

DUAL SPACED NEUTRON
SPECTRAL DENSITY
ARRAY COMPENSATED
TRUE RESISTIVITY

Fold here

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	7580	7450	REC	0 API	200 API				20%	0%	2.68 g/cc	20%	0%	SAND		
ONE	7450	7130	REC	0 API	200 API				20%	0%	2.71 g/cc	20%	0%	LIME		
ONE	7130	836	REC	0 API	200 API				20%	0%	2.68 g/cc	20%	0%	SAND		
ONE	836	100	REC	0 API	200 API											
DIRECTIONAL INFORMATION																
Maximum Deviation								@	KOP							@
Remarks: RWCH/GTET/DSNT/SDLT/ACRT RAN IN COMBINATION																
TENSION PULLS, WASHOUTS, AND BOREHOLE RUGOSITY CAN AFFECT TOOL RESPONSE																
DSNT DENCENTRALIZER NOT RAN AT CUSTOMER REQUEST																
CHLORIDES REPORTED TO BE 1100 ppm																
ANNULAR HOLE VOLUME CALCULATED USING 4.5" CASING																
YOU CREW TODAY: B. CALDWELL, T. RAFF																
RIG: ENSIGN 122																
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES, GRAND JUNCTION , CO (970) 523-3600																
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PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	DSNT	NLIT	Neutron Lithology	Sandstone	
	SDLT Pad	DMA	Formation Density Matrix	2.680	g/cc
7130.00					
	DSNT	NLIT	Neutron Lithology	Limestone	
	SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
7450.00					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.400	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	1100.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	1.540	ohmm
	SHARED	TRM	Temperature of Mud	60.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	4.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	7577.00	ft
	SHARED	BHT	Bottom Hole Temperature	120.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	

SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
SHARED	TEMM	Temperature Master Tool	NONE	
SHARED	BHSM	Borehole Size Master Tool	NONE	
Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.250	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Sandstone	
DSNT	DNOS	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.680	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt Sonde	TPOS	Tool Position	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm

BOTTOM

Data: HIRSH 6-24\0001 TRIPLE\005.01 23-Jan-14 08:42 Up

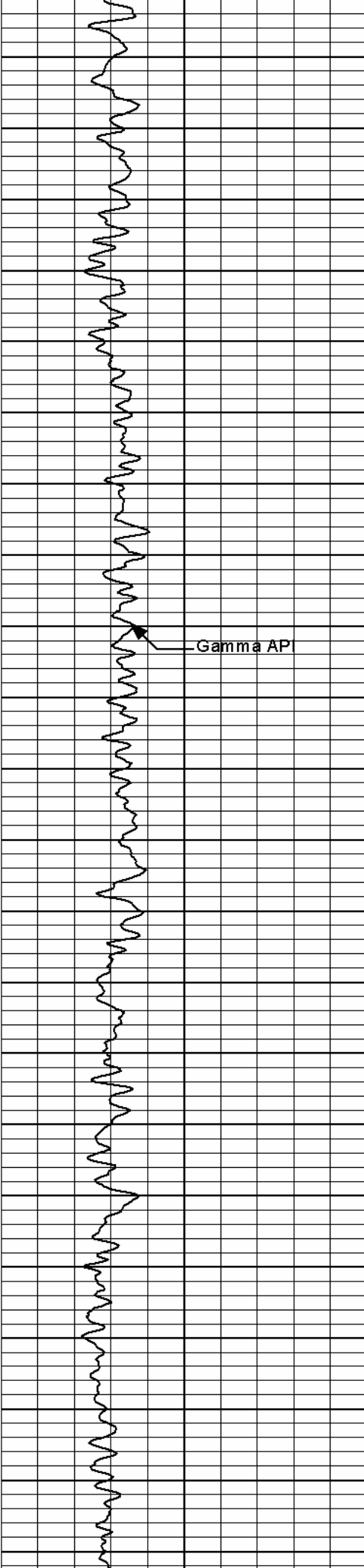
Date: 23-Jan-14 09:26:11

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Plot Time: 08-Feb-14 18:57:32
Plot Range: 100 ft to 7591.42 ft
Data: HIRSH 6-24\Well Based\1
Plot File: \COMP\MAIN

MAIN PASS 5" = 100'

			2	RT10	200				
			ohmm						
10K	Tens	0		2	RT20	200			
pounds		ohmm							
6	Caliper	16	AHVT	2	RT30	200	20	Neutron Porosity	0
inches					ohmm		percent		
0	Gamma API	200		2	RT60	200	20	Density Porosity	0
api					ohmm		percent		
0	SP	100	1 : 240	2	RT90	200	0	Pe	10
millivolts					ohmm				-0.25 DensityCorr 0.25
							gram per cc		
		100							
		150							
		200							
		250							

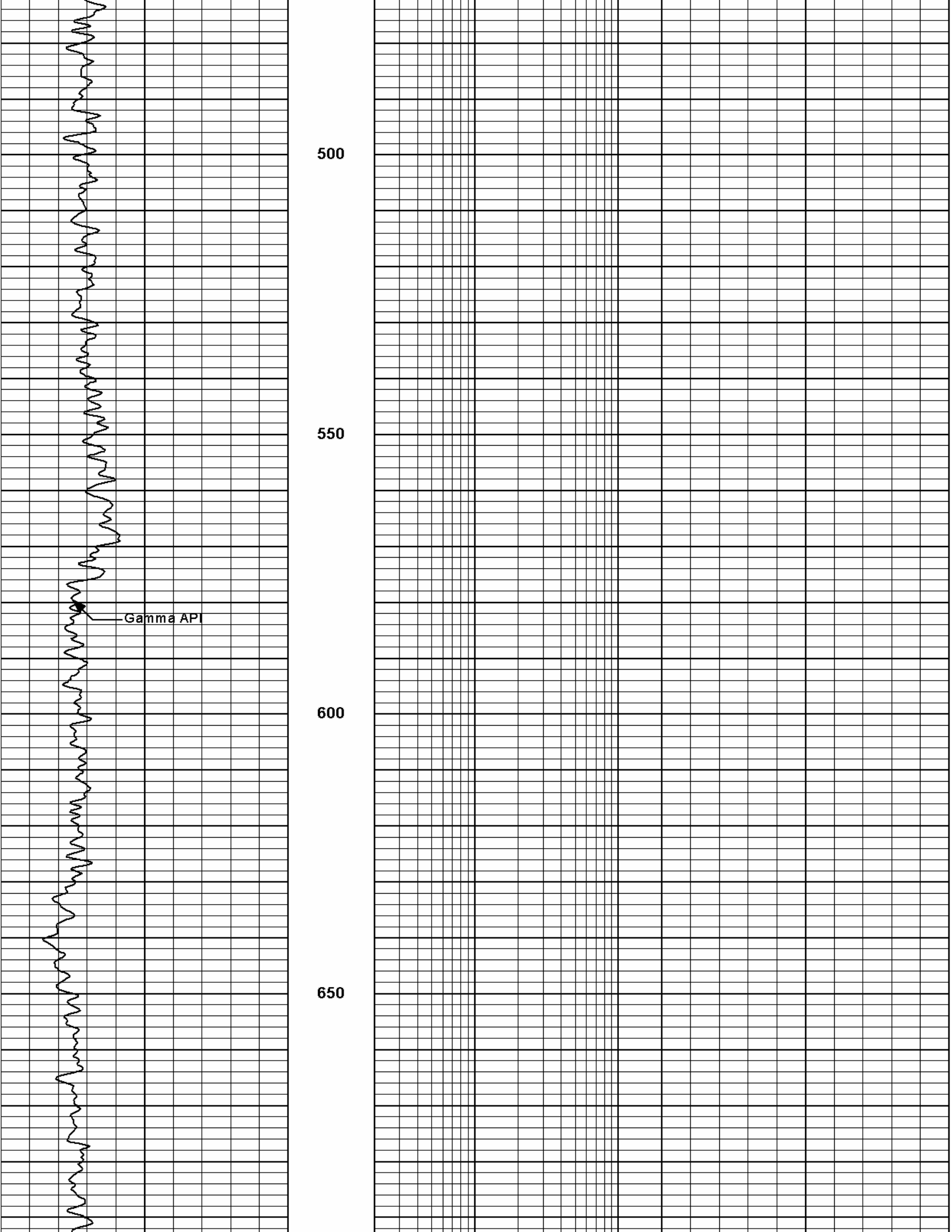


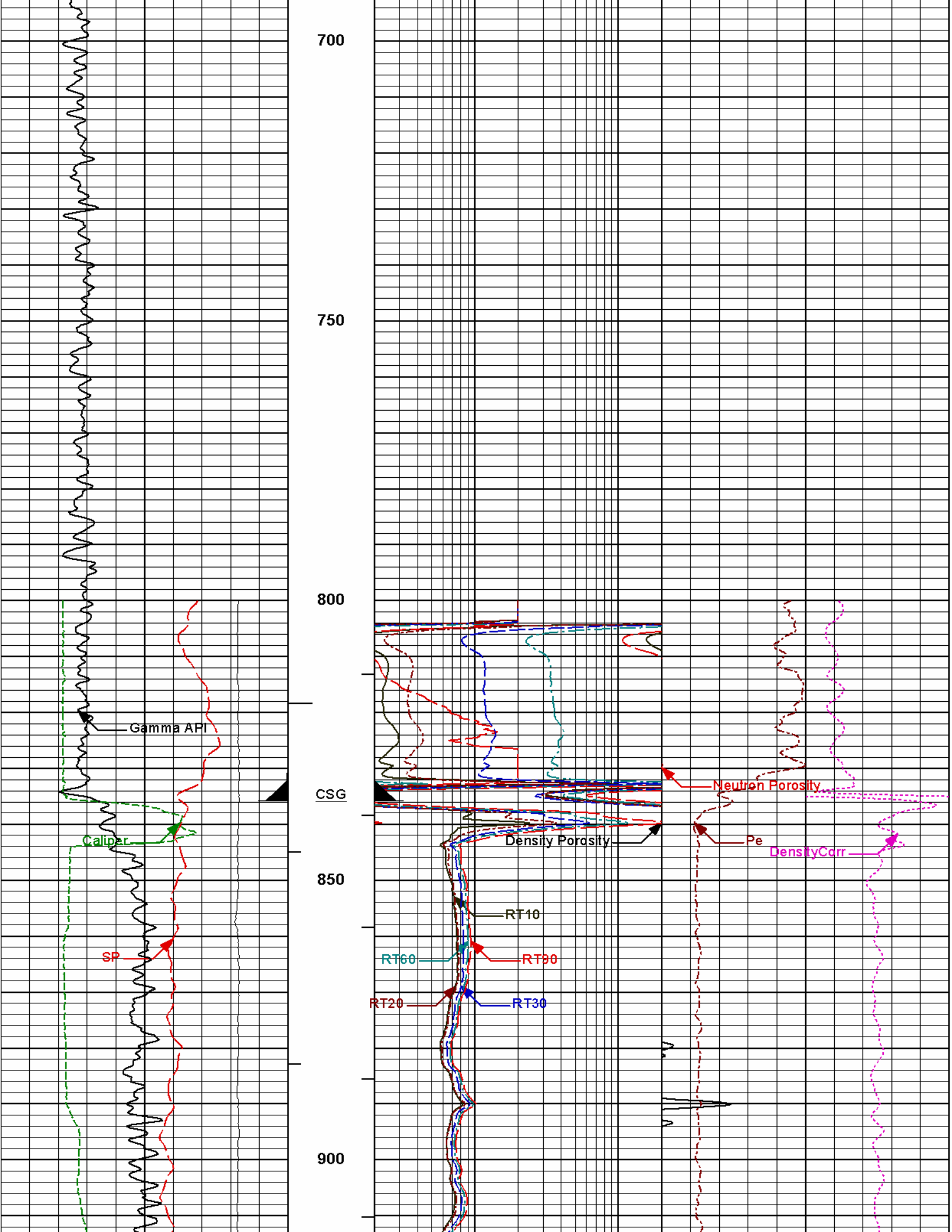
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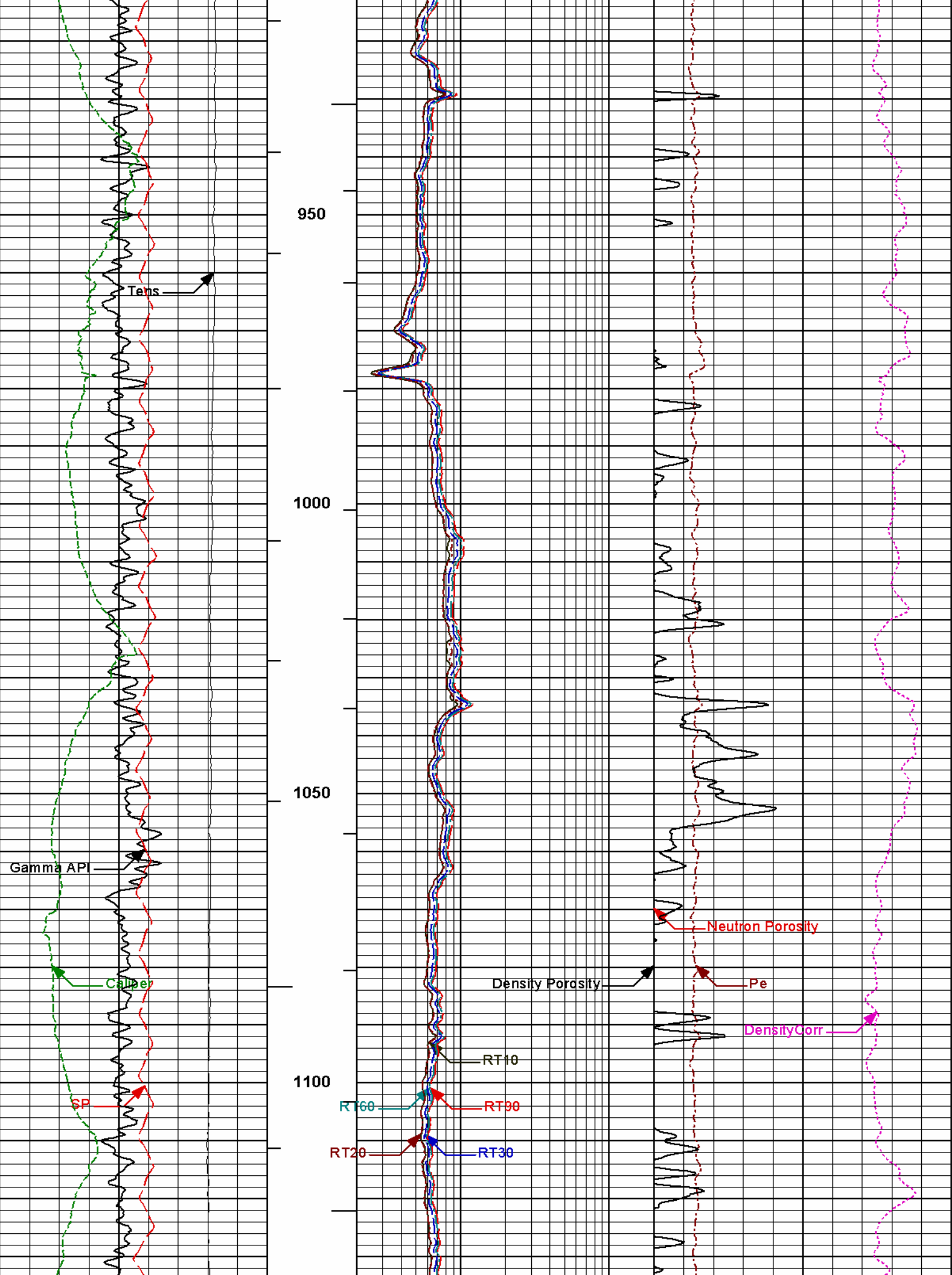
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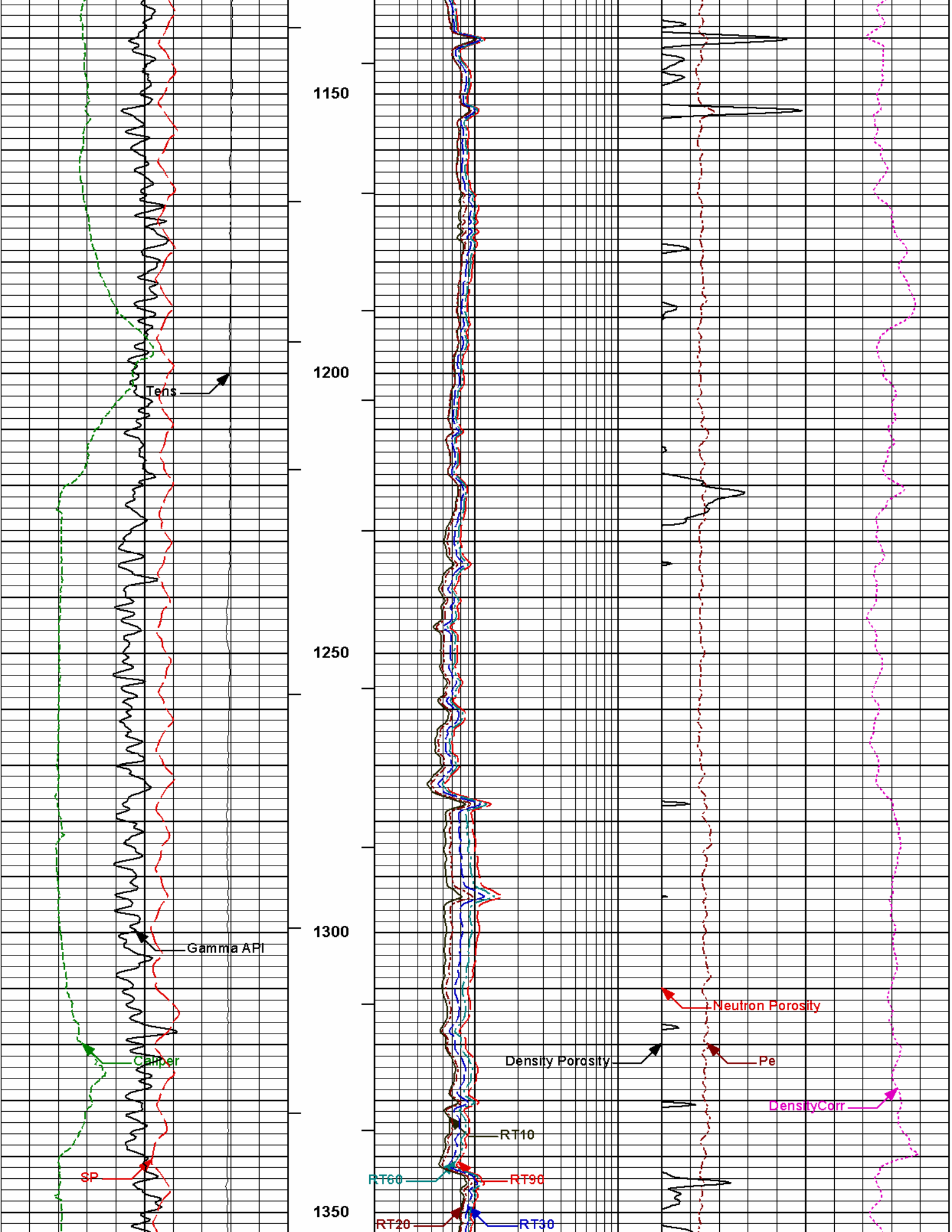
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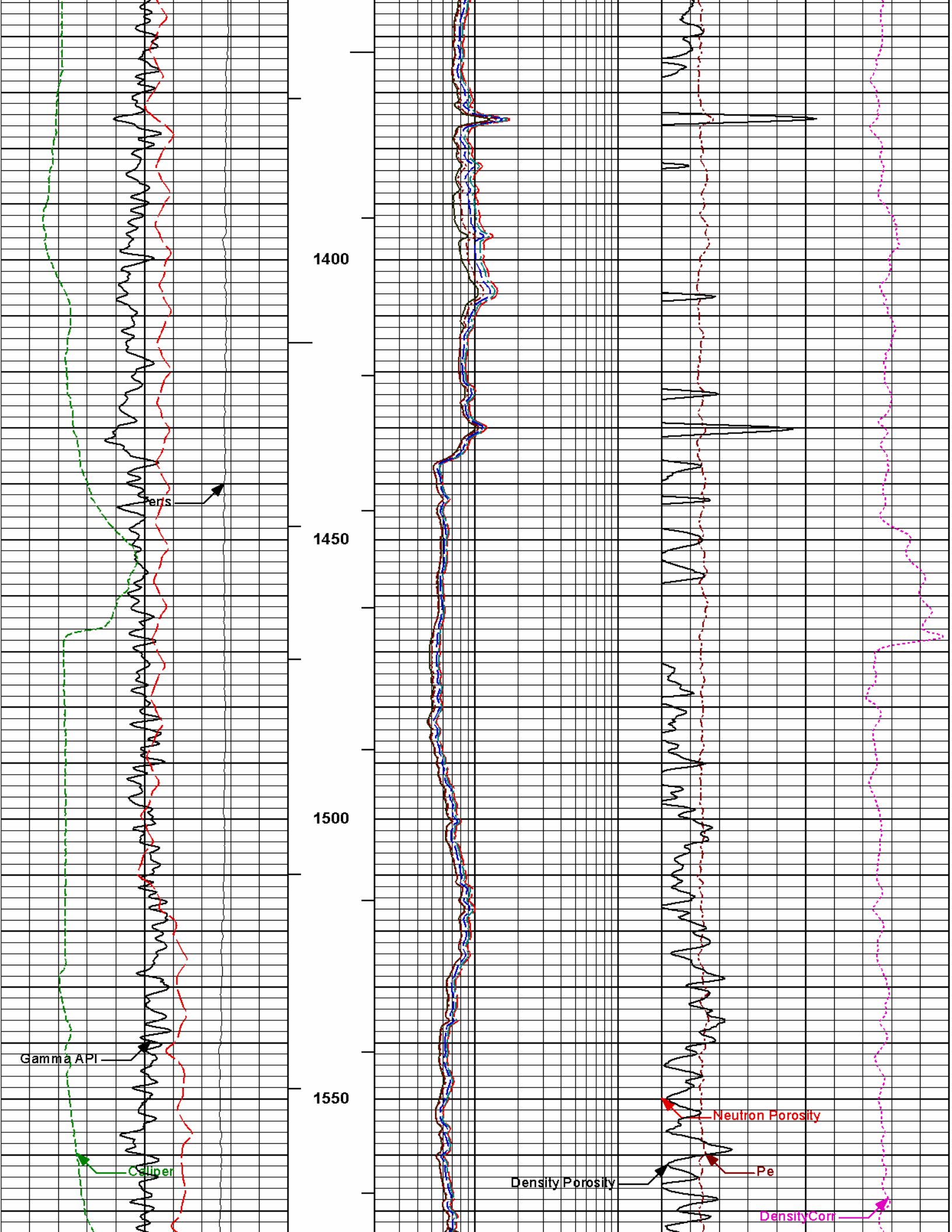
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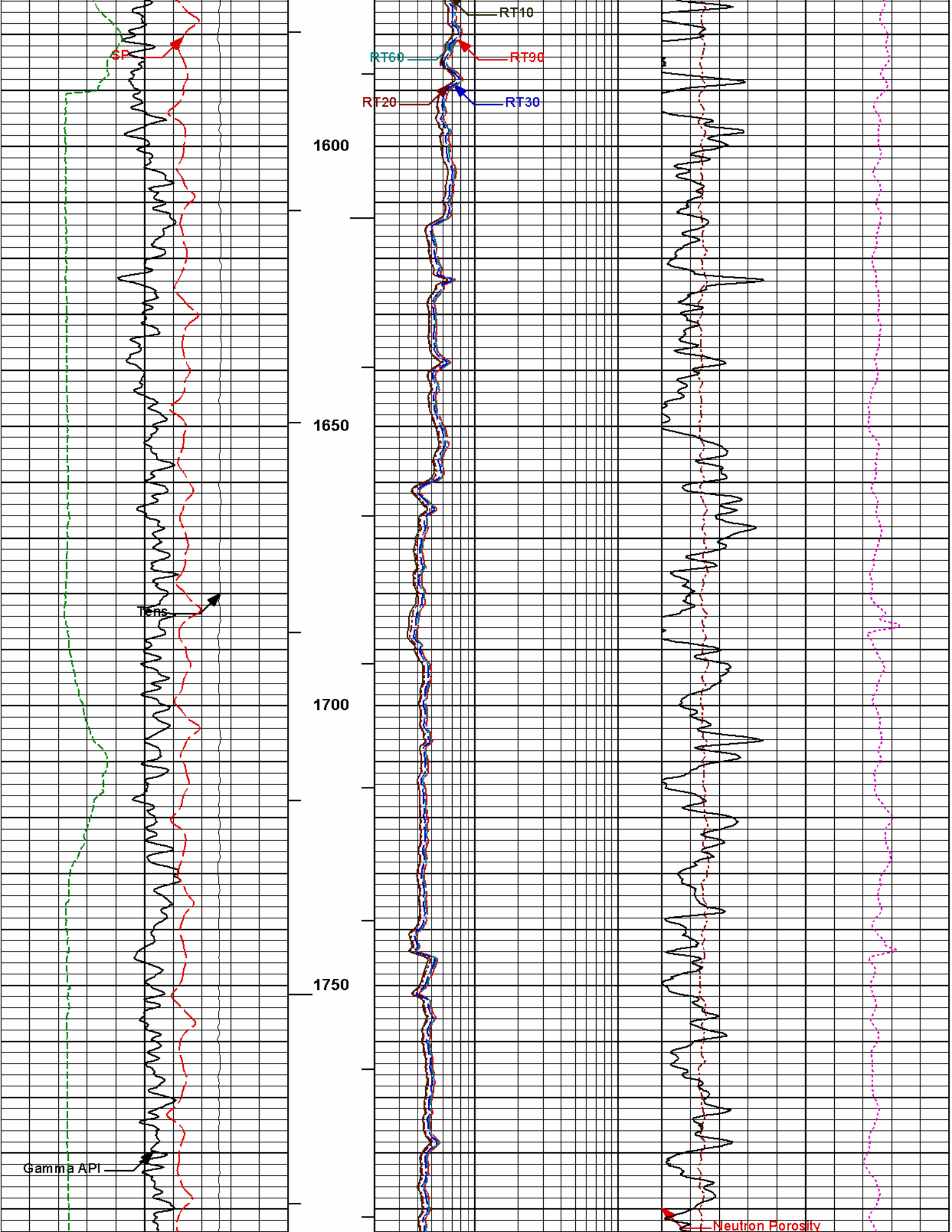


