HALLIBURTON

DUAL SPACED NEUTRON SPECTRAL DENSITY ARRAY COMPENSATED TRUE RESISTIVITY

COMPANY	BAYSWATER EXPLORATION AND PRODUCTION LLC
WELL	BOOTH 19-23
FIELD/BLOCK	WATTENBERG
COUNTY	WELD
STATE	CO

API No. 05123375040000

Location SURFACE LOCATION: 202' FSL & 2569' FEL SWSE

LATITUDE: 40.552319°
LONGITUDE: -104.629797°

Sect. 23 Twp. 7N Rge. 65W

Other Services: RWCH

Permanent Datum	GL	Elev. 4884.0 ft	Elev.: K.B. 4900.0 ft
Log measured from	KB	, 16.0 ft above perm. Datum	D.F. 4899.0 ft
Drilling measured from	KB		G.L. 4884.0 ft

Date		10-Jun-13					
Run No.		ONE					
Depth - Driller		7635.00 ft					
Depth - Logger		7626.0 ft					
Bottom - Logged Interval		7604 ft					
Top - Logged Interval		CASING					
Casing - Driller		8.625 in	@ 718.0 ft	@		@	
Casing - Logger		733.0 ft					
Bit Size		7.875 in		@		@	
Type Fluid in Hole		WATER BASED MUD					
Density	Viscosity	9.5 ppg	61.00 s/qt				
PH	Fluid Loss	8.00 pH	7.2 cptm				
Source of Sample		MUD CELL					
Rm @ Meas. Temperature		1.370 ohmm	@ 99.96 degF	@		@	
Rmf @ Meas. Temperature		1.58 ohmm	@ 75.00 degF	@		@	
Rmc @ Meas. Temperature		1.517 ohmm	@ 75.00 degF	@		@	
Source Rmf	Rmc	CHART	CHART				
Rm @ BHT		0.68 ohmm	@ 209.0 degF	@		@	
Time Since Circulation		8.5 hr					
Time on Bottom		10-Jun-13 02:23					
Max. Rec. Temperature		209.0 degF	@ 7626.0 ft	@		@	
Equipment	Location	11454566	BRIGHTON				
Recorded By		J. SCHMIDT					
Witnessed By		C. WEITZEL					

Fold here

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

Service Ticket No.: API Serial No.: 05123375040000

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

Date	Sample No.							
Depth-Driller								
Type Fluid in Hole								
Density	Viscosity							
Ph	Fluid Loss							
Source of Sample								
Rm @ Meas. Temp		@	@	@		@	@	@
Rmf @ Meas. Temp.		@	@	@		@	@	@
Rmc @ Meas. Temp.		@	@	@		@	@	@
Source Rmf	Rmc							
Rm @ BHT		@	@	@		@	@	@
Rmf @ BHT		@	@	@		@	@	@
Rmc @ BHT		@	@	@		@	@	@

RESISTIVITY SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA

Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.		Run No.	ONE	Run No.	ONE
Serial No.	11812882	Serial No.		Serial No.	11107335	Serial No.	11301132
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.	GTET	Spacing		Log Type	GAM-GAM	Log Type	NEU-NEU
Type	SCINT			Source Type	Cs-137	Source Type	Am241Be
Length	8"	LSA [Y/N]		Serial No.	5471GW	Serial No.	DSN 434
Distance to Source	17'	FWDA [Y/N]		Strength	1.5 Ci	Strength	15 Ci

LOGGING DATA

GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	TD	7470	REC	0	200				20	0	2.68	20	0	SAND
ONE	7470	7160	REC	0	200				20	0	2.71	20	0	LIME
ONE	7160	CSG	REC	0	200				20	0	2.68	20	0.	SAND

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@

Remarks: RWCH/GTET/DSNT/SDLT/ACRT RAN IN COMBINATION
TENSION PULLS, WASHOUTS, AND BOREHOLE RUGOSITY CAN AFFECT TOOL RESPONSE
ANNULAR HOLE VOLUME CALCULATED FOR 4.5-INCH CASING
DSNT DECENTRALIZER NOT RUN AT CUSTOMER REQUEST
SP DEFLECTION AT 1630' DUE TO SPLICED DATA

YOUR CREW: K. PRIEST, J. BYRGE RIG: ENSIGN 7

THANK YOU FOR USING HALLIBURTON ENERGY SERVICES - BRIGHTON, CO - (303) 825-4346

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					
	DSNT	NLIT	Neutron Lithology	Sandstone	
	SDLT Pad	DMA	Formation Density Matrix	2.680	g/cc
7160.00					
	SHARED	TD	Total Well Depth	7626.00	ft
	SHARED	BHT	Bottom Hole Temperature	209.0	degF
	DSNT	NLIT	Neutron Lithology	Limestone	
	SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
7470.00					
	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	9.500	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	0.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	1.370	ohmm
	SHARED	TRM	Temperature of Mud	99.9	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	7635.00	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	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	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.680	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 Upr	
ACRt Sonde	TPOS	Tool Position	Eccentered	
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: BOOTH 19-23\0001 TRIPLE_BLACK\005.01 10-Jun-13 04:12 Up **Date: 10-Jun-13 04:16:47**

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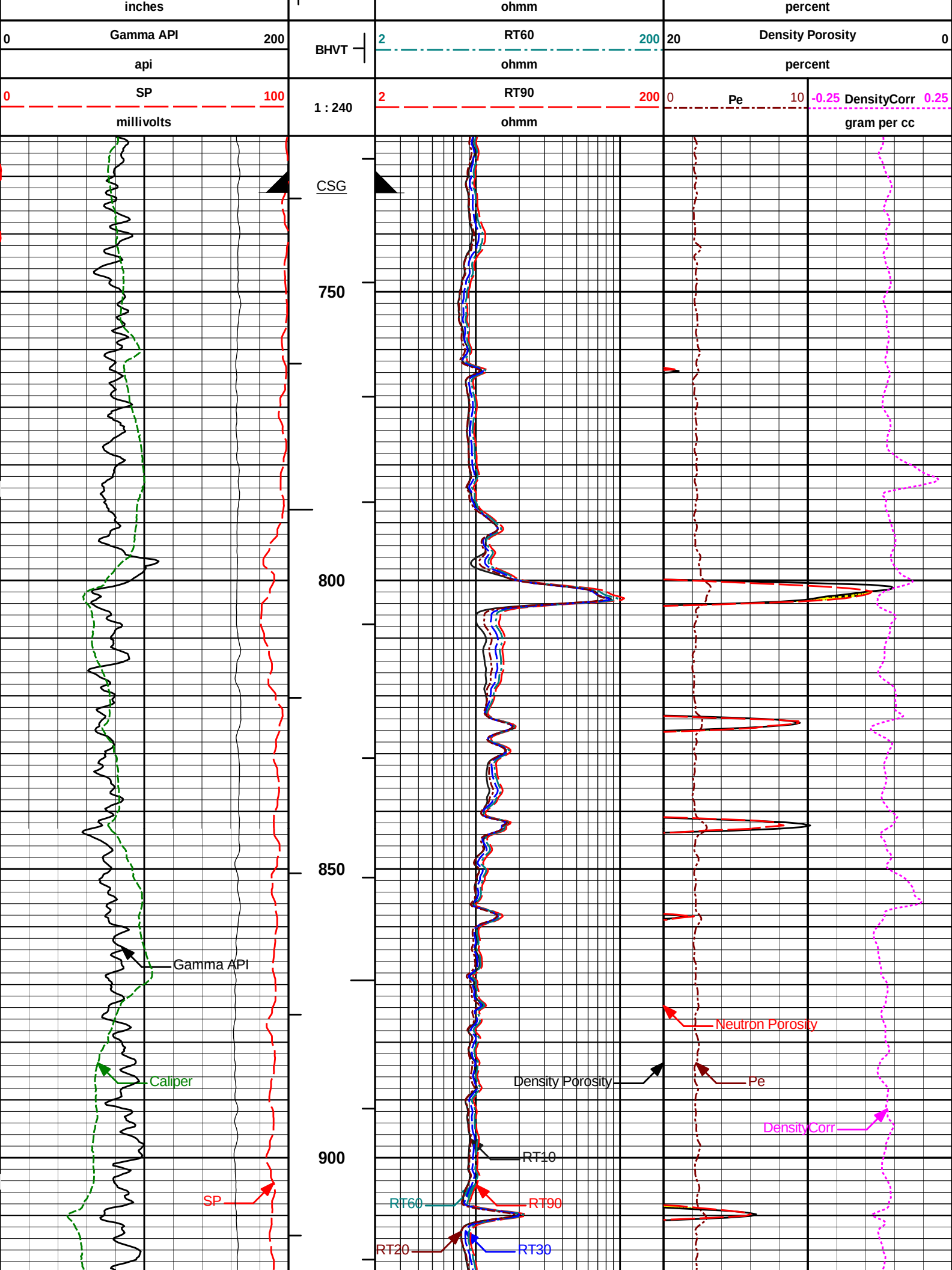
Plot Time: 10-Jun-13 05:07:50
Plot Range: 723 ft to 7643.92 ft
Data: BOOTH 19-23\Well Based\MAIN*
Plot File: \\COMP\MAIN

