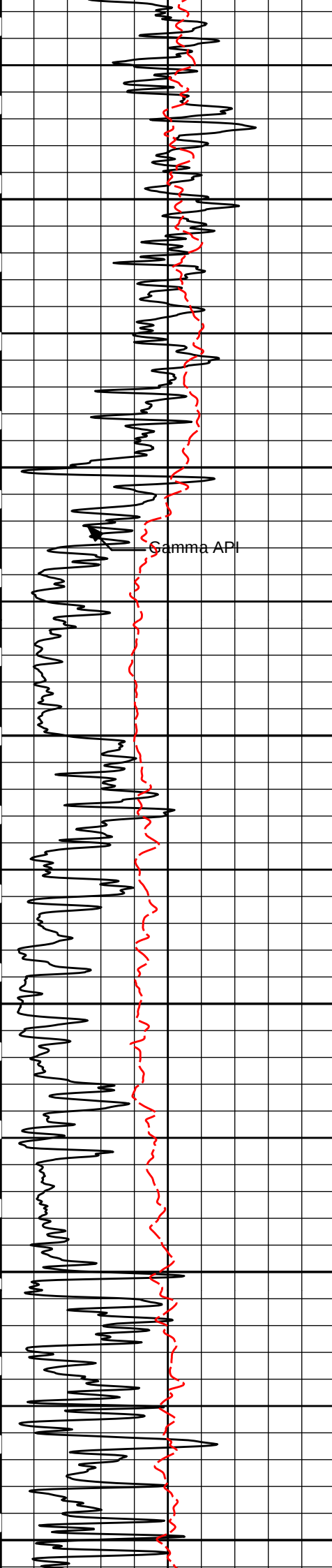


ARRAY COMPENSATED
TRUE RESISTIVITY
LOG

Fold here

Service Ticket No.: 904586269				API No.: 15-069-20503-00-00				PGM Version: WL INSITE R5.0.5 (Build 8)									
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES											
Date	Sample No.					Type Log	Depth	Scale Up Hole		Scale Down Hole							
Depth-Driller																	
Type Fluid in Hole																	
Density	Viscosity																
Ph	Fluid Loss																
Source of Sample						RESISTIVITY EQUIPMENT DATA											
Rm @ Meas. Temp		@			@	Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other							
Rmf @ Meas. Temp.		@			@	ONE	ACRT	N/A	CENT	N/A							
Rmc @ Meas. Temp.		@			@		I-11026095										
Source Rmf	Rmc						S-11005908										
Rm @ BHT		@			@												
Rmf @ BHT		@			@												
Rmc @ BHT		@			@												
EQUIPMENT DATA																	
GAMMA				ACOUSTIC				DENSITY				NEUTRON					
Run No.		ONE		Run No.		ONE		Run No.		ONE		Run No.		ONE			
Serial No.		11958947		Serial No.		U70T00R44L98		Serial No.		10960494		Serial No.		11055304			
Model No.		GTET		Model No.		WSTT		Model No.		SDLT		Model No.		DSNT			
Diameter		3.625"		No. of Cent.		2		Diameter		5.5"		Diameter		3.625"			
Detector Model No.		T-102		Spacing		EVEN		Log Type		GAM-GAM		Log Type		NEU-NEU			
Type		SCINT						Source Type		CS137		Source Type		AM241BE			
Length		8"		LSA [Y/N]				Serial No.		5168GW		Serial No.		DSN-424			
Distance to Source		N/A		FWDA [Y/N]				Strength		1.5 Ci		Strength		15.0 Ci			
LOGGING DATA																	
GENERAL				GAMMA		ACOUSTIC				DENSITY				NEUTRON			
Run		Depth		Speed		Scale		Scale		Matrix		Scale		Matrix			
No.		From	To	ft/min		L	R	L	R	Matrix		L	R	L	R		
ONE	TD	CSG	REC	0	150	30	10	47.6 uSec/ft	30	10	2.71 gr/cc	30	10	LIME			

ONE	TD	CSG	REC	U	150	30	-10	47.0 uSec/ft	30	-10	2.71 g/cc	30	-10	TIME		
DIRECTIONAL INFORMATION																
Maximum Deviation								@	KOP							@
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING																
CHLORIDES REPORTED AT 4800 ppm																



2100

2200

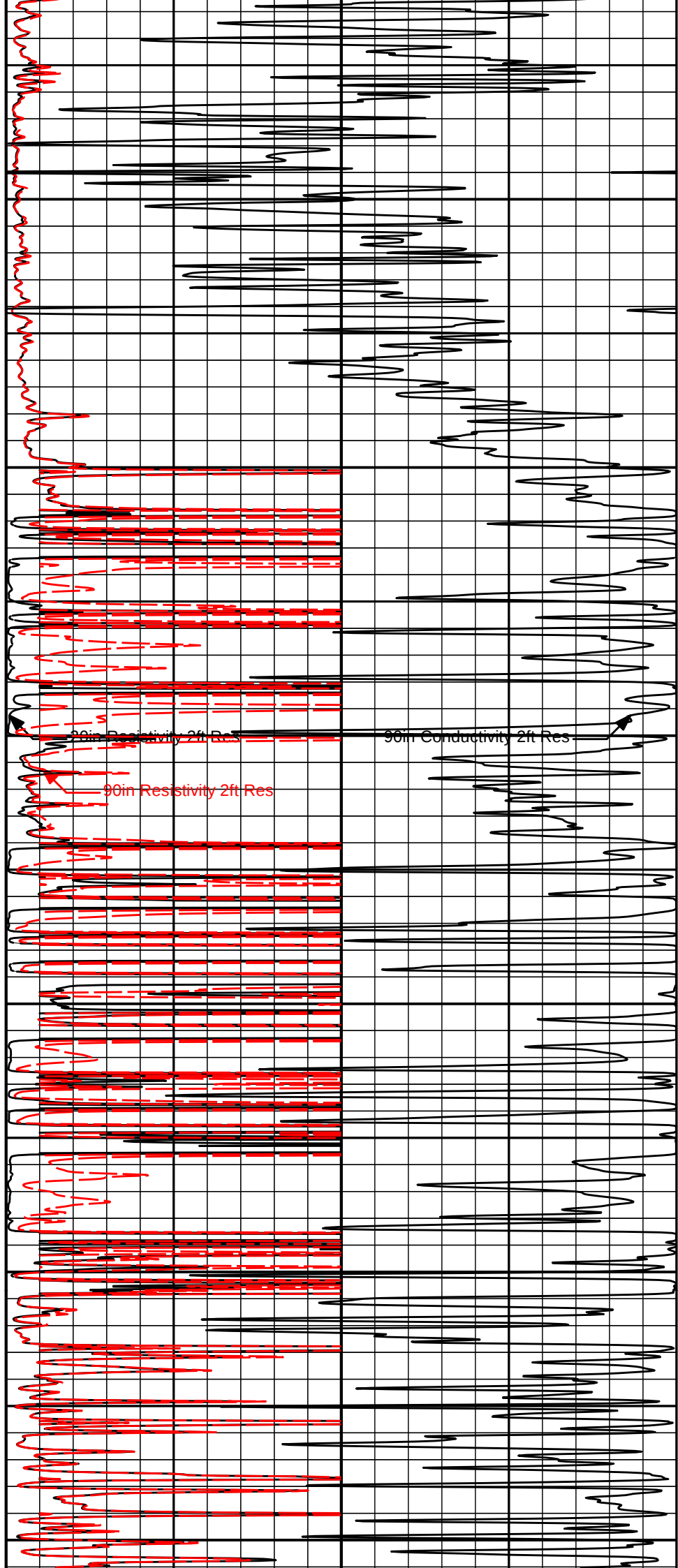
2300

2400

2500

2600

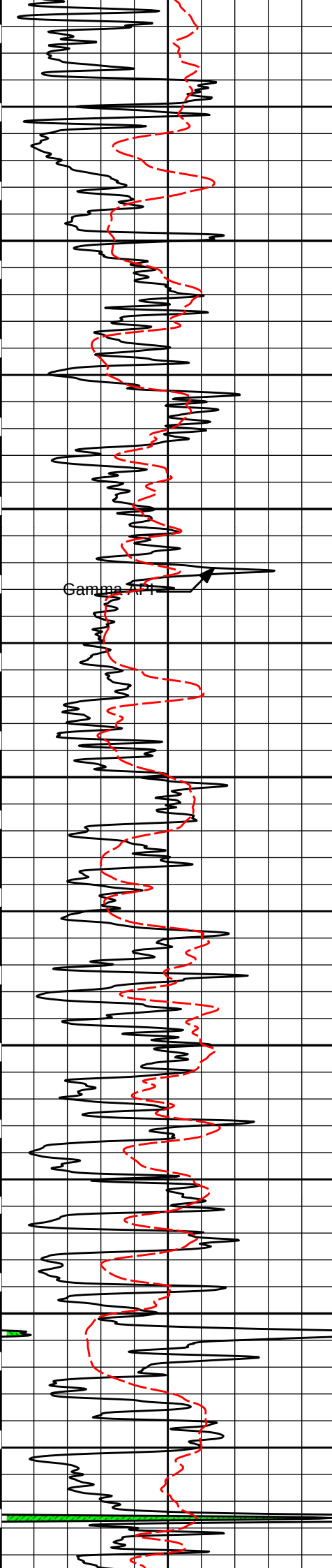
Gamma API



90in Resistivity 2ft Res

90in Conductivity 2ft Res

90in Resistivity 2ft Res



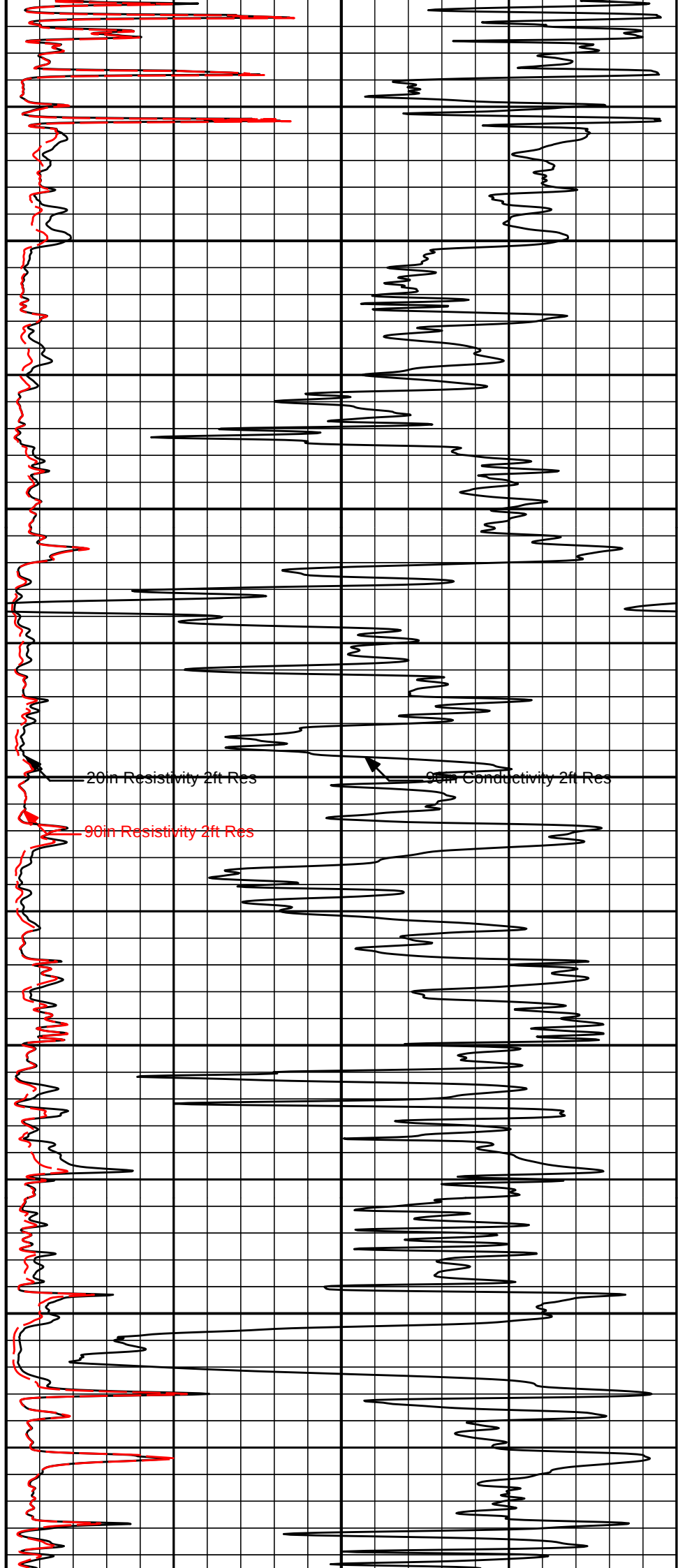
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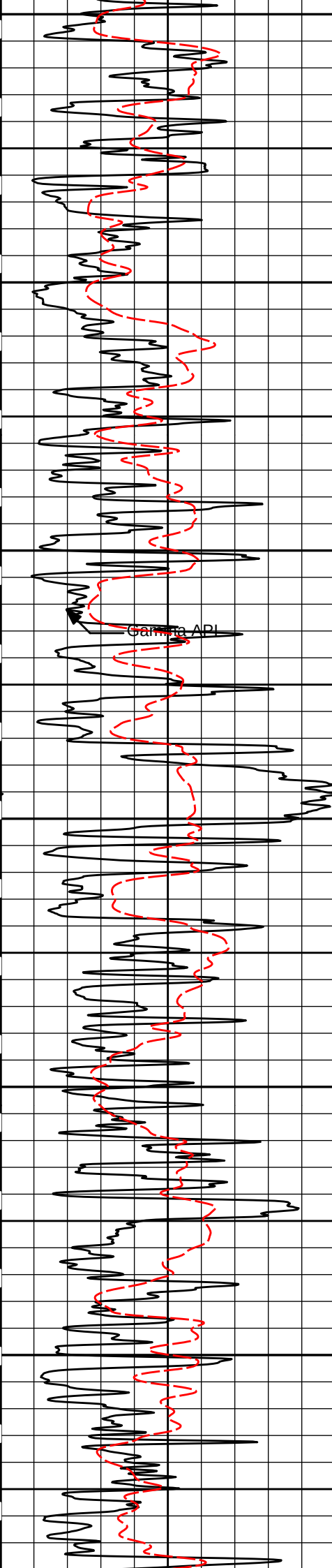
2800

