

HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY 5" LOG

COMPANY		MERIT ENERGY COMPANY			
WELL		EAST FORK 34-1			
FIELD/BLOCK		WILDCAT			
COUNTY		SEWARD			
STATE		KANSAS			
Permanent Datum	GL	Sect. 34	Twp. 32S	Rge. 34W	Elev. 2896.0 ft
Log measured from	KB				12.0 ft above perm. Datum
Drilling measured from	KB				
Date	01-May-19				
Run No.	1				
Depth - Driller	6400.0 ft				
Depth - Logger	6402.0 ft				
Bottom - Logged Interval	6392				
Top - Logged Interval	1582				
Casing - Driller	8.625 in				@
Casing - Logger	1582.0 ft				@
Bit Size	7.875 in				@
Type Fluid in Hole	Water Based Mud				@
Density	9.20 g/cc	70.00	sl/qt		
PH	11.00 pH	5.2	cp/m		
Source of Sample	FLOWLINE				
Rm @ Meas. Temperature	1.22 ohmm	@	76.00 degF		@
Rmf @ Meas. Temperature	0.96 ohmm	@	74.00 degF		@
Rmc @ Meas. Temperature	1.51 ohmm	@	74.00 degF		@
Source Rmf	Rmc	MEAS	MEAS		@
Rm @ BHT	0.64 ohmm	@	151.0 degF		@
Time Since Circulation	20:00 hr				
Time on Bottom	01-May-19 01:47				
Max. Rec. Temperature	151.00 degF	@	6402.0 ft		@
Equipment	Location	12156883	EL RENO, OK		
Recorded By	WHITLOCK				
Witnessed By	MARTIN LANGE				AUSTIN GARNIER

Fold here

Service Ticket No.: 905666710		API No.: 15-175-22267-00-00		PGM Version: WL INSITE R6.0.8 (Build 3)	
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE			RESISTIVITY SCALE CHANGES		
Date	Sample No.		Type Log	Depth	Scale Up Hole
Depth-Driller					Scale Down Hole
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
Rmf @ Meas. Temp.	@	@			Tool Pos.
Rmc @ Meas. Temp.	@	@			Other
Source Rmf	Rmc				
Rm @ BHT	@	@			
Rmf @ BHT	@	@			
Rmc @ BHT	@	@			
EQUIPMENT DATA					
GAMMA		ACOUSTIC		DENSITY	
Run No.		Run No.		Run No.	NEUTRON
Serial No.		Serial No.		Serial No.	
Model No.		Model No.		Model No.	
Diameter		No. of Cent.		Diameter	
Detector Model No.		Spacing		Log Type	
Type				Source Type	
Length		LSA [Y/N]		Serial No.	
Distance to Source		FWDA [Y/N]		Strength	
LOGGING DATA					
GENERAL		GAMMA		ACOUSTIC	
Run	Depth	Speed	Scale	Scale	DENSITY
No.	From	To	L	R	L
		ft/min			R
					Matrix
					L
					R
					Matrix
					L
					R
					Matrix

DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @

Remarks: 5 1/2" CASING USED FOR ANNULAR HOLE VOLUME

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: 01-May-19 05:48:03

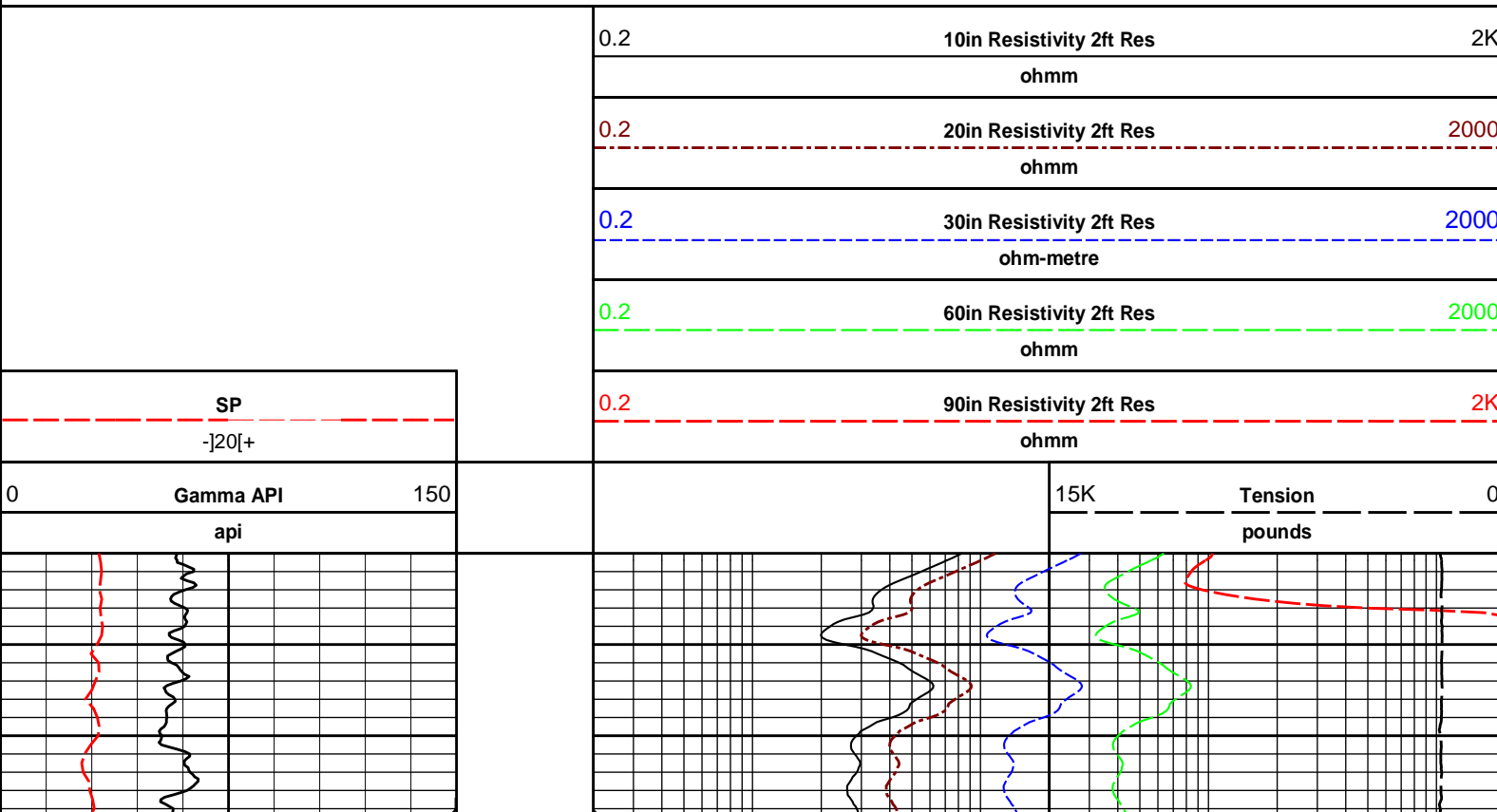
Plot Range: 1550 ft to 6402 ft

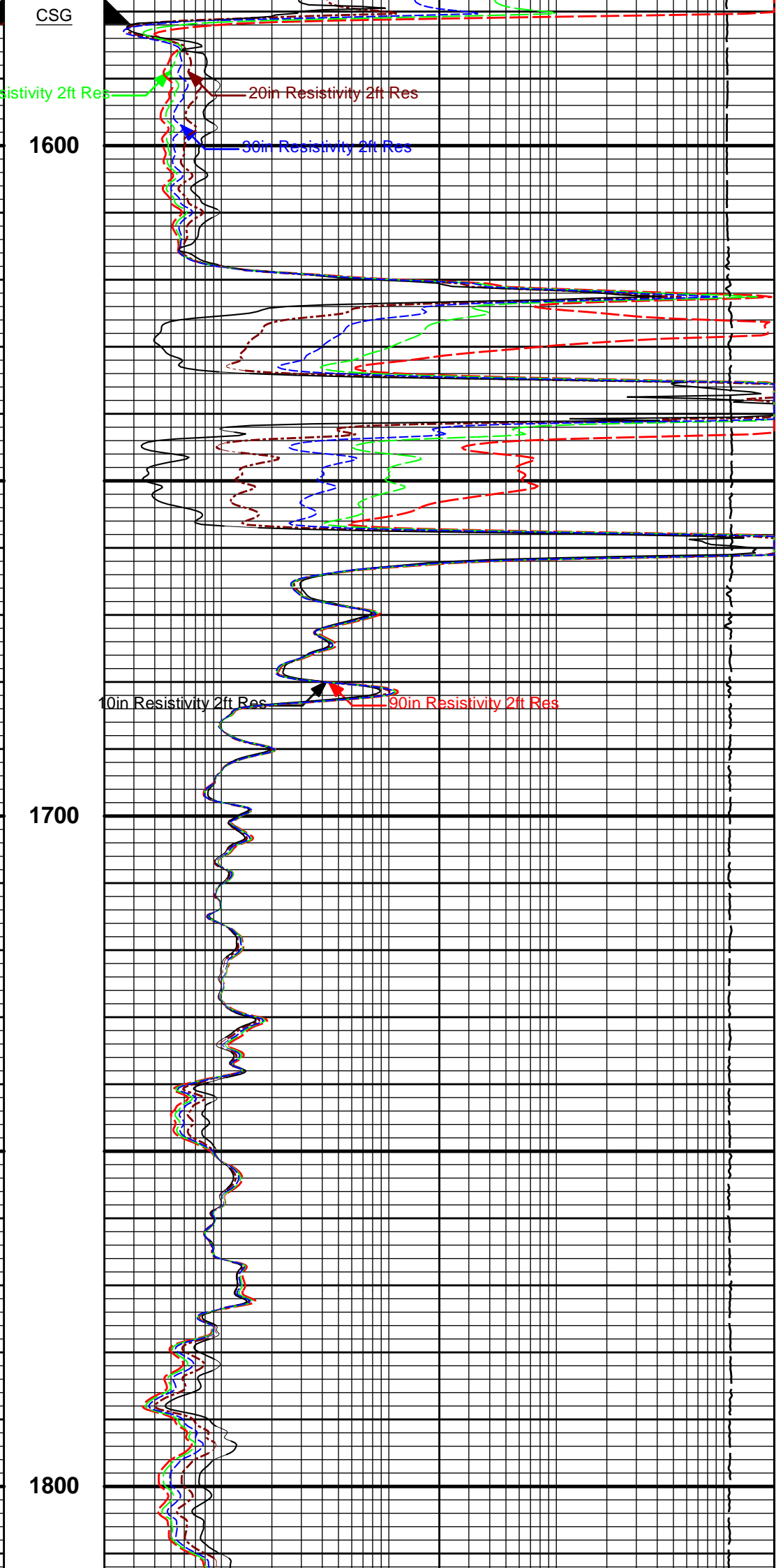
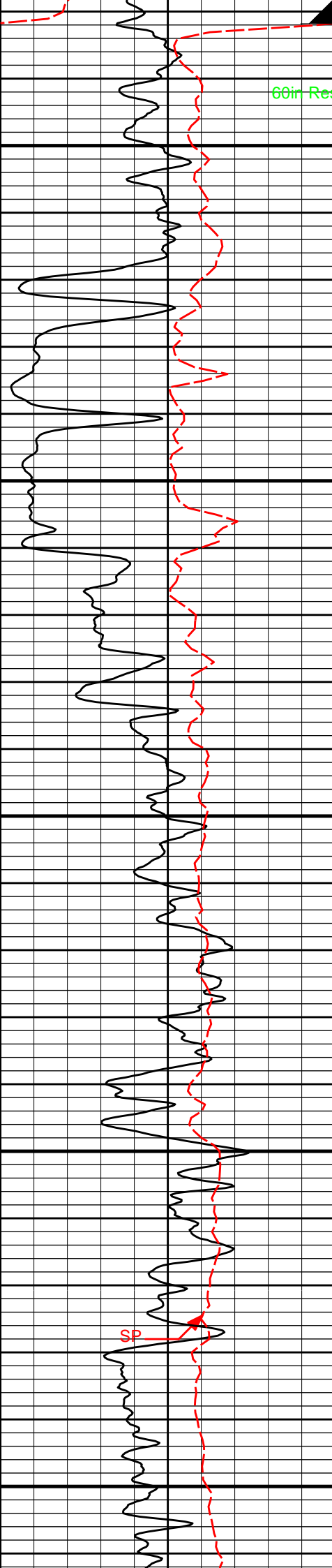
Data: MERIT_EAST-FORK\Well Based\DAQ-0001-003\

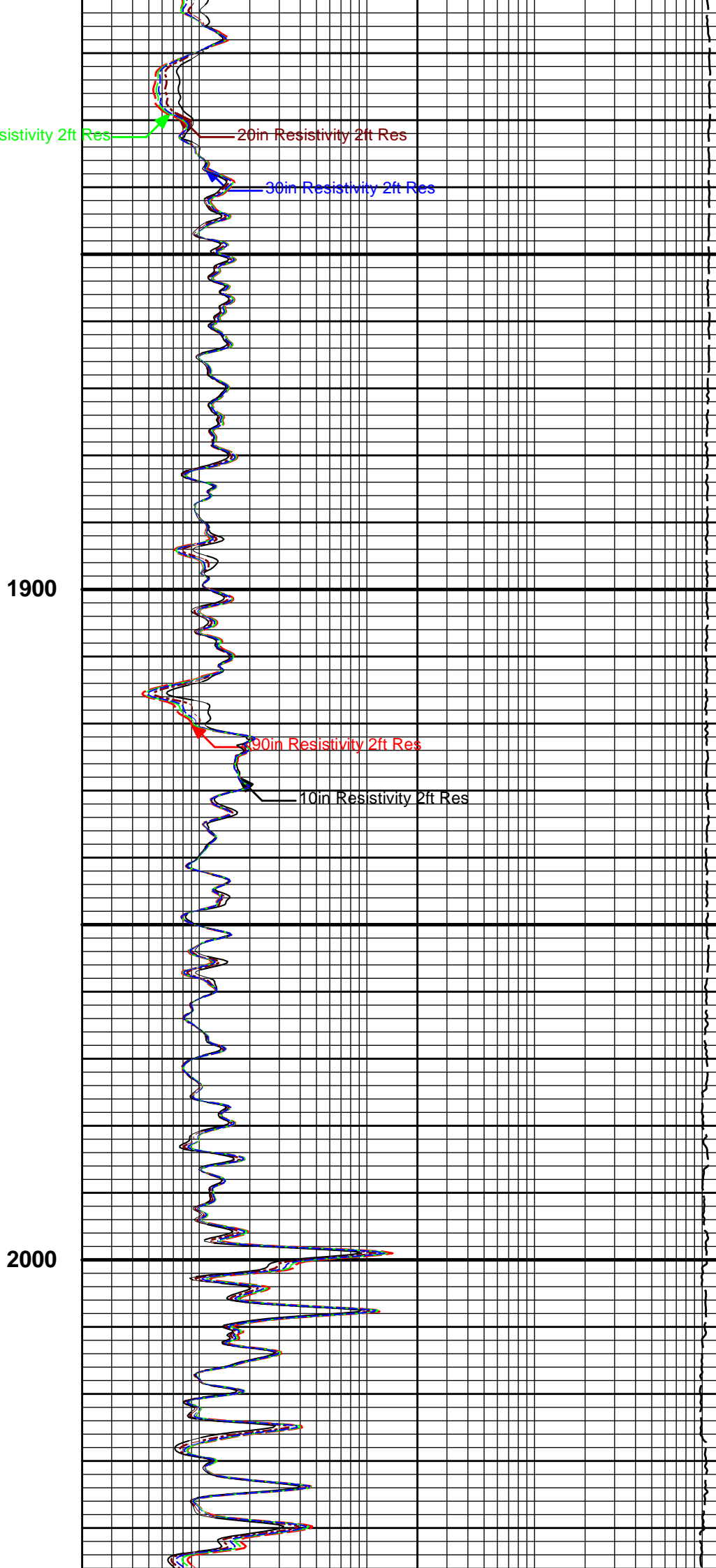
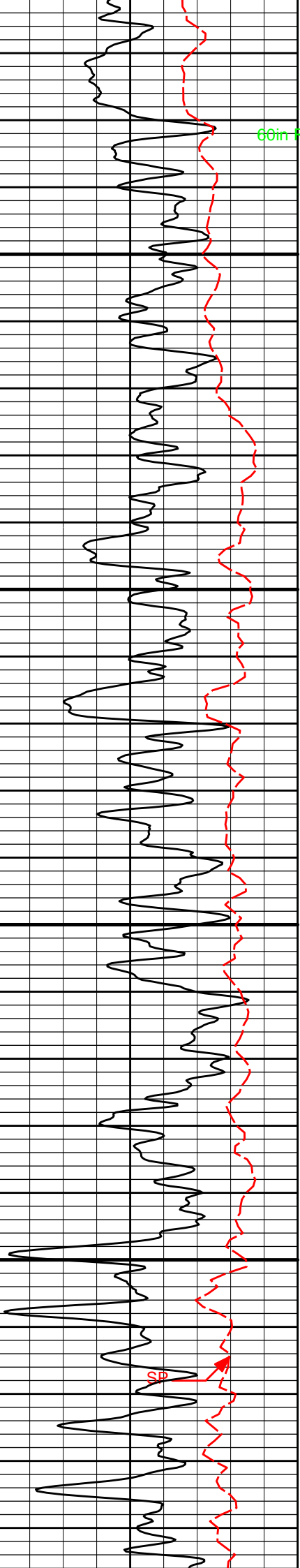
Plot File: \\-LOCAL-MERIT_EAST-FORK\0001 GTET-DSN-SDL-BSAT-ACRTIACRT-5\ACRT_5inch_main

