HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY LOG

COMPANY	MERIT ENERGY COMPANY, LLC
WELL	BLACK KNIGHT 28-1
FIELD/BLOCK	WILDCAT
COUNTY	HASKELL
STATE	KANSAS

API No. 15081221980100

Location (SHL) 2277' FWL & 1220' FSL
NE NW SW SE

Sect. 28 Twp. 30S Rge. 32W

Other Services:
DSNT/SDLT
MICROLOG
BSAT
ACRT

Permanent Datum	GL	Elev. 2963.0 ft	Elev.: K.B. 2975.0 ft
Log measured from	KB	, 12.0 ft above perm. Datum	D.F. 2975.0 ft
Drilling measured from	KB		G.L. 2963.0 ft

Date		21-Sep-19		
Run No.		ONE		
Depth - Driller		5645.0 ft		
Depth - Logger		5634.0 ft		
Bottom - Logged Interval		5625.00 ft		
Top - Logged Interval		1756.00 ft		
Casing - Driller		8.625 in @ 1767.0 ft	@	@
Casing - Logger		1756.0 ft		
Bit Size		7.875 in	@	@
Type Fluid in Hole		Water Based Mud		
Density	Viscosity	9.15 g/cc	65.00 s/qt	
PH	Fluid Loss	11.00 pH	4.0 cptm	
Source of Sample		MUDPIT		
Rm @ Meas. Temperature		1.20 ohmm @ 75.00 degF	@	@
Rmf @ Meas. Temperature		1.08 ohmm @ 75.00 degF	@	@
Rmc @ Meas. Temperature		1.29 ohmm @ 75.00 degF	@	@
Source Rmf	Rmc	MEAS	MEAS	
Rm @ BHT		0.70 ohmm @ 134.0 degF	@	@
Time Since Circulation		6.0 hr		
Time on Bottom		21-Sep-19 09:30		
Max. Rec. Temperature		134.00 degF @ 5634.0 ft	@	@
Equipment	Location	12147634	EL RENO, OK	
Recorded By		JORGE ORLANDO PEREZ		
Witnessed By		MARTIN LANGE		

Fold here

PGM Version: WL INSITE R6.2.7 (Build 7)

API No.: 15081221980100

Service Ticket No.: 905980530

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

Date	Sample No.	Depth-Driller	Type Fluid in Hole	Density	Viscosity	Ph	Fluid Loss	Source of Sample	Rm @ Meas. Temp	Rmf @ Meas. Temp.	Rmc @ Meas. Temp.	Source Rmf	Rmc	Rm @ BHT	Rmf @ BHT	Rmc @ BHT
									@	@	@			@	@	@

RESISTIVITY SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA

Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other
ONE	ACRT	N/A	1.5" S.O.	N/A
	I-11022962			
	S-11005909			

EQUIPMENT DATA

	GAMMA		ACOUSTIC		DENSITY		NEUTRON
Run No.	ONE		ONE		ONE		ONE
Serial No.	10971172		10747683		12153520		11019643
Model No.	GTET		BSAT		SDLT		DSNT
Diameter	3.625"		2		5.5"		3.625"
Detector Model No.	T-102		EVEN		GAM-GAM		NEU-NEU
Type	SCINT				CS137		AM241BE
Length	8"		LSA [Y/N]		5471GW		DSN-424
Distance to Source	N/A		FWDA [Y/N]		1.78 Ci		15.0 Ci

LOGGING DATA

GENERAL					GAMMA			ACOUSTIC			DENSITY			NEUTRON		
Run No.	Depth From	Depth To	Speed ft/min	Scale L	Scale R	Matrix	Scale L	Scale R	Matrix	Scale L	Scale R	Matrix	Scale L	Scale R	Matrix
ONE	TD	CSG	REC	0	150	30	-10	-10	47.6 uSec/ft	30	-10	2.71 gr/cc	30	-10	LIME

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@

Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING

CHLORIDES REPORTED AT 1500 ppm

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.

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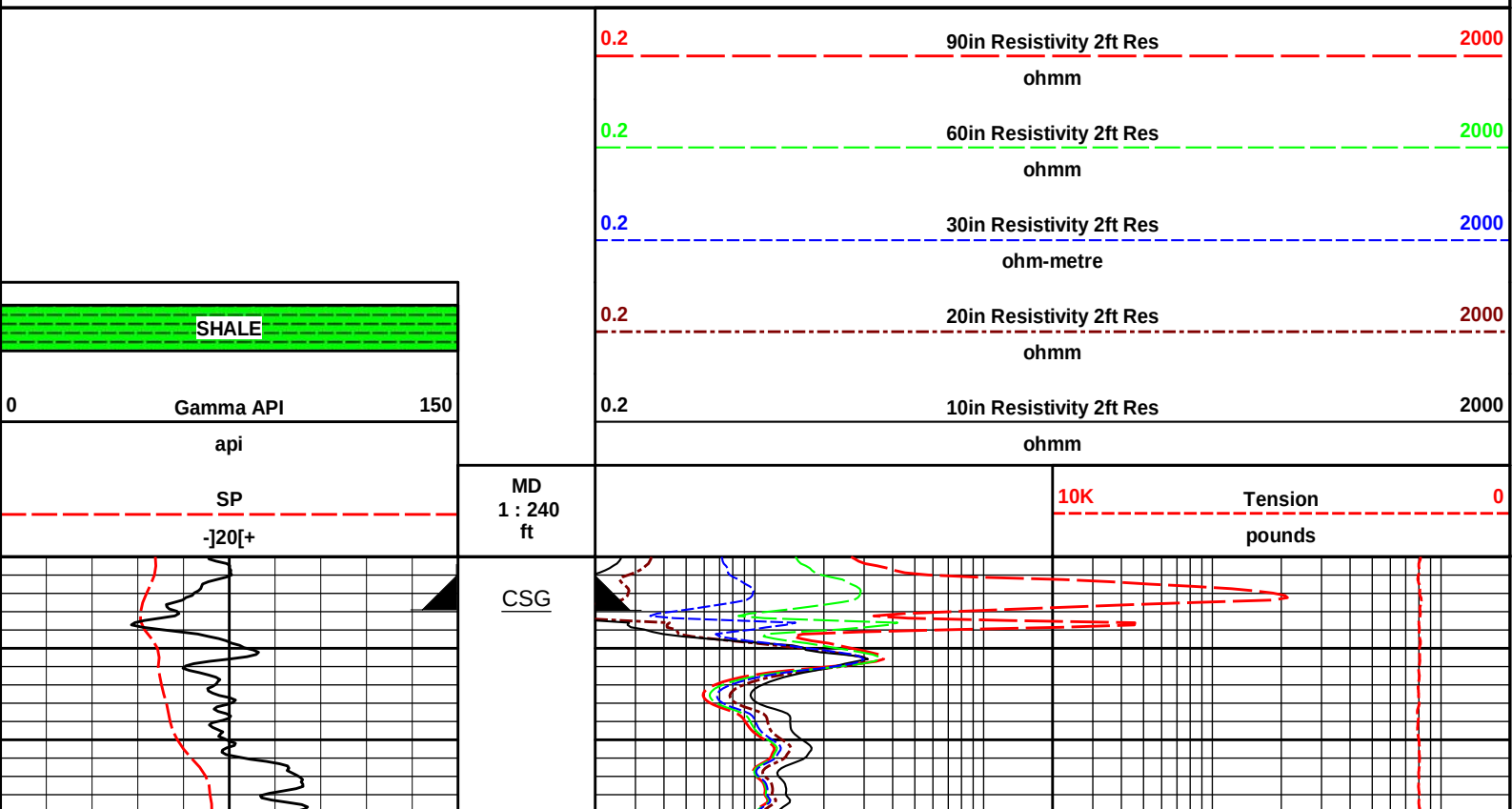
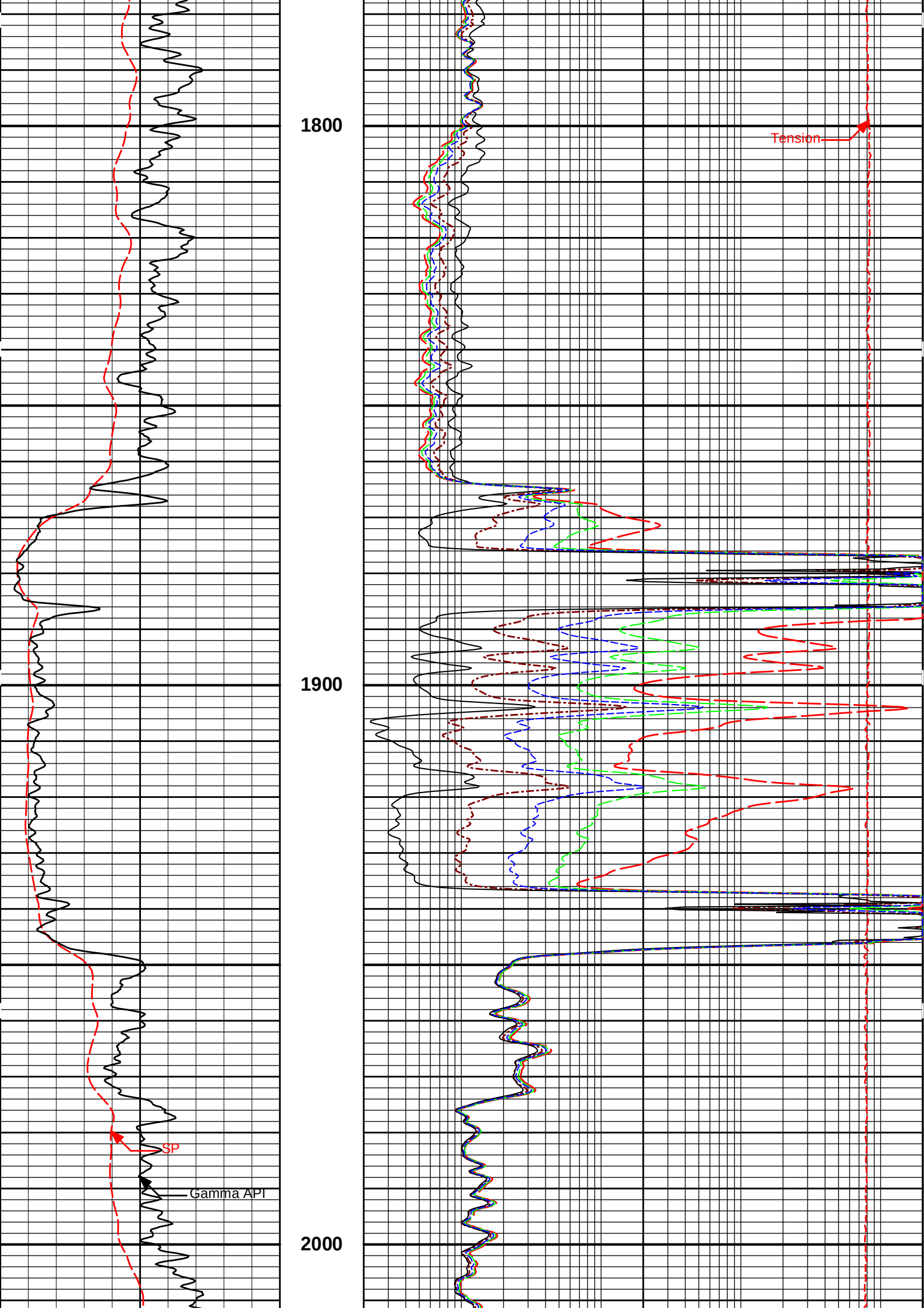
Plot Time: 21-Sep-19 11:04:25
Plot Range: 1750 ft to 5639 ft
Data: BLACK-K_28-1\Well Based*
Plot File: \\-LOCAL-\BLACK-K_28-1\Well Based\ACRT5\ACRT_5_main_lib

5 INCH MAIN LOG

MEASURED DEPTH
MAIN SECTION 5" PER 100'

