HALLIBURTON

BOREHOLE COMPENSATED SONIC ARRAY DELTA-T LOG

COMPANY	RAYDON EXPLORATION INC.
WELL	LINDA JO 1-22
FIELD/BLOCK	WILDCAT
COUNTY	SEWARD
STATE	KANSAS

COMPANY **RAYDON EXPLORATION INC.**
WELL **LINDA JO 1-22**
FIELD/BLOCK **WILDCAT**
COUNTY **SEWARD** STATE **KANSAS**

API No. 15-175-22252-00-00
Location (SHL) 335' FSL & 335' FEL
NW SE SE SE

Other Services:
DSNT/SDLT
MICRO
BSAT
XRMI

Sect. 22 Twp. 33S Rge. 31W

Permanent Datum	GL	Elev. 2739.0 ft	Elev.: K.B. 2750.0 ft
Log measured from	KB	11.0 ft above perm. Datum	D.F. 2749.0 ft
Drilling measured from	KB		G.L. 2739.0 ft

Date	10-Aug-17		
Run No.	ONE		
Depth - Driller	5980.0 ft		
Depth - Logger	5980.0 ft		
Bottom - Logged Interval	5953.0 ft		
Top - Logged Interval	1633.0 ft		
Casing - Driller	8.625 in @ 1635.0 ft	@	@
Casing - Logger	1633.0 ft		
Bit Size	7.875 in	@	@
Type Fluid in Hole	Water Based Mud		
Density / Viscosity	8.9 ppg / 60.00 s/qt		
PH / Fluid Loss	11.50 pH / 6.0 cptm		
Source of Sample	FLOWLINE		
Rm @ Meas. Temperature	0.92 ohmm @ 75.00 degF	@	@
Rmf @ Meas. Temperature	0.78 ohmm @ 75.00 degF	@	@
Rmc @ Meas. Temperature	1.05 ohmm @ 75.00 degF	@	@
Source Rmf / Rmc	MEAS / MEAS		
Rm @ BHT	0.57 ohmm @ 125.0 degF	@	@
Time Since Circulation	04:00 hr		
Time on Bottom	10-Aug-17 18:35		
Max. Rec. Temperature	125.00 degF @ 5980.0 ft	@	@
Equipment / Location	11230668 / EL RENO, OK		
Recorded By	T. HYDE		
Witnessed By	E. GRIEVES		

Fold here

Service Ticket No.: 904173918	API No.: 15-175-22252-00-00	PGM Version: WL INSITE R5.0.5 (Build 8)	

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	CENT.	N/A
	I-12109517			
	S-12109515			

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	10971172	Serial No.	10939050	Serial No.	12153526	Serial No.	1203046
Model No.	GTET	Model No.	BSAT	Model No.	SDLT	Model No.	DSNT
Diameter	3.625"	No. of Cent.	2	Diameter	5.5"	Diameter	3.625"
Detector Model No.	T-102	Spacing	EVEN	Log Type	GAM-GAM	Log Type	NEU-NEU
Type	SCINT			Source Type	Cs137	Source Type	Am241Be
Length	8"	LSA [Y/N]		Serial No.	20791B	Serial No.	DSN-438
Distance to Source	10'	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	TD	BSC	REC	0	150	30	-10	47.6 usec/ft	30	-10	2.71	30	-10	LIME

ONE	TD	BSC	REC	0	150	30	-10	47.6 µsec/ft	30	-10	2.71	30	-10	LIME

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@

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

CHLORIDES REPORTED AT 5000 mg/l

ANNULAR HOLE VOLUME CALCULATED FOR 5 INCH CASING

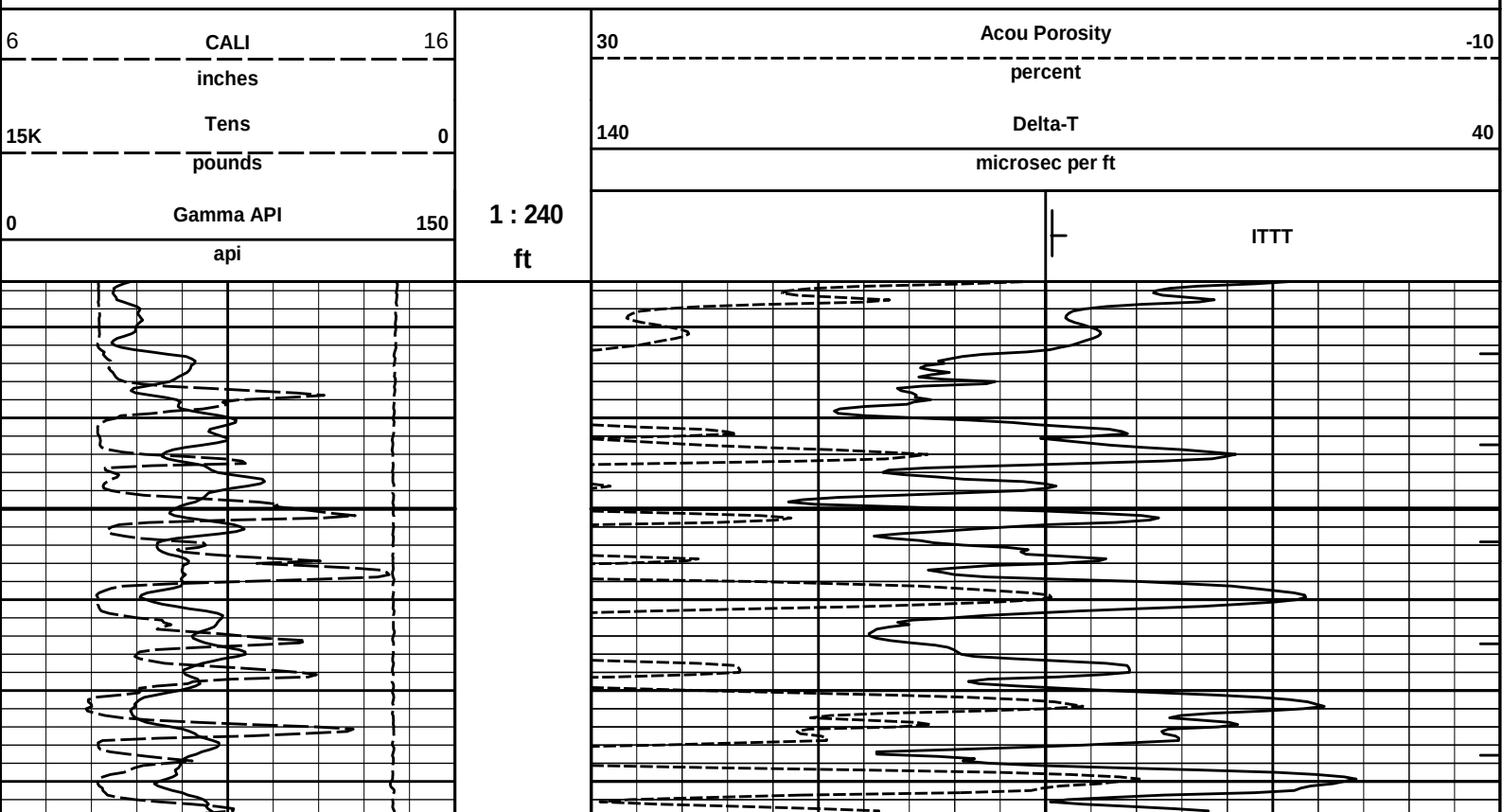
BOREHOLE WAS VERY RUGOSE

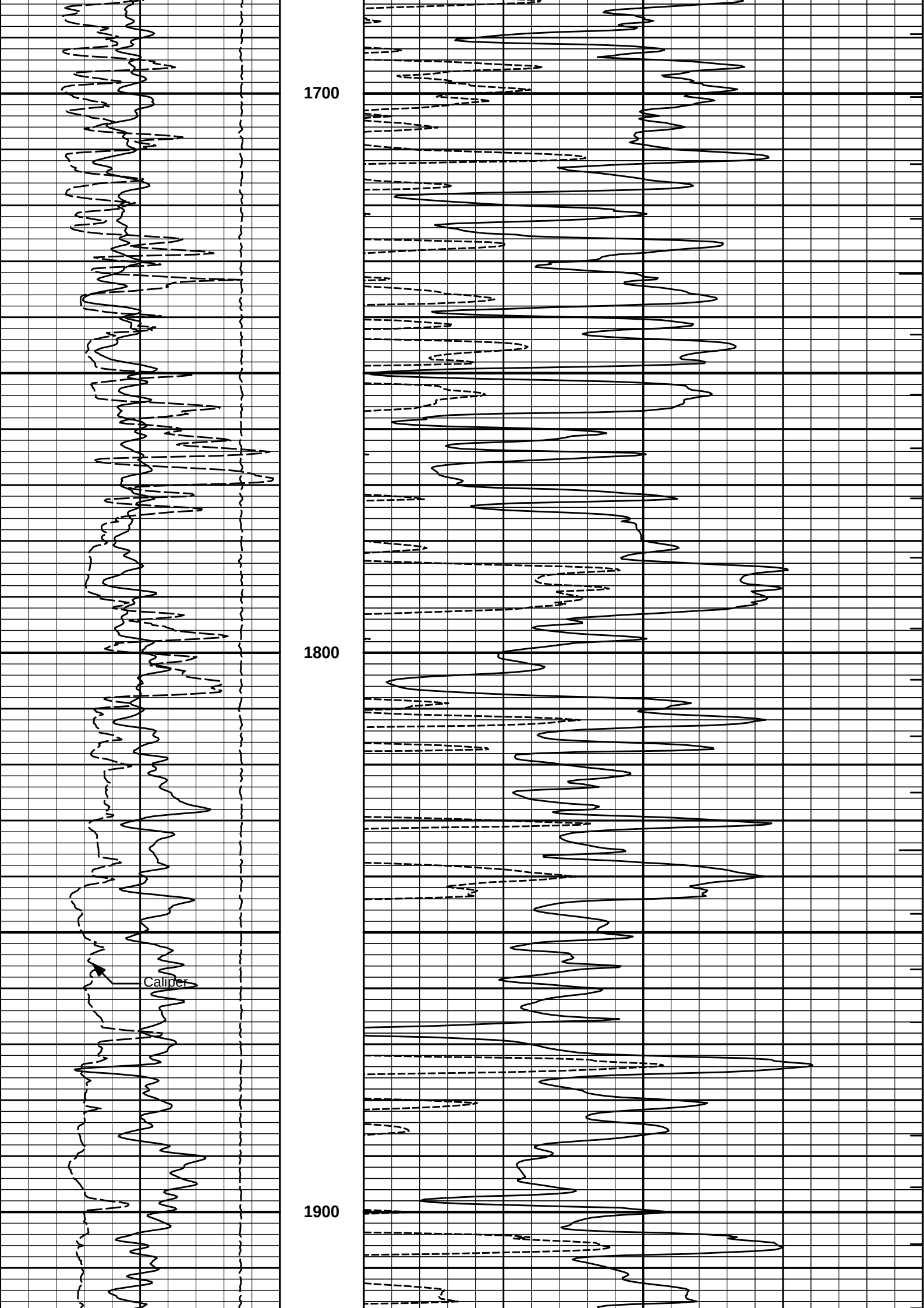
HALLIBURTON

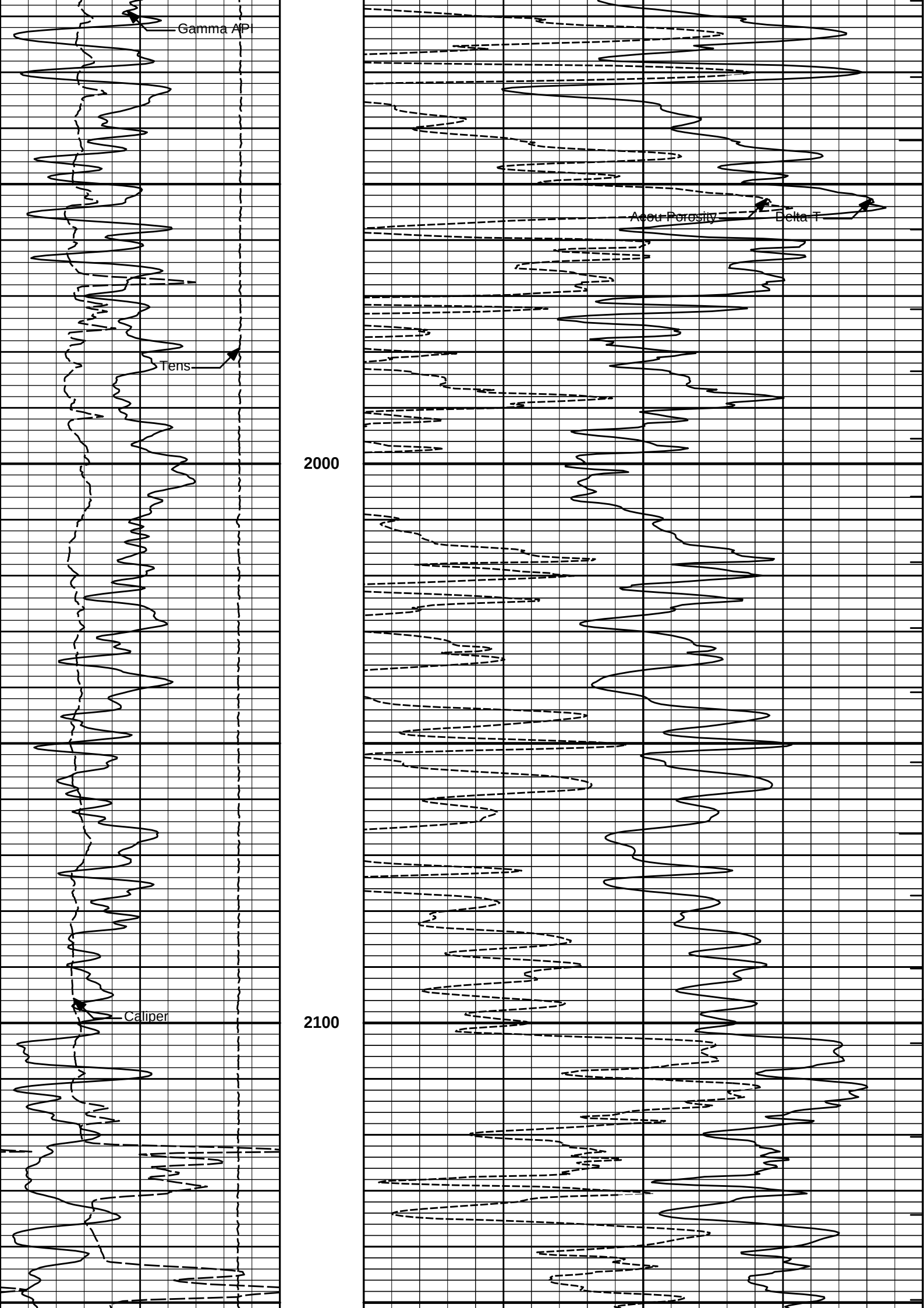
Plot Time: 11-Aug-17 00:39:35
Plot Range: 1625 ft to 5984.08 ft
Data: LINDA_JO_1-22\Well Based\DAQ-0001-005
Plot File: \\BSAT\BSAT_5inch