2900

3000

3100





3200

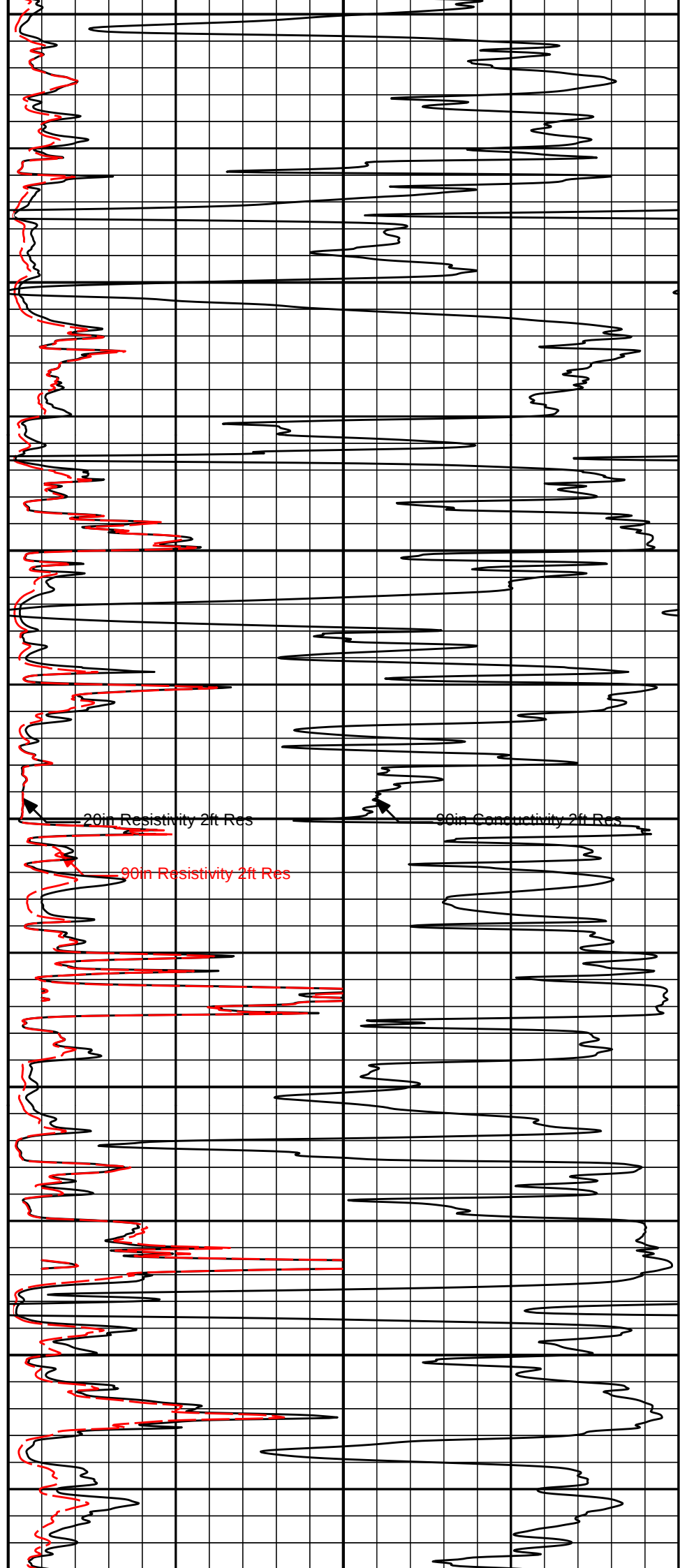
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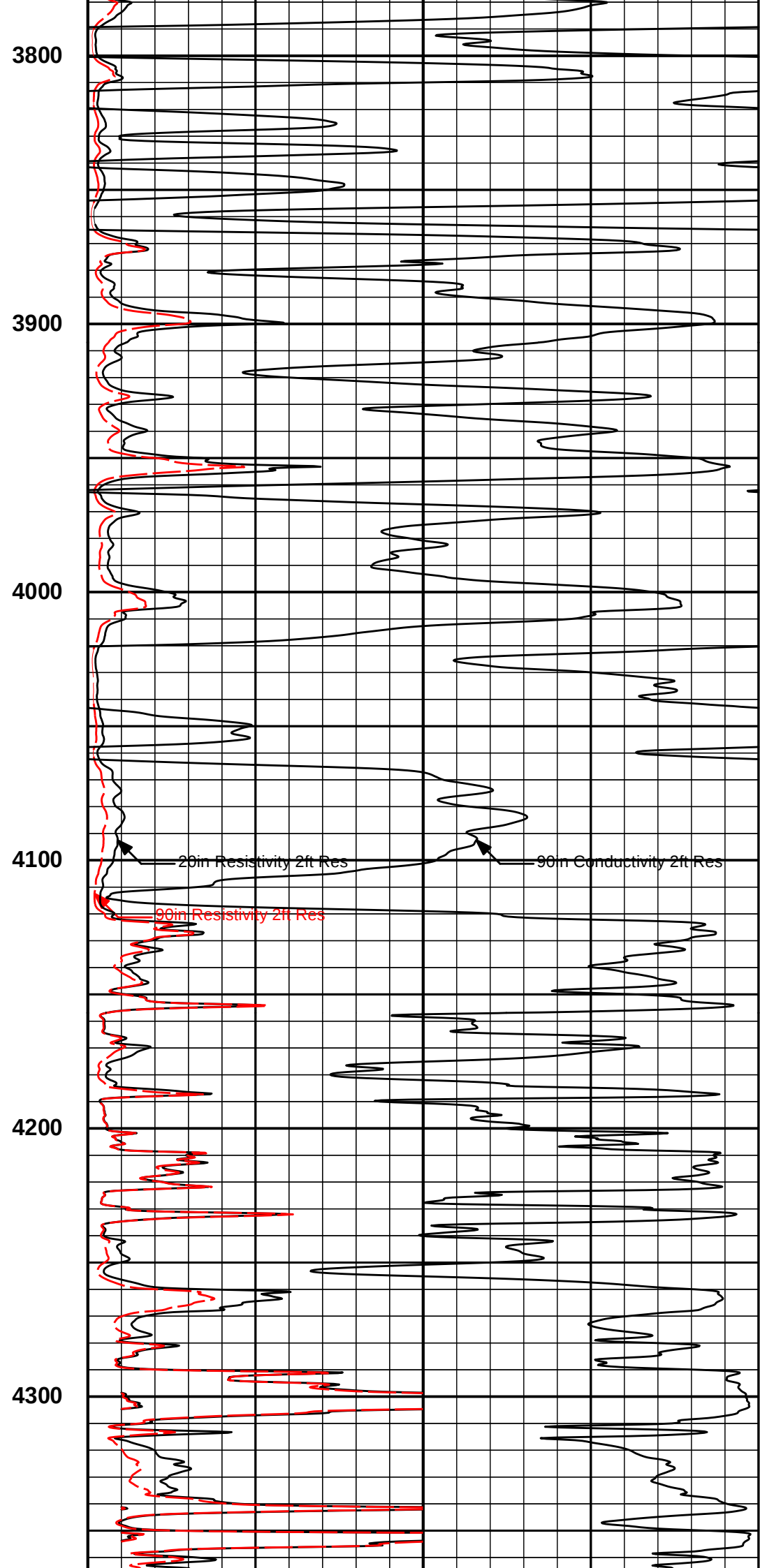
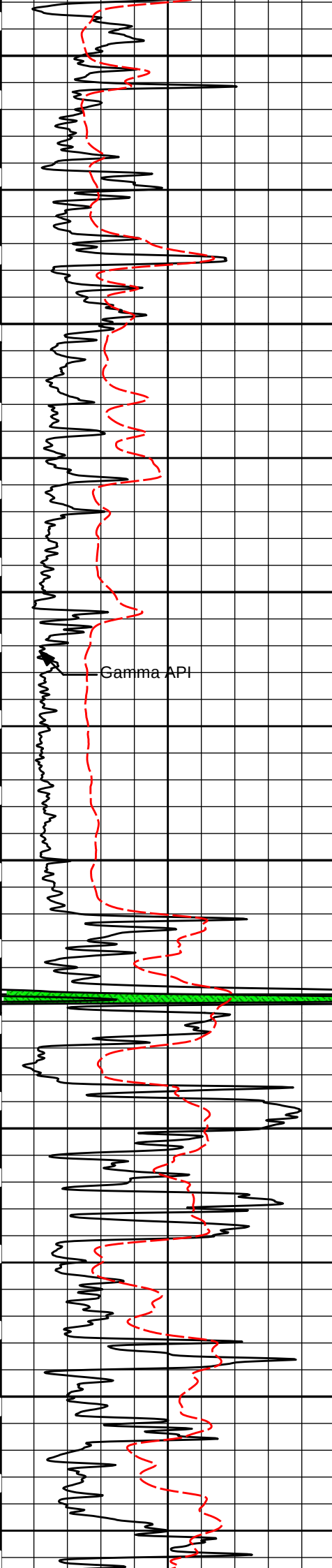
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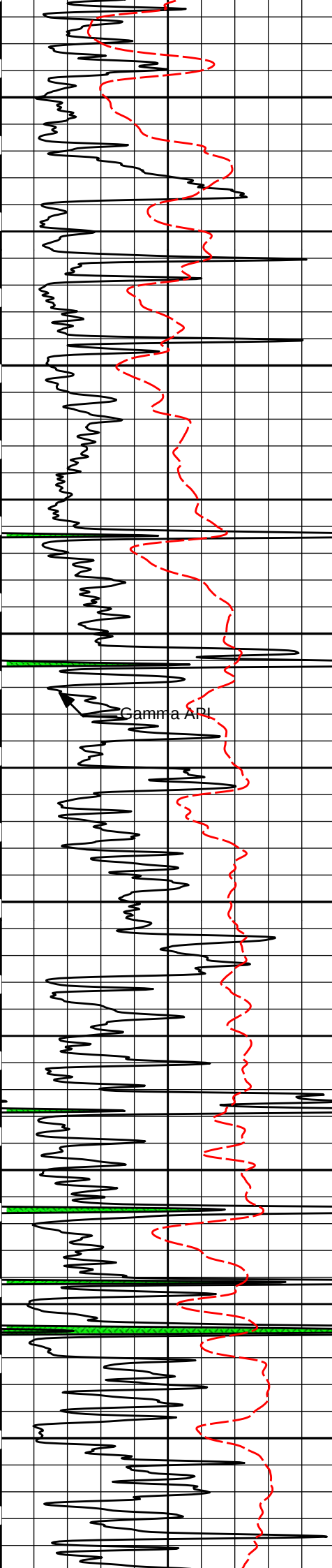
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3600

3700







4400

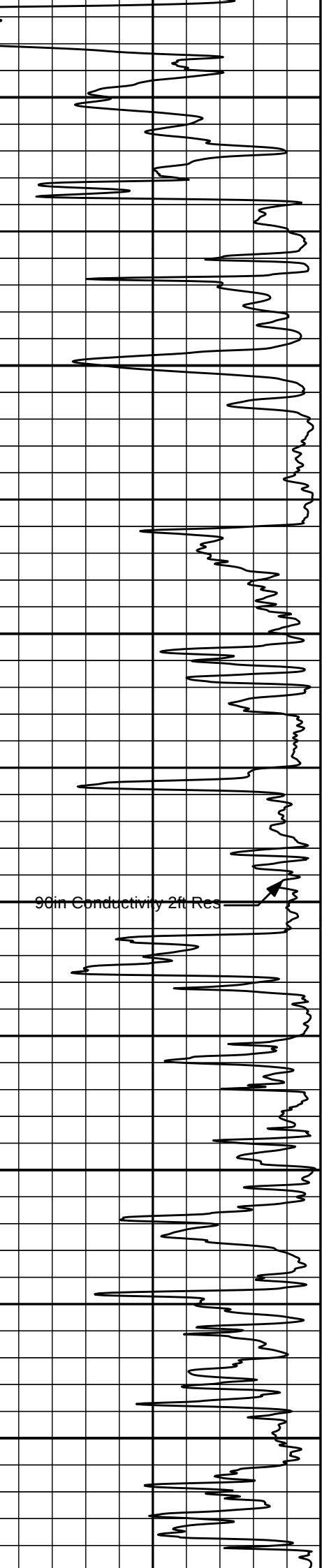
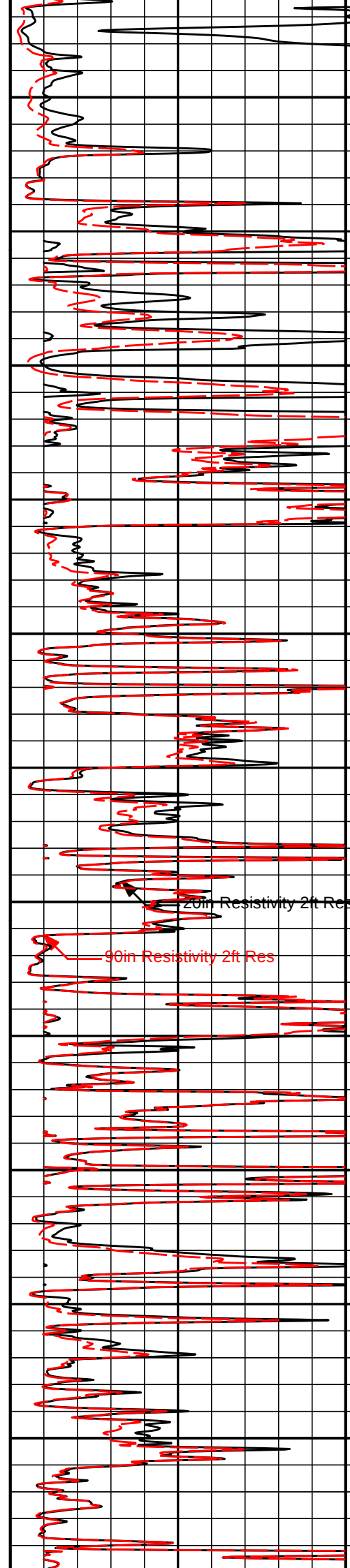
4500

4600

4700

4800

4900

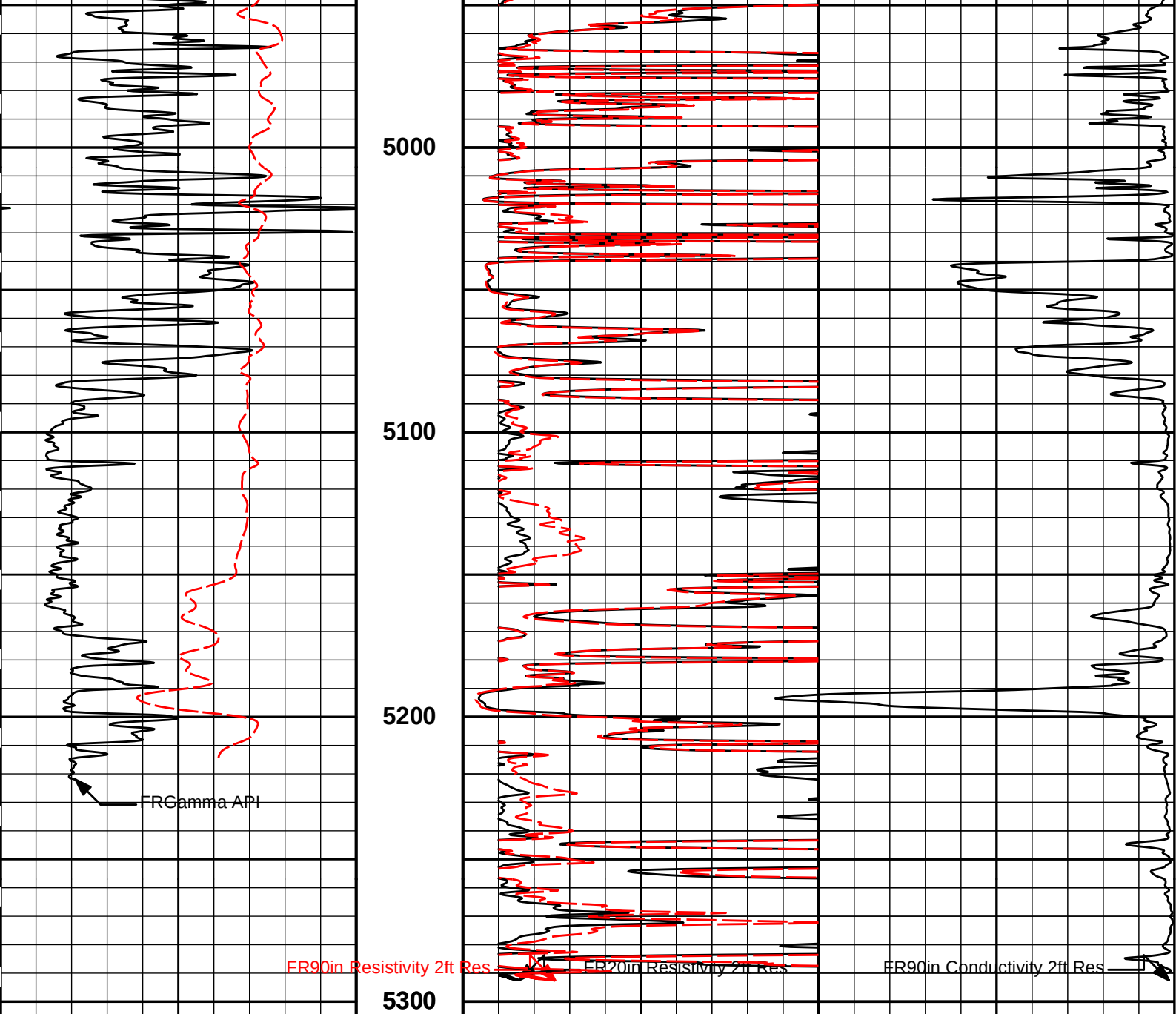


Gamma APL

20in Resistivity 2ft Res

90in Resistivity 2ft Res

90in Conductivity 2ft Res



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

HALLIBURTON

Plot Time: 07-Feb-18 07:53:28
Plot Range: 1880 ft to 5305.08 ft
Data: RILEY-WINKLER\Well Based\MAIN\
Plot File: \\-LOCAL-RILEY-WINKLER\Well Based\ACRT\ACRT_2_main

