

HALLIBURTON

SPECTRAL DENSITY  
DUAL SAGED NEURTON  
ARRAY COMPENSATED  
TRUE RESISTIVITY

COMPANY				LARAMIE ENERGY			
WELL				HAWXSHURST 24-15A			
FIELD				BUZZARD			
COUNTY				MESA			
STATE				CO			
COMPANY				LARAMIE ENERGY			
WELL				HAWXSHURST 24-15A			
FIELD				BUZZARD			
COUNTY				MESA			
STATE				CO			
COMPANY		LARAMIE ENERGY		WELL		HAWXSHURST 24-15A	
FIELD		BUZZARD		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE		CO		COUNTY		MESA	
STATE							

Fold here

Service Ticket No.: N/A						API Serial No.: 05077101050000						PGM Version: WL INSITE R3.2.1 (Build 7)											
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		N/A		1.5" S.O.		N/A			
Rmc @ Meas. Temp.				@				@						90194258E7486									
Source Rmf		Rmc																					
Rm @ BHT				@				@															
Rmf @ BHT				@				@															
Rmc @ BHT				@				@															
EQUIPMENT DATA																							
GAMMA				ACOUSTIC								DENSITY								NEUTRON			
Run No.		ONE		Run No.				Run No.		ONE		Run No.		ONE		Run No.		ONE					
Serial No.		11004661		Serial No.				Serial No.		10951300		Serial No.		10993888		Serial No.		10993888					
Model No.		GTET		Model No.				Model No.		SDLT		Model No.		DSNT		Model No.		DSNT					
Diameter		3.625		No. of Cent.				Diameter		4.5"		Diameter		3.625"		Diameter		3.625"					
Detector Model No.		102A		Spacing				Log Type		GAMMA-GAMMA		Log Type		THERMAL		Log Type		THERMAL					
Type		SCINT						Source Type		Cs-137		Source Type		Am241Be		Source Type		Am241Be					
Length		8"		LSA [Y/N]				Serial No.		5153GW		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			NEUTRON		
---------	--	--	-------	--	--	----------	--	--	---------	--	--	---------	--	--

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.700	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	0.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	0.960	ohmm
	SHARED	TRM	Temperature of Mud	87.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	4.500	in
	SHARED	ST	Surface Temperature	32.0	degF
	SHARED	TD	Total Well Depth	6615.00	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	Centered	
	BSNT	BNOK	Process BSN?	Yes	

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	0.000	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	CB	Logging Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	DMA	Formation Density Matrix	2.680	g/cc
SDLT	DFL	Formation Density Fluid	1.000	g/cc
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT	MLOK	Process MicroLog Outputs?	Yes	
ACRt	RTOK	Process ACRt?	Yes	
ACRt	MNSO	Minimum Tool Standoff	1.50	in
ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt	TPOS	Tool Position	Free Hanging	
ACRt	RMOP	Rmud Source	Mud Cell	
ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt	THQY	Threshold Quality	0.50	
BOTTOM				

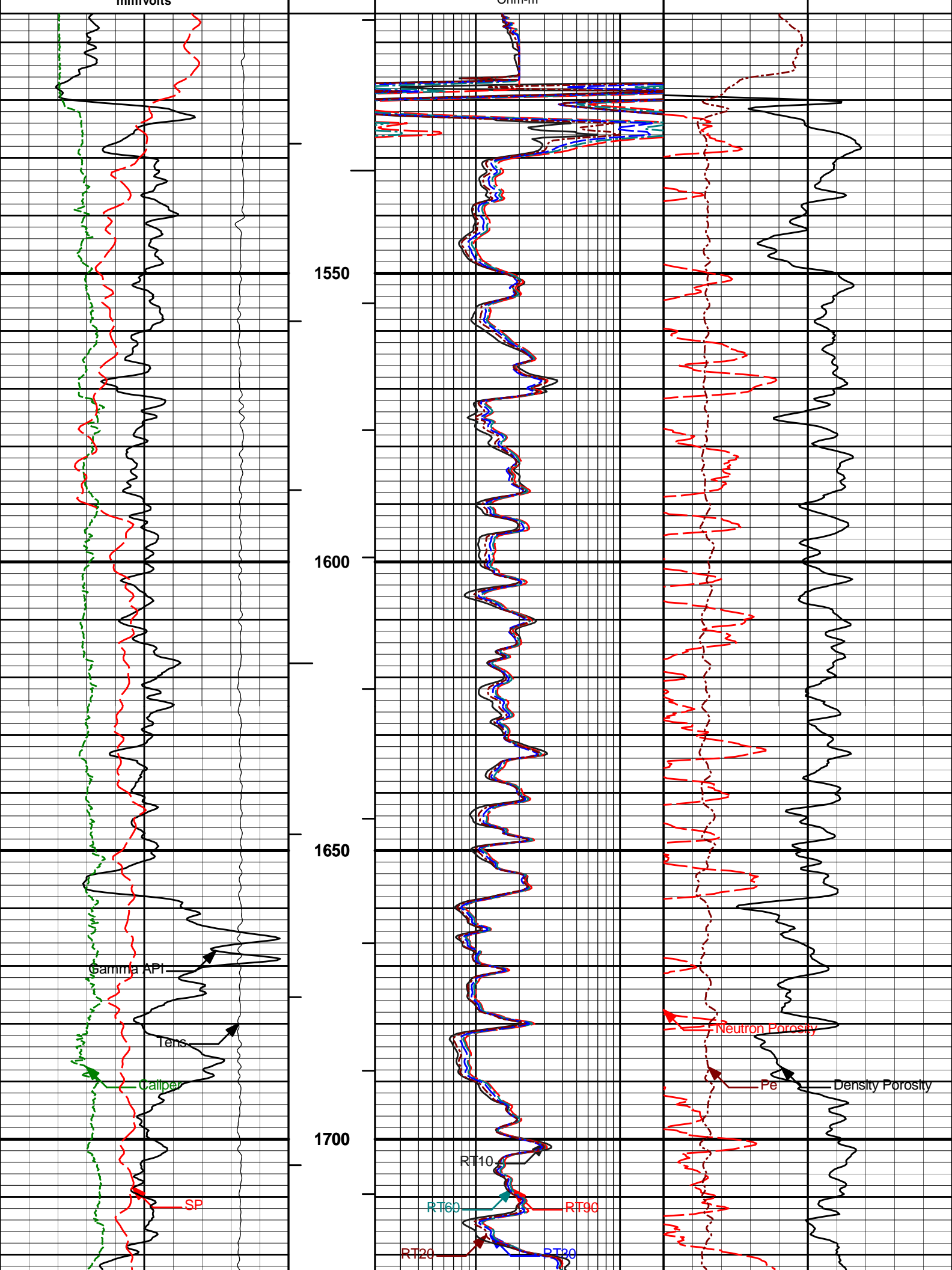
Data: LARA\_PERCI\_706\0001 TRIPLE\IDLE

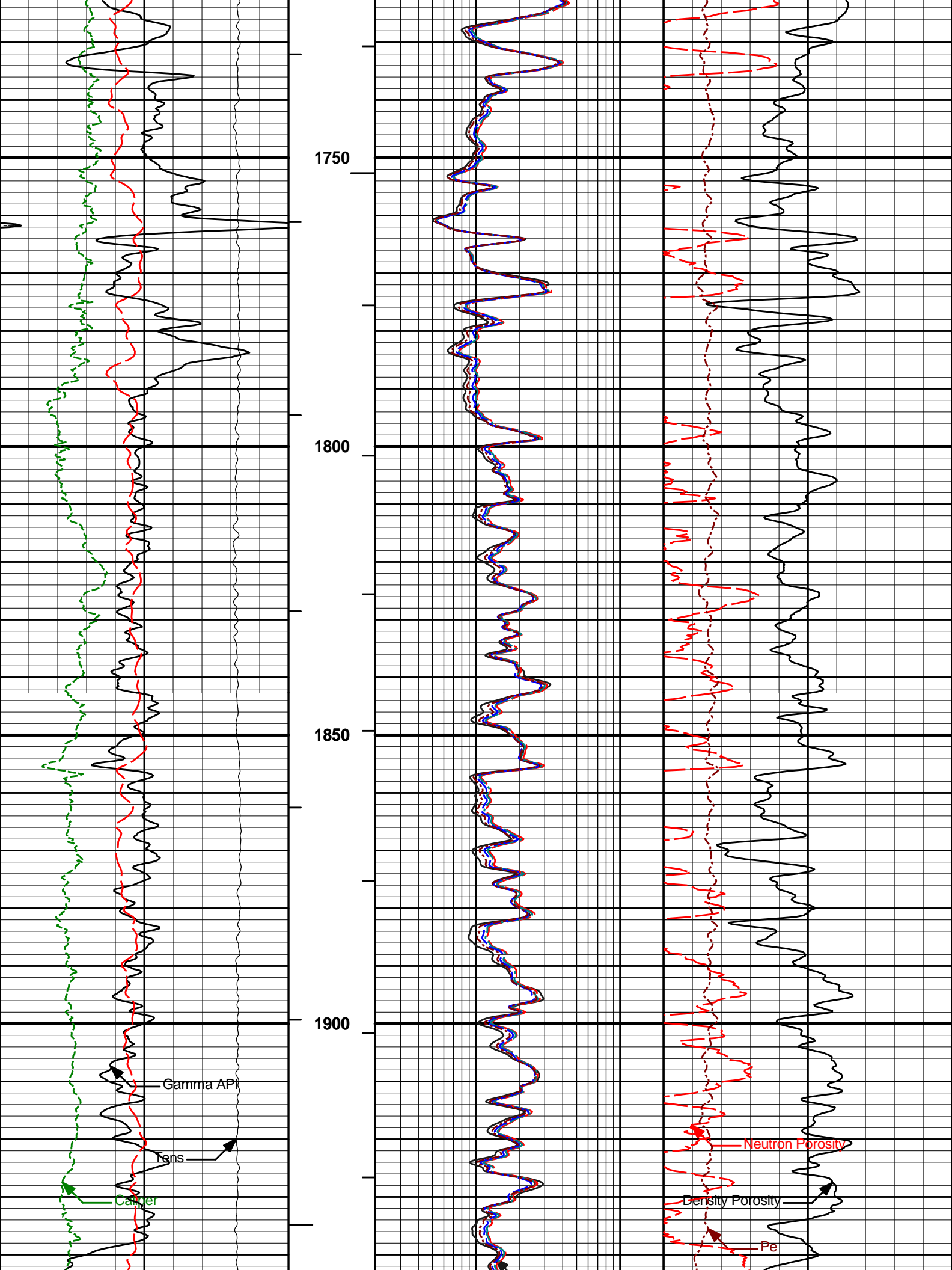
Date: 03-Apr-11 12:26:31

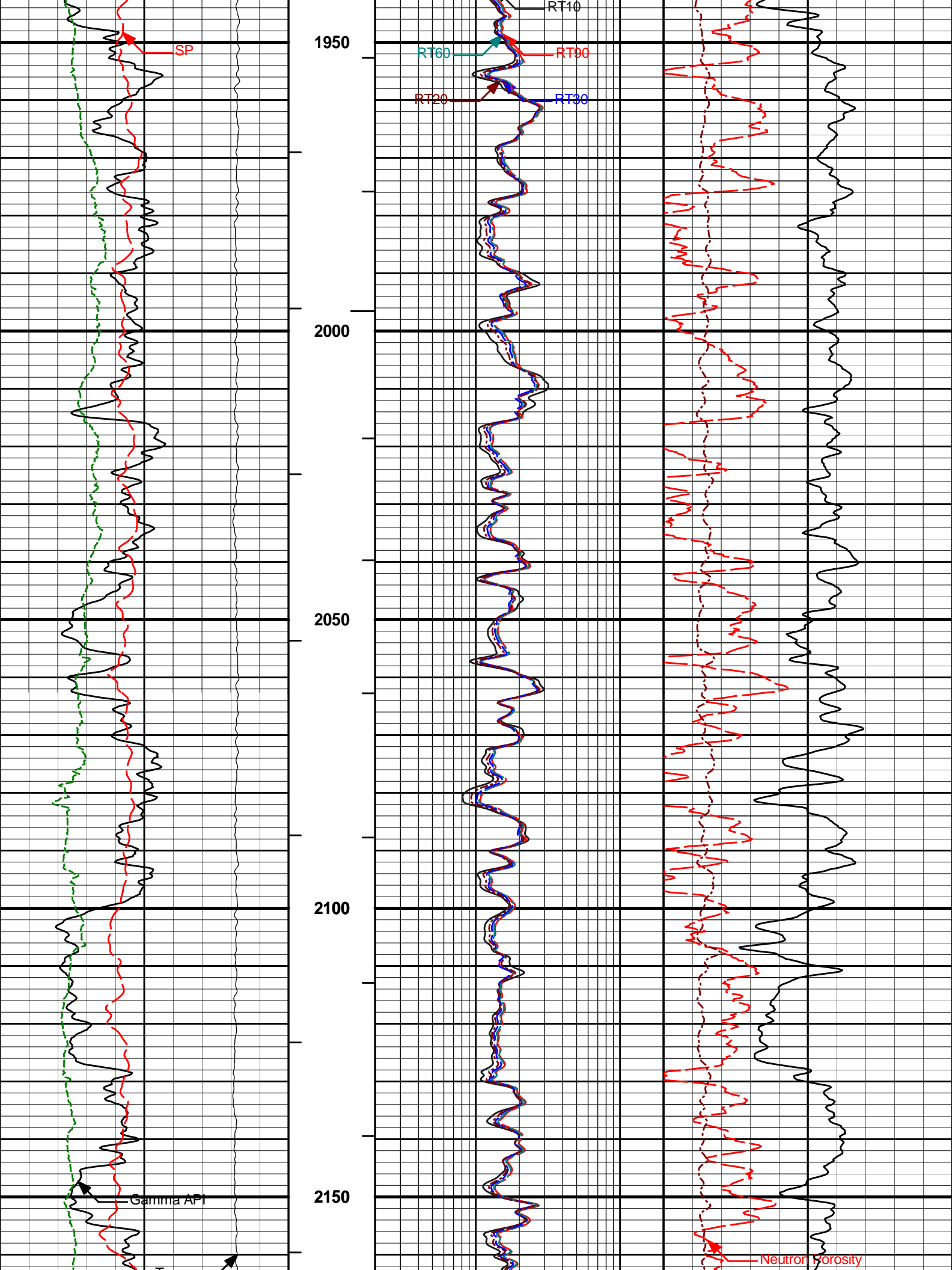
Plot Time: 03-Apr-11 13:19:54  
 Plot Range: 1505 ft to 5800.5 ft  
 Data: {ActiveWell}\Well Based\MAIN\*  
 Plot File: \\TRIPLE\IQ\_COMPOSITE\_5IN\_RM\_NOBLE

