



Run No.	GENERAL		Speed ft/min	GAMMA		ACOUSTIC		Matrix	DENSITY		Matrix	NEUTRON			
	Depth			L	R	L	R		Scale			L	R	Scale	
	From	To							L	R				L	R
ONE	TD	CSG	REC	0	150										

**DIRECTIONAL INFORMATION**

Maximum Deviation @ KOP @

Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING

CHLORIDES: 4300 PPM

GPS COORDINATES: LAT: 37.27 N LONG: 100.48 W

TODAY'S CREW: V. JAIME, K. KELLY

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

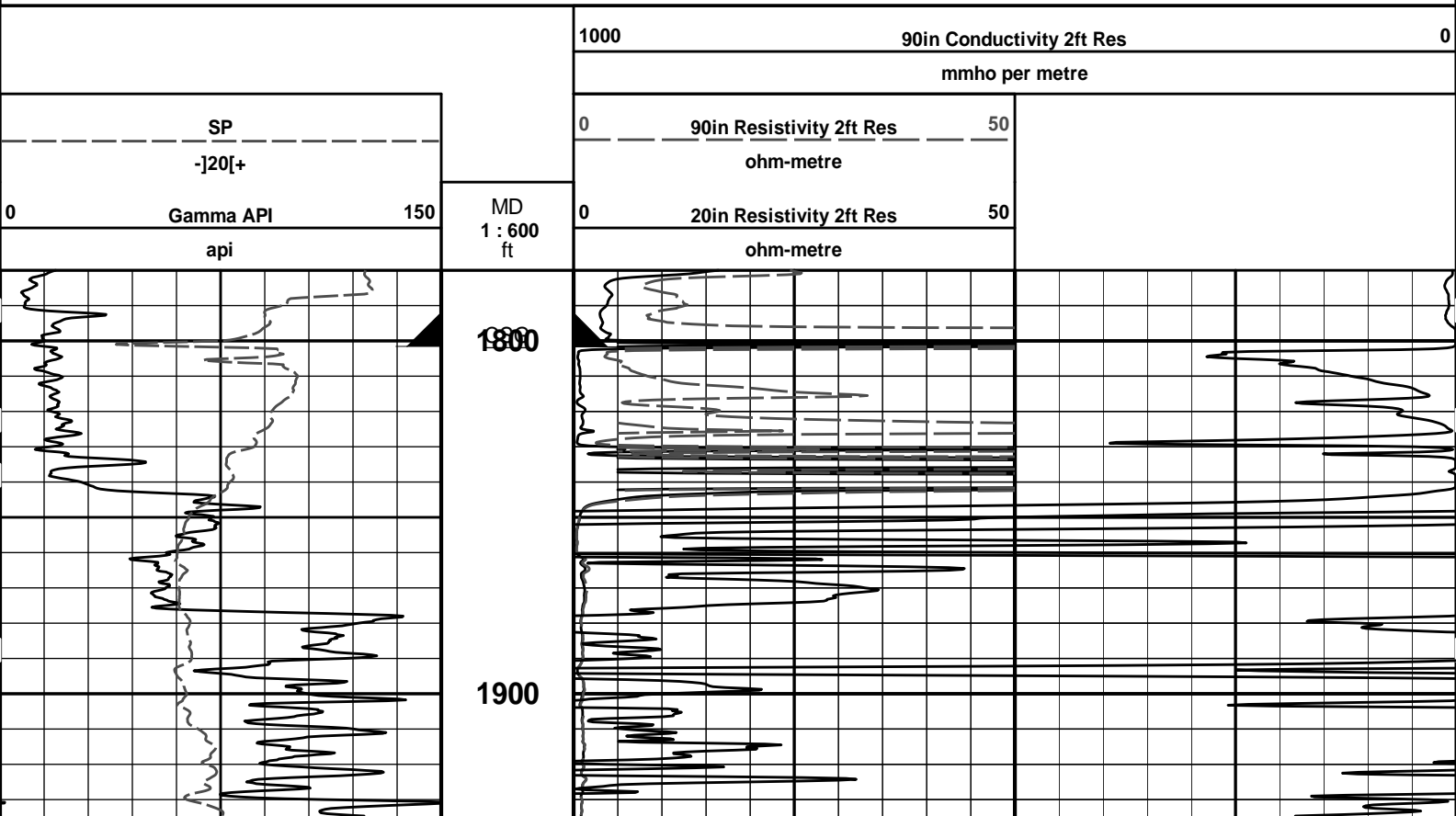
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR 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.

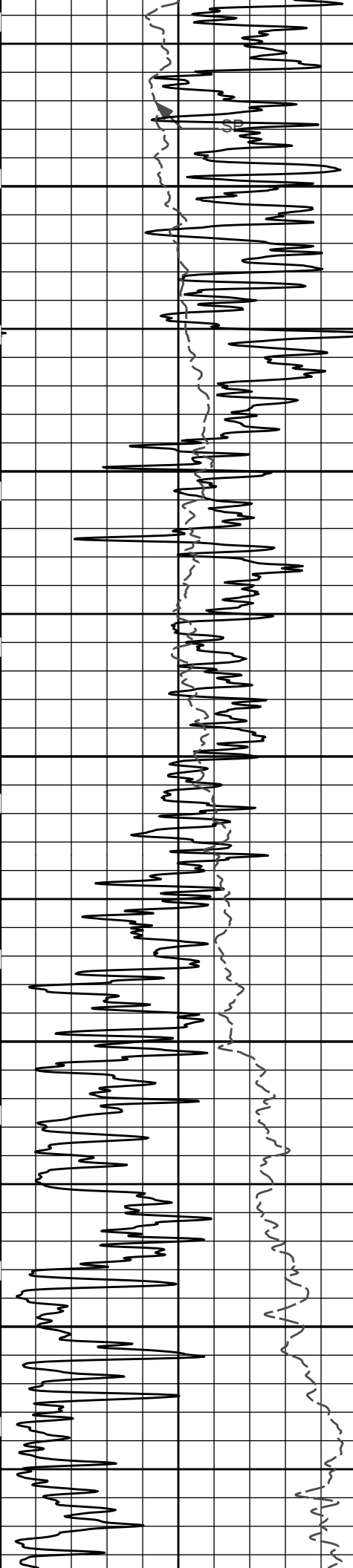
HALLIBURTON

# HALLIBURTON

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 Data: STAPLETON\_4\_10Well Based\DAQ-0001-003\  
 Plot File: \\-LOCAL-\STAPLETON\_4\_10Well Based\ACRT\ACRT\_2\_lib

## 2 INCH MAIN LOG





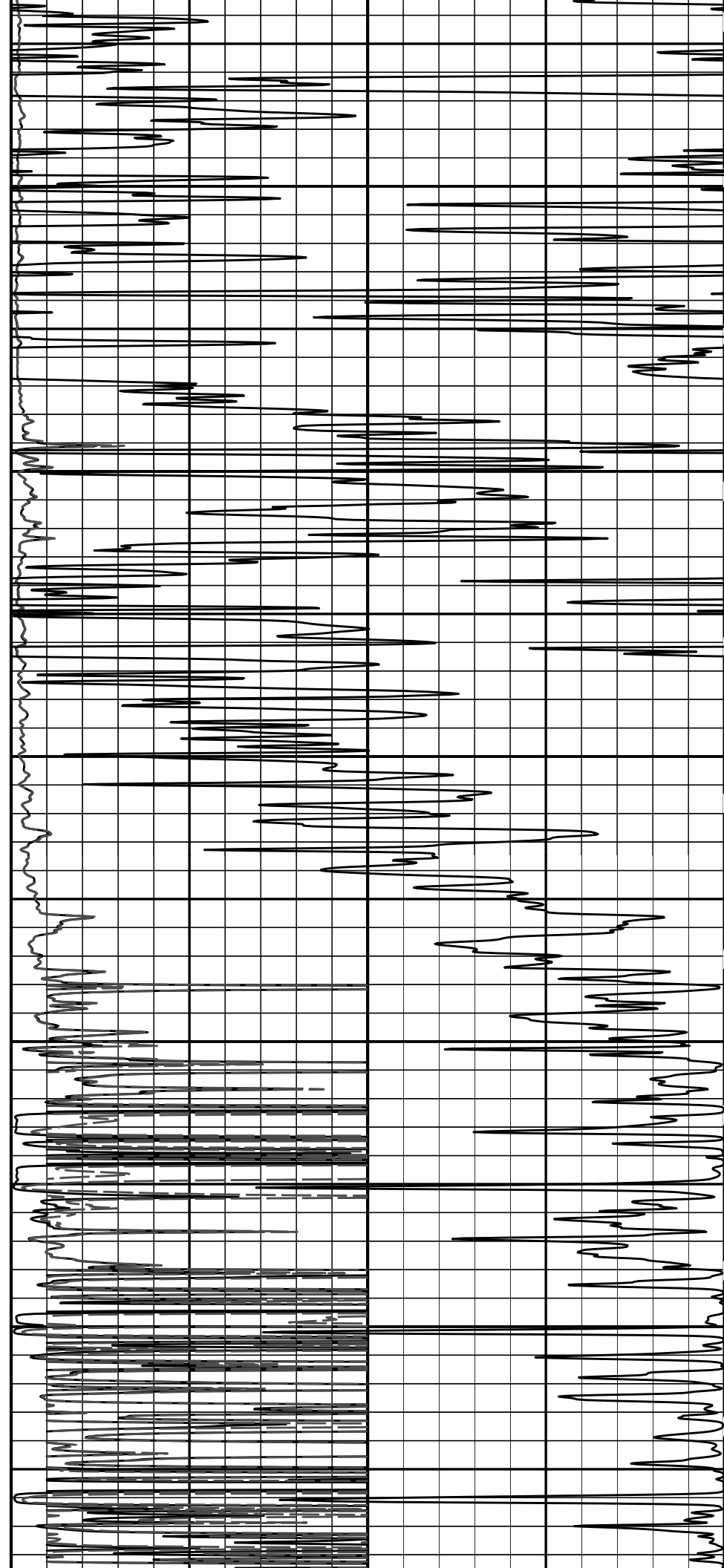
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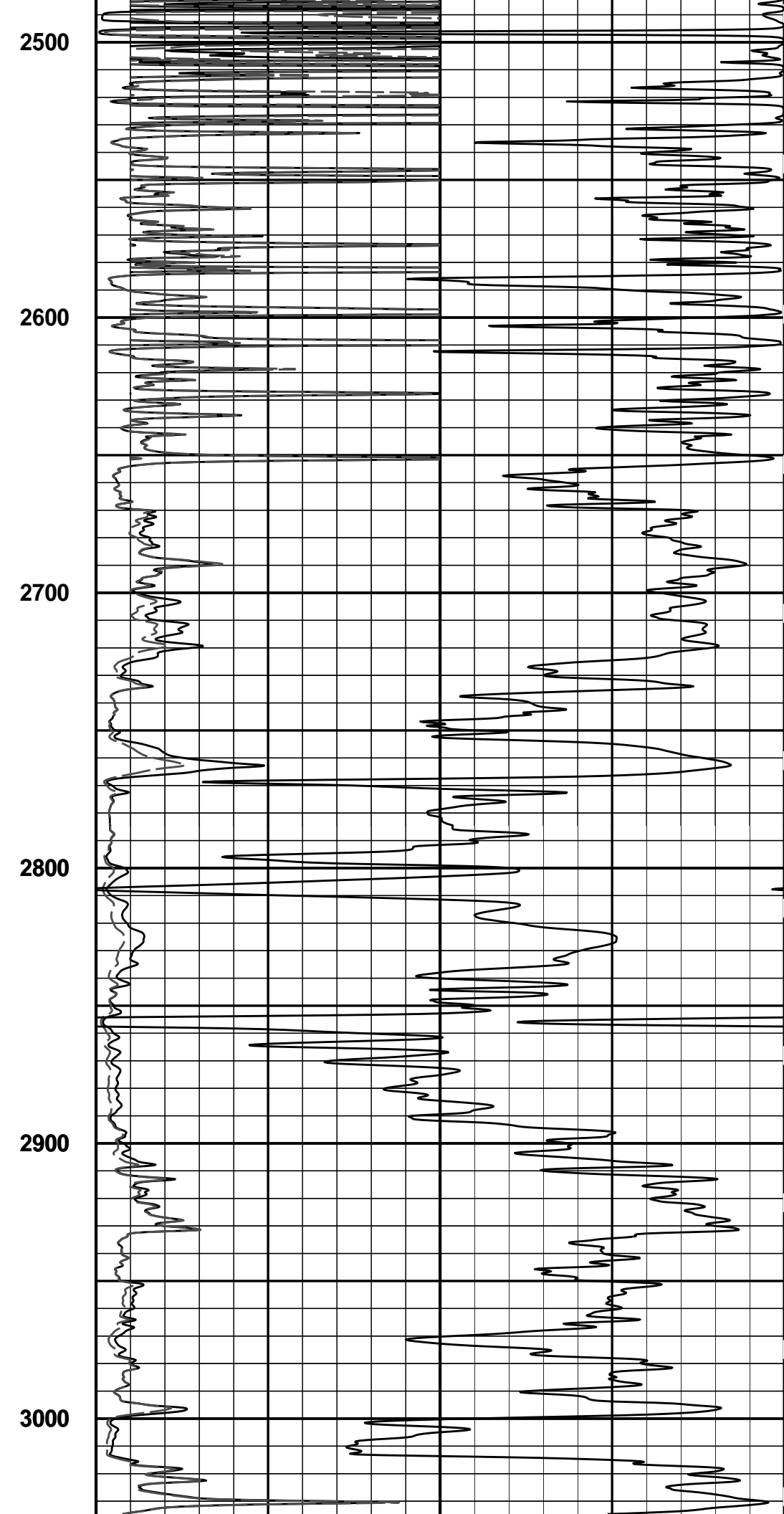
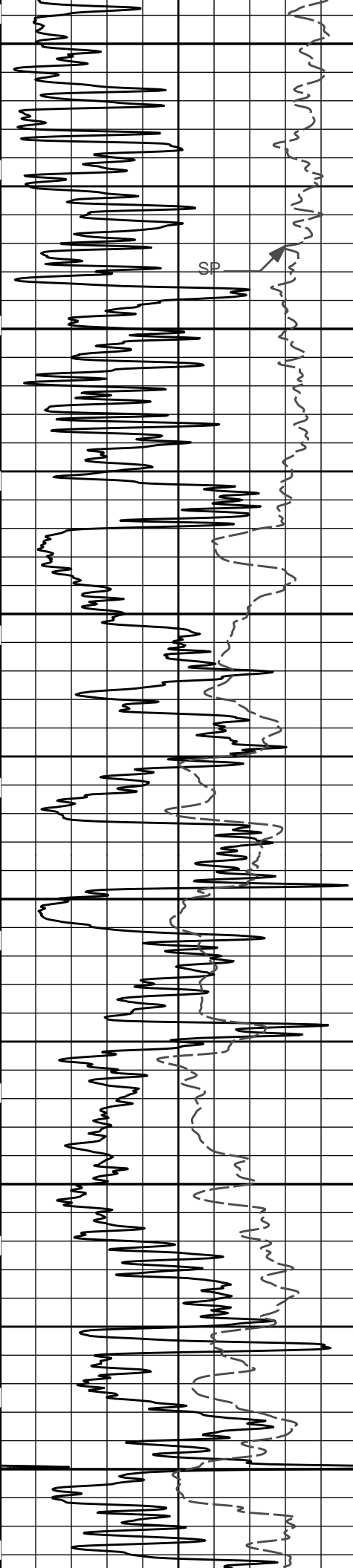
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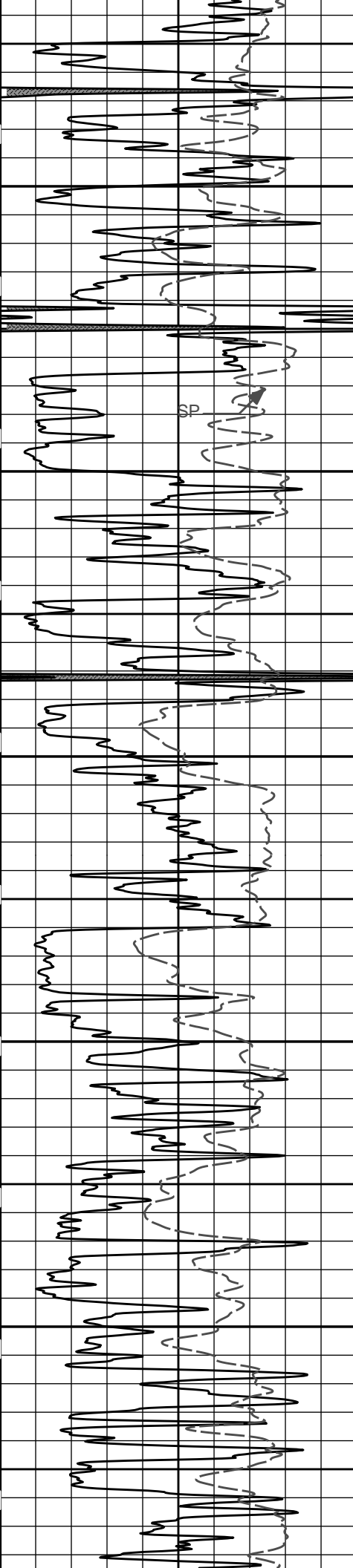
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2300

