

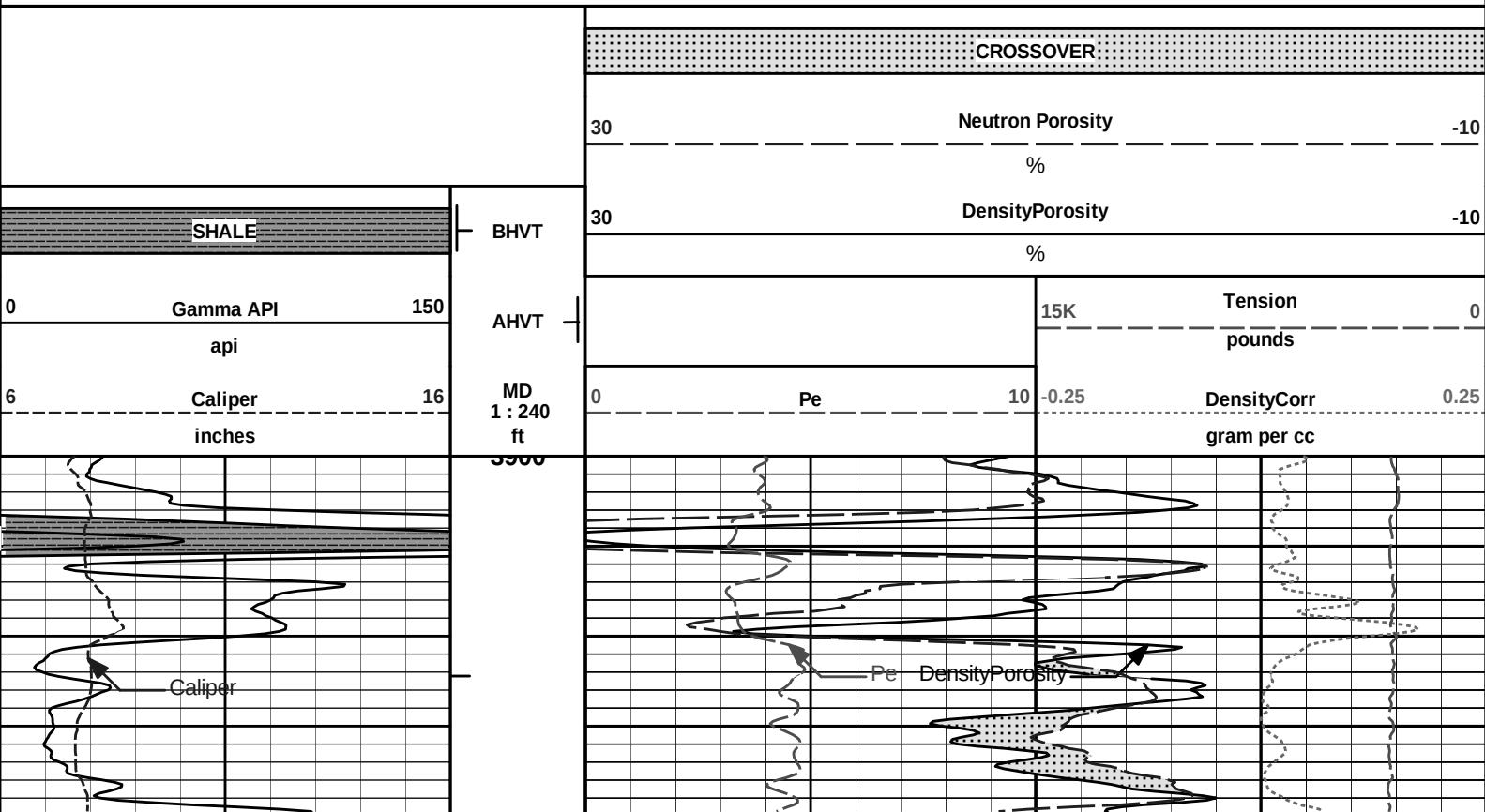
HALLIBURTON

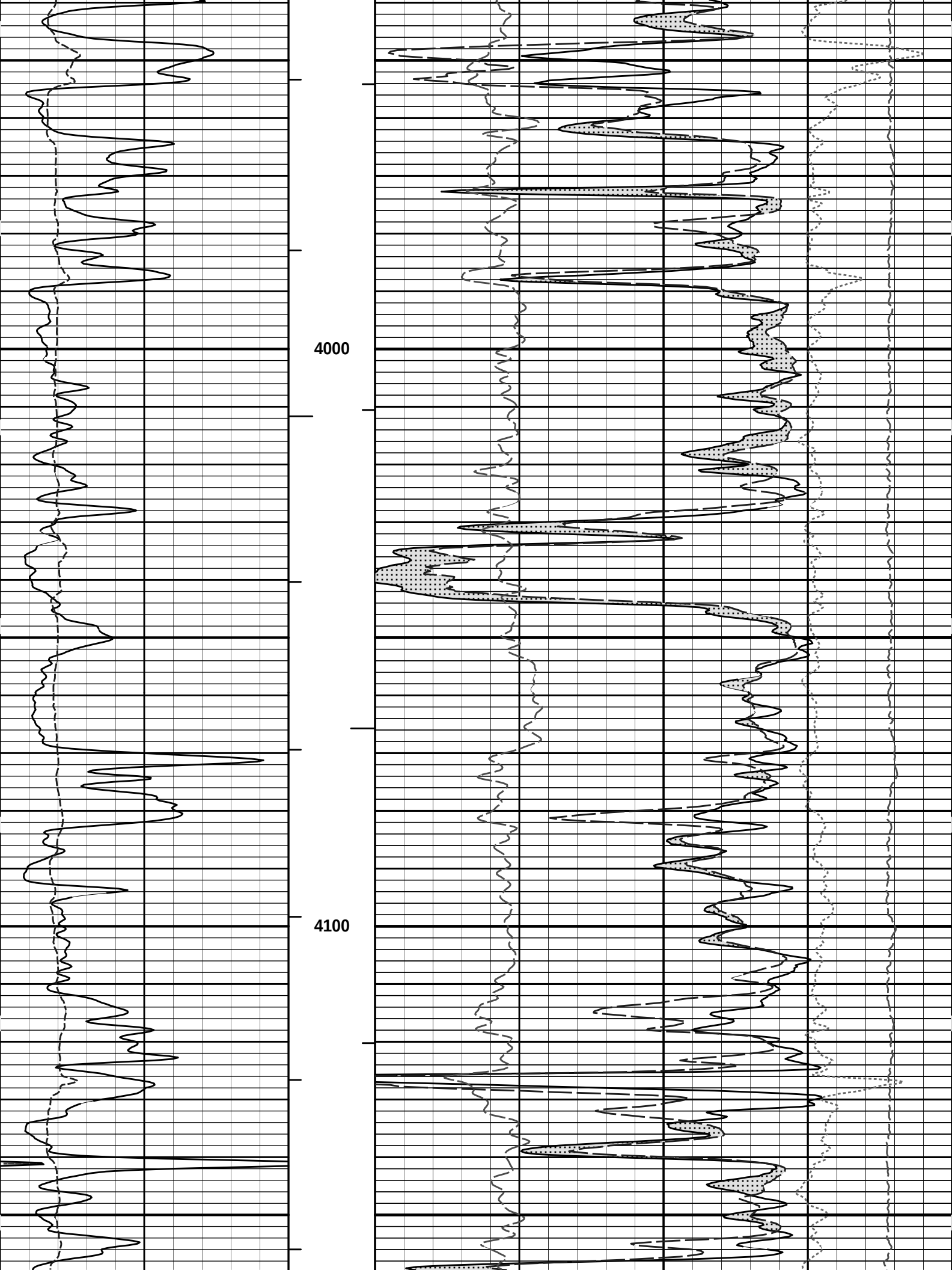
SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

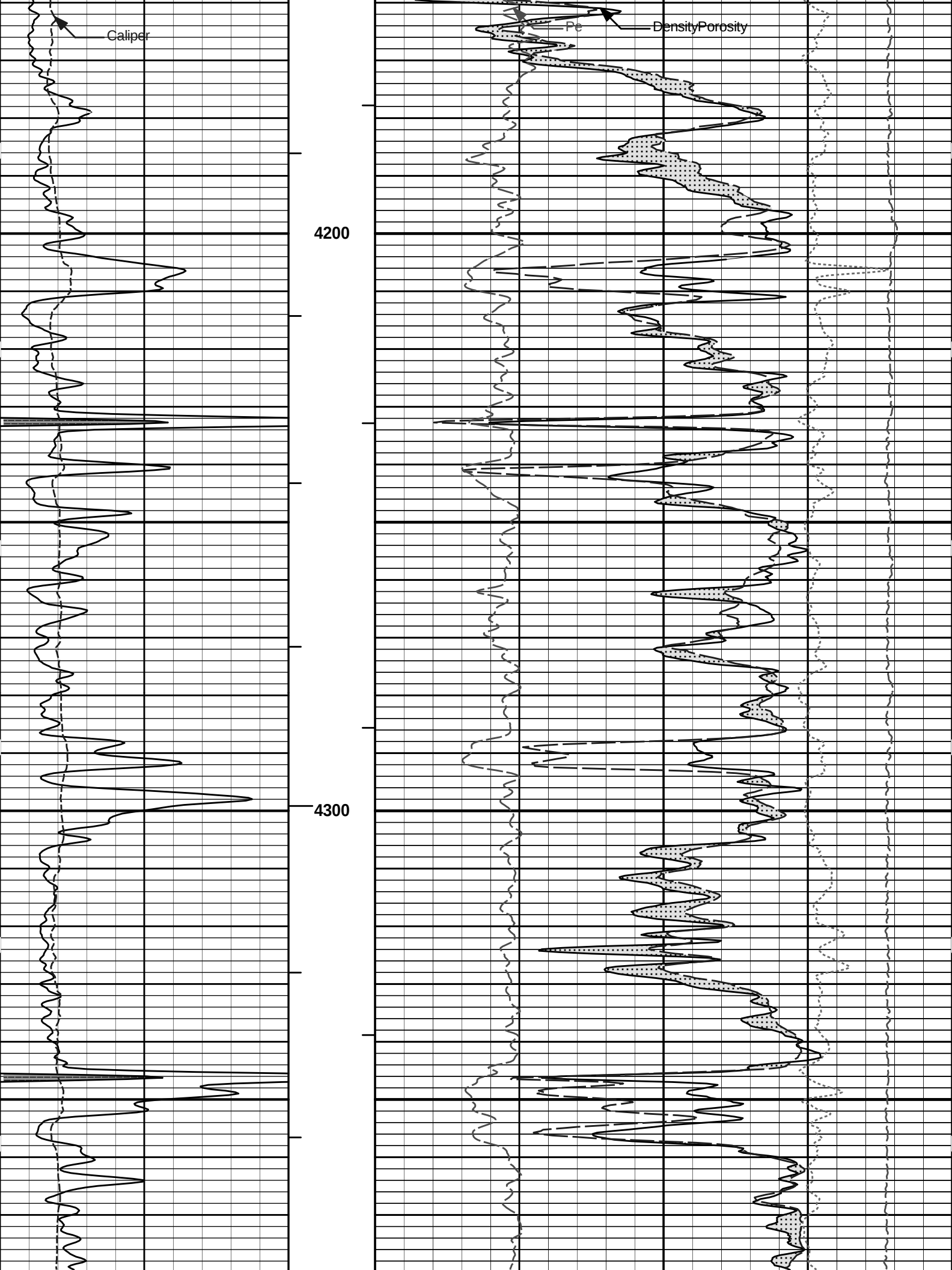
COMPANY WELL FIELD/BLOCK COUNTY STATE				OXY USA INC. DRUSSEL E-2 HUGOTON GAS AREA FINNEY KANSAS			
COMPANY WELL FIELD/BLOCK COUNTY STATE				OXY USA INC. DRUSSEL E-2 HUGOTON GAS AREA FINNEY KANSAS			
API No. 1505522270000 Location (SHL) 648' FSL & 2347' FWL				Other Services: MICROLOG ACRT BSAT			
Permanent Datum Log measured from Drilling measured from				G.L. Elev. 2895.0 ft KB D.F. 2905.0 ft KB G.L. 2895.0 ft			
Date 12-Jul-13							
Run No. ONE							
Depth - Driller							
Depth - Logger							
Bottom - Logged Interval							
Top - Logged Interval							
Casing - Driller							
Casing - Logger							
Bit Size							
Type Fluid in Hole							
Density							
PH							
Source of Sample							
Rm @ Meas. Temperature							
Rmf @ Meas. Temperature							
Rmc @ Meas. Temperature							
Source Rmf							
Rm @ BHT							
Time Since Circulation							
Time on Bottom							
Max. Rec. Temperature							
Equipment							
Recorded By							
Witnessed By							

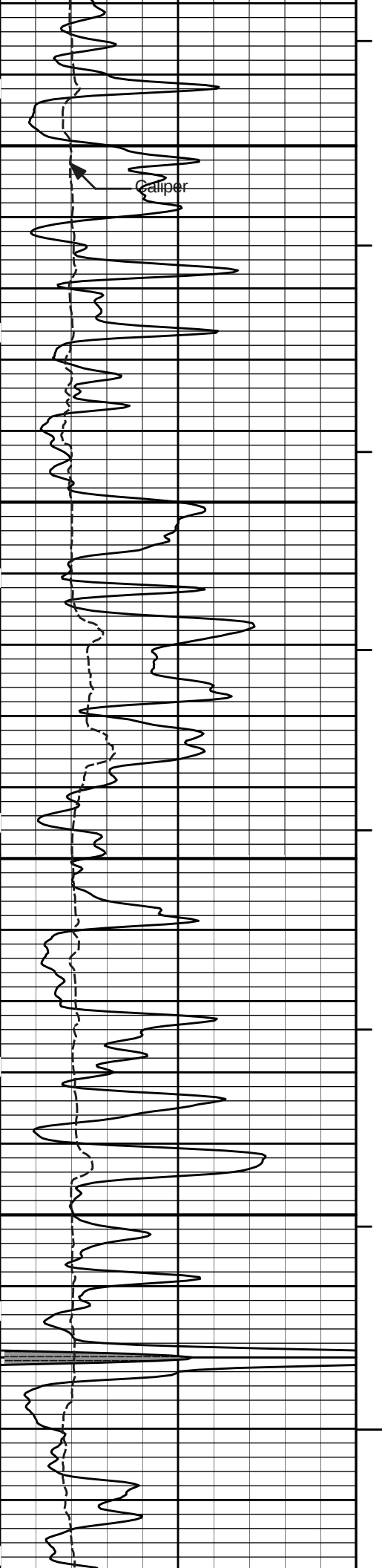
Service Ticket No.: 900582238				API Serial No.: 1505522270000				PGM Version: WL INSITE R3.8.4 (Build 5)							
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES									
Date		Sample No.				Type Log		Depth		Scale Up Hole		Scale Down Hole			
Depth-Driller															
Type Fluid 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.		10811258		Serial No.				Serial No.		10673790		Serial No.		10755066	
Model No.		GTET		Model No.				Model No.		SDLT-I		Model No.		DSNT-I	
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		8'		LSA [Y/N]				Serial No.		5073GW		Serial No.		DSN-436	
Distance to Source		10'		FWDA [Y/N]				Strength				Strength			
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	5162	3900	REC	0	150				30	-10	2.71	30	-10	LIME	
DIRECTIONAL INFORMATION															
Maximum Deviation								@	KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING															
CHLORIDES REPORTED AT 4,000 MG/L															
GTET-DSNT-SDLT-BSAT-ACRT RUN IN COMBINATION															
TODAY'S CREW: V. JAIME & K. KING															
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															