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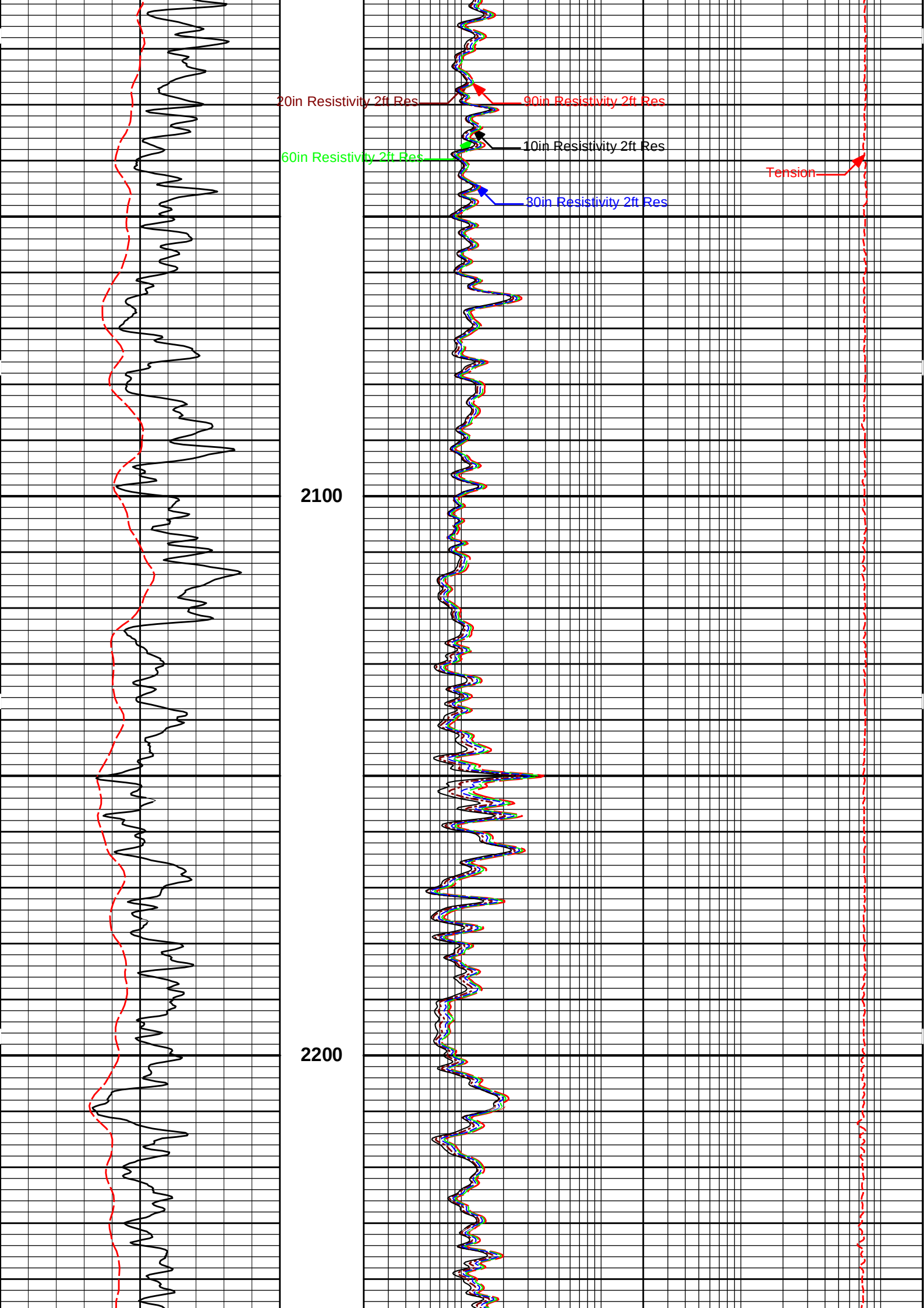
1900
2000
SP
Gamma API
Tension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10in Resistivity 2ft Res
60in Resistivity 2ft Res
Tension
30in Resistivity 2ft Res
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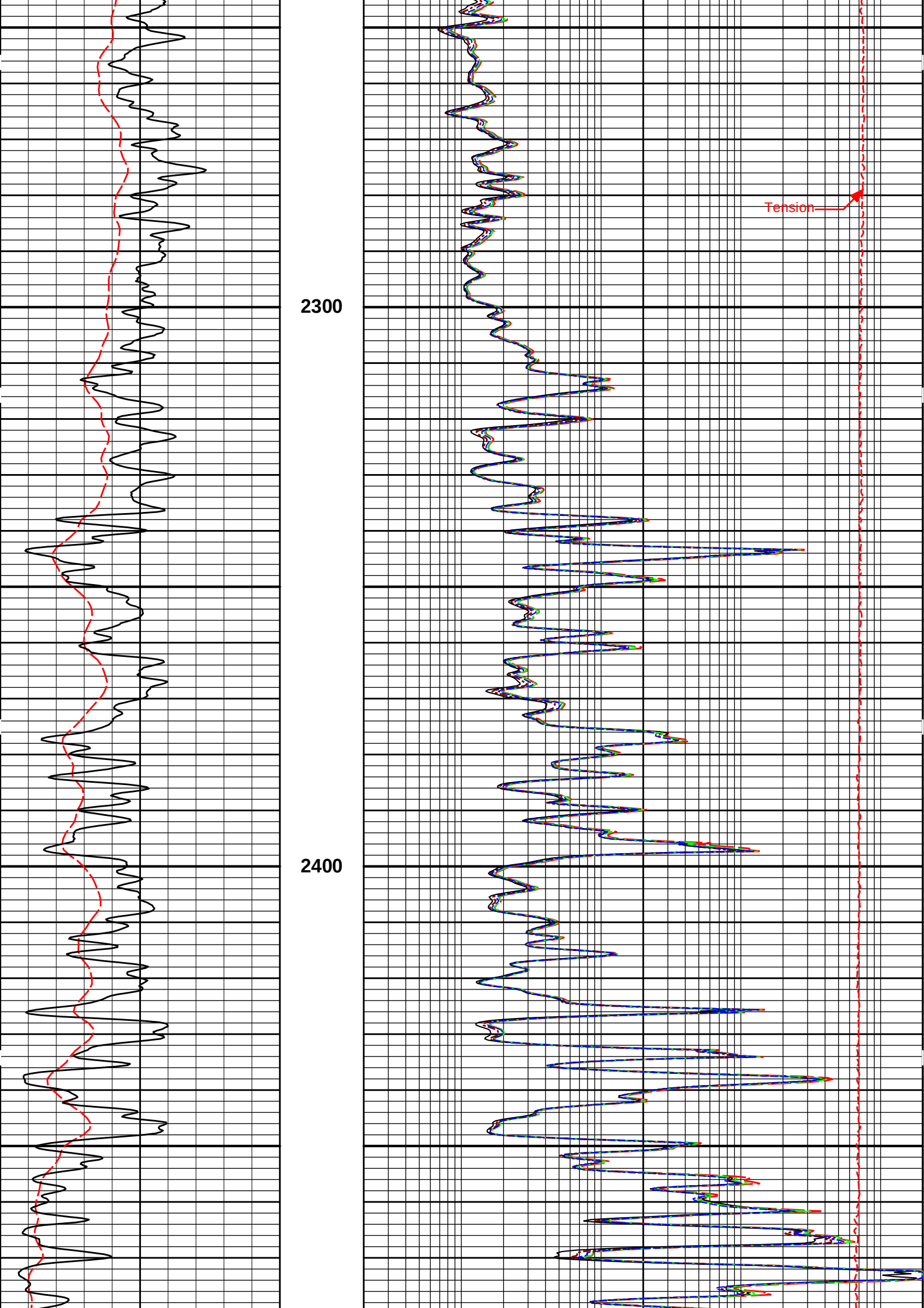
2200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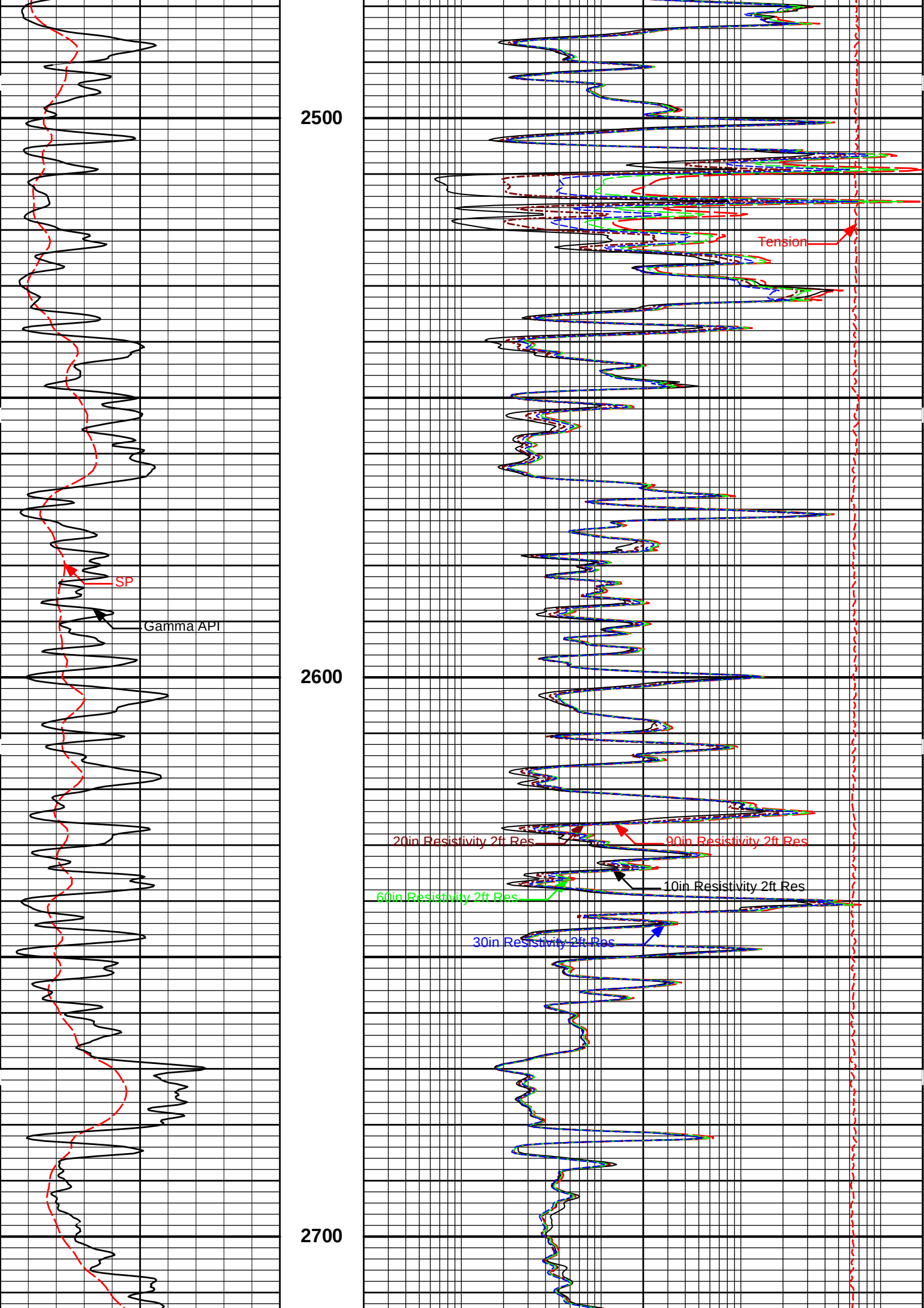