2400







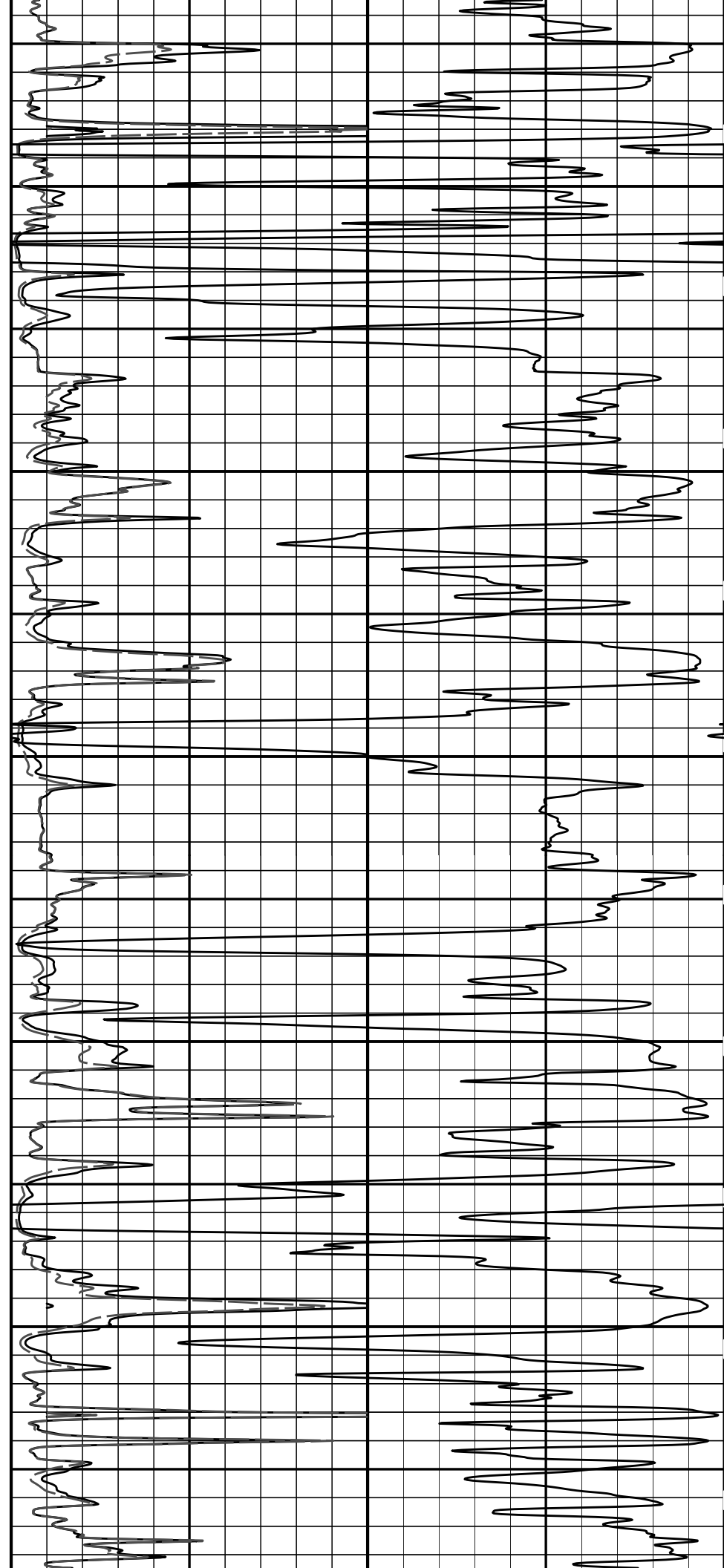
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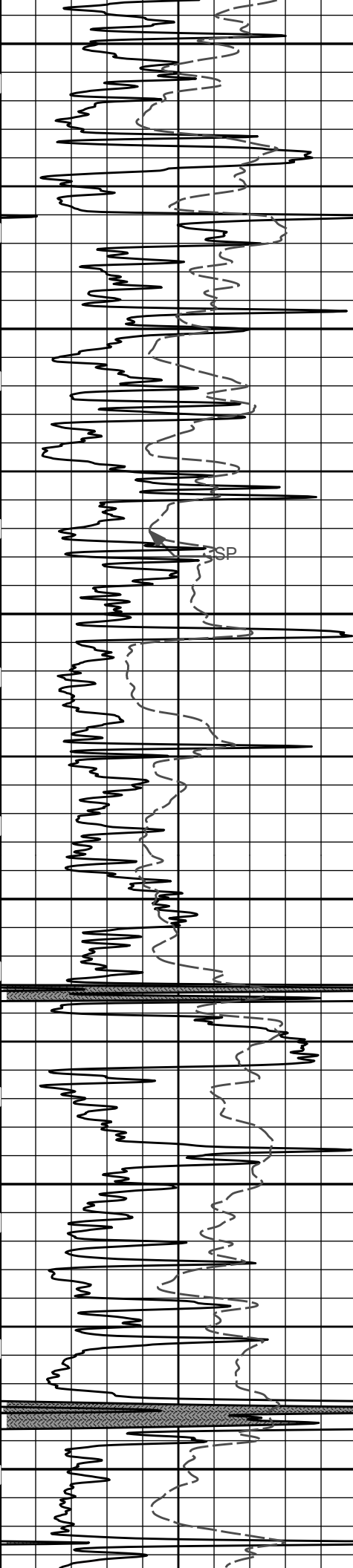
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3300

3400

3500





3600

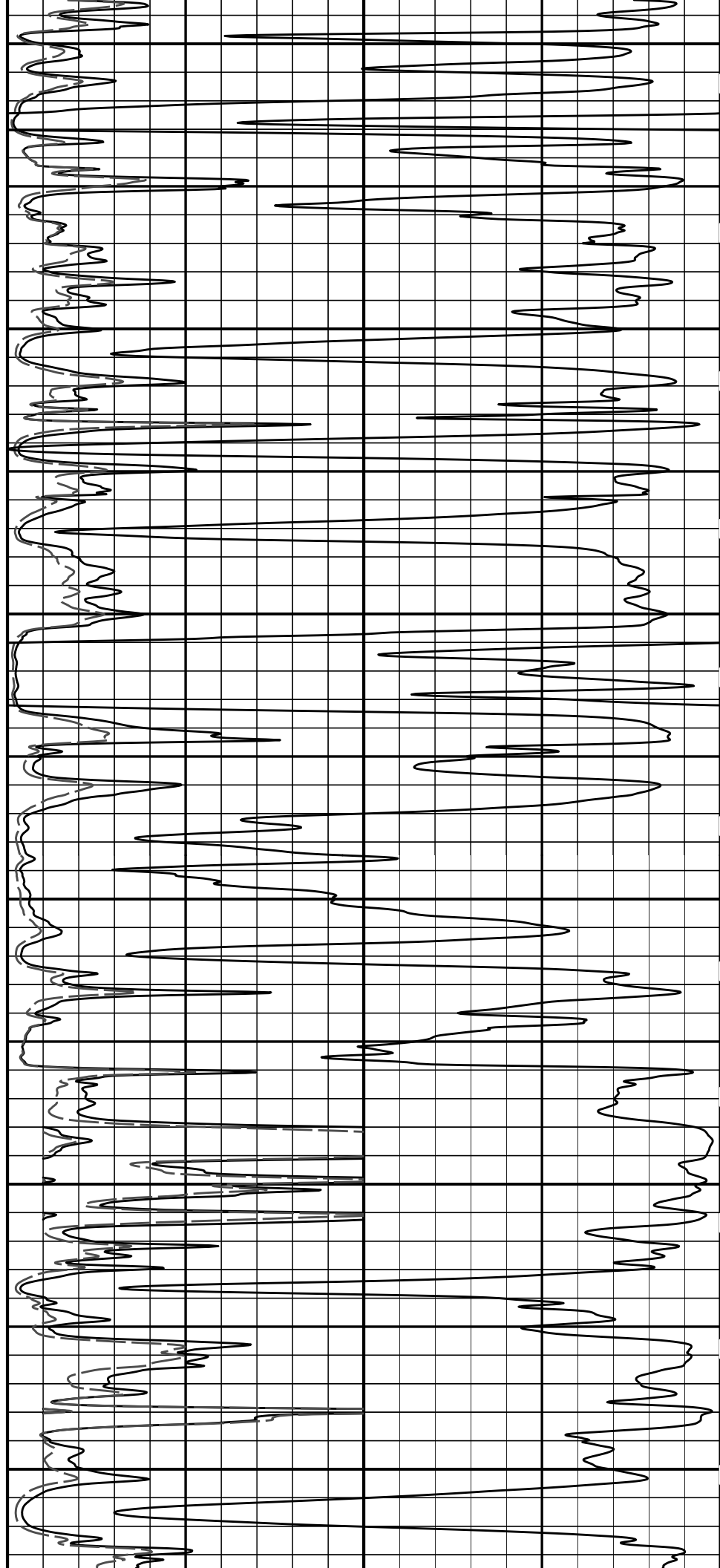
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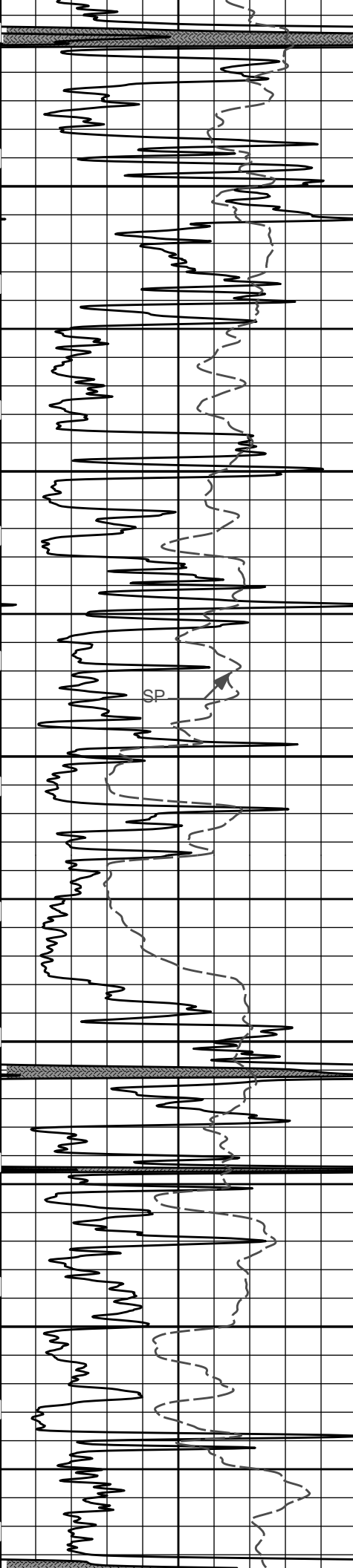
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3900

