

HALLIBURTON

DUAL SPACED NEUTRON SPECTRAL DENSITY LOG

COMPANY		VAL ENERGY, INC.,	
WELL		HOAGLAND 1-22	
FIELD		UNKNOWN	
COUNTY		BARBER	
STATE		KANSAS	
Permanent Datum		GL	
Log measured from		KB	
Drilling measured from		KB	
Date		15-Jan-12	
Run No.		ONE	
Depth - Driller		5270.00 ft	
Depth - Logger		5264.0 ft	
Bottom - Logged Interval		5241 ft	
Top - Logged Interval		3700 ft	
Casing - Driller		8.625 in @ 224.0 ft	
Casing - Logger		226.0 ft	
Bit Size		7.875 in	
Type Fluid in Hole		WATER BASED MUD	
Density		9.5 ppq	
Viscosity		61.00 s/qt	
PH		12.00 pH	
Fluid Loss		13.6 cpm	
Source of Sample		FLOWLINE	
Rm @ Meas. Temperature		0.340 ohmm @ 67.00 degF	
Rmf @ Meas. Temperature		0.29 ohmm @ 65.00 degF	
Rmc @ Meas. Temperature		0.450 ohmm @ 65.00 degF	
Source Rmf		MEASURED	
Rmc		MEASURED	
Rm @ BHT		0.21 ohmm @ 115.0 degF	
Time Since Circulation		0.0 hr	
Time on Bottom		15-Jan-12 23:17	
Max. Rec. Temperature		115.0 degF @ 5264.0 ft	
Equipment		10782954	
Location		LIBERAL	
Recorded By		C. MARLOWE	
Witnessed By		S. VANBUSKIRK	

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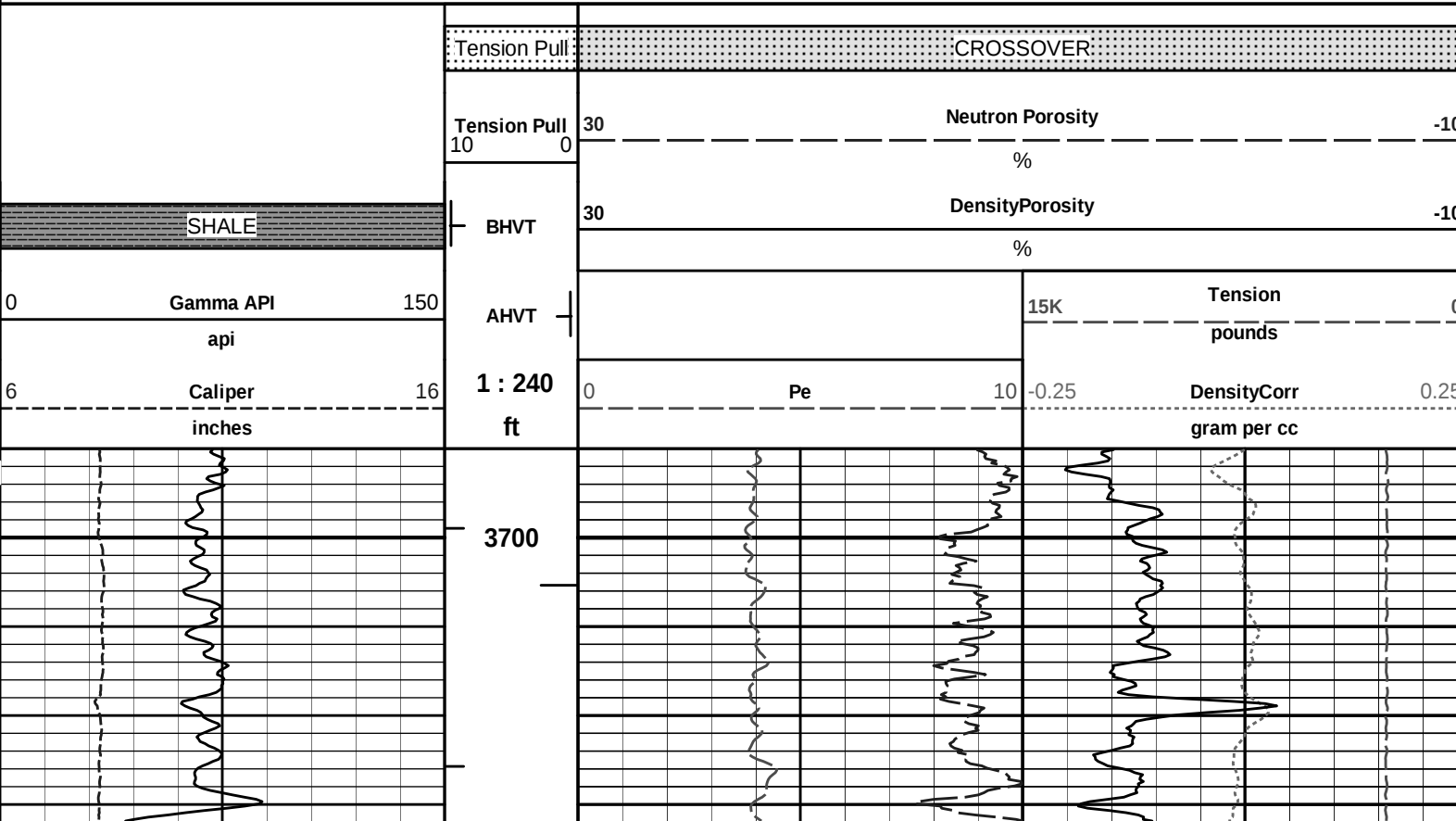
Service Ticket No.: 99198957				API Serial No.: 15-007-23821				PGM Version: WL INSITE R3.4.2 (Build 2)											
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES													
Date	Sample No.					Type Log	Depth	Scale Up Hole	Scale Down Hole										
Depth-Driller																			
Type Fluid in Hole																			
Density	Viscosity																		
Ph	Fluid Loss																		
Source of Sample						RESISTIVITY EQUIPMENT DATA													
Rm @ Meas. Temp	@		@			Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other									
Rmf @ Meas. Temp.	@		@																
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.	10748374			Serial No.		Serial No.	I145_M73803_P90		Serial No.		10735145								
Model No.	GTET			Model No.		Model No.	SDLT		Model No.		DSNT								
Diameter	3.625"			No. of Cent.		Diameter	4.75"		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	8"			LSA [Y/N]		Serial No.	5068GW		Serial No.		DSN-436								
Distance to Source	10'			FWDA [Y/N]		Strength	1.5 CI		Strength		15 CI								
LOGGING DATA																			
GENERAL				GAMMA				ACOUSTIC				DENSITY				NEUTRON			

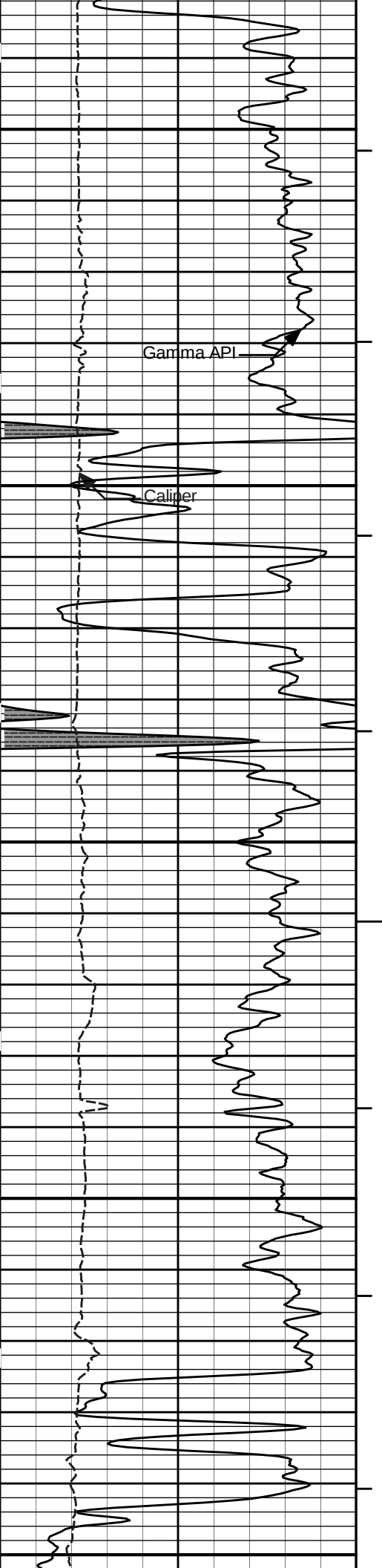
GENERAL			GAMMA		ACOUSTIC		DENSITY		NEUTRON					
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	TD	3700	REC	0	150				30	-10	2.71	30	-10	LIME
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: SP/GTET/DSNT/SDLT/ACRT RUN IN COMBINATION														
ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING														
CHLORIDES REPORTED AT 8000 PPM														
GPS COORDINATES: 35°32' N & 98°34' W														
TODAY'S CREW: F. VILLA, B. TERRELL														
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.														
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Plot Time: 16-Jan-12 01:28:23
Plot Range: 3690 ft to 5268.33 ft
Data: HOAGLAND_1_22\Well Based\CASING\
Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