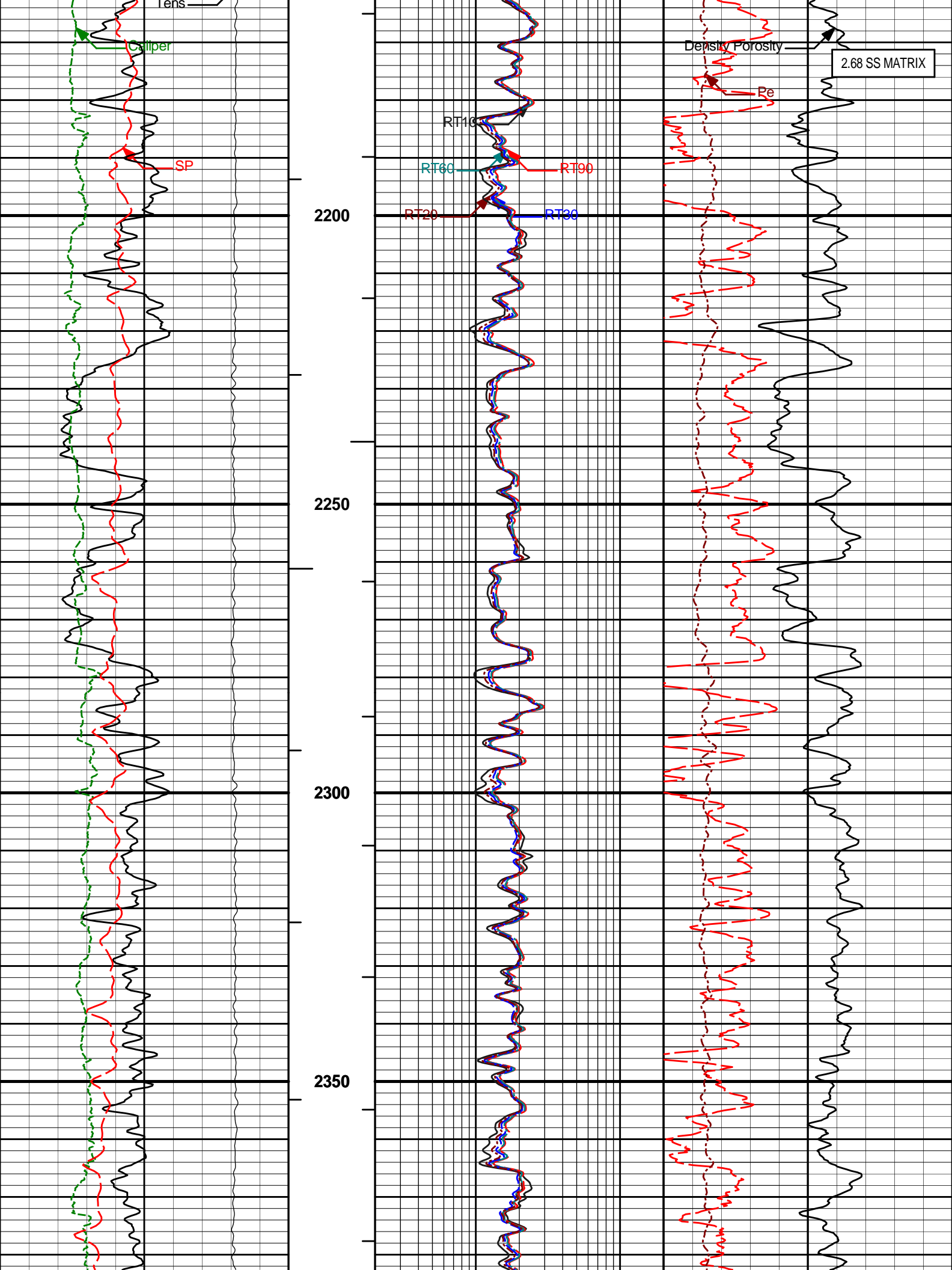
2150 TO 2500 5" = 100'

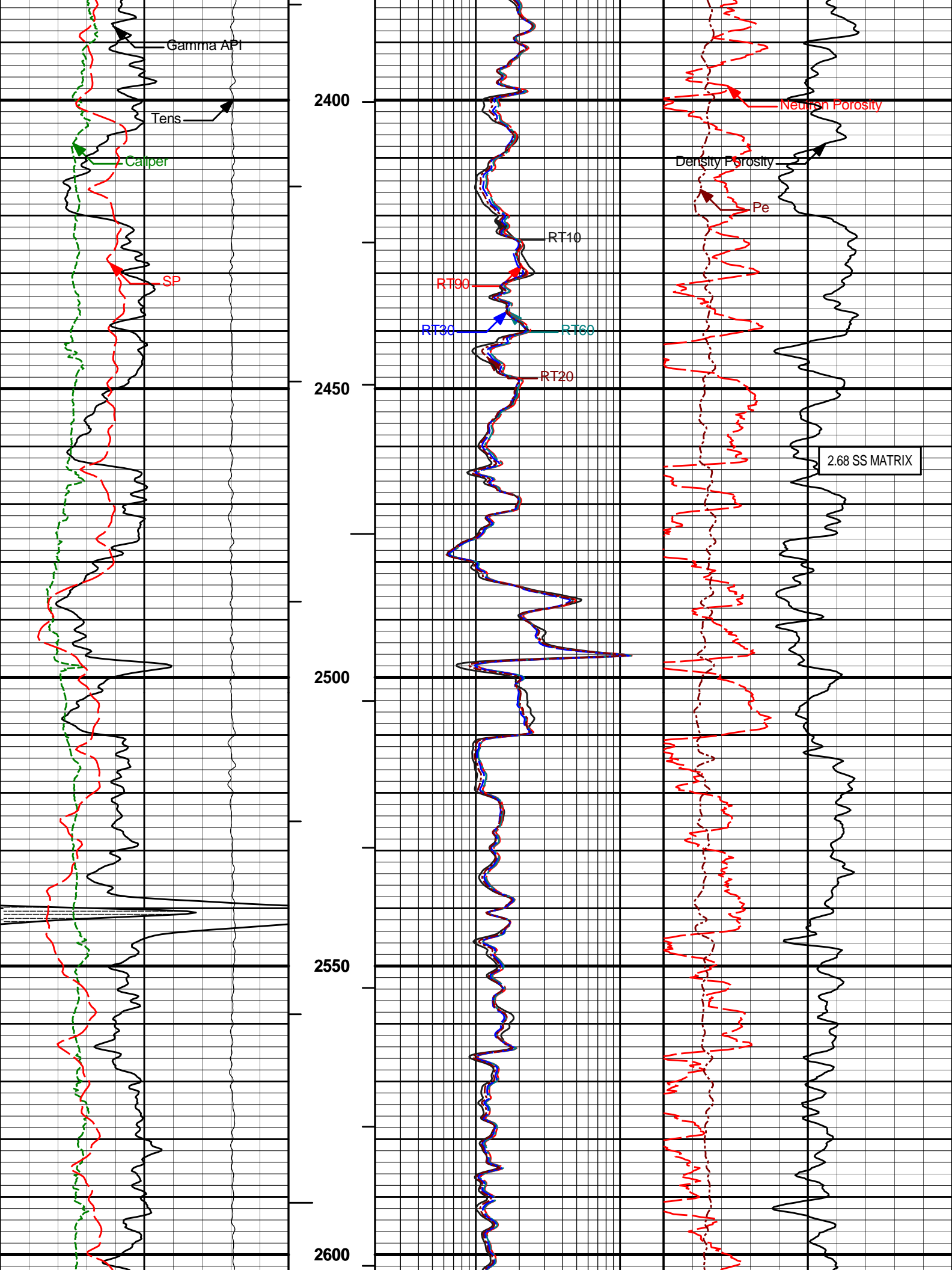
Track 1			Depth Track	Track 2		Track 5	Track 3		
<div>10K</div> <div>Tens</div> <div>0</div>			<div></div>	2	RT10	200			
				Ohm-m					
<div>10K</div> <div>Tens</div> <div>0</div>			<div></div>	2	RT20	200			
<div>pounds</div>				Ohm-m					
6	Caliper	16	AHVT	2	RT30	200	30	Neutron Porosity	-10
<div>inches</div>				Ohm-m		percent			
0	Gamma API	250	BHVT	2	RT60	200	30	Density Porosity	-10
<div>api</div>				Ohm-m		percent			
0	SP	100	1 : 240	2	RT90	200	0	Pe	10
<div>millivolts</div>				Ohm-m					



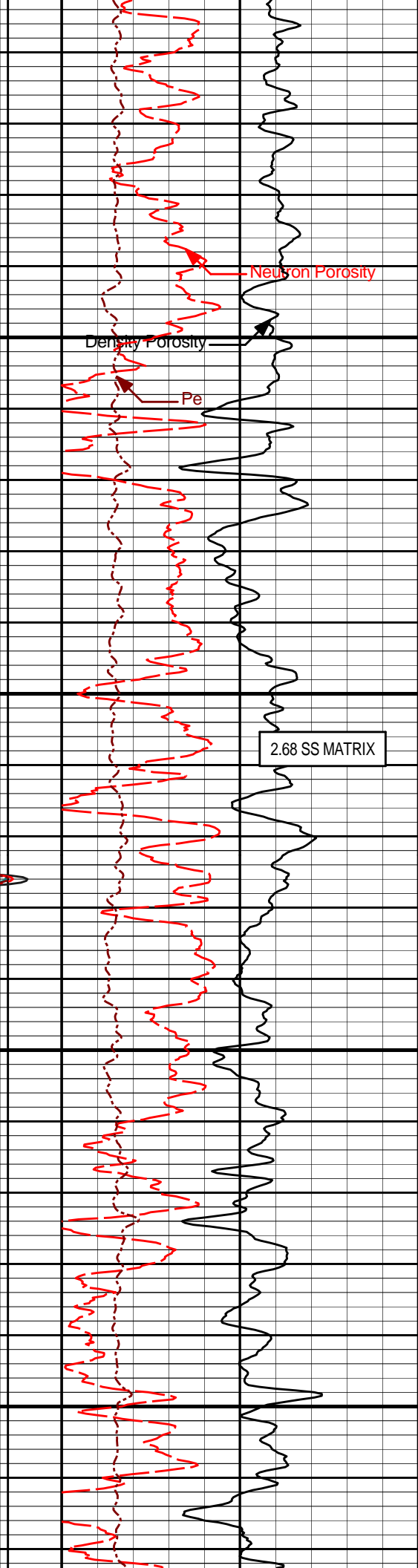
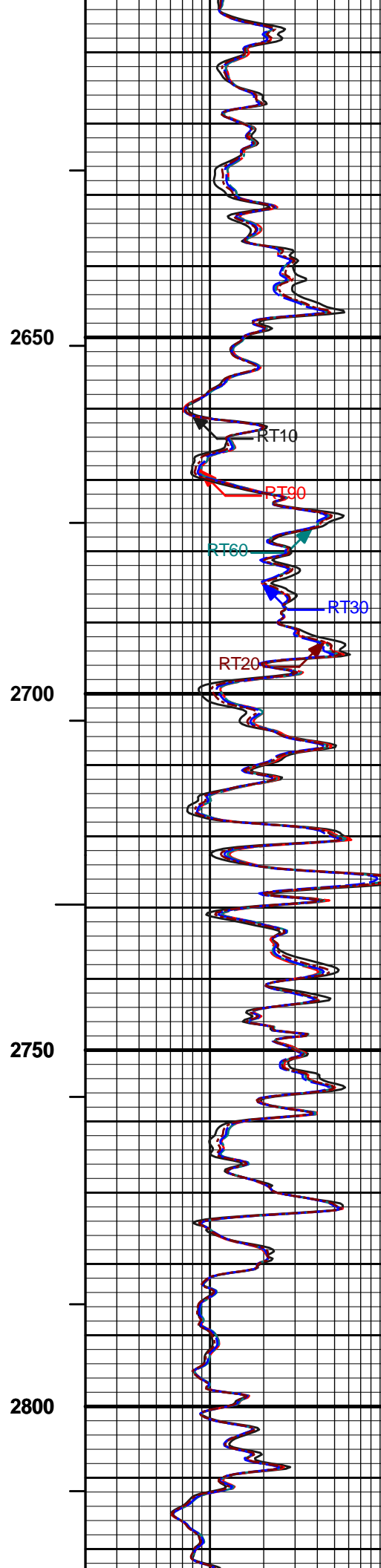
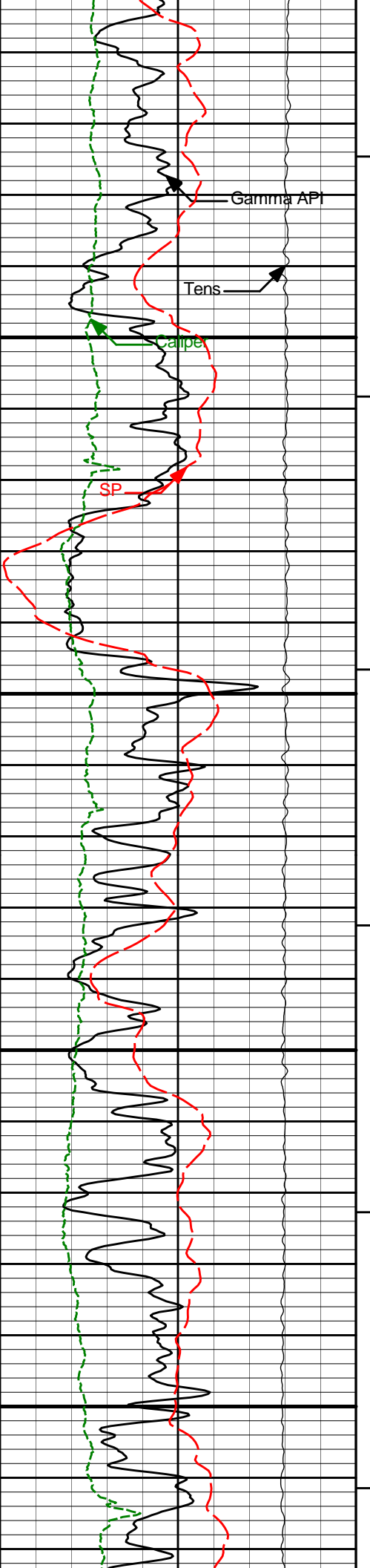


