HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY LOG

COMPANY **SANDRIDGE ENERGY**

WELL **MAZANEC 1735 1-19**

FIELD/BLOCK **BEAVER CLIFF NW**

COUNTY **WICHITA** STATE **KANSAS**

API No. 15-203-20245-00-00

Location (SHL) 400' FNL & 400' FEL
SW-NE-NE-NE

Sect. 19 Twp. 17S Rge. 35W

Other Services:
DSN / SDL
MICROLOG
CSNG
ACRT
MRIL

Permanent Datum	GL	Elev. 3220.0 ft	Elev.: K.B. 3229.0 ft
Log measured from	KB	9.0 ft above perm. Datum	D.F. 3229.0 ft
Drilling measured from	KB		G.L. 3220.0 ft

Date		18-Dec-13					
Run No.		ONE					
Depth - Driller		5100.00 ft					
Depth - Logger		5103.0 ft					
Bottom - Logged Interval		5093					
Top - Logged Interval		1552					
Casing - Driller		9.625 in	@ 1550.0 ft	@		@	
Casing - Logger		1552.0 ft					
Bit Size		8.750 in		@		@	
Type Fluid in Hole		WATER BASED MUD					
Density	Viscosity	9.3 ppg	45.00 s/qt				
PH	Fluid Loss	10.10 pH					
Source of Sample		MUD PIT					
Rm @ Meas. Temperature		0.490 ohmm	@ 75.00 degF	@		@	
Rmf @ Meas. Temperature		0.42 ohmm	@ 75.00 degF	@		@	
Rmc @ Meas. Temperature		0.563 ohmm	@ 75.00 degF	@		@	
Source Rmf	Rmc	CALCULATED	CALCULATED				
Rm @ BHT		0.32 ohmm	@ 120.0 degF	@		@	
Time Since Circulation		5.8 hr					
Time on Bottom		18-Dec-13 02:41					
Max. Rec. Temperature		120.0 degF	@ 5103.0 ft	@		@	
Equipment	Location	11230668	LIBERAL				
Recorded By		S. INGERSOLL					
Witnessed By		P. BECKELHEIMER					

Fold here

Service Ticket No.: 900977601 API Serial No.: 15-203-20245-00-00 PGM Version: WL INSITE R3.8.4 (Build 5)

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.	
	@	10929776			
	@				
	@				
	@				

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.		Run No.	ONE	Run No.	ONE
Serial No.	10748374	Serial No.		Serial No.	10673790	Serial No.	10735145
Model No.	GTET	Model No.		Model No.	SDLT	Model No.	DSNT
Diameter	3.625"	No. of Cent.		Diameter	5.3"	Diameter	3.625"
Detector Model No.	T-102	Spacing		Log Type	GAM-GAM	Log Type	NEU-NEU
Type	SCINT			Source Type	CS-137	Source Type	AM-241BE
Length	8"	LSA [Y/N]		Serial No.	5073GW	Serial No.	DSN-436
Distance to Source	N/A	FWDA [Y/N]		Strength	1.5 CI	Strength	15 CI

LOGGING DATA

GENERAL			GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	5093	1552	REC	0	150				30	-10	2.71 gm/cc	30	-10	LIME

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@

Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 7 INCH CASING.

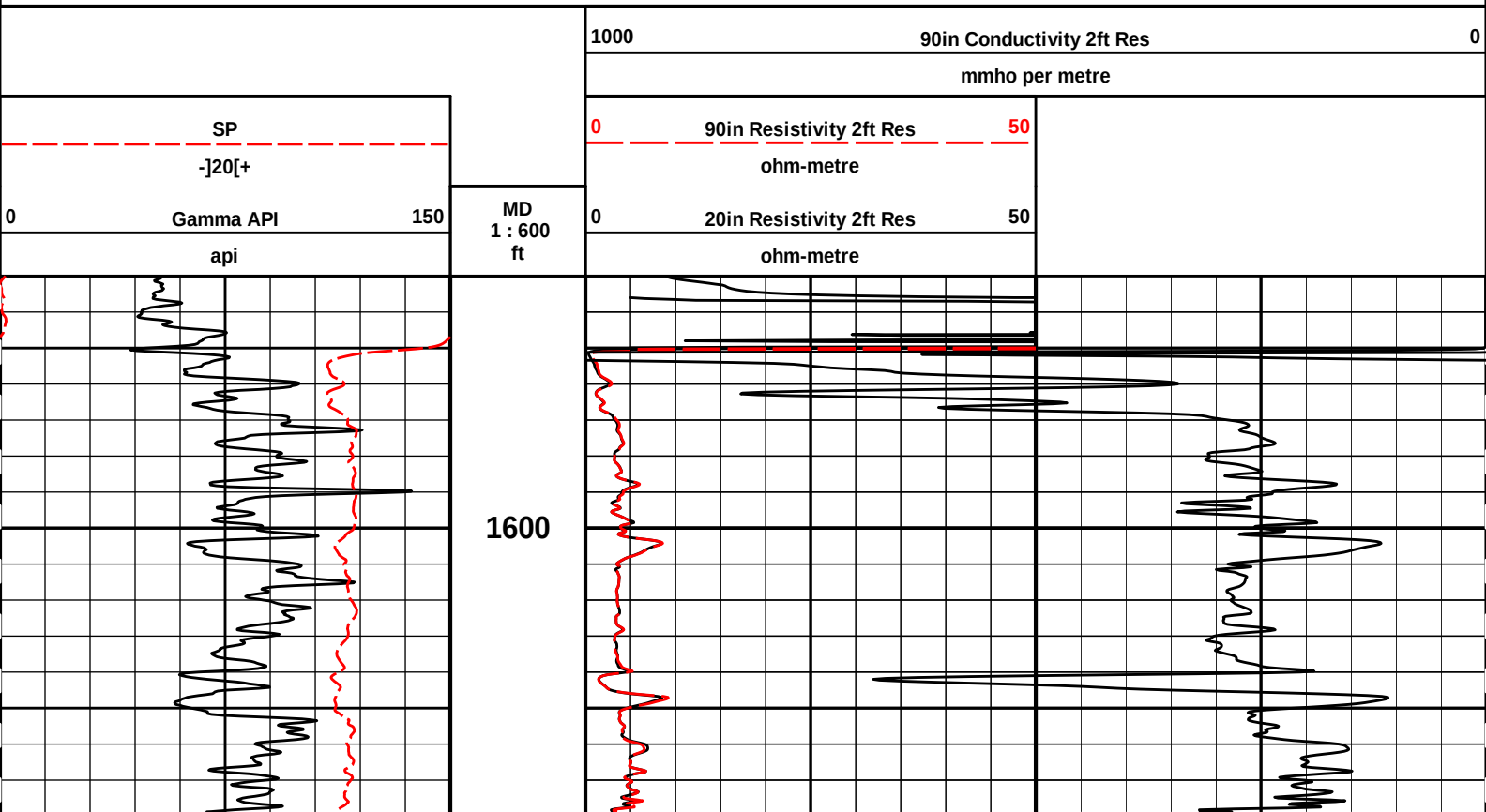
CHLORIDES REPORTED AT 18000 mg/L.

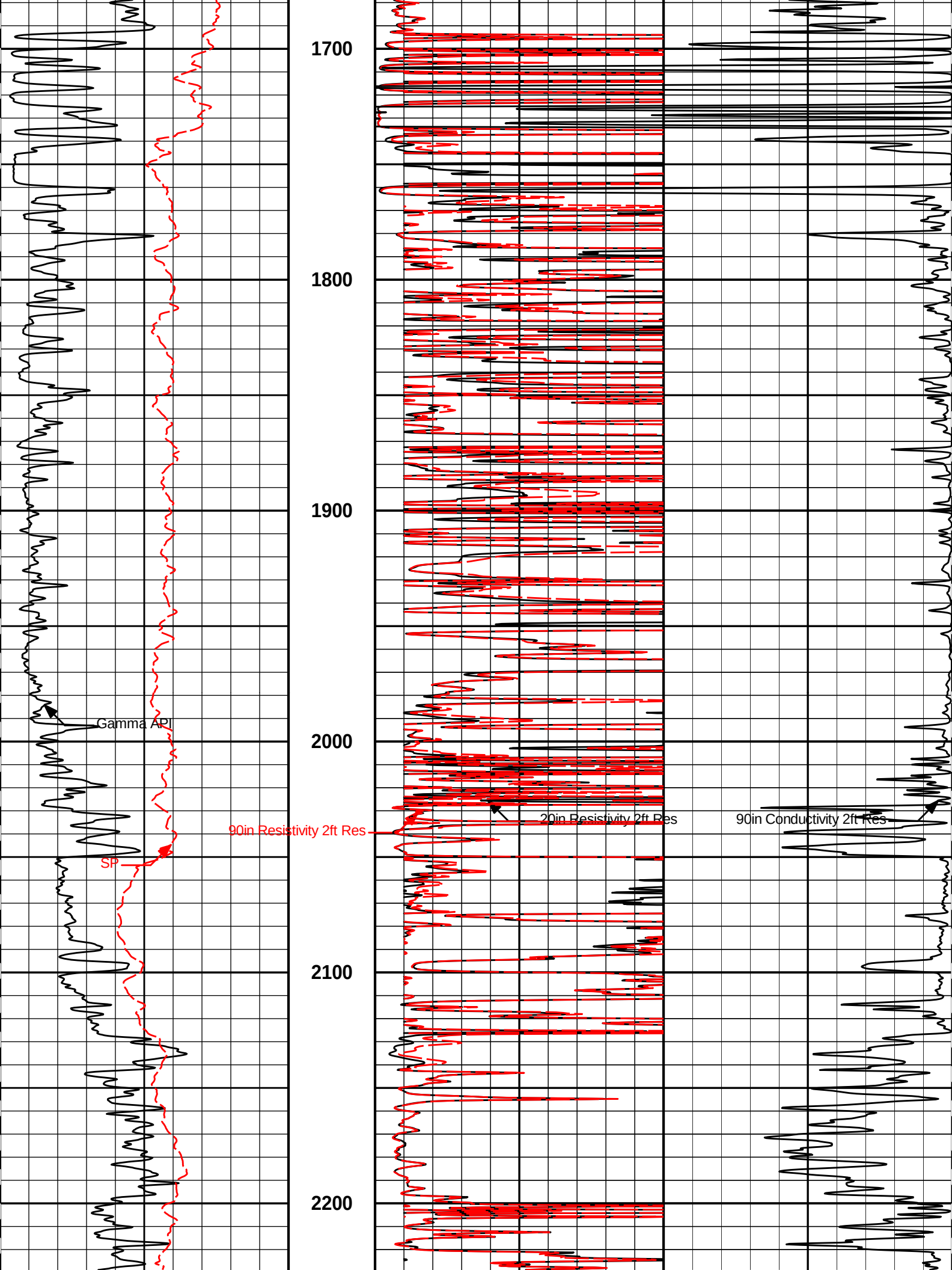
LOG SPLICED AT 2780' & 1760'.

HALLIBURTON

Plot Time: 18-Dec-13 09:33:34
Plot Range: 1530 ft to 5104.33 ft
Data: MAZANEC_1735\Well Based\R1 CASING SPLICE
Plot File: \\-LOCAL-\MAZANEC_1735\Well Based\ACRT\ACRT_2_lib