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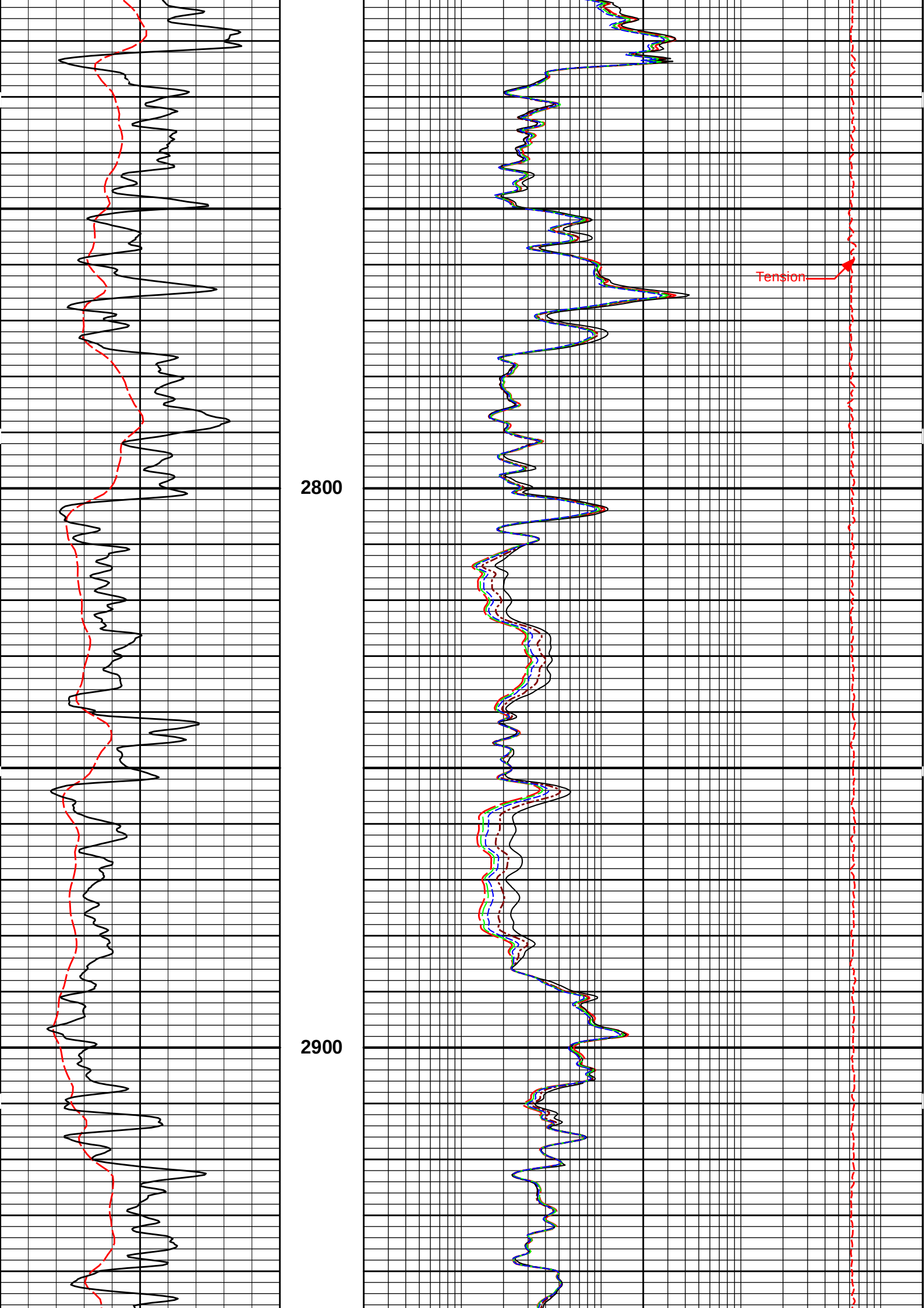
60in Resistivity 2ft Res
30in Resistivity 2ft Res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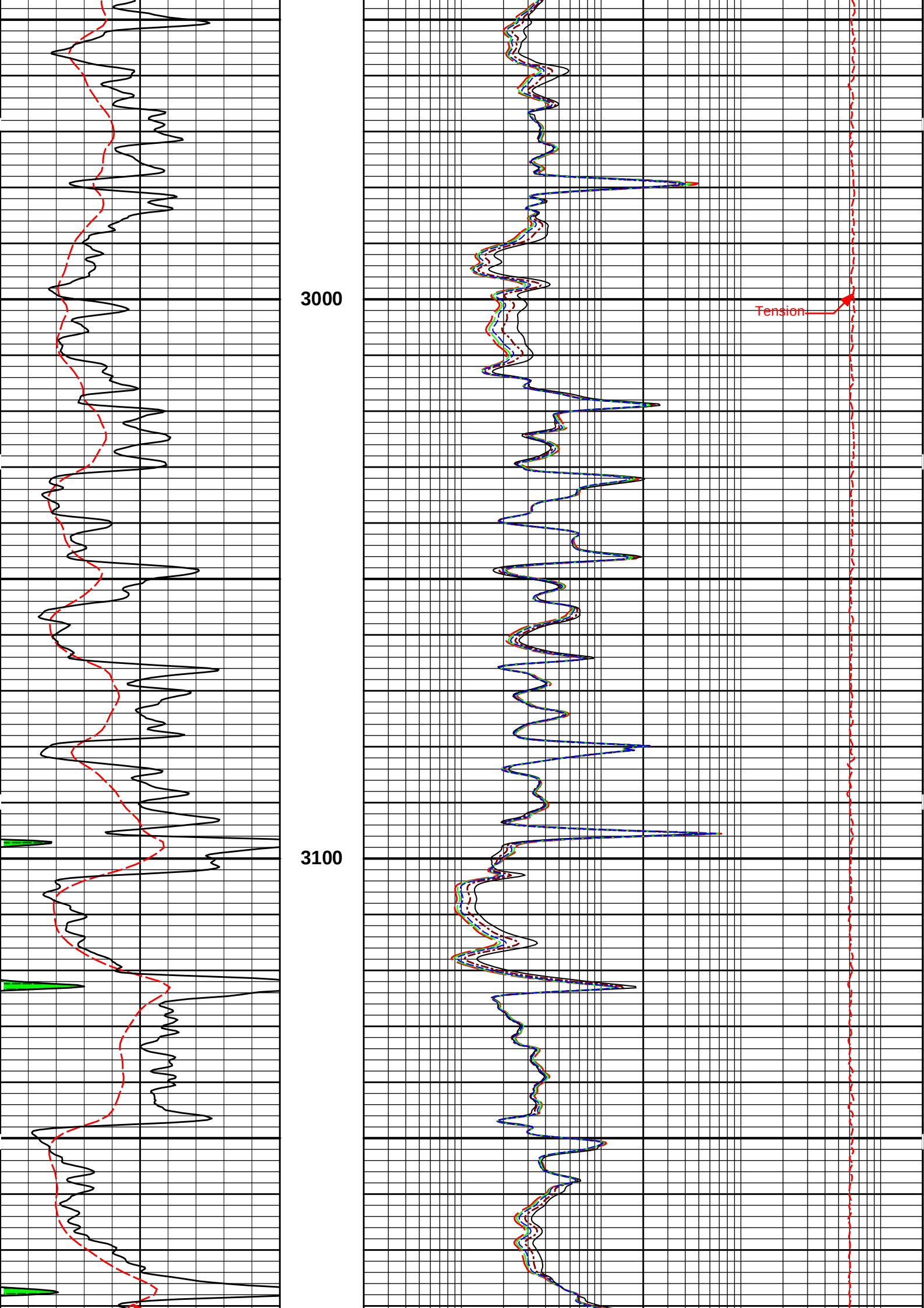
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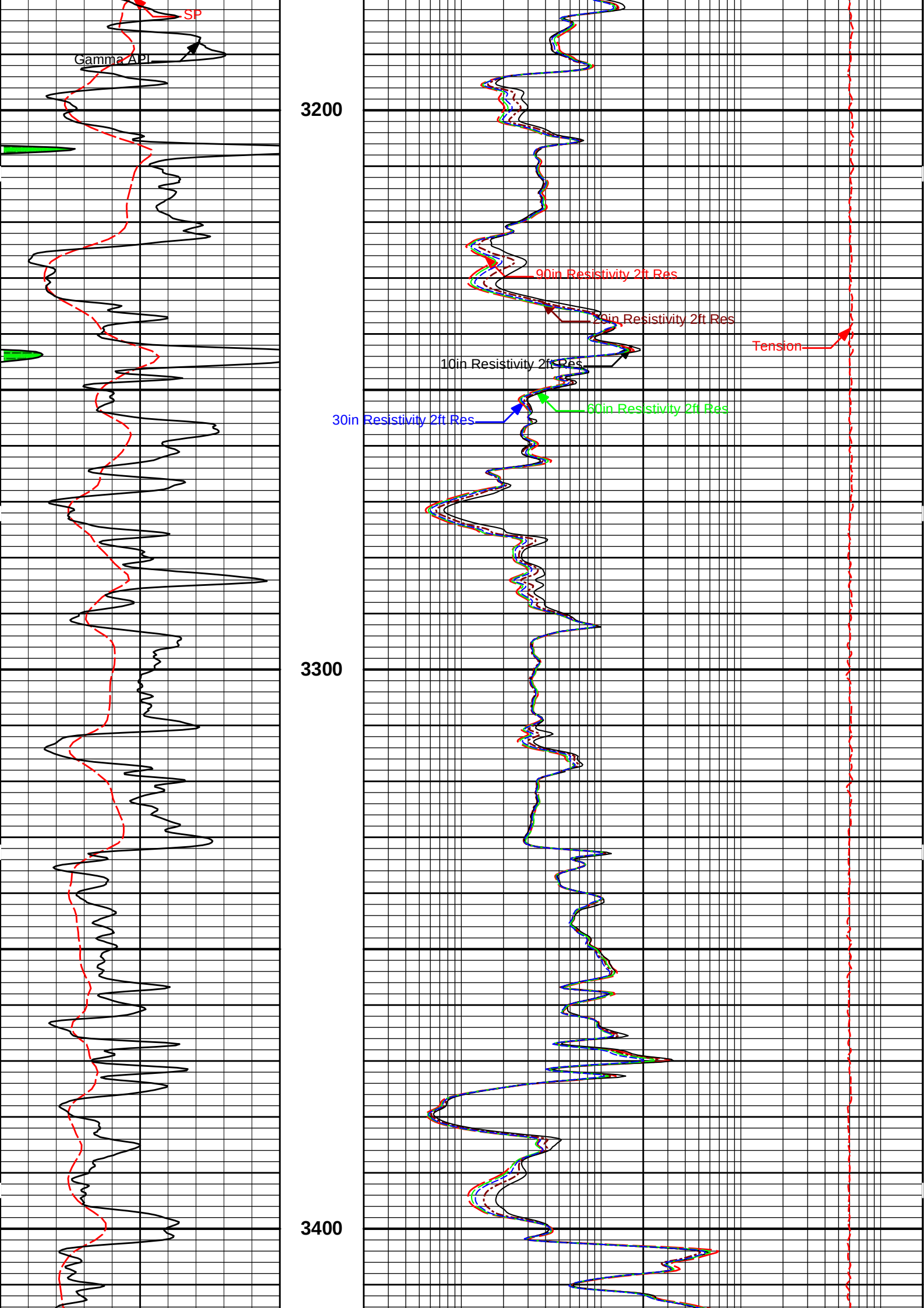
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Tension
10in Resistivity 2ft Res
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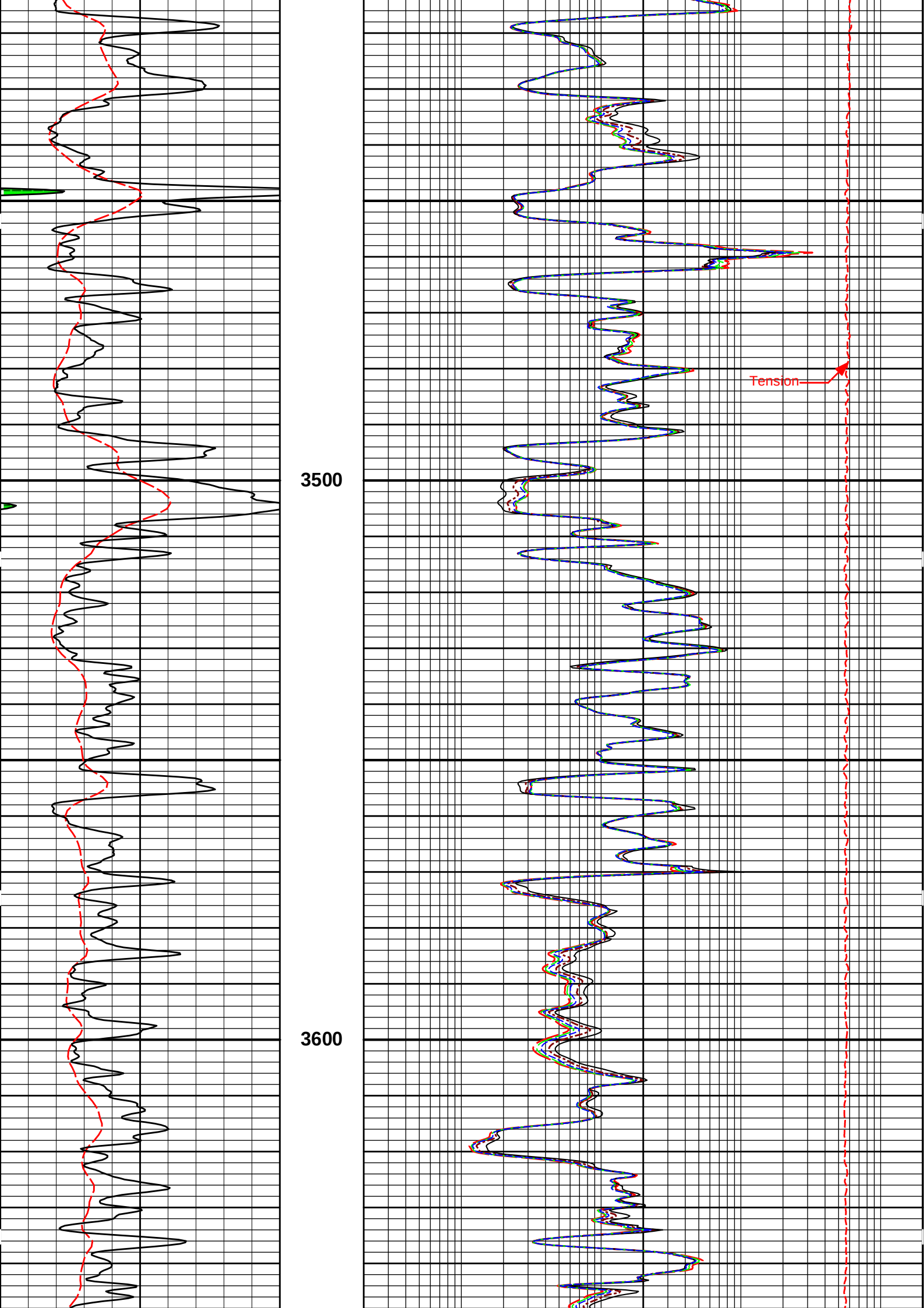
