

# HALLIBURTON

## ARRAY COMPENSATED RESISTIVITY LOG

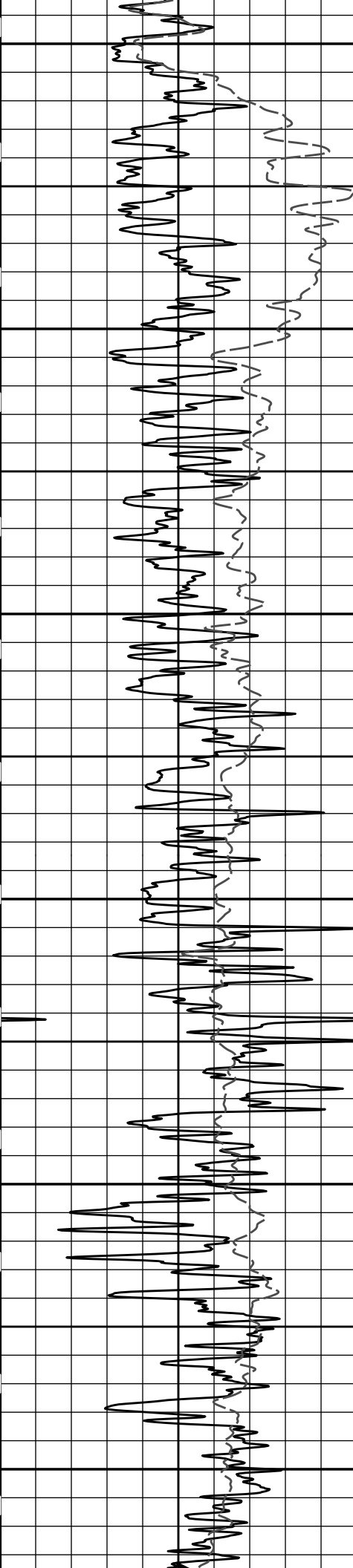
COMPANY	PHOENIX PETROCORP INC.		
WELL	BERRYMAN RU 14-4		
FIELD	RICHFIELD		
COUNTY	MORTON		
STATE	KANSAS		
COMPANY	PHOENIX PETROCORP INC.	WELL	BERRYMAN RU 14-4
FIELD	RICHFIELD	COUNTY	MORTON
STATE	KANSAS		
API No.	15-129-21933	Location	2310 FSL & 1320 FEL
Other Services:	ACRT SDL-DSN-ML		
Permanent Datum	GL	Elev. 3443.0 ft	Elev. K.B. 3454.0 ft
Log measured from	KB	11.0 ft above perm. Datum	D.F. 3453.0 ft
Drilling measured from	KB		G.L. 3443.0 ft

Date	31-May-11	Run No.	1
Depth - Driller	5175.00 ft	Depth - Logger	5175.0 ft
Bottom - Logged Interval	5165	Top - Logged Interval	1563
Casing - Driller	8.625 in	Casing - Logger	1563.0 ft
Bit Size	7.875 in	Type Fluid in Hole	W/BM
Viscosity	9.1 ppq	Density	65.00 sg/qt
PH	5.40 pH	Fluid Loss	5.4 cpm
Source of Sample	FLOWLINE		
Rm @ Meas. Temperature	1.650 ohmm	Rmf @ Meas. Temperature	1.37 ohmm
Rmc @ Meas. Temperature	1.830 ohmm	Source Rmf	MEAS
Rm @ BHT	1.05 ohmm	Rmf @ BHT	10.0 hr
Time Since Circulation	31-May-11 10:54		
Max. Rec. Temperature	134.0 degF	Equipment Location	WHITLOCK
Recorded By	CHARLIE WILLIAMS		
Witnessed By	JIM BERGMAN		

Fold here

Service Ticket No.: 8213414		API Serial No.: 15-129-21933		PGM Version: WL INSITE R3.2.1 (Build 7)			
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.	@						
Rmc @ Meas. Temp.	@						
Source Rmf	Rmc						
Rm @ BHT	@						
Rmf @ BHT	@						
Rmc @ BHT	@						
EQUIPMENT DATA							
GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.		Run No.		Run No.		Run No.	
Serial No.		Serial No.		Serial No.		Serial No.	
Model No.		Model No.		Model No.		Model No.	
Diameter		No. of Cent.		Diameter		Diameter	
Detector Model No.		Spacing		Log Type		Log Type	
Type				Source Type		Source Type	
Length		LSA [Y/N]		Serial No.		Serial No.	
Distance to Source		FWDA [Y/N]		Strength		Strength	
LOGGING DATA							
GENERAL		GAMMA		ACOUSTIC		DENSITY	