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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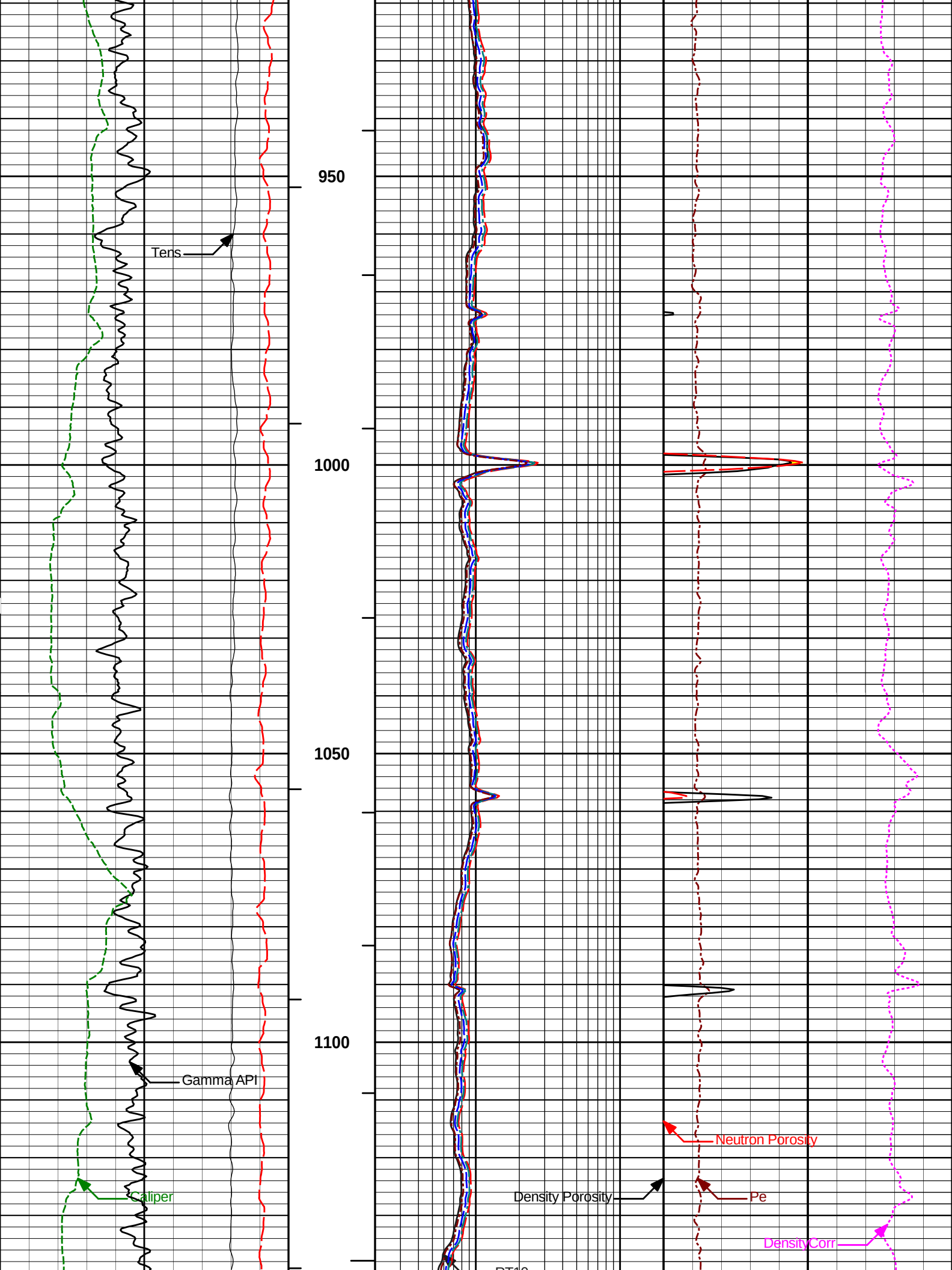
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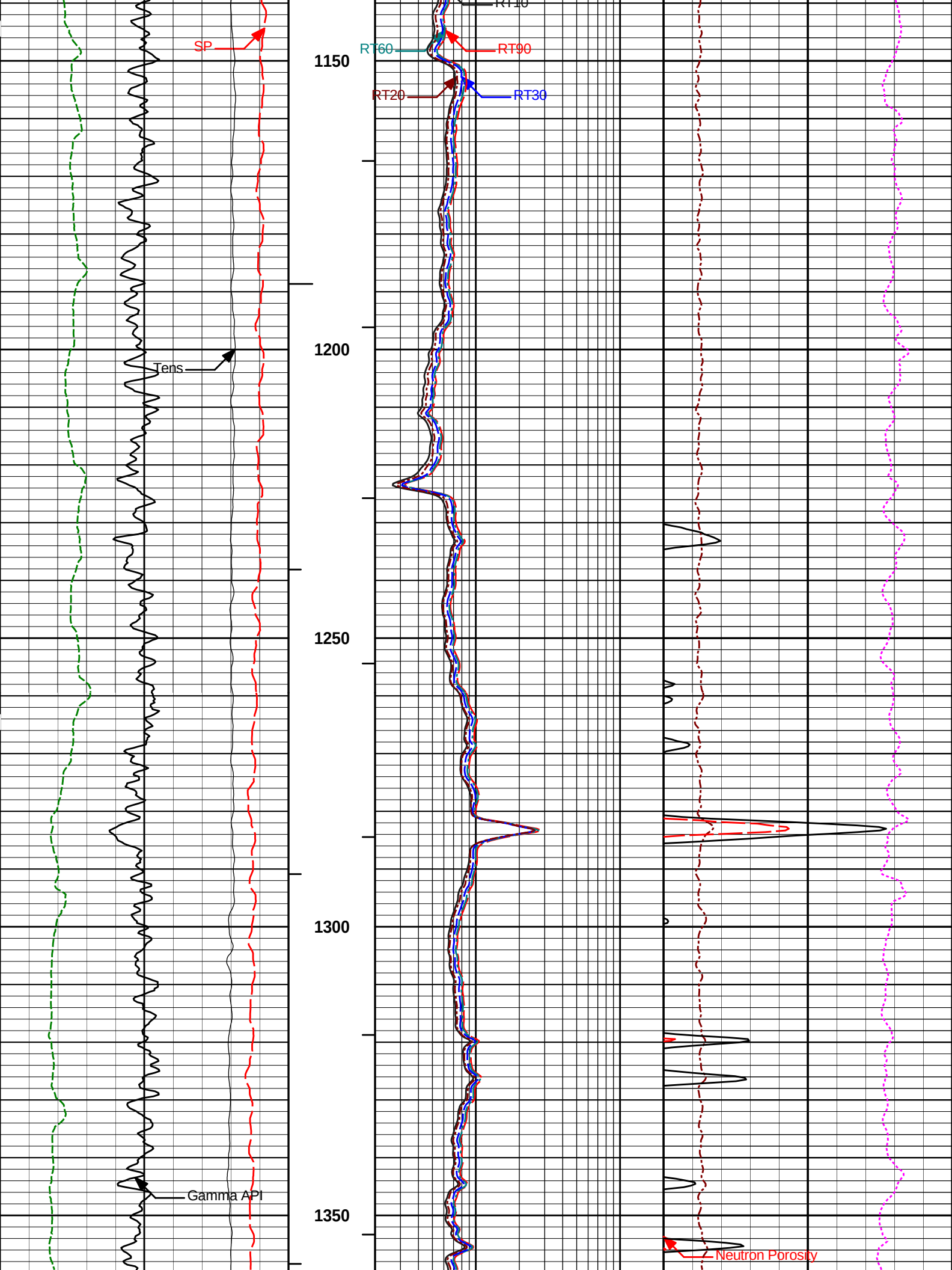
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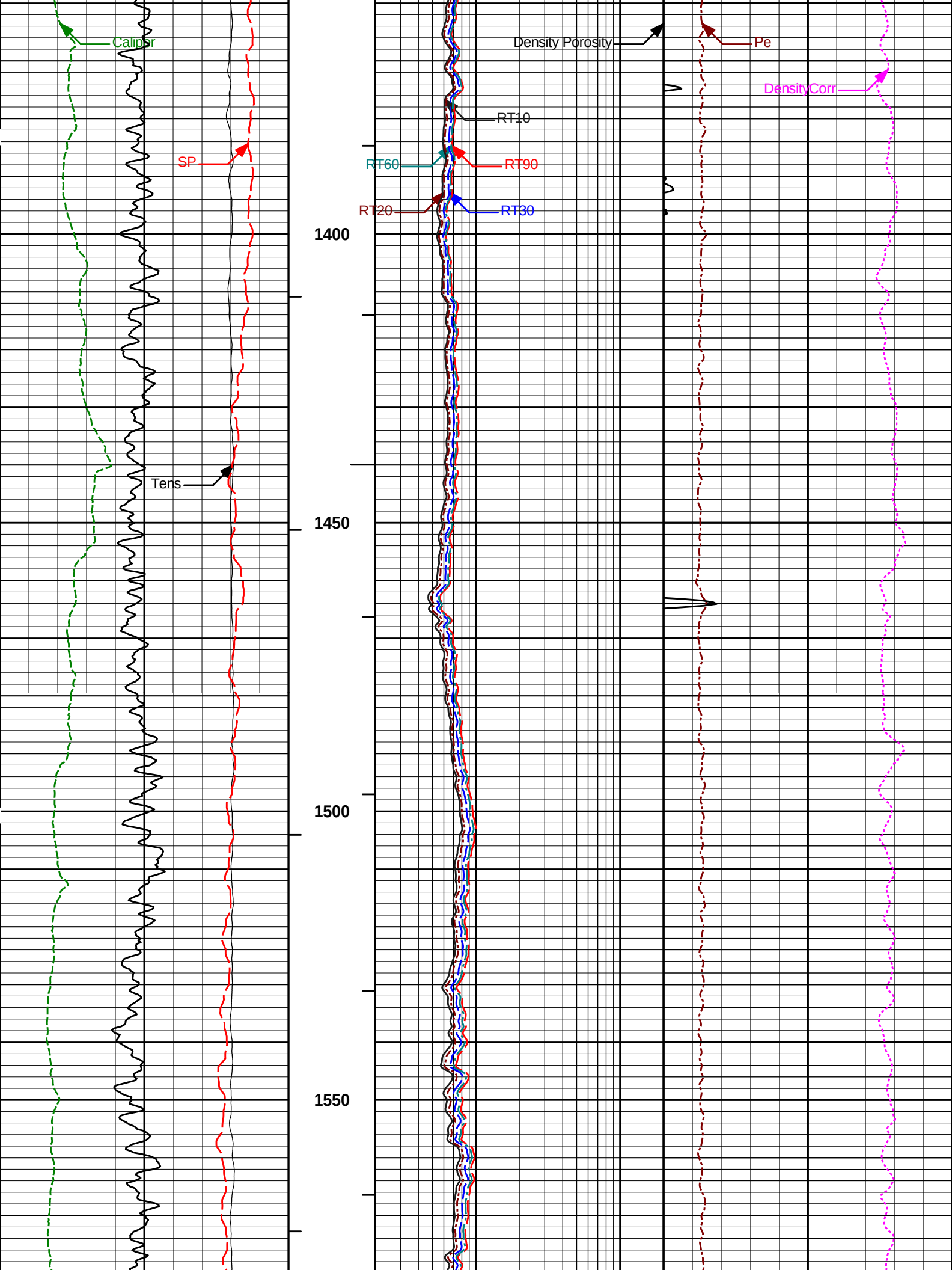
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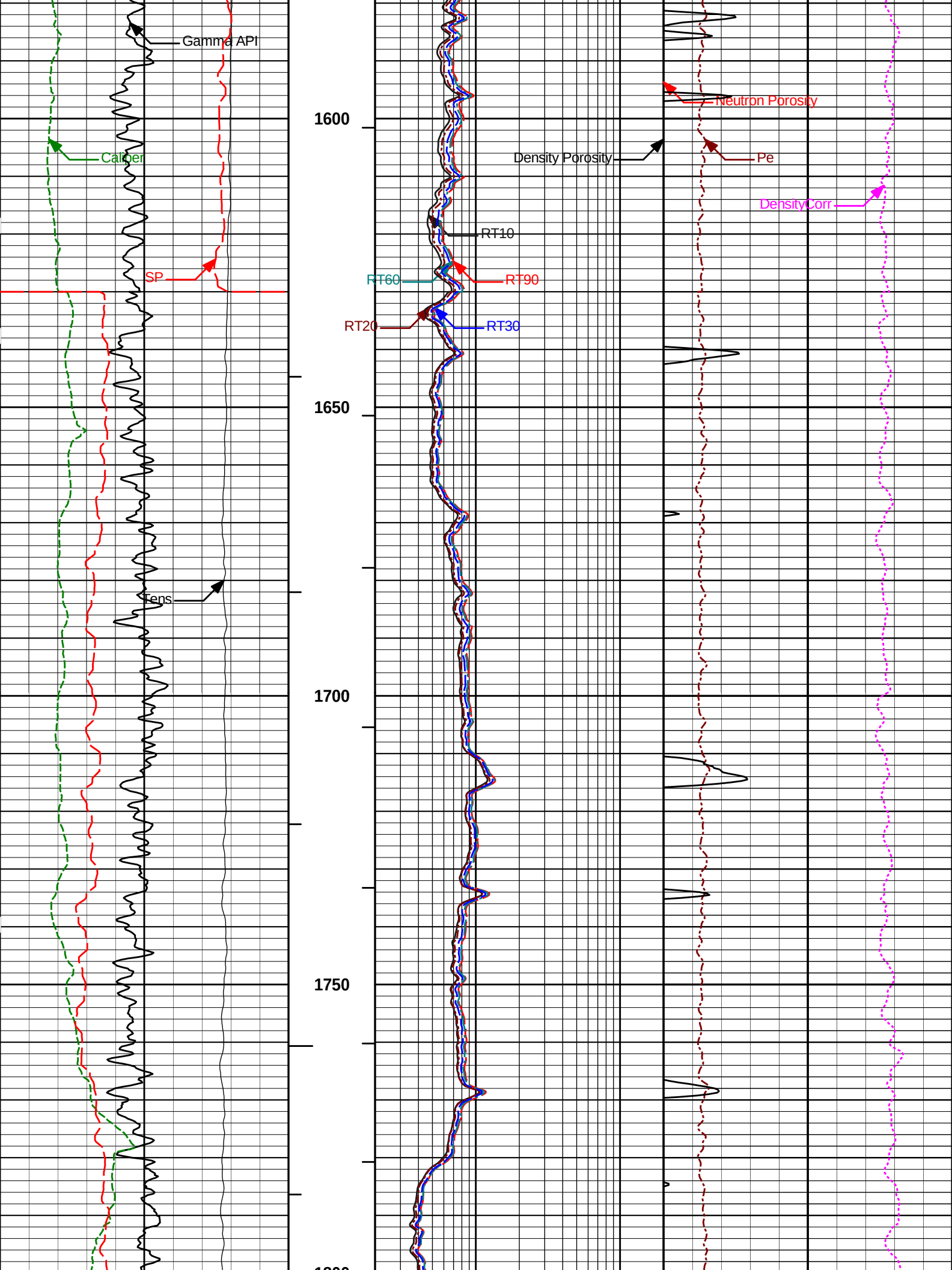
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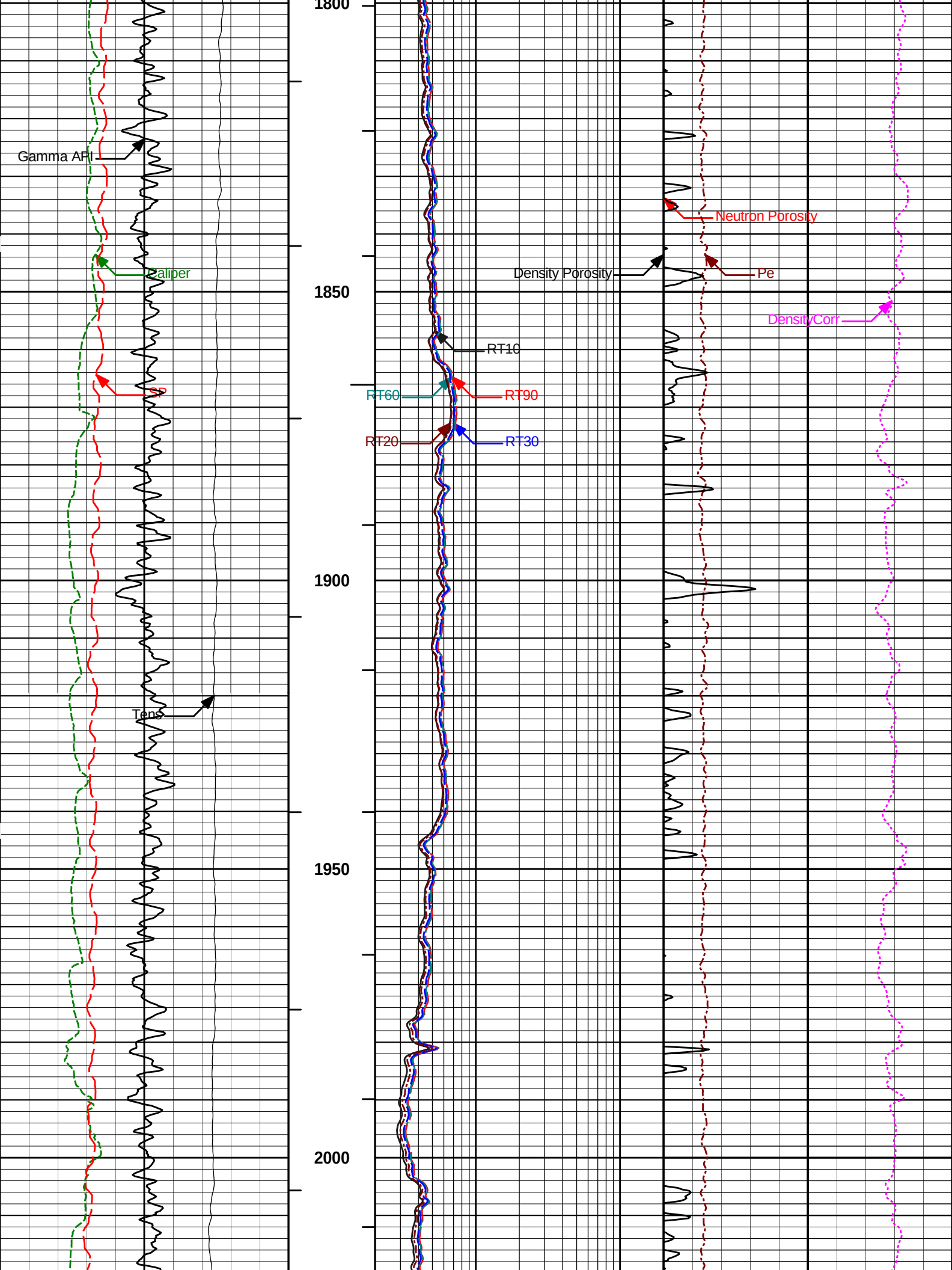