2 INCH MAIN LOG

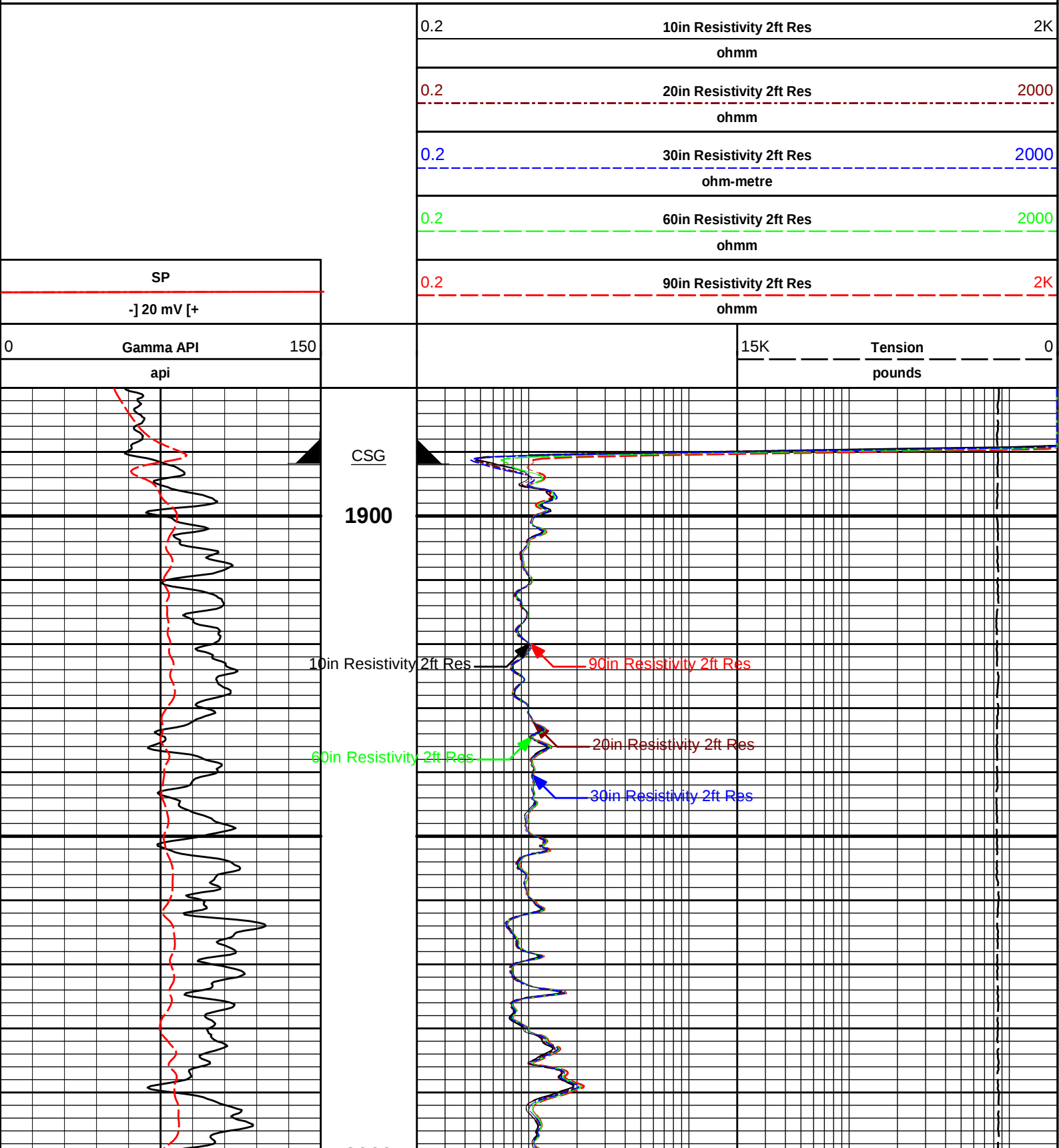
2 INCH MAIN LOG

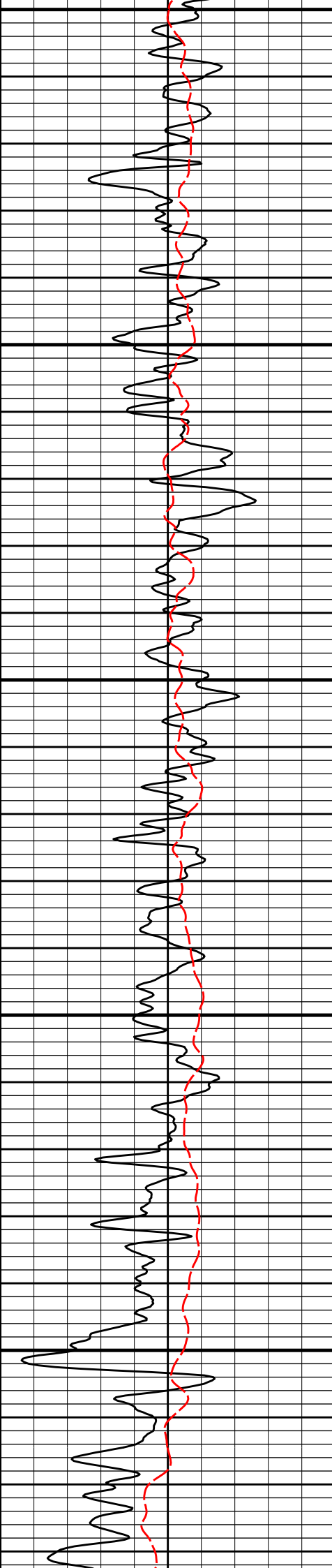
HALLIBURTON

Plot Time: 07-Feb-18 07:53:28

5 INCH MAIN LOG

5 INCH MAIN LOG





2000

2100

2200

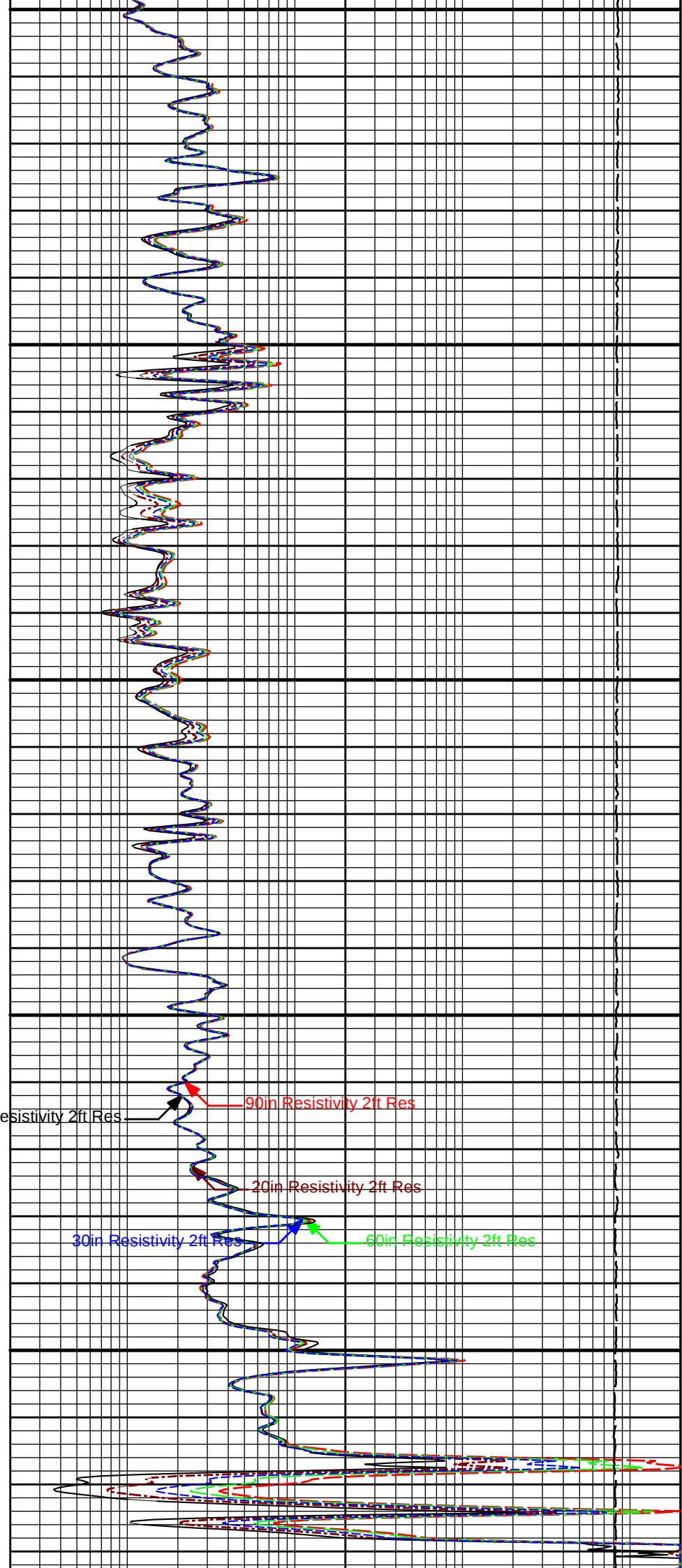
10in Resistivity 2ft Res

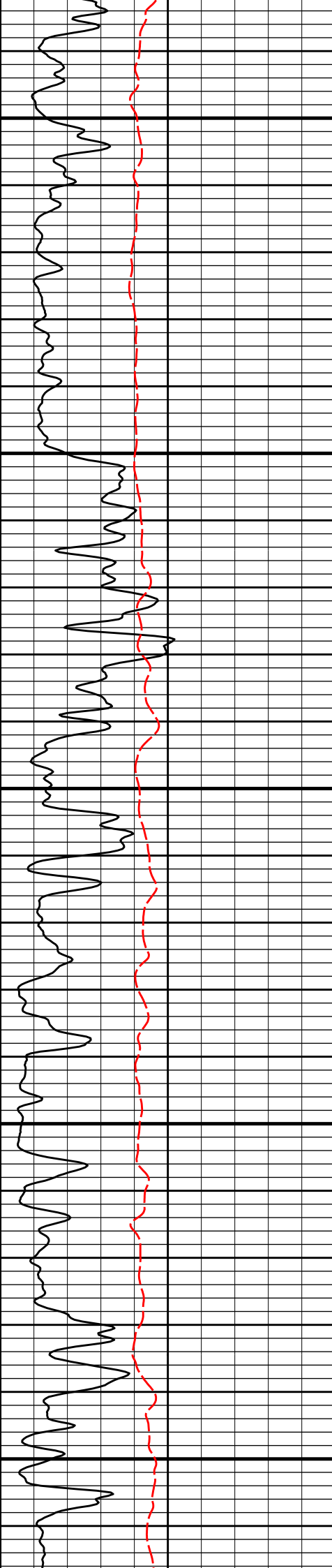
90in Resistivity 2ft Res

20in Resistivity 2ft Res

30in Resistivity 2ft Res

60in Resistivity 2ft Res

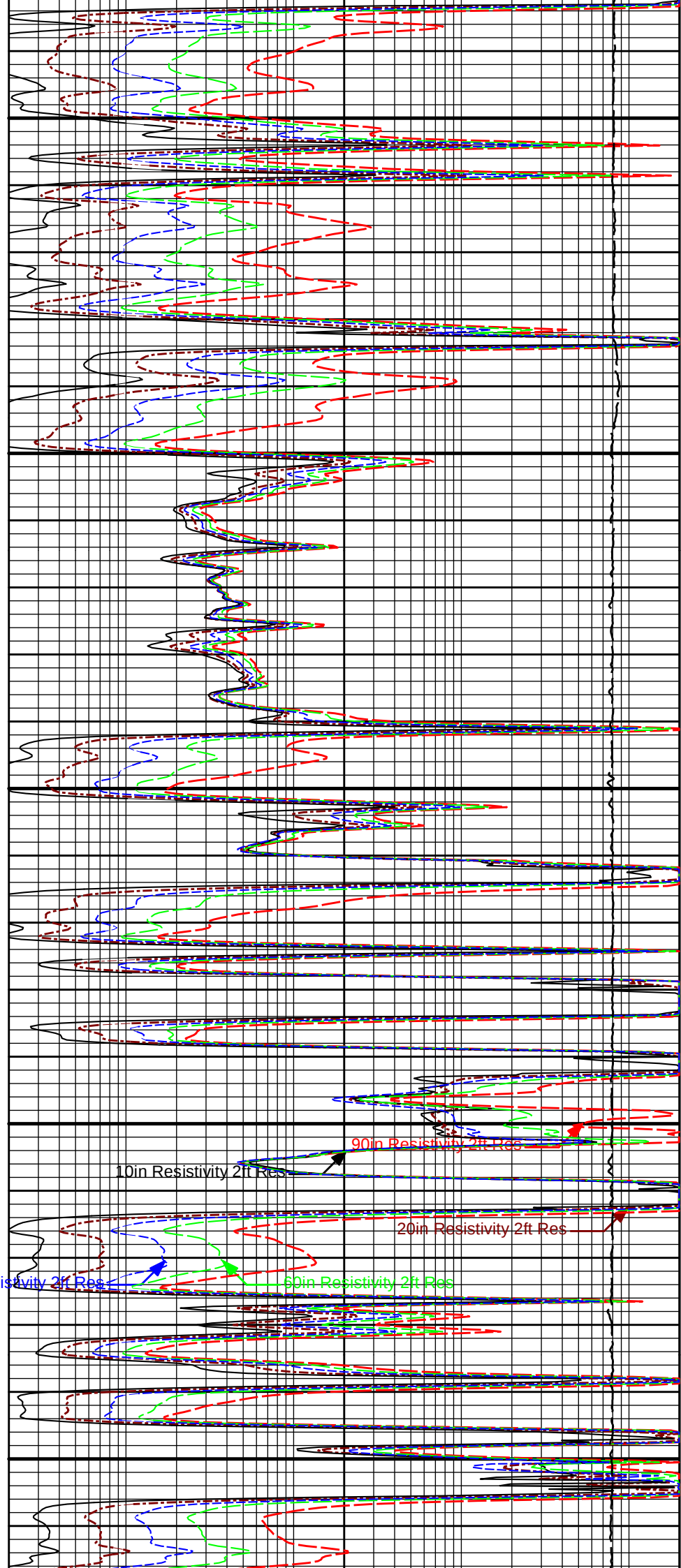


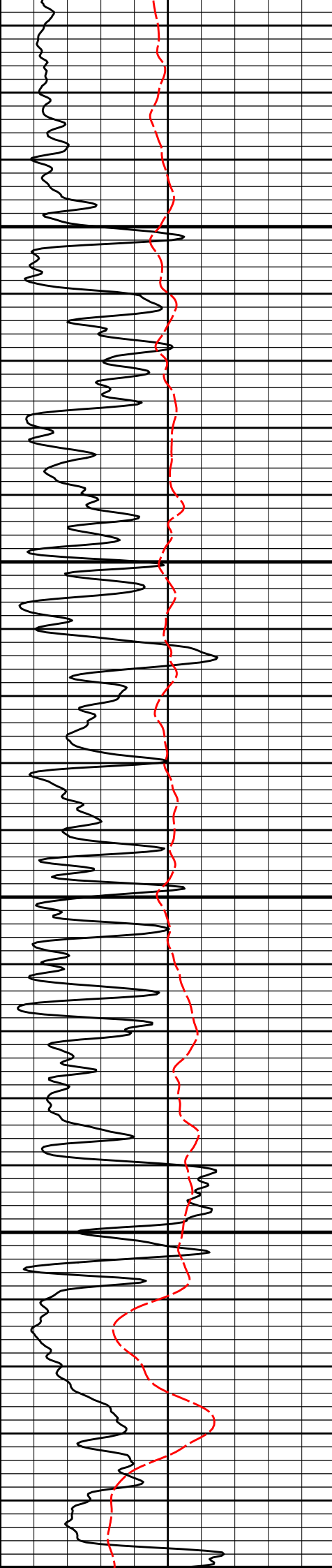


2300

2400

30in Resistivity 2ft Res





2500

2600

