

HALLIBURTON

ARRAY COMP RESISTIVITY DUAL SPACED NEUTRON SPECTRAL DENSITY

COMPANY		LARAMIE ENERGY II, LLC	
WELL		JOHNSON 05-06D	
FIELD		MAMM CREEK	
COUNTY		GARFIELD	
STATE		CO	
Permanent Datum Log measured from Drilling measured from		COMPANY LARAMIE ENERGY II, LLC WELL JOHNSON 05-06D FIELD MAMM CREEK COUNTY GARFIELD STATE CO API No. 050451637800 Location SURFACE HOLE LOCATION: 1766' FNL, 179' FWL BOTTOM HOLE LOCATION: 2543' FNL, 1978' FWL Sect. 5 Twp. 8S Rge. 93W Elev. 8228.0 ft Elev. 8248.0 ft D.F. 8228.0 ft G.L. 8228.0 ft	
Date	22-Dec-08		
Run No.	ONE		
Depth - Driller	10420.0 ft		
Depth - Logger	10418.0 ft		
Bottom - Logged Interval	10416.0 ft		
Top - Logged Interval	1542.0 ft		
Casing - Driller	9.625 in @ 1550.0 ft		
Casing - Logger	1542.0 ft		
Bit Size	7.875 in		
Type Fluid in Hole	LSND		
Density	9.5 ppg	43.00 s/qt	
PH	8.30 pH	6.0 optm	
Source of Sample	MUD TANK		
Rm @ Meas. Temperature	2.09 ohmm @ 61.40 degF	@	@
Rmf @ Meas. Temperature	1.63 ohmm @ 73.50 degF	@	@
Rmc @ Meas. Temperature	2.25 ohmm @ 76.00 degF	@	@
Source Rmf	MEAS.		
Rm @ BHT	0.66 ohmm @ 210.0 degF	@	@
Time Since Circulation	17.5 hr		
Time on Bottom	22-Dec-08 15:45		
Max. Rec. Temperature	210.0 degF @ 10418.0 ft	@	@
Equipment Location	11014853 G.J.		
Recorded By	T. McKEE	J. GILBERT	
Witnessed By	C. CLAUSSEN		

Fold here

Service Ticket No.: 6373372		API Serial No.: 050451637800		PGM Version: WL INSITE R2.2 (Build 12)	
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE			RESISTIVITY SCALE CHANGES		
Date	Sample No.		Type Log	Depth	Scale Up Hole
Depth-Driller					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
Rmf @ Meas. Temp.	@	@	ONE	ACRt-90144319	N/A
Rmc @ Meas. Temp.	@	@		-E554-S481-3-	
Source Rmf	Rmc			13-08	
Rm @ BHT	@	@			
Rmf @ BHT	@	@			
Rmc @ BHT	@	@			
EQUIPMENT DATA					
GAMMA		ACOUSTIC		DENSITY	
Run No.	ONE	Run No.		Run No.	ONE
Serial No.	11004661	Serial No.		Serial No.	10951314
Model No.	GTET	Model No.		Model No.	SDLT
Diameter	3.625	No. of Cent.		Diameter	4.5
Detector Model No.	GTET	Spacing		Log Type	GAMMA-GAMMA
Type	SCINT			Source Type	Cs 137
Length	8"	LSA [Y/N]		Serial No.	5123GW
Distance to Source	N/A	FWDA [Y/N]		Strength	1.5 Ci
LOGGING DATA					
GENERAL		GAMMA		DENSITY	
		ACOUSTIC		NEUTRON	

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	CSG	REC	0	200				30	-10	2.68	30	-10	SAND
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks:														
RWCH-GTET-DSNT-SDLT-ACRT WERE RUN IN COMBINATION														
HOLE RUGOSITY AND TESION PULLS MAY EFFECT LOG QUALITY														
AHV CALCULATED FOR 4.5" CASING														
CHLORIDES REPORTED AT 1600 mg/L														
LATITUDE: 39.397° N // LONGITUDE: 107.797° W														
YOUR CREW TODAY: T. ISHTEIWY, AND T. CHANEY								RIG: GREY WOLF 831						
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES - GRAND JUNCTION, CO - (970) 523-3600														
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.														
HALLIBURTON														

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	MDWT	Borehole Fluid Weight	9.500	ppg
	SHARED	RMUD	Mud Resistivity	2.090	ohmm
	SHARED	TRM	Temperature of Mud	61.4	degF
	SHARED	OBM	Oil Based Mud System?	No	
	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	10420.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	degF
	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
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in

GTET	GEOK	Process Gamma Ray EVR?	No	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	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		Logging Horizontal Water Tank?	No	
SDLT	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	AD	Is Hole Air Drilled?	No	
SDLT	CB	Use Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	MDTP	Weighted Mud Correction Type?	Barite	
SDLT	DMA	Formation Density Matrix	2.680	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	CIND	Casing Indicator Enabled?	Yes	
ACRt	RECE	Relative Caliper Error	0	%
ACRt	MNSO	Minimum Tool Standoff	1.50	in
ACRt	RMC	Use RM Calculated for BHC?	No	
ACRt	TSEL	Calculate Temperature for Rmud Correction?	No	
ACRt	LTNM	Actr Lateral Normalization	None	
ACRt	UTC	Use Temperature Correction	Yes	
ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
ACRt	TPOS	Tool Position	Standoff	
ACRt	BHCM	Borehole Compensation Type	Conventional	
ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt	REC6	Record 6 in curves in ADI?	No	

BOTTOM

Data: LAR_JOHN_05_06D\0001 TRIPLE_1\IDLE

Date: 22-Dec-08 16:39:32

MAIN PASS 5" = 100'

SP				0.2	RT90	2K			
-110[+				Ohm-m					
6	Caliper	16		0.2	RT60	2K	21000	Tension	1000
inches				Ohm-m			pounds		
0	Gamma API	200	BHV ft3	0.2	RT30	2K	30	Neutron Porosity	-10
api				Ohm-m			percent		
-0.9	DensityCorr	0.1	AHV	0.2	RT20	2K	30	DensityPorosity	-10