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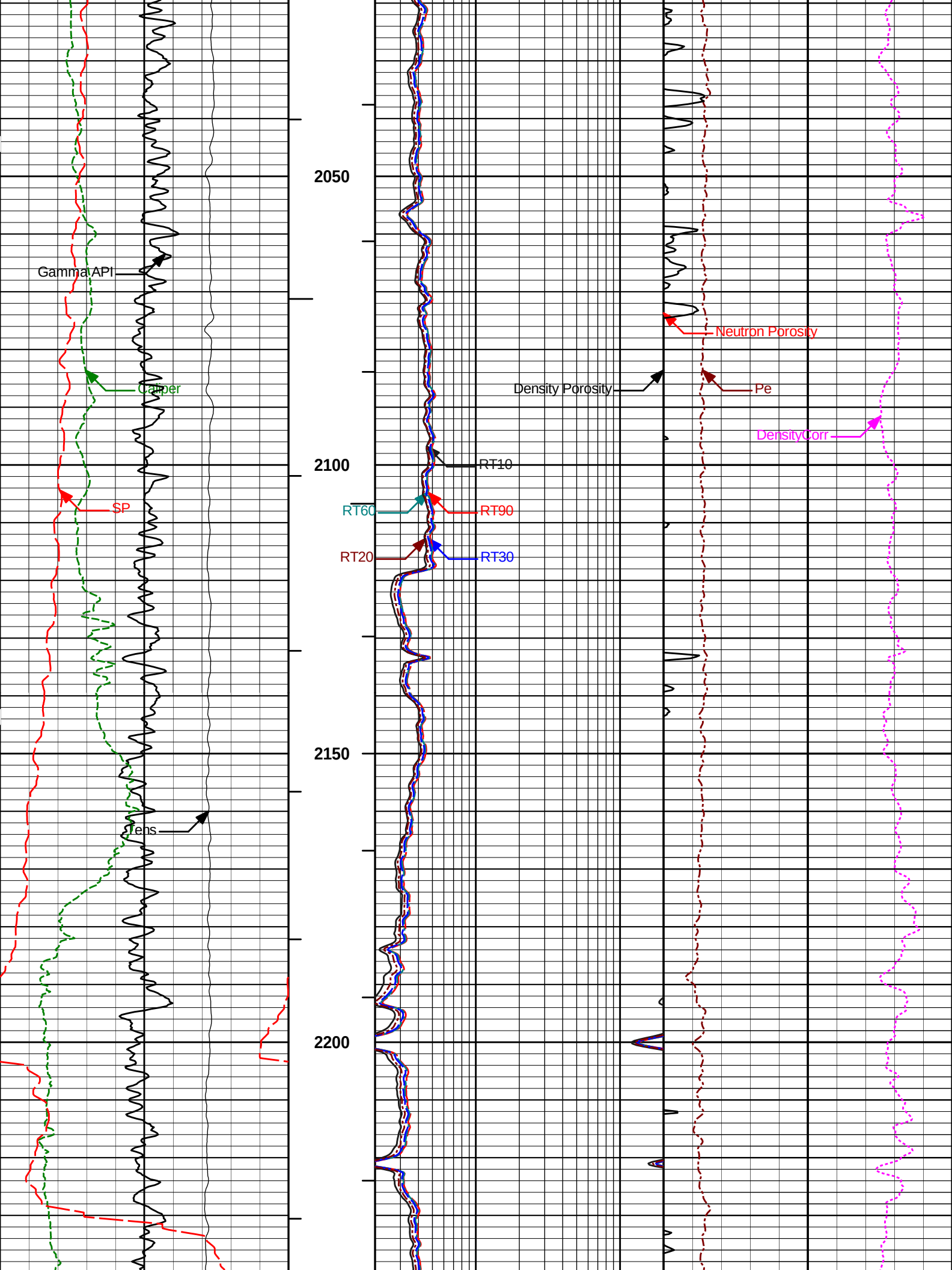
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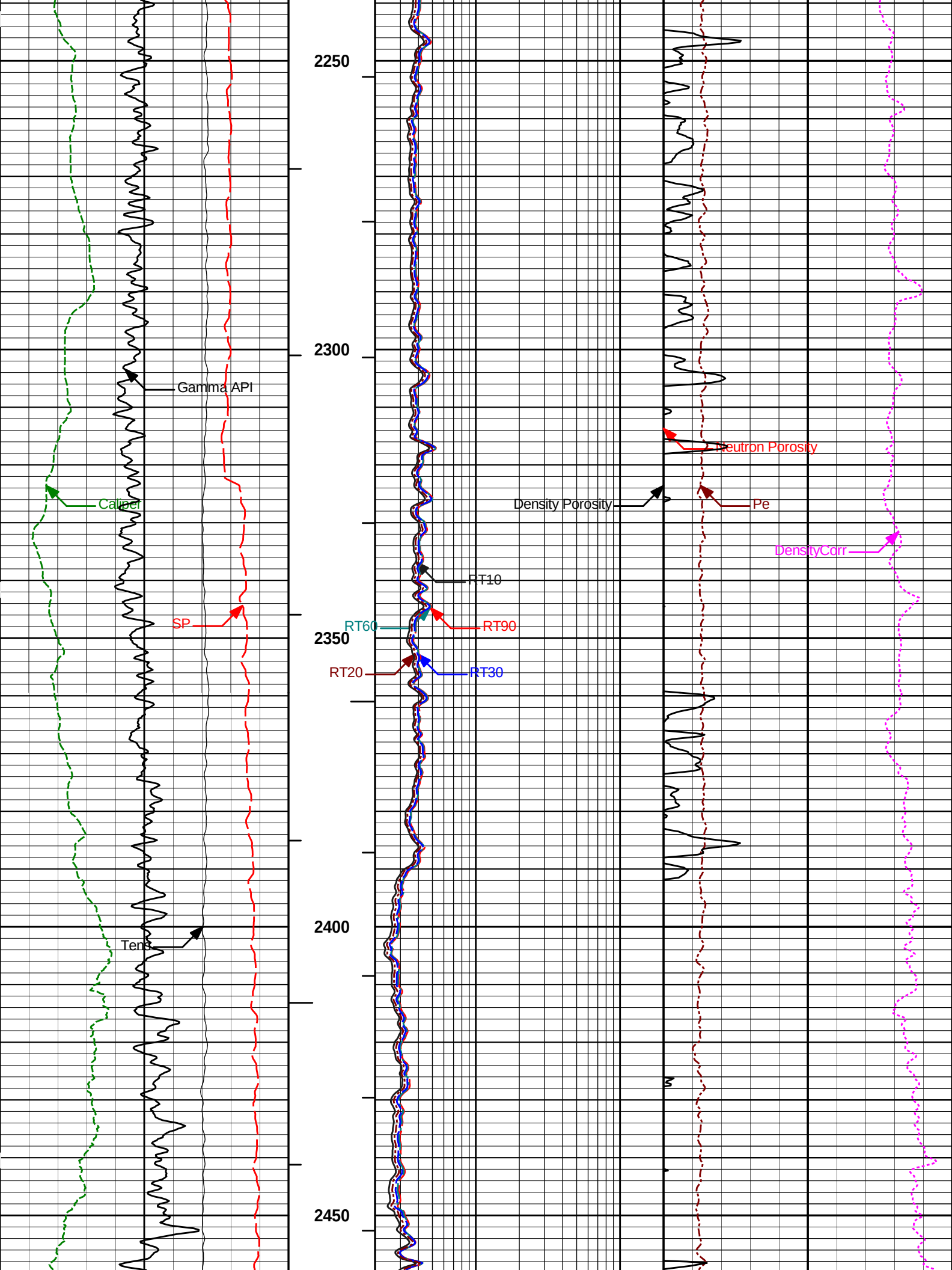
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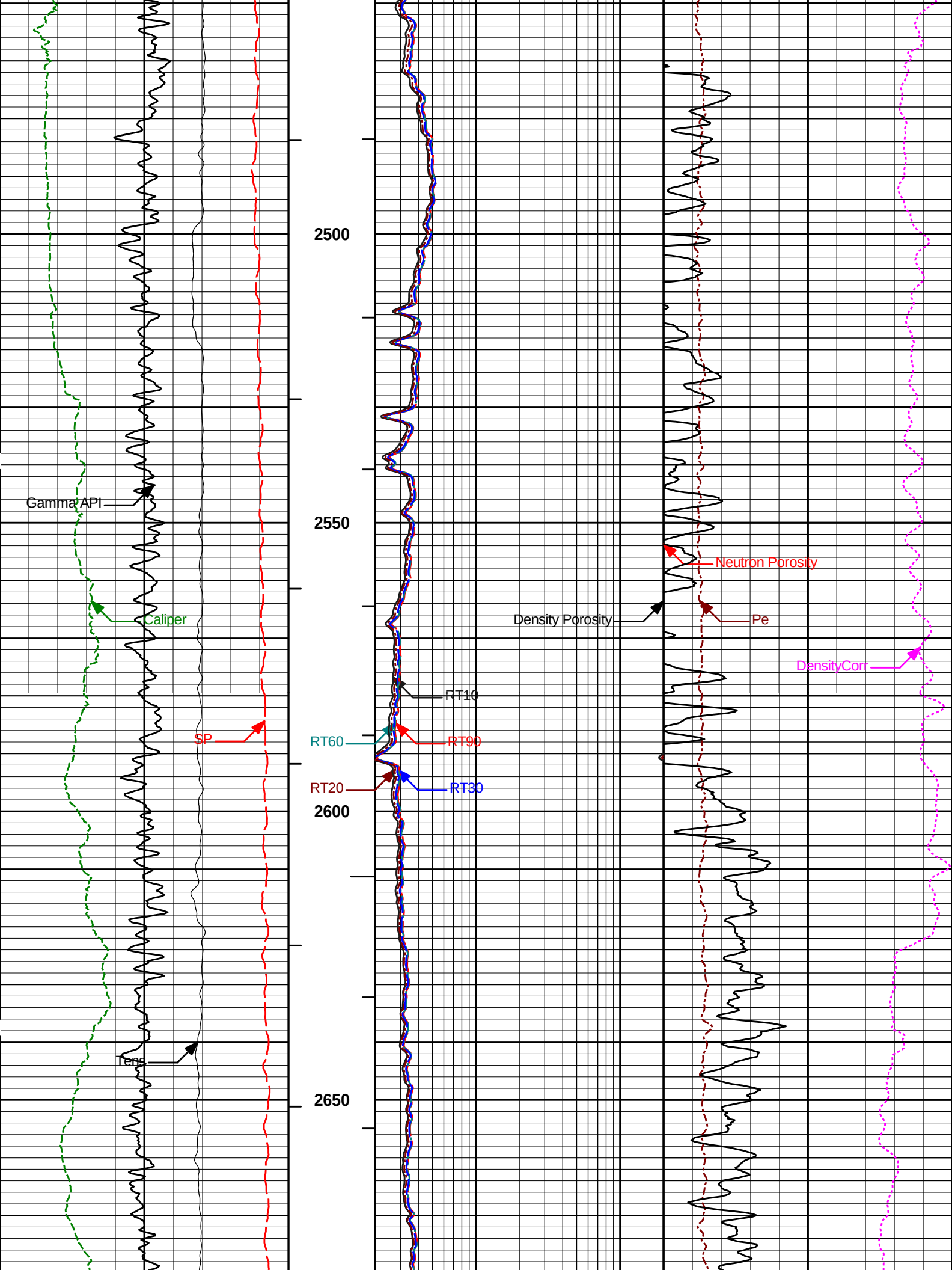
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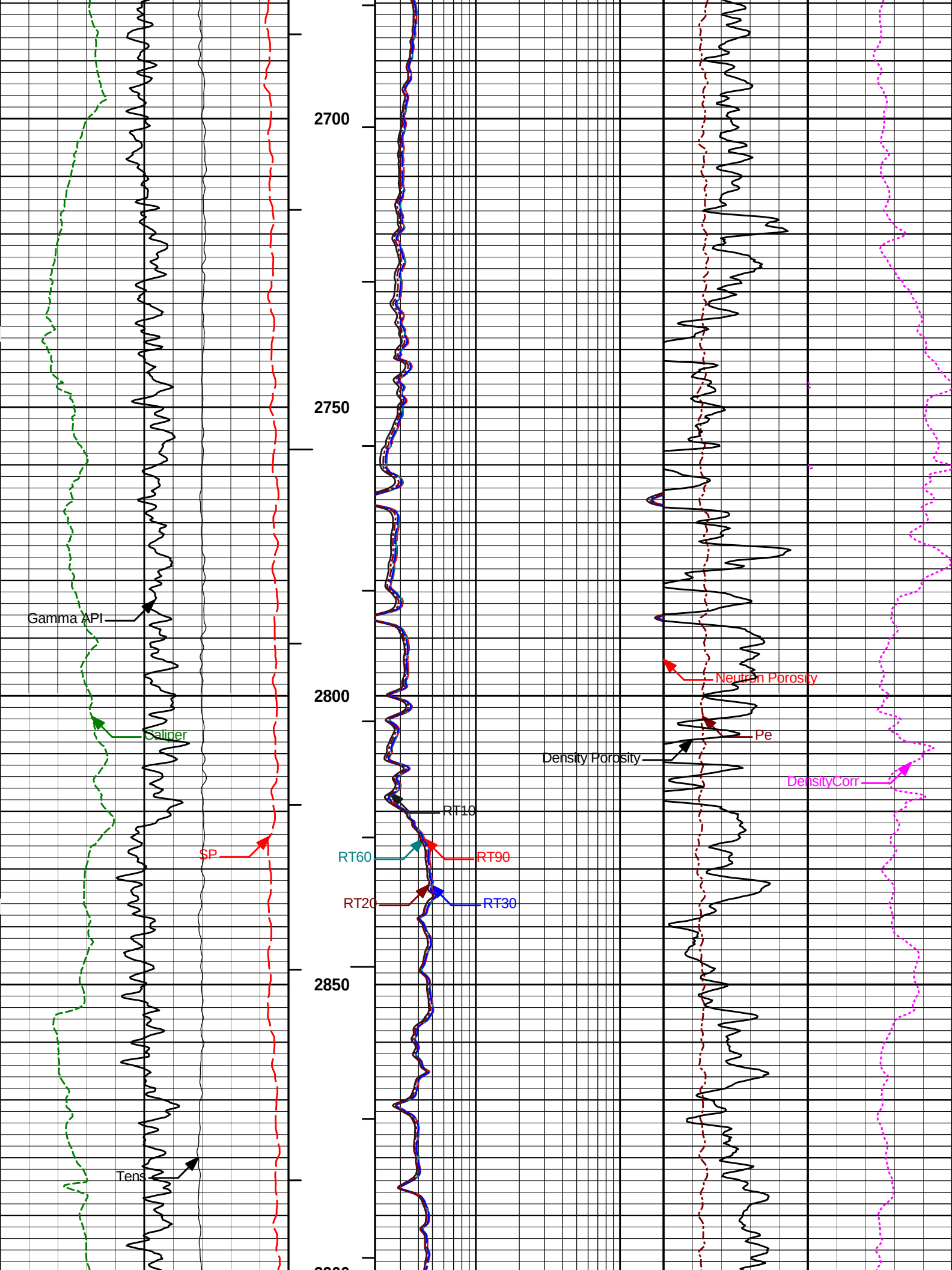
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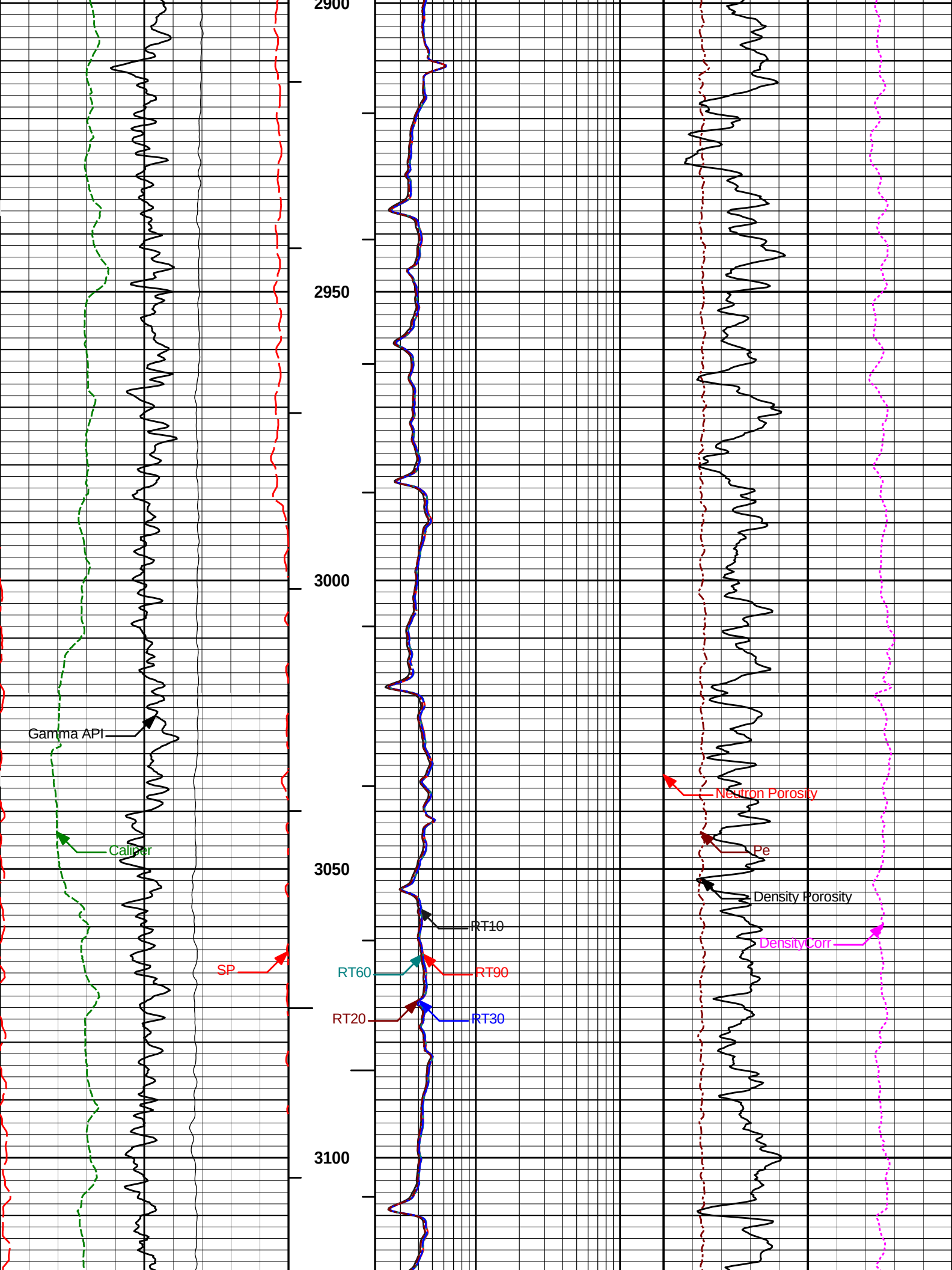