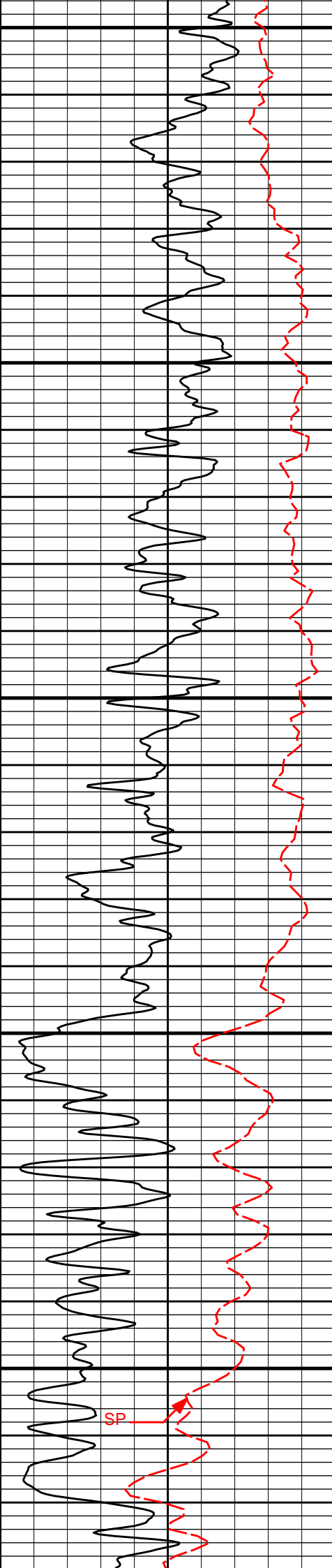
5 INCH MAIN LOG

5 INCH MAIN LOG





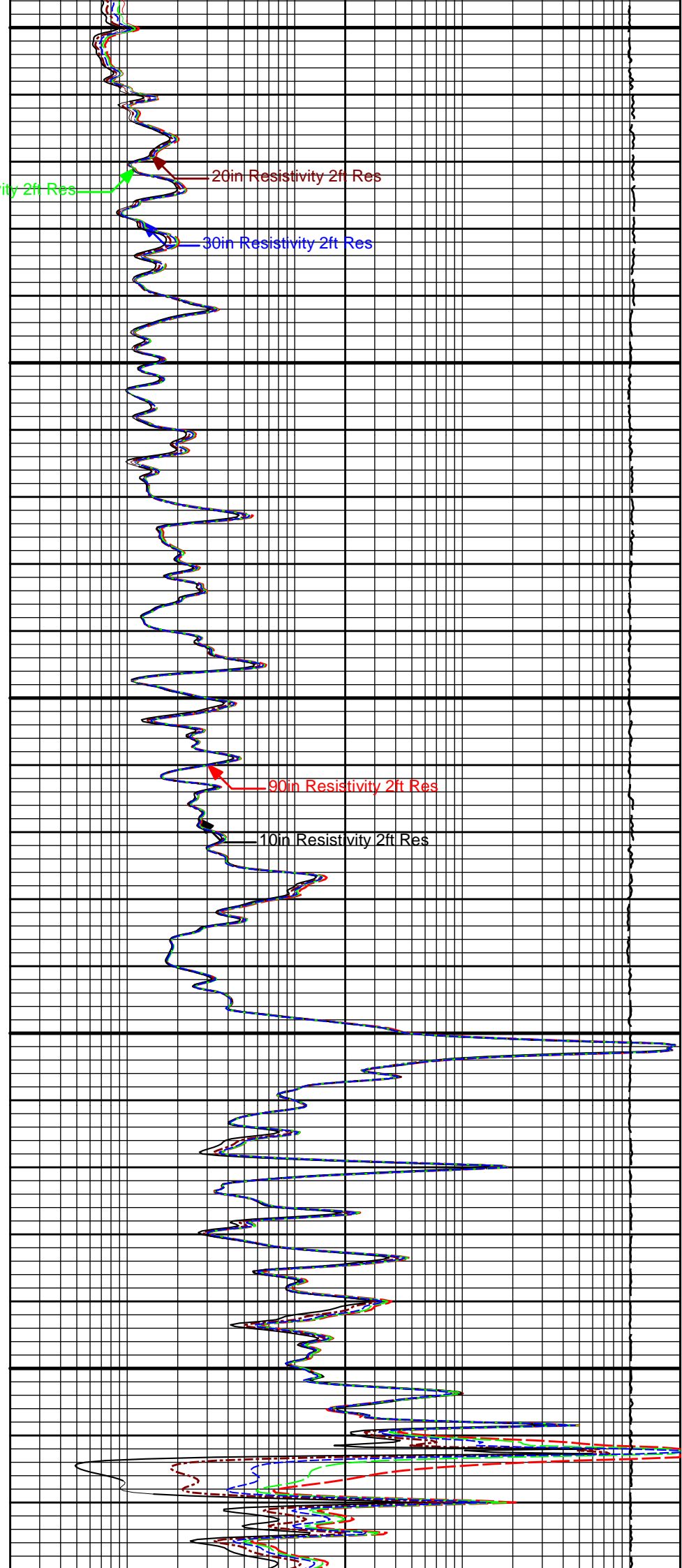


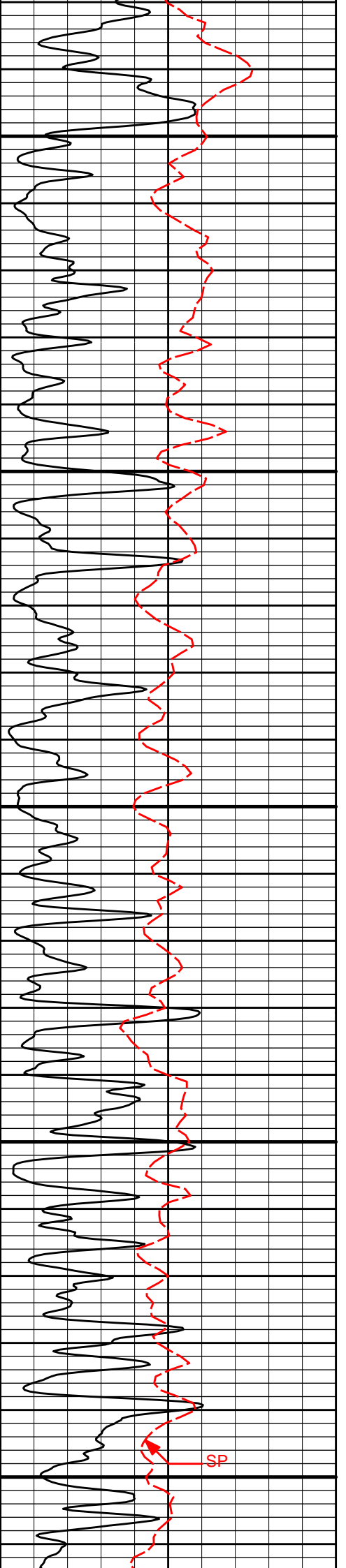


60in Resistivity 2ft Res

2100

2200

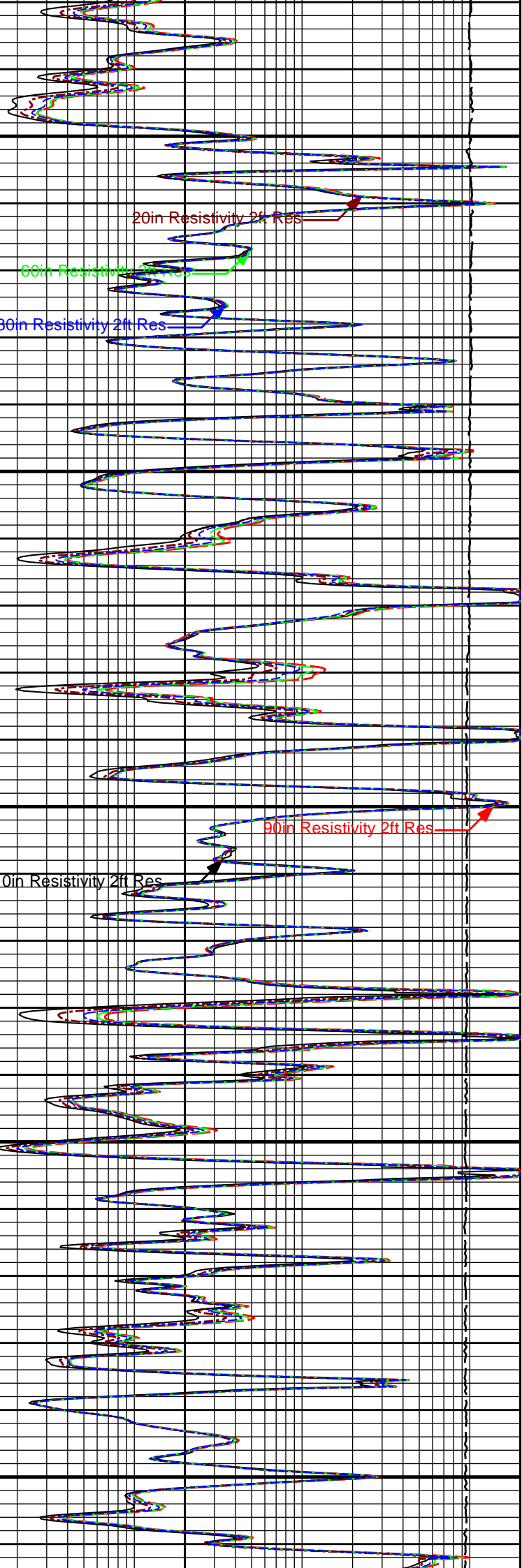


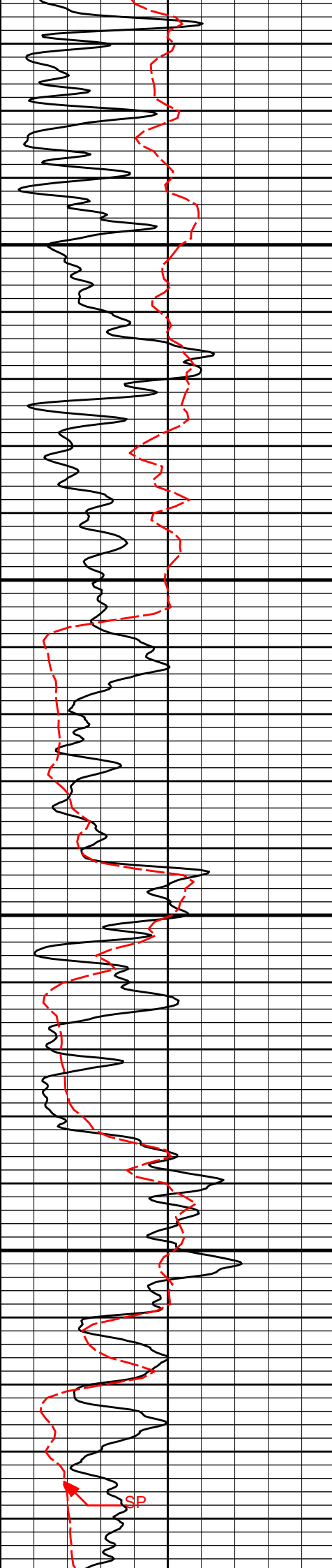


2300

2400

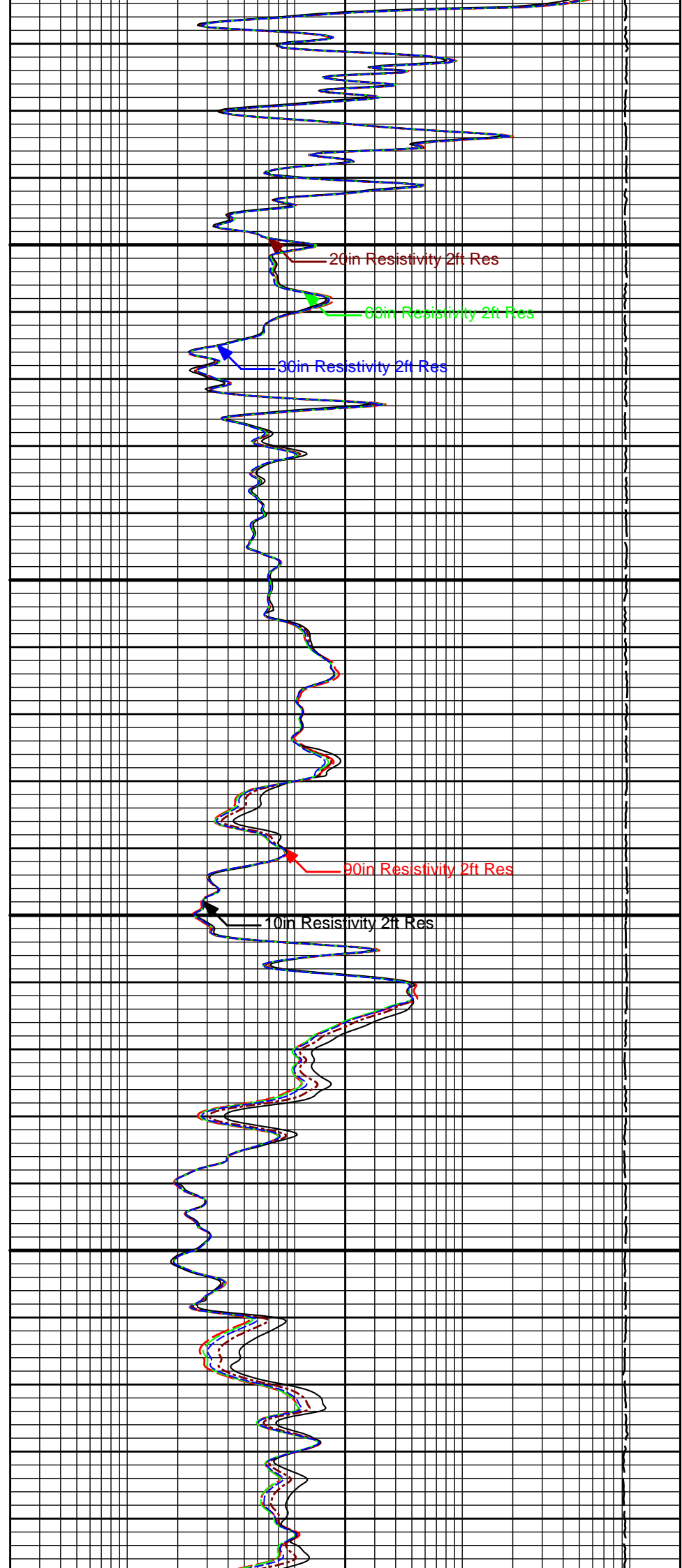
2500





2600

2700



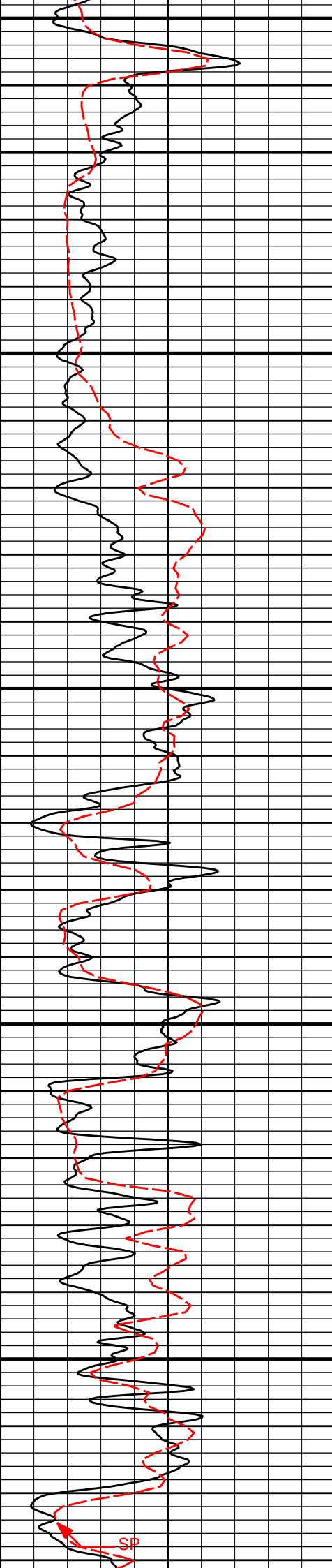