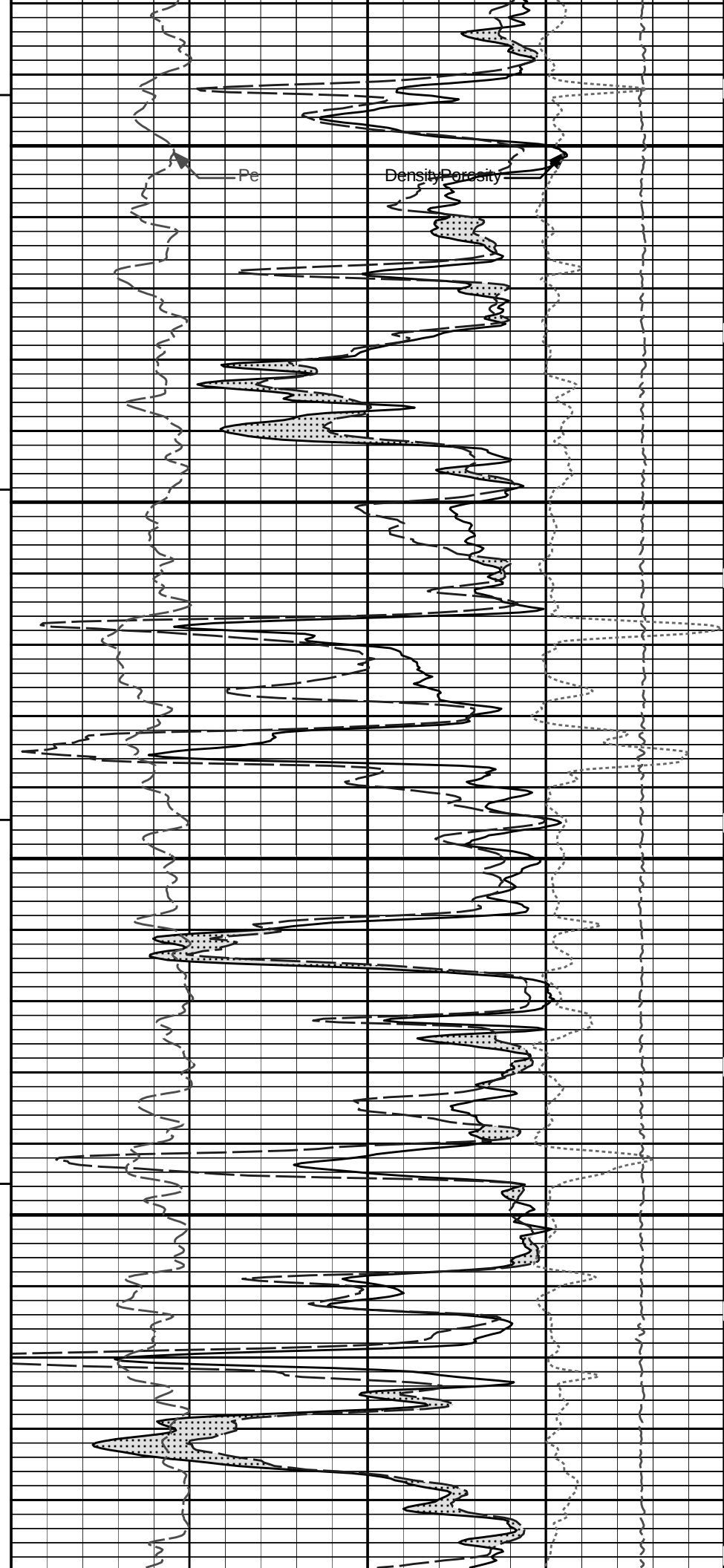


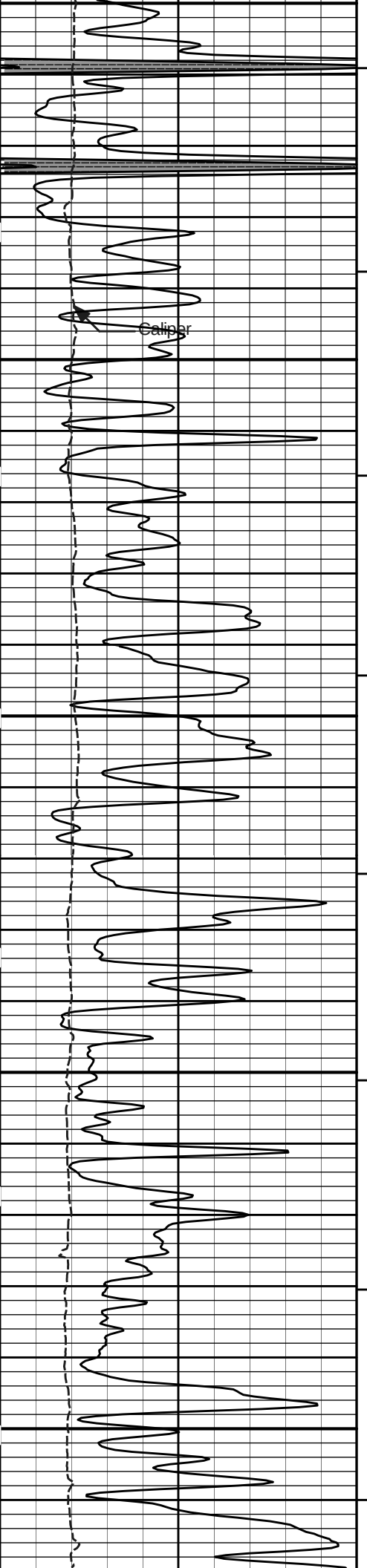


4400

4500

4600

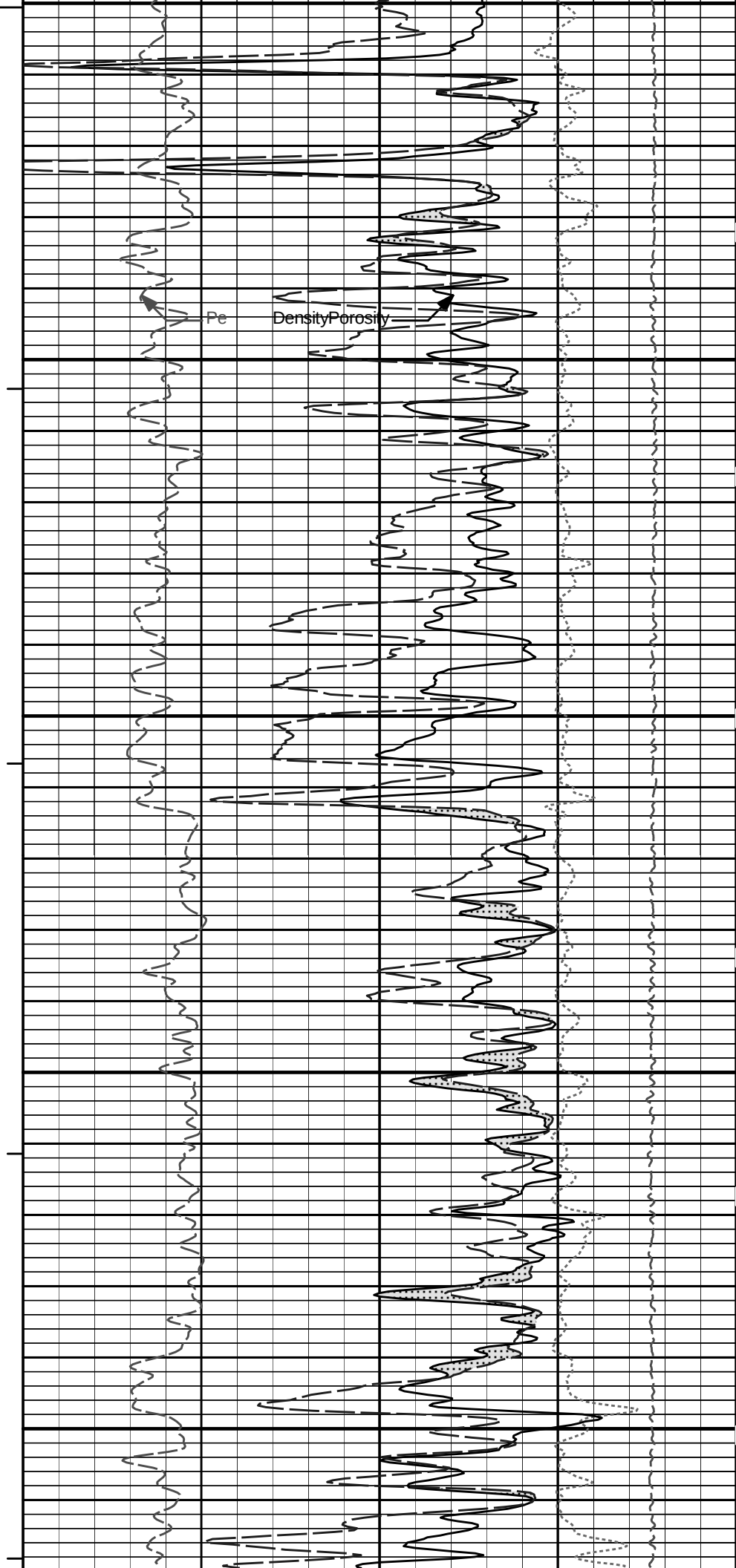


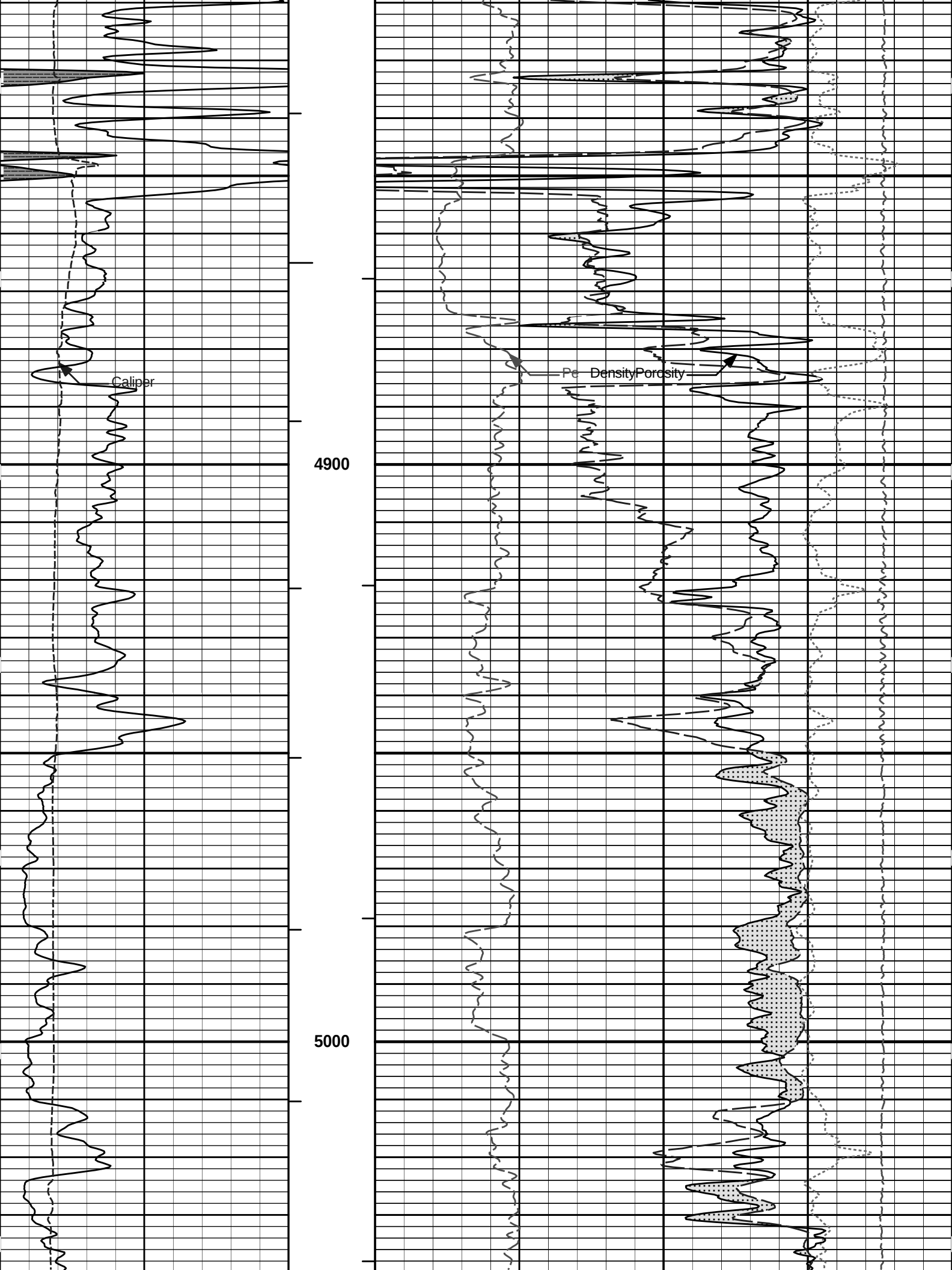


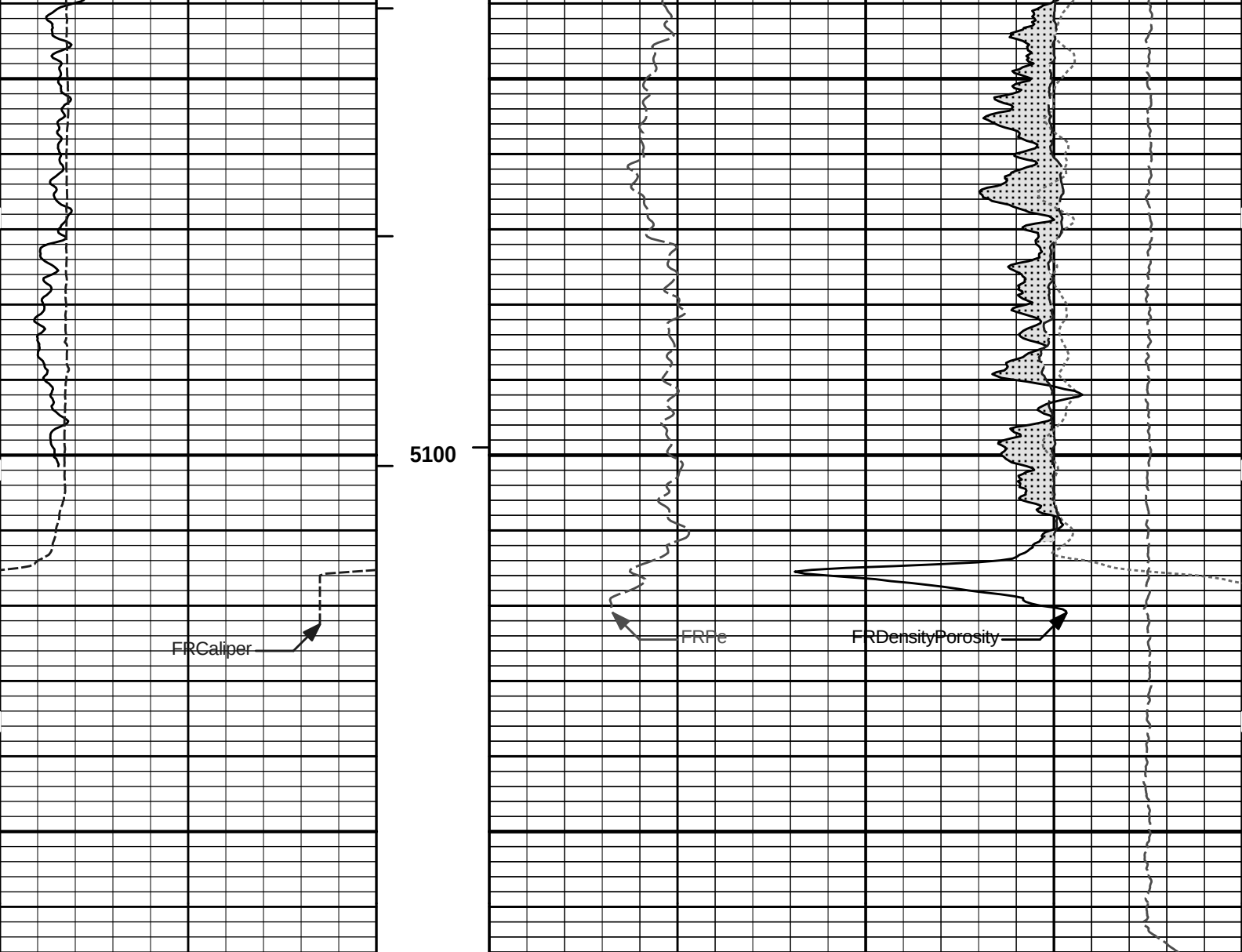
4600

4700

4800







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

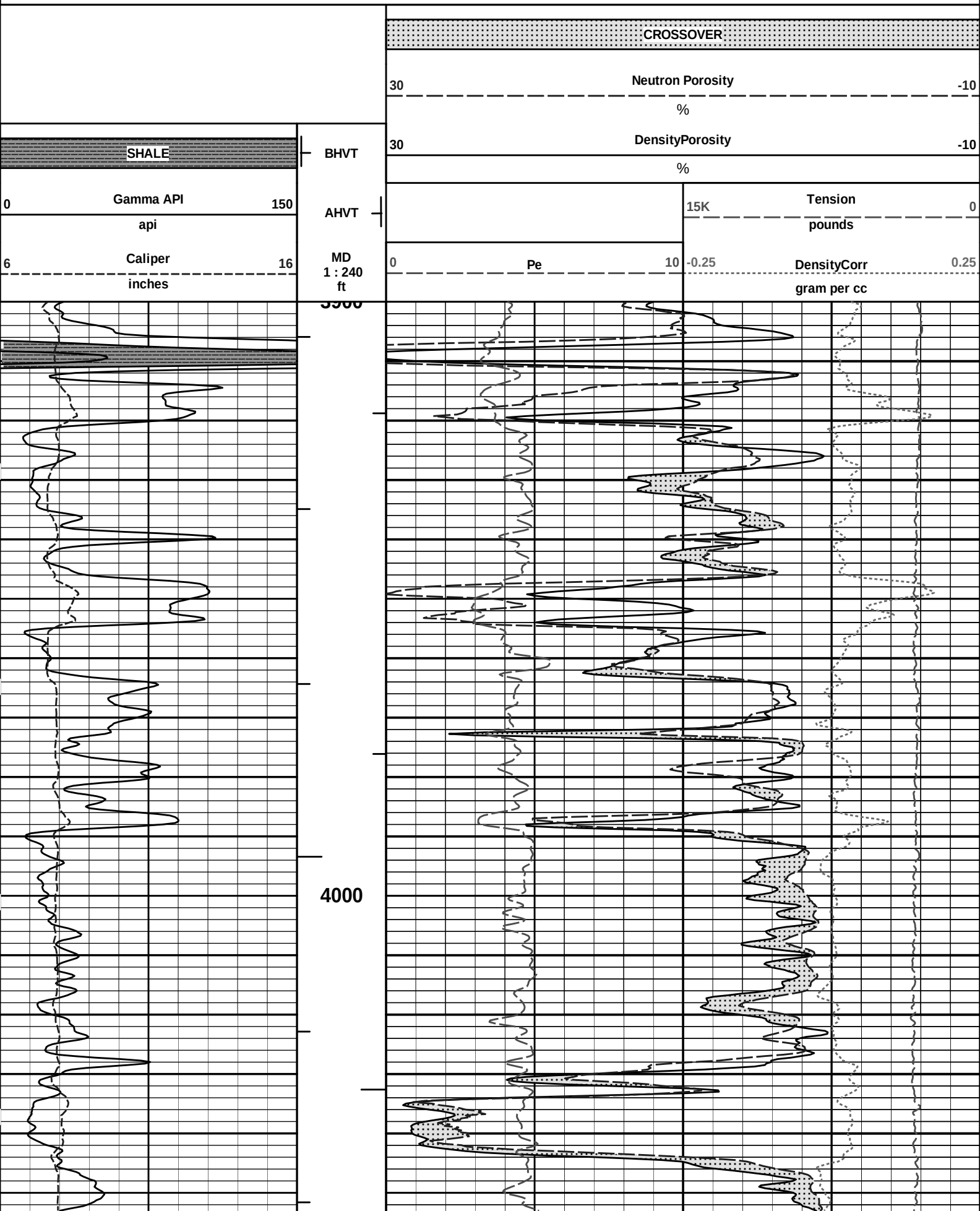
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 Plot Range: 3900 ft to 5166.17 ft
 Data: DRUSSEL_E-1\Well Based\DETAIL\
 Plot File: \\PORO\Poros_IQ_5_MAIN_LIB

