

HALLIBURTON

SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

COMPANY	SANDRIDGE ENERGY		
WELL	ALBERTA MARIE 3119 1-23		
FIELD	SILVER SPUR		
COUNTY	COMANCHE		
STATE	KANSAS		
COMPANY	SANDRIDGE ENERGY	API No.	15-033-21653
WELL	ALBERTA MARIE 3119 1-23	Location	351' FNL 363' FWL
FIELD	SILVER SPUR		
COUNTY	COMANCHE		
STATE	KANSAS		
Sect.	23	Twp.	31S
Rge.			19W
Elev.	2172.0 ft		
Elev. K.B.			2186.0 ft
D.F.			2185.0 ft
G.L.			2172.0 ft
Other Services:			CSNG MICRO WSTT ACRT XRMI MRIL

Permanent Datum	GL		
Log measured from	KB		14.0 ft above perm. Datum
Drilling measured from	KB		
Date	16-Jul-12		
Run No.	ONE		
Depth - Driller	6110.00 ft		
Depth - Logger	6096.0 ft		
Bottom - Logged Interval	6014.0 ft		
Top - Logged Interval	825.0 ft		
Casing - Driller	9.625 in	@	833.0 ft
Casing - Logger	825.0 ft		
Bit Size	8.750 in	@	
Type Fluid in Hole	WATER BASED MUD		
Density	9.1 ppg	54.00	s/qt
PH	10.00 pH	5.8	cpm
Source of Sample	MUD PIT		

Time Since Circulation	11.5 hr		
Time on Bottom	16-Jul-12 23:32		
Max. Rec. Temperature	144.0 degF	@	6096.0 ft
Equipment	10546696		LIBERAL
Recorded By	C. HAVERKAMP		
Witnessed By	K. GENTRY		

Fold here

Service Ticket No.: 9669057 API Serial No.: 15-033-21653 PGM Version: WL INSITE R3.6.0 (Build 3)

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.
Rmf @ Meas. Temp.	@	@					
Rmc @ Meas. Temp.	@	@					
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
Serial No.	11039640	Serial No.		Serial No.	P81	Serial No.	11019643
Model No.	CSNG	Model No.		Model No.	SDLT	Model No.	DSNT
Diameter	3.625	No. of Cent.		Diameter	4.5	Diameter	3.625
Detector Model No.	T-102	Spacing		Log Type	GAM-GAM	Log Type	NEU-NEU
Type	SCINT			Source Type	CS137	Source Type	AM241BE
Length	10"	LSA [Y/N]		Serial No.	5168 GW	Serial No.	DSN-424
Distance to Source	10'	FWDA [Y/N]		Strength	1.5 CI	Strength	15 CI

LOGGING DATA

GENERAL GAMMA ACOUSTIC DENSITY NEUTRON

Run No.	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	6096	825	REC	0	150				30	-10	2.71	30	-10	LIME

DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @

Remarks: SP-GTET-CSNG-DSNT-SDLT-WSTT-XRMI-ACRT RAN IN COMBINATION.

ANNULAR HOLE VOLUME CALCULATED FOR 7 INCH CASING.

CHLORIDES REPORTED AT 2000 MG/L.

LCM REPORTED AT 2 LB/BBL.

TOOL SURVEYS NOT PERFORMED PER CUSTOMER REQUEST.

YOUR CREW: K. KING, V. JAIME

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES. LIBERAL, KS 620-624-8123

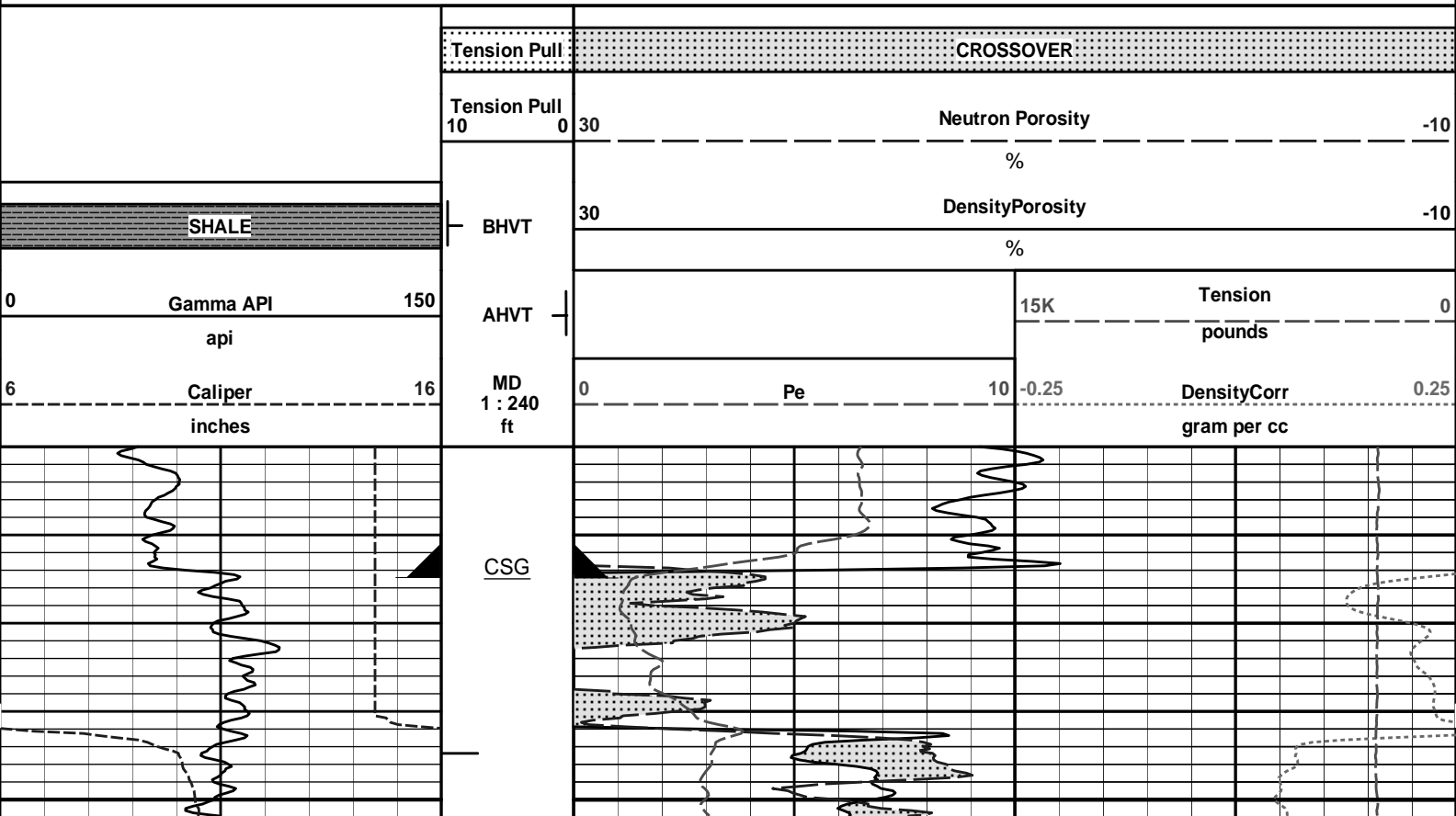
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR 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.

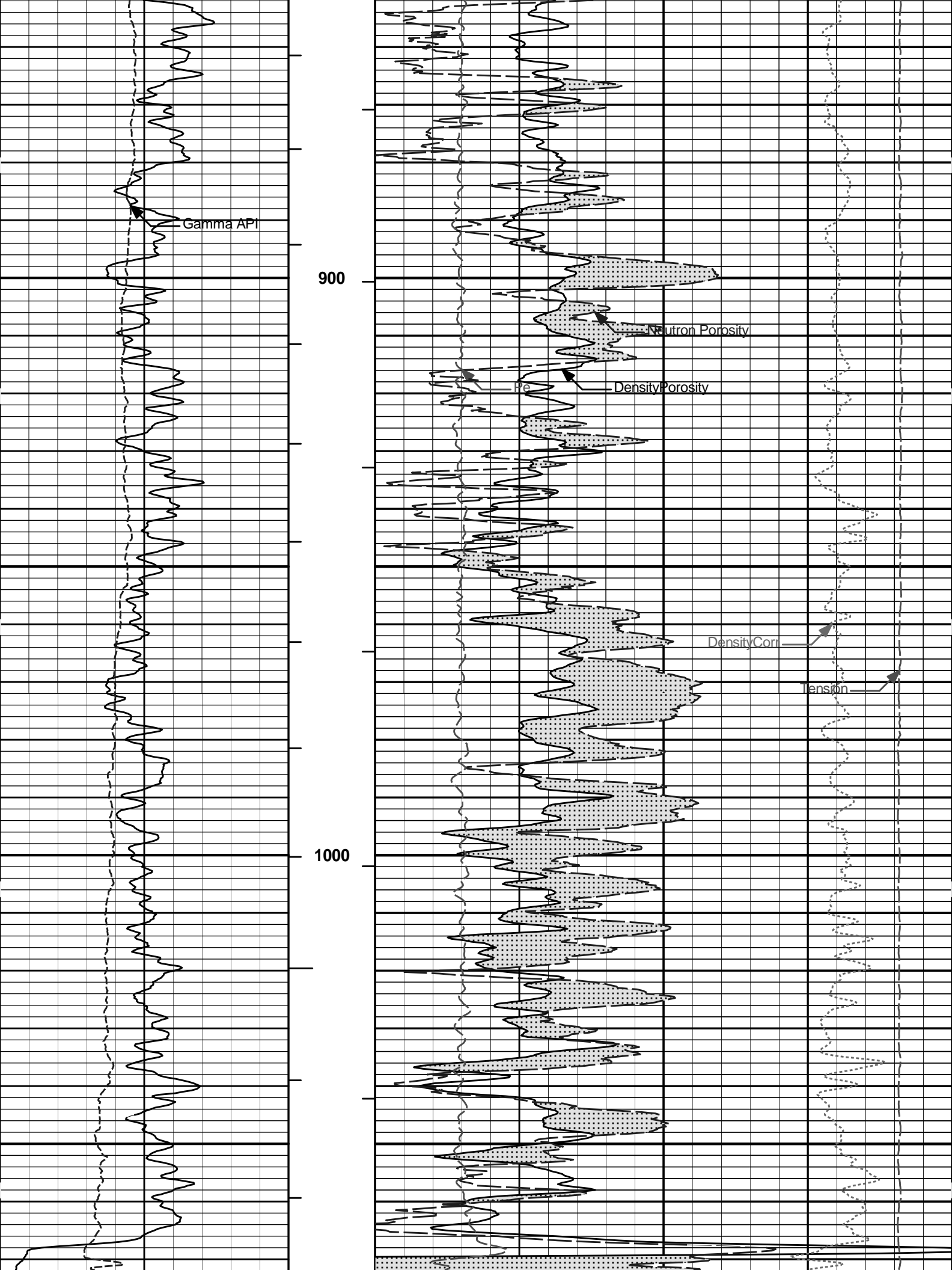
HALLIBURTON

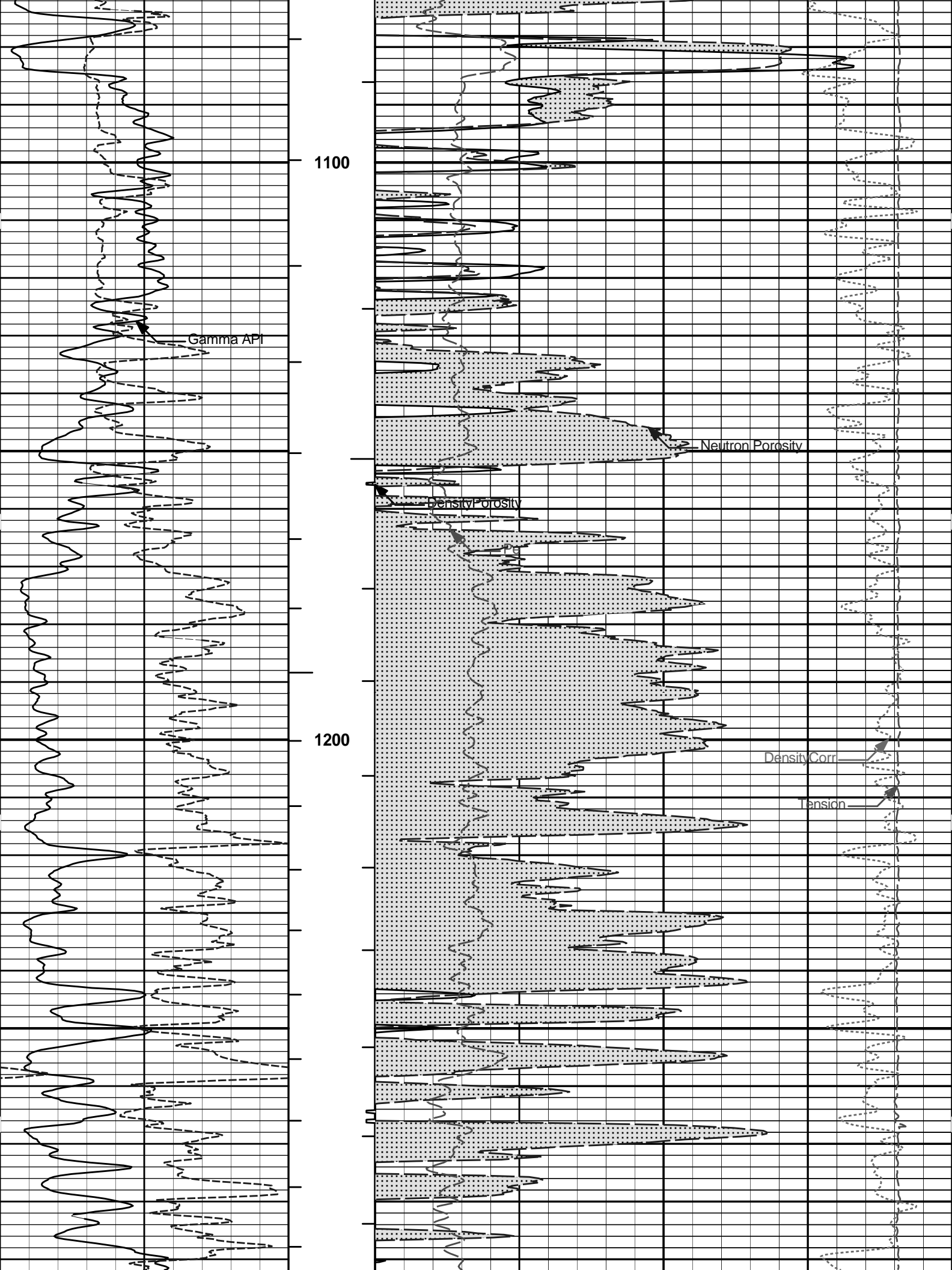


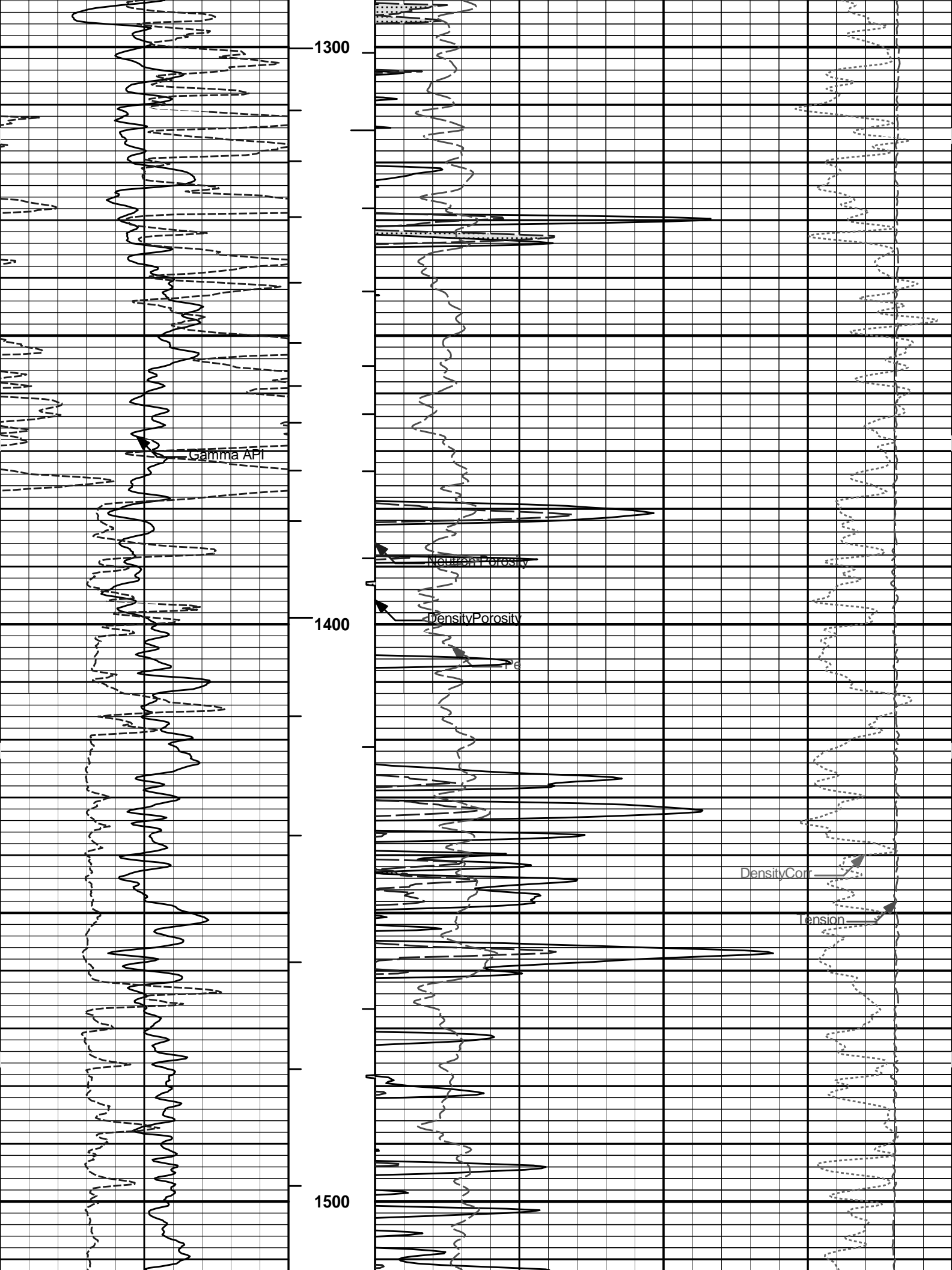
Plot Time: 17-Jul-12 06:02:59
 Plot Range: 810 ft to 6098.42 ft
 Data: ALBERTA_MARIE_1\Well Based\R1_ELSE\
 Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