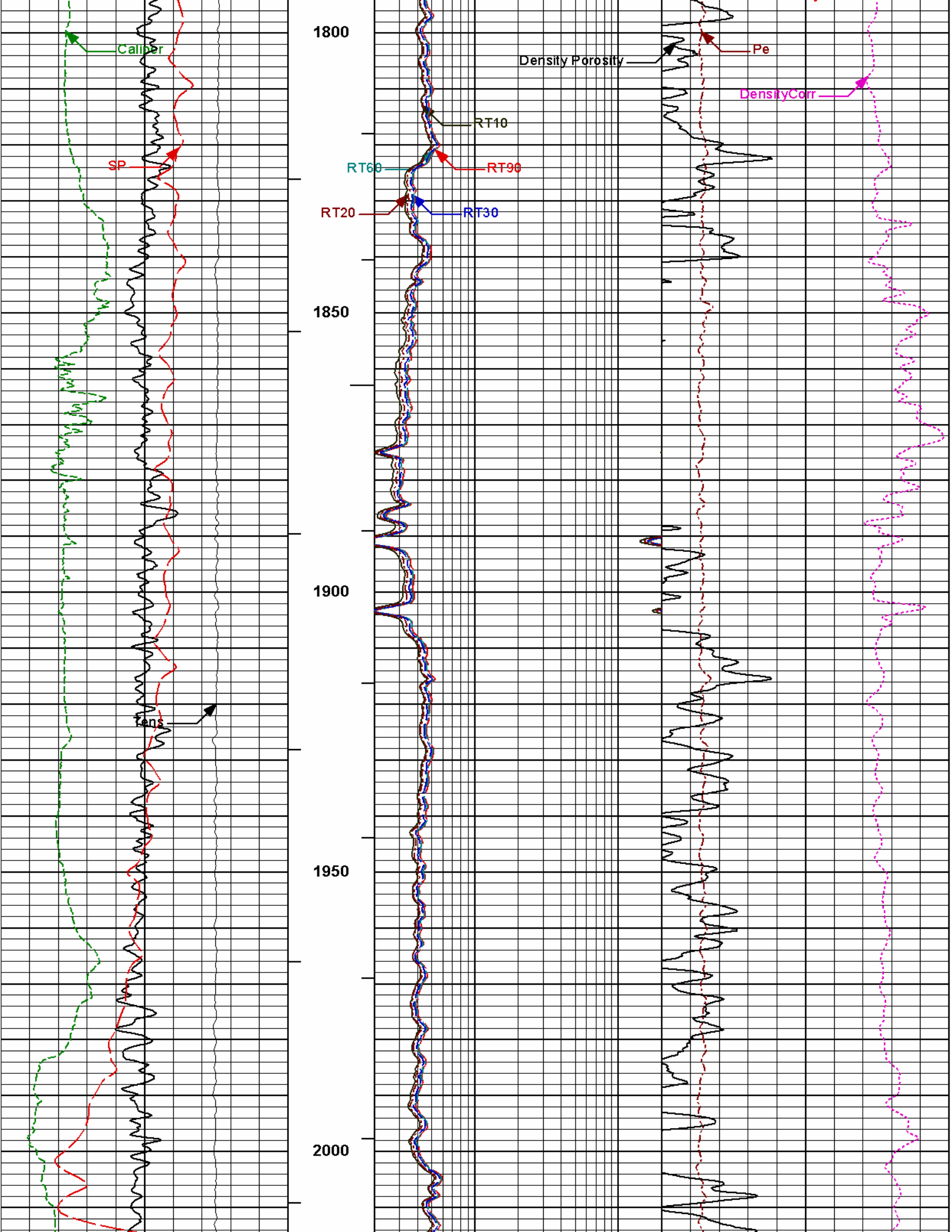


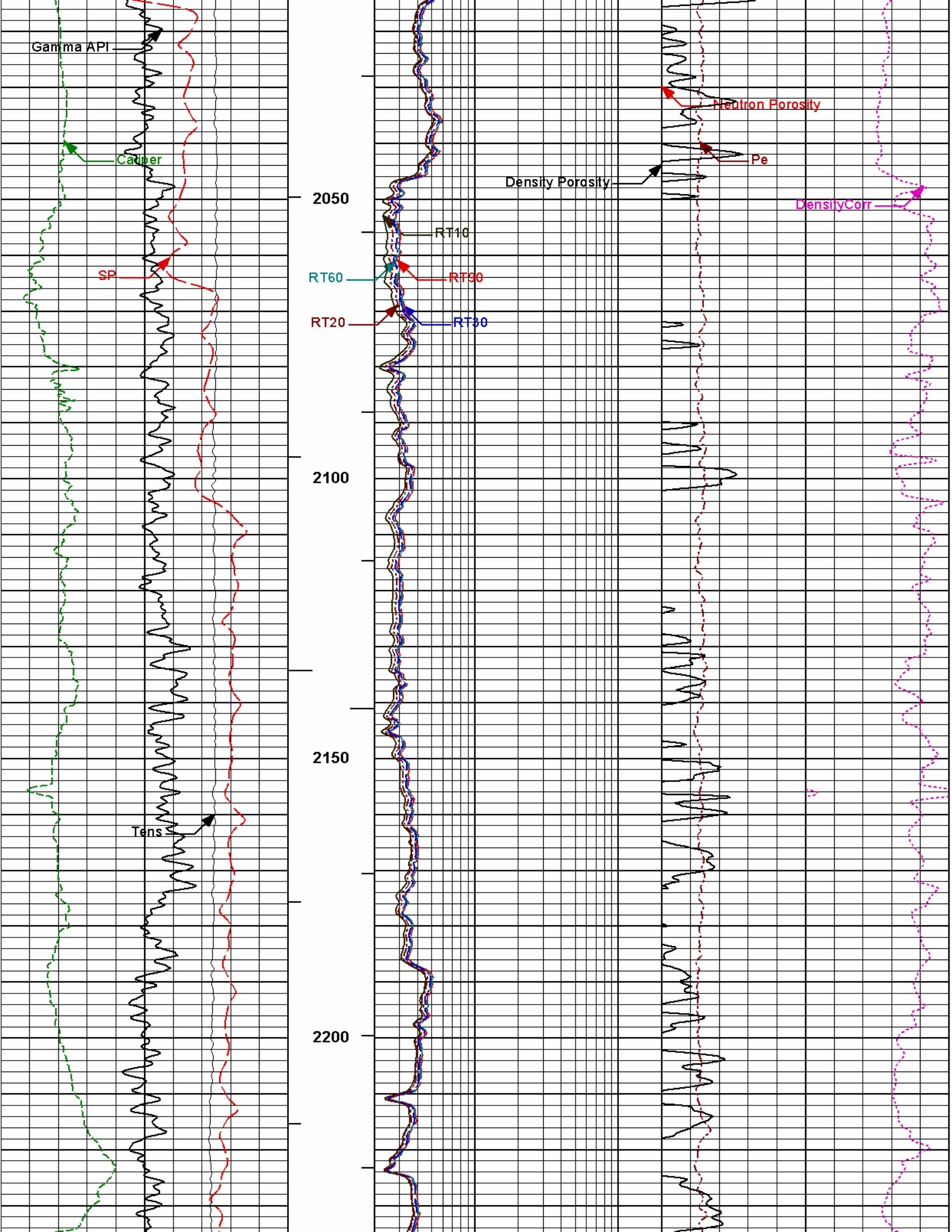


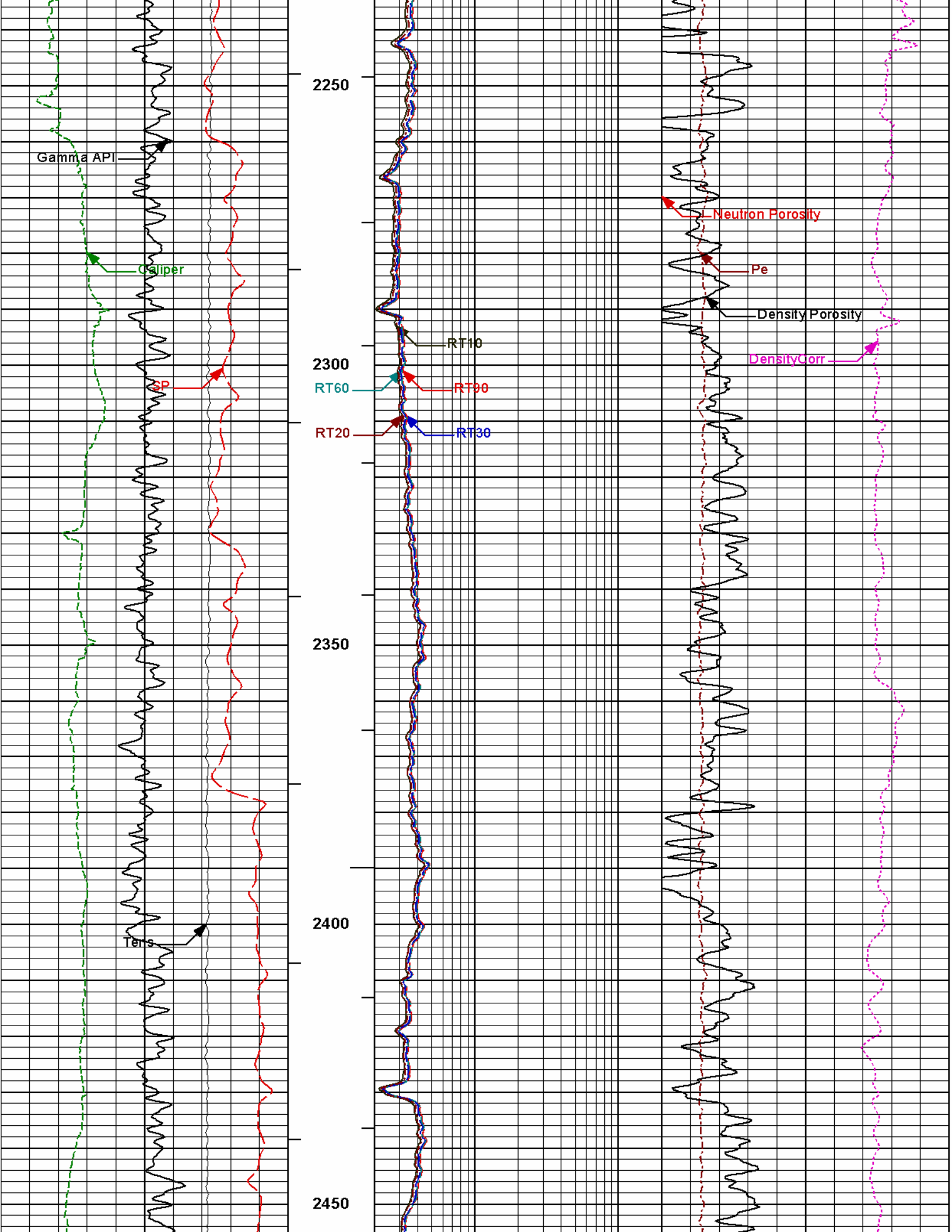


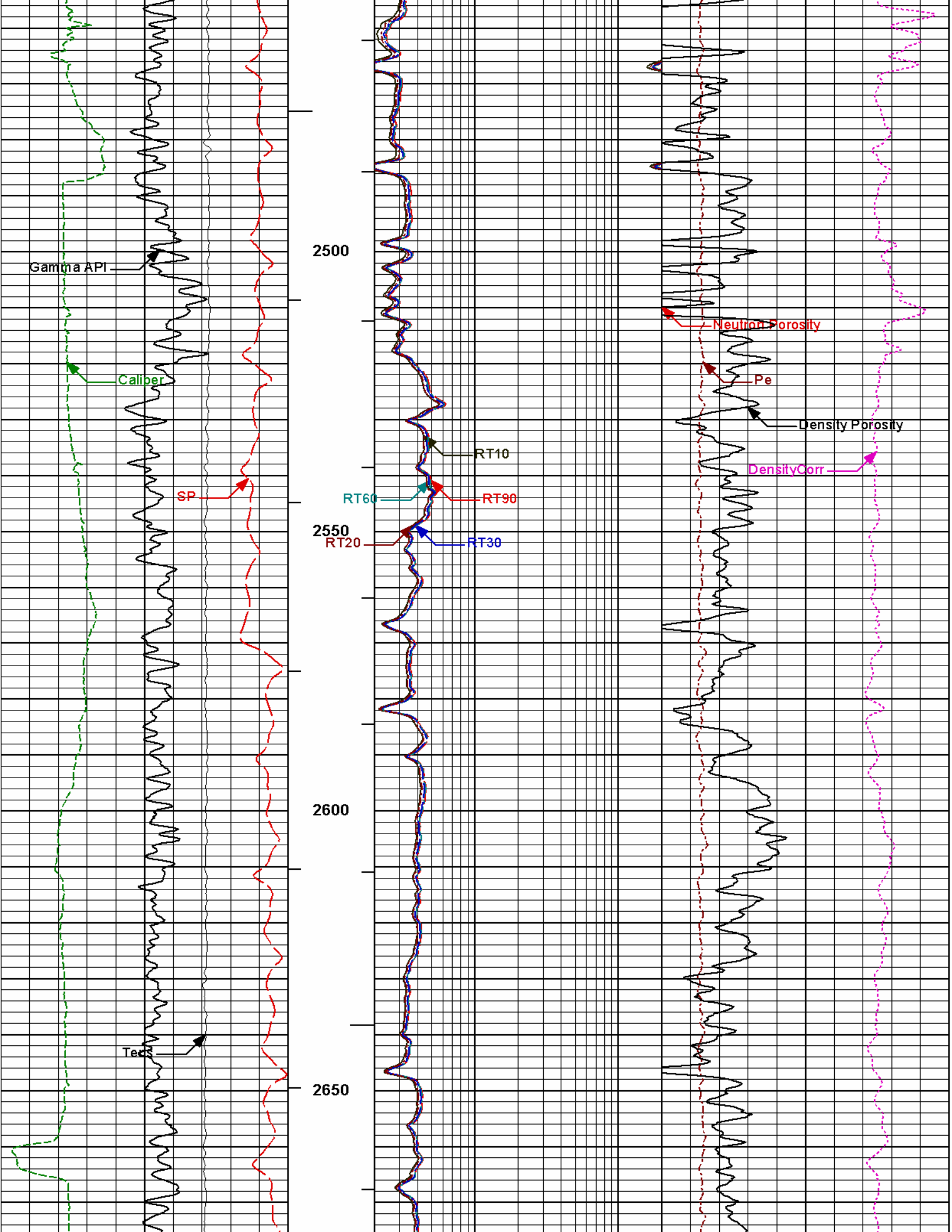


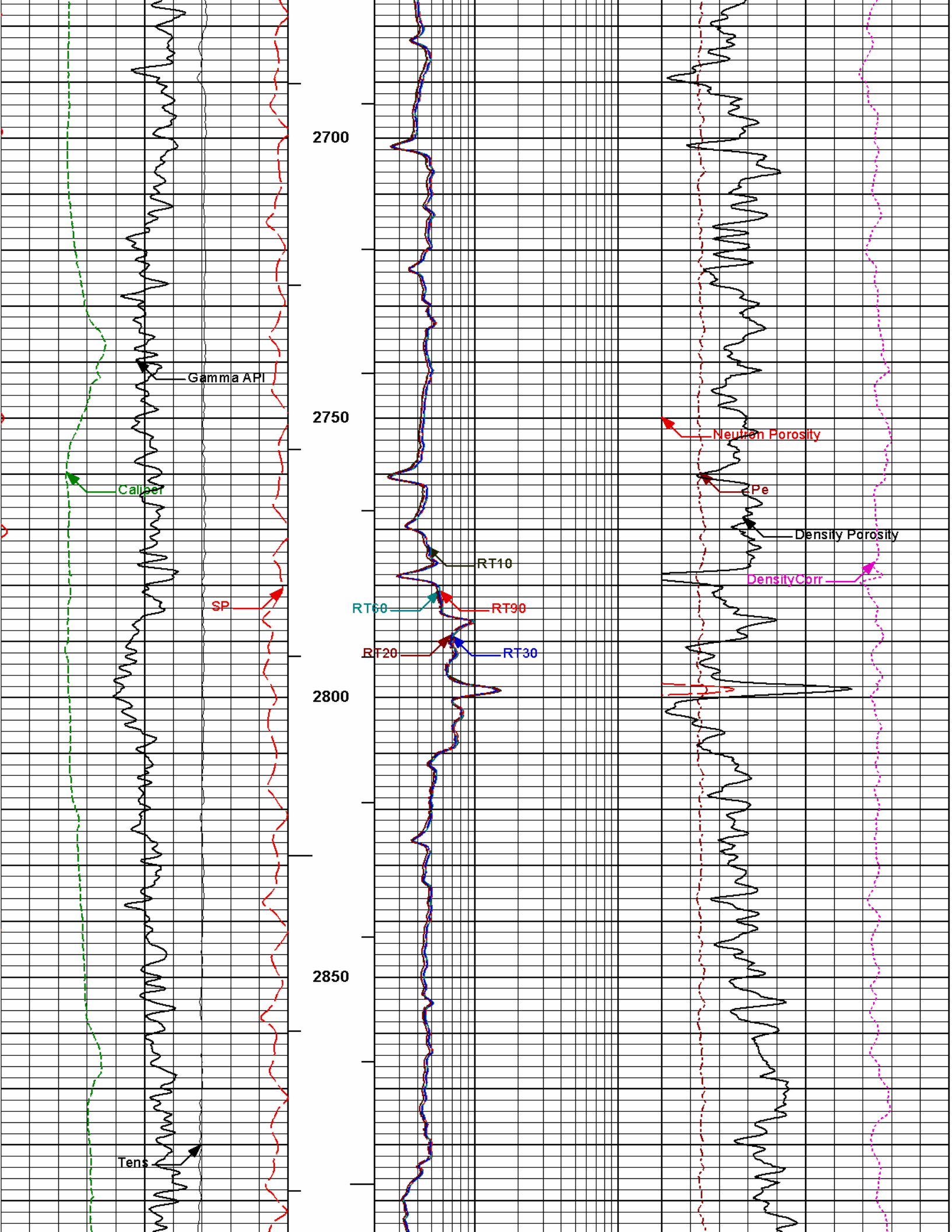


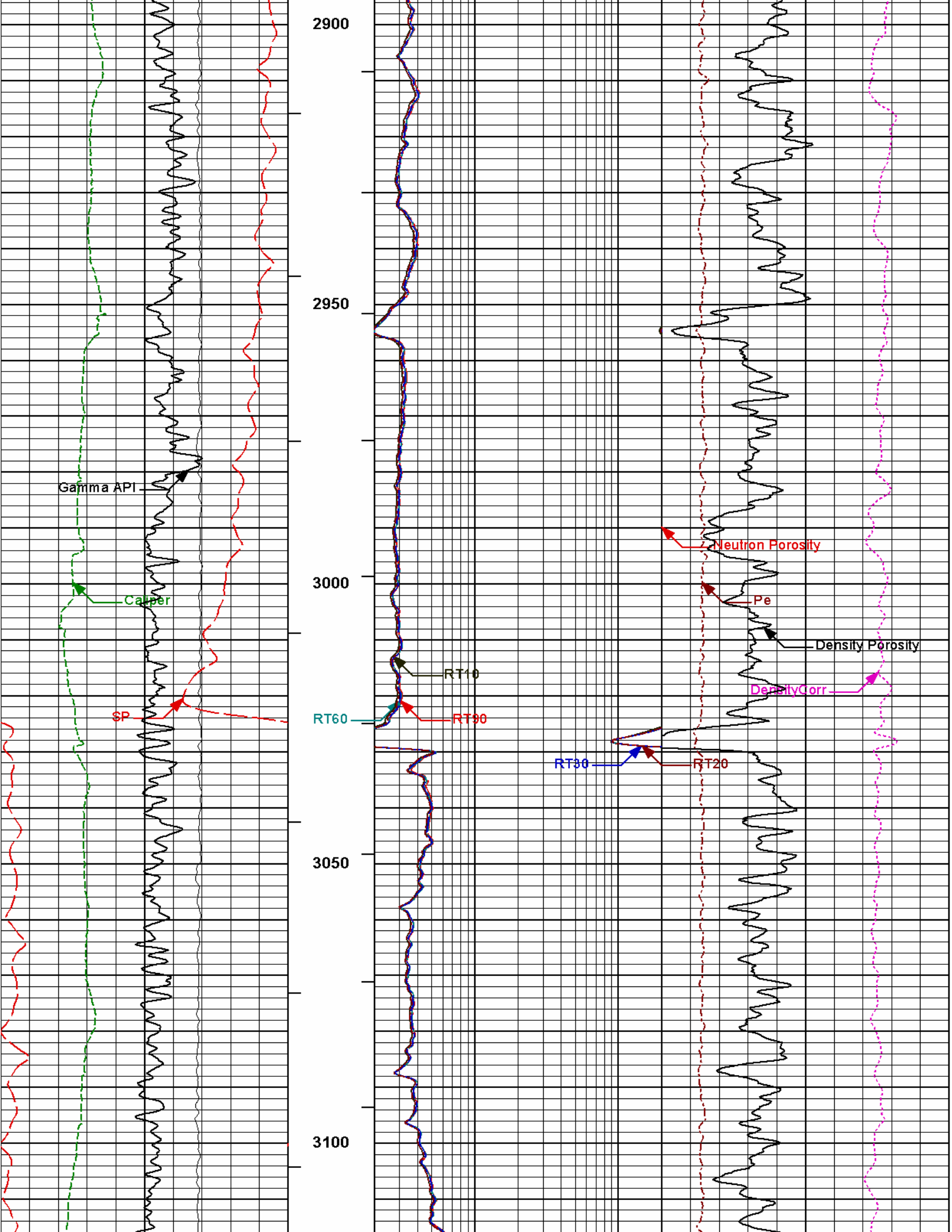


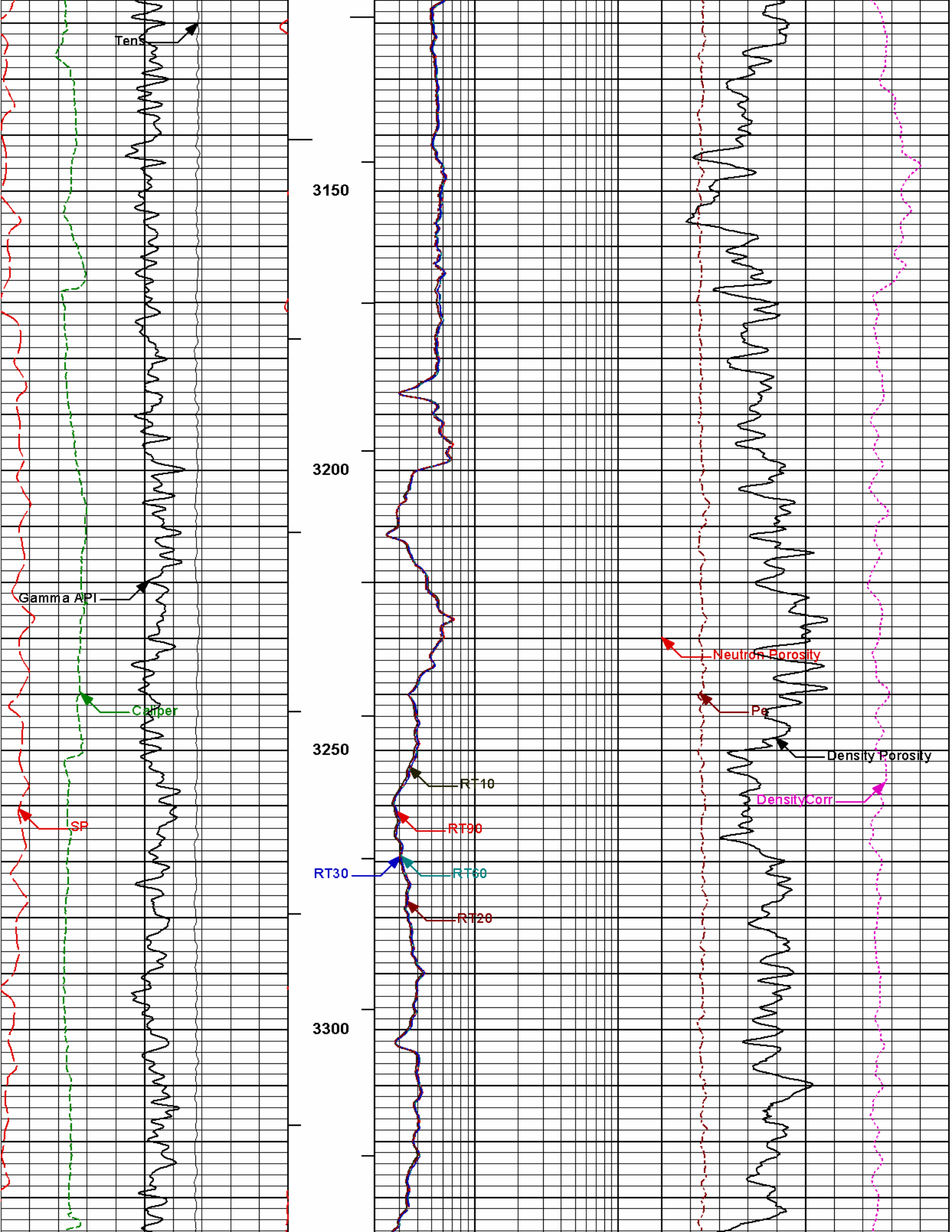


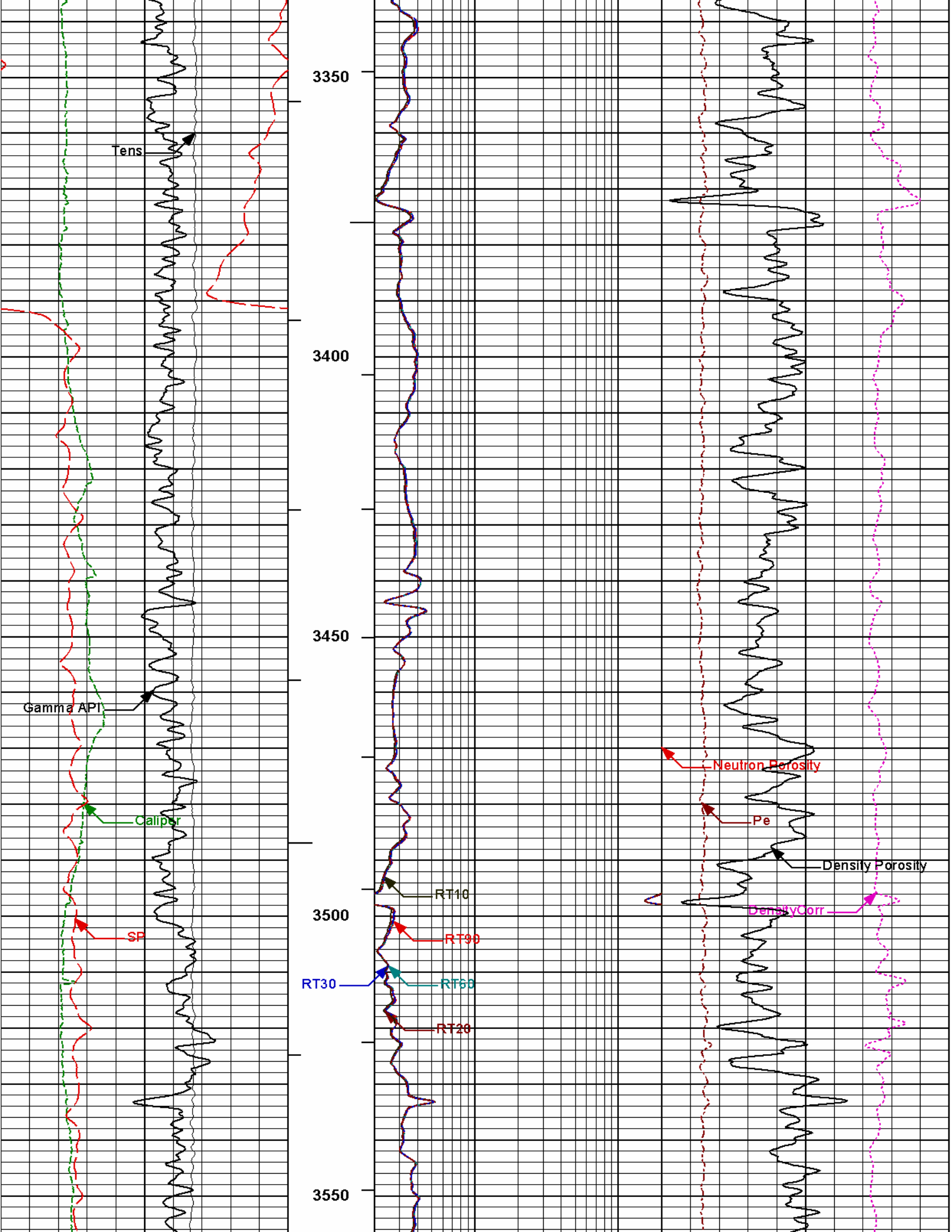


