

HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY LOG

COMPANY		EL PASO PRODUCTION			
WELL		VPR C 204 WDW			
FIELD		VERMEJO PARK RANCH			
COUNTY		LAS ANIMAS			
STATE		CO			
Permanent Datum		GL			Elev. 7359.0 ft
Log measured from		KB			12.0 ft above perm. Datum
Drilling measured from		KB			Elev. 7371.0 ft
Date		06-Feb-11			
Run No.		ONE			
Depth - Driller		6610.00 ft			
Depth - Logger		6609.0 ft			
Bottom - Logged Interval		6589 ft			
Top - Logged Interval		3384 ft			
Casing - Driller		9.625 in		@	3384.0 ft
Casing - Logger		33844.0 ft			
Bit Size		8.750 in		@	
Type Fluid in Hole		WBM			
Density		9.1 ppq	43.00 s/qt		
PH		9.50 pH	2.0 cp/m		
Source of Sample		MUD CELL			
Rm @ Meas. Temperature		0.210 ohmm		@	75.00 degF
Rmf @ Meas. Temperature		0.16 ohmm		@	75.00 degF
Rmc @ Meas. Temperature		0.228 ohmm		@	75.00 degF
Source Rmf		Rmc	CHART	CHART	
Rm @ BHT		0.09 ohmm		@	196.0 degF
Time Since Circulation		10.0 hr			
Time on Bottom		06-Feb-11 09:21			
Max. Rec. Temperature		@		@	
Equipment		Location	10800785	BRIGHTON	
Recorded By		F. LODER			
Witnessed By		JACK			

Fold here

Service Ticket No.: N/A		API Serial No.: 05071098380000		PGM Version: WMLINSITE R3.0.7 (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.
Rmf @ Meas. Temp.		@	@	ONE	ACRt 338-042	N/A	1.5" S.O.
Rmc @ Meas. Temp.		@	@				
Source Rmf	Rmc						
Rm @ BHT		@	@				
Rmf @ BHT		@	@				
Rmc @ BHT		@	@				
EQUIPMENT DATA							
GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.		Run No.	ONE	Run No.	ONE
Serial No.	11215095	Serial No.		Serial No.	1332M335	Serial No.	11219332
Model No.	GTET	Model No.		Model No.	SDLT	Model No.	DSNT
Diameter	3.625"	No. of Cent.		Diameter	4.5"	Diameter	3.625"
Detector Model No.	2G8 BICORN	Spacing		Log Type	GAM-GAM	Log Type	NEU-NEU
Type	SCINT			Source Type	Cs137	Source Type	Am241Be
Length	8"	LOG TYPE		Serial No.	525R RW	Serial No.	DSN490

Length			LOG [Y/N]		Serial No.	Value	Serial No.	Value											
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								
No.	From	To	ft/min	L	R	L	R		L	R									
ONE	8610'	3384	REC	0 API	150 API				30%	-10 %	2.88 g/cc	30 %	-10 %	SAND					
DIRECTIONAL INFORMATION																			
Maximum Deviation					@					KOP					@				
Remarks: RWCH-GTET-DSNT-SDLT-ACRT RAN IN COMBINATION																			
ANNULAR HOLE VOLUME CALCULATED USING 7 INCH PRODUCTION CASING																			
TENSION PULLS AND BOREHOLE RUGOSITY AFFECT LOG RESPONSE																			
CHLORIDES REPORTED AT 33000 mg/L																			
CREW: J. WALKER, N. GOULD, R. PERSHALL RIG: AZTEC 222																			
THANK YOU FOR USING HALLIBURTON ENERGY SERVICES -- BRIGHTON, CO -- 303.825.4348																			
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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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	MDWT	Borehole Fluid Weight	9.100	ppg
	SHARED	OBM	Oil Based Mud System?	No	
	SHARED	RMUD	Mud Resistivity	2.000	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	6610.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	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	
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in
	GTET	GEOK	Process Gamma Ray EVR?	No	
	GTET	GRSA	Gamma Ray Standoff	0.00	in

GTET	POTA	Potassium	0.00	%
GTET	MDTP	Mud Type	Natural	
GTET	TPOS	Tool Position	Standoff	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Sandstone	
DSNT	DSNO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.000	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	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	AD	Is Hole Air Drilled?	No	
SDLT	CB	Logging Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	MDTP	Weighted Mud Correction Type?	None	
SDLT	DMA	Formation Density Matrix	2.680	g/cc
SDLT	DFL	Formation Density Fluid	1.000	g/cc
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT	MLOK	Process MicroLog Outputs?	Yes	
ACRt	RTOK	Process ACRt?	Yes	
ACRt	MNSO	Minimum Tool Standoff	1.50	in
ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt	TPOS	Tool Position	Free Hanging	
ACRt	RMOP	Rmud Source	Mud Cell	
ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt	THQY	Threshold Quality	0.50	

BOTTOM

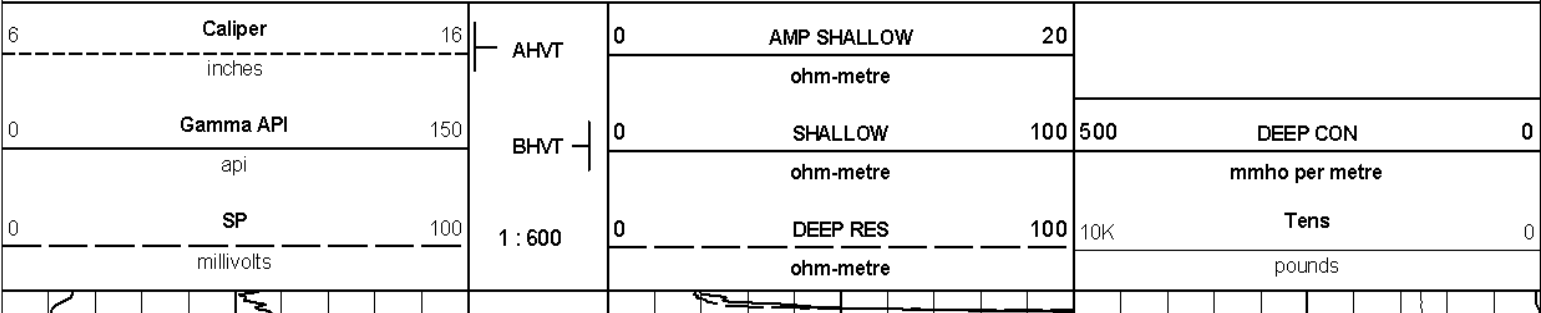
Data: EP_C_204_WDW\0001 TRIPLE\008 06-Feb-11 10:27 Up @4725.5f

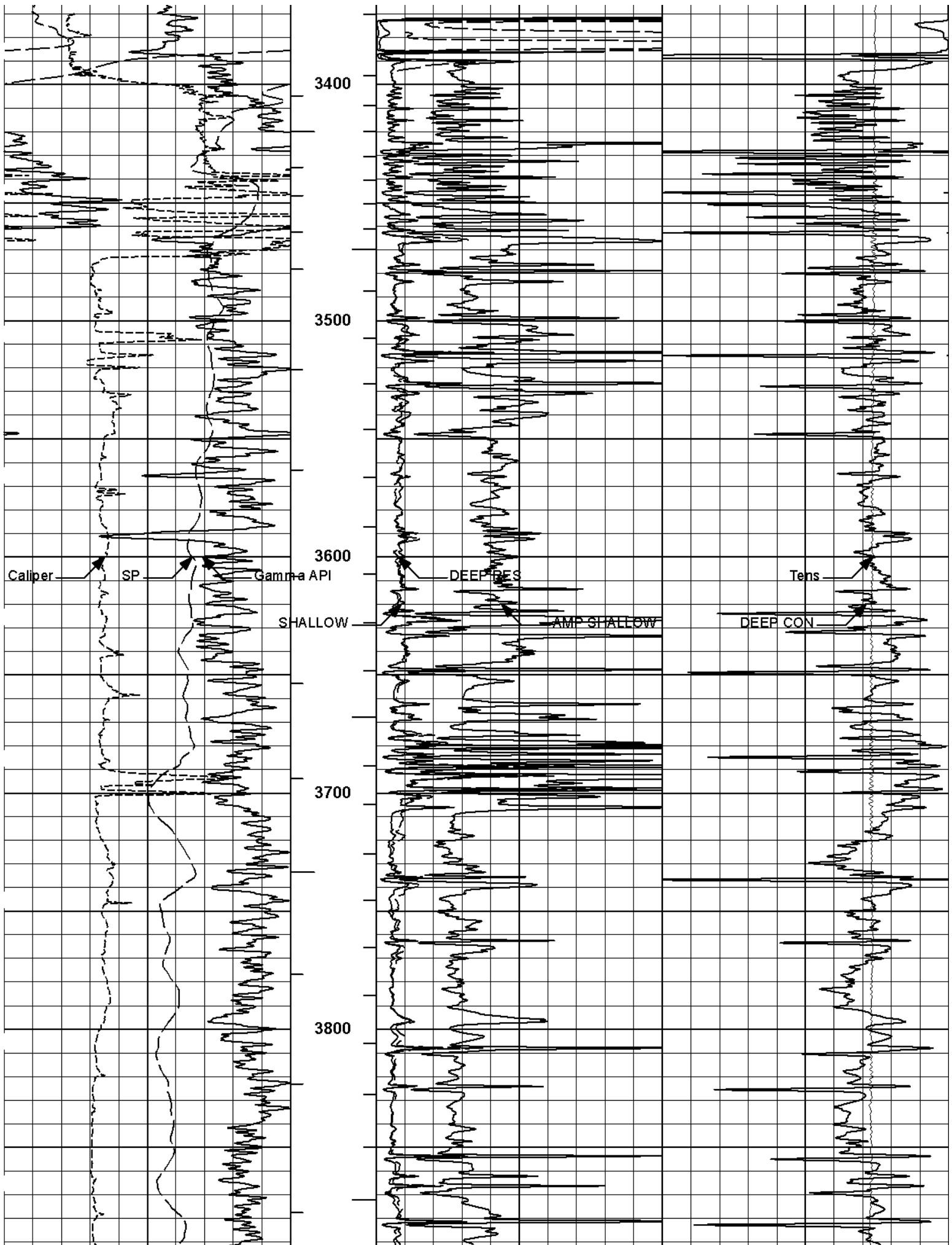
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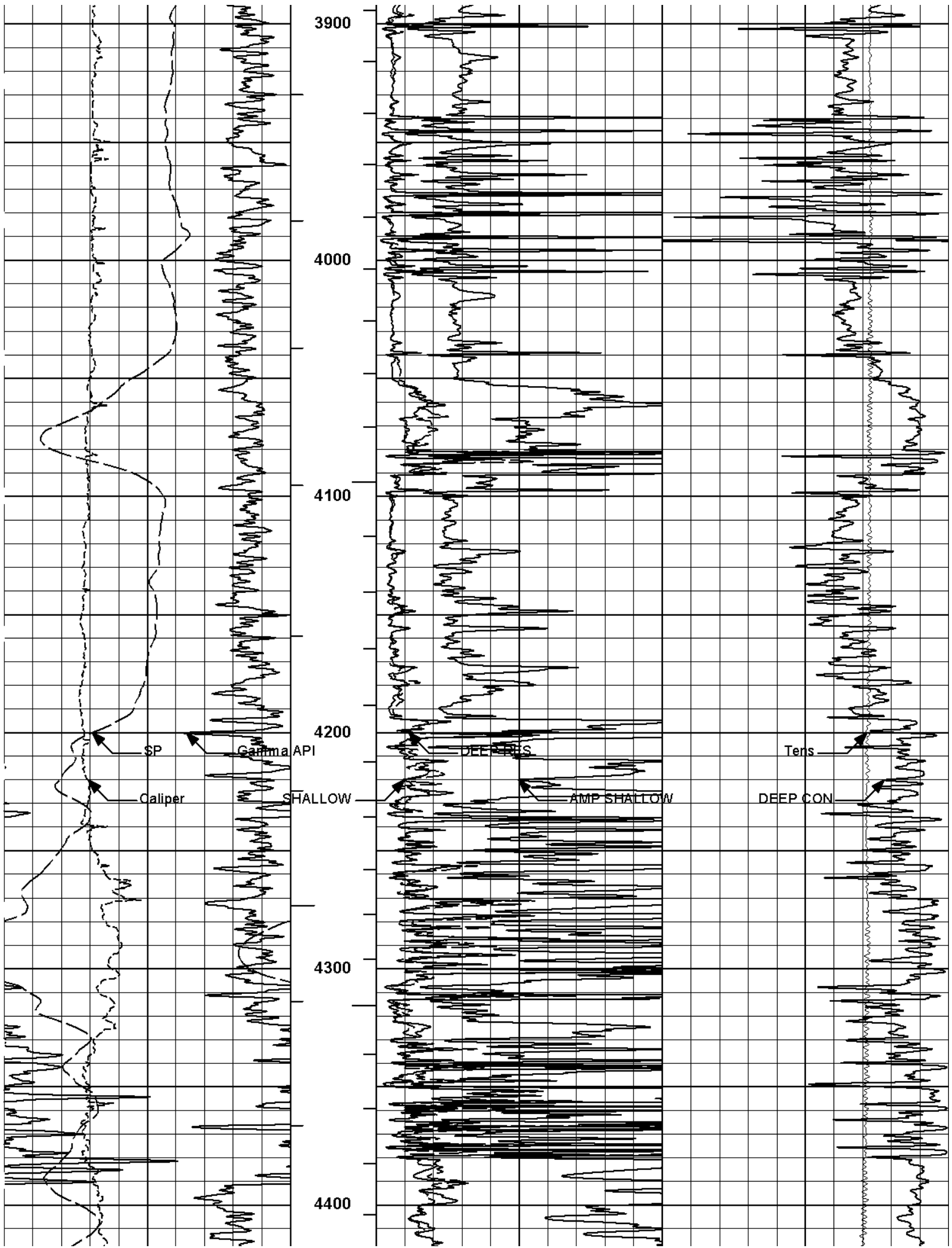
HALLIBURTON

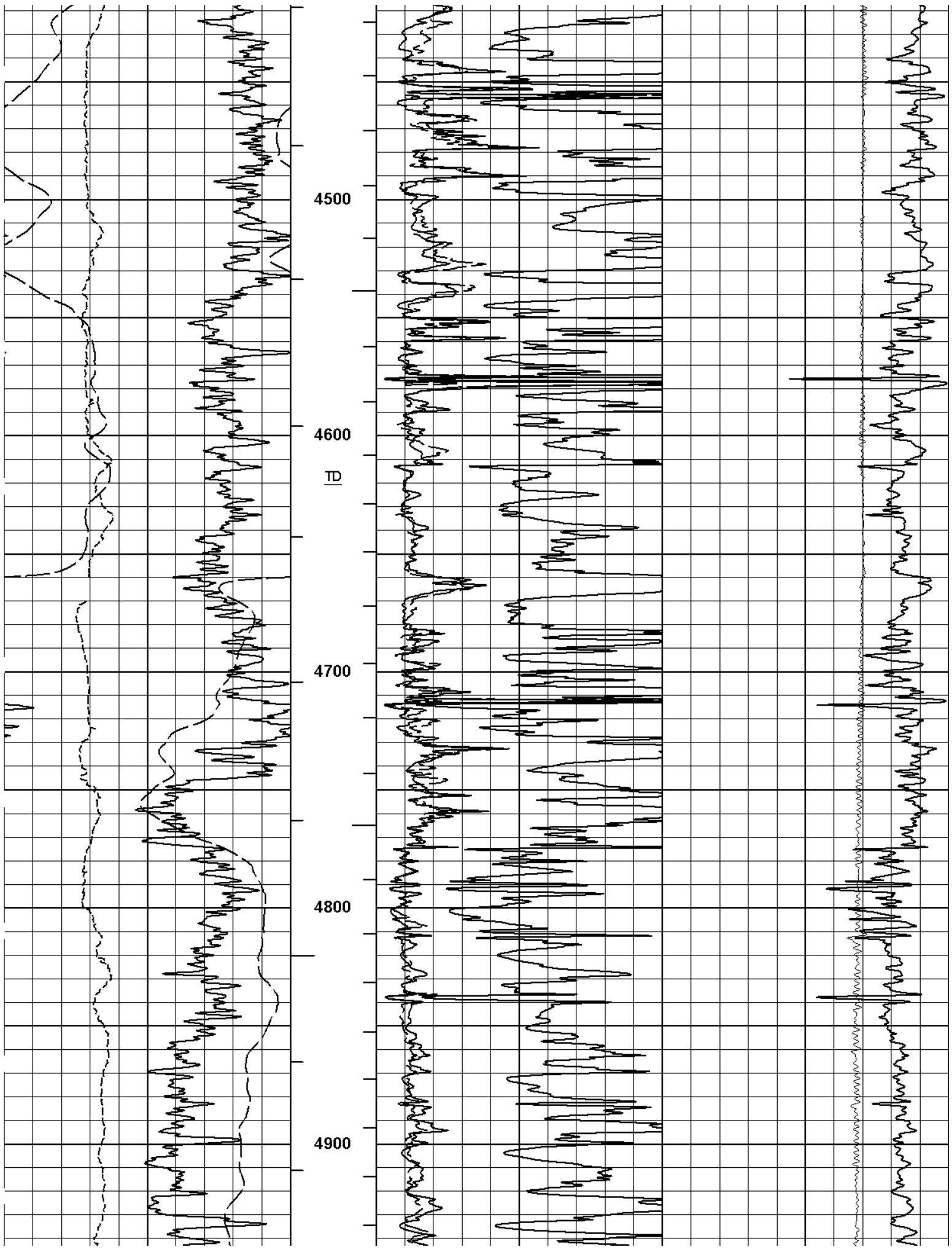
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Plot Range: 3360 ft to 6615.83 ft
Data: {ActiveWell}\Well Based\MAIN*
Plot File: \ACRT\IQ_ACRt_2IN_RM

