

COMPANY		HARTMAN OIL CO.	
WELL		DOWELL 1-33	
FIELD		WILDCAT	
COUNTY		GOVE	
STATE		KANSAS	
Permanent Datum		GL	
Log measured from		KB	
Drilling measured from		KB	
Date		13-Aug-12	
Run No.		ONE	
Depth - Driller		4400.00 ft	
Depth - Logger		4390.0 ft	
Bottom - Logged Interval		4381.0 ft	
Top - Logged Interval		372.0 ft	
Casing - Driller		8.625 in @ 317.0 ft	
Casing - Logger		372.0 ft	
Bit Size		7.875 in @	
Type Fluid in Hole		WATER BASED MUD	
Density		9.2 ppg	
Viscosity		55.00 s/qt	
PH		10.00 pH	
Fluid Loss		8.0 cpm	
Source of Sample		FLOWLINE	
Rm @ Meas. Temperature		0.760 ohmm @ 91.00 degF	
Rmf @ Meas. Temperature		0.82 ohmm @ 77.00 degF	
Rmc @ Meas. Temperature		0.950 ohmm @ 77.00 degF	
Source Rmf		MEASURED	
Rm @ BHT		0.63 ohmm @ 126.0 degF	
Time Since Circulation		3.5 hr	
Time on Bottom		13-Aug-12 20:27	
Max. Rec. Temperature		126.0 degF @ 4390.0 ft	
Equipment		10782954 LIBERAL	
Recorded By		C. HAVERKAMP	
Witnessed By		K. NOAH	

Service Ticket No.: 9734629		API Serial No.: 15-063-22026		PGM Version: WL INSITE R3.6.0 (Build 3)															
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		1.5" S.O.		N/A					
Rmc @ Meas. Temp.		@		@				I776_S775											
Source Rmf		Rmc																	
Rm @ BHT		@		@															
Rmf @ BHT		@		@															
Rmc @ BHT		@		@															
EQUIPMENT DATA																			
GAMMA				ACOUSTIC				DENSITY				NEUTRON							
Run No.		ONE		Run No.				Run No.				Run No.							
Serial No.		10811258		Serial No.				Serial No.				Serial No.							
Model No.		GTET		Model No.				Model No.				Model No.							
Diameter		3.625		No. of Cent.				Diameter				Diameter							
Detector Model No.		T-102		Spacing				Log Type				Log Type							
Type		SCINT						Source Type				Source Type							
Length		8"		LSA [Y/N]				Serial No.				Serial No.							
Distance to Source		10'		FWDA [Y/N]				Strength				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	4390'	372'	REC	0	150									
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: SP-GTET-DSNT-SDLT-ACRT RAN IN COMBINATION.														
ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.														
CHLORIDES REPORTED AT 2300 PPM.														
LCM REPORTED AT 3 LB/BBL.														
POST TOOL SURVEYS NOT PERFORMED PER CUSTOMER REQUEST.														
YOUR CREW: A. VAQUERA, B. TERRELL														
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES. LIBERAL, KS 620-624-8123														
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.														
HALLIBURTON														

HALLIBURTON

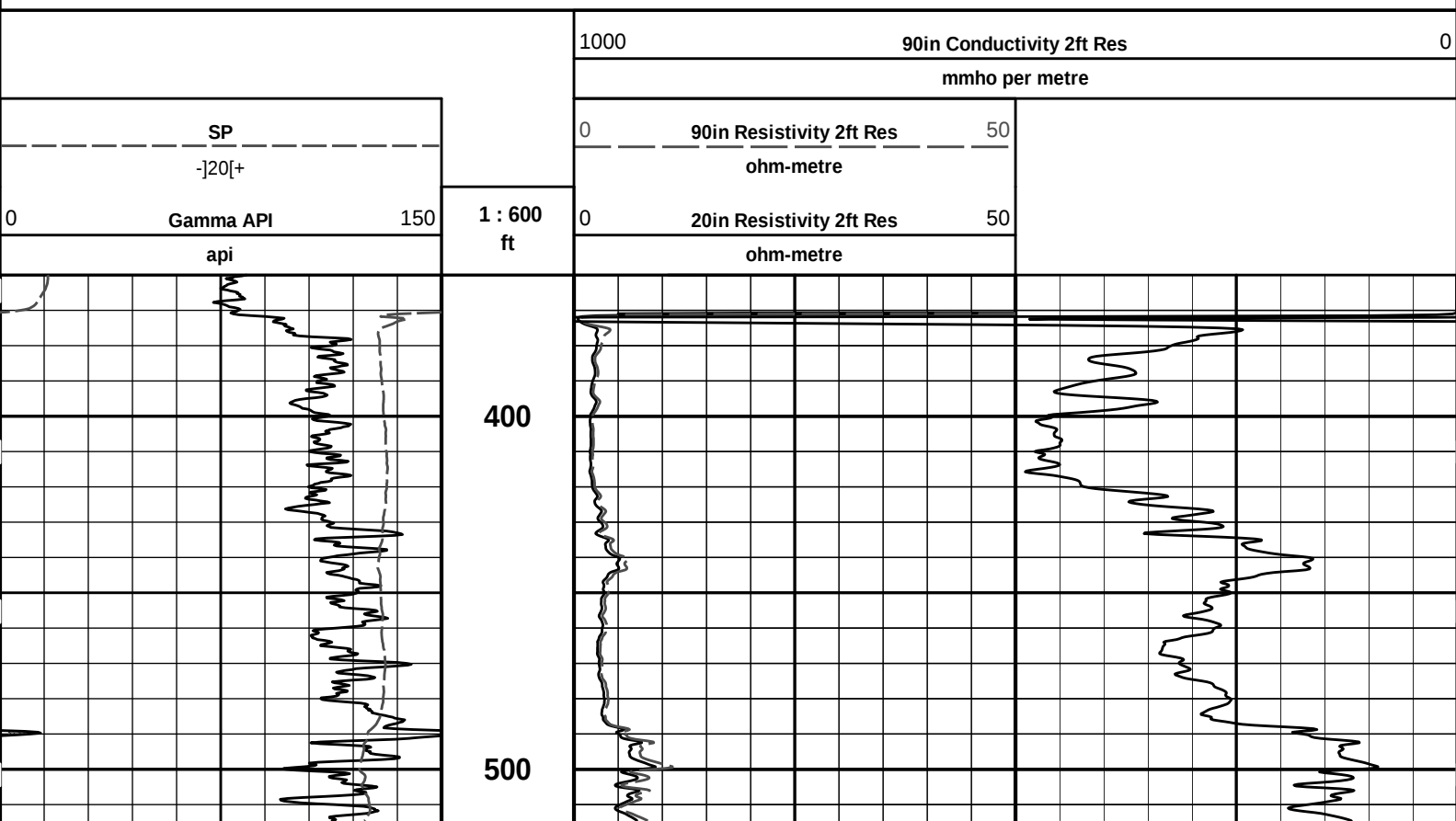
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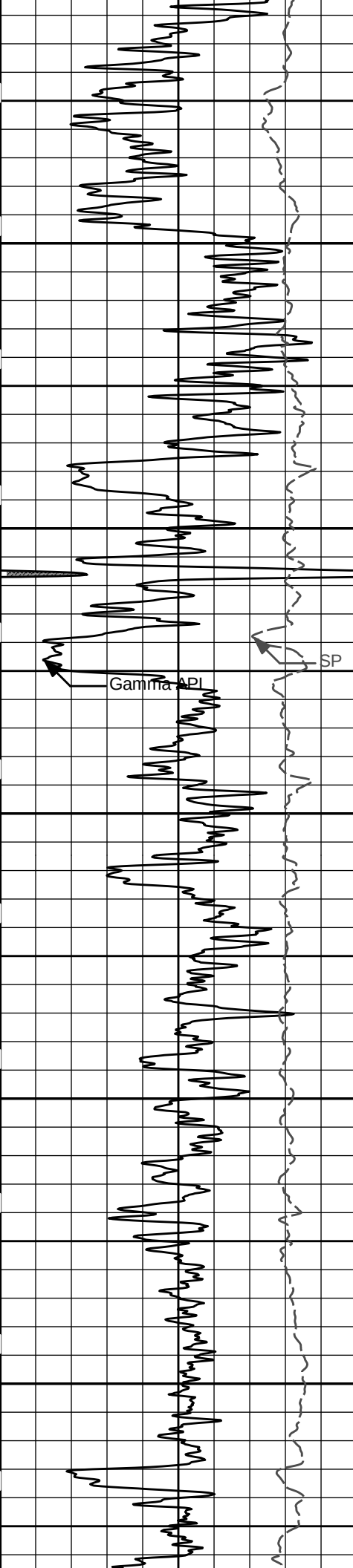
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Data: DOWELL_1_33\Well Based\R1_CASING\

Plot File: \\-LOCAL-\\DOWELL_1_33\\0001 TRIPLE COMBO\\ACRT\\ACRT_2_lib

2 INCH MAIN LOG





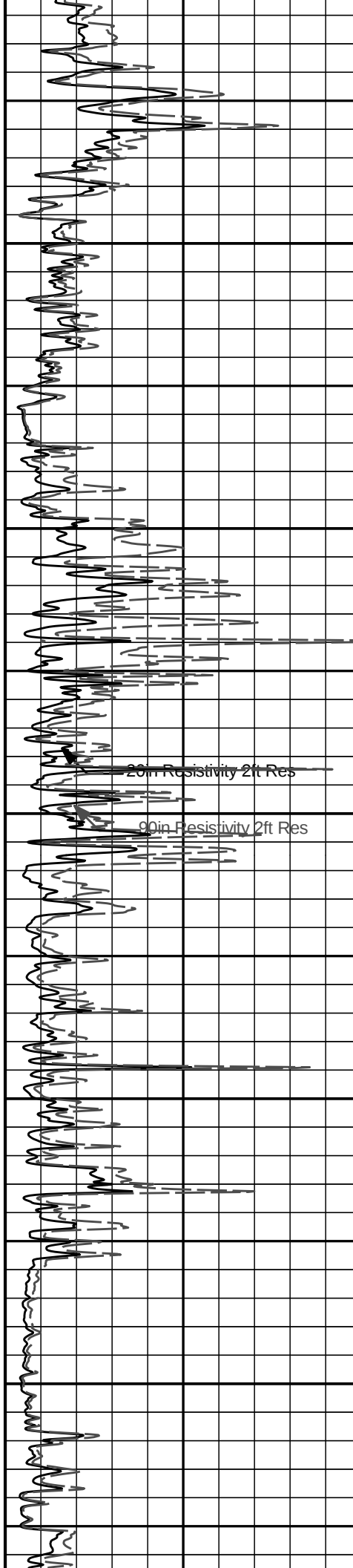
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700

800

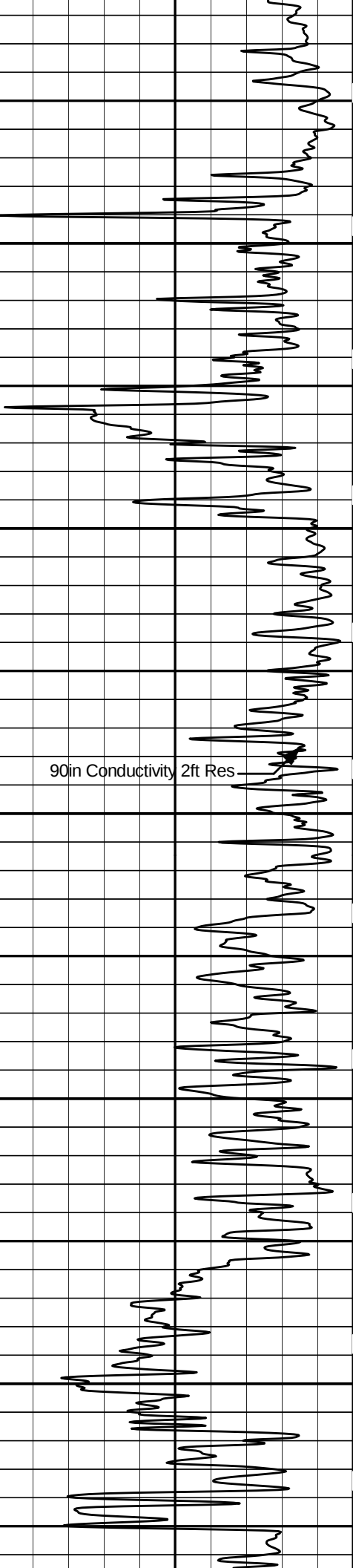
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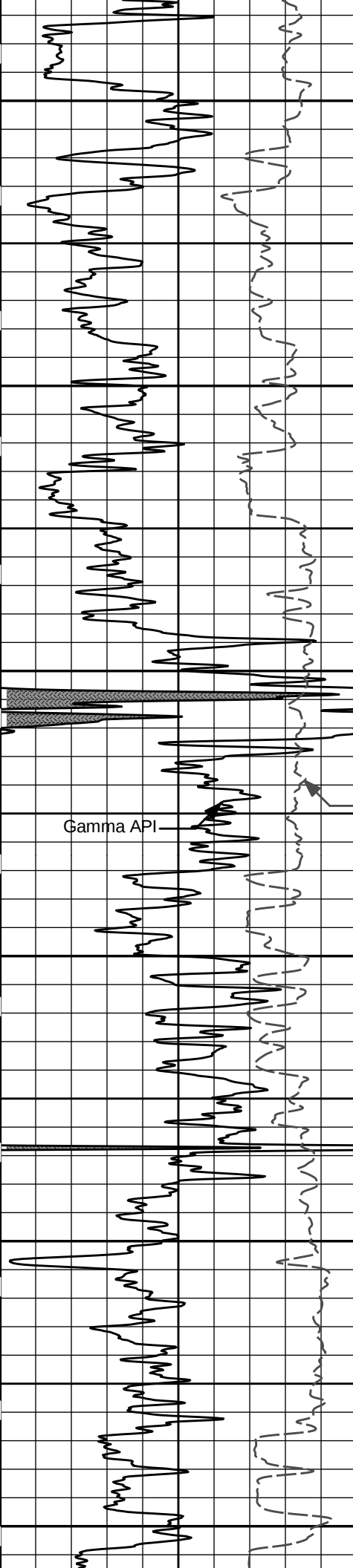