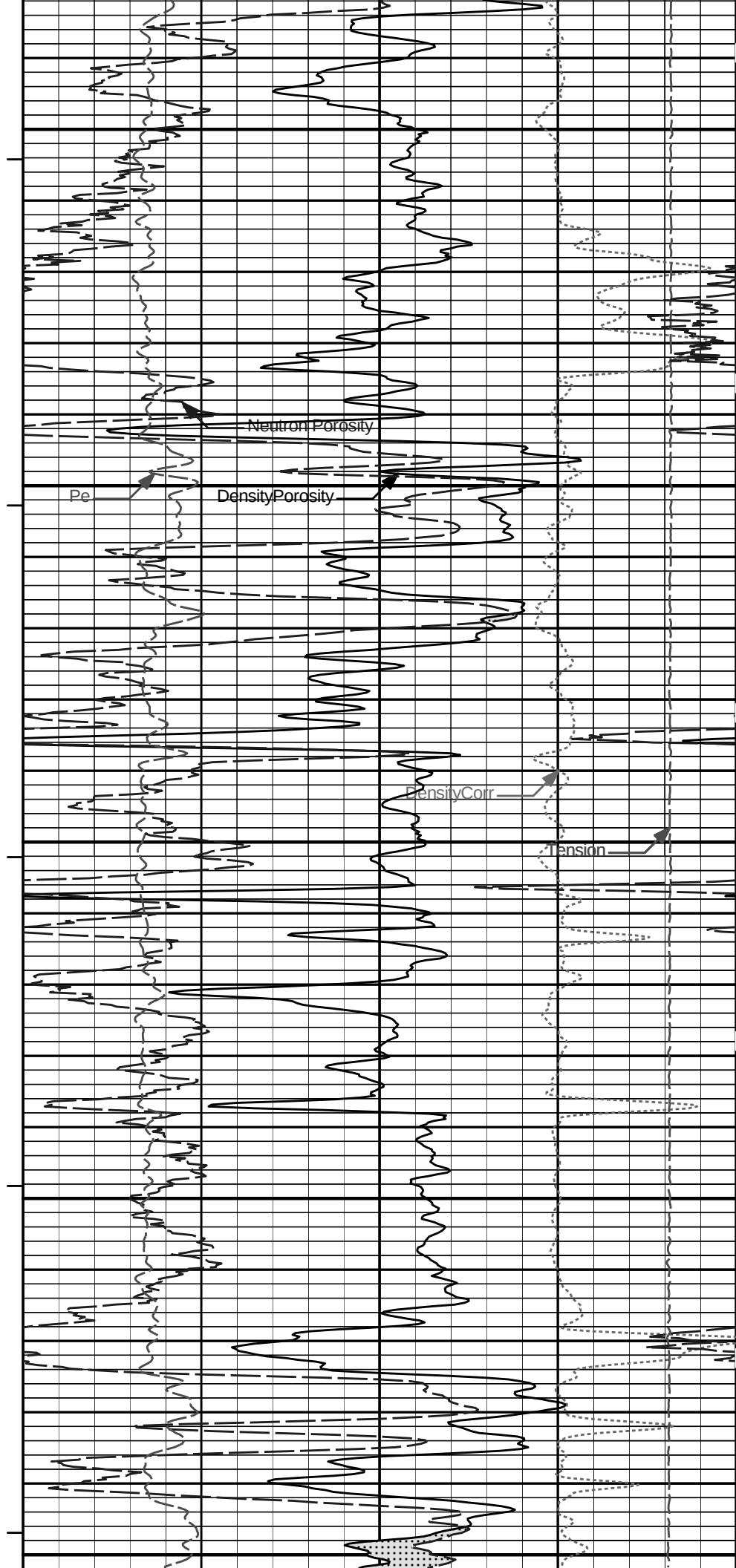
5 INCH MAIN LOG

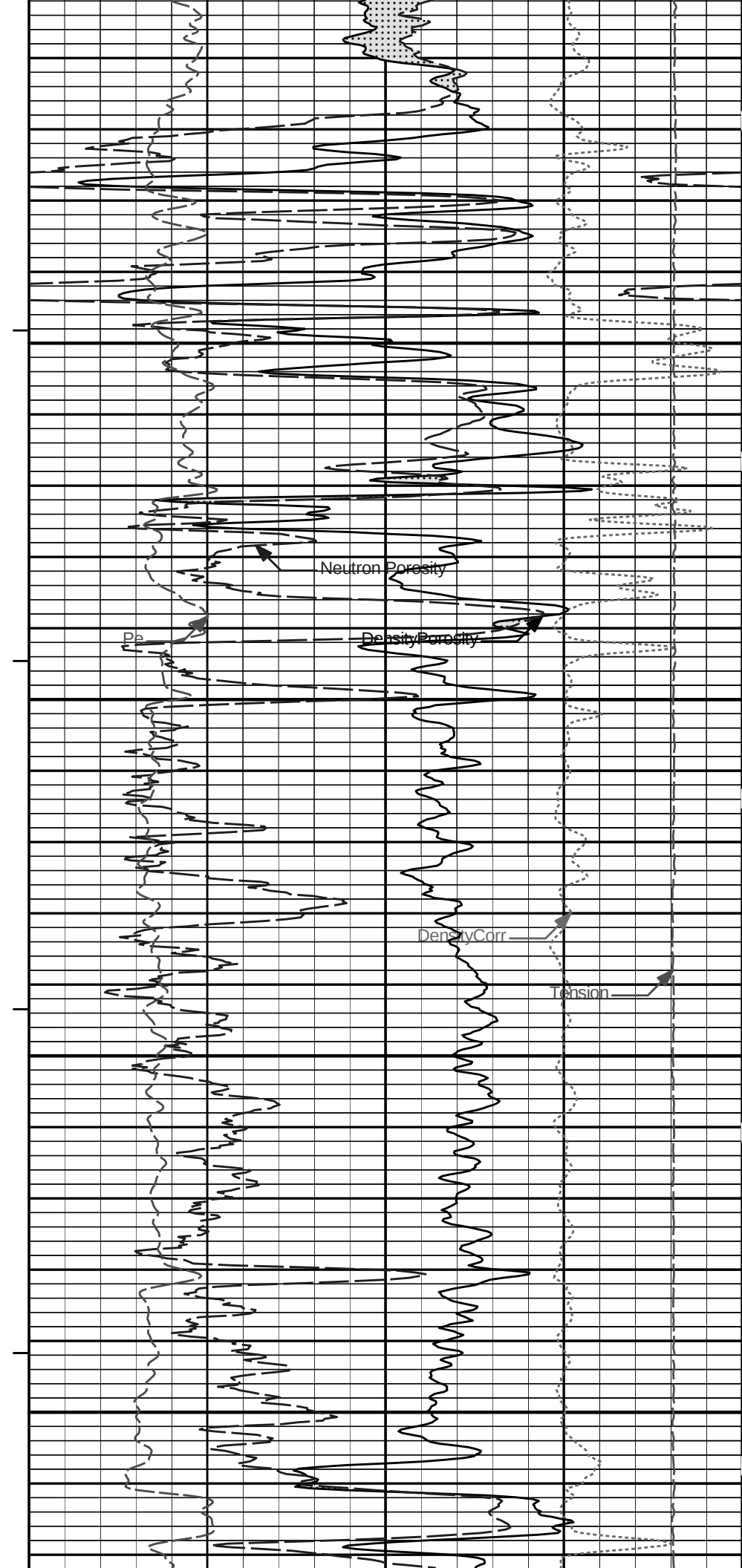
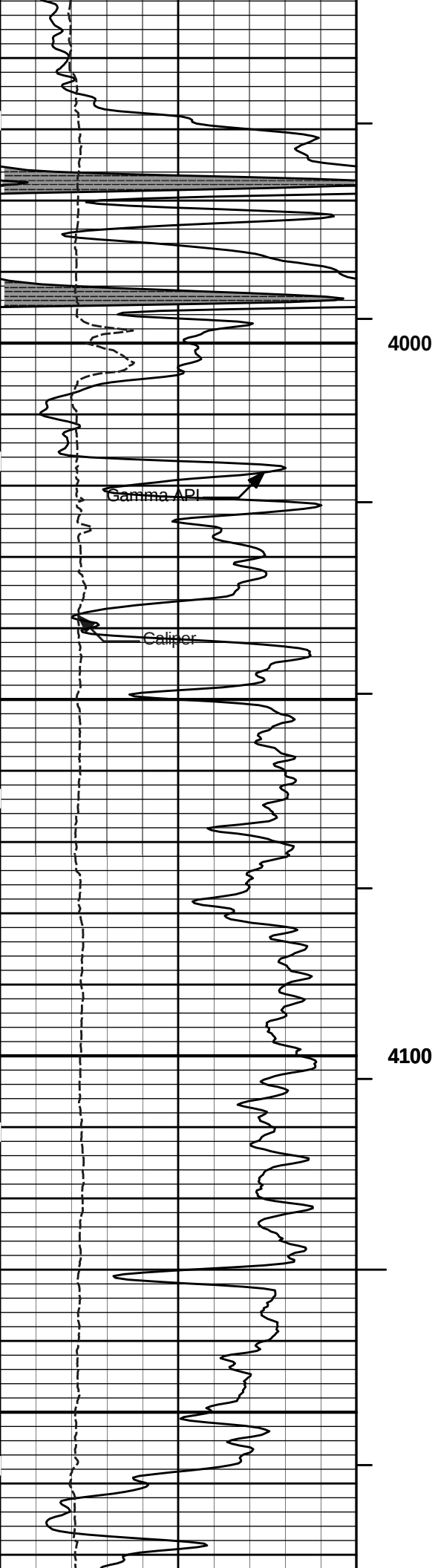


