HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY LOG

COMPANY **OXY USA INC**

WELL **FEIGHT A-8**

FIELD **VICTORY**

COUNTY **HASKELL** STATE **KANSAS**

OXY USA INC
FEIGHT A-8
VICTORY
HASKELL
KANSAS
COMPANY
WELL
FIELD
COUNTY
STATE

API No. 15-081-21985

Location 1980' FNL & 660' FWL

Sect. 27 Twp. 29S Rge. 33W

Other Services:
MICRO
BSAT
DSNT / SDLT

Permanent Datum	GL	Elev. 2943.0 ft	Elev.: K.B. 2957.0 ft
Log measured from	KB	, 14.0 ft above perm. Datum	D.F. 2956.0 ft
Drilling measured from	KB		G.L. 2943.0 ft

Date		14-Jul-12					
Run No.		ONE					
Depth - Driller		5700.00 ft					
Depth - Logger		5698.0 ft					
Bottom - Logged Interval		5979.0 ft					
Top - Logged Interval		1813.0 ft					
Casing - Driller		9.625 in @ 1816.0 ft		@		@	
Casing - Logger		1813.0 ft					
Bit Size		7.875 in		@		@	
Type Fluid in Hole		WATER BASED MUD					
Density	Viscosity	9.6 ppg	75.00 s/qt				
PH	Fluid Loss	10.00 pH	8.0 cptm				
Source of Sample		FLOW LINE					
Rm @ Meas. Temperature		0.390 ohmm @ 92.00 degF		@		@	
Rmf @ Meas. Temperature		0.47 ohmm @ 76.00 degF		@		@	
Rmc @ Meas. Temperature		0.560 ohmm @ 76.00 degF		@		@	
Source Rmf	Rmc	MEAS	MEAS				
Rm @ BHT		0.26 ohmm @ 151.0 degF		@		@	
Time Since Circulation		17.6 hr					
Time on Bottom		14-Jul-12 16:08					
Max. Rec. Temperature		5698.0 degF @ 151.0 ft		@		@	
Equipment	Location	10546696	LIBERAL				
Recorded By		C. HAVERKAMP					
Witnessed By		D. PRATT					

Fold here

Service Ticket No.: 9646571 API Serial No.: 15-081-21985 PGM Version: WL INSITE R3.6.0 (Build 3)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

RESISTIVITY SCALE CHANGES

	Type Log	Depth	Scale Up Hole	Scale Down Hole
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 EQUIPMENT DATA

	Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other
Date					
Sample No.					
Depth-Driller					
Type Fluid in Hole					
Density / Viscosity					
Ph / Fluid Loss					
Source of Sample					
Rm @ Meas. Temp	@				
Rmf @ Meas. Temp.	@	ONE ACRT	N/A	1.5" S.O.	N/A
Rmc @ Meas. Temp.	@	I5059_S8385			
Source Rmf / Rmc					
Rm @ BHT	@				
Rmf @ BHT	@				
Rmc @ BHT	@				

EQUIPMENT DATA

	GAMMA	ACOUSTIC	DENSITY	NEUTRON
Run No.	ONE			
Serial No.	11039640			
Model No.	GTET			
Diameter	3.625			
Detector Model No.	T-102	Spacing	Log Type	
Type	SCINT		Source Type	
Length	8"	LSA [Y/N]	Serial No.	
Distance to Source	10'	FWDA [Y/N]	Strength	

LOGGING DATA

GENERAL GAMMA ACOUSTIC DENSITY NEUTRON

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	5698	1813	REC	0	150									

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@

Remarks: SP-GTET-DSNT-SDLT-BSAT-ACRT RAN IN COMBINATION.

ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.

CHLORIDES REPORTED AT 10000 MG/L. LCM REPORTED AT 1 LB/BBL.

POST TOOL SURVEYS NOT PERFORMED PER CUSTOMER REQUEST.

CUSTOMER ACCEPTS MICROLOG @ 5500

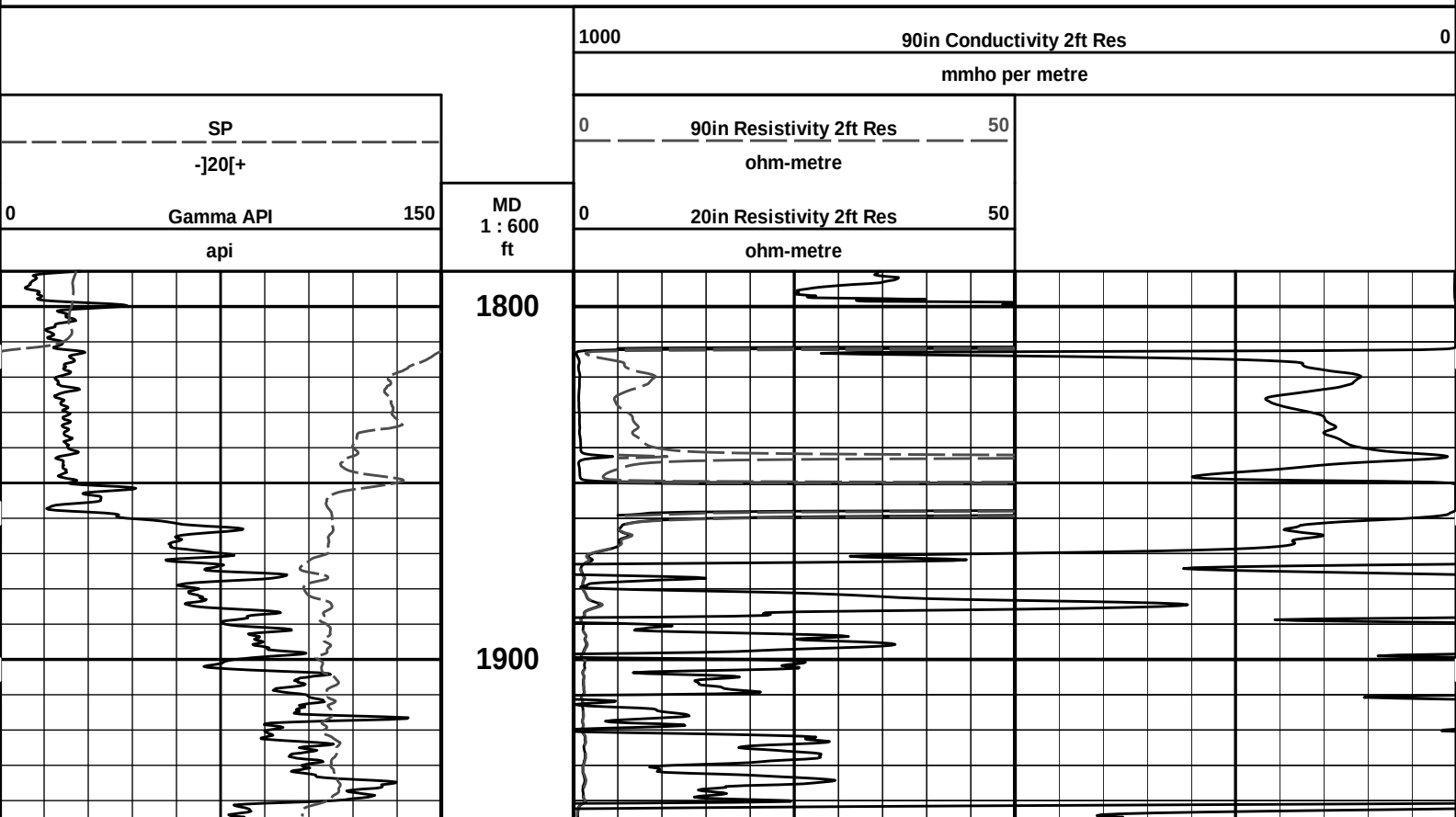
YOUR CREW: P. COBLE, K. KING

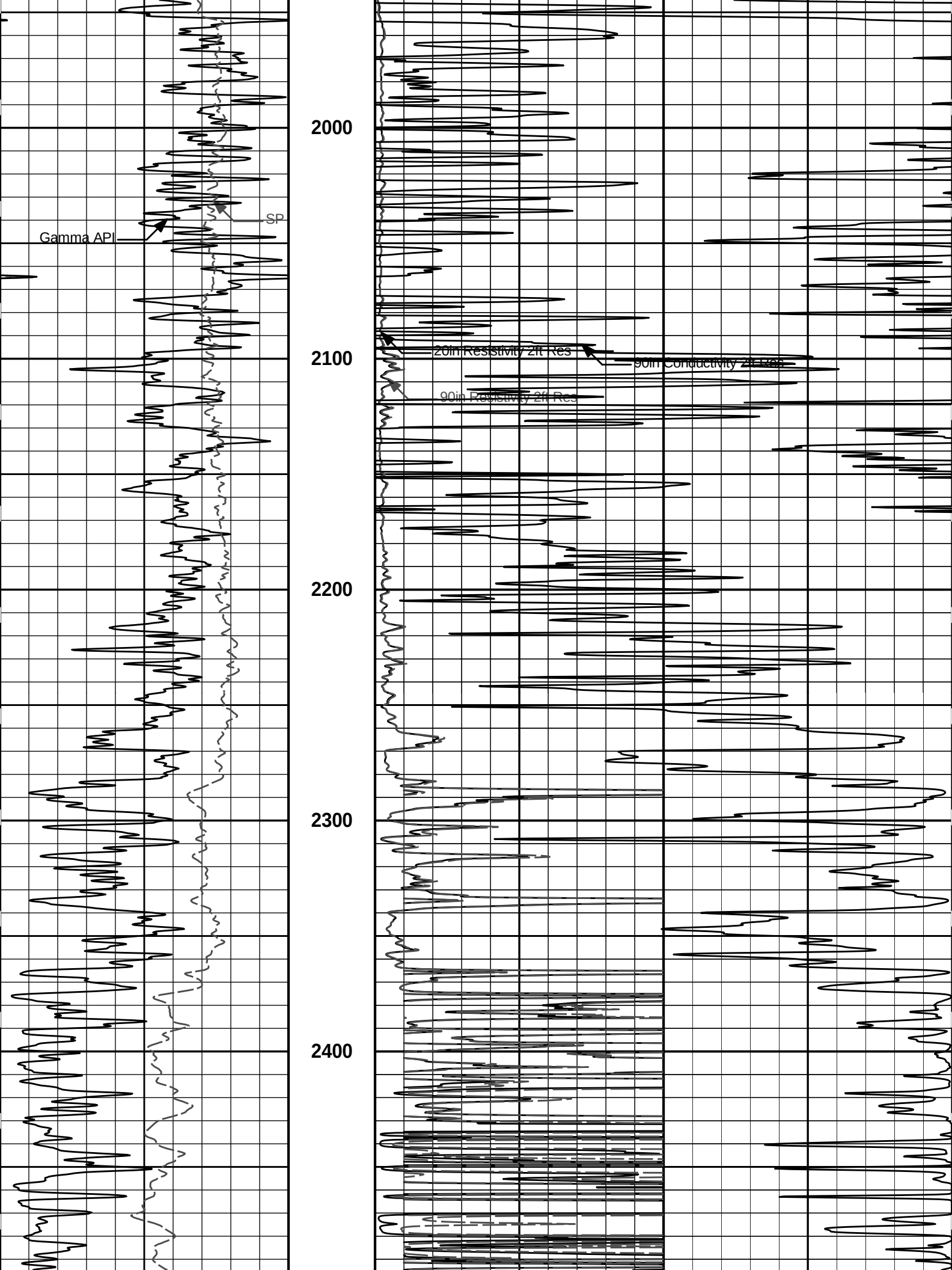
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES. LIBERAL, KS 620-624-8123