20in Resistivity 2ft Res

60in Resistivity 2ft Res

30in Resistivity 2ft Res

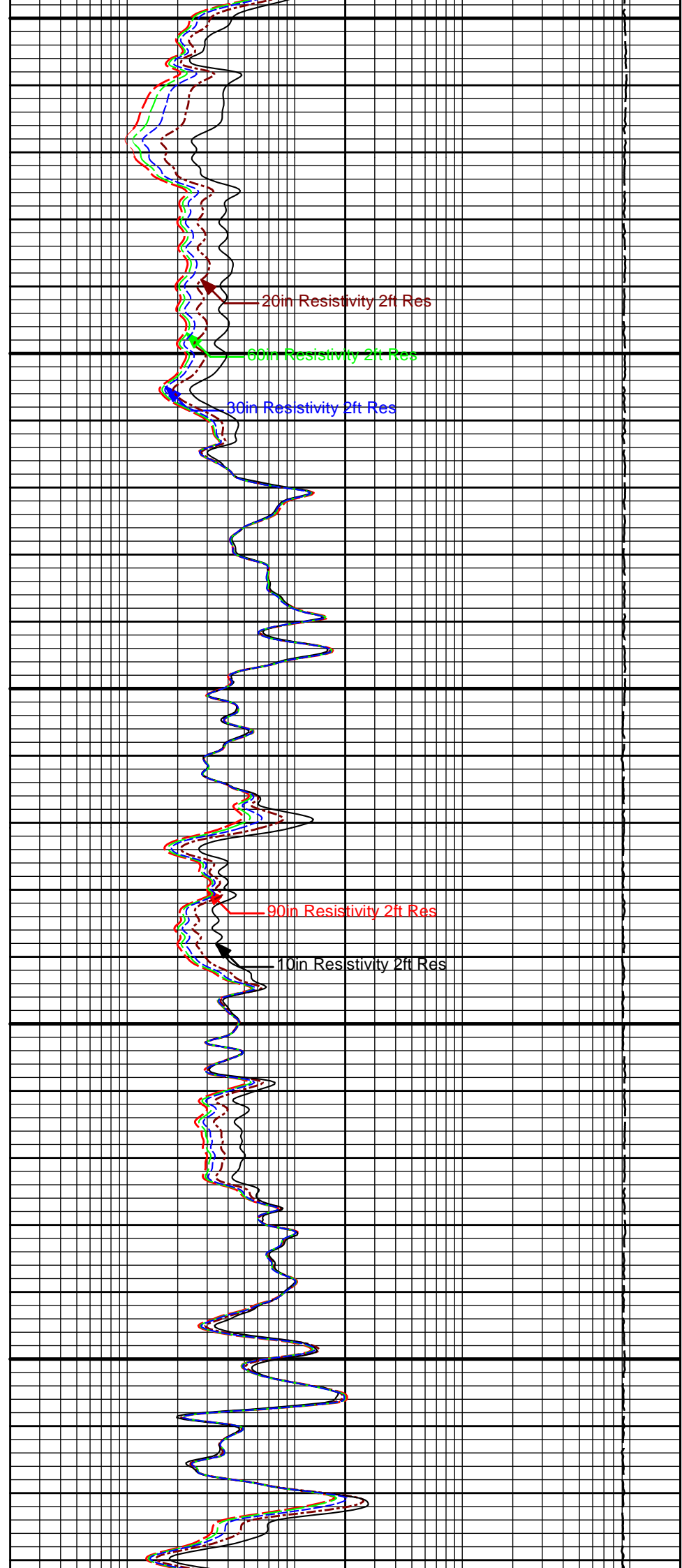
90in Resistivity 2ft Res

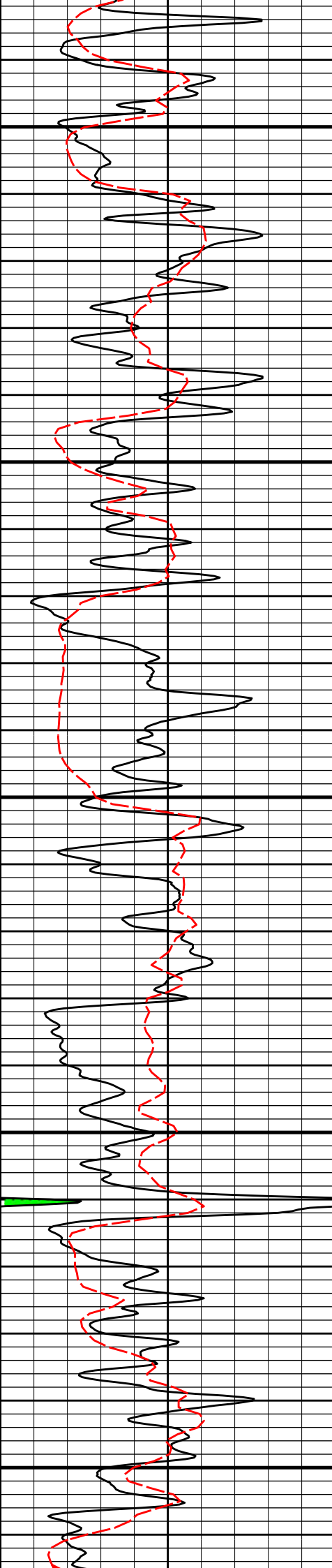
10in Resistivity 2ft Res



2800

2900

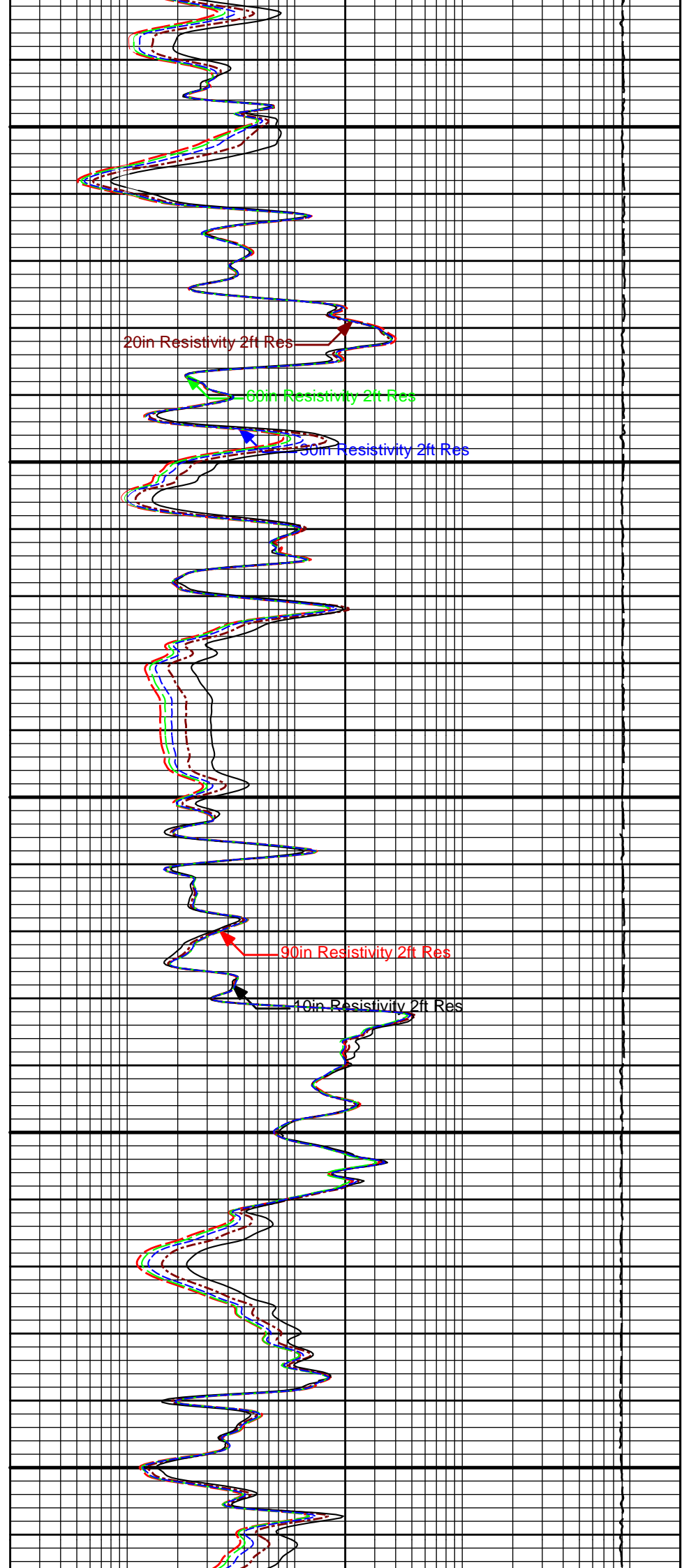




3000

3100

3200



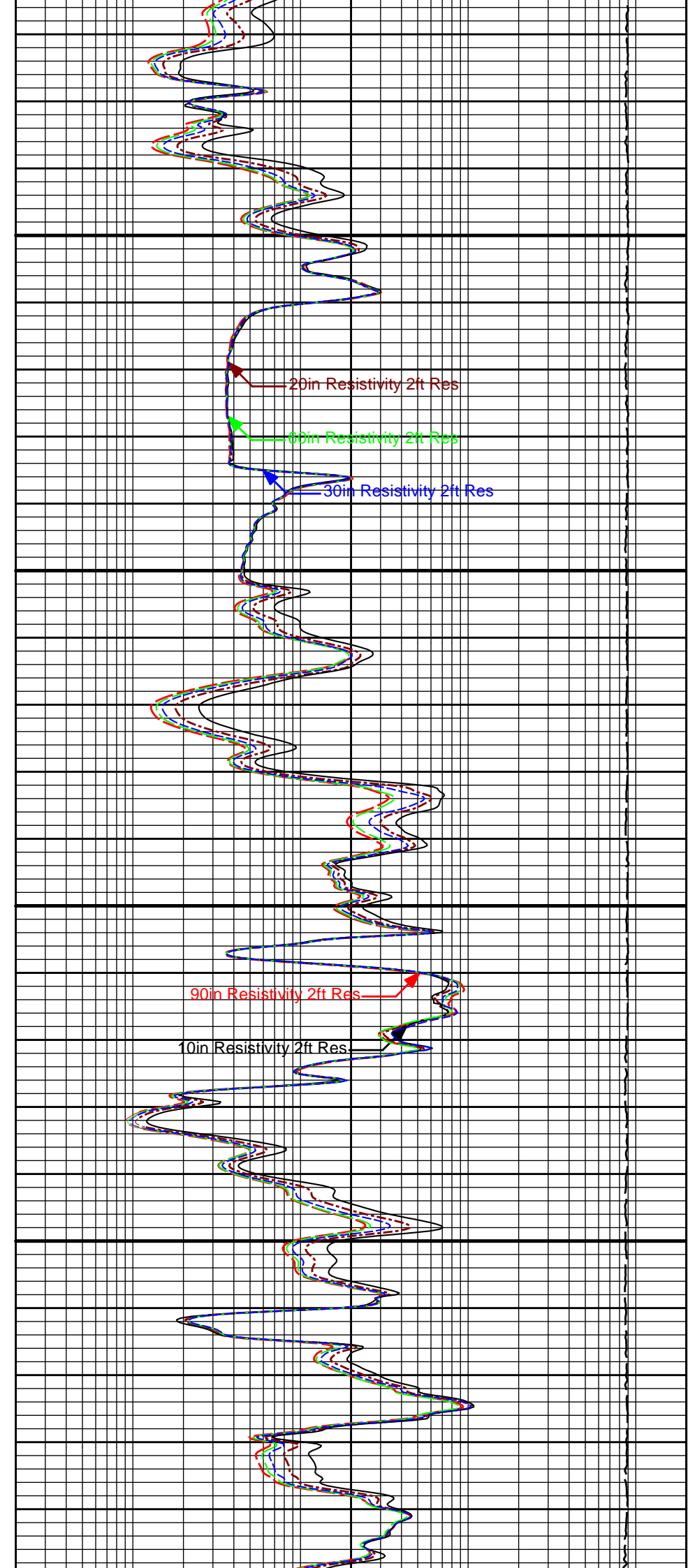
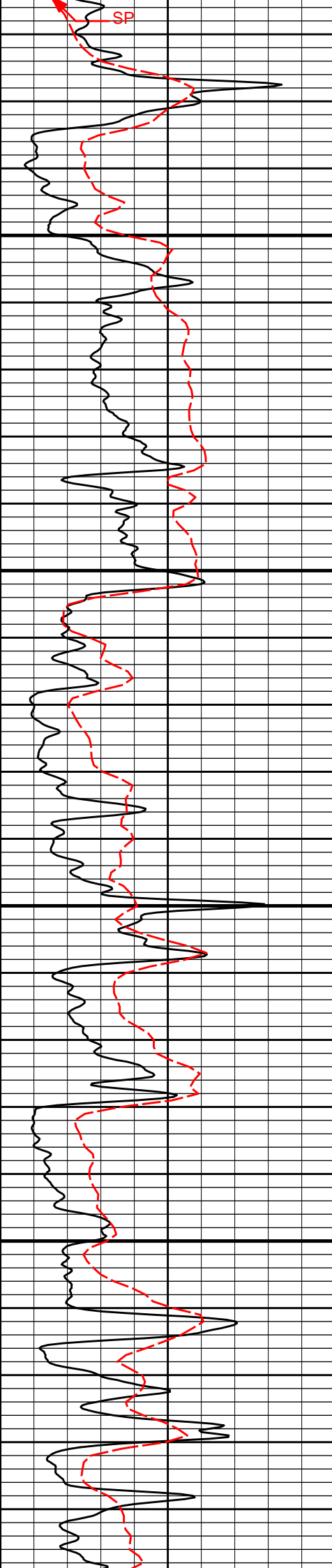
20in Resistivity 2ft Res