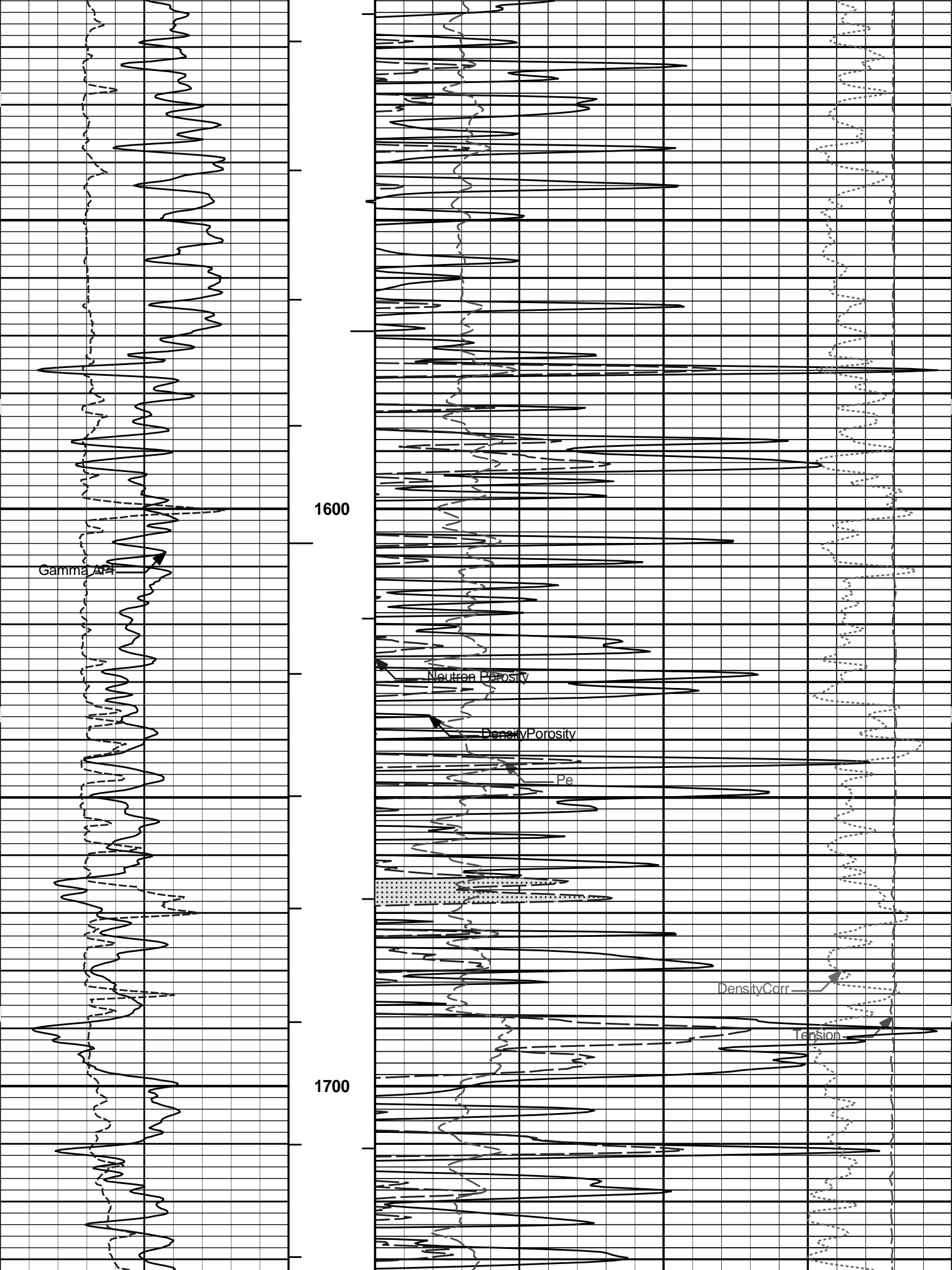
5 INCH MAIN LOG

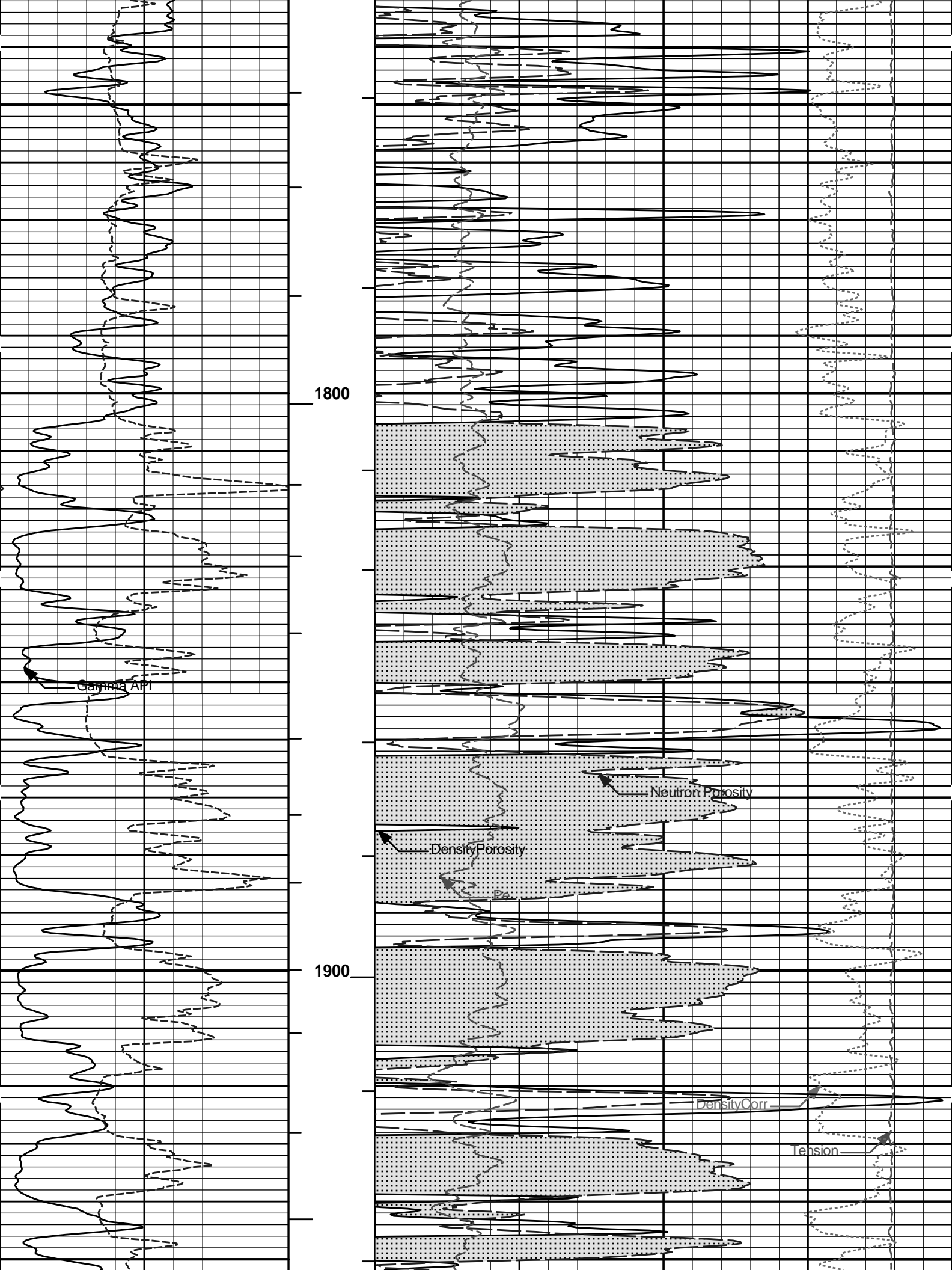


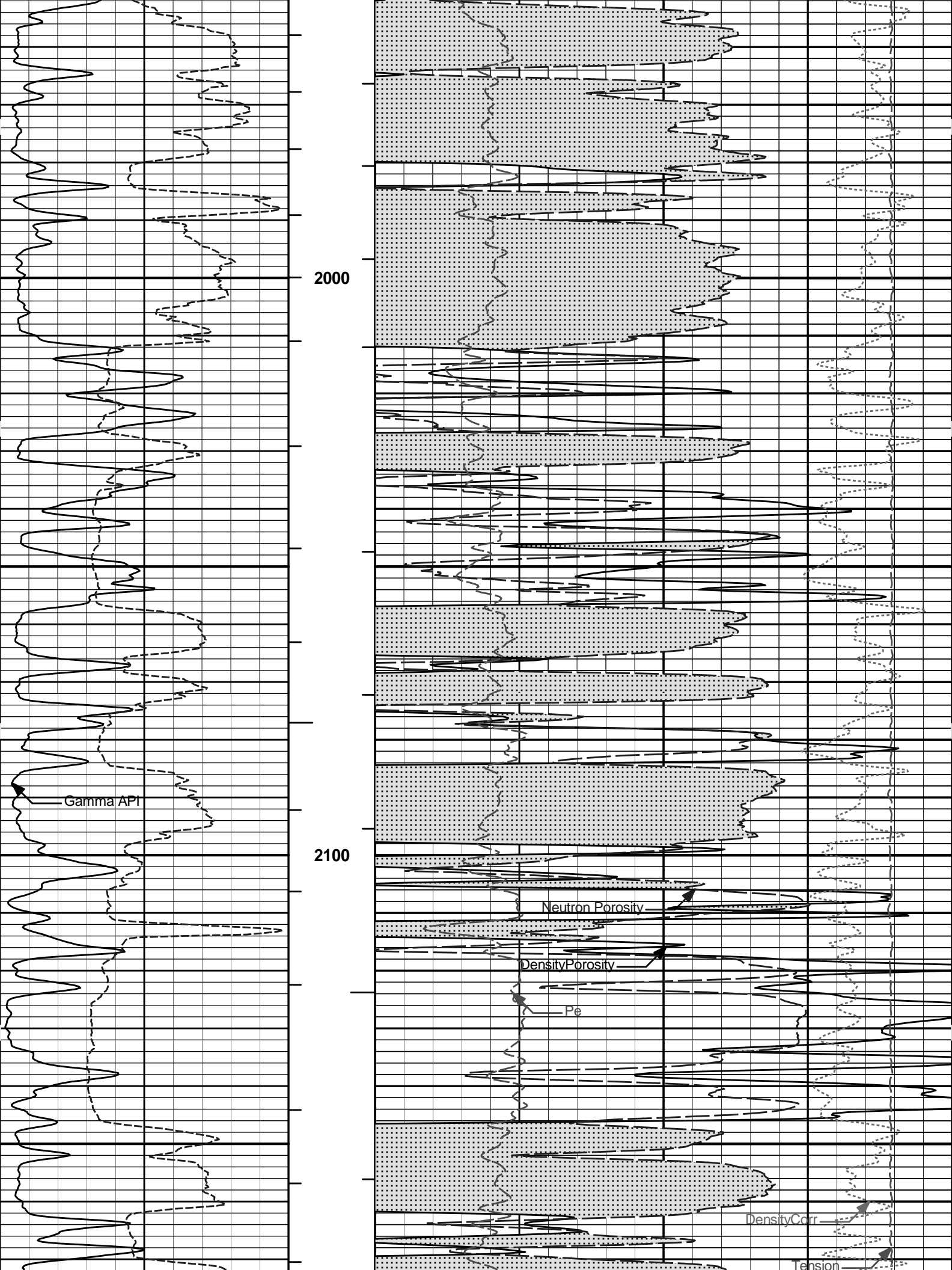


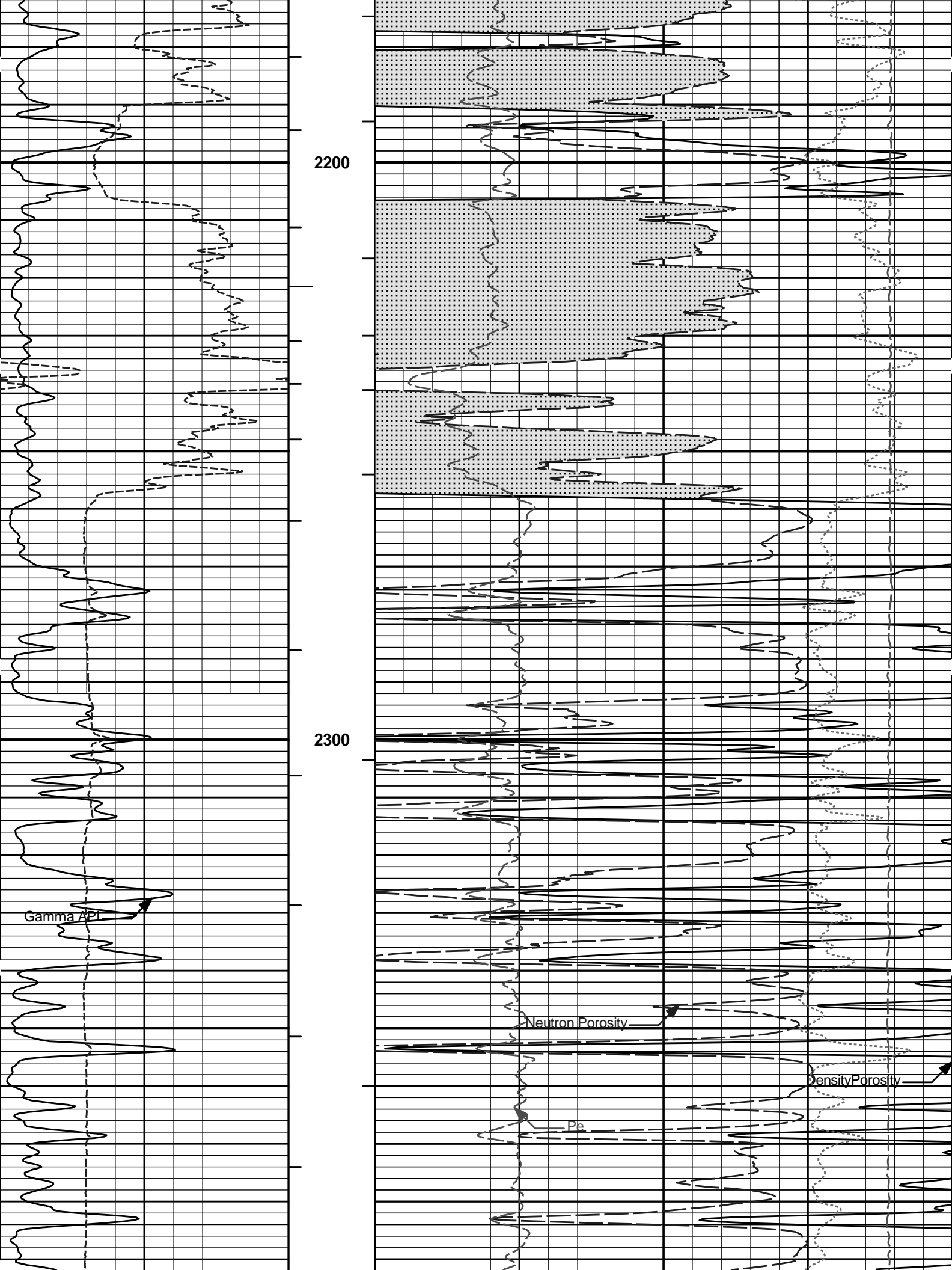












2200

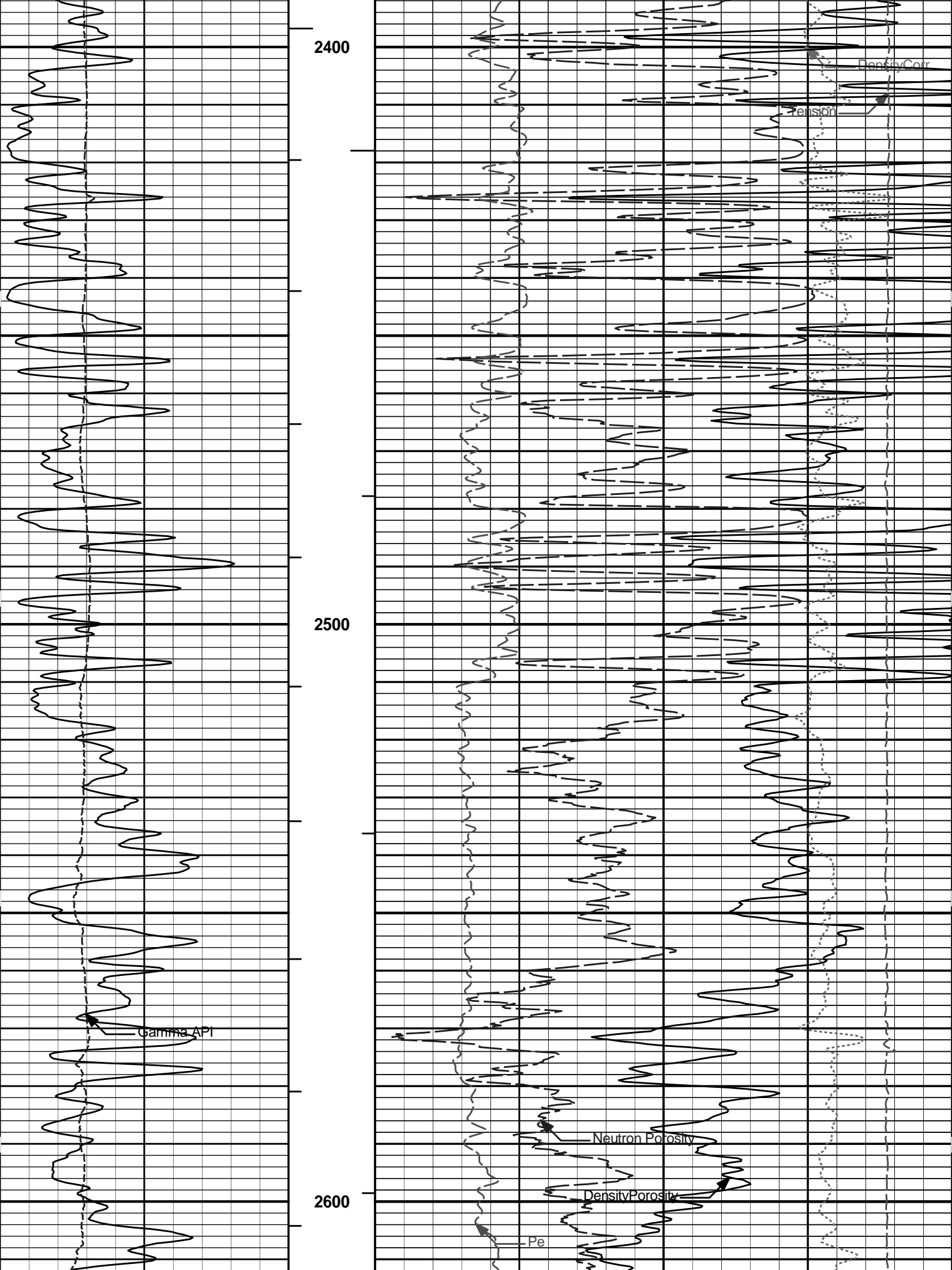
2300

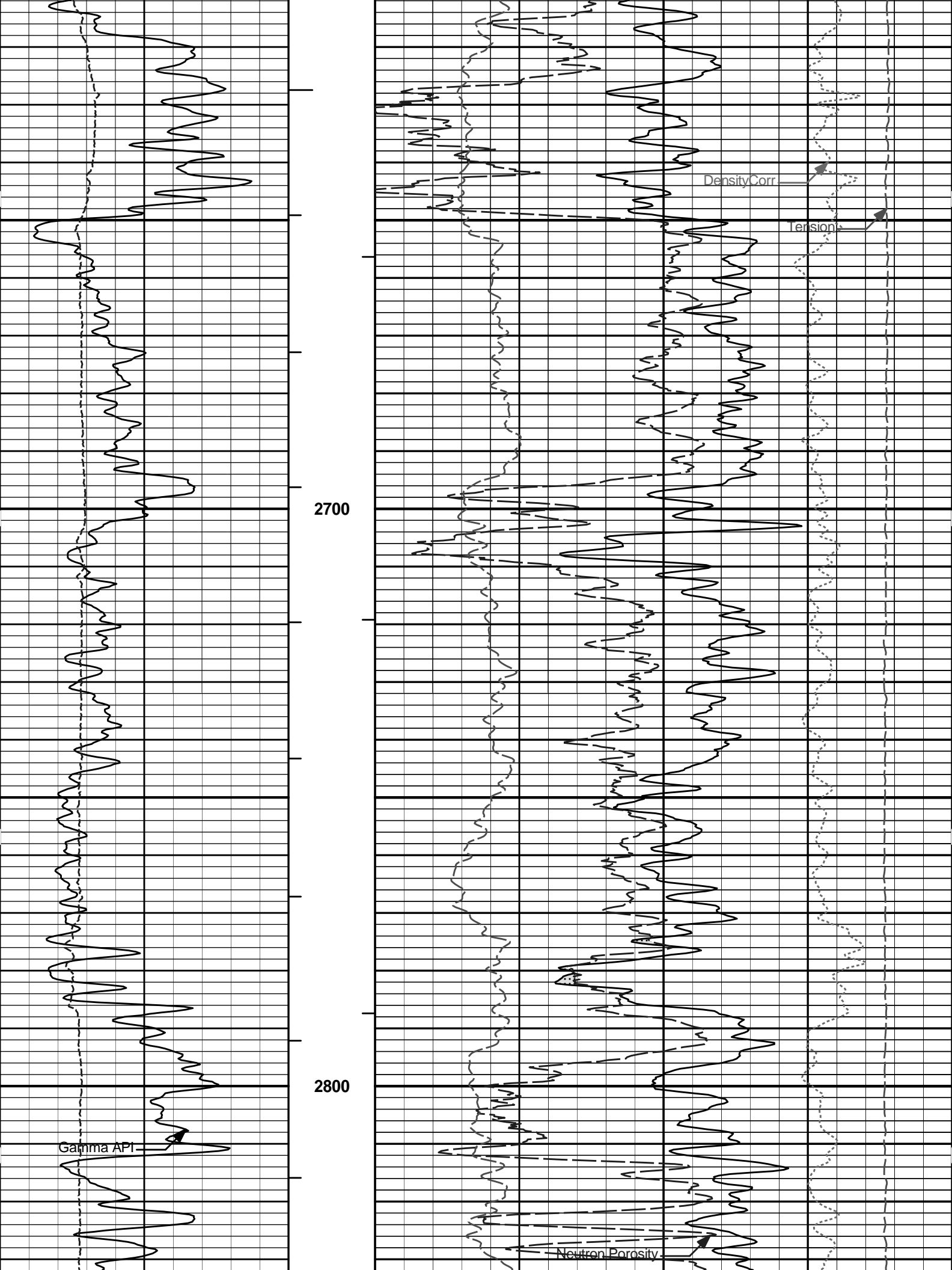
Gamma API

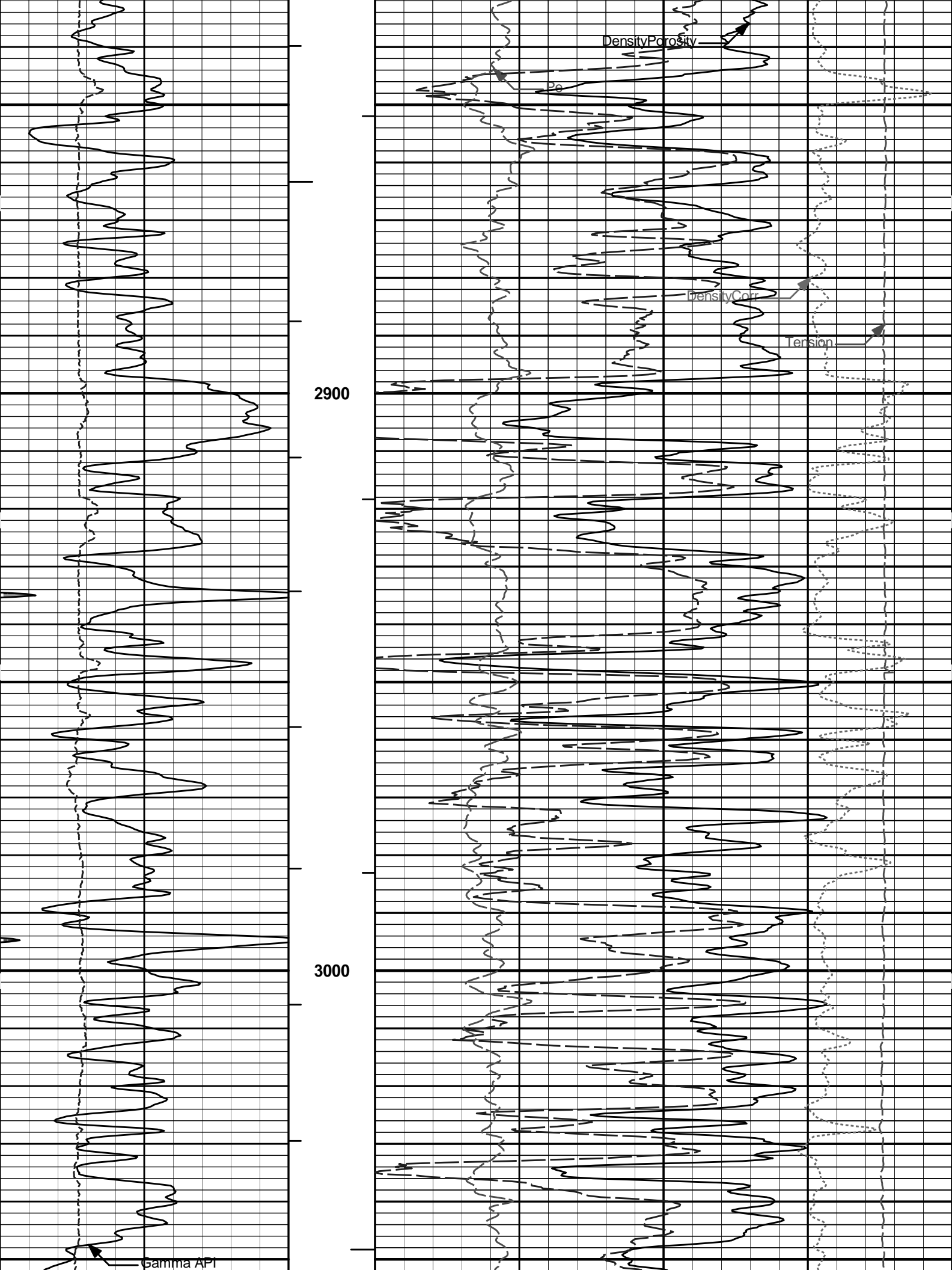
Neutron Porosity

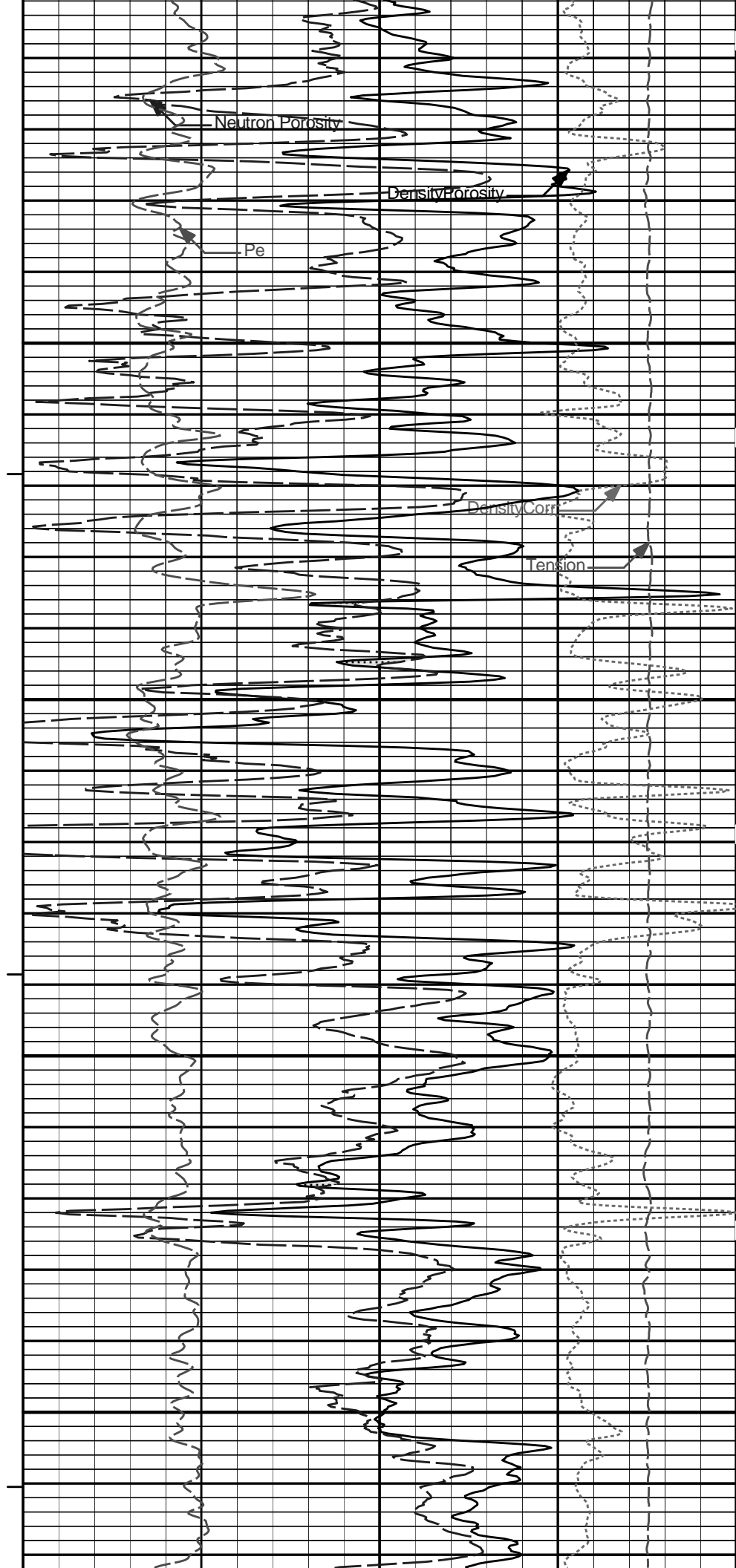
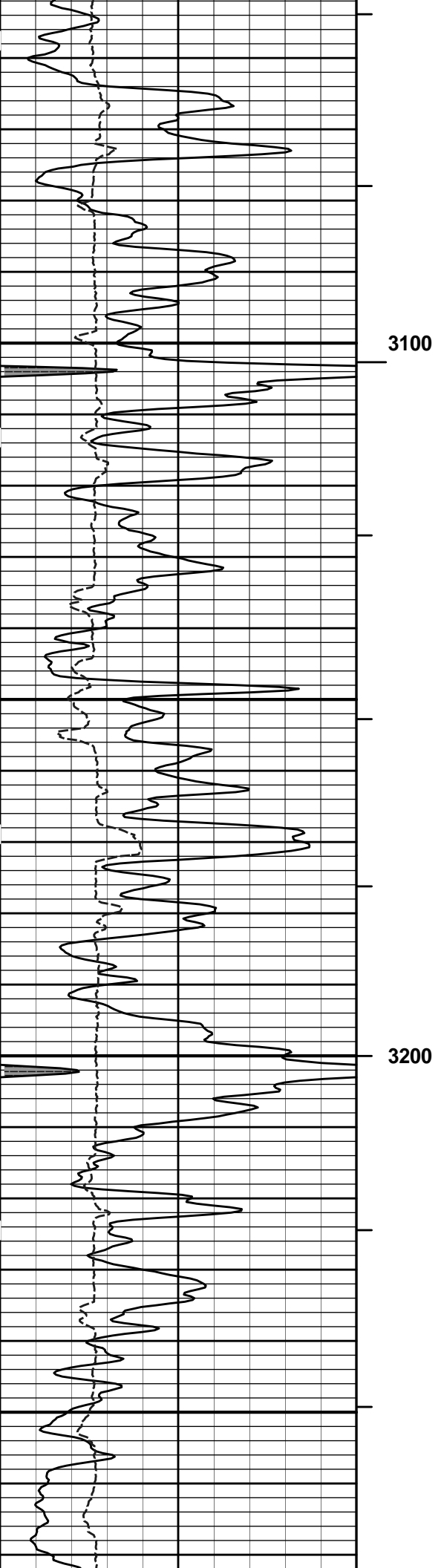
Pe

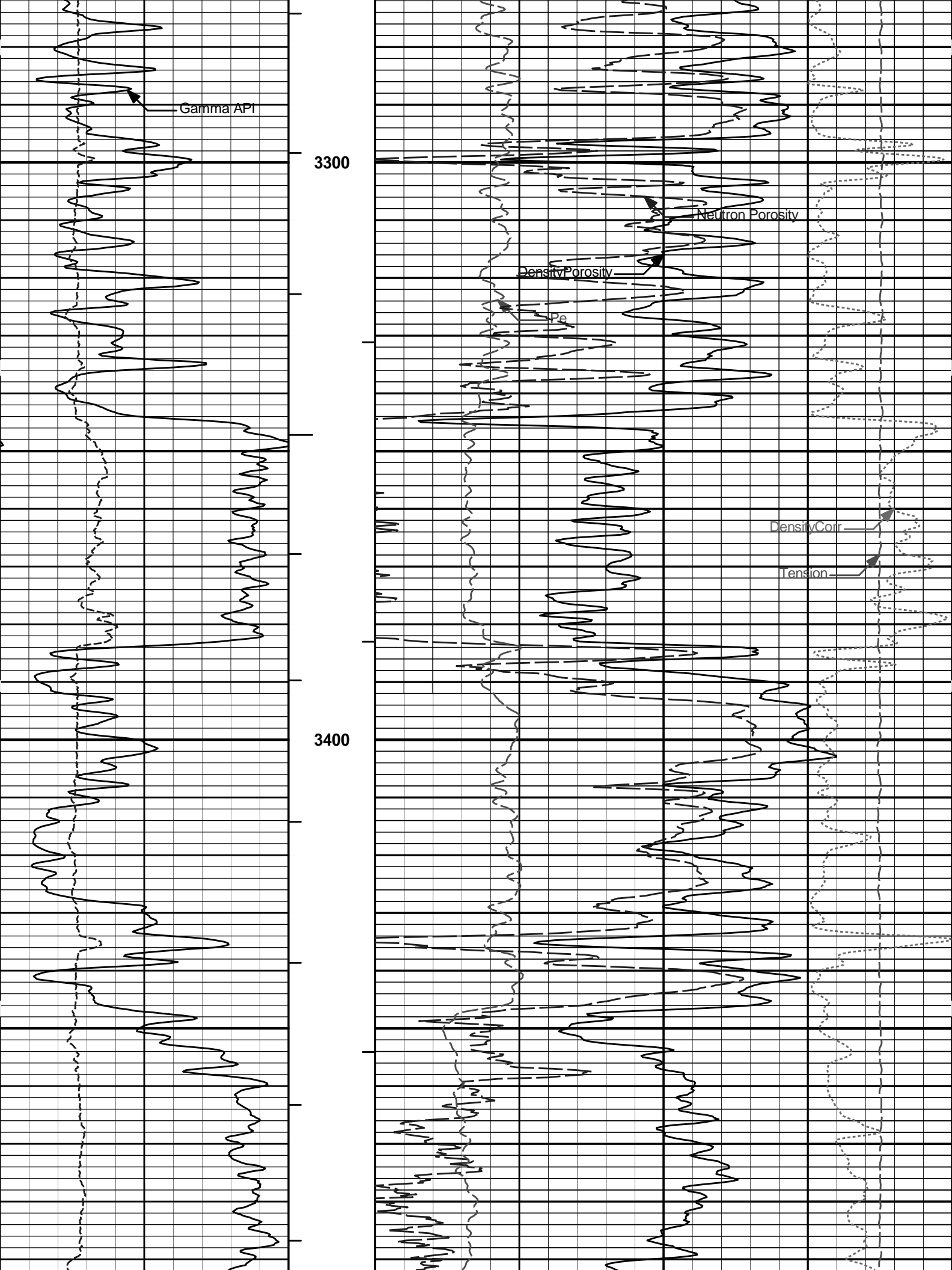
Density Porosity

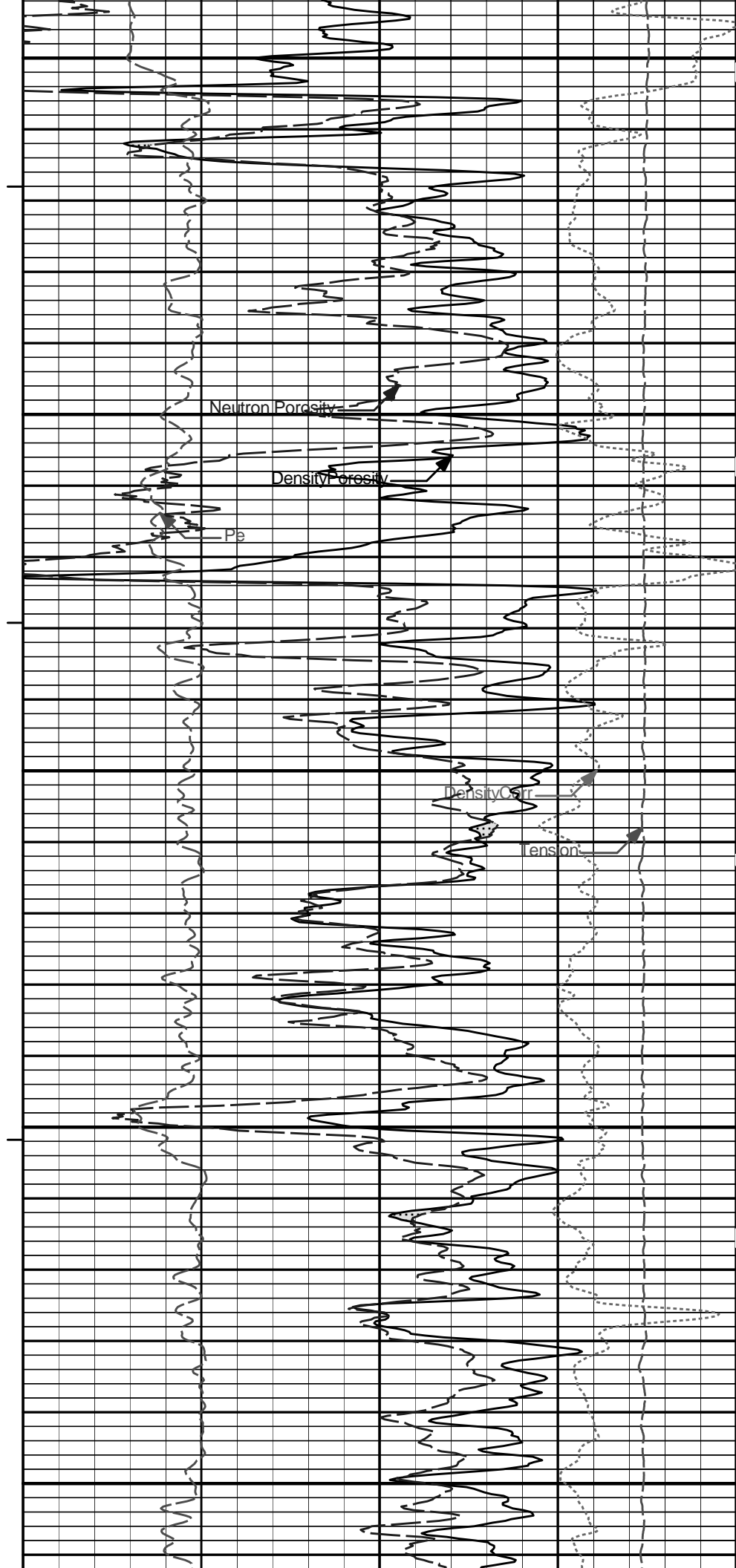
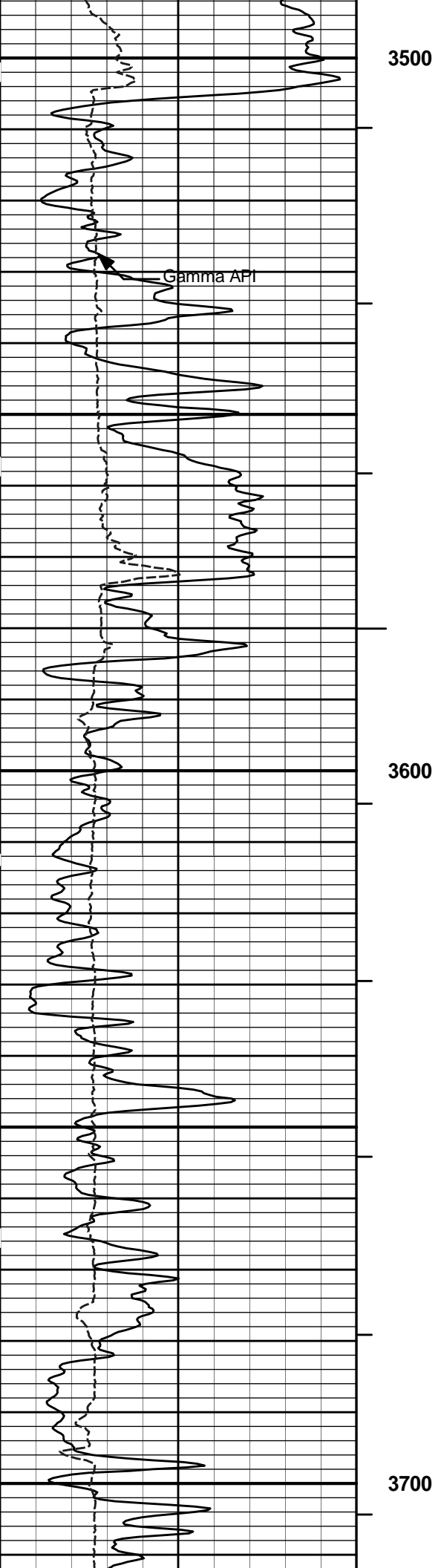


