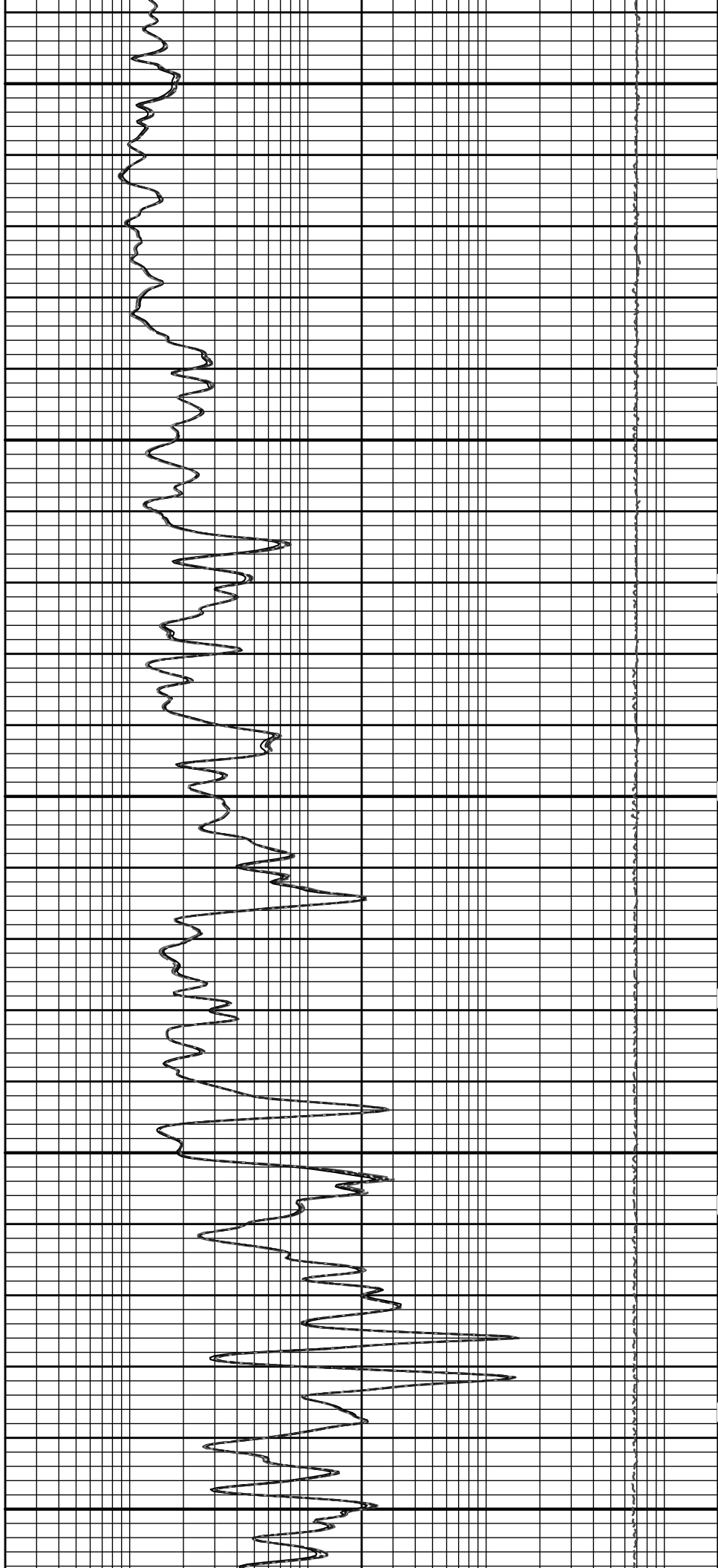
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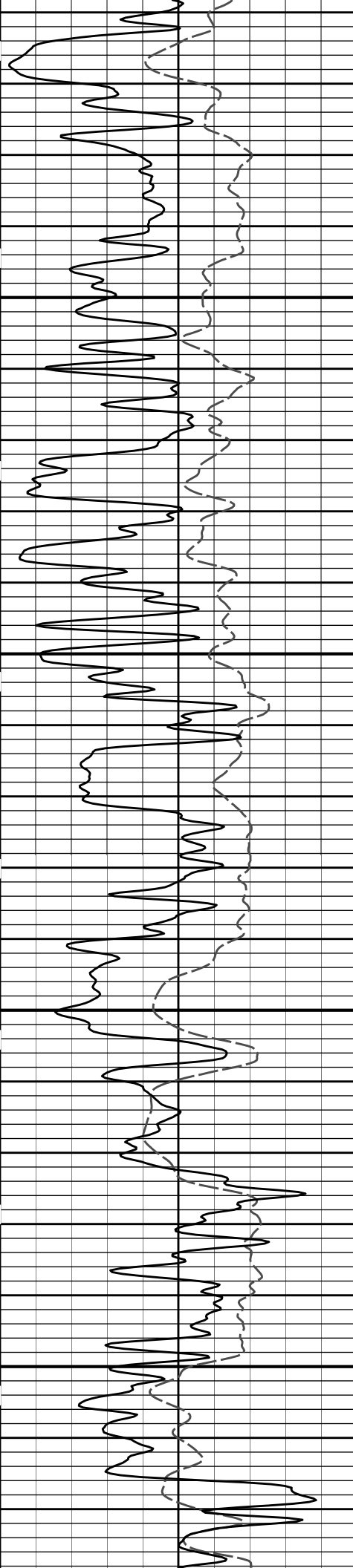




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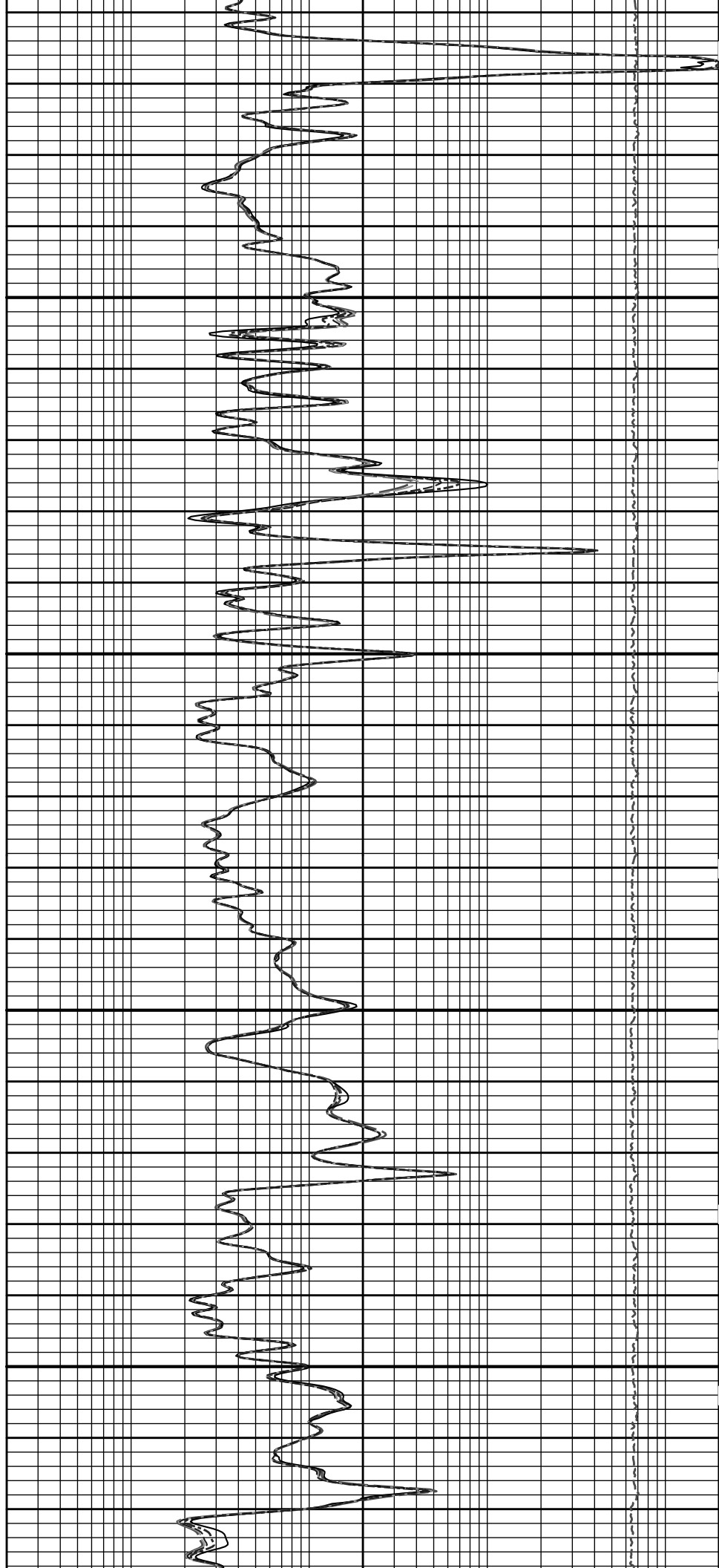
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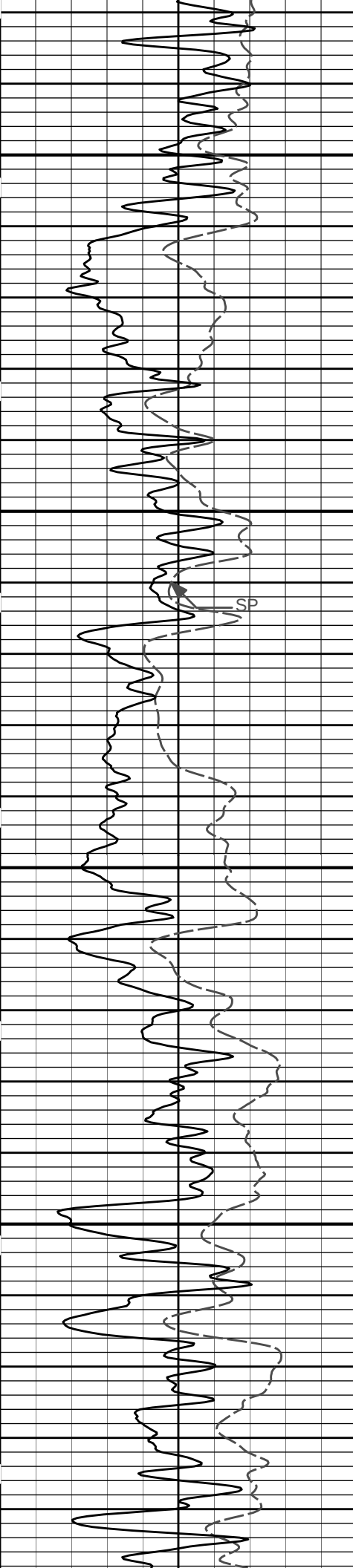




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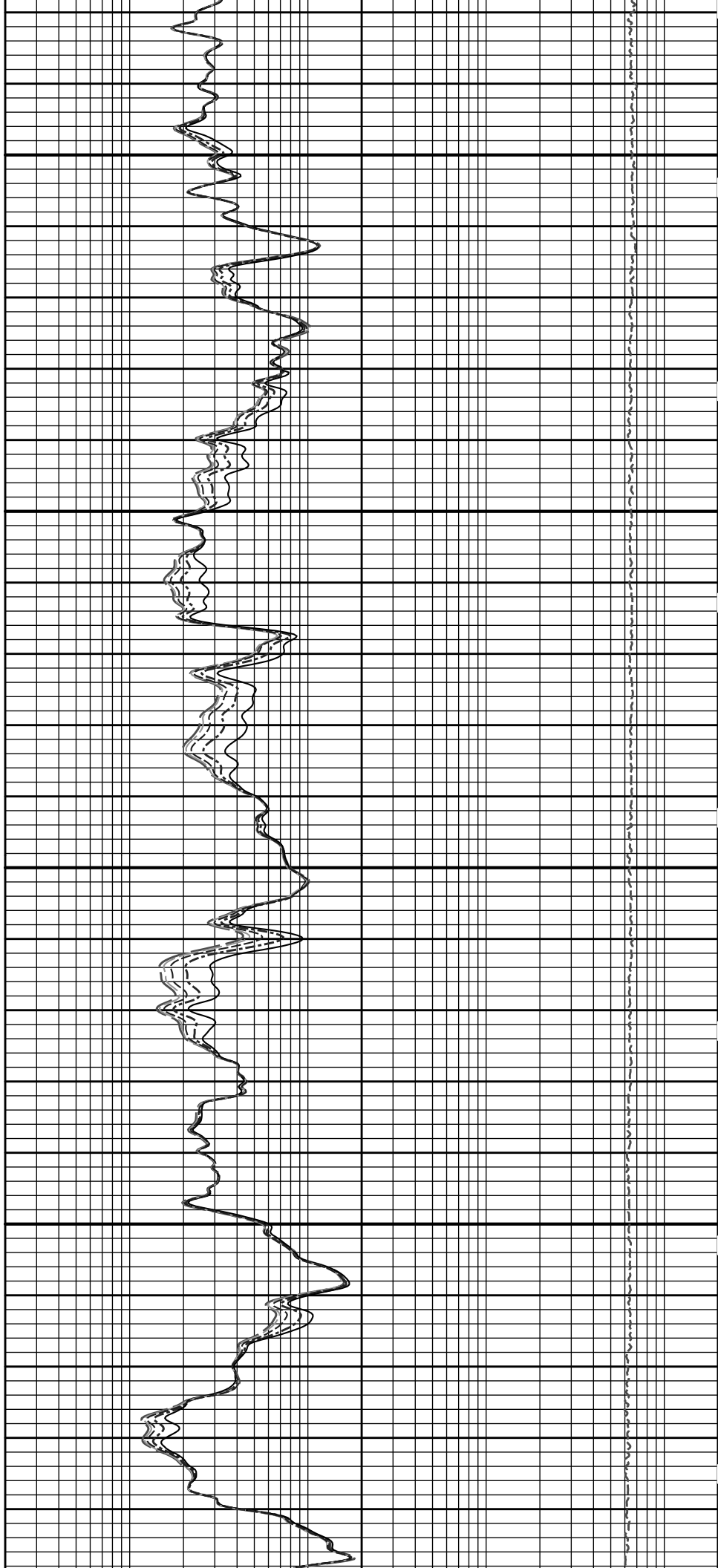
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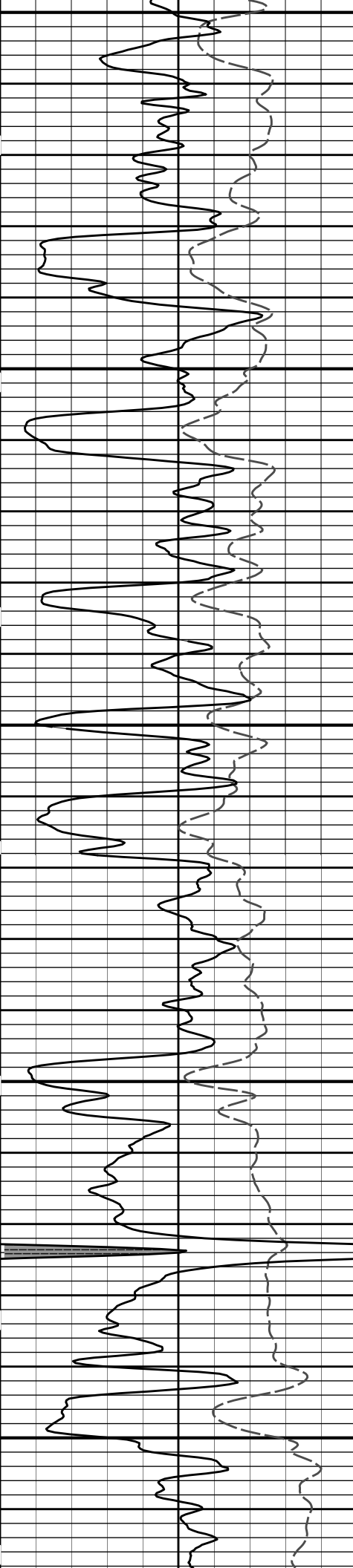




