HALLIBURTON

SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

COMPANY	OXY USA INC
WELL	FEIGHT A-8
FIELD	VICTORY
COUNTY	HASKELL
STATE	KANSAS

COMPANY **OXY USA INC**
WELL **FEIGHT A-8**
FIELD **VICTORY**
COUNTY **HASKELL** STATE **KANSAS**

API No. 15-081-21985
Location 1980' FNL & 660' FWL

Other Services:
MICRO
BSAT
ACRT

Sect. 27 Twp. 29S Rge. 33W

Permanent Datum	GL	Elev. 2943.0 ft	Elev.: K.B. 2957.0 ft
Log measured from	KB	14.0 ft above perm. Datum	D.F. 2956.0 ft
Drilling measured from	KB		G.L. 2943.0 ft

Date	14-Jul-12		
Run No.	ONE		
Depth - Driller	5700.00 ft		
Depth - Logger	5698.0 ft		
Bottom - Logged Interval	5660.0 ft		
Top - Logged Interval	4000.0 ft		
Casing - Driller	9.625 in @ 1816.0 ft	@	@
Casing - Logger	1813.0 ft		
Bit Size	7.875 in	@	@
Type Fluid in Hole	WATER BASED MUD		
Density / Viscosity	9.6 ppg / 75.00 s/qt		
PH / Fluid Loss	10.00 pH / 8.0 cptm		
Source of Sample	FLOW LINE		
Rm @ Meas. Temperature	0.390 ohmm @ 92.00 degF	@	@
Rmf @ Meas. Temperature	0.47 ohmm @ 76.00 degF	@	@
Rmc @ Meas. Temperature	0.560 ohmm @ 76.00 degF	@	@
Source Rmf / Rmc	MEAS / MEAS		
Rm @ BHT	0.26 ohmm @ 151.0 degF	@	@
Time Since Circulation	17.6 hr		
Time on Bottom	14-Jul-12 16:08		
Max. Rec. Temperature	5698.0 degF @ 151.0 ft	@	@
Equipment / Location	10546696 / LIBERAL		
Recorded By	C. HAVERKAMP		
Witnessed By	D. PRATT		

Fold here

Service Ticket No.: 9646571 API Serial No.: 15-081-21985 PGM Version: WL INSITE R3.6.0 (Build 3)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

Date	Sample No.				
Depth-Driller					
Type Fluid in Hole					
Density	Viscosity				
Ph	Fluid Loss				
Source of Sample					
Rm @ Meas. Temp		@		@	
Rmf @ Meas. Temp.		@		@	
Rmc @ Meas. Temp.		@		@	
Source Rmf	Rmc				
Rm @ BHT		@		@	
Rmf @ BHT		@		@	
Rmc @ BHT		@		@	

RESISTIVITY SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA

Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.		Run No.	ONE	Run No.	ONE
Serial No.	11039640	Serial No.		Serial No.	P81	Serial No.	11019643
Model No.	GTET	Model No.		Model No.	SDLT	Model No.	DSNT
Diameter	3.625	No. of Cent.		Diameter	4.5	Diameter	3.625
Detector Model No.	T-102	Spacing		Log Type	GAM-GAM	Log Type	NEU-NEU
Type	SCINT			Source Type	CS137	Source Type	AM241BE
Length	8"	LSA [Y/N]		Serial No.	5168GW	Serial No.	DSN-424
Distance to Source	10'	FWDA [Y/N]		Strength	1.5 CI	Strength	15 CI

LOGGING DATA

GENERAL GAMMA ACOUSTIC DENSITY NEUTRON

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	5698	4000	REC	0	150				30	-10	2.71	30	-10	LIME

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@

Remarks: SP-GTET-DSNT-SDLT-BSAT-ACRT RAN IN COMBINATION.

ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.

CHLORIDES REPORTED AT 10000 MG/L. LCM REPORTED AT 1 LB/BBL.

POST TOOL SURVEYS NOT PERFORMED PER CUSTOMER REQUEST.

CUSTOMER ACCEPTS MICROLOG @ 5500

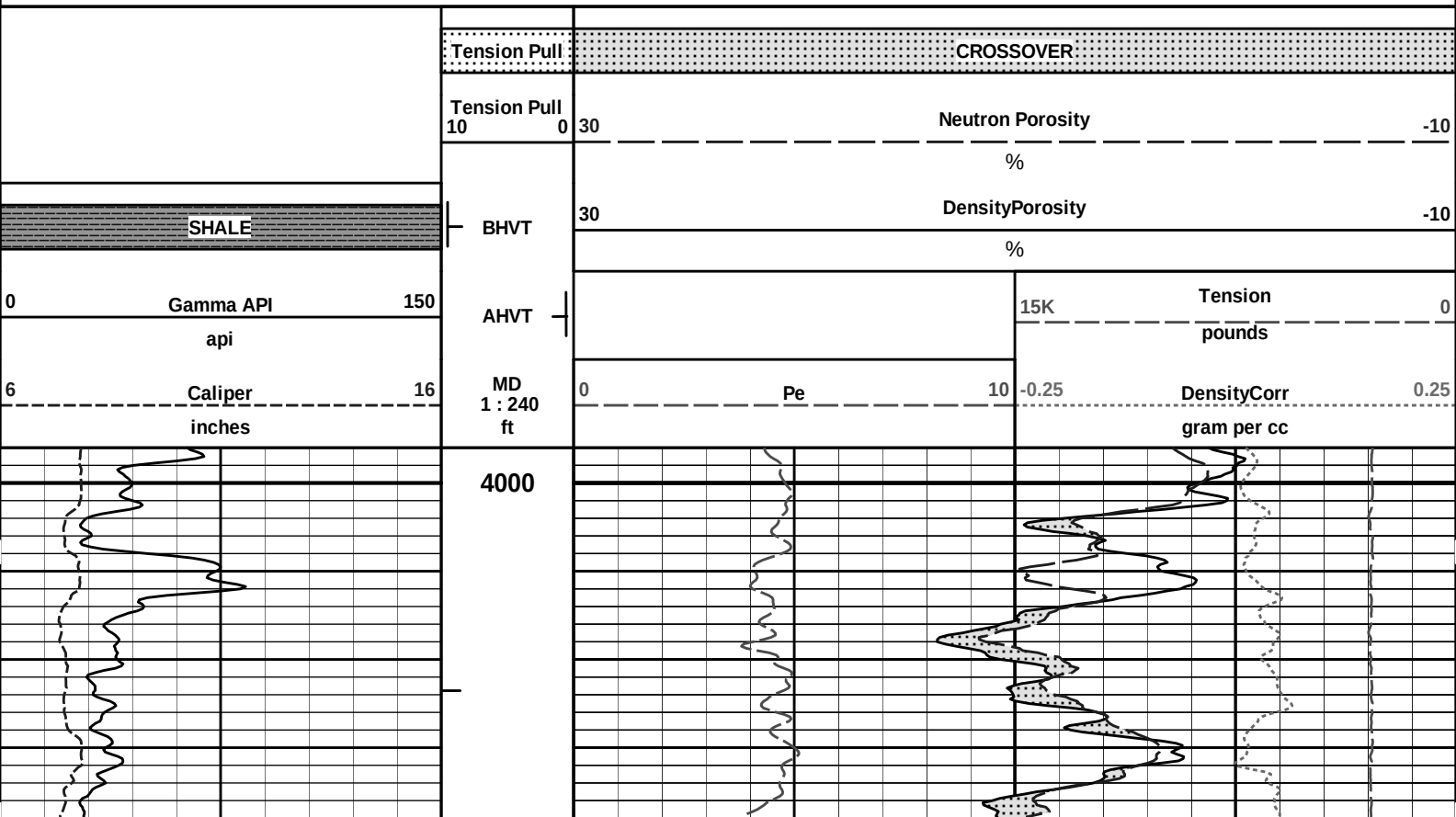
YOUR CREW: P. COBLE, K. KING

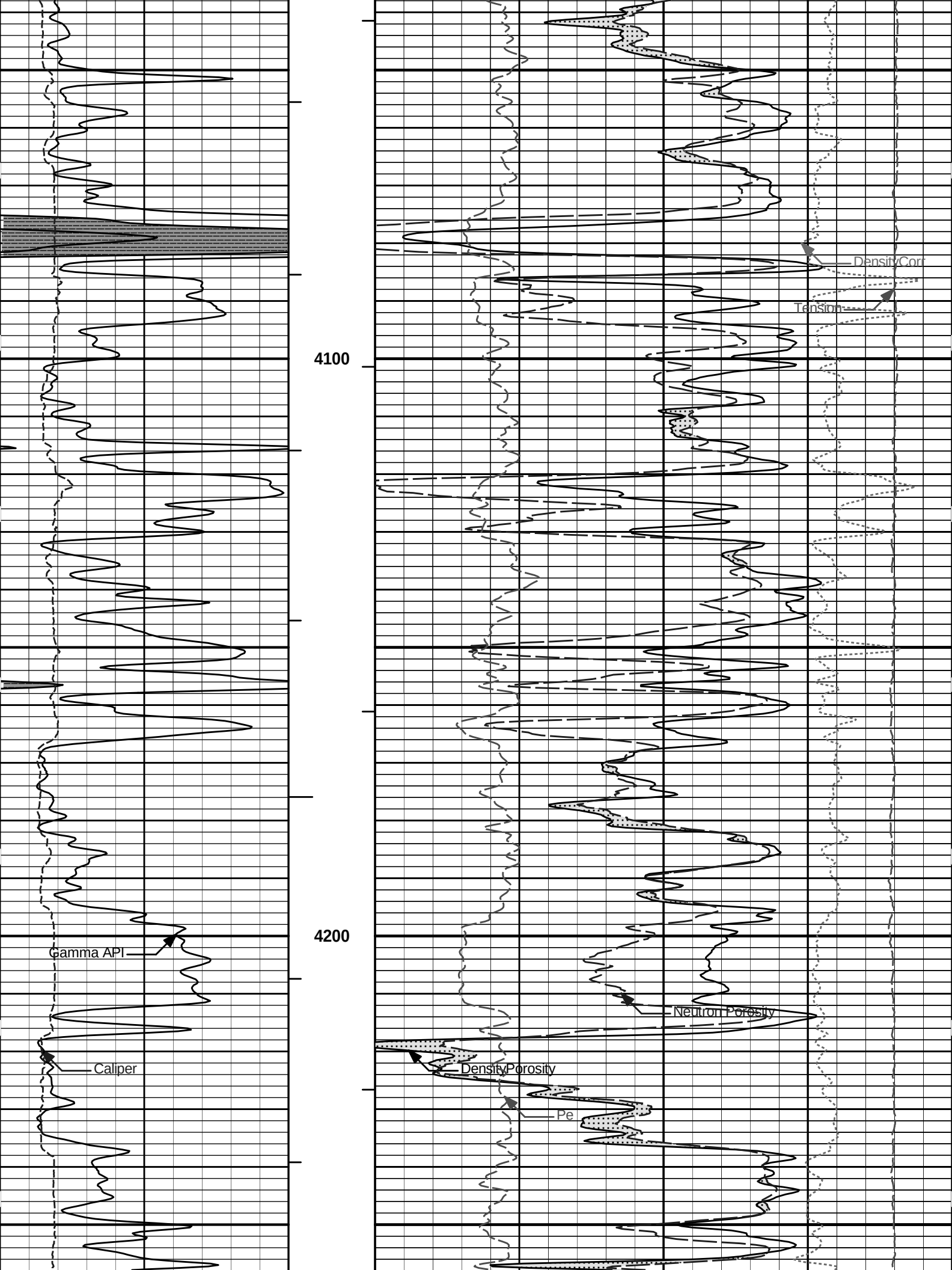
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES. LIBERAL, KS 620-624-8123