1600

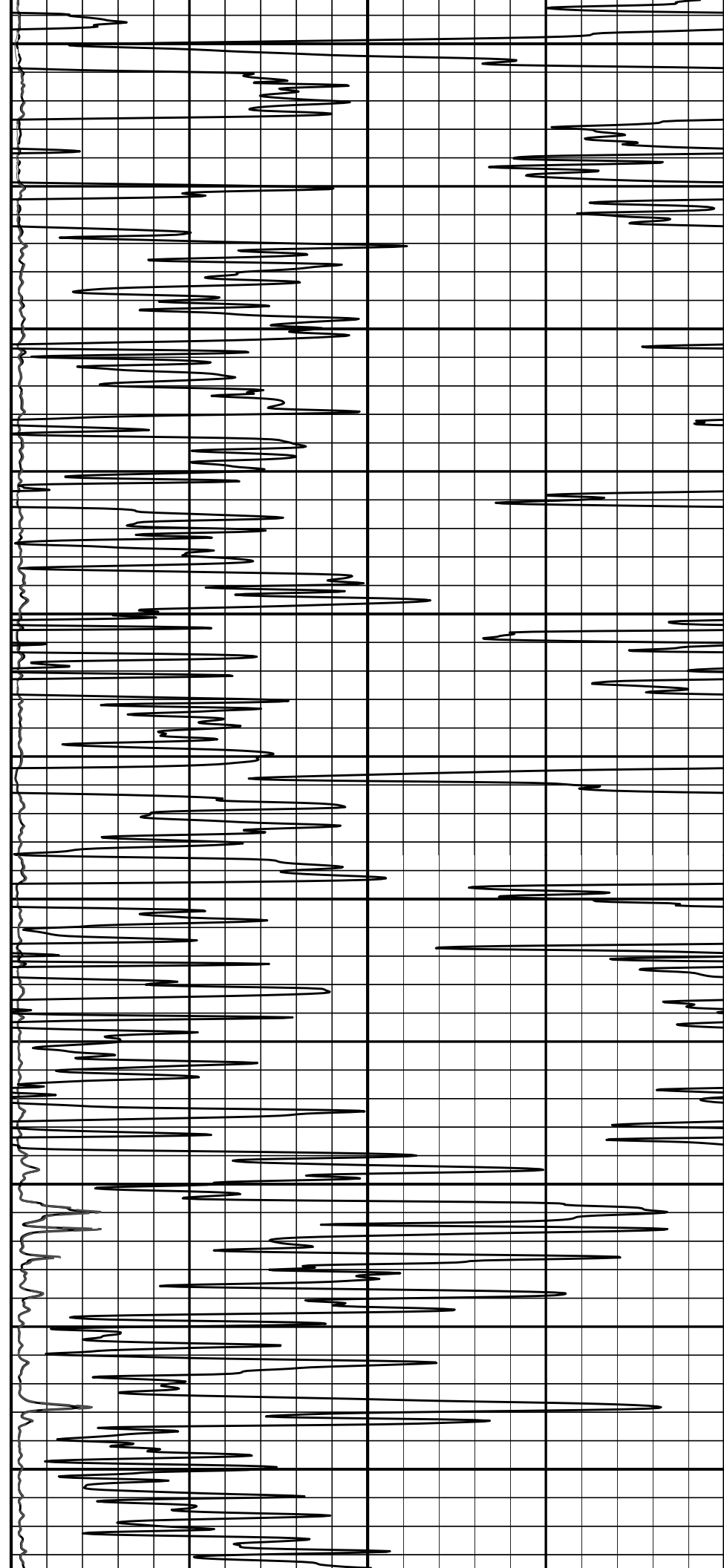
1700

1800

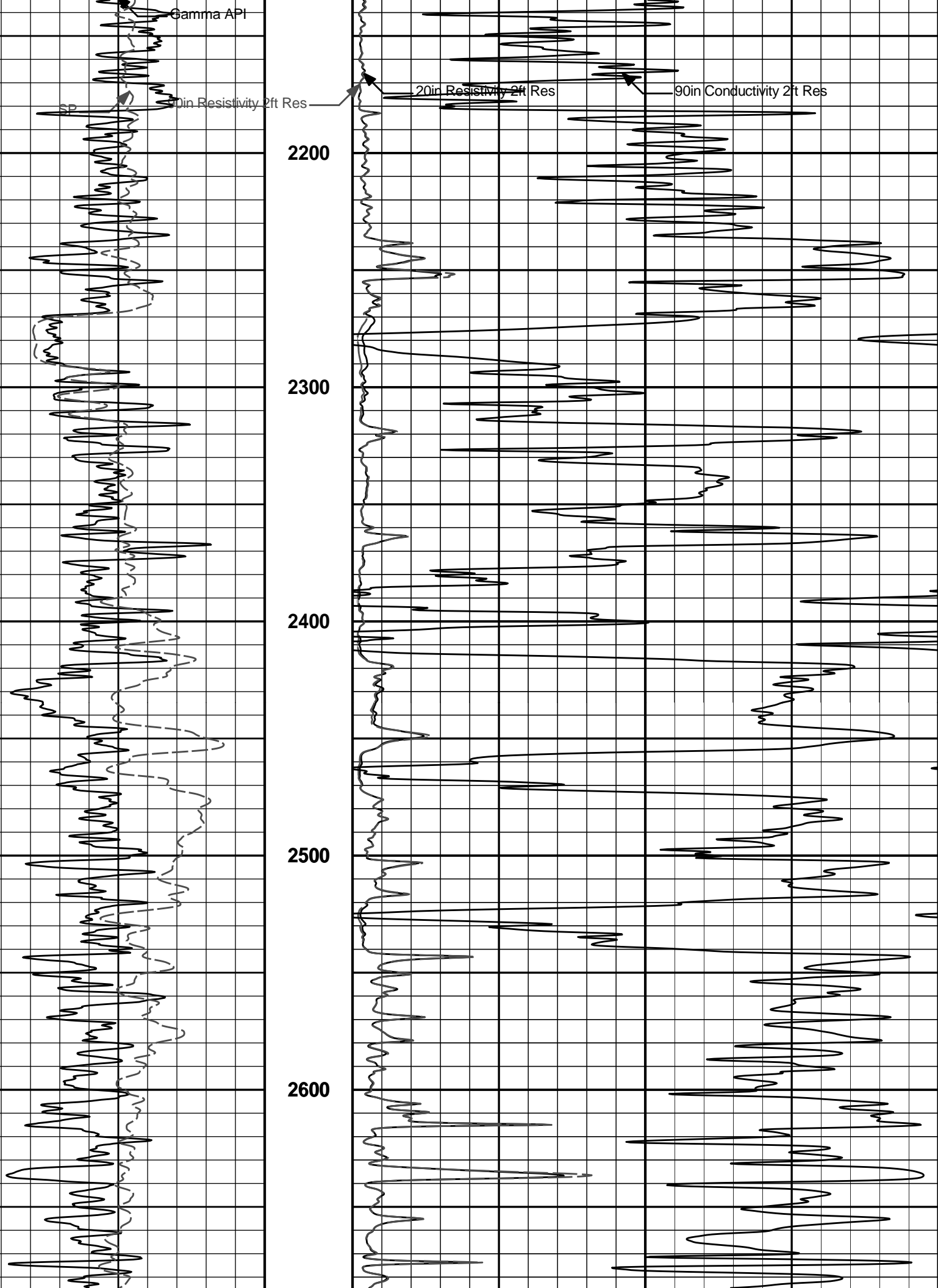
1900

2000

2100



Gamma API



20in Resistivity 2ft Res

90in Conductivity 2ft Res

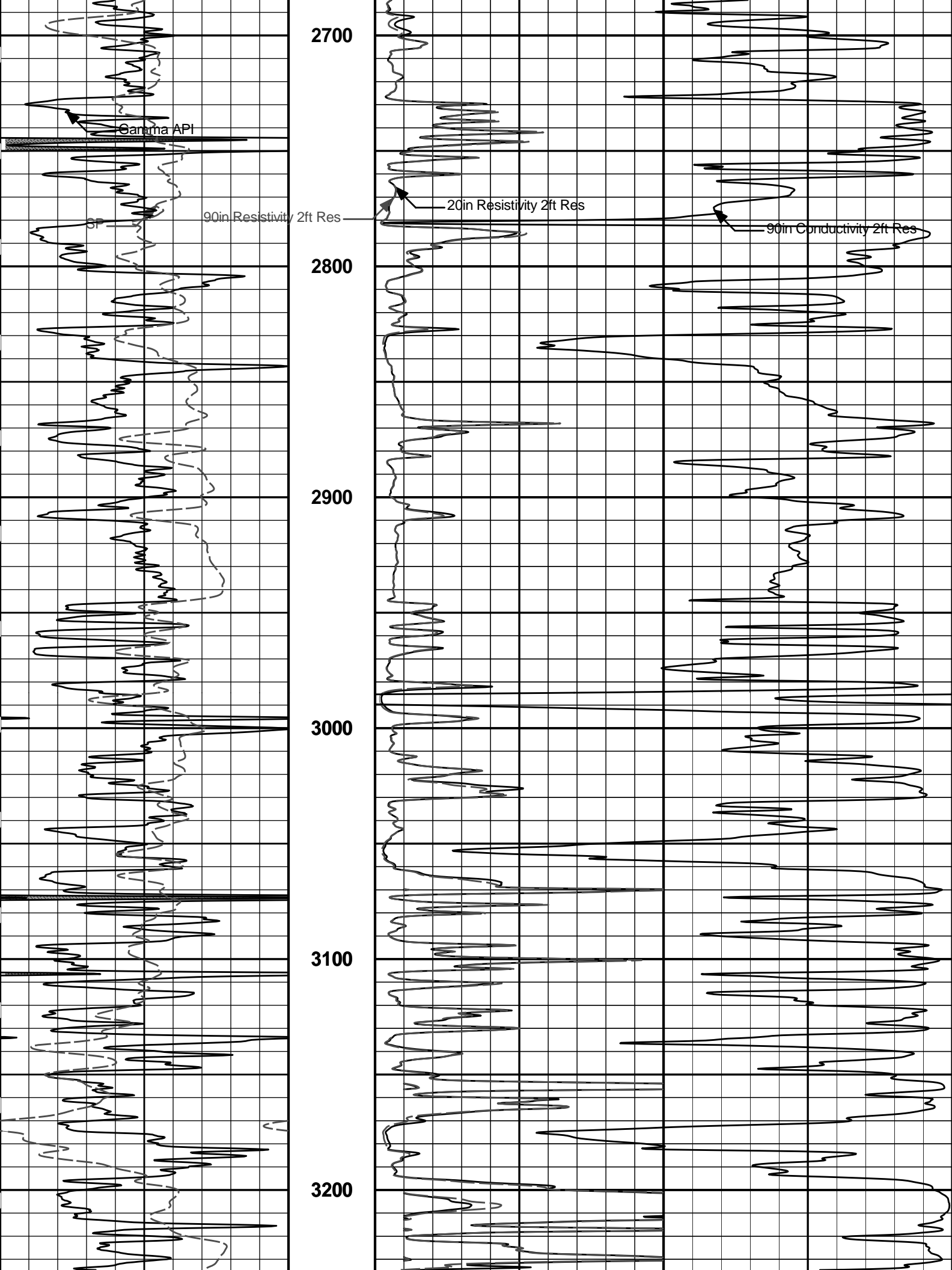
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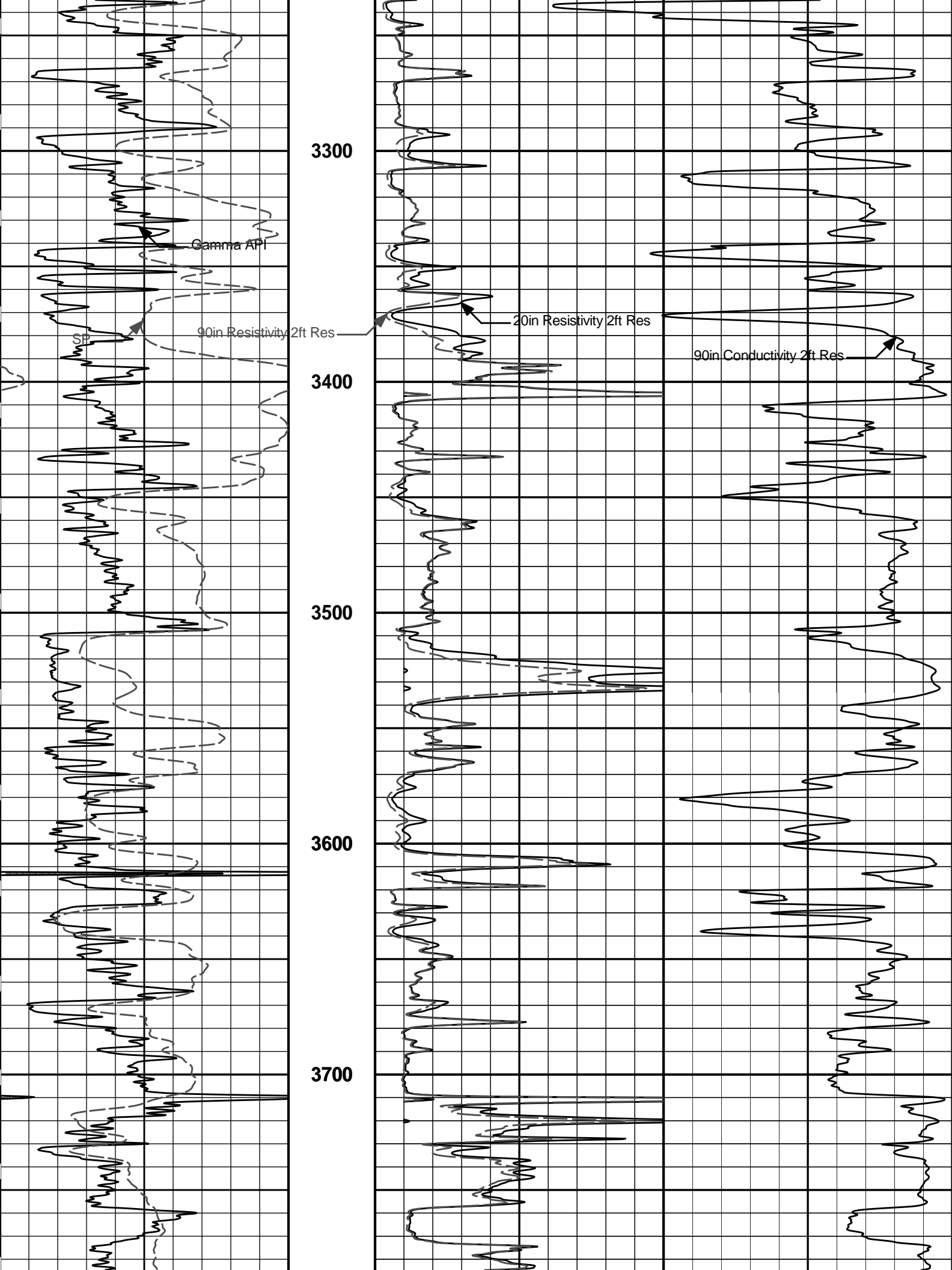
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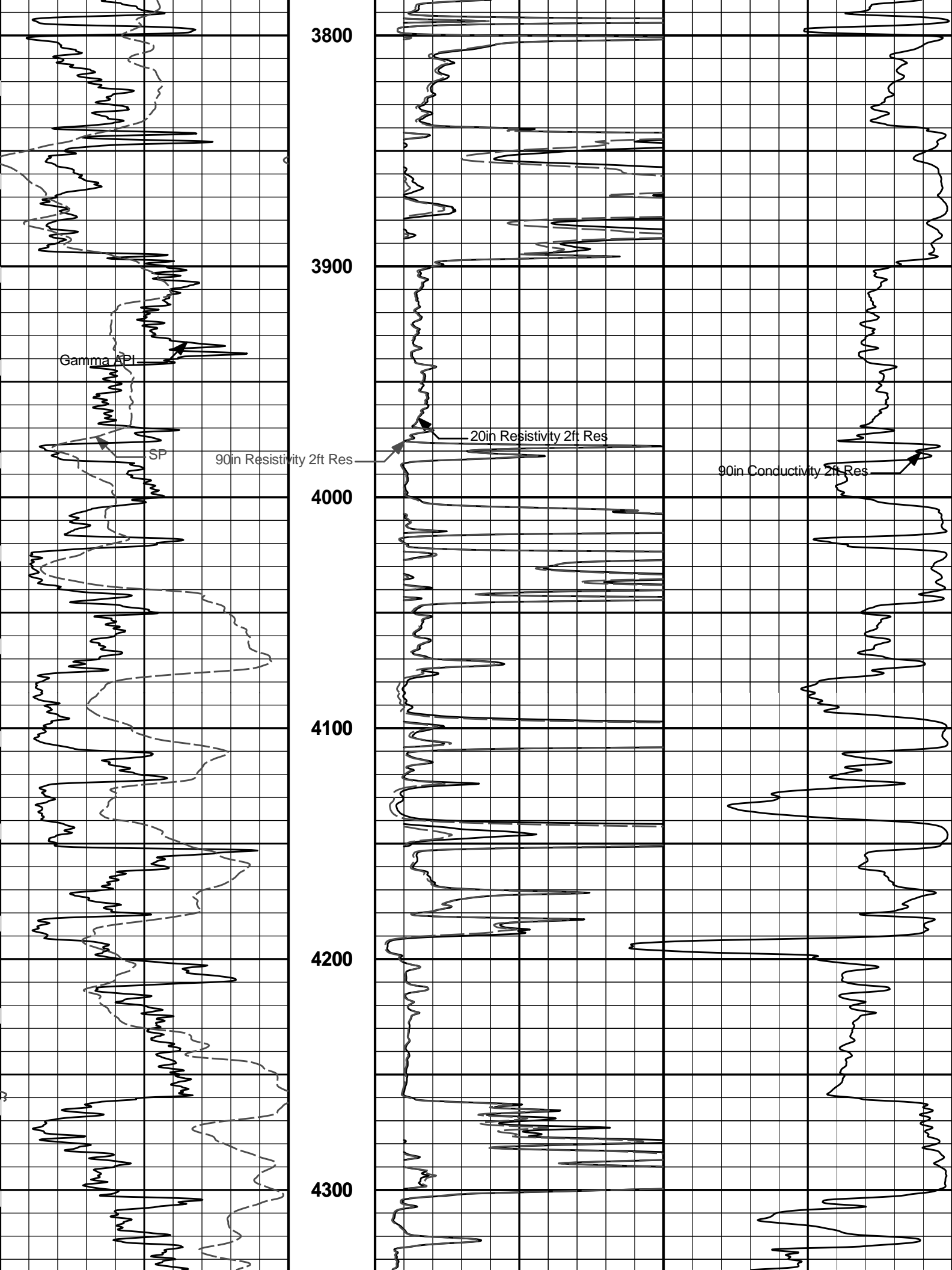
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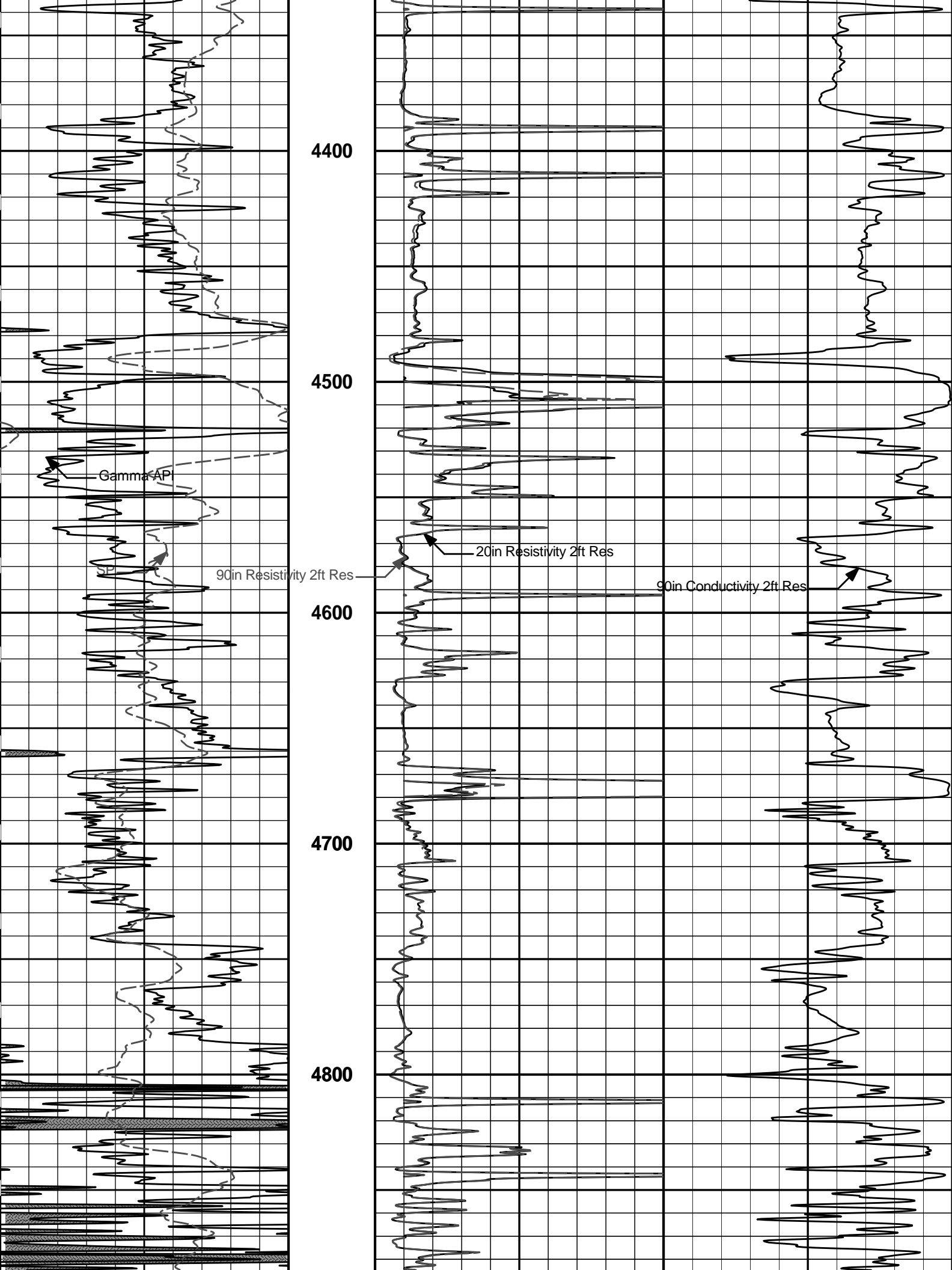
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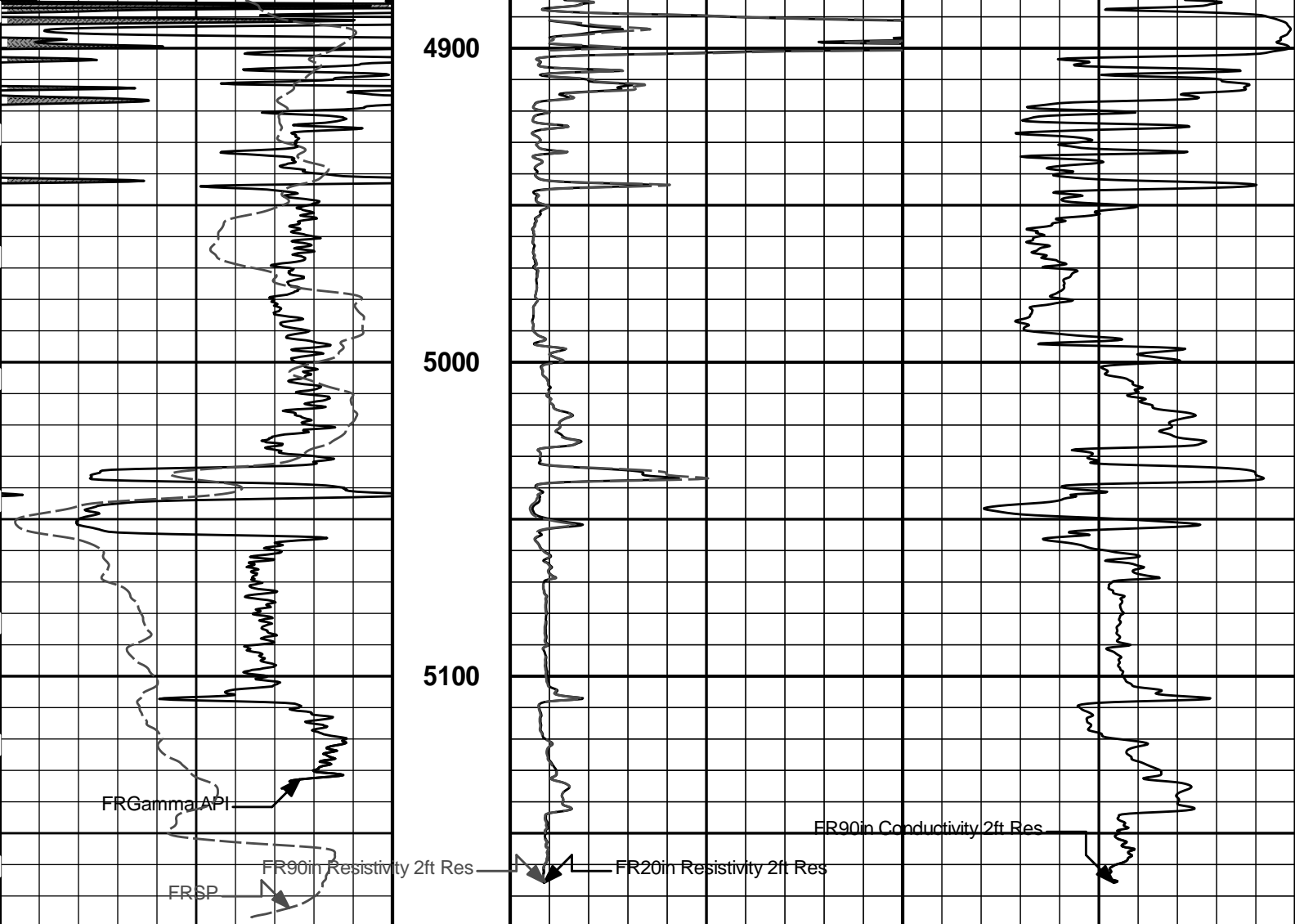
2600











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

**HALLIBURTON**

Plot Time: 31-May-11 13:32:33  
 Plot Range: 1500 ft to 5179.67 ft  
 Data: PHOENIX\_BERRYMN\Well Based\DAQ-0001-003\  
 Plot File: \\-LOCAL-\\PHOENIX\_BERRYMN0001 GTET-DSN-SDL-ACRT\ACRT\ACRT\_2\_main

**2 INCH MAIN LOG**

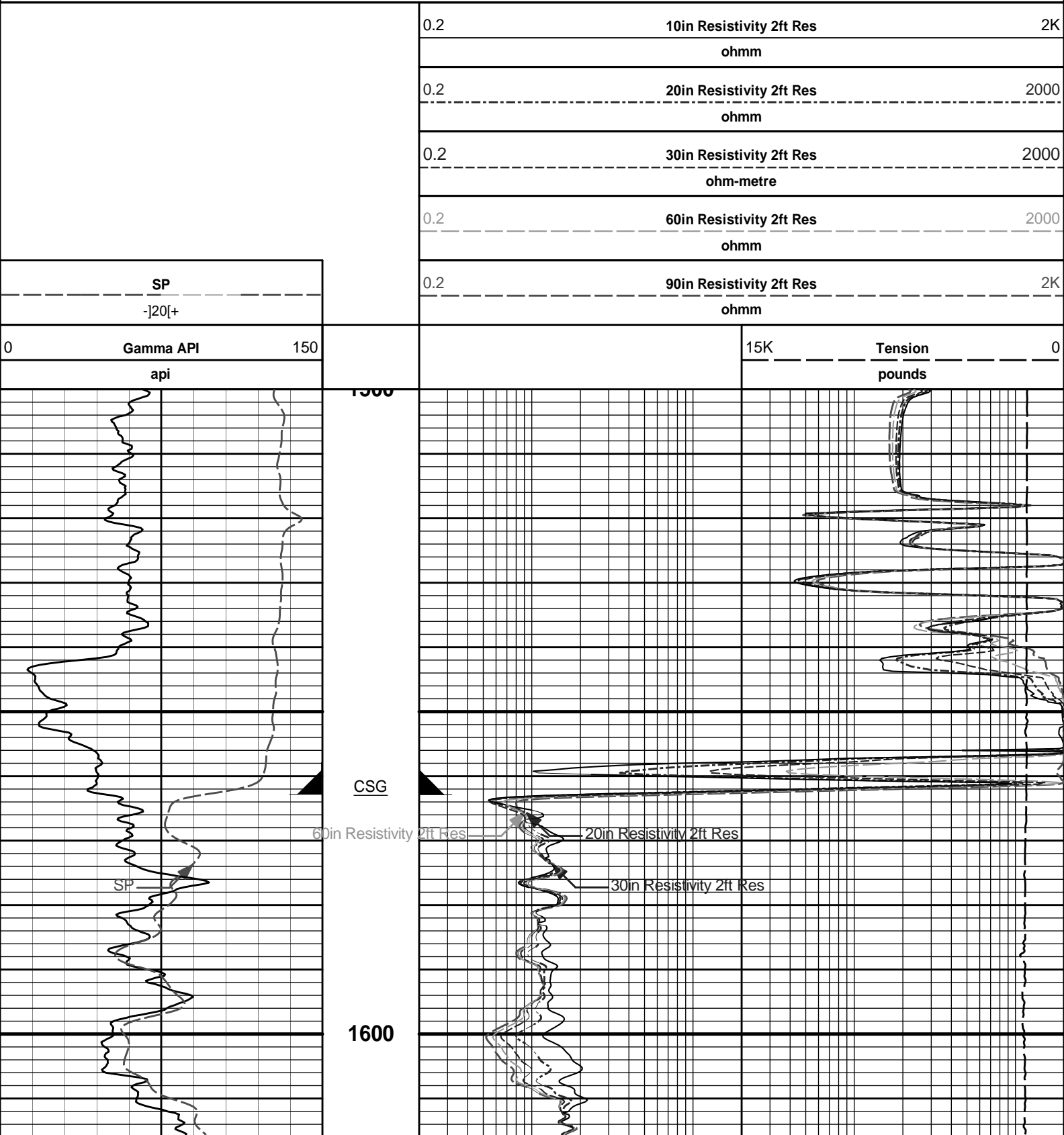
**2 INCH MAIN LOG**

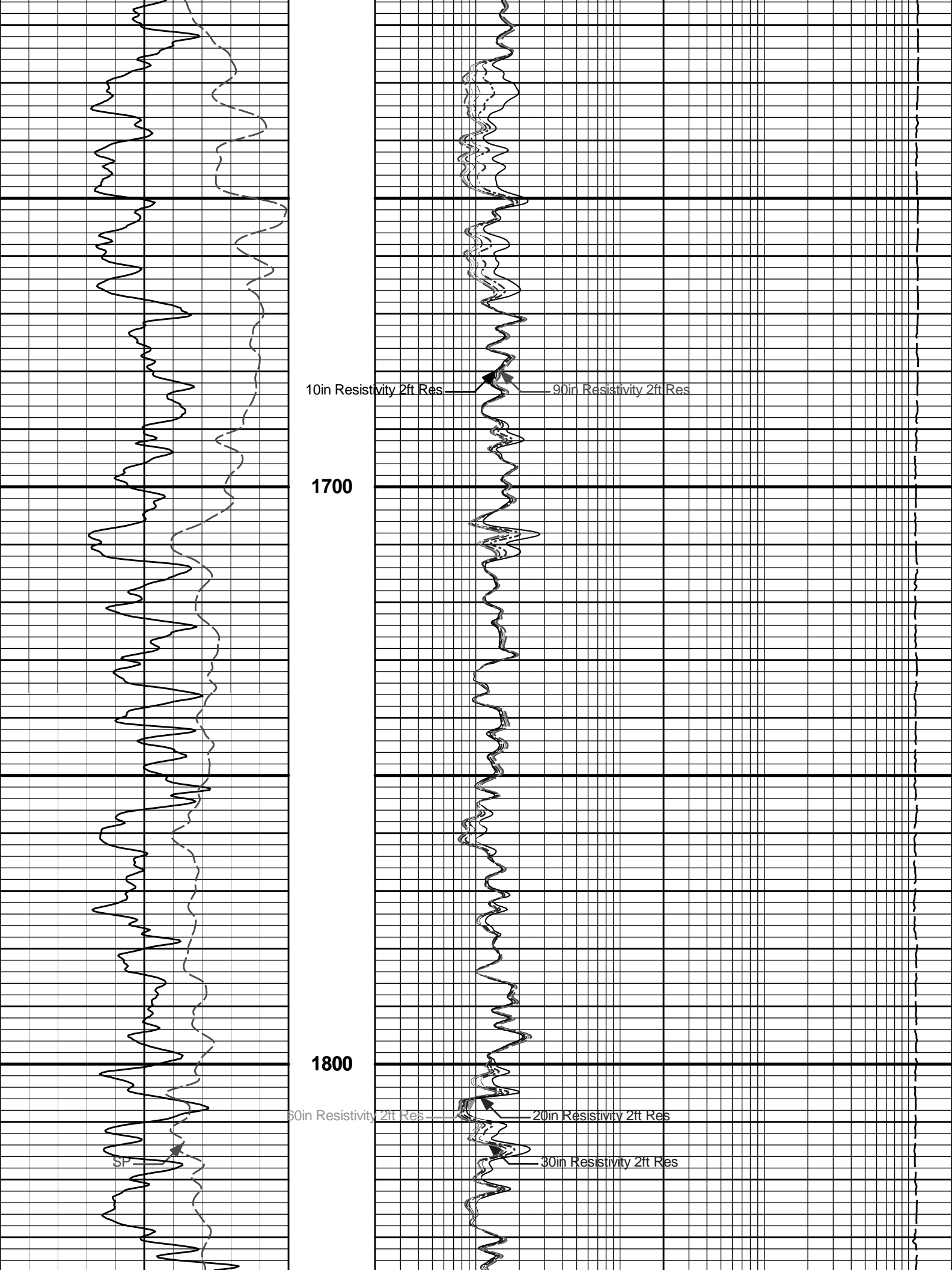
**HALLIBURTON**

Plot Time: 31-May-11 13:32:33  
 Plot Range: 1500 ft to 5179.67 ft  
 Data: PHOENIX\_BERRYMN\Well Based\DAQ-0001-003\  
 Plot File: \\-LOCAL-\\PHOENIX\_BERRYMN0001 GTET-DSN-SDL-ACRT\ACRT\ACRT\_5inch\_main