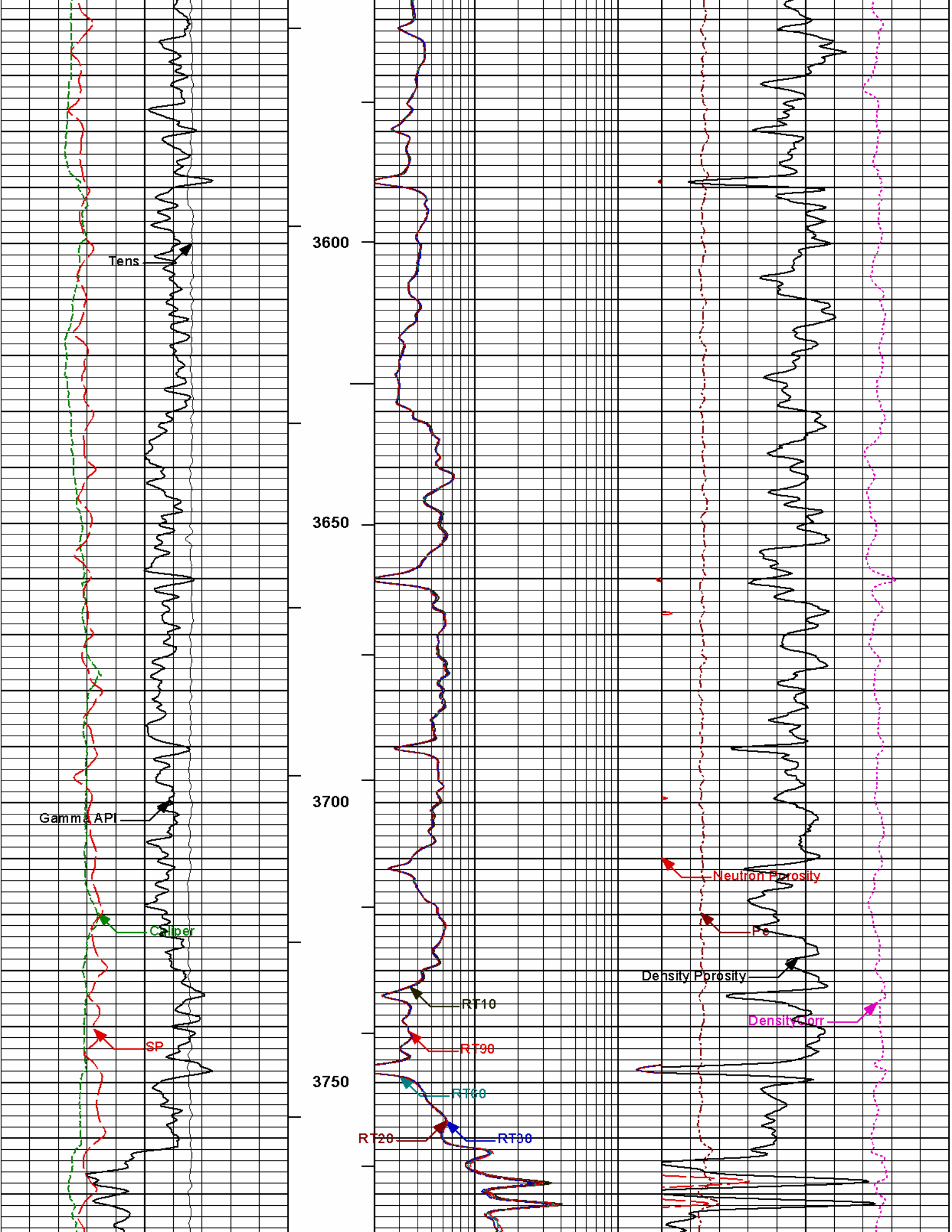


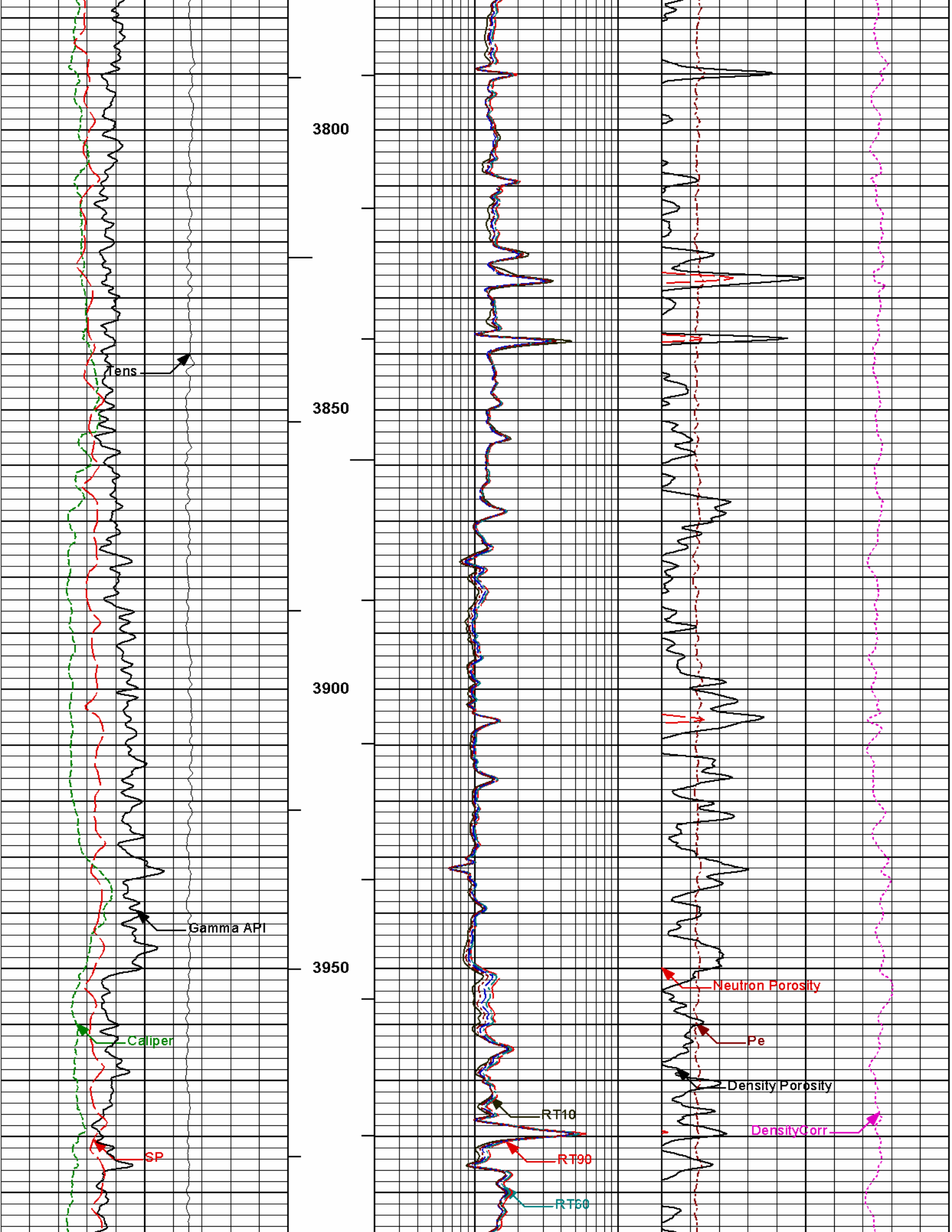


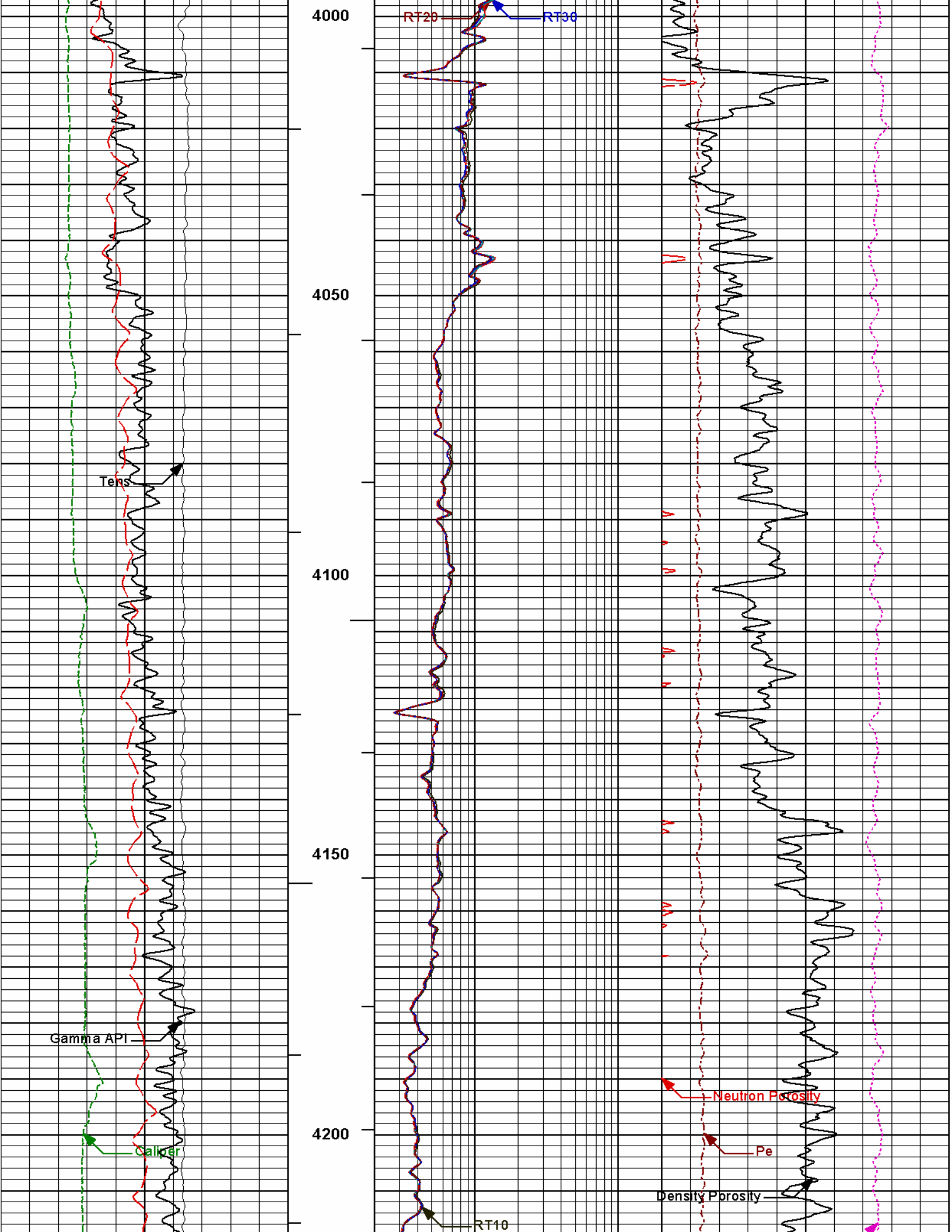


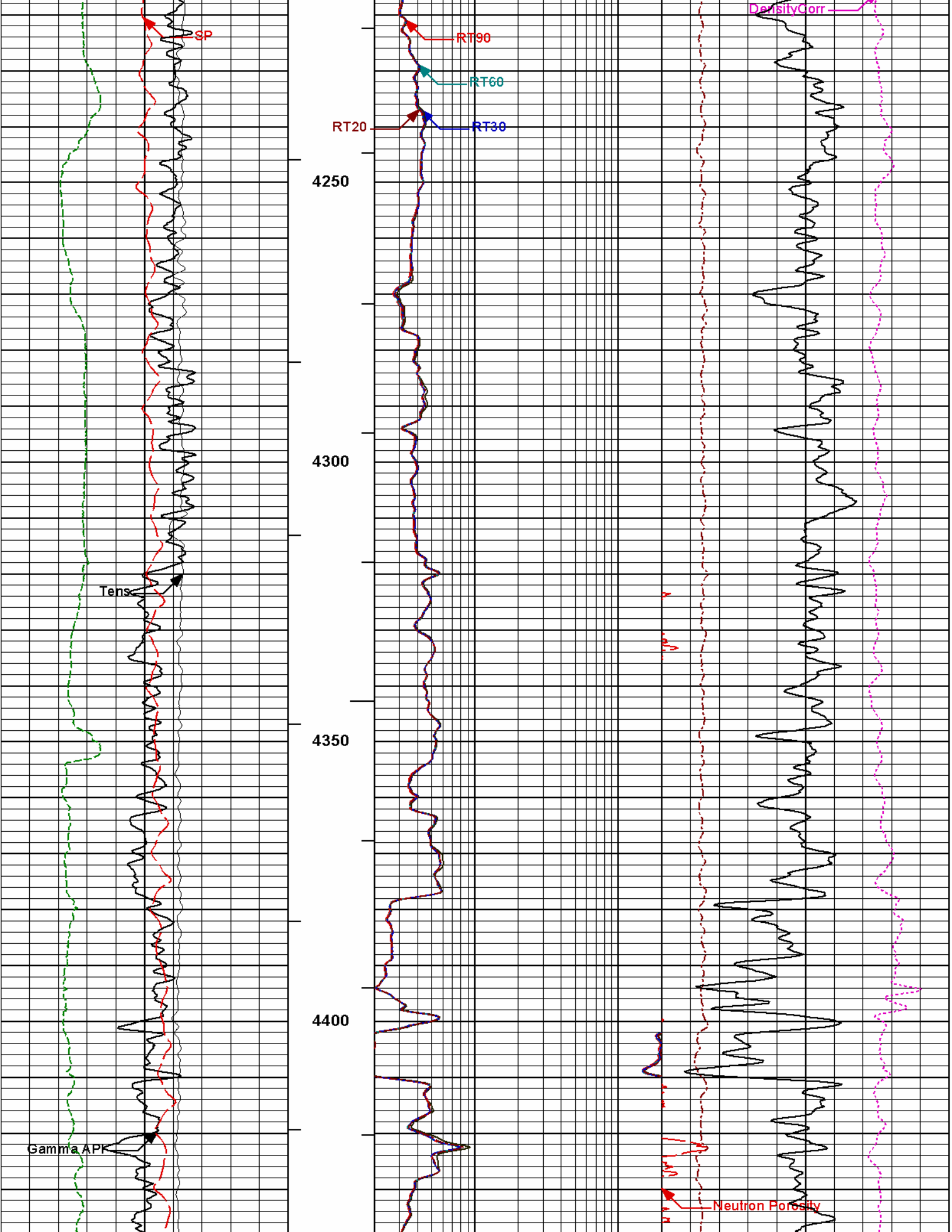


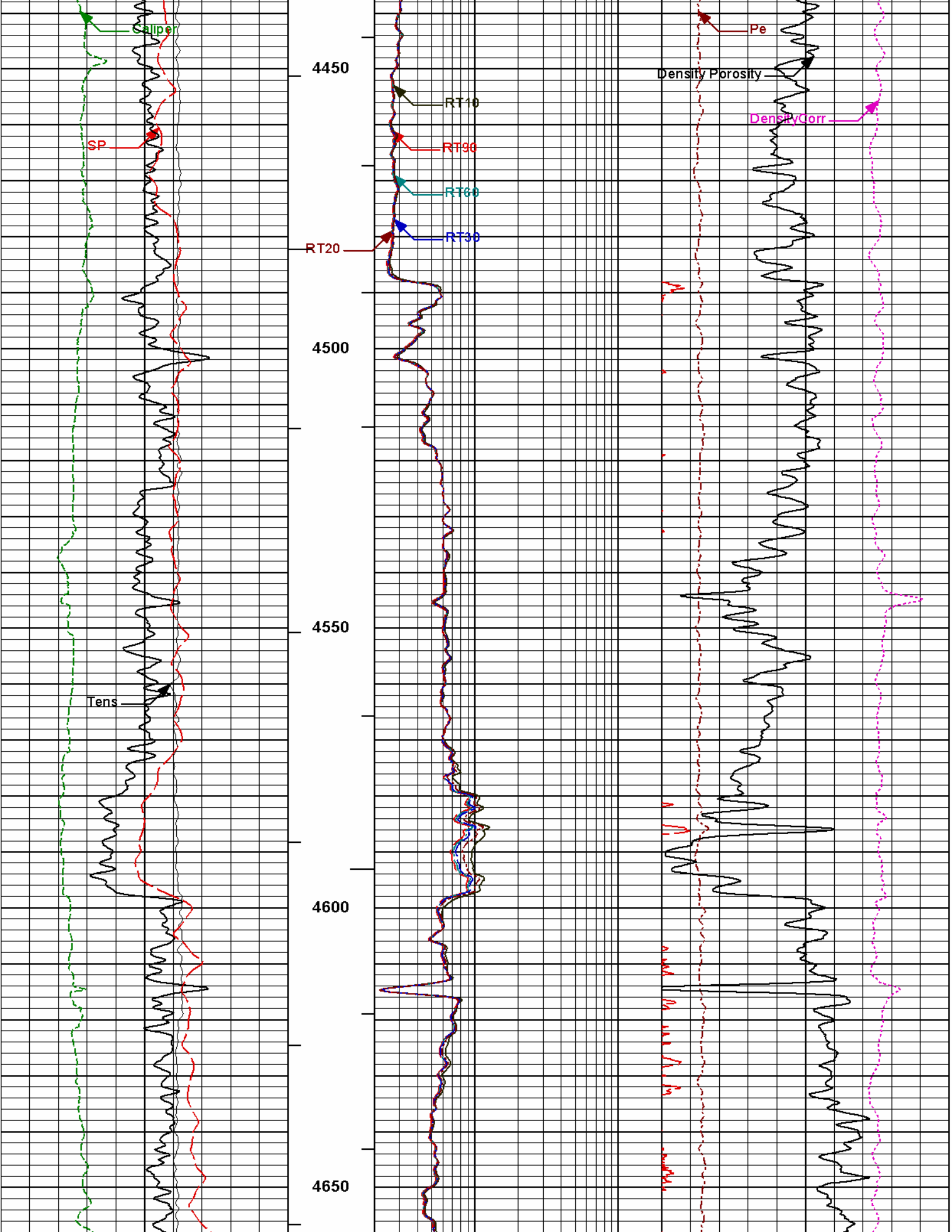


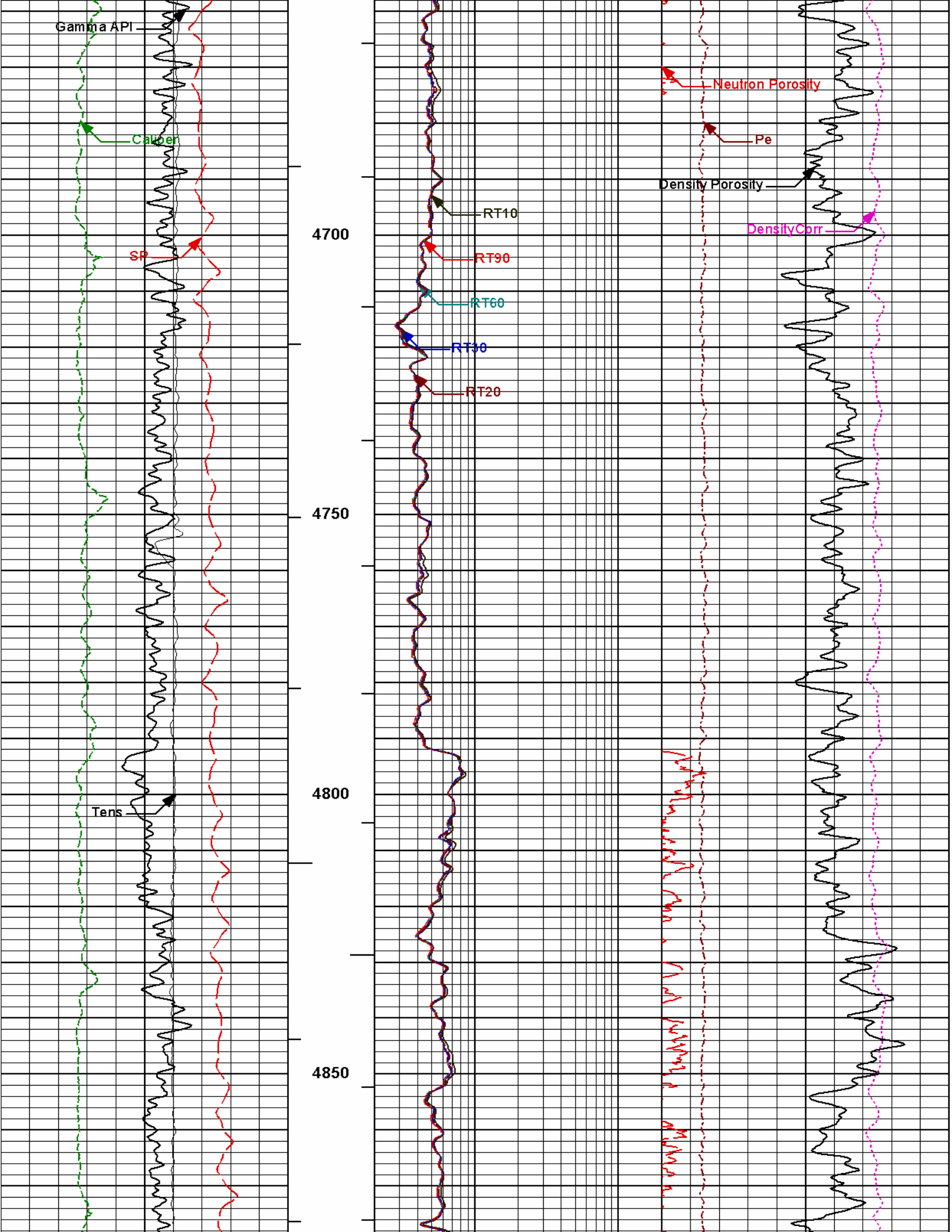


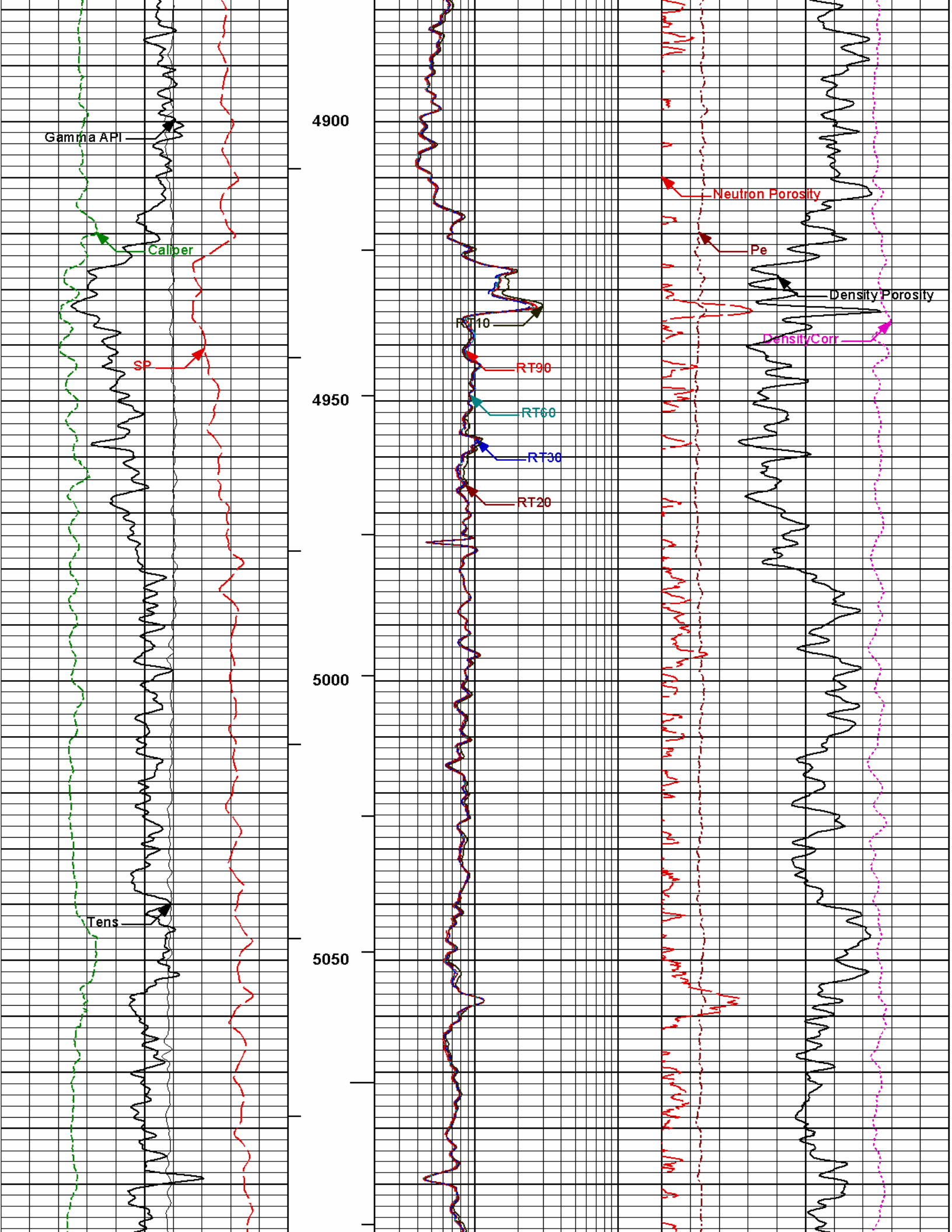