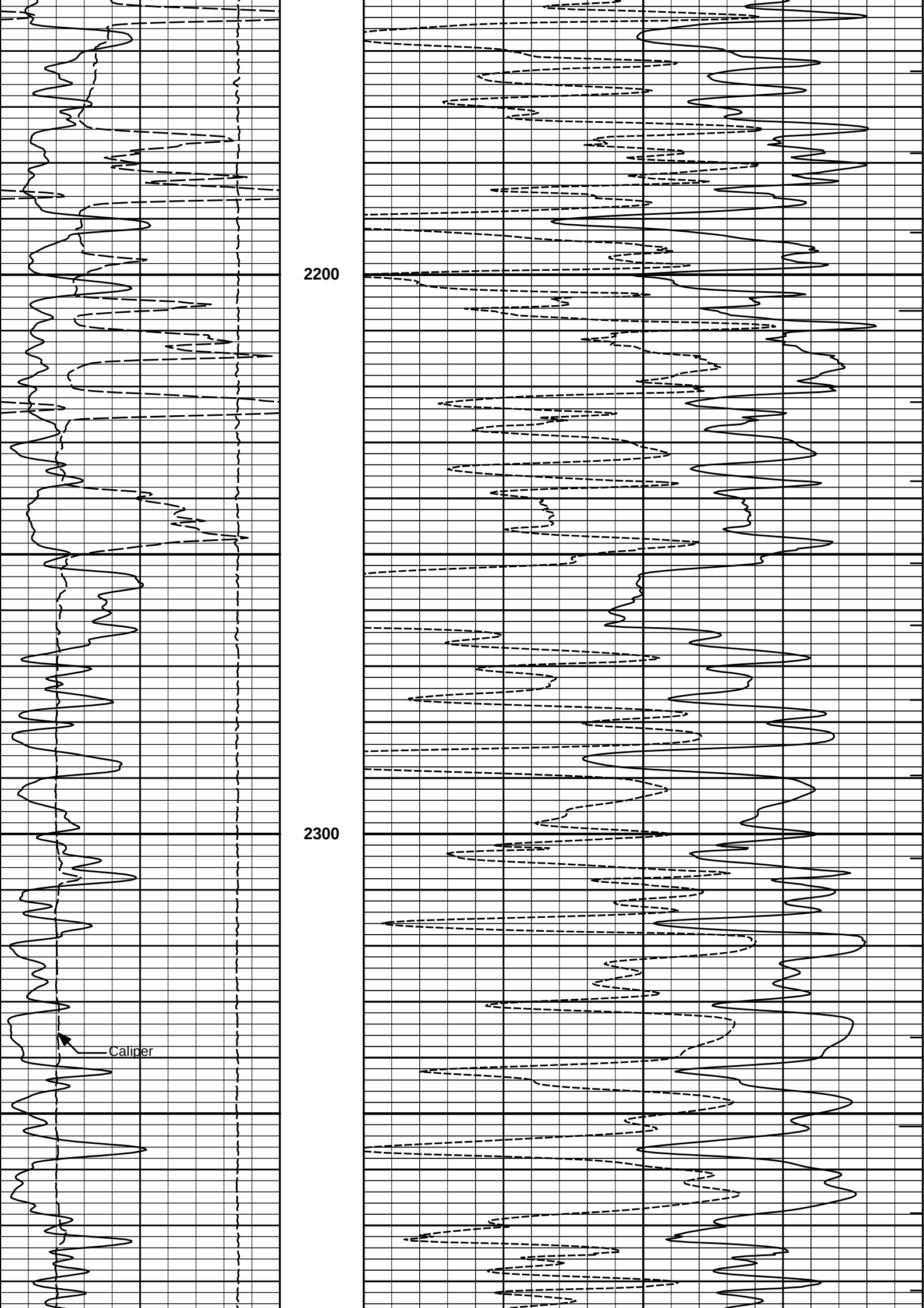
5 INCH MAIN LOG

MAIN LOG SECTION




1700
1800
1900
Caliper


Gamma API
Tens
Caliper
Accu Porosity
Delta T
2000
2100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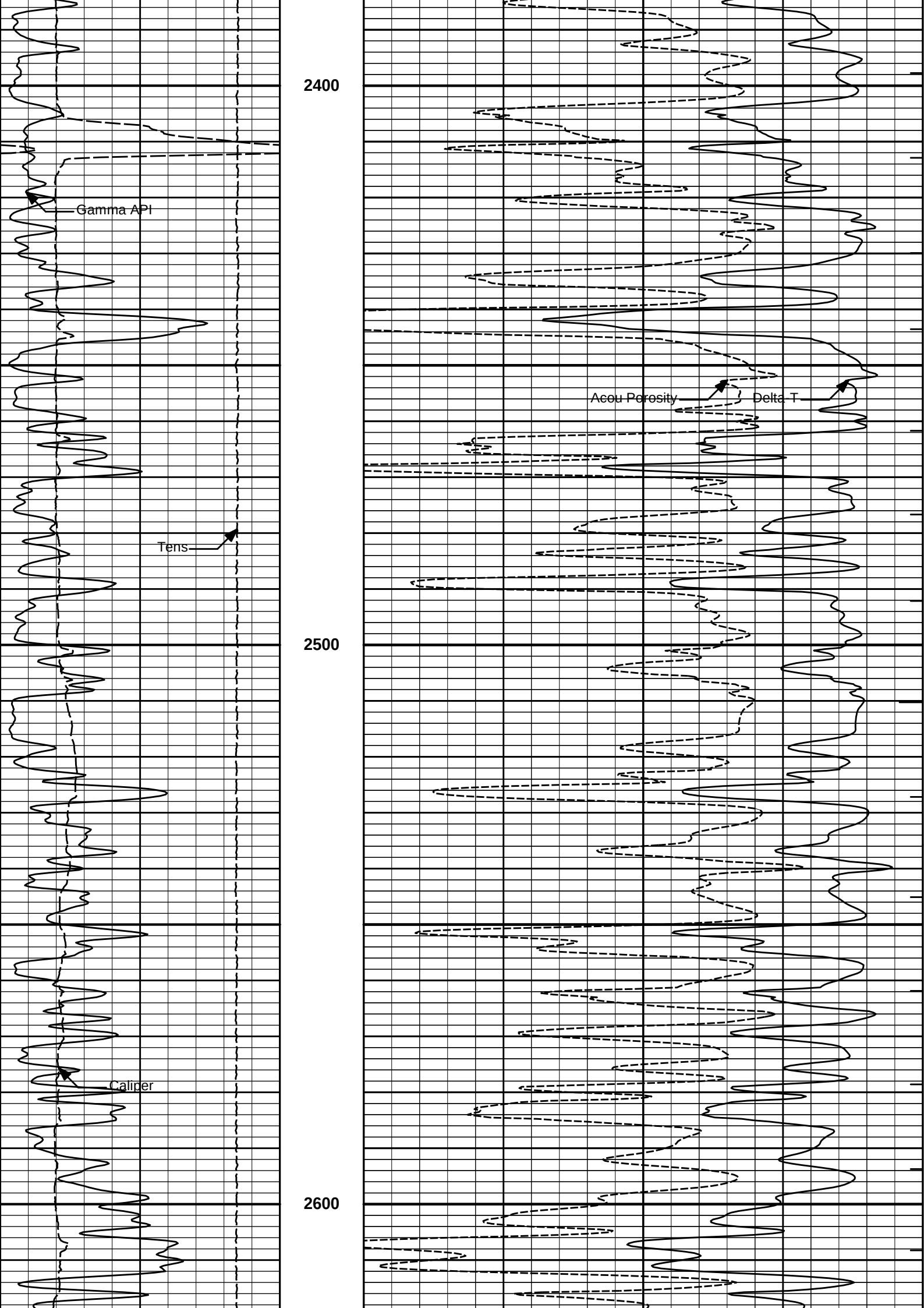
2300
Caliper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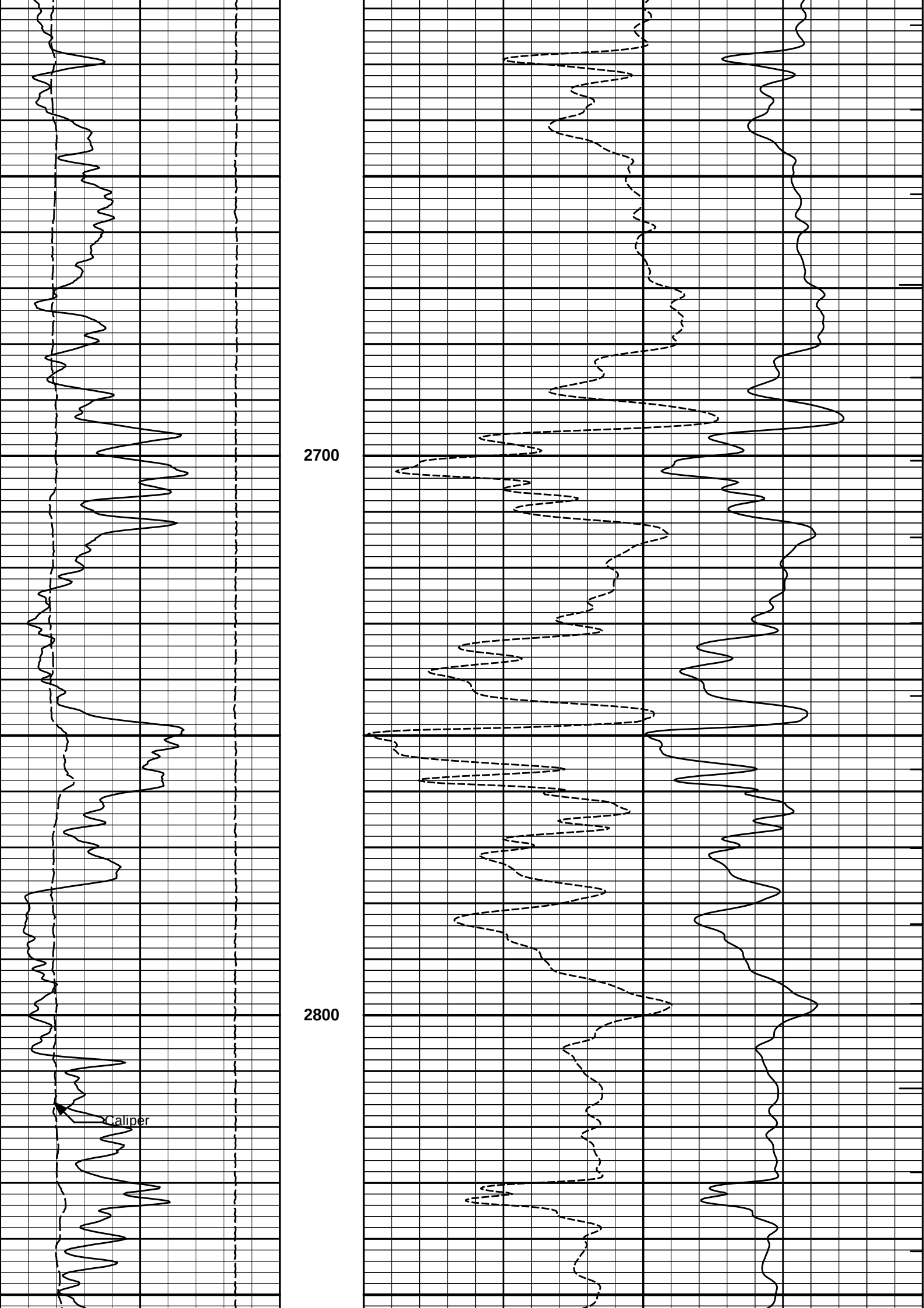
Gamma API
Acou Porosity
Delta T
Tens
2500
Caliper
2600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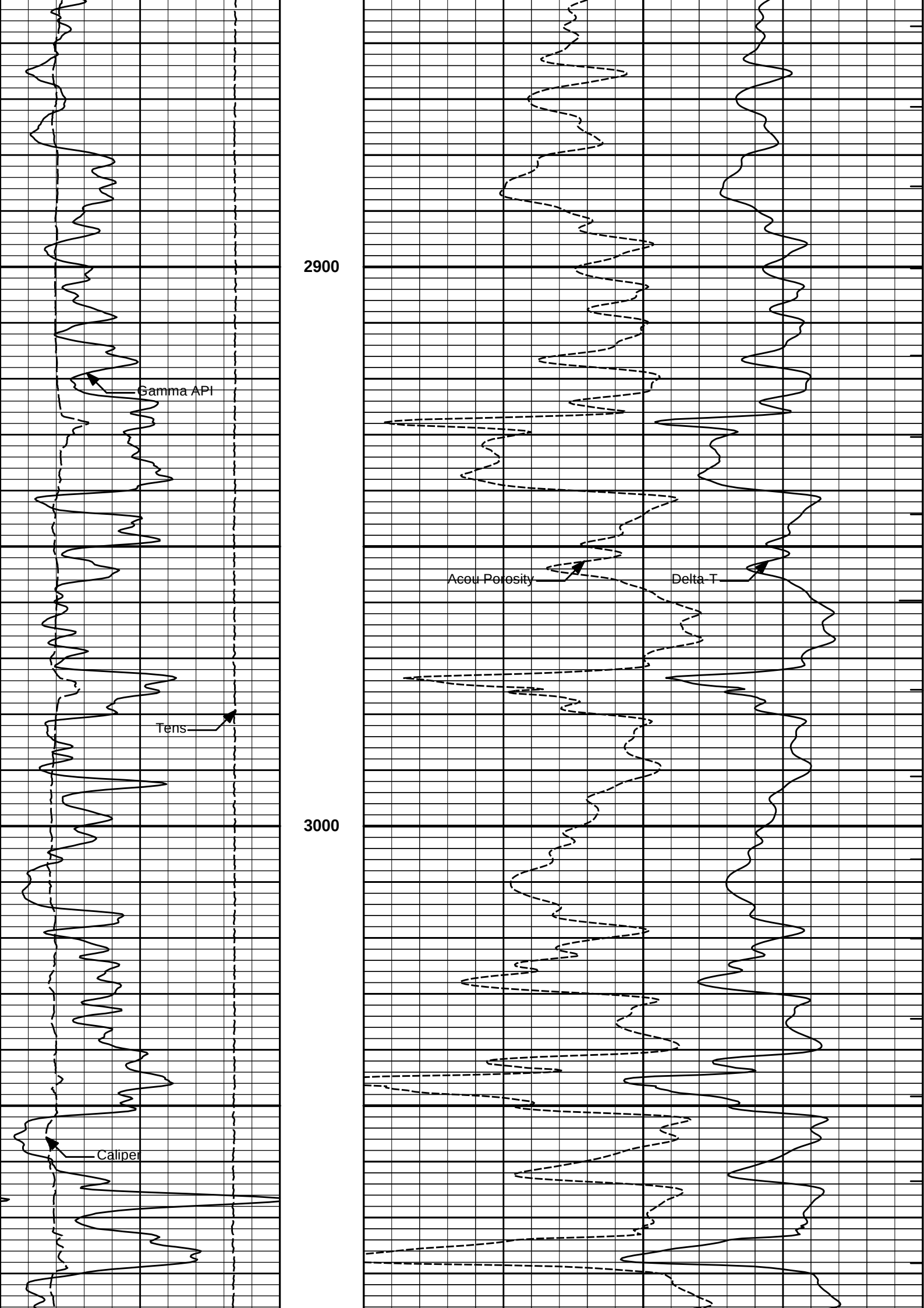
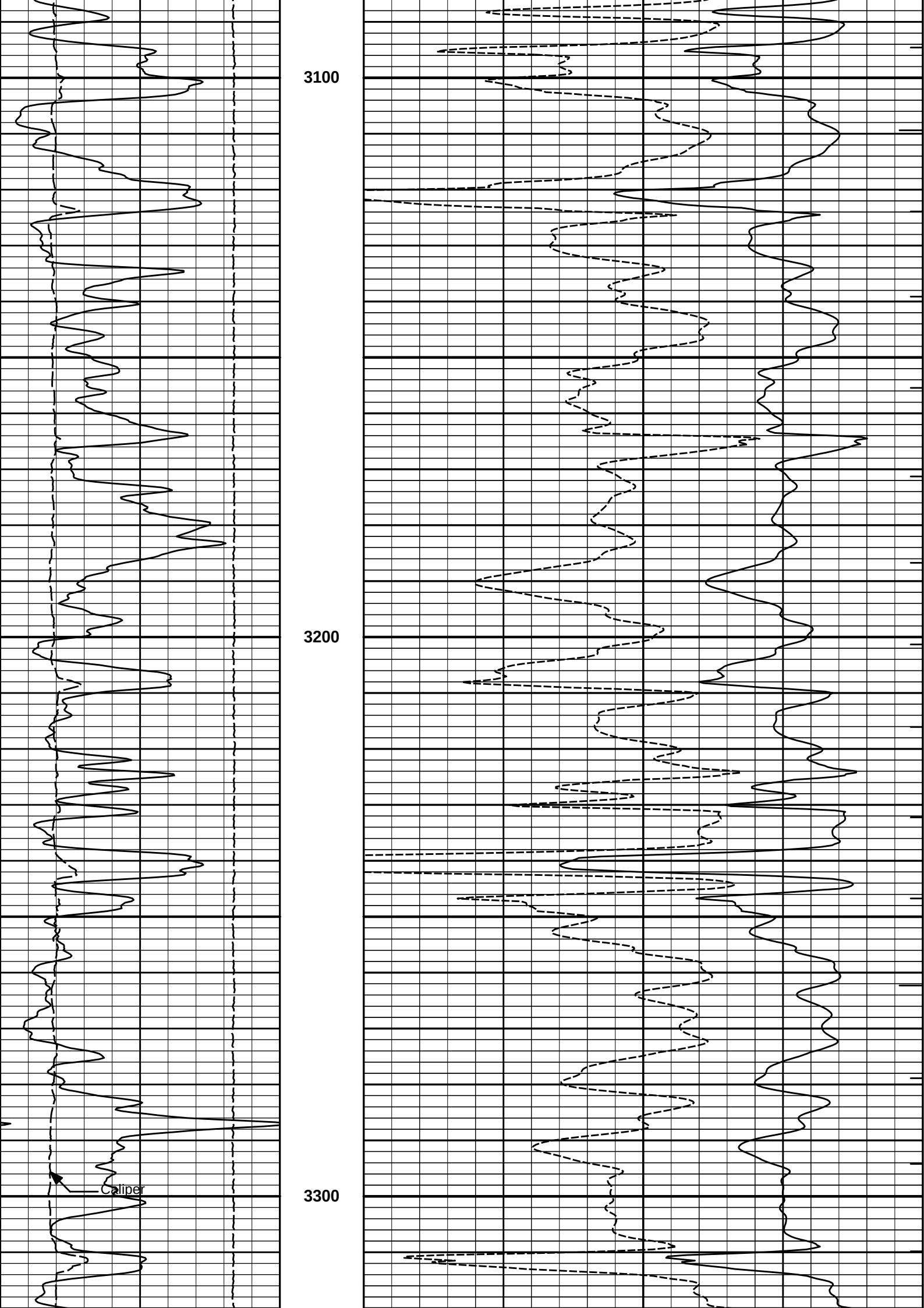
2800
Caliper


