

HALIBURTON				DUAL SPACED NEUTRON SPECTRAL DENSITY LOG			
COMPANY		FALCON EXPLORATION INC.		COMPANY		FALCON EXPLORATION INC.	
WELL		STEVE TUCKER 1-19 (SW)		WELL		STEVE TUCKER 1-19 (SW)	
FIELD/BLOCK		WILDCAT		FIELD/BLOCK		WILDCAT	
COUNTY		GRAY		COUNTY		GRAY	
STATE		KANSAS		STATE		KANSAS	
Permanent Datum		G.L.		Other Services: DSNT/SDLT MICROLOG WSTT ACRT			
Log measured from		KB		Elev. 2814.0 ft		2827.0 ft	
Drilling measured from		KB		13.0 ft above perm. Datum		2827.0 ft	
Date		07-Mar-15				2814.0 ft	
Run No.		ONE					
Depth - Driller		5550.00 ft					
Depth - Logger		5546.0 ft					
Bottom - Logged Interval		5484.00 ft					
Top - Logged Interval		2650.00 ft					
Casing - Driller		8.625 in @ 1832.0 ft				@	
Casing - Logger		1832.0 ft					
Bit Size		7.875 in				@	
Type Fluid in Hole		Water Based Mud					
Density		9.3 ppg		61.00 s/qt			
PH		10.00 pH		7.2 cphm			
Source of Sample		MUD PIT					
Rm @ Meas. Temperature		1.050 ohmm @ 55.00 degF				@	
Rmf @ Meas. Temperature		0.89 ohmm @ 55.00 degF				@	
Rmc @ Meas. Temperature		1.210 ohmm @ 55.00 degF				@	
Source Rmf		CALCULATED		CALCULATED			
Rm @ BHT		0.50 ohmm @ 123.0 degF				@	
Time Since Circulation		6.0000 hr					
Time on Bottom		07-Mar-15 04:00:43.000					
Max. Rec. Temperature		123.0 degF @ 5546.0 ft				@	
Equipment		11230668 LIBERAL					
Recorded By		JORGE ORLANDO PEREZ					
Witnessed By		DAVE WILLIAMS					

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Service Ticket No.: 902209523						API Serial No.: 15-069-20493-00-00				PGM Version: WL INSITE R4.6.4 (Build 3)							
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE								RESISTIVITY SCALE CHANGES									
Date	Sample No.								Type Log	Depth		Scale Up Hole		Scale Down Hole			
Depth-Driller																	
Type Fluid in Hole																	
Density	Viscosity																
Ph	Fluid Loss																
Source of Sample									RESISTIVITY EQUIPMENT DATA								
Rm @ Meas. Temp			@		@				Run No.	Tool Type & No.		Pad Type		Tool Pos.		Other	
Rmf @ Meas. Temp.			@		@		ONE		ACRT		N/A		CENT		N/A		
Rmc @ Meas. Temp.			@		@				10929776								
Source Rmf	Rmc																
Rm @ BHT			@		@												
Rmf @ BHT			@		@												
Rmc @ BHT			@		@												
EQUIPMENT DATA																	
GAMMA				ACOUSTIC				DENSITY				NEUTRON					
Run No.		ONE		Run No.		ONE		Run No.		ONE		Run No.		ONE			
Serial No.		10811258		Serial No.		U99T45R44L01		Serial No.		10673790		Serial No.		10735145			
Model No.		GTET		Model No.		WSTT		Model No.		SDLT		Model No.		DSNT			
Diameter		3.625"		No. of Cent.		2		Diameter		5.3"		Diameter		3.625"			
Detector Model No.		T-102		Spacing		EVEN		Log Type		GAM-GAM		Log Type		NEU-NEU			
Type		SCINT						Source Type		CS-137		Source Type		AM241BE			
Length		8"		LSA [Y/N]				Serial No.		5073GW		Serial No.		DSN-436			
Distance to Source		N/A		FWDA [Y/N]				Strength		1.5 Ci		Strength		15.0 Ci			
LOGGING DATA																	
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	150	30	-10	47.6 uSec/ft	30	-10	2.71 gr/cc	30	-10	LIME			

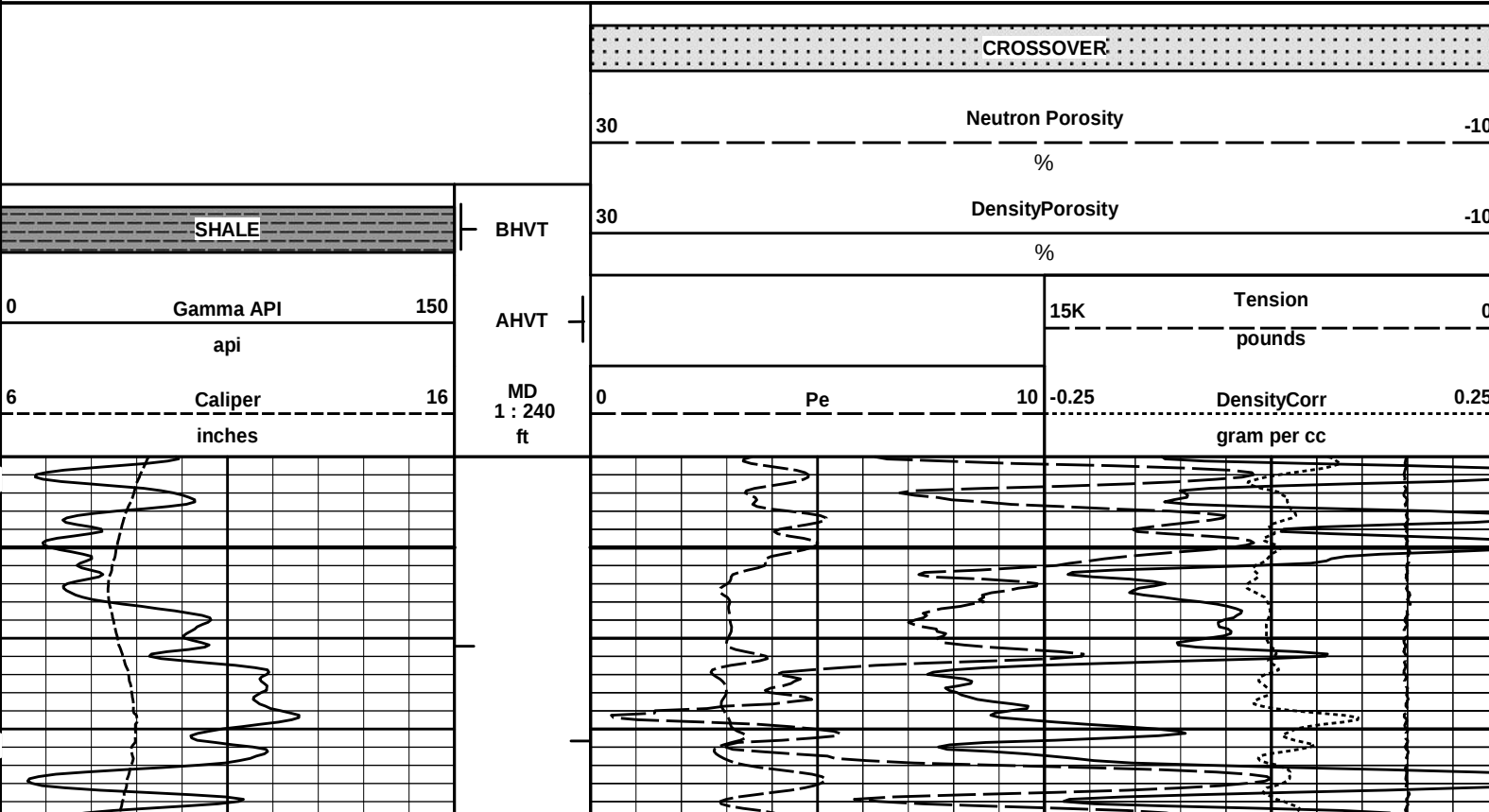
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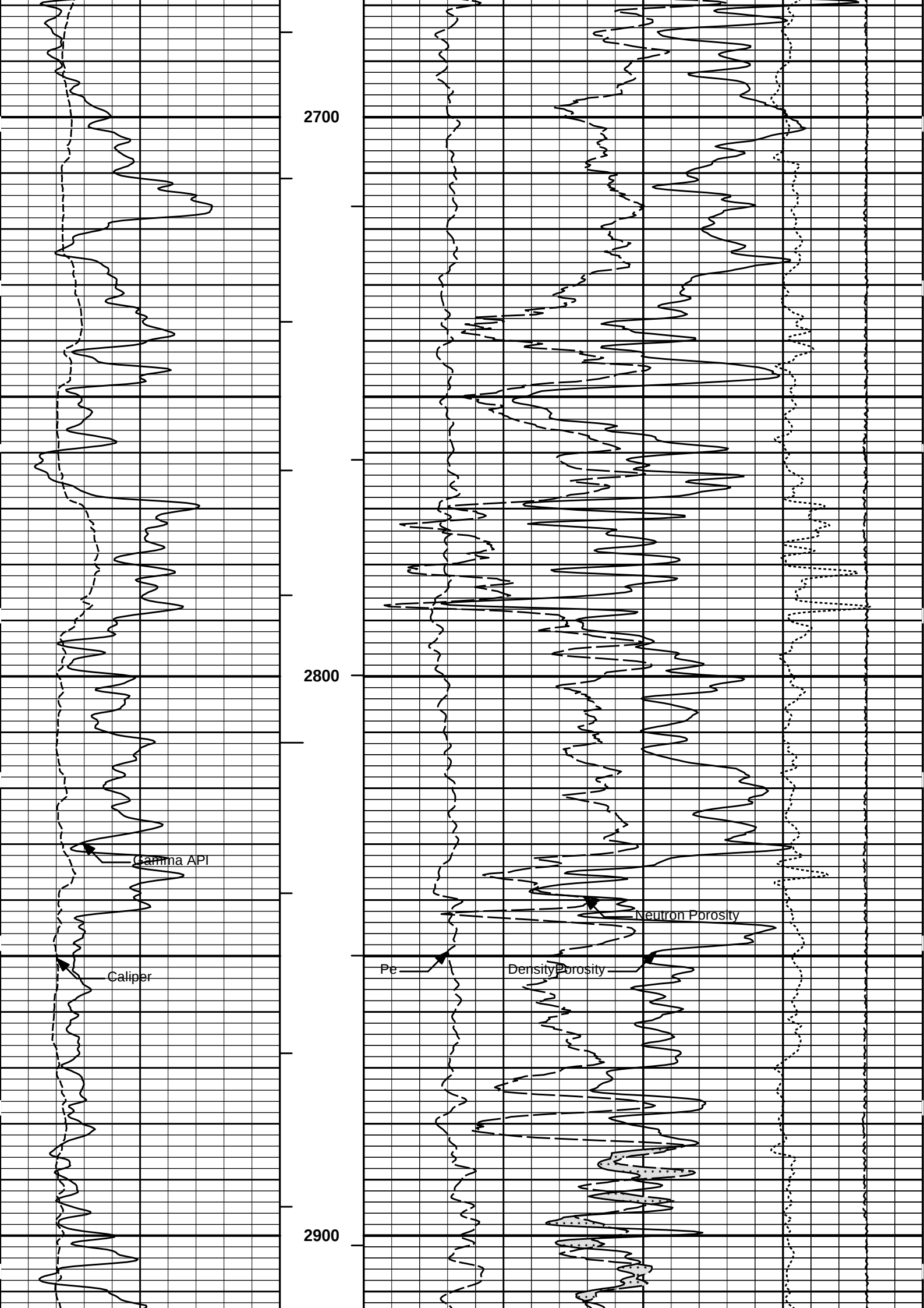
HALLIBURTON

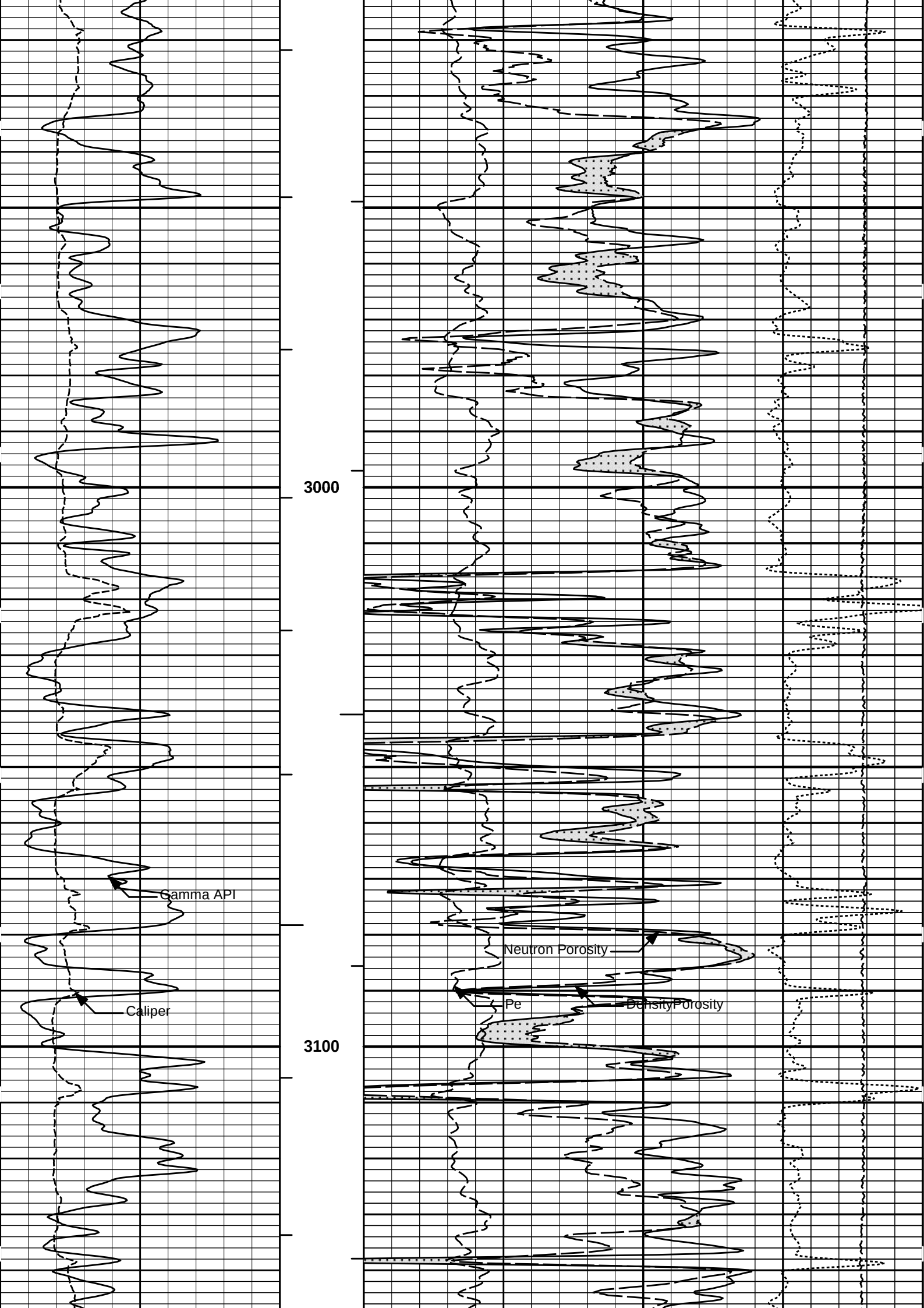
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Data: S.TUCKER_1-19SWWell Based\DETAILS
Plot File: \\POROSITY\Poro_IQ_5_MAIN_LIB

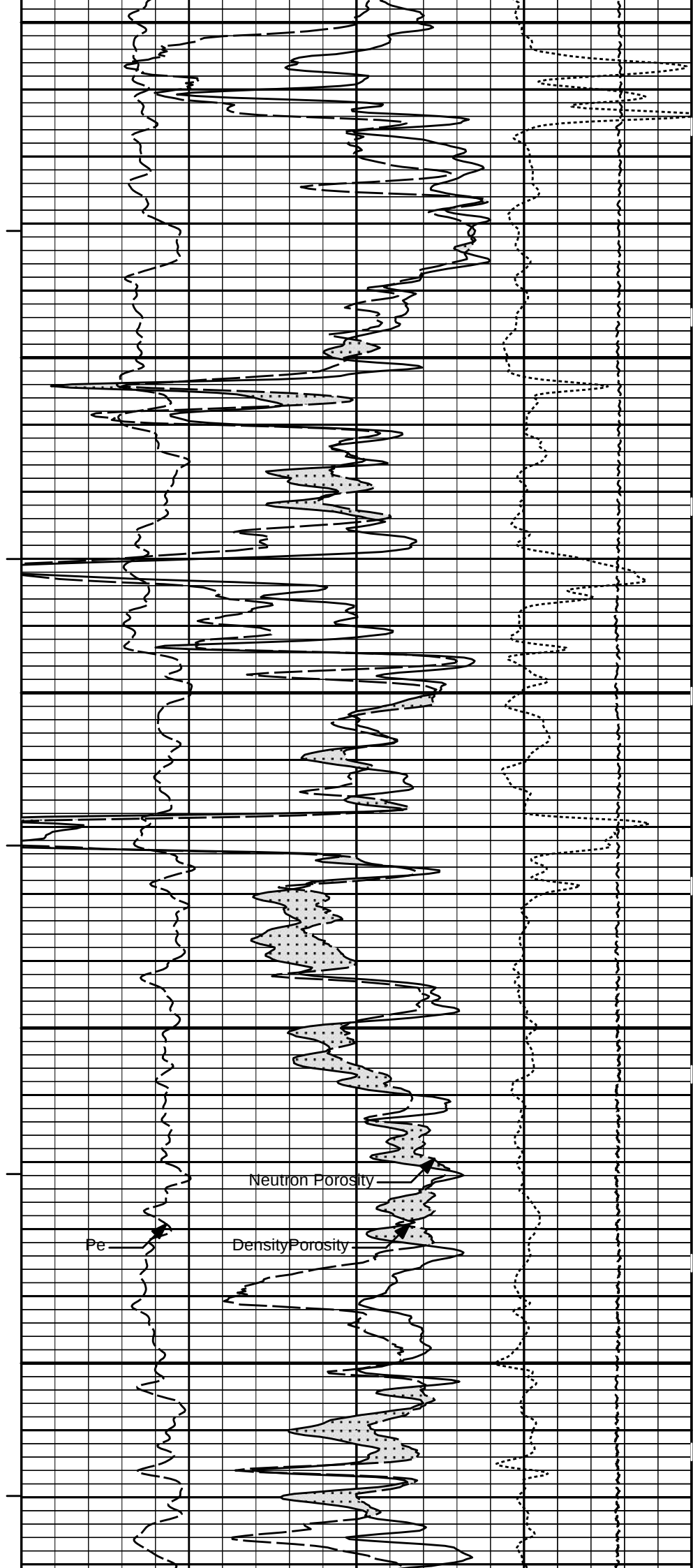
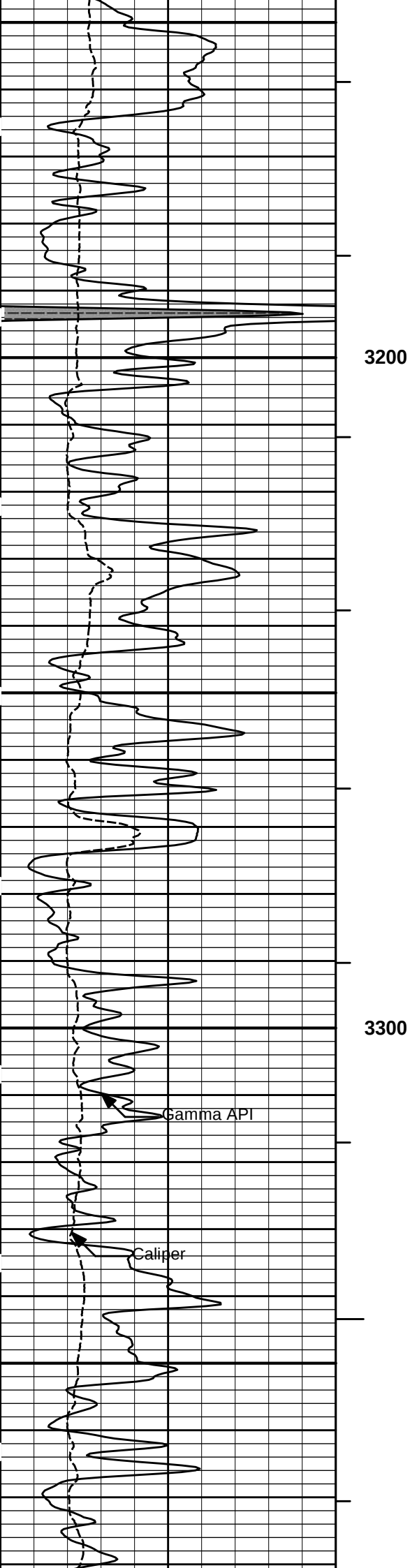
5 INCH MAIN LOG

