

HALLIBURTON

ARRAY COMP. RESISTIVITY
SPECTRAL DENSITY
DUAL SPACED NEUTRON
MICRO-LOG

COMPANY		BOPCO L.P.	
WELL		YCF XOM 1-41-1	
FIELD		YELLOW CREEK	
COUNTY		RIO BLANCO	
STATE		CO	
Location		SURFACE HOLE: 0950' FNL & 1053' FEL	
API No.		1031107100	
Sect.		01	
Twp.		01S	
Rge.		96W	
Other Services:		MRIL	
Permanent Datum		GL	
Log measured from		KB	
Drilling measured from		KB	
Date		17-Oct-08	
Run No.		ONE	
Depth - Driller		12220.0 ft	
Depth - Logger		12058.0 ft	
Bottom - Logged Interval		12055.0 ft	
Top - Logged Interval		50.0 ft	
Casing - Driller		9.625 in @ 3249.0 ft	
Casing - Logger		3254.0 ft	
Bit Size		7.875 in	
Type Fluid in Hole		LSND	
Density		9.6 ppg	
Viscosity		78.00 s/qt	
PH		7.00 pH	
Fluid Loss		6.1 cpts	
Source of Sample		MUD TANK	
Rm @ Meas. Temperature		2.98 ohmm @ 61.80 degF	
Rmf @ Meas. Temperature		2.08 ohmm @ 70.50 degF	
Rmc @ Meas. Temperature		3.13 ohmm @ 71.10 degF	
Source Rmf		MEAS.	
Rm @ BHT		0.83 ohmm @ 238.0 degF	
Time Since Circulation		10.0 hr	
Time on Bottom		18-Oct-08 10:54	
Max. Rec. Temperature		238.0 degF @ 12058.0 ft	
Equipment		11014853	
Recorded By		M. LEE	
Witnessed By		J. HOUT	

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Service Ticket No.: 6237708				API Serial No.: 1031107100				PGM Version: WL INSITE R2.2 (Build 9)			
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-90144319	N/A	N/A	N/A			
Rmc @ Meas. Temp.	@	@			E554-S481						
Source Rmf	Rmc	CALC.	CALC.								
Rm @ BHT	0.83 ohmm @ 238 degF	@									
Rmf @ BHT	0.66 ohmm @ 238 degF	@									
Rmc @ BHT	0.99 ohmm @ 238 degF	@									
EQUIPMENT DATA											
GAMMA			ACOUSTIC			DENSITY			NEUTRON		
Run No.	ONE	Run No.		Run No.	ONE	Run No.	ONE	Run No.	ONE		
Serial No.	11004661	Serial No.		Serial No.	10951300	Serial No.	10993887	Serial No.	10993887		
Model No.	GTET	Model No.		Model No.	SDLT	Model No.	DSNT	Model No.	DSNT		
Diameter	3.625"	No. of Cent.		Diameter	4.75"	Diameter	3.625"	Diameter	3.625"		
Detector Model No.	GTET	Spacing		Log Type	GAMMA-GAMMA	Log Type	THERMAL	Log Type	THERMAL		
Type	SCINT.			Source Type	Cs137	Source Type	Am241Be	Source Type	Am241Be		
Length	8"	LSA [Y/N]		Serial No.	5123GW	Serial No.	DSN-388	Serial No.	DSN-388		
Distance to Source	10'	FWDA [Y/N]		Strength	1.5 Ci	Strength	15 Ci	Strength	15 Ci		
LOGGING DATA											
GENERAL			GAMMA			ACOUSTIC			DENSITY		

CROSSH	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in
	GTET	GEOK	Process Gamma Ray EVR?	No	
	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	0.000	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		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	Use Calibration Blocks?	No	
	SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
	SDLT	DTWN	Disable temperature warning	No	
	SDLT	MDTP	Weighted Mud Correction Type?	Barite	
	SDLT	DMA	Formation Density Matrix	2.710	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	CIND	Casing Indicator Enabled?	Yes	
	ACRt	RECE	Relative Caliper Error	0	%
	ACRt	MNSO	Minimum Tool Standoff	0.00	in
	ACRt	RMC	Use RM Calculated for BHC?	No	
	ACRt	TSEL	Calculate Temperature for Rmud Correction?	No	
	ACRt	LTNM	Acrt Lateral Normalization	None	
	ACRt	UTC	Use Temperature Correction	Yes	
	ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
	ACRt	TPOS	Tool Position	Standoff	
	ACRt	BHCM	Borehole Compensation Type	Conventional	
	ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohm m
	ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohm m
	ACRt	REC6	Record 6 in curves in ADI?	No	

BOTTOM

Data: YCF_XOM_1_41_110001 TRIPLE_2\IDLE

Date: 18-Oct-08 12:00:32

HALLIBURTON

Plot Time: 19-Oct-08 01:33:42

Plot Range: 3234 ft to 12074 ft

Data: YCF_XOM_1_41_11Well Based\MAIN PASS - CASING\

Plot File: \\LOCAL\YCF_XOM_1_41_110001 TRIPLE_2\TRIPL\ACRT_1IN

MAIN PASS 1" = 100'

0.2

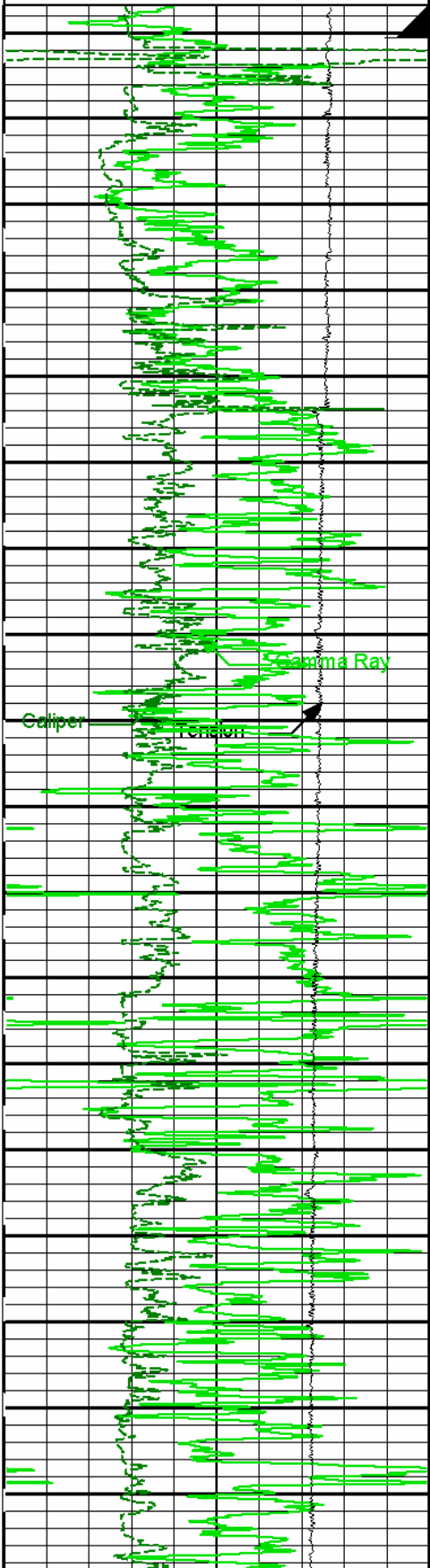
RT90

2K

Ohm-m

6	Caliper	16
	inches	
0	Gamma Ray	150
	api	
10000	Tension	0
	lbs	

1 : 1200
ft
MD



CSG

3300

3400

3500

3600

3700

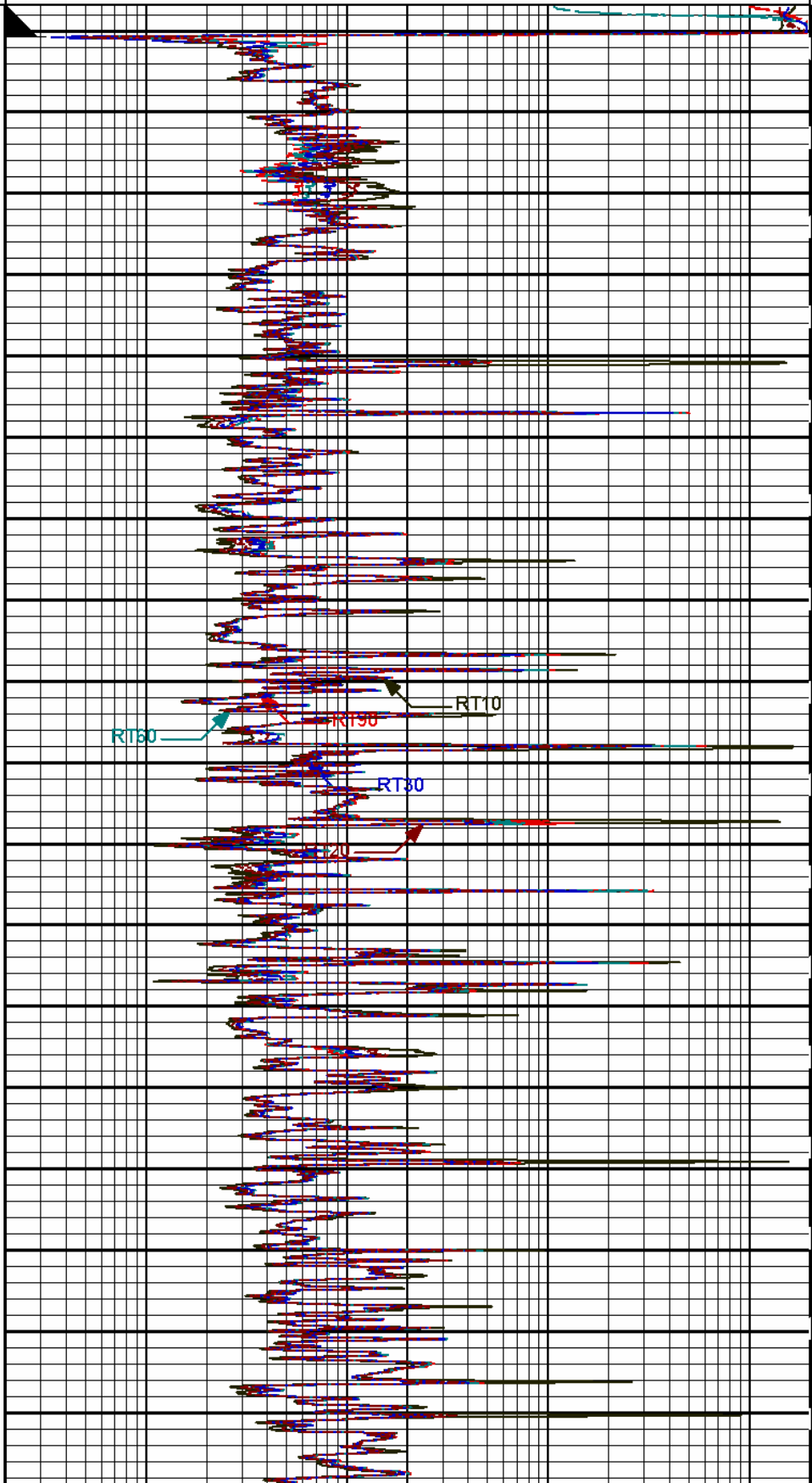
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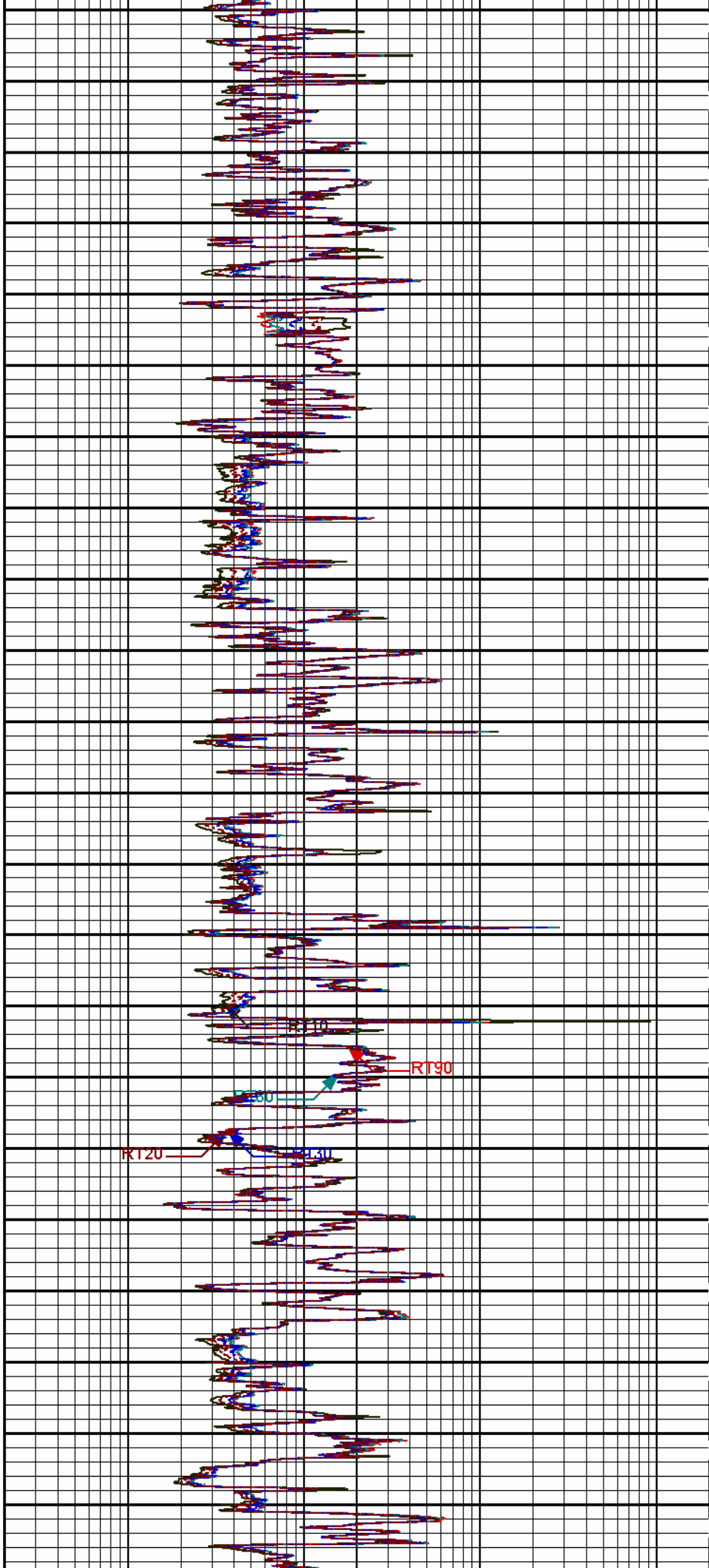
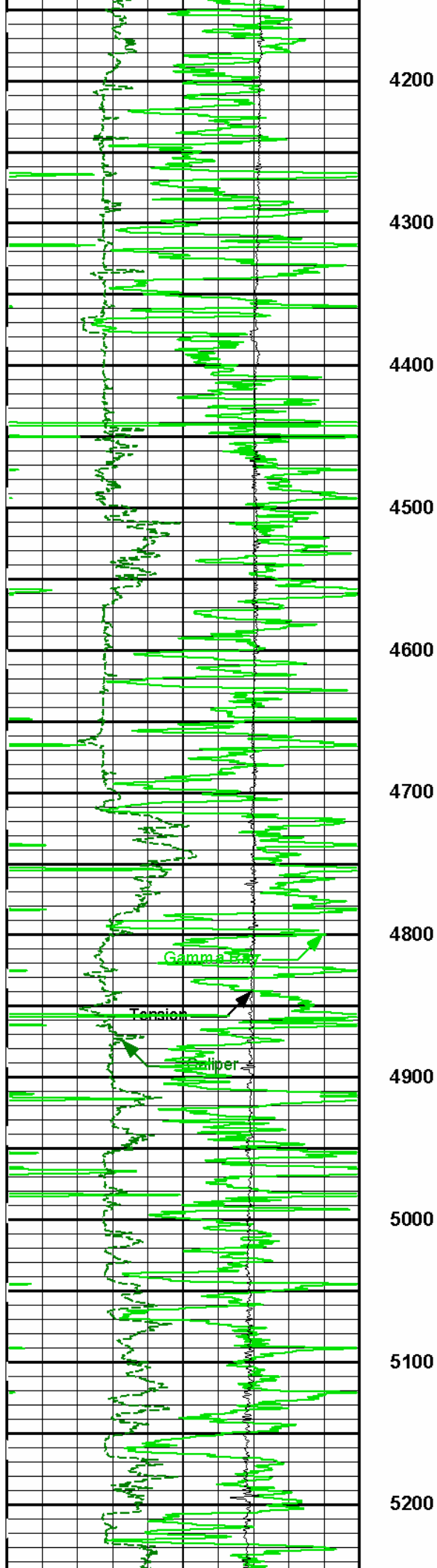
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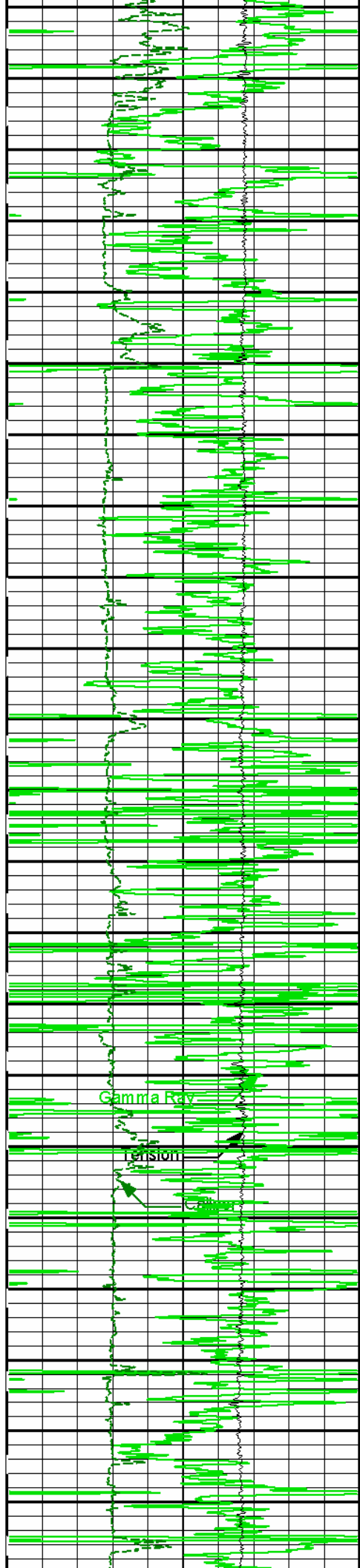
4000

4100

0.2	RT60	2K
	Ohm-m	
0.2	RT30	2K
	Ohm-m	
0.2	RT20	2K
	Ohm-m	
0.2	RT10	2K
	Ohm-m	







5300

5400

5500

5600

5700

5800

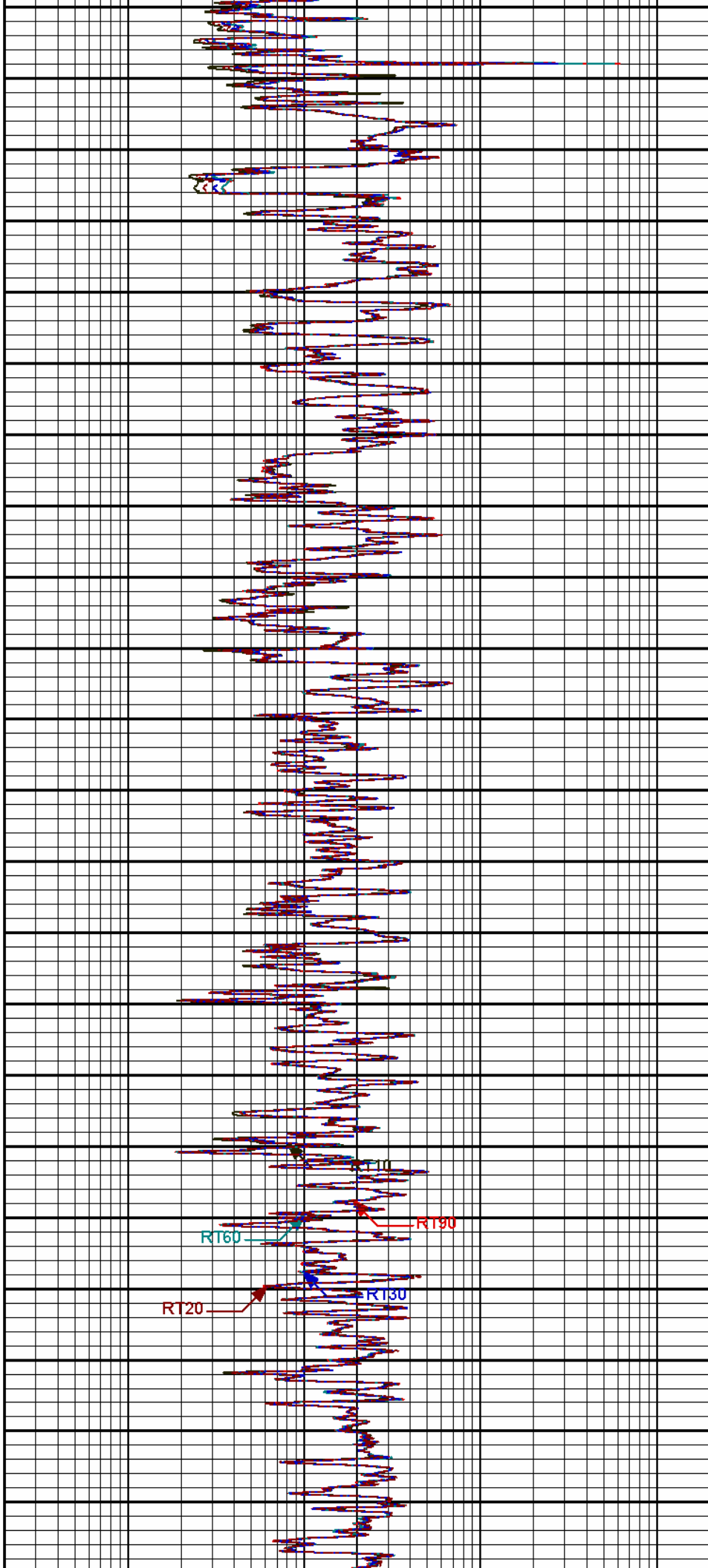
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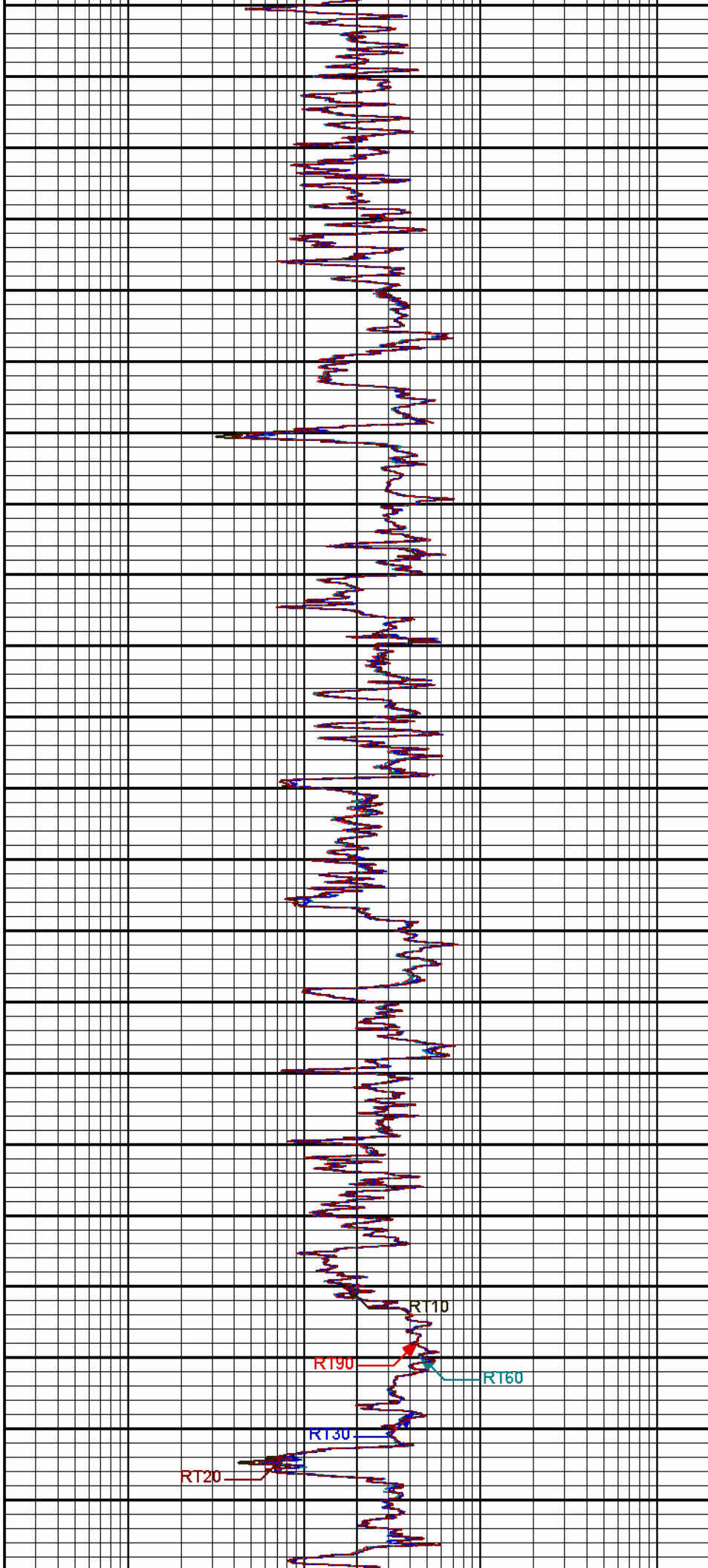
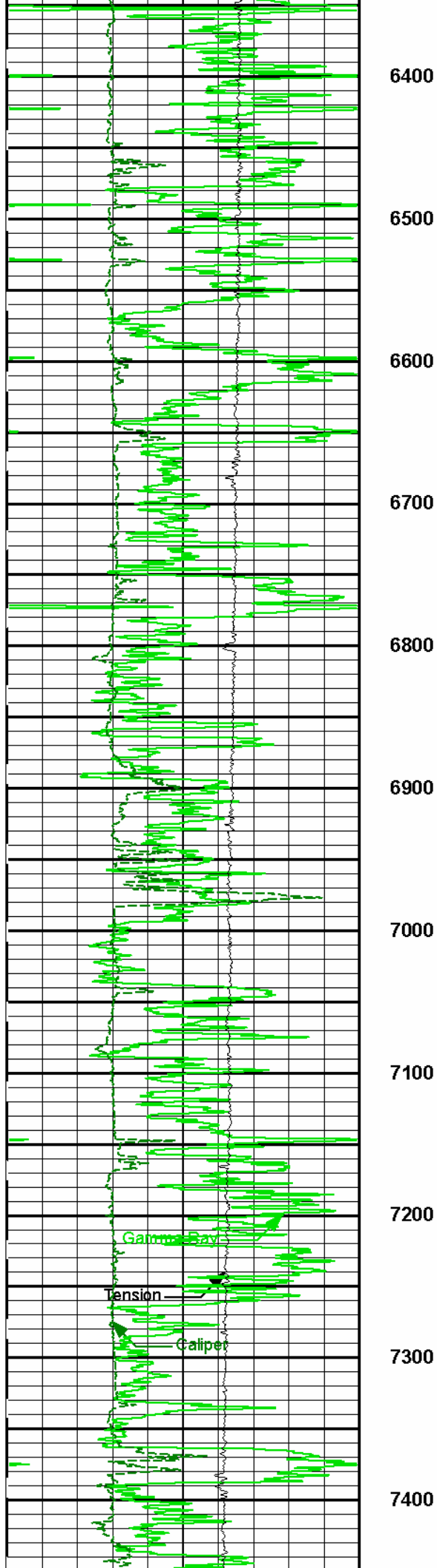
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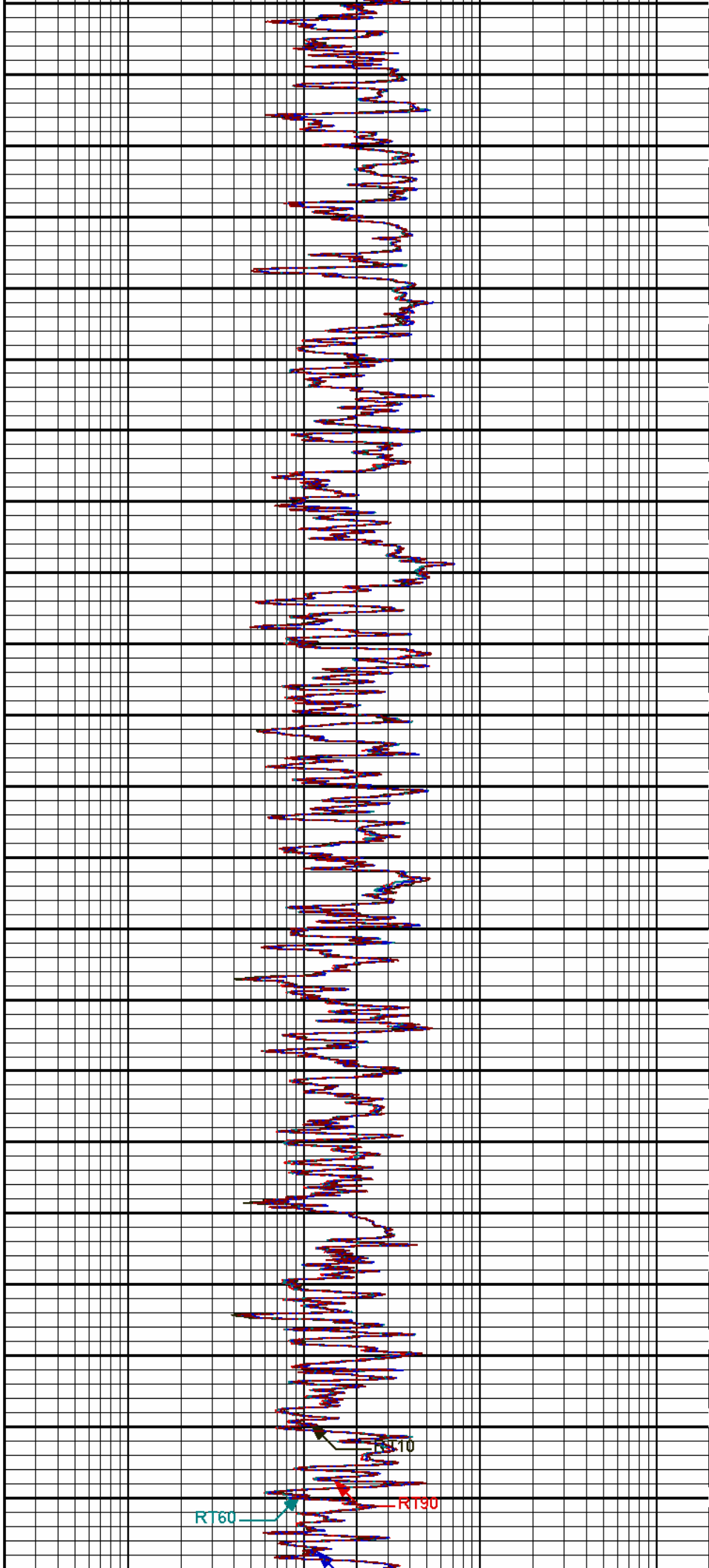
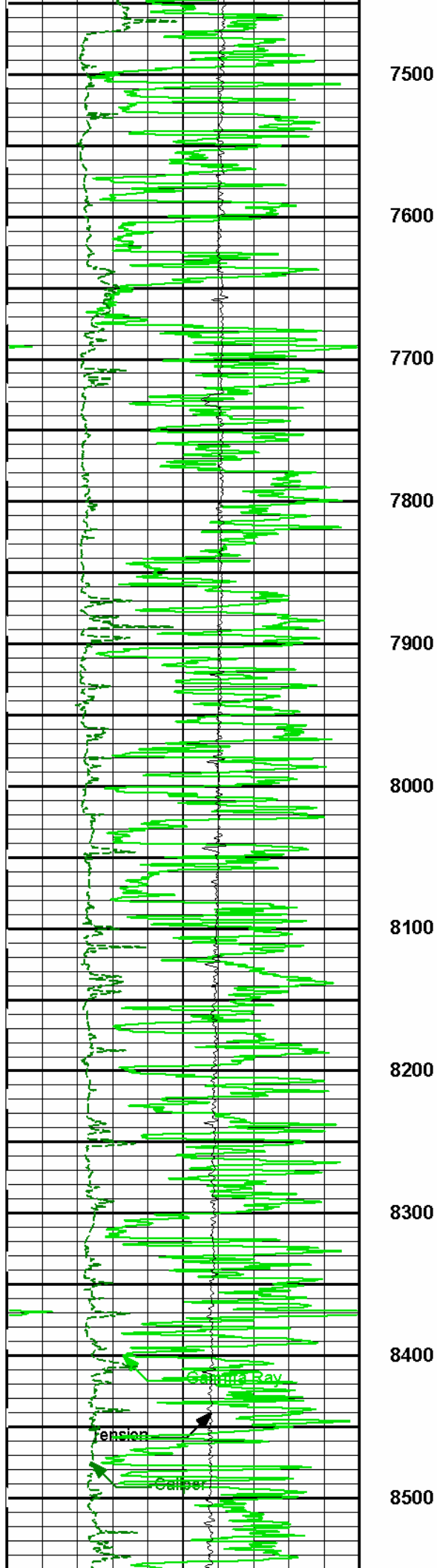
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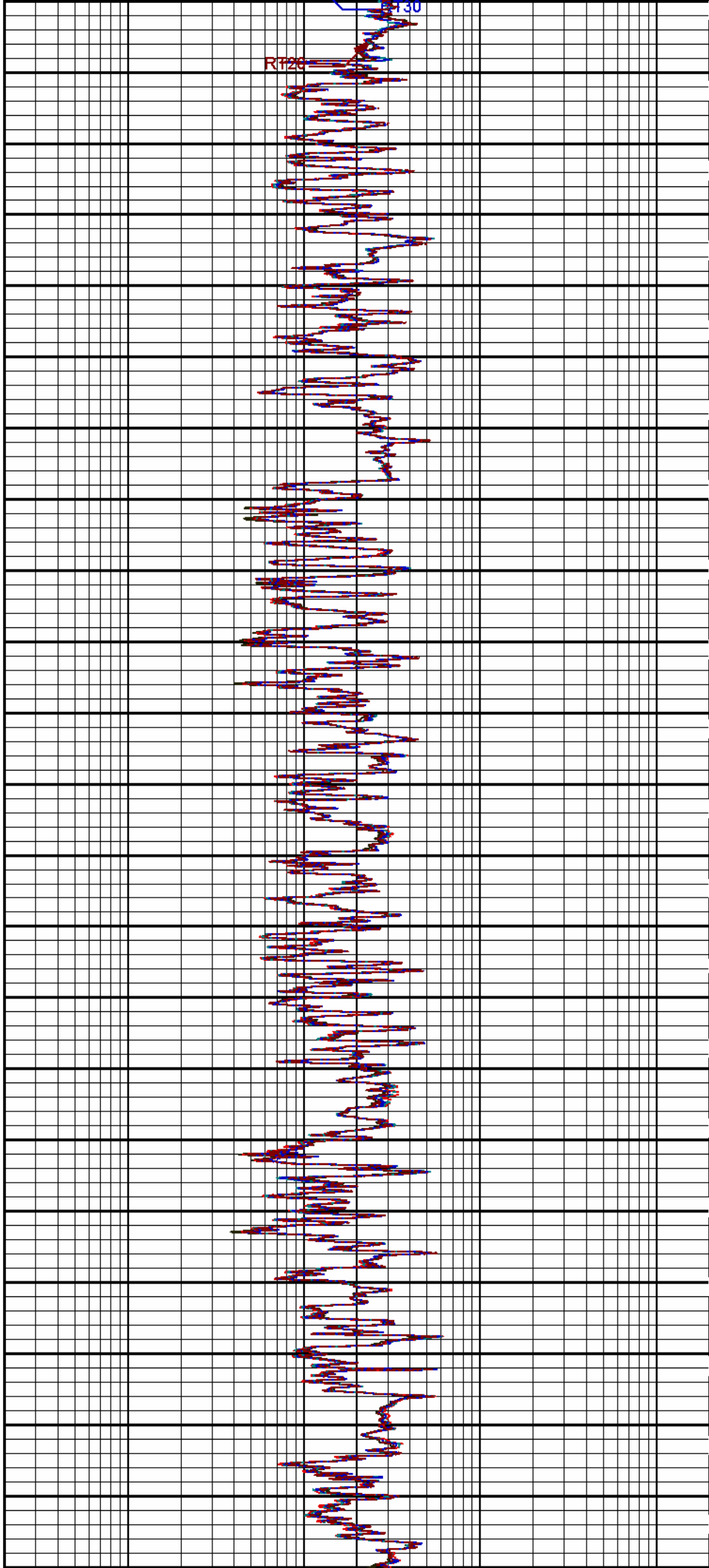
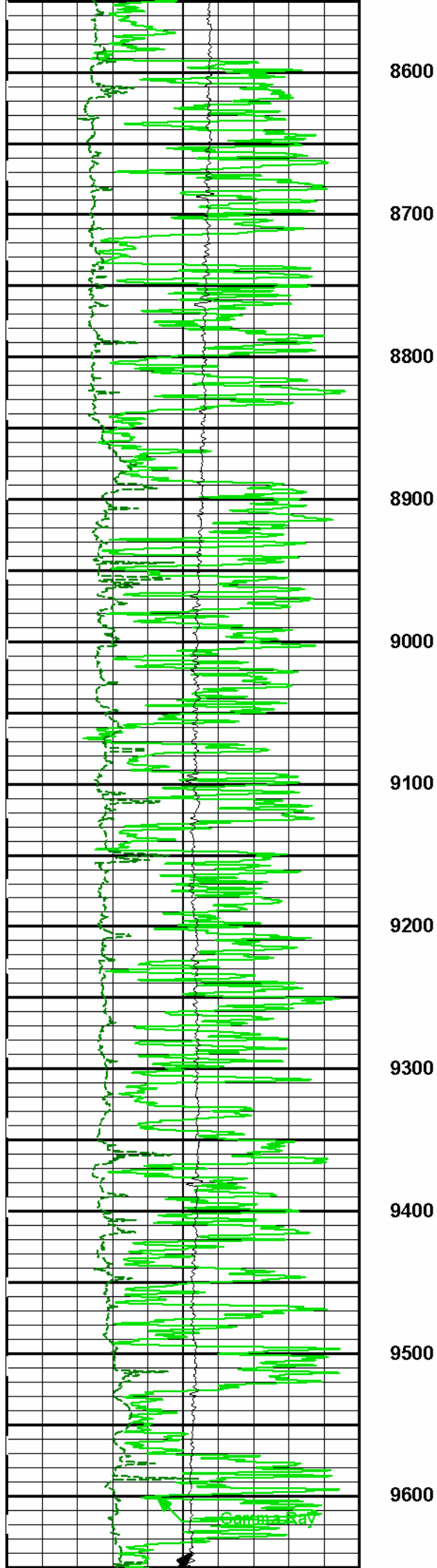
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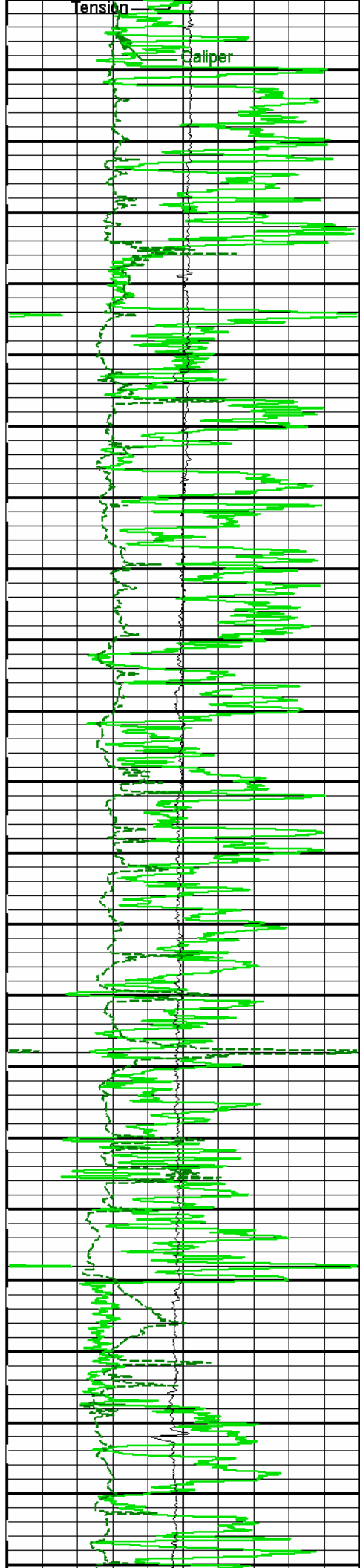
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9700