gram per cc

Bit Size

inches

6

16

ft3

1 : 240

ft

MD

0.2

Ohm-m

RT10

2K

0

Pe

percent

10

Ohm-m

CSG

RT10

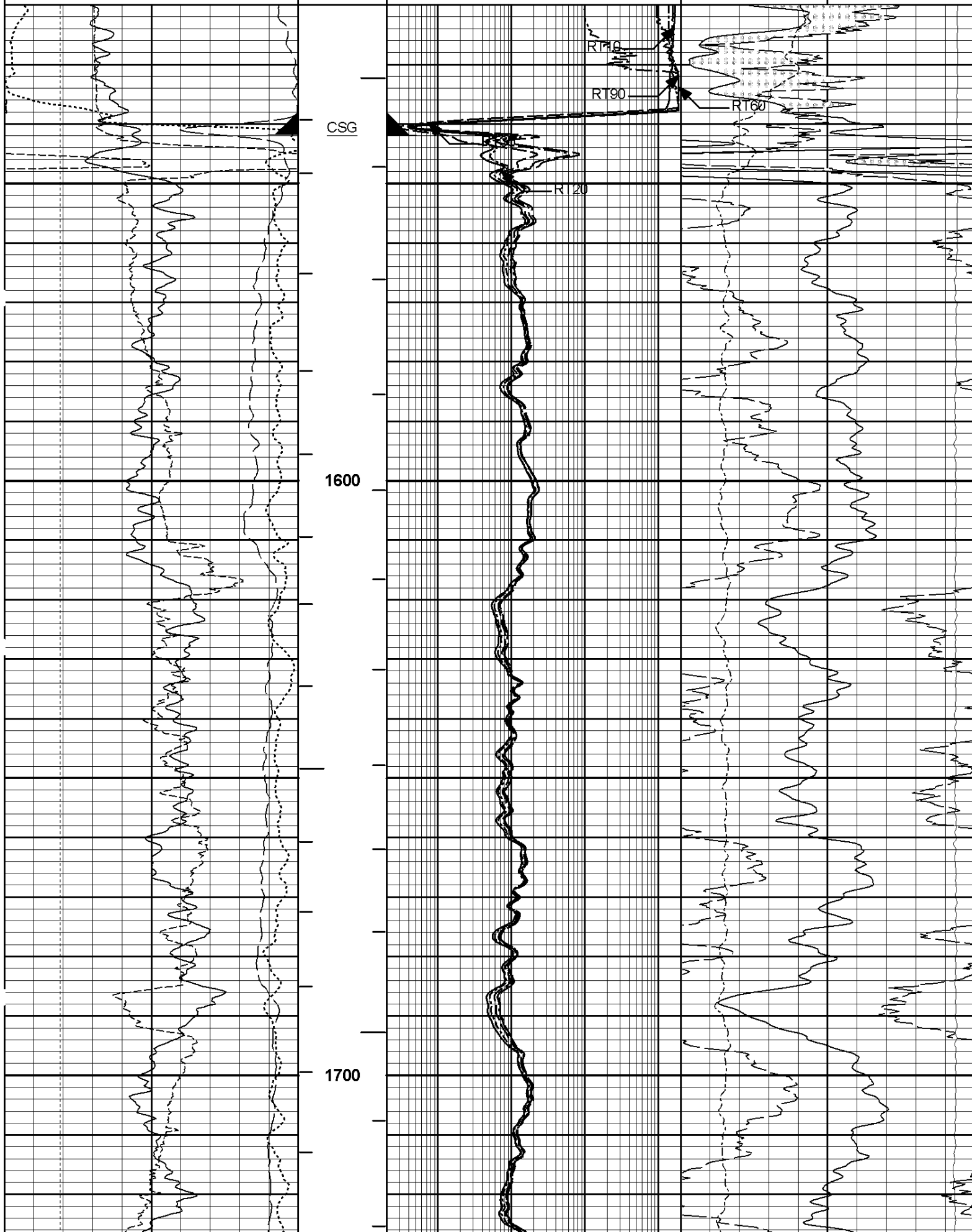
RT90

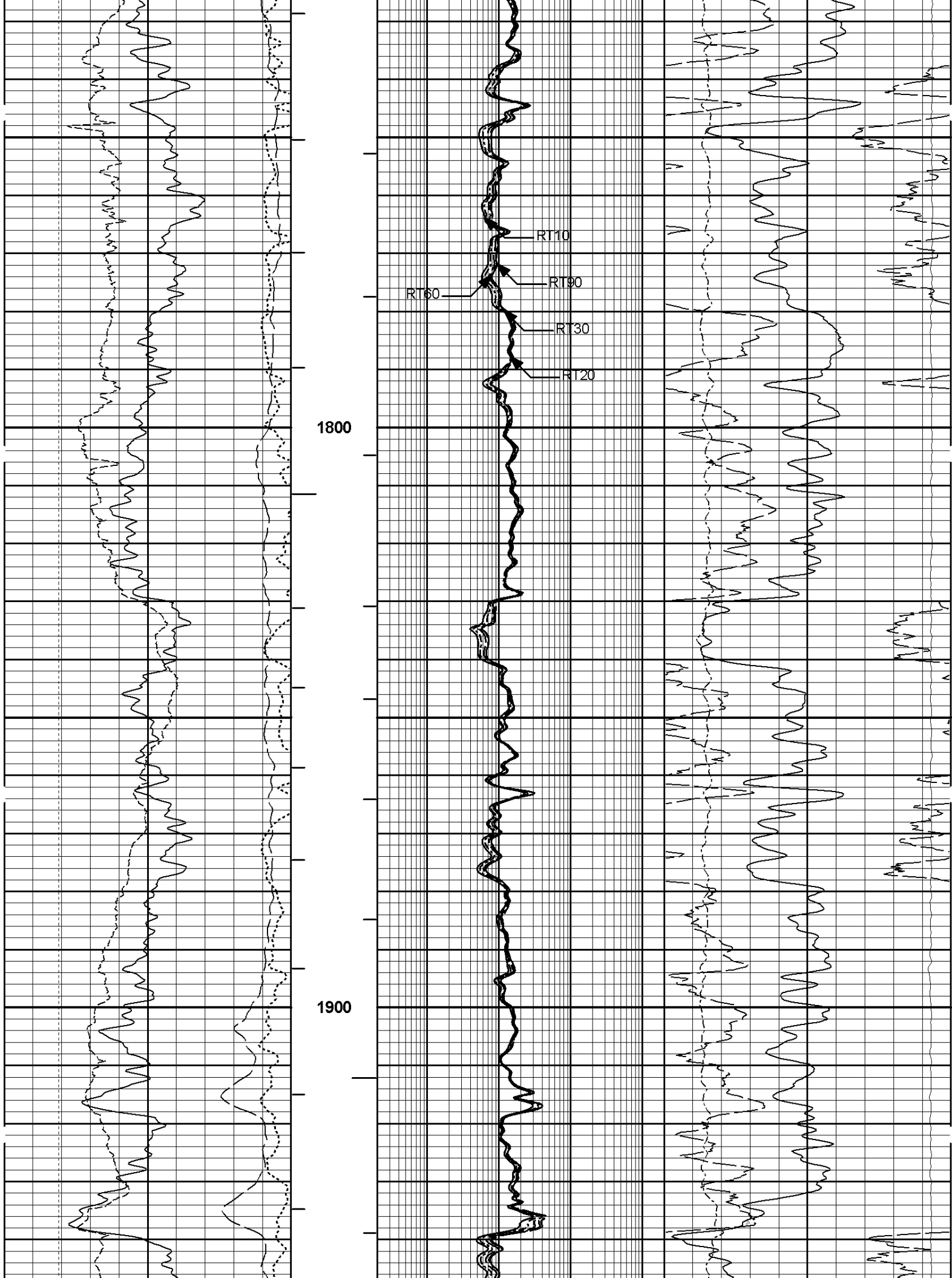
RT60

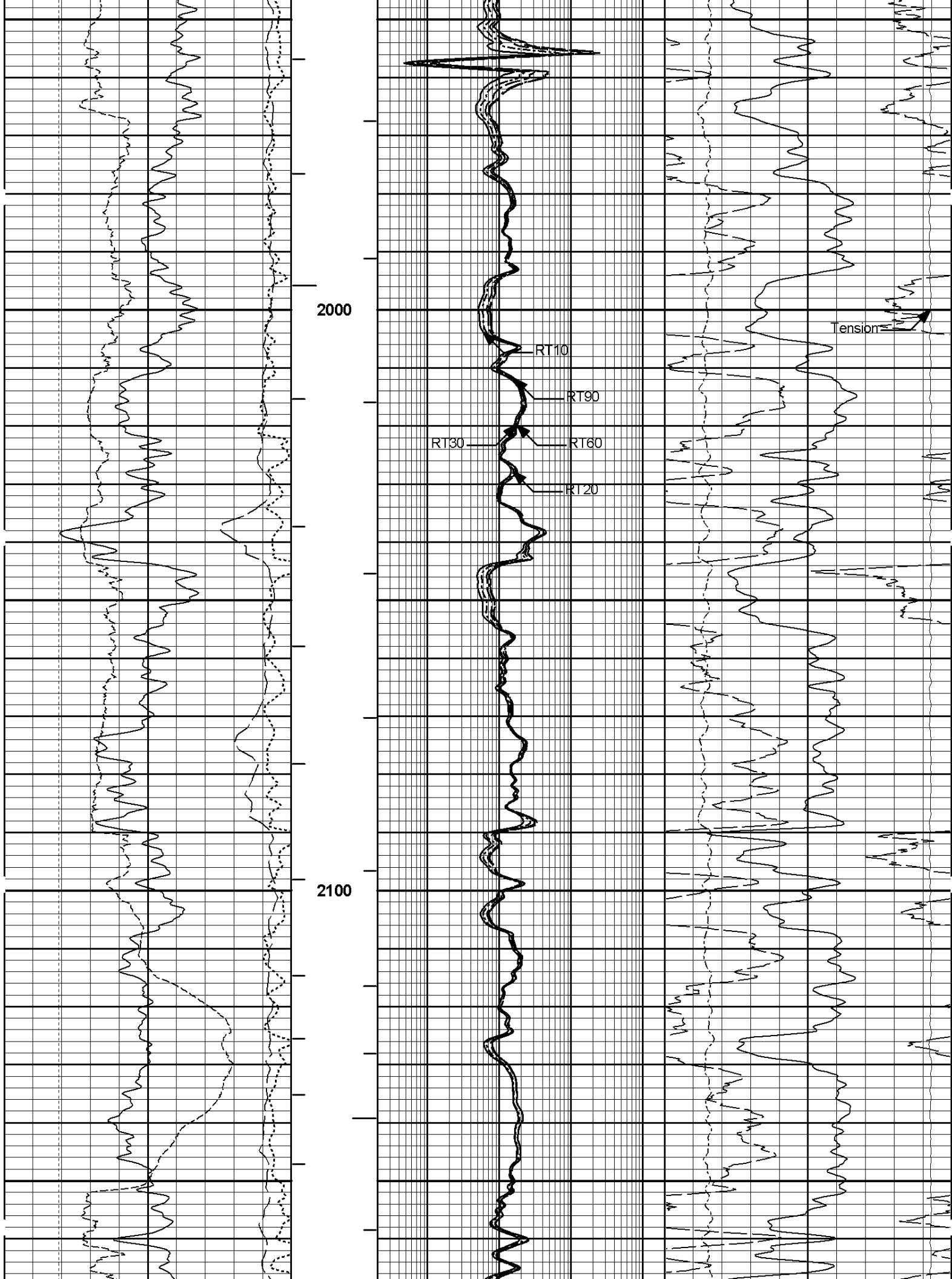
RT20

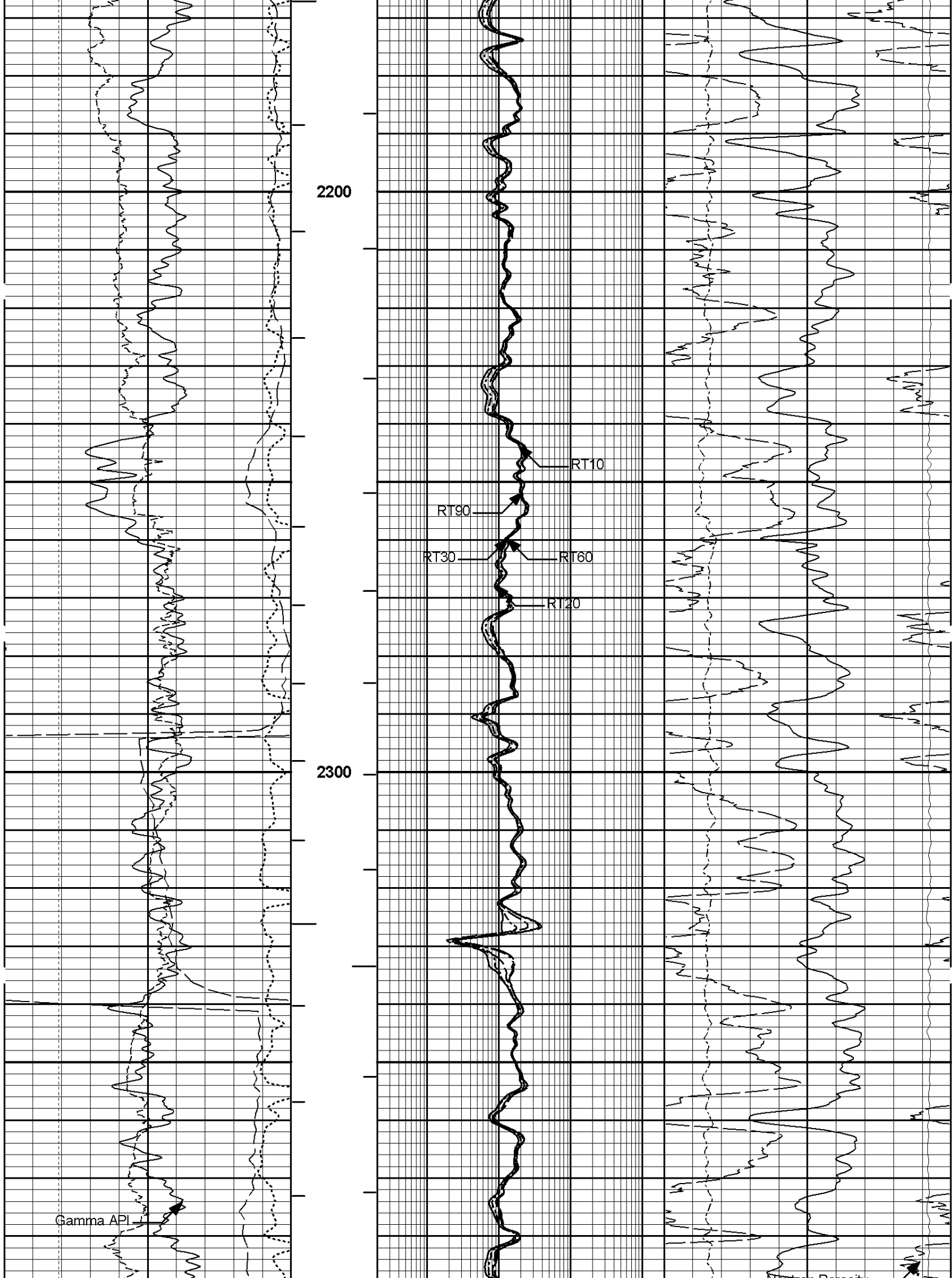
1600

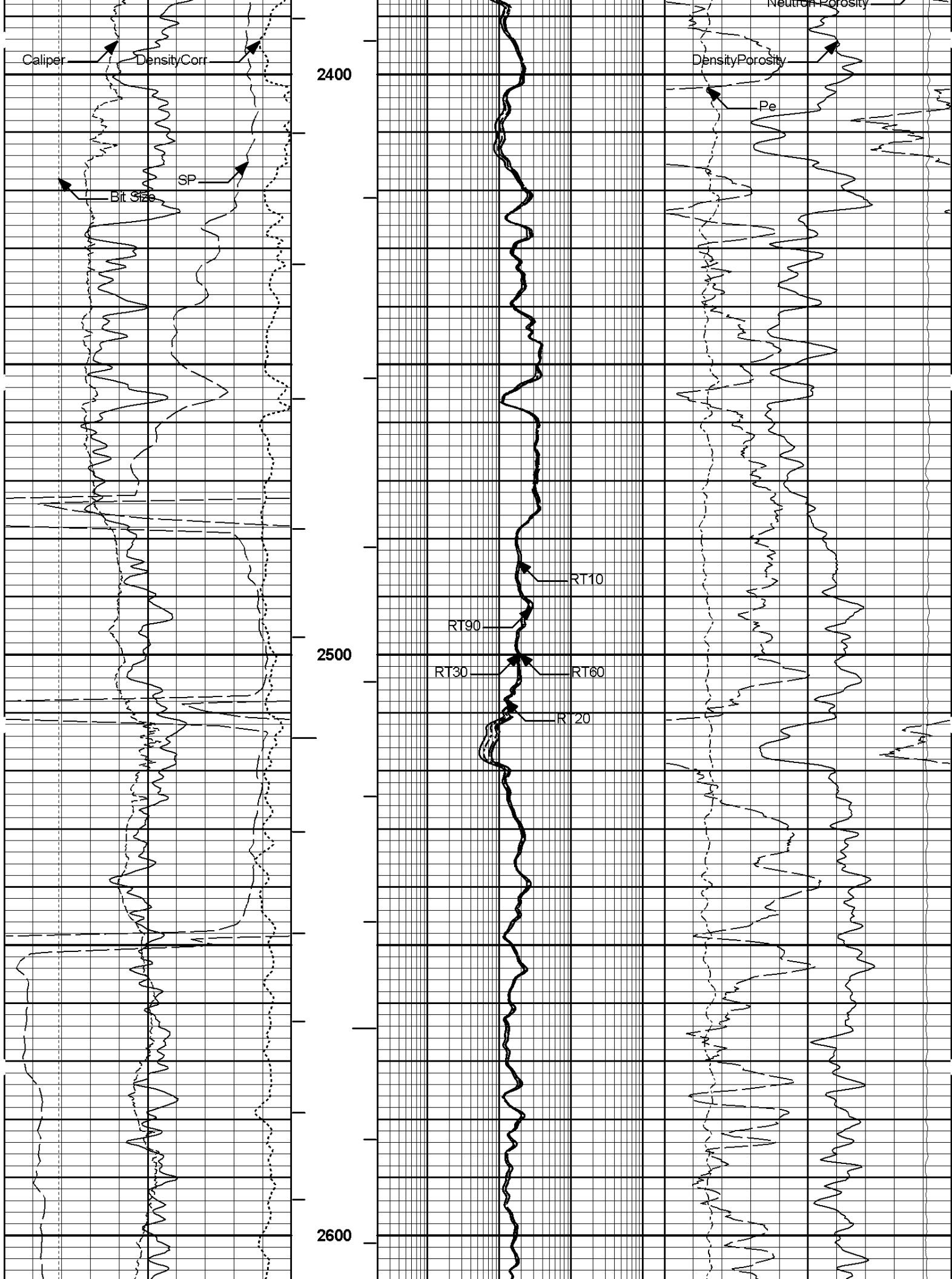
1700

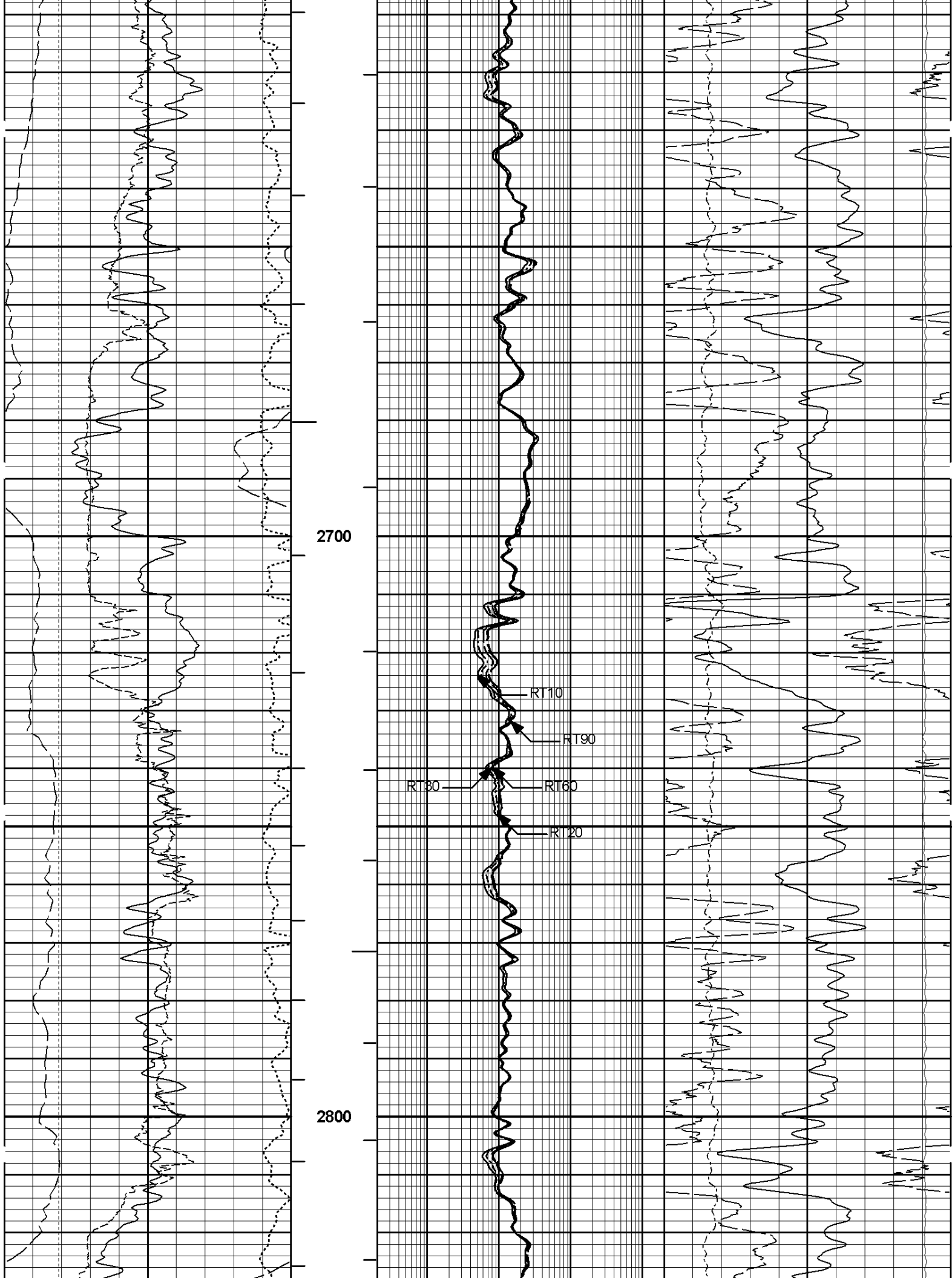