HALLIBURTON

Plot Time: 14-Jul-12 18:32:58
Plot Range: 3996 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_DETAIL
Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

5 INCH MAIN LOG

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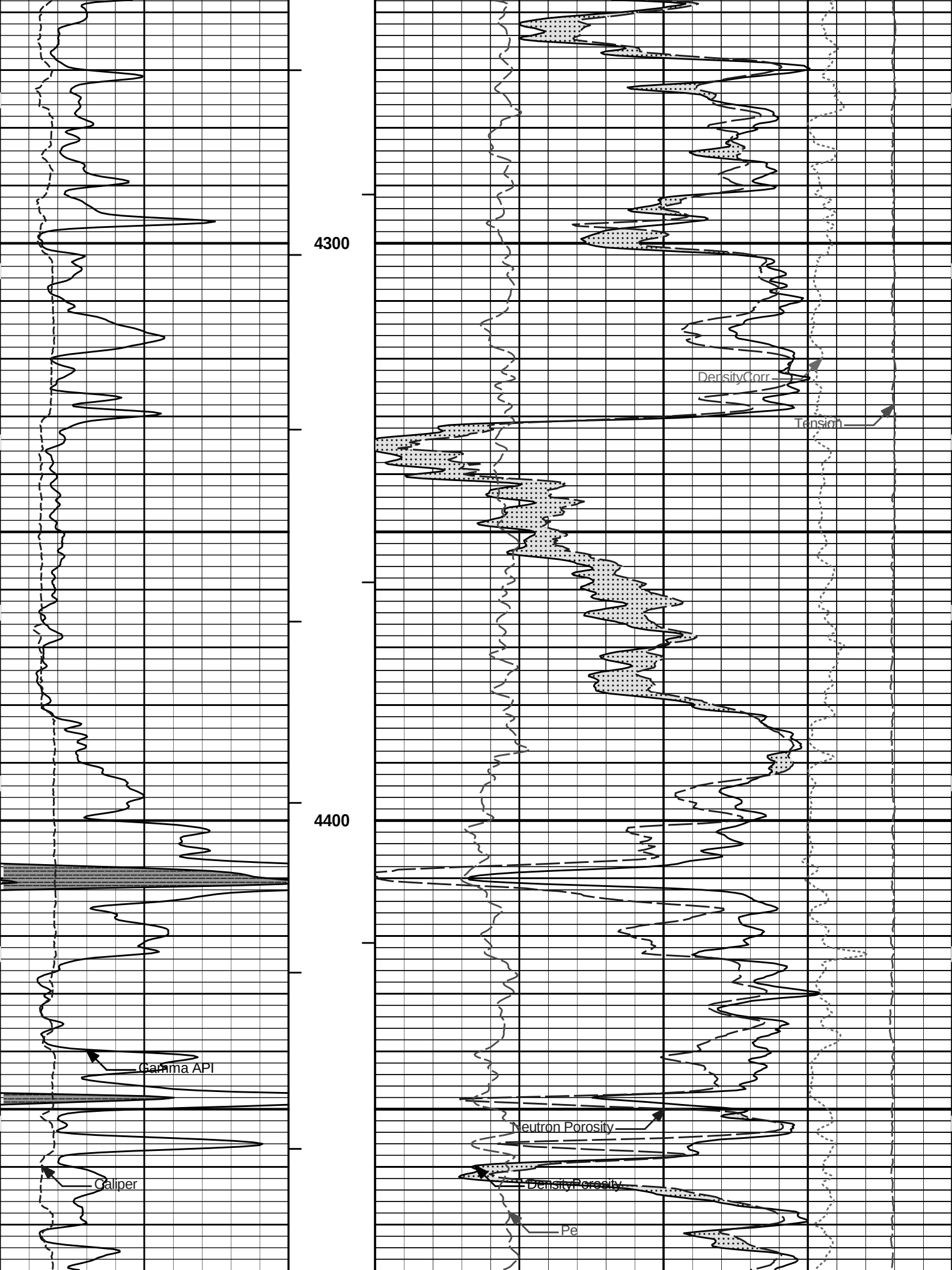
Caliper
DensityCorr
Tension
Neutron Porosity
DensityPorosity
Pe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DensityCorr
Tension
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Caliper
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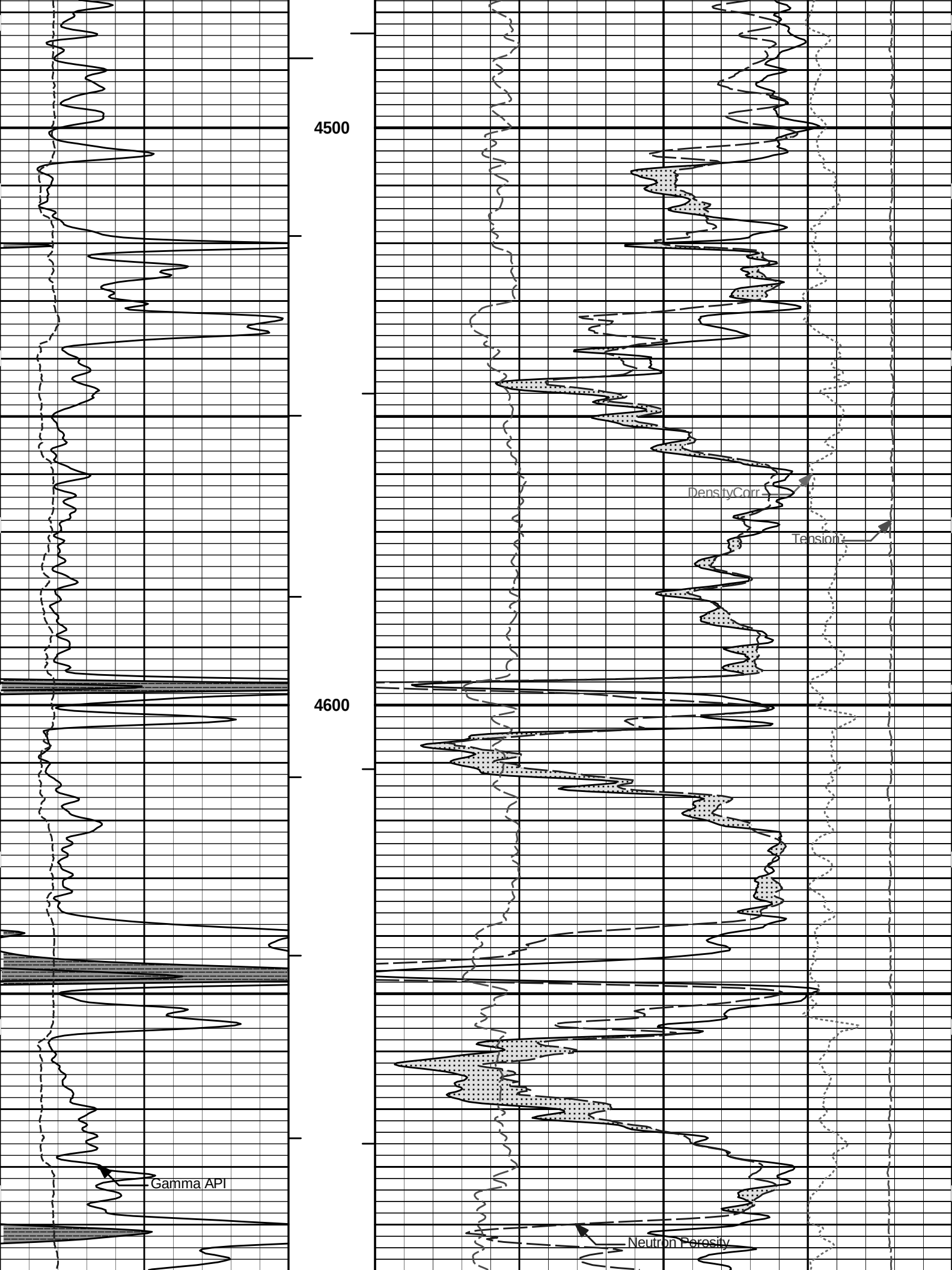
DensityPorosity
Pe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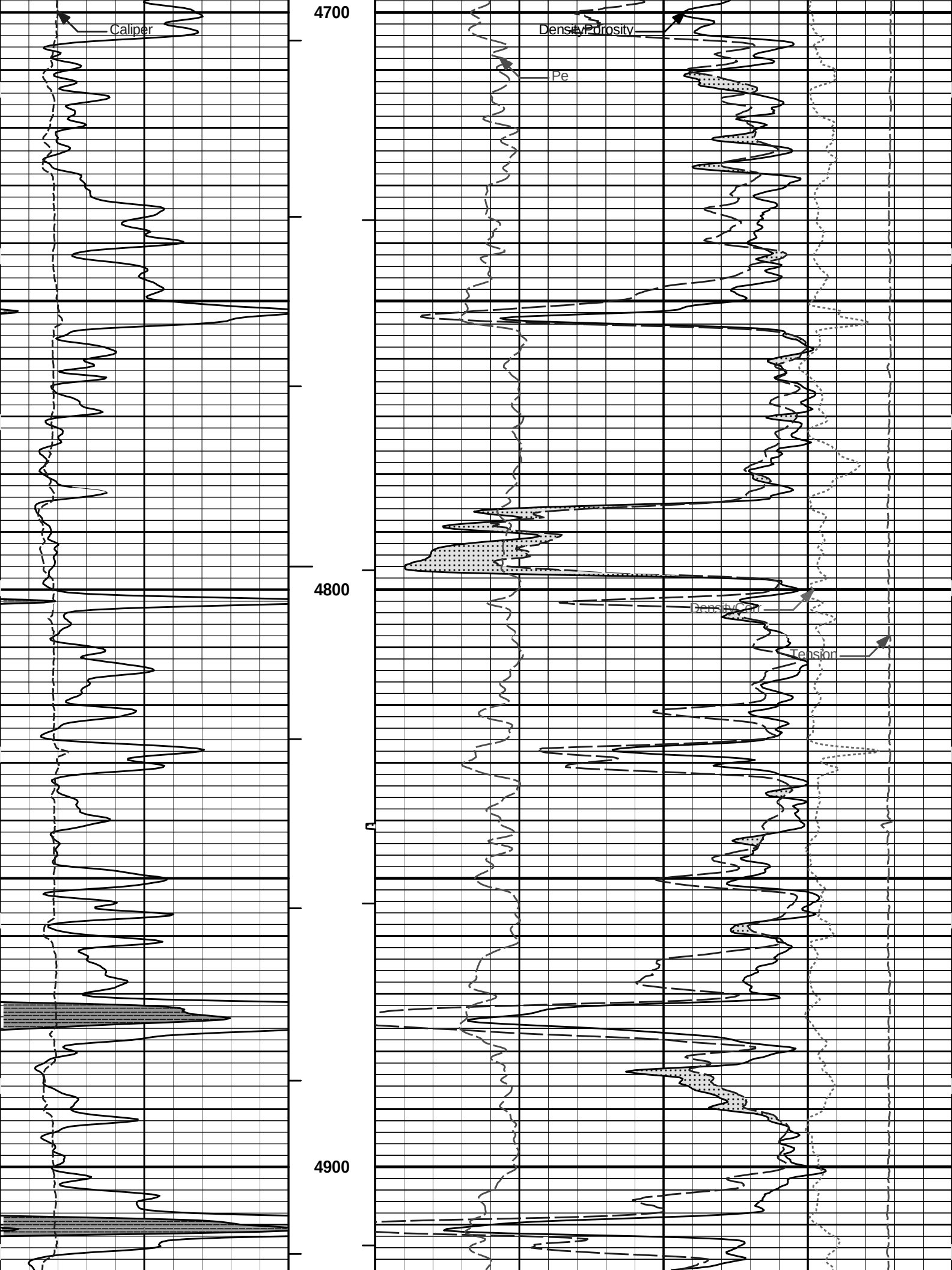
Tension
Gamma API