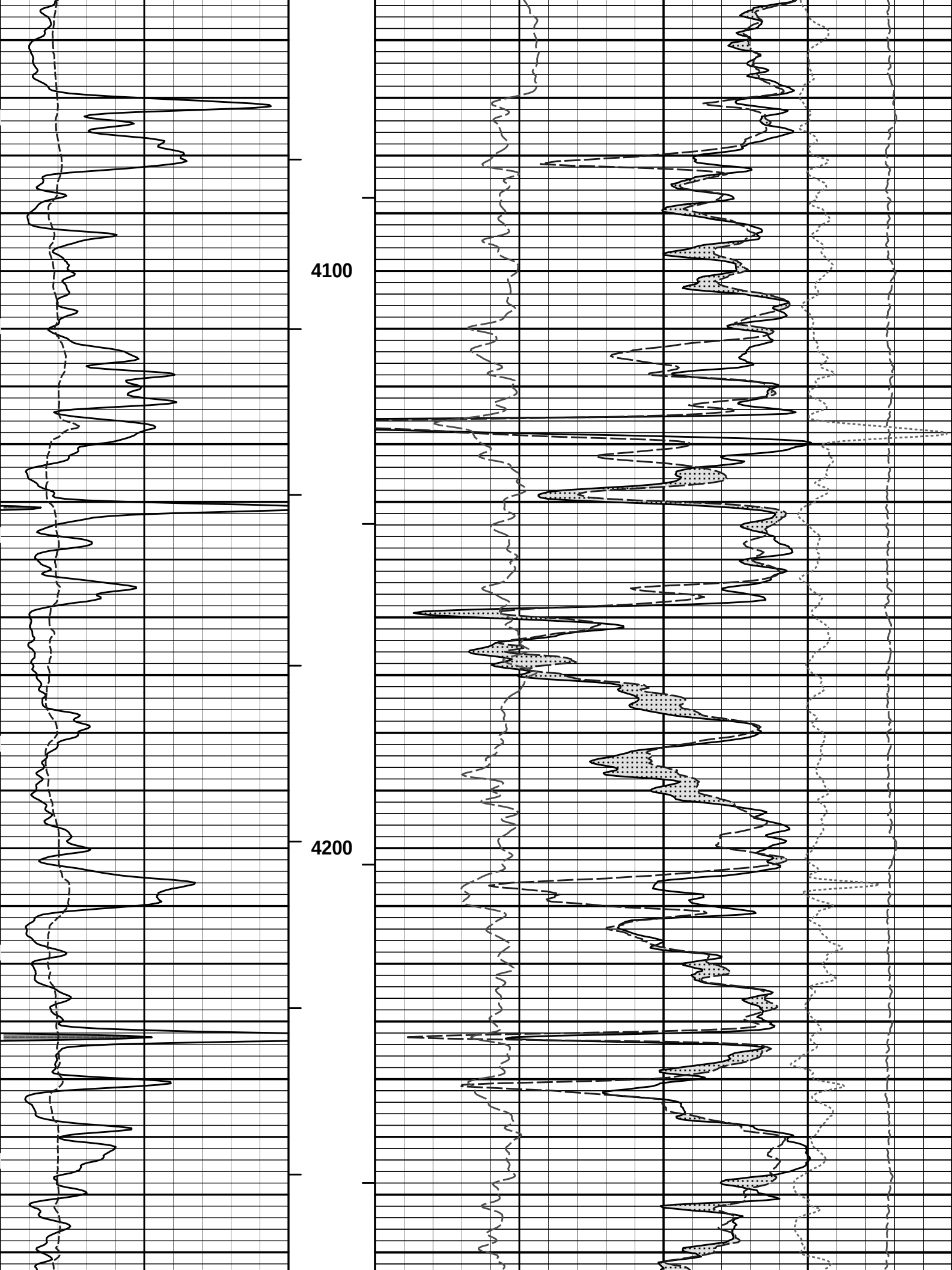
5 INCH MAIN LOG

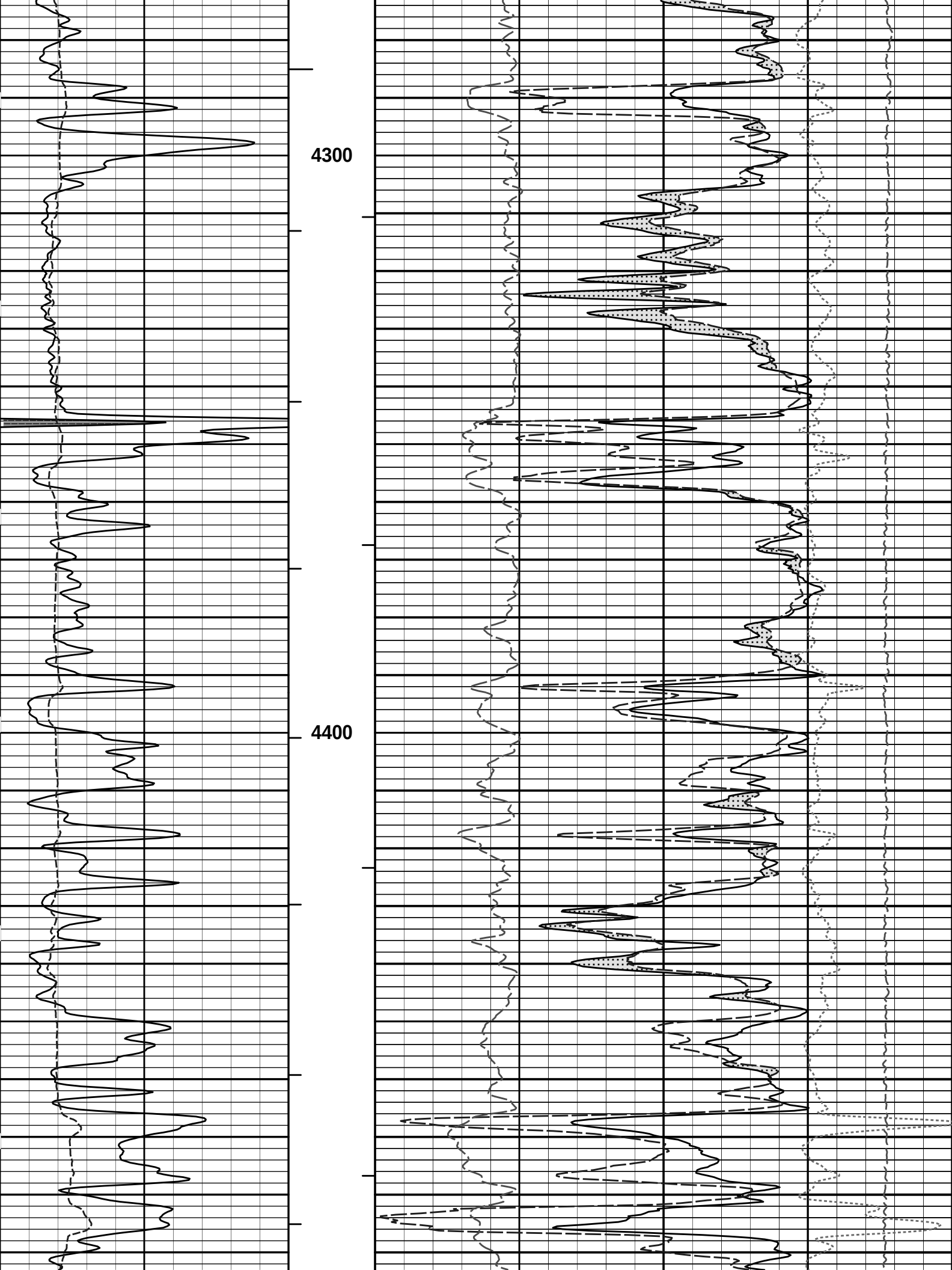
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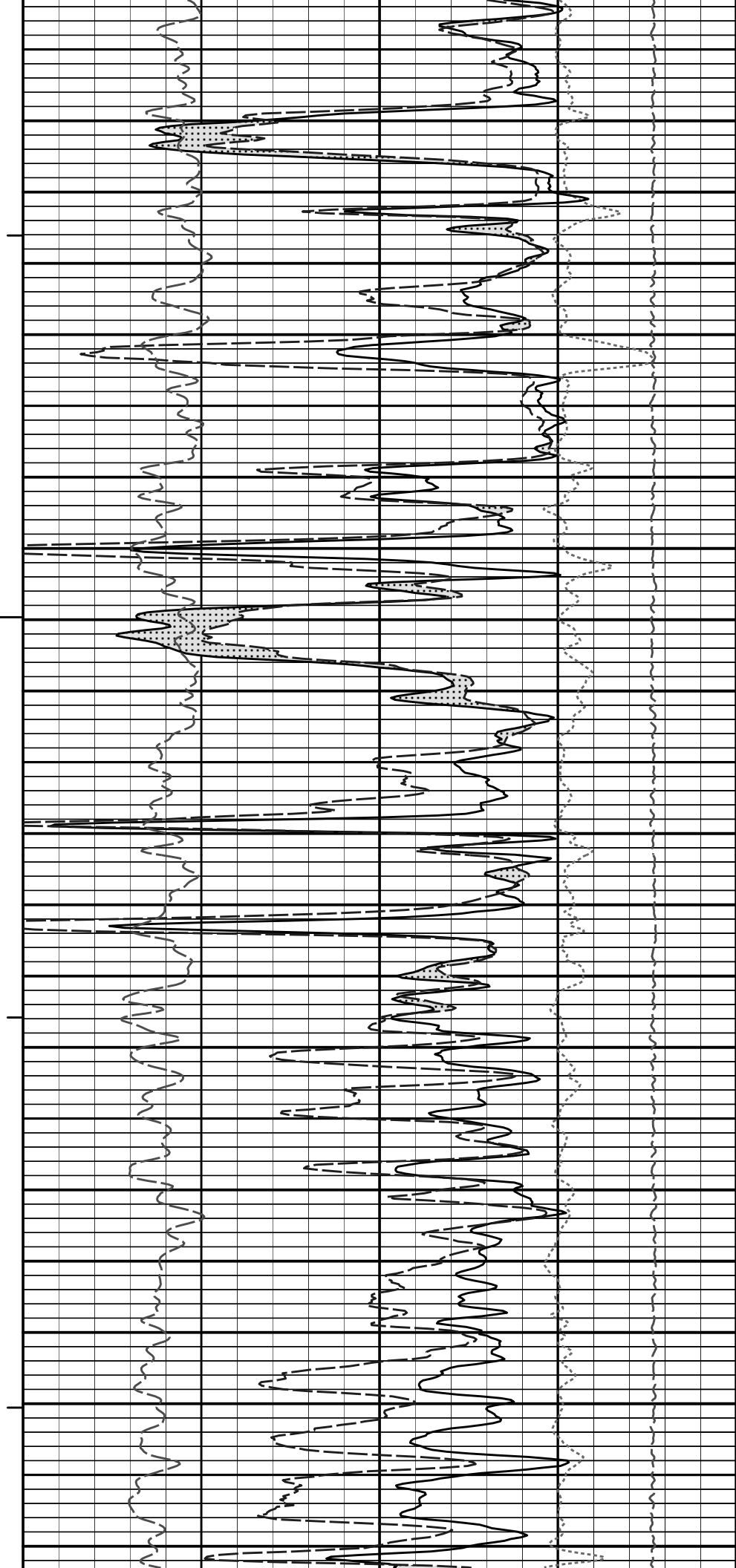
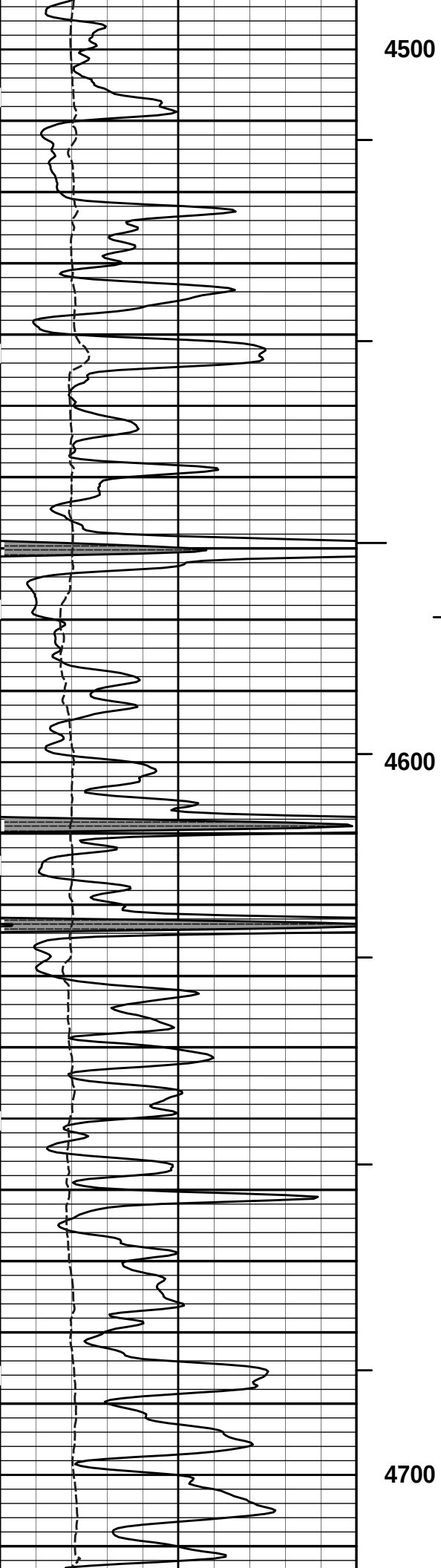
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 Data: DRUSSEL_E-1\Well Based\REPEAT\
 Plot File: \\PORO\Poros_IQ_5_REP_LIB

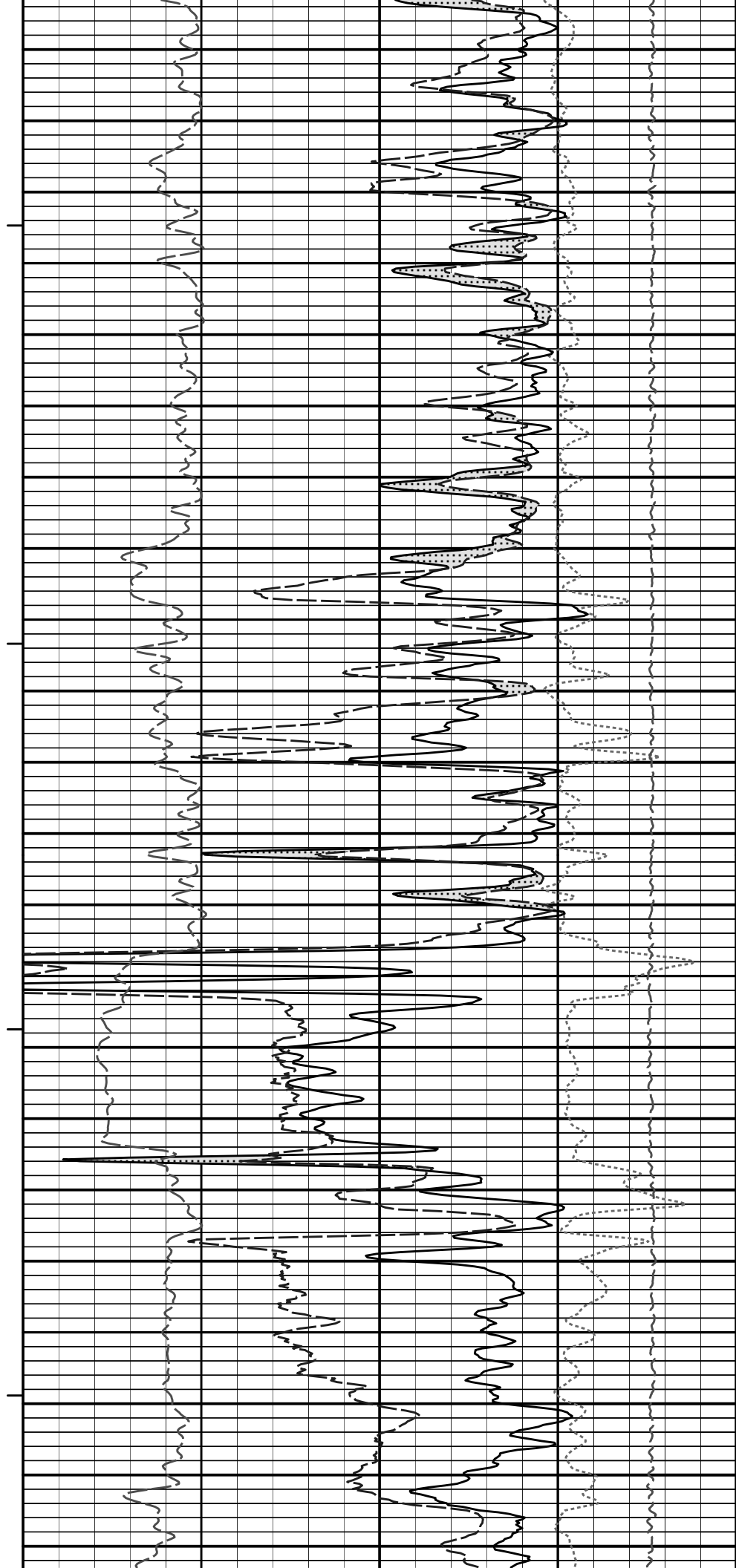
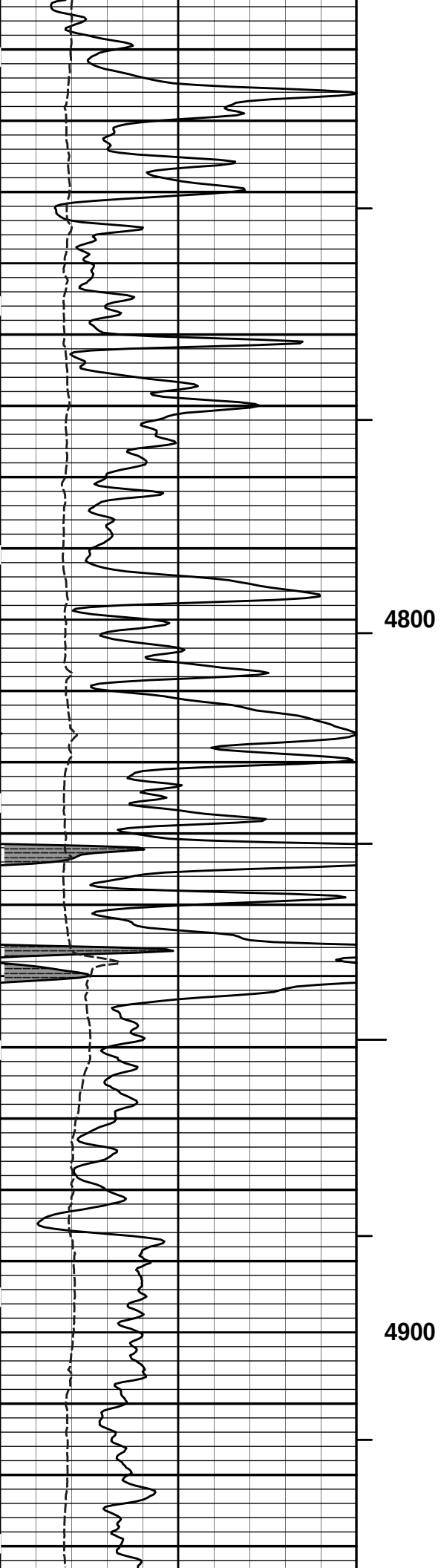
REPEAT SECTION