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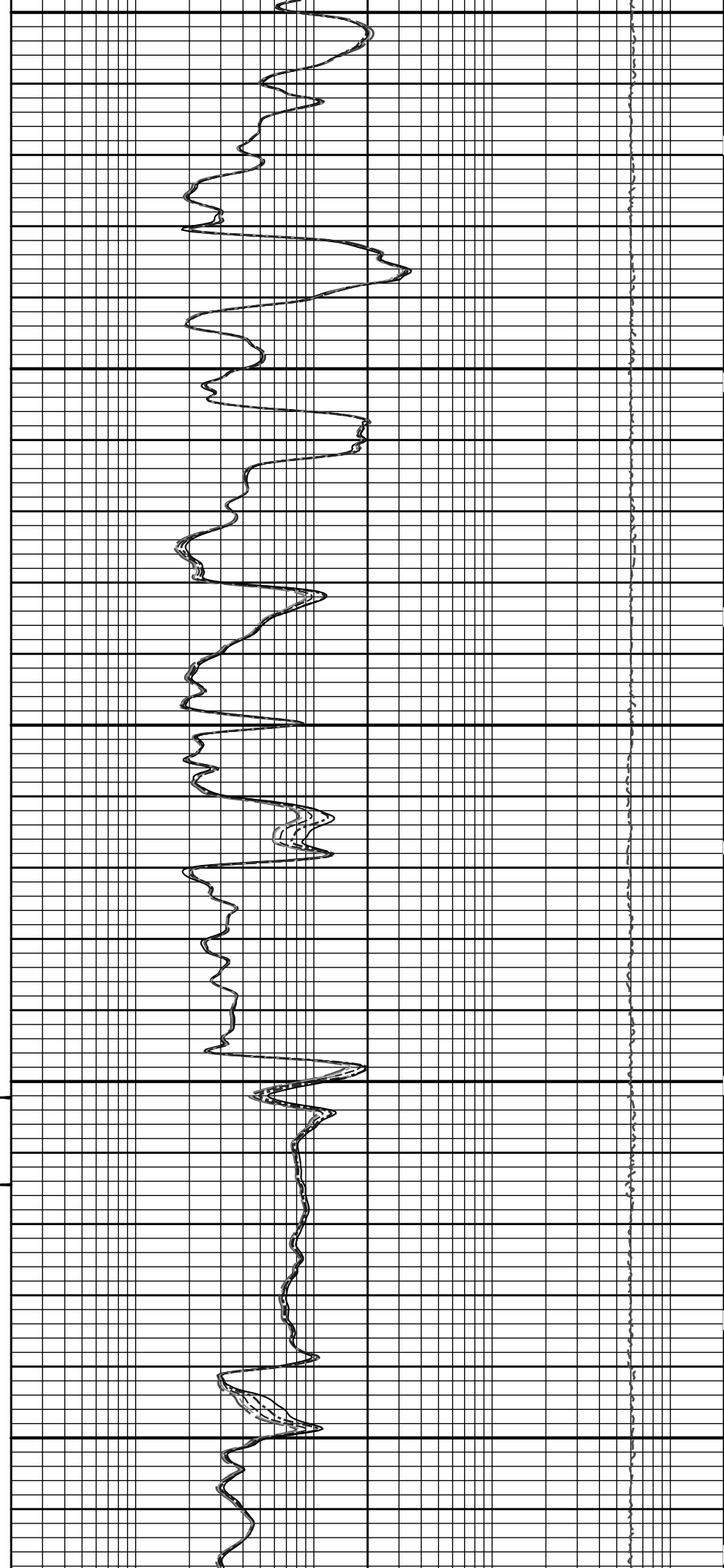


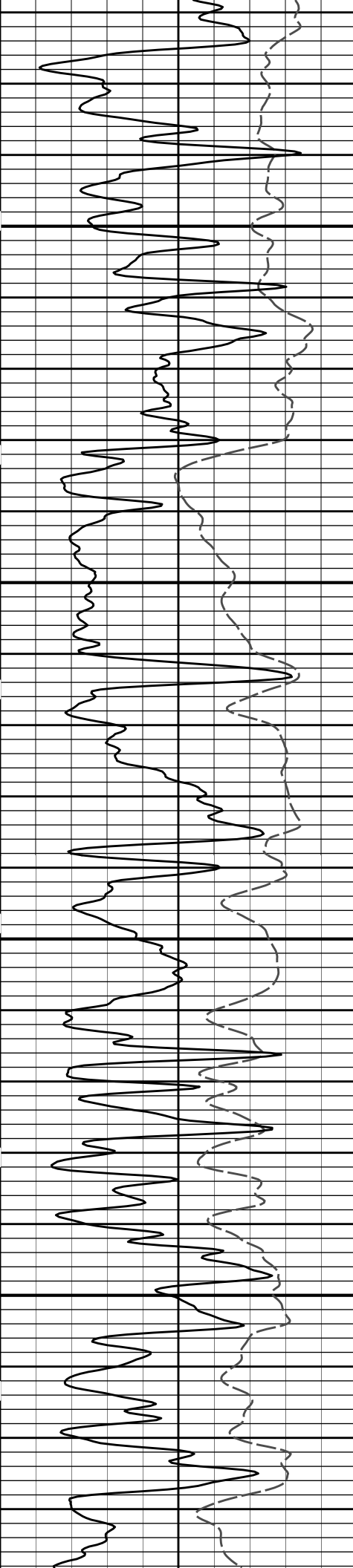


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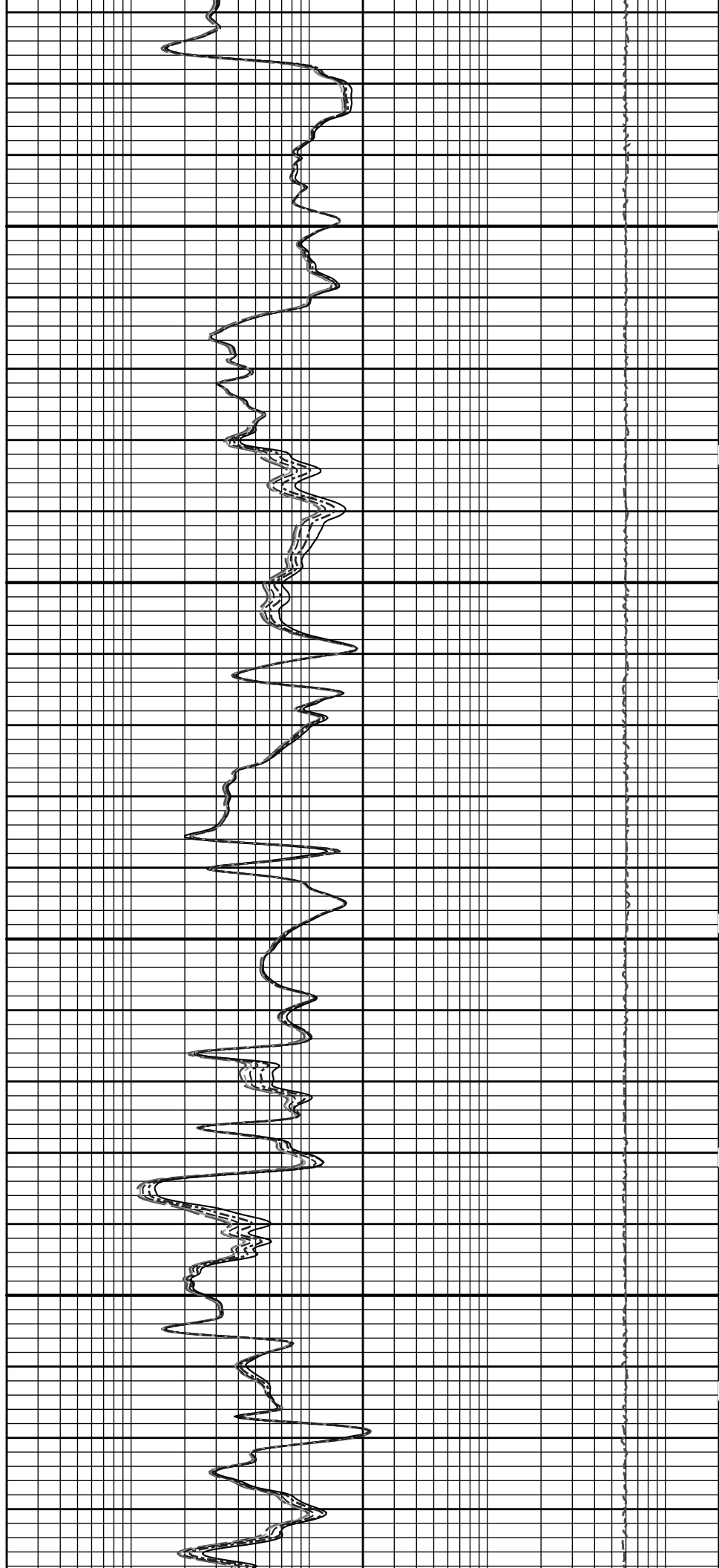
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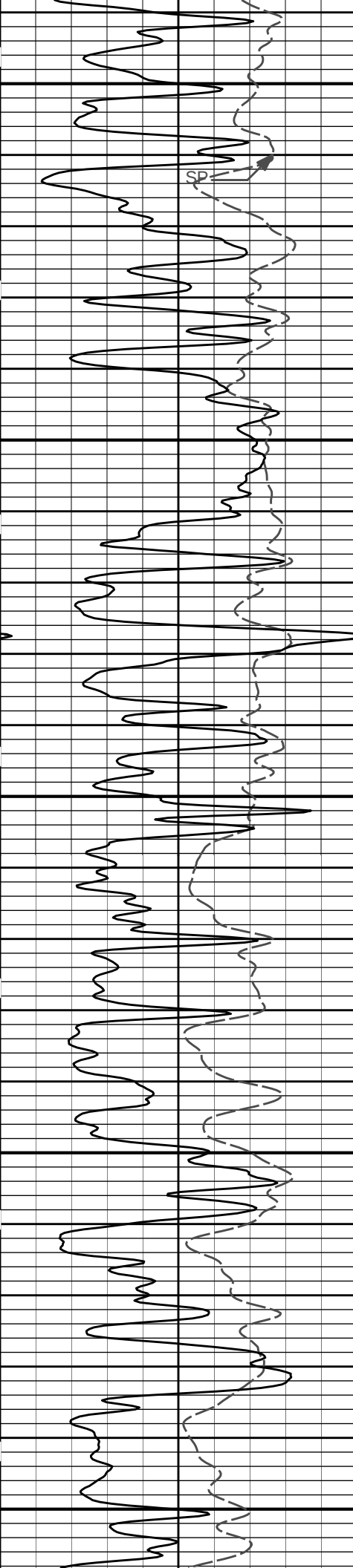