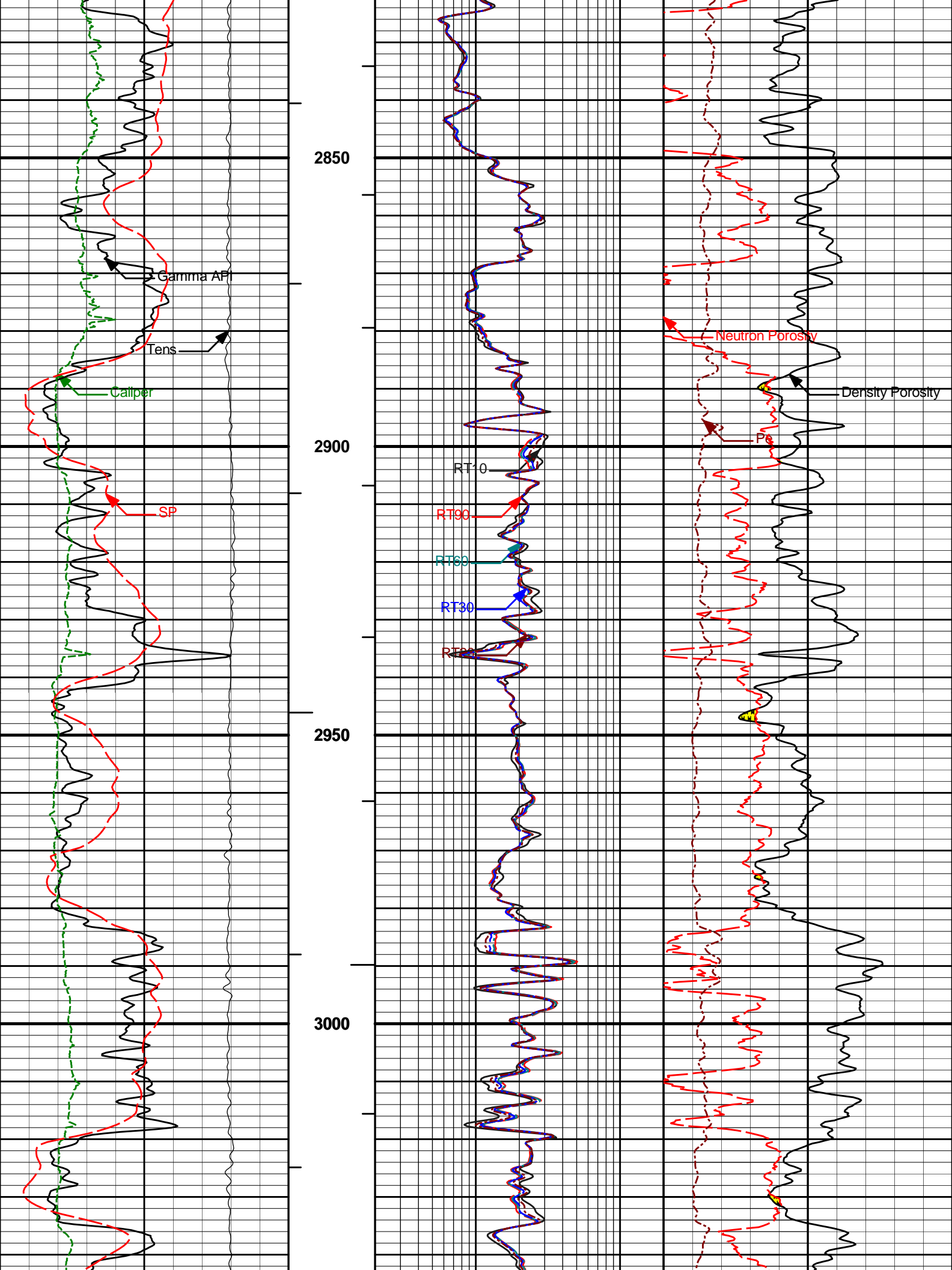


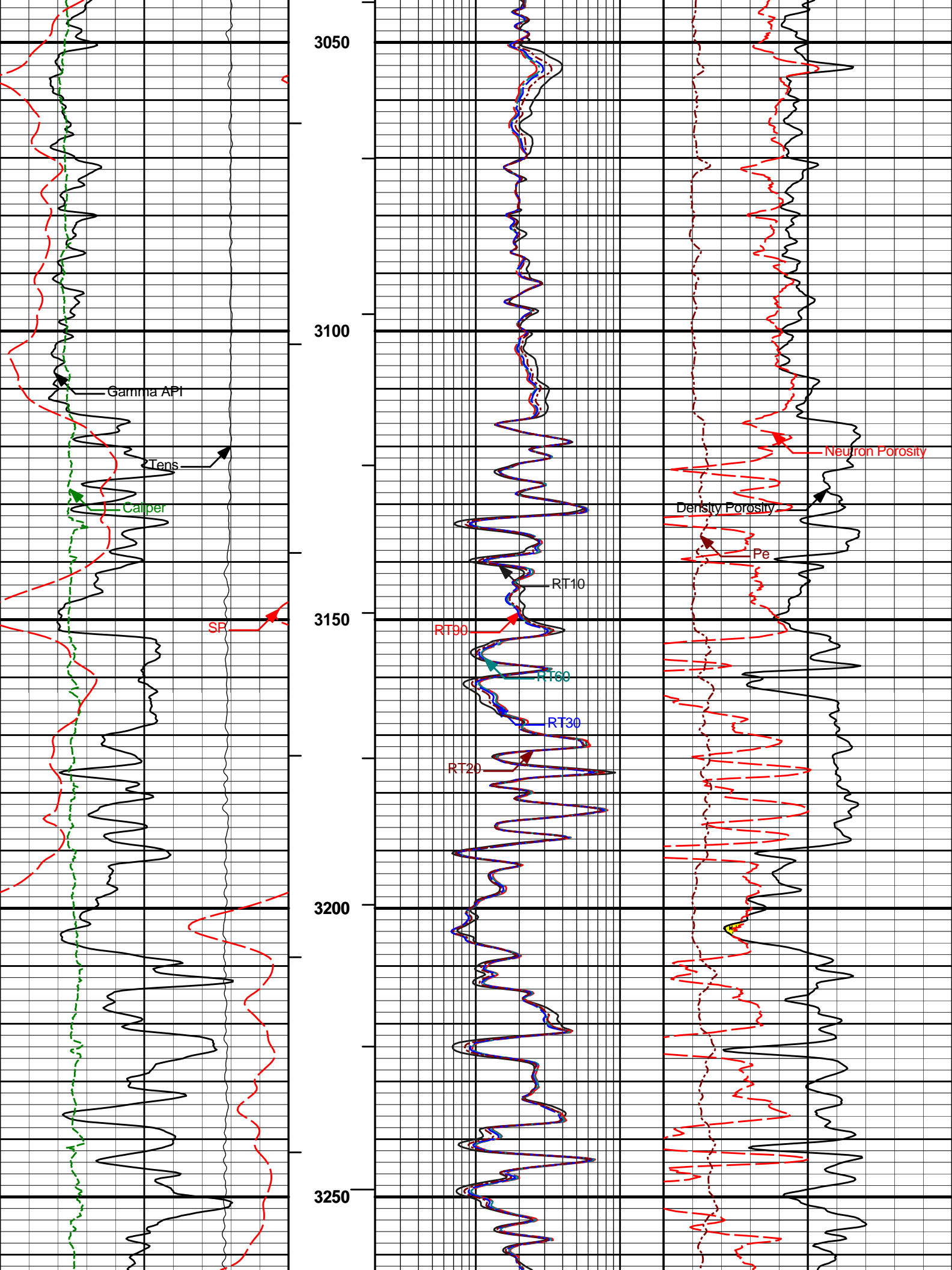


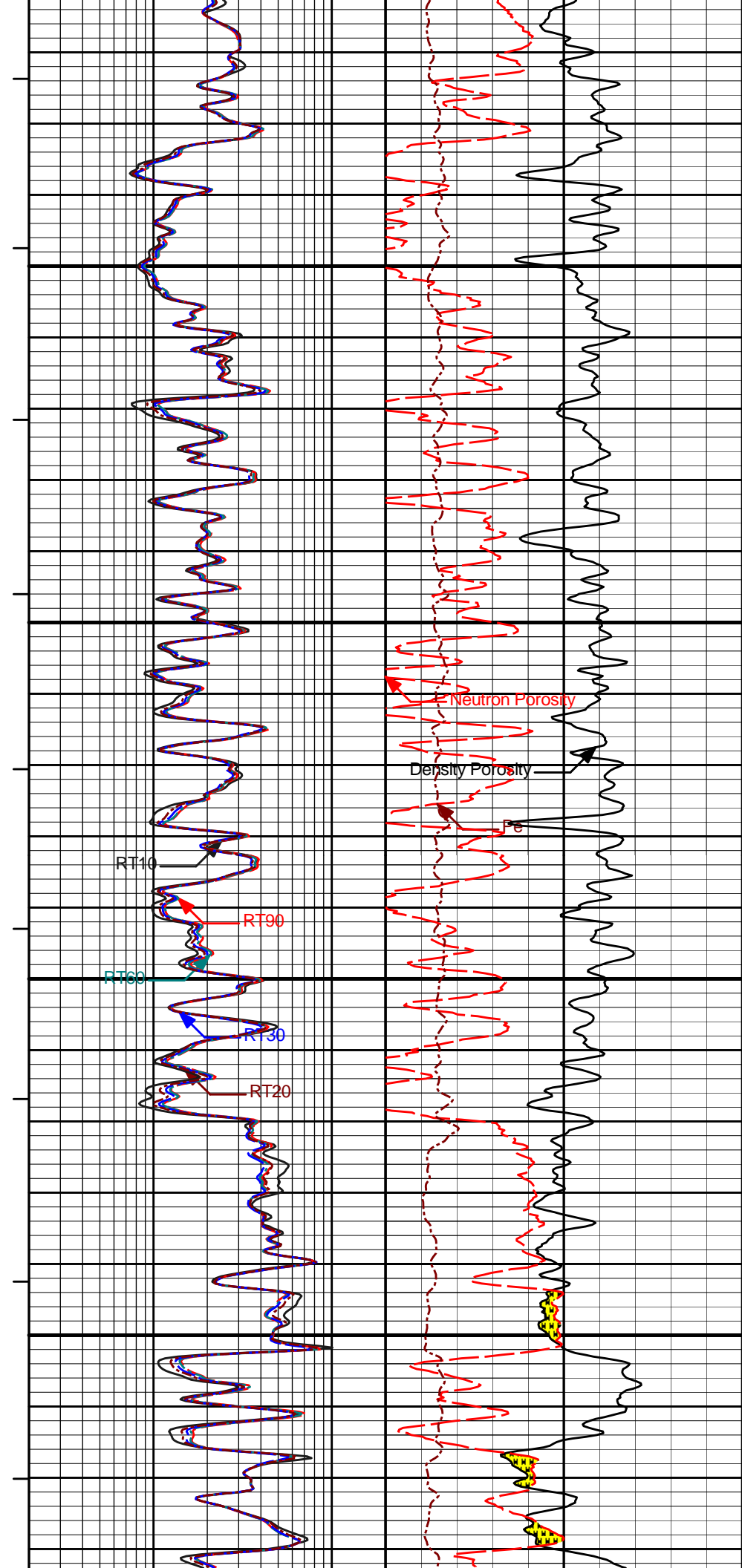
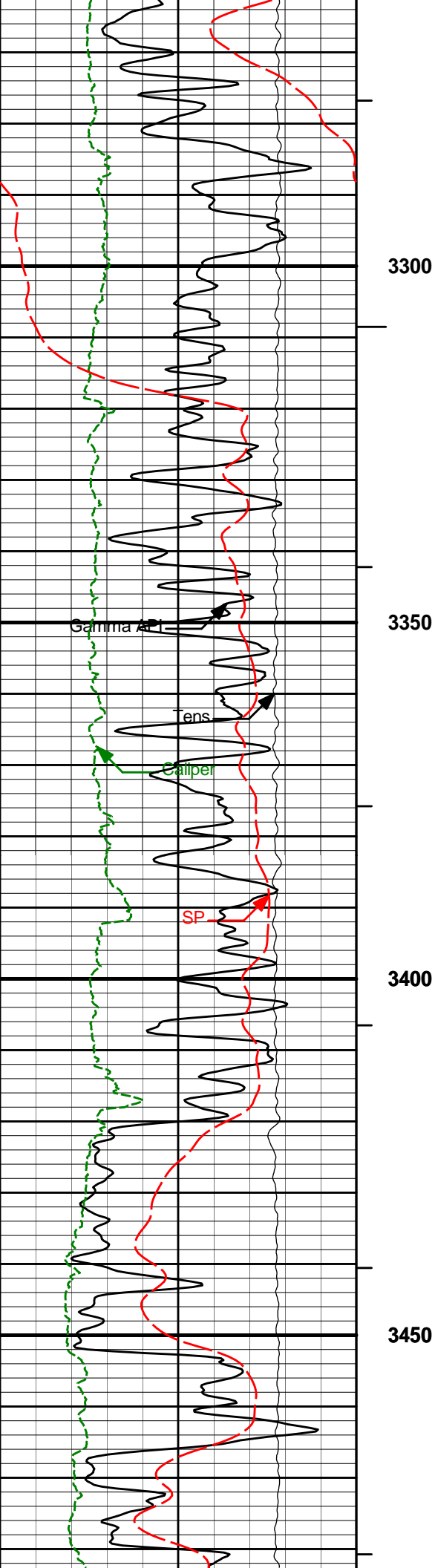