9800

9900

10000

10100

10200

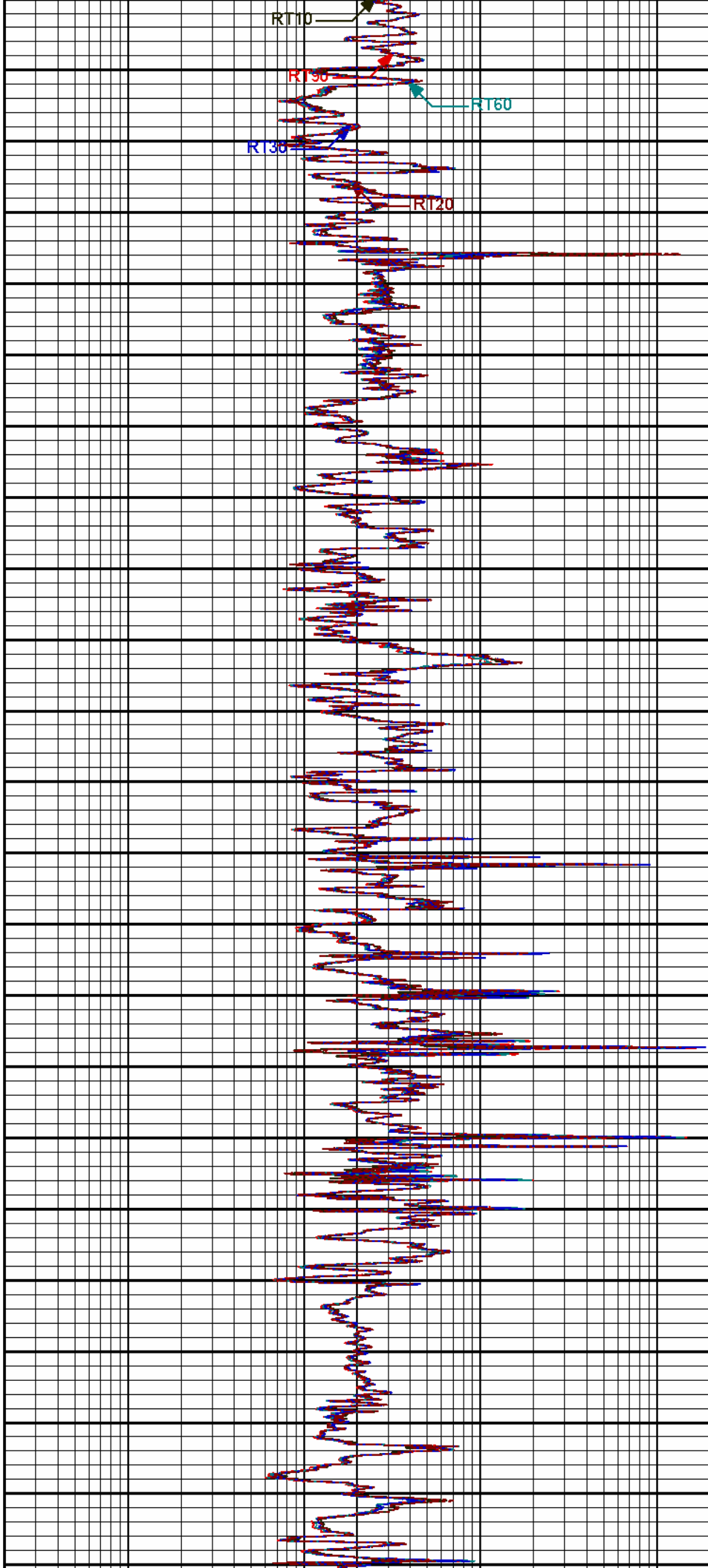
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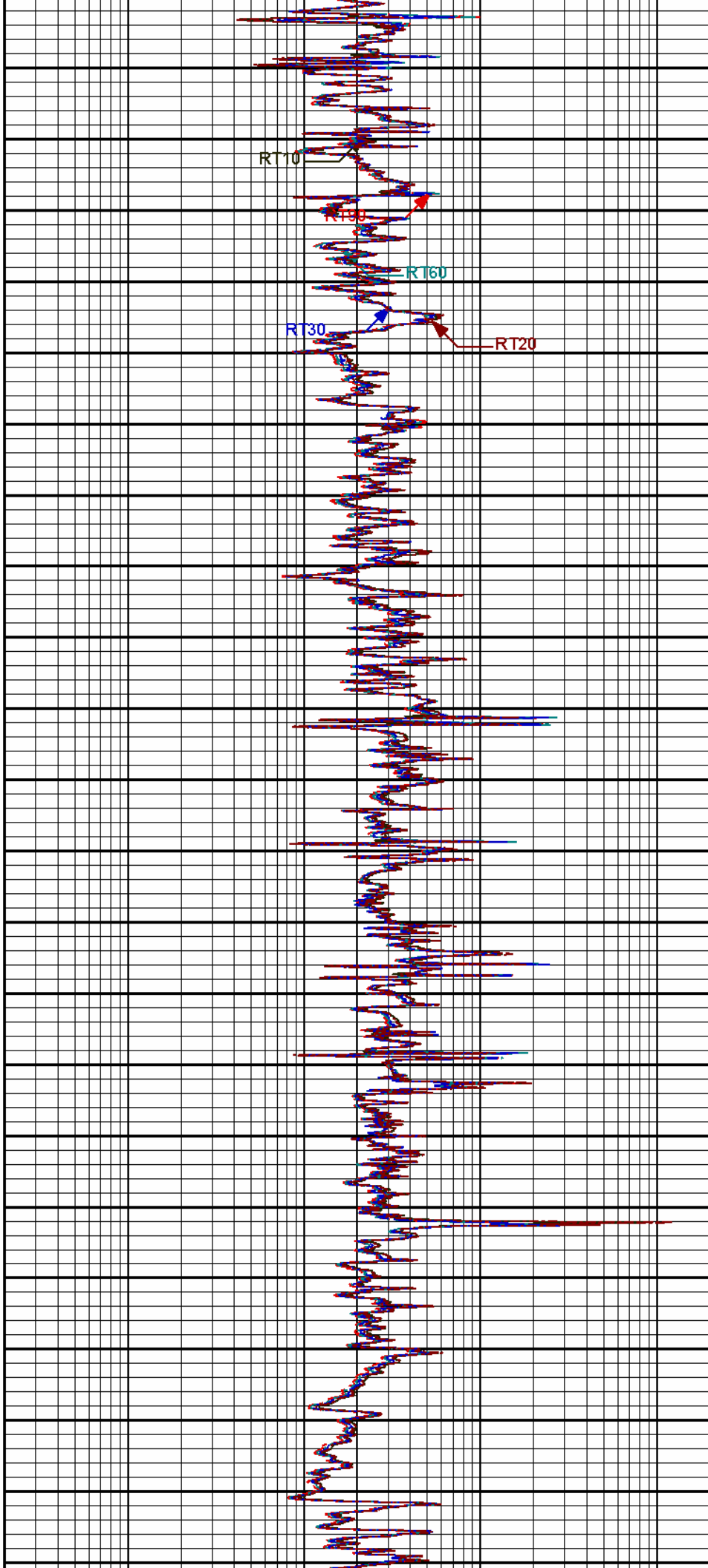
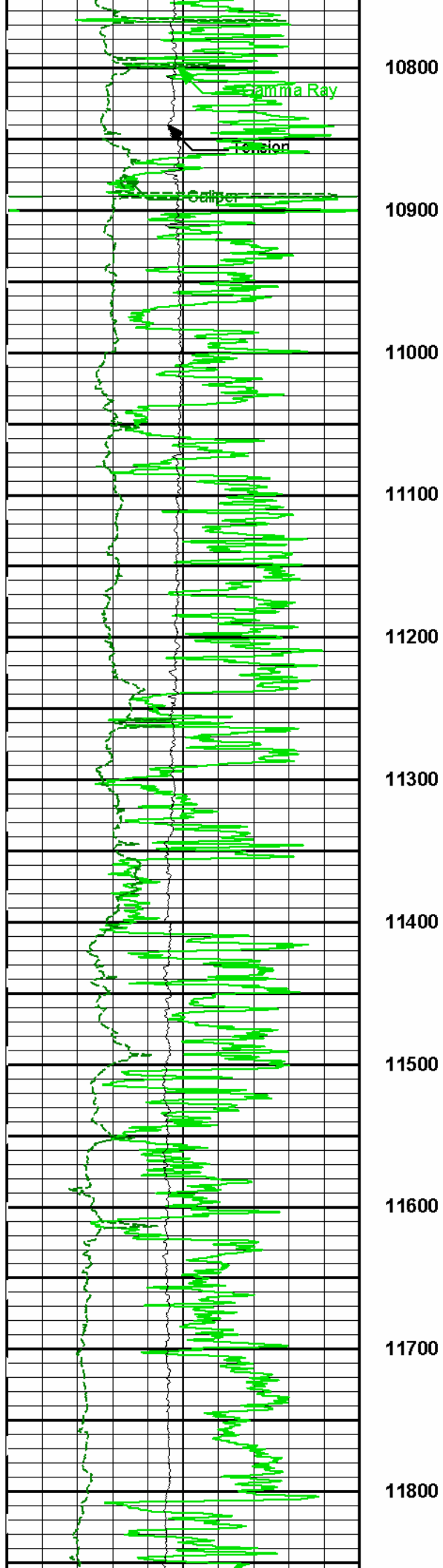
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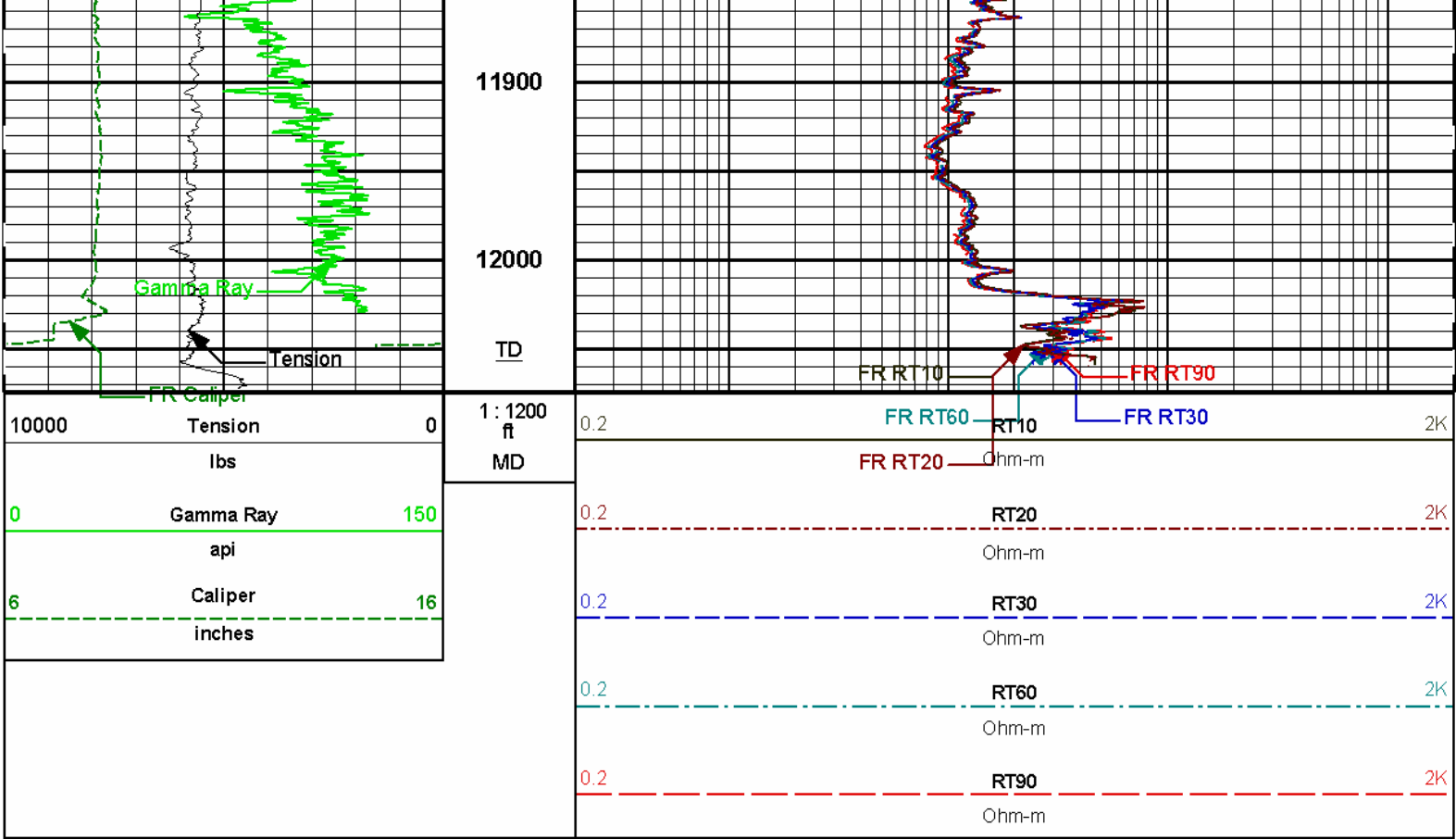
10500

10600

10700







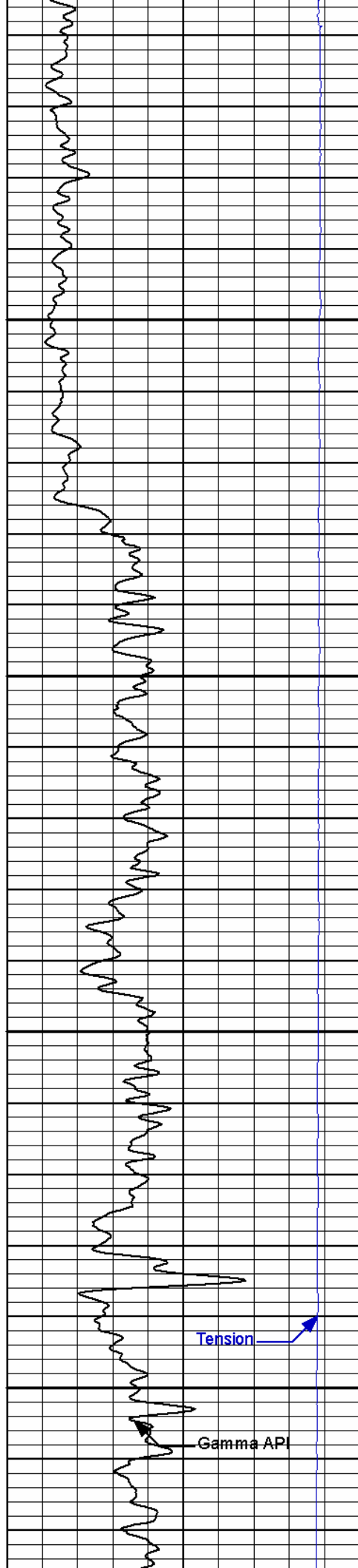
HALLIBURTON

Plot Time: 19-Oct-08 01:34:01
Plot Range: 3234 ft to 12074 ft
Data: YCF_XOM_1_41_1\Well Based\MAIN PASS - CASING1
Plot File: \\LOCAL-YCF_XOM_1_41_1\0001 TRIPLE_2\TRIPLEACRT_1IN

MAIN PASS 1" = 100'

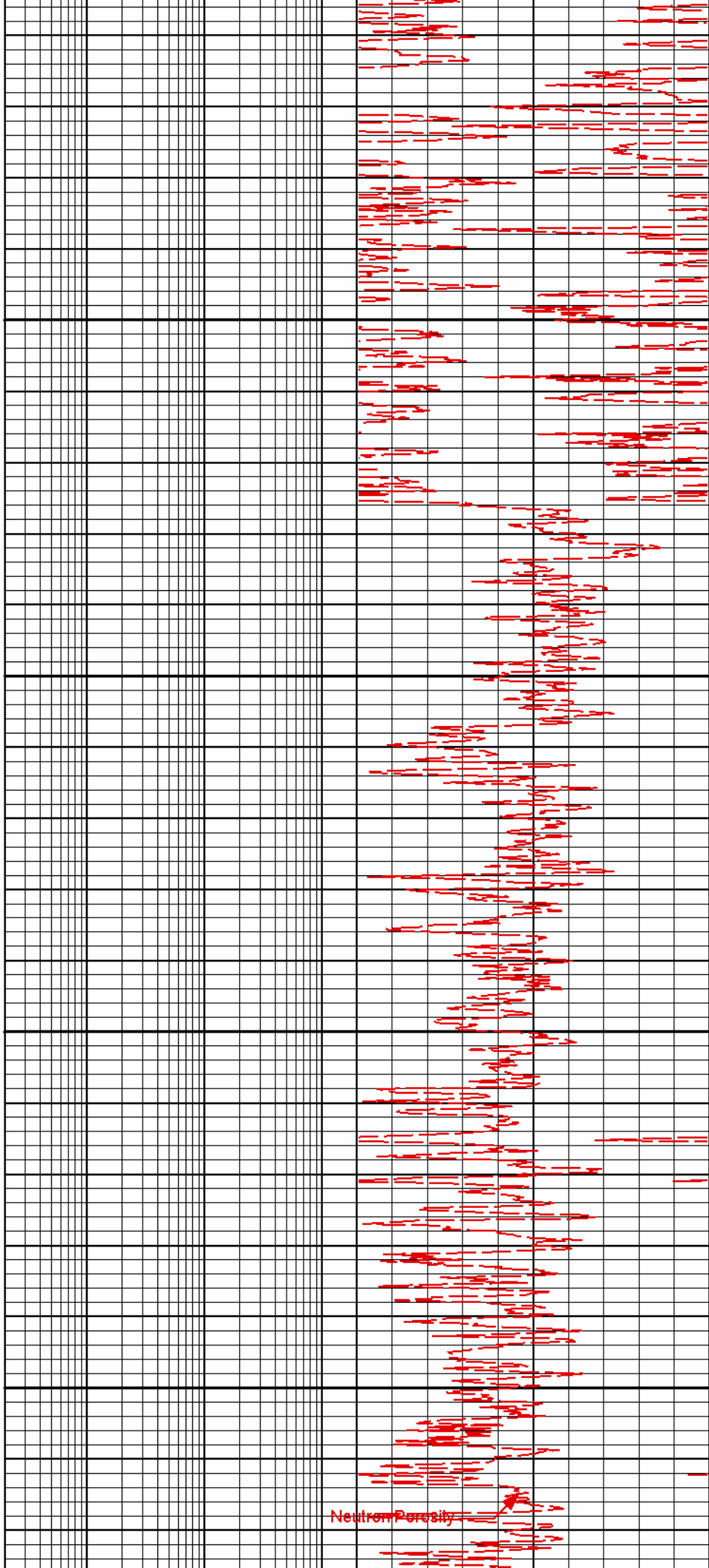
MAIN PASS 5" = 100'

	0 MINV 50	0.2	RT90	200	
	ohmm		Ohm-m		
10K	0 0 MNOR 50	0.2	RT60	200	-1.8
Tension	0		Ohm-m		DensityCorr
pounds	ohmm				gram per cc
SP	BHV	0.2	RT30	200	30
-]10[+	ft3		Ohm-m		Neutron Porosity
6	AHV	0.2	RT20	200	30
Caliper	ft3		Ohm-m		DensityPorosity
inches					percent
0	1 : 240	0.2	RT10	200	0
Gamma API	ft MD		Ohm-m		Pe
api					10

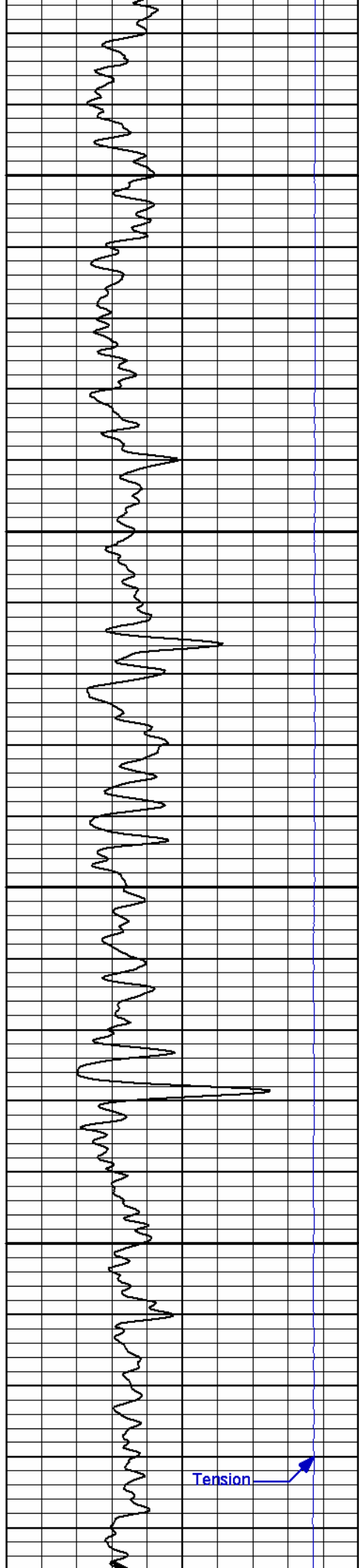


100

200



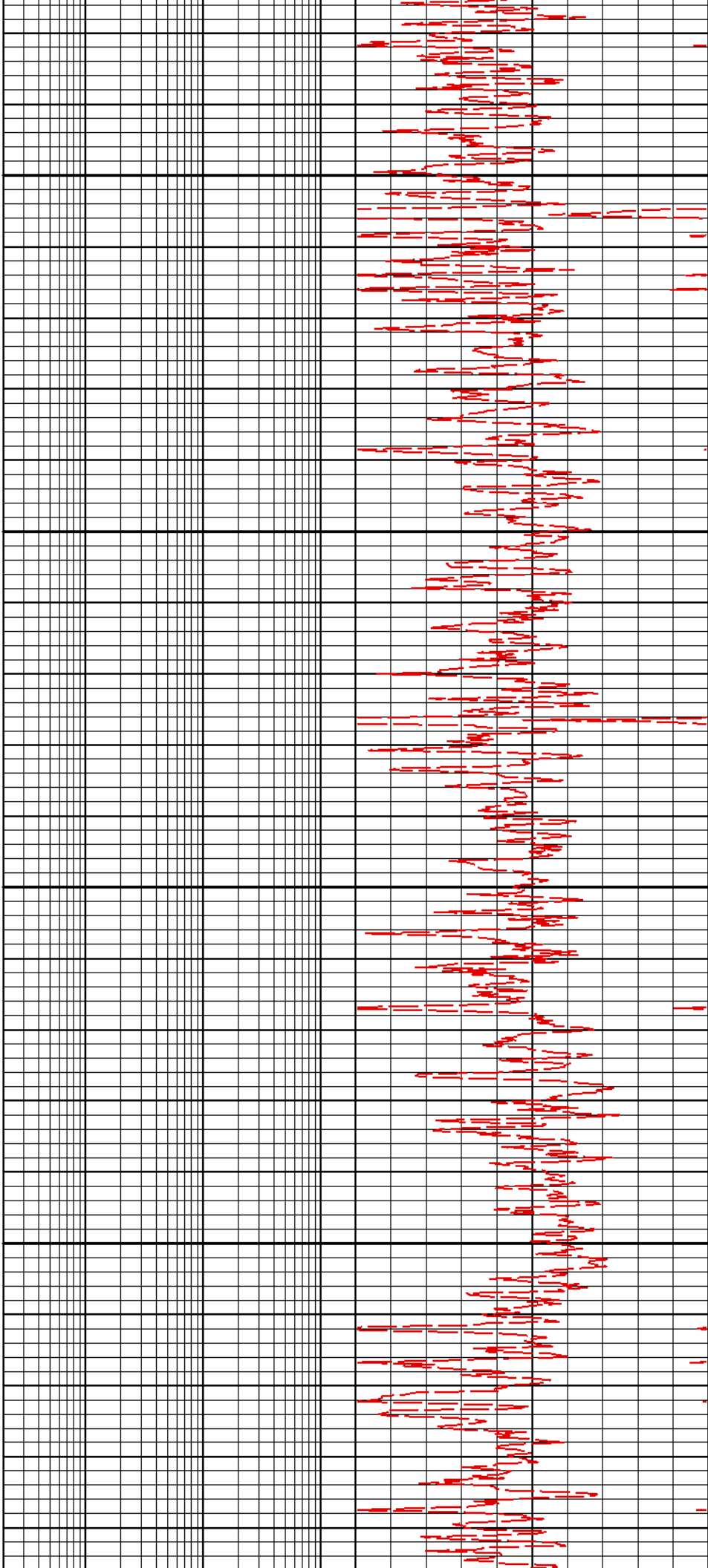
Neutron Porosity

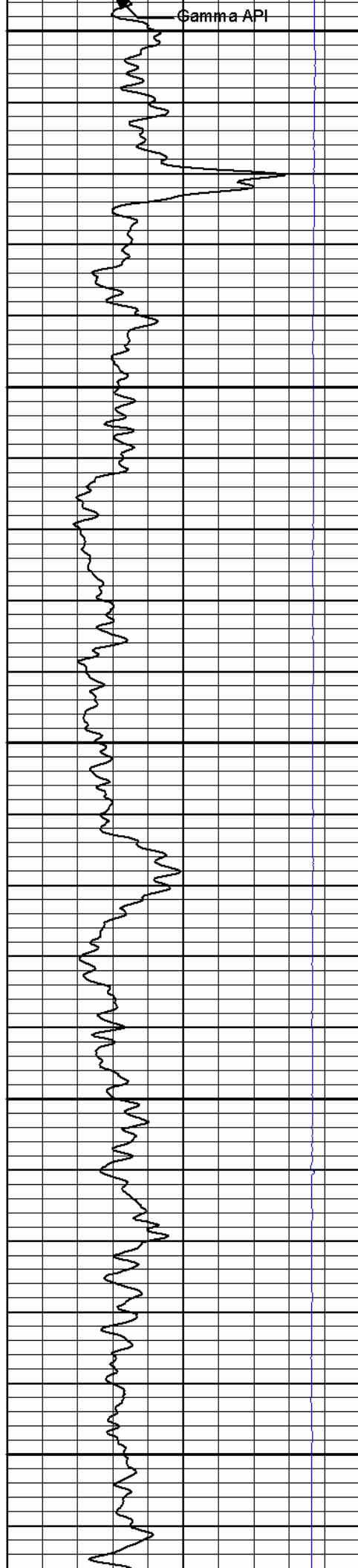


300

400

Tension

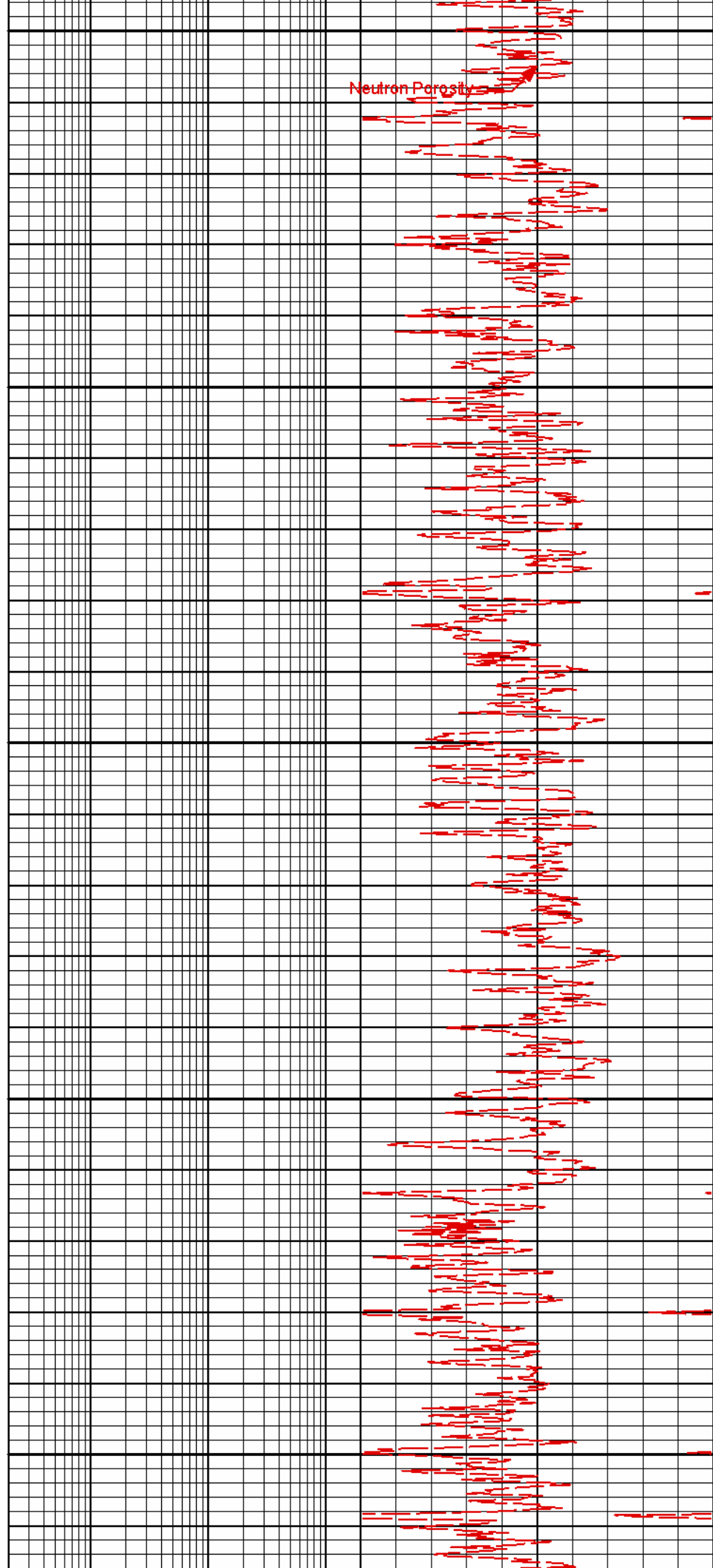


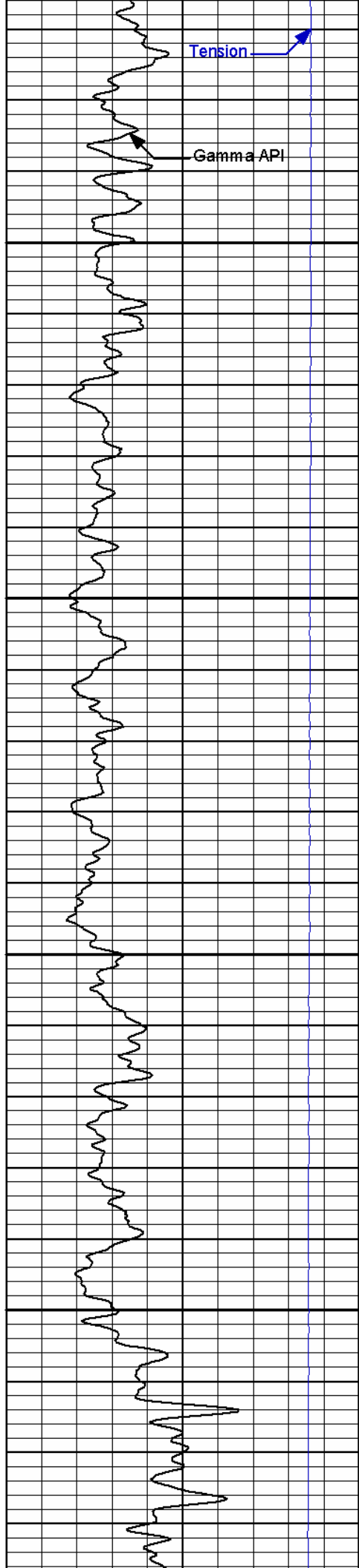


500

600

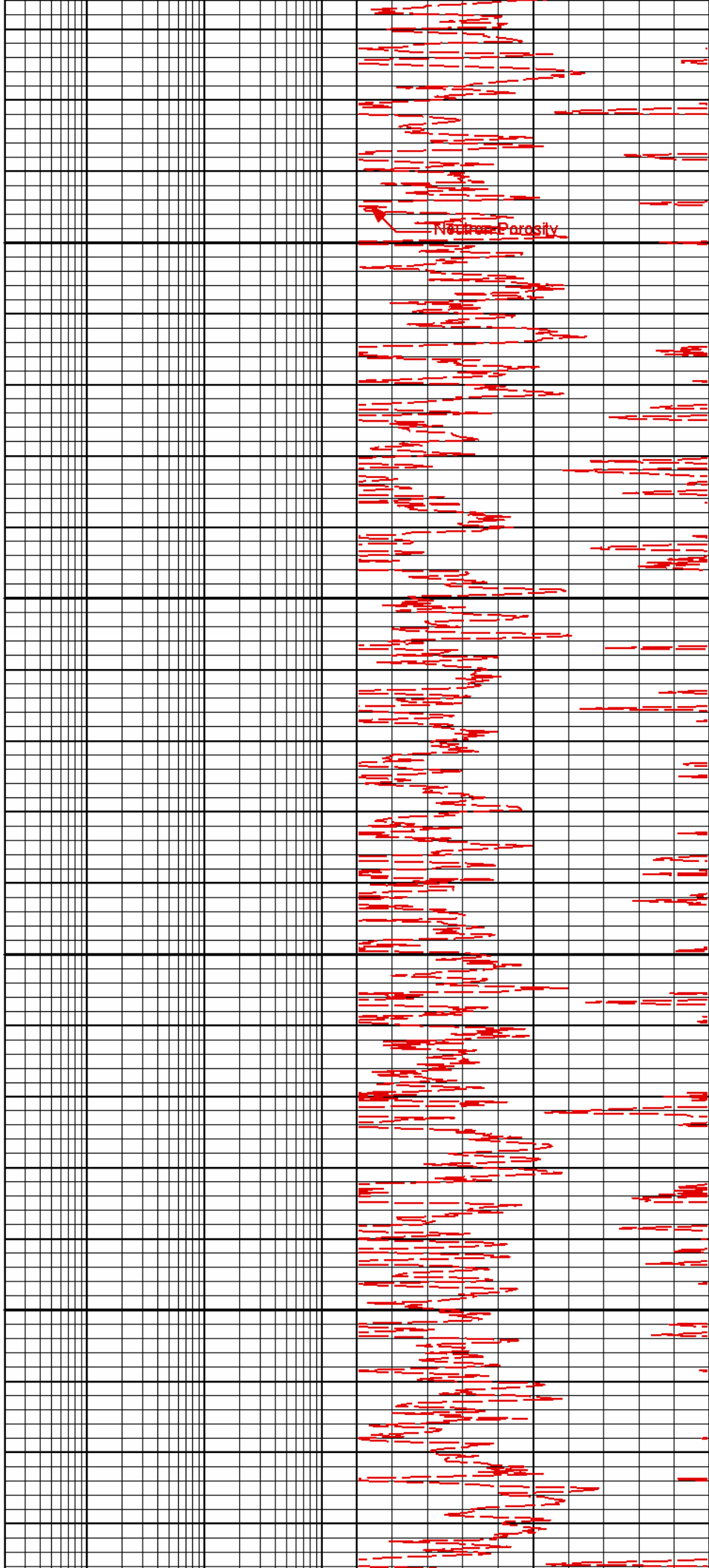
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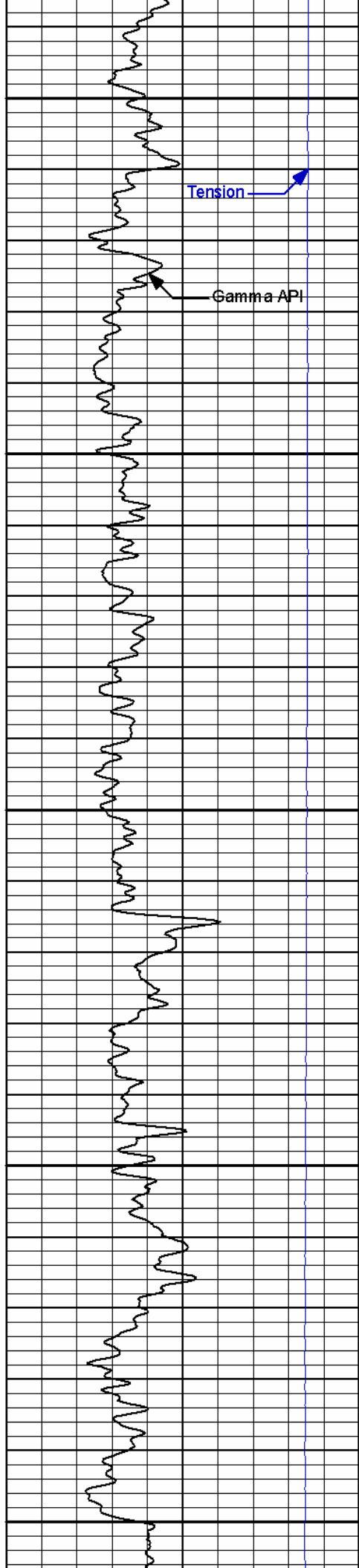




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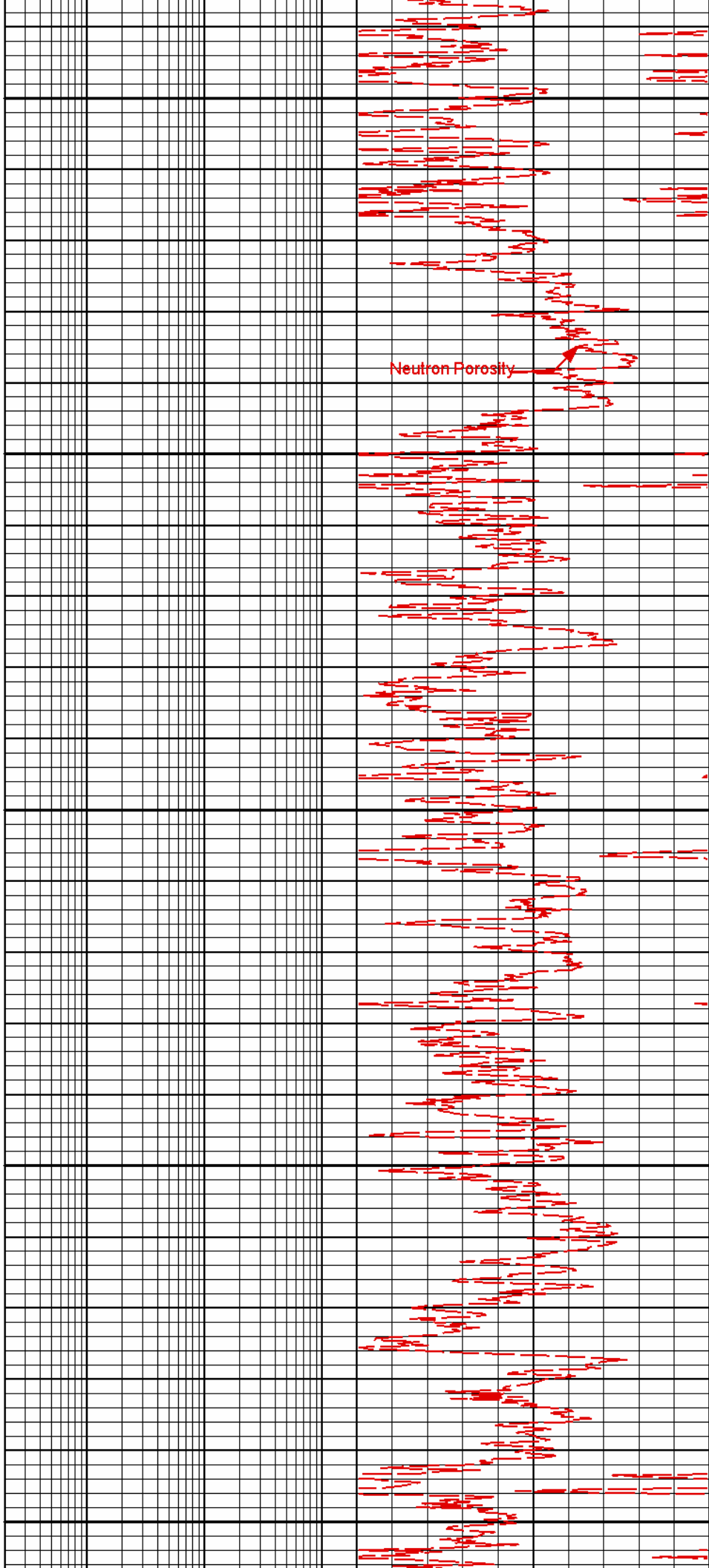
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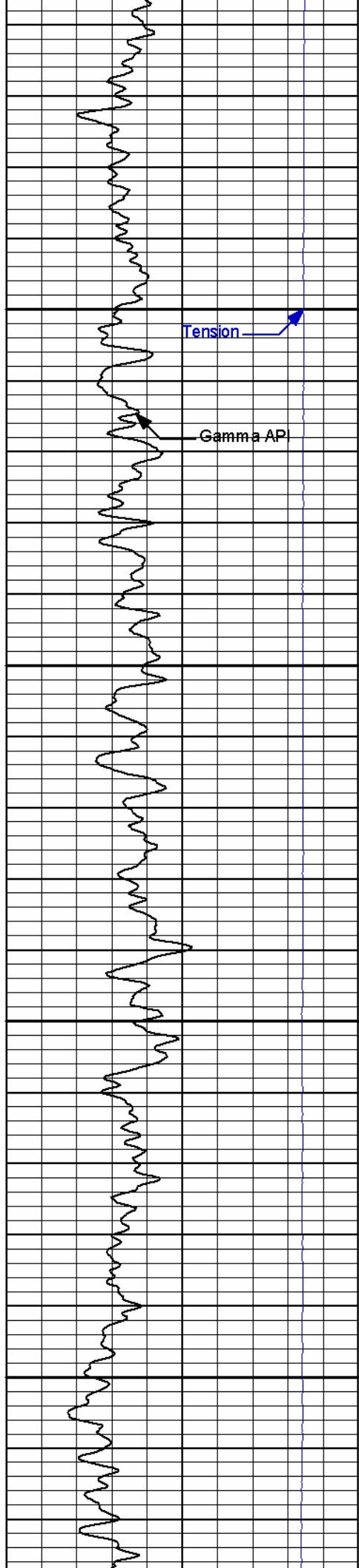




1000

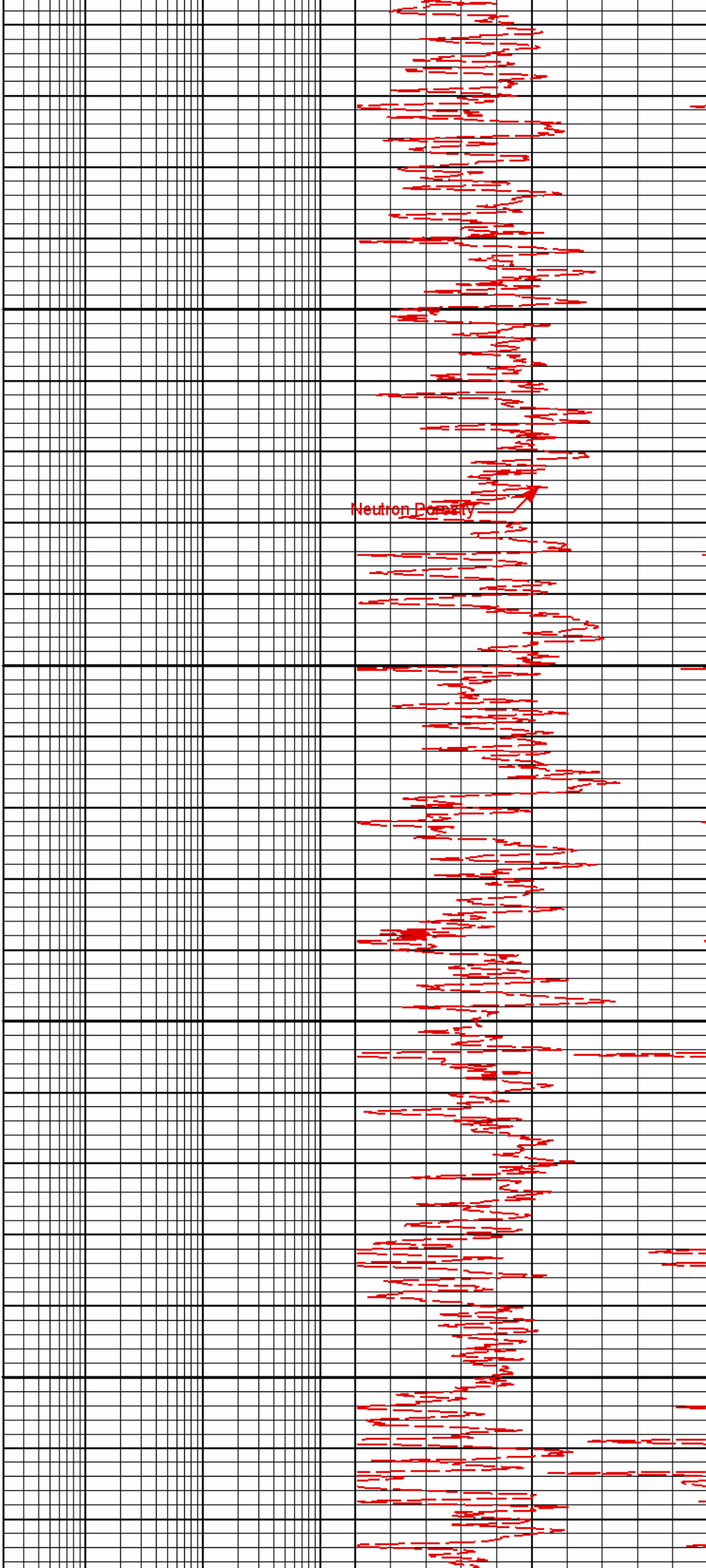
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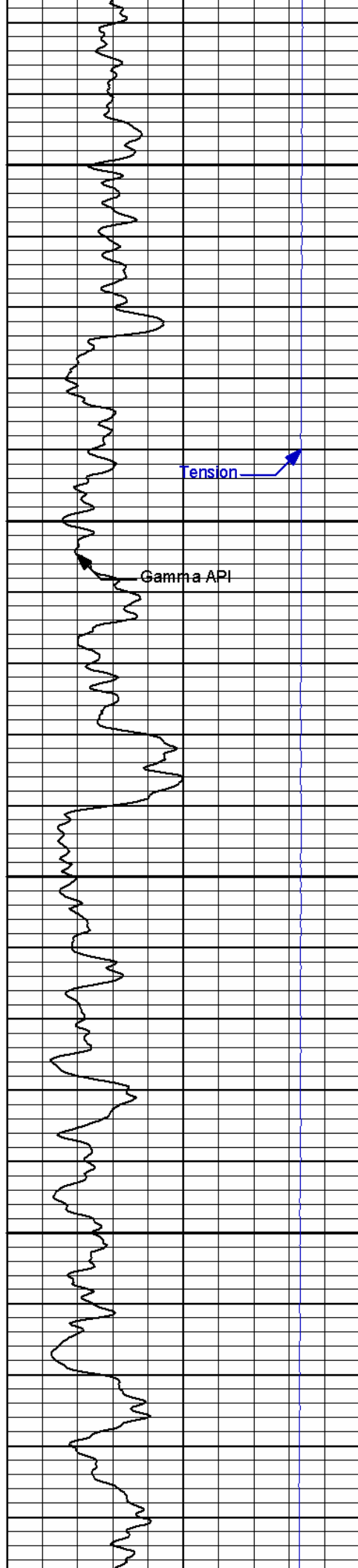




