

# HALLIBURTON

**DUAL SPACED NEUTRON  
SPECTRAL DENSITY  
ARRAY COMPENSATED  
TRUE RESISTIVITY**

COMPANY **BRIDGE ENERGY INC**  
WELL **ISLAND CAPITOL 1-19**  
FIELD **PAYETTE WILDCAT**  
COUNTY **PAYETTE**  
STATE **WY**

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WELL **ISLAND CAPITOL 1-19**  
FIELD **PAYETTE WILDCAT**  
COUNTY **PAYETTE**  
STATE **WY**

API No. 11075020009  
Location SURFACE HOLE LOCATION:  
1583 FSL AND 543 FEL

Sect. 19 Twp. 9N Rge. 3W

Elev. 2373.0 ft  
Elev. K.B. 2385.0 ft  
D.F. 2384.0 ft  
G.L. 2373.0 ft

Other Services:  
RWCH  
BSAT

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Permanent Datum Log measured from	GL	Elev. 2373.0 ft
Drilling measured from	KB	Elev. K.B. 2385.0 ft
	KB	D.F. 2384.0 ft
	KB	G.L. 2373.0 ft
Date	15-Apr-10	
Run No.	ONE	
Depth - Driller	4386.00 ft	
Depth - Logger	4384.0 ft	
Bottom - Logger Interval	4381.0 ft	
Top - Logger Interval	50.0 ft	
Casing - Diner	9.628 in @ 868.0 ft	@
Casing - Logger	869.0 ft	@
Bit Size	8.750 in	@
Type Fluid	WBM	@
Density	10.2 ppg	44.00 sg/qt
PH	9.10 pH	5.0 q/in
Source of Sample	MUD TANK	
Rm @ Meas. Temperature	3.960 ohmm @ 70.00 degF	@
Rmf @ Meas. Temperature	3.19 ohmm @ 75.80 degF	@
Rmc @ Meas. Temperature	3.060 ohmm @ 75.30 degF	@
Source Rmf	MEAS. Rmc	@
Rm @ BHT	1.66 ohmm @ 176.0 degF	@
Time Since Circulation	15.5 hr	
Time on Bottom	15-Apr-10 05:32	
Max. Rec. Temperature	176.0 degF @ 4384.0 ft	@
Equipment Location	11170614 ROCK SPRING	@
Recorded By	B. DRAKE	
Witnessed By	RON RICHARDS	JEFF KIRN

Fold here

Service Ticket No.: 7307023      API Serial No.: 11075020009      PGM Version: WL INSITE R3.0.3 (Build 5)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE				RESISTIVITY SCALE CHANGES				
Date	Sample No.			Type Log	Depth	Scale Up Hole	Scale Down Hole	
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.	@	@			E171_S970			
Source Rmf	Rmc							
Rm @ BHT	@	@						
Rmf @ BHT	@	@						
Rmc @ BHT	@	@						

EQUIPMENT DATA							
GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	11238317	Serial No.	10939067	Serial No.	10947725	Serial No.	11020488
Model No.	GTET	Model No.	BSAT	Model No.	SDLT-I	Model No.	DSNT-I
Diameter	3.625"	No. of Cent.	TWO	Diameter	4.5"	Diameter	3.625"
Detector Model No.	102-A	Spacing	10.5"	Log Type	RAM-RAM	Log Type	NEU-NEU
Type	SCINT	Source Type	CS-137	Source Type	CS-137	Source Type	Am241Be
Length	8"	LSA [Y/N]		Serial No.	5235GW	Serial No.	08-018
Distance to Source	10'	FWDA [Y/N ]		Strength	1.5 Ci	Strength	15 Ci

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LOGGING DATA

Run	Depth		Speed ft/min	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix	
	No.	From		To	L	R	L		R	L		R	L		R
	ONE	4384'		869'	REC	200	0		40%	0%		55.5 usec/ft	40%		0%
ONE	869'	50'	REC	200	0							40%	0%	SAND	

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DIRECTIONAL INFORMATION	
Maximum Deviation @	KOP @

Remarks: GTET-DSNT-SDLT-BSAT-ACRT WERE RAN IN COMBINATION  
 ANNULAR HOLE VOLUME CALCULATED FOR 5.5" CASING  
 BOREHOLE RUGOSITY, TENSION PULLS AND WASHOUTS MAY EFFECT LOG QUALITY

LATITUDE: 44.125  
 LONGITUDE: -116.753

TODAY'S CREW: S. BENGSTON, A. SALDIVAR & B. PECK RIG: ENSIGN 516  
 \*\*\* THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES, ROCK SPRINGS, WY (301) 352-8600 \*\*\*

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## PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	8.750	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDWT	Borehole Fluid Weight	10.200	ppg
	SHARED	OBM	Oil Based Mud System?	No	
	SHARED	RMUD	Mud Resistivity	2.000	ohmm
	SHARED	TRM	Temperature of Mud	75.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	4386.00	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	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	Rwa / CrossPlot	AFAC	Arche A factor	0.6200	
	Rwa / CrossPlot	MFAC	Arche M factor	2.1500	
	Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
	Rwa /	TMER	Rmf Ref Temp	75.00	degF

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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	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	POTA	Potassium	0.00	%
GTET	MDTP	Mud Type	Natural	
GTET	TPOS	Tool Position	Standoff	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Sandstone	
DSNT	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	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	AD	Is Hole Air Drilled?	No	
SDLT	CB	Logging Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	MDTP	Weighted Mud Correction Type?	Barite	
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	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Semblance Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Semblance Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	Sandstone 55.5	
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRt	RTOK	Process ACRt?	Yes	
ACRt	MNSO	Minimum Tool Standoff	1.50	in
ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
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: ISLND\_CPTL\_1\_19\0001 QUAD-BSAT\004 15-Apr-10 05:32 Up @4389.0f

Date: 15-Apr-10 06:18:17

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Plot Time: 15-Apr-10 08:08:42

Plot Range: 50 ft to 4387.92 ft

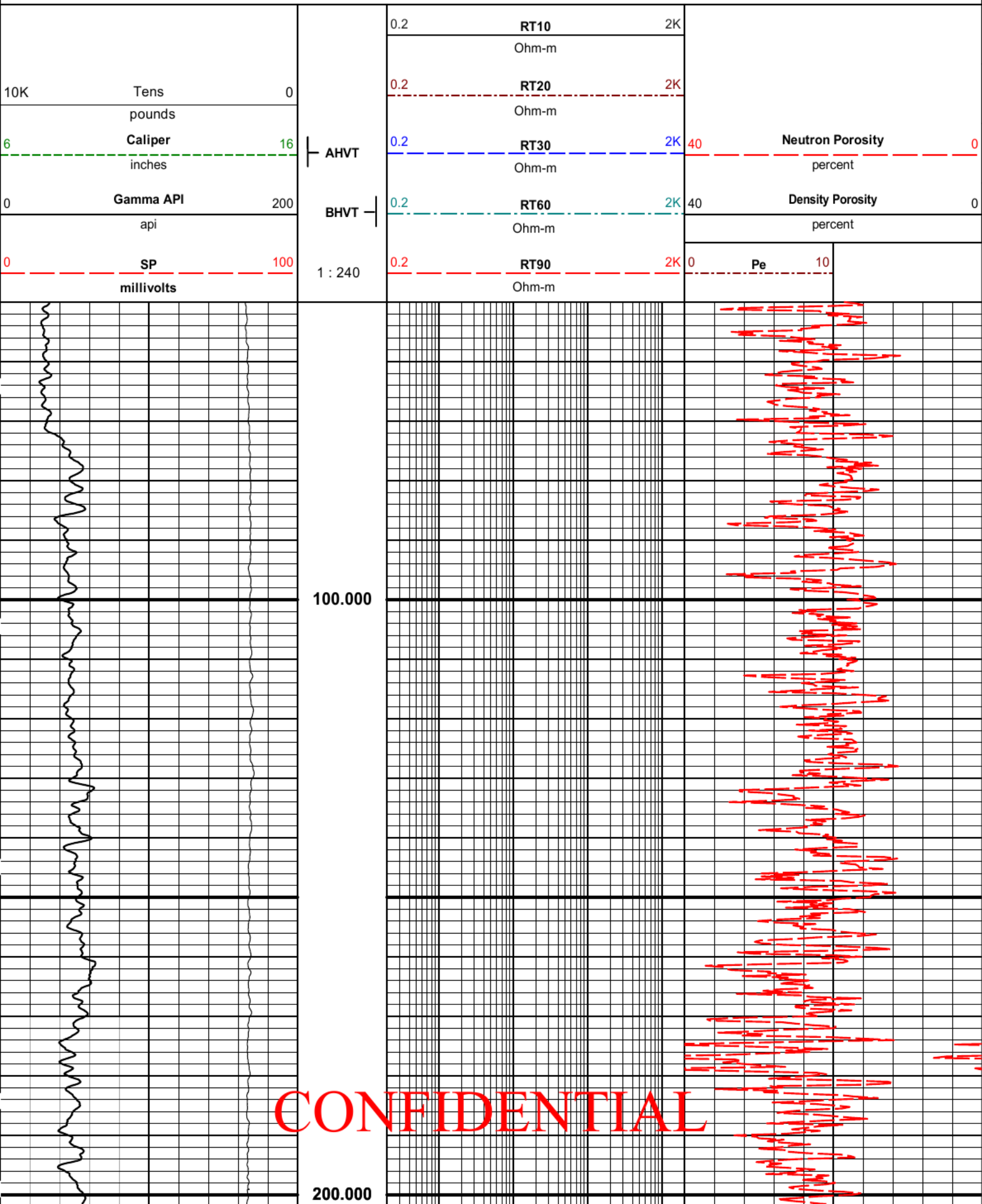
Date: ISLND\_CPTL\_1\_19 Well Based M A A\*

Plot File: \\COMP\Q\_COMPOSITE\_AGRANT\_JIN\_RM

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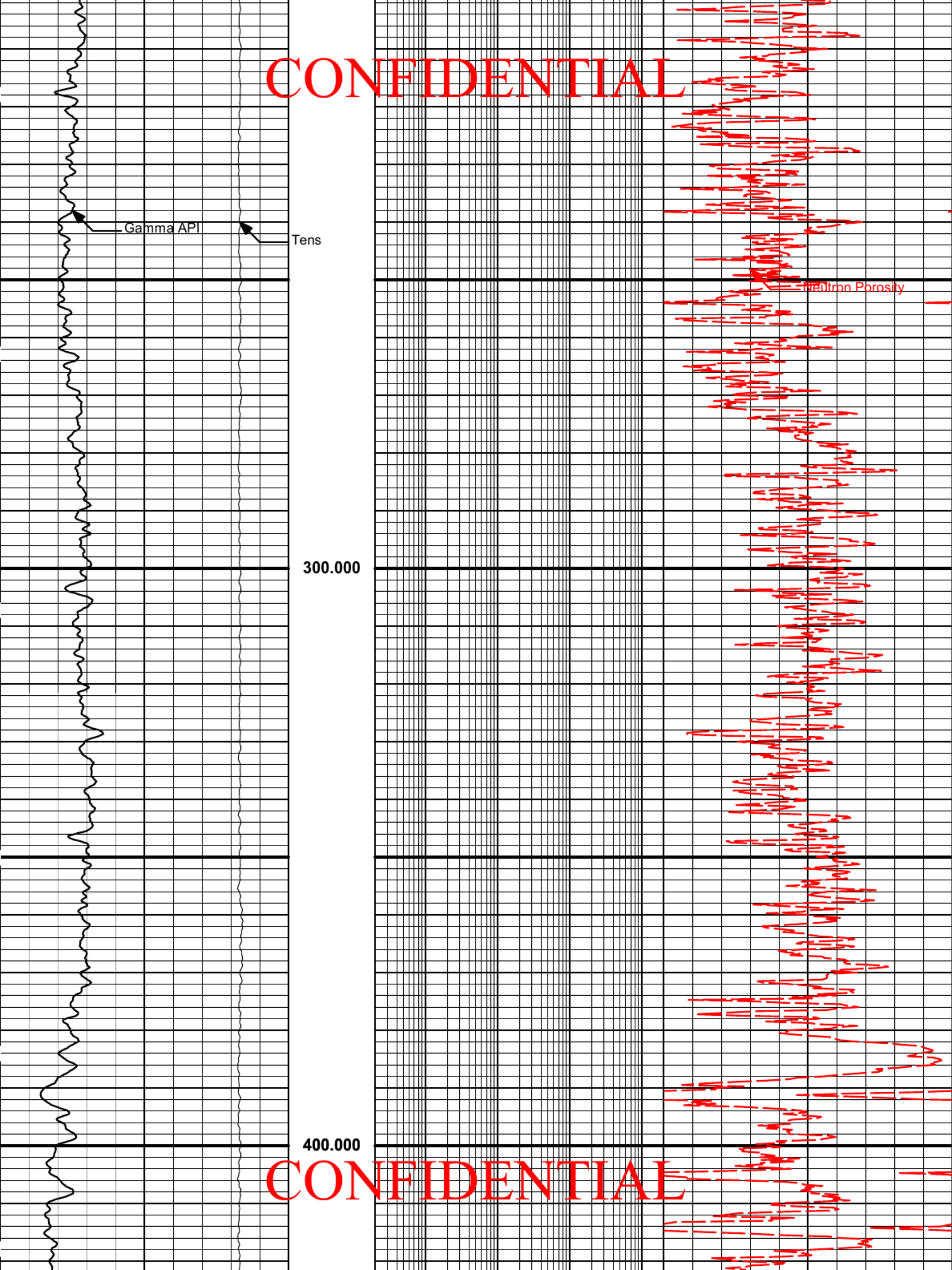
MAIN PASS 5" = 100'