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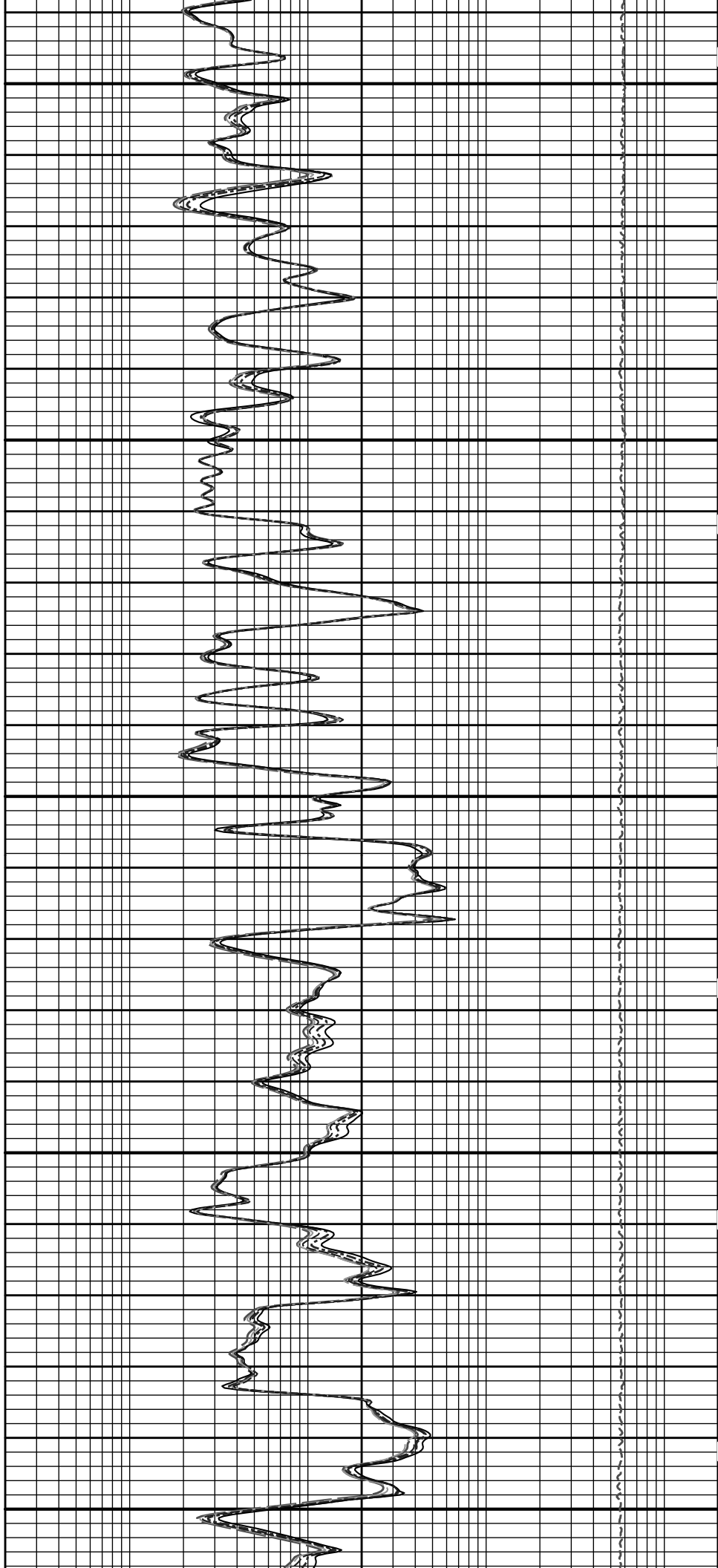


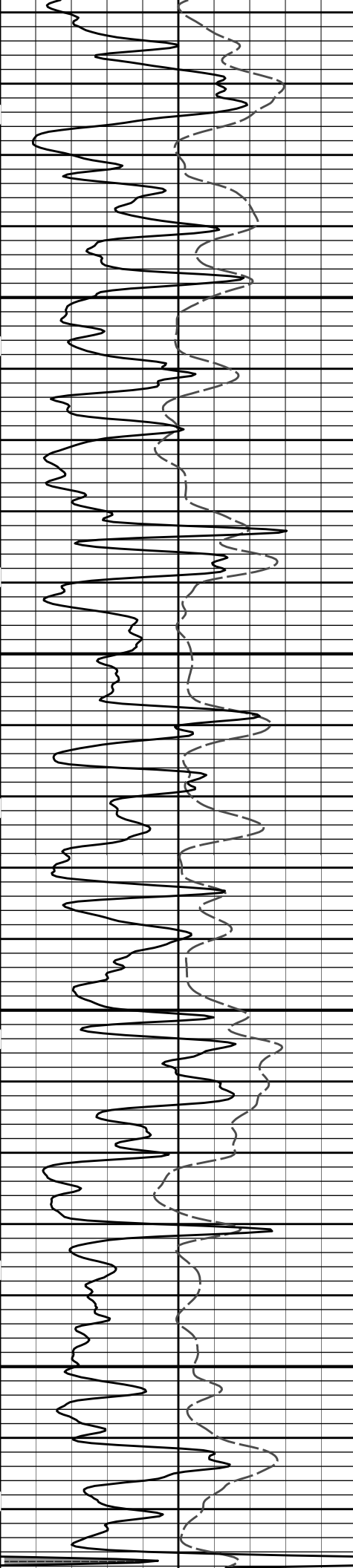
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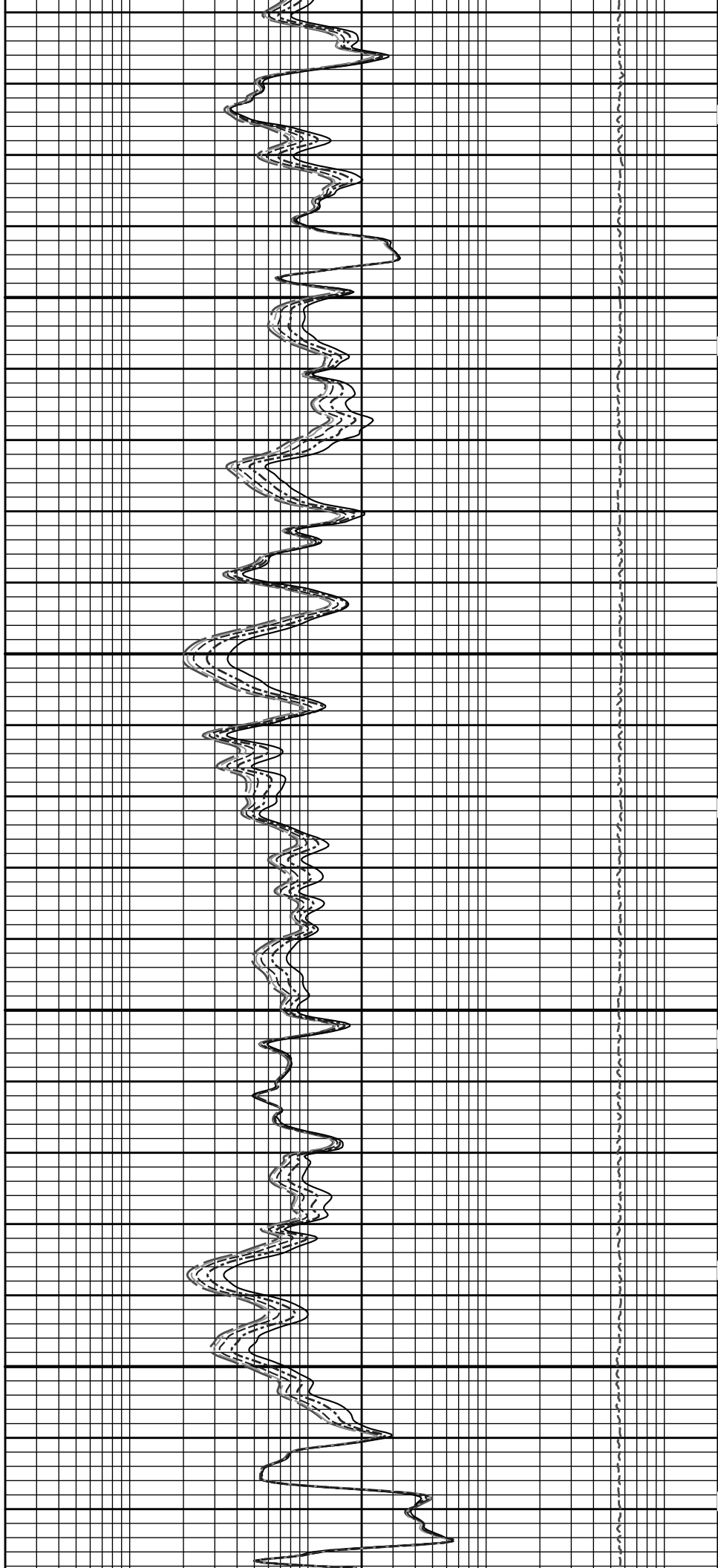
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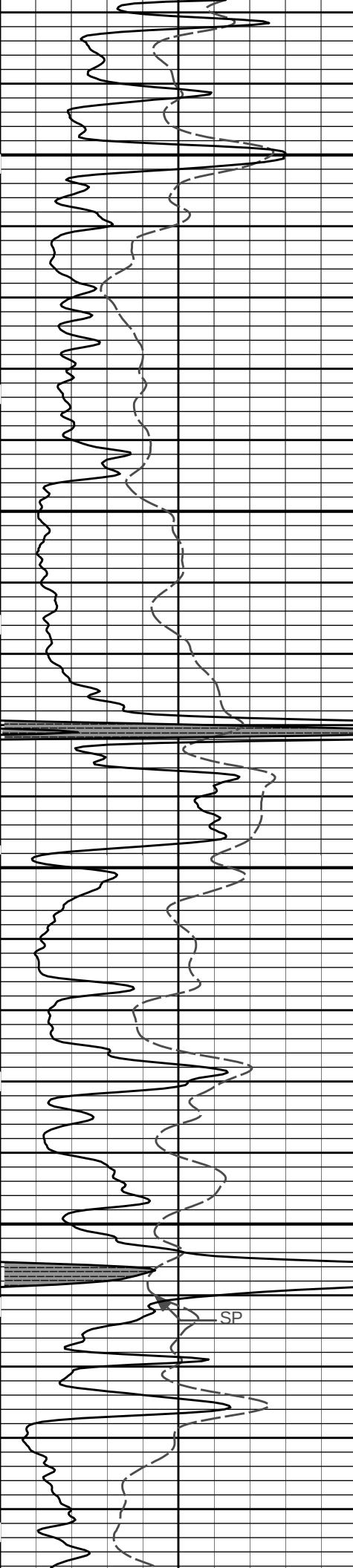




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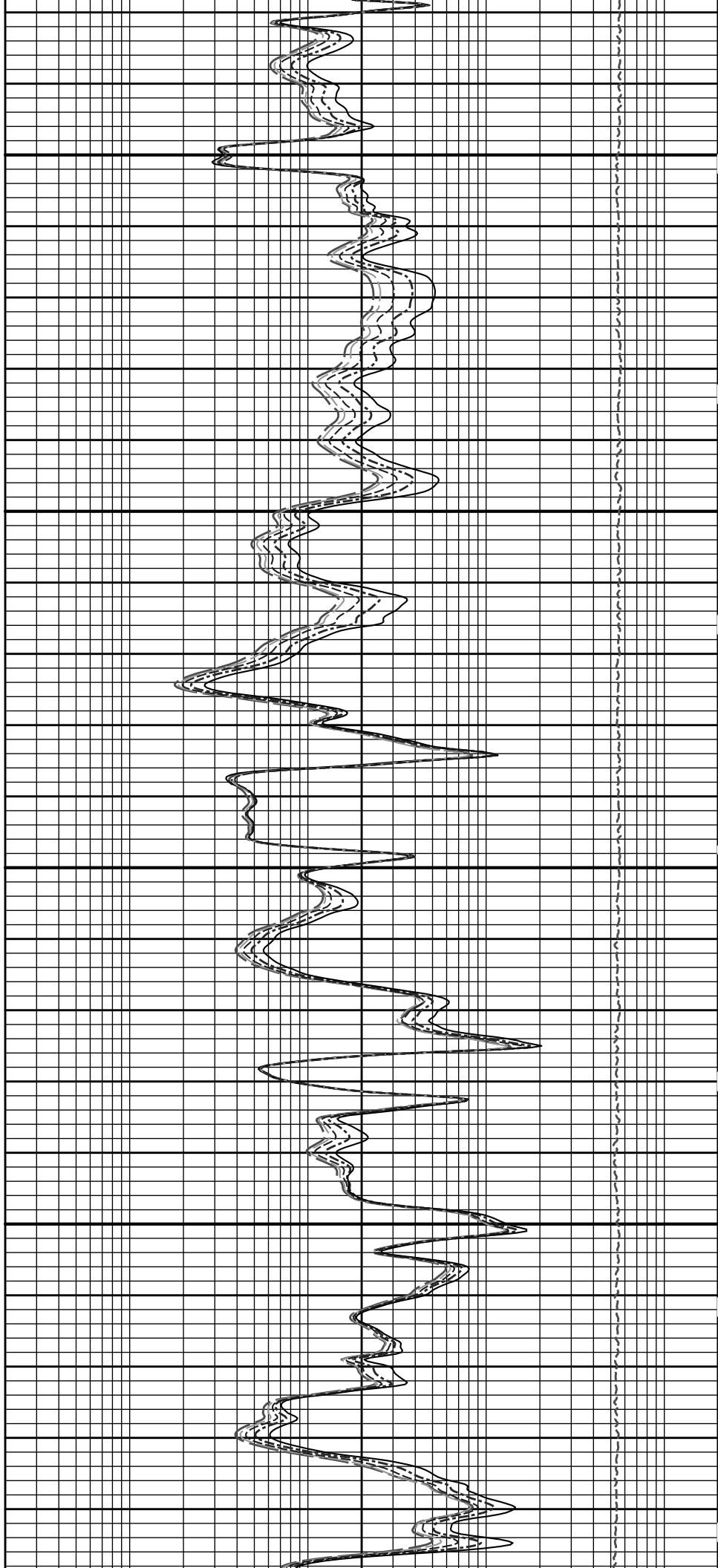
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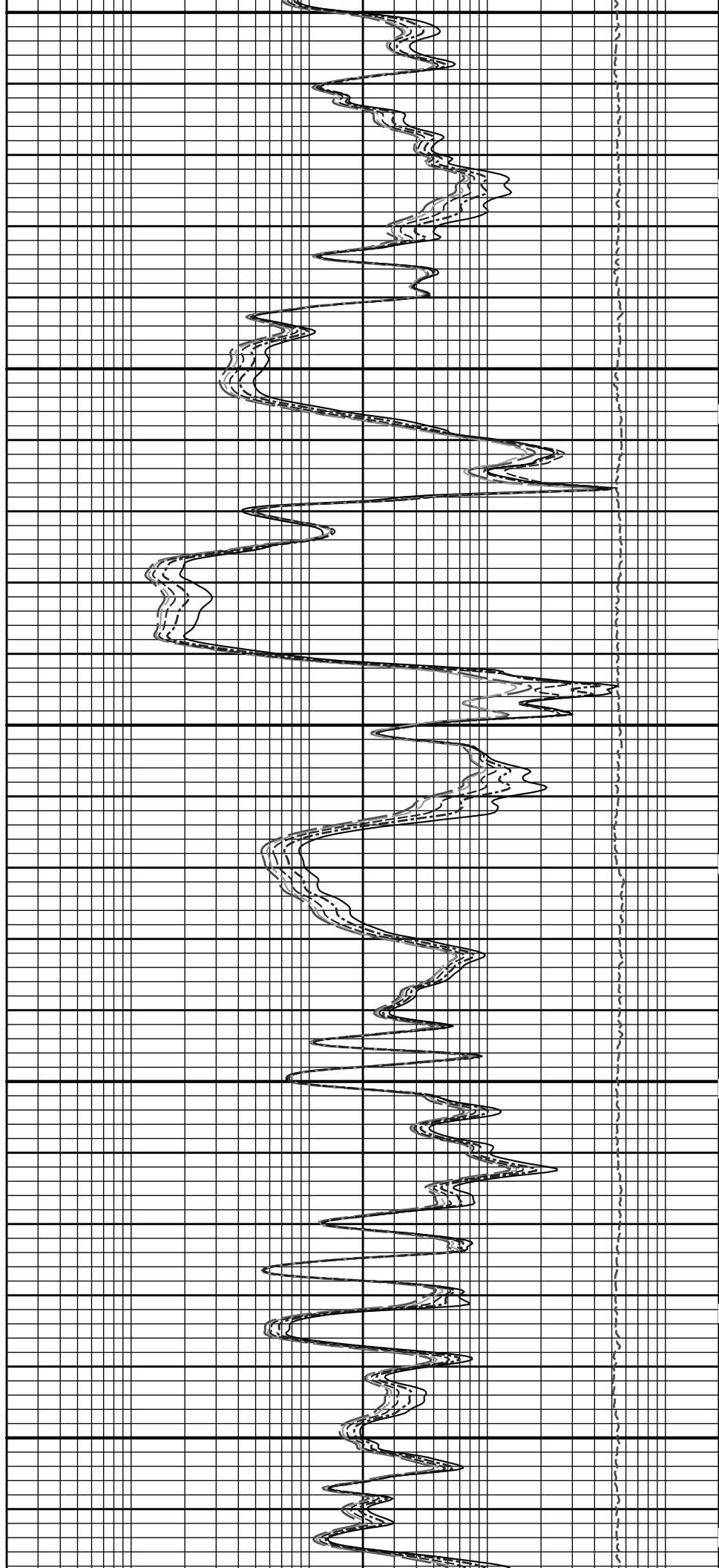