1200

1300

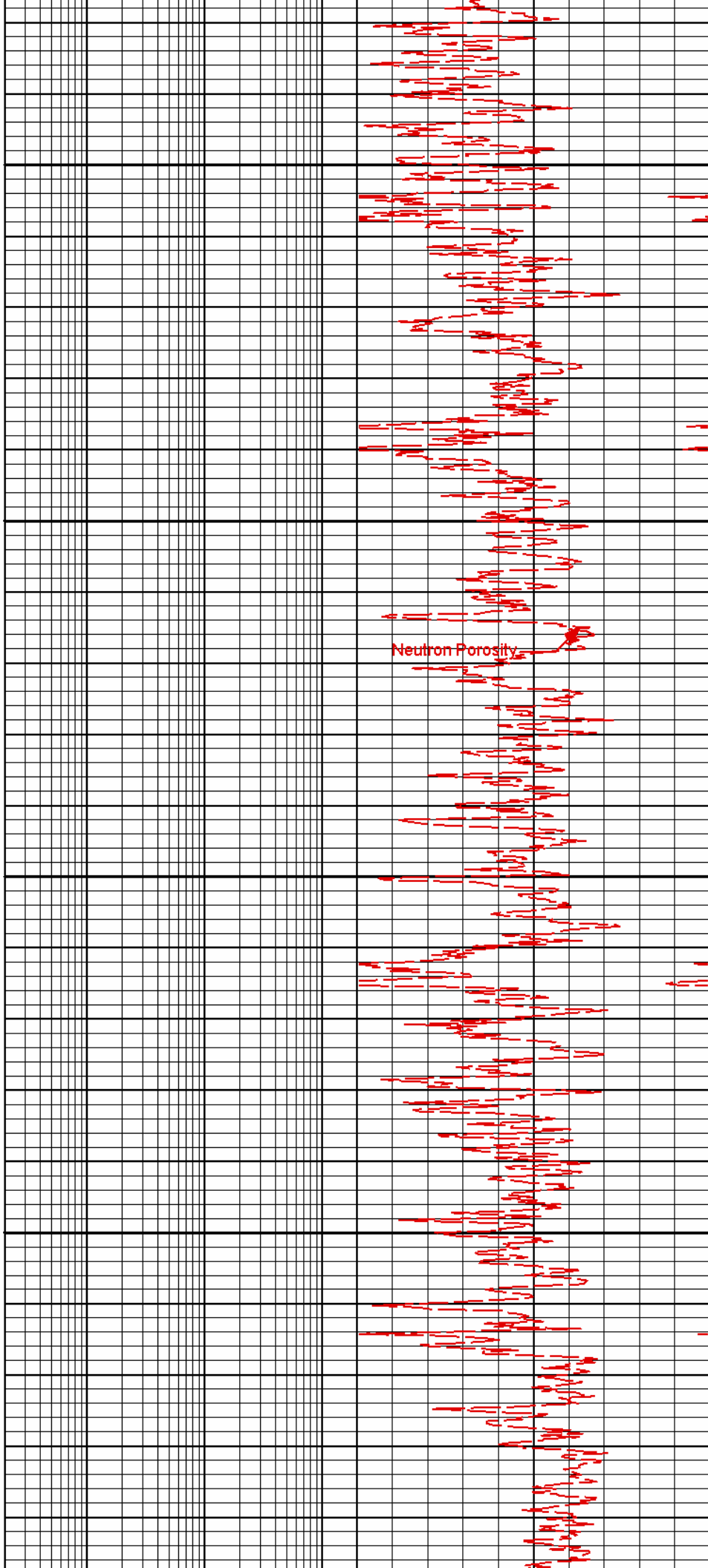




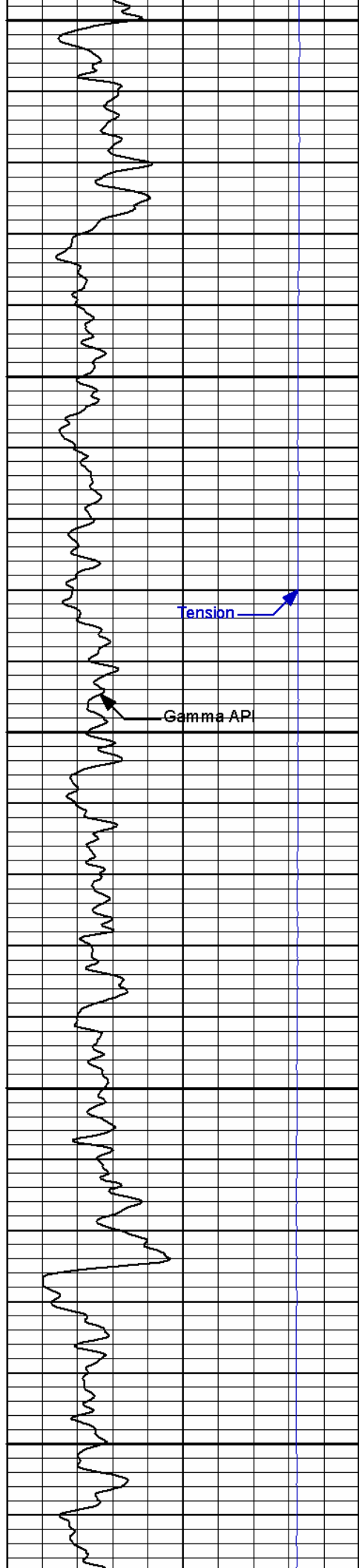
1400

Gamma API

1500



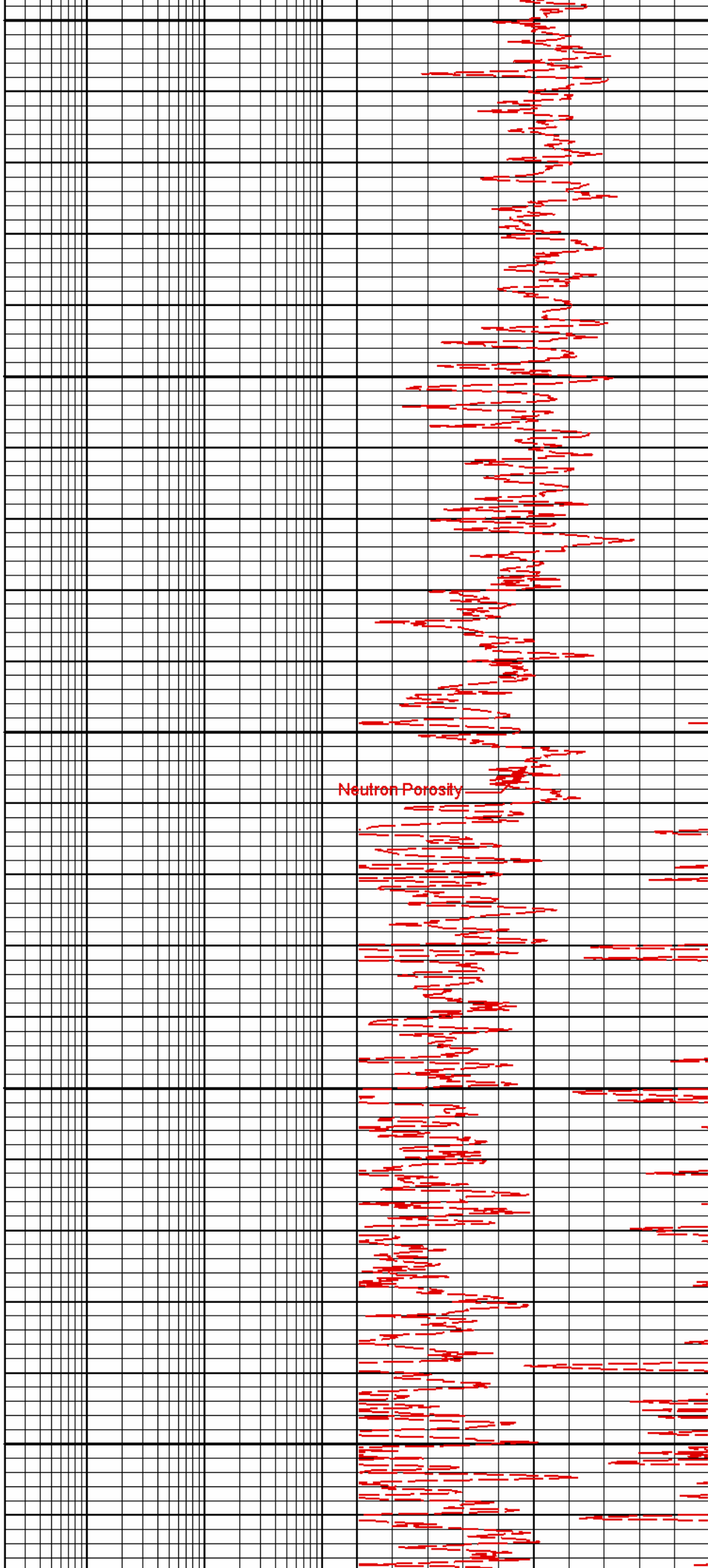
Neutron Porosity



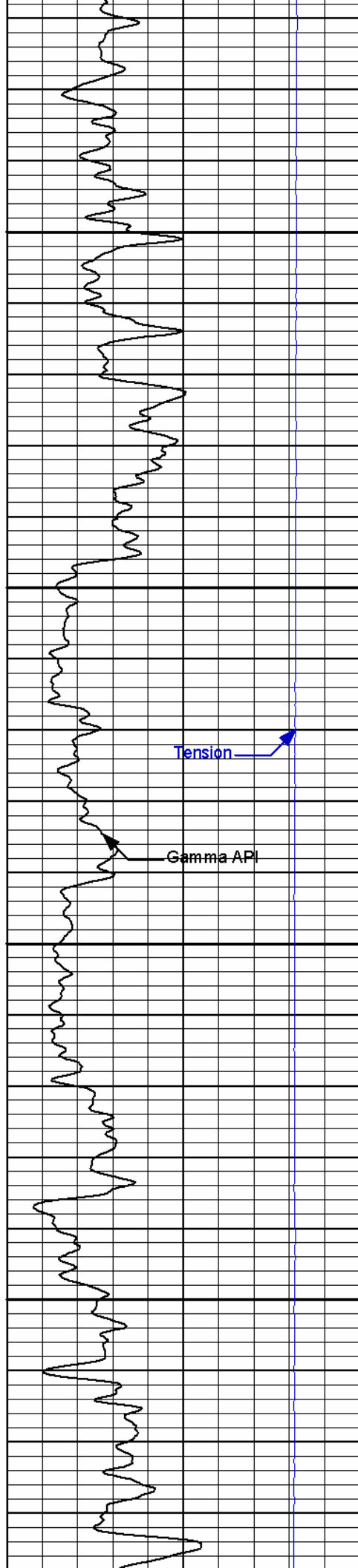
1600

1700

1800

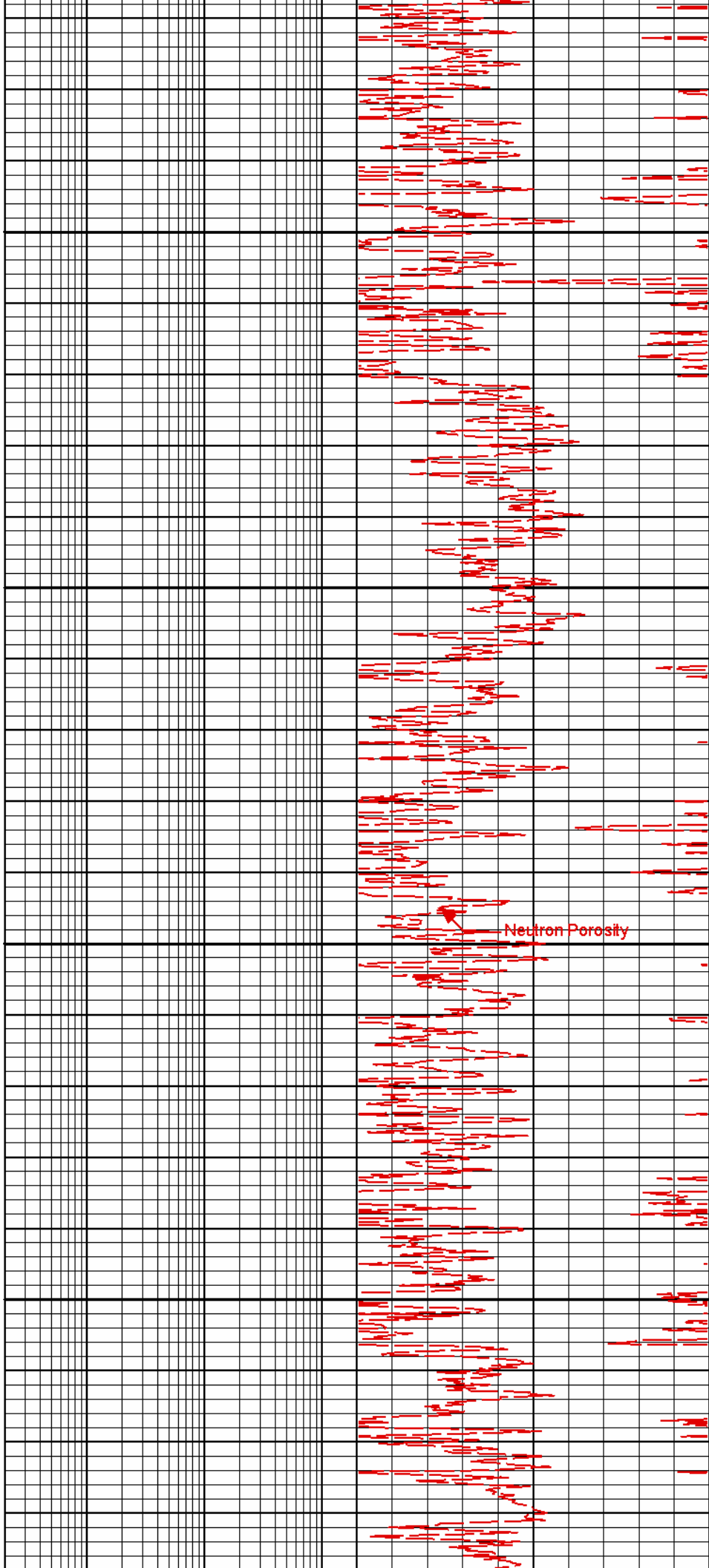


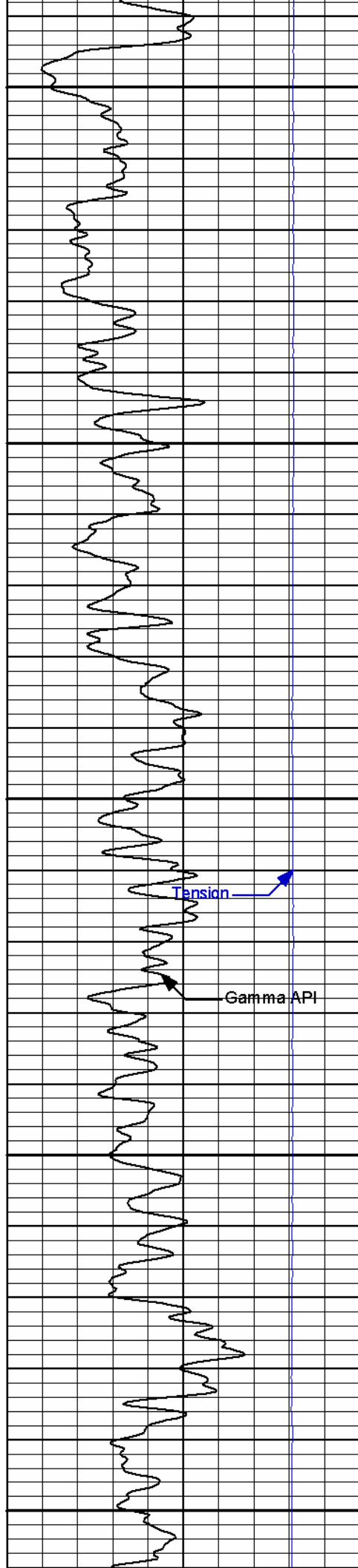
Neutron Porosity



1900

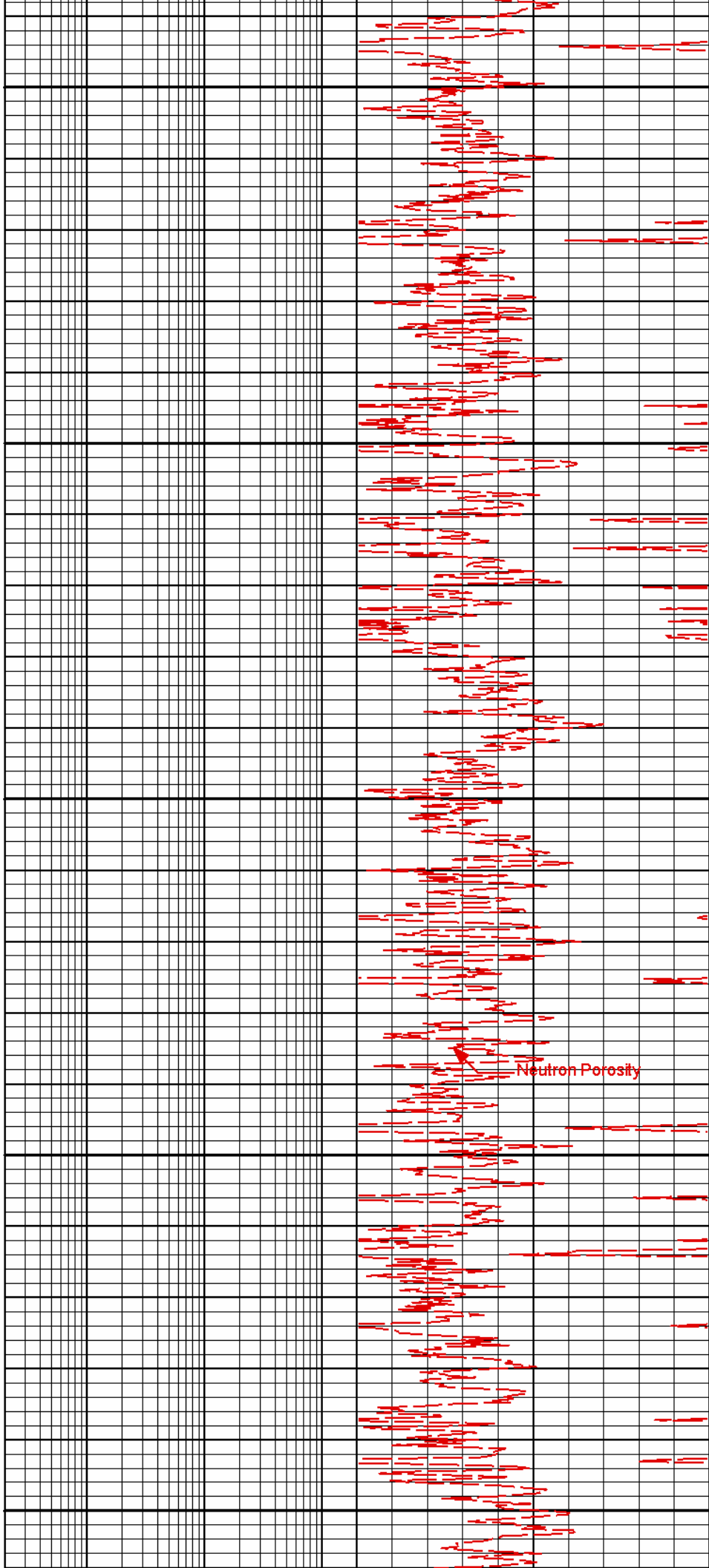
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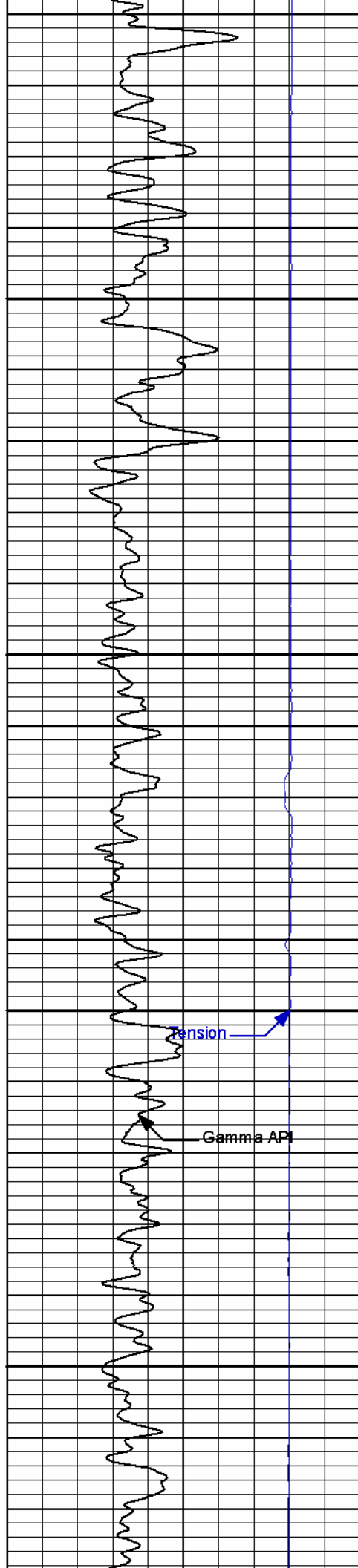




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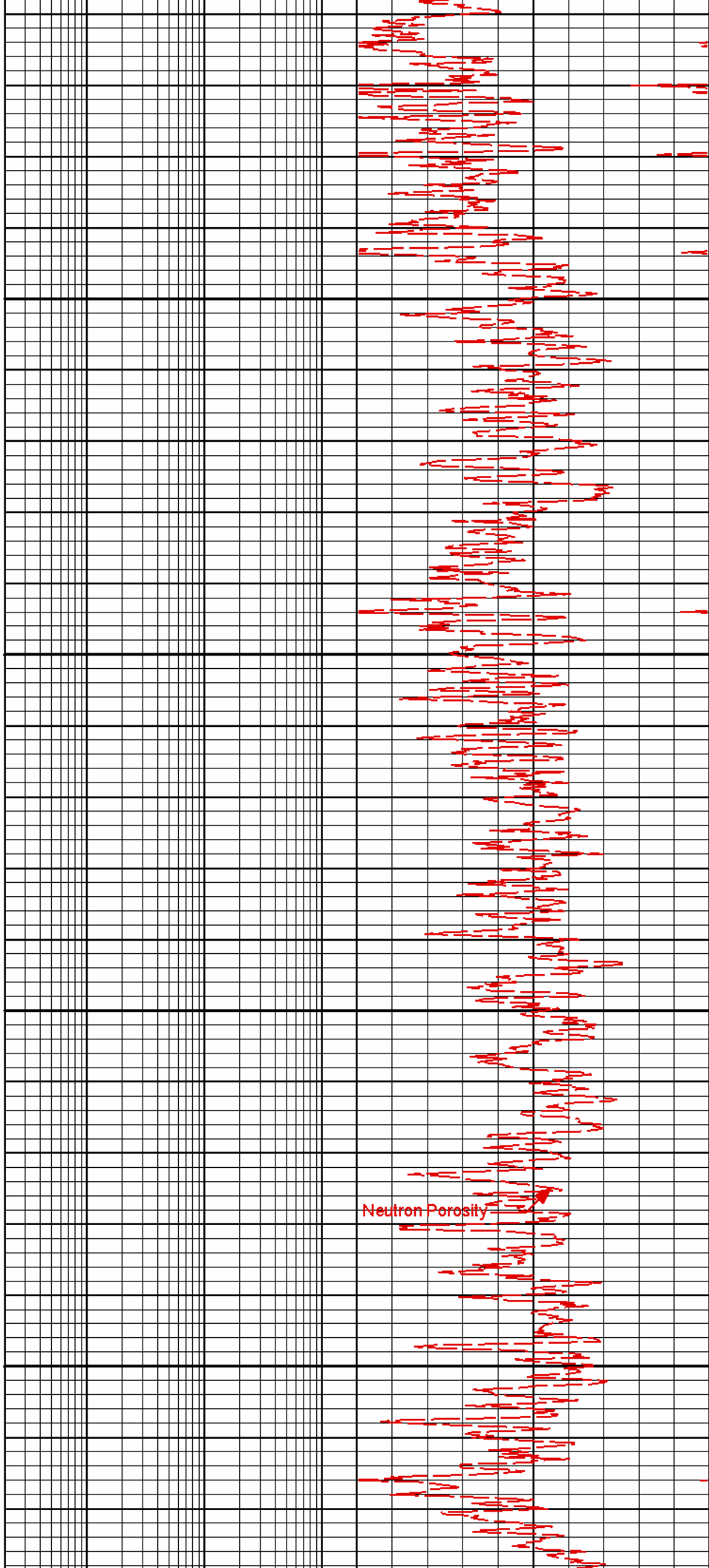
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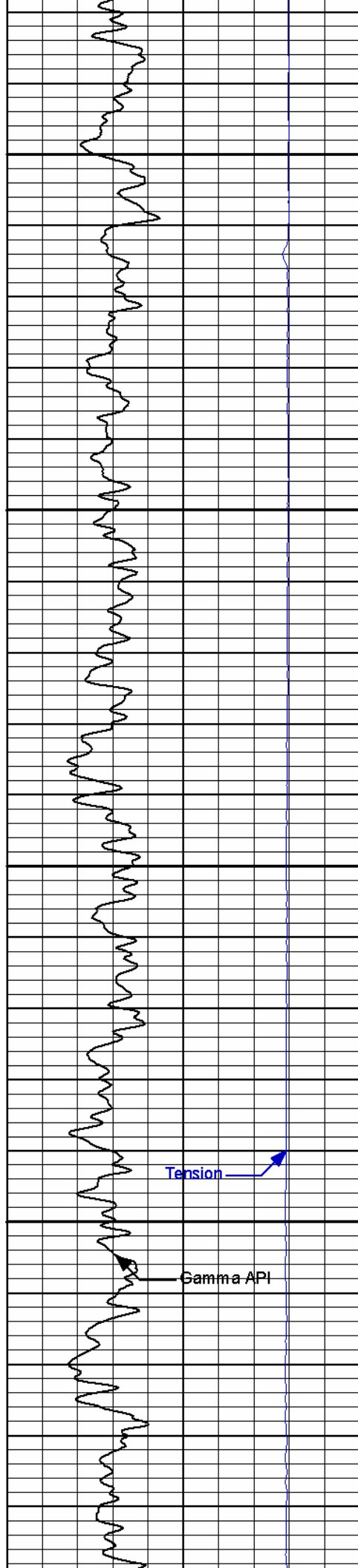


2300

2400



Neutron Porosity

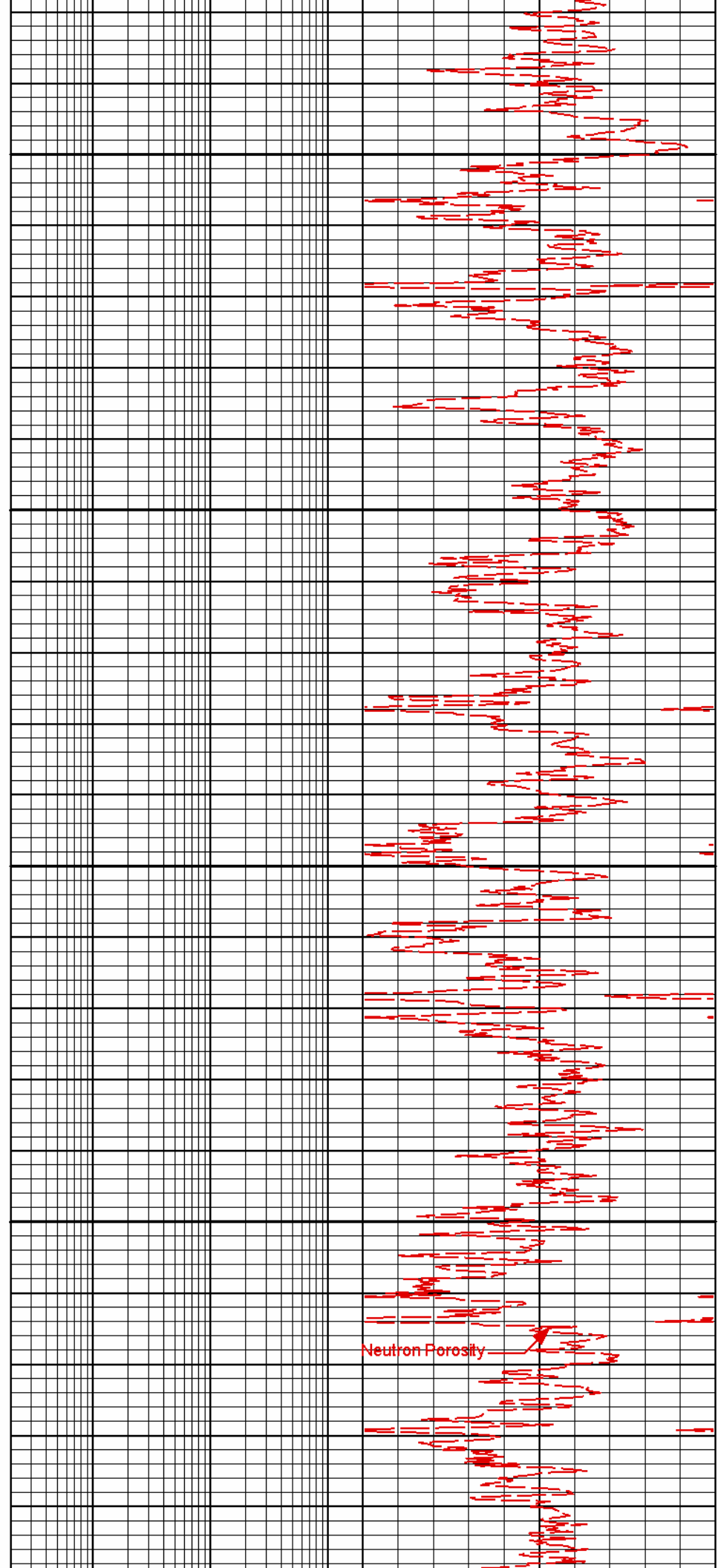


2500

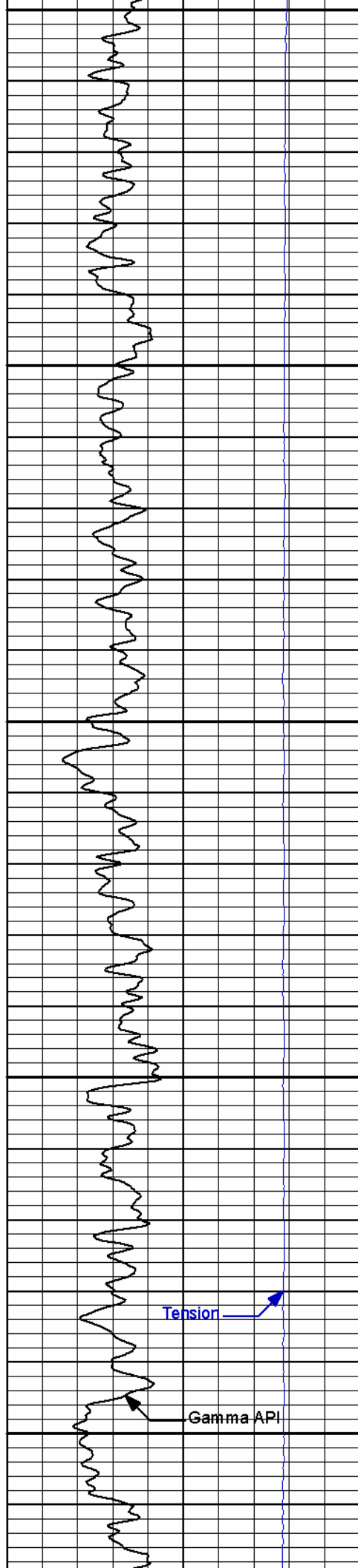
2600

Tension

Gamma API



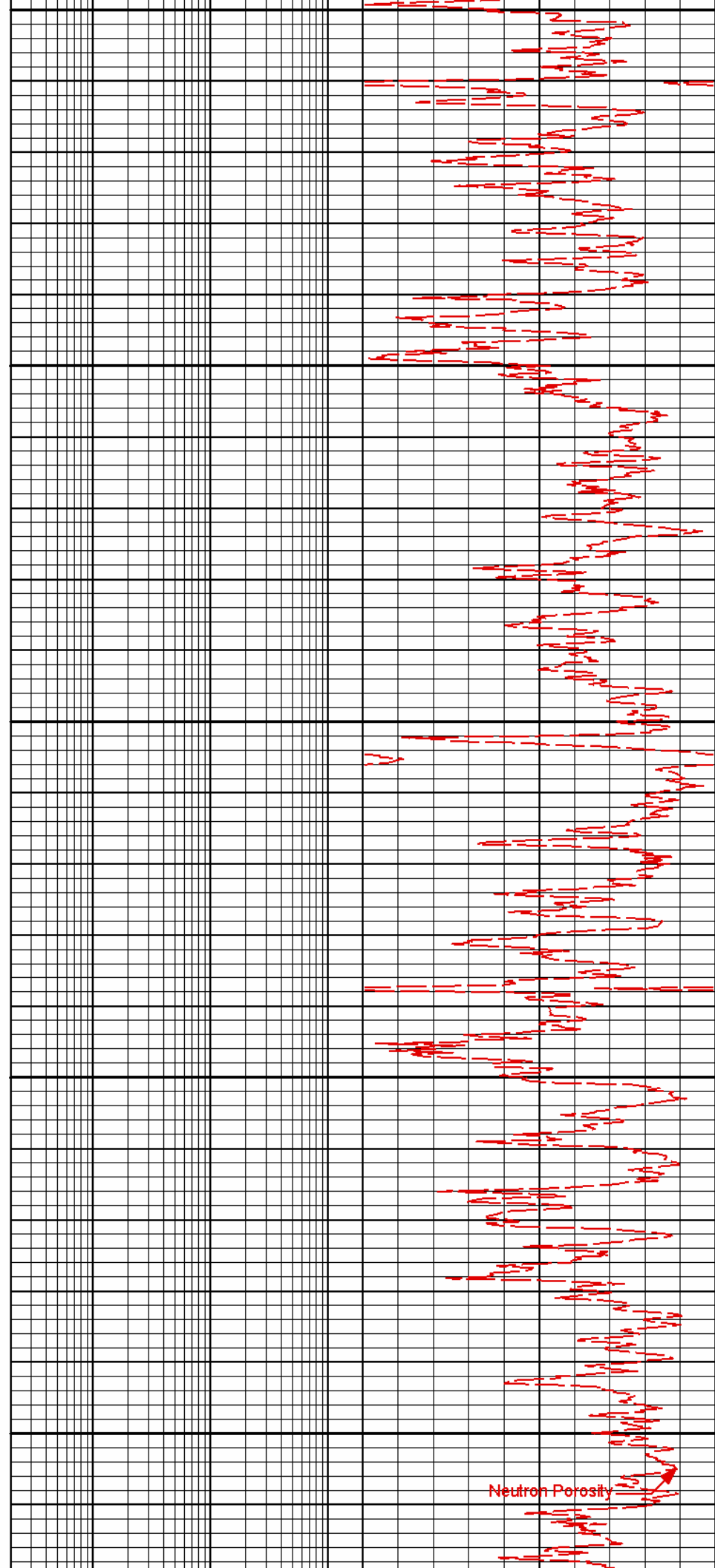
Neutron Porosity



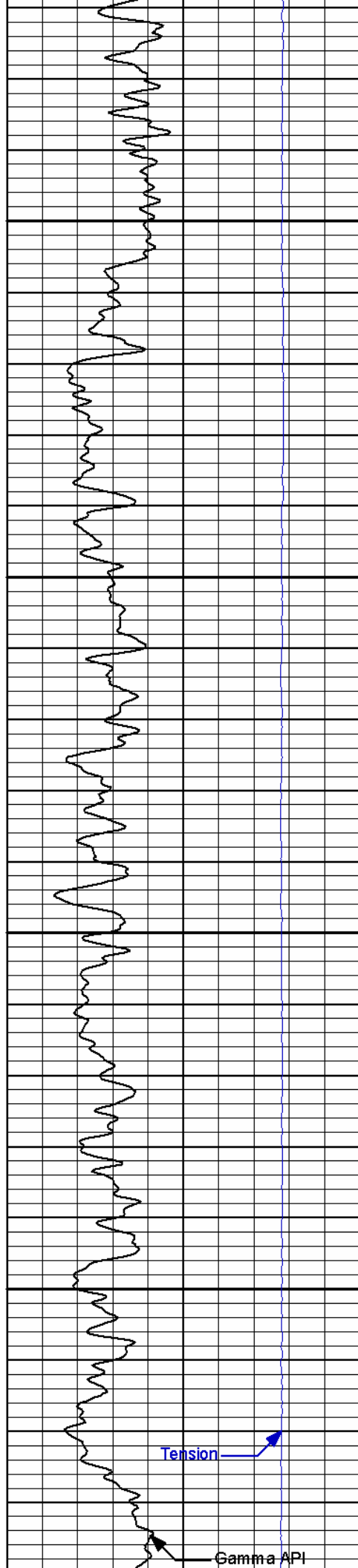
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2800

2900

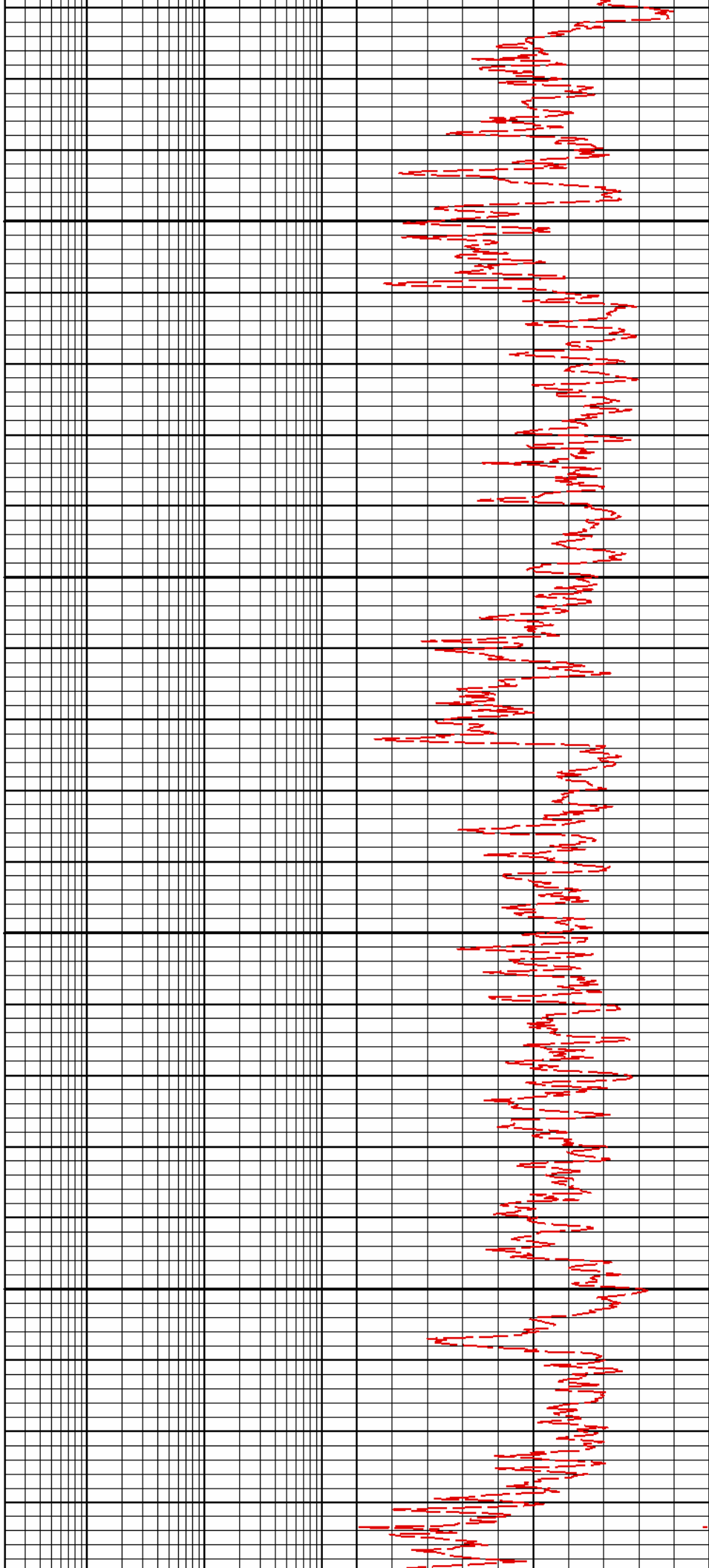


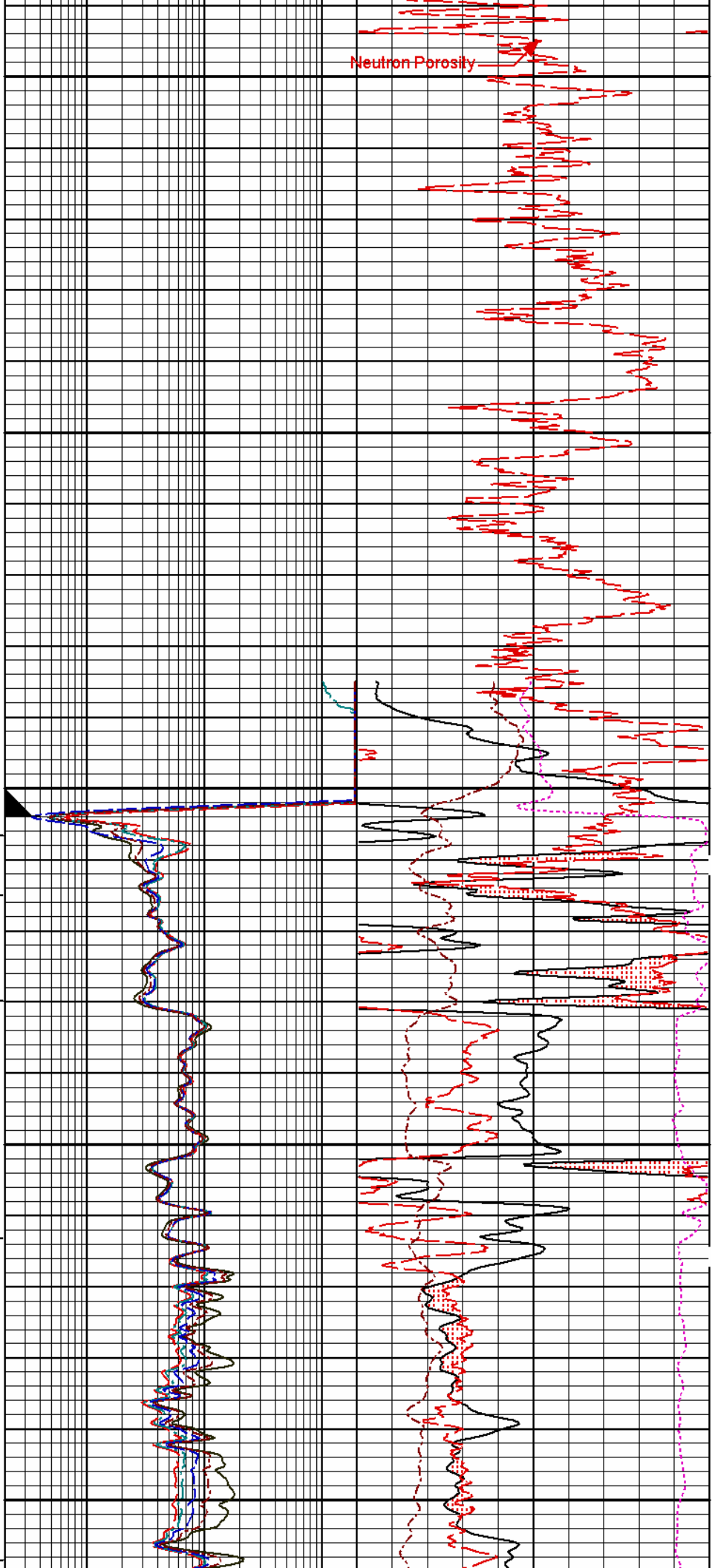
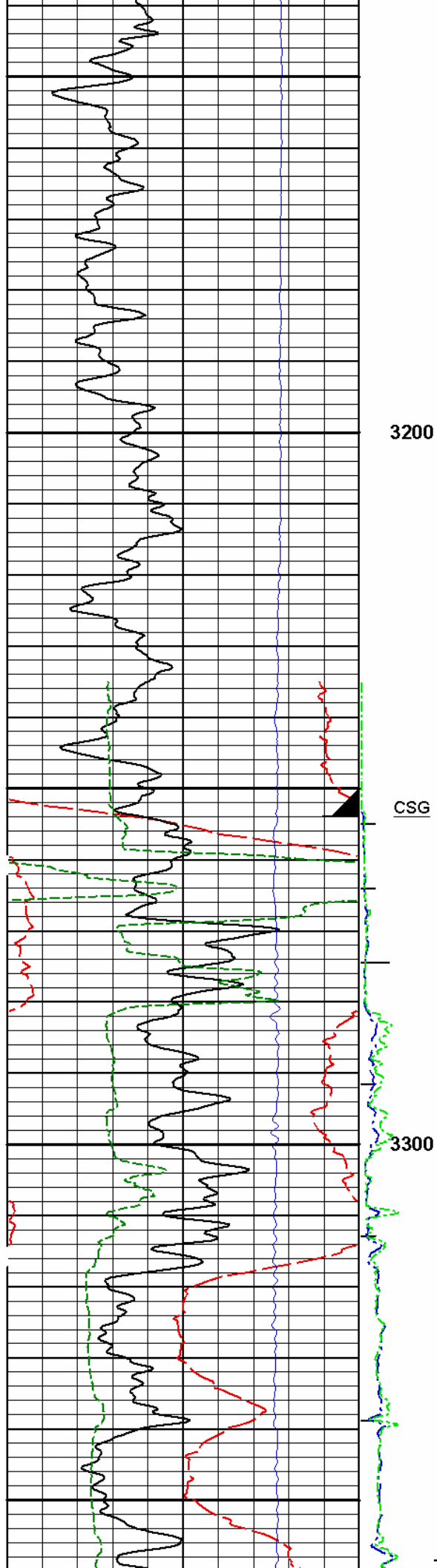
Neutron Porosity