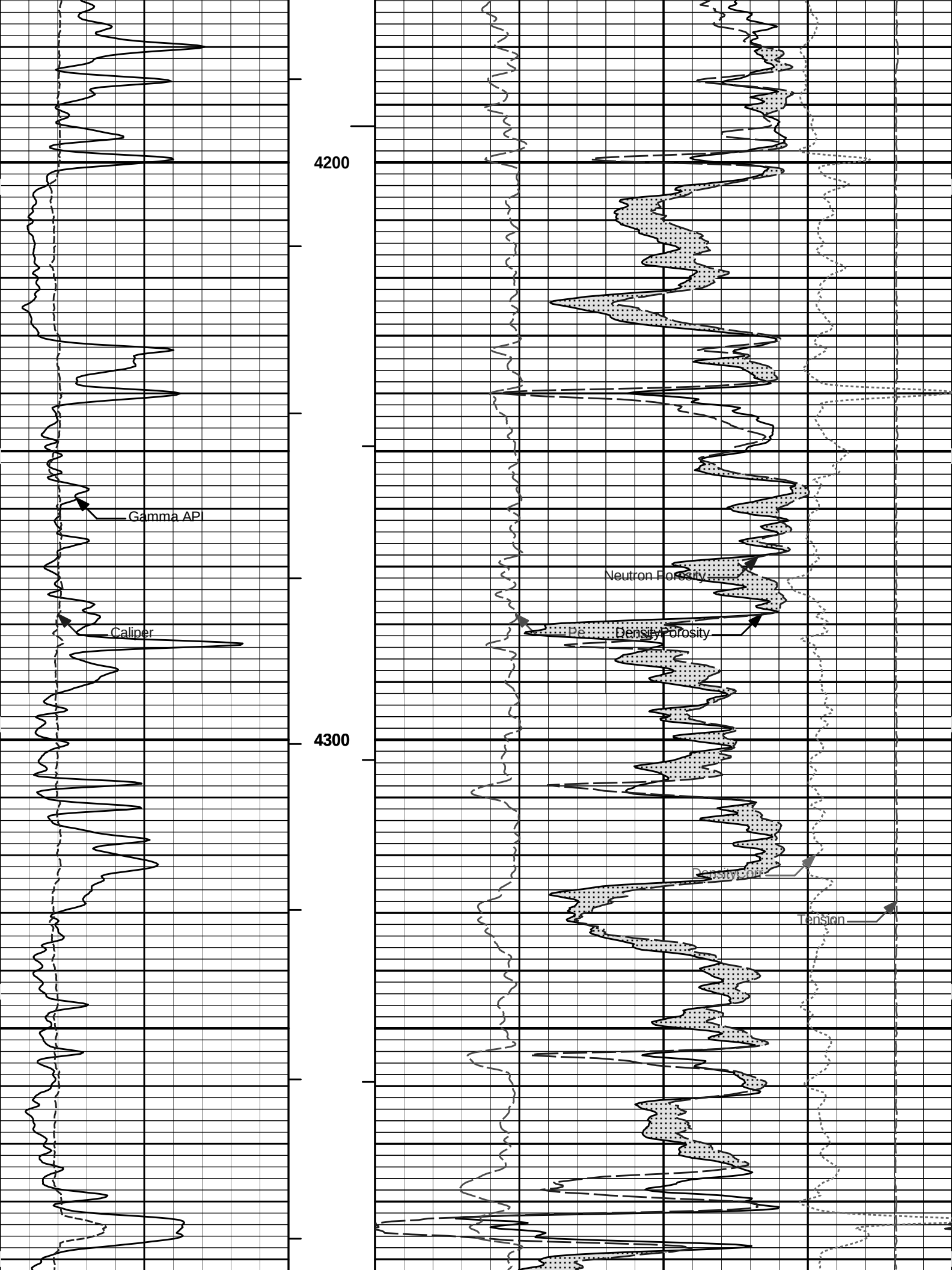


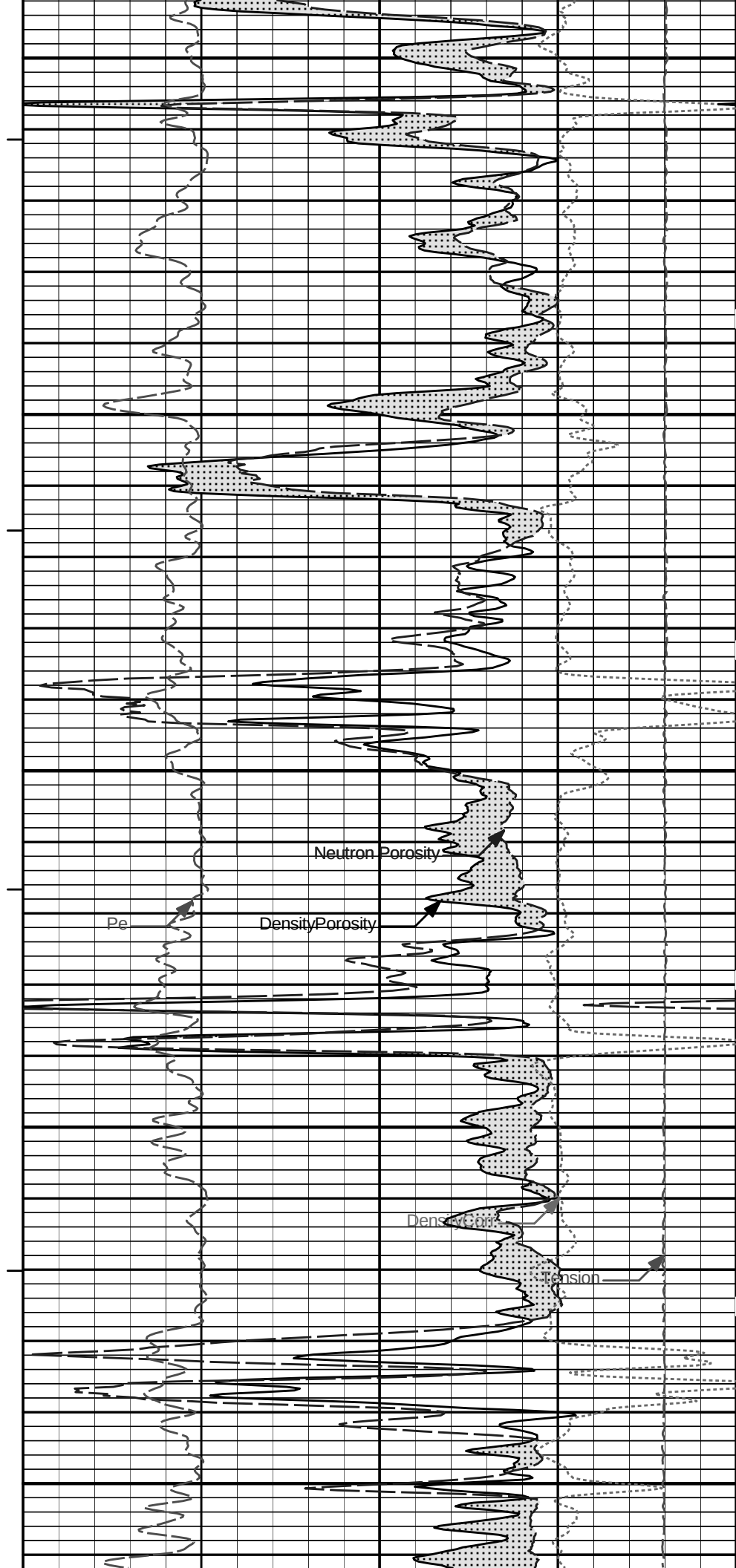
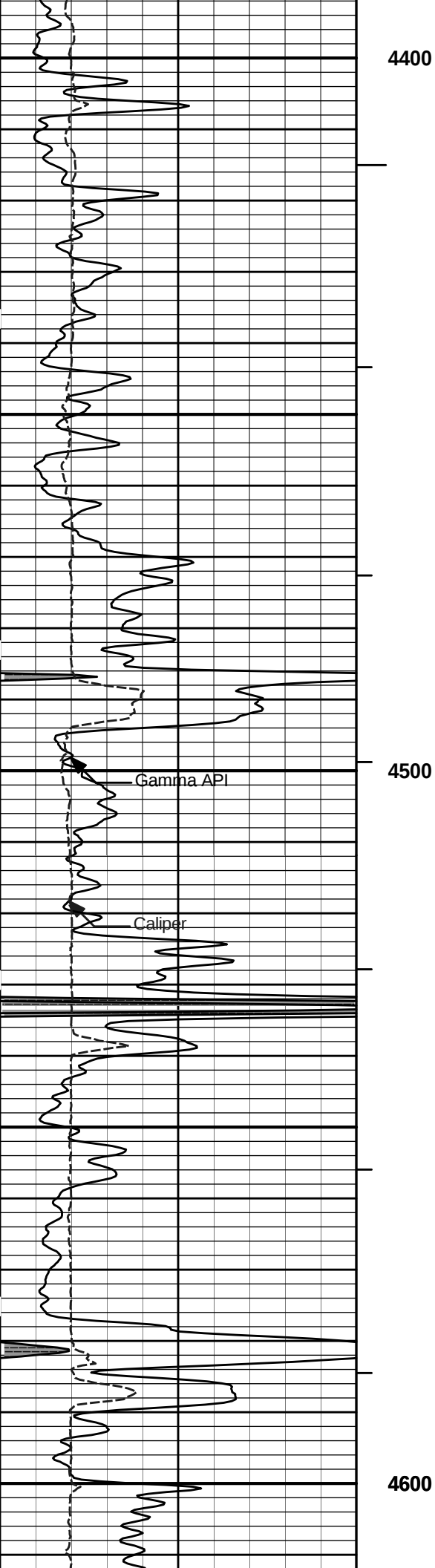
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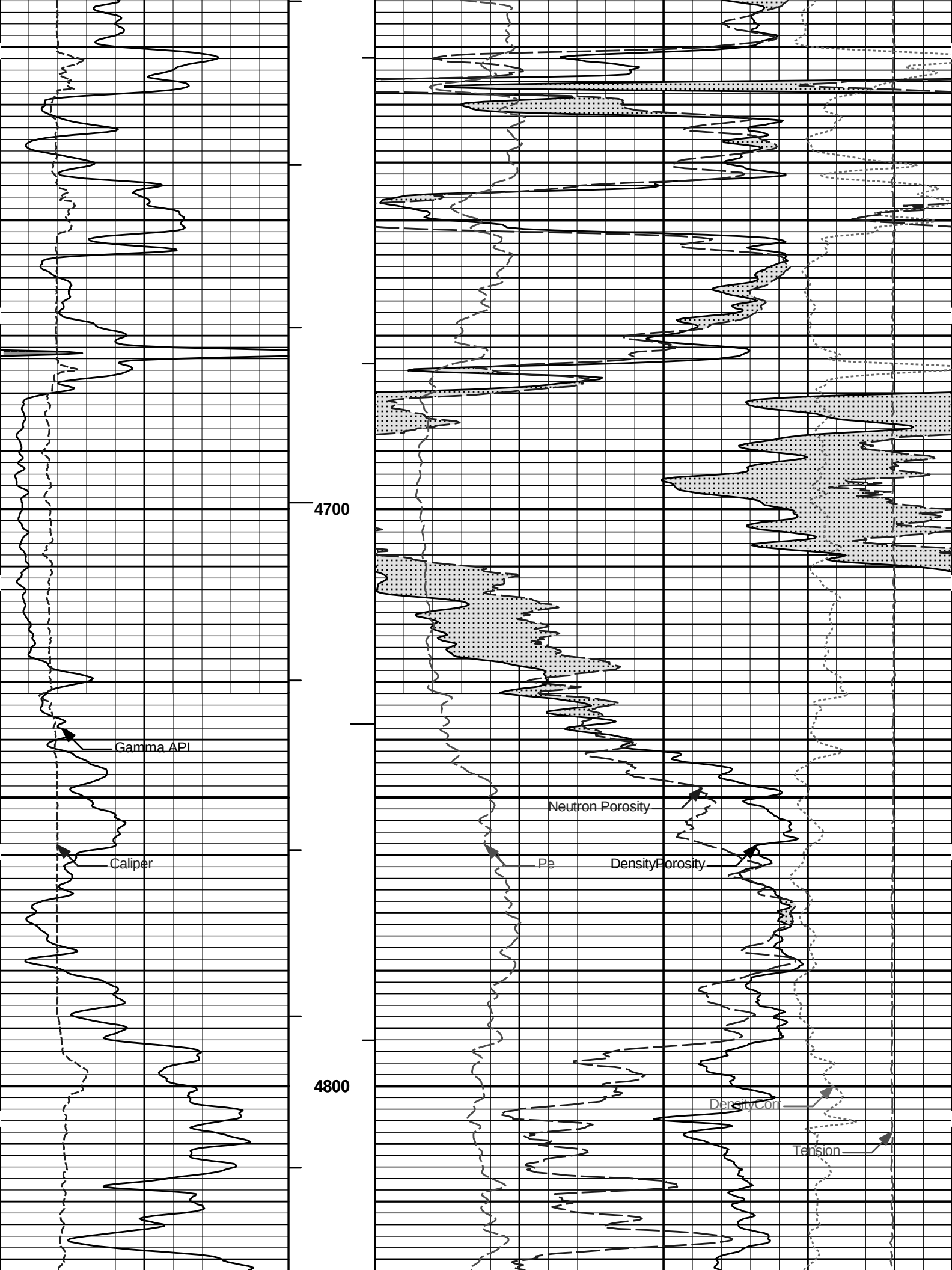
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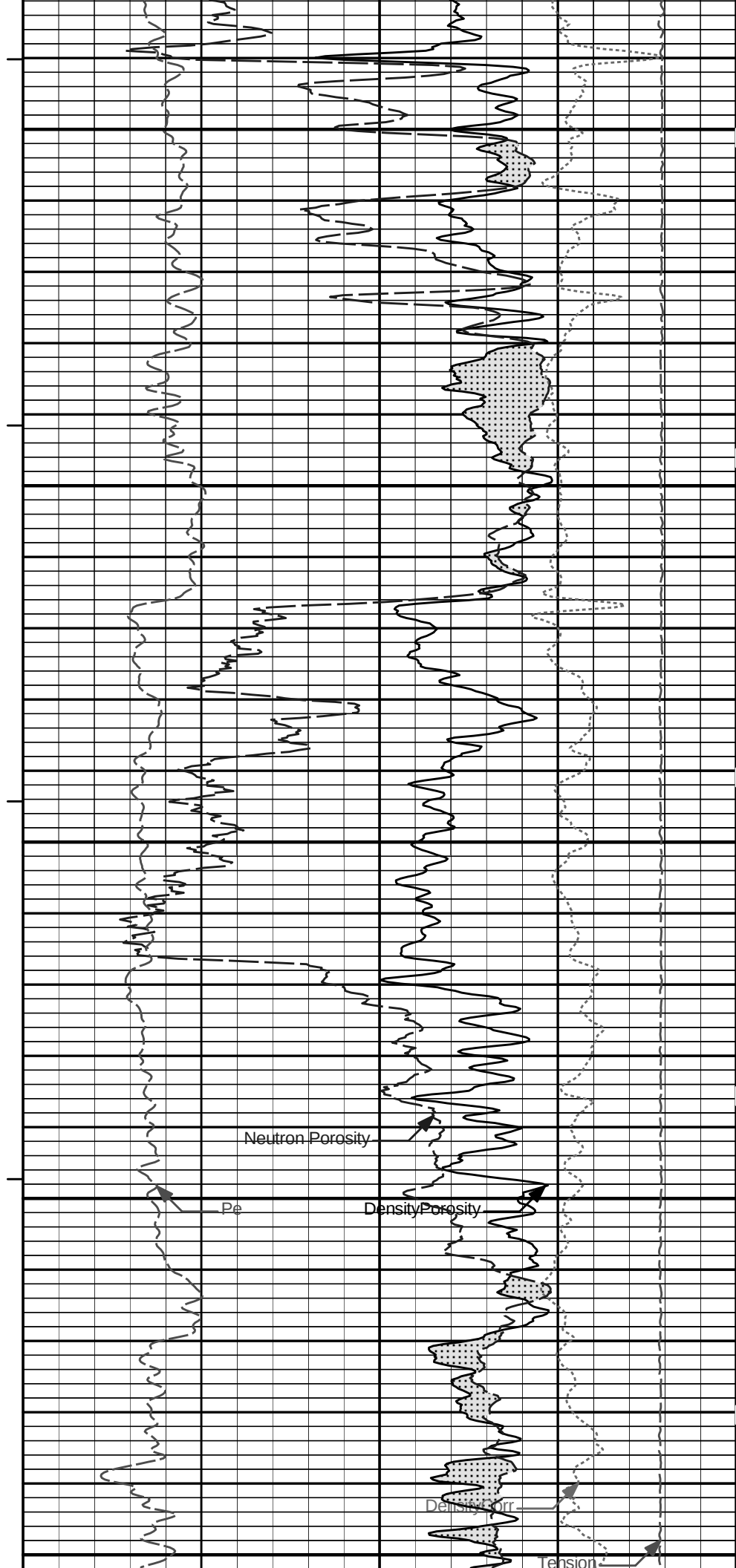
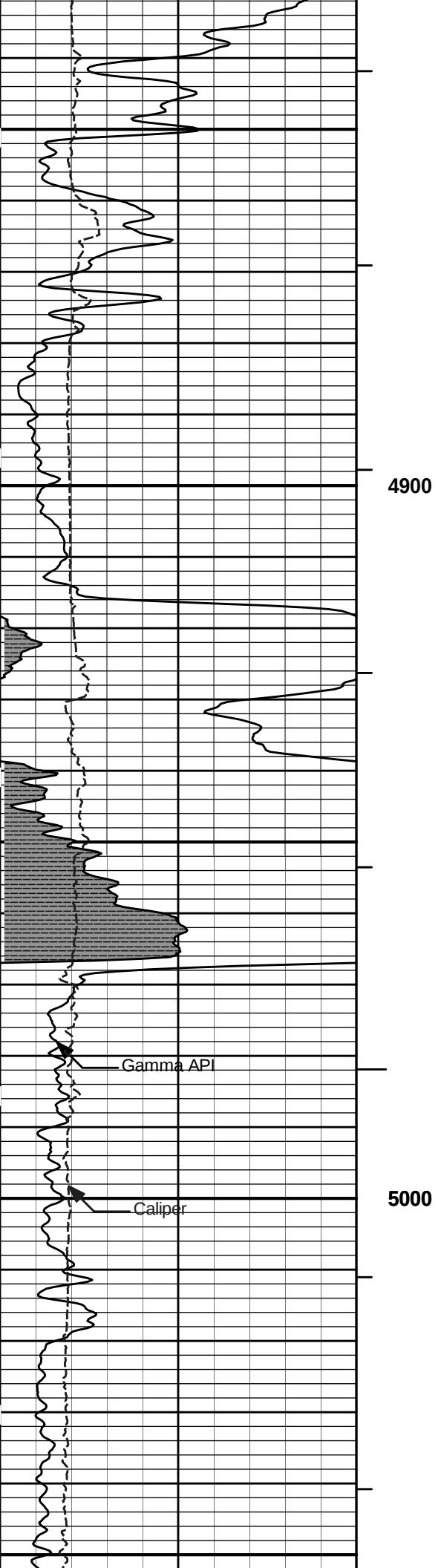


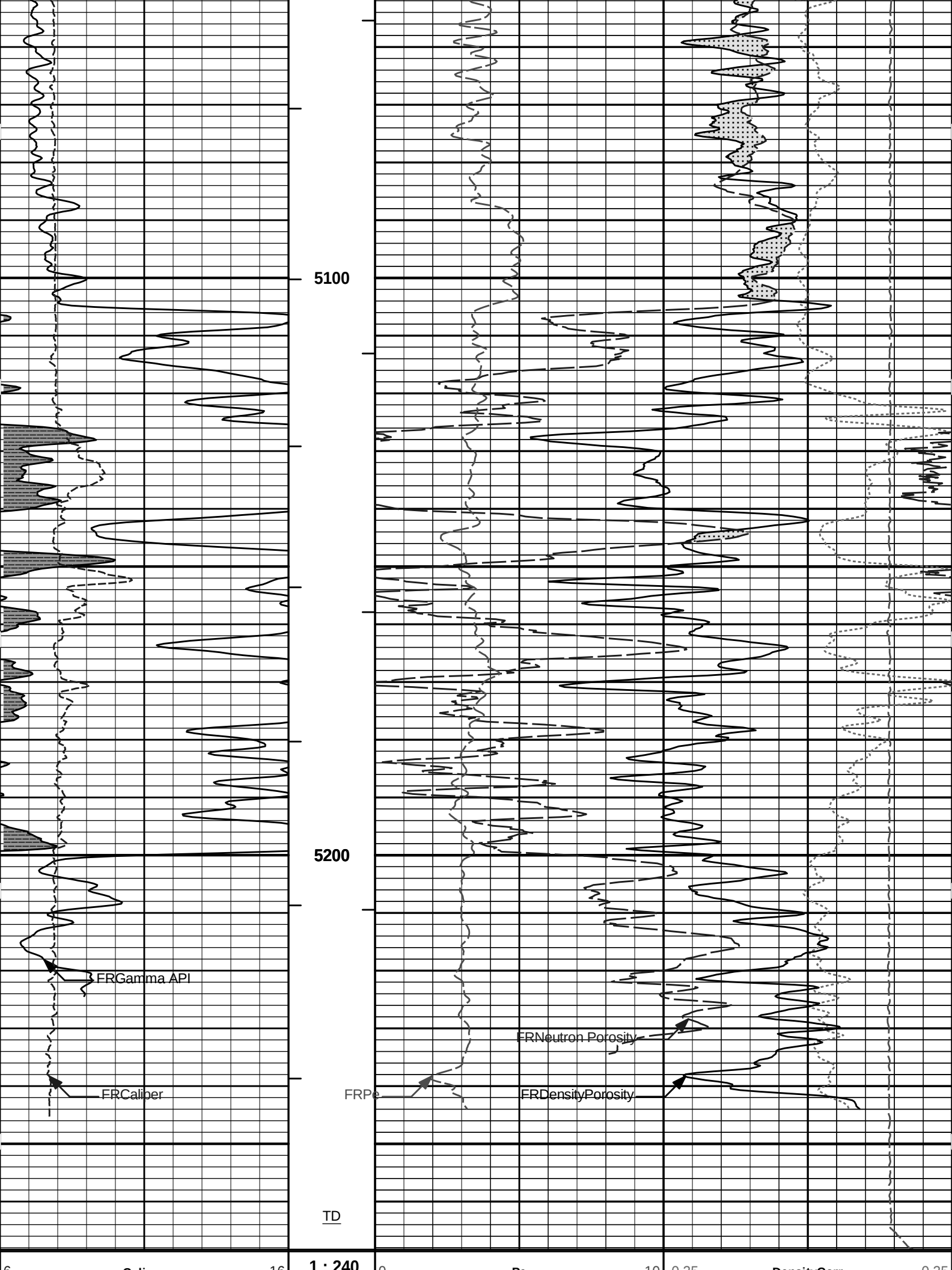












Caliper	16	1 : 240	ft	0	Pe	10	-0.25	DensityCorr	0.25
inches								gram per cc	
Gamma API	150		AHVT			15K		Tension	0
api								pounds	
SHALE			BHVT	30				DensityPorosity	-10
								%	
			Tension Pull	30				Neutron Porosity	-10
			10	0				%	
			Tension Pull					CROSSOVER	