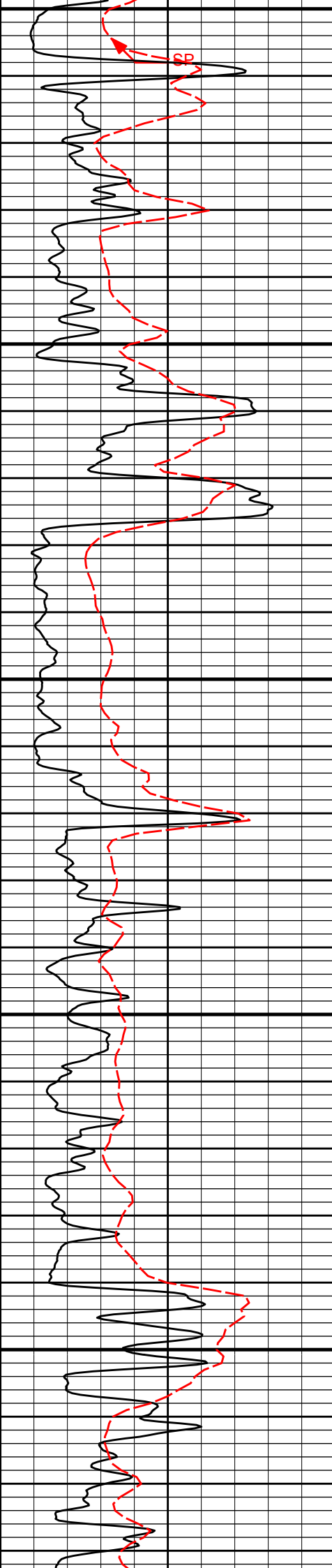
60in Resistivity 2ft Res

30in Resistivity 2ft Res

90in Resistivity 2ft Res

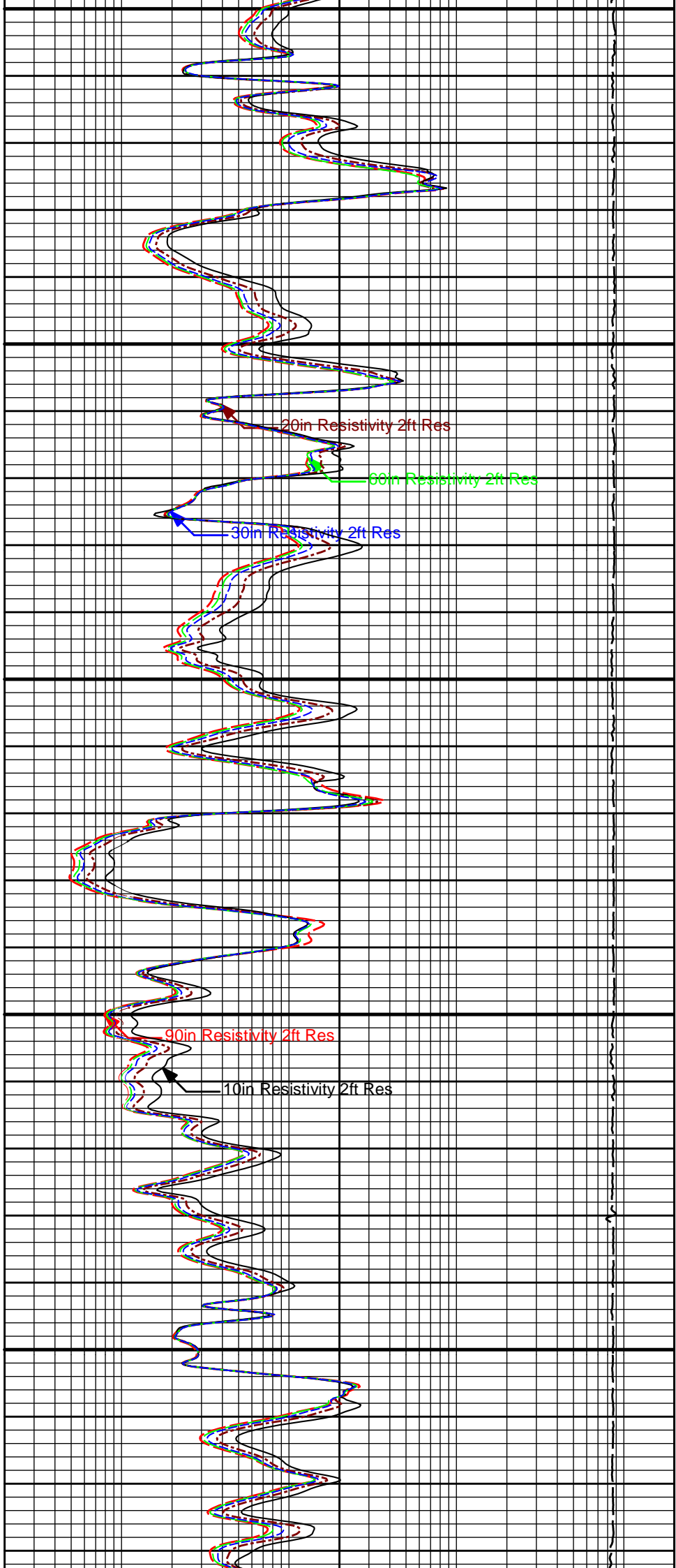
40in Resistivity 2ft Res





3500

3600



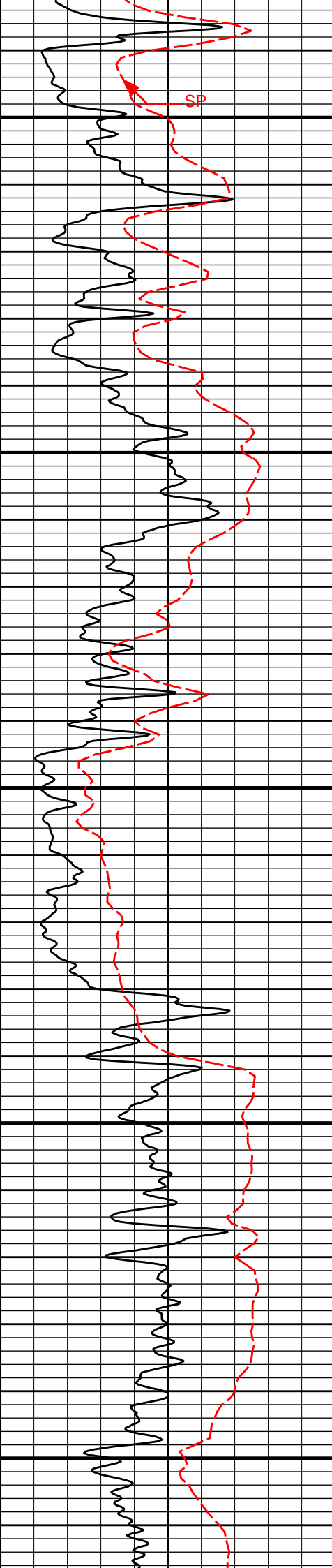
20in Resistivity 2ft Res

60in Resistivity 2ft Res

30in Resistivity 2ft Res

90in Resistivity 2ft Res

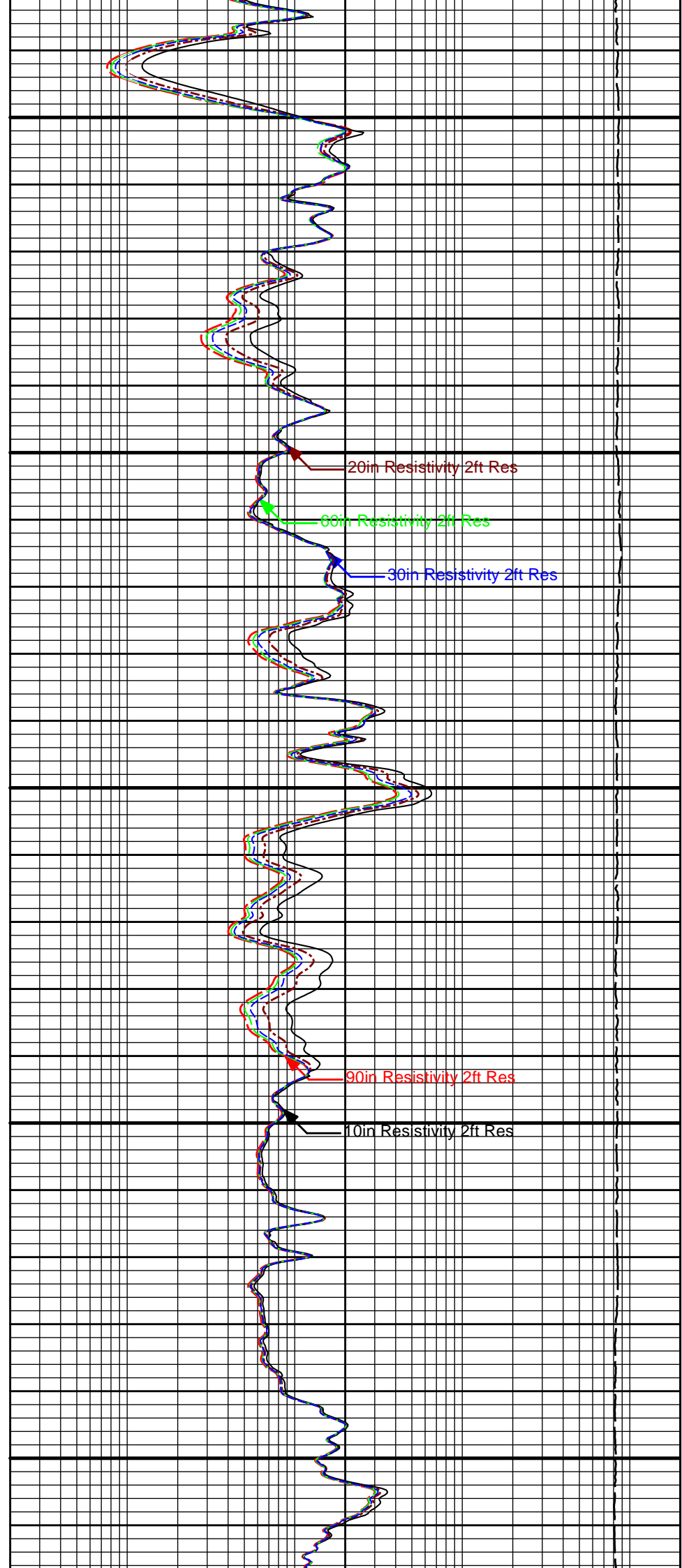
10in Resistivity 2ft Res

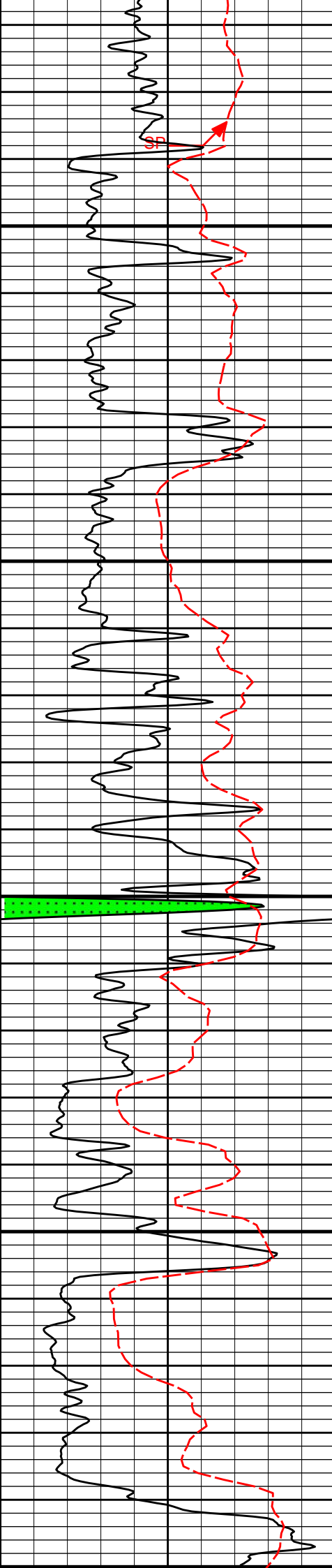


3700

3800

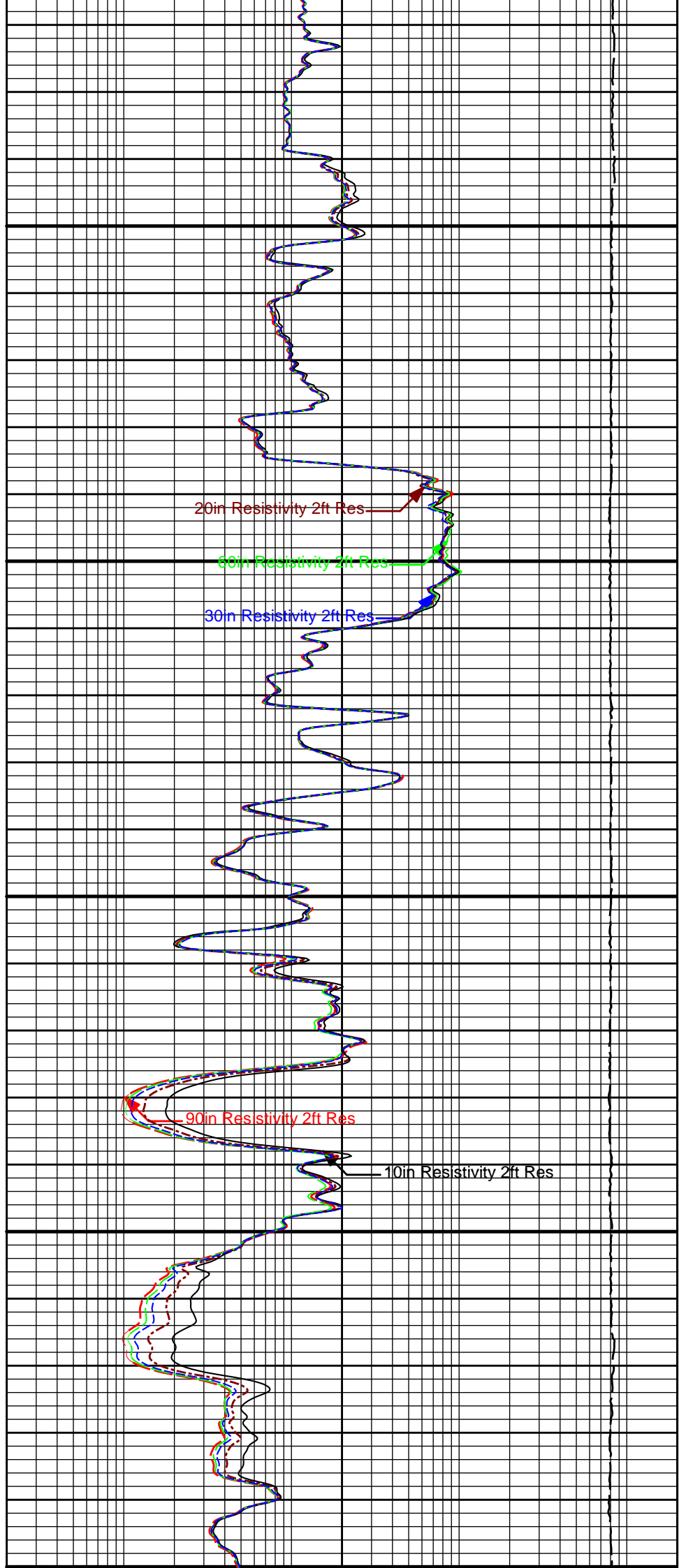
3900

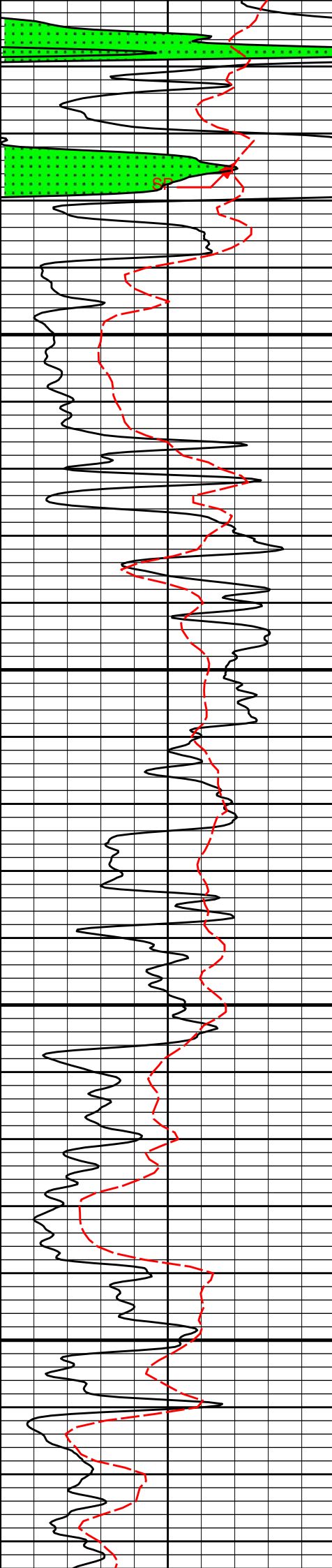




4000

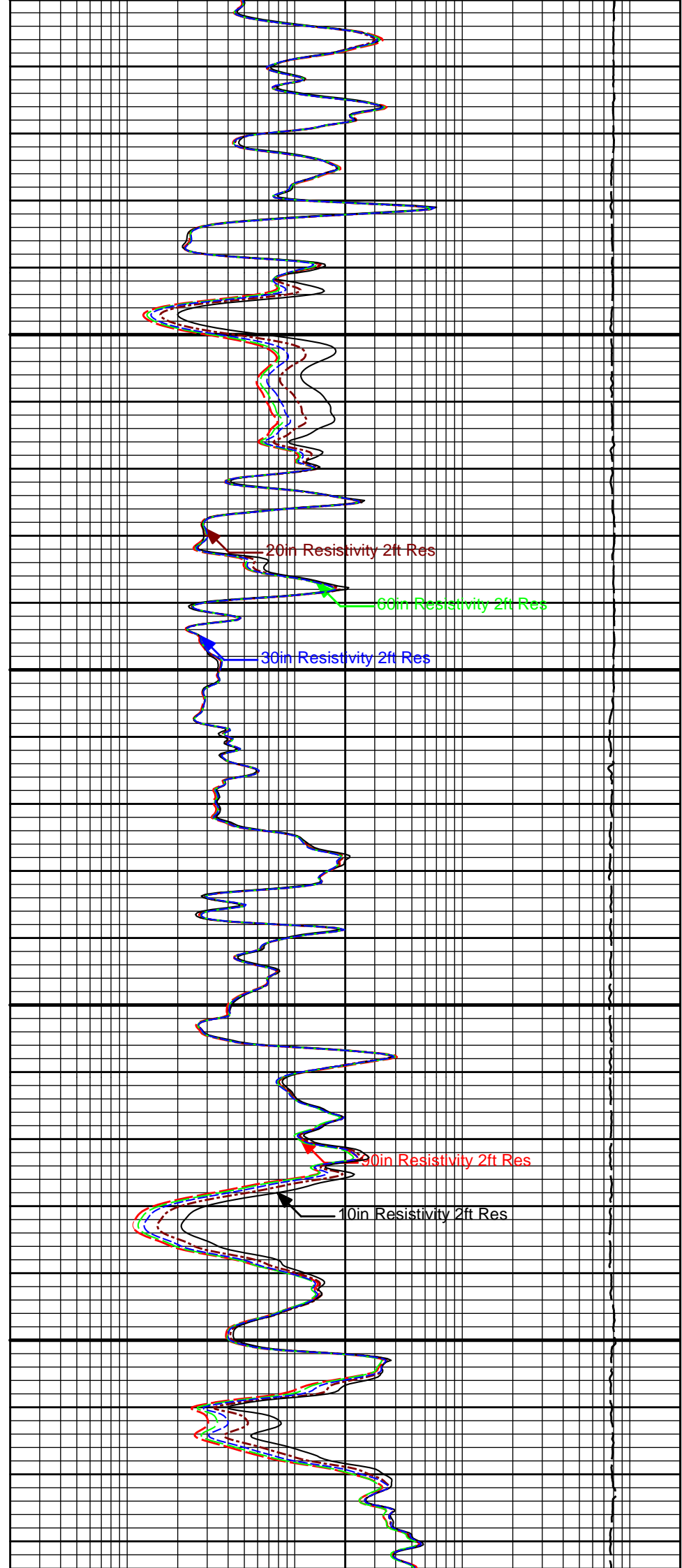
4100





4200

4300



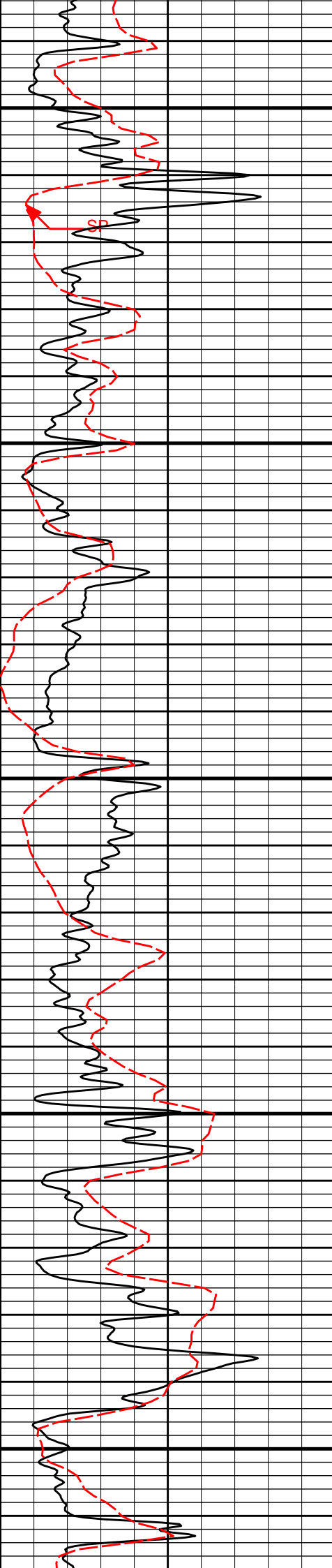
20in Resistivity 2ft Res