2700

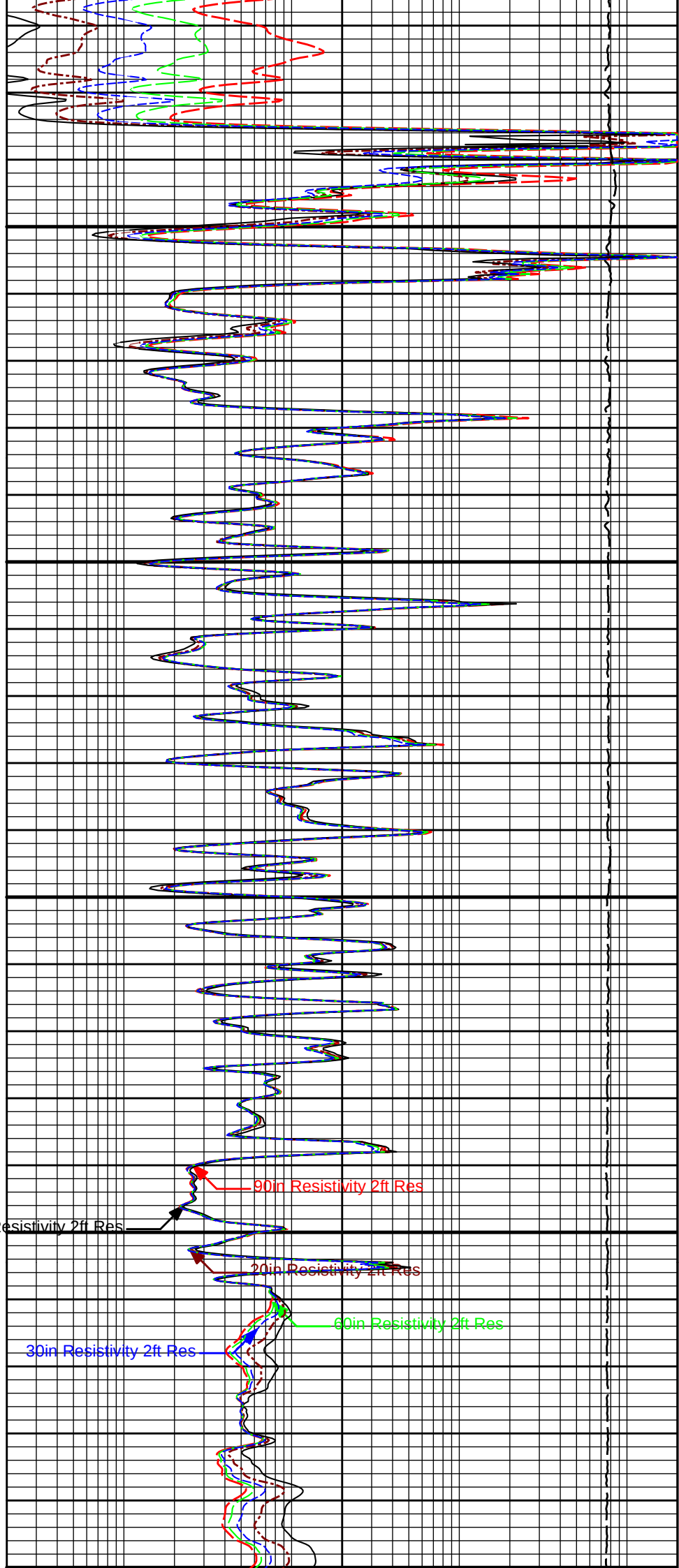
10in Resistivity 2ft Res

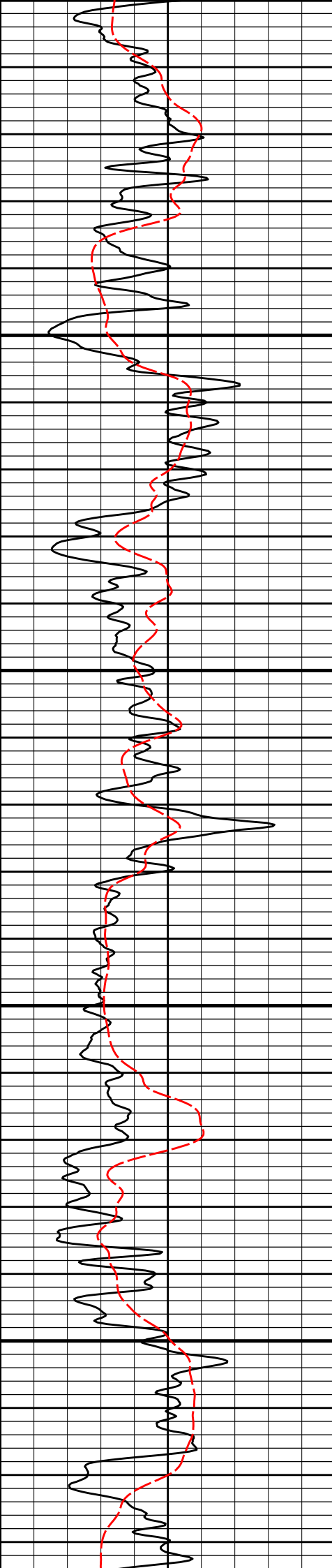
90in Resistivity 2ft Res

20in Resistivity 2ft Res

60in Resistivity 2ft Res

30in Resistivity 2ft Res



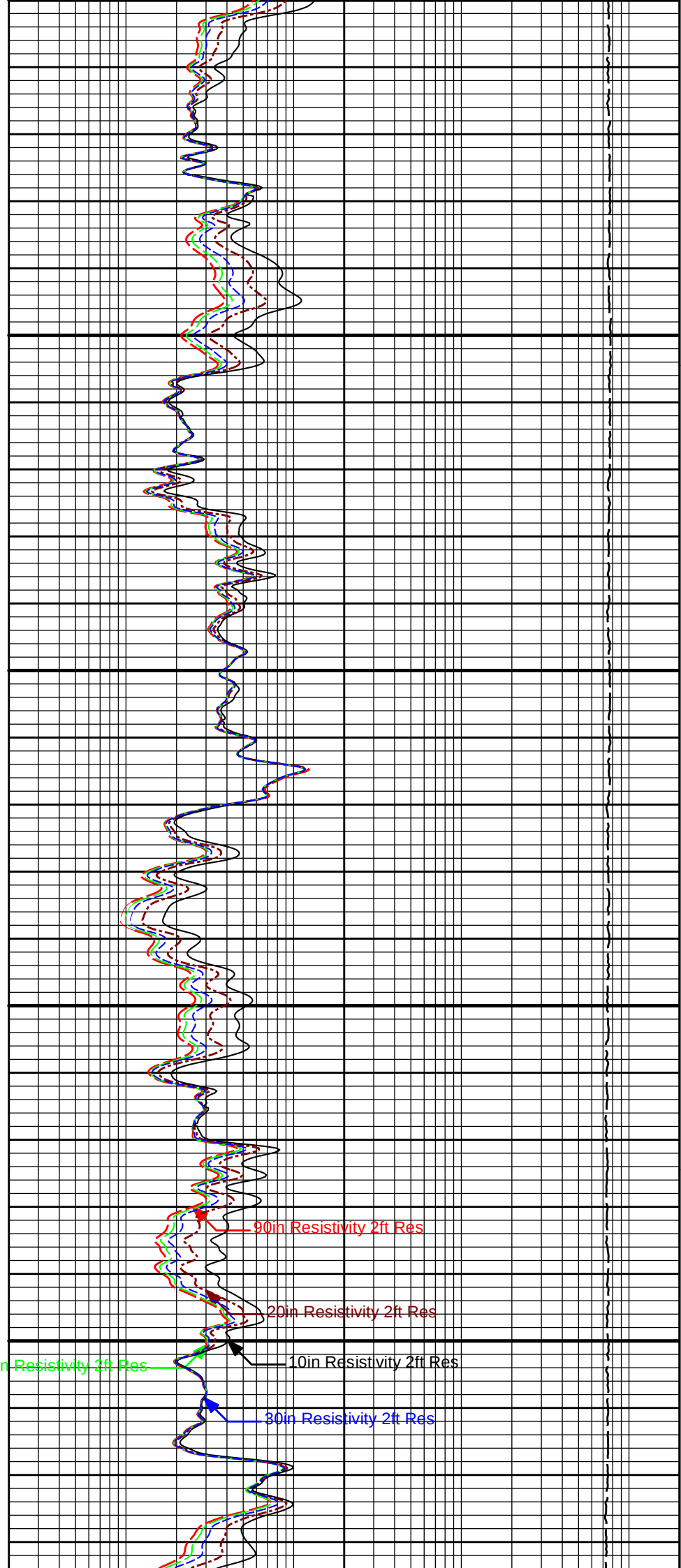


2700

2800

2900

60in Resistivity 2ft Res

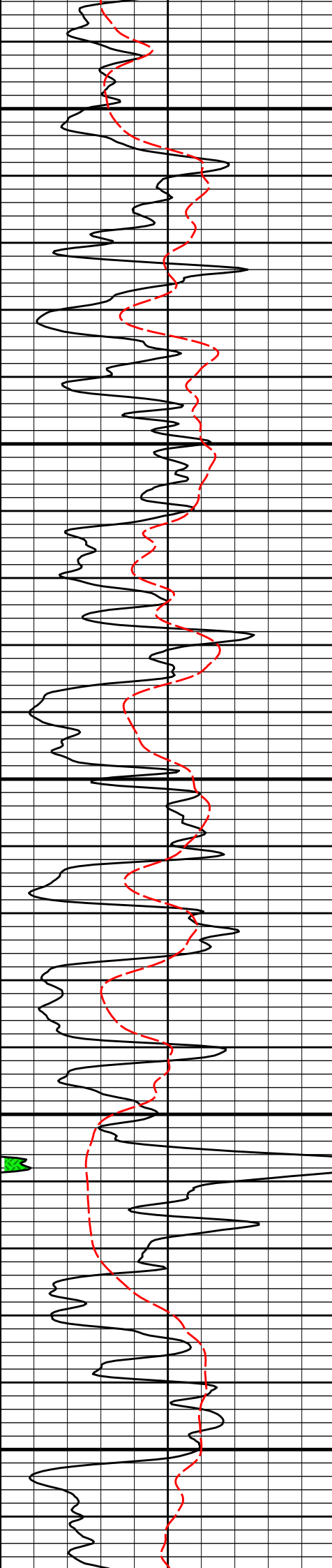


90in Resistivity 2ft Res

20in Resistivity 2ft Res

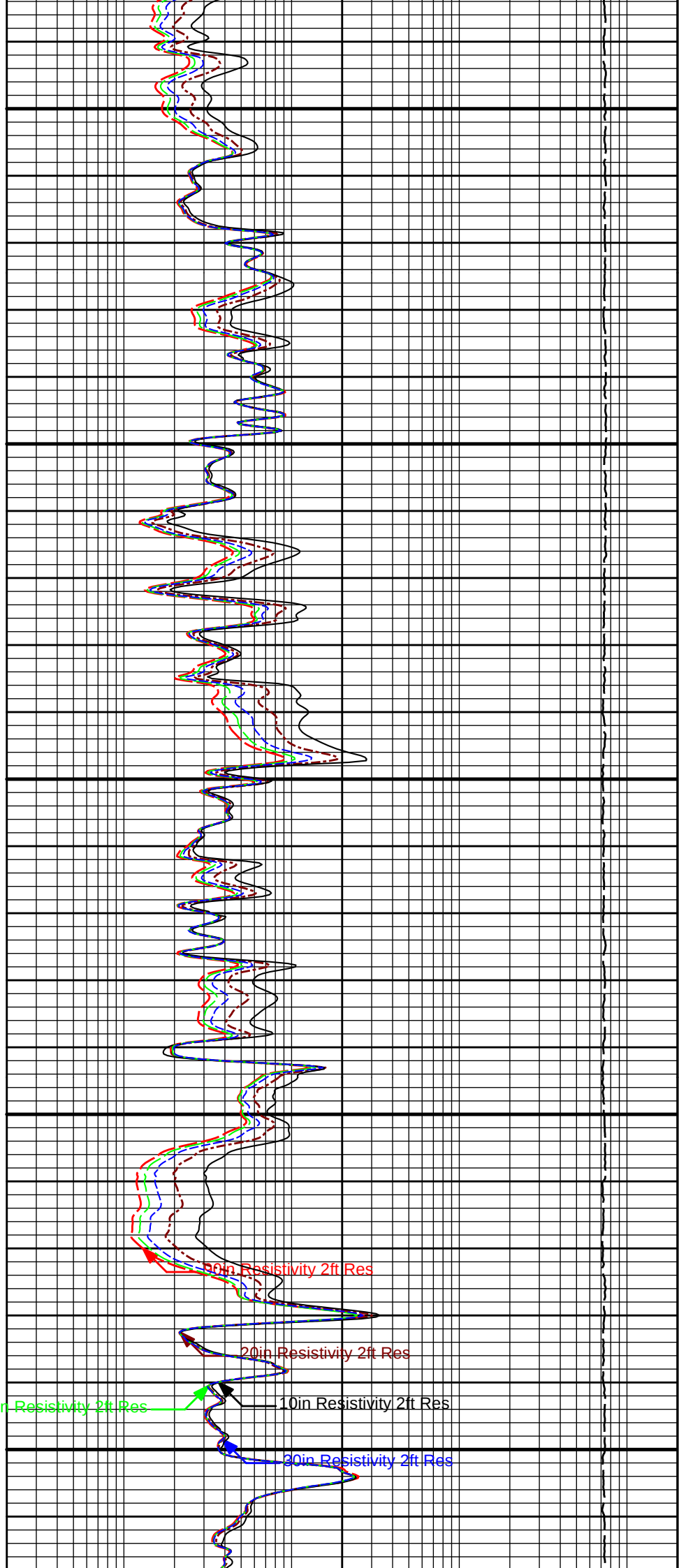
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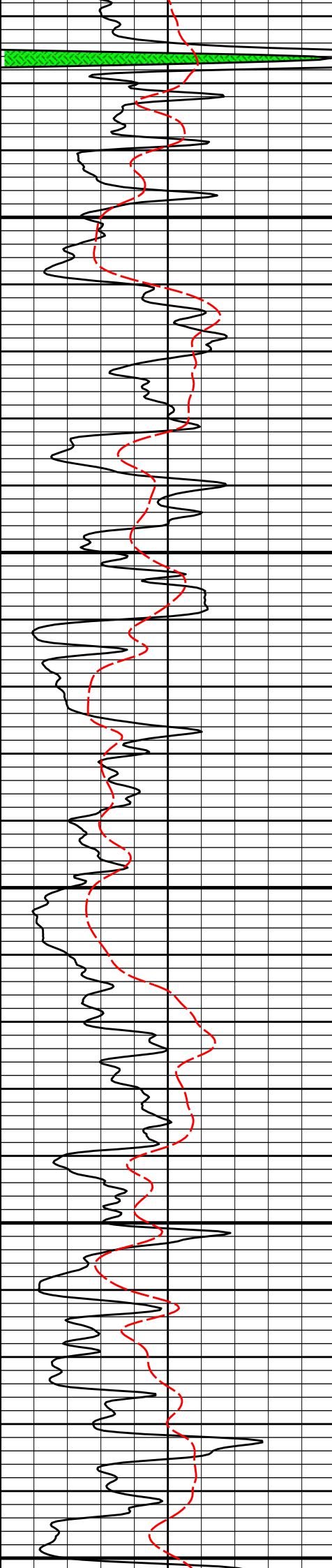
30in Resistivity 2ft Res