# 5 INCH MAIN LOG

## 5 INCH MAIN LOG





10in Resistivity 2ft Res

90in Resistivity 2ft Res

1700

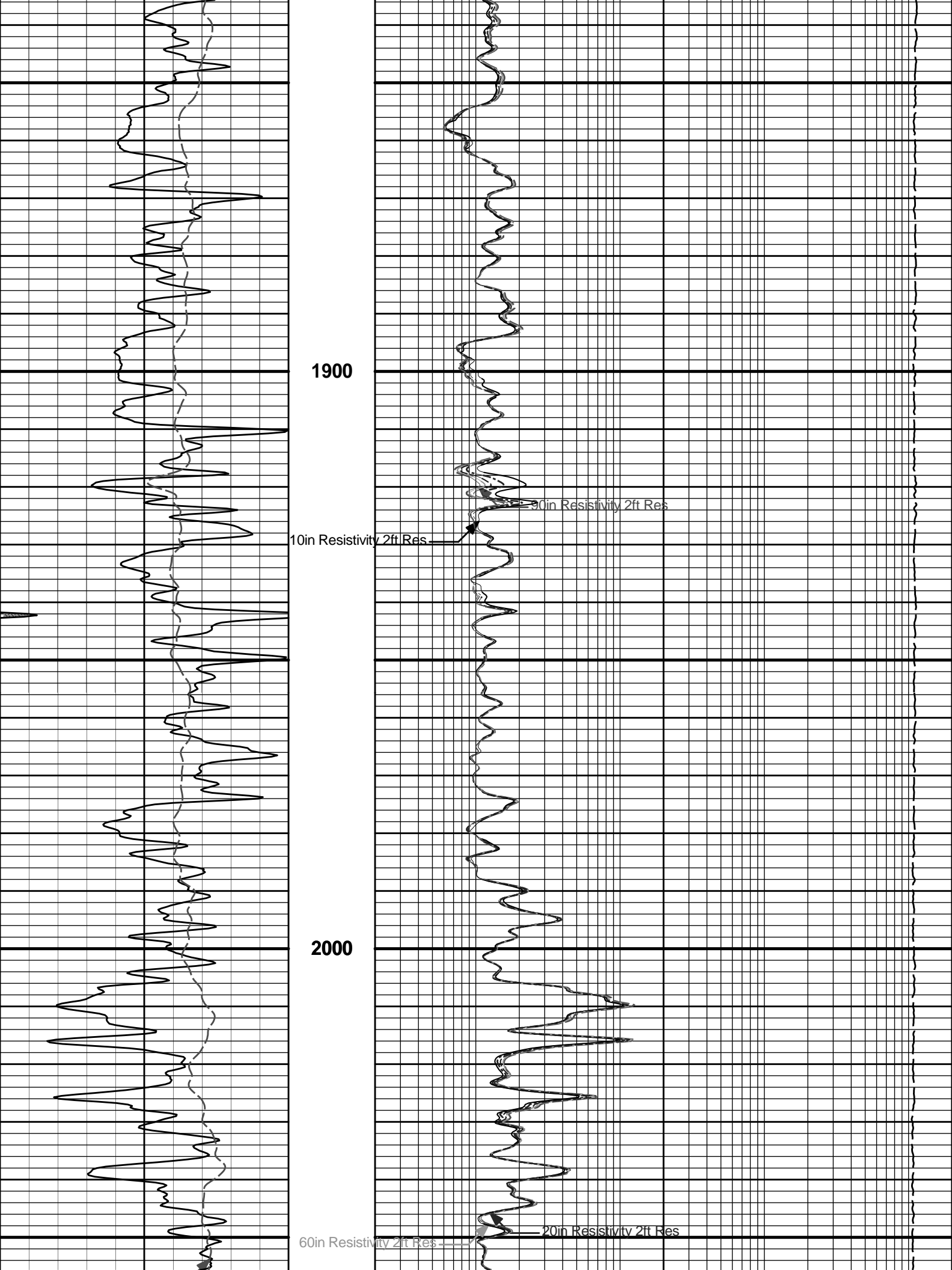
1800

60in Resistivity 2ft Res

20in Resistivity 2ft Res

30in Resistivity 2ft Res

SP



1900

2000

10in Resistivity 2ft Res

20in Resistivity 2ft Res

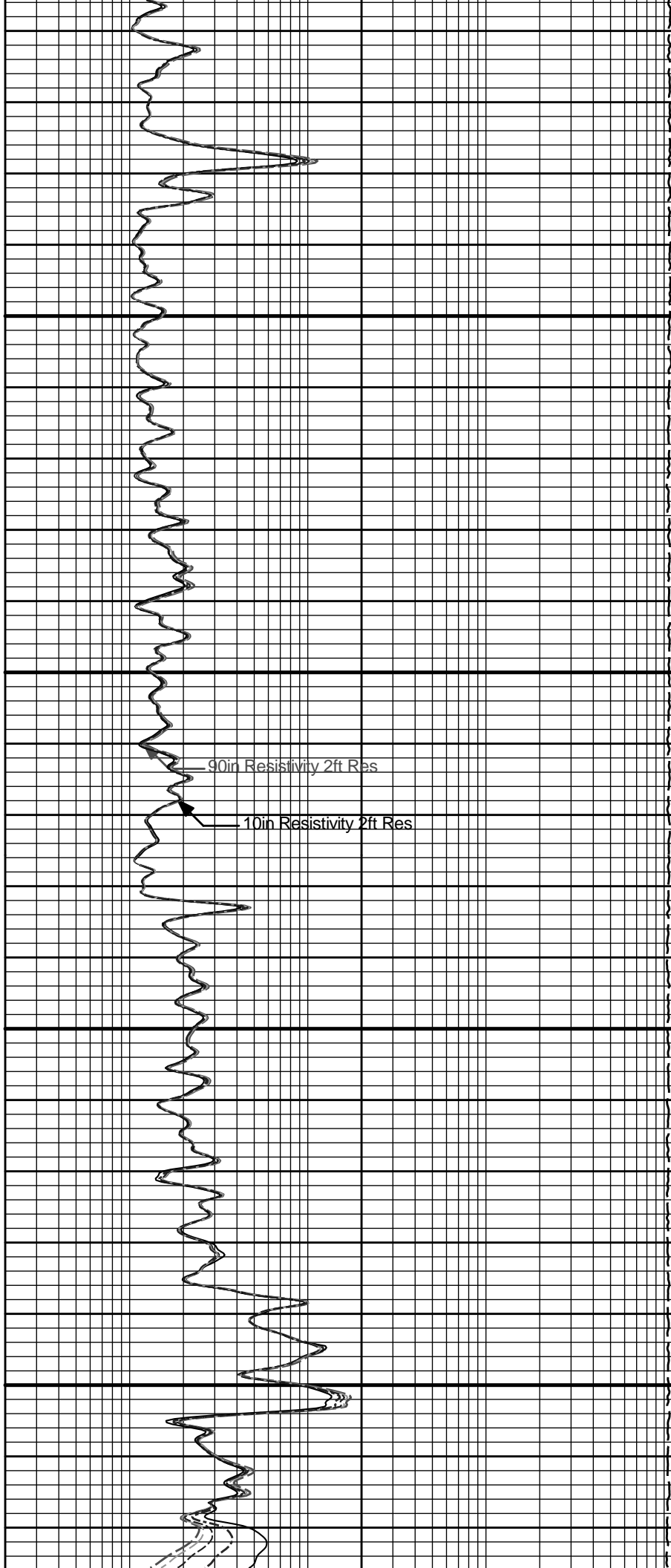
60in Resistivity 2ft Res

20in Resistivity 2ft Res



2100

2200



90in Resistivity 2ft Res

10in Resistivity 2ft Res

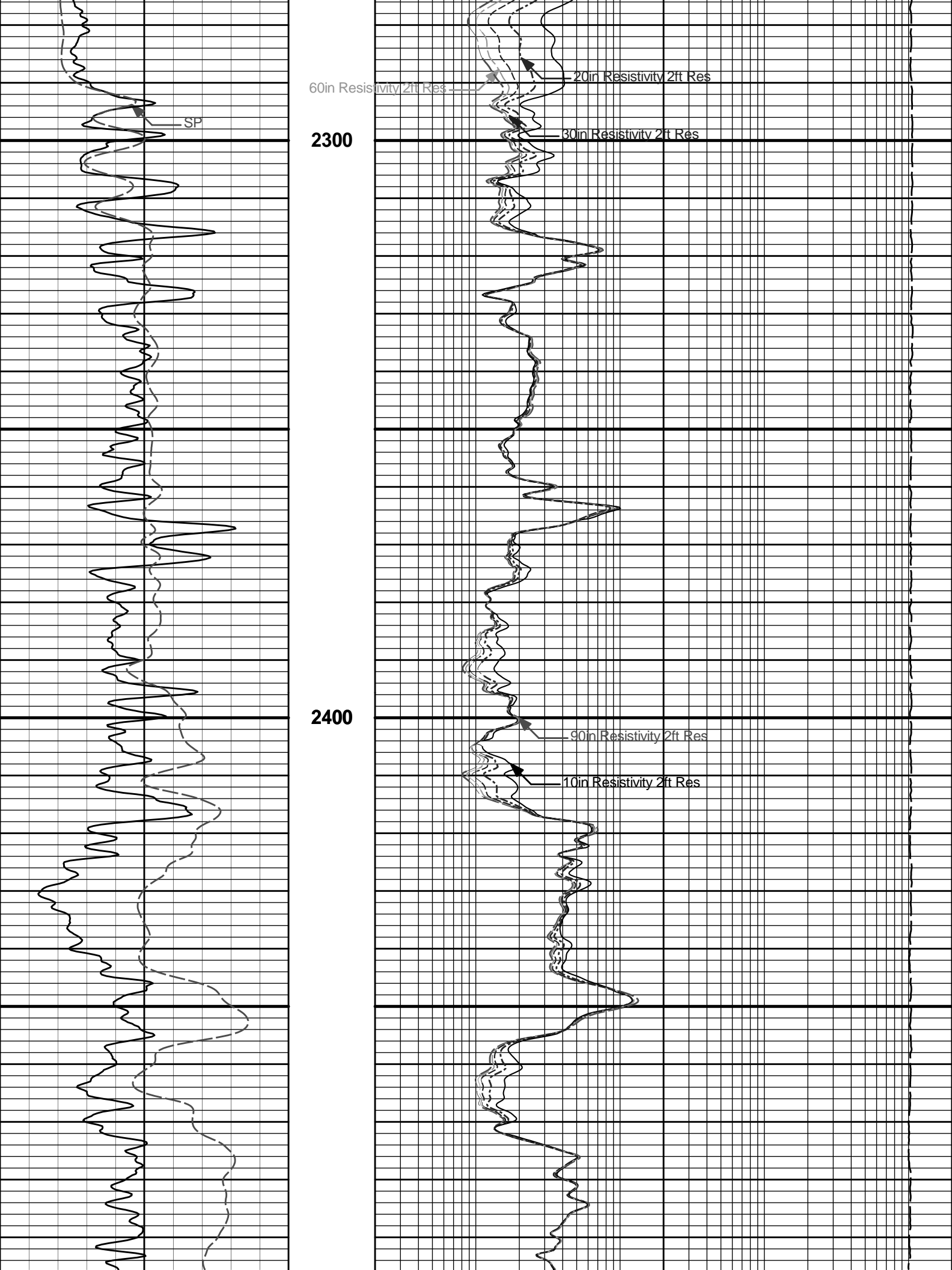
60in Resistivity 2ft Res  
20in Resistivity 2ft Res  
30in Resistivity 2ft Res