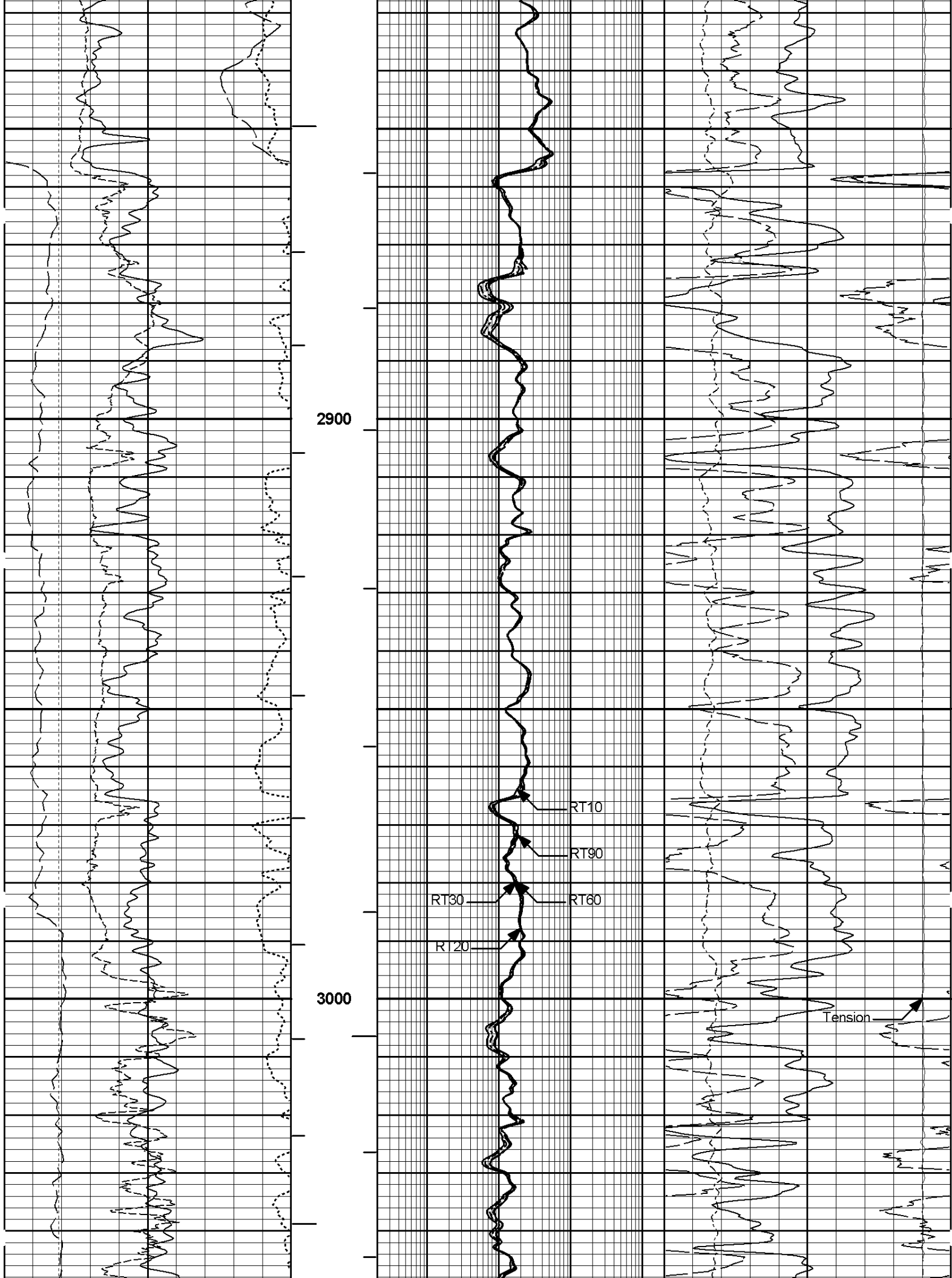


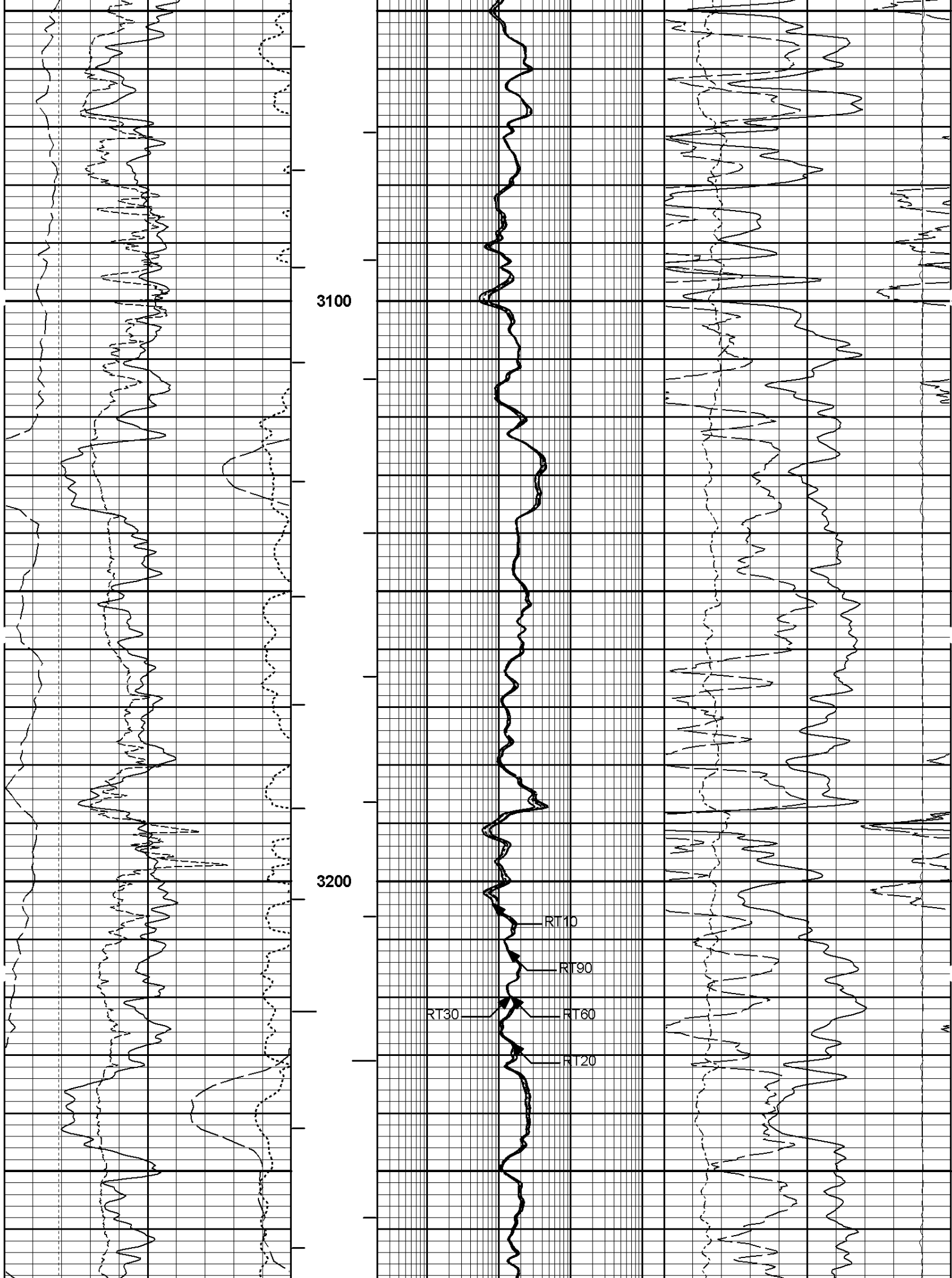


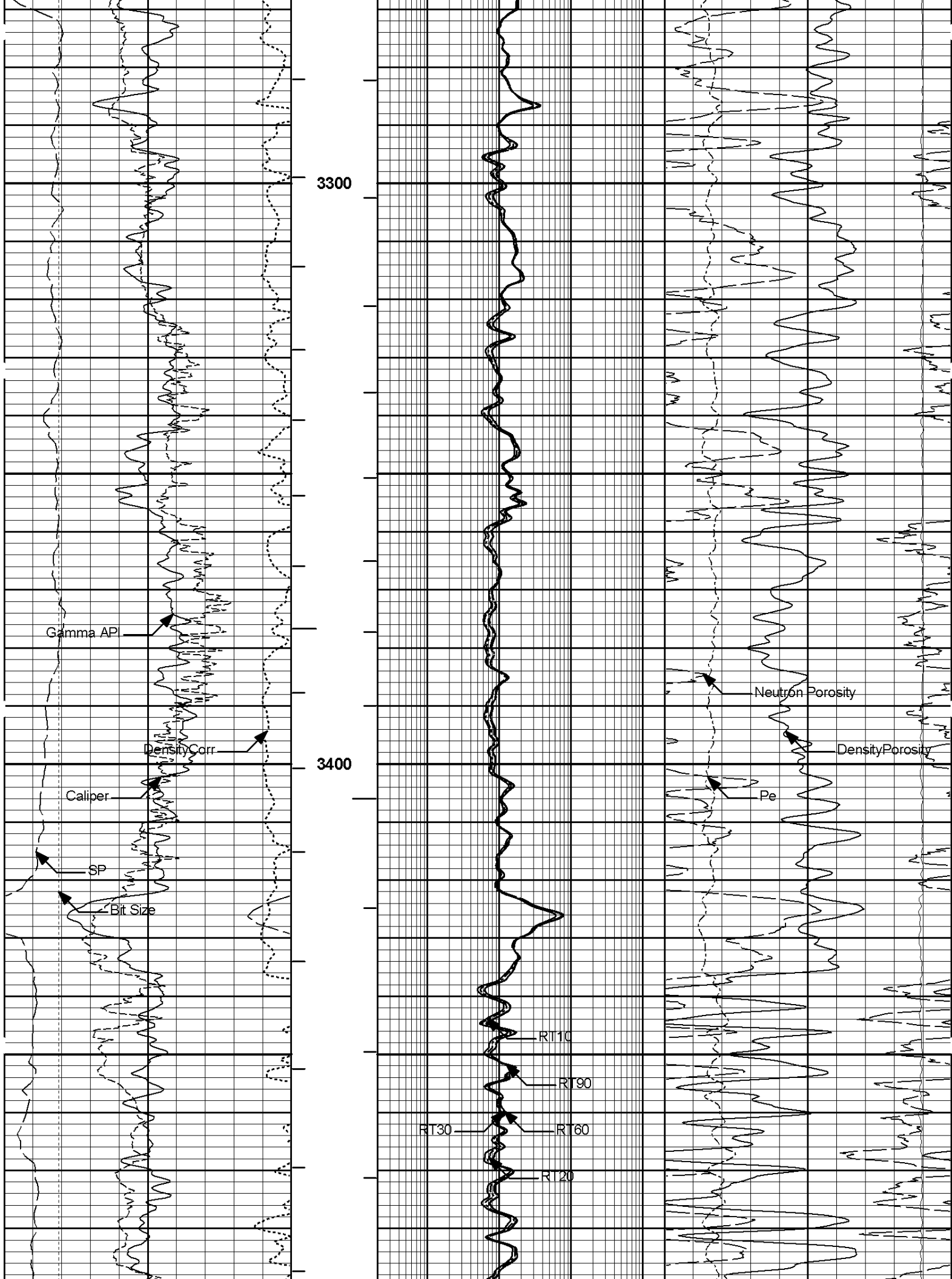


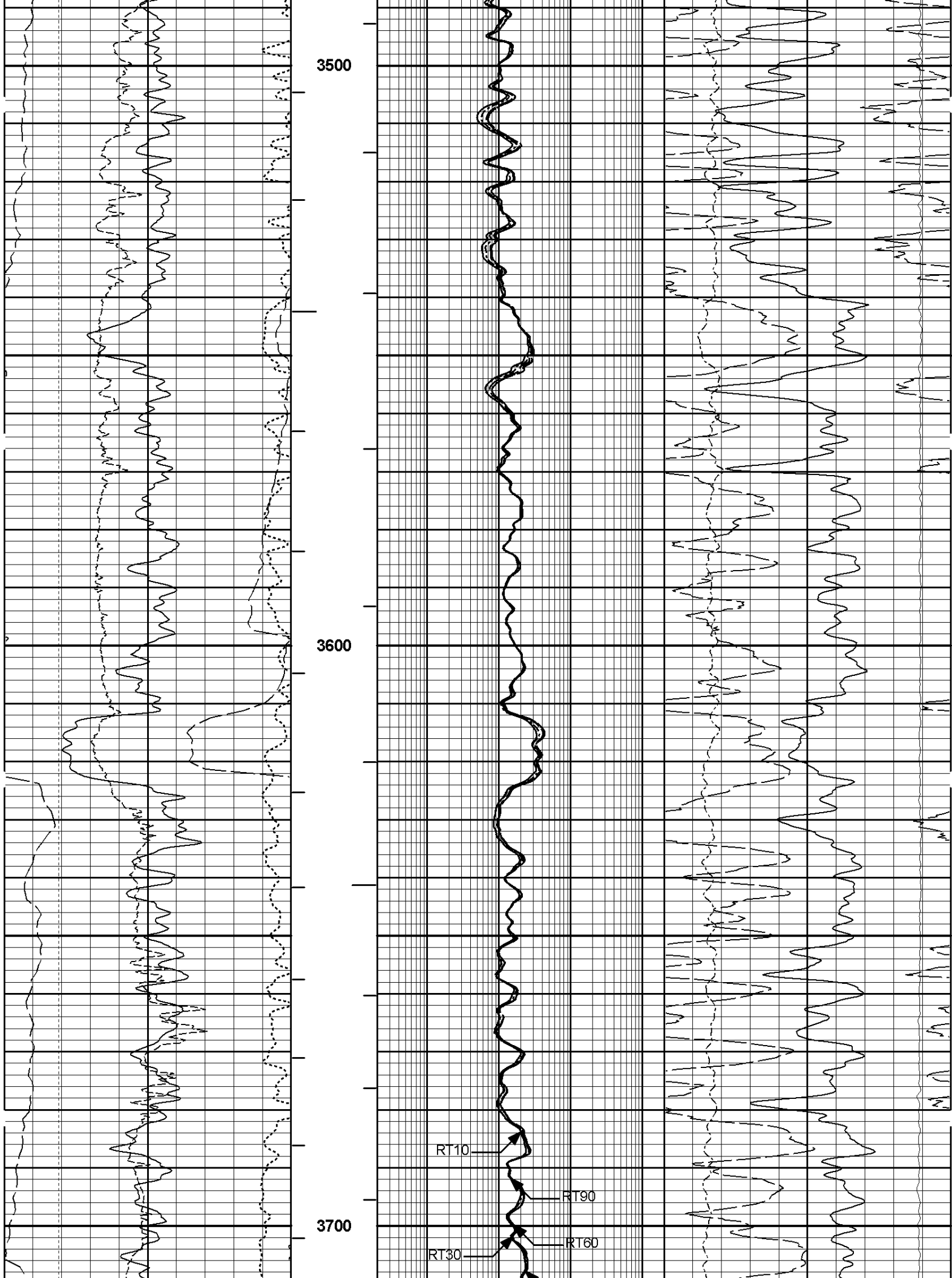


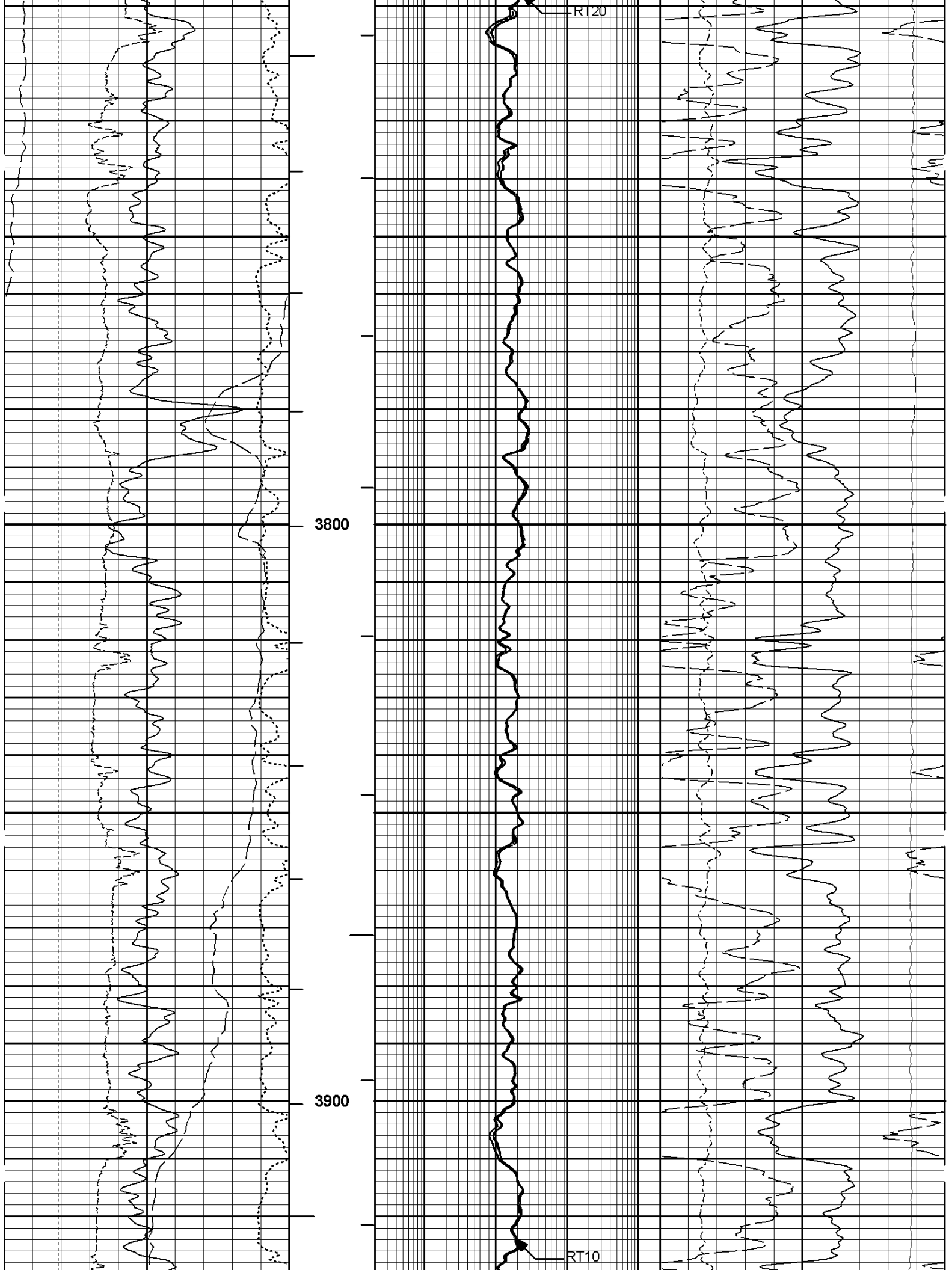


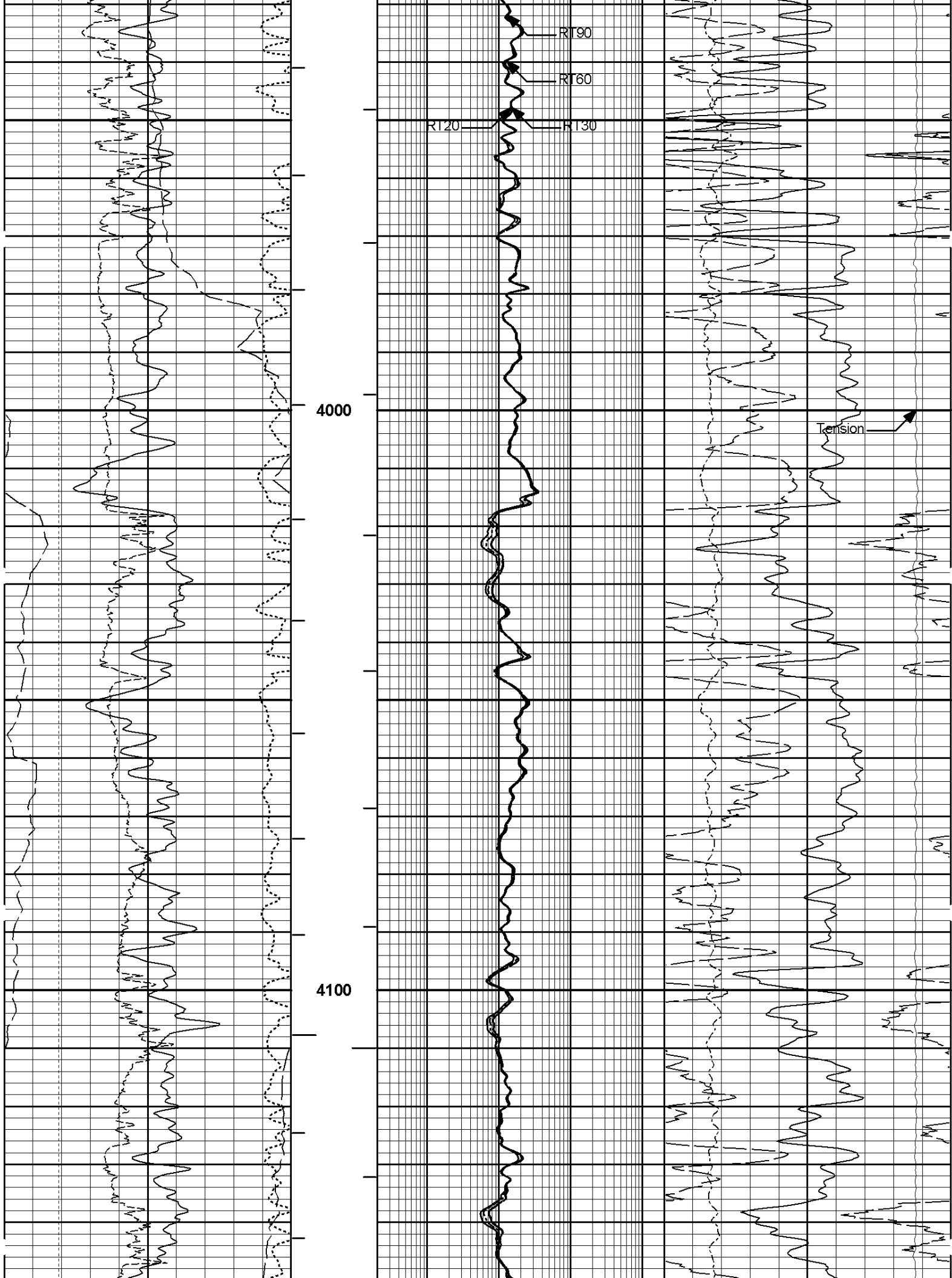


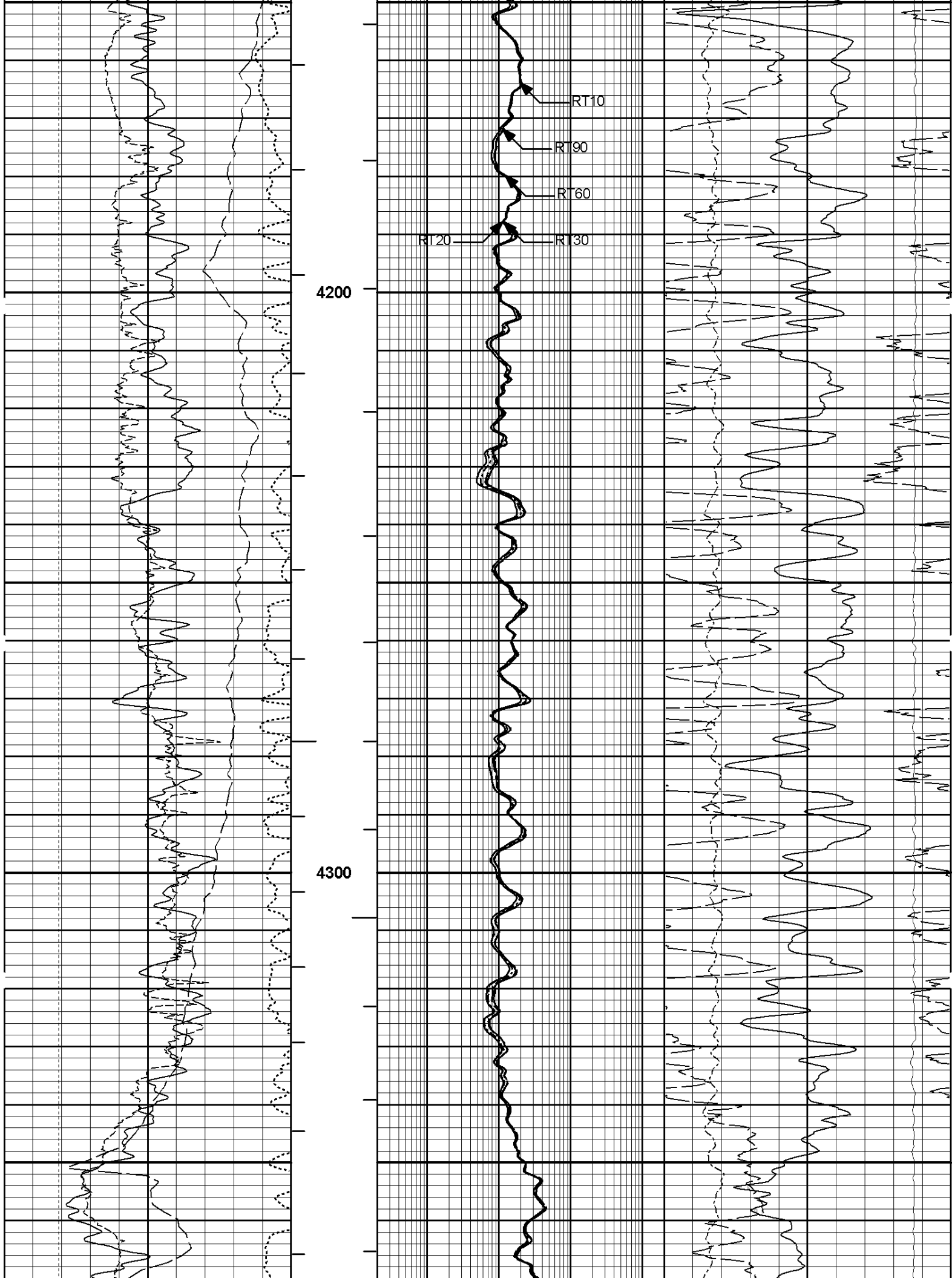


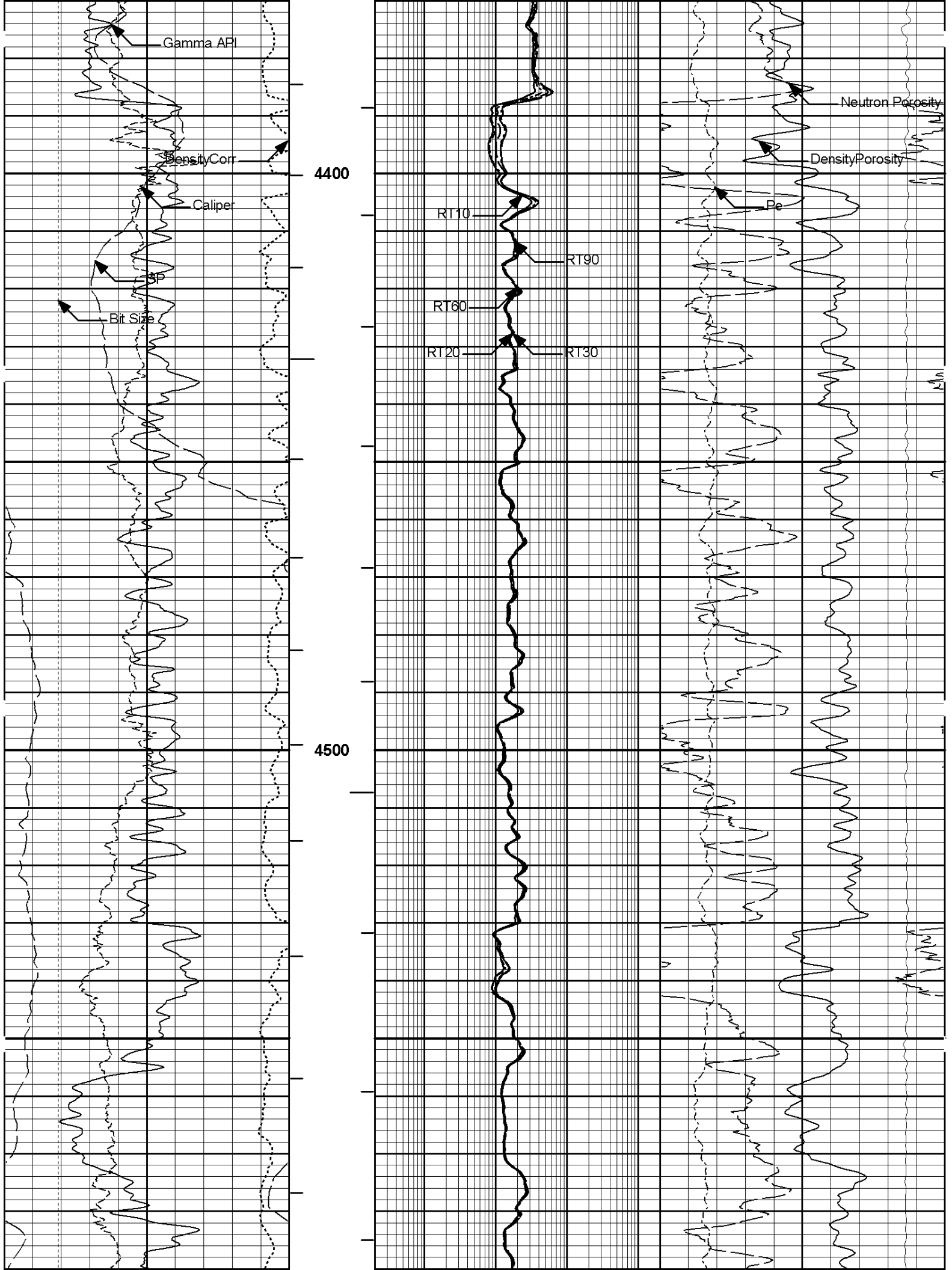


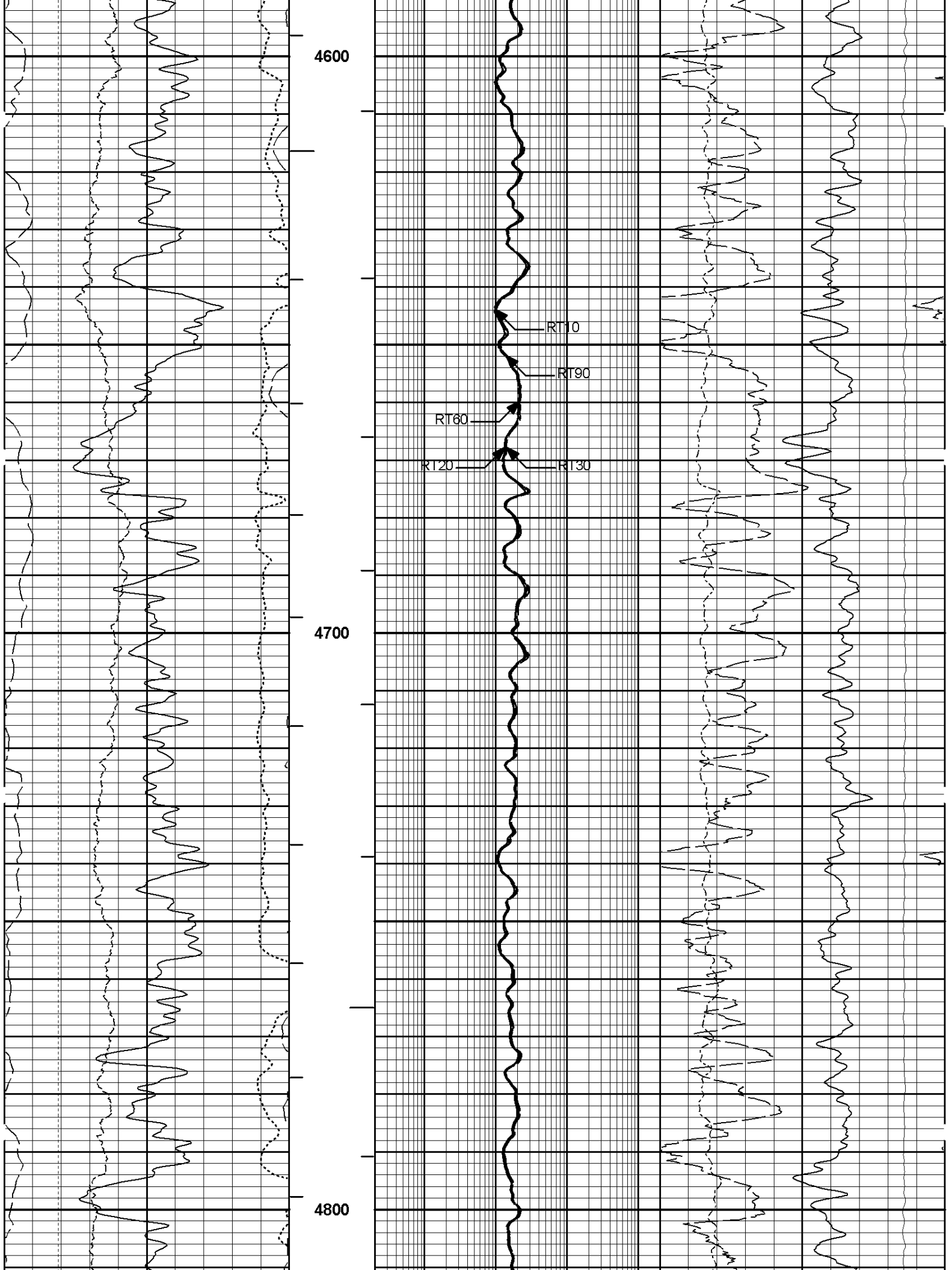


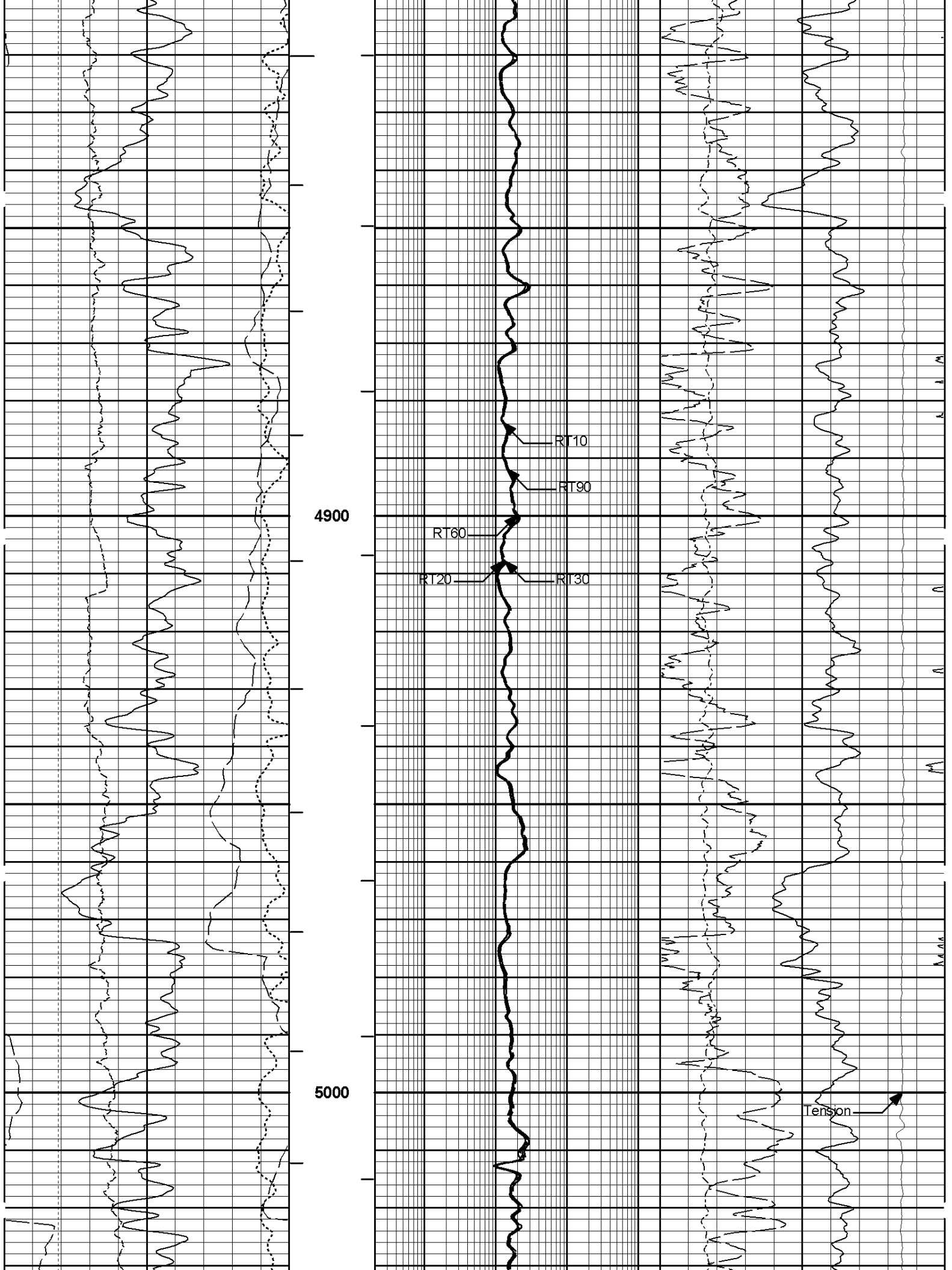