30in Resistivity 2ft Res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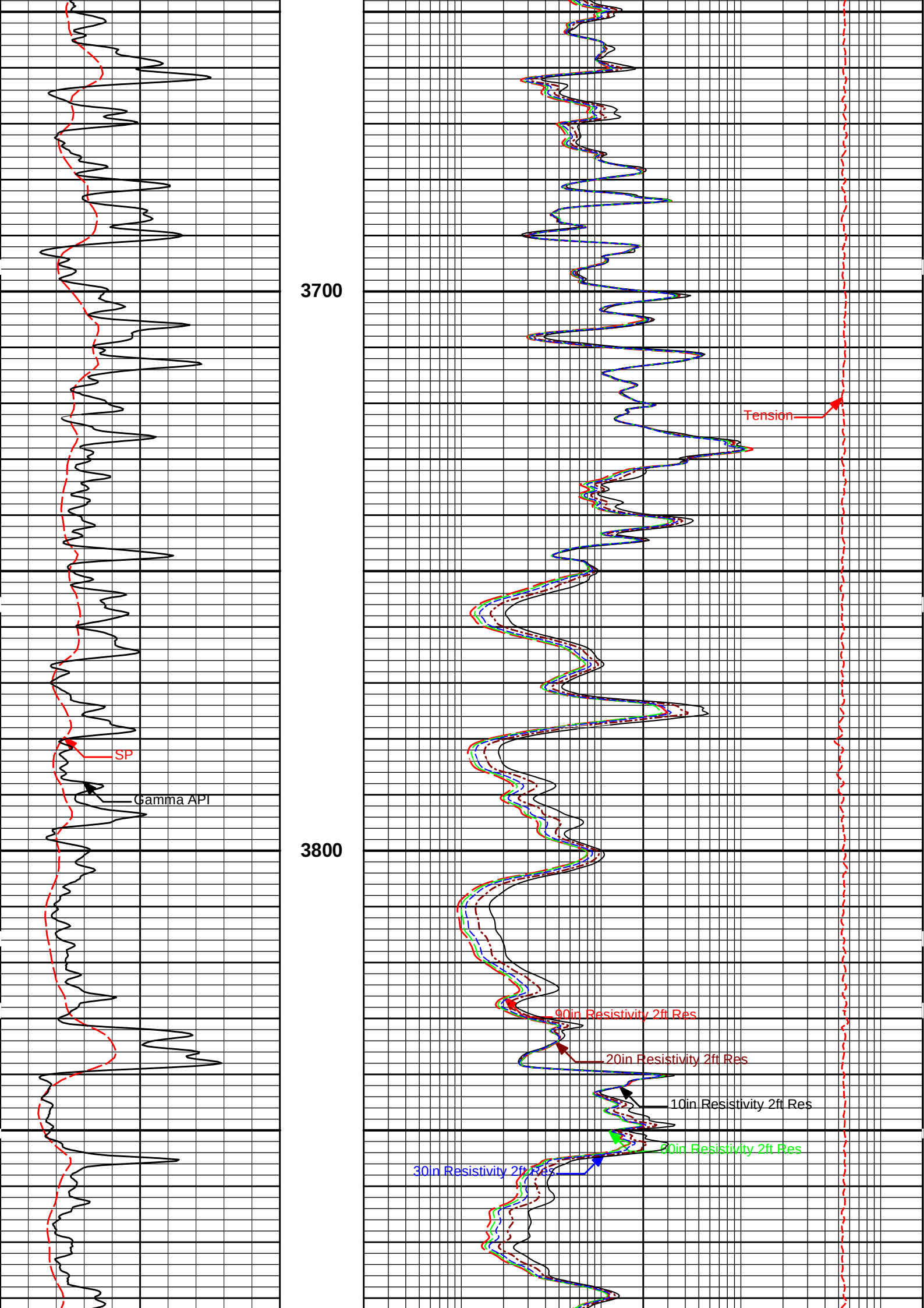
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SP
Gamma API
Tension
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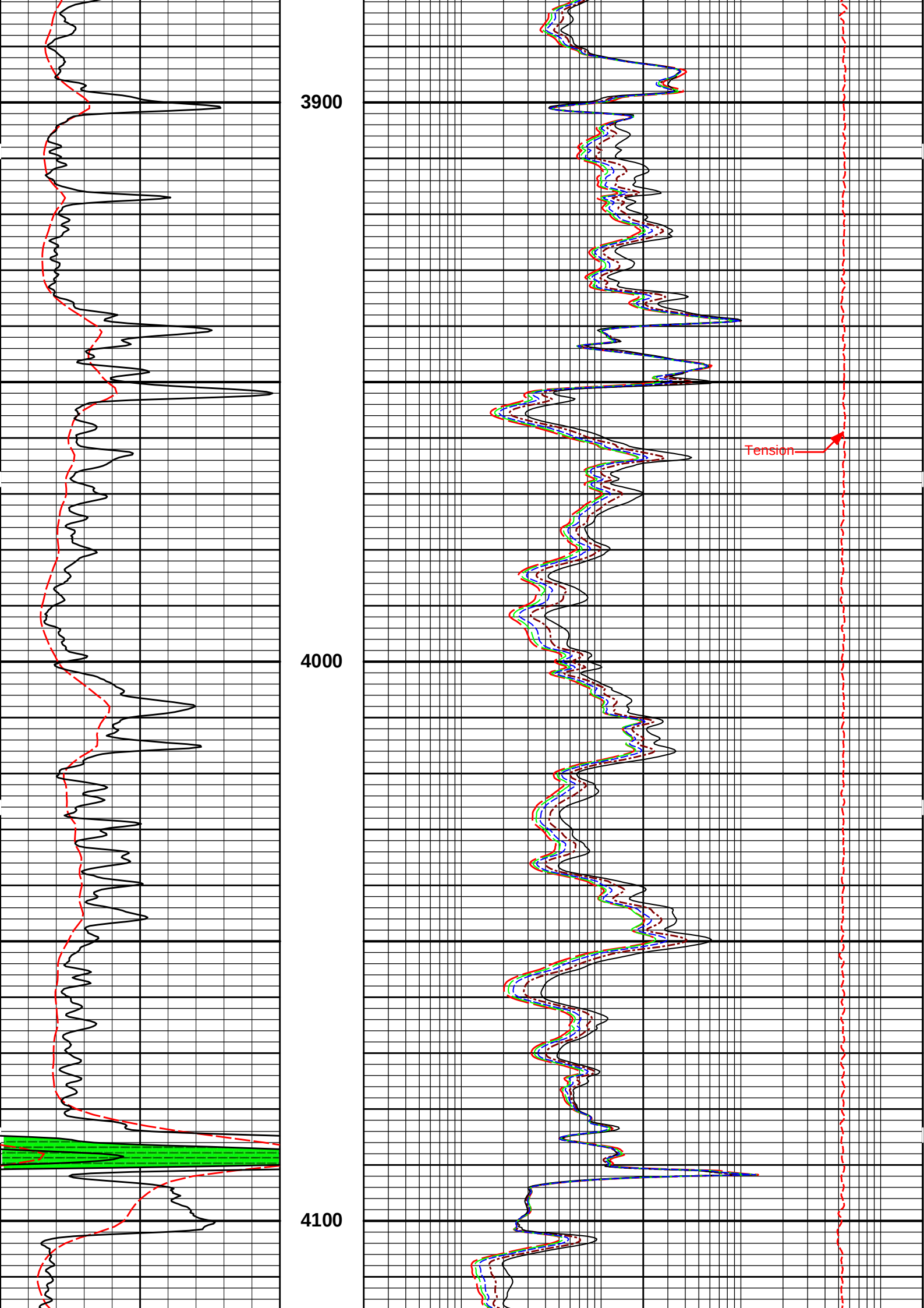
10in Resistivity 2ft Res
60in Resistivity 2ft Res
30in Resistivity 2ft Res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4000