2300

2400

90in Resistivity 2ft Res  
10in Resistivity 2ft Res

SP



2500

60in Resistivity 2ft Res

20in Resistivity 2ft Res

30in Resistivity 2ft Res

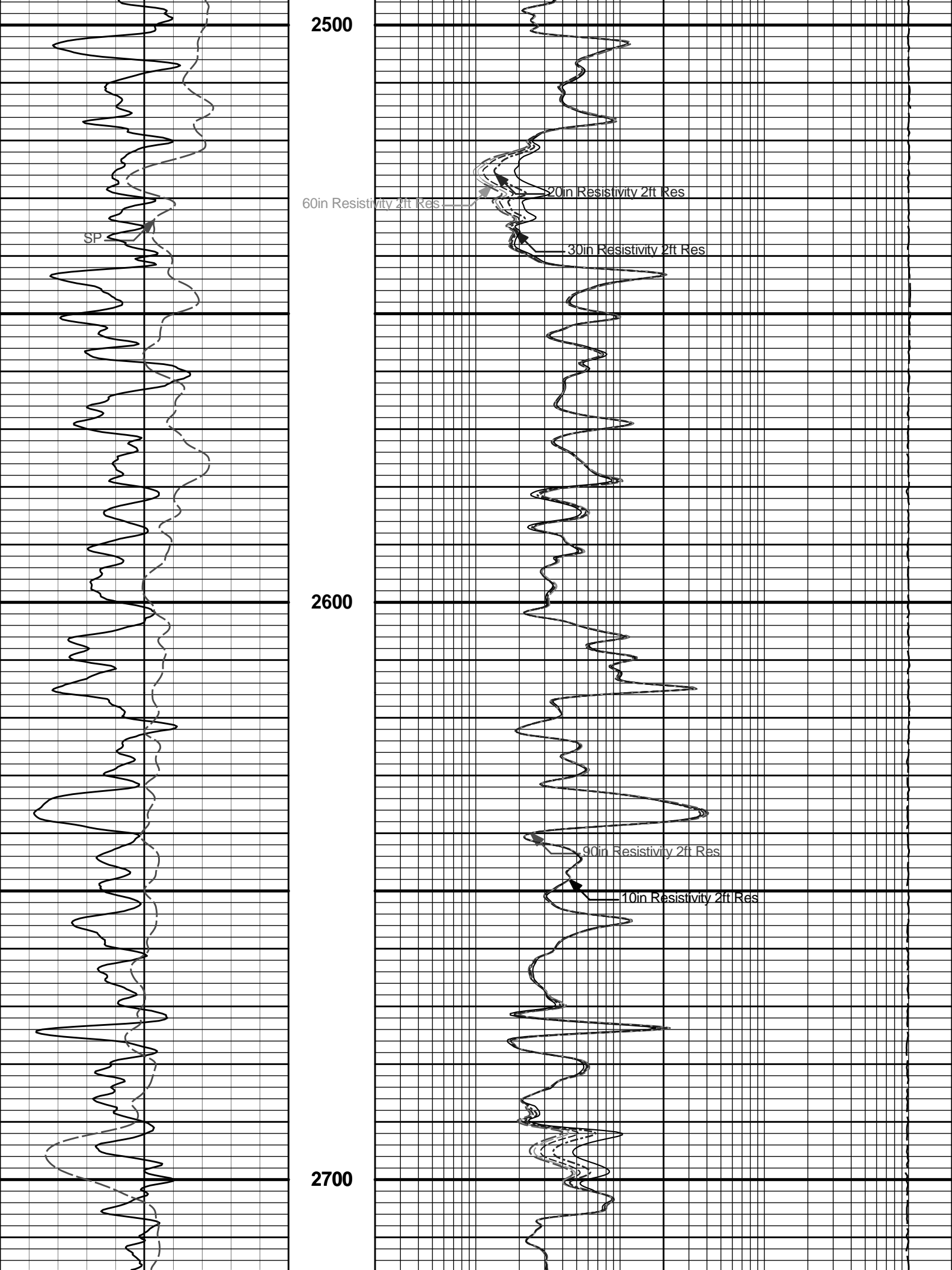
SP

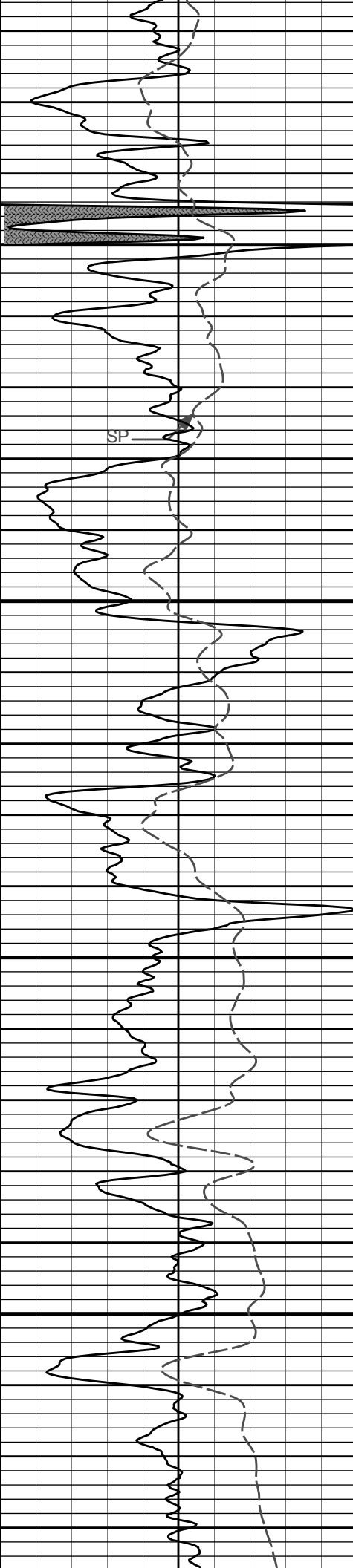
2600

90in Resistivity 2ft Res

10in Resistivity 2ft Res

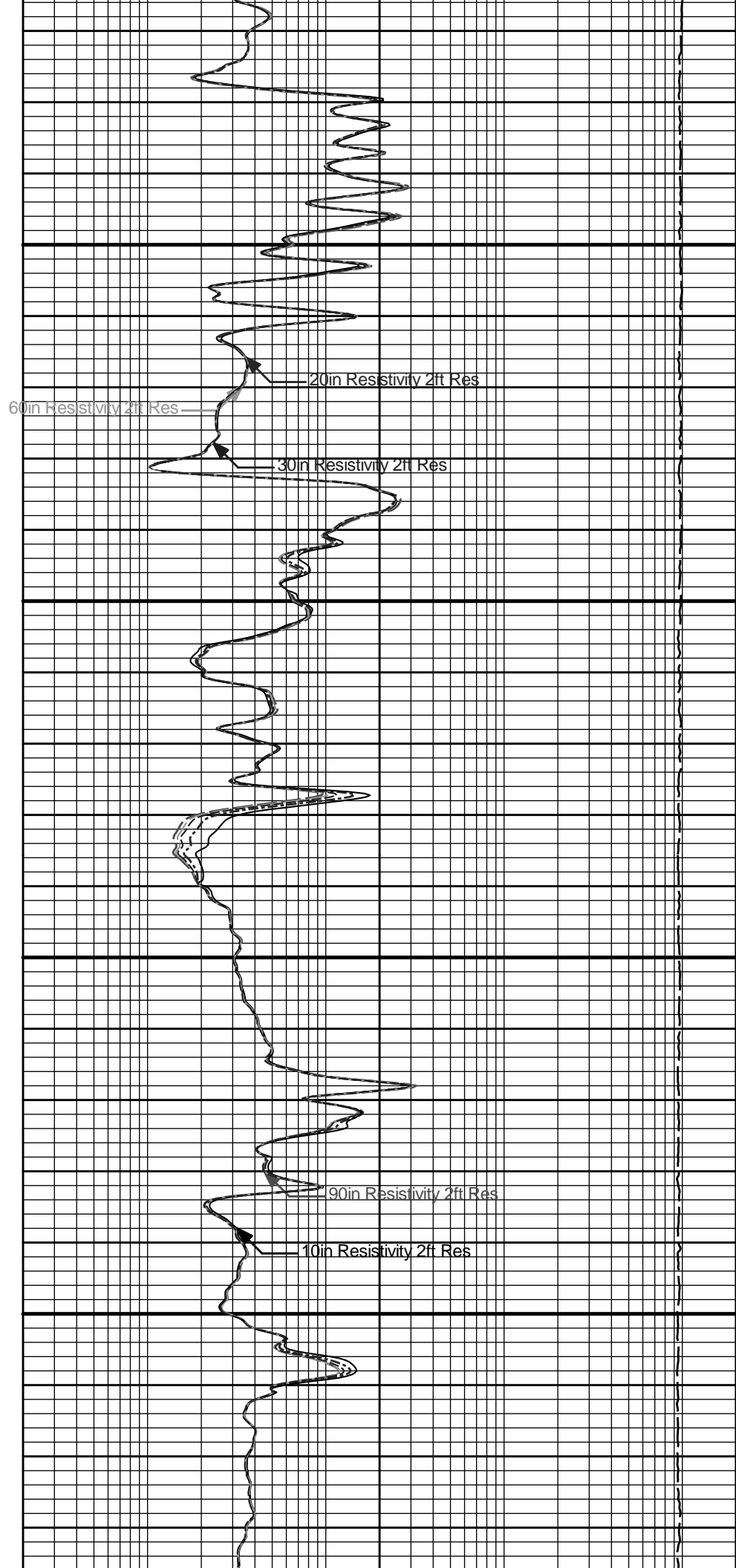
2700

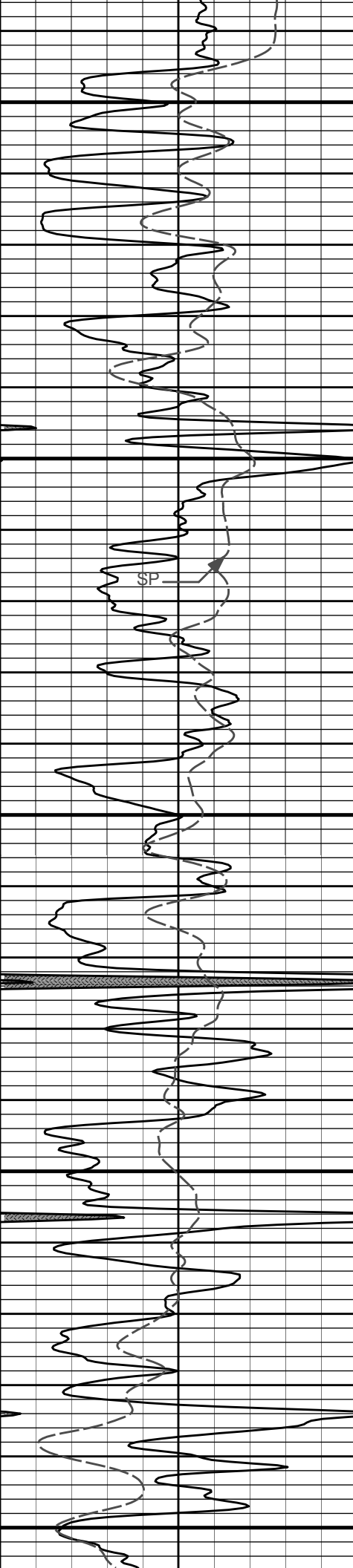




2800

2900





3000

60in Resistivity 2ft Res

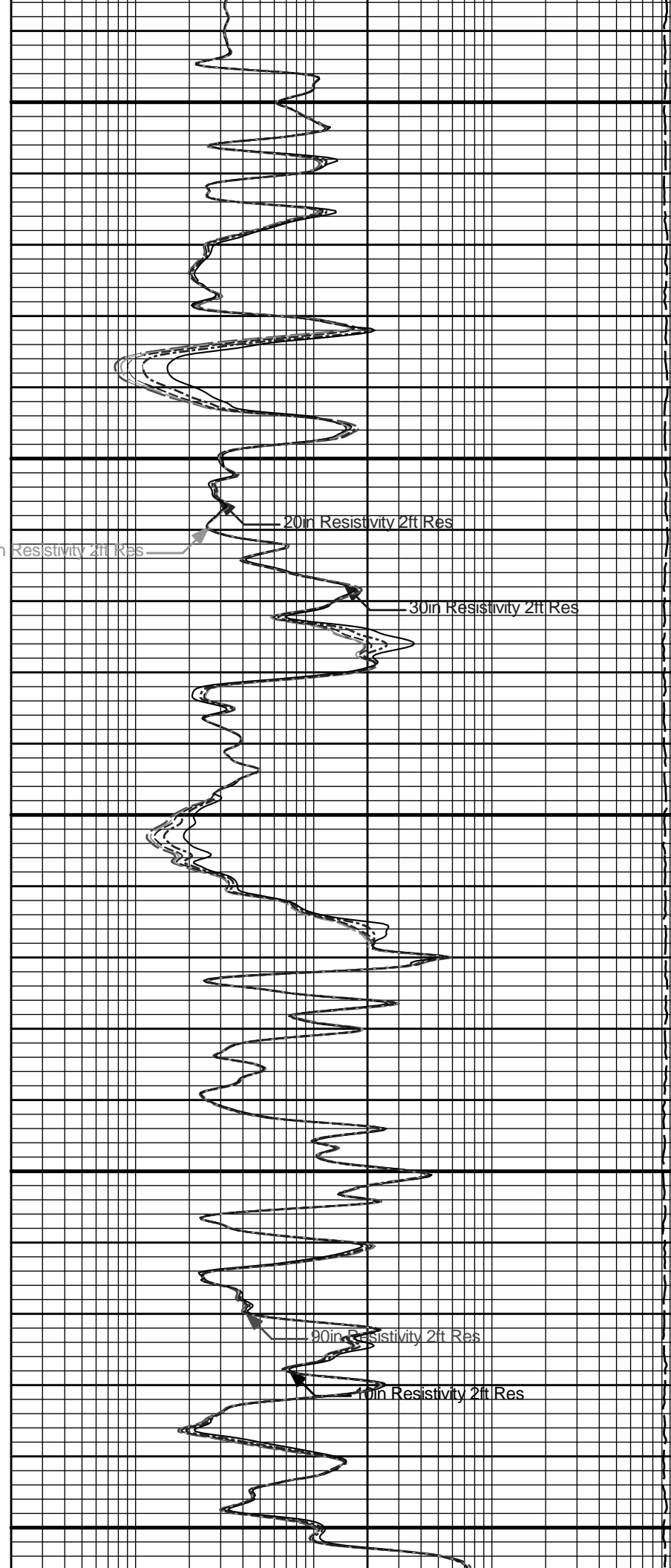
20in Resistivity 2ft Res

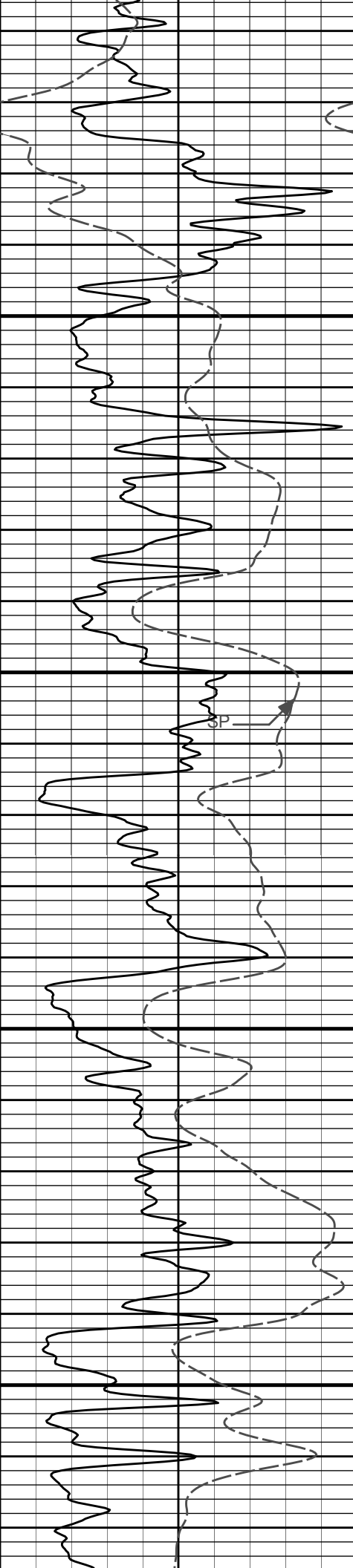
30in Resistivity 2ft Res

3100

90in Resistivity 2ft Res

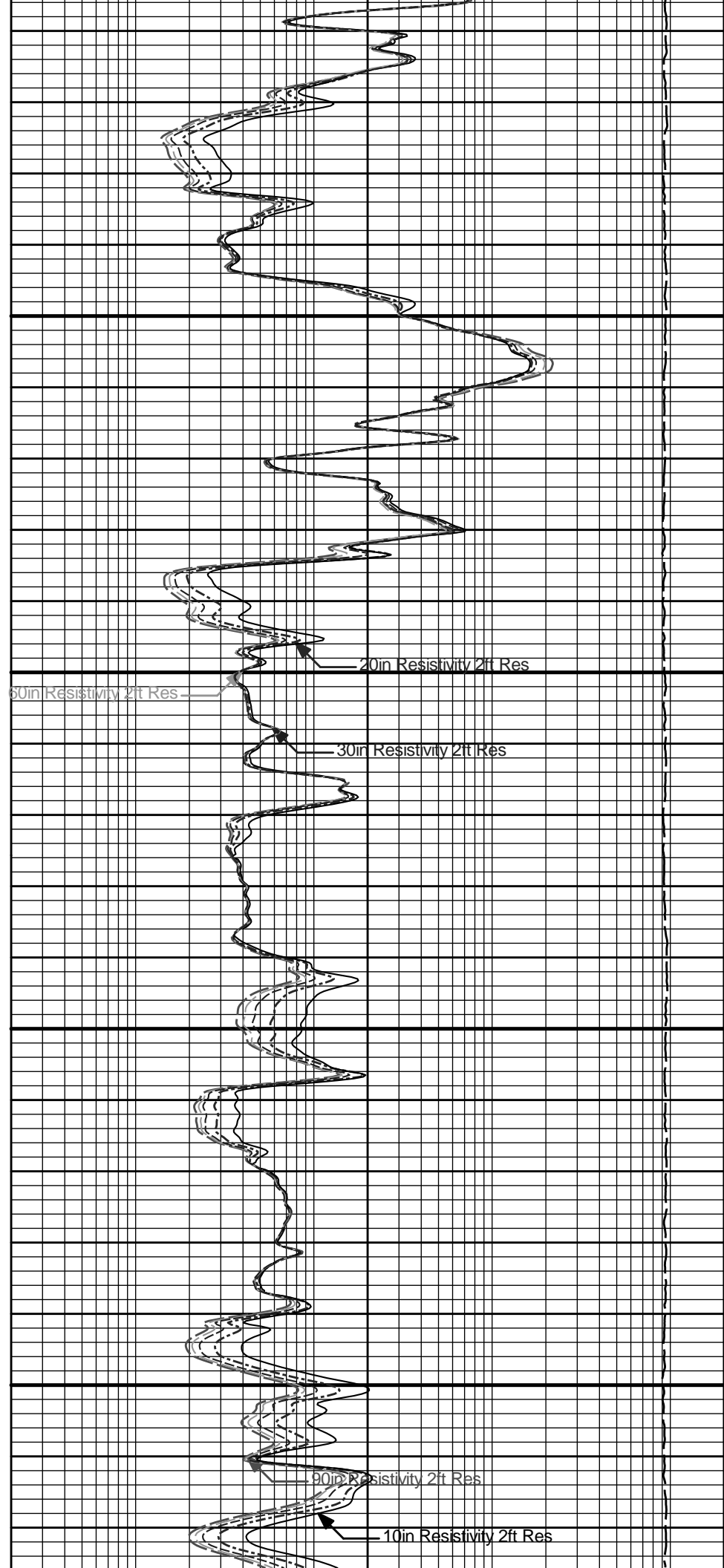
10in Resistivity 2ft Res

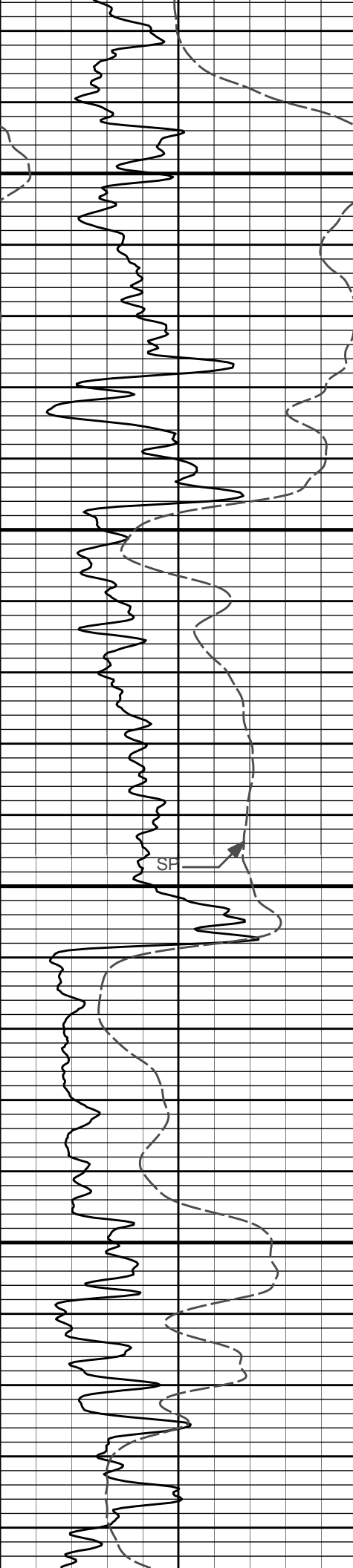




3200

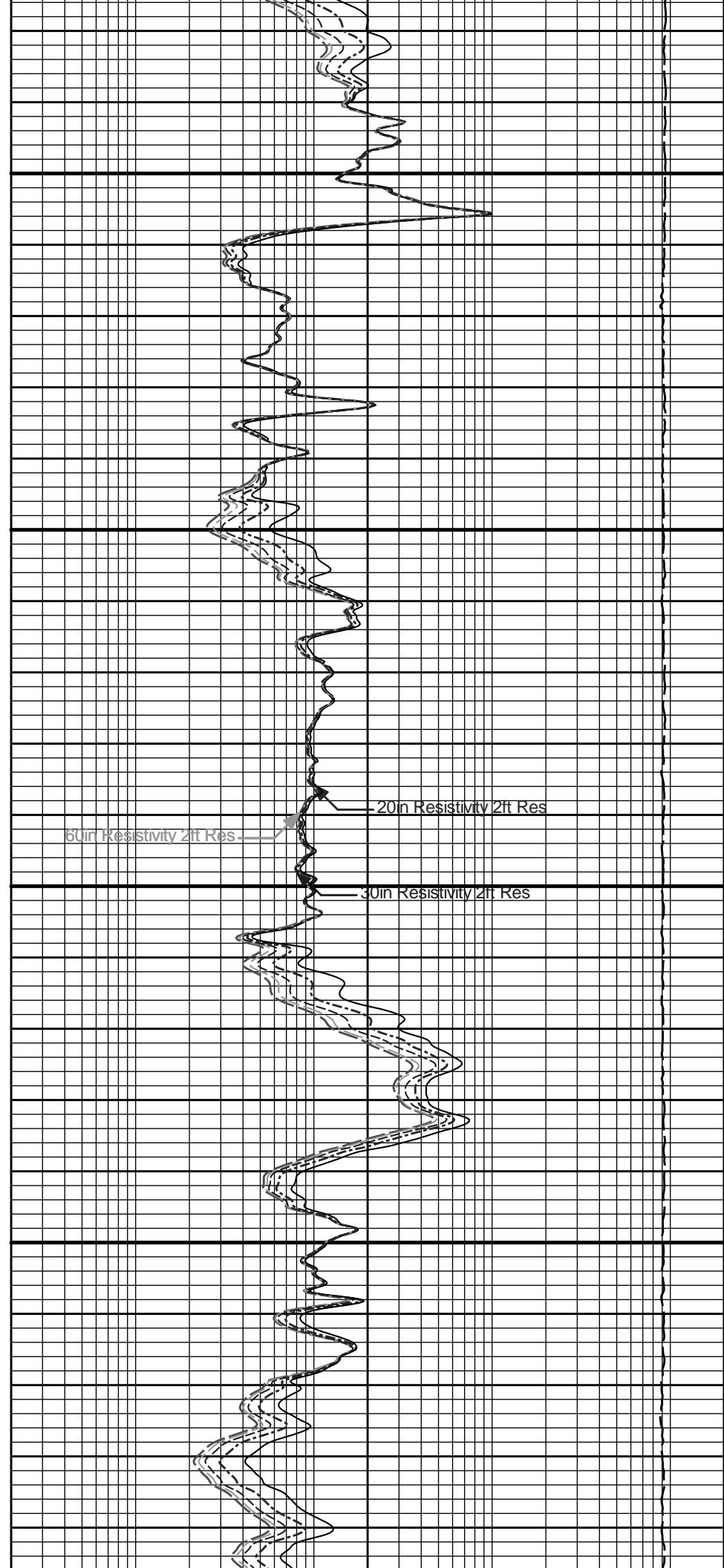
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3400