Neutron Porosity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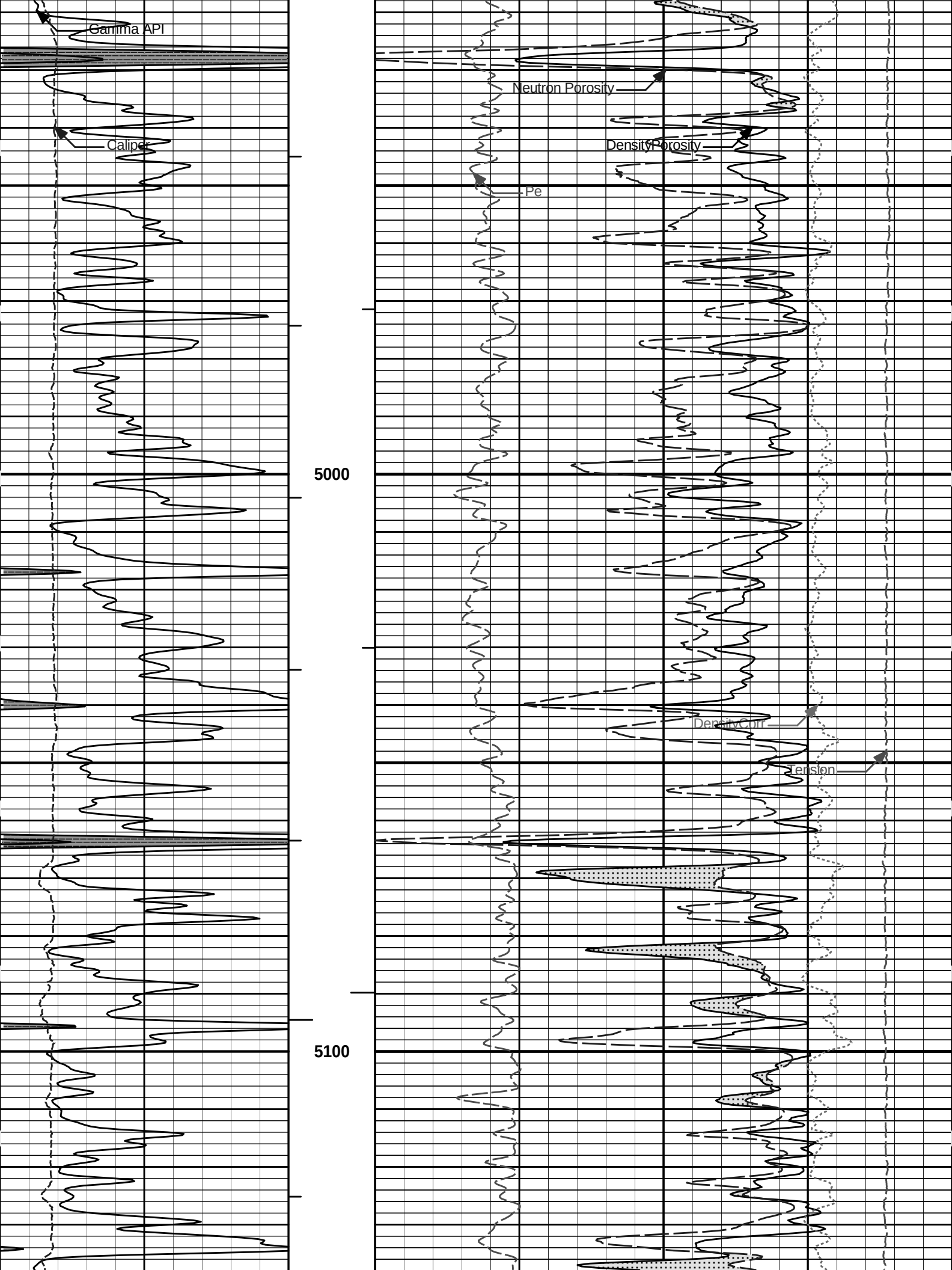
4700
Density Porosity
Pe
4800
Density Cor
Tension
4900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Neutron Porosity
DensityPorosity
Pe
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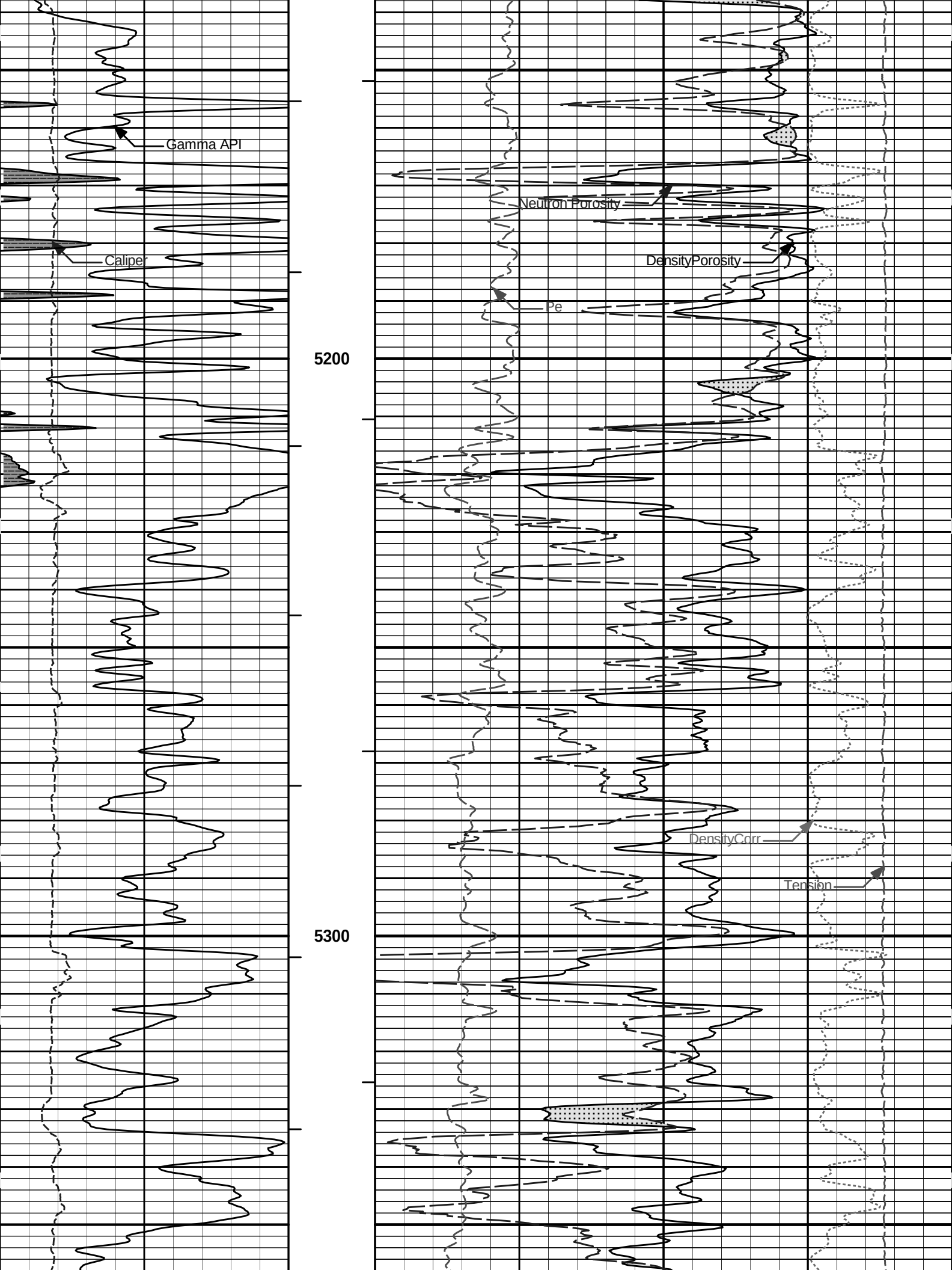
DensityCorr
Tension
5100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DensityPorosity
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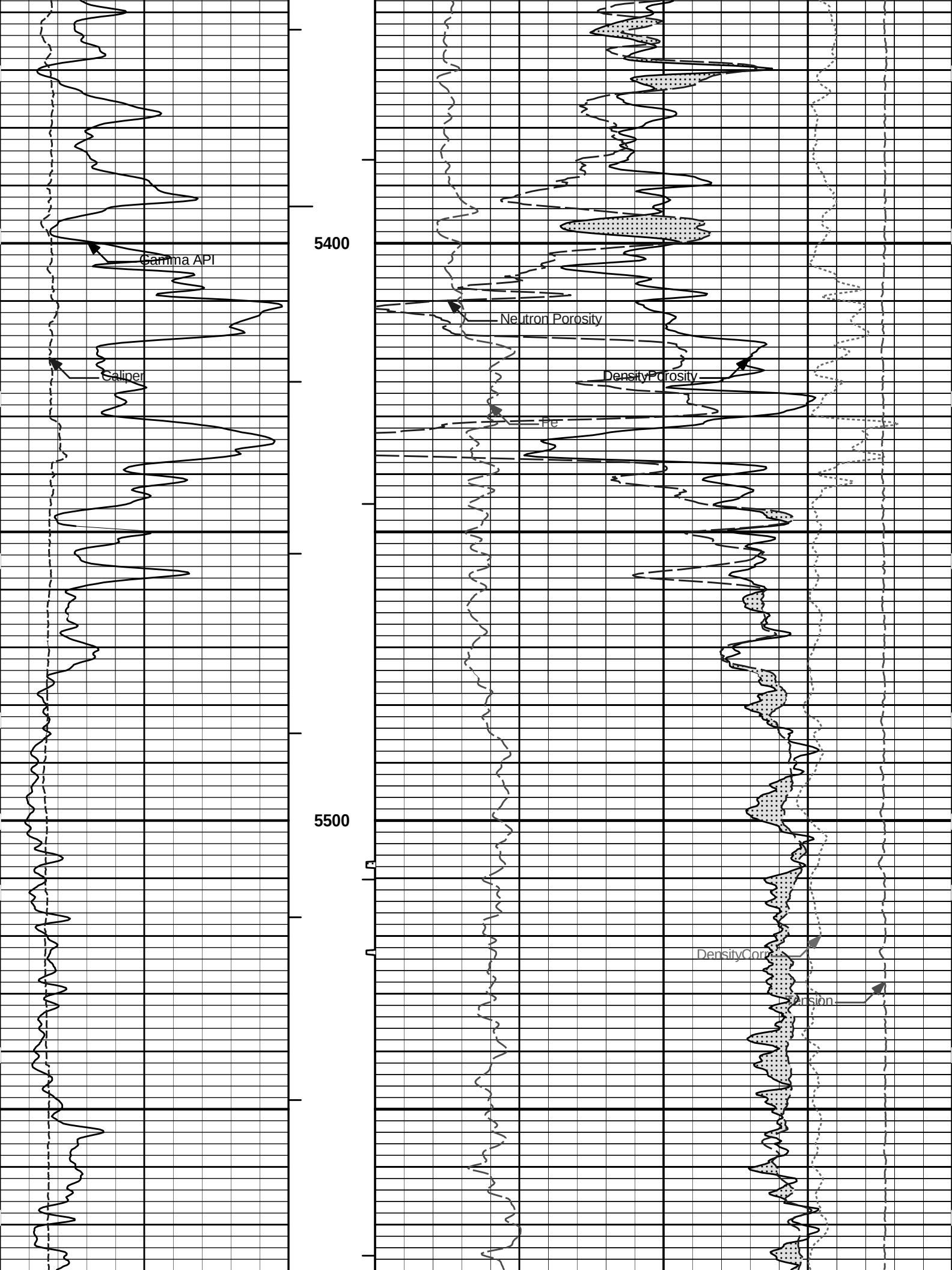
DensityCorr
Tension
5300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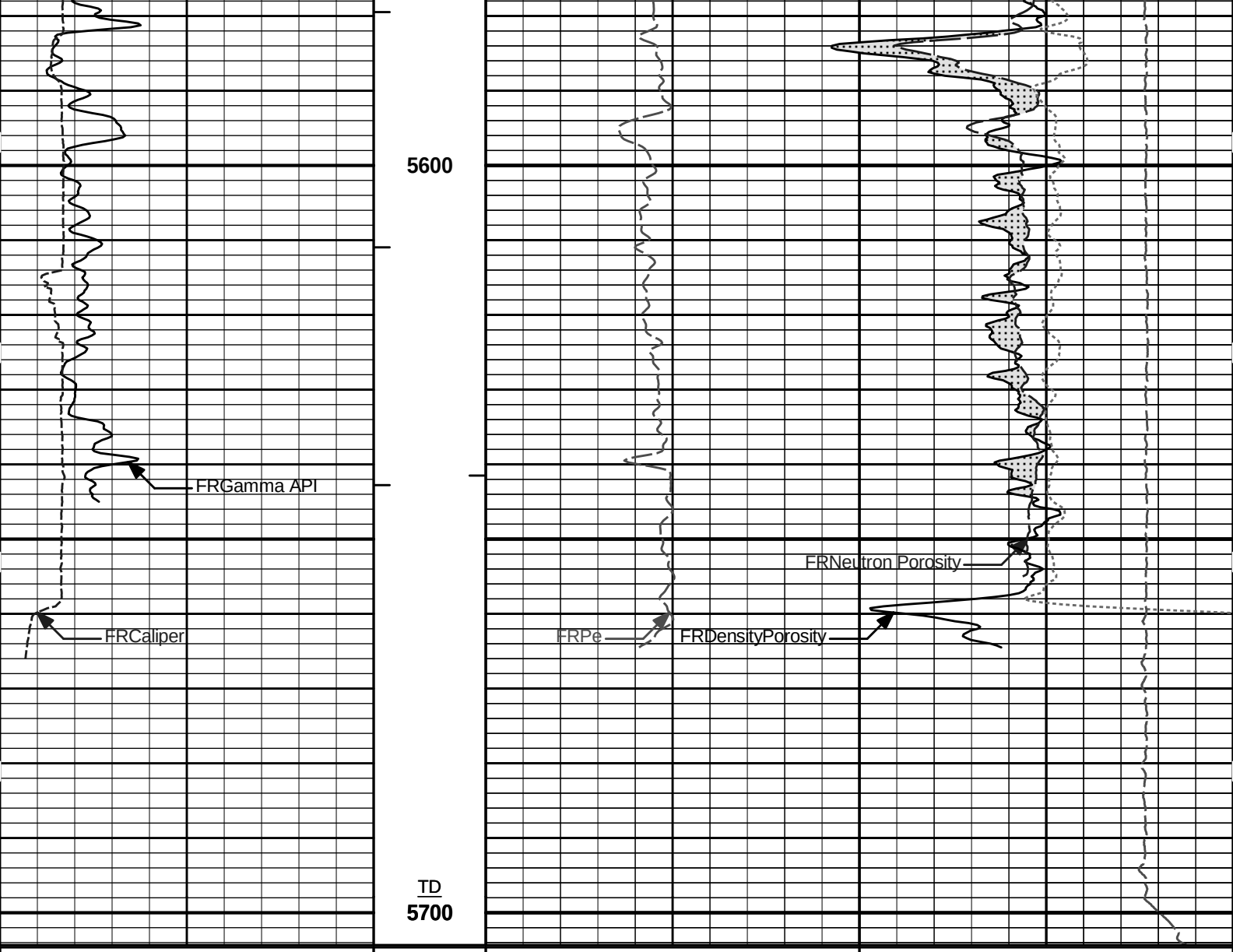
Neutron Porosity
DensityPorosity
Pe
DensityCorr
Tension



