

HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY 2 INCH LOG

COMPANY		MERIT ENERGY COMPANY	
WELL		RIVER BEND 4	
FIELD/BLOCK		ARKANSAS RIVER	
COUNTY		FINNEY	
STATE		KANSAS	
Permanent Datum	GL	Elev: 2825.0 ft	
Log measured from	KB	12.0 ft above perm. Datum	
Drilling measured from	KB		
Date	11-Aug-18		
Run No.	ONE		
Depth - Driller	4960.0 ft		
Depth - Logger	4949.0 ft		
Bottom - Logged Interval	4940.0 ft		
Top - Logged Interval	1783.0 ft		
Casing - Driller	8.625 in	@ 1784.0 ft	
Casing - Logger	1783.0 ft		
Bit Size	7.875 in	@	
Type Fluid in Hole	Water Based Mud		
Density	9.20 g/cc	56.00 sl/qt	
PH	11.00 pH	1.1 cpm	
Source of Sample	MUD PIT		
Rm @ Meas. Temperature	1.03 ohmm	@ 75.00 degF	
Rmf @ Meas. Temperature	0.82 ohmm	@	
Rmc @ Meas. Temperature	1.24 ohmm	@ 75.00 degF	
Source Rmf	Rmc	MEAS	
Rm @ BHT	0.80 ohmm	@ 133.0 degF	
Time Since Circulation	04:00 hr		
Time on Bottom	11-Aug-18 23:24		
Max. Rec. Temperature	133.00 degF	@ 4949.0 ft	
Equipment Location	12156883	EL RENO, OK	
Recorded By	SEAN WOLTEMATH		
Witnessed By	MARTIN LANGE		

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Service Ticket No.: 905054687		API No.: 15-055-22492-00-00		PGM Version: WL INSITE R5.6.3 (Build 4)										
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	ECEN	N/A							
Rmc @ Meas. Temp.	@	@		I-11830684										
Source Rmf	Rmc			S-11830728										
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.	11013113	Serial No.	12173982	Serial No.	11213308	Serial No.	11019641							
Model No.	GTET	Model No.	BSAT	Model No.	SDLT	Model No.	DSNT							
Diameter	3.625"	No. of Cent.		Diameter	5.5"	Diameter	3.625"							
Detector Model No.	GTET	Spacing		Log Type	GAM-GAM	Log Type	NEU-NEU							
Type	SCINT			Source Type	Cs-137	Source Type	Am241Be							
Length	8"	LSA [Y/N]		Serial No.	5475GW	Serial No.	DSN-436							
Distance to Source	10'	FWDA [Y/N]		Strength	1.78 Ci	Strength	15.0 Ci							
LOGGING DATA														
GENERAL		GAMMA		ACOUSTIC		DENSITY		NEUTRON						
Run No.	Depth	Speed	Scale	Scale	Matrix	Scale	Matrix	Scale	Matrix					
	From	To	L	R	L	R	L	R	L					
ONE	TD	CSG	REC	0	150	30	-10	17.6 us/ft	30	-10	2.71 g/cc	30	-10	LIME

ONE	TD	CSG	REC	0	150	30	-10	47.0 us/m	30	-10	2.77 g/cc	30	-10	LIME
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DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @

Remarks:

GTET-DSNT-SDLT-BSAT-ACRT RUN IN COMBINATION
 ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING
 CHLORIDES REPORTED AT 1600 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.