2 INCH MAIN LOG

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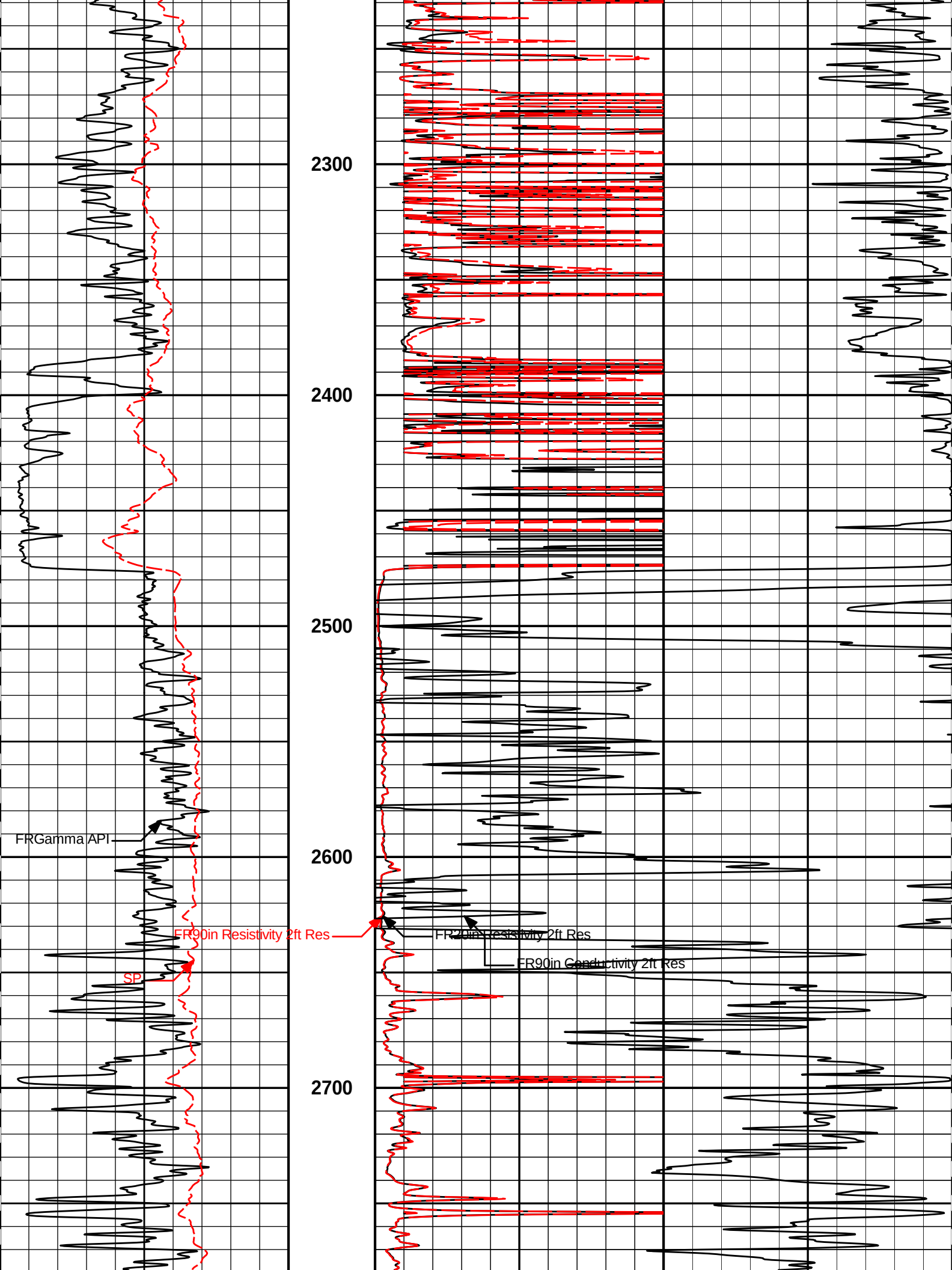
1900
2000
2100
2200
Gamma API
SP
90in Resistivity 2ft Res
20in Resistivity 2ft Res
90in Conductivity 2ft Res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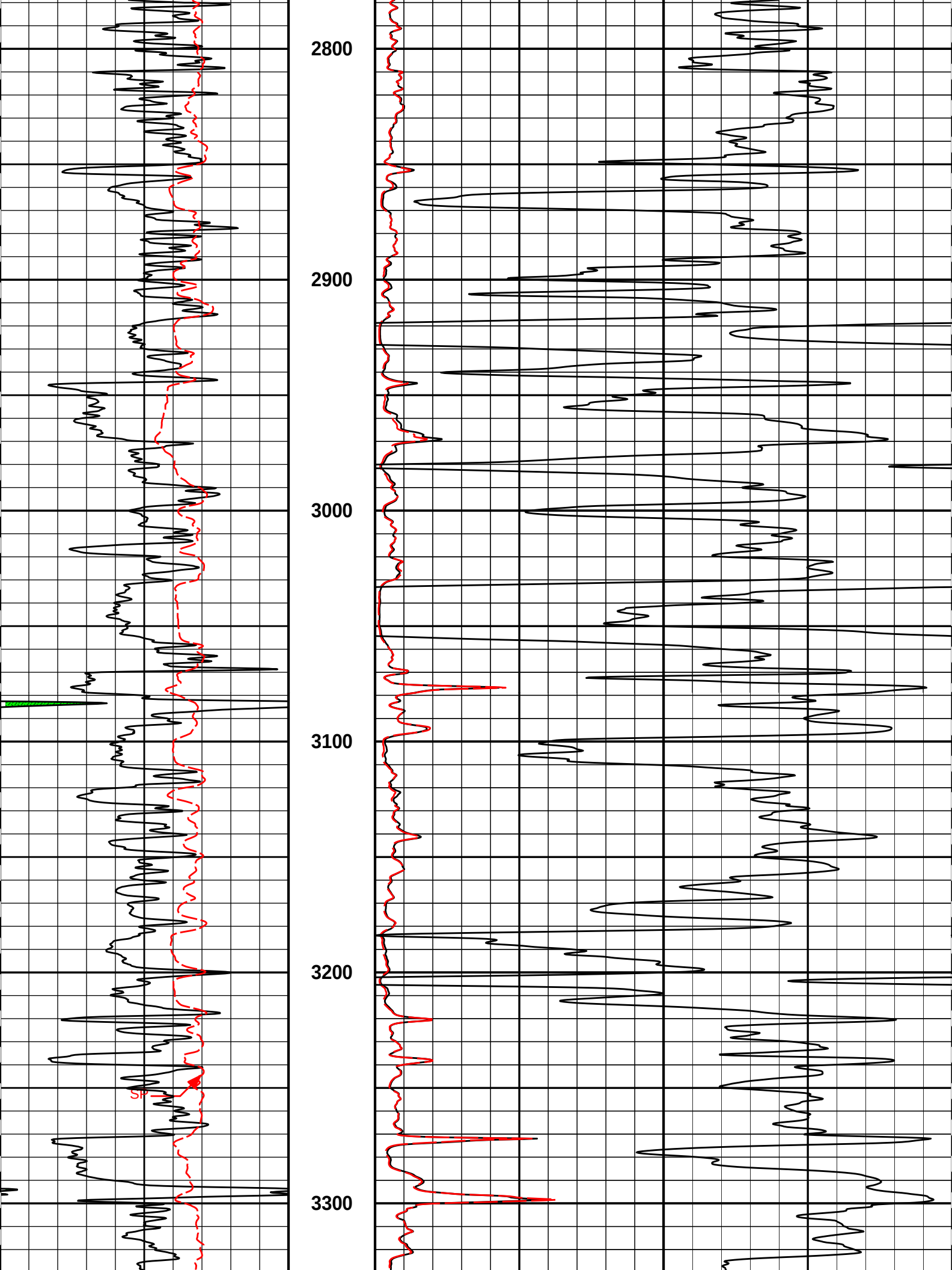
2600
2700
FRGamma API
FR90in Resistivity 2ft Res
SP
FR20in Resistivity 2ft Res
FR90in Conductivity 2ft Res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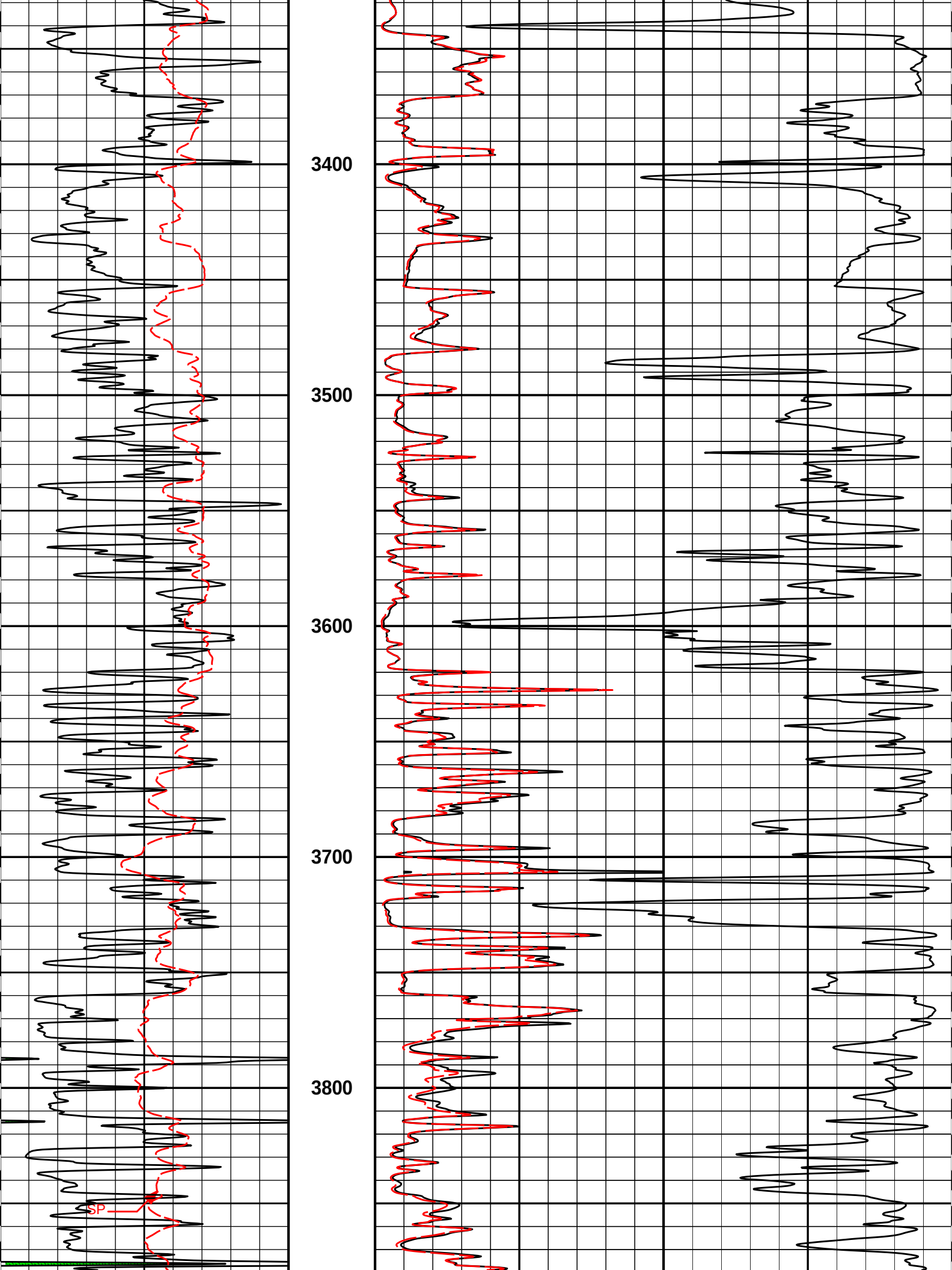
2900
3000
3100
3200
3300
SP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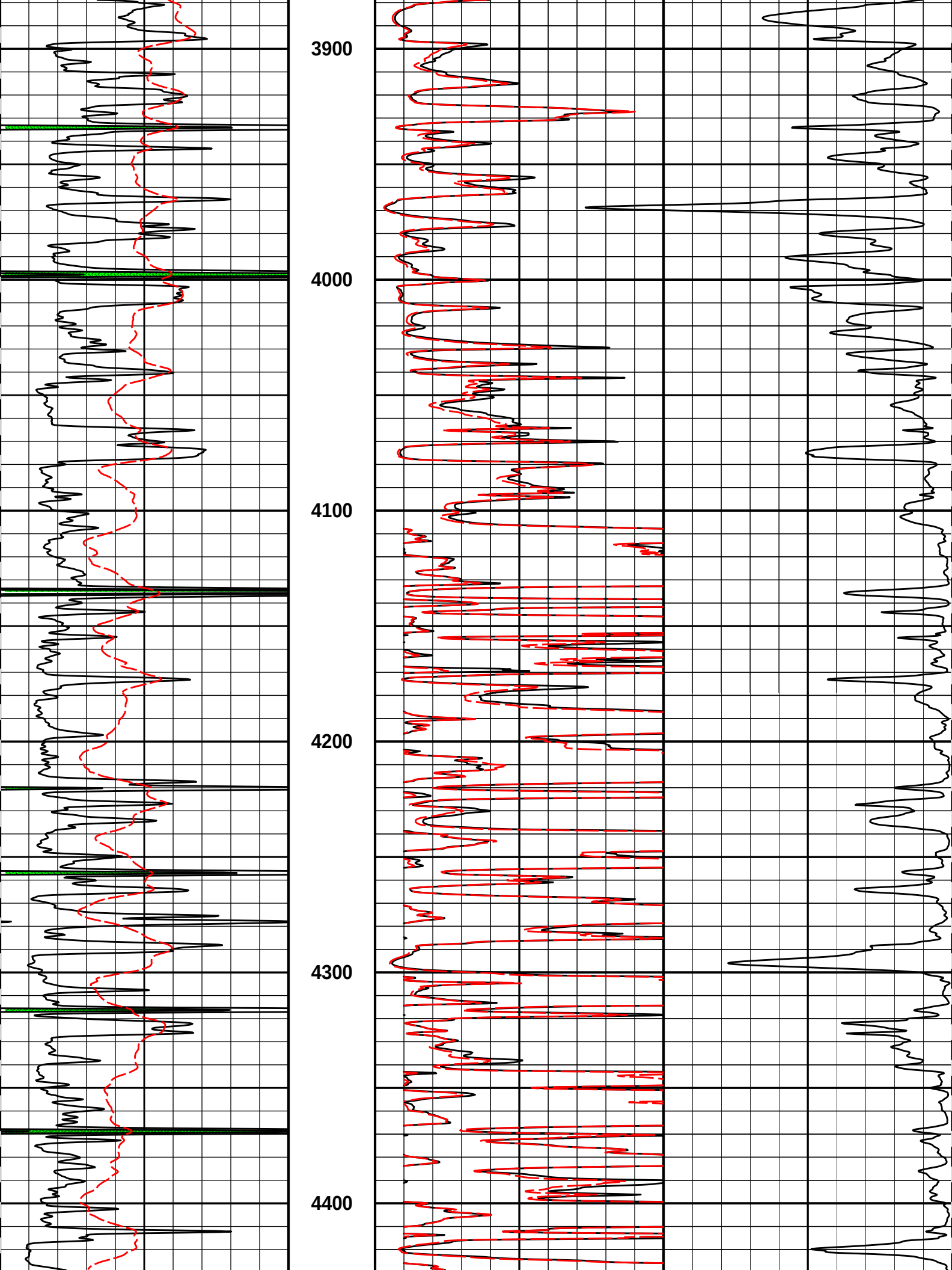
3500
3600
3700
3800
SP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4100
4200
4300
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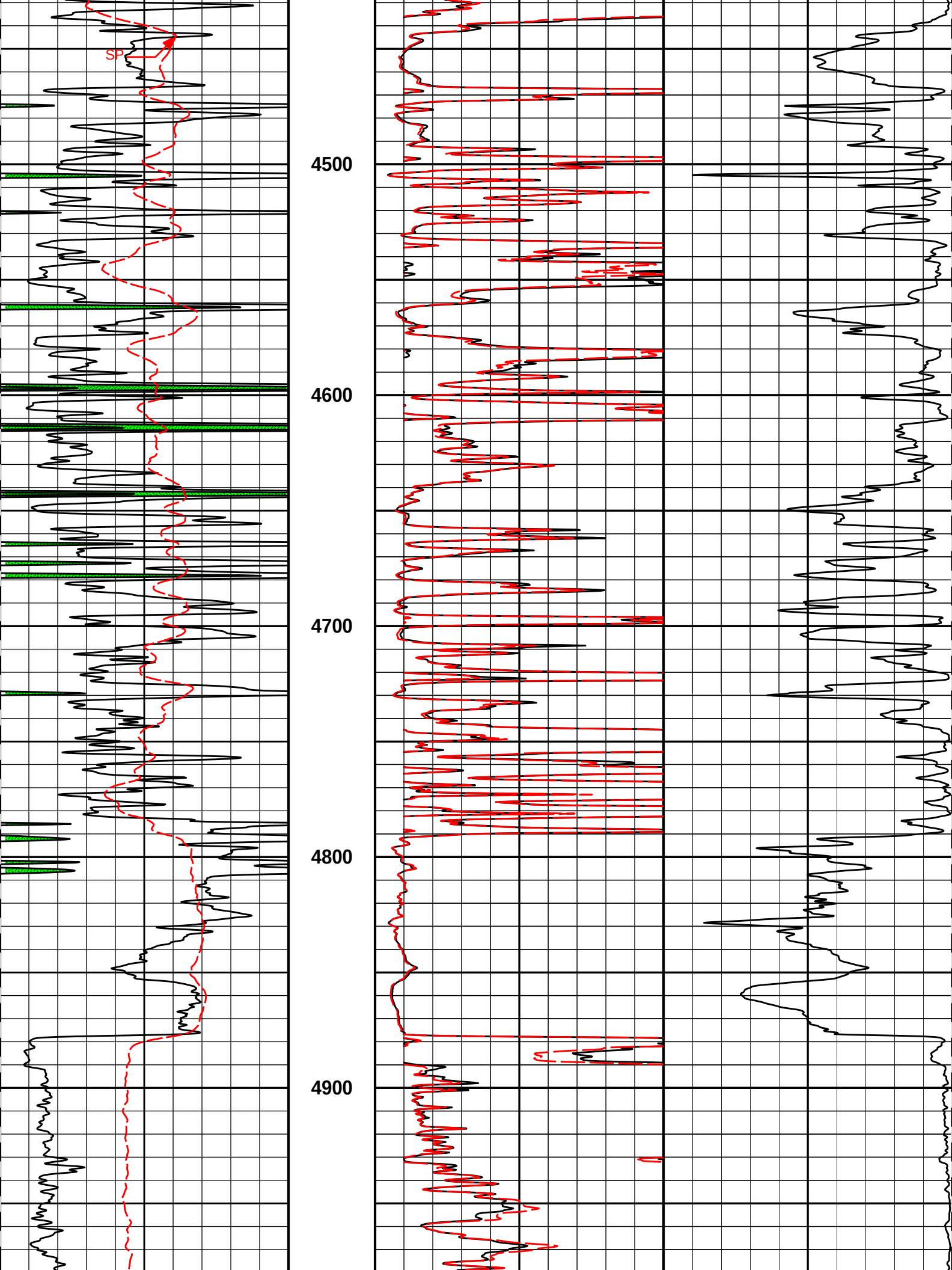
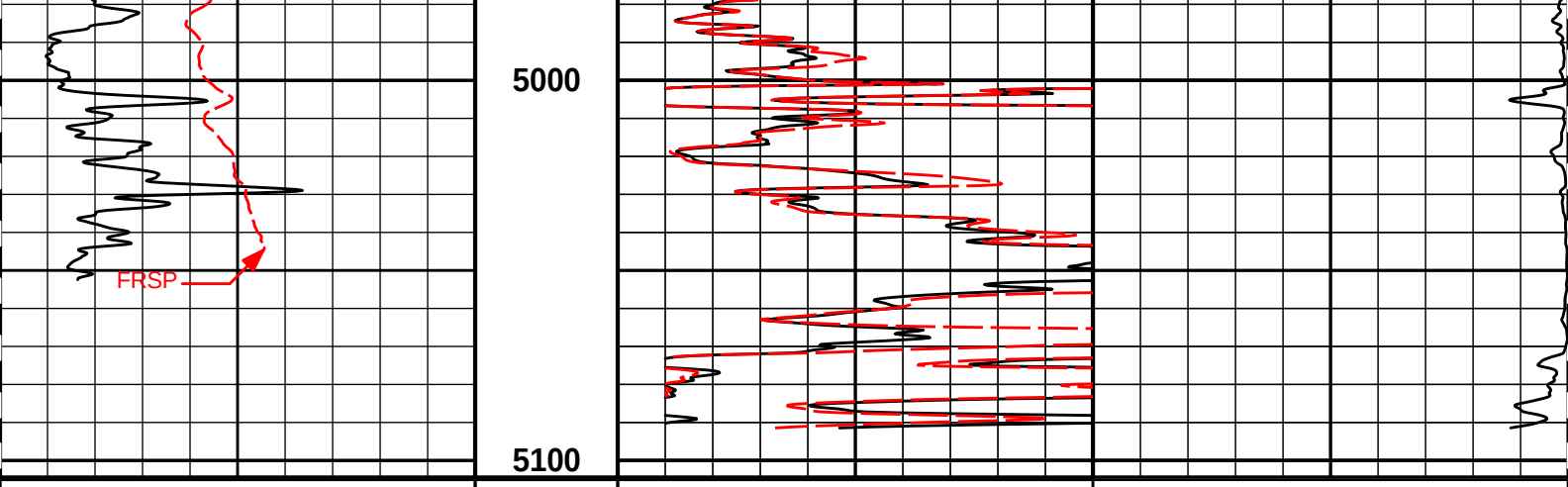

SP
4500
4600
4700
4800
4900



0 Gamma API 150
api
SP
-]20[+

MD
1 : 600
ft

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

1000 90in Conductivity 2ft Res 0
mmho per metre

HALLIBURTON

Plot Time: 18-Dec-13 09:33:37
Plot Range: 1530 ft to 5104.33 ft
Data: MAZANEC_1735\Well Based\R1 CASING SPLICE\
Plot File: \\-LOCAL-\MAZANEC_1735\Well Based\ACRT\ACRT_2_lib

2 INCH MAIN LOG

HALLIBURTON

Plot Time: 18-Dec-13 09:33:37
Plot Range: 1530 ft to 5104.33 ft
Data: MAZANEC_1735\Well Based\R1 CASING SPLICE\
Plot File: \\-LOCAL-\MAZANEC_1735\Well Based\ACRT\ACRT_5_main_lib