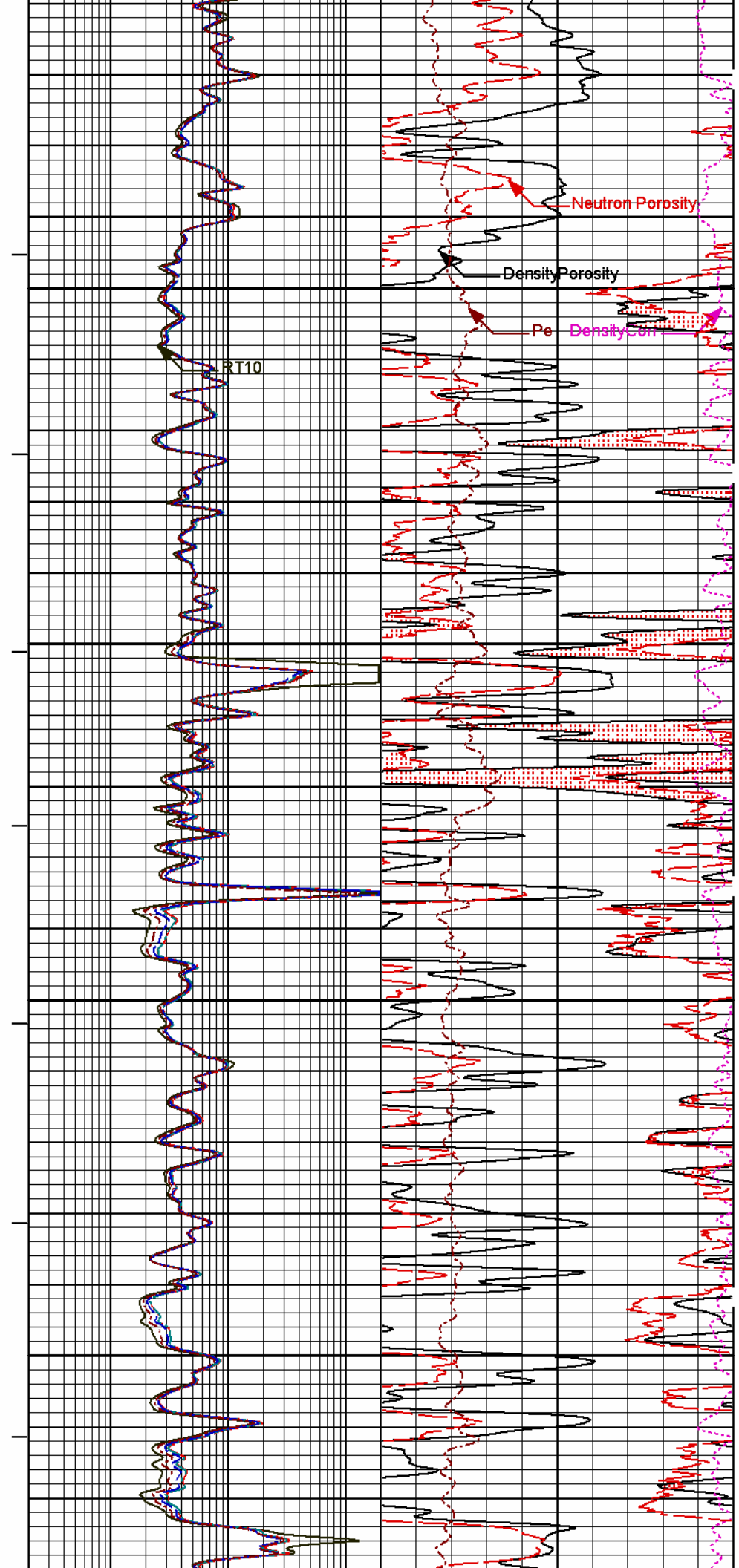
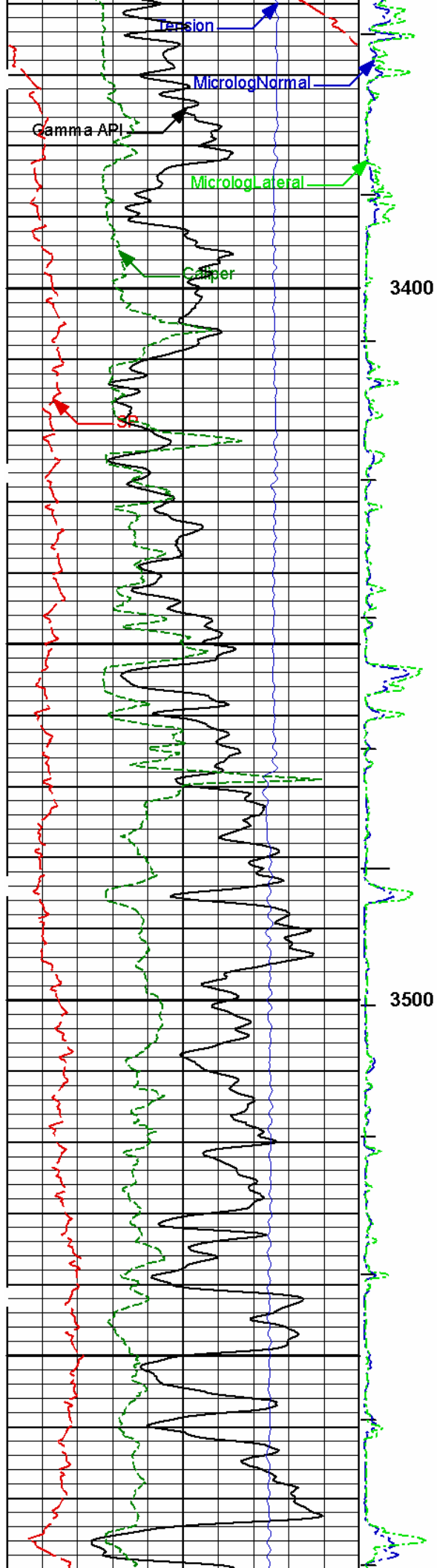


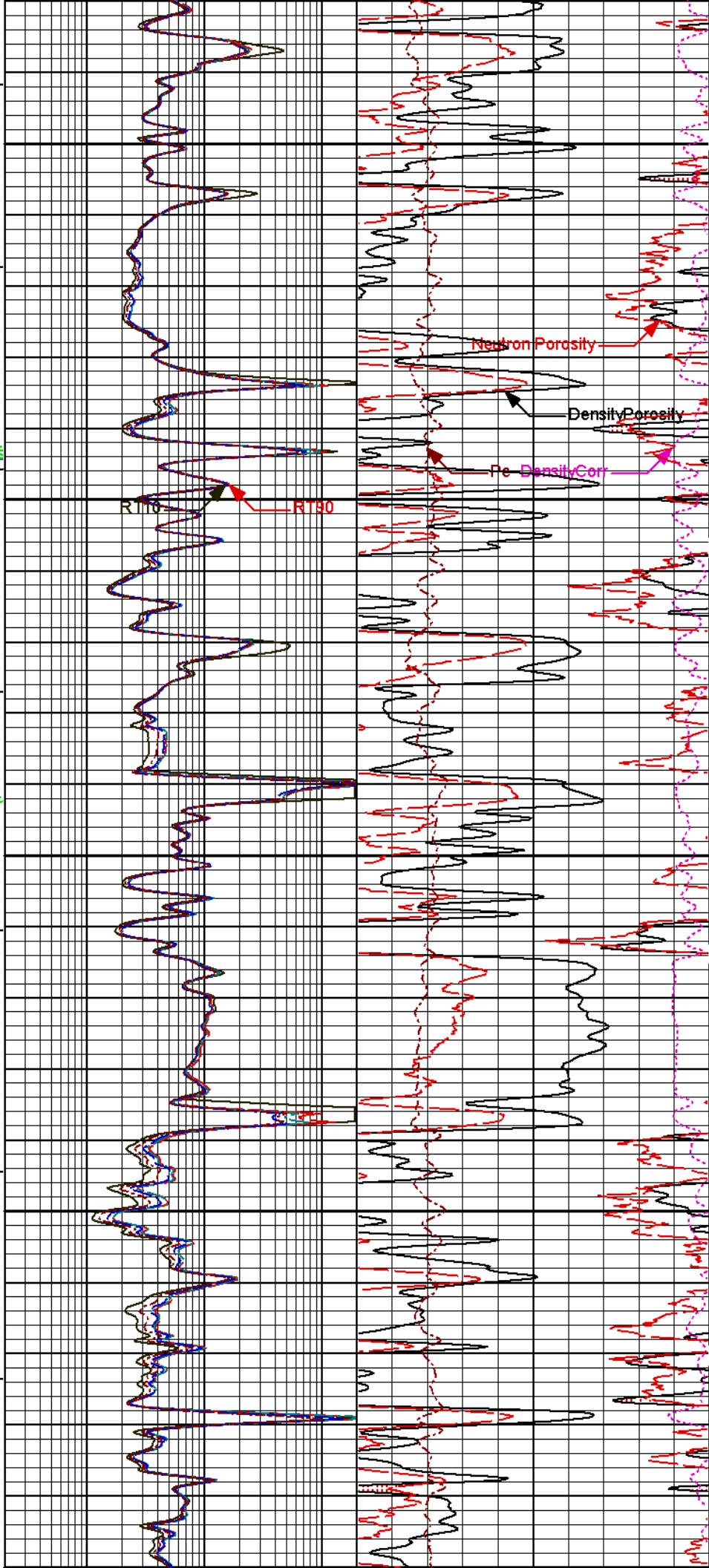
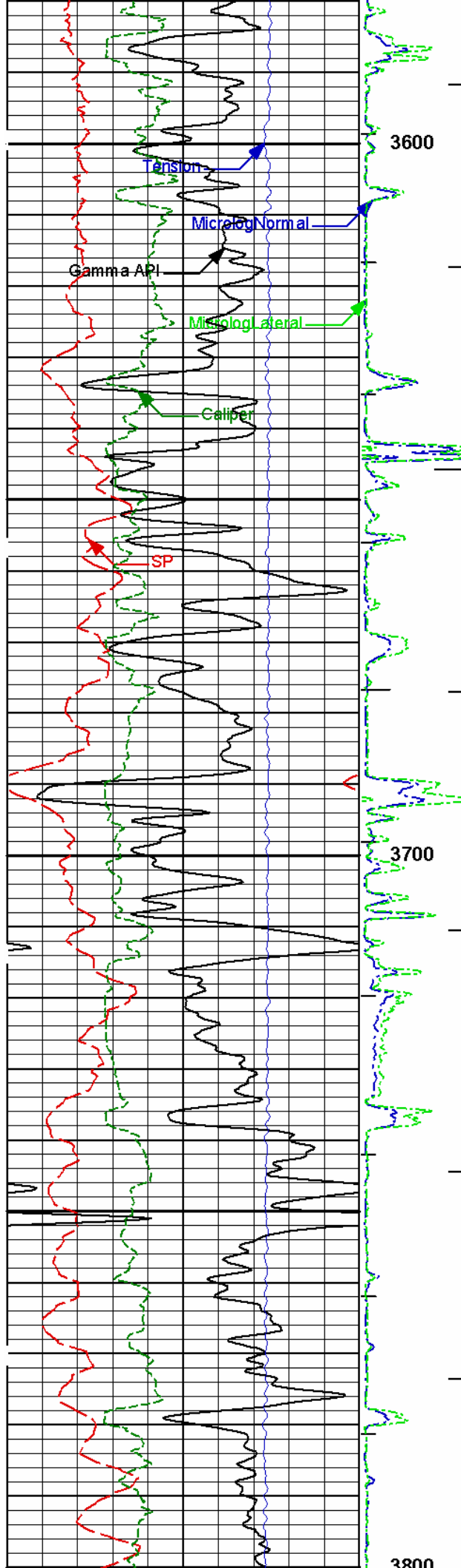
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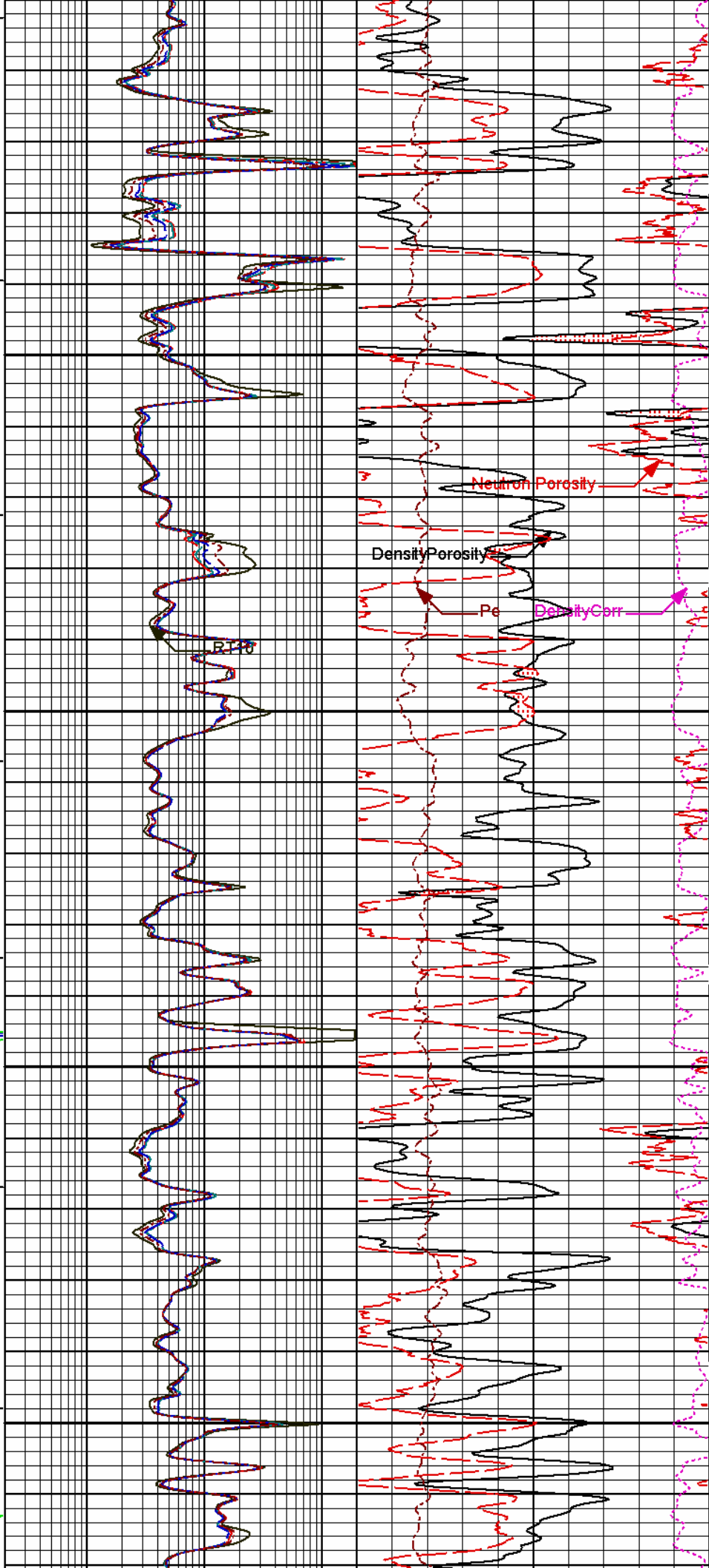
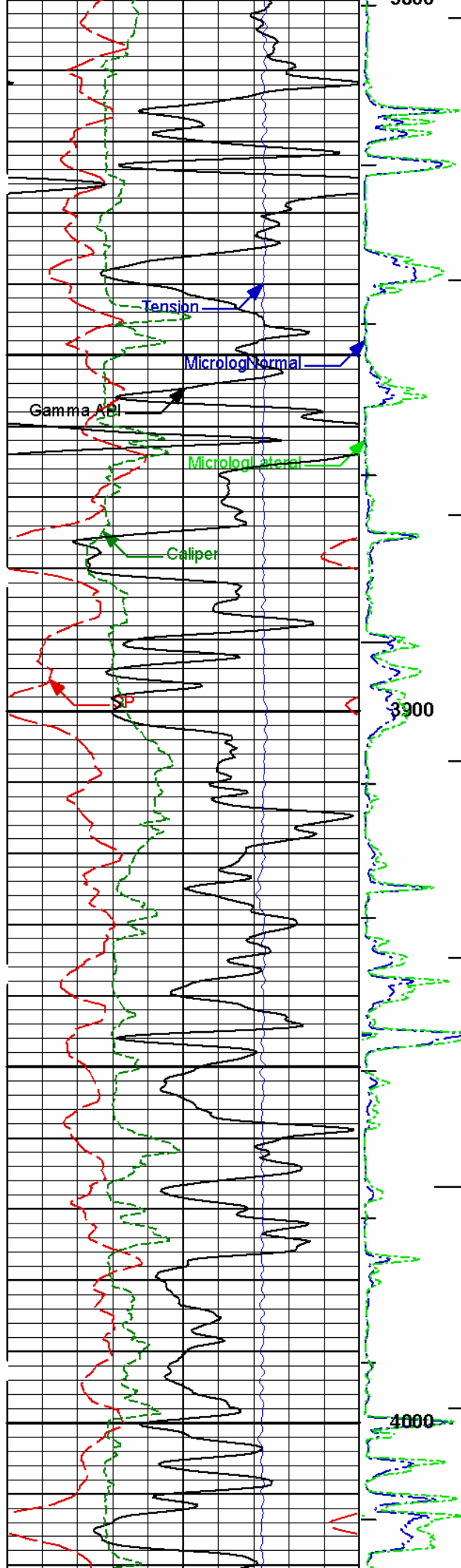
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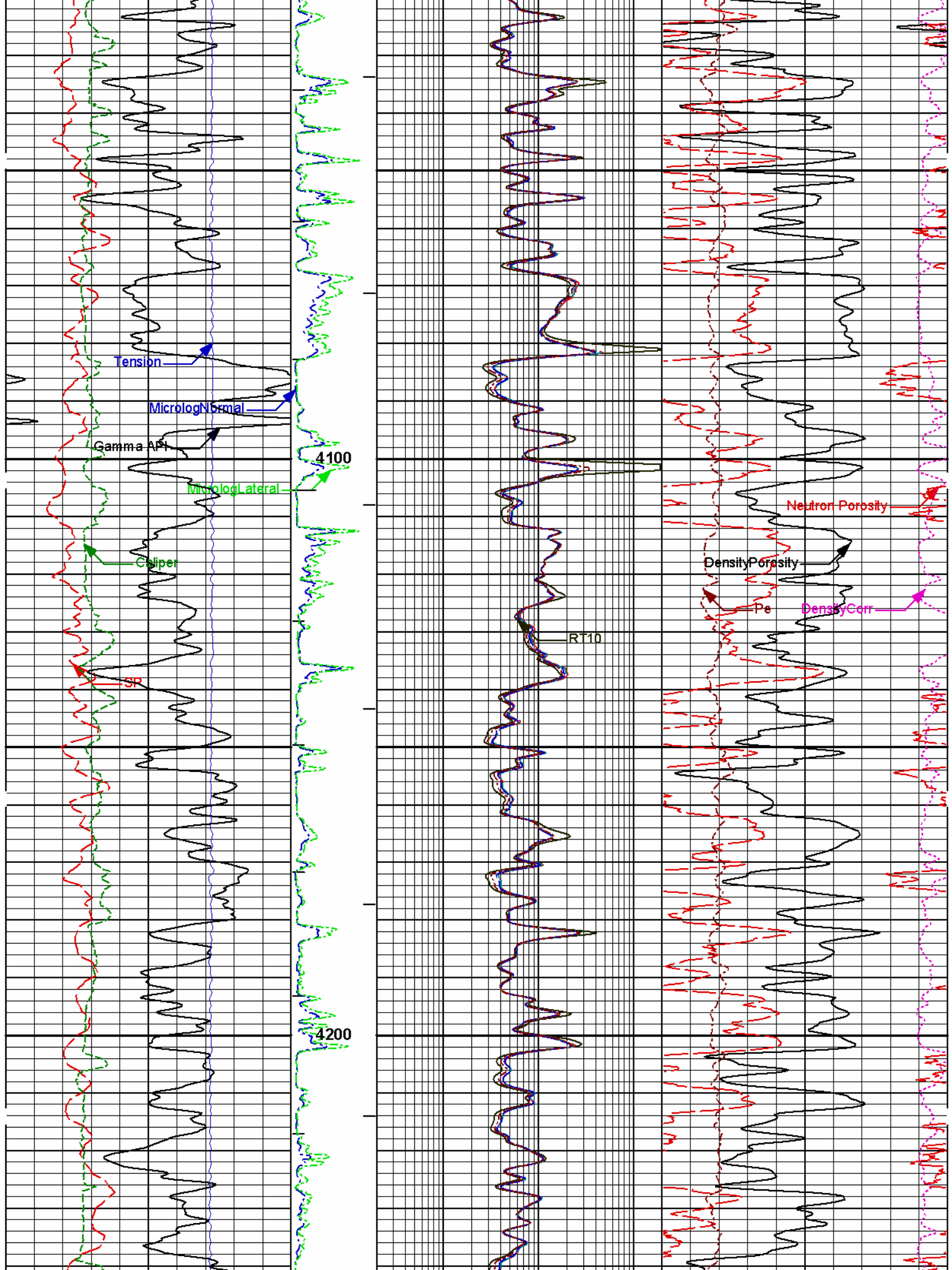


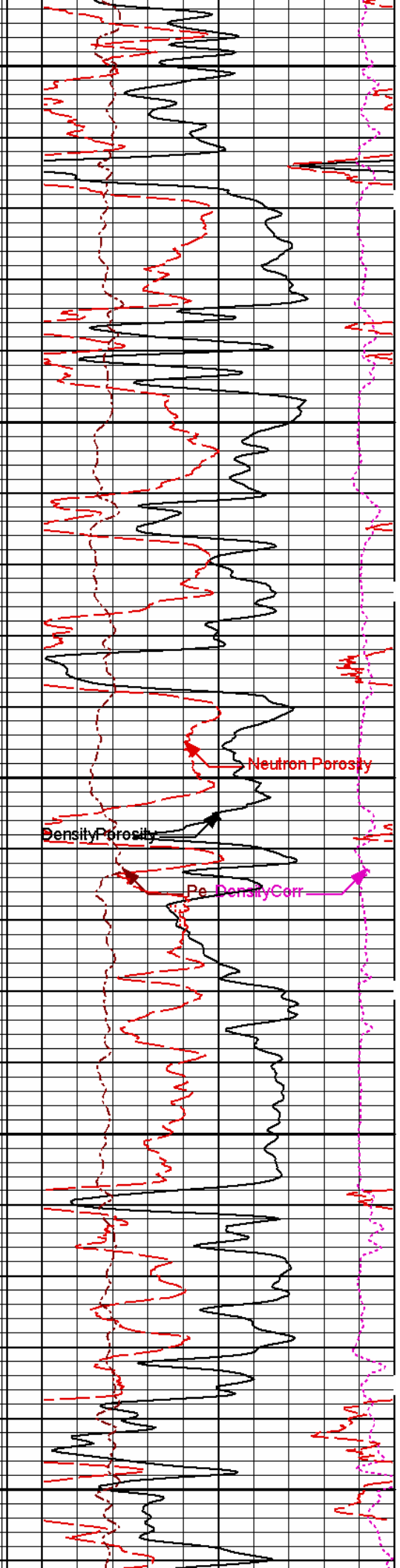
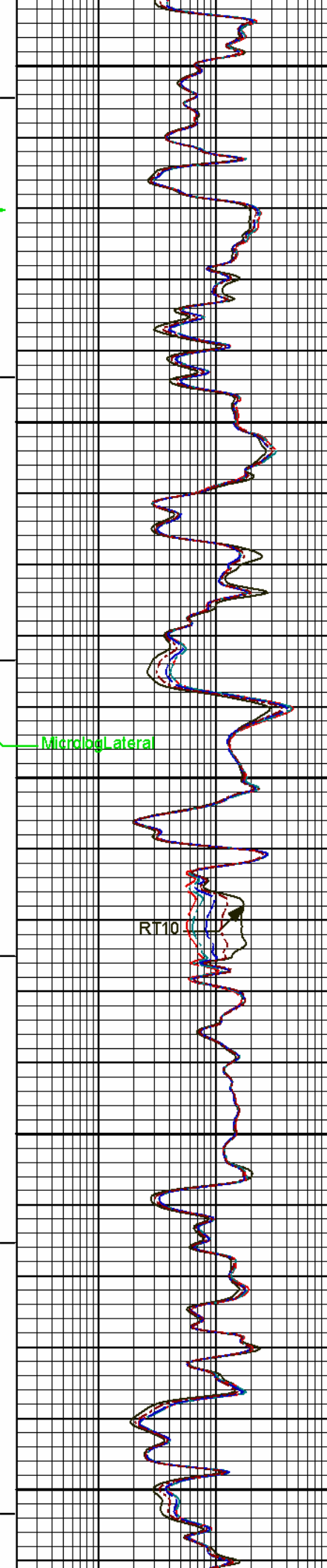
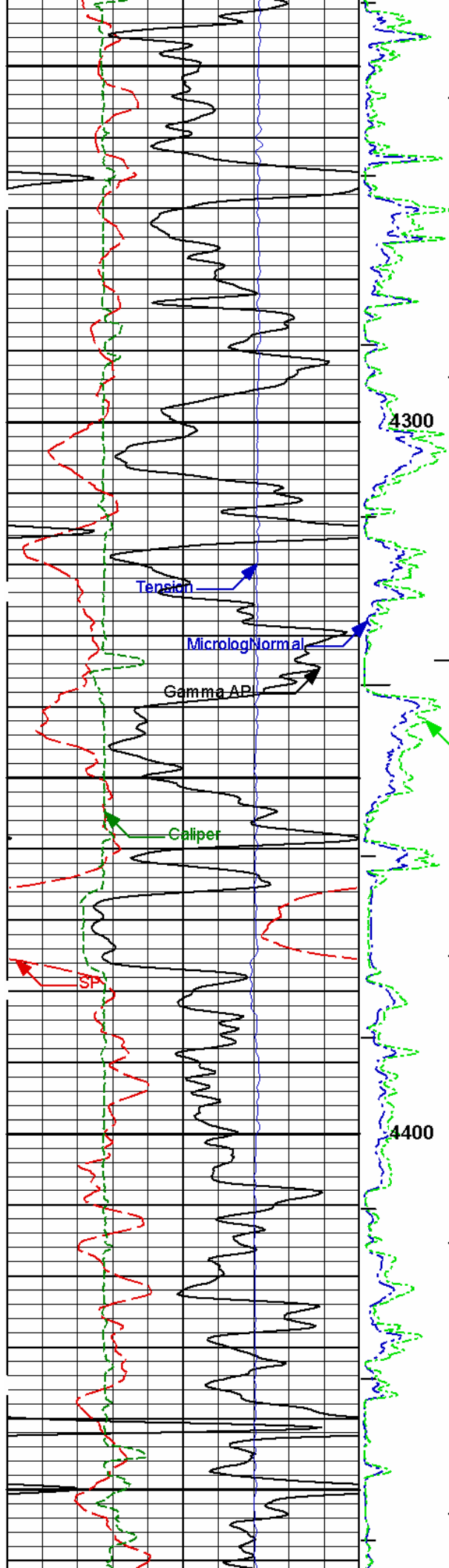


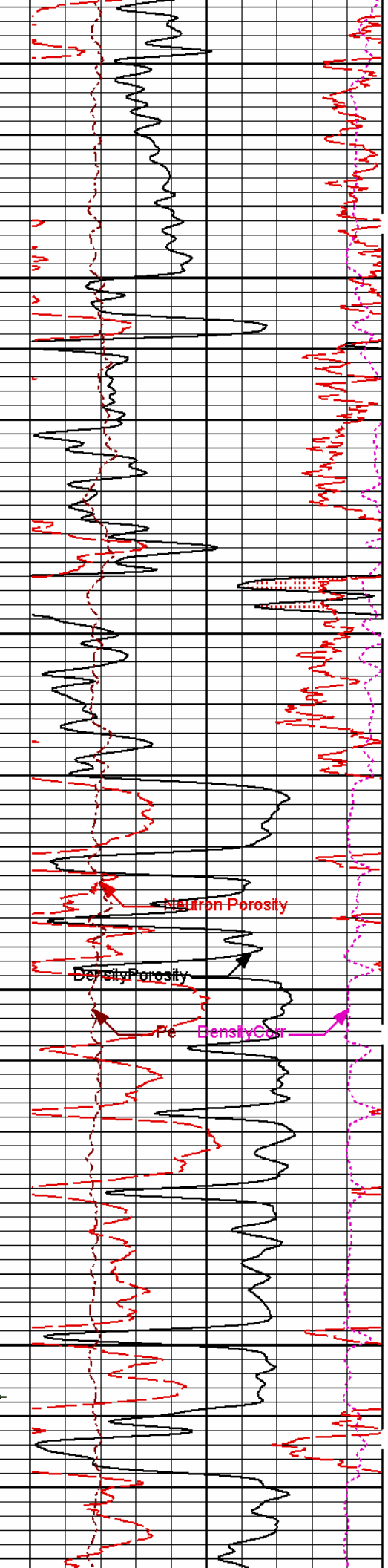
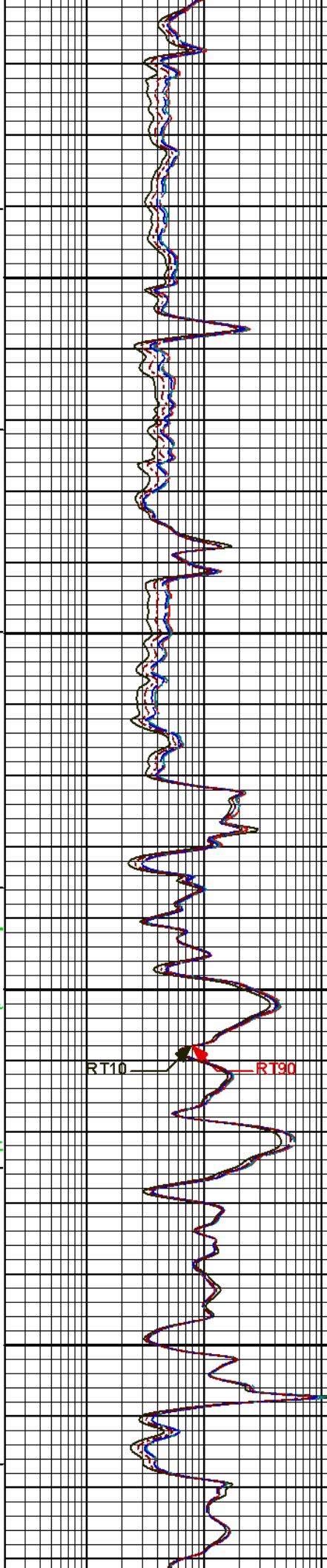
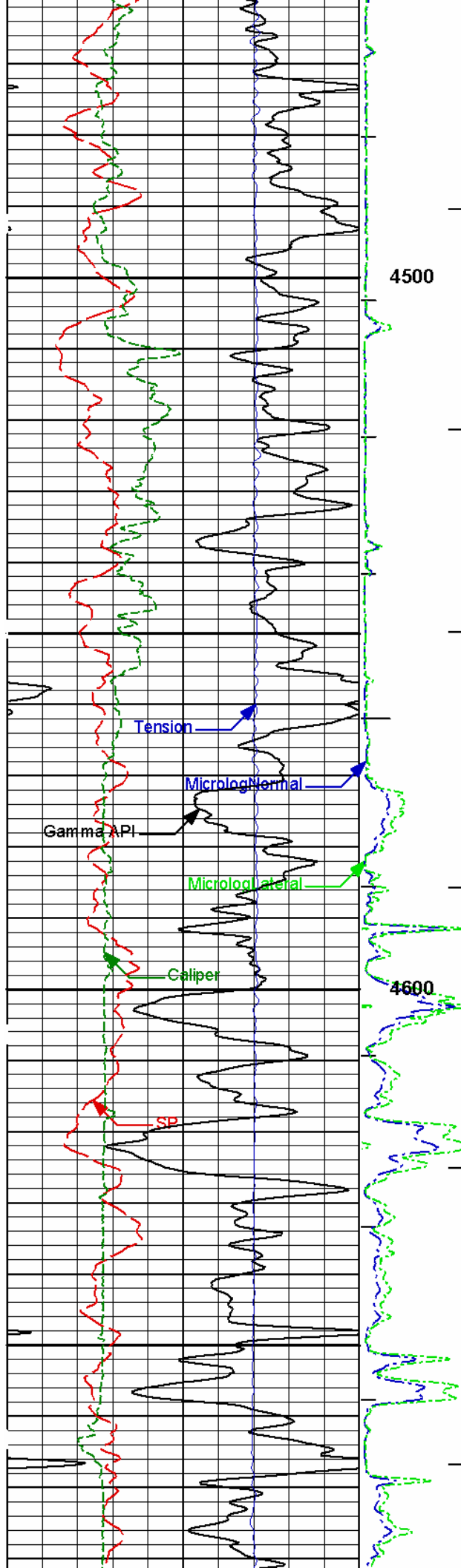


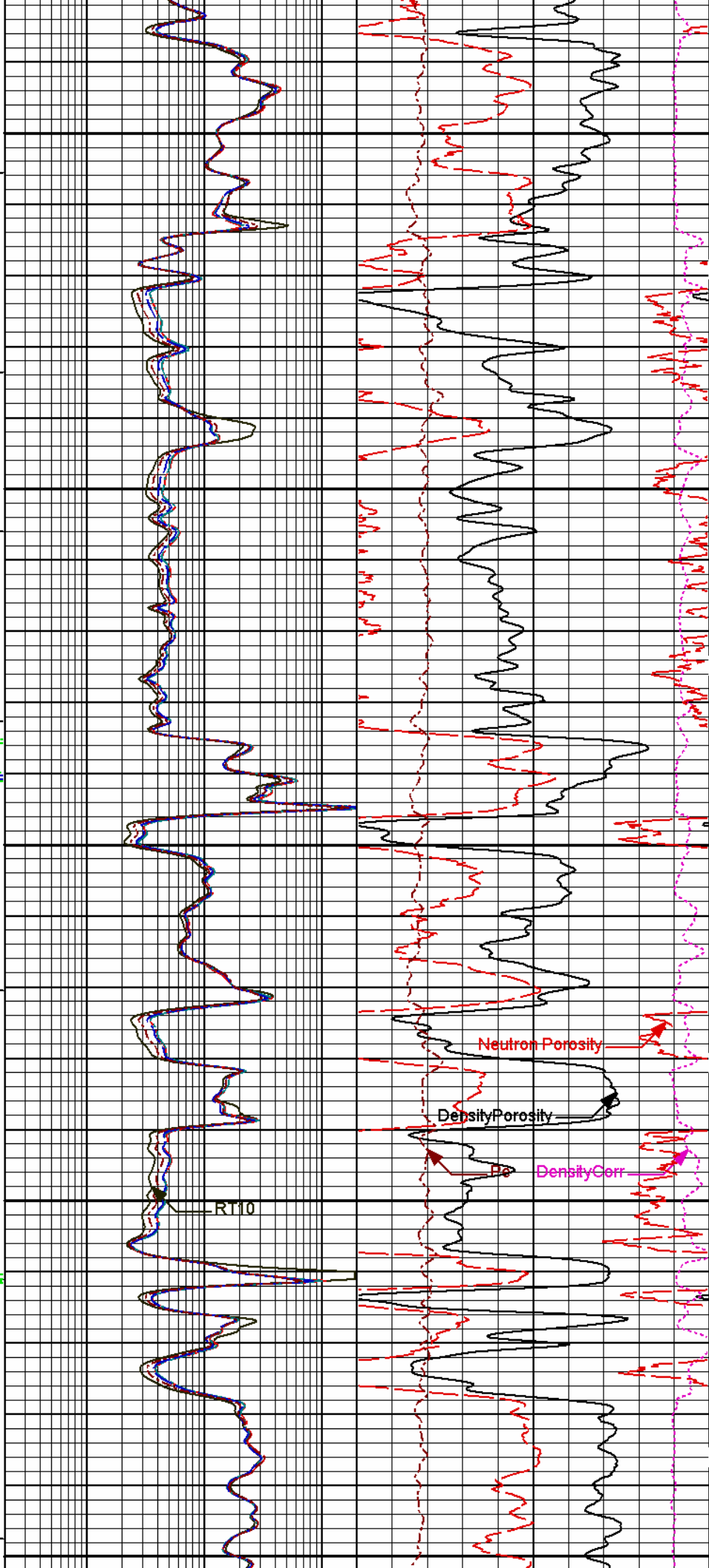
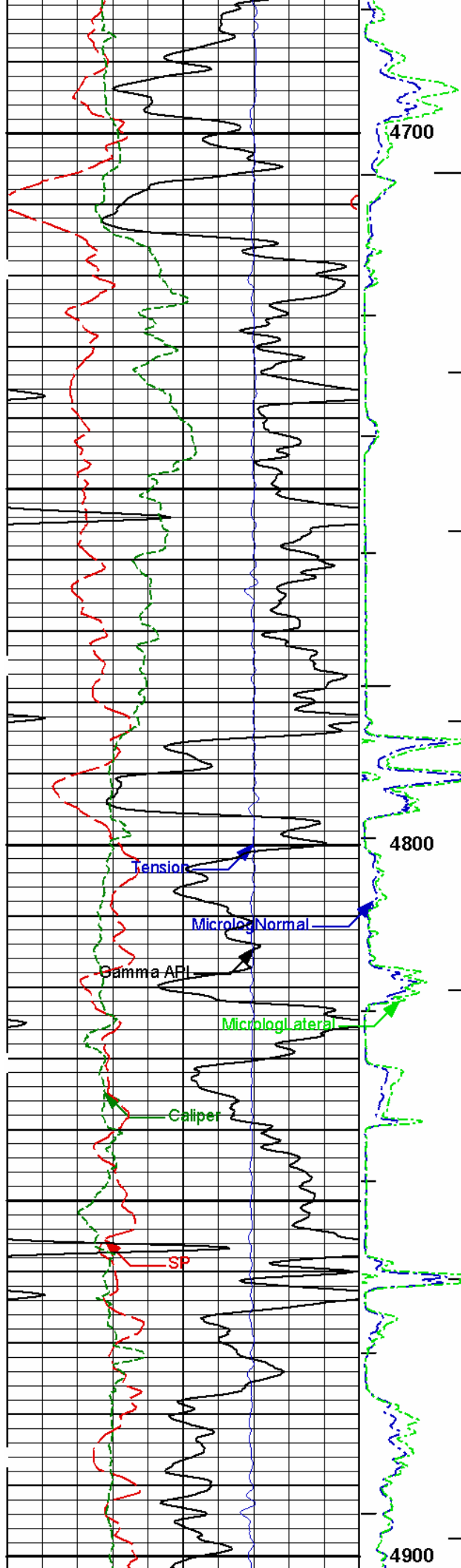