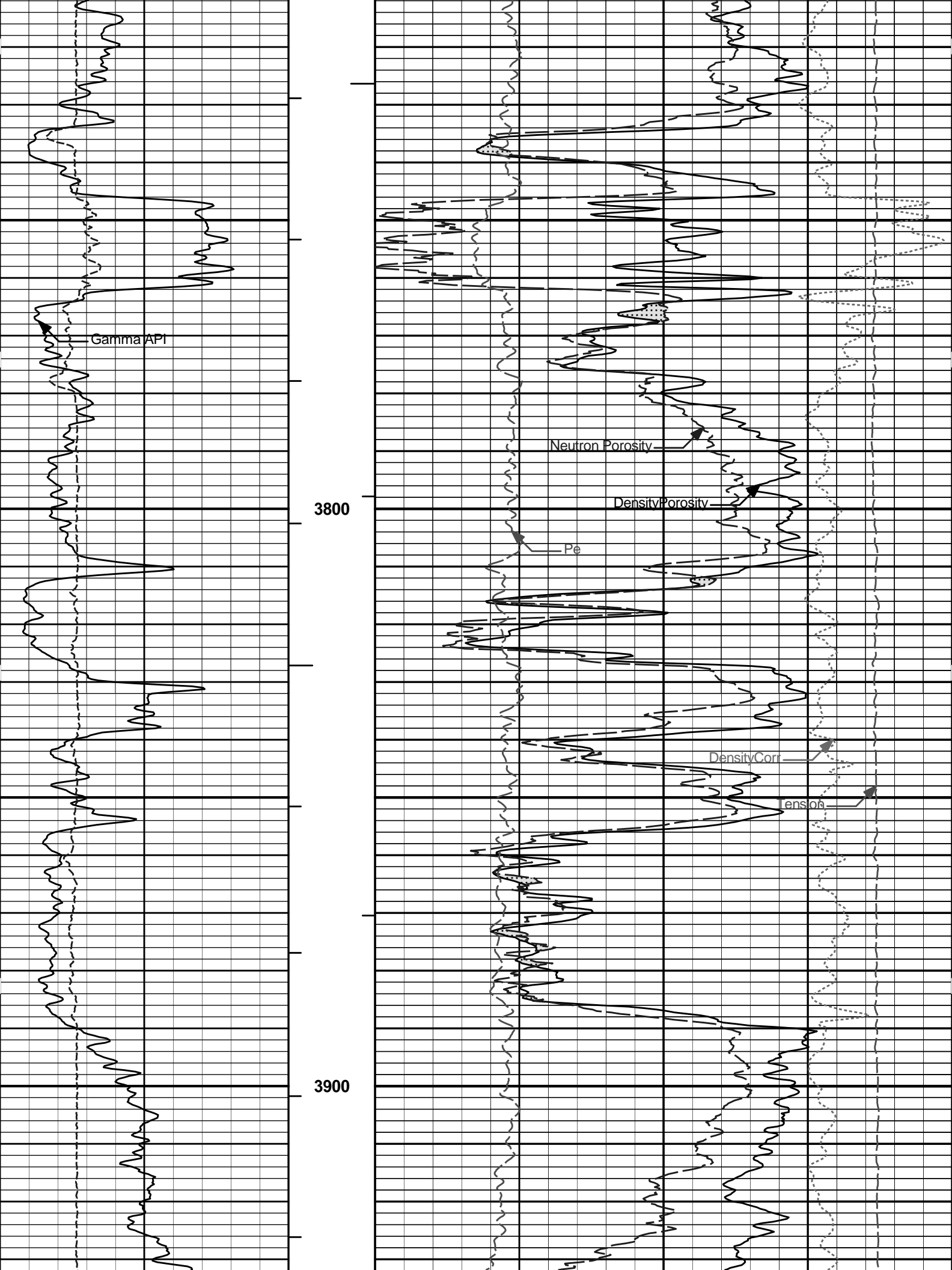


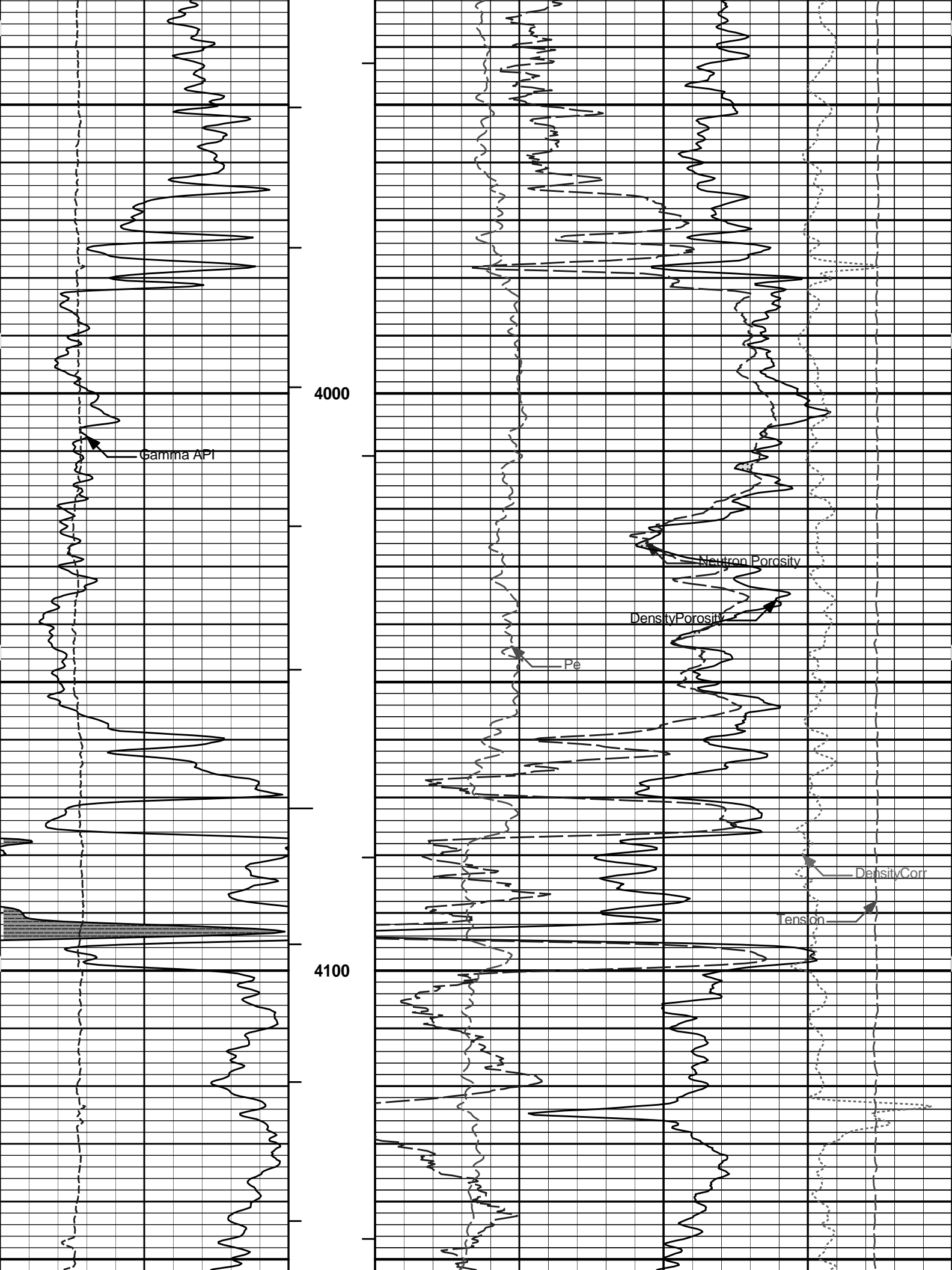


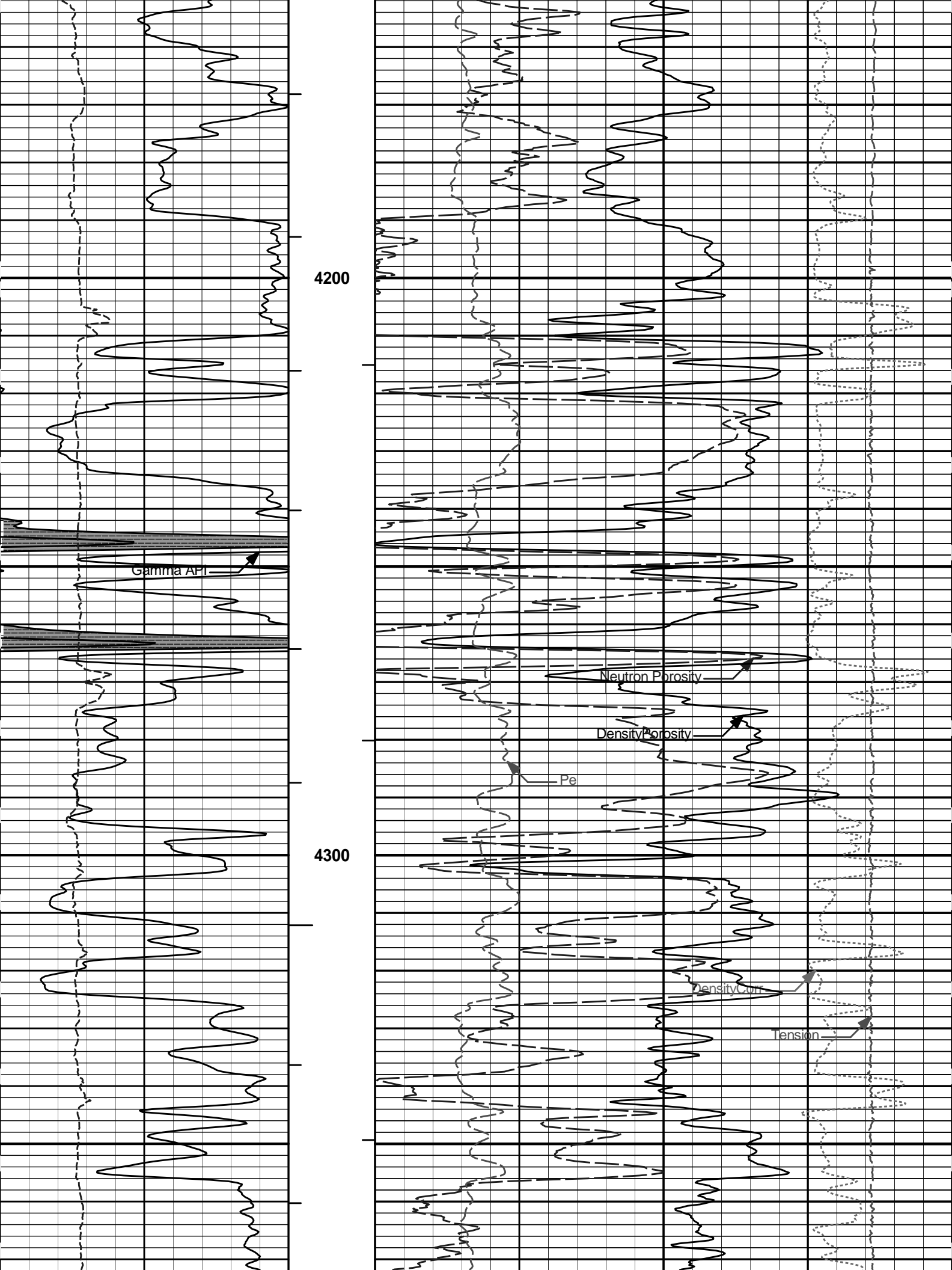


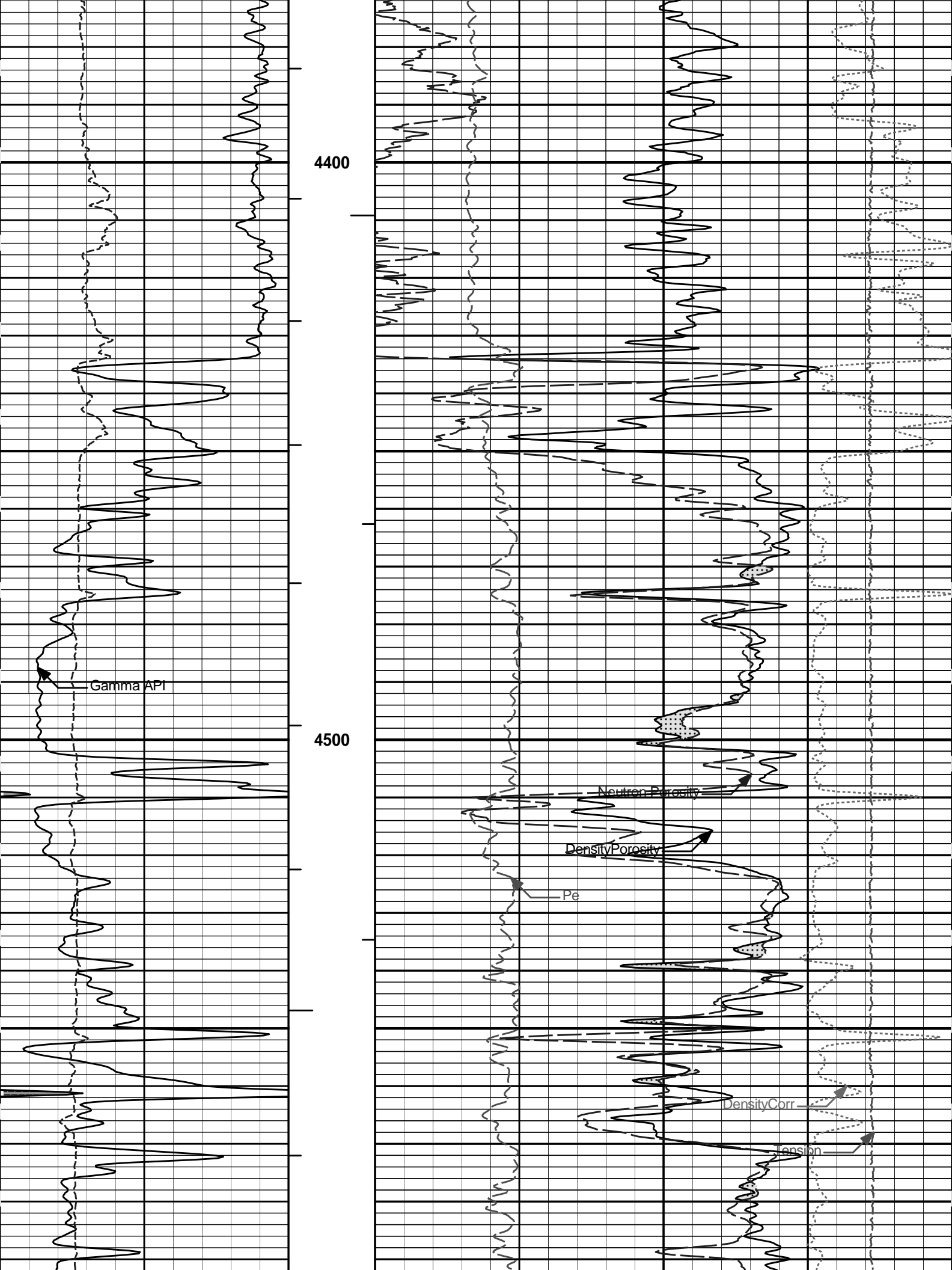


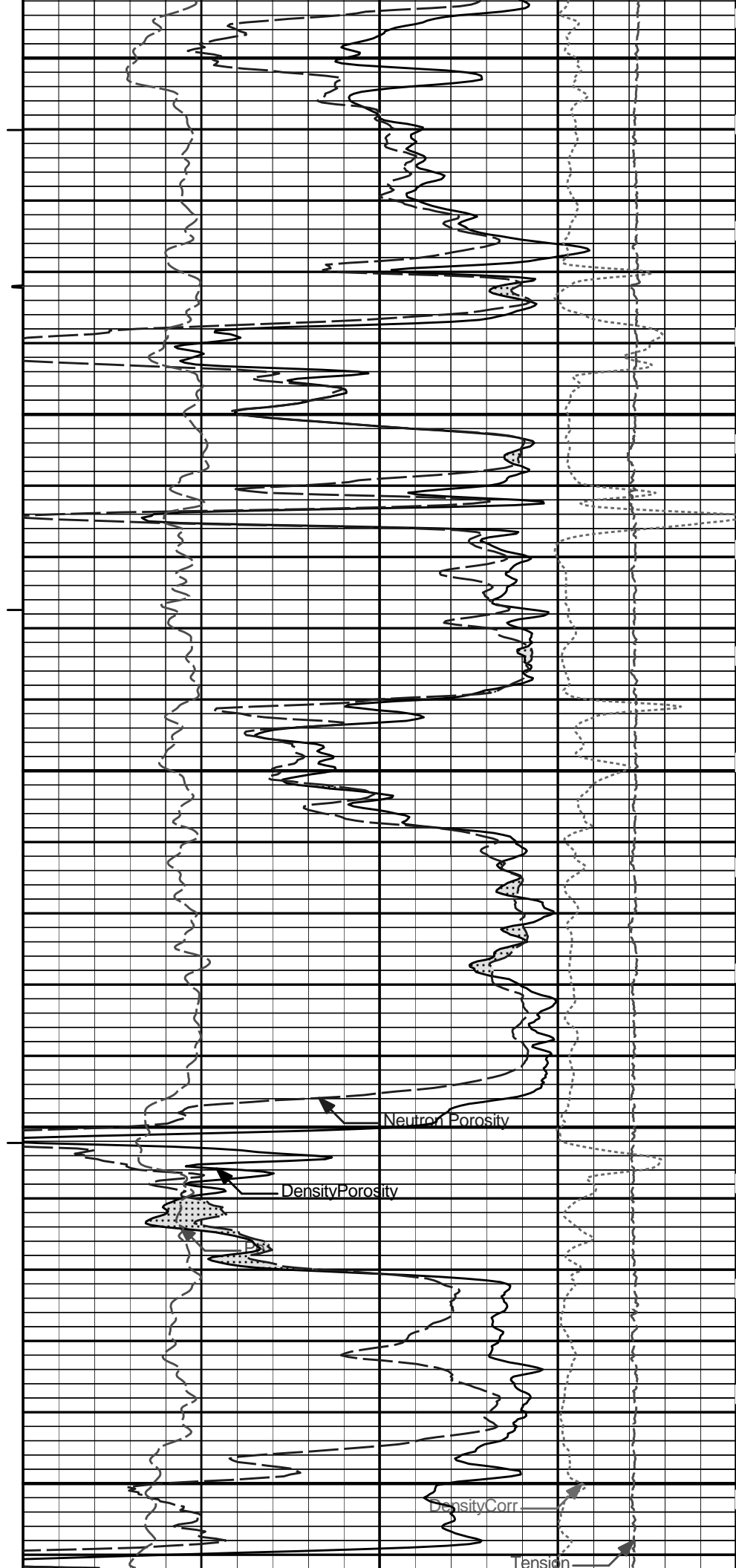
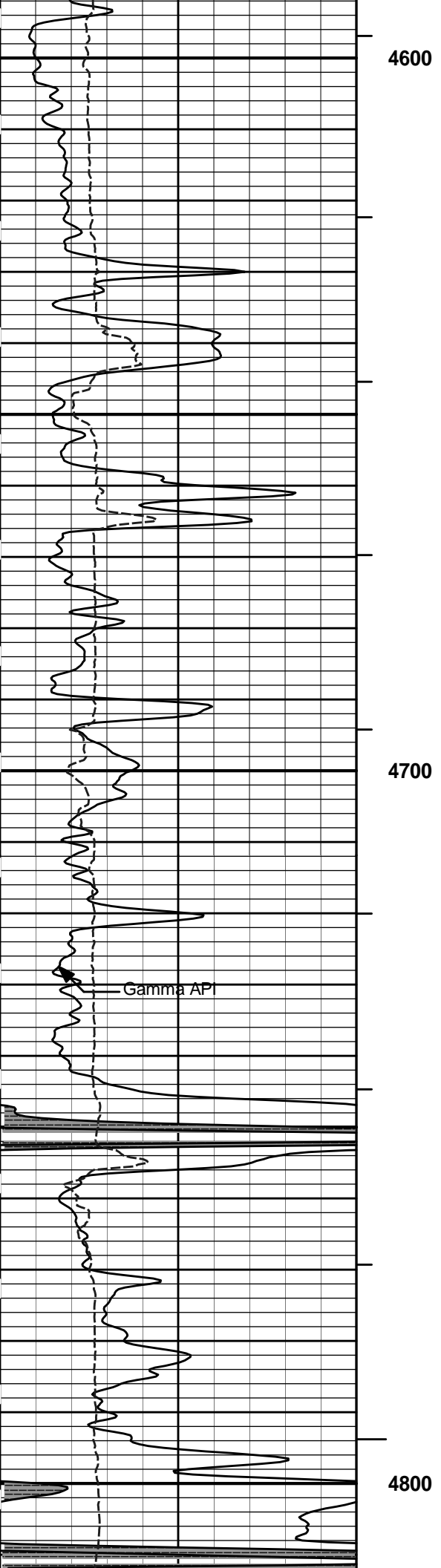


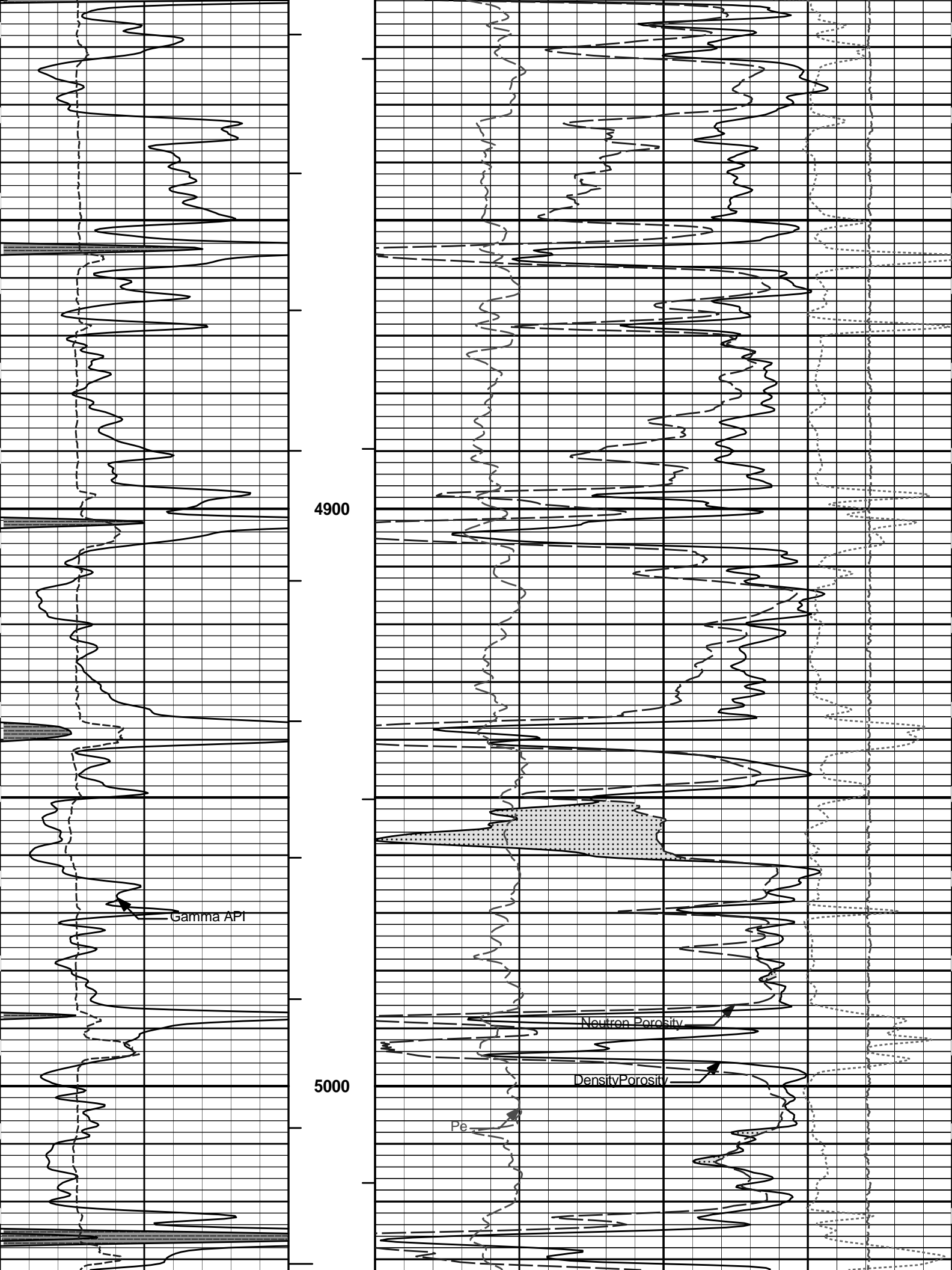












4900

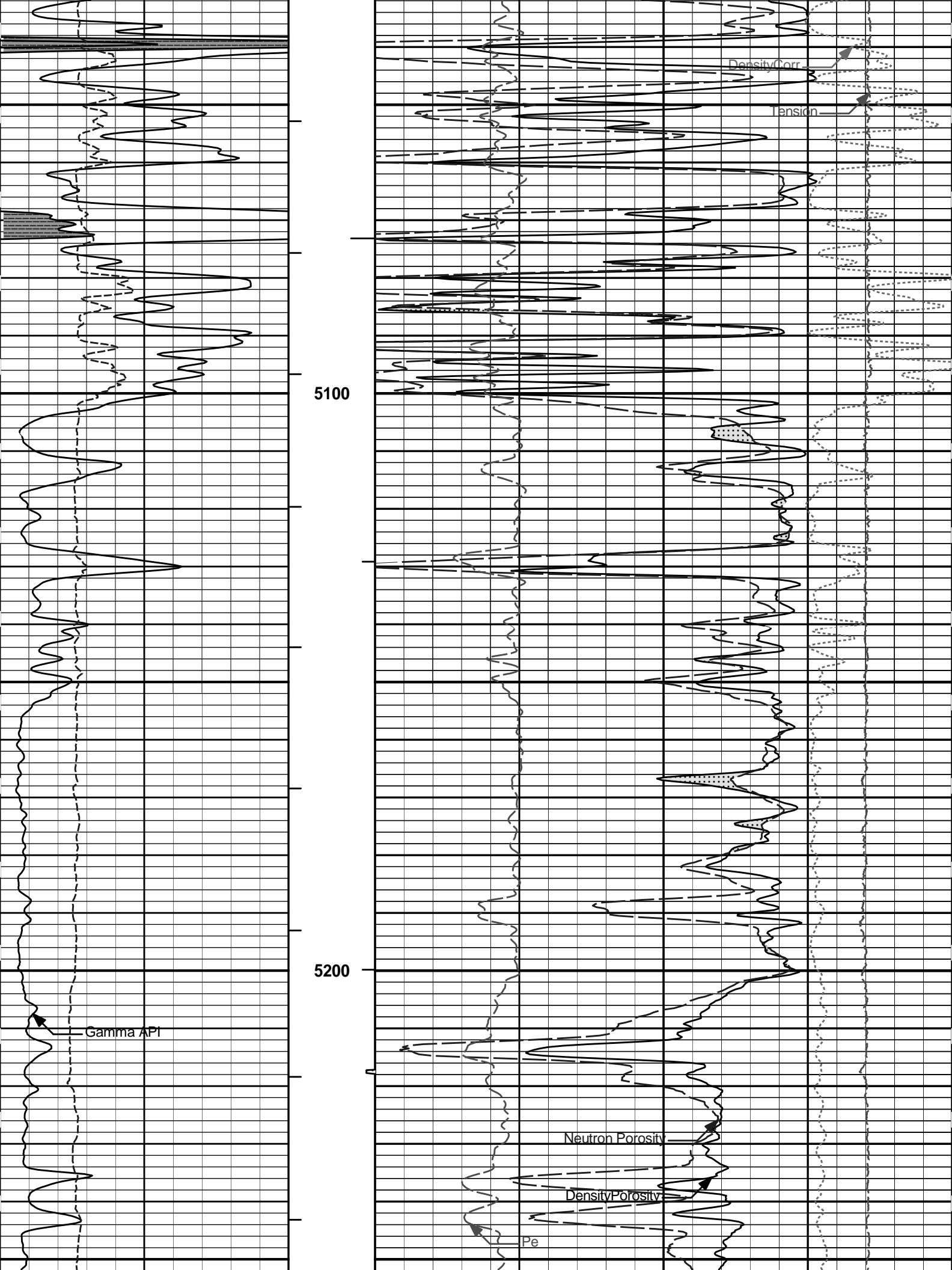
Gamma API

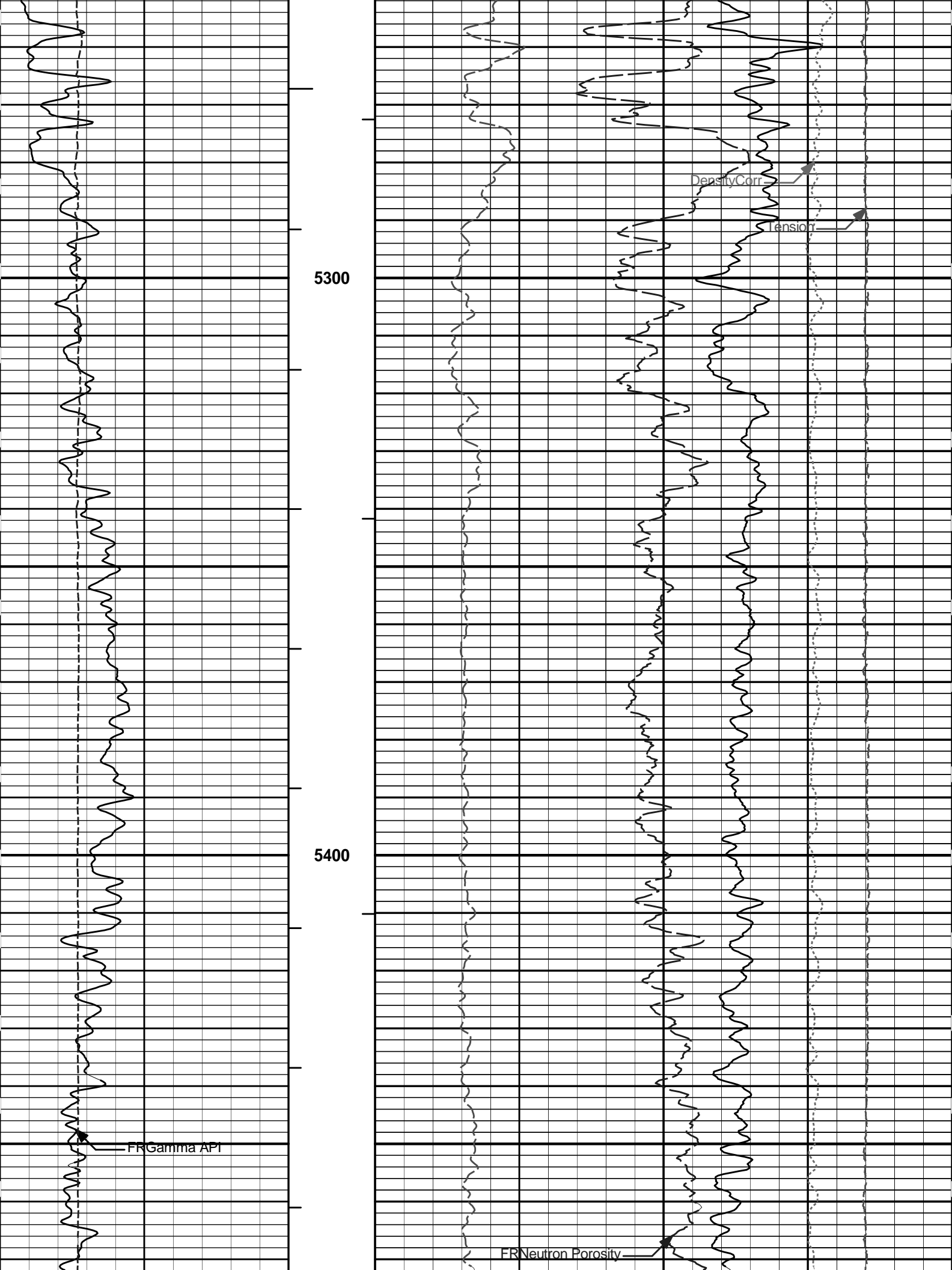
Neutron Porosity

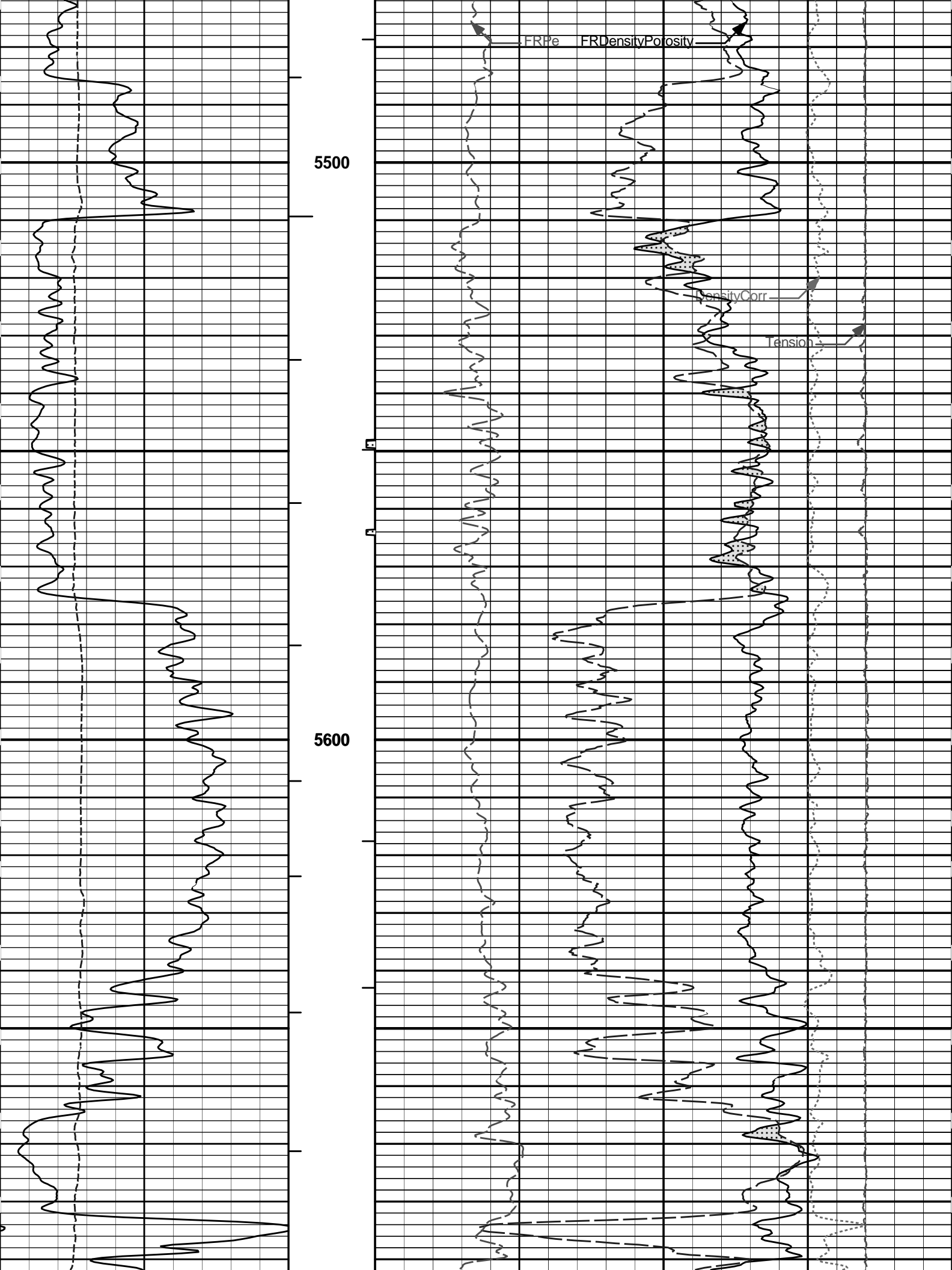
Density Porosity

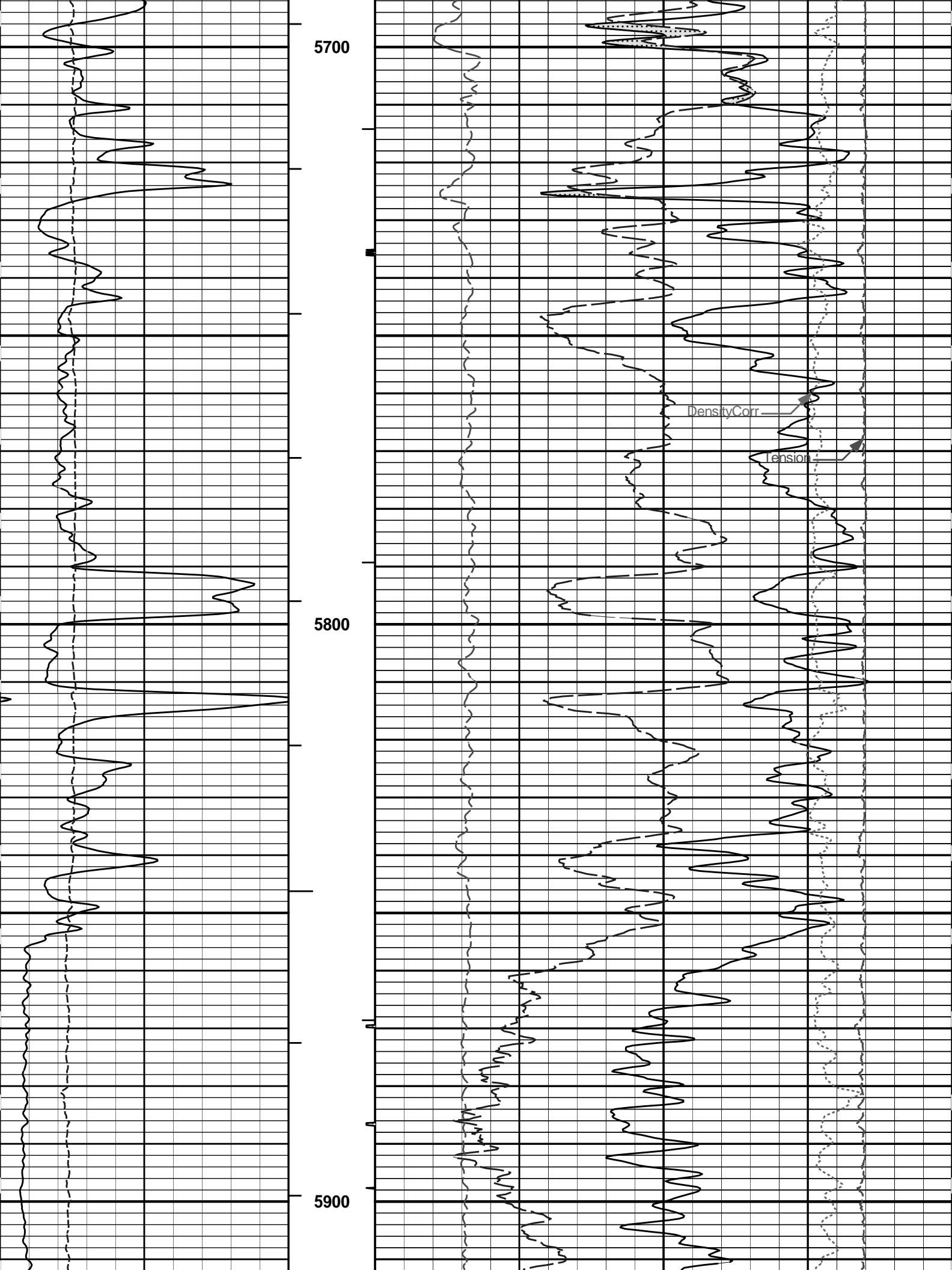
5000

Pe









10	0	30	Neutron Porosity	-10
			%	
Tension Pull			CROSSOVER	

HALLIBURTON

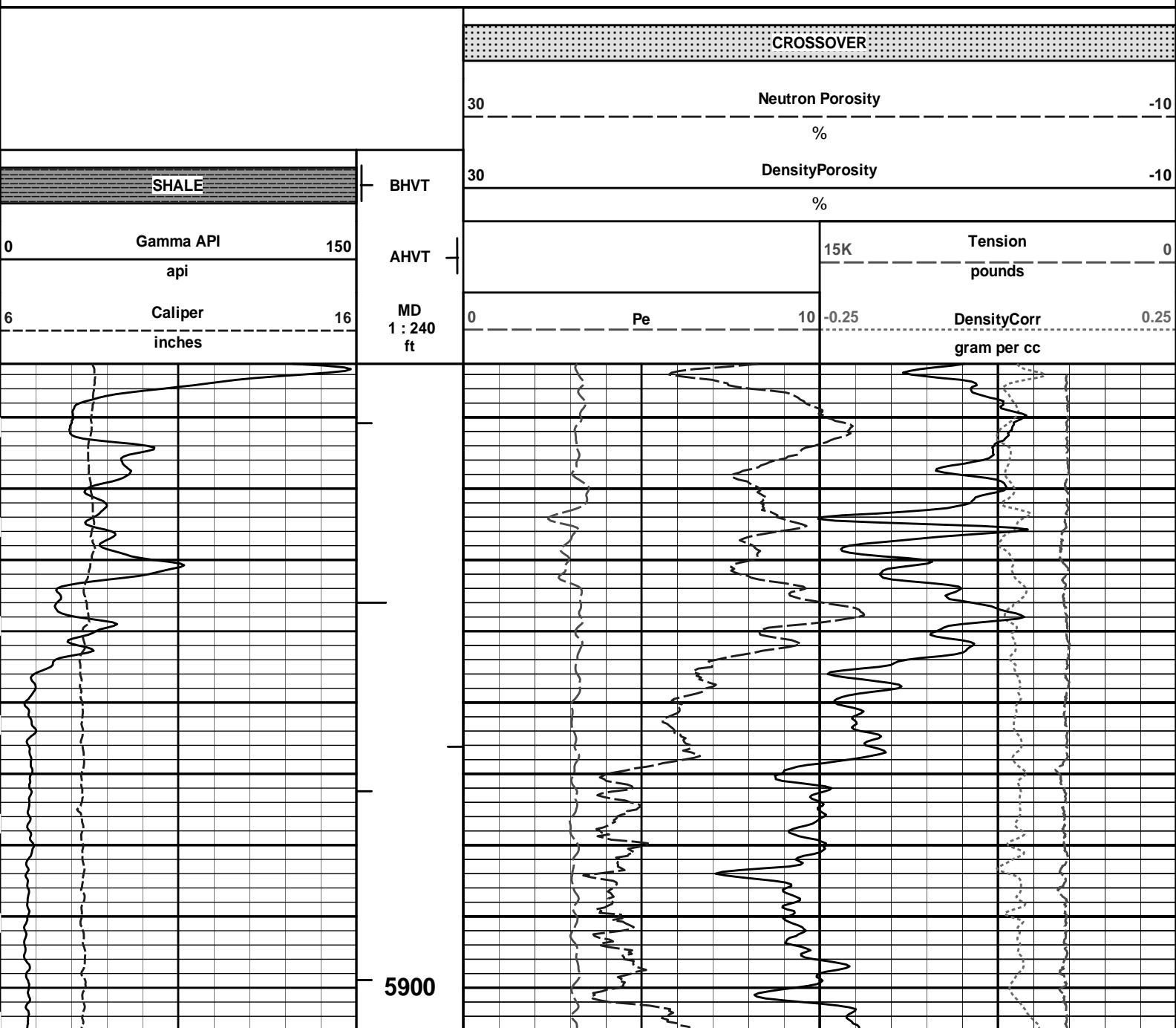
Plot Time: 17-Jul-12 06:03:28
 Plot Range: 810 ft to 6098.42 ft
 Data: ALBERTA_MARIE_1\Well Based\R1_ELSE\
 Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

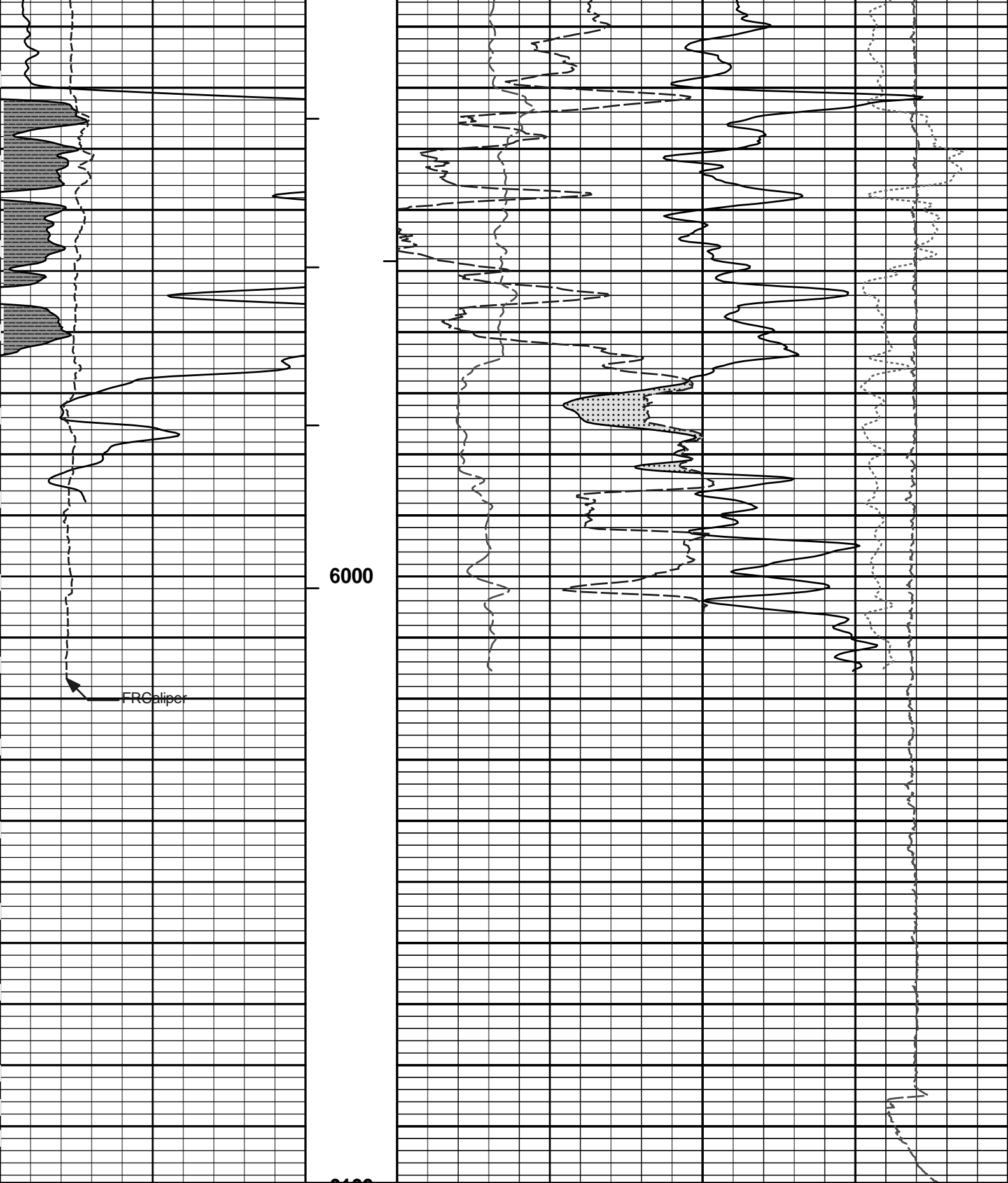
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 17-Jul-12 06:03:29
 Plot Range: 5812.5 ft to 6099.25 ft
 Data: ALBERTA_MARIE_1\Well Based\R1_REPEAT\
 Plot File: \\PORO\Poro_IQ_5_REP_LIB

REPEAT SECTION





6	Caliper	16	MD	0	Pe	10	-0.25	DensityCorr	0.25
	inches		1 : 240					gram per cc	
0	Gamma API	150	AHVT			15K		Tension	0
	api							pounds	
	SHALE		BHVT	30	DensityPorosity				-10

30

Neutron Porosity

-10

%

CROSSOVER

HALLIBURTON

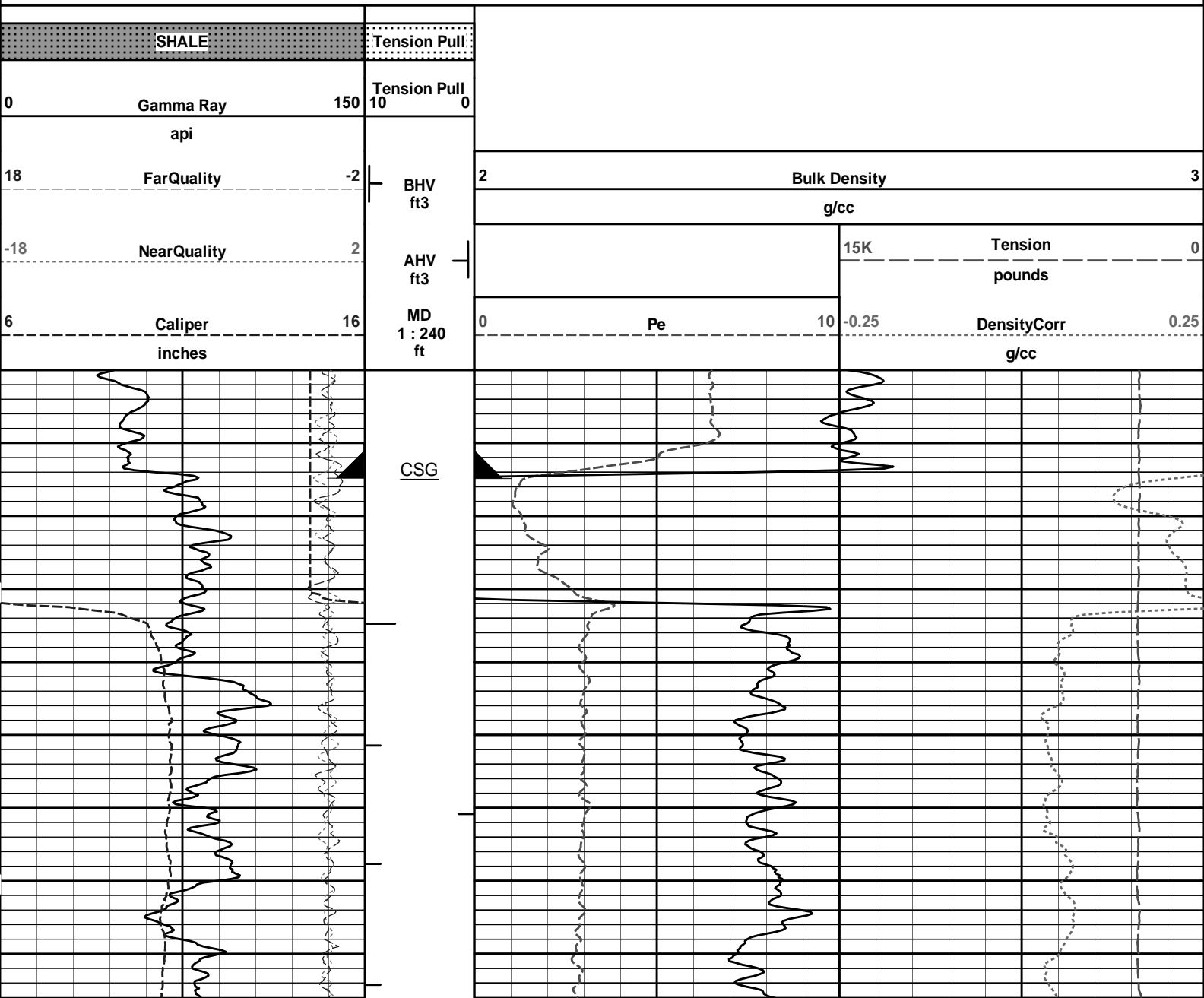
Plot Time: 17-Jul-12 06:03:32
Plot Range: 5812.5 ft to 6099.25 ft
Data: ALBERTA_MARIE_1\Well Based\R1_REPEAT\
Plot File: \\PORO\Poro_IQ_5_REP_LIB