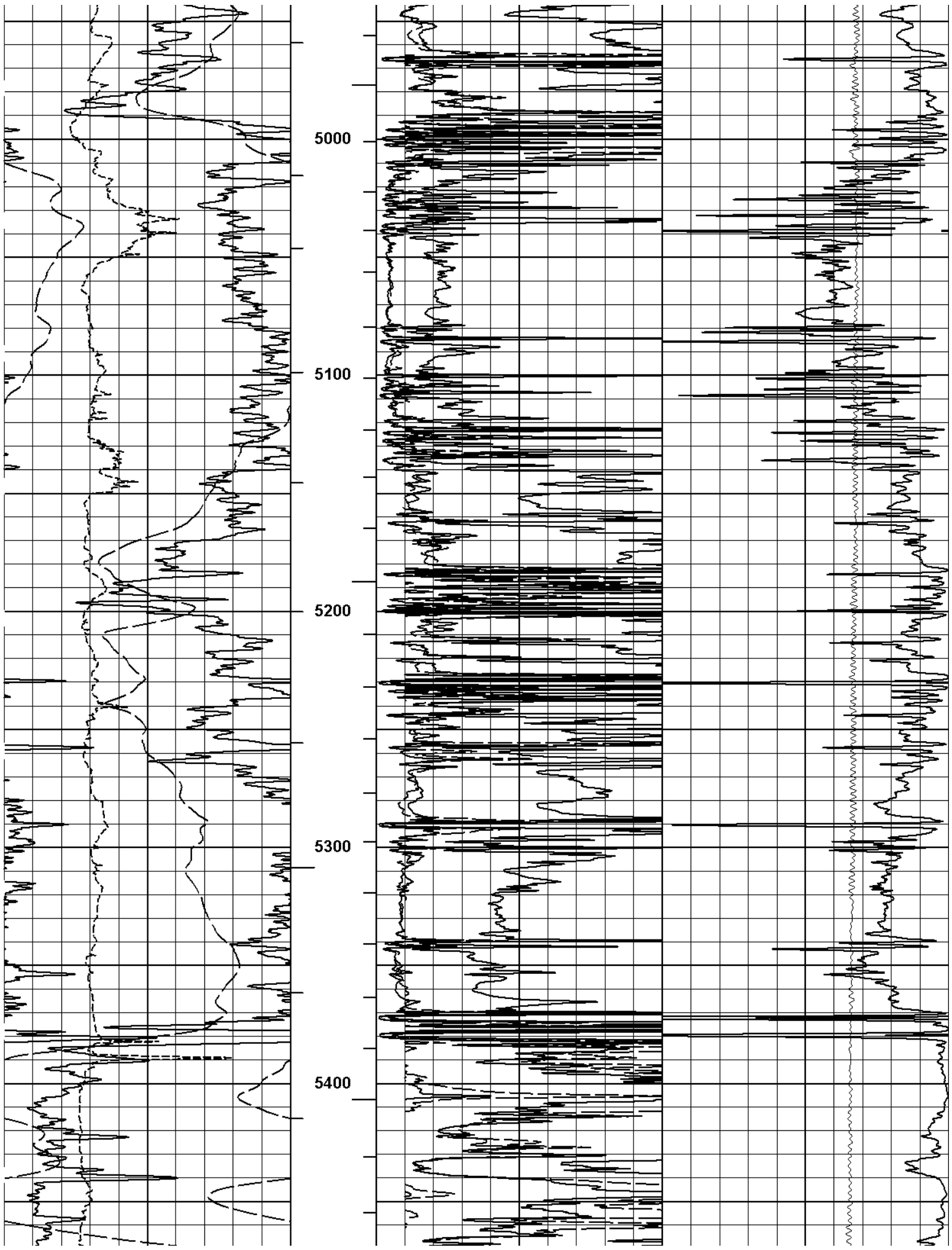
MAIN PASS 2" = 100'

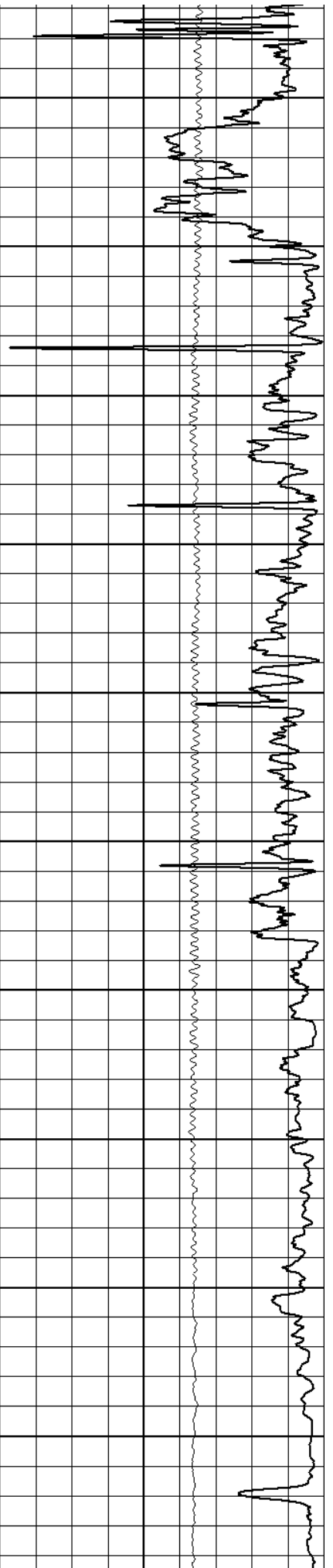
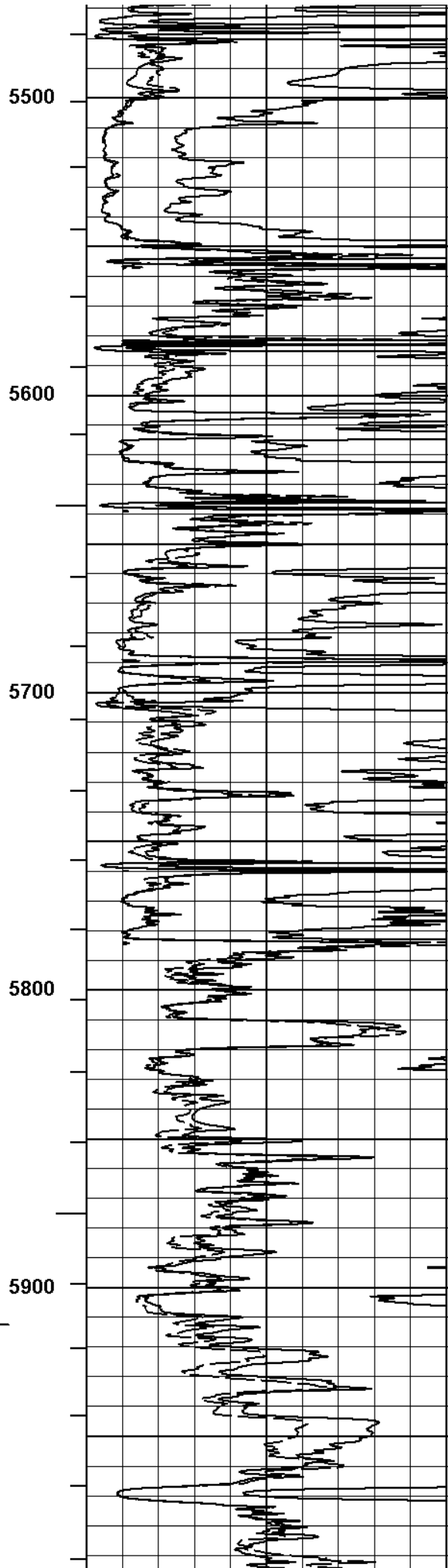
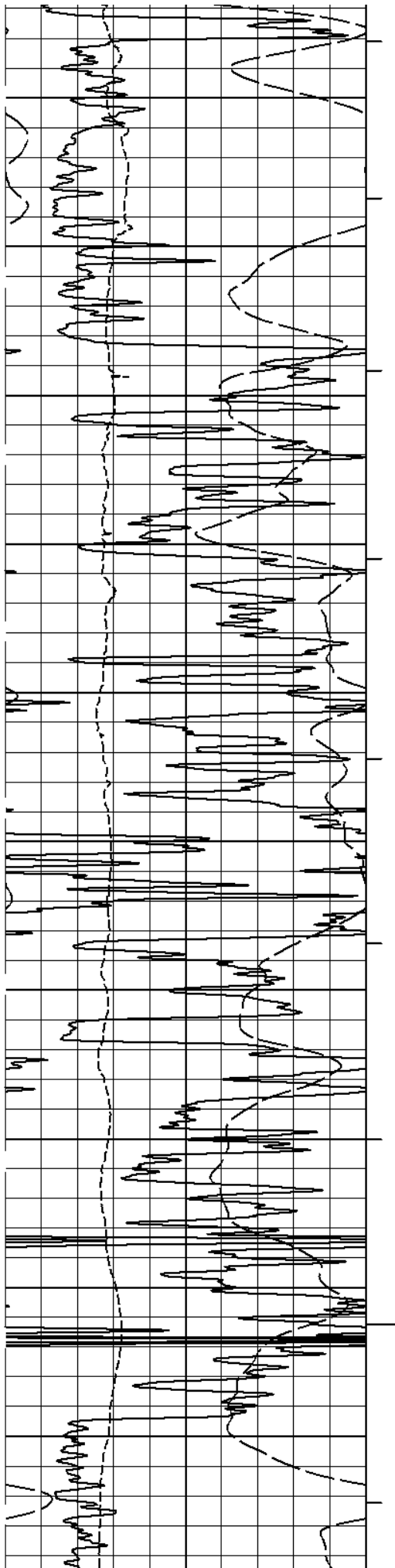


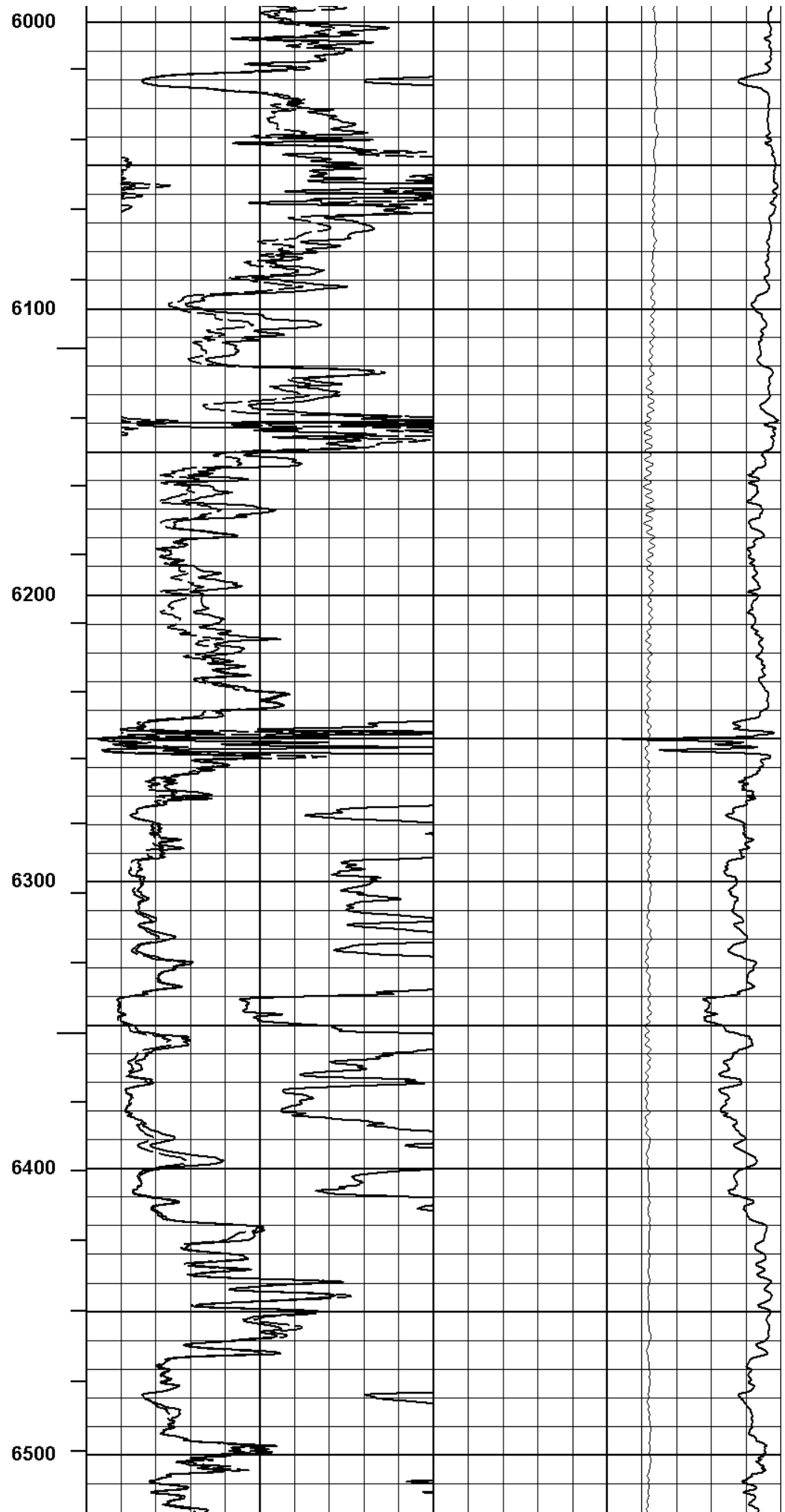
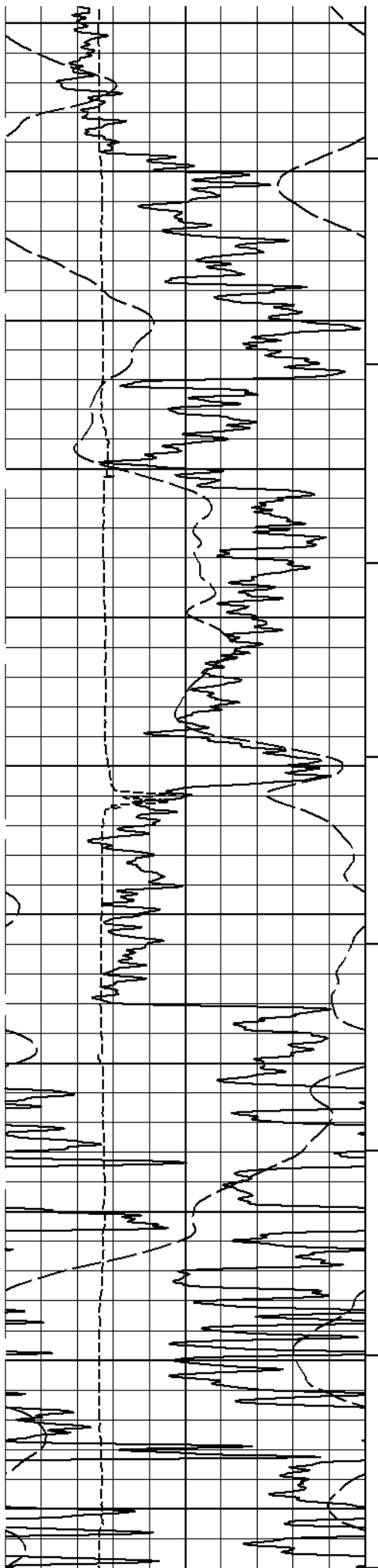


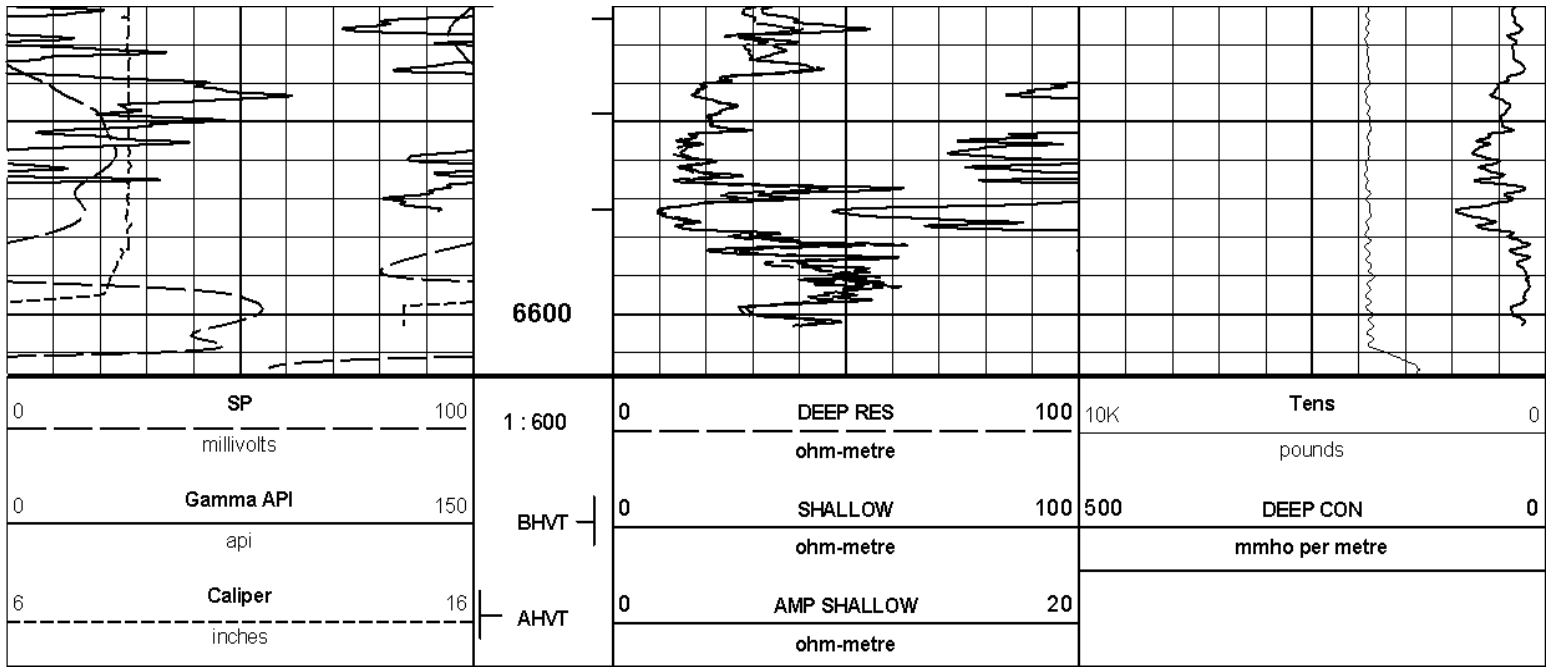












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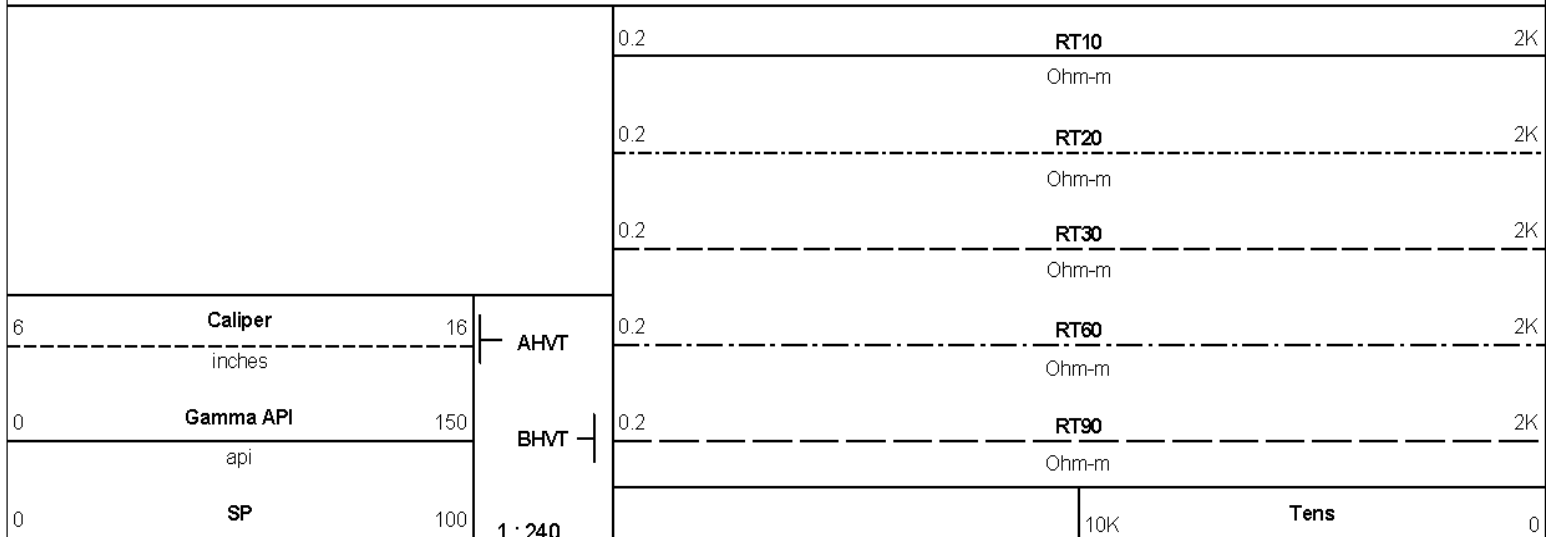
Plot Time: 06-Feb-11 11:10:24
 Plot Range: 3360 ft to 6615.83 ft
 Data: {ActiveWell}\Well Based\MAIN*
 Plot File: \\ACRT\IQ_ACRT_2IN_RM