4000

4100





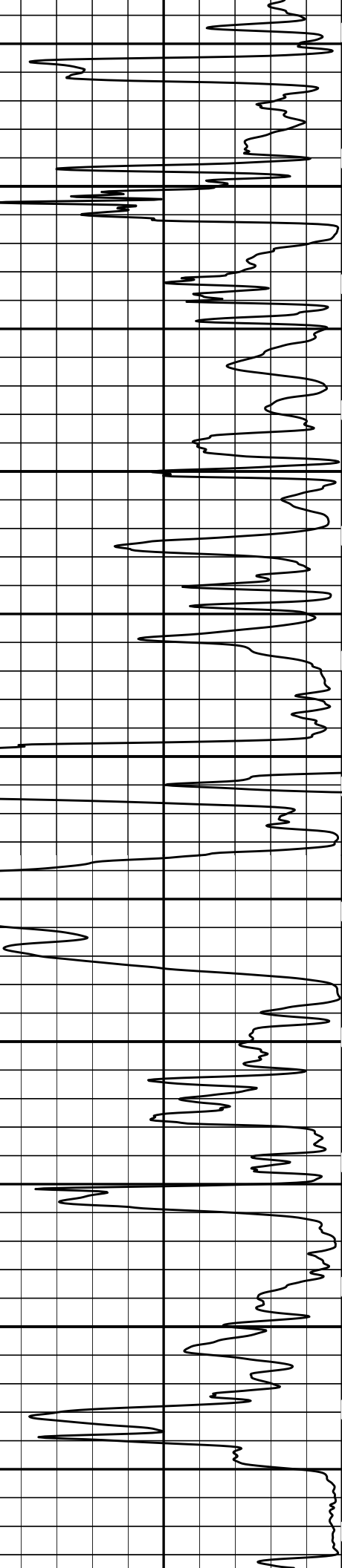
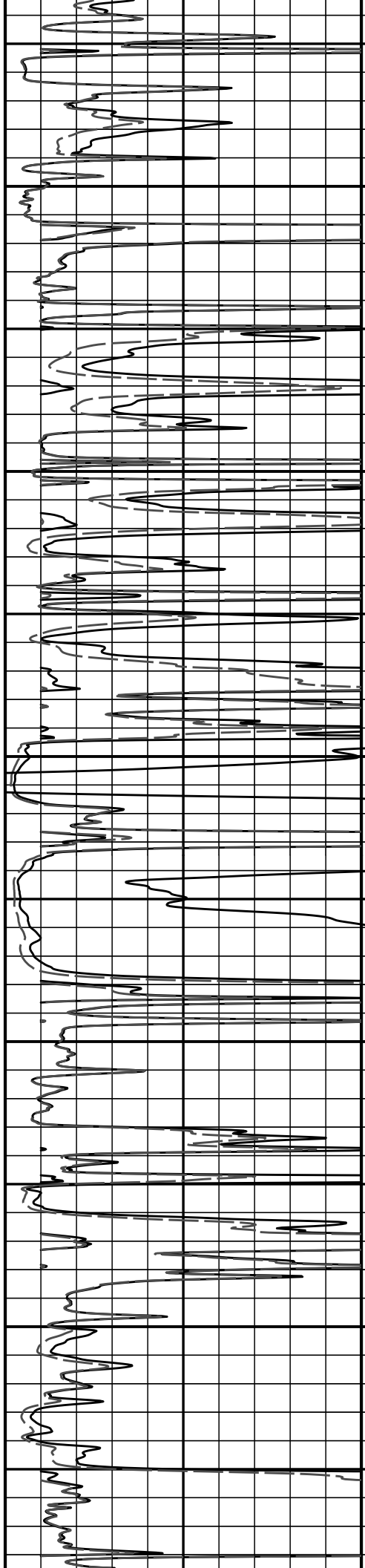
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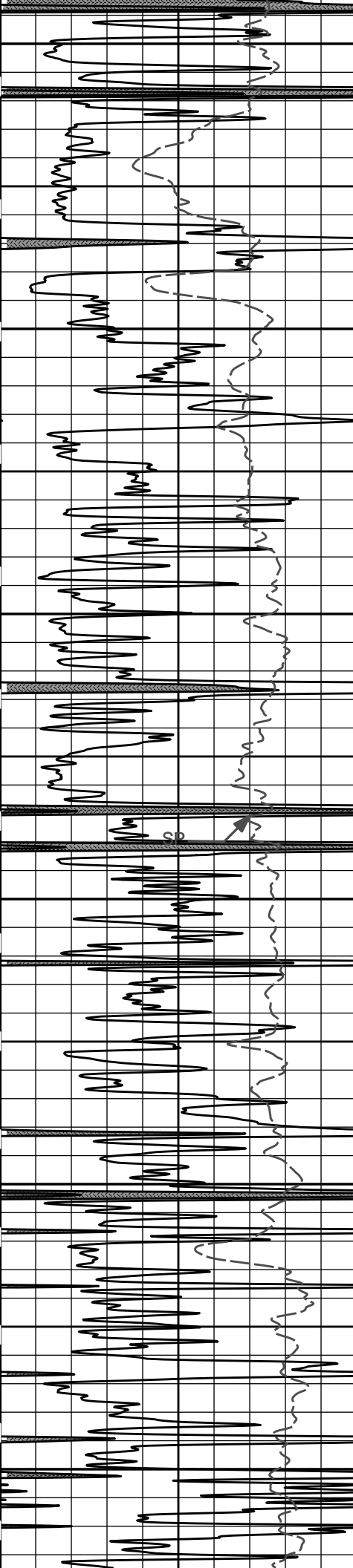
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4400

4500

4600





4700

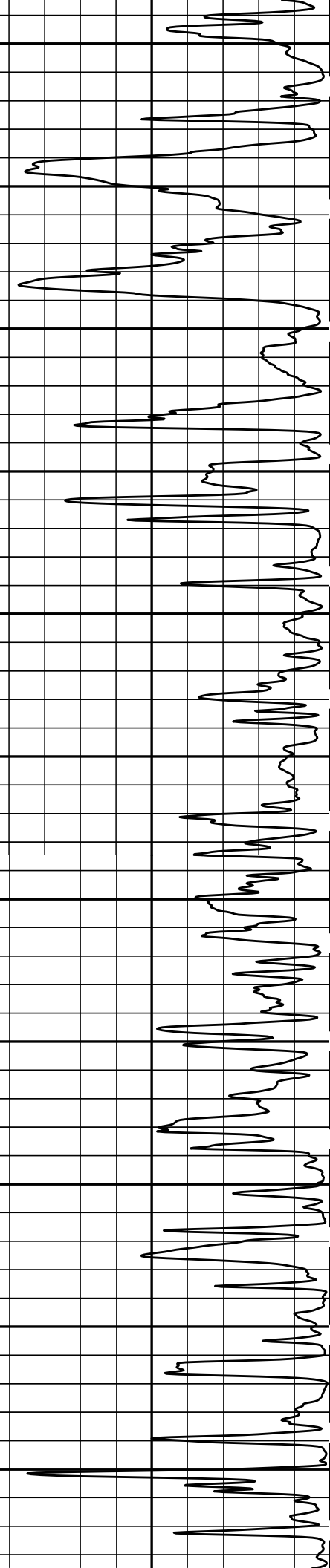
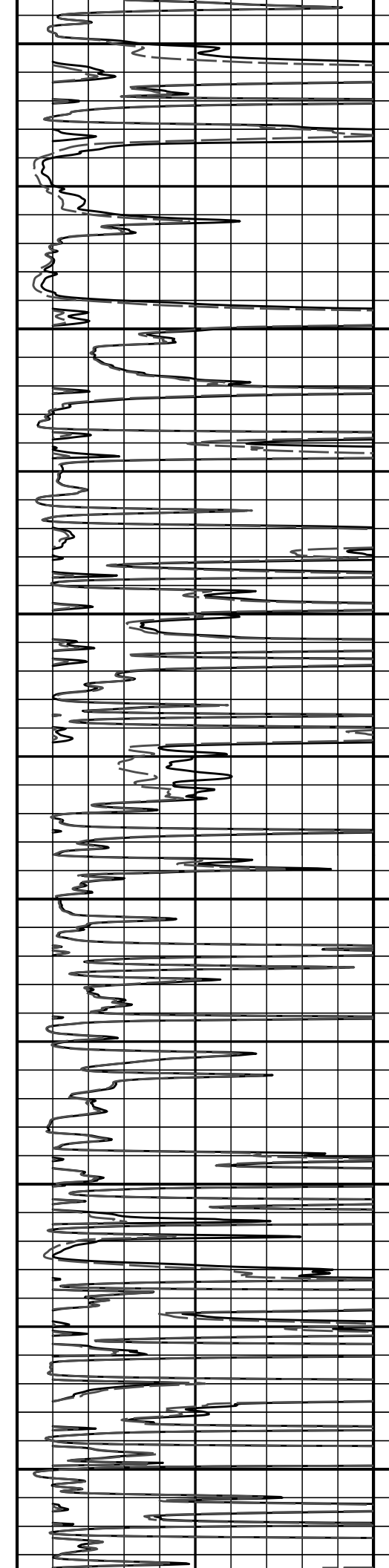
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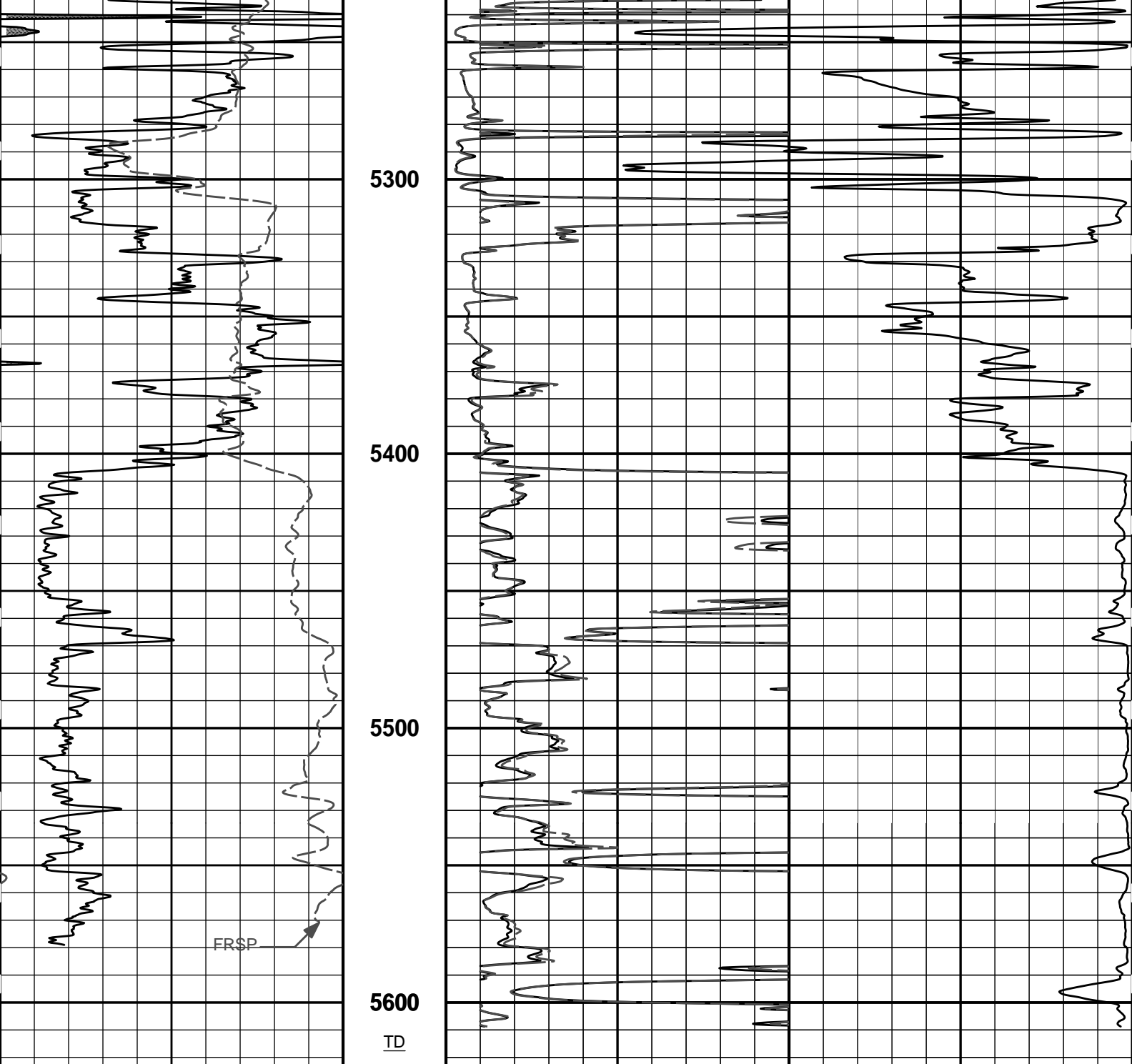
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5000

5100

5200





5300

5400

5500

5600

TD

0	Gamma API	150
	api	
	SP	
	- 20 +	

MD  
1 : 600  
ft

0	20in Resistivity 2ft Res	50
	ohm-metre	
0	90in Resistivity 2ft Res	50
	ohm-metre	

1000	90in Conductivity 2ft Res	0
	mmho per metre	

**HALLIBURTON**

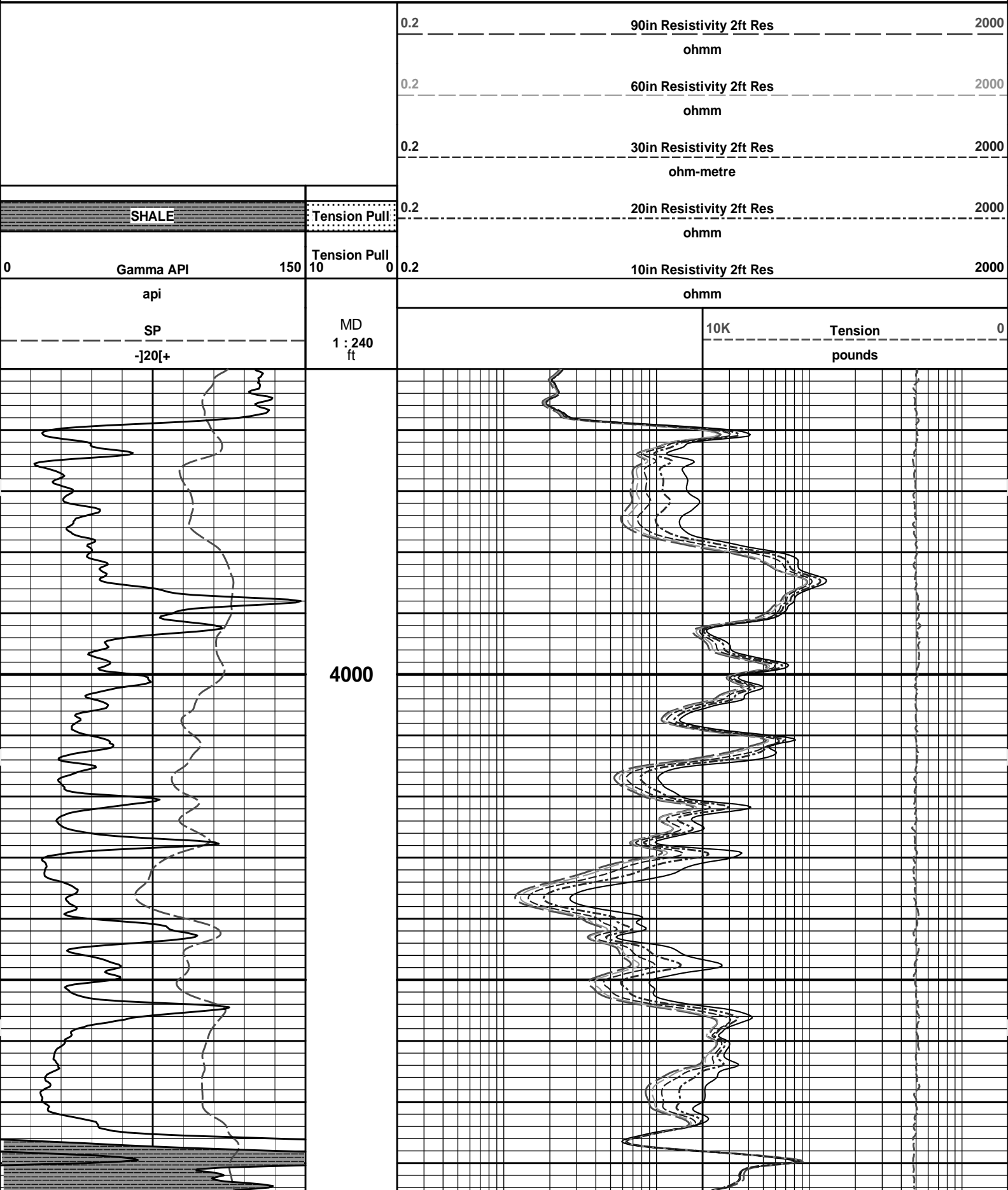
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 Data: STAPLETON\_4\_10Well Based\DAQ-0001-003\  
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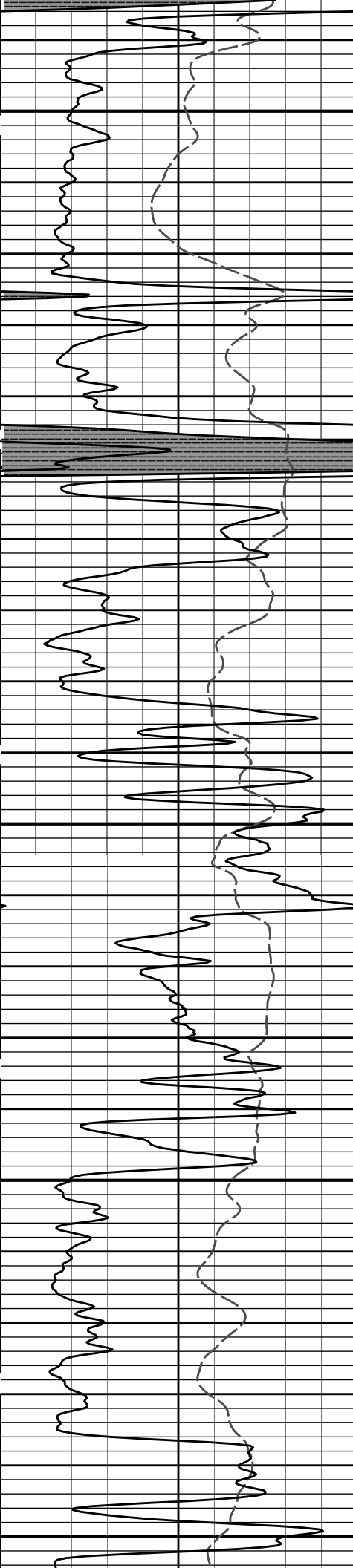
**2 INCH MAIN LOG**