60in Resistivity 2ft Res

30in Resistivity 2ft Res

20in Resistivity 2ft Res

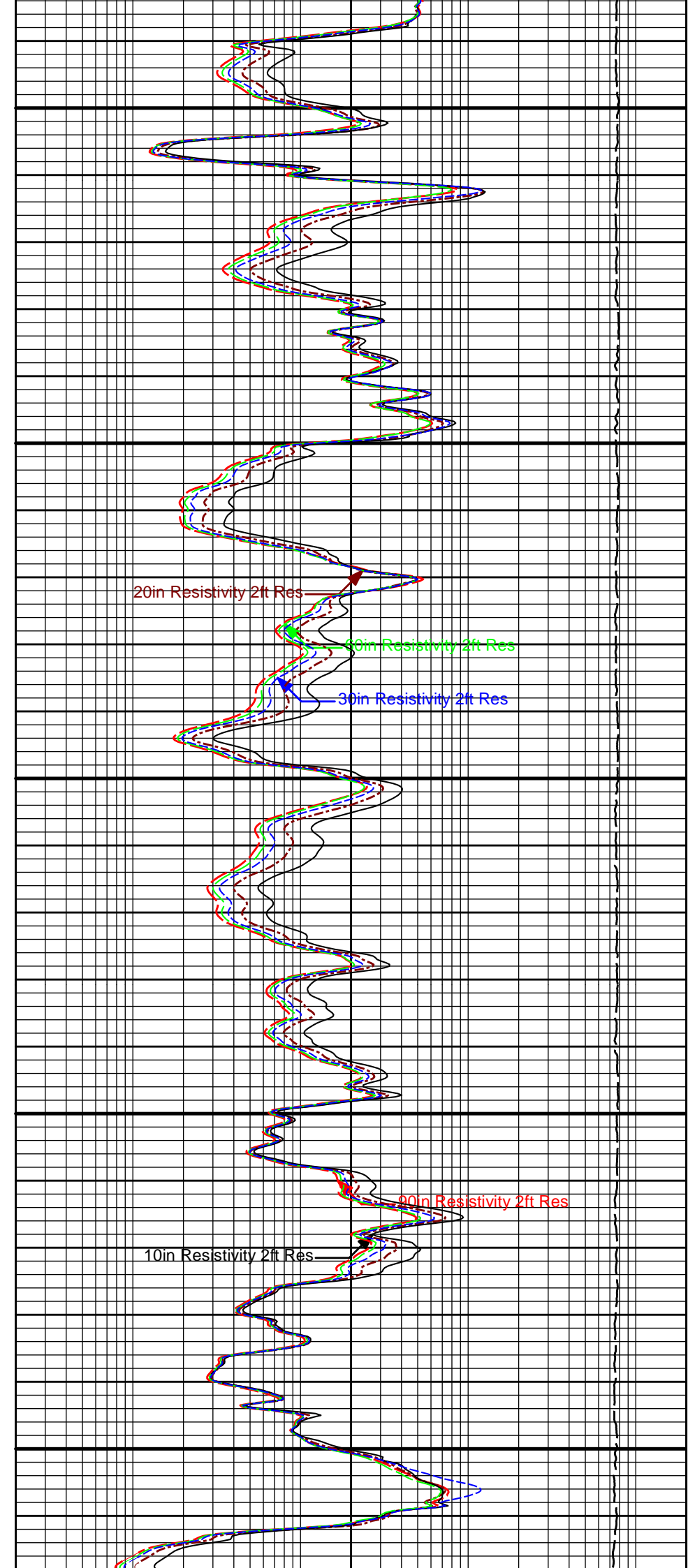
10in Resistivity 2ft Res



4400

4500

4600



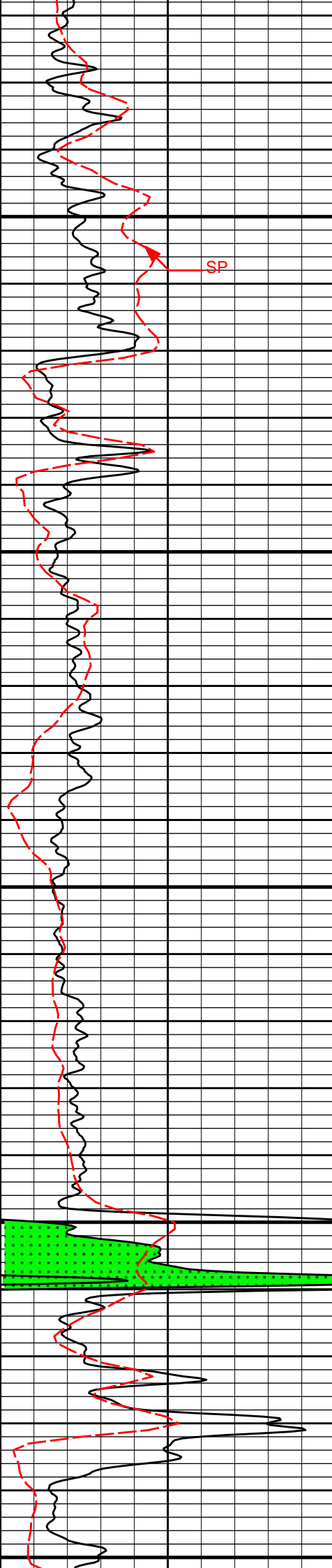
20in Resistivity 2ft Res

30in Resistivity 2ft Res

30in Resistivity 2ft Res

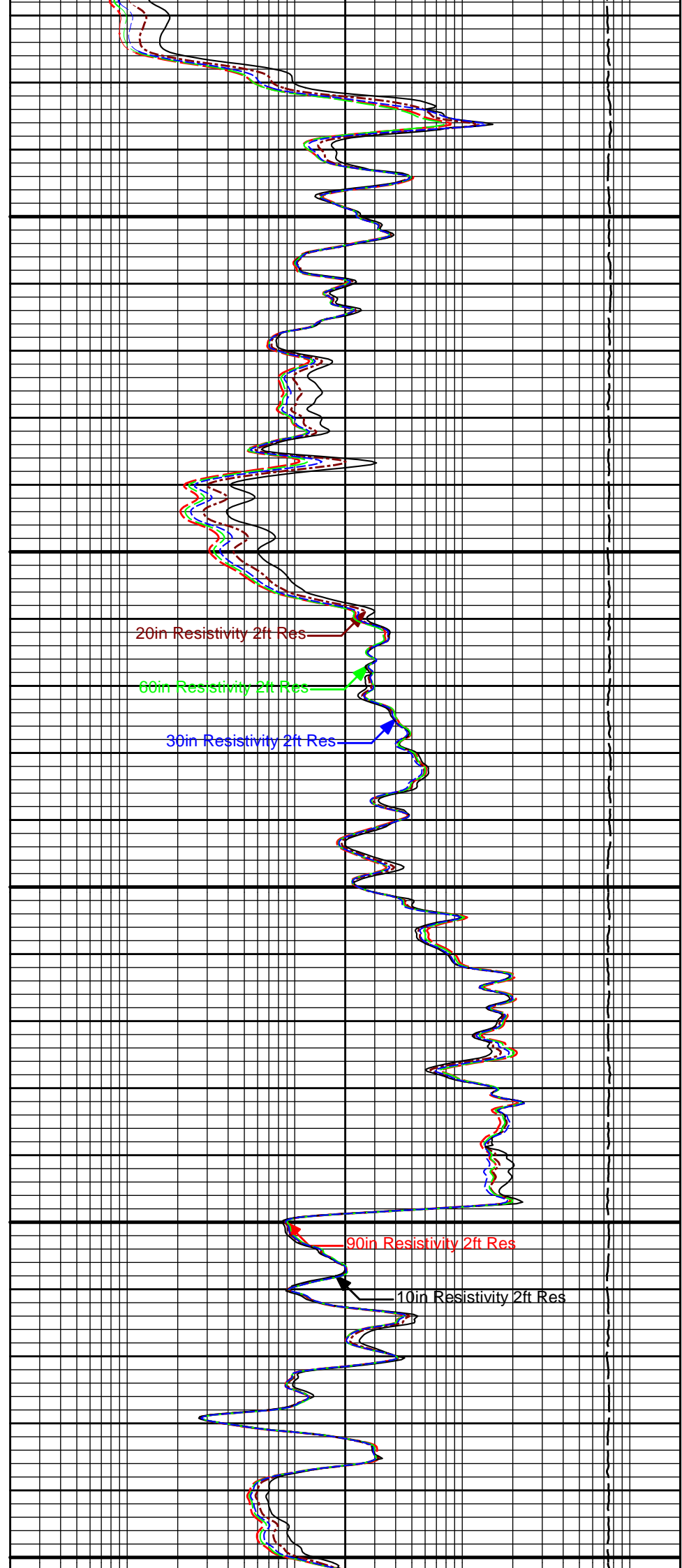
90in Resistivity 2ft Res

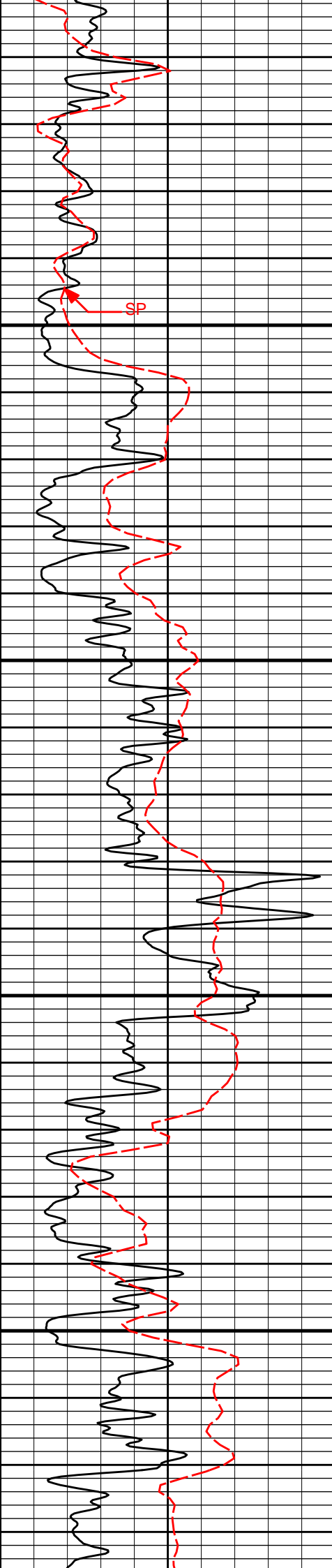
10in Resistivity 2ft Res



4700

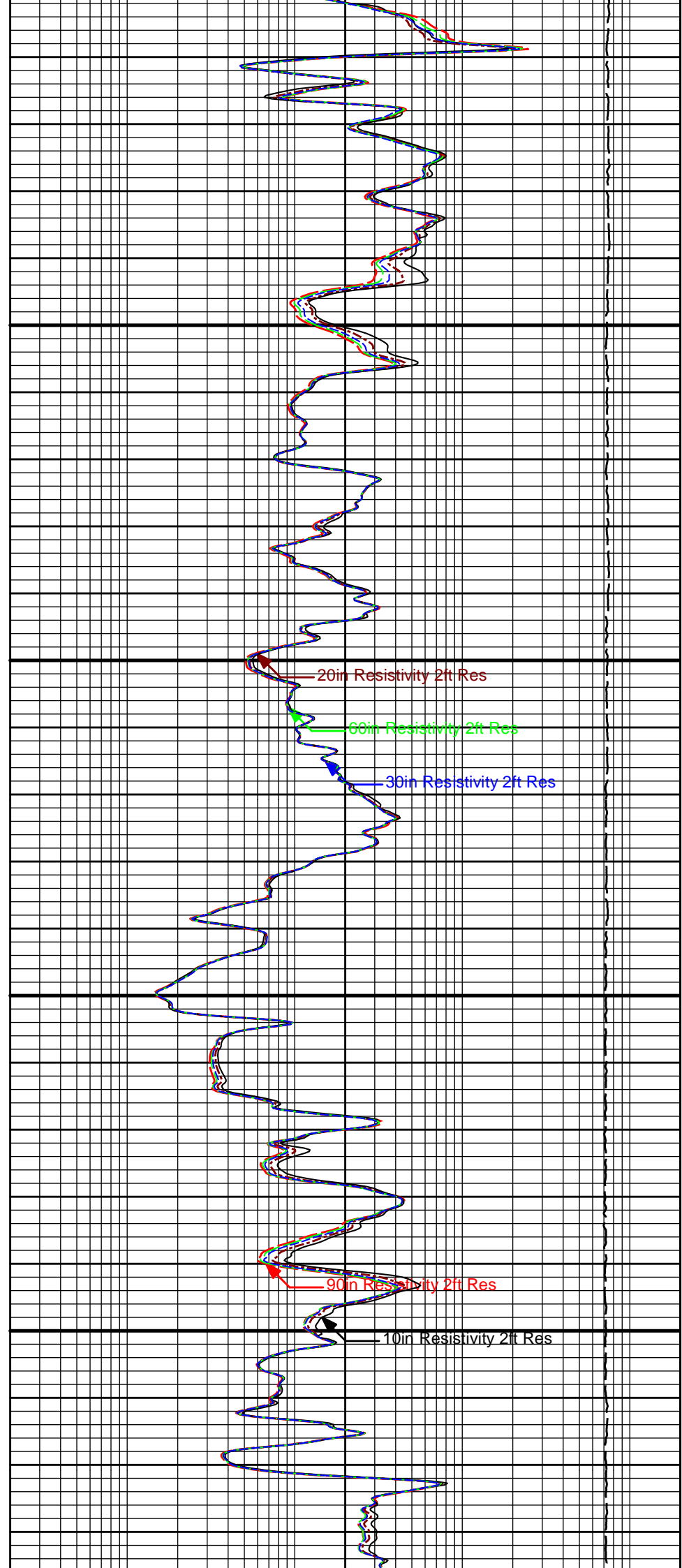
4800

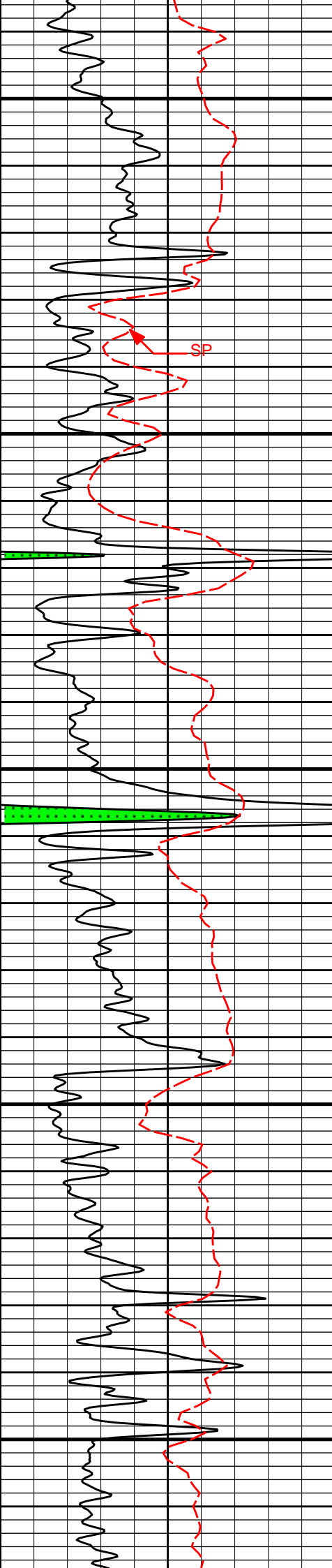




4900

5000

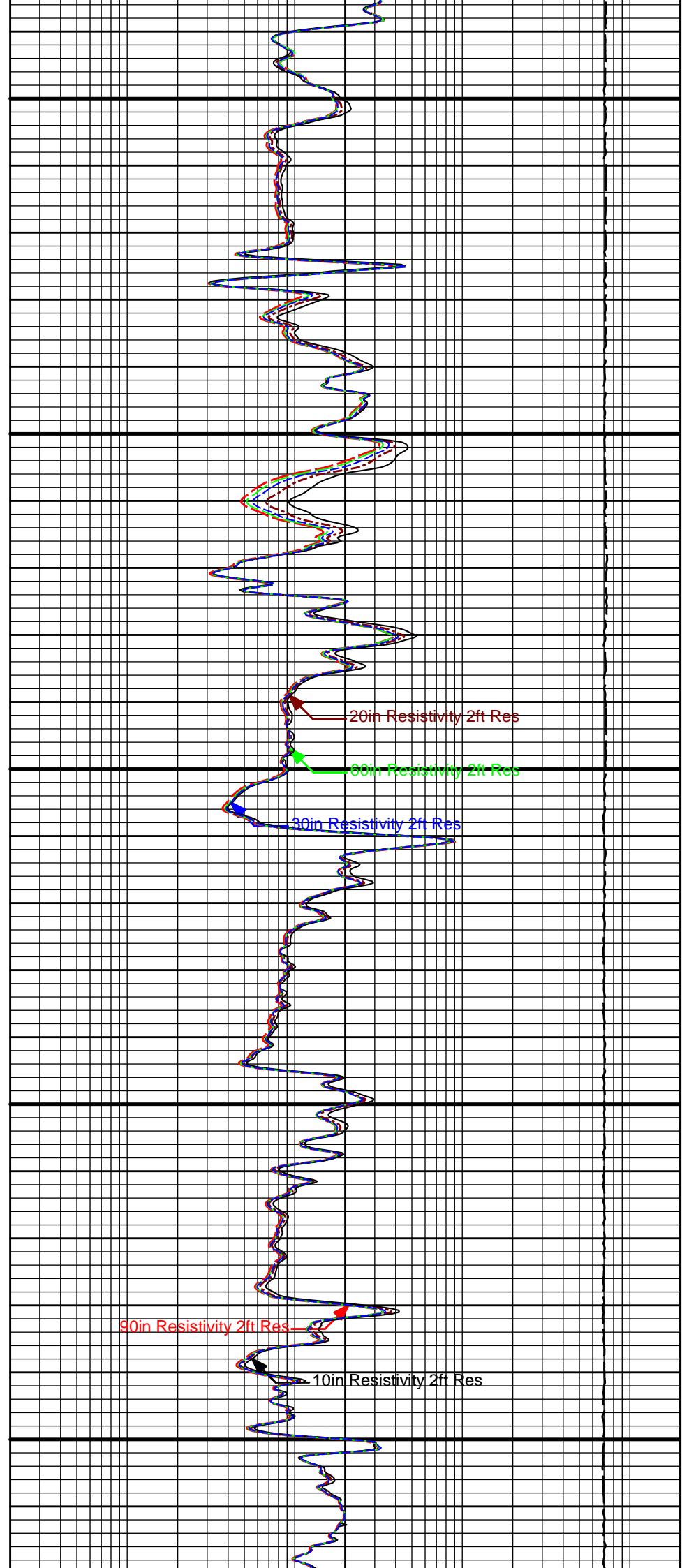




5100

5200

5300



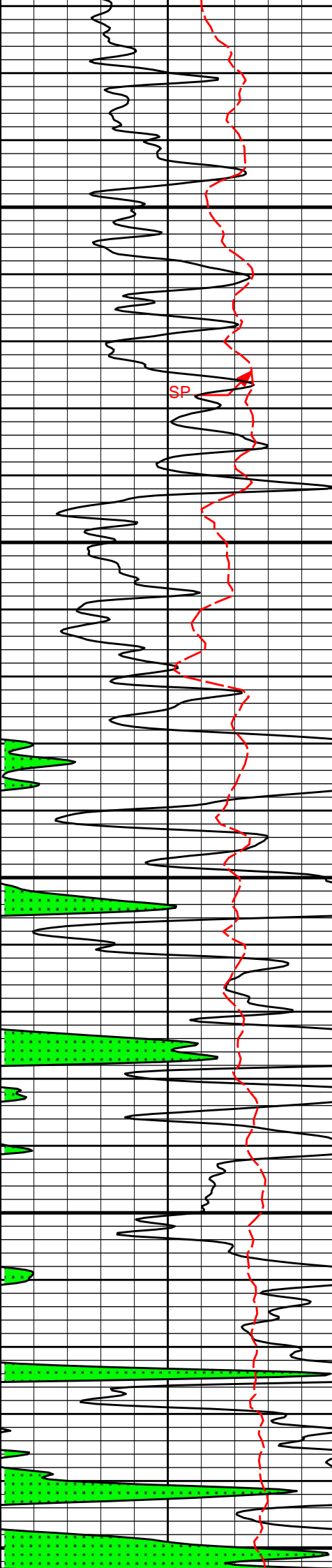
20in Resistivity 2ft Res

60in Resistivity 2ft Res

30in Resistivity 2ft Res