MAIN PASS 2" = 100'

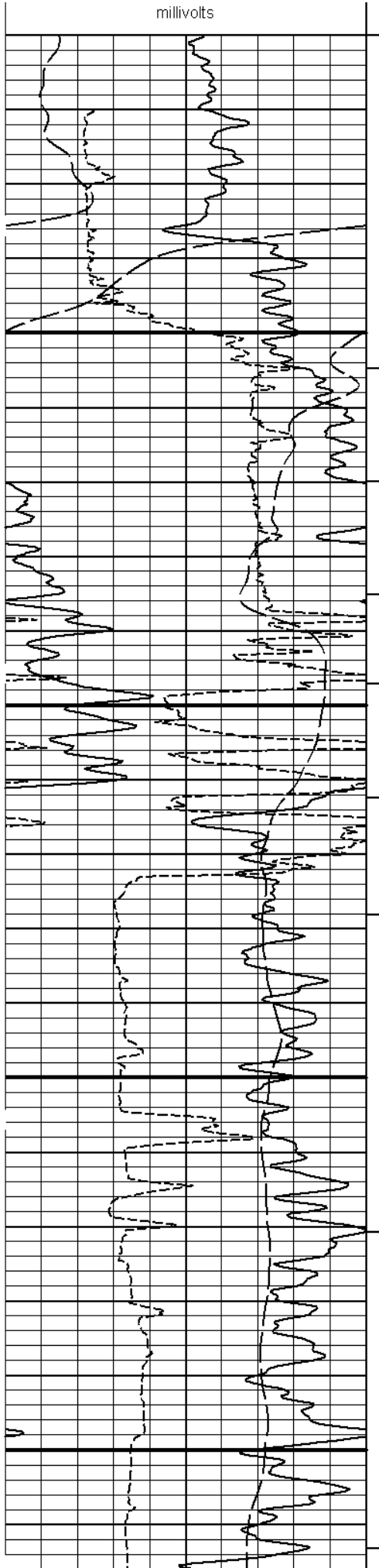
HALLIBURTON

Plot Time: 06-Feb-11 11:10:24
 Plot Range: 3360 ft to 6615.83 ft
 Data: {ActiveWell}\Well Based\MAIN
 Plot File: \\ACRT\IQ_ACRT_5IN_RM

MAIN PASS 5" = 100'



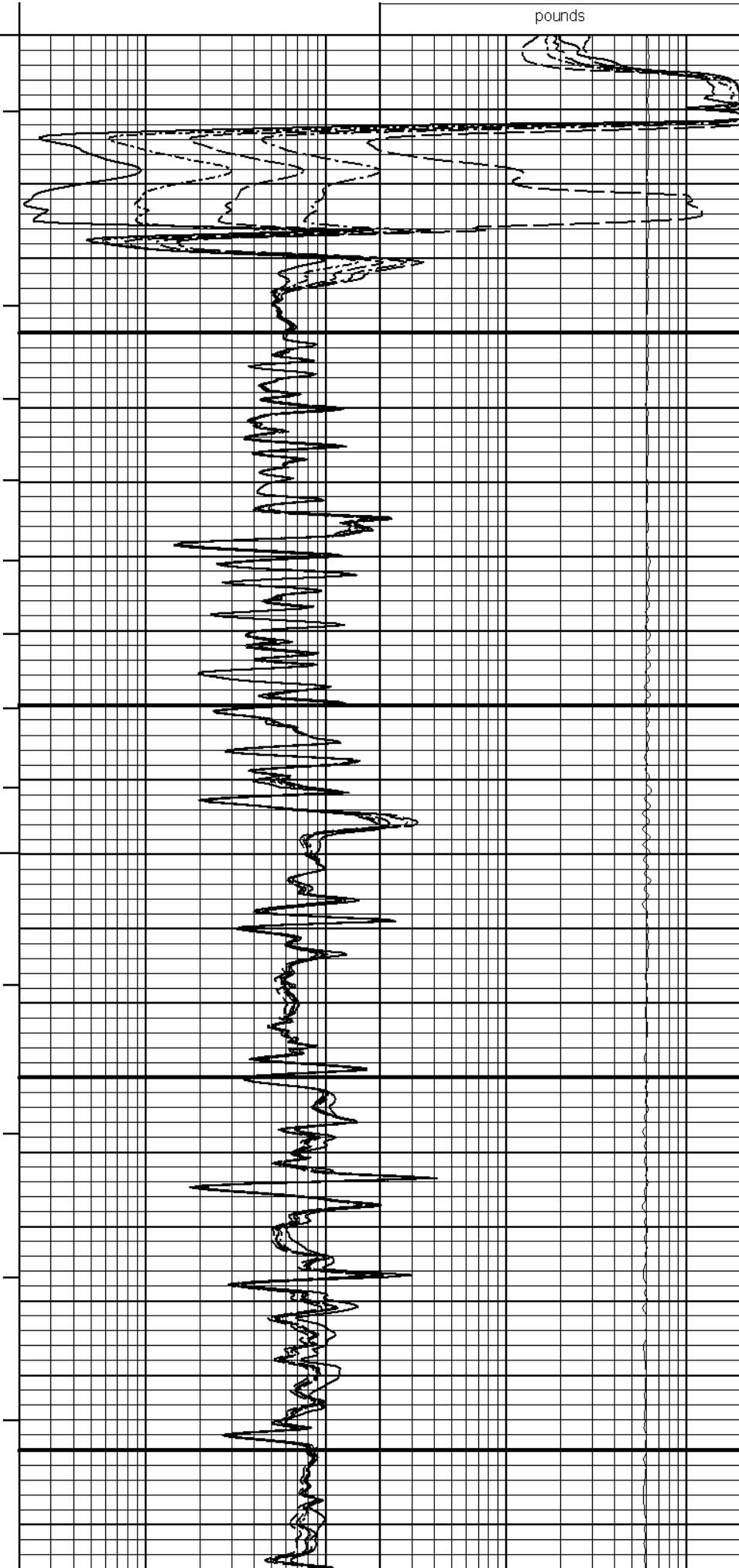
millivolts

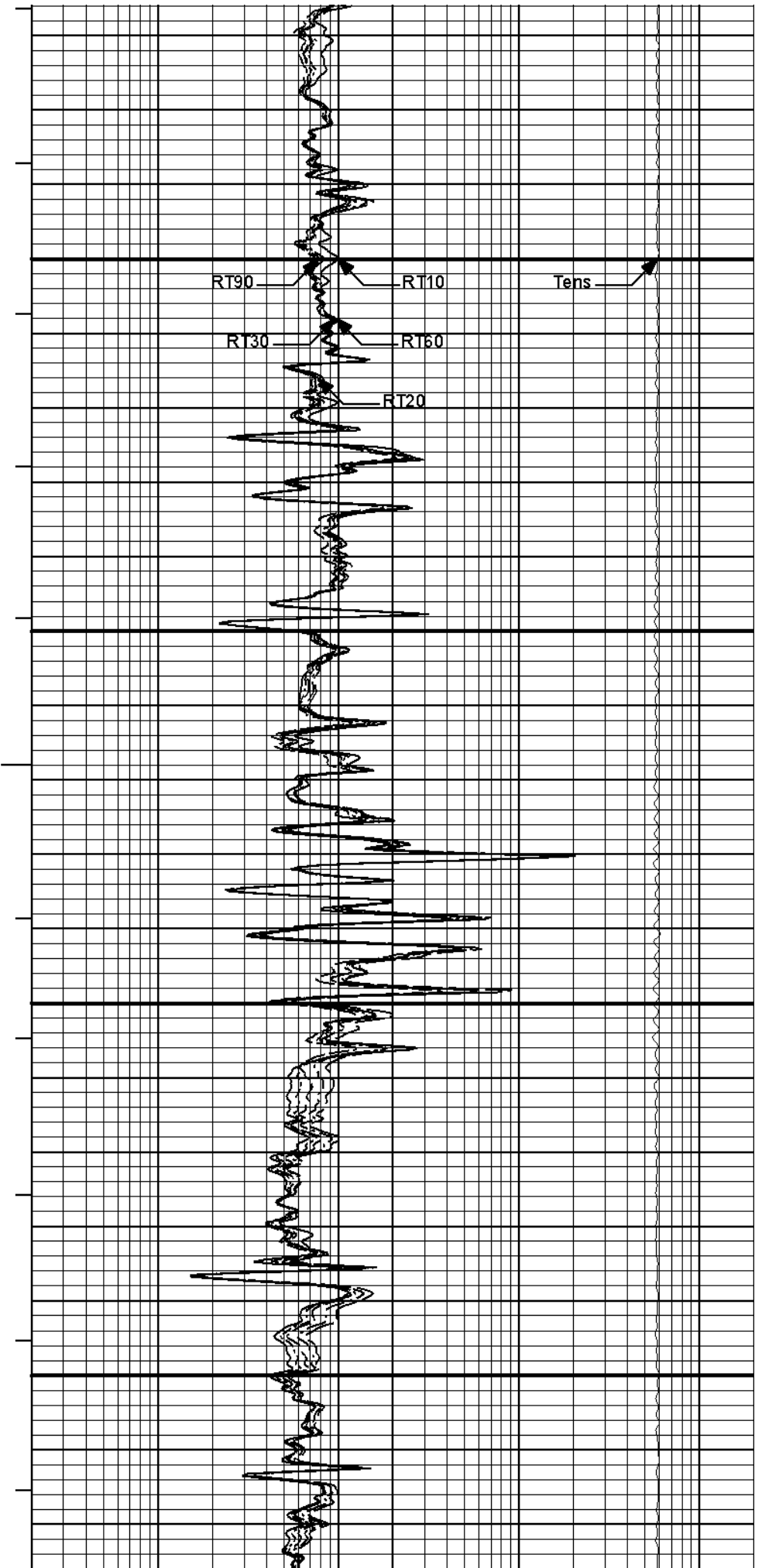
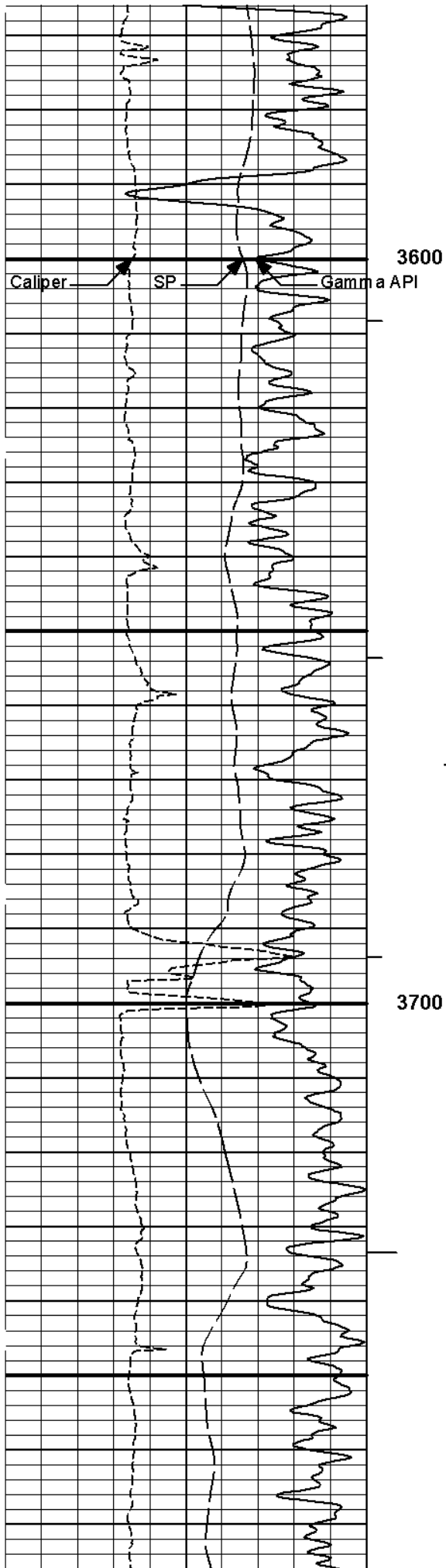