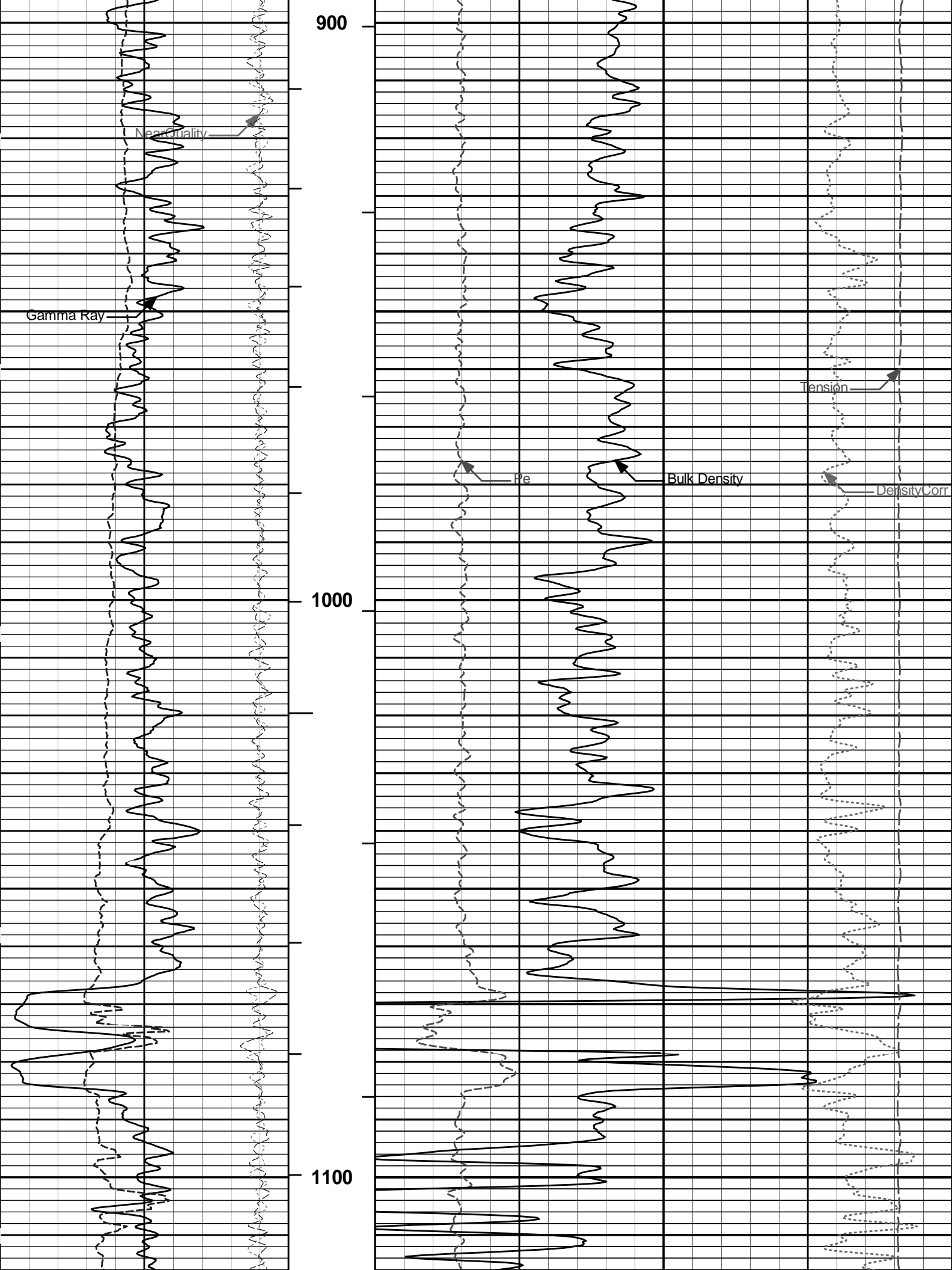
REPEAT SECTION

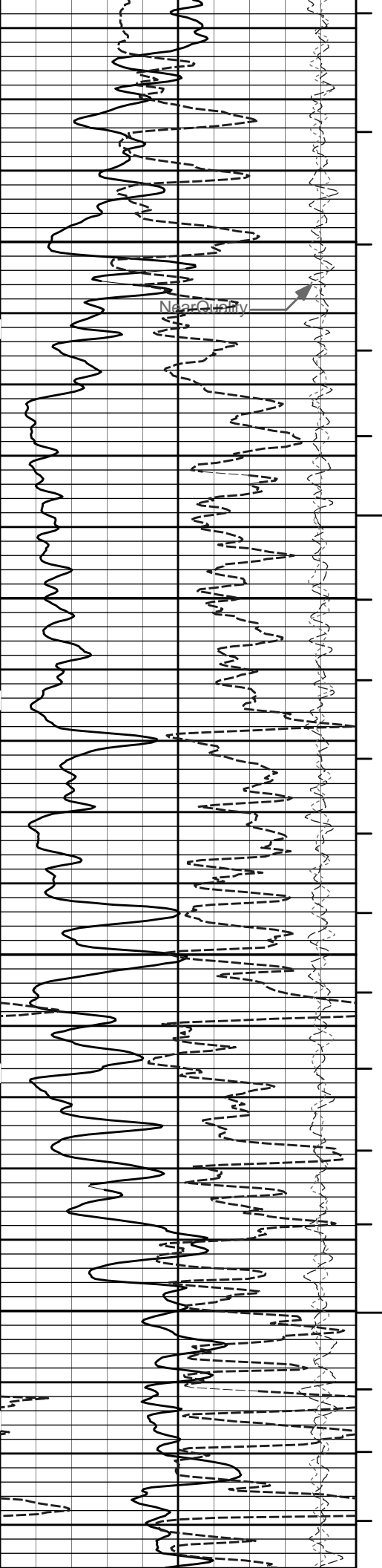
HALLIBURTON

Plot Time: 17-Jul-12 06:03:32
Plot Range: 810 ft to 6098.42 ft
Data: ALBERTA_MARIE_1\Well Based\R1_ELSE\
Plot File: \\LOCAL-ALBERTA_MARIE_1\0001 SP-GTET-DSN-SDL-WSTT-XRMI-ACRT-CH\PORO\BULKD_5_MAIN_LIB

5 INCH MAIN LOG

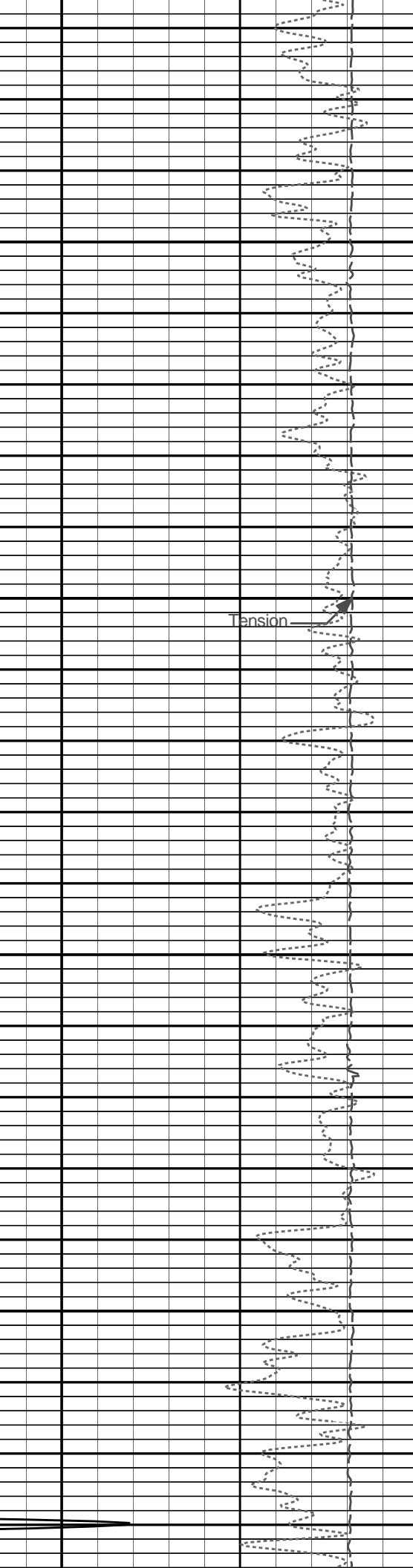
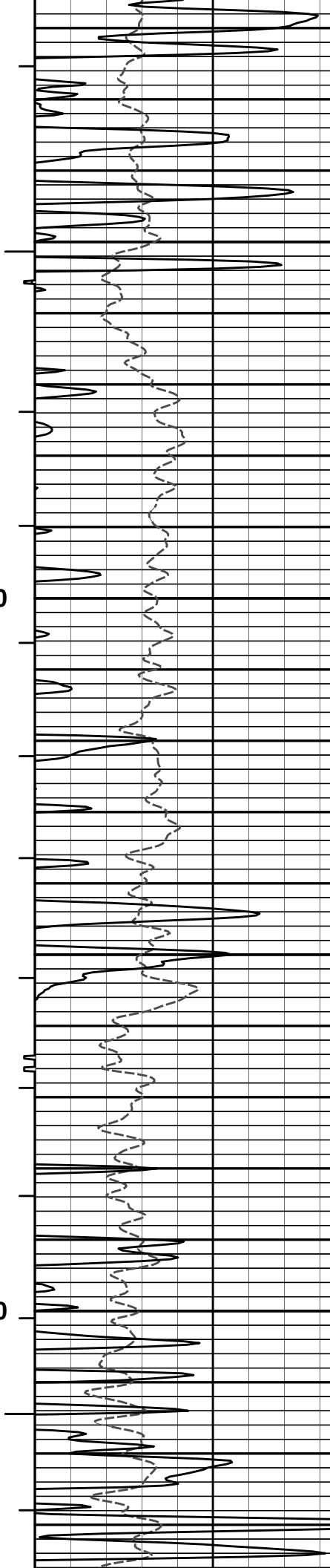