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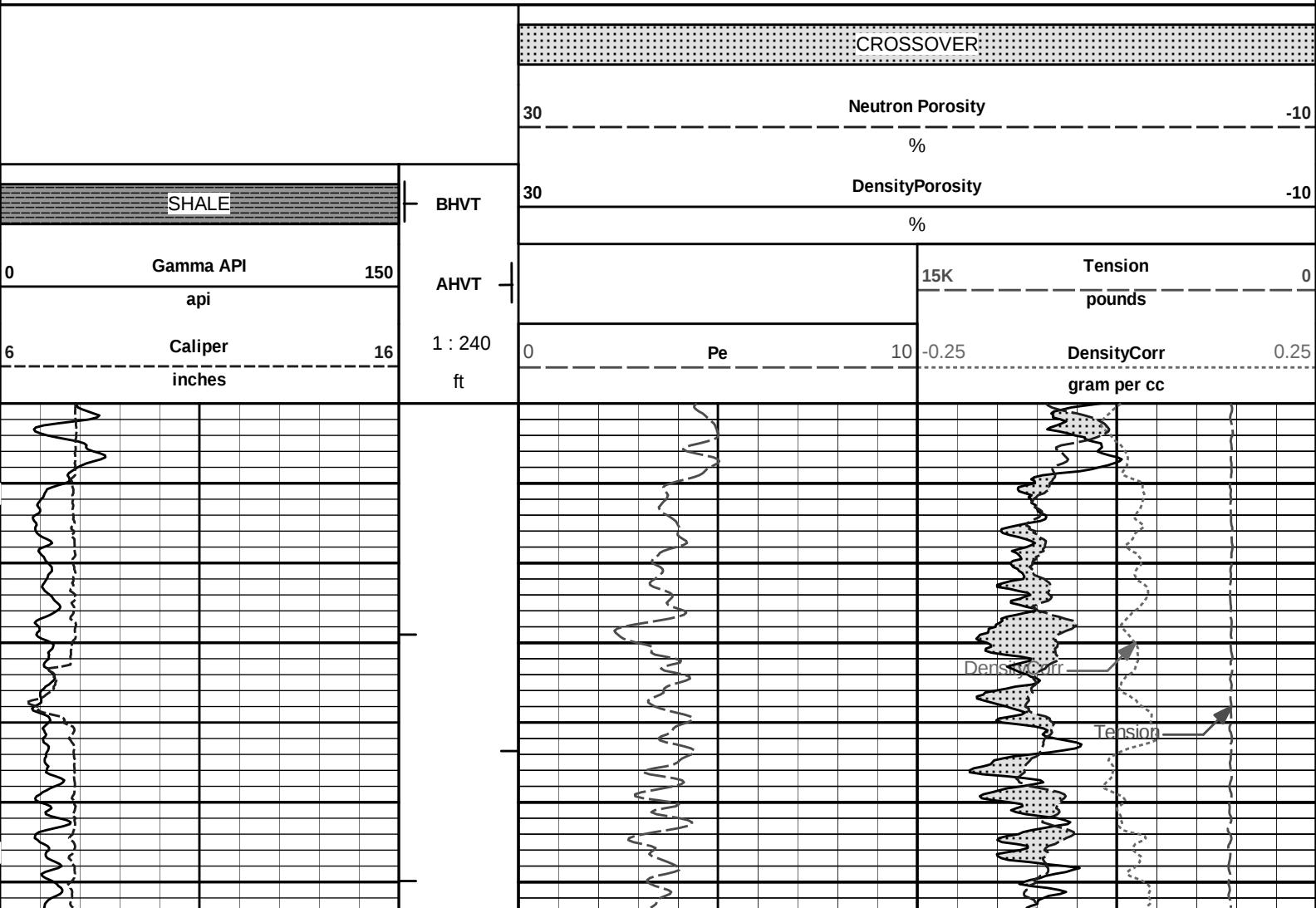
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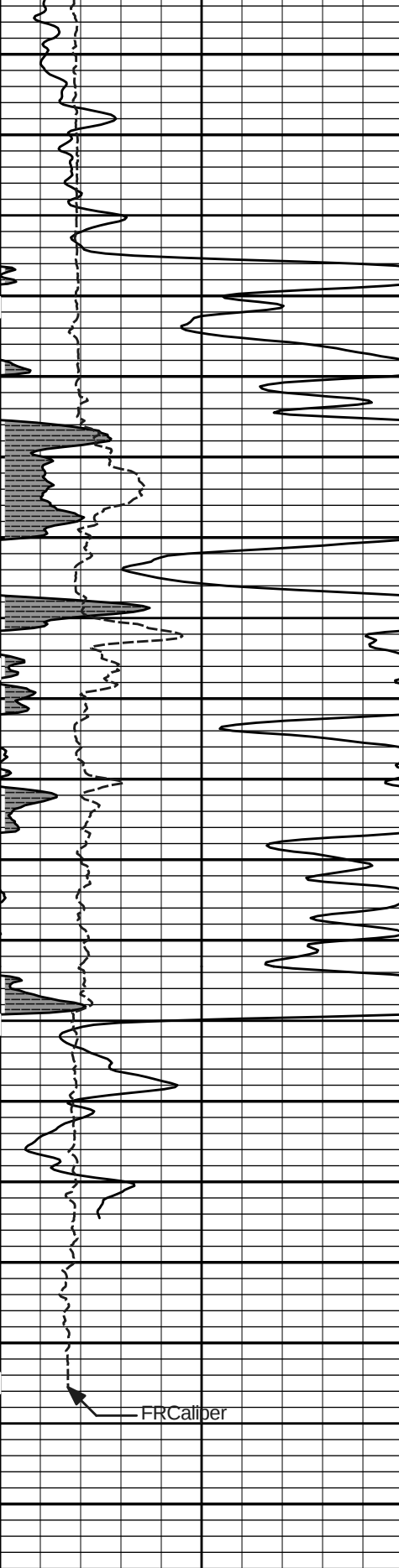
5 INCH MAIN LOG

HALLIBURTON

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Plot Range: 5010 ft to 5268.33 ft
Data: HOAGLAND_1_22\Well Based\REPEAT2\
Plot File: \\POROI\Poroi_Q_5_REP_LIB

REPEAT SECTION





5100

5200

- FRCaliper

Caliper

inches

Gamma API

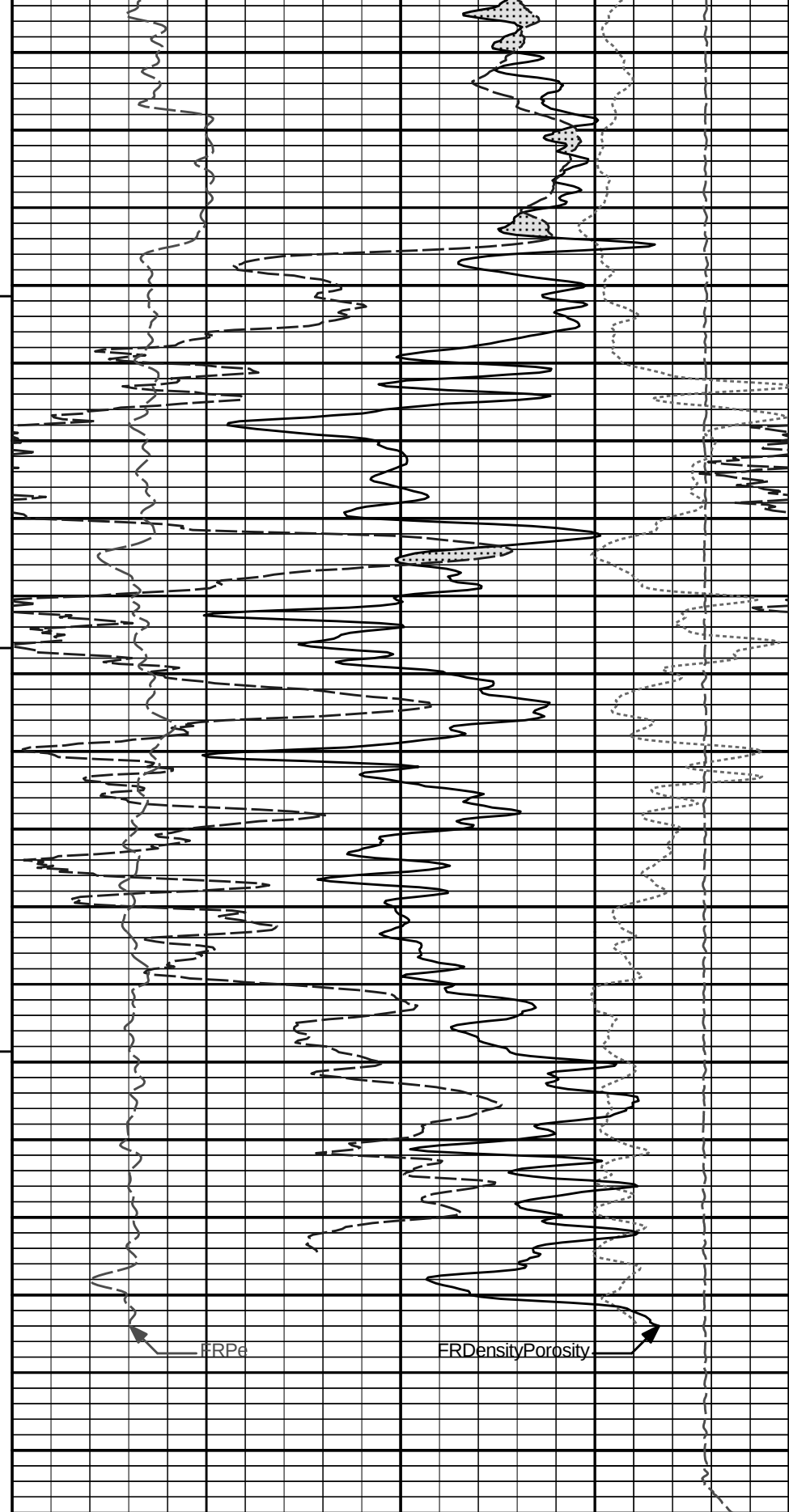
CHIALE

1 : 240

ft

AHVT

PLANT



FRPe

FRDensityPorosity

Pe

10

0 | -0.25

15K

DensityCorr

 Tension
 pounds

DensityPorosity

-10

SHALE	BHV	%
		Neutron Porosity
		30
		%
		CROSSOVER

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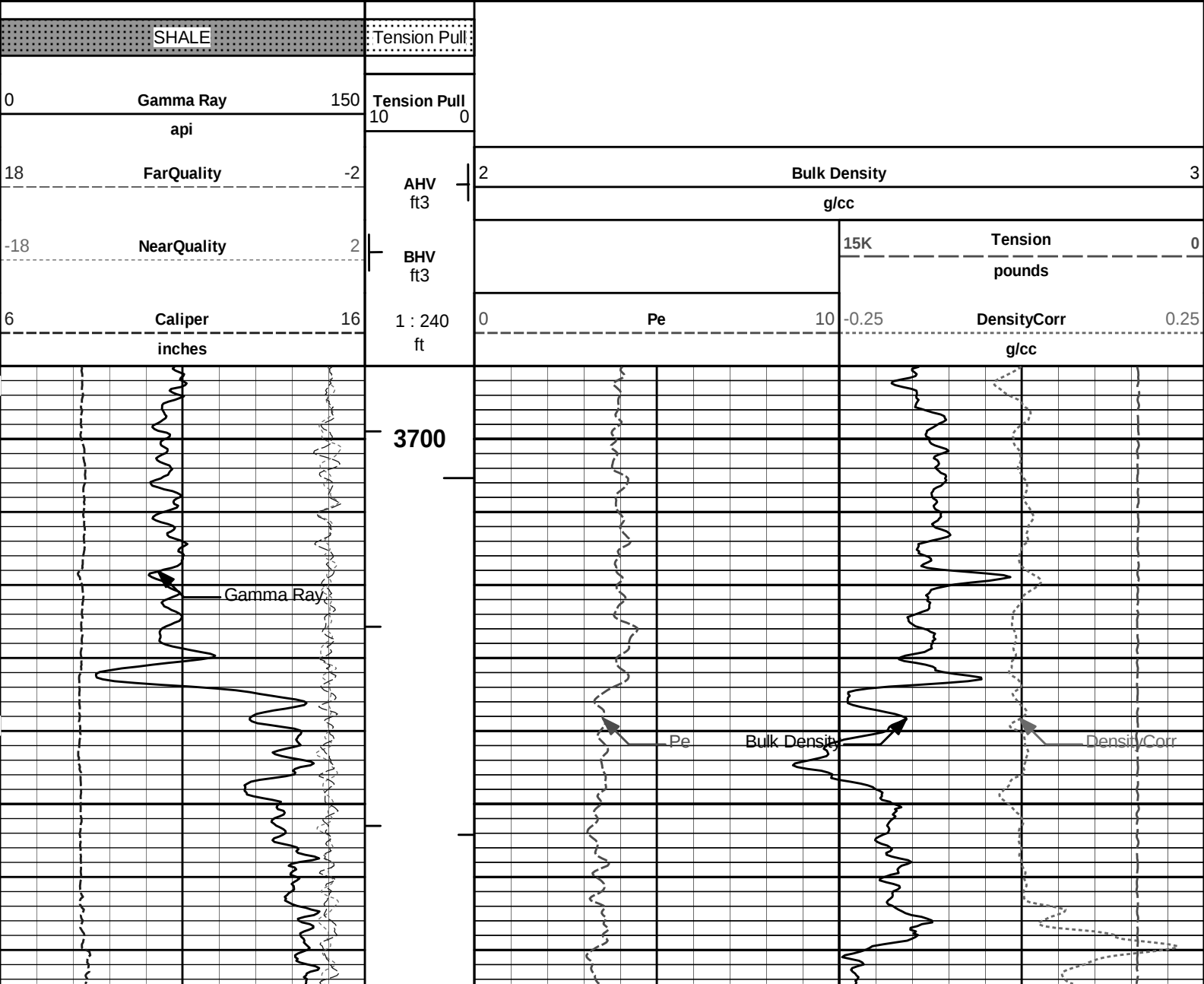
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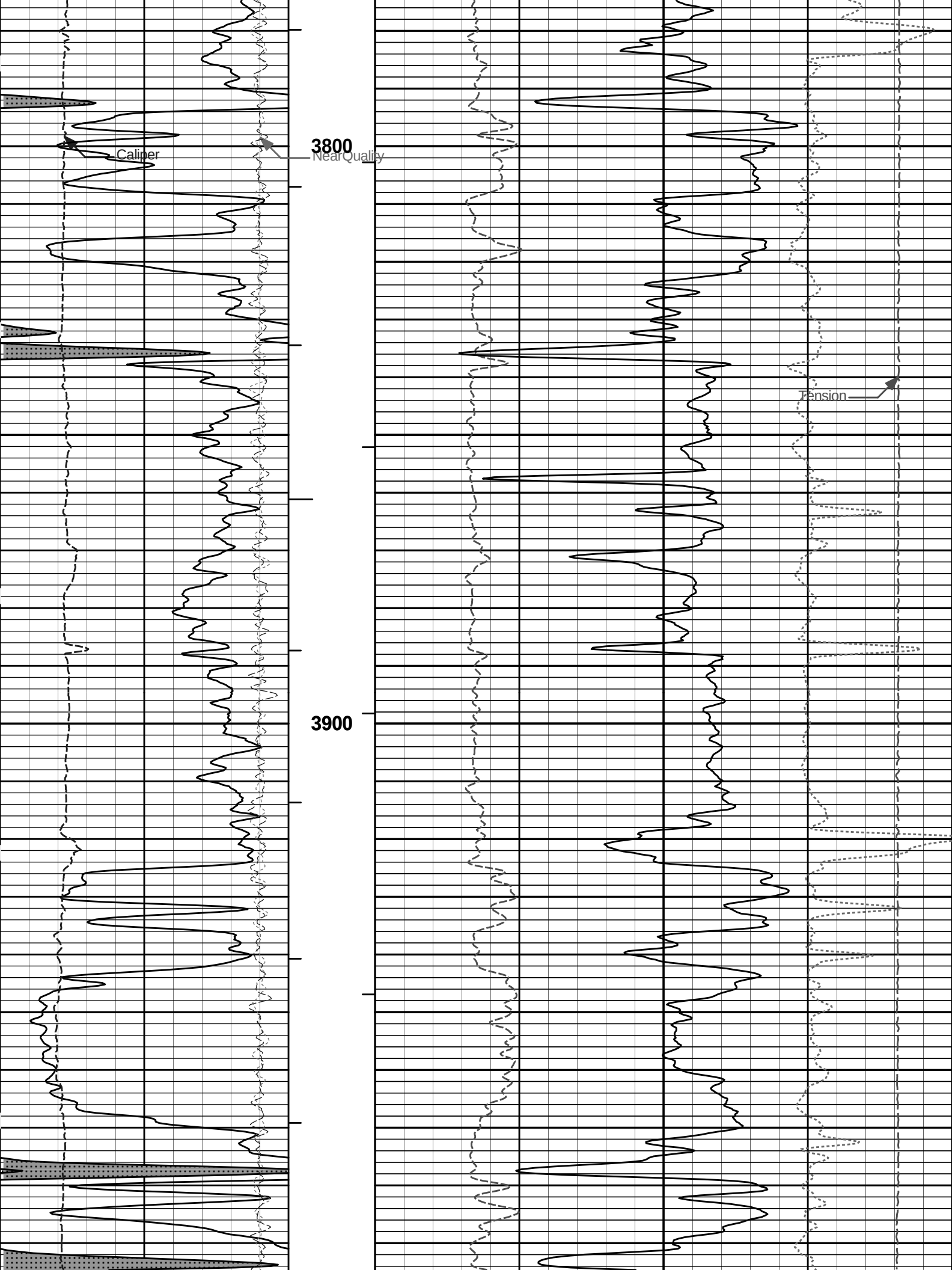
REPEAT SECTION