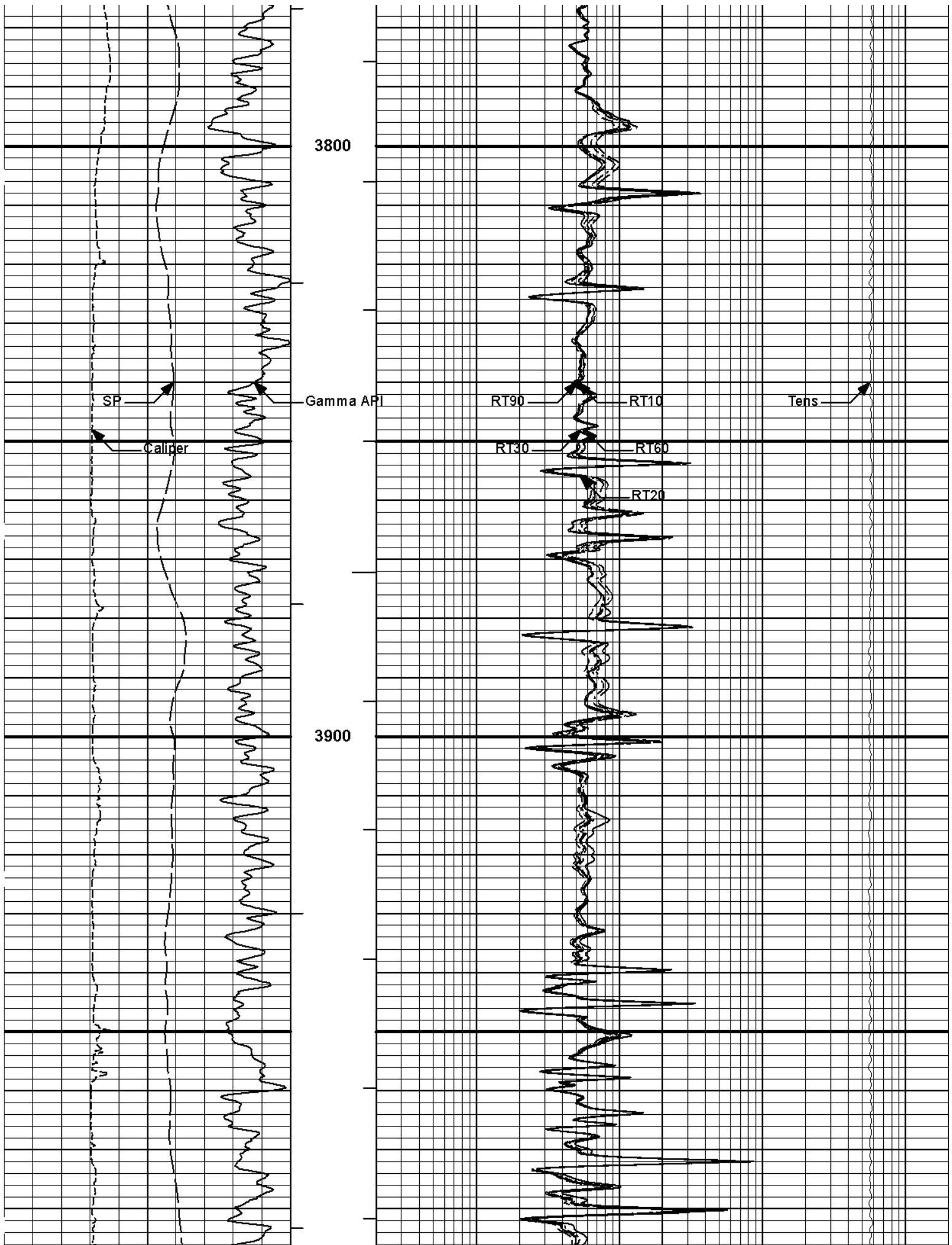
3400

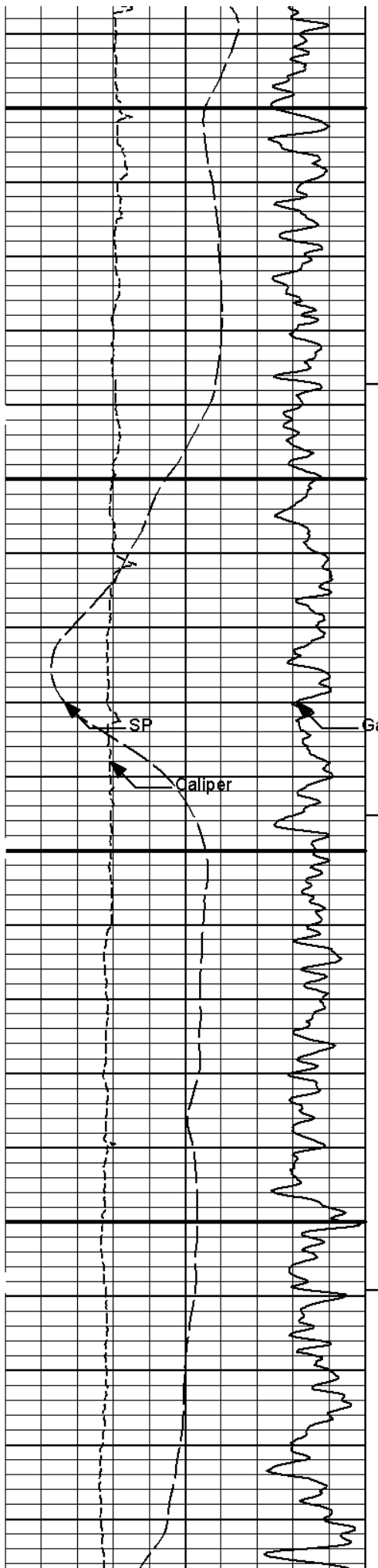
3500

pounds









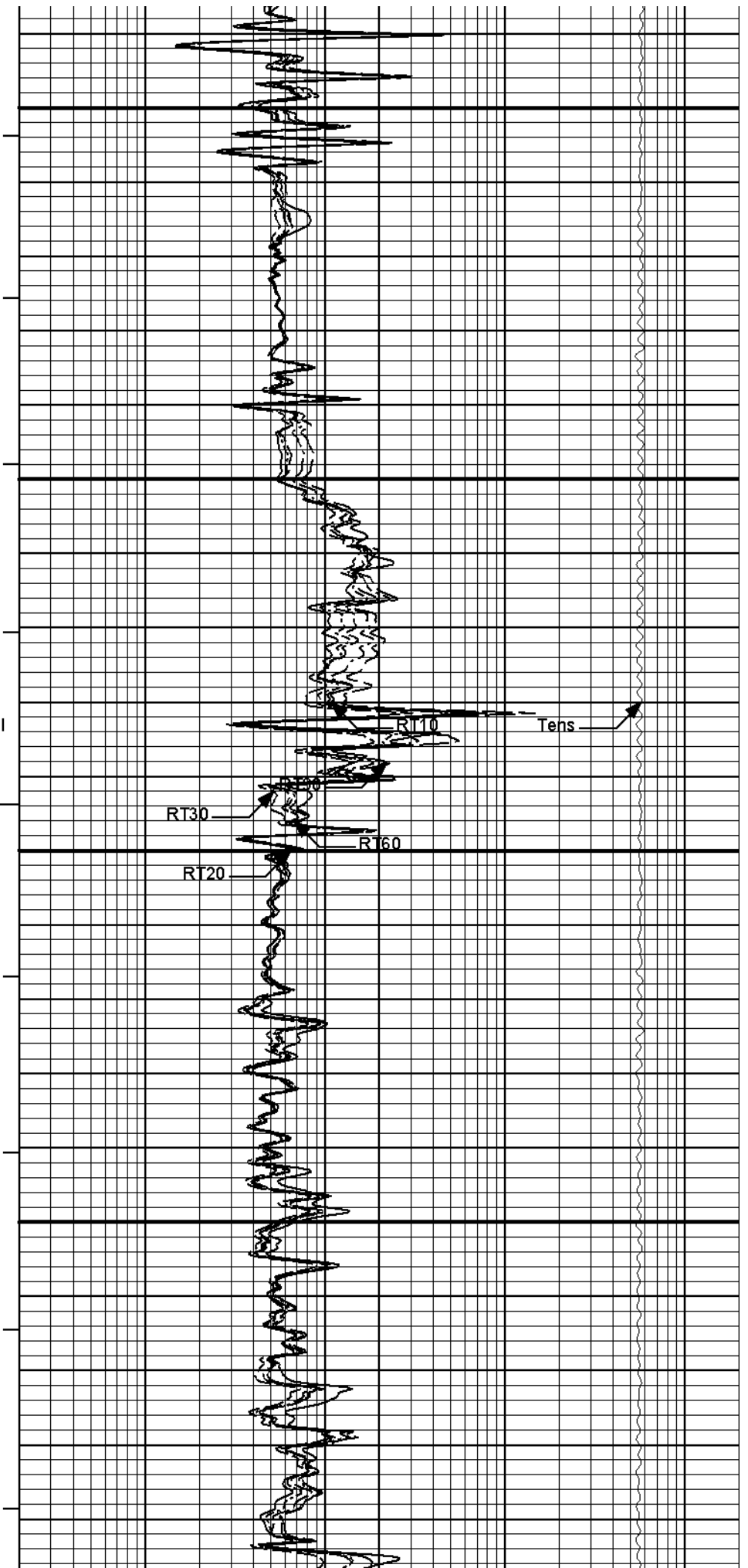
4000

Gamma API

SP

Caliper

4100



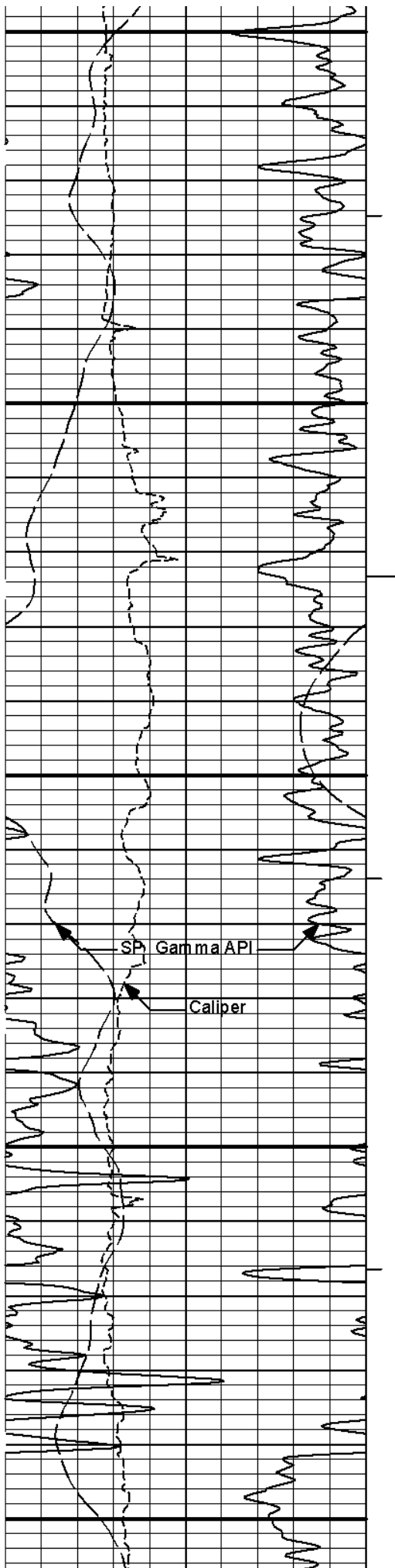
RT30

RT20

RT60

RT10

Tens



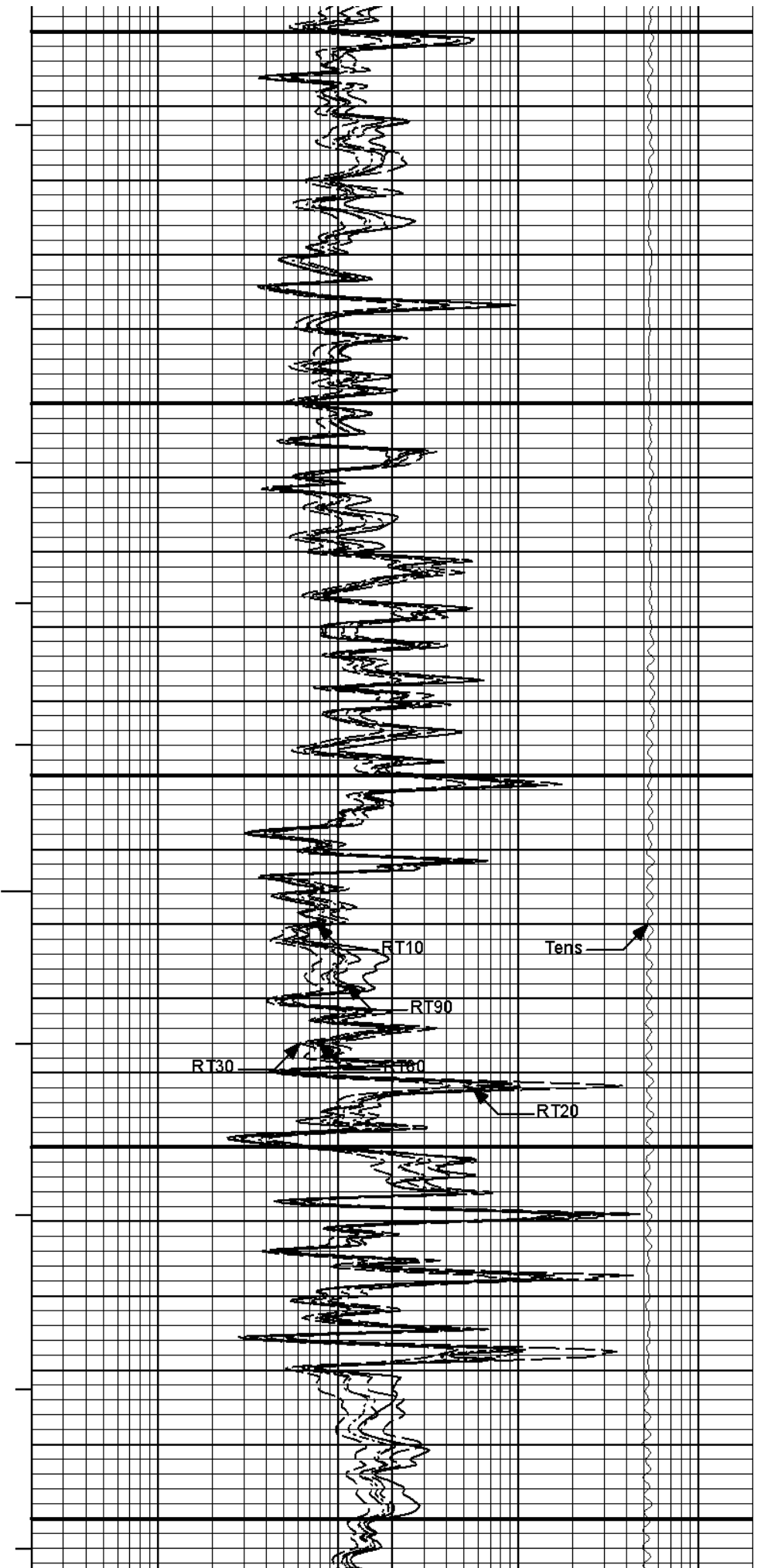
4200

4300

4400

SP Gamma API

Caliper



RT10

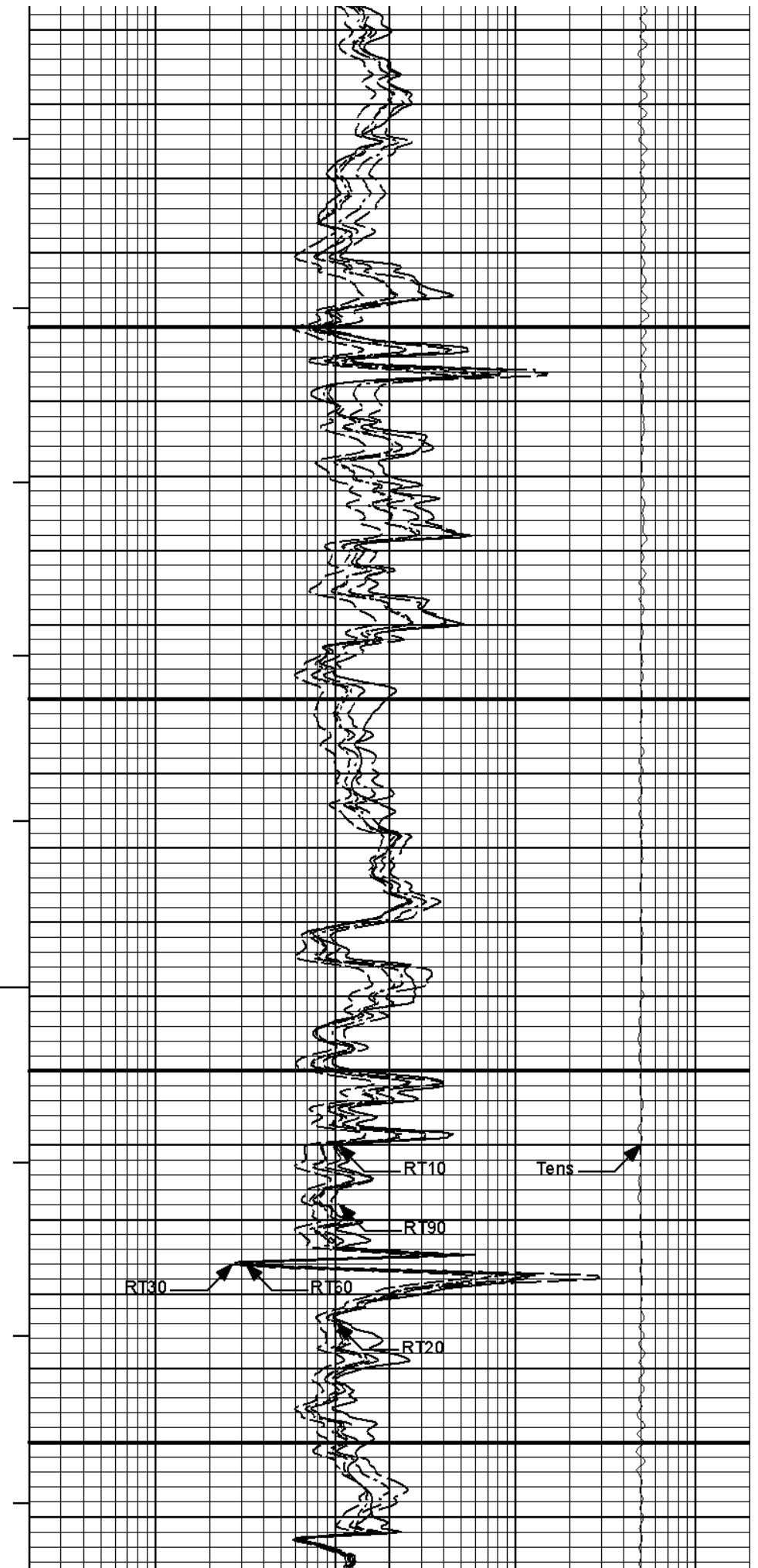
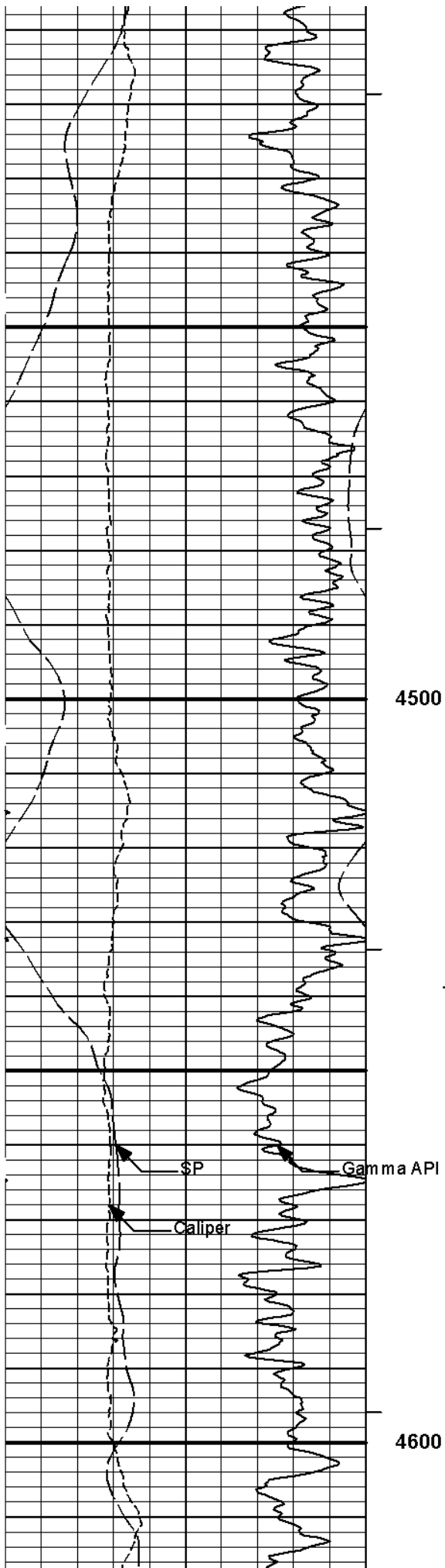
Tens