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Gamma API

Tens

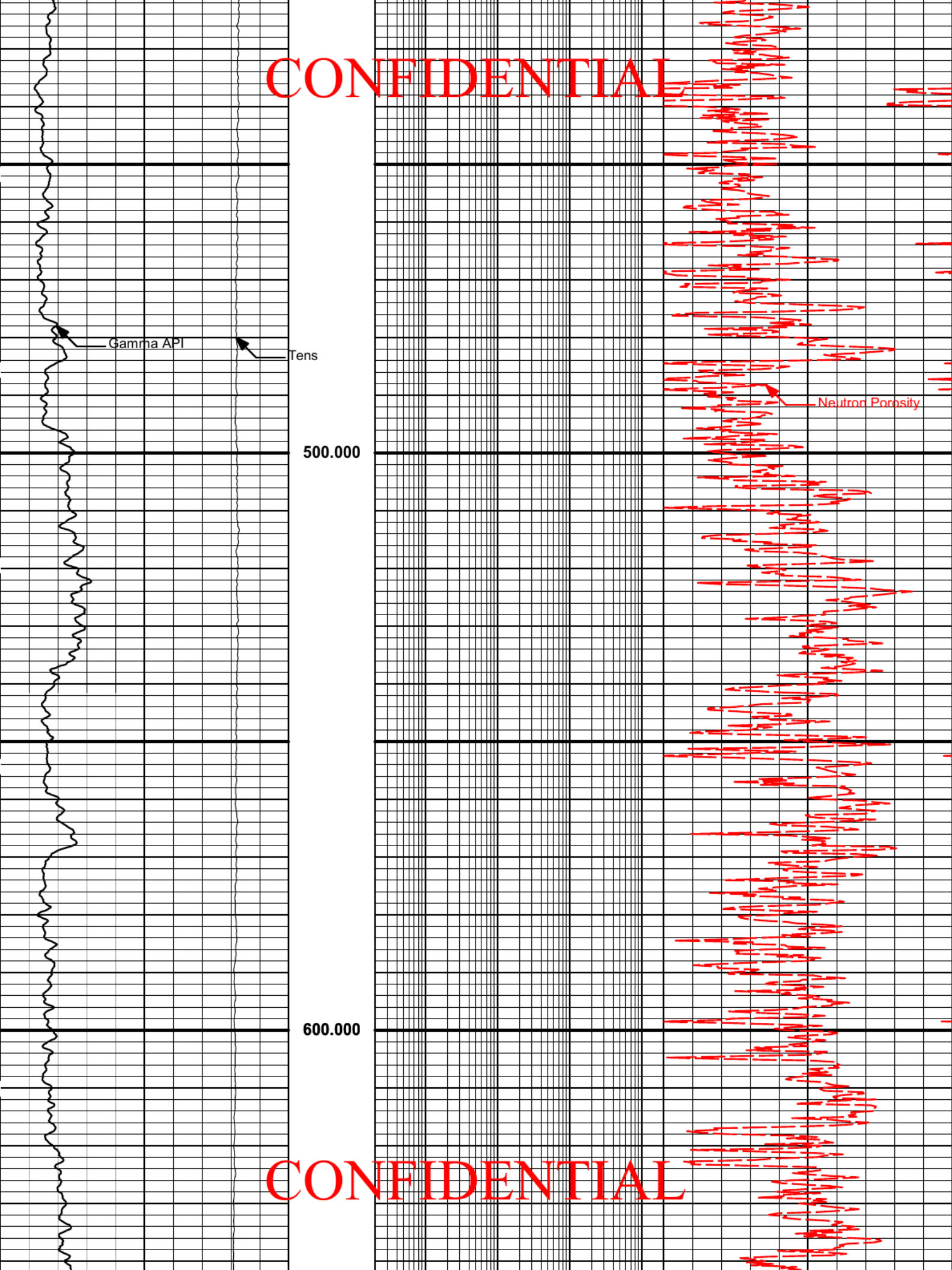
Neutron Porosity

300.000

400.000

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700.000

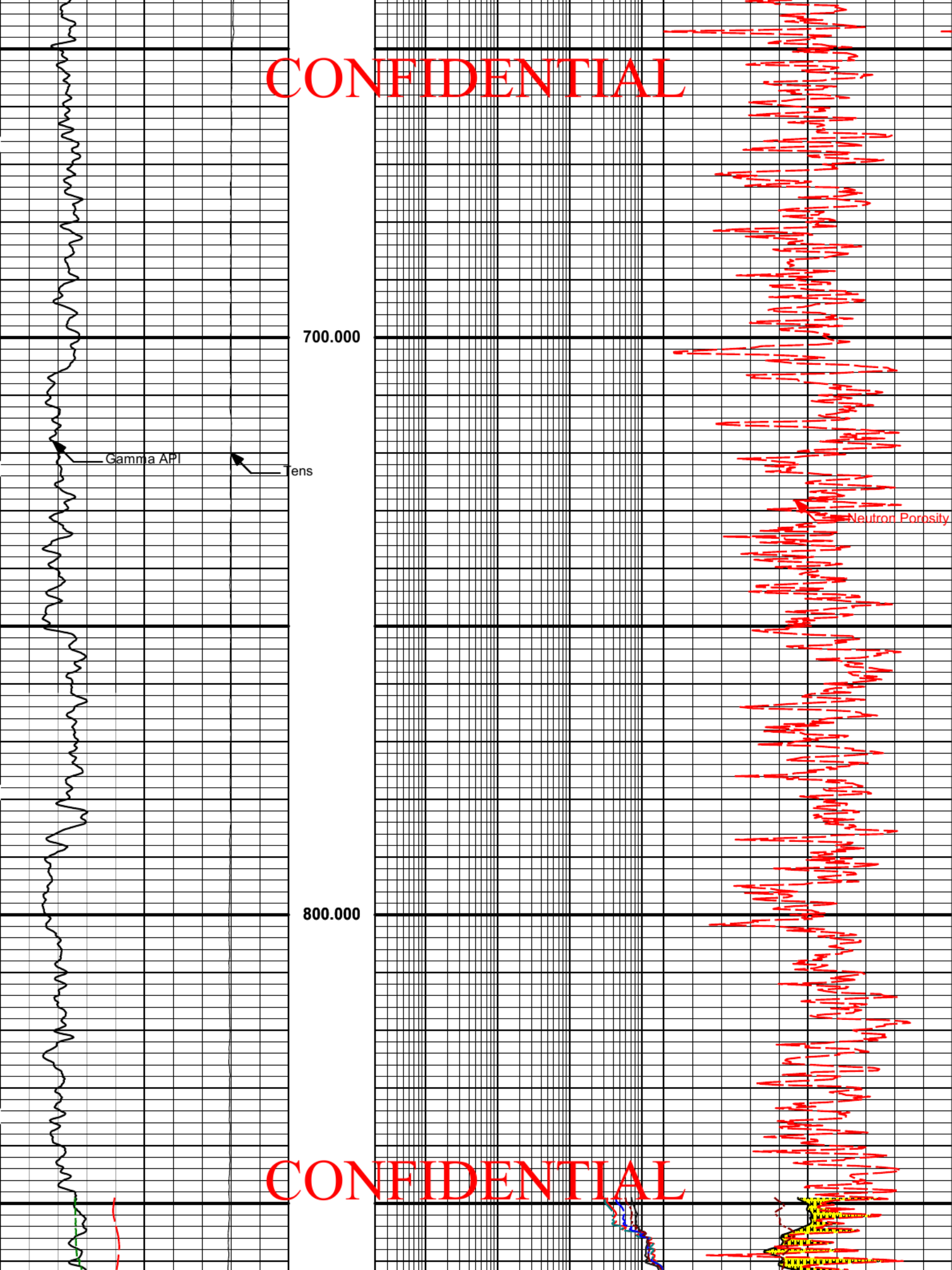
Gamma API

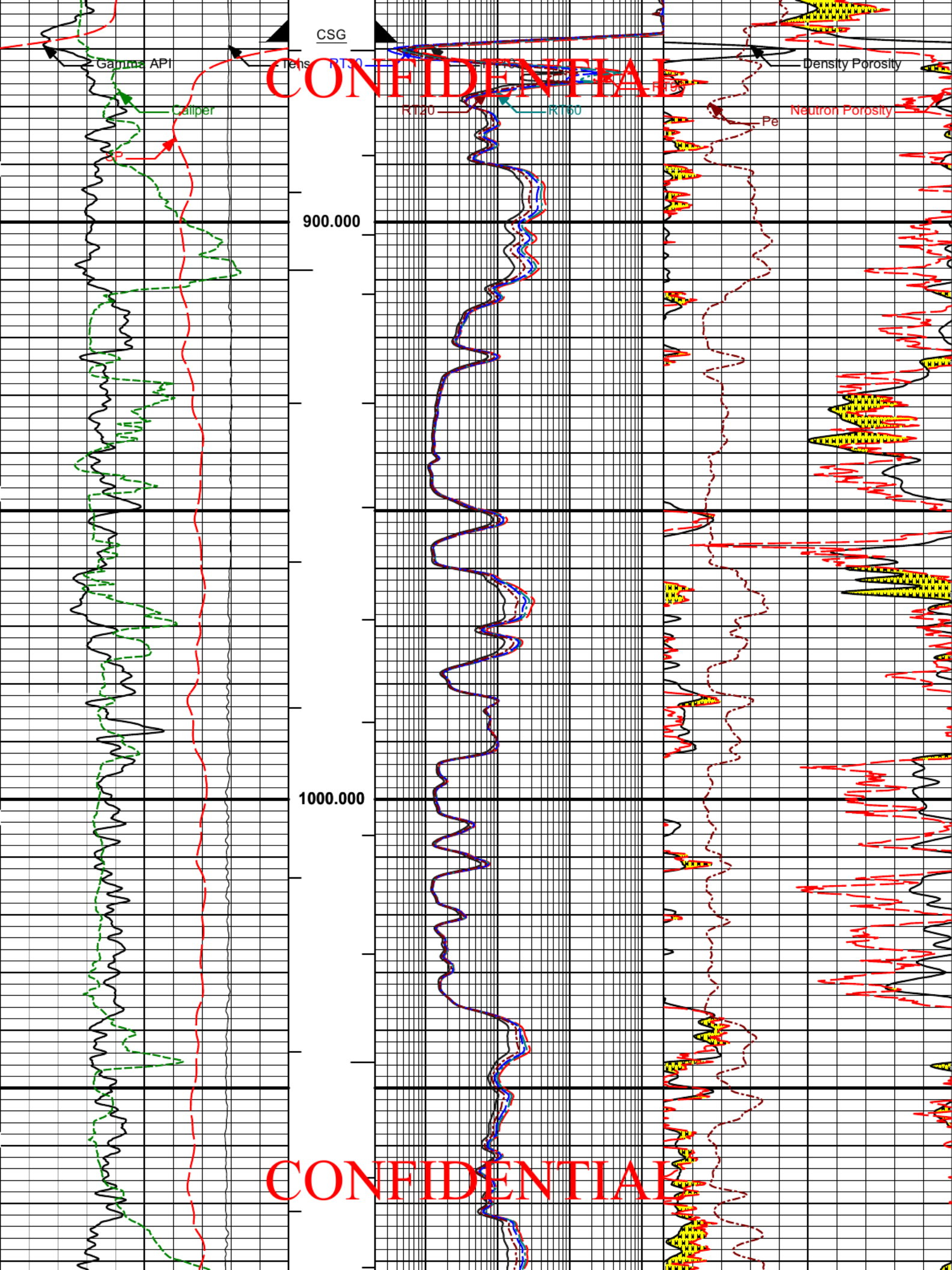
Tens

Neutron Porosity

800.000

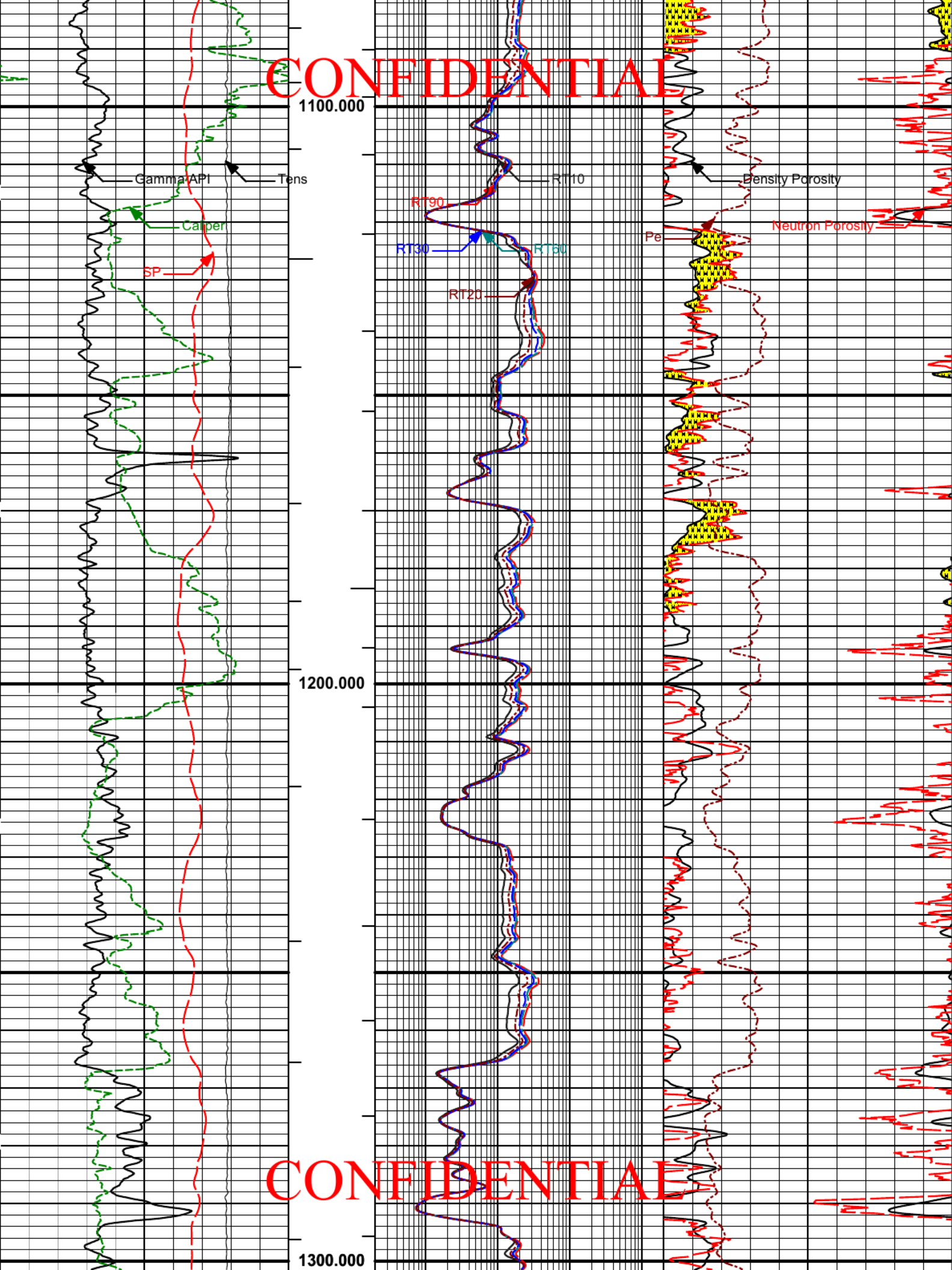
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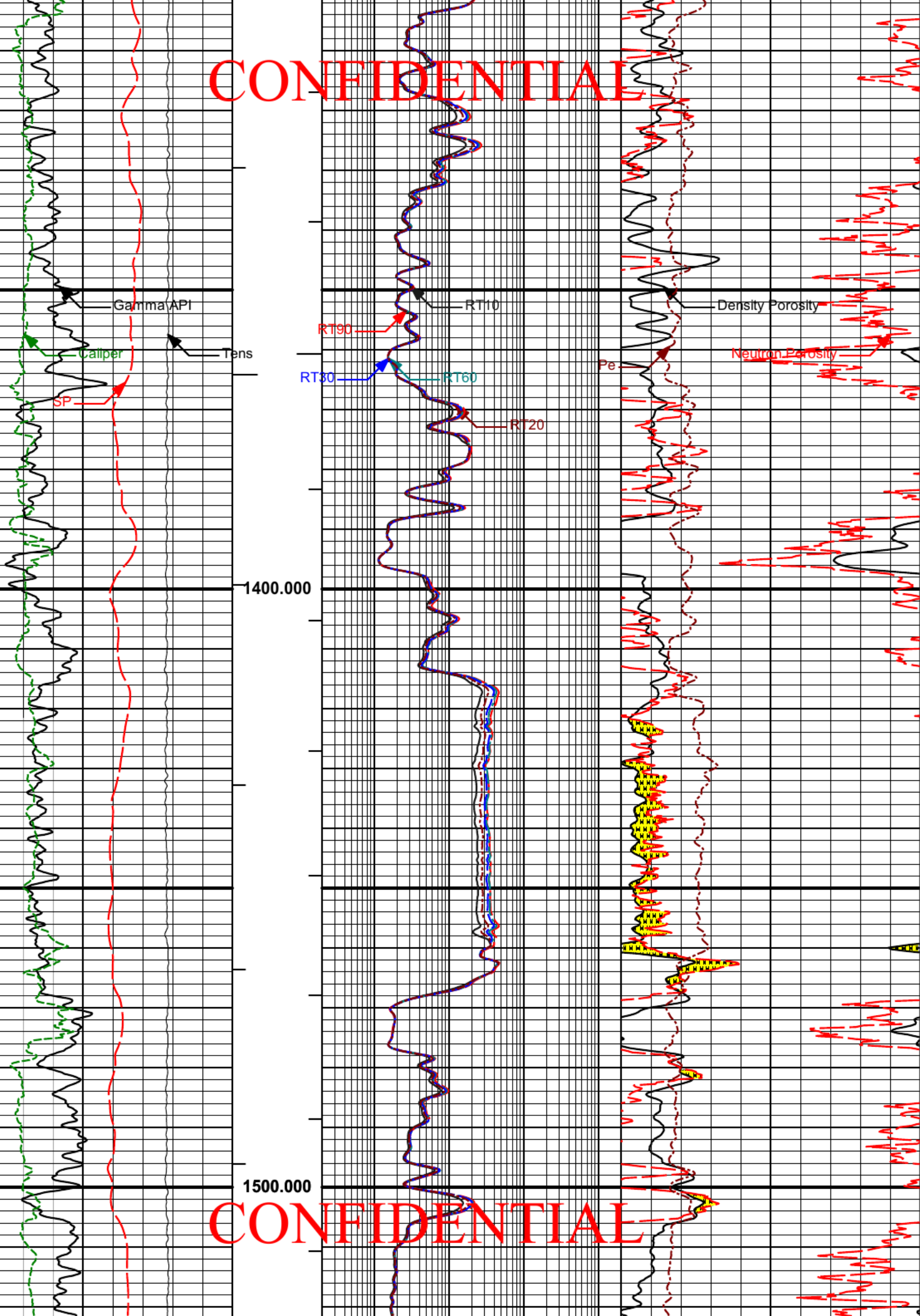