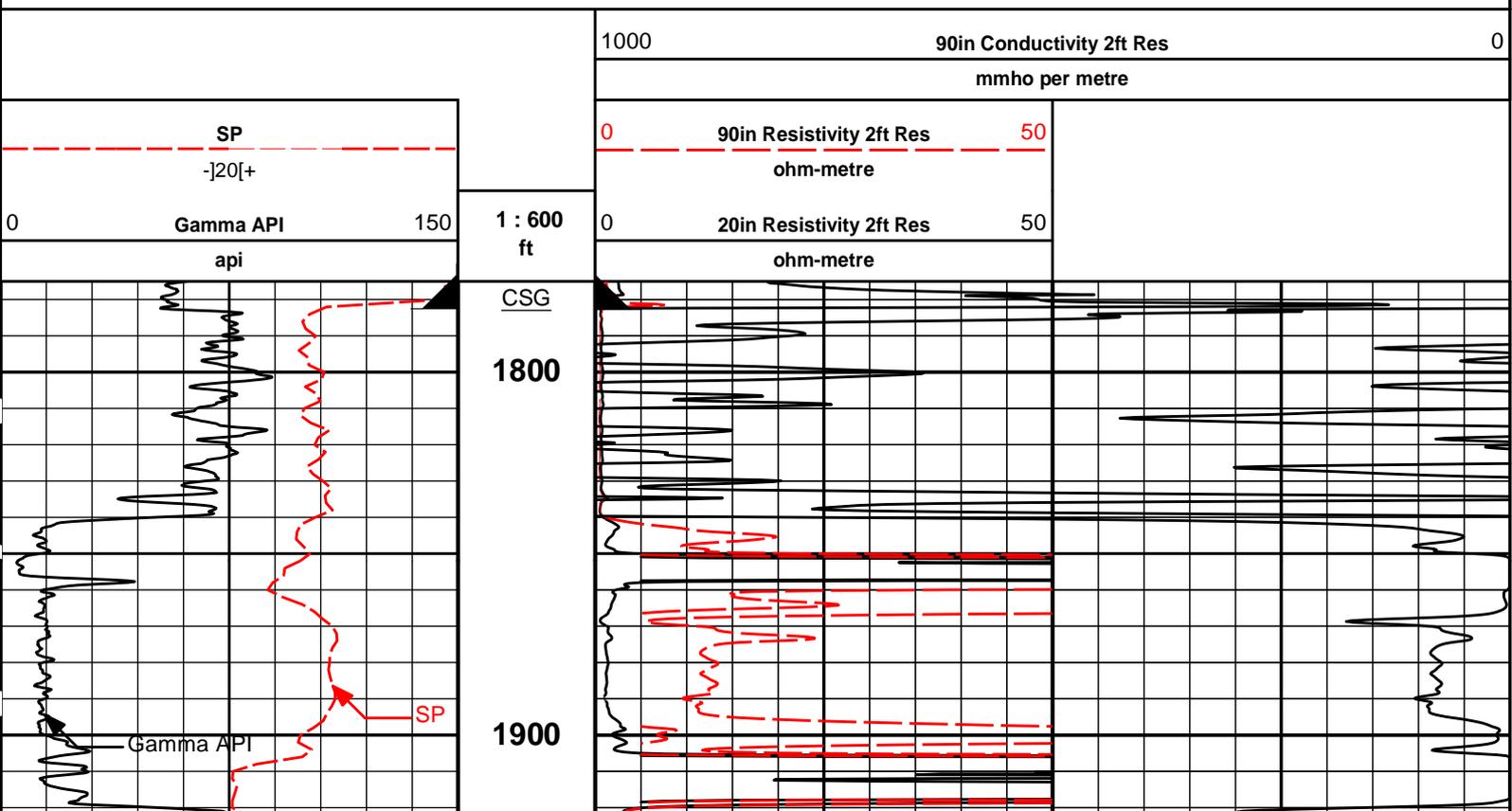
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