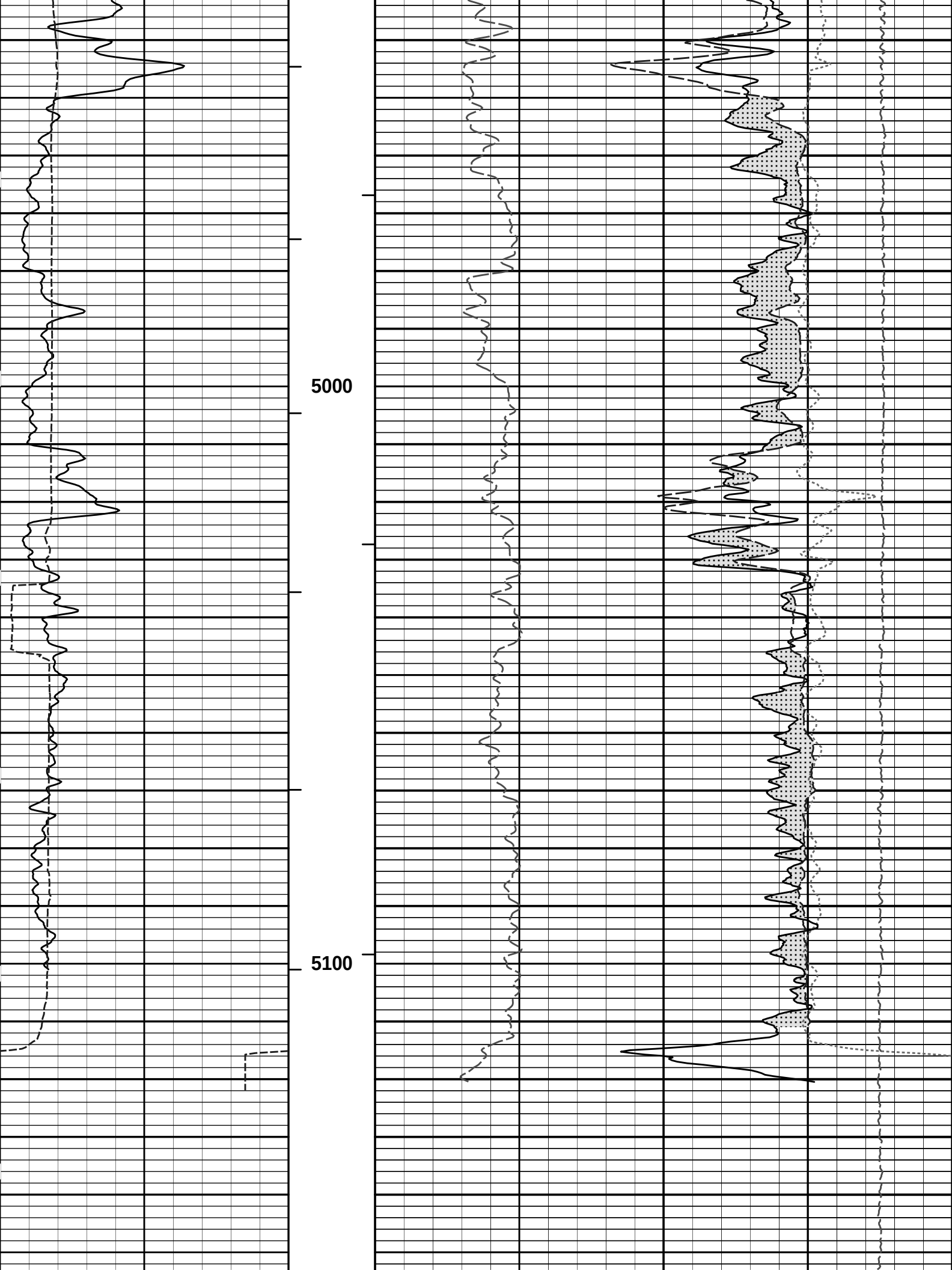


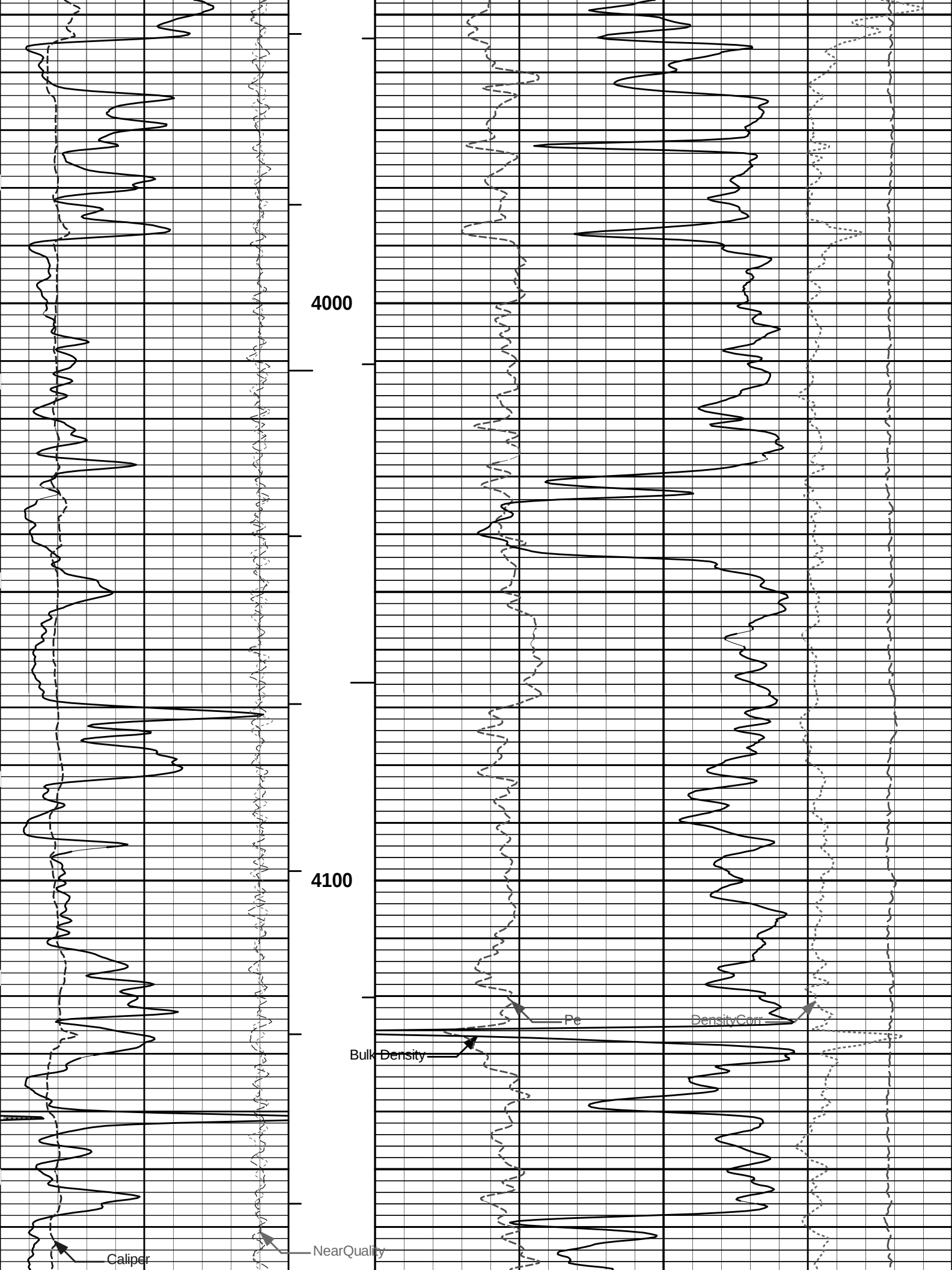


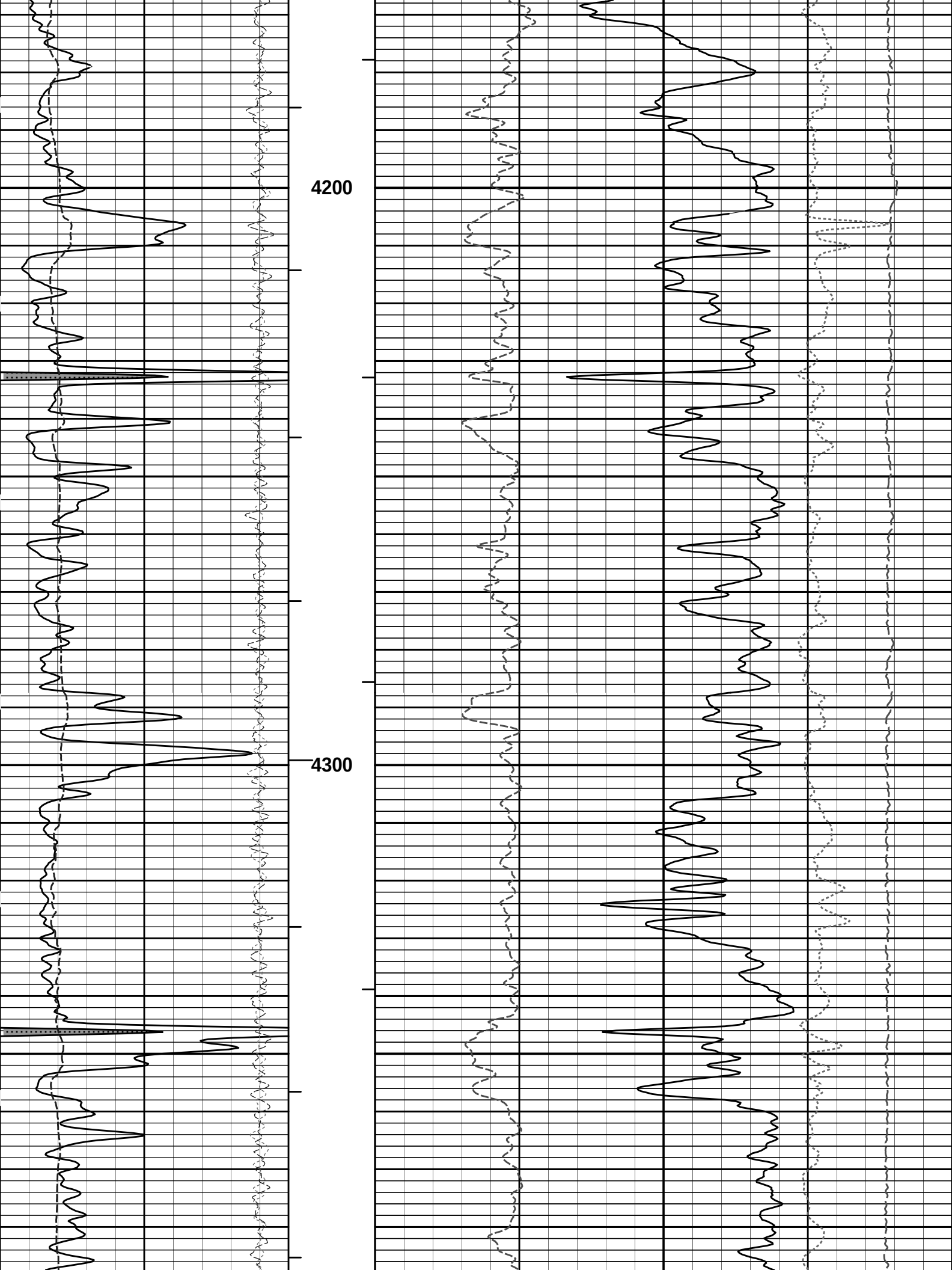


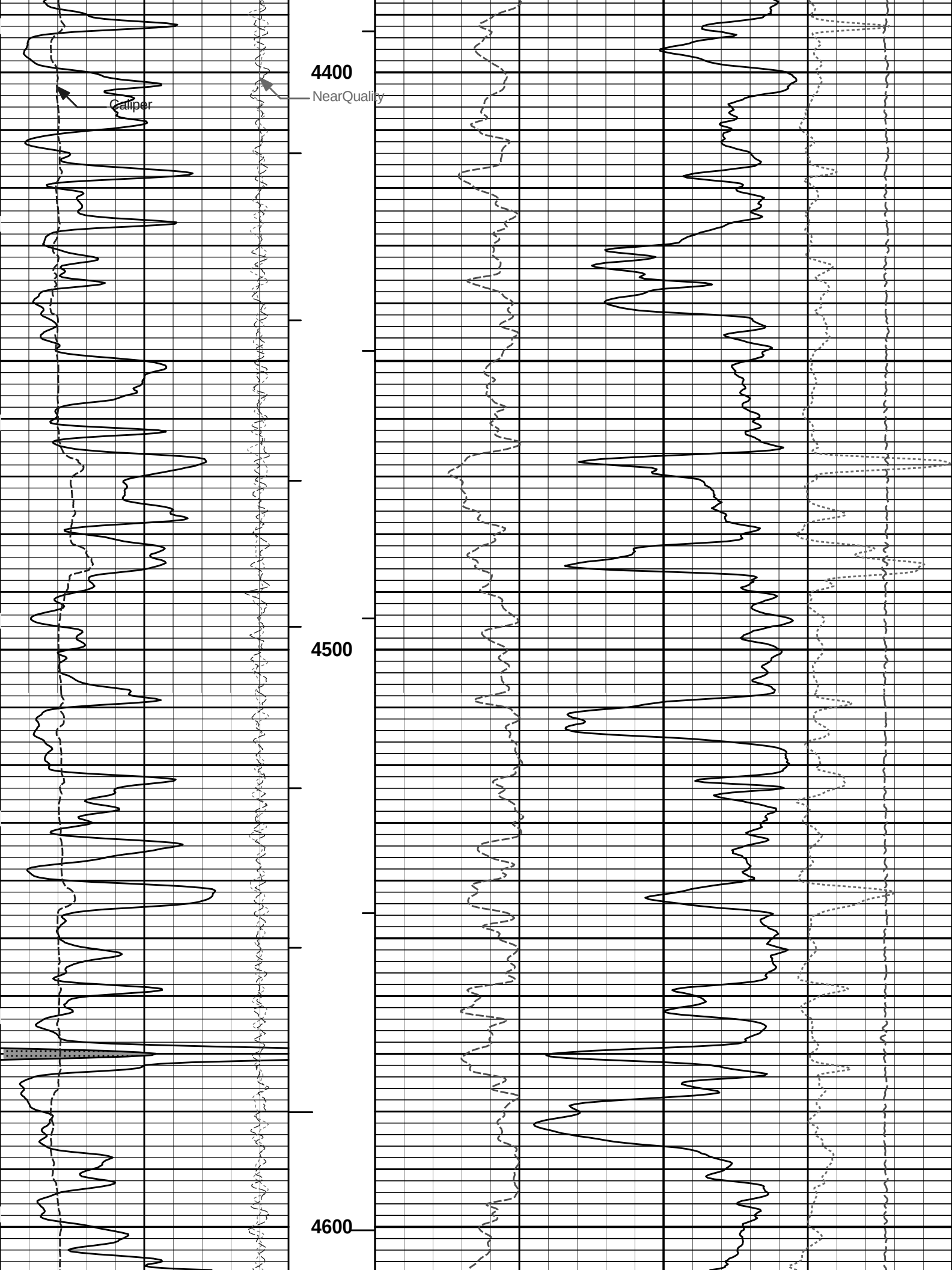


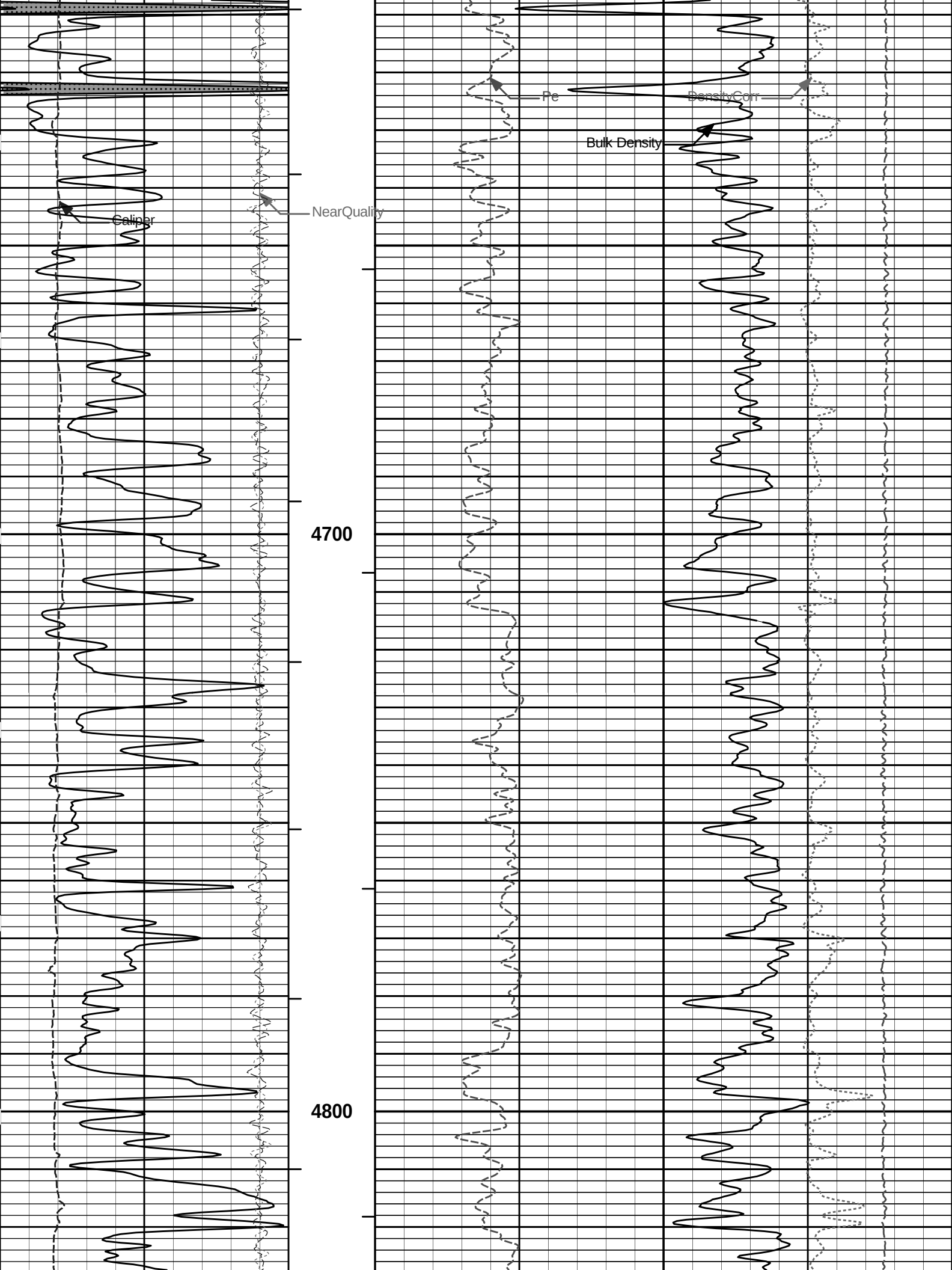


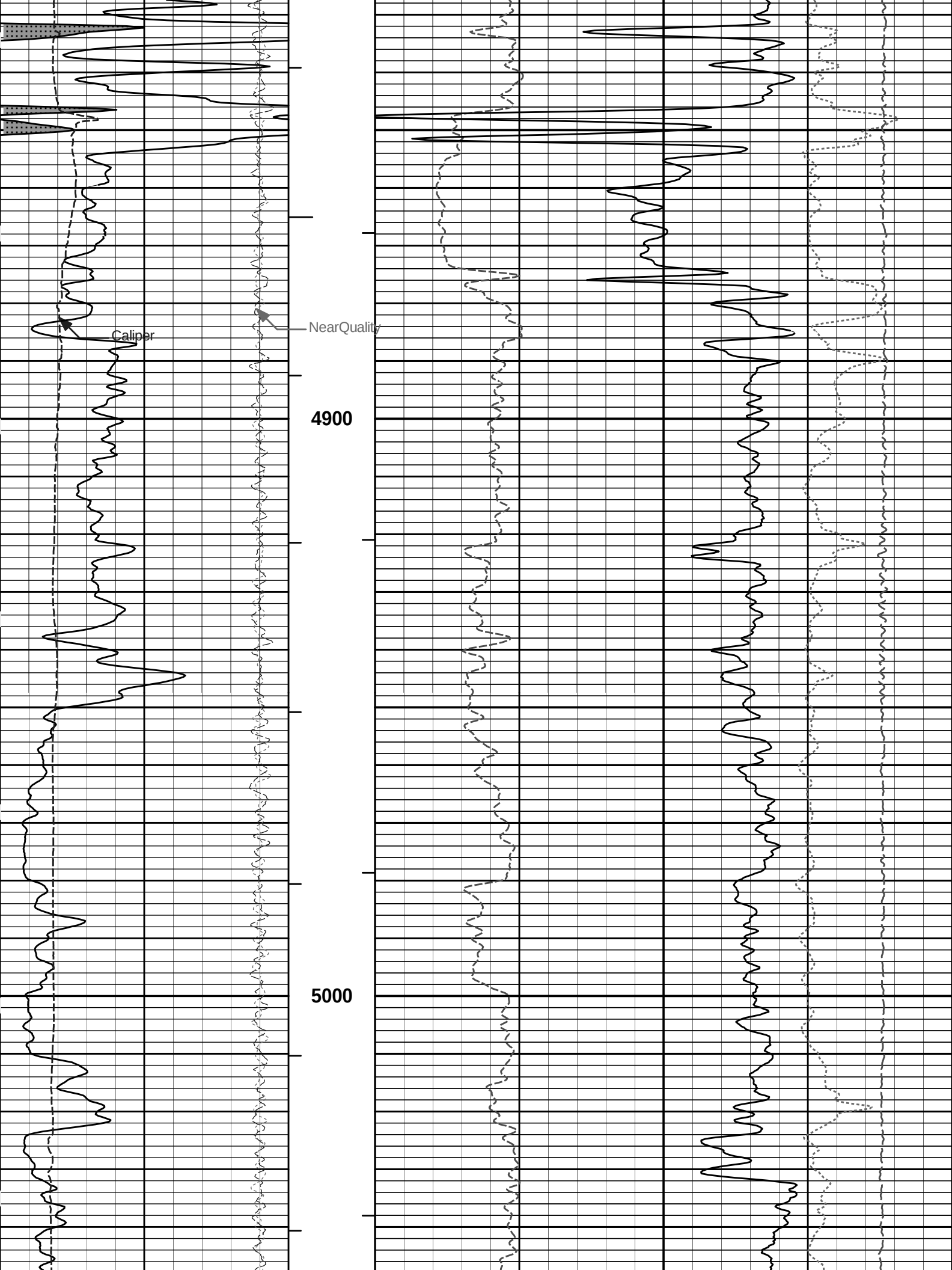


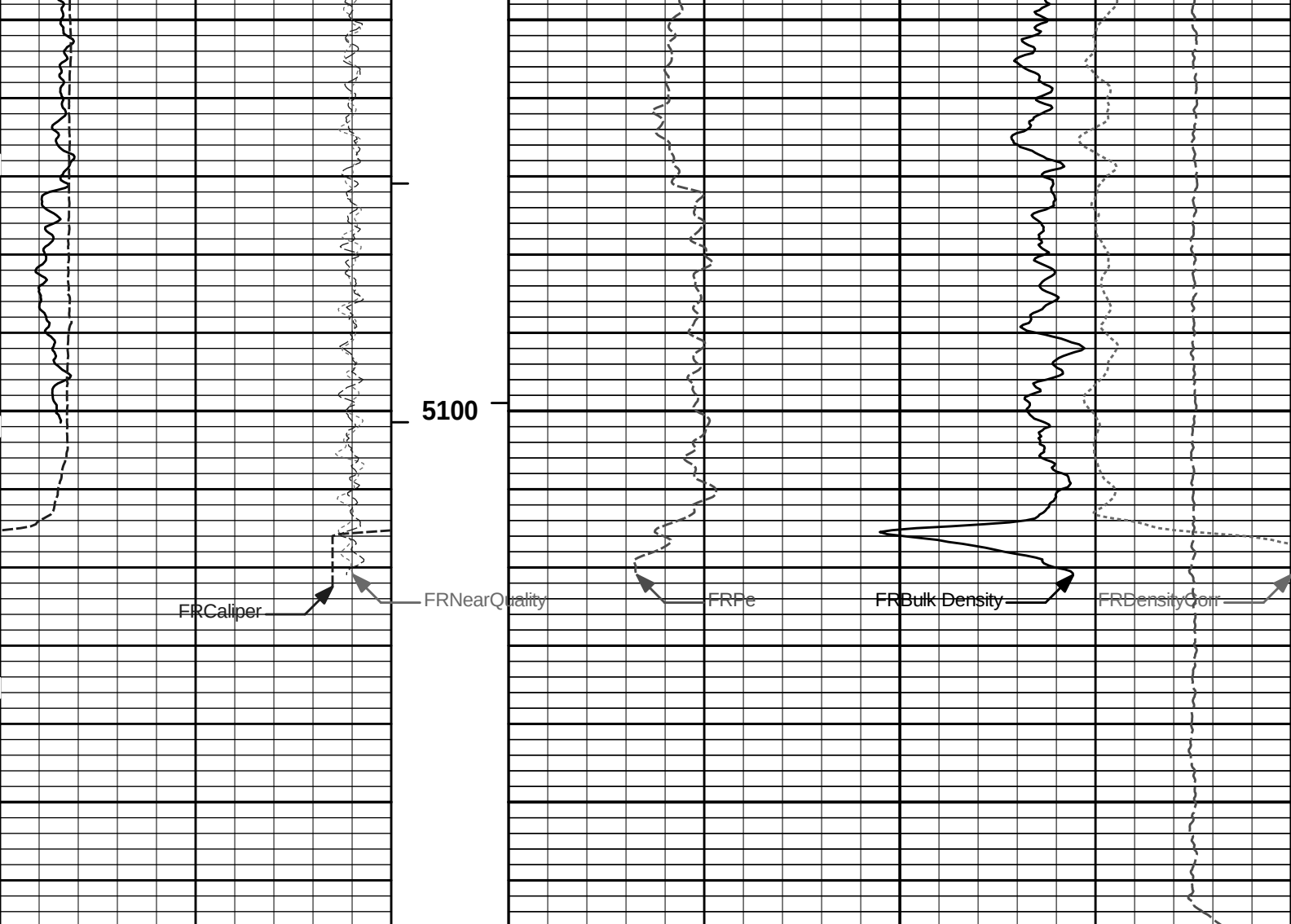












6	Caliper	16	MD	0	Pe	10	-0.25	DensityCorr	0.25
	inches		1 : 240					g/cc	