3000

3100

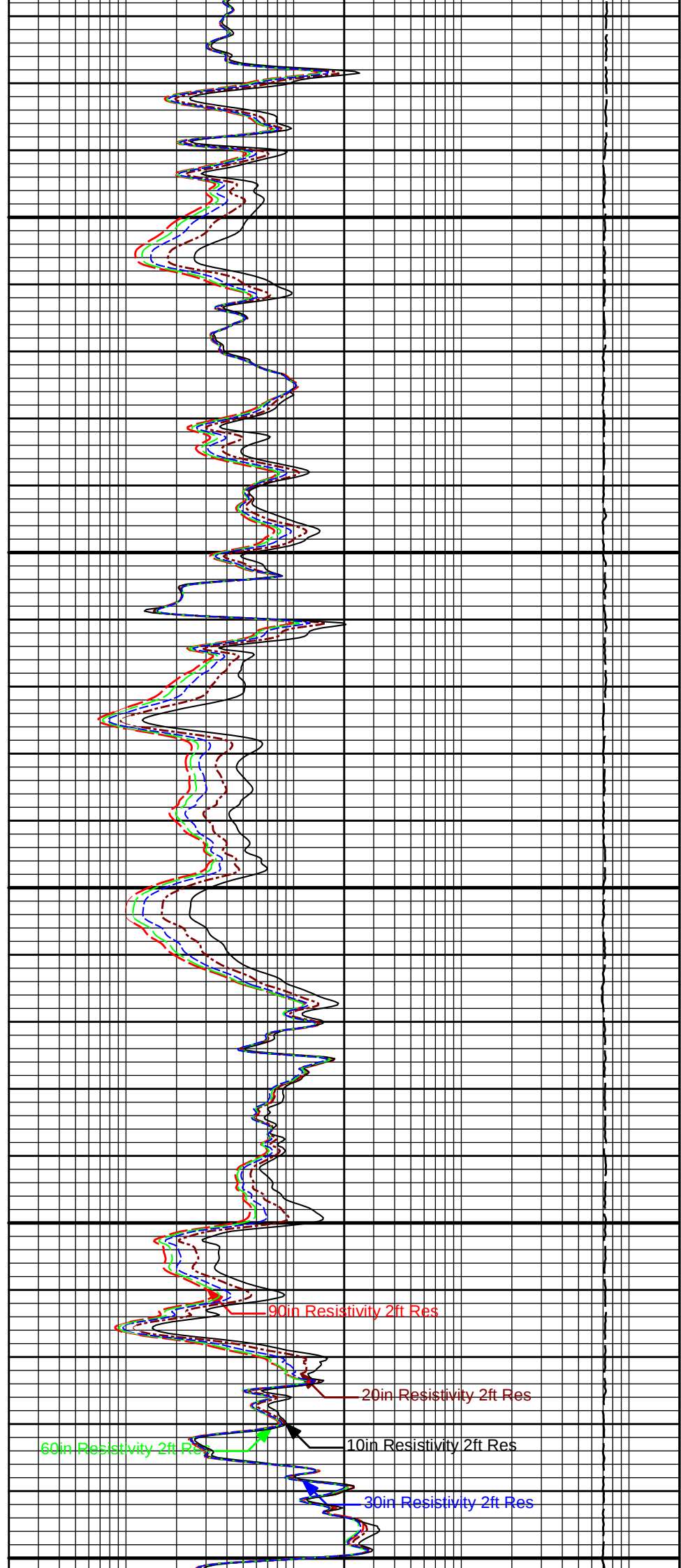


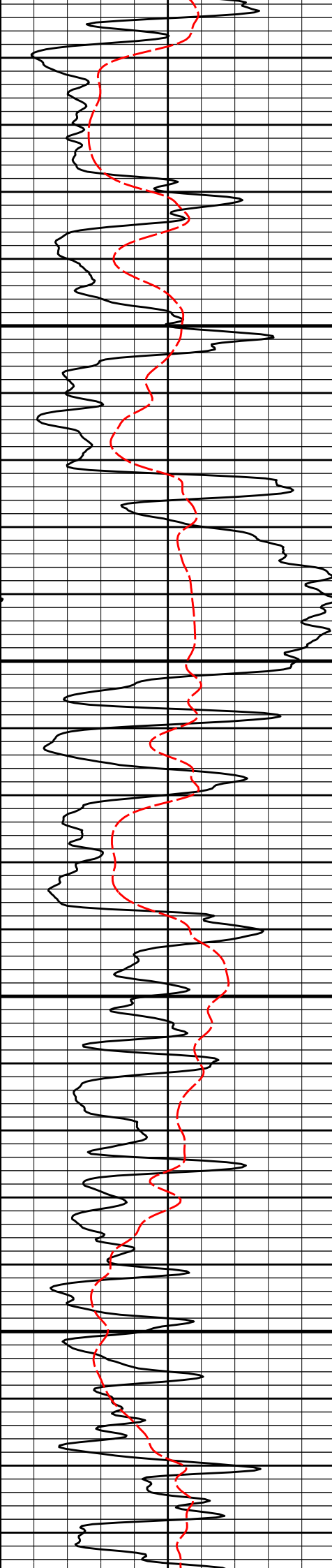


3200

3300

3400

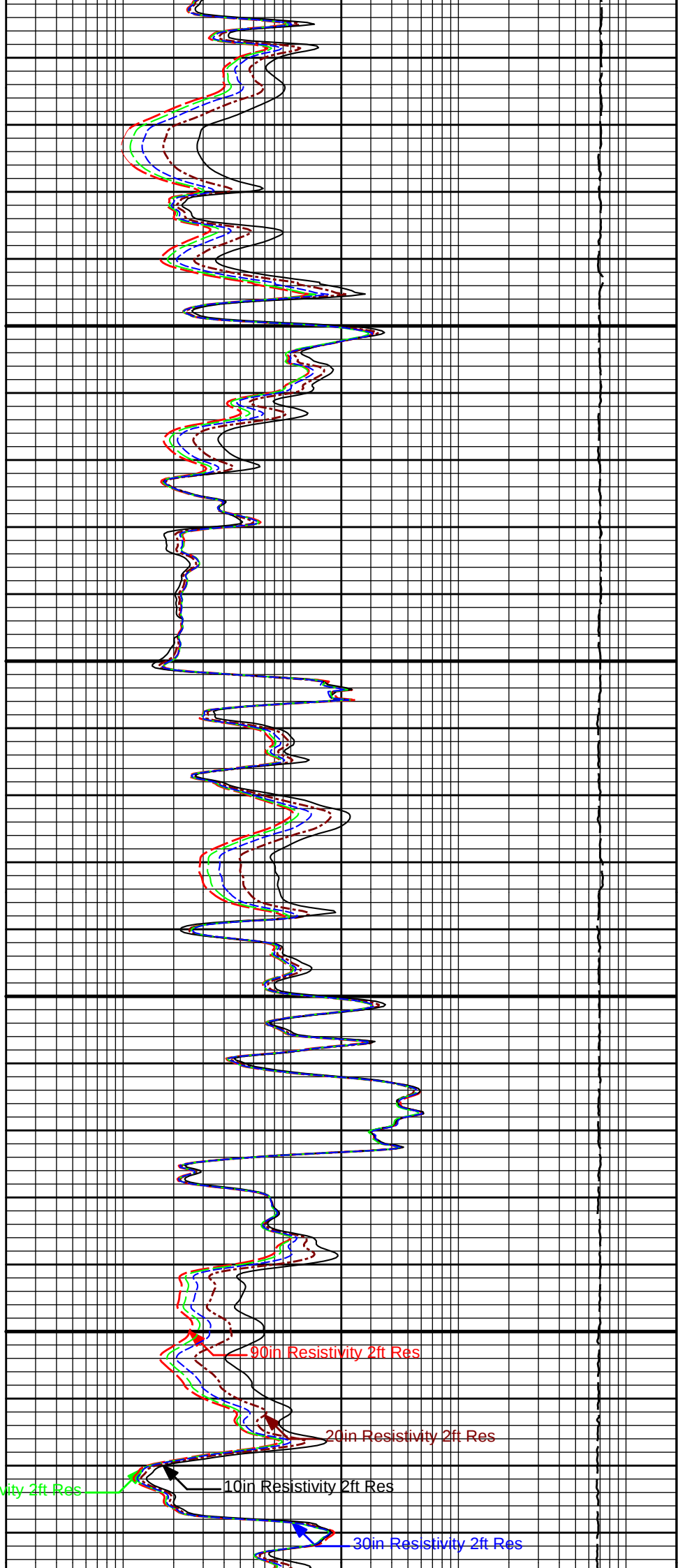


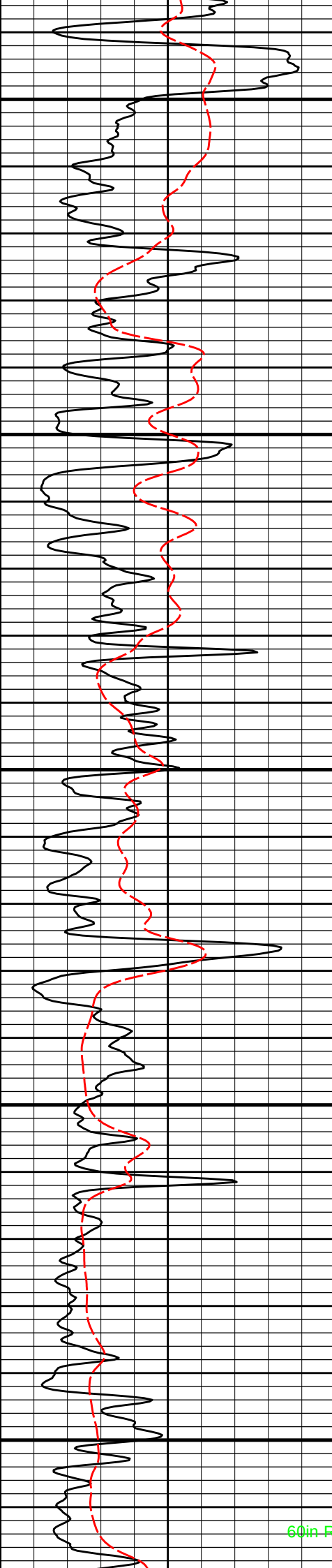


3500

3600

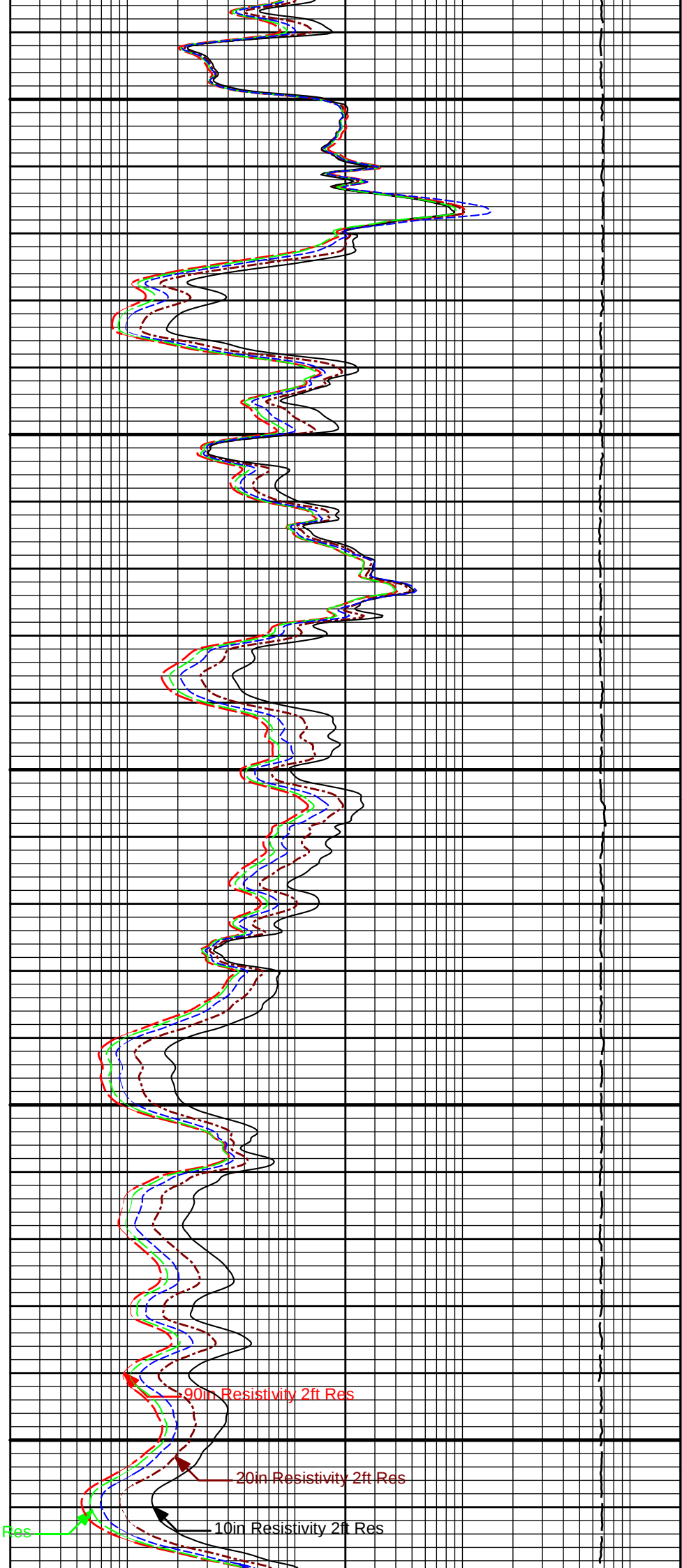
60in Resistivity 2ft Res





3700

3800

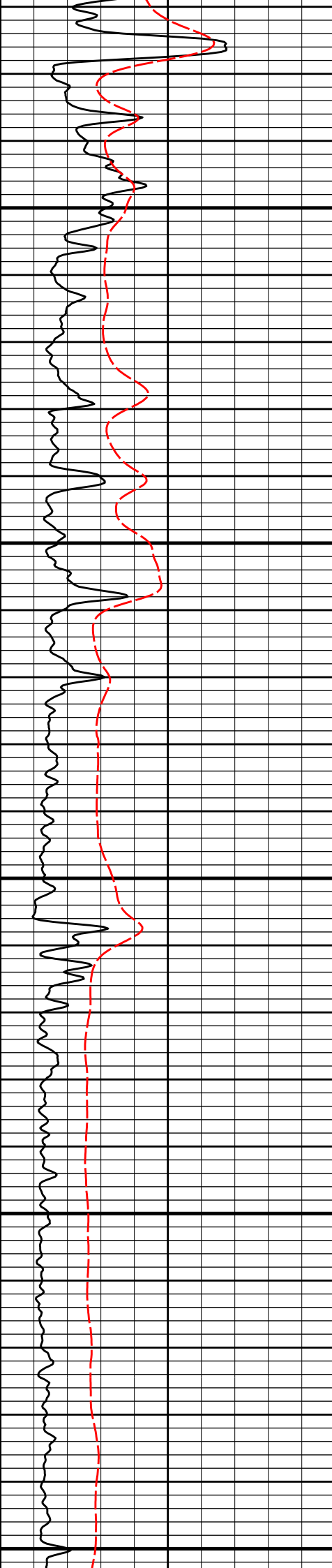


90in Resistivity 2ft Res

20in Resistivity 2ft Res

10in Resistivity 2ft Res

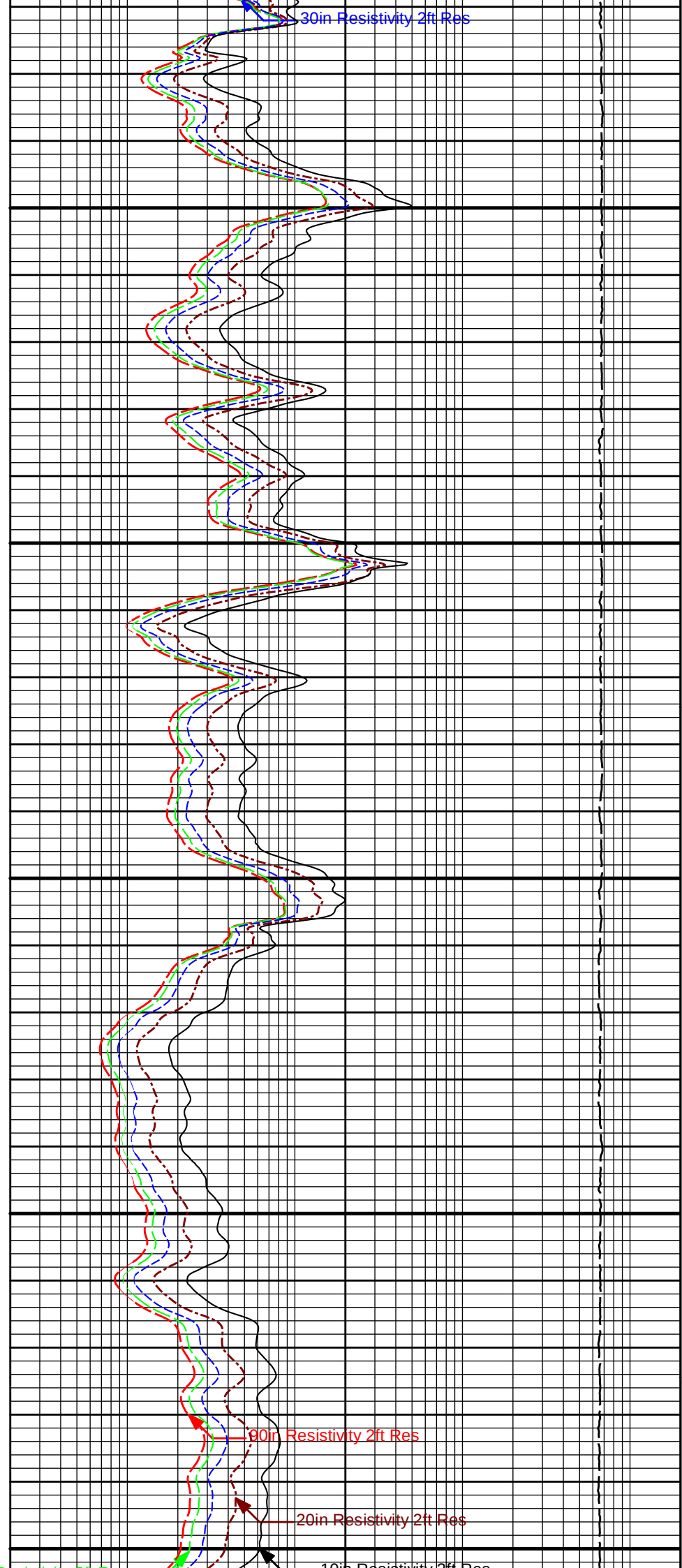
60in Resistivity 2ft Res



3900

4000

4100

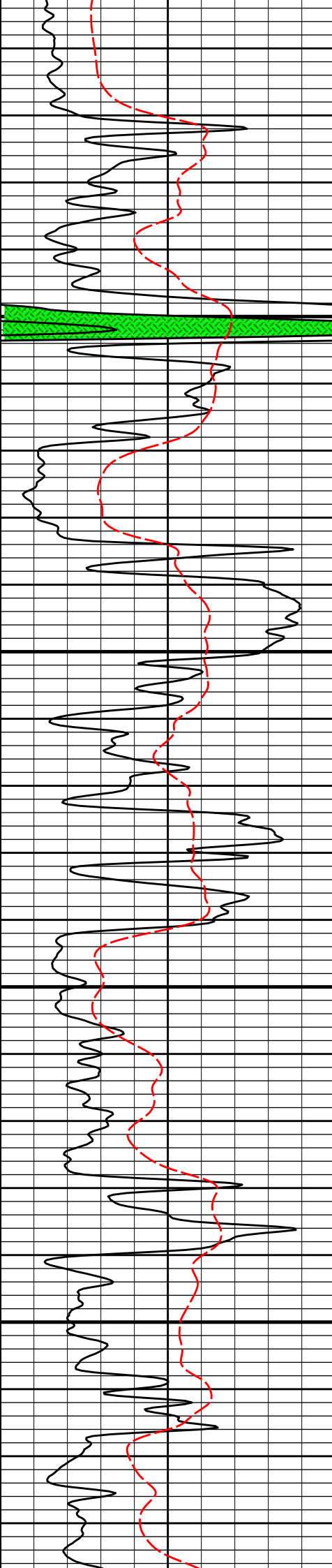


30in Resistivity 2ft Res

90in Resistivity 2ft Res

20in Resistivity 2ft Res

10in Resistivity 2ft Res



4200

4300

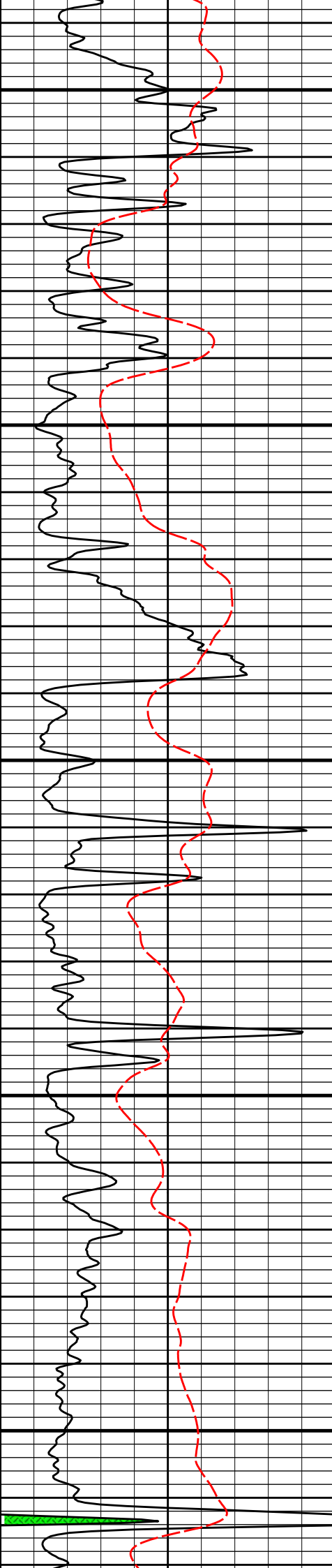
60in Resistivity 2ft Res