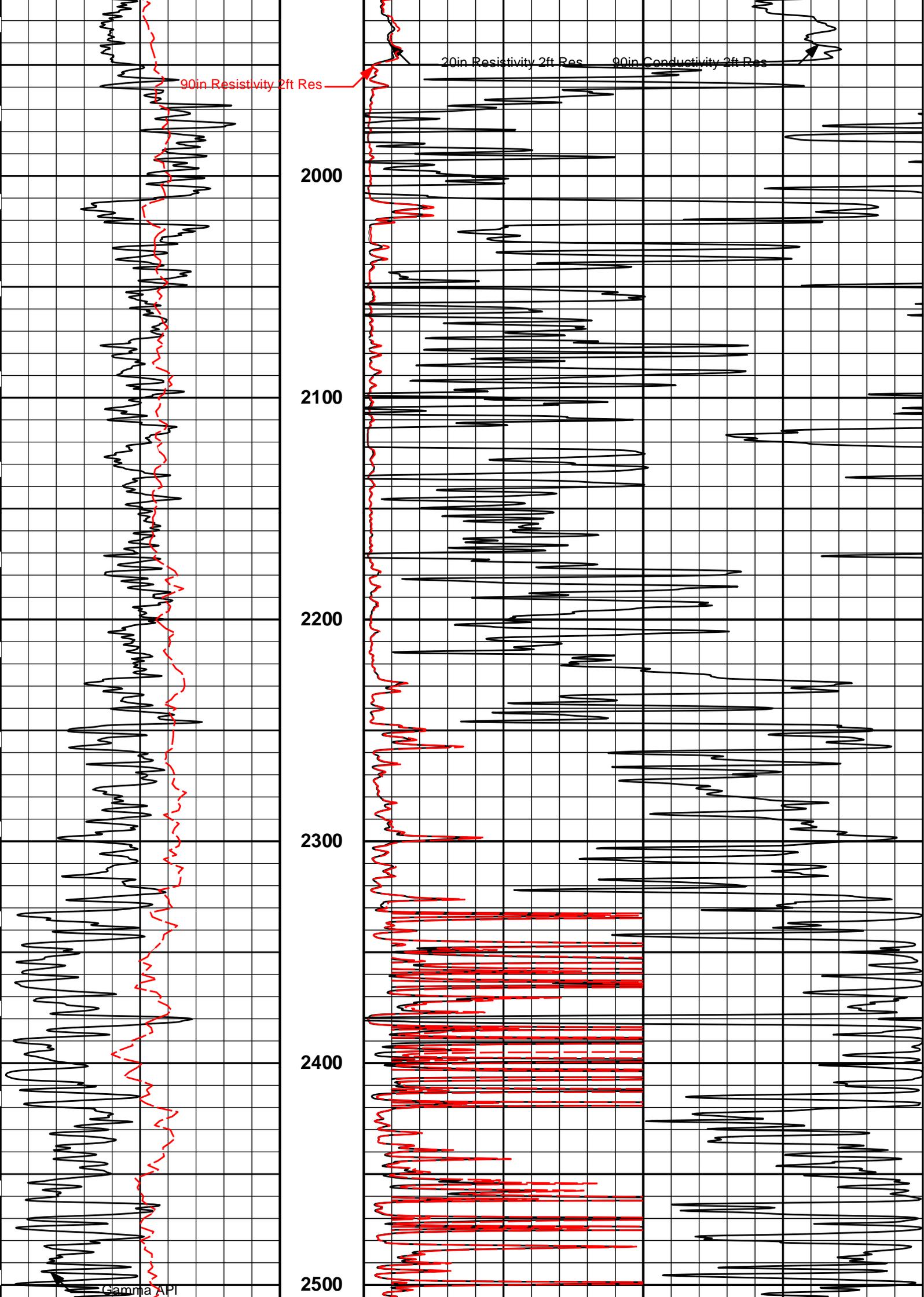