-18	NearQuality	2	AHV				15K	Tension	0
			ft3					pounds	
18	FarQuality	-2	BHV	2	Bulk Density				
			ft3		g/cc				
0	Gamma Ray	150							
	api								
	SHALE								

HALLIBURTON

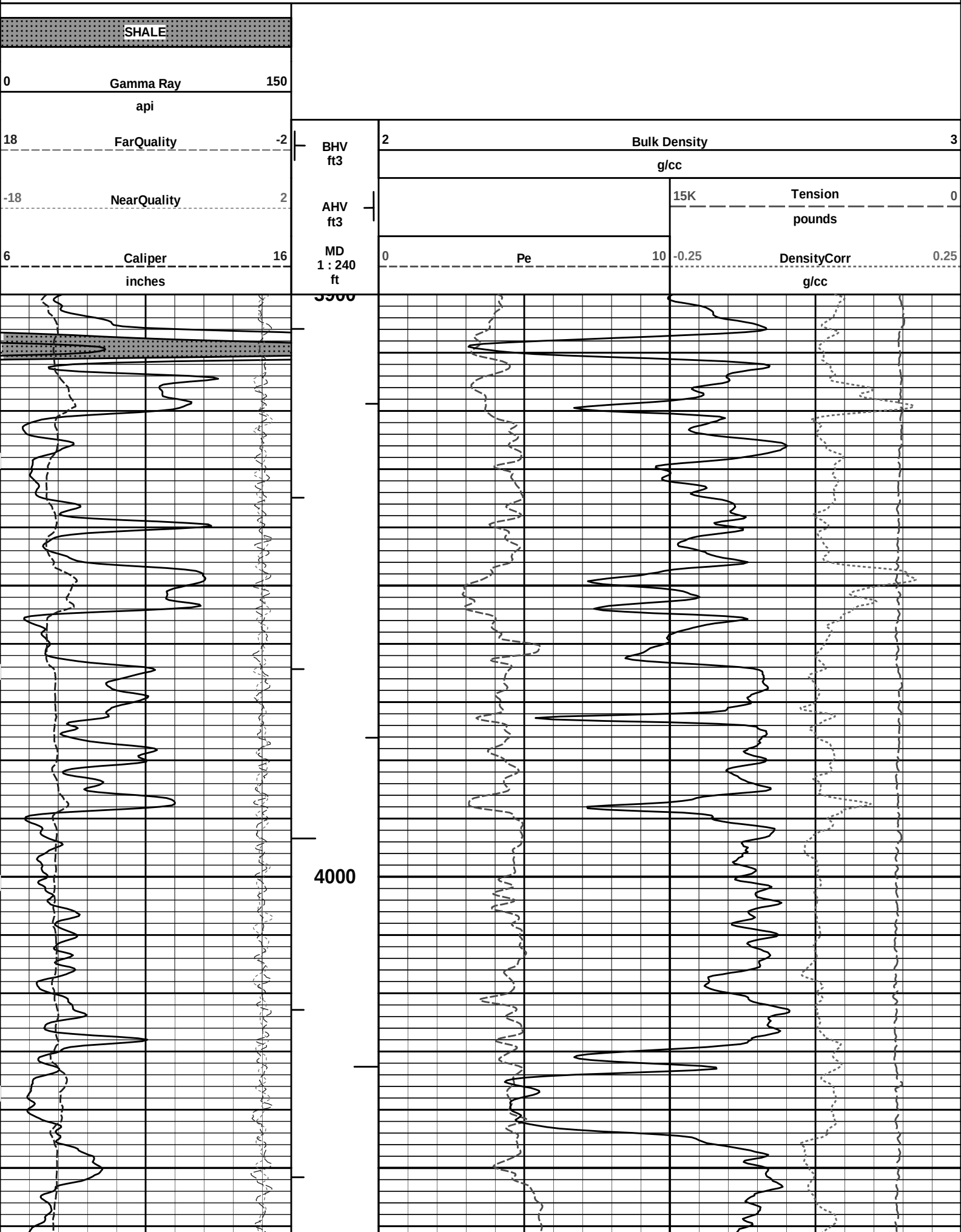
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Data: DRUSSEL_E-1\Well Based\DETAIL\
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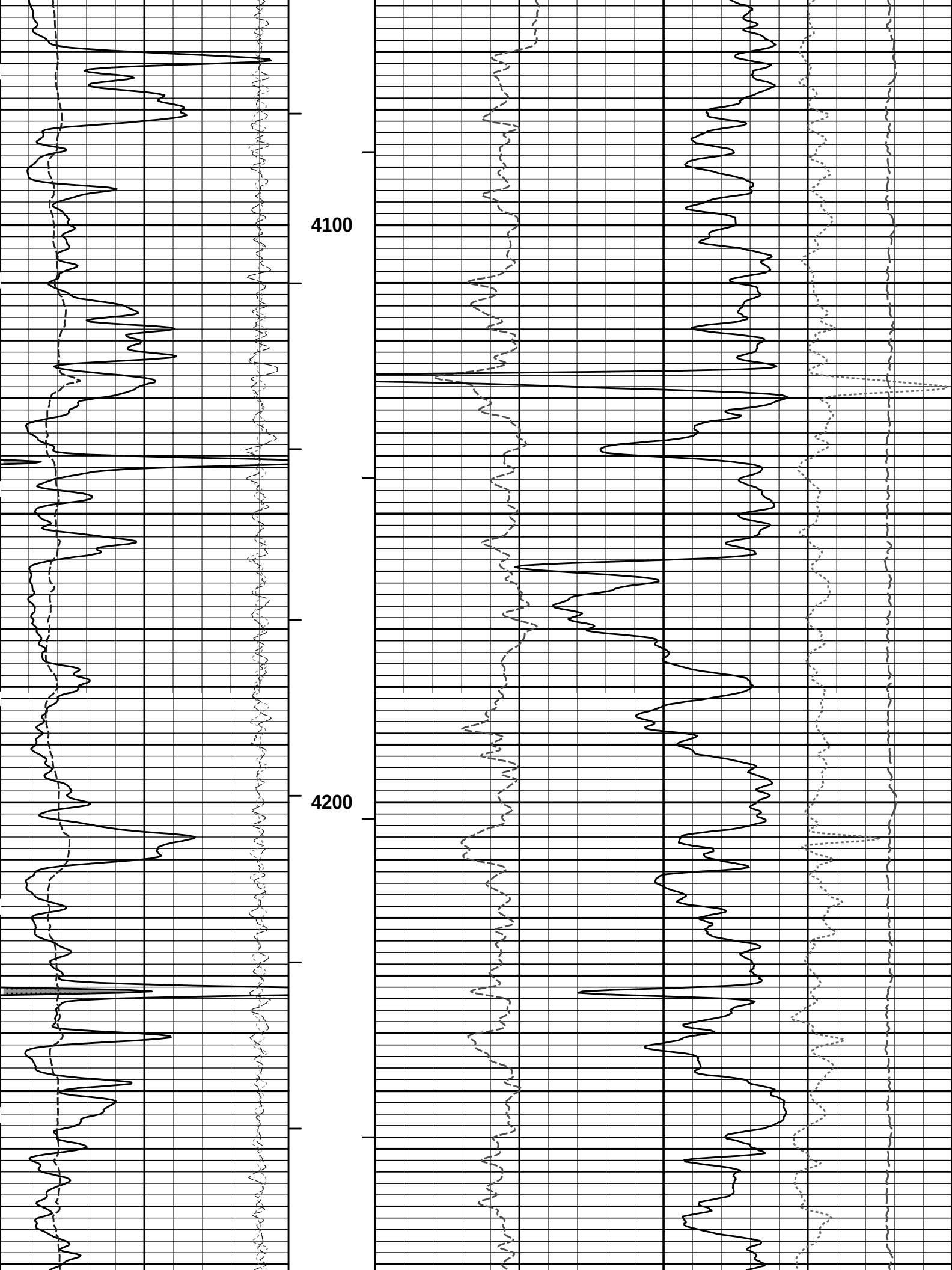
5 INCH MAIN LOG