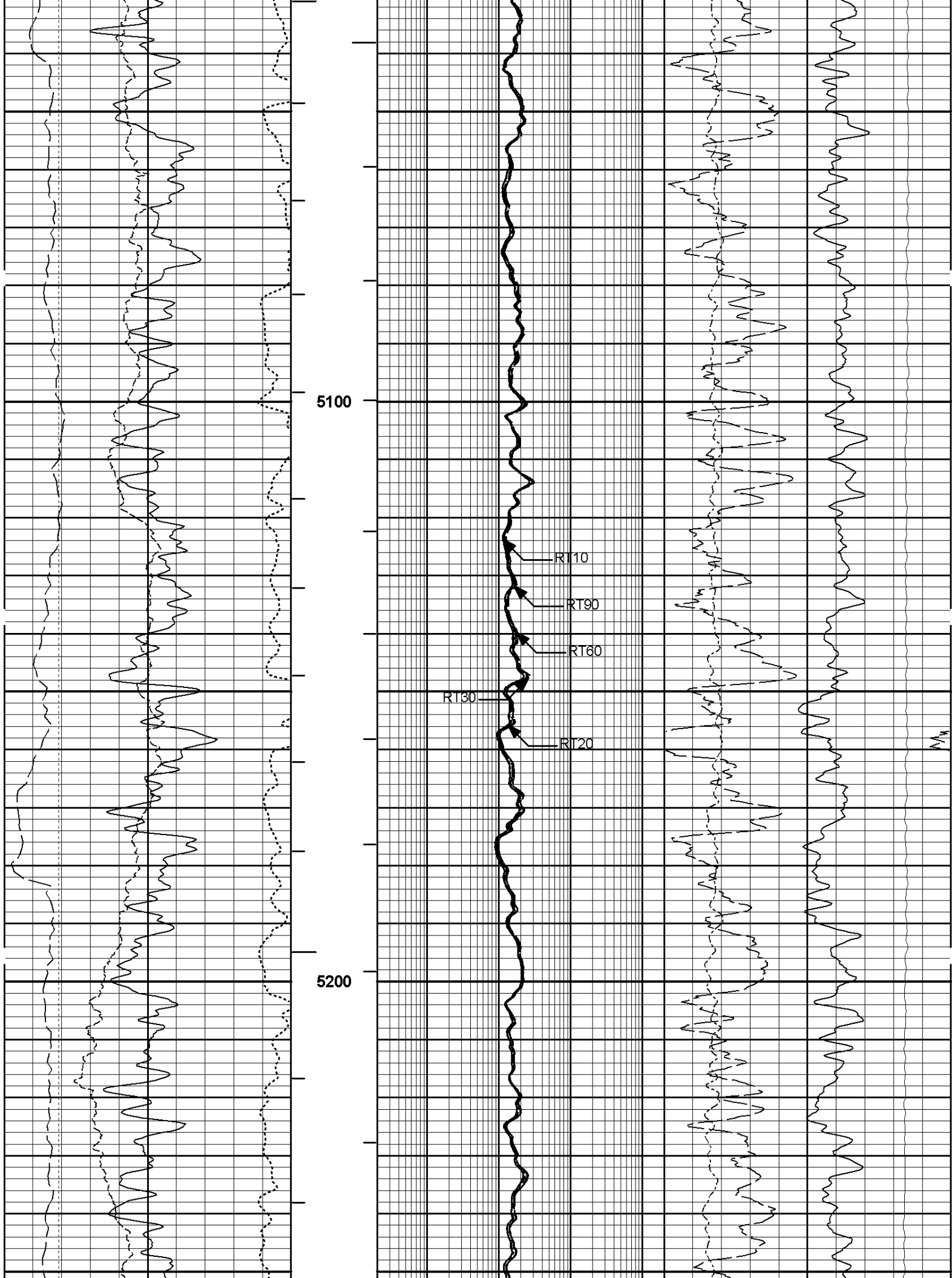


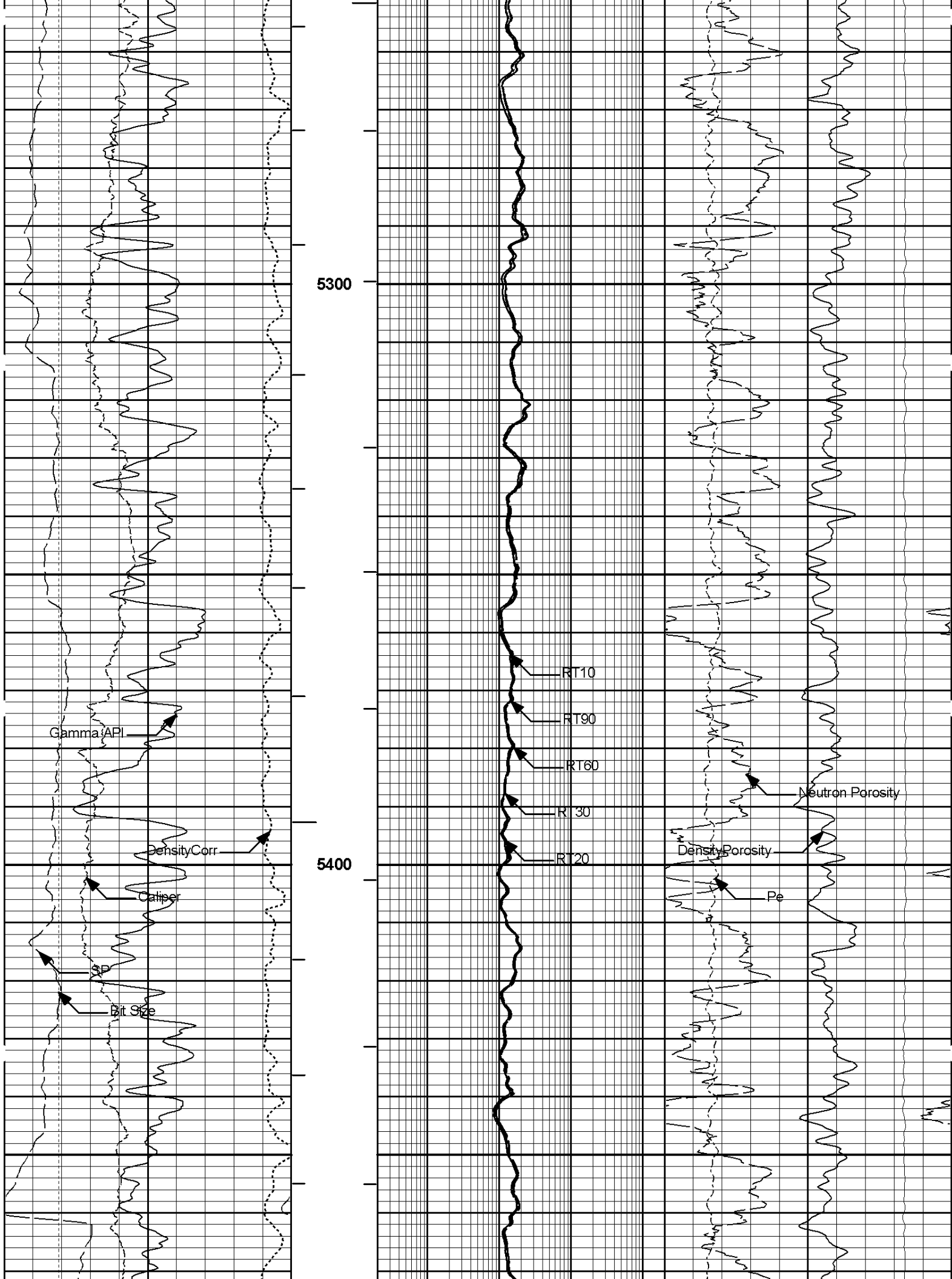


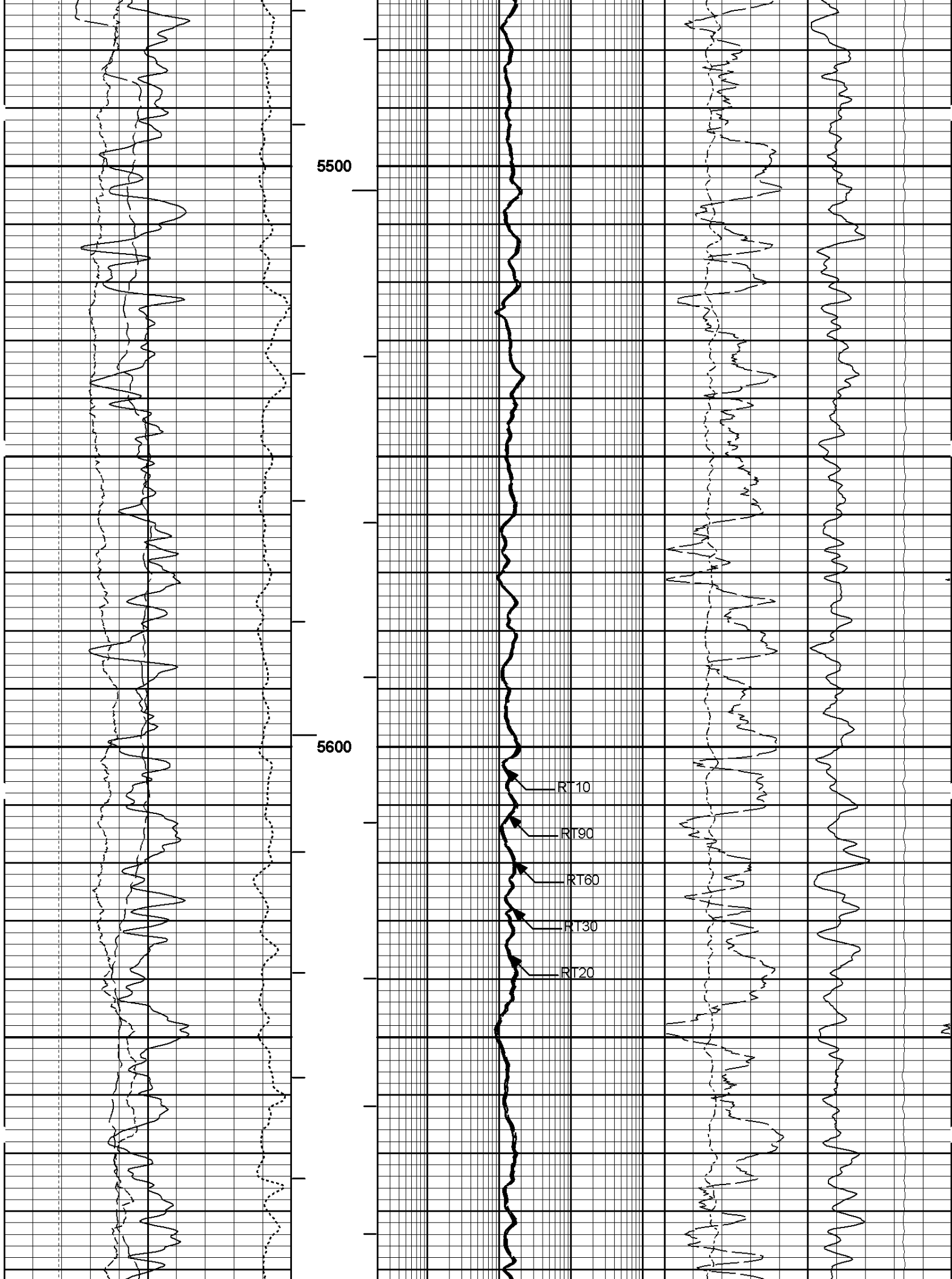


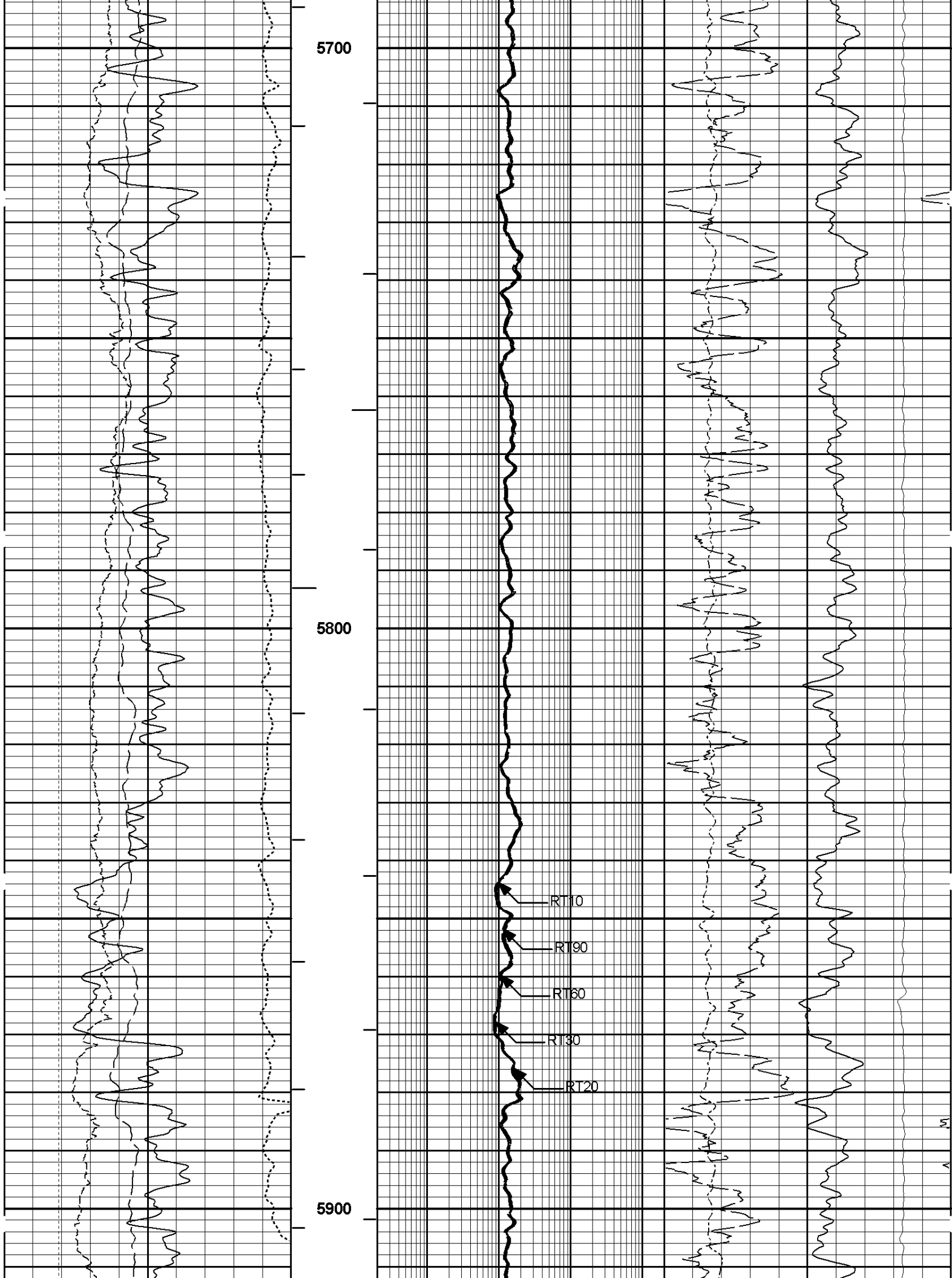


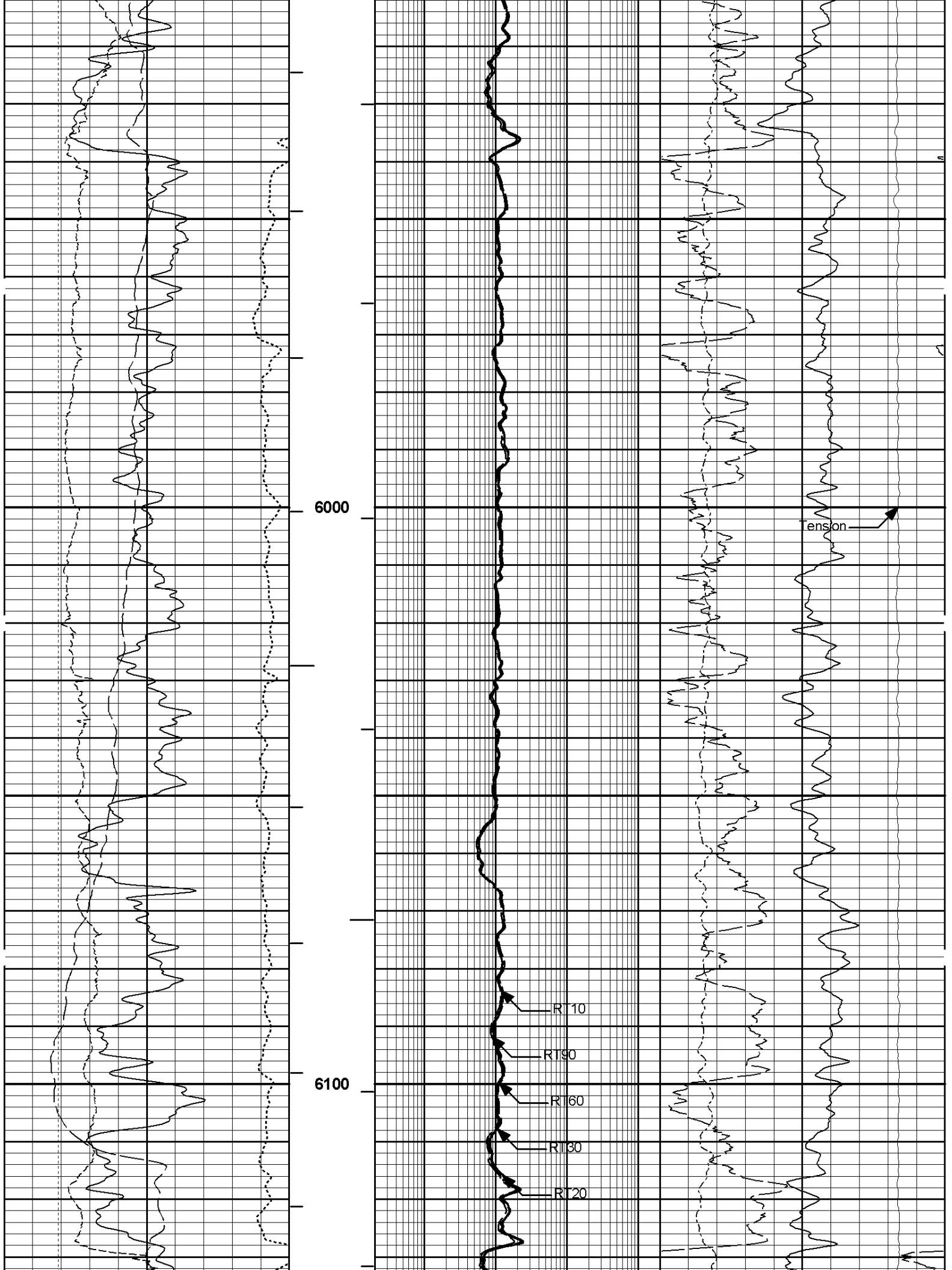


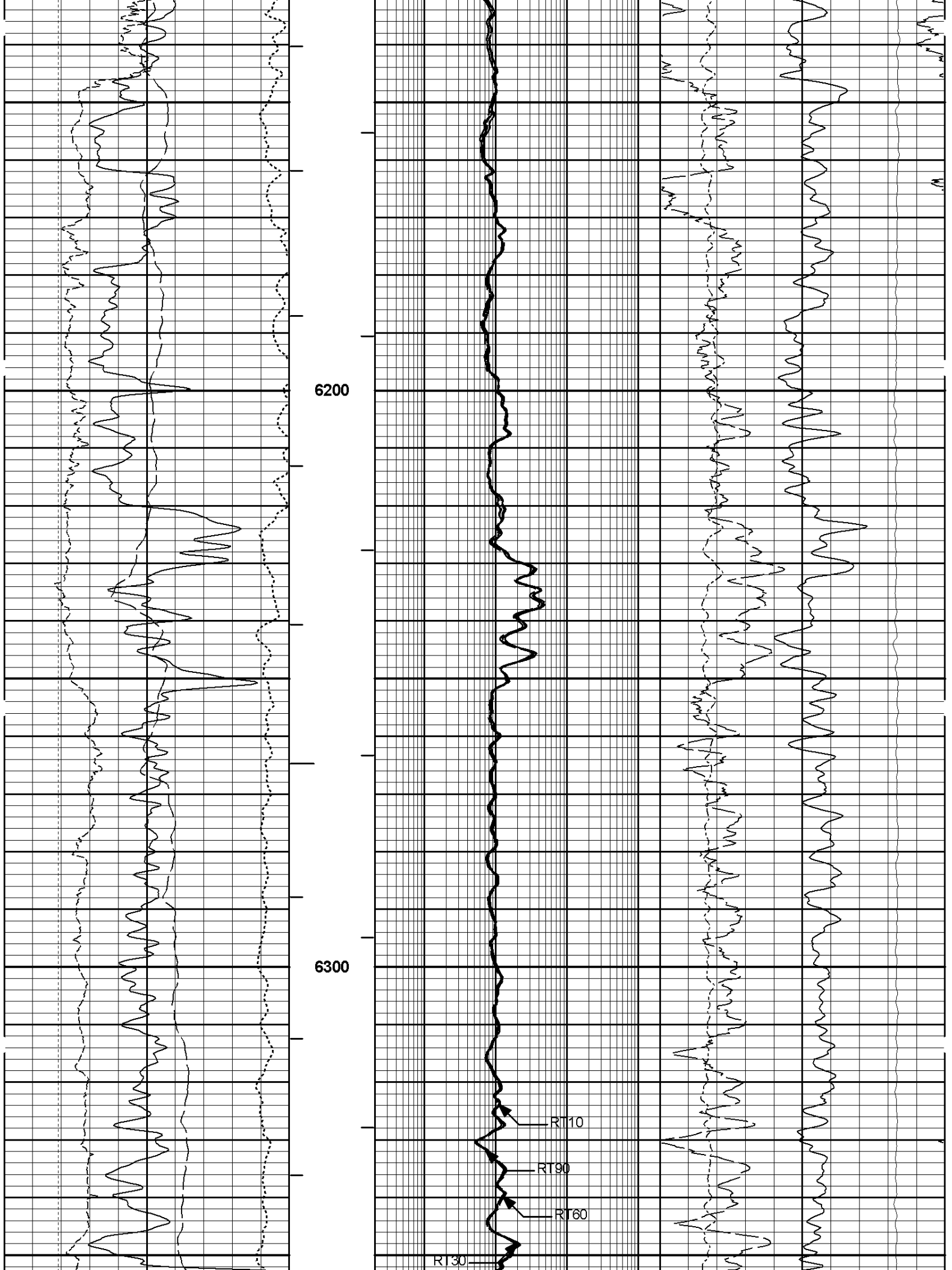


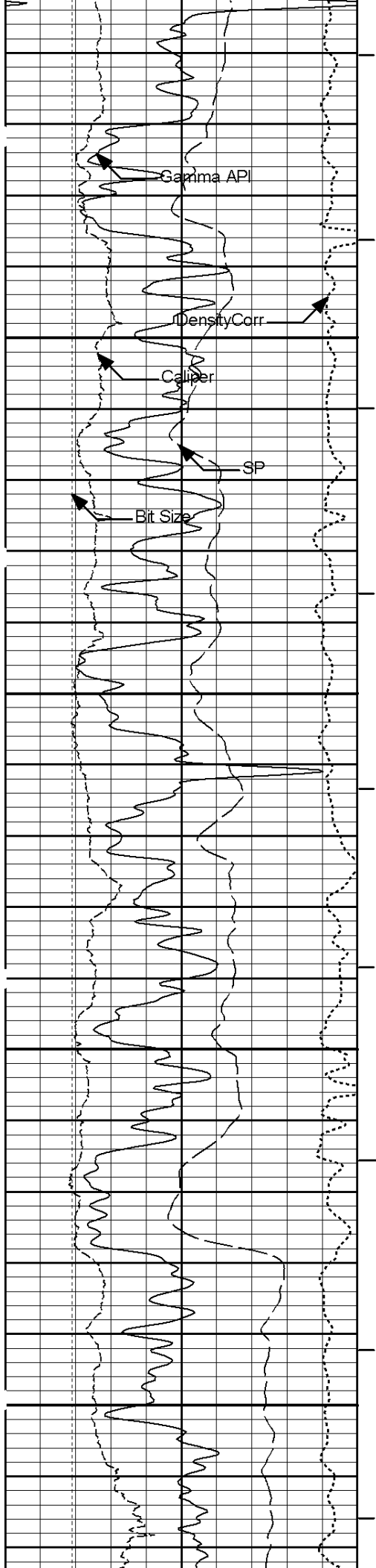






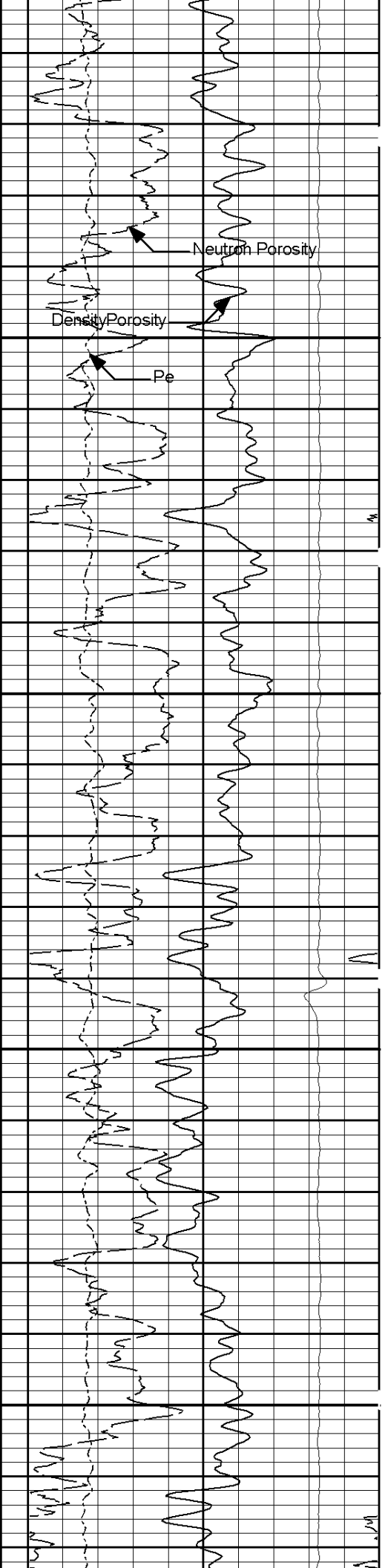
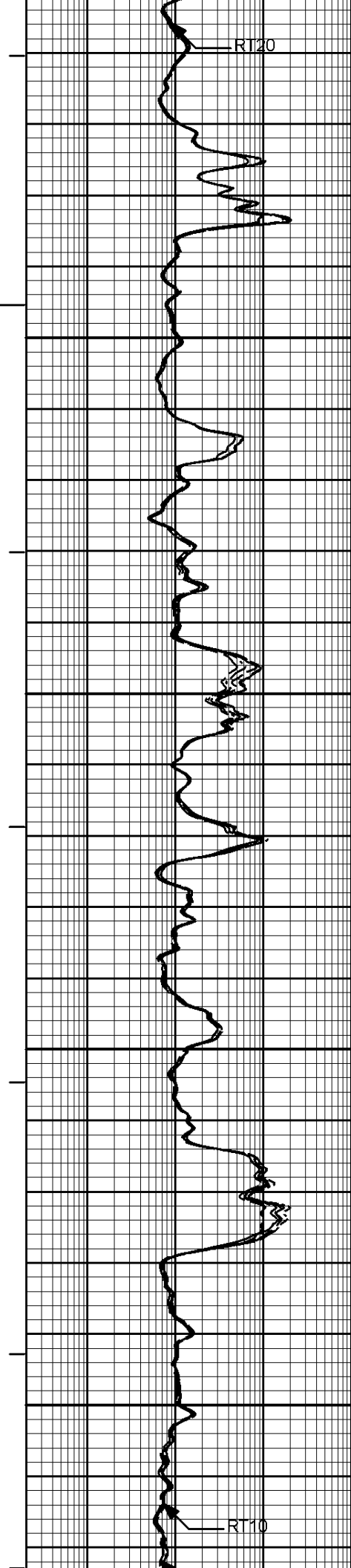