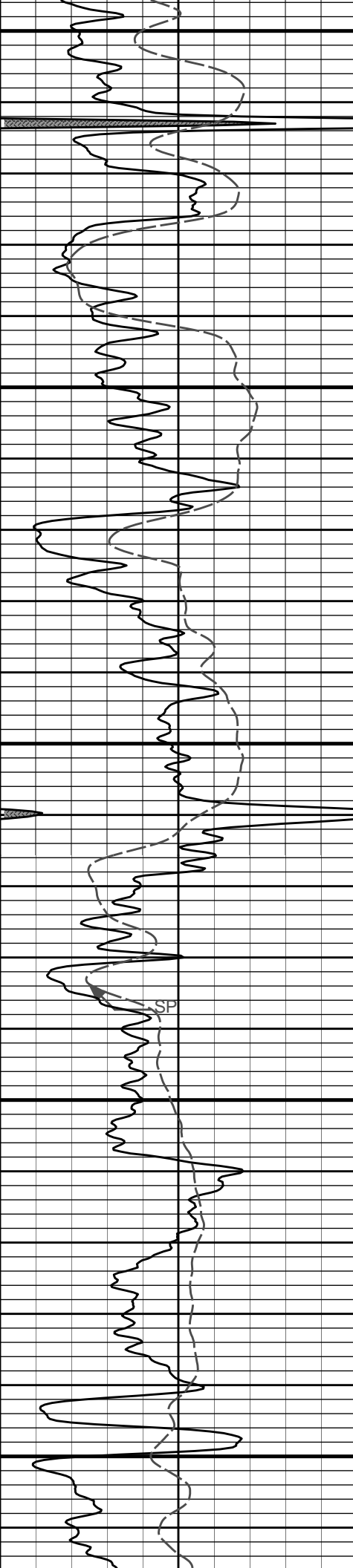
3500



60in Resistivity 2ft Res

20in Resistivity 2ft Res

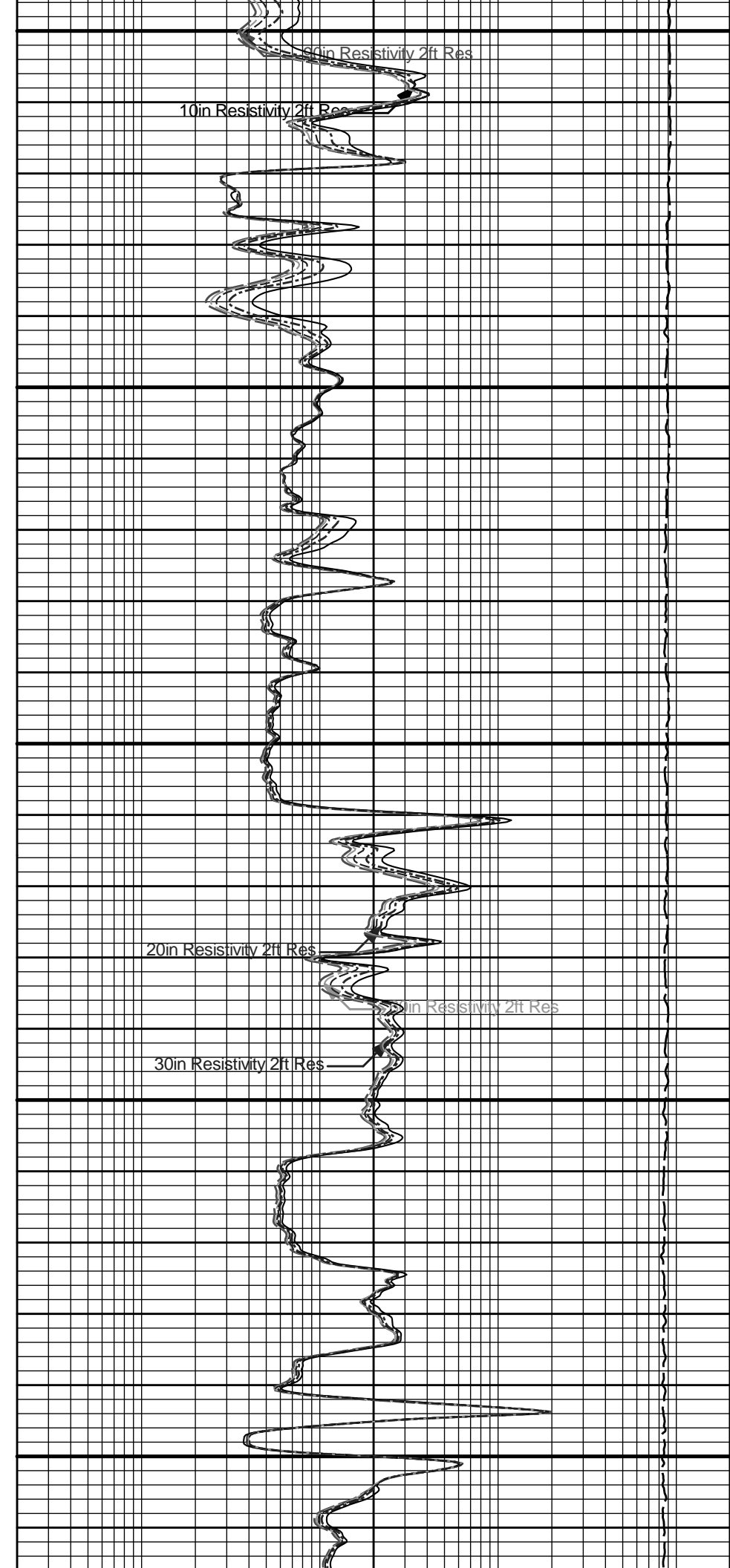
30in Resistivity 2ft Res



3600

3700

3800



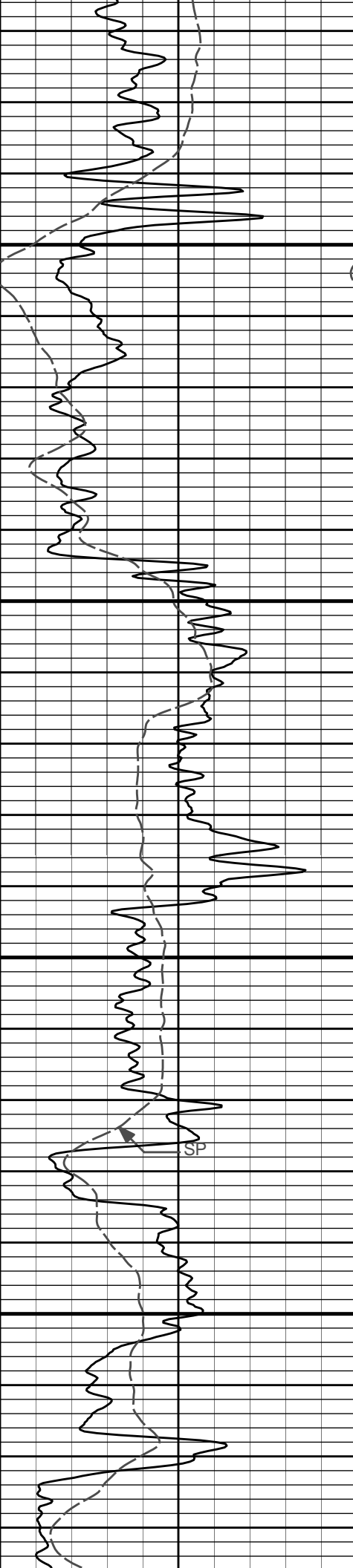
10in Resistivity 2ft Res

10in Resistivity 2ft Res

20in Resistivity 2ft Res

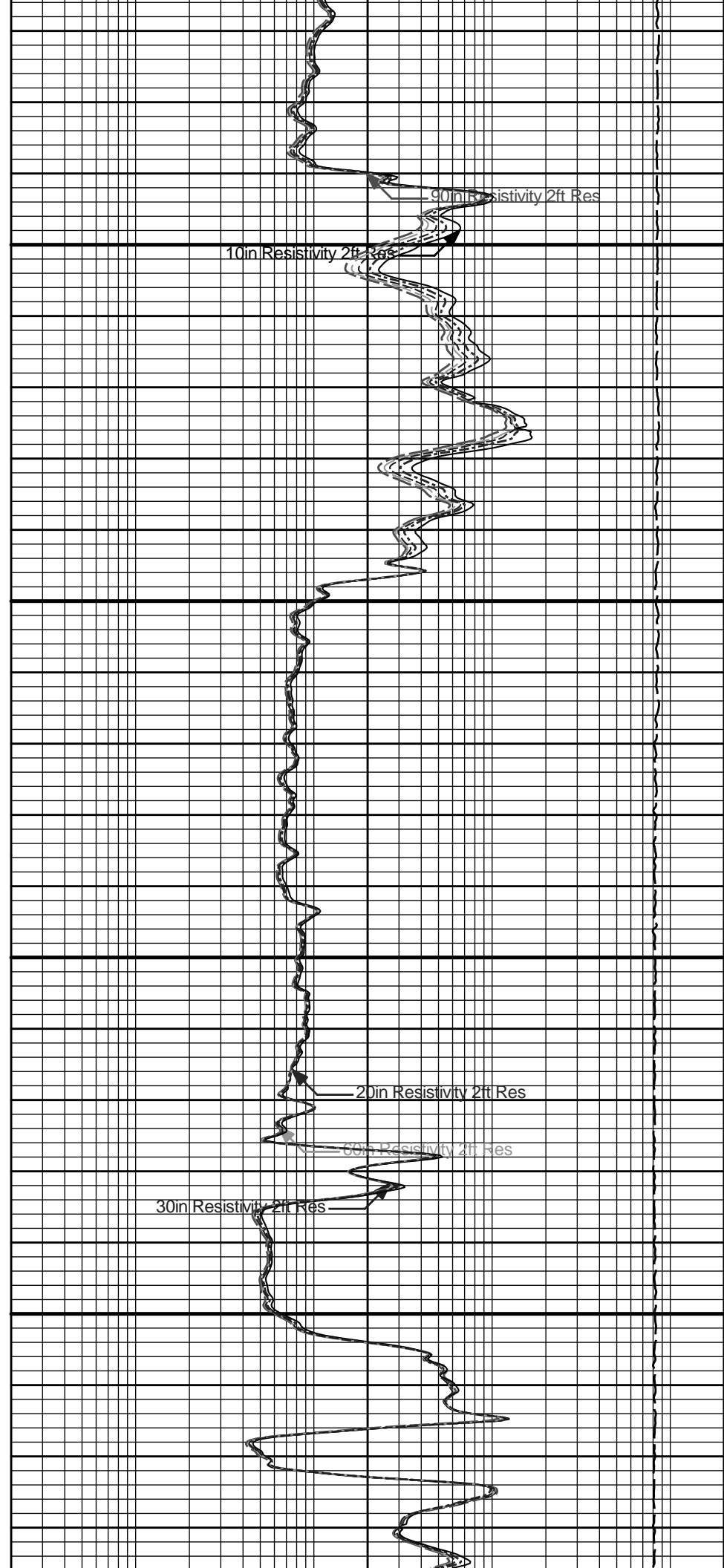
20in Resistivity 2ft Res

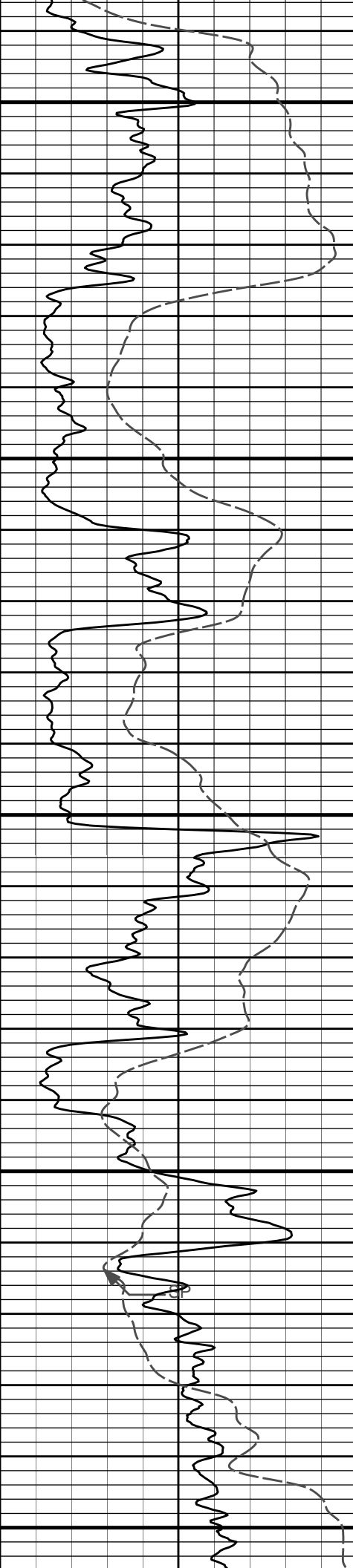
30in Resistivity 2ft Res



3900

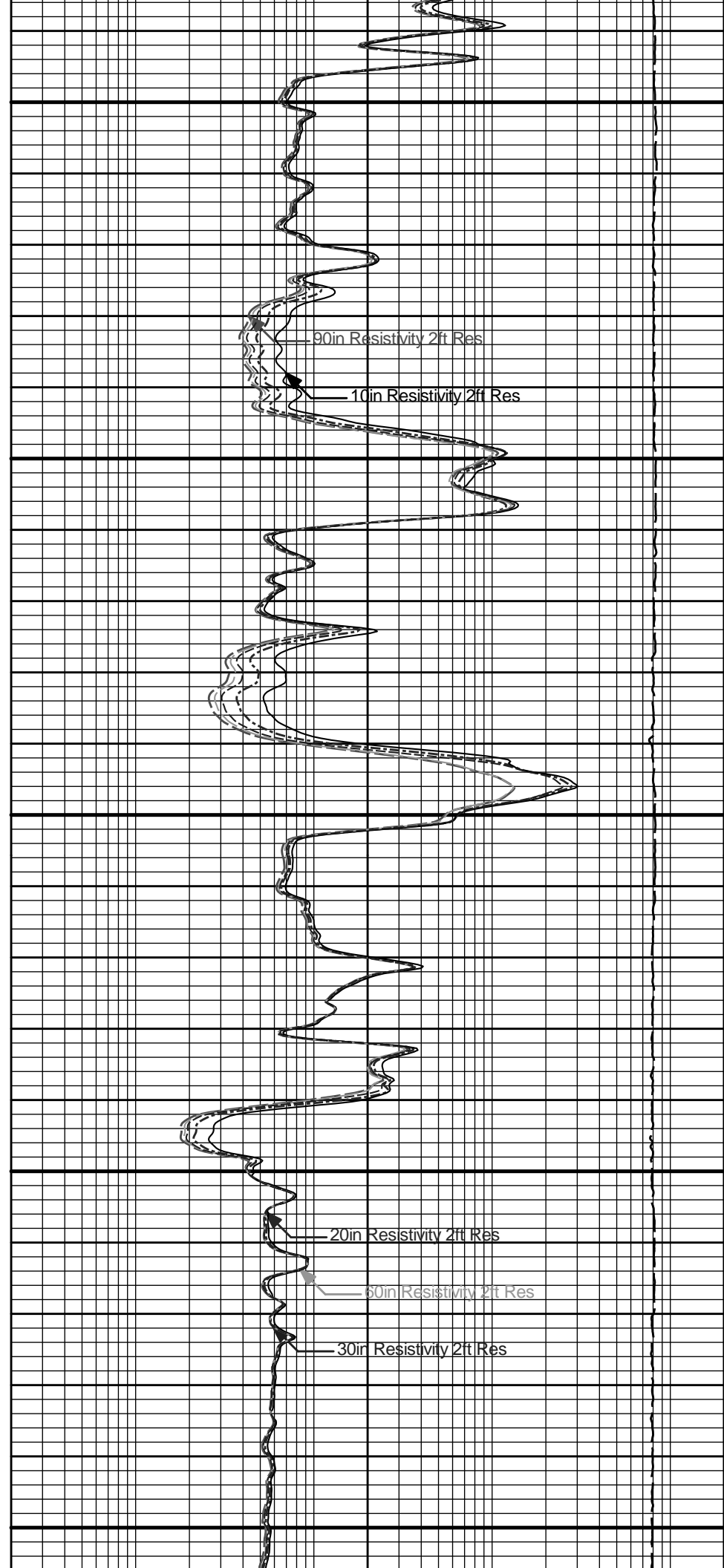
4000





4100

4200



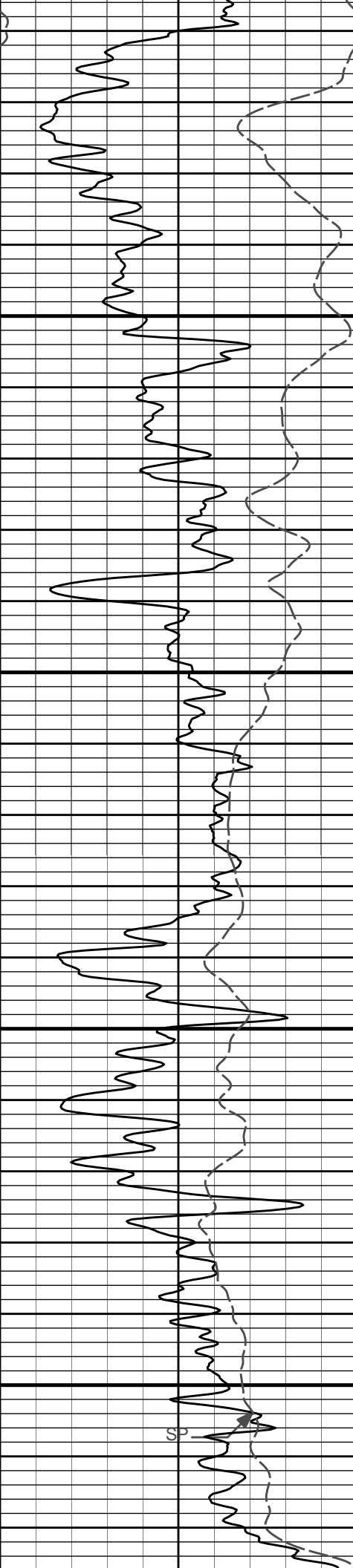
90in Resistivity 2ft Res

10in Resistivity 2ft Res

20in Resistivity 2ft Res

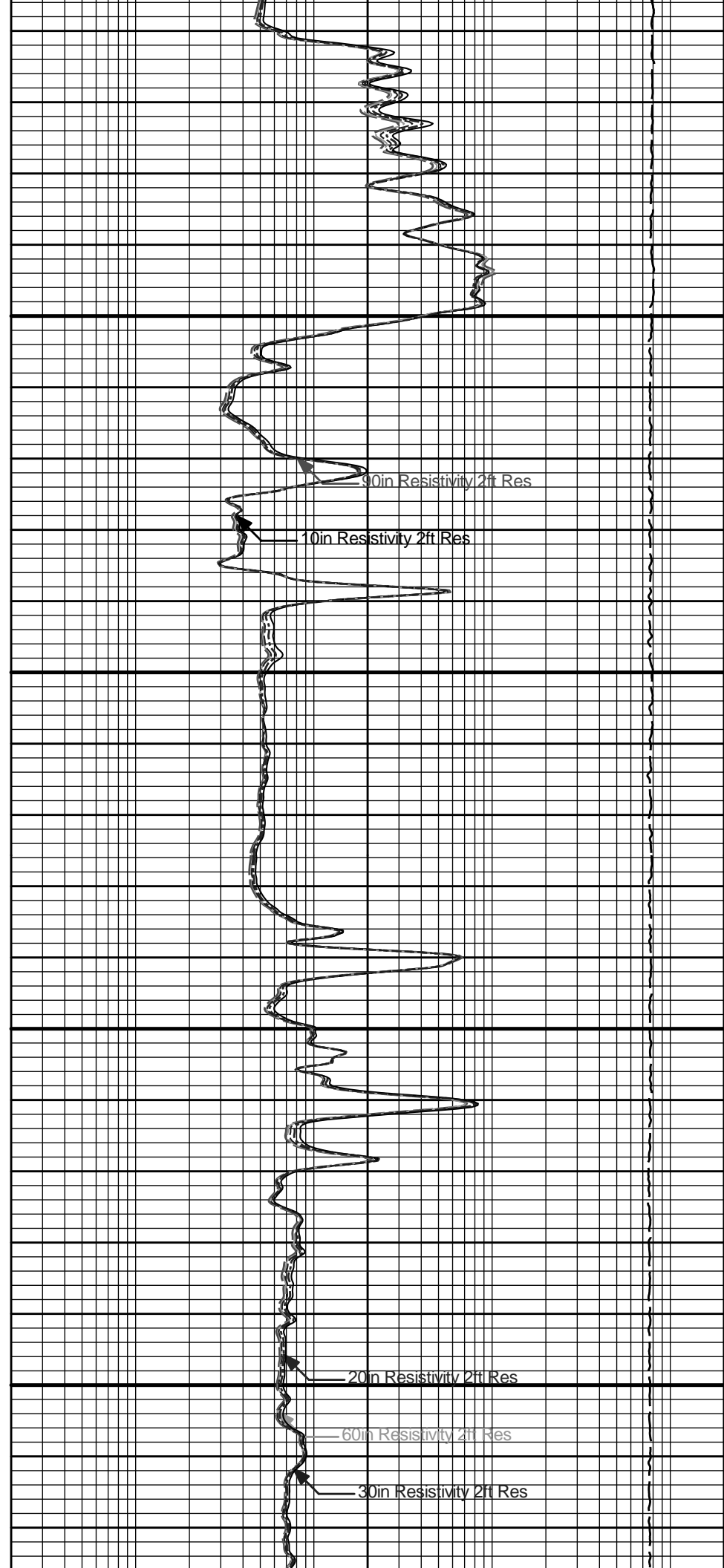
60in Resistivity 2ft Res

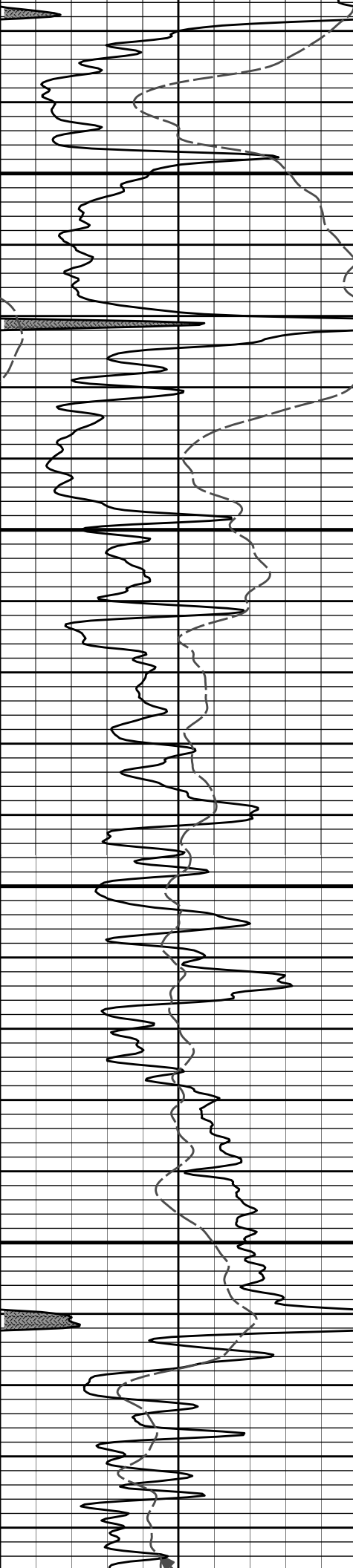
30in Resistivity 2ft Res



4300

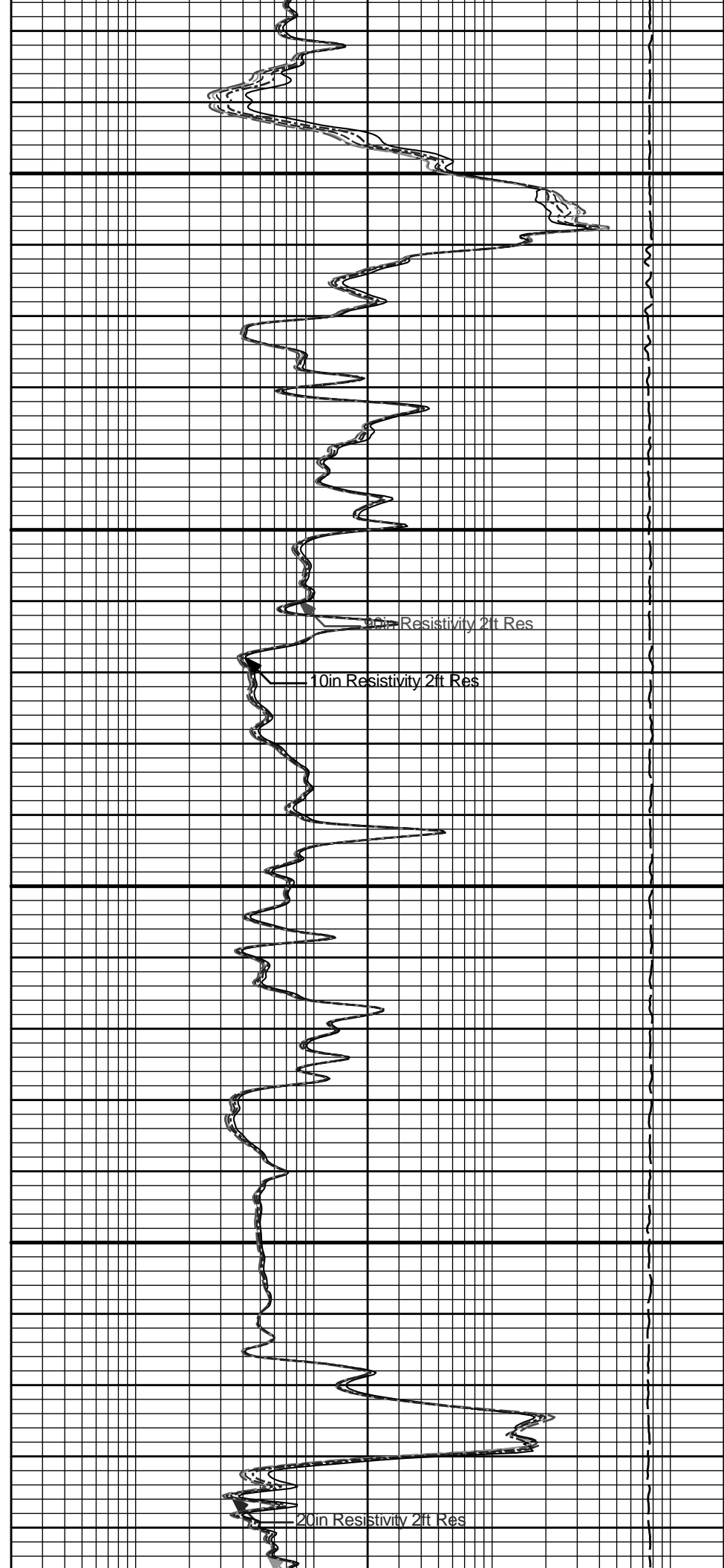
4400





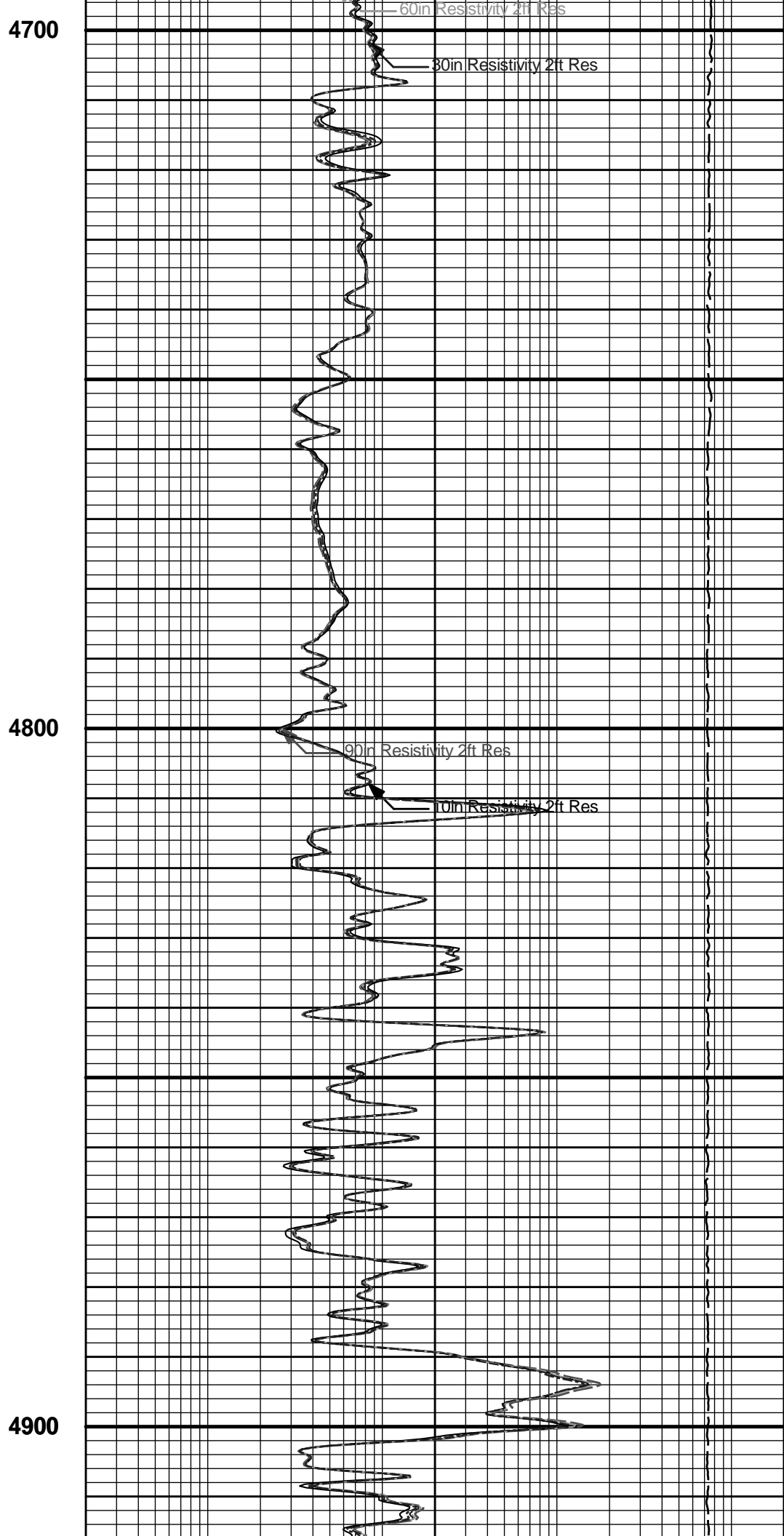
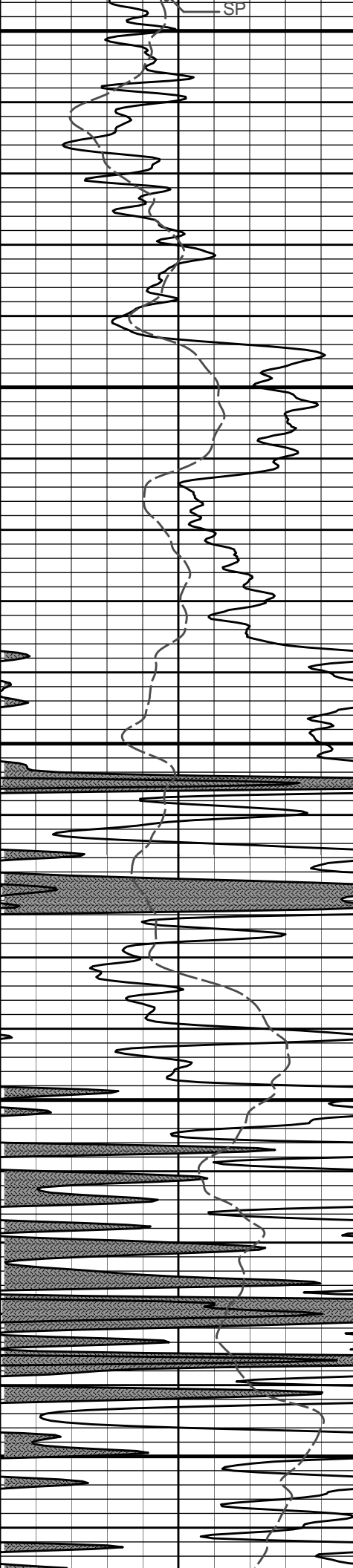
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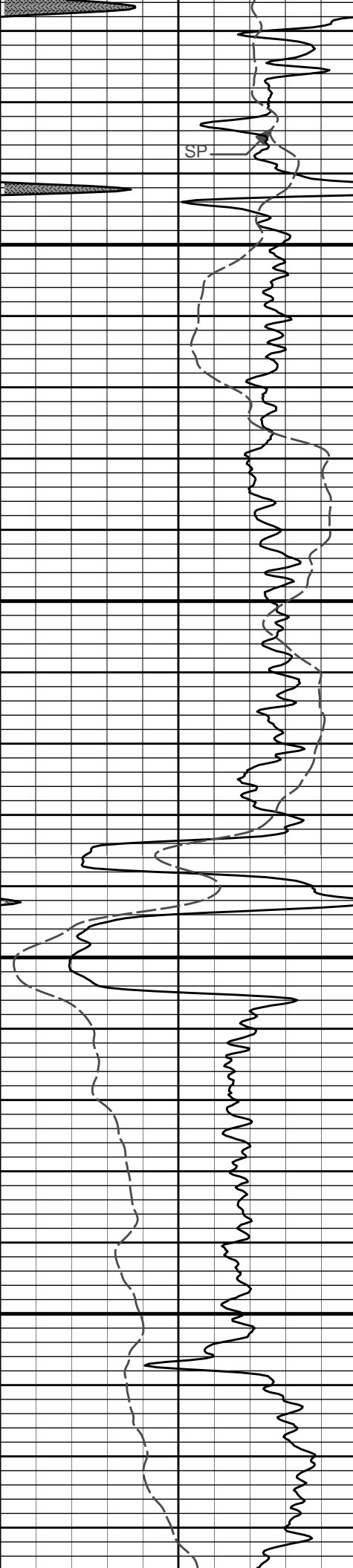
4600