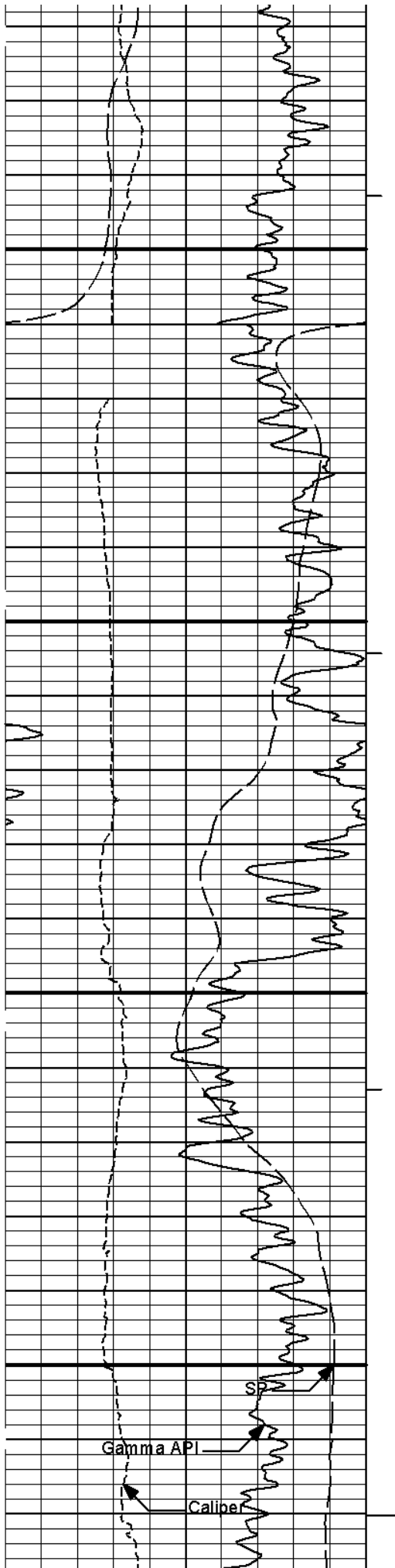
RT90

RT30

RT60

RT20





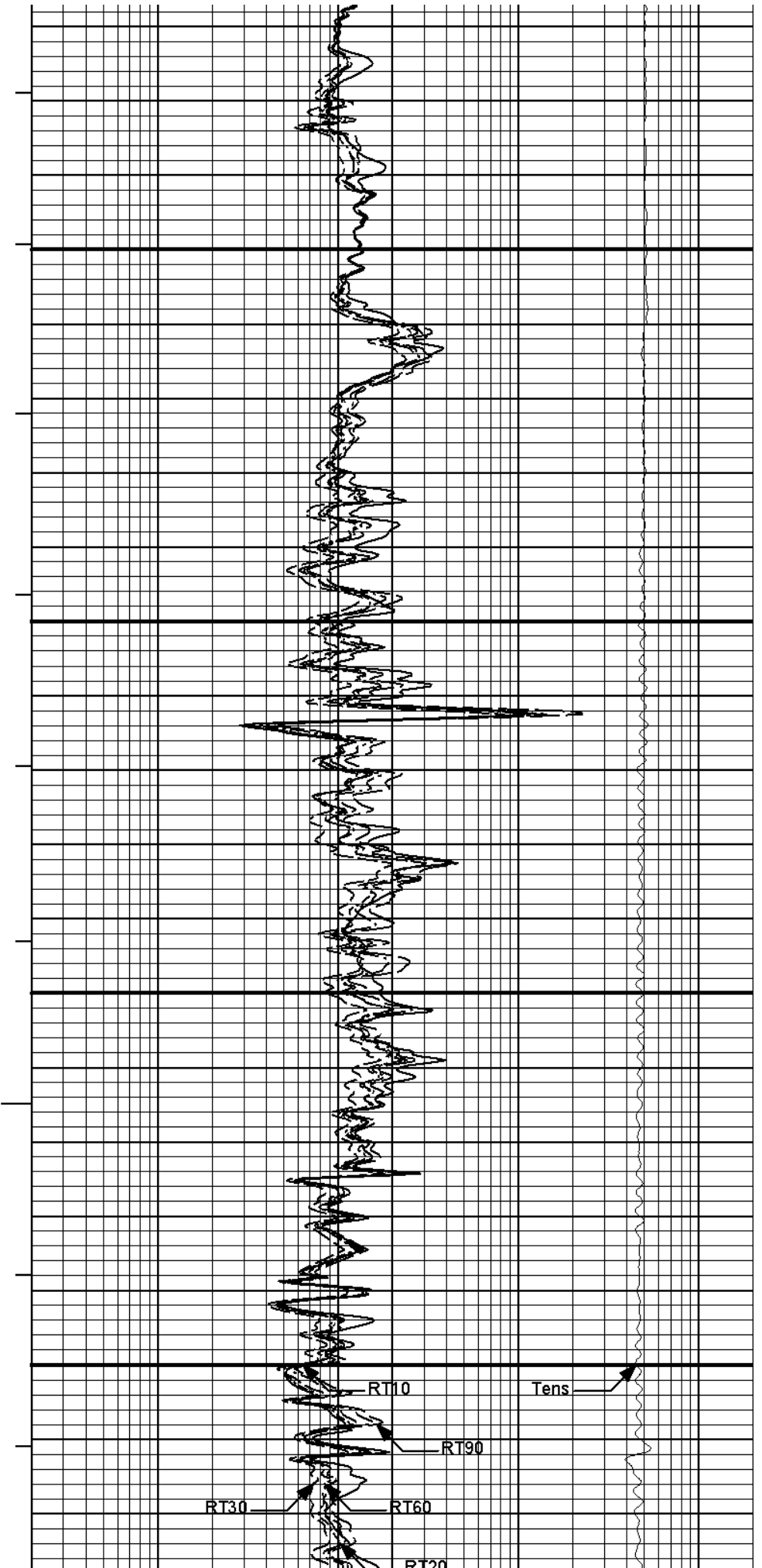
4700

4800

Gamma API

Caliper

Sp



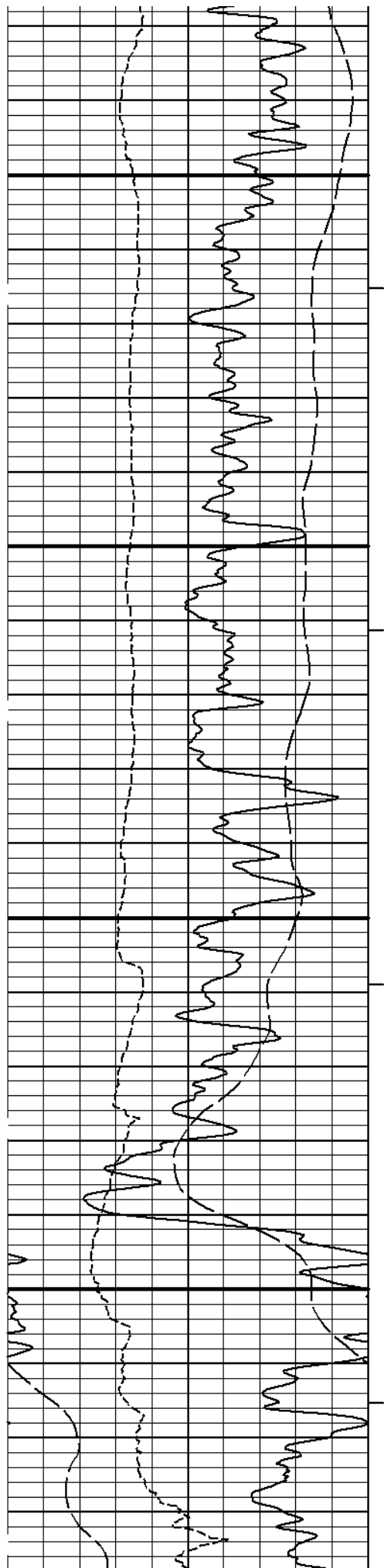
RT30

RT60

RT90

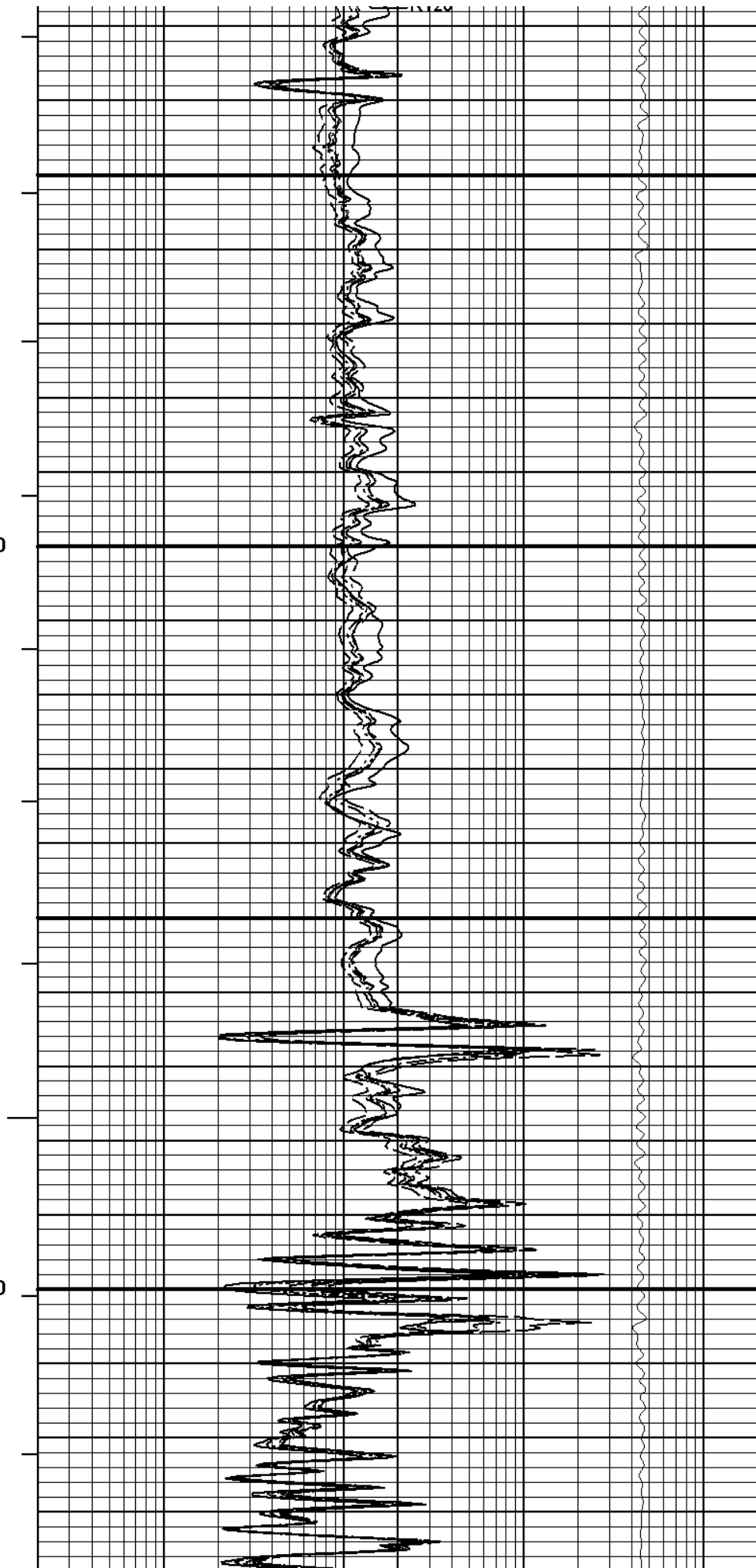
RT10

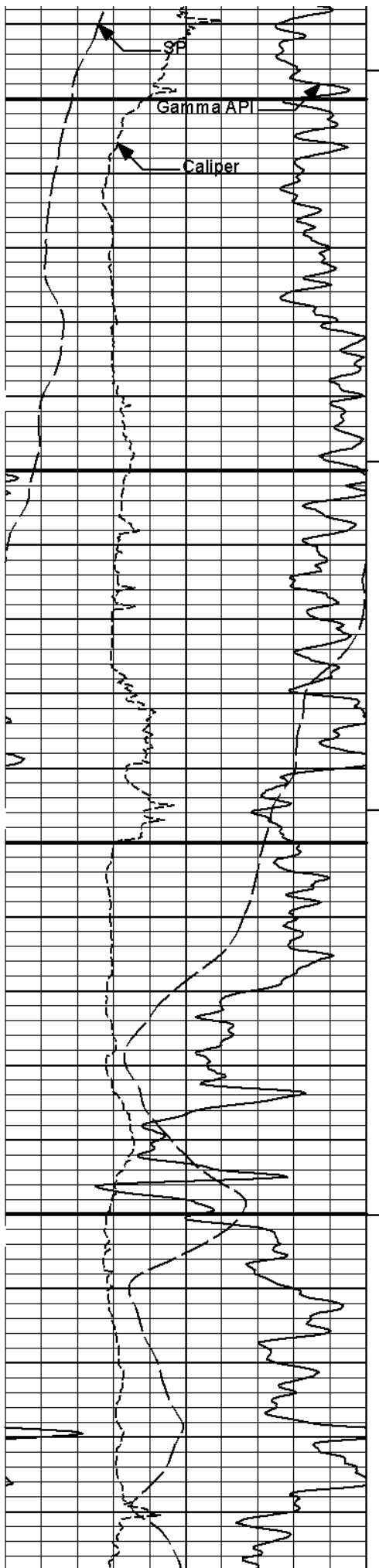
Tens



4900

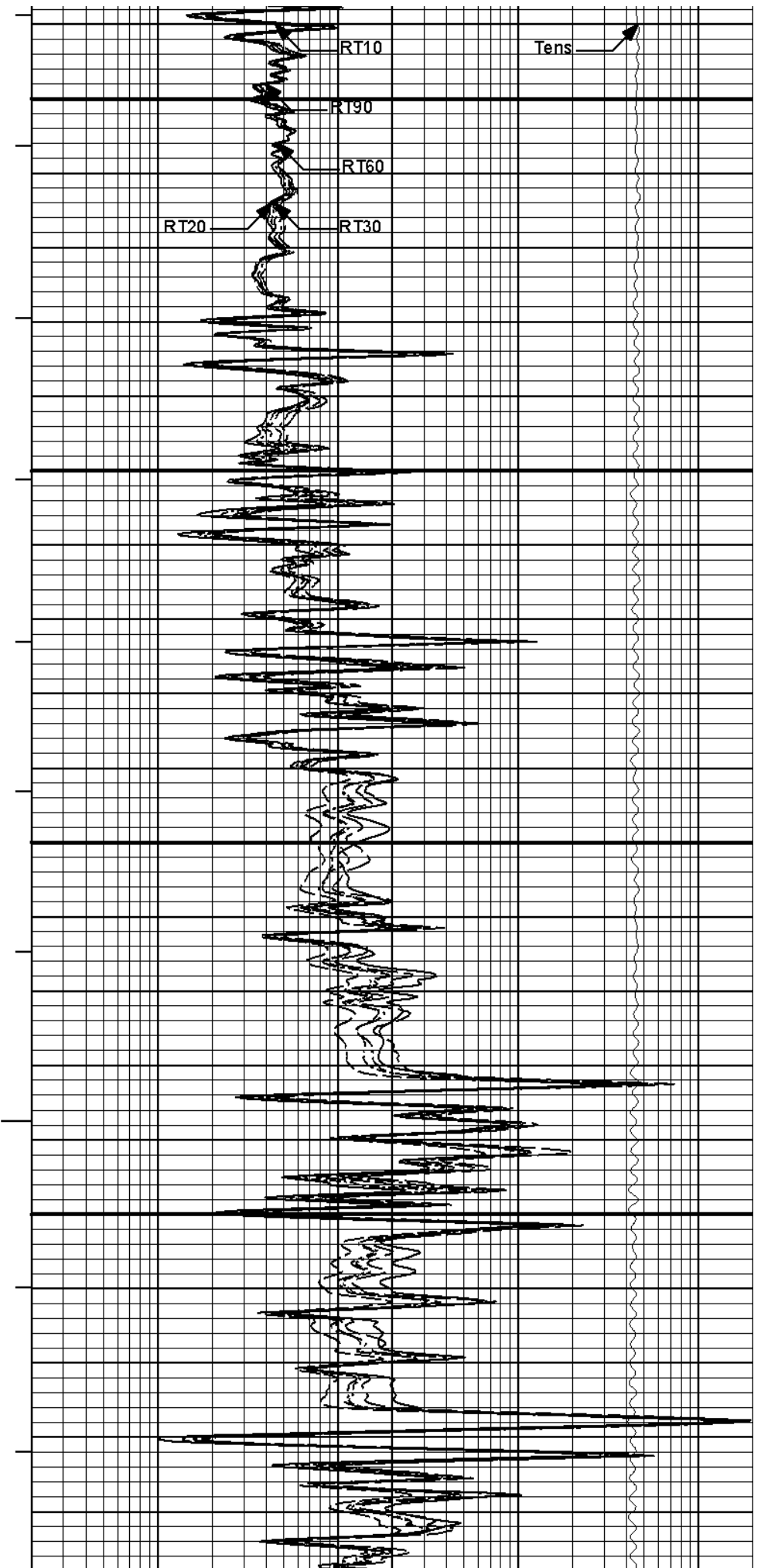
5000

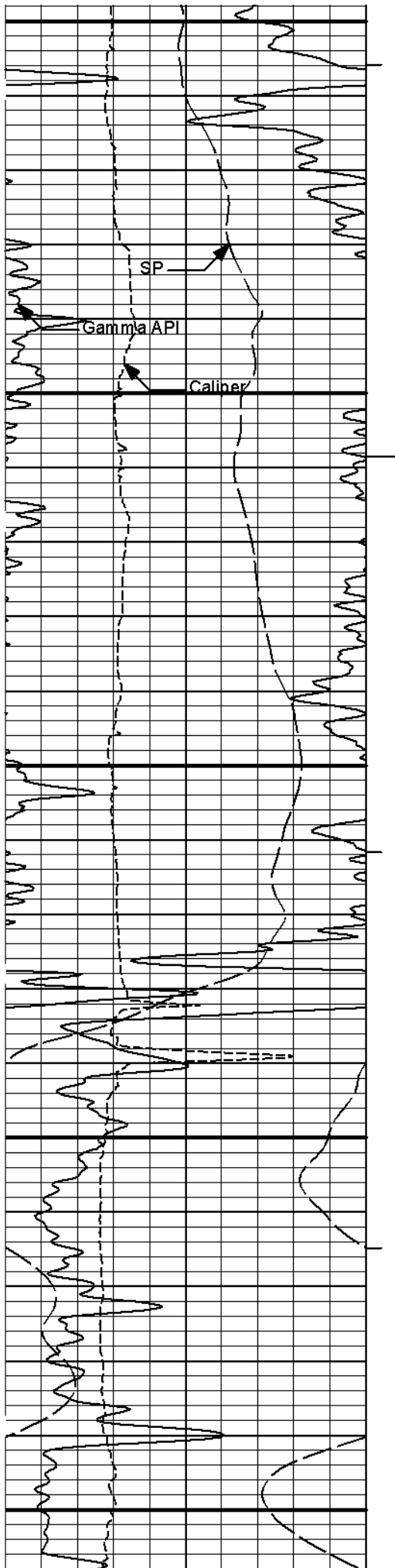