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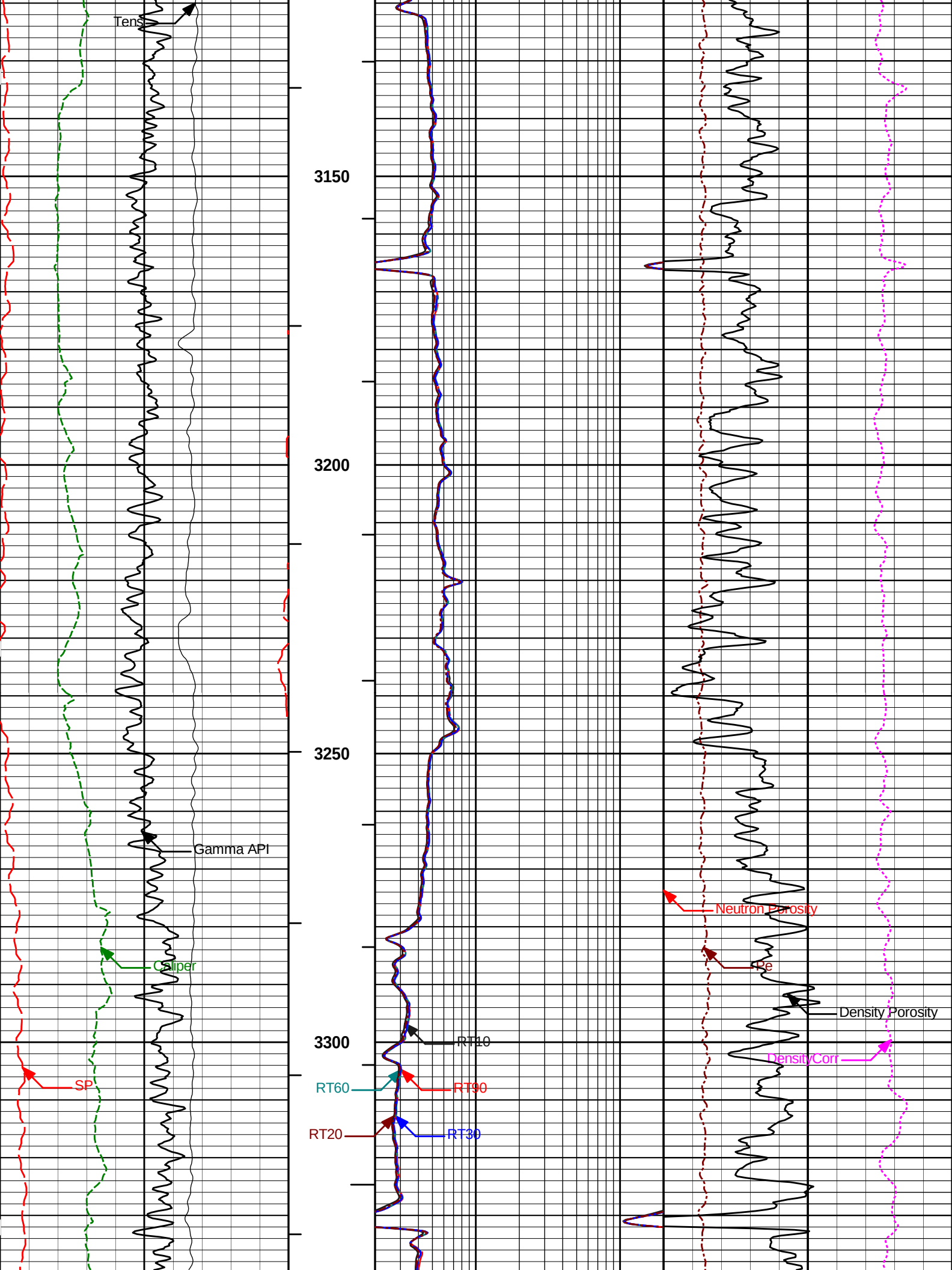
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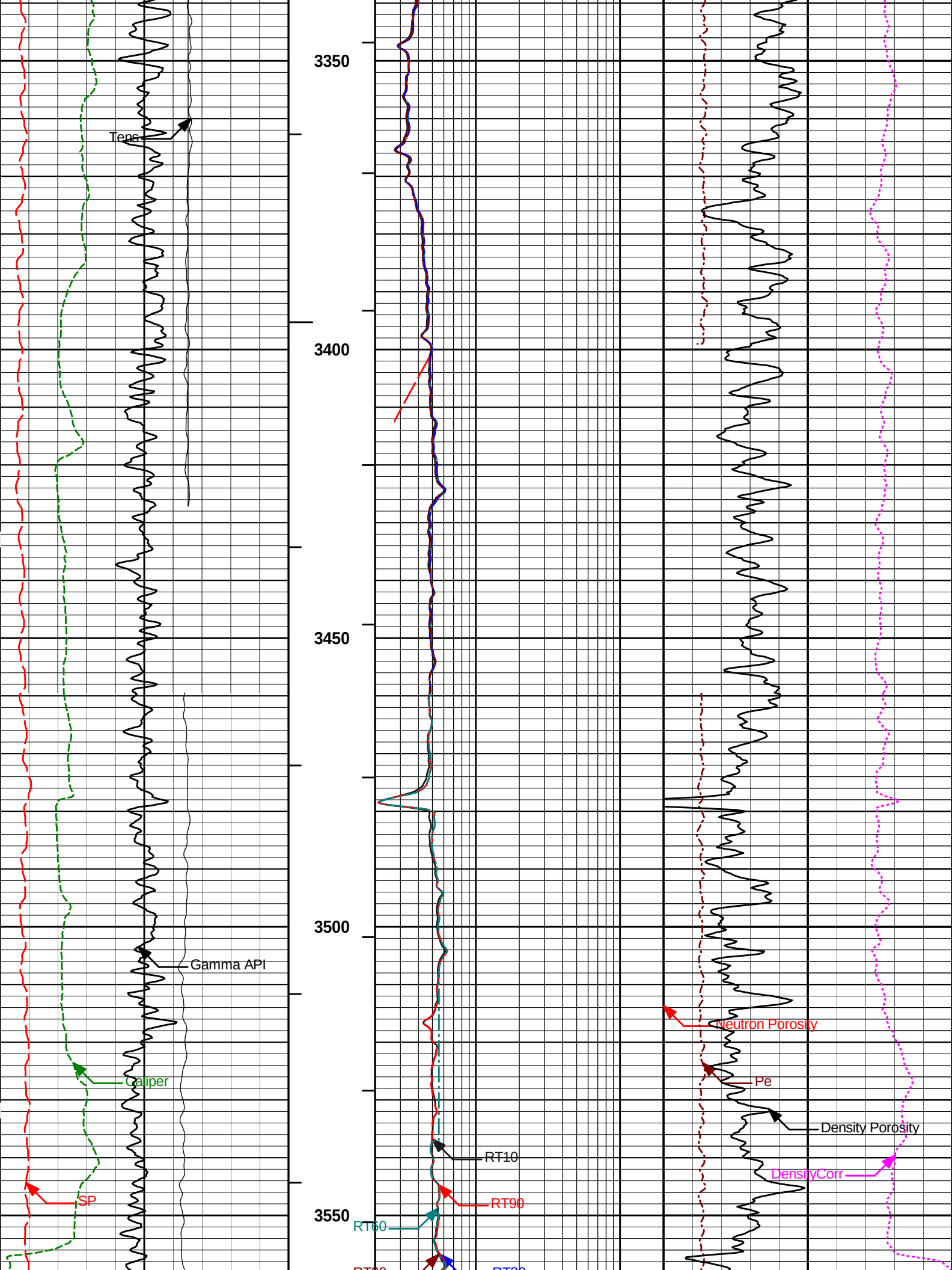
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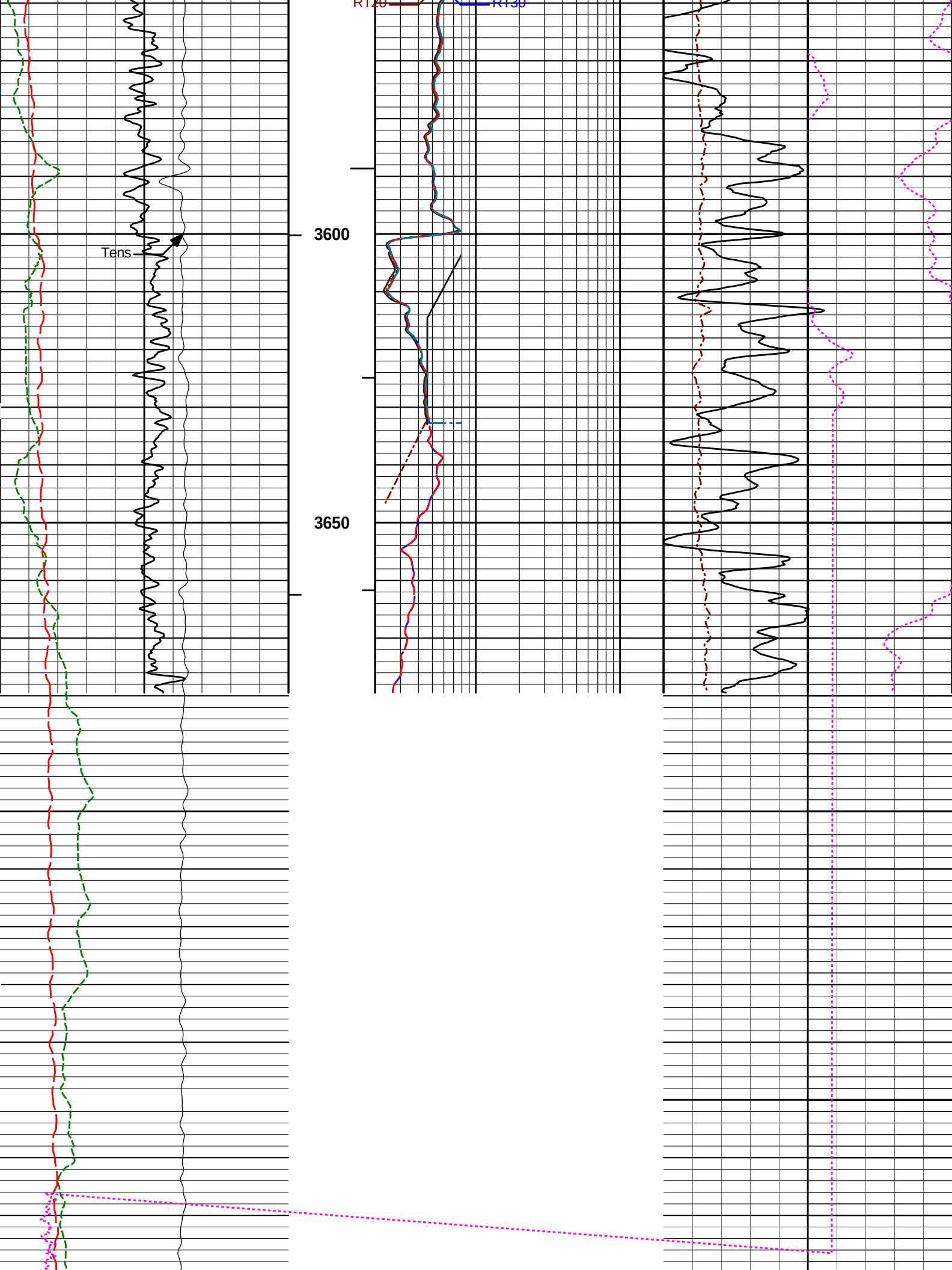
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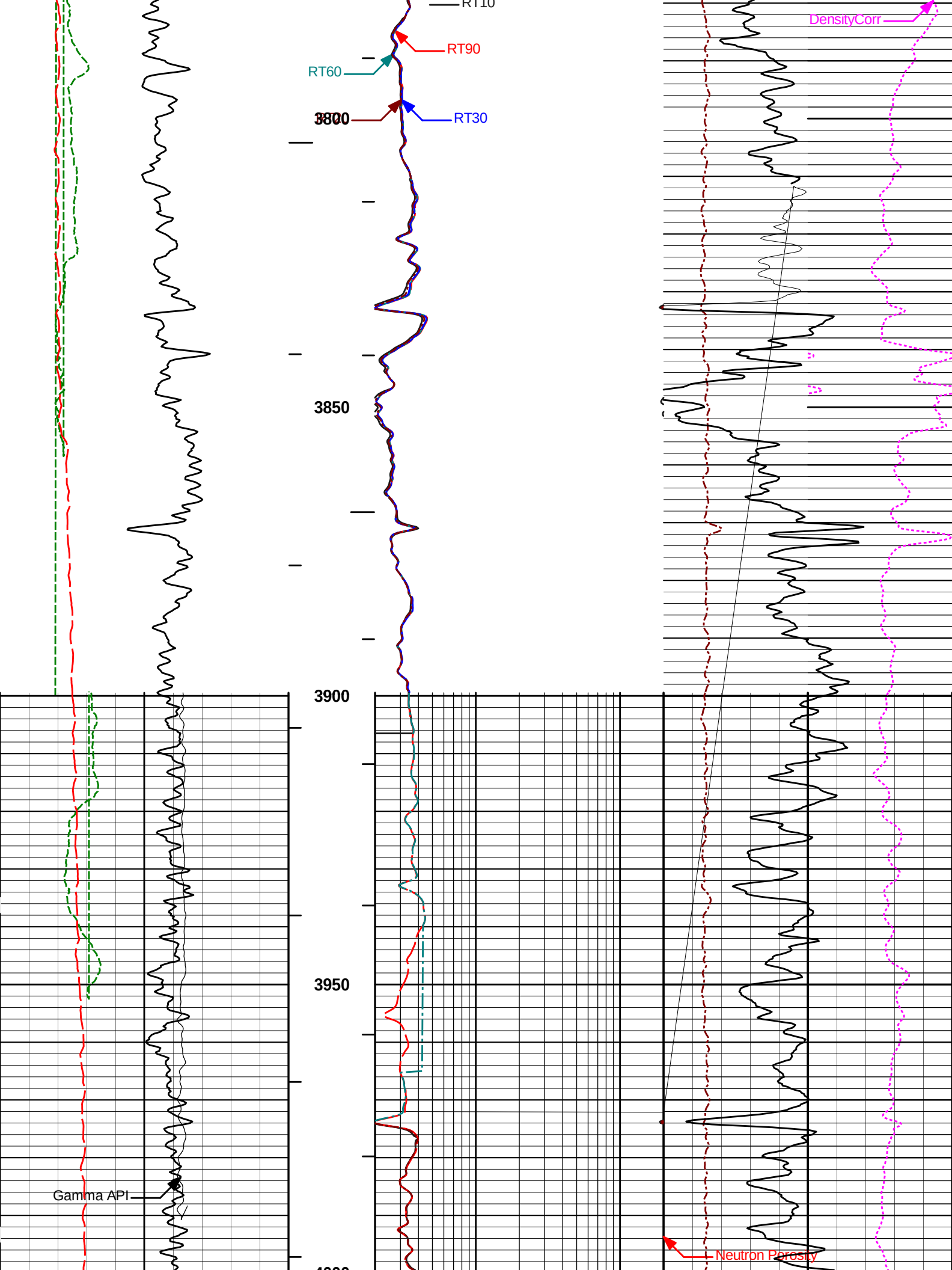
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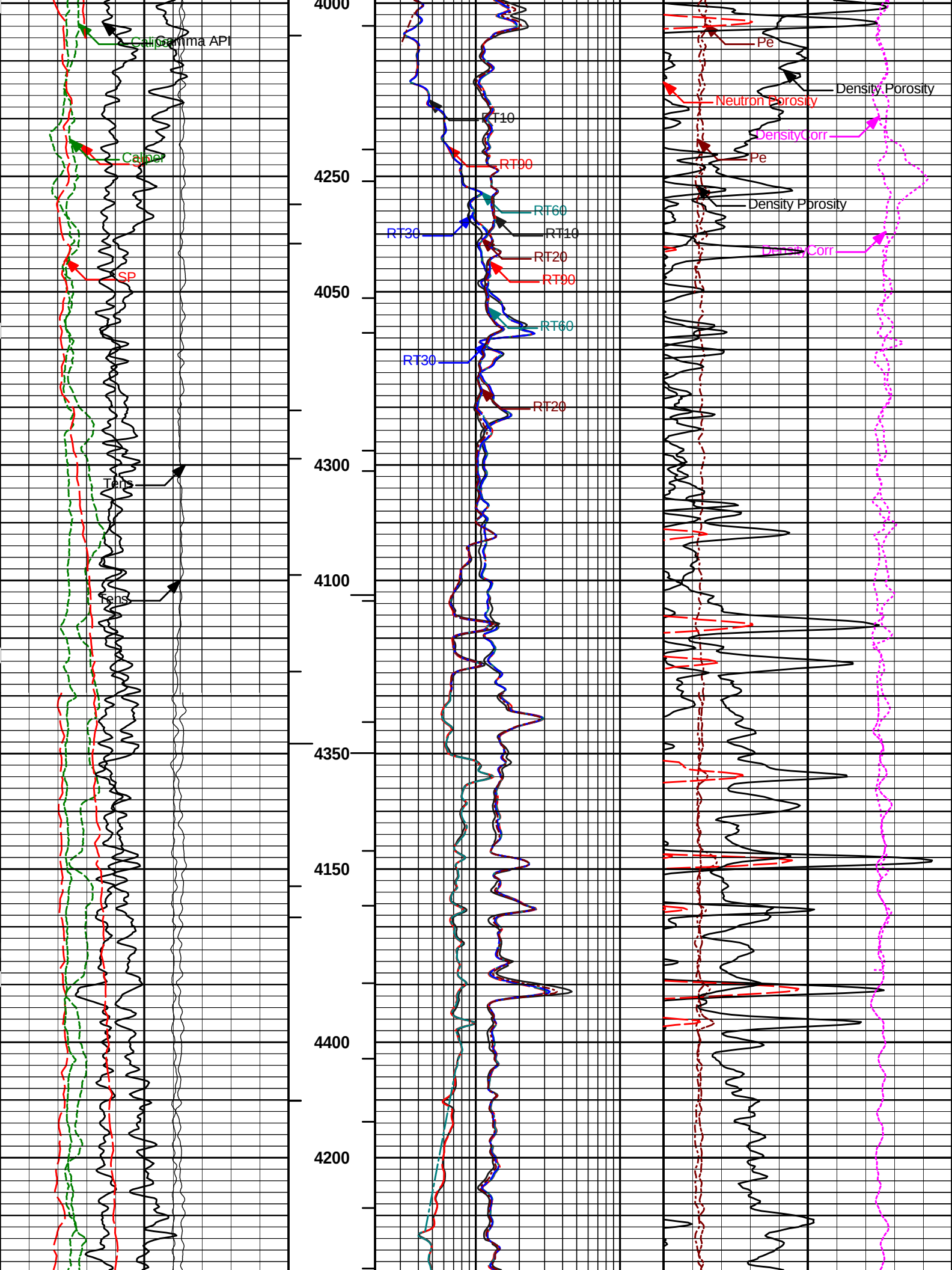