10in Resistivity 2ft Res

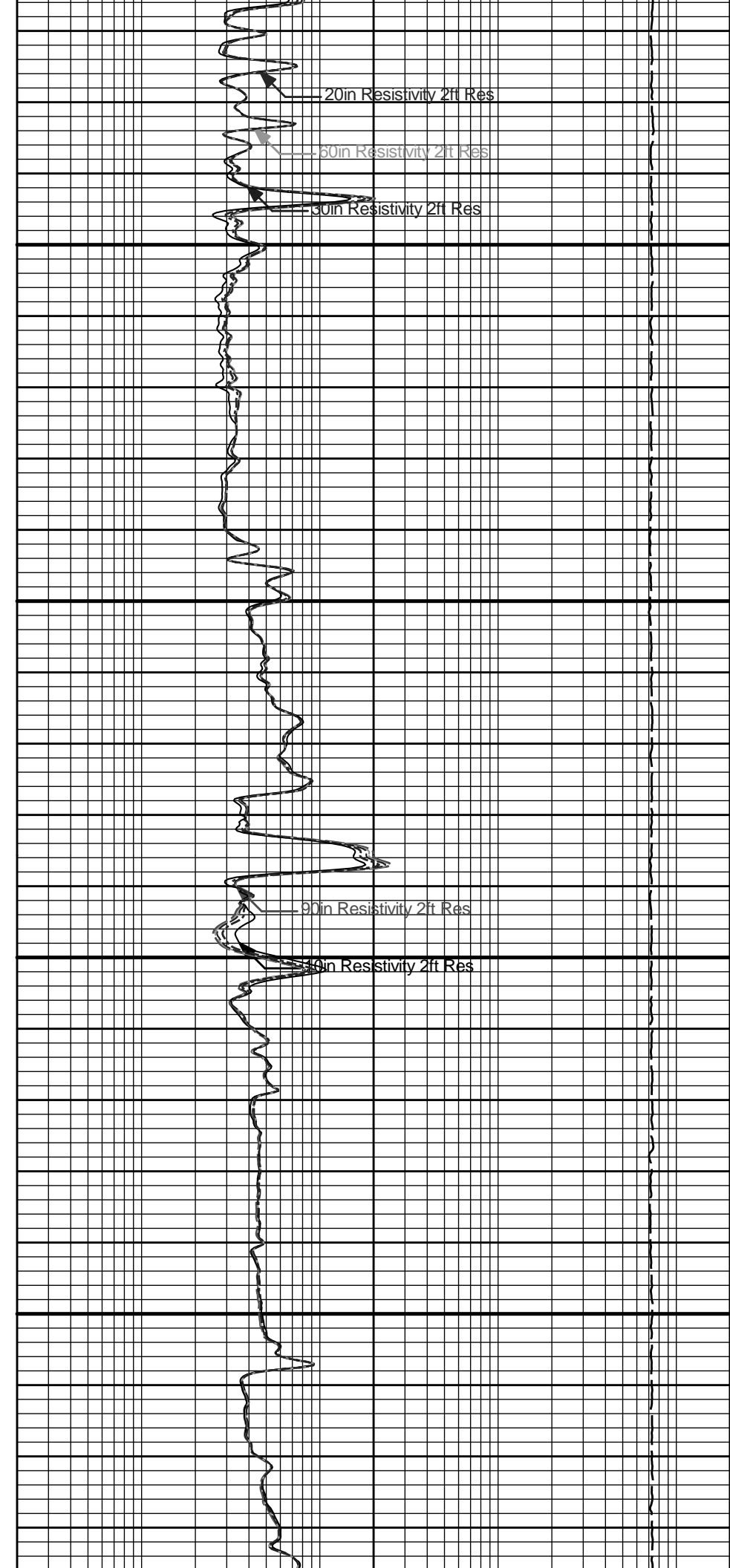
20in Resistivity 2ft Res

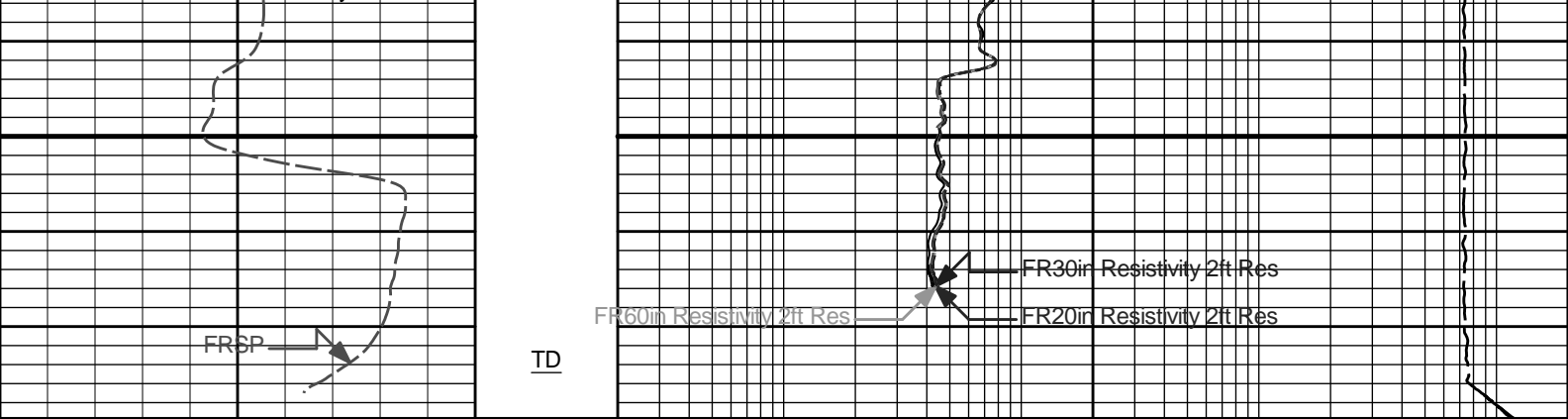




5000

5100





0	Gamma API	150	15K	Tension	0
	api			pounds	
	SP		0.2	90in Resistivity 2ft Res	2K
	-]20[+			ohmm	
			0.2	60in Resistivity 2ft Res	2000
				ohmm	
			0.2	30in Resistivity 2ft Res	2000
				ohm-metre	
			0.2	20in Resistivity 2ft Res	2000
				ohmm	
			0.2	10in Resistivity 2ft Res	2K
				ohmm	

**HALLIBURTON**

Plot Time: 31-May-11 13:32:37  
 Plot Range: 1500 ft to 5179.67 ft  
 Data: PHOENIX\_BERRYMNWell Based\DAQ-0001-003\  
 Plot File: \\-LOCAL-\\PHOENIX\_BERRYMN0001 GTET-DSN-SDL-ACRT\\ACRT\\ACRT\_5inch\_main

**5 INCH MAIN LOG**

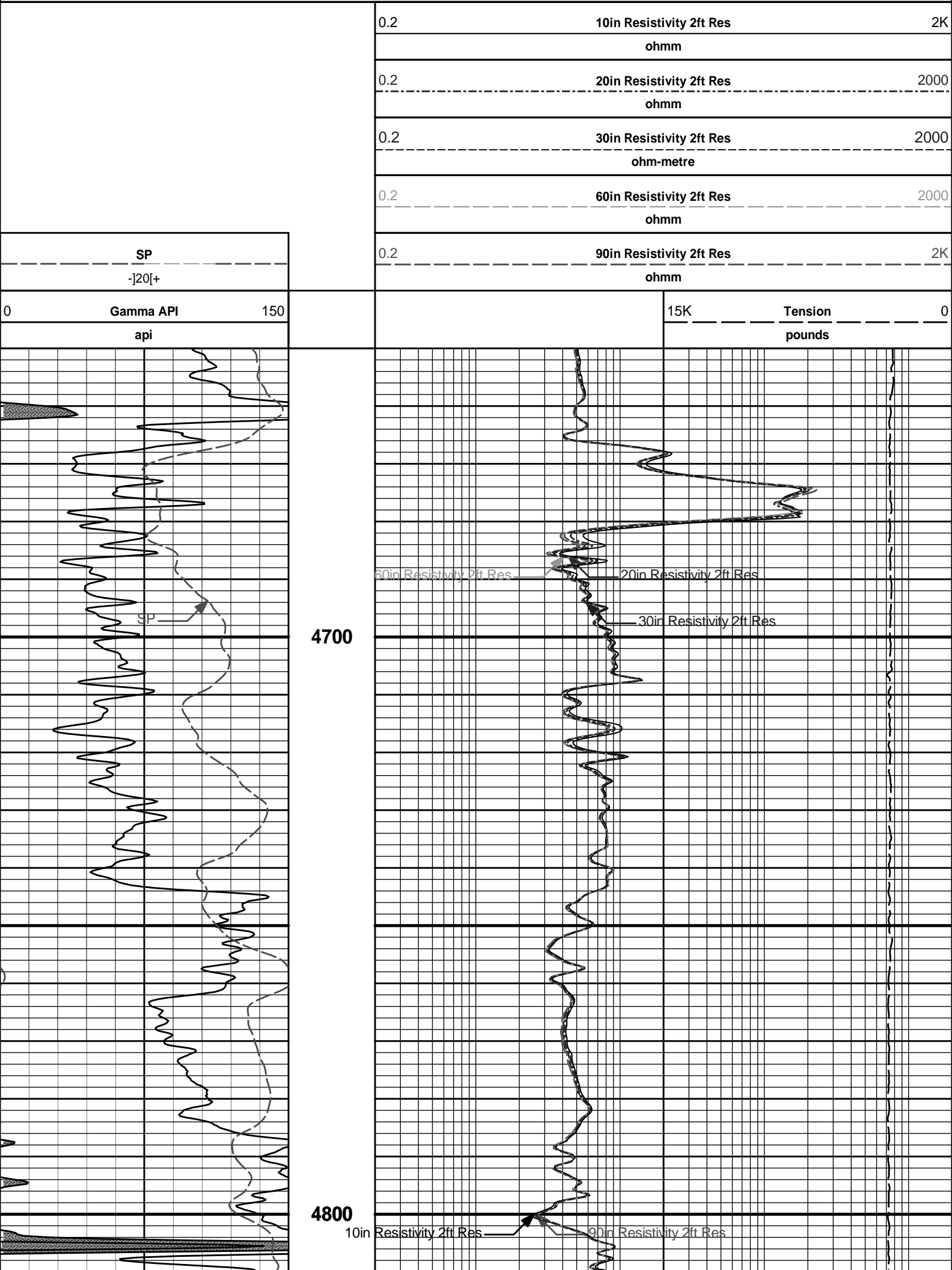
**5 INCH MAIN LOG**

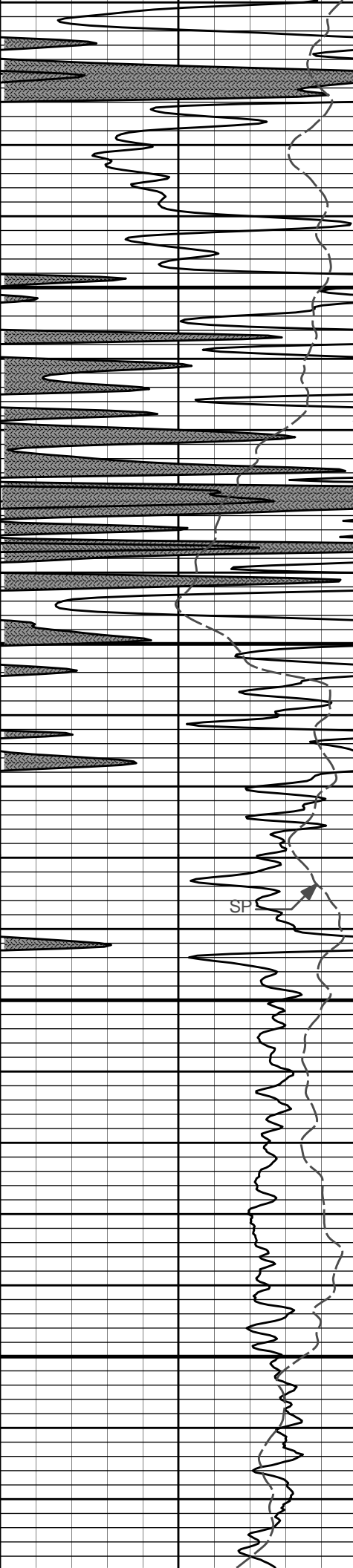
**HALLIBURTON**

Plot Time: 31-May-11 13:32:38  
 Plot Range: 4650 ft to 5180.17 ft  
 Data: PHOENIX\_BERRYMNWell Based\DAQ-0001-002\  
 Plot File: \\-LOCAL-\\PHOENIX\_BERRYMN0001 GTET-DSN-SDL-ACRT\\ACRT\\ACRT\_5inch\_main