2900
Gamma API
Acou Porosity
Delta T
Tens
3000
Caliper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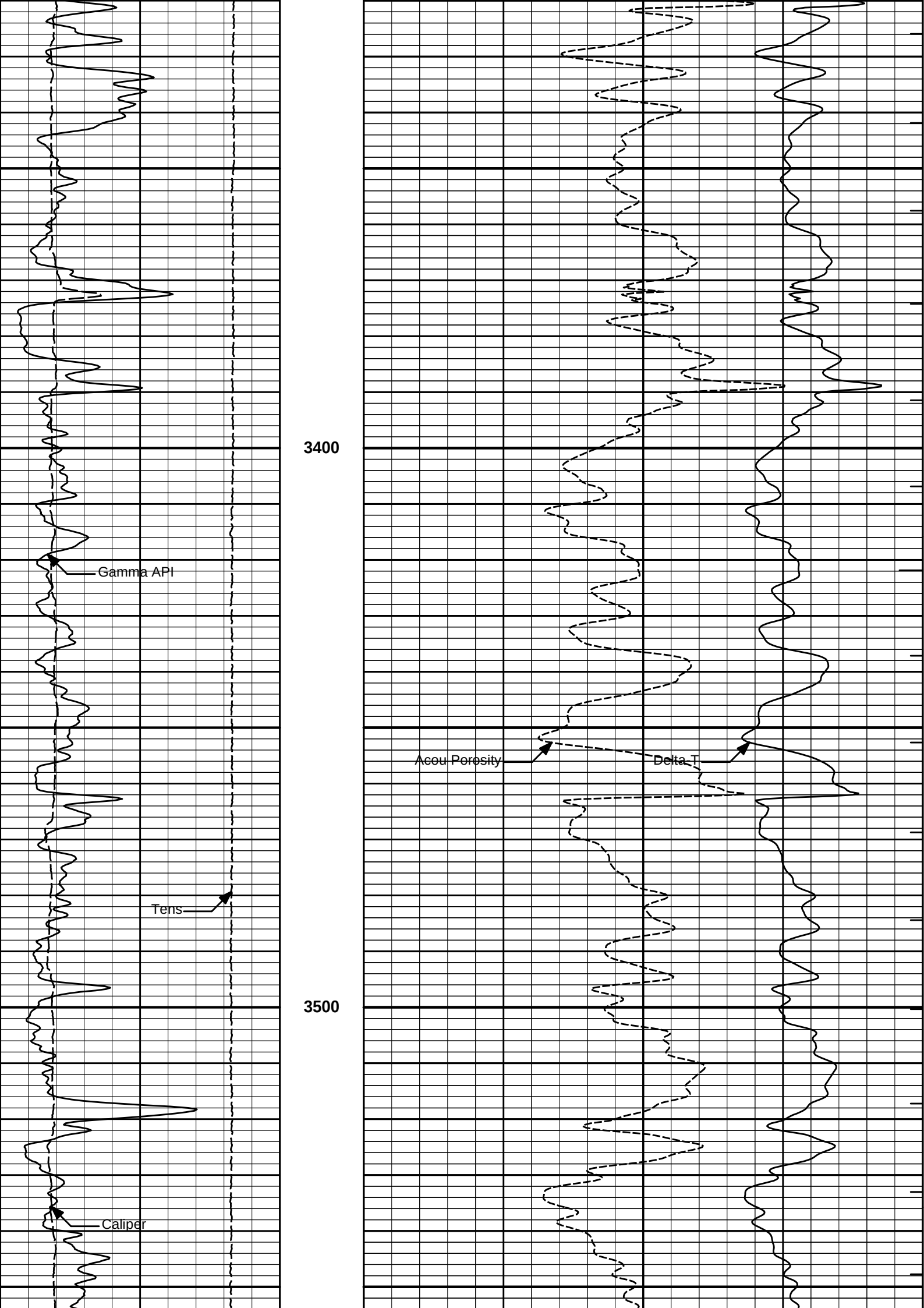
3200
3300
Caliper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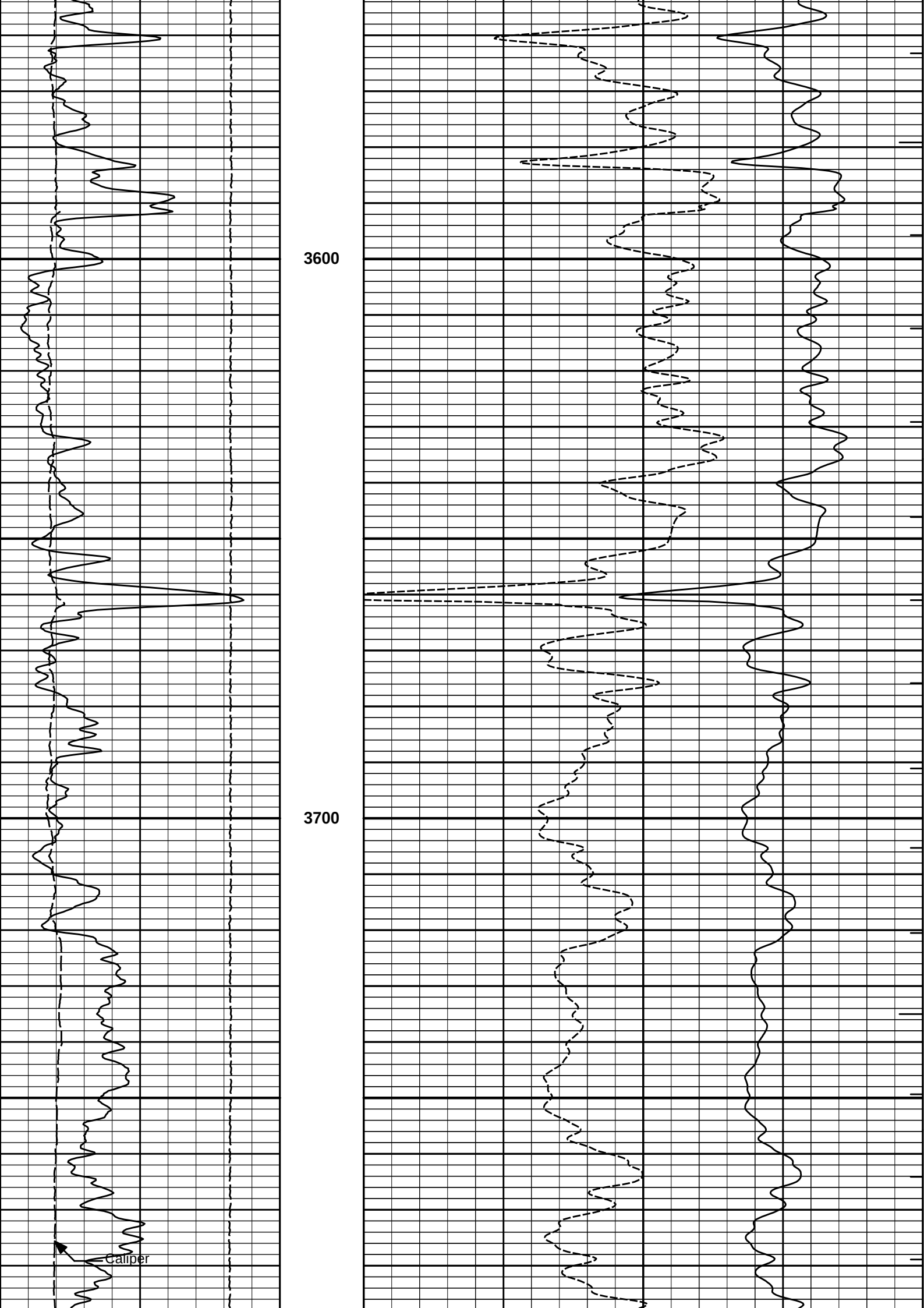
Gamma API
Tens
3500
Caliper