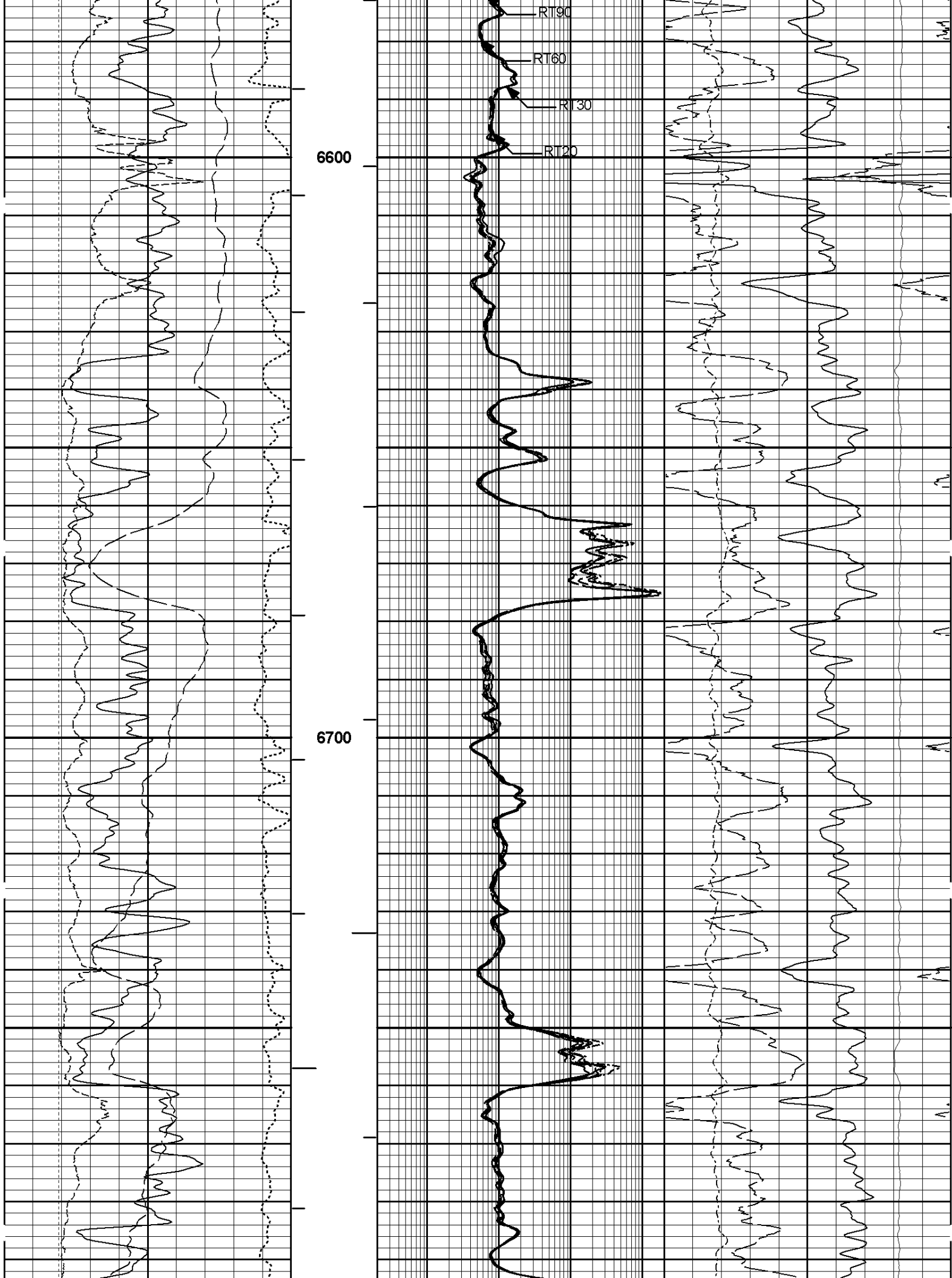


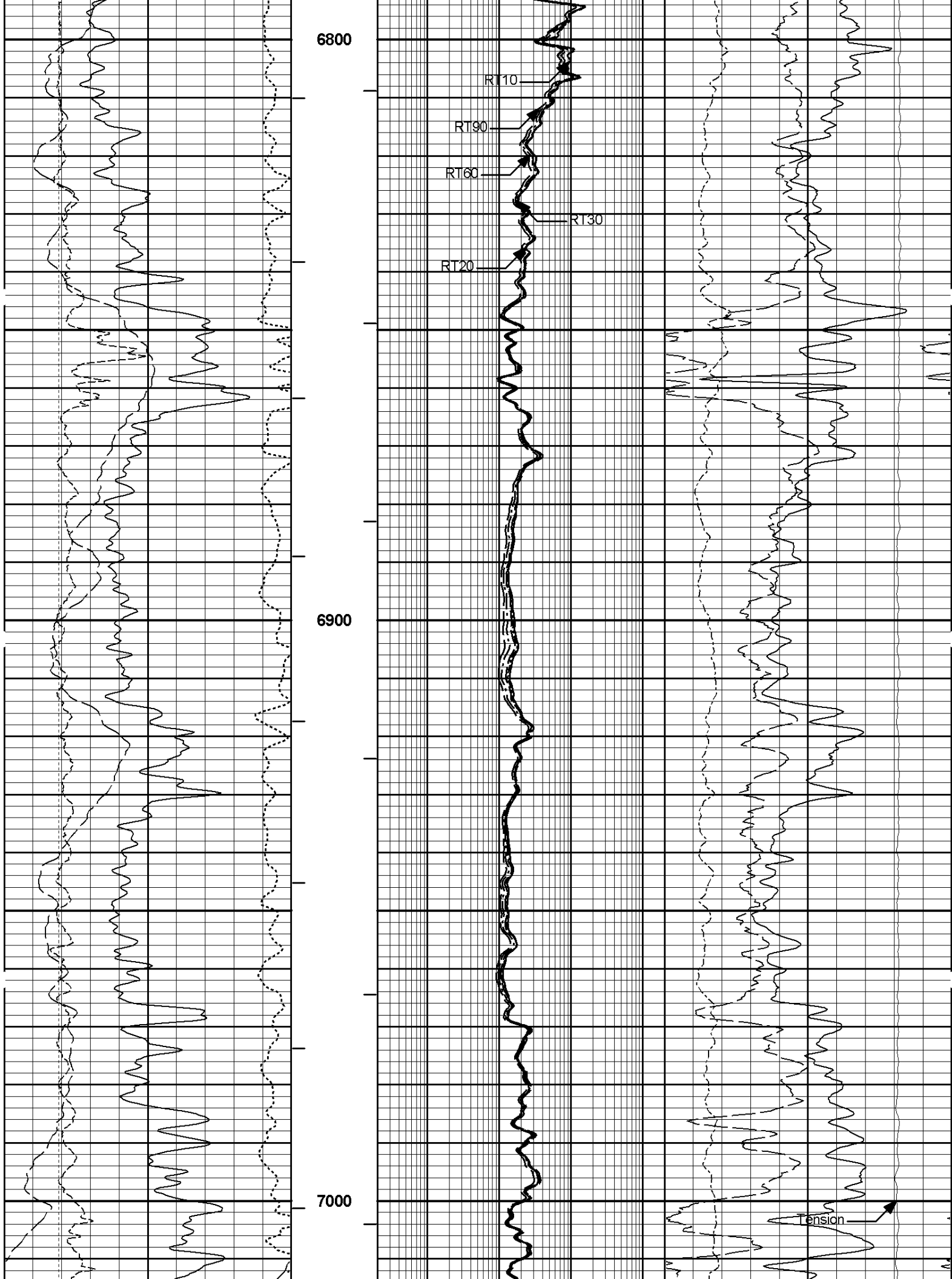


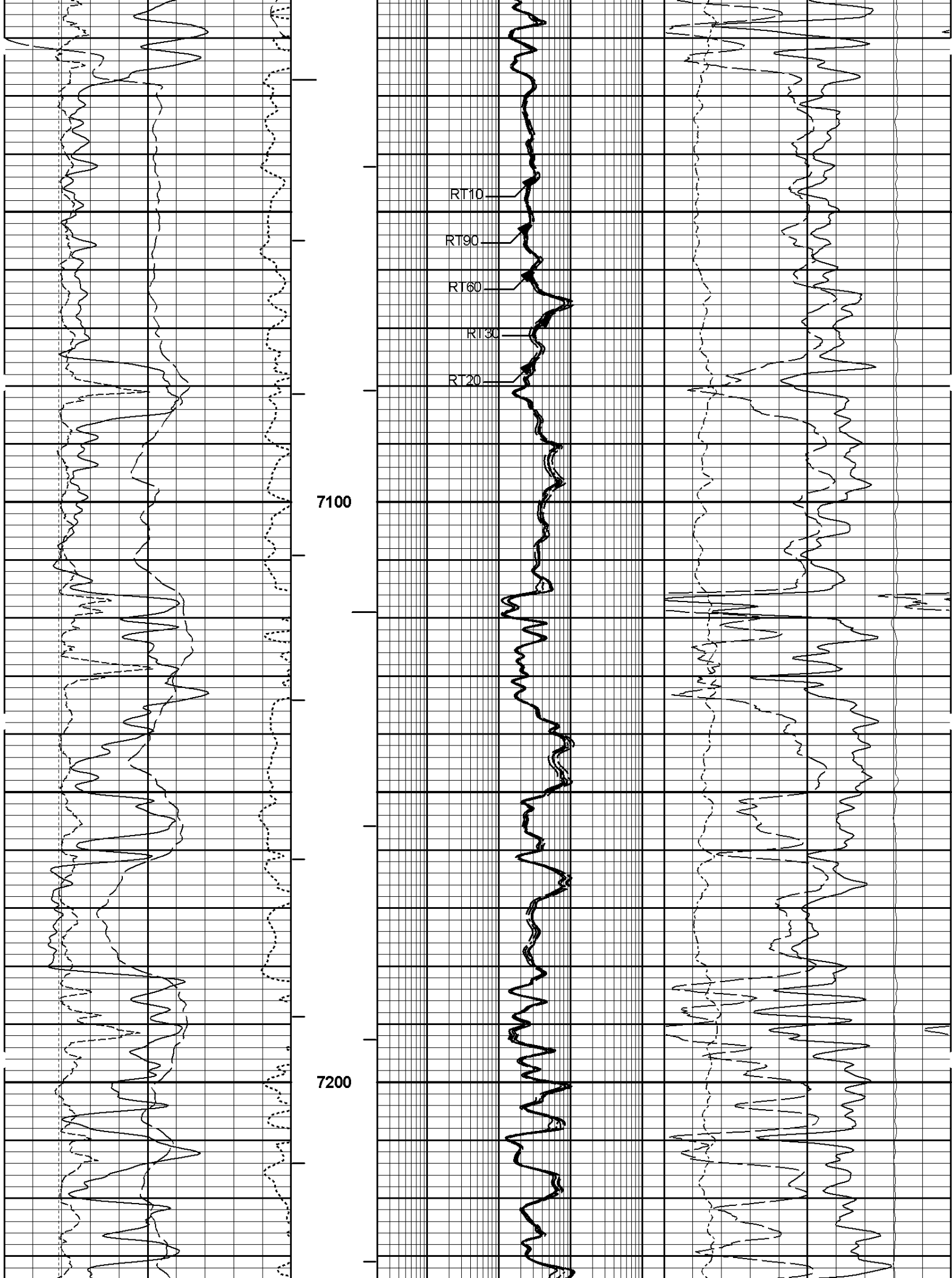
6400

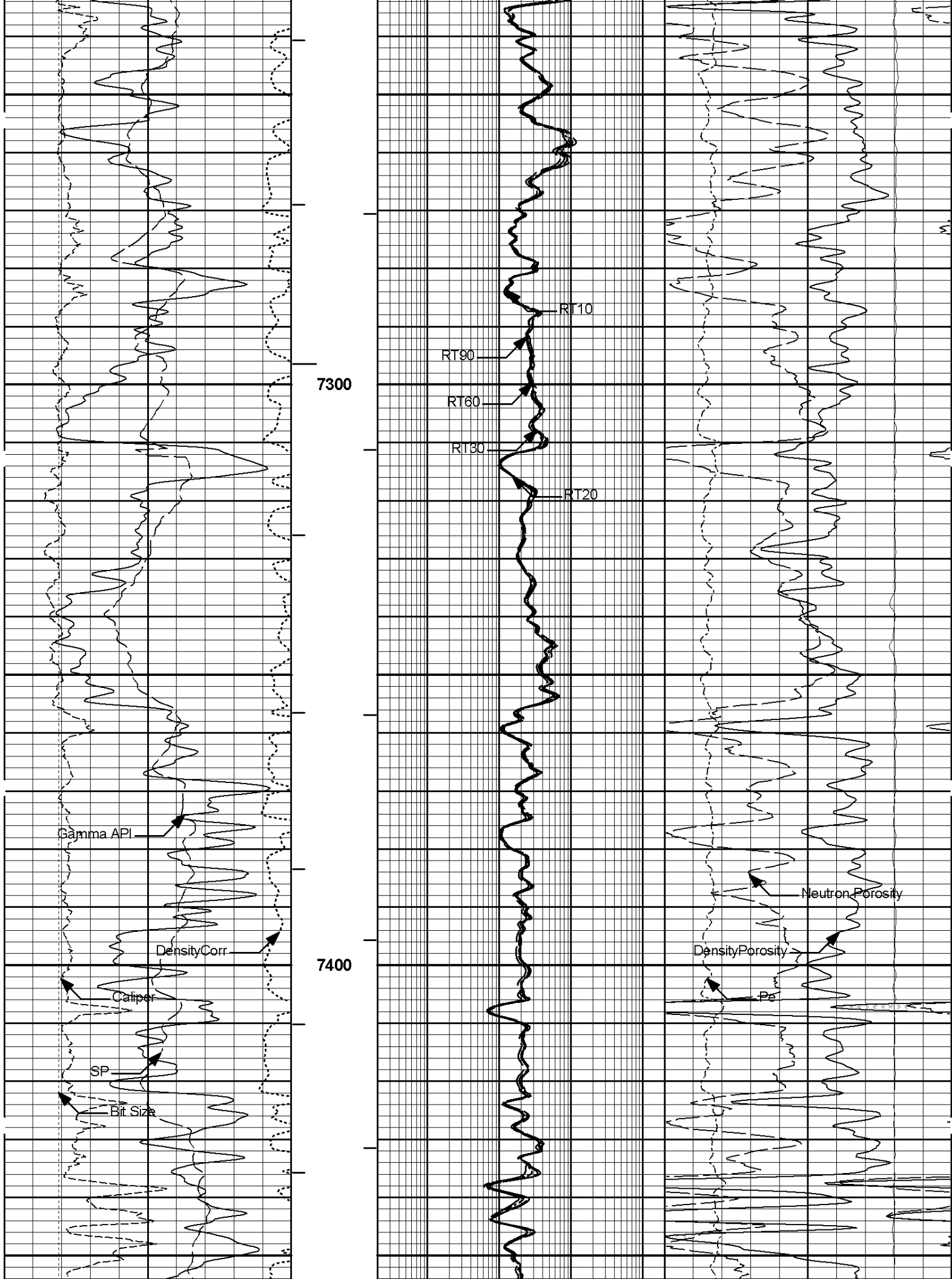
6500

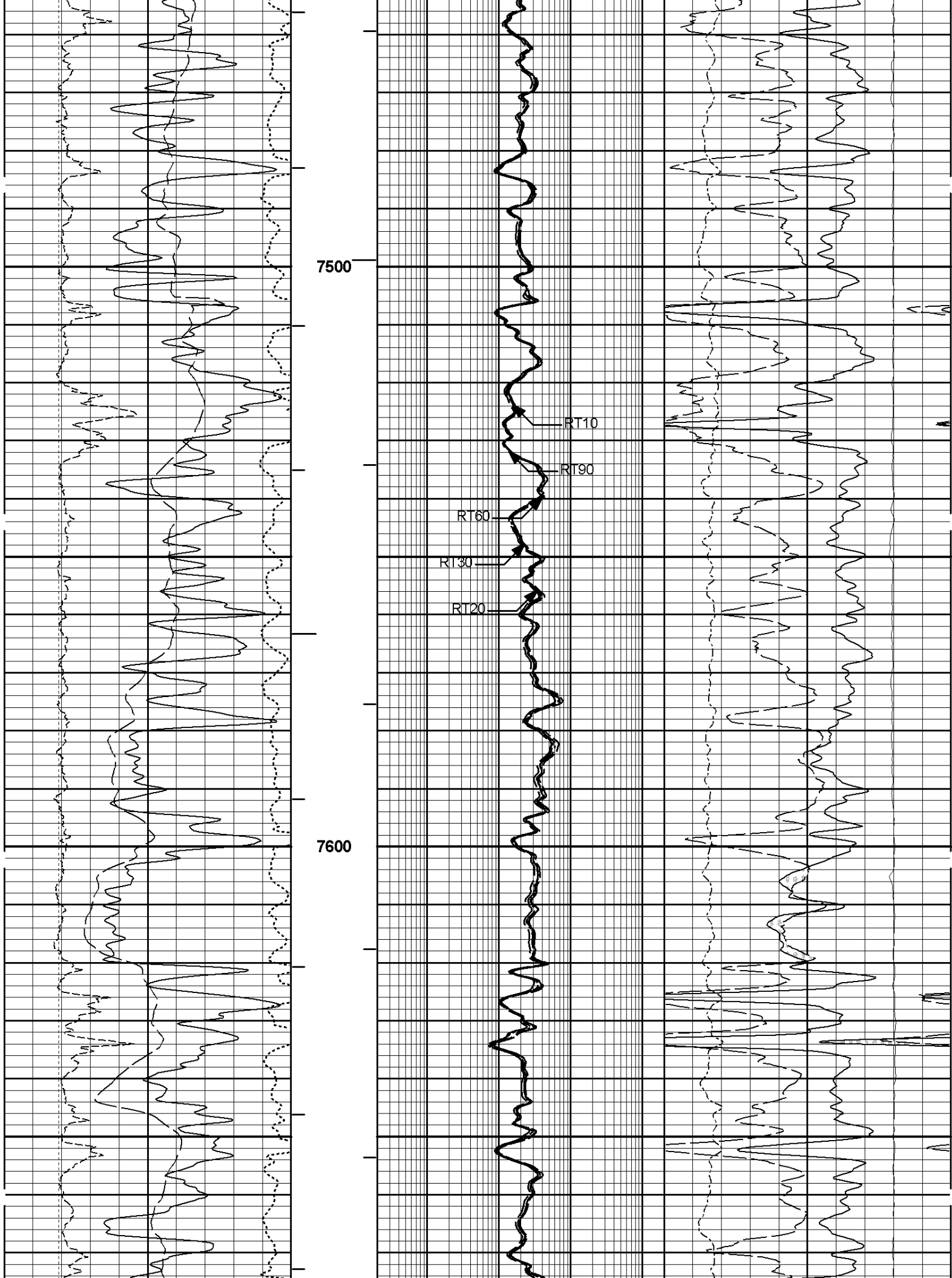


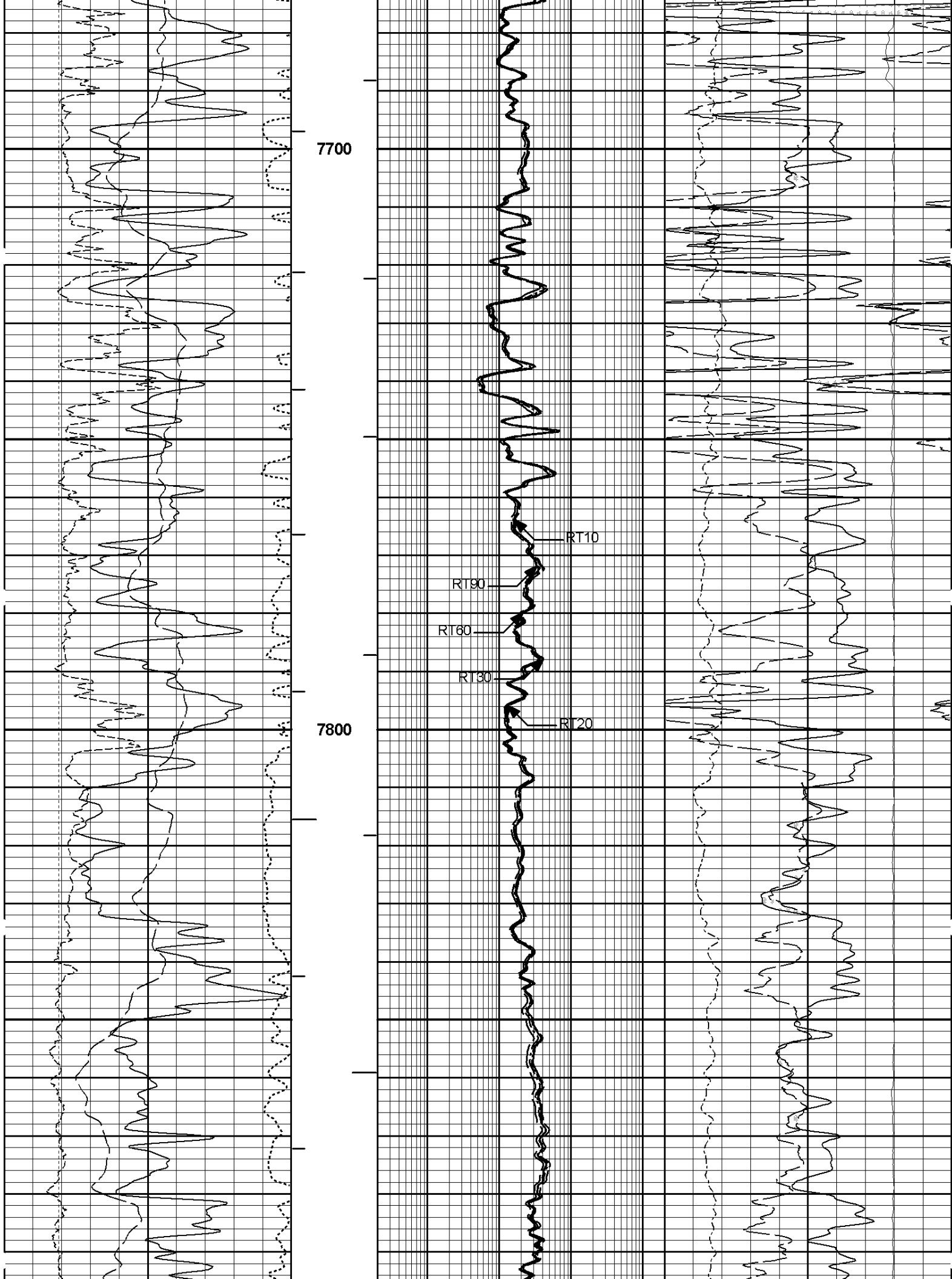


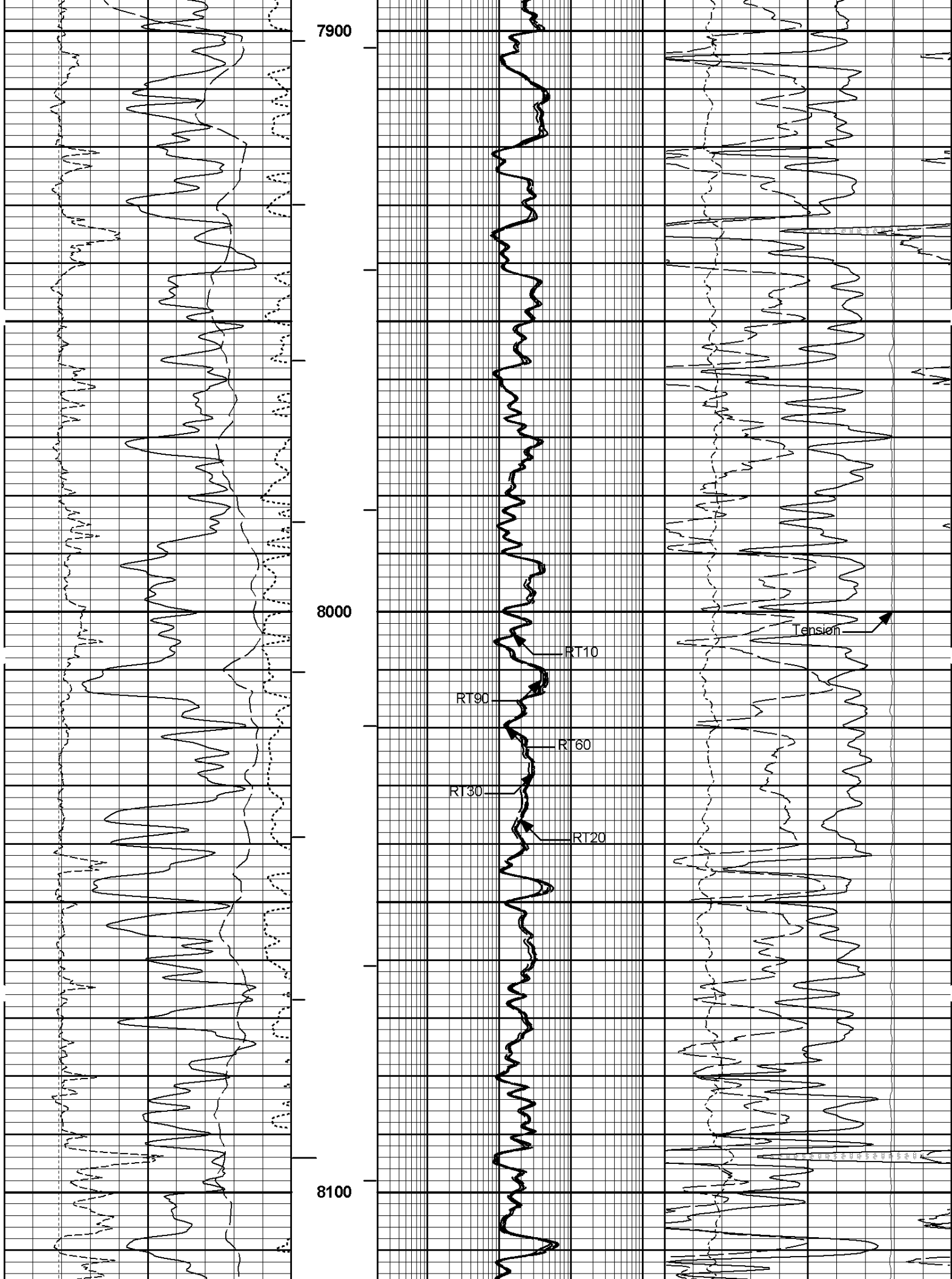


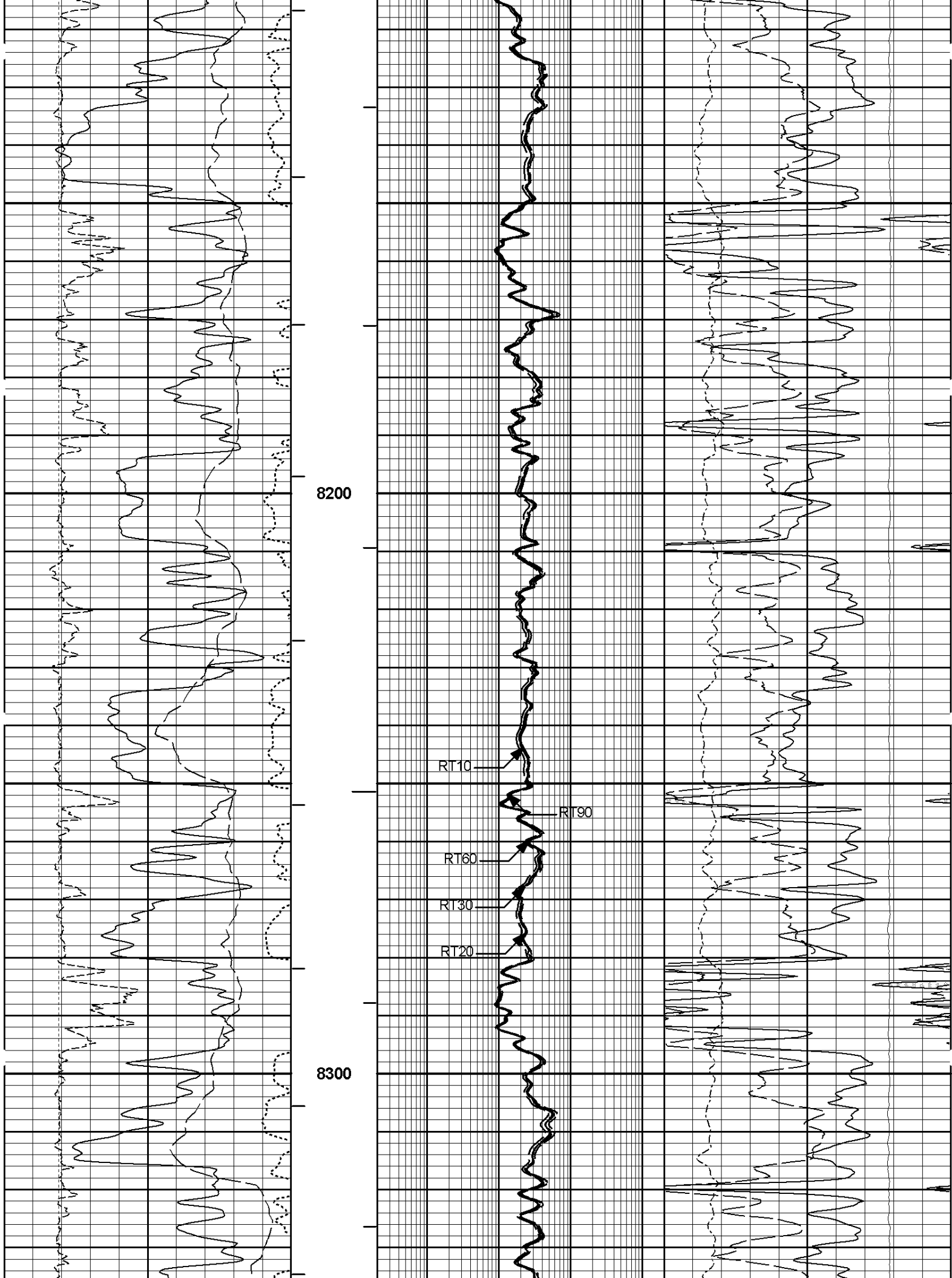


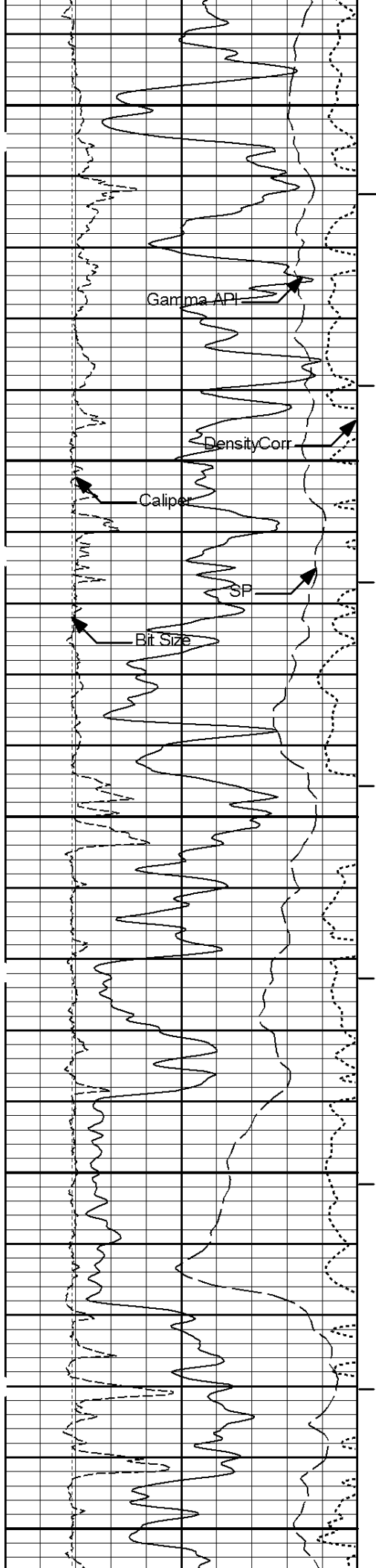






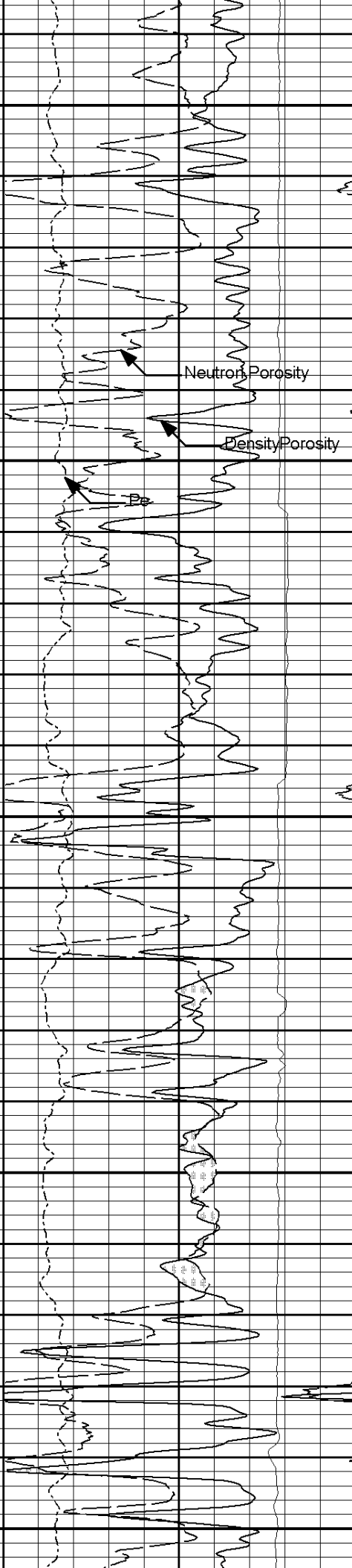
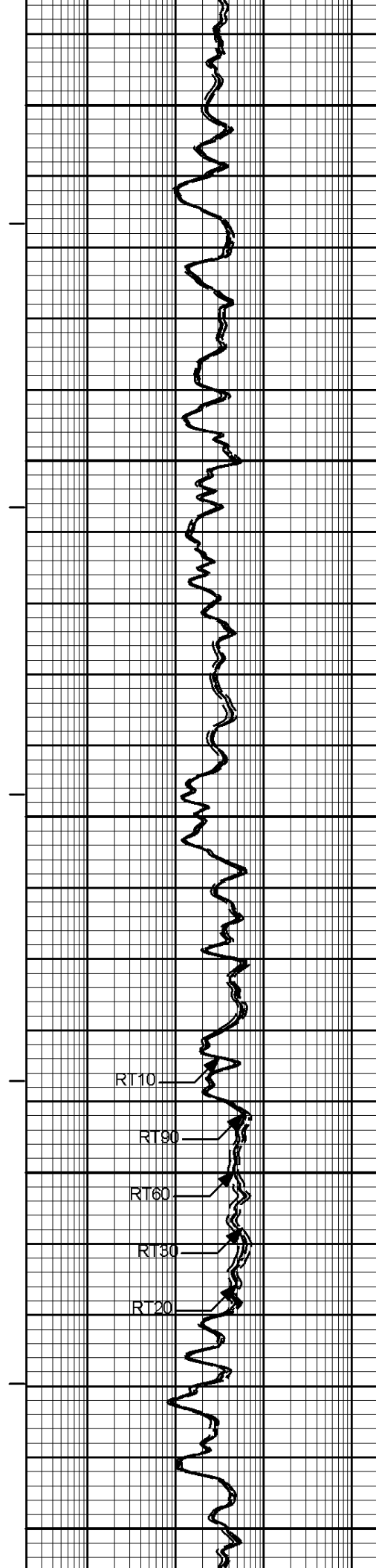