**REPEAT SECTION**

**REPEAT SECTION**





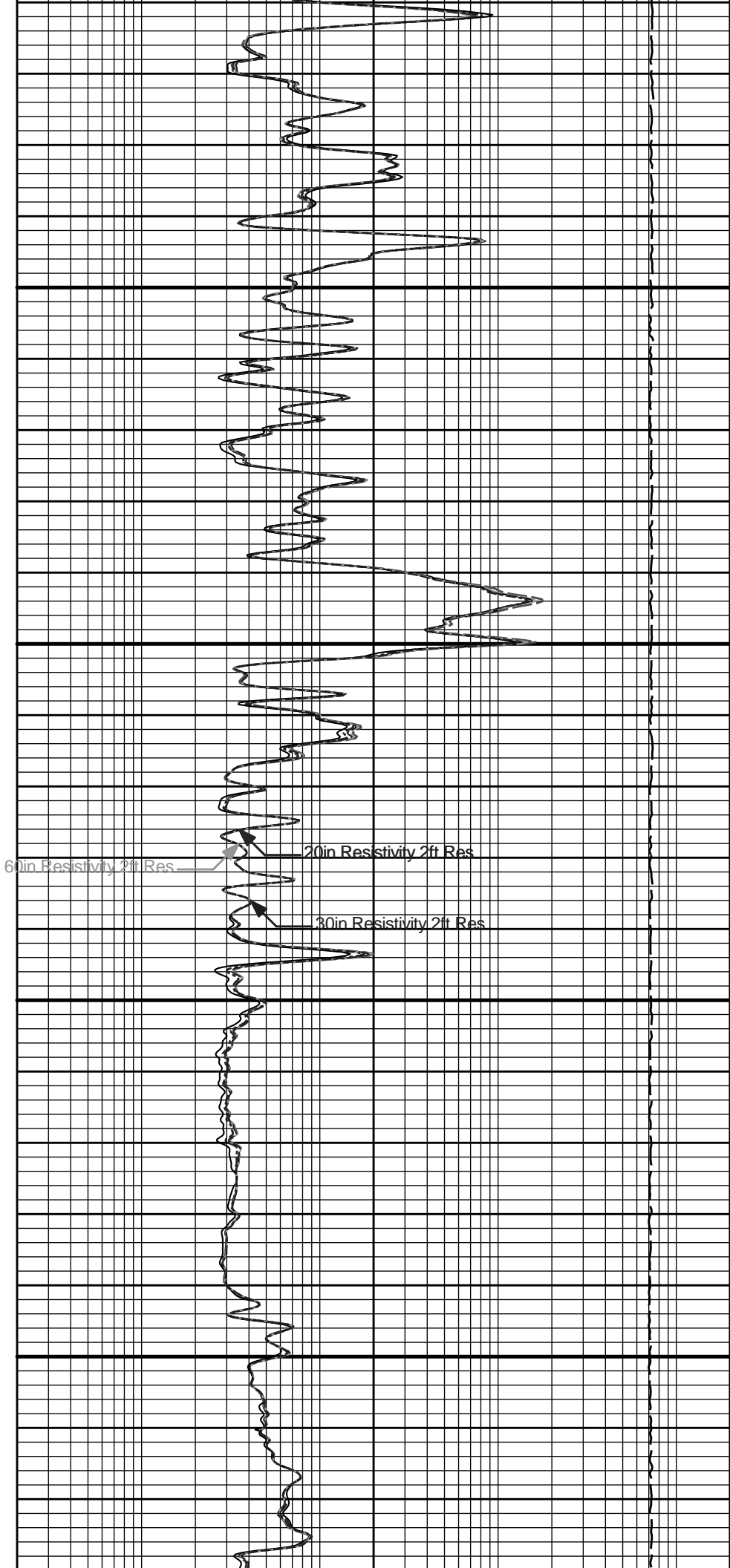
4900

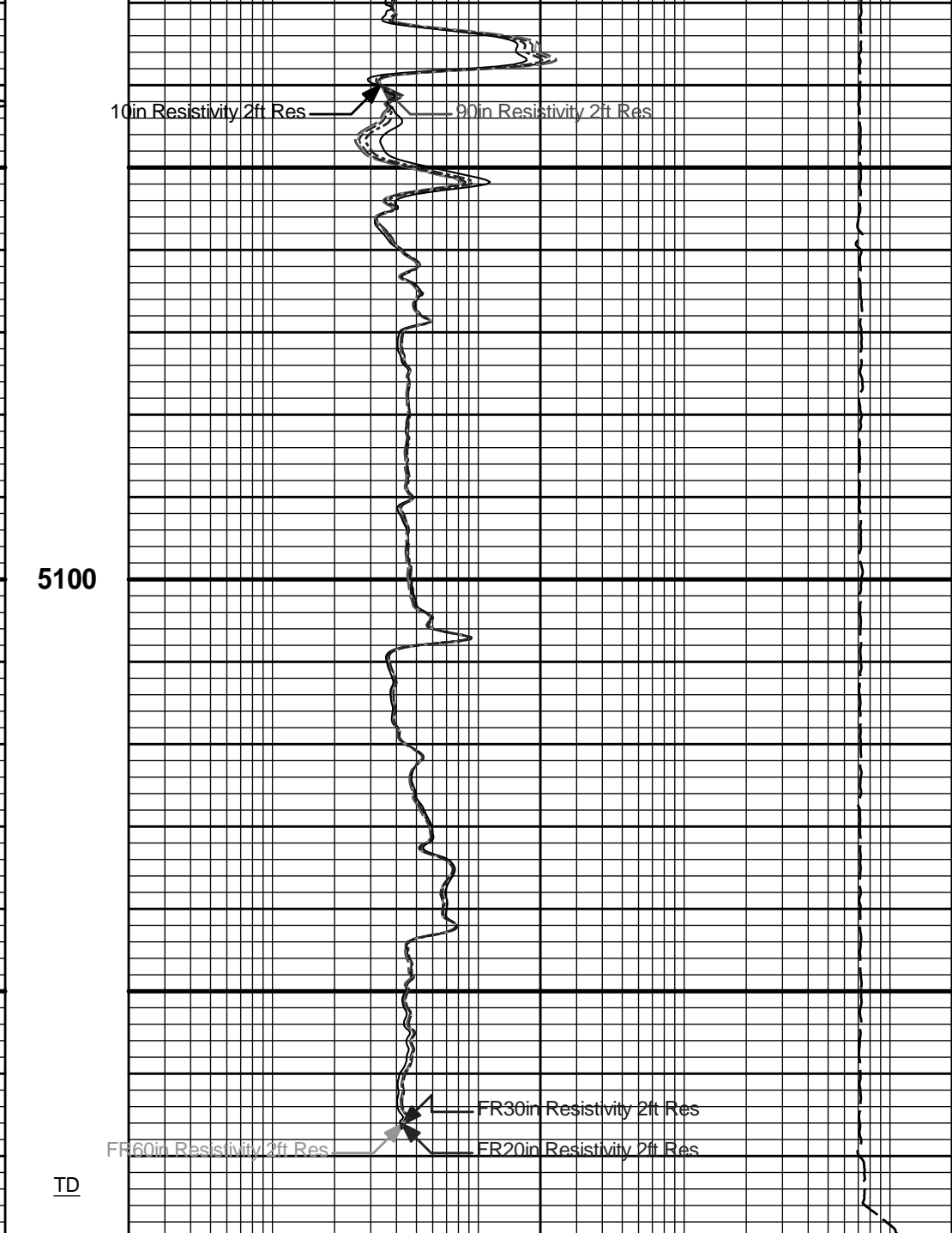
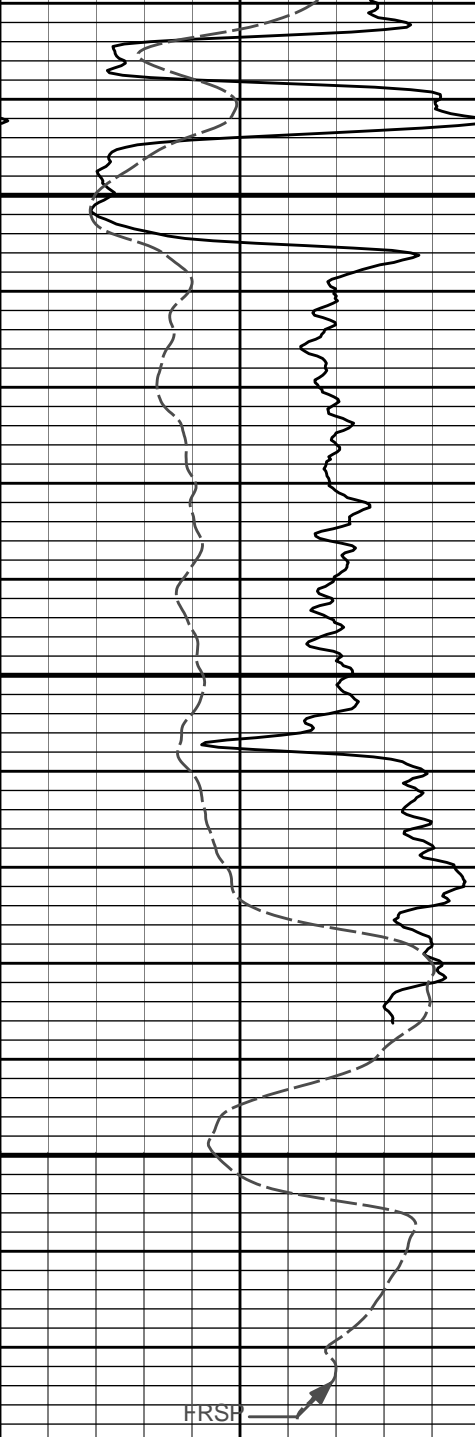
60in Resistivity 2ft Res

20in Resistivity 2ft Res

30in Resistivity 2ft Res

5000





0	Gamma API	150
	api	
	SP	
	- 20 +	

	15K	Tension	0
		pounds	
0.2	90in Resistivity 2ft Res		2K
	ohmm		
0.2	60in Resistivity 2ft Res		2000
	ohmm		
0.2	30in Resistivity 2ft Res		2000
	ohm-metre		
0.2	20in Resistivity 2ft Res		2000
	ohmm		
0.2	10in Resistivity 2ft Res		2K
	ohmm		

**HALLIBURTON**

Plot Time: 31-May-11 13:32:45  
 Plot Range: 4650 ft to 5180.17 ft  
 Data: PHOENIX\_BEPYMMNWell Based\DAQ-0001-002\





**PASS/FAIL SUMMARY**

Background Check: Passed  
Gain-Range Check: Passed  
Snow-Block Check: Passed

**DUAL SPACED NEUTRON FIELD CALIBRATION**

**Tool Name:** DSNT - 10951378      **Reference Calibration Date:** 13-May-11 12:51:07  
**Engineer:** WHITLOCK      **Calibration Date:** 13-May-11 12:52:54  
**Software Version:** WL INSITE R3.2.1 (Build 7)      **Calibration Version:** 1

Logging Source S/N: DSN-373  
Snow Block S/N: 10975786

**NEUTRON FIELD-CHECK SUMMARY**

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0774	0.0774	-0.0000	+/- 0.0150

**PASS/FAIL SUMMARY**

Block Change Check: Passed  
Snow Block Stat Check: Passed  
Temperature Check: Passed

**SPECTRAL DENSITY SHOP CALIBRATION**

**Tool Name:** SDLT - I378\_M477\_P870      **Reference Calibration Date:** 14-Apr-11 11:44:47  
**Engineer:** WHITLOCK      **Calibration Date:** 13-May-11 10:52:25  
**Software Version:** WL INSITE R3.2.1 (Build 7)      **Calibration Version:** 1

Logging Source S/N: 20784B

Aluminum Block S/N: FTSM AL BLOCK      Density: 2.581g/cc      Pe: 3.170  
Magnesium Block S/N: FTSM MAG BLOCK      Density: 1.687g/cc      Pe: 2.594

**DENSITY CALIBRATION SUMMARY**

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0050	1.0205	0.90 - 1.10
Near Dens Gain	1.0034	1.0212	0.90 - 1.10
Near Peak Gain	1.0112	1.0213	0.90 - 1.10
Near Lith Gain	1.0234	1.0308	0.90 - 1.10
Far Bar Gain	1.0089	1.0097	0.90 - 1.10
Far Dens Gain	1.0001	1.0010	0.90 - 1.10
Far Peak Gain	0.9987	1.0002	0.90 - 1.10
Far Lith Gain	0.9782	0.9820	0.90 - 1.10
<hr/>			
Near Bar Offset	0.1245	-0.0176	NONE
Near Dens Offset	0.1198	-0.0359	NONE
Near Peak Offset	0.0426	-0.0412	NONE
Near Lith Offset	-0.0861	-0.1494	NONE
Far Bar Offset	0.0231	0.0176	NONE
Far Dens Offset	0.0875	0.0795	NONE
Far Peak Offset	0.0748	0.0642	NONE
Far Lith Offset	0.2061	0.1781	NONE
<hr/>			
Near Bar Background	917.62	917.54	700 - 1450
Near Dens Background	299.23	300.24	230 - 480
Near Peak Background	131.16	131.13	100 - 210
Near Lith Background	162.20	162.12	125 - 260

Far Bar Background	549.43	550.05	450 - 900
Far Dens Background	213.49	215.29	175 - 345
Far Peak Background	84.89	84.18	70 - 140
Far Lith Background	88.22	88.01	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.686	1.687	0.001	+/- 0.015
Pe	2.550	2.558	0.008	+/- 0.150
ALUMINUM				
Density (g/cc)	2.582	2.581	-0.001	+/- 0.01500
Pe	3.128	3.131	0.003	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0013	+/- 0.0110	-0.0019	+/- 0.0140
Magnesium Block	-0.0000	+/- 0.0110	0.0008	+/- 0.0140
Aluminum Block	0.0001	+/- 0.0110	0.0006	+/- 0.0140
Resolution	9.23	6.00 - 11.50	8.52	6.00 - 11.50
Internal Verifier(B+D+P+L)	1511	1200 - 2700	938	800 - 1700

PASS/FAIL SUMMARY	
Background Quality Check:	Passed
Background Range Check:	Passed
Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

### SPECTRAL DENSITY FIELD CHECK

<b>Tool Name:</b>	<b>SDLT - I378_M477_P870</b>	<b>Reference Calibration Date:</b>	<b>13-May-11 10:52:25</b>
<b>Engineer:</b>	<b>WHITLOCK</b>	<b>Calibration Date:</b>	<b>13-May-11 11:03:26</b>
<b>Software Version:</b>	<b>WL INSITE R3.2.1 (Build 7)</b>	<b>Calibration Version:</b>	<b>1</b>

Pad Temperature: 79.1 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1511.032	1514.376	3.344	15.660
Far (B+D+P+L) cps	937.529	940.796	3.267	16.547
Near Resolution	9.23	9.12	-0.110	0.50
Far Resolution	8.52	8.47	-0.050	1.00

PASS/FAIL SUMMARY	
Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

### MICRO LOG SHOP CALIBRATION

Tool Name: SDLT - I378\_M477\_P870

Reference Calibration Date: 22-Apr-11 13:32:38

Engineer: WHITLOCK

Calibration Date: 03-May-11 11:32:17

Software Version: WL INSITE R3.2.1 (Build 7)

Calibration Version: 1

#### CALIBRATION COEFFICIENT SUMMARY

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.18	-0.15	-0.00	0.00	ohmm
Calibration Point #1	-0.04	0.00	-0.01	0.00	ohmm
Calibration Point #2	19.33	20.00	19.98	20.00	ohmm
Internal Reference	19.20	19.86	19.99	20.00	ohmm

Measurement	Micro Log Normal	Micro Log Lateral	Units
	Tool Value	Tool Value	
Tool Zero	0.18	0.01	V
Calibration Point #1	38.48	-0.52	V
Calibration Point #2	5298.30	6866.00	V
Internal Reference	5262.31	6866.98	V

### MICRO LOG FIELD CHECK

Tool Name: SDLT - I378\_M477\_P870

Reference Calibration Date: 03-May-11 11:32:17

Engineer: WHITLOCK

Calibration Date: 03-May-11 11:33:13

Software Version: WL INSITE R3.2.1 (Build 7)

Calibration Version: 1

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.15	-0.14	0.00	0.00	ohmm
Internal Reference	19.86	19.86	20.00	20.00	ohmm

Summary				
Signal	Shop	Field	Difference	Tolerance
Microlog Normal	19.86	19.86	0.00	+/- 0.80
Microlog Lateral	20.00	20.00	0.00	+/- 0.80

### DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - I378\_M477\_P870

Reference Calibration Date: 01-Jan-70 00:00:00

Engineer: WHITLOCK

Calibration Date: 25-Feb-11 10:15:12

Software Version: WL INSITE R3.2.1 (Build 7)

Calibration Version: 1

#### CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1186.01	-1186.01	-7000.00 - -1000.00
Pad Gain	0.0003757	0.0003757	0.000200 - 0.000600
Arm Offset	-1165.63	-1165.63	-5000.00 - 3000.00
Arm Gain	0.0004320	0.0004320	0.000300 - 0.000700
Arm Power	0.000000704	0.000000704	-0.000010 - 0.000010

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

Tool Diameter: 4.50 in

#### CALIBRATION RINGS

Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				

Small Ring (in)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
<b>RING DIAMETER:</b>				
Small Ring (in)	6.50	6.50	0.00	+/- 0.20
Medium Ring (in)	8.25	8.25	0.00	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 0.20

**PASS/FAIL SUMMARY**

Calibration-Coefficients Range Check: Passed  
 Ring-Measurement Check: Passed

**PASS/FAIL SUMMARY**

Calibration-Coefficients Range Check: Passed

**SDLT CALIPER FIELD CALIBRATION**

**Tool Name:** SDLT - I378\_M477\_P870      **Reference Calibration Date:** 25-Feb-11 10:15:12  
**Engineer:** WHITLOCK      **Calibration Date:** 25-Feb-11 10:16:46  
**Software Version:** WL INSITE R3.2.1 (Build 7)      **Calibration Version:** 1

**MEASURED CALIPER VALUES**

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.76	0.01	+/- 0.10
Ring Diameter	8.25	8.25	0.00	+/- 0.15

**PASS/FAIL SUMMARY**

Pad Extension Check: Passed  
 Diameter Check: Passed

**ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION**

**Tool Name:** ACRt - I816\_S708      **Reference Calibration Date:** 21-Mar-11 07:29:13  
**Engineer:** WHITLOCK      **Calibration Date:** 24-May-11 10:13:21  
**Software Version:** WL INSITE R3.2.1 (Build 7)      **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	1.0377	1.05	0.95	1.0167	1.05	0.95	1.0084	1.05
A2 (50")	0.95	1.0436	1.05	0.95	1.0218	1.05	0.95	1.0107	1.05
A3 (29")	0.95	1.0477	1.05	0.95	1.0264	1.05	0.95	1.0158	1.05
A4 (17")	0.95	1.0259	1.05	0.95	1.0036	1.05	0.95	0.9984	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9938	1.05	0.95	0.9865	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9923	1.05	0.95	0.9861	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	1.540	2	-6	-4.354	-2	-8	-5.886	-2
A2 (50")	-7	0.756	-1	-6	-4.115	-2	-7	-5.229	-2
A3 (29")	-27	-11.449	-9	-9	-3.850	-3	-7	-4.599	-1
A4 (17")	-180	-106.437	-60	-45	-32.865	-15	-39	-25.638	-13
A5 (10")	N/A	N/A	N/A	-150	-102.566	-50	-80	-48.266	-10
A6 (6")	N/A	N/A	N/A	175	326.990	525	90	165.506	270

Signal	Lower	R	Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.8460	1.3	Mud Cell	0.95	1.003	1.05
36K	1.0	1.1689	2.0				
72K	1.0	1.3226	2.0				

## CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
<b>Depth Panel-PROT01</b>						
Tension Zero	0.00	-----	-----	0.00	-----	lbs
Tension Cal	7800.00	-----	-----	0.00	-----	lbs
<b>CH_HOS-CH_HOS_I</b>						
DH Tension Zero	0.00	-----	-----	0.00	-----	lbs
DH Tension Cal	1050.00	-----	-----	0.00	-----	lbs
<b>GTET-10971172</b>						
Gamma Ray Calibrator	225.9	223.7	-----	2.2	+/- 9.00	api
<b>DSNT-10951378</b>						
Snow-Block Porosity	0.0774	0.0774	-----	0.0000	+/- 0.0150	decip
<b>SDLT-I378_M477_P870</b>						
Near(B+D+P+L)	1511.032	1514.376	-----	-3.344	+/-15.660	cps
Far(B+D+P+L)	937.529	940.796	-----	-3.267	+/-16.547	cps
MicroLog Normal	19.86	19.86	-----	0.00	+/-0.80	ohmm
MicroLog Lateral	20.00	20.00	-----	0.00	+/-0.80	ohmm
Pad Extension	3.75	3.76	-----	-0.01	+/-0.10	in
Ring Diameter	8.25	8.25	-----	0.000	+/-0.15	in
<b>ACRT-I816_S708</b>						
Mud Cell	1.003	-----	-----	0.000	-----	ohm-m

Data: PHOENIX\_BERRYMN0001 GTET-DSN-SDL-ACRT001 31-May-11 10:59 Dn @476.8f

Date: 31-May-11 11:00:25

## 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	9.100	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	2.000	ohmm
	SHARED	TRM	Temperature of Mud	75.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	4.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	5175.00	ft
	SHARED	BHT	Bottom Hole Temperature	140.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	

SHARED	AZIM	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	0.200		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		

BOTTOM

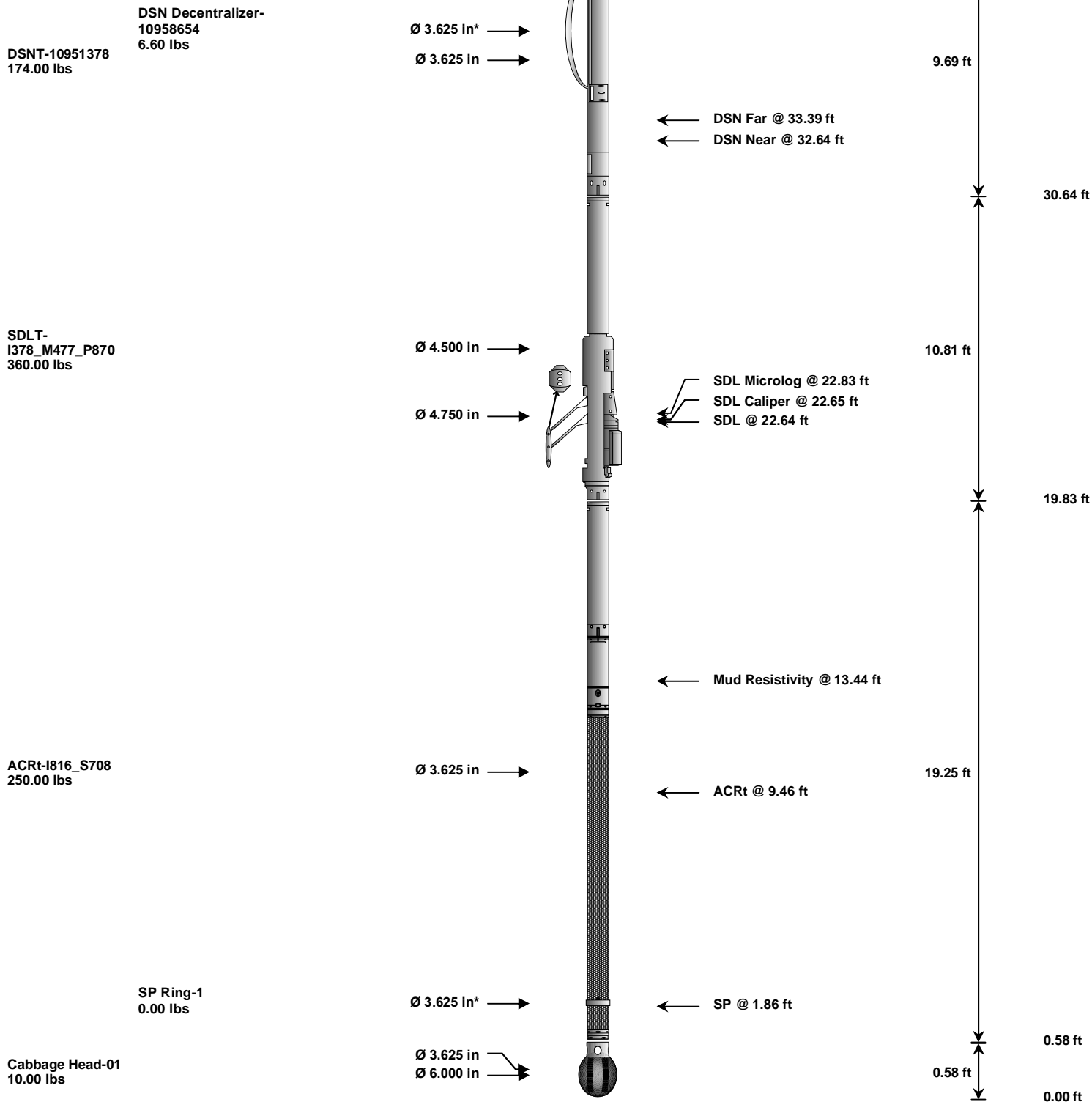
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Date: 31-May-11 11:01:09

# 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 @ 50.85 ft	3.25 ft	52.10 ft
						48.85 ft
GTET-10971172 165.00 lbs		Ø 3.625 in		← GammaRay @ 42.79 ft	8.52 ft	40.33 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	3.25	48.85	300.00
GTET	Gamma Telemetry Tool	10971172	165.00	8.52	40.33	60.00
DSNT	Dual Spaced Neutron	10951378	174.00	9.69	30.64	60.00
DCNT	DSN Decentralizer	10958654	6.60	5.13 *	33.97	300.00
SDLT	Spectral Density Tool	I378_M477_P870	360.00	10.81	19.83	60.00
ACRt	Array Compensated True Resistivity	I816_S708	250.00	19.25	0.58	300.00
SP	SP Ring	1	0.00	0.25 *	1.86	300.00
CBHD	Cabbage Head	01	10.00	0.58	0.00	300.00

**Total** **1,003.10**    **52.10**

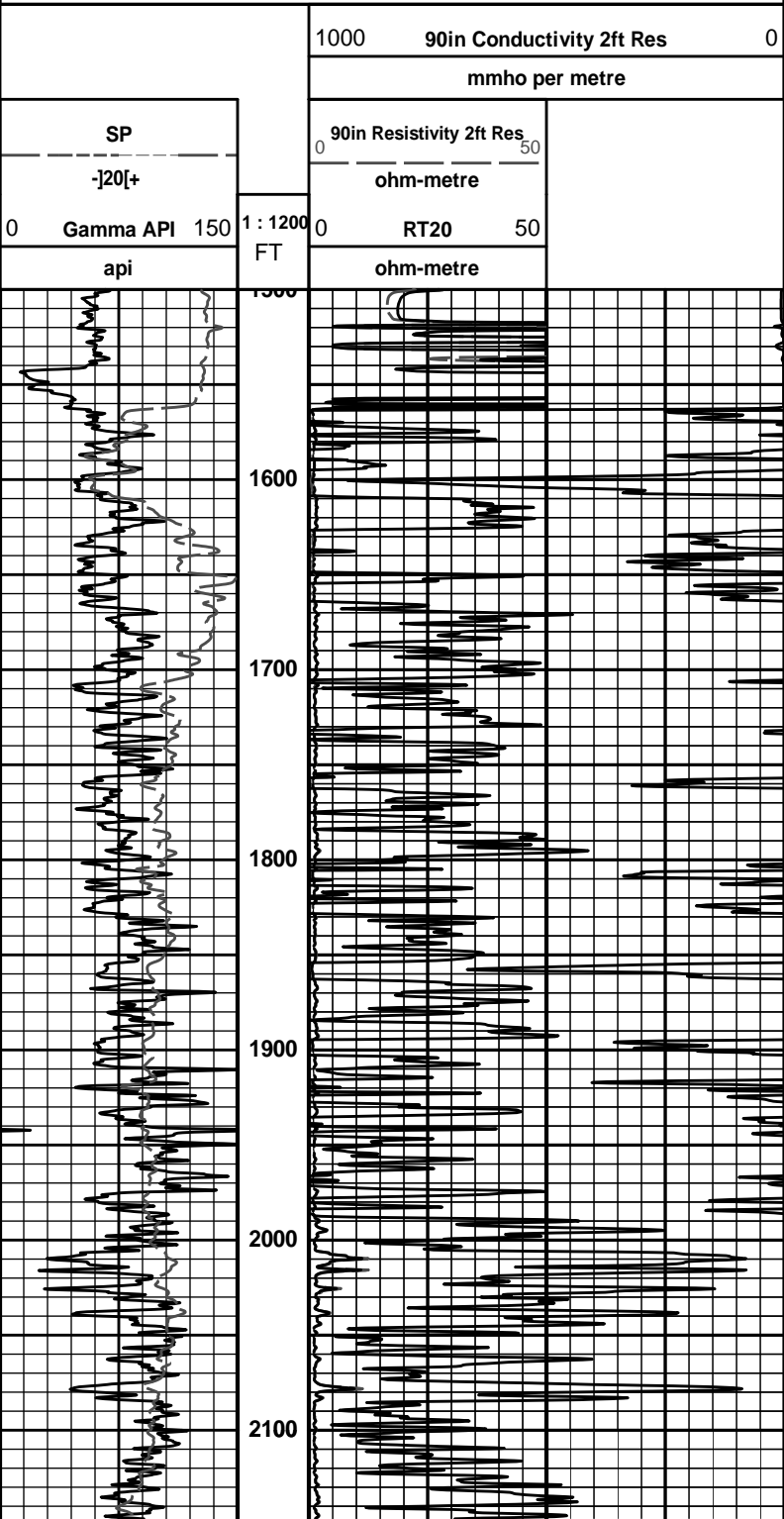
\* Not included in Total Length and Length Accumulation.

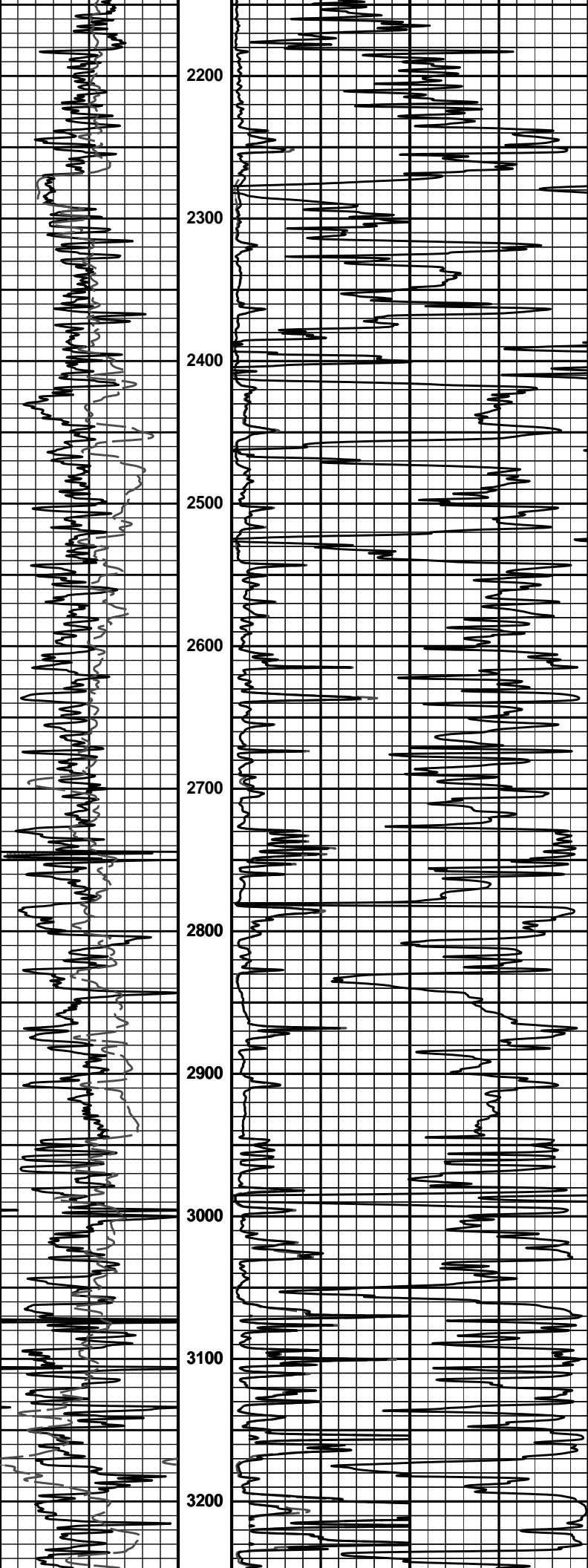
# HALLIBURTON

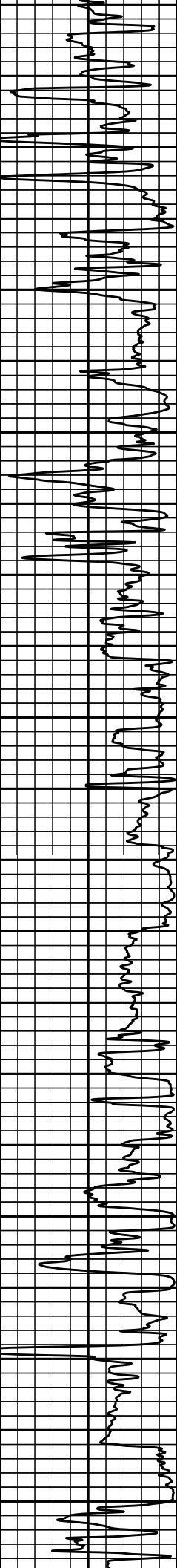
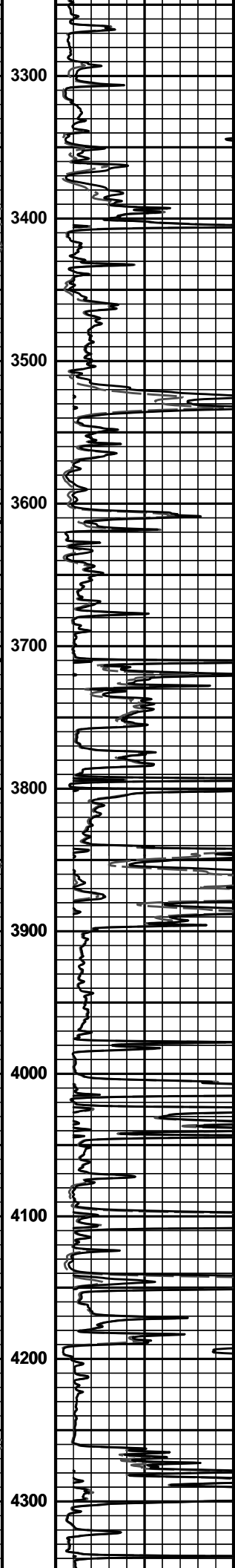
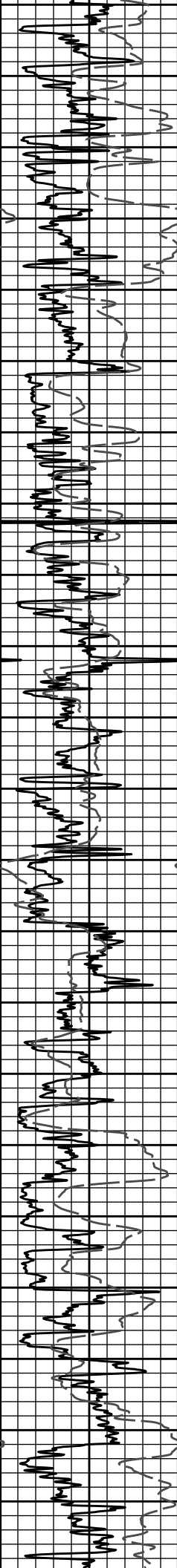
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## 1 INCH MAIN LOG

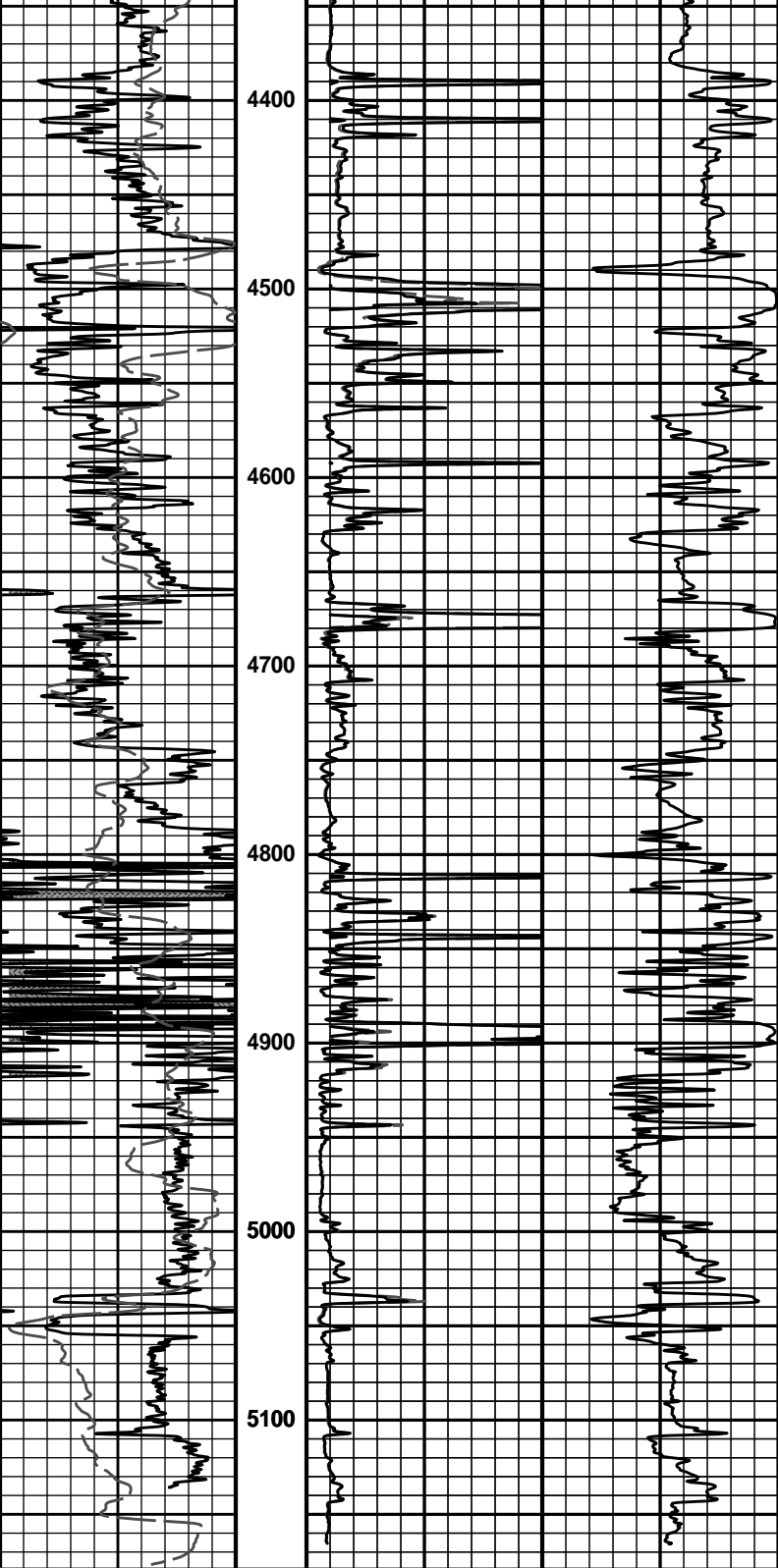
### 1 INCH CORRELATION LOG







3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000  
4100  
4200  
4300



0	Gamma API	150	1 : 1200	0	RT20	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: 31-May-11 13:32:48  
 Plot Range: 1500 ft to 5179 ft  
 Data: PHOENIX\_BERRYMNWell Based\DAQ-0001-003\  
 Plot File: \\LOCAL\PHOENIX\_BERRYMN0001 GTET-DSN-SDL-ACRT\ACRT\ACRT\_1\_main

**1 INCH MAIN LOG**

1 INCH CORRELATION LOG