20in Resistivity 2ft Res

90in Resistivity 2ft Res



90in Conductivity 2ft Res



1100

1200

1300

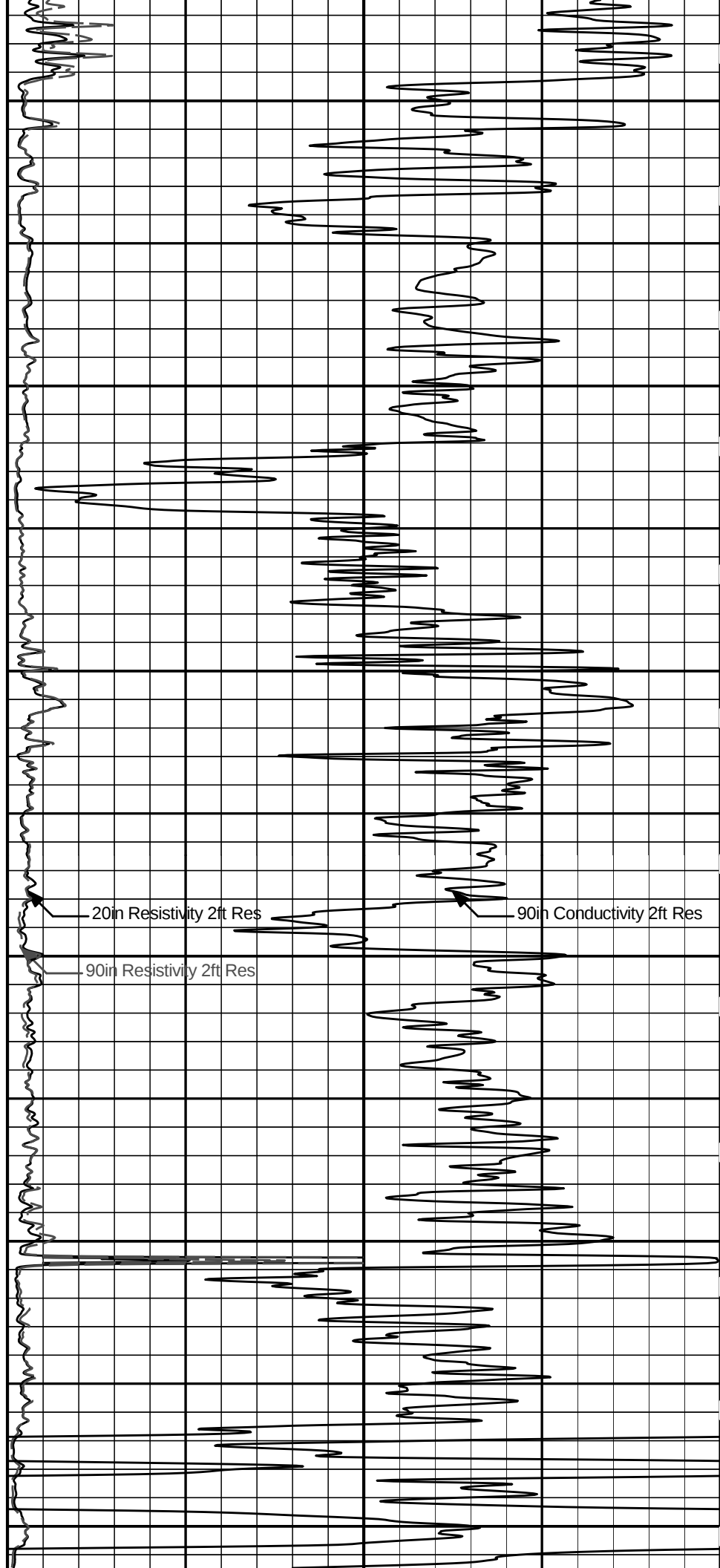
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1500

1600

Gamma API

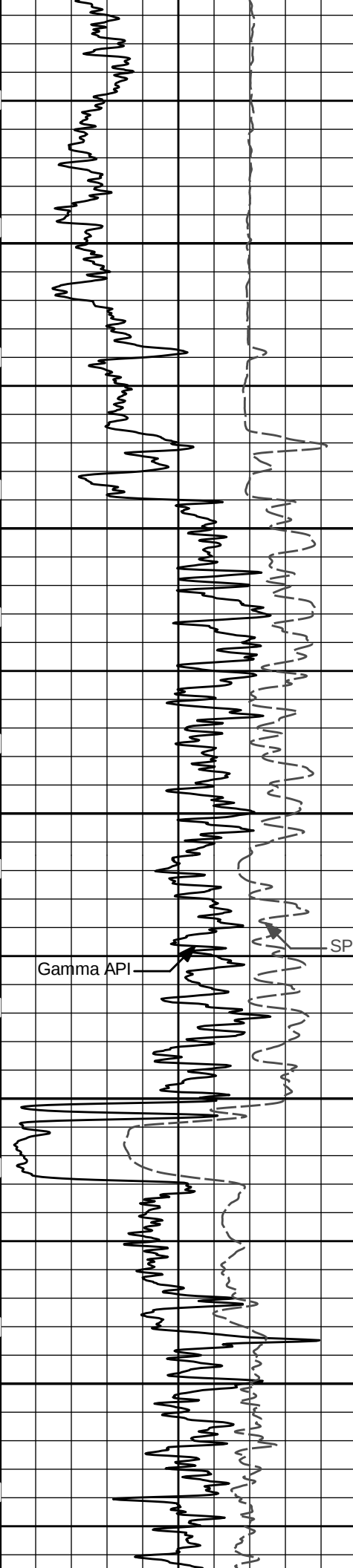
SP



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90in Resistivity 2ft Res

90in Conductivity 2ft Res



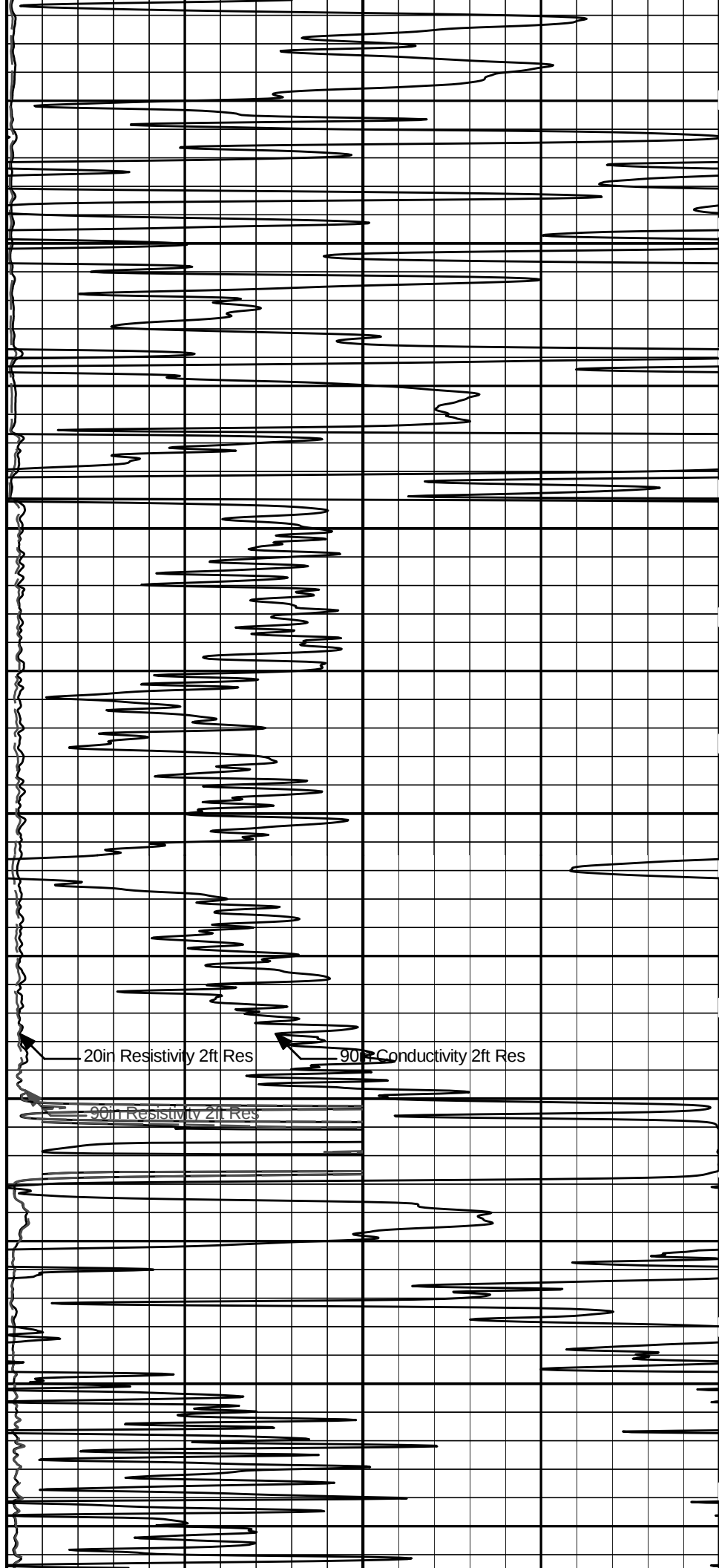
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1800

1900

2000

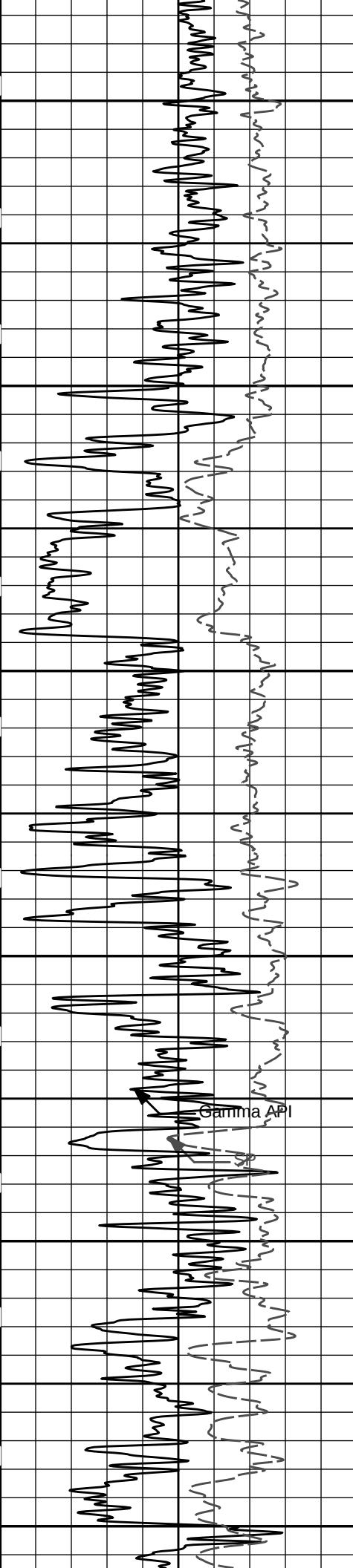
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20in Resistivity 2ft Res

90in Conductivity 2ft Res

90in Resistivity 2ft Res



2200

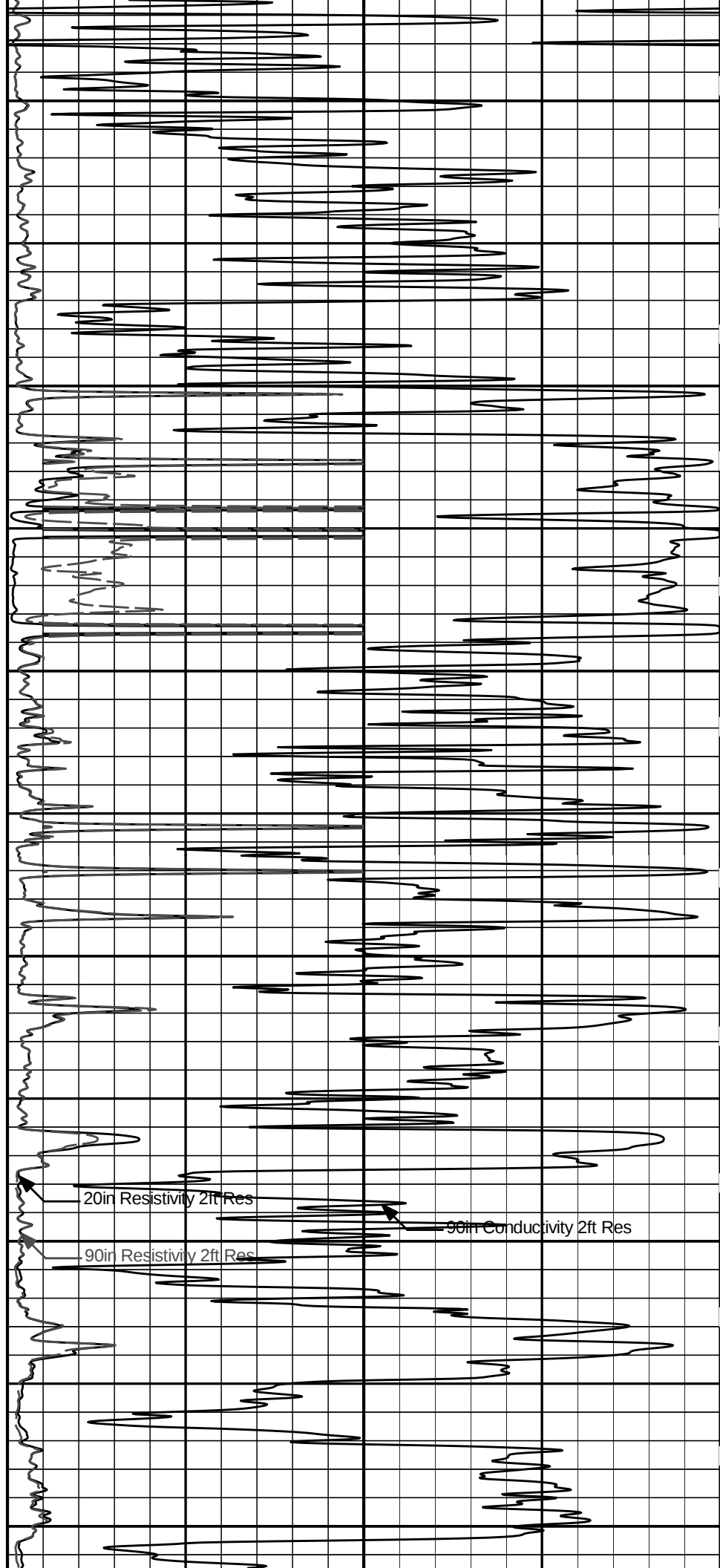
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2400