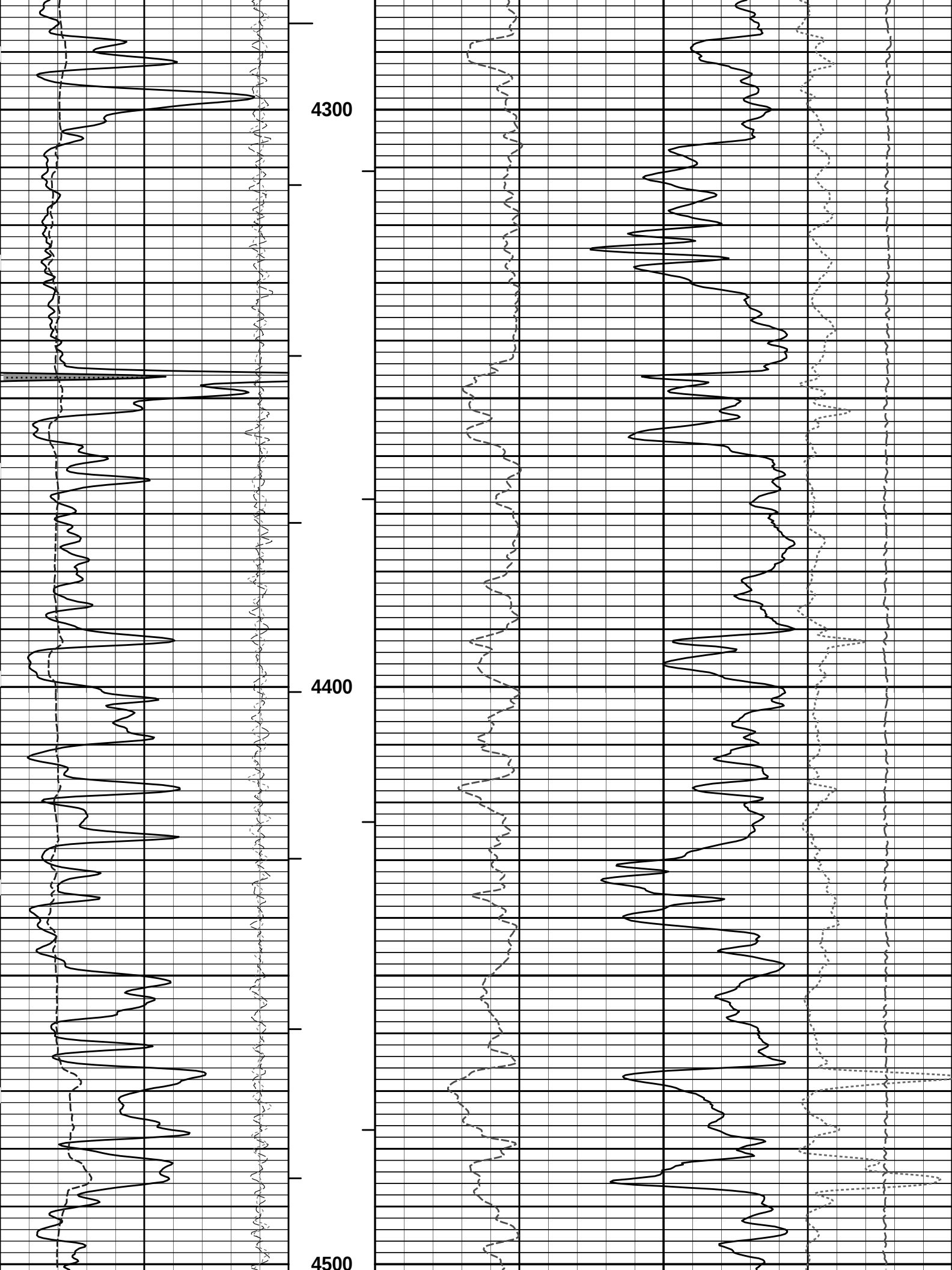
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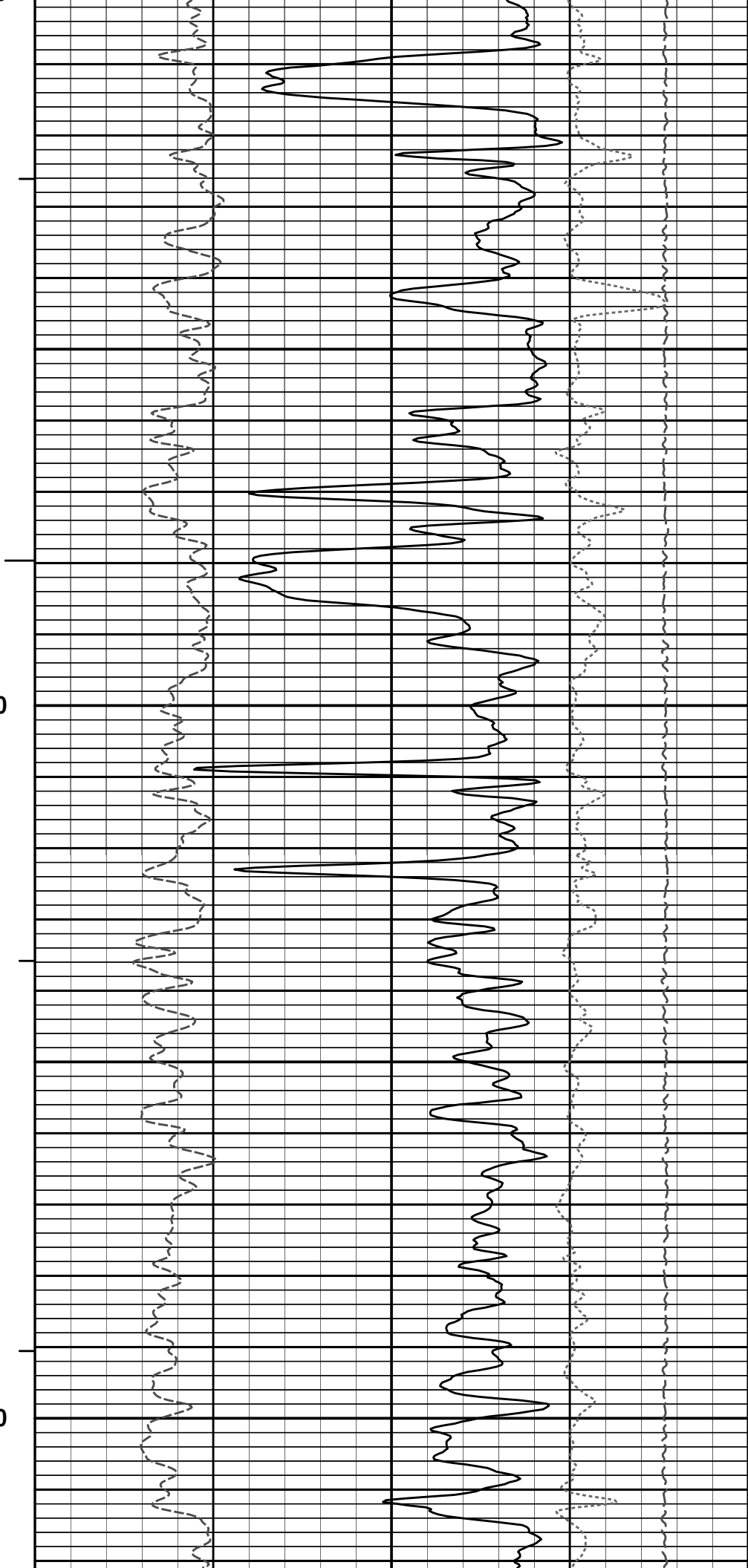
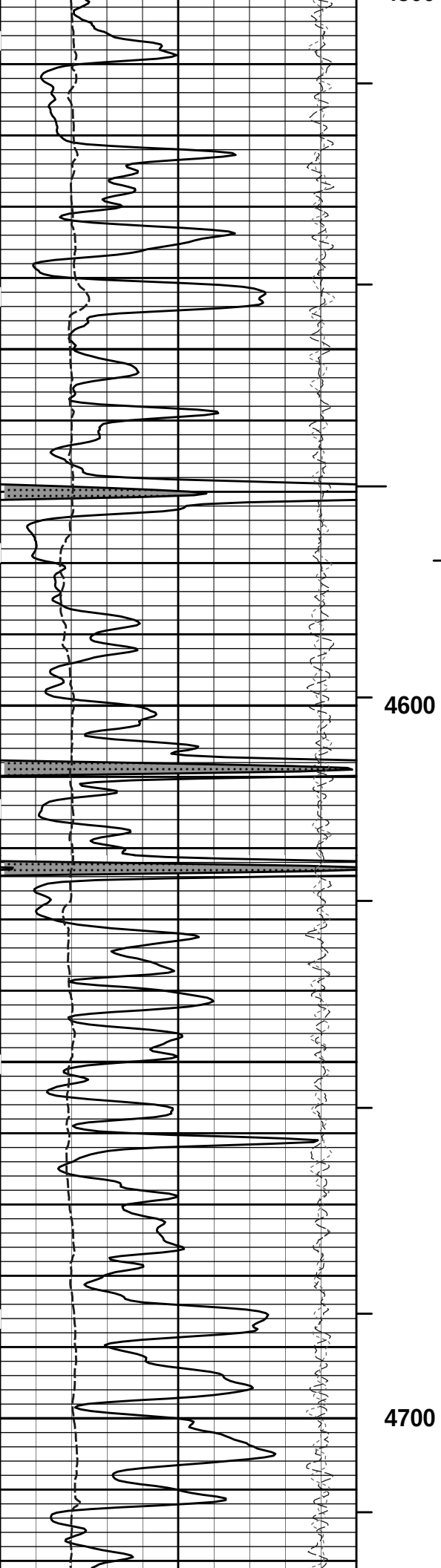
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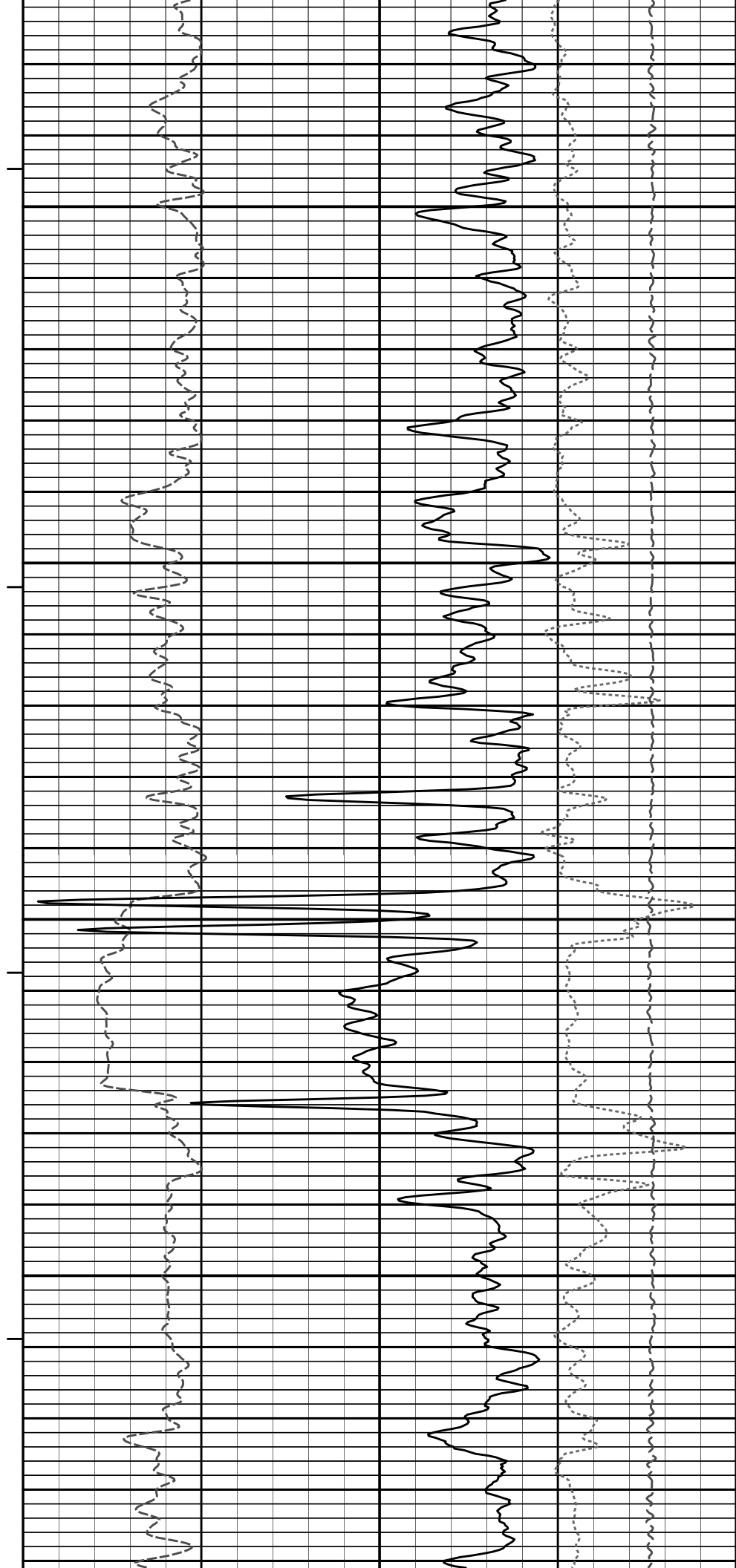
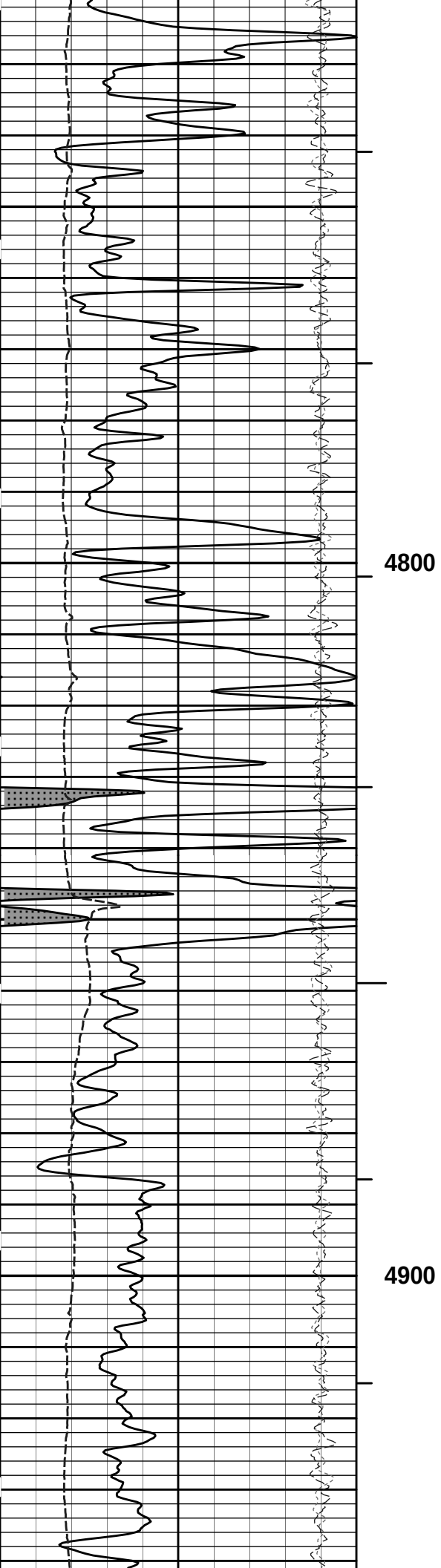
REPEAT SECTION

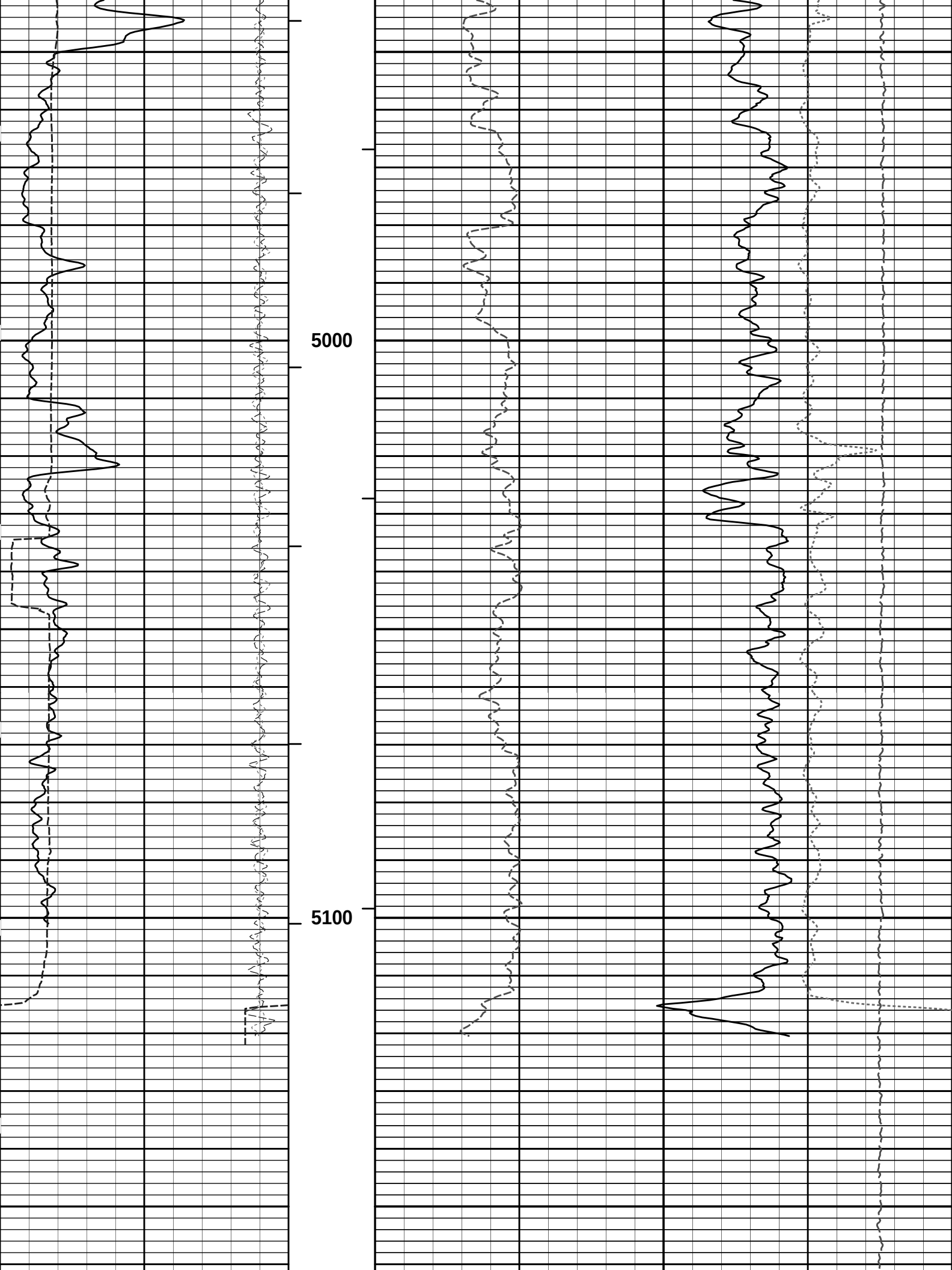












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HALLIBURTON

Plot Time: 12-Jul-13 21:13:17
Plot Range: 3900 ft to 5165.33 ft
Data: DRUSSEL_E-1\Well Based\REPEAT\
Plot File: \\-LOCAL-\\DRUSSEL_E-1\\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHIPORO\\BULKD_5_REP_LIB

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-954 37.50 lbs		Ø 2.750 in →		← Temperature @ 76.74 ft	3.03 ft	77.77 ft
XOHD-00000001 20.00 lbs		Ø 2.750 in → Ø 3.625 in →			0.95 ft	74.74 ft
SP Sub-12345678 60.00 lbs		Ø 3.625 in →		← SP @ 72.01 ft	3.74 ft	73.79 ft
						70.05 ft
GTET-10811258 165.00 lbs		Ø 3.625 in →			8.52 ft	
				← GammaRay @ 63.99 ft		61.53 ft
DSN Decentralizer - Large Hole-00000001 6.60 lbs		Ø 5.000 in* →				
DSNT-10755066 174.00 lbs		Ø 3.625 in →			9.69 ft	
				← DSN Far @ 54.59 ft ← DSN Near @ 53.84 ft		51.84 ft

SDLT-10685803
360.00 lbs
SDLT Pad-10673790
65.00 lbs
Microlog Pad-10685803
8.00 lbs

Ø 4.500 in →

Ø 4.750 in* →
Ø 4.750 in* →

Microlog @ 44.03 ft
SDL Caliper @ 43.84 ft
SDL @ 43.83 ft

10.81 ft

41.03 ft

IQ Flex-10000954
140.00 lbs

Ø 3.625 in →

5.67 ft

35.36 ft

Centralizer 25-00000002
8.00 lbs

Ø 4.000 in* →

BSAT-10747684
300.00 lbs

Ø 3.625 in →

← Sonic Receivers @ 26.84 ft

15.77 ft

19.58 ft

ACRt Instrument-
10929776
50.00 lbs
Centralizer 25-00000003
8.00 lbs

Ø 3.625 in →
Ø 4.000 in* →

5.03 ft

14.55 ft

← Mud Resistivity @ 13.19 ft

← ACRt @ 9.21 ft

ACRt Sonde-
10929775
200.00 lbs

Ø 3.625 in →

14.22 ft

Bull Nose-00000001
5.00 lbs

Ø 2.750 in →

0.33 ft

0.33 ft

0.00 ft

Serial Weight Length Accumulated Max.Loq.

Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Length (ft)	Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	954	37.50	3.03	74.74	300.00
XOHD	Hostile to Dits Cross Over	00000001	20.00	0.95	73.79	300.00
SP	SP Sub	12345678	60.00	3.74	70.05	300.00
GTET	Gamma Telemetry Tool	10811258	165.00	8.52	61.53	60.00
DSNT	Dual Spaced Neutron	10755066	174.00	9.69	51.84	60.00
DCNT	DSN Decentralizer Large Hole	00000001	6.60	9.42 *	55.17	300.00
SDLT	Spectral Density Tool	10685803	360.00	10.81	41.03	60.00
MICP	Microlog Pad	10685803	8.00	1.00 *	43.53	60.00
SDLP	Density Insite Pad	10673790	65.00	2.55 *	43.24	60.00
IQF	IQ Flex tool	10000954	140.00	5.67	35.36	300.00
BSAT	Borehole Sonic Array Tool	10747684	300.00	15.77	19.58	60.00
OBCEN	Centralizer - 25 in. Overbody	00000002	8.00	2.08 *	32.51	300.00
ACRt	Array Compensated True Resistivity Instrument Section	10929776	50.00	5.03	14.55	300.00
OBCEN	Centralizer - 25 in. Overbody	00000003	8.00	2.08 *	15.87	300.00
ACRt	Array Compensated True Resistivity Sonde Section	10929775	200.00	14.22	0.33	300.00
BLNS	Bull Nose	00000001	5.00	0.33	0.00	300.00
Total			1,607.10	77.77		
* Not included in Total Length and Length Accumulation.						
Data: DRUSSEL_E-1\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHIDLE					Date: 12-Jul-13 17:47:52	

HALLIBURTON				
CALIBRATION REPORT				
NATURAL GAMMA RAY TOOL SHOP CALIBRATION				
Tool Name:	GTET - 10811258		Reference Calibration Date:	05-Jun-13 10:17:04
Engineer:	S. INGERSOLL		Calibration Date:	01-Jul-13 12:19:31
Software Version:	WL INSITE R3.8.4 (Build 5)		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	35.8	34.7	api
	Background + Calibrator	274.6	266.7	api
	Calibrator	238.8	232.0	api
NATURAL GAMMA RAY TOOL FIELD CALIBRATION				
Tool Name:	GTET - 10811258		Reference Calibration Date:	01-Jul-13 12:19:31
Engineer:	S. INGERSOLL		Calibration Date:	11-Jul-13 11:27:35
Software Version:	WL INSITE R3.8.4 (Build 5)		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	34.7	43.7	api
	Background + Calibrator	266.7	268.3	api
	Calibrator	232.0	224.6	api
	Shop	Field	Difference	Tolerance
	232.0	224.6	7.4	+/- 9.00
DUAL SPACED NEUTRON SHOP CALIBRATION				
Tool Name:	DSNT - 10755066		Reference Calibration Date:	10-May-13 13:08:19

Tool Name:	DSNT - 10755066	Reference Calibration Date:	19-May-13 13:06:19
Engineer:	S. INGERSOLL	Calibration Date:	01-Jul-13 16:27:31
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Logging Source S/N: DSN-436
Tank Serial Number: 105060
Reference value assigned to Tank: 51.680
Snow Block S/N: 08910
Calibration Tank Water Temperature: 62 degF
Min. Tool Housing Outside Diameter: 3.620 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.953	0.952	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):	0.2110	0.2106	0.0003	+/- 0.0020
Calibrated Ratio:	9.73	9.72	0.011	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0662	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 - 10755066	Reference Calibration Date:	01-Jul-13 16:27:31
Engineer:	S. INGERSOLL	Calibration Date:	11-Jul-13 13:06:26
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Logging Source S/N: DSN-436
Snow Block S/N: 08910

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0662	0.0758	0.0096	+/- 0.0150

PASS/FAIL SUMMARY	
Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DENSITY CALIPER SHOP CALIBRATION			
Tool Name:	SDLT - 10685803	Reference Calibration Date:	20-Jun-13 16:09:36
Engineer:	S. INGERSOLL	Calibration Date:	01-Jul-13 15:30:20
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1
Host Tool Name:	DSNT - 10755066		