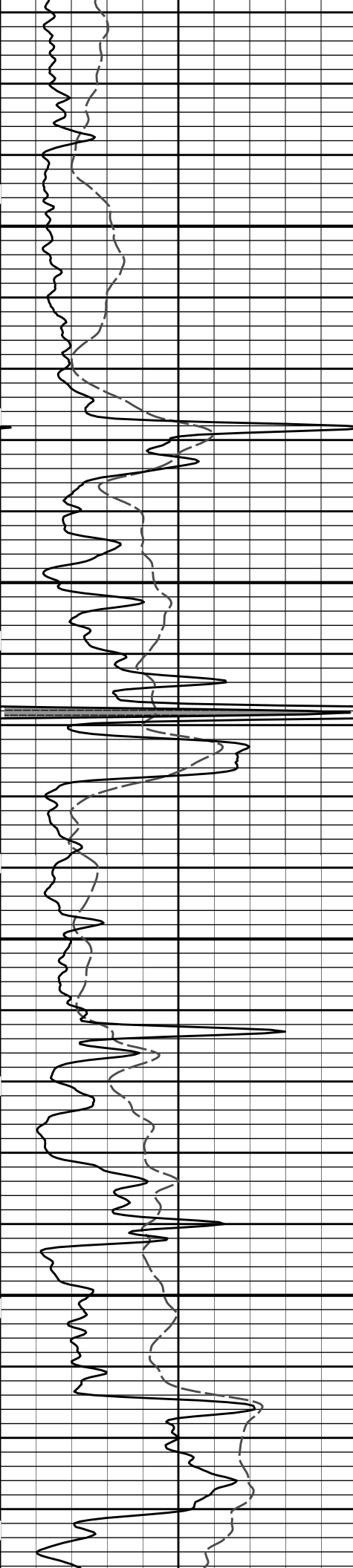


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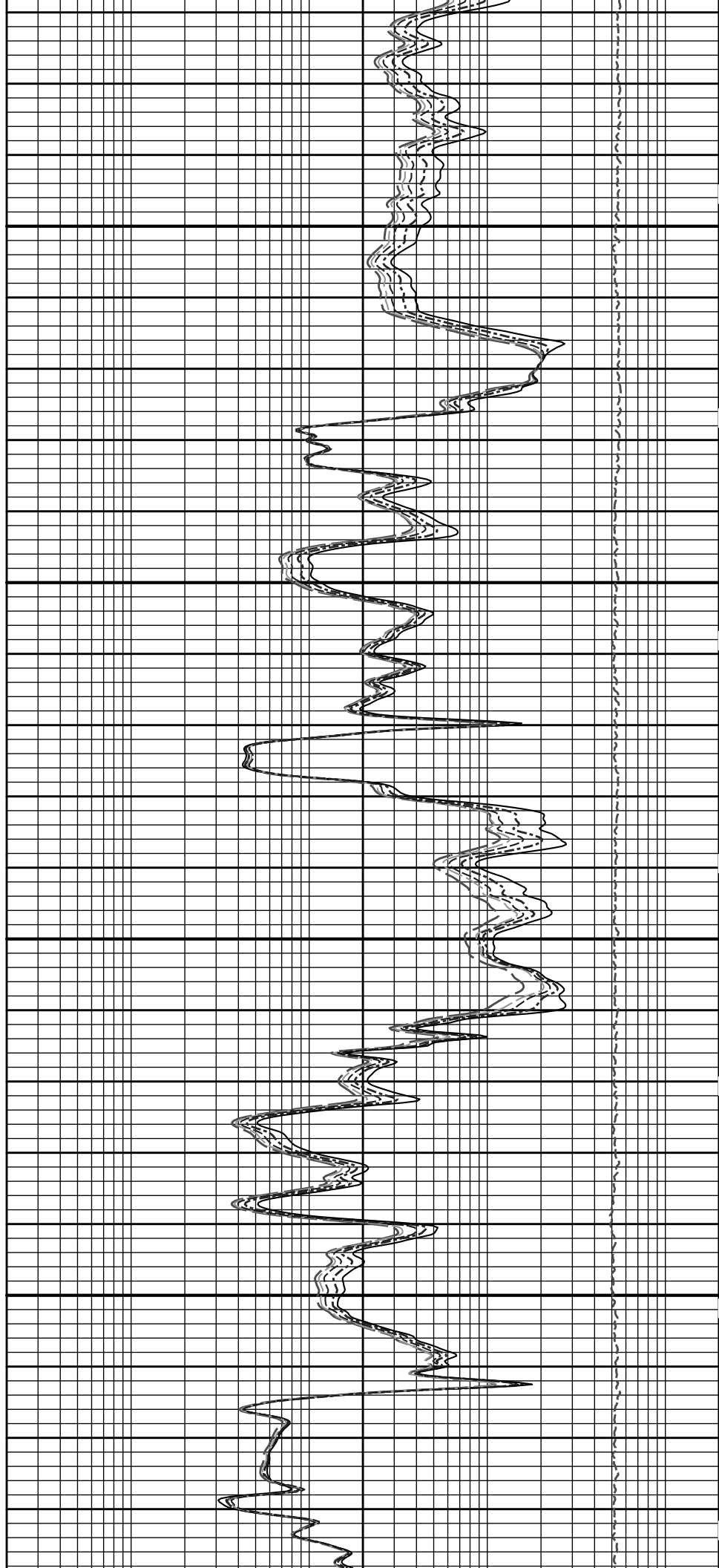
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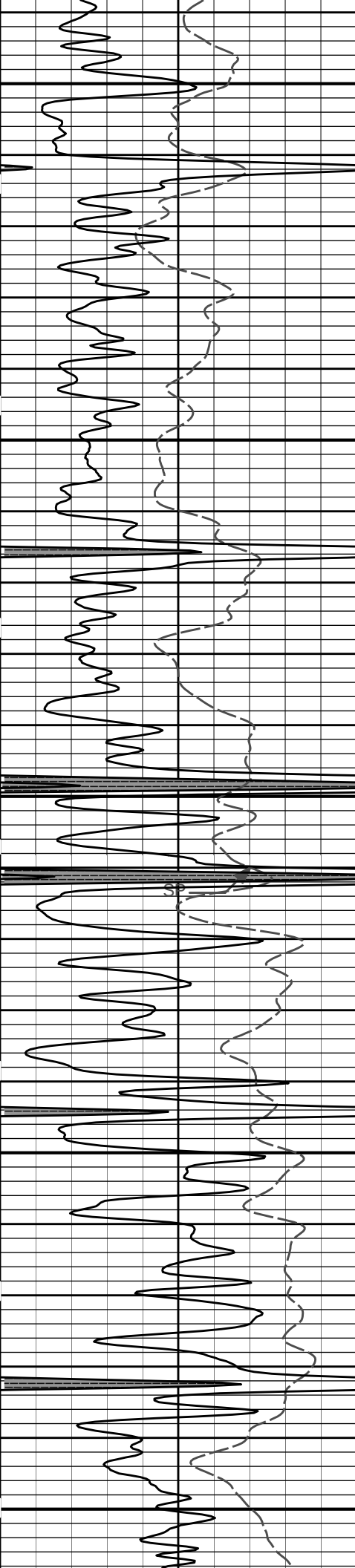




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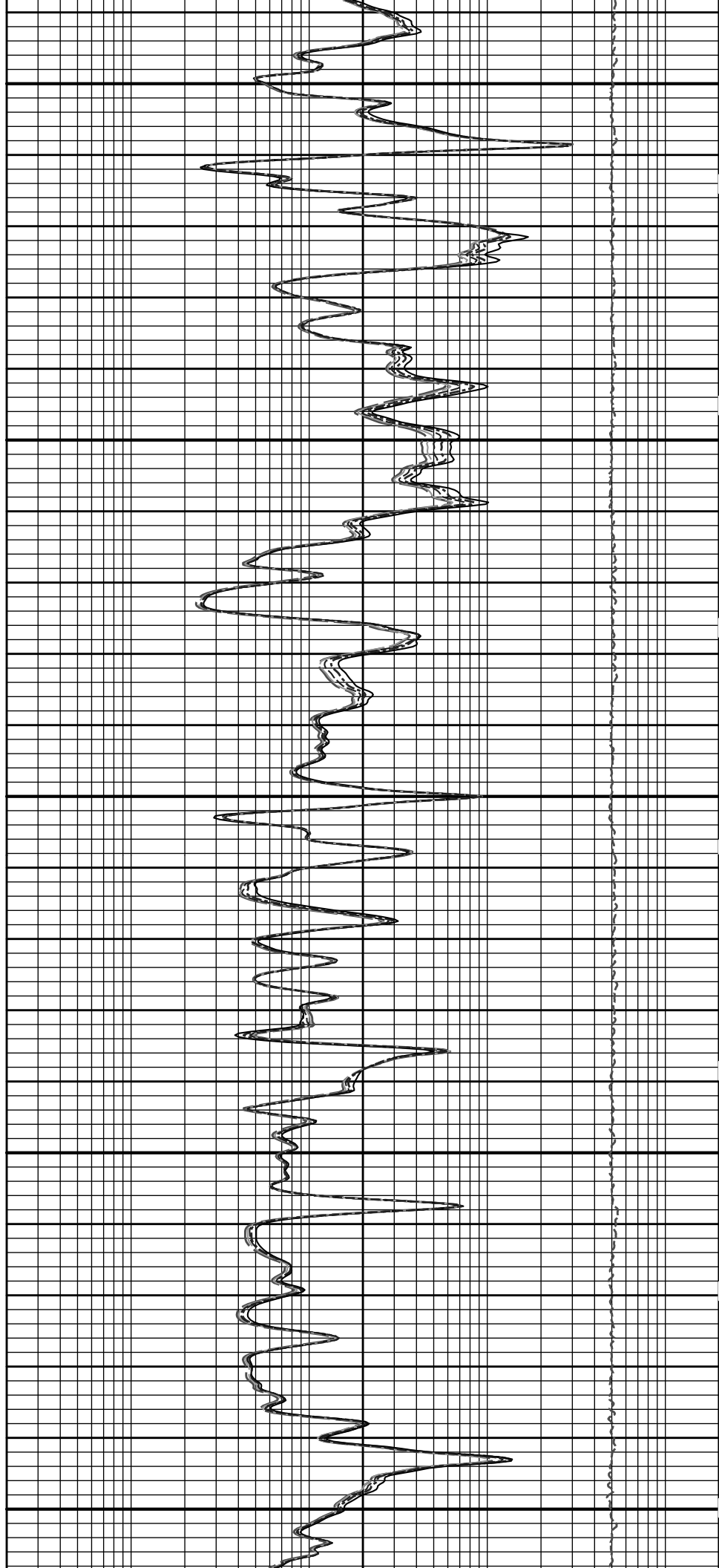
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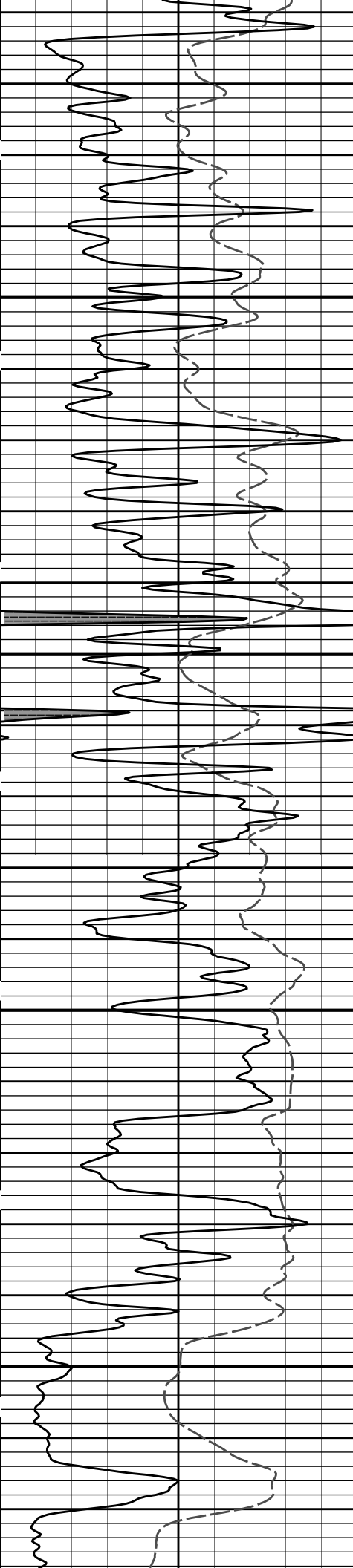