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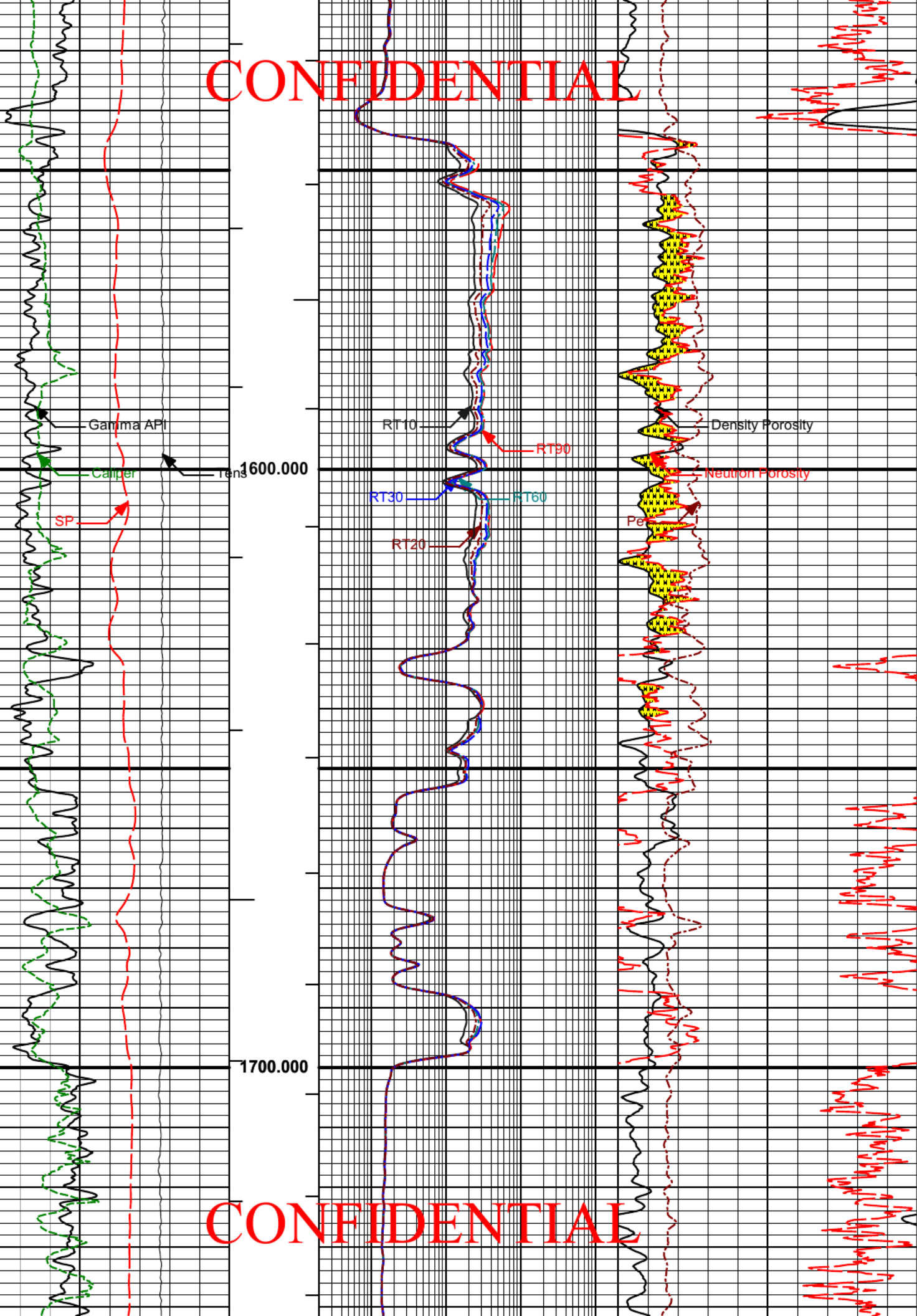
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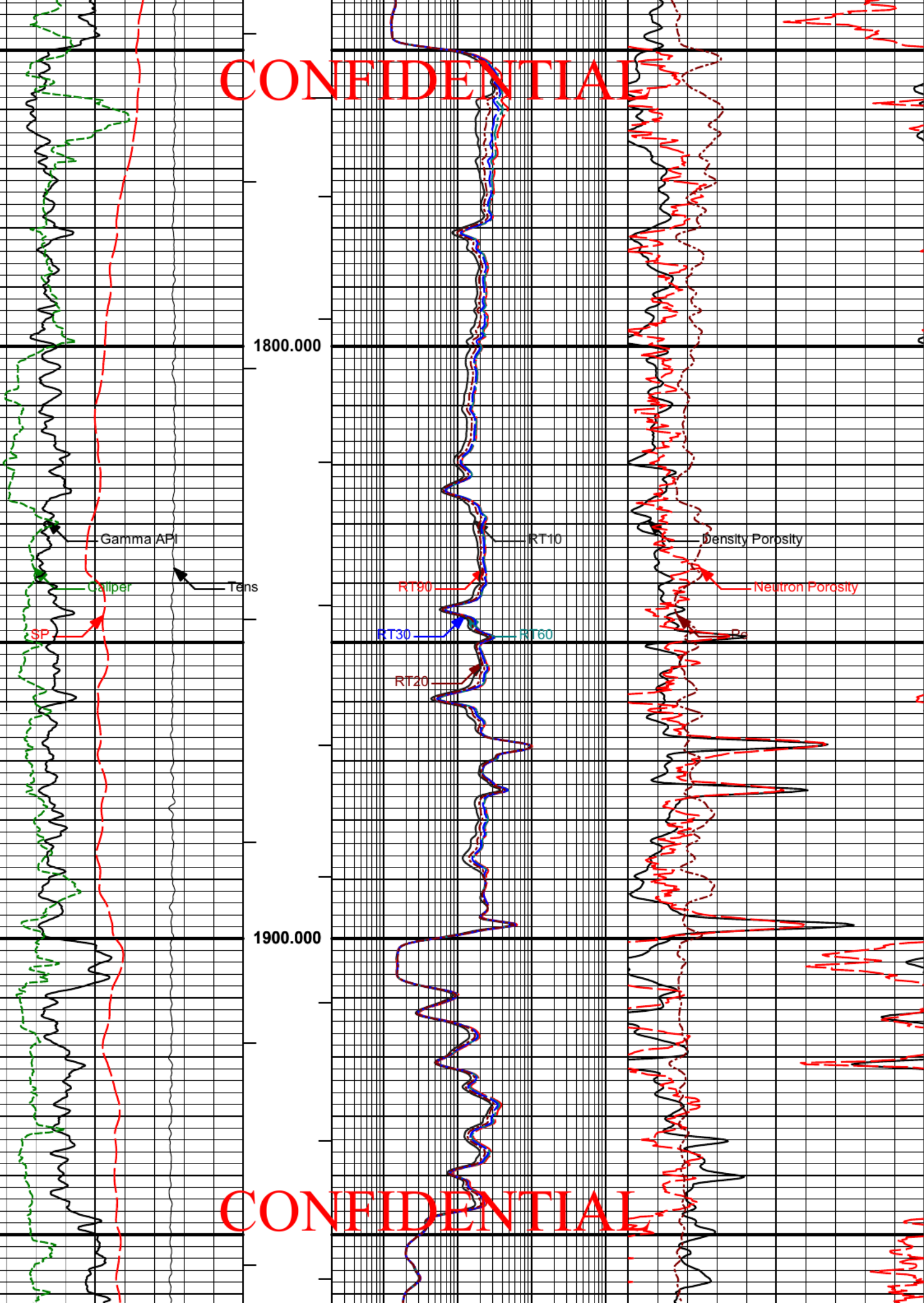
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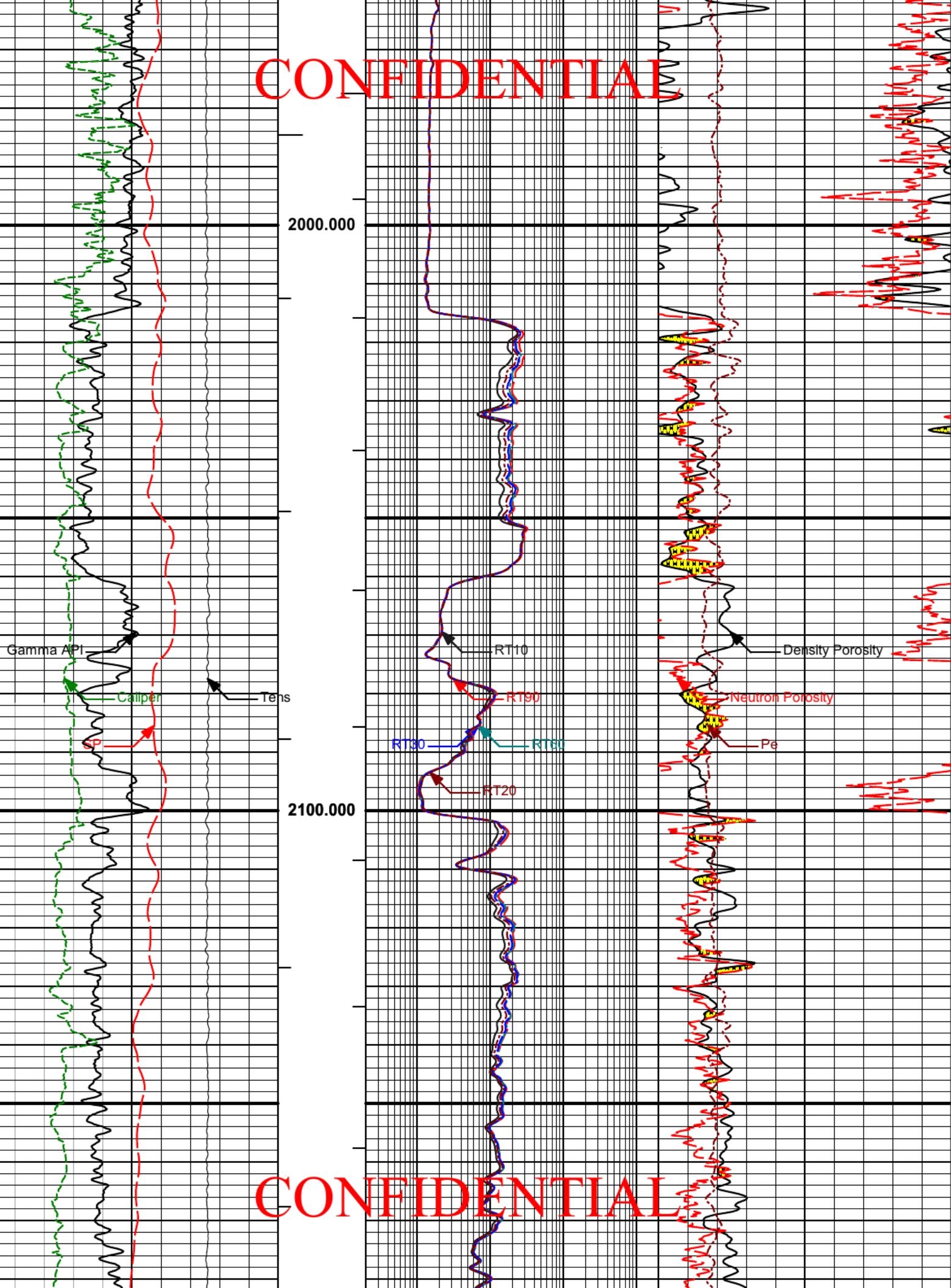