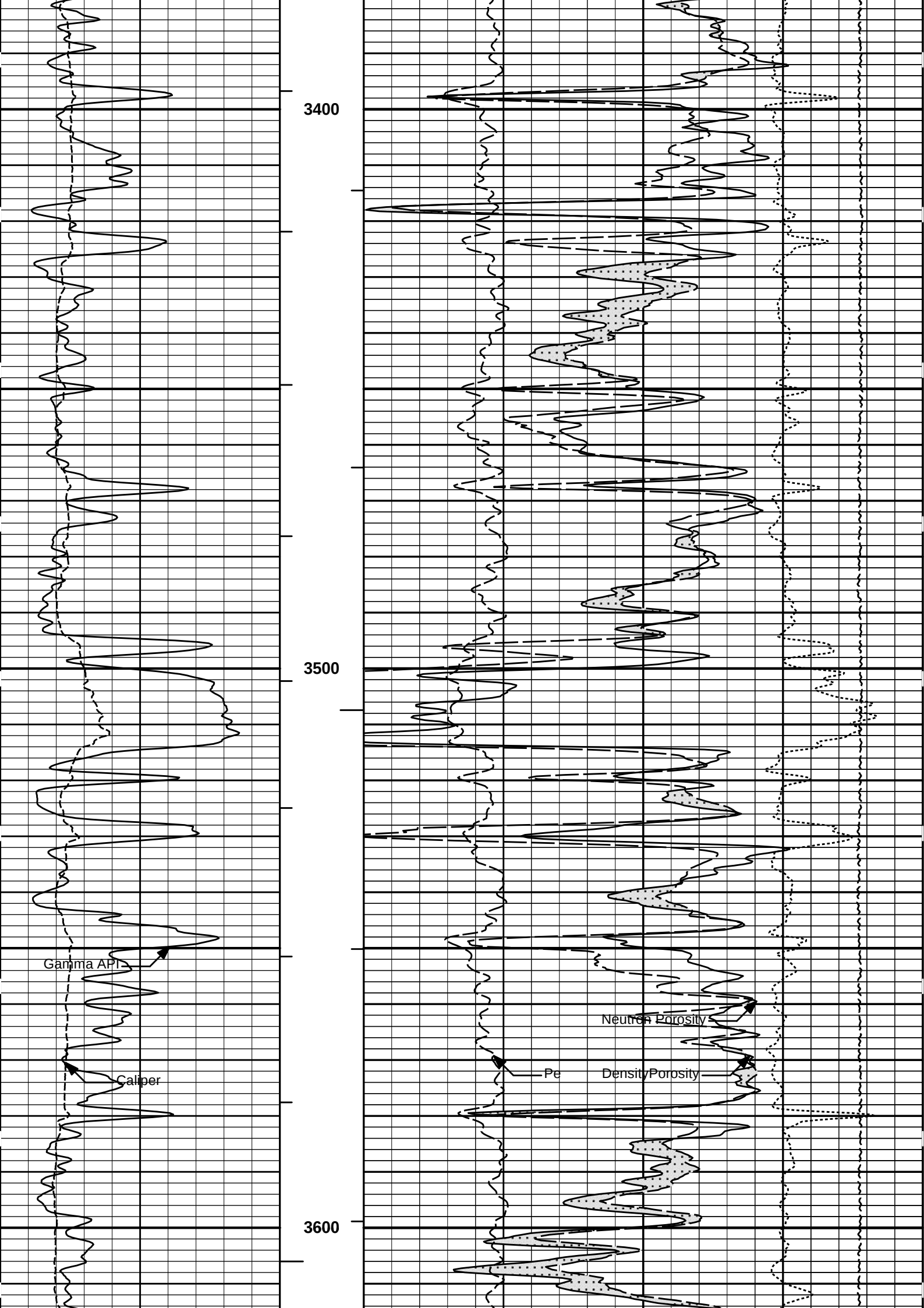
MEASURED DEPTH
MAIN SECTION 5" PER 100'

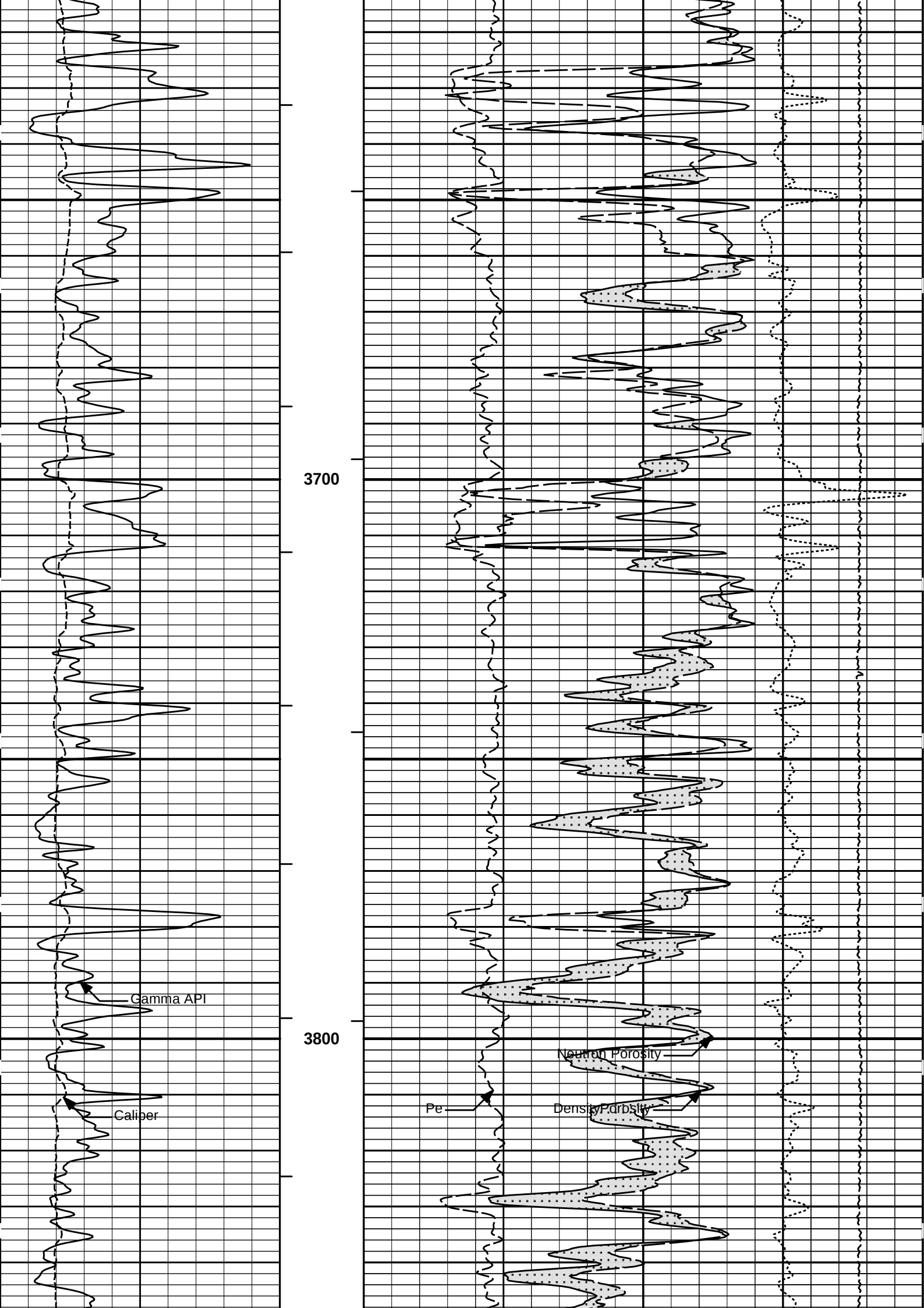


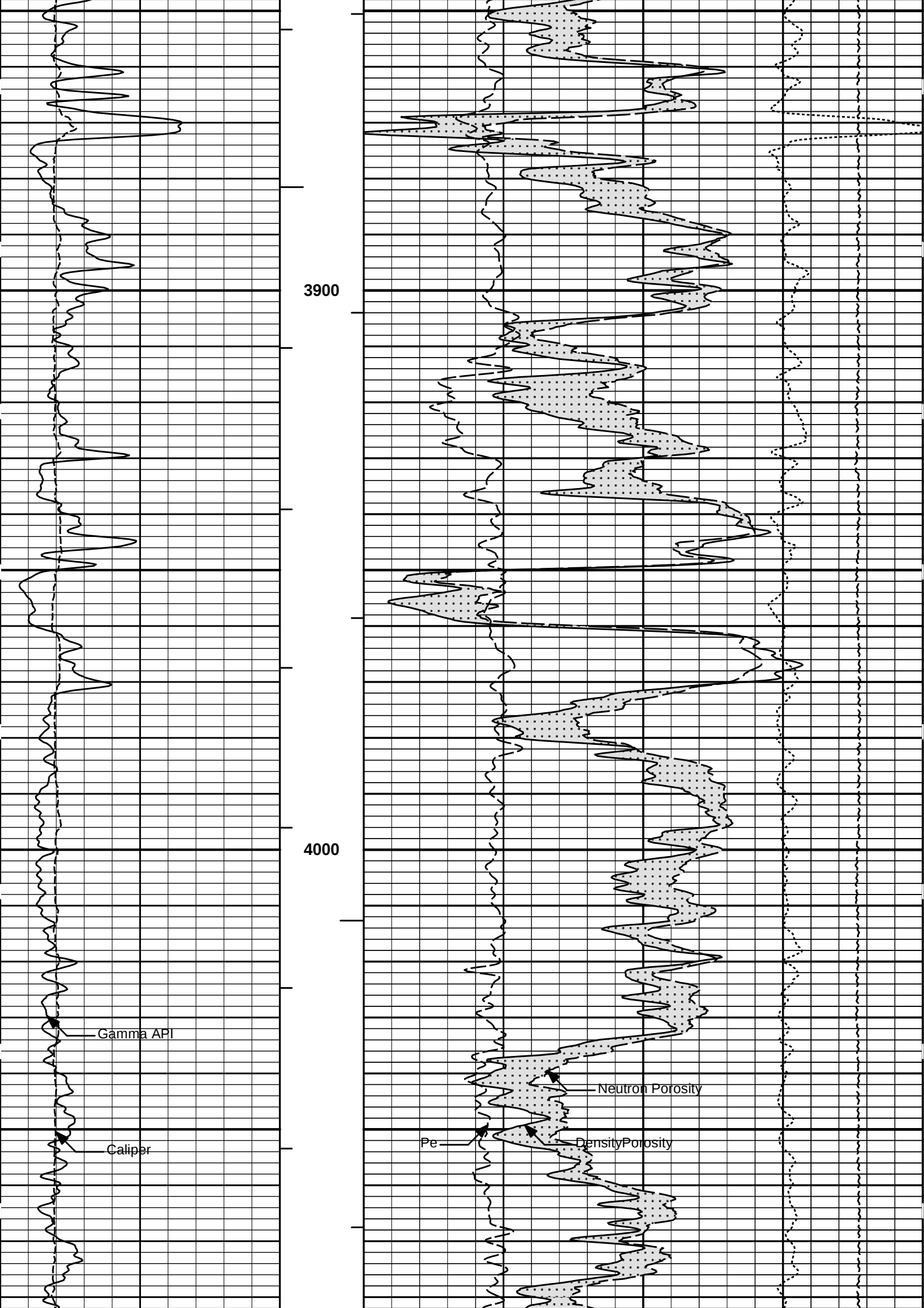


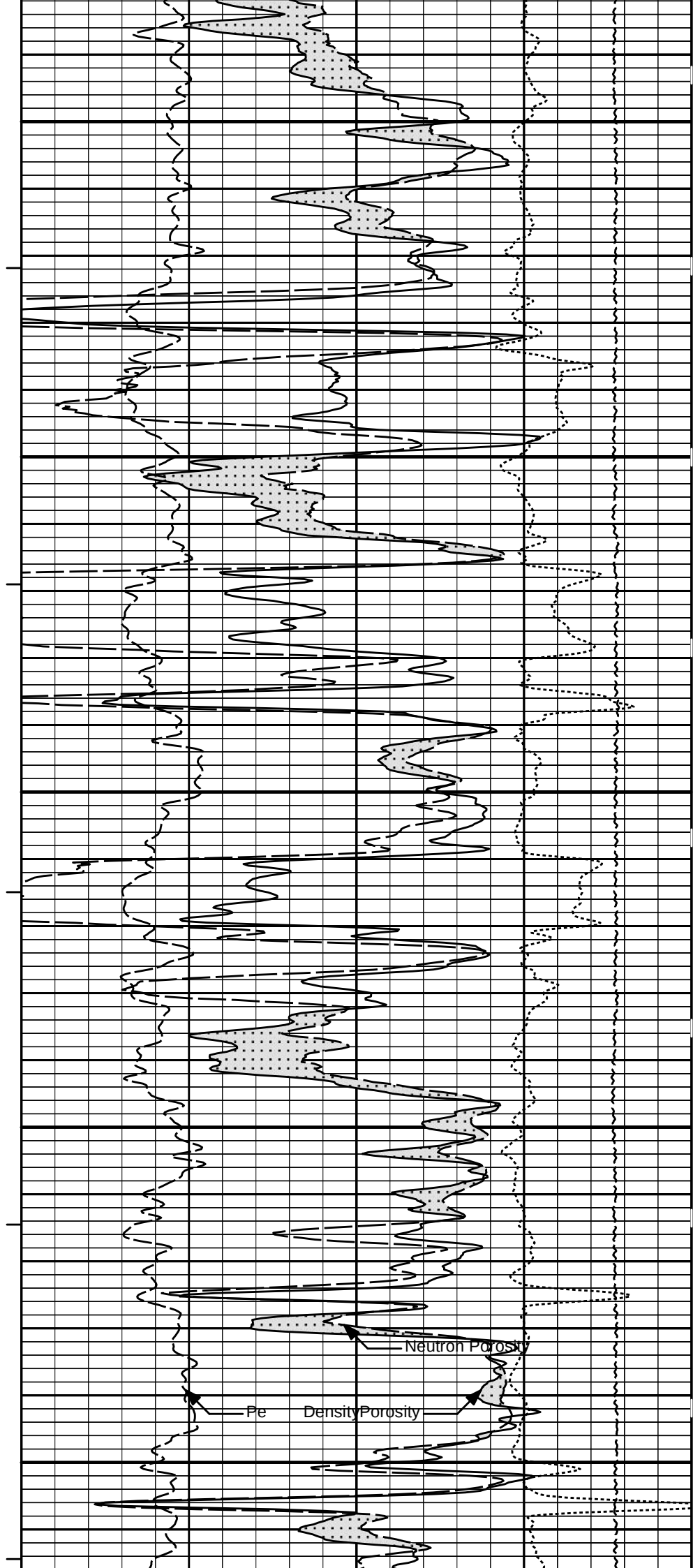
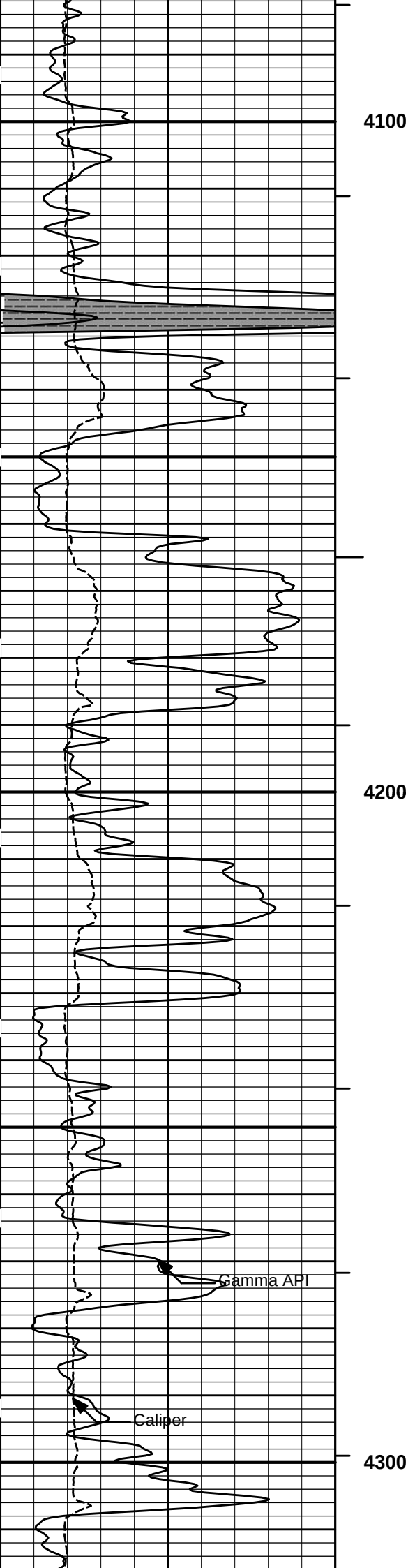


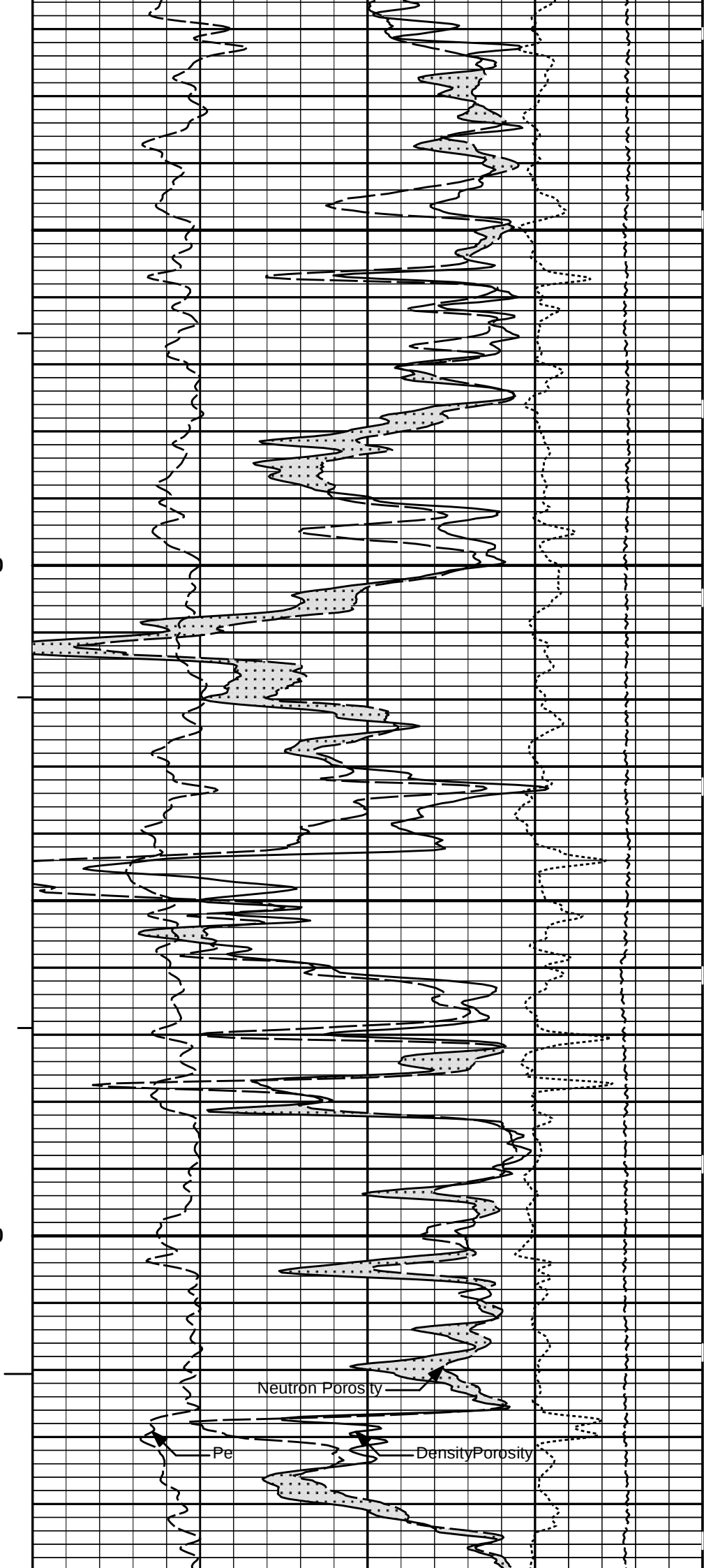
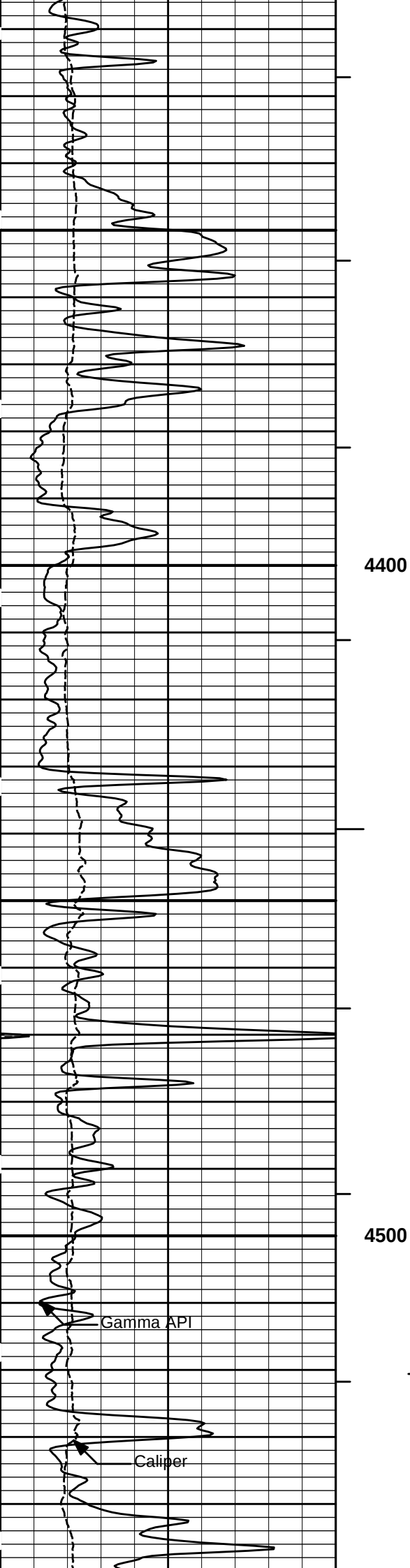