**HALLIBURTON**

Plot Time: 10-Jul-11 06:52:39

# 5 INCH MAIN LOG

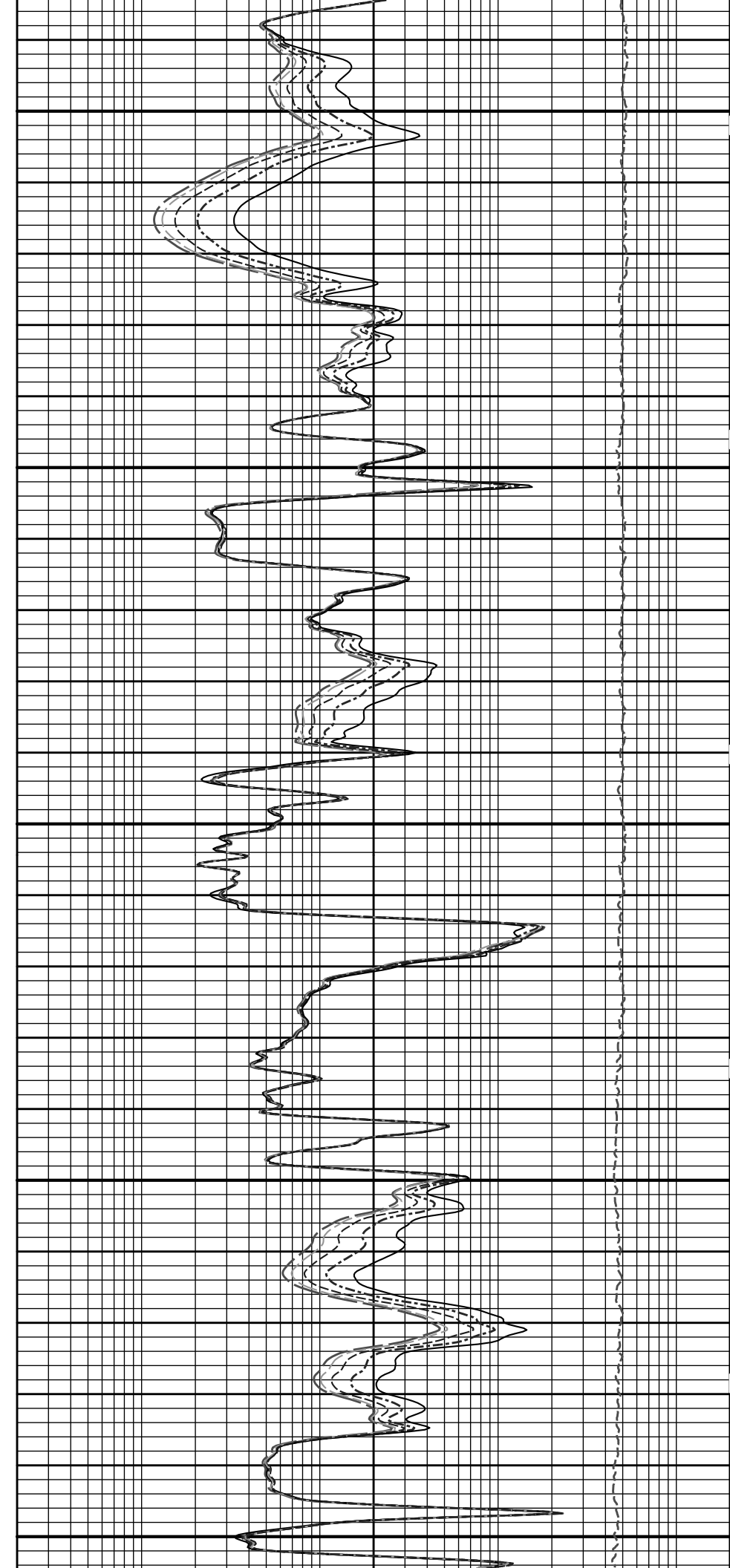


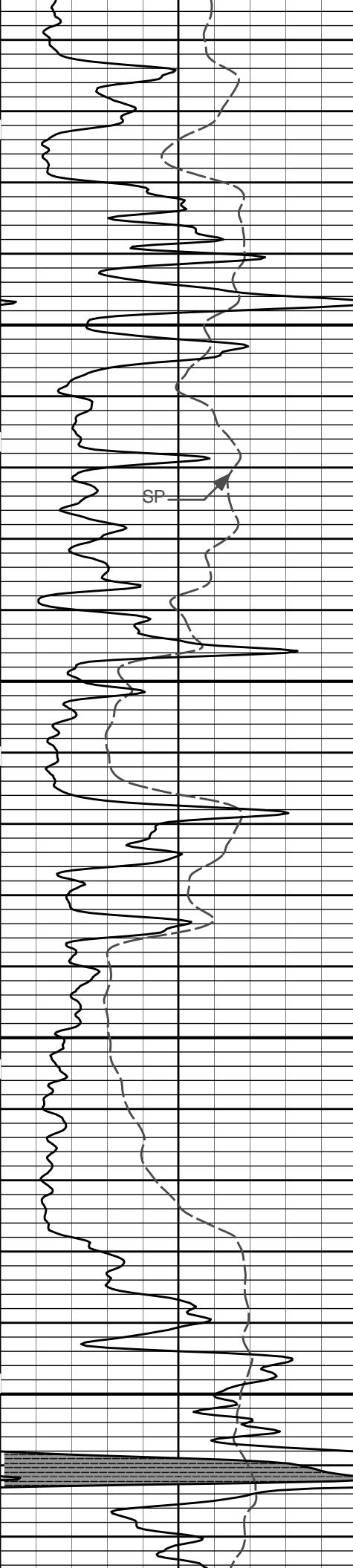


4100

4200

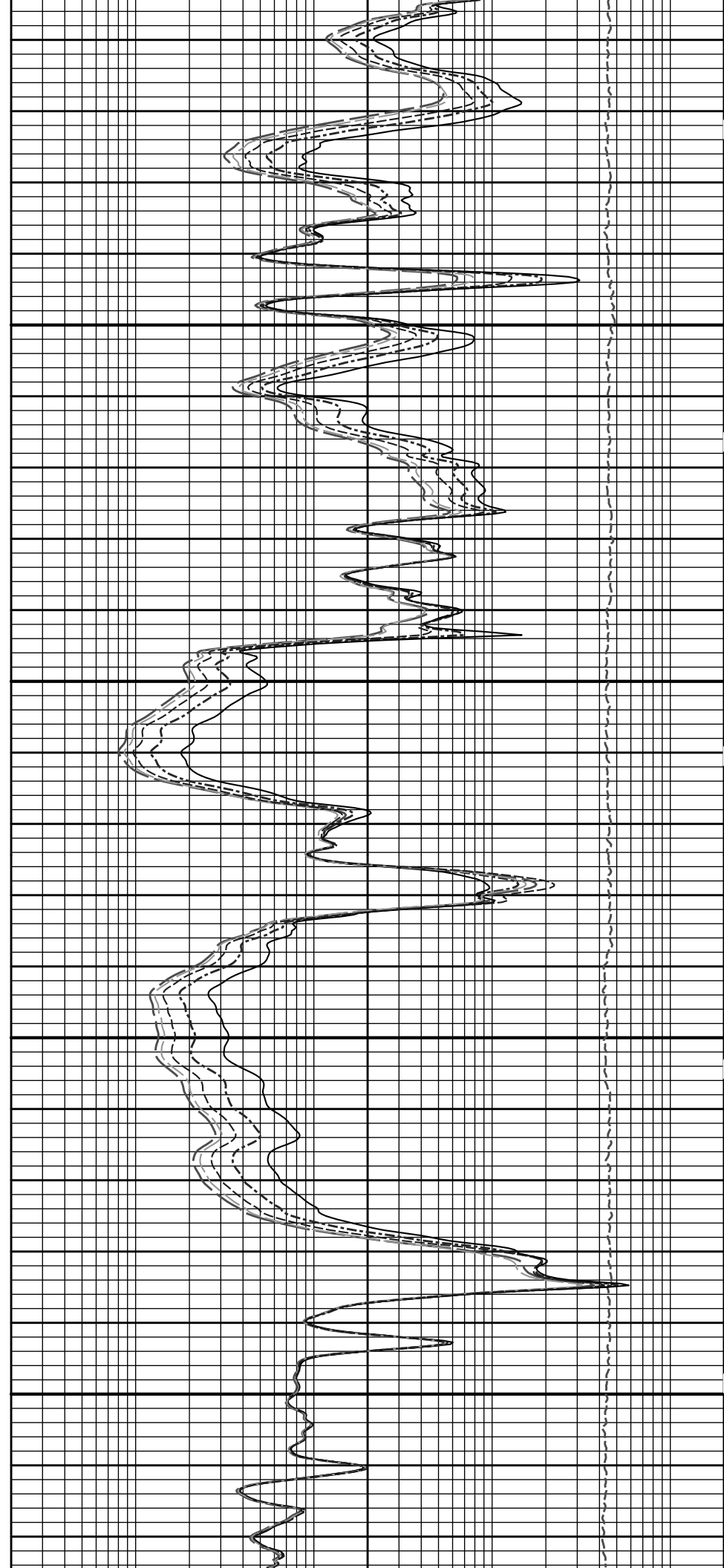
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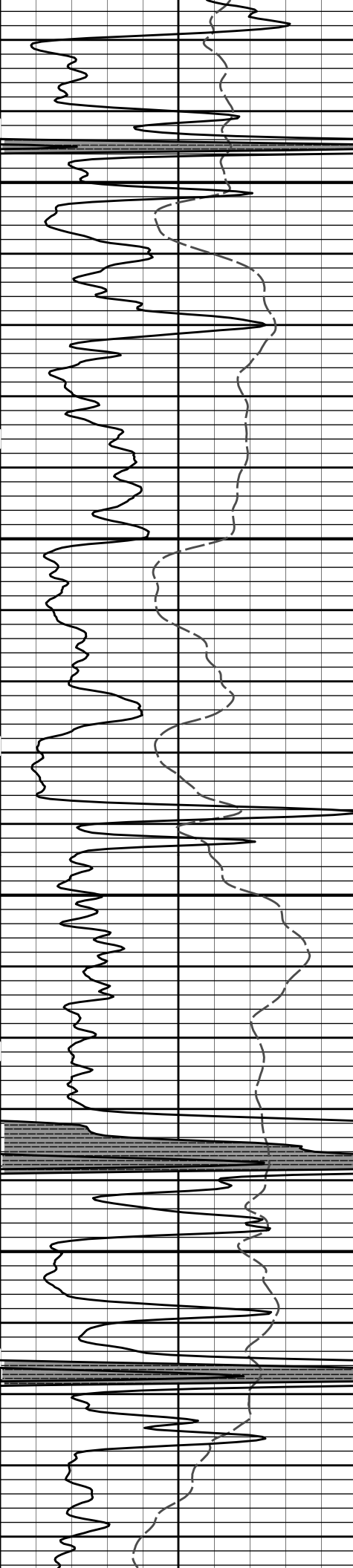