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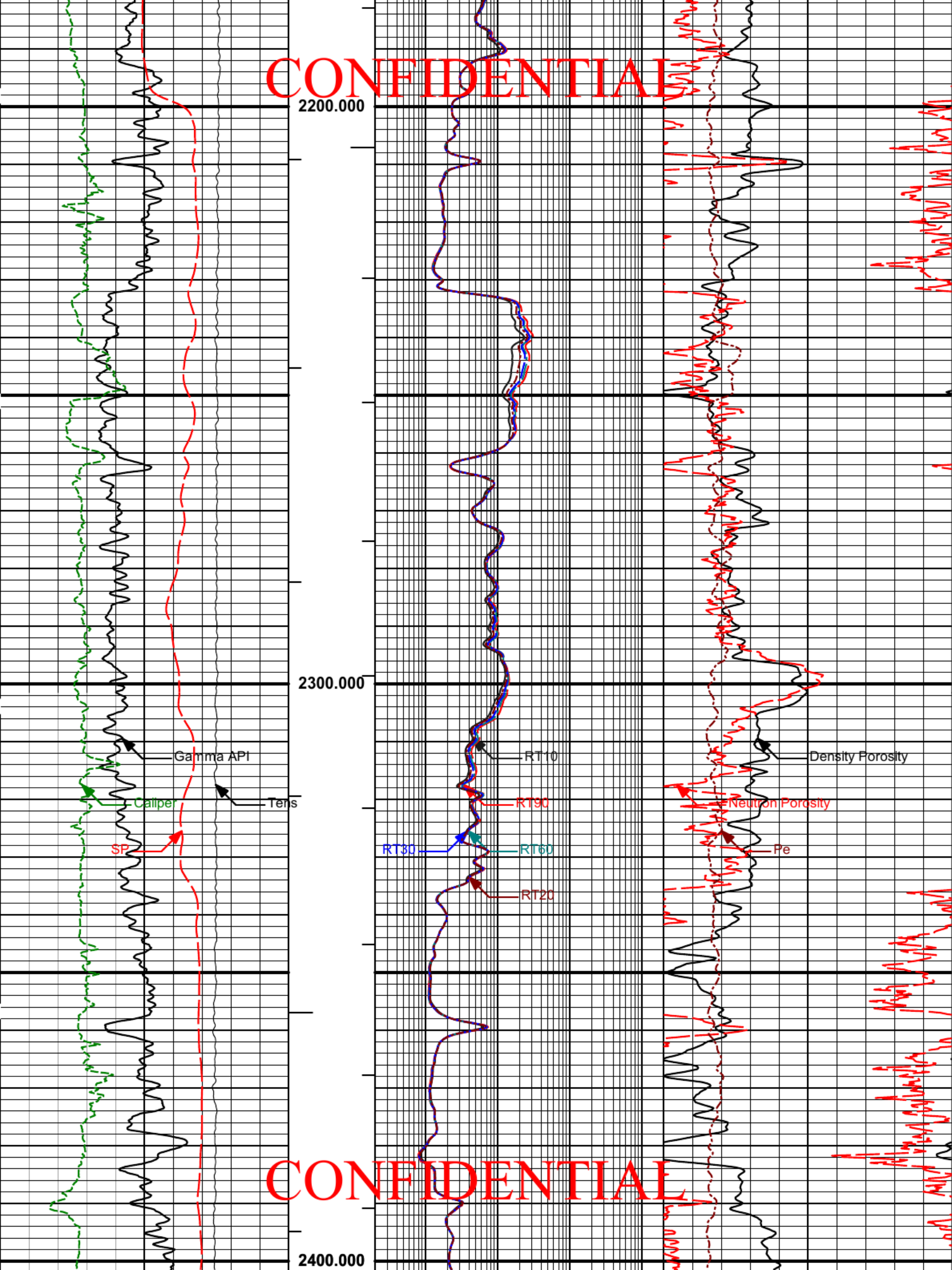
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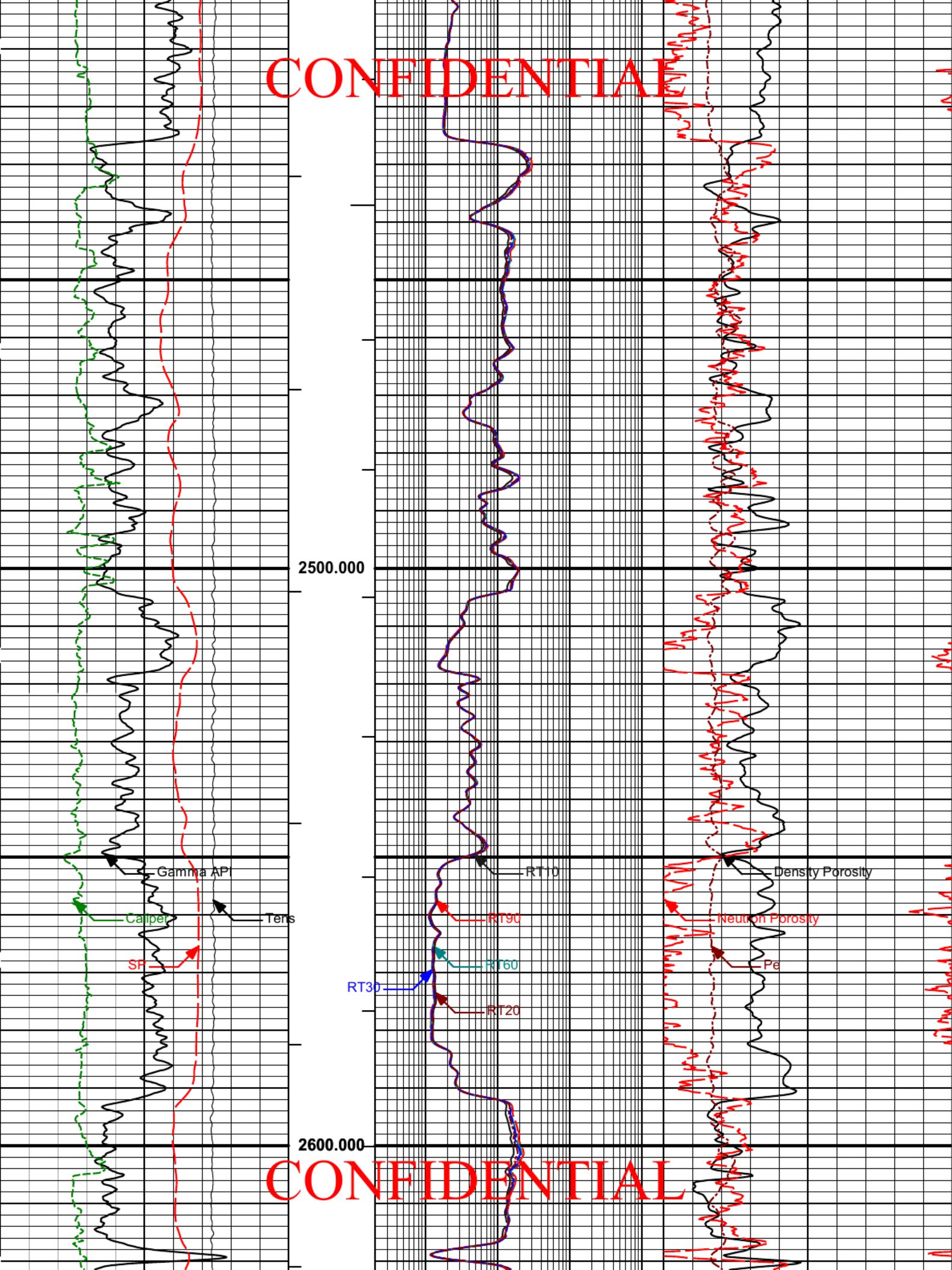
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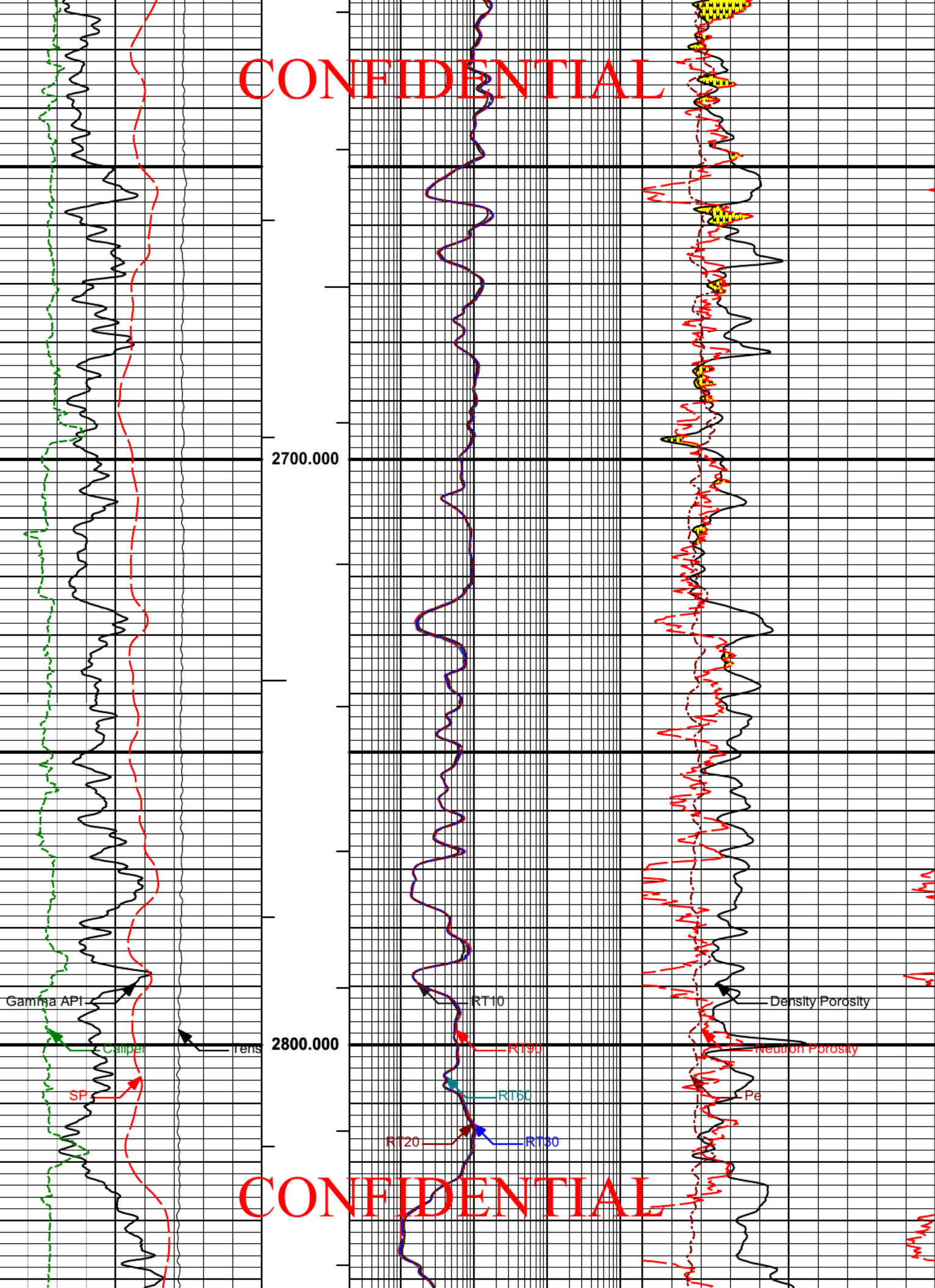
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2700.000