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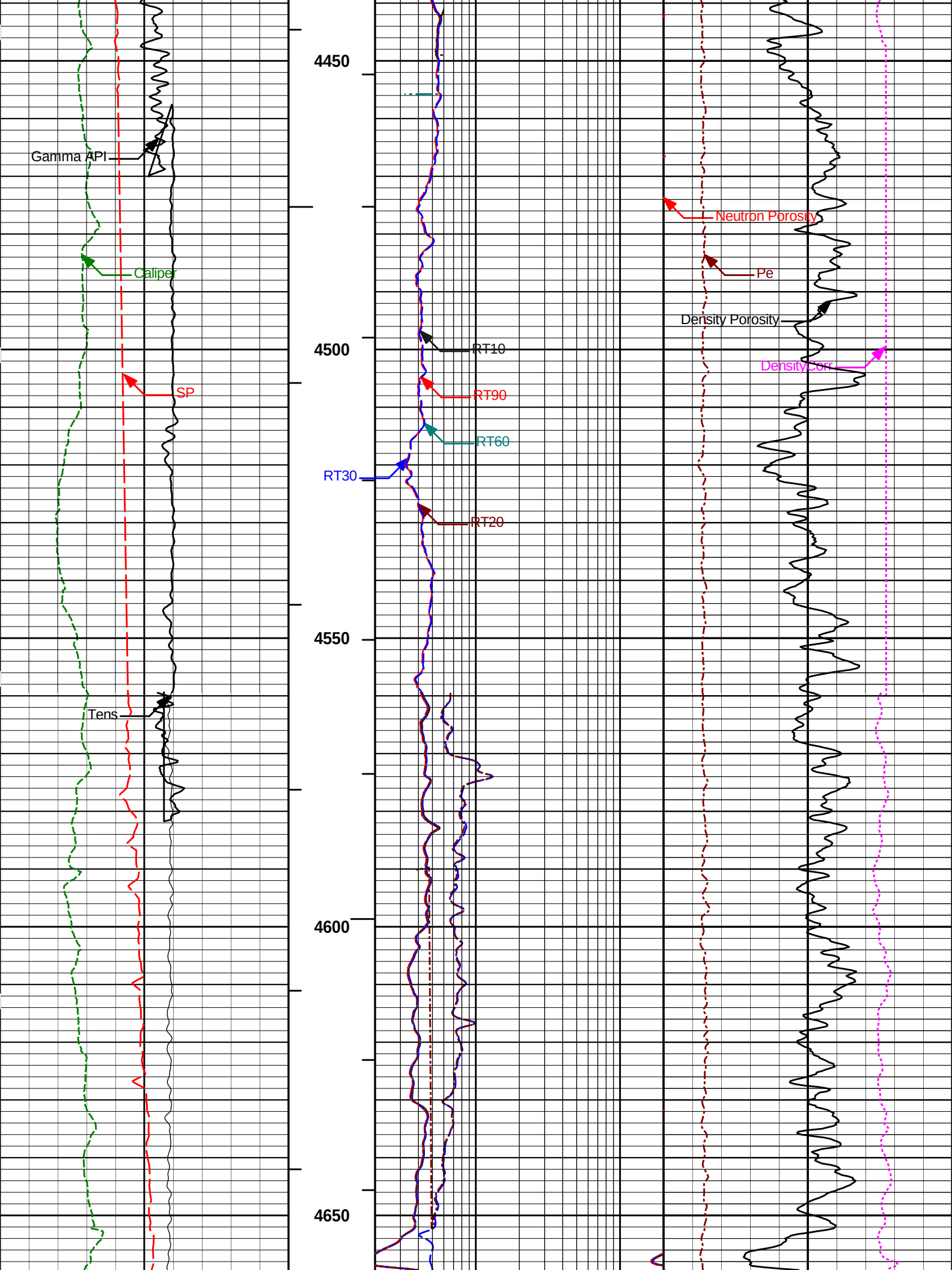
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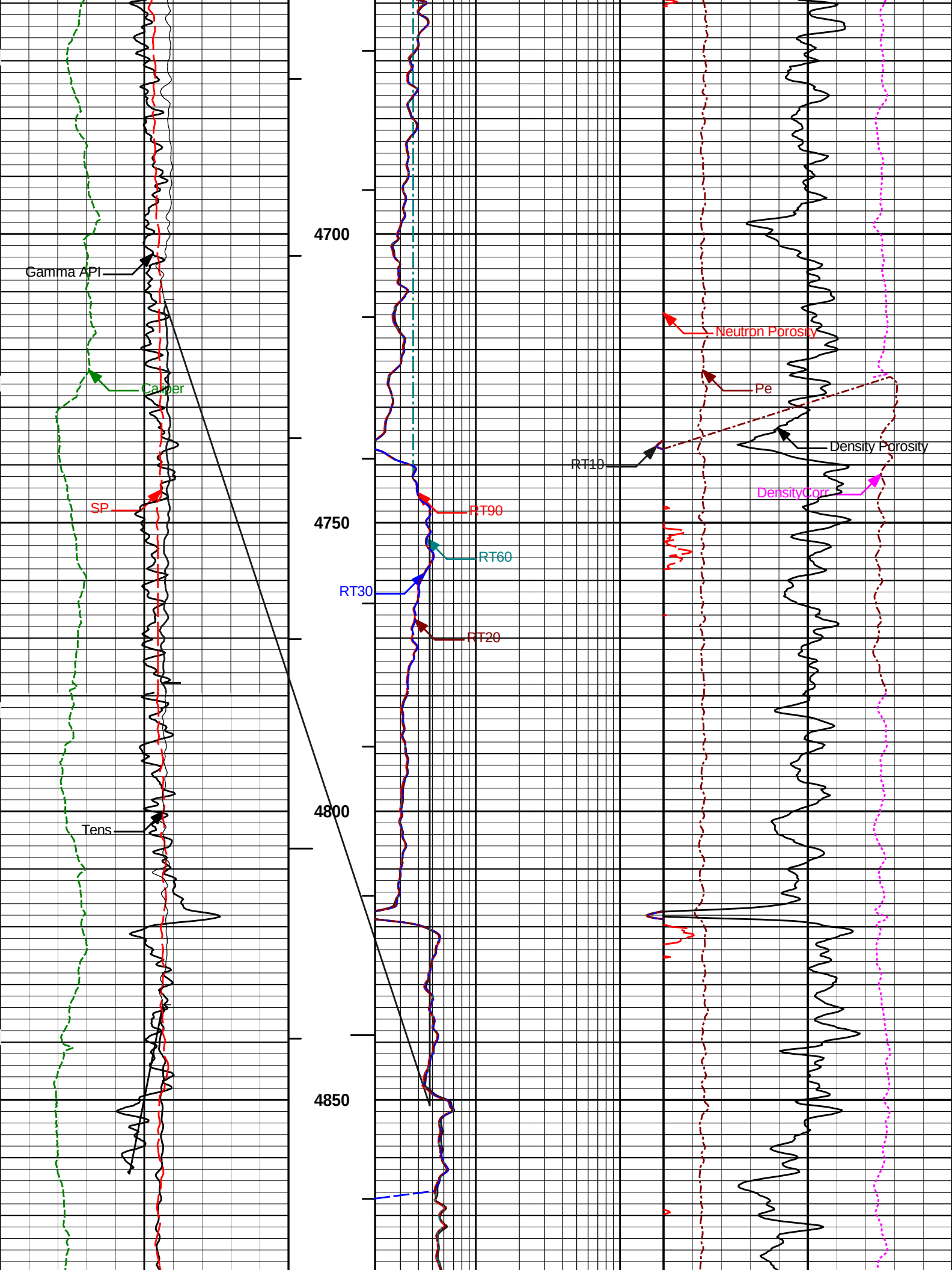
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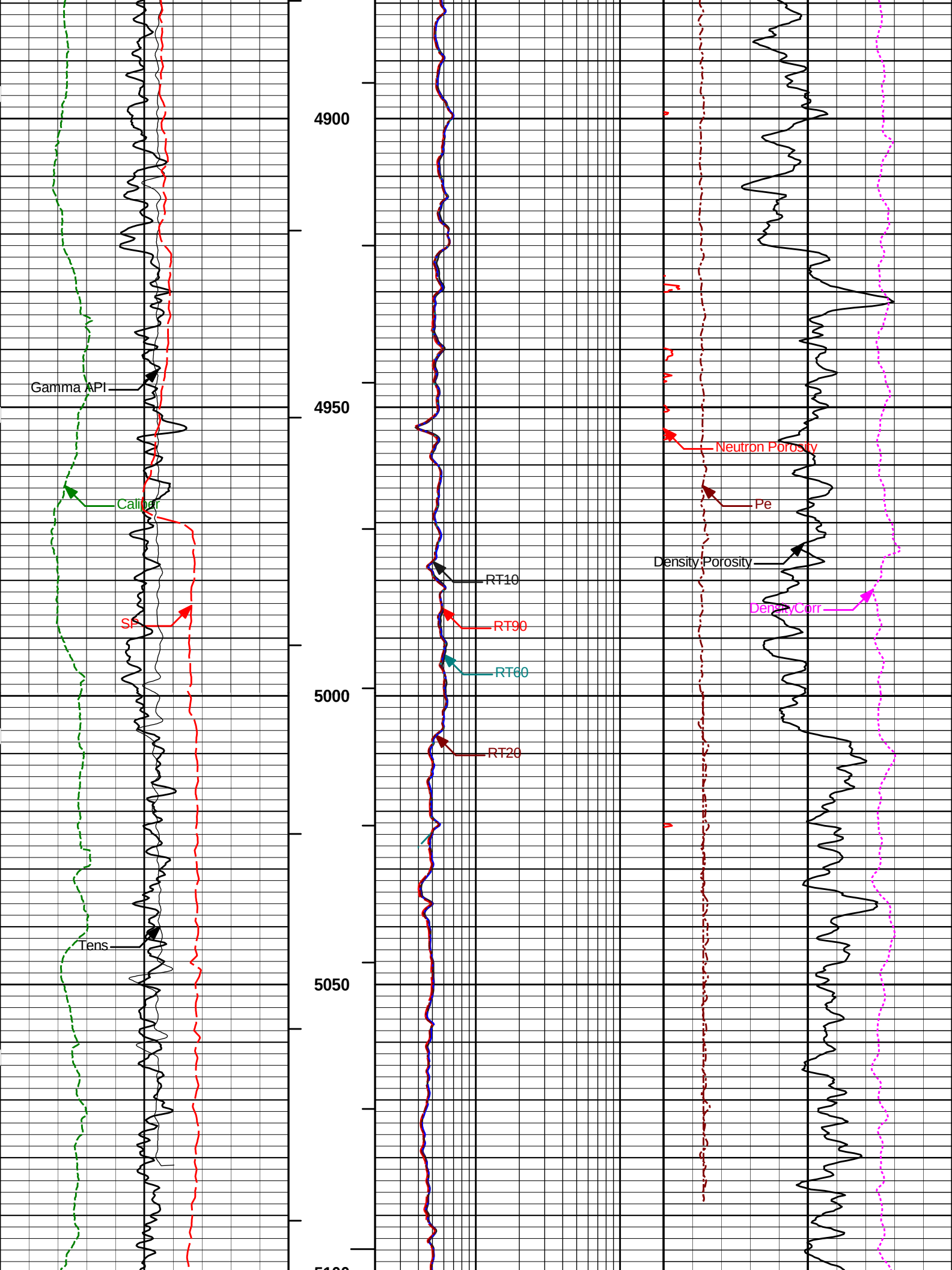
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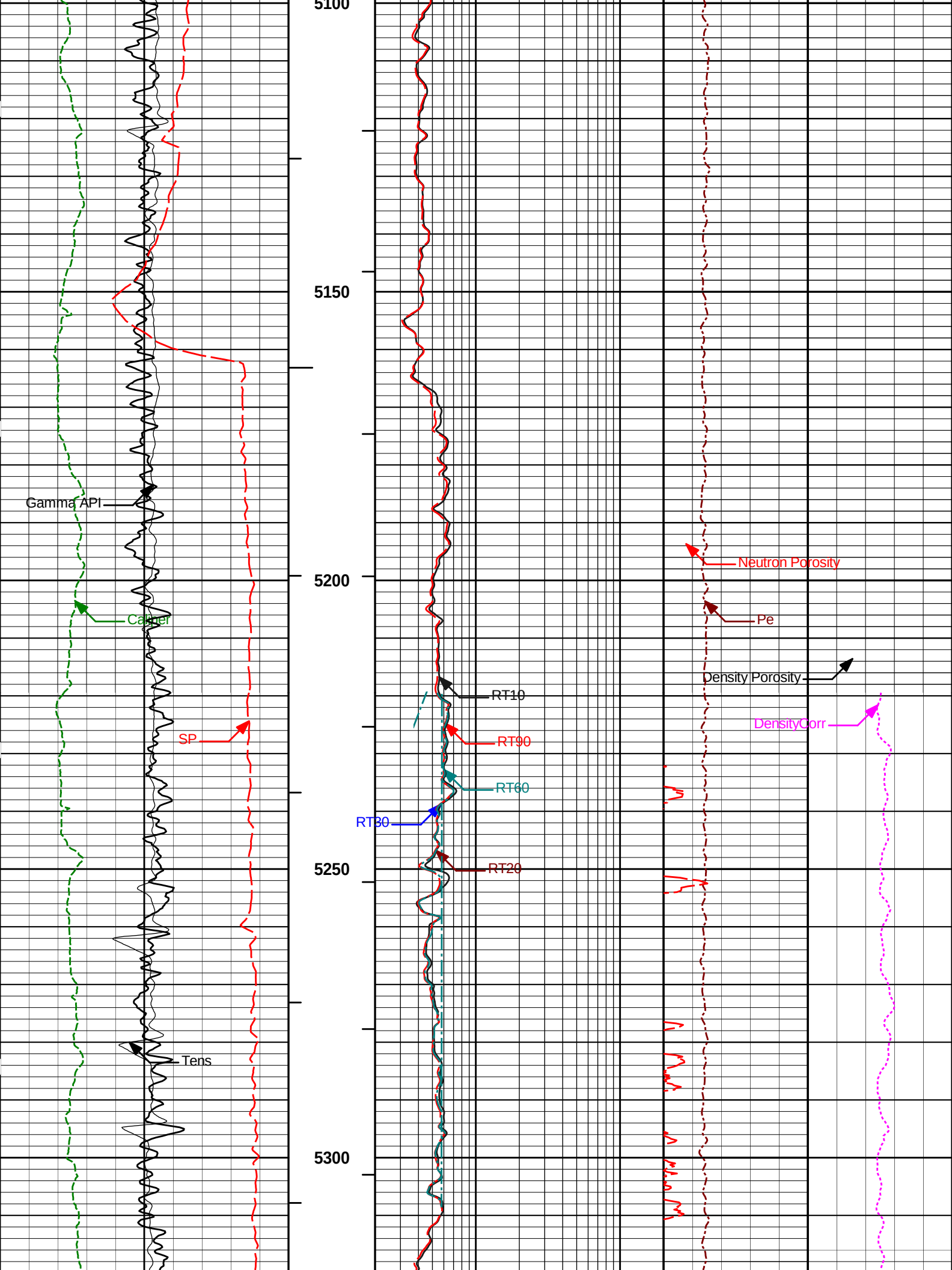
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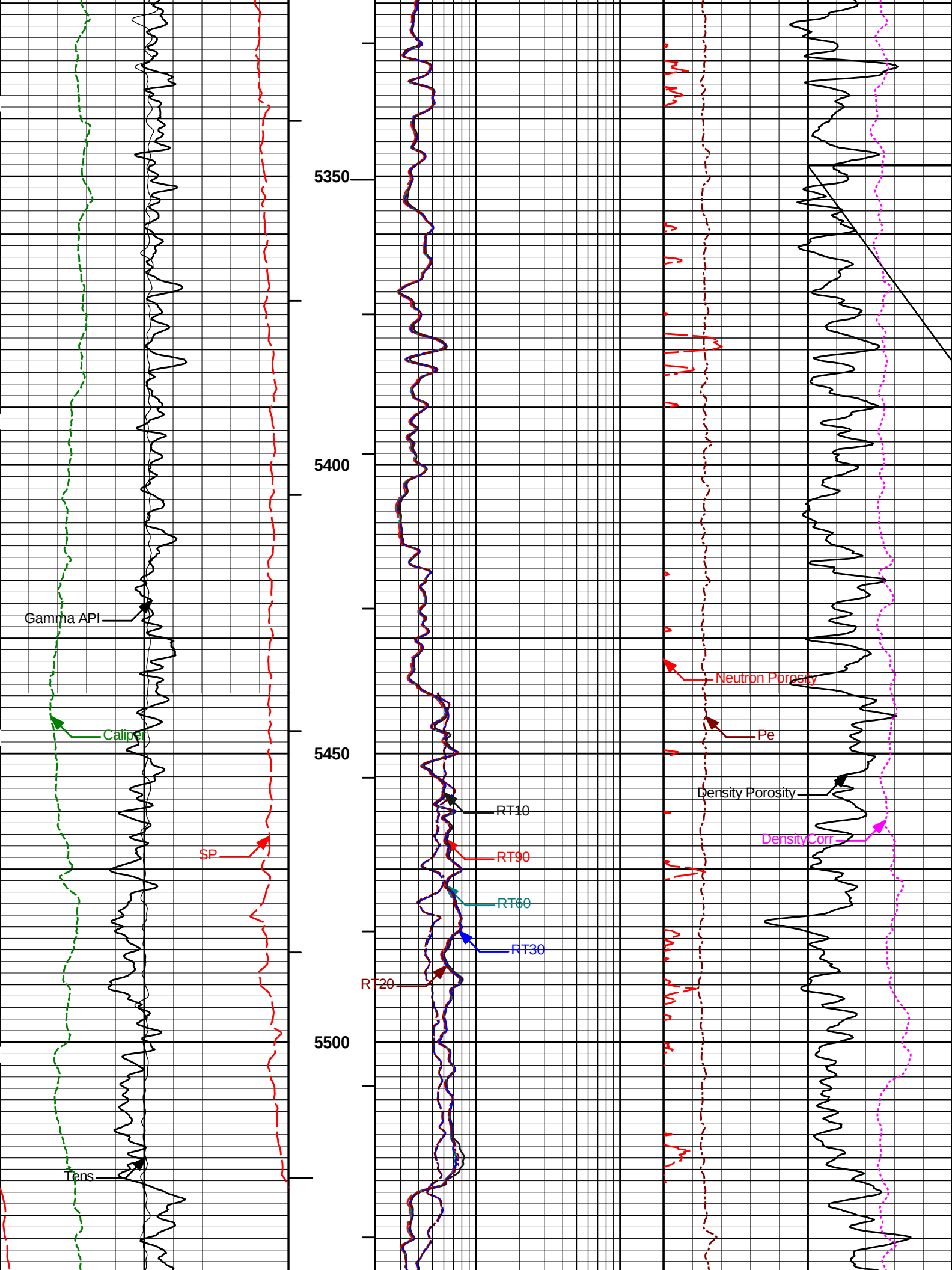
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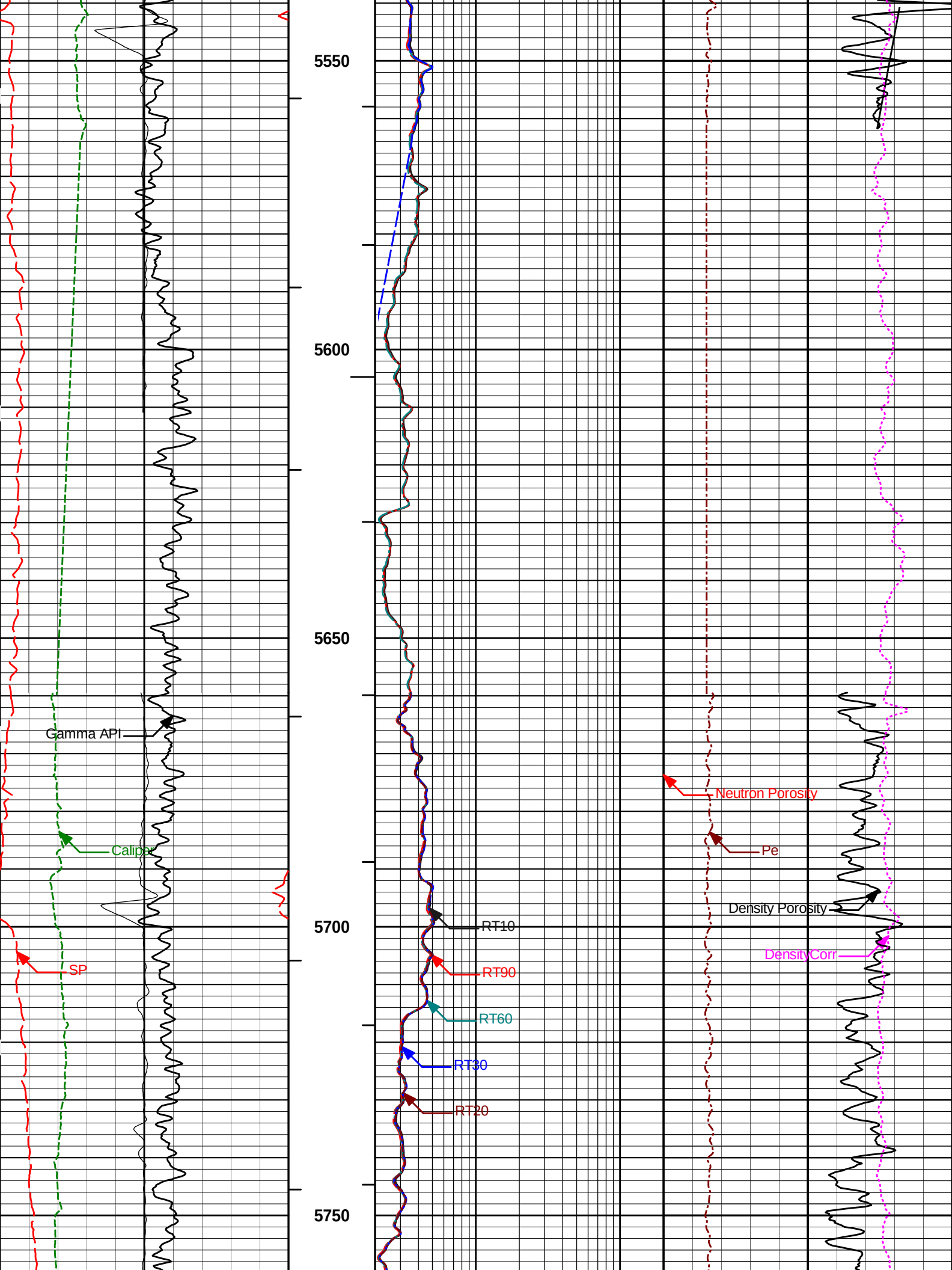