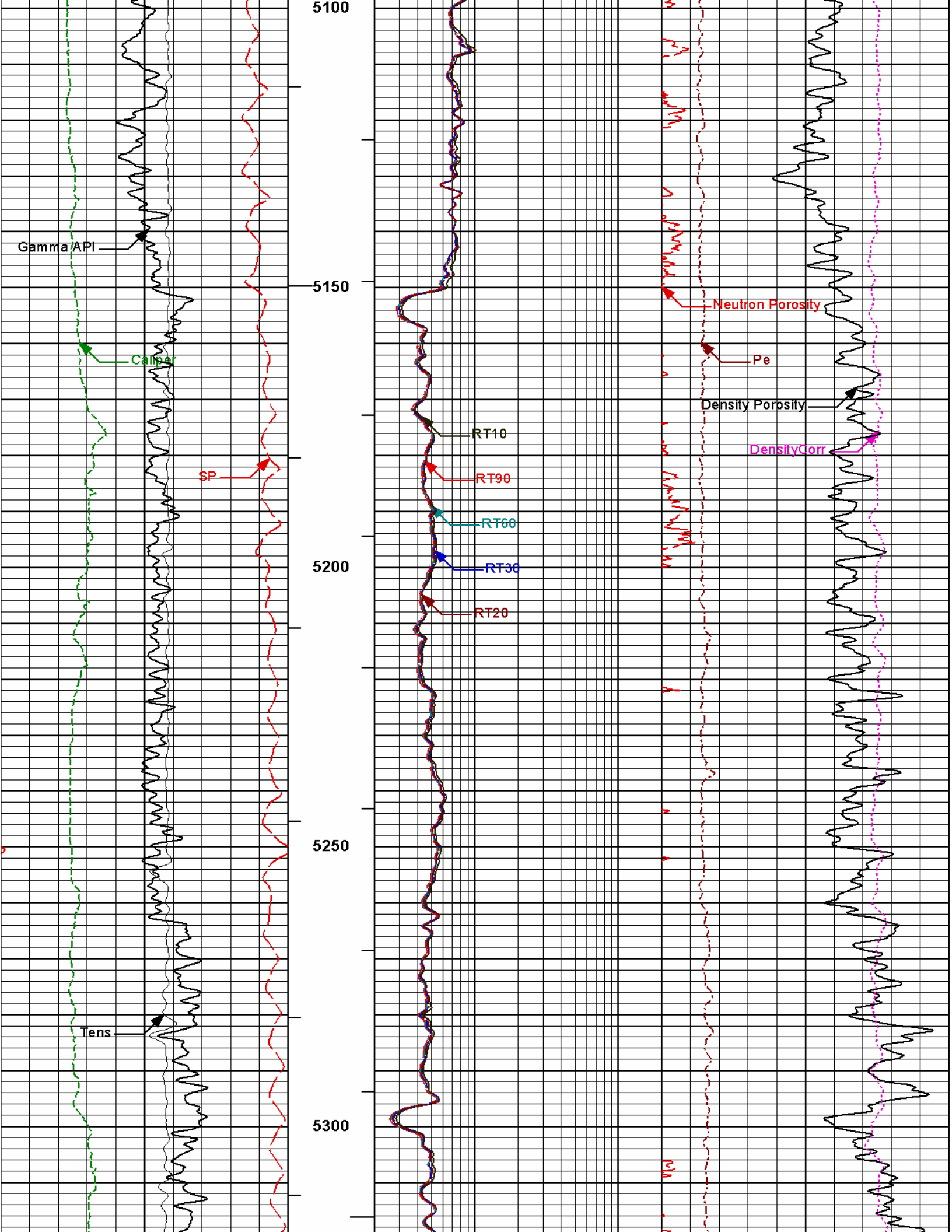


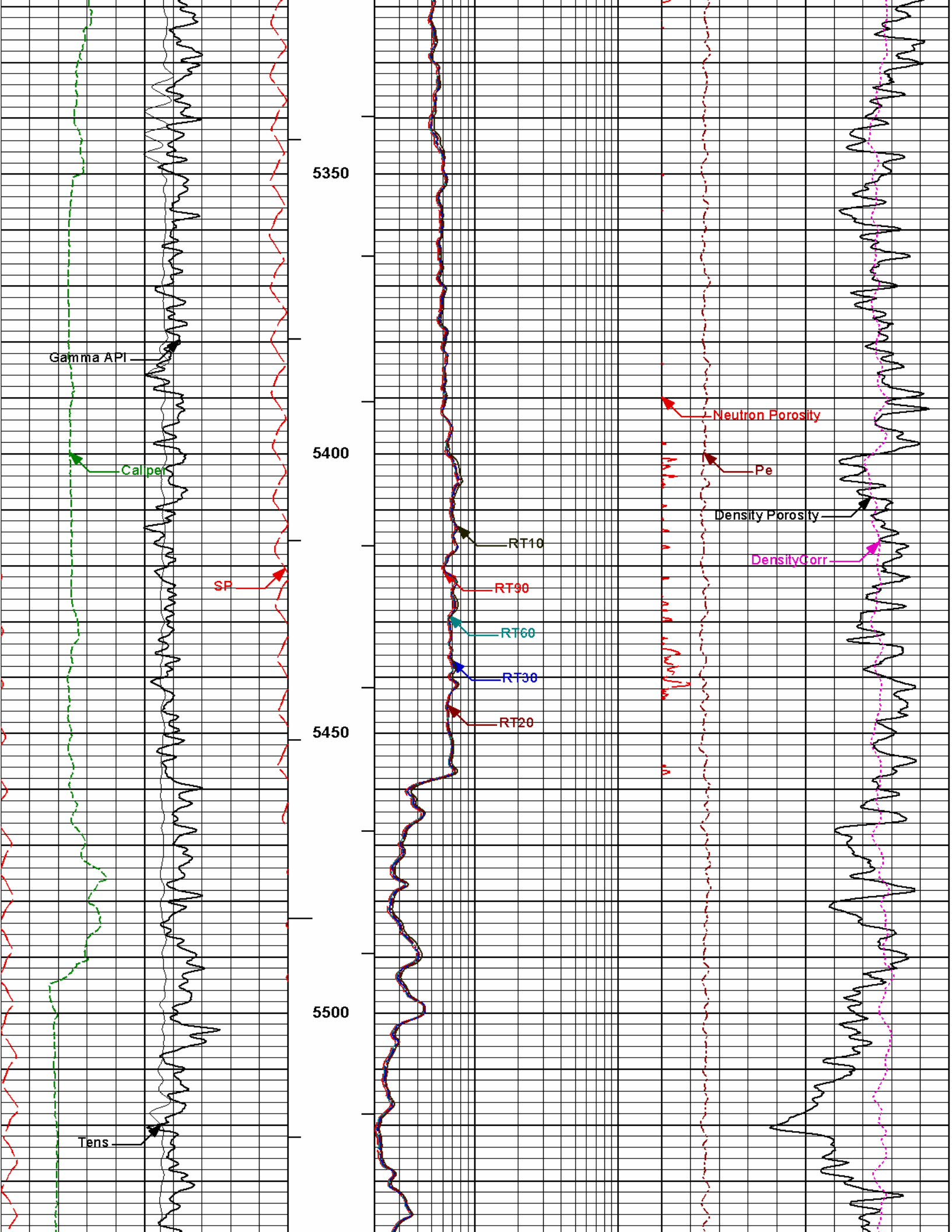


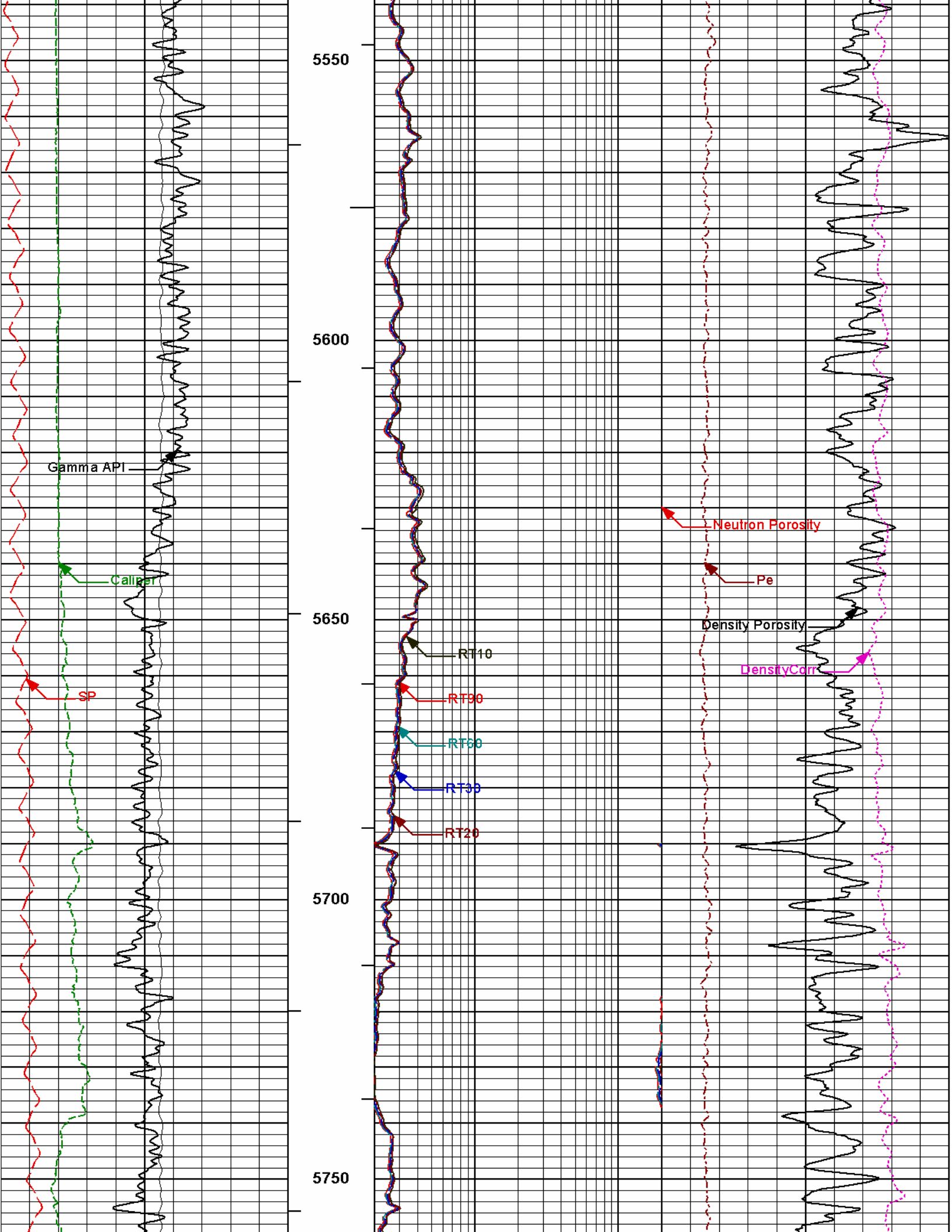


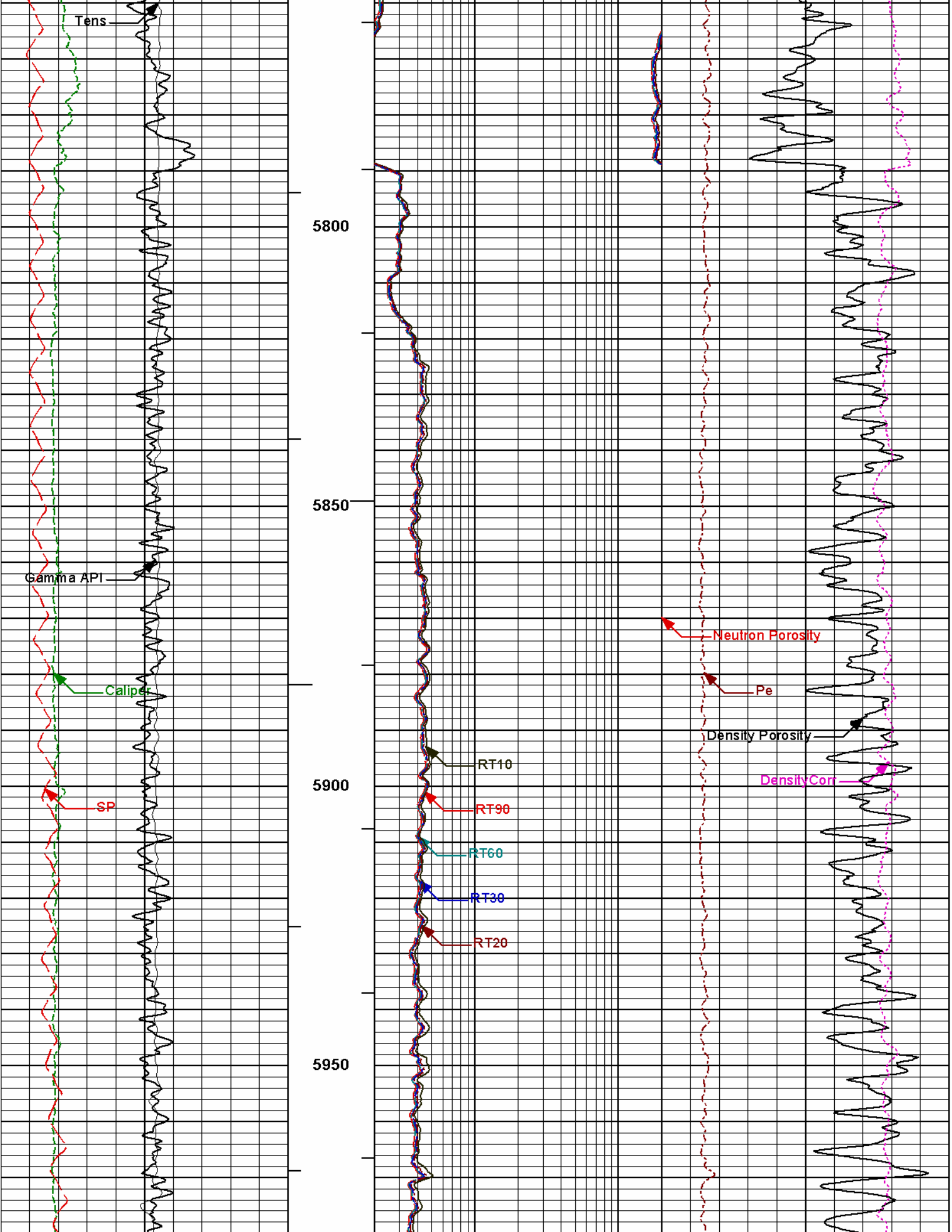


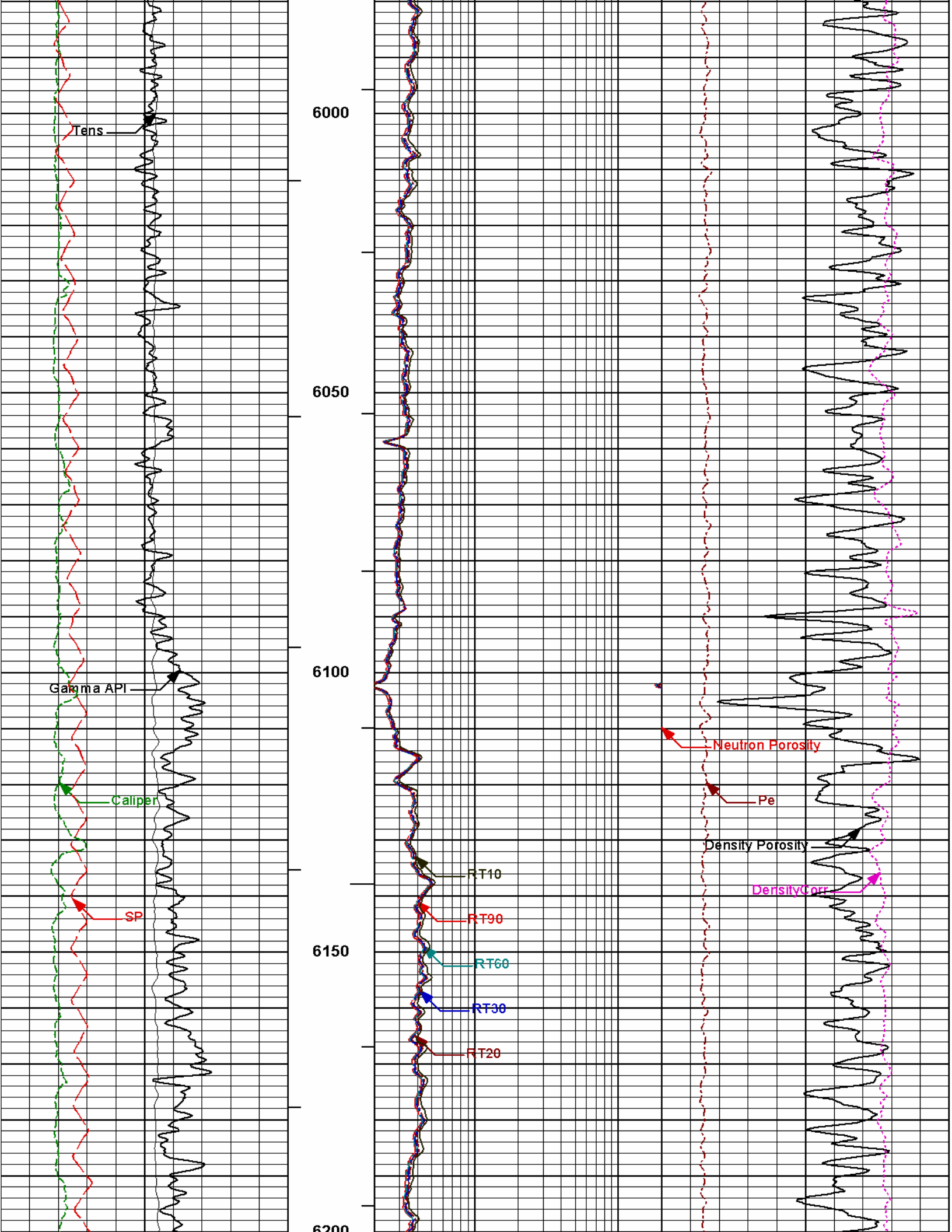


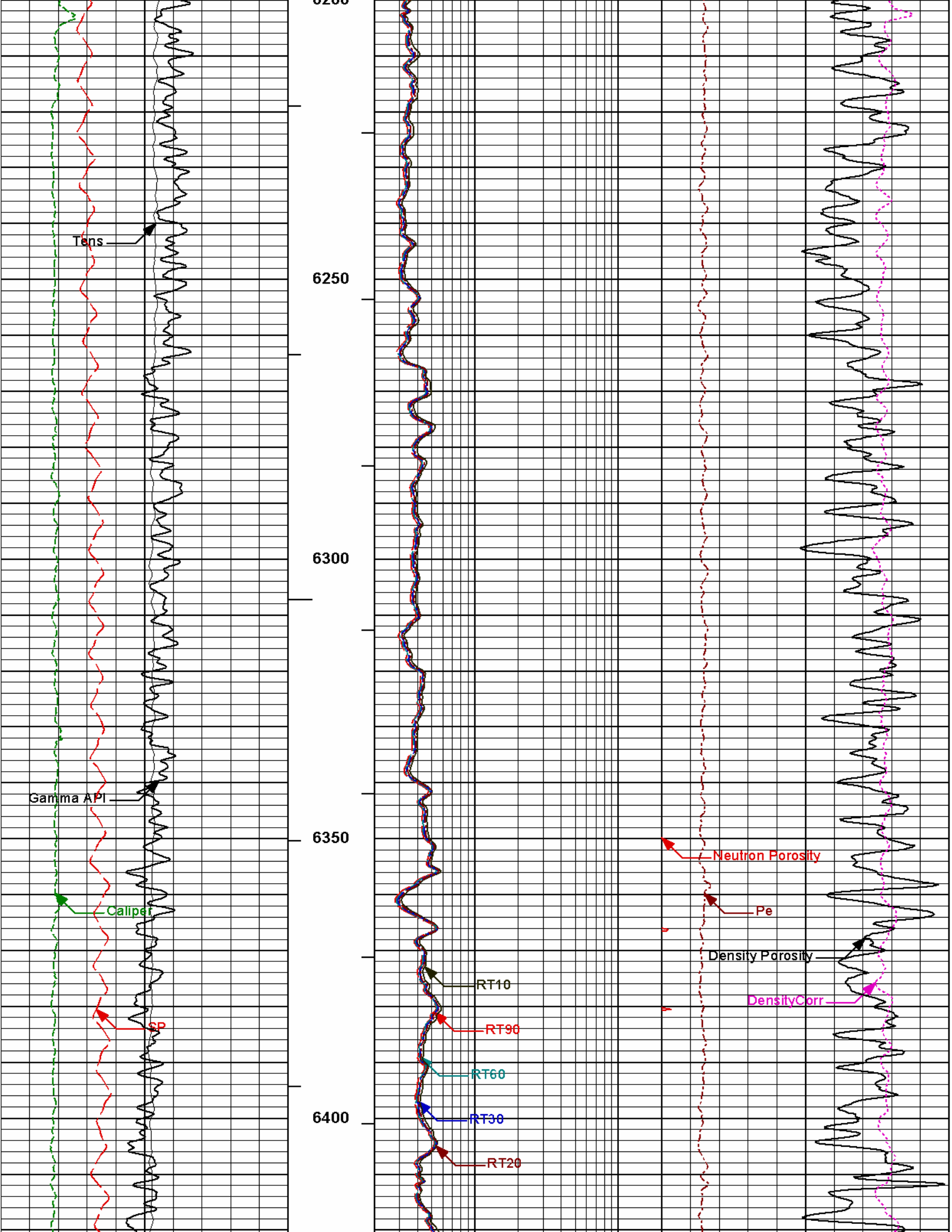


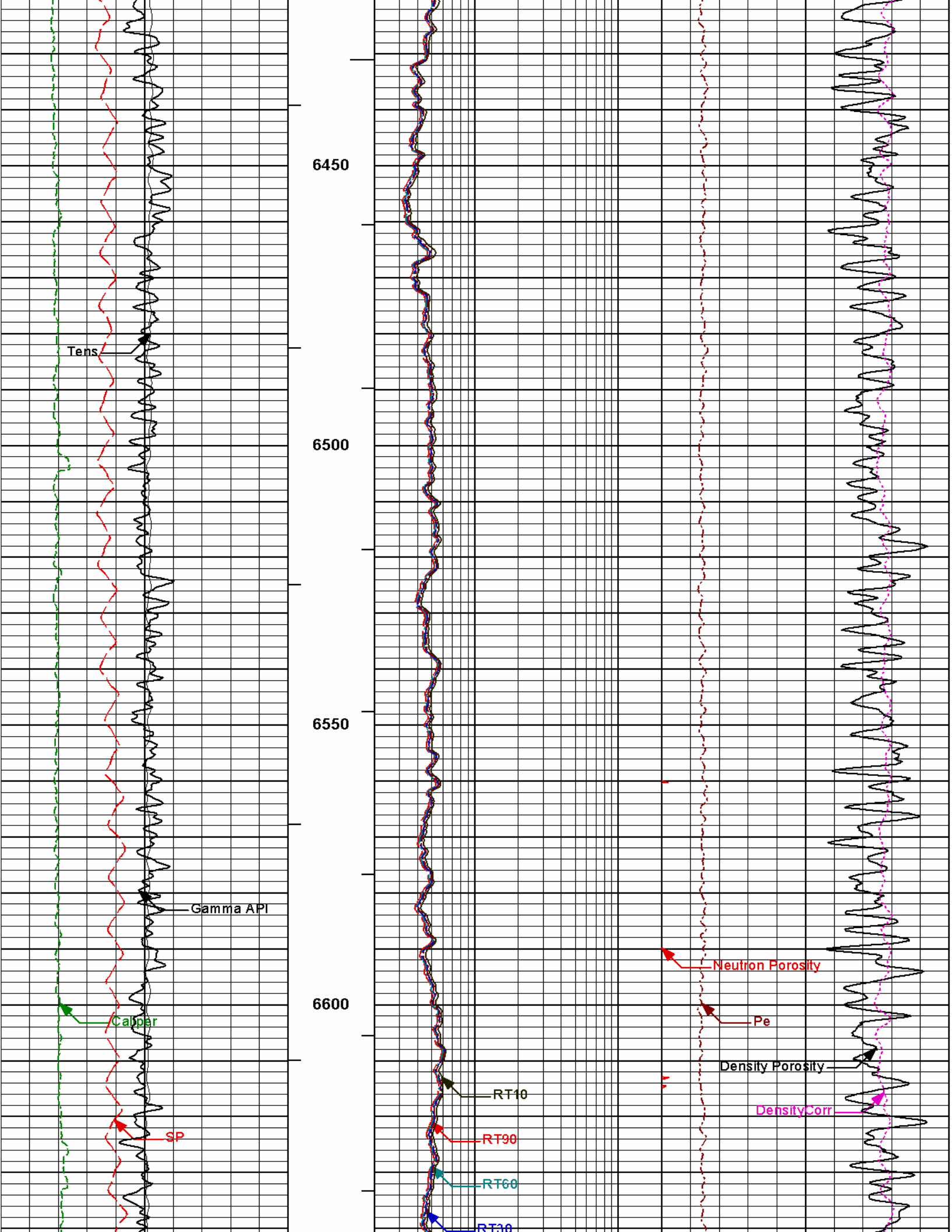


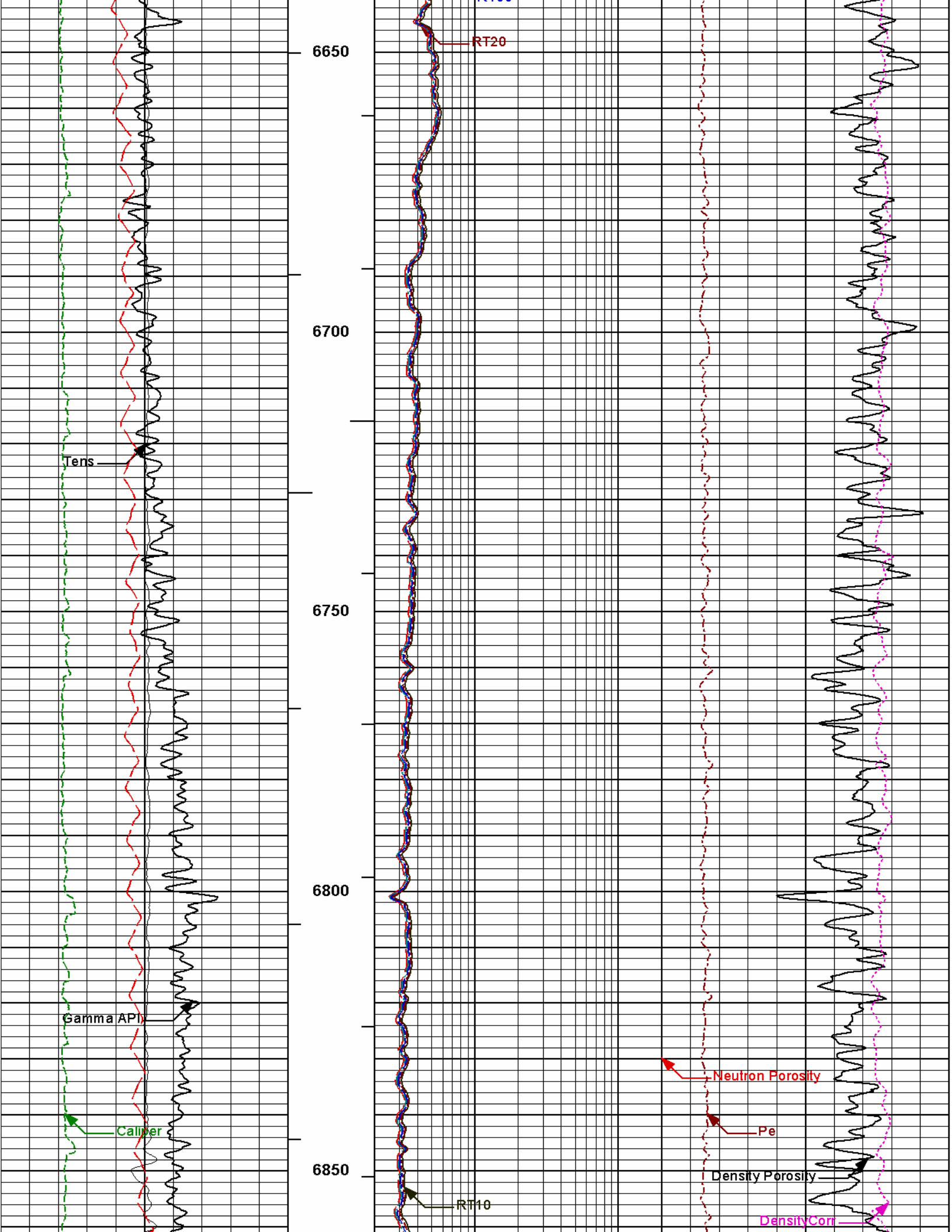