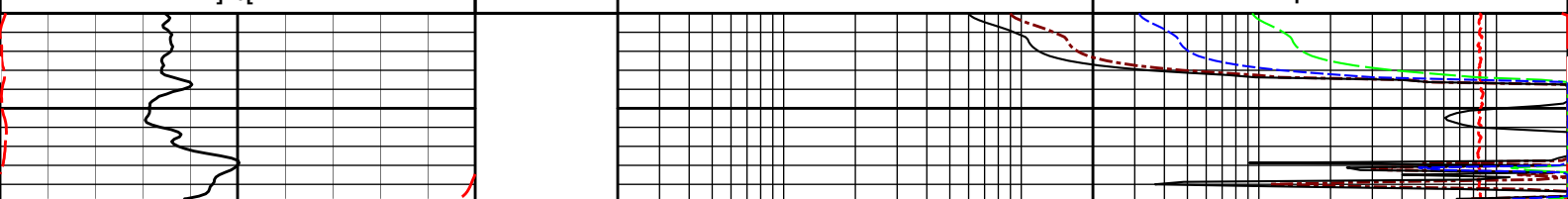
5 INCH MAIN LOG

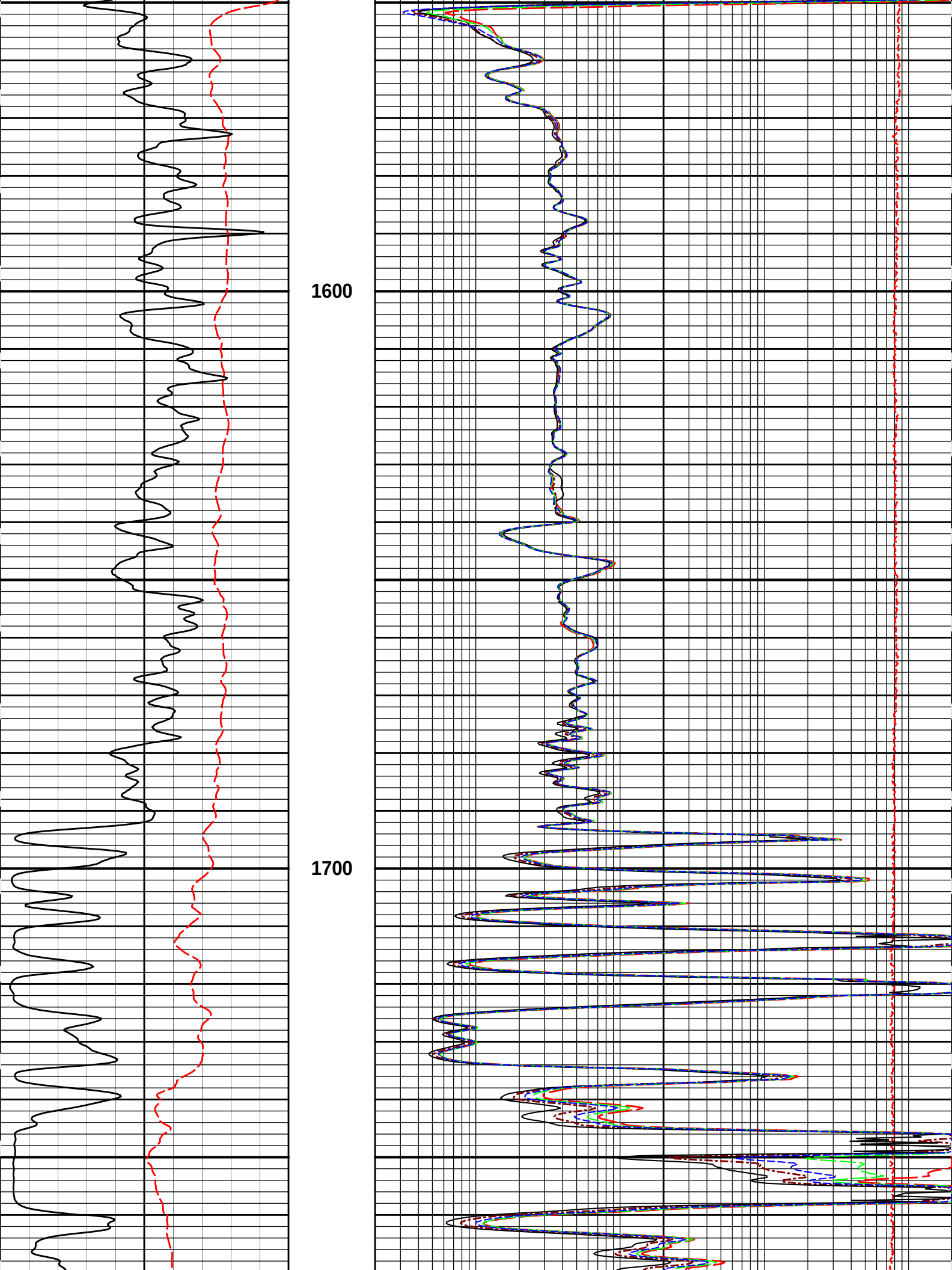
0.2 90in Resistivity 2ft Res 2000
ohmm
0.2 60in Resistivity 2ft Res 2000
ohmm
0.2 30in Resistivity 2ft Res 2000
ohm-metre
0.2 20in Resistivity 2ft Res 2000
ohmm
0.2 10in Resistivity 2ft Res 2000
ohmm

SHALE
0 Gamma API 150
api
SP
-]20[+

MD
1 : 240
ft

10K Tension 0
pounds

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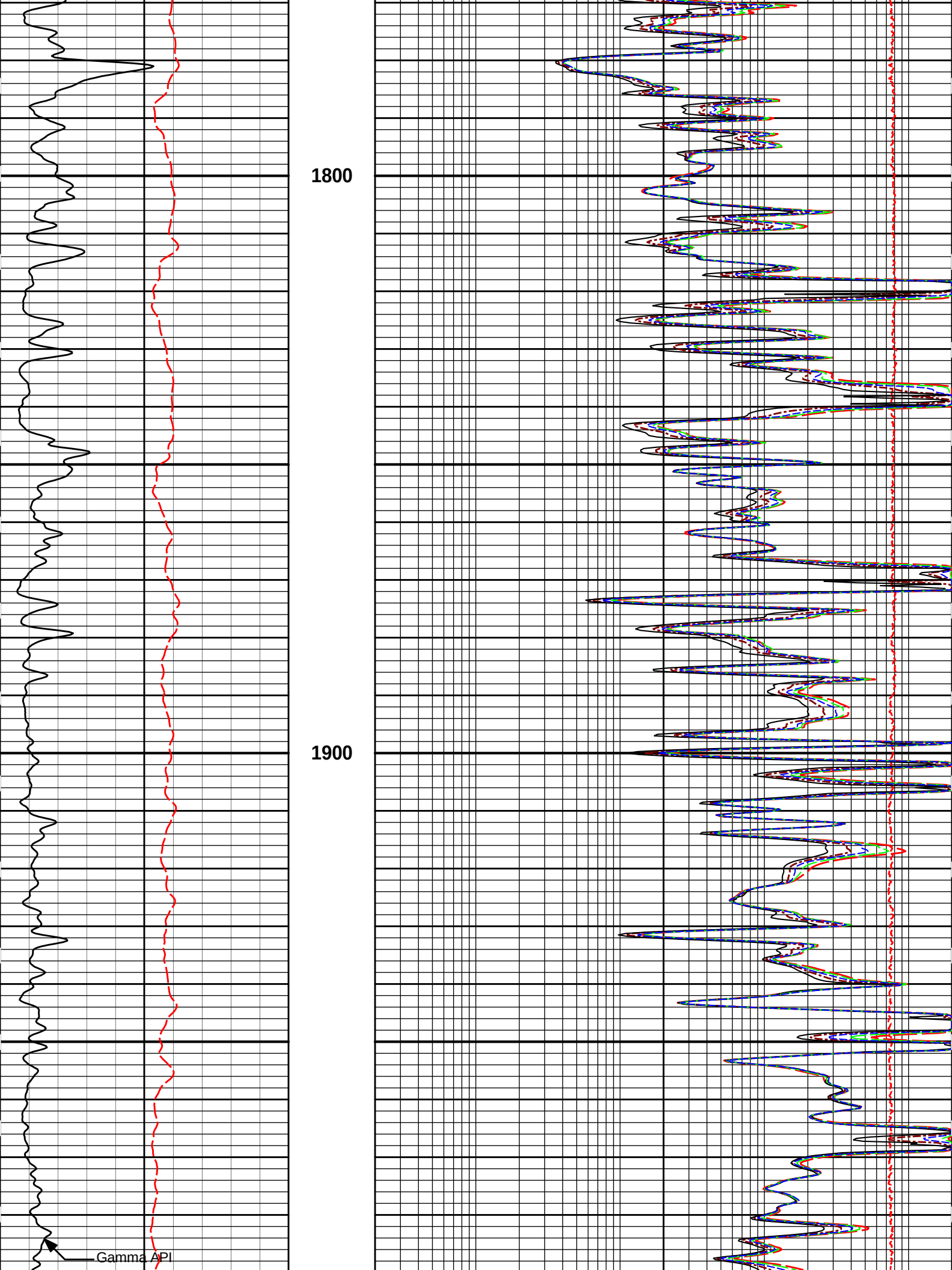
1700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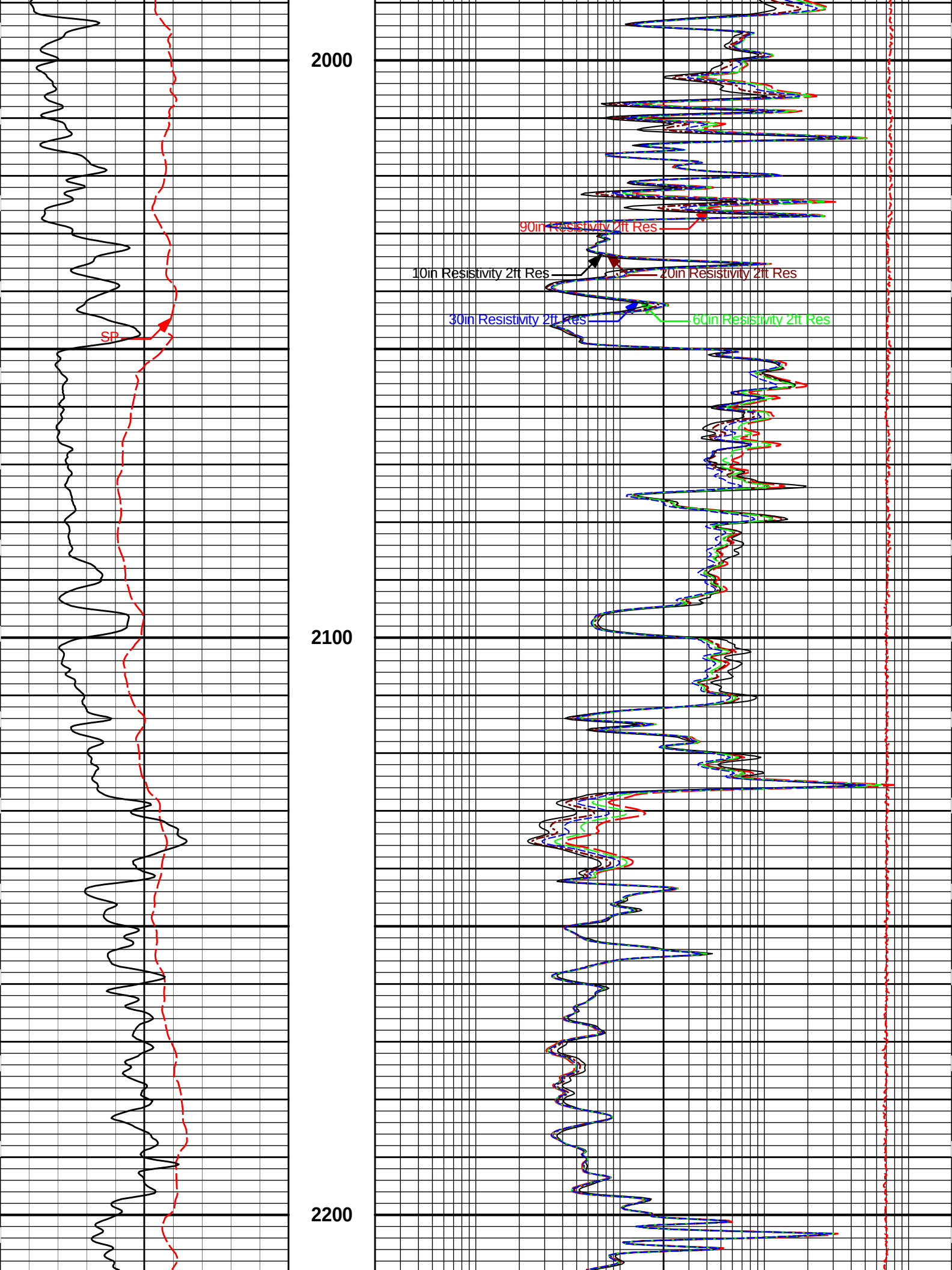
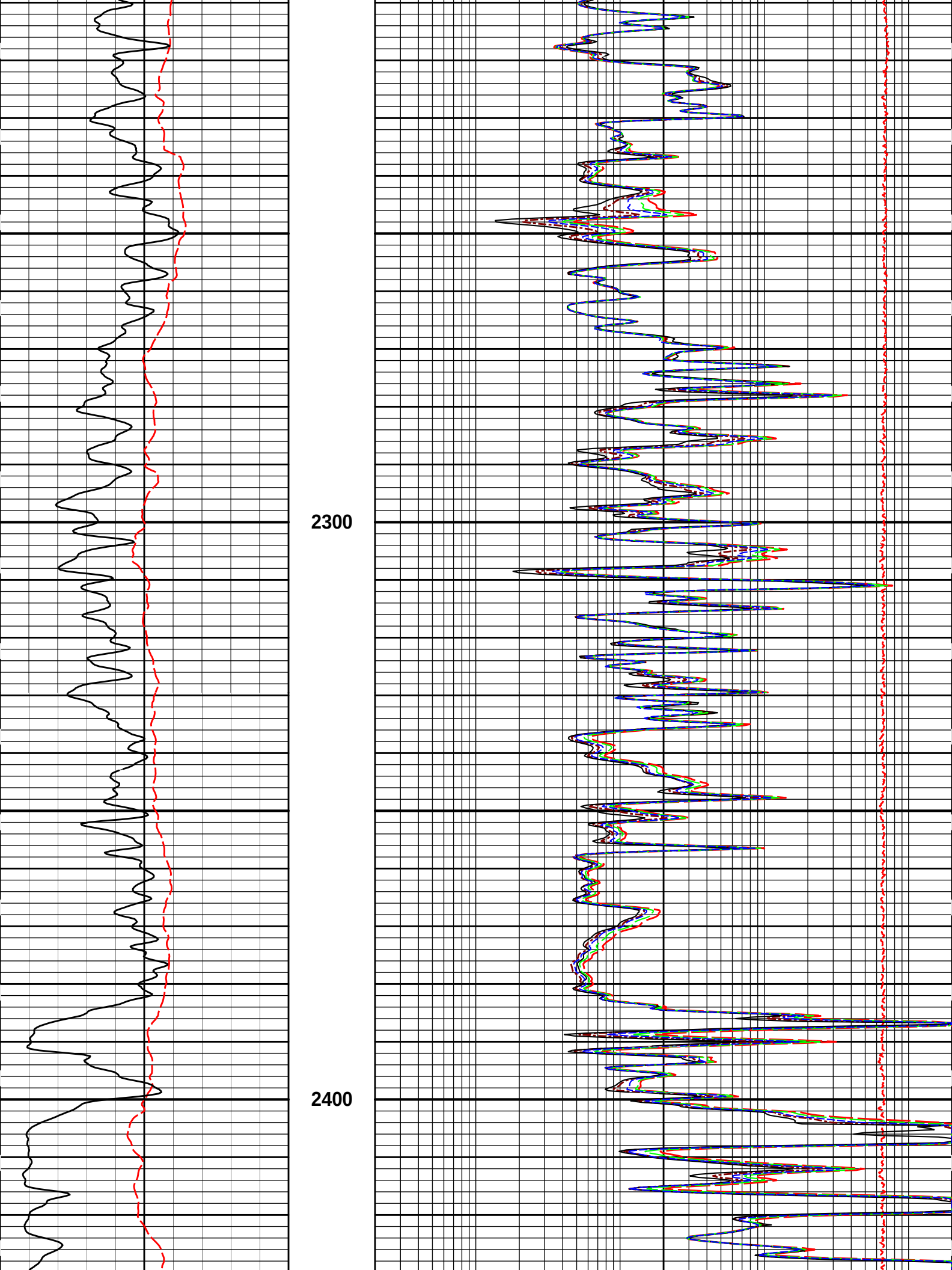
1900
Gamma API