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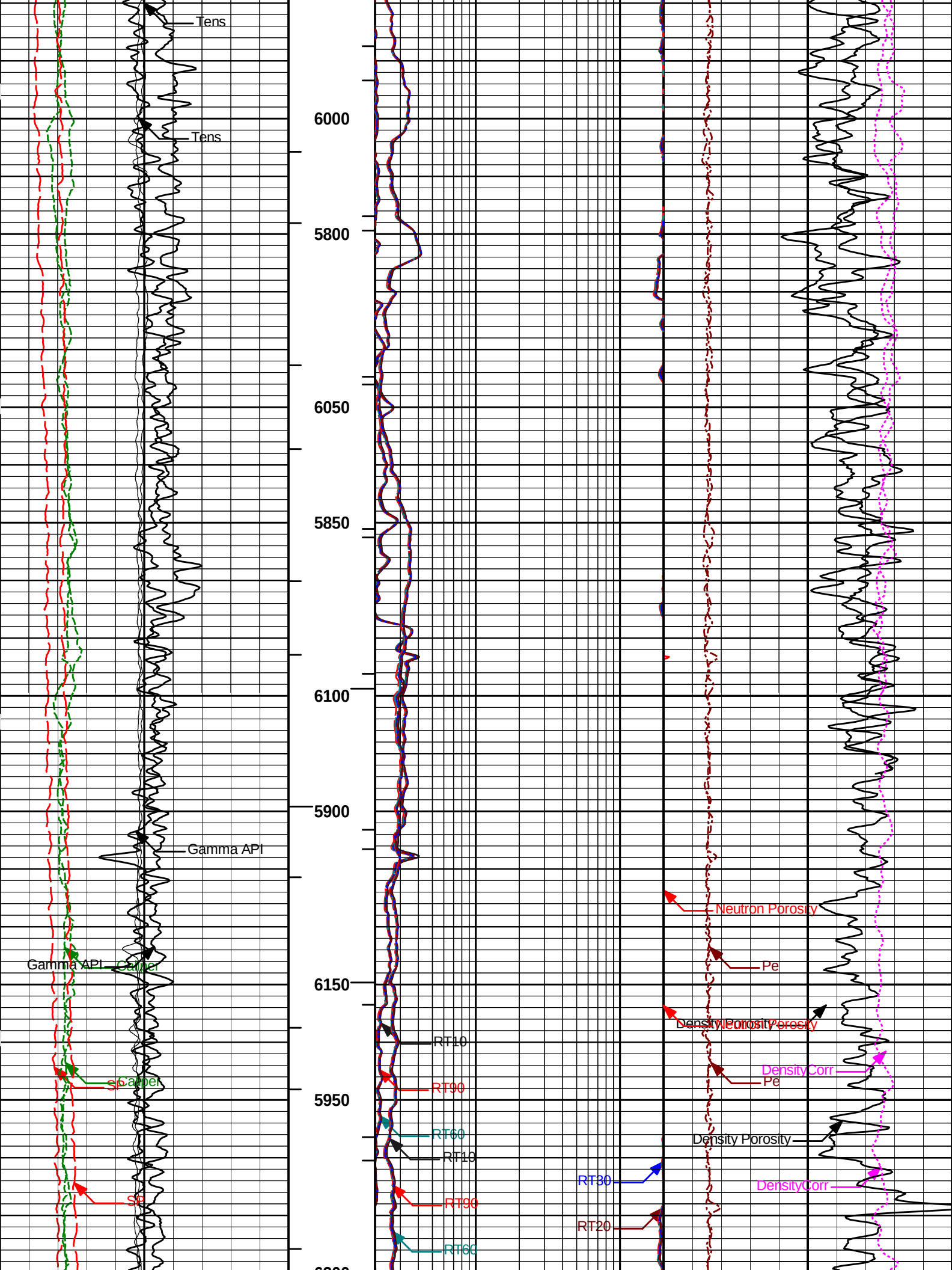
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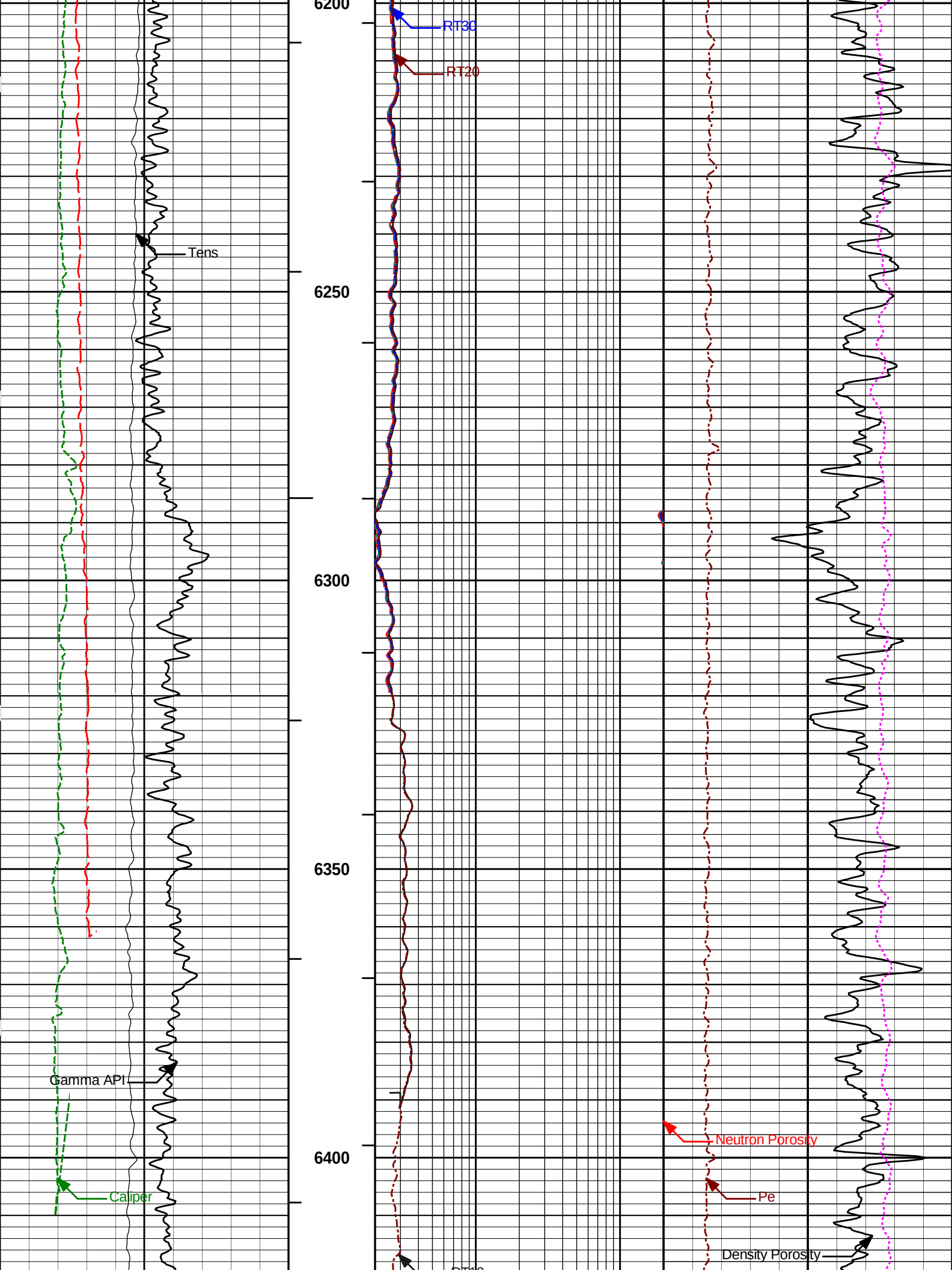
RT30
RT20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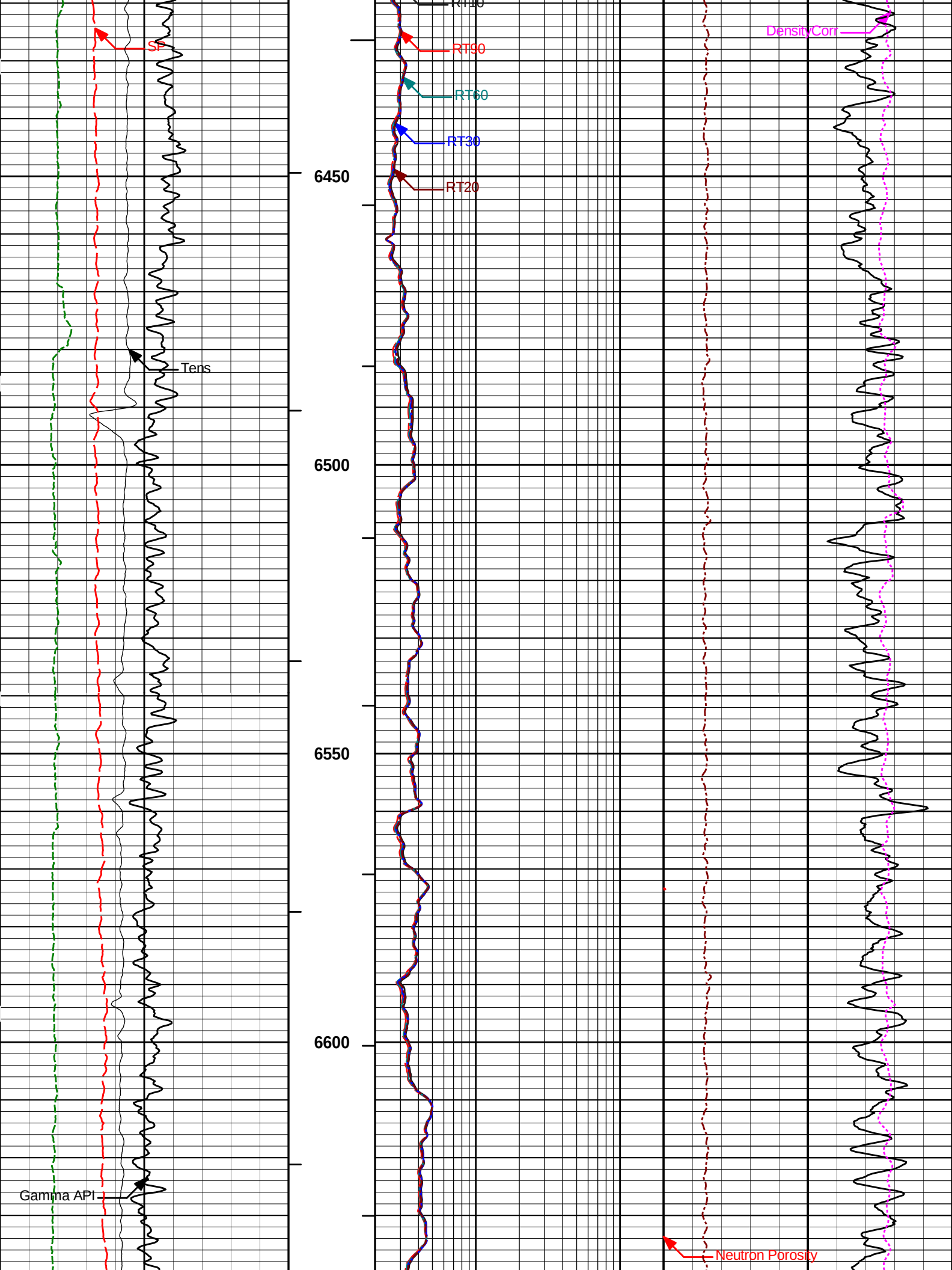
RT20
Tens
Gamma API
Caliper
Neutron Porosity
Pe
Density Porosity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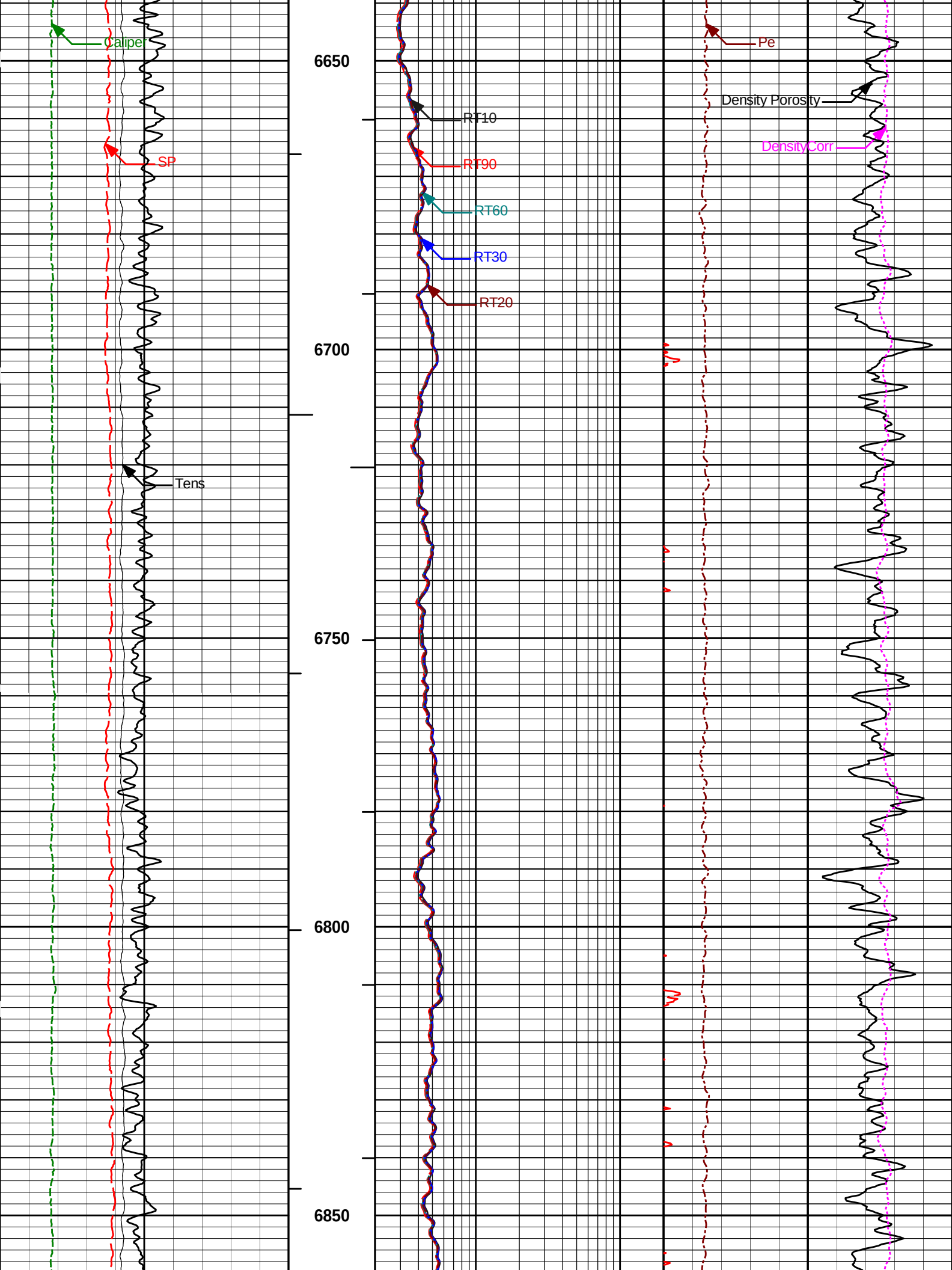
DensityCorr
Neutron Porosity