CALIBRATION COEFFICIENTS			
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Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-4578.27	-4092.36	-7000.00 - -1000.00
Pad Gain	0.0003895	0.0003815	0.000200 - 0.000600
Arm Offset	-2279.74	-2703.47	-5000.00 - 3000.00
Arm Gain	0.0004915	0.0005069	0.000300 - 0.000700
Arm Power	-0.000003324	-0.000004137	-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)	1.85	2.00	0.15	+/- 0.20
Medium Ring (in)	3.64	3.75	0.11	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.47	6.50	0.03	+/- 0.20
Medium Ring (in)	8.18	8.25	0.07	+/- 0.20
Large Ring (in)	14.88	15.00	0.12	+/- 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 - 10685803	Reference Calibration Date:	01-Jul-13 15:30:20
Engineer:	S. INGERSOLL	Calibration Date:	11-Jul-13 11:35:54
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.70	-0.05	+/- 0.10
Ring Diameter	8.25	8.20	-0.05	+/- 0.15

PASS/FAIL SUMMARY	
Pad Extension Check:	Passed
Diameter Check:	Passed

SPECTRAL DENSITY SHOP CALIBRATION			
Tool Name:	SDLT Pad - 10673790	Reference Calibration Date:	18-May-13 21:41:33
Engineer:	S. INGERSOLL	Calibration Date:	01-Jul-13 12:50:36
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Logging Source S/N: 5073GW

Aluminum Block S/N: LIBERAL ALUMINUM

Density: 2.598g/cc

Pe: 3.170

Magnesium Block S/N: LIBERAL MAG BLOCK

Density: 1.684g/cc

Pe: 2.598

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0467	1.0402	0.90 - 1.10
Near Dens Gain	1.0386	1.0308	0.90 - 1.10
Near Back Gain	1.0500	1.0600	0.90 - 1.10

Near Peak Gain	1.0598	1.0600	0.90 - 1.10
Near Lith Gain	1.0491	1.0179	0.90 - 1.10
Far Bar Gain	1.0107	1.0098	0.90 - 1.10
Far Dens Gain	0.9993	0.9981	0.90 - 1.10
Far Peak Gain	0.9920	0.9920	0.90 - 1.10
Far Lith Gain	0.9604	0.9603	0.90 - 1.10
Near Bar Offset	-0.1729	-0.1107	NONE
Near Dens Offset	-0.0887	-0.0193	NONE
Near Peak Offset	-0.2382	-0.2385	NONE
Near Lith Offset	-0.1653	0.0962	NONE
Far Bar Offset	0.0790	0.0820	NONE
Far Dens Offset	0.1500	0.1581	NONE
Far Peak Offset	0.1726	0.1658	NONE
Far Lith Offset	0.3450	0.3403	NONE
Near Bar Background	864.83	861.54	700 - 1450
Near Dens Background	283.75	282.76	230 - 480
Near Peak Background	124.36	123.64	100 - 210
Near Lith Background	152.79	154.08	125 - 260
Far Bar Background	576.79	576.20	450 - 900
Far Dens Background	226.46	226.25	175 - 345
Far Peak Background	90.61	89.12	70 - 140
Far Lith Background	93.93	93.55	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.679	1.684	0.005	+/- 0.015
Pe	2.554	2.562	0.008	+/- 0.150
ALUMINUM				
Density (g/cc)	2.591	2.598	0.007	+/- 0.01500
Pe	3.154	3.131	-0.023	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0002	+/- 0.0110	-0.0002	+/- 0.0140
Magnesium Block	-0.0001	+/- 0.0110	0.0009	+/- 0.0140
Aluminum Block	0.0002	+/- 0.0110	0.0013	+/- 0.0140
Resolution	8.58	6.00 - 11.50	8.79	6.00 - 11.50
Internal Verifier(B+D+P+L)	1422	1200 - 2700	985	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: 01-Jul-13 12:50:36				
Engineer: S. INGERSOLL		Calibration Date: 11-Jul-13 11:27:45				
Software Version: WL INSITE R3.8.4 (Build 5)		Calibration Version: 1				
Pad Temperature: 82.3 degF						
DENSITY FIELD CALIBRATION SUMMARY						
Measurement	Shop	Field	Change	Control Limit +/-		
Near (B+D+P+L) cps	1422.026	1426.182	4.156	15.221		
Far (B+D+P+L) cps	985.123	988.204	3.081	16.837		
Near Resolution	8.58	8.54	-0.040	0.50		
Far Resolution	8.79	9.05	0.260	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	224.6	-----	7.4	+/- 9.00	api
DSNT-10755066						
Snow-Block Porosity	0.0662	0.0758	-----	-0.0096	+/- 0.0150	decp
SDLT-10685803						
Pad Extension	3.75	3.70	-----	0.05	+/-0.10	in
Ring Diameter	8.25	8.20	-----	0.05	+/-0.15	in
SDLT Pad-10673790						
Near(B+D+P+L)	1422.026	1426.182	-----	-4.156	+/-15.221	cps
Far(B+D+P+L)	985.123	988.204	-----	-3.081	+/-16.837	cps
Data: DRUSSEL F-110001 SP-GTET-DSN-SDLT-FLEX-BSAT-ACRT-CHV1DLE						
Date: 12-Jul-13 17:51:25						
HALLIBURTON						
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	9.700	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	75.0	degF	
	SHARED	CSD	Logging Interval is Cased?	No		
	SHARED	ICOD	AHV Casing OD	5.500	in	
	SHARED	ST	Surface Temperature	75.0	degF	

SHARED	TD	Total Well Depth	5170.00	ft
SHARED	BHT	Bottom Hole Temperature	200.0	degF
SHARED	SVTM	Navigation and Survey Master Tool	NONE	
SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
SHARED	TEMM	Temperature Master Tool	NONE	
SHARED	BHSM	Borehole Size Master Tool	NONE	
Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
Rwa / CrossPlot	AFAC	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	
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	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	User define	
BSAT	DTMA	Delta -T Matrix	47.60	uspf
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
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
BOTTOM				
Data: DRUSSEL_E-110001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHIDLE			Date: 12-Jul-13 17:49:25	

HALLIBURTON

INPUTS, DELAYS AND FILTERS TABLE

Mnemonic		Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel					
TENS	Tension		0.00	NO	
CH_HOS					
DHTN	DownholeTension		0.00	BLK	0.000
SP Sub					
PLTC	Plot Control Mask		72.01	NO	
SP	Spontaneous Potential		72.01	BLK	1.250
SPR	Raw Spontaneous Potential		72.01	NO	
SPO	Spontaneous Potential Offset		72.01	NO	
GTET					
TPUL	Tension Pull		63.99	NO	
GR	Natural Gamma Ray API		63.99	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API		63.99	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution		63.99	W	1.416 , 0.750
ACCZ	Accelerometer Z		0.00	BLK	0.083
DEVI	Inclination		0.00	NO	
DSNT					
TPUL	Tension Pull		53.74	NO	
RNDS	Near Detector Telemetry Counts		53.84	BLK	1.417
RFDS	Far Detector Telemetry Counts		54.59	TRI	0.583
DNTT	DSN Tool Temperature		53.84	NO	
DSNS	DSN Tool Status		53.74	NO	
ERND	Near Detector Telemetry Counts EVR		53.84	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR		54.59	BLK	0.000
ENTM	DSN Tool Temperature EVR		53.84	NO	
SDLT					
TPUL	Tension Pull		43.84	NO	
PCAL	Pad Caliper		43.84	TRI	0.250
ACAL	Arm Caliper		43.84	TRI	0.250
BSAT					
TPUL	Tension Pull		26.84	NO	
STAT	Status		26.84	NO	
DLYT	Delay Time		26.84	NO	
SI	Sample Interval		26.84	NO	
TXRX	Raw Telemetry 10 Receivers		26.84	NO	
FRMC	Tool Frame Count		26.84	NO	
GMOD	Gain processing mode		19.58	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 Current Raw 12K X Receiver	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	
SDLT Pad				
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000

TPUL	Tension Pull	43.83	NO	
NAB	Near Above	43.66	BLK	0.920
NHI	Near Cesium High	43.66	BLK	0.920
NLO	Near Cesium Low	43.66	BLK	0.920
NVA	Near Valley	43.66	BLK	0.920
NBA	Near Barite	43.66	BLK	0.920
NDE	Near Density	43.66	BLK	0.920
NPK	Near Peak	43.66	BLK	0.920
NLI	Near Lithology	43.66	BLK	0.920
NBAU	Near Barite Unfiltered	43.66	BLK	0.250
NLIU	Near Lithology Unfiltered	43.66	BLK	0.250
FAB	Far Above	44.01	BLK	0.250
FHI	Far Cesium High	44.01	BLK	0.250
FLO	Far Cesium Low	44.01	BLK	0.250
FVA	Far Valley	44.01	BLK	0.250
FBA	Far Barite	44.01	BLK	0.250
FDE	Far Density	44.01	BLK	0.250
FPK	Far Peak	44.01	BLK	0.250
FLI	Far Lithology	44.01	BLK	0.250
PTMP	Pad Temperature	43.84	BLK	0.920
NHV	Near Detector High Voltage	43.24	NO	
FHV	Far Detector High Voltage	43.24	NO	
ITMP	Instrument Temperature	43.24	NO	
DDHV	Detector High Voltage	43.24	NO	

Microlog Pad

TPUL	Tension Pull	44.03	NO	
MINV	Microlog Lateral	44.03	BLK	0.750
MNOR	Microlog Normal	44.03	BLK	0.750