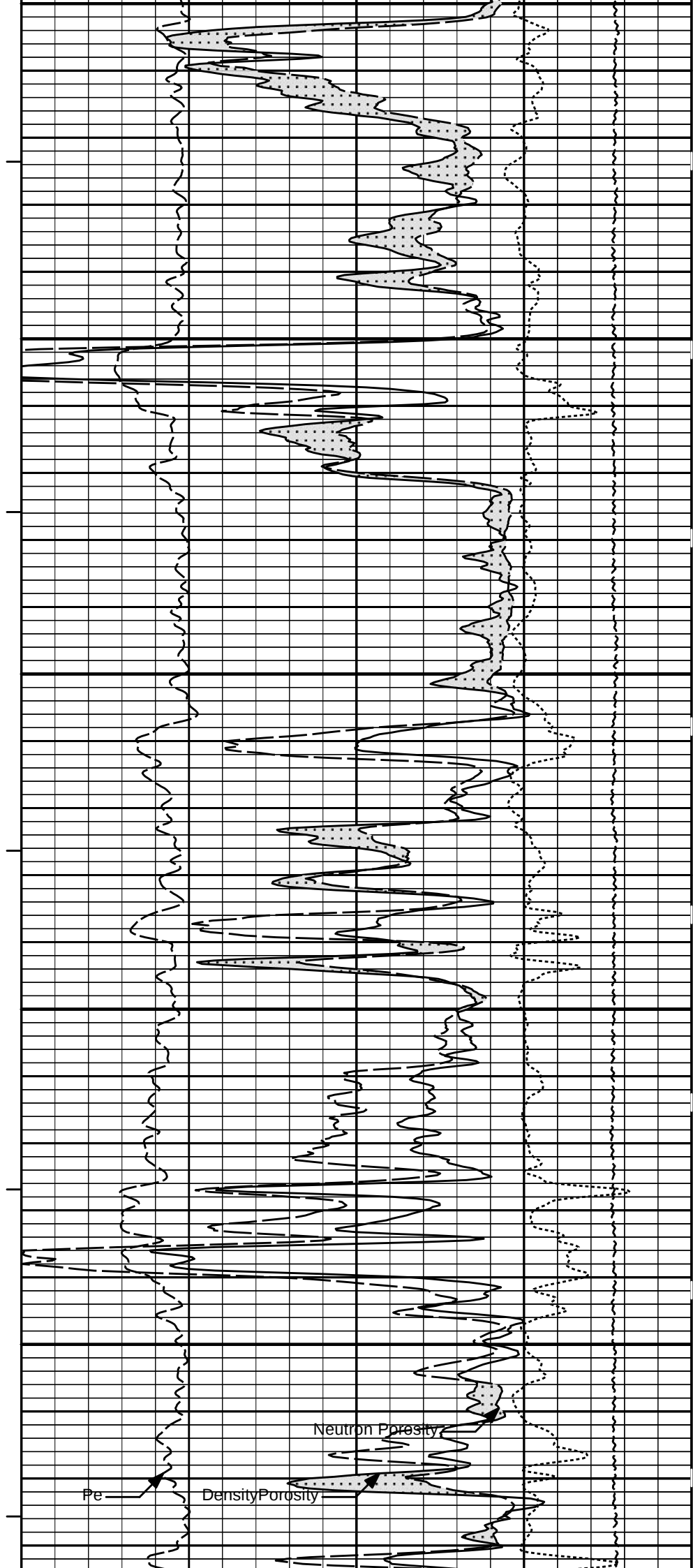
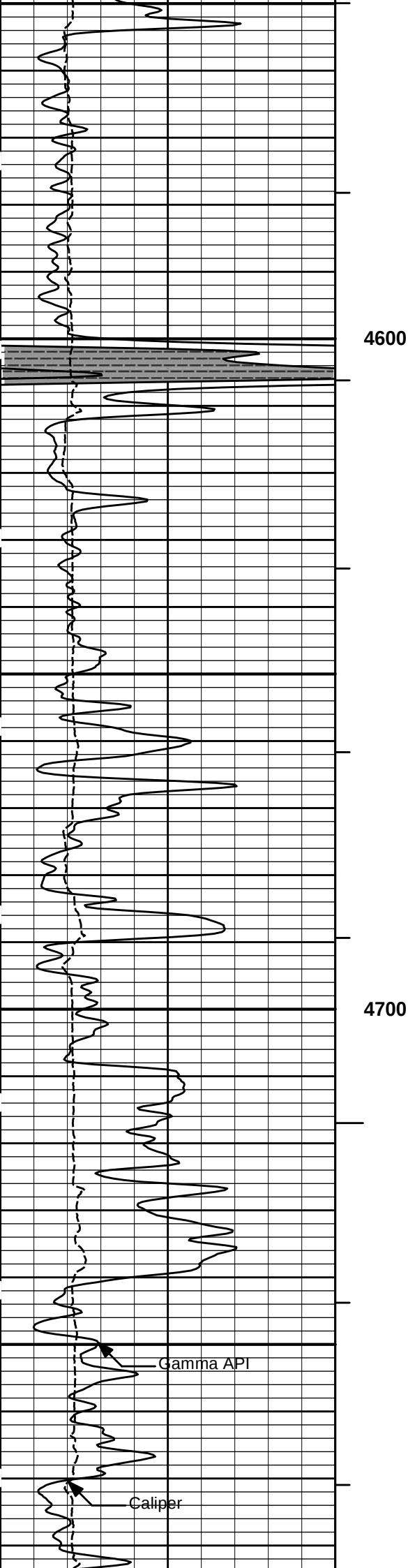


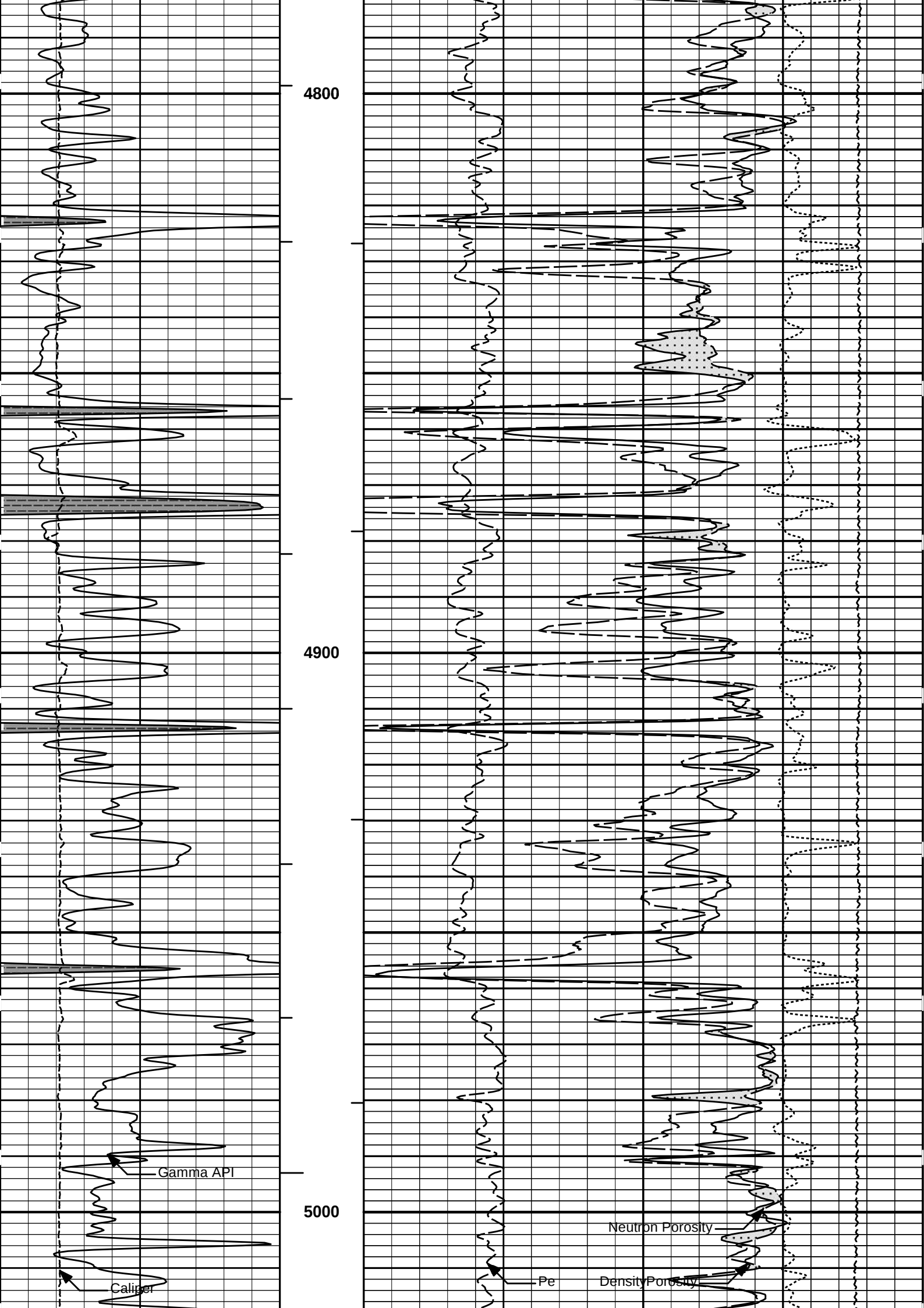


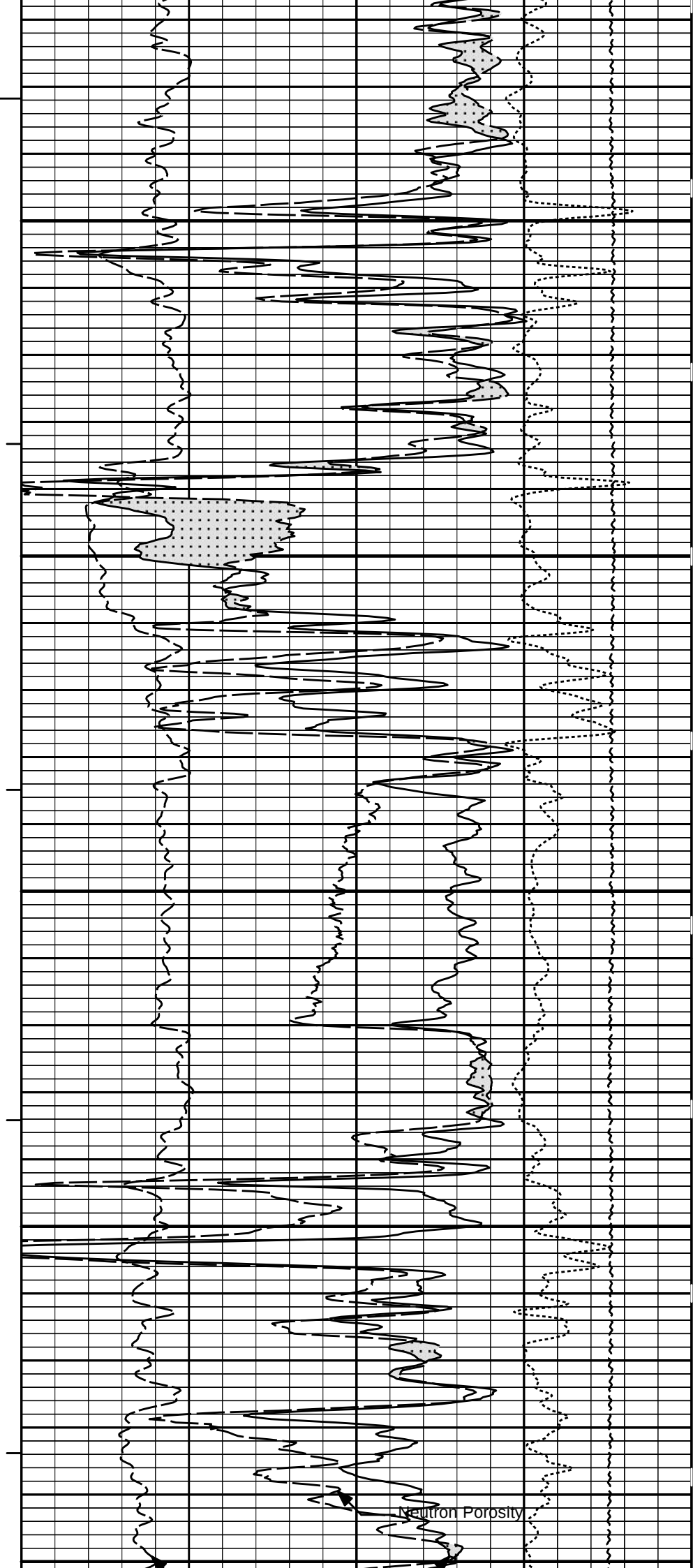
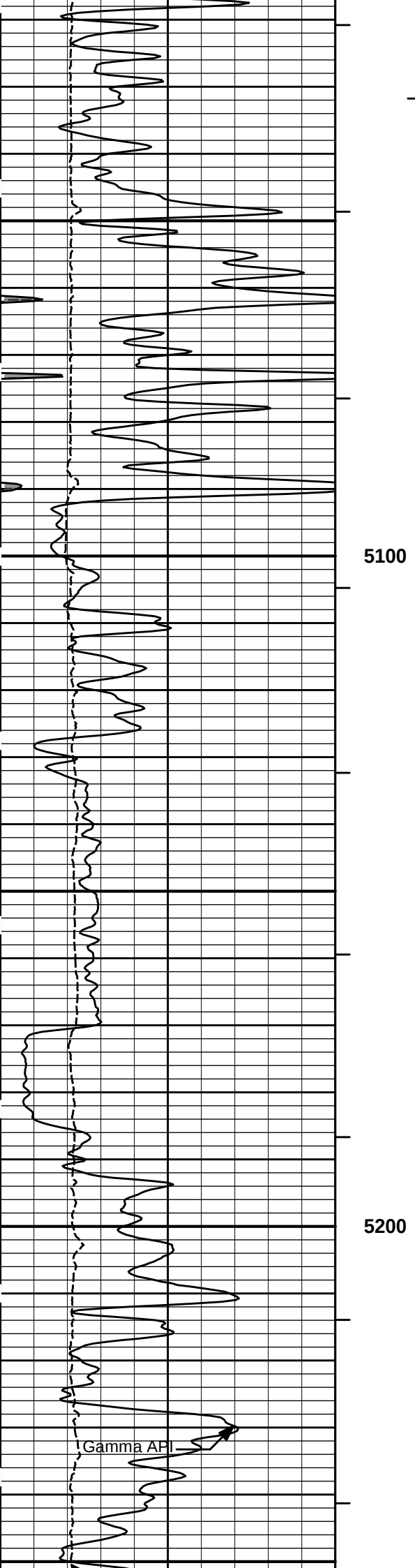


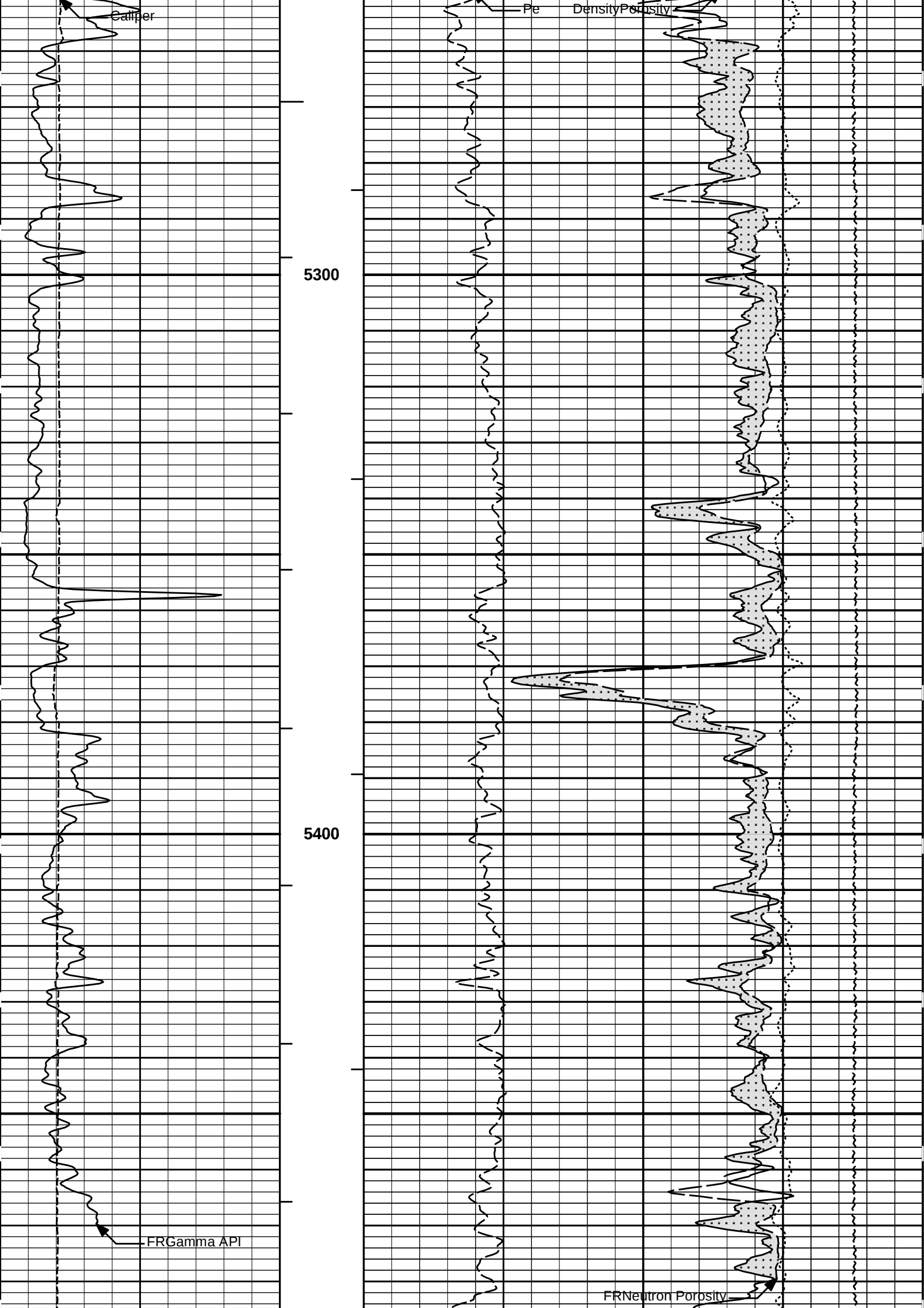


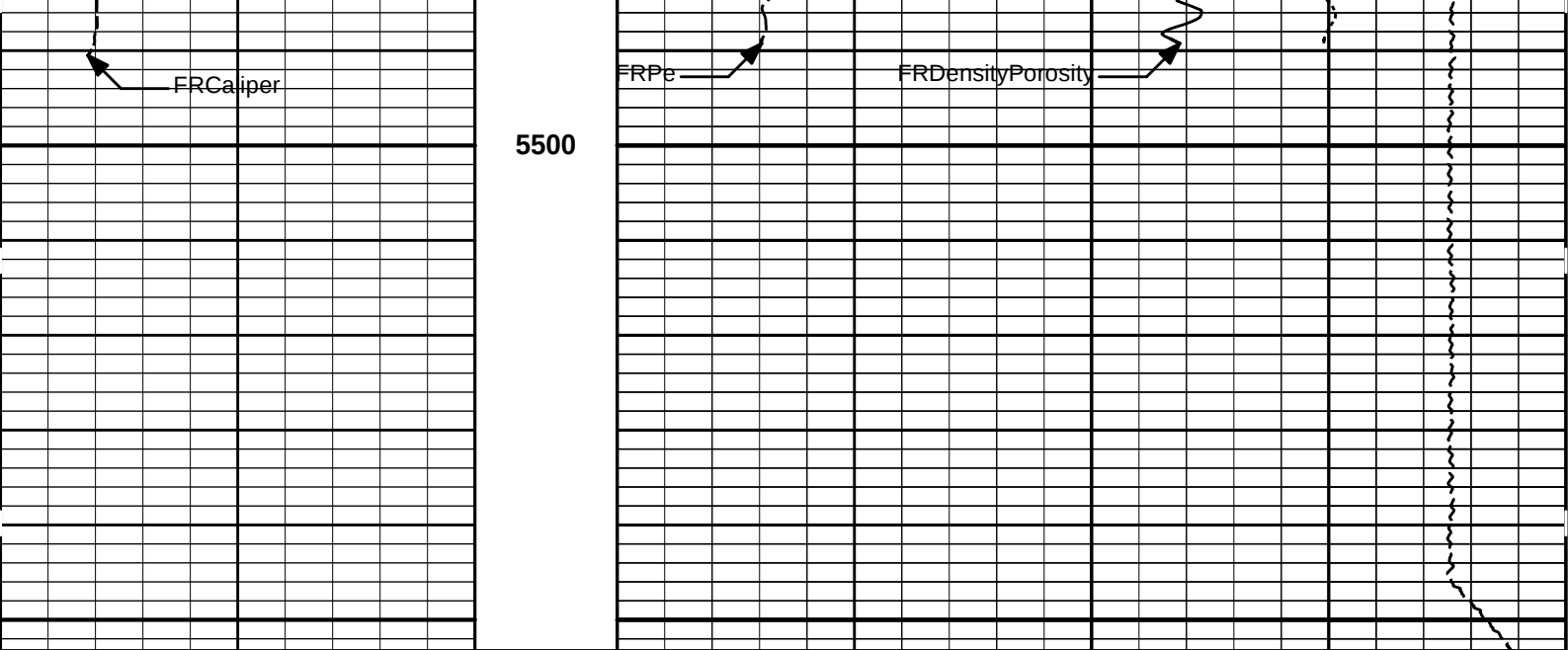












6	Caliper	16	MD 1 : 240 ft	0	Pe	10	-0.25	DensityCorr	0.25
	inches							gram per cc	
0	Gamma API	150	AHVT				15K	Tension	0
	api							pounds	
	SHALE		BHVT	30	DensityPorosity				-10
					%				
				30	Neutron Porosity				-10
					%				
					CROSSOVER				