5100

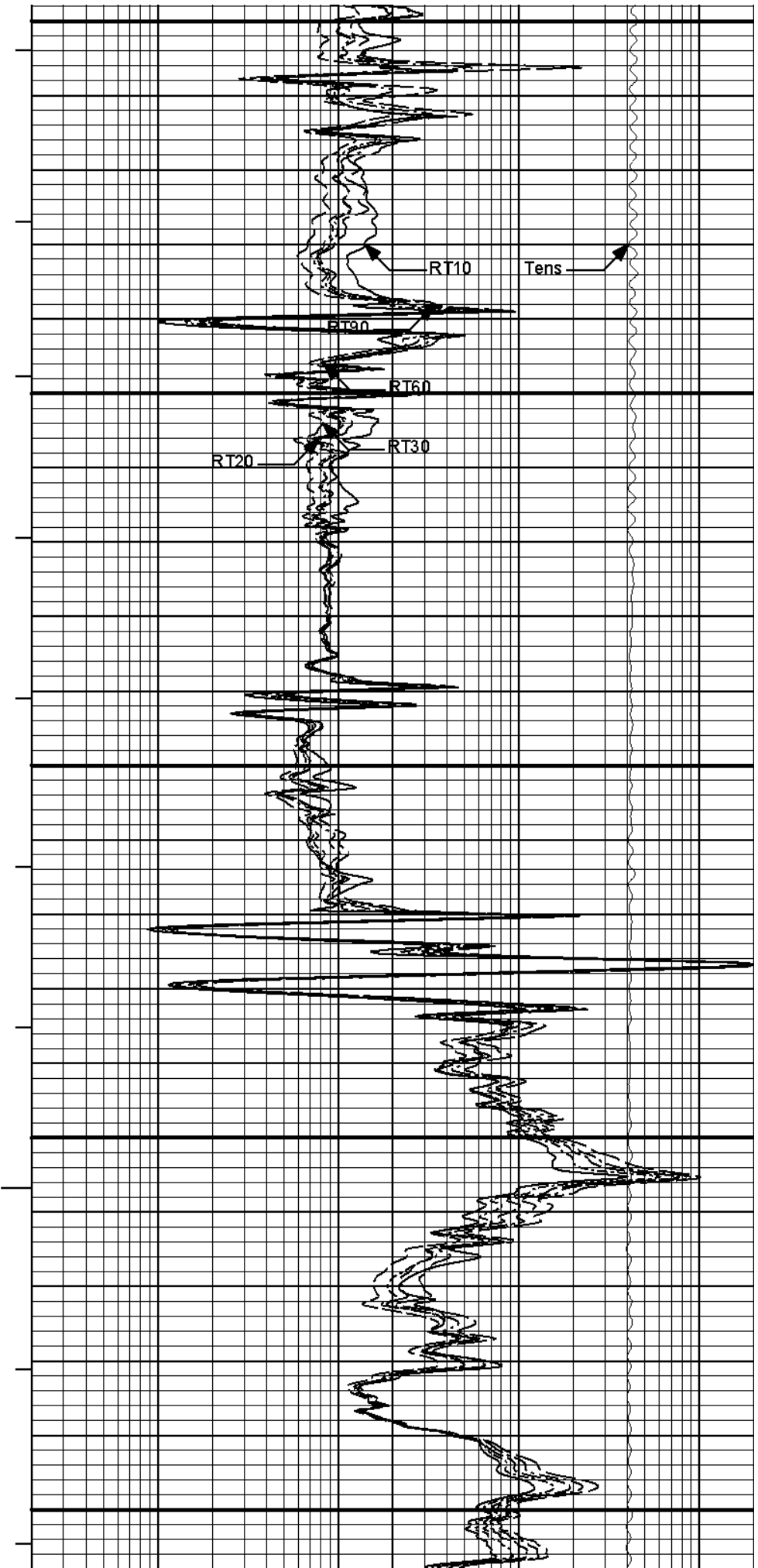
5200

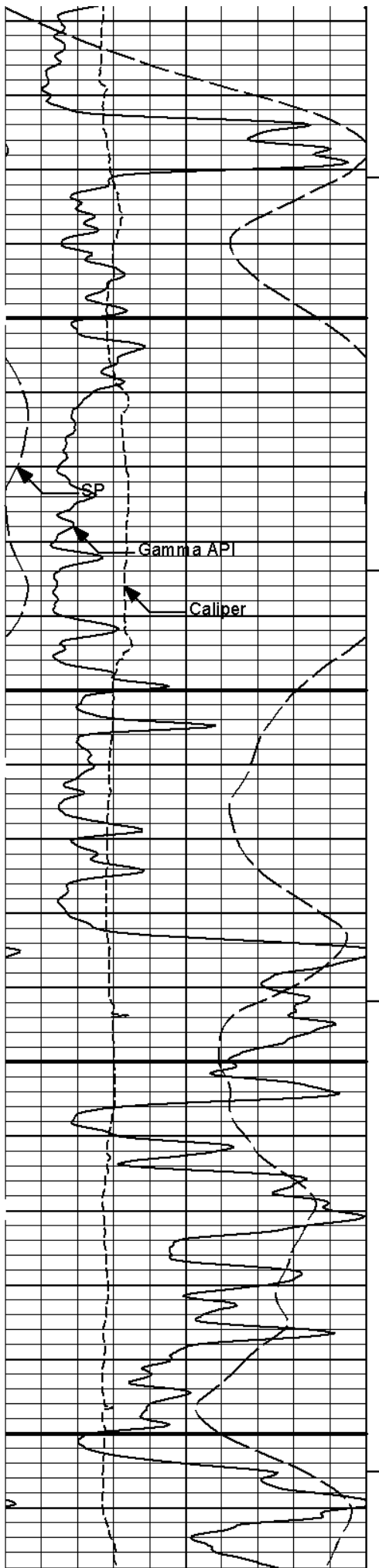




5300

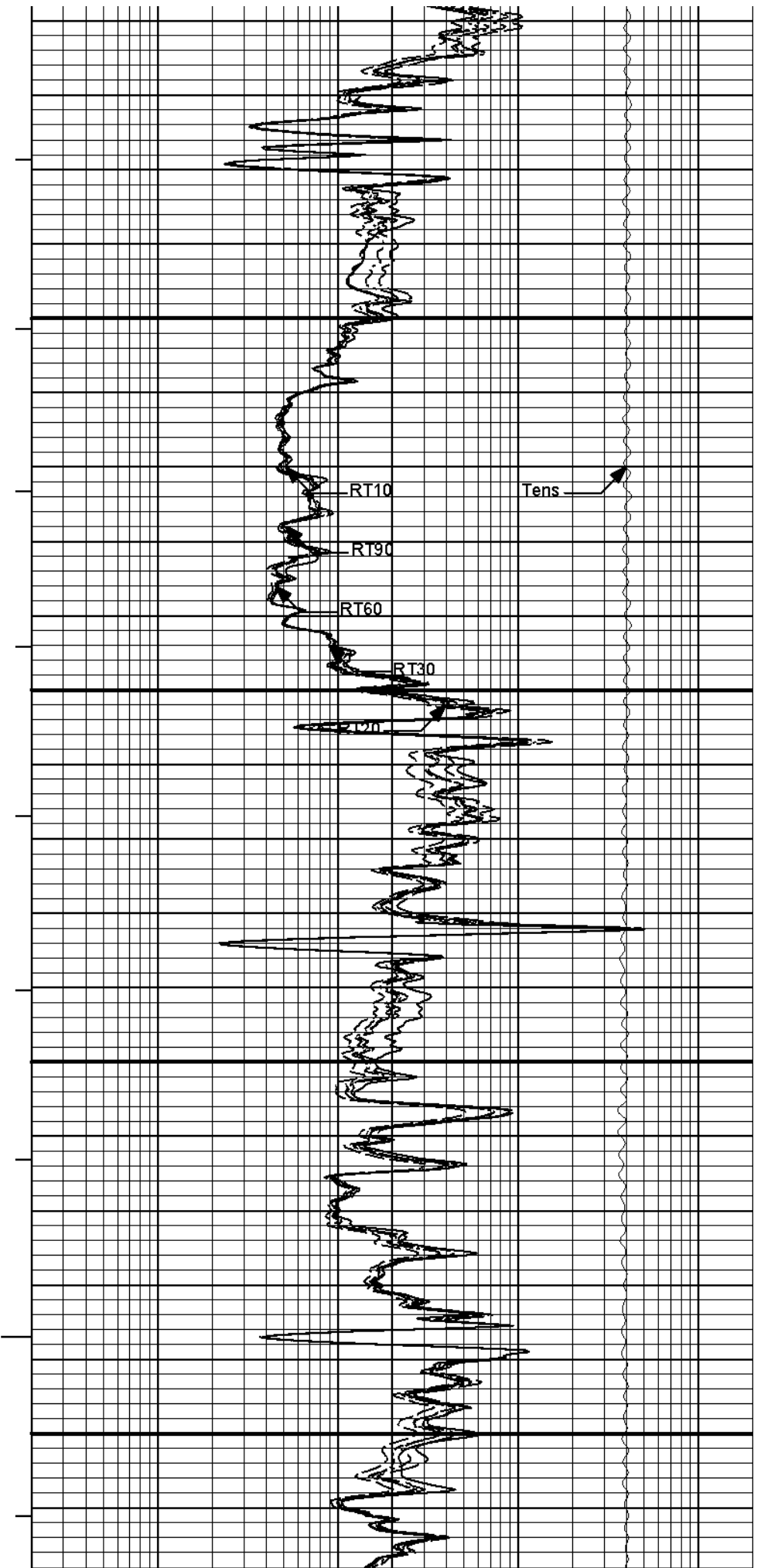
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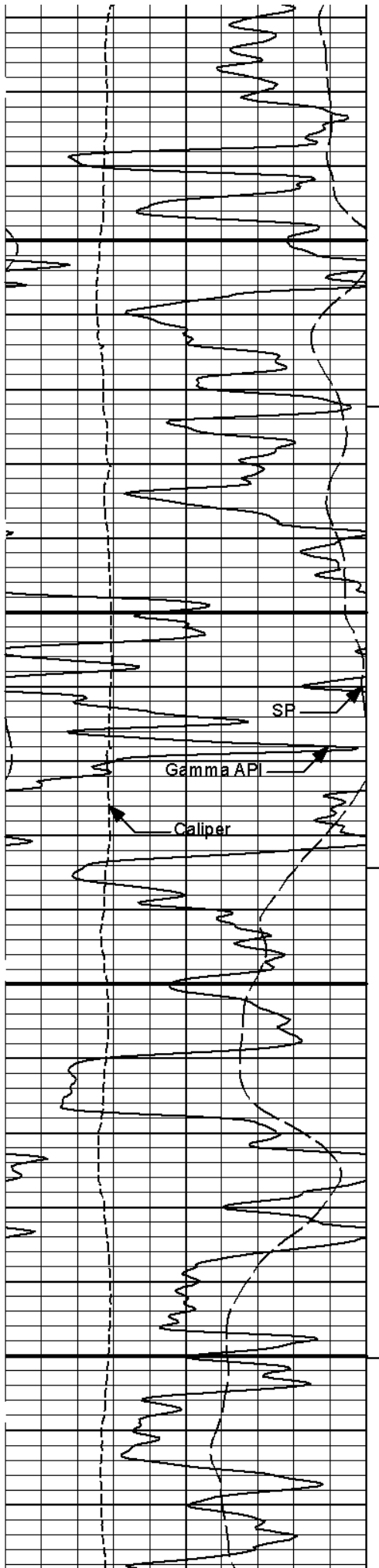




5500

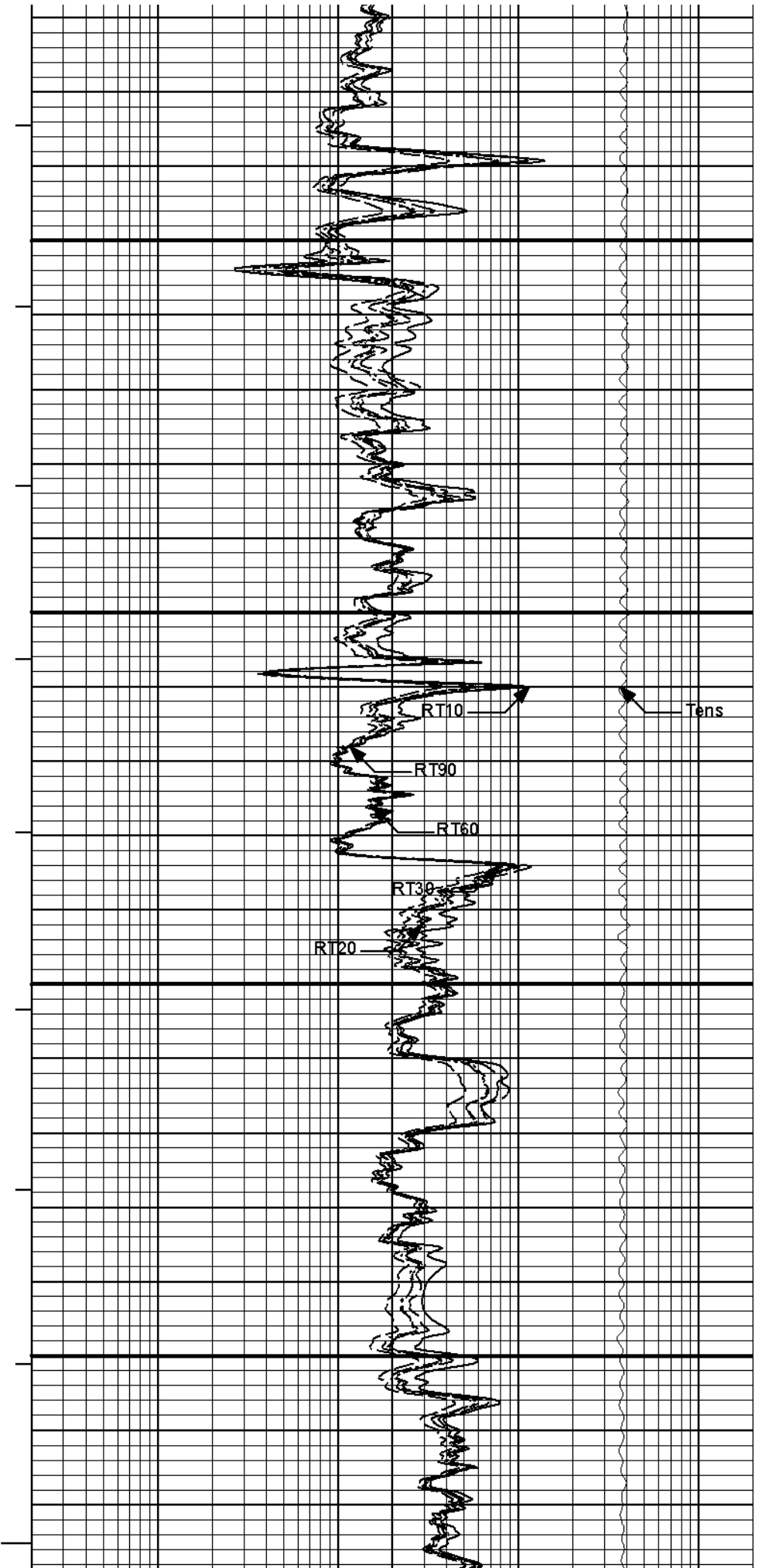
5600

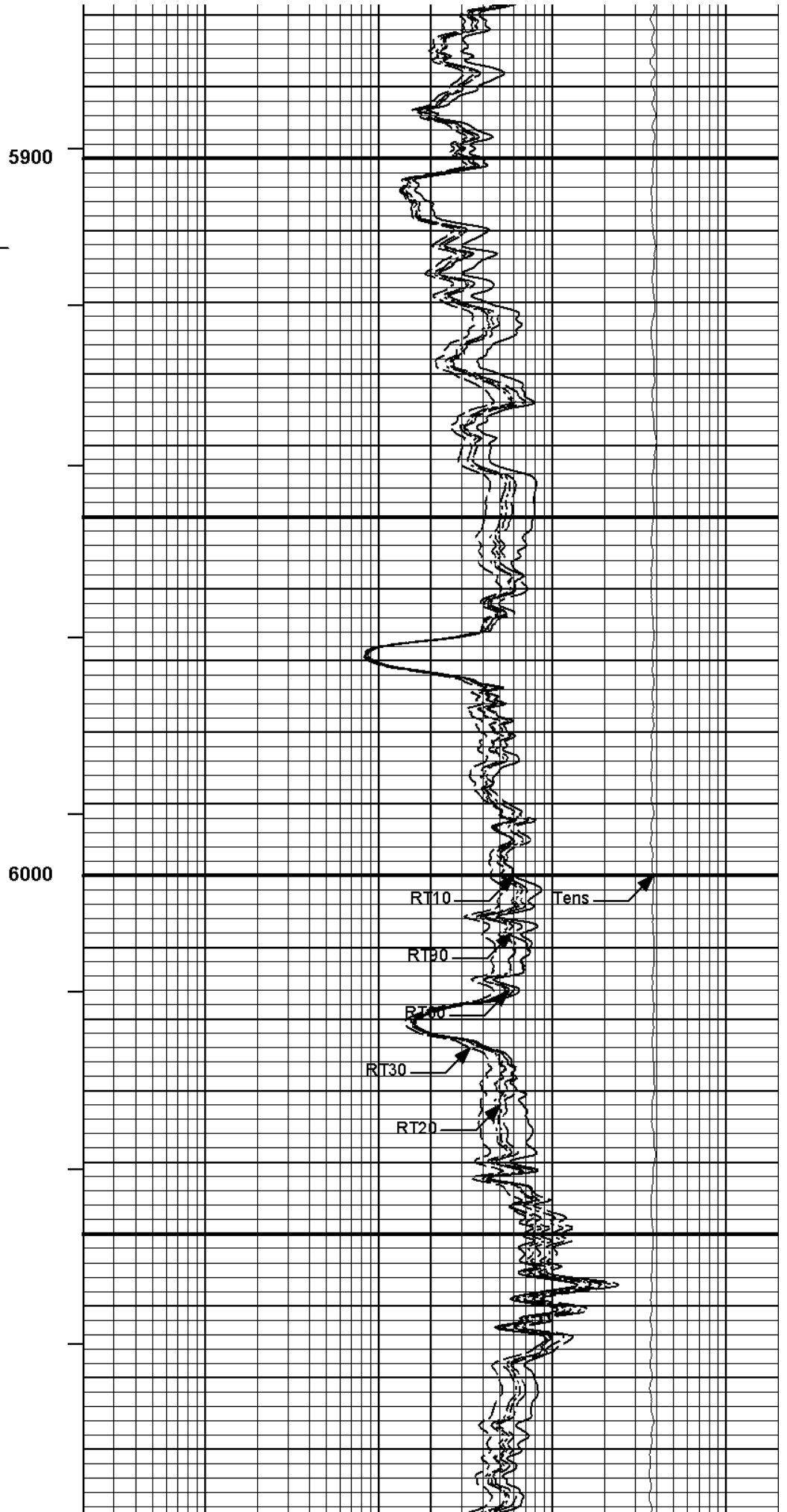
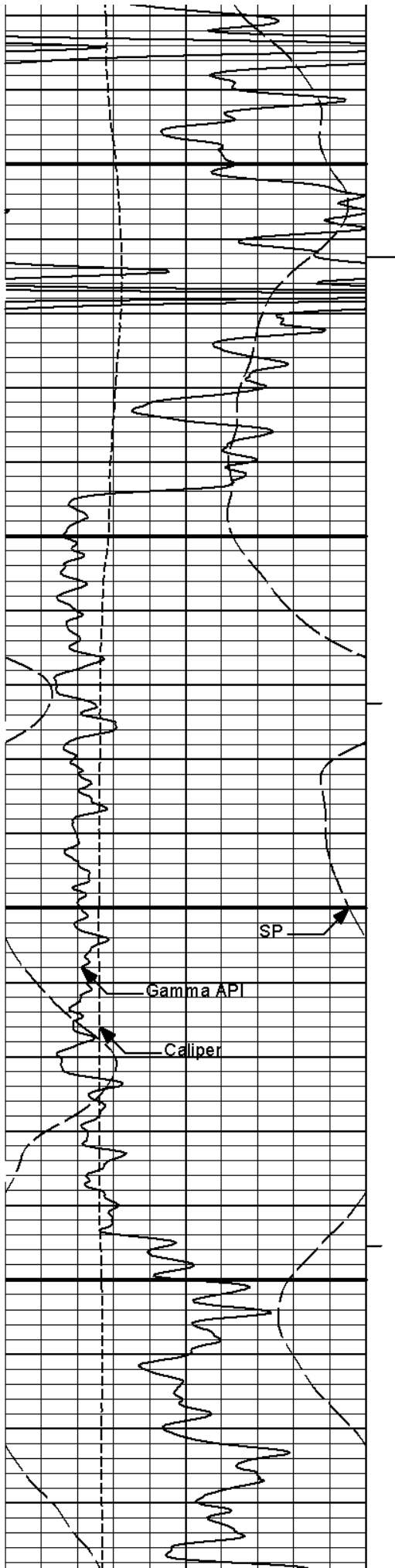