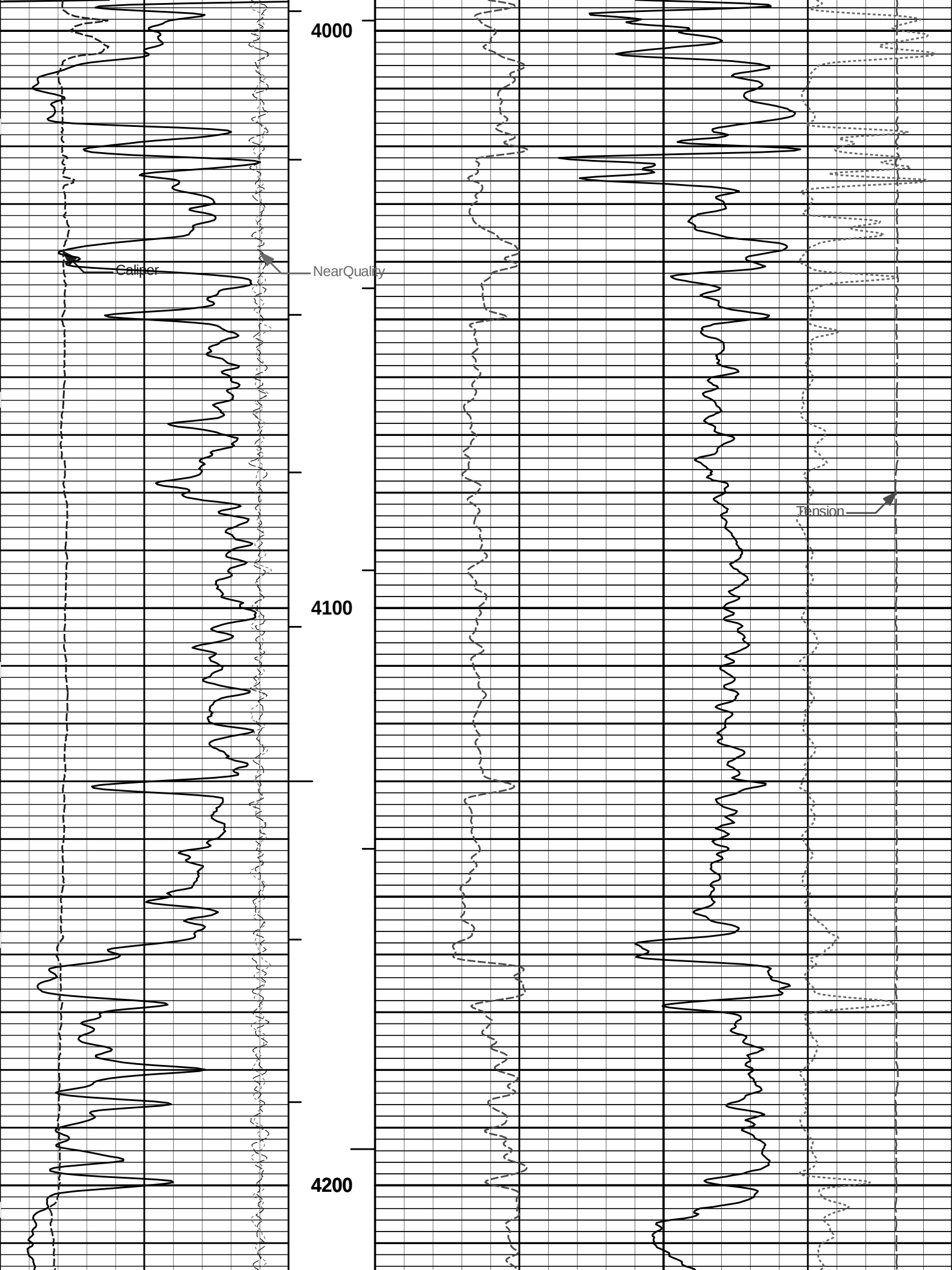
HALLIBURTON

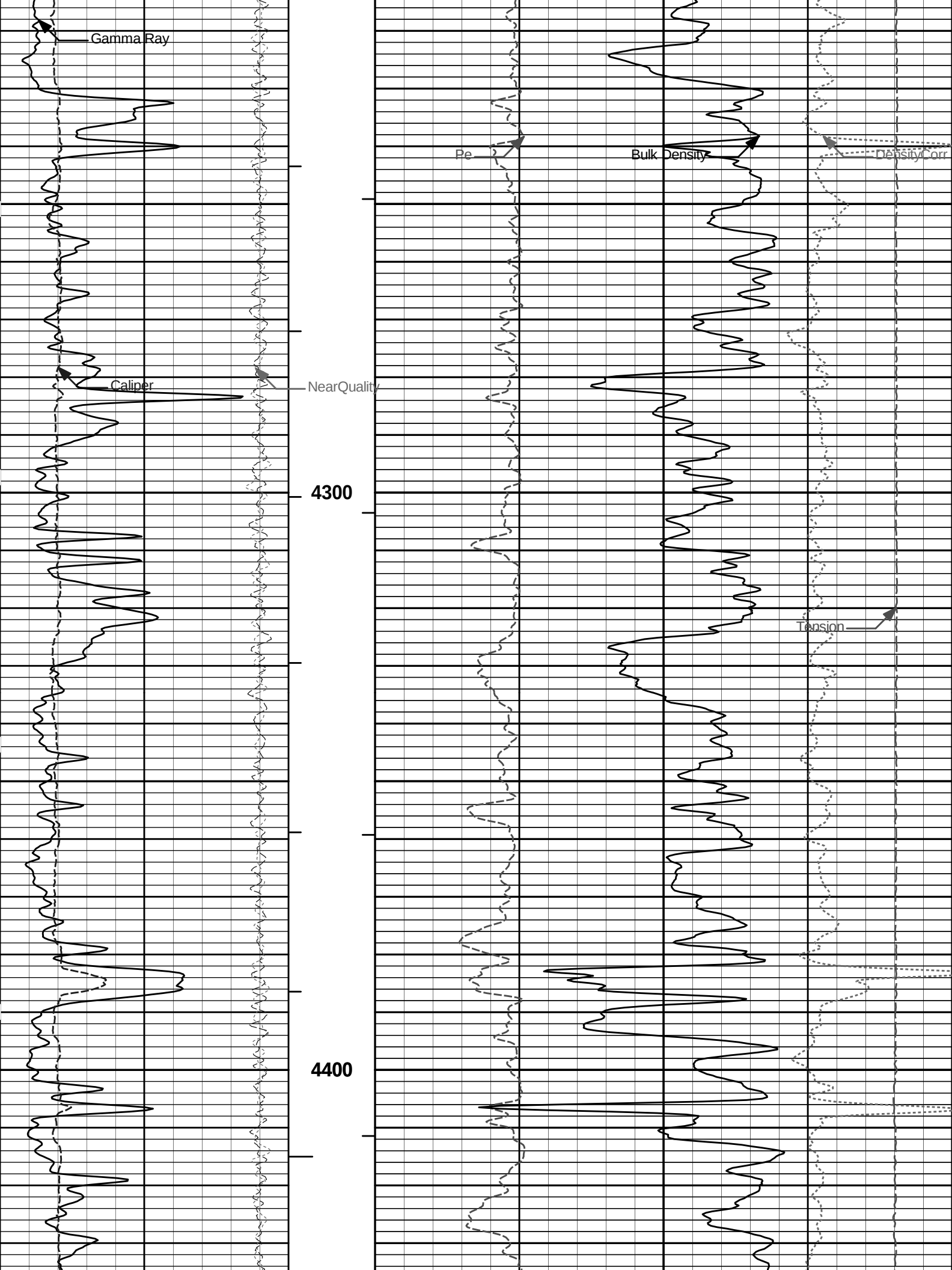
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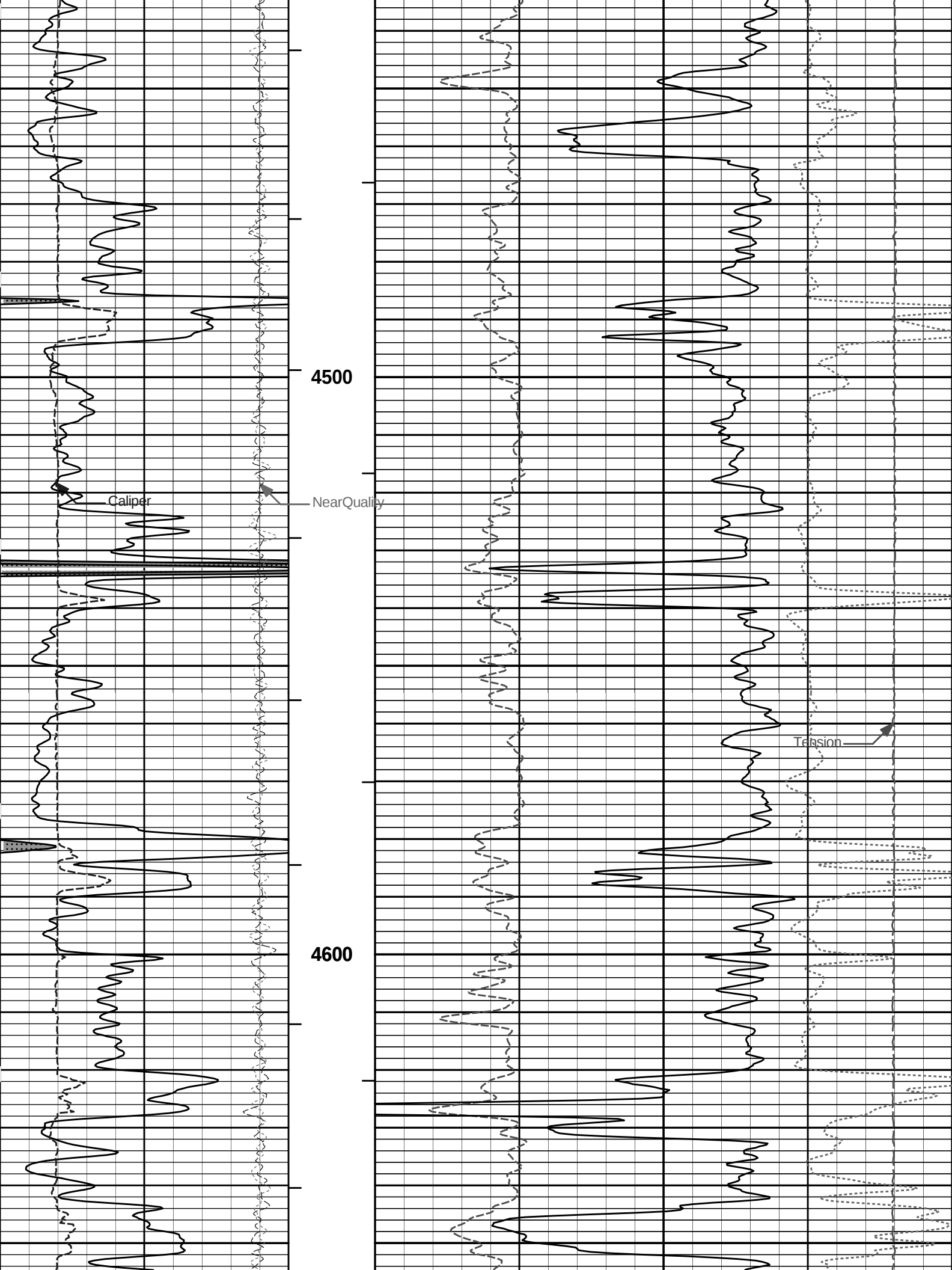
5 INCH MAIN LOG