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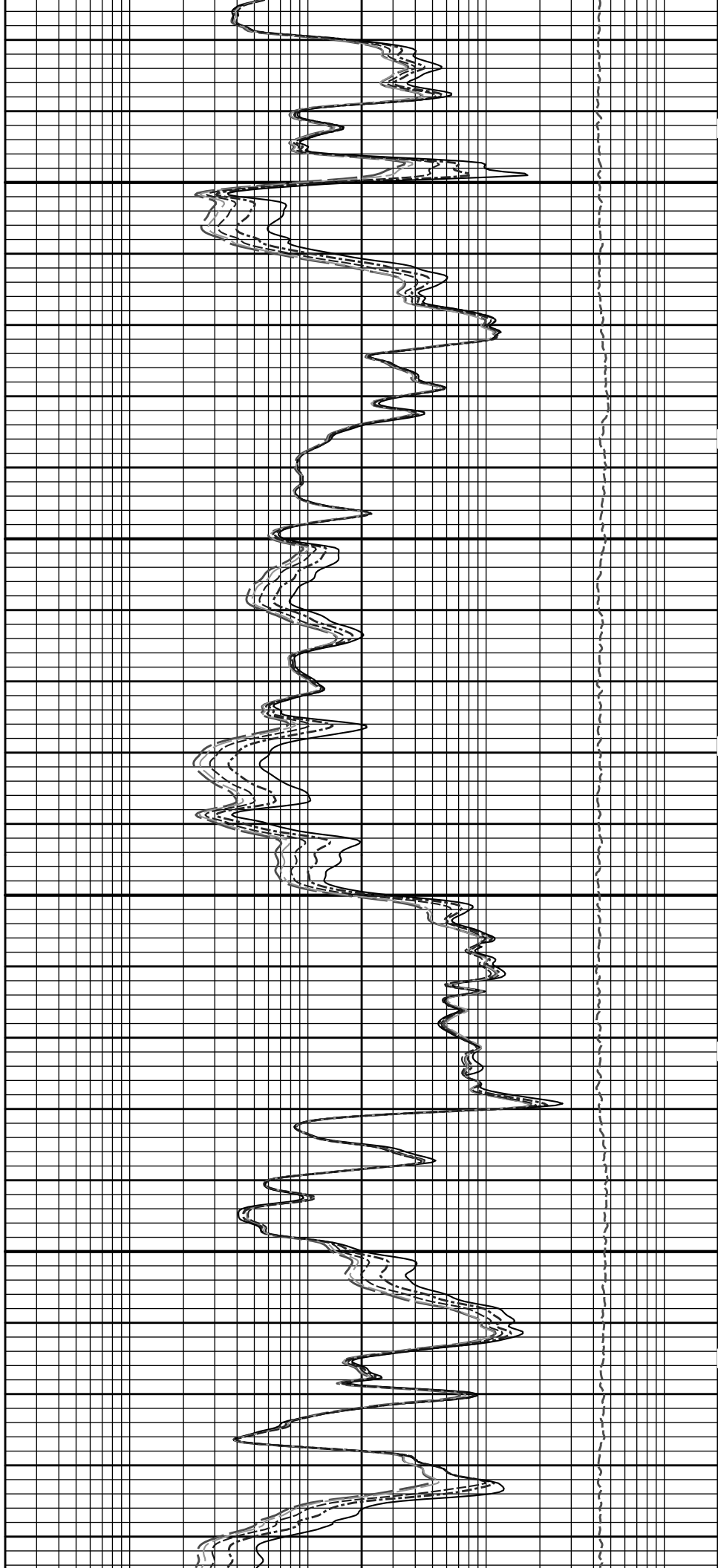
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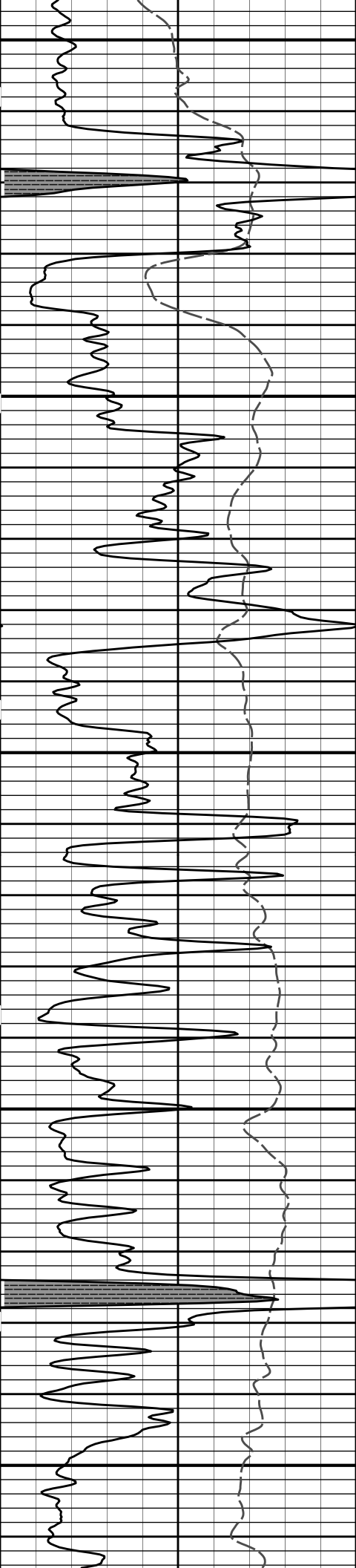




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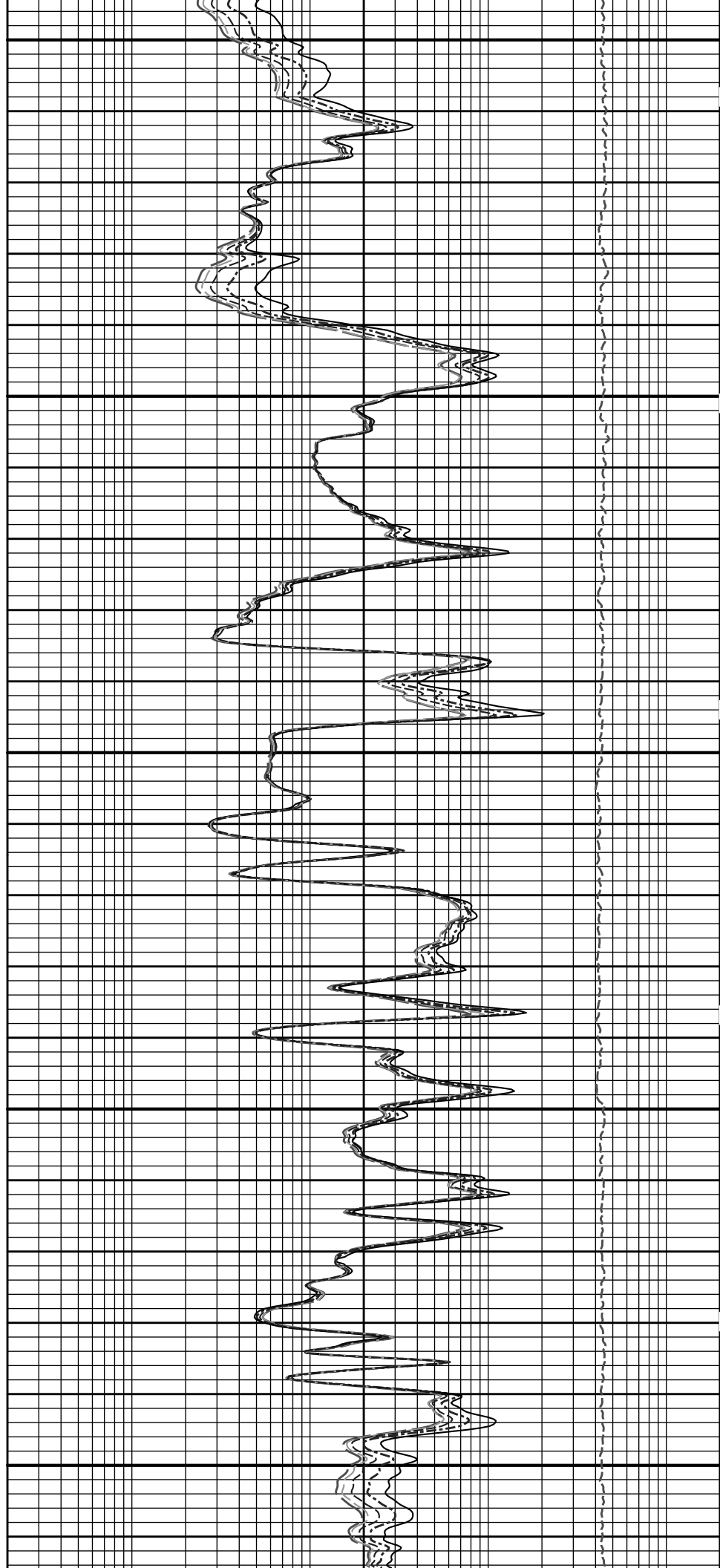
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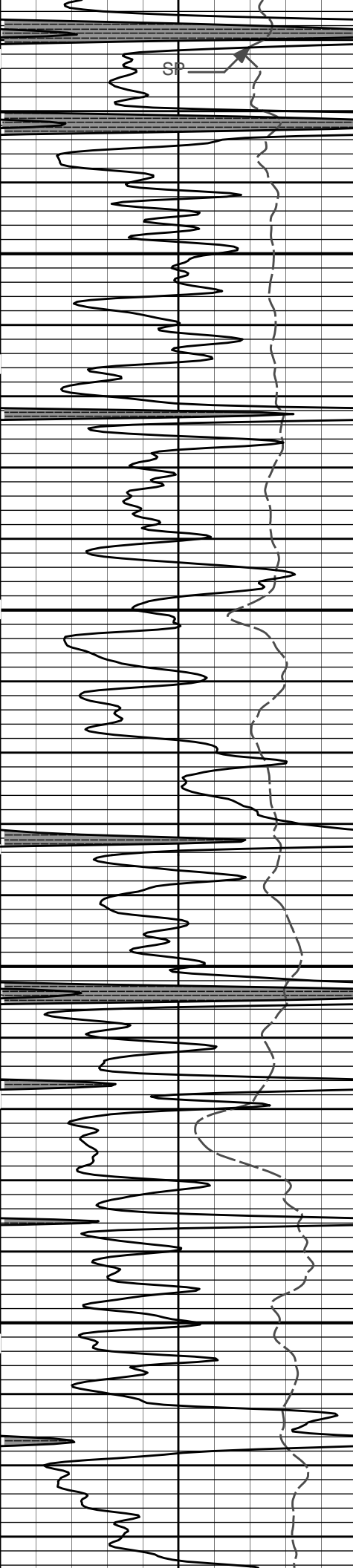




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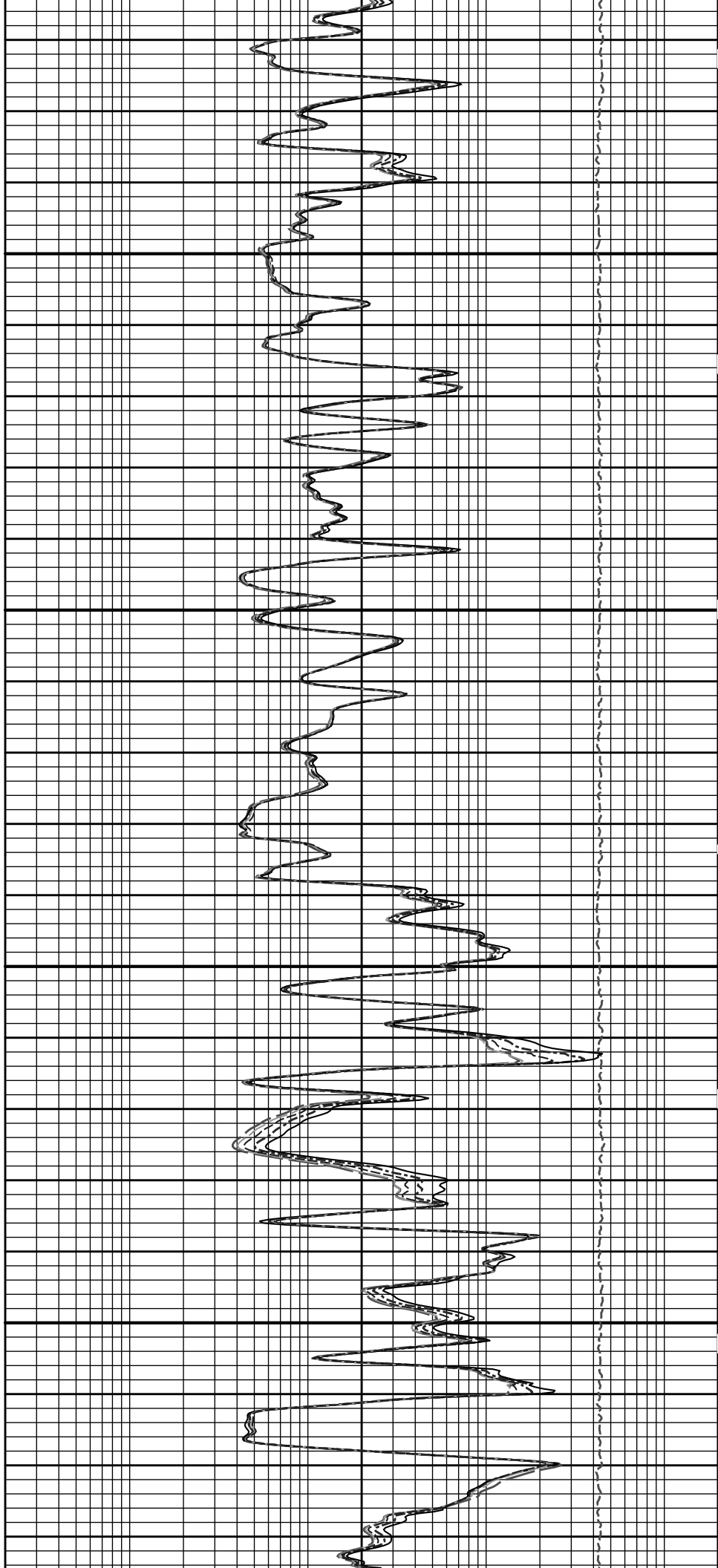
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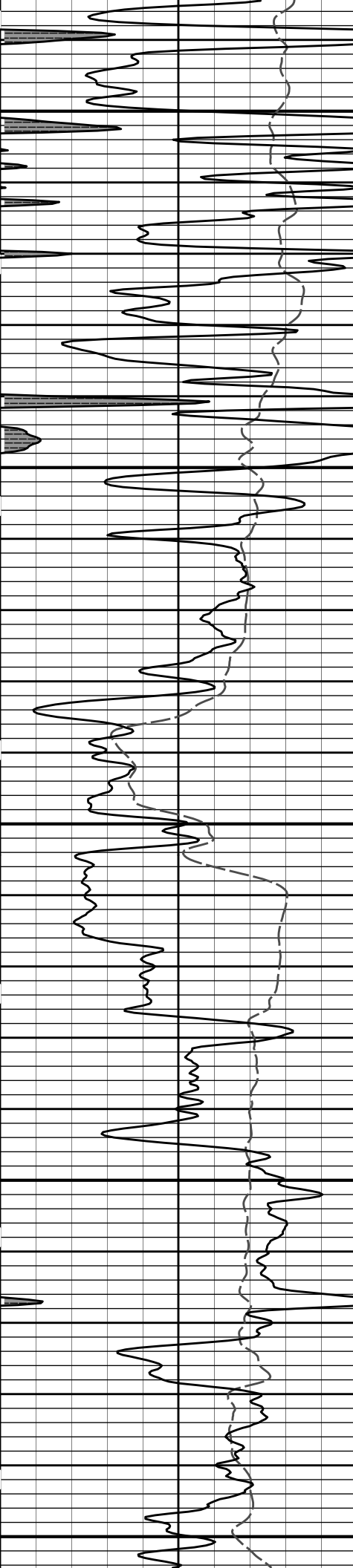