2000
2100
2200
SP
90in Resistivity 2ft Res
10in Resistivity 2ft Res
20in Resistivity 2ft Res
30in Resistivity 2ft Res
60in Resistivity 2ft Res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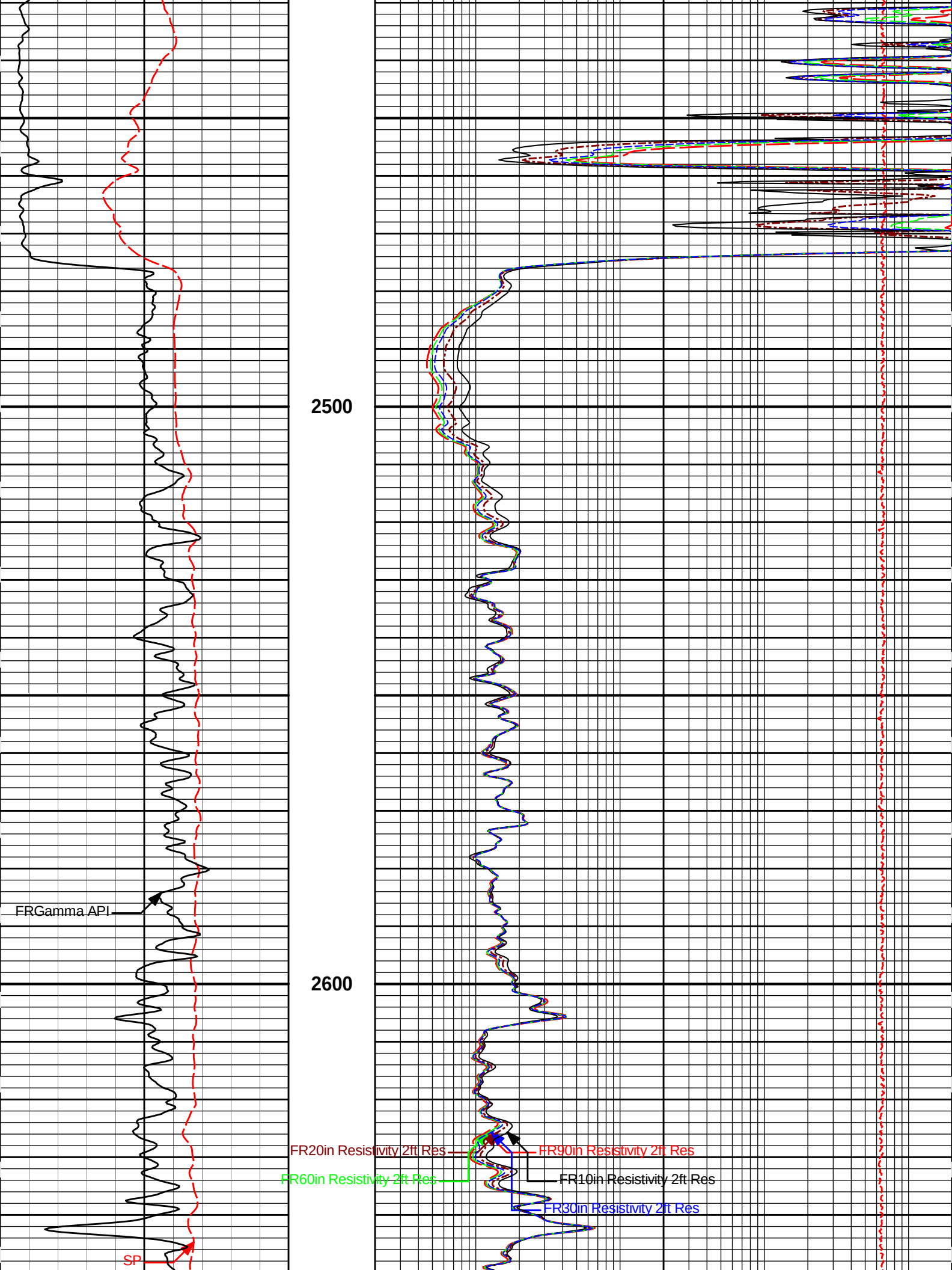
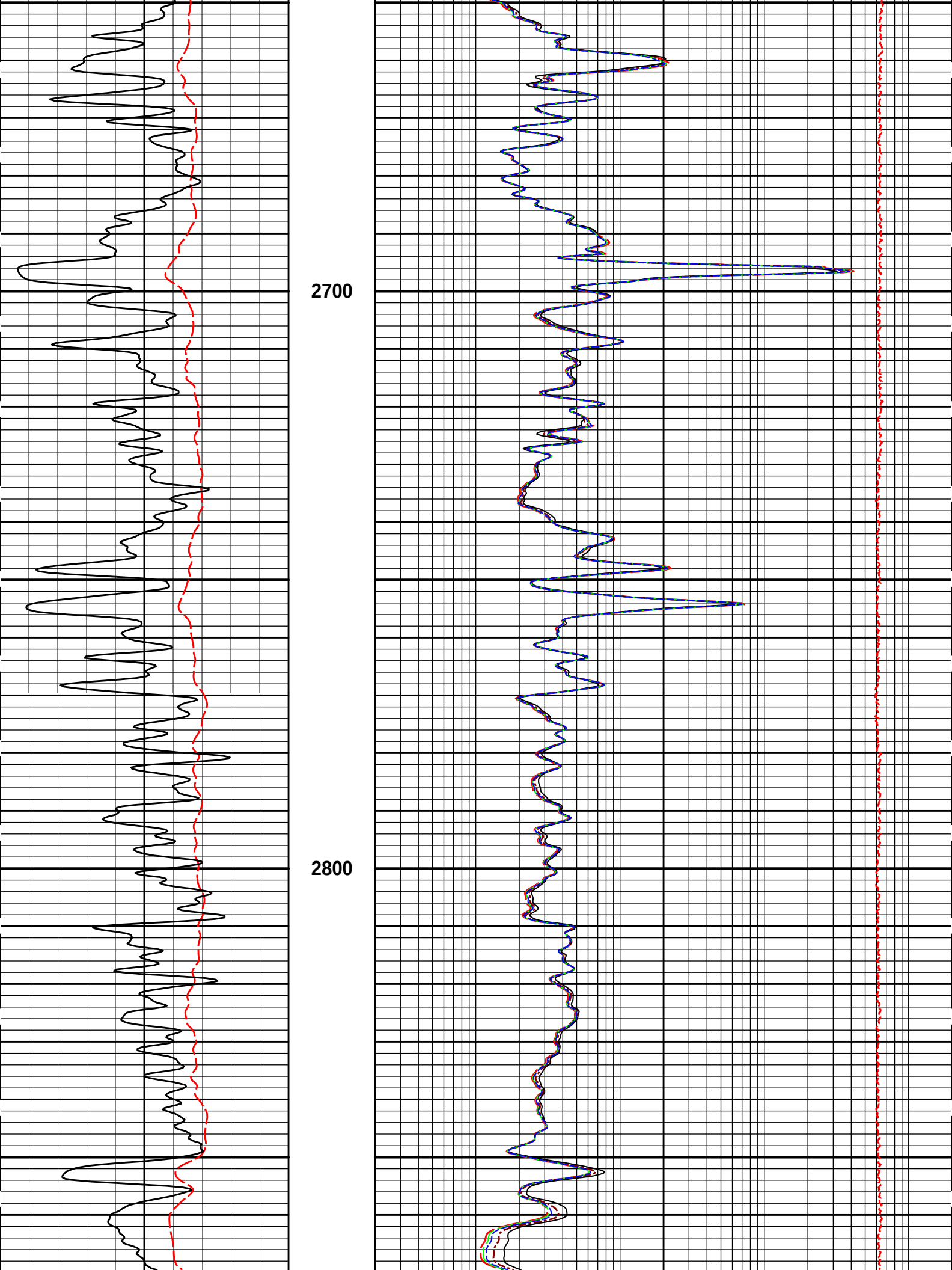