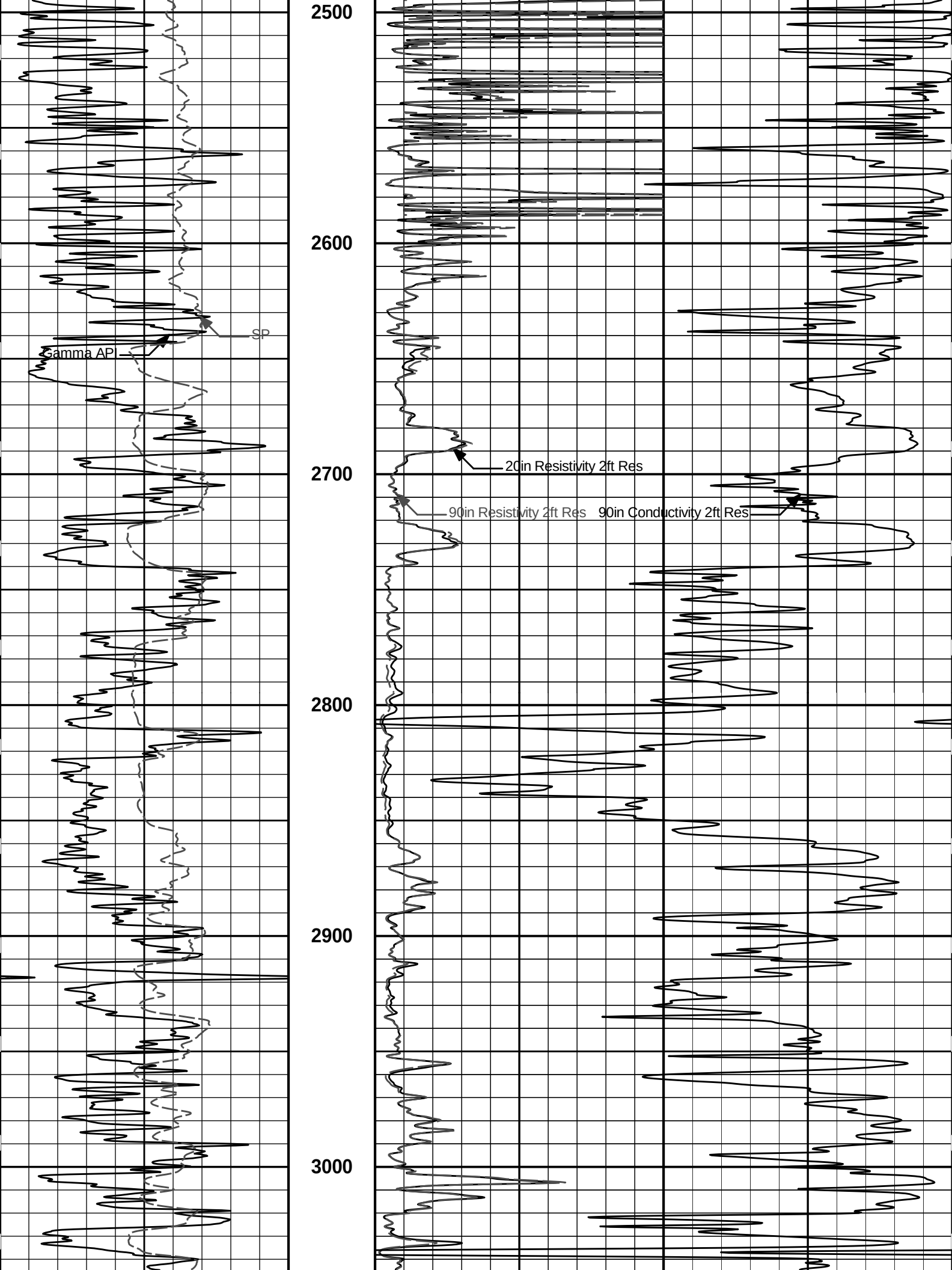
HALLIBURTON

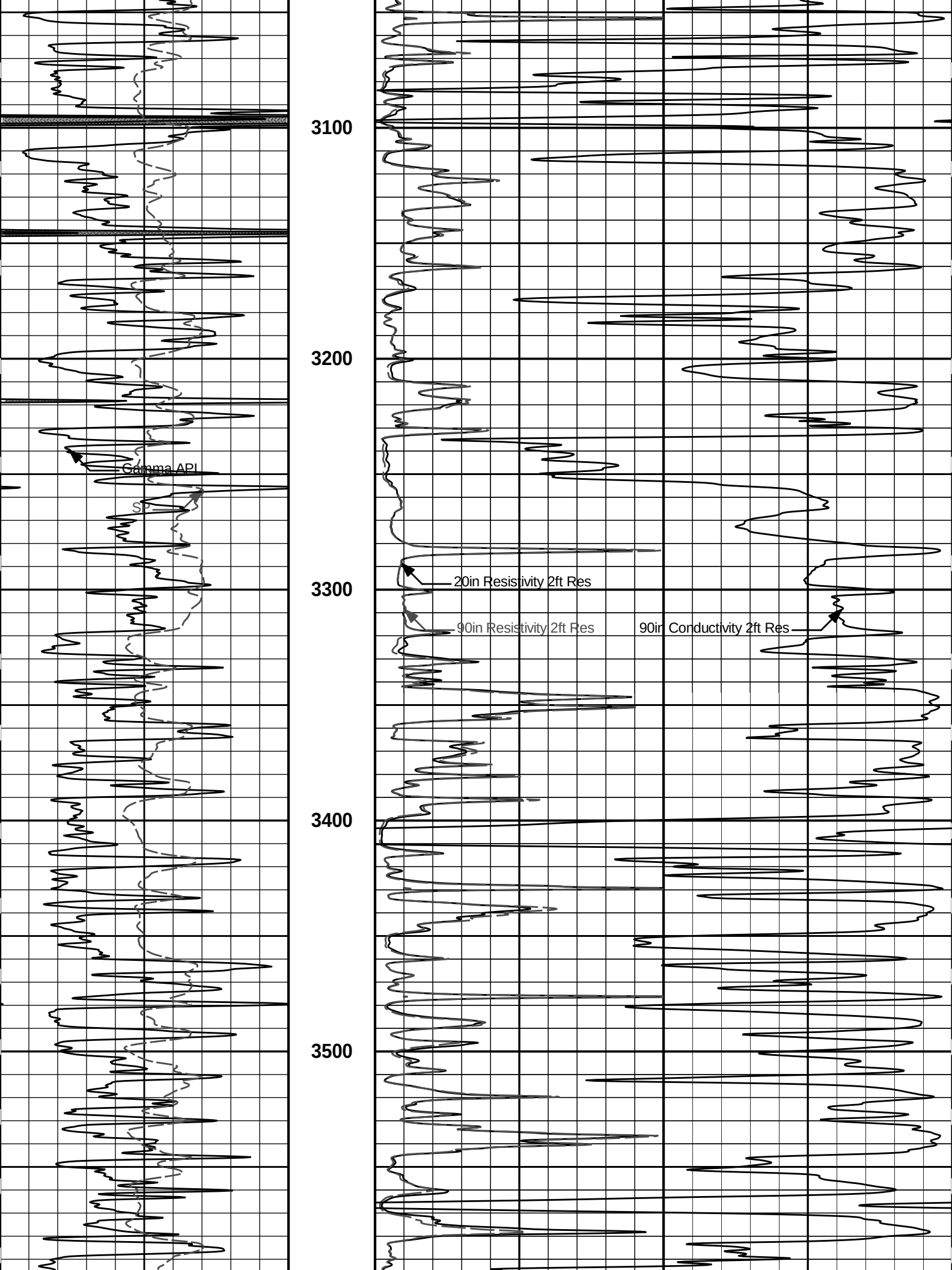
Plot Time: 14-Jul-12 18:16:34
Plot Range: 1790 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_CASING
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\ACRT\ACRT_2_lib

2 INCH MAIN LOG




2000
2100
2200
2300
2400
SP
Gamma API
20in Resistivity 2ft Res
90in Conductivity 2ft Res
90in Resistivity 2ft Res


2500
2600
SP
Gamma API
20in Resistivity 2ft Res
2700
90in Resistivity 2ft Res
90in Conductivity 2ft Res
2800
2900
3000


3100
3200
Gamma API
SP
3300
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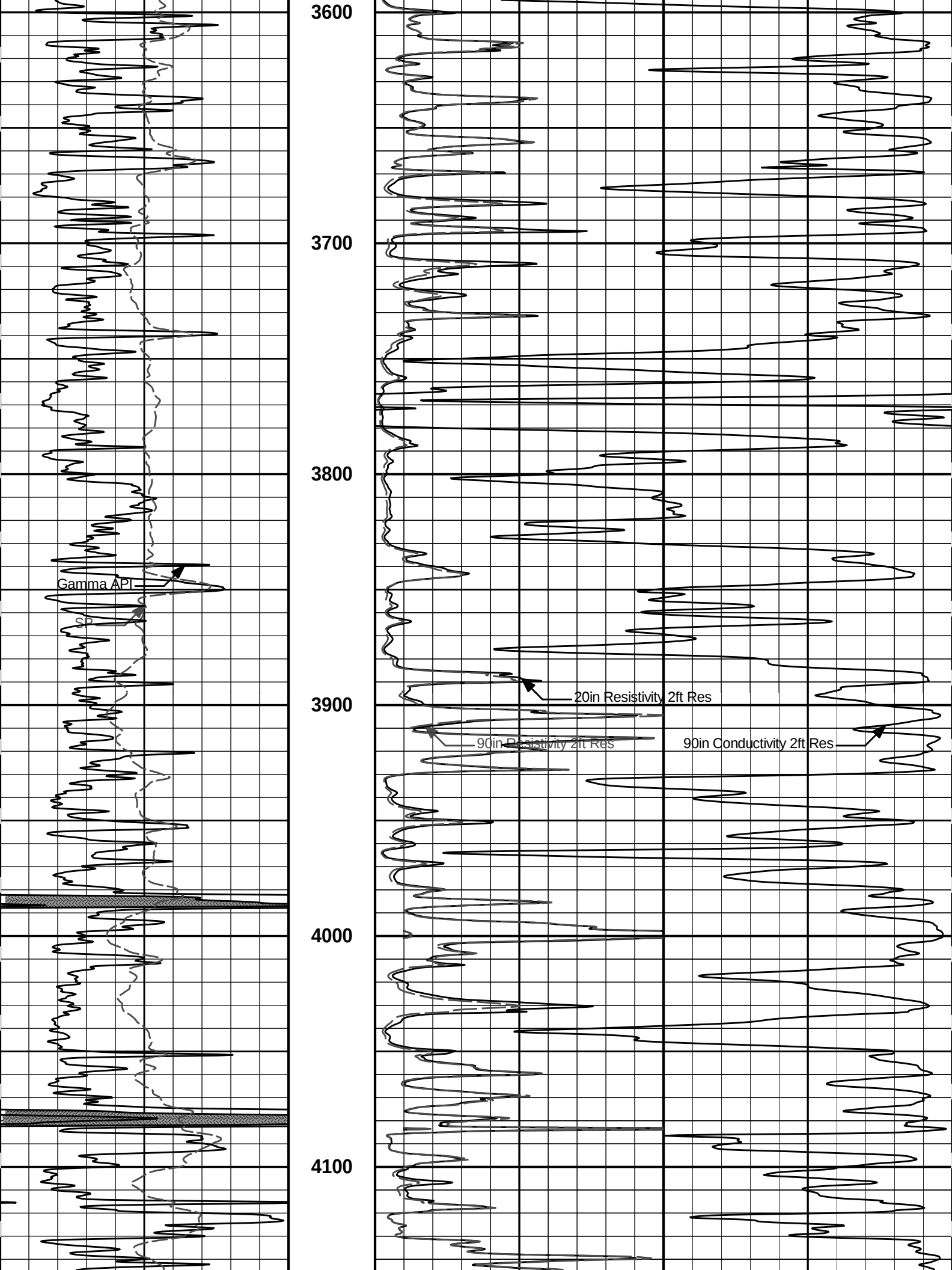
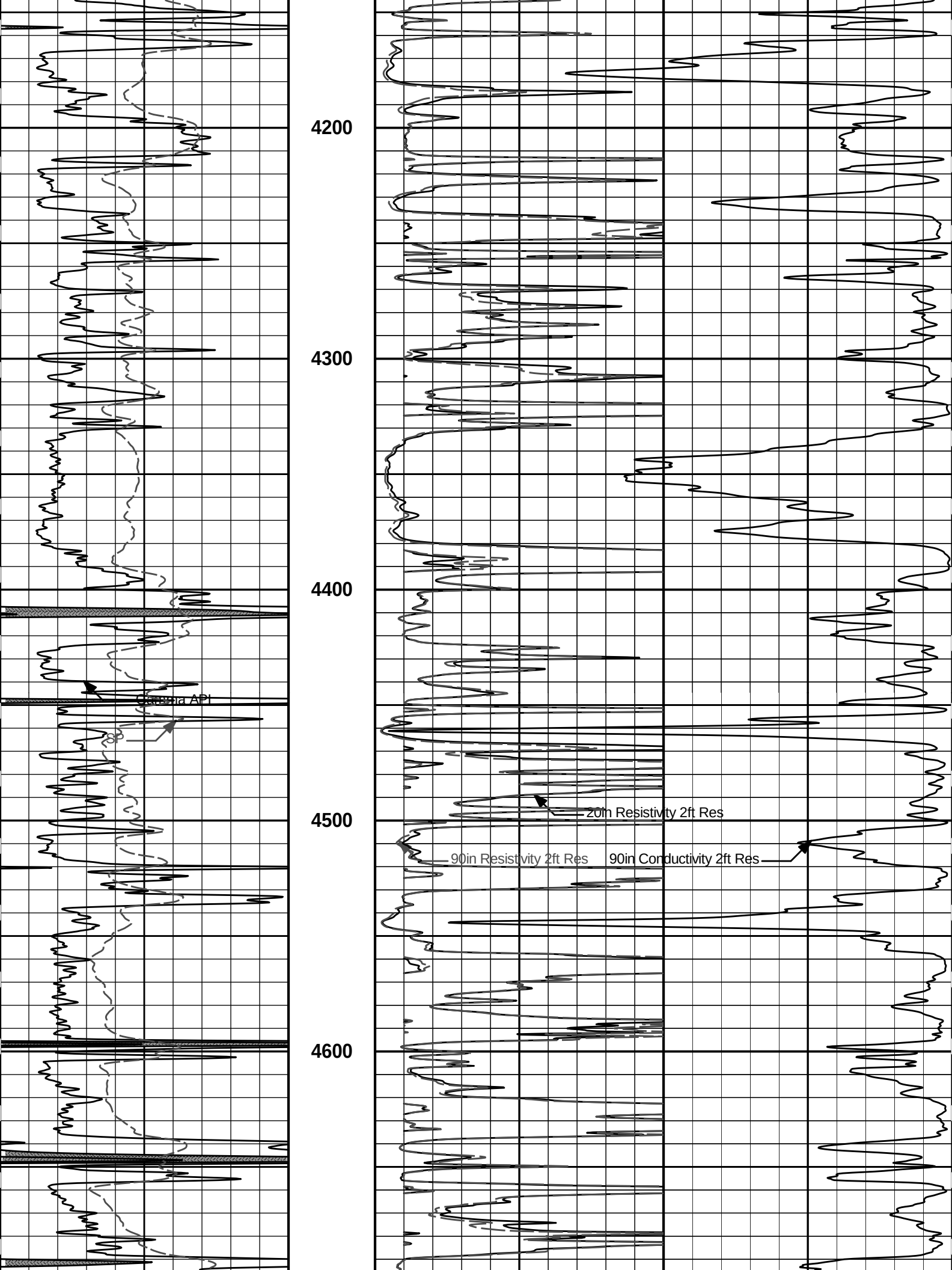
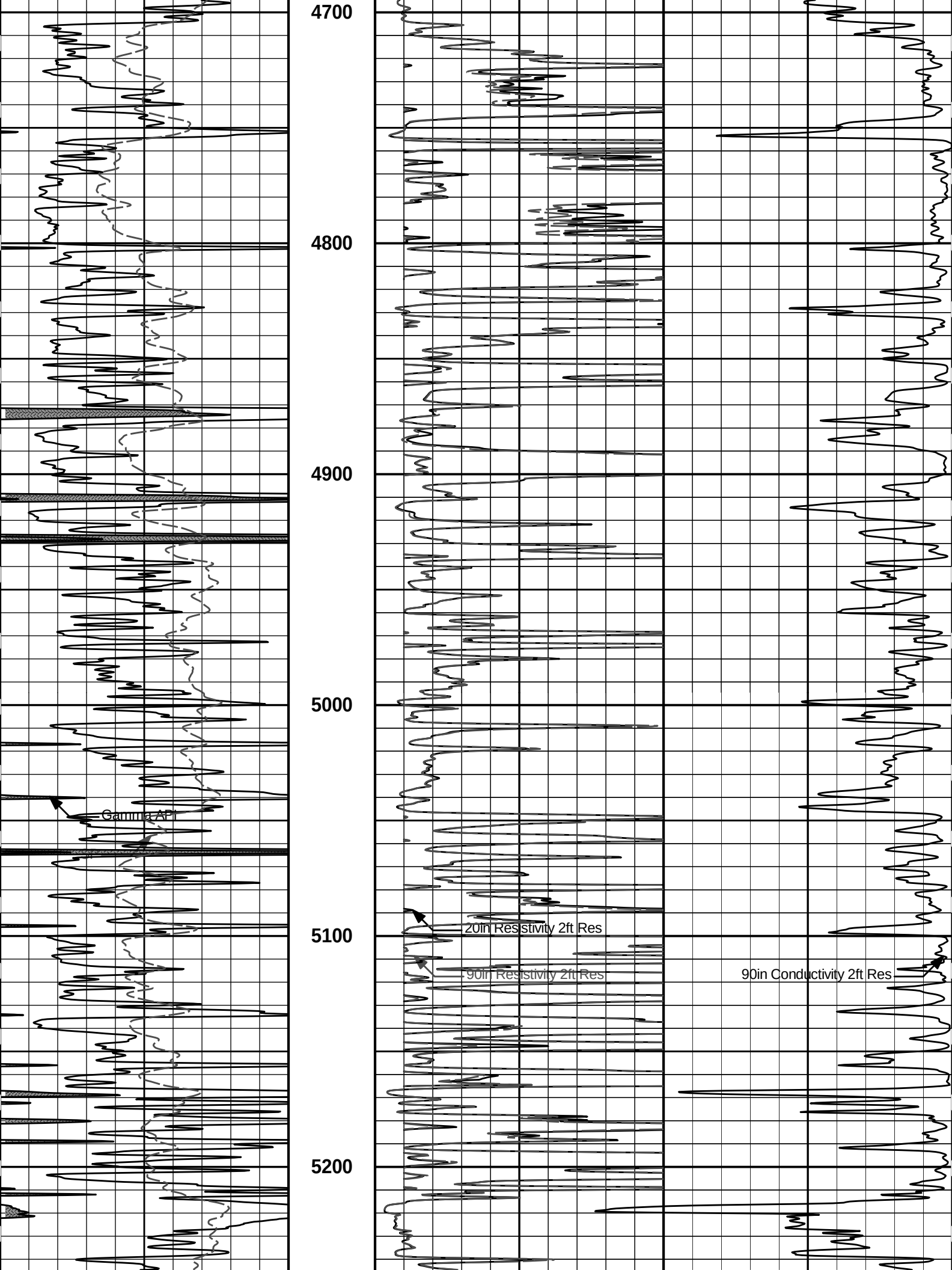
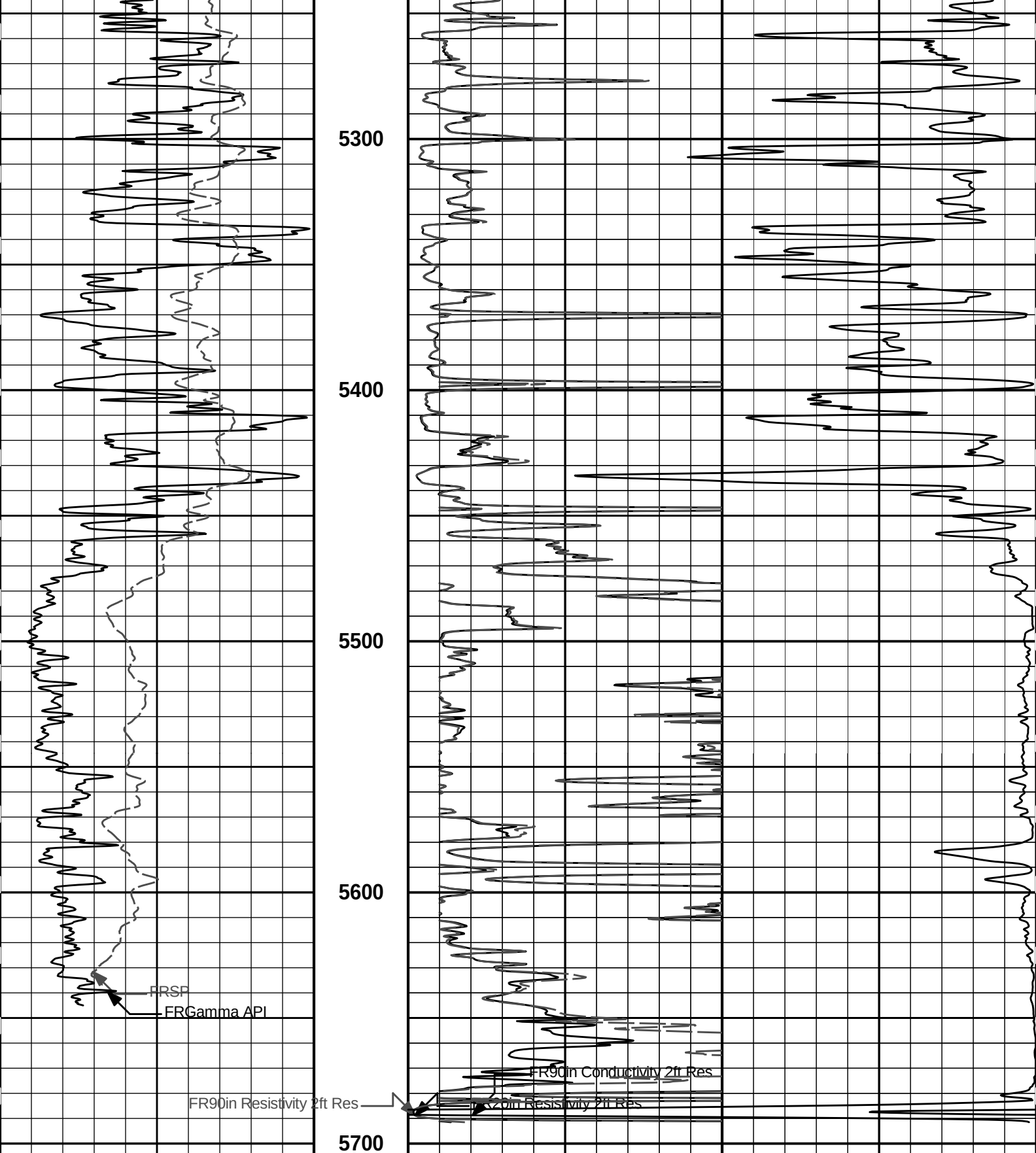
90in Resistivity 2ft Res
90in Conductivity 2ft Res
3400
3500