5000

5100

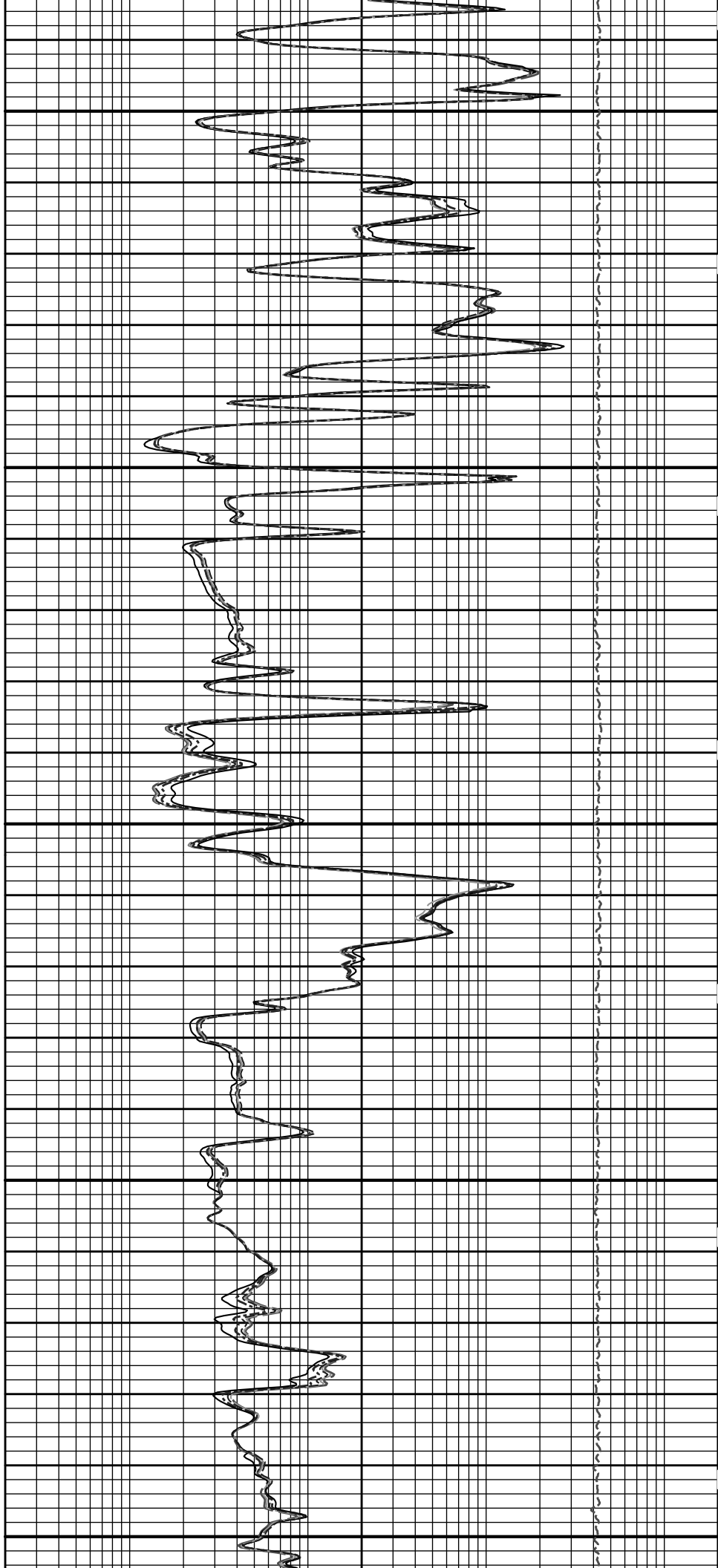


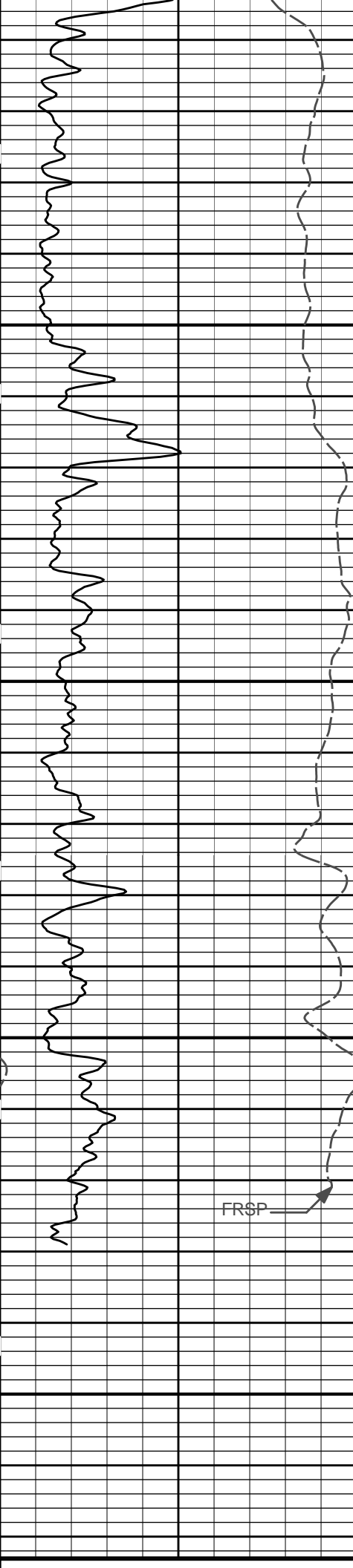


5200

5300

5400

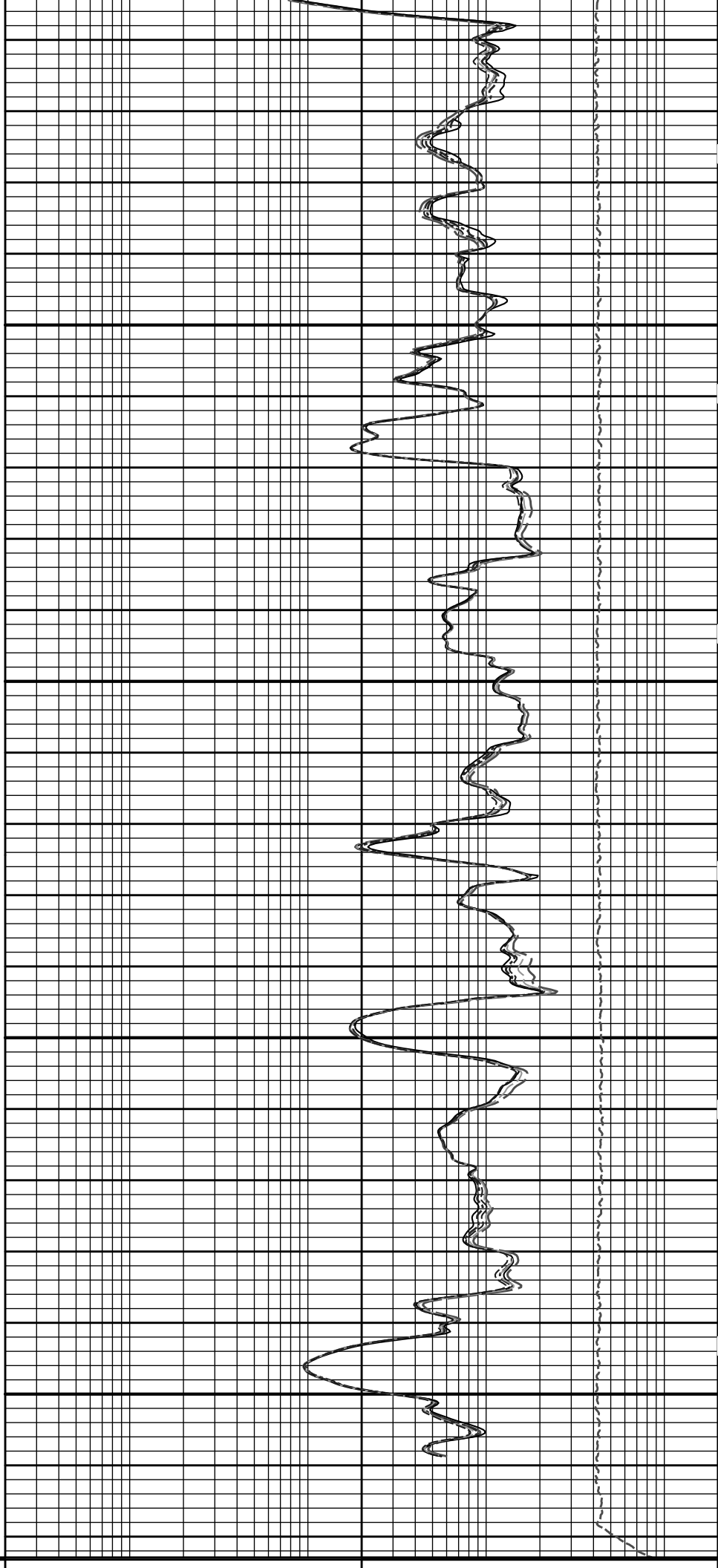




5500

5600

TD



SP -J20[+	MD 1 : 240 ft	10K	Tension pounds	0
0	Gamma API	150	Tension Pull	0
api				
SHALE	Tension Pull			
	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**

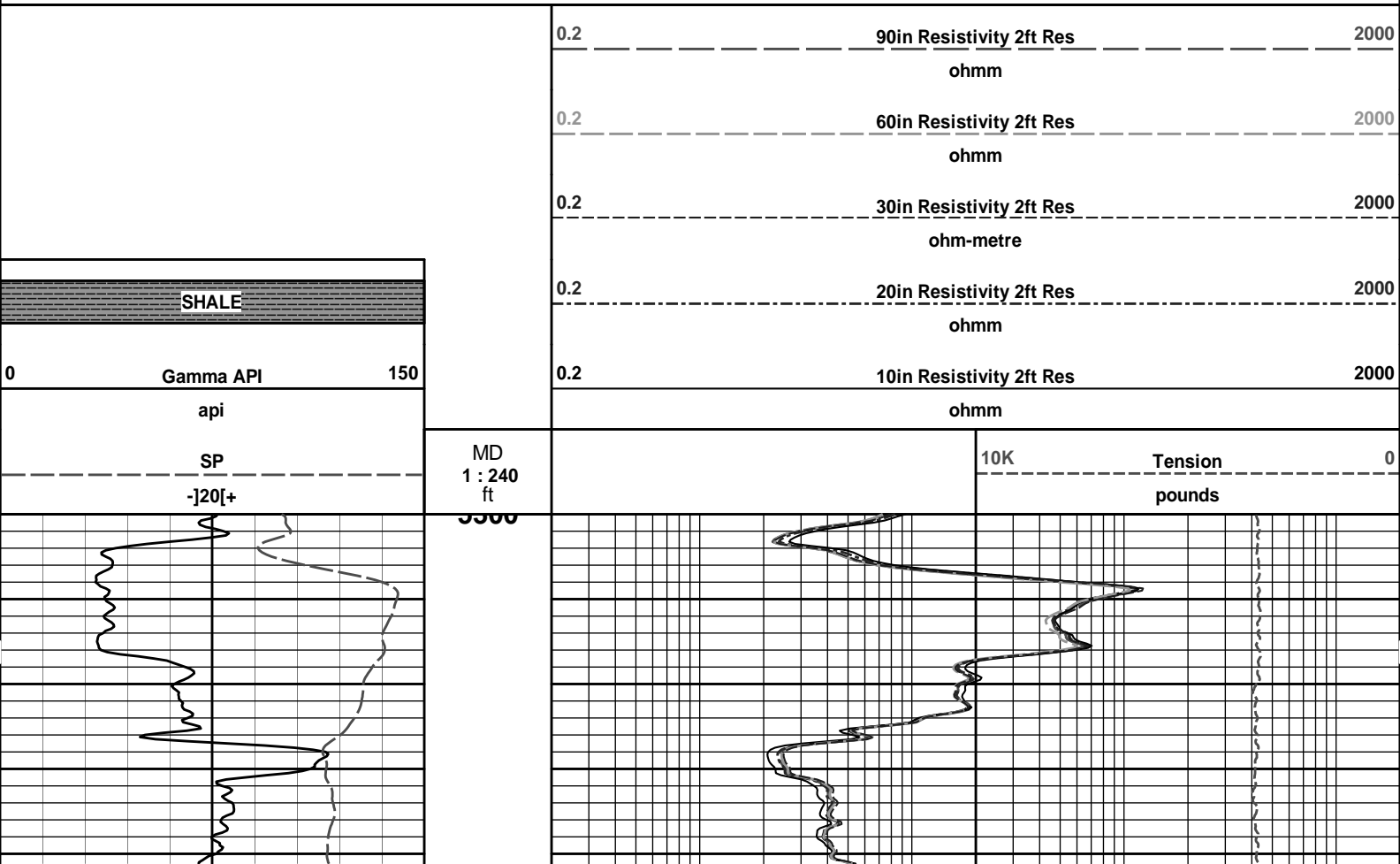
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 Plot Range: 3950 ft to 5622.92 ft  
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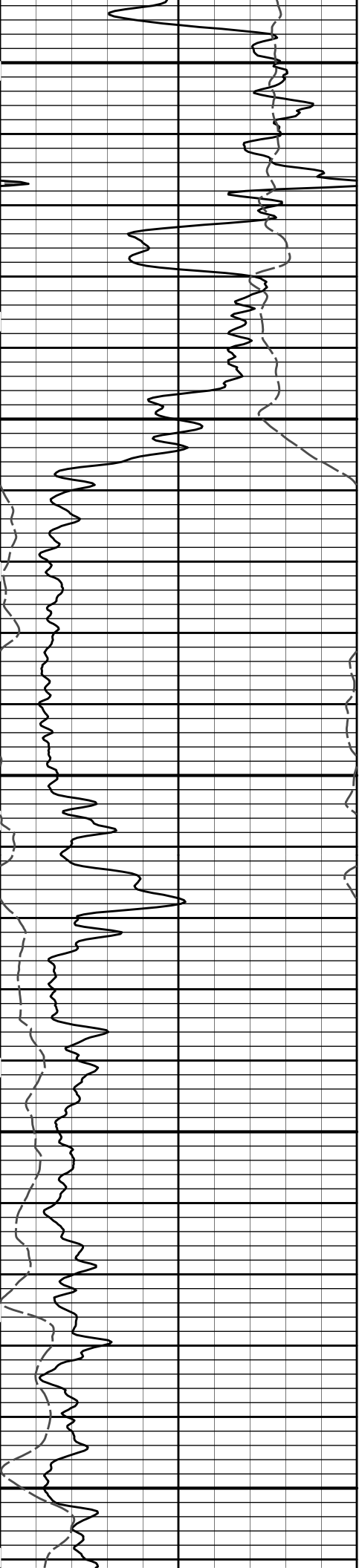
## 5 INCH MAIN LOG

**HALLIBURTON**

Plot Time: 10-Jul-11 06:52:49  
 Plot Range: 5300 ft to 5623.25 ft  
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 Plot File: \\-LOCAL-ISTAPLETON\_4\_10Well Based\ACRT\ACRT\_5\_repeat\_lib