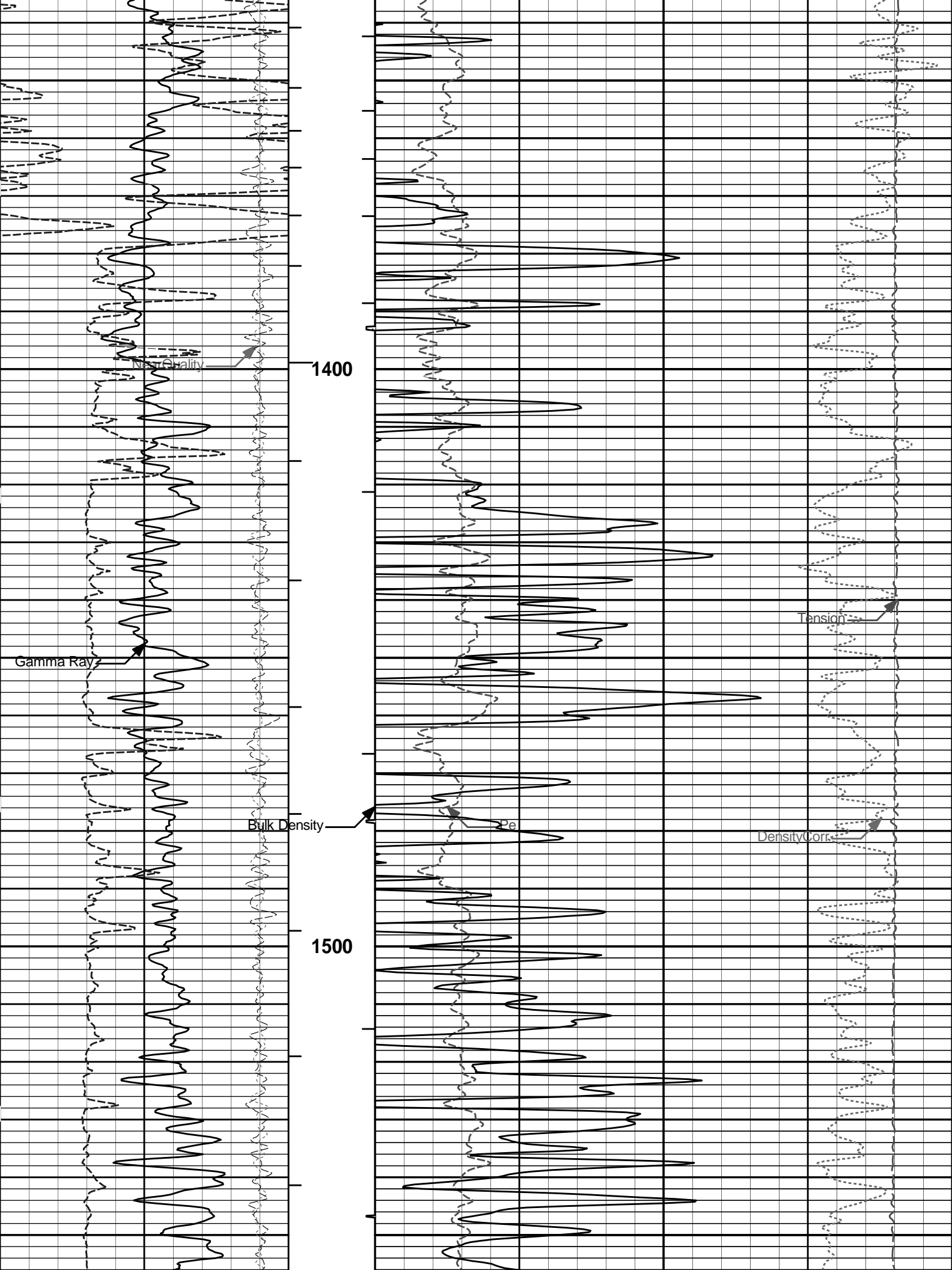


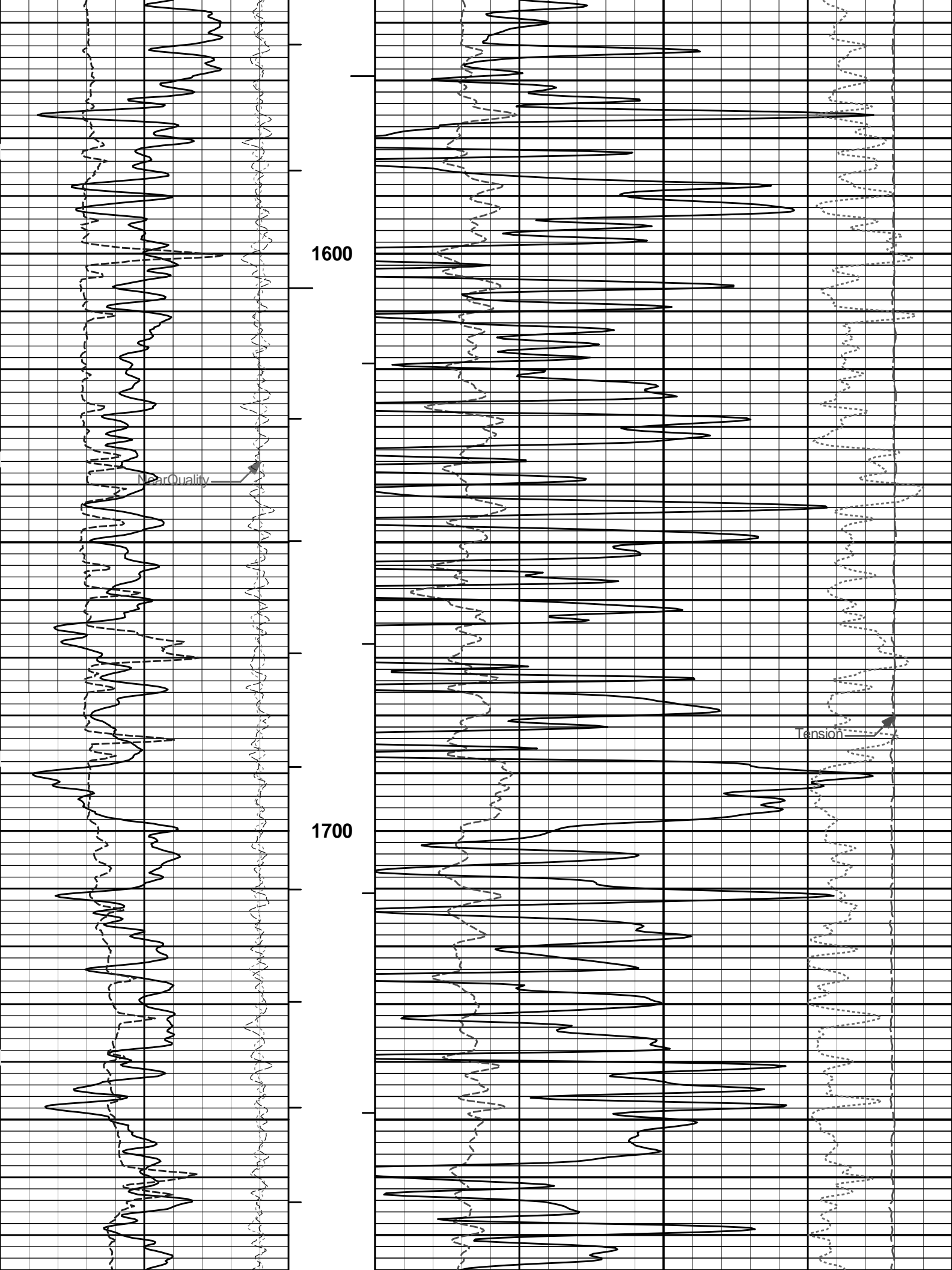
1200

1300



Tension



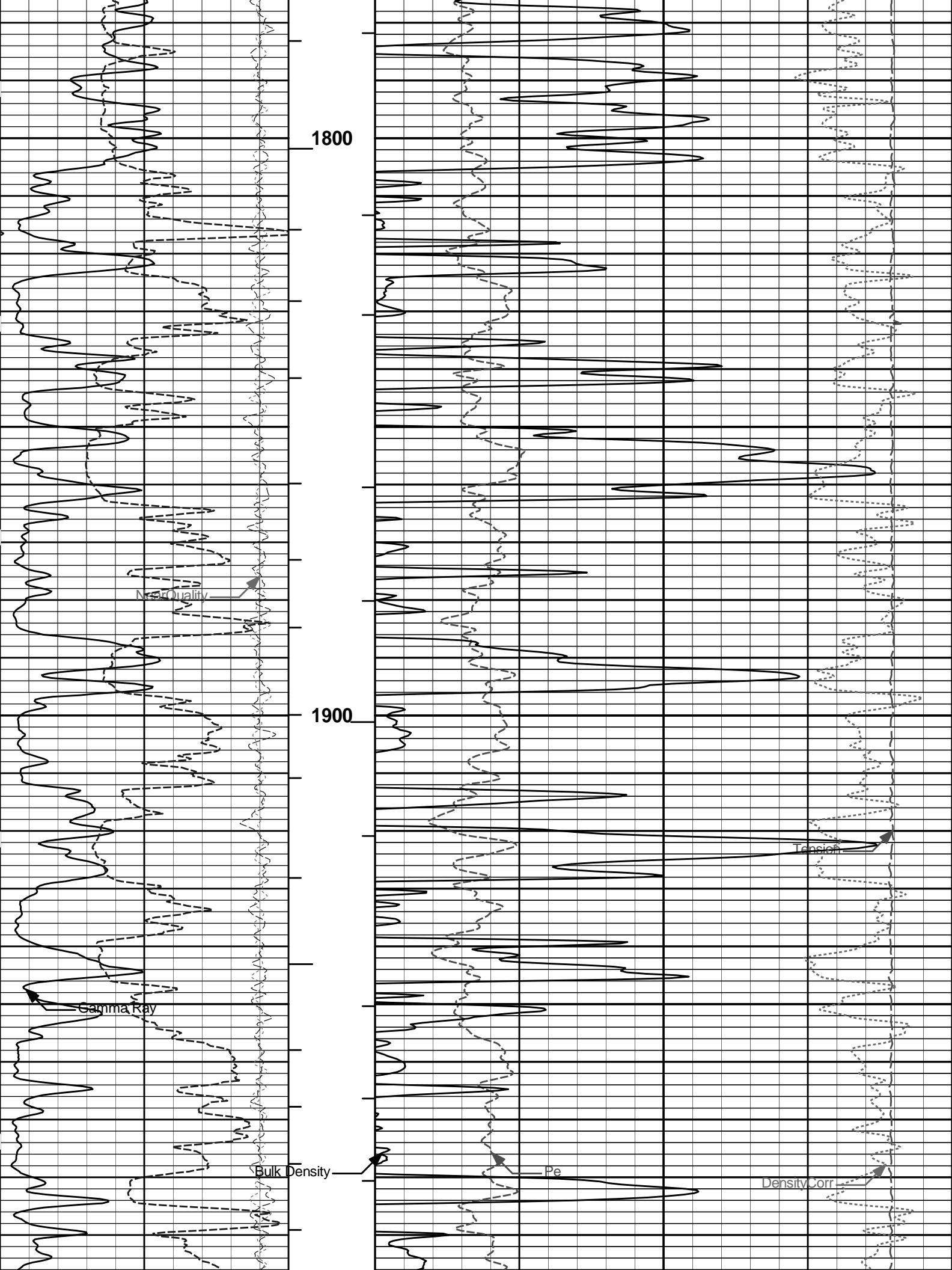


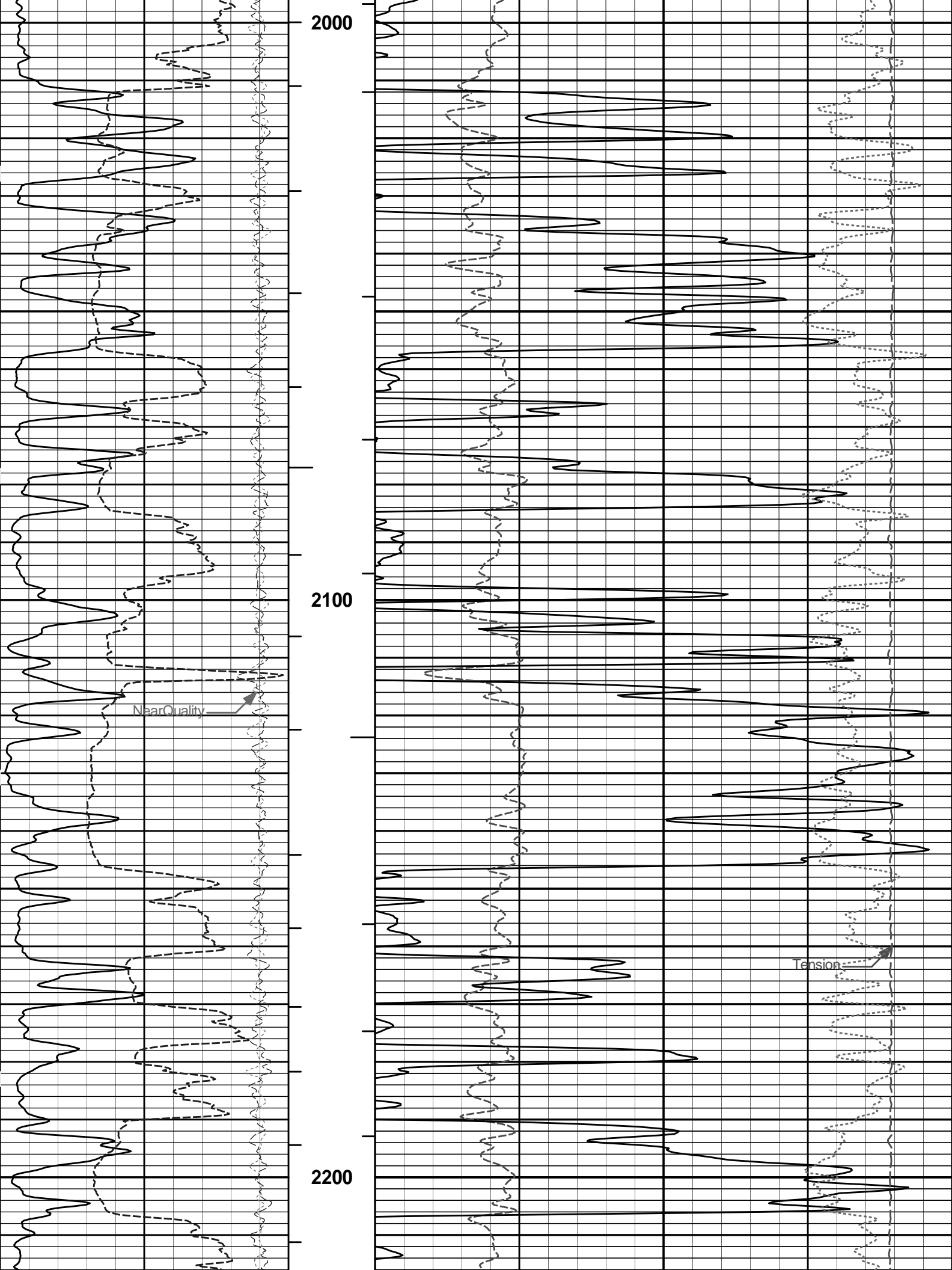
1600

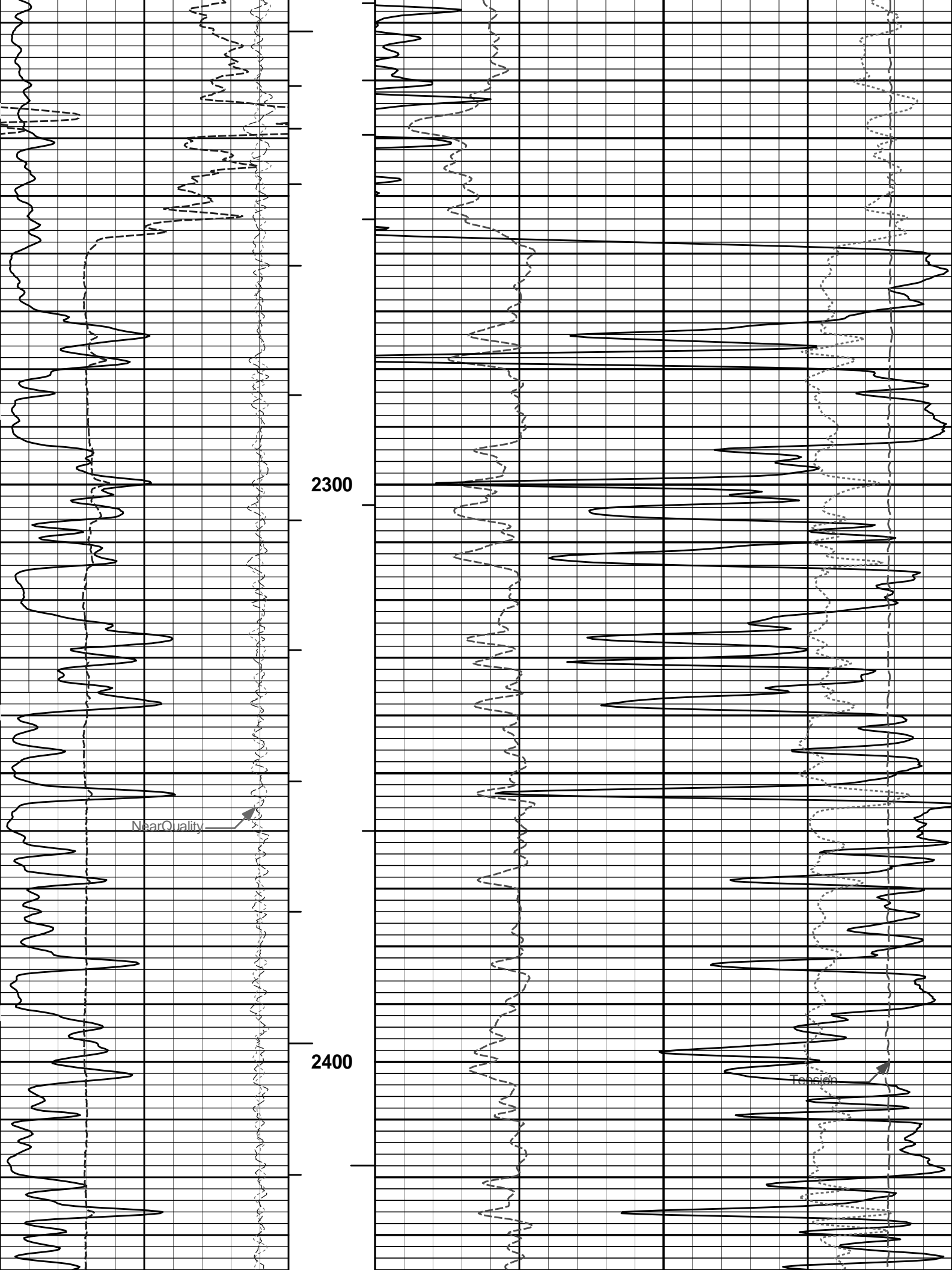
NearQuality

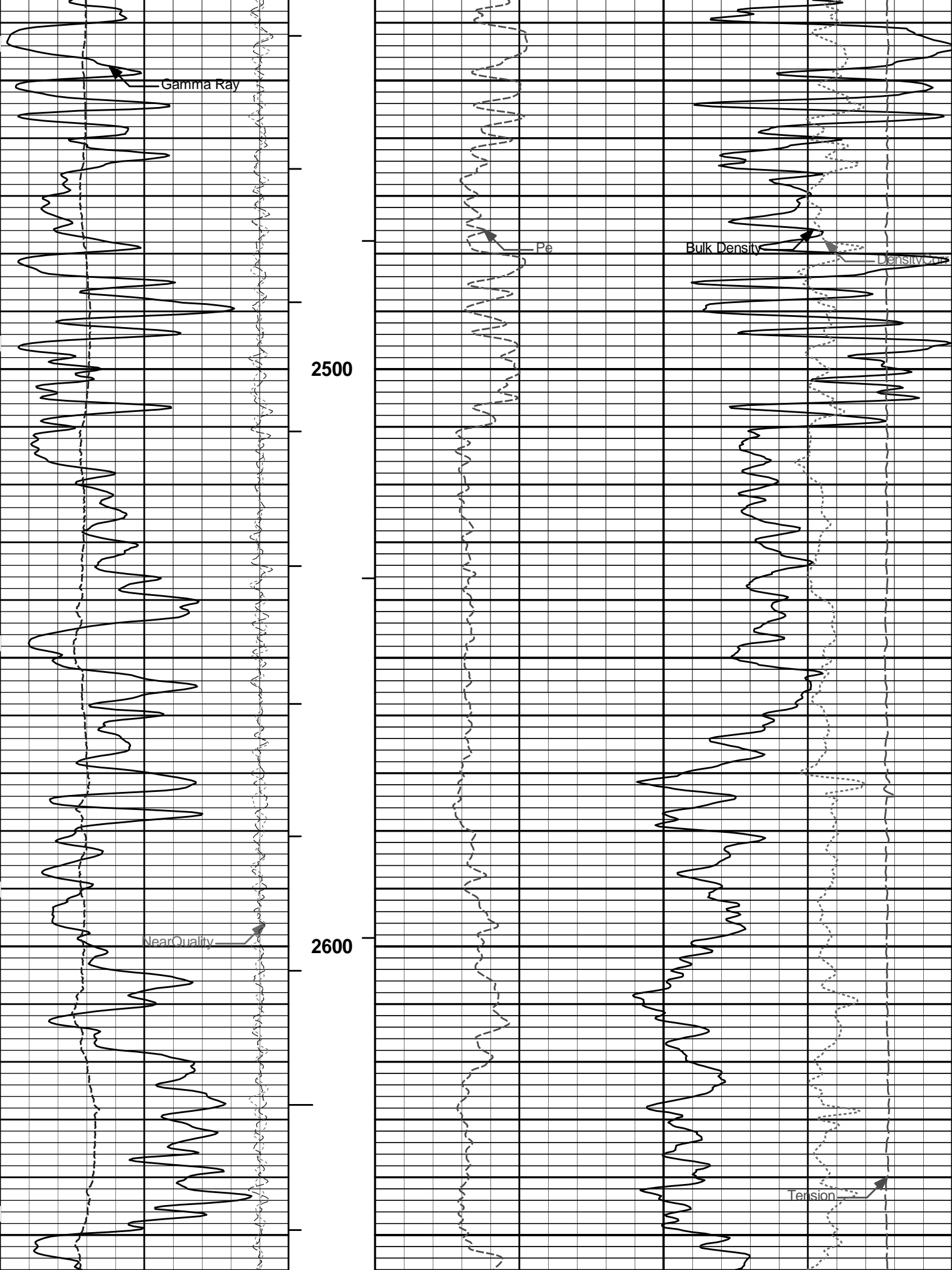
1700

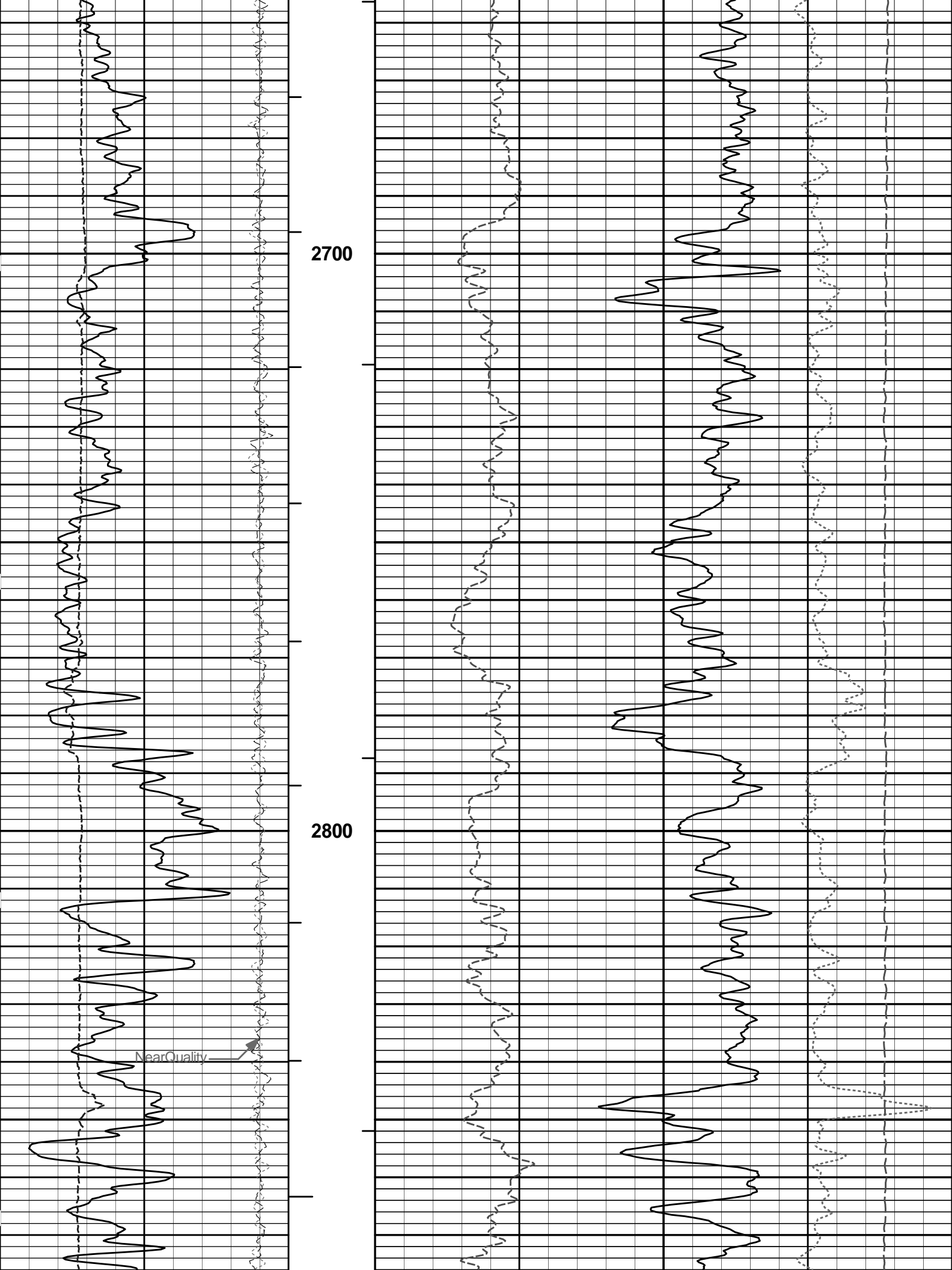
Tension

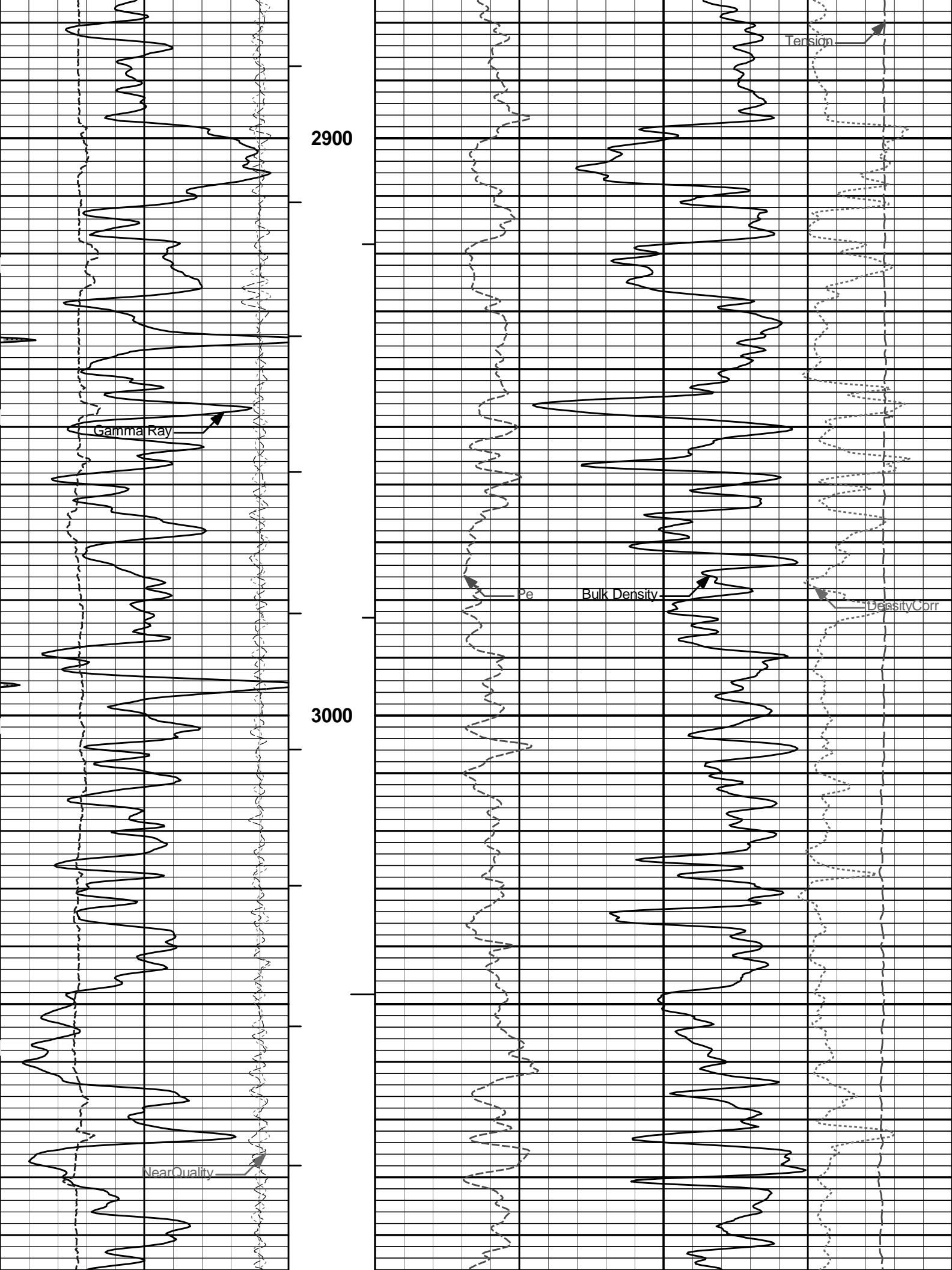


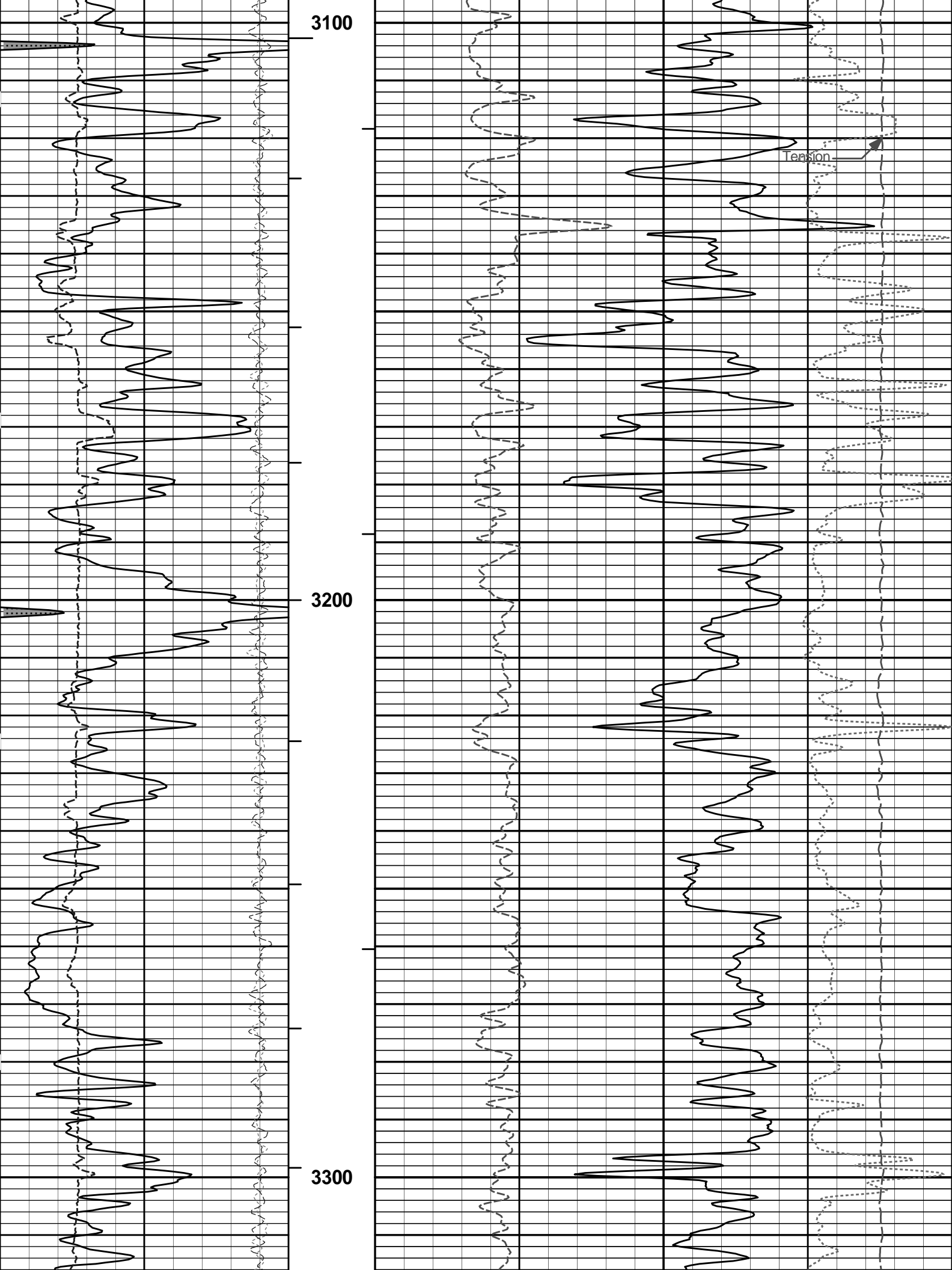


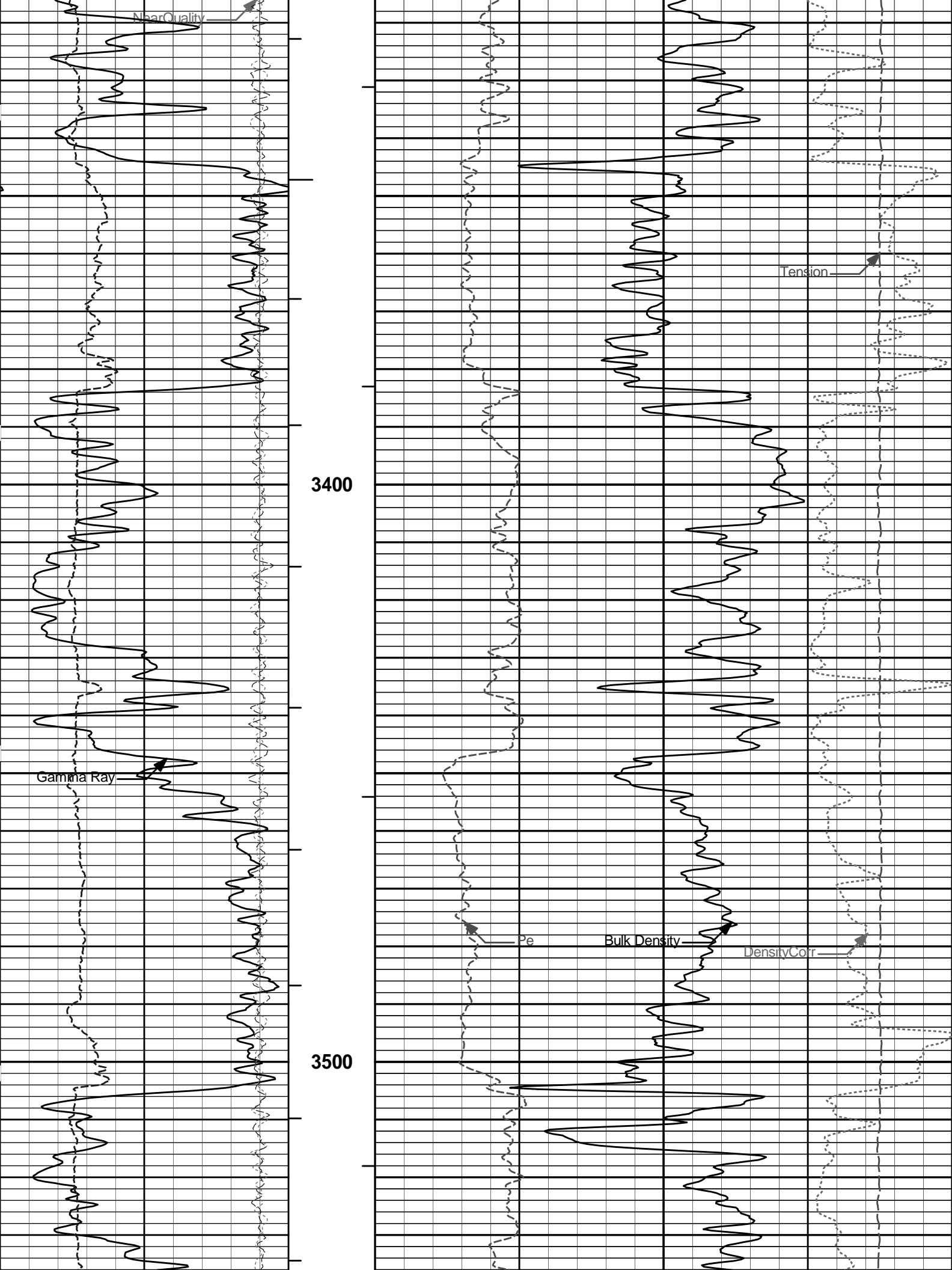


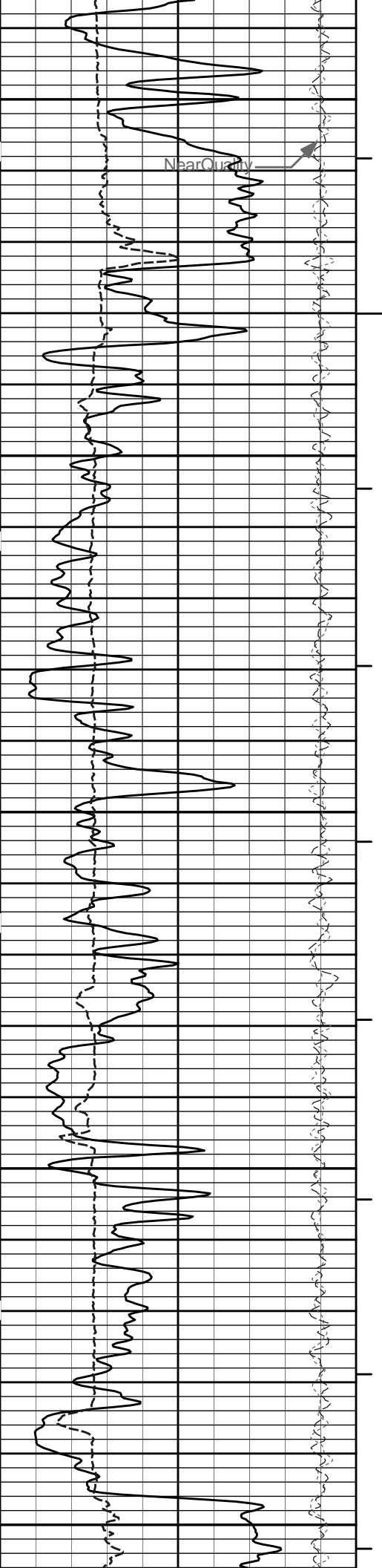






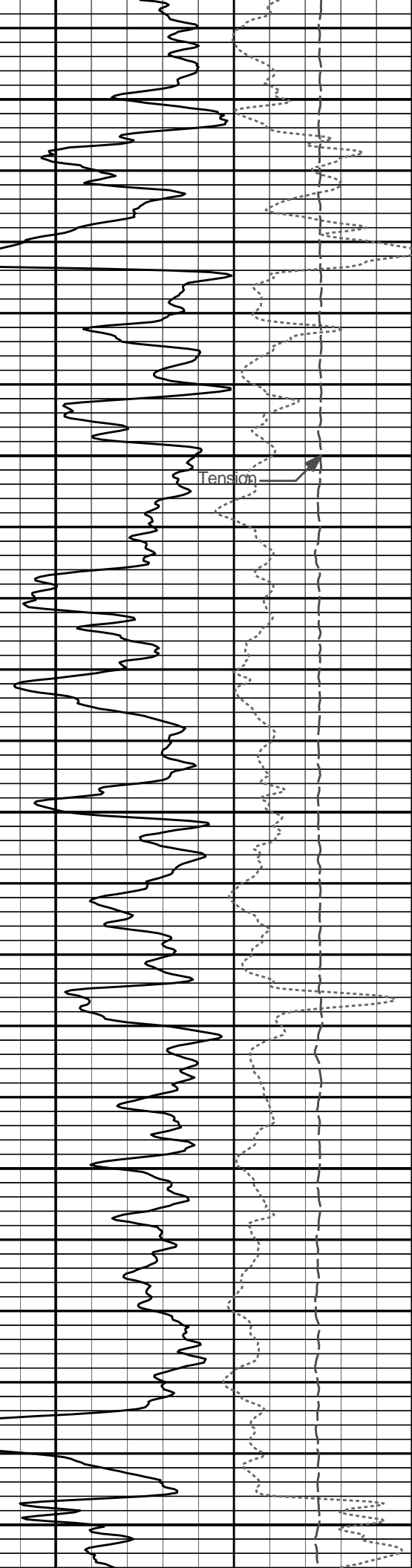
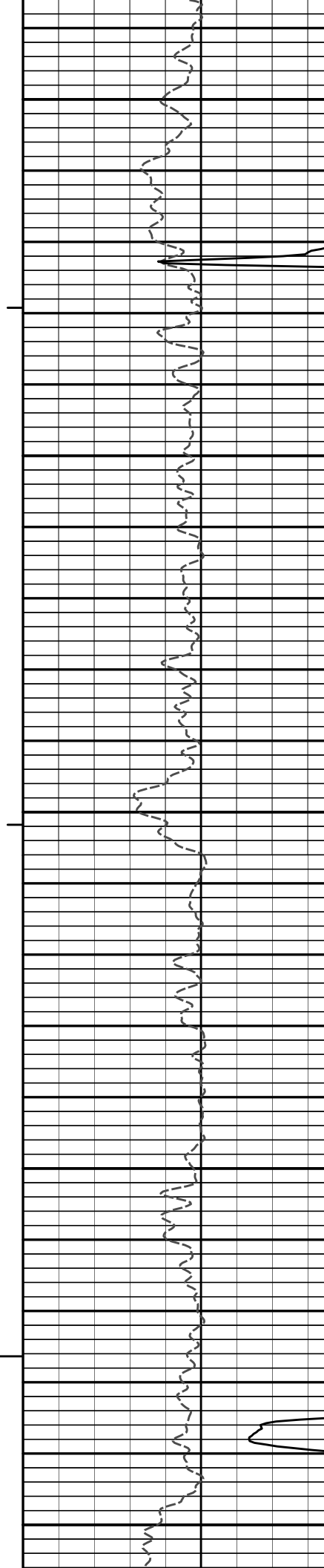


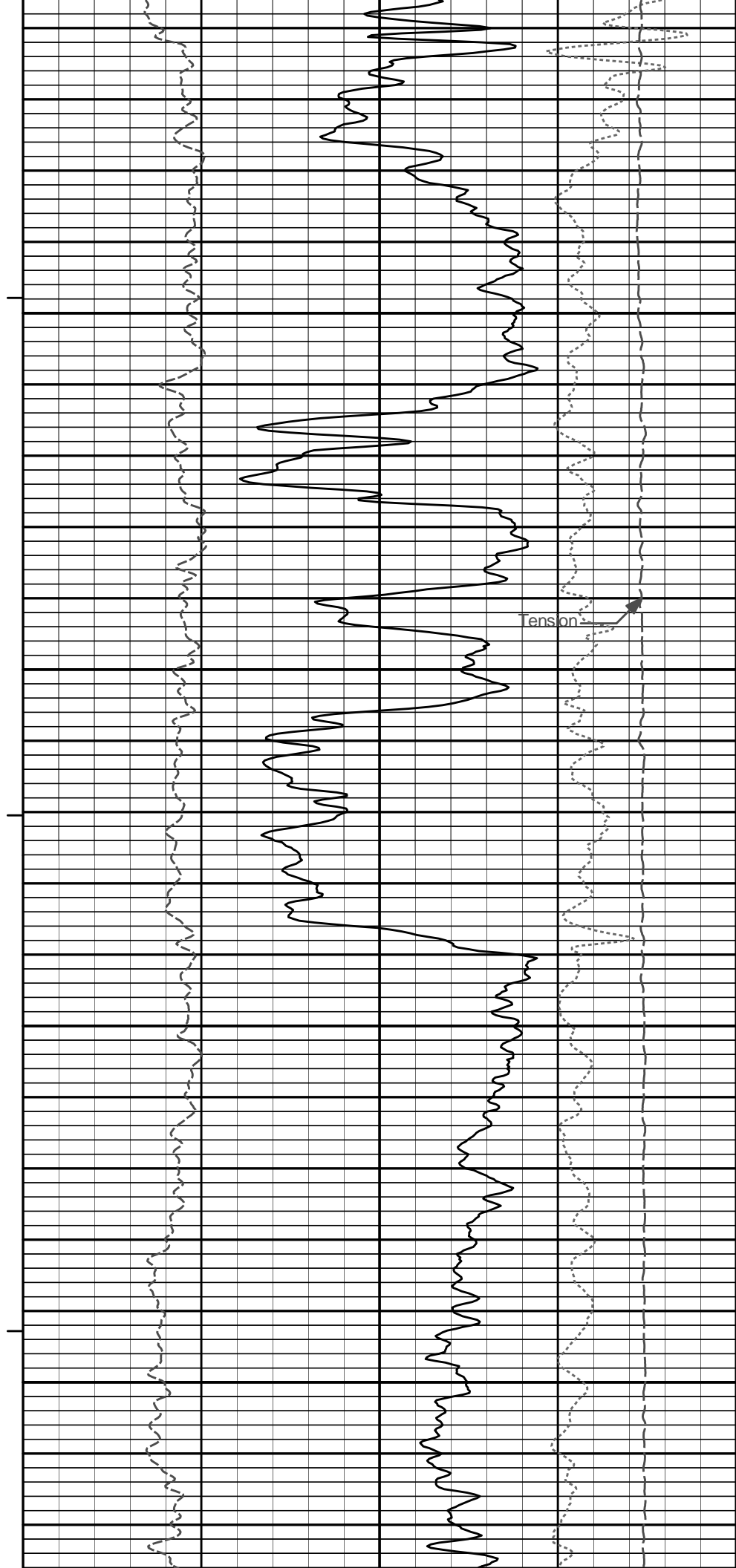
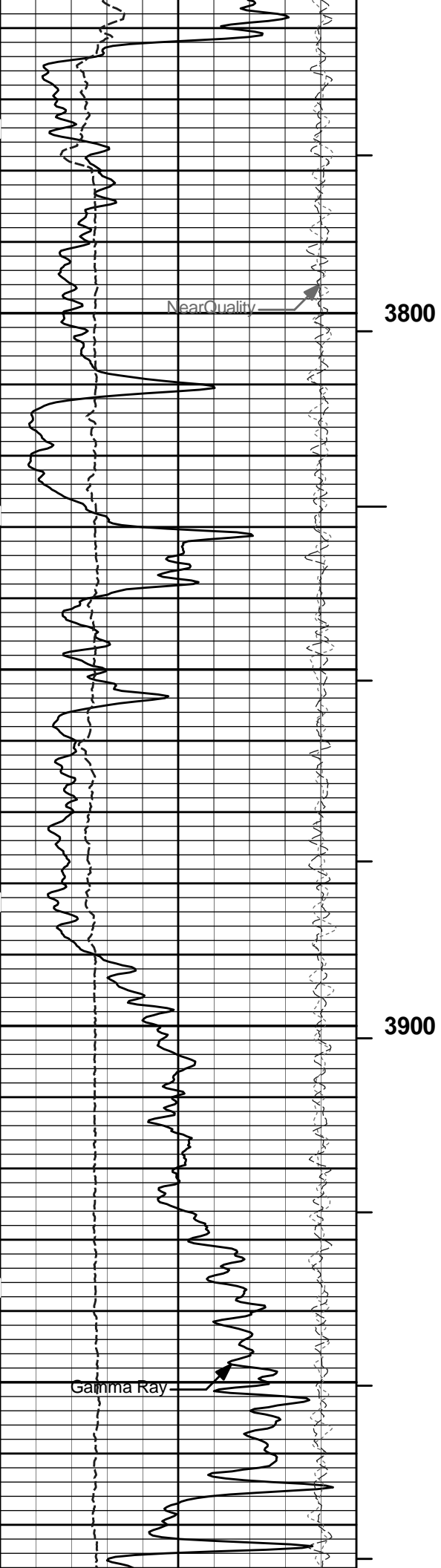