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
		%
	Tension Pull 10 0	30 Neutron Porosity -10
		%
	Tension Pull	CROSSOVER

HALLIBURTON

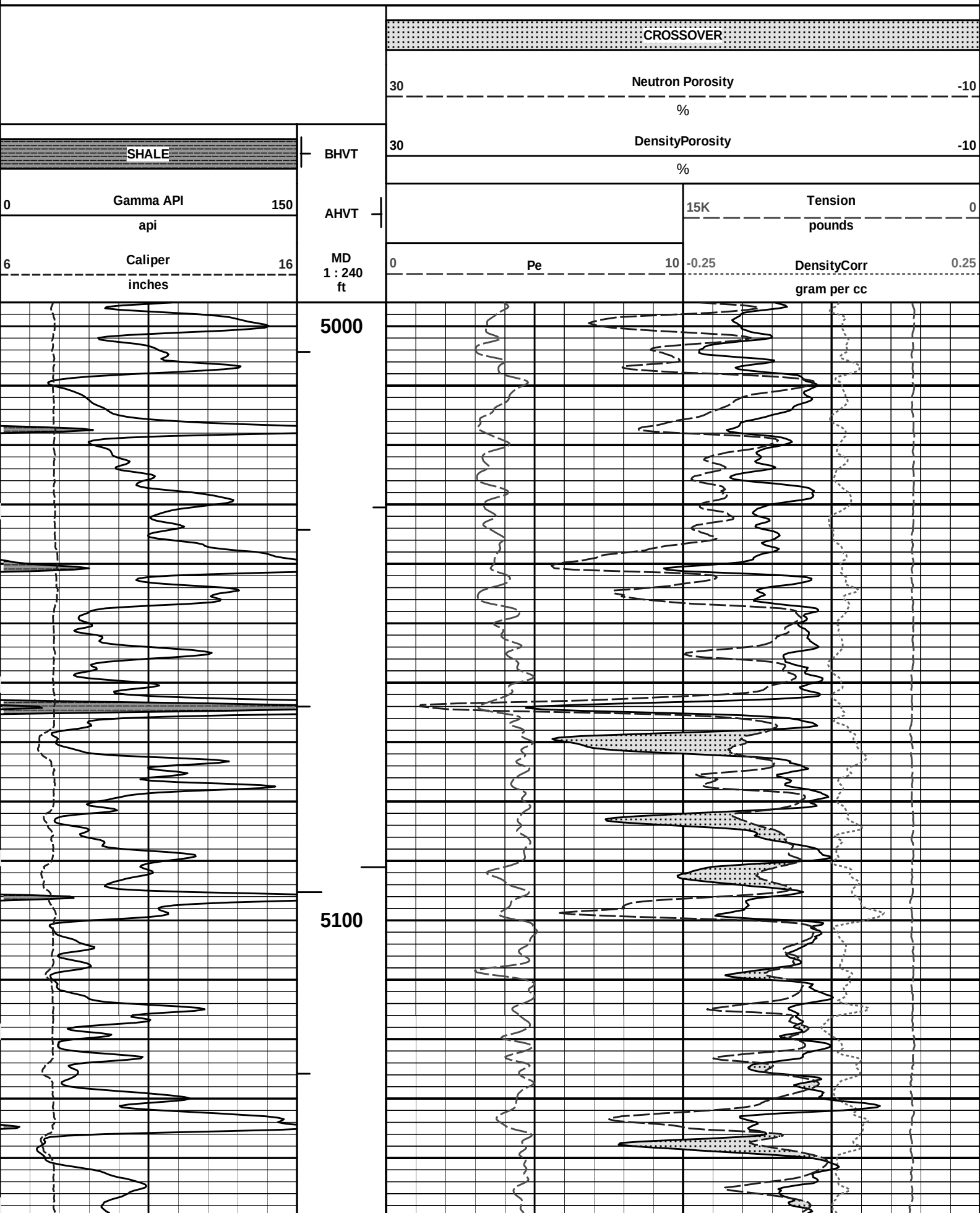
Plot Time: 14-Jul-12 18:33:12
Plot Range: 3996 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_DETAIL\
Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