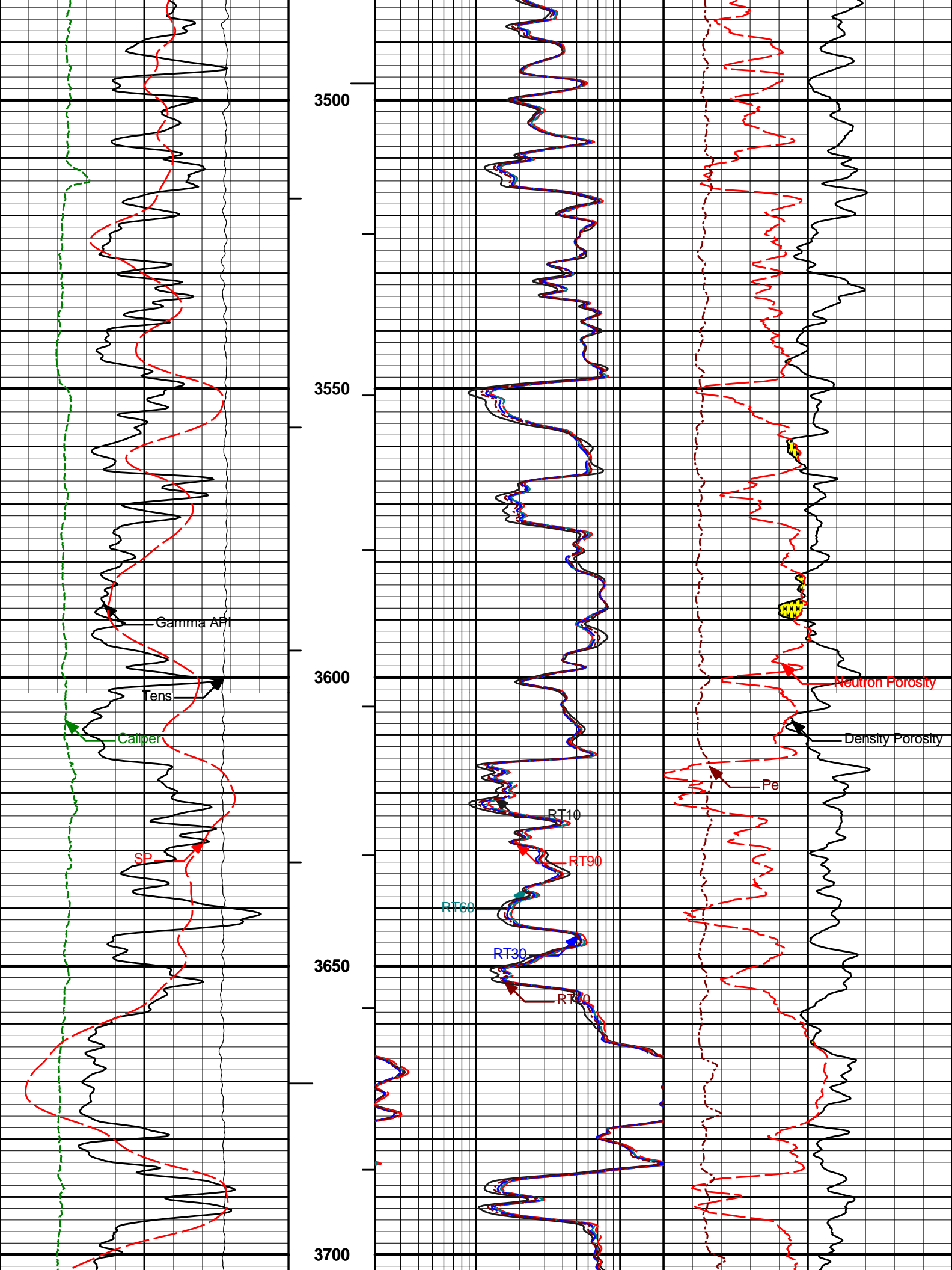


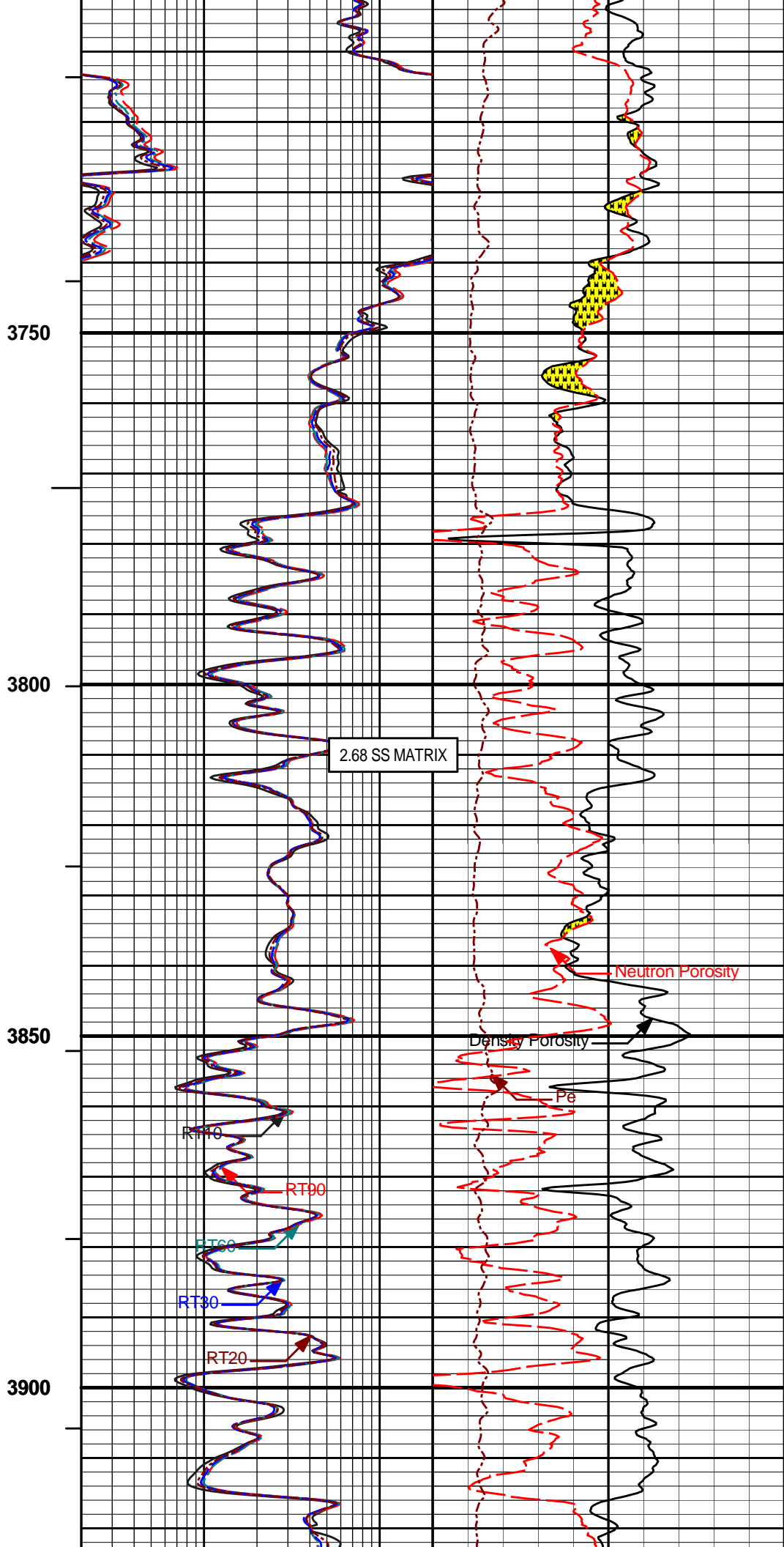
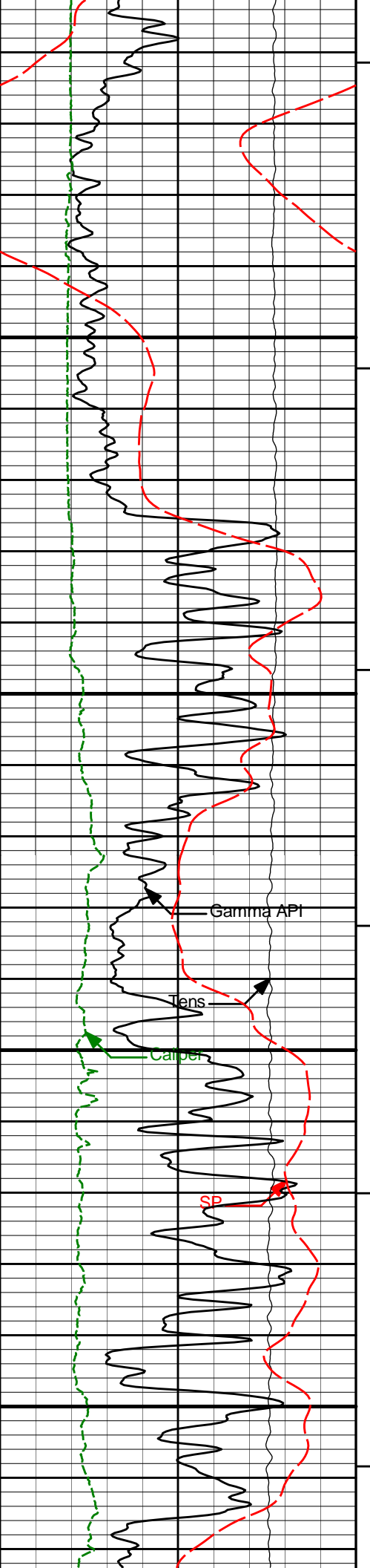


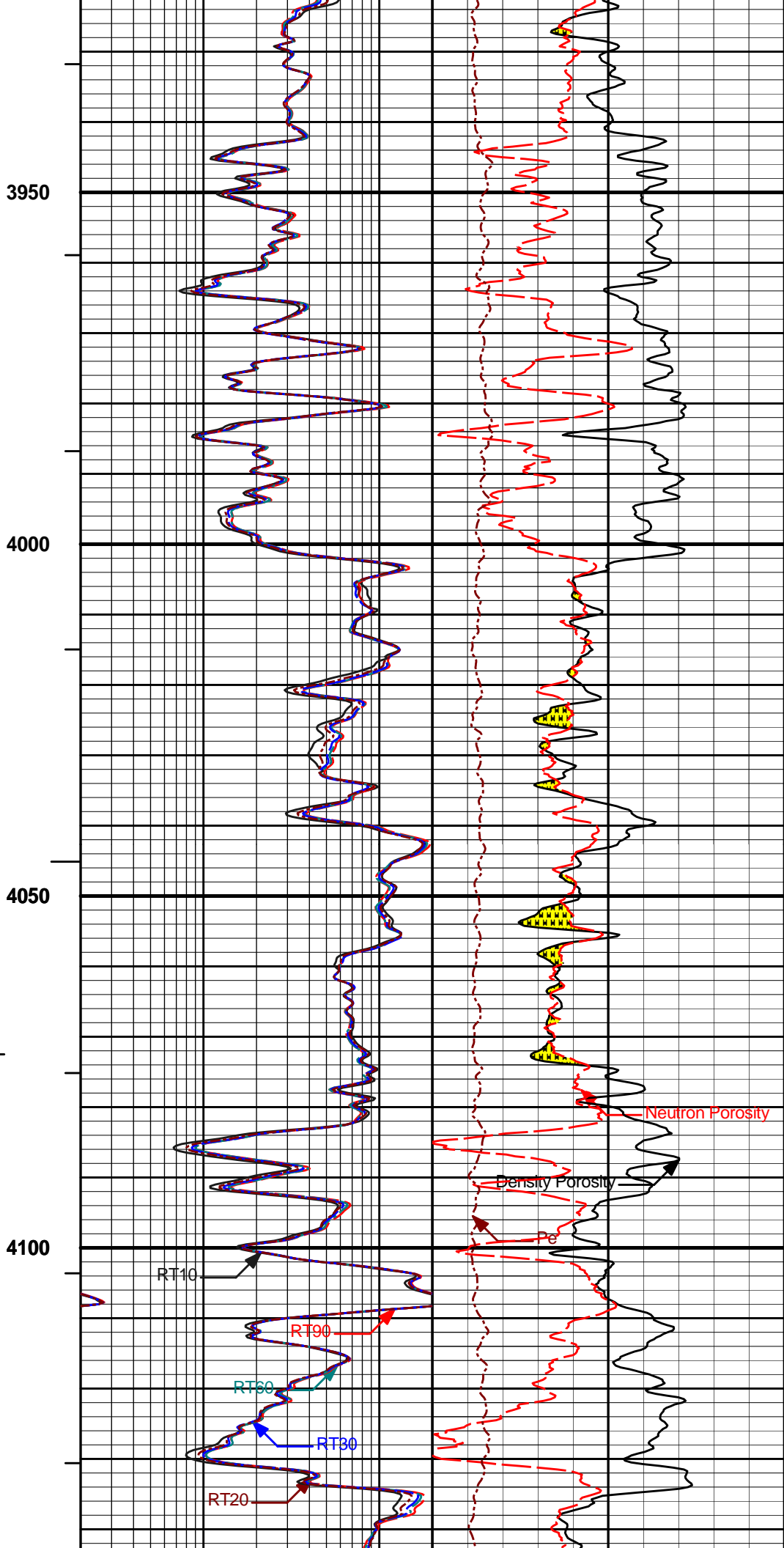
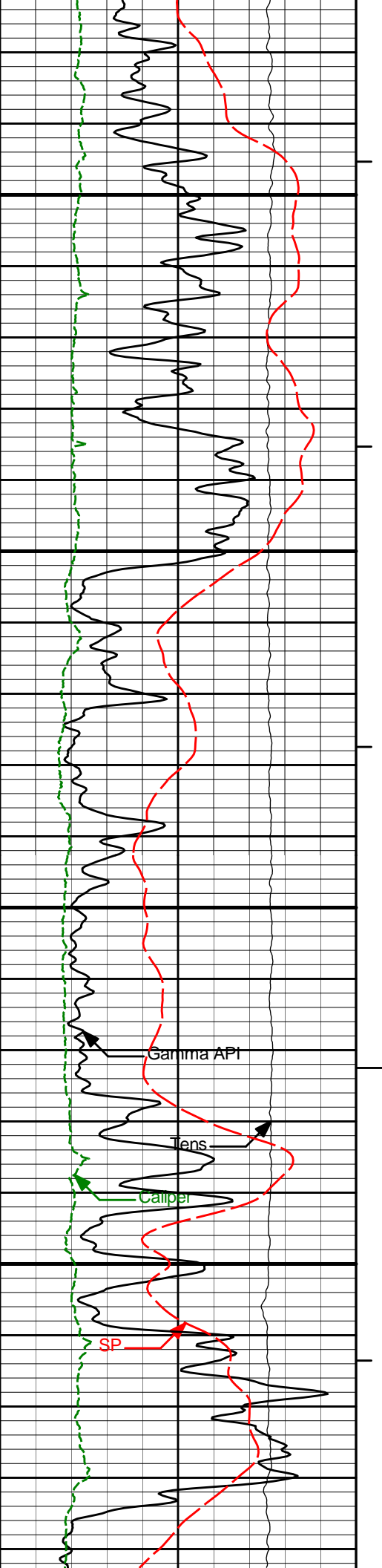