Acou Porosity
Delta T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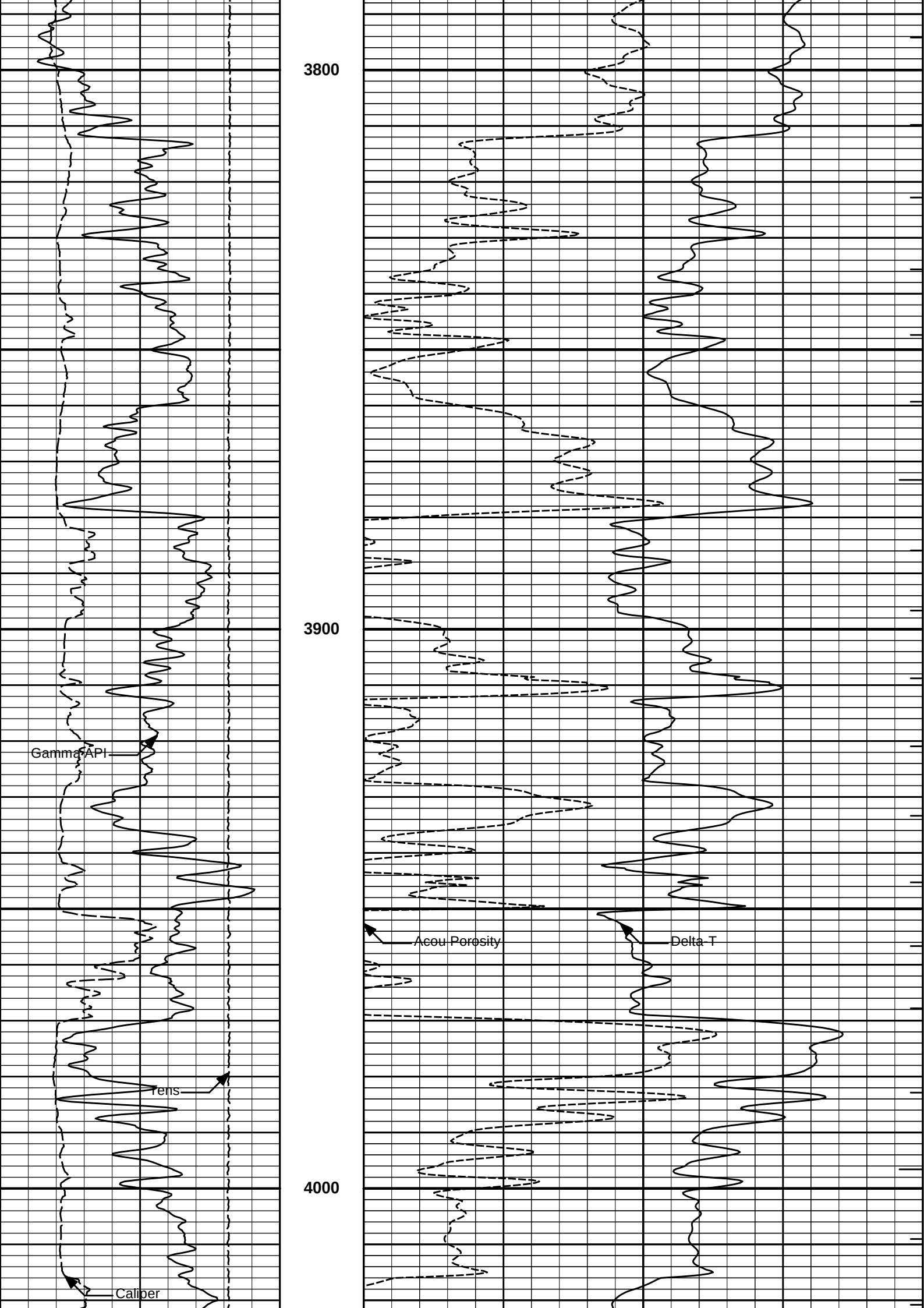
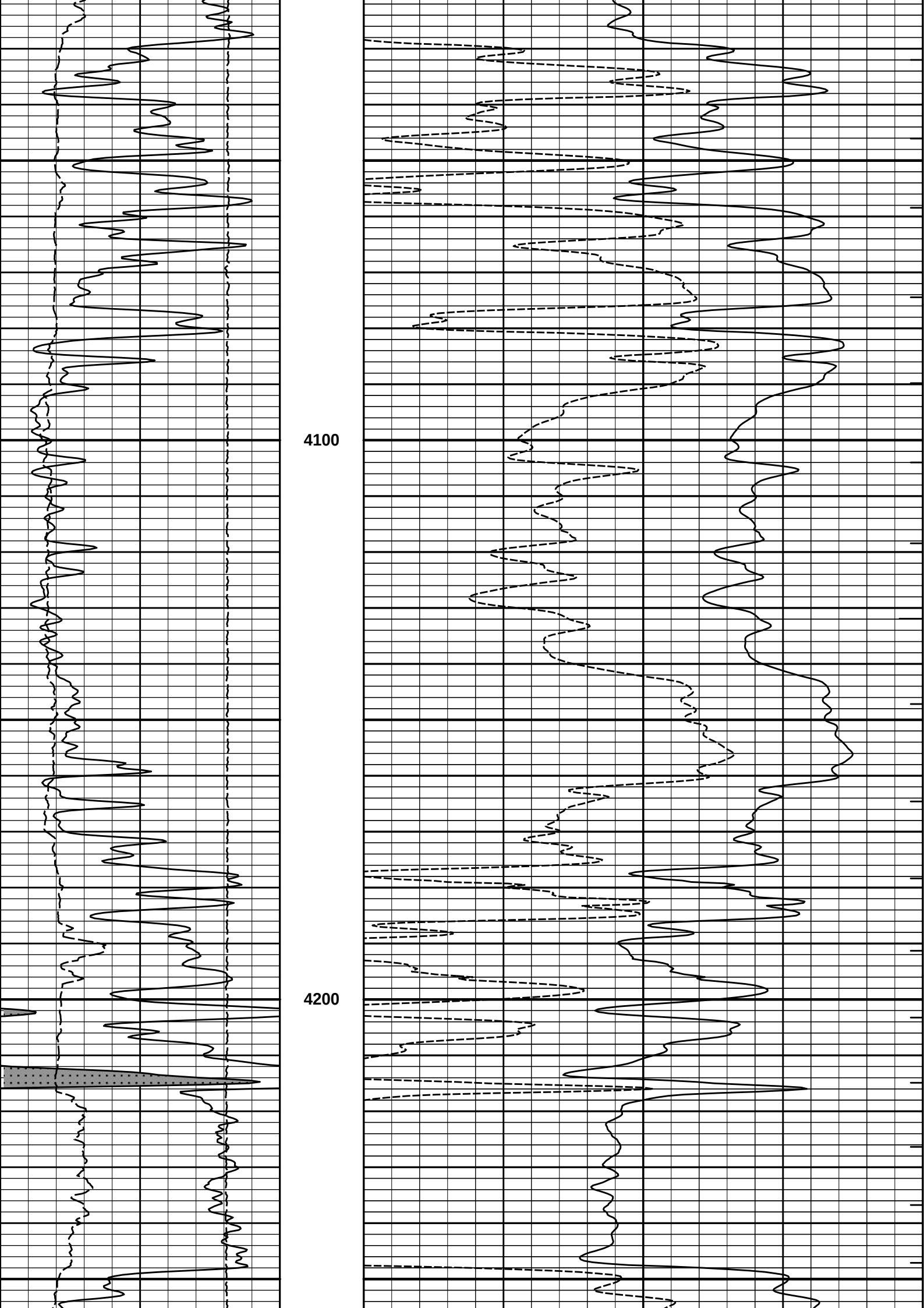
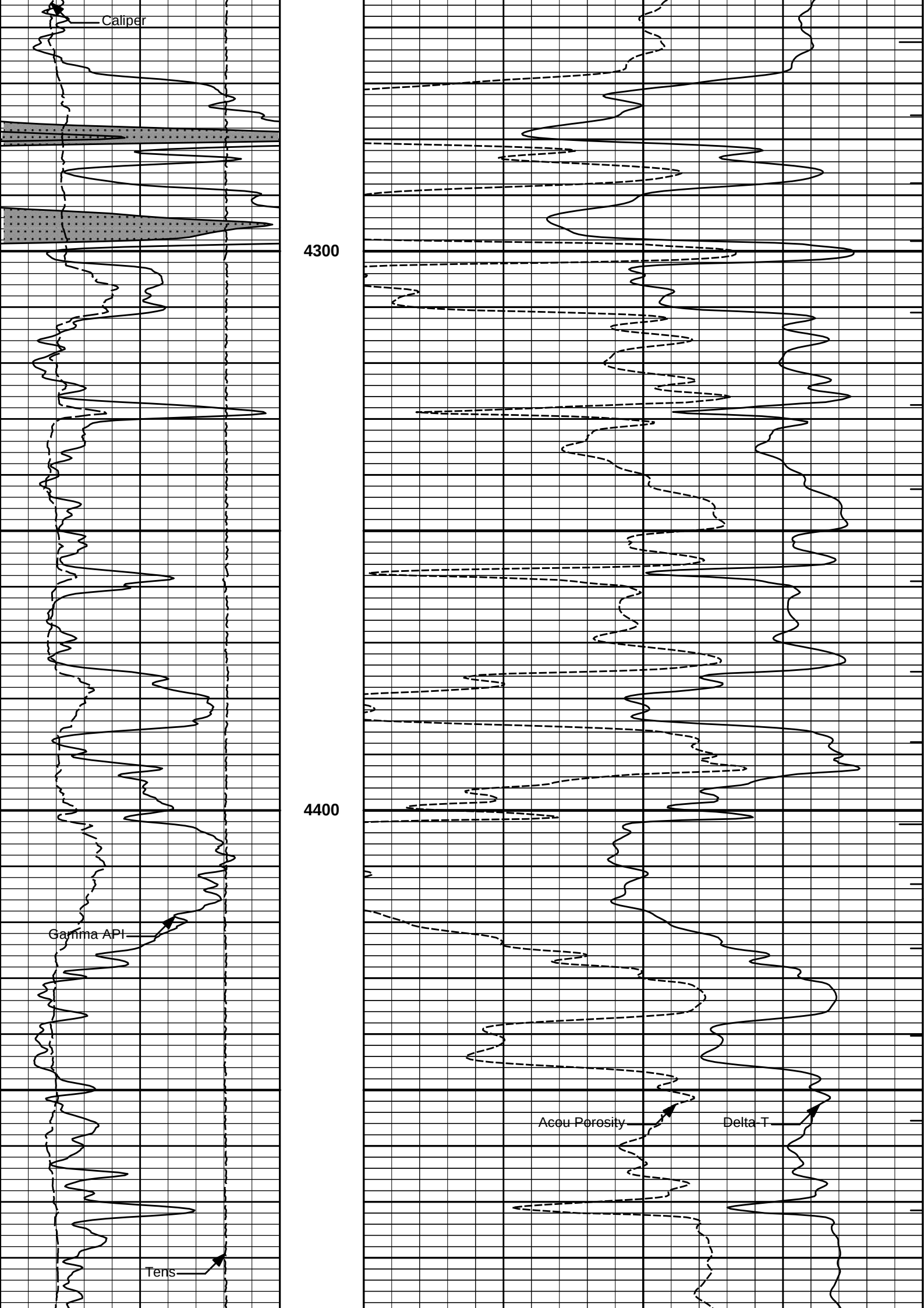
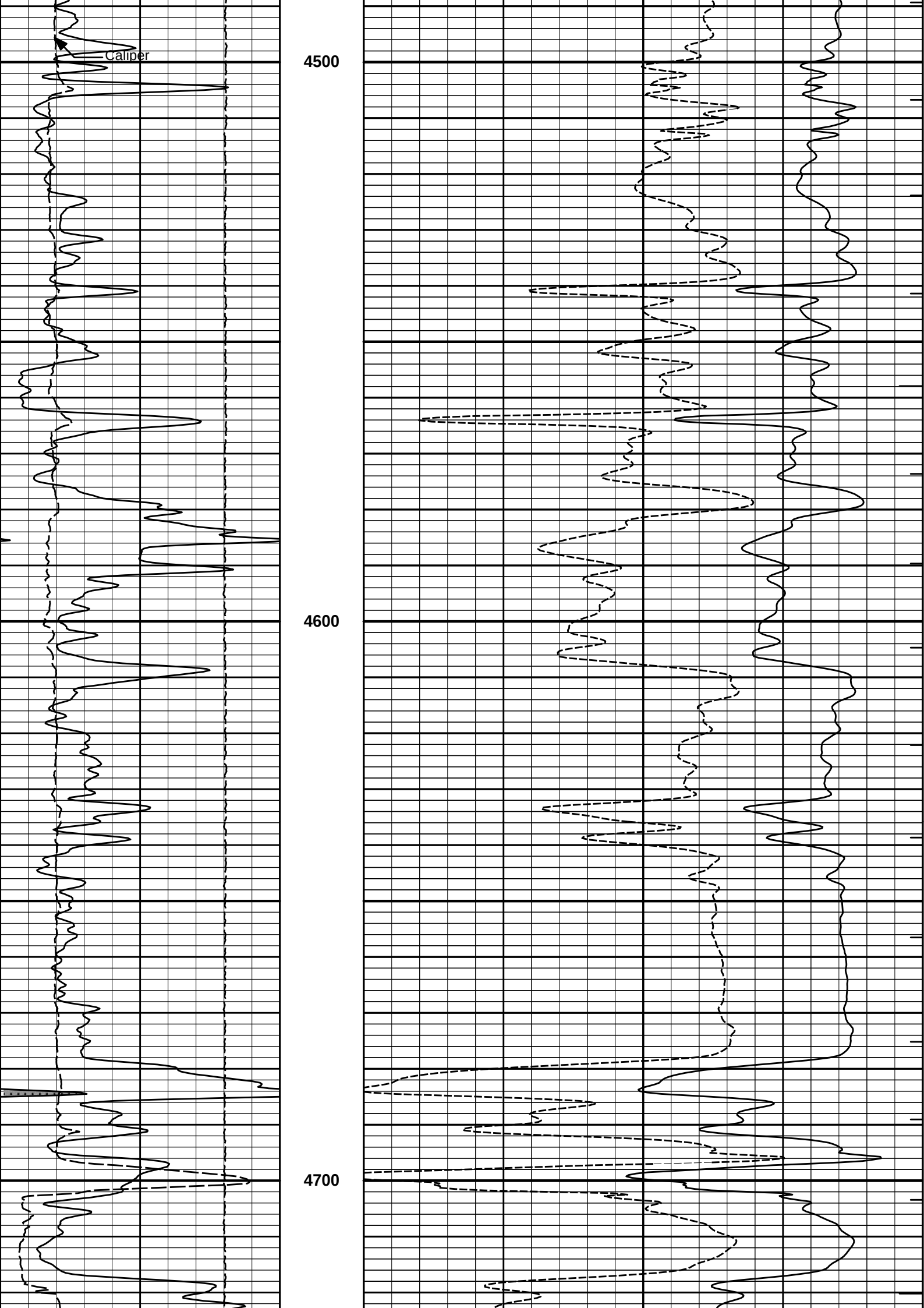
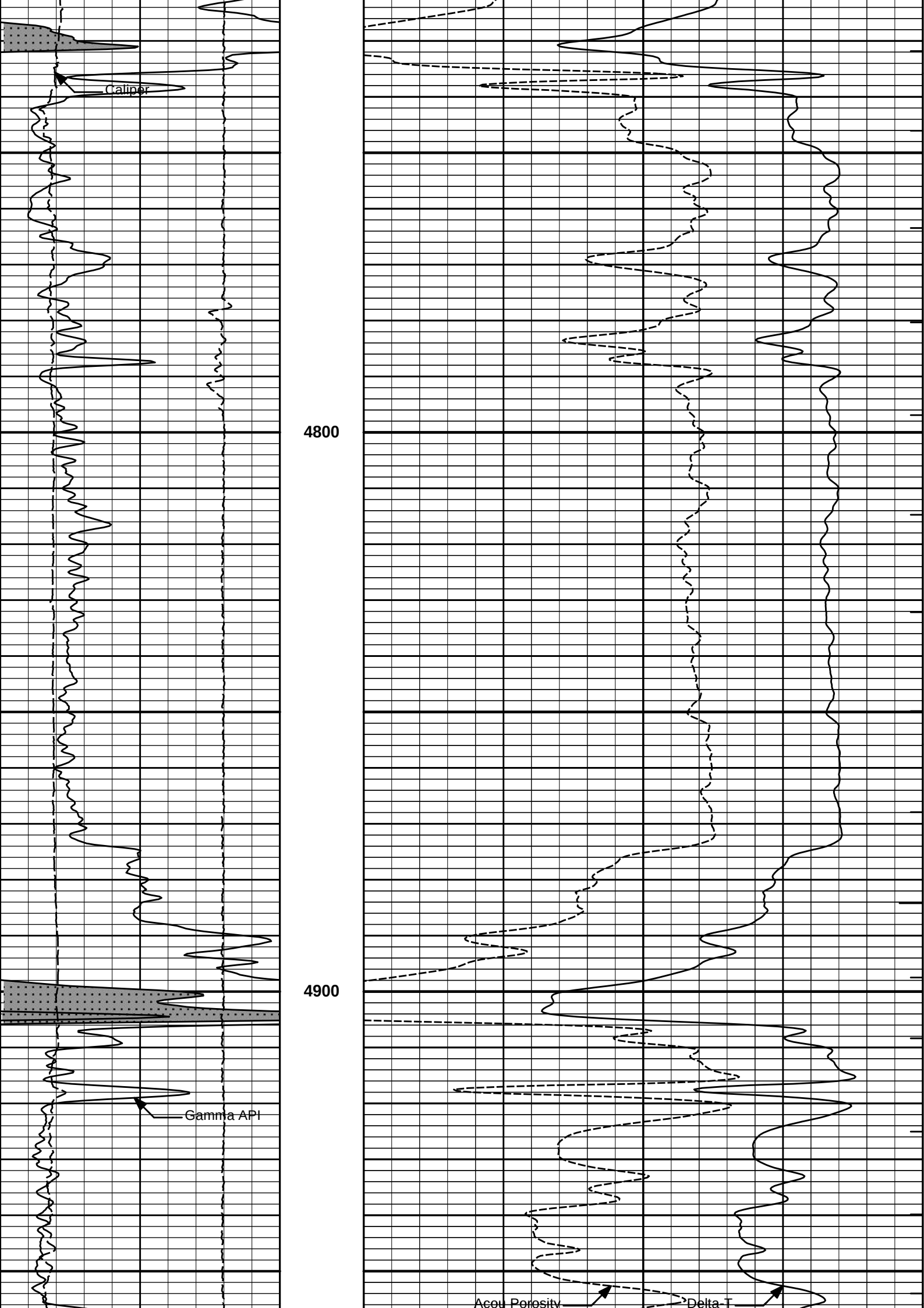
3700
Caliper