2500

2600

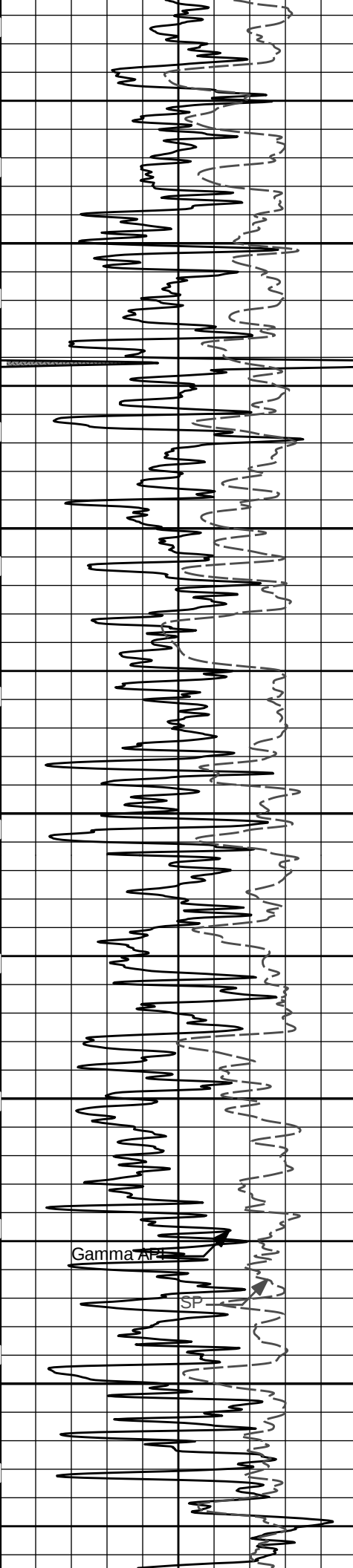
2700



20in Resistivity 2ft Res

90in Resistivity 2ft Res

90in Conductivity 2ft Res



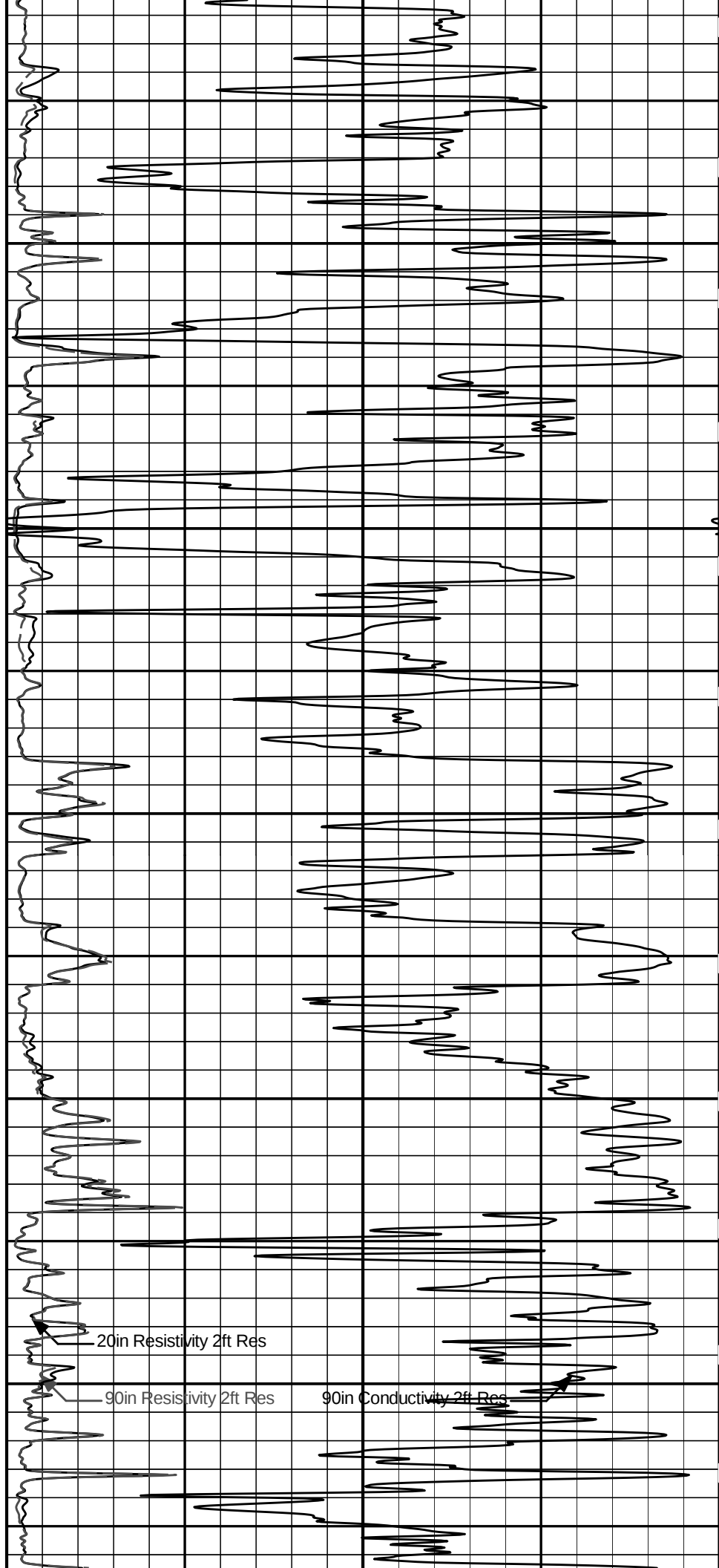
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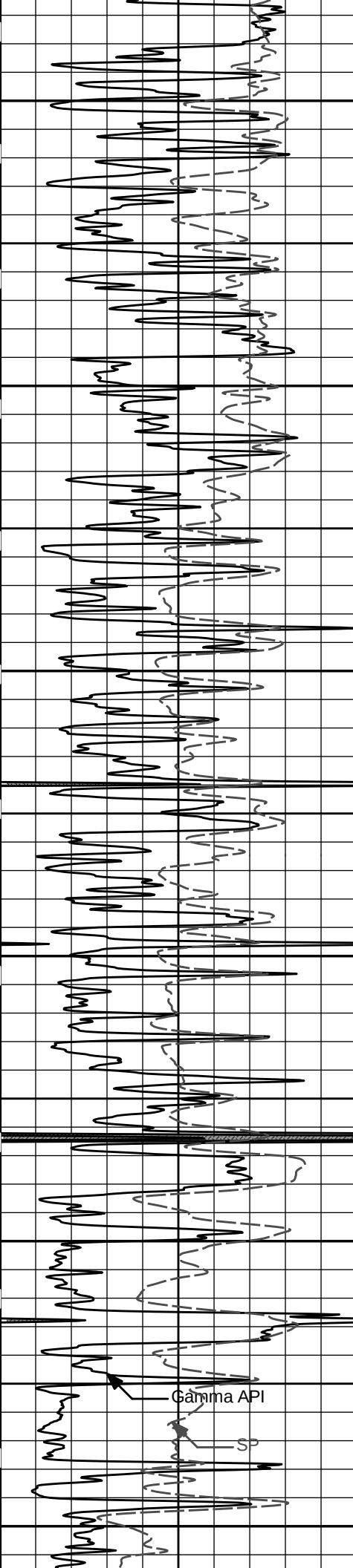
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3000

3100

3200





3300

3400

3500

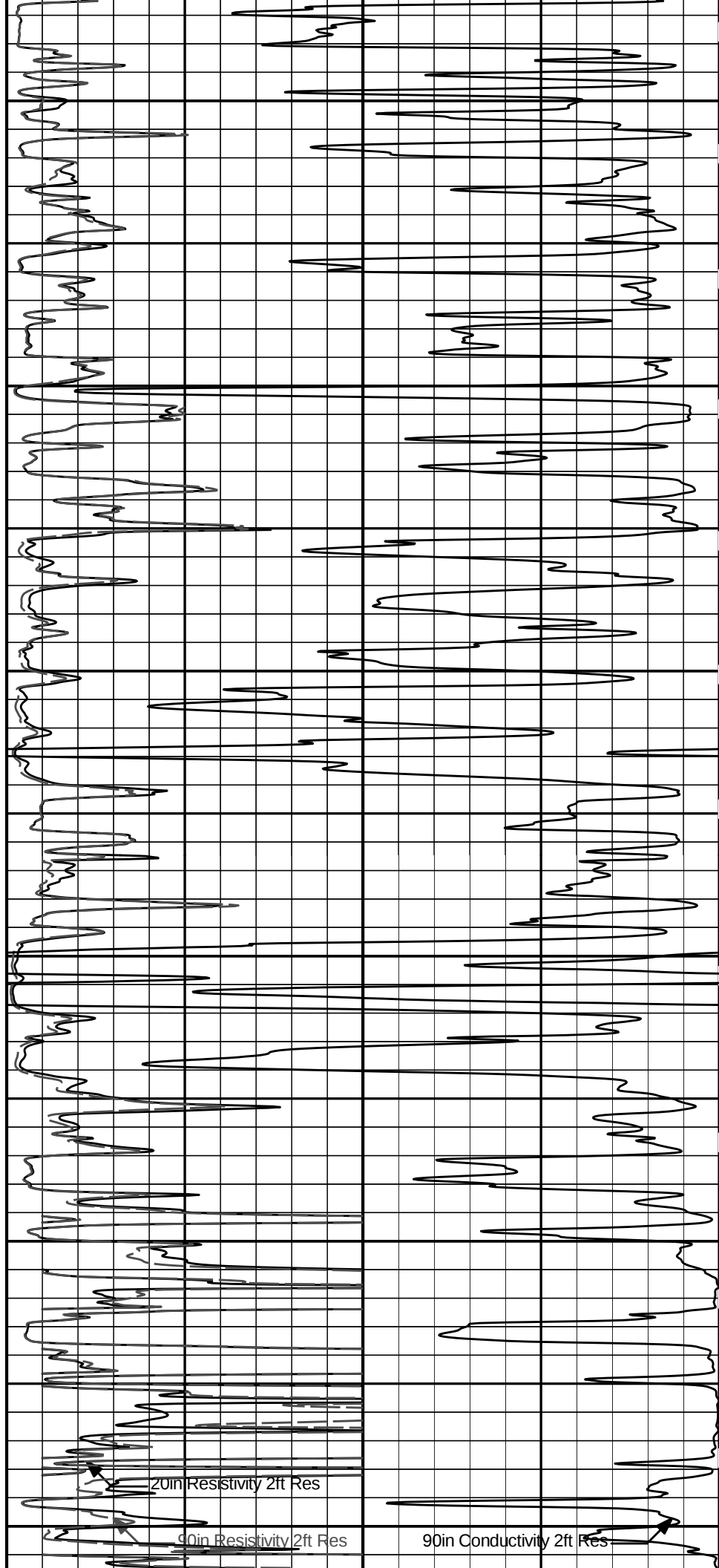
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3700