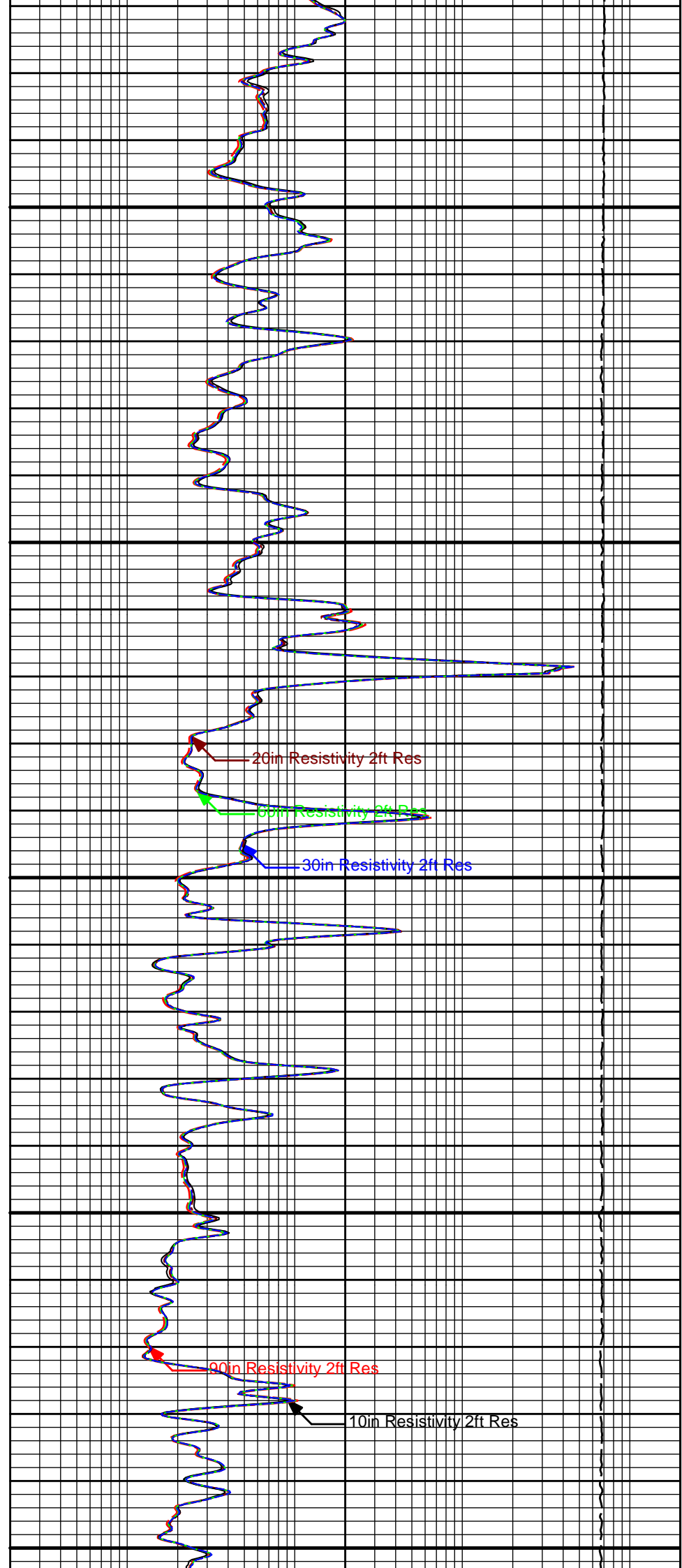
90in Resistivity 2ft Res

10in Resistivity 2ft Res



5400

5500



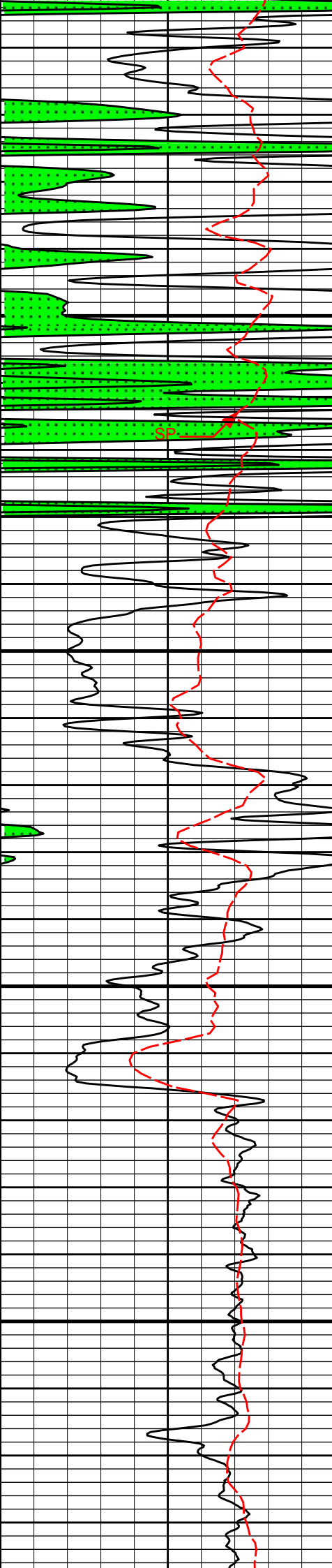
20in Resistivity 2ft Res

80in Resistivity 2ft Res

30in Resistivity 2ft Res

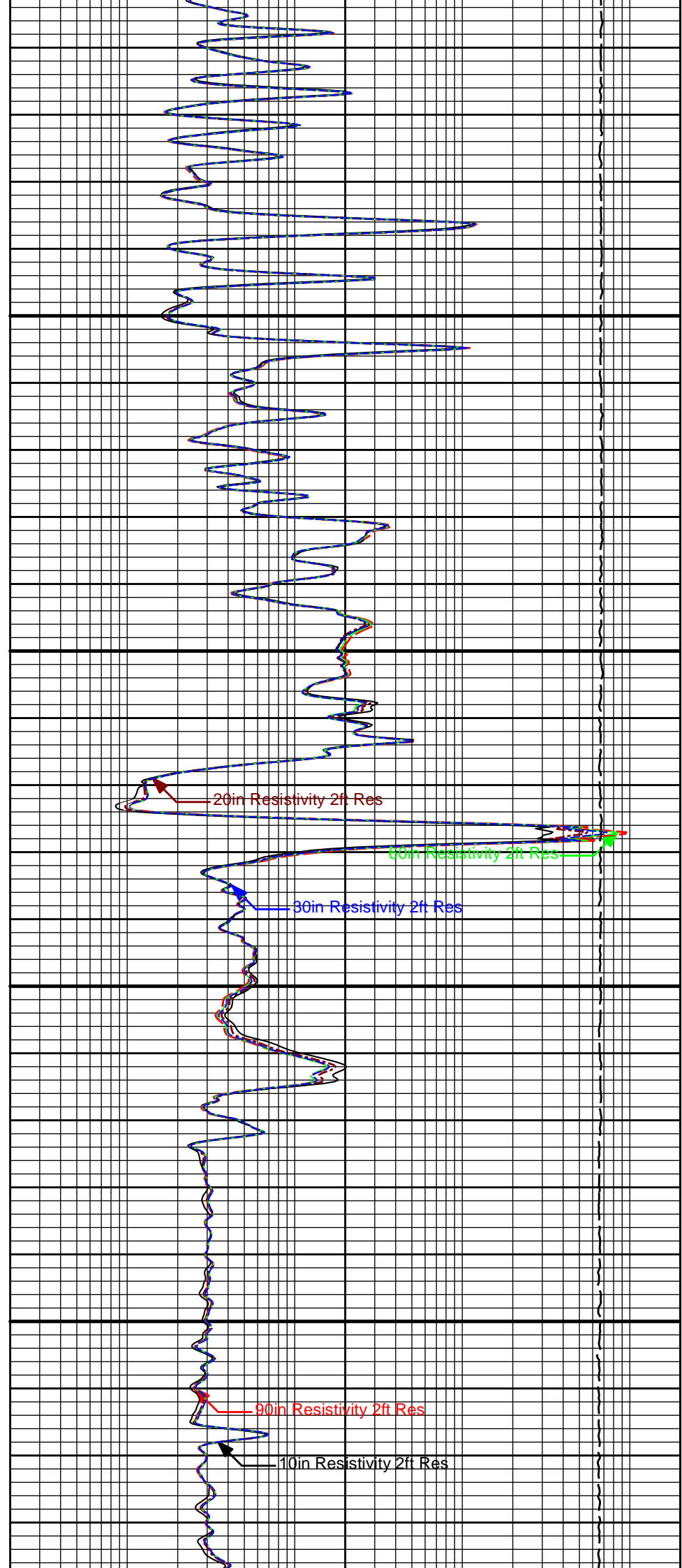
80in Resistivity 2ft Res

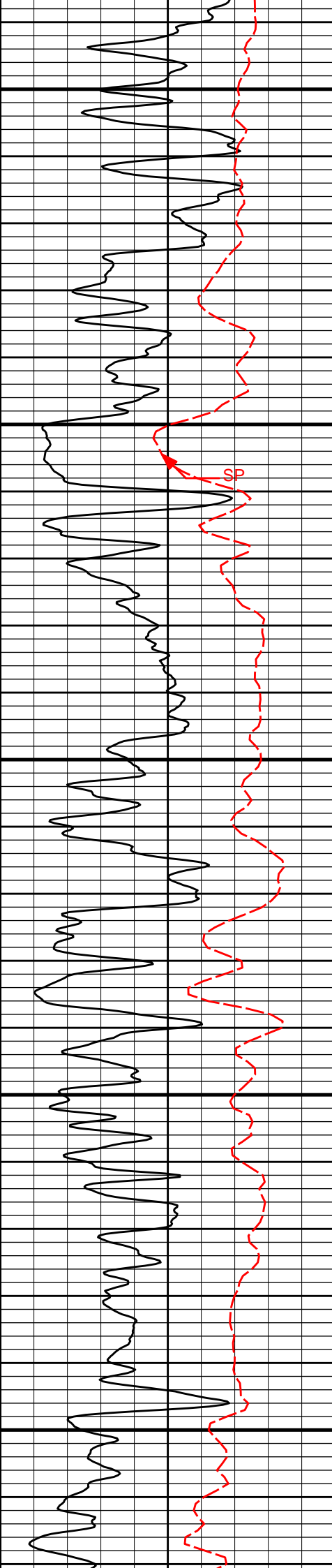
10in Resistivity 2ft Res



5600

5700

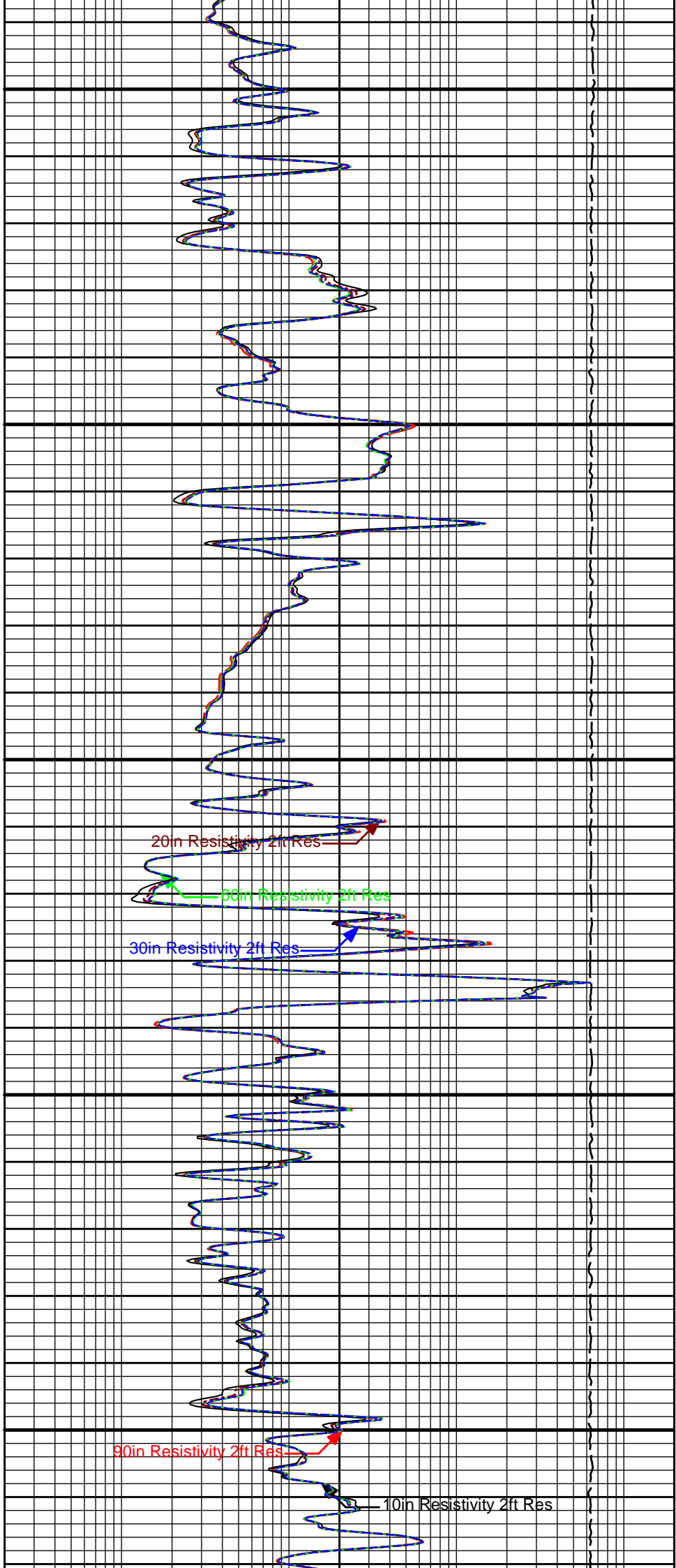




5800

5900

6000



20in Resistivity 2ft Res

30in Resistivity 2ft Res

30in Resistivity 2ft Res

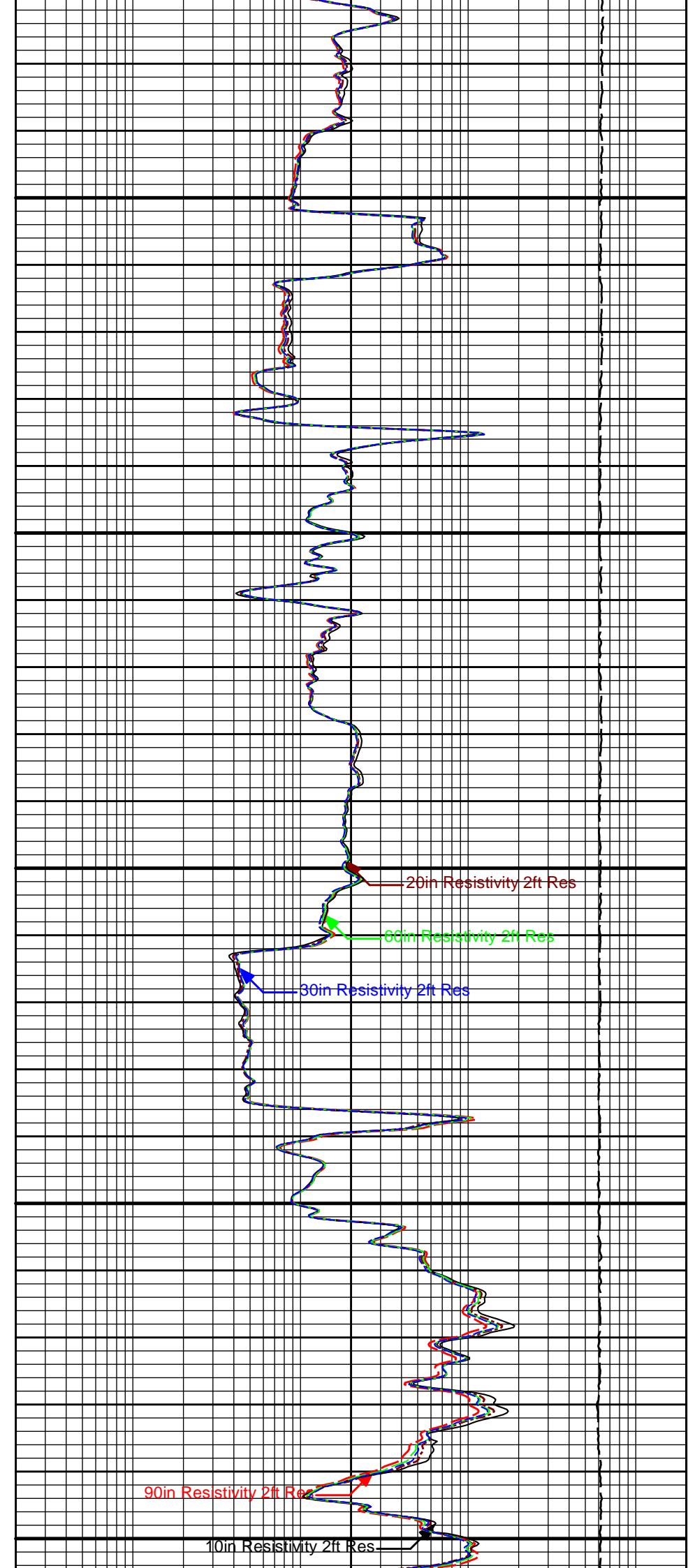
90in Resistivity 2ft Res

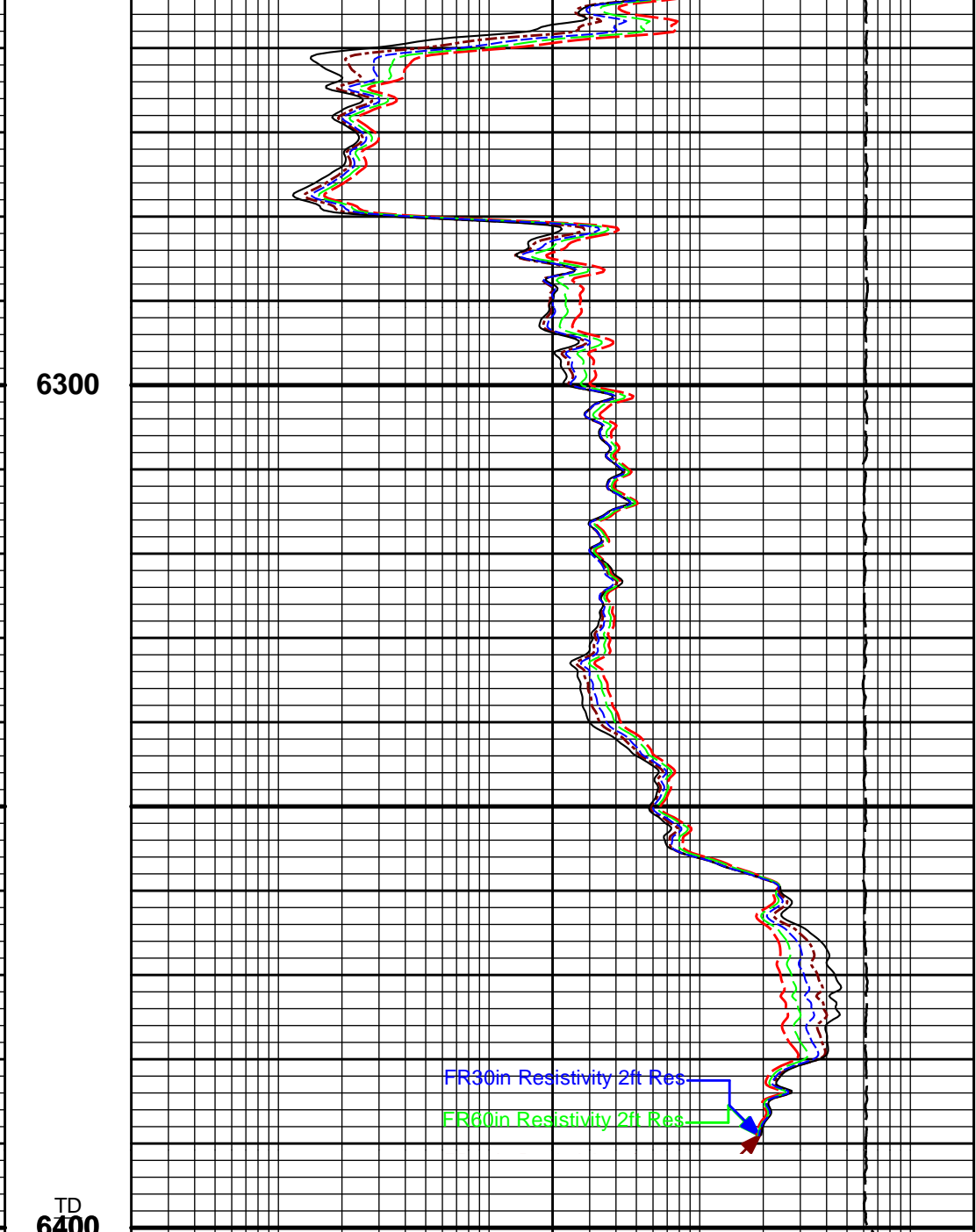
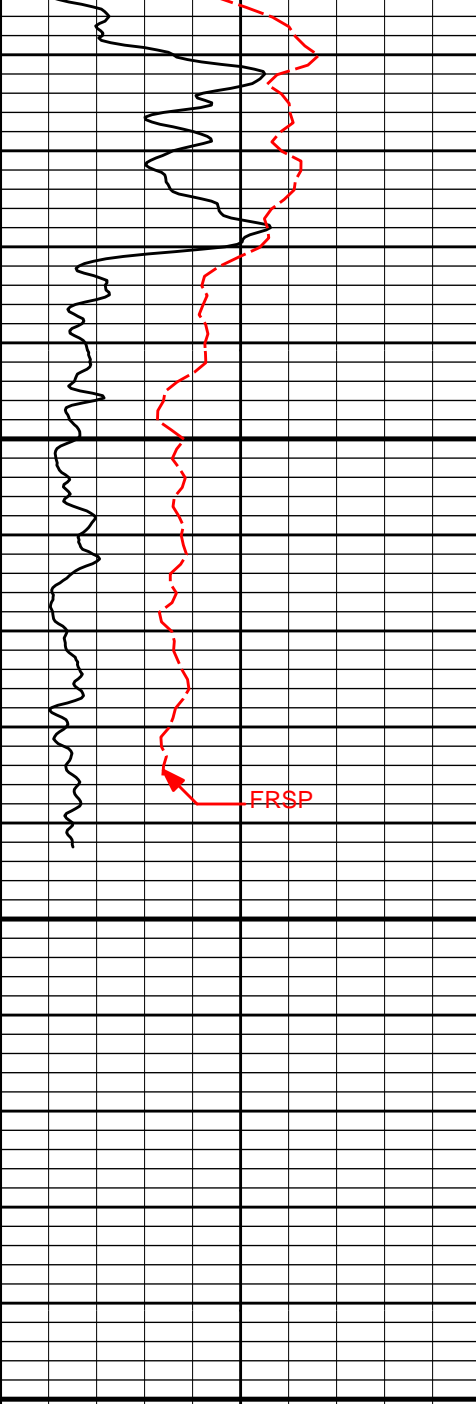
10in Resistivity 2ft Res