2500
2600
FRGamma API
SP
FR20in Resistivity 2ft Res
FR90in Resistivity 2ft Res
FR60in Resistivity 2ft Res
FR10in Resistivity 2ft Res
FR30in Resistivity 2ft Res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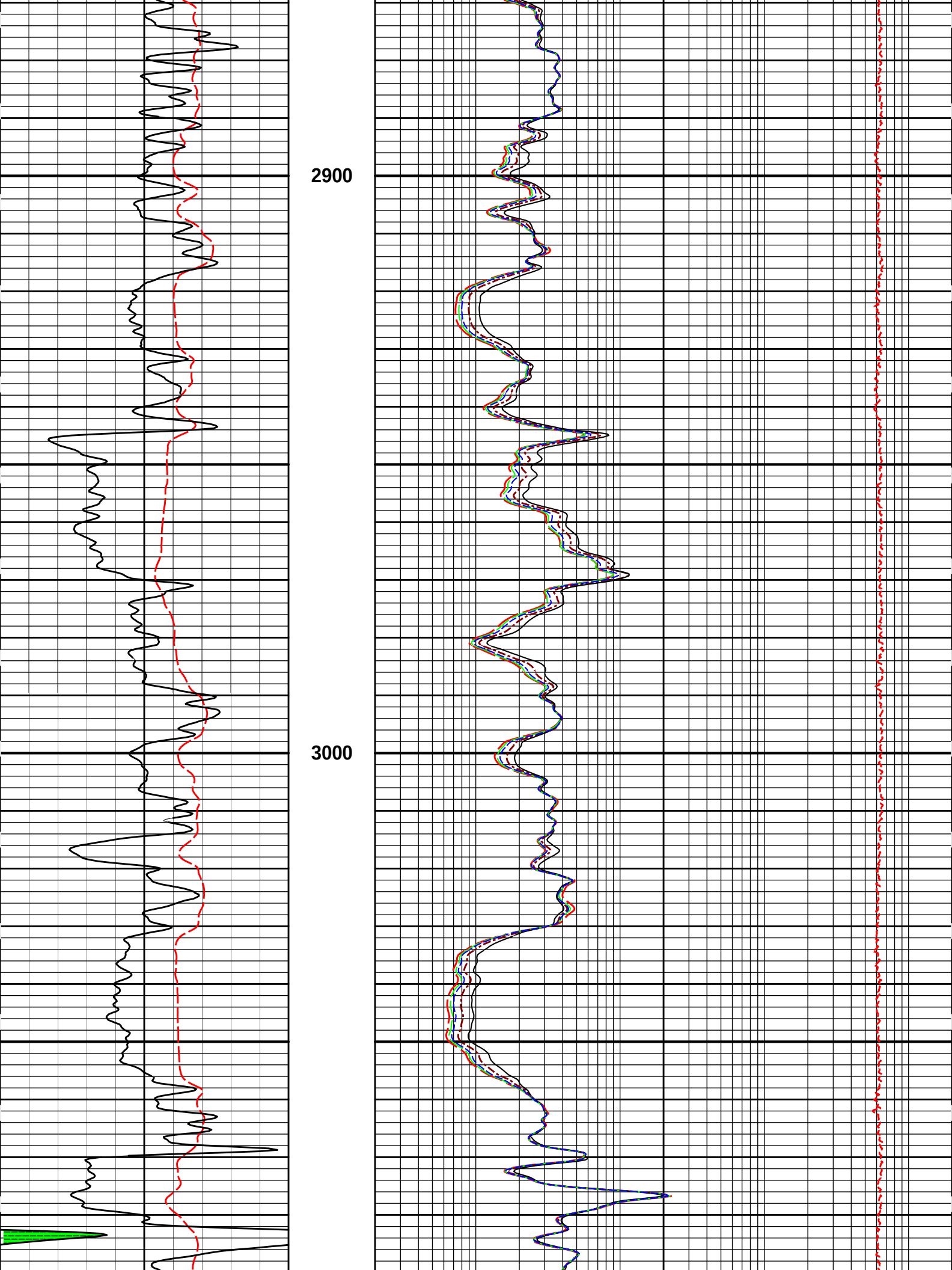
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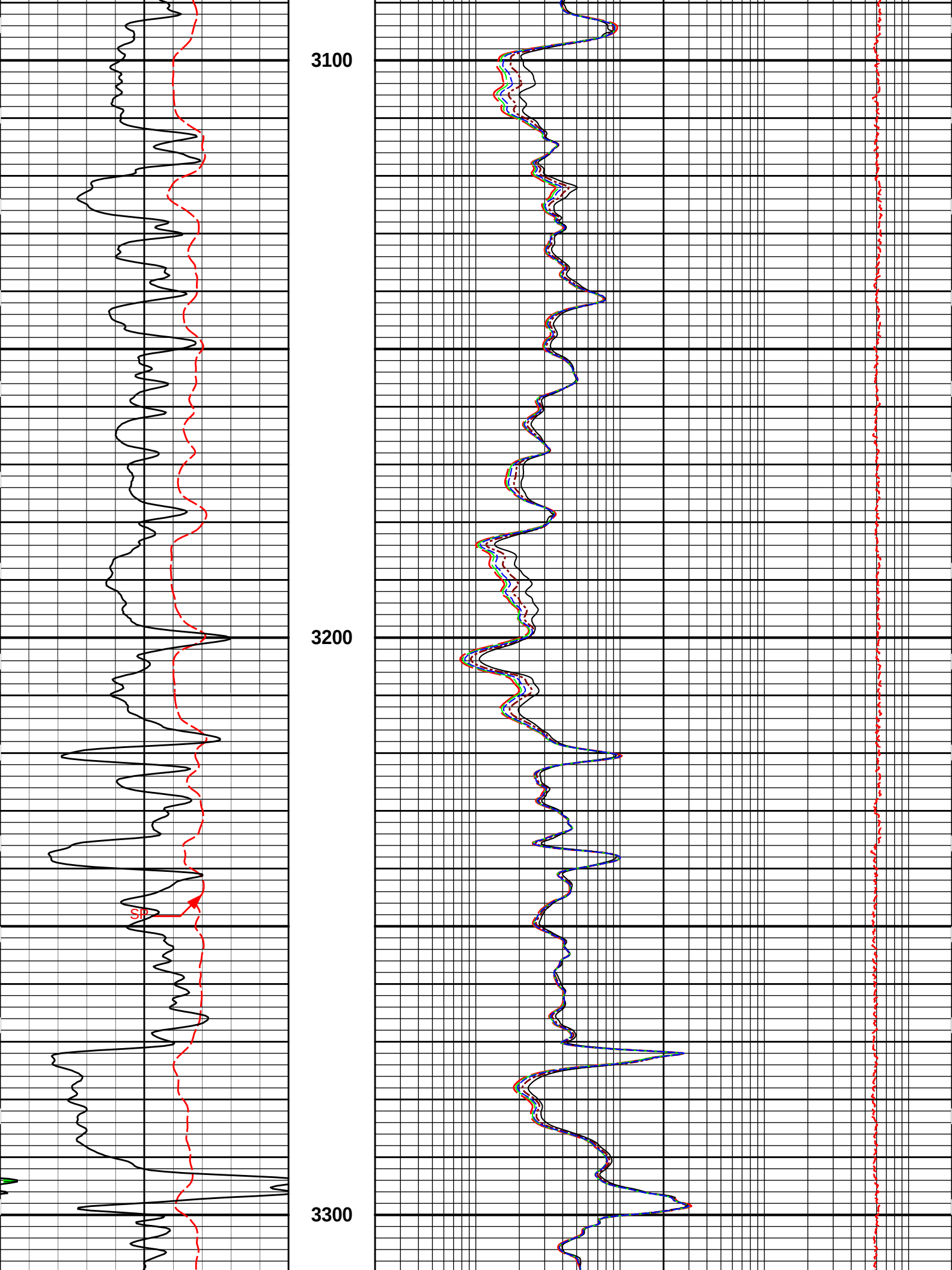
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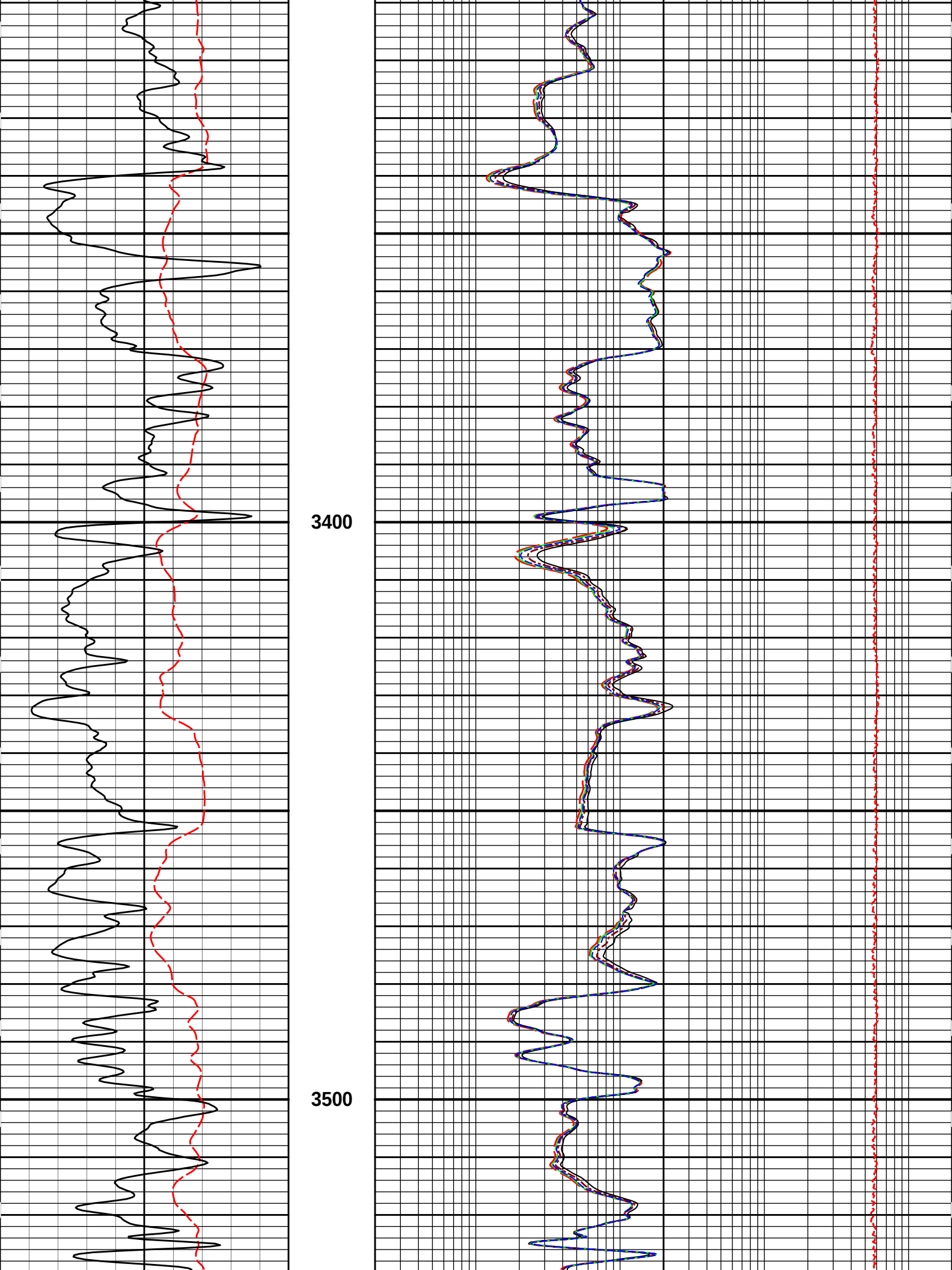
3200
3300
SP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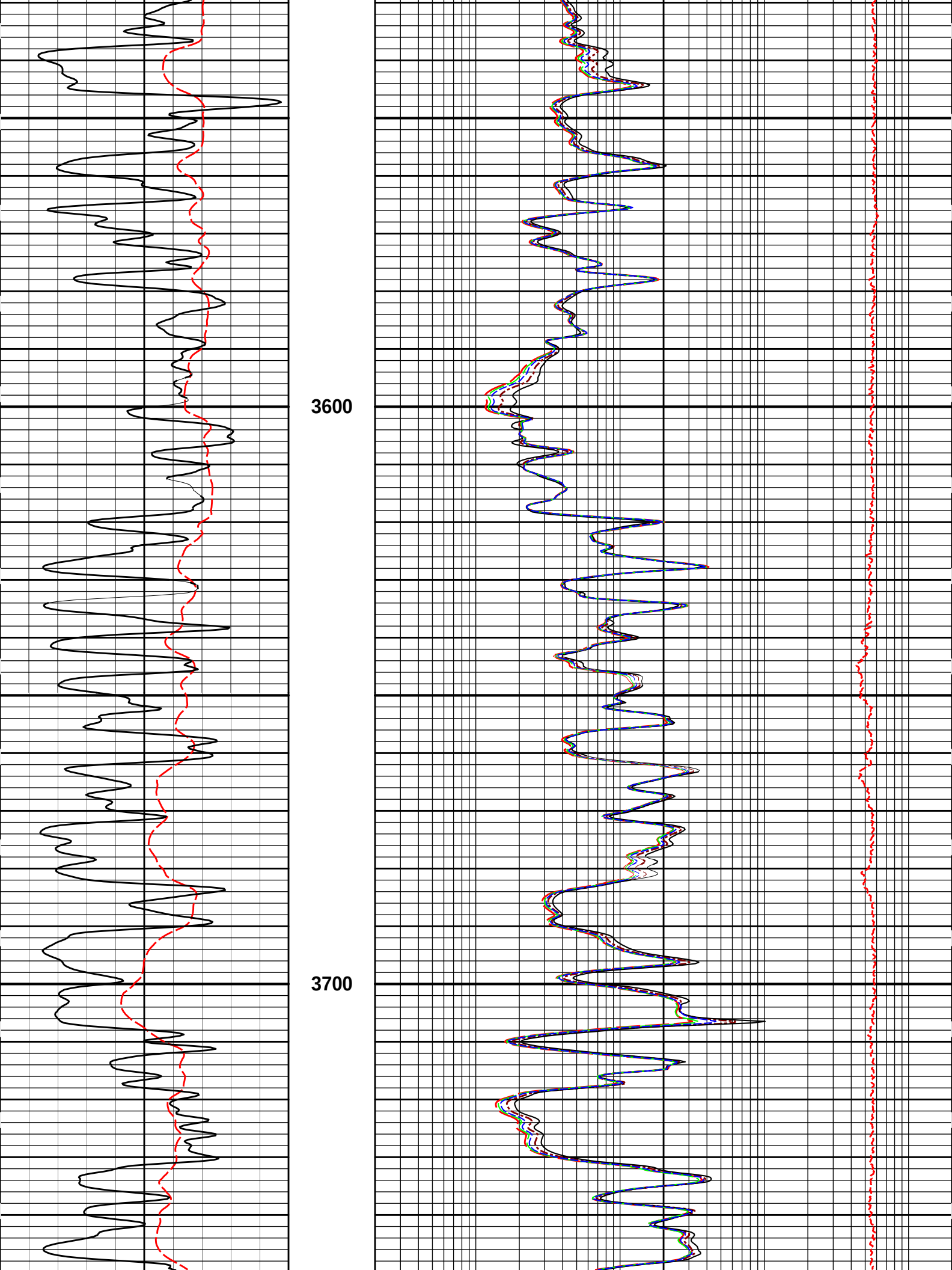
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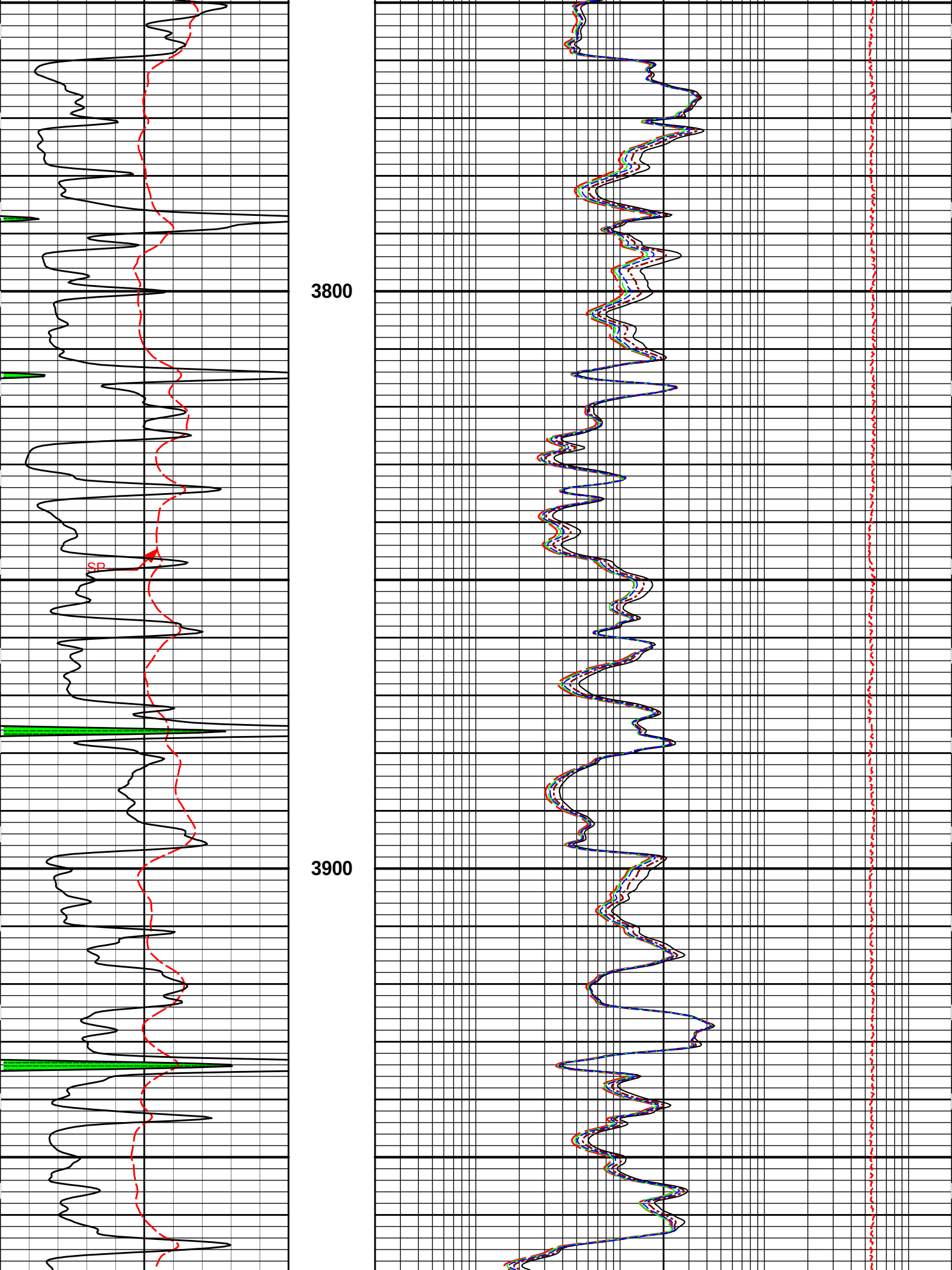
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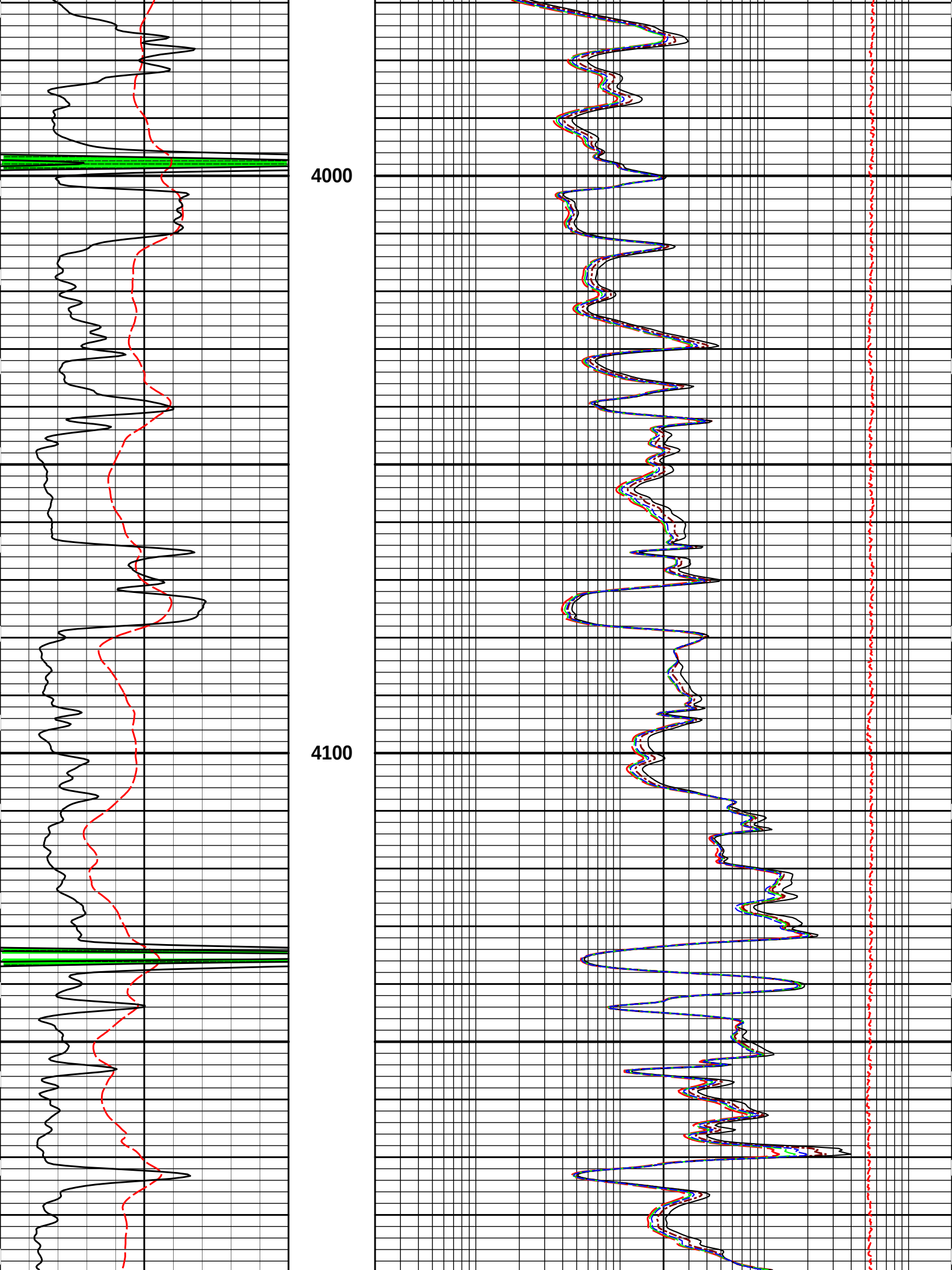
SP
3900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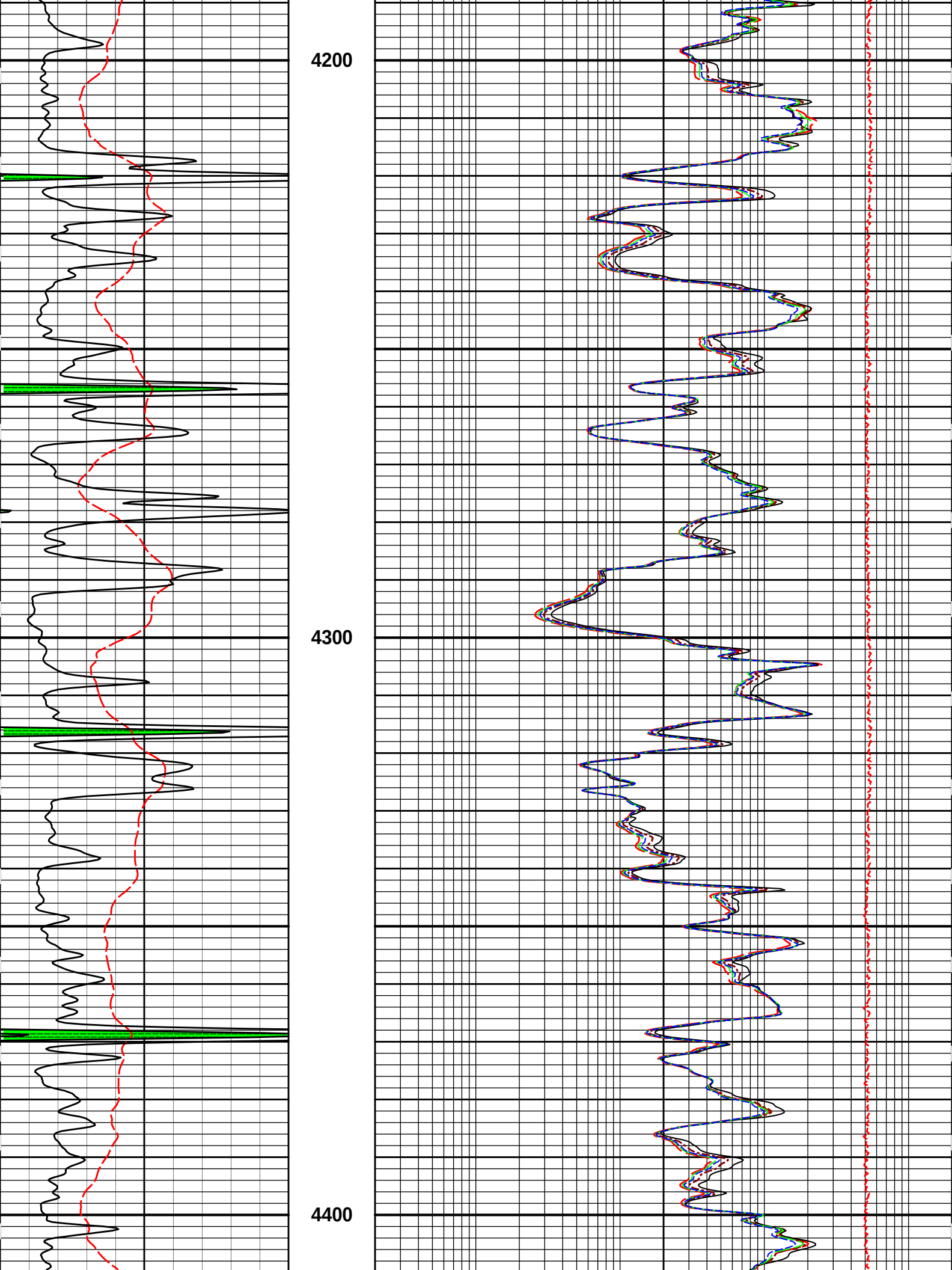
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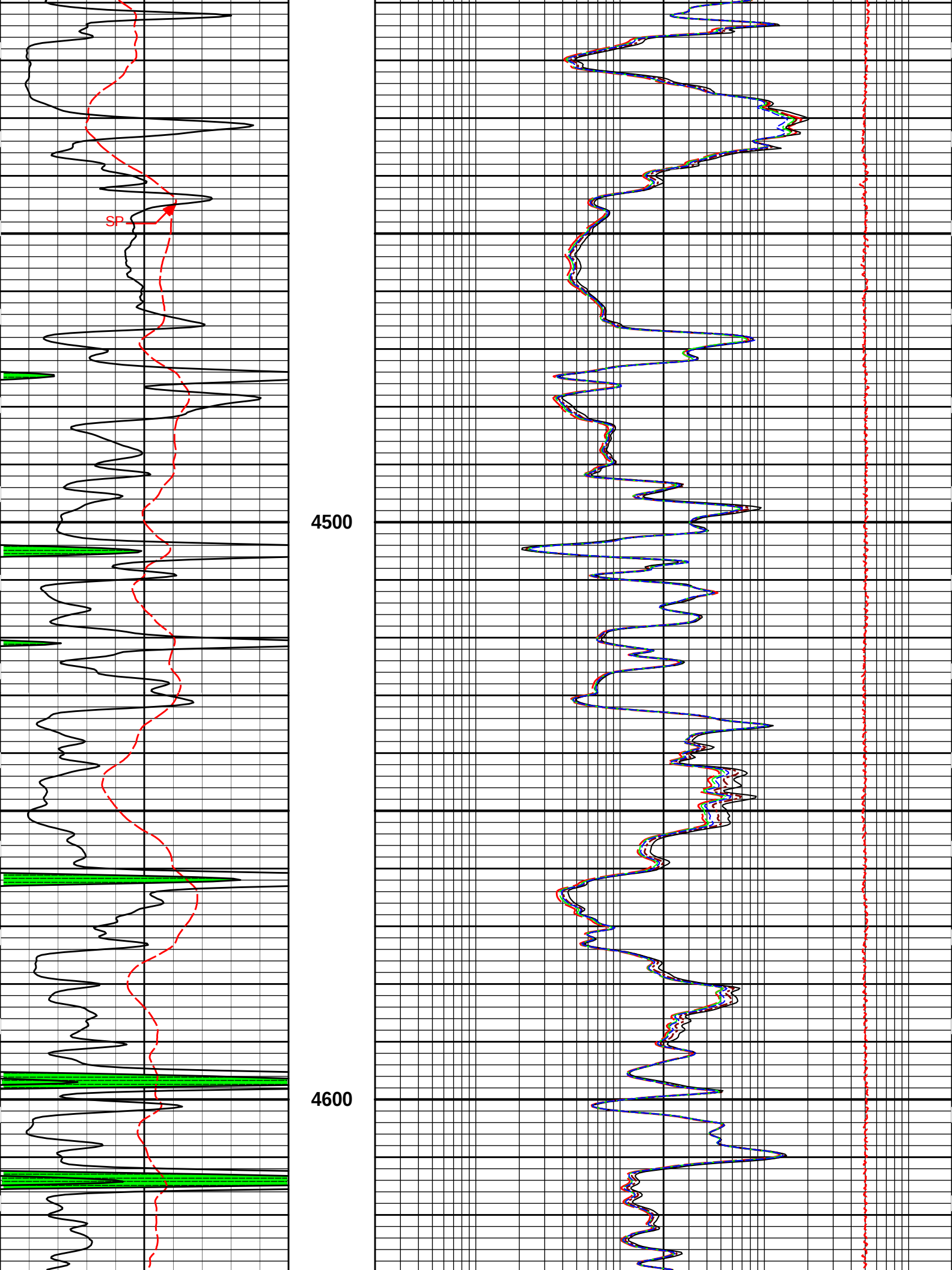
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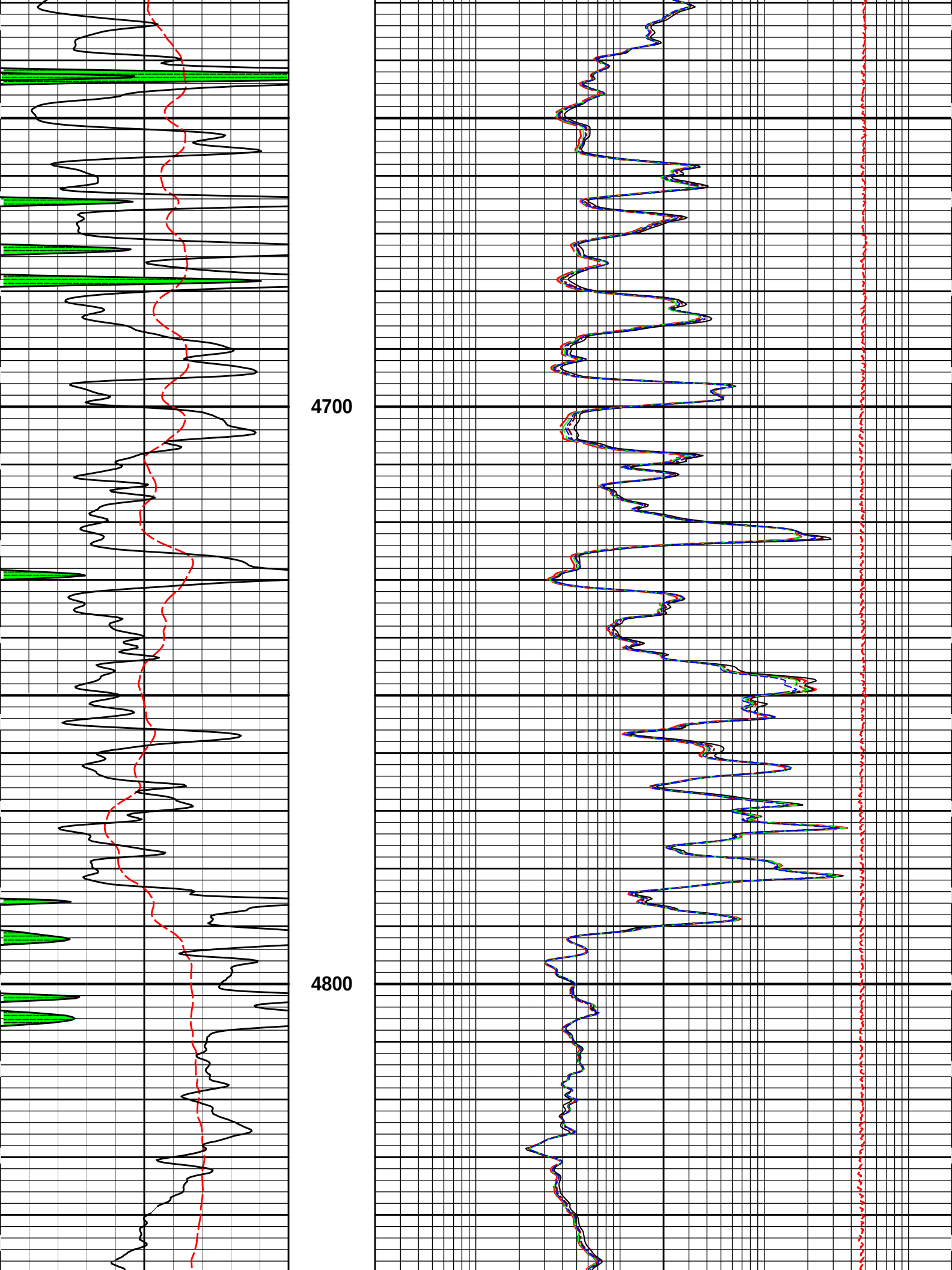
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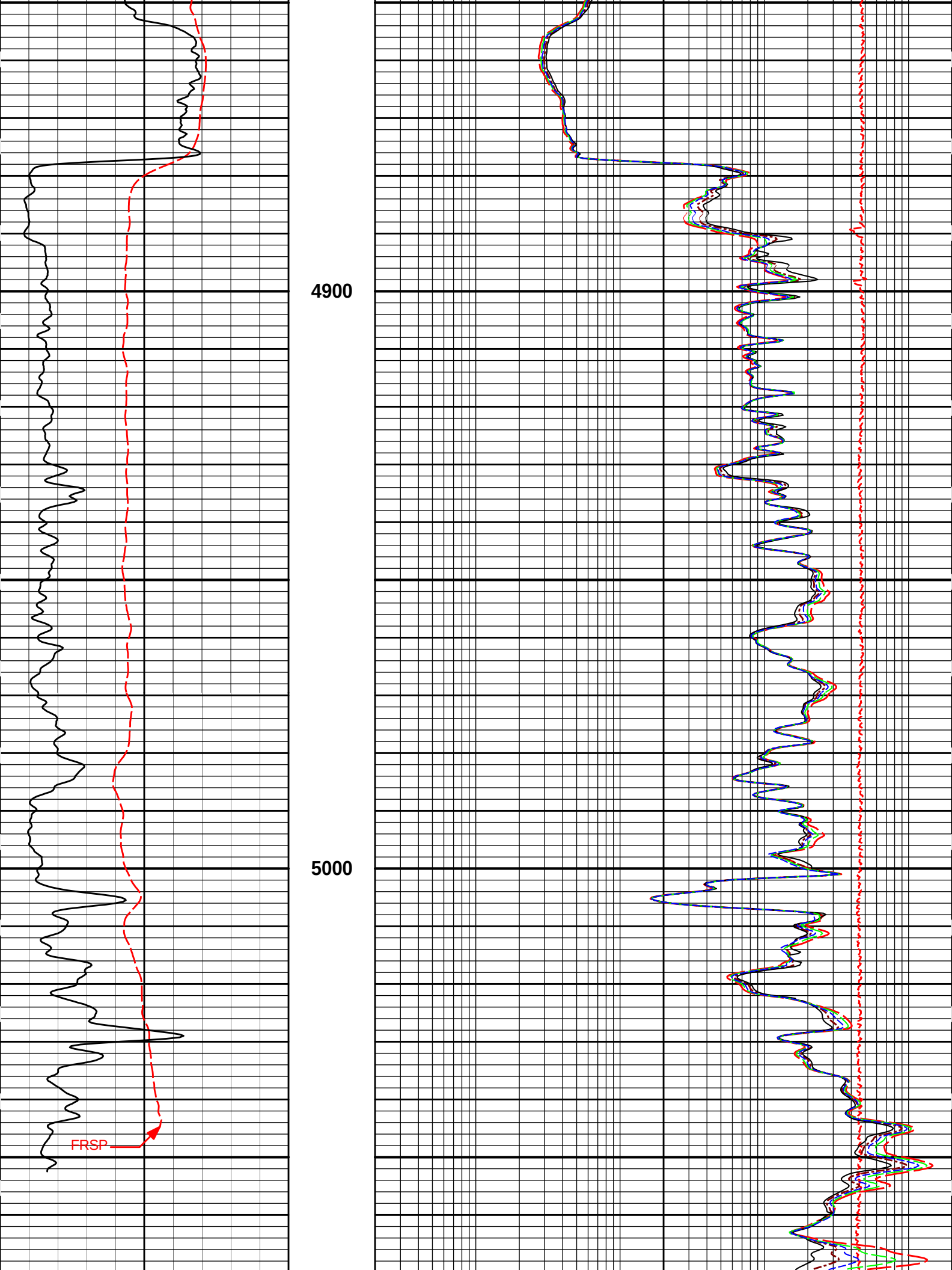
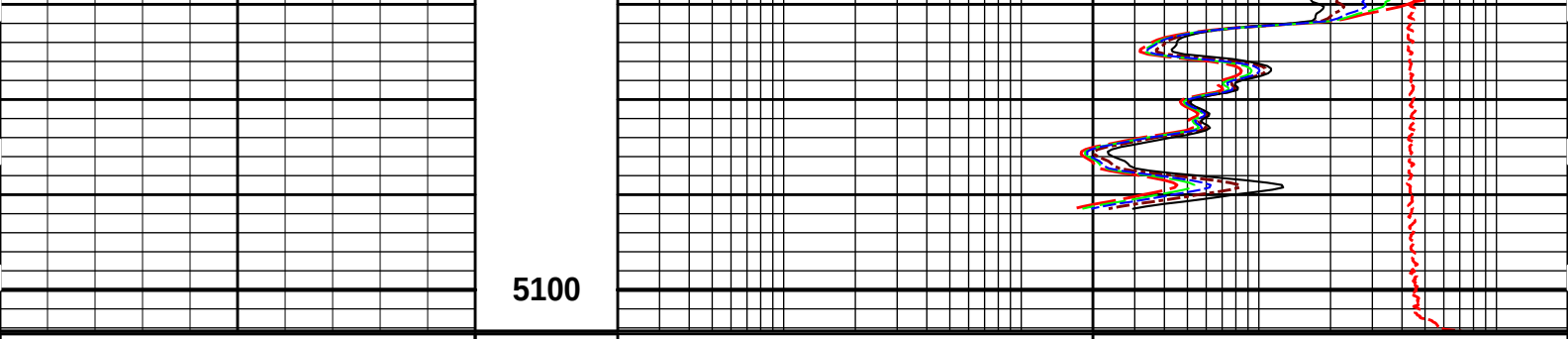