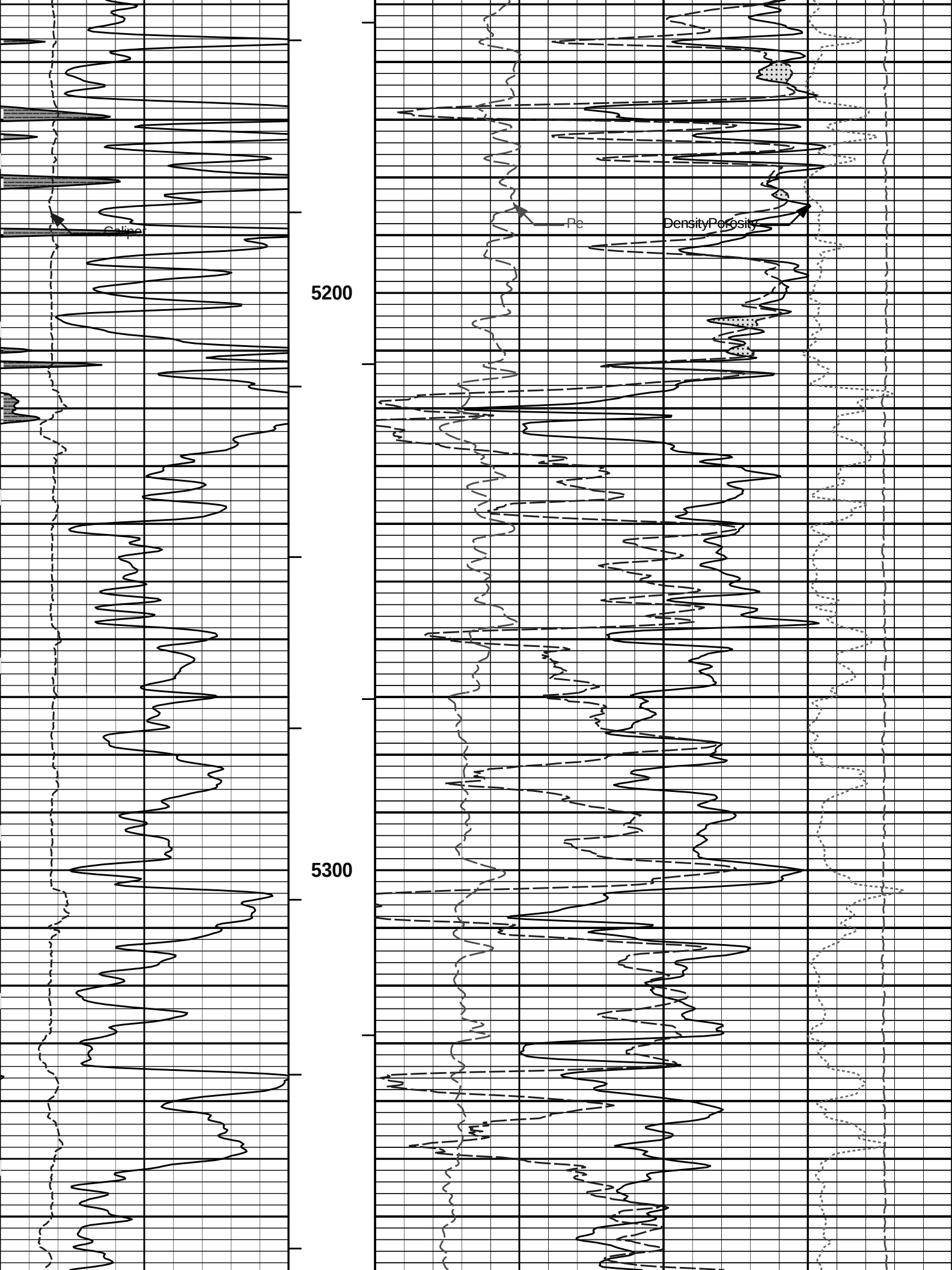
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 14-Jul-12 18:33:12
Plot Range: 4996 ft to 5704.67 ft
Data: FEIGHT_A_8\Well Based\R1_REPEAT\
Plot File: \\PORO\Poro_IQ_5_REP_LIB

REPEAT SECTION

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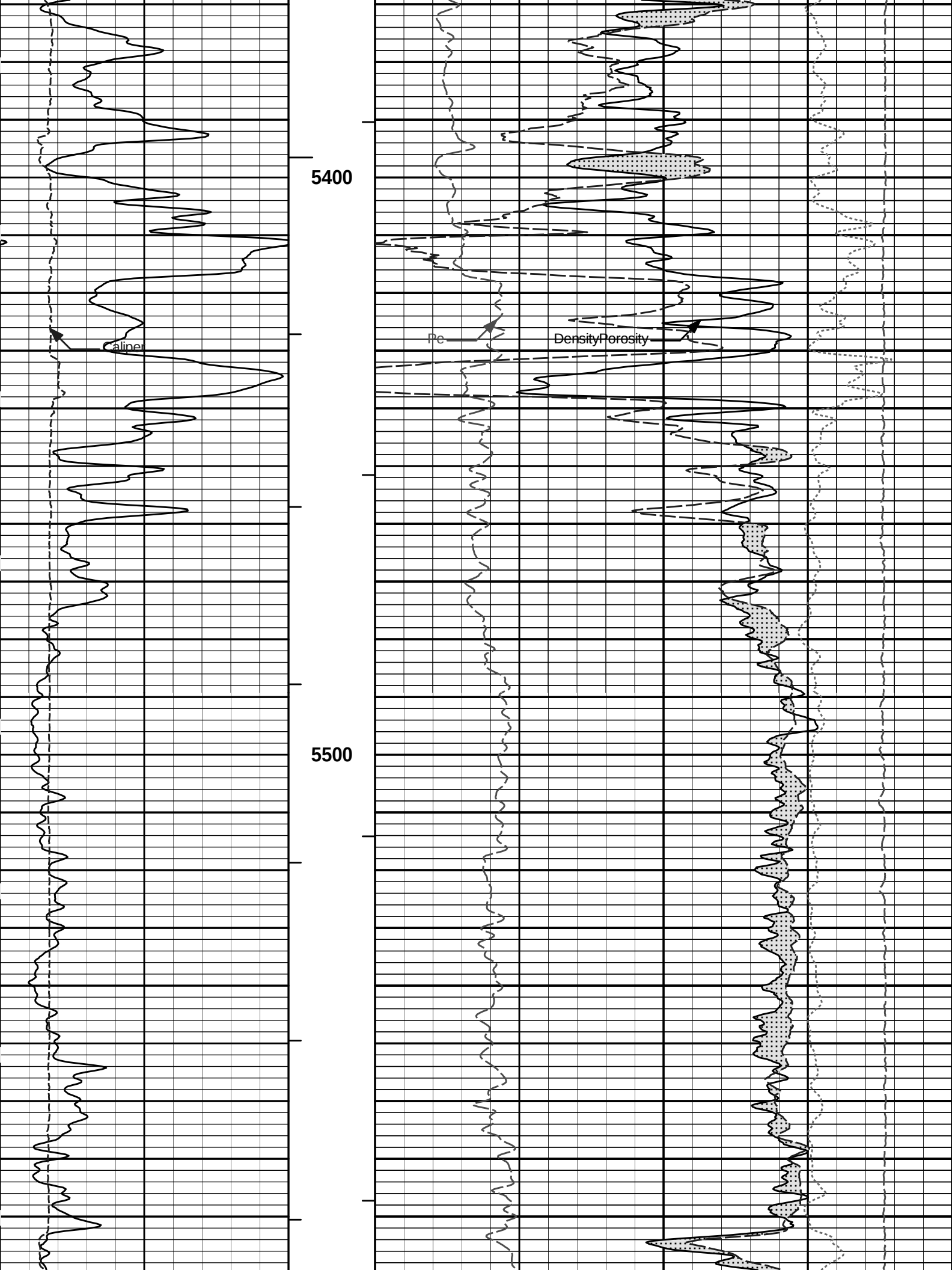
Pe
DensityPorosity
5200
5300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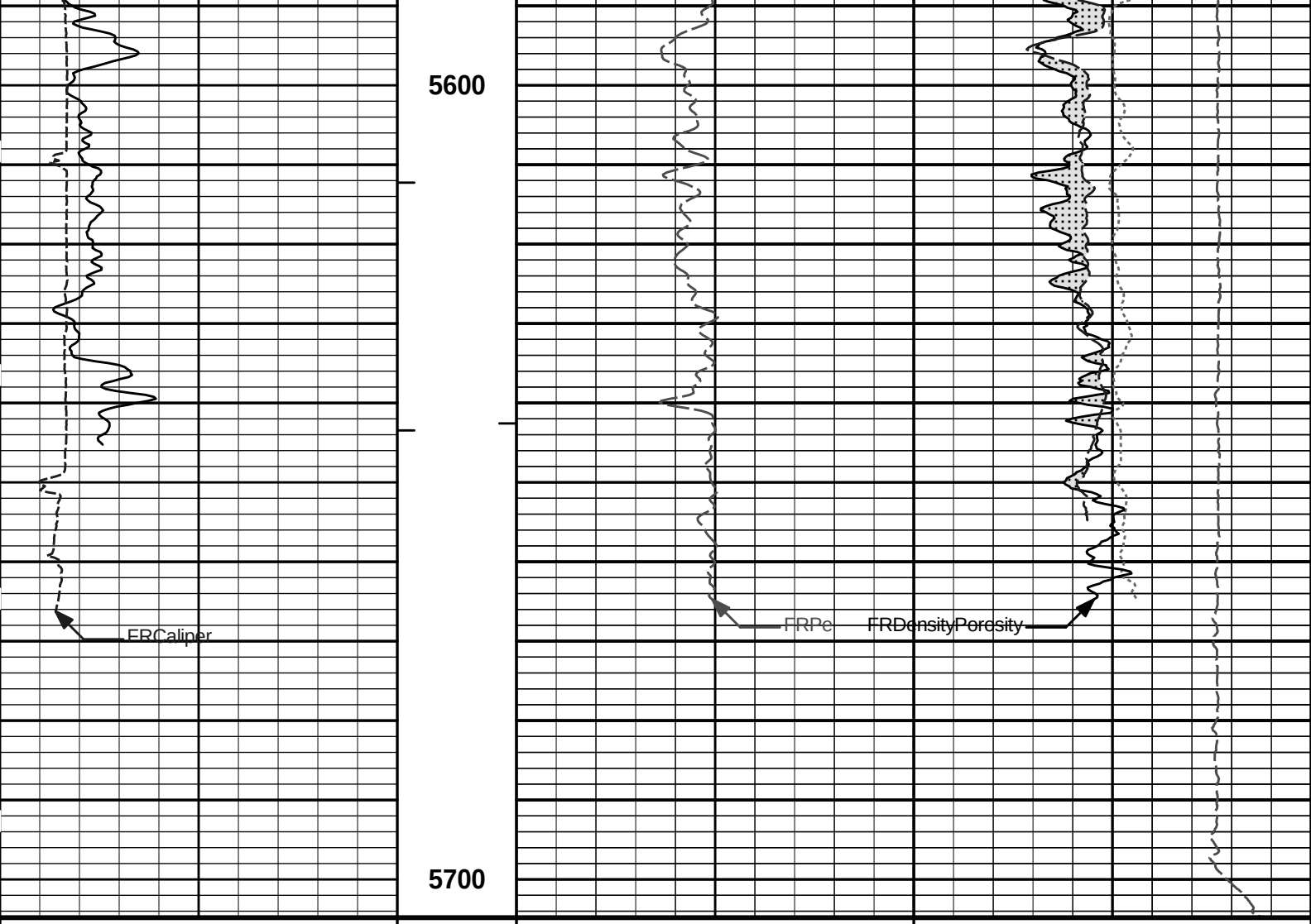
Caliper
Pe
DensityPorosity