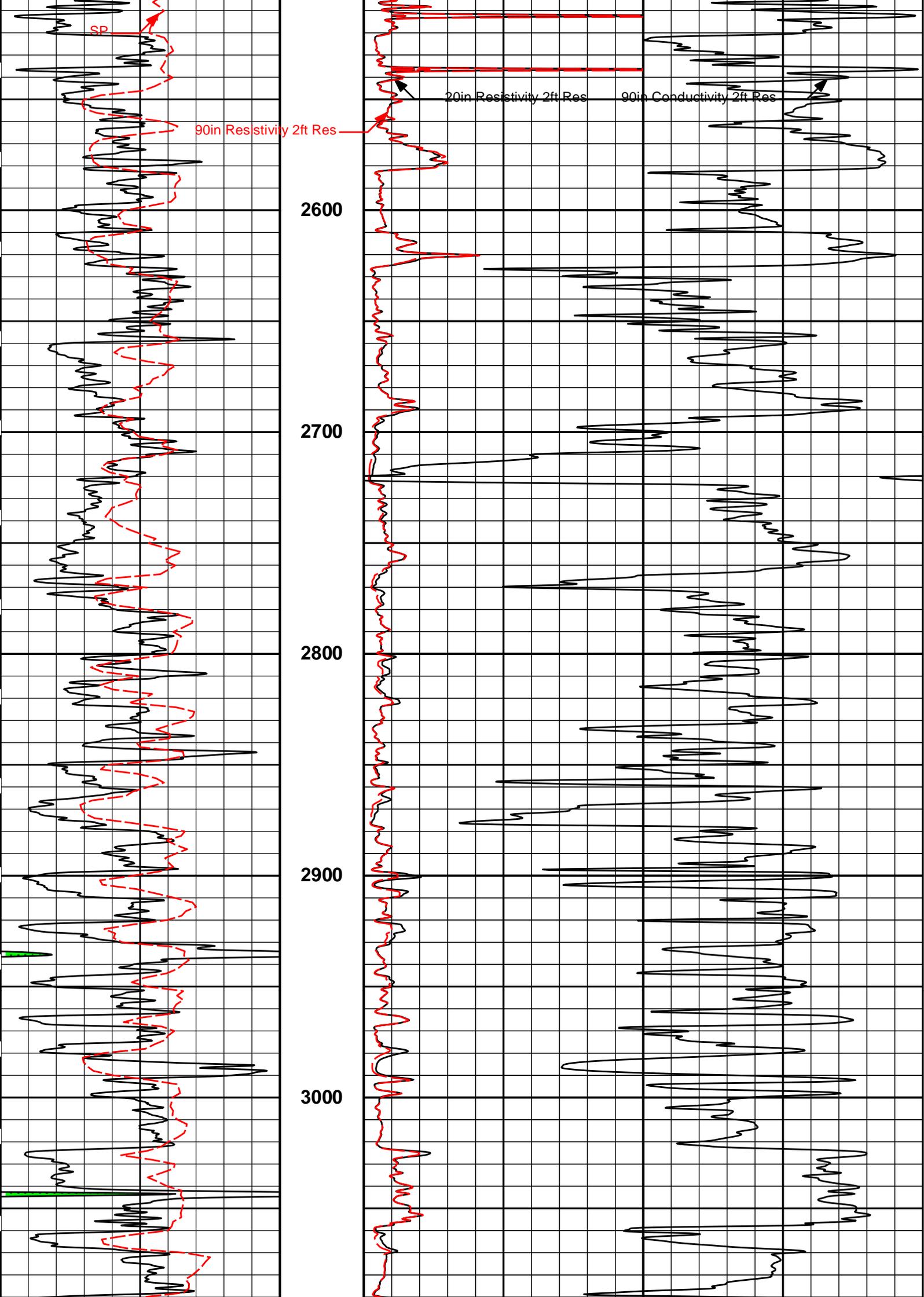
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 Plot Range: 1775 ft to 4953.58 ft
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 Plot File: \\-LOCAL-MERIT_RIVERBND4\Well Based\ACRT2\ACRT_2_main