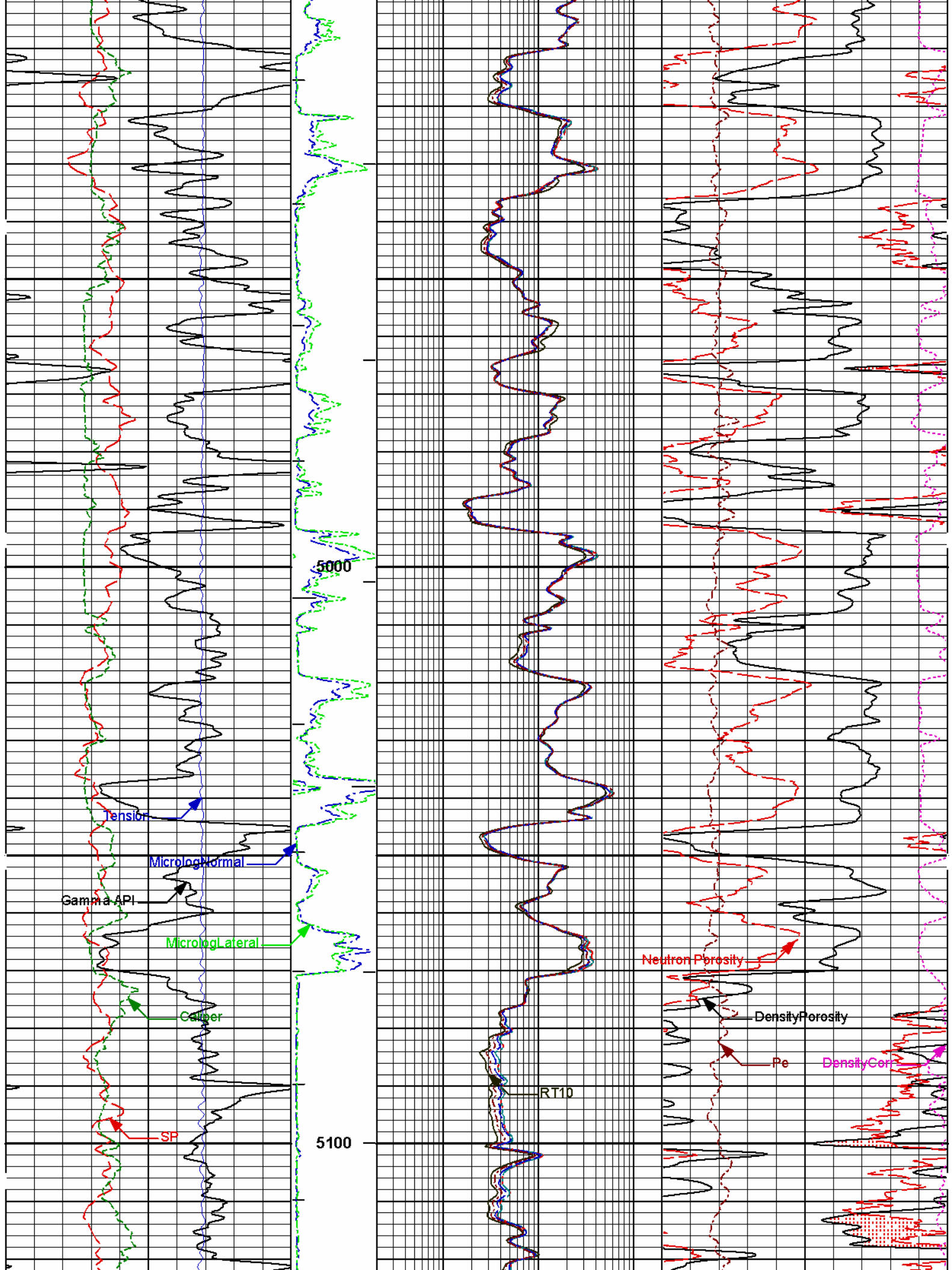


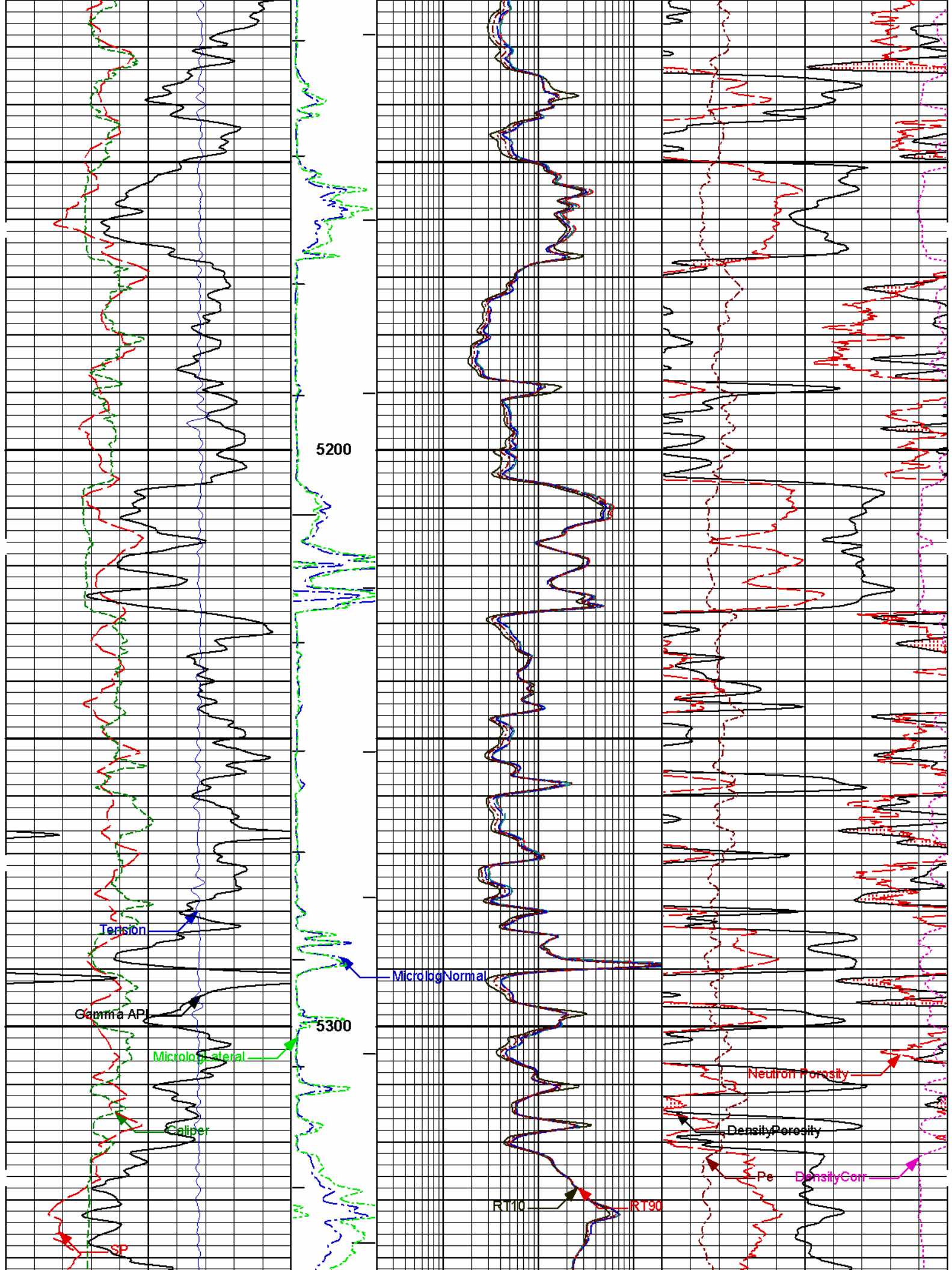


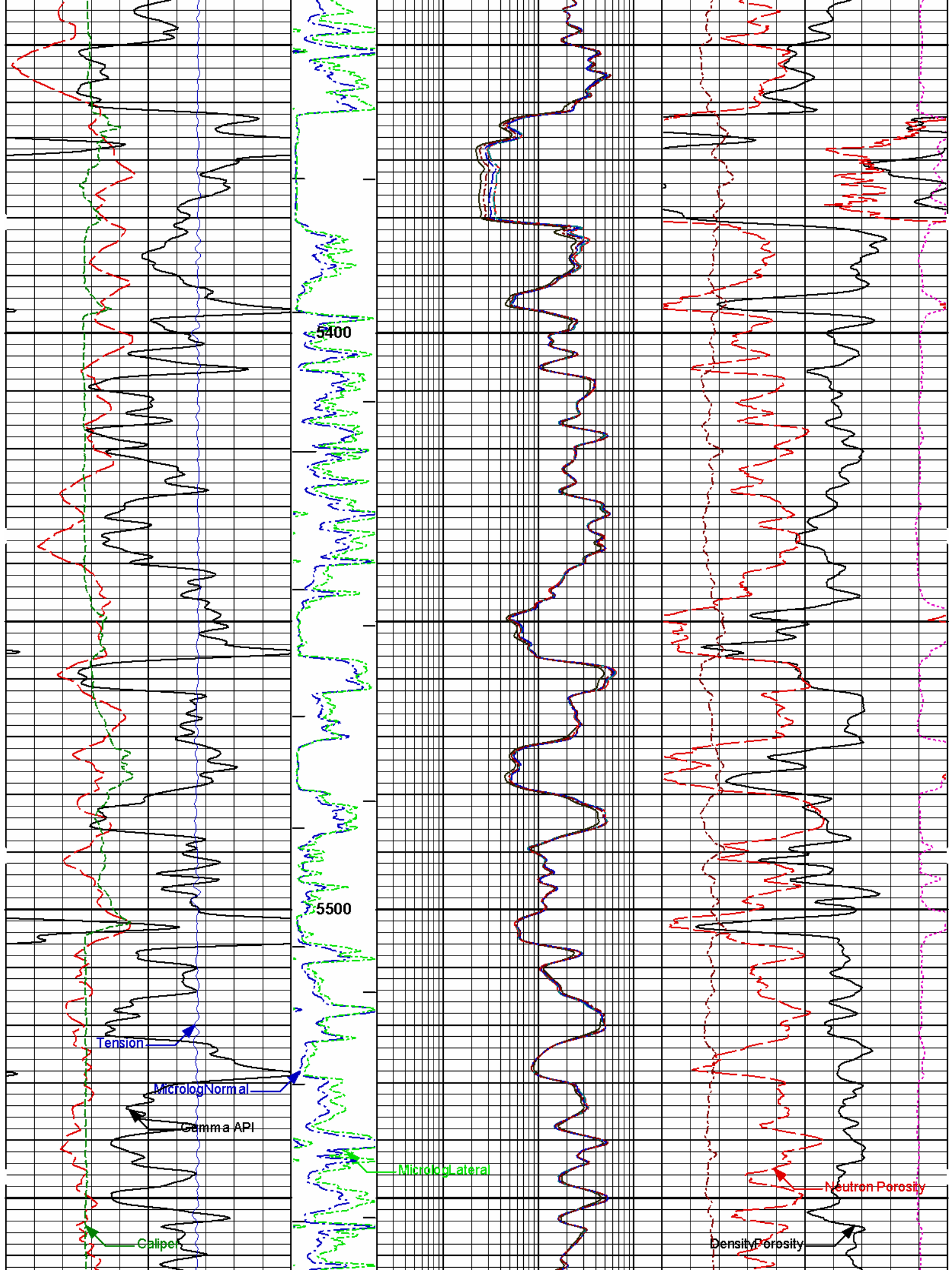


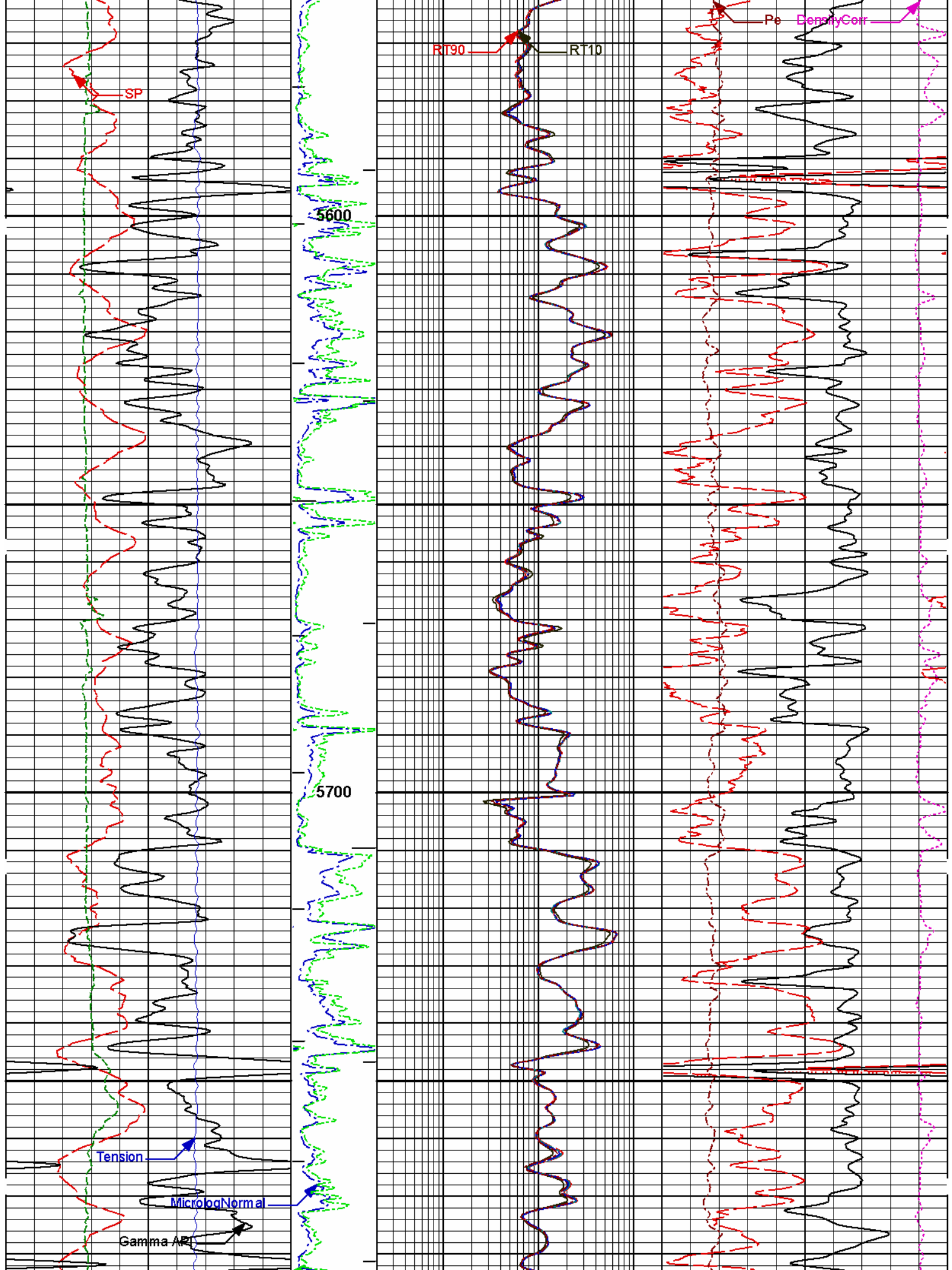


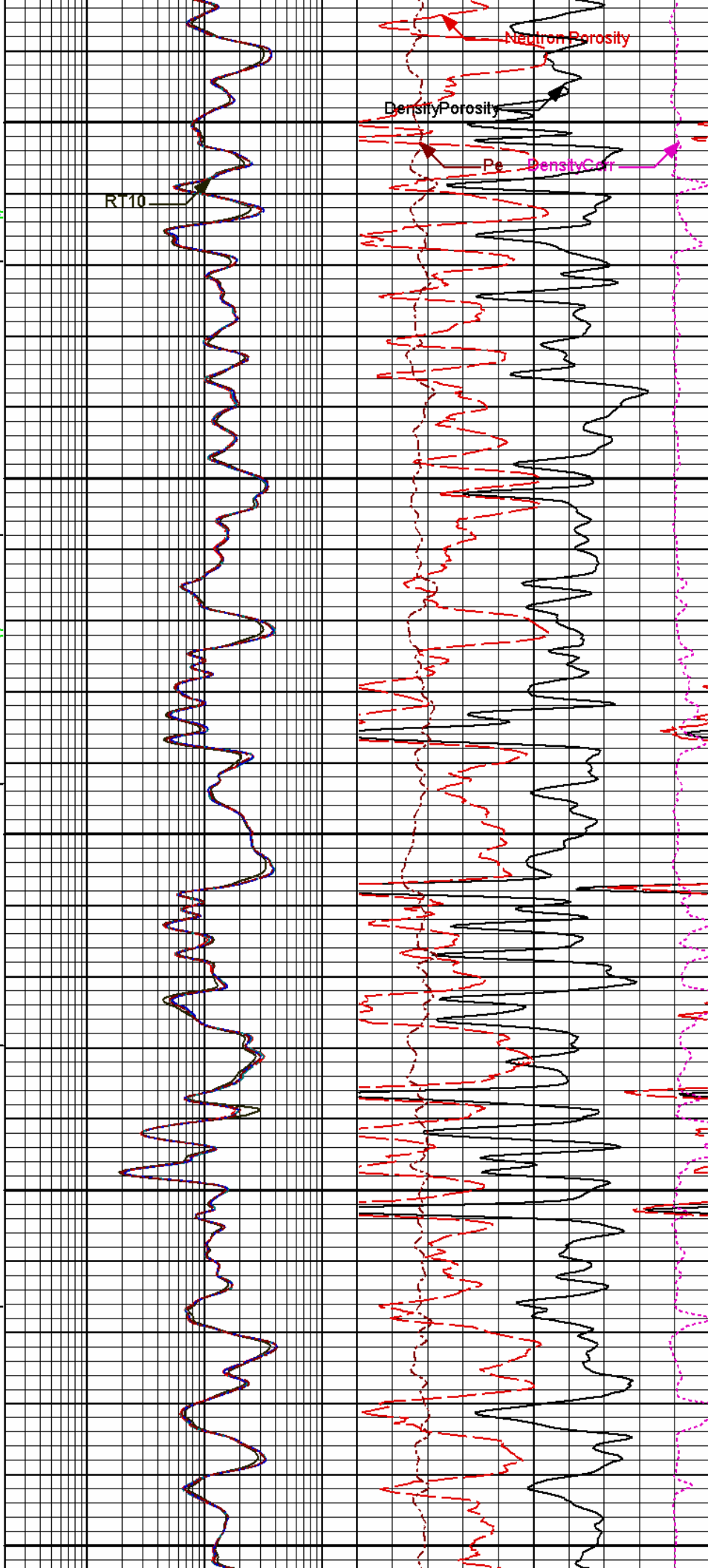
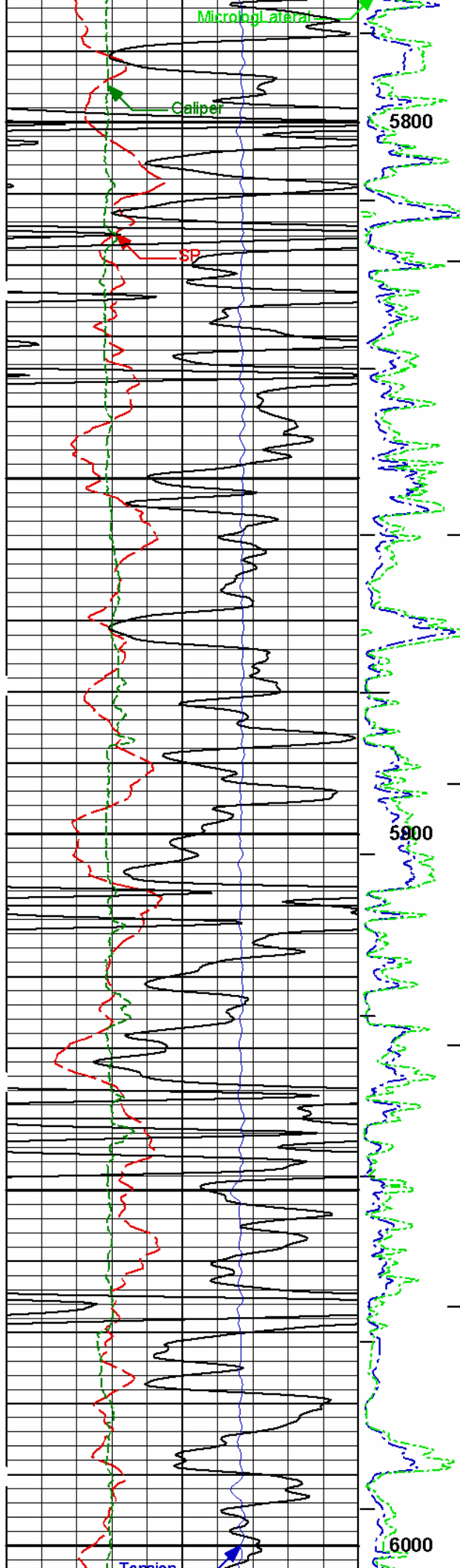


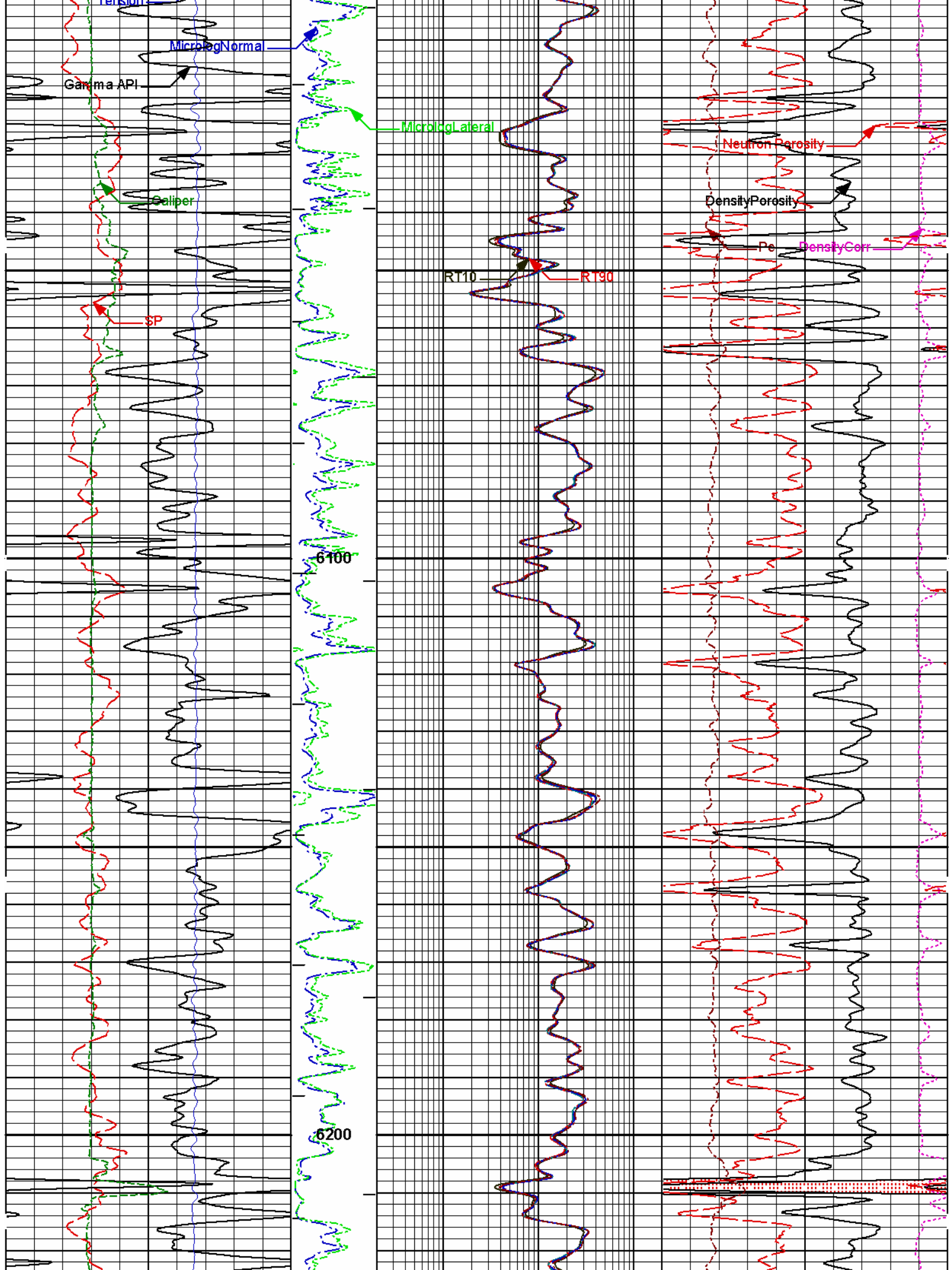












Tension

MicrologNormal

Gamma API

Caliper

SP

MicrologLateral

6300

6400

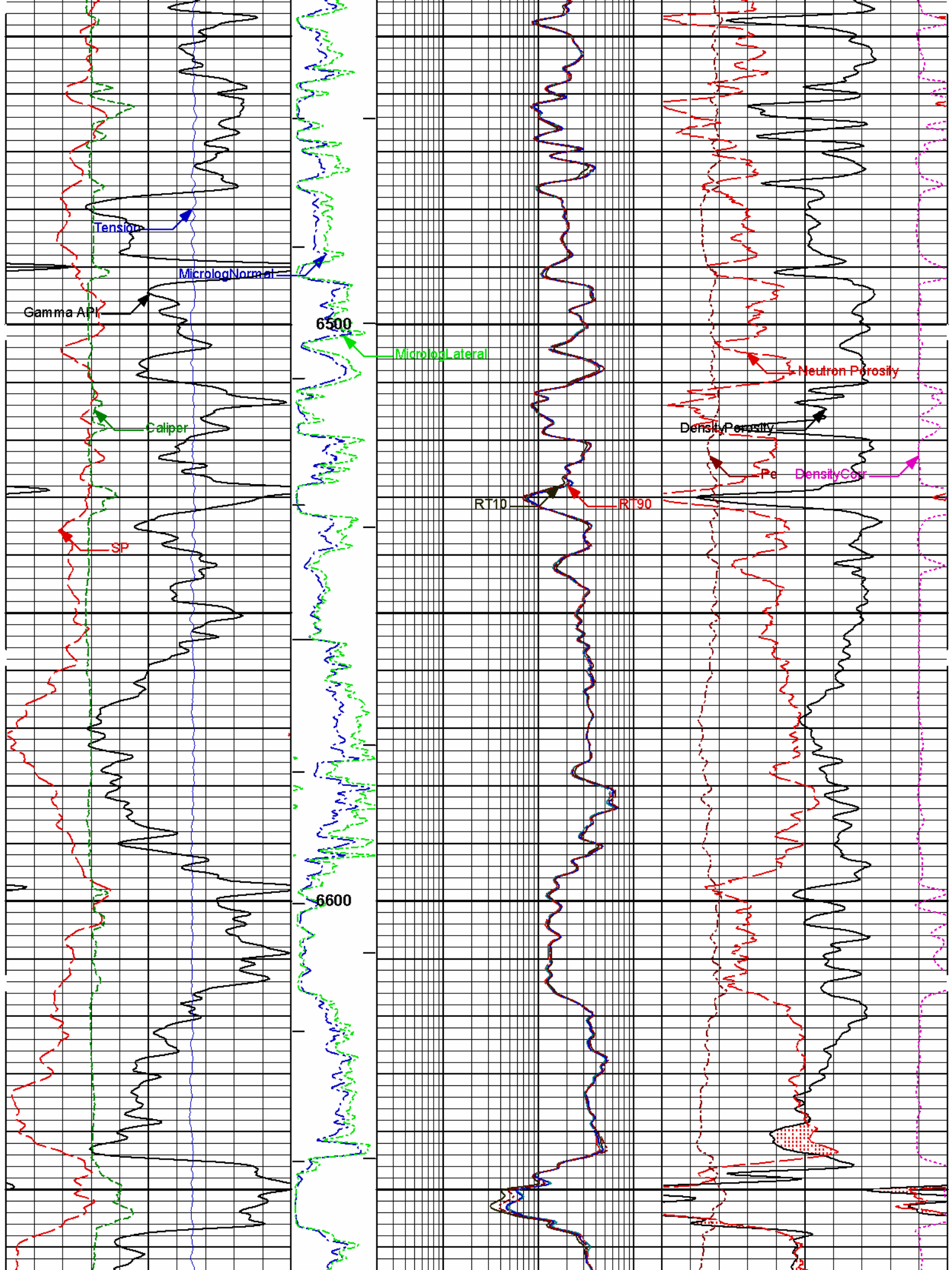
RT10

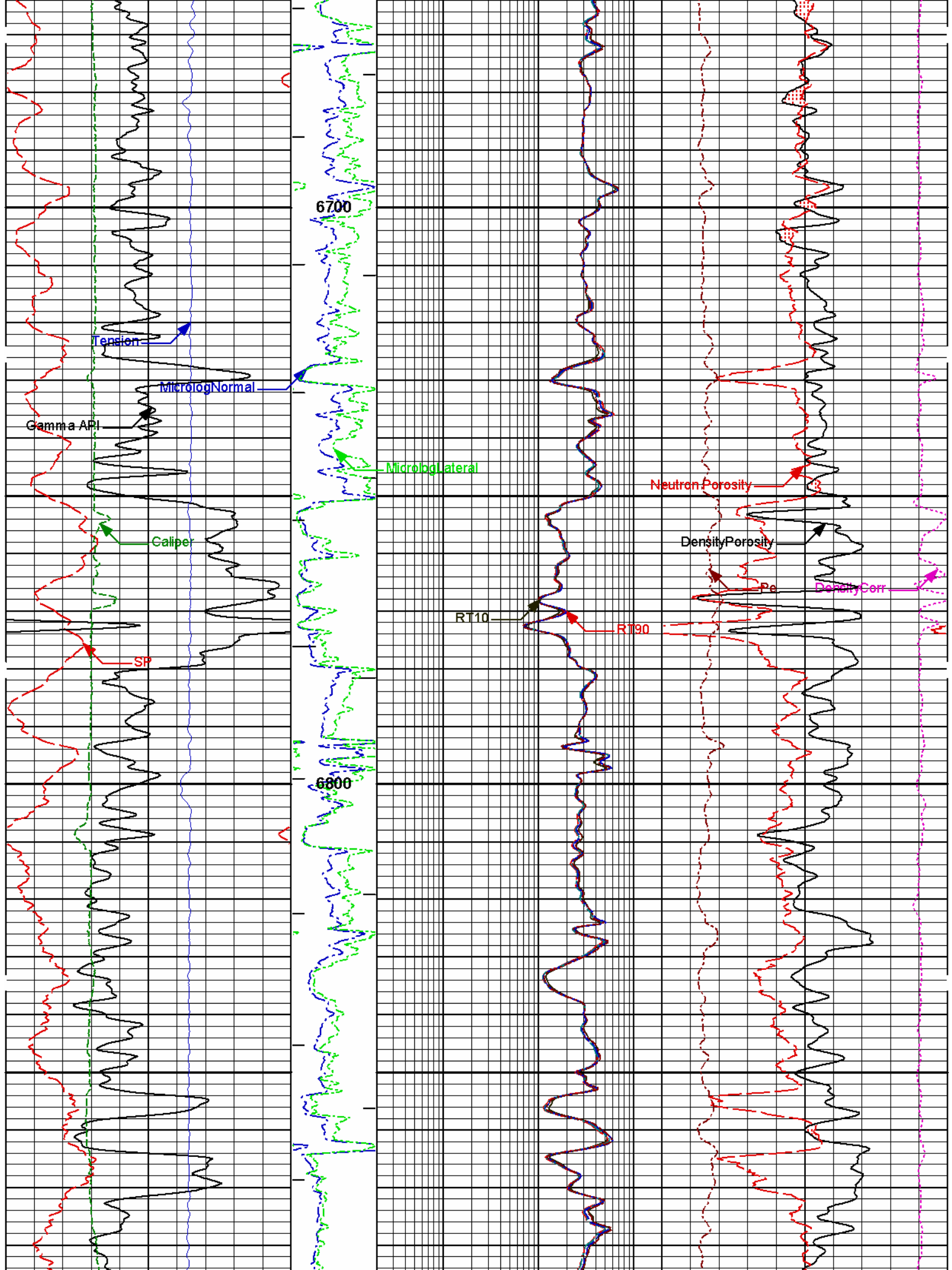
RT20

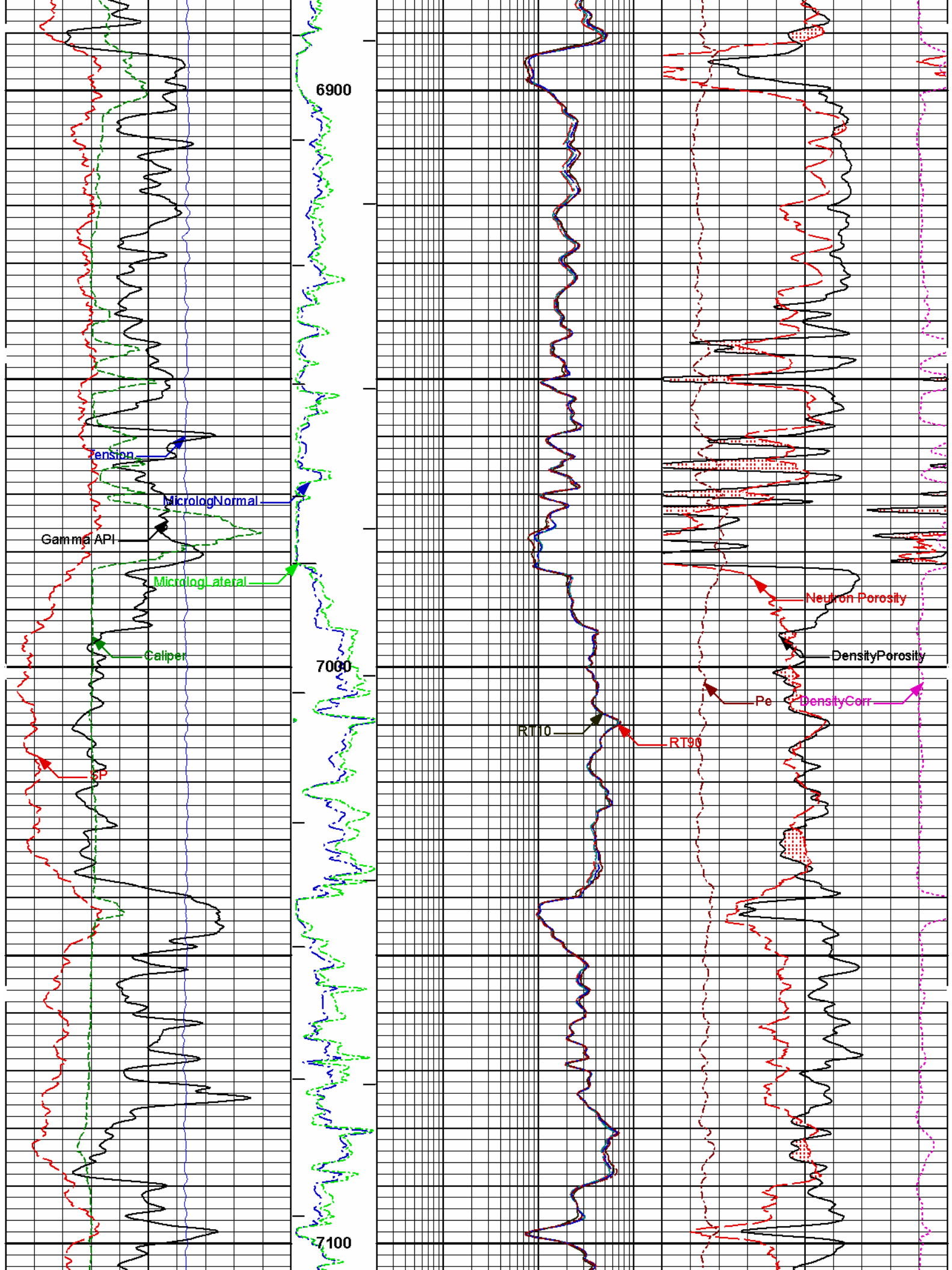
Neutron Porosity

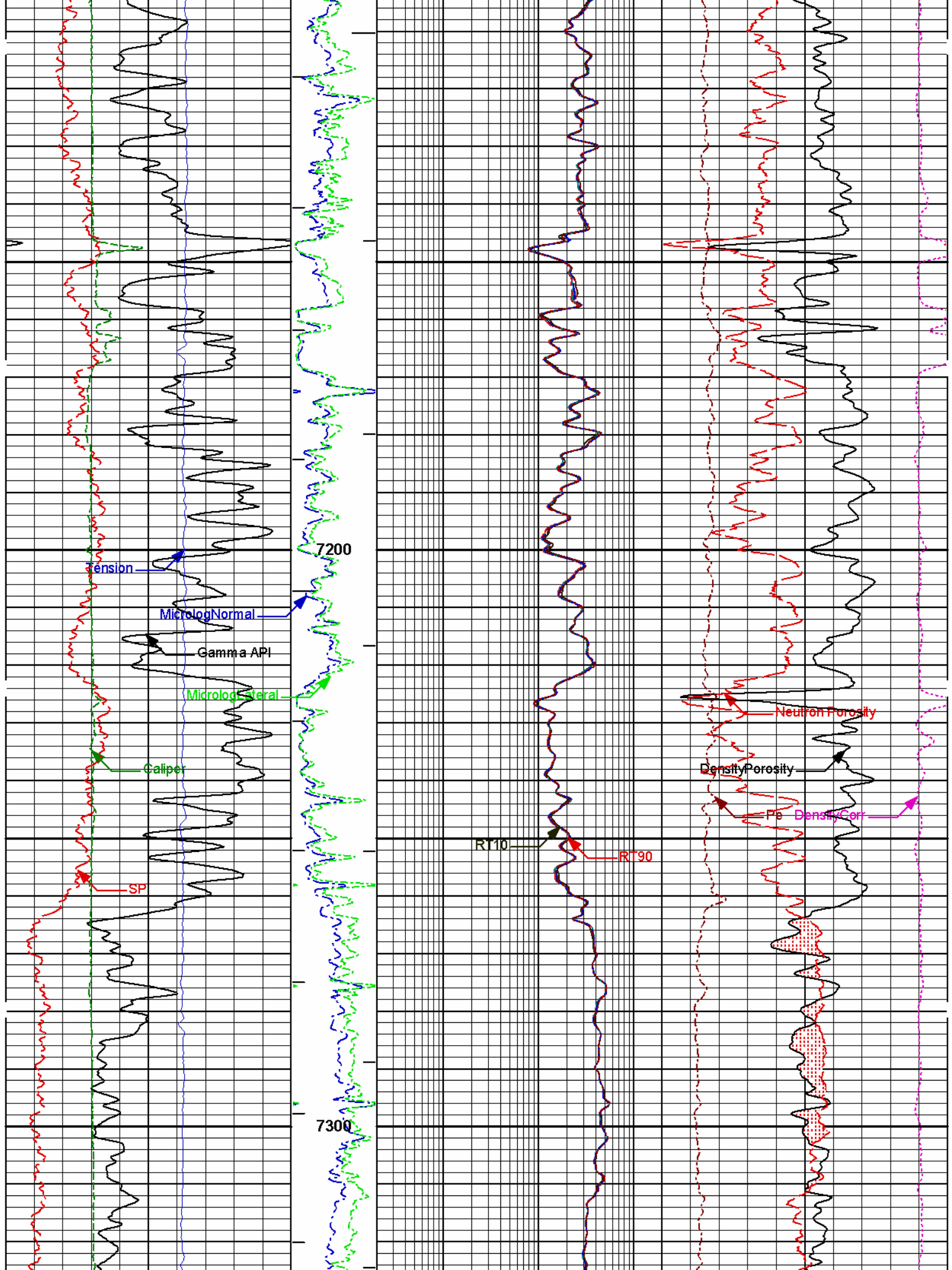
Density Porosity

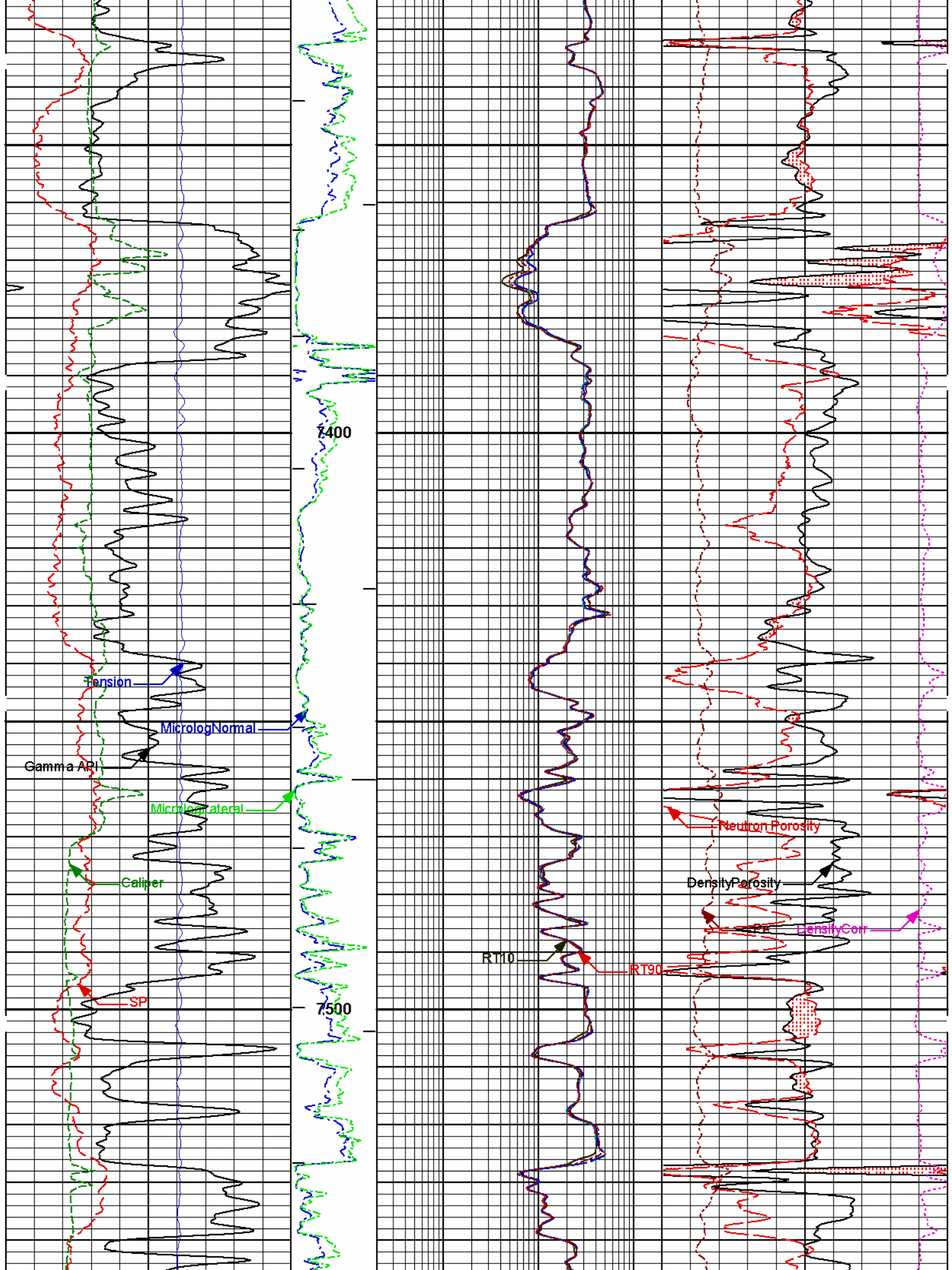
Pe DensityCore

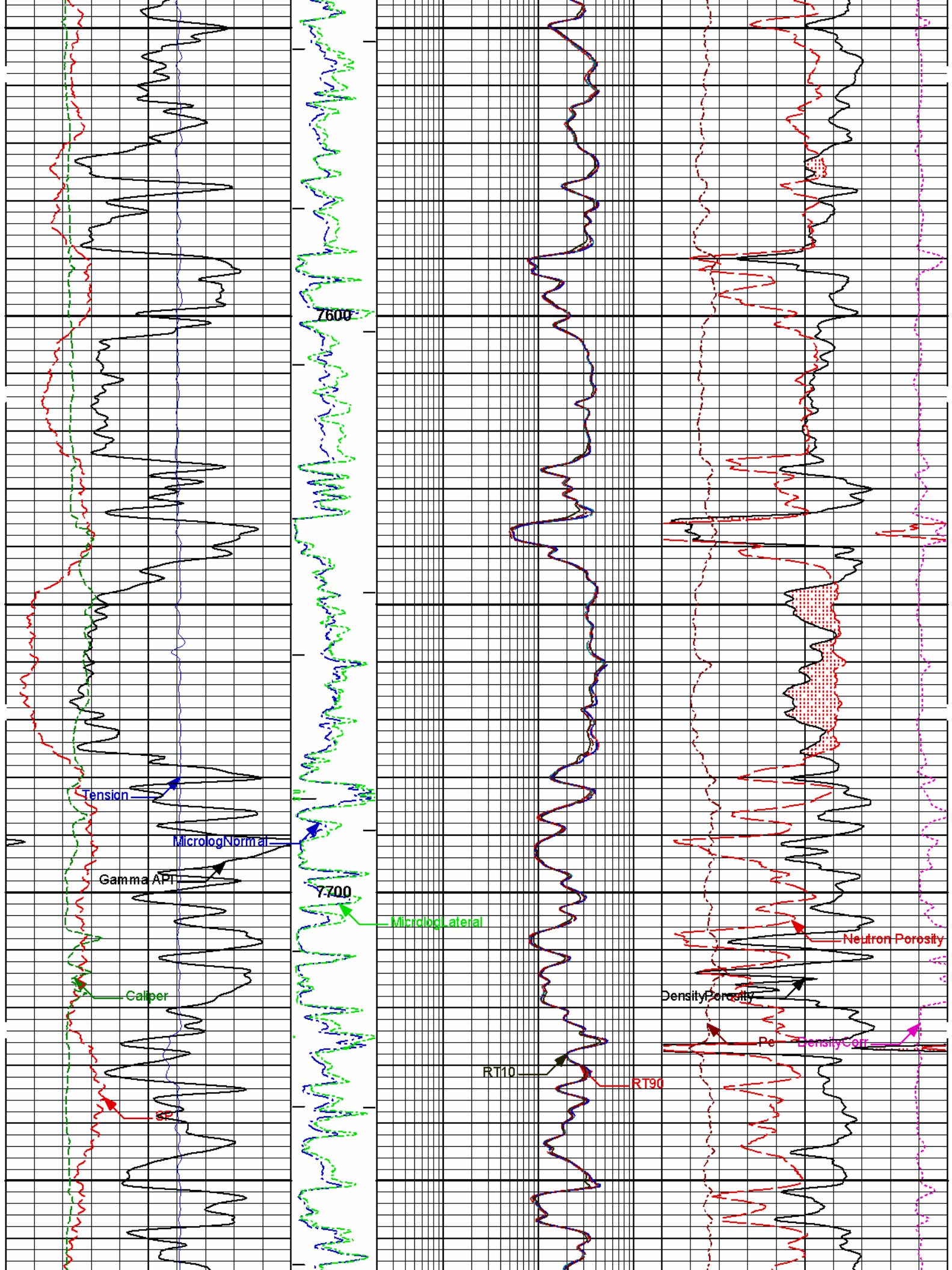


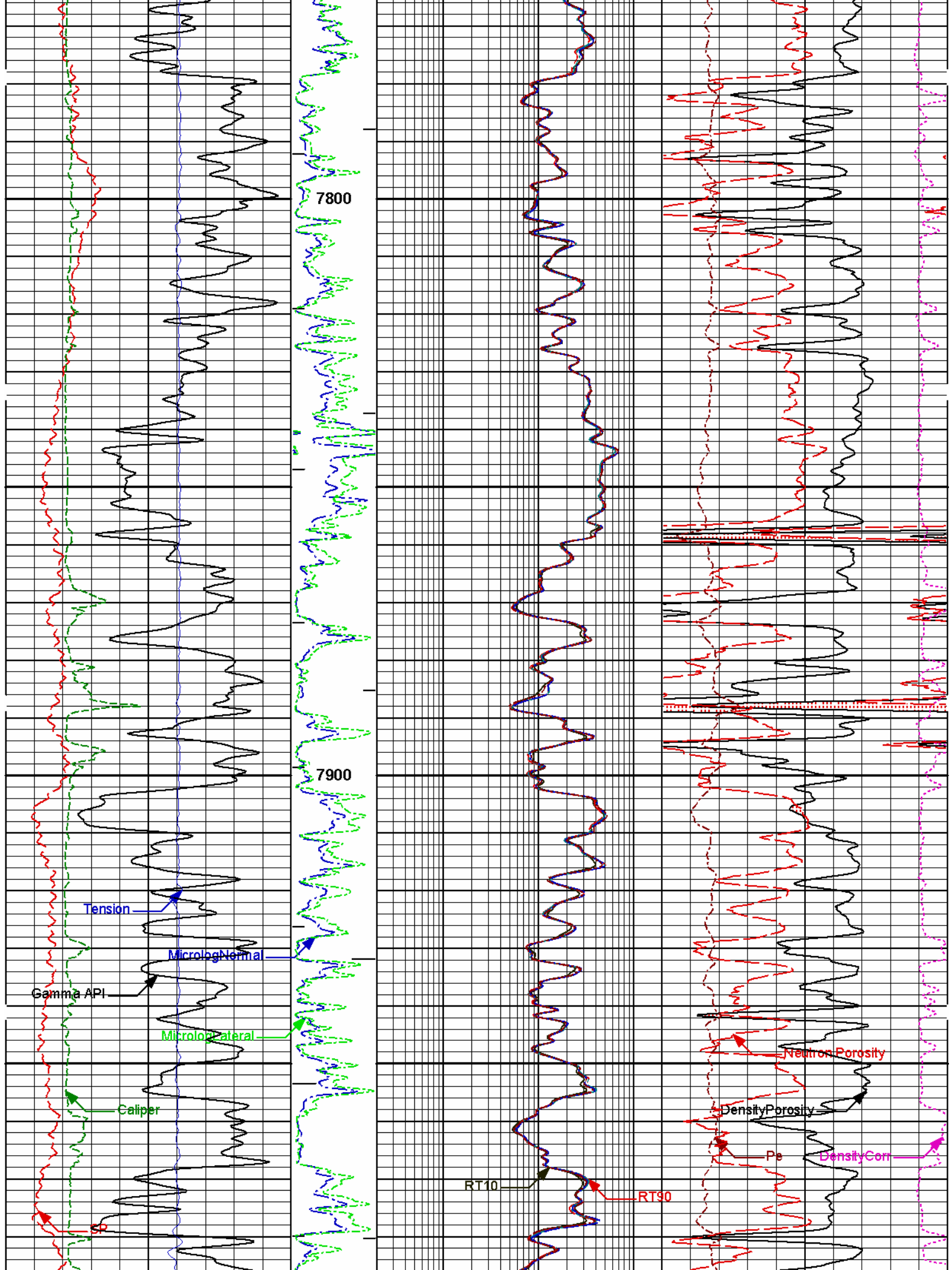


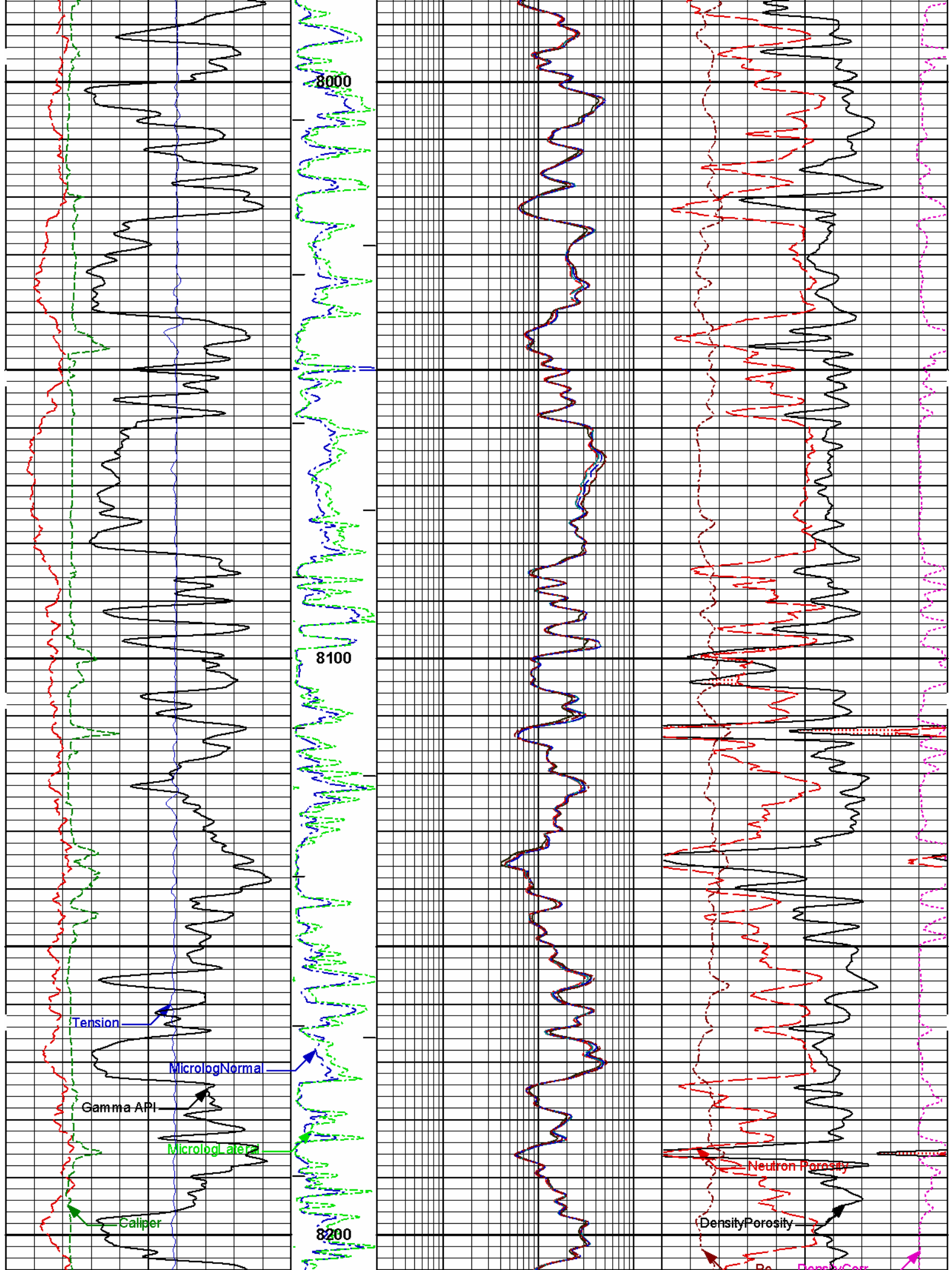


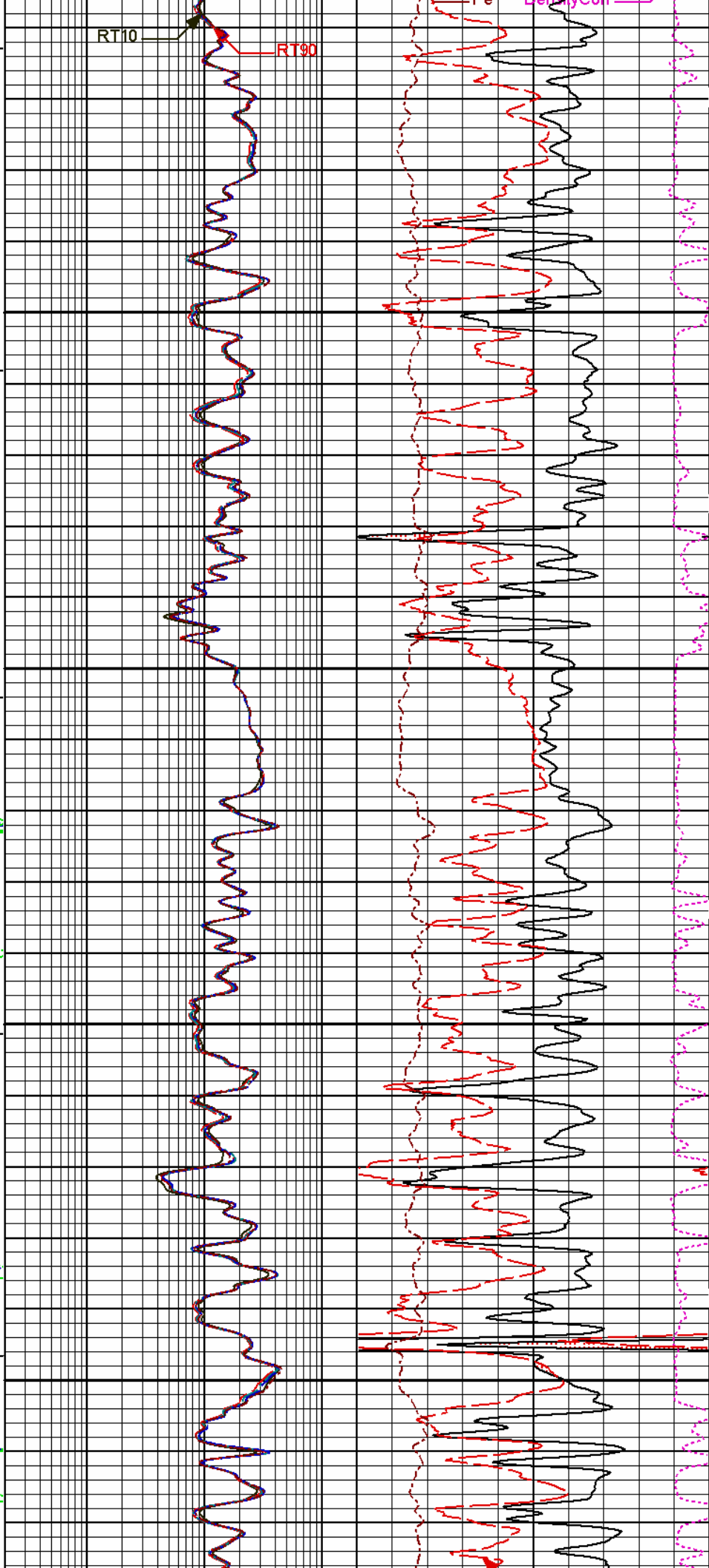
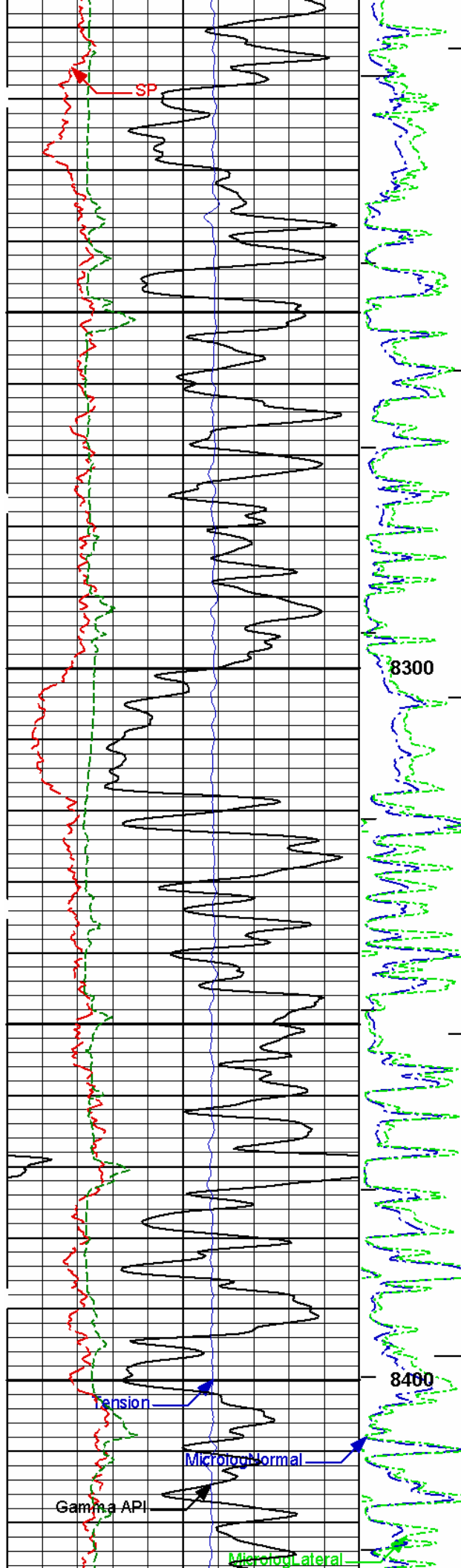