3600
3700
3800
3900
4000
4100
Gamma API
SP
20in Resistivity 2ft Res
90in Resistivity 2ft Res
90in Conductivity 2ft Res


4200
4300
4400
4500
4600
Gamma API
0
200
20in Resistivity 2ft Res
90in Resistivity 2ft Res
90in Conductivity 2ft Res


4700
4800
4900
5000
5100
5200
Gamma API
20in Resistivity 2ft Res
90in Resistivity 2ft Res
90in Conductivity 2ft Res



0 Gamma API 150	MD 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

HALLIBURTON

Plot Time: 14-Jul-12 18:16:59

Plot Range: 1700 ft to 5704.33 ft

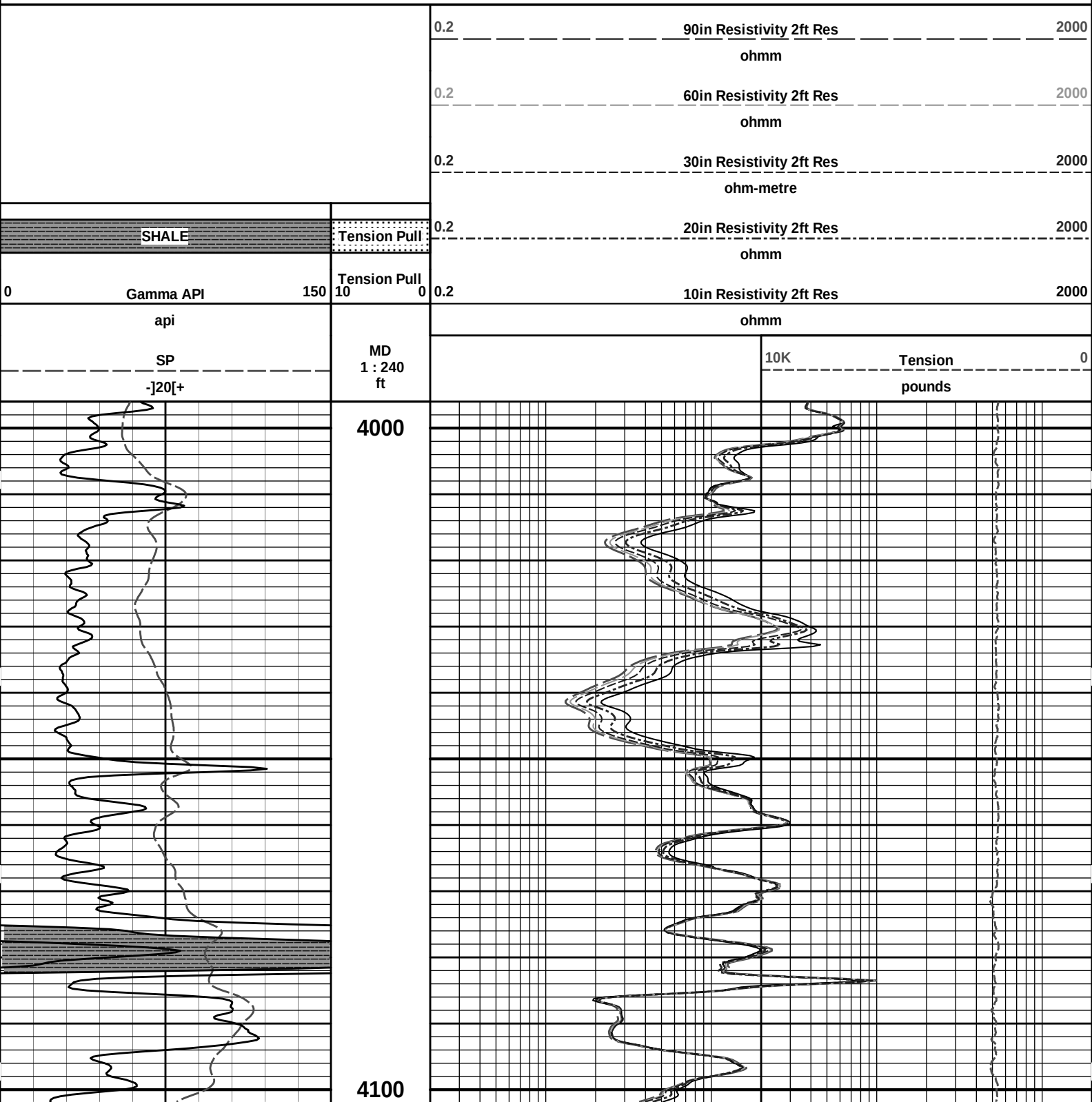
Plot Range: 1790 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_CASING\
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\ACRT\ACRT_2_lib