4900
5000
FRSP



HALLIBURTON

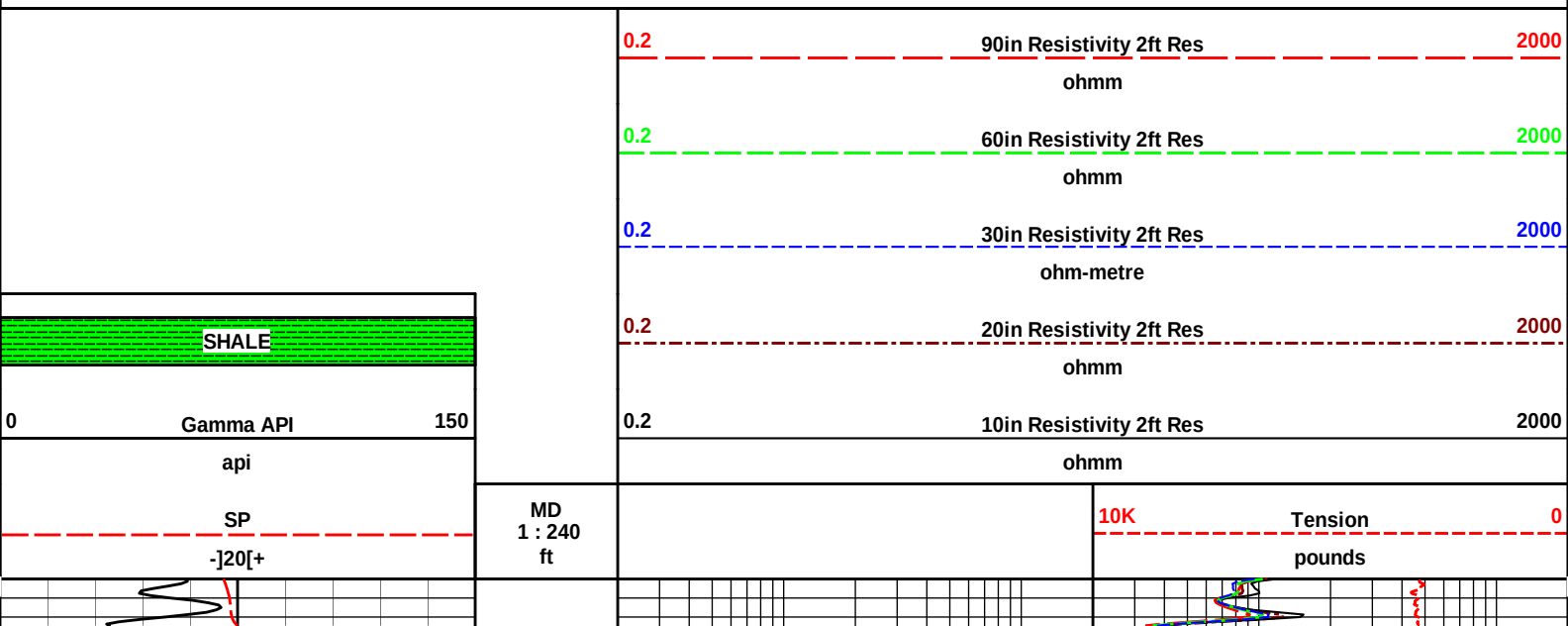
Plot Time: 18-Dec-13 09:33:43
Plot Range: 1530 ft to 5104.33 ft
Data: MAZANEC_1735\Well Based\R1 CASING SPLICE\
Plot File: \\-LOCAL-\MAZANEC_1735\Well Based\ACRT\ACRT_5_main_lib

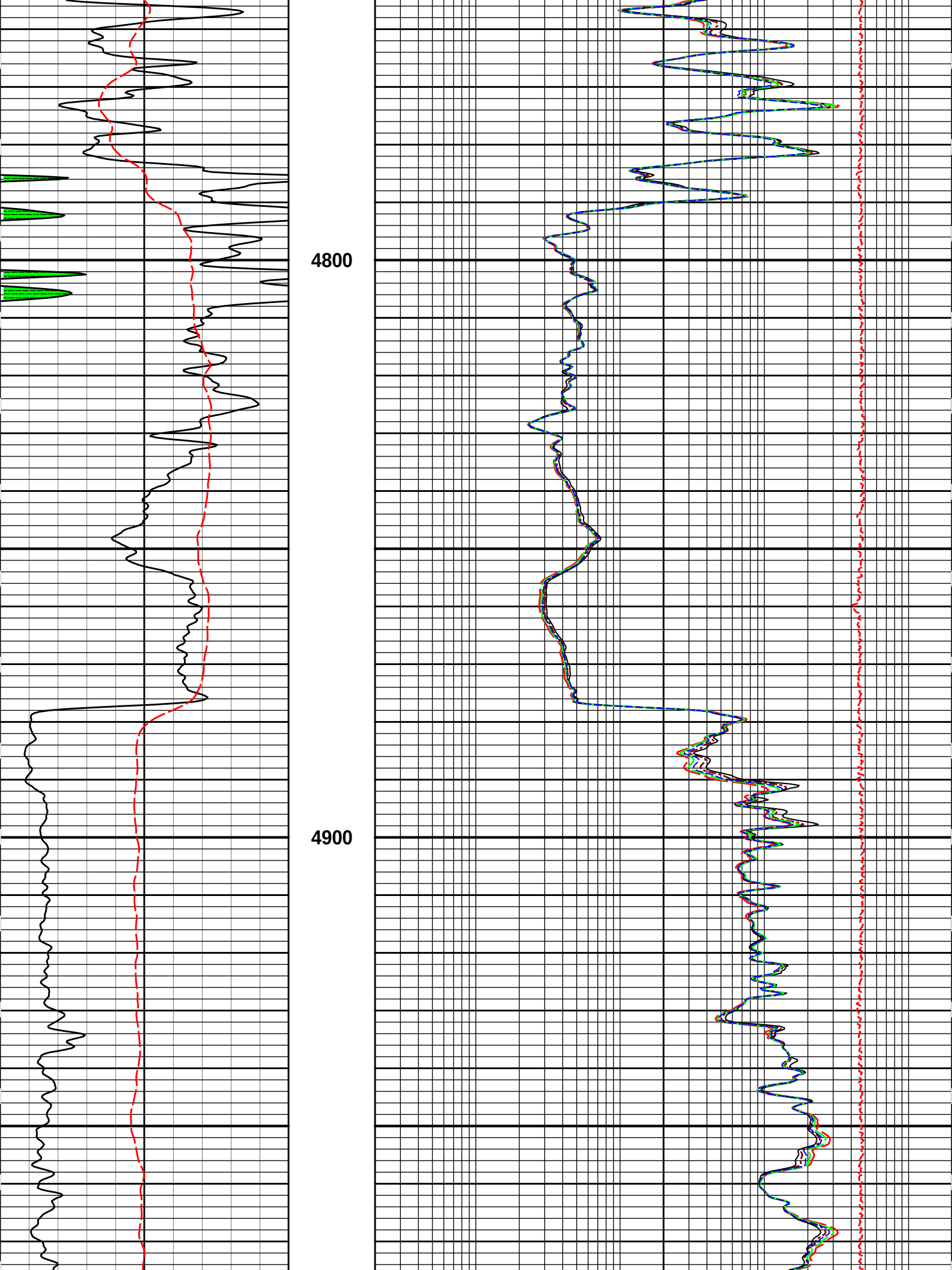
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 18-Dec-13 09:33:43
Plot Range: 4750 ft to 5102.25 ft
Data: MAZANEC_1735\Well Based\R1 REPEAT\
Plot File: \\-LOCAL-\MAZANEC_1735\Well Based\ACRT\ACRT_5_repeat_lib