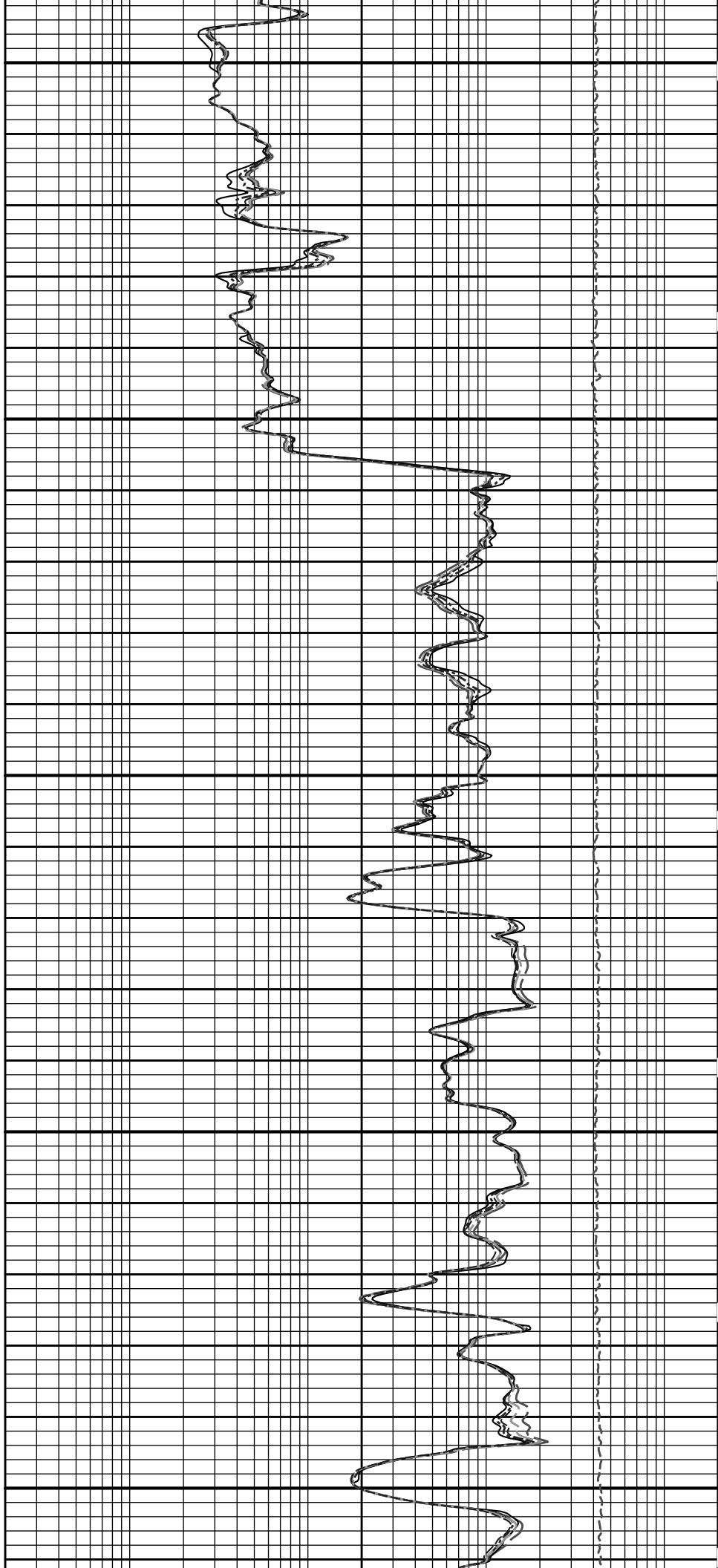
## REPEAT SECTION

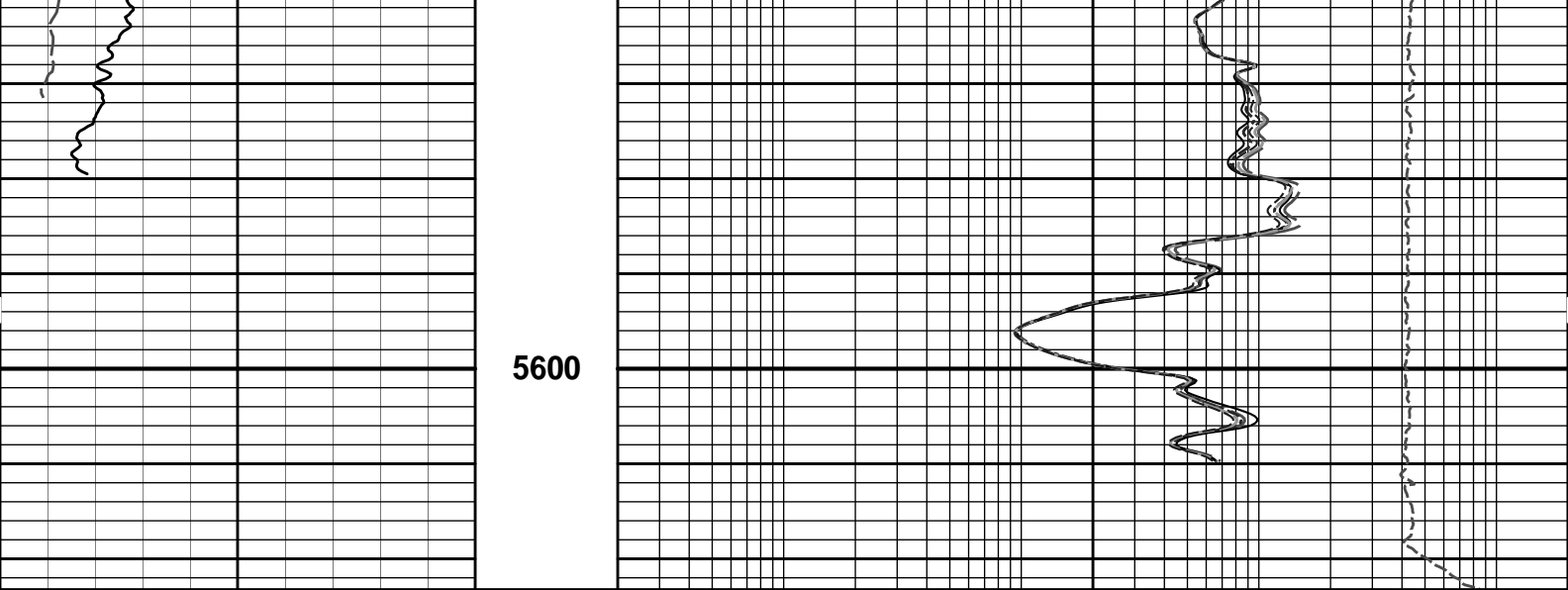




5400

5500





SP -]20[+	MD 1 : 240 ft	10K	Tension pounds	0
0	Gamma API	150		
	api			
	SHALE			
0.2	10in Resistivity 2ft Res	ohmm		2000
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: 10-Jul-11 06:52:54  
 Plot Range: 5300 ft to 5623.25 ft  
 Data: STAPLETON\_4\_10\Well Based\DAQ-0001-002\  
 Plot File: \\-LOCAL-ISTAPLETON\_4\_10\Well Based\ACRT\ACRT\_5\_repeat.lib

**REPEAT SECTION**

**HALLIBURTON**

**TOOL STRING DIAGRAM REPORT**

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-CH_696 37.50 lbs		Ø 2.750 in →		← Temperature @ 55.54 ft	3.03 ft	56.57 ft
XOHD-TRK696 20.00 lbs		Ø 2.750 in → Ø 3.625 in →			0.95 ft	53.54 ft
SP Sub-PROT01 60.00 lbs		Ø 3.625 in →		← SP @ 50.81 ft	3.74 ft	52.59 ft
						48.85 ft

GTET-11048627  
165.00 lbs

Ø 3.625 in →

8.52 ft

← GammaRay @ 42.79 ft

40.33 ft

DSN Decentralizer-  
10755066  
6.60 lbs

Ø 3.625 in\* →

Ø 3.625 in →

9.69 ft

← DSN Far @ 33.39 ft

← DSN Near @ 32.64 ft

30.64 ft

SDLT-I04\_P84  
360.00 lbs

Ø 4.500 in →

Ø 4.750 in →

10.81 ft

← SDL Microlog @ 22.83 ft

← SDL Caliper @ 22.65 ft

← SDL @ 22.64 ft

19.83 ft

ACRt-I962\_S909  
250.00 lbs

Ø 3.625 in →

← Mud Resistivity @ 13.44 ft

← ACRt @ 9.46 ft

19.25 ft

Cabbage Head-  
TRK696  
5.00 lbs

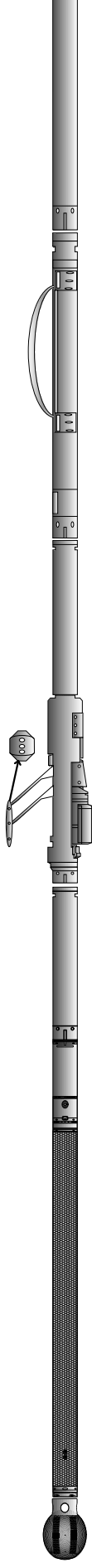
Ø 3.625 in →

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_696	37.50	3.03	53.54	300.00
XOHD	Hostile to Dits Cross Over	TRK696	20.00	0.95	52.59	300.00
SP	SP Sub	PROT01	60.00	3.74	48.85	300.00
GTET	Gamma Telemetry Tool	11048627	165.00	8.52	40.33	60.00

DSNT	Dual Spaced Neutron	11055304	174.00	9.69	30.64	60.00
DCNT	DSN Decentralizer	10755066	6.60	5.13 *	33.97	300.00
SDLT	Spectral Density Tool	I04_P84	360.00	10.81	19.83	60.00
ACRt	Array Compensated True Resistivity	I962_S909	250.00	19.25	0.58	300.00
CBHD	Cabbage Head	TRK696	5.00	0.58	0.00	300.00

<b>Total</b>			<b>1,078.10</b>	<b>56.57</b>		
* Not included in Total Length and Length Accumulation.						
Data: STAPLETON_4_10\0001 SP-GTET-DSN-SDL-ACRT-CHNDLE						
Date: 10-Jul-11 04:12:47						

# HALLIBURTON

## CALIBRATION REPORT

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION			
Tool Name:	ACRt - I962_S909	Reference Calibration Date:	03-May-11 14:28:43
Engineer:	C. MARLOWE	Calibration Date:	14-Jun-11 12:22:56
Software Version:	WL INSITE R3.2.5 (Build 2)	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	1.0092	1.05	0.95	1.0164	1.05	0.95	1.0153	1.05
A2 (50")	0.95	1.0324	1.05	0.95	1.0414	1.05	0.95	1.0436	1.05
A3 (29")	0.95	1.0045	1.05	0.95	1.0103	1.05	0.95	1.0089	1.05
A4 (17")	0.95	1.0048	1.05	0.95	1.0097	1.05	0.95	1.0101	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0198	1.05	0.95	1.0193	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9973	1.05	0.95	0.9969	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	-0.654	2	-6	-3.605	-2	-8	-4.455	-2
A2 (50")	-7	-1.760	-1	-6	-3.423	-2	-7	-4.210	-2
A3 (29")	-27	-14.677	-9	-9	-4.421	-3	-7	-2.557	-1
A4 (17")	-180	-101.481	-60	-45	-31.116	-15	-39	-26.047	-13
A5 (10")	N/A	N/A	N/A	-150	-101.037	-50	-80	-45.913	-10
A6 (6")	N/A	N/A	N/A	175	286.578	525	90	150.035	270

TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION			
Signal	Lower	R	Upper		Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.9283	1.3		Mud Cell	0.95	1.002	1.05
36K	1.0	1.3668	2.0					
72K	1.0	1.5818	2.0					

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
ACRt-I962_S909						
Mud Cell	1.002	-----	-----	0.000	-----	ohm-m

## PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	DSNT	DNOK	Process DSN?	No	
	SDLT	DNOK	Process Density?	No	
	SDLT	MLOK	Process MicroLog Outputs?	No	
3940.00					
	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	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	0.750	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	5618.00	ft
	SHARED	BHT	Bottom Hole Temperature	130.0	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	
	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	Centered	
	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	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	DNOK	Process Density?	Yes	
	SDLT	DNOK	Process Density EVR?	No	
	SDLT	CB	Logging Calibration Blocks?	No	
	SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
	SDLT	DTWN	Disable temperature warning	No	
	SDLT	DMA	Formation Density Matrix	2.710	g/cc
	SDLT	DFL	Formation Density Fluid	1.000	g/cc
	SDLT	CLOK	Process Caliper Outputs?	Yes	
	SDLT	MLOK	Process MicroLog Outputs?	Yes	
	ACRt	RTOK	Process ACRt?	Yes	
	ACRt	MNSO	Minimum Tool Standoff	1.50	in
	ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Up	

ACRt	TPOS	Tool Position	Free Hanging	
ACRt	RMOP	Rmud Source	Mud Cell	
ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt	THQY	Threshold Quality	0.50	
<b>BOTTOM</b>				
Data: STAPLETON_4_10\0001 SP-GTET-DSN-SDL-ACRT-CHNDLE			Date: 10-Jul-11 05:28:22	

# HALLIBURTON

## INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
<b>Depth Panel</b>				
TENS	Tension	0.00	NO	
<b>CH_HOS</b>				
DHTN	DownholeTension	0.00	BLK	0.000
<b>SP Sub</b>				
PLTC	Plot Control Mask	50.81	NO	
SP	Spontaneous Potential	50.81	BLK	1.250
SPR	Raw Spontaneous Potential	50.81	NO	
SPO	Spontaneous Potential Offset	50.81	NO	
<b>GTET</b>				
TPUL	Tension Pull	42.79	NO	
GR	Natural Gamma Ray API	42.79	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	42.79	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	42.79	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
<b>DSNT</b>				
TPUL	Tension Pull	32.54	NO	
RNDS	Near Detector Telemetry Counts	32.64	BLK	1.417
RFDS	Far Detector Telemetry Counts	33.39	TRI	0.583
DNTT	DSN Tool Temperature	32.64	NO	
DSNS	DSN Tool Status	32.54	NO	
ERND	Near Detector Telemetry Counts EVR	32.64	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	33.39	BLK	0.000
ENTM	DSN Tool Temperature EVR	32.64	NO	
<b>SDLT</b>				
TPUL	Tension Pull	22.64	NO	
NAB	Near Above	22.46	BLK	0.920
NHI	Near Cesium High	22.46	BLK	0.920
NLO	Near Cesium Low	22.46	BLK	0.920
NVA	Near Valley	22.46	BLK	0.920
NBA	Near Barite	22.46	BLK	0.920
NDE	Near Density	22.46	BLK	0.920
NPK	Near Peak	22.46	BLK	0.920
NLI	Near Lithology	22.46	BLK	0.920
NBAU	Near Barite Unfiltered	22.46	BLK	0.250
NLIU	Near Lithology Unfiltered	22.46	BLK	0.250

AB	Far Above	22.81	BLK	0.250
FHI	Far Cesium High	22.81	BLK	0.250
FLO	Far Cesium Low	22.81	BLK	0.250
FVA	Far Valley	22.81	BLK	0.250
FBA	Far Barite	22.81	BLK	0.250
FDE	Far Density	22.81	BLK	0.250
FPK	Far Peak	22.81	BLK	0.250
FLI	Far Lithology	22.81	BLK	0.250
PTMP	Pad Temperature	22.65	BLK	0.920
NHV	Near Detector High Voltage	19.83	NO	
FHV	Far Detector High Voltage	19.83	NO	
ITMP	Instrument Temperature	19.83	NO	
DDHV	Detector High Voltage	19.83	NO	
TPUL	Tension Pull	22.65	NO	
PCAL	Pad Caliper	22.65	TRI	0.250
ACAL	Arm Caliper	22.65	TRI	0.250
TPUL	Tension Pull	22.83	NO	
MINV	Microlog Lateral	22.83	BLK	0.750
MNOR	Microlog Normal	22.83	BLK	0.750