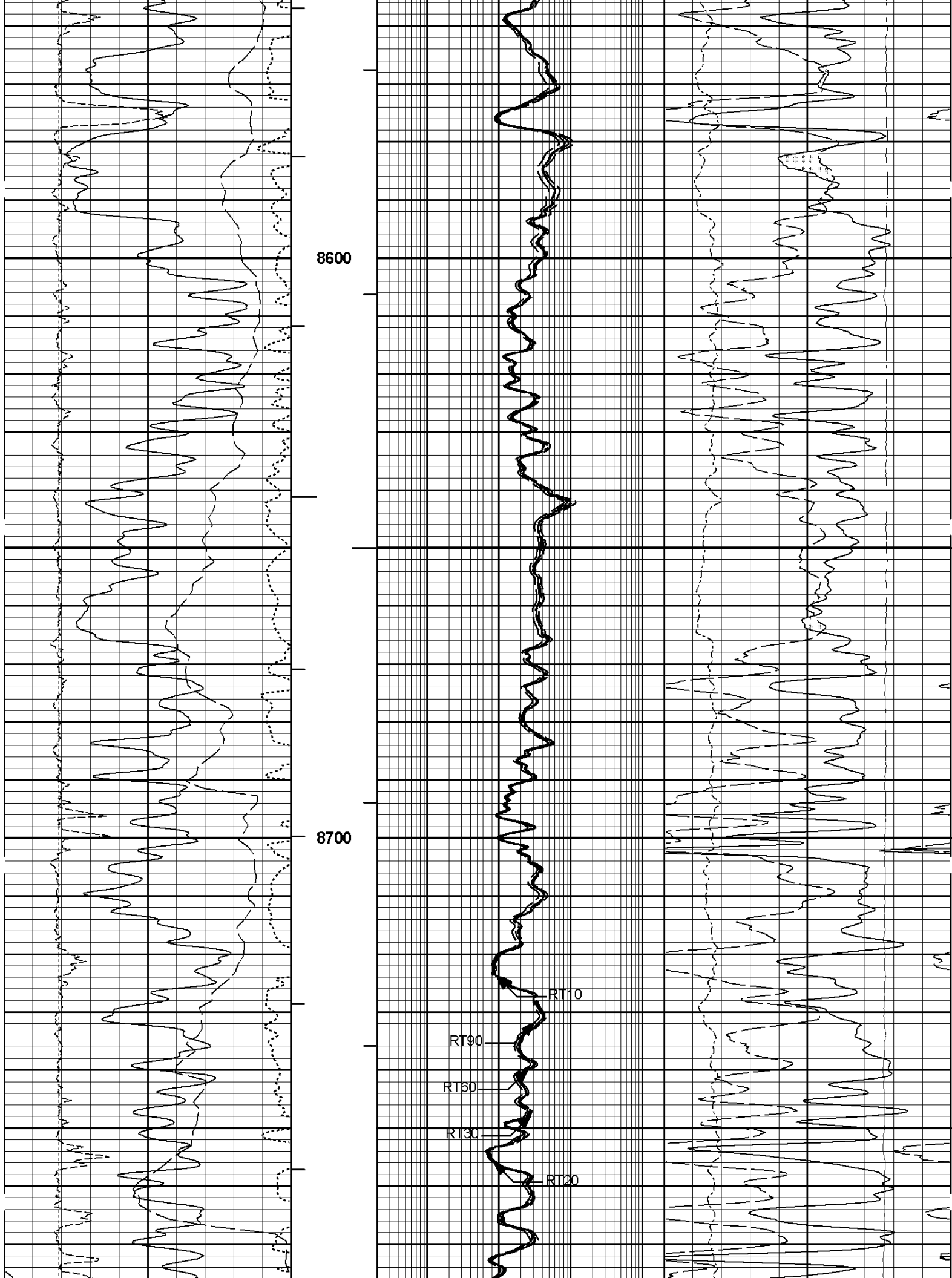


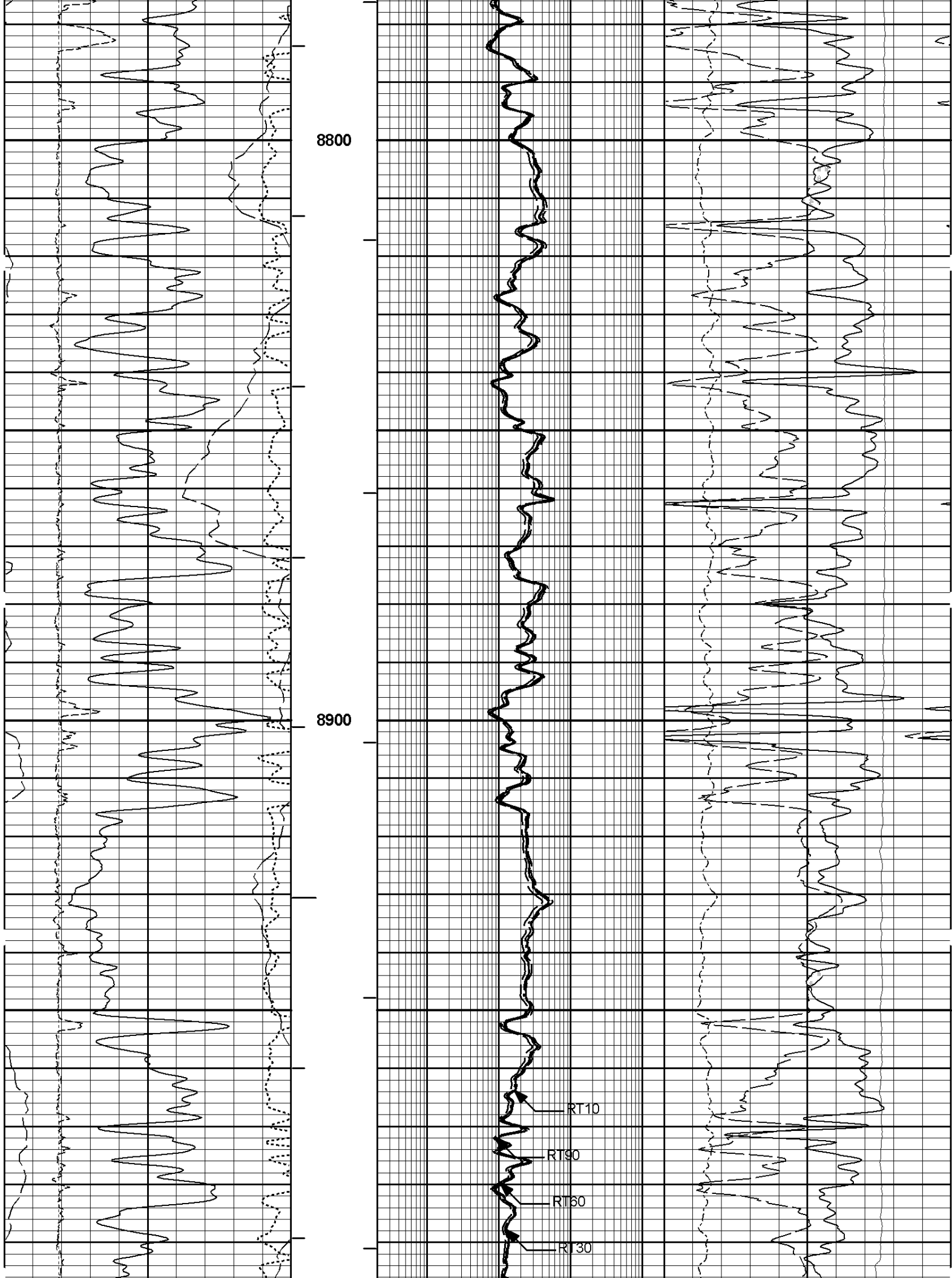


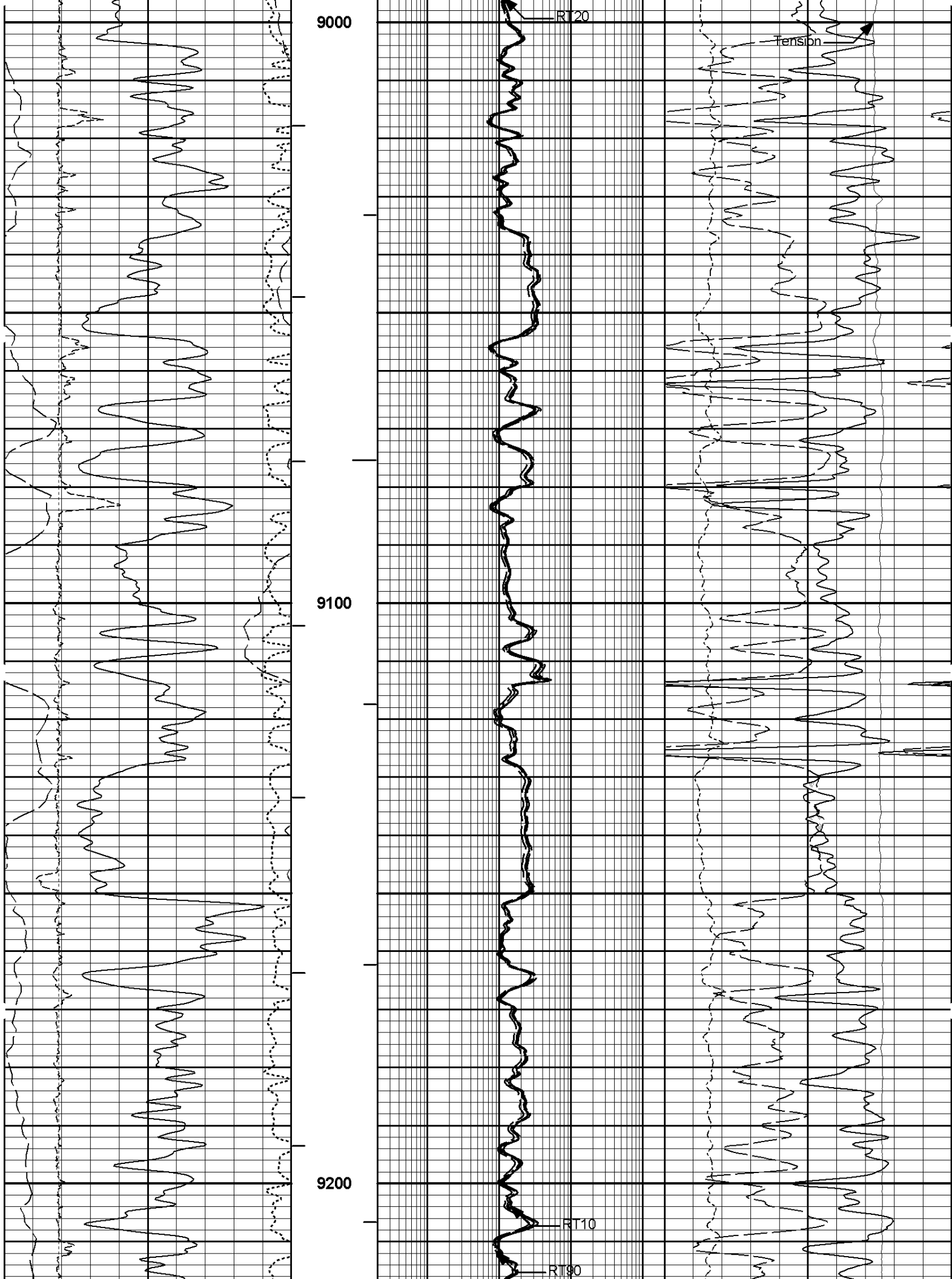
8400

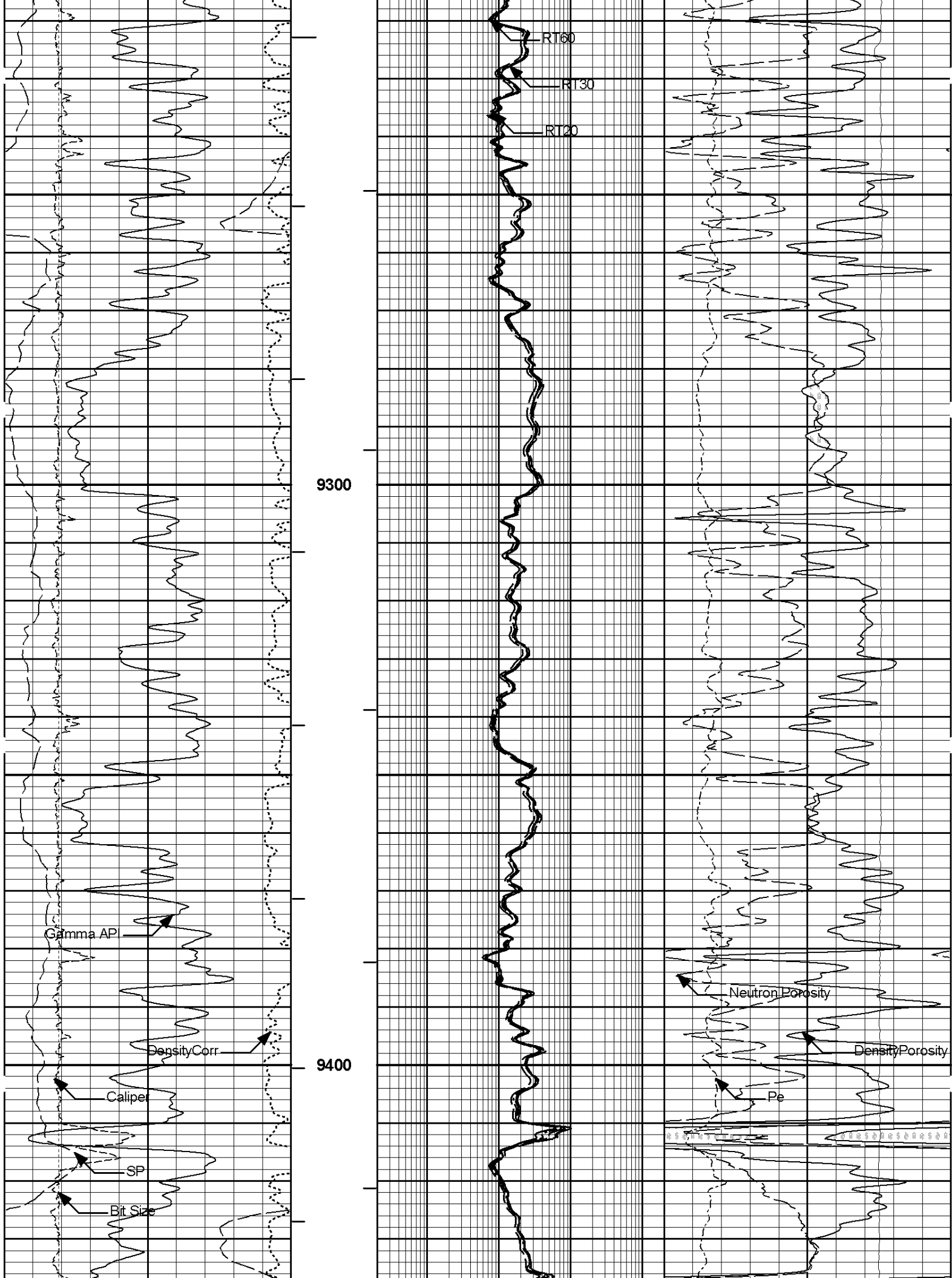
8500

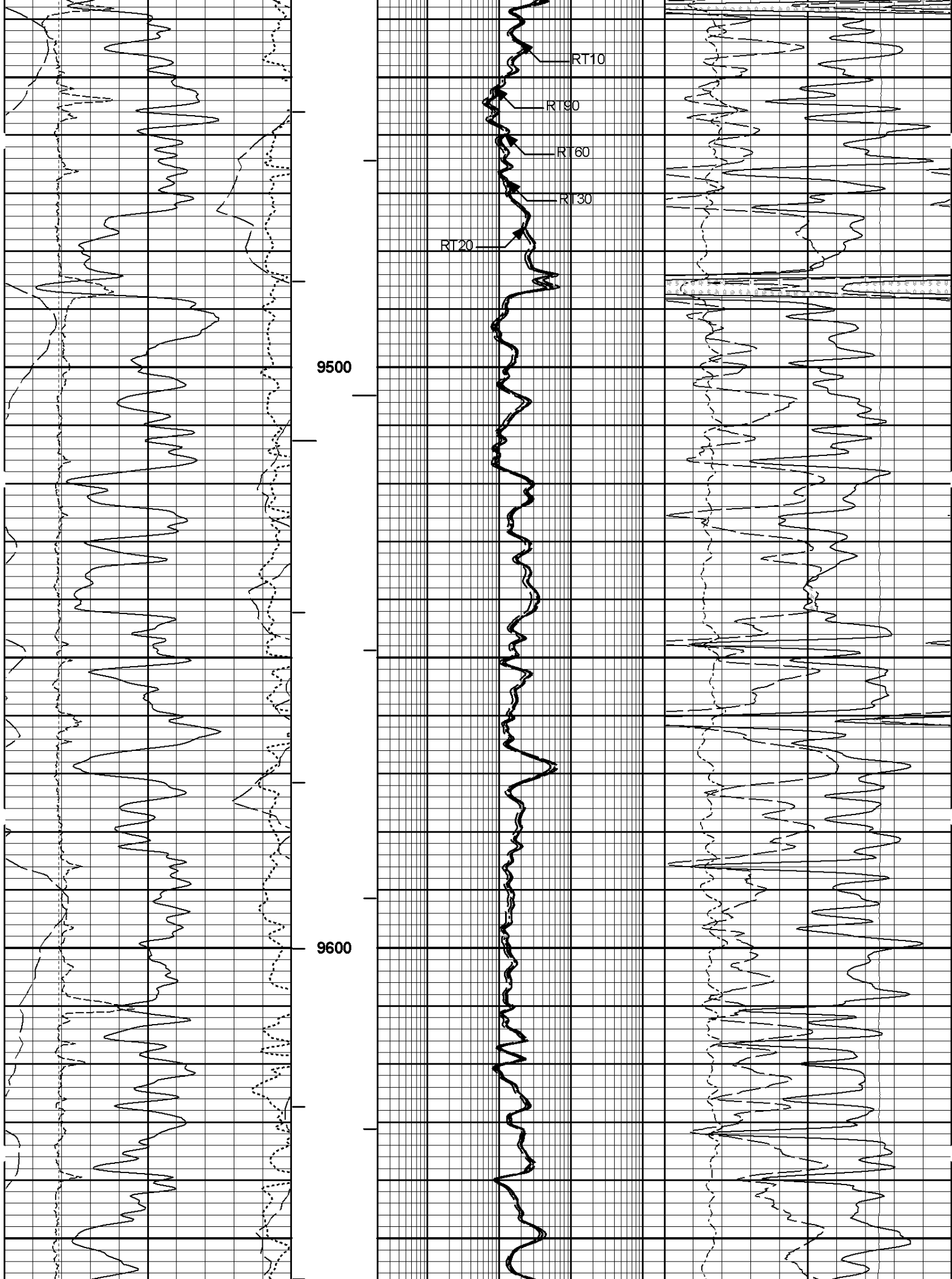


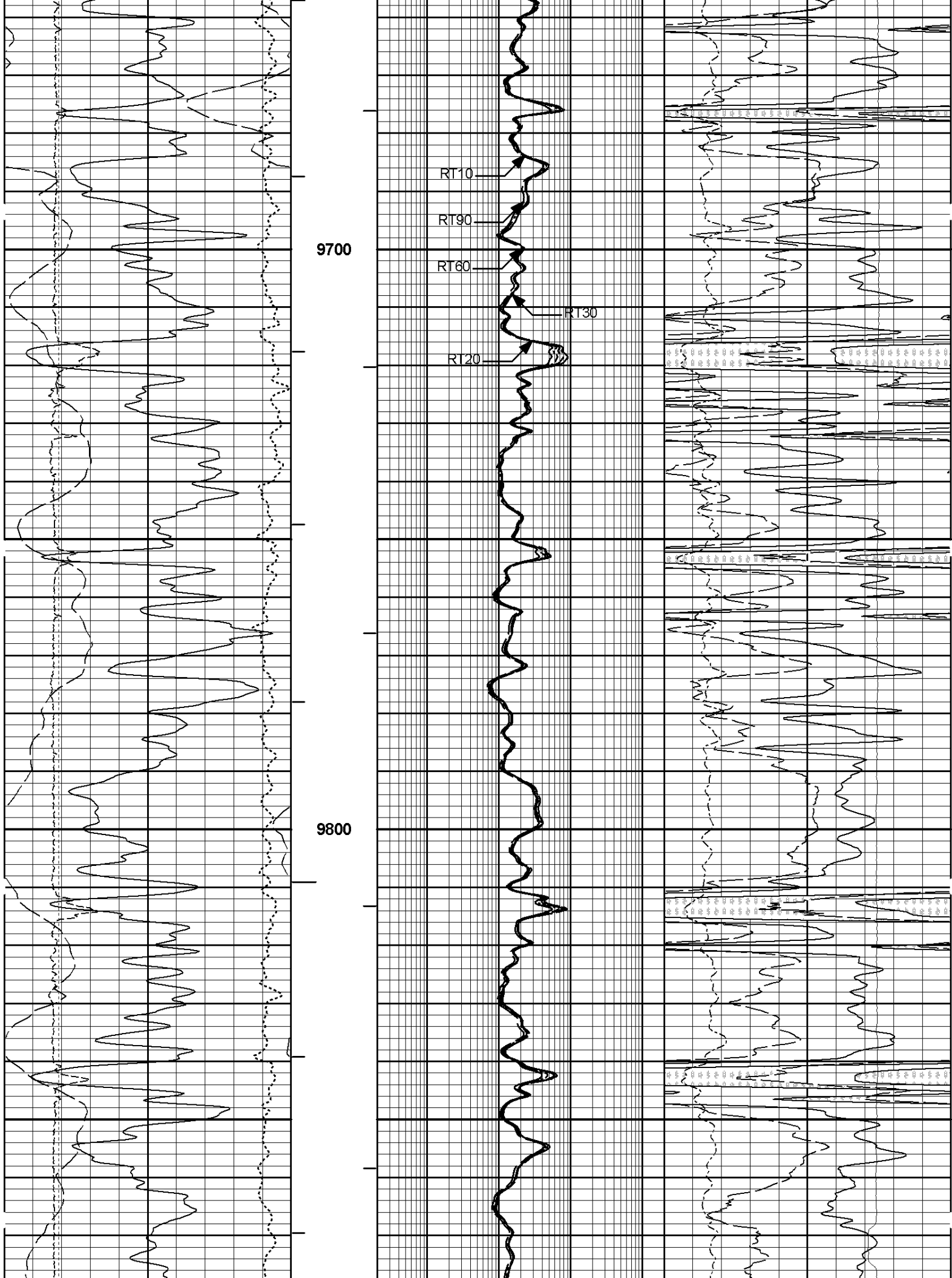


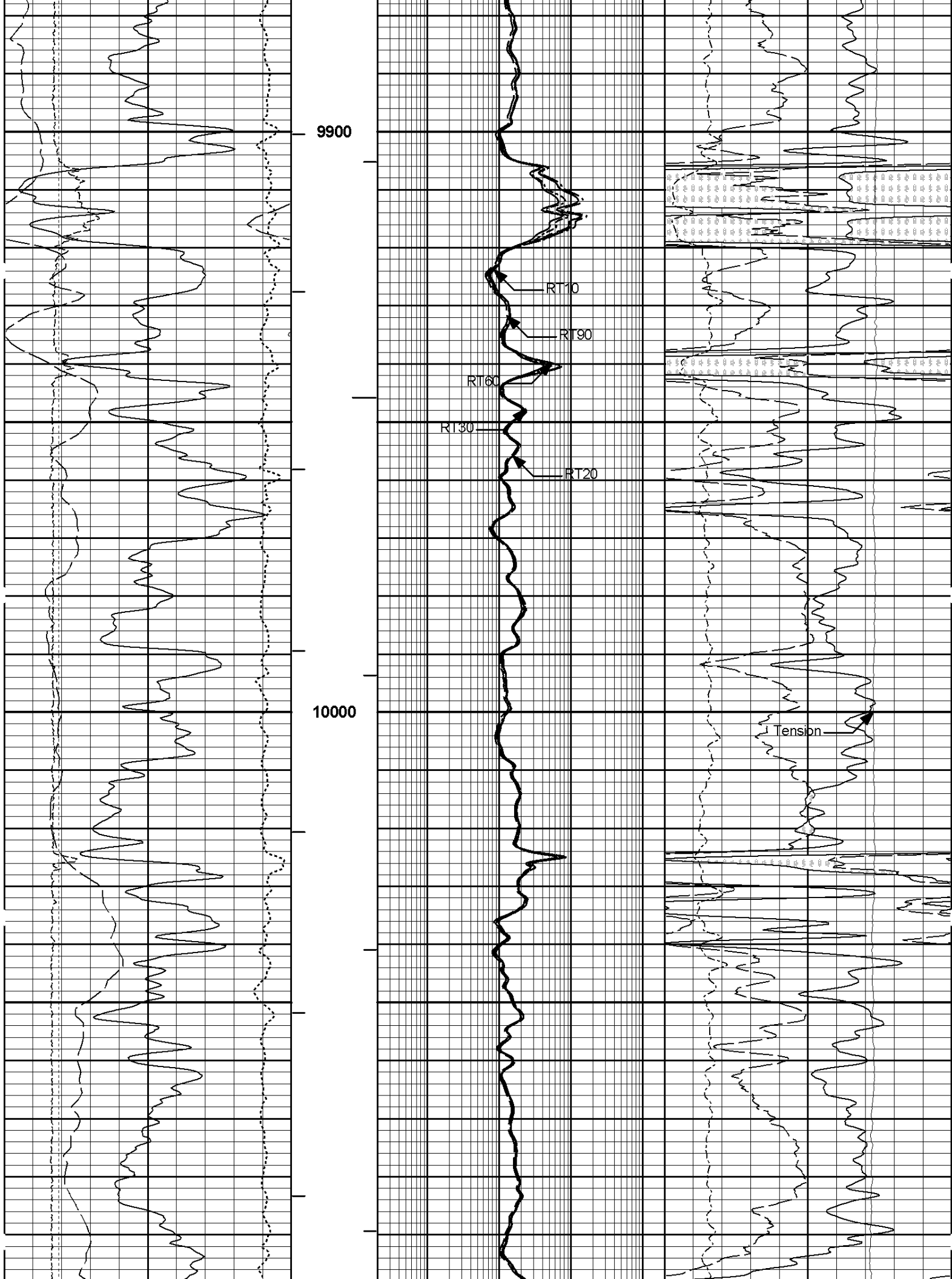


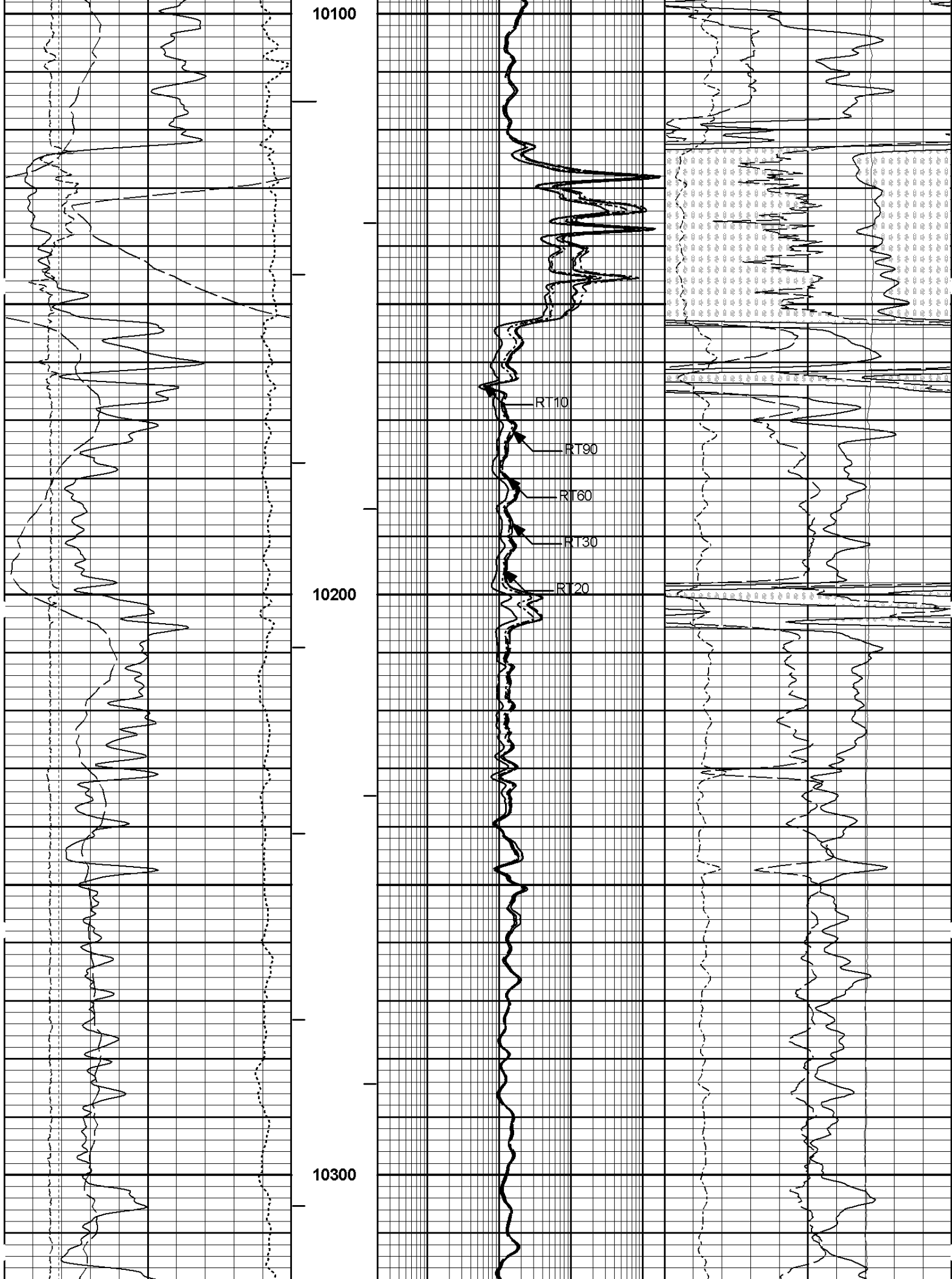


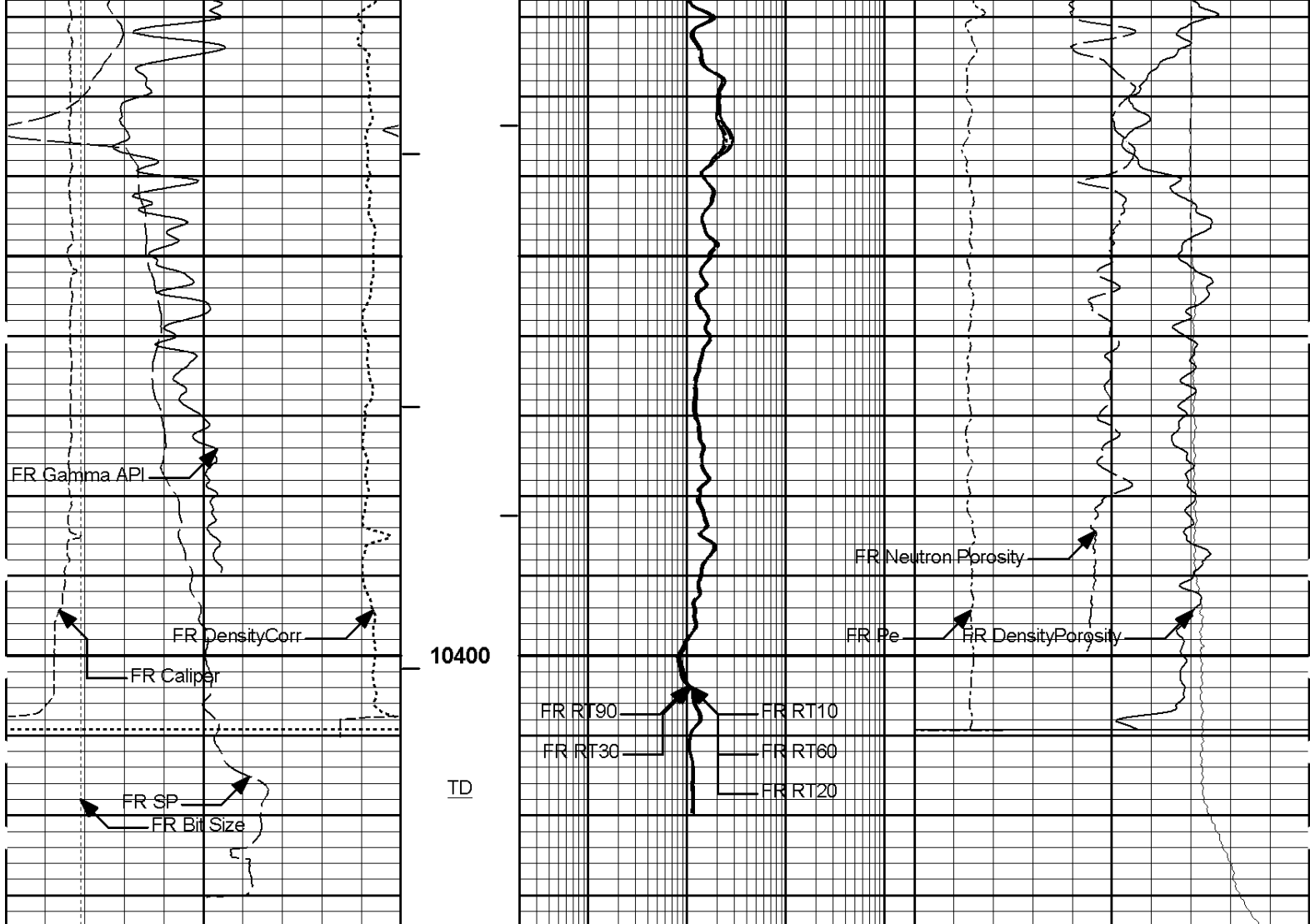












6	Bit Size	16	1 : 240	0.2	RT10	2K	0	Pe	10
	inches		ft		Ohm-m				