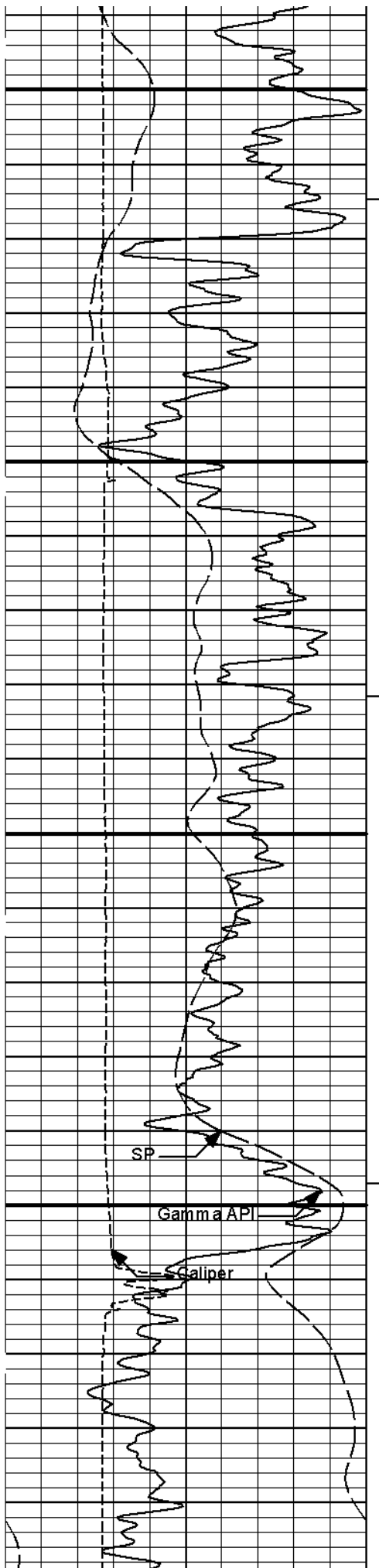


5700

5800







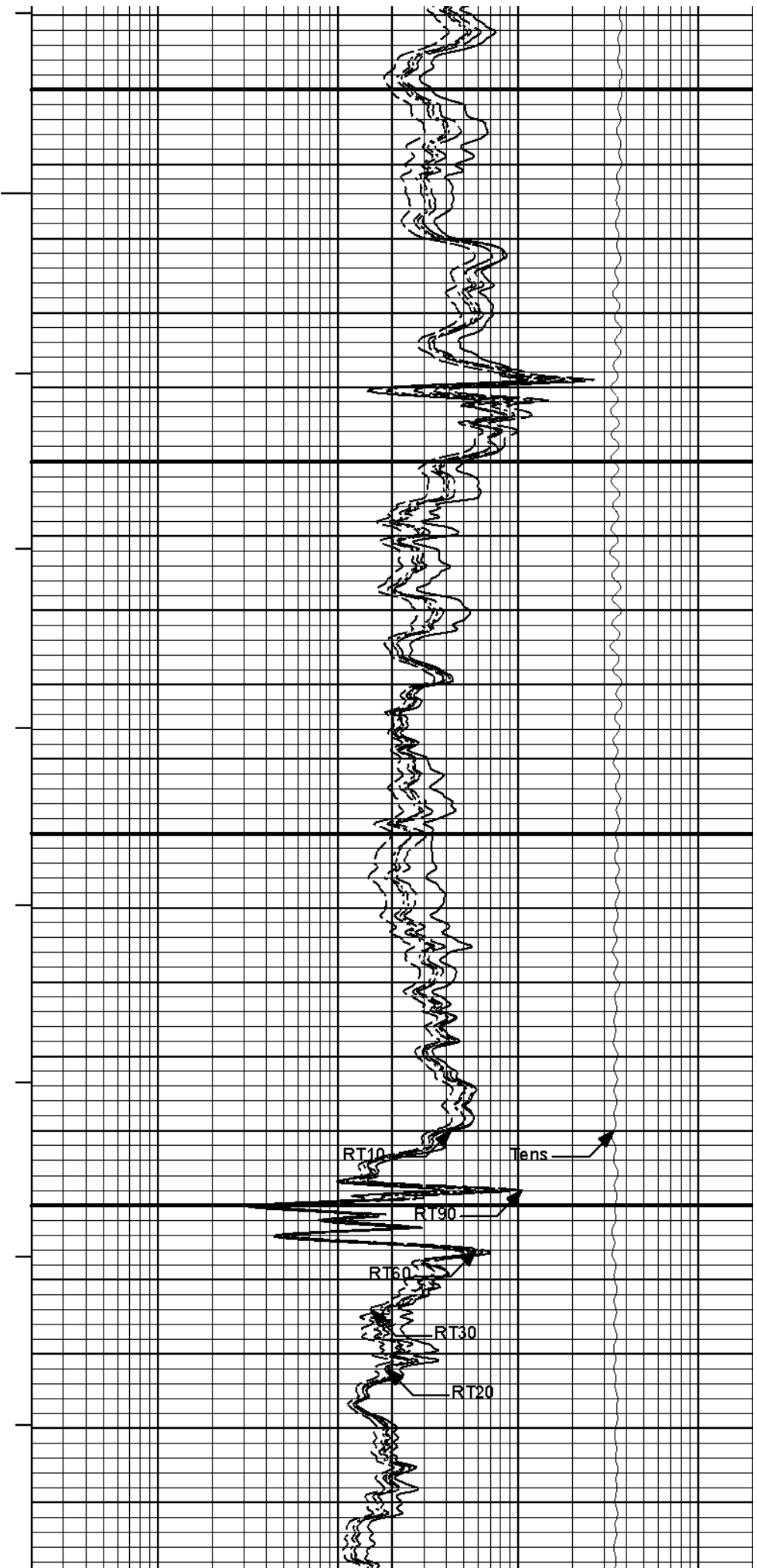
6100

6200

SP

Gamma API

Caliper



RT10

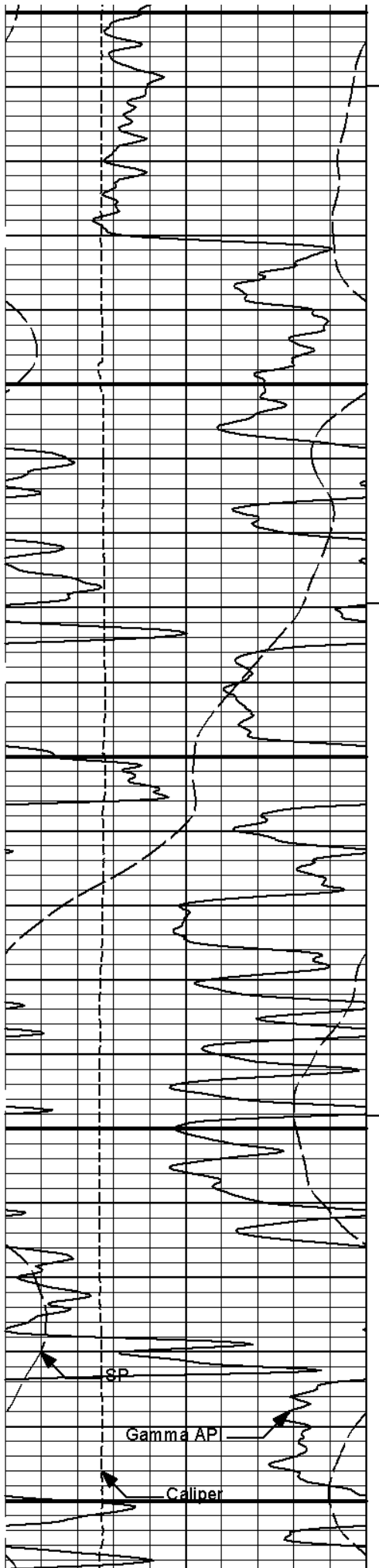
Tens

RT90

RT60

RT30

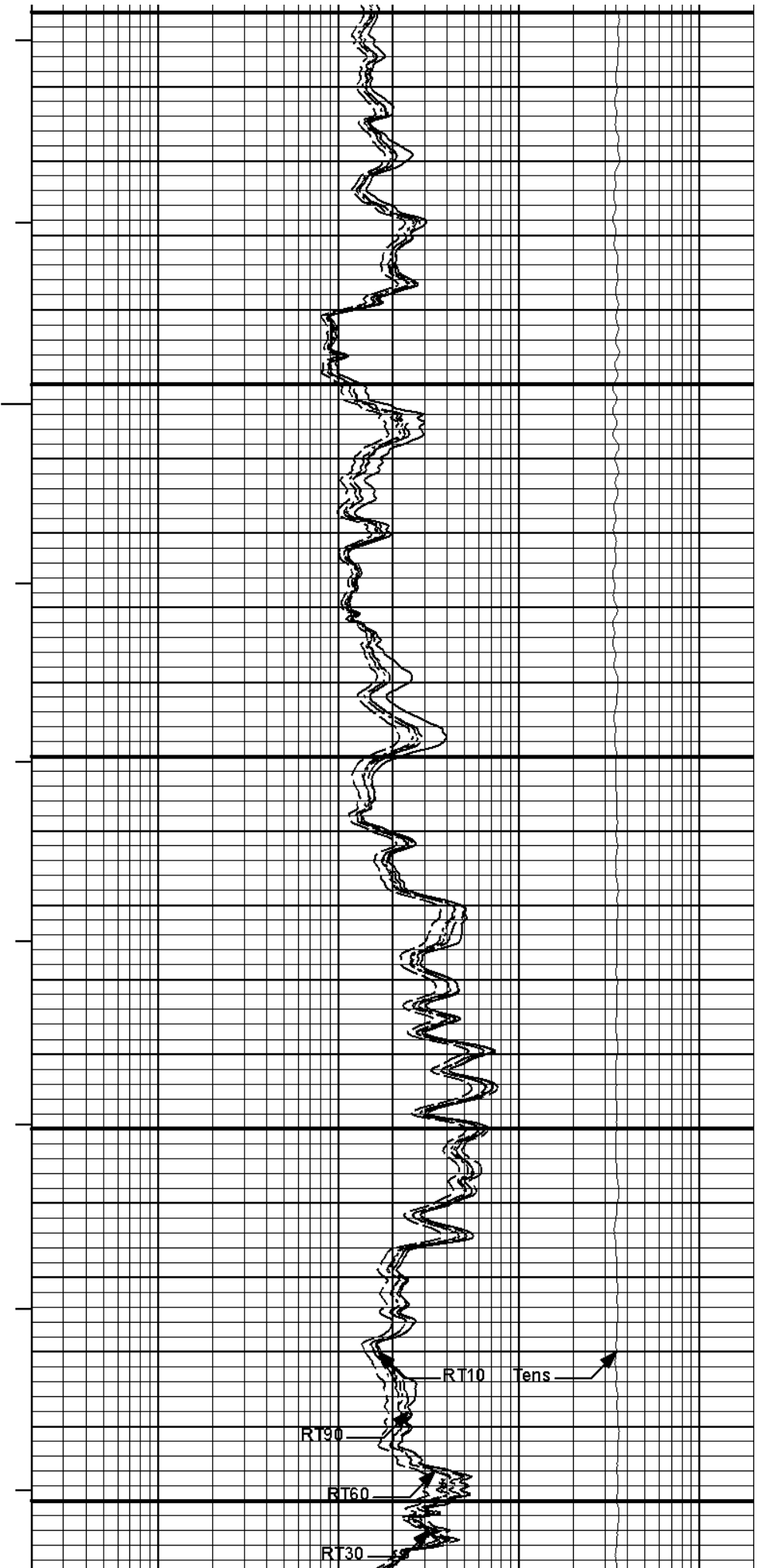
RT20

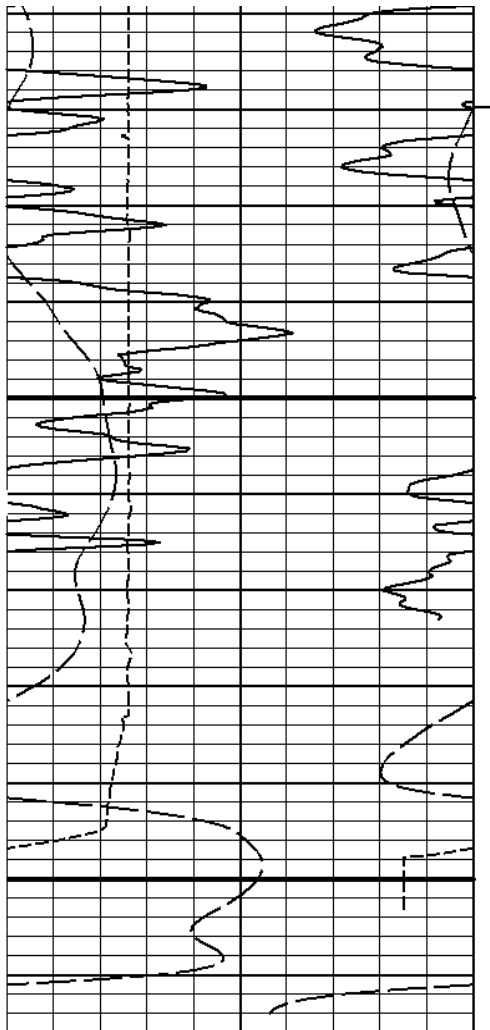


6300

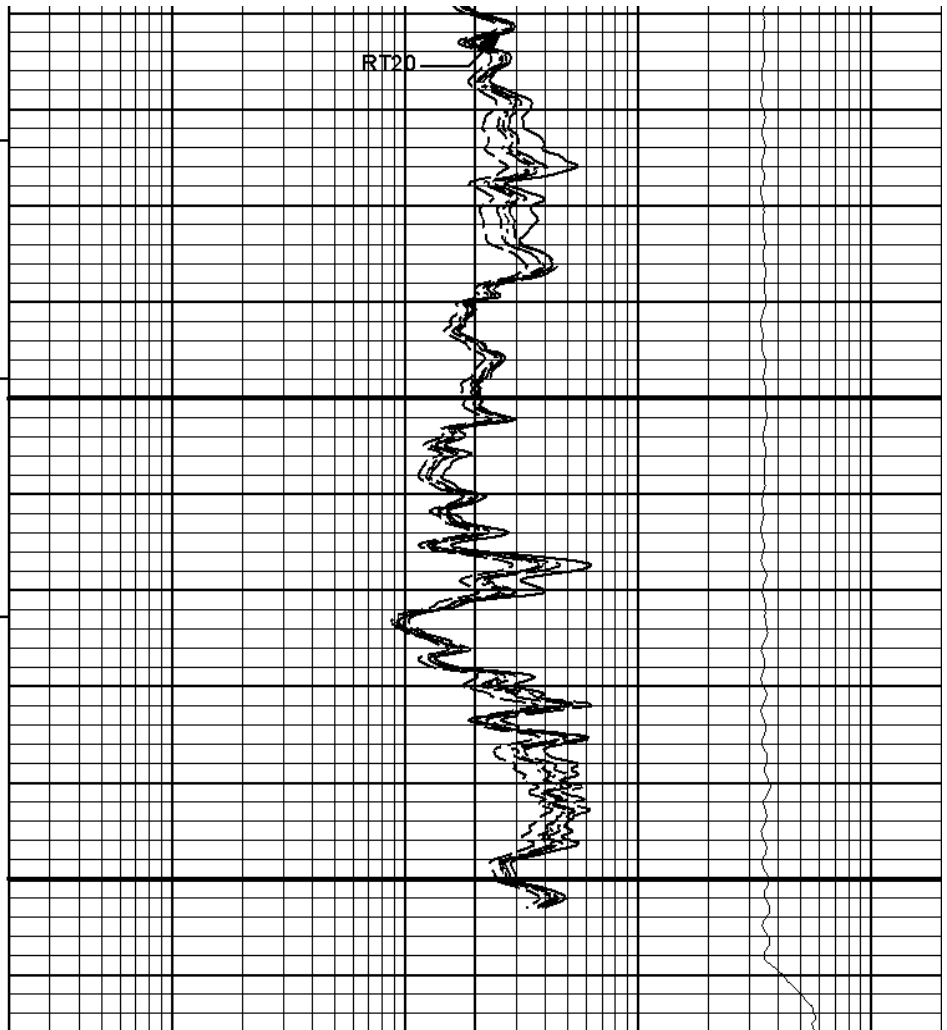
6400

6500





6600



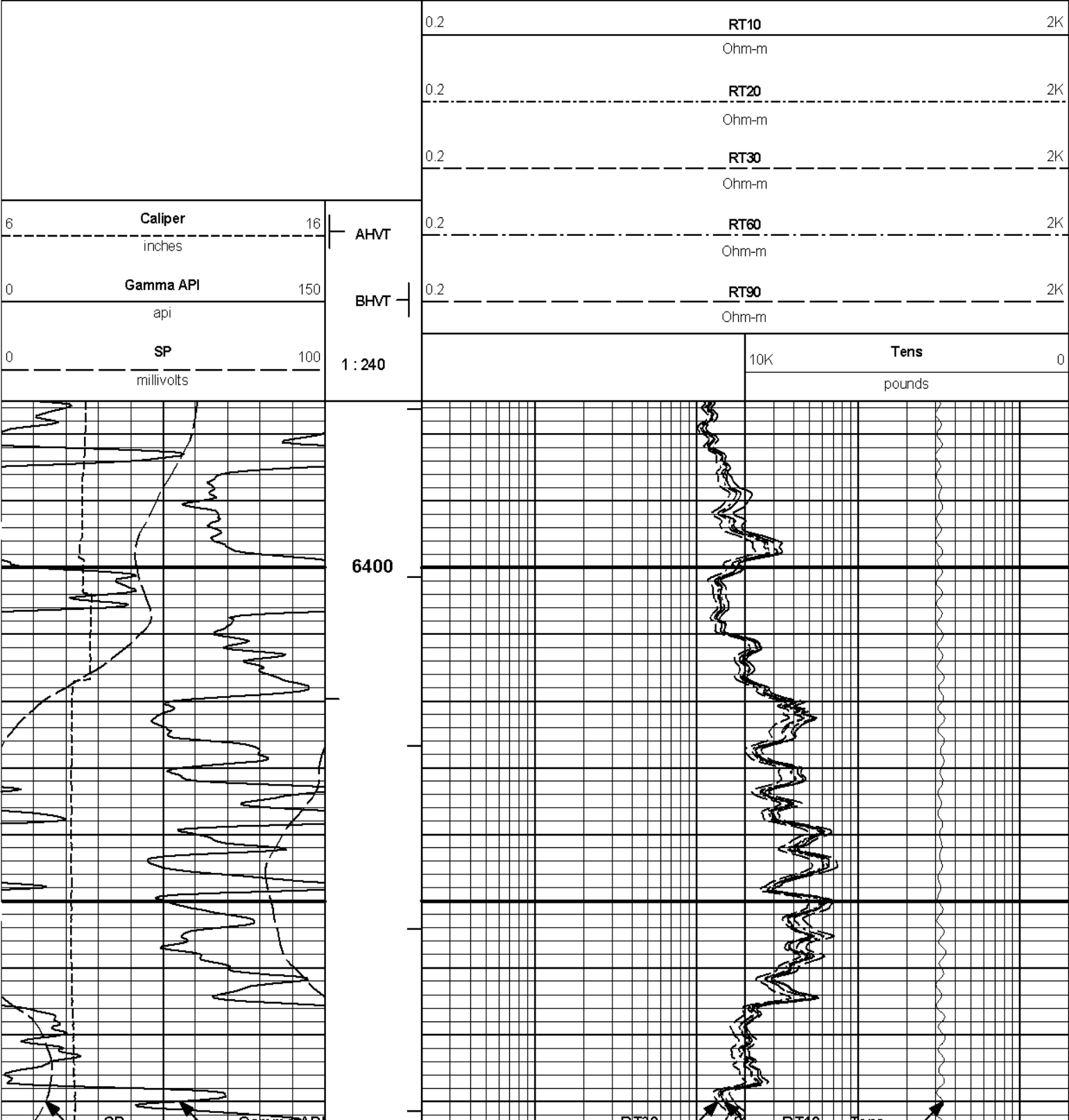
0	SP	100	1 : 240	10K	Tens	0
	millivolts				pounds	
0	Gamma API	150	BHVT	0.2	RT90	2K
	api				Ohm-m	
6	Caliper	16	AHVT	0.2	RT60	2K
	inches				Ohm-m	
				0.2	RT30	2K
					Ohm-m	
				0.2	RT20	2K
					Ohm-m	
				0.2	RT10	2K
					Ohm-m	