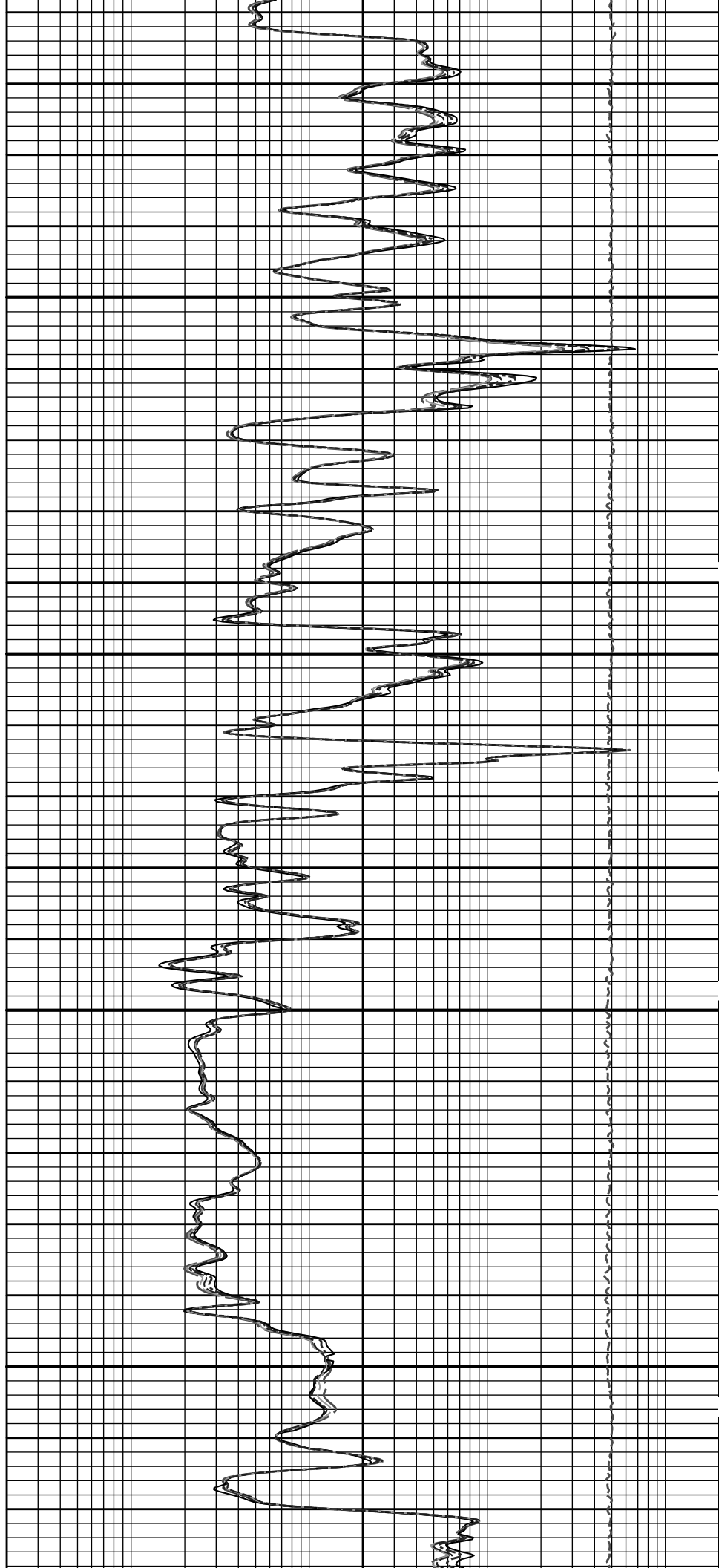
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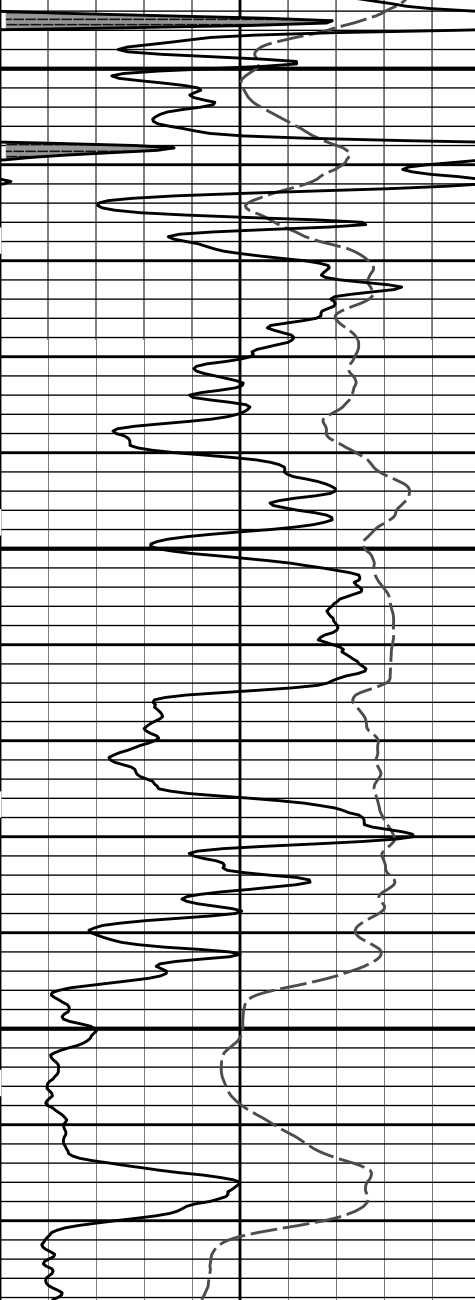


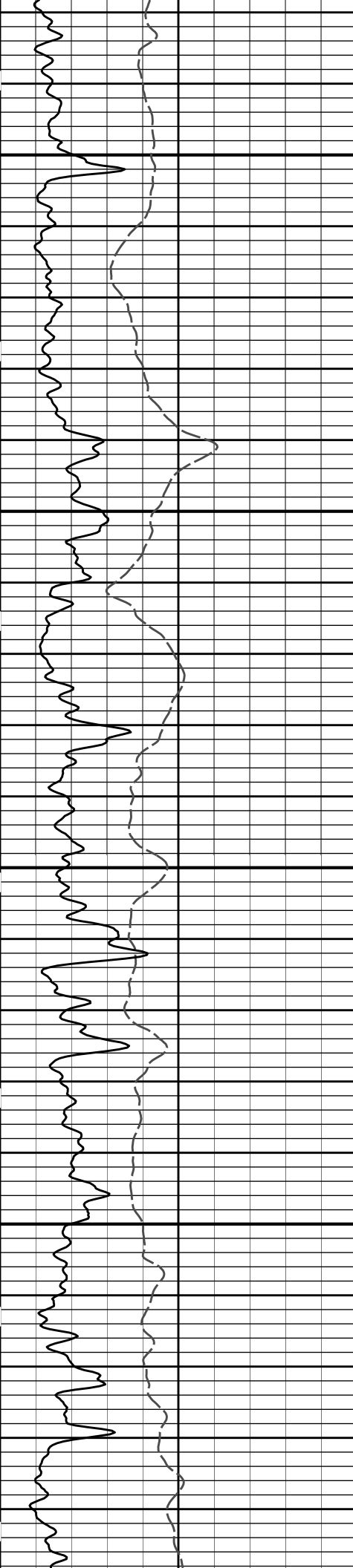


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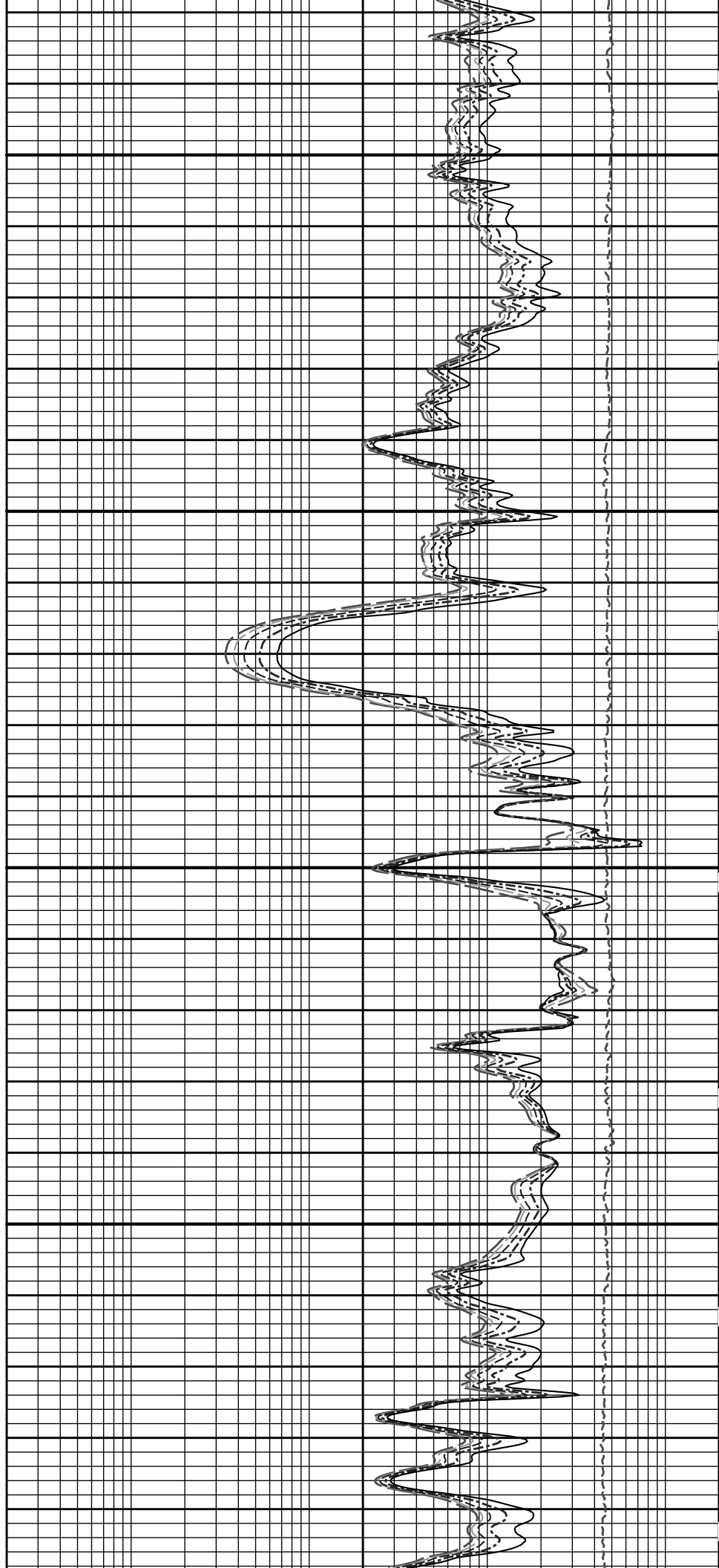