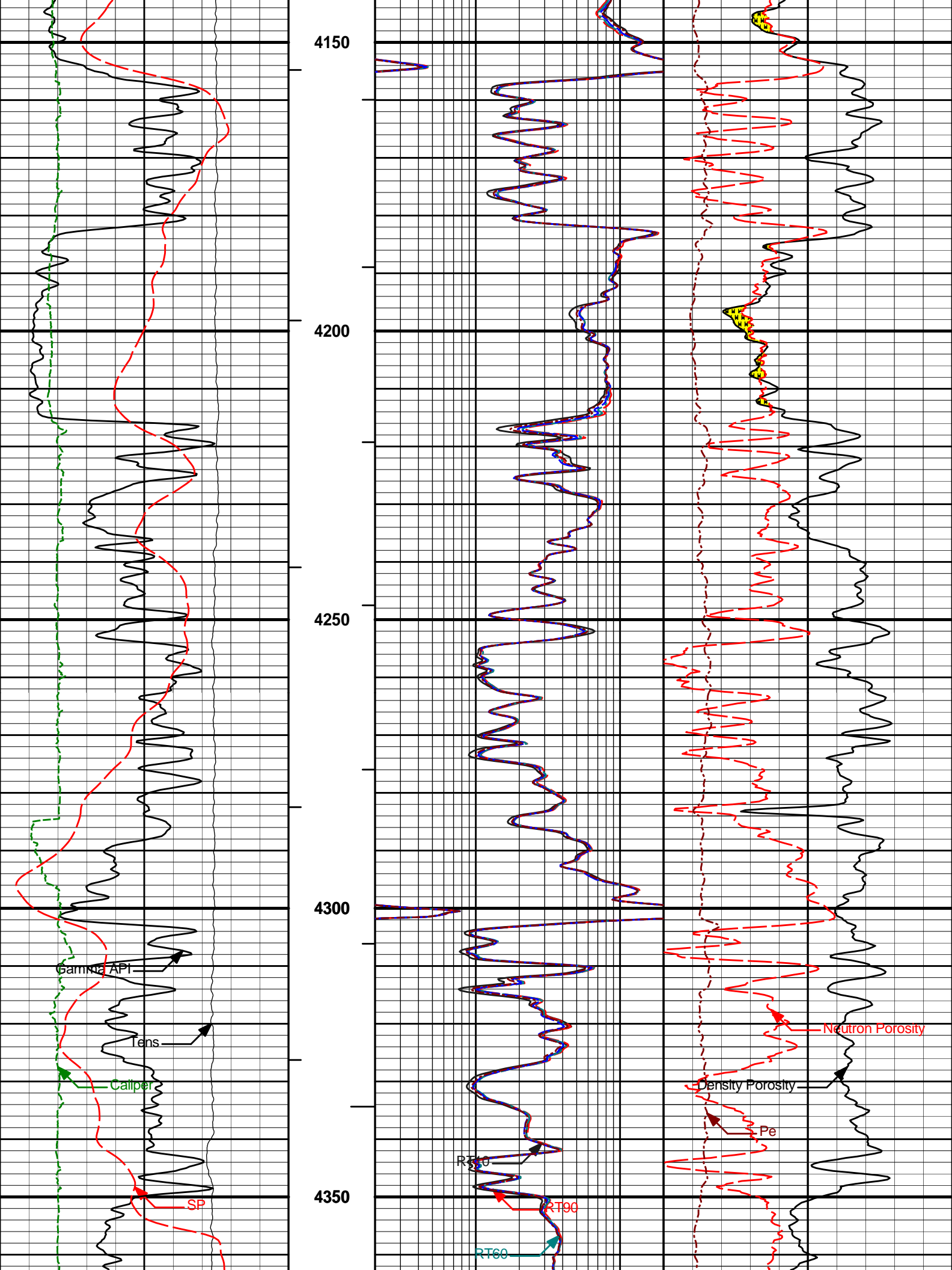




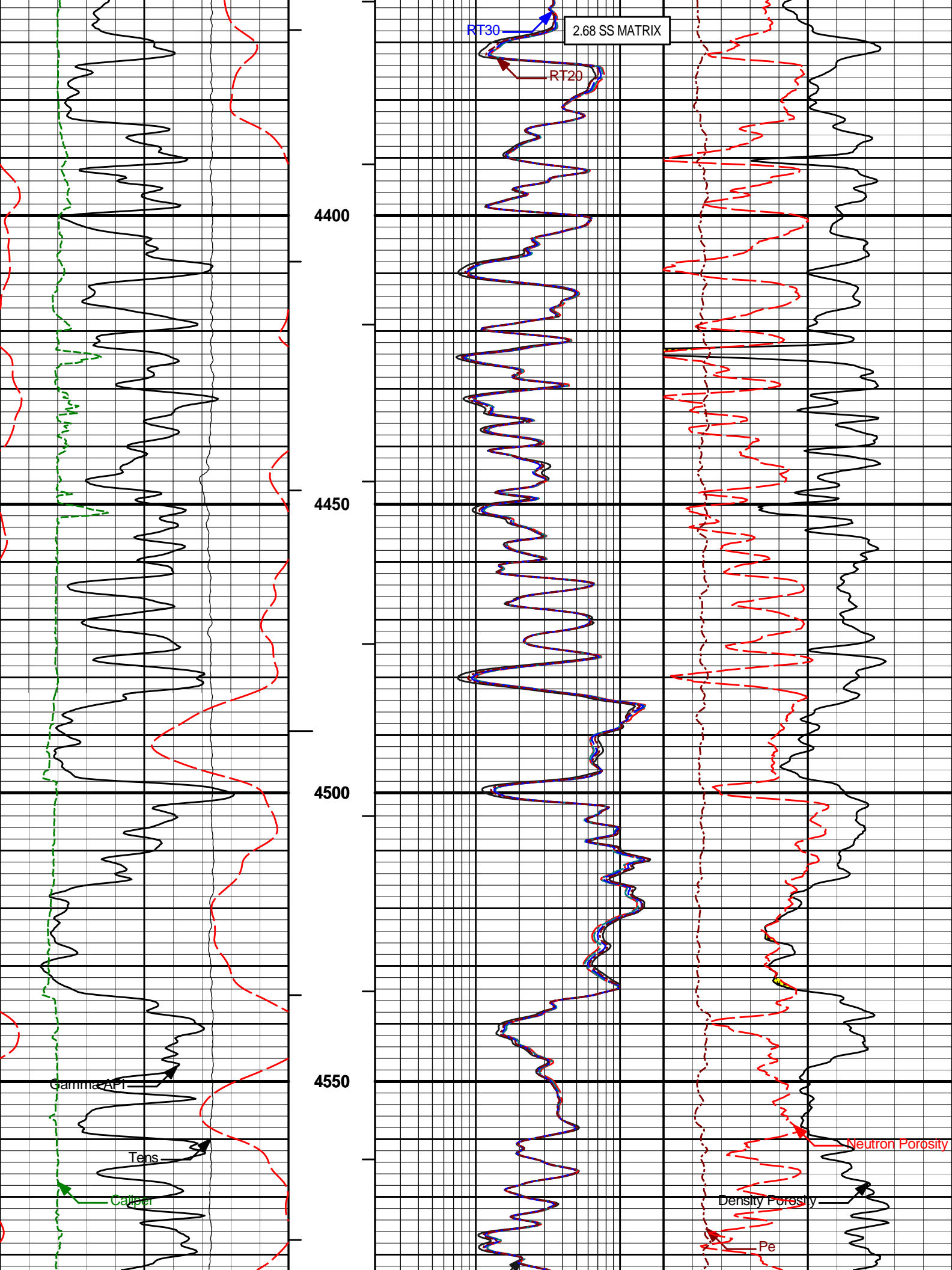


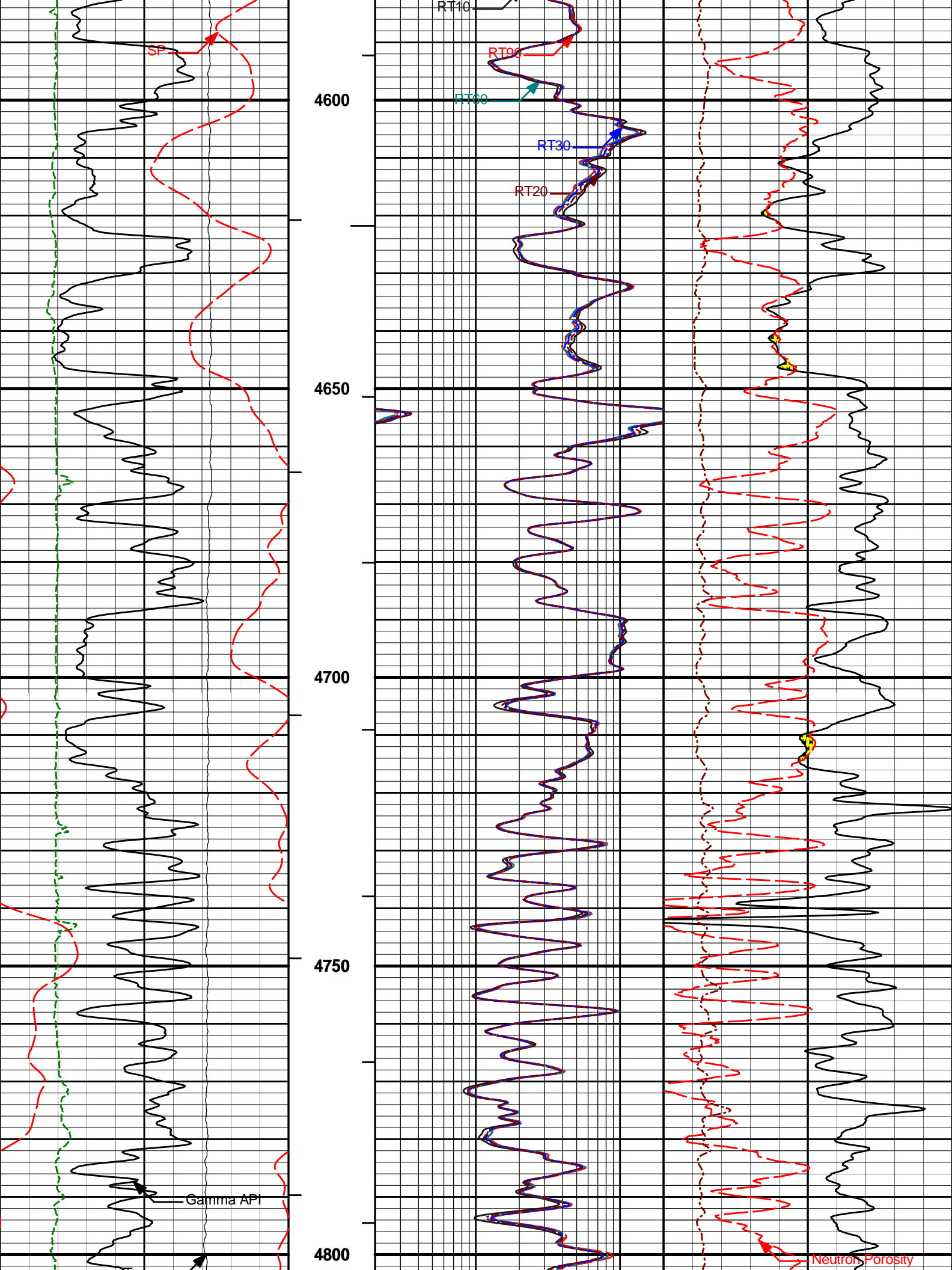


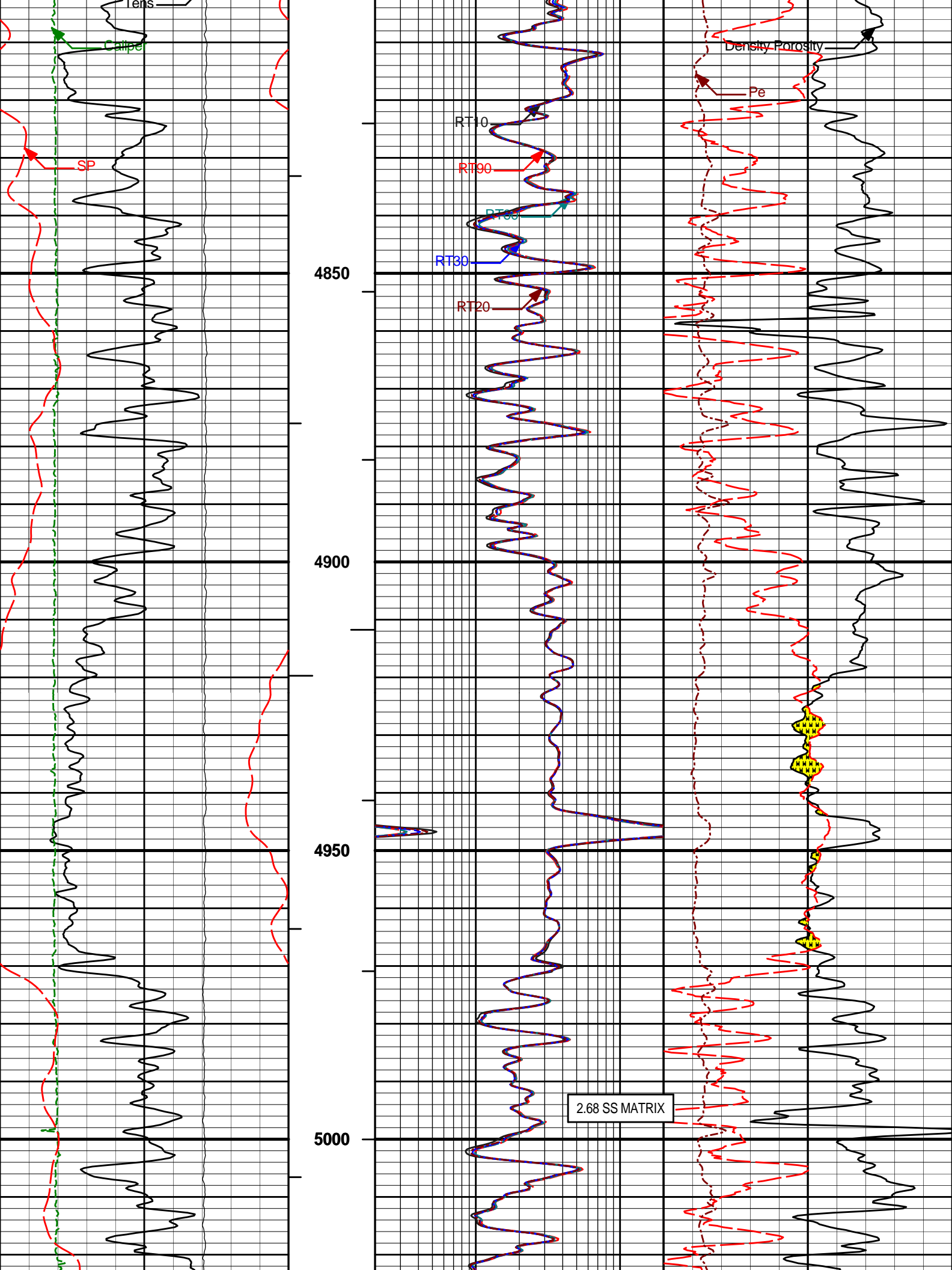


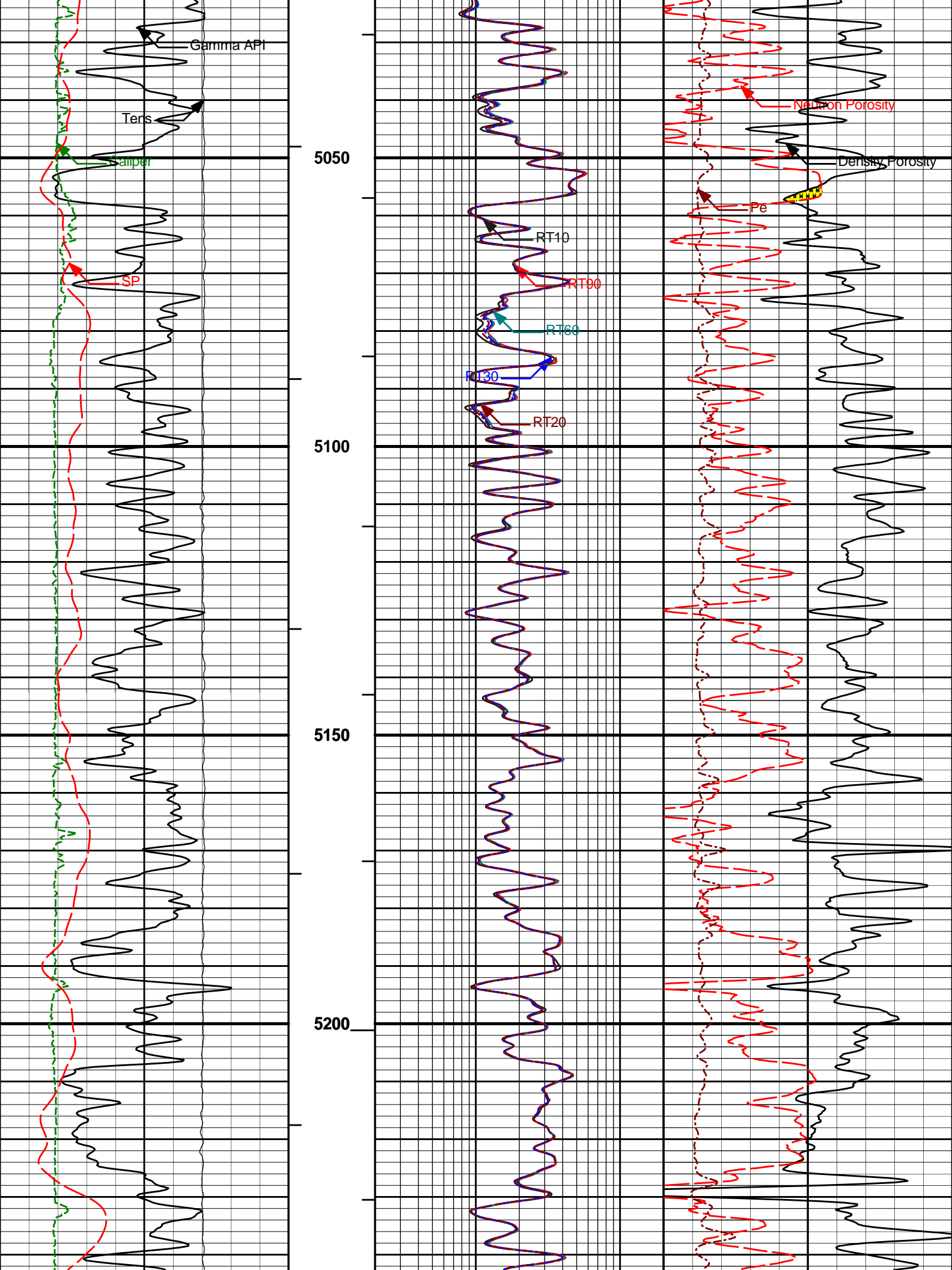


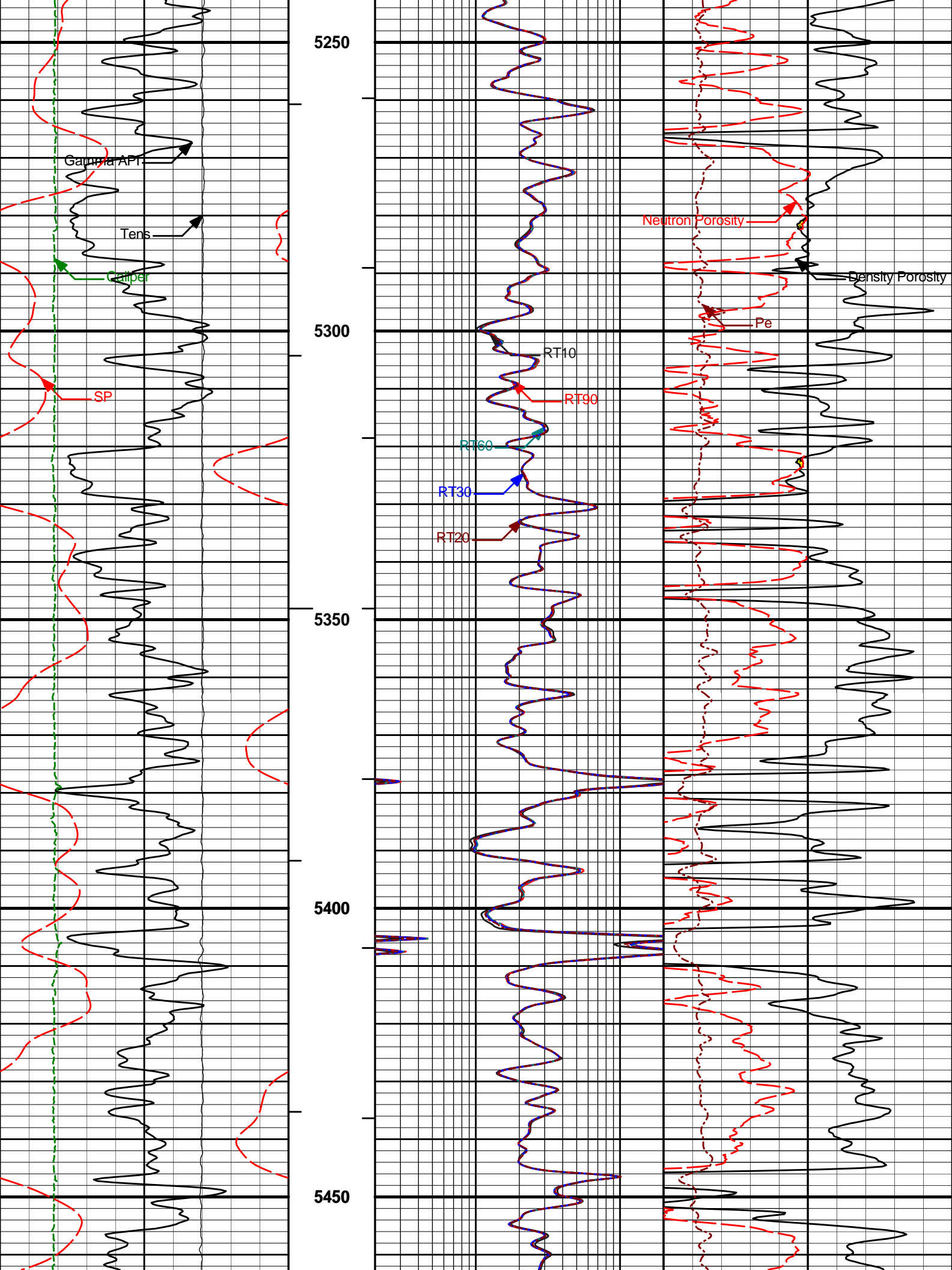


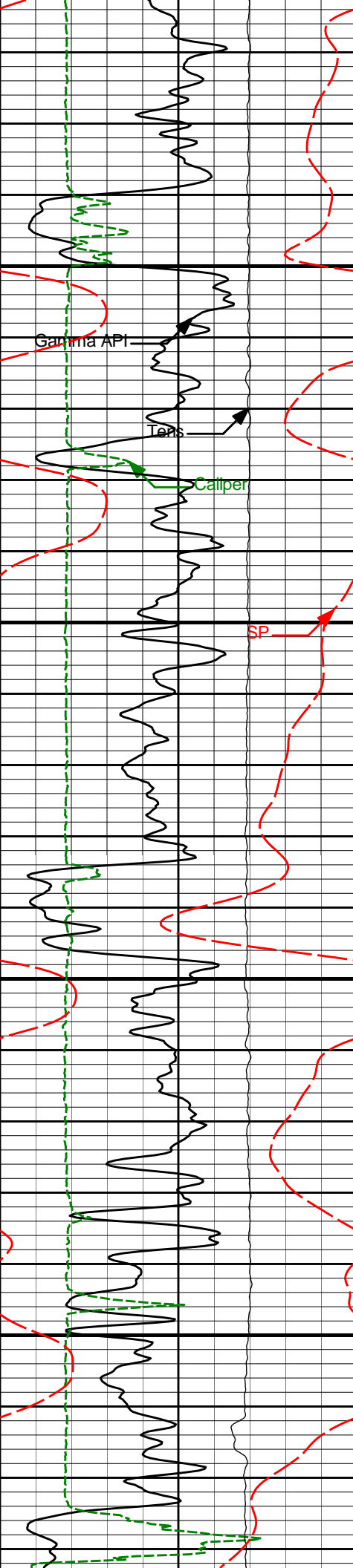












5500

Gamma API

Tens

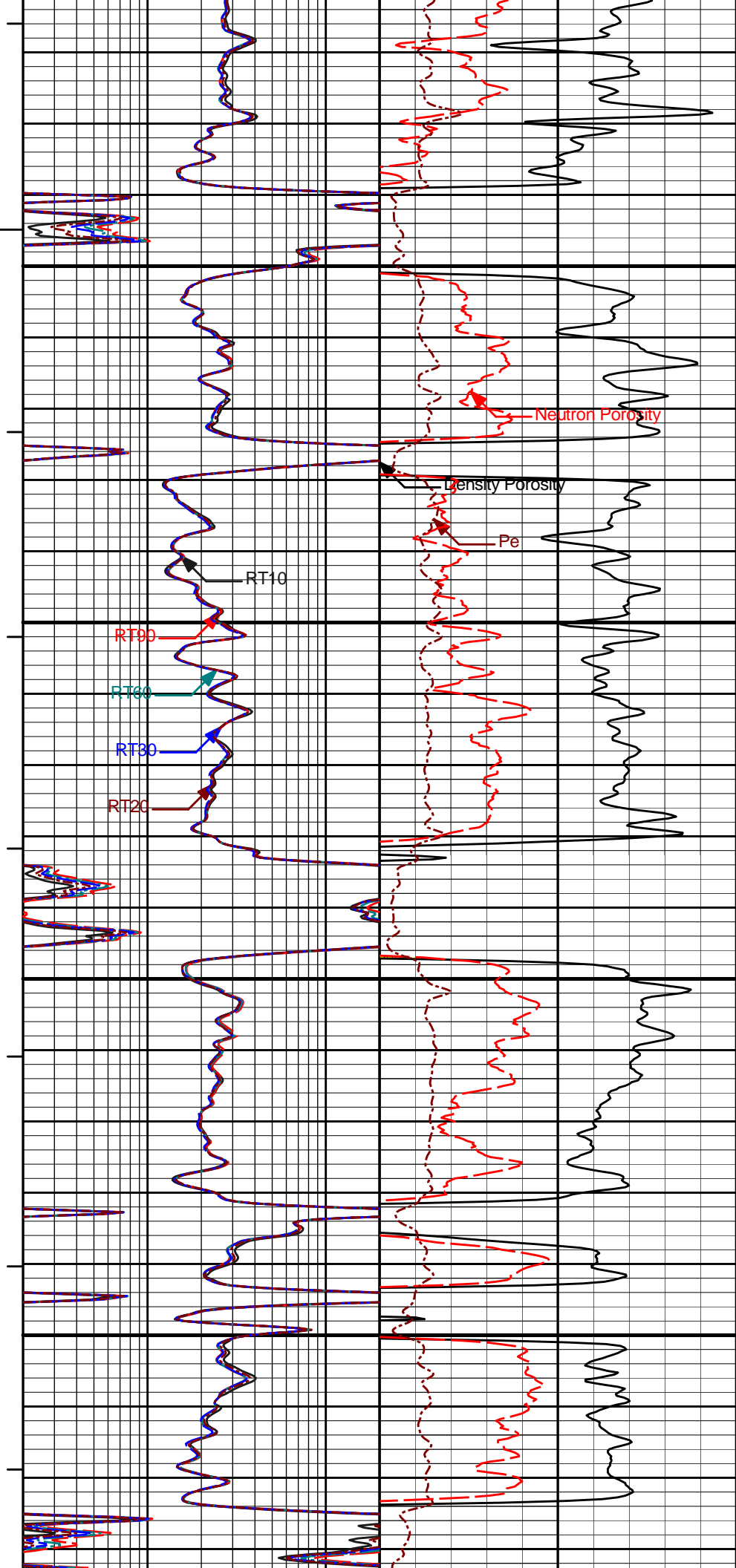
Caliper

SP

5550

5600

5650