2800.000

Gamma API

Campel

SF

Tens

RT10

RT190

RT50

RT20

RT30

Density Porosity

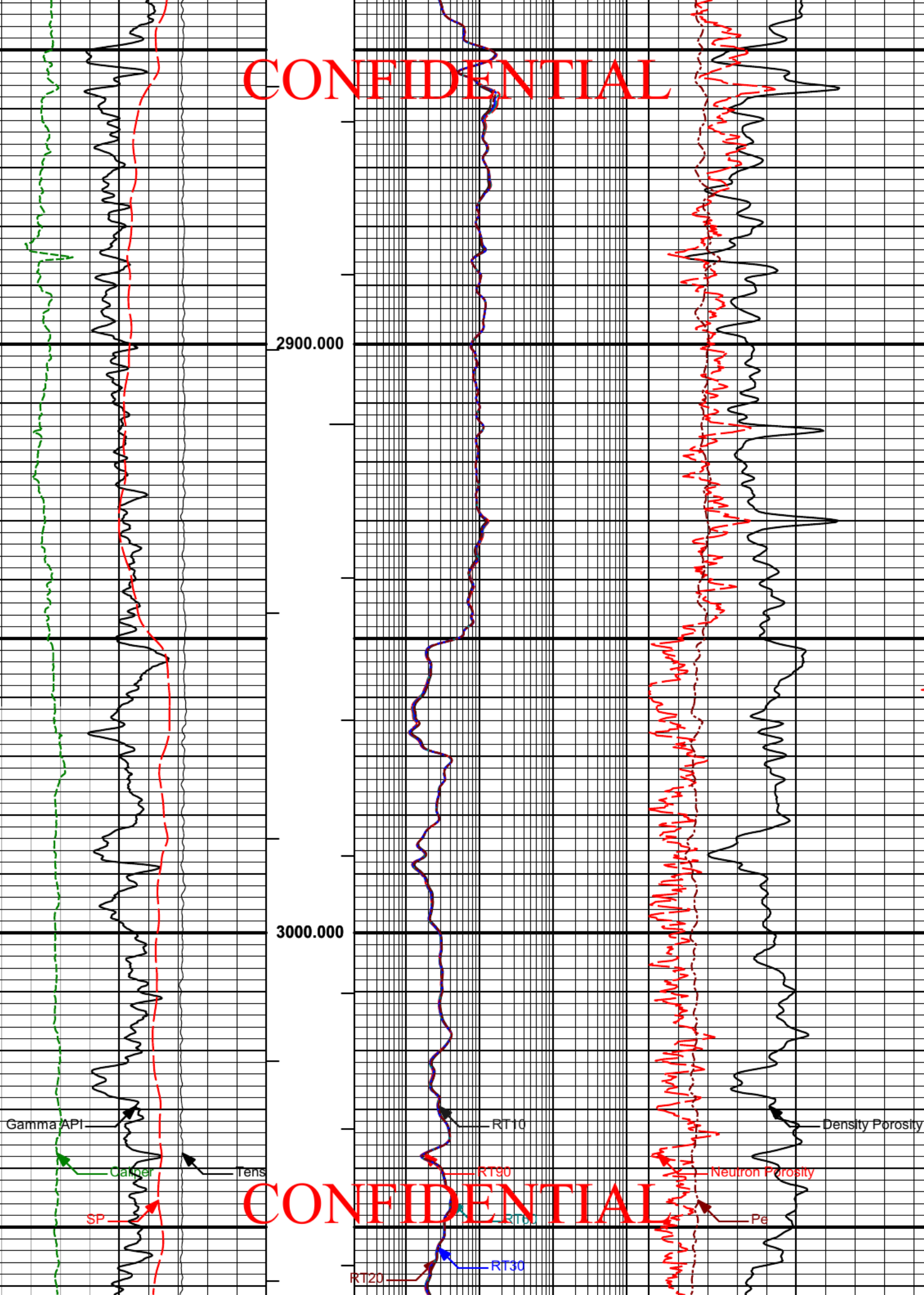
Neutron Porosity

Pe

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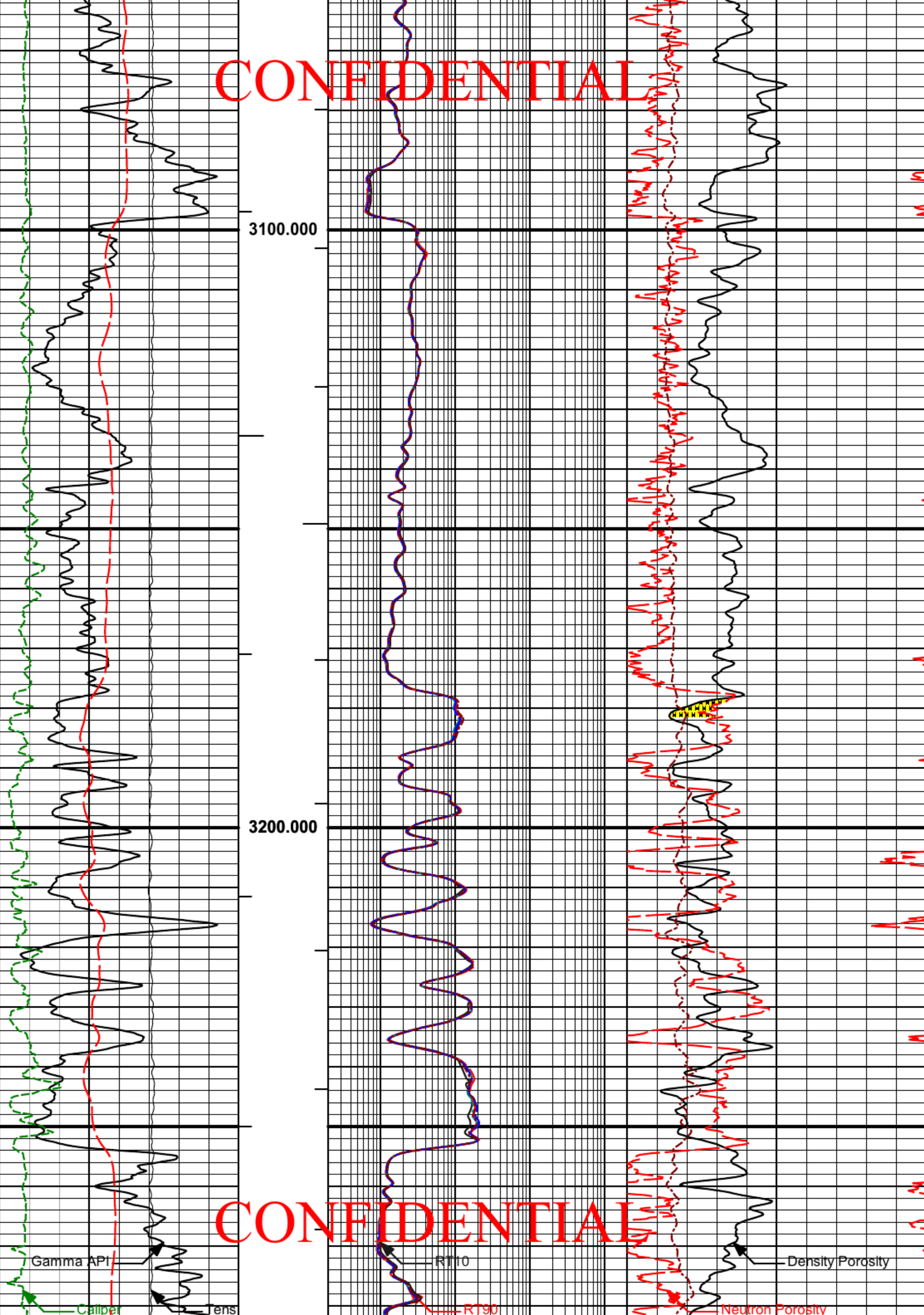