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Plot Time: 07-Mar-15 05:42:22
Plot Range: 2640 ft to 5553.25 ft
Data: S.TUCKER_1-19SWWell Based\DETAILS\
Plot File: \\POROSITY\Porosity_Q_5_MAIN_LIB

5 INCH MAIN LOG

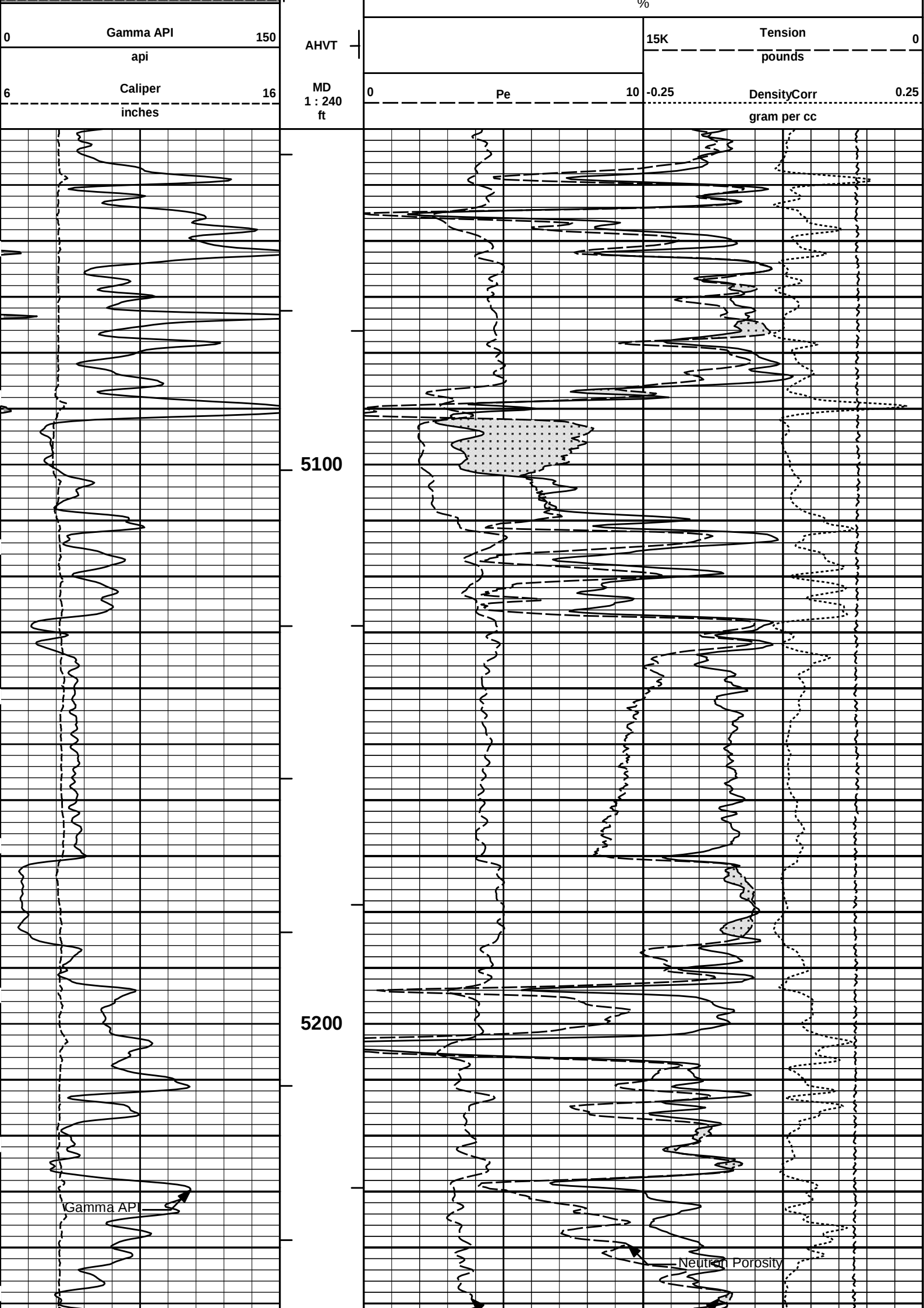
MEASURED DEPTH
MAIN SECTION 5" PER 100'

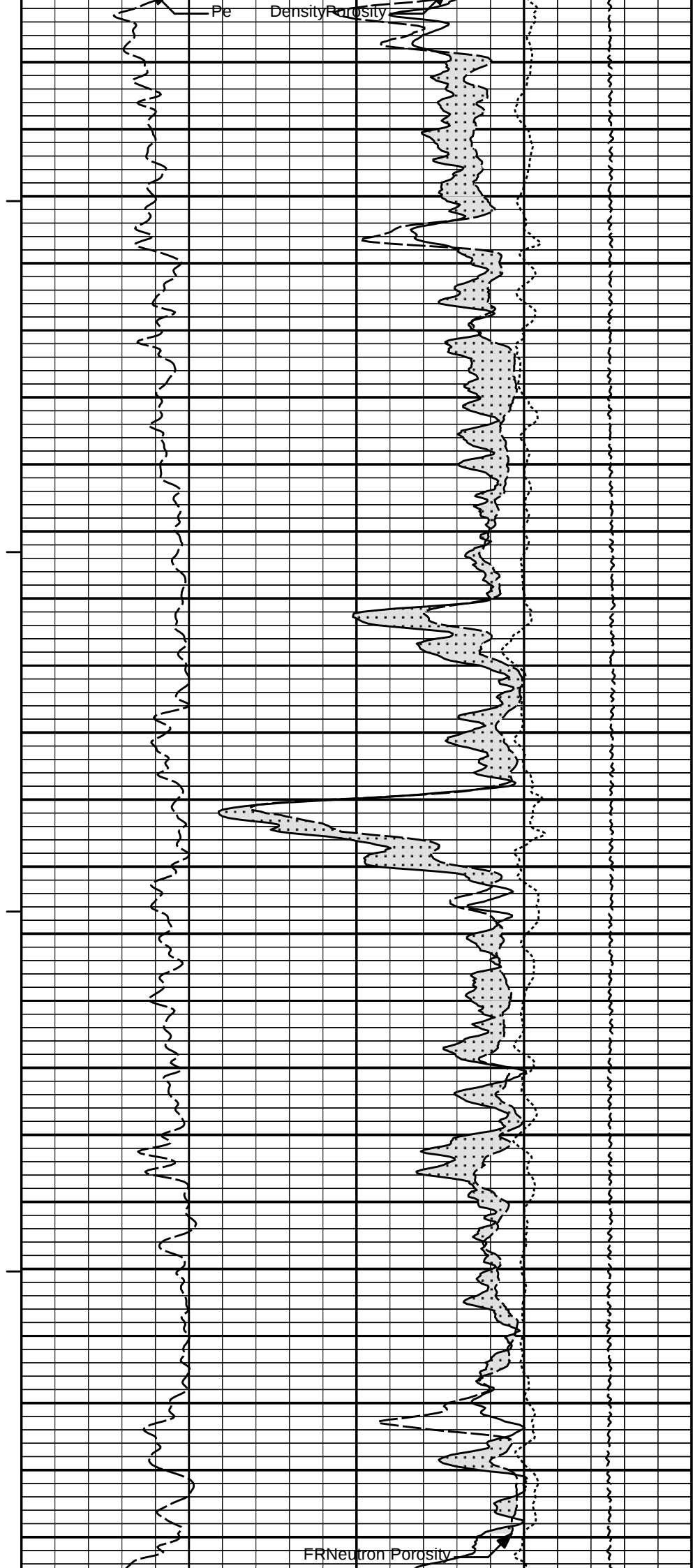
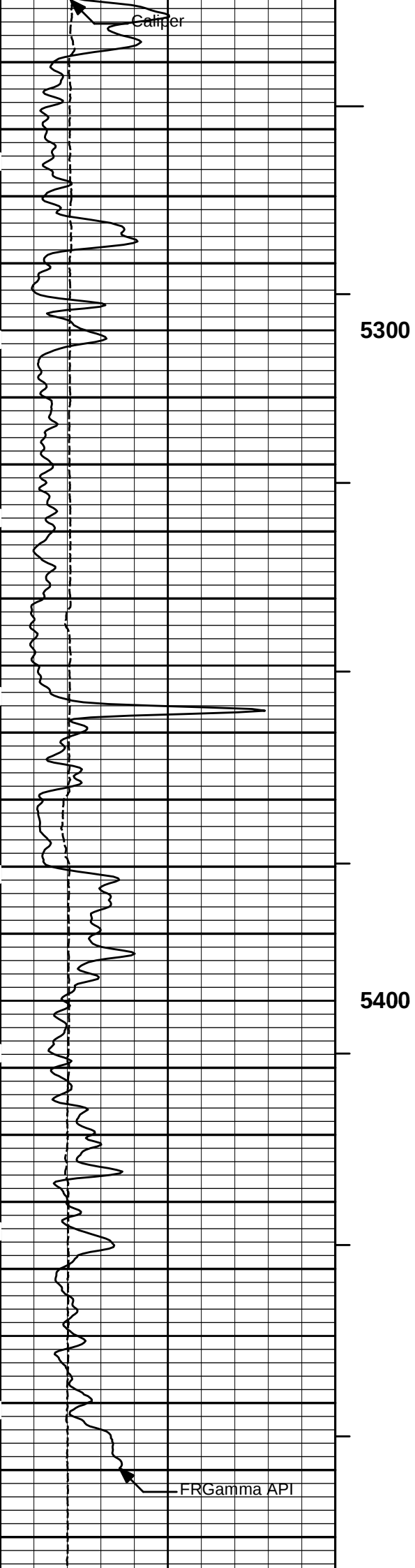
HALLIBURTON

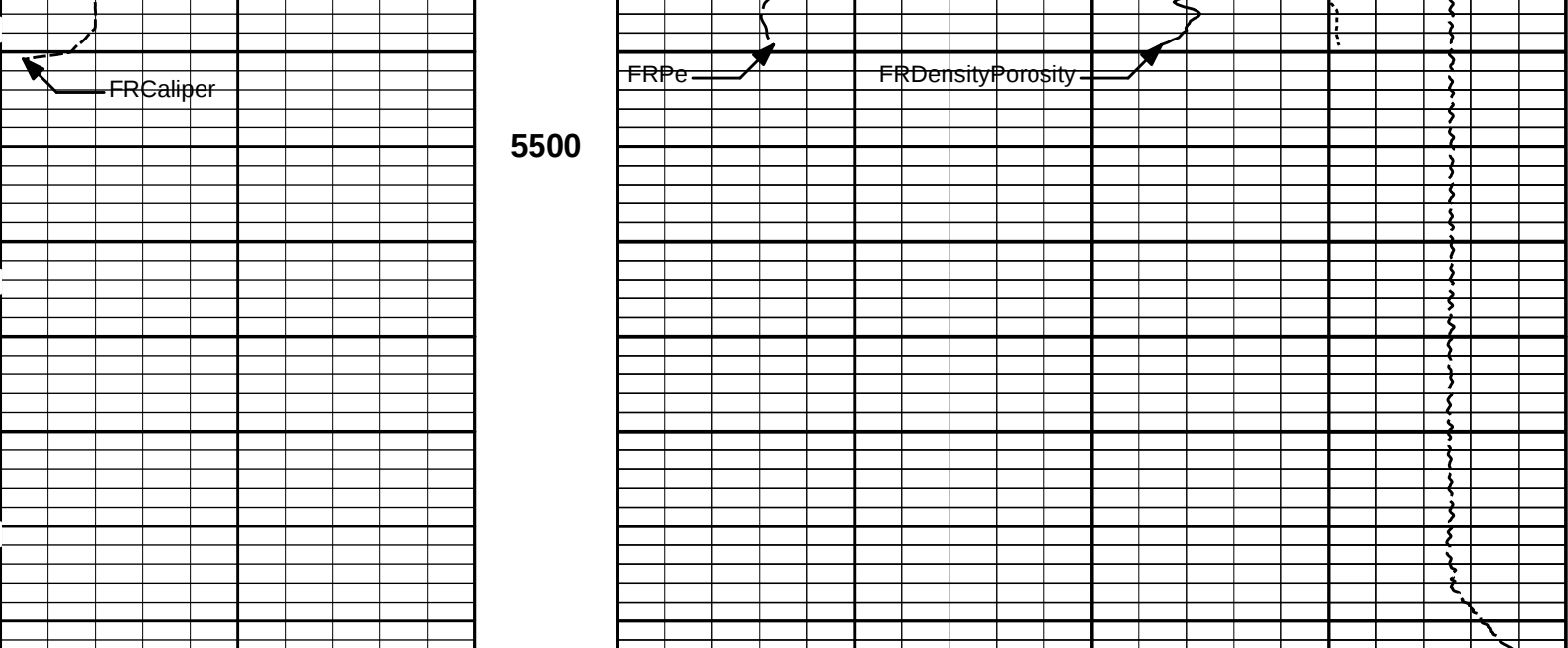
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Plot Range: 5040 ft to 5553 ft
Data: S.TUCKER_1-19SWWell Based\REPEAT\
Plot File: \\POROSITY\Porosity_Q_5_REP_LIB

REPEAT SECTION

					CROSSOVER				
				30	Neutron Porosity				-10
					%				
	SHALE		BHVT	30	DensityPorosity				-10
					%				







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: 07-Mar-15 05:42:23
Plot Range: 5040 ft to 5553 ft
Data: S.TUCKER_1-19SWWell Based\REPEAT\
Plot File: \\POROSITY\Porosity_Q_5_REP_LIB