3800

Gamma API

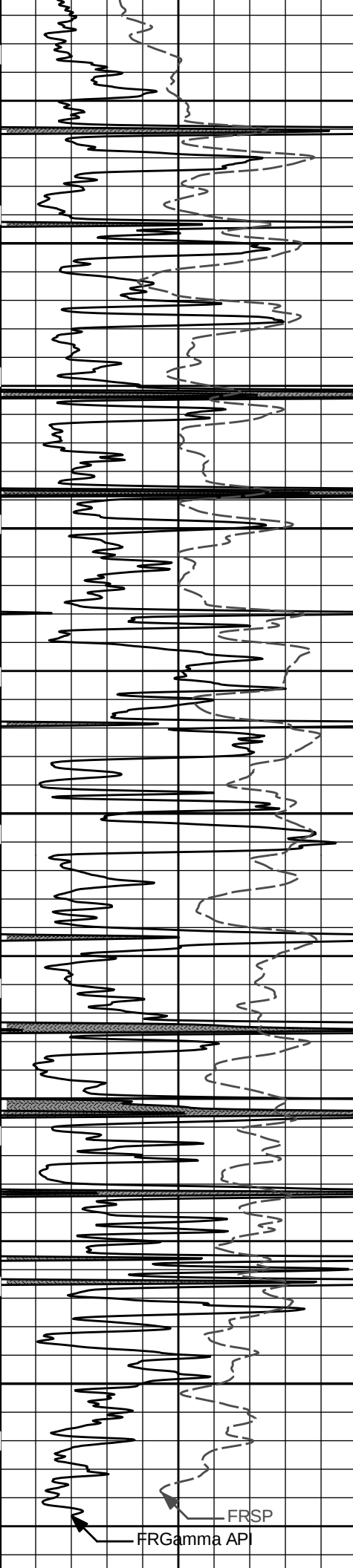
S



20in Resistivity 2ft Res

90in Resistivity 2ft Res

90in Conductivity 2ft Res



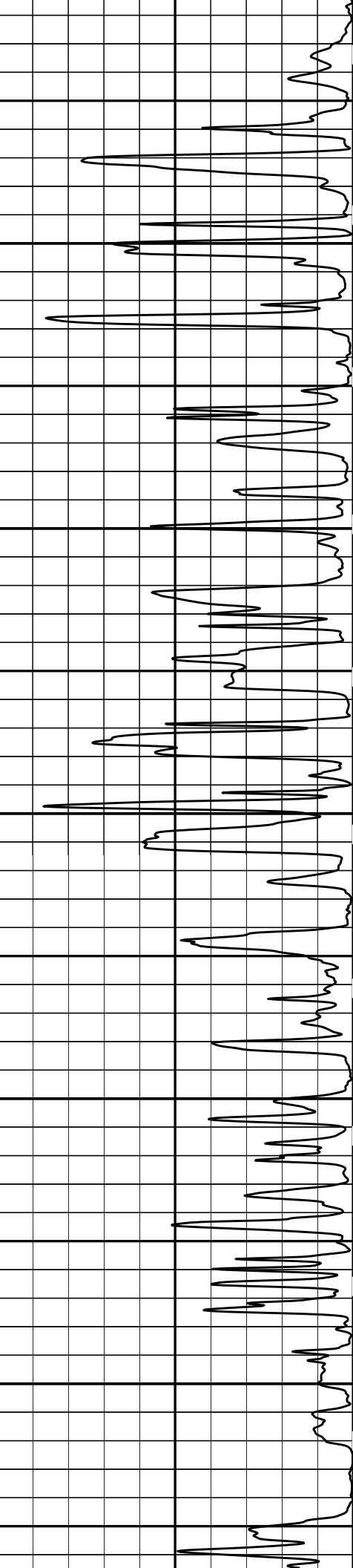
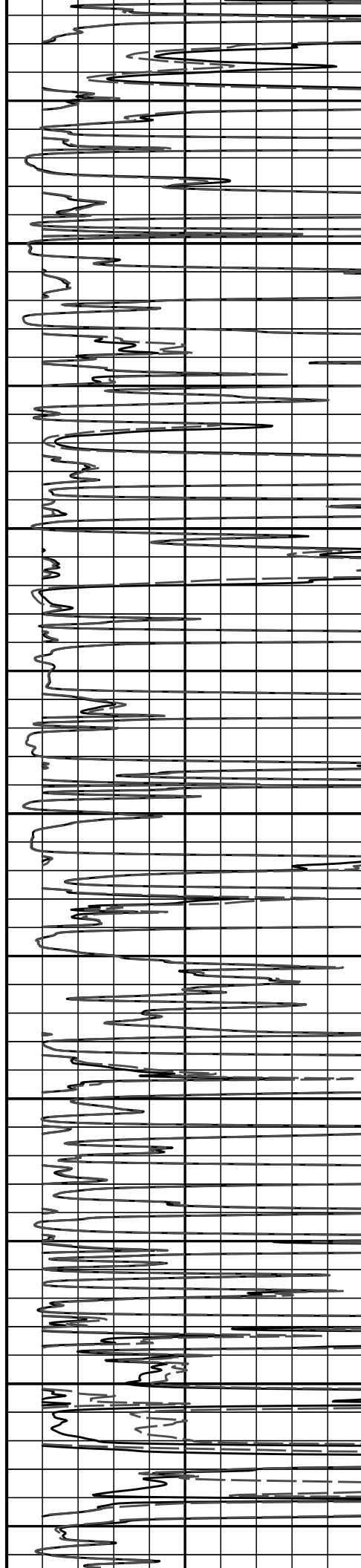
3900

4000

4100

4200

4300



[illegible]

HALLIBURTON

Plot Time: 13-Aug-12 22:38:06
Plot Range: 360 ft to 4390 ft
Data: DOWELL_1_33\Well Based\IR1_CASING\
Plot File: \\LOCAL-IDOWELL_1_33\0001 TRIPLE COMBO\ACRT\ACRT_2.lib

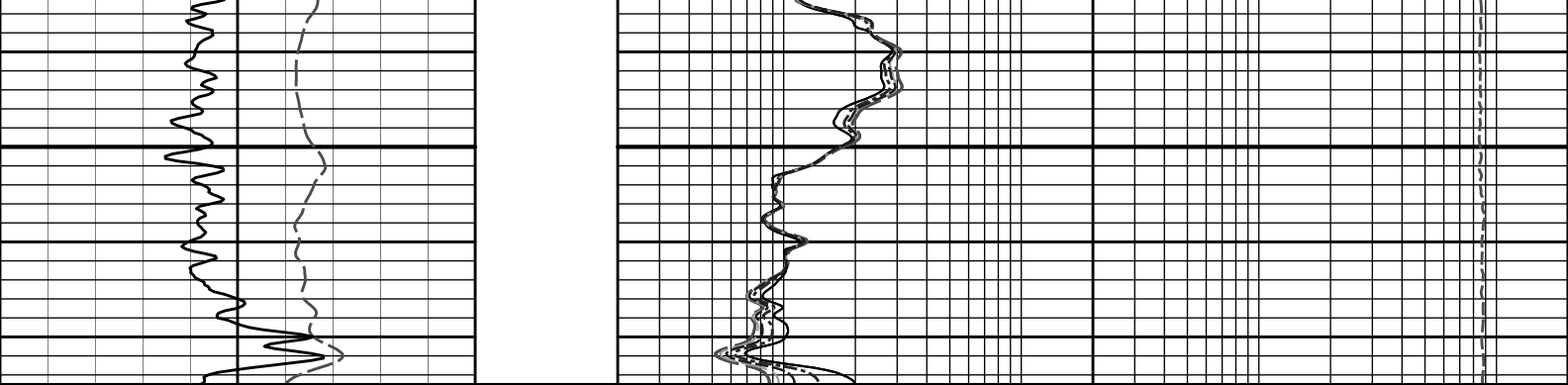
2 INCH MAIN LOG

HALLIBURTON

Plot Time: 13-Aug-12 22:38:07
Plot Range: 1975 ft to 2075 ft
Data: DOWELL_1_33\Well Based\R1_DETAIL\
Plot File: \\LOCAL-IDOWELL_1_33\0001 TRIPLE COMBO\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		
SHALE		0.2	20in Resistivity 2ft Res		2000
			ohmm		
0	Gamma API	150	0.2	10in Resistivity 2ft Res	
	api			ohmm	
	SP				
	-]20[+				
Tension Pull		10			0
1 : 240				10K	Tension
ft				pounds	
		90in Resistivity 2ft Res	90in Resistivity 2ft Res REPEA		
		10in Resistivity 2ft Res	20in Resistivity 2ft Res		
2000		60in Resistivity 2ft Res	10in Resistivity 2ft Res REPEA		
			30in Resistivity 2ft Res REPEA		
			30in Resistivity 2ft Res		



SP		1 : 240 ft			10K	Tension	0	
-]20[+					pounds			
0	Gamma API	150	Tension Pull 10 0	0.2	10in Resistivity 2ft Res			2000
api				ohmm				
SHALE			Tension Pull	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: 13-Aug-12 22:38:08
Plot Range: 1975 ft to 2075 ft
Data: DOWELL_1_33\Well Based\IR1_DETAIL\
Plot File: \\-LOCAL-\DOWELL_1_33\0001 TRIPLE COMBO\ACRT\ACRT_5_main_lib

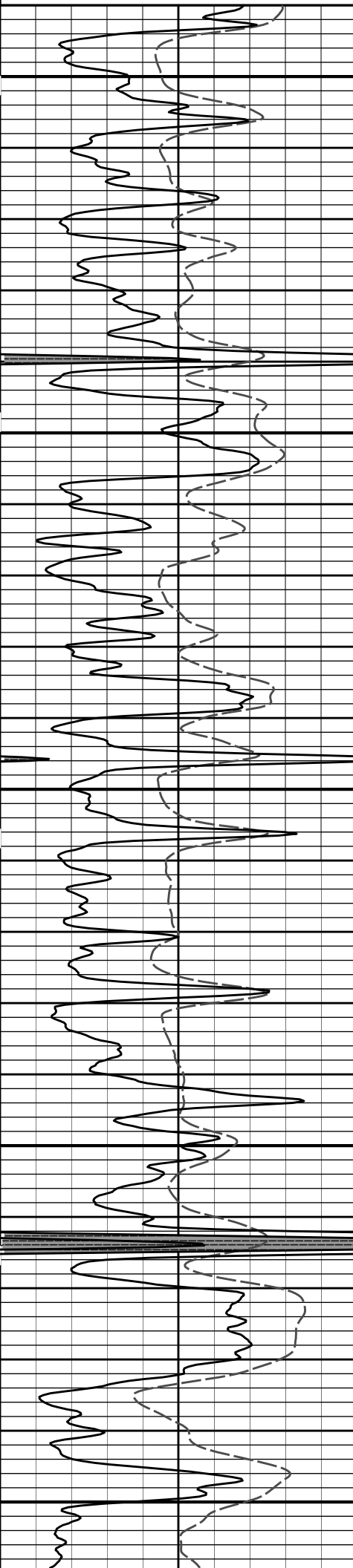
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 13-Aug-12 22:38:08
Plot Range: 3490 ft to 4390 ft
Data: DOWELL_1_33\Well Based\IR1_DETAIL\
Plot File: \\-LOCAL-\DOWELL_1_33\0001 TRIPLE COMBO\ACRT\ACRT_5_main_lib

5 INCH MAIN LOG

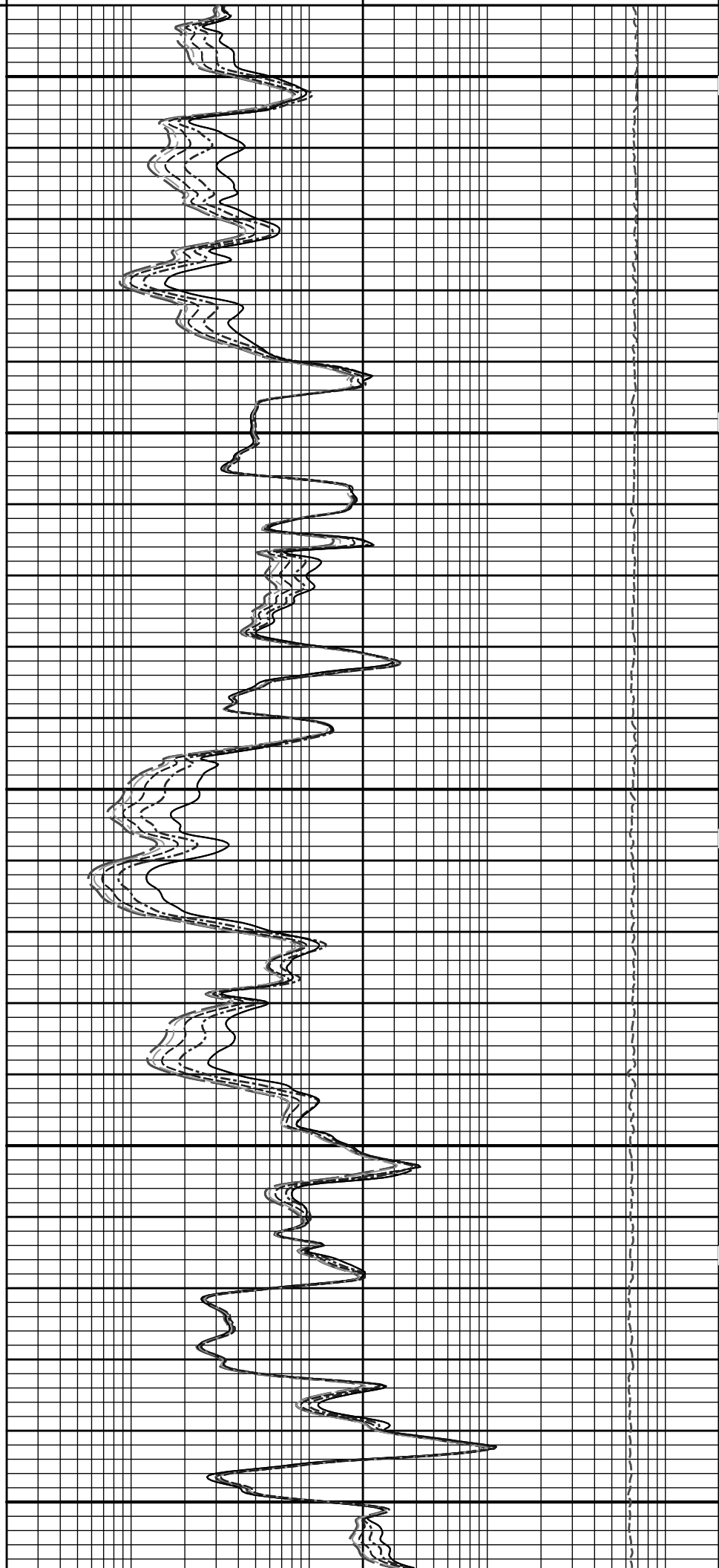
			0.2	90in Resistivity 2ft Res		2000	
			ohmm				
			0.2	60in Resistivity 2ft Res		2000	
			ohmm				
			0.2	30in Resistivity 2ft Res		2000	
			ohm-metre				
SHALE		Tension Pull	0.2	20in Resistivity 2ft Res		2000	
			ohmm				
0	Gamma API	150	Tension Pull	0.2	10in Resistivity 2ft Res		2000
api			10	ohmm			
SP		1 : 240 ft			10K	Tension	0
-120[+					pounds		