REPEAT SECTION

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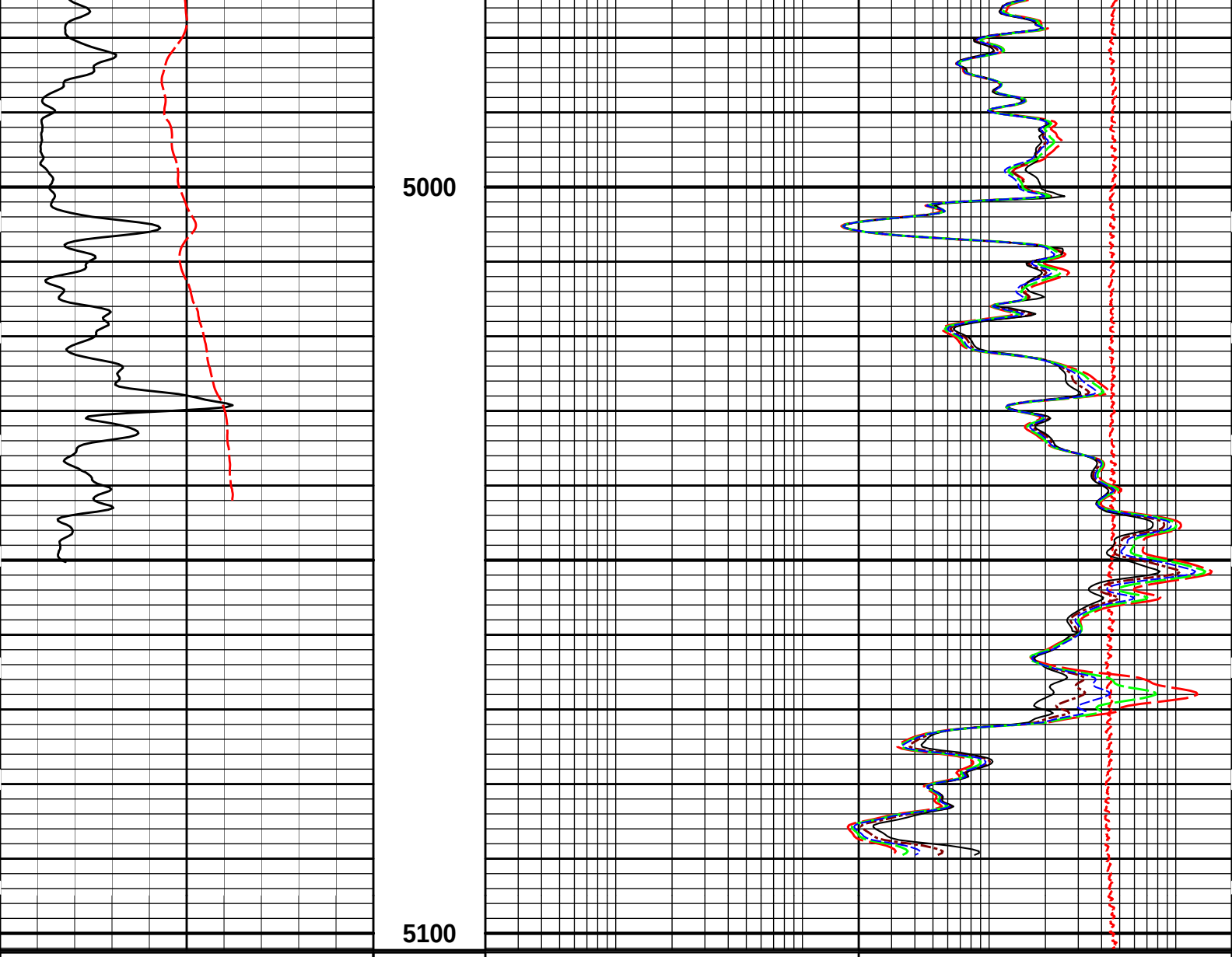


SP

-]20[+

0 Gamma API 150

api

SHALE

MD
1 : 240
ft

10K Tension 0

pounds

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

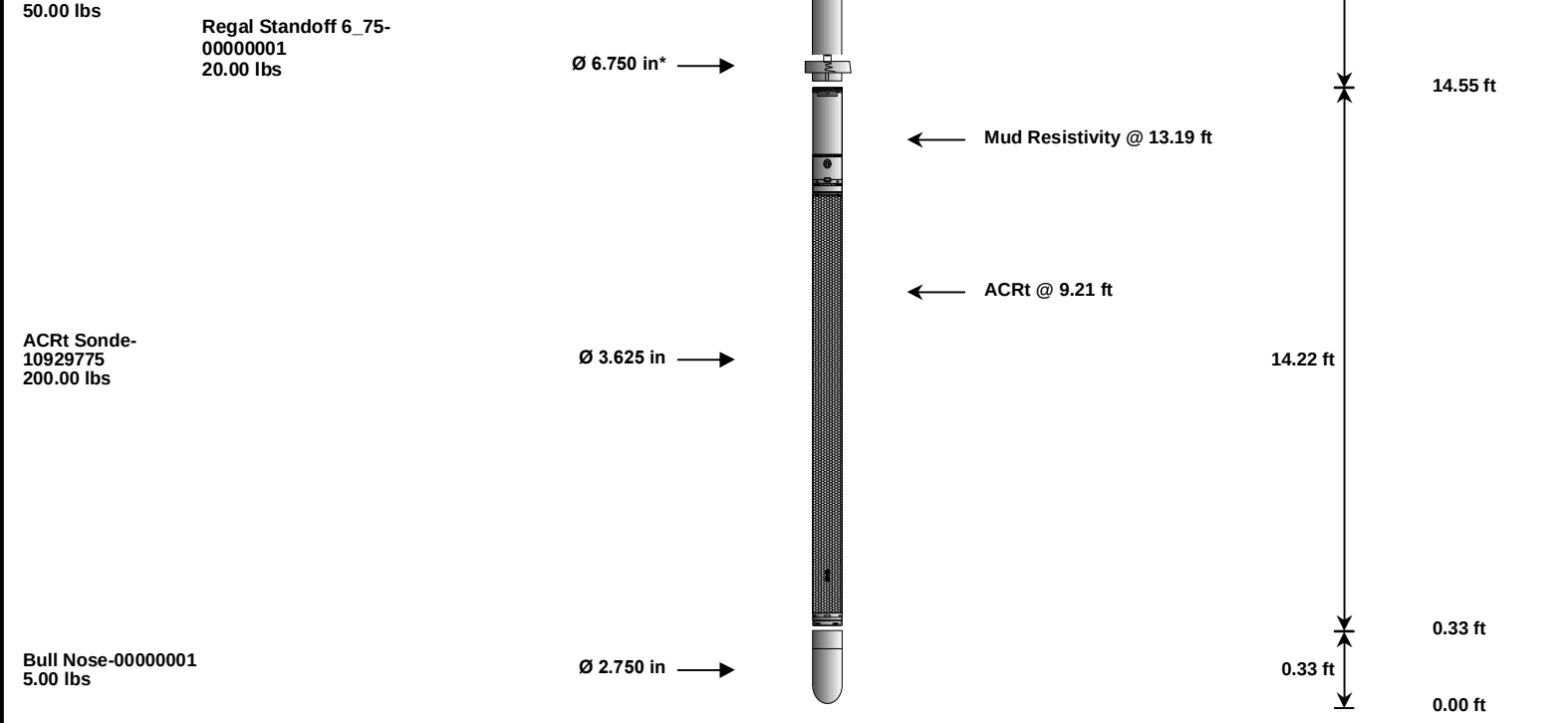
Plot Time: 18-Dec-13 09:33:45
Plot Range: 4750 ft to 5102.25 ft
Data: MAZANEC_1735\Well Based\R1 REPEAT\
Plot File: \\-LOCAL-\MAZANEC_1735\Well Based\ACRT\ACRT_5_repeat_lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Sensors @ Delays	Length	Accumulated Length
					64.49 ft
CH_HOS-954 37.50 lbs		Ø 2.750 in	Temperature @ 63.46 ft	3.03 ft	
					61.46 ft
XOHD-00000001 20.00 lbs		Ø 2.750 in Ø 3.625 in		0.95 ft	
					60.51 ft
SP Sub-12345678 60.00 lbs		Ø 3.625 in	SP @ 58.73 ft	3.74 ft	
					56.77 ft
GTET-10748374 165.00 lbs		Ø 3.625 in	GammaRay @ 50.71 ft	8.52 ft	
					48.25 ft
CSNG-11830417 114.00 lbs		Ø 3.625 in	CSNG @ 42.62 ft	8.17 ft	
					40.08 ft
DSNT-10735145 174.00 lbs	DSN Decentralizer-10755066 6.60 lbs	Ø 5.000 in* Ø 3.625 in	DSN Far @ 33.15 ft DSN Near @ 32.40 ft	9.69 ft	
					30.40 ft
SDLT-10673803 360.00 lbs	SDLT Pad-10673790 65.00 lbs Microlog Pad-10673803 8.00 lbs	Ø 4.500 in Ø 4.750 in* Ø 4.750 in*	Microlog @ 22.58 ft SDL Caliper @ 22.40 ft SDL @ 22.39 ft	10.81 ft	
					19.58 ft
ACRt Instrument-10929776		Ø 3.625 in		5.03 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	954	37.50	3.03		61.46	300.00
XOHD	Hostile to Dits Cross Over	00000001	20.00	0.95		60.51	300.00
SP	SP Sub	12345678	60.00	3.74		56.77	300.00
GTET	Gamma Telemetry Tool	10748374	165.00	8.52		48.25	60.00
CSNG	Compensated Spectral Natural Gamma	11830417	114.00	8.17		40.08	15.00
DSNT	Dual Spaced Neutron	10735145	174.00	9.69		30.40	60.00
DCNT	DSN Decentralizer	10755066	6.60	5.13	*	33.73	300.00
SDLT	Spectral Density Tool	10673803	360.00	10.81		19.58	60.00
SDLP	Density Insite Pad	10673790	65.00	2.55	*	21.79	60.00
MICP	Microlog Pad	10673803	8.00	1.00	*	22.08	60.00
ACRt	Array Compensated True Resistivity Instrument Section	10929776	50.00	5.03		14.55	300.00
RSOF	Regal Standoff 6.75in	00000001	20.00	0.52	*	14.87	300.00
ACRt	Array Compensated True Resistivity Sonde Section	10929775	200.00	14.22		0.33	300.00
BLNS	Bull Nose	00000001	5.00	0.33		0.00	300.00
Total			**1,285.10**	**64.49**			

* Not included in Total Length and Length Accumulation.

Data: MAZANEC_1735\0001 SP-GTET-CSNG-DSN-SDL-ACRT-BN\IDLE **Date: 18-Dec-13 01:12:48**

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	8.750	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.300	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	1.000	ohmm

SHARED	TRM	Temperature of Mud	75.0	degF
SHARED	CSD	Logging Interval is Cased?	No	
SHARED	ICOD	AHV Casing OD	7.000	in
SHARED	ST	Surface Temperature	75.0	degF
SHARED	TD	Total Well Depth	5100.00	ft
SHARED	BHT	Bottom Hole Temperature	130.0	degF
SHARED	SVTM	Navigation and Survey Master Tool	NONE	
SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
SHARED	TEMM	Temperature Master Tool	NONE	
SHARED	BHSM	Borehole Size Master Tool	NONE	
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	
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 for Gamma Ray Tools.	Eccentered	
CSNG	CGOK	Process CSNG Data?	Yes	
CSNG	CENT	Is Tool Centralized?	No	
CSNG	GBOK	Gamma Enviromental Corrections?	Yes	
CSNG	BARF	Barite Correction Factor	1.00	
CSNG	ORDG	Use Fixed Gain	No	
CSNG	ORDO	Use Fixed Offset	No	
CSNG	ORDR	Use Fixed Resolution Degradation Factor	No	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	CLOK	Process Caliper 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
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
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	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm

BOTTOM

Data: MAZANEC_1735\0001 SP-GTET-CSNG-DSN-SDL-ACRT-BN\002 18-Dec-13 01:44 Dn @1418.3f **Date: 18-Dec-13 02:02:11**

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 10748374 **Reference Calibration Date:** 11-Oct-13 12:41:08

Engineer: J. BOLLOM **Calibration Date:** 25-Nov-13 16:08:30

Software Version: WL INSITE R3.8.4 (Build 5) **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	48.3	47.5	api
Background + Calibrator	284.0	279.5	api
Calibrator	235.7	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 10748374 **Reference Calibration Date:** 25-Nov-13 16:08:30

Engineer: S. INGERSOLL **Calibration Date:** 17-Dec-13 16:42:52

Software Version: WL INSITE R3.8.4 (Build 5) **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	47.5	44.8	api
Background + Calibrator	279.5	278.9	api
Calibrator	232.0	234.1	api

Shop	Field	Difference	Tolerance
232.0	234.1	-2.1	+/- 9.00

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name: ACRt Sonde - 10929775 **Reference Calibration Date:** 23-Aug-13 09:44:09

Engineer: J. BOLLOM **Calibration Date:** 12-Nov-13 12:09:49

Software Version: WL INSITE R3.8.4 (Build 5) **Calibration Version:** 1

Host Tool Name: ACRt Instrument - 10929776

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.04	1.05	0.95	1.04	1.05	0.95	1.03	1.05
A2 (50")	0.95	1.02	1.05	0.95	1.02	1.05	0.95	1.02	1.05
A3 (29")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.01	1.05

A4 (17")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.01	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.00	1.05	0.95	1.00	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.99	1.05	0.95	0.99	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	-2.34	2	-6	-4.73	-2	-8	-4.72	-2
A2 (50")	-7	-2.79	0	-7	-4.36	0	-7	-4.53	0
A3 (29")	-27	-14.45	-9	-9	-4.62	-3	-7	-2.78	-1
A4 (17")	-180	-103.11	-60	-45	-32.17	-15	-39	-24.95	-13
A5 (10")	N/A	N/A	N/A	-150	-117.91	-50	-80	-54.45	-10
A6 (6")	N/A	N/A	N/A	175	275.03	525	90	136.96	270

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.6	0.83	1.3
36K	1.0	1.17	2.0
72K	1.0	1.46	2.0

R-MUD VERIFICATION

Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	0.99	1.05

PASS/FAIL SUMMARY

GAIN RANGE CHK	PASS
SONDE OFFSET RANGE CHK	PASS
Tx CURRENT GAIN	PASS
Rmud VERIFICATION	PASS

TOOL OK TO LOG

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10748374						
Gamma Ray Calibrator	232.0	234.1	----------	-2.1	+/- 9.00	api
ACRt Sonde-10929775						
Mud Cell	0.99	----------	----------	0.00	----------	ohm-m

Data: MAZANEC_1735\0001 SP-GTET-CSNG-DSN-SDL-ACRT-BN\002 18-Dec-13 01:44 Dn @1418.3f **Date: 18-Dec-13 02:04:20**

HALLIBURTON

INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
CH_HOS				
DHTN	DownholeTension	0.00	BLK	0.000
SP Sub				
PLTC	Plot Control Mask	58.73	NO	
SP	Spontaneous Potential	58.73	BLK	1.250
SPR	Raw Spontaneous Potential	58.73	NO	