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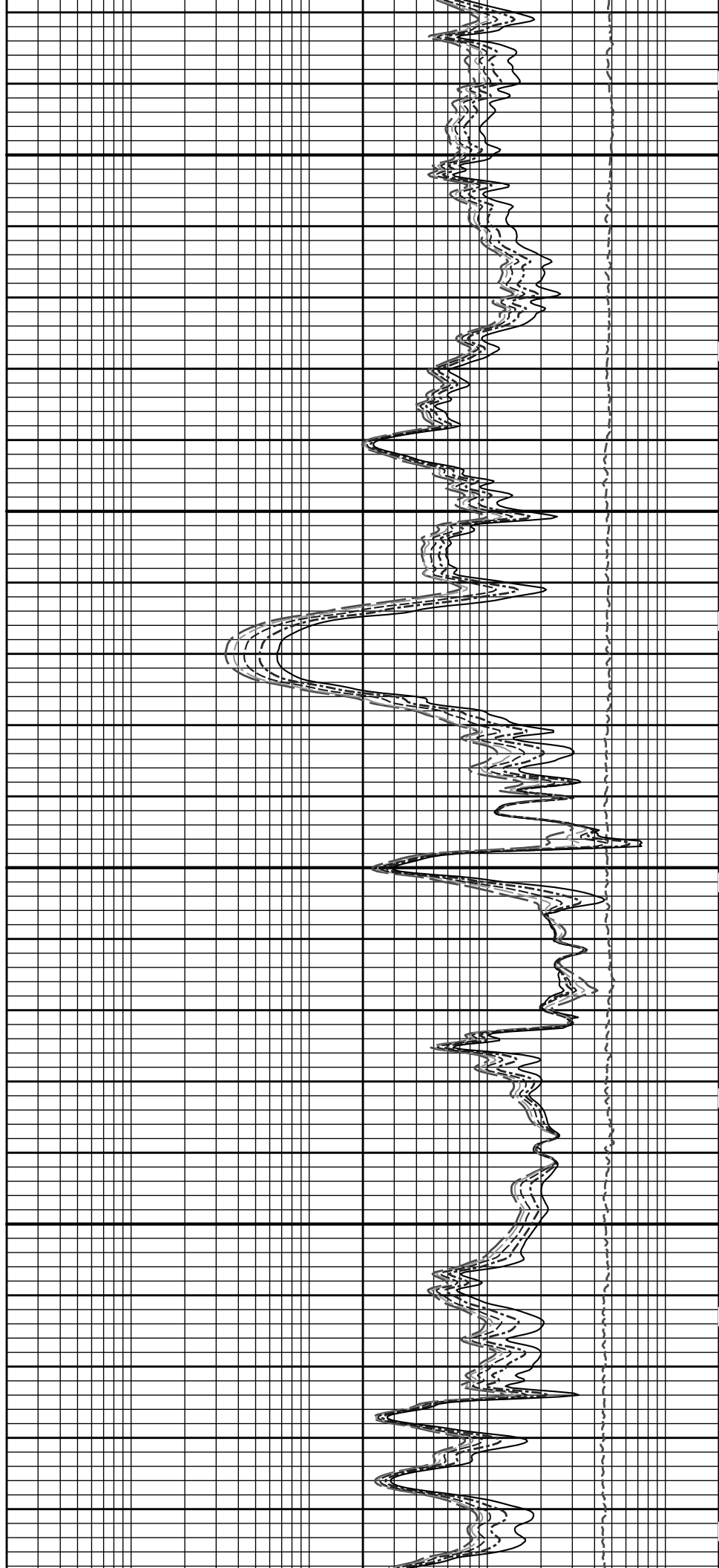
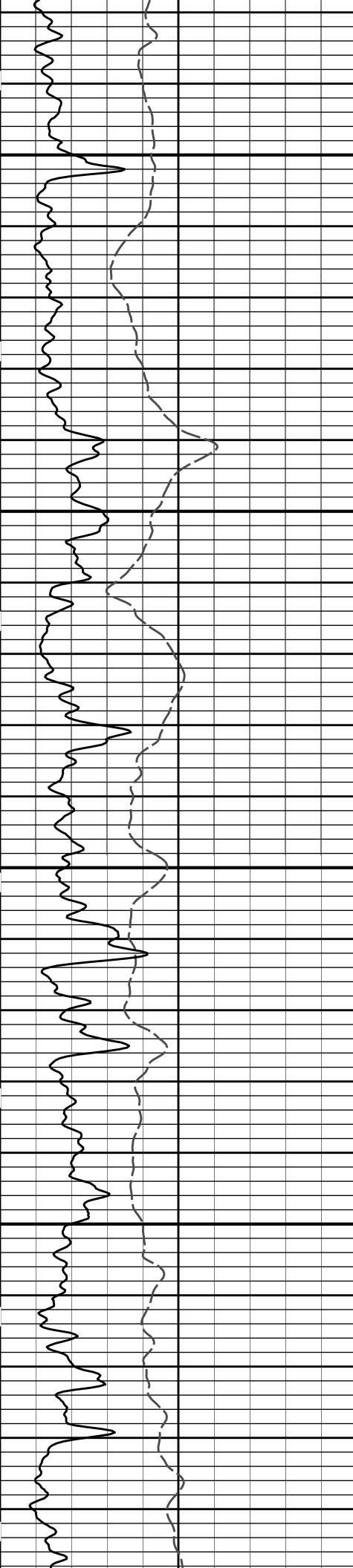


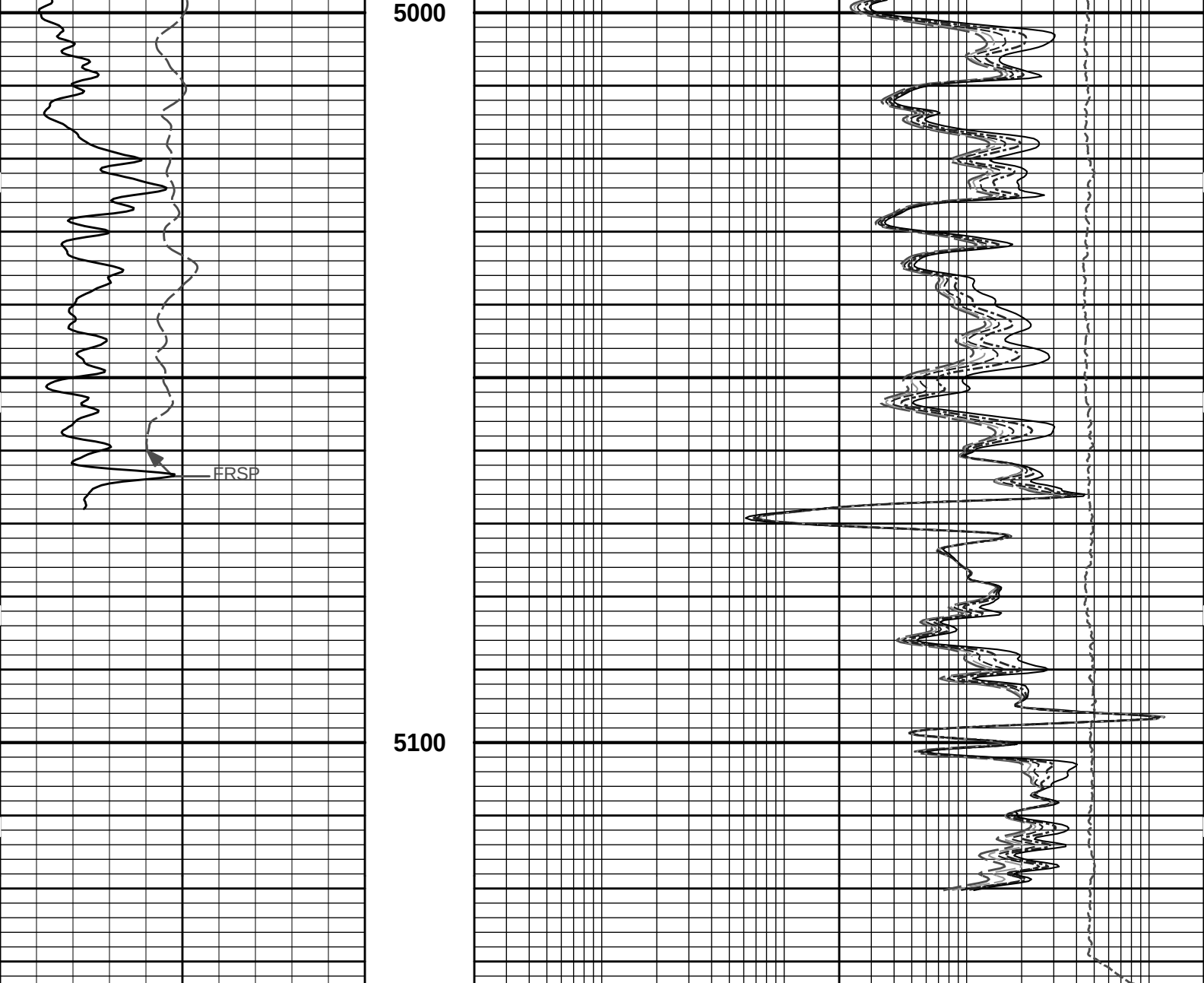


4800



4900





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

HALLIBURTON

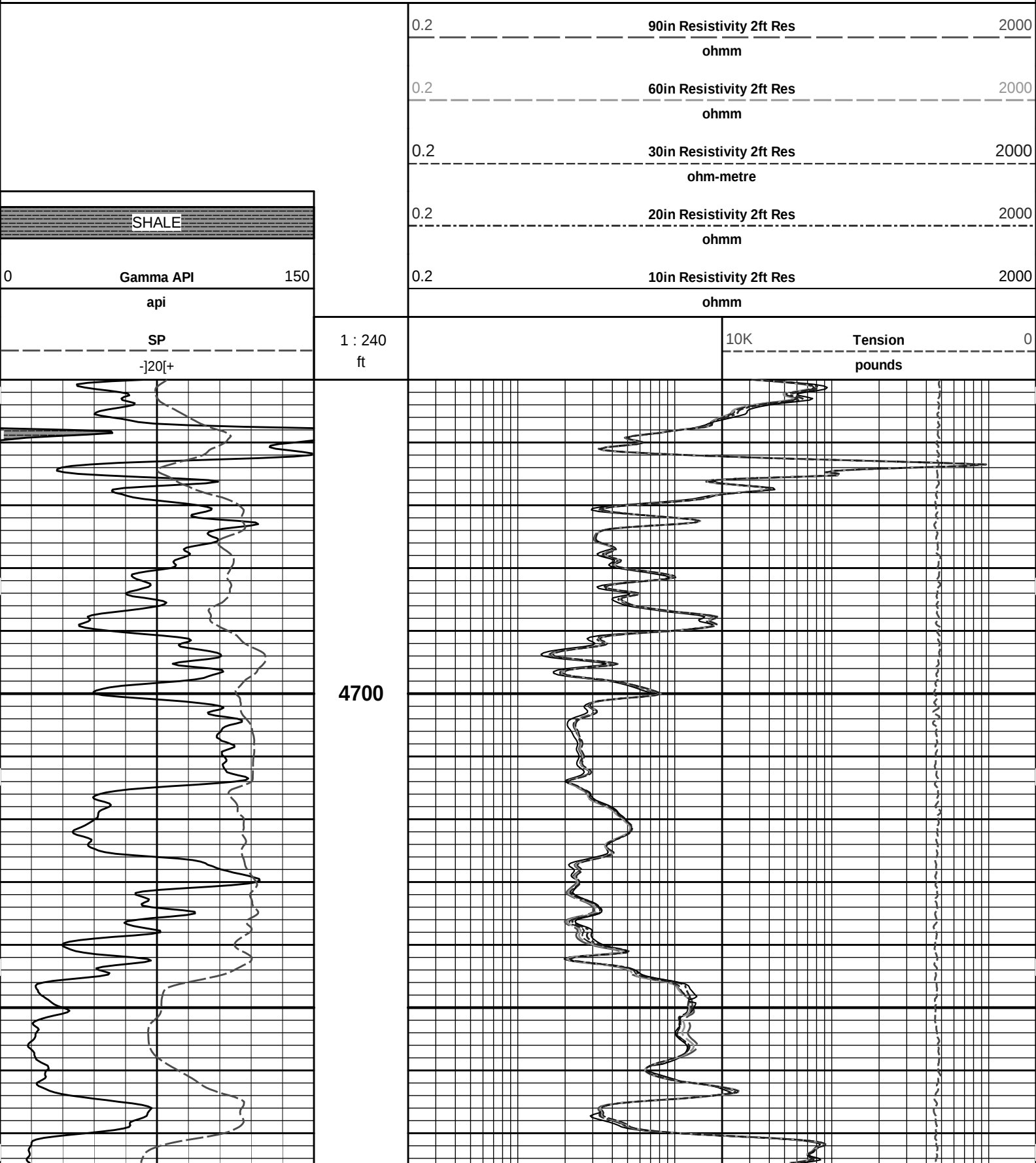
Plot Time: 20-Dec-12 23:26:08
Plot Range: 1800 ft to 5133.25 ft
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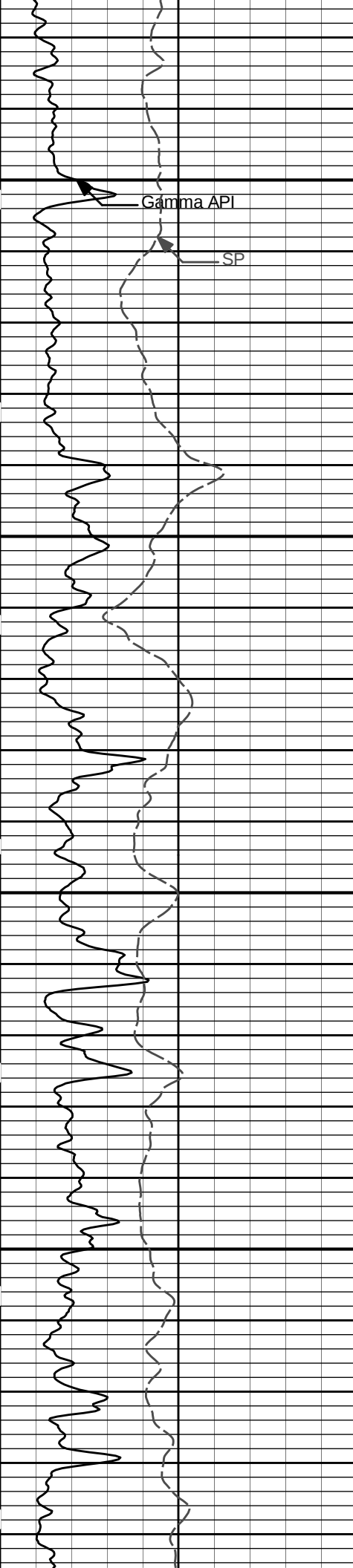
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 20-Dec-12 23:26:08
Plot Range: 4650 ft to 5132.42 ft
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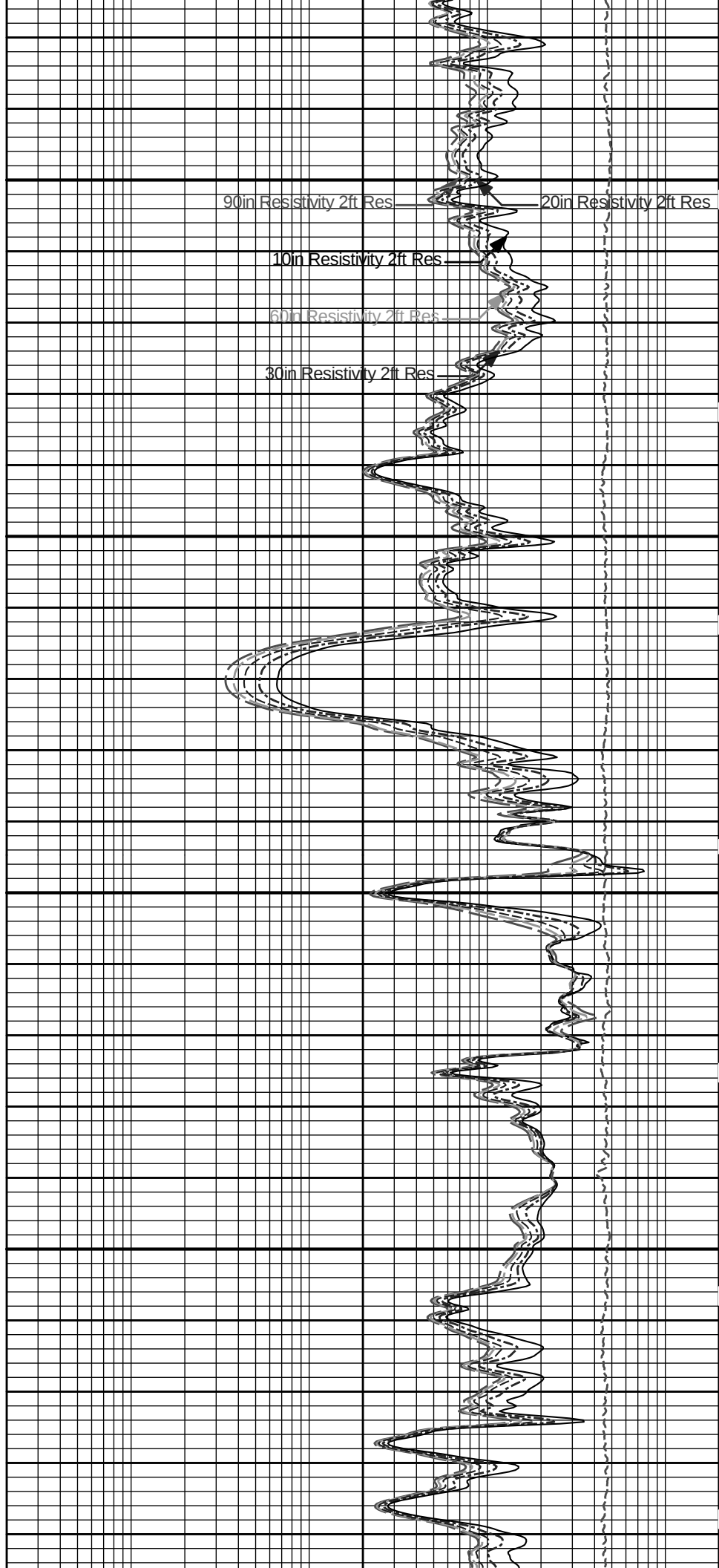
REPEAT SECTION