6100

6200





0	Gamma API	150
	api	

15K	Tension	0
	pounds	

	SP	
	- 20 +	

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: 01-May-19 05:48:07
 Plot Range: 1550 ft to 6402 ft
 Data: MERIT_EAST-FORK\Well Based\DAQ-0001-003\
 Plot File: \\-LOCAL-MERIT_EAST-FORK\0001 GTET-DSN-SDL-BSAT-ACRTIACRT-5IACRT_5inch_main

5 INCH MAIN LOG

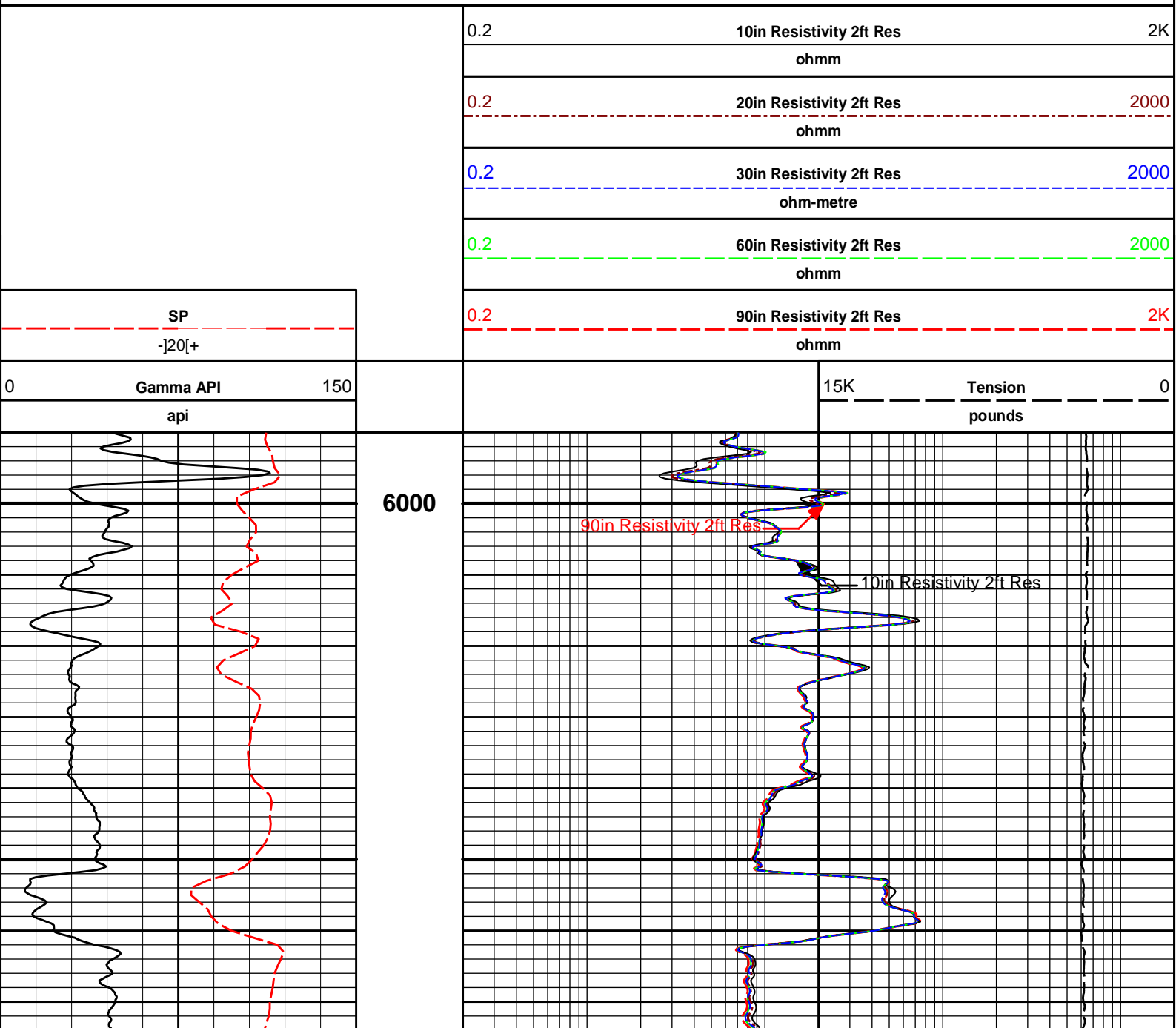
5 INCH MAIN LOG

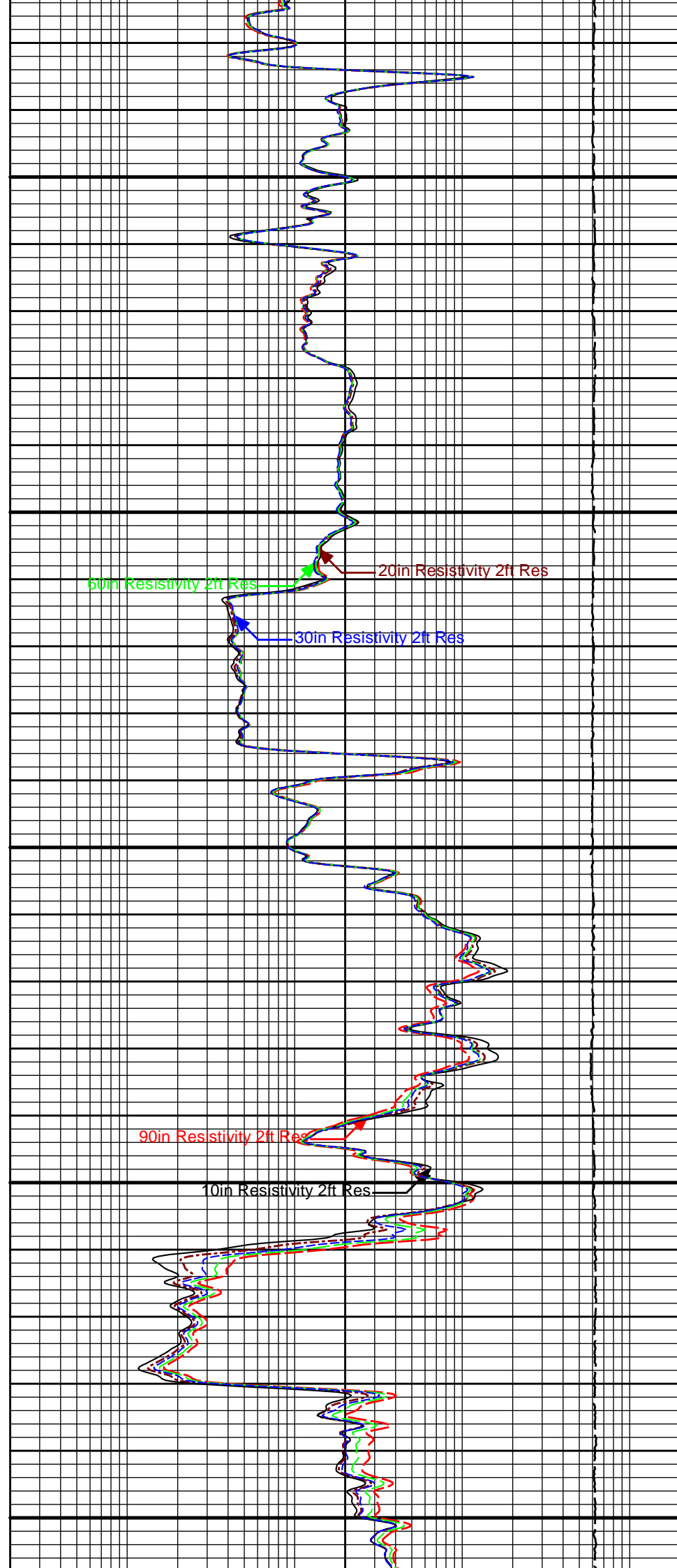
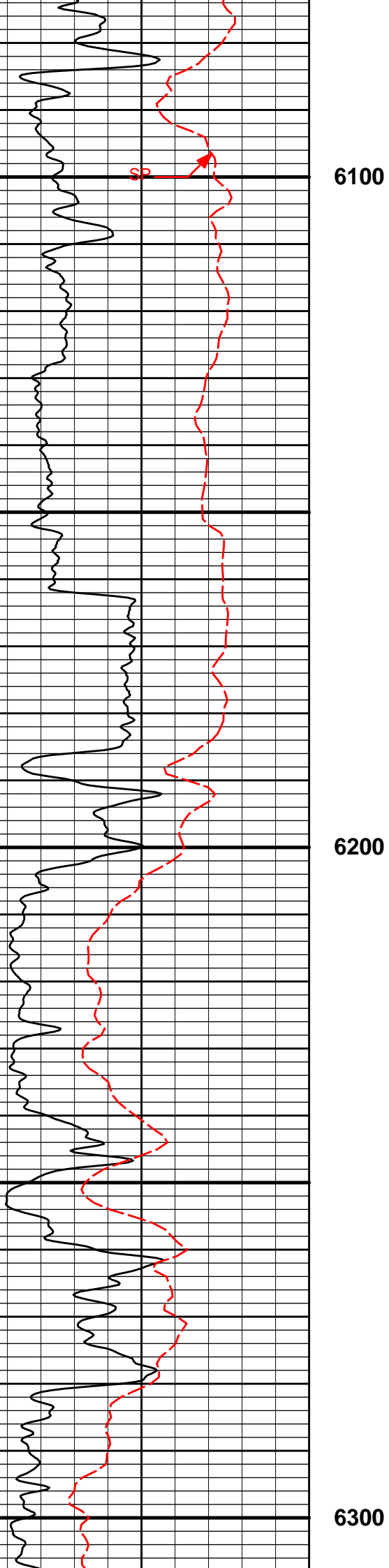
HALLIBURTON

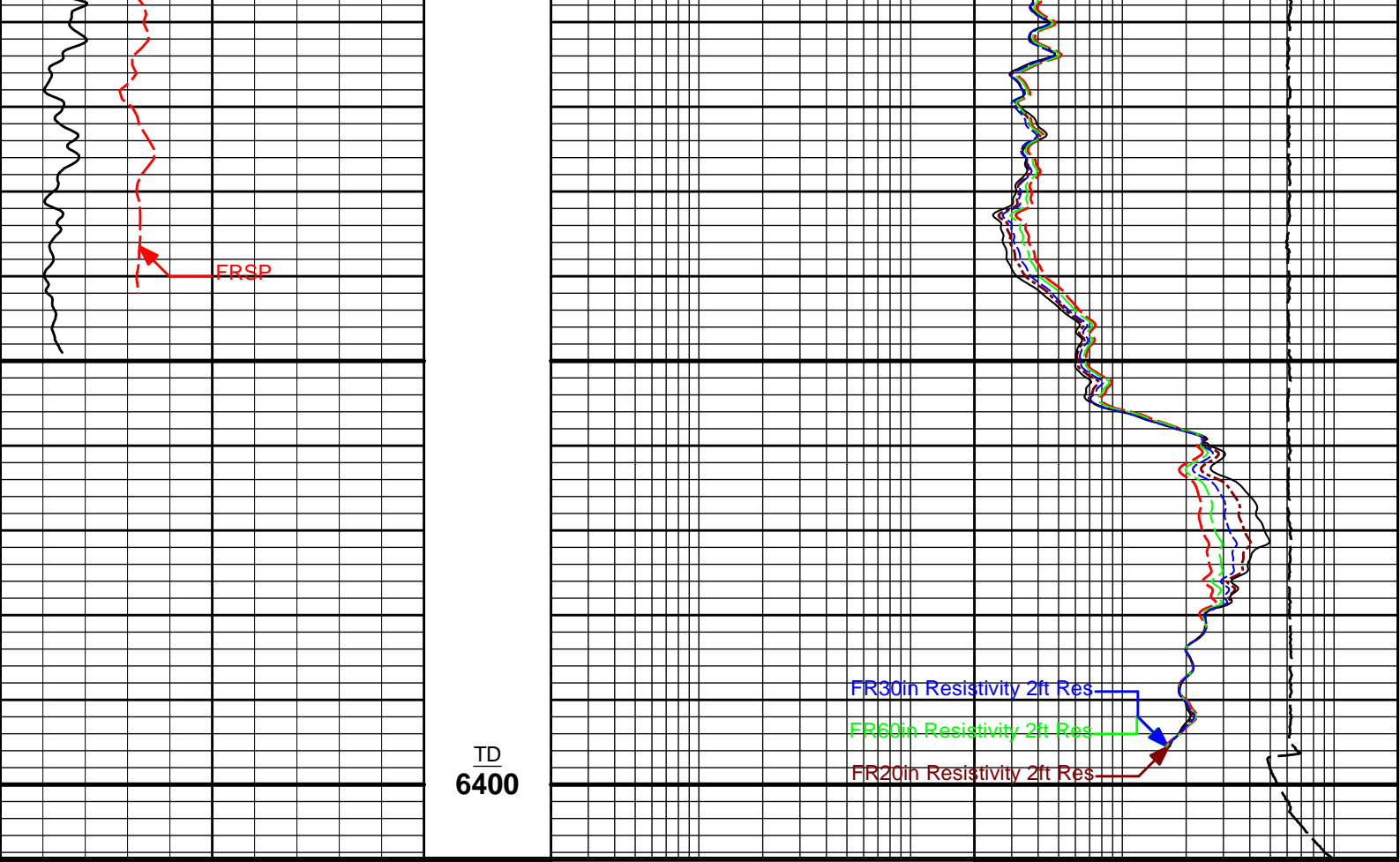
Plot Time: 01-May-19 05:48:07
 Plot Range: 5990 ft to 6408.67 ft
 Data: MERIT_EAST-FORK\Well Based\DAQ-0001-002\
 Plot File: \\-LOCAL-MERIT_EAST-FORK\0001 GTET-DSN-SDL-BSAT-ACRTIACRT-5IACRT_5inch_main

REPEAT SECTION

REPEAT SECTION







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: 01-May-19 05:48:08
 Plot Range: 5990 ft to 6408.67 ft
 Data: MERIT_EAST-FORK\Well Based\DAQ-0001-002\
 Plot File: \\-LOCAL-MERIT_EAST-FORK\0001 GTET-DSN-SDL-BSAT-ACRTIACRT-5IACRT_5inch_main

REPEAT SECTION

REPEAT SECTION

HALLIBURTON

CALIBRATION REPORT

Calibration Tank Water Temperature: 71 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	1.04550	1.04715	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)

Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decp):	0.2353	0.2358	0.0005	+/- 0.0020
Calibrated Ratio:	10.5429	10.5596	0.017	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0694	0.02000 - 0.09000

PASS/FAIL SUMMARY

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

DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name: DSNT - 11055304	Reference Calibration Date: 19-Apr-19 13:31:18
Engineer: WHITLOCK	Calibration Date: 26-Apr-19 10:34:06
Software Version: WL INSITE R6.0.8 (Build 3)	Calibration Version: 1

Logging Source S/N: DSN-436
Snow Block S/N: 12156883

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0694	0.0707	0.0012	+/- 0.0150

PASS/FAIL SUMMARY

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

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - 10960494	Reference Calibration Date: 01-Jan-70 00:00:00
Engineer: WHITLOCK	Calibration Date: 19-Apr-19 15:10:24
Software Version: WL INSITE R6.0.8 (Build 3)	Calibration Version: 1
Host Tool Name: DSNT - 11055304	

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-4116.41	-4116.41	-7000.00 - -1000.00
Pad Gain	0.0003782	0.0003782	0.0002000 - 0.0006000
Arm Offset	-2612.76	-2612.76	-5000.00 - 3000.00
Arm Gain	0.0005131	0.0005131	0.000300 - 0.000700
Arm Power	-0.000004627	-0.000004627	-0.000010000 - 0.000010000