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

HALLIBURTON

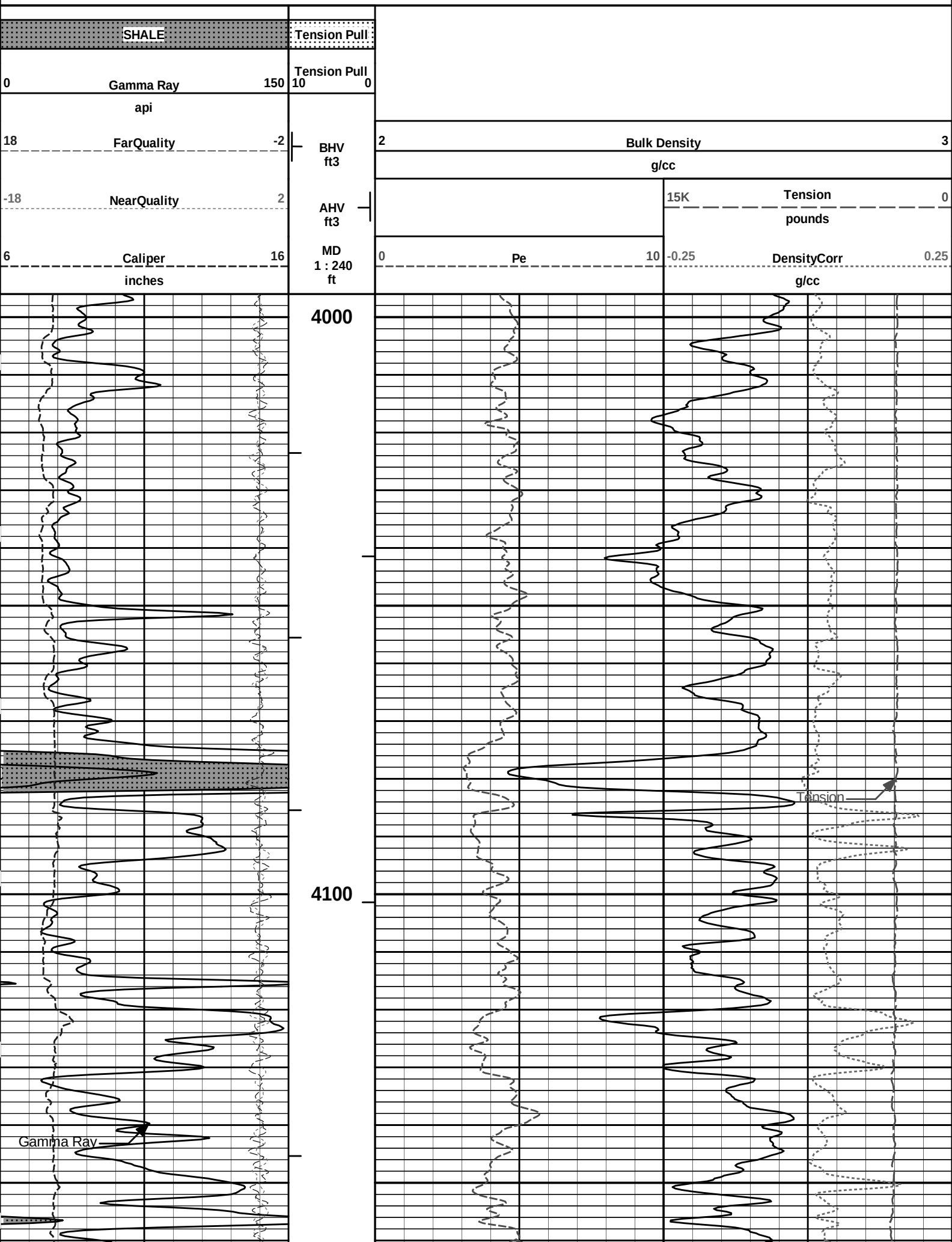
Plot Time: 14-Jul-12 18:33:17
Plot Range: 4996 ft to 5704.67 ft
Data: FEIGHT_A_8\Well Based\R1_REPEAT\
Plot File: \\PORO\Poro_IQ_5_REP_LIB

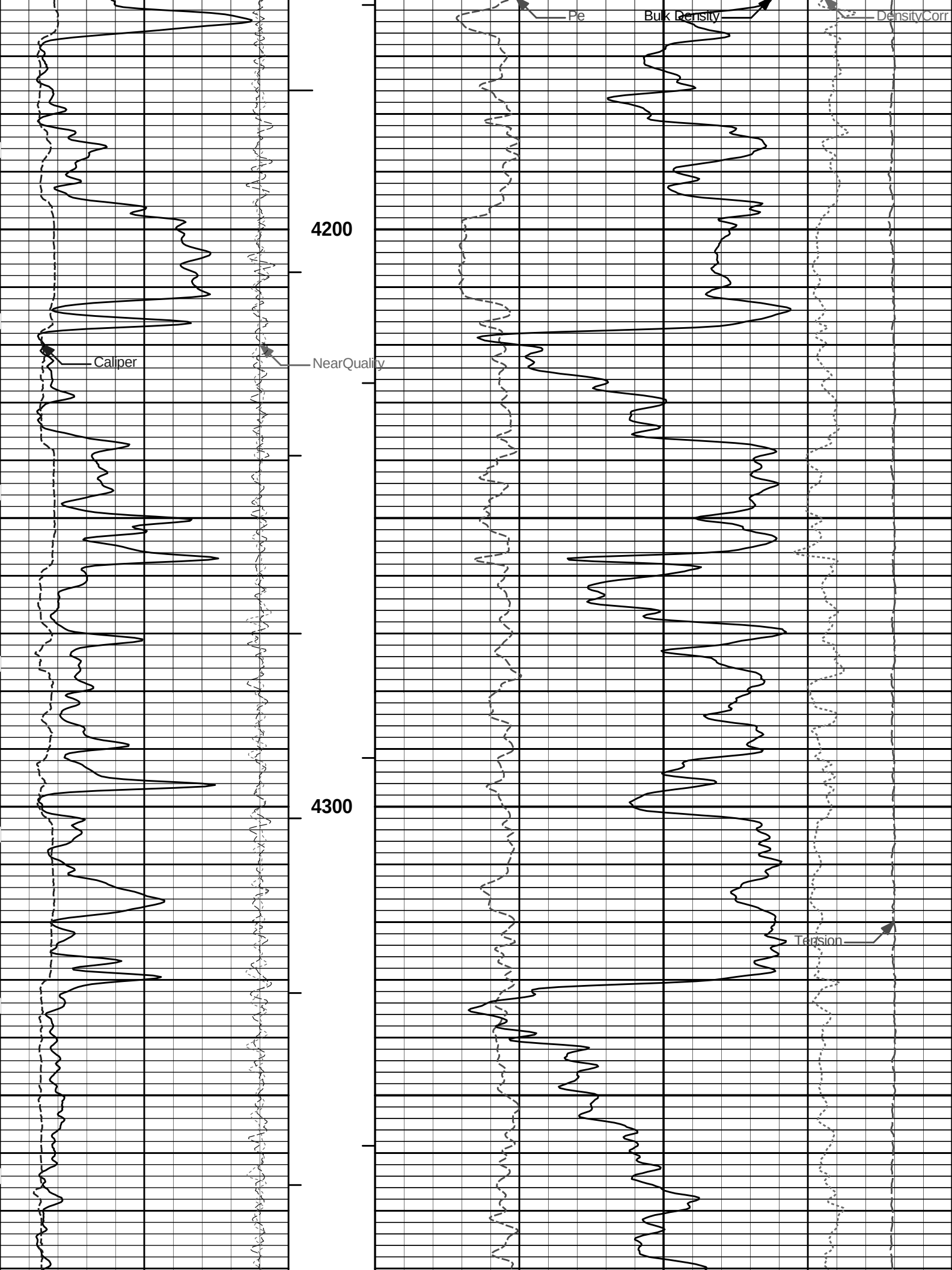
REPEAT SECTION

HALLIBURTON

Plot Time: 14-Jul-12 18:33:17
Plot Range: 3996 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_DETAIL\
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\PORO\BULKD_5_MAIN_LIB