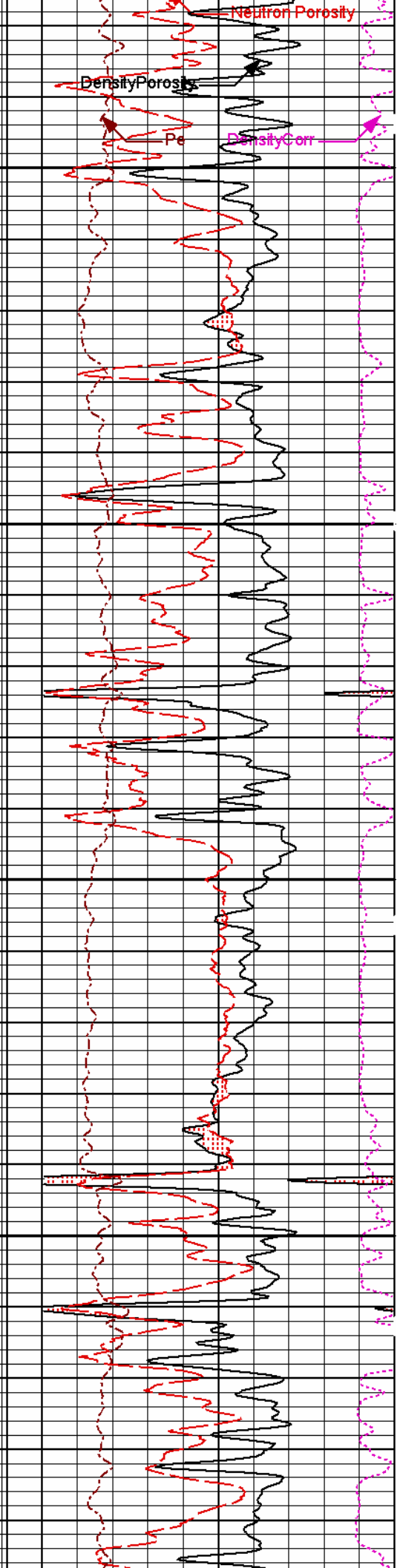
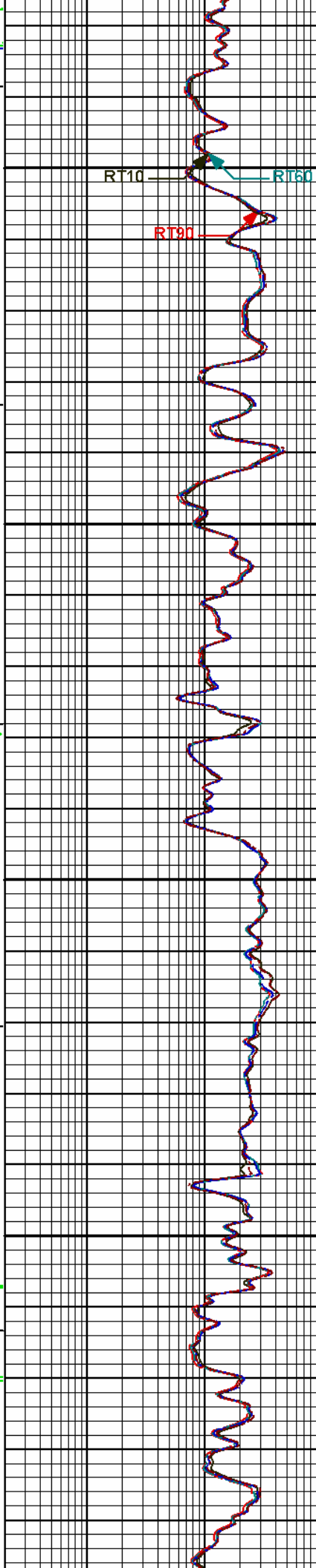
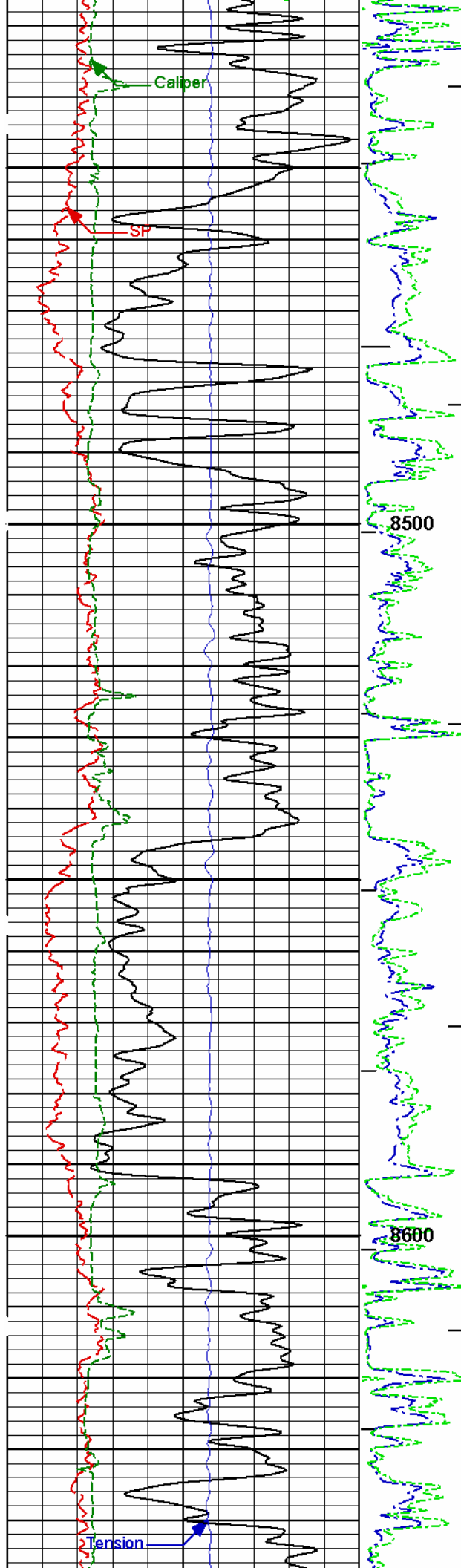


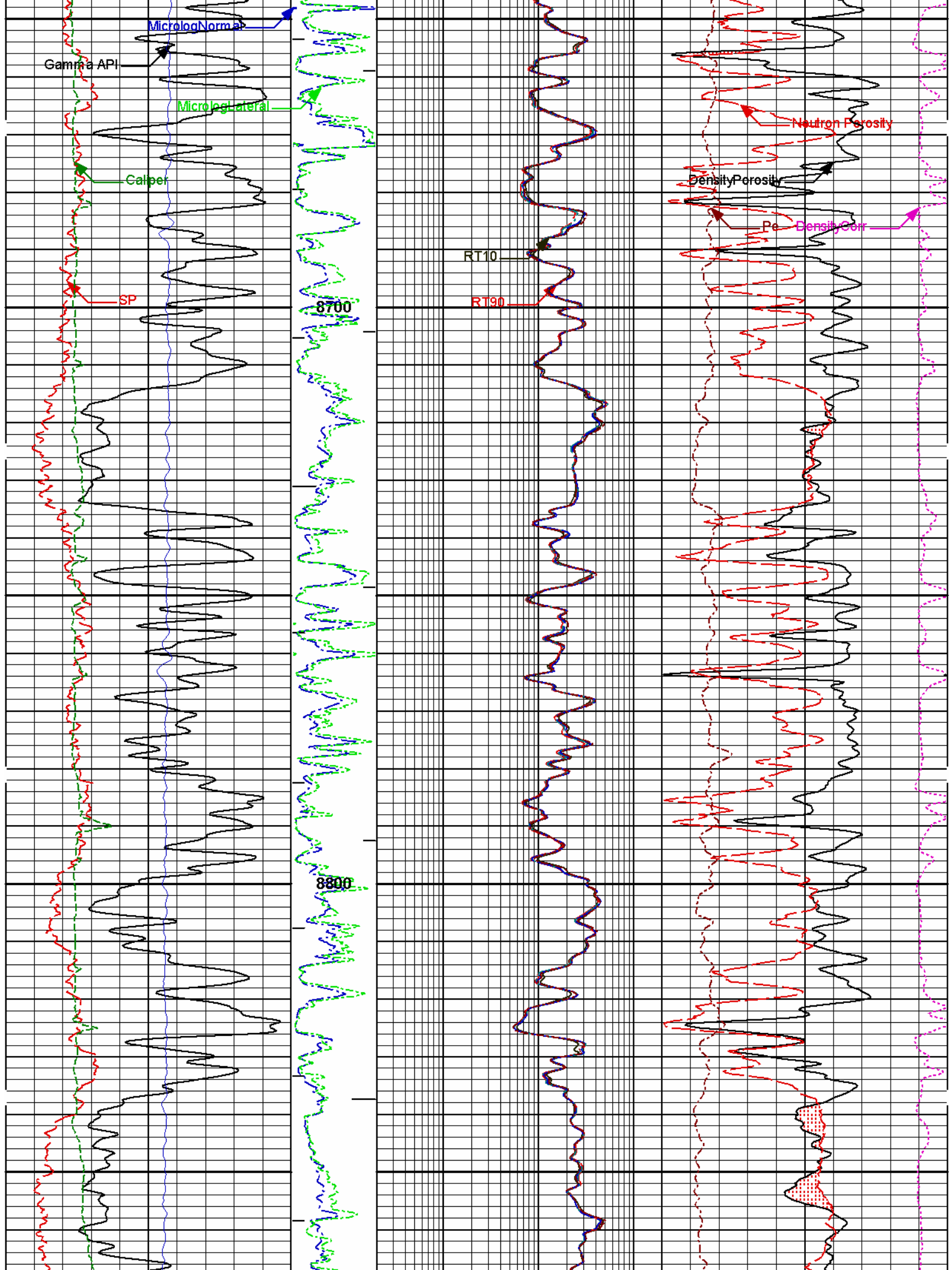


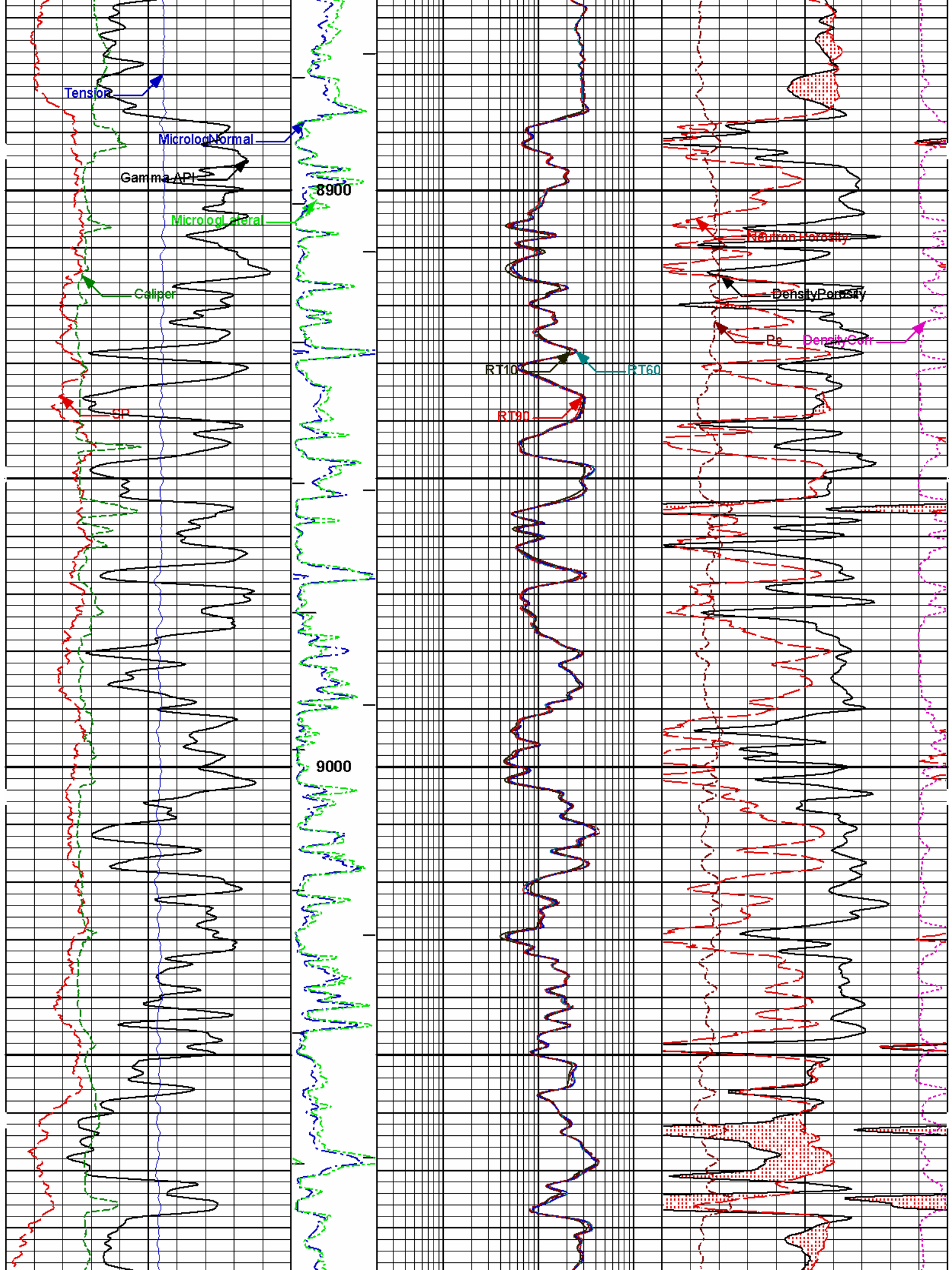


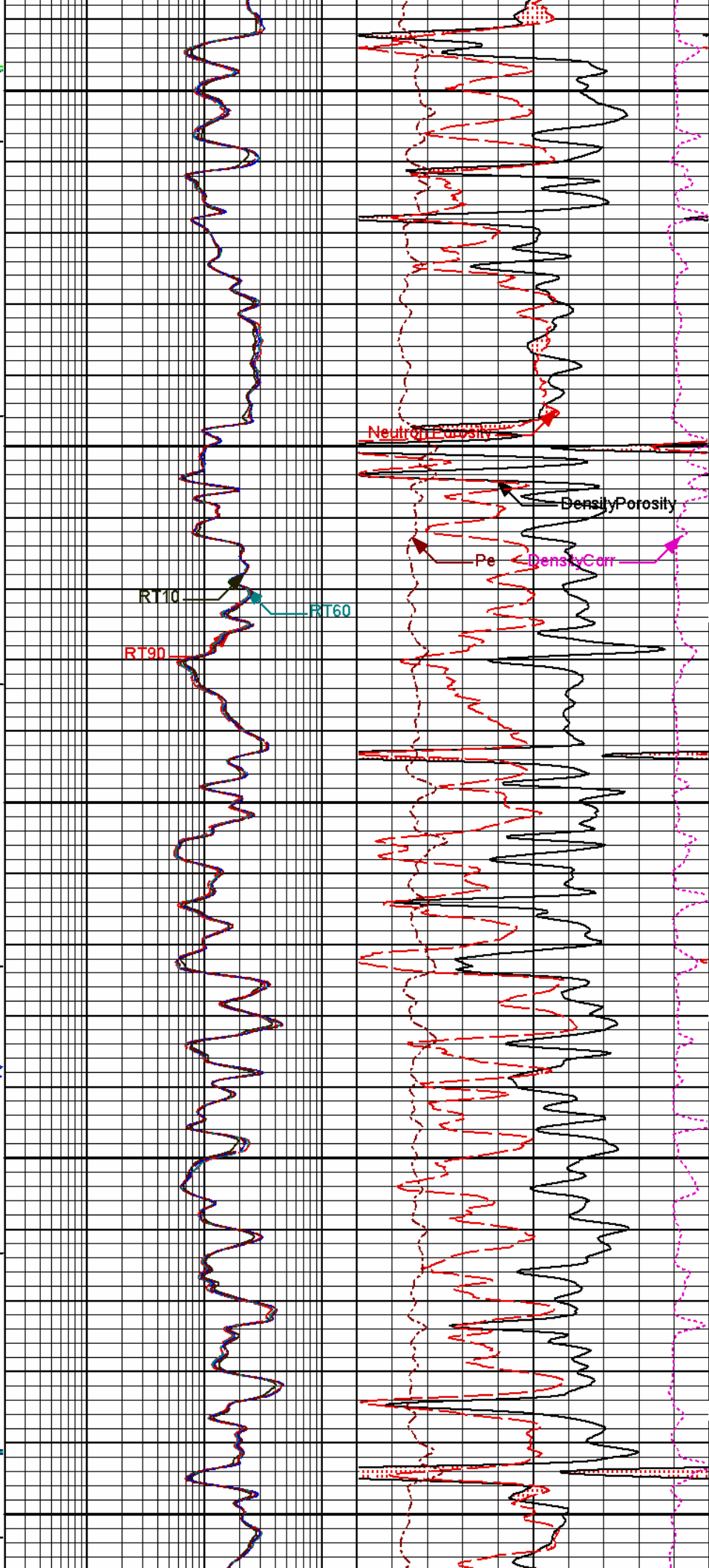
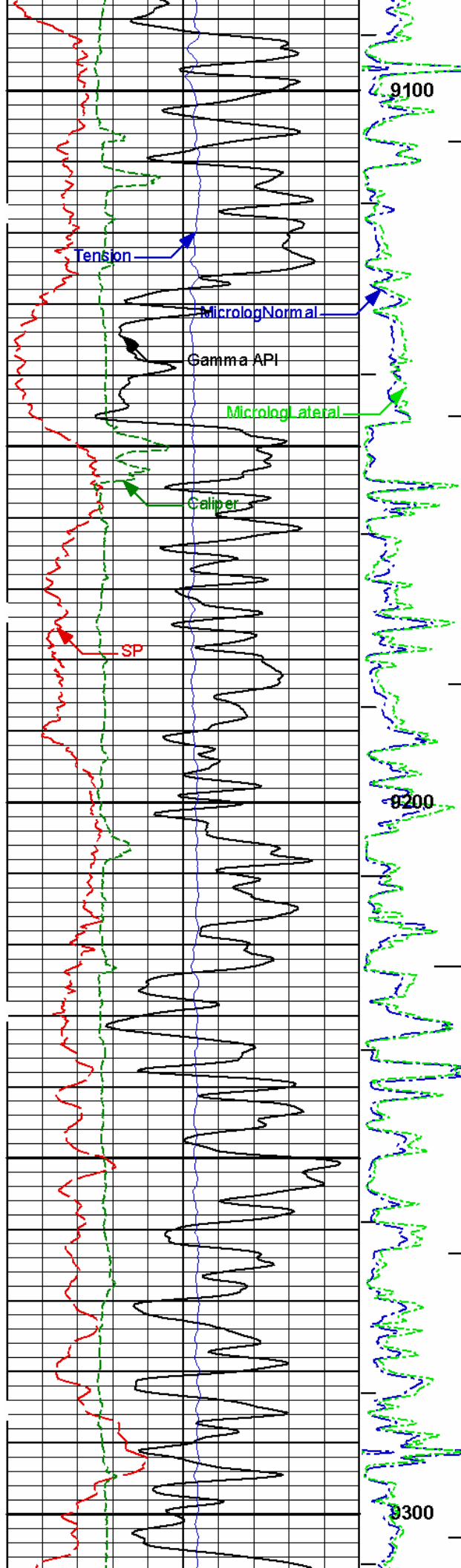


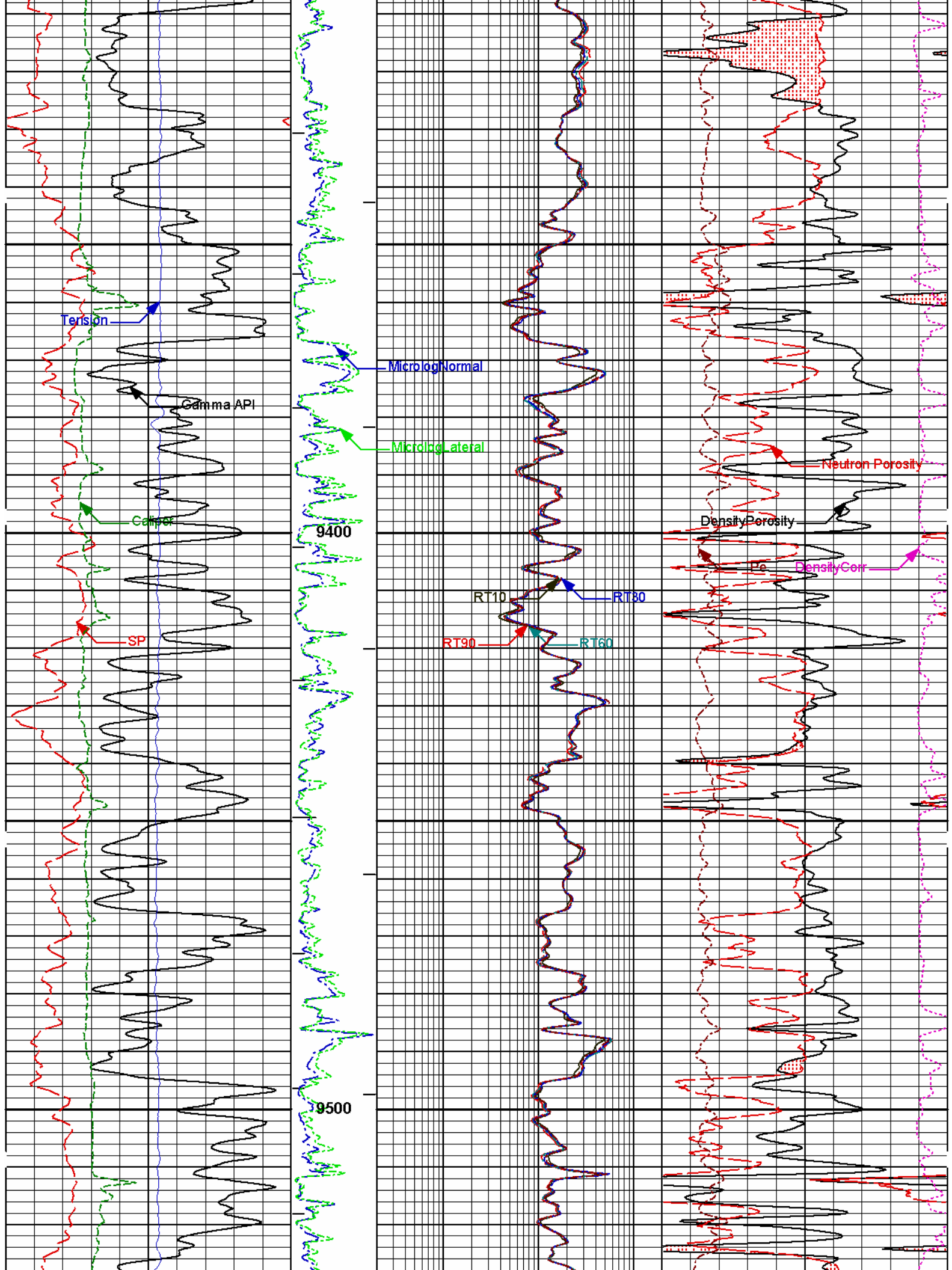


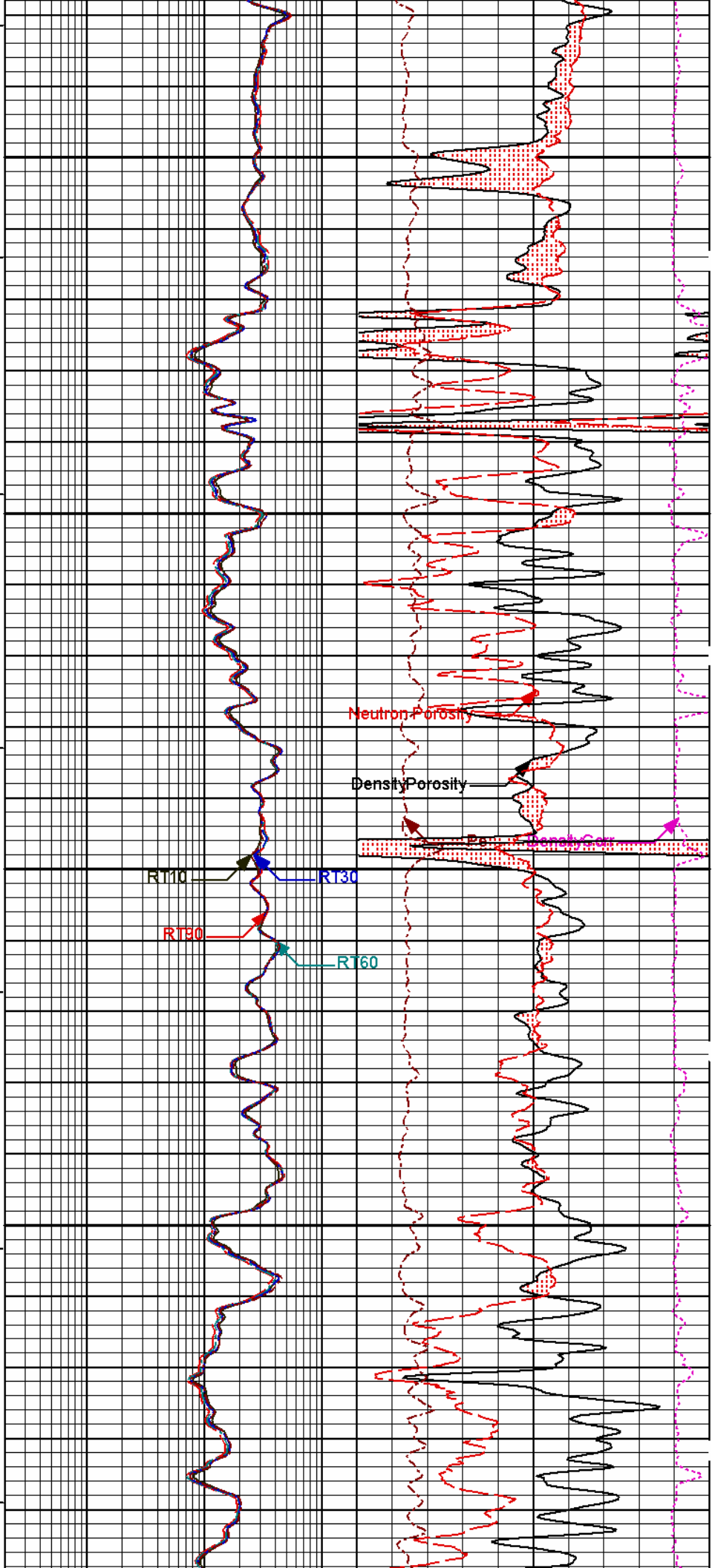
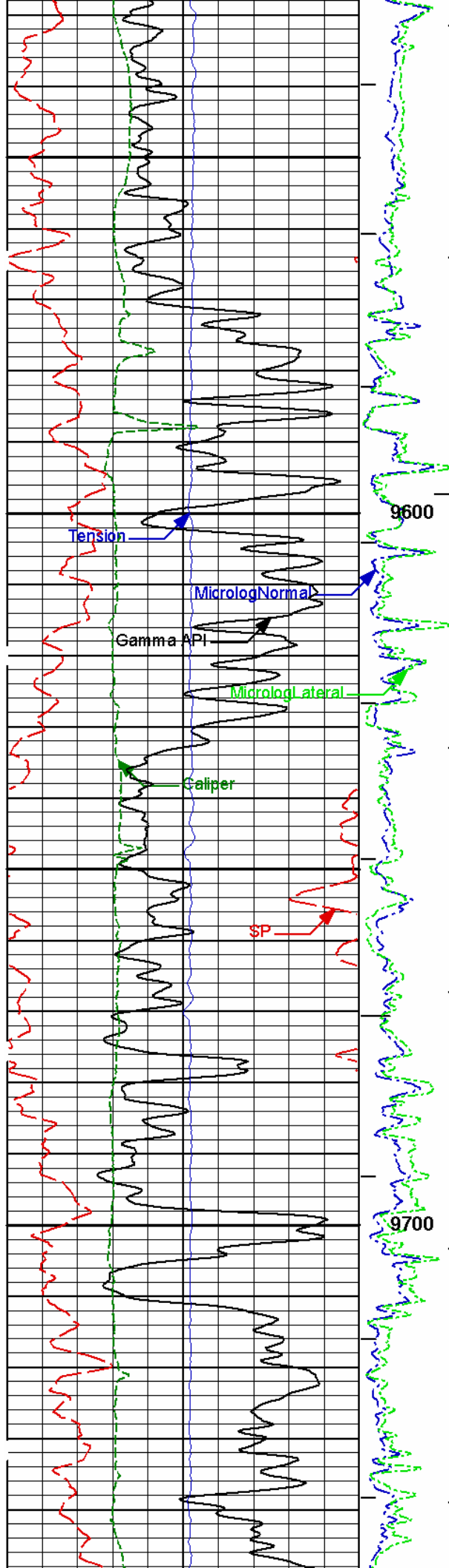


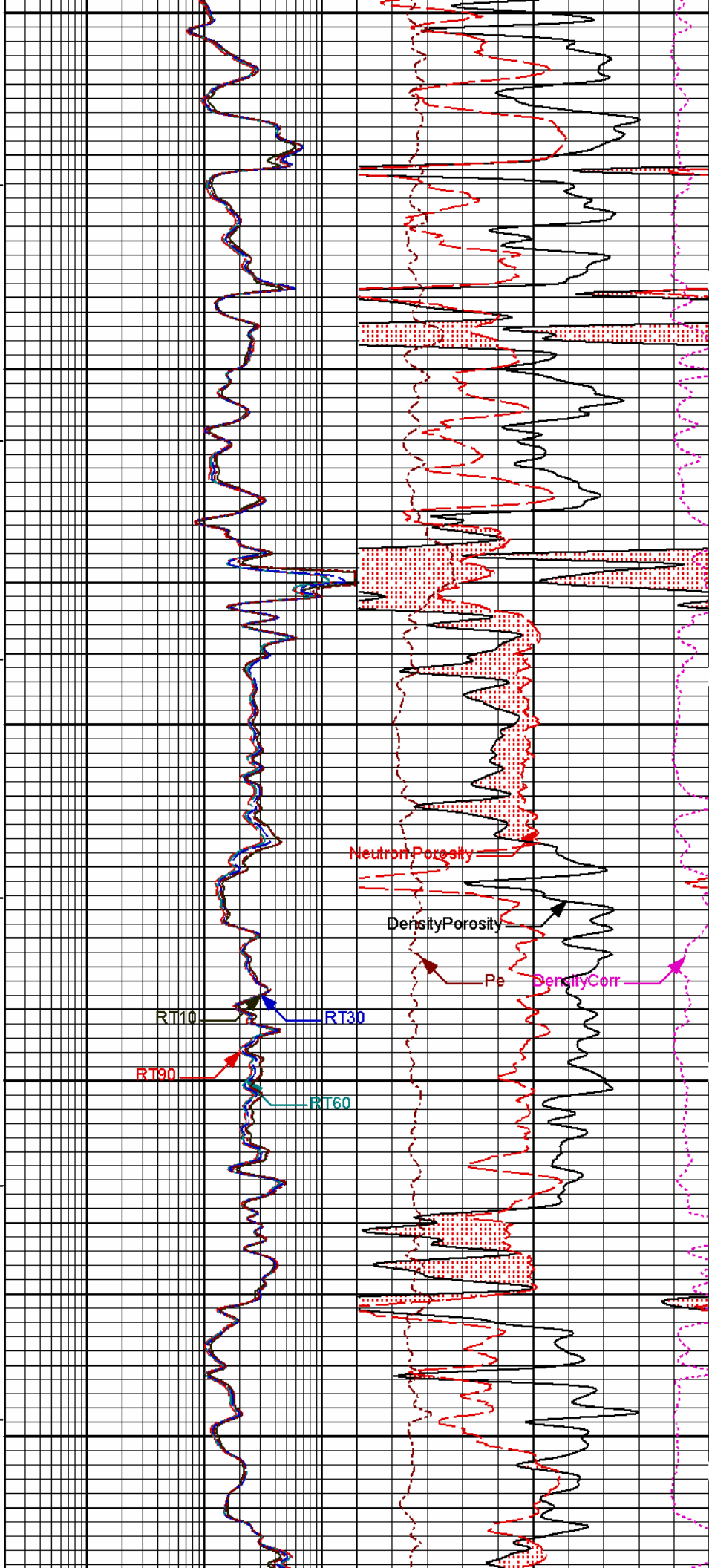
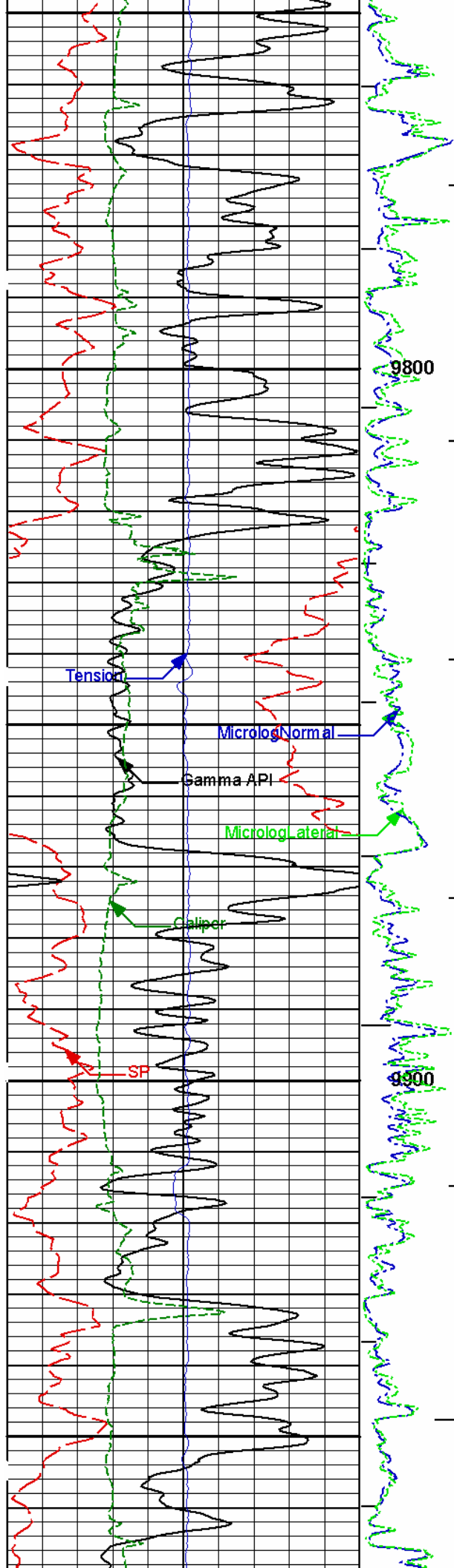


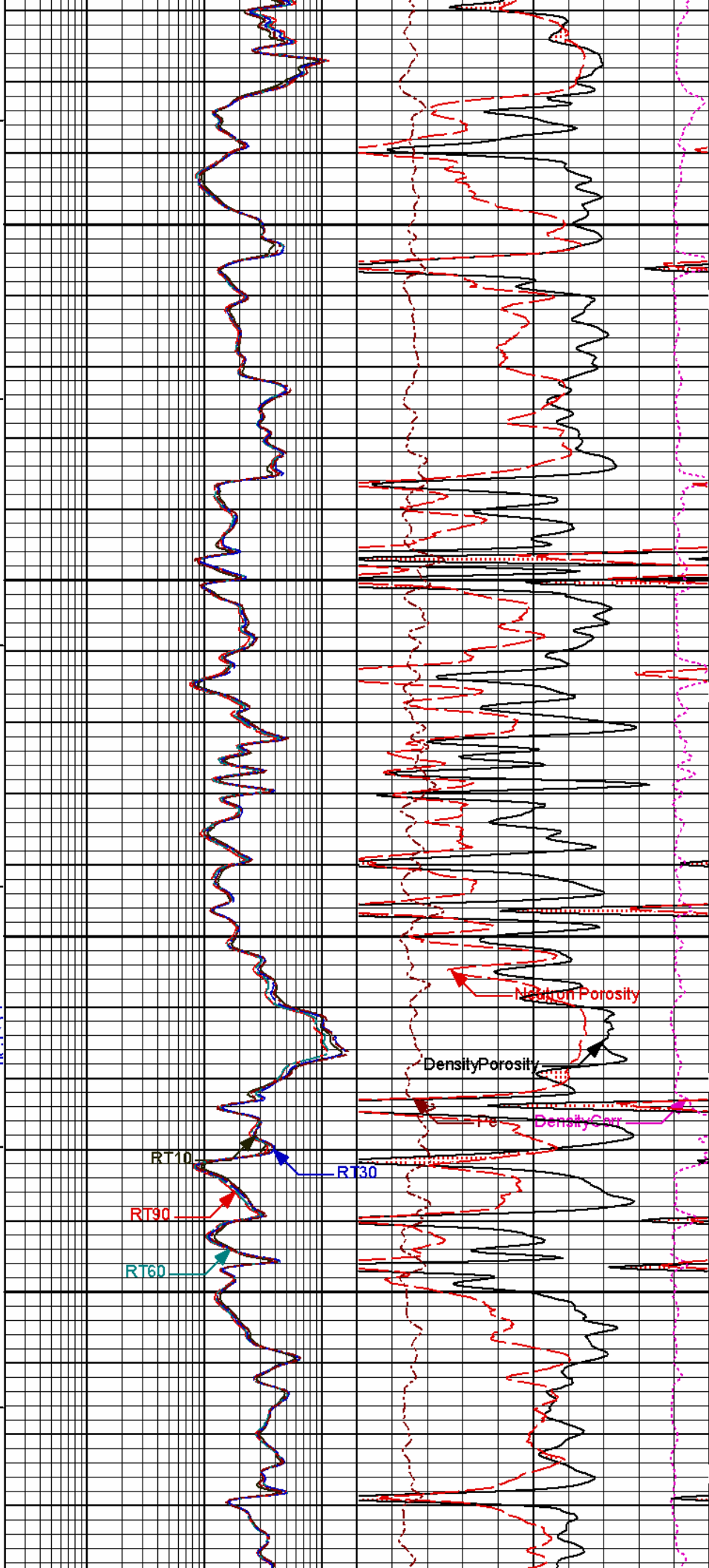
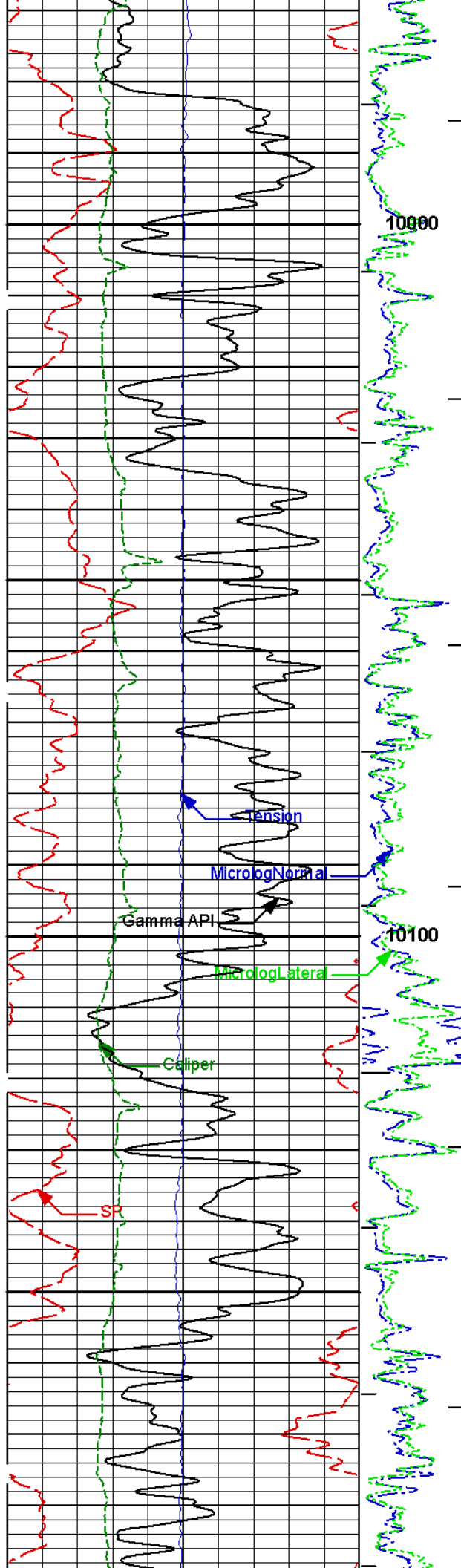