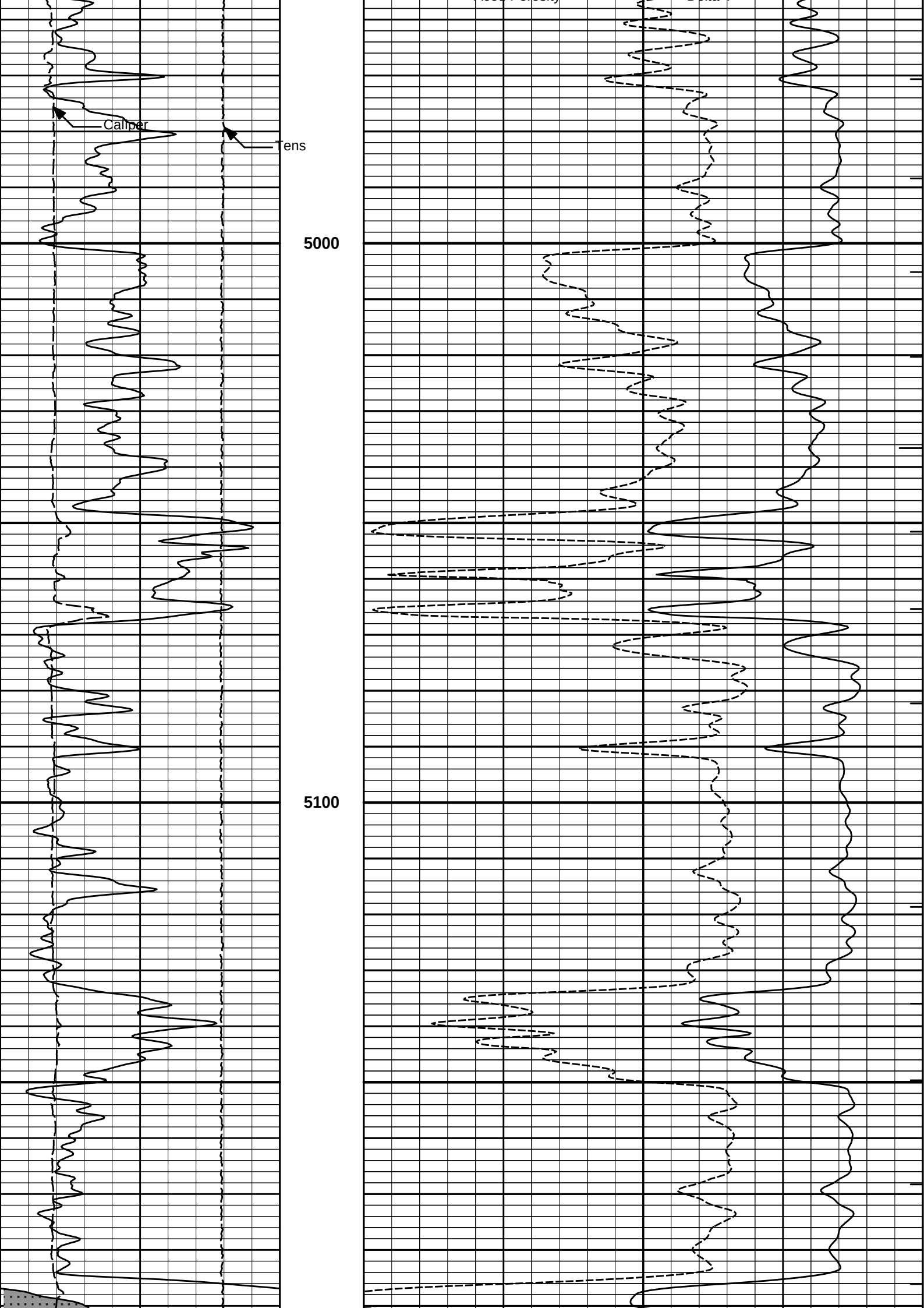

3800
3900
4000
Gamma API
Tens
Caliper
Acou Porosity
Delta T

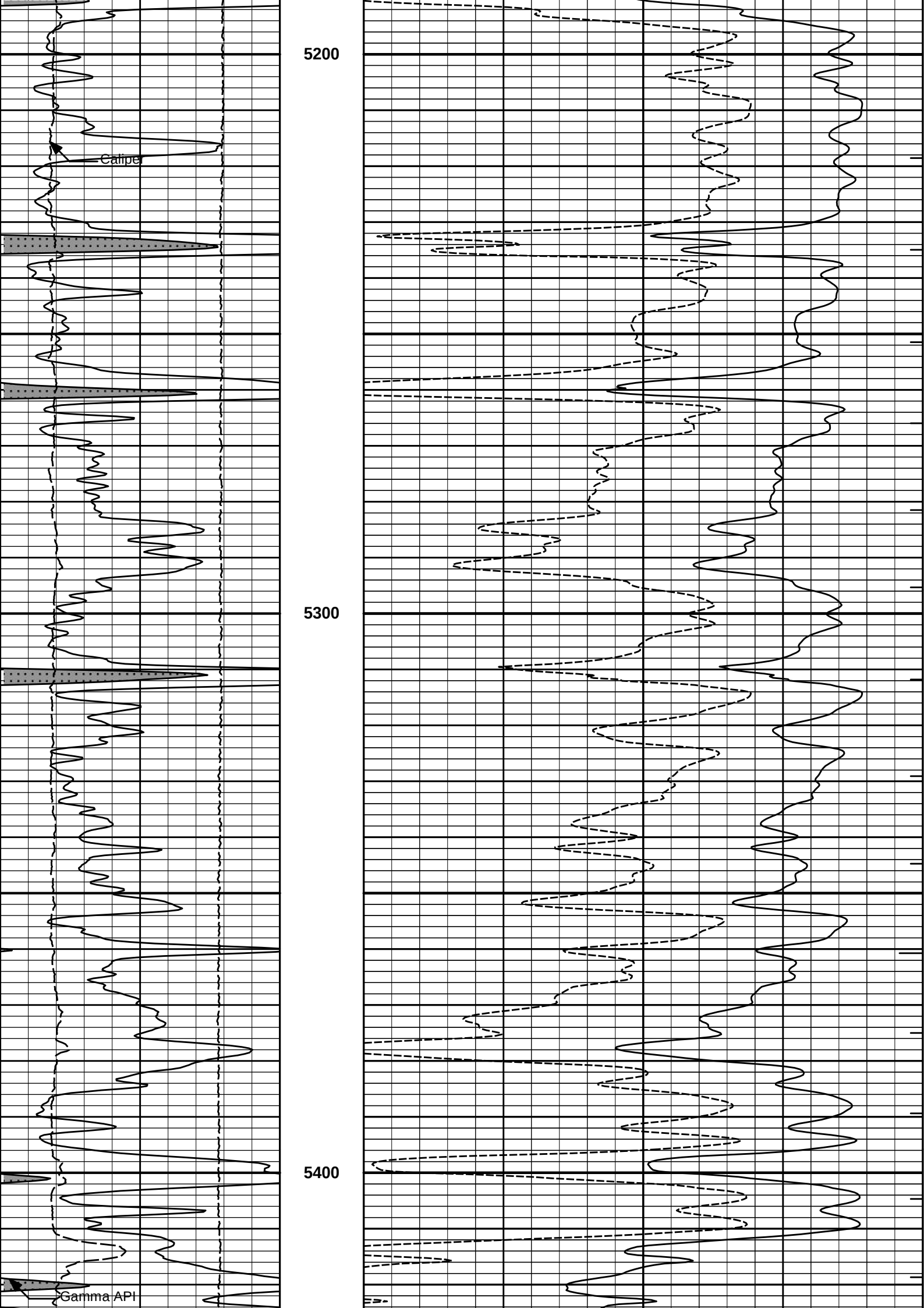

4100
4200


Caliper
4300
4400
Gamma API
Tens
Acou Porosity
Delta-T


Caliper
4500
4600
4700


Caliper
4800
4900
Gamma API
Acou Porosity
Delta-T


Caliper
Tens
5000
5100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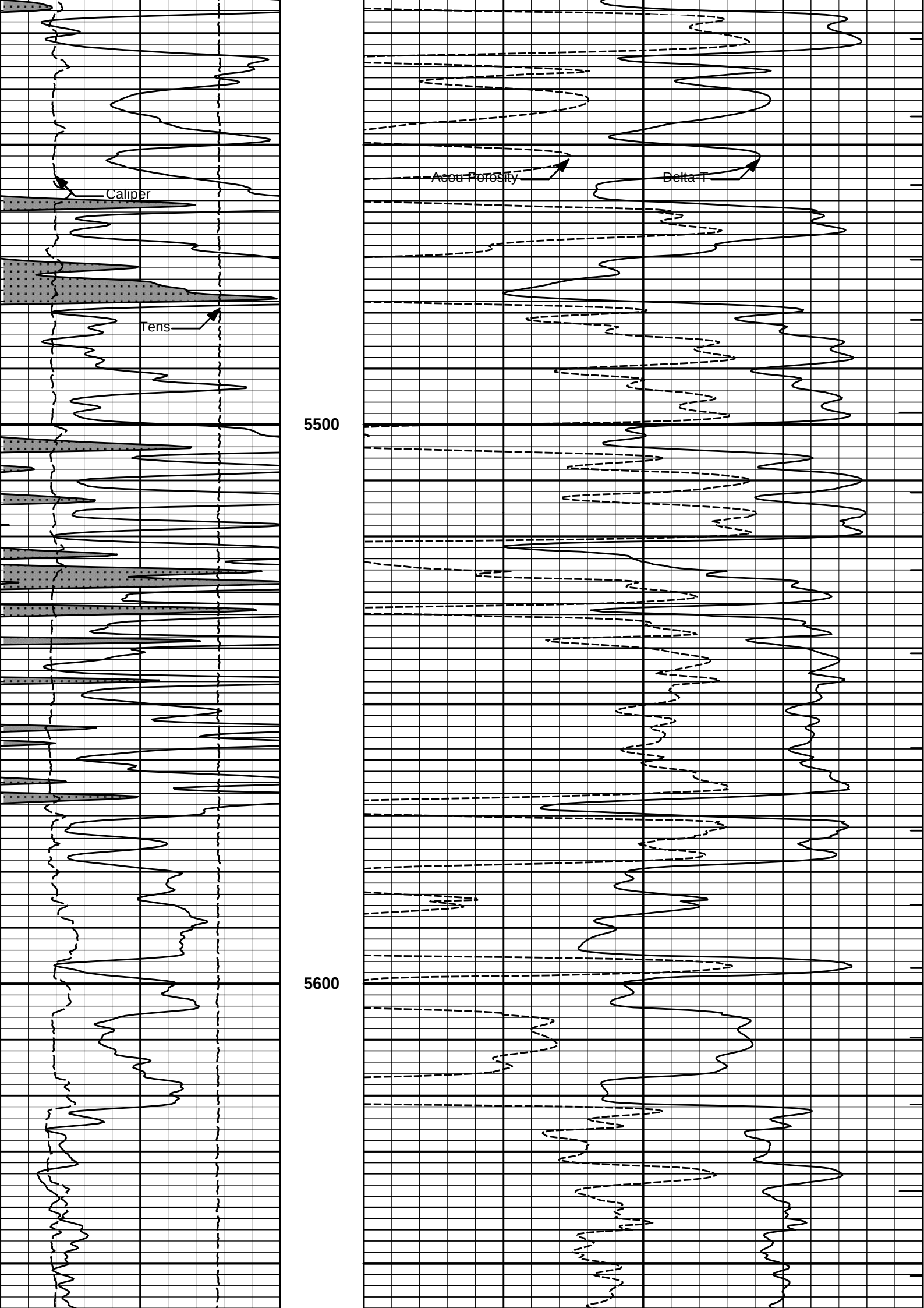
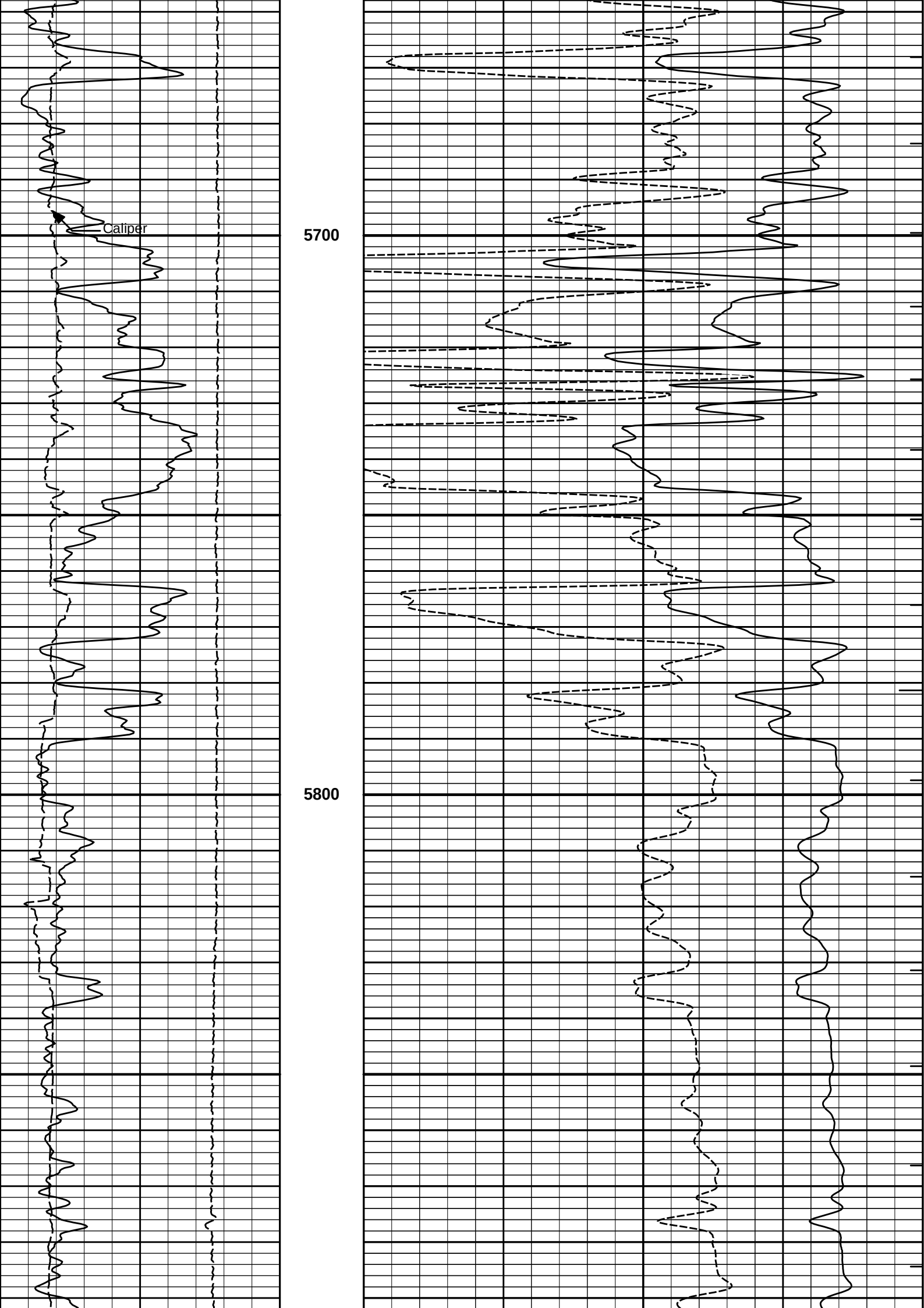