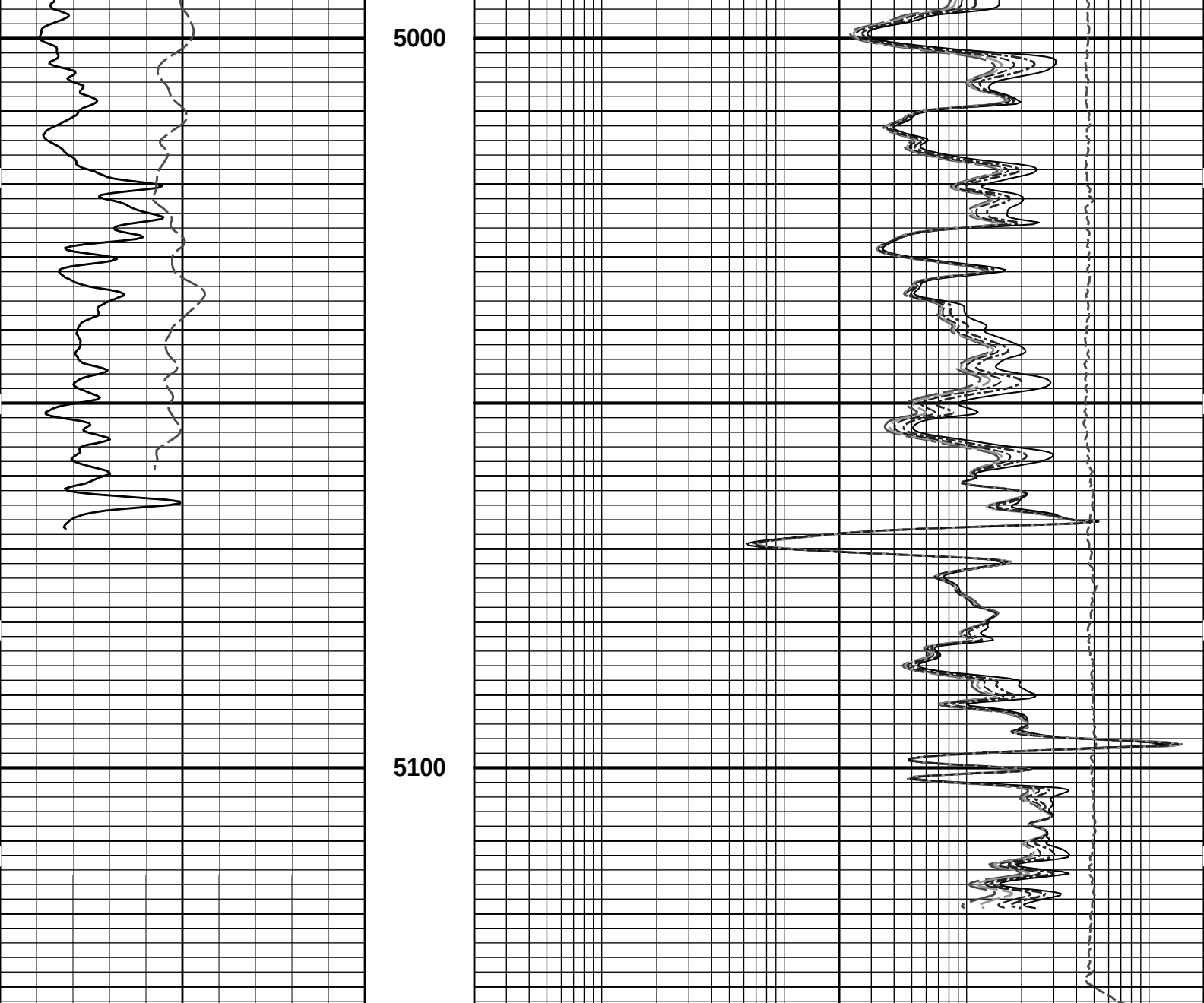




4800

4900





SP -]20[+ 0 Gamma API 150 api SHALE	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: 20-Dec-12 23:26:12
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Data: GARDEN_CTY_V3\Well Based\IRPT\
Plot File: \\-LOCAL-IGARDEN_CTY_V3\0001 SP-GTET-DSNT-SDLT-FLEX-BSAT-ACRT-CHIACRTIACRT_5_repeat_lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head- PROT01 30.00 lbs		Ø 3.625 in →			1.92 ft	75.95 ft
SP Sub-11441709 60.00 lbs		Ø 3.625 in →		← SP @ 72.26 ft	3.74 ft	74.03 ft
GTET-10811258 165.00 lbs		Ø 3.625 in →		← GammaRay @ 64.23 ft	8.52 ft	70.30 ft
DSNT-10735145 174.00 lbs	DSN Decentralizer- 10735145 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →		← DSN Far @ 54.84 ft ← DSN Near @ 54.09 ft	9.69 ft	61.78 ft
SDLT-10673803 360.00 lbs	SDLT Pad-10673790 65.00 lbs Microlog Pad-10673803 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		Microlog @ 44.28 ft SDL Caliper @ 44.09 ft SDL @ 44.08 ft	10.81 ft	52.09 ft
Flex Joint- 10989947 140.00 lbs		Ø 3.625 in →			5.67 ft	41.28 ft
Centralizer 25-001 8.00 lbs		Ø 4.000 in* →				35.61 ft

BSAT-10747684
300.00 lbs

Ø 3.625 in →

← Sonic Receivers @ 27.09 ft

15.77 ft

19.83 ft

ACRt Instrument-
I776
50.00 lbs

Centralizer 25-002
8.00 lbs
Regal Standoff 6_75-02
20.00 lbs

Ø 4.000 in* →

Ø 3.625 in →

Ø 6.750 in* →

5.03 ft

14.80 ft

← Mud Resistivity @ 13.44 ft

← ACRt @ 9.46 ft

ACRt Sonde-
10929775
200.00 lbs

Ø 3.625 in →

14.22 ft

Cabbage Head-
TRK954
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		PROT01	30.00	1.92	74.03	300.00
SP	SP Sub		11441709	60.00	3.74	70.30	300.00
GTET	Gamma Telemetry Tool		10811258	165.00	8.52	61.78	60.00
DSNT	Dual Spaced Neutron		10735145	174.00	9.69	52.09	60.00
DCNT	DSN Decentralizer		10735145	6.60	5.13	* 55.42	300.00
SDLT	Spectral Density Tool		10673803	360.00	10.81	41.28	60.00
SDLP	Density Insite Pad		10673790	65.00	2.55	* 43.49	60.00
MICP	Microlog Pad		10673803	8.00	1.00	* 43.78	60.00
FLEX	Flex Joint		10989947	140.00	5.67	35.61	300.00
BSAT	Borehole Sonic Array Tool		10747684	300.00	15.77	19.83	60.00
OBCEN	Centralizer - 25 in. Overbody		001	8.00	2.08	* 32.78	300.00
ACRt	Array Compensated True Resistivity Instrument Section		I776	50.00	5.03	14.80	300.00
RSOF	Regal Standoff 6.75in		02	20.00	0.52	* 16.05	300.00
OBCEN	Centralizer - 25 in. Overbody		002	8.00	2.08	* 16.96	300.00
ACRt	Array Compensated True Resistivity Sonde Section		10929775	200.00	14.22	0.58	300.00
CBHD	Cabbage Head		TRK954	10.00	0.58	0.00	300.00
Total				1,604.60	75.95		
				* Not included in Total Length and Length Accumulation.			
Data: GARDEN_CTY_V3I0001 SP-GTET-DSNT-SDLT-FLEX-BSAT-ACRT-CHMDLE				Date: 20-Dec-12 09:40:25			

CALIBRATION REPORT									
NATURAL GAMMA RAY TOOL SHOP CALIBRATION									
Tool Name:		GTET - 10811258				Reference Calibration Date:		30-Sep-12 14:49:28	
Engineer:		S. INGERSOLL				Calibration Date:		01-Dec-12 15:51:34	
Software Version:		WL INSITE R3.6.0 (Build 3)				Calibration Version:		1	
Calibrator Source S/N: TB-185									
Calibrator API Reference:228.00 api									
Equivalent Calibrator API Reference:232.0 api									
		Measurement		Measured		Calibrated		Units	
		Background		34.5		34.4		api	
		Background + Calibrator		267.1		266.4		api	
		Calibrator		232.6		232.0		api	
NATURAL GAMMA RAY TOOL FIELD CALIBRATION									
Tool Name:		GTET - 10811258				Reference Calibration Date:		01-Dec-12 15:51:34	
Engineer:		T. HYDE				Calibration Date:		20-Dec-12 08:50:30	
Software Version:		WL INSITE R3.6.0 (Build 3)				Calibration Version:		1	
Calibrator Source S/N: TB-185									
Calibrator API Reference:228.00 api									
Equivalent Calibrator API Reference:232.0 api									
		Field Verification		Shop		Field		Units	
		Background		34.4		45.8		api	
		Background + Calibrator		266.4		278.0		api	
		Calibrator		232.0		232.2		api	
		Shop		Field		Difference		Tolerance	
		232.0		232.2		-0.2		+/- 9.00	
ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION									
Tool Name:		ACRt Sonde - 10929775				Reference Calibration Date:		21-Nov-12 11:21:31	
Engineer:		T. HYDE				Calibration Date:		19-Dec-12 11:12:24	
Software Version:		WL INSITE R3.6.0 (Build 3)				Calibration Version:		1	
Host Tool Name:		ACRt Instrument - I776							
TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.02	1.05	0.95	1.02	1.05	0.95	1.02	1.05
A2 (50")	0.95	1.03	1.05	0.95	1.03	1.05	0.95	1.03	1.05
A3 (29")	0.95	1.00	1.05	0.95	1.01	1.05	0.95	1.00	1.05
A4 (17")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.01	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.01	1.05	0.95	1.01	1.05
A6 (6")	N/A	N/A	N/A	0.95	1.00	1.05	0.95	1.00	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	-2.12	2	-6	-4.63	-2	-8	-4.79	-2
A2 (50")	-7	-2.79	0	-7	-4.29	0	-7	-4.43	0
A3 (29")	-27	-14.78	-9	-9	-4.66	-3	-7	-2.92	-1
A4 (17")	-100	-100.17	-60	-45	-20.40	-15	-20	-25.00	-10

A4 (17")	-180	-103.17	-60	-45	-32.42	-15	-39	-25.28	-13
A5 (10")	N/A	N/A	N/A	-150	-114.86	-50	-80	-53.59	-10
A6 (6")	N/A	N/A	N/A	175	272.16	525	90	136.16	270

TRANSMITTER CURRENT GAIN				R-MUD VERIFICATION			
Signal	Lower	R	Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.84	1.3	Mud Cell	0.95	0.99	1.05
36K	1.0	1.17	2.0				
72K	1.0	1.46	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-10811258						
Gamma Ray Calibrator	232.0	232.2	-----	-0.2	+/- 9.00	api
ACRt Sonde-10929775						
Mud Cell	0.99	-----	-----	0.00	-----	ohm-m
Data: GARDEN_CTY_V3\0001 SP-GTET-DSNT-SDLT-FLEX-BSAT-ACRT-CH\IDLE					Date: 20-Dec-12 10:00:27	