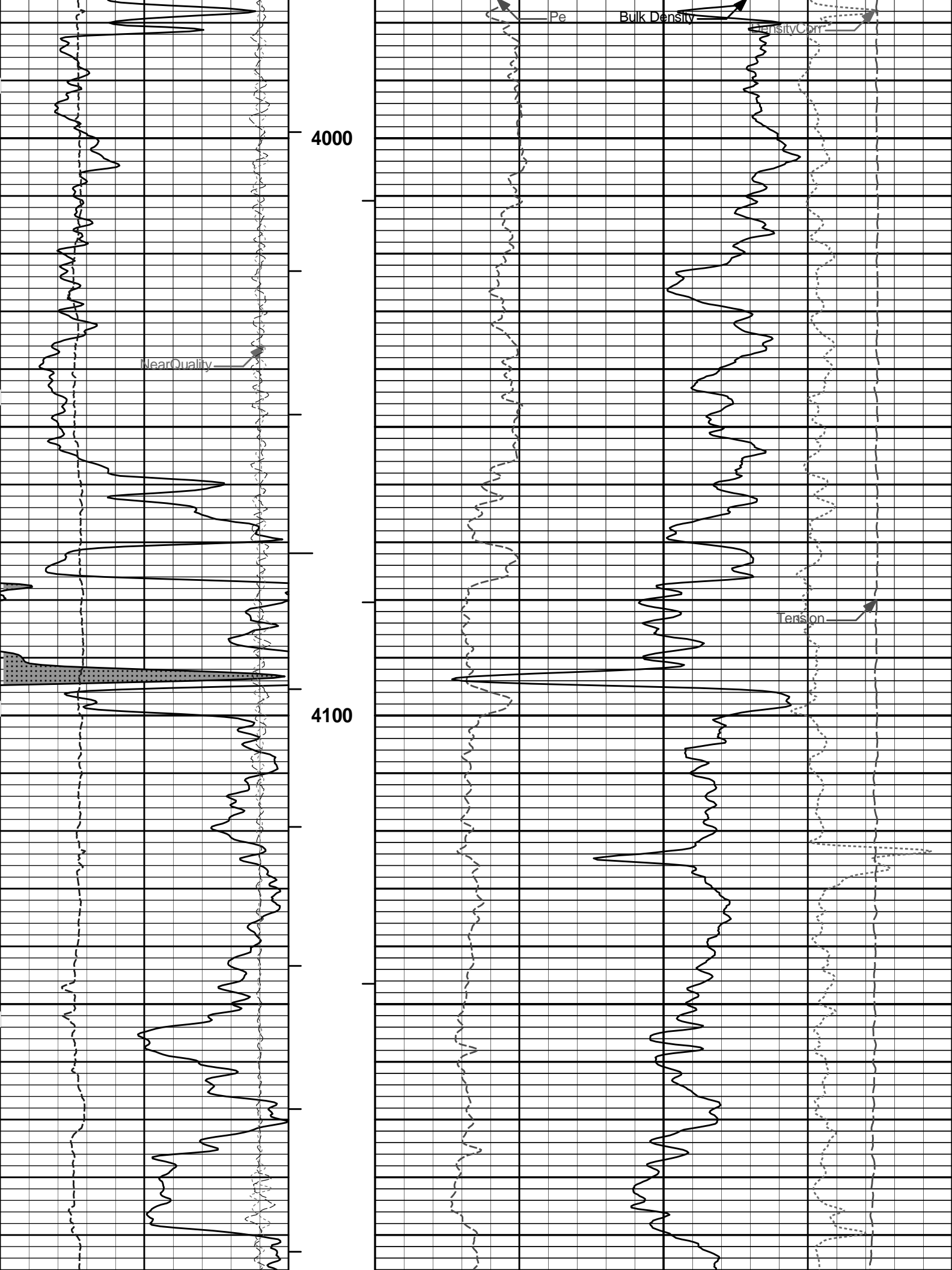


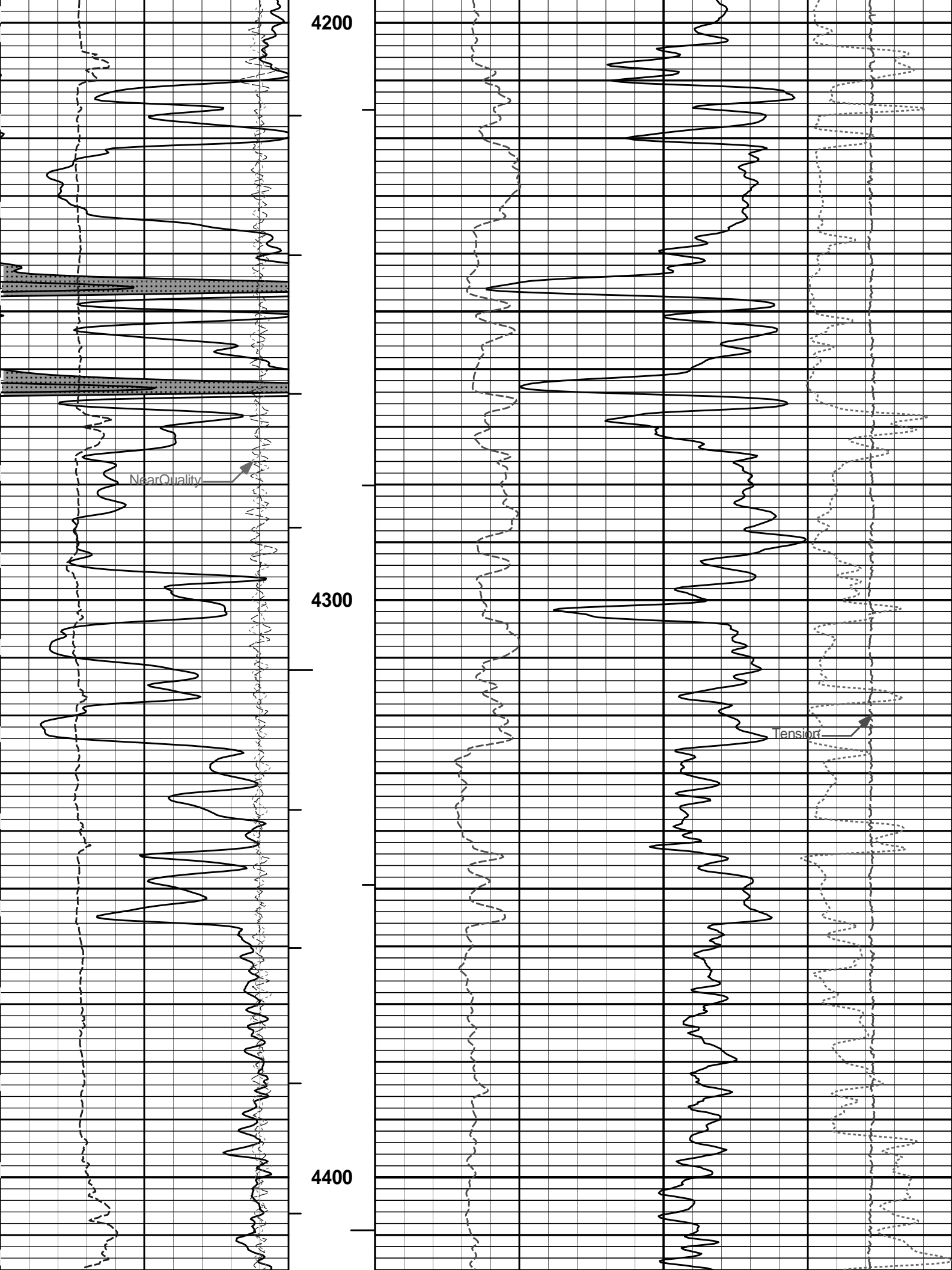
3600

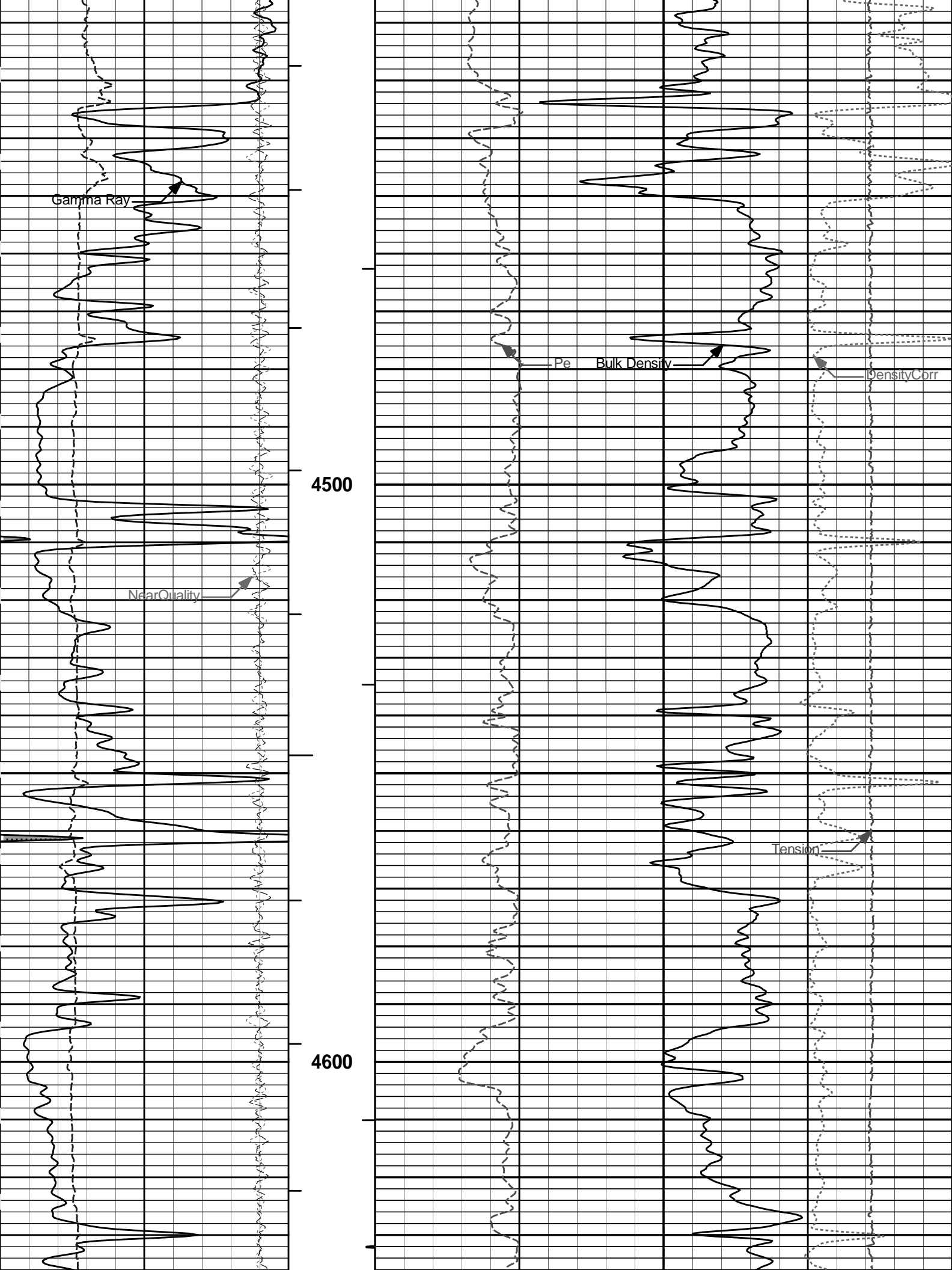
3700

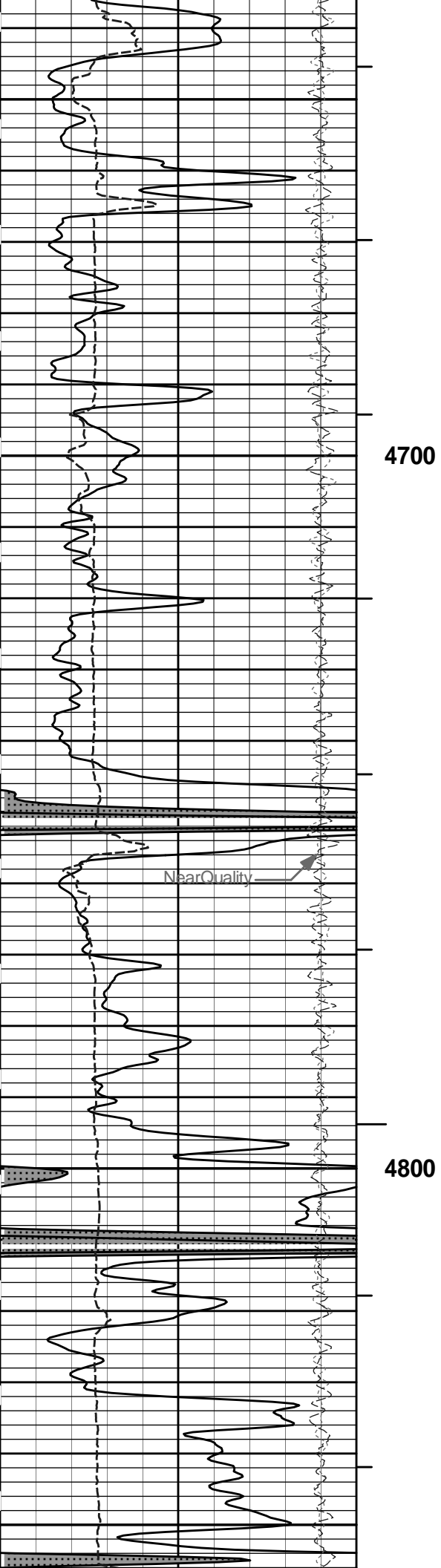










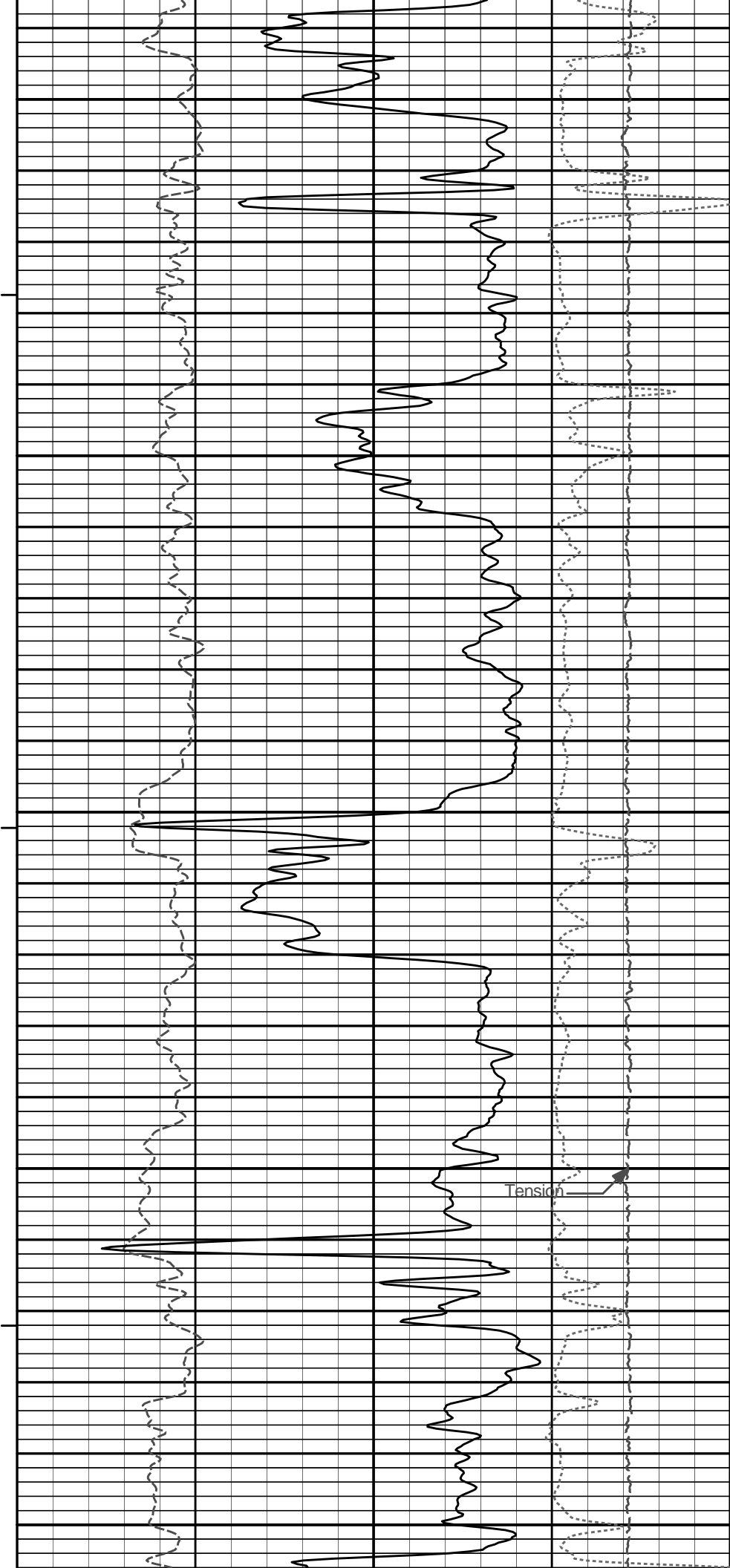


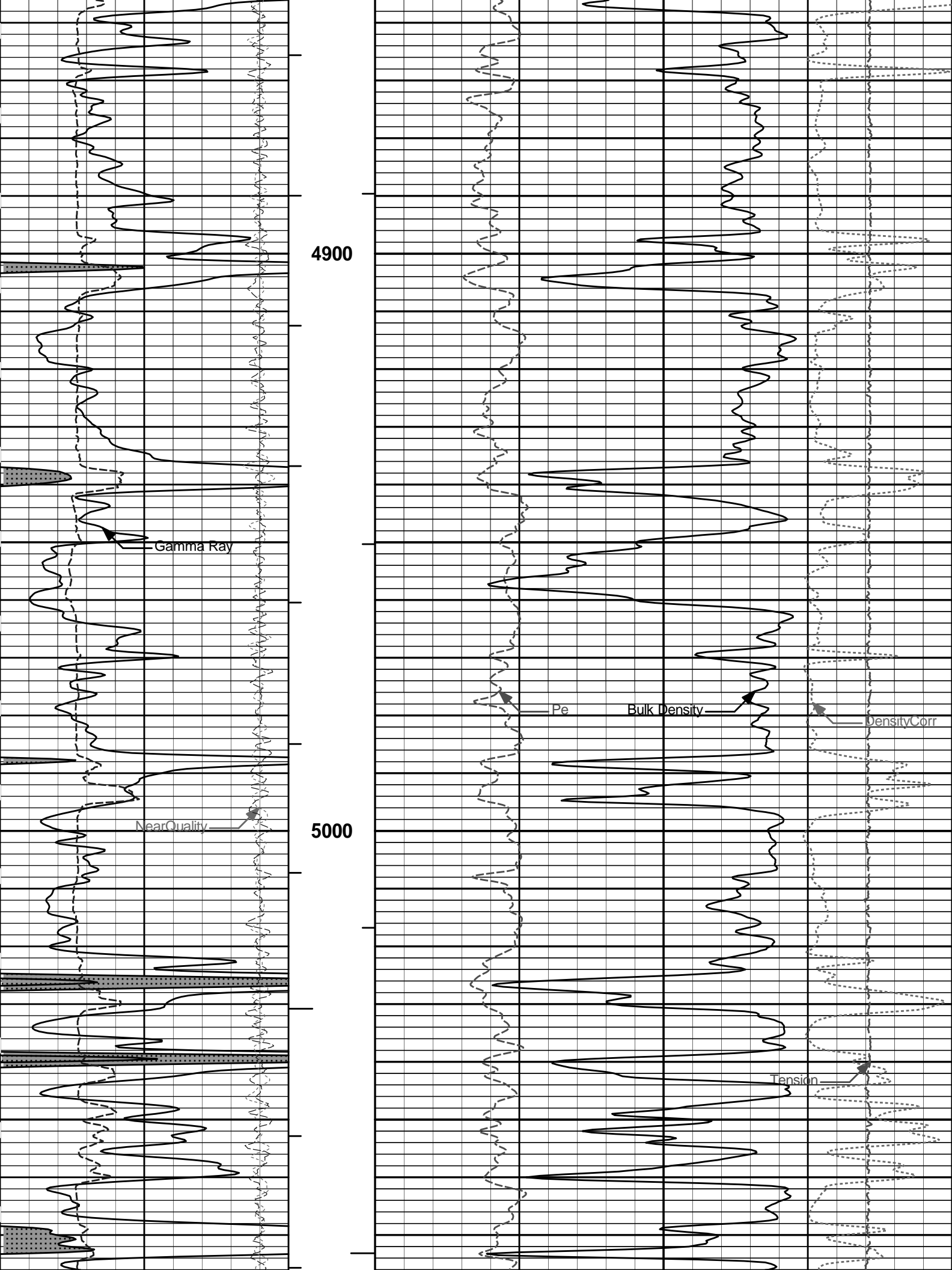
4700

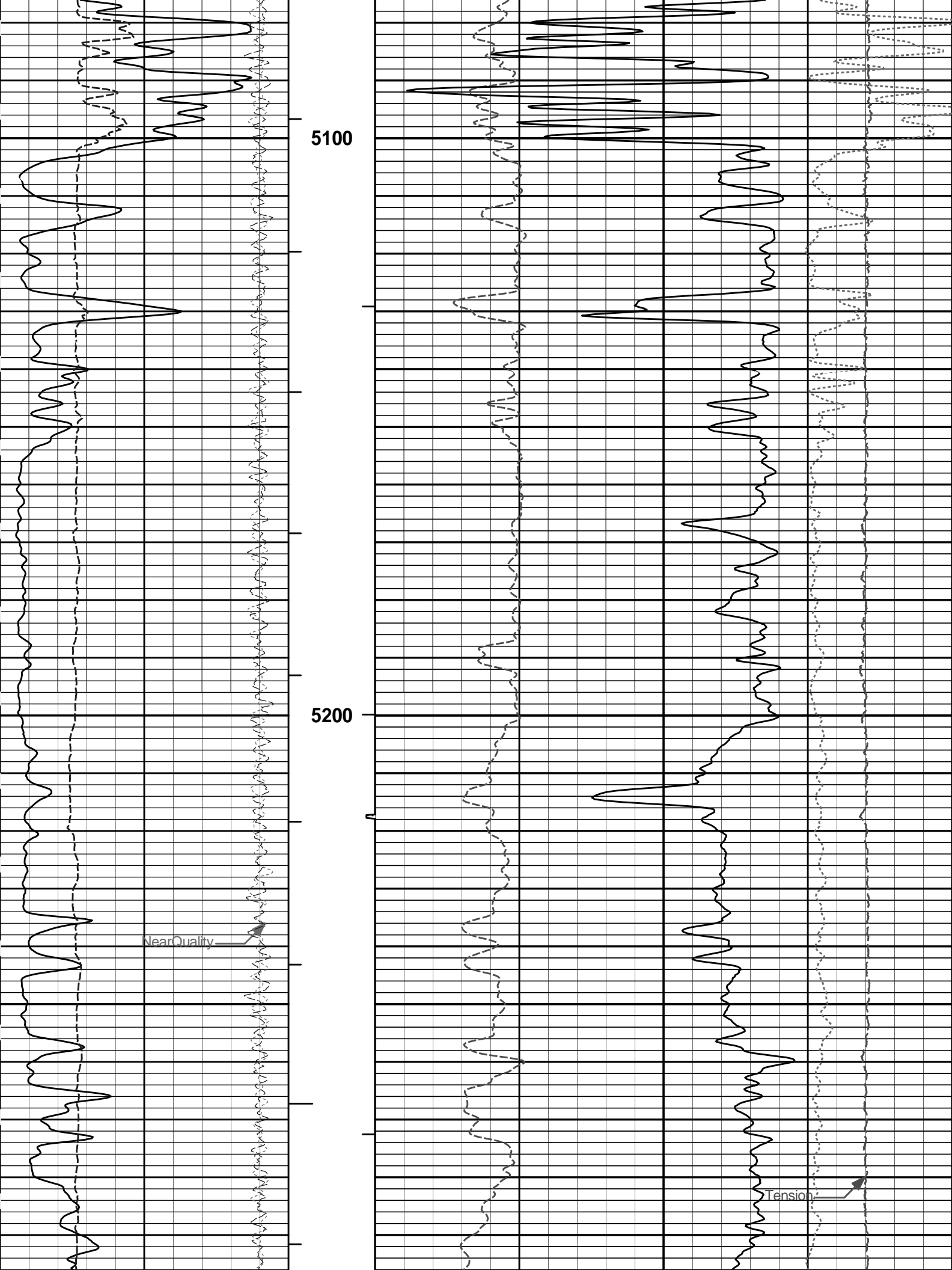
4800

NearQuality

Tension





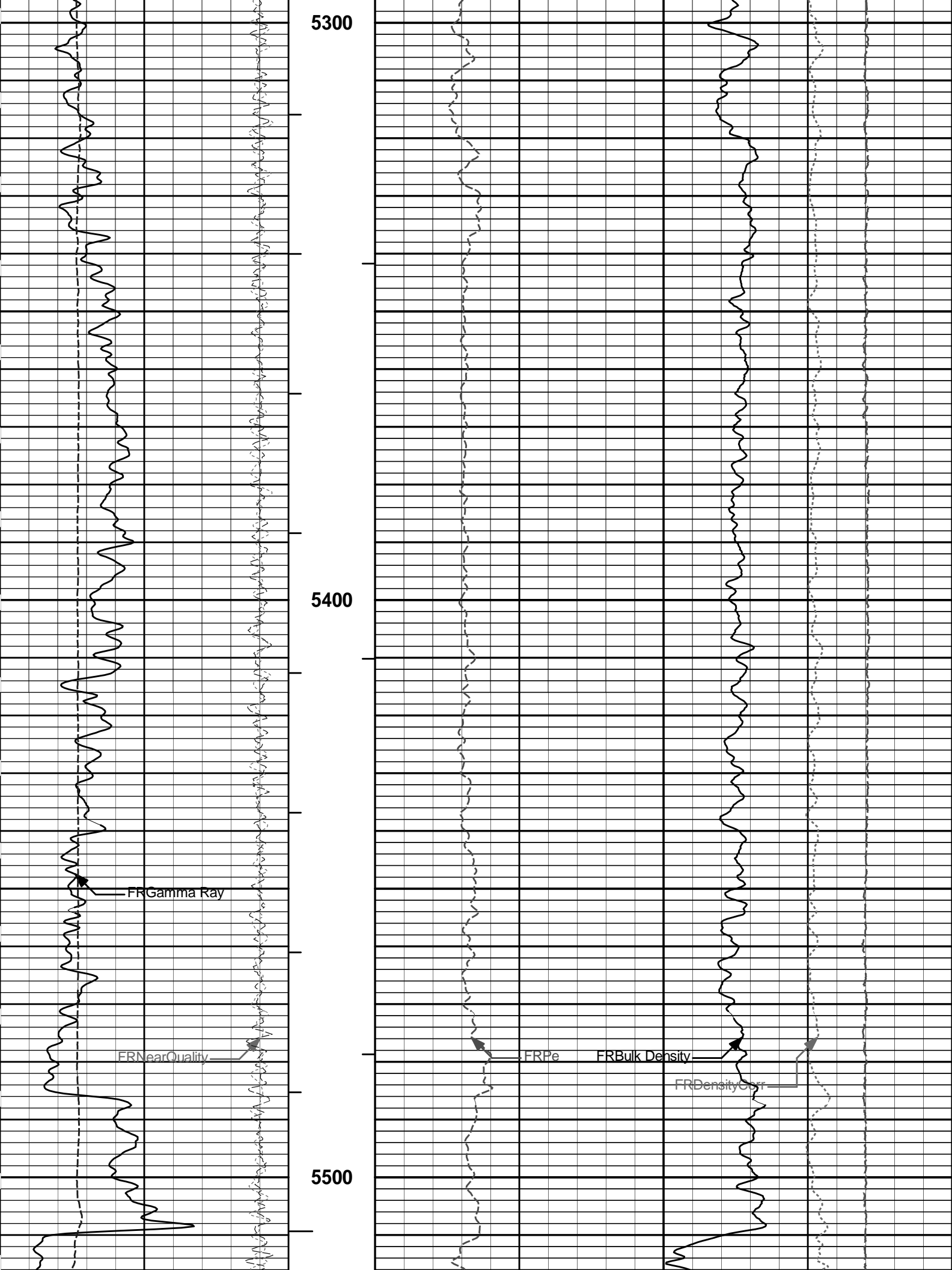


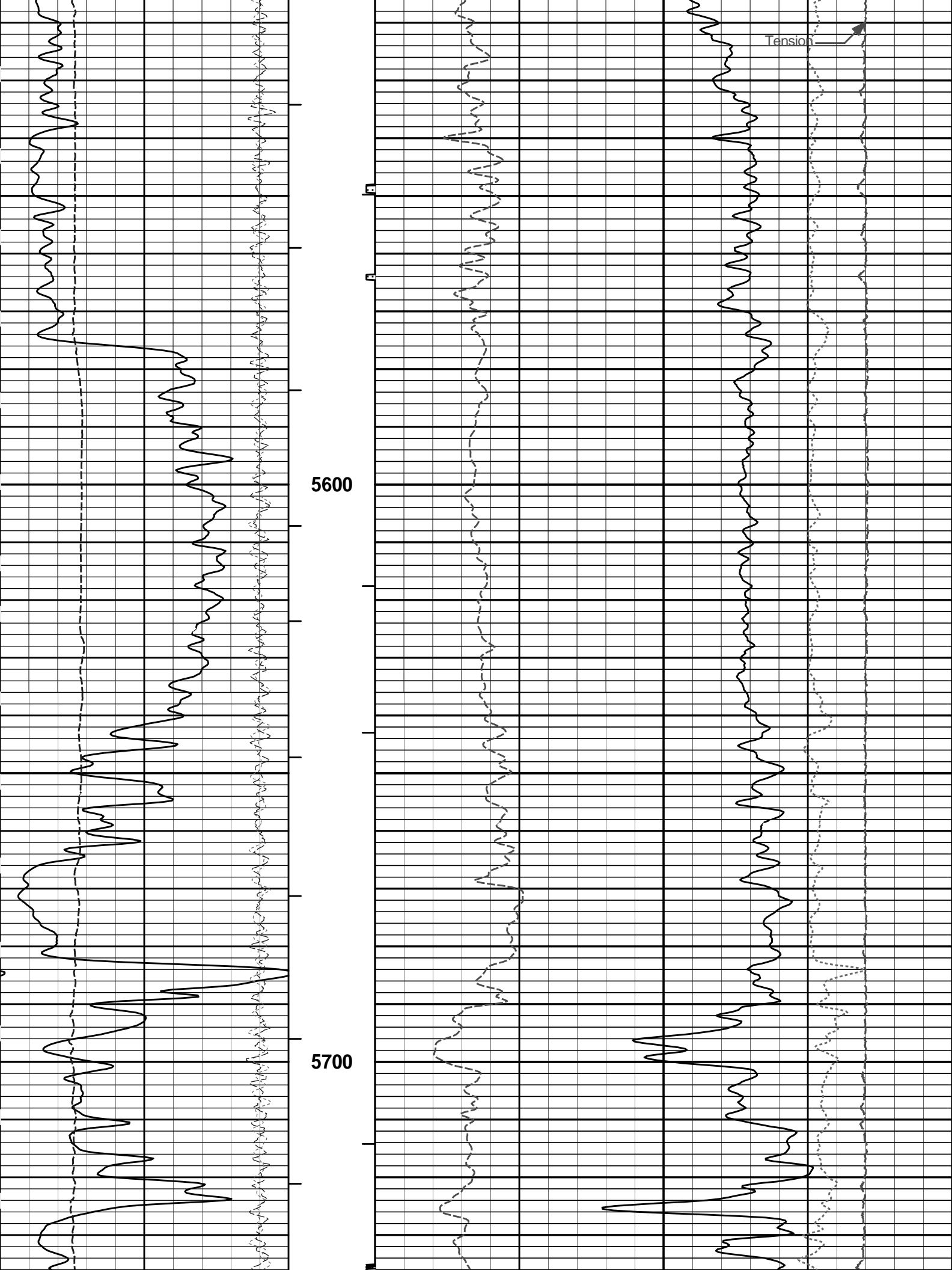
5100

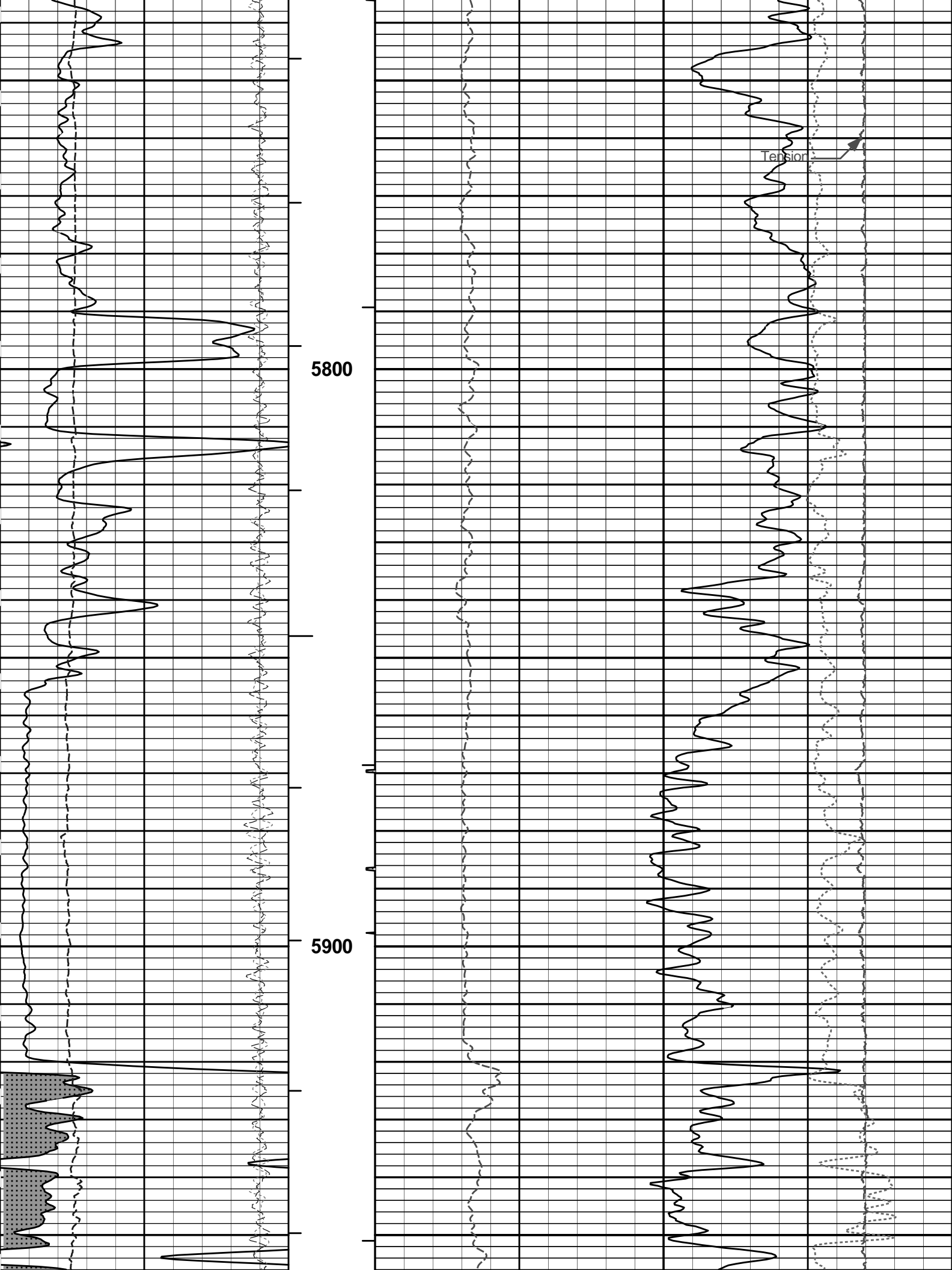
5200

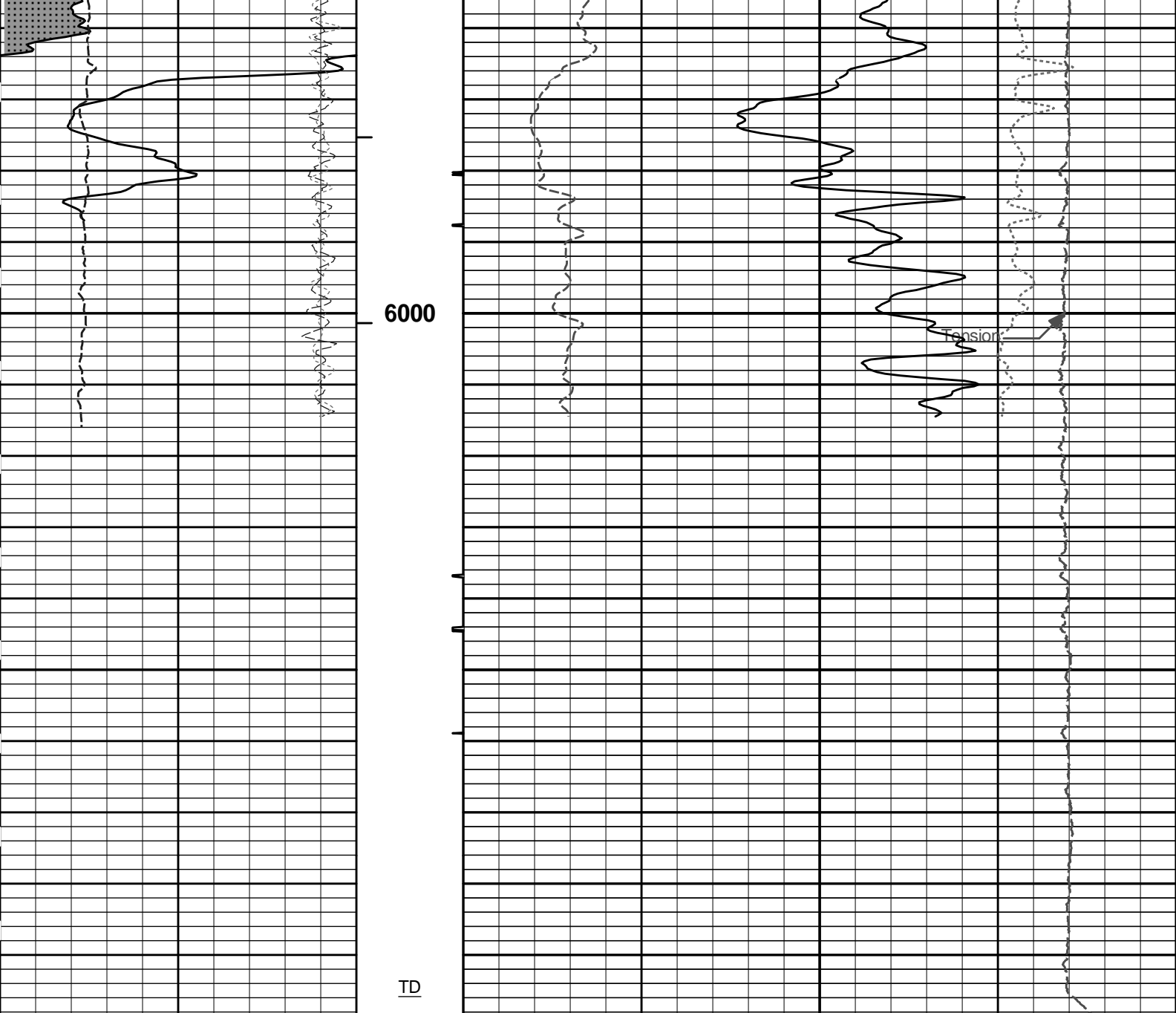
NearQuality

Tension









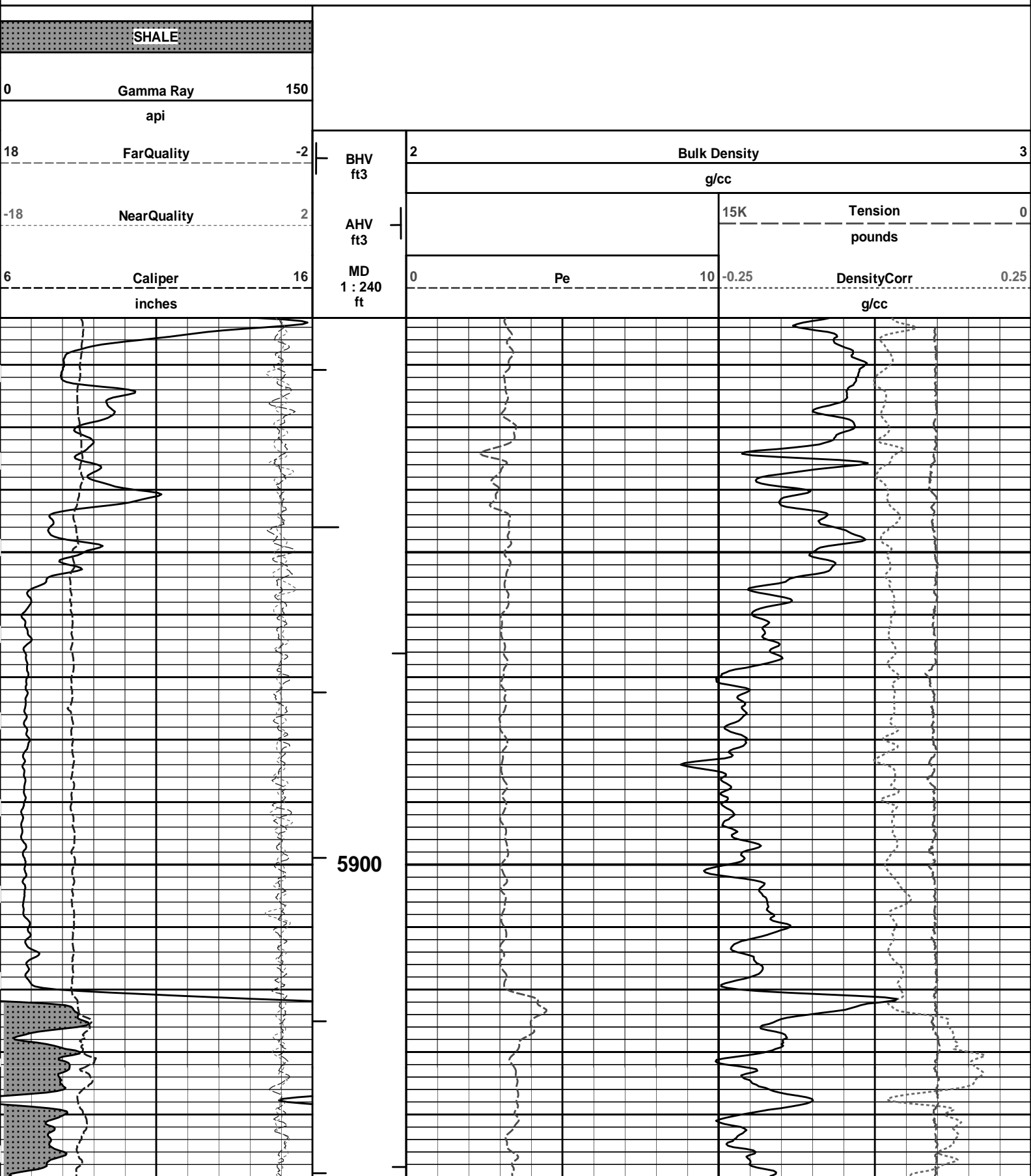
6	Caliper	16	MD	0	Pe	10	-0.25	DensityCorr	0.25
	inches		1 : 240					g/cc	
-18	NearQuality	2	AHV			15K		Tension	0
			ft3					pounds	
18	FarQuality	-2	BHV	2	Bulk Density				3
			ft3		g/cc				
0	Gamma Ray	150	Tension Pull	0					
	api		10	0					
	SHALE		Tension Pull						

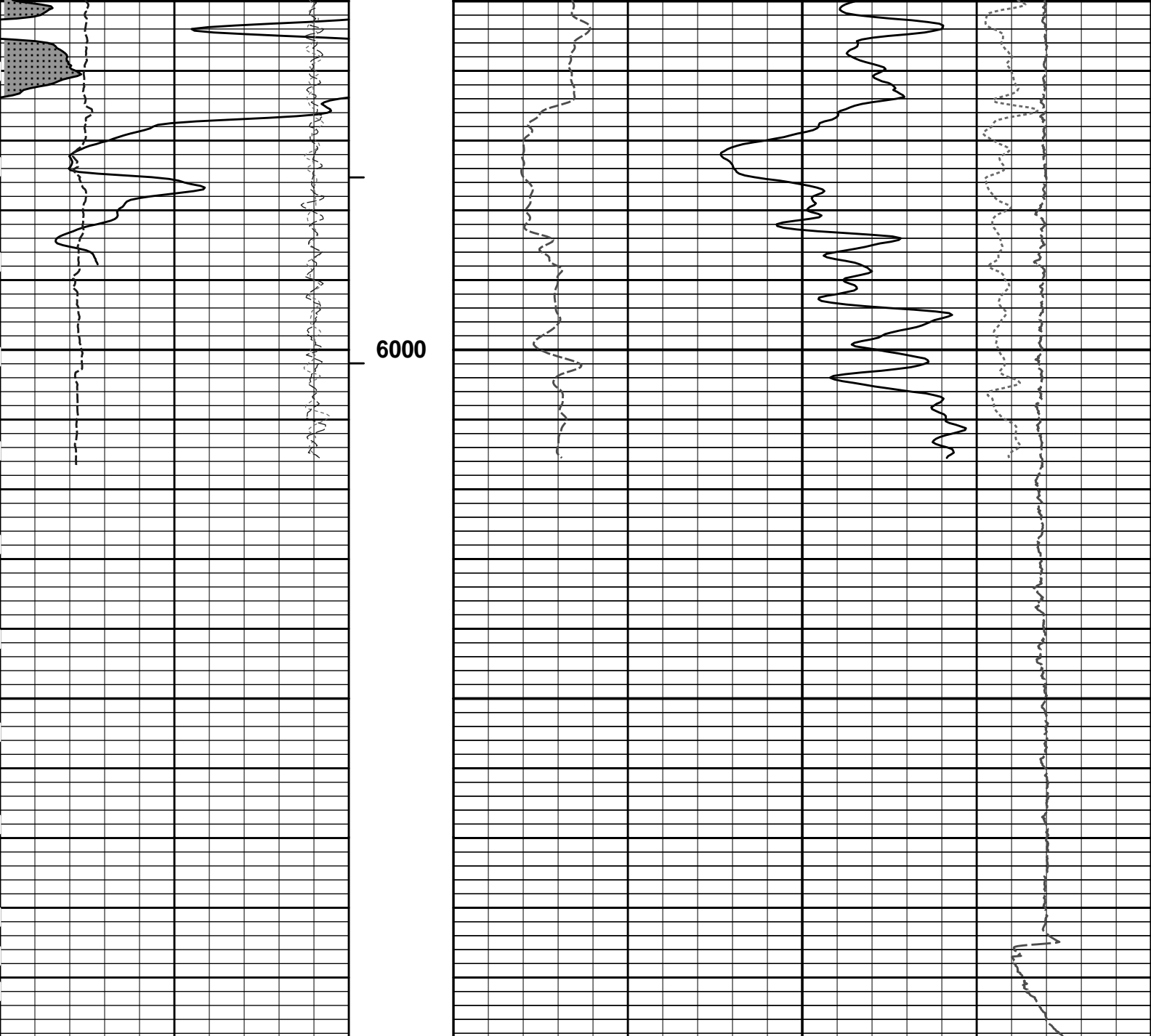
HALLIBURTON

Plot Time: 17-Jul-12 06:03:37
 Plot Range: 810 ft to 6098.42 ft
 Data: ALBERTA_MARIE_1\Well Based\R1_ELSE\
 Plot File: \\LOCAL-ALBERTA_MARIE_1\0001 SP-GTET-DSN-SDL-WSTT-XRMI-ACRT-CHIPORO\BULKD_5_MAIN_LIB

5 INCH MAIN LOG

REPEAT SECTION





6	Caliper	16	MD	0	10	-0.25	DensityCorr	0.25
	inches		1 : 240				g/cc	
-18	NearQuality	2	AHV			15K	Tension	0
			ft3				pounds	
18	FarQuality	-2	BHV	2	Bulk Density			3
			ft3		g/cc			
0	Gamma Ray	150						
	api							
	SHALE							

HALLIBURTON

Plot Time: 17-Jul-12 06:03:38
 Plot Range: 5812.5 ft to 6099.25 ft
 Data: ALBERTA_MARIE_1\Well Based\R1_REPEAT\
 Plot File: \\LOCAL-ALBERTA_MARIE_1\0001 SP-GTET-DSN-SDL-WSTT-XRMI-ACRT-CHPORO\BULKD_5_REP_LIB

REPEAT SECTION

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	122.21 ft	
SP Sub-11441455 60.00 lbs		Ø 3.625 in →		← SP @ 118.51 ft	3.74 ft	120.29 ft	
GTET-11039640 165.00 lbs		Ø 3.625 in →		← GammaRay @ 110.49 ft	8.52 ft	116.55 ft	
CSNG-10736164 114.00 lbs		Ø 3.625 in →		← CSNG @ 102.40 ft	8.17 ft	108.03 ft	
DSN Decentralizer- 11005605 6.60 lbs		Ø 5.000 in* →		← DSN Far @ 92.93 ft	9.69 ft	99.86 ft	
DSNT-11019643 174.00 lbs		Ø 3.625 in →		← DSN Near @ 92.18 ft			
SDLT-I43_M489 360.00 lbs	SDLT Pad-P81 65.00 lbs Microlog Pad-M489 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		Microlog @ 82.36 ft SDL Caliper @ 82.18 ft SDL @ 82.17 ft	10.81 ft	90.18 ft	
Centralizer 25-002		Ø 4.000 in* →					79.36 ft