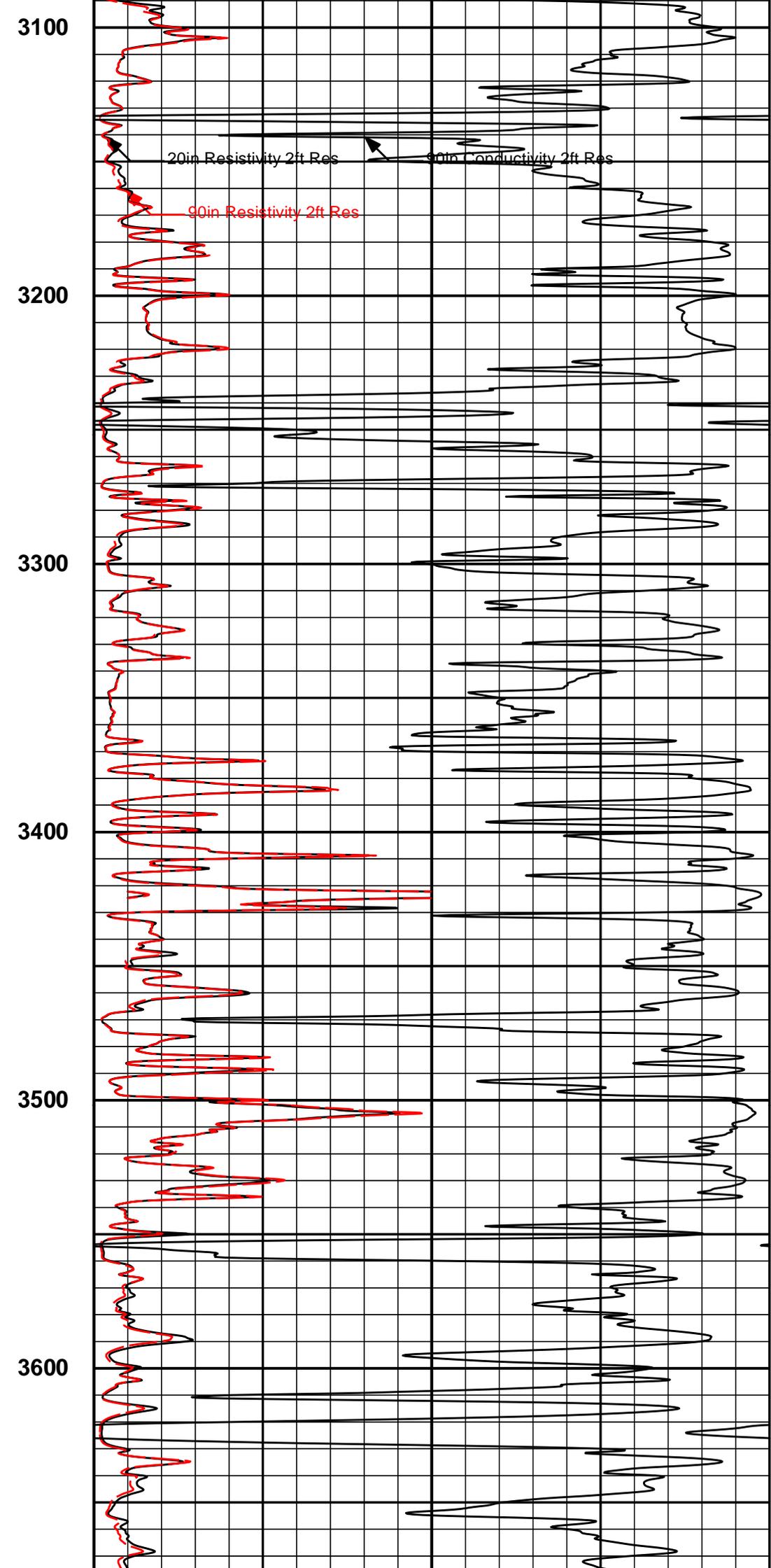
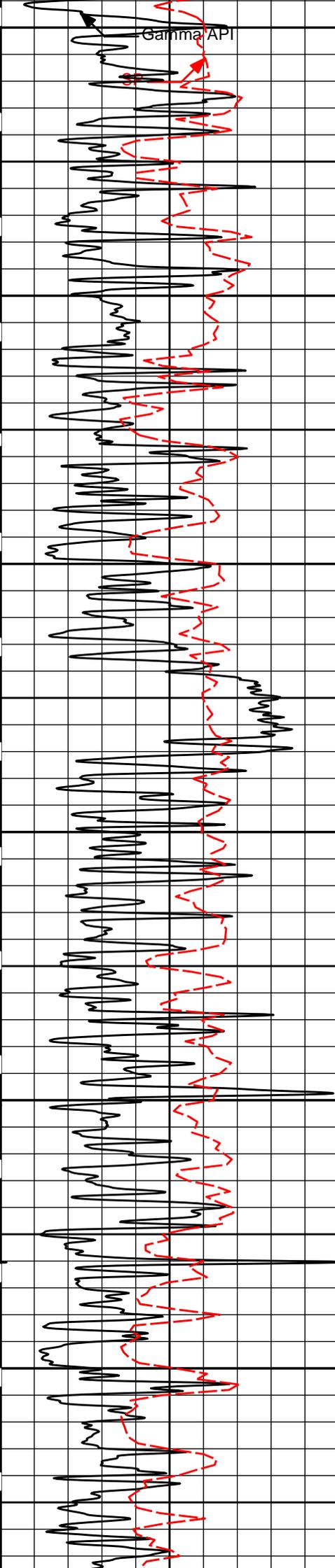
2 INCH MAIN LOG