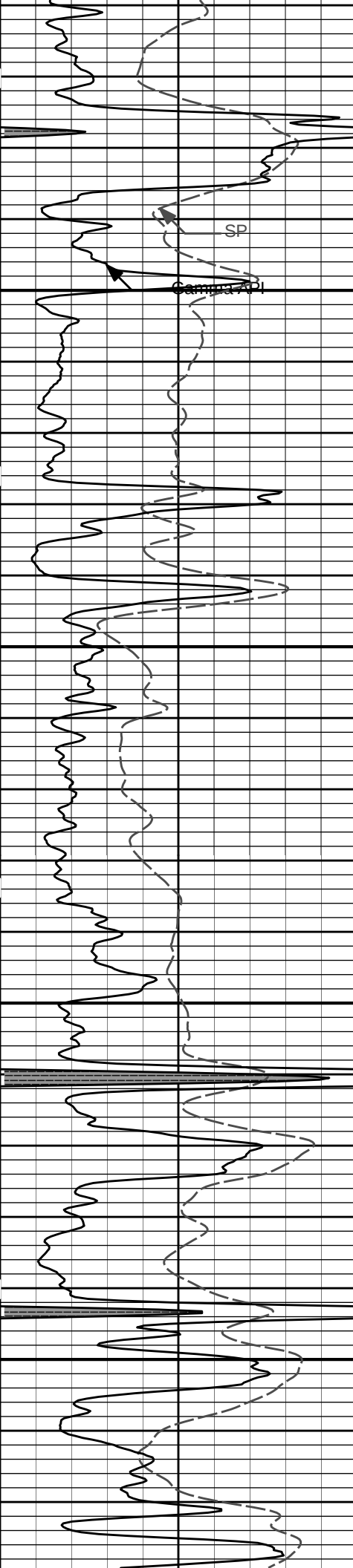


3500

3600

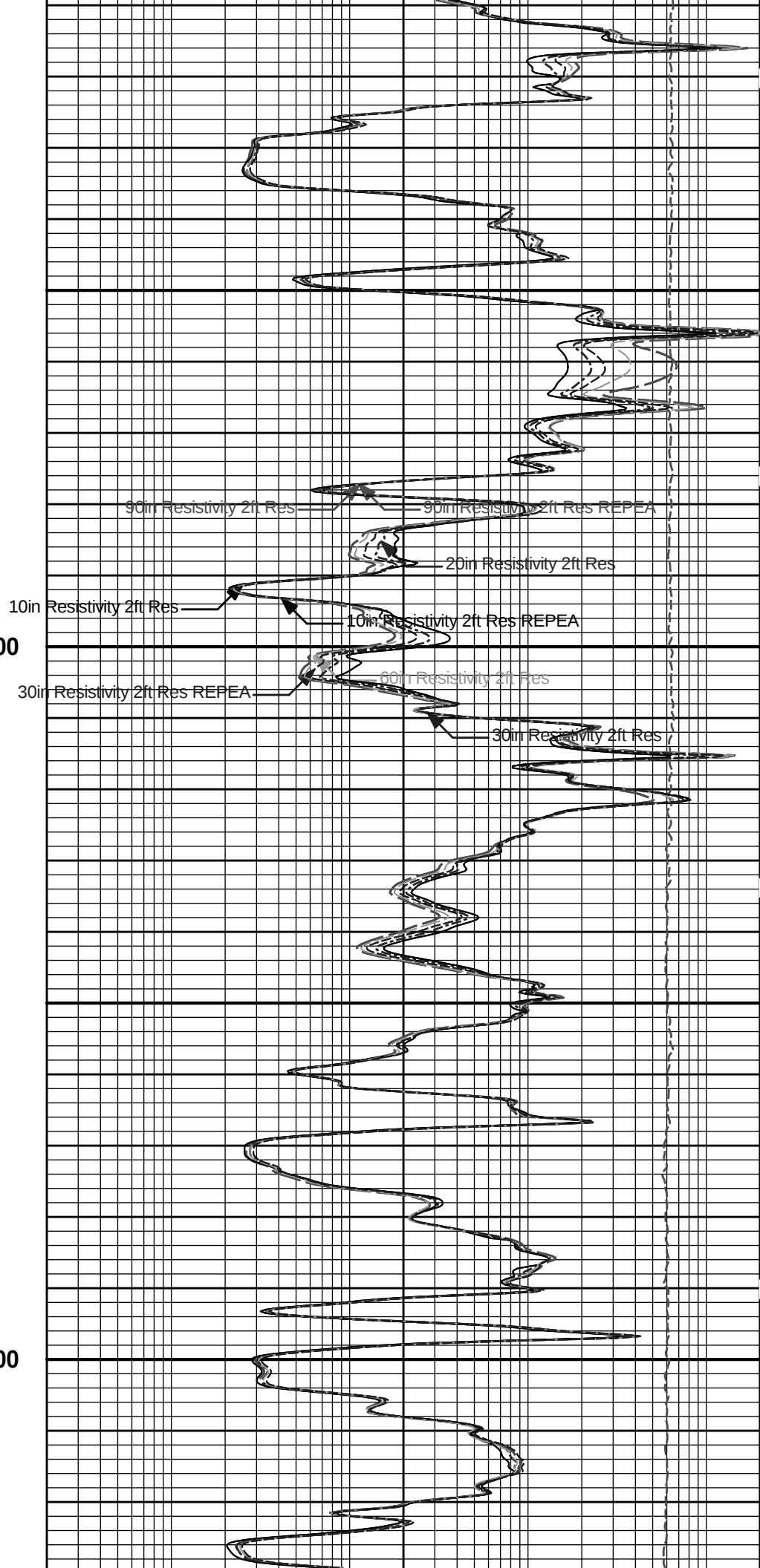
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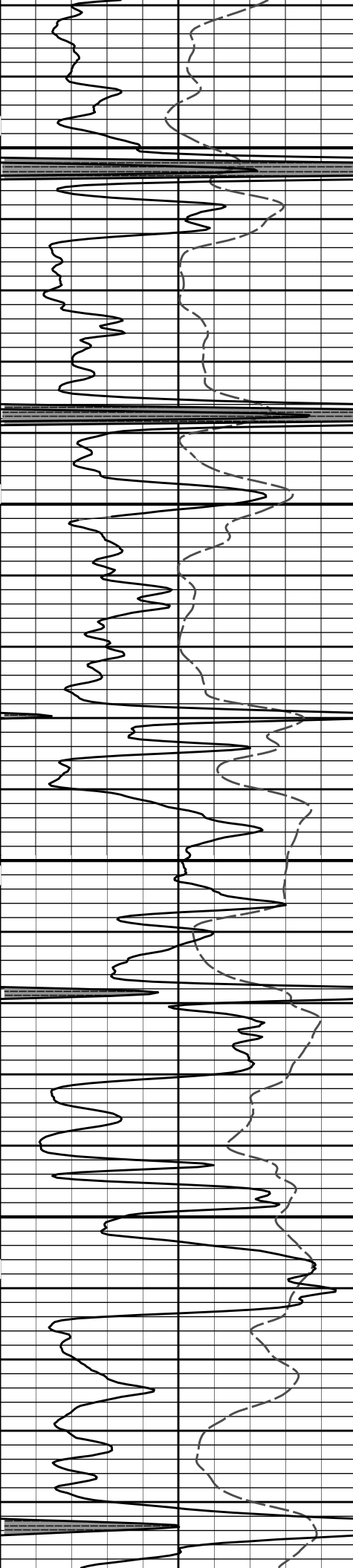




3800

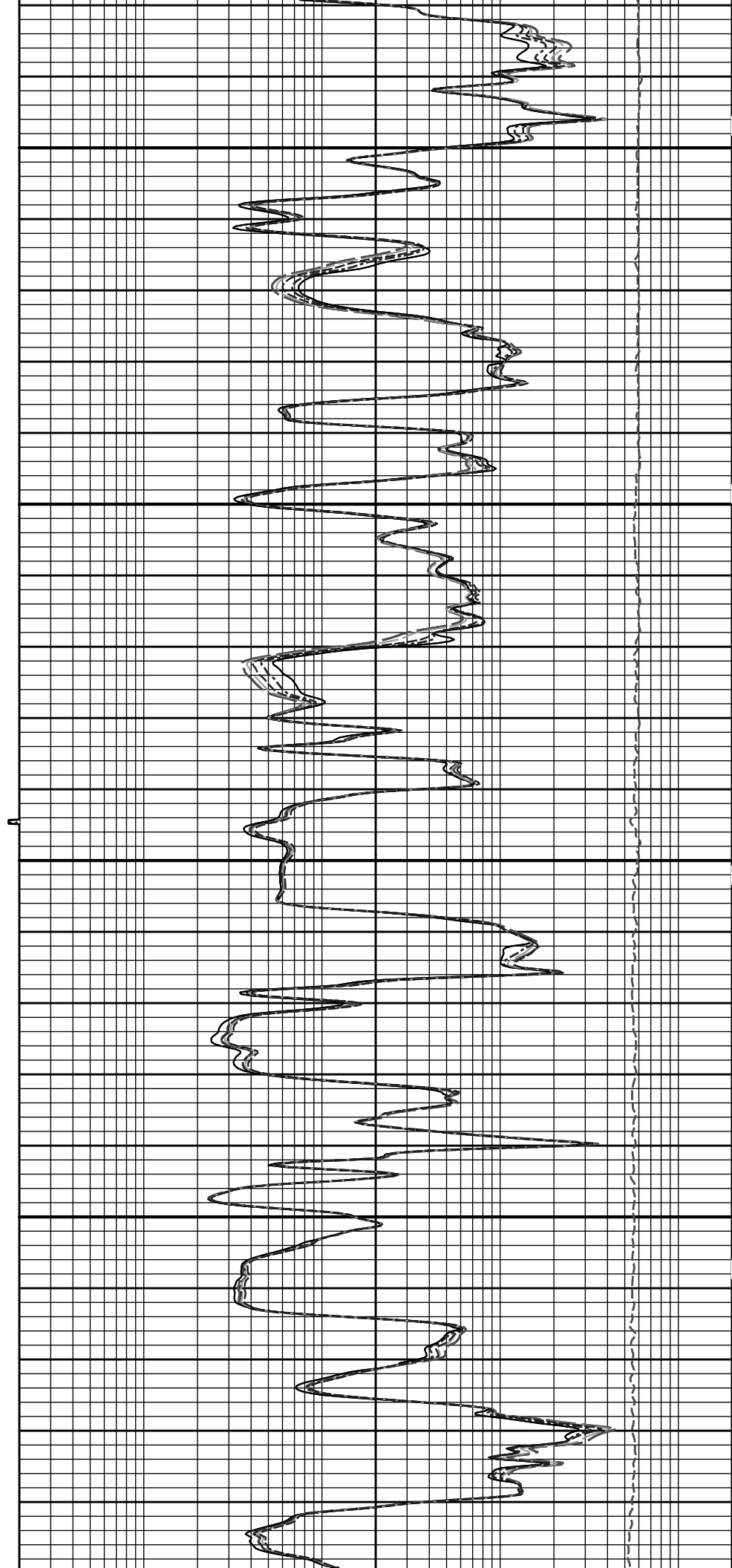
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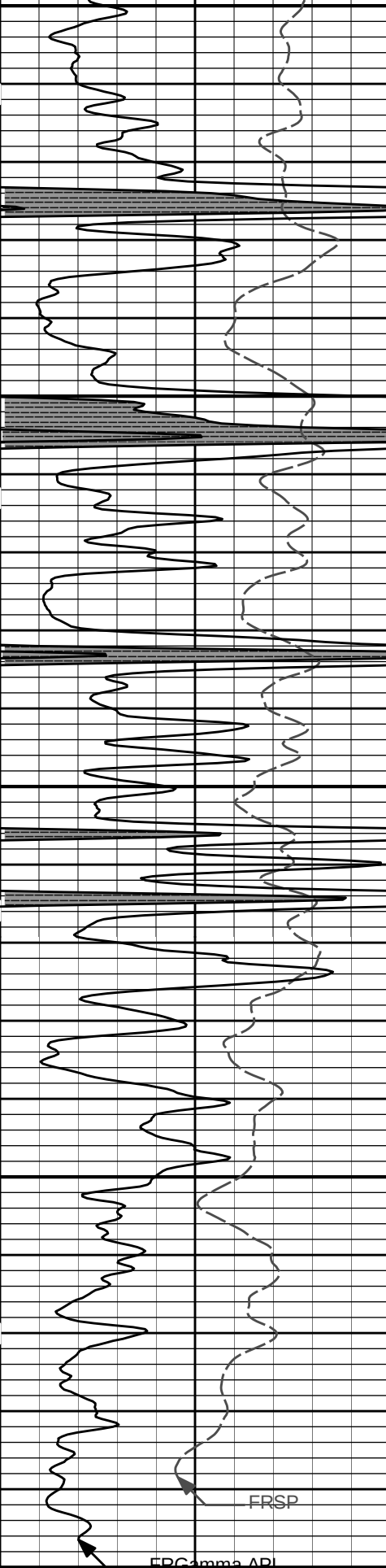