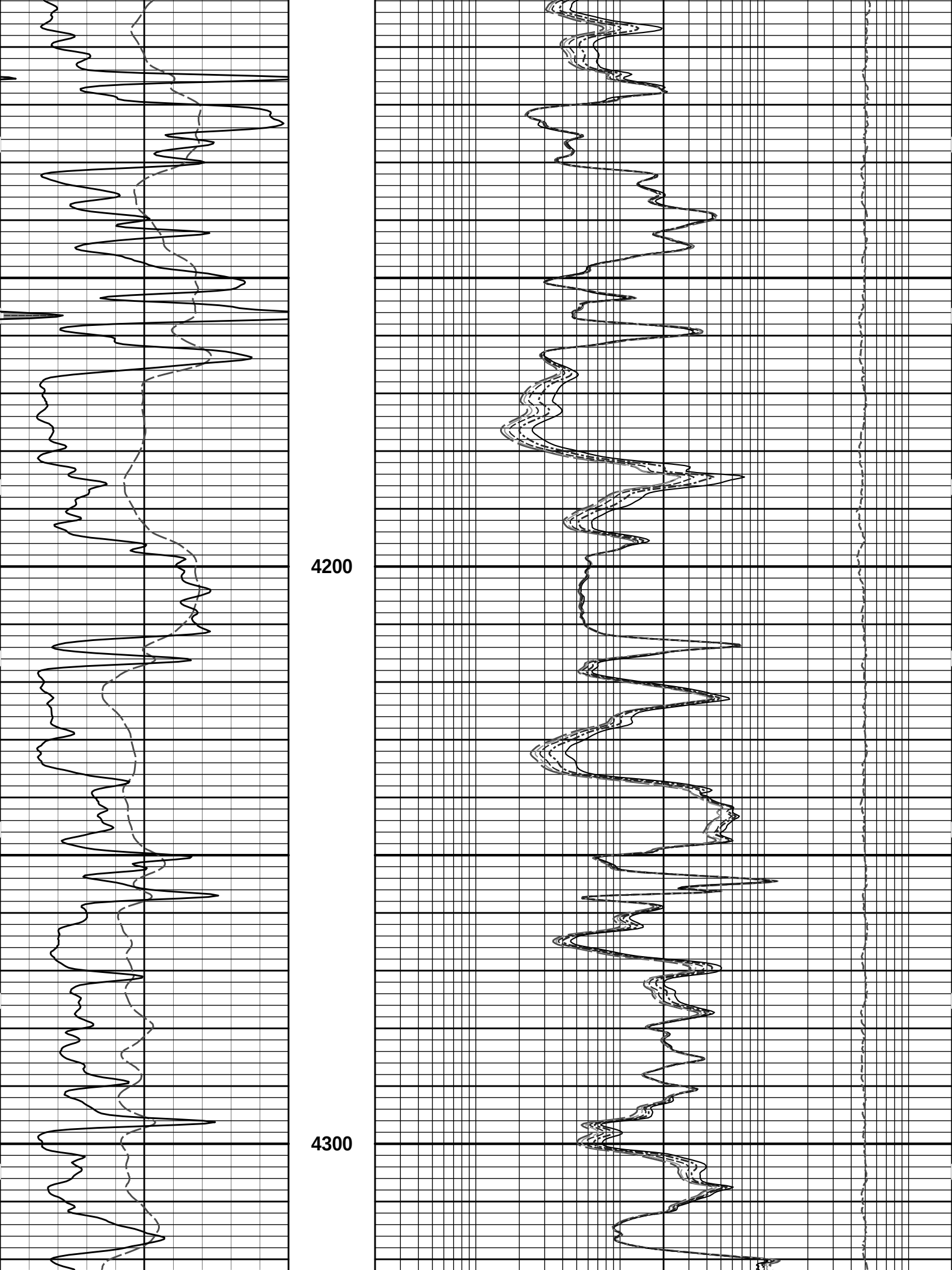
2 INCH MAIN LOG

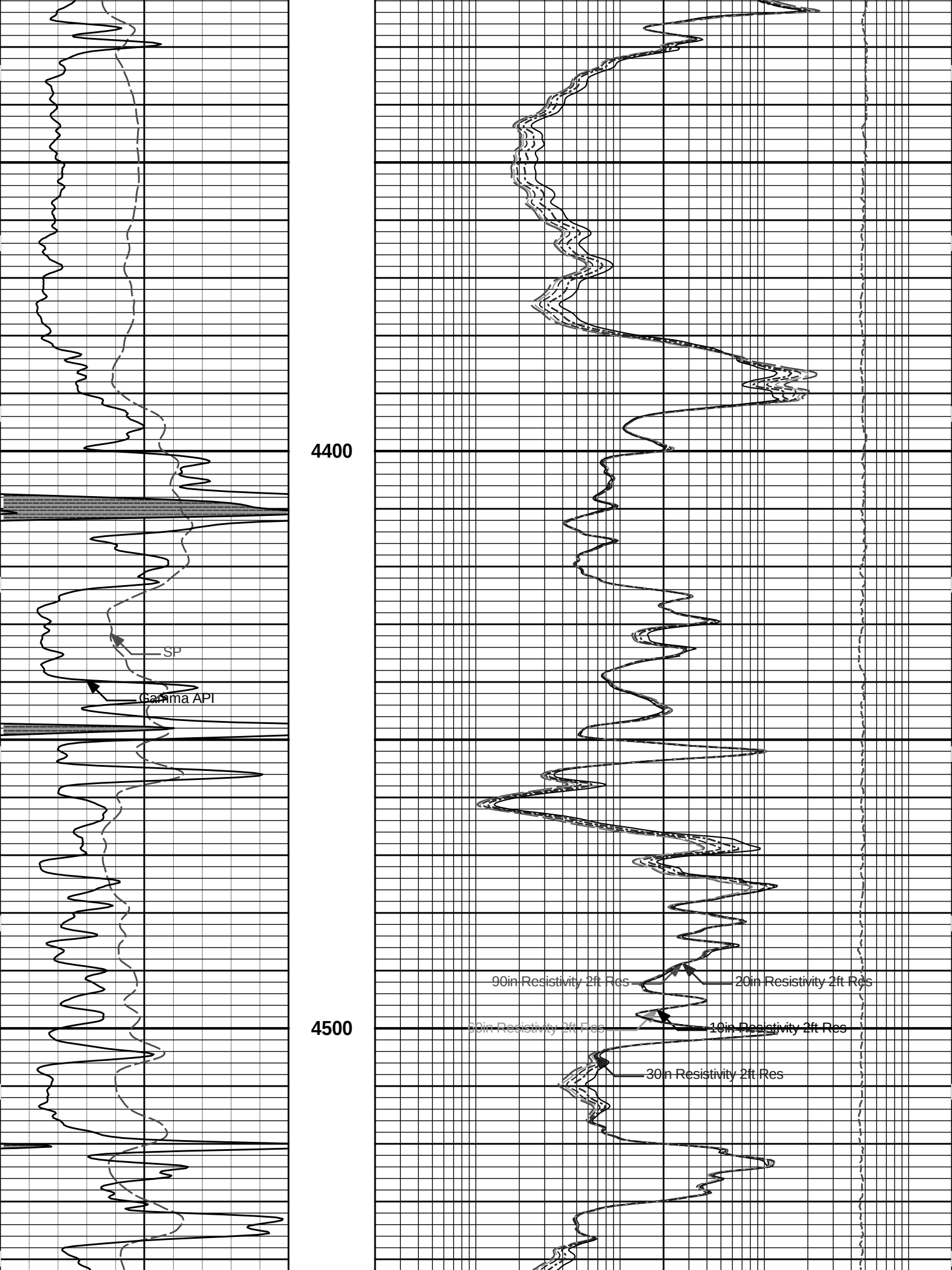
HALLIBURTON

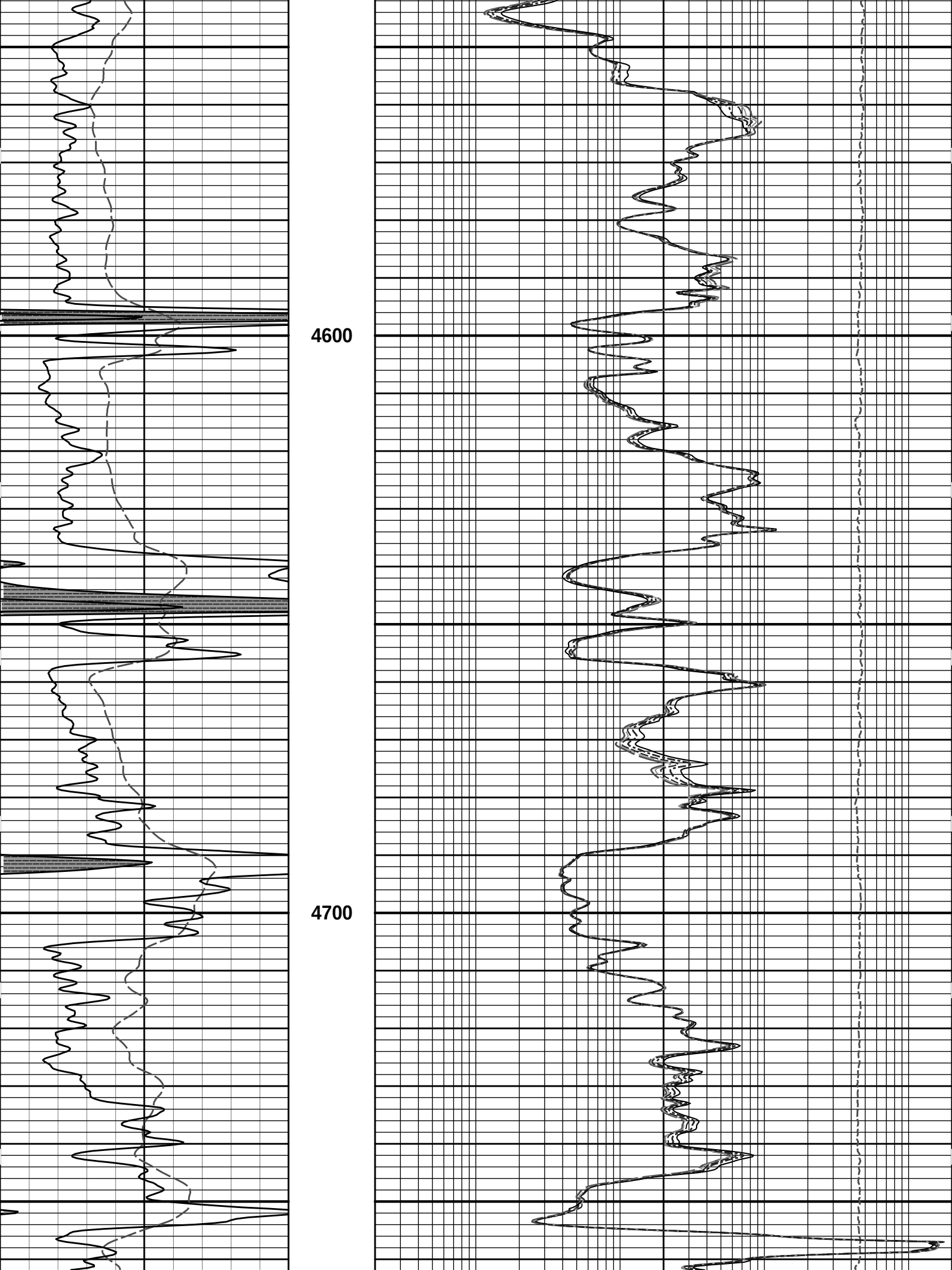
Plot Time: 14-Jul-12 18:16:59
Plot Range: 3996 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_DETAIL\
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\ACRT\ACRT_5_main_lib