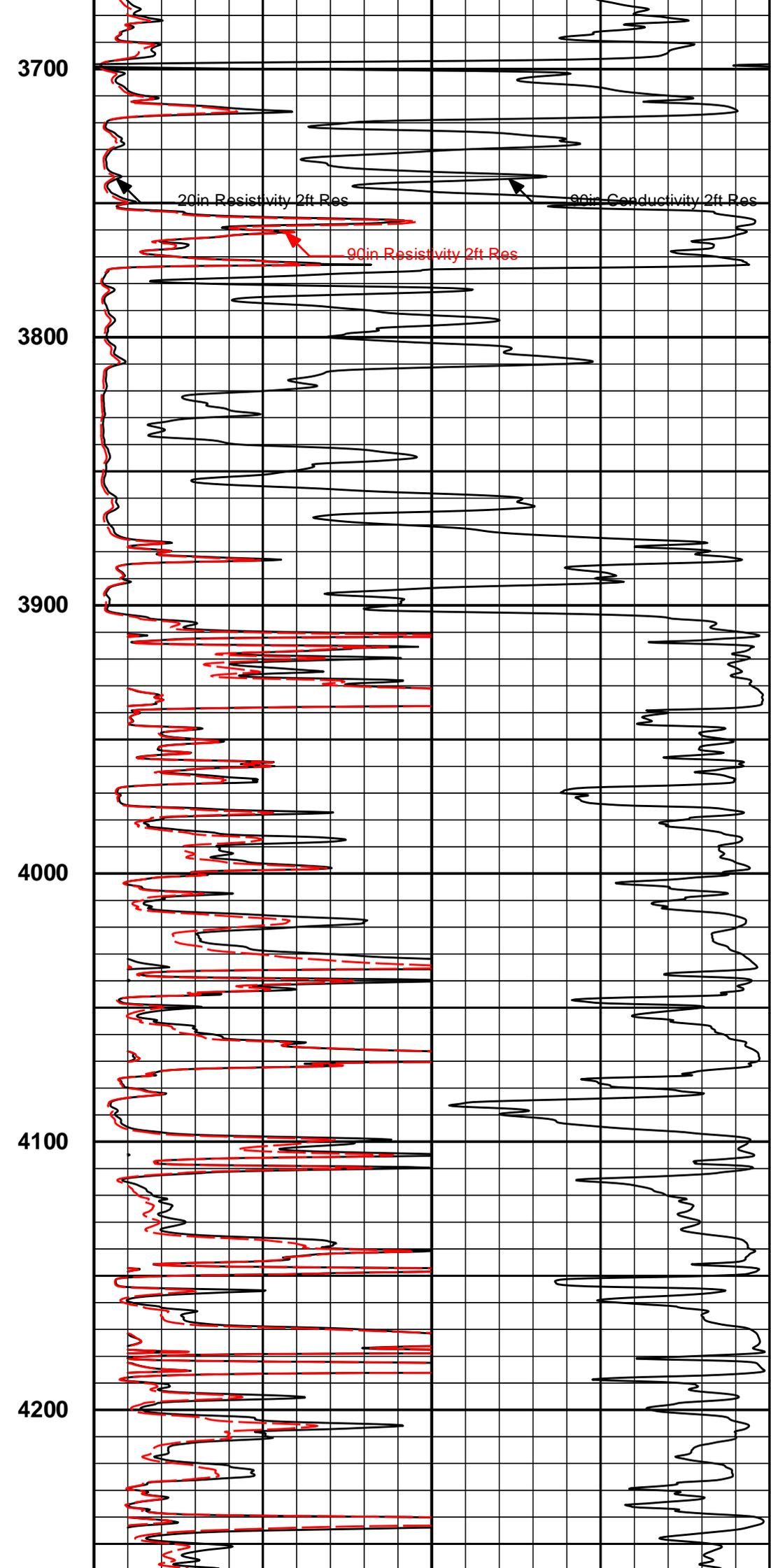
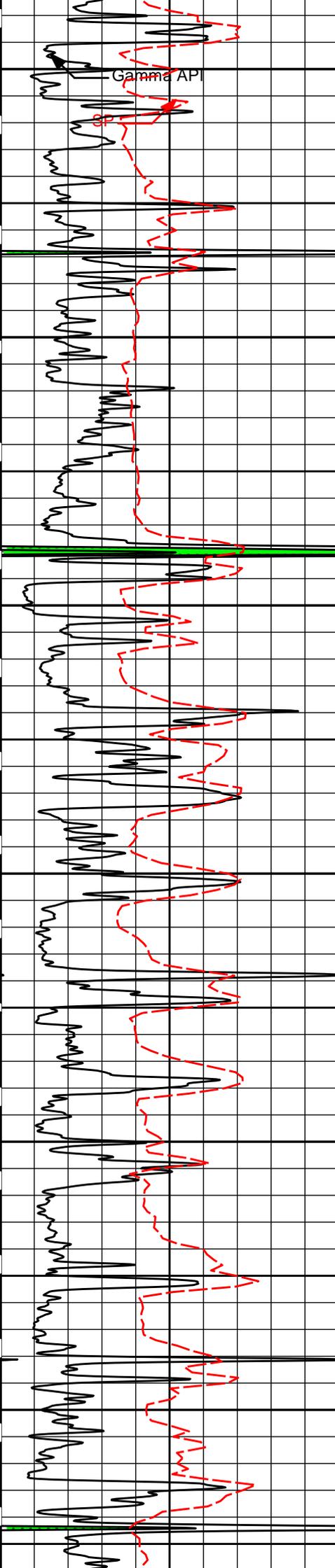
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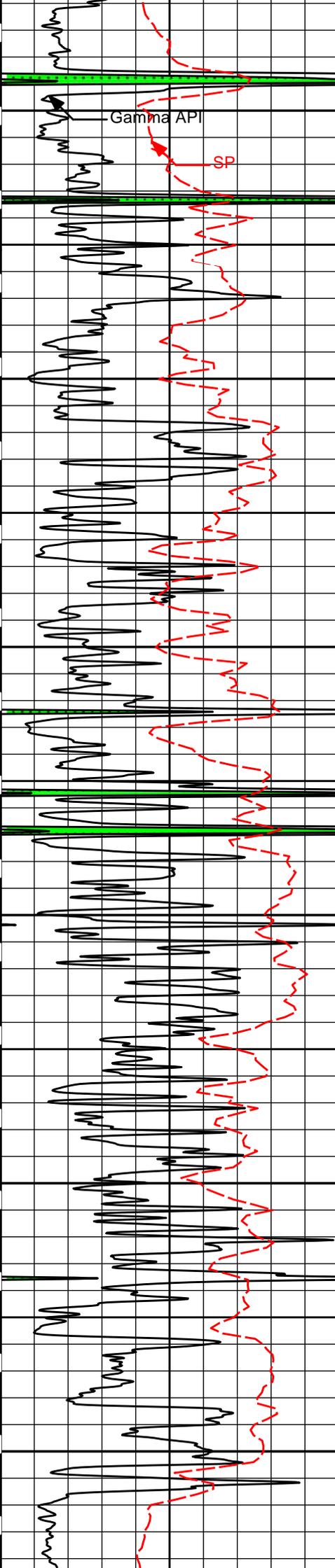