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Gamma API

Caliper

Density

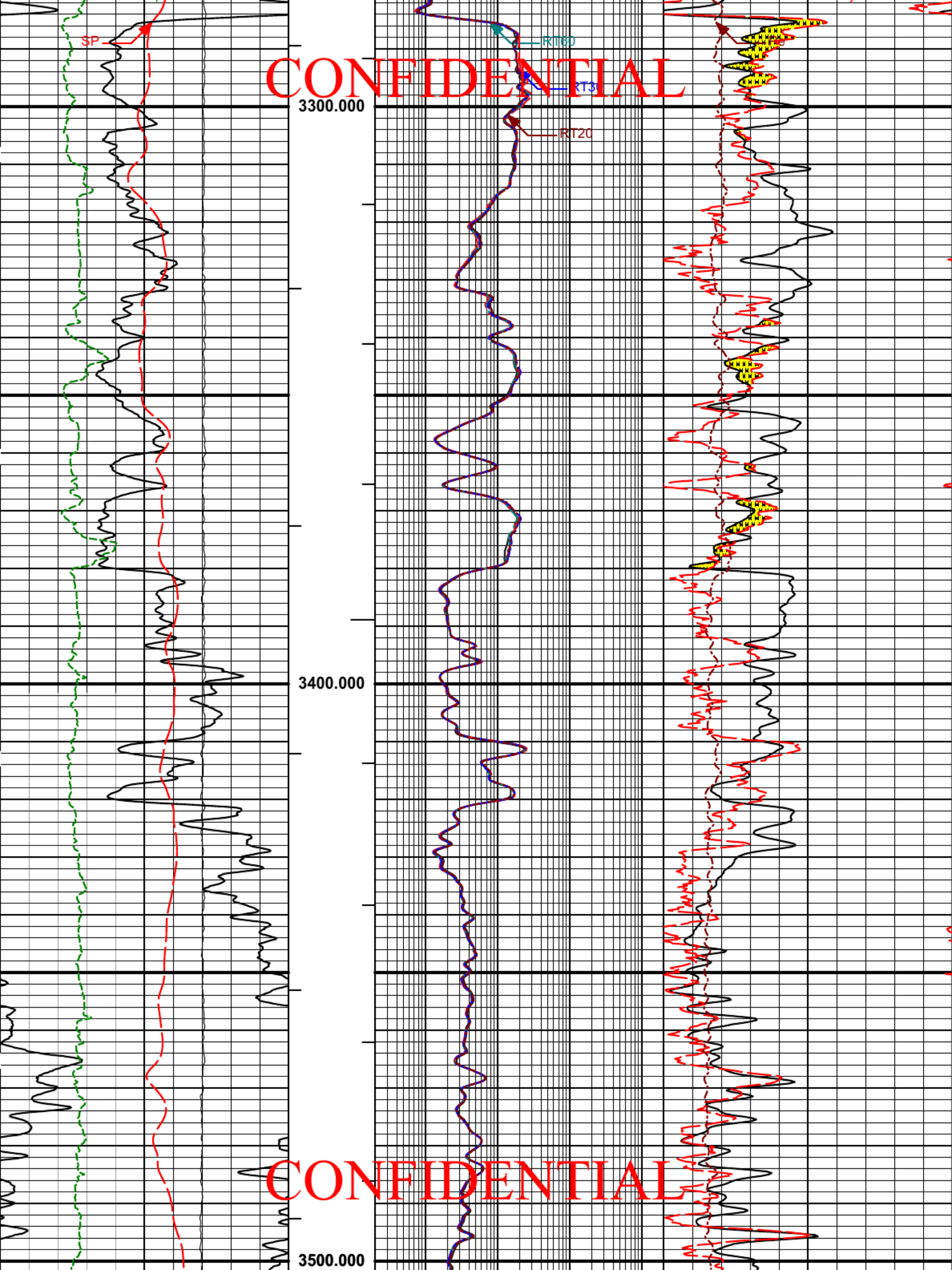
RT10

RT90

Density Porosity

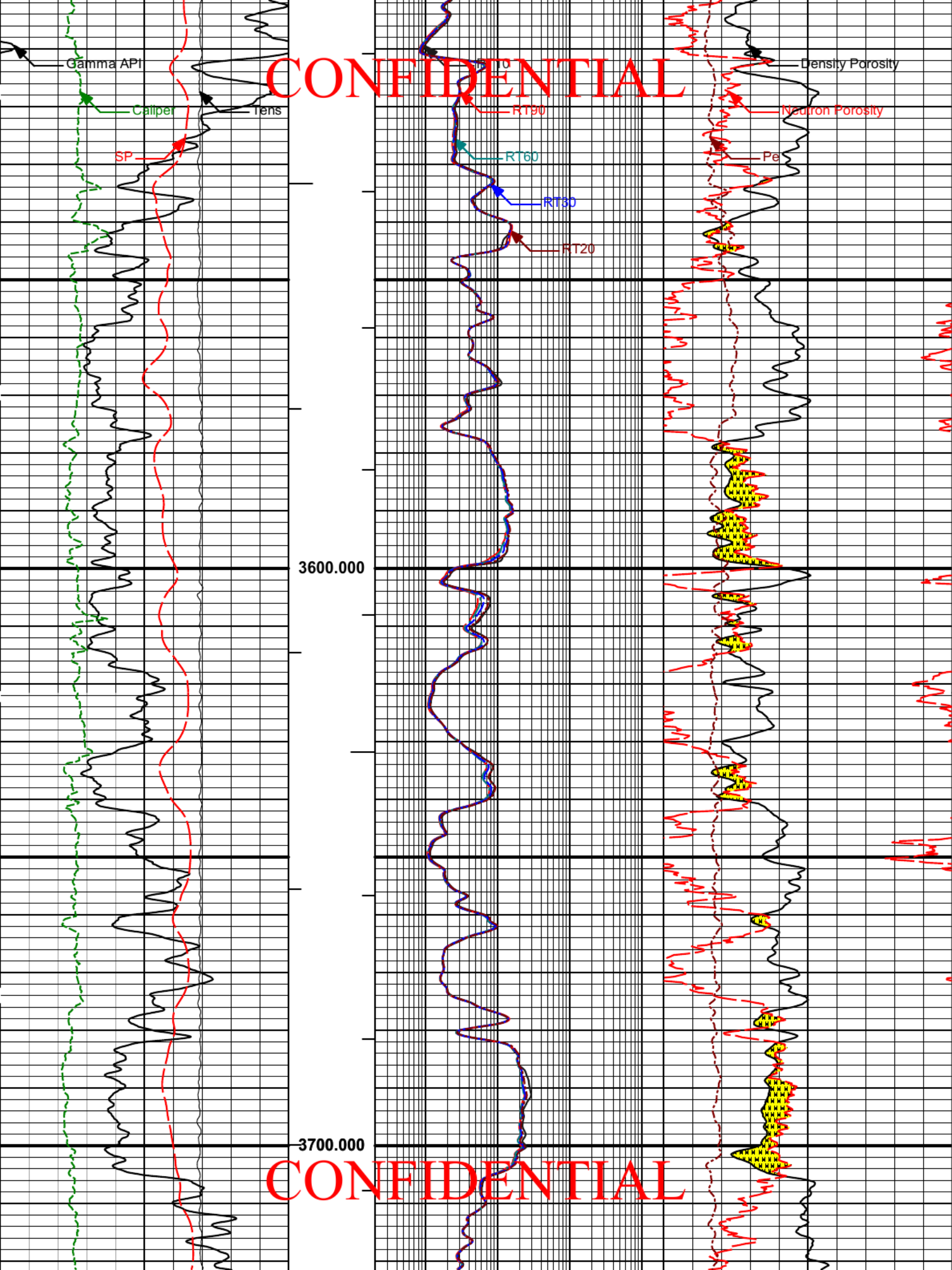
Neutron Porosity

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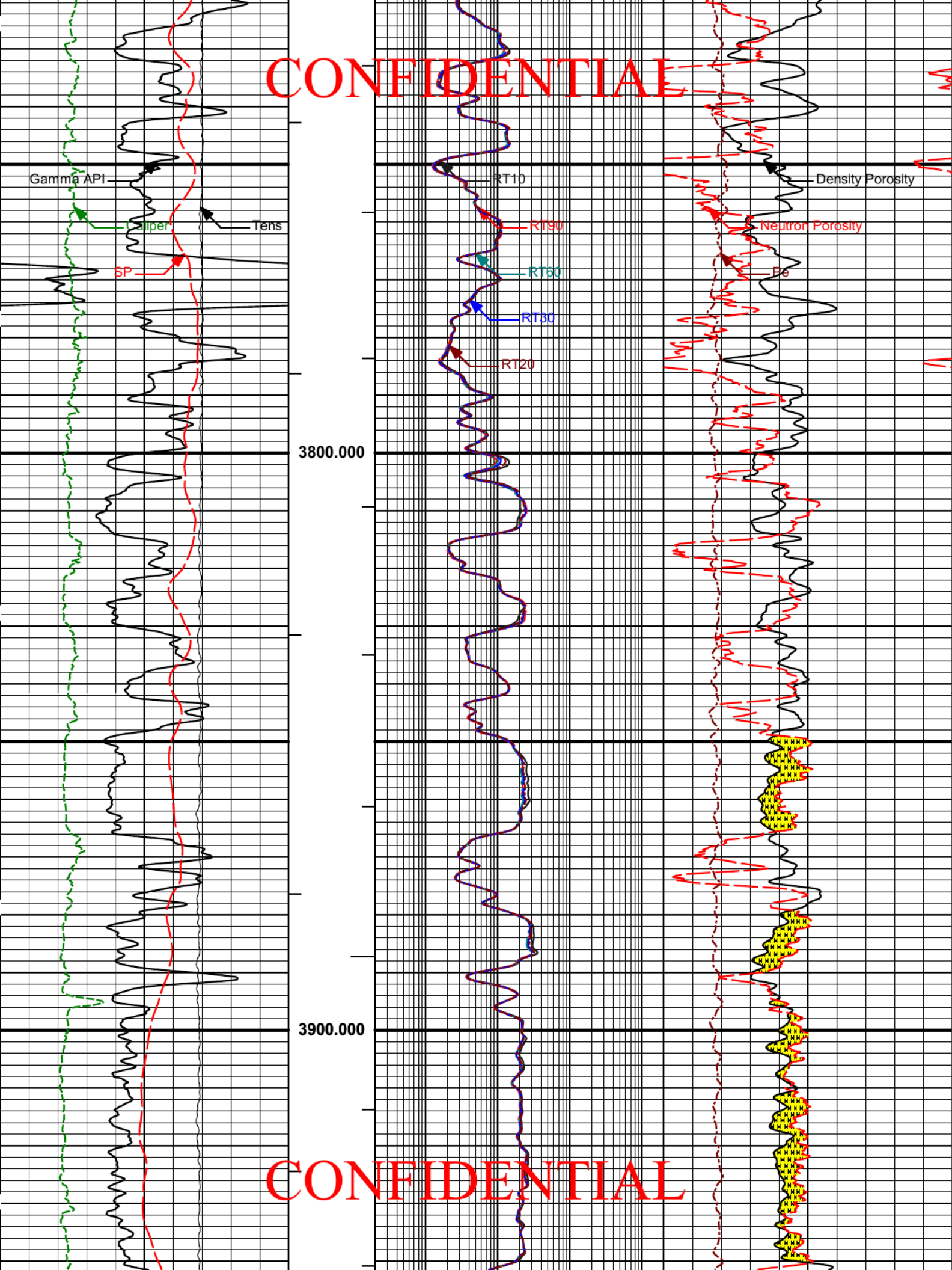


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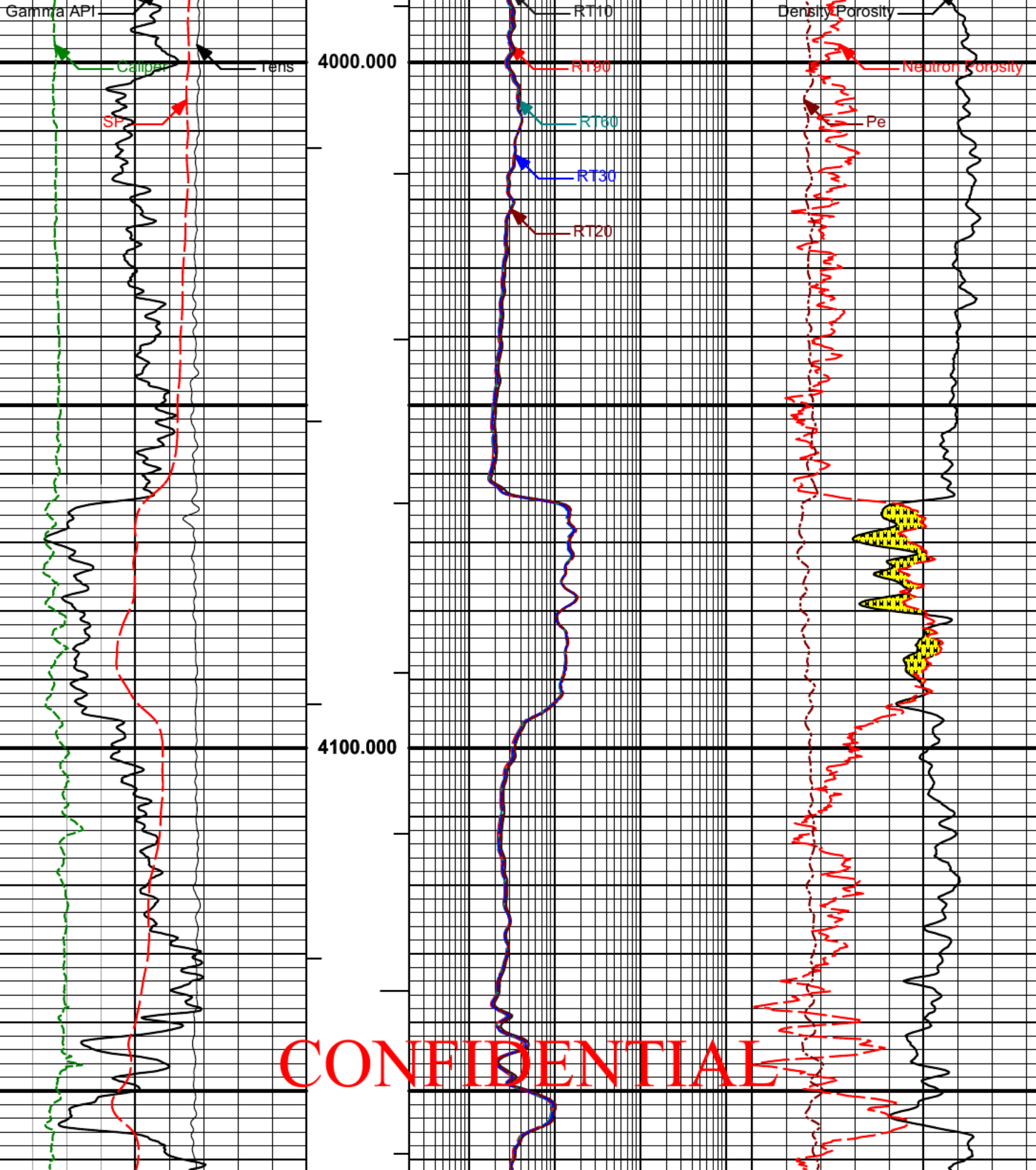


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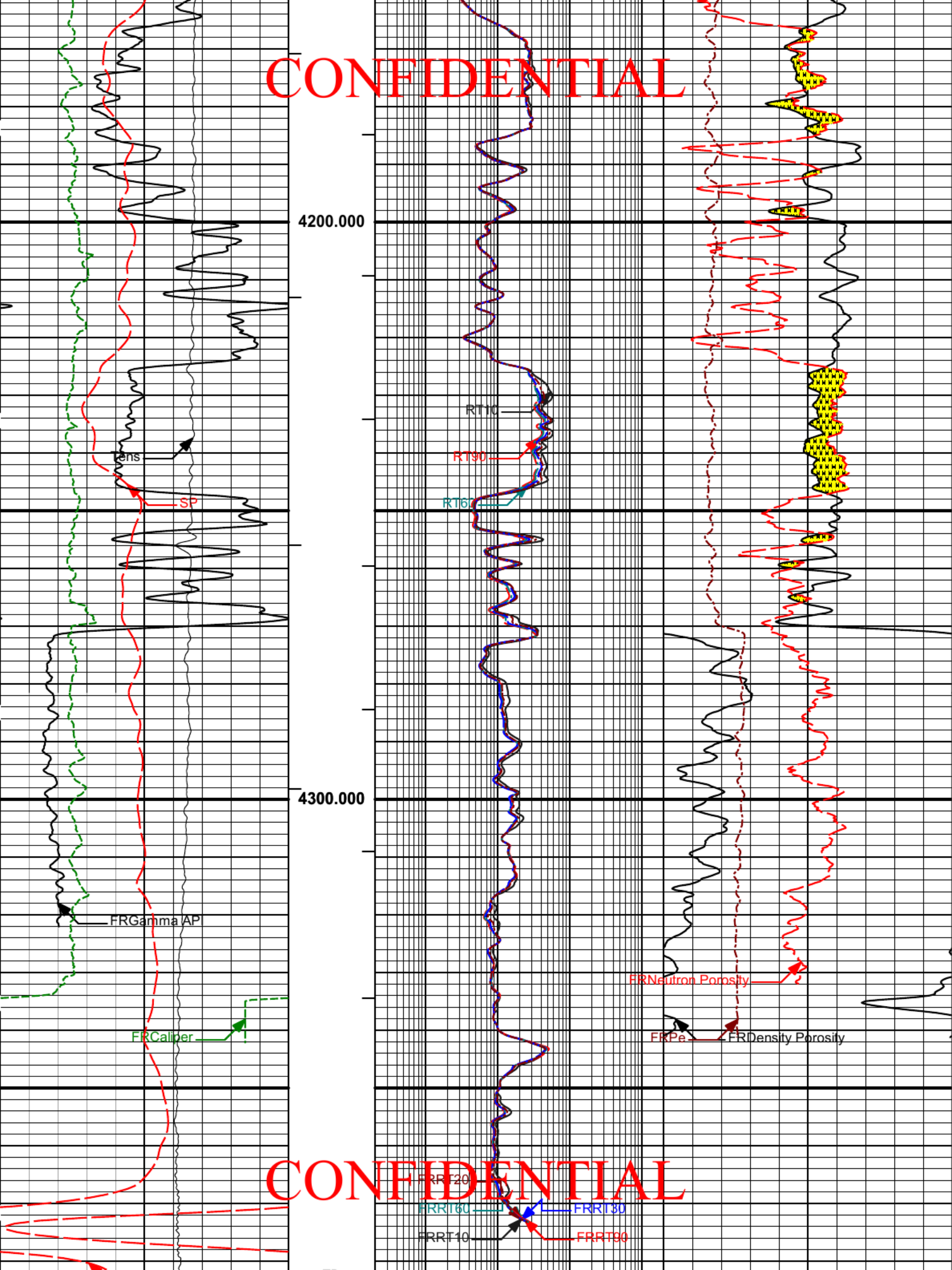
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0	SP	100	TD	0.2	RT90	2K	0	Pe	10
	millivolts				Ohm-m				
0	Gamma API	200	BHVT	0.2	RT60	2K	40	Density Porosity	0
	api				Ohm-m			percent	
6	Caliper	16	AHVT	0.2	RT30	2K	40	Neutron Porosity	0
	inches				Ohm-m			percent	
10K	Tens	0		0.2	RT20	2K			
	pounds				Ohm-m				
				0.2	RT10	2K			
					Ohm-m				