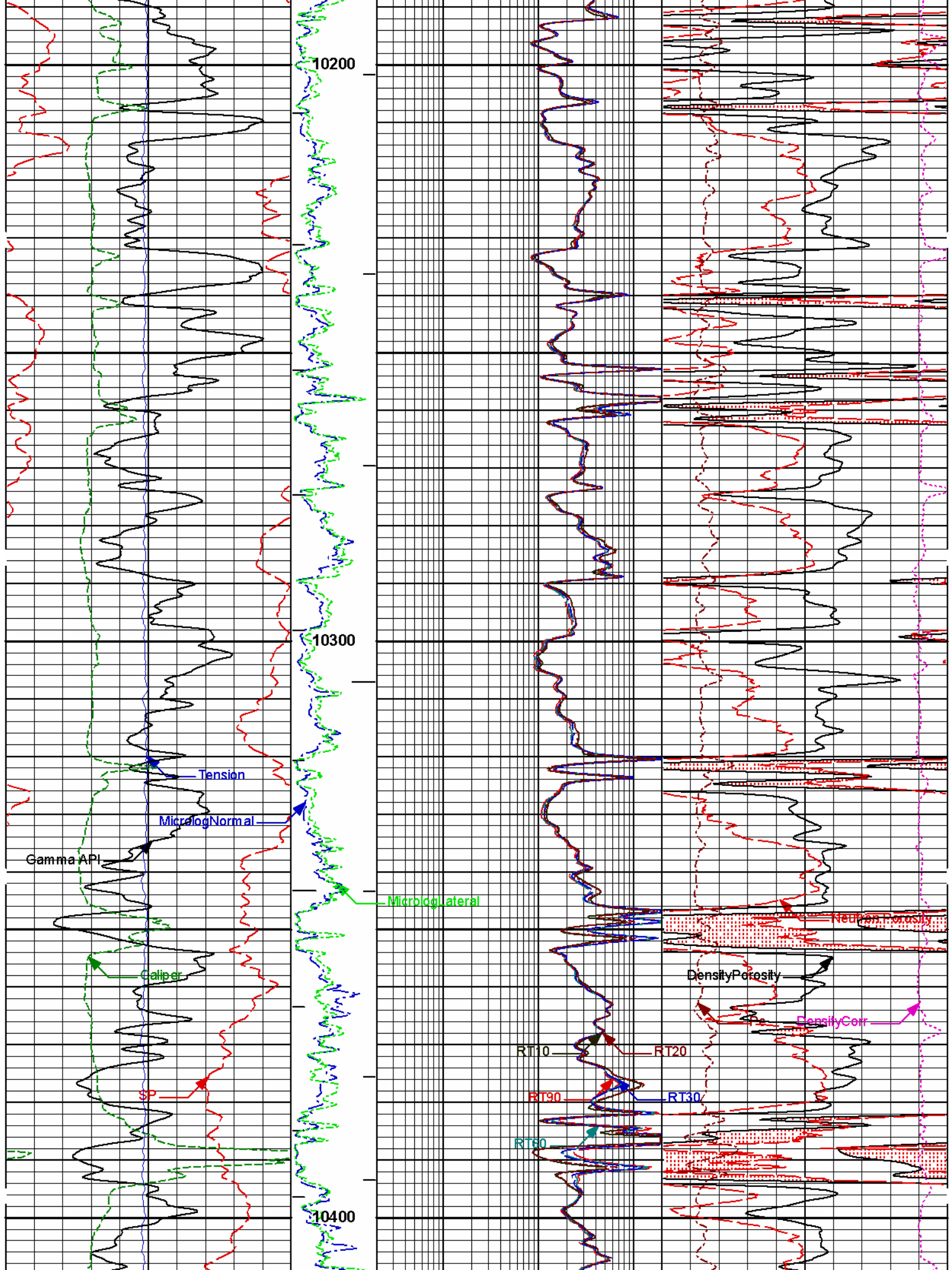


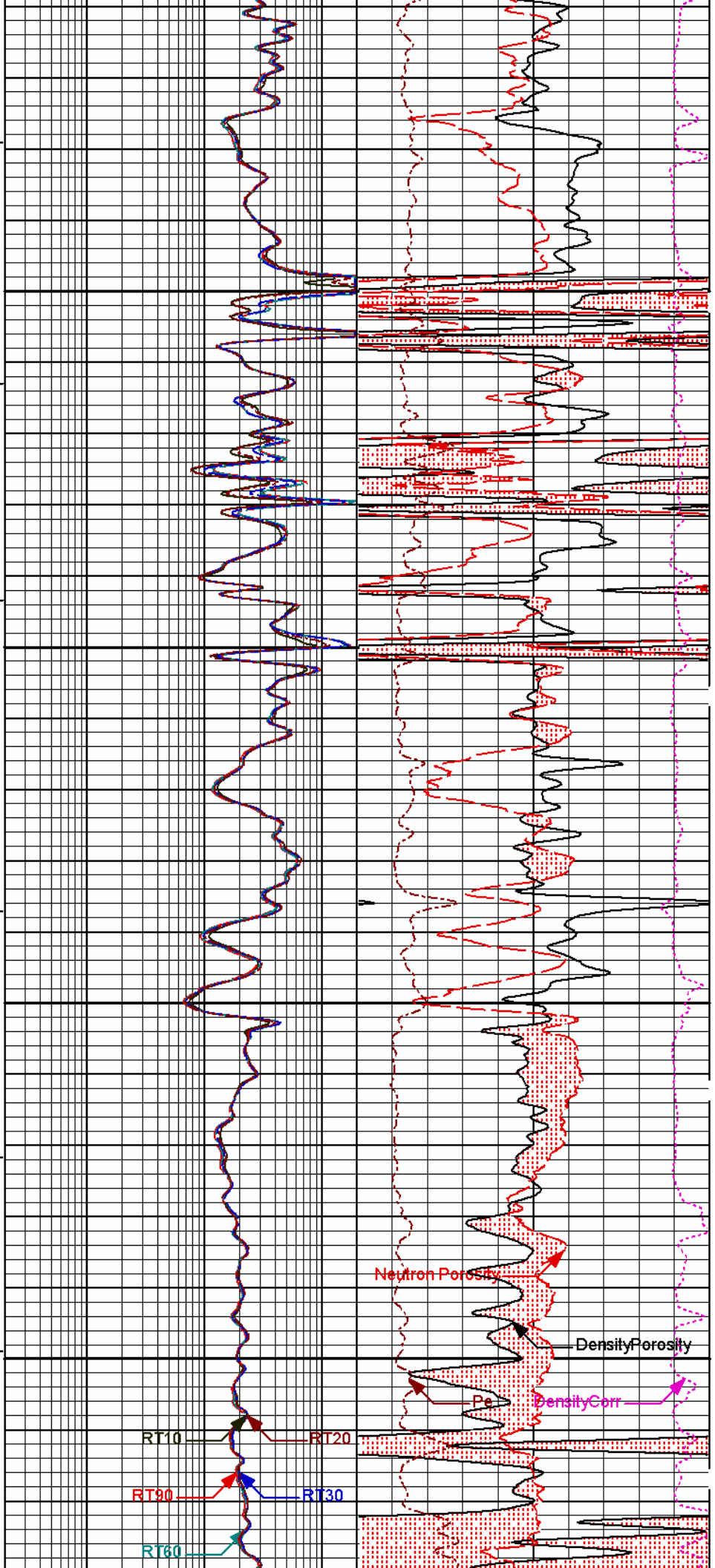
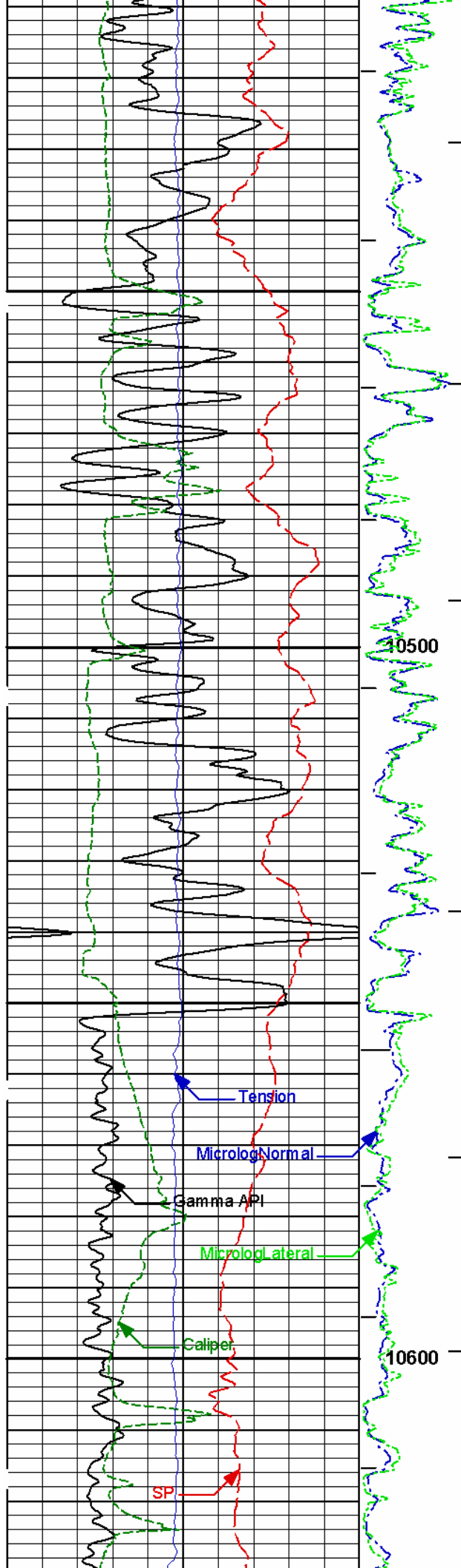


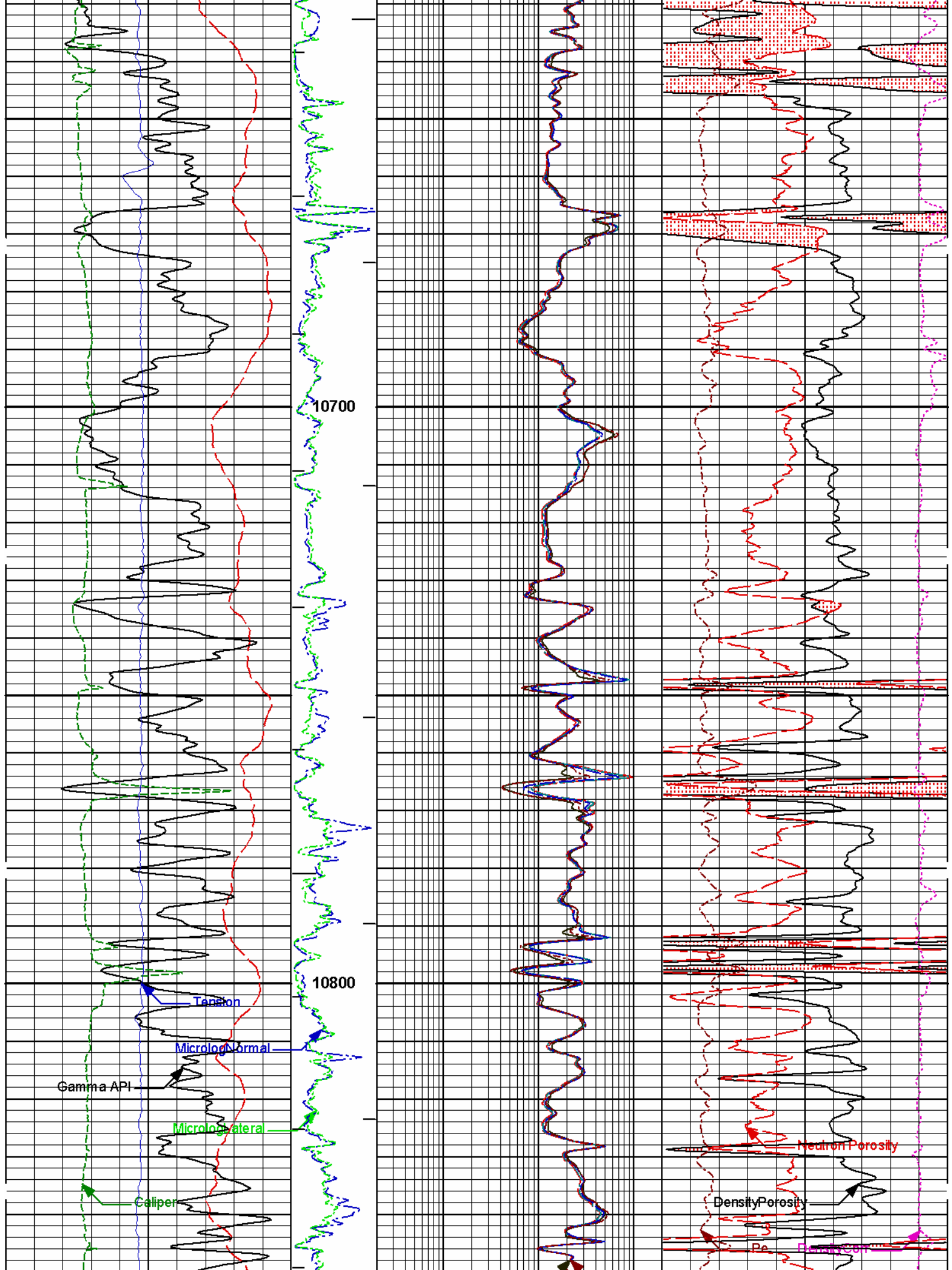


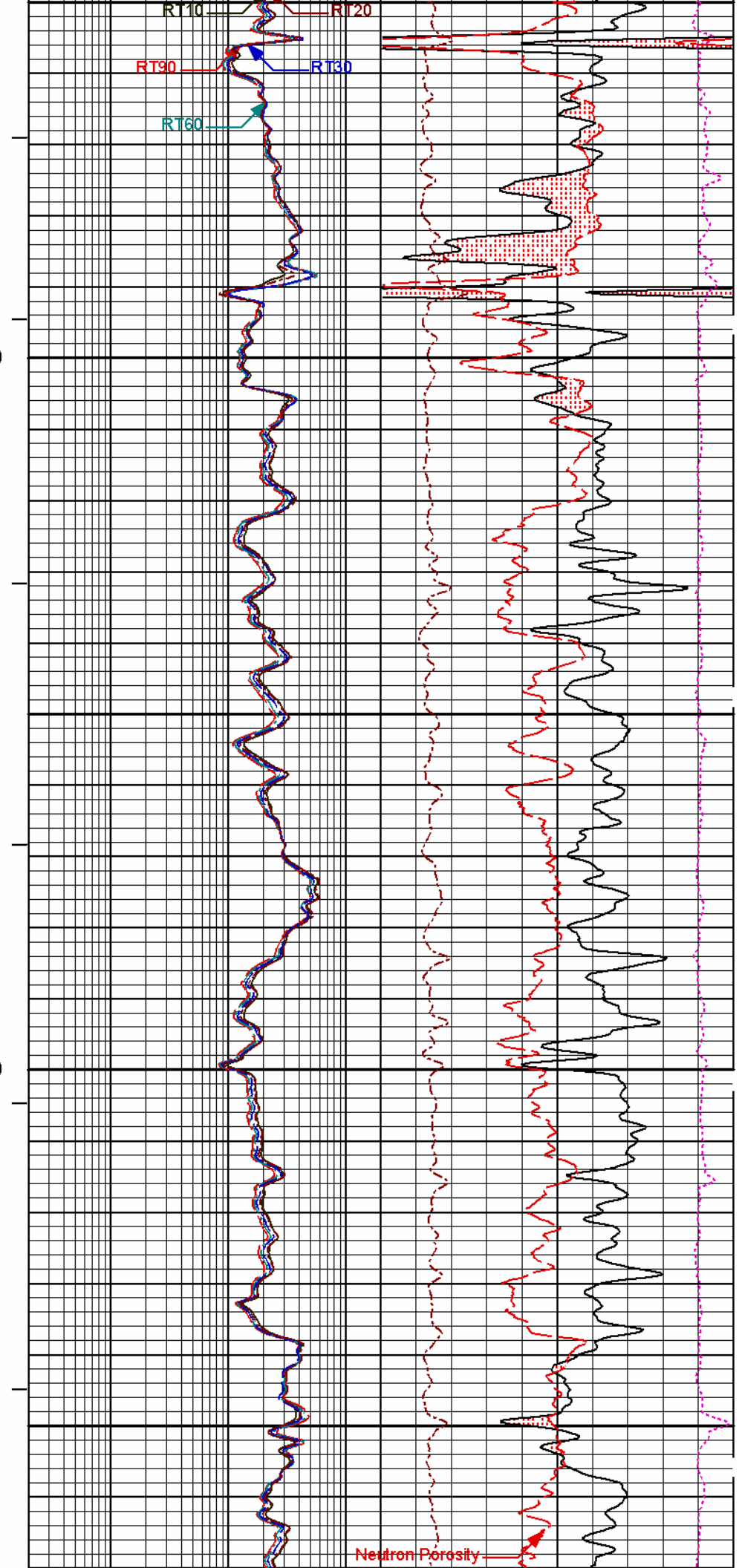
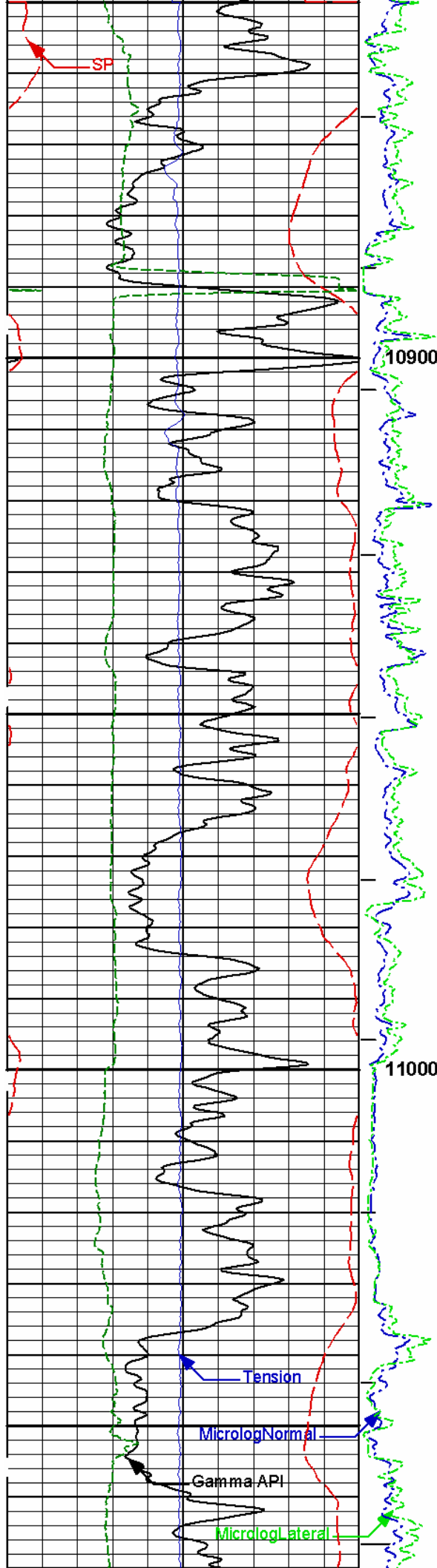


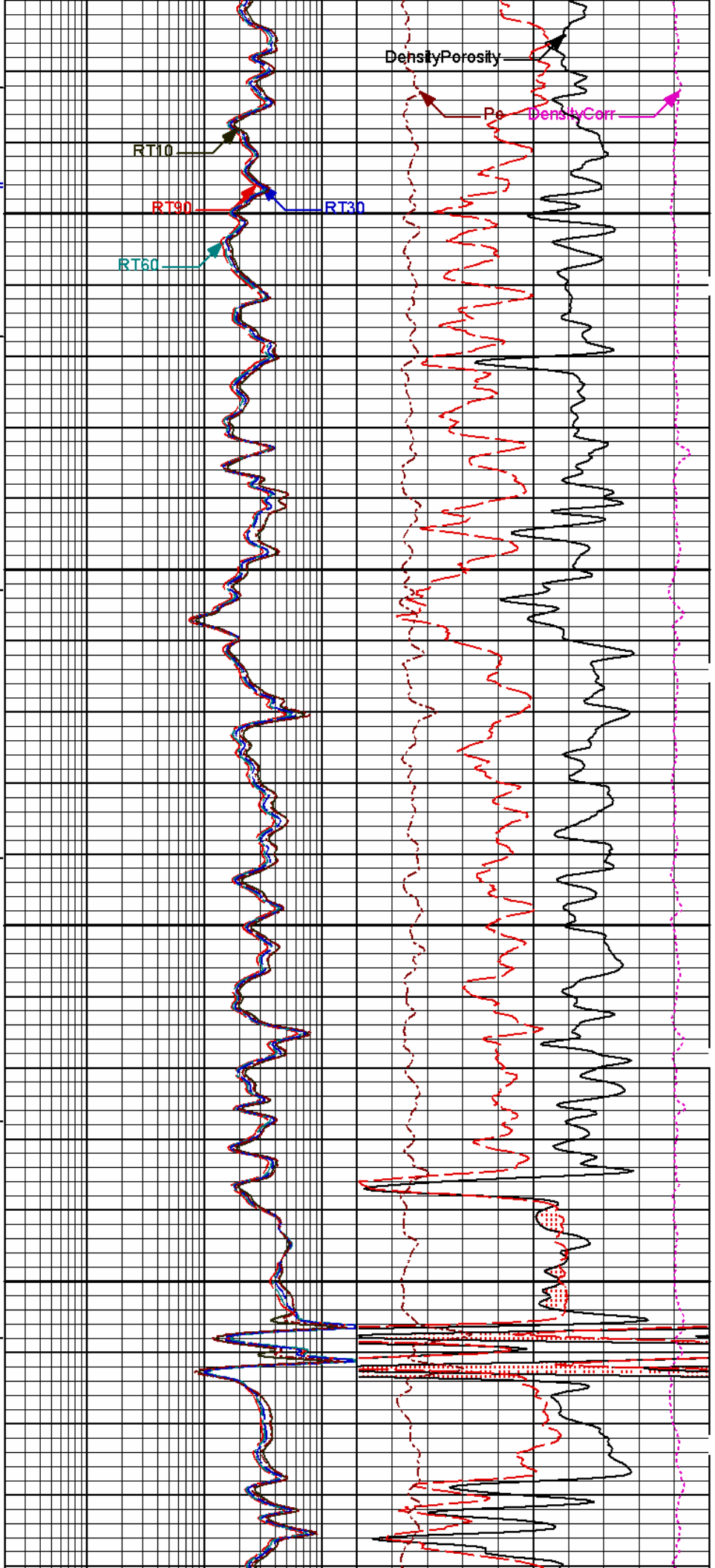
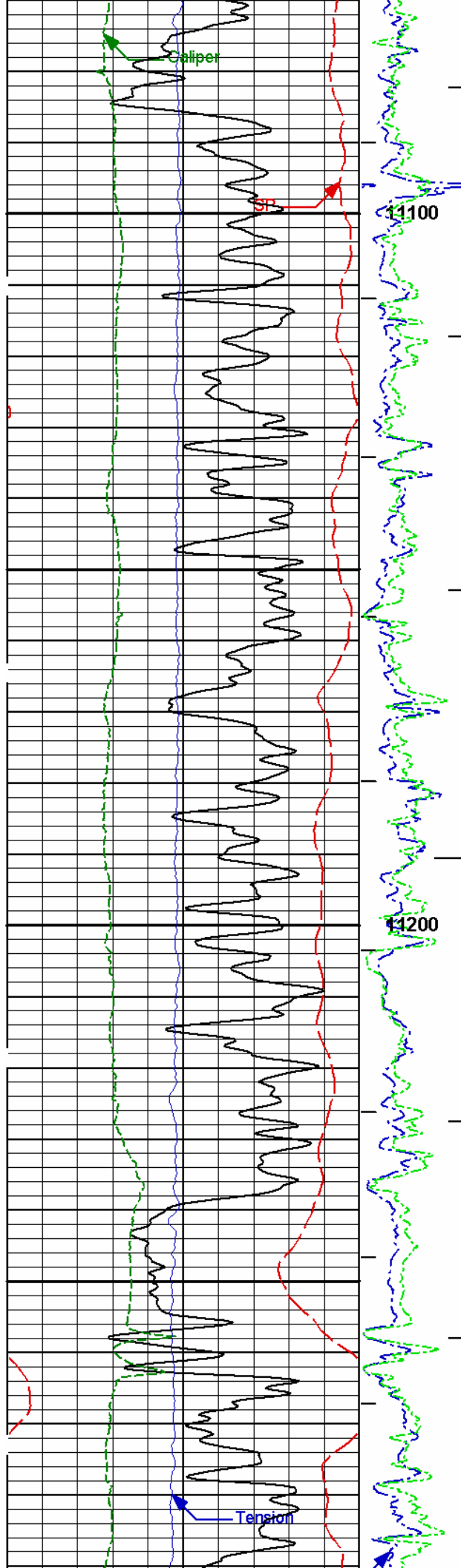


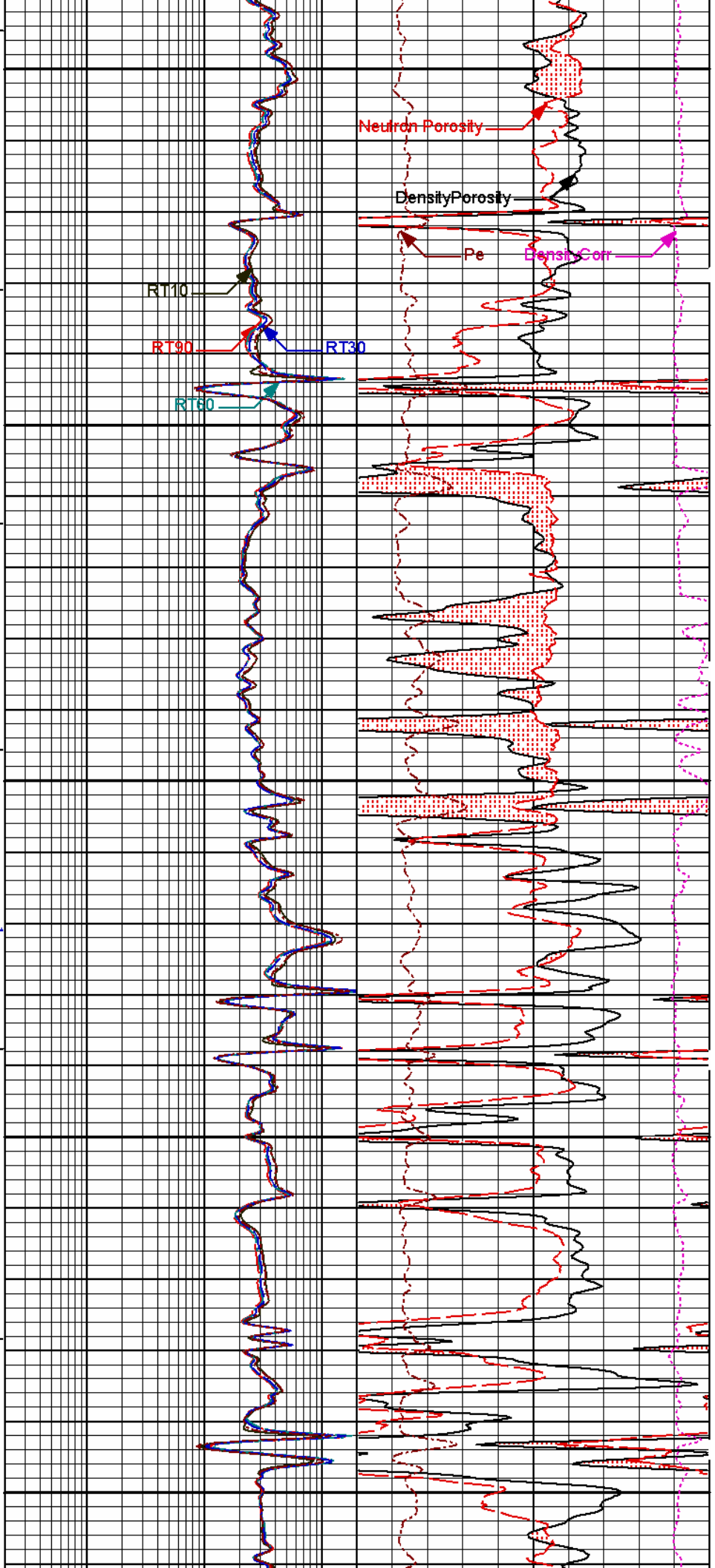
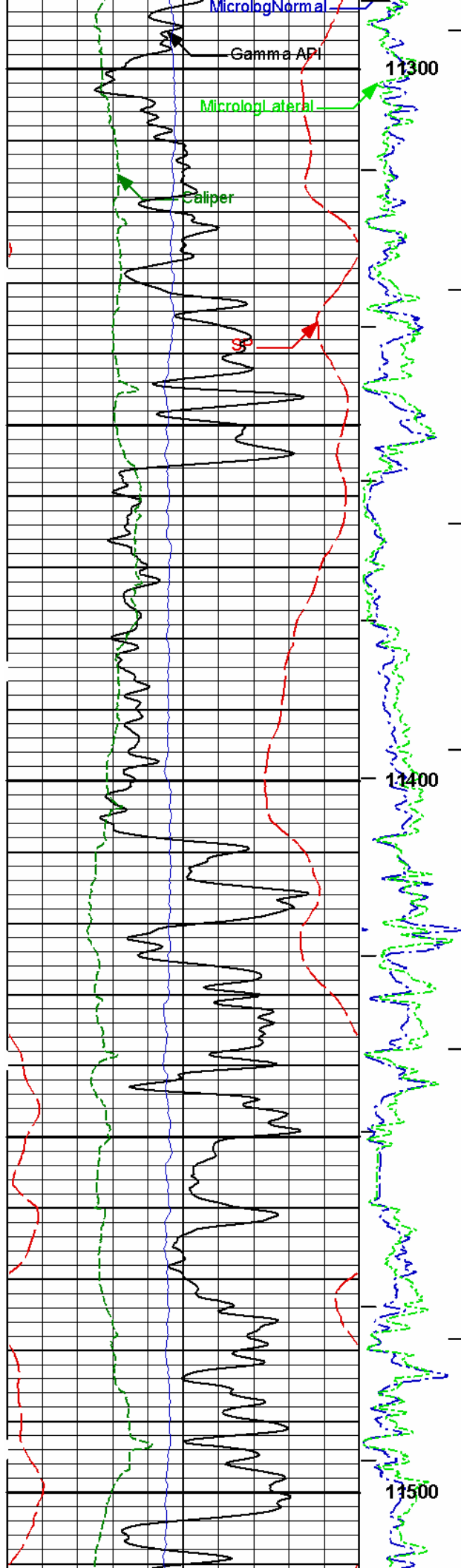


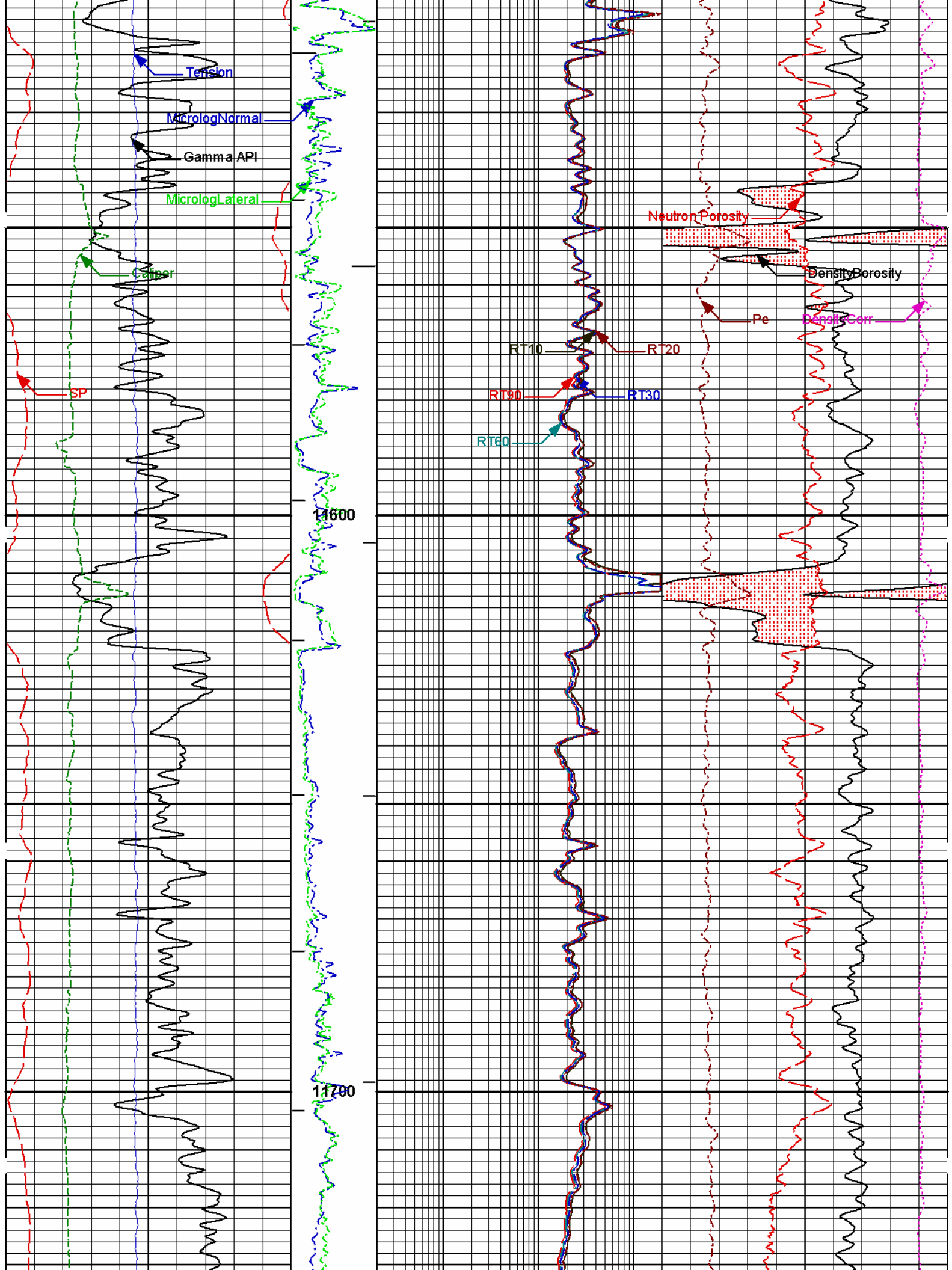


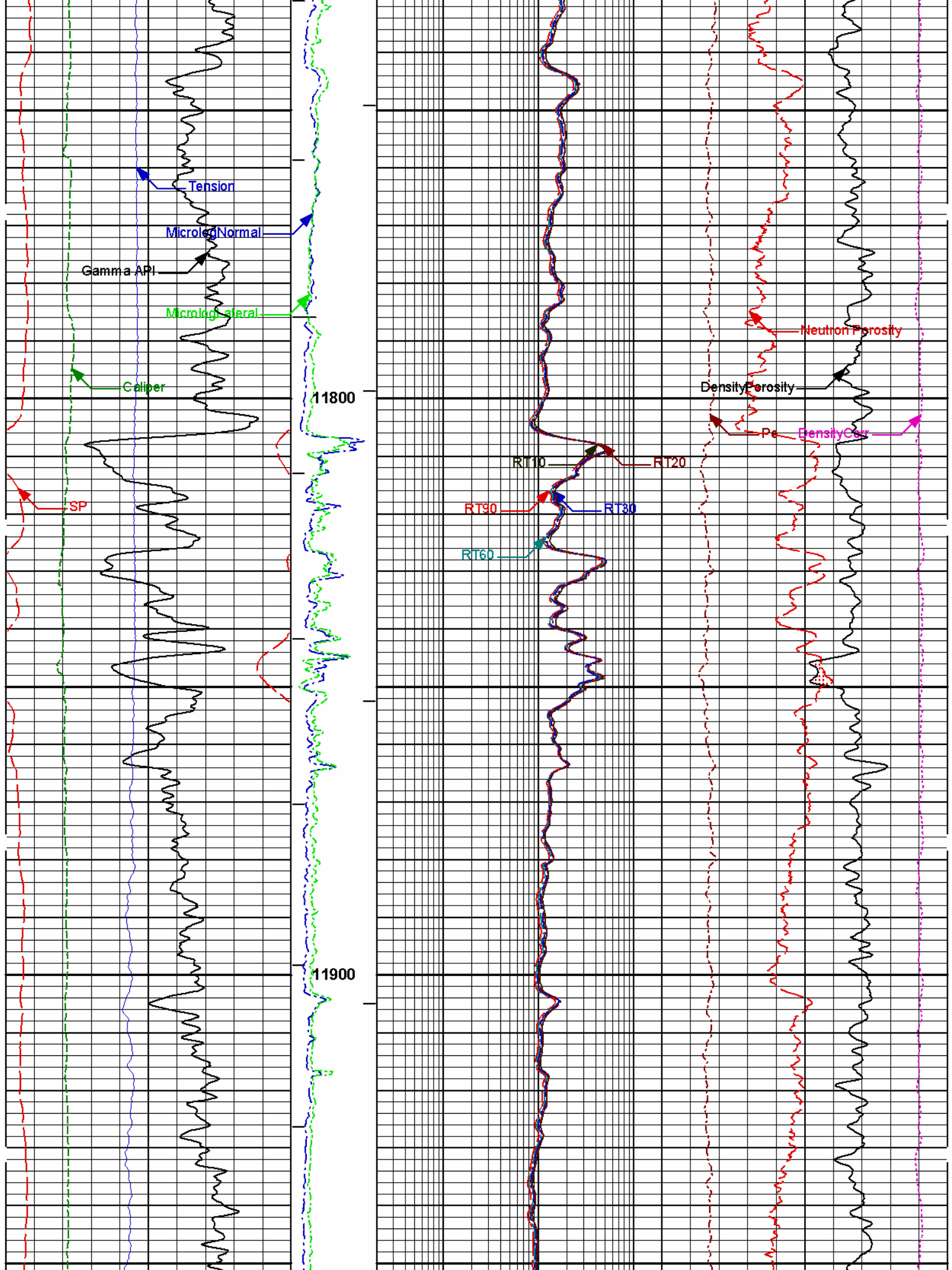


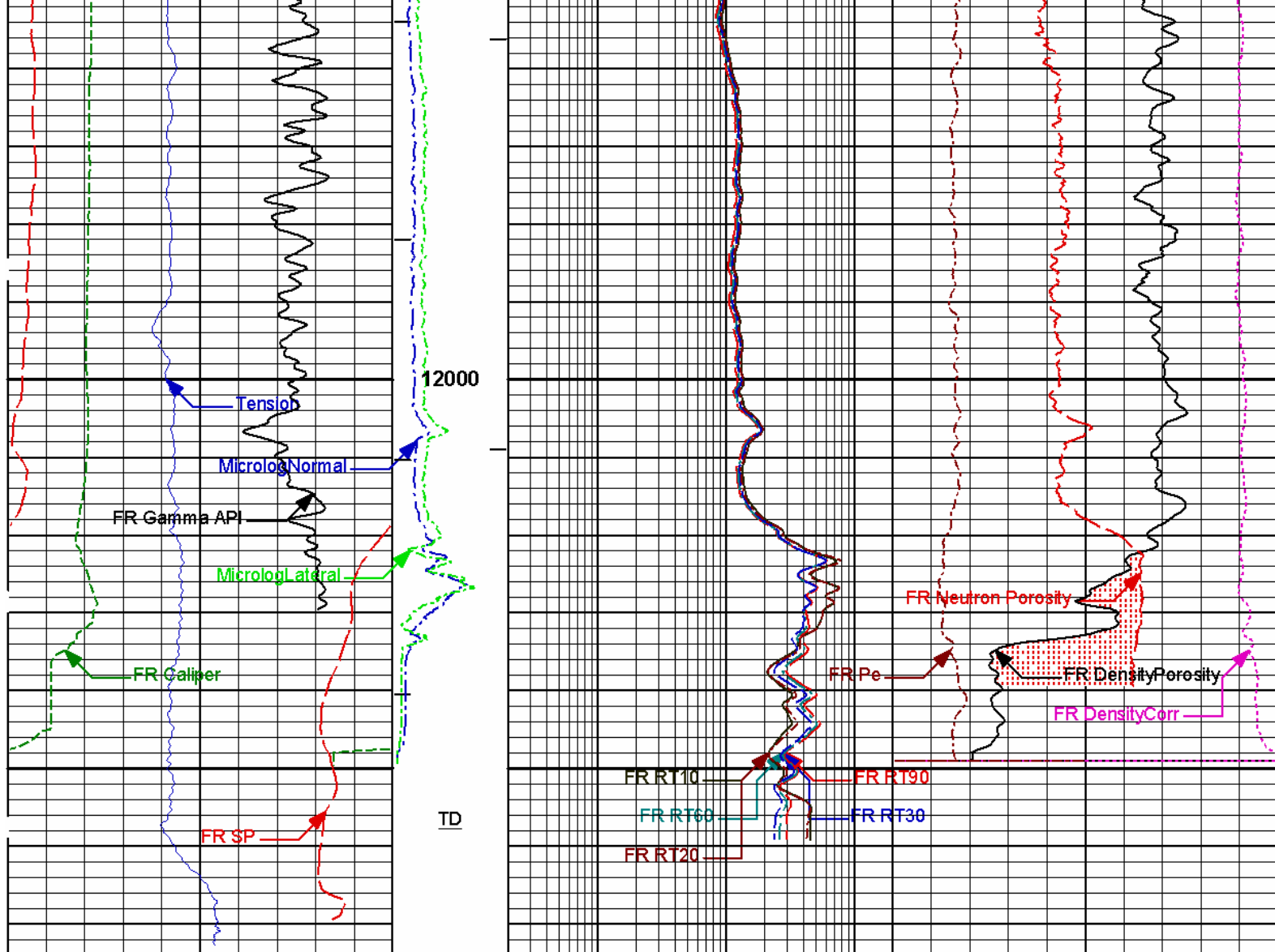










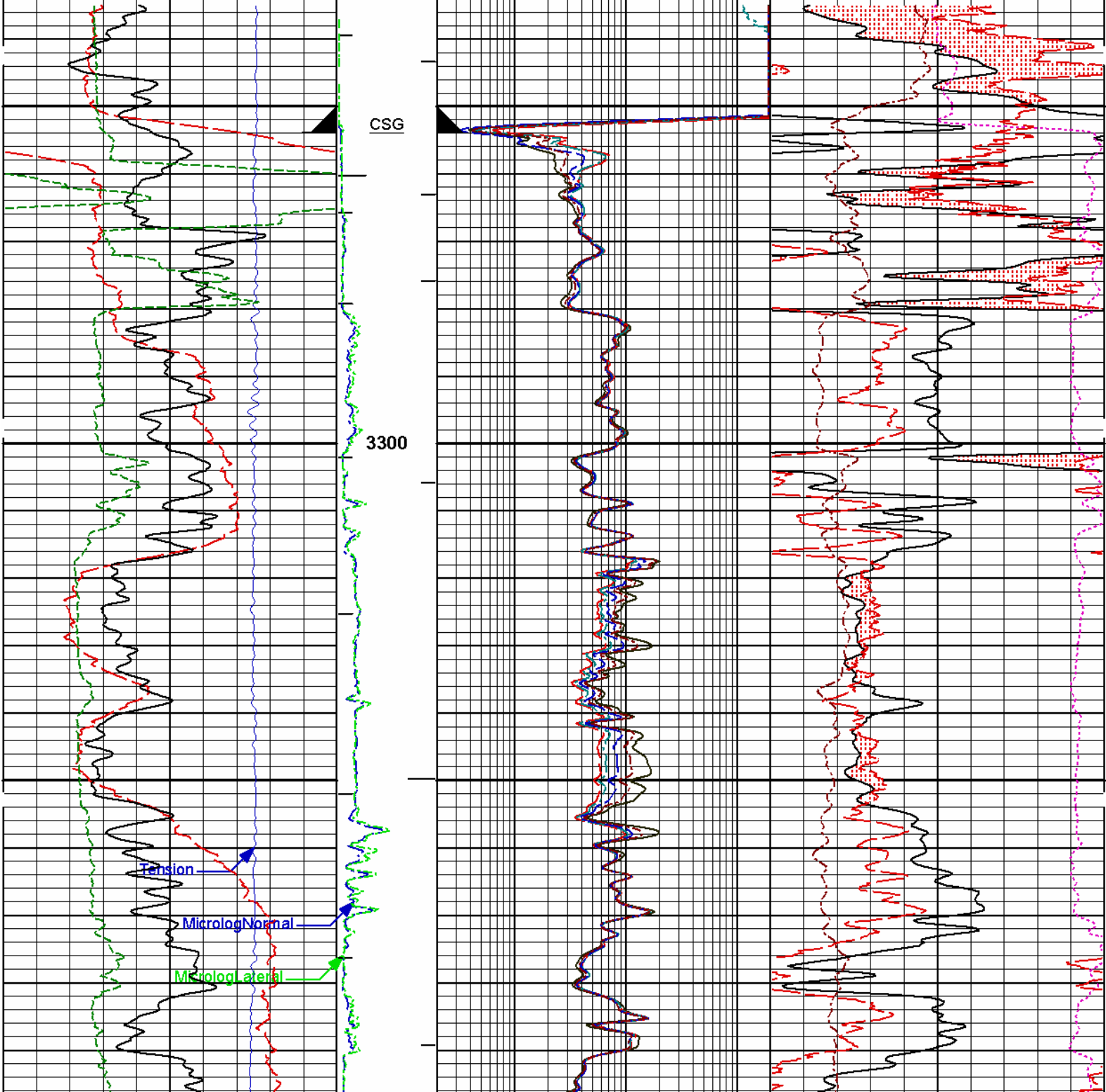


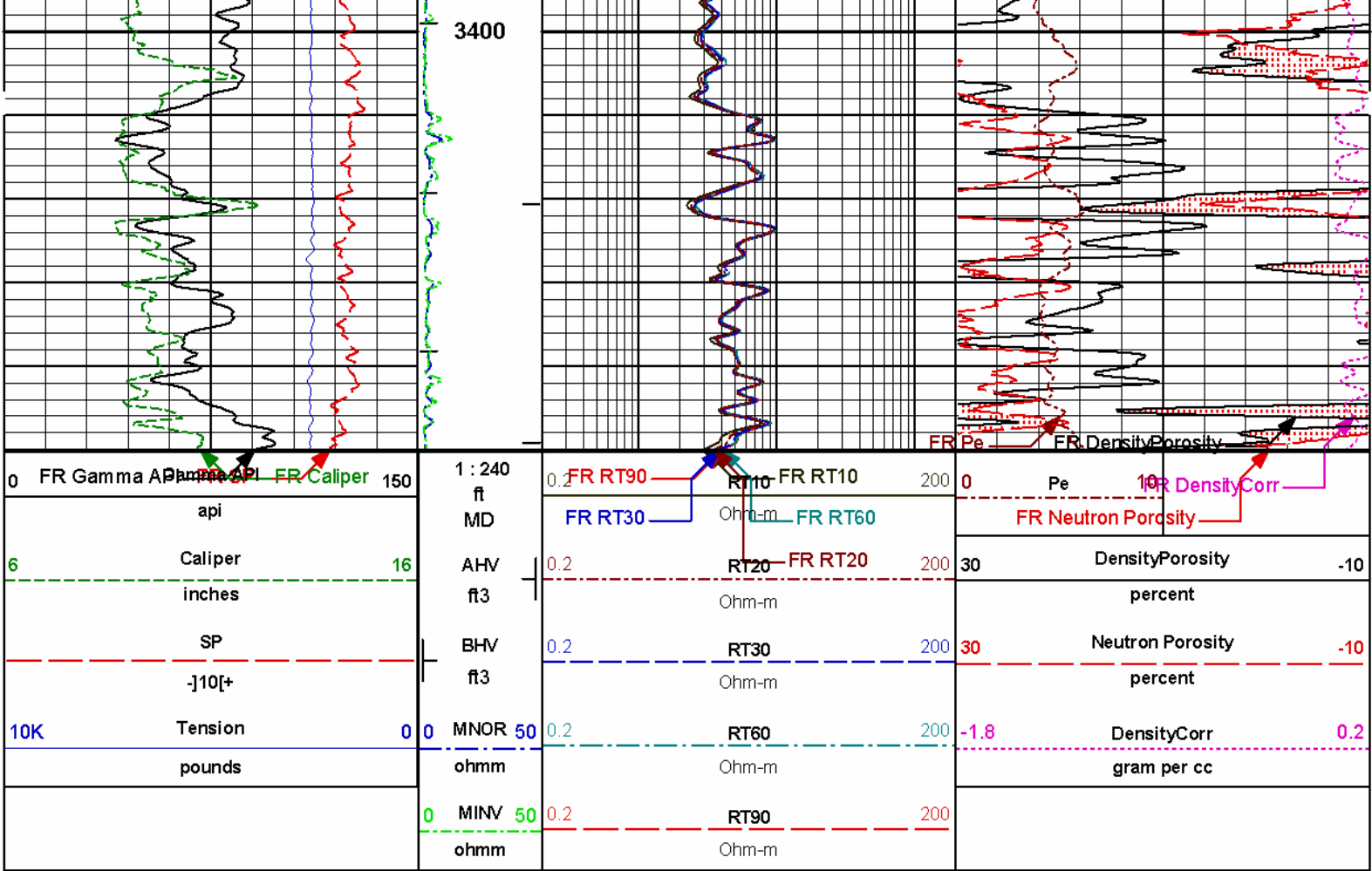
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	api				Ohm-m				
6	Caliper	16	AHV	0.2	RT20	200	30	DensityPorosity	-10
	inches		ft3		Ohm-m			percent	
	SP		BHV	0.2	RT30	200	30	Neutron Porosity	-10
	-]10[+		ft3		Ohm-m			percent	
10K	Tension	0 0	MNOR 50	0.2	RT60	200	-1.8	DensityCorr	0.2
	pounds		ohmm		Ohm-m			gram per cc	
		0	MINV 50	0.2	RT90	200			
			ohmm		Ohm-m				