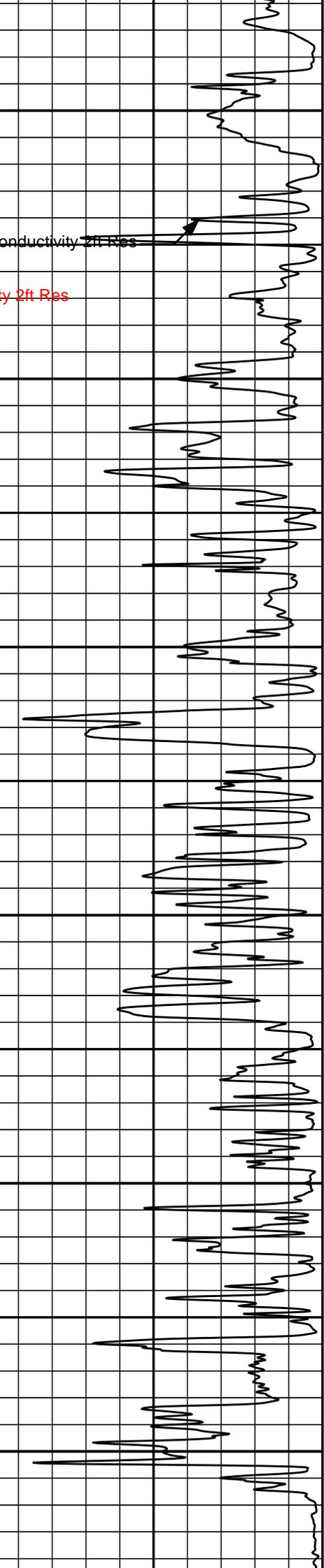
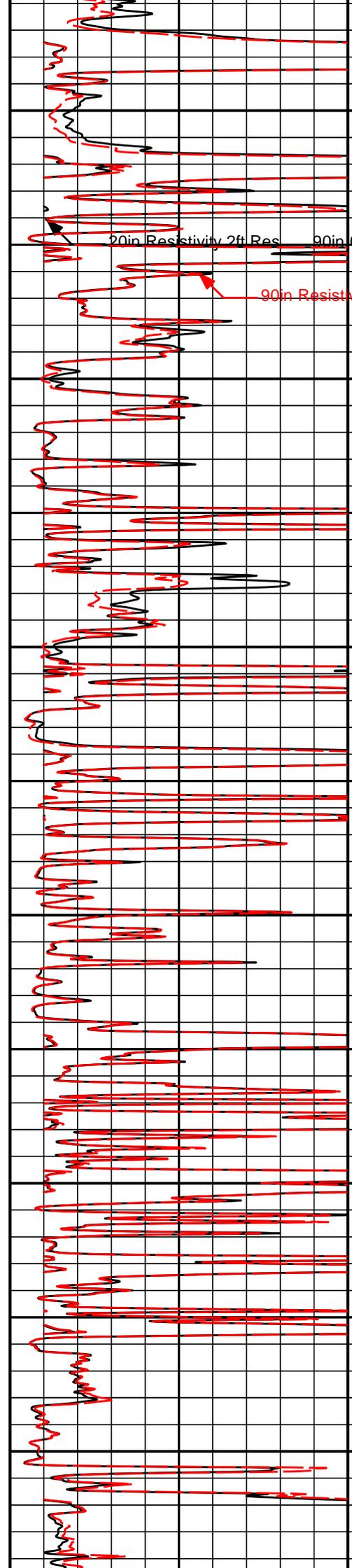