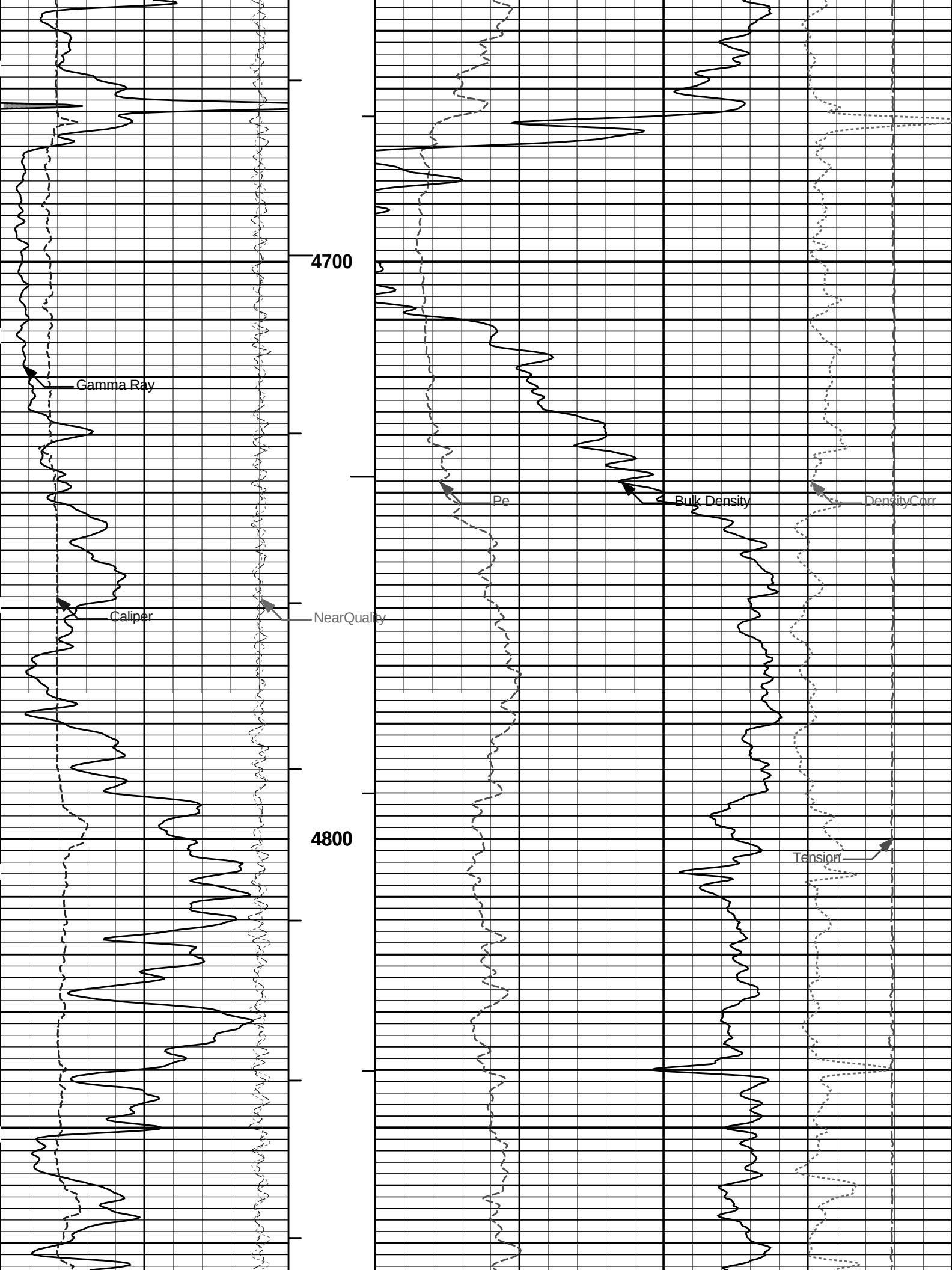


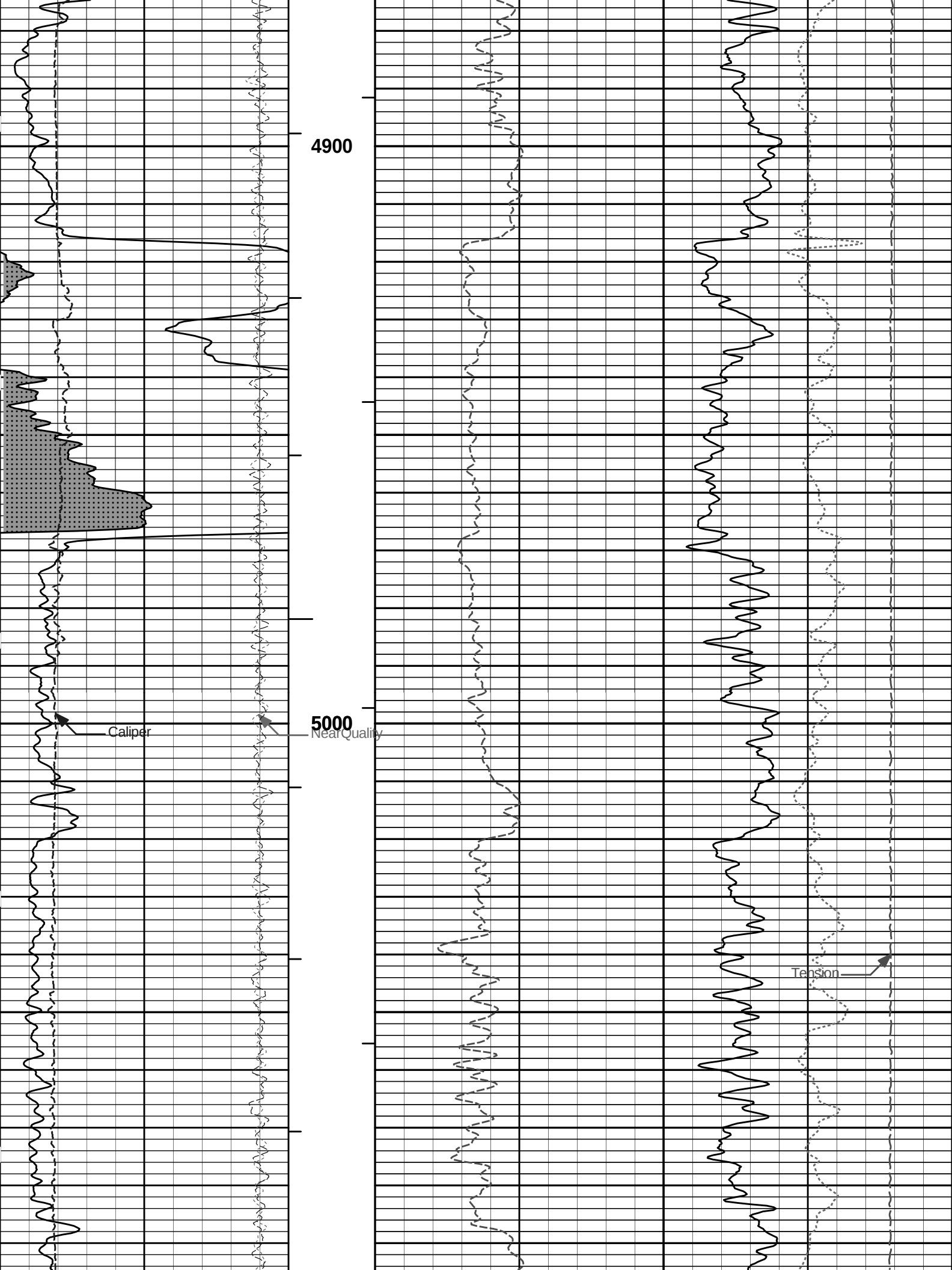


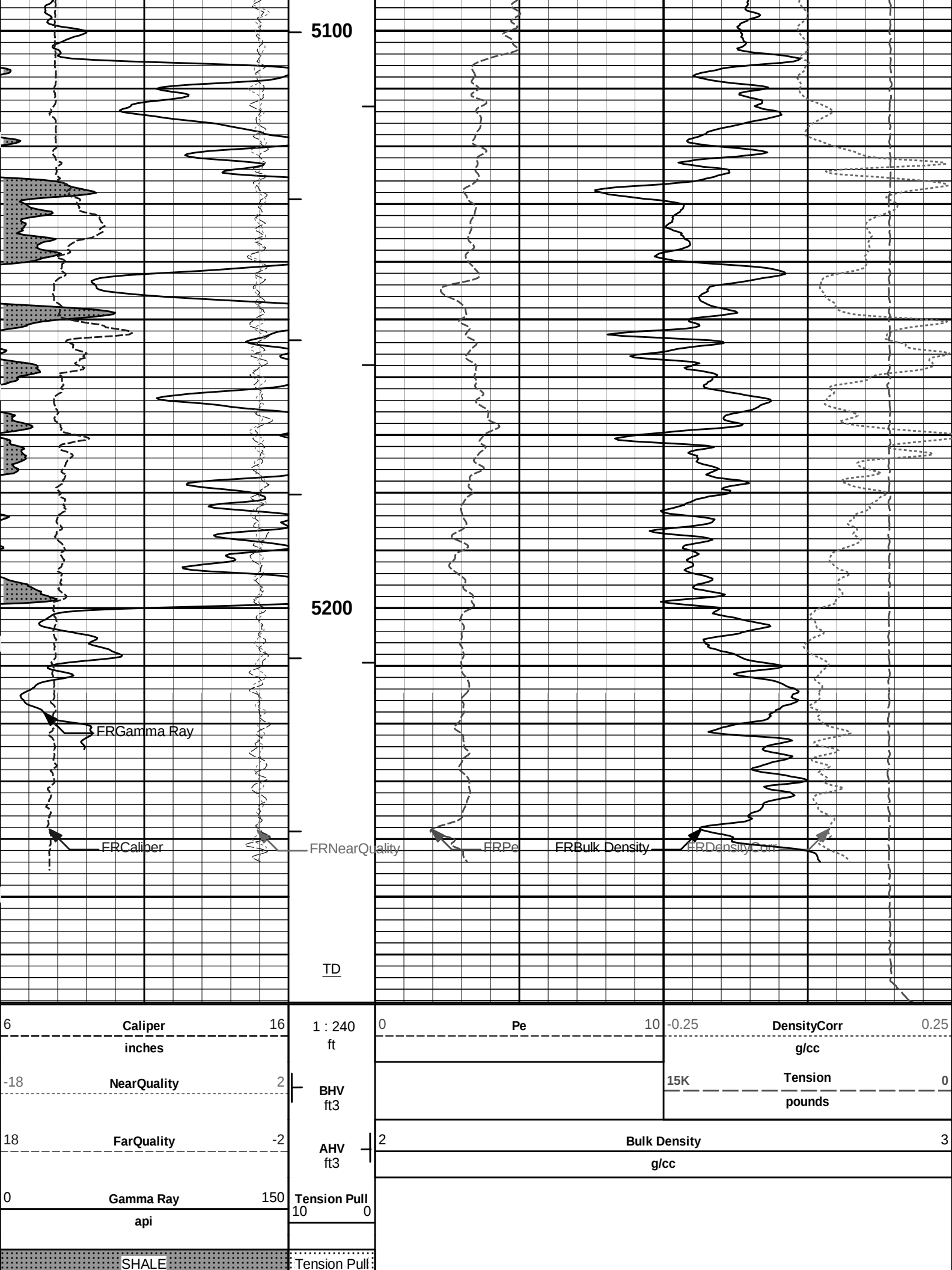






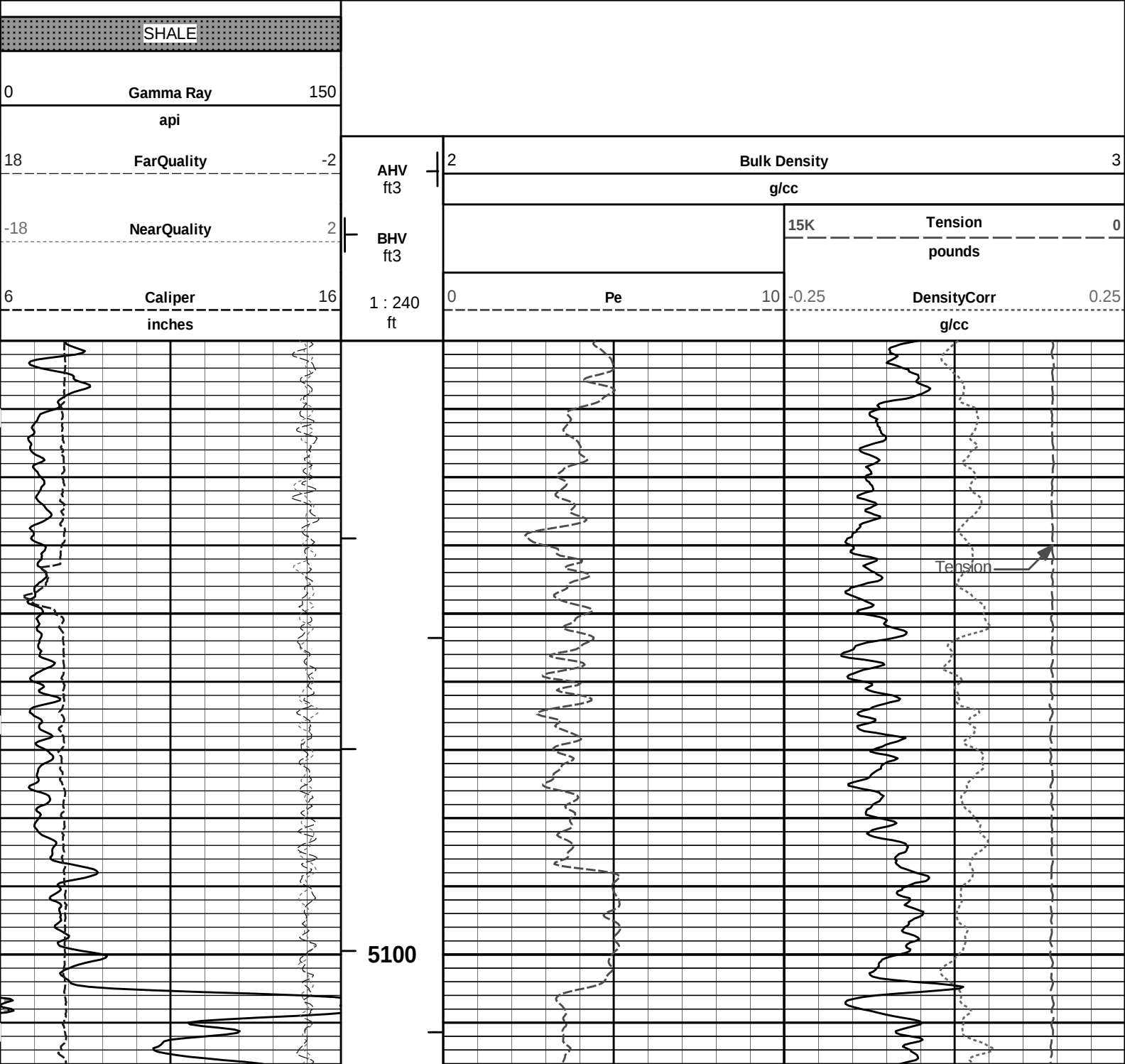


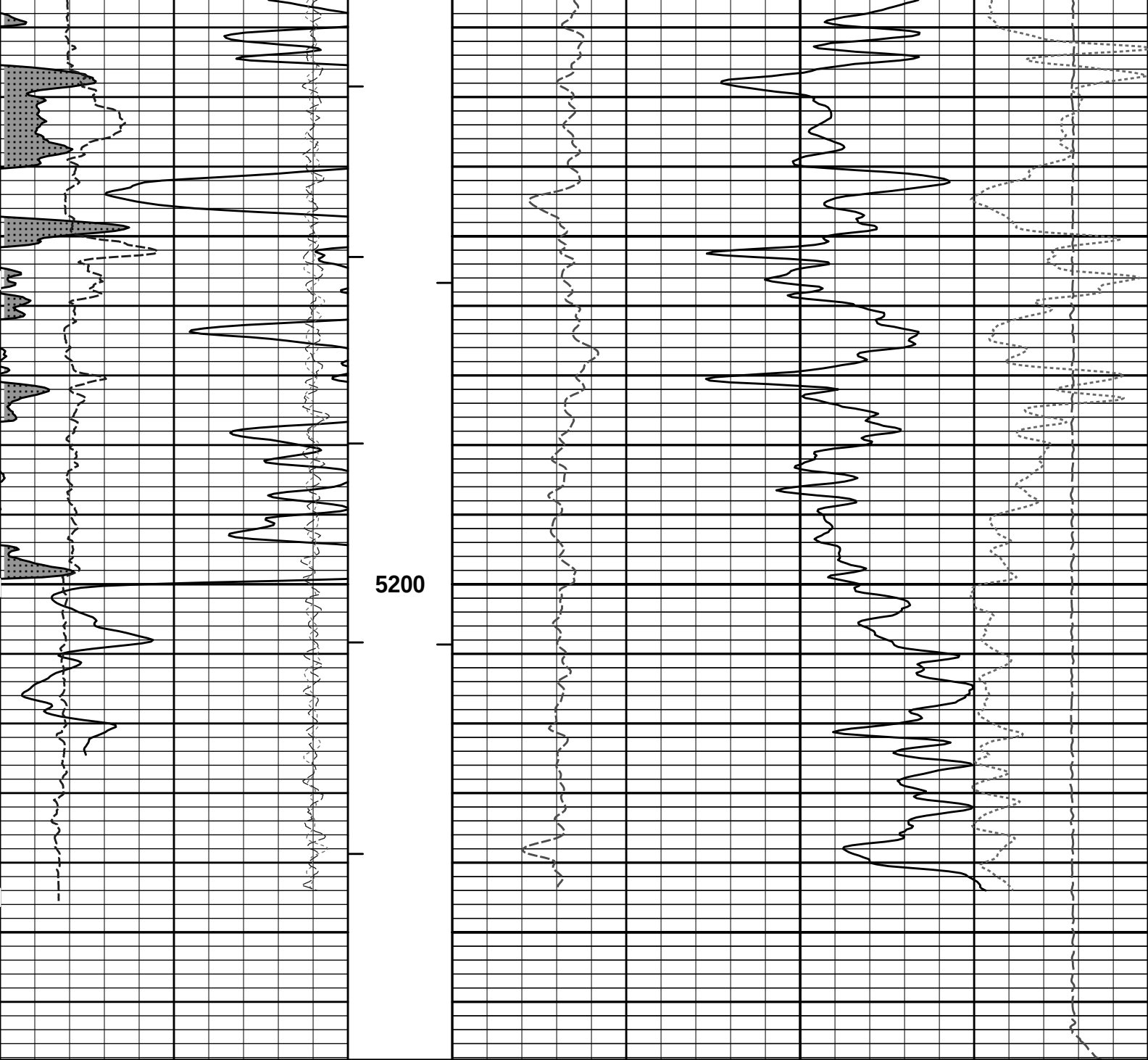




5 INCH MAIN LOG

REPEAT SECTION





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

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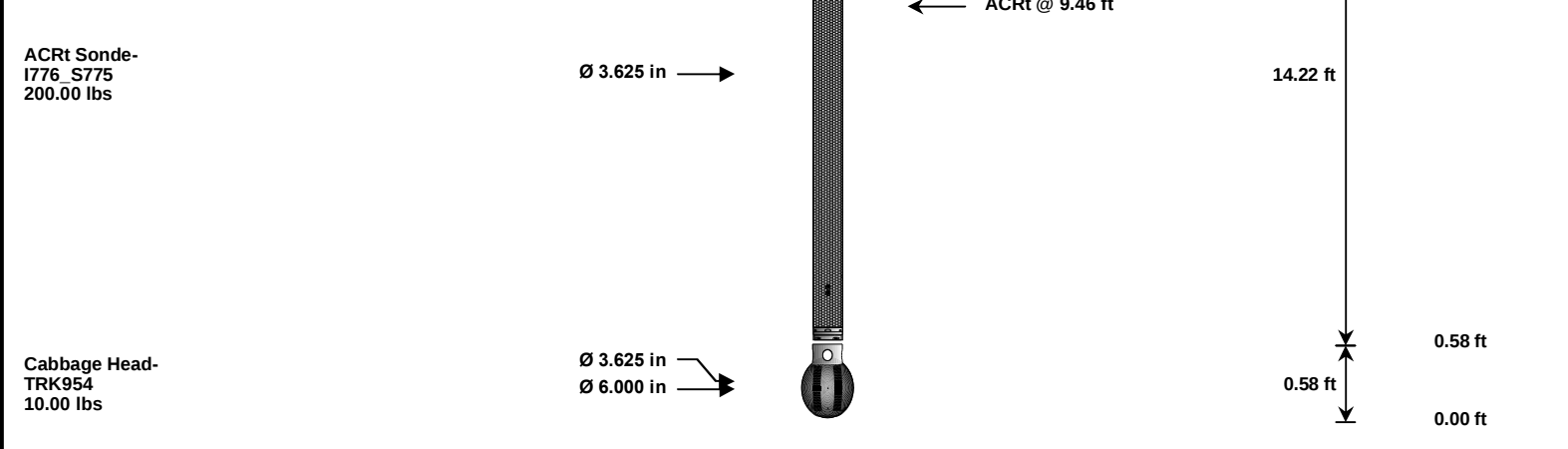
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Plot File: \\-LOCAL-HOAGLAND_1_22\0002 SP-GTET-DSNT-SDLT-ACRT-CHIPORO\BULKD_5_REP_LIB

REPEAT SECTION

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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	54.51 ft
SP Sub-PROT01 60.00 lbs		Ø 3.625 in →		← SP @ 50.81 ft	3.74 ft	52.59 ft
GTET-10748374 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.79 ft	8.52 ft	48.85 ft
DSNT-10735145 174.00 lbs	DSN Decentralizer- 10735145 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →		← DSN Far @ 33.39 ft ← DSN Near @ 32.64 ft	9.69 ft	40.33 ft
SDLT- I145_M73803_P90 360.00 lbs	SDLT Pad- I145_M73803_P90 65.00 lbs Microlog Pad- I145_M73803_P90 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		Microlog @ 22.83 ft SDL Caliper @ 22.65 ft SDL @ 22.64 ft	10.81 ft	30.64 ft
ACRt Instrument- I776 50.00 lbs		Ø 3.625 in →		← Mud Resistivity @ 13.44 ft	5.03 ft	19.83 ft
						14.80 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	52.59	300.00
SP	SP Sub		PROT01	60.00	3.74	48.85	300.00
GTET	Gamma Telemetry Tool		10748374	165.00	8.52	40.33	60.00
DSNT	Dual Spaced Neutron		10735145	174.00	9.69	30.64	60.00
DCNT	DSN Decentralizer		10735145	6.60	5.13	*	33.97
SDLT	Spectral Density Tool		I145_M73803_P90	360.00	10.81	19.83	60.00
MICP	Microlog Pad		I145_M73803_P90	8.00	1.00	*	22.33
SDLP	Density Insite Pad		I145_M73803_P90	65.00	2.55	*	22.04
ACRt	Array Compensated True Resistivity Instrument Section		I776	50.00	5.03	14.80	300.00
ACRt	Array Compensated True Resistivity		I776_S775	200.00	14.22	0.58	300.00
CBHD	Cabbage Head		TRK954	10.00	0.58	0.00	300.00
Total				1,128.60	54.51		
* Not included in Total Length and Length Accumulation.							
Data: HOAGLAND_1_22I0002 SP-GTET-DSNT-SDLT-ACRT-CHIDLE						Date: 15-Jan-12 22:11:31	

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 10748374	Reference Calibration Date:	02-Nov-11 10:46:23
Engineer:	C. MARLOWE	Calibration Date:	11-Dec-11 15:41:11
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

Calibrator Source S/N: TB-185			
Calibrator API Reference:228.00 api			
Equivalent Calibrator API Reference:232.0 api			
Measurement	Measured	Calibrated	Units
Background	29.5	29.1	api
Background + Calibrator	264.0	261.1	api
Calibrator	234.6	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 10748374	Reference Calibration Date:	11-Dec-11 15:41:11
Engineer:	C. MARLOWE	Calibration Date:	13-Jan-12 11:31:40
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

Calibrator Source S/N: TB-185			
Calibrator API Reference:228.00 api			
Equivalent Calibrator API Reference:232.0 api			
Field Verification	Shop	Field	Units
Background	29.1	45.1	api

Background + Calibrator	261.1	277.8	api
Calibrator	232.0	232.7	api

Shop	Field	Difference	Tolerance
232.0	232.7	-0.7	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 10735145

Reference Calibration Date: 06-Nov-11 16:03:25

Engineer: C. MARLOWE

Calibration Date: 17-Dec-11 07:19:51

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

Calibration Version: 1

Logging Source S/N: DSN-436

Tank Serial Number: 105060

Reference value assigned to Tank: 51.680

Snow Block S/N: TRK_954

Calibration Tank Water Temperature: 62 degF

Min. Tool Housing Outside Diameter: 3.615 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.930	0.930	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):	0.2103	0.2103	0.0000	+/- 0.0020
Calibrated Ratio:	9.70	9.70	0.000	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0712	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 - 10735145

Reference Calibration Date: 17-Dec-11 07:19:51

Engineer: C. MARLOWE

Calibration Date: 13-Jan-12 14:15:26

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

Calibration Version: 1

Logging Source S/N: DSN-436

Snow Block S/N: TRK_954

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0712	0.0699	-0.0013	+/- 0.0150

PASS/FAIL SUMMARY

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

DENSITY CALIPER SHOP CALIBRATION					
Tool Name:	SDLT - I145_M73803_P90		Reference Calibration Date:	15-Oct-11 01:31:43	
Engineer:	C. MARLOWE		Calibration Date:	16-Dec-11 08:53:18	
Software Version:	WL INSITE R3.4.2 (Build 2)		Calibration Version:	1	
	CALIBRATION COEFFICIENTS				
	Measurement	Previous Value	New Value	Control Limit On New Value	
	Pad Offset	-2810.00	-2999.04	-7000.00 - -1000.00	
	Pad Gain	0.0004066	0.0004000	0.000200 - 0.000600	
	Arm Offset	-1181.84	-1398.96	-5000.00 - 3000.00	
	Arm Gain	0.0005021	0.0005230	0.000300 - 0.000700	
	Arm Power	-0.000004412	-0.000004686	-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)	2.11	2.00	-0.11	+/- 0.20
	Medium Ring (in)	3.89	3.75	-0.14	+/- 0.20
	RING DIAMETER:				
	Small Ring (in)	6.60	6.50	-0.10	+/- 0.20
Medium Ring (in)	8.28	8.25	-0.03	+/- 0.20	
Large Ring (in)	14.82	15.00	0.18	+/- 0.20	
PASS/FAIL SUMMARY					
Calibration-Coefficients Range Check:			Passed		
Ring-Measurement Check:			Passed		