SPO	Spontaneous Potential Offset	58.73	NO	
	GTET			
TPUL	Tension Pull	50.71	NO	
GR	Natural Gamma Ray API	50.71	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	50.71	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	50.71	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
	CSNG			
TPUL	Tension Pull	42.62	NO	
STAT	Status	42.62	NO	
FRMC	Tool Frame Count	42.62	BLK	0.250
TFRM	Total Frames	42.62	NO	
LSPD	Line Speed	42.62	BLK	0.250
CTIM	Accumulation time for sample	42.62	BLK	0.250
NOIS	Spectral Noise	42.62	BLK	0.250
STAB	Stabilizer Voltage in mv	42.62	BLK	0.250
STBP	Stabilizer 60 KEV Peak	42.62	BLK	0.250
AMER	Americium	42.62	BLK	0.250
FTMP	Flask PCB Temperature	42.62	BLK	0.250
SPEL	Low Energy Spectrum	42.62	BLK	0.250
SPEH	High Energy Spectrum	42.62	BLK	0.250
SSP	Stabilization Energy Spectrum	42.62	BLK	0.250
CSPC	CSNG Lo Hi Spectrum Data	42.62	NO	
	DSNT			
TPUL	Tension Pull	32.30	NO	
RNDS	Near Detector Telemetry Counts	32.40	BLK	1.417
RFDS	Far Detector Telemetry Counts	33.15	TRI	0.583
DNTT	DSN Tool Temperature	32.40	NO	
DSNS	DSN Tool Status	32.30	NO	
ERND	Near Detector Telemetry Counts EVR	32.40	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	33.15	BLK	0.000
ENTM	DSN Tool Temperature EVR	32.40	NO	
	SDLT			
TPUL	Tension Pull	22.40	NO	
PCAL	Pad Caliper	22.40	TRI	0.250
ACAL	Arm Caliper	22.40	TRI	0.250
	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 Current Raw 12K X Receiver	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	
	SDLT Pad			
TPUL	Tension Pull	22.39	NO	
NAB	Near Above	22.21	BLK	0.920
NHI	Near Cesium High	22.21	BLK	0.920
NLO	Near Cesium Low	22.21	BLK	0.920
NVA	Near Valley	22.21	BLK	0.920
NBA	Near Barite	22.21	BLK	0.920
NDE	Near Density	22.21	BLK	0.920
NPK	Near Peak	22.21	BLK	0.920
NLI	Near Lithology	22.21	BLK	0.920
NBAU	Near Barite Unfiltered	22.21	BLK	0.250
NLIU	Near Lithology Unfiltered	22.21	BLK	0.250
FAB	Far Above	22.56	BLK	0.250
FHI	Far Cesium High	22.56	BLK	0.250
FLO	Far Cesium Low	22.56	BLK	0.250
FVA	Far Valley	22.56	BLK	0.250

FVA	Far Valley	22.56	BLK	0.250
FBA	Far Barite	22.56	BLK	0.250
FDE	Far Density	22.56	BLK	0.250
FPK	Far Peak	22.56	BLK	0.250
FLI	Far Lithology	22.56	BLK	0.250
PTMP	Pad Temperature	22.40	BLK	0.920
NHV	Near Detector High Voltage	21.79	NO	
FHV	Far Detector High Voltage	21.79	NO	
ITMP	Instrument Temperature	21.79	NO	
DDHV	Detector High Voltage	21.79	NO	

Microlog Pad				
TPUL	Tension Pull	22.58	NO	
MINV	Microlog Lateral	22.58	BLK	0.750
MNOR	Microlog Normal	22.58	BLK	0.750

Data: MAZANEC_1735\0001 SP-GTET-CSNG-DSN-SDL-ACRT-BN\002 18-Dec-13 01:44 Dn @1418.3f **Date: 18-Dec-13 02:01:45**

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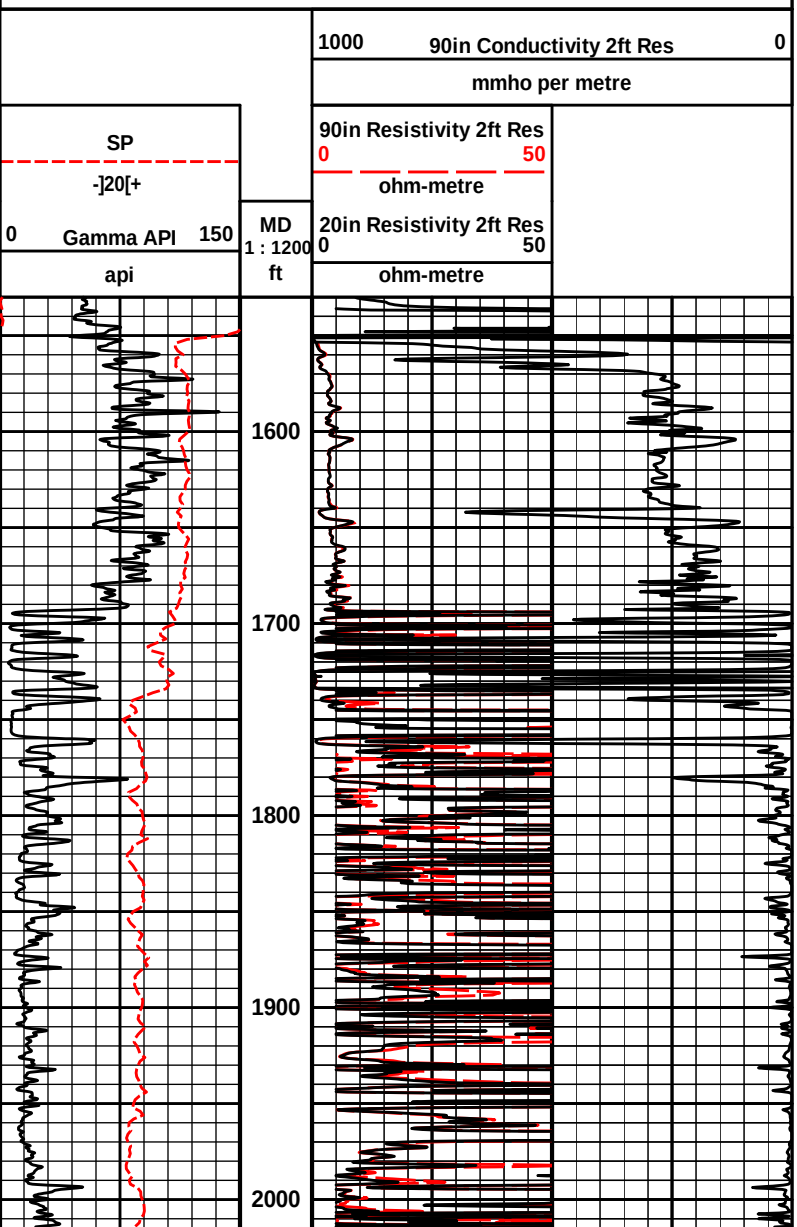
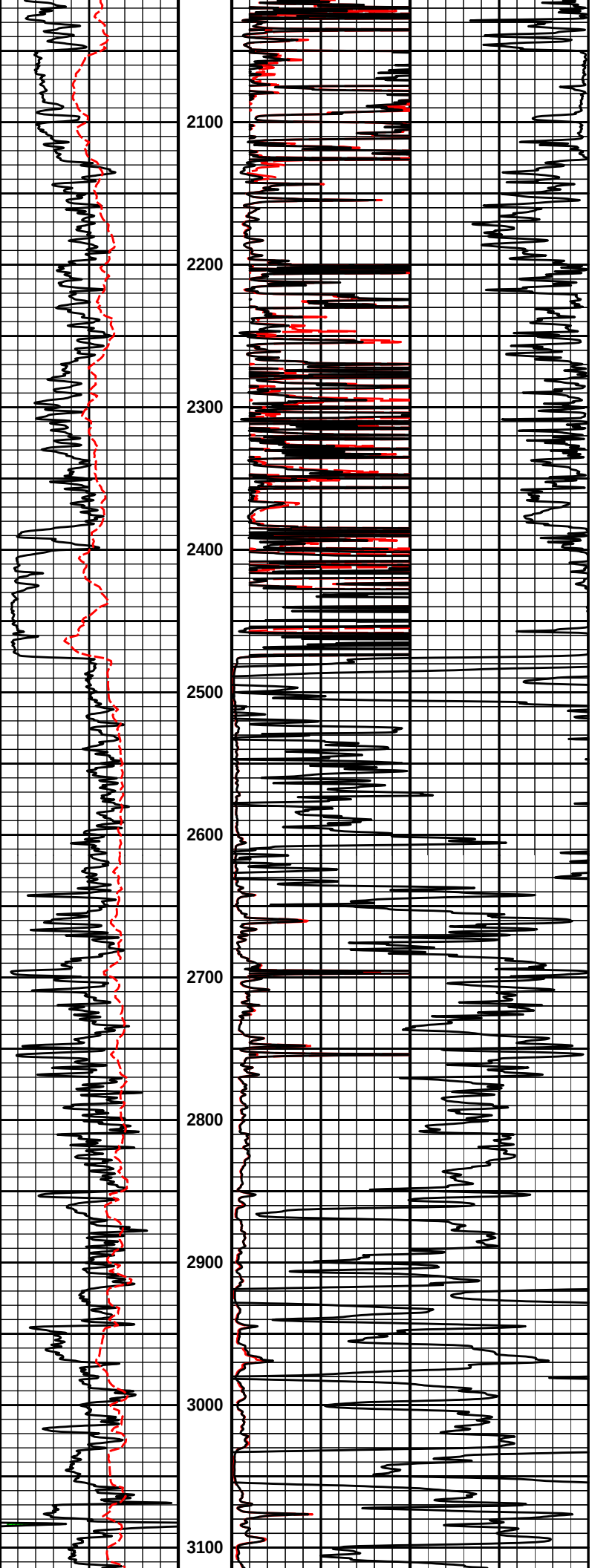
Plot Time: 18-Dec-13 09:33:46
Plot Range: 1530 ft to 5091.5 ft
Data: MAZANEC_1735\Well Based\R1 CASING SPLICE
Plot File: \\-LOCAL-\MAZANEC_1735\Well Based\ACRT\ACRT_1_lib

1 INCH MAIN LOG

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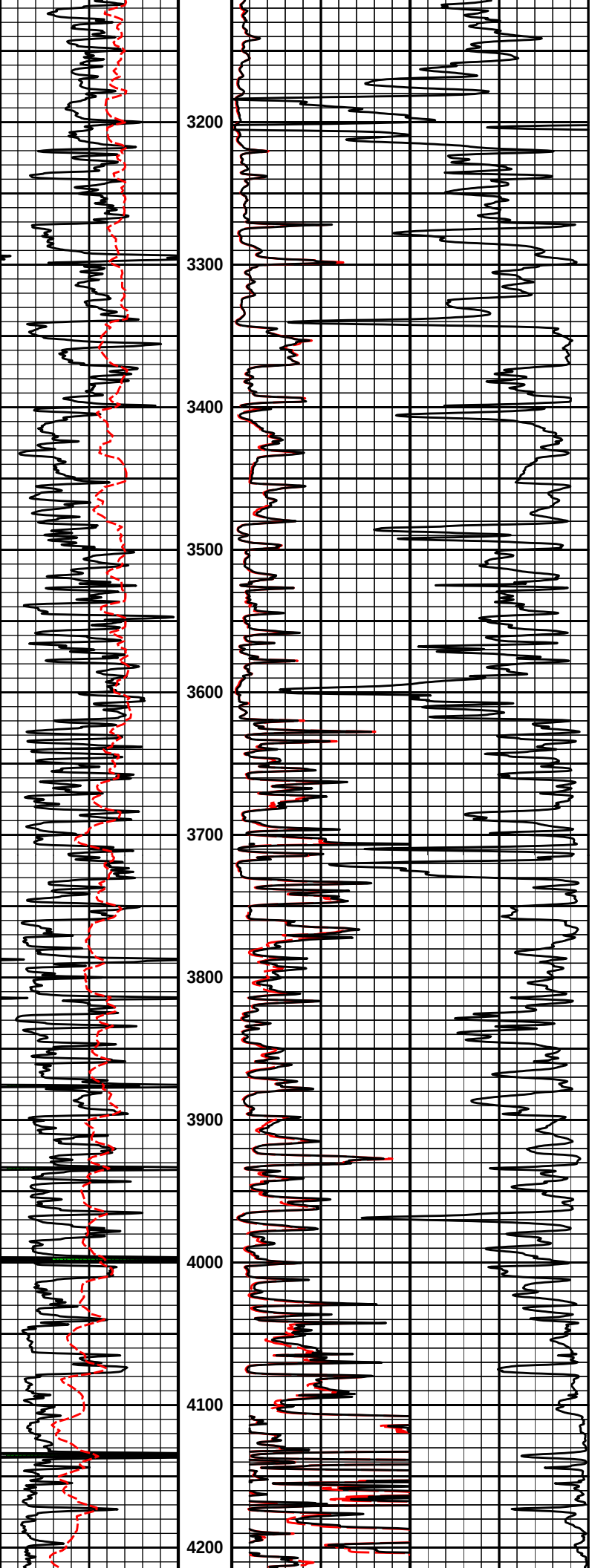
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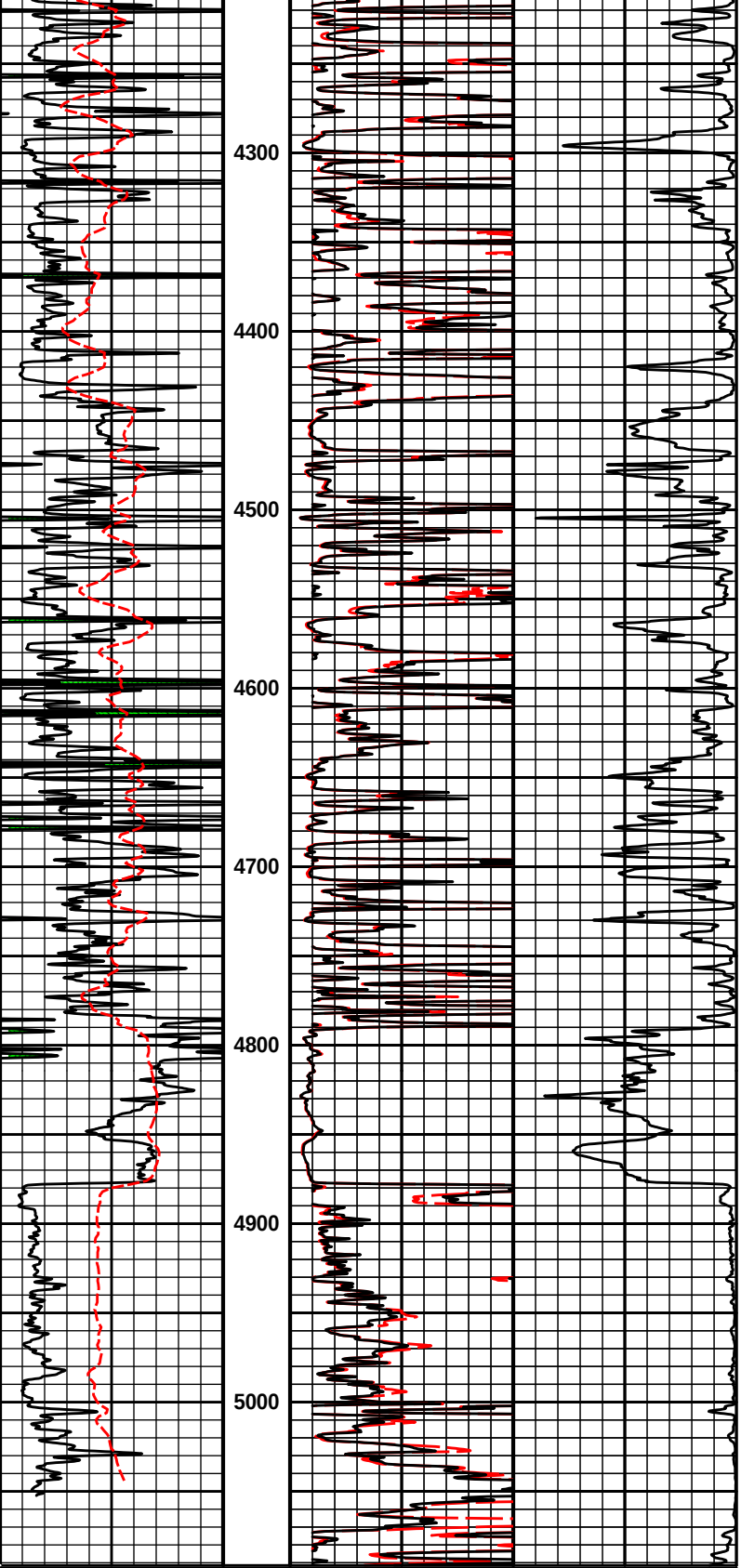

0 Gamma API 150	MD 1 : 1200 ft	20in Resistivity 2ft Res 0 50
api		ohm-metre
SP		90in Resistivity 2ft Res 0 50
-]20[+		ohm-metre
		1000 90in Conductivity 2ft Res 0
		mmho per metre

HALLIBURTON

Plot Time: 18-Dec-13 09:33:48
Plot Range: 1530 ft to 5091.5 ft
Data: MAZANEC_1735\Well Based\R1 CASING SPLICE\
Plot File: \\-LOCAL-\MAZANEC_1735\Well Based\ACRT\ACRT_1.lib

Plot File: \\-LOCAL-MAZANEC_1735\Well Based\ACRT\ACRT_1_1.tib

1 INCH MAIN LOG

COMPANY	**SANDRIDGE ENERGY**		
WELL	**MAZANEC 1735 1-19**		
FIELD	**BEAVER CLIFF NW**		
COUNTY	**WICHITA**	STATE	**KANSAS**

HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY LOG