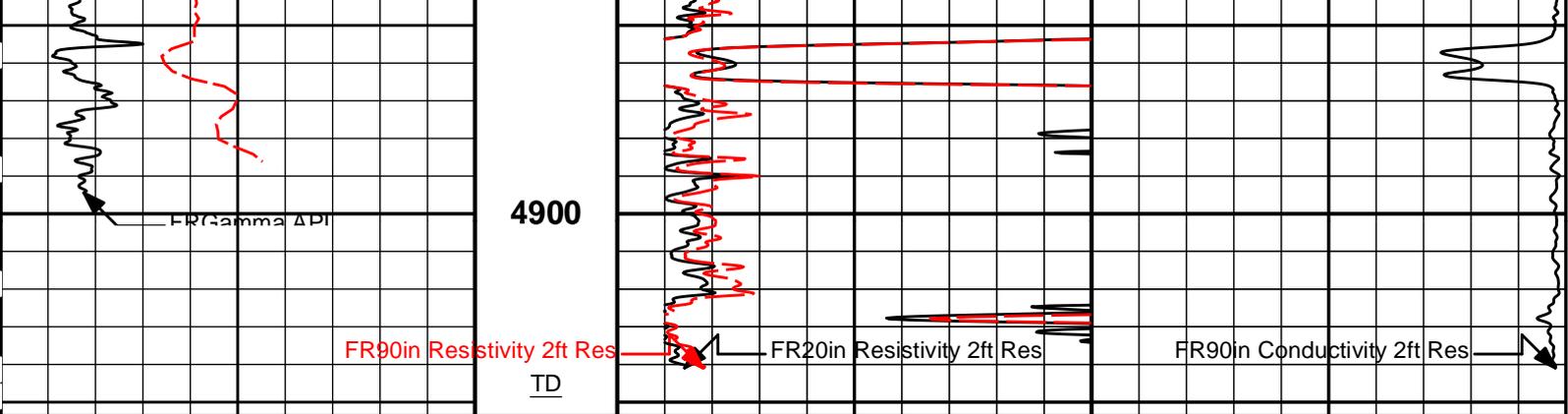






4300
4400
4500
4600
4700
4800





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

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WELL	RIVER BEND 4		
FIELD	ARKANSAS RIVER		
COUNTY	FINNEY	STATE	KANSAS
HALLIBURTON		ARRAY COMPENSATED TRUE RESISTIVITY 2 INCH LOG	