Neutron Porosity

Density Porosity

Pe

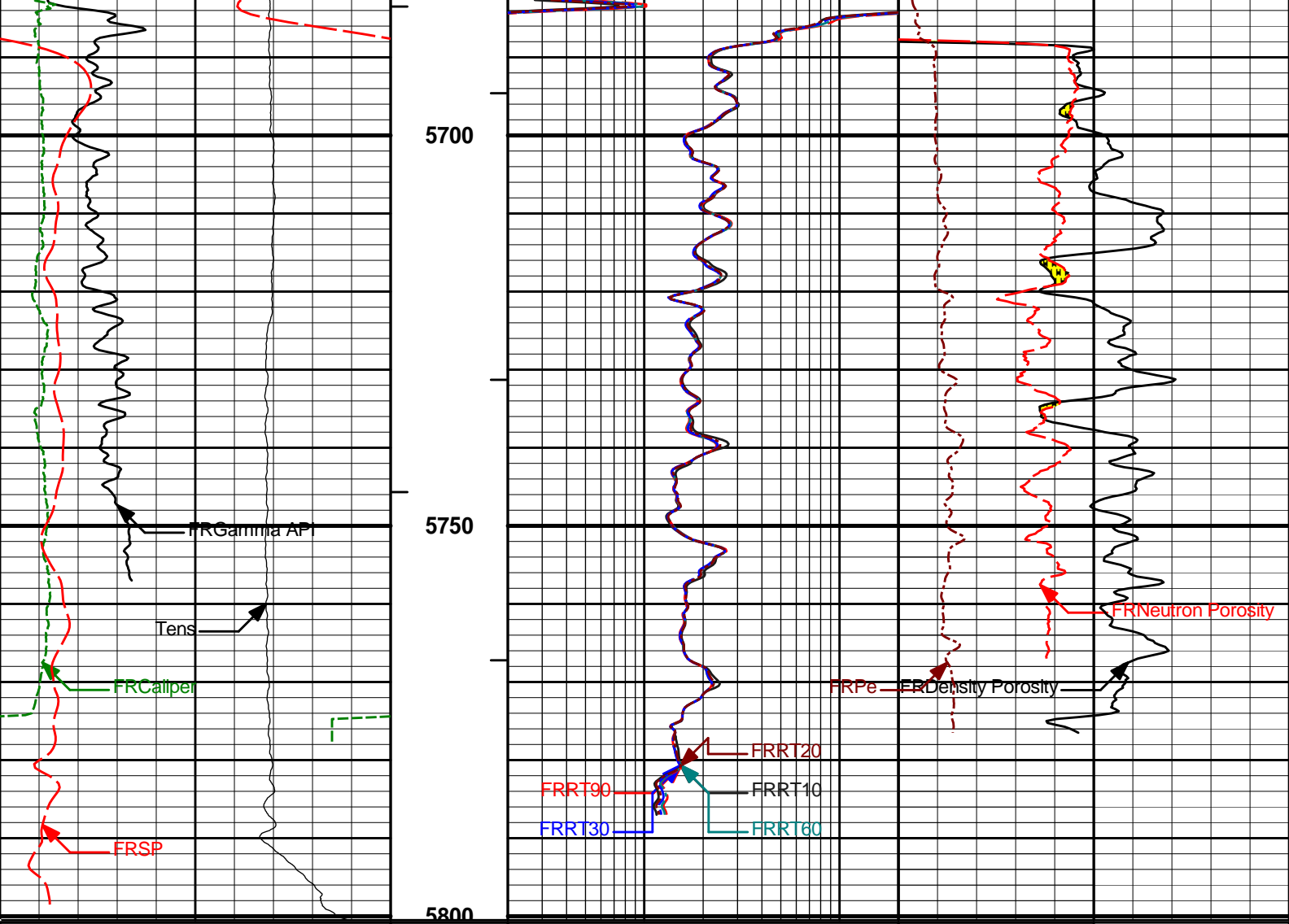
RT10

RT90

RT60

RT30

RT20



0	SP	100	1 : 240	2	RT90	200	0	Pe	10
	millivolts				Ohm-m				
0	Gamma API	250	BHVT	2	RT60	200	30	Density Porosity	-10
	api				Ohm-m			percent	
6	Caliper	16	AHVT	2	RT30	200	30	Neutron Porosity	-10
	inches				Ohm-m			percent	
10K	Tens	0		2	RT20	200			
	pounds				Ohm-m				
				2	RT10	200			
					Ohm-m				