REPEAT SECTION

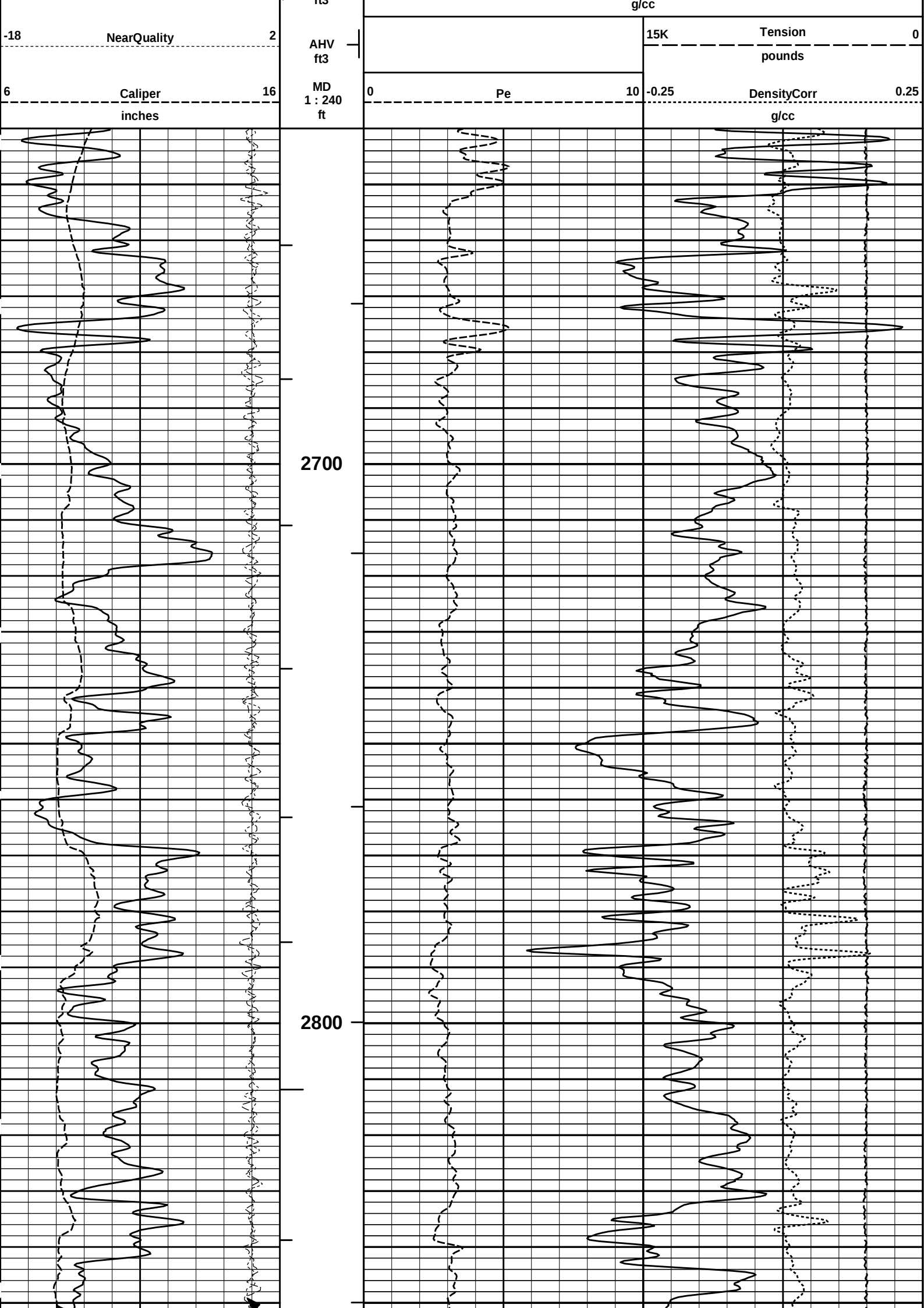
HALLIBURTON

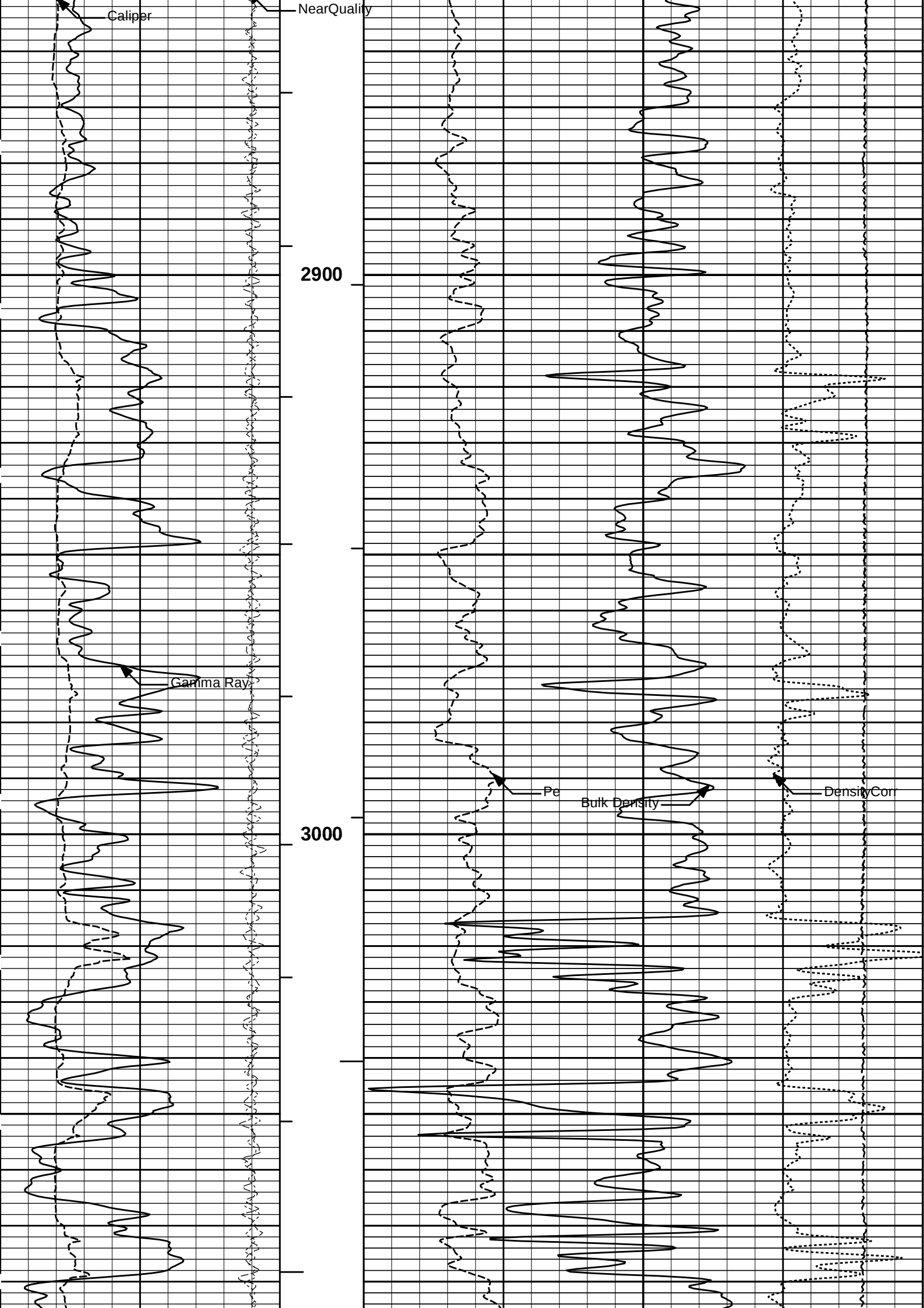
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Data: S.TUCKER_1-19SWWell Based\DETAILS\
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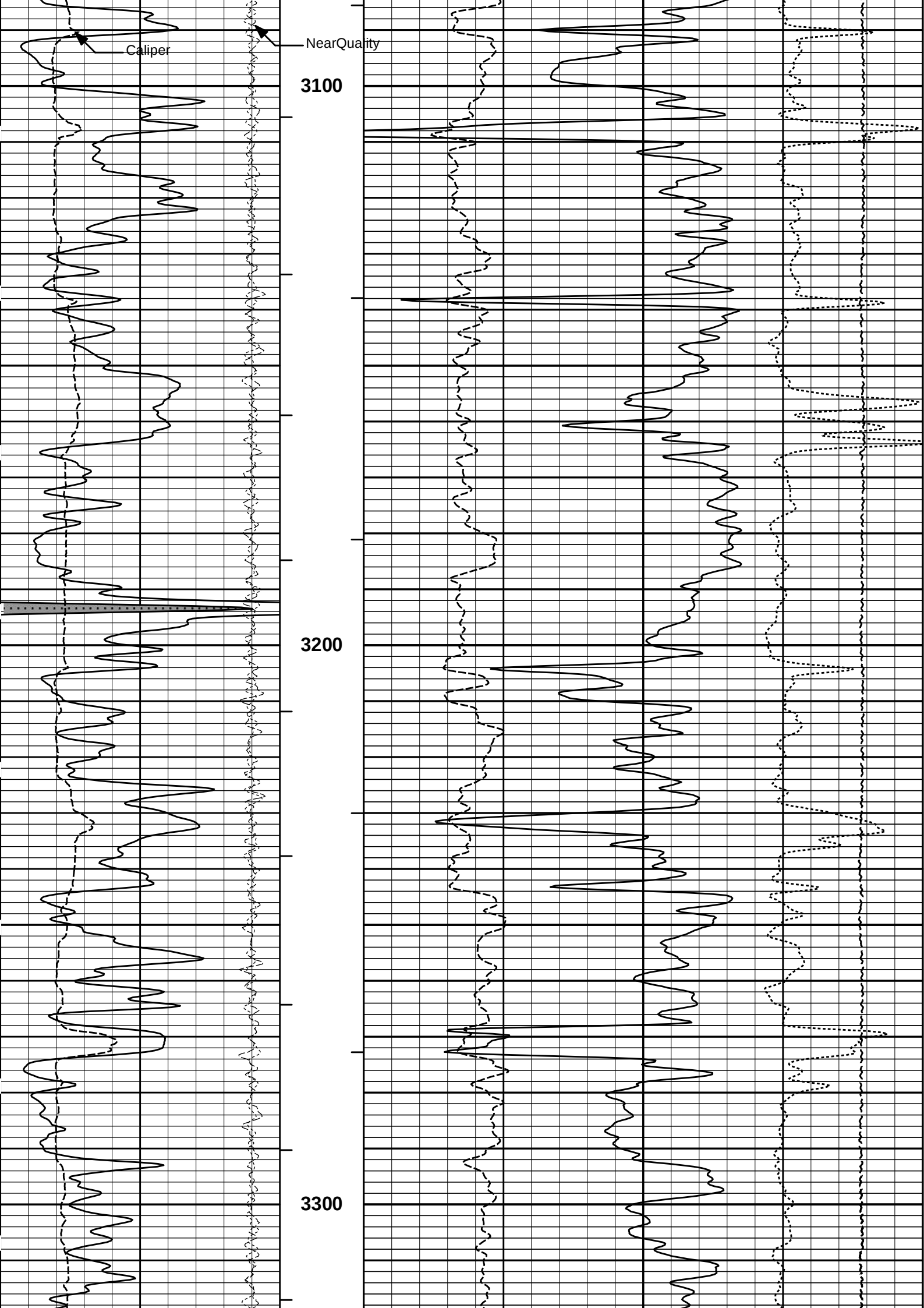
5 INCH MAIN LOG

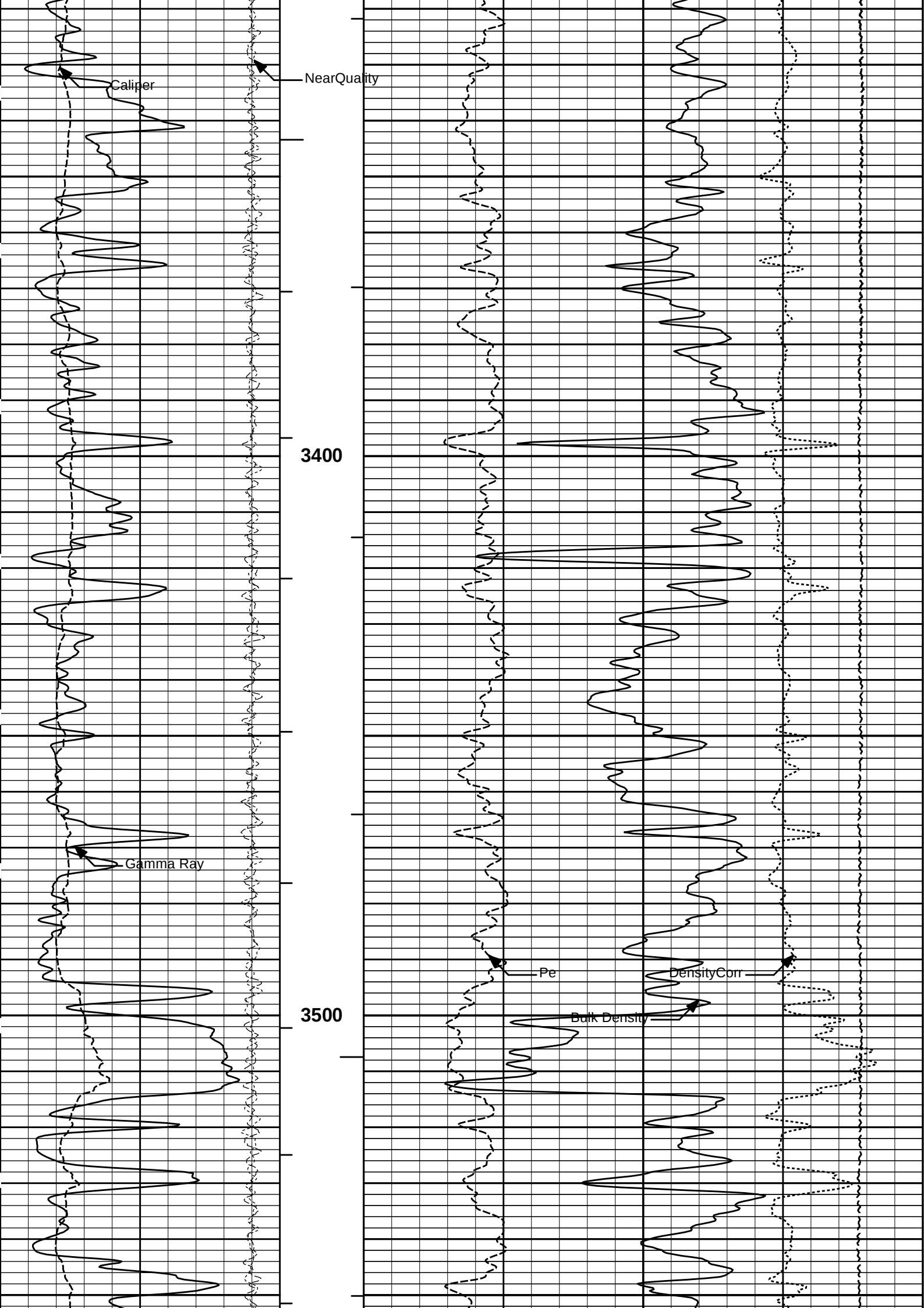
MEASURED DEPTH
MAIN SECTION 5" PER 100'

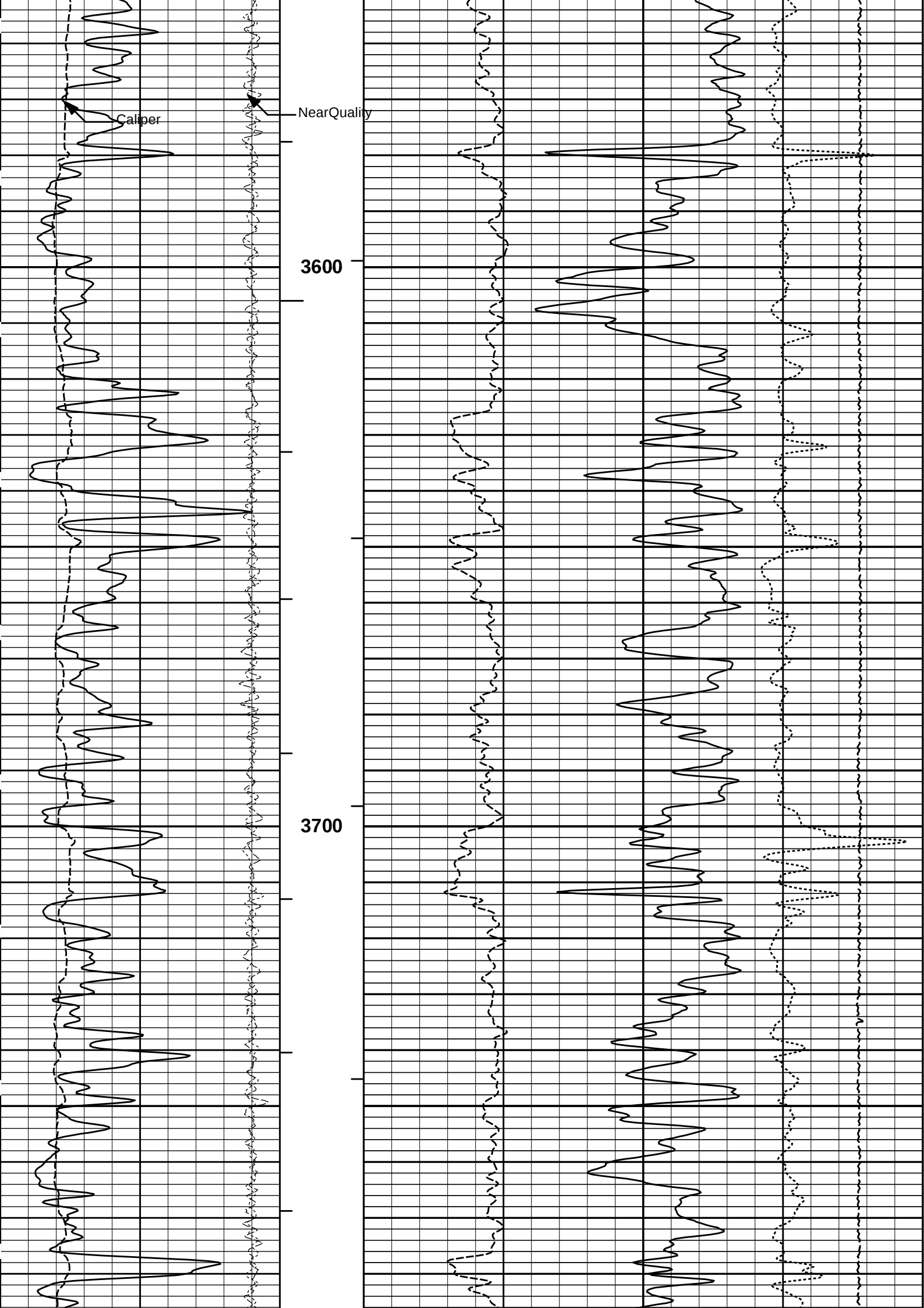
	SHALE		
0	Gamma Ray	150	
	api		
18	FarQuality	-2	BHV
			ft2
		2	Bulk Density