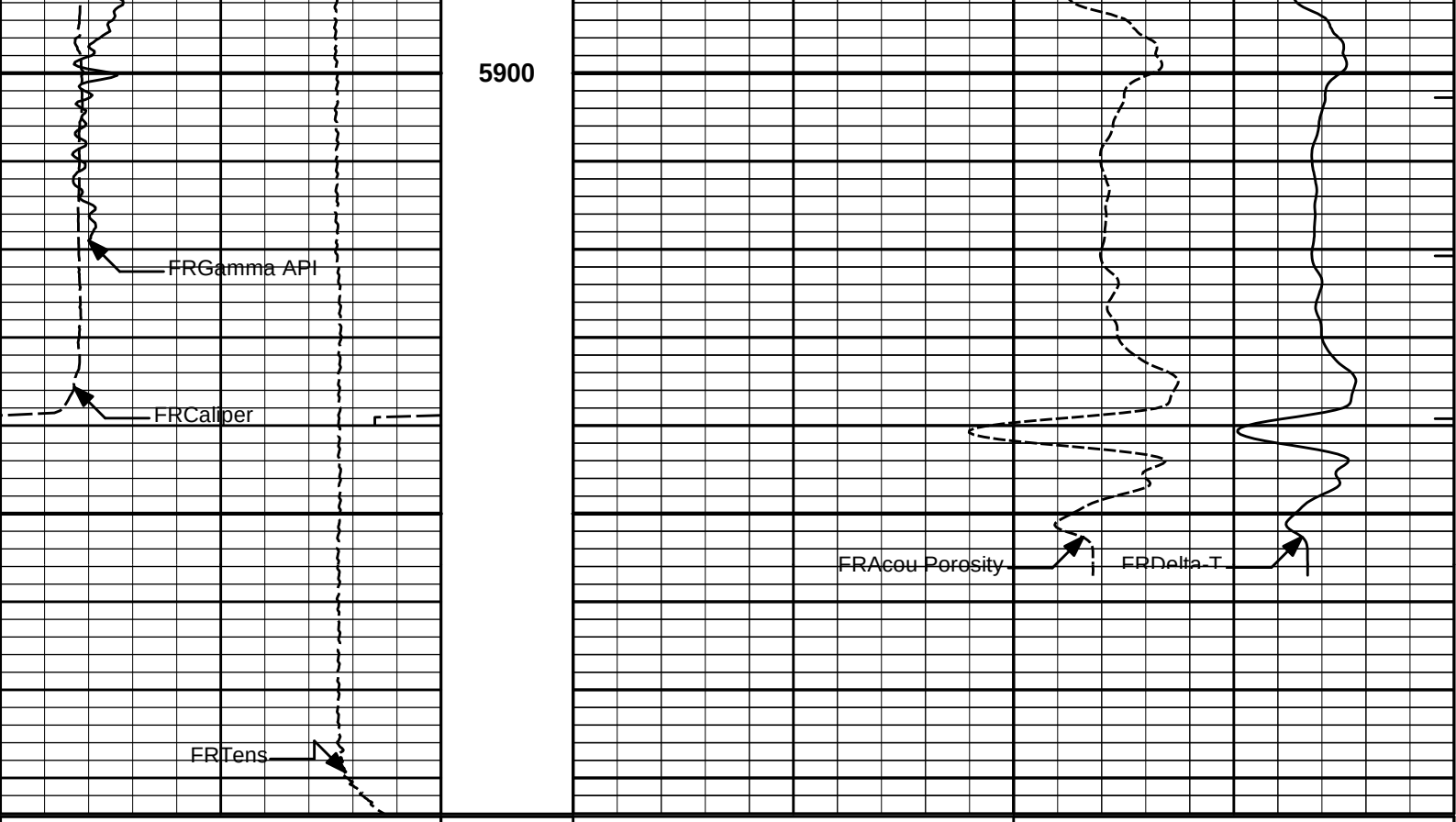
Caliper
5300
5400
Gamma API


Caliper
Tens
Acou Porosity
Delta T
5500
5600


Caliper
5700
5800



0 Gamma API 150 api	1 : 240 ft	ITTT
15K Tens 0 pounds		140 Delta-T 40 microsec per ft
6 CALI 16 inches		30 Acou Porosity -10 percent

HALLIBURTON

Plot Time: 11-Aug-17 00:39:39
Plot Range: 1625 ft to 5984.08 ft
Data: LINDA_JO_1-22\Well Based\DAQ-0001-005\
Plot File: \\BSAT\BSAT_5inch