4000

4100



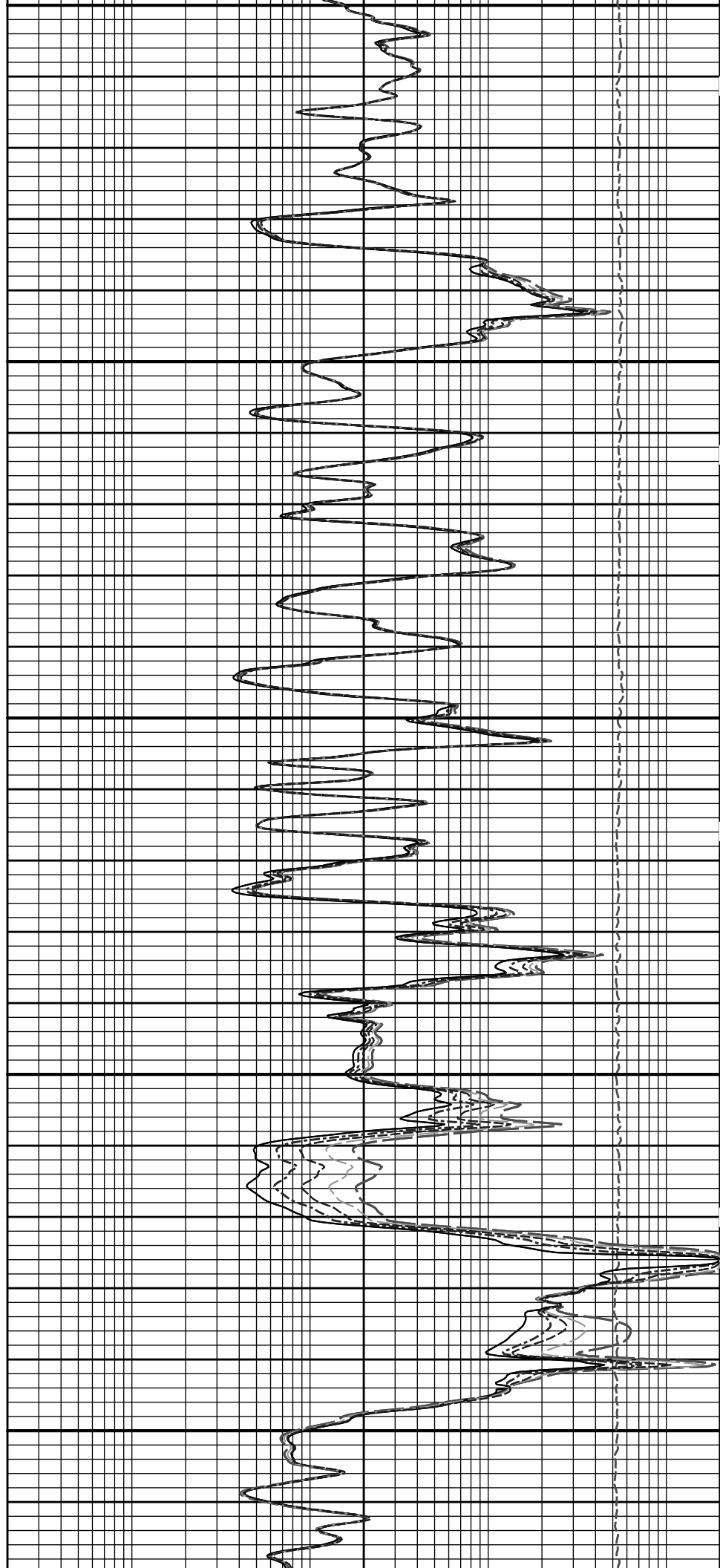


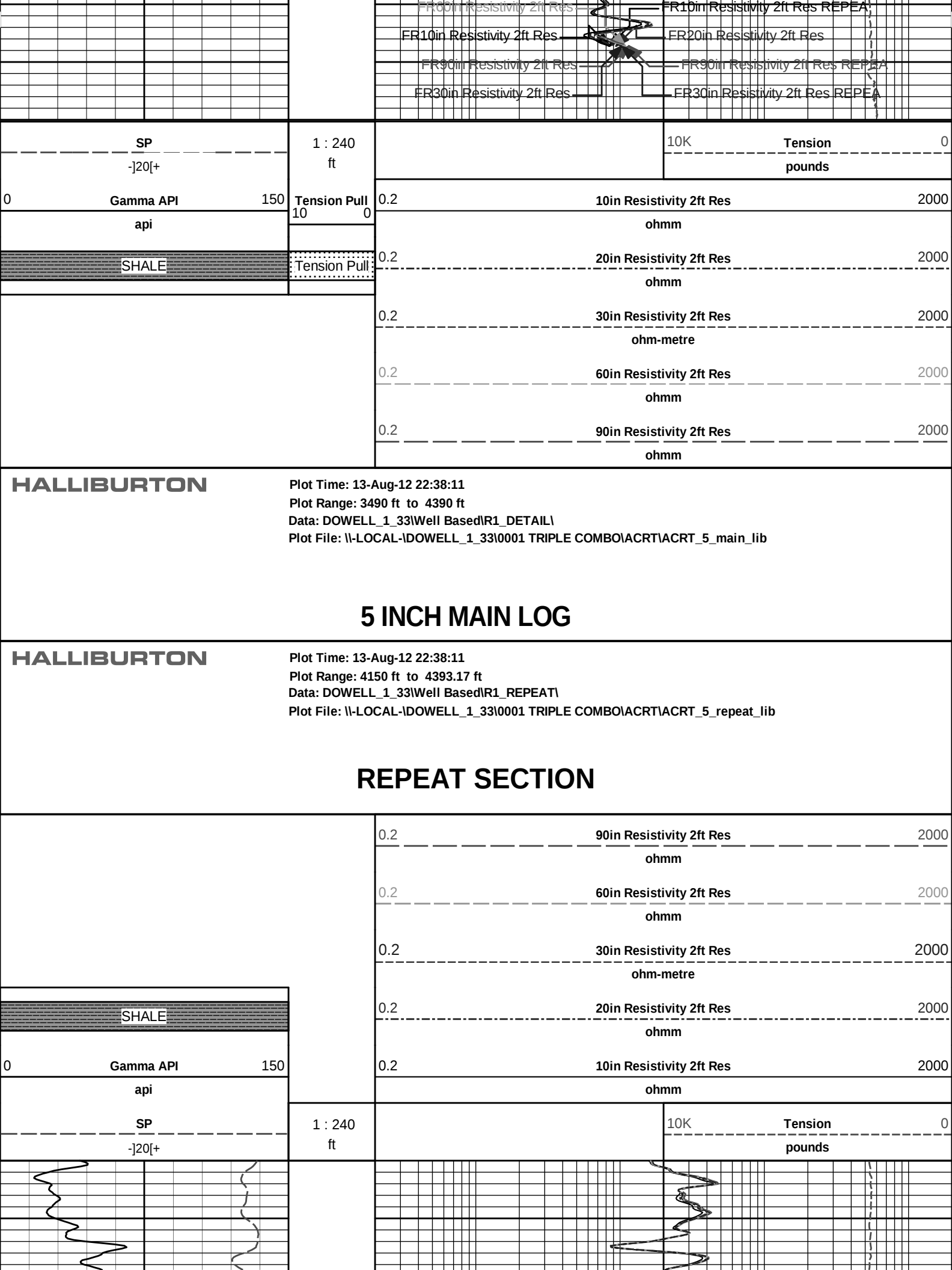
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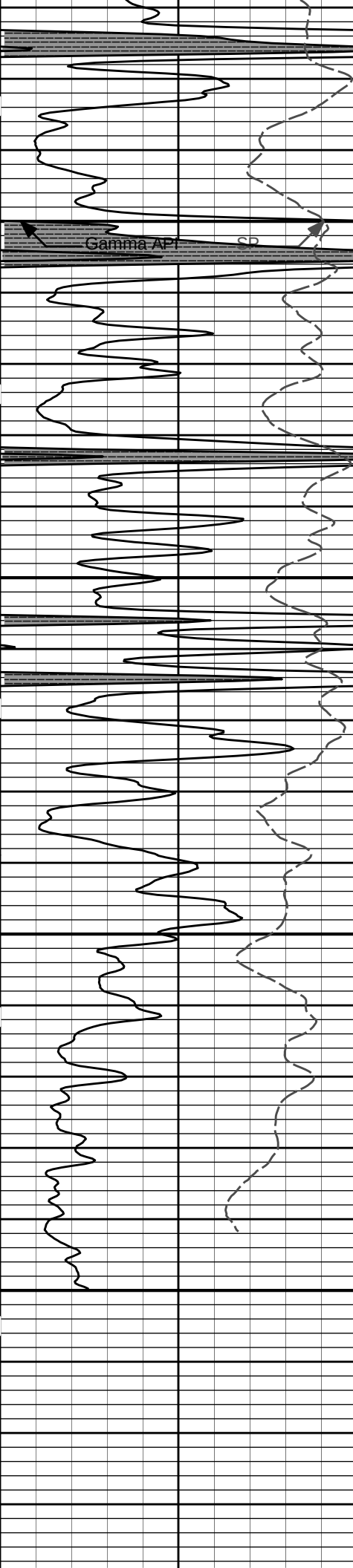
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FRSP