30in Resistivity 2ft Res

10in Resistivity 2ft Res

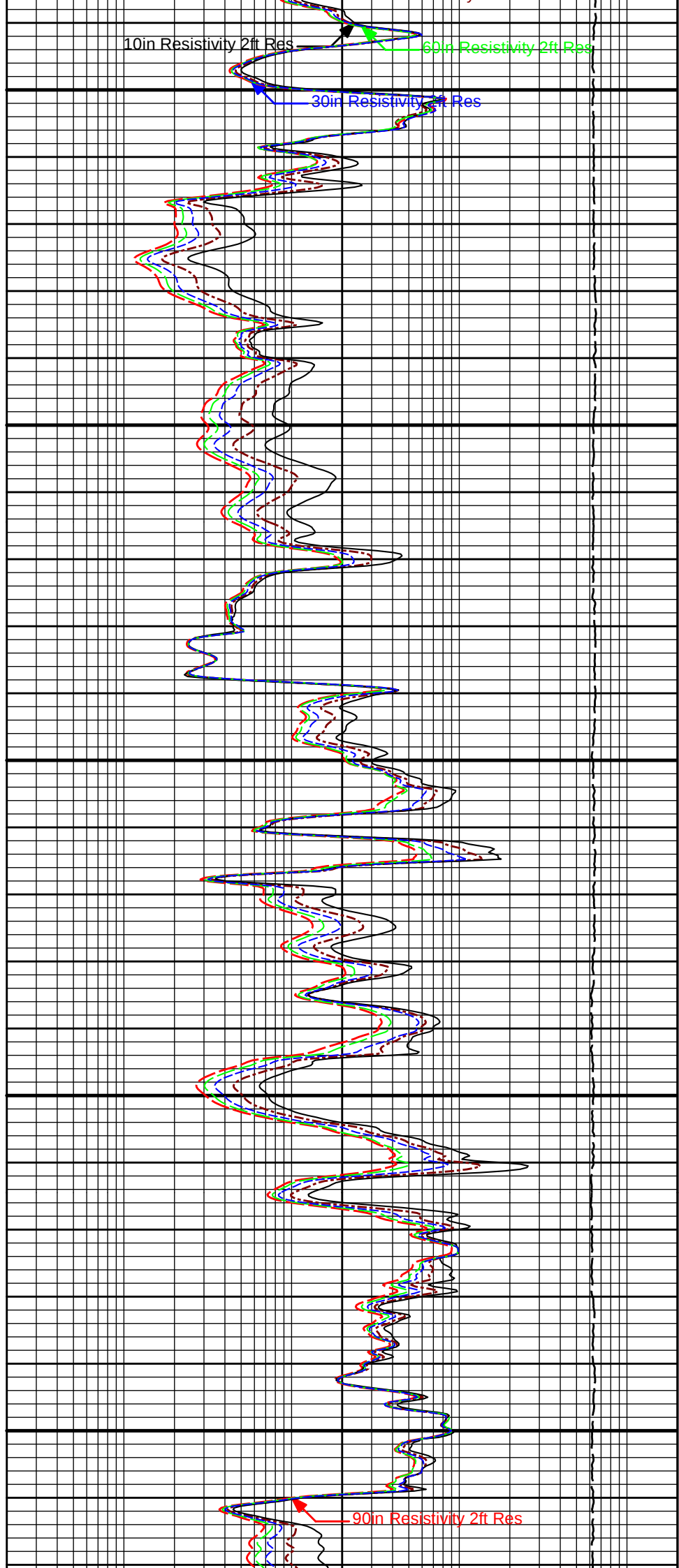
90in Resistivity 2ft Res

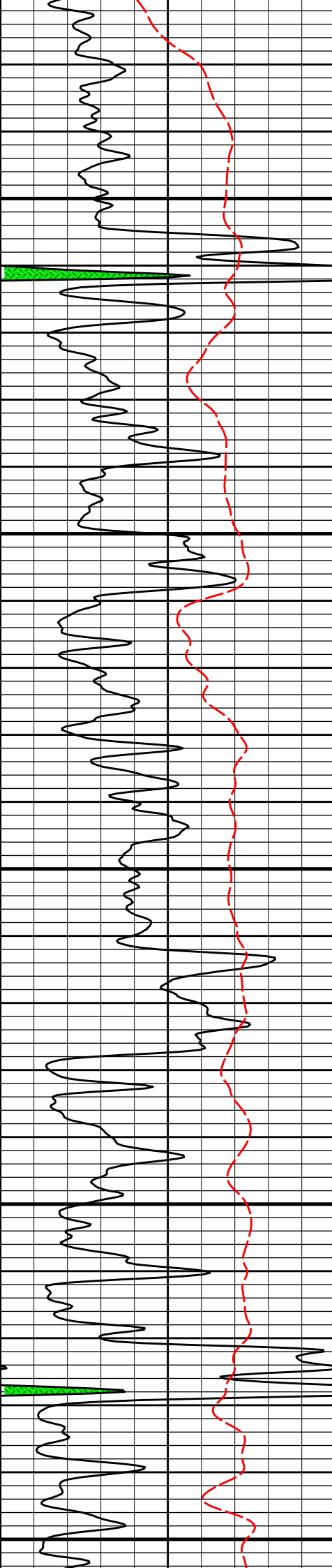
20in Resistivity 2ft Res



4400

4500

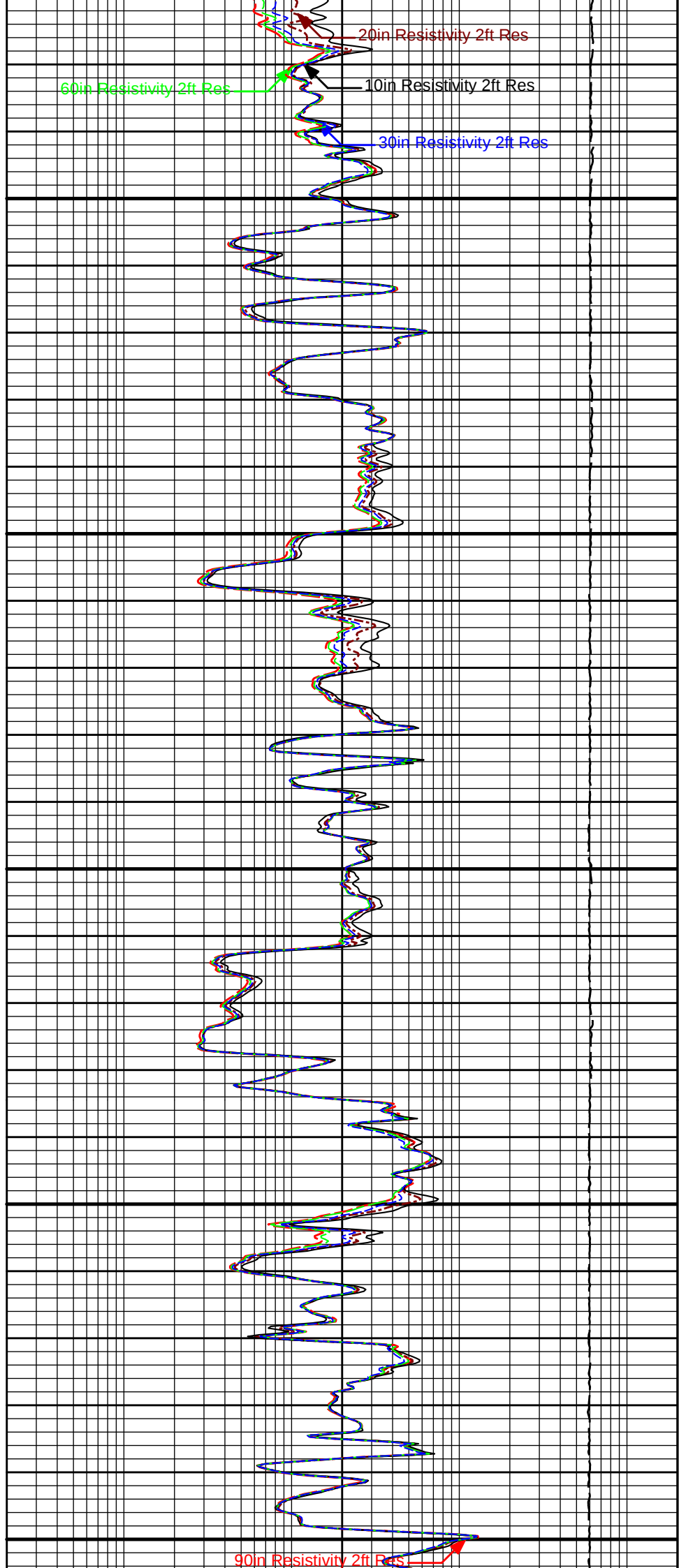


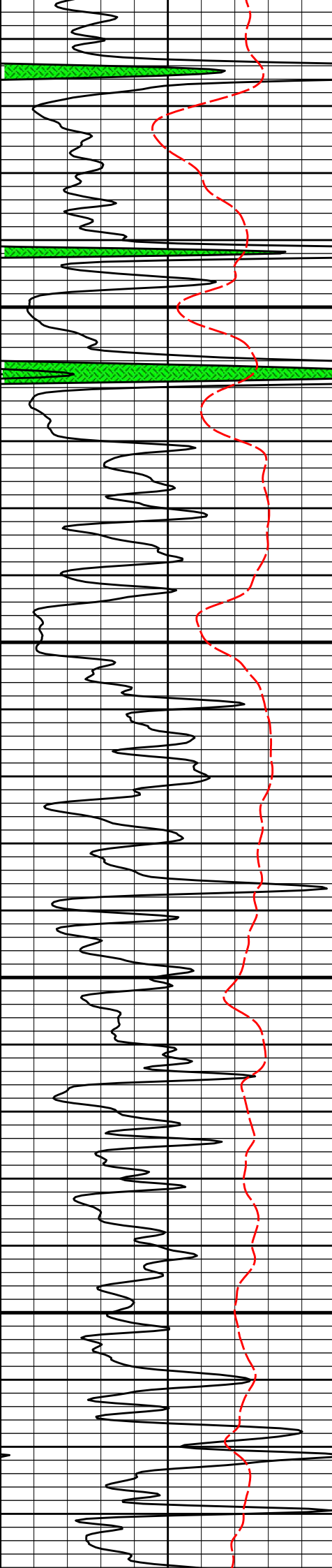


4600

4700

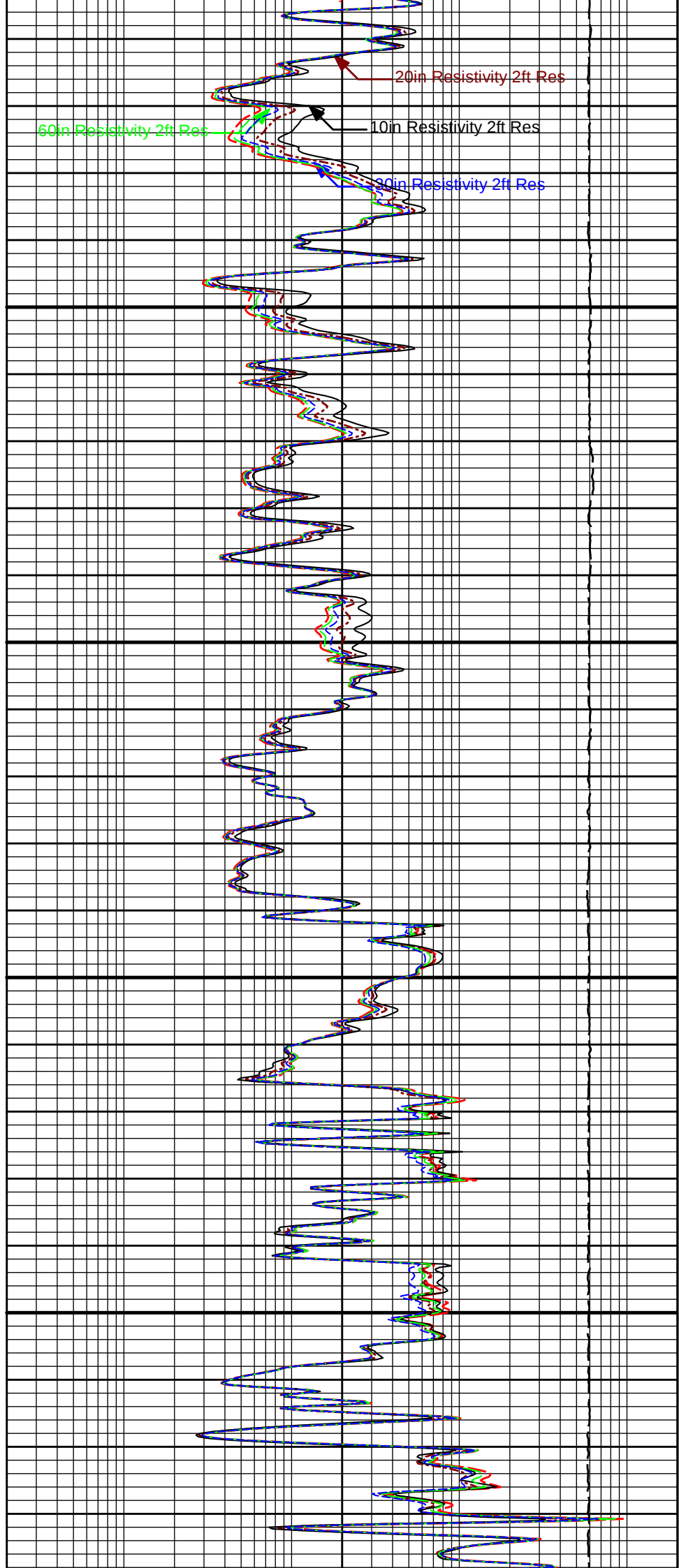
4800

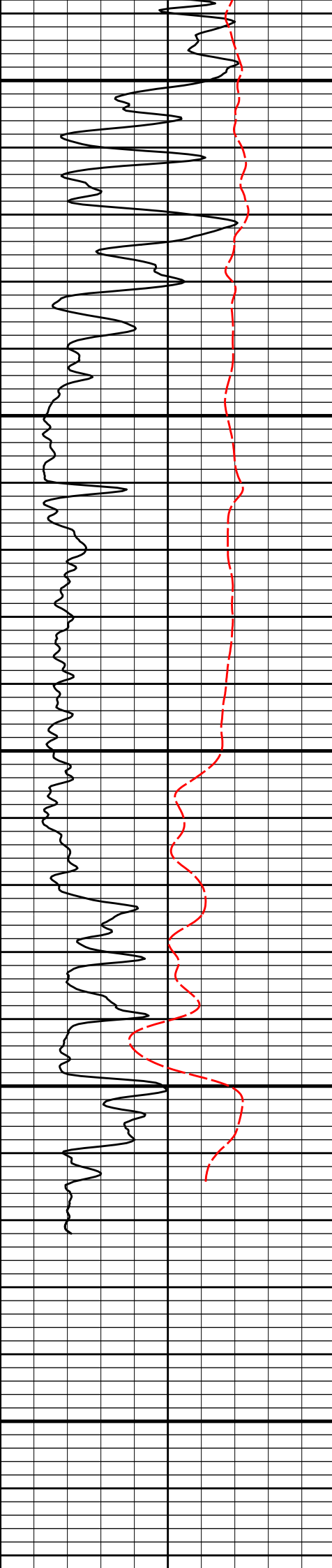




4900

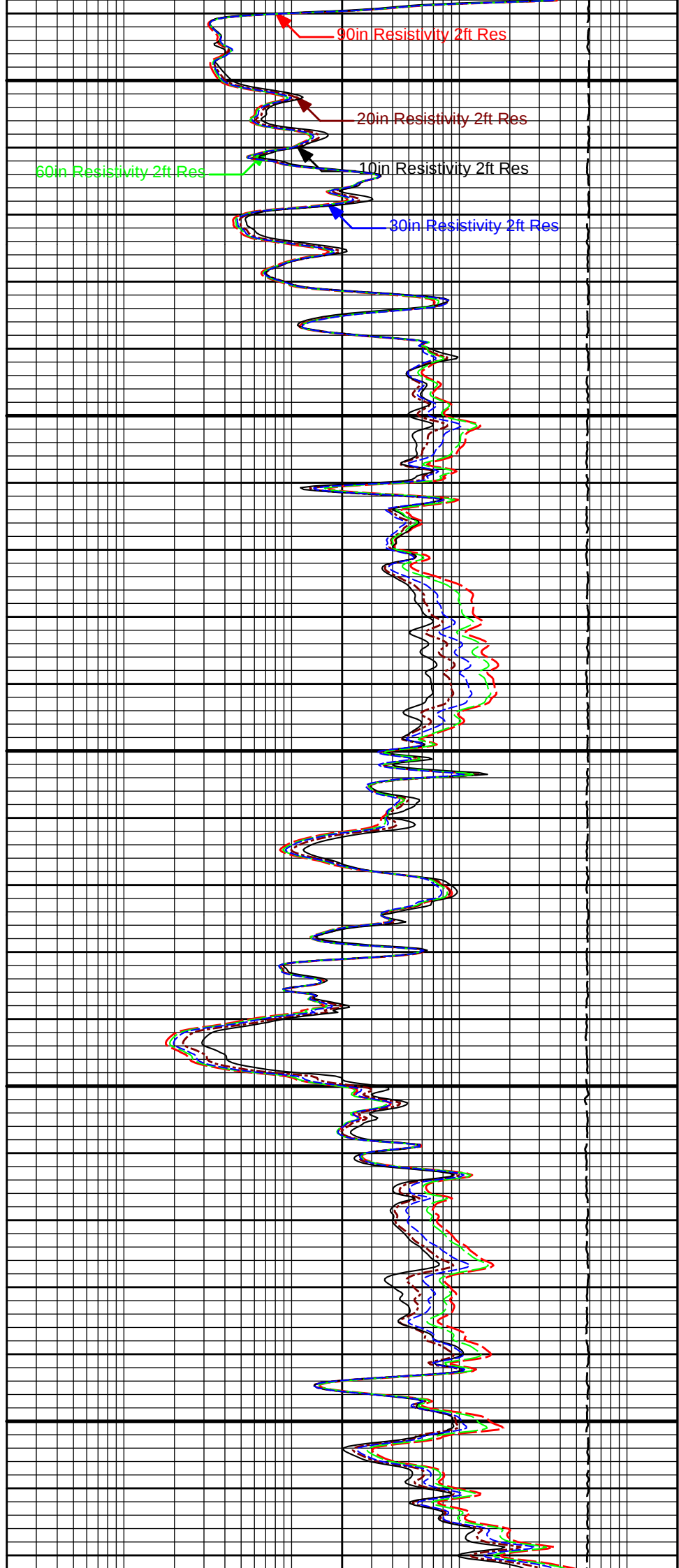
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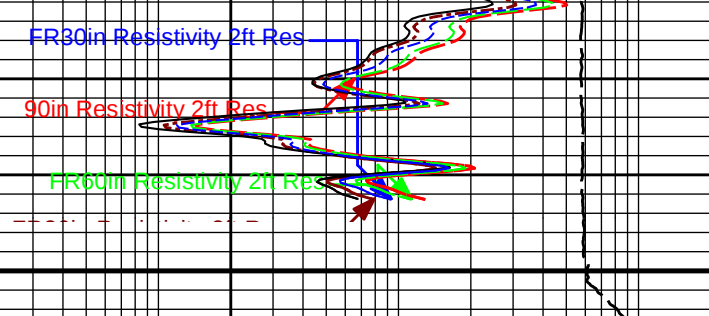




5100

5200



[illegible]**HALLIBURTON**

Plot Time: 07-Feb-18 07:53:36
Plot Range: 1880 ft to 5305.08 ft
Data: RILEY-WINKLER\Well Based\MAIN\
Plot File: \\LOCAL-IRILEY-WINKLER\Well Based\ACRT\ACRT_5inch_main