5 INCH MAIN LOG

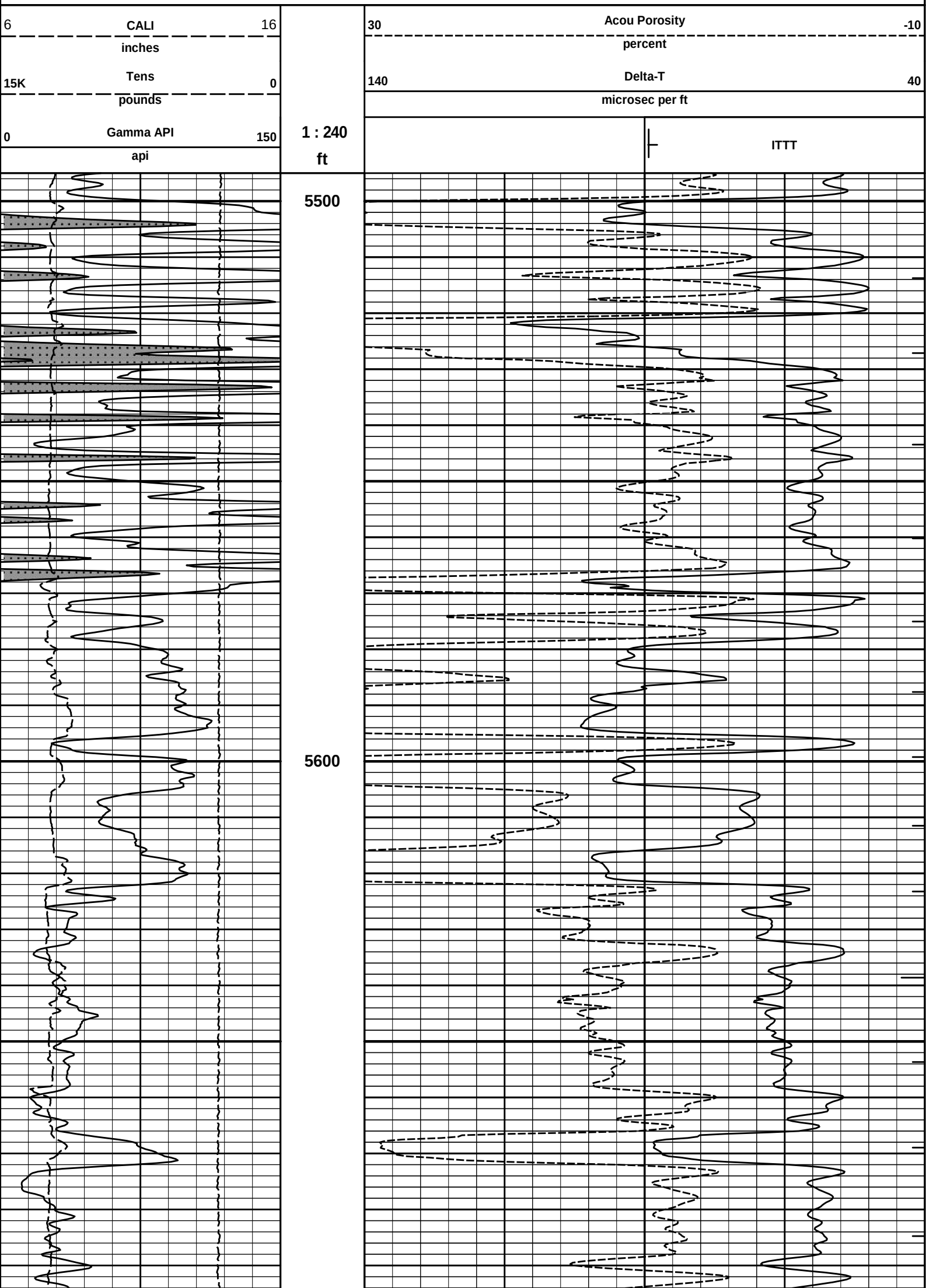
MAIN LOG SECTION

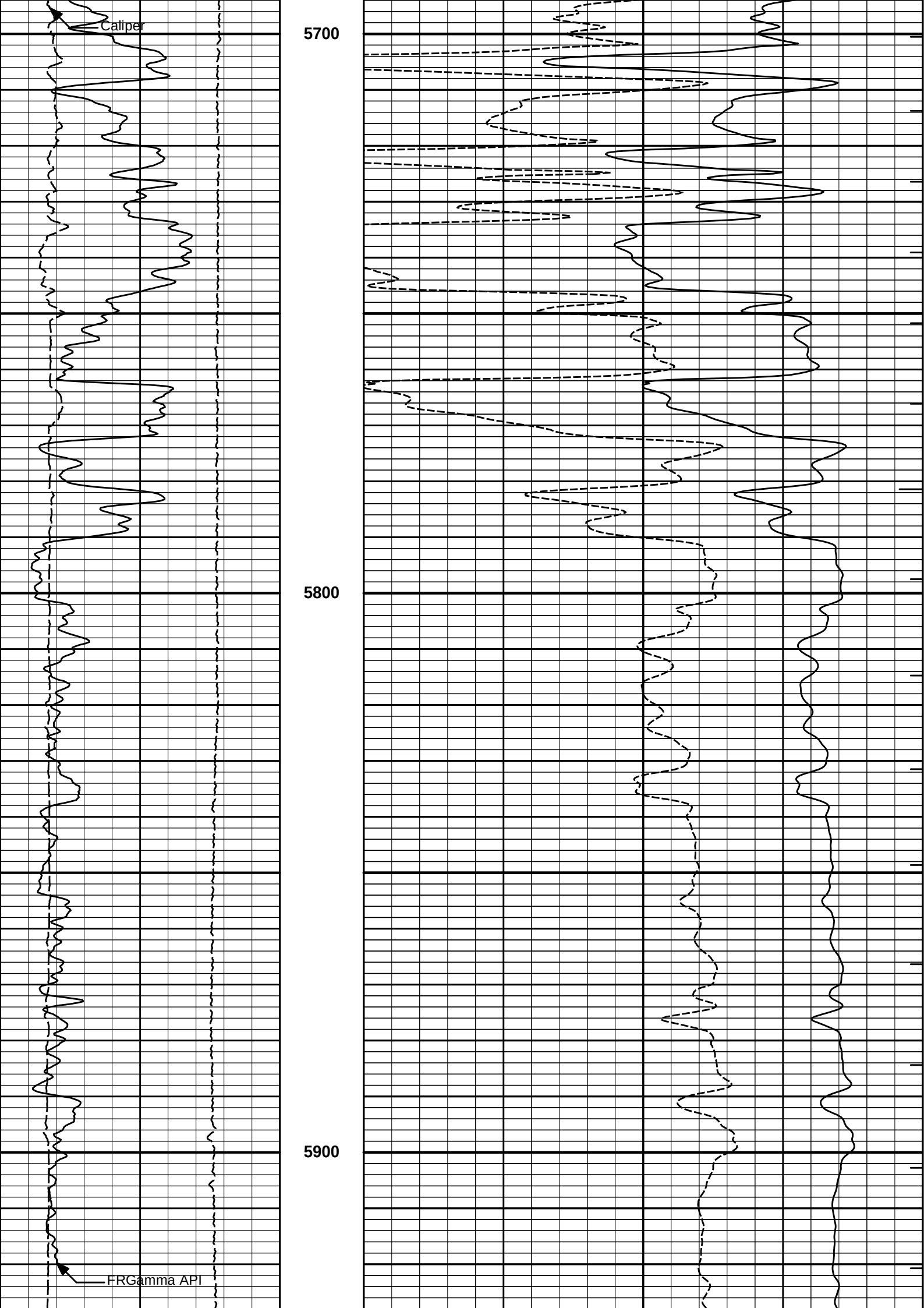
HALLIBURTON

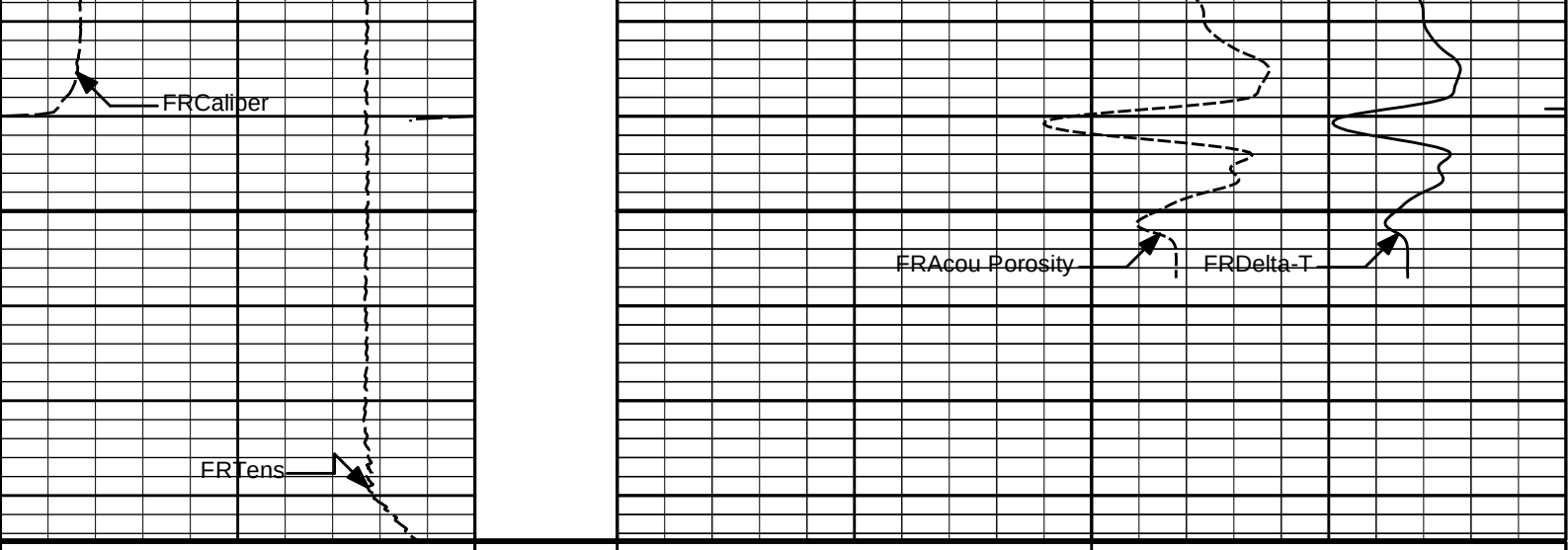
Plot Time: 11-Aug-17 00:39:39
Plot Range: 5495 ft to 5984.67 ft
Data: LINDA_JO_1-22\Well Based\DAQ-0001-003\
Plot File: \\BSAT\BSAT_5inch

5 INCH REPEAT LOG

REPEAT LOG SECTION


6
CALI
16
inches
15K
Tens
0
pounds
0
Gamma API
150
api
1 : 240
ft
30
Acou Porosity
-10
percent
140
Delta-T
40
microsec per ft
ITTT
5500
5600


Caliper
5700
5800
5900
FRGamma API



0 Gamma API 150 api		1 : 240 ft		ITTT
15K Tens 0 pounds			140 Delta-T 40 microsec per ft	
6 CALI 16 inches			30 Acou Porosity -10 percent	

HALLIBURTON

Plot Time: 11-Aug-17 00:39:41
Plot Range: 5495 ft to 5984.67 ft
Data: LINDA_JO_1-22\Well Based\DAQ-0001-003\
Plot File: \\BSAT\BSAT_5inch

5 INCH REPEAT LOG

REPEAT LOG SECTION

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	**GTET - 10971172**	**Reference Calibration Date:**	**05-Jul-17 12:41:12**
Engineer:	**T. HYDE**	**Calibration Date:**	**14-Jul-17 15:53:59**
Software Version:	**WL INSITE R5.0.5 (Build 8)**	**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	27.0	23.5	api
Background + Calibrator	294.0	255.5	api
Calibrator	267.0	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	**GTET - 10971172**	**Reference Calibration Date:**	**14-Jul-17 15:53:59**
Engineer:	**T. HYDE**	**Calibration Date:**	**31-Jul-17 09:22:39**
Software Version:	**WL INSITE R5.0.5 (Build 8)**	**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	23.5	24.3	api
Background + Calibrator	255.5	258.9	api
Calibrator	232.0	234.6	api

Shop	Field	Difference	Tolerance
232.0	234.6	-2.6	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	**DSNT - 12023046**	**Reference Calibration Date:**	**08-May-17 09:03:21**
Engineer:	**T. HYDE**	**Calibration Date:**	**05-Jul-17 14:38:25**
Software Version:	**WL INSITE R5.0.5 (Build 8)**	**Calibration Version:**	**1**

Logging Source S/N: DSN-438
Tank Serial Number: 10730320
Reference value assigned to Tank: 56.100
Snow Block S/N: 668
Calibration Tank Water Temperature: 68 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	1.00193	1.00528	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)

Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decp):	0.2347	0.2358	0.0011	+/- 0.0020
Calibrated Ratio:	10.5243	10.5595	0.035	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0800	0.02000 - 0.09000

PASS/FAIL SUMMARY

Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name:	**DSNT - 12023046**	**Reference Calibration Date:**	**05-Jul-17 14:38:25**
Engineer:	**T. HYDE**	**Calibration Date:**	**31-Jul-17 09:47:53**
Software Version:	**WL INSITE R5.0.5 (Build 8)**	**Calibration Version:**	**1**

Logging Source S/N: DSN-438
Snow Block S/N: 668

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0800	0.0732	-0.0068	+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check:	Passed
Snow Block Stat Check:	Passed

Temperature Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	**SDLT - 12153526**	**Reference Calibration Date:**	**31-Jul-17 09:29:06**
Engineer:	**T. HYDE**	**Calibration Date:**	**31-Jul-17 09:34:52**
Software Version:	**WL INSITE R5.0.5 (Build 8)**	**Calibration Version:**	**1**
Host Tool Name:	**DSNT - 12023046**		

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-3562.79	-3301.56	-7000.00 - -1000.00
Pad Gain	0.0004001	0.0003800	0.0002000 - 0.0006000
Arm Offset	-1709.09	-2120.30	-5000.00 - 3000.00
Arm Gain	0.0004654	0.0005034	0.000300 - 0.000700
Arm Power	-0.000000440	-0.000003440	-0.000010000 - 0.000010000

The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER

Tool Diameter: 4.50 in

CALIBRATION RINGS

Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.84	3.75	-0.09	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.46	6.50	0.04	+/- 0.20
Medium Ring (in)	8.14	8.25	0.11	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 0.20

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed

SDLT CALIPER FIELD CALIBRATION

Tool Name:	**SDLT - 12153526**	**Reference Calibration Date:**	**31-Jul-17 09:34:52**
Engineer:	**T. HYDE**	**Calibration Date:**	**31-Jul-17 09:36:40**
Software Version:	**WL INSITE R5.0.5 (Build 8)**	**Calibration Version:**	**1**

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.74	-0.01	+/- 0.10
Ring Diameter	8.25	8.27	0.02	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:	Passed
Diameter Check:	Passed

MICRO LOG SHOP CALIBRATION

Tool Name:	**Microlog Pad - 12153526**	**Reference Calibration Date:**	**31-Jul-17 09:19:19**
Engineer:	**T. HYDE**	**Calibration Date:**	**31-Jul-17 09:21:08**
Software Version:	**WL INSITE R5.0.5 (Build 8)**	**Calibration Version:**	**1**
Host Tool Name:	**DSNT - 12023046**		

CALIBRATION COEFFICIENT SUMMARY

Measurement	Micro Log Normal	Micro Log Lateral

	Measured	Calibrated	Measured	Calibrated	Units
Tool Zero	-0.17	-0.17	-0.01	-0.00	ohmm
Calibration Point #1	0.00	0.00	-0.00	0.00	ohmm
Calibration Point #2	20.01	20.00	20.00	20.00	ohmm
Internal Reference	19.88	19.87	19.97	19.97	ohmm

Measurement	Micro Log Normal Tool Value	Micro Log Lateral Tool Value	Units
Tool Zero	0.01	0.17	V
Calibration Point #1	44.98	1.31	V
Calibration Point #2	5336.68	6851.06	V
Internal Reference	5301.61	6839.77	V

MICRO LOG FIELD CHECK

Tool Name: Microlog Pad - 12153526 **Reference Calibration Date:** 31-Jul-17 09:21:08

Engineer: T. HYDE **Calibration Date:** 31-Jul-17 09:27:34

Software Version: WL INSITE R5.0.5 (Build 8) **Calibration Version:** 1

Measurement	Micro Log Normal		Micro Log Lateral		
	Shop	Field	Shop	Field	Units
Tool Zero	-0.17	-0.17	-0.00	-0.00	ohmm
Internal Reference	19.87	19.87	19.97	19.97	ohmm

Summary

Signal	Shop	Field	Difference	Tolerence
Microlog Normal	19.87	19.87	0.00	+/- 0.80
Microlog Lateral	19.97	19.97	0.00	+/- 0.80

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name: SDLT Pad - 10865873 **Reference Calibration Date:** 11-May-17 10:56:48

Engineer: T. HYDE **Calibration Date:** 05-Jul-17 13:02:30

Software Version: WL INSITE R5.0.5 (Build 8) **Calibration Version:** 1

Logging Source S/N: 20791B

Aluminum Block S/N: EL RENO ALUMINUM Density: 2.581g/cc Pe: 3.170

Magnesium Block S/N: EL RENO MAGNESIUM Density: 1.687g/cc Pe: 2.594

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0133	1.0988	0.90 - 1.10
Near Dens Gain	1.0164	1.0679	0.90 - 1.10
Near Peak Gain	1.0400	1.0978	0.90 - 1.10
Near Lith Gain	1.0400	1.0968	0.90 - 1.10
Far Bar Gain	1.0101	1.0199	0.90 - 1.10
Far Dens Gain	1.0001	1.0096	0.90 - 1.10
Far Peak Gain	0.9986	1.0093	0.90 - 1.10
Far Lith Gain	0.9724	0.9817	0.90 - 1.10
Near Bar Offset	0.1327	-0.6543	NONE
Near Dens Offset	0.0969	-0.3629	NONE
Near Peak Offset	-0.1129	-0.5939	NONE
Near Lith Offset	-0.1381	-0.6143	NONE
Far Bar Offset	0.1541	0.0639	NONE
Far Dens Offset	0.2032	0.1140	NONE
Far Peak Offset	0.1741	0.0775	NONE
Far Lith Offset	0.3213	0.2365	NONE
Near Bar Background	840.40	841.26	700 - 1450
Near Dens Background	276.97	274.42	230 - 480