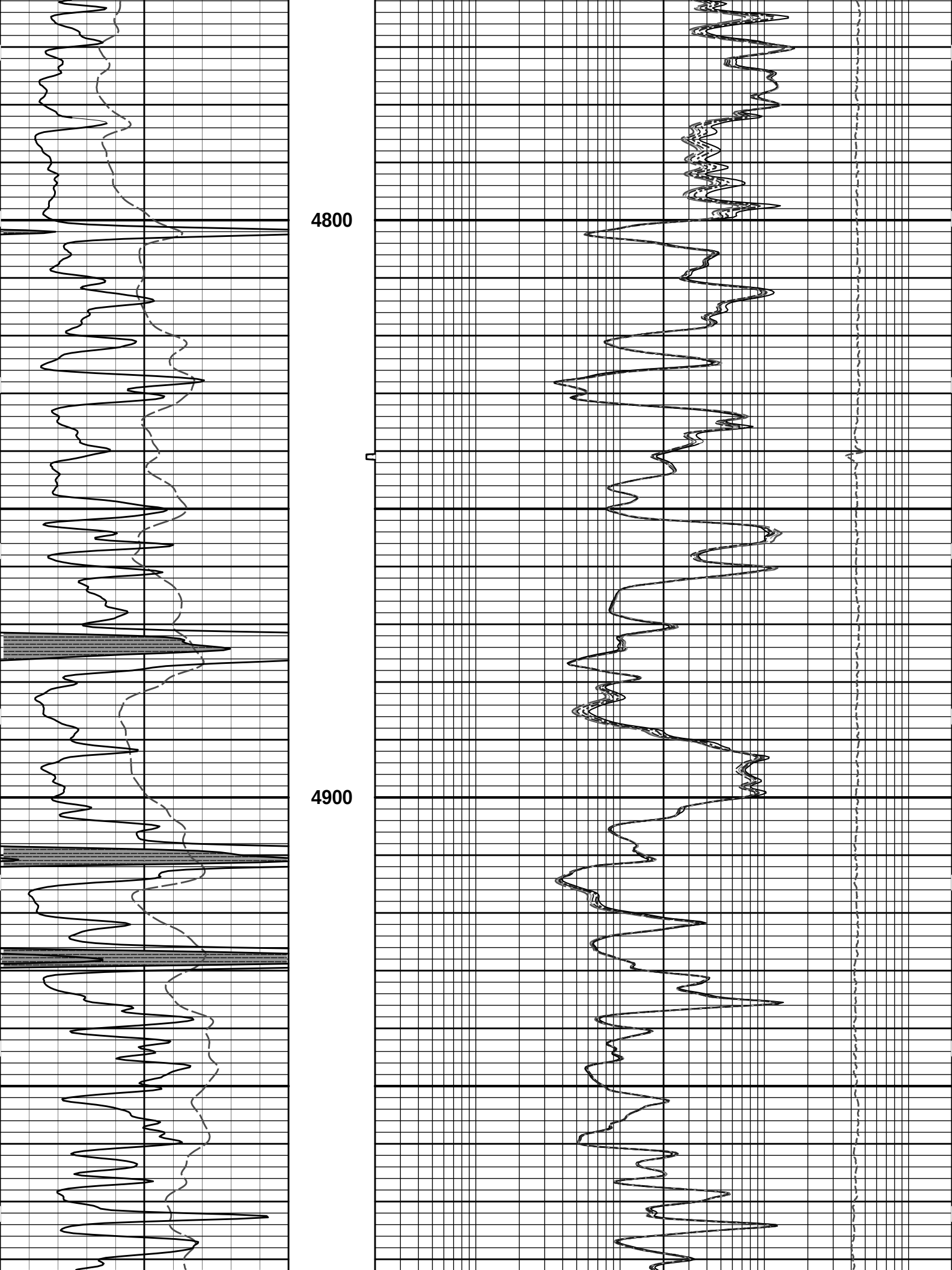
5 INCH MAIN LOG

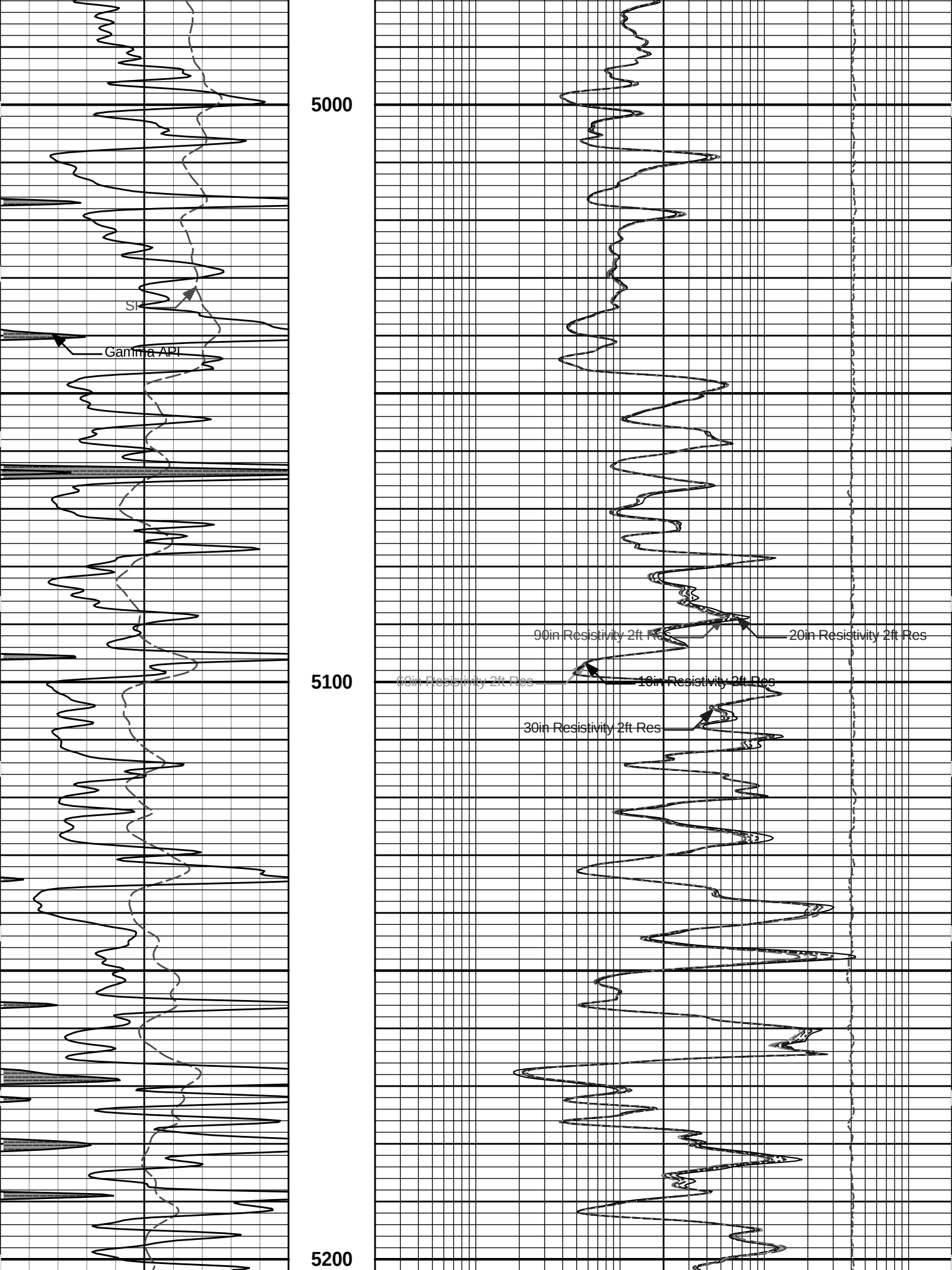


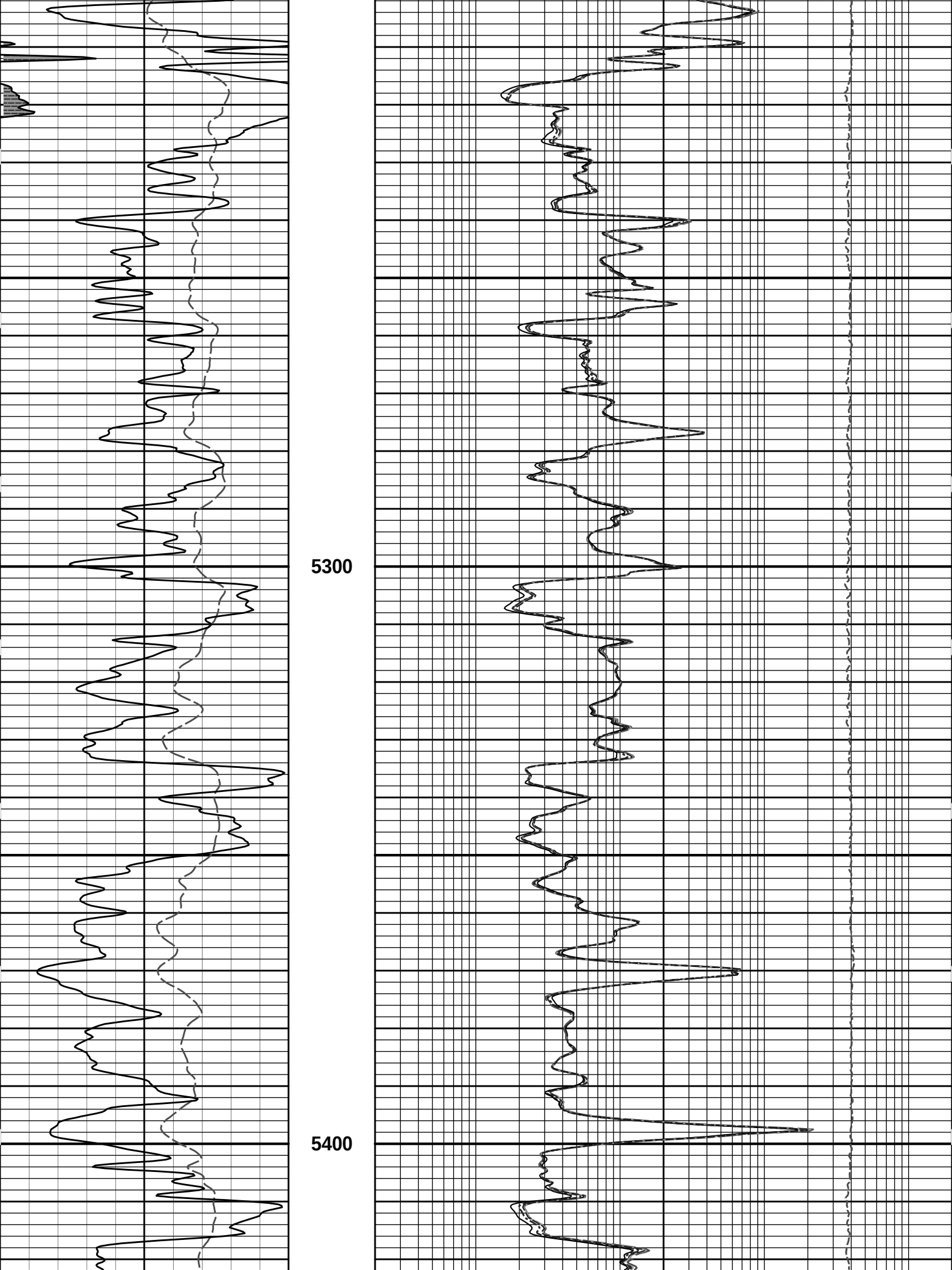

4200
4300


4400
4500
SP
Gamma API
90in Resistivity 2ft Res
20in Resistivity 2ft Res
60in Resistivity 2ft Res
10in Resistivity 2ft Res
30in Resistivity 2ft Res


4600
4700


4800
4900


5000
SP
Gamma API
90in Resistivity 2ft Res
20in Resistivity 2ft Res
5100
60in Resistivity 2ft Res
10in Resistivity 2ft Res
30in Resistivity 2ft Res
5200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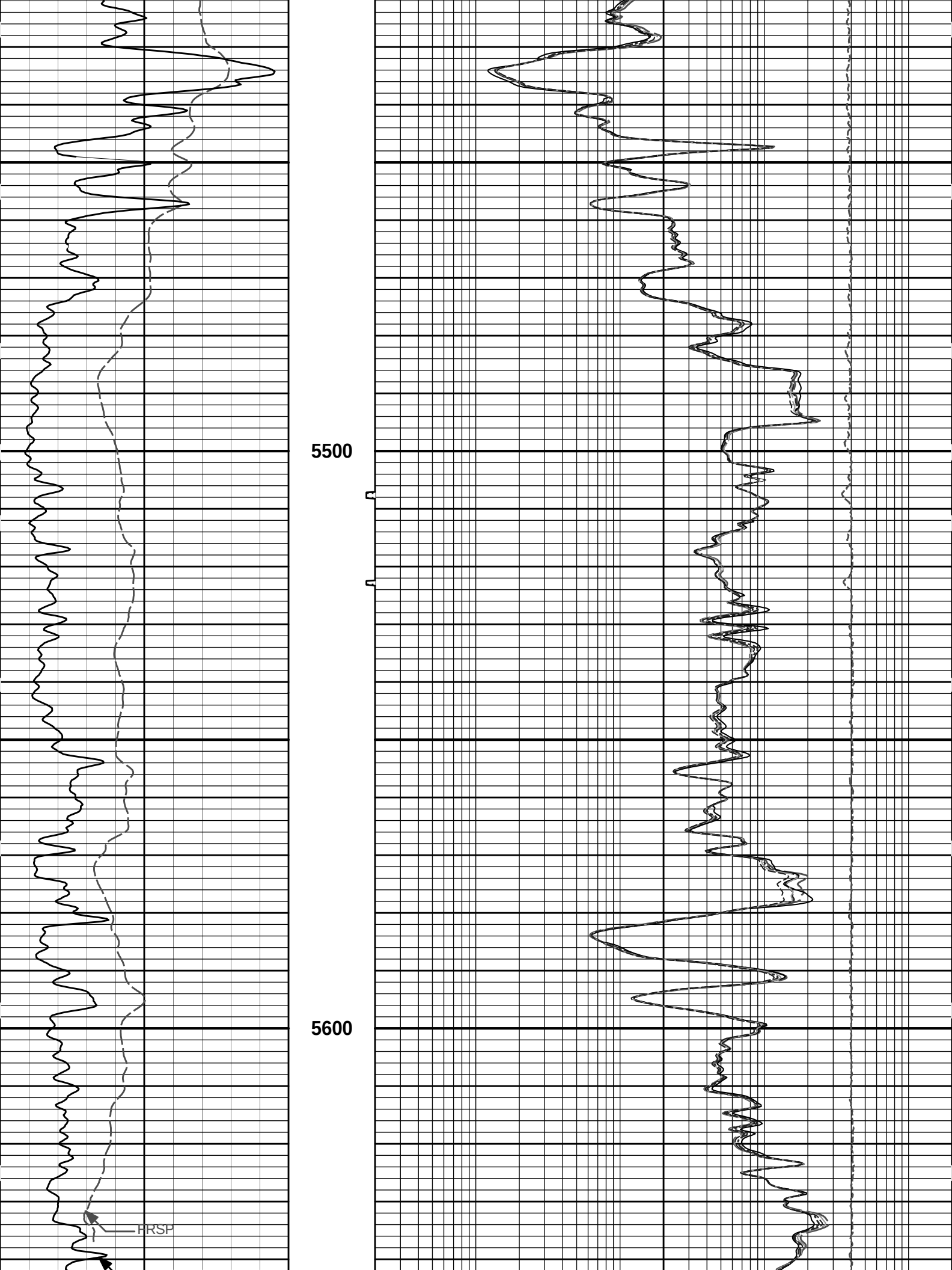
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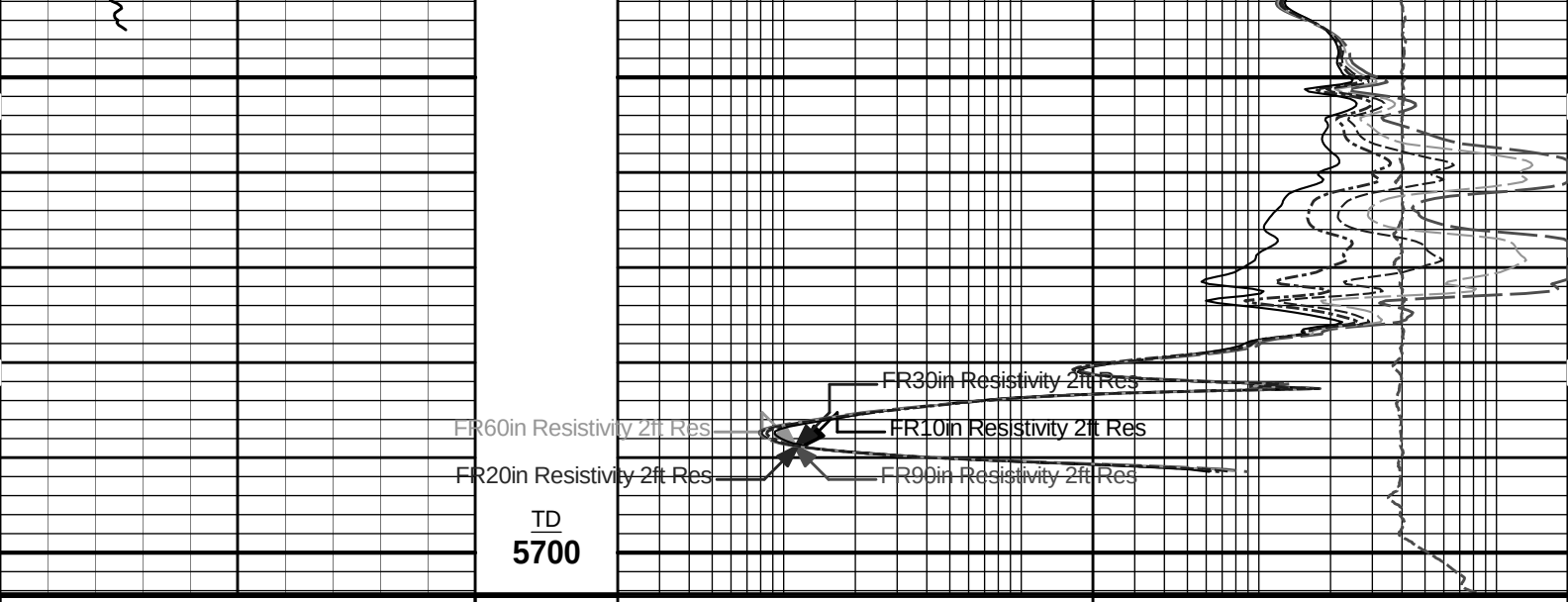
HRSP