8.00 lbs

Ø 4.500 in

Wavesonic-I-
10855601
520.00 lbs

Ø 3.625 in →

34.07 ft

← Wavesonic Delay @ 56.79 ft

Centralizer 25-001
8.00 lbs

Ø 4.000 in* →

XRMI Isolator-001
32.50 lbs

Ø 4.500 in →

1.30 ft

45.29 ft

43.99 ft

XRMI-I Instrument-
11682412
290.00 lbs

Ø 4.500 in →

13.00 ft

XRMI-I Mandrel-
11682413
206.00 lbs

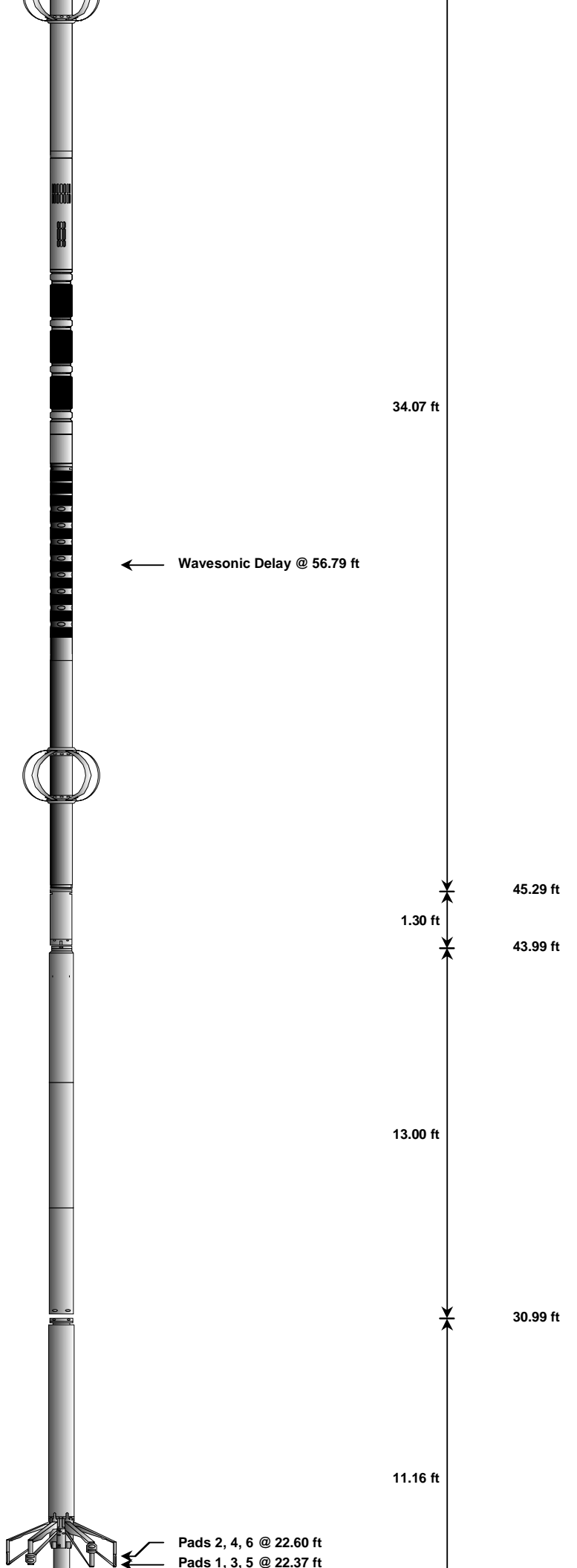
Ø 5.000 in →

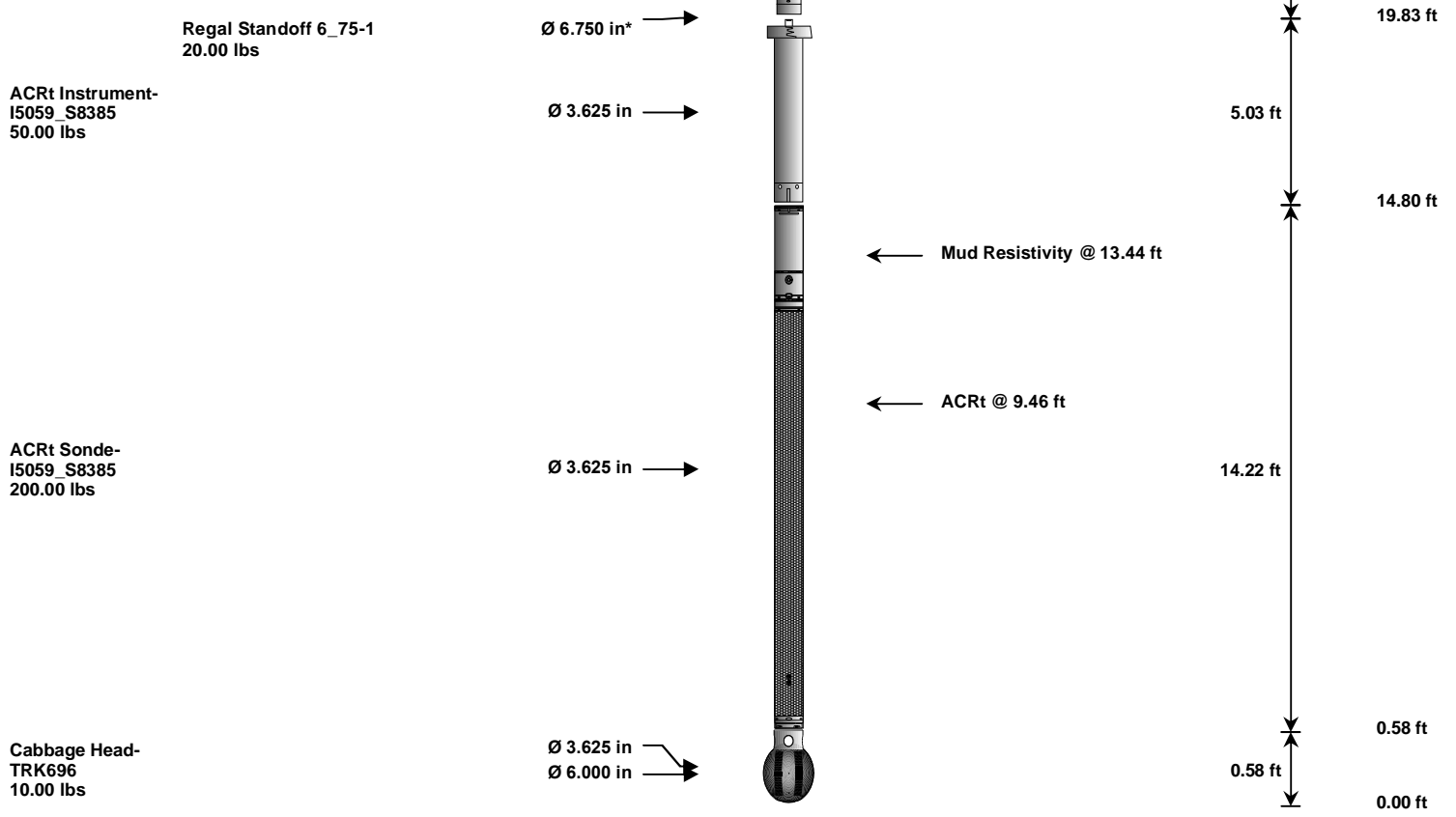
Ø 4.500 in →

11.16 ft

Pads 2, 4, 6 @ 22.60 ft

Pads 1, 3, 5 @ 22.37 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	120.29	300.00
SP	SP Sub	11441455	60.00	3.74	116.55	300.00
GTET	Gamma Telemetry Tool	11039640	165.00	8.52	108.03	60.00
CSNG	Compensated Spectral Natural Gamma	10736164	114.00	8.17	99.86	15.00
DSNT	Dual Spaced Neutron	11019643	174.00	9.69	90.18	60.00
DCNT	DSN Decentralizer	11005605	6.60	5.13	93.51	300.00
SDLT	Spectral Density Tool	I43_M489	360.00	10.81	79.36	60.00
SDLP	Density Insite Pad	P81	65.00	2.55	81.57	60.00
MICP	Microlog Pad	M489	8.00	1.00	81.86	60.00
WSTT	WaveSonic Insite	10855601	520.00	34.07	45.29	30.00
OBCEN	Centralizer - 25 in. Overbody	001	8.00	2.08	48.27	300.00
OBCEN	Centralizer - 25 in. Overbody	002	8.00	2.08	75.63	300.00
	Isolator for the XRMI tool	001	32.50	1.30	43.99	300.00
XRMI	XRMI Navigation - Insite	11682412	290.00	13.00	30.99	30.00
XRMI-I	XRMI Imager - Insite	11682413	206.00	11.16	19.83	30.00
ACRt	Array Compensated True Resistivity Instrument Section	I5059_S8385	50.00	5.03	14.80	300.00
RSOF	Regal Standoff 6.75in	1	20.00	0.52	19.31	300.00
ACRt	Array Compensated True Resistivity Sonde Section	I5059_S8385	200.00	14.22	0.58	300.00
CBHD	Cabbage Head	TRK696	10.00	0.58	0.00	300.00
Total			2,327.10	122.21		

* Not included in Total Length and Length Accumulation.

Data: ALBERTA_MARIE_1\0001 SP-GTET-DSN-SDL-WSTT-XRMI-ACRT-CHWDL

Date: 16-Jul-12 22:01:36

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11039640

Reference Calibration Date: 17-May-12 09:57:29

Engineer: THOMAS HYDE

Calibration Date: 14-Jun-12 09:57:44

Software Version: WL INSITE R3.4.2 (Build 2)

Calibration Version: 1

Calibrator Source S/N: TB146

Calibrator API Reference:265.00 api

Equivalent Calibrator API Reference:269.6 api

Measurement	Measured	Calibrated	Units
Background	51.3	51.0	api
Background + Calibrator	322.2	320.7	api
Calibrator	270.9	269.6	api

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 11019643

Reference Calibration Date: 13-Jul-12 10:27:47

Engineer: T. HYDE

Calibration Date: 13-Jul-12 10:44:01

Software Version: WL INSITE R3.6.0 (Build 3)

Calibration Version: 1

Logging Source S/N: 696

Tank Serial Number: LIBERAL_NEUTRON

Reference value assigned to Tank: 51.680

Snow Block S/N: 696

Calibration Tank Water Temperature: 78 degF

Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.949	0.947	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):	0.2113	0.2110	0.0003	+/- 0.0020
Calibrated Ratio:	9.74	9.73	0.011	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0636	0.02000 - 0.09000

PASS/FAIL SUMMARY

Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - I43_M489

Reference Calibration Date: 12-Jul-12 11:52:19

Engineer: T. HYDE

Calibration Date: 12-Jul-12 11:56:20

Software Version: WL INSITE R3.6.0 (Build 3)

Calibration Version: 1

Host Tool Name: DSNT - 11019643

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1931.94	-2130.51	-7000.00 - -1000.00
Pad Gain	0.0003956	0.0004016	0.000200 - 0.000600
Arm Offset	-746.21	-714.63	-5000.00 - 3000.00
Arm Gain	0.0005387	0.0005524	0.000300 - 0.000700

Arm Gain 0.0003387 -0.00007005 0.0003324 -0.00007671 0.000300 -0.0000700
 Arm Power -0.00007005 -0.00007671 -0.00010000 -0.00010000

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)	2.05	2.00	-0.05	+/- 0.20
Medium Ring (in)	3.77	3.75	-0.02	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.52	6.50	-0.02	+/- 0.20
Medium Ring (in)	8.24	8.25	0.01	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 0.20

PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed
PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed

SPECTRAL DENSITY SHOP CALIBRATION			
Tool Name:	SDLT Pad - P81	Reference Calibration Date:	12-Jul-12 11:10:03
Engineer:	T. HYDE	Calibration Date:	12-Jul-12 11:29:25
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1

Logging Source S/N: 5168GW
 Aluminum Block S/N: LIBERAL Density: 2.598g/cc Pe: 3.170
 Magnesium Block S/N: LIBERAL Density: 1.684g/cc Pe: 2.598

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0494	1.0276	0.90 - 1.10
Near Dens Gain	1.0245	1.0237	0.90 - 1.10
Near Peak Gain	1.0209	1.0117	0.90 - 1.10
Near Lith Gain	0.9944	0.9741	0.90 - 1.10
Far Bar Gain	1.0166	1.0157	0.90 - 1.10
Far Dens Gain	1.0025	1.0013	0.90 - 1.10
Far Peak Gain	0.9952	0.9951	0.90 - 1.10
Far Lith Gain	0.9728	0.9724	0.90 - 1.10
Near Bar Offset	-0.2421	-0.0440	NONE
Near Dens Offset	-0.0236	-0.0173	NONE
Near Peak Offset	0.0150	0.0901	NONE
Near Lith Offset	0.2244	0.3908	NONE
Far Bar Offset	0.0031	0.0070	NONE
Far Dens Offset	0.1122	0.1198	NONE
Far Peak Offset	0.1497	0.1484	NONE
Far Lith Offset	0.2992	0.3010	NONE
Near Bar Background	820.30	817.64	700 - 1450
Near Dens Background	268.11	268.51	230 - 480
Near Peak Background	118.01	117.58	100 - 210
Near Lith Background	145.20	145.39	125 - 260
Far Bar Background	532.97	531.83	450 - 900

Far Dens Background	209.40	210.36	175 - 345
Far Peak Background	84.28	85.05	70 - 140
Far Lith Background	86.17	86.29	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.683	1.684	0.001	+/- 0.015
Pe	2.552	2.564	0.012	+/- 0.150
ALUMINUM				
Density (g/cc)	2.595	2.598	0.003	+/- 0.01500
Pe	3.127	3.133	0.006	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0001	+/- 0.0110	0.0021	+/- 0.0140
Magnesium Block	0.0001	+/- 0.0110	-0.0011	+/- 0.0140
Aluminum Block	-0.0010	+/- 0.0110	0.0004	+/- 0.0140
Resolution	9.41	6.00 - 11.50	8.86	6.00 - 11.50
Internal Verifier(B+D+P+L)	1349	1200 - 2700	914	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

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11039640						
Gamma Ray Calibrator	269.6	-----	-----	0.0	+/- 9.00	api
DSNT-11019643						
Snow-Block Porosity	0.0636	-----	-----	0.0000	+/- .--	decg
SDLT-I43_M489						
Pad Extension	3.75	-----	-----	0.00	+/-0.20	in
Ring Diameter	8.25	-----	-----	0.00	+/-0.20	in
SDLT Pad-P81						
Near(B+D+P+L)	1349.120	-----	-----	0.000	+/-12.996	cps
Far(B+D+P+L)	913.515	-----	-----	0.000	+/-14.871	cps

Data: ALBERTA_MARIE_1\0001 SP-GTET-DSN-SDL-WSTT-XRMI-ACRT-CHNDLE Date: 17-Jul-12 02:53:05

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	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.100	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	2000.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	1.000	ohmm
	SHARED	TRM	Temperature of Mud	82.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	7.000	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	6100.00	ft
	SHARED	BHT	Bottom Hole Temperature	130.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	XRMI-I Instrument	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	XRMI-I Instrument	
	SHARED	TEMM	Temperature Master Tool	NONE	
	SHARED	BHSM	Borehole Size Master Tool	NONE	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
	Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
	Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
	Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in
	GTET	GEOK	Process Gamma Ray EVR?	No	
	GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
	CSNG	CGOK	Process CSNG Data?	Yes	
	CSNG	CENT	Is Tool Centralized?	No	
	CSNG	GBOK	Gamma Enviromental Corrections?	Yes	
	CSNG	BARF	Barite Correction Factor	1.00	
	CSNG	ORDG	Use Fixed Gain	No	
	CSNG	ORDO	Use Fixed Offset	No	
	CSNG	ORDR	Use Fixed Resolution Degradation Factor	No	
	DSNT	DNOK	Process DSN?	Yes	
	DSNT	DEOK	Process DSN EVR?	No	
	DSNT	NLIT	Neutron Lithology	Limestone	
	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	
	CDLT	CLOK	Process Caliper Outputs?	Yes	

SDLT	CLOK	Process Caliper Outputs?	Yes	
Microlog Pad	MLOK	Process MicroLog 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	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
Wavesonic-I	WSOK	Process WSTT?	Yes	
Wavesonic-I	AFIL	Adaptive Filtering?	No	
Wavesonic-I	PINT	Process 1 Sample and Skip	0	
Wavesonic-I	PROM	Process Mode: M=1,MX=2,MY=3,MXY=4	4	
Wavesonic-I	DTSH	Delta -T Shale	100.00	uspf
Wavesonic-I	DTMT	Delta -T Matrix Type	User define	
Wavesonic-I	DTMA	Delta -T Matrix	47.60	uspf
Wavesonic-I	DTFL	Delta -T Fluid	189.00	uspf
Wavesonic-I	RHOM	Matrix Density	2.7100	g/cc
Wavesonic-I	RHOF	Fluid Density	1.0000	g/cc
Wavesonic-I	SMTH	Semblance Threshold	0.25	
Wavesonic-I	VPVS	VPVS Ratio for Porosity	1.40	
Wavesonic-I	APEQ	Acoustic Porosity Equation	Wylie	
Wavesonic-I	NAVS	Navigation Source Tool	XRMI-I Instrument	
XRMI-I Instrument	WRTI	Survey Writing Interval	30	ft
XRMI-I Instrument	SOPT	Smoothing Option	None	
XRMI-I Mandrel	DIMG	Process XRMI?	Yes	
XRMI-I Mandrel	ROTI	Rotate Image (N-E-S-W-N)?	Yes	
XRMI-I Mandrel	AGN	Use Button Auto Gain?	Yes	
XRMI-I Mandrel	BCLR	Button Auto Gain Color	127	
XRMI-I Mandrel	BFIL	Button Auto Gain Filter	0.020	
XRMI-I Mandrel	BGAN	Button Gain Value	0.001	
XRMI-I Mandrel	BOFF	Button Offset	0	
XRMI-I Mandrel	DIPE	Process Dipmeter Calculations?	Yes	
XRMI-I Mandrel	BHCS	Process Borehole Corrections?	Yes	
XRMI-I Mandrel	CLOK	Process Caliper Outputs?	Yes	
XRMI-I Mandrel	CMAX	Caliper Maximum Limit	100.0	in
XRMI-I Mandrel	CMIN	Caliper Mimimum Limit	3.5	in
XRMI-I Mandrel	NAVS	Navigation Source Tool	XRMI-I Instrument	
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	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm

HALLIBURTON

INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
SP Sub				
PLTC	Plot Control Mask	118.51	NO	
SP	Spontaneous Potential	118.51	BLK	1.250
SPR	Raw Spontaneous Potential	118.51	NO	
SPO	Spontaneous Potential Offset	118.51	NO	
GTET				
TPUL	Tension Pull	110.49	NO	
GR	Natural Gamma Ray API	110.49	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	110.49	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	110.49	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
CSNG				
TPUL	Tension Pull	102.40	NO	
STAT	Status	102.40	NO	
FRMC	Tool Frame Count	102.40	BLK	0.250
TFRM	Total Frames	102.40	NO	
LSPD	Line Speed	102.40	BLK	0.250
CTIM	Accumulation time for sample	102.40	BLK	0.250
NOIS	Spectral Noise	102.40	BLK	0.250
STAB	Stabilizer Voltage in mv	102.40	BLK	0.250
STBP	Stabilizer 60 KEV Peak	102.40	BLK	0.250
AMER	Americium	102.40	BLK	0.250
FTMP	Flask PCB Temperature	102.40	BLK	0.250
SPEL	Low Energy Spectrum	102.40	BLK	0.250
SPEH	High Energy Spectrum	102.40	BLK	0.250
SSP	Stabilization Energy Spectrum	102.40	BLK	0.250
CSPC	CSNG Lo Hi Spectrum Data	102.40	NO	
DSNT				
TPUL	Tension Pull	92.08	NO	
RNDS	Near Detector Telemetry Counts	92.18	BLK	1.417
RFDS	Far Detector Telemetry Counts	92.93	TRI	0.583
DNTT	DSN Tool Temperature	92.18	NO	
DSNS	DSN Tool Status	92.08	NO	
ERND	Near Detector Telemetry Counts EVR	92.18	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	92.93	BLK	0.000
ENTM	DSN Tool Temperature EVR	92.18	NO	
SDLT				
TPUL	Tension Pull	82.18	NO	
PCAL	Pad Caliper	82.18	TRI	0.250
ACAL	Arm Caliper	82.18	TRI	0.250
Wavesonic-I				
TPUL	Tension Pull	56.79	NO	
DPSX	Dipole Source X StructureI	45.29	NO	
DPSY	Dipole Source Y StructureI	45.29	NO	
DPSM	Monopole Source Structure	45.29	NO	

WVST	Wavesonic Compressed Data	56.79	NO
TPUL	Tension Pull	56.79	NO
XMS1	Wave Sonic Status Word 1	45.29	NO
XMS2	Wave Sonic Status Word 2	45.29	NO
XMS1	Wave Sonic XMITStatus Word 1	45.29	NO
XMS1	Wave Sonic XMITStatus Word 2	45.29	NO
F1HA	Dipole 1 HV After	45.29	NO
F1HB	Dipole 1 HV Before	45.29	NO
F2HA	Dipole 2 HV After	45.29	NO
F2HB	Dipole 2 HV Before	45.29	NO
F3HA	Monopole HV After	45.29	NO
F3HB	Monopole HV Before	45.29	NO
INVT	Input Voltage	45.29	NO
5VOL	5 Volts	45.29	NO
MI5A	Minus 5 Volts Analog	45.29	NO
ITMP	Instrument Temperature	45.29	NO
PL5A	Plus 5 Volts Analog	45.29	NO
5VD	Plus 5 Volts Digital	45.29	NO
TCUR	Tool Current	45.29	NO
SUPV	Supply Voltage	45.29	NO
PRVT	Preregulated voltage	45.29	NO
PRVT	Pre-regulated voltage Xmter	45.29	NO
TEMP	Temperature	45.29	NO
ACQN	Acquisition Number	45.29	NO
XDP	Delay Reference	56.79	NO
MITM	MIT Mode	56.79	NO
VERS	Version	45.29	NO
D1CT	Dipole 1 Compressed Word Count	56.79	NO
D2CT	Dipole 2 Compressed Word Count	56.79	NO
MCNT	Monopole Compressed Word Count	56.79	NO
SEQN	Sequence Number	45.29	NO
FREV	Firmware Revision	45.29	NO
MSMP	Monopole Sample Rate	45.29	NO
MSMP	Dipole Sample Rate	45.29	NO
MFWF	Monopole Firing Waveform	45.29	NO
MFRQ	Monopole Frequency	45.29	NO
MDLY	Monopole Delay	45.29	NO
DXWF	Dipole X Firing Waveform	45.29	NO
XFRQ	Dipole X Frequency	45.29	NO
XDLY	Dipole X Delay	45.29	NO
DYWF	Dipole Y Firing Waveform	45.29	NO
YFRQ	Dipole Y Frequency	45.29	NO
YDLY	Dipole Y Delay	45.29	NO
DPSX	Dipole Source X Structurel	45.29	NO
DPSY	Dipole Source Y Structurel	45.29	NO
DPSM	Monopole Source Structure	45.29	NO
WVST	Wavesonic Compressed Data	56.79	NO
AUTM	Auto Mode	45.29	NO
SONM	tool mode for sonic - 0 for normal or 3 for calibration	45.29	NO
MSL	Monopole Lower Travel Time	56.79	NO
MSH	Monopole Upper Travel Time	56.79	NO
MLFC	Monopole-1 Lower Filter Bandpass Frequency Cut-off	45.29	NO
MUFC	Monopole-1 Upper Filter Bandpass Frequency Cut-off	45.29	NO
DLTT	Dipole Lower Travel Time	45.29	NO
DUTT	Dipole Upper Travel Time	45.29	NO
DLFC	Dipole-1 Lower Filter Bandpass Frequency Cut-off	45.29	NO

DLFC	Dipole Lower Filter Bandpass Frequency Cut-off	45.29	NO
DUFC	Dipole Upper Filter Bandpass Frequency Cut-off	45.29	NO
MUTE	WaveSonic Mute/Enable Channels and Sides map	45.29	NO
MUTS	Mute/Enable Sides	45.29	NO
WSRB	Relative Bearing	56.79	NO
WSAZ	WSX Azimuth Pad 1	56.79	NO
TPUL	Tension Pull	56.79	NO
WMP	Summed array of Monopole for SIDES - A,B,C,D	56.79	NO
WXX	Dipole X for SIDES - A-C	56.79	NO
WYY	Dipole Y for SIDES - B-D	56.79	NO
WXY	Dipole X for SIDES - B-D	56.79	NO
WYX	Dipole Y for SIDES - A-C	56.79	NO
TPUL	Tension Pull	56.79	NO
WMA	Monopole Waveform Side A - Channel 1 to Channel 8 Receivers	56.79	NO
WMB	Monopole Waveform Side B - Channel 1 to Channel 8 Receivers	56.79	NO
WMC	Monopole Waveform Side C - Channel 1 to Channel 8 Receivers	56.79	NO
WMD	Monopole Waveform Side D - Channel 1 to Channel 8 Receivers	56.79	NO
WXA	Dipole X Waveform Side A - Channel 1 to Channel 8 Receivers	56.79	NO
WXB	Dipole X Waveform Side B - Channel 1 to Channel 8 Receivers	56.79	NO
WXC	Dipole X Waveform Side C - Channel 1 to Channel 8 Receivers	56.79	NO
WXD	Dipole X Waveform Side D - Channel 1 to Channel 8 Receivers	56.79	NO
WYA	Dipole Y Waveform Side A - Channel 1 to Channel 8 Receivers	56.79	NO
WYB	Dipole Y Waveform Side B - Channel 1 to Channel 8 Receivers	56.79	NO
WYC	Dipole Y Waveform Side C - Channel 1 to Channel 8 Receivers	56.79	NO
WYD	Dipole Y Waveform Side D - Channel 1 to Channel 8 Receivers	56.79	NO
GAR1	Gain Side A Receiver 1	45.29	NO
GAR2	Gain Side A Receiver 2	45.29	NO
GAR3	Gain Side A Receiver 3	45.29	NO
GAR4	Gain Side A Receiver 4	45.29	NO
GAR5	Gain Side A Receiver 5	45.29	NO
GAR6	Gain Side A Receiver 6	45.29	NO
GAR7	Gain Side A Receiver 7	45.29	NO
GAR8	Gain Side A Receiver 8	45.29	NO
GBR1	Gain Side B Receiver 1	45.29	NO
GBR2	Gain Side B Receiver 2	45.29	NO
GBR3	Gain Side B Receiver 3	45.29	NO
GBR4	Gain Side B Receiver 4	45.29	NO
GBR5	Gain Side B Receiver 5	45.29	NO
GBR6	Gain Side B Receiver 6	45.29	NO
GBR7	Gain Side B Receiver 7	45.29	NO
GBR8	Gain Side B Receiver 8	45.29	NO
GCR1	Gain Side C Receiver 1	45.29	NO
GCR2	Gain Side C Receiver 2	45.29	NO
GCR3	Gain Side C Receiver 3	45.29	NO
GCR4	Gain Side C Receiver 4	45.29	NO
GCR5	Gain Side C Receiver 5	45.29	NO
GCR6	Gain Side C Receiver 6	45.29	NO
GCR7	Gain Side C Receiver 7	45.29	NO
GCR8	Gain Side C Receiver 8	45.29	NO
GDR1	Gain Side D Receiver 1	45.29	NO

GDR2	Gain Side D Receiver 2	45.29	NO	
GDR3	Gain Side D Receiver 3	45.29	NO	
GDR4	Gain Side D Receiver 4	45.29	NO	
GDR5	Gain Side D Receiver 5	45.29	NO	
GDR6	Gain Side D Receiver 6	45.29	NO	
GDR7	Gain Side D Receiver 7	45.29	NO	
GDR8	Gain Side D Receiver 8	45.29	NO	
XRMI-I Mandrel				
TPUL	Tension Pull	22.60	NO	
PAD1	XRMI Pad 1 values	22.36	NO	
PAD2	XRMI Pad 2 values	22.36	NO	
PAD3	XRMI Pad 3 values	22.36	NO	
PAD4	XRMI Pad 4 values	22.36	NO	
PAD5	XRMI Pad 5 values	22.36	NO	
PAD6	XRMI Pad 6 values	22.36	NO	
OD1	EMI Odd Button Values Pad 1	22.36	NO	
OD2	EMI Odd Button Values Pad 2	22.60	NO	
OD3	EMI Odd Button Values Pad 3	22.36	NO	
OD4	EMI Odd Button Values Pad 4	22.60	NO	
OD5	EMI Odd Button Values Pad 5	22.36	NO	
OD6	EMI Odd Button Values Pad 6	22.60	NO	
EV1	EMI Even Button Values Pad 1	22.39	NO	
EV2	EMI Even Button Values Pad 2	22.57	NO	
EV3	EMI Even Button Values Pad 3	22.39	NO	
EV4	EMI Even Button Values Pad 4	22.57	NO	
EV5	EMI Even Button Values Pad 5	22.39	NO	
EV6	EMI Even Button Values Pad 6	22.57	NO	
ITMP	Instrument Temperature	19.83	NO	
EMIM	Tool Mode	19.83	NO	
HAZI	Hole Azimuth	22.11	NO	
HAZI	Hole Azimuth - Down Delay	22.61	NO	
ZACC	Accelerometer Z	22.36	NO	
TPUL	Tension Pull	22.60	NO	
FIR1	Current Button R - Pad 1	22.36	NO	
FIR2	Current Button R - Pad 2	22.60	NO	
FIR3	Current Button R - Pad 3	22.36	NO	
FIR4	Current Button R - Pad 4	22.60	NO	
FIR5	Current Button R - Pad 5	22.36	NO	
FIR6	Current Button R - Pad 6	22.60	NO	
FIX1	Current Button X - Pad 1	22.36	NO	
FIX2	Current Button X - Pad 2	22.60	NO	
FIX3	Current Button X - Pad 3	22.36	NO	
FIX4	Current Button X - Pad 4	22.60	NO	
FIX5	Current Button X - Pad 5	22.36	NO	
FIX6	Current Button X - Pad 6	22.60	NO	
SIR1	Current Slow Button R - Pad 1	22.36	BLK	3.000
SIR2	Current Slow Button R - Pad 2	22.60	BLK	3.000
SIR3	Current Slow Button R - Pad 3	22.36	BLK	3.000
SIR4	Current Slow Button R - Pad 4	22.60	BLK	3.000
SIR5	Current Slow Button R - Pad 5	22.36	BLK	3.000
SIR6	Current Slow Button R - Pad 6	22.60	BLK	3.000
SIX1	Current Slow Button X - Pad 1	22.36	BLK	3.000
SIX2	Current Slow Button X - Pad 2	22.60	BLK	3.000
SIX3	Current Slow Button X - Pad 3	22.36	BLK	3.000
SIX4	Current Slow Button X - Pad 4	22.60	BLK	3.000

SIX4	Current Slow Button X - Pad 4	22.36	BLK	3.000
SIX5	Current Slow Button X - Pad 5	22.36	BLK	3.000
SIX6	Current Slow Button X - Pad 6	22.60	BLK	3.000
EMMR	Phasor Voltage - Real Part	22.36	NO	
EMMX	Phasor Voltage - Imaginary Part	22.36	NO	
PADV	Pad Voltage	19.83	BLK	0.250
ITMP	Instrument Temperature	19.83	BLK	0.000
CON1	Conductivity Pad 1	22.36	BLK	3.000
CON2	Conductivity Pad 2	22.60	BLK	3.000
CON3	Conductivity Pad 3	22.36	BLK	3.000
CON4	Conductivity Pad 4	22.60	BLK	3.000
CON5	Conductivity Pad 5	22.36	BLK	3.000
CON6	Conductivity Pad 6	22.60	BLK	3.000
UIR2	Current Button R No Delay - Pad 2	22.36	NO	
UIR4	Current Button R No Delay - Pad 4	22.36	NO	
UIR6	Current Button R No Delay - Pad 6	22.36	NO	
UIX2	Current Button X No Delay - Pad 2	22.36	NO	
UIX4	Current Button X No Delay - Pad 4	22.36	NO	
UIX6	Current Button X No Delay - Pad 6	22.36	NO	
TPUL	Tension Pull	22.60	NO	
ARM1	Caliper 1 measurement	22.36	BLK	0.000
ARM2	Caliper 2 measurement	22.36	BLK	0.000
ARM3	Caliper 3 measurement	22.36	BLK	0.000
ARM4	Caliper 4 measurement	22.36	BLK	0.000
ARM5	Caliper 5 measurement	22.36	BLK	0.000
ARM6	Caliper 6 measurement	22.36	BLK	0.000
MOTV	Motor Voltage Monitor 1	22.36	BLK	0.000
PRES	Caliper percentage of total compression of the spring	19.83	BLK	0.000
HAZI	Hole Azimuth	22.36	NO	
RB	Relative Bearing	22.36	NO	
AZI1	PAD1 Azimuth	22.36	NO	
DEVI	Inclination	22.36	NO	

ACRt Sonde

TPUL	Tension Pull	2.97	NO	
F1R1	ACRT 12KHz - 80in R value	9.22	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	9.22	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.72	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.72	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	5.22	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	5.22	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	4.22	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	4.22	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.72	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.72	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.47	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.47	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	9.22	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	9.22	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.72	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.72	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	5.22	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	5.22	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	4.22	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	4.22	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.72	BLK	0.000

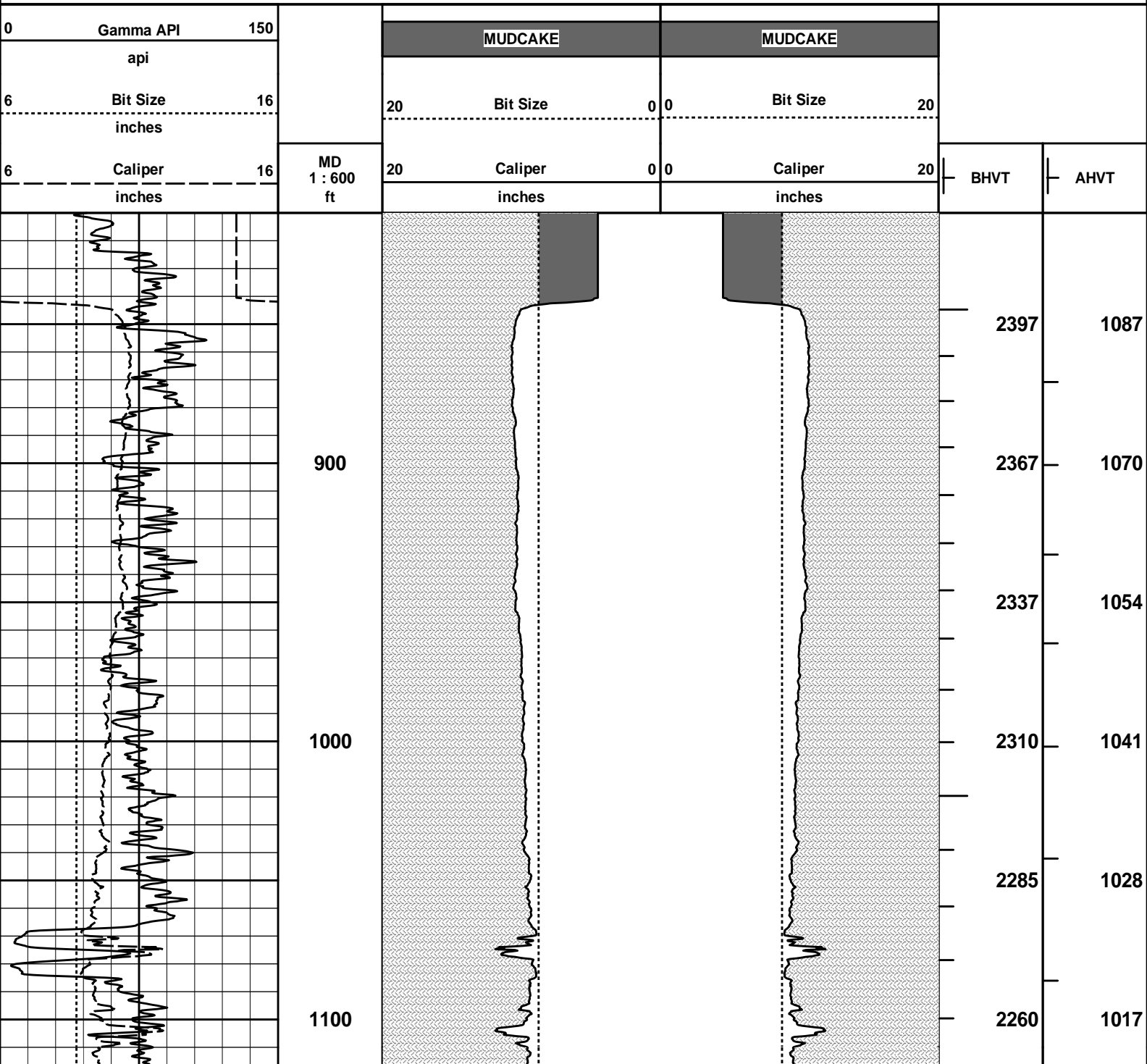
F2X5	ACRT 36KHz - 10in X value	3.72	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.47	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.47	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	9.22	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	9.22	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.72	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.72	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	5.22	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	5.22	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	4.22	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	4.22	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.72	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.72	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.47	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.47	BLK	0.000
RMUD	Mud Resistivity	12.76	BLK	0.000
F1RT	Transmitter Reference 12 KHz Real Signal	2.97	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.97	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.97	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.97	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.97	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.97	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.97	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.97	BLK	0.000
ITMP	Instrument Temperature	2.97	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.97	NO	
TIDV	Instrument Temperature Derivative	2.97	NO	
TUDV	Upper Temperature Derivative	2.97	NO	
TLDV	Lower Temperature Derivative	2.97	NO	
TRBD	Receiver Board Temperature	2.97	NO	
Microlog Pad				
TPUL	Tension Pull	82.36	NO	
MINV	Microlog Lateral	82.36	BLK	0.750
MNOR	Microlog Normal	82.36	BLK	0.750
SDLT Pad				
TPUL	Tension Pull	82.17	NO	
NAB	Near Above	81.99	BLK	0.920
NHI	Near Cesium High	81.99	BLK	0.920
NLO	Near Cesium Low	81.99	BLK	0.920
NVA	Near Valley	81.99	BLK	0.920
NBA	Near Barite	81.99	BLK	0.920
NDE	Near Density	81.99	BLK	0.920
NPK	Near Peak	81.99	BLK	0.920
NLI	Near Lithology	81.99	BLK	0.920
NBAU	Near Barite Unfiltered	81.99	BLK	0.250
NLIU	Near Lithology Unfiltered	81.99	BLK	0.250
FAB	Far Above	82.34	BLK	0.250
FHI	Far Cesium High	82.34	BLK	0.250
FLO	Far Cesium Low	82.34	BLK	0.250
FVA	Far Valley	82.34	BLK	0.250
FBA	Far Barite	82.34	BLK	0.250
FDE	Far Density	82.34	BLK	0.250
FPK	Far Peak	82.34	BLK	0.250
FLI	Far Lithology	82.34	BLK	0.250