-0.9	DensityCorr	0.1	MD	0.2	RT20	2K	30	DensityPorosity	-10
	gram per cc		ft3		Ohm-m			percent	
0	Gamma API	200	AHV	0.2	RT30	2K	30	Neutron Porosity	-10
	api		ft3		Ohm-m			percent	
6	Caliper	16	BHV	0.2	RT60	2K	21000	Tension	1000
	inches				Ohm-m			pounds	
	SP			0.2	RT90	2K			
	-10[+				Ohm-m				

MAIN PASS 5" = 100'

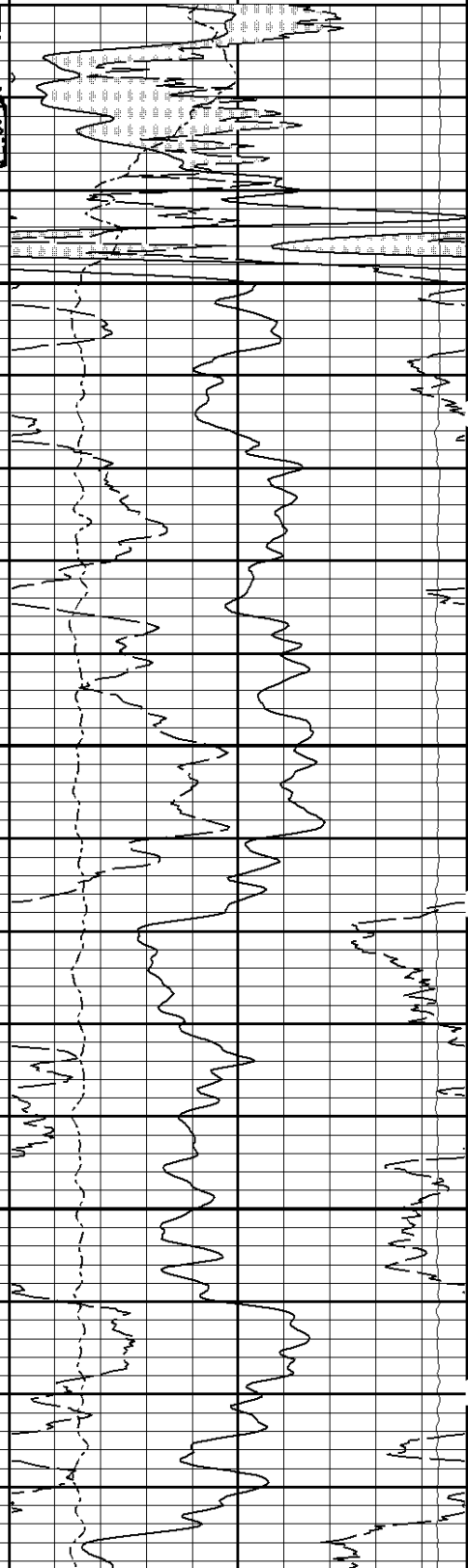
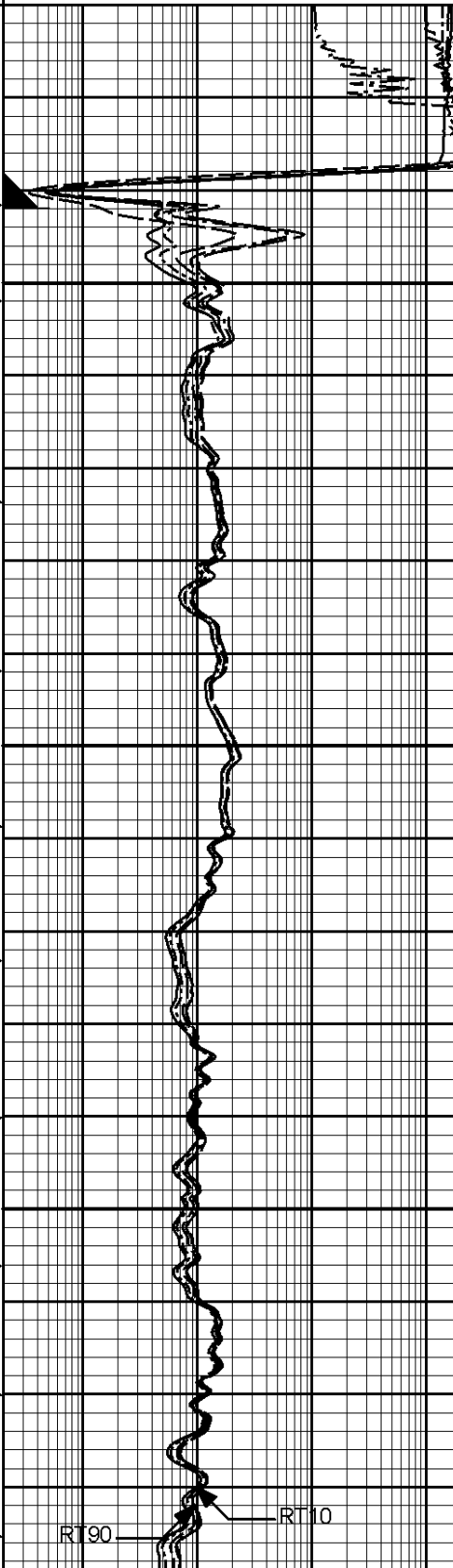
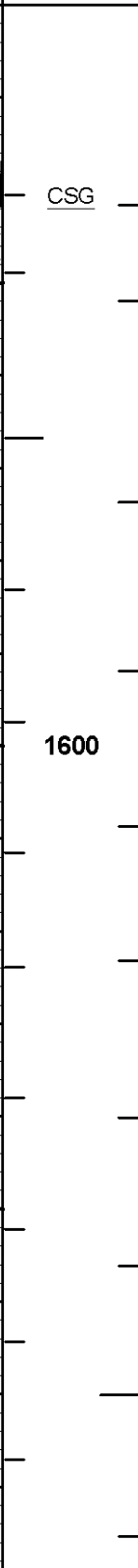
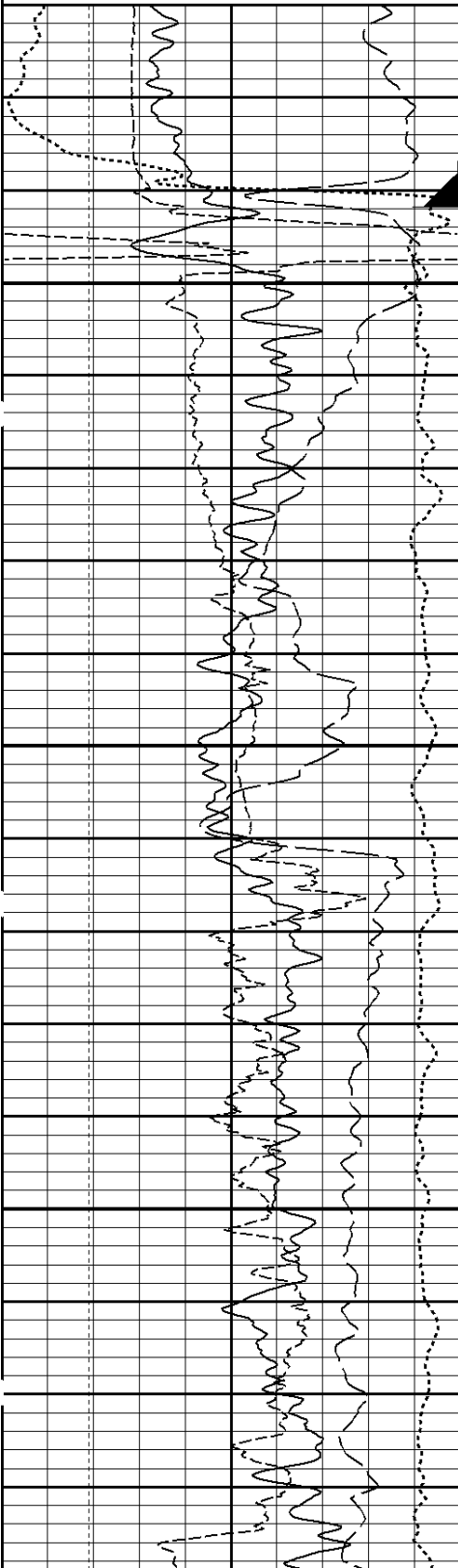
REPEAT PASS 5" = 100'