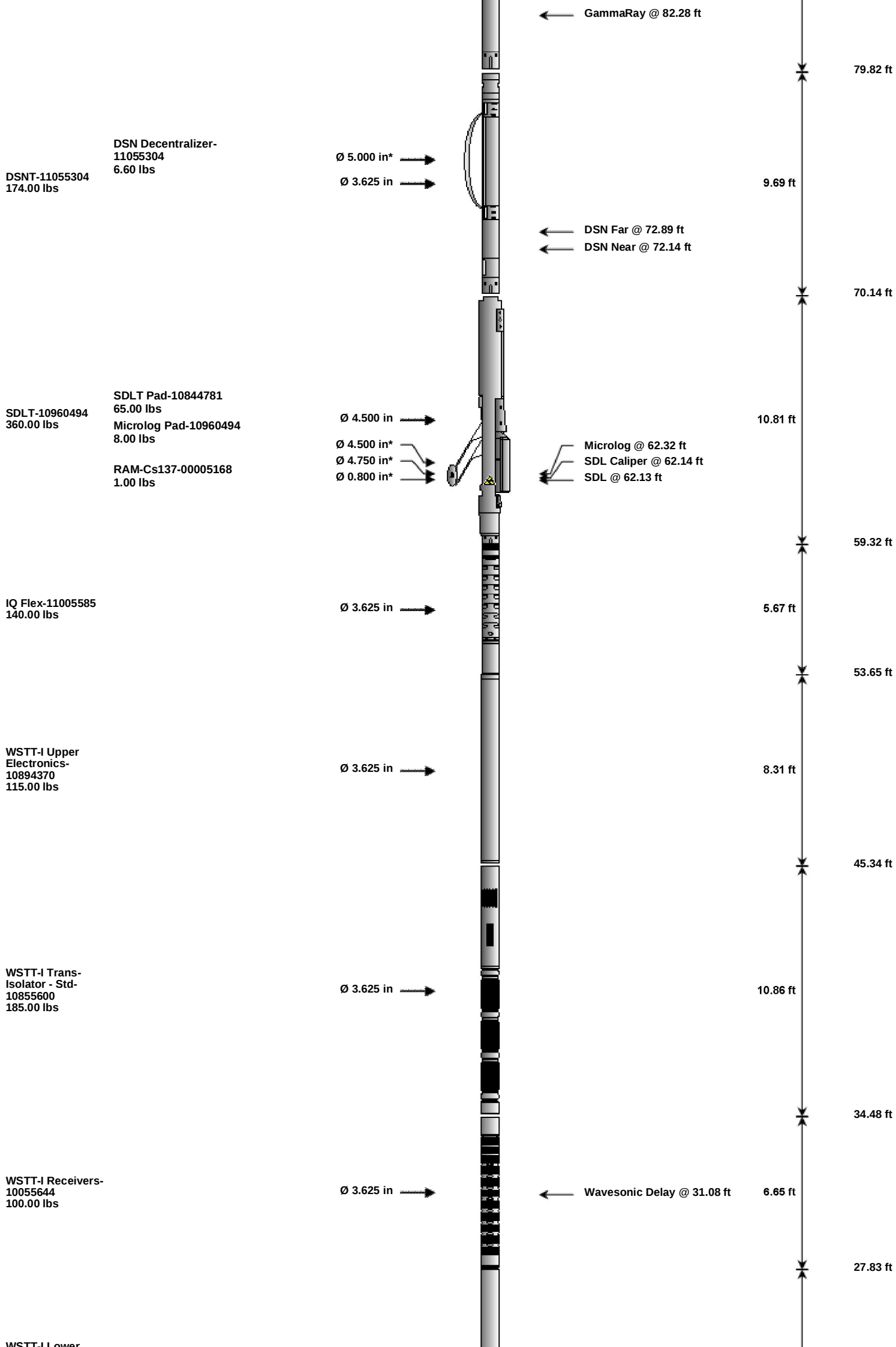
5 INCH MAIN LOG

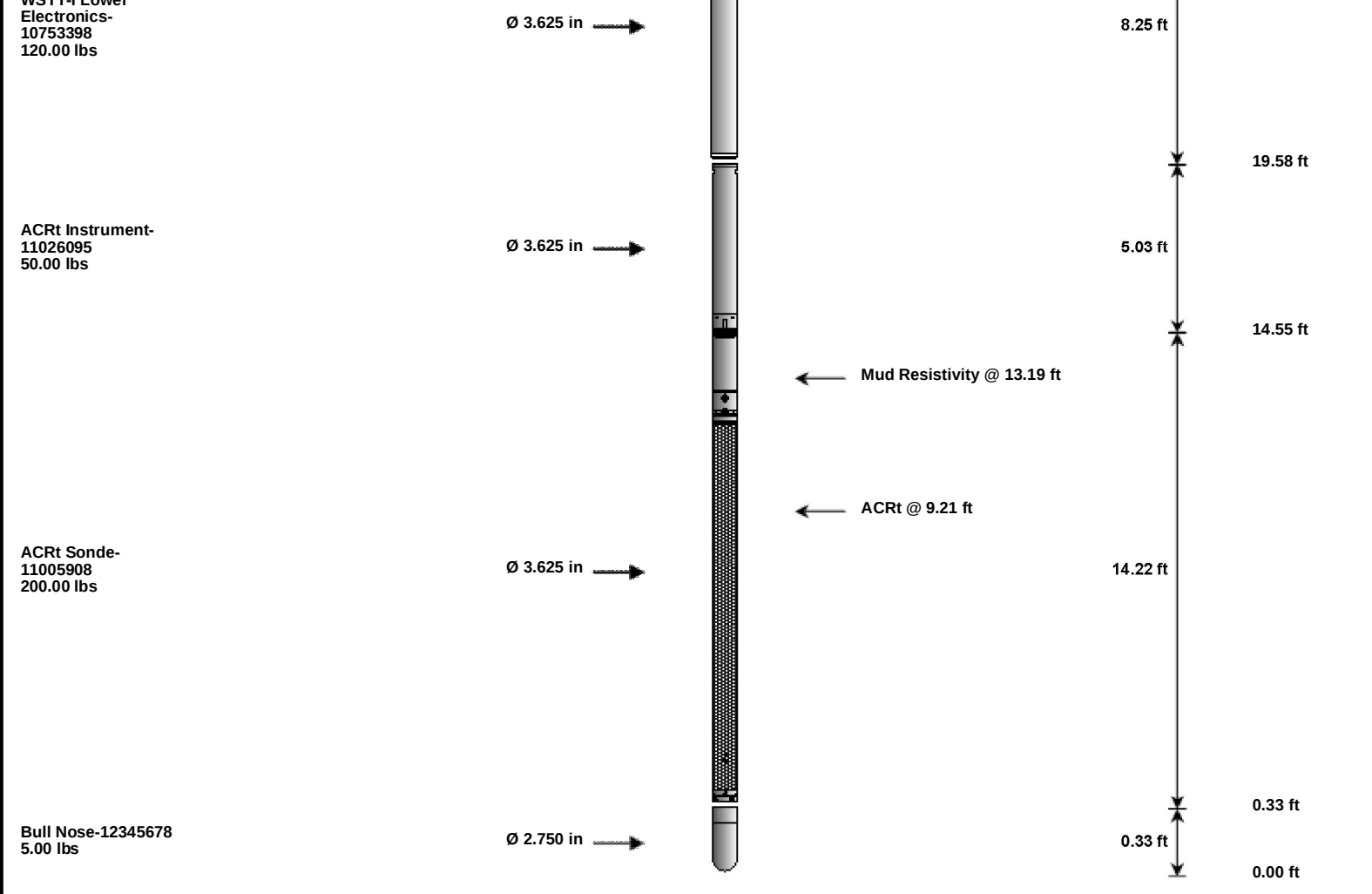
5 INCH MAIN LOG

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length	
CH_HOS-11459024 37.50 lbs	Weak Point 7000 lbs- 00000025 0.01 lbs	Ø 2.750 in Ø 0.010 in*		← Temperature @ 95.03 ft	2.50 ft	95.53 ft	
XOHD-11569312 20.00 lbs		Ø 2.750 in Ø 3.625 in			0.95 ft	93.03 ft	
							92.08 ft
SP Sub-11441455 60.00 lbs		Ø 3.625 in		← SP @ 90.30 ft	3.74 ft		
				← Z-Accelerometer @ 87.89 ft			88.34 ft
GTET-11958947 165.00 lbs		Ø 3.625 in			8.52 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	11459024	37.50	2.50	93.03	300.00
WP7K	Weak Point 7000 lbs	00000025	0.01	0.01	* 93.83	300.00
XOHD	Hostile to Dits Cross Over	11569312	20.00	0.95	92.08	300.00
SP	SP Sub	11441455	60.00	3.74	88.34	300.00
GTET	Gamma Telemetry Tool	11958947	165.00	8.52	79.82	60.00
DSNT	Dual Spaced Neutron	11055304	174.00	9.69	70.14	60.00
DCNT	DSN Decentralizer	11055304	6.60	5.13	* 73.47	300.00
SDLT	Spectral Density Tool	10960494	360.00	10.81	59.32	60.00
SDLP	Density Insite Pad	10844781	65.00	2.55	* 61.53	60.00
Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137	00005168	1.00	0.80	* 61.76	300.00
MICP	Microlog Pad	10960494	8.00	1.00	* 61.82	60.00
IQF	IQ Flex tool	11005585	140.00	5.67	53.65	300.00
WSTT	WaveSonic Insite - Upper Electronics	10894370	115.00	8.31	45.34	100.00
WSTT	WaveSonic Insite - Trans-Isolator - Std	10855600	185.00	10.86	34.48	100.00
WSTT	WaveSonic Insite - Receivers	10055644	100.00	6.65	27.83	30.00
WSTT	WaveSonic Insite - Lower Electronics	10753398	120.00	8.25	19.58	100.00
ACRt	Array Compensated True Resistivity Instrument Section	11026095	50.00	5.03	14.55	120.00
ACRt	Array Compensated True Resistivity Sonde Section	11005908	200.00	14.22	0.33	120.00
BLNS	Bull Nose	12345678	5.00	0.33	0.00	300.00
Total			1,812.11	95.53		
* Not included in Total Length and Length Accumulation.						
Data: RILEY-WINKLER\0001 GTET-DSNT-SDLT-WSTT-ACRT\IDLE					Date: 07-Feb-18 02:58:52	

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	CSD	Logging Interval is Cased?	Yes	

	SHARED	CSOD	Inner Casing OD size	8.625	in
	SHARED	CSWT	Casing Weight	24.00	lbpf
	SHARED	ISOC	Is Outer Casing Present?	No	
	SHARED	CSCM	Casing Cemented	Yes	
	SHARED	CMTY	API Cement Class	H	
	SHARED	CMWT	Cement Weight	16.500	ppg
1893.00					
	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	9.350	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	0.903	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	5300.00	ft
	SHARED	BHT	Bottom Hole Temperature	152.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	CBM Temperature Master Tool	GTET	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
	Rwa / CrossPlot	RMFR	Rmf Reference	0.77	ohmm
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
	Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
	Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
	Rwa / CrossPlot	BHSM	Borehole Size Source Tool	SDLT	
	Rwa / CrossPlot	ROIN	Input for RO Calculation	Rwa	
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GEOK	Process Gamma Ray EVR?	No	
	GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
	GTET	BHSM	Borehole Size Source Tool	SDLT	
	DSNT	DNOK	Process DSN?	Yes	
	DSNT	DEOK	Process DSN EVR?	No	
	DSNT	NLIT	Neutron Lithology	Limestone	
	DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
	DSNT	DNTT	Temperature Correction Type	None	
	DSNT	DPRS	DSN Pressure Correction Type	None	
	DSNT	SHCO	View More Correction Options	No	
	DSNT	UTVD	Use TVD for Gradient Corrections?	No	
	DSNT	LHWT	Logging Horizontal Water Tank?	No	
	DSNT	BHSM	Borehole Size Source Tool	SDLT	
	SDLT	CLOK	Process Caliper Outputs?	Yes	
	Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
	SDLT Pad	DNOK	Process Density?	Yes	

SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
WSTT-I Receivers	WSOK	Process WSTT?	Yes	
WSTT-I Receivers	AFIL	Adaptive Filtering?	No	
WSTT-I Receivers	PINT	Process 1 Sample and Skip	0	
WSTT-I Receivers	PROM	Process Mode: M=1,MX=2,MY=3,MXY=4	4	
WSTT-I Receivers	DTSH	Delta -T Shale	100.00	uspf
WSTT-I Receivers	DTMT	Delta -T Matrix Type	Limestone 47.6	
WSTT-I Receivers	DTMA	Delta -T Matrix	57.00	uspf
WSTT-I Receivers	DTFL	Delta -T Pore Fluid	189.00	uspf
WSTT-I Receivers	RHOM	Matrix Density	2.7100	g/cc
WSTT-I Receivers	RHOF	Fluid Density	1.0000	g/cc
WSTT-I Receivers	SMTH	Semblance Threshold	0.25	
WSTT-I Receivers	VPVS	VPVS Ratio for Porosity	1.40	
WSTT-I Receivers	APEQ	Acoustic Porosity Equation	Wylie	
WSTT-I Receivers	NAVS	Navigation Source Tool	GTET	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt Sonde	TPOS	Tool Position	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMAX	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
ACRt Sonde	BHSM	Borehole Size Source Tool	SDLT	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	
BOTTOM				
Data: RILEY-WINKLER\0001 GTET-DSNT-SDLT-WSTT-ACRT\003 07-Feb-18 04:56 Dn @2119.5f			Date: 07-Feb-18 04:58:11	

HALLIBURTON			
CALIBRATION REPORT			
NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 11958947	Reference Calibration Date:	08-Dec-17 09:10:57
Engineer:	HARRIS	Calibration Date:	08-Dec-17 09:13:31
Software Version:	WL INSITE R5.0.5 (Build 8)	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	33.1	32.7	api
Background + Calibrator	267.5	264.7	api
Calibrator	234.4	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 11958947	Reference Calibration Date:	08-Dec-17 09:13:31
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	06-Feb-18 10:40:47
Software Version:	WL INSITE R5.0.5 (Build 8)	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	32.7	22.9	api
Background + Calibrator	264.7	255.8	api
Calibrator	232.0	232.9	api
Shop	Field	Difference	Tolerance
232.0	232.9	-0.9	+/- 9.00

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION			
Tool Name:	ACRt Sonde - 11005908	Reference Calibration Date:	24-Jan-18 11:36:27
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	24-Jan-18 11:50:13
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1
Host Tool Name:	ACRt Instrument - 11026095		

TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0460	1.05	0.95	1.0254	1.05	0.95	1.0171	1.05
A2 (50")	0.95	1.0446	1.05	0.95	1.0235	1.05	0.95	1.0164	1.05
A3 (29")	0.95	1.0389	1.05	0.95	1.0177	1.05	0.95	1.0093	1.05
A4 (17")	0.95	1.0430	1.05	0.95	1.0192	1.05	0.95	1.0120	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0151	1.05	0.95	1.0061	1.05
A6 (6")	N/A	N/A	N/A	0.95	1.0008	1.05	0.95	0.9927	1.05

SONDE OFFSET									
Subarray	R12KHz			R36KHz			R72KHz		
	(mmho/m)			(mmho/m)			(mmho/m)		
A1 (80")	2.035			-4.238			-6.287		
A2 (50")	-0.068			-4.209			-5.392		
A3 (29")	-14.940			-4.585			-4.141		
A4 (17")	-94.271			-29.723			-24.603		
A5 (10")	N/A			-111.810			-48.336		
A6 (6")	N/A			351.822			183.260		

TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION			
Signal	Lower	R	Upper		Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.91	1.3		Mud Cell	0.95	1.00	1.05
36K	1.0	1.93	2.0					
72K	1.0	1.27	2.0					

PASS/FAIL SUMMARY	
GAIN RANGE CHK	PASS
SONDE OFFSET CHK	PASS

TOOL OK TO LOG						
CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11958947						
Gamma Ray Calibrator	232.0	232.9	-----	-0.9	+/- 9.00	api
ACRt Sonde-11005908						
Mud Cell	1.00	-----	-----	0	-----	ohm-m
Data: RILEY-WINKLER\0001 GTET-DSNT-SDLT-WSTT-ACRT\IDLE					Date: 07-Feb-18 02:59:43	



INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
Rwa / CrossPlot				
TPUL	Tension Pull	95.53	NO	
BS	Bit Size	95.53	NO	
HDIA	Measured Hole Diameter	0.00	NO	
CH_HOS				
DHTN	DownholeTension	0.00	BLK	0.000
SP Sub				
PLTC	Plot Control Mask	90.30	NO	
SP	Spontaneous Potential	90.30	BLK	1.250
SPR	Raw Spontaneous Potential	90.30	NO	
SPO	Spontaneous Potential Offset	90.30	NO	
GTET				
TPUL	Tension Pull	82.28	NO	
GR	Natural Gamma Ray API	82.28	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	82.28	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	82.28	W	1.416 , 0.750
HDIA	Measured Hole Diameter	0.00	NO	
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	72.04	NO	
RNDS	Near Detector Telemetry Counts	72.14	BLK	1.417
RFDS	Far Detector Telemetry Counts	72.89	TRI	0.583
DNTT	DSN Tool Temperature	72.14	NO	
DSNS	DSN Tool Status	72.04	NO	
ERND	Near Detector Telemetry Counts EVR	72.14	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	72.89	BLK	0.000
ENTM	DSN Tool Temperature EVR	72.14	NO	
HDIA	Measured Hole Diameter	0.00	NO	
SDLT				
TPUL	Tension Pull	62.14	NO	
PCAL	Pad Caliper	62.14	TRI	0.250
ACAL	Arm Caliper	62.14	TRI	0.250
WSTT - Downhole				

WS11-I Receivers			
TPUL	Tension Pull	31.08	NO
DPSX	Dipole Source X Structure1	27.83	NO
DPSY	Dipole Source Y Structure1	27.83	NO
DPSM	Monopole Source Structure	27.83	NO
WVST	Wavesonic Compressed Data	31.08	NO
TPUL	Tension Pull	31.08	NO
XMS1	Wave Sonic Status Word 1	27.83	NO
XMS2	Wave Sonic Status Word 2	27.83	NO
XTS1	Wave Sonic XMITStatus Word 1	27.83	NO
XTS2	Wave Sonic XMITStatus Word 2	27.83	NO
F1HA	Dipole 1 HV After	27.83	NO
F1HB	Dipole 1 HV Before	27.83	NO
F2HA	Dipole 2 HV After	27.83	NO
F2HB	Dipole 2 HV Before	27.83	NO
F3HA	Monopole HV After	27.83	NO
F3HB	Monopole HV Before	27.83	NO
INVT	Input Voltage	27.83	NO
5VOL	5 Volts	27.83	NO
MI5A	Minus 5 Volts Analog	27.83	NO
ITMP	Instrument Temperature	27.83	NO
PL5A	Plus 5 Volts Analog	27.83	NO
5VD	Plus 5 Volts Digital	27.83	NO
TCUR	Tool Current	27.83	NO
SUPV	Supply Voltage	27.83	NO
PRVT	Preregulated voltage	27.83	NO
PRVT	Pre-regulated voltage Xmter	27.83	NO
TEMP	Temperature	27.83	NO
ACQN	Acquisition Number	27.83	NO
XDP	Delay Reference	31.08	NO
MITM	MIT Mode	31.08	NO
VERS	Version	27.83	NO
D1CT	Dipole 1 Compressed Word Count	31.08	NO
D2CT	Dipole 2 Compressed Word Count	31.08	NO
MCNT	Monopole Compressed Word Count	31.08	NO
SEQN	Sequence Number	27.83	NO
FREV	Firmware Revision	27.83	NO
MSMP	Monopole Sample Rate	27.83	NO
DSMP	Dipole Sample Rate	27.83	NO
MFWF	Monopole Firing Waveform	27.83	NO
MFRQ	Monopole Frequency	27.83	NO
MDLY	Monopole Delay	27.83	NO
DXWF	Dipole X Firing Waveform	27.83	NO
XFRQ	Dipole X Frequency	27.83	NO
XDLY	Dipole X Delay	27.83	NO
DYWF	Dipole Y Firing Waveform	27.83	NO
YFRQ	Dipole Y Frequency	27.83	NO
YDLY	Dipole Y Delay	27.83	NO
DPSX	Dipole Source X Structure1	27.83	NO
DPSY	Dipole Source Y Structure1	27.83	NO
DPSM	Monopole Source Structure	27.83	NO
WVST	Wavesonic Compressed Data	31.08	NO
AUTM	Auto Mode	27.83	NO
SONM	tool mode for sonic - 0 for normal or 3 for calibration	27.83	NO
MSL	Monopole Lower Travel Time	31.08	NO
MSH	Monopole Upper Travel Time	31.08	NO
MLFC	Monopole-1 Lower Filter Bandpass Frequency Cut-off	27.83	NO
MUFC	Monopole-1 Upper Filter Bandpass Frequency Cut-off	27.83	NO
DLTT	Dipole Lower Travel Time	27.83	NO