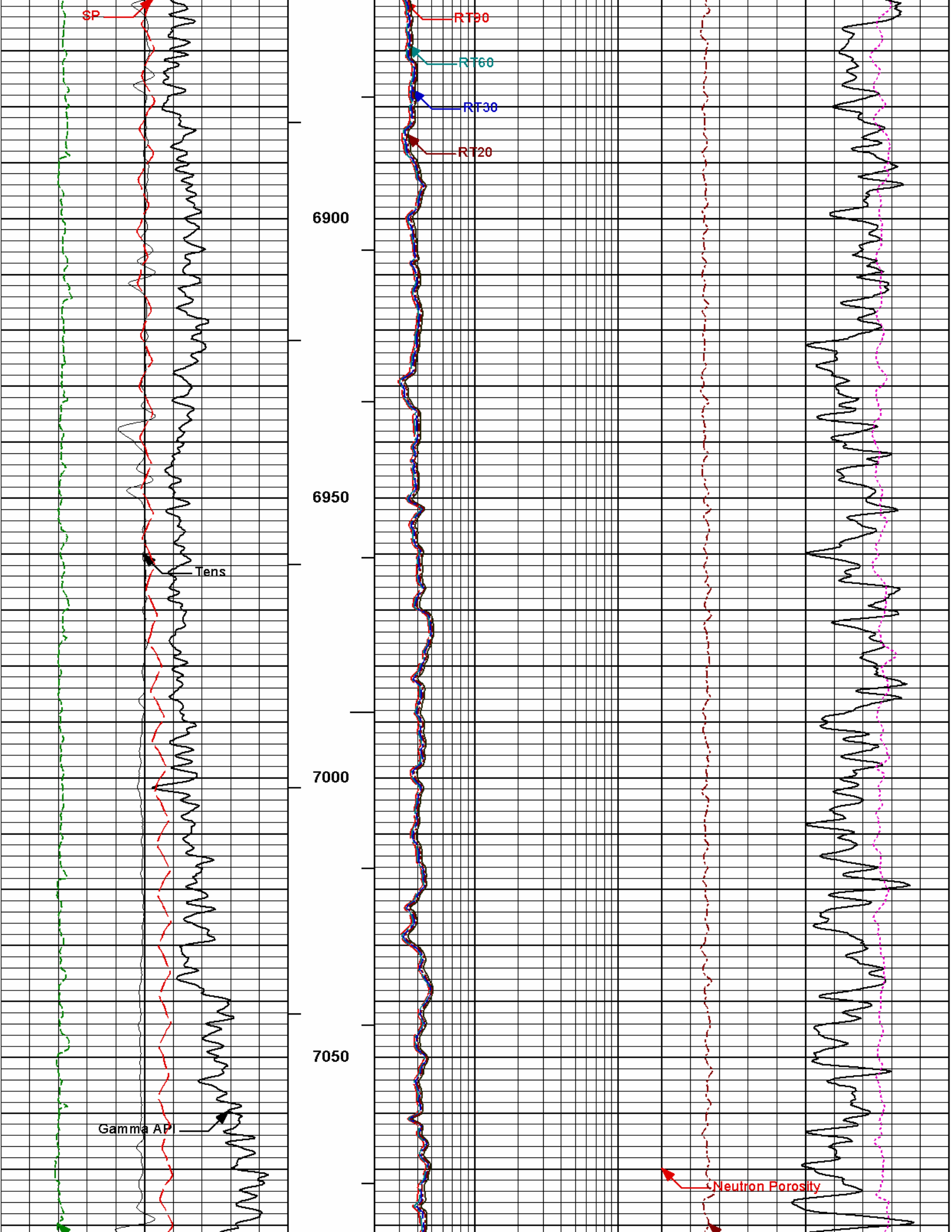


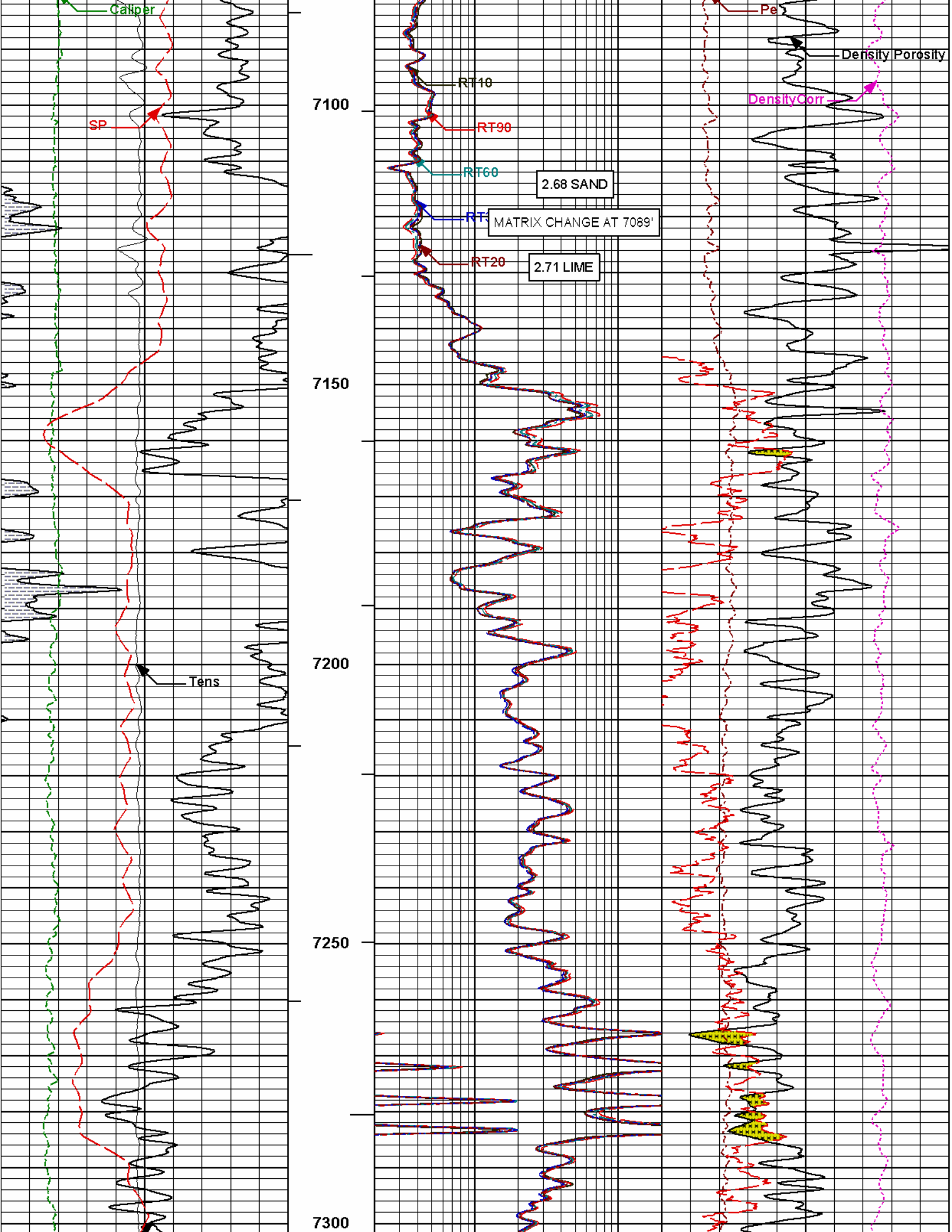


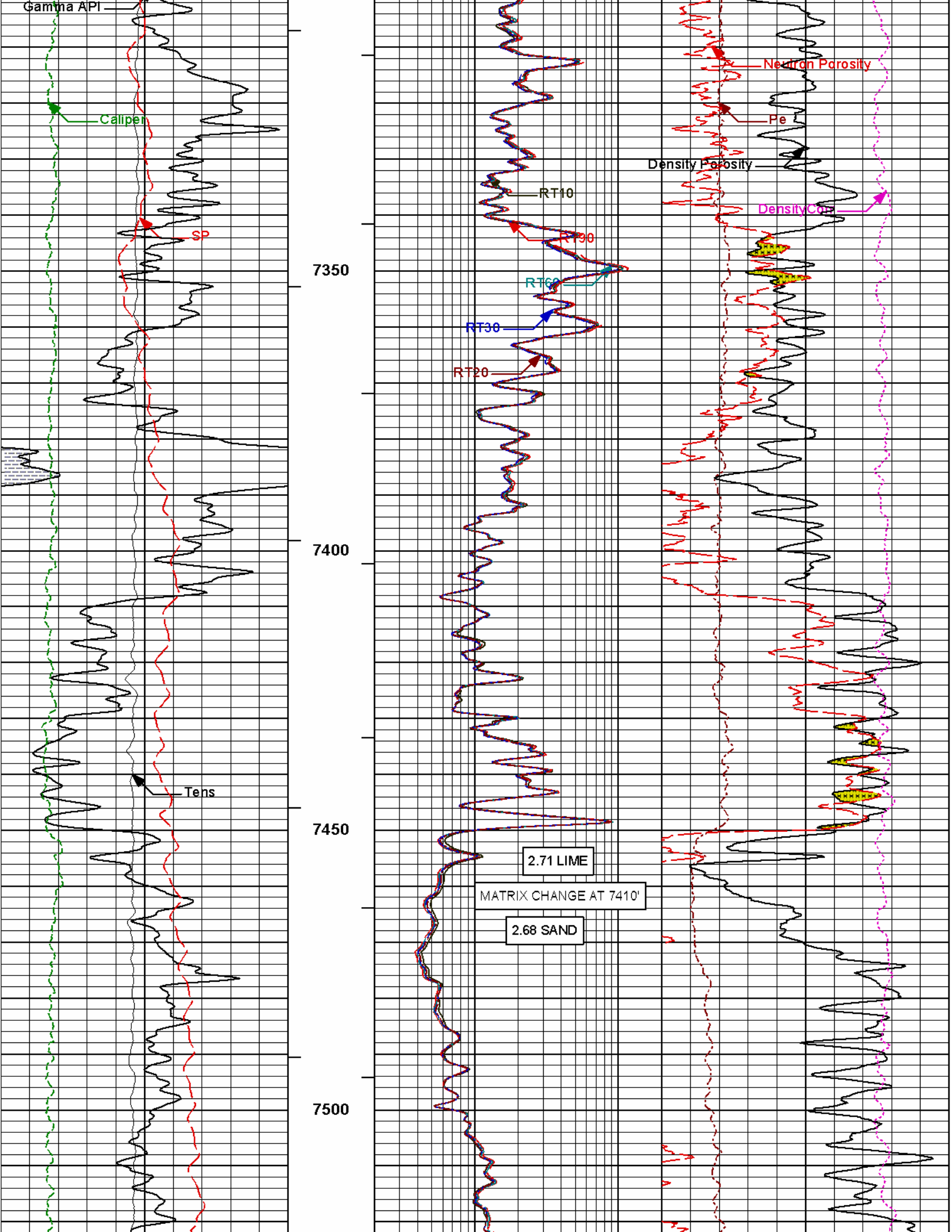


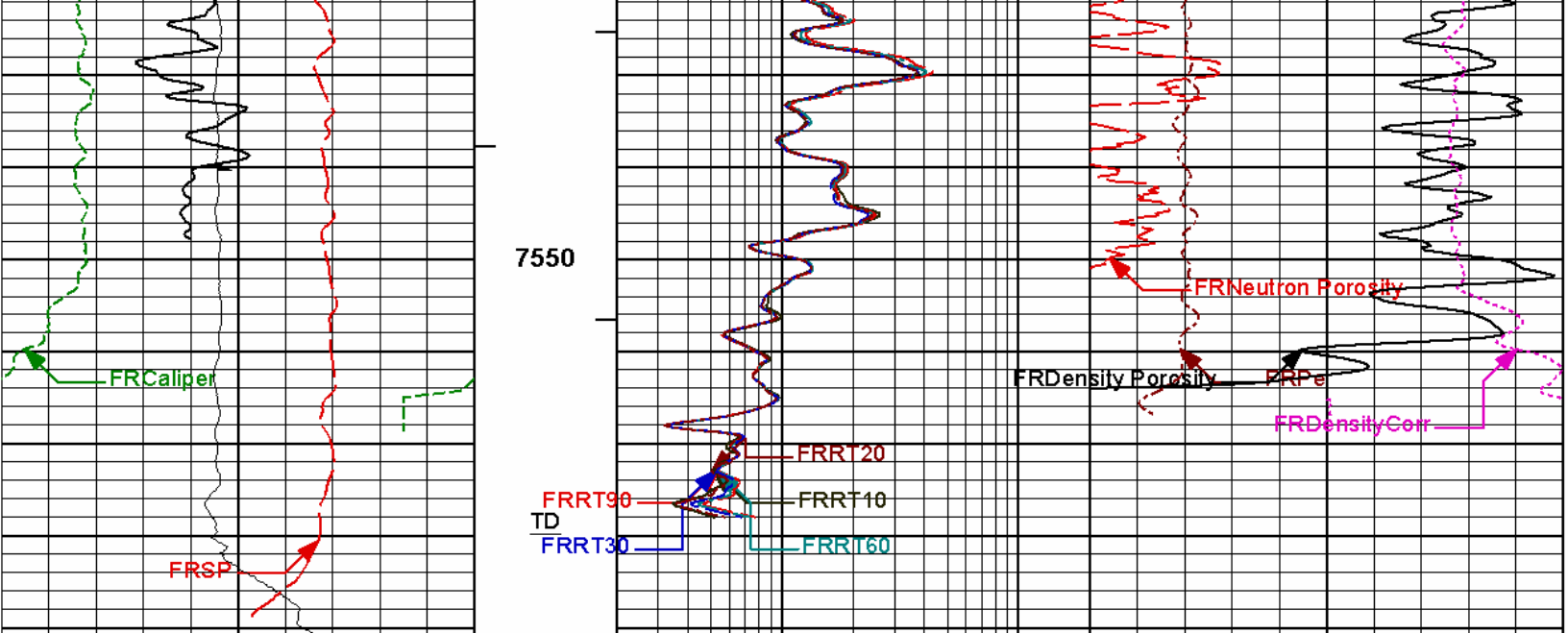












0	SP	100	1 : 240	2	RT90	200	0	Pe	10	-0.25	DensityCorr	0.25
	millivolts				ohmm						gram per cc	