PASS/FAIL SUMMARY					
Calibration-Coefficients Range Check:			Passed		

SDLT CALIPER FIELD CALIBRATION					
Tool Name:	SDLT - I145_M73803_P90		Reference Calibration Date:	16-Dec-11 08:53:18	
Engineer:	C. MARLOWE		Calibration Date:	13-Jan-12 11:37:16	
Software Version:	WL INSITE R3.4.2 (Build 2)		Calibration Version:	1	
	MEASURED CALIPER VALUES				
	Measurement	Shop	Field	Change	Control Limit On New Value
	Pad Extension	3.75	3.66	-0.09	+/- 0.10
	Ring Diameter	8.25	8.31	0.06	+/- 0.15
PASS/FAIL SUMMARY					
Pad Extension Check:			Passed		
Diameter Check:			Passed		

SPECTRAL DENSITY SHOP CALIBRATION				
Tool Name:	SDLT Pad - I145_M73803_P90		Reference Calibration Date:	09-Nov-11 11:03:30
Engineer:	C. HAVERKAMP		Calibration Date:	09-Nov-11 11:21:55
Software Version:	WL INSITE R3.4.2 (Build 2)		Calibration Version:	1
Logging Source S/N: 5073GW				
Aluminum Block S/N: 63061		Density: 2.591g/cc		Pe: 3.170
Magnesium Block S/N: 63393		Density: 1.690g/cc		Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9618	0.9908	0.90 - 1.10
Near Dens Gain	0.9687	0.9857	0.90 - 1.10
Near Peak Gain	0.9662	0.9997	0.90 - 1.10
Near Lith Gain	0.9623	0.9761	0.90 - 1.10
Far Bar Gain	0.9857	0.9899	0.90 - 1.10
Far Dens Gain	0.9806	0.9802	0.90 - 1.10
Far Peak Gain	0.9744	0.9743	0.90 - 1.10
Far Lith Gain	0.9497	0.9466	0.90 - 1.10
Near Bar Offset	0.5202	0.2573	NONE
Near Dens Offset	0.4360	0.2886	NONE
Near Peak Offset	0.4342	0.1594	NONE
Near Lith Offset	0.4499	0.3374	NONE
Far Bar Offset	0.2209	0.1839	NONE
Far Dens Offset	0.2459	0.2495	NONE
Far Peak Offset	0.2438	0.2421	NONE
Far Lith Offset	0.3476	0.3669	NONE
Near Bar Background	888.77	889.83	700 - 1450
Near Dens Background	296.48	295.30	230 - 480
Near Peak Background	130.62	130.16	100 - 210
Near Lith Background	159.45	157.41	125 - 260
Far Bar Background	600.00	595.63	450 - 900
Far Dens Background	235.40	234.49	175 - 345
Far Peak Background	91.92	93.71	70 - 140
Far Lith Background	98.35	97.53	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.683	1.690	0.007	+/- 0.015
Pe	2.547	2.547	0.000	+/- 0.150
ALUMINUM				
Density (g/cc)	2.589	2.591	0.002	+/- 0.01500
Pe	3.133	3.120	-0.013	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0014	+/- 0.0110	0.0019	+/- 0.0140
Magnesium Block	-0.0003	+/- 0.0110	-0.0011	+/- 0.0140
Aluminum Block	-0.0009	+/- 0.0110	-0.0001	+/- 0.0140
Resolution	8.94	6.00 - 11.50	9.01	6.00 - 11.50
Internal Verifier(B+D+P+L)	1473	1200 - 2700	1021	800 - 1700

PASS/FAIL SUMMARY	
Background Quality Check:	Passed
Background Range Check:	Passed

Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

SPECTRAL DENSITY FIELD CHECK

Tool Name:	SDLT Pad - I145_M73803_P90	Reference Calibration Date:	09-Nov-11 11:21:55
Engineer:	C. MARLOWE	Calibration Date:	13-Jan-12 11:30:37
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

Pad Temperature: 64.7 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1472.697	1472.840	0.143	15.472
Far (B+D+P+L) cps	1021.361	1019.669	-1.692	17.052
Near Resolution	8.94	9.00	0.060	0.50
Far Resolution	9.01	9.04	0.030	1.00

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

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10748374						
Gamma Ray Calibrator	232.0	232.7	-----	-0.7	+/- 9.00	api
DSNT-10735145						
Snow-Block Porosity	0.0712	0.0699	-----	0.0013	+/- 0.0150	decp
SDLT-I145_M73803_P90						
Pad Extension	3.75	3.66	-----	0.09	+/-0.10	in
Ring Diameter	8.25	8.31	-----	-0.060	+/-0.15	in
SDLT Pad-I145_M73803_P90						
Near(B+D+P+L)	1472.697	1472.840	-----	-0.143	+/-15.472	cps
Far(B+D+P+L)	1021.361	1019.669	-----	1.692	+/-17.052	cps

Data: HOAGLAND_1_22\0001 SP-GTET-DSNT-SDLT-ACRT-CH\IDLE

Date: 15-Jan-12 17:09:06

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PARAMETERS REPORT

Depth ((ft))	Tool Name	Mnemonic	Description	Value	Units
TOP-----					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.500	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	0.00	ppm

	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	0.340	ohmm
	SHARED	TRM	Temperature of Mud	67.0	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	5264.00	ft
	SHARED	BHT	Bottom Hole Temperature	115.0	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	Archie A factor	0.6200	
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
	Rwa / CrossPlot	RMFR	Rmf Reference	0.29	ohmm
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	65.00	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	
	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	
	SDLT	CLOK	Process Caliper Outputs?	Yes	
	SDLT Pad	DNOK	Process Density?	Yes	
	SDLT Pad	DNOK	Process Density EVR?	No	
	SDLT Pad	CB	Logging Calibration Blocks?	No	
	SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
	SDLT Pad	DTWN	Disable temperature warning	No	
	SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
	SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
	Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
	ACRt Sonde	RTOK	Process ACRt?	Yes	
	ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
	ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	
	ACRt Sonde	TPOS	Tool Position	Free Hanging	
	ACRt Sonde	RMOP	Rmud Source	Gradient	
	ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
	ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm
	ACRt Sonde	THQY	Threshold Quality	0.50	
BOTTOM					