FRCgamma API

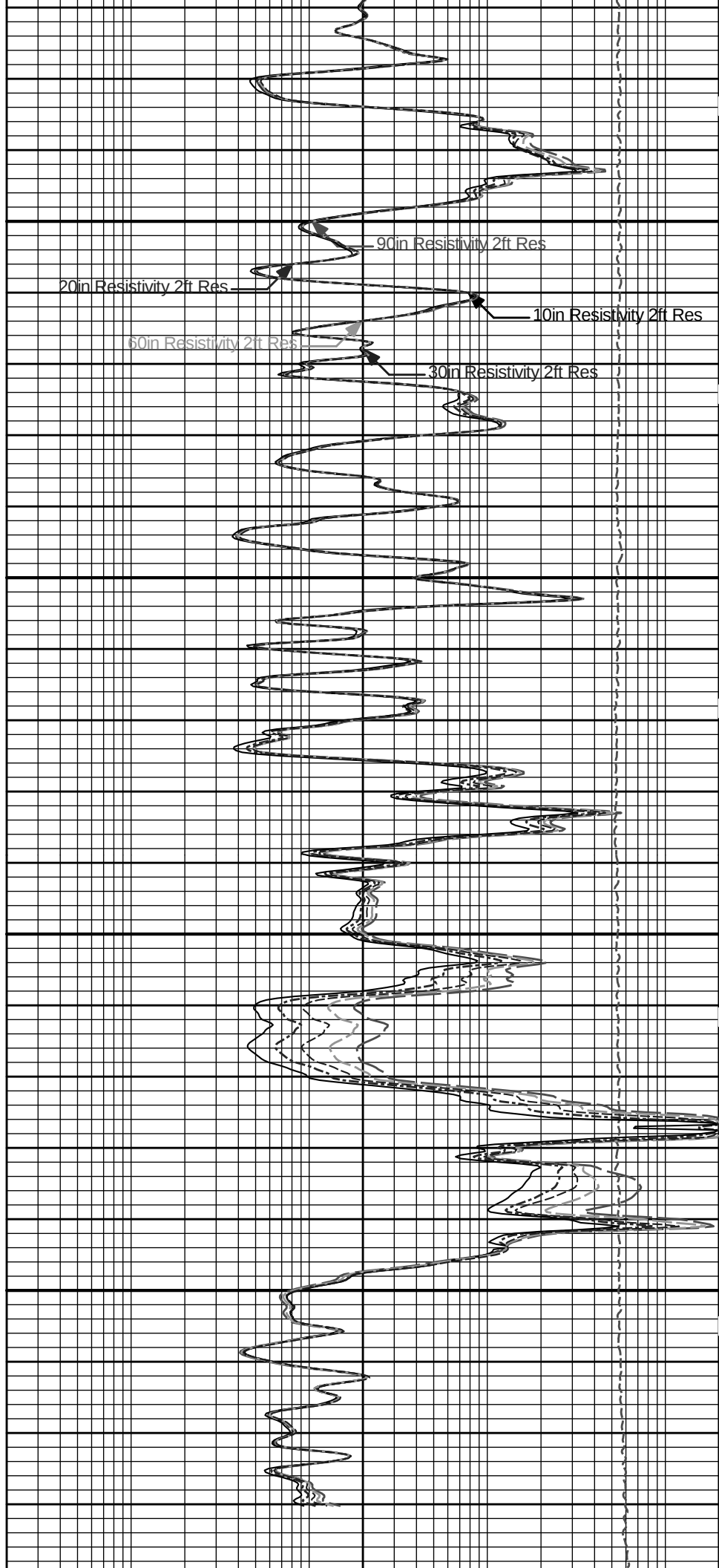






4200

4300



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HALLIBURTON

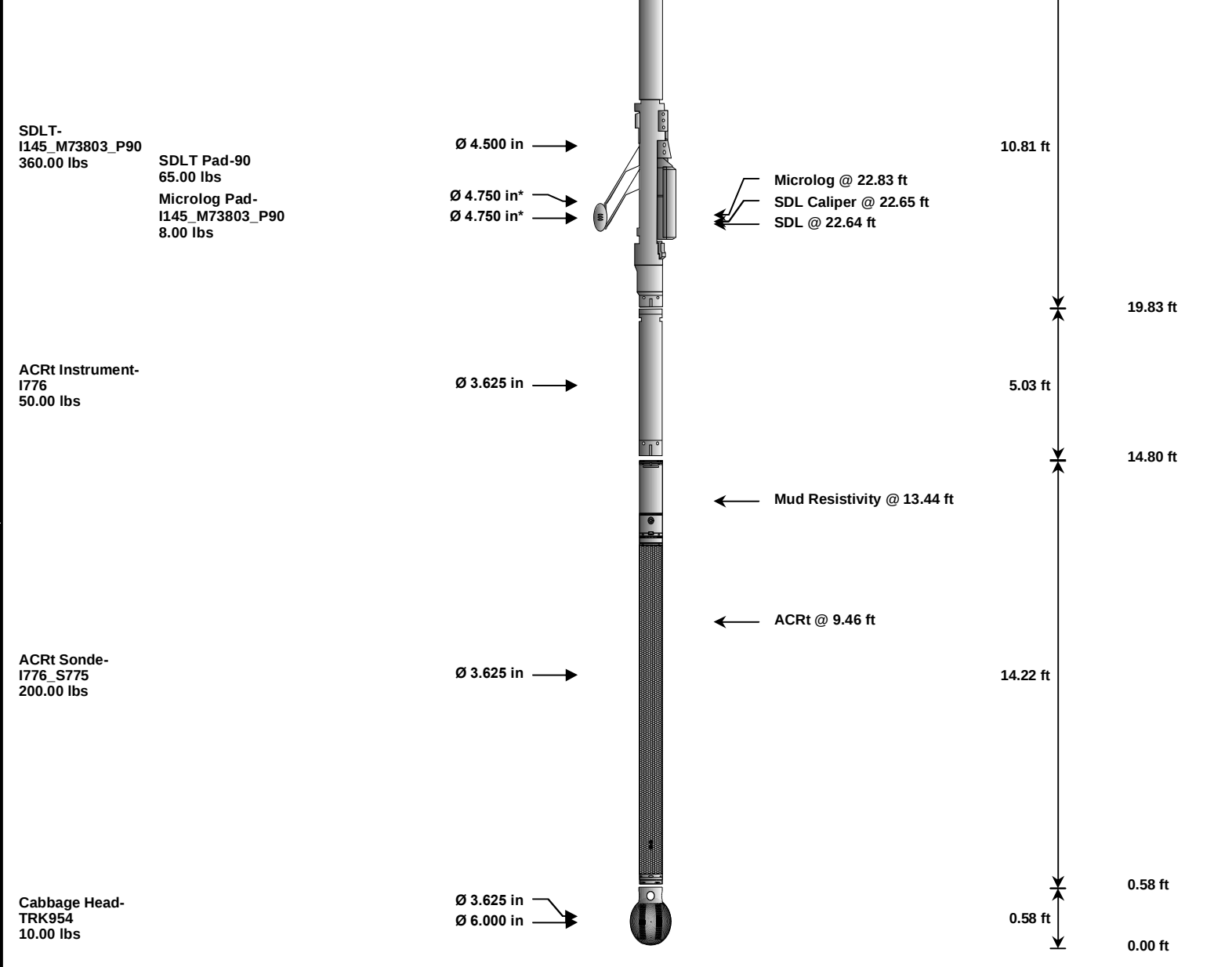
Plot Time: 13-Aug-12 22:38:14
Plot Range: 4150 ft to 4393.17 ft
Data: DOWELL_1_33\Well Based\IR1_REPEAT\
Plot File: \\-LOCAL-IDOWELL_1_33\0001 TRIPLE COMBO\ACRT\ACRT_5_repeat_lib

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	54.51 ft
SP Sub-TRK954 60.00 lbs		Ø 3.625 in →		← SP @ 50.81 ft	3.74 ft	52.59 ft
GTET-10811258 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.79 ft	8.52 ft	48.85 ft
						40.33 ft
DSN Decentralizer- 10735145 6.60 lbs		Ø 5.000 in* →				
DSNT-10735145 174.00 lbs		Ø 3.625 in →		← DSN Far @ 33.39 ft ← DSN Near @ 32.64 ft	9.69 ft	30.64 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	52.59	300.00	
SP	SP Sub		TRK954	60.00	3.74	48.85	300.00	
GTET	Gamma Telemetry Tool		10811258	165.00	8.52	40.33	60.00	
DSNT	Dual Spaced Neutron		10735145	174.00	9.69	30.64	60.00	
DCNT	DSN Decentralizer		10735145	6.60	5.13	*	33.97	300.00
SDLT	Spectral Density Tool		I145_M73803_P90	360.00	10.81	19.83	60.00	
MICP	Microlog Pad		I145_M73803_P90	8.00	1.00	*	22.33	60.00
SDLP	Density Insite Pad		90	65.00	2.55	*	22.04	60.00
ACRt	Array Compensated True Resistivity Instrument Section		I776	50.00	5.03	14.80	300.00	
ACRt	Array Compensated True Resistivity Sonde Section		I776_S775	200.00	14.22	0.58	300.00	
CBHD	Cabbage Head		TRK954	10.00	0.58	0.00	300.00	
Total				1,128.60	54.51			
* Not included in Total Length and Length Accumulation.								
Data: DOWELL_1_33I0001 TRIPLE COMBOIIDLE								
Date: 13-Aug-12 20:08:15								

HALLIBURTON

CALIBRATION REPORT

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION			
Tool Name:	ACRt Sonde - I776 S775	Reference Calibration Date:	18-Jul-12 12:39:11

Engineer:		T. HYDE		Calibration Date:		18-Jul-12 12:49:07			
Software Version:		WL INSITE R3.6.0 (Build 3)		Calibration Version:		1			
Host Tool Name:		ACRt Instrument - I776							
TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.02	1.05	0.95	1.02	1.05	0.95	1.02	1.05
A2 (50")	0.95	1.04	1.05	0.95	1.05	1.05	0.95	1.05	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	1.02	1.05	0.95	1.03	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	-2.16	2	-6	-4.81	-2	-8	-5.37	-2
A2 (50")	-7	-3.28	0	-7	-4.33	0	-7	-4.27	0
A3 (29")	-27	-15.10	-9	-9	-5.04	-3	-7	-3.52	-1
A4 (17")	-180	-111.09	-60	-45	-38.71	-15	-39	-32.23	-13
A5 (10")	N/A	N/A	N/A	-150	-125.50	-50	-80	-70.29	-10
A6 (6")	N/A	N/A	N/A	175	260.55	525	90	139.39	270
TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION				
Signal	Lower		R	Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)	
12K		0.6	0.89	1.3	Mud Cell	0.95	0.99	1.05	
36K		1.0	1.20	2.0					
72K		1.0	1.47	2.0					
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-I776_S775						
Mud Cell	0.99	-----	-----	0.00	-----	ohm-m

Data: DOWELL_1_33\0001 TRIPLE COMBOIDLE		Date: 13-Aug-12 20:05:35	
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HALLIBURTON					
PARAMETERS REPORT					
Depth (ft))	Tool Name	Mnemonic	Description	Value	Units
500	ACRt	SONDE	SONDE	0.99	ohm-m

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	9.200	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	2300.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	0.760	ohmm
	SHARED	TRM	Temperature of Mud	91.0	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	4400.00	ft
	SHARED	BHT	Bottom Hole Temperature	120.0	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	
	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

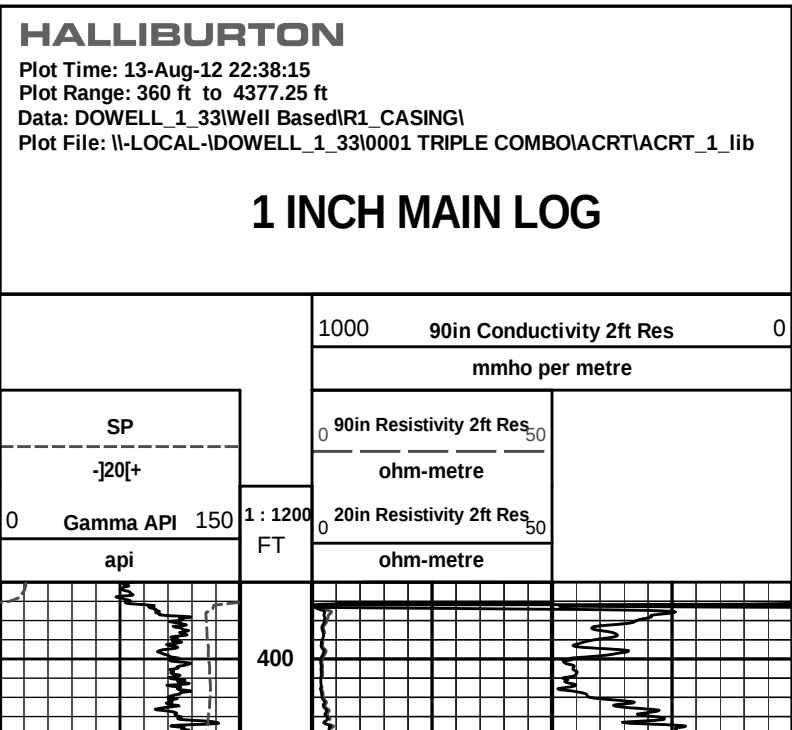
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	2000	ohmm
ACRt Sonde	TPOS	Tool Position	Free Hanging		
ACRt Sonde	RMOP	Rmud Source	Mud Cell		
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20		ohmm
ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00		ohmm
ACRt Sonde	THQY	Threshold Quality	0.50		
ACRt Sonde	MRFX	Fixed mud resistivity	2000		ohmm
BOTTOM					
Data: DOWELL_1_3310001 TRIPLE COMBOIDLE				Date: 13-Aug-12 20:07:37	

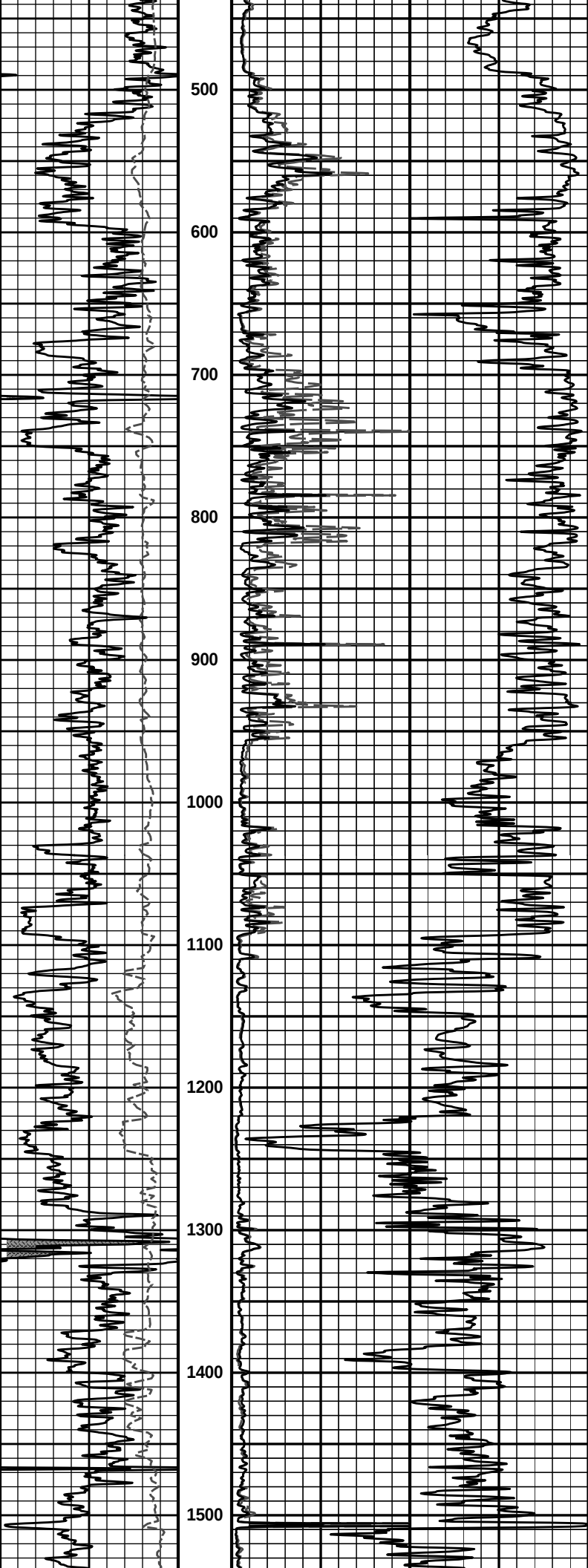
HALLIBURTON					
INPUTS, DELAYS AND FILTERS TABLE					
Mnemonic		Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel					
TENS	Tension		0.00	NO	
SP Sub					
PLTC	Plot Control Mask		50.81	NO	
SP	Spontaneous Potential		50.81	BLK	1.250
SPR	Raw Spontaneous Potential		50.81	NO	
SPO	Spontaneous Potential Offset		50.81	NO	
GTET					
TPUL	Tension Pull		42.79	NO	
GR	Natural Gamma Ray API		42.79	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API		42.79	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution		42.79	W	1.416 , 0.750
ACCZ	Accelerometer Z		0.00	BLK	0.083
DEVI	Inclination		0.00	NO	
DSNT					
TPUL	Tension Pull		32.54	NO	
RNDS	Near Detector Telemetry Counts		32.64	BLK	1.417
RFDS	Far Detector Telemetry Counts		33.39	TRI	0.583
DNTT	DSN Tool Temperature		32.64	NO	
DSNS	DSN Tool Status		32.54	NO	
ERND	Near Detector Telemetry Counts EVR		32.64	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR		33.39	BLK	0.000
ENTM	DSN Tool Temperature EVR		32.64	NO	
SDLT					
TPUL	Tension Pull		22.65	NO	
PCAL	Pad Caliper		22.65	TRI	0.250
ACAL	Arm Caliper		22.65	TRI	0.250
ACRt Sonde					
TPUL	Tension Pull		2.97	NO	
F1R1	ACRT 12KHz - 80in R value		9.22	BLK	0.000
F1X1	ACRT 12KHz - 80in X value		9.22	BLK	0.000
F1R2	ACRT 12KHz - 50in R value		6.72	BLK	0.000
F1X2	ACRT 12KHz - 50in X value		6.72	BLK	0.000
F1R3	ACRT 12KHz - 20in R value		5.22	BLK	0.000