0	Gamma API	200	BHVT	2	RT60	200	20	Density Porosity				0
	api				ohmm			percent				
6	Caliper	16	AHVT	2	RT30	200	20	Neutron Porosity				0
	inches				ohmm			percent				
10K	Tens	0		2	RT20	200						
	pounds				ohmm							
				2	RT10	200						
					ohmm							

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Plot Time: 08-Feb-14 18:57:52
 Plot Range: 100 ft to 7591.42 ft
 Data: HIRSH 6-24\Well Based\1
 Plot File: \COMP\MAIN

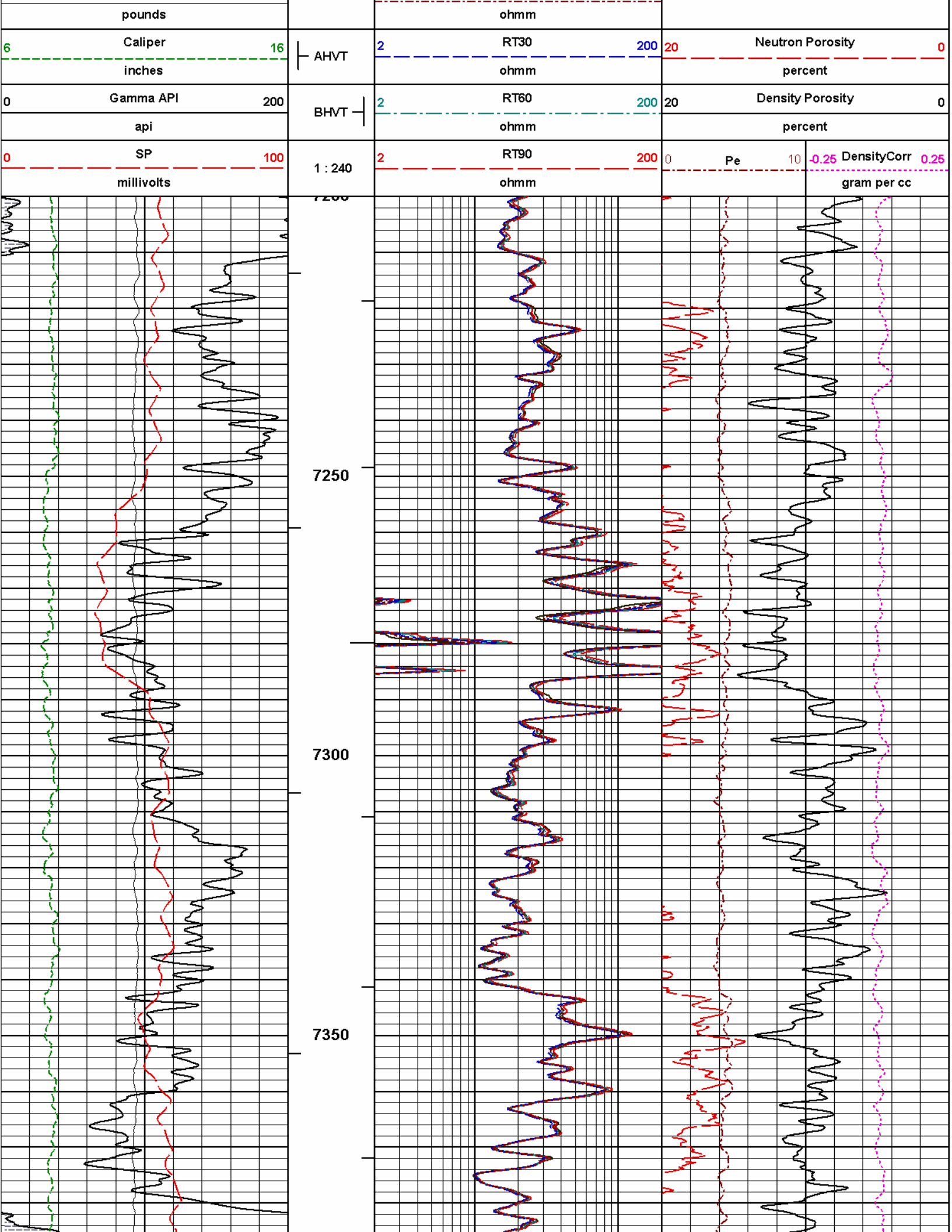
MAIN PASS 5" = 100'

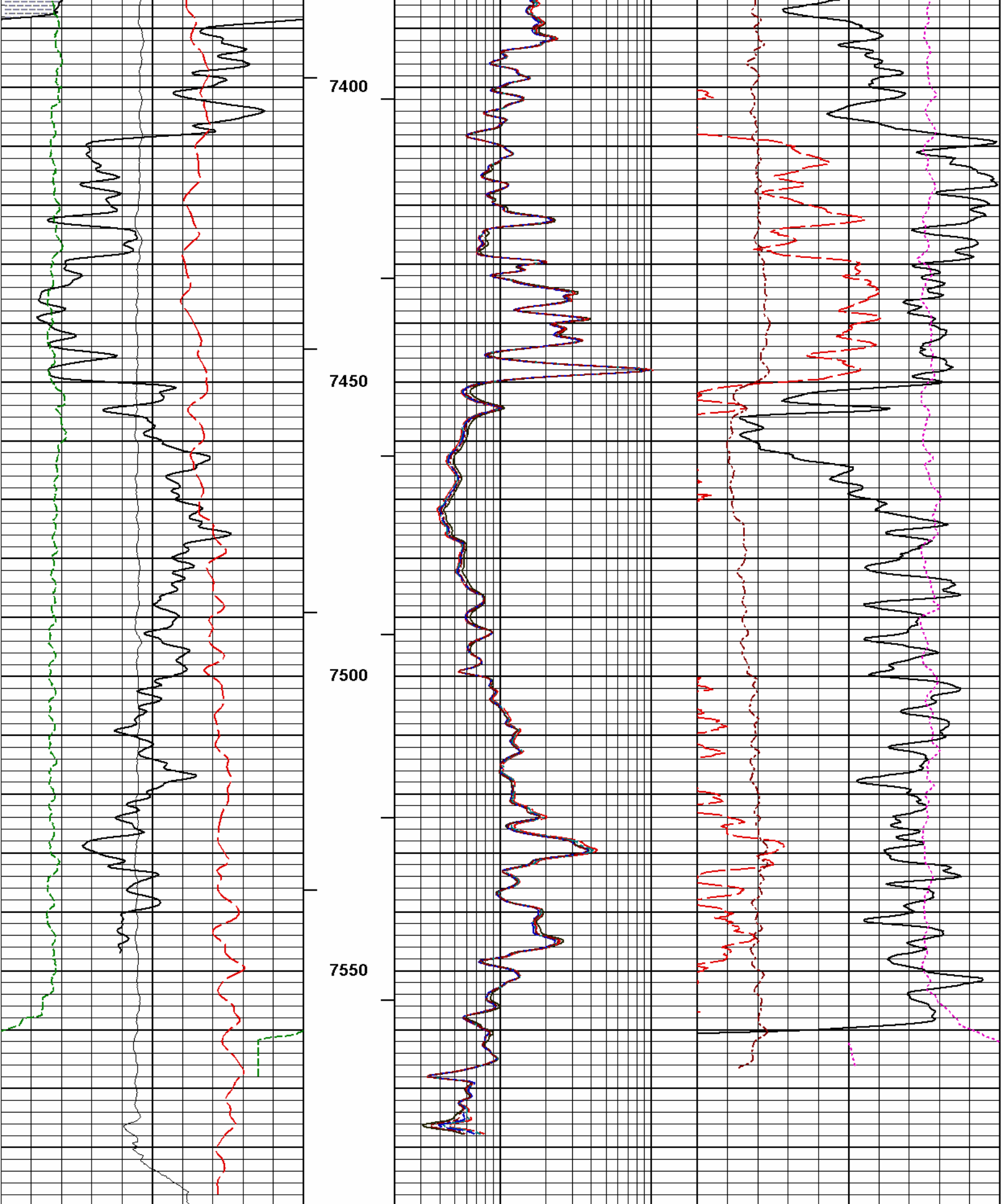
HALLIBURTON

Plot Time: 08-Feb-14 18:57:52
 Plot Range: 7200 ft to 7589.83 ft
 Data: HIRSH 6-24\Well Based\REPEAT\1
 Plot File: \COMP\REPEAT