SP
-]20[+
0 Gamma API 150
api

MD
1 : 240
ft

Tension Pull
10 0

SHALE

Tension Pull

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: 14-Jul-12 18:17:02
Plot Range: 3996 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_DETAIL\
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\ACRT\ACRT_5_main_lib

5 INCH MAIN LOG

HALLIBURTON

Plot Time: 14-Jul-12 18:17:02
Plot Range: 4996 ft to 5704.67 ft
Data: FEIGHT_A_8\Well Based\R1_REPEAT\
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\ACRT\ACRT_5_repeat_lib

REPEAT SECTION

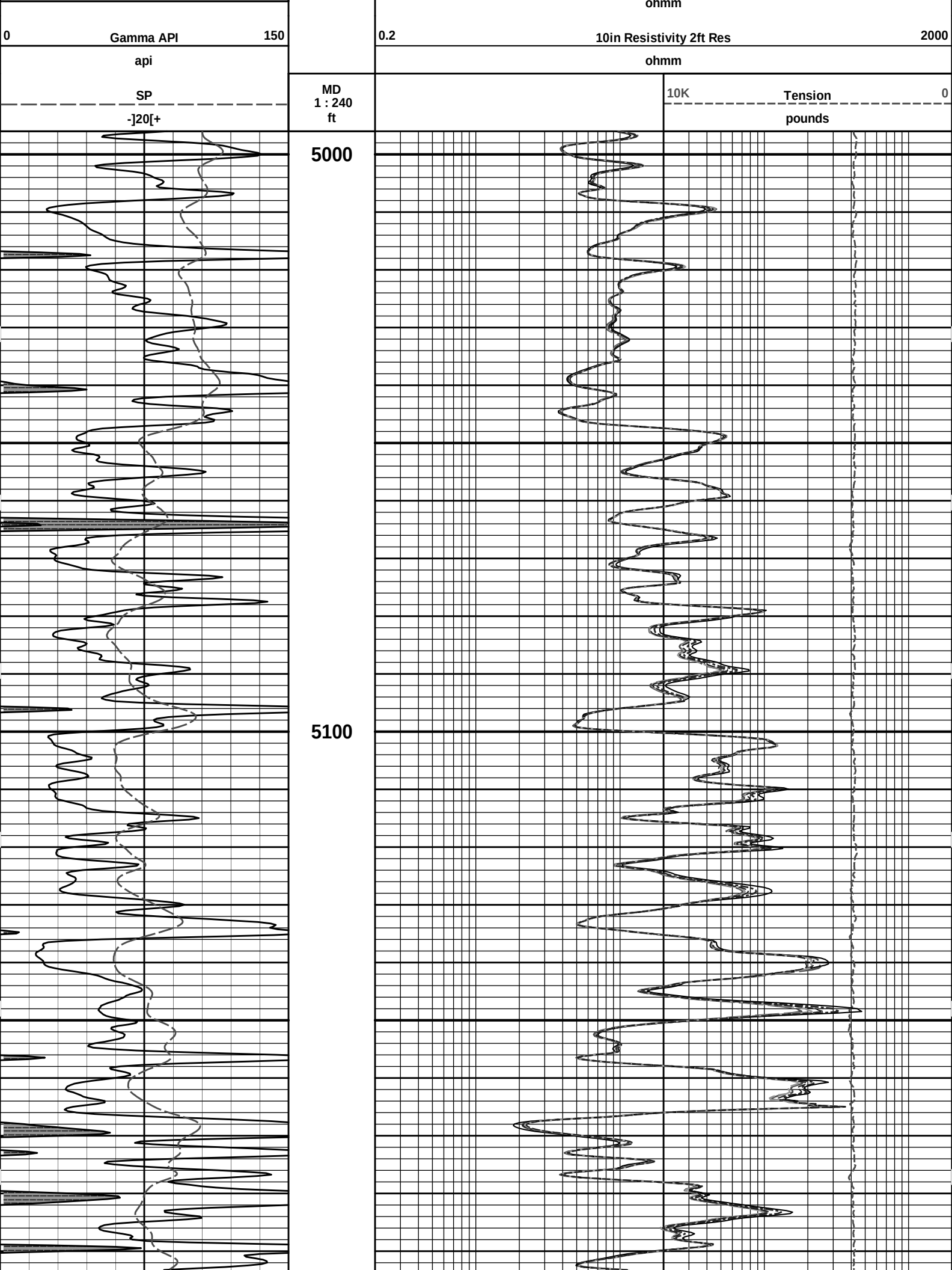
0.2 90in Resistivity 2ft Res 2000
ohmm

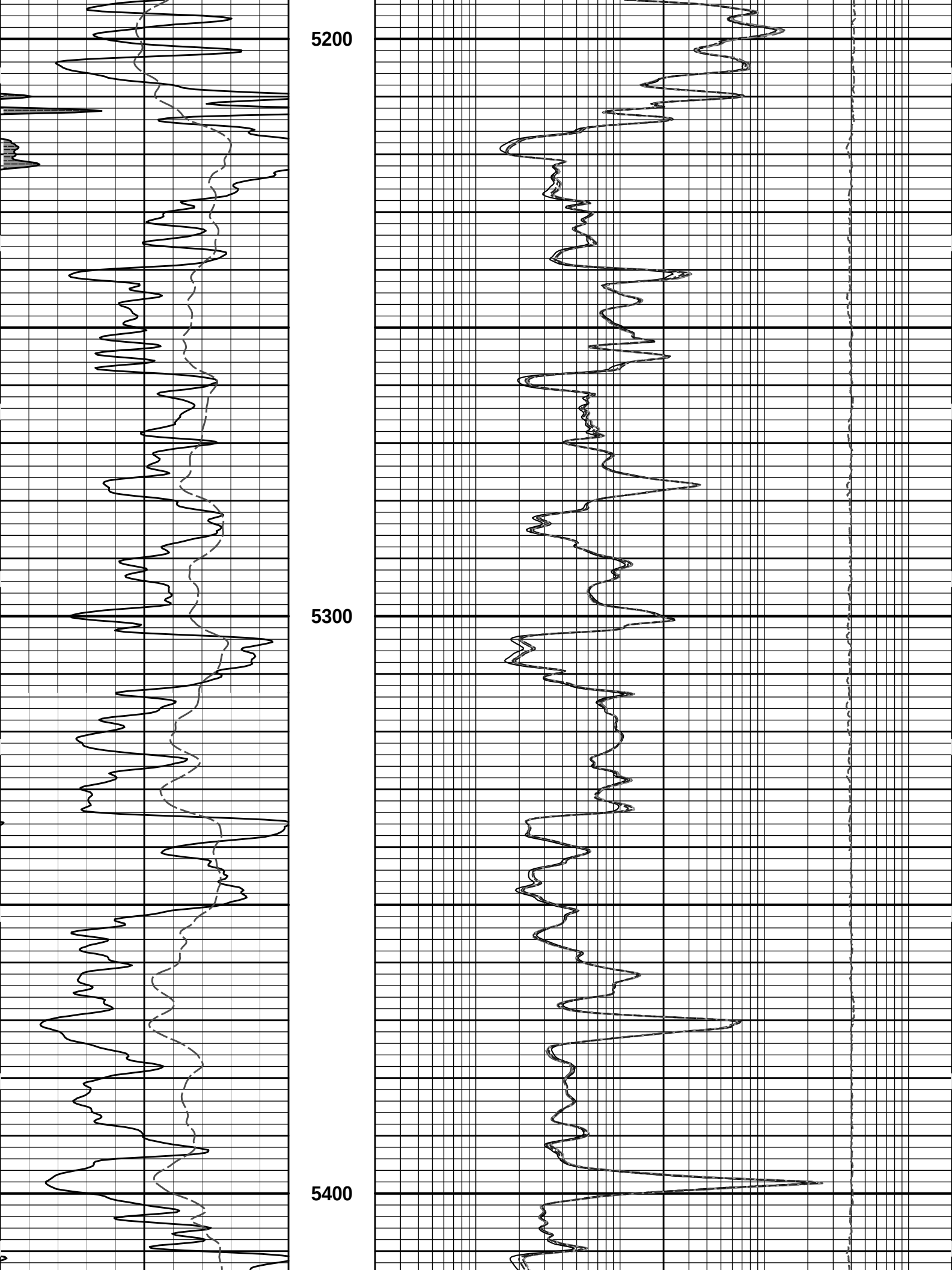
0.2 60in Resistivity 2ft Res 2000
ohmm

0.2 30in Resistivity 2ft Res 2000
ohm-metre

0.2 20in Resistivity 2ft Res 2000

SHALE


ohmm
0
Gamma API
150
0.2
10in Resistivity 2ft Res
2000
api
ohmm
SP
MD
1 : 240
ft
10K
Tension
0
-]20[+
pounds
5000
5100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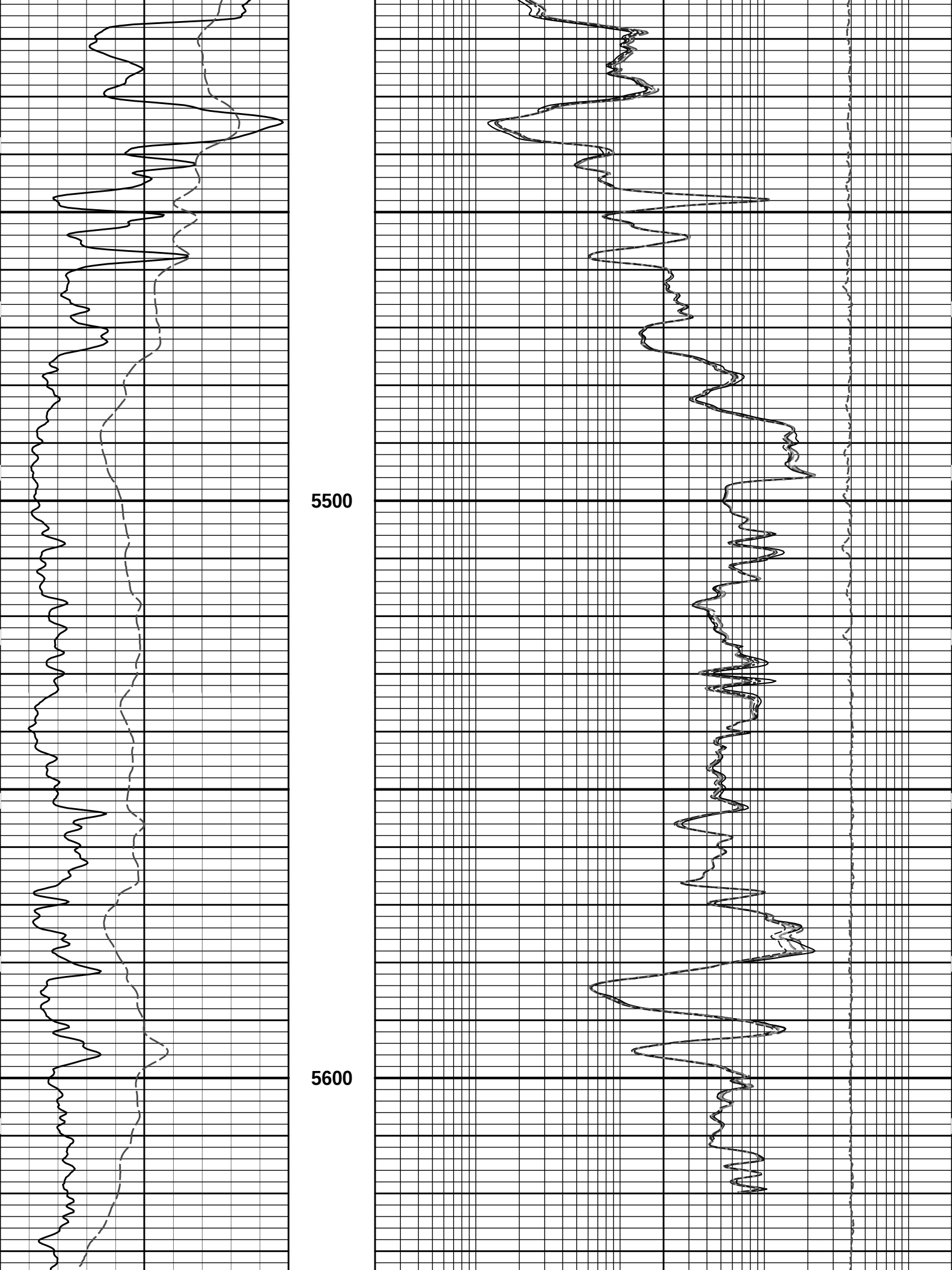
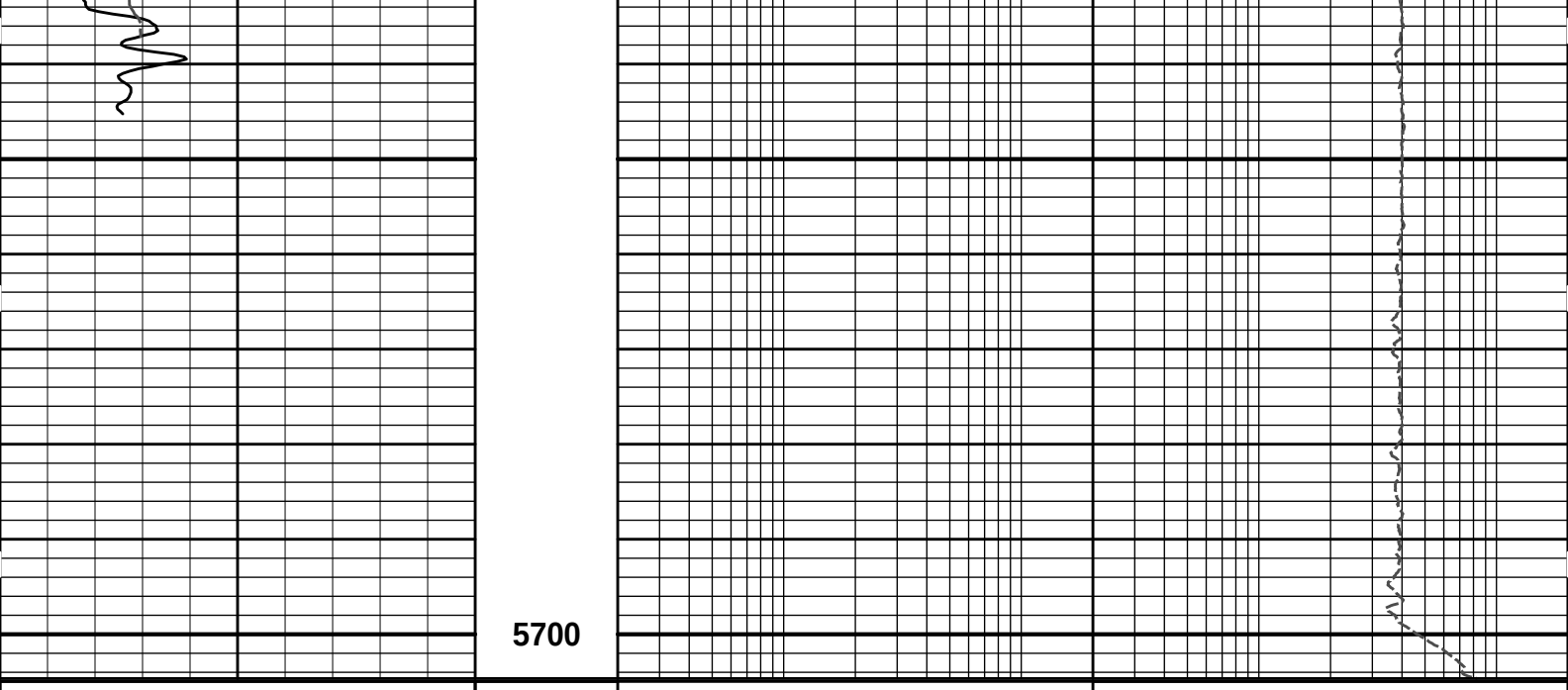
5300
5400