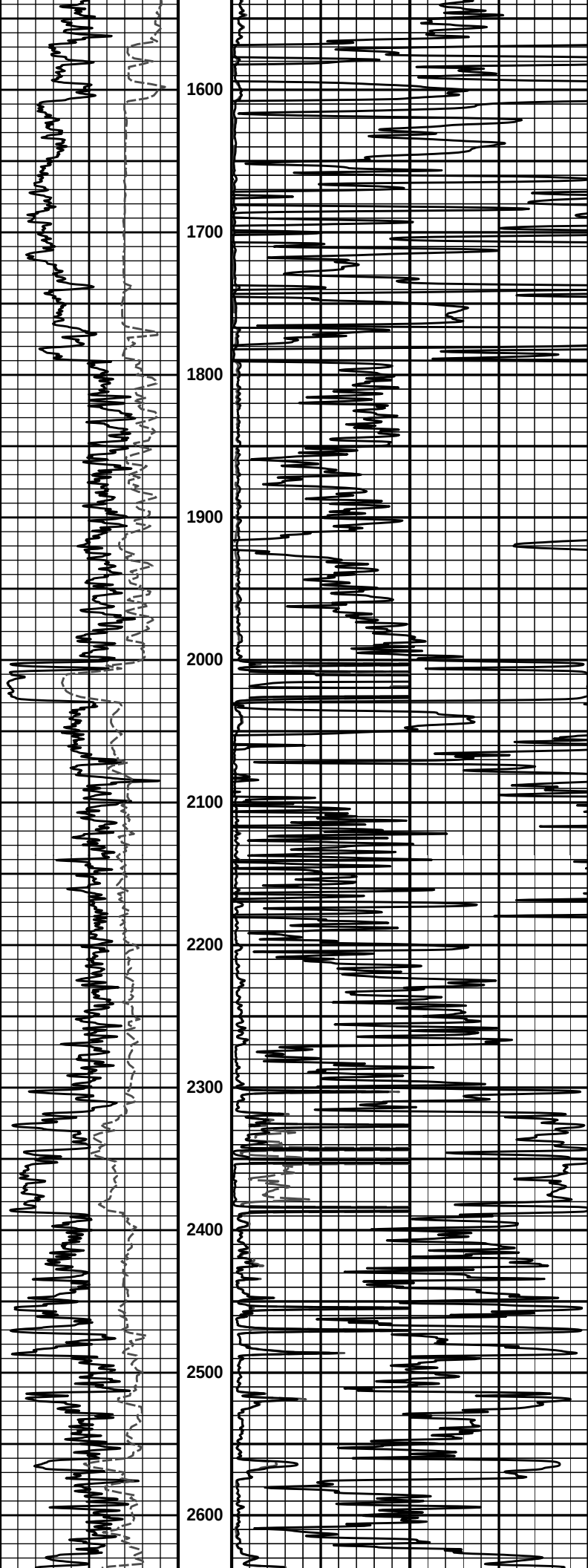
F1R3	ACRT 12KHz - 29in R value	5.22	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	5.22	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	4.22	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	4.22	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.72	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.72	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.47	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.47	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	9.22	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	9.22	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.72	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.72	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	5.22	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	5.22	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	4.22	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	4.22	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.72	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.72	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.47	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.47	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	9.22	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	9.22	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.72	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.72	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	5.22	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	5.22	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	4.22	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	4.22	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.72	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.72	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.47	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.47	BLK	0.000
RMUD	Mud Resistivity	12.76	BLK	0.000
F1RT	Transmitter Reference 12 KHz Real Signal	2.97	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.97	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.97	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.97	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.97	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.97	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.97	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.97	BLK	0.000
ITMP	Instrument Temperature	2.97	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.97	NO	
TIDV	Instrument Temperature Derivative	2.97	NO	
TUDV	Upper Temperature Derivative	2.97	NO	
TLDV	Lower Temperature Derivative	2.97	NO	
TRBD	Receiver Board Temperature	2.97	NO	
SDLT Pad				
TPUL	Tension Pull	22.64	NO	
NAB	Near Above	22.46	BLK	0.920
NHI	Near Cesium High	22.46	BLK	0.920
NLO	Near Cesium Low	22.46	BLK	0.920
NVA	Near Valley	22.46	BLK	0.920
NBA	Near Barite	22.46	BLK	0.920
NDE	Near Density	22.46	BLK	0.920

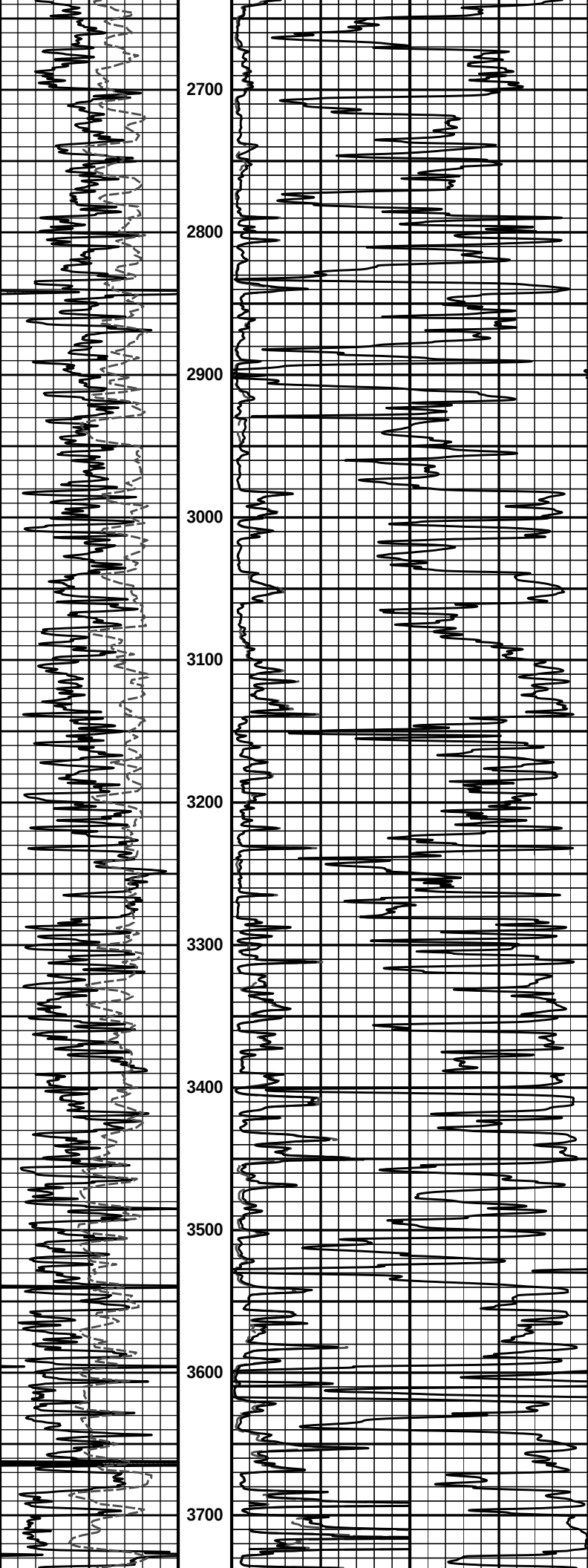
NPK	Near Peak	22.46	BLK	0.920
NLI	Near Lithology	22.46	BLK	0.920
NBAU	Near Barite Unfiltered	22.46	BLK	0.250
NLIU	Near Lithology Unfiltered	22.46	BLK	0.250
FAB	Far Above	22.81	BLK	0.250
FHI	Far Cesium High	22.81	BLK	0.250
FLO	Far Cesium Low	22.81	BLK	0.250
FVA	Far Valley	22.81	BLK	0.250
FBA	Far Barite	22.81	BLK	0.250
FDE	Far Density	22.81	BLK	0.250
FPK	Far Peak	22.81	BLK	0.250
FLI	Far Lithology	22.81	BLK	0.250
PTMP	Pad Temperature	22.65	BLK	0.920
NHV	Near Detector High Voltage	22.04	NO	
FHV	Far Detector High Voltage	22.04	NO	
ITMP	Instrument Temperature	22.04	NO	
DDHV	Detector High Voltage	22.04	NO	
Microlog Pad				
TPUL	Tension Pull	22.83	NO	
MINV	Microlog Lateral	22.83	BLK	0.750
MNOR	Microlog Normal	22.83	BLK	0.750
Data: DOWELL_1_33\0001 TRIPLE COMBO\DL			Date: 13-Aug-12 20:07:49	

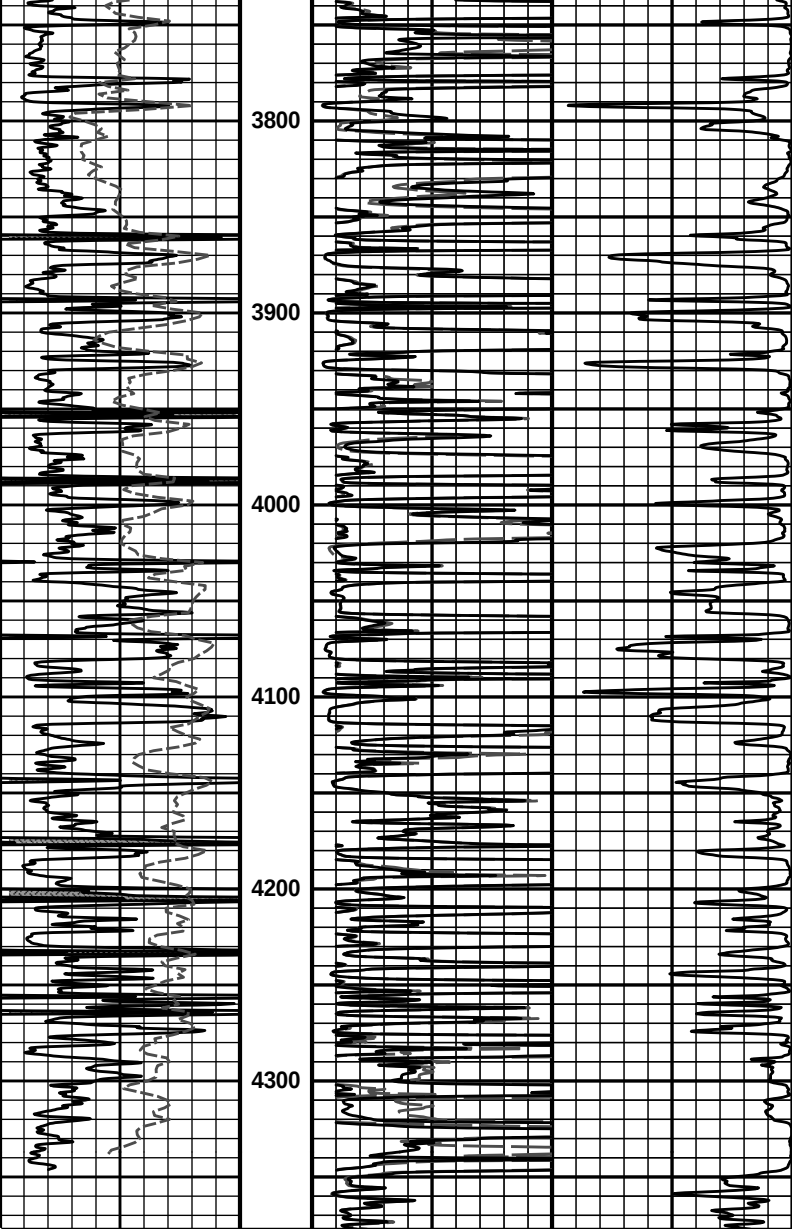
COMPANY	HARTMAN OIL CO.		
WELL	DOWELL 1-33		
FIELD	WILDCAT		
COUNTY	GOVE	STATE	KANSAS
HALLIBURTON		ARRAY COMPENSATED TRUE RESISTIVITY LOG	











0	Gamma API	150	1 : 1200	0	20in Resistivity 2ft Res	50	
	api		FT		ohm-metre		
	SP			0	90in Resistivity 2ft Res	50	
	-120[+				ohm-metre		
				1000	90in Conductivity 2ft Res	0	
					mmho per metre		

HALLIBURTON

Plot Time: 13-Aug-12 22:38:17
Plot Range: 360 ft to 4377.25 ft
Data: DOWELL_1_33\Well Based\IR1_CASING\
Plot File: \\-LOCAL-IDOWELL_1_33\0001 TRIPLE COMBO\ACRT\ACRT_1.lib

1 INCH MAIN LOG