Caliper
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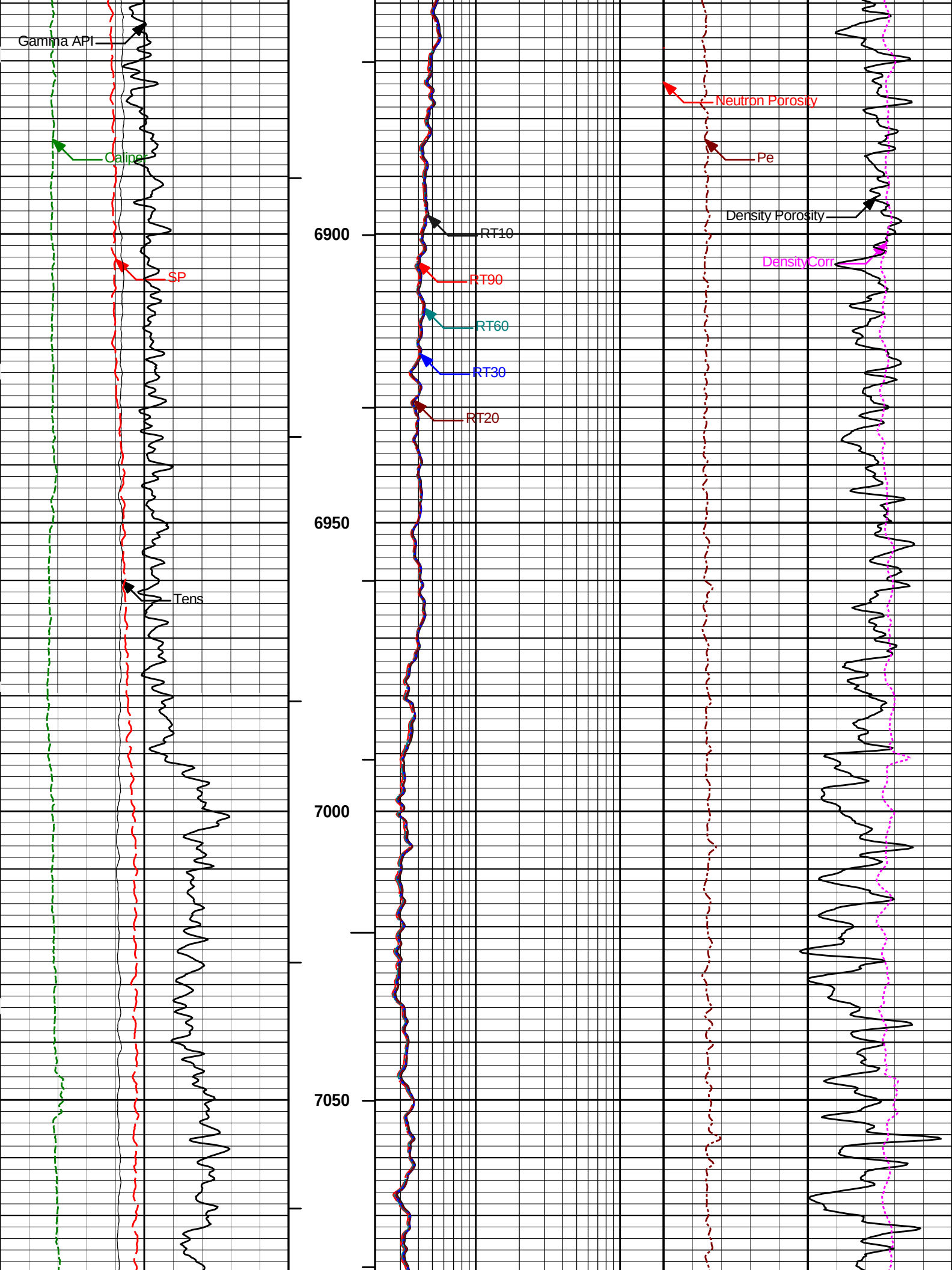
RT30
RT20
Pe
Density Porosity
DensityCorr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Caliper
SP
Tens
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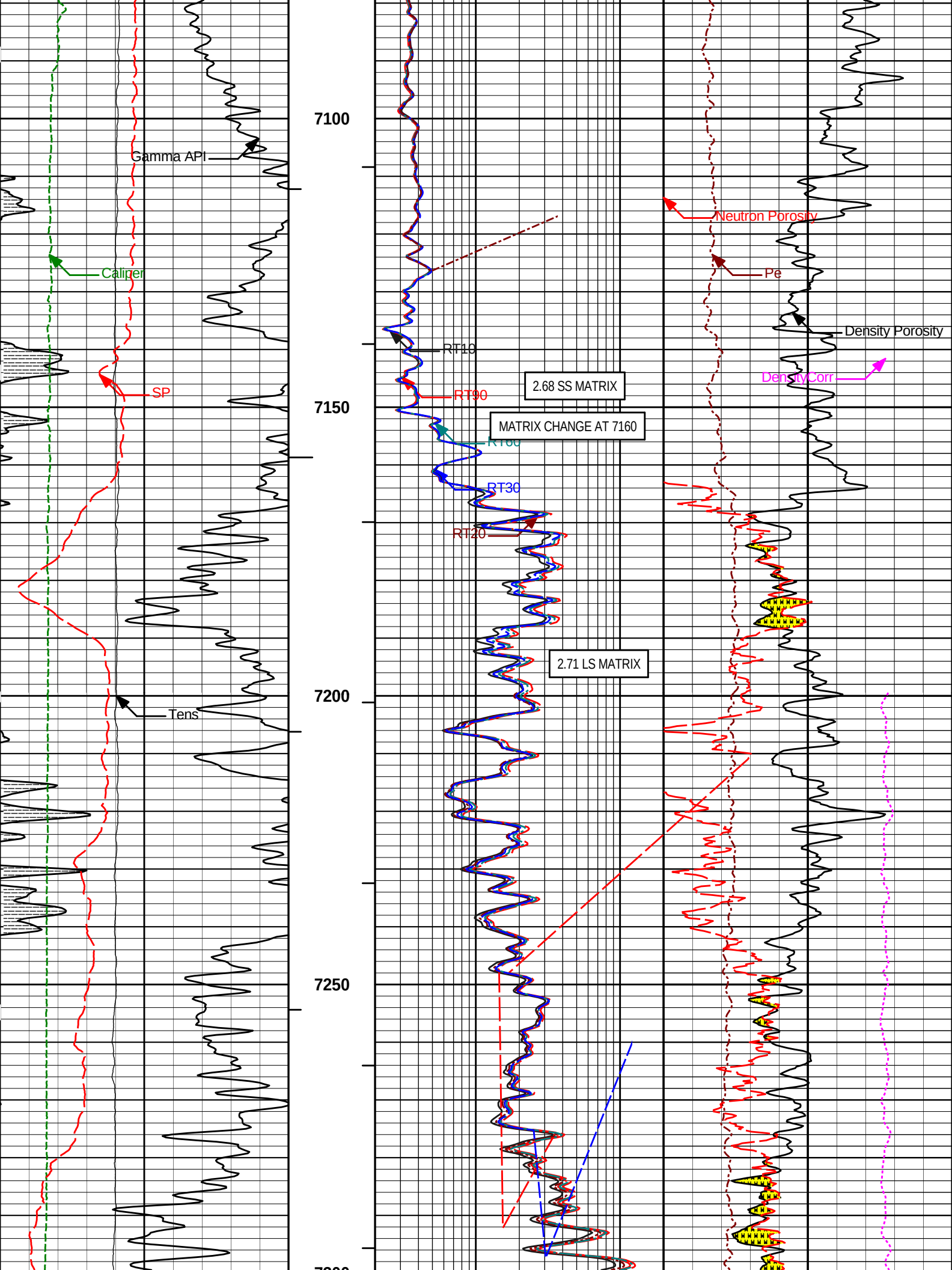
RT60
RT30
RT20
Neutron Porosity
Pe
Density Porosity
DensityCorr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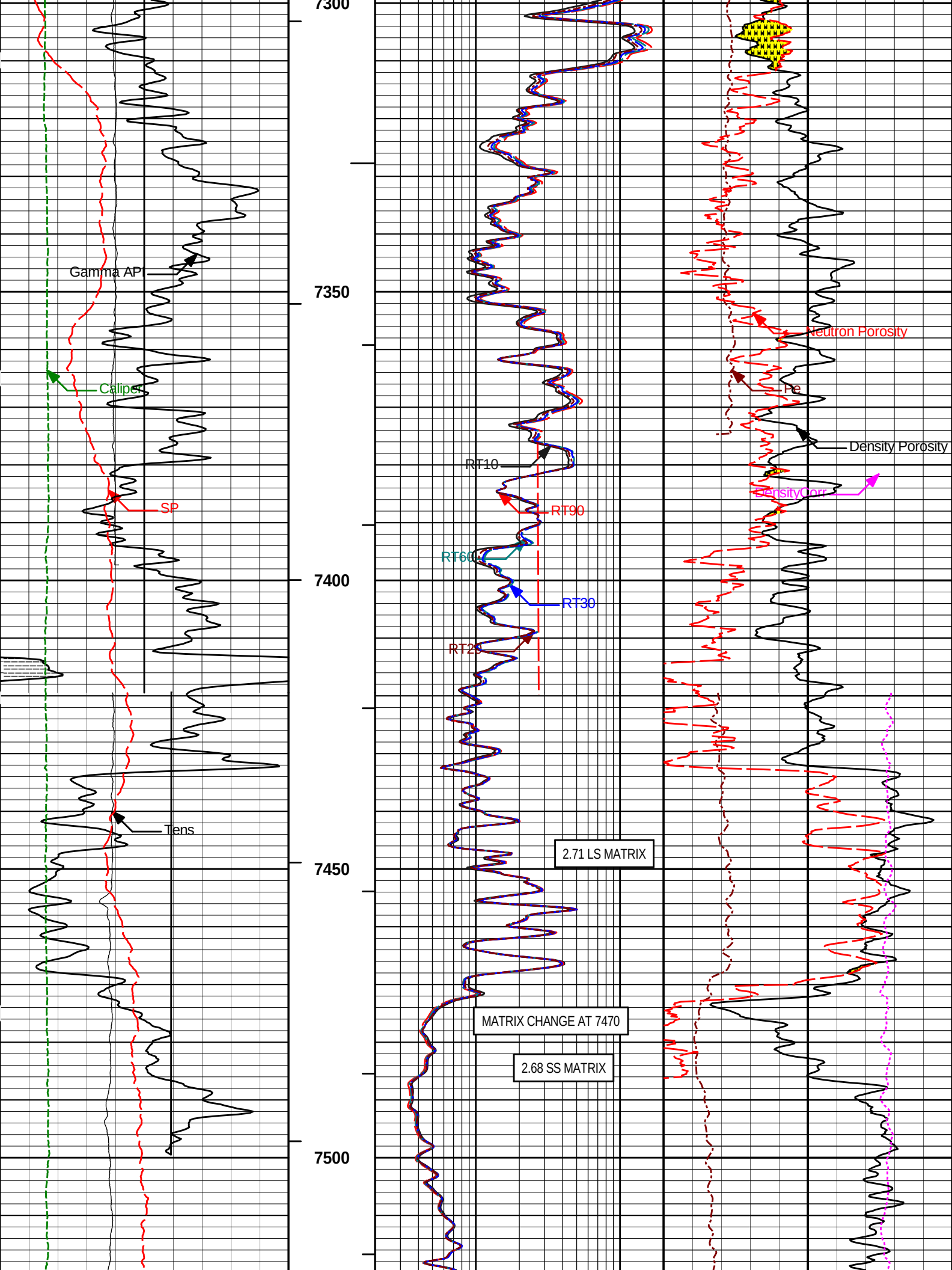
Caliper
SP
Tens
7100
7150
7200
7250
RT10
RT90
RT60
RT30
RT20
2.68 SS MATRIX
MATRIX CHANGE AT 7160
2.71 LS MATRIX
Neutron Porosity
Pe
Density Porosity
DensityCorr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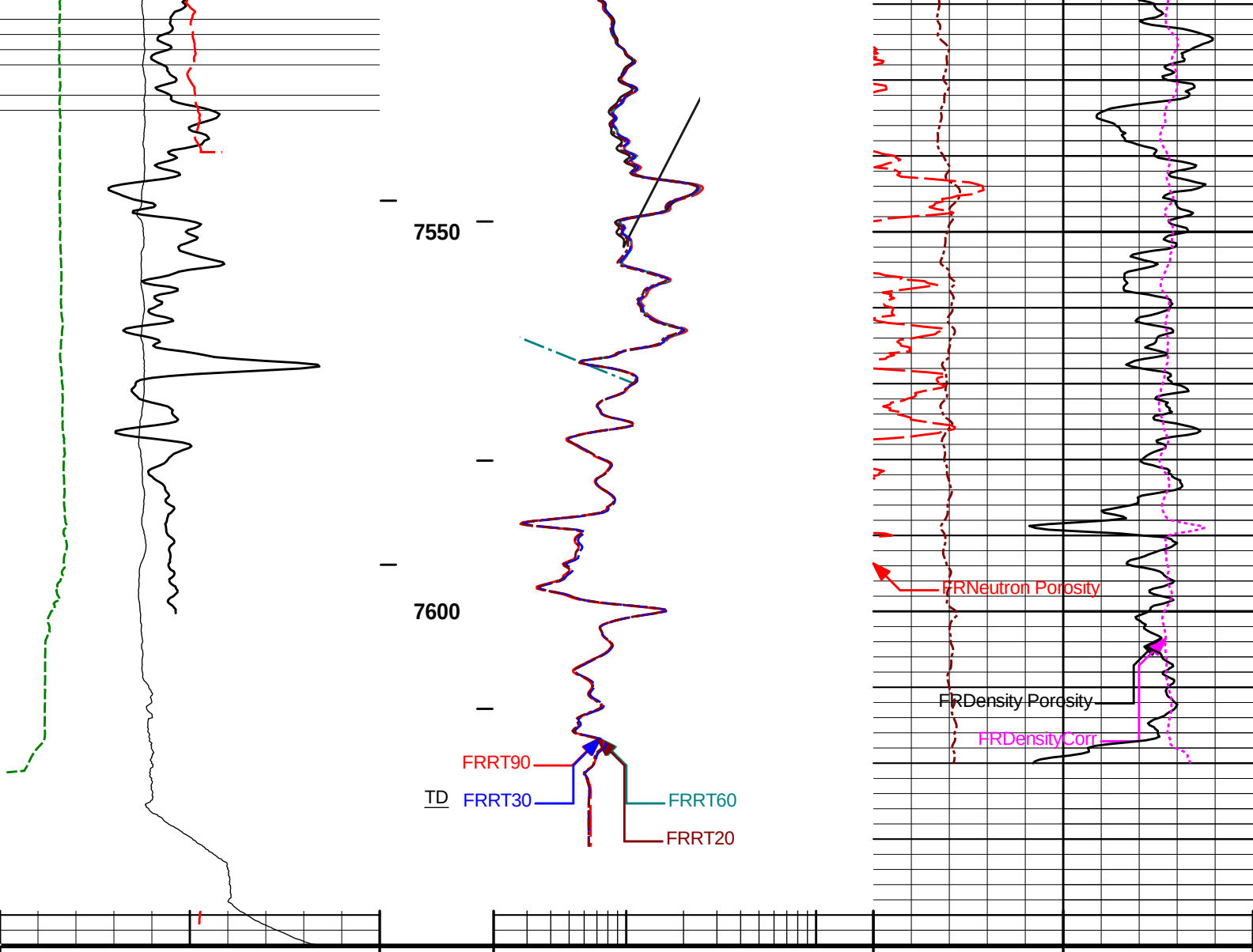
7350
7400
7450
7500
Gamma API
Caliper
SP
Tens
RT10
RT90
RT60
RT30
RT20
2.71 LS MATRIX
MATRIX CHANGE AT 7470
2.68 SS MATRIX
Neutron Porosity
Pe
Density Porosity
DensityCorr