DUTT	Dipole Upper Travel Time	27.83	NO
DLFC	Dipole Lower Filter Bandpass Frequency Cut-off	27.83	NO
DUFC	Dipole Upper Filter Bandpass Frequency Cut-off	27.83	NO
MUTE	WaveSonic Mute/Enable Channels and Sides map	27.83	NO
MUTS	Mute/Enable Sides	27.83	NO
WSRB	Relative Bearing	31.08	NO
WSAZ	WSX Azimuth Pad 1	31.08	NO
TPUL	Tension Pull	31.08	NO
WMP	Summed array of Monopole for SIDES - A,B,C,D	31.08	NO
WXX	Dipole X for SIDES - A-C	31.08	NO
WYY	Dipole Y for SIDES - B-D	31.08	NO
WXY	Dipole X for SIDES - B-D	31.08	NO
WYX	Dipole Y for SIDES - A-C	31.08	NO
TPUL	Tension Pull	31.08	NO
WMA	Monopole Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO
WMB	Monopole Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO
WMC	Monopole Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO
WMD	Monopole Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO
WXA	Dipole X Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO
WXB	Dipole X Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO
WXC	Dipole X Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO
WXD	Dipole X Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO
WYA	Dipole Y Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO
WYB	Dipole Y Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO
WYC	Dipole Y Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO
WYD	Dipole Y Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO
GAR1	Gain Side A Receiver 1	27.83	NO
GAR2	Gain Side A Receiver 2	27.83	NO
GAR3	Gain Side A Receiver 3	27.83	NO
GAR4	Gain Side A Receiver 4	27.83	NO
GAR5	Gain Side A Receiver 5	27.83	NO
GAR6	Gain Side A Receiver 6	27.83	NO
GAR7	Gain Side A Receiver 7	27.83	NO
GAR8	Gain Side A Receiver 8	27.83	NO
GBR1	Gain Side B Receiver 1	27.83	NO
GBR2	Gain Side B Receiver 2	27.83	NO
GBR3	Gain Side B Receiver 3	27.83	NO
GBR4	Gain Side B Receiver 4	27.83	NO
GBR5	Gain Side B Receiver 5	27.83	NO
GBR6	Gain Side B Receiver 6	27.83	NO
GBR7	Gain Side B Receiver 7	27.83	NO
GBR8	Gain Side B Receiver 8	27.83	NO
GCR1	Gain Side C Receiver 1	27.83	NO
GCR2	Gain Side C Receiver 2	27.83	NO
GCR3	Gain Side C Receiver 3	27.83	NO
GCR4	Gain Side C Receiver 4	27.83	NO
GCR5	Gain Side C Receiver 5	27.83	NO
GCR6	Gain Side C Receiver 6	27.83	NO
GCR7	Gain Side C Receiver 7	27.83	NO
GCR8	Gain Side C Receiver 8	27.83	NO
GDR1	Gain Side D Receiver 1	27.83	NO
GDR2	Gain Side D Receiver 2	27.83	NO
GDR3	Gain Side D Receiver 3	27.83	NO
GDR4	Gain Side D Receiver 4	27.83	NO
GDR5	Gain Side D Receiver 5	27.83	NO
GDR6	Gain Side D Receiver 6	27.83	NO
GDR7	Gain Side D Receiver 7	27.83	NO
GDR8	Gain Side D Receiver 8	27.83	NO

ACRt Sonde				
TPUL	Tension Pull	2.73	NO	
F1R1	ACRT 12KHz - 80in R value	8.98	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	8.98	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.48	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.48	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	4.98	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	4.98	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	3.98	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	3.98	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.48	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.48	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.23	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.23	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	8.98	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.48	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.48	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	4.98	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	3.98	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	3.98	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.48	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.48	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.23	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.23	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	8.98	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	8.98	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.48	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.48	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	4.98	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	4.98	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	3.98	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	3.98	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.48	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.48	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.23	BLK	0.000
RMUD	Mud Resistivity	12.52	BLK	0.000
F1RT	Transmitter Reference 12 KHz Real Signal	2.73	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.73	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.73	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.73	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.73	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.73	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.73	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.73	BLK	0.000
ITMP	Instrument Temperature	2.73	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.73	NO	
TIDV	Instrument Temperature Derivative	2.73	NO	
TUDV	Upper Temperature Derivative	2.73	NO	
TLDV	Lower Temperature Derivative	2.73	NO	
TRBD	Receiver Board Temperature	2.73	NO	
HDIA	Measured Hole Diameter	0.00	NO	
Microlog Pad				
TPUL	Tension Pull	62.32	NO	
MINV	Microlog Lateral	62.32	BLK	0.750
MNOR	Microlog Normal	62.32	BLK	0.750

SDLT Pad				
TPUL	Tension Pull	62.13	NO	
NAB	Near Above	61.95	BLK	0.920
NHI	Near Cesium High	61.95	BLK	0.920
NLO	Near Cesium Low	61.95	BLK	0.920
NVA	Near Valley	61.95	BLK	0.920
NBA	Near Barite	61.95	BLK	0.920
NDE	Near Density	61.95	BLK	0.920
NPK	Near Peak	61.95	BLK	0.920
NLI	Near Lithology	61.95	BLK	0.920
NBAU	Near Barite Unfiltered	61.95	BLK	0.250
NLIU	Near Lithology Unfiltered	61.95	BLK	0.250
FAB	Far Above	62.30	BLK	0.250
FHI	Far Cesium High	62.30	BLK	0.250
FLO	Far Cesium Low	62.30	BLK	0.250
FVA	Far Valley	62.30	BLK	0.250
FBA	Far Barite	62.30	BLK	0.250
FDE	Far Density	62.30	BLK	0.250
FPK	Far Peak	62.30	BLK	0.250
FLI	Far Lithology	62.30	BLK	0.250
PTMP	Pad Temperature	62.14	BLK	0.920
NHV	Near Detector High Voltage	61.53	NO	
FHV	Far Detector High Voltage	61.53	NO	
ITMP	Instrument Temperature	61.53	NO	
DDHV	Detector High Voltage	61.53	NO	
HDIA	Measured Hole Diameter	0.00	NO	

~~D.C. FILE # WUW/LEB/0004 ATFT DONT ADLT WATT AORTIDE~~

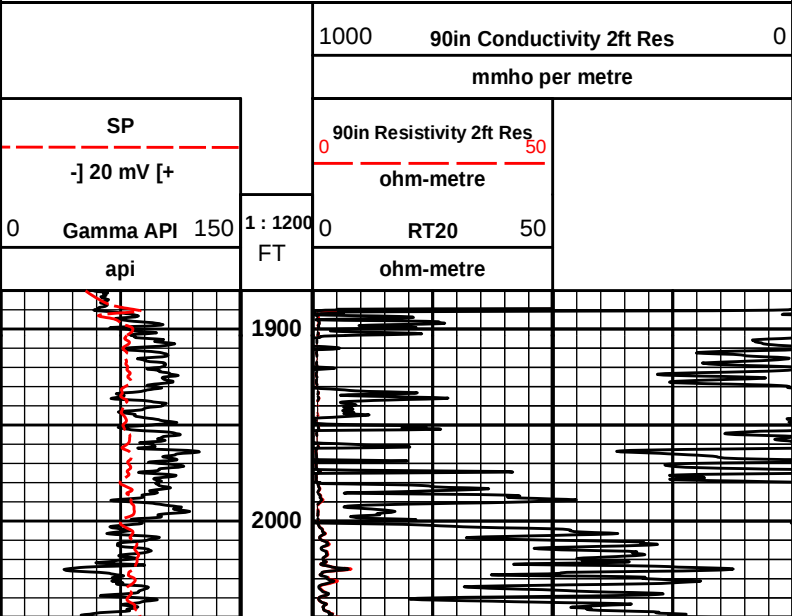
24 25 26 27 28 29 30 31

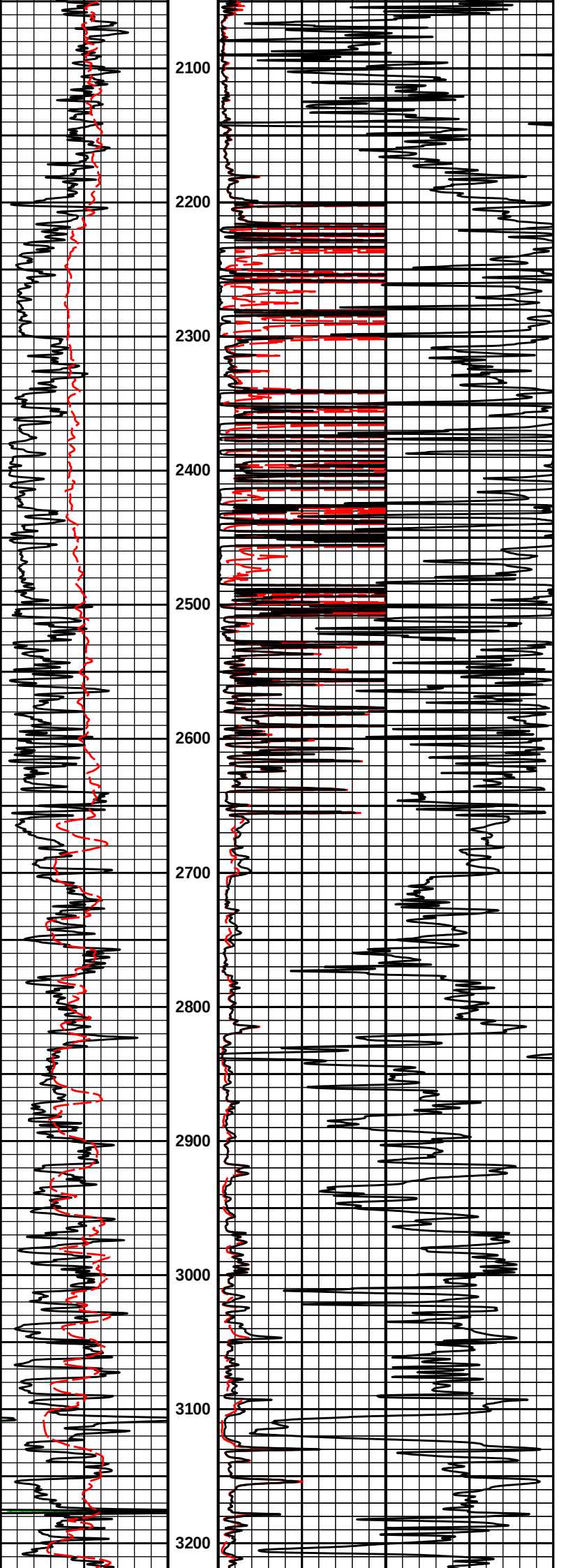
HALLIBURTON

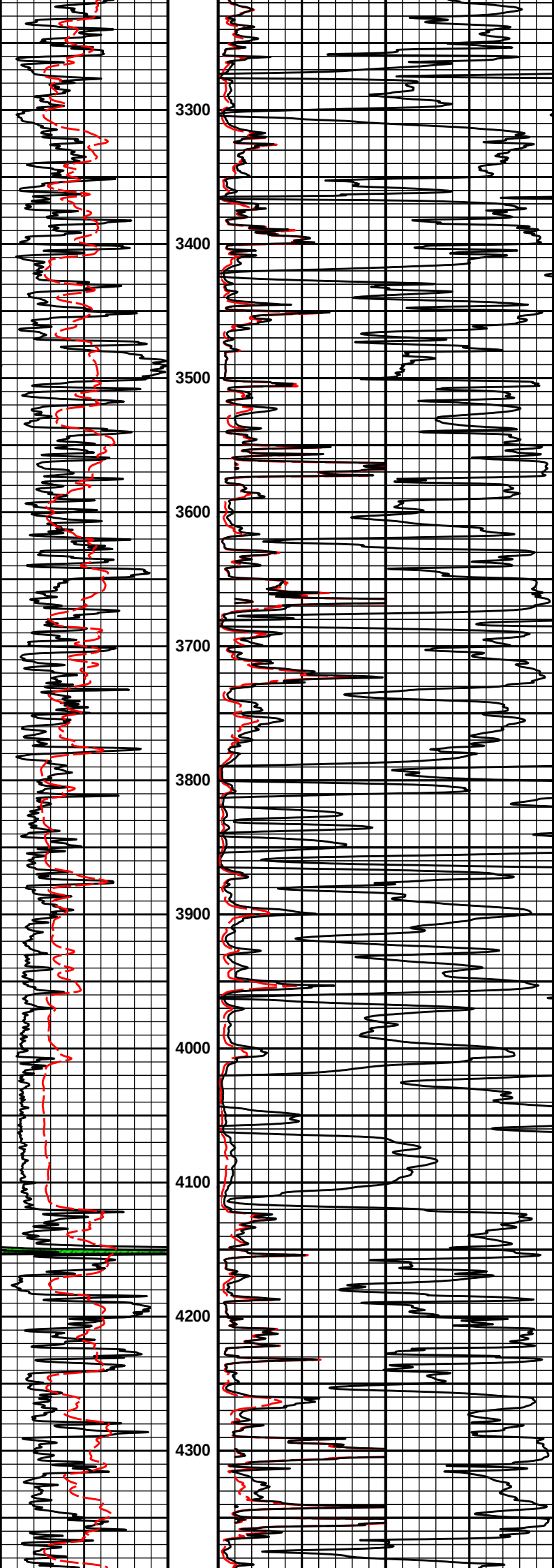
Plot Time: 07-Feb-18 07:53:43
Plot Range: 1880 ft to 5292.5 ft
Data: RILEY-WINKLER\Well Based\MAIN\
Plot File: \\LOCAL-IRILEY-WINKLER\Well Based\ACRT\ACRT_1_main

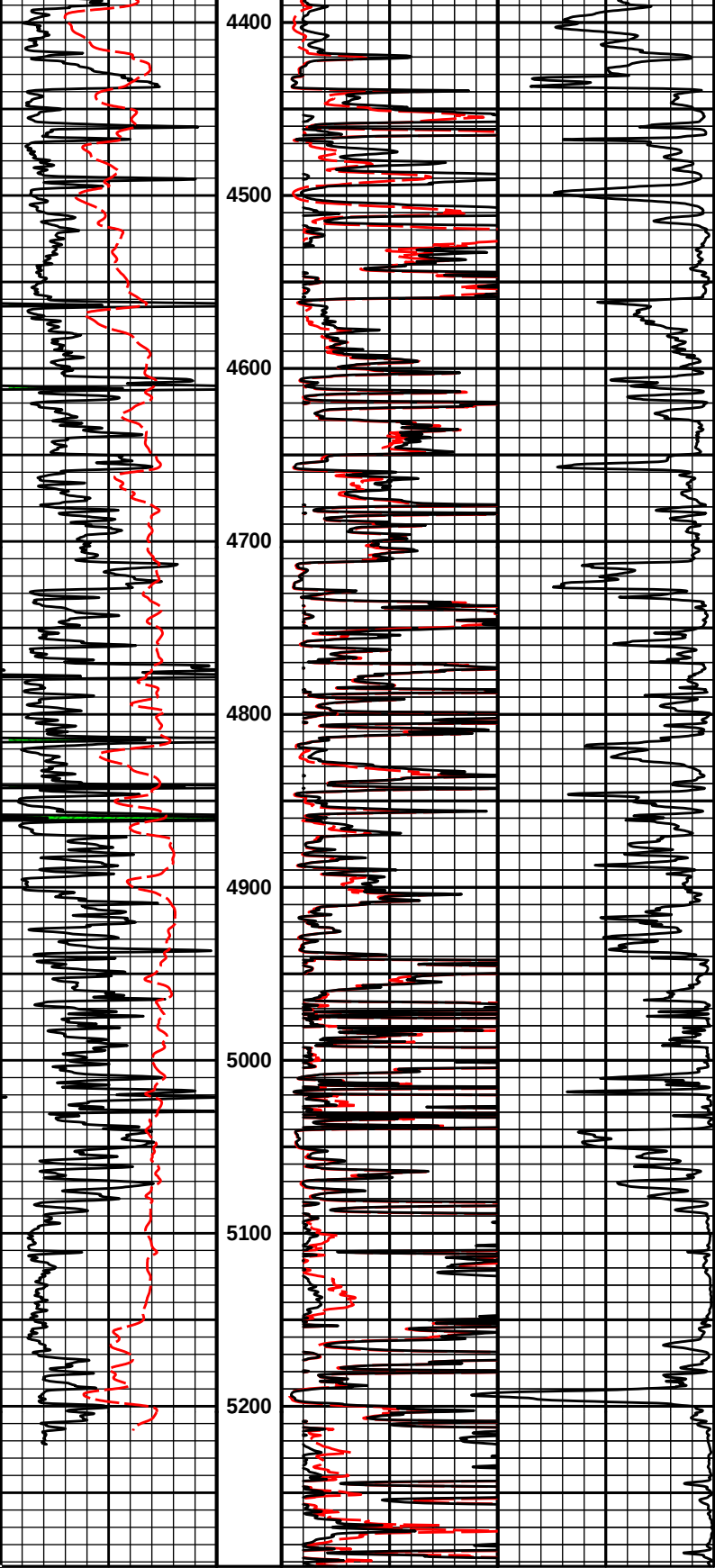
1 INCH MAIN LOG

1 INCH CORRELATION LOG









0	Gamma API	150	1 : 1200	0	RT20	50	
	api		FT		ohm-metre		
	SP				90in Resistivity 2ft Res	0	50
	-] 20 mV [+]				ohm-metre		
				1000	90in Conductivity 2ft Res		0
					mmho per metre		

HALLIBURTON

Plot Time: 07-Feb-18 07:53:46
Plot Range: 1880 ft to 5292.5 ft
Data: RILEY-WINKLER\Well Based\MAIN\
Plot File: \\LOCAL\RILEY-WINKLER\Well Based\ACRT\ACRT_1_main

1 INCH MAIN LOG

2 INCH MAIN LOG
1 INCH CORRELATION LOG

COMPANY	FALCON EXPLORATION, INC		
WELL	RILEY WINKLER 1-6(SW)		
FIELD	WILDCAT		
COUNTY	GRAY	STATE	KANSAS
HALLIBURTON		ARRAY COMPENSATED TRUE RESISTIVITY LOG	