MAIN PASS 5" = 100'

REPEAT PASS 5" = 100'

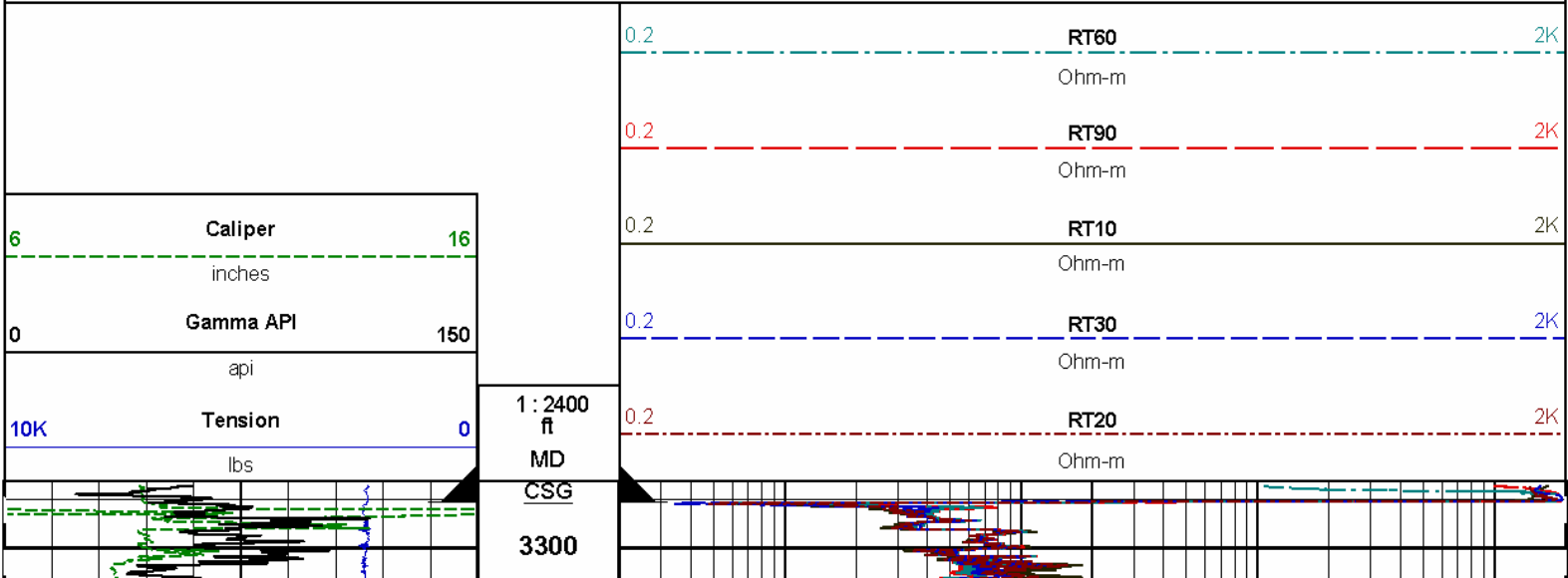
	0 MINV 50	0.2	RT90	200	
	ohmm		Ohm-m		
10K Tension	0 0 MNOR 50	0.2	RT60	200	-1.8 DensityCorr 0.2
pounds	ohmm		Ohm-m		gram per cc
SP	BHV	0.2	RT30	200	30 Neutron Porosity -10
-]10[+	ft3		Ohm-m		percent
6 Caliper 16	AHV	0.2	RT20	200	30 DensityPorosity -10
inches	ft3		Ohm-m		percent
0 Gamma API 150	1 : 240 ft MD	0.2	RT10	200	0 Pe 10
api			Ohm-m		

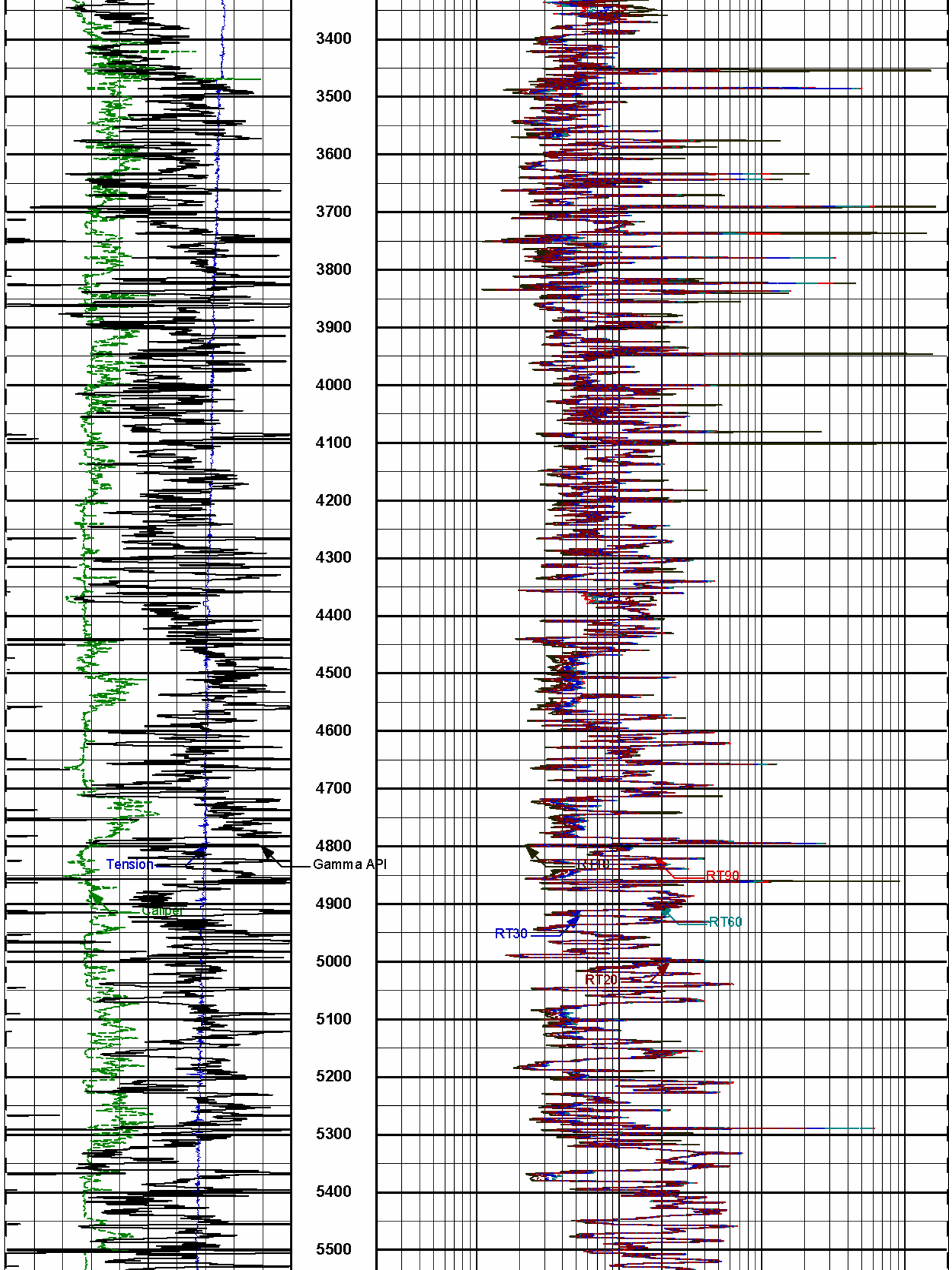


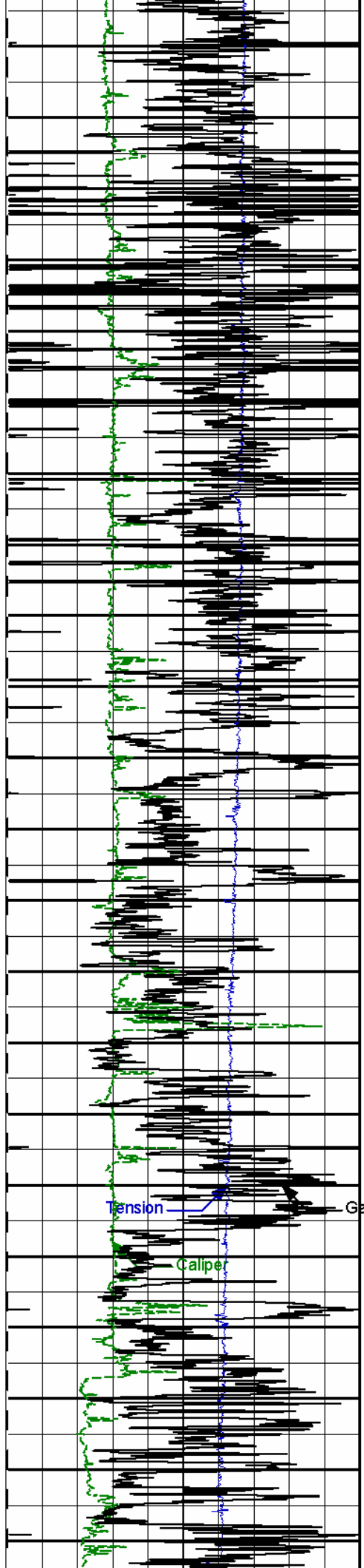


REPEAT PASS 5" = 100'

MAIN PASS 1/2" = 100'







5600

5700

5800

5900

6000

6100

6200

6300

6400

6500

6600

6700

6800

6900

7000

7100

7200

7300

7400

7500

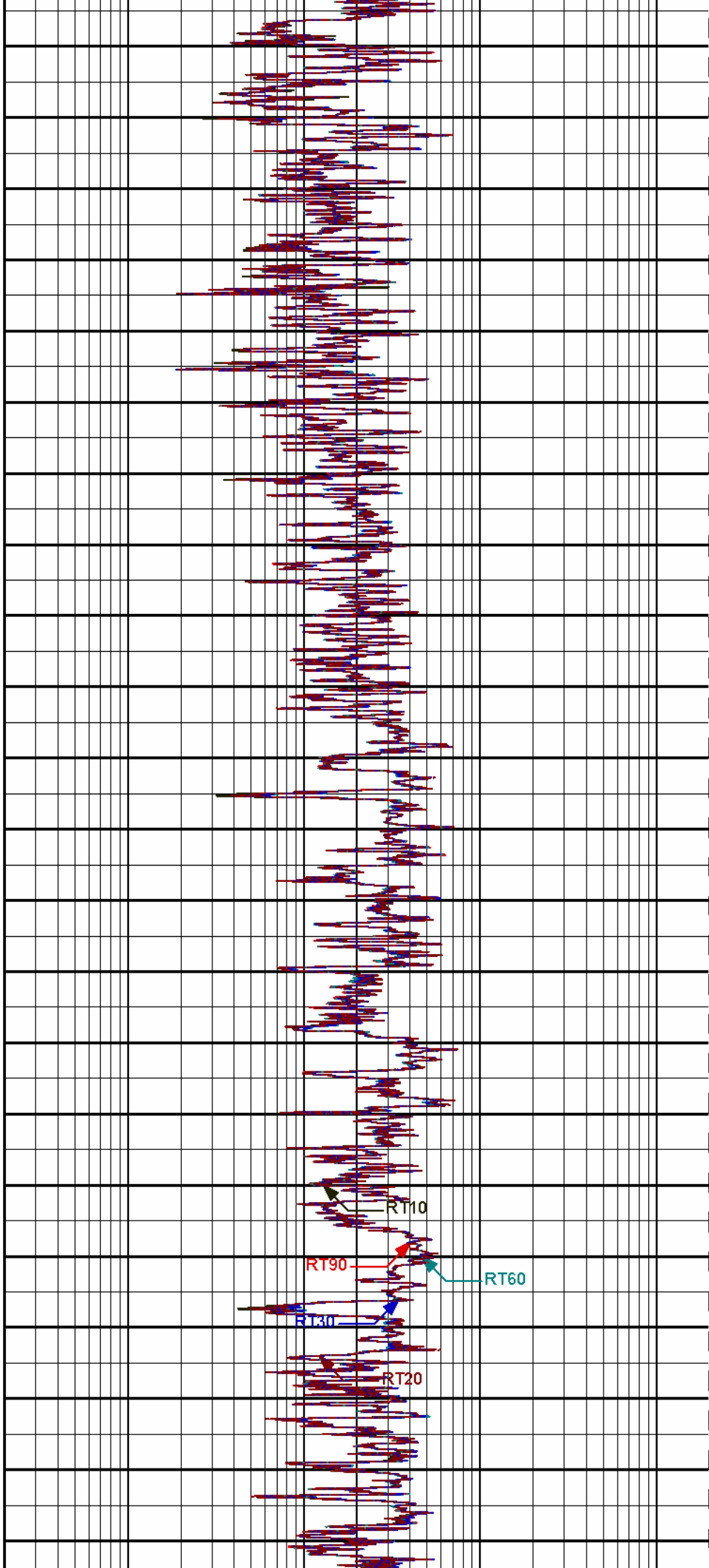
7600

7700

Gamma API

Tension

Caliper



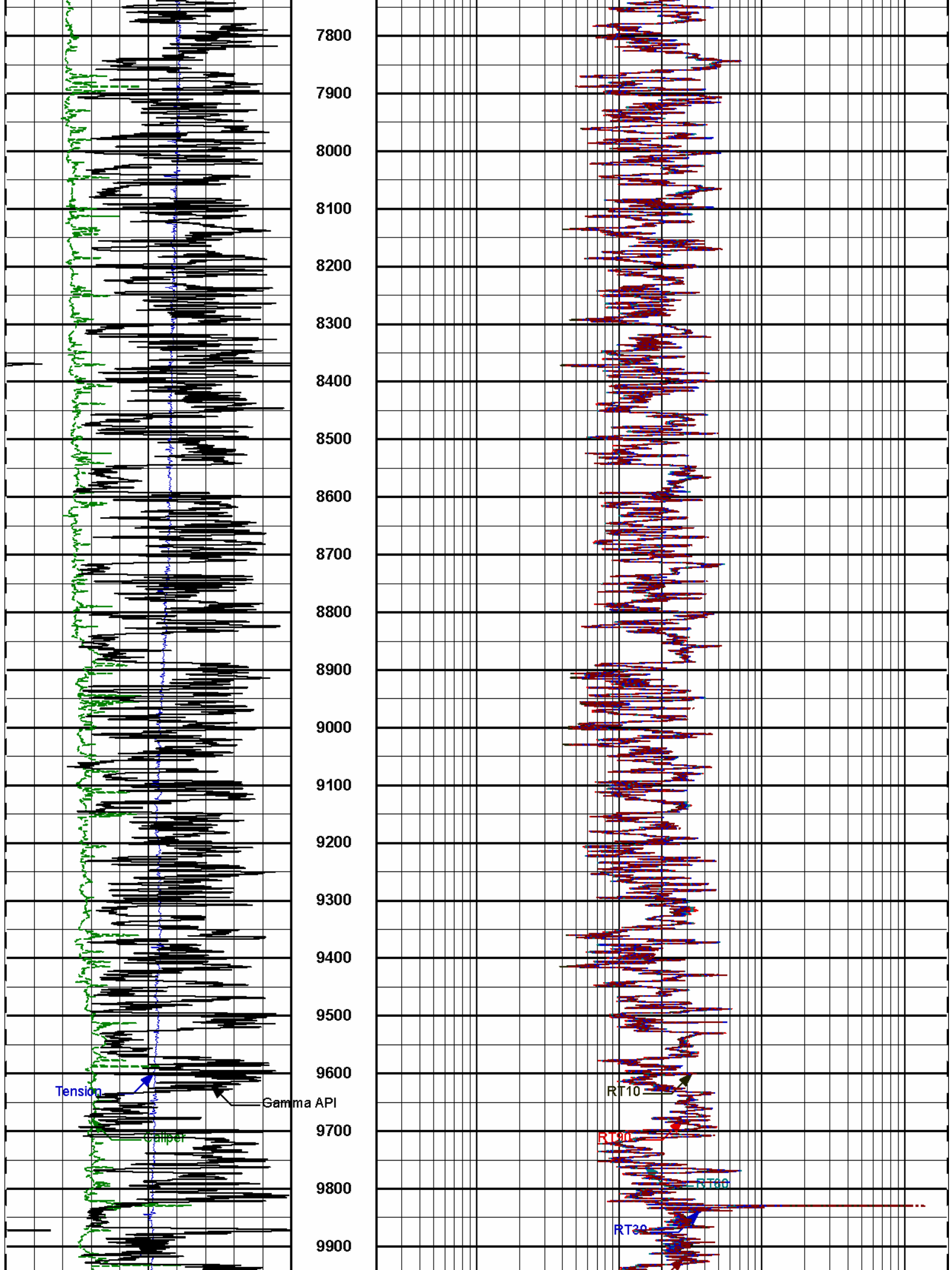
RT10

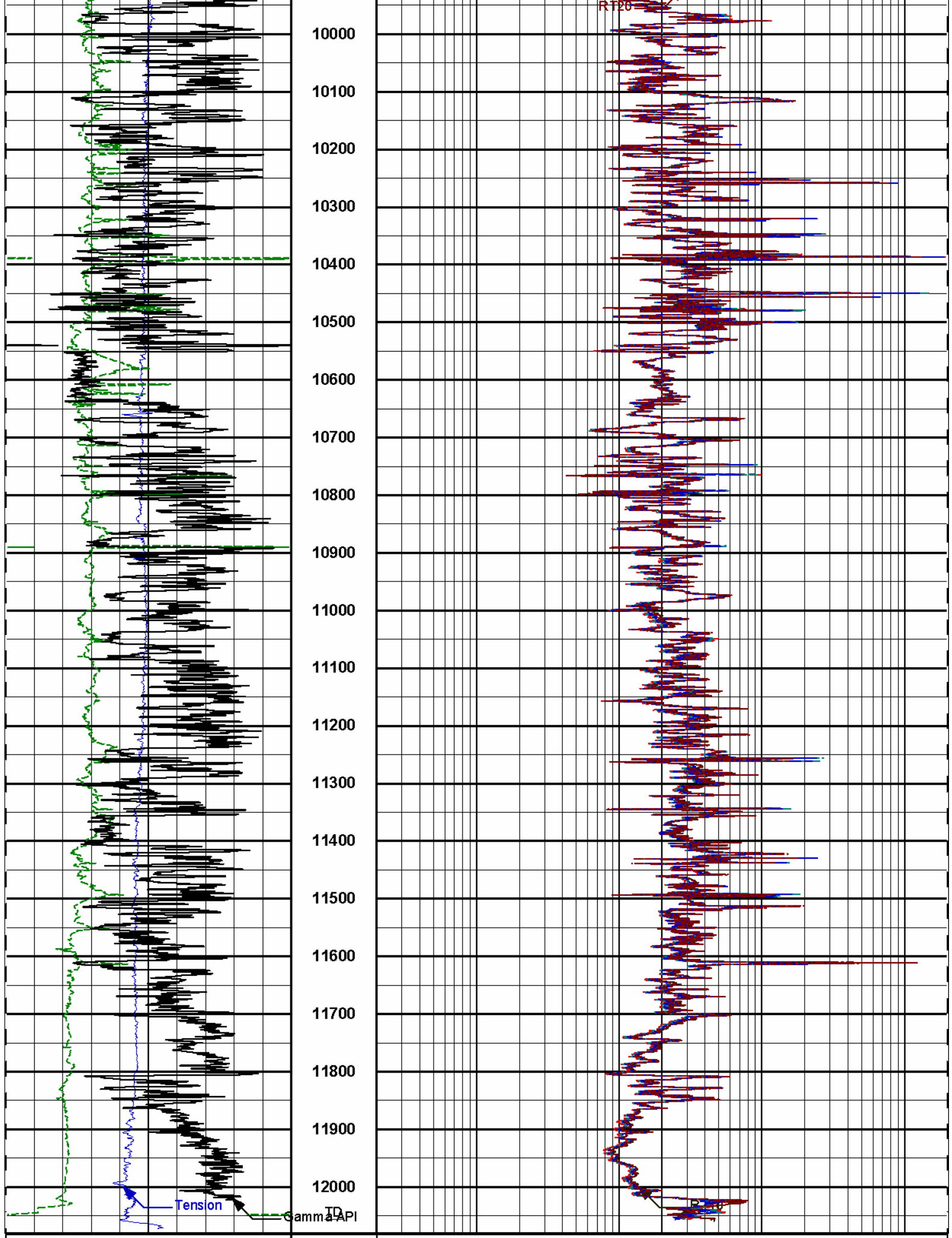
RT90

RT60

RT30

RT20





lbs		MD	Ohm-m	
0	Gamma API		150	0.2 RT30 2K
api			Ohm-m	
6	Caliper		16	0.2 RT10 2K
inches			Ohm-m	
			0.2 RT90 2K	
			Ohm-m	
			0.2 RT60 2K	
			Ohm-m	

MAIN PASS 1/2" = 100'

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION					
Tool Name:	GTET - 11004661	Reference Calibration Date:	11-Sep-08 17:26:20		
Engineer:	M. LEE	Calibration Date:	11-Sep-08 21:39:42		
Software Version:	WL INSITE R2.2 (Build 9)	Calibration Version:	1		

Calibrator Source S/N: MP051807-04

Calibrator API Reference:239.00 api

Measurement	Measured	Calibrated	Units
Background	54.7	52.7	api
Background + Calibrator	302.8	291.7	api
Calibrator	237.0	239.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION					
Tool Name:	GTET - 11004661	Reference Calibration Date:	11-Sep-08 21:39:42		
Engineer:	M. LEE	Calibration Date:	17-Oct-08 03:43:34		
Software Version:	WL INSITE R2.2 (Build 9)	Calibration Version:	1		

Calibrator Source S/N: MP051807-04

Calibrator API Reference:239.00 api

Field Verification	Shop	Field	Units
Background	52.7	38.1	api
Background + Calibrator	291.7	275.9	api
Calibrator	239.0	237.8	api

Shop	Field	Difference	Tolerance
239.0	237.8	1.2	+/- 9.00

NATURAL GAMMA RAY TOOL POST CALIBRATION					
Tool Name:	GTET - 11004661	Reference Calibration Date:	17-Oct-08 03:43:34		
Engineer:	M. LEE	Calibration Date:	18-Oct-08 13:34:22		
Software Version:	WL INSITE R2.2 (Build 9)	Calibration Version:	1		

Calibrator Source S/N: MP051807-04

Post Verification	Field	Post	Units
Background	38.1	35.7	api
Background + Calibrator	275.9	271.2	api
Calibrator	237.8	235.4	api

Shop	Field	Post	Difference	Tolerance
239.0	237.8	235.4	2.4	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION**Tool Name:** DSNT - 10993887**Reference Calibration Date:** 14-Jul-08 09:49:34**Engineer:** D. RENNER**Calibration Date:** 11-Sep-08 15:22:24**Software Version:** WL INSITE R2.2 (Build 2)**Calibration Version:** 1

Logging Source S/N: DSN-388

Tank Serial Number: GJ WATER TANK

Reference value assigned to Tank: 52.570

Snow Block S/N: 110

Calibration Tank Water Temperature: 72 degF

Min. Tool Housing Outside Diameter: 3.590 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.955	0.957	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)

Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (dec):	0.2154	0.2159	0.0005	+/- 0.0020
Calibrated Ratio:	9.88	9.90	0.018	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (dec):	0.0813	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 - 10993887**Reference Calibration Date:** 11-Sep-08 15:22:24**Engineer:** M. LEE**Calibration Date:** 17-Oct-08 03:50:56**Software Version:** WL INSITE R2.2 (Build 9)**Calibration Version:** 1

Logging Source S/N: DSN-388

Snow Block S/N: 110

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (dec):	0.0813	0.0817	0.0004	+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check:	Passed
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Block Change Check:

Passed

Snow Block Stat Check:

Passed

Temperature Check:

Passed

DUAL SPACED NEUTRON POST CALIBRATION**Tool Name:** DSNT - 10993887**Reference Calibration Date:** 17-Oct-08 03:50:56**Engineer:** M. LEE**Calibration Date:** 18-Oct-08 13:40:25**Software Version:** WL INSITE R2.2 (Build 9)**Calibration Version:** 1

Logging Source S/N: DSN-388

Snow Block S/N: 110

NEUTRON POST-CHECK SUMMARY

	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (dec):	0.0817	0.0838	0.0021	+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

SPECTRAL DENSITY SHOP CALIBRATION**Tool Name:** SDLT - 10951300**Reference Calibration Date:** 01-Jan-70 00:00:00**Engineer:** D. RENNER**Calibration Date:** 11-Sep-08 17:26:47**Software Version:** WL INSITE R2.2 (Build 2)**Calibration Version:** 1

Logging Source S/N: 5123GW

Aluminum Block S/N: 63094

Density: 2.610g/cc

Magnesium Block S/N: 63387

Density: 1.685g/cc

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9993	0.9993	0.90 - 1.10
Near Dens Gain	1.0021	1.0021	0.90 - 1.10
Near Peak Gain	0.9819	0.9819	0.90 - 1.10
Near Lith Gain	0.9363	0.9363	0.90 - 1.10
Far Bar Gain	1.0037	1.0037	0.90 - 1.10
Far Dens Gain	0.9901	0.9901	0.90 - 1.10
Far Peak Gain	0.9833	0.9833	0.90 - 1.10
Far Lith Gain	0.9573	0.9573	0.90 - 1.10
Near Bar Offset	0.1899	0.1899	NONE
Near Dens Offset	0.1517	0.1517	NONE
Near Peak Offset	0.3173	0.3173	NONE
Near Lith Offset	0.6884	0.6884	NONE
Far Bar Offset	0.1267	0.1267	NONE
Far Dens Offset	0.2360	0.2360	NONE
Far Peak Offset	0.2622	0.2622	NONE
Far Lith Offset	0.4297	0.4297	NONE
Near Bar Background	1019.23	1019.23	700 - 1450
Near Dens Background	338.38	338.38	230 - 480
Near Peak Background	147.52	147.52	100 - 210
Near Lith Background	181.80	181.80	125 - 260
Far Bar Background	602.59	602.59	450 - 900
Far Dens Background	235.65	235.65	175 - 345
Far Peak Background	93.56	93.56	70 - 140

Far Peak Background	95.36	95.36	75 - 145
Far Lith Background	97.19	97.19	

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.685	1.685	0.000	+/- 0.015
Pe	2.520	2.520	0.000	+/- 0.150
ALUMINUM				
Density (g/cc)	2.610	2.610	0.000	+/- 0.01500
Pe	3.100	3.100	0.000	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0006	+/- 0.0110	0.0016	+/- 0.0140
Magnesium Block	-0.0009	+/- 0.0110	-0.0016	+/- 0.0140
Aluminum Block	-0.0007	+/- 0.0110	-0.0011	+/- 0.0140
Resolution	9.49	6.00 - 11.50	9.01	6.00 - 11.50
Internal Verifier(B+D+P+L)	1687	1200 - 2700	1029	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 - 10951300

Reference Calibration Date: 11-Sep-08 17:26:47

Engineer: M. LEE

Calibration Date: 17-Oct-08 03:43:15

Software Version: WL INSITE R2.2 (Build 9)

Calibration Version: 1

Aluminum Block S/N: 63094

Density: 2.610g/cc

Magnesium Block S/N: 63387

Density: 1.685g/cc

Pad Temperature: 43.5 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1686.918	1675.735	-11.183	16.489
Far (B+D+P+L) cps	1028.992	1023.486	-5.506	17.097
Near Resolution	9.49	9.62	0.130	0.50
Far Resolution	9.03	9.01	0.020	1.00

PASS/FAIL SUMMARY	
Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

SPECTRAL DENSITY POST CHECK

Tool Name: SDLT - 10951300

Reference Calibration Date: 17-Oct-08 03:43:15

Engineer: M. LEE

Calibration Date: 18-Oct-08 13:34:35

Software Version: WL INSITE R2.2 (Build 9)

Calibration Version: 1

Aluminum Block S/N: 63094

Density: 2.610g/cc

Magnesium Block S/N: 63387

Density: 1.685g/cc

Pad Temperature: 92.9 degF

DENSITY POST CALIBRATION SUMMARY

Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1675.735	1685.956	10.221	16.489
Far (B+D+P+L) cps	1023.486	1023.995	0.509	17.097
Near Resolution	9.62	9.48	-0.140	0.50
Far Resolution	8.91	9.03	-0.120	1.00

PASS/FAIL SUMMARY

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

MICRO LOG SHOP CALIBRATION

Tool Name: SDLT - 10951300

Reference Calibration Date: 13-Sep-08 12:14:57

Engineer: M. LEE

Calibration Date: 13-Sep-08 12:17:33

Software Version: WL INSITE R2.2 (Build 9)

Calibration Version: 1

CALIBRATION COEFFICIENT SUMMARY

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.11	-0.12	-0.01	-0.00	ohmm
Calibration Point #1	0.01	0.00	-0.00	0.00	ohmm
Calibration Point #2	20.00	20.00	20.00	20.00	ohmm
Internal Reference	19.87	19.87	19.99	19.98	ohmm

Measurement	Micro Log Normal Tool Value		Micro Log Lateral Tool Value		Units
Tool Zero	1.77		-0.55		V
Calibration Point #1	33.10		0.11		V
Calibration Point #2	5251.48		6824.03		V
Internal Reference	5217.67		6818.76		V

MICRO LOG FIELD CHECK

Tool Name: SDLT - 10951300

Reference Calibration Date: 13-Sep-08 12:17:33

Engineer: M. LEE

Calibration Date: 17-Oct-08 03:43:57

Software Version: WL INSITE R2.2 (Build 9)

Calibration Version: 1

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.12	-0.12	-0.00	-0.00	ohmm
Internal Reference	19.87	19.77	19.98	19.89	ohmm

Summary

Signal	Shop	Field	Difference	Tolerance
Microlog Normal	19.87	19.77	0.100	+/- 0.80
Microlog Lateral	19.98	19.89	0.090	+/- 0.80

MICRO LOG POST CHECK

Tool Name: SDLT - 10951300

Reference Calibration Date: 17-Oct-08 03:43:57

Engineer: M. LEE

Calibration Date: 18-Oct-08 13:39:04

Software Version: WL INSITE R2.2 (Build 9)

Calibration Version: 1

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Field	Post	Field	Post	
Tool Zero	-0.12	-0.13	-0.00	-0.00	ohmm
Internal Reference	19.77	19.99	19.89	20.10	ohmm
Summary					
Signal	Field	Post	Difference		Tolerance
Microlog Normal	19.77	19.99	0.220		+/- 0.80
Microlog Lateral	19.89	20.10	0.210		+/- 0.80

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - 10951300

Reference Calibration Date: 01-Jan-70 00:00:00

Engineer: M. LEE

Calibration Date: 11-Sep-08 18:28:24

Software Version: WL INSITE R2.2 (Build 9)

Calibration Version: 1

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1817.42	-1817.42	-7000.00 - -1000.00
Pad Gain	0.0003841	0.0003841	0.000200 - 0.000600
Arm Offset	-3118.39	-3118.39	-5000.00 - 3000.00
Arm Gain	0.0005360	0.0005360	0.000300 - 0.000700
Arm Power	-0.000006466	-0.000006466	-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)	2.00	2.00	0.0000	+/- 0.200
Medium Ring (in)	3.75	3.75	0.0000	+/- 0.200
RING DIAMETER:				
Small Ring (in)	6.50	6.500	0.0000	+/- 0.200
Medium Ring (in)	8.25	8.250	0.0000	+/- 0.200
Large Ring (in)	15.00	15.000	0.0000	+/- 0.200

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 - 10951300

Reference Calibration Date: 11-Sep-08 18:28:24

Engineer: M. LEE

Calibration Date: 17-Oct-08 03:47:37

Software Version: WL INSITE R2.2 (Build 9)

Calibration Version: 1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value

	Old Value	Change	New Value
Pad Extension	3.75	3.72	-0.03 +/- 0.10
Ring Diameter	8.250	8.25	-0.00 +/- 0.15

PASS/FAIL SUMMARY	
Pad Extension Check:	Passed
Diameter Check:	Passed

SDLT CALIPER POST CALIBRATION			
Tool Name:	SDLT - 10951300	Reference Calibration Date:	17-Oct-08 03:47:37
Engineer:	M. LEE	Calibration Date:	18-Oct-08 13:37:33
Software Version:	WL INSITE R2.2 (Build 9)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Field	Post	Change	Control Limit On New Value
Pad Extension	3.72	3.80	0.08	+/- 0.10
Ring Diameter	8.249	8.29	0.04	+/- 0.15

PASS/FAIL SUMMARY	
Pad Extension Check:	Passed
Diameter Check:	Passed

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION			
Tool Name:	ACRt - 90144319-E554-S481-3-13-08	Reference Calibration Date:	17-Sep-08 14:49:56
Engineer:	T. MCKEE	Calibration Date:	17-Sep-08 15:02:10
Software Version:	WL INSITE R2.2 (Build 9)	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	1.0094	1.05	0.95	1.0119	1.05	0.95	1.0114	1.05
A2 (50")	0.95	1.0083	1.05	0.95	1.0101	1.05	0.95	1.0079	1.05
A3 (29")	0.95	1.0014	1.05	0.95	1.0035	1.05	0.95	1.0026	1.05
A4 (17")	0.95	1.0013	1.05	0.95	1.0011	1.05	0.95	1.0026	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9972	1.05	0.95	0.9959	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9868	1.05	0.95	0.9866	1.05

TYPICAL SONDE OFFSET RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	-3	-0.224	-1	-6	-4.406	-2	-6	-4.960	-2
A2 (50")	-6	-3.120	-2	-6	-4.546	-2	-6	-4.379	-2
A3 (29")	-27	-14.081	-9	-9	-5.391	-3	-9	-2.788	-3
A4 (17")	-180	-96.840	-60	-45	-31.142	-15	-39	-24.329	-13
A5 (10")	N/A	N/A	N/A	-150	-101.205	-50	-90	-50.510	-30
A6 (6")	N/A	N/A	N/A	175	300.862	525	90	147.470	270

TRANSMITTER CURRENT GAIN			
Signal	Lower	R	Upper
12K	0.75	0.8305	1.4
36K	1.0	1.7602	2.4
72K	1.25	1.2601	2.5

R-MUD VERIFICATION			
Signal	Lower (ohm-m)	Measured (ohmm)	Upper (ohm-m)
Mud Cell	0.95	1.001	1.05

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11004661						
Gamma Ray Calibrator	239.0	237.8	235.4	2.4	+/- 9.00	api
DSNT-10993887						
Snow-Block Porosity	0.0813	0.0817	0.0838	-0.0021	+/- 0.0150	decg
SDLT-10951300						
Near(B+D+P+L)	1686.918	1675.735	1685.956	-10.221	+/-16.489	cps
Far(B+D+P+L)	1028.992	1023.486	1023.995	-0.509	+/-17.097	cps
MicroLog Normal	19.87	19.77	19.99	-0.22	+/-0.80	ohmm
MicroLog Lateral	19.98	19.89	20.10	-0.21	+/-0.80	ohmm
Pad Extension	3.75	3.72	3.80	-0.08	+/-0.10	in
Ring Diameter	8.250	8.25	8.29	-0.040	+/-0.15	in
ACRt-90144319-E554-S481-3-13-08						
Mud Cell	1.001	-----	-----	0.000	-----	ohmm
Data: YCF_XOM_1_41_110001 TRIPLE_2IDLE						
Date: 18-Oct-08 13:41:58						


HALLIBURTON

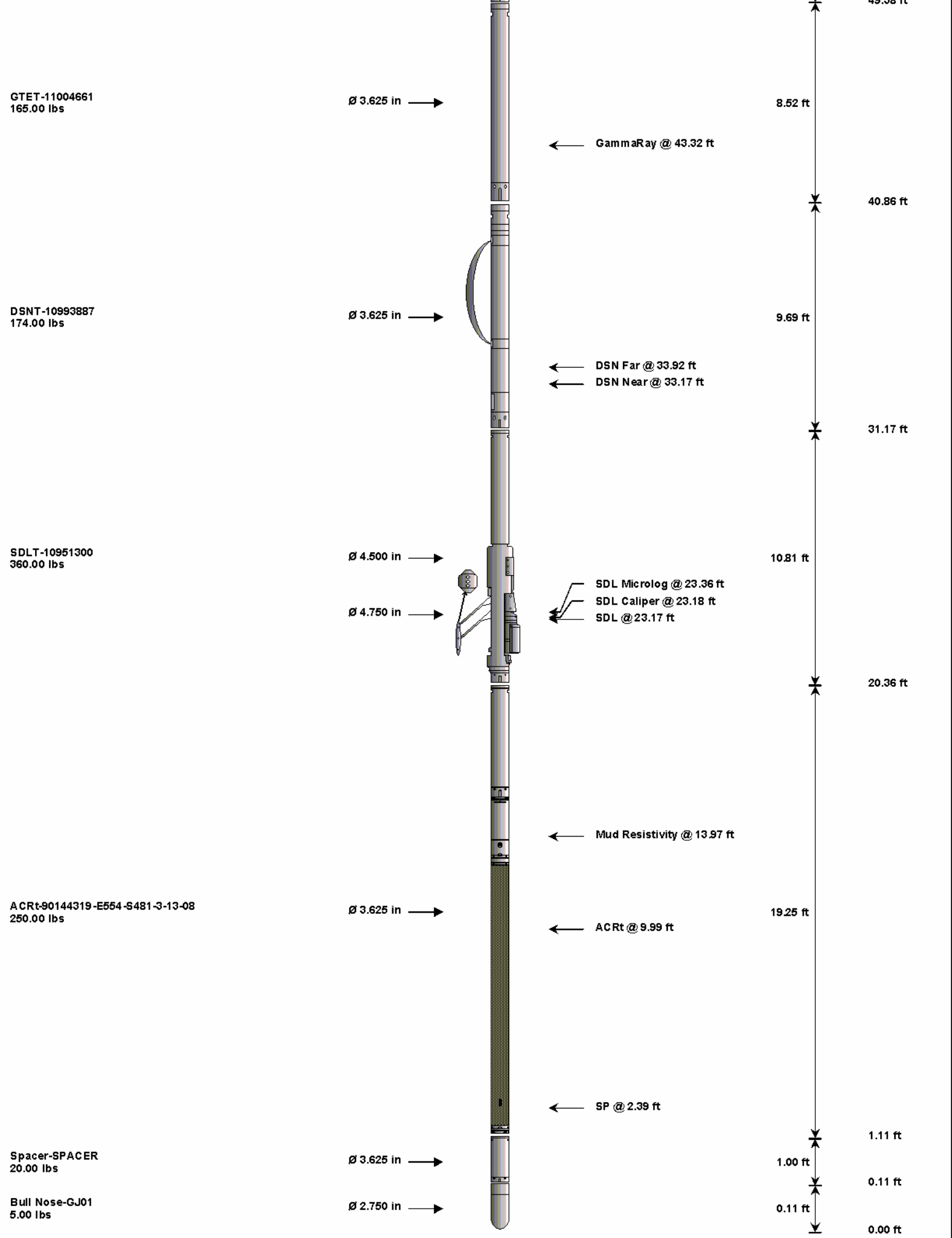
CUSTOMER EVENT LOG

Event Type	Time & Date	Depth (ft)	Event Description
	17-Oct-08 04:24:51	178.25	Logging 001 17-Oct-08 04:24 Dn @183.5f
	17-Oct-08 04:27:39	764.20	Halting 001 17-Oct-08 04:24 Dn @183.5f
	17-Oct-08 04:30:07	1268.75	Logging 002 17-Oct-08 04:30 Dn @1272.5f
	17-Oct-08 04:40:52	3655.76	Halting 002 17-Oct-08 04:30 Dn @1272.5f
	17-Oct-08 04:41:15	3660.00	Logging 003 CASING_CHECK
	17-Oct-08 04:50:32	3176.58	Halting 003 CASING_CHECK
	17-Oct-08 04:53:03	3525.50	Logging 004 DOWNLOG
	17-Oct-08 06:58:44	10888.73	Halting 004 DOWNLOG
	17-Oct-08 07:00:09	11012.00	Logging 005 MAIN_PASS_TRIP1
	17-Oct-08 10:15:05	49.79	Halting 005 MAIN_PASS_TRIP1
	18-Oct-08 10:29:04	10100.50	Logging 006 18-Oct-08 10:29 Up 10099.3f
	18-Oct-08 10:30:18	10036.90	Halting 006 18-Oct-08 10:29 Up 10099.3f
	18-Oct-08 10:30:41	9978.25	Logging 007 18-Oct-08 10:30 Dn @9982.5f
	18-Oct-08 10:53:04	12059.46	Halting 007 18-Oct-08 10:30 Dn @9982.5f
	18-Oct-08 10:54:13	12074.00	Logging 008 18-Oct-08 10:54 Up 12074.0f
Data: YCF_XOM_1_41_110001 TRIPLE_2IHW0159			Date: 18-Oct-08 12:00:46

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TOOL STRING DIAGRAM REPORT

Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-C11013846 135.00 lbs	Ø 3.625 in		Load Cell @ 51.95 ft BH Temperature @ 51.38 ft	6.25 ft	55.63 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
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RWCH	Releasable Wireline Cable Head	C11013846	135.00	6.25	49.38	300.00
GTET	Natural Gamma Ray Tool	11004661	165.00	8.52	40.86	60.00
DSNT	Dual Spaced Neutron	10993887	174.00	9.69	31.17	60.00
SDLT	Spectral Density Tool	10951300	360.00	10.81	20.36	60.00
ACRt	Array Compensated True Resistivity	90144319-E554-S481-3-13-08	250.00	19.25	1.11	300.00
SP	SP Ring	PROTO1	0.00	0.00	2.39	300.00
SPC	Test	SPACER	20.00	1.00	0.11	100.00
BLNS	Bull Nose	GJ01	5.00	0.11	0.00	300.00
Total			1,109.00	55.63		
Data: YCF_XOM_1_41_110001 TRIPLE_2IIDLE			* Not included in Total Length and Length Accumulation.			Date: 18-Oct-08 12:01:07

COMPANY	BOPCO L.P.		
WELL	YCF XOM 1-41-1		
FIELD	YELLOW CREEK		
COUNTY	RIO BLANCO	STATE	CO
HALLIBURTON		ARRAY COMP. RESISTIVITY SPECTRAL DENSITY DUAL SPACED NEUTRON MICRO-LOG	