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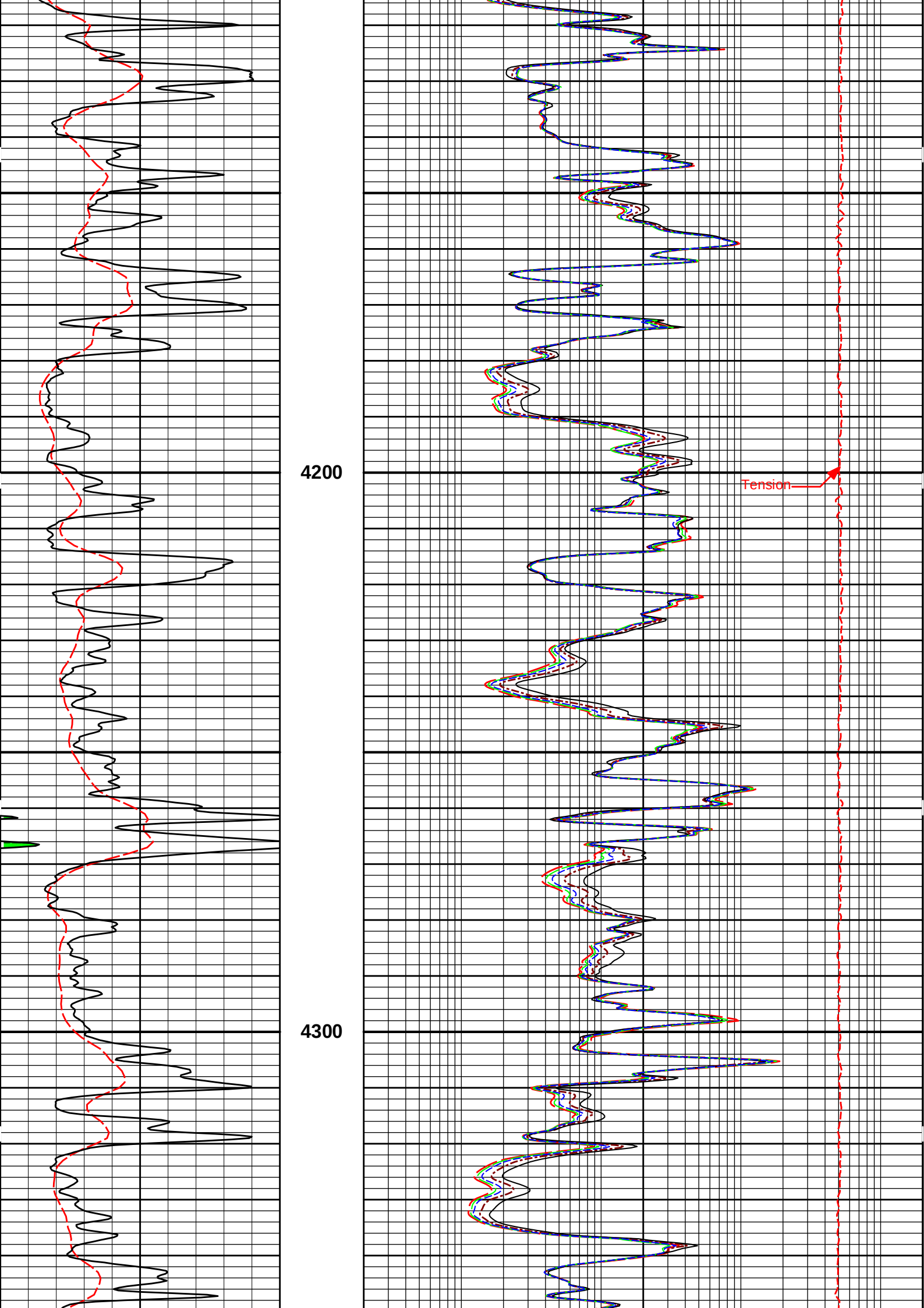
Tension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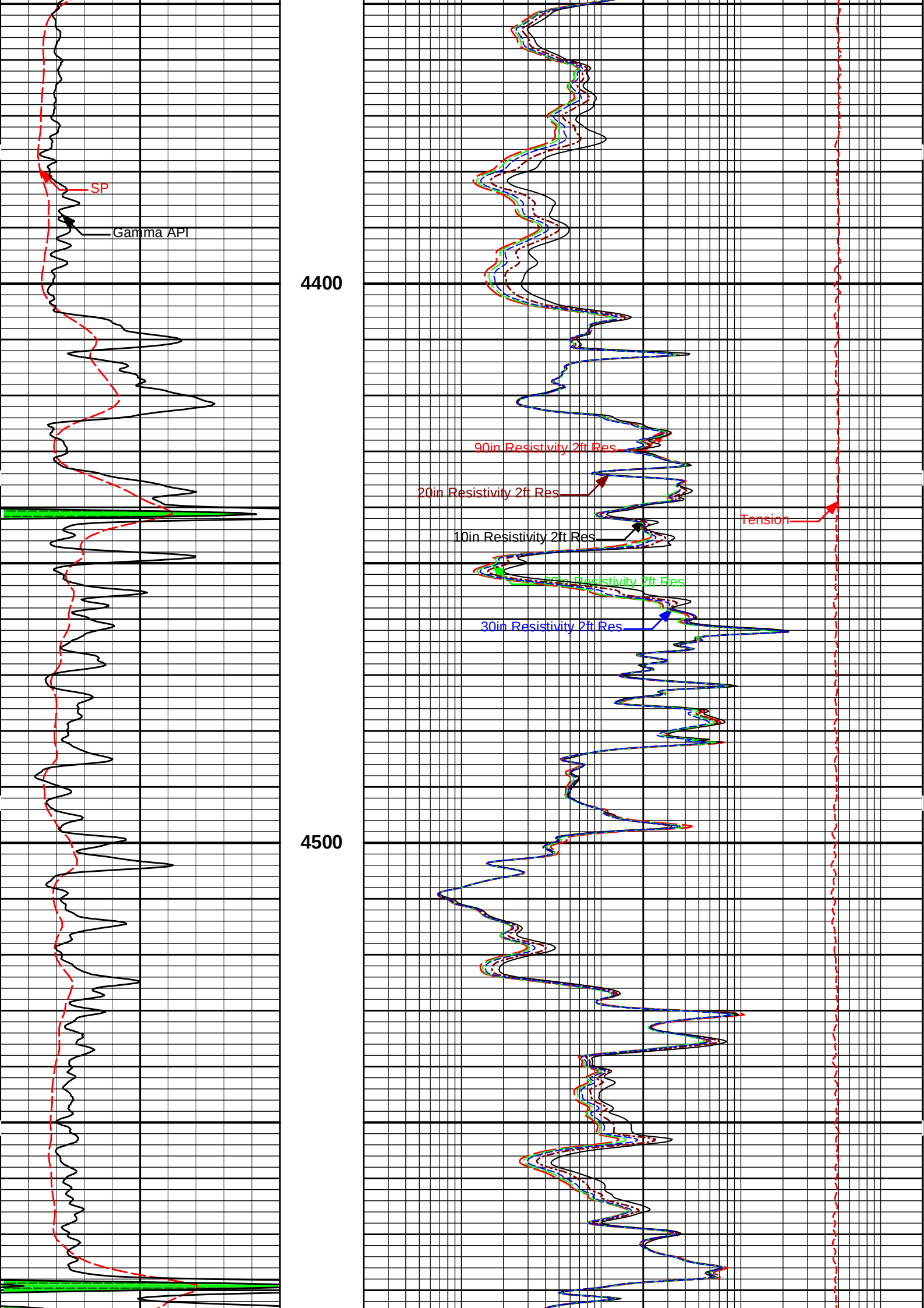
SP
Gamma API
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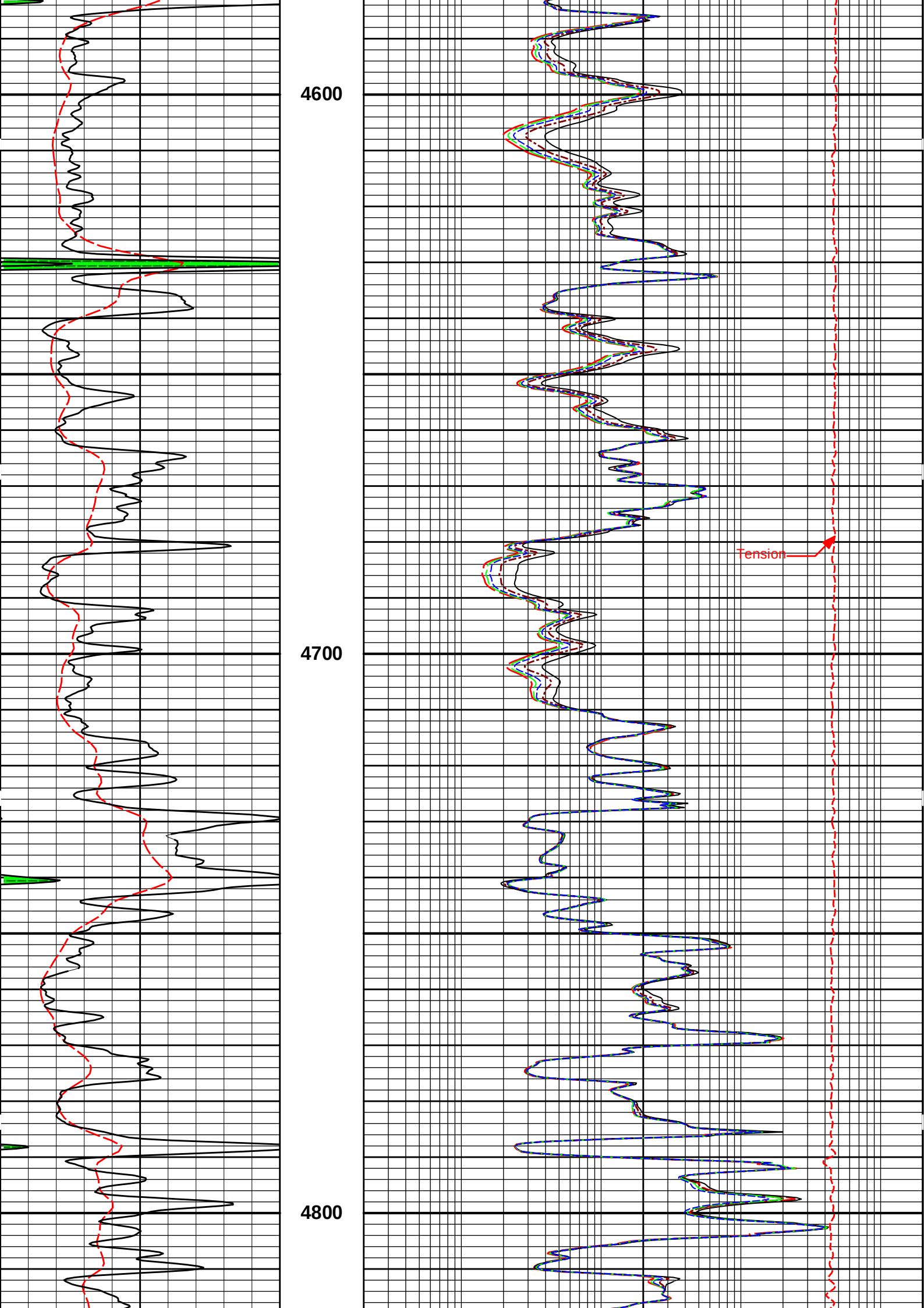
20in Resistivity 2ft Res
Tension
10in Resistivity 2ft Res
60in Resistivity 2ft Res
30in Resistivity 2ft Res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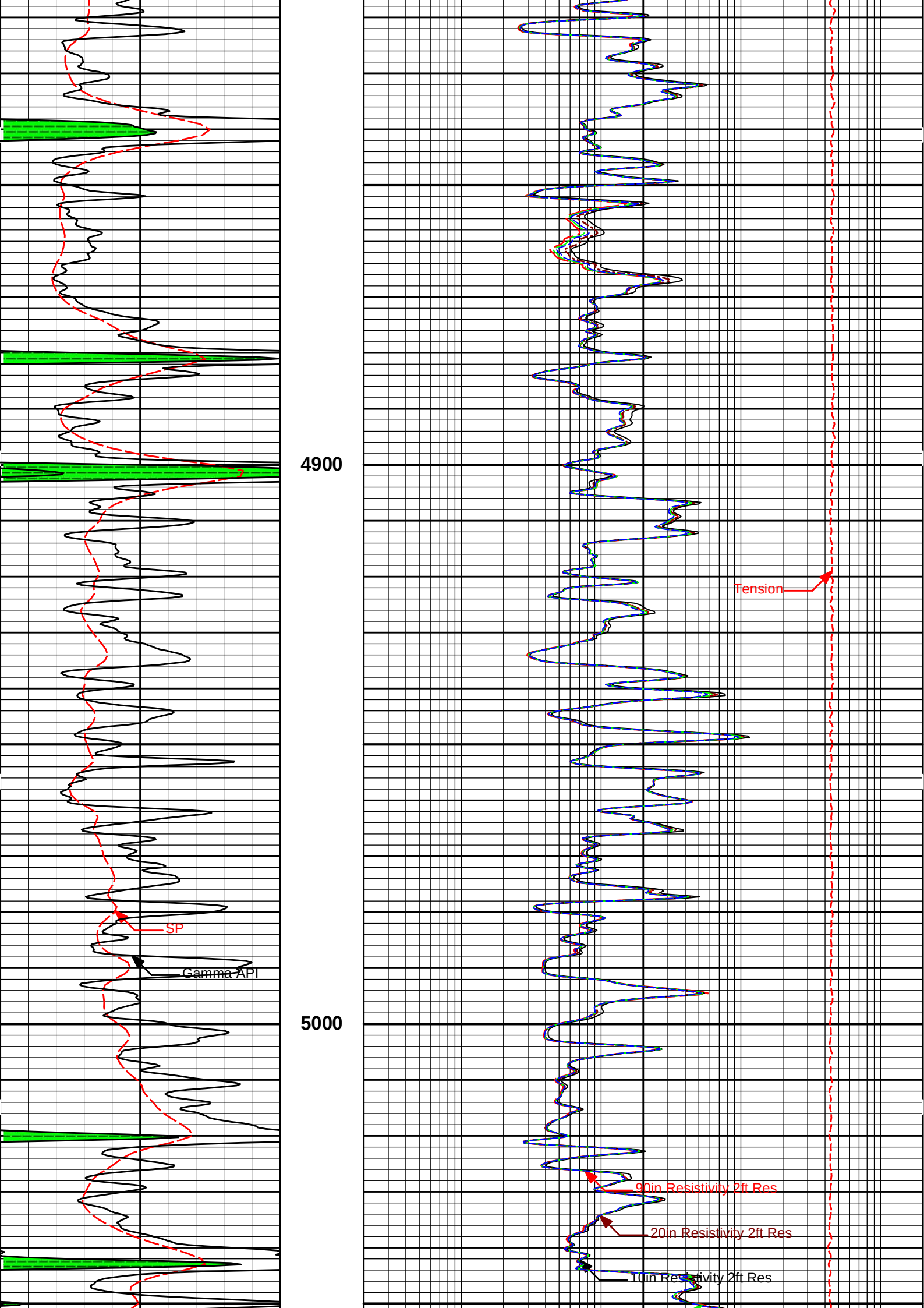