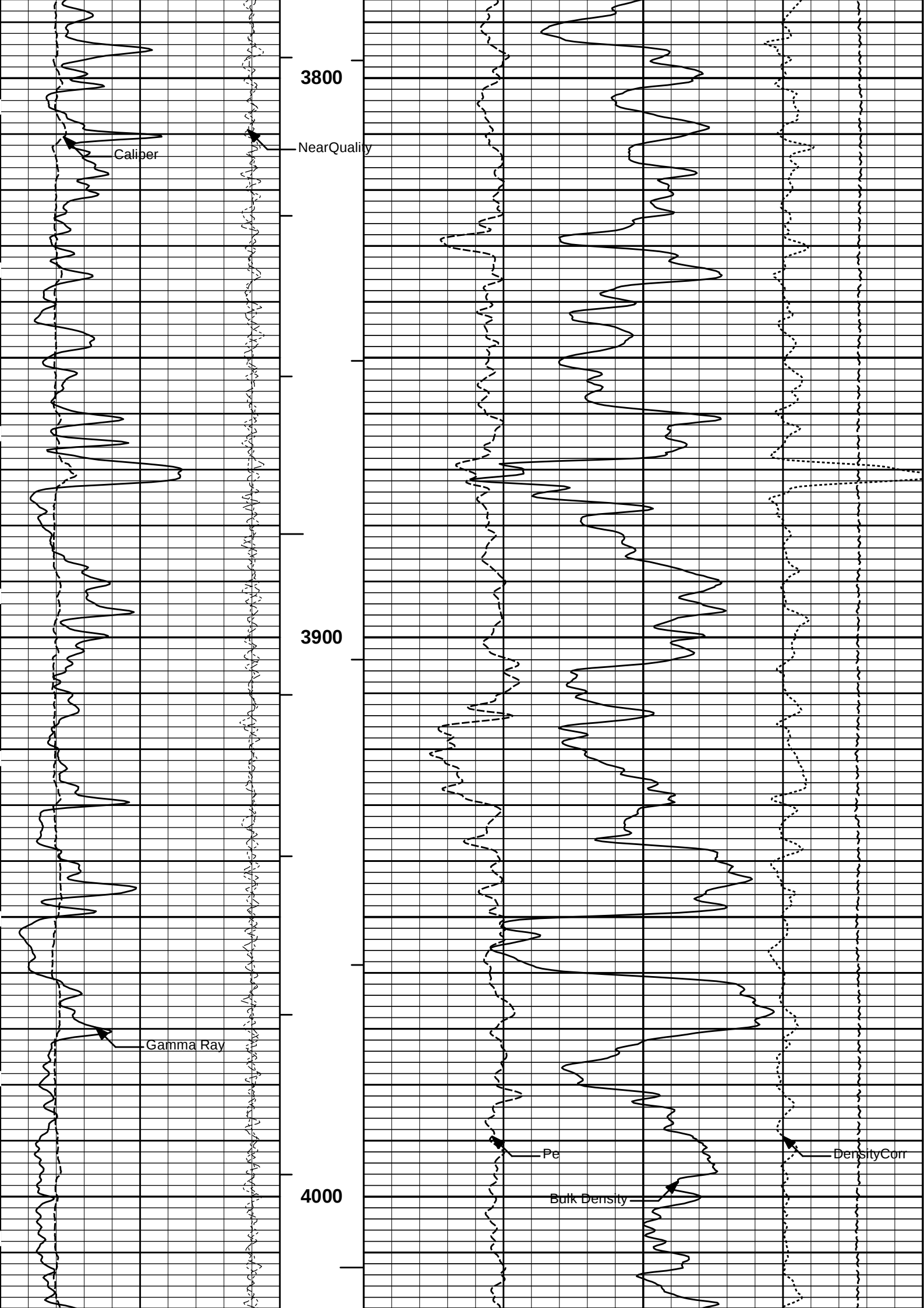


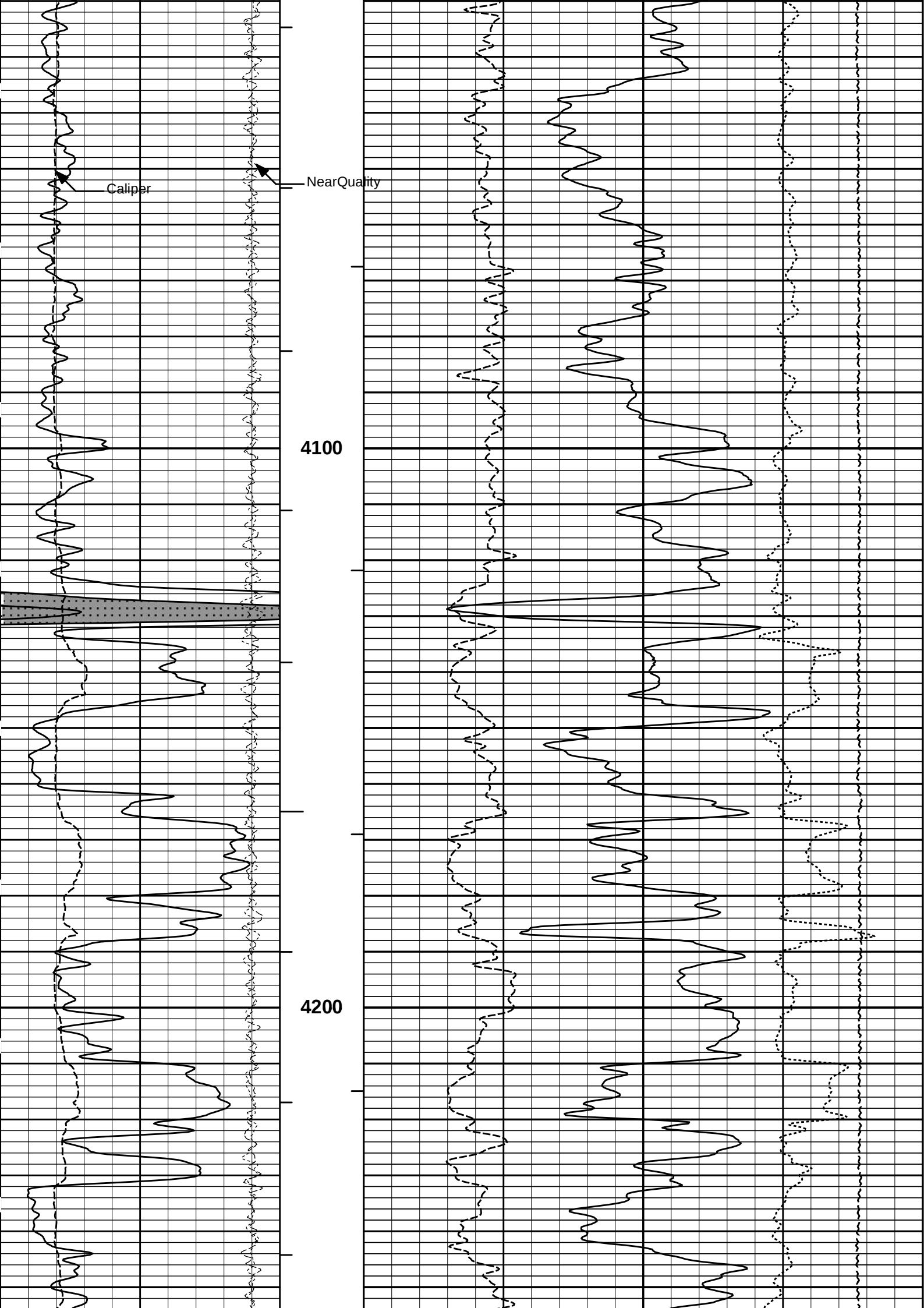


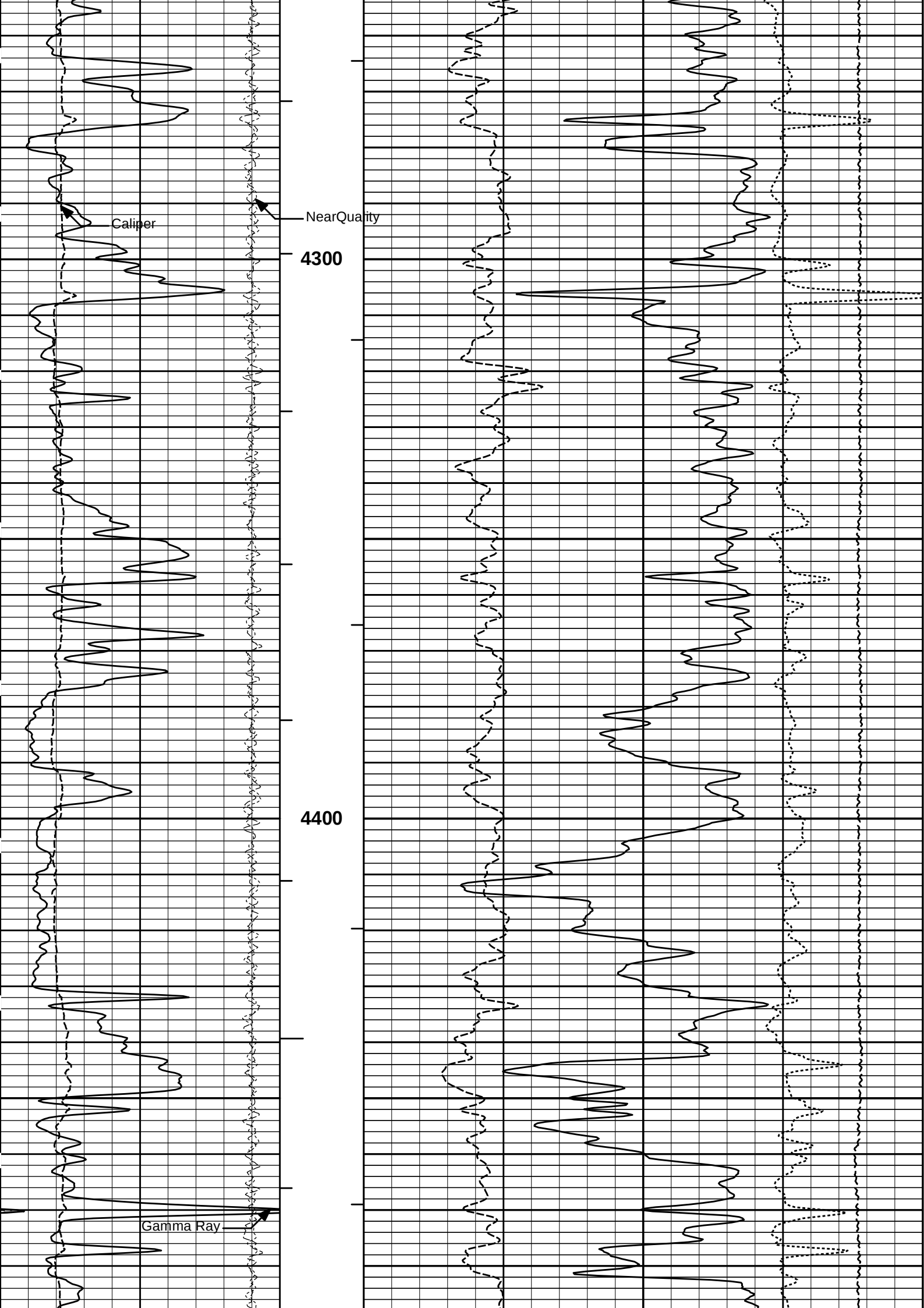


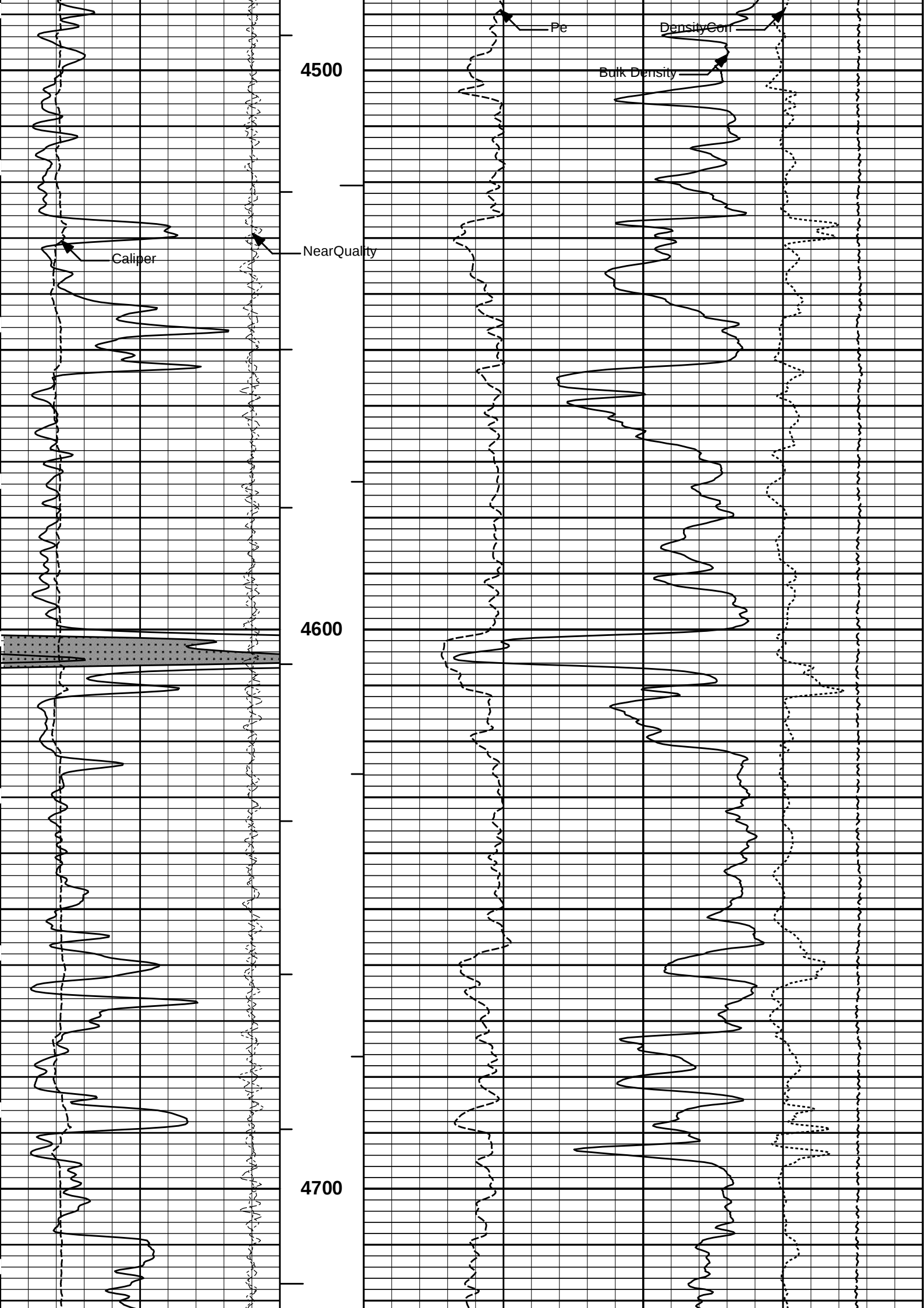


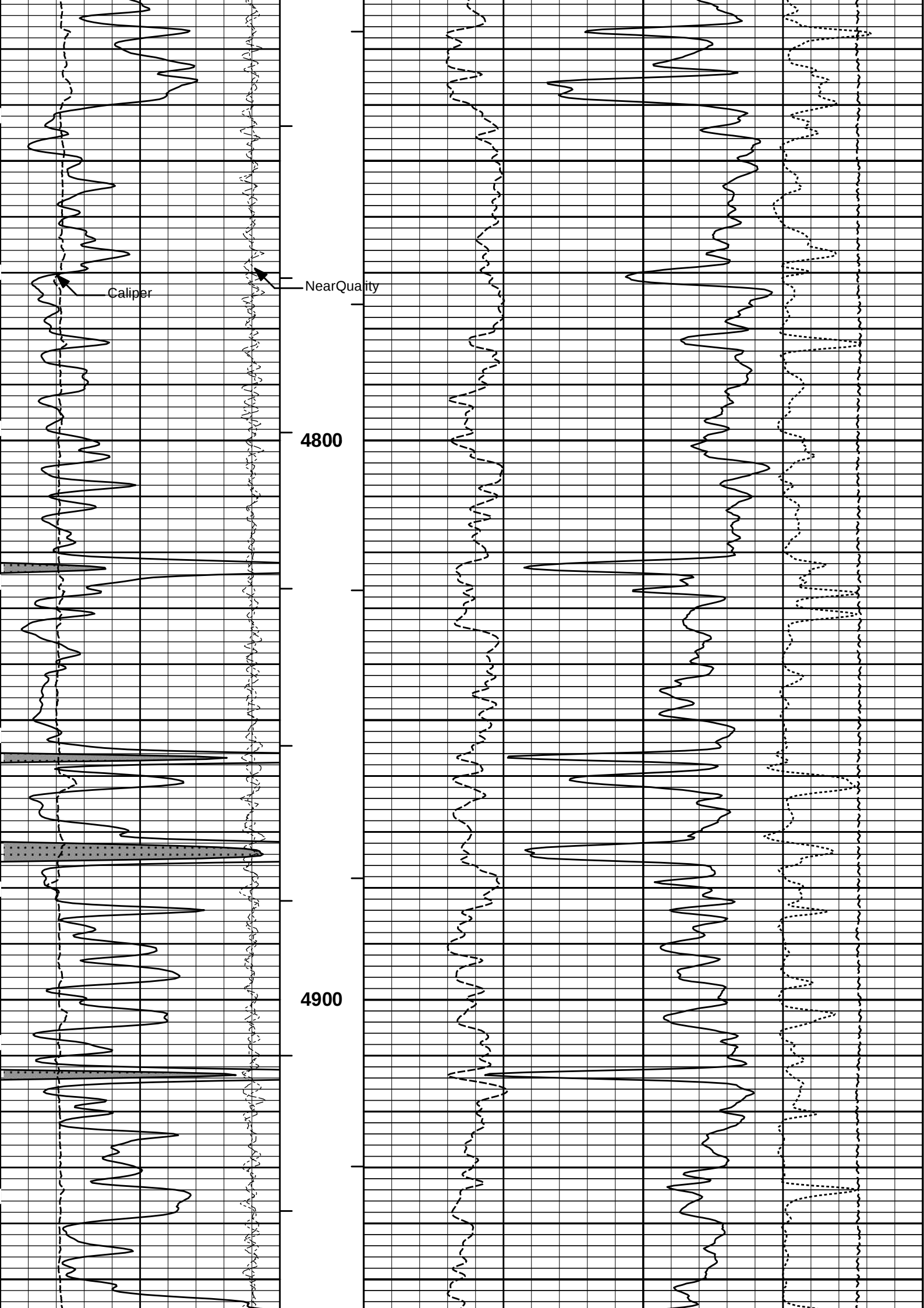


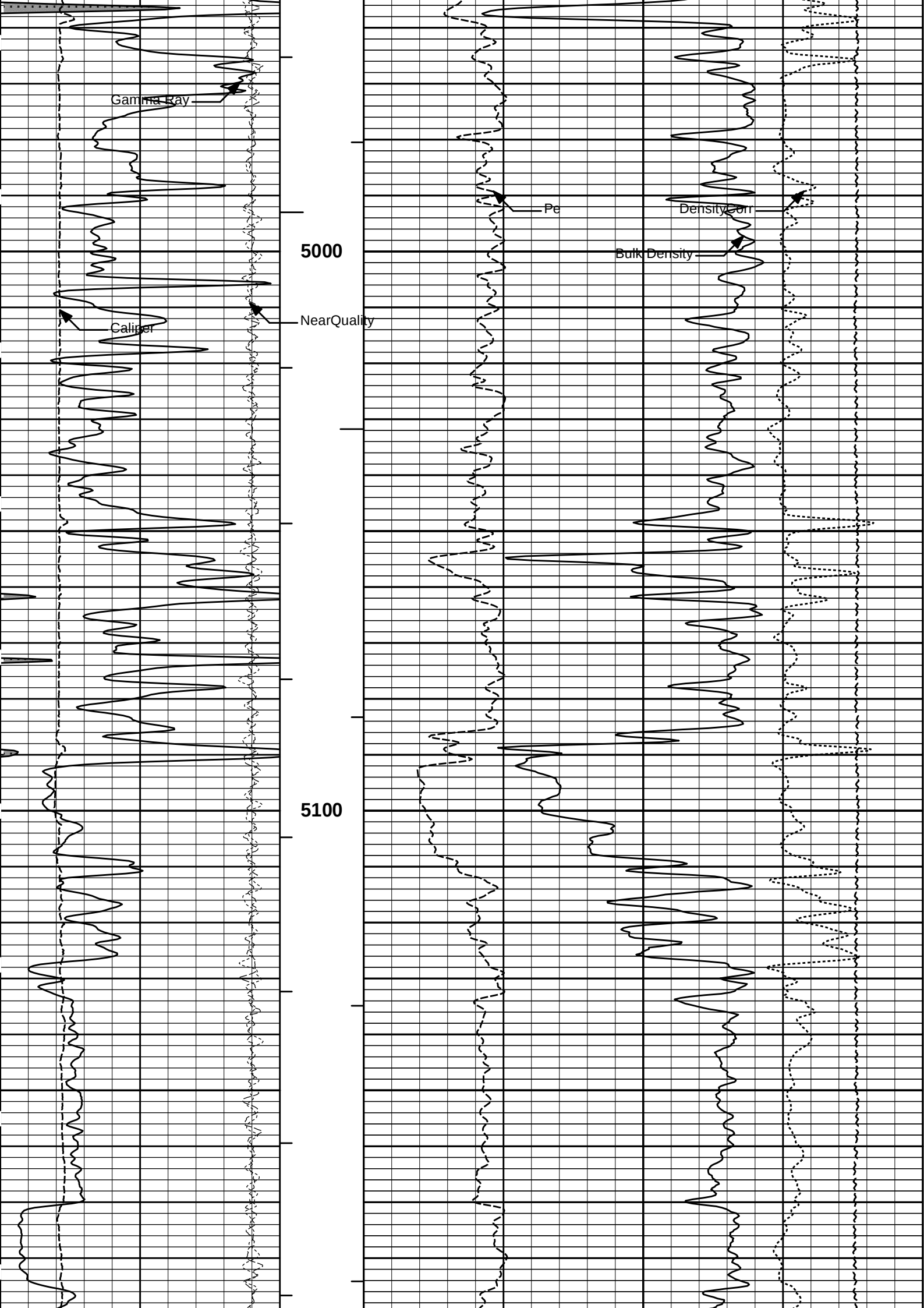


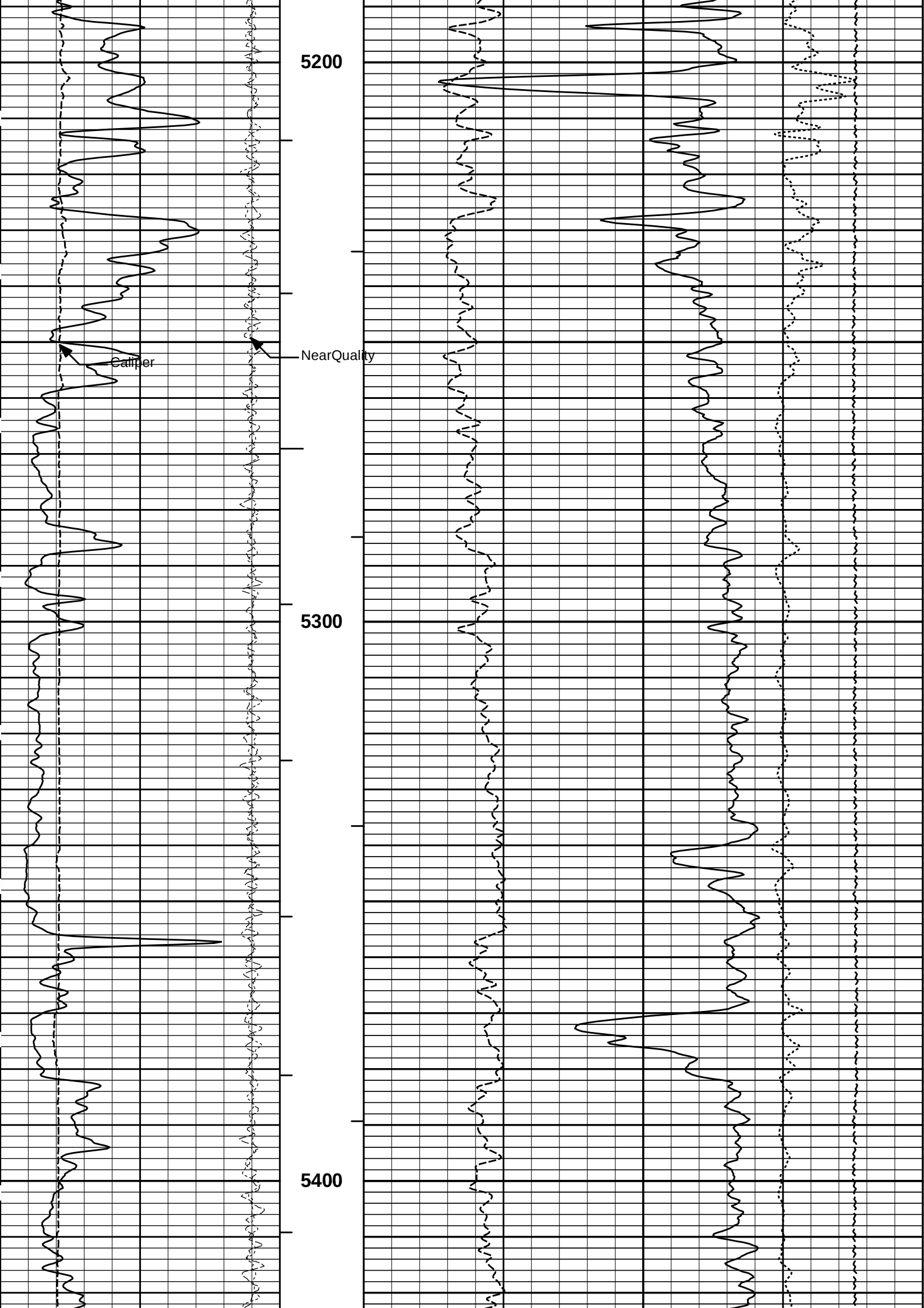


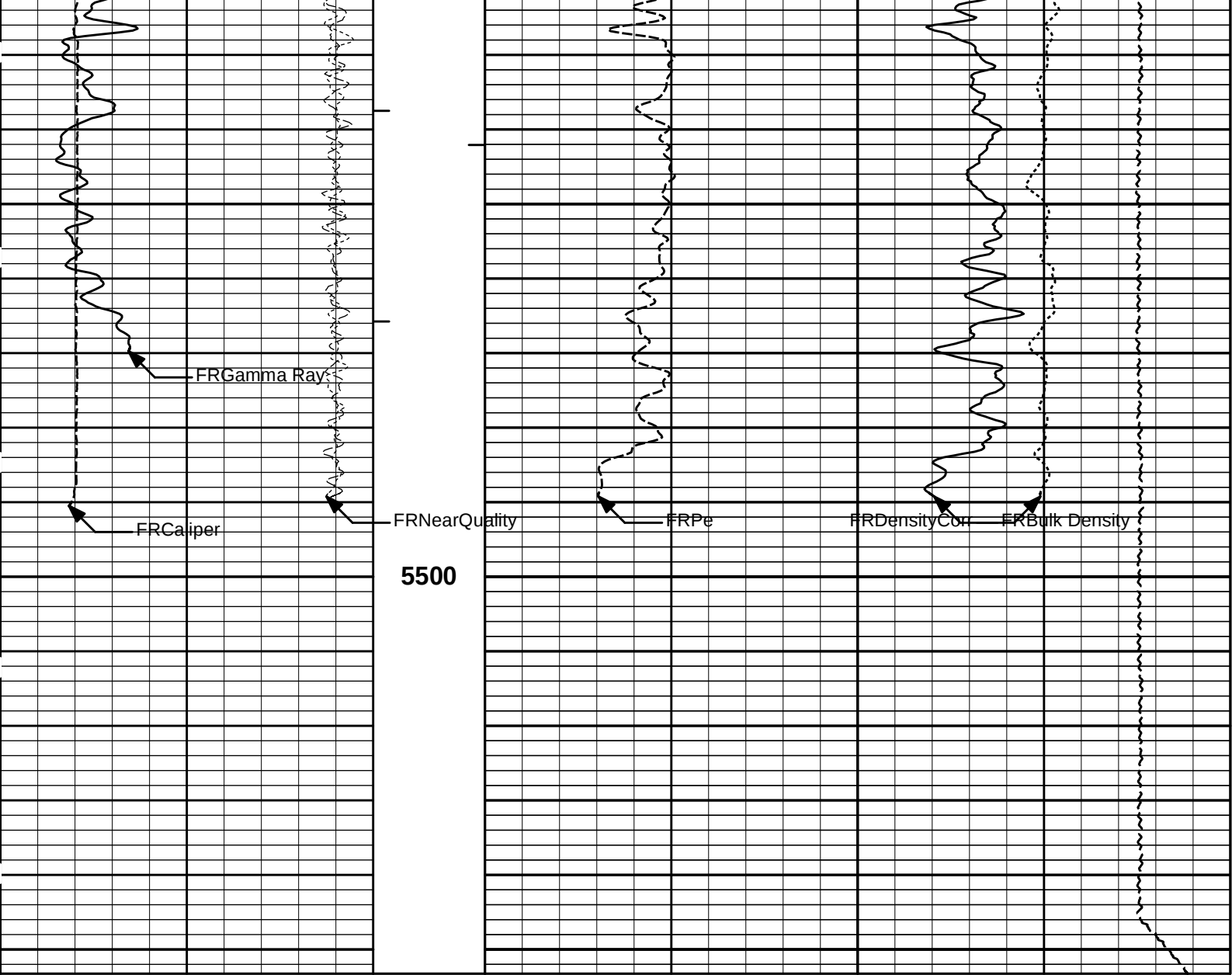












6	Caliper	16	MD 1 : 240 ft	0	Pe	10	-0.25	DensityCorr	0.25
	inches							g/cc	
-18	NearQuality	2	AHV ft3				15K	Tension	0
									pounds
18	FarQuality	-2	BH ft3		2		Bulk Density		3
					g/cc				
0	Gamma Ray	150							
	api								
	SHALE								