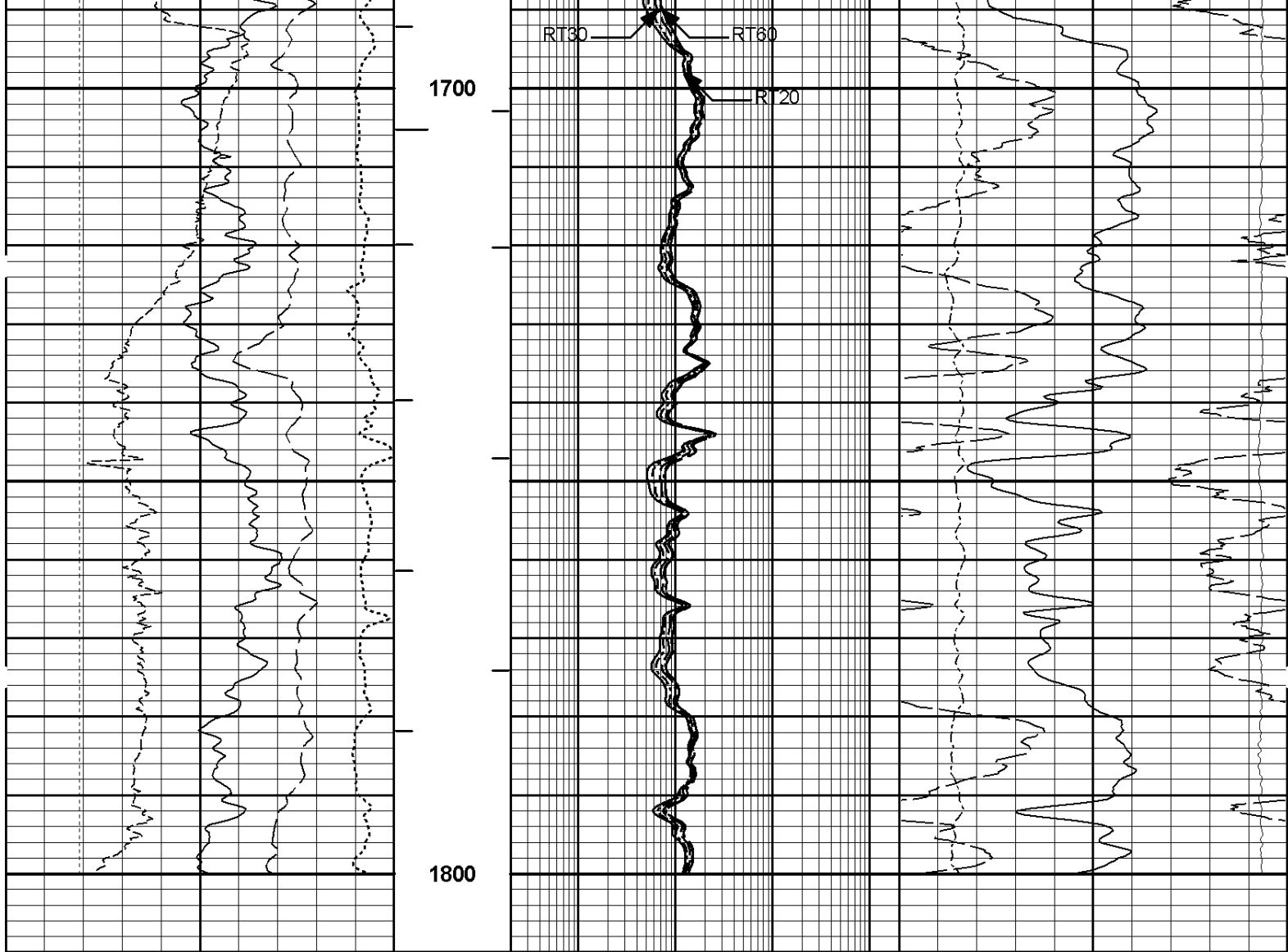
SP		
-10[+		
6	Caliper	16
inches		
0	Gamma API	200
api		
-0.9	DensityCorr	0.1
gram per cc		
6	Bit Size	16
inches		

BH ft3	AH ft3	1 : 240 ft MD

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		

Tension		
21000	pounds	
1000		
30	Neutron Porosity	-10
percent		
30	DensityPorosity	-10
percent		
0	Pe	10





6	Bit Size	16	1 : 240	0.2	RT10	2K	0	Pe	10
	inches		ft		Ohm-m				
			MD						
-0.9	DensityCorr	0.1	AHV	0.2	RT20	2K	30	DensityPorosity	-10
	gram per cc		ft3		Ohm-m			percent	
0	Gamma API	200	BHV	0.2	RT30	2K	30	Neutron Porosity	-10
	api		ft3		Ohm-m			percent	
6	Caliper	16		0.2	RT60	2K	21000	Tension	1000
	inches				Ohm-m			pounds	
	SP			0.2	RT90	2K			
	-]10[+				Ohm-m				

REPEAT PASS 5" = 100'

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	GTET - 11004661	Reference Calibration Date:	07-Nov-08 18:10:21
Engineer:	T. McKEE	Calibration Date:	08-Nov-08 11:29:09
Software Version:	WL INSITE R2.2 (Build 9)	Calibration Version:	1
Calibrator Source S/N: MP051807-04			
Calibrator API Reference:239.00 api			
Measurement	Measured	Calibrated	Units
Background	46.4	44.0	api
Background + Calibrator	298.7	283.0	api
Calibrator	236.6	239.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 11004661	Reference Calibration Date:	08-Nov-08 11:29:09
Engineer:	C. GULLETT	Calibration Date:	22-Dec-08 08:54:13
Software Version:	WL INSITE R2.2 (Build 12)	Calibration Version:	1
Calibrator Source S/N: MP051807-04			
Calibrator API Reference:239.00 api			
Field Verification	Shop	Field	Units
Background	44.0	123.4	api
Background + Calibrator	283.0	360.0	api
Calibrator	239.0	236.6	api
Shop	Field	Difference	Tolerance
239.0	236.6	2.4	+/- 9.00

NATURAL GAMMA RAY TOOL POST CALIBRATION				
Tool Name:	GTET - 11004661	Reference Calibration Date:	22-Dec-08 08:54:13	
Engineer:	T. McKEE	Calibration Date:	22-Dec-08 19:38:29	
Software Version:	WL INSITE R2.2 (Build 12)	Calibration Version:	1	
Calibrator Source S/N: MP051807-04				
Calibrator API Reference:239.00 api				
Post Verification		Field	Post	Units
Background		123.4	45.3	api
Background + Calibrator		360.0	279.4	api
Calibrator		236.6	234.2	api
Shop		Field	Post	Difference
239.0		236.6	234.2	2.4
				+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION			
Tool Name:	DSNT - 10993888	Reference Calibration Date:	23-Nov-08 11:53:49
Engineer:	D. RENNER	Calibration Date:	23-Nov-08 12:21:16
Software Version:	WL INSITE R2.2 (Build 12)	Calibration Version:	1
Logging Source S/N: DSN-388			
Tank Serial Number: GJ - H2O			
Reference value assigned to Tank: 52.750			
Snow Block S/N: SB-110			
Calibration Tank Water Temperature: 65 degF			
Min. Tool Housing Outside Diameter: 3.561 in			
CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value

Gain: 0.984 0.987 value 0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)

Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decip):	0.2161	0.2169	0.0008	+/- 0.0020
Calibrated Ratio:	9.90	9.93	0.028	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decip):	0.0809	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 - 10993888	Reference Calibration Date:	23-Nov-08 12:21:16
Engineer:	C. GULLETT	Calibration Date:	22-Dec-08 09:03:40
Software Version:	WL INSITE R2.2 (Build 12)	Calibration Version:	1

Logging Source S/N: DSN-388

Snow Block S/N: SB-110

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decip):	0.0809	0.0778	-0.0031	+/- 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 - 10993888	Reference Calibration Date:	22-Dec-08 09:03:40
Engineer:	T. McKEE	Calibration Date:	22-Dec-08 19:50:10
Software Version:	WL INSITE R2.2 (Build 12)	Calibration Version:	1

Logging Source S/N: DSN-388

Snow Block S/N: SB-110

NEUTRON POST-CHECK SUMMARY

	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (decip):	0.0778	0.0844	0.0066	+/- 0.0150

PASS/FAIL SUMMARY

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

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT - 10951314	Reference Calibration Date:	20-Oct-08 13:48:19
Engineer:	D. RENNER	Calibration Date:	22-Nov-08 16:33:33

Logging Source S/N: 5123GW

Aluminum Block S/N: 63094

Density: 2.610g/cc

Magnesium Block S/N: 63387

Density: 1.685g/cc

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0040	1.0067	0.90 - 1.10
Near Dens Gain	1.0077	1.0075	0.90 - 1.10
Near Peak Gain	1.0003	0.9744	0.90 - 1.10
Near Lith Gain	0.9851	0.9190	0.90 - 1.10
Far Bar Gain	1.0073	1.0048	0.90 - 1.10
Far Dens Gain	0.9948	0.9878	0.90 - 1.10
Far Peak Gain	0.9893	0.9764	0.90 - 1.10
Far Lith Gain	0.9647	0.9471	0.90 - 1.10
Near Bar Offset	0.1569	0.1340	NONE
Near Dens Offset	0.1115	0.1176	NONE
Near Peak Offset	0.1761	0.3967	NONE
Near Lith Offset	0.2945	0.8537	NONE
Far Bar Offset	0.1086	0.1342	NONE
Far Dens Offset	0.1948	0.2594	NONE
Far Peak Offset	0.2064	0.3125	NONE
Far Lith Offset	0.3614	0.4959	NONE
Near Bar Background	1014.37	1013.63	700 - 1450
Near Dens Background	335.67	337.68	230 - 480
Near Peak Background	147.63	148.07	100 - 210
Near Lith Background	180.45	180.11	125 - 260
Far Bar Background	599.04	598.21	450 - 900
Far Dens Background	234.25	234.74	175 - 345
Far Peak Background	93.13	94.16	70 - 140
Far Lith Background	96.87	96.94	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.681	1.685	0.004	+/- 0.015
Pe	2.600	2.594	-0.006	+/- 0.150
ALUMINUM				
Density (g/cc)	2.613	2.610	-0.003	+/- 0.01500
Pe	3.219	3.100	-0.119	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0012	+/- 0.0110	0.0004	+/- 0.0140
Magnesium Block	0.0004	+/- 0.0110	-0.0016	+/- 0.0140
Aluminum Block	-0.0007	+/- 0.0110	0.0003	+/- 0.0140
Resolution	9.68	6.00 - 11.50	9.04	6.00 - 11.50
Internal Verifier(B+D+P+L)	1679	1200 - 2700	1024	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 - 10951314

Reference Calibration Date: 22-Nov-08 16:33:33

Engineer: C. GULLETT

Calibration Date: 22-Dec-08 08:45:54

Software Version: WL INSITE R2.2 (Build 12)

Calibration Version: 1

Aluminum Block S/N: 63094

Density: 2.610g/cc

Magnesium Block S/N: 63387

Density: 1.685g/cc

Pad Temperature: 32.0 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1679.493	1671.770	-7.723	16.455
Far (B+D+P+L) cps	1024.054	1017.784	-6.270	17.068
Near Resolution	9.68	9.98	0.300	0.50
Far Resolution	9.26	9.04	0.220	1.00

PASS/FAIL SUMMARY

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

SPECTRAL DENSITY POST CHECK

Tool Name: SDLT - 10951314

Reference Calibration Date: 22-Dec-08 08:45:54

Engineer: T. McKEE

Calibration Date: 22-Dec-08 19:34:44

Software Version: WL INSITE R2.2 (Build 12)

Calibration Version: 1

Aluminum Block S/N: 63094

Density: 2.610g/cc

Magnesium Block S/N: 63387

Density: 1.685g/cc

Pad Temperature: 50.5 degF

DENSITY POST CALIBRATION SUMMARY

Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1671.770	1666.397	-5.373	16.455
Far (B+D+P+L) cps	1017.784	1019.002	1.218	17.068
Near Resolution	9.98	9.96	-0.020	0.50
Far Resolution	9.20	9.26	-0.060	1.00

PASS/FAIL SUMMARY

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

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - 10951314

Reference Calibration Date: 30-Nov-08 15:54:43

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1594.14	-1971.24	-7000.00 - -1000.00
Pad Gain	0.0003784	0.0003937	0.000200 - 0.000600
Arm Offset	-2265.24	-2005.08	-5000.00 - 3000.00
Arm Gain	0.0005565	0.0005596	0.000300 - 0.000700
Arm Power	-0.000005166	-0.000005258	-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)	2.07	2.00	-0.0700	+/- 0.200
Medium Ring (in)	3.75	3.75	0.0000	+/- 0.200
RING DIAMETER:				
Small Ring (in)	6.50	6.500	0.0000	+/- 0.200
Medium Ring (in)	8.25	8.250	0.0000	+/- 0.200
Large Ring (in)	15.00	15.000	0.0000	+/- 0.200

PASS/FAIL SUMMARY

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

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed
---------------------------------------	--------

SDLT CALIPER FIELD CALIBRATION

Tool Name: SDLT - 10951314

Reference Calibration Date: 30-Nov-08 16:01:13

Engineer: C. GULLETT

Calibration Date: 22-Dec-08 09:49:11

Software Version: WL INSITE R2.2 (Build 12)

Calibration Version: 1

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.72	-0.03	+/- 0.10
Ring Diameter	8.250	8.26	0.01	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:	Passed
Diameter Check:	Passed

SDLT CALIPER POST CALIBRATION

Tool Name: SDLT - 10951314

Reference Calibration Date: 22-Dec-08 09:49:11

Engineer: T. McKEE

Calibration Date: 22-Dec-08 19:43:15

Software Version: WL INSITE R2.2 (Build 12)

Calibration Version: 1

MEASURED CALIPER VALUES

Measurement	Field	Post	Change	Control Limit On New Value
Pad Extension	3.72	3.81	0.09	+/- 0.10
Ring Diameter	8.258	8.19	-0.07	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:

Passed

Diameter Check:

Passed

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name: ACRt - 90144319-E554-S481-3-13-08

Reference Calibration Date: 17-Sep-08 15:02:10

Engineer: T. McKEE

Calibration Date: 21-Nov-08 18:39:59

Software Version: WL INSITE R2.2 (Build 12)

Calibration Version: 1

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0128	1.05	0.95	1.0110	1.05	0.95	1.0102	1.05
A2 (50")	0.95	1.0123	1.05	0.95	1.0116	1.05	0.95	1.0091	1.05
A3 (29")	0.95	0.9963	1.05	0.95	0.9977	1.05	0.95	0.9983	1.05
A4 (17")	0.95	0.9950	1.05	0.95	0.9945	1.05	0.95	0.9971	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9818	1.05	0.95	0.9819	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9728	1.05	0.95	0.9741	1.05

TYPICAL SONDE OFFSET RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	-3	-0.419	-1	-6	-4.392	-2	-6	-4.795	-2
A2 (50")	-6	-2.042	-2	-6	-4.546	-2	-6	-4.209	-2
A3 (29")	-27	-12.986	-9	-9	-5.286	-3	-9	-2.578	-3
A4 (17")	-180	-95.933	-60	-45	-31.393	-15	-39	-24.444	-13
A5 (10")	N/A	N/A	N/A	-150	-99.800	-50	-90	-50.155	-30
A6 (6")	N/A	N/A	N/A	175	296.021	525	90	144.414	270

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.75	0.7726	1.4
36K	1.0	1.7782	2.4
72K	1.25	1.2095	2.5

R-MUD VERIFICATION

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

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11004661						
Gamma Ray Calibrator	239.0	236.6	234.2	2.4	+/- 9.00	api
DSNT-10993888						
Snow-Block Porosity	0.0809	0.0778	0.0844	-0.0066	+/- 0.0150	decp
SDLT-10951314						
Near(B+D+P+L)	1679.493	1671.770	1666.397	5.373	+/-16.455	cps
Far(B+D+P+L)	1024.054	1017.784	1019.002	-1.218	+/-17.068	cps
Pad Extension	3.75	3.72	3.81	-0.09	+/-0.10	in
Ring Diameter	8.250	8.26	8.19	0.070	+/-0.15	in
ACRt-90144319-E554-S481-3-13-08						
Mud Cell	1.001	-----	-----	0.000	-----	ohmm

Data: LAR_JOHN_05_06D\0001 TRIPLE_1\IDLE

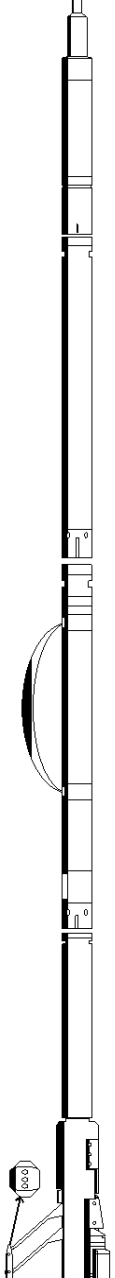
Date: 22-Dec-08 19:51:24

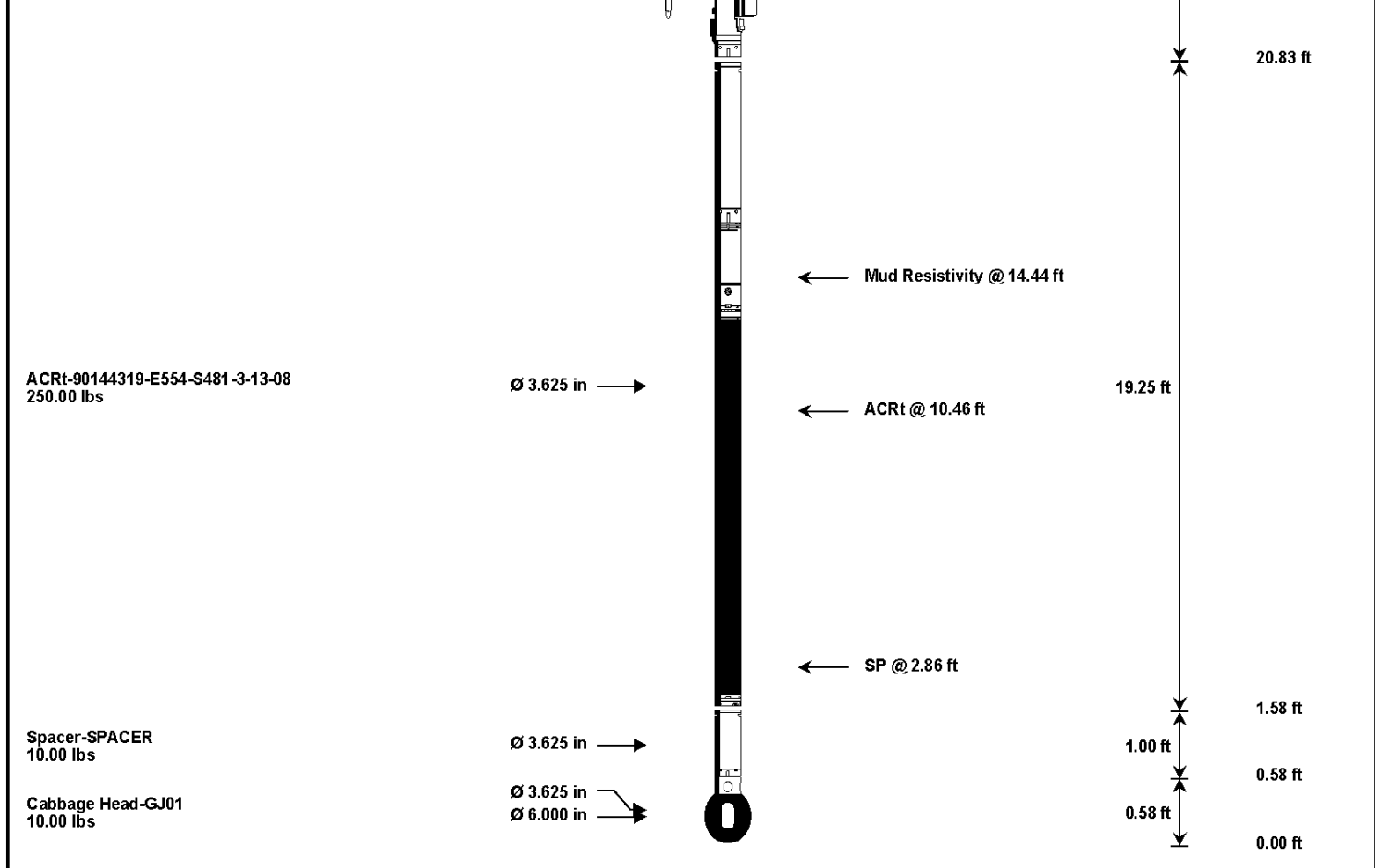
CUSTOMER EVENT LOG

Event Type	Time & Date	Depth (ft)	Event Description
	22-Dec-08 14:39:03	233.25	Logging 001 22-Dec-08 14:39 Dn @237.3f
	22-Dec-08 14:47:18	1901.18	Halting 001 22-Dec-08 14:39 Dn @237.3f
	22-Dec-08 14:48:01	1900.00	Logging 002 22-Dec-08 14:48 Up @1900.0f
	22-Dec-08 14:59:01	1435.76	Halting 002 22-Dec-08 14:48 Up @1900.0f
	22-Dec-08 14:59:20	1396.50	Logging 003 22-Dec-08 14:59 Dn @1400.8f
	22-Dec-08 15:46:38	10435.23	Halting 003 22-Dec-08 14:59 Dn @1400.8f
	22-Dec-08 15:46:55	10434.50	Logging 004 22-Dec-08 15:46 Up 10434.3f
	22-Dec-08 18:42:36	295.52	Halting 004 22-Dec-08 15:46 Up 10434.3f

Data: LAR_JOHN_05_06D\0001 TRIPLE_1\HWI0855 Date: 22-Dec-08 18:42:56

TOOL STRING DIAGRAM REPORT

Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-C11013846 135.00 lbs	Ø 3.625 in		Load Cell @ 52.42 ft BH Temperature @ 51.85 ft	6.25 ft	56.10 ft
GTET-11004661 165.00 lbs	Ø 3.625 in		GammaRay @ 43.79 ft	8.52 ft	49.85 ft
DSNT-10993888 174.00 lbs	Ø 3.625 in		DSN Far @ 34.39 ft DSN Near @ 33.64 ft	9.69 ft	41.33 ft
SDLT-10951314 360.00 lbs	Ø 4.500 in Ø 4.750 in		SDL Microlog @ 23.83 ft SDL Caliper @ 23.65 ft SDL @ 23.64 ft	10.81 ft	31.64 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	49.85	300.00
GTET	Natural Gamma Ray Tool	11004661	165.00	8.52	41.33	60.00
DSNT	Dual Spaced Neutron	10993888	174.00	9.69	31.64	60.00
SDLT	Spectral Density Tool	10951314	360.00	10.81	20.83	60.00
ACRt	Array Compensated True Resistivity	90144319-E554-S481-3-13-08	250.00	19.25	1.58	300.00
SP	SP Ring	PROTO1	0.00	0.00	*	2.86
SPC	Test	SPACER	10.00	1.00	0.58	100.00
CBHD	Cabbage Head	GJ01	10.00	0.58	0.00	300.00
Total			1,104.00	56.10		
* Not included in Total Length and Length Accumulation.						
Data: LAR_JOHN_05_06D\0001 TRIPLE_1\004 22-Dec-08 15:46 Up 10434.3f					Date: 22-Dec-08 16:39:02	

COMPANY	LARAMIE ENERGY II, LLC		
WELL	JOHNSON 05-06D		
FIELD	MAMM CREEK		
COUNTY	GARFIELD	STATE	CO
HALLIBURTON		ARRAY COMP RESISTIVITY DUAL SPACED NEUTRON SPECTRAL DENSITY	