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Gamma API
Tension
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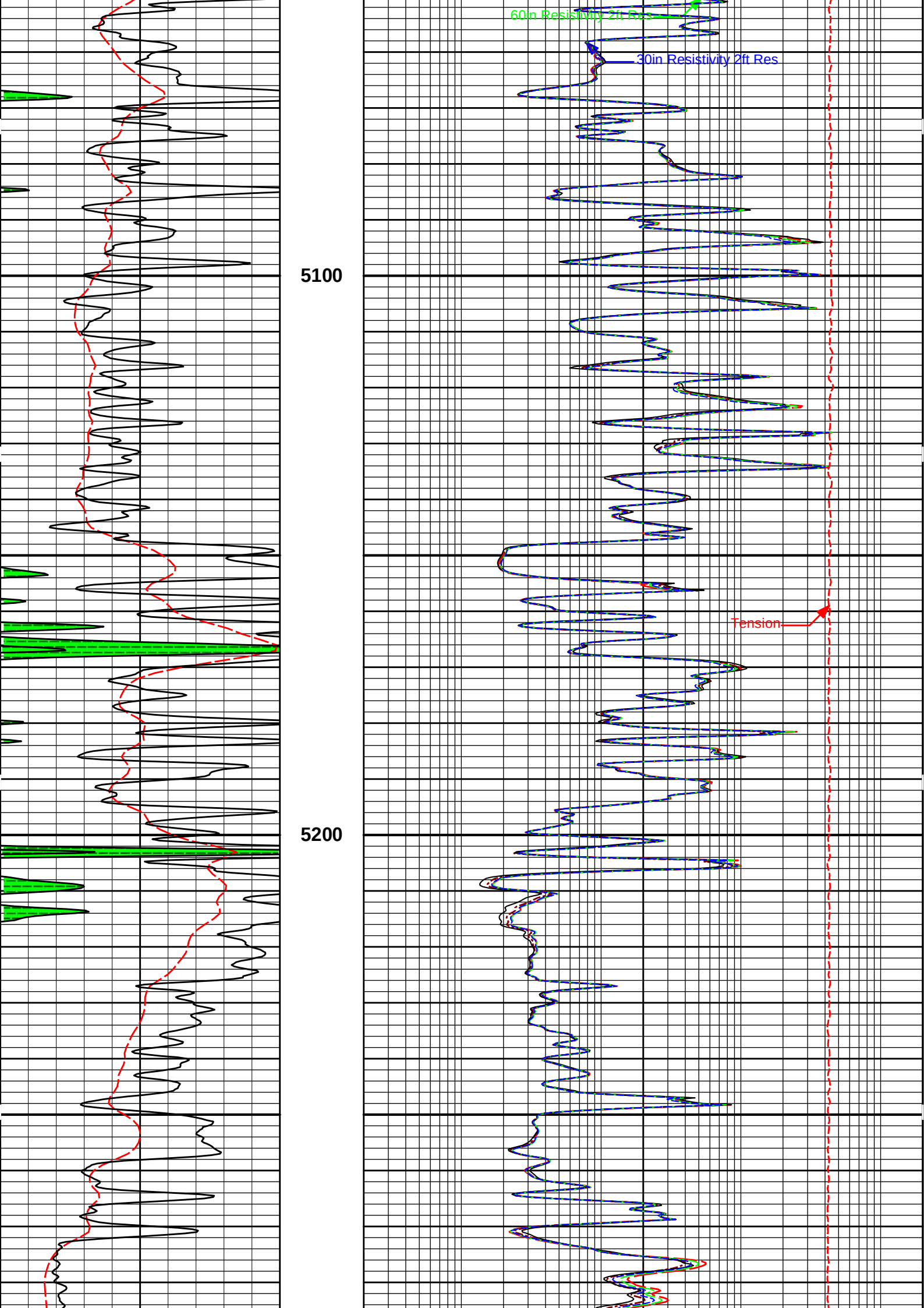
20in Resistivity 2ft Res
10in Resistivity 2ft Res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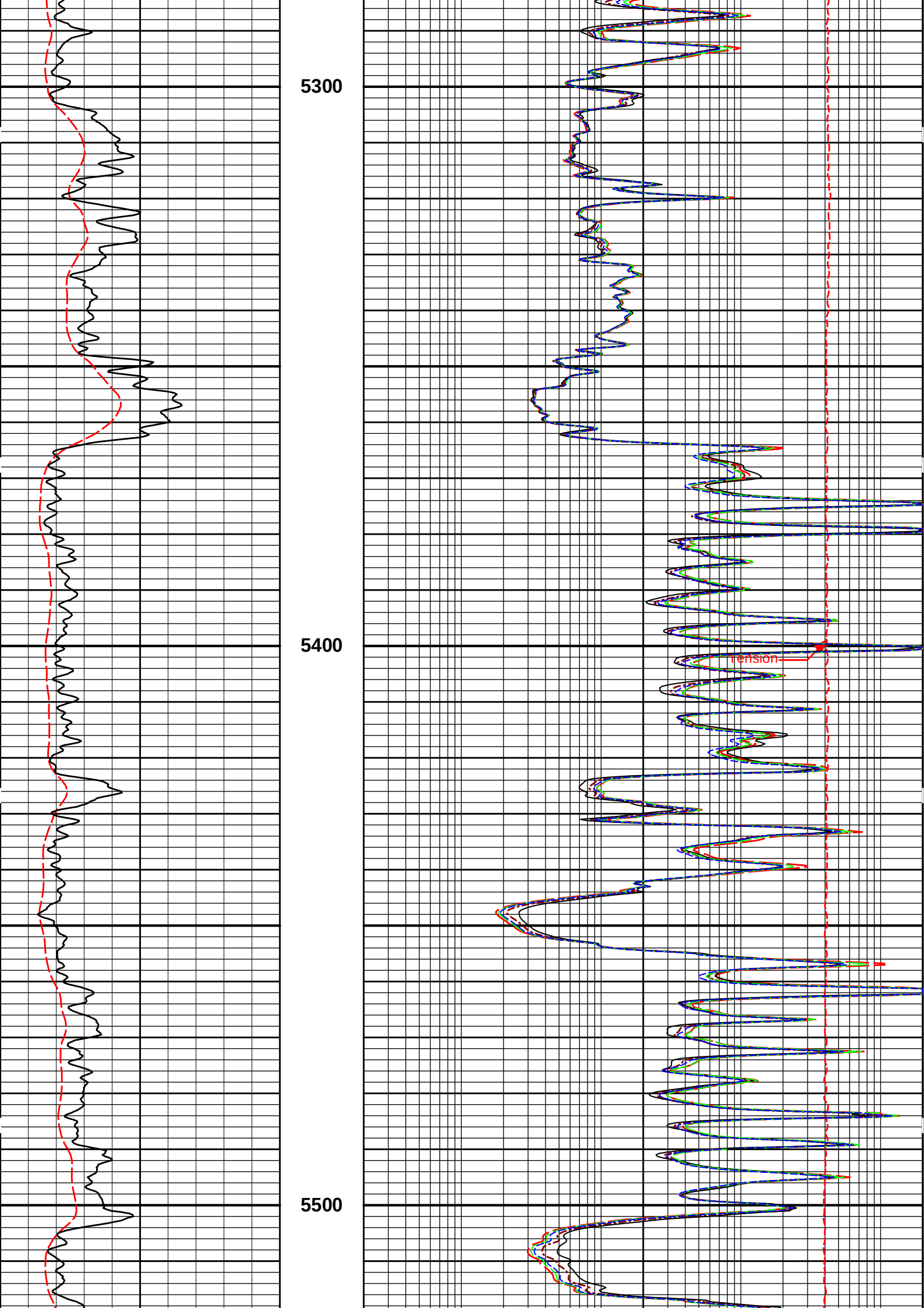
5100
Tension
5200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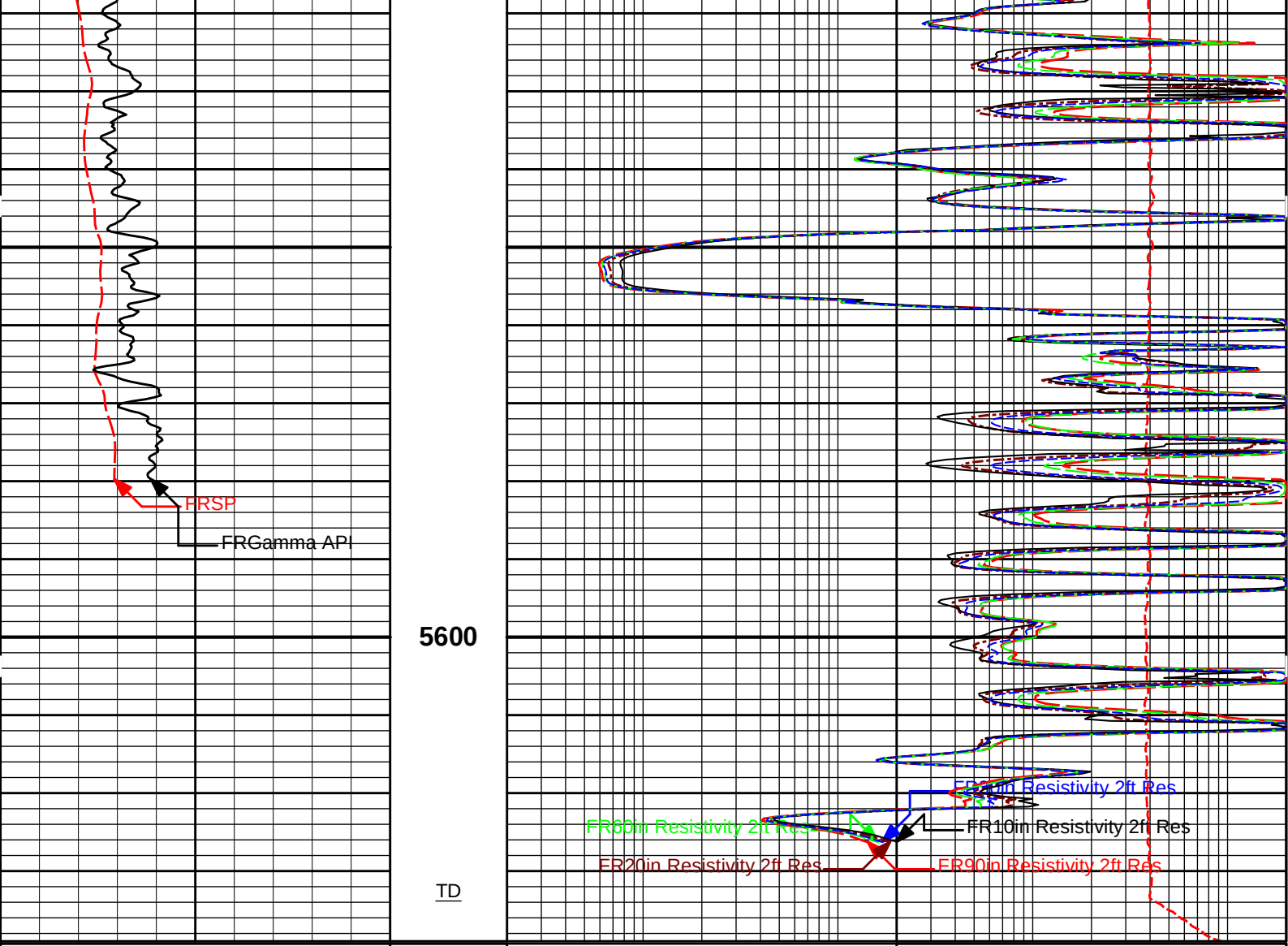
5500
Tension