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Plot Time: 15-Apr-10 08:09:07  
 Plot Range: 50 ft to 4387.92 ft  
 Data: ISLND\_CPTL\_1\_19\Well Based\MAIN\  
 Plot File: \\COMP\IQ\_COMPOSITE\_ACRT\_5IN\_RM

MAIN PASS 5" = 100'

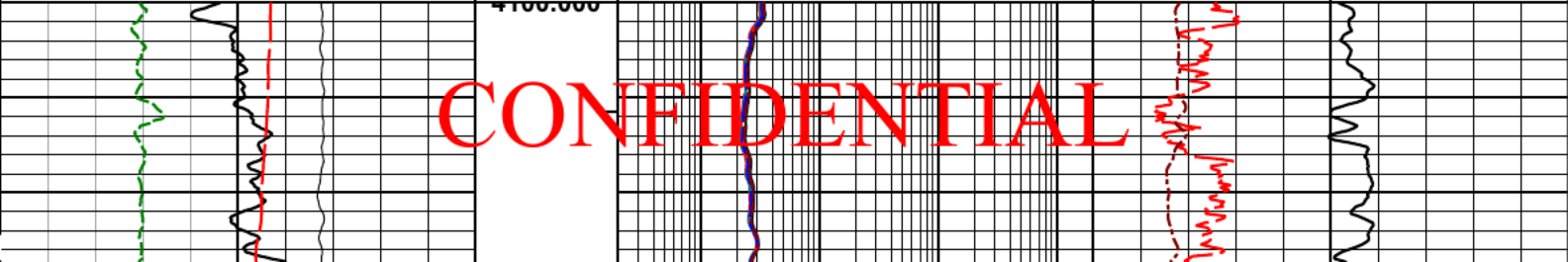
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Plot Time: 15-Apr-10 08:09:07  
 Plot Range: 4100 ft to 4388.92 ft  
 Data: ISLND\_CPTL\_1\_19\Well Based\RPT\  
 Plot File: \\COMP\IQ\_COMPOSITE\_ACRT\_5IN\_RM

REPEAT PASS 5" = 100'

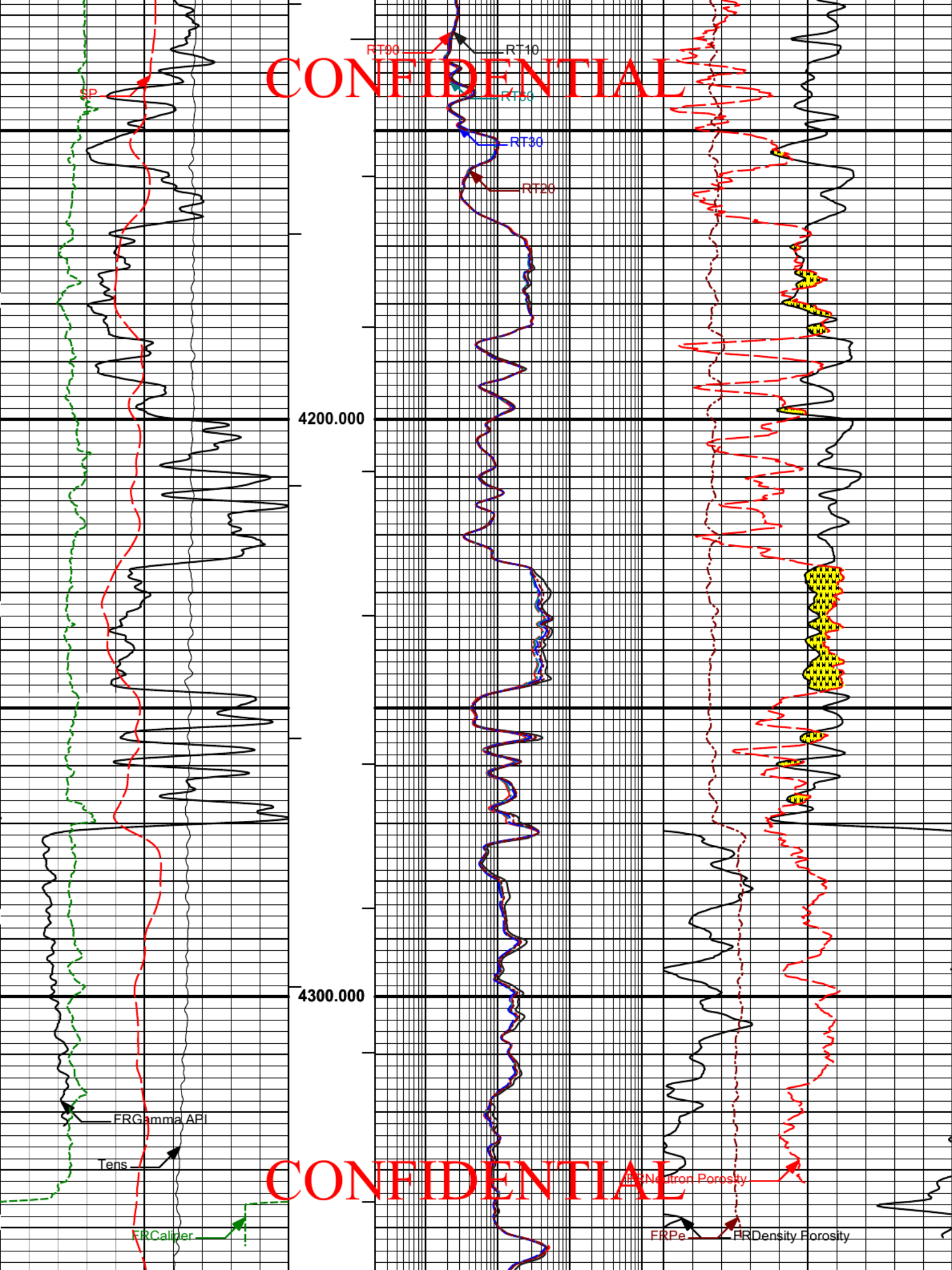
				0.2	RT10	2K			
					Ohm-m				
10K	Tens	0		0.2	RT20	2K			
	pounds				Ohm-m				
6	Caliper	16	AHVT	0.2	RT30	2K	40	Neutron Porosity	0
	inches				Ohm-m			percent	
0	Gamma API	200	BHVT	0.2	RT60	2K	40	Density Porosity	0
	api				Ohm-m			percent	
0	SP	100		0.2	RT90	2K	0	Pe	10
	millivolts				Ohm-m				

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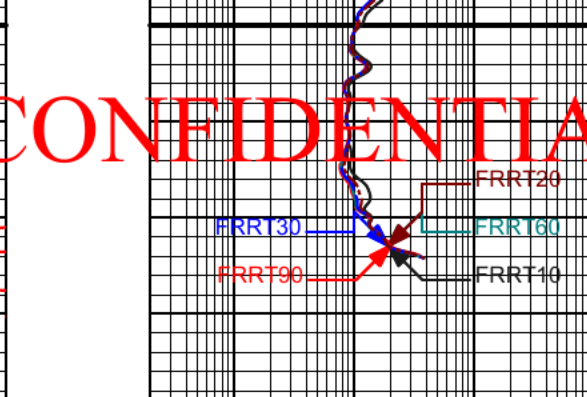
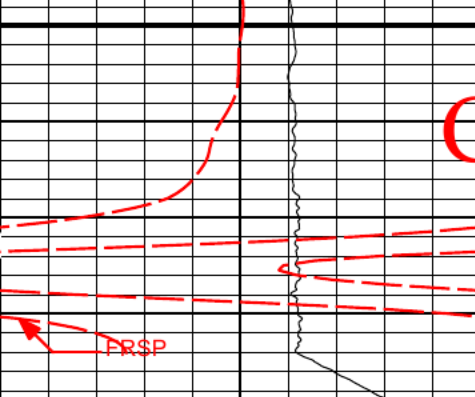


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0	SP	100
	millivolts	
0	Gamma API	200
	api	
6	Caliper	16
	inches	
10K	Tens	0
	pounds	

1 : 240	BHVT	AHVT
0.2	RT90	2K
	Ohm-m	
0.2	RT60	2K
	Ohm-m	
0.2	RT30	2K
	Ohm-m	
0.2	RT20	2K
	Ohm-m	
0.2	RT10	2K
	Ohm-m	

0	Pe	10
	Density Porosity	0
	percent	
40	Neutron Porosity	0
	percent	

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Plot Time: 15-Apr-10 08:09:09  
 Plot Range: 4100 ft to 4388.92 ft  
 Data: ISLND\_CPTL\_1\_19\Well Based\RP1\*\\*  
 Plot File: \\COMPIQ\_COMPOSITE\_ACRT\_5IN\_RM

REPEAT PASS 5" = 100'

HALLIBURTON

### CALIBRATION REPORT

#### NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11238317

Reference Calibration Date: 05-Mar-10 15:44:24

Engineer: J. MAYNE

Calibration Date: 05-Apr-10 23:56:55

Software Version: WL INSITE R3.0.3 (Build 5)

Calibration Version: 1

Calibrator Source S/N: TB-270

Calibrator API Reference: 259.00 api

Measurement	Measured	Calibrated	Units
Background	35.8	36.0	api
Background + Calibrator	297.9	299.6	api
Calibrator	263.7	263.5	api

#### NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 1123 317

Reference Calibration Date: 05-Apr-10 23:56:55

Engineer: B. DRAKE

Calibration Date: 15-Apr-10 03:45:18

Software Version: WL INSITE R3.0.3 (Build 5)

Calibration Version: 1

Calibrator Source S/N: TB-270

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Calibrator Source S/N: TB-270

Calibrator API Reference:259.00 api

Field Verification	Shop	Field	Units
Background	36.0	92.0	api
Background + Calibrator	299.6	346.8	api
Calibrator	263.5	254.8	api

Shop	Field	Difference	Tolerance
263.5	254.8	8.7	+/- 9.00

### NATURAL GAMMA RAY TOOL POST CALIBRATION

Tool Name: GTET - 11238317

Reference Calibration Date: 15-Apr-10 03:45:18

Engineer: B. DRAKE

Calibration Date: 15-Apr-10 07:50:50

Software Version: WL INSITE R3.0.3 (Build 5)

Calibration Version: 1

Calibrator Source S/N: TB-270

Calibrator API Reference:259.00 api

Post Verification	Field	Post	Units
Background	92.0	58.2	api
Background + Calibrator	346.8	313.5	api
Calibrator	254.8	255.3	api

Shop	Field	Post	Difference	Tolerance
263.5	254.8	255.3	-0.5	+/- 9.00

### DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 11020488

Reference Calibration Date: 06-Mar-10 10:06:00

Engineer: J. MAYNE

Calibration Date: 06-Apr-10 01:45:03

Software Version: WL INSITE R3.0.3 (Build 5)

Calibration Version: 1

Logging Source S/N: 08-018

Tank Serial Number: ROCK SPRINGS

Reference value assigned to Tank: 51.650

Snow Block S/N: 11170614

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:	0.966	0.964	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):	0.2114	0.2108	0.0006	+/- 0.0020
Calibrated Ratio:	9.74	9.72	0.021	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp)	0.0633	0.02000 - 0.19000

### PASS/FAIL SUMMARY

Background Check: Passed

Gain-Range Check:

Passed

Snow-Block Check:

Passed

**DUAL SPACED NEUTRON FIELD CALIBRATION**

Tool Name: DSNT - 11020488

Reference Calibration Date: 06-Apr-10 01:45:03

Engineer: B. DRAKE

Calibration Date: 15-Apr-10 03:49:05

Software Version: WL INSITE R3.0.3 (Build 5)

Calibration Version: 1

Logging Source S/N: 08-018

Snow Block S/N: 11170614

**NEUTRON FIELD-CHECK SUMMARY**

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0633	0.0716	0.0083	+/- 0.0150