5 INCH MAIN LOG


SHALE
Tension Pull
Tension Pull
0
Gamma Ray
150
10
0
api
18
FarQuality
-2
BHV
ft3
2
Bulk Density
3
g/cc
-18
NearQuality
2
AHV
ft3
15K
Tension
0
pounds
6
Caliper
16
MD
1 : 240
ft
0
Pe
10
-0.25
DensityCorr
0.25
inches
g/cc
4000
4100
Tension
Gamma Ray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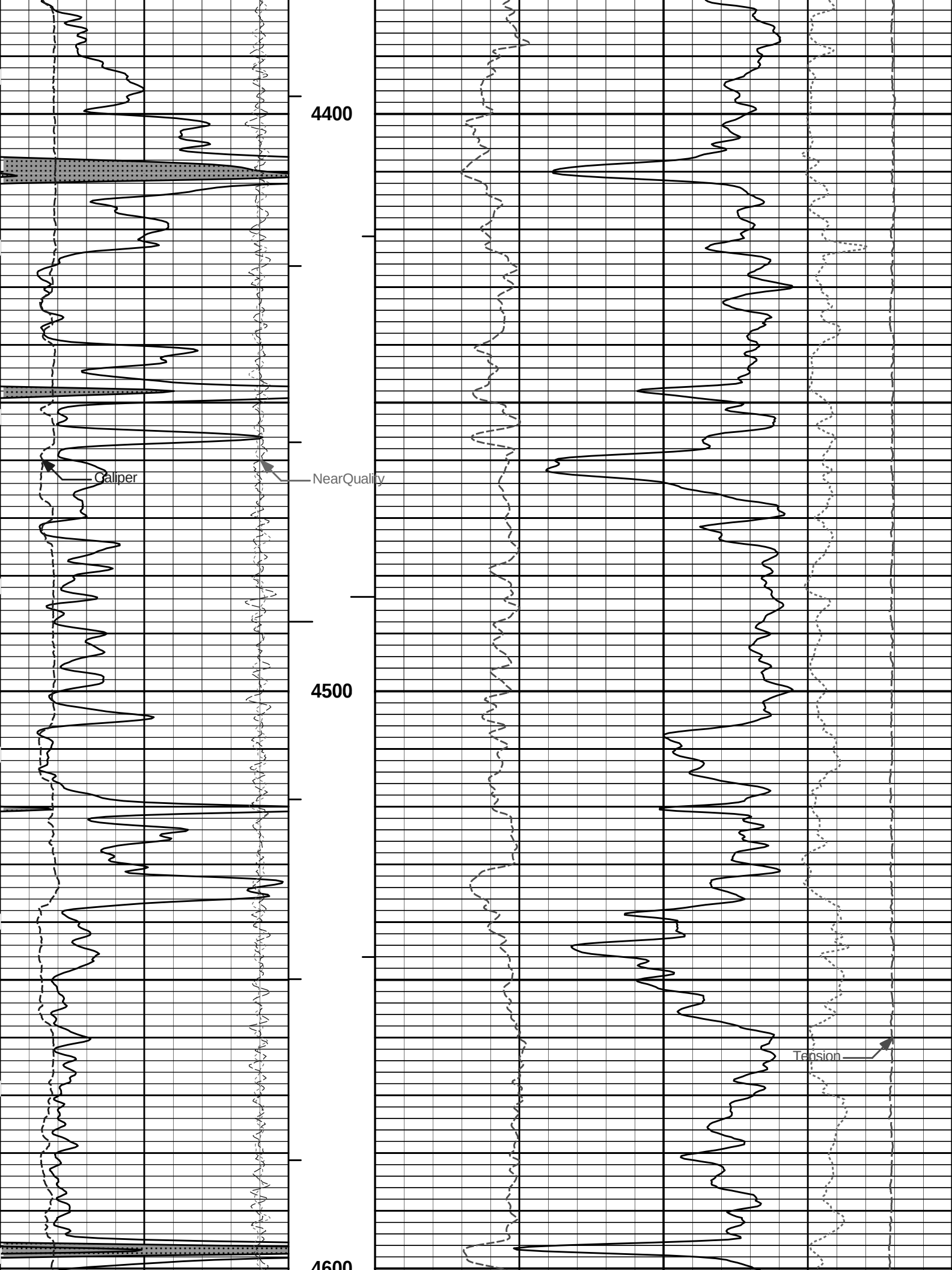
Bulk Density
DensityCorr
4200
Caliper
NearQuality
4300
Tension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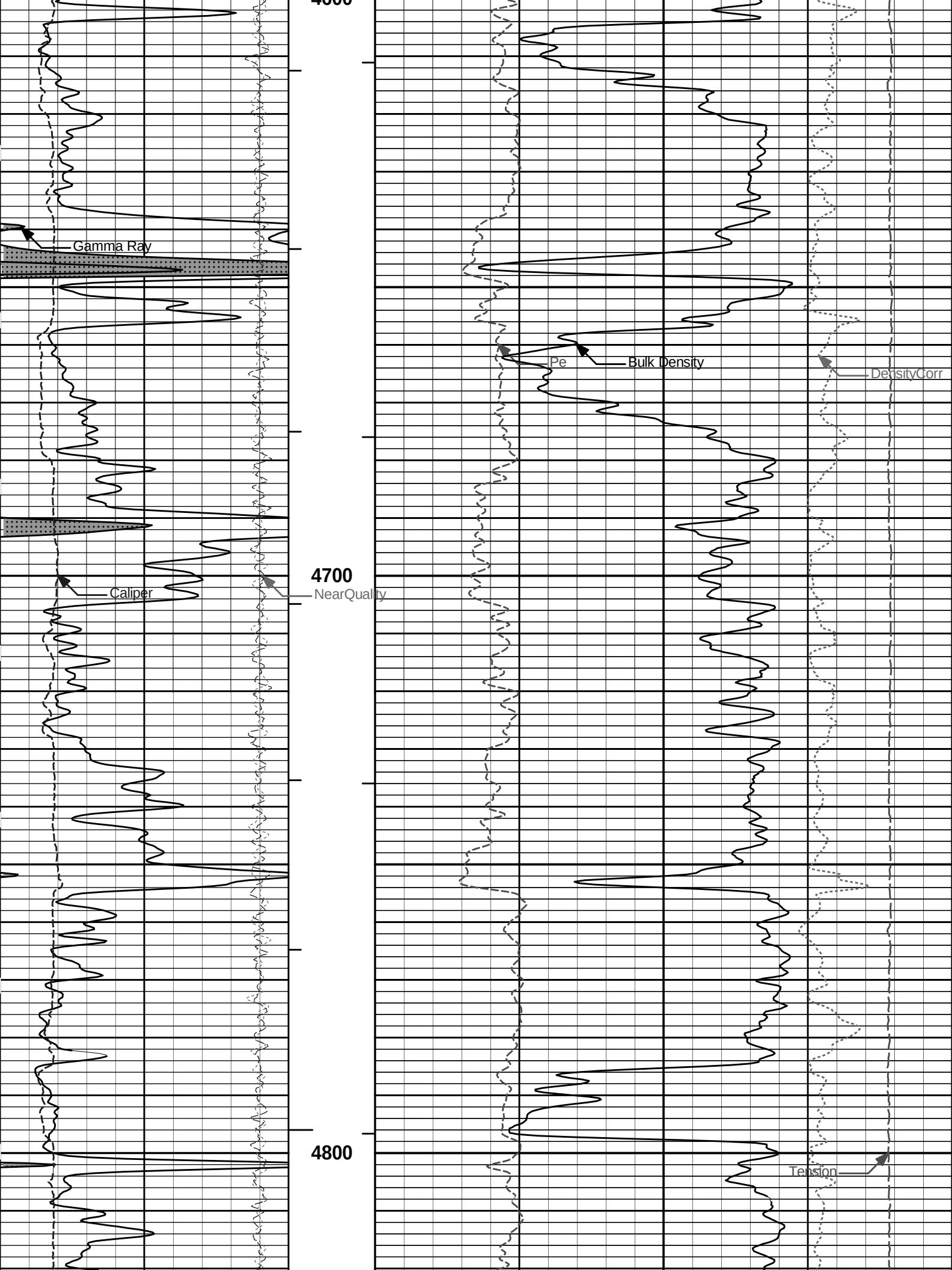
4500
4600
Caliper
NearQuality
Tension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Caliper
NearQuality
Pe
Bulk Density
DensityCorr
Tension
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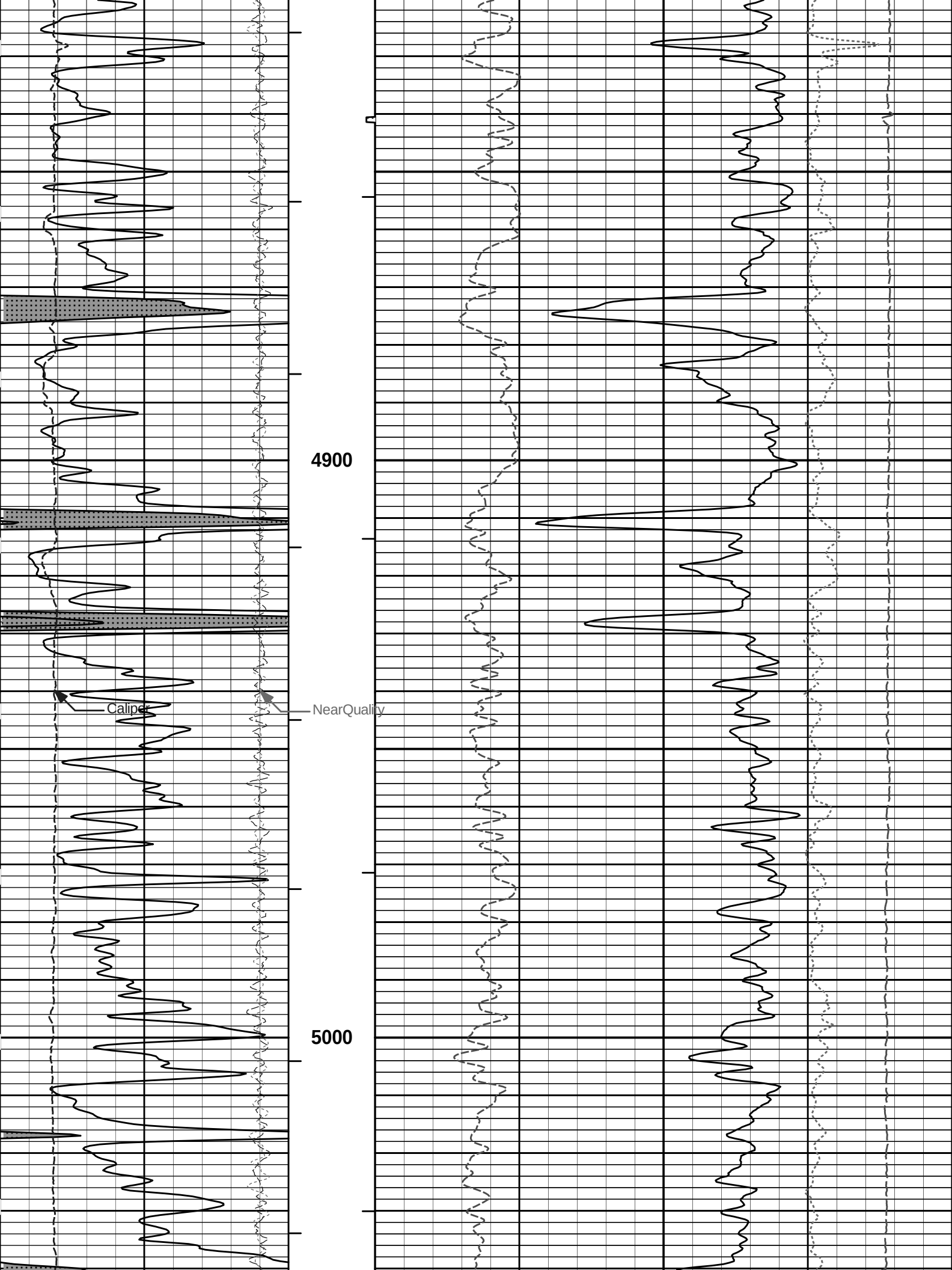
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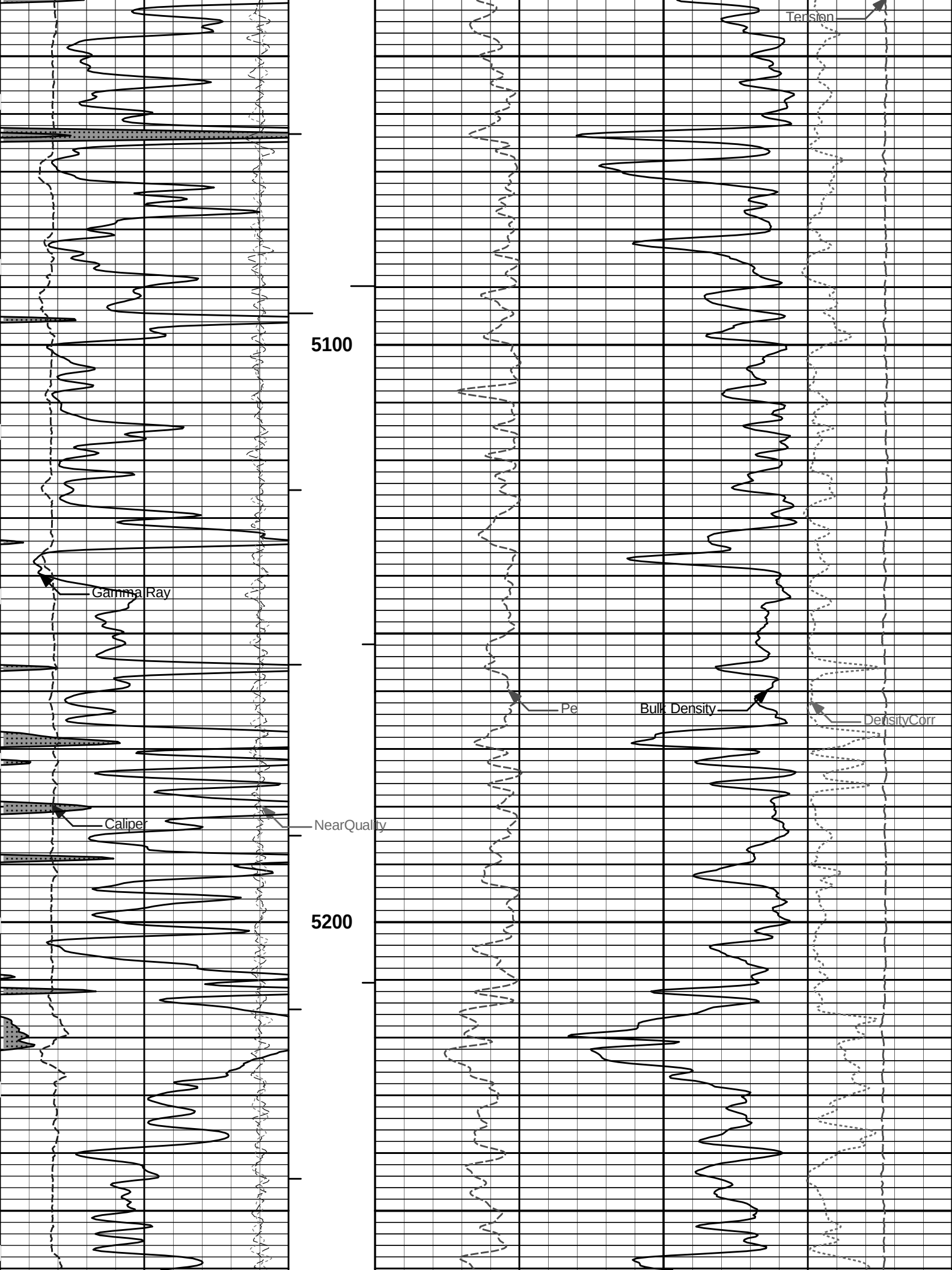
5000
Caliper
NearQuality