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

HALLIBURTON

Plot Time: 21-Sep-19 11:04:28
Plot Range: 1750 ft to 5639 ft
Data: BLACK-K_28-1\Well Based*\
Plot File: \\-LOCAL-\BLACK-K_28-1\Well Based\ACRT5\ACRT_5_main_lib

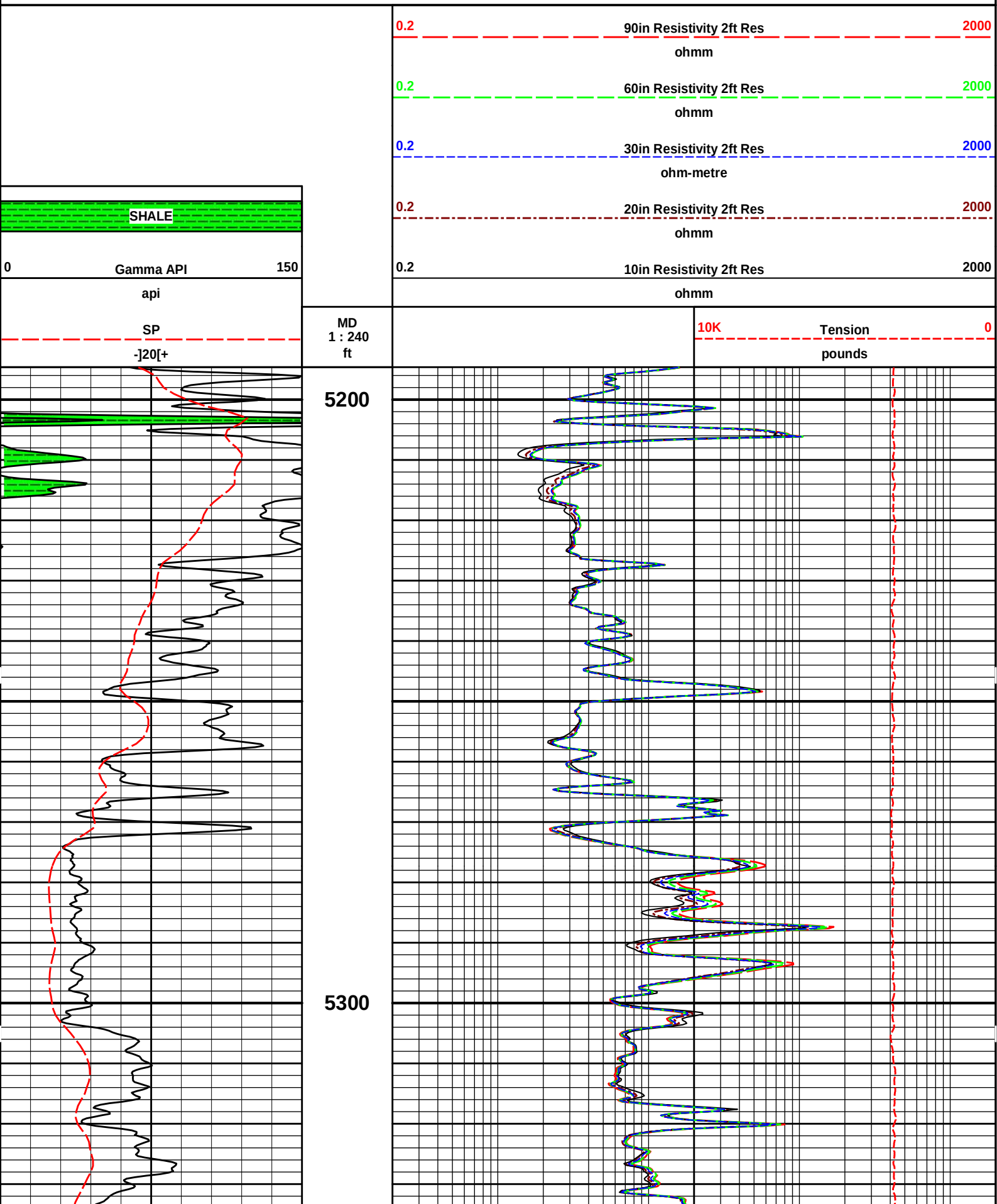
5 INCH MAIN LOG

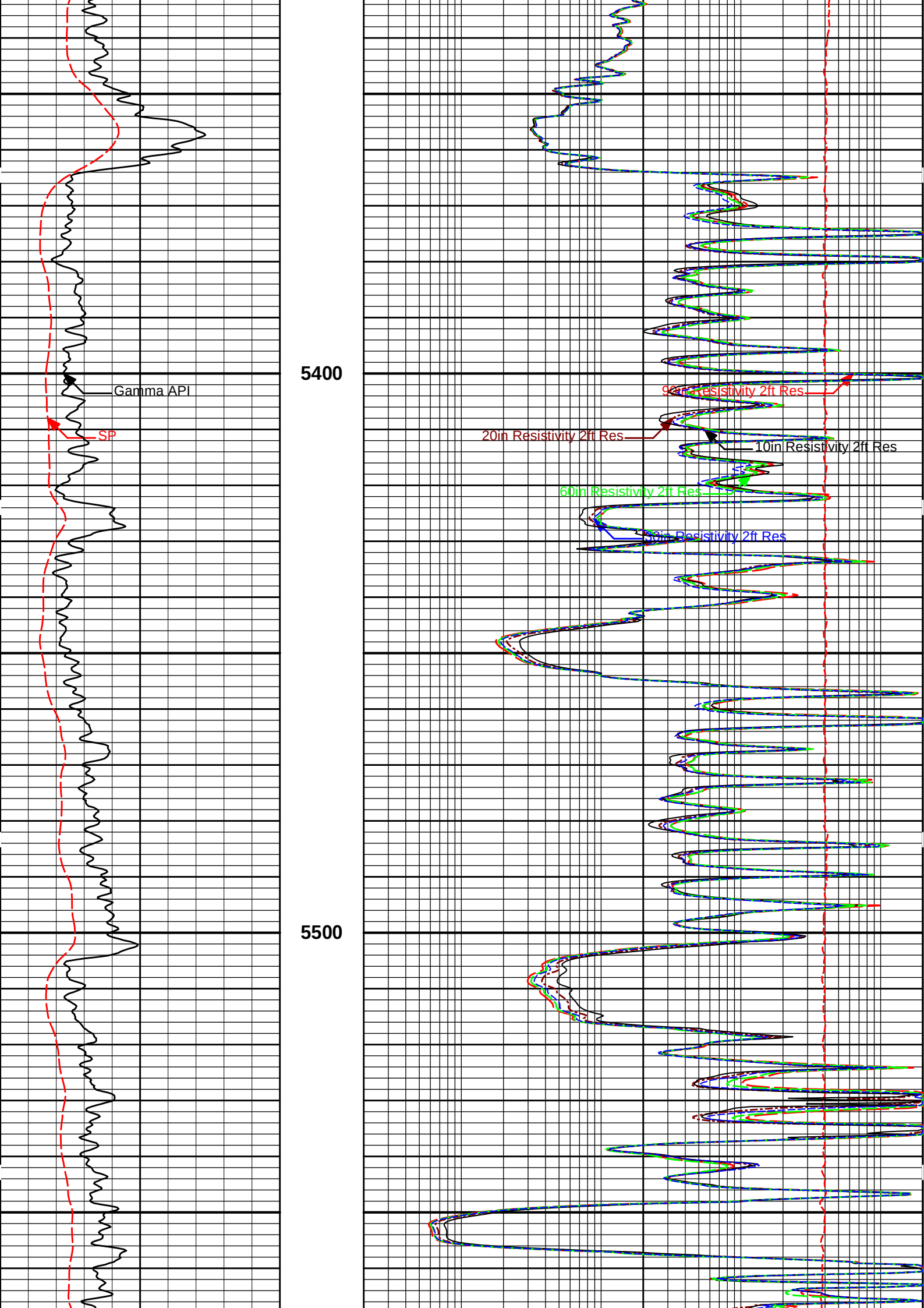
MEASURED DEPTH
MAIN SECTION 5" PER 100'

HALLIBURTON

Plot Time: 21-Sep-19 11:04:29
Plot Range: 5194.6 ft to 5639.35 ft
Data: BLACK-K_28-1\Well Based*\
Plot File: \\-LOCAL-\BLACK-K_28-1\Well Based\ACRT5\ACRT_5_repeat_lib

REPEAT SECTION




Gamma API
SP
5400
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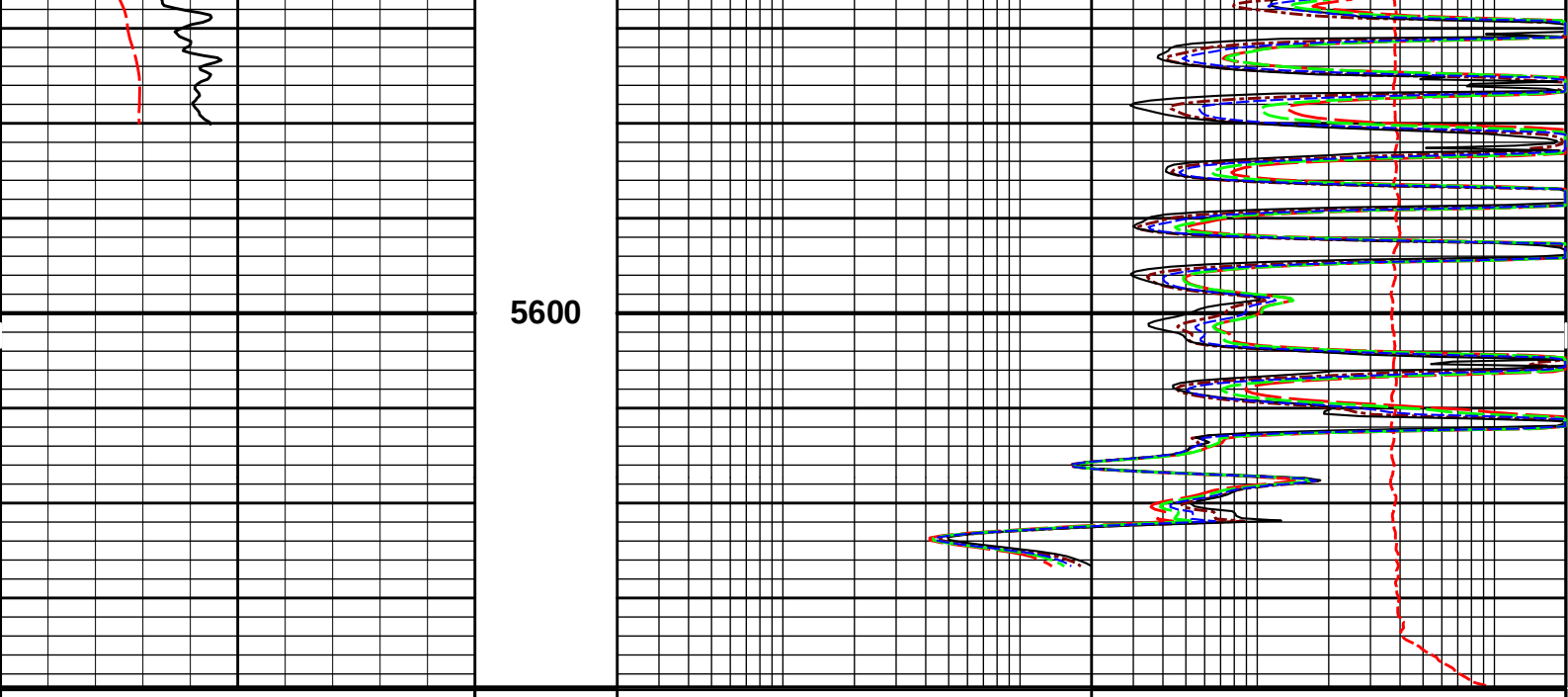
90in Resistivity 2ft Res
20in Resistivity 2ft Res
10in Resistivity 2ft Res
60in Resistivity 2ft Res
30in Resistivity 2ft Res



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

HALLIBURTON

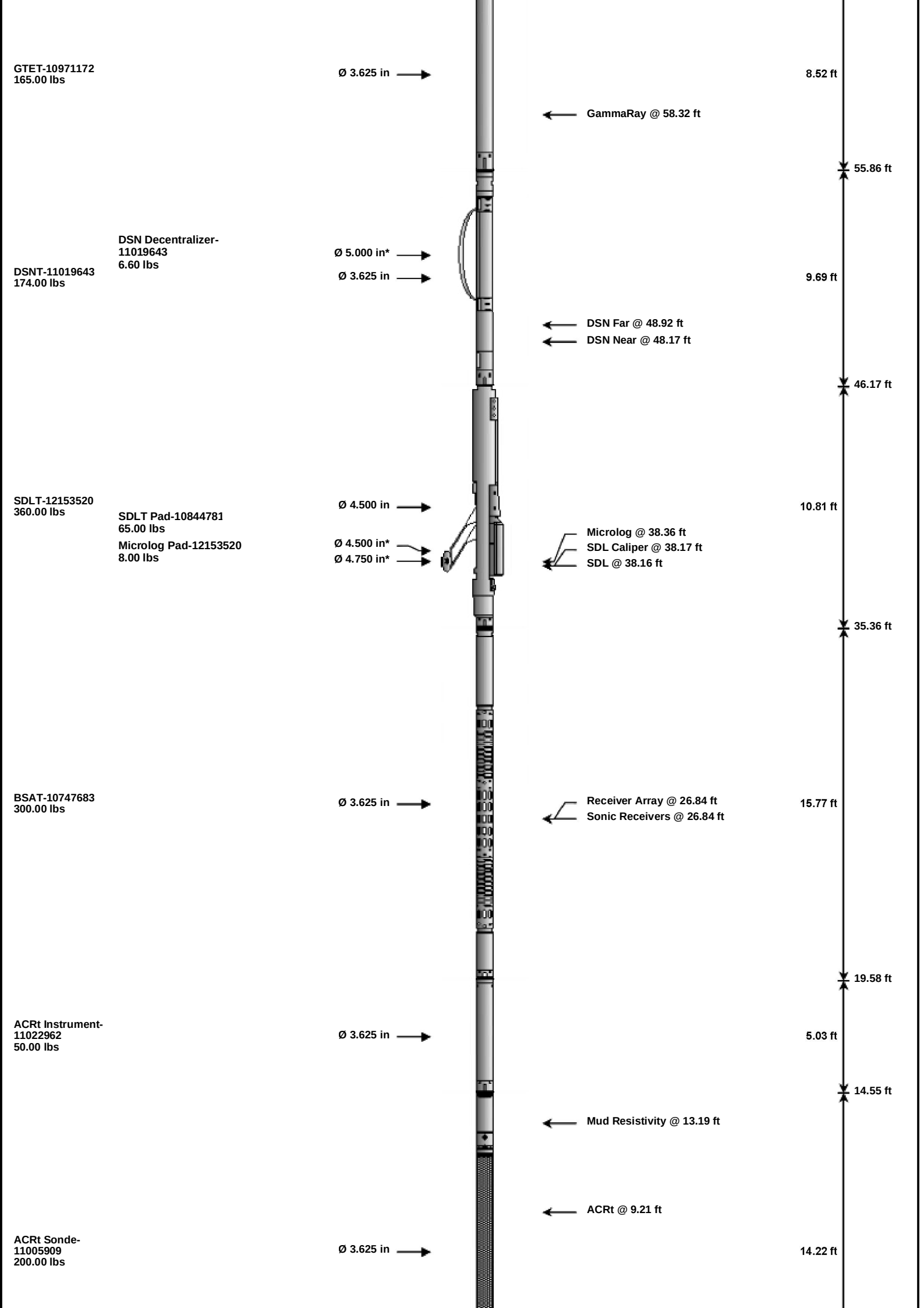
Plot Time: 21-Sep-19 11:04:30
Plot Range: 5194.6 ft to 5639.35 ft
Data: BLACK-K_28-1\Well Based*\
Plot File: \\-LOCAL-\BLACK-K_28-1\Well Based\ACRT5\ACRT_5_repeat_lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						74.37 ft
		Ø 2.310 in		Fishing Neck @ 73.49 ft		
RWCH-12027542 135.00 lbs		Ø 3.625 in		Load Cell @ 70.68 ft BH Temperature @ 70.12 ft	6.25 ft	
	Weak Point Solid- 12027542 0.01 lbs	Ø 0.010 in*				68.12 ft
SP Sub-11441455 60.00 lbs		Ø 3.625 in		SP @ 66.34 ft	3.74 ft	
				Z-Accelerometer @ 63.93 ft		64.38 ft


GTET-10971172
165.00 lbs
Ø 3.625 in
8.52 ft
GammaRay @ 58.32 ft
55.86 ft
DSN Decentralizer-
11019643
6.60 lbs
Ø 5.000 in*
DSNT-11019643
174.00 lbs
Ø 3.625 in
9.69 ft
DSN Far @ 48.92 ft
DSN Near @ 48.17 ft
46.17 ft
SDLT-12153520
360.00 lbs
Ø 4.500 in
10.81 ft
SDLT Pad-10844781
65.00 lbs
Microlog Pad-12153520
8.00 lbs
Ø 4.500 in*
Ø 4.750 in*
Microlog @ 38.36 ft
SDL Caliper @ 38.17 ft
SDL @ 38.16 ft
35.36 ft
BSAT-10747683
300.00 lbs
Ø 3.625 in
Receiver Array @ 26.84 ft
Sonic Receivers @ 26.84 ft
15.77 ft
19.58 ft
ACRt Instrument-
11022962
50.00 lbs
Ø 3.625 in
5.03 ft
14.55 ft
Mud Resistivity @ 13.19 ft
ACRt @ 9.21 ft
ACRt Sonde-
11005909
200.00 lbs
Ø 3.625 in
14.22 ft

Bull Nose-11111111
5.00 lbs

Ø 2.750 in

0.33 ft
0.33 ft
0.00 ft

Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)		Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	12027542	135.00	6.25		68.12	300.00
WPSS	Weak Point Solid	12027542	0.01	0.01	*	68.12	300.00
SP	SP Sub	11441455	60.00	3.74		64.38	300.00
GTET	Gamma Telemetry Tool	10971172	165.00	8.52		55.86	60.00
DSNT	Dual Spaced Neutron	11019643	174.00	9.69		46.17	60.00
DCNT	DSN Decentralizer	11019643	6.60	5.13	*	49.50	300.00
SDLT	Spectral Density Tool	12153520	360.00	10.81		35.36	60.00
SDLP	Density Insite Pad	10844781	65.00	2.55	*	37.57	60.00
MICP	Microlog Pad	12153520	8.00	1.00	*	37.86	60.00
BSAT	Borehole Sonic Array Tool	10747683	300.00	15.77		19.58	60.00
ACRt	Array Compensated True Resistivity Instrument Section	11022962	50.00	5.03		14.55	120.00
ACRt	Array Compensated True Resistivity Sonde Section	11005909	200.00	14.22		0.33	120.00
BLNS	Bull Nose	11111111	5.00	0.33		0.00	300.00
Total			**1,528.61**	**74.37**			

* Not included in Total Length and Length Accumulation.