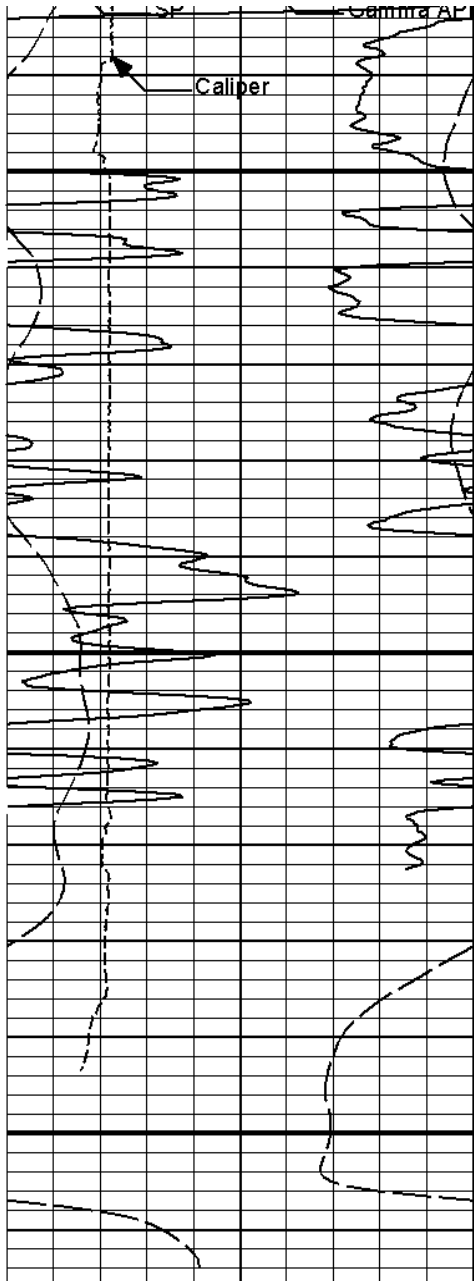
HALLIBURTON

Plot Time: 06-Feb-11 11:10:27
 Plot Range: 3360 ft to 6615.83 ft
 Data: {ActiveWell}\Well Based\MAIN
 Plot File: \\ACRT\IQ_ACRT_5IN_RM

MAIN PASS 5" = 100'

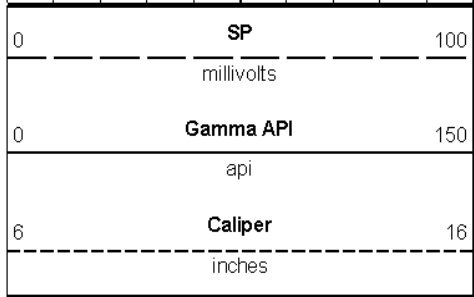
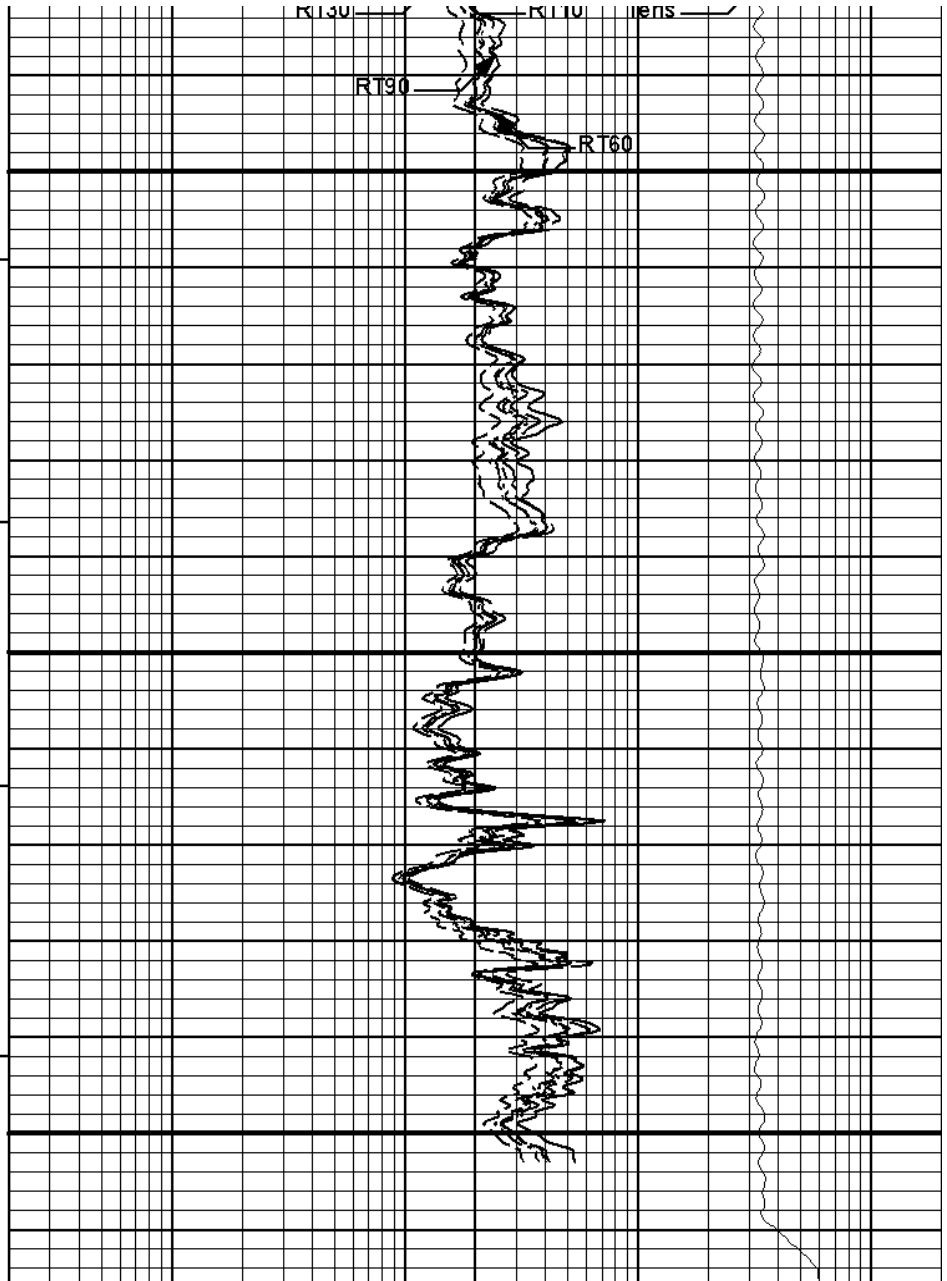
REPEAT PASS 5" = 100'





6500

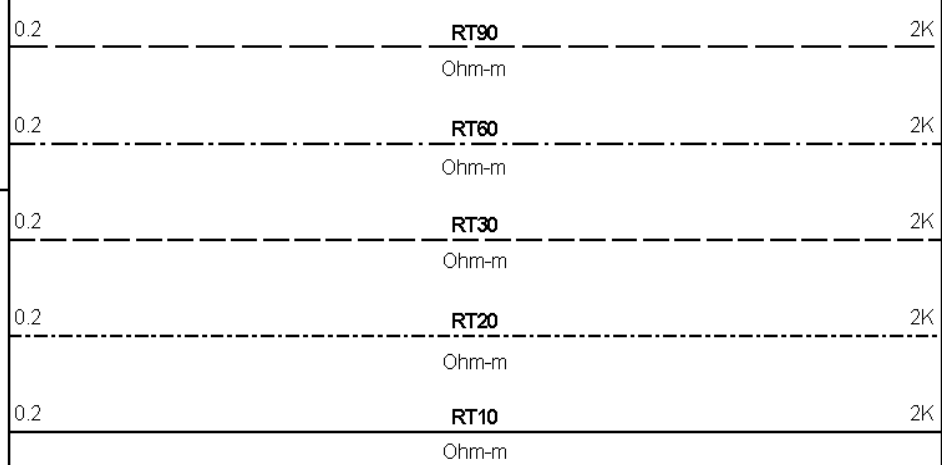
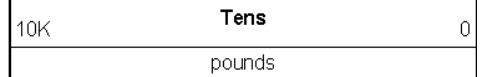
6600



1 : 240

BHVT

AHVT



HALLIBURTON

Plot Time: 06-Feb-11 11:10:28
 Plot Range: 6375 ft to 6615.67 ft
 Data: {ActiveWell}\Well Based\REPEAT
 Plot File: \\ACRT\IQ_ACRt_5IN_RM

REPEAT PASS 5" = 100'

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11215095

Reference Calibration Date: 29-Nov-10 15:50:18

Engineer: C. BLUE

Calibration Date: 11-Jan-11 17:38:46

Software Version: WL INSITE R3.0.7 (Build 3)

Calibration Version: 1

Calibrator Source S/N: TB290

Calibrator API Reference: 235.00 api

Measurement	Measured	Calibrated	Units
Background	74.1	73.9	api
Background + Calibrator	313.8	313.0	api
Calibrator	238.9	239.1	api

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 11219332

Reference Calibration Date: 11-Jan-11 18:09:27

Engineer: C. BLUE

Calibration Date: 11-Jan-11 18:24:20

Software Version: WL INSITE R3.0.7 (Build 3)

Calibration Version: 1

Logging Source S/N: DSN430

Tank Serial Number: BRIGHTON

Reference value assigned to Tank: 55.000

Snow Block S/N: BRIGHTON

Calibration Tank Water Temperature: 40 degF

Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.995	0.998	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):	0.2287	0.2295	0.0008	+/- 0.0020
Calibrated Ratio:	10.32	10.35	0.028	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0747	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 - 11219332**Reference Calibration Date:** 11-Jan-11 18:24:20**Engineer:** F. LODER**Calibration Date:** 05-Feb-11 22:06:34**Software Version:** WL INSITE R3.0.7 (Build 3)**Calibration Version:** 1

Logging Source S/N: DSN430

Snow Block S/N: BRIGHTON

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (dec):	0.0747	0.0755	0.0008	+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check: Passed

Snow Block Stat Check: Passed

Temperature Check: Passed

SPECTRAL DENSITY SHOP CALIBRATION**Tool Name:** SDLT - I332M335**Reference Calibration Date:** 21-Jan-11 18:12:58**Engineer:** C. BLUE**Calibration Date:** 21-Jan-11 18:32:31**Software Version:** WL INSITE R3.0.7 (Build 3)**Calibration Version:** 1

Logging Source S/N: 5256GW

Aluminum Block S/N: BRIGHTON

Density: 2.600g/cc

Pe: 3.100

Magnesium Block S/N: BRIGHTON

Density: 1.680g/cc

Pe: 2.594

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0659	1.0701	0.90 - 1.10
Near Dens Gain	1.0257	1.0427	0.90 - 1.10
Near Peak Gain	1.0220	1.0433	0.90 - 1.10
Near Lith Gain	1.0083	1.0324	0.90 - 1.10
Far Bar Gain	1.0170	1.0152	0.90 - 1.10
Far Dens Gain	1.0083	1.0047	0.90 - 1.10
Far Peak Gain	1.0029	1.0006	0.90 - 1.10
Far Lith Gain	0.9847	0.9832	0.90 - 1.10

Near Bar Offset	-0.6266	-0.6647	NONE
Near Dens Offset	-0.2167	-0.3664	NONE
Near Peak Offset	-0.1735	-0.3516	NONE
Near Lith Offset	-0.0773	-0.2777	NONE
Far Bar Offset	-0.2049	-0.1899	NONE
Far Dens Offset	-0.1331	-0.0993	NONE
Far Peak Offset	-0.0990	-0.0807	NONE
Far Lith Offset	0.0257	0.0358	NONE

Near Bar Background	1069.73	1071.20	700 - 1450
Near Dens Background	350.53	351.42	230 - 480
Near Peak Background	153.87	152.84	100 - 210
Near Lith Background	187.53	186.92	125 - 260
Far Bar Background	559.10	557.06	450 - 900

Far Bkg Background	338.10	337.90	430 - 500
Far Dens Background	217.51	219.17	175 - 345
Far Peak Background	84.73	84.91	70 - 140
Far Lith Background	89.97	89.66	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.676	1.681	0.005	+/- 0.015
Pe	2.627	2.586	-0.041	+/- 0.150
ALUMINUM				
Density (g/cc)	2.601	2.600	-0.001	+/- 0.01500
Pe	3.096	3.091	-0.005	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0006	+/- 0.0110	0.0014	+/- 0.0140
Magnesium Block	-0.0009	+/- 0.0110	-0.0017	+/- 0.0140
Aluminum Block	0.0016	+/- 0.0110	-0.0005	+/- 0.0140
Resolution	9.10	6.00 - 11.50	9.67	6.00 - 11.50
Internal Verifier(B+D+P+L)	1762	1200 - 2700	952	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 - I332M335

Reference Calibration Date: 21-Jan-11 18:32:31

Engineer: F. LODER

Calibration Date: 05-Feb-11 21:55:15

Software Version: WL INSITE R3.0.7 (Build 3)

Calibration Version: 1

Pad Temperature: 56.1 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1762.380	1761.230	-1.150	16.832
Far (B+D+P+L) cps	951.703	953.393	1.690	16.634
Near Resolution	9.10	9.11	0.010	0.50
Far Resolution	9.67	9.73	0.060	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
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Bkg Resolution Check:

Passed

Bkg Verification Check:

Passed

DENSITY CALIPER SHOP CALIBRATIONTool Name: **SDLT - I332M335**Reference Calibration Date: **21-Jan-11 18:47:16**Engineer: **C. BLUE**Calibration Date: **21-Jan-11 18:51:33**Software Version: **WL INSITE R3.0.7 (Build 3)**Calibration Version: **1****CALIBRATION COEFFICIENTS**

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2404.06	-2407.77	-7000.00 - -1000.00
Pad Gain	0.0003925	0.0003957	0.000200 - 0.000600
Arm Offset	-3229.94	-2928.72	-5000.00 - 3000.00
Arm Gain	0.0006115	0.0005786	0.000300 - 0.000700
Arm Power	-0.000007993	-0.000006215	-0.000010 - 0.000010

The ring diameter is computed from: $\text{DIAMETER} = \text{PAD EXTENSION} + \text{ARM EXTENSION} + \text{TOOL DIAMETER}$

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)	1.98	2.00	0.02	+/- 0.20
Medium Ring (in)	3.72	3.75	0.03	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.43	6.50	0.07	+/- 0.20
Medium Ring (in)	8.25	8.25	0.00	+/- 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 CALIBRATIONTool Name: **SDLT - I332M335**Reference Calibration Date: **21-Jan-11 18:51:33**Engineer: **F. LODER**Calibration Date: **05-Feb-11 21:58:32**Software Version: **WL INSITE R3.0.7 (Build 3)**Calibration Version: **1****MEASURED CALIPER VALUES**

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.71	-0.04	+/- 0.10
Ring Diameter	8.25	8.15	-0.10	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:

Passed

Diameter Check:

Passed

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATIONTool Name: **ACRt - E9336-S4042**Reference Calibration Date: **29-Nov-10 10:05:24**Engineer: **C. BLUE**Calibration Date: **20-Nov-10 10:24:29**

Software Version: WL INSITE R3.0.4 (Build 6)

Calibration Version: 1

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0124	1.05	0.95	1.0112	1.05	0.95	1.0087	1.05
A2 (50")	0.95	0.9999	1.05	0.95	0.9994	1.05	0.95	0.9992	1.05
A3 (29")	0.95	1.0027	1.05	0.95	1.0017	1.05	0.95	0.9984	1.05
A4 (17")	0.95	0.9959	1.05	0.95	0.9923	1.05	0.95	0.9933	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9818	1.05	0.95	0.9804	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9703	1.05	0.95	0.9694	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	0.658	2	-6	-3.458	-2	-8	-5.078	-2
A2 (50")	-7	-1.854	-1	-6	-3.756	-2	-7	-4.493	-2
A3 (29")	-27	-13.021	-9	-9	-3.753	-3	-7	-3.013	-1
A4 (17")	-180	-98.689	-60	-45	-31.432	-15	-39	-25.166	-13
A5 (10")	N/A	N/A	N/A	-150	-69.697	-50	-80	-36.680	-10
A6 (6")	N/A	N/A	N/A	175	268.707	525	90	139.940	270

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.6	0.8512	1.3
36K	1.0	1.8893	2.0
72K	1.0	1.0922	2.0

R-MUD VERIFICATION

Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.008	1.05

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11215095						
Gamma Ray Calibrator	239.1	-----	-----	0.0	+/- 9.00	api
DSNT-11219332						
Snow-Block Porosity	0.0747	0.0755	-----	-0.0008	+/- 0.0150	decP
SDLT-I332M335						
Near(B+D+P+L)	1762.380	1761.230	-----	1.150	+/-16.832	cps
Far(B+D+P+L)	951.703	953.393	-----	-1.690	+/-16.634	cps
Pad Extension	3.75	3.71	-----	0.04	+/-0.10	in
Ring Diameter	8.25	8.15	-----	0.100	+/-0.15	in
ACRt-E9336-S4042						
Mud Cell	1.008	-----	-----	0.000	-----	ohm-m

Data: EP_C_204_WDWM0001 TRIPLENDLE

Date: 06-Feb-11 10:39:36

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
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RWCH-10895163
135.00 lbs

Ø 3.625 in →

← Load Cell @ 51.17 ft
← BH Temperature @ 50.60 ft

6.25 ft

54.85 ft

GTET-11215095
165.00 lbs

Ø 3.625 in →

← GammaRay @ 42.54 ft

8.52 ft

48.60 ft

DSN Decentralizer-
10813523
6.60 lbs
DSNT-11219332
174.00 lbs

Ø 3.625 in →

Ø 3.625 in →

← DSN Far @ 33.15 ft
← DSN Near @ 32.40 ft

9.69 ft

40.08 ft

SDLT-4332M335
360.00 lbs

Ø 4.500 in →

Ø 4.750 in →

← SDL Microlog @ 22.58 ft
← SDL Caliper @ 22.40 ft
← SDL @ 22.39 ft

10.81 ft

30.40 ft

19.58 ft

ACRt-E9336-S4042
250.00 lbs

Ø 3.625 in →

← Mud Resistivity @ 13.19 ft

← ACRt @ 9.21 ft

19.25 ft

<div>SP Ring-1 0.00 lbs</div>		<div>Ø 3.625 in →</div>	<div>← SP @ 1.61 ft</div>	<div><div>0.33 ft</div><div>0.33 ft</div><div>0.00 ft</div></div>
<div>Bull Nose-BN 5.00 lbs</div>		<div>Ø 2.750 in →</div>		

Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	10895163	135.00	6.25	48.60	300.00
GTET	Gamma Telemetry Tool	11215095	165.00	8.52	40.08	60.00
DSNT	Dual Spaced Neutron	11219332	174.00	9.69	30.40	60.00
DCNT	DSN Decentralizer	10813523	6.60	5.13	*	33.73 300.00
SDLT	Spectral Density Tool	I332M335	360.00	10.81	19.58	60.00
ACRt	Array Compensated True Resistivity	E9336-S4042	250.00	19.25	0.33	300.00
SP	SP Ring	1	0.00	0.25	*	1.61 300.00
BLNS	Bull Nose	BN	5.00	0.33	0.00	300.00
Total			1,095.60	54.85		
* Not included in Total Length and Length Accumulation.						
Data: EP_C_204_WDW0001 TRIPLE\IDLE					Date: 06-Feb-11 08:09:59	

COMPANY	EL PASO PRODUCTION		
WELL	VPR C 204 WDW		
FIELD	VERMEJO PARK RANCH		
COUNTY	LAS ANIMAS	STATE	CO
HALLIBURTON		ARRAY COMPENSATED TRUE RESISTIVITY LOG	