**PASS/FAIL SUMMARY**

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

**DUAL SPACED NEUTRON POST CALIBRATION**

Tool Name: DSNT - 11020488

Reference Calibration Date: 15-Apr-10 03:49:05

Engineer: B. DRAKE

Calibration Date: 15-Apr-10 08:00:02

Software Version: WL INSITE R3.0.3 (Build 5)

Calibration Version: 1

Logging Source S/N: 08-018

Snow Block S/N: 11170614

**NEUTRON POST-CHECK SUMMARY**

	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0716	0.0660	-0.0056	+/- 0.0150

**PASS/FAIL SUMMARY**

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

**SPECTRAL DENSITY SHOP CALIBRATION**

Tool Name: SDLT - 10947725

Reference Calibration Date: 06-Mar-10 09:17:56

Engineer: J. MAYNE

Calibration Date: 02-Apr-10 10:44:56

Software Version: WL INSITE R3.0.3 (Build 5)

Calibration Version: 1

Logging Source S/N: 5235GW

Aluminum Block S/N: ROCK SPRINGS

Density: 2.606g/cc

Pe: 3.069

Magnesium Block S/N: ROCK SPRINGS

Density: 1.683g/cc

Pe: 2.594

**DENSITY CALIBRATION SUMMARY**

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0048	1.0153	0.90 - 1.10
Near Dens Gain	0.9949	0.9950	0.90 - 1.10
Near Peak Gain	0.9789	0.9928	0.90 - 1.10
Near Lith Gain	0.9636	0.9636	0.90 - 1.10
Far Bar Gain	1.0125	1.0117	0.90 - 1.10
Far Dens Gain	1.0018	1.0044	0.90 - 1.10
Far Peak Gain	0.9987	0.9978	0.90 - 1.10
Far Lith Gain	0.9806	0.9868	0.90 - 1.10

Near Bar Offset	-0.0351	-0.1401	NONE
Near Dens Offset	0.0313	0.0251	NONE
Near Peak Offset	0.1491	0.027	NONE
Near Lith Offset	0.2417	0.2375	NONE
Far Bar Offset	-0.1893	-0.1991	NONE
Far Dens Offset	-0.1063	-0.1355	NONE
Far Peak Offset	-0.1090	-0.1031	NONE
Far Lith Offset	0.0102	-0.0400	NONE

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Near Bar Background	970.67	968.20	700 - 1450
Near Dens Background	323.69	320.29	230 - 480
Near Peak Background	138.17	137.75	100 - 210
Near Lith Background	170.72	169.82	125 - 260
Far Bar Background	564.59	565.10	450 - 900
Far Dens Background	219.65	221.11	175 - 345
Far Peak Background	86.39	87.00	70 - 140
Far Lith Background	90.81	91.14	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
<b>MAGNESIUM</b>				
Density (g/cc)	1.684	1.684	-0.000	+/- 0.015
Pe	2.575	2.585	0.010	+/- 0.150
<b>ALUMINUM</b>				
Density (g/cc)	2.605	2.606	0.001	+/- 0.01500
Pe	3.071	3.058	-0.013	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
<b>QUALITY</b>				
Background	-0.0006	+/- 0.0110	-0.0016	+/- 0.0140
Magnesium Block	-0.0014	+/- 0.0110	-0.0017	+/- 0.0140
Aluminum Block	0.0004	+/- 0.0110	0.0004	+/- 0.0140
Resolution	9.71	6.00 - 11.50	9.12	6.00 - 11.50
Internal Verifier(B+D+P+L)	1596	1200 - 2700	964	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

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SPECTRAL DENSITY FIELD CHECK

Pad Temperature: 46.7 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1596.060	1590.828	-5.232	16.066
Far (B+D+P+L) cps	964.352	966.032	1.680	16.711
Near Resolution	9.71	9.71	0.000	0.50
Far Resolution	9.12	9.30	0.180	1.00

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

## SPECTRAL DENSITY POST CHECK

Tool Name: SDLT - 10947725	Reference Calibration Date: 15-Apr-10 03:44:27
Engineer: B. DRAKE	Calibration Date: 15-Apr-10 07:50:54
Software Version: WL INSITE R3.0.3 (Build 5)	Calibration Version: 1

Pad Temperature: 71.7 degF

DENSITY POST CALIBRATION SUMMARY				
Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1590.828	1599.381	8.553	16.066
Far (B+D+P+L) cps	966.032	976.381	10.349	16.711
Near Resolution	9.71	9.70	-0.010	0.50
Far Resolution	9.30	9.27	-0.030	1.00

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

## DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - 10947725	Reference Calibration Date: 02-Apr-10 11:08:59
Engineer: J. MAYNE	Calibration Date: 02-Apr-10 11:13:27
Software Version: WL INSITE R3.0.3 (Build 5)	Calibration Version: 1

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2092.38	-2134.81	-7000.00 - -1000.00
Pad Gain	0.0003726	0.0003740	0.000200 - 0.000600
Arm Offset	-3598.92	-3371.76	-5000.00 - 3000.00
Arm Gain	0.0005432	0.0005276	0.000300 - 0.000700
Arm Power	-0.000004207	-0.000003335	-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)	2.01	2.00	-0.01	+/- 0.20
Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
RING DIAMETER:				

Small Ring (in)	6.45	6.50	0.05	+/- 0.20
Medium Ring (in)	8.23	8.25	0.02	+/- 0.20
Large Ring (in)	15.01	15.00	-0.01	+/- 0.20

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## PASS/FAIL SUMMARY

Calibration-Coefficients Range Check: Passed  
 Ring-Measurement Check: Passed

## PASS/FAIL SUMMARY

Calibration-Coefficients Range Check: Passed

## SDLT CALIPER FIELD CALIBRATION

<b>Tool Name:</b> SDLT - 10947725	<b>Reference Calibration Date:</b> 02-Apr-10 11:13:27
<b>Engineer:</b> B. DRAKE	<b>Calibration Date:</b> 11-Apr-10 15:37:28
<b>Software Version:</b> WL INSITE R3.0.3 (Build 5)	<b>Calibration Version:</b> 1

## MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.67	-0.08	+/- 0.10
Ring Diameter	8.25	8.15	-0.10	+/- 0.15

## PASS/FAIL SUMMARY

Pad Extension Check: Passed  
 Diameter Check: Passed

## ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

<b>Tool Name:</b> ACRT - E171_S970	<b>Reference Calibration Date:</b> 20-Feb-10 12:59:47
<b>Engineer:</b> B. DRAKE	<b>Calibration Date:</b> 11-Apr-10 12:27:26
<b>Software Version:</b> WL INSITE R2.6.1 (Build 9)	<b>Calibration Version:</b> 1

## TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0039	1.05	0.95	1.0084	1.05	0.95	1.0052	1.05
A2 (50")	0.95	1.0075	1.05	0.95	1.0134	1.05	0.95	1.0126	1.05
A3 (29")	0.95	1.0038	1.05	0.95	1.0090	1.05	0.95	1.0062	1.05
A4 (17")	0.95	1.0032	1.05	0.95	1.0061	1.05	0.95	1.0047	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9968	1.05	0.95	0.9944	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9822	1.05	0.95	0.9795	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	-0.951	2	-6	-3.624	-2	-8	-4.729	-2
A2 (50")	-7	-1.674	-2	-6	-3.428	-2	-7	-4.414	-2
A3 (29")	-27	-13.370	-9	-9	-3.629	-3	-7	-2.984	-1
A4 (17")	-180	-94.043	-60	-45	-30.116	-15	-39	-25.061	-13
A5 (10")	N/A	N/A	N/A	-150	-100.942	-50	-80	-48.878	-10
A6 (6")	N/A	N/A	N/A	175	328.850	525	90	158.464	270

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## TRANSMITTER CURRENT GAIN

## R-MUD VERIFICATION

Signal	Lower	R	Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.8343	1.3	Mud Cell	0.95	1.001	1.05

36K	1.0	1.3113	2.0
72K	1.0	1.6082	2.0

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## CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
<b>GTET-11238317</b>						
Gamma Ray Calibrator	263.5	254.8	255.3	-0.5	+/- 9.00	api
<b>DSNT-11020488</b>						
Snow-Block Porosity	0.0633	0.0716	0.0660	0.0056	+/- 0.0150	decp
<b>SDLT-10947725</b>						
Near(B+D+P+L)	1596.060	1590.828	1599.381	-8.553	+/-16.066	cps
Far(B+D+P+L)	964.352	966.032	976.381	-10.349	+/-16.711	cps
Pad Extension	3.75	3.67	-----	0.08	+/-0.10	in
Ring Diameter	8.25	8.15	-----	0.100	+/-0.15	in
<b>ACRt-E171_S970</b>						
Mud Cell	1.001	-----	-----	0.000	-----	ohm-m

Data: ISLND\_CPTL\_1\_19\0001 QUAD-BSAT\IDLE Date: 15-Apr-10 08:00:49

## HALLIBURTON

### CUSTOMER EVENT LOG

Event Type	Time & Date	Depth (ft)	Event Description
	15-Apr-10 04:44:21	1042.25	Logging 001 15-Apr-10 04:44 Up @1042.3f
	15-Apr-10 04:48:14	858.65	Halting 001 15-Apr-10 04:44 Up @1042.3f
	15-Apr-10 04:48:54	750.25	Logging 002 15-Apr-10 04:48 Dn @750.3f
	15-Apr-10 05:17:13	4197.45	Halting 002 15-Apr-10 04:48 Dn @750.3f
	15-Apr-10 05:20:39	4389.50	Logging 003 15-Apr-10 05:20 Up @4389.5f
	15-Apr-10 05:27:44	4068.60	Halting 003 15-Apr-10 05:20 Up @4389.5f
	15-Apr-10 05:32:49	4389.00	Logging 004 15-Apr-10 05:32 Up @4389.0f
	15-Apr-10 07:13:33	35.76	Halting 004 15-Apr-10 05:32 Up @4389.0f

Data: ISLND\_CPTL\_1\_19\0001 QUAD-BSAT\HALLIBUR-1A34A9 Date: 15-Apr-10 07:13:54

## HALLIBURTON

### TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head- PROT01 30.00 lbs		Ø 3.625 in →			1.92 ft	73.72 ft
GTET-11238317 165.00 lbs		Ø 3.625 in →			8.52 ft	71.80 ft
				← GammaRay @ 65.74 ft		

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DSNT-11020488  
174.00 lbs

DSN Decentralizer-  
10860047  
6.60 lbs

Ø 3.625 in\*

Ø 3.625 in

9.69 ft

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← DSN Far @ 56.34 ft  
← DSN Near @ 55.59 ft

53.59 ft

SDLT-10947725  
360.00 lbs

Ø 4.500 in

Ø 4.750 in

10.81 ft

← SDL Microlog @ 45.78 ft  
← SDL Caliper @ 45.59 ft  
← SDL @ 45.58 ft

42.78 ft

IQ Flex-ORANGE  
140.00 lbs

Ø 3.625 in

5.67 ft

37.11 ft

Centralizer 25 Hostile-  
OVERBODY  
7.00 lbs

Ø 4.000 in\*

BSAT-10939067  
300.00 lbs

Ø 3.625 in

15.77 ft

← Sonic Receivers @ 28.59 ft

Centralizer 25 Hostile-  
OVERBODY2  
7.00 lbs

Ø 4.000 in\*

21.33 ft

Regal Standoff 6\_75-  
STANDOFF  
20.00 lbs

Ø 6.750 in\*

← Mud Resistivity @ 14.94 ft

ACRt-E171\_S970  
250.00 lbs

Ø 3.625 in

19.25 ft

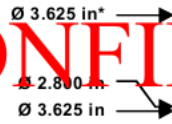
← ACRt @ 10.96 ft

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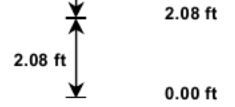
SP Ring-1  
0.00 lbs

Hole Finder-  
HOLE\_FINDER  
50.00 lbs

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SP @ 3.36 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH	Standard OH Cable Head	PROT01	30.00	1.92	71.80	300.00
GTET	Gamma Telemetry Tool	11238317	165.00	8.52	63.28	60.00
DSNT	Dual Spaced Neutron	11020488	174.00	9.69	53.59	60.00
DCNT	DSN Decentralizer	10860047	6.60	5.13	* 56.92	300.00
SDLT	Spectral Density Tool	10947725	360.00	10.81	42.78	60.00
IQF	IQ Flex tool	ORANGE	140.00	5.67	37.11	300.00
BCAS	Borehole Sonic Array Tool	10939067	300.00	15.77	21.33	60.00
OBCEN	Centralizer - 25 in. Hostile Overbody	OVERBODY2	7.00	2.08	* 21.40	300.00
OBCEN	Centralizer - 25 in. Hostile Overbody	OVERBODY	7.00	2.08	* 33.99	300.00
ACRt	Array Compensated True Resistivity	E171_S970	250.00	19.25	2.08	300.00
SP	SP Ring	1	0.00	0.25	* 3.36	300.00
RSOF	Regal Standoff 6.75"	STANDOFF	20.00	0.52	* 18.89	300.00
HFND	Hole Finder	HOLE_FINDER	50.00	2.08	0.00	300.00

**Total** **1,509.60** **73.72**

\* Not included in Total Length and Length Accumulation.

Data: ISLND\_CPTL\_1\_19\0001 QUAD-BSAT\004 15-Apr-10 05:32 Up @4389.0f

Date: 15-Apr-10 06:18:35

COMPANY	BRIDGE ENERGY INC		
WELL	ISLAND CAPITOL 1-19		
FIELD	PAYETTE WILDCAT		
COUNTY	PAYETTE	STATE	WY

**HALLIBURTON**

DUAL SPACED NEUTRON  
SPECTRAL DENSITY  
ARRAY COMPENSATED  
TRUE RESISTIVITY

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