Data: BLACK-K_28-1\0001 RWCH-GTET-DSNT-SDLT-BSAT-ACRT_DRIVERS\IDLE **Date: 21-Sep-19 08:15:46**

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	9.150	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	1.201	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	5645.00	ft
	SHARED	BHT	Bottom Hole Temperature	134.0	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	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	1.09	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	
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	
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

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CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	**GTET - 10971172**	**Reference Calibration Date:**	**03-Jul-19 13:10:49**
Engineer:	**JORGE ORLANDO PEREZ**	**Calibration Date:**	**03-Aug-19 09:24:44**
Software Version:	**WL INSITE R6.2.1 (Build 2)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB-146
Calibrator API Reference:225.00 api
Equivalent Calibrator API Reference:228.9 api

Measurement	Measured	Calibrated	Units
Background	20.8	20.8	api
Background + Calibrator	249.4	249.7	api
Calibrator	228.6	228.9	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	**GTET - 10971172**	**Reference Calibration Date:**	**03-Aug-19 09:24:44**
Engineer:	**WHITLOCK**	**Calibration Date:**	**12-Sep-19 09:32:31**
Software Version:	**WL INSITE R6.2.7 (Build 7)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB-146
Calibrator API Reference:225.00 api
Equivalent Calibrator API Reference:228.9 api

Field Verification	Shop	Field	Units
Background	20.8	19.7	api
Background + Calibrator	249.7	255.3	api
Calibrator	228.9	235.6	api

Shop	Field	Difference	Tolerance
228.9	235.6	-6.7	+/- 9.00

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	**ACRt Sonde - 11005909**	**Reference Calibration Date:**	**30-May-19 14:42:28**
Engineer:	**WHITLOCK**	**Calibration Date:**	**30-May-19 14:54:04**
Software Version:	**WL INSITE R6.2.1 (Build 2)**	**Calibration Version:**	**1**
Host Tool Name:	**ACRt Instrument - 11022962**		

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0431	1.05	0.95	1.0223	1.05	0.95	1.0121	1.05
A2 (50")	0.95	1.0473	1.05	0.95	1.0284	1.05	0.95	1.0198	1.05
A3 (29")	0.95	1.0489	1.05	0.95	1.0379	1.05	0.95	1.0280	1.05
A4 (17")	0.95	1.0407	1.05	0.95	1.0368	1.05	0.95	1.0282	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0089	1.05	0.95	0.9992	1.05
A6 (6")	N/A	N/A	N/A	0.95	1.0025	1.05	0.95	0.9921	1.05

SONDE OFFSET

Subarray	R12KHz	R36KHz	R72KHz
	(mmho/m)	(mmho/m)	(mmho/m)
A1 (80")	1.154	-3.309	-6.251
A2 (50")	0.367	-3.712	-5.258
A3 (29")	-15.287	-5.375	-3.481
A4 (17")	-109.453	-32.609	-27.313
A5 (10")	N/A	-104.249	-45.793

A6 (6")	N/A	287.796	155.250

TRANSMITTER CURRENT GAIN			
Signal	Lower	R	Upper
12K	0.6	0.94	1.3
36K	1.0	1.38	2.0
72K	1.0	1.61	2.0

R-MUD VERIFICATION			
Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.00	1.05

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-10971172						
Gamma Ray Calibrator	228.9	235.6	----------	-6.7	+/- 9.00	api
ACRt Sonde-11005909						
Mud Cell	1.00	----------	----------	0	----------	ohm-m

Data: BLACK-K_28-1\0001 RWCH-GTET-DSNT-SDLT-BSAT-ACRT_DRIVERS\IDLE **Date: 21-Sep-19 08:16:11**

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INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Depth Filter Type	Depth Filter Length (ft)	Time Filter Type	Time Filter Length (sec)
Depth Panel						
TENS	Tension	0.00	NO		NO	
Rwa / CrossPlot						
TPUL	Tension Pull	74.37	NO		NO	
BS	Bit Size	74.37	NO		NO	
HDIA	Measured Hole Diameter	0.00	NO		NO	
RWCH						
DHTN	DownholeTension	0.00	BLK	0.000	NO	
SP Sub						
PLTC	Plot Control Mask	66.34	NO		NO	
SP	Spontaneous Potential	66.34	BLK	1.250	NO	
SPR	Raw Spontaneous Potential	66.34	NO		NO	
SPO	Spontaneous Potential Offset	66.34	NO		NO	
GTET						
TPUL	Tension Pull	58.32	NO		NO	
GR	Natural Gamma Ray API	58.32	TRI	1.750	NO	
GRU	Unfiltered Natural Gamma Ray API	58.32	NO		NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	58.32	W	1.416 , 0.750	NO	
HDIA	Measured Hole Diameter	0.00	NO		NO	
ACCZ	Accelerometer Z	0.00	BLK	0.083	NO	
DEVI	Inclination	0.00	NO		NO	
DSNT						
TPUL	Tension Pull	48.07	NO		NO	

RNDS	Near Detector Telemetry Counts	48.17	BLK	1.417	NO
RFDS	Far Detector Telemetry Counts	48.92	TRI	0.583	NO
DNTT	DSN Tool Temperature	48.17	NO		NO
DSNS	DSN Tool Status	48.07	NO		NO
ERND	Near Detector Telemetry Counts EVR	48.17	BLK	0.000	NO
ERFD	Far Detector Telemetry Counts EVR	48.92	BLK	0.000	NO
ENTM	DSN Tool Temperature EVR	48.17	NO		NO
HDIA	Measured Hole Diameter	0.00	NO		NO
SDLT					
TPUL	Tension Pull	38.17	NO		NO
PCAL	Pad Caliper	38.17	TRI	0.250	NO
ACAL	Arm Caliper	38.17	TRI	0.250	NO
BSAT					
TPUL	Tension Pull	26.84	NO		NO
STAT	Status	26.84	NO		NO
DLYT	Delay Time	26.84	NO		NO
SI	Sample Interval	26.84	NO		NO
TXRX	Raw Telemetry 10 Receivers	26.84	NO		NO
FRMC	Tool Frame Count	26.84	NO		NO
GMOD	Gain processing mode	19.58	NO		NO
ACRt Sonde					
TPUL	Tension Pull	2.73	NO		NO
F1R1	ACRT 12KHz - 80in R value	8.98	BLK	0.000	NO
F1X1	ACRT 12KHz - 80in X value	8.98	BLK	0.000	NO
F1R2	ACRT 12KHz - 50in R value	6.48	BLK	0.000	NO
F1X2	ACRT 12KHz - 50in X value	6.48	BLK	0.000	NO
F1R3	ACRT 12KHz - 29in R value	4.98	BLK	0.000	NO
F1X3	ACRT 12KHz - 29in X value	4.98	BLK	0.000	NO
F1R4	ACRT 12KHz - 17in R value	3.98	BLK	0.000	NO
F1X4	ACRT 12KHz - 17in X value	3.98	BLK	0.000	NO
F1R5	ACRT 12KHz - 10in R value	3.48	BLK	0.000	NO
F1X5	ACRT 12KHz - 10in X value	3.48	BLK	0.000	NO
F1R6	ACRT 12KHz - 6in R value	3.23	BLK	0.000	NO
F1X6	ACRT 12KHz - 6in X value	3.23	BLK	0.000	NO
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000	NO
F2X1	ACRT 36KHz - 80in X value	8.98	BLK	0.000	NO
F2R2	ACRT 36KHz - 50in R value	6.48	BLK	0.000	NO
F2X2	ACRT 36KHz - 50in X value	6.48	BLK	0.000	NO
F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000	NO
F2X3	ACRT 36KHz - 29in X value	4.98	BLK	0.000	NO
F2R4	ACRT 36KHz - 17in R value	3.98	BLK	0.000	NO
F2X4	ACRT 36KHz - 17in X value	3.98	BLK	0.000	NO
F2R5	ACRT 36KHz - 10in R value	3.48	BLK	0.000	NO
F2X5	ACRT 36KHz - 10in X value	3.48	BLK	0.000	NO
F2R6	ACRT 36KHz - 6in R value	3.23	BLK	0.000	NO
F2X6	ACRT 36KHz - 6in X value	3.23	BLK	0.000	NO
F3R1	ACRT 72KHz - 80in R value	8.98	BLK	0.000	NO
F3X1	ACRT 72KHz - 80in X value	8.98	BLK	0.000	NO
F3R2	ACRT 72KHz - 50in R value	6.48	BLK	0.000	NO
F3X2	ACRT 72KHz - 50in X value	6.48	BLK	0.000	NO
F3R3	ACRT 72KHz - 29in R value	4.98	BLK	0.000	NO
F3X3	ACRT 72KHz - 29in X value	4.98	BLK	0.000	NO
F3R4	ACRT 72KHz - 17in R value	3.98	BLK	0.000	NO
F3X4	ACRT 72KHz - 17in X value	3.98	BLK	0.000	NO
F3R5	ACRT 72KHz - 10in R value	3.48	BLK	0.000	NO
F3X5	ACRT 72KHz - 10in X value	3.48	BLK	0.000	NO
F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000	NO

F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000	NO
F3X6	ACRT 72KHz - 6in X value	3.23	BLK	0.000	NO
RMUD	Mud Resistivity	12.52	BLK	0.000	NO
F1RT	Transmitter Reference 12 KHz Real Signal	2.73	BLK	0.000	NO
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.73	BLK	0.000	NO
F2RT	Transmitter Reference 36 KHz Real Signal	2.73	BLK	0.000	NO
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.73	BLK	0.000	NO
F3RT	Transmitter Reference 72 KHz Real Signal	2.73	BLK	0.000	NO
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.73	BLK	0.000	NO
TFPU	Upper Feedpipe Temperature Calculated	2.73	BLK	0.000	NO
TFPL	Lower Feedpipe Temperature Calculated	2.73	BLK	0.000	NO
ITMP	Instrument Temperature	2.73	BLK	0.000	NO
TCVA	Temperature Correction Values Loop Off	2.73	NO		NO
TIDV	Instrument Temperature Derivative	2.73	NO		NO
TUDV	Upper Temperature Derivative	2.73	NO		NO
TLDV	Lower Temperature Derivative	2.73	NO		NO
TRBD	Receiver Board Temperature	2.73	NO		NO
HDIA	Measured Hole Diameter	0.00	NO		NO
	Microlog Pad				
TPUL	Tension Pull	38.36	NO		NO
MINV	Microlog Lateral	38.36	BLK	0.750	NO
MNOR	Microlog Normal	38.36	BLK	0.750	NO
	SDLT Pad				
TPUL	Tension Pull	38.16	NO		NO
NAB	Near Above	37.99	BLK	0.920	NO
NHI	Near Cesium High	37.99	BLK	0.920	NO
NLO	Near Cesium Low	37.99	BLK	0.920	NO
NVA	Near Valley	37.99	BLK	0.920	NO
NBA	Near Barite	37.99	BLK	0.920	NO
NDE	Near Density	37.99	BLK	0.920	NO
NPK	Near Peak	37.99	BLK	0.920	NO
NLI	Near Lithology	37.99	BLK	0.920	NO
NBAU	Near Barite Unfiltered	37.99	BLK	0.250	NO
NLIU	Near Lithology Unfiltered	37.99	BLK	0.250	NO
FAB	Far Above	38.34	BLK	0.250	NO
FHI	Far Cesium High	38.34	BLK	0.250	NO
FLO	Far Cesium Low	38.34	BLK	0.250	NO
FVA	Far Valley	38.34	BLK	0.250	NO
FBA	Far Barite	38.34	BLK	0.250	NO
FDE	Far Density	38.34	BLK	0.250	NO
FPK	Far Peak	38.34	BLK	0.250	NO
FLI	Far Lithology	38.34	BLK	0.250	NO
PTMP	Pad Temperature	38.17	BLK	0.920	NO
NHV	Near Detector High Voltage	37.57	NO		NO
FHV	Far Detector High Voltage	37.57	NO		NO
ITMP	Instrument Temperature	37.57	NO		NO
DDHV	Detector High Voltage	37.57	NO		NO
HDIA	Measured Hole Diameter	0.00	NO		NO

Data: BLACK-K_28-1\0001 RWCH-GTET-DSNT-SDLT-BSAT-ACRT_DRIVERS\IDLE **Date: 21-Sep-19 10:04:07**

COMPANY	**MERIT ENERGY COMPANY, LLC**
WELL	**BLACK KNIGHT 28-1**
FIELD	**WILDCAT**
COUNTY	**HASKELL** STATE **KANSAS**

COUNTY	HASKELL	STATE	KANSAS

HALLIBURTON	ARRAY COMPENSATED TRUE RESISTIVITY LOG