Data: DRUSSEL_E-1\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CH\IDLE

Date: 12-Jul-13 17:49:07

HALLIBURTON

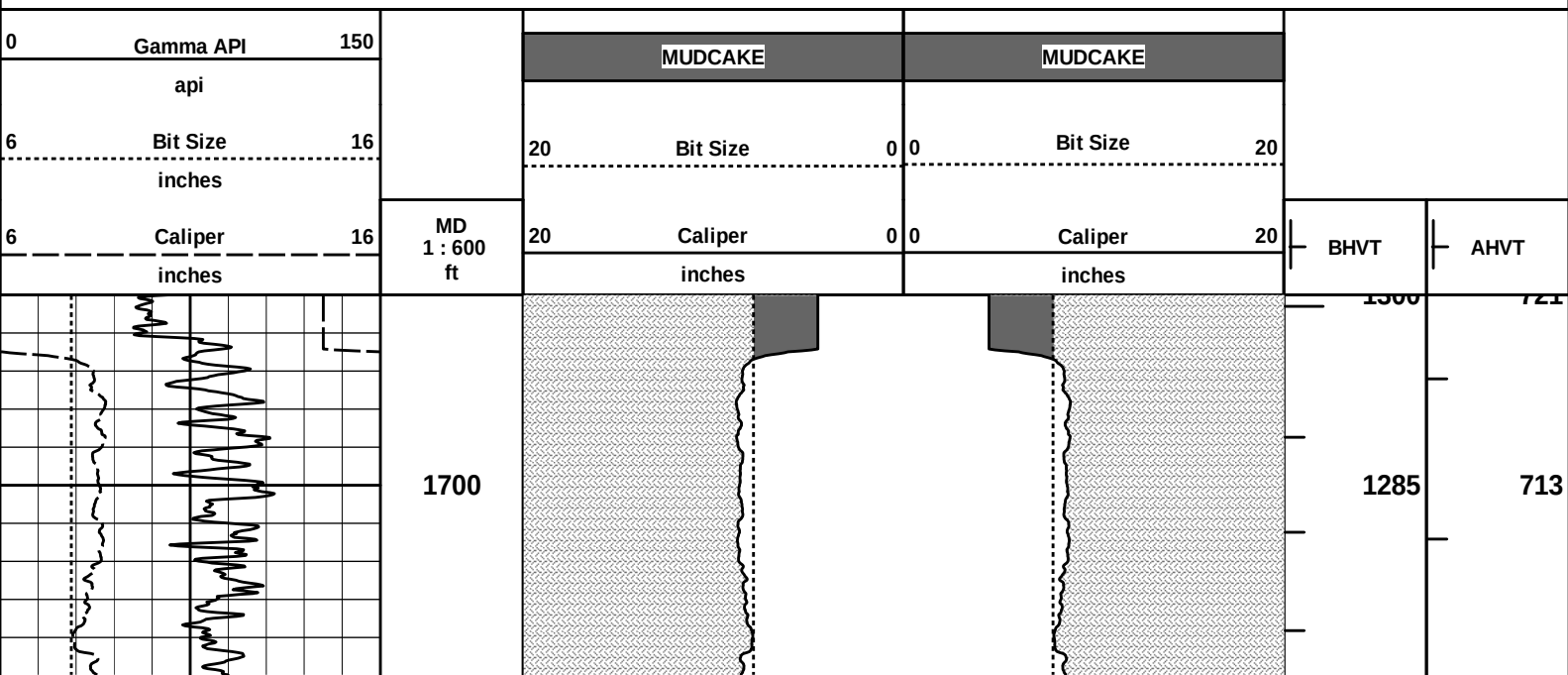
Plot Time: 12-Jul-13 21:13:18

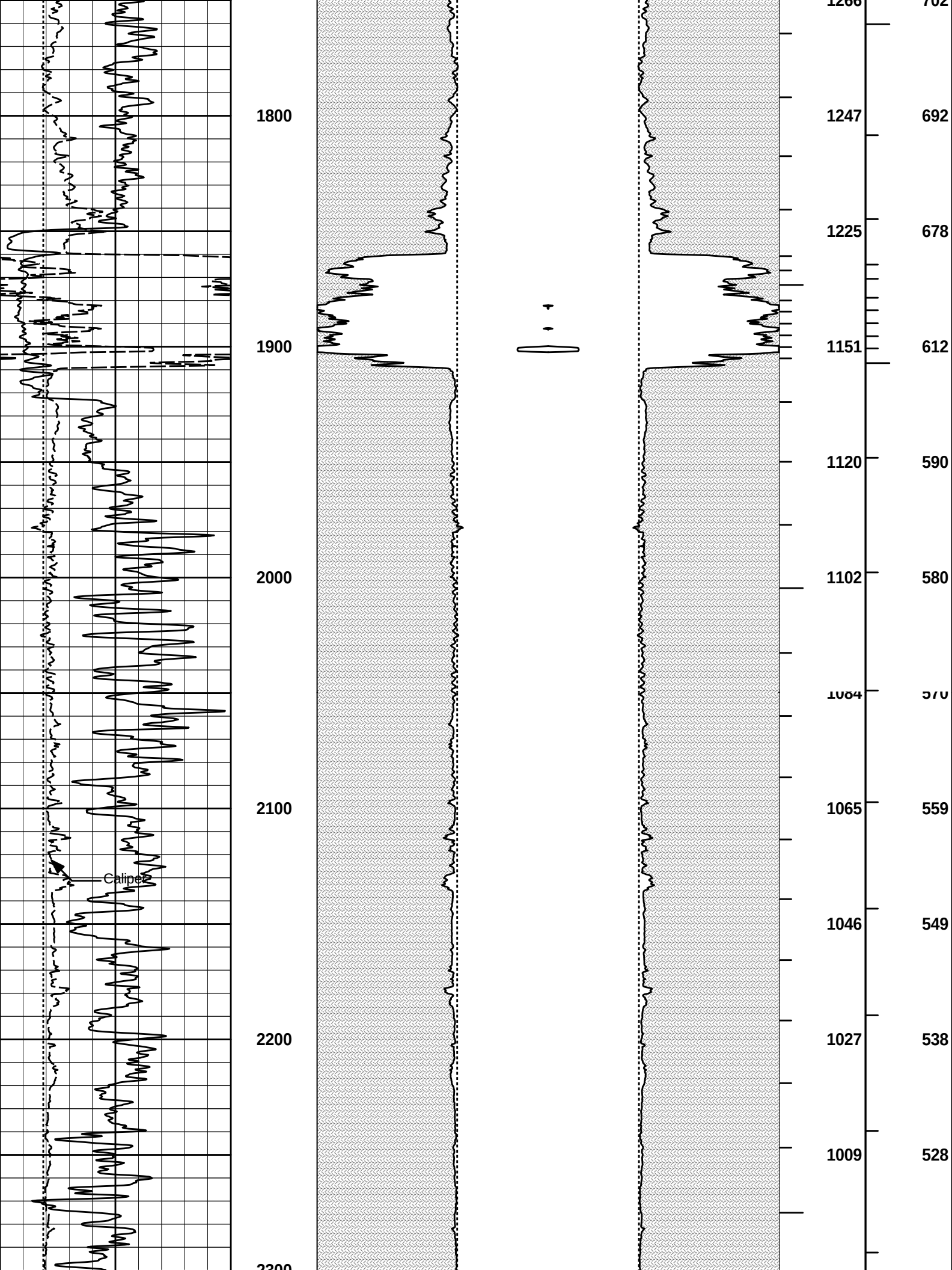
Plot Range: 1650 ft to 5166.17 ft

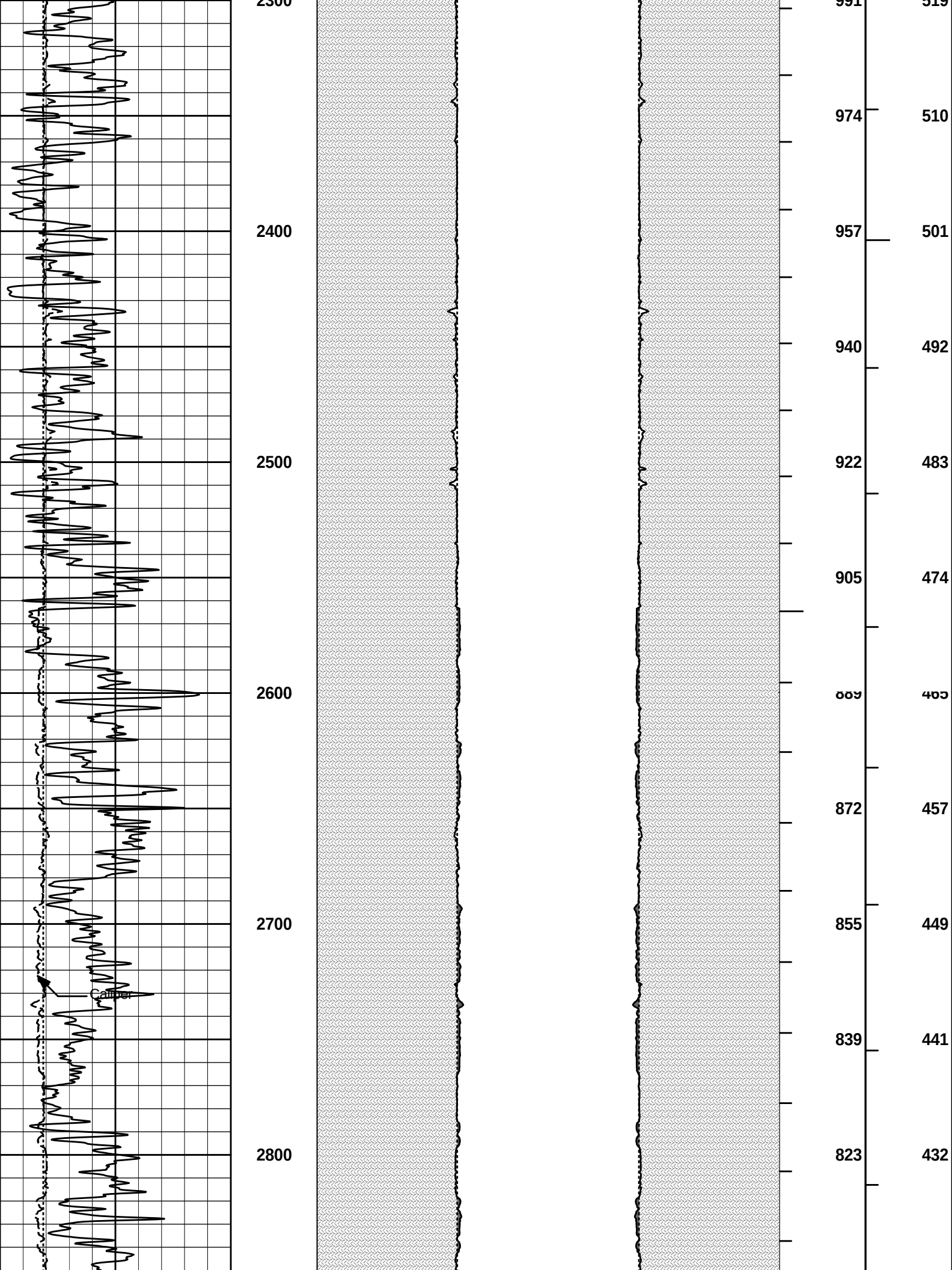
Data: DRUSSEL_E-1\Well Based\CASING\

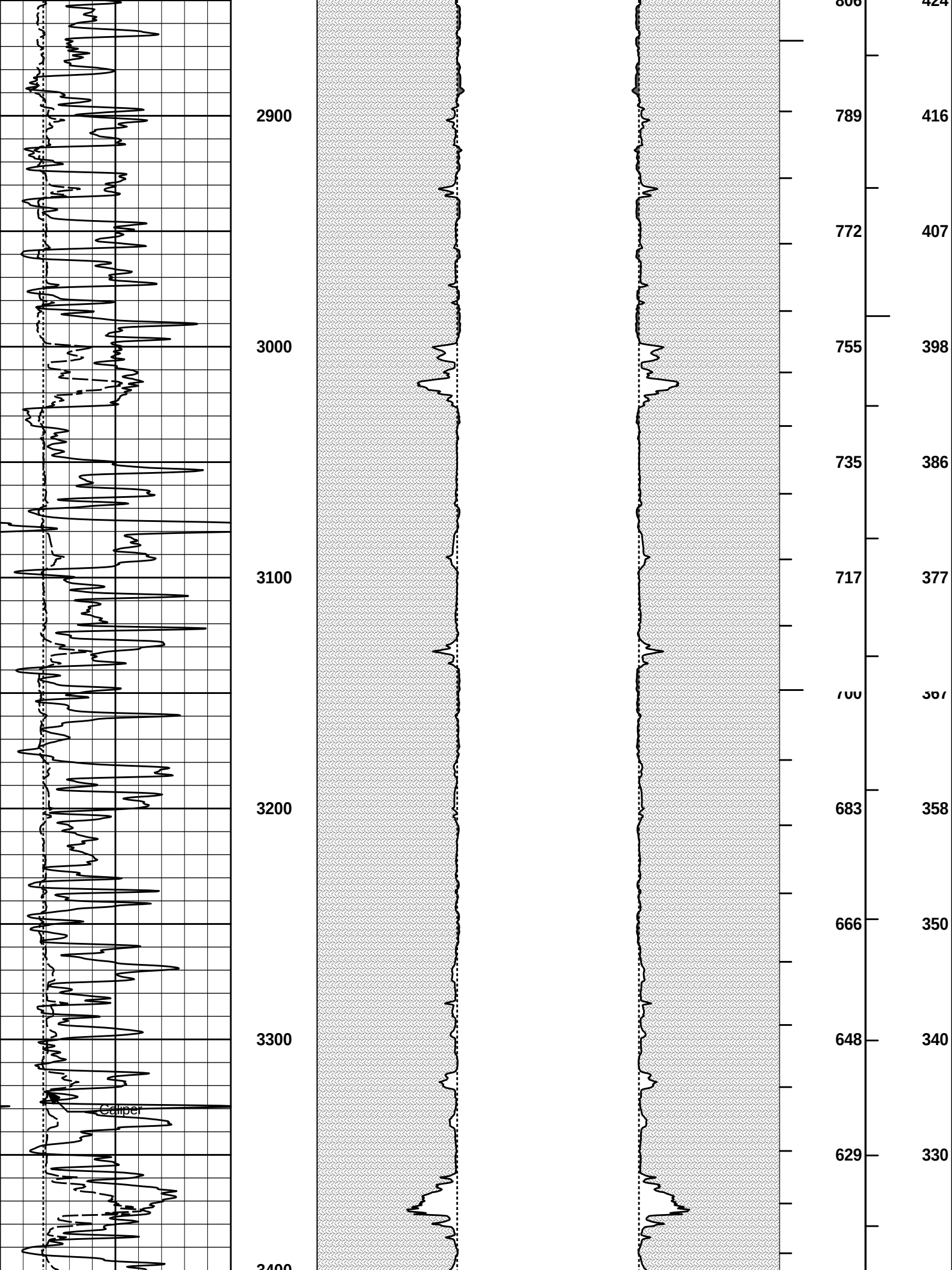
Plot File: \\-LOCAL-IDRUSSEL_E-1\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHIPOROA\HV_2_IQ_LIB

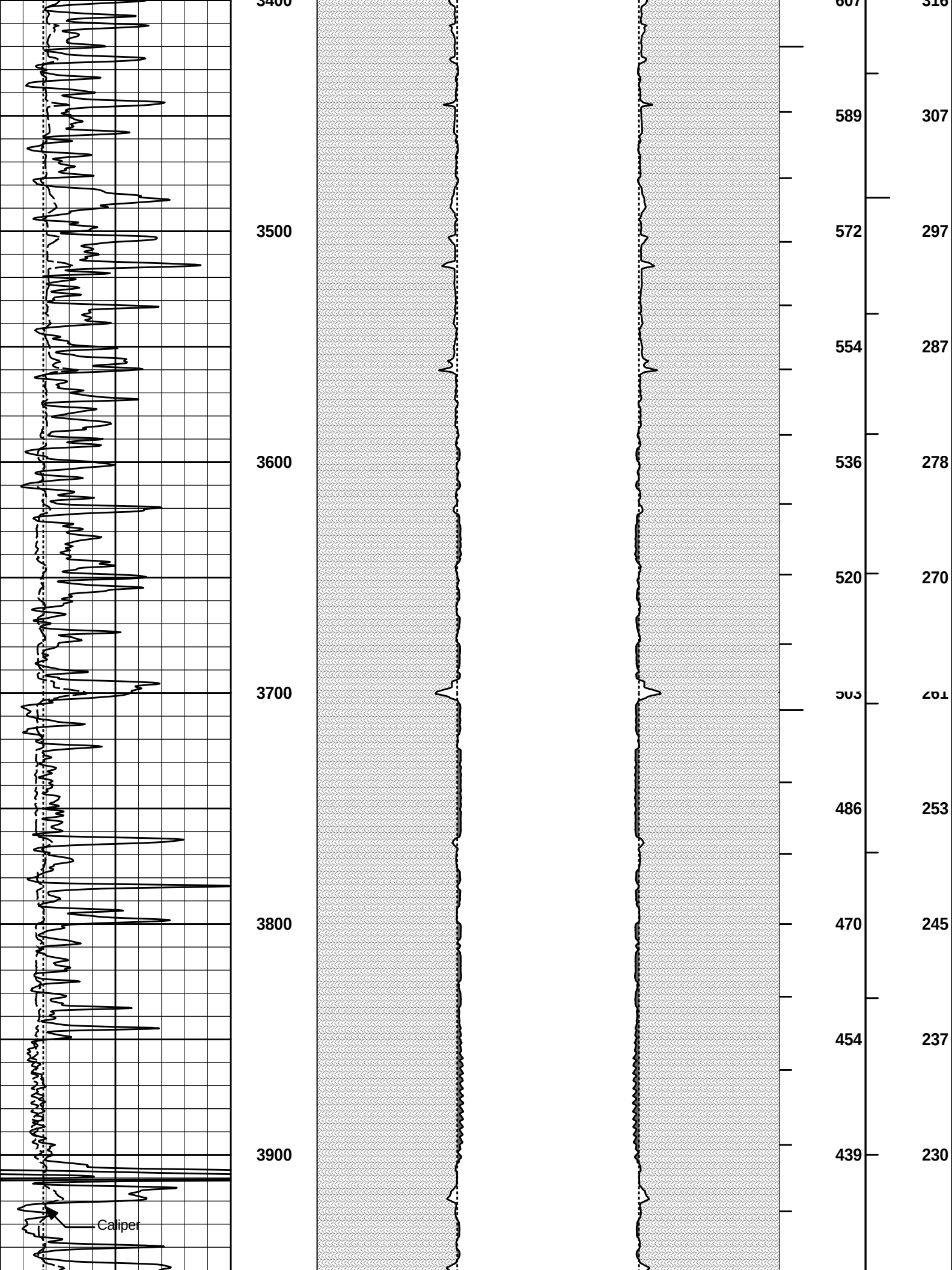
ANNULAR HOLE VOLUME PLOT

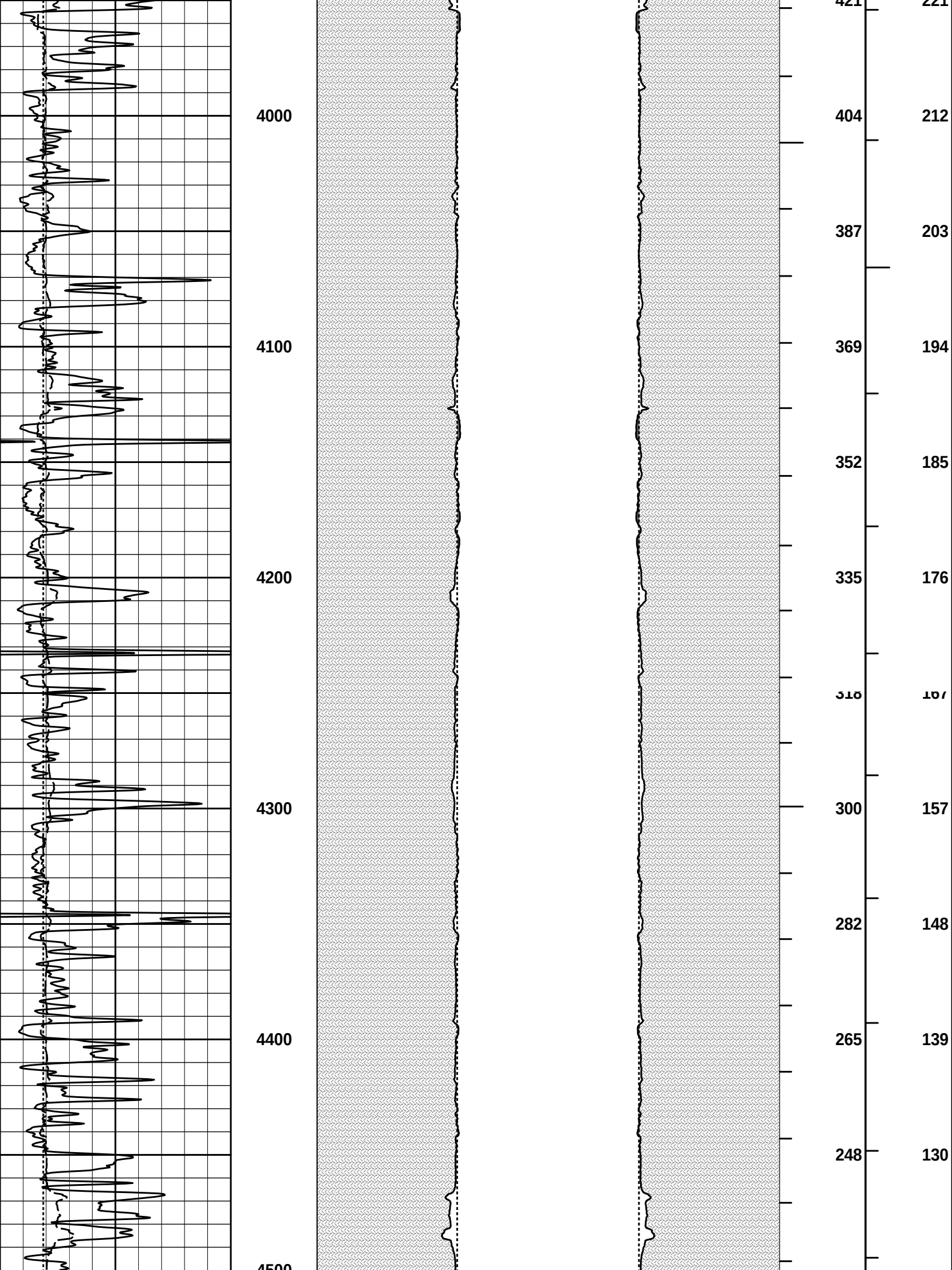


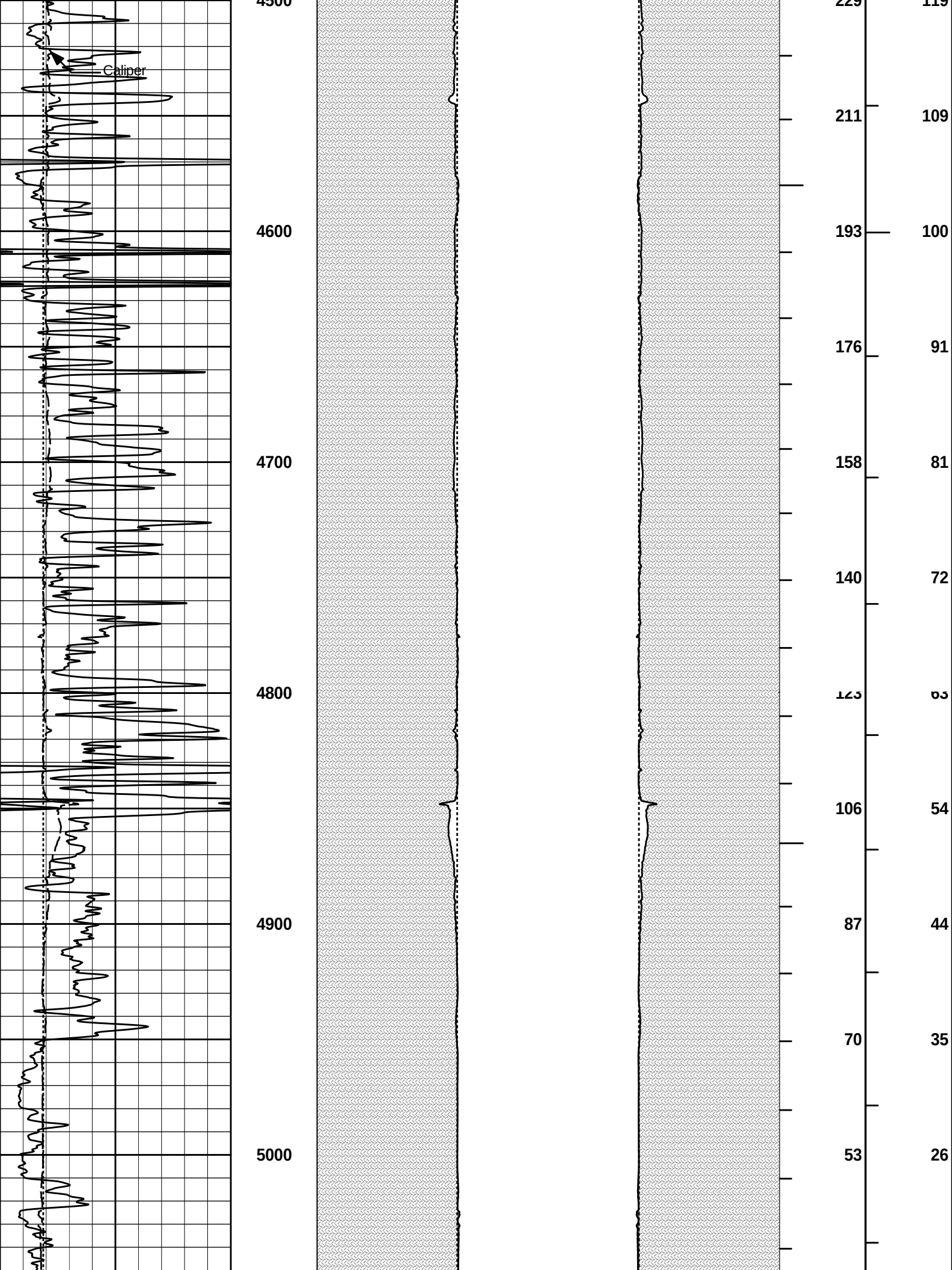


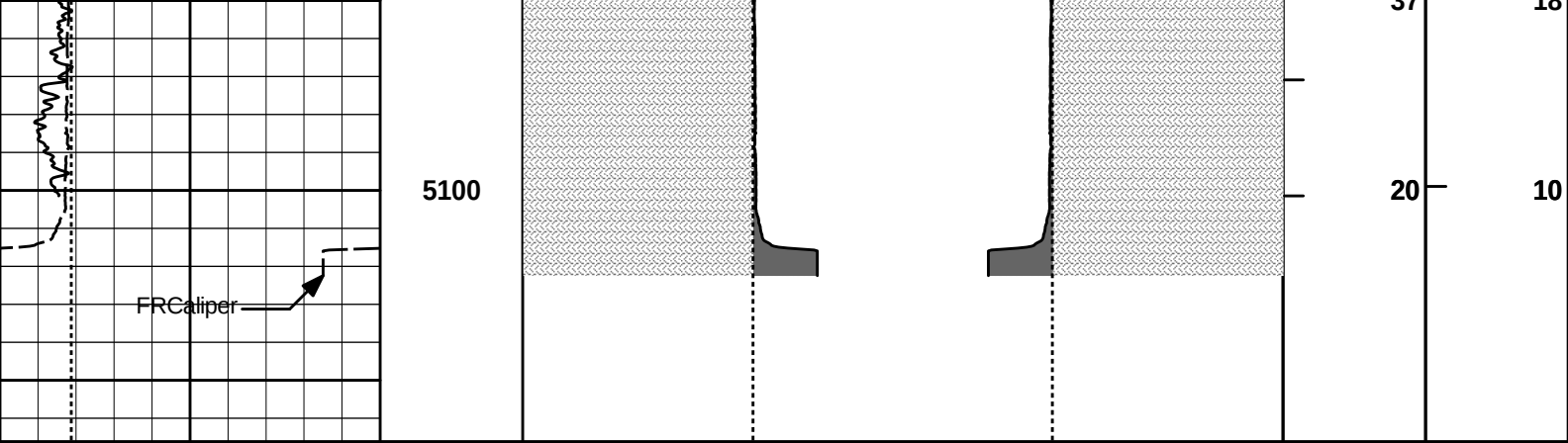












6	Caliper	16	MD 1 : 600 ft	20	Caliper	0 0	Caliper	20	BHVT	AHVT
	inches				inches			inches		
6	Bit Size	16		20	Bit Size	0 0	Bit Size	20		
	inches									
0	Gamma API	150			MUDCAKE		MUDCAKE			
	api									

HALLIBURTON

Plot Time: 12-Jul-13 21:13:35
Plot Range: 1650 ft to 5166.17 ft
Data: DRUSSEL_E-1\Well Based\CASING\
Plot File: \\-LOCAL-DRUSSEL_E-1\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHIPOROIAHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	OXY USA INC.		
WELL	DRUSSEL E-2		
FIELD	HUGOTON GAS AREA		
COUNTY	FINNEY	STATE	KANSAS
HALLIBURTON		SPECTRAL DENSITY DUAL SPACED NEUTRON LOG	