**ACRt**

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	

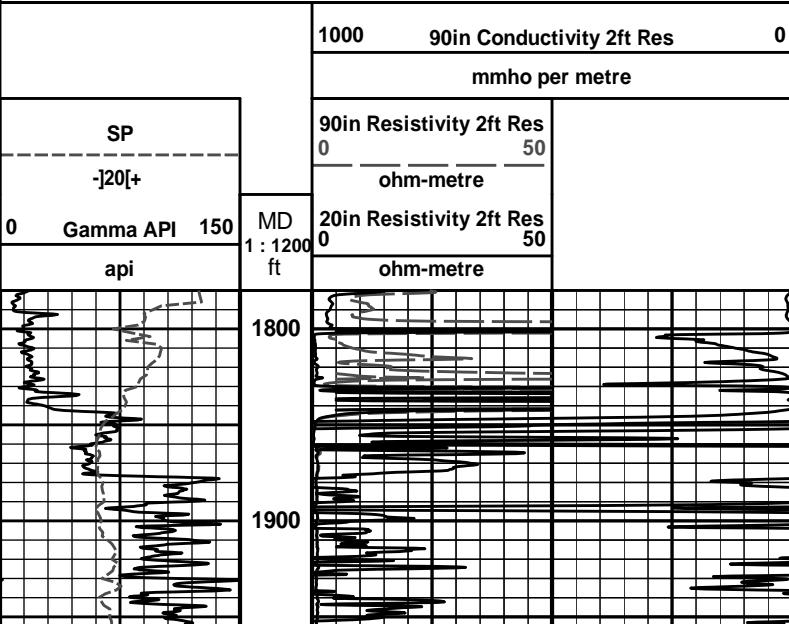
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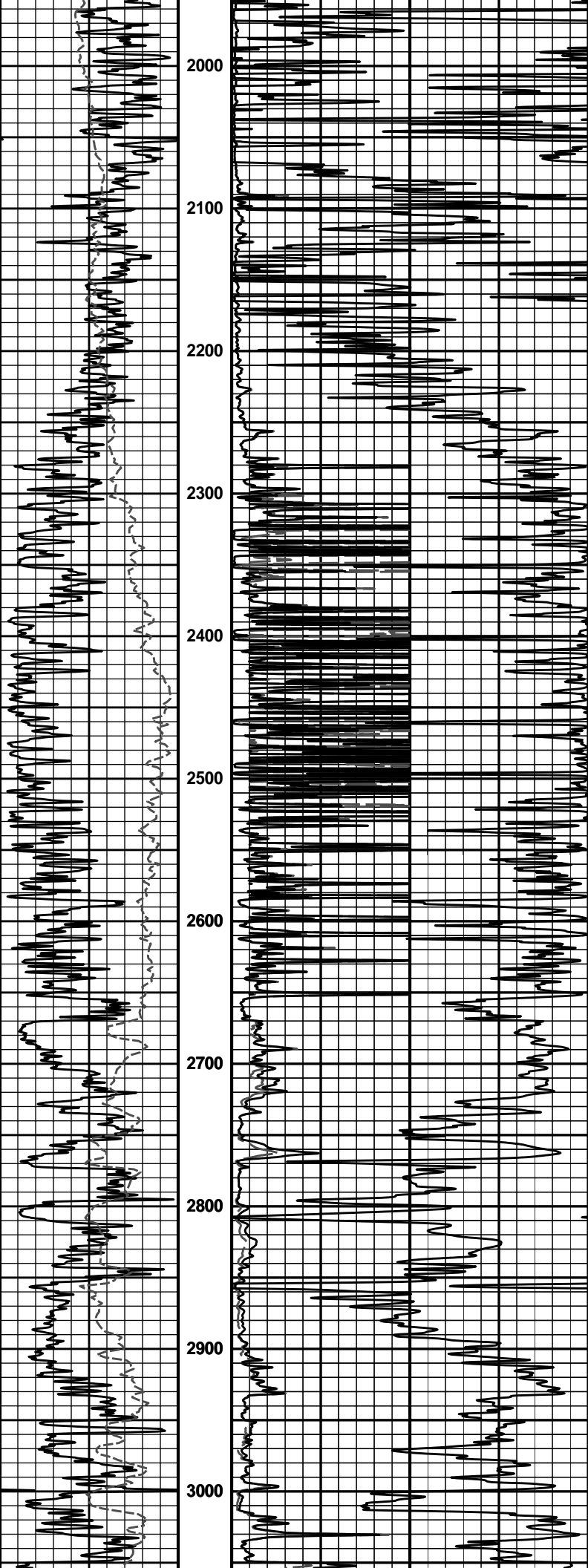
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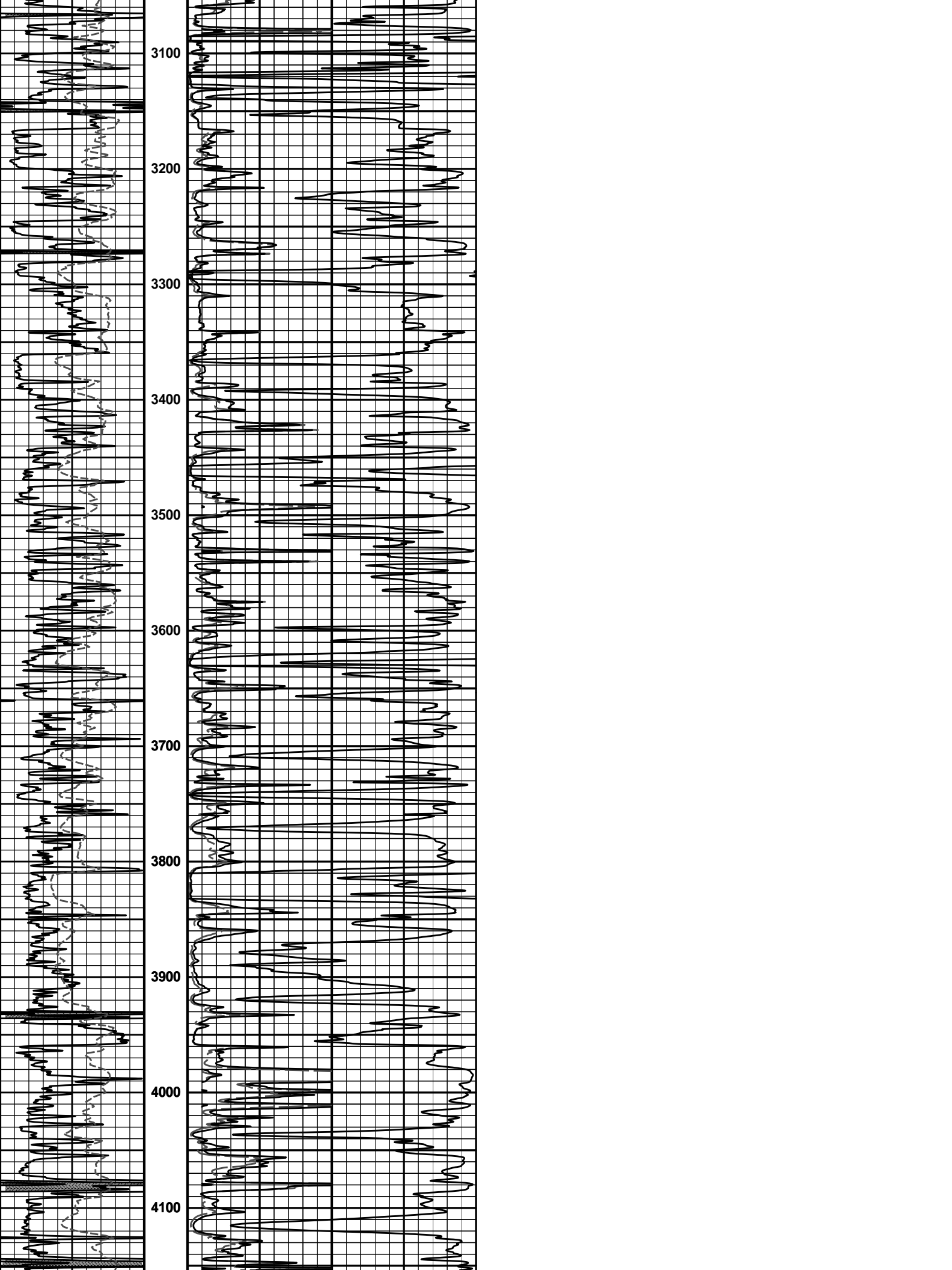
COMPANY	STRATA EXPLORATION		
WELL	STAPLETON 4-10		
FIELD	DIADEN		
COUNTY	HASKELL	STATE	KANSAS
<b>HALLIBURTON</b>		ARRAY COMPENSATED TRUE RESISTIVITY LOG	

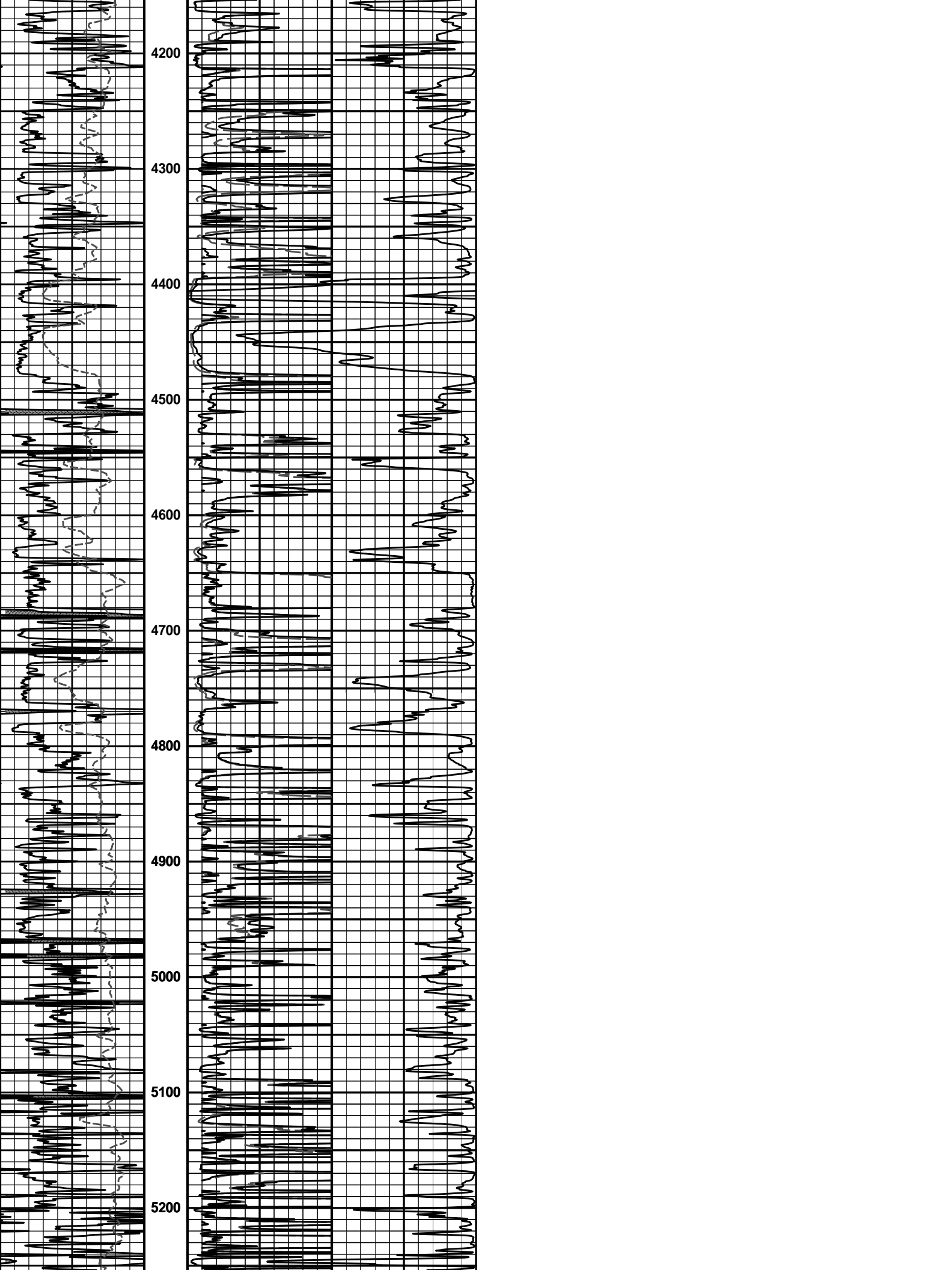
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 Plot Range: 1780 ft to 5571 ft  
 Data: STAPLETON\_4\_10\Well Based\DAQ-0001-003\  
 Plot File: \\-LOCAL-STAPLETON\_4\_10\Well Based\ACRT\ACRT\_1\_lib

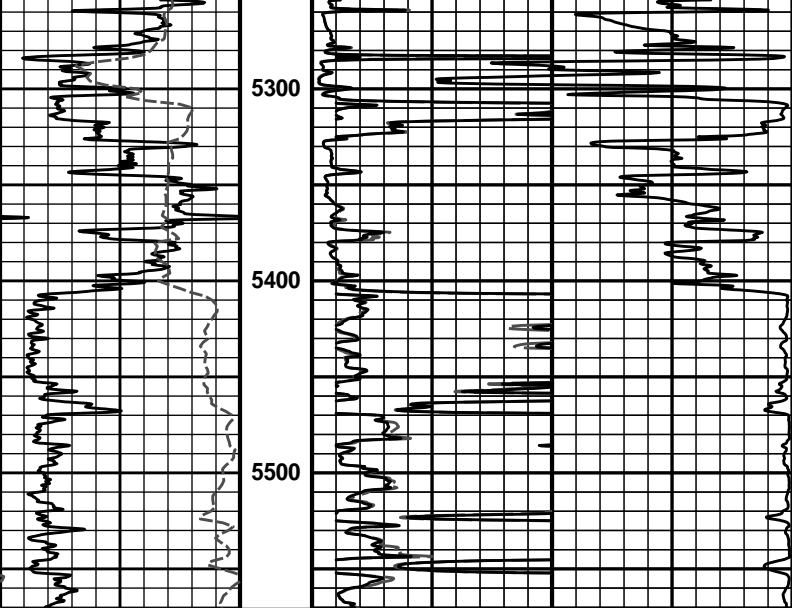
## 1 INCH MAIN LOG











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

**HALLIBURTON**  
 Plot Time: 10-Jul-11 06:53:02  
 Plot Range: 1780 ft to 5571 ft  
 Data: STAPLETON\_4\_10Well Based\DAQ-0001-003\  
 Plot File: \\-LOCAL-STAPLETON\_4\_10Well Based\ACRT\ACRT\_1\_lib

# 1 INCH MAIN LOG