REPEAT SECTION 5" = 100'

			2	RT10	200	
				ohmm		
10K	Tens	0	2	RT20	200	





0	SP	100	1 : 240	2	RT90	200	0	Pe	10	-0.25 DensityCorr	0.25
	millivolts				ohmm					gram per cc	
0	Gamma API	200	BHVT	2	RT60	200	20	Density Porosity		0	

api		ohmm	percent
6 Caliper 16	AHVT	2 RT30 200	20 Neutron Porosity 0
inches		ohmm	percent
10K Tens 0		2 RT20 200	
pounds		ohmm	
		2 RT10 200	
		ohmm	

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Plot Time: 08-Feb-14 18:57:56
Plot Range: 7200 ft to 7589.83 ft
Data: HIRSH 6-24\Well Based\REPEAT\
Plot File: \COMPIREPEAT

REPEAT SECTION 5" = 100'

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CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11005602

Reference Calibration Date: 05-Jan-14 21:49:47

Engineer: B.RIDDEL

Calibration Date: 22-Jan-14 12:34:00

Software Version: WL INSITE R3.8.4 (Build 5)

Calibration Version: 1

Calibrator Source S/N: MP051807-04

Calibrator API Reference:239.00 api

Equivalent Calibrator API Reference:243.2 api

Measurement	Measured	Calibrated	Units
Background	58.3	55.8	api
Background + Calibrator	312.4	299.0	api
Calibrator	254.1	243.2	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 11005602

Reference Calibration Date: 22-Jan-14 12:34:00

Engineer: B.RIDDEL

Calibration Date: 22-Jan-14 12:36:54

Software Version: WL INSITE R3.8.4 (Build 5)

Calibration Version: 1

Calibrator Source S/N: MP051807-04

Calibrator API Reference:239.00 api

Equivalent Calibrator API Reference:243.2 api

Field Verification	Shop	Field	Units
Background	55.8	57.5	api
Background + Calibrator	299.0	300.5	api
Calibrator	243.2	243.0	api

Shop	Field	Difference	Tolerance
243.2	243.0	0.2	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 10993887

Reference Calibration Date: 27-Dec-13 15:16:07

Engineer: B.RIDDEL**Calibration Date: 22-Jan-14 10:14:12****Software Version: WL INSITE R3.8.4 (Build 5)****Calibration Version: 1**

Logging Source S/N: DSN-388

Tank Serial Number: GJ-WATERTANK

Reference value assigned to Tank: 52.750

Snow Block S/N: GJ

Calibration Tank Water Temperature: 60 degF

Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.956	0.953	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):	0.2180	0.2169	0.0010	+/- 0.0020
Calibrated Ratio:	9.96	9.93	0.035	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (dec):	0.0606	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: 22-Jan-14 10:14:12****Engineer: B.RIDDEL****Calibration Date: 22-Jan-14 12:44:09****Software Version: WL INSITE R3.8.4 (Build 5)****Calibration Version: 1**

Logging Source S/N: DSN-388

Snow Block S/N: GJ

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (dec):	0.0606	0.0634	0.0028	+/- 0.0150

PASS/FAIL SUMMARY

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

DENSITY CALIPER SHOP CALIBRATION**Tool Name: SDLT - 10951314****Reference Calibration Date: 03-Jan-14 10:10:07****Engineer: B.RIDDEL****Calibration Date: 03-Jan-14 10:14:31****Software Version: WL INSITE R3.8.4 (Build 5)****Calibration Version: 1****Host Tool Name: DSNT - 10993887****CALIBRATION COEFFICIENTS**

Measurement	Previous Value	New Value	Control Limit On
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Measurement	Previous Value	New Value	New Value
Pad Offset	-4296.46	-4368.19	-7000.00 - -1000.00
Pad Gain	0.0003881	0.0003903	0.000200 - 0.000600
Arm Offset	-3980.07	-3839.88	-5000.00 - 3000.00
Arm Gain	0.0005282	0.0005172	0.000300 - 0.000700
Arm Power	-0.000003103	-0.000002318	-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)	2.02	2.00	-0.02	+/- 0.20
Medium Ring (in)	3.76	3.75	-0.01	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.48	6.50	0.02	+/- 0.20
Medium Ring (in)	8.26	8.25	-0.01	+/- 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 - 10951314	Reference Calibration Date:	03-Jan-14 10:14:31
Engineer:	B.RIDDEL	Calibration Date:	22-Jan-14 12:33:35
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.85	0.10	+/- 0.10
Ring Diameter	8.25	8.19	-0.06	+/- 0.15

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

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad - 10865879	Reference Calibration Date:	27-Dec-13 16:53:35
Engineer:	B.RIDDEL	Calibration Date:	22-Jan-14 10:57:56
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Logging Source S/N: 5153 GW

Aluminum Block S/N: 63094

Density: 2.608g/cc

Pe: 3.230

Magnesium Block S/N: 63387

Density: 1.681g/cc

Pe: 2.600

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0801	1.0197	0.90 - 1.10
Near Dens Gain	1.0437	1.0139	0.90 - 1.10
Near Peak Gain	1.0393	1.0157	0.90 - 1.10
Near Lith Gain	0.9868	0.9784	0.90 - 1.10

Near Lith Gain	0.9988	0.9784	0.90 - 1.10
Far Bar Gain	1.0193	1.0116	0.90 - 1.10
Far Dens Gain	1.0101	1.0037	0.90 - 1.10
Far Peak Gain	1.0047	0.9984	0.90 - 1.10
Far Lith Gain	0.9813	0.9802	0.90 - 1.10
Near Bar Offset	-0.5633	0.0003	NONE
Near Dens Offset	-0.2473	0.0256	NONE
Near Peak Offset	-0.2078	-0.0039	NONE
Near Lith Offset	0.1474	0.3065	NONE
Far Bar Offset	-0.0431	0.0343	NONE
Far Dens Offset	0.0259	0.0917	NONE
Far Peak Offset	0.0673	0.1306	NONE
Far Lith Offset	0.2156	0.2360	NONE
Near Bar Background	901.92	898.53	700 - 1450
Near Dens Background	295.69	295.92	230 - 480
Near Peak Background	129.27	129.46	100 - 210
Near Lith Background	157.89	157.75	125 - 260
Far Bar Background	532.92	532.35	450 - 900
Far Dens Background	208.80	208.22	175 - 345
Far Peak Background	83.22	82.59	70 - 140
Far Lith Background	85.33	86.64	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.682	1.681	-0.001	+/- 0.015
Pe	2.555	2.553	-0.002	+/- 0.150
ALUMINUM				
Density (g/cc)	2.604	2.608	0.004	+/- 0.01500
Pe	3.108	3.173	0.065	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0011	+/- 0.0110	-0.0003	+/- 0.0140
Magnesium Block	-0.0003	+/- 0.0110	-0.0017	+/- 0.0140
Aluminum Block	-0.0002	+/- 0.0110	0.0008	+/- 0.0140
Resolution	8.58	6.00 - 11.50	8.95	6.00 - 11.50
Internal Verifier(B+D+P+L)	1482	1200 - 2700	910	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 - 10865879				Reference Calibration Date:		22-Jan-14 10:57:56	
Engineer:		B.RIDDEL				Calibration Date:		22-Jan-14 12:28:07	
Software Version:		WL INSITE R3.8.4 (Build 5)				Calibration Version:		1	
Pad Temperature: 54.0 degF									
DENSITY FIELD CALIBRATION SUMMARY									
Measurement		Shop		Field		Change		Control Limit +/-	
Near (B+D+P+L) cps		1481.657		1481.894		0.237		15.516	
Far (B+D+P+L) cps		909.795		911.985		2.190		16.375	
Near Resolution		8.58		8.59		0.010		0.50	
Far Resolution		8.95		9.04		0.090		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 - 90190515-E9775-				Reference Calibration Date:		30-Dec-13 10:20:42	
Engineer:		P. DIMPFL				Calibration Date:		30-Dec-13 10:29:03	
Software Version:		WL INSITE R3.8.4 (Build 5)				Calibration Version:		1	
Host Tool Name:		ACRt Instrument - 11259775							
TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.00	1.05
A2 (50")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.00	1.05
A3 (29")	0.95	1.00	1.05	0.95	1.00	1.05	0.95	0.99	1.05
A4 (17")	0.95	1.01	1.05	0.95	1.00	1.05	0.95	1.00	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.00	1.05	0.95	0.99	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.98	1.05	0.95	0.98	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	0.21	2	-6	-4.70	-2	-8	-5.11	-2
A2 (50")	-7	-0.73	0	-7	-2.72	0	-7	-5.15	0
A3 (29")	-27	-13.12	-9	-9	-3.70	-3	-7	-3.72	-1
A4 (17")	-180	-101.14	-60	-45	-31.39	-15	-39	-25.40	-13
A5 (10")	N/A	N/A	N/A	-150	-93.60	-50	-80	-45.27	-10
A6 (6")	N/A	N/A	N/A	175	331.85	525	90	165.94	270
TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION				
Signal	Lower	R	Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)		
12K	0.6	0.84	1.3	Mud Cell	0.95	1.01	1.05		
36K	1.0	1.91	2.0						
72K	1.0	1.09	2.0						
PASS/FAIL SUMMARY									

Reference Calibration Date: 22-Jan-14 10:57:56

Calibration Date: 22-Jan-14 12:28:07

Calibration Version: 1

DENSITY FIELD CALIBRATION SUMMARY

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

Reference Calibration Date: 30-Dec-13 10:20:42

Calibration Date: 30-Dec-13 10:29:03

Calibration Version: 1

Host Tool Name: ACRT Instrument - 11259775

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.00	1.05
A2 (50")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.00	1.05
A3 (29")	0.95	1.00	1.05	0.95	1.00	1.05	0.95	0.99	1.05
A4 (17")	0.95	1.01	1.05	0.95	1.00	1.05	0.95	1.00	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.00	1.05	0.95	0.99	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.98	1.05	0.95	0.98	1.05

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	-5	0.21	2	-6	-4.70	-2	-8	-5.11	-2
A2 (50")	-7	-0.73	0	-7	-2.72	0	-7	-5.15	0
A3 (29")	-27	-13.12	-9	-9	-3.70	-3	-7	-3.72	-1
A4 (17")	-180	-101.14	-60	-45	-31.39	-15	-39	-25.40	-13
A5 (10")	N/A	N/A	N/A	-150	-93.60	-50	-80	-45.27	-10
A6 (6")	N/A	N/A	N/A	175	331.85	525	90	165.94	270

TRANSMITTER CURRENT GAIN			
Signal	Lower	R	Upper
12K	0.6	0.84	1.3
36K	1.0	1.91	2.0
72K	1.0	1.09	2.0

R-MUD VERIFICATION			
Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.01	1.05

PASS/FAIL SUMMARY

GAIN RANGE CHK	PASS
SONDE OFFSET RANGE CHK	PASS
Tx CURRENT GAIN	PASS
Rmud VERIFICATION	PASS

TOOL OK TO LOG

CALIBRATION SUMMARY

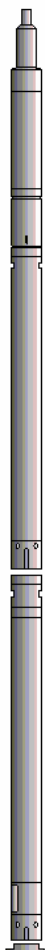
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11005602						
Gamma Ray Calibrator	243.2	243.0	-----	0.2	+/- 9.00	api
DSNT-10993887						
Snow-Block Porosity	0.0606	0.0634	-----	-0.0028	+/- 0.0150	decp
SDLT-10951314						
Pad Extension	3.75	3.85	-----	-0.10	+/-0.10	in
Ring Diameter	8.25	8.19	-----	0.06	+/-0.15	in
SDLT Pad-10865879						
Near(B+D+P+L)	1481.657	1481.894	-----	-0.237	+/-15.516	cps
Far(B+D+P+L)	909.795	911.985	-----	-2.190	+/-16.375	cps
ACRt Sonde-90190515-E9775-						
Mud Cell	1.01	-----	-----	0.00	-----	ohm-m

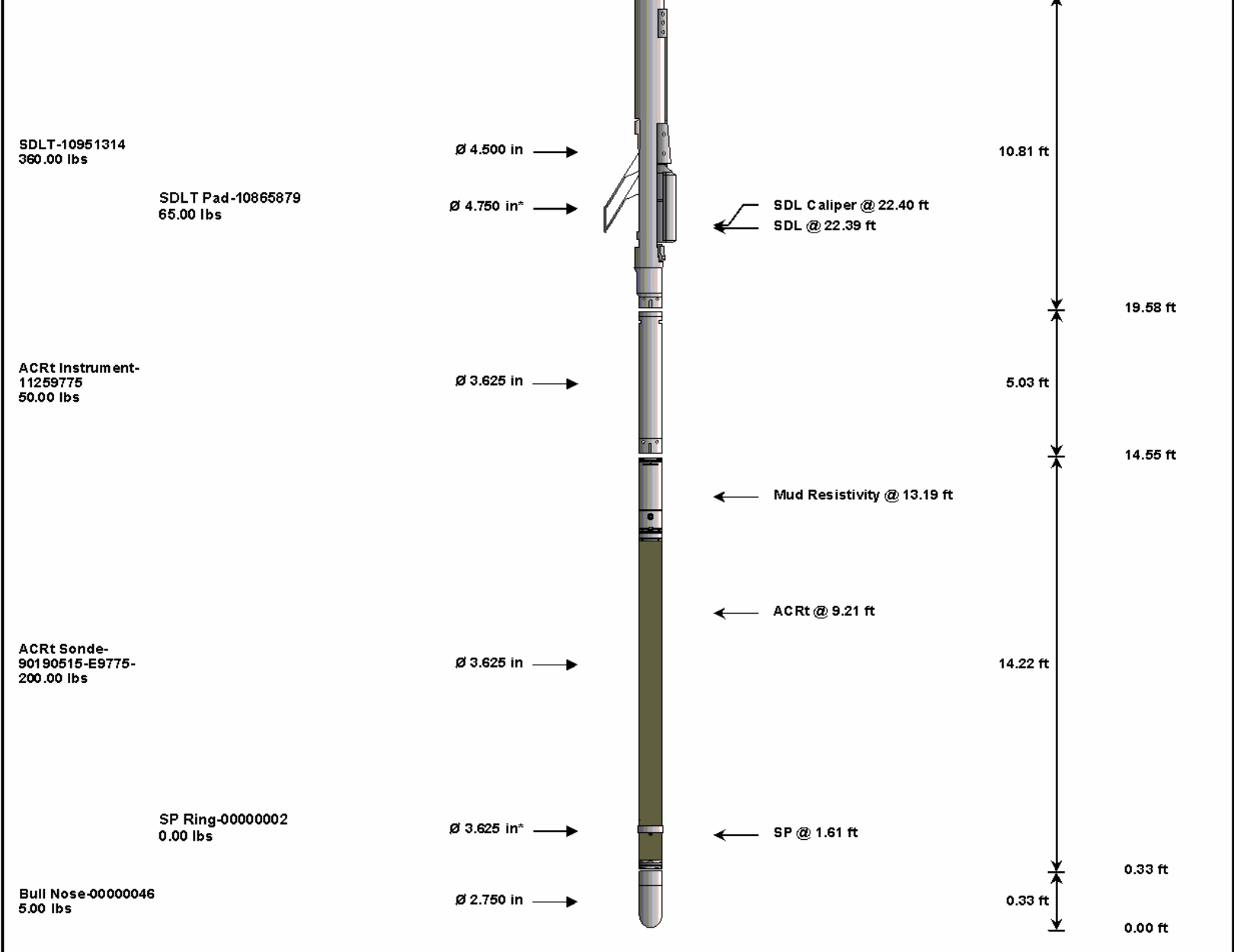
Data: HIRSH 6-24\0001 TRIPLE\001 23-Jan-14 07:26 Up @889.3f

Date: 23-Jan-14 09:26:53

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-A032 135.00 lbs		Ø 3.625 in →		← Load Cell @ 51.17 ft ← BH Temperature @ 50.60 ft	6.25 ft	54.85 ft
GTET-11005602 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.54 ft	8.52 ft	48.60 ft
DSNT-10993887 174.00 lbs		Ø 3.625 in →		← DSN Far @ 33.15 ft ← DSN Near @ 32.40 ft	9.69 ft	40.08 ft
						30.40 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	A032	135.00	6.25	48.60	300.00
GTET	Gamma Telemetry Tool	11005602	165.00	8.52	40.08	60.00
DSNT	Dual Spaced Neutron	10993887	174.00	9.69	30.40	60.00
SDLT	Spectral Density Tool	10951314	360.00	10.81	19.58	60.00
SDLP	Density Insite Pad	10865879	65.00	2.55	* 21.79	60.00
ACRt	Array Compensated True Resistivity Instrument Section	11259775	50.00	5.03	14.55	300.00
ACRt	Array Compensated True Resistivity Sonde Section	90190515-E9775-	200.00	14.22	0.33	300.00
SP	SP Ring	00000002	0.00	0.25	* 1.61	300.00
BLNS	Bull Nose	00000046	5.00	0.33	0.00	300.00
Total			1,154.00	54.85		
* Not included in Total Length and Length Accumulation.						
Data: HIRSH 6-24\0001 TRIPLE\IDLE					Date: 23-Jan-14 05:42:51	

COMPANY	BAYSWATER EXPLORATION & PRODUCTION		
WELL	HIRSCH 6-24		
FIELD	WATTENBERG		
COUNTY	WELD	STATE	CO

HALLIBURTON

DUAL SPACED NEUTRON
SPECTRAL DENSITY
ARRAY COMPENSATED
TRUE RESISTIVITY