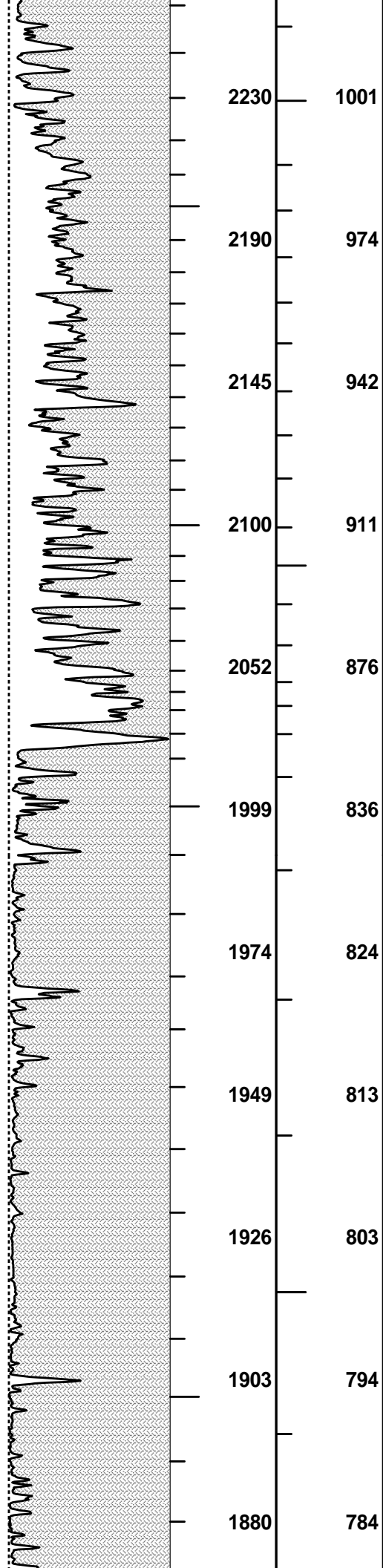
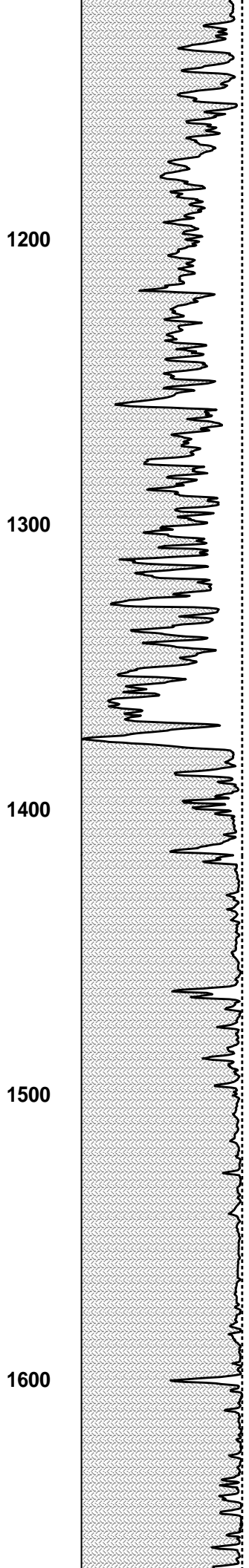
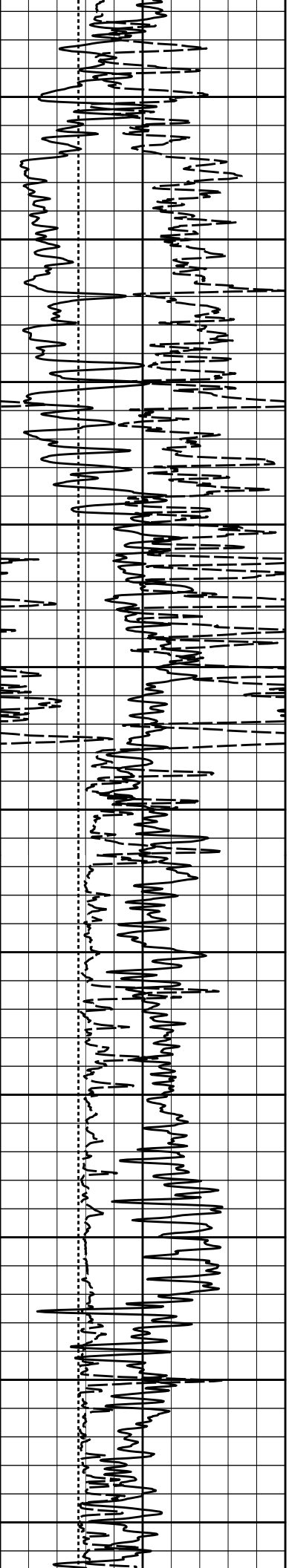
PTMP	Pad Temperature	82.18	BLK	0.920
NHV	Near Detector High Voltage	81.57	NO	
FHV	Far Detector High Voltage	81.57	NO	
ITMP	Instrument Temperature	81.57	NO	
DDHV	Detector High Voltage	81.57	NO	

Data: ALBERTA_MARIE_1\0001 SP-GTET-DSN-SDL-WSTT-XRMI-ACRT-CHNDLE Date: 17-Jul-12 02:49:59

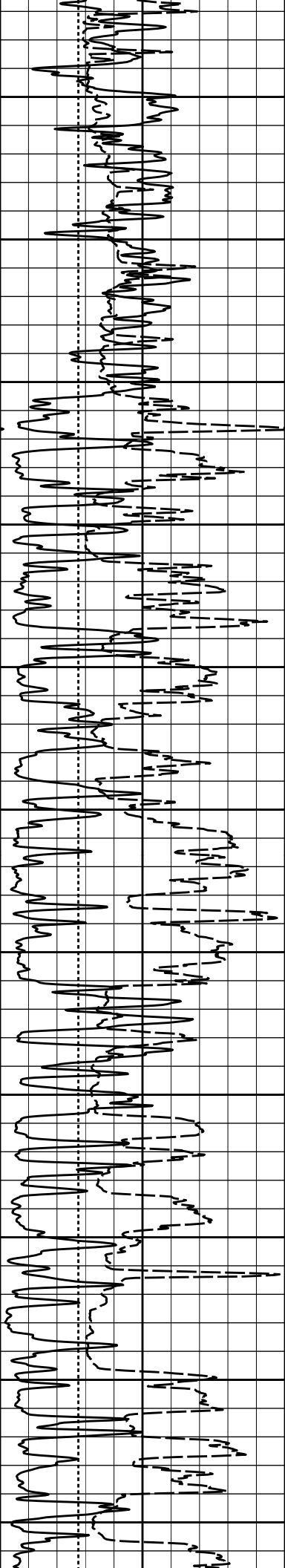
HALLIBURTON Plot Time: 17-Jul-12 06:03:39
 Plot Range: 810 ft to 6098.42 ft
 Data: ALBERTA_MARIE_1\Well Based\R1_ELSE\
 Plot File: \\LOCAL-ALBERTA_MARIE_1\0001 SP-GTET-DSN-SDL-WSTT-XRMI-ACRT-CH\PORO\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT





1001
974
942
911
876
836
824
813
803
794
784



1700

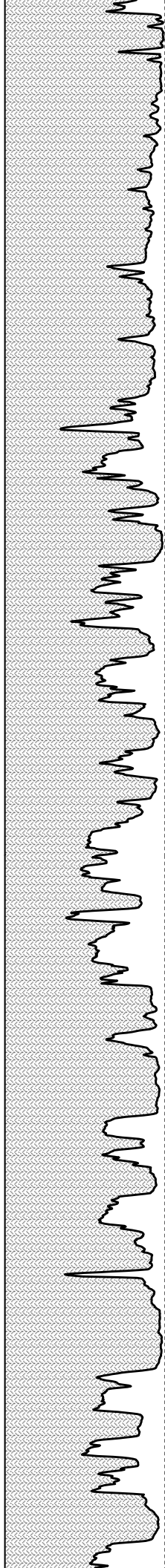
1800

1900

2000

2100

2200



1855

1829

1801

1764

1730

1696

1650

1619

1584

1556

1517

772

760

745

722

701

680

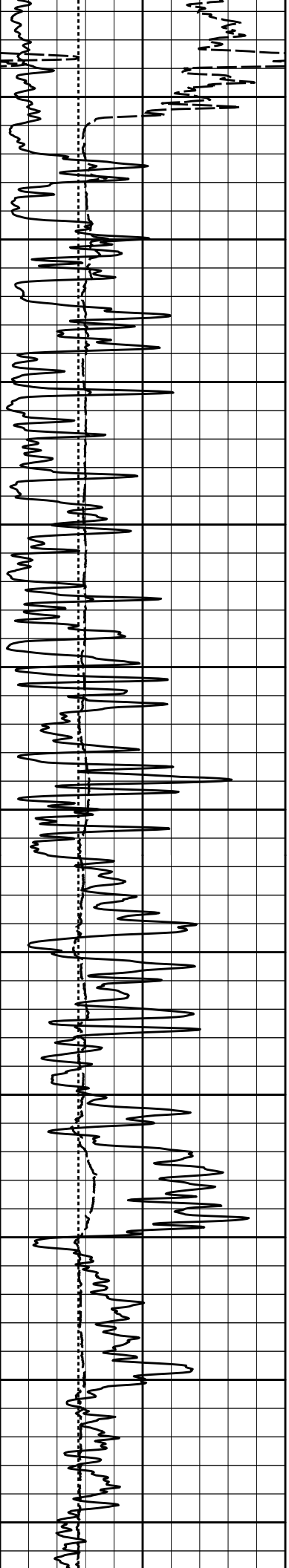
648

630

608

594

568



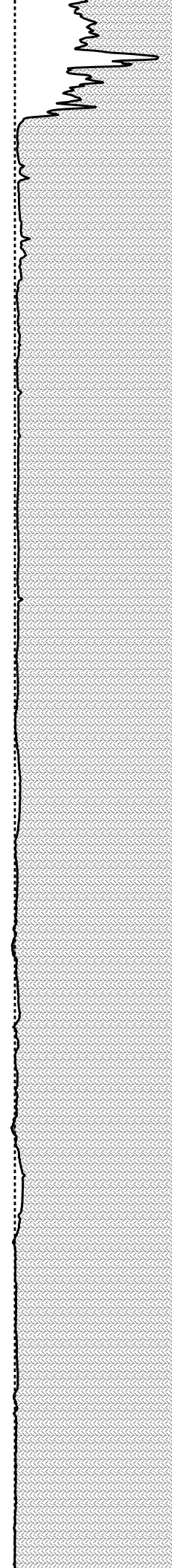
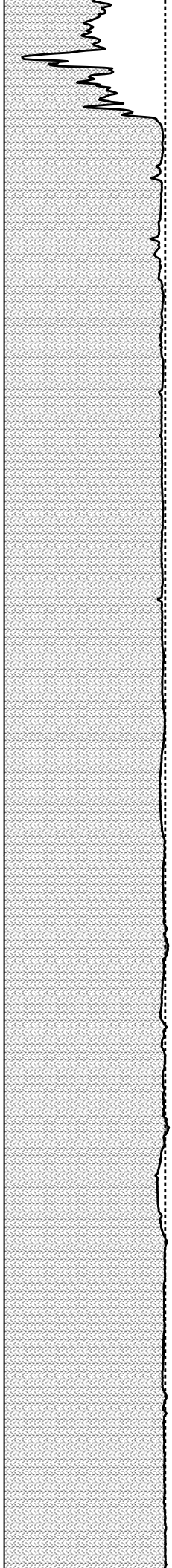
2300

2400

2500

2600

2700



1468

1443

1421

1399

1377

1355

1333

1312

1290

1268

1247

533

521

512

503

495

486

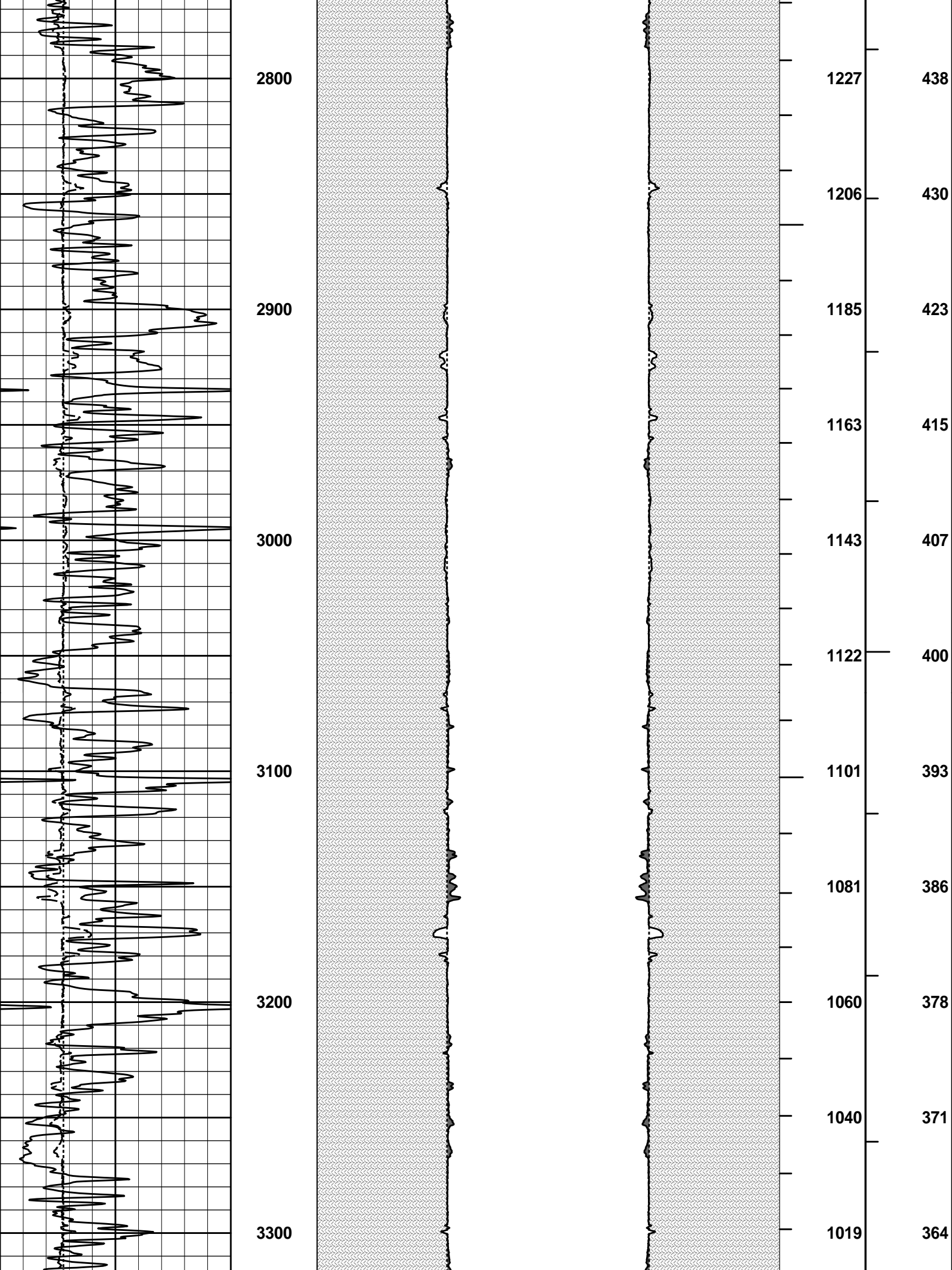
478

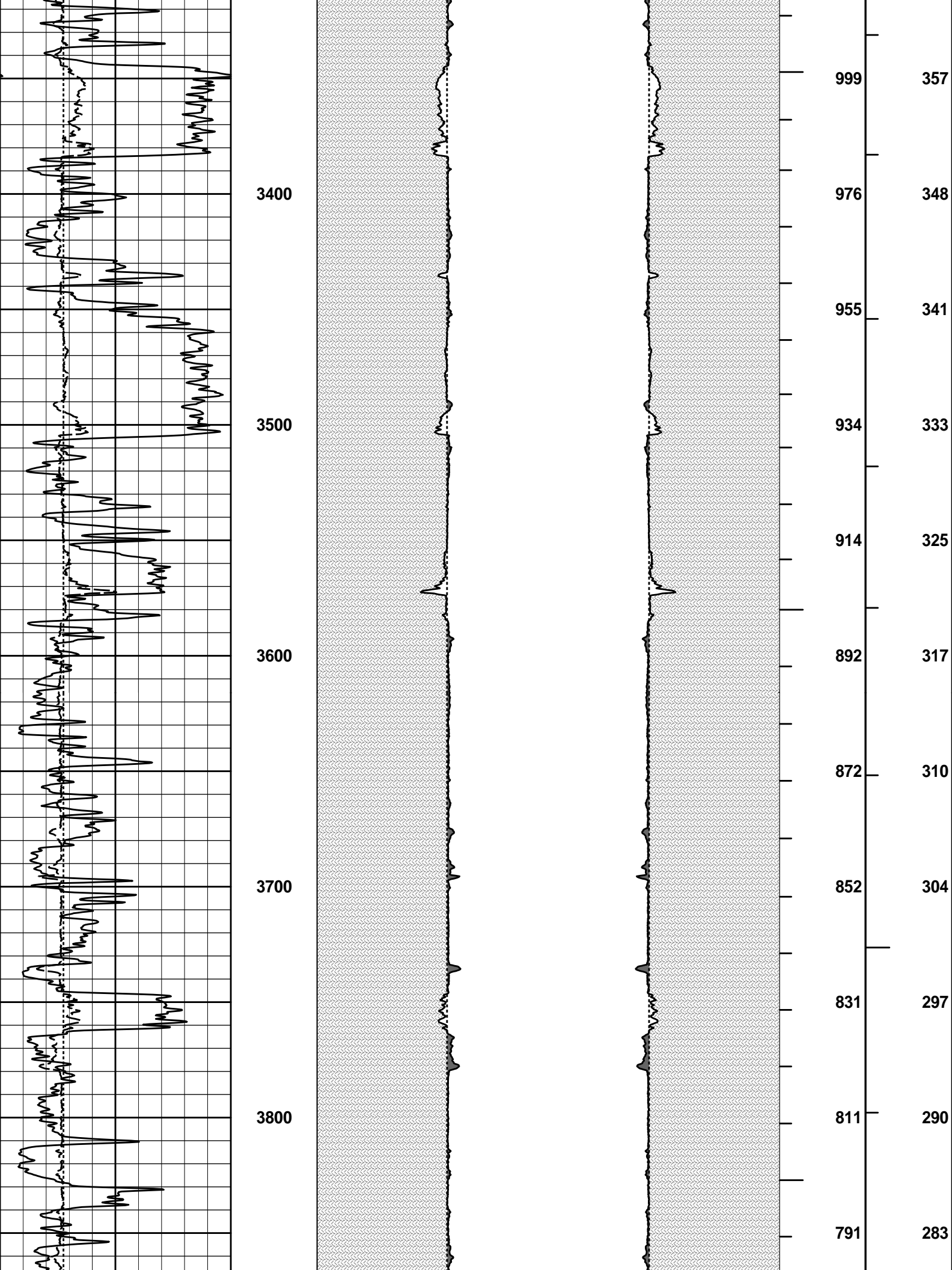
470

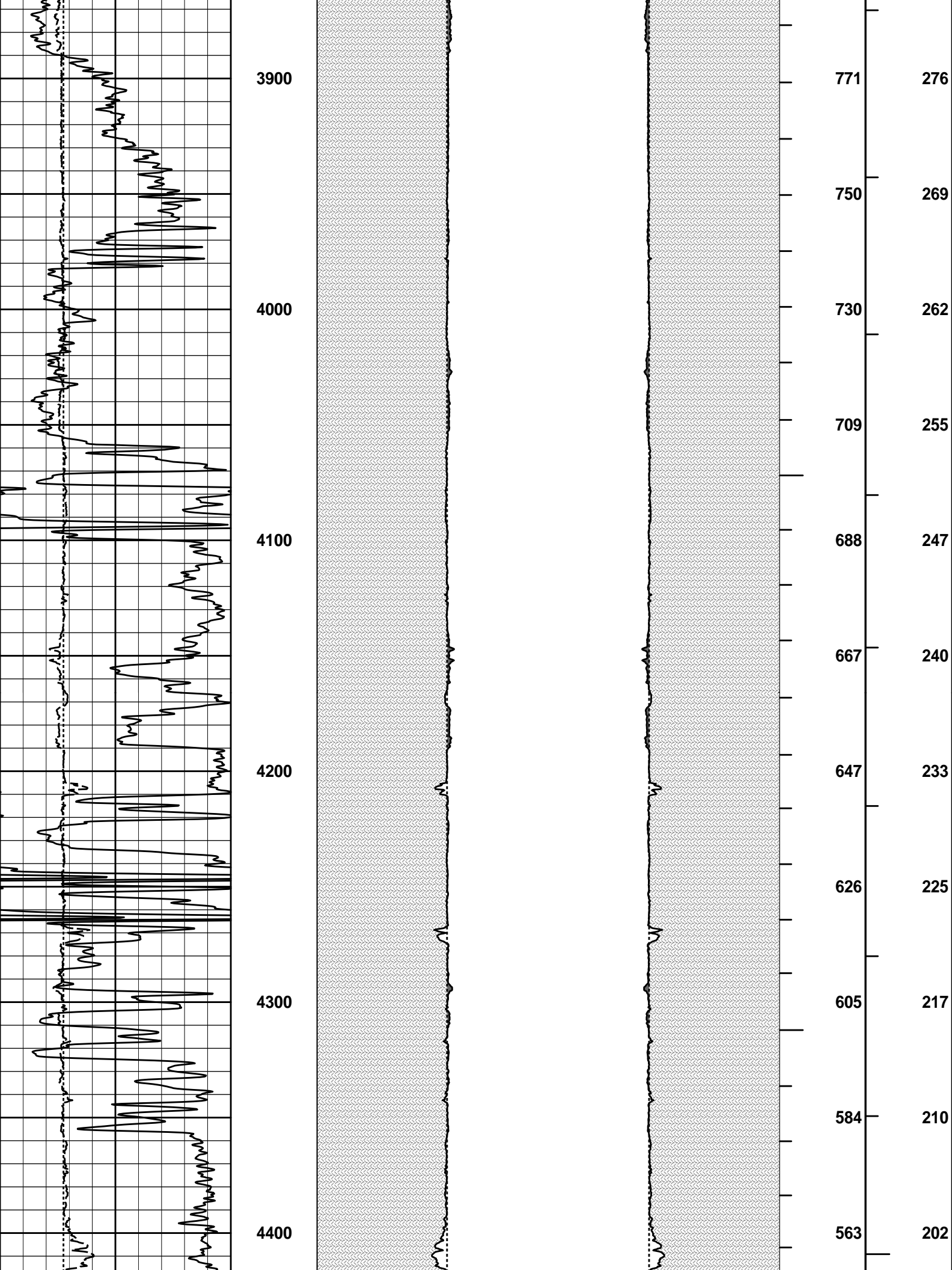
461

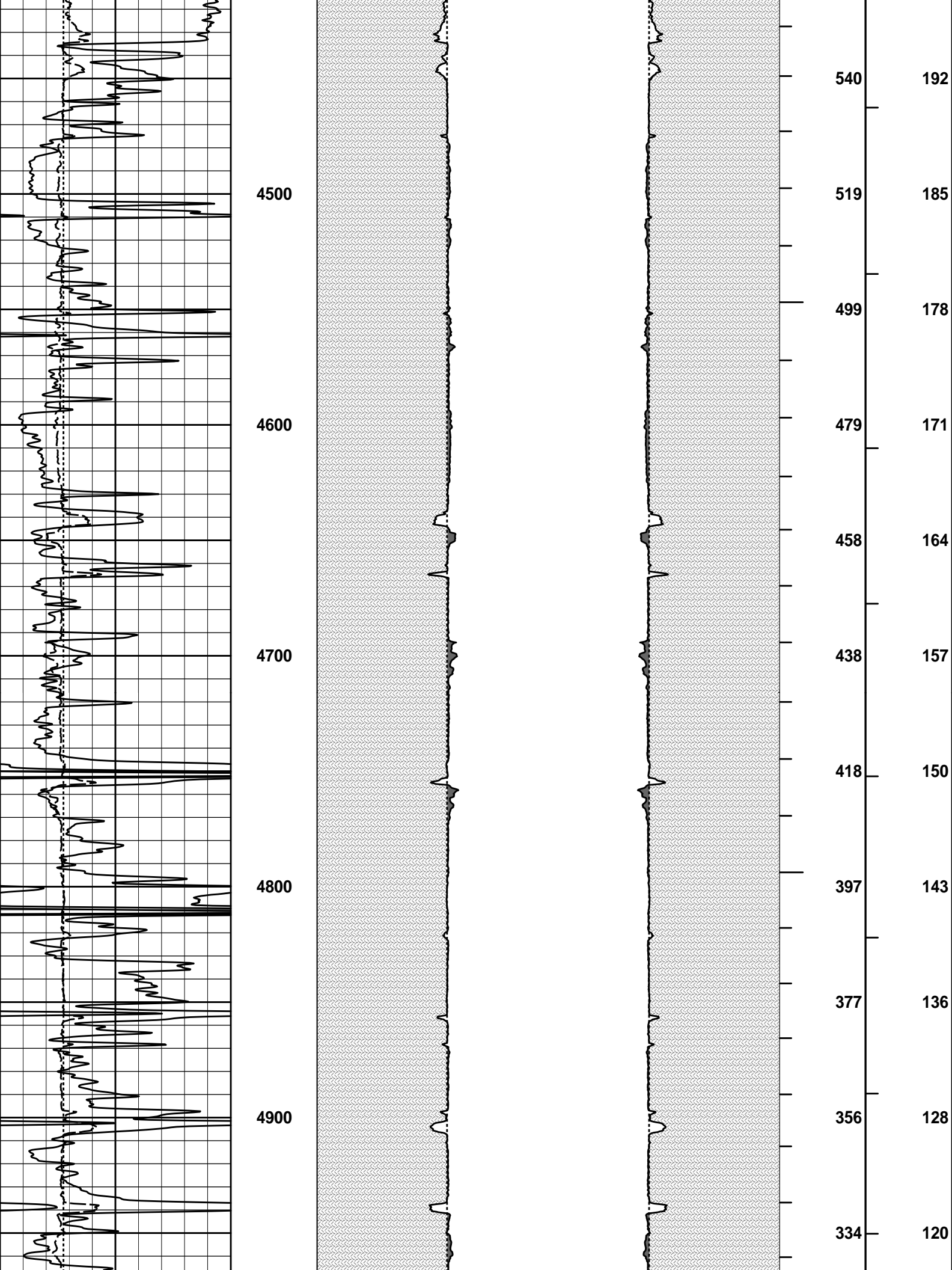
453

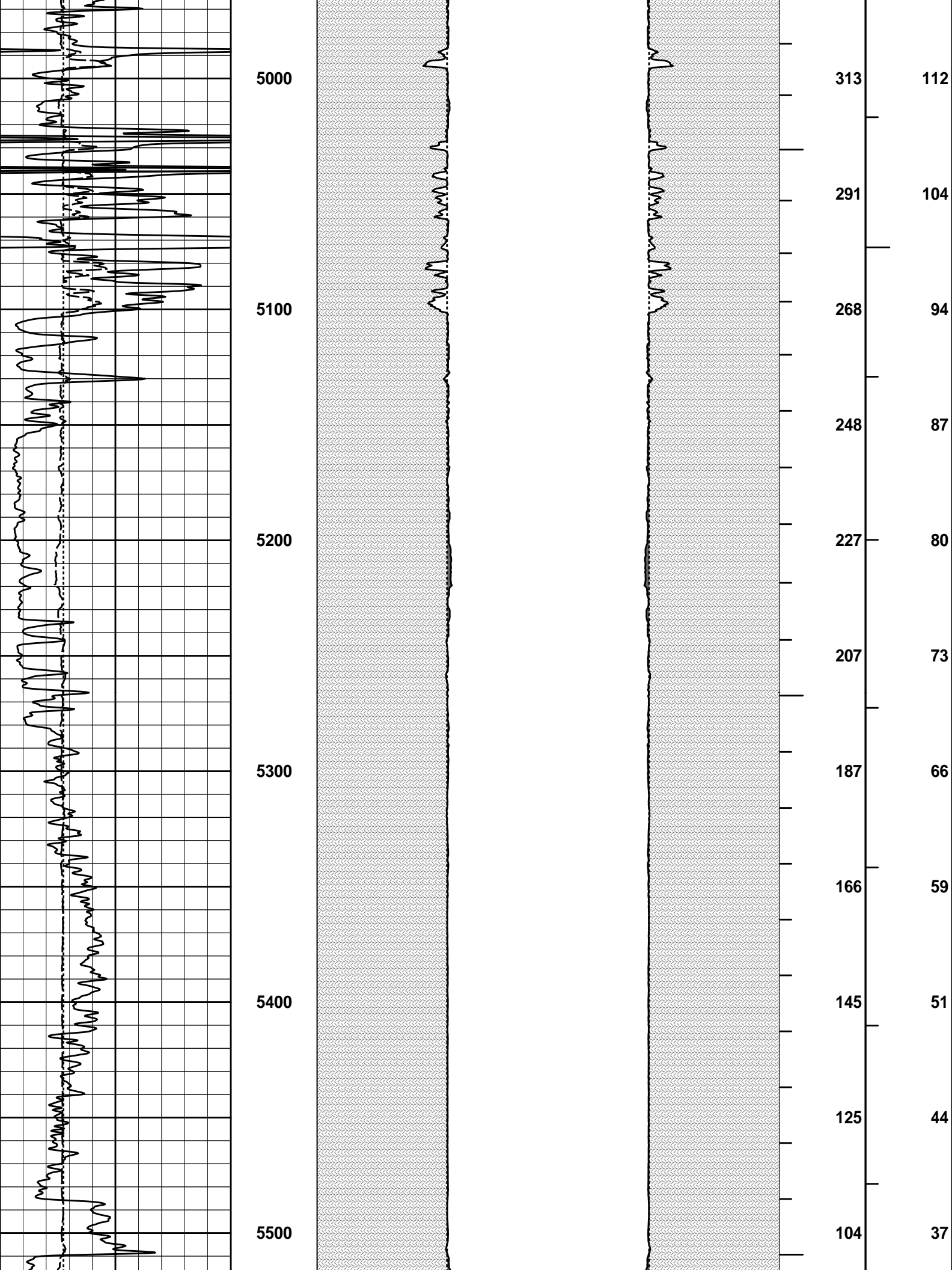
445

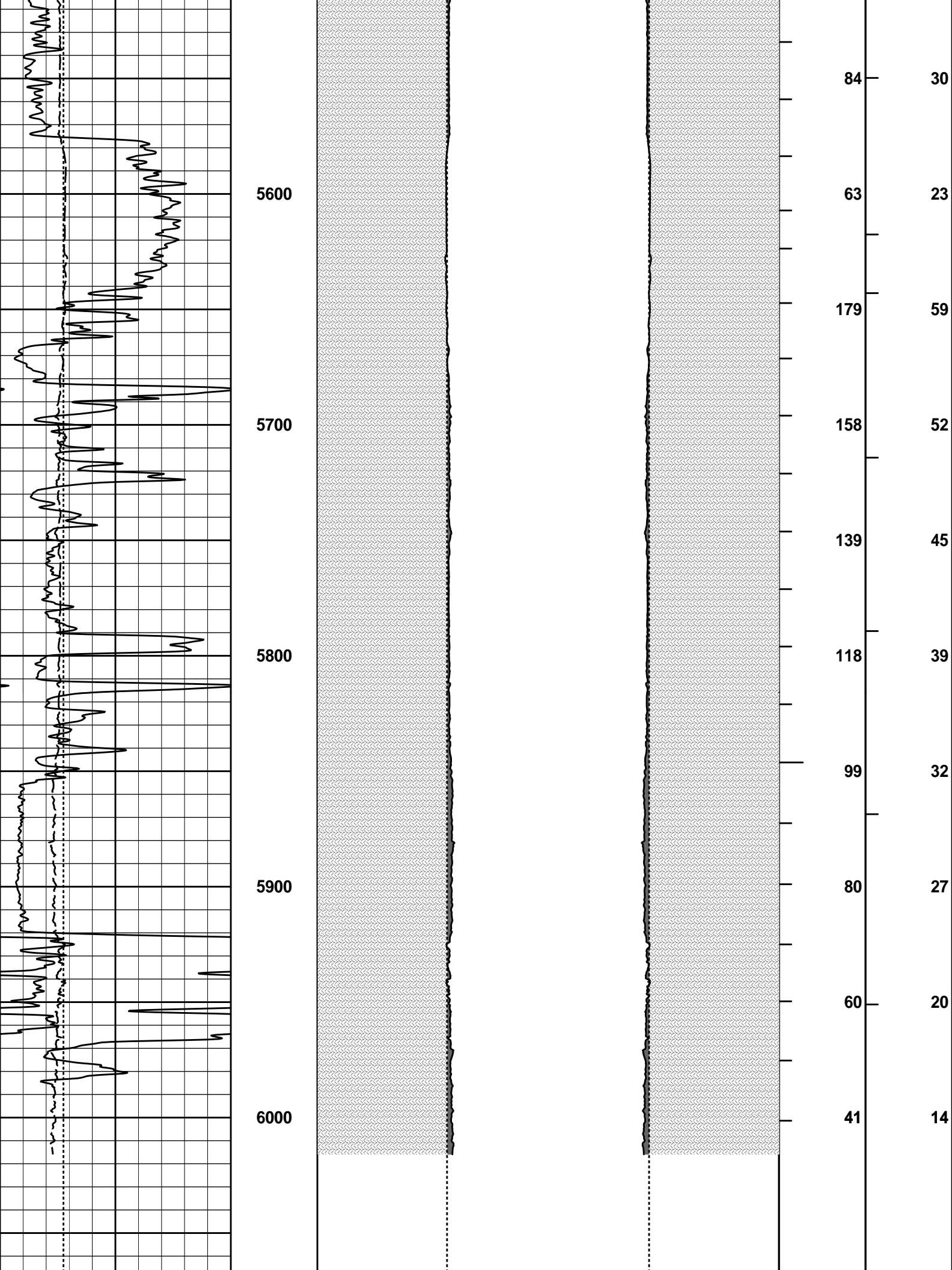












6	Caliper	16	MD 1 : 600 ft	20	Caliper	0 0	20	BHVT	AHVT	
	inches					inches				
6	Bit Size	16			20	Bit Size	0 0	20		
	inches									
0	Gamma API	150								
	api									
					MUDCAKE		MUDCAKE			

HALLIBURTON

Plot Time: 17-Jul-12 06:03:44
 Plot Range: 810 ft to 6098.42 ft
 Data: ALBERTA_MARIE_1\Well Based\R1_ELSE\
 Plot File: \\-LOCAL-ALBERTA_MARIE_1\0001 SP-GTET-DSN-SDL-WSTT-XRMI-ACRT-CH\PORO\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	SANDRIDGE ENERGY		
WELL	ALBERTA MARIE 3119 1-23		
FIELD	SILVER SPUR		
COUNTY	COMANCHE	STATE	KANSAS
HALLIBURTON		SPECTRAL DENSITY DUAL SPACED NEUTRON LOG	