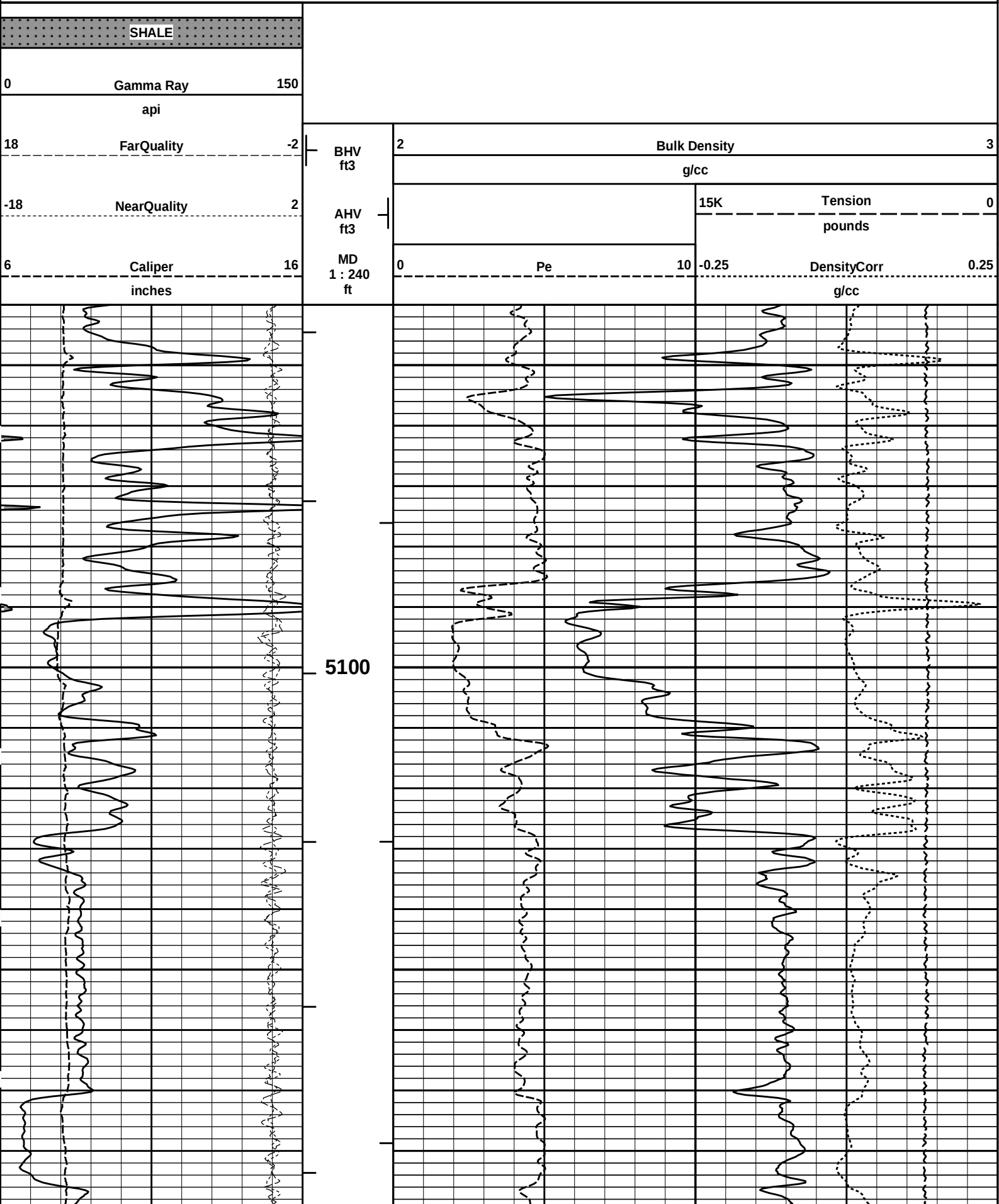
HALLIBURTON

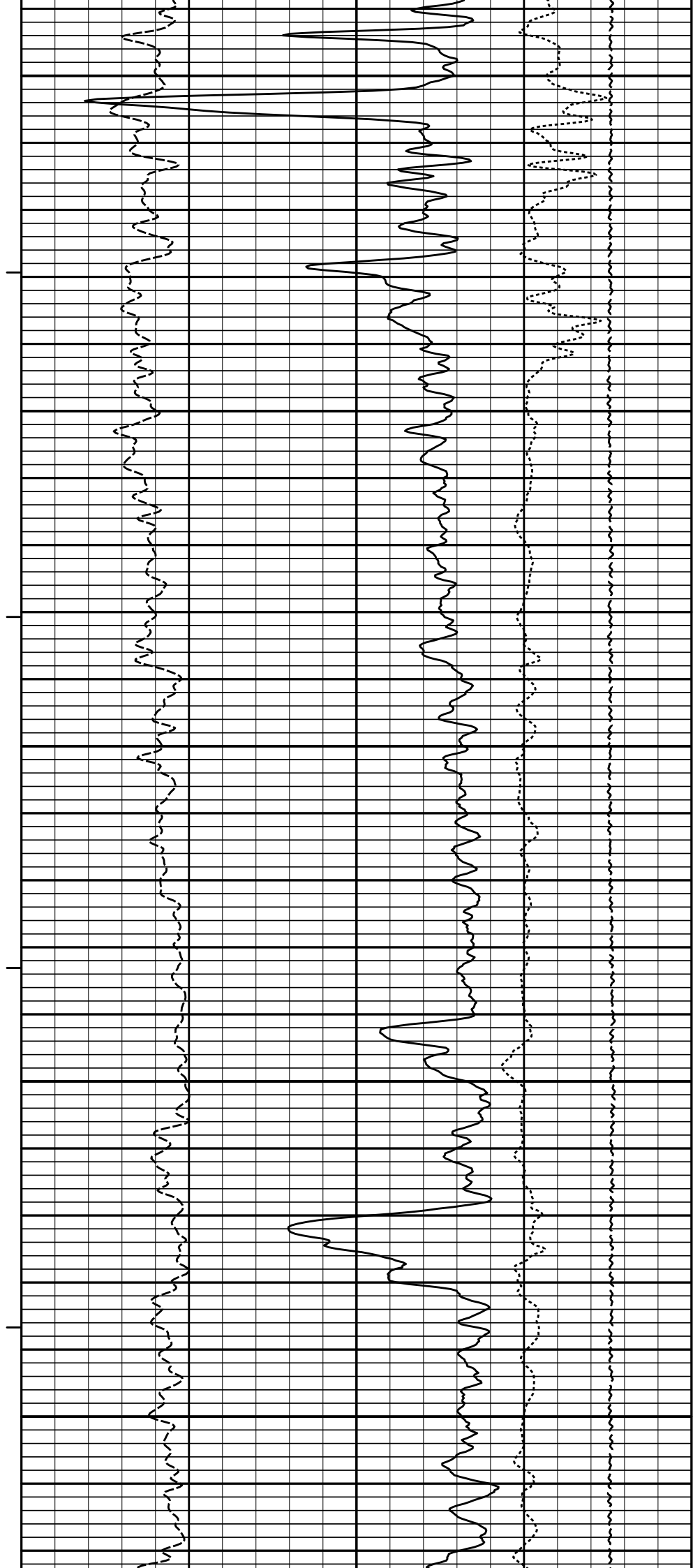
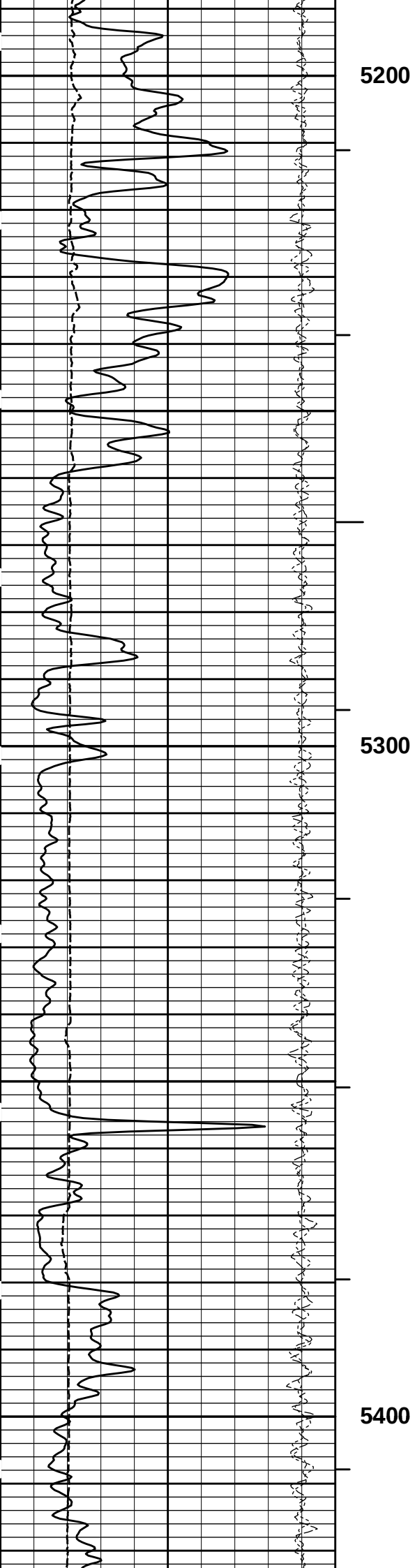
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Data: S.TUCKER_1-19SWWell Based\DETAILS\
Plot File: \\-LOCAL-IS.TUCKER_1-19SWWell Based\POROSITY\BULKD_5_MAIN_LIB

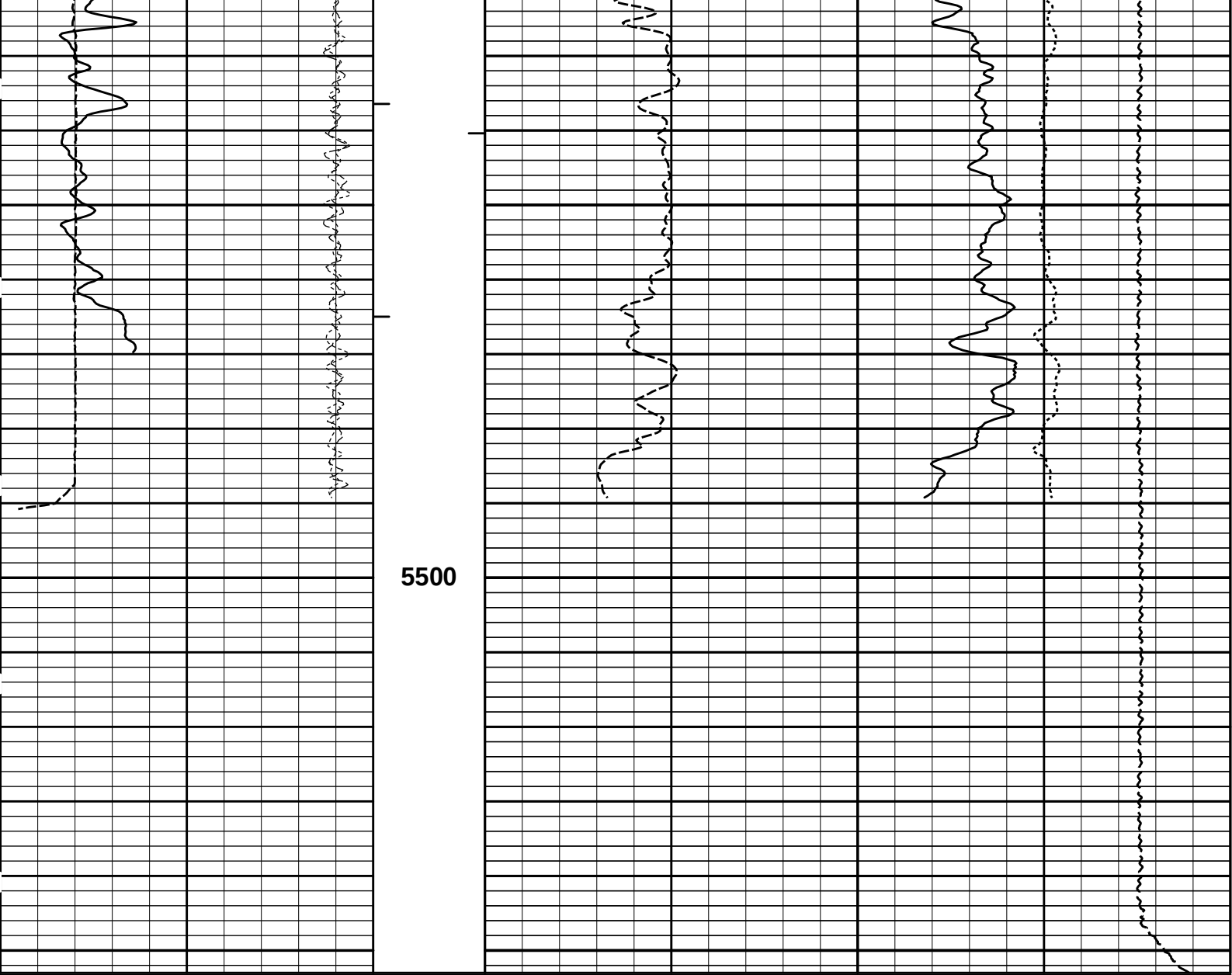
5 INCH MAIN LOG

MEASURED DEPTH
MAIN SECTION 5" PER 100'

REPEAT SECTION







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

HALLIBURTON

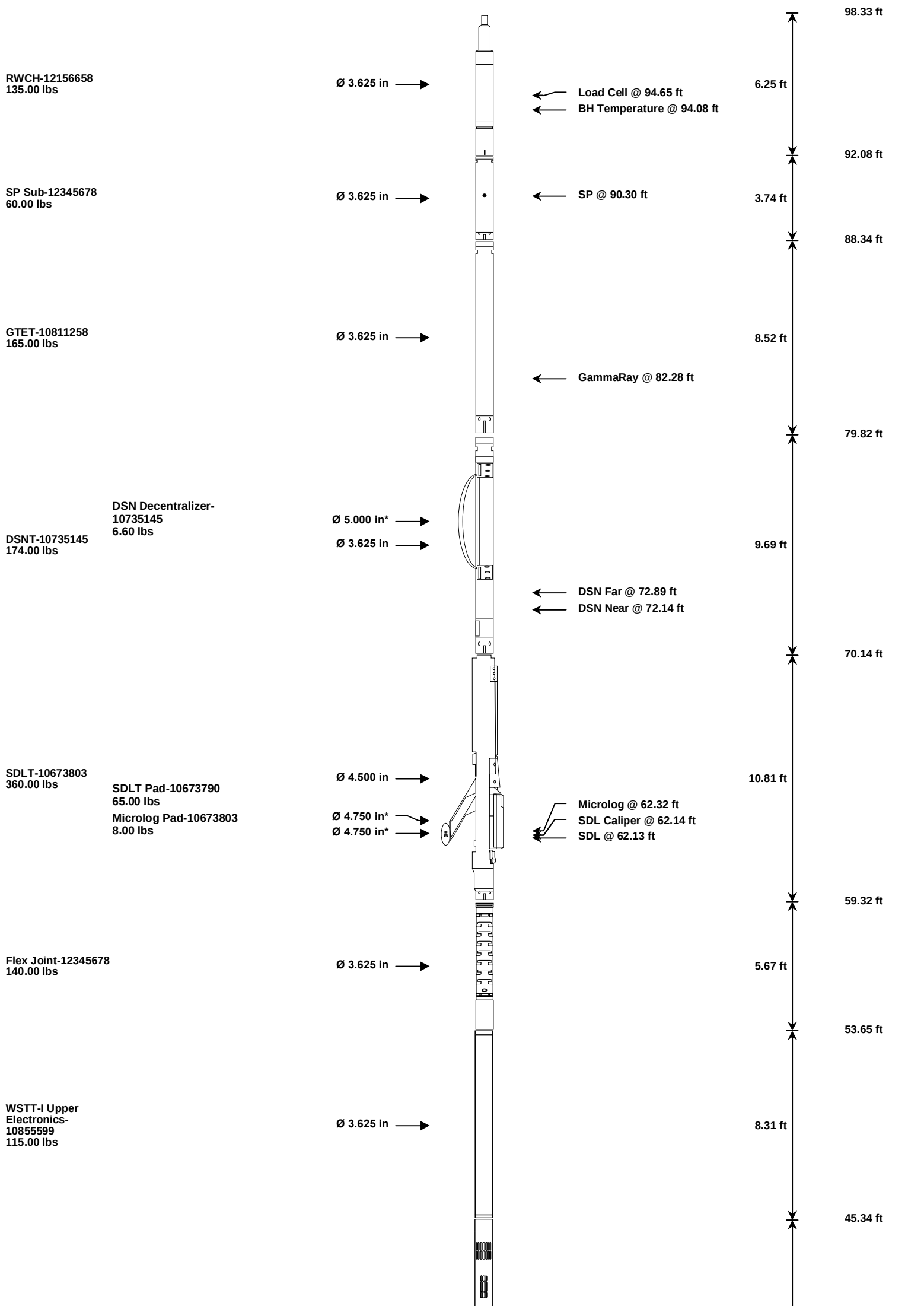
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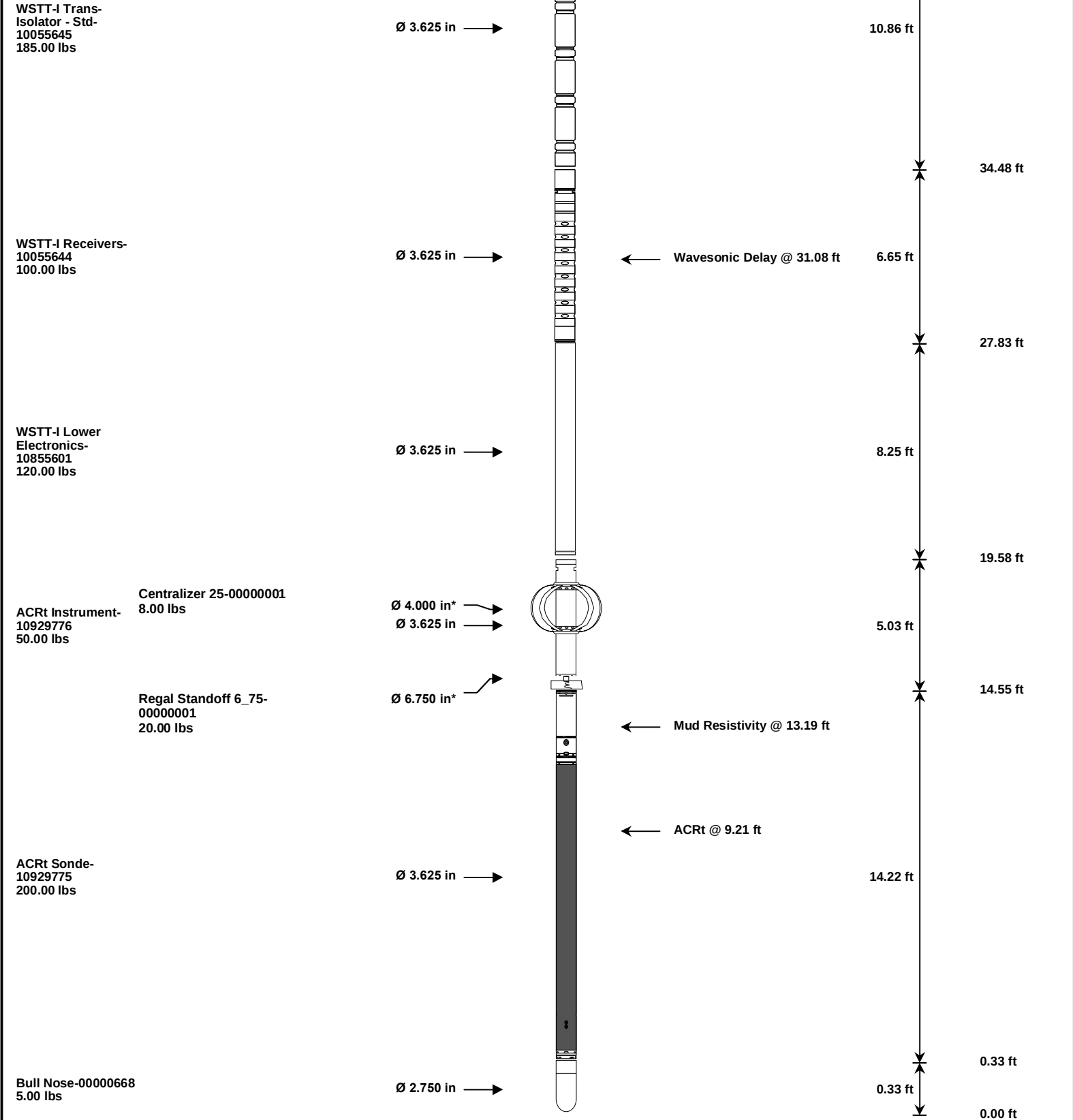
REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
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Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	12156658	135.00	6.25	92.08	300.00
SP	SP Sub	12345678	60.00	3.74	88.34	300.00
GTET	Gamma Telemetry Tool	10811258	165.00	8.52	79.82	60.00
DSNT	Dual Spaced Neutron	10735145	174.00	9.69	70.14	60.00
DCNT	DSN Decentralizer	10735145	6.60	5.13	73.47	300.00
SDLT	Spectral Density Tool	10673803	360.00	10.81	59.32	60.00
SDLP	Density Insite Pad	10673790	65.00	2.55	61.53	60.00
MICP	Microlog Pad	10673803	8.00	1.00	61.82	60.00
FLEX	Flex Joint	12345678	140.00	5.67	53.65	300.00
WSTT	WaveSonic Insite - Upper Electronics	10855599	115.00	8.31	45.34	100.00
WSTT	WaveSonic Insite - Trans-Isolator - Std	10055645	185.00	10.86	34.48	100.00
WSTT	WaveSonic Insite - Receivers	10055644	100.00	6.65	27.83	30.00
WSTT	WaveSonic Insite - Lower Electronics	10855601	120.00	8.25	19.58	100.00
ACRt	Array Compensated True Resistivity Instrument Section	10929776	50.00	5.03	14.55	120.00
OBCEN	Centralizer - 25 in. Overbody	00000001	8.00	2.08	16.57	300.00
ACRt	Array Compensated True Resistivity Sonde Section	10929775	200.00	14.22	0.33	120.00