The ring diameter is computed from: $DIAMETER = PAD\ EXTENSION + ARM\ EXTENSION + TOOL\ DIAMETER$
Tool Diameter: 4.50 in

CALIBRATION RINGS

Measurement	Current Reading	Calibrated	Change	Control Limit On
-------------	-----------------	------------	--------	------------------

Measurement	(Previous Coeff.)	(New Coeff.)	Change	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
RING DIAMETER:				
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 - 10960494 **Reference Calibration Date:** 19-Apr-19 15:10:24
Engineer: WHITLOCK **Calibration Date:** 19-Apr-19 15:12:12
Software Version: WL INSITE R6.0.8 (Build 3) **Calibration Version:** 1

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.75	0.00	+/- 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 Sonde - 11830728 **Reference Calibration Date:** 31-Oct-18 14:22:50
Engineer: WHITLOCK **Calibration Date:** 27-Mar-19 11:06:32
Software Version: WL INSITE R6.0.2 (Build 8) **Calibration Version:** 1
Host Tool Name: ACRt Instrument - 11830684

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0408	1.05	0.95	1.0181	1.05	0.95	1.0095	1.05
A2 (50")	0.95	1.0367	1.05	0.95	1.0155	1.05	0.95	1.0105	1.05
A3 (29")	0.95	1.0317	1.05	0.95	1.0098	1.05	0.95	1.0024	1.05
A4 (17")	0.95	1.0385	1.05	0.95	1.0148	1.05	0.95	1.0094	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0181	1.05	0.95	1.0119	1.05
A6 (6")	N/A	N/A	N/A	0.95	1.0267	1.05	0.95	1.0201	1.05

SONDE OFFSET

Subarray	R12KHz	R36KHz	R72KHz
	(mmho/m)	(mmho/m)	(mmho/m)
A1 (80")	-0.236	-5.186	-5.852
A2 (50")	0.946	-3.552	-5.481
A3 (29")	-12.619	-4.085	-3.872
A4 (17")	-94.869	-29.774	-24.286
A5 (10")	N/A	-74.930	-36.896
A6 (6")	N/A	293.687	156.113

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	1.81	2.0				
72K	1.0	1.08	2.0				

PASS/FAIL SUMMARY

GAIN RANGE CHK PASS
 SONDE OFFSET CHK PASS

TOOL OK TO LOG

QUALITY CHECK SHOP CALIBRATION

Tool Name: ACRt Sonde - 11830728 **Reference Calibration Date:** 27-Mar-19 11:08:08
Engineer: WHITLOCK **Calibration Date:** 27-Mar-19 11:09:33
Software Version: WL INSITE R6.0.2 (Build 8) **Calibration Version:** 1
Host Tool Name: ACRt Instrument - 11830684

STANDARD DEVIATIONS

	R12KHz			R36KHz			R72KHz		
	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail
A1 (80")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A2 (50")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A3 (29")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A4 (17")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A5 (10")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A6 (6")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass

AVERAGES

	R12KHz			R36KHz			R72KHz		
	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail
A1 (80")	0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.006	> -0.500	Pass
A2 (50")	0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.005	> -0.500	Pass
A3 (29")	-0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.003	> -0.500	Pass
A4 (17")	-0.002	> -0.500	Pass	-0.007	> -0.500	Pass	-0.024	> -0.500	Pass
A5 (10")	-0.010	> -0.500	Pass	-0.017	> -0.500	Pass	-0.036	> -0.500	Pass
A6 (6")	0.014	< 0.500	Pass	0.063	< 0.500	Pass	0.138	< 0.500	Pass

GAIN TOLERANCE

R12KHz

	Measured (mmho/m)	Last Month (mmho/m)	Difference (mmho/m)	Tolerance (mmho/m)	Pass/Fail
A1 (80")	-214207680.000	-214179520.000	28160.000	10708976.000	Pass
A2 (50")	-206708368.000	-206673776.000	34592.000	10333688.800	Pass
A3 (29")	-201738432.000	-201708688.000	29744.000	10085434.400	Pass
A4 (17")	-201131136.000	-201103920.000	27216.000	10055196.000	Pass
A5 (10")	-201166688.000	-201139392.000	27296.000	10056969.600	Pass
A6 (6")	-200820928.000	-200790224.000	30704.000	10039511.200	Pass

R36KHz

	Measured (mmho/m)	Last Month (mmho/m)	Difference (mmho/m)	Tolerance (mmho/m)	Pass/Fail
A1 (80")	49716636.000	49685420.000	31216.000	2484271.000	Pass
A2 (50")	35654644.000	35621340.000	33304.000	1781067.000	Pass
A3 (29")	29652460.000	29621220.000	31240.000	1481061.000	Pass
A4 (17")	29377682.000	29345894.000	31788.000	1467294.700	Pass

A4 (17")	29377882.000	29343894.000	31788.000	1487294.700	Pass
A5 (10")	28976940.000	28946928.000	30012.000	1447346.400	Pass
A6 (6")	27667190.000	27635410.000	31780.000	1381770.500	Pass

R72KHz

	Measured (mmho/m)	Last Month (mmho/m)	Difference (mmho/m)	Tolerance (mmho/m)	Pass/Fail
A1 (80")	-93174168.000	-93165432.000	8736.000	4658271.600	Pass
A2 (50")	-90798624.000	-90786864.000	11760.000	4539343.200	Pass
A3 (29")	-88522848.000	-88513168.000	9680.000	4425658.400	Pass
A4 (17")	-88712168.000	-88700376.000	11792.000	4435018.800	Pass
A5 (10")	-87283416.000	-87271512.000	11904.000	4363575.600	Pass
A6 (6")	-88347128.000	-88335576.000	11552.000	4416778.800	Pass

PASS/FAIL SUMMARY

Std Deviation Verification	Pass
Average Verification	Pass
Gain Tolerance Verification	Pass

MICRO LOG SHOP CALIBRATION

Tool Name: Microlog Pad - 10960494	Reference Calibration Date: 09-Jan-16 16:38:49
Engineer: WHITLOCK	Calibration Date: 19-Apr-19 15:03:30
Software Version: WL INSITE R6.0.8 (Build 3)	Calibration Version: 1
Host Tool Name: DSNT - 11055304	

CALIBRATION COEFFICIENT SUMMARY

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	0.00	-0.11	0.00	-0.01	ohmm
Calibration Point #1	0.11	0.00	0.01	0.00	ohmm
Calibration Point #2	20.61	20.00	23.36	20.00	ohmm
Internal Reference	20.50	19.89	23.34	19.98	ohmm

Measurement	Micro Log Normal	Micro Log Lateral	Units
	Tool Value	Tool Value	
Tool Zero	-1.03	1.14	V
Calibration Point #1	27.13	4.08	V
Calibration Point #2	5346.13	6899.88	V
Internal Reference	5316.31	6893.17	V

MICRO LOG FIELD CHECK

Tool Name: Microlog Pad - 10960494	Reference Calibration Date: 19-Apr-19 15:03:30
Engineer: WHITLOCK	Calibration Date: 29-Apr-19 09:51:09
Software Version: WL INSITE R6.0.8 (Build 3)	Calibration Version: 1

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.11	-0.10	-0.01	-0.01	ohmm
Internal Reference	19.89	19.91	19.98	20.00	ohmm

Summary

Signal	Shop	Field	Difference	Tolerance
Microlog Normal	19.89	19.91	-0.02	+/- 0.80
Microlog Lateral	19.98	20.00	-0.02	+/- 0.80

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name: SDLT Pad - 11213308	Reference Calibration Date: 14-Dec-18 11:15:00
Engineer: WHITLOCK	Calibration Date: 20-Feb-19 12:17:03
Software Version: WL INSITE R5.0.0 (Build C)	Calibration Version: 1

Logging Source S/N: 5475GW

Aluminum Block S/N: El Reno Aluminum Block

Density: 2.581g/cc

Pe: 3.170

Magnesium Block S/N: El Reno Magnesium Block

Density: 1.687g/cc

Pe: 2.594

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9935	0.9902	0.90 - 1.10
Near Dens Gain	0.9891	0.9881	0.90 - 1.10
Near Peak Gain	1.0020	1.0148	0.90 - 1.10
Near Lith Gain	1.0071	1.0175	0.90 - 1.10
Far Bar Gain	1.0015	1.0048	0.90 - 1.10
Far Dens Gain	0.9919	0.9938	0.90 - 1.10
Far Peak Gain	0.9878	0.9921	0.90 - 1.10
Far Lith Gain	0.9743	0.9808	0.90 - 1.10
<hr/>			
Near Bar Offset	0.1918	0.2246	NONE
Near Dens Offset	0.2308	0.2401	NONE
Near Peak Offset	0.0959	-0.0122	NONE
Near Lith Offset	0.0296	-0.0574	NONE
Far Bar Offset	0.0411	0.0135	NONE
Far Dens Offset	0.1442	0.1314	NONE
Far Peak Offset	0.1660	0.1305	NONE
Far Lith Offset	0.2364	0.1860	NONE
<hr/>			
Near Bar Background	937.48	939.15	700 - 1450
Near Dens Background	311.57	312.43	230 - 480
Near Peak Background	135.23	136.70	100 - 210
Near Lith Background	166.58	166.31	125 - 260
Far Bar Background	479.15	478.16	450 - 900
Far Dens Background	191.75	190.12	175 - 345
Far Peak Background	77.50	76.92	70 - 140
Far Lith Background	79.00	78.81	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.689	1.687	-0.002	+/- 0.015
Pe	2.556	2.551	-0.005	+/- 0.150
ALUMINUM				
Density (g/cc)	2.580	2.581	0.001	+/- 0.01500
Pe	3.107	3.123	0.016	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0000	+/- 0.0110	-0.0004	+/- 0.0140
Magnesium Block	-0.0005	+/- 0.0110	-0.0010	+/- 0.0140
Aluminum Block	-0.0013	+/- 0.0110	0.0004	+/- 0.0140
Resolution	9.27	6.00 - 11.50	9.45	6.00 - 11.50
Internal Verifier(B+D+P+L)	1555	1200 - 2700	824	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

Tool Name: SDLT Pad - 11213308	Reference Calibration Date: 20-Feb-19 12:17:03
Engineer: WHITLOCK	Calibration Date: 29-Apr-19 09:53:55
Software Version: WL INSITE R6.0.8 (Build 3)	Calibration Version: 1

Pad Temperature: 78.8 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1554.595	1544.138	-10.457	15.869
Far (B+D+P+L) cps	824.007	811.331	-12.676	15.826
Near Resolution	9.27	9.15	-0.120	0.50
Far Resolution	9.45	9.35	-0.100	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
Depth Panel-00000032						
Tension Zero	0.00	-----	-----	0.00	-----	lbs
Tension Cal	7830.00	-----	-----	0.00	-----	lbs
RWCH-12345678						
DH Tension Zero	0.00	-----	-----	0.00	-----	lbs
DH Tension Cal	1450.00	-----	-----	0.00	-----	lbs
GTET-11013113						
Gamma Ray Calibrator	225.9	224.2	-----	1.7	+/- 9.00	api
DSNT-11055304						
Snow-Block Porosity	0.0694	0.0707	-----	-0.0013	+/- 0.0150	decp
SDLT-10960494						
Pad Extension	3.75	3.75	-----	0.00	+/-0.10	in
Ring Diameter	8.25	8.25	-----	0.00	+/-0.15	in
ACRt Sonde-11830728						
Mud Cell	0.99	-----	-----	0	-----	ohm-m
Microlog Pad-10960494						
MicroLog Normal	19.89	19.91	-----	-0.02	+/-0.80	ohmm
MicroLog Lateral	19.98	20.00	-----	-0.02	+/-0.80	ohmm
SDLT Pad-11213308						
Near(B+D+P+L)	1554.595	1544.138	-----	10.457	+/-15.869	cps
Far(B+D+P+L)	824.007	811.331	-----	12.676	+/-15.826	cps

Data: MERIT_EAST-FORK\0001 GTET-DSN-SDL-BSAT-ACRT\IDLE

Date: 01-May-19 01:11:43



PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
------------	-----------	----------	-------------	-------	-------

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	9.200	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	1.500	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	6400.00	ft
SHARED	BHT	Bottom Hole Temperature	144.0	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	
SHARED	SOCI	Source of Casing Information	Parameters	
SHARED	MSAL	Water-base mud filtrate salinity	0.00	ppm
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	UCLA	Classic Neutron Parameter utilized?	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	
SDI T Pad	SPVT	SDI T 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	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	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

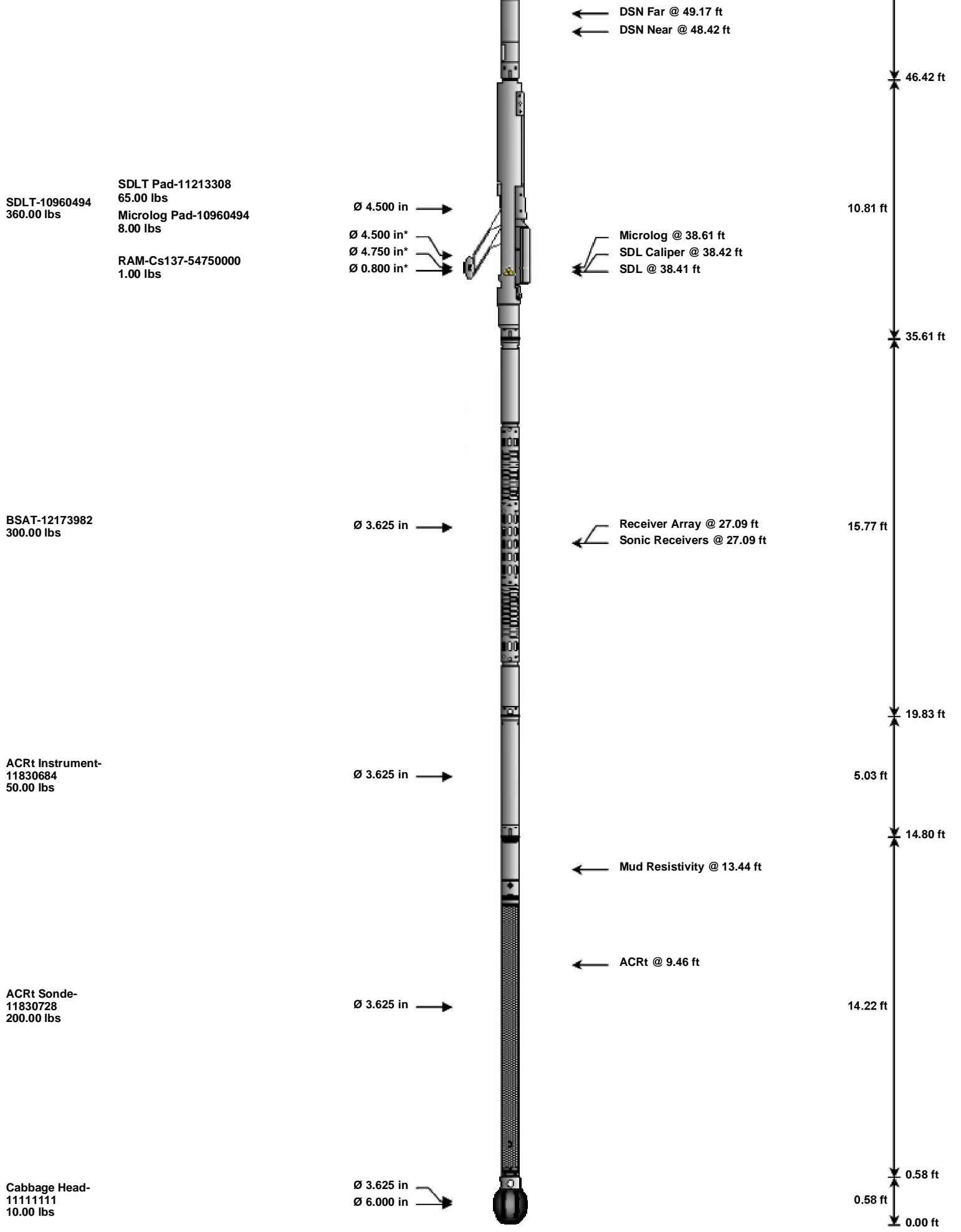
Data: MERIT_EAST-FORK\0001 GTET-DSN-SDL-BSAT-ACRT\IDLE

Date: 01-May-19 01:12:36

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
		Ø 2.310 in →		← Fishing Neck @ 73.73 ft		74.61 ft
RWCH-12345678 135.00 lbs	Weak Point Solid- 11111111 0.01 lbs	Ø 3.625 in →		← Load Cell @ 70.93 ft ← BH Temperature @ 70.36 ft	6.25 ft	
		Ø 0.010 in* →				68.36 ft
SP Sub-11812437 60.00 lbs		Ø 3.625 in →		← SP @ 66.59 ft	3.74 ft	
				← Z-Accelerometer @ 64.17 ft		64.63 ft
GTET-11013113 165.00 lbs		Ø 3.625 in →		← GammaRay @ 58.56 ft	8.52 ft	
DSNT-11055304 174.00 lbs	DSN Decentralizer- 11055304 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →			9.69 ft	56.11 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max. Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	12345678	135.00	6.25	68.36	300.00
WPSS	Weak Point Solid	11111111	0.01	0.01	68.36	300.00
SP	SP Sub	11812437	60.00	3.74	64.63	300.00
GTET	Gamma Telemetry Tool	11013113	165.00	8.52	56.11	60.00
DSNT	Dual Spaced Neutron	11055304	174.00	9.69	46.42	60.00
DCNT	DSN Decentralizer	11055304	6.60	5.13	49.75	300.00

DCNT	DSN Decentralizer	11033304	0.00	0.13	49.73	300.00
SDLT	Spectral Density Tool	10960494	360.00	10.81	35.61	60.00
SDLP	Density Insite Pad	11213308	65.00	2.55 *	37.82	60.00
Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137	54750000	1.00	0.80 *	38.05	300.00
MICP	Microlog Pad	10960494	8.00	1.00 *	38.11	60.00
BSAT	Borehole Sonic Array Tool	12173982	300.00	15.77	19.83	60.00
ACRt	Array Compensated True Resistivity Instrument Section	11830684	50.00	5.03	14.80	120.00
ACRt	Array Compensated True Resistivity Sonde Section	11830728	200.00	14.22	0.58	120.00
CBHD	Cabbage Head	11111111	10.00	0.58	0.00	300.00

Total			1,534.61	74.61		
			* Not included in Total Length and Length Accumulation.			
Data: MERIT_EAST-FORK\0001 GTET-DSN-SDL-BSAT-ACRT\IDLE			Date: 01-May-19 01:14:17			