Near Peak Background	121.49	121.24	100 - 210
Near Lith Background	146.82	146.46	125 - 260
Far Bar Background	472.80	472.41	450 - 900
Far Dens Background	186.19	186.04	175 - 345
Far Peak Background	72.59	73.12	70 - 140
Far Lith Background	75.44	77.06	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.685	1.687	0.002	+/- 0.015
Pe	2.572	2.561	-0.011	+/- 0.150
ALUMINUM				
Density (g/cc)	2.577	2.580	0.003	+/- 0.01500
Pe	3.165	3.134	-0.031	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0012	+/- 0.0110	0.0006	+/- 0.0140
Magnesium Block	-0.0007	+/- 0.0110	-0.0012	+/- 0.0140
Aluminum Block	-0.0007	+/- 0.0110	-0.0006	+/- 0.0140
Resolution	9.91	6.00 - 11.50	8.90	6.00 - 11.50
Internal Verifier(B+D+P+L)	1383	1200 - 2700	809	800 - 1700

PASS/FAIL SUMMARY

Background Quality Check:	Passed
Background Range Check:	Passed
Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

SPECTRAL DENSITY FIELD CHECK

Tool Name: SDLT Pad - 10865873 **Reference Calibration Date:** 05-Jul-17 13:02:30

Engineer: T. HYDE **Calibration Date:** 31-Jul-17 09:19:26

Software Version: WL INSITE R5.0.5 (Build 8) **Calibration Version:** 1

Pad Temperature: 80.8 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1383.381	1376.524	-6.857	15.027
Far (B+D+P+L) cps	808.624	805.509	-3.115	15.724
Near Resolution	9.91	9.98	0.070	0.50
Far Resolution	8.90	9.14	0.240	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	**ACRt Sonde - 12109515**	**Reference Calibration Date:**	**10-Mar-17 16:30:34**
Engineer:	**JORGE ORLANDO PEREZ**	**Calibration Date:**	**26-Jun-17 09:54:04**
Software Version:	**WL INSITE R5.0.5 (Build 8)**	**Calibration Version:**	**1**
Host Tool Name:	**ACRt Instrument - 12109517**		

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0343	1.05	0.95	1.0158	1.05	0.95	1.0090	1.05
A2 (50")	0.95	1.0478	1.05	0.95	1.0305	1.05	0.95	1.0275	1.05
A3 (29")	0.95	1.0359	1.05	0.95	1.0177	1.05	0.95	1.0125	1.05
A4 (17")	0.95	1.0289	1.05	0.95	1.0091	1.05	0.95	1.0060	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0141	1.05	0.95	1.0089	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9916	1.05	0.95	0.9874	1.05

SONDE OFFSET

Subarray	R12KHz	R36KHz	R72KHz
	(mmho/m)	(mmho/m)	(mmho/m)
A1 (80")	0.785	-4.447	-5.755
A2 (50")	-0.427	-3.982	-5.059
A3 (29")	-14.213	-4.684	-3.616
A4 (17")	-109.833	-33.558	-25.528
A5 (10")	N/A	-77.847	-35.599
A6 (6")	N/A	284.626	148.473

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.6	0.91	1.3
36K	1.0	1.90	2.0
72K	1.0	1.15	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	232.0	234.6	----------	-2.6	+/- 9.00	api
DSNT-12023046						
Snow-Block Porosity	0.0800	0.0732	----------	0.0068	+/- 0.0150	decp
SDLT-12153526						
Pad Extension	3.75	3.74	----------	0.01	+/-0.10	in
Ring Diameter	8.25	8.27	----------	-0.02	+/-0.15	in
Microlog Pad-12153526						
MicroLog Normal	19.87	19.87	----------	0.00	+/-0.80	ohmm
MicroLog Lateral	19.97	19.97	----------	0.00	+/-0.80	ohmm
SDLT Pad-10865873						
Near(B+D+P+L)	1383.381	1376.524	----------	6.857	+/-15.027	cps
Far(B+D+P+L)	808.624	805.509	----------	3.115	+/-15.724	cps
ACRt Sonde-12109515						
Mud Cell	1.00	----------	----------	0	----------	ohm-m

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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	8.900	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	0.920	ohmm
	SHARED	TRM	Temperature of Mud	75.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.000	in
	SHARED	CSTR	Compressive Strength	1000.00	psia
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	5980.00	ft
	SHARED	BHT	Bottom Hole Temperature	125.0	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	
	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	
	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	BHSM	Borehole Size Source Tool	SDLT	
	SDLT	CLOK	Process Caliper Outputs?	Yes	
	Micrologl 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	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	1.19	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
ACRt Sonde	TPOS	Tool Position	Centered	
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

Data: LINDA_JO_1-22\0001 GTET-DSNT-SDLT-BSAT-ACRT\IDLE **Date: 10-Aug-17 23:32:49**

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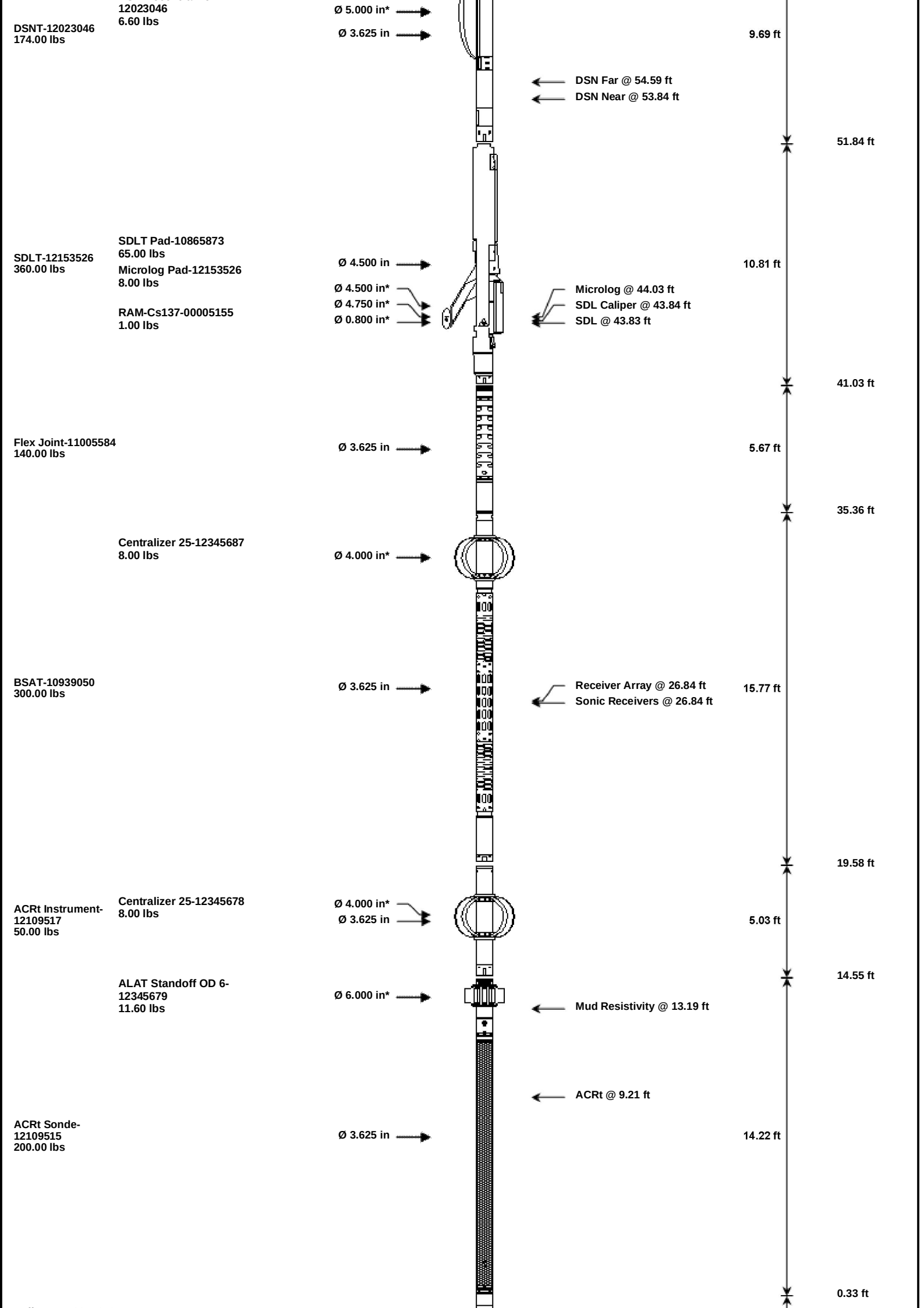
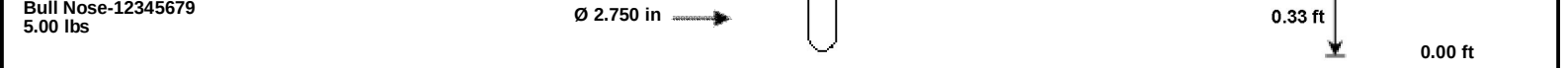
TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
				Temperature @ 76.74 ft		77.24 ft
CH_HOS-11459024 37.50 lbs	Weak Point 7000 lbs-12345678 0.01 lbs	Ø 2.750 in Ø 0.010 in*			2.50 ft	
						74.74 ft
XOHD-11569312 20.00 lbs		Ø 2.750 in Ø 3.625 in			0.95 ft	
						73.79 ft
SP Sub-11441709 60.00 lbs		Ø 3.625 in		SP @ 72.01 ft	3.74 ft	
						70.05 ft
				Z-Accelerometer @ 69.60 ft		
GTET-10971172 165.00 lbs		Ø 3.625 in			8.52 ft	
				GammaRay @ 63.99 ft		
						61.53 ft
	DSN Decentralizer-					


12023046
6.60 lbs
Ø 5.000 in*
DSNT-12023046
174.00 lbs
Ø 3.625 in
9.69 ft
DSN Far @ 54.59 ft
DSN Near @ 53.84 ft
51.84 ft
SDLT Pad-10865873
65.00 lbs
SDLT-12153526
360.00 lbs
Microlog Pad-12153526
8.00 lbs
Ø 4.500 in
10.81 ft
Ø 4.500 in*
Ø 4.750 in*
Ø 0.800 in*
RAM-Cs137-00005155
1.00 lbs
Microlog @ 44.03 ft
SDL Caliper @ 43.84 ft
SDL @ 43.83 ft
41.03 ft
Flex Joint-11005584
140.00 lbs
Ø 3.625 in
5.67 ft
35.36 ft
Centralizer 25-12345687
8.00 lbs
Ø 4.000 in*
BSAT-10939050
300.00 lbs
Ø 3.625 in
Receiver Array @ 26.84 ft
Sonic Receivers @ 26.84 ft
15.77 ft
19.58 ft
Centralizer 25-12345678
8.00 lbs
Ø 4.000 in*
ACRt Instrument-
12109517
50.00 lbs
Ø 3.625 in
5.03 ft
14.55 ft
ALAT Standoff OD 6-
12345679
11.60 lbs
Ø 6.000 in*
Mud Resistivity @ 13.19 ft
ACRt @ 9.21 ft
ACRt Sonde-
12109515
200.00 lbs
Ø 3.625 in
14.22 ft
0.33 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	11459024	37.50	2.50		74.74	300.00
WP7K	Weak Point 7000 lbs	12345678	0.01	0.01	*	75.54	300.00
XOHD	Hostile to Dits Cross Over	11569312	20.00	0.95		73.79	300.00
SP	SP Sub	11441709	60.00	3.74		70.05	300.00
GTET	Gamma Telemetry Tool	10971172	165.00	8.52		61.53	60.00
DSNT	Dual Spaced Neutron	12023046	174.00	9.69		51.84	60.00
DCNT	DSN Decentralizer	12023046	6.60	5.13	*	55.17	300.00
SDLT	Spectral Density Tool	12153526	360.00	10.81		41.03	60.00
SDLP	Density Insite Pad	10865873	65.00	2.55	*	43.24	60.00
Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137	00005155	1.00	0.80	*	43.47	300.00
MICP	Microlog Pad	12153526	8.00	1.00	*	43.53	60.00
FLEX	Flex Joint	11005584	140.00	5.67		35.36	300.00
BSAT	Borehole Sonic Array Tool	10939050	300.00	15.77		19.58	60.00
OBCEN	Centralizer - 25 in. Overbody	12345687	8.00	2.08	*	32.29	300.00
ACRt	Array Compensated True Resistivity Instrument Section	12109517	50.00	5.03		14.55	120.00
OBCEN	Centralizer - 25 in. Overbody	12345678	8.00	2.08	*	16.24	300.00
ACRt	Array Compensated True Resistivity Sonde Section	12109515	200.00	14.22		0.33	120.00
ALATS	Array Laterolog Tool OD 6 Standoff	12345679	11.60	1.00	*	13.19	60.00
BLNS	Bull Nose	12345679	5.00	0.33		0.00	300.00
Total			**1,619.71**	**77.24**			

* Not included in Total Length and Length Accumulation.

Data: LINDA_JO_1-22\0001 GTET-DSNT-SDLT-BSAT-ACRT\IDLE **Date: 10-Aug-17 18:19:14**

COMPANY	**RAYDON EXPLORATION INC.**
WELL	**LINDA JO 1-22**
FIELD	**WILDCAT**
COUNTY	**SEWARD** STATE **KANSAS**

HALLIBURTON

BOREHOLE COMPENSATED SONIC ARRAY DELTA-T LOG