RSOF	Regal Standoff 6.75in	00000001	20.00	0.52	*	14.53	300.00	
BLNS	Bull Nose	00000668	5.00	0.33		0.00	300.00	
Total							1,916.60	98.33
* Not included in Total Length and Length Accumulation.								
Data: S.TUCKER_1-19SWI0001 SP-GTET-DSNT-SDLT-FLEX-WSTT-ACRT-BNIDLE							Date: 07-Mar-15 01:28:30	

HALLIBURTON							
PARAMETERS REPORT							
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units		
TOP							
	SHARED	CSD	Logging Interval is Cased?	Yes			
	SHARED	CSOD	Inner Casing OD size	8.625	in		
	SHARED	CSWT	Casing Weight	24.00	lbpf		
	SHARED	ISOC	Is Outer Casing Present?	No			
	SHARED	CSCM	Casing Cemented	Yes			
	SHARED	CMWT	Cement Weight	16.500	ppg		
1832.00							
	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	9.300	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	2.000	ohmm		
	SHARED	TRM	Temperature of Mud	55.0	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	5550.00	ft		
	SHARED	BHT	Bottom Hole Temperature	125.0	degF		
	SHARED	SVTM	Navigation and Survey Master Tool	NONE			
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET			
	SHARED	TEMM	Temperature Master Tool	NONE			
	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			
	Rwa / CrossPlot	BHSM	Borehole Size Source Tool	SDLT			
	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			
	GTET	BHSM	Borehole Size Source Tool	SDLT			

DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DSNO	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	
DSNT	BHSM	Borehole Size Source Tool	SDLT	
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
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
WSTT-I Receivers	WSOK	Process WSTT?	Yes	
WSTT-I Receivers	AFIL	Adaptive Filtering?	No	
WSTT-I Receivers	PINT	Process 1 Sample and Skip	0	
WSTT-I Receivers	PROM	Process Mode: M=1,MX=2,MY=3,MXY=4	4	
WSTT-I Receivers	DTSH	Delta -T Shale	100.00	uspf
WSTT-I Receivers	DTMT	Delta -T Matrix Type	User define	
WSTT-I Receivers	DTMA	Delta -T Matrix	47.60	uspf
WSTT-I Receivers	DTFL	Delta -T Fluid	189.00	uspf
WSTT-I Receivers	RHOM	Matrix Density	2.7100	g/cc
WSTT-I Receivers	RHOF	Fluid Density	1.0000	g/cc
WSTT-I Receivers	SMTH	Semblance Threshold	0.25	
WSTT-I Receivers	VPVS	VPVS Ratio for Porosity	1.40	
WSTT-I Receivers	APEQ	Acoustic Porosity Equation	Wylie	
WSTT-I Receivers	NAVS	Navigation Source Tool	NONE	
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	Mud Cell	
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	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
ACRt Sonde	BHSM	Borehole Size Source Tool	SDLT	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	

BOTTOM

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	GTET - 10811258	Reference Calibration Date:	03-Oct-14 18:51:39
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	28-Jan-15 10:19:36
Software Version:	WL INSITE R4.4.3 (Build 6)	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	44.7	44.8	api
Background + Calibrator	275.8	276.8	api
Calibrator	231.2	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	GTET - 10811258	Reference Calibration Date:	28-Jan-15 10:19:36
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	03-Mar-15 14:09:26
Software Version:	WL INSITE R4.6.4 (Build 3)	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	44.8	38.6	api
Background + Calibrator	276.8	264.5	api
Calibrator	232.0	225.9	api

Shop	Field	Difference	Tolerance
232.0	225.9	6.1	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT - 10735145	Reference Calibration Date:	17-Feb-15 14:53:40
Engineer:	SUHAIL BISHTI	Calibration Date:	17-Feb-15 15:07:53
Software Version:	WL INSITE R4.6.4 (Build 3)	Calibration Version:	1

Logging Source S/N: DSN-436
Tank Serial Number: LIBERAL
Reference value assigned to Tank: 51.680
Snow Block S/N: 668
Calibration Tank Water Temperature: 70 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.949	0.951	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	0.2110	0.0007	+/- 0.0020
Calibrated Ratio:	9.70	9.73	0.023	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
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	Measurement	Value	Control Limit
	Snow-Block Porosity (decp):	0.0610	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-Feb-15 15:07:53	
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	03-Mar-15 14:14:44	
Software Version:	WL INSITE R4.6.4 (Build 3)	Calibration Version:	1	
Logging Source S/N: DSN-436				
Snow Block S/N: 668				
NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0610	0.0686	0.0076	+/- 0.0150
PASS/FAIL SUMMARY				
	Block Change Check:	Passed		
	Snow Block Stat Check:	Passed		
	Temperature Check:	Passed		

DENSITY CALIPER SHOP CALIBRATION				
Tool Name:	SDLT - 10673803	Reference Calibration Date:	17-Nov-14 10:23:04	
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	06-Jan-15 11:10:53	
Software Version:	WL INSITE R4.4.3 (Build 6)	Calibration Version:	1	
Host Tool Name:	DSNT - 10735145			
CALIBRATION COEFFICIENTS				
Measurement	Previous Value	New Value	Control Limit On New Value	
Pad Offset	-3053.35	-2998.86	-7000.00 - -1000.00	
Pad Gain	0.0003748	0.0003859	0.000200 - 0.000600	
Arm Offset	-4973.87	-4834.66	-5000.00 - 3000.00	
Arm Gain	0.0005142	0.0004778	0.000300 - 0.000700	
Arm Power	-0.000004974	-0.000002882	-0.000010000 - 0.000010000	
The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER				
Tool Diameter: 4.50 in				
CALIBRATION RINGS				
Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	1.92	2.00	0.08	+/- 0.20
Medium Ring (in)	3.62	3.75	0.13	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.54	6.50	-0.04	+/- 0.20
Medium Ring (in)	8.37	8.25	-0.12	+/- 0.20
Large Ring (in)	15.13	15.00	-0.13	+/- 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			
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Tool Name: SDLT - 10673803		Reference Calibration Date: 06-Jan-15 11:10:53		
Engineer: JORGE ORLANDO PEREZ		Calibration Date: 03-Mar-15 14:05:36		
Software Version: WL INSITE R4.6.4 (Build 3)		Calibration Version: 1		
MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.75	-0.00	+/- 0.10
Ring Diameter	8.25	8.34	0.09	+/- 0.15
PASS/FAIL SUMMARY				
Pad Extension Check:			Passed	
Diameter Check:			Passed	

SPECTRAL DENSITY SHOP CALIBRATION				
Tool Name: SDLT Pad - 10673790		Reference Calibration Date: 17-Feb-15 16:22:47		
Engineer: SUHAIL BISHTI		Calibration Date: 17-Feb-15 16:43:21		
Software Version: WL INSITE R4.6.4 (Build 3)		Calibration Version: 1		
Logging Source S/N: 5073 GW				
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	1.0164	1.0307	0.90 - 1.10	
Near Dens Gain	1.0003	1.0191	0.90 - 1.10	
Near Peak Gain	0.9689	1.0112	0.90 - 1.10	
Near Lith Gain	0.9501	0.9942	0.90 - 1.10	
Far Bar Gain	1.0121	1.0110	0.90 - 1.10	
Far Dens Gain	0.9985	1.0008	0.90 - 1.10	
Far Peak Gain	0.9916	0.9933	0.90 - 1.10	
Far Lith Gain	0.9594	0.9598	0.90 - 1.10	
Near Bar Offset	0.1394	0.0069	NONE	
Near Dens Offset	0.2772	0.1095	NONE	
Near Peak Offset	0.5444	0.1924	NONE	
Near Lith Offset	0.6941	0.3253	NONE	
Far Bar Offset	0.1032	0.1127	NONE	
Far Dens Offset	0.1886	0.1677	NONE	
Far Peak Offset	0.1953	0.1800	NONE	
Far Lith Offset	0.3619	0.3576	NONE	
Near Bar Background	832.26	828.40	700 - 1450	
Near Dens Background	272.41	270.79	230 - 480	
Near Peak Background	120.11	119.36	100 - 210	
Near Lith Background	147.40	147.68	125 - 260	
Far Bar Background	558.72	558.23	450 - 900	
Far Dens Background	218.54	219.16	175 - 345	
Far Peak Background	87.23	87.41	70 - 140	
Far Lith Background	90.72	91.12	75 - 145	
CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.684	1.684	0.000	+/- 0.015

Pe	2.545	2.554	0.009	+/- 0.150
ALUMINUM				
Density (g/cc)	2.601	2.598	-0.003	+/- 0.01500
Pe	3.065	3.122	0.057	+/- 0.150
TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0003	+/- 0.0110	-0.0007	+/- 0.0140
Magnesium Block	-0.0003	+/- 0.0110	0.0001	+/- 0.0140
Aluminum Block	-0.0002	+/- 0.0110	0.0018	+/- 0.0140
Resolution	8.56	6.00 - 11.50	9.03	6.00 - 11.50
Internal Verifier(B+D+P+L)	1366	1200 - 2700	956	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 - 10673790	Reference Calibration Date:	17-Feb-15 16:43:21	
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	03-Mar-15 14:01:52	
Software Version:	WL INSITE R4.6.4 (Build 3)	Calibration Version:	1	
Pad Temperature: 58.1 degF				
DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1366.234	1372.398	6.164	14.939
Far (B+D+P+L) cps	955.924	949.425	-6.499	16.660
Near Resolution	8.56	8.61	0.050	0.50
Far Resolution	9.03	9.02	-0.010	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-10811258						
Gamma Ray Calibrator	232.0	225.9	-----	6.1	+/- 9.00	api
DSNT-10735145						
Snow-Block Porosity	0.0610	0.0686	-----	-0.0076	+/- 0.0150	decp
SDLT-10673803						
Pad Extension	3.75	3.75	-----	0.00	+/-0.10	in
Ring Diameter	8.25	8.34	-----	-0.09	+/-0.15	in
SDLT Pad-10673790						
Near(B+D+P+L)	1366.234	1372.398	-----	-6.164	+/-14.939	cps
Far(B+D+P+L)	955.924	949.425	-----	6.499	+/-16.660	cps

HALLIBURTON

INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
Rwa / CrossPlot				
TPUL	Tension Pull	98.33	NO	
BS	Bit Size	98.33	NO	
HDIA	Measured Hole Diameter	0.00	NO	
RWCH				
DHTN	DownholeTension	0.00	BLK	0.000
SP Sub				
PLTC	Plot Control Mask	90.30	NO	
SP	Spontaneous Potential	90.30	BLK	1.250
SPR	Raw Spontaneous Potential	90.30	NO	
SPO	Spontaneous Potential Offset	90.30	NO	
GTET				
TPUL	Tension Pull	82.28	NO	
GR	Natural Gamma Ray API	82.28	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	82.28	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	82.28	W	1.416 , 0.750
HDIA	Measured Hole Diameter	0.00	NO	
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	72.04	NO	
RNDS	Near Detector Telemetry Counts	72.14	BLK	1.417
RFDS	Far Detector Telemetry Counts	72.89	TRI	0.583
DNTT	DSN Tool Temperature	72.14	NO	
DSNS	DSN Tool Status	72.04	NO	
ERND	Near Detector Telemetry Counts EVR	72.14	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	72.89	BLK	0.000
ENTM	DSN Tool Temperature EVR	72.14	NO	
HDIA	Measured Hole Diameter	0.00	NO	
SDLT				
TPUL	Tension Pull	62.14	NO	
PCAL	Pad Caliper	62.14	TRI	0.250
ACAL	Arm Caliper	62.14	TRI	0.250
WSTT-I Receivers				
TPUL	Tension Pull	31.08	NO	
DPSX	Dipole Source X StructureI	27.83	NO	
DPSY	Dipole Source Y StructureI	27.83	NO	
DPSM	Monopole Source Structure	27.83	NO	
WVST	Wavesonic Compressed Data	31.08	NO	
TPUL	Tension Pull	31.08	NO	
XMS1	Wave Sonic Status Word 1	27.83	NO	
XMS2	Wave Sonic Status Word 2	27.83	NO	
XMS1	Wave Sonic XMITStatus Word 1	27.83	NO	
XMS1	Wave Sonic XMITStatus Word 2	27.83	NO	

WVST	Wave Sonic XMT Status Word 2	27.83	NO
F1HA	Dipole 1 HV After	27.83	NO
F1HB	Dipole 1 HV Before	27.83	NO
F2HA	Dipole 2 HV After	27.83	NO
F2HB	Dipole 2 HV Before	27.83	NO
F3HA	Monopole HV After	27.83	NO
F3HB	Monopole HV Before	27.83	NO
INVT	Input Voltage	27.83	NO
5VOL	5 Volts	27.83	NO
MI5A	Minus 5 Volts Analog	27.83	NO
ITMP	Instrument Temperature	27.83	NO
PL5A	Plus 5 Volts Analog	27.83	NO
5VD	Plus 5 Volts Digital	27.83	NO
TCUR	Tool Current	27.83	NO
SUPV	Supply Voltage	27.83	NO
PRVT	Preregulated voltage	27.83	NO
PRVT	Pre-regulated voltage Xmter	27.83	NO
TEMP	Temperature	27.83	NO
ACQN	Acquisition Number	27.83	NO
XDP	Delay Reference	31.08	NO
MITM	MIT Mode	31.08	NO
VERS	Version	27.83	NO
D1CT	Dipole 1 Compressed Word Count	31.08	NO
D2CT	Dipole 2 Compressed Word Count	31.08	NO
MCNT	Monopole Compressed Word Count	31.08	NO
SEQN	Sequence Number	27.83	NO
FREV	Firmware Revision	27.83	NO
MSMP	Monopole Sample Rate	27.83	NO
MSMP	Dipole Sample Rate	27.83	NO
MFWF	Monopole Firing Waveform	27.83	NO
MFRQ	Monopole Frequency	27.83	NO
MDLY	Monopole Delay	27.83	NO
DXWF	Dipole X Firing Waveform	27.83	NO
XFRQ	Dipole X Frequency	27.83	NO
XDLY	Dipole X Delay	27.83	NO
DYWF	Dipole Y Firing Waveform	27.83	NO
YFRQ	Dipole Y Frequency	27.83	NO
YDLY	Dipole Y Delay	27.83	NO
DPSX	Dipole Source X Structure1	27.83	NO
DPSY	Dipole Source Y Structure1	27.83	NO
DPSM	Monopole Source Structure	27.83	NO
WVST	Wavesonic Compressed Data	31.08	NO
AUTM	Auto Mode	27.83	NO
SONM	tool mode for sonic - 0 for normal or 3 for calibration	27.83	NO
MSL	Monopole Lower Travel Time	31.08	NO
MSH	Monopole Upper Travel Time	31.08	NO
MLFC	Monopole-1 Lower Filter Bandpass Frequency Cut-off	27.83	NO
MUFC	Monopole-1 Upper Filter Bandpass Frequency Cut-off	27.83	NO
DLTT	Dipole Lower Travel Time	27.83	NO
DUTT	Dipole Upper Travel Time	27.83	NO
DLFC	Dipole Lower Filter Bandpass Frequency Cut-off	27.83	NO
DUFC	Dipole Upper Filter Bandpass Frequency Cut-off	27.83	NO
MUTE	WaveSonic Mute/Enable Channels and Sides map	27.83	NO
MUTS	Mute/Enable Sides	27.83	NO
WSRB	Relative Bearing	31.08	NO
WSAZ	WSX Azimuth Pad 1	31.08	NO
TPUL	Tension Pull	31.08	NO
WMP	Summed array of Monopole for SIDES - A,B,C,D	31.08	NO
WXX	Dipole X for SIDES - A-C	31.08	NO

WYY	Dipole Y for SIDES - B-D	31.08	NO	
WXY	Dipole X for SIDES - B-D	31.08	NO	
WYX	Dipole Y for SIDES - A-C	31.08	NO	
TPUL	Tension Pull	31.08	NO	
WMA	Monopole Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO	
WMB	Monopole Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO	
WMC	Monopole Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO	
WMD	Monopole Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO	
WXA	Dipole X Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO	
WXB	Dipole X Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO	
WXC	Dipole X Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO	
WXD	Dipole X Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO	
WYA	Dipole Y Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO	
WYB	Dipole Y Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO	
WYC	Dipole Y Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO	
WYD	Dipole Y Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO	
GAR1	Gain Side A Receiver 1	27.83	NO	
GAR2	Gain Side A Receiver 2	27.83	NO	
GAR3	Gain Side A Receiver 3	27.83	NO	
GAR4	Gain Side A Receiver 4	27.83	NO	
GAR5	Gain Side A Receiver 5	27.83	NO	
GAR6	Gain Side A Receiver 6	27.83	NO	
GAR7	Gain Side A Receiver 7	27.83	NO	
GAR8	Gain Side A Receiver 8	27.83	NO	
GBR1	Gain Side B Receiver 1	27.83	NO	
GBR2	Gain Side B Receiver 2	27.83	NO	
GBR3	Gain Side B Receiver 3	27.83	NO	
GBR4	Gain Side B Receiver 4	27.83	NO	
GBR5	Gain Side B Receiver 5	27.83	NO	
GBR6	Gain Side B Receiver 6	27.83	NO	
GBR7	Gain Side B Receiver 7	27.83	NO	
GBR8	Gain Side B Receiver 8	27.83	NO	
GCR1	Gain Side C Receiver 1	27.83	NO	
GCR2	Gain Side C Receiver 2	27.83	NO	
GCR3	Gain Side C Receiver 3	27.83	NO	
GCR4	Gain Side C Receiver 4	27.83	NO	
GCR5	Gain Side C Receiver 5	27.83	NO	
GCR6	Gain Side C Receiver 6	27.83	NO	
GCR7	Gain Side C Receiver 7	27.83	NO	
GCR8	Gain Side C Receiver 8	27.83	NO	
GDR1	Gain Side D Receiver 1	27.83	NO	
GDR2	Gain Side D Receiver 2	27.83	NO	
GDR3	Gain Side D Receiver 3	27.83	NO	
GDR4	Gain Side D Receiver 4	27.83	NO	
GDR5	Gain Side D Receiver 5	27.83	NO	
GDR6	Gain Side D Receiver 6	27.83	NO	
GDR7	Gain Side D Receiver 7	27.83	NO	
GDR8	Gain Side D Receiver 8	27.83	NO	
ACRt Sonde				
TPUL	Tension Pull	2.73	NO	
F1R1	ACRT 12KHz - 80in R value	8.98	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	8.98	BLK	0.000

F1R2	ACRT 12KHz - 50in R value	6.48	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.48	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	4.98	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	4.98	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	3.98	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	3.98	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.48	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.48	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.23	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.23	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	8.98	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.48	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.48	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	4.98	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	3.98	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	3.98	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.48	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.48	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.23	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.23	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	8.98	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	8.98	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.48	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.48	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	4.98	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	4.98	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	3.98	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	3.98	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.48	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.48	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.23	BLK	0.000
RMUD	Mud Resistivity	12.52	BLK	0.000
F1RT	Transmitter Reference 12 KHz Real Signal	2.73	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.73	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.73	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.73	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.73	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.73	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.73	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.73	BLK	0.000
ITMP	Instrument Temperature	2.73	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.73	NO	
TIDV	Instrument Temperature Derivative	2.73	NO	
TUDV	Upper Temperature Derivative	2.73	NO	
TLDV	Lower Temperature Derivative	2.73	NO	
TRBD	Receiver Board Temperature	2.73	NO	
HDIA	Measured Hole Diameter	0.00	NO	
SDLT Pad				
TPUL	Tension Pull	62.13	NO	
NAB	Near Above	61.95	BLK	0.920
NHI	Near Cesium High	61.95	BLK	0.920
NLO	Near Cesium Low	61.95	BLK	0.920
NVA	Near Valley	61.95	BLK	0.920
NBA	Near Barite	61.95	BLK	0.920
NDF	Near Density	61.95	BLK	0.920

NDE	Near Density	61.95	BLK	0.920
NPK	Near Peak	61.95	BLK	0.920
NLI	Near Lithology	61.95	BLK	0.920
NBAU	Near Barite Unfiltered	61.95	BLK	0.250
NLIU	Near Lithology Unfiltered	61.95	BLK	0.250
FAB	Far Above	62.30	BLK	0.250
FHI	Far Cesium High	62.30	BLK	0.250
FLO	Far Cesium Low	62.30	BLK	0.250
FVA	Far Valley	62.30	BLK	0.250
FBA	Far Barite	62.30	BLK	0.250
FDE	Far Density	62.30	BLK	0.250
FPK	Far Peak	62.30	BLK	0.250
FLI	Far Lithology	62.30	BLK	0.250
PTMP	Pad Temperature	62.14	BLK	0.920
NHV	Near Detector High Voltage	61.53	NO	
FHV	Far Detector High Voltage	61.53	NO	
ITMP	Instrument Temperature	61.53	NO	
DDHV	Detector High Voltage	61.53	NO	
HDIA	Measured Hole Diameter	0.00	NO	
Microlog Pad				
TPUL	Tension Pull	62.32	NO	
MINV	Microlog Lateral	62.32	BLK	0.750
MNOR	Microlog Normal	62.32	BLK	0.750
Data: S.TUCKER_1-19SWI0001 SP-GTET-DSNT-SDLT-FLEX-WSTT-ACRT-BNIDLE			Date: 07-Mar-15 01:31:07	

COMPANY	FALCON EXPLORATION INC.		
WELL	STEVE TUCKER 1-19 (SW)		
FIELD	WILDCAT		
COUNTY	GRAY	STATE	KANSAS
HALLIBURTON		DUAL SPACED NEUTRON SPECTRAL DENSITY LOG	