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	9.500	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	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	10000.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	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 /					

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	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	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
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 Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	User define	
BSAT	DTMA	Delta -T Matrix	47.60	uspf
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
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: GARDEN_CTY_V3I0001 SP-GTET-DSNT-SDLT-FLEX-BSAT-ACRT-CHIDLE			Date: 20-Dec-12 10:01:32	

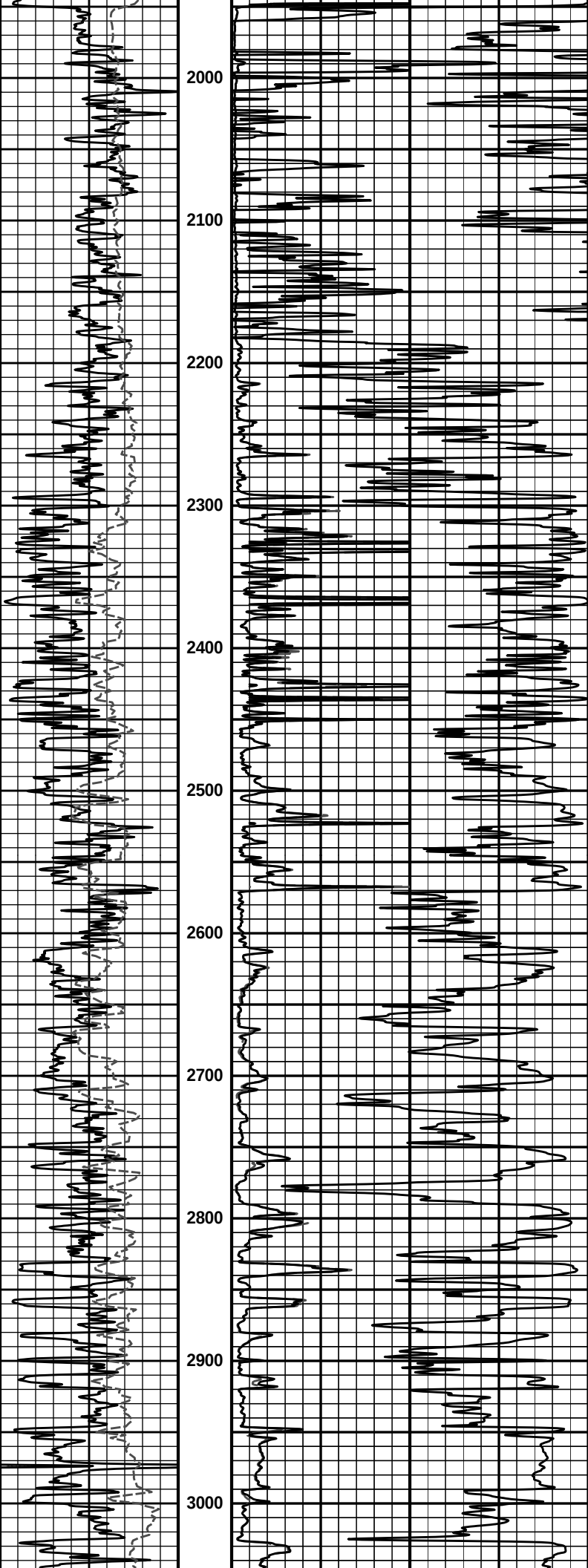
INPUTS, DELAYS AND FILTERS TABLE

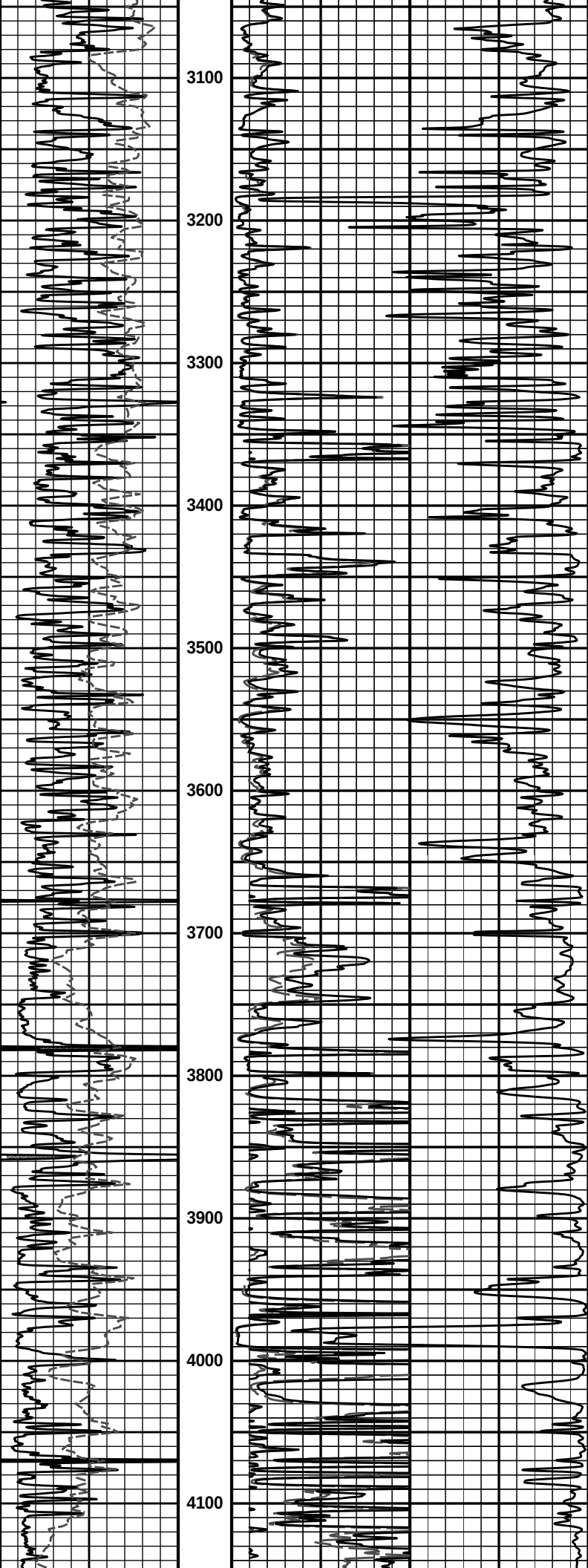
Mnemonic		Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel					
TENS		Tension	0.00	NO	
SP Sub					
PLTC		Plot Control Mask	72.25	NO	
SP		Spontaneous Potential	72.25	BLK	1.250
SPR		Raw Spontaneous Potential	72.25	NO	
SPO		Spontaneous Potential Offset	72.25	NO	
GTET					
TPUL		Tension Pull	64.23	NO	
GR		Natural Gamma Ray API	64.23	TRI	1.750
GRU		Unfiltered Natural Gamma Ray API	64.23	NO	
EGR		Natural Gamma Ray API with Enhanced Vertical Resolution	64.23	W	1.416 , 0.750
ACCZ		Accelerometer Z	0.00	BLK	0.083
DEVI		Inclination	0.00	NO	
DSNT					
TPUL		Tension Pull	53.99	NO	
RNDS		Near Detector Telemetry Counts	54.09	BLK	1.417
RFDS		Far Detector Telemetry Counts	54.84	TRI	0.583
DNTT		DSN Tool Temperature	54.09	NO	
DSNS		DSN Tool Status	53.99	NO	
ERND		Near Detector Telemetry Counts EVR	54.09	BLK	0.000
ERFD		Far Detector Telemetry Counts EVR	54.84	BLK	0.000
ENTM		DSN Tool Temperature EVR	54.09	NO	
SDLT					
TPUL		Tension Pull	44.09	NO	
PCAL		Pad Caliper	44.09	TRI	0.250
ACAL		Arm Caliper	44.09	TRI	0.250
BSAT					
TPUL		Tension Pull	27.09	NO	
STAT		Status	27.09	NO	
DLYT		Delay Time	27.09	NO	
SI		Sample Interval	27.09	NO	
TXRX		Raw Telemetry 10 Receivers	27.09	NO	
FRMC		Tool Frame Count	27.09	NO	
GMOD		Gain processing mode	19.83	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

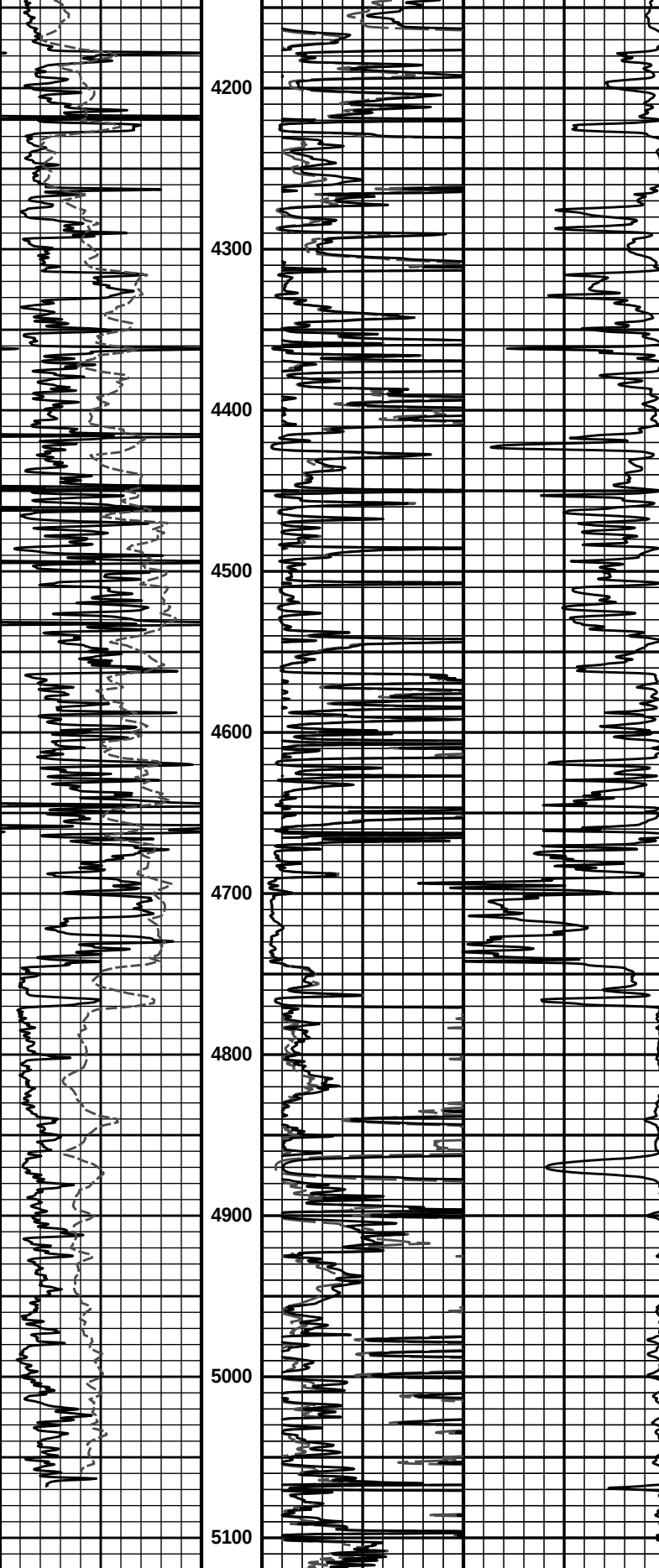
F1R5	ACRT 12KHz - 10in R value	3.72	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.72	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.47	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.47	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	9.22	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	9.22	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	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 Reference 12 KHz Real Signal	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	
SDLT Pad				
TPUL	Tension Pull	44.08	NO	
NAB	Near Above	43.90	BLK	0.920
NHI	Near Cesium High	43.90	BLK	0.920
NLO	Near Cesium Low	43.90	BLK	0.920
NVA	Near Valley	43.90	BLK	0.920
NBA	Near Barite	43.90	BLK	0.920
NDE	Near Density	43.90	BLK	0.920
NPK	Near Peak	43.90	BLK	0.920
NLI	Near Lithology	43.90	BLK	0.920
NBAU	Near Barite Unfiltered	43.90	BLK	0.250
NLIU	Near Lithology Unfiltered	43.90	BLK	0.250

FAB	Far Above	44.26	BLK	0.250
FHI	Far Cesium High	44.26	BLK	0.250
FLO	Far Cesium Low	44.26	BLK	0.250
FVA	Far Valley	44.26	BLK	0.250
FBA	Far Barite	44.26	BLK	0.250
FDE	Far Density	44.26	BLK	0.250
FPK	Far Peak	44.26	BLK	0.250
FLI	Far Lithology	44.26	BLK	0.250
PTMP	Pad Temperature	44.09	BLK	0.920
NHV	Near Detector High Voltage	43.49	NO	
FHV	Far Detector High Voltage	43.49	NO	
ITMP	Instrument Temperature	43.49	NO	
DDHV	Detector High Voltage	43.49	NO	

COMPANY	OXY USA INC		
WELL	GARDEN CITY V-3		
FIELD	GARDEN CITY		
COUNTY	FINNEY	STATE	KANSAS
HALLIBURTON		ARRAY COMPENSATED TRUE RESISTIVITY LOG	







0	Gamma API	150	1 : 1200	0	20in Resistivity 2ft Res	50	
	api		FT		ohm-metre		
	SP			0	90in Resistivity 2ft Res	50	
	-20[+				ohm-metre		
				1000	90in Conductivity 2ft Res	0	

mmho per metre

HALLIBURTON

Plot Time: 20-Dec-12 23:26:15

Plot Range: 1800 ft to 5120.25 ft

Data: GARDEN_CTY_V3\Well Based\DAQ-0001-004\

Plot File: \\-LOCAL-IGARDEN_CTY_V3\...ACRT_1.lib

1 INCH MAIN LOG