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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	50.81	NO	
SP	Spontaneous Potential	50.81	BLK	1.250
SPR	Raw Spontaneous Potential	50.81	NO	
SPO	Spontaneous Potential Offset	50.81	NO	
GTET				
TPUL	Tension Pull	42.79	NO	
GR	Natural Gamma Ray API	42.79	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	42.79	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	42.79	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	32.54	NO	
RNDS	Near Detector Telemetry Counts	32.64	BLK	1.417
RFDS	Far Detector Telemetry Counts	33.39	TRI	0.583
DNTT	DSN Tool Temperature	32.64	NO	
DSNS	DSN Tool Status	32.54	NO	
ERND	Near Detector Telemetry Counts EVR	32.64	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	33.39	BLK	0.000
ENTM	DSN Tool Temperature EVR	32.64	NO	
SDLT				
TPUL	Tension Pull	22.65	NO	
PCAL	Pad Caliper	22.65	TRI	0.250
ACAL	Arm Caliper	22.65	TRI	0.250
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	
SDLT Pad				
TPUL	Tension Pull	22.64	NO	
NAB	Near Above	22.46	BLK	0.920
NHI	Near Cesium High	22.46	BLK	0.920
NLO	Near Cesium Low	22.46	BLK	0.920
NVA	Near Valley	22.46	BLK	0.920
NBA	Near Barite	22.46	BLK	0.920
NDE	Near Density	22.46	BLK	0.920
NPK	Near Peak	22.46	BLK	0.920
NLI	Near Lithology	22.46	BLK	0.920
NBAU	Near Barite Unfiltered	22.46	BLK	0.250
NLIU	Near Lithology Unfiltered	22.46	BLK	0.250
FAB	Far Above	22.81	BLK	0.250
FHI	Far Cesium High	22.81	BLK	0.250
FLO	Far Cesium Low	22.81	BLK	0.250
FVA	Far Valley	22.81	BLK	0.250

FBA	Far Barite	22.81	BLK	0.250
FDE	Far Density	22.81	BLK	0.250
FPK	Far Peak	22.81	BLK	0.250
FLI	Far Lithology	22.81	BLK	0.250
PTMP	Pad Temperature	22.65	BLK	0.920
NHV	Near Detector High Voltage	22.04	NO	
FHV	Far Detector High Voltage	22.04	NO	
ITMP	Instrument Temperature	22.04	NO	
DDHV	Detector High Voltage	22.04	NO	

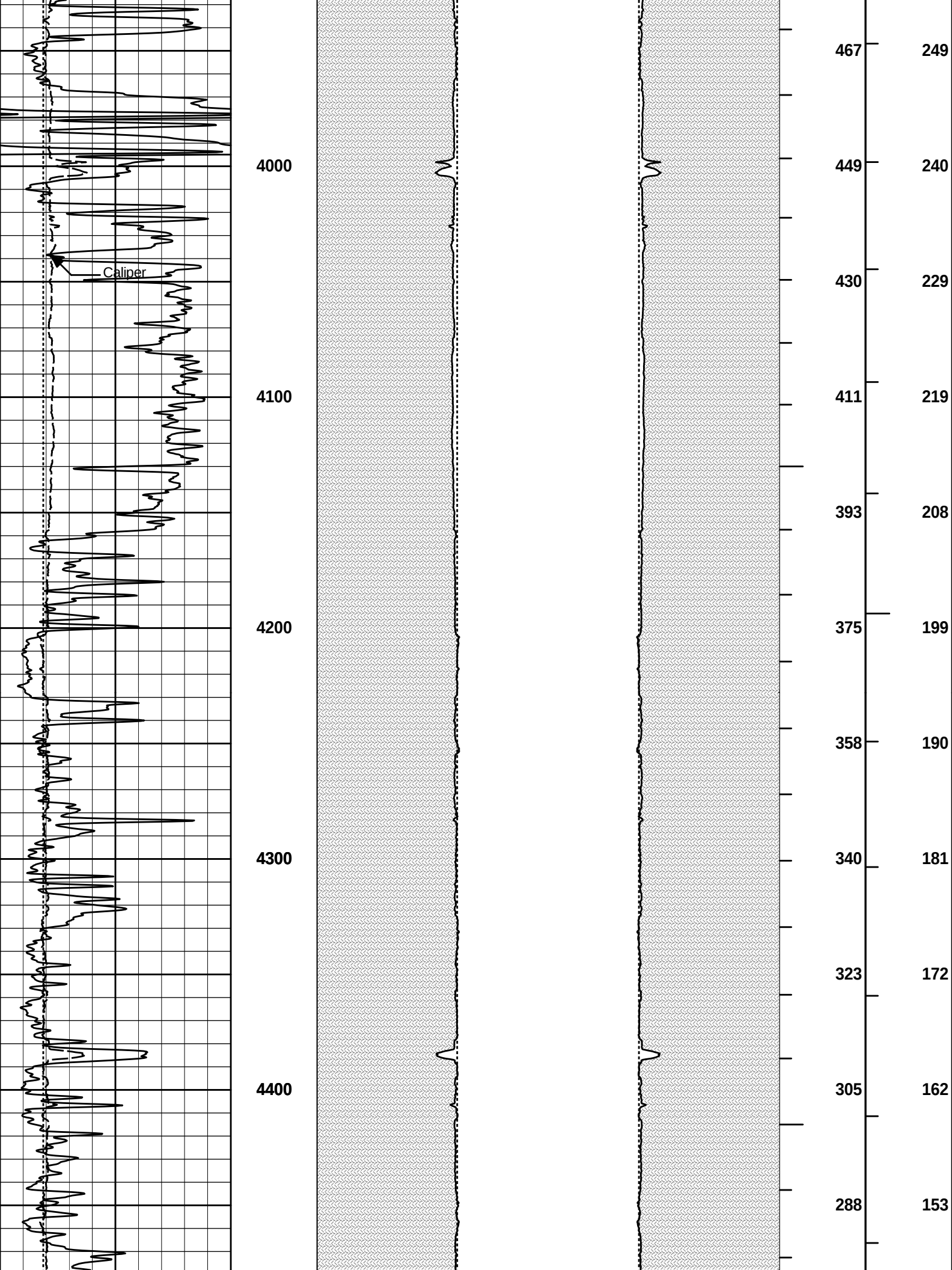
Microlog Pad				
TPUL	Tension Pull	22.83	NO	
MINV	Microlog Lateral	22.83	BLK	0.750
MNOR	Microlog Normal	22.83	BLK	0.750
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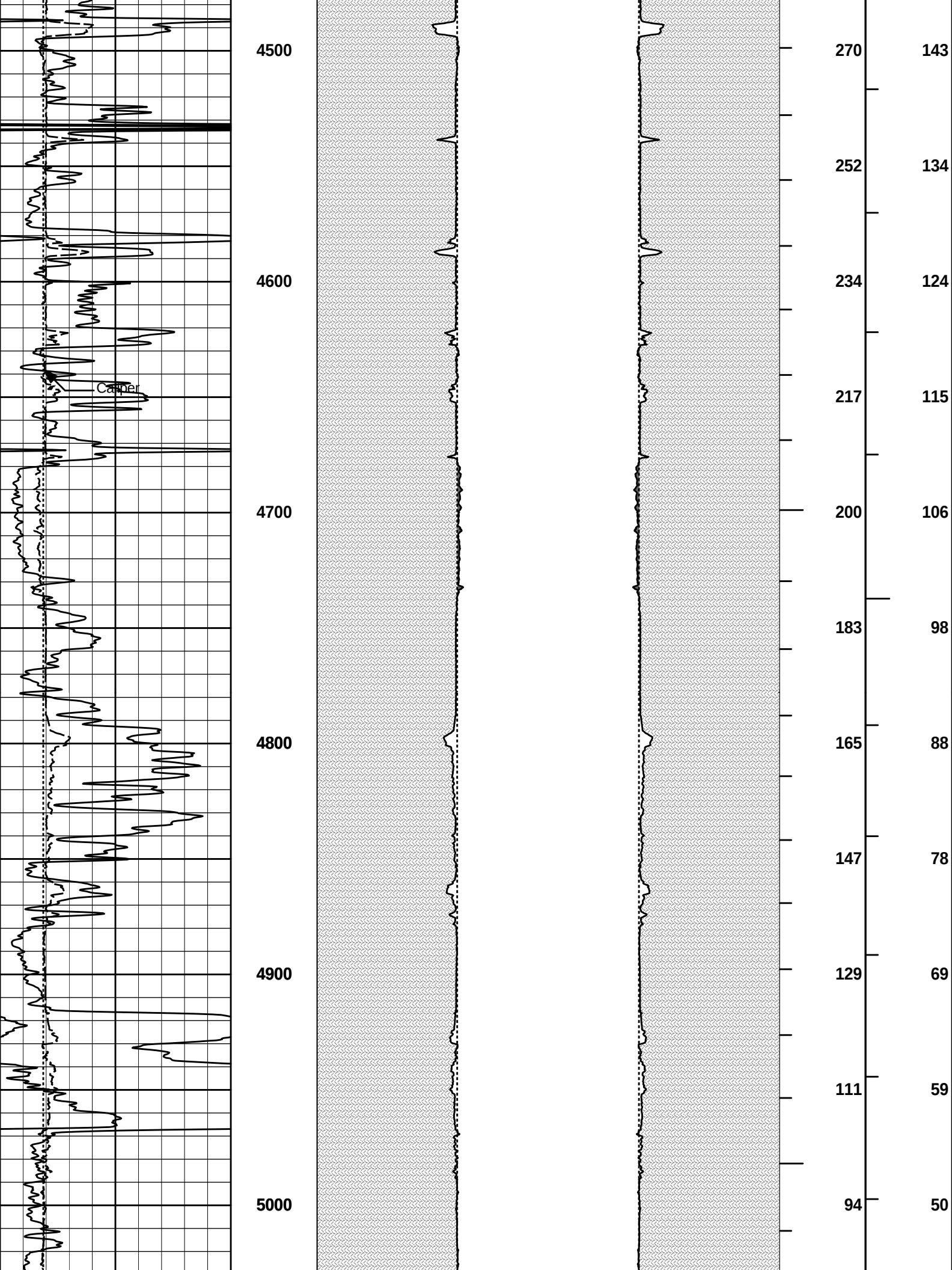
HALLIBURTON

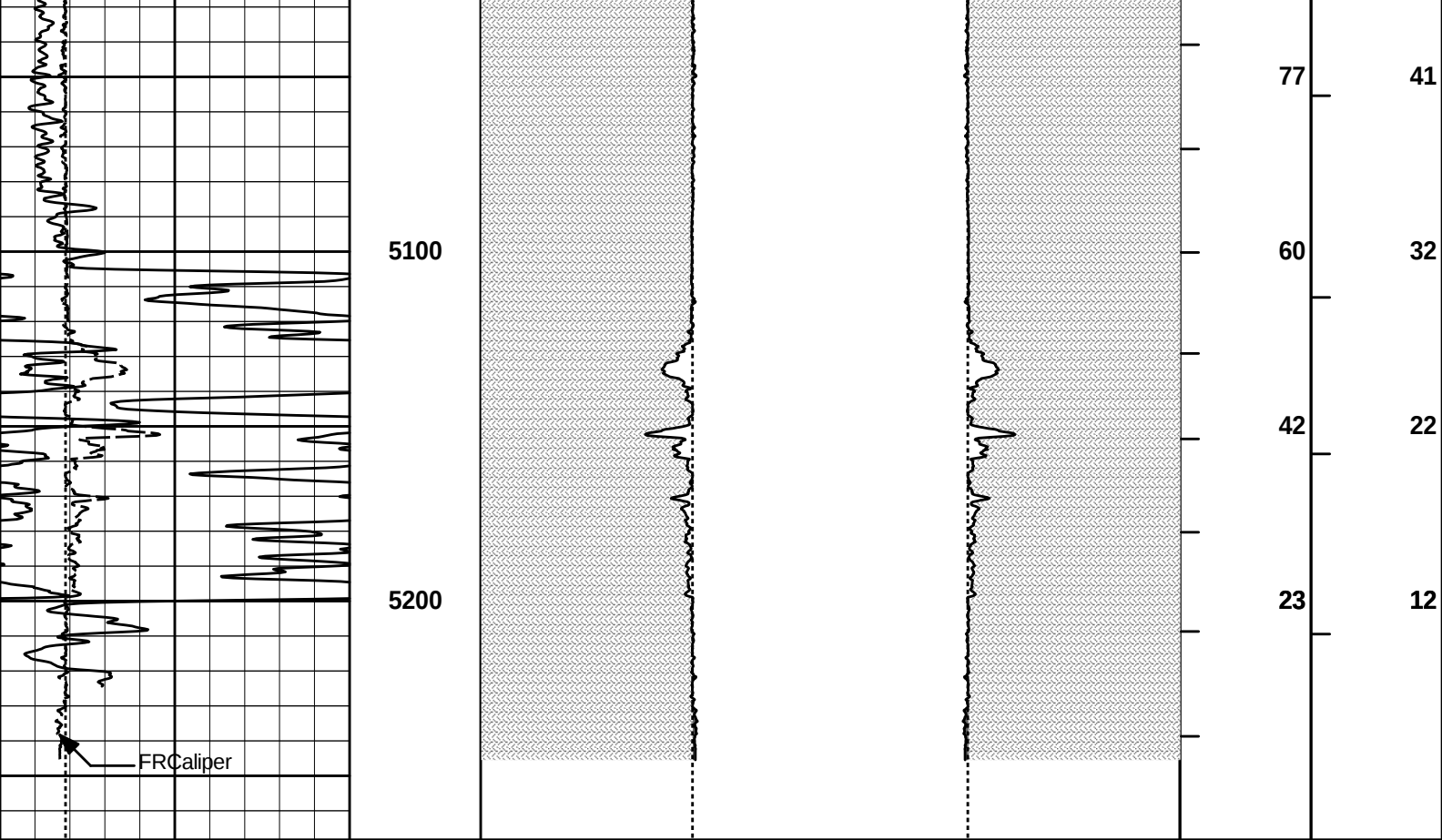
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ANNULAR HOLE VOLUME PLOT (5.5 INCH)

0			Gamma API	150		MUDCAKE		MUDCAKE					
api													
6						Bit Size		0		0		Bit Size	
BS						20		0		0		20	
inches													
6			1 : 600 ft	20		0		0		20		BHVT	AHVT
Caliper				inches		inches		inches		inches			
inches													
				</									







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

HALLIBURTON									
Plot Time: 16-Jan-12 01:28:52									
Plot Range: 3690 ft to 5268.33 ft									
Data: HOAGLAND_1_22\Well Based\CASING\									
Plot File: \\-LOCAL-\\HOAGLAND_1_22\\0002 SP-GTET-DSNT-SDLT-ACRT-CHIPOROI\\AHV_5_5_INCH_2_IQ_LIB									
ANNULAR HOLE VOLUME PLOT (5.5 INCH)									

COMPANY	VAL ENERGY, INC,		
WELL	HOAGLAND 1-22		
FIELD	UNKNOWN		
COUNTY	BARBER	STATE	KANSAS
HALLIBURTON		DUAL SPACED NEUTRON SPECTRAL DENSITY LOG	