**HALLIBURTON**

Plot Time: 03-Apr-11 13:20:04  
 Plot Range: 1505 ft to 5800.5 ft  
 Data: {ActiveWell}\Well Based\MAIN\*  
 Plot File: \\TRIPLEIQ\_COMPOSITE\_5IN\_RM\_NOBLE

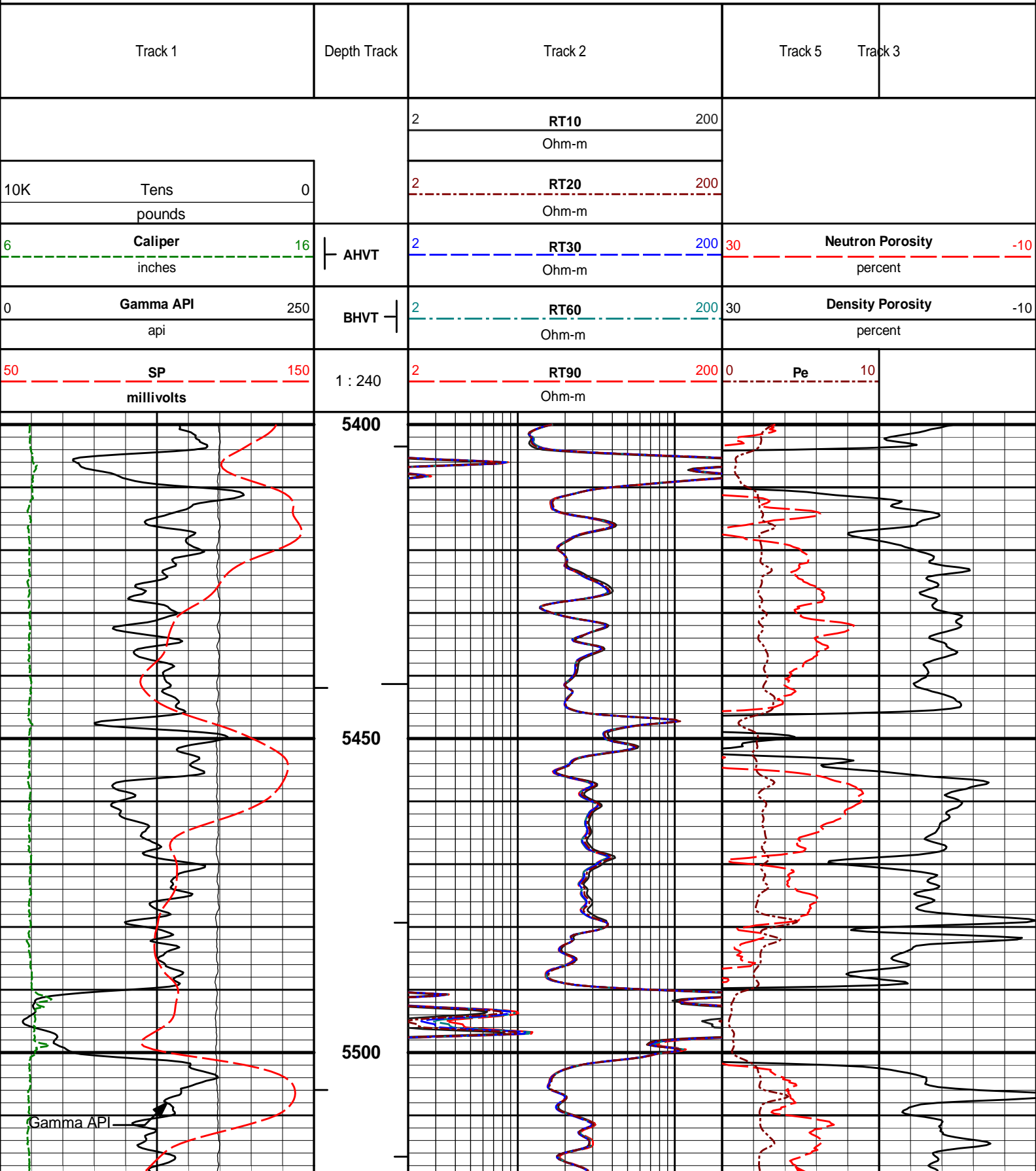
2150 TO 2500 5" = 100'

**HALLIBURTON**

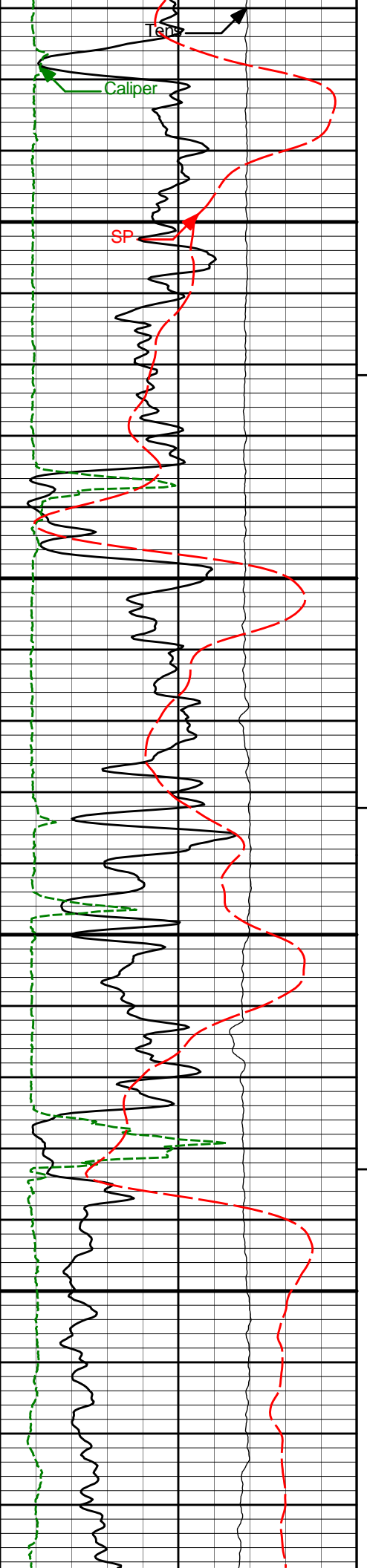
Plot Time: 03-Apr-11 13:20:04  
 Plot Range: 5398 ft to 5802.33 ft  
 Data: LARA\_PEPCL 706\Well Based\REPEAT\*



3500 TO 4480 5" = 100'





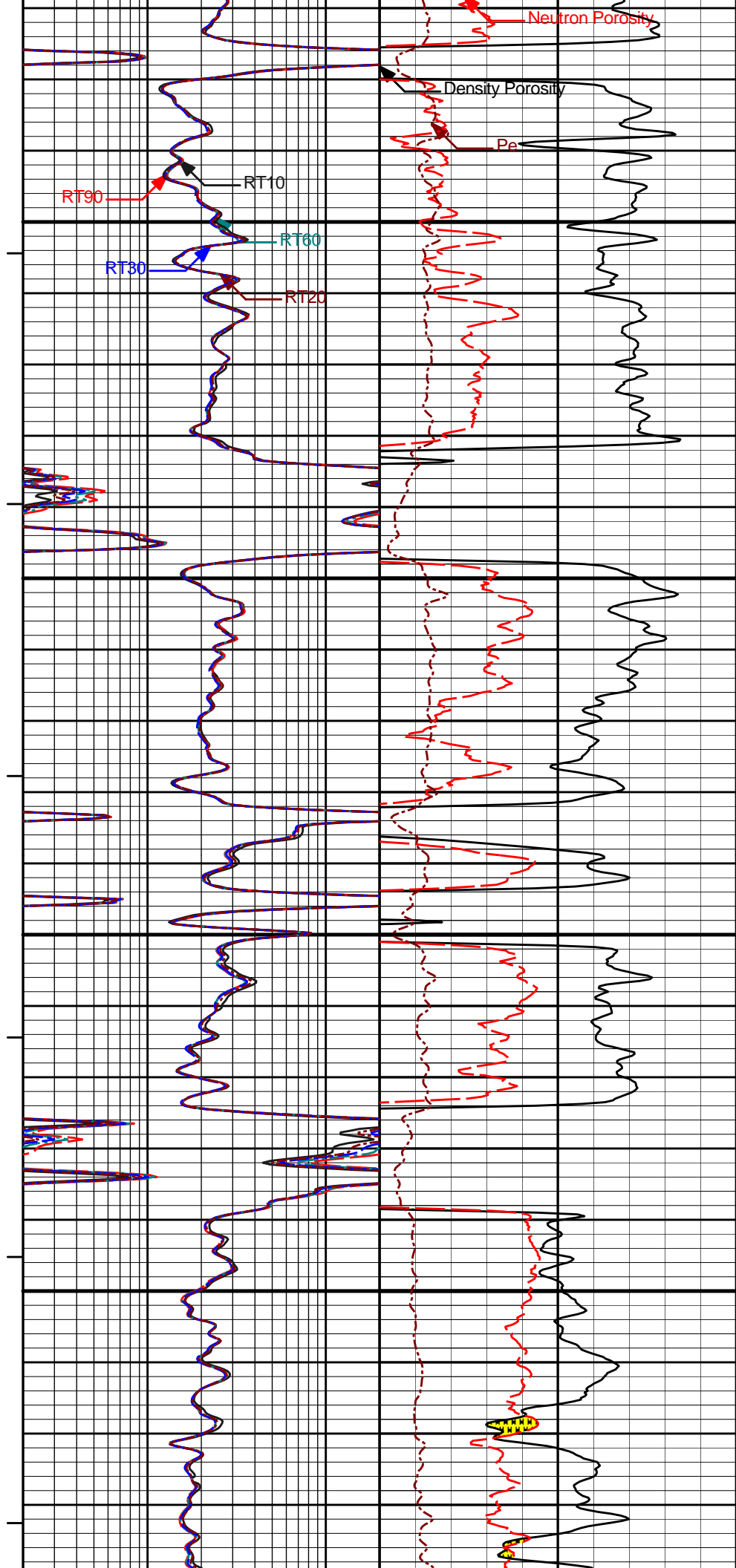


5550

5600

5650

5700



Neutron Porosity

Density Porosity

Pe

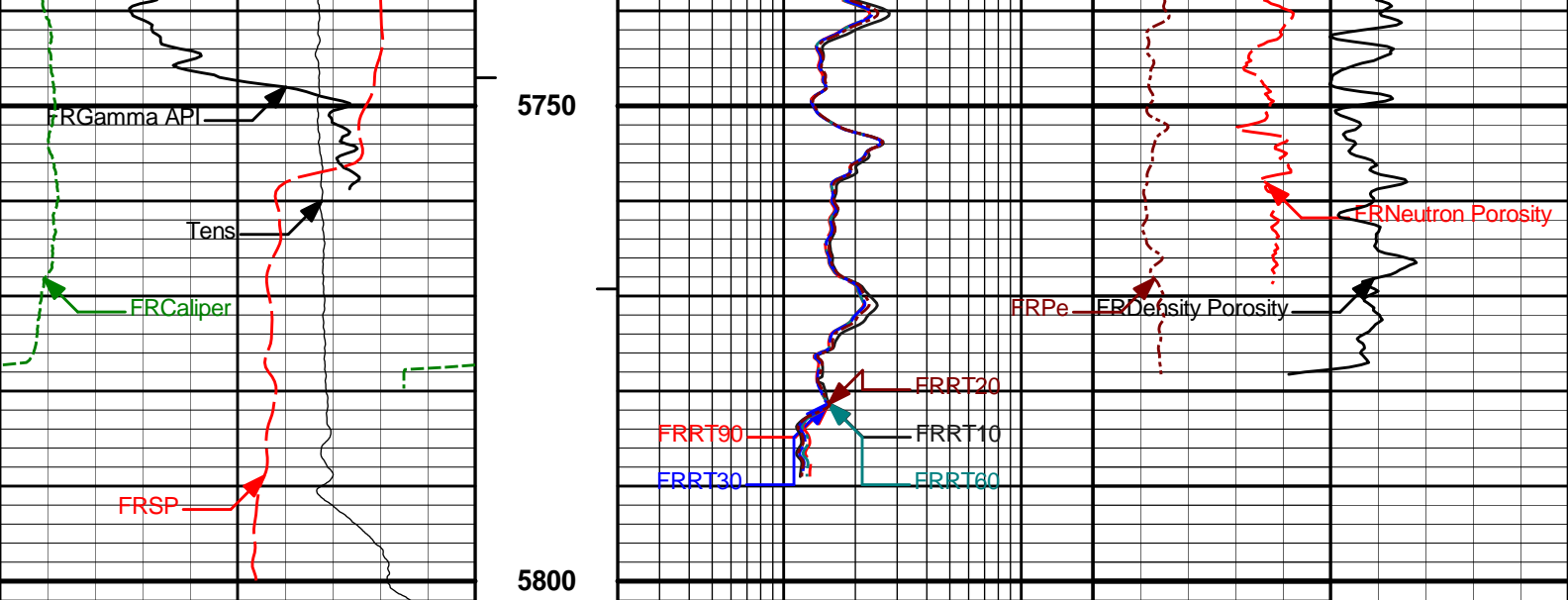
RT90

RT10

RT60

RT30

RT20



50	SP	150	1 : 240	2	RT90	200	0	Pe	10
	millivolts				Ohm-m				
0	Gamma API	250	BHVT	2	RT60	200	30	Density Porosity	-10
	api				Ohm-m			percent	
6	Caliper	16	AHVT	2	RT30	200	30	Neutron Porosity	-10
	inches				Ohm-m			percent	
10K	Tens	0		2	RT20	200			
	pounds				Ohm-m				
				2	RT10	200			
					Ohm-m				