5500
5600



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

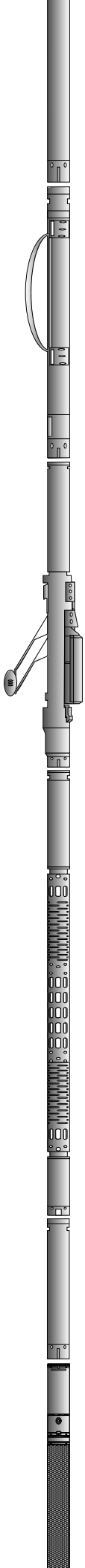
Plot Time: 14-Jul-12 18:17:06
Plot Range: 4996 ft to 5704.67 ft
Data: FEIGHT_A_8\Well Based\R1_REPEAT\
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\ACRT\ACRT_5_repeat_lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head-PROT01 30.00 lbs		Ø 3.625 in →			1.92 ft	70.04 ft
						68.12 ft
SP Sub-11441455 60.00 lbs		Ø 3.625 in →		← SP @ 66.34 ft	3.74 ft	
						64.38 ft



GTET-11039640
165.00 lbs

Ø 3.625 in

8.52 ft

GammaRay @ 58.32 ft

55.86 ft

DSN Decentralizer-
10755066
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-I43_M489
360.00 lbs

Ø 4.500 in

10.81 ft

SDLT Pad-P81
65.00 lbs

Microlog Pad-M489
8.00 lbs

Ø 4.750 in*

Ø 4.750 in*

Microlog @ 38.36 ft

SDL Caliper @ 38.17 ft

SDL @ 38.16 ft

35.36 ft

BSAT-10747684
300.00 lbs

Ø 3.625 in

15.77 ft

Sonic Receivers @ 26.84 ft

19.58 ft

ACRt Instrument-
I5059_S8385
50.00 lbs

Ø 3.625 in

5.03 ft

14.55 ft

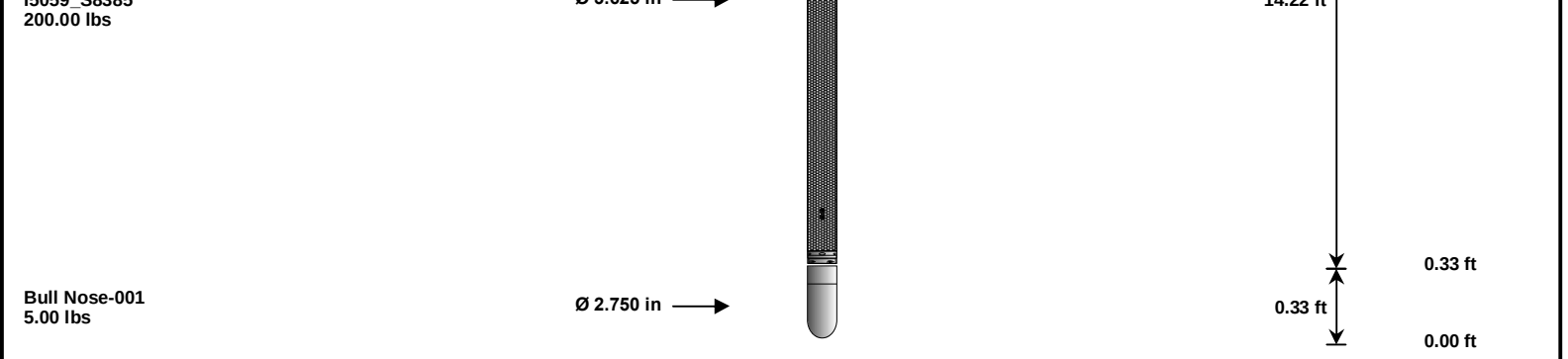
Mud Resistivity @ 13.19 ft

ACRt @ 9.21 ft

ACRt Sonde-
I5059_S8385

Ø 3.625 in

14.22 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)		Accumulated Length (ft)	Max.Log. Speed (fpm)
CH	Standard OH Cable Head	PROT01	30.00	1.92		68.12	300.00
SP	SP Sub	11441455	60.00	3.74		64.38	300.00
GTET	Gamma Telemetry Tool	11039640	165.00	8.52		55.86	60.00
DSNT	Dual Spaced Neutron	11019643	174.00	9.69		46.17	60.00
DCNT	DSN Decentralizer	10755066	6.60	5.13	*	49.50	300.00
SDLT	Spectral Density Tool	I43_M489	360.00	10.81		35.36	60.00
MICP	Microlog Pad	M489	8.00	1.00	*	37.86	60.00
SDLP	Density Insite Pad	P81	65.00	2.55	*	37.57	60.00
BSAT	Borehole Sonic Array Tool	10747684	300.00	15.77		19.58	60.00
ACRt	Array Compensated True Resistivity Instrument Section	I5059_S8385	50.00	5.03		14.55	300.00
ACRt	Array Compensated True Resistivity Sonde Section	I5059 S8385	200.00	14.22		0.33	300.00
BLNS	Bull Nose	001	5.00	0.33		0.00	300.00
Total			**1,423.60**	**70.04**			

* Not included in Total Length and Length Accumulation.

Data: FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\IDLE **Date: 14-Jul-12 14:37:45**

HALLIBURTON

CALIBRATION REPORT

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name: ACRt Sonde - I5059_S8385
Reference Calibration Date: 12-Jul-12 16:18:52
Engineer: T. HYDE
Calibration Date: 12-Jul-12 16:29:47
Software Version: WL INSITE R3.6.0 (Build 3)
Calibration Version: 1
Host Tool Name: ACRt Instrument - I5059_S8385

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.03	1.05	0.95	1.04	1.05	0.95	1.04	1.05
A2 (50")	0.95	1.01	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	1.02	1.05	0.95	1.02	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.01	1.05	0.95	1.01	1.05
A6 (6")	N/A	N/A	N/A	0.95	1.00	1.05	0.95	1.00	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	-1.40	2	-6	-4.43	-2	-8	-4.52	-2
A2 (50")	-7	-2.26	0	-7	-3.72	0	-7	-4.52	0
A3 (29")	-27	-13.36	-9	-9	-3.56	-3	-7	-2.73	-1

A4 (17")	-180	-107.06	-60	-45	-33.57	-15	-39	-26.06	-13
A5 (10")	N/A	N/A	N/A	-150	-82.67	-50	-80	-41.94	-10
A6 (6")	N/A	N/A	N/A	175	341.28	525	90	170.50	270

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.6	0.92	1.3
36K	1.0	1.37	2.0
72K	1.0	1.63	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 RANGE CHK	PASS
Tx CURRENT GAIN	PASS
Rmud VERIFICATION	PASS

TOOL OK TO LOG

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
ACRt Sonde-I5059_S8385						
Mud Cell	1.00	----------	----------	0.00	----------	ohm-m

Data: FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\IDLE **Date: 14-Jul-12 14:43:49**

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	9.600	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	10000.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	0.323	ohmm
	SHARED	TRM	Temperature of Mud	111.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	5700.00	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?	No	

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	
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	
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 Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	User define	
BSAT	DTMA	Delta -T Matrix	47.60	uspf
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	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm

BOTTOM

HALLIBURTON

INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
	Depth Panel			

TENS	Tension	0.00	NO	
	SP Sub			
PLTC	Plot Control Mask	66.34	NO	
SP	Spontaneous Potential	66.34	BLK	1.250
SPR	Raw Spontaneous Potential	66.34	NO	
SPO	Spontaneous Potential Offset	66.34	NO	
	GTET			
TPUL	Tension Pull	58.32	NO	
GR	Natural Gamma Ray API	58.32	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	58.32	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	58.32	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
	DSNT			
TPUL	Tension Pull	48.07	NO	
RNDS	Near Detector Telemetry Counts	48.17	BLK	1.417
RFDS	Far Detector Telemetry Counts	48.92	TRI	0.583
DNTT	DSN Tool Temperature	48.17	NO	
DSNS	DSN Tool Status	48.07	NO	
ERND	Near Detector Telemetry Counts EVR	48.17	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	48.92	BLK	0.000
ENTM	DSN Tool Temperature EVR	48.17	NO	
	SDLT			
TPUL	Tension Pull	38.17	NO	
PCAL	Pad Caliper	38.17	TRI	0.250
ACAL	Arm Caliper	38.17	TRI	0.250
	BSAT			
TPUL	Tension Pull	26.84	NO	
STAT	Status	26.84	NO	
DLYT	Delay Time	26.84	NO	
SI	Sample Interval	26.84	NO	
TXRX	Raw Telemetry 10 Receivers	26.84	NO	
FRMC	Tool Frame Count	26.84	NO	
GMOD	Gain processing mode	19.58	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	

SDLT Pad				
TPUL	Tension Pull	38.16	NO	
NAB	Near Above	37.99	BLK	0.920
NHI	Near Cesium High	37.99	BLK	0.920
NLO	Near Cesium Low	37.99	BLK	0.920
NVA	Near Valley	37.99	BLK	0.920
NBA	Near Barite	37.99	BLK	0.920
NDE	Near Density	37.99	BLK	0.920
NPK	Near Peak	37.99	BLK	0.920
NLI	Near Lithology	37.99	BLK	0.920
NBAU	Near Barite Unfiltered	37.99	BLK	0.250
NLIU	Near Lithology Unfiltered	37.99	BLK	0.250
FAB	Far Above	38.34	BLK	0.250
FHI	Far Cesium High	38.34	BLK	0.250
FLO	Far Cesium Low	38.34	BLK	0.250
FVA	Far Valley	38.34	BLK	0.250
FBA	Far Barite	38.34	BLK	0.250
FDE	Far Density	38.34	BLK	0.250

FPK	Far Peak	38.34	BLK	0.250
FLI	Far Lithology	38.34	BLK	0.250
PTMP	Pad Temperature	38.17	BLK	0.920
NHV	Near Detector High Voltage	37.57	NO	
FHV	Far Detector High Voltage	37.57	NO	
ITMP	Instrument Temperature	37.57	NO	
DDHV	Detector High Voltage	37.57	NO	
	Microlog Pad			
TPUL	Tension Pull	38.36	NO	
MINV	Microlog Lateral	38.36	BLK	0.750
MNOR	Microlog Normal	38.36	BLK	0.750

Data: FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\IDLE **Date: 14-Jul-12 14:43:26**