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

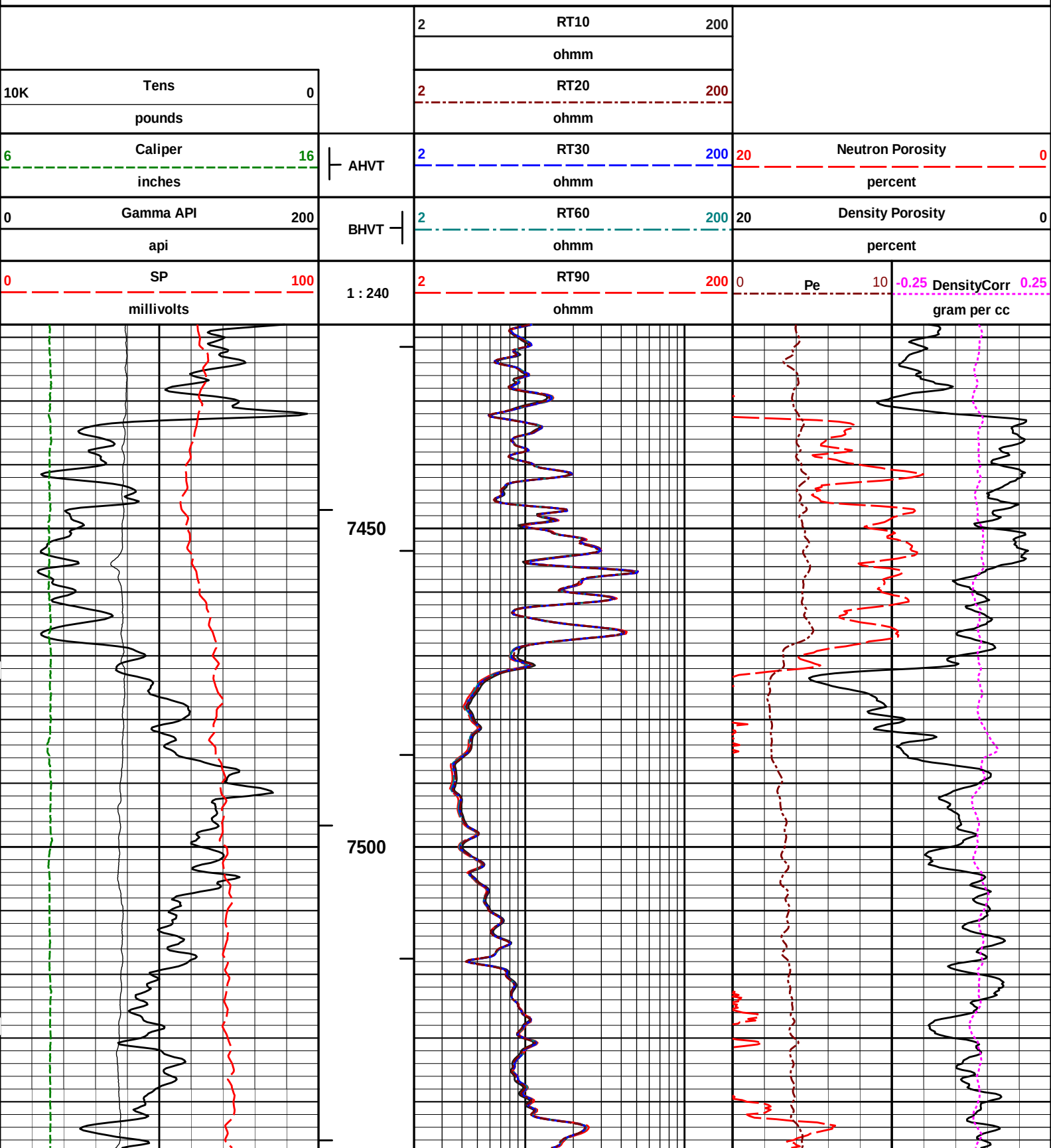
HALLIBURTON

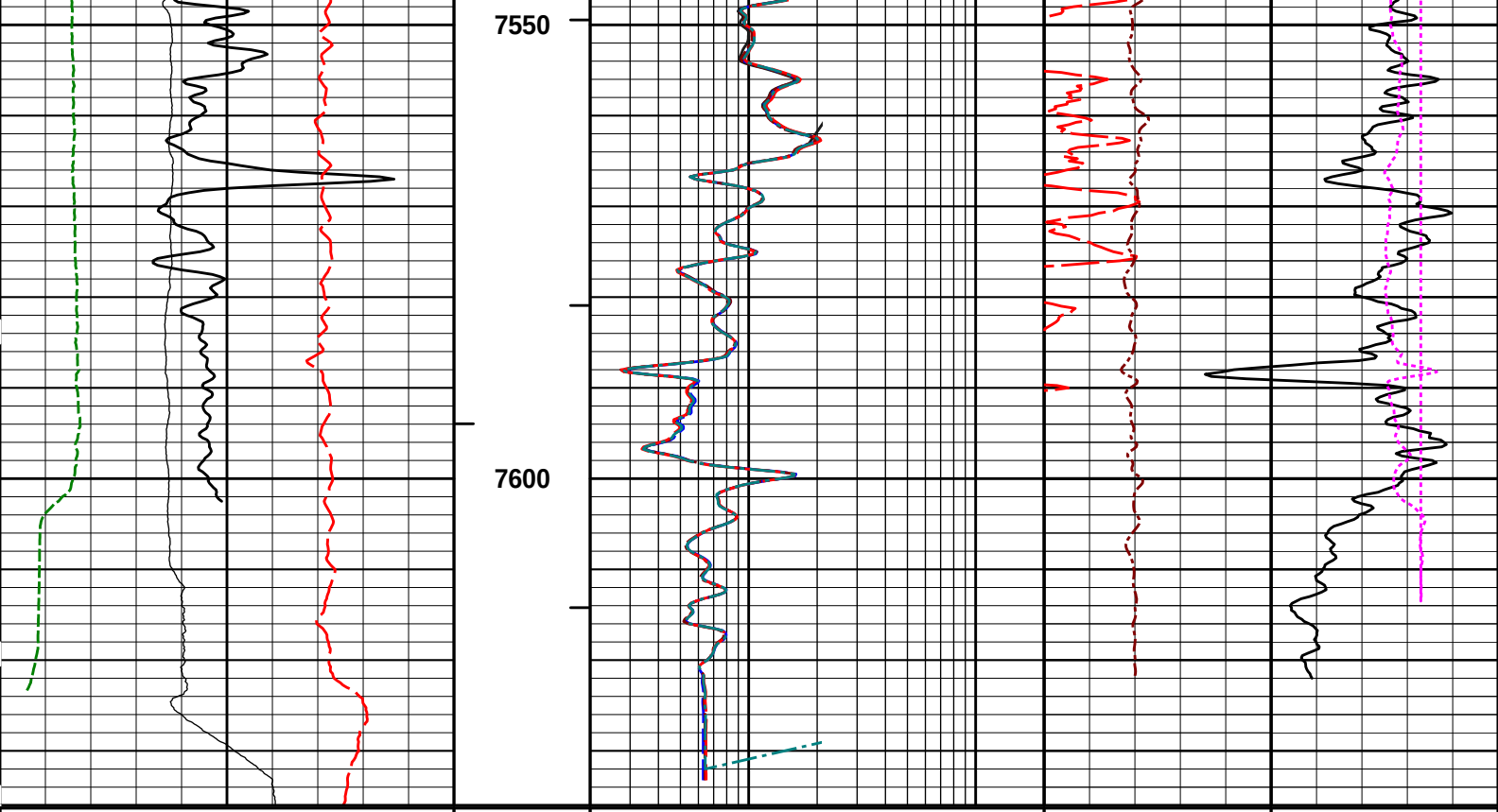
Plot Time: 10-Jun-13 05:08:11
Plot Range: 723 ft to 7643.92 ft
Data: BOOTH 19-23\Well Based\MAIN*
Plot File: \\COMP\MAIN

MAIN PASS 5" = 100'

Plot Time: 10-Jun-13 05:08:11
Plot Range: 7418 ft to 7636 ft
Data: BOOTH 19-23\Well Based\REPEAT*
Plot File: \\COMP\REPEAT

REPEAT PASS 5" = 100'





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

HALLIBURTON

Plot Time: 10-Jun-13 05:08:15
Plot Range: 7418 ft to 7636 ft
Data: BOOTH 19-23\Well Based\REPEAT*
Plot File: \\COMP\REPEAT

REPEAT PASS 5" = 100'

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	GTET - 11812882	Reference Calibration Date:	09-May-13 12:18:08
Engineer:	J. PINKETT	Calibration Date:	05-Jun-13 13:59:32
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Calibrator Source S/N: TB-289

Calibrator API Reference:243.00 api

Equivalent Calibrator API Reference:247.3 api

Measurement	Measured	Calibrated	Units
Background	73.6	73.7	api
Background + Calibrator	320.5	321.0	api
Calibrator	246.9	247.3	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	**GTET - 11812882**	**Reference Calibration Date:**	**05-Jun-13 13:59:32**
Engineer:	**J. SCHMIDT**	**Calibration Date:**	**09-Jun-13 20:04:46**
Software Version:	**WL INSITE R3.8.4 (Build 5)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB-289

Calibrator API Reference:243.00 api

Equivalent Calibrator API Reference:247.3 api

Field Verification	Shop	Field	Units
Background	73.7	74.0	api
Background + Calibrator	321.0	323.6	api
Calibrator	247.3	249.6	api

Shop	Field	Difference	Tolerance
247.3	249.6	-2.3	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	**DSNT - 11301132**	**Reference Calibration Date:**	**09-May-13 12:07:55**
Engineer:	**J. PINKETT**	**Calibration Date:**	**05-Jun-13 14:15:33**
Software Version:	**WL INSITE R3.8.4 (Build 5)**	**Calibration Version:**	**1**

Logging Source S/N: DSN434

Tank Serial Number: 11068236

Reference value assigned to Tank: 53.720

Snow Block S/N: BRIGHTON

Calibration Tank Water Temperature: 64 degF

Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	**Prev. Value**	**New Value**	**Control Limit On New Value**
Gain:	1.004	1.006	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):	0.2217	0.2223	0.0006	+/- 0.0020
Calibrated Ratio:	10.09	10.11	0.021	+/- 0.050

VERIFIER		
Measurement	**Value**	**Control Limit**
Snow-Block Porosity (decp):	0.0846	0.02000 - 0.09000

PASS/FAIL SUMMARY	
Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

Snow-Block Check: Passed

DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name:	**DSNT - 11301132**	**Reference Calibration Date:**	**05-Jun-13 14:15:33**
Engineer:	**J. SCHMIDT**	**Calibration Date:**	**09-Jun-13 20:45:39**
Software Version:	**WL INSITE R3.8.4 (Build 5)**	**Calibration Version:**	**1**

Logging Source S/N: DSN434

Snow Block S/N: BRIGHTON

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0846	0.0852	0.0006	+/- 0.0150

PASS/FAIL SUMMARY	
Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	**SDLT - 11107335**	**Reference Calibration Date:**	**05-Jun-13 15:39:06**
Engineer:	**J. PINKETT**	**Calibration Date:**	**05-Jun-13 15:46:19**
Software Version:	**WL INSITE R3.8.4 (Build 5)**	**Calibration Version:**	**1**
Host Tool Name:	**DSNT - 11301132**		

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-3866.47	-3883.36	-7000.00 - -1000.00
Pad Gain	0.0003925	0.0003940	0.000200 - 0.000600
Arm Offset	-2274.12	-2594.89	-5000.00 - 3000.00
Arm Gain	0.0005308	0.0005666	0.000300 - 0.000700
Arm Power	-0.000005954	-0.000007913	-0.000010000 - 0.000010000

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

Tool Diameter: 4.50 in

CALIBRATION RINGS

Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.74	3.75	0.01	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.55	6.50	-0.05	+/- 0.20
Medium Ring (in)	8.22	8.25	0.03	+/- 0.20
Large Ring (in)	15.01	15.00	-0.01	+/- 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 - 11107335**	**Reference Calibration Date:**	**05-Jun-13 15:46:19**
Engineer:	**J. SCHMIDT**	**Calibration Date:**	**09-Jun-13 20:43:21**

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	3.68	-0.07	+/- 0.10
Ring Diameter	8.25	8.23	-0.02	+/- 0.15

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

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	**SDLT Pad - 11045470**	**Reference Calibration Date:**	**09-May-13 12:43:09**
Engineer:	**J. PINKETT**	**Calibration Date:**	**05-Jun-13 15:05:18**
Software Version:	**WL INSITE R3.8.4 (Build 5)**	**Calibration Version:**	**1**

Logging Source S/N: 5471GW

Aluminum Block S/N: 63066	Density: 2.602g/cc	Pe: 3.100
Magnesium Block S/N: 12345	Density: 1.690g/cc	Pe: 2.650

DENSITY CALIBRATION SUMMARY			
Measurement	**Previous Value**	**New Value**	**Control Limit**
Near Bar Gain	1.0865	1.0868	0.90 - 1.10
Near Dens Gain	1.0395	1.0397	0.90 - 1.10
Near Peak Gain	1.0326	1.0178	0.90 - 1.10
Near Lith Gain	0.9963	0.9670	0.90 - 1.10
Far Bar Gain	1.0134	1.0124	0.90 - 1.10
Far Dens Gain	1.0006	1.0030	0.90 - 1.10
Far Peak Gain	0.9968	0.9981	0.90 - 1.10
Far Lith Gain	0.9771	0.9759	0.90 - 1.10
Near Bar Offset	-0.8715	-0.8675	NONE
Near Dens Offset	-0.3870	-0.3833	NONE
Near Peak Offset	-0.3096	-0.1752	NONE
Near Lith Offset	-0.0169	0.2436	NONE
Far Bar Offset	-0.2100	-0.2008	NONE
Far Dens Offset	-0.1011	-0.1245	NONE
Far Peak Offset	-0.0819	-0.0878	NONE
Far Lith Offset	0.0596	0.0767	NONE
Near Bar Background	1013.74	1011.73	700 - 1450
Near Dens Background	333.14	335.20	230 - 480
Near Peak Background	146.59	146.34	100 - 210
Near Lith Background	178.74	176.91	125 - 260
Far Bar Background	530.65	529.00	450 - 900
Far Dens Background	207.68	207.56	175 - 345
Far Peak Background	80.44	80.53	70 - 140
Far Lith Background	84.76	85.34	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	**Current Reading (Previous Coef)**	**Calibrated (New Coef)**	**Change**	**Control Limit On Change**
MAGNESIUM				
Density (g/cc)	1.685	1.690	0.005	+/- 0.015

Pe	2.618	2.602	-0.016	+/- 0.150
ALUMINUM				
Density (g/cc)	2.593	2.602	0.009	+/- 0.01500
Pe	3.108	3.061	-0.047	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0021	+/- 0.0110	-0.0016	+/- 0.0140
Magnesium Block	0.0005	+/- 0.0110	-0.0027	+/- 0.0140
Aluminum Block	-0.0002	+/- 0.0110	-0.0007	+/- 0.0140
Resolution	9.11	6.00 - 11.50	9.65	6.00 - 11.50
Internal Verifier(B+D+P+L)	1670	1200 - 2700	902	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 - 11045470**	**Reference Calibration Date:**	**05-Jun-13 15:05:18**
Engineer:	**J. SCHMIDT**	**Calibration Date:**	**09-Jun-13 20:03:48**
Software Version:	**WL INSITE R3.8.4 (Build 5)**	**Calibration Version:**	**1**

Pad Temperature: 82.3 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1670.186	1668.149	-2.037	16.412
Far (B+D+P+L) cps	902.430	901.354	-1.076	16.329
Near Resolution	9.11	9.11	0.000	0.50
Far Resolution	9.65	9.74	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 - 11294352**	**Reference Calibration Date:**	**02-May-13 21:01:50**
Engineer:	**J. PINKETT**	**Calibration Date:**	**02-Jun-13 14:30:20**
Software Version:	**WL INSITE R3.8.4 (Build 5)**	**Calibration Version:**	**1**
Host Tool Name:	**ACRt Instrument - 11296758**		

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	1.00	1.05	0.95	1.00	1.05
A3 (29")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.00	1.05
A4 (17")	0.95	1.01	1.05	0.95	1.01	1.05	0.95	1.00	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.00	1.05	0.95	1.00	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	-0.98	2	-6	-4.33	-2	-8	-5.95	-2
A2 (50")	-7	-2.95	0	-7	-				

	Shop	Field	Post	Difference	Tolerance	Units
GTET-11812882						
Gamma Ray Calibrator	247.3	249.6	----------	-2.3	+/- 9.00	api
DSNT-11301132						
Snow-Block Porosity	0.0846	0.0852	----------	-0.0006	+/- 0.0150	decp
SDLT-11107335						
Pad Extension	3.75	3.68	----------	0.07	+/-0.10	in
Ring Diameter	8.25	8.23	----------	0.02	+/-0.15	in
SDLT Pad-11045470						
Near(B+D+P+L)	1670.186	1668.149	----------	2.037	+/-16.412	cps
Far(B+D+P+L)	902.430	901.354	----------	1.076	+/-16.329	cps
ACRt Sonde-11294352						
Mud Cell	1.01	----------	----------	0.00	----------	ohm-m

Data: BOOTH 19-23\0001 TRIPLE_BLACK\IDLE **Date: 10-Jun-13 03:23:45**

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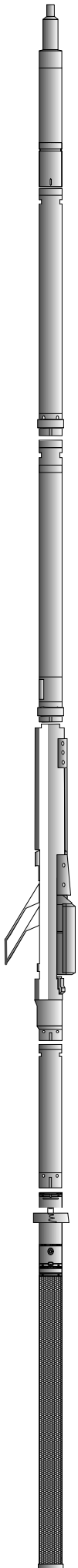
TOOL STRING DIAGRAM REPORT

Accumulated

Description	Overbody Description	O.D.	Sensors @ Delays	Length	Accumulated Length
					54.85 ft
RWCH-10409638 135.00 lbs		Ø 3.625 in	Load Cell @ 51.17 ft BH Temperature @ 50.60 ft	6.25 ft	
					48.60 ft
GTET-11812882 165.00 lbs		Ø 3.625 in		8.52 ft	
			GammaRay @ 42.54 ft		
	UnivWearRing3.6- 00000002 5.00 lbs	Ø 4.200 in*			
					40.08 ft
DSNT-11301132 174.00 lbs		Ø 3.625 in		9.69 ft	
			DSN Far @ 33.15 ft DSN Near @ 32.40 ft		
	UnivWearRing3.6- 00000001 5.00 lbs	Ø 4.200 in*			
					30.40 ft
SDLT-11107335 360.00 lbs		Ø 4.500 in		10.81 ft	
	SDLT Pad-11045470 65.00 lbs	Ø 4.750 in*	SDL Caliper @ 22.40 ft SDL @ 22.39 ft		
					19.58 ft
ACRt Instrument- 11296758 50.00 lbs		Ø 3.625 in		5.03 ft	
					14.55 ft
	Regal Standoff 6_75- 00000001 20.00 lbs	Ø 6.750 in*	Mud Resistivity @ 13.19 ft		
			ACRt @ 9.21 ft		
ACRt Sonde- 11294352 200.00 lbs		Ø 3.625 in		14.22 ft	
	SP Ring-00000001	Ø 3.625 in*			



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)		Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	10409638	135.00	6.25		48.60	300.00
GTET	Gamma Telemetry Tool	11812882	165.00	8.52		40.08	60.00
UWR3P6	Universal Wear Ring 3 5-8 inch	00000002	5.00	0.35	*	40.39	300.00
DSNT	Dual Spaced Neutron	11301132	174.00	9.69		30.40	60.00
UWR3P6	Universal Wear Ring 3 5-8 inch	00000001	5.00	0.35	*	30.64	300.00
SDLT	Spectral Density Tool	11107335	360.00	10.81		19.58	60.00
SDLP	Density Insite Pad	11045470	65.00	2.55	*	21.79	60.00
ACRt	Array Compensated True Resistivity Instrument Section	11296758	50.00	5.03		14.55	300.00
ACRt	Array Compensated True Resistivity Sonde Section	11294352	200.00	14.22		0.33	300.00
SP	SP Ring	00000001	0.00	0.25	*	1.61	300.00
RSOF	Regal Standoff 6.75in	00000001	20.00	0.52	*	13.44	300.00
BLNS	Bull Nose	00000001	5.00	0.33		0.00	300.00
Total			**1,184.00**	**54.85**			

* Not included in Total Length and Length Accumulation.

Data: BOOTH 19-23\0001 TRIPLE_BLACK\004 10-Jun-13 02:09 Up @7646.3f **Date: 10-Jun-13 02:15:33**

COMPANY	**BAYSWATER EXPLORATION AND PRODUCTION LLC**		
WELL	**BOOTH 19-23**		
FIELD	**WATTENBERG**		
COUNTY	**WELD**	STATE	**CO**

HALLIBURTON

DUAL SPACED NEUTRON
SPECTRAL DENSITY
ARRAY COMPENSATED
TRUE RESISTIVITY