<b>HALLIBURTON</b>	Plot Time: 03-Apr-11 13:20:06 Plot Range: 5398 ft to 5802.33 ft Data: LARA_PERCI_706\Well Based\REPEAT\* Plot File: \\TRIPLE\IQ_COMPOSITE_5IN_RM_NOBLE
--------------------	---

3500 TO 4480 5" = 100'
------------------------

<b>HALLIBURTON</b>
<b>CALIBRATION REPORT</b>

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 11004661	Reference Calibration Date:	18-Feb-11 17:31:33
Engineer:	R. STONE	Calibration Date:	18-Feb-11 17:39:09
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

Calibrator Source S/N: 110			
Calibrator API Reference:239.00 api			
Equivalent Calibrator API Reference:243.2 api			
Measurement	Measured	Calibrated	Units
Background	52.7	55.8	api
Background + Calibrator	282.5	299.0	api

Calibrator

246.3

243.2

api

**NATURAL GAMMA RAY TOOL FIELD CALIBRATION****Tool Name:** GTET - 11004661**Reference Calibration Date:** 18-Feb-11 17:39:09**Engineer:** W. MATSON**Calibration Date:** 03-Apr-11 10:39:41**Software Version:** WL INSITE R3.2.1 (Build 7)**Calibration Version:** 1

Calibrator Source S/N: 110

Calibrator API Reference:239.00 api

Equivalent Calibrator API Reference:243.2 api

Field Verification	Shop	Field	Units
Background	55.8	43.8	api
Background + Calibrator	299.0	290.6	api
Calibrator	243.2	246.8	api

Shop	Field	Difference	Tolerance
243.2	246.8	-3.6	+/- 9.00

**DUAL SPACED NEUTRON SHOP CALIBRATION****Tool Name:** DSNT - 10993887**Reference Calibration Date:** 03-Mar-11 13:58:53**Engineer:** J. KRONABLE**Calibration Date:** 03-Mar-11 14:13:27**Software Version:** WL INSITE R3.2.1 (Build 7)**Calibration Version:** 1

Logging Source S/N: 388

Tank Serial Number: GJWATERTANK

Reference value assigned to Tank: 52.700

Snow Block S/N: GJ

Calibration Tank Water Temperature: 68 degF

Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.939	0.936	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):	0.2175	0.2166	0.0009	+/- 0.0020
Calibrated Ratio:	9.95	9.92	0.030	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0652	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:** 03-Mar-11 14:13:27**Engineer:** W. MATSON**Calibration Date:** 03-Apr-11 10:47:42**Software Version:** WL INSITE R3.2.1 (Build 7)**Calibration Version:** 1

Logging Source S/N: 388

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0652	0.0633	-0.0019	+/- 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:	25-Feb-11 23:59:35
Engineer:	J. KRONABLE	Calibration Date:	03-Mar-11 11:12:32
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

Logging Source S/N: 5253GW

Aluminum Block S/N: GJALBLOCK

Density: 2.610g/cc

Pe: 3.100

Magnesium Block S/N: GJMGBLOCK

Density: 1.686g/cc

Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0461	1.0403	0.90 - 1.10
Near Dens Gain	1.0066	0.9989	0.90 - 1.10
Near Peak Gain	0.9664	0.9582	0.90 - 1.10
Near Lith Gain	0.9205	0.9196	0.90 - 1.10
Far Bar Gain	1.0078	1.0080	0.90 - 1.10
Far Dens Gain	0.9922	0.9950	0.90 - 1.10
Far Peak Gain	0.9840	0.9864	0.90 - 1.10
Far Lith Gain	0.9604	0.9675	0.90 - 1.10
Near Bar Offset	-0.2976	-0.2422	NONE
Near Dens Offset	0.0540	0.1278	NONE
Near Peak Offset	0.3887	0.4667	NONE
Near Lith Offset	0.7508	0.7697	NONE
Far Bar Offset	0.0183	0.0161	NONE
Far Dens Offset	0.1341	0.1079	NONE
Far Peak Offset	0.1970	0.1796	NONE
Far Lith Offset	0.3663	0.3171	NONE
Near Bar Background	969.85	966.99	700 - 1450
Near Dens Background	319.26	318.40	230 - 480
Near Peak Background	138.15	138.78	100 - 210
Near Lith Background	171.06	172.22	125 - 260
Far Bar Background	567.51	563.01	450 - 900
Far Dens Background	221.91	221.14	175 - 345
Far Peak Background	87.57	86.38	70 - 140
Far Lith Background	91.36	91.19	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.683	1.686	0.003	+/- 0.015

Pe	2.607	2.543	-0.064	+/- 0.150
ALUMINUM				
Density (g/cc)	2.602	2.610	0.008	+/- 0.01500
Pe	3.098	3.052	-0.046	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0008	+/- 0.0110	-0.0018	+/- 0.0140
Magnesium Block	-0.0011	+/- 0.0110	-0.0009	+/- 0.0140
Aluminum Block	-0.0003	+/- 0.0110	0.0016	+/- 0.0140
Resolution	9.66	6.00 - 11.50	9.09	6.00 - 11.50
Internal Verifier(B+D+P+L)	1596	1200 - 2700	962	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:	03-Mar-11 11:12:32
Engineer:	W. MATSON	Calibration Date:	03-Apr-11 10:38:49
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

Pad Temperature: 36.4 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1596.396	1591.481	-4.915	16.068
Far (B+D+P+L) cps	961.729	965.932	4.203	16.695
Near Resolution	9.66	9.93	0.270	0.50
Far Resolution	9.09	9.33	0.240	1.00

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

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	SDLT - 10951300	Reference Calibration Date:	24-Feb-11 12:55:20
Engineer:	R. STONE	Calibration Date:	24-Feb-11 13:01:45
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2073.34	-1879.96	-7000.00 - -1000.00
Pad Gain	0.0003758	0.0003676	0.000200 - 0.000600

Arm Offset	-3594.64	-3632.78	-5000.00 - 3000.00
Arm Gain	0.0005346	0.0005188	0.000300 - 0.000700
Arm Power	-0.000003844	-0.000002736	-0.000010 - 0.000010

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)	1.97	2.00	0.03	+/- 0.20
Medium Ring (in)	3.76	3.75	-0.01	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.50	6.50	0.00	+/- 0.20
Medium Ring (in)	8.28	8.25	-0.03	+/- 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 - 10951300	Reference Calibration Date:	24-Feb-11 13:01:45
Engineer:	W. MATSON	Calibration Date:	08-Mar-11 16:40:35
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.66	-0.09	+/- 0.10
Ring Diameter	8.25	8.16	-0.09	+/- 0.15

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

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	ACRt - 90194258-E7486-	Reference Calibration Date:	11-Dec-10 12:48:04
Engineer:	J. KRONABLE	Calibration Date:	03-Mar-11 16:02:52
Software Version:	WL INSITE R3.2.1 (Build 7)	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	0.9933	1.05	0.95	0.9948	1.05	0.95	0.9918	1.05
A2 (50")	0.95	1.0050	1.05	0.95	1.0067	1.05	0.95	1.0056	1.05
A3 (29")	0.95	0.9996	1.05	0.95	1.0006	1.05	0.95	0.9974	1.05
A4 (17")	0.95	0.9948	1.05	0.95	0.9945	1.05	0.95	0.9920	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9909	1.05	0.95	0.9870	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9848	1.05	0.95	0.9806	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	-0.669	2	-6	-3.845	-2	-8	-5.125	-2
A2 (50")	-7	-1.972	-1	-6	-3.812	-2	-7	-4.712	-2
A3 (29")	-27	-11.792	-9	-9	-3.527	-3	-7	-2.915	-1
A4 (17")	-180	-102.081	-60	-45	-32.319	-15	-39	-25.805	-13
A5 (10")	N/A	N/A	N/A	-150	-68.266	-50	-80	-35.004	-10
A6 (6")	N/A	N/A	N/A	175	265.948	525	90	139.593	270

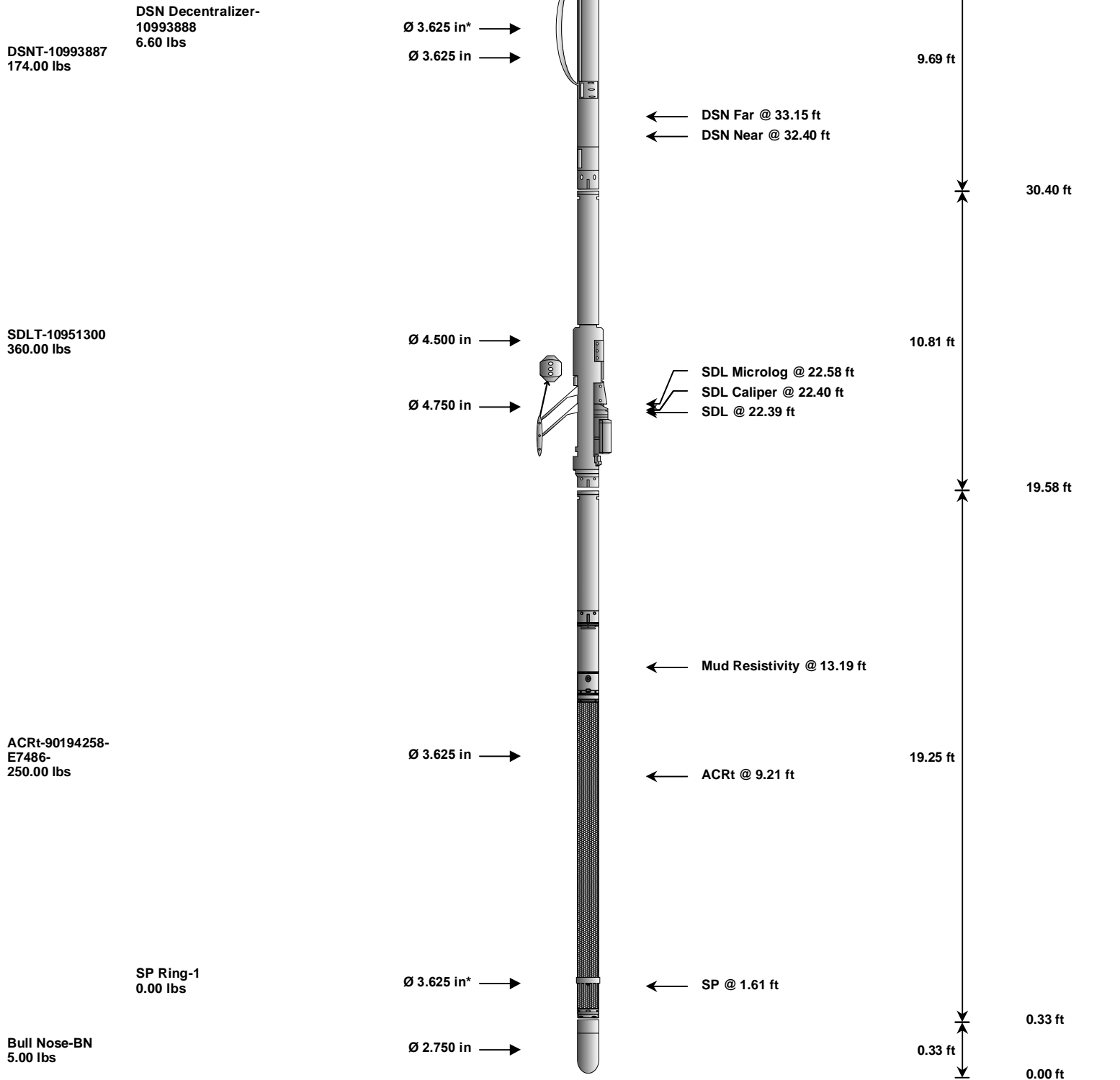
TRANSMITTER CURRENT GAIN				R-MUD VERIFICATION			
Signal	Lower	R	Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.8521	1.3	Mud Cell	0.95	1.004	1.05
36K	1.0	1.7961	2.0				
72K	1.0	1.0980	2.0				

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11004661						
Gamma Ray Calibrator	243.2	246.8	-----	-3.6	+/- 9.00	api
DSNT-10993887						
Snow-Block Porosity	0.0652	0.0633	-----	0.0019	+/- 0.0150	decp
SDLT-10951300						
Near(B+D+P+L)	1596.396	1591.481	-----	4.915	+/-16.068	cps
Far(B+D+P+L)	961.729	965.932	-----	-4.203	+/-16.695	cps
Pad Extension	3.75	3.66	-----	0.09	+/-0.10	in
Ring Diameter	8.25	8.16	-----	0.090	+/-0.15	in
ACRt-90194258-E7486-						
Mud Cell	1.004	-----	-----	0.000	-----	ohm-m
Data: LARA_PERCI_706\0001 TRIPLE\IDLE				Date: 03-Apr-11 12:25:05		

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-C11013846 135.00 lbs		Ø 3.625 in →		Load Cell @ 51.17 ft BH Temperature @ 50.60 ft	6.25 ft	54.85 ft
						48.60 ft
GTET-11004661 165.00 lbs		Ø 3.625 in →		GammaRay @ 42.54 ft	8.52 ft	
						40.08 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	C11013846	135.00	6.25	48.60	300.00
GTET	Gamma Telemetry Tool	11004661	165.00	8.52	40.08	60.00
DSNT	Dual Spaced Neutron	10993887	174.00	9.69	30.40	60.00
DCNT	DSN Decentralizer	10993888	6.60	5.13	* 33.73	300.00
SDLT	Spectral Density Tool	10951300	360.00	10.81	19.58	60.00
ACRt	Array Compensated True Resistivity	90194258-E7486-	250.00	19.25	0.33	300.00
SP	SP Ring	1	0.00	0.25	* 1.61	300.00
BLNS	Bull Nose	BN	5.00	0.33	0.00	300.00
<b>Total</b>			<b>1,095.60</b>	<b>54.85</b>		
* Not included in Total Length and Length Accumulation.						
Data: LARA_PERCI_706\0001 TRIPLE\IDLE					Date: 03-Apr-11 11:08:05	



COMPANY	LARAMIE ENERGY		
WELL	HAWXSHURST 24-15A		
FIELD	BUZZARD		
COUNTY	MESA	STATE	CO
<b>HALLIBURTON</b>		SPECTRAL DENSITY DUAL SAGED NEURTON ARRAY COMPENSATED TRUE RESISTIVITY	