COMPANY	**OXY USA INC**		
WELL	**FEIGHT A-8**		
FIELD	**VICTORY**		
COUNTY	**HASKELL**	STATE	**KANSAS**

HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY LOG

HALLIBURTON

Plot Time: 14-Jul-12 18:17:06
Plot Range: 1790 ft to 5691.5 ft
Data: FEIGHT_A_8\Well Based\R1_CASING
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\...\ACRT_1_lib

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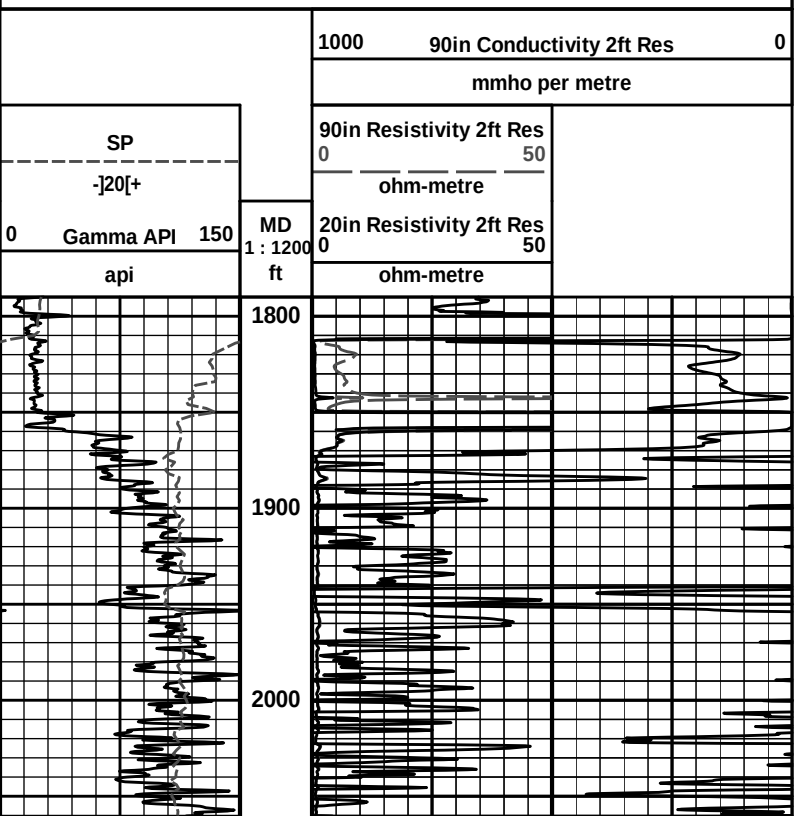

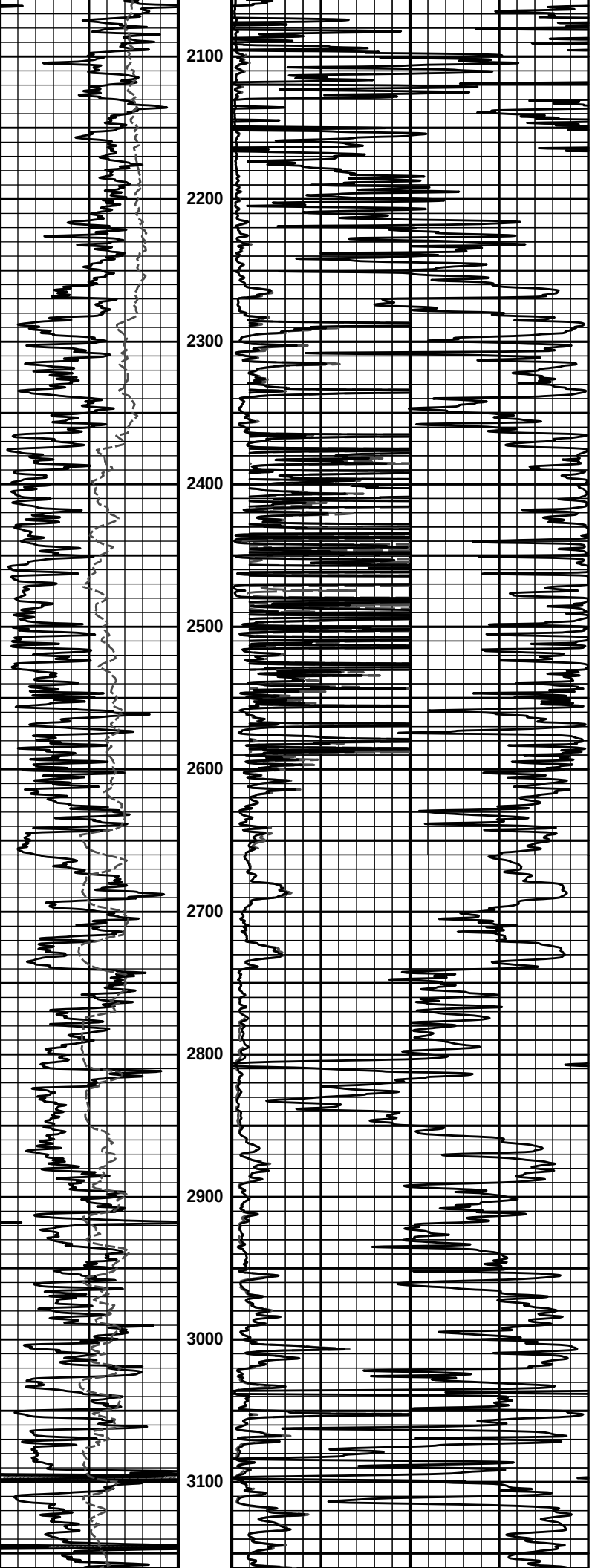
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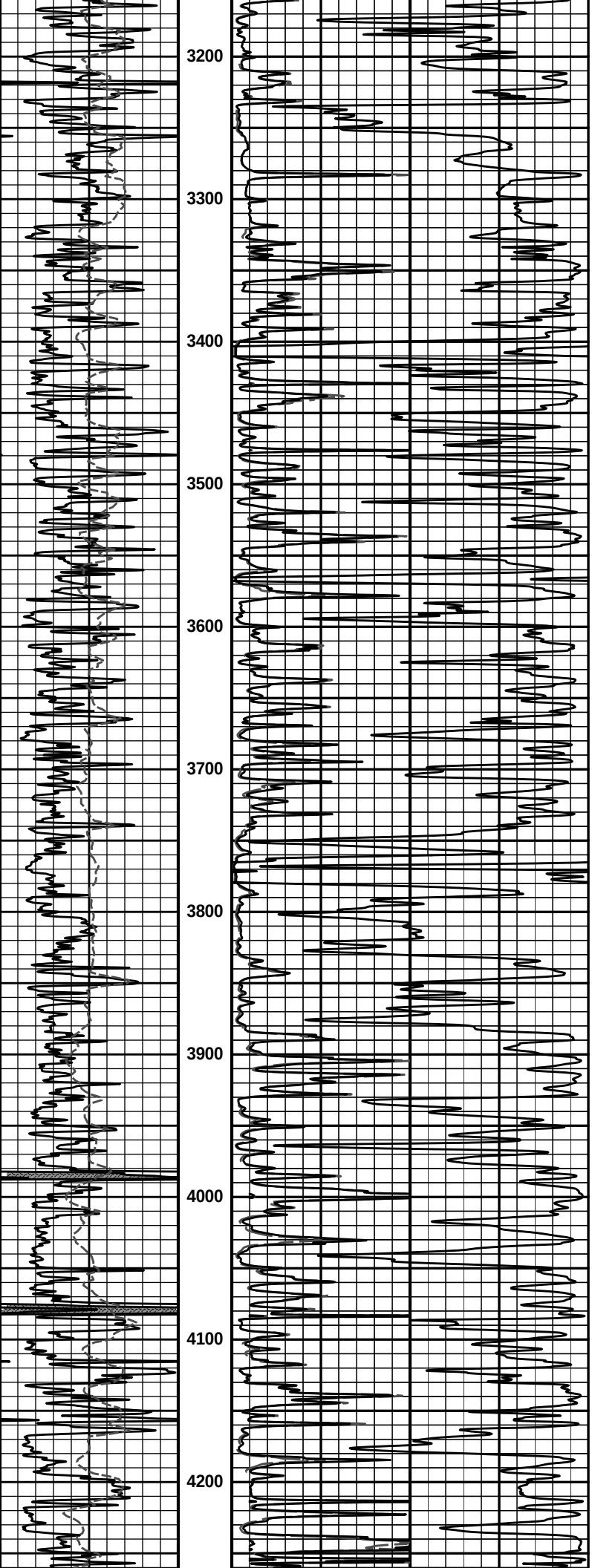
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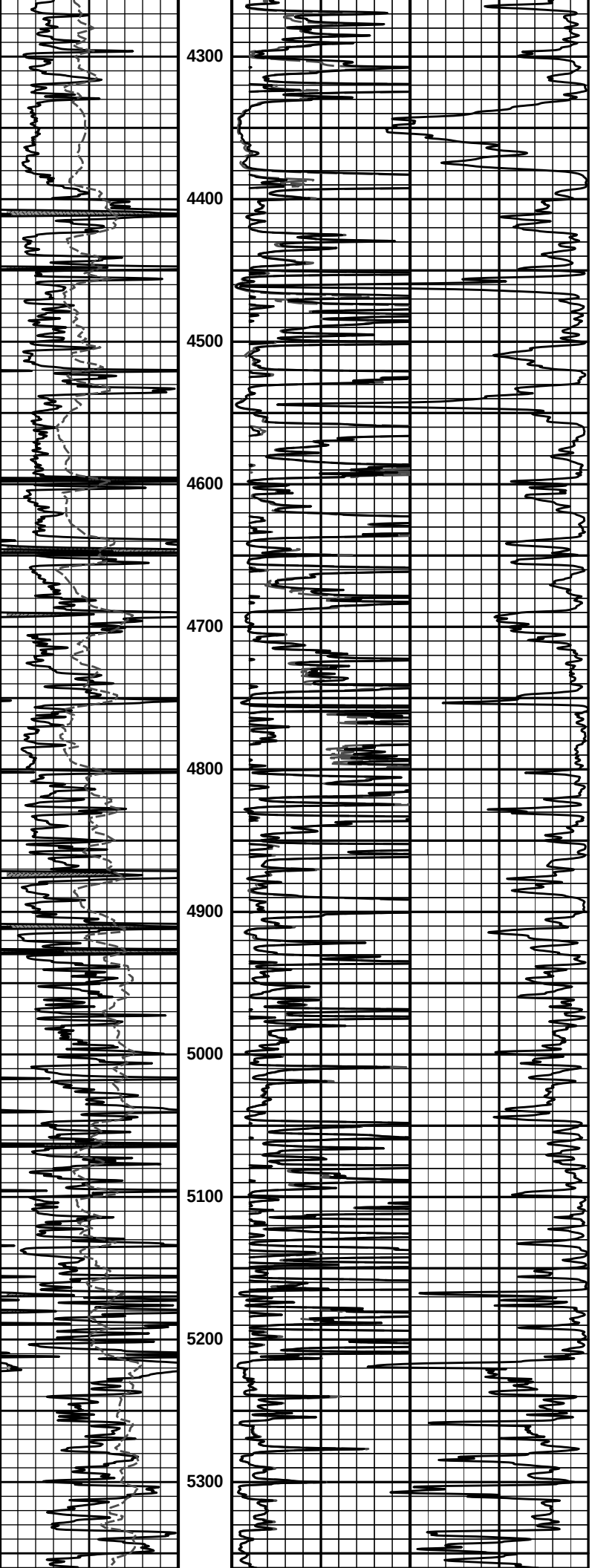
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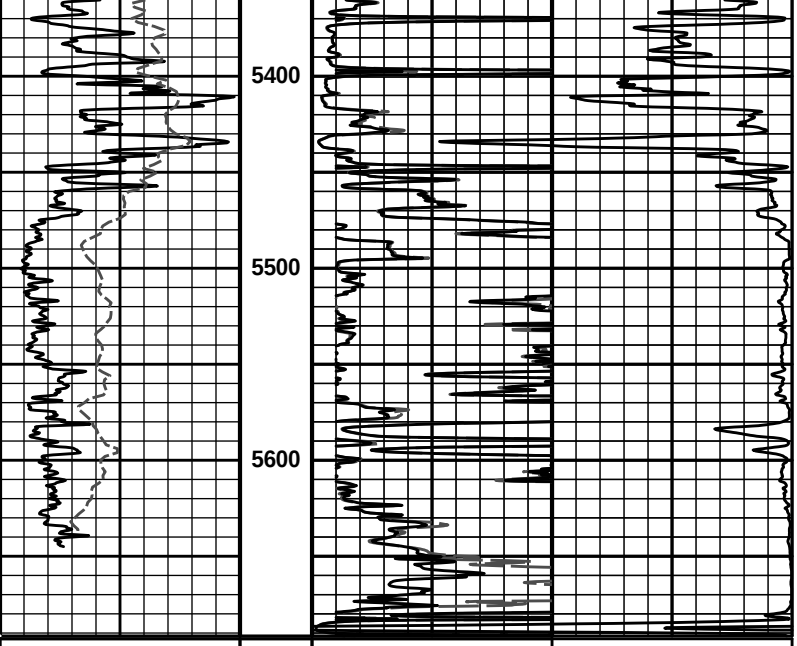

0 Gamma API 150	MD 1 : 1200 ft	20in Resistivity 2ft Res 0 50
api		ohm-metre
SP		90in Resistivity 2ft Res 0 50
-]20[+		ohm-metre
		1000 90in Conductivity 2ft Res 0
		mmho per metre

HALLIBURTON

Plot Time: 14-Jul-12 18:17:08
Plot Range: 1790 ft to 5691.5 ft
Data: FEIGHT_A_8\Well Based\R1_CASING
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\...\ACRT_1_lib

1 INCH MAIN LOG