Tension
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Gamma Ray
Pe
Bulk Density
DensityCorr
Caliper
NearQuality
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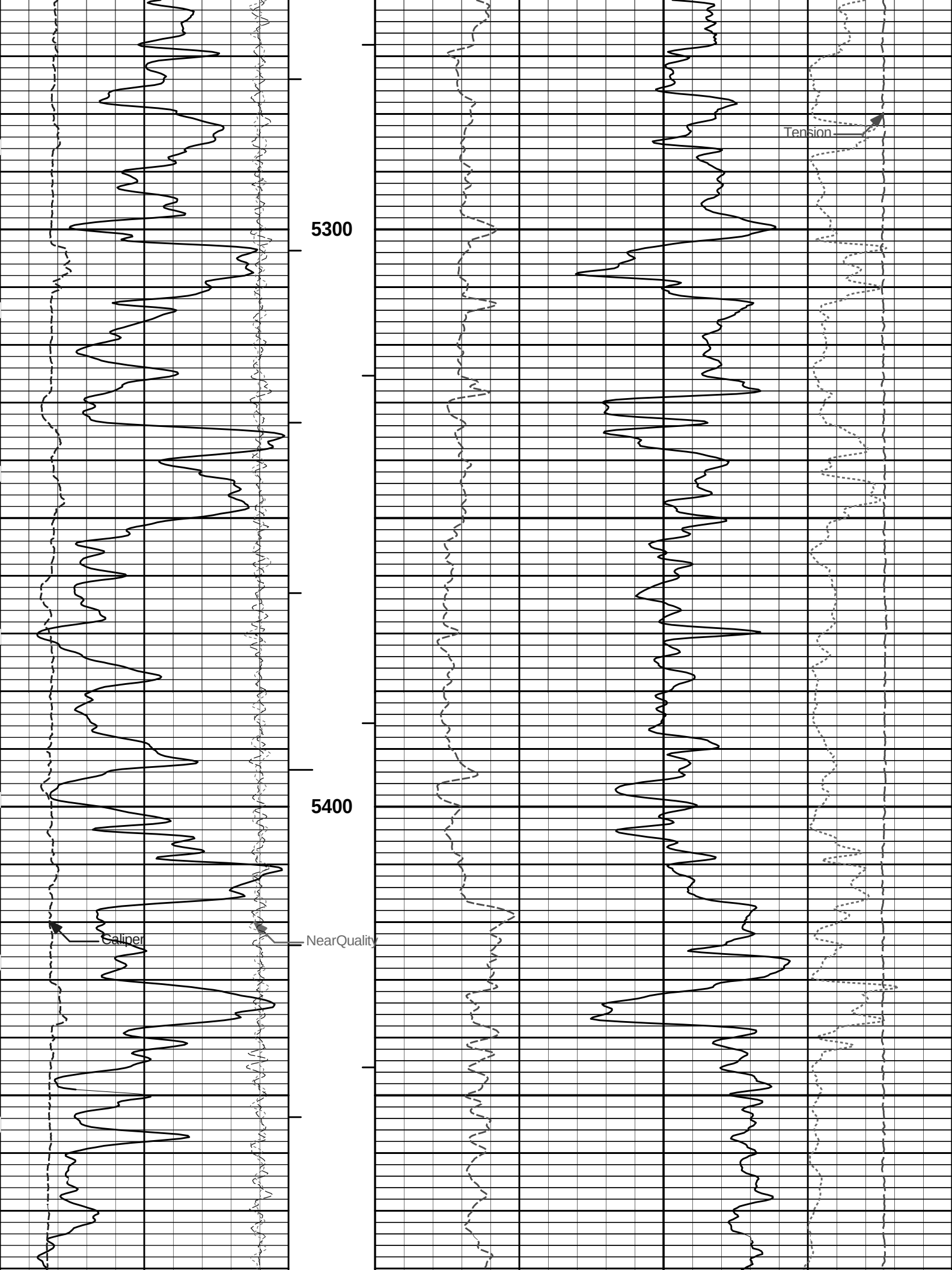
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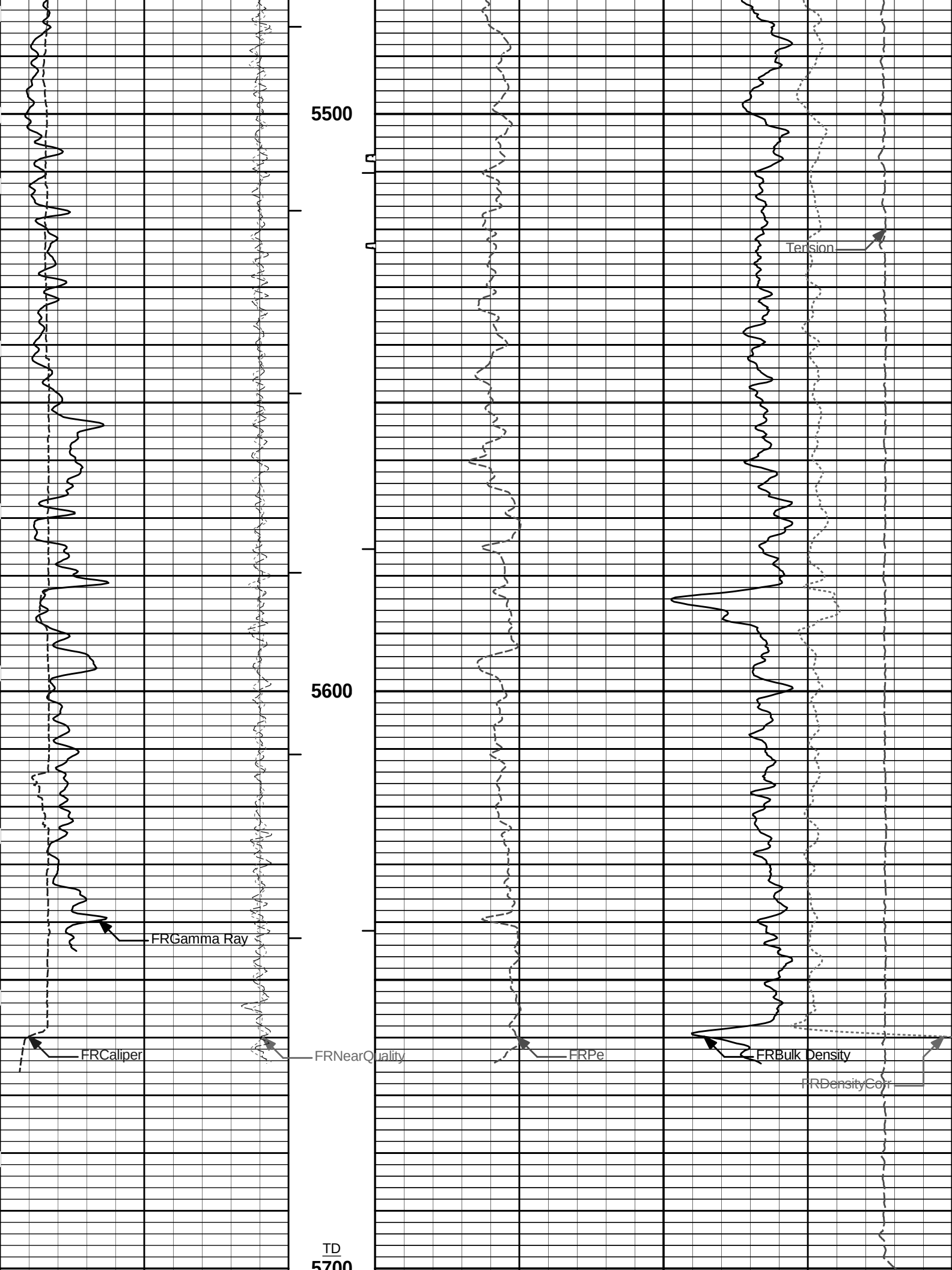
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5600
TD
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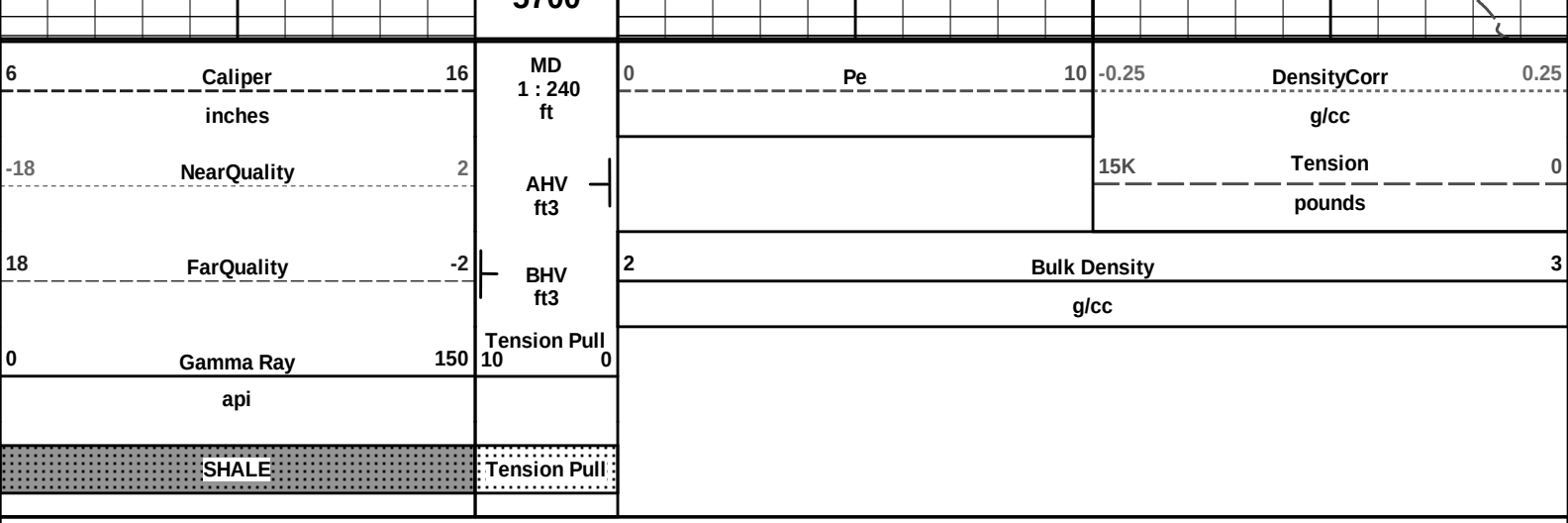
FRGamma Ray
FRCaliper
FRNearQuality
FRPe
FRBulk Density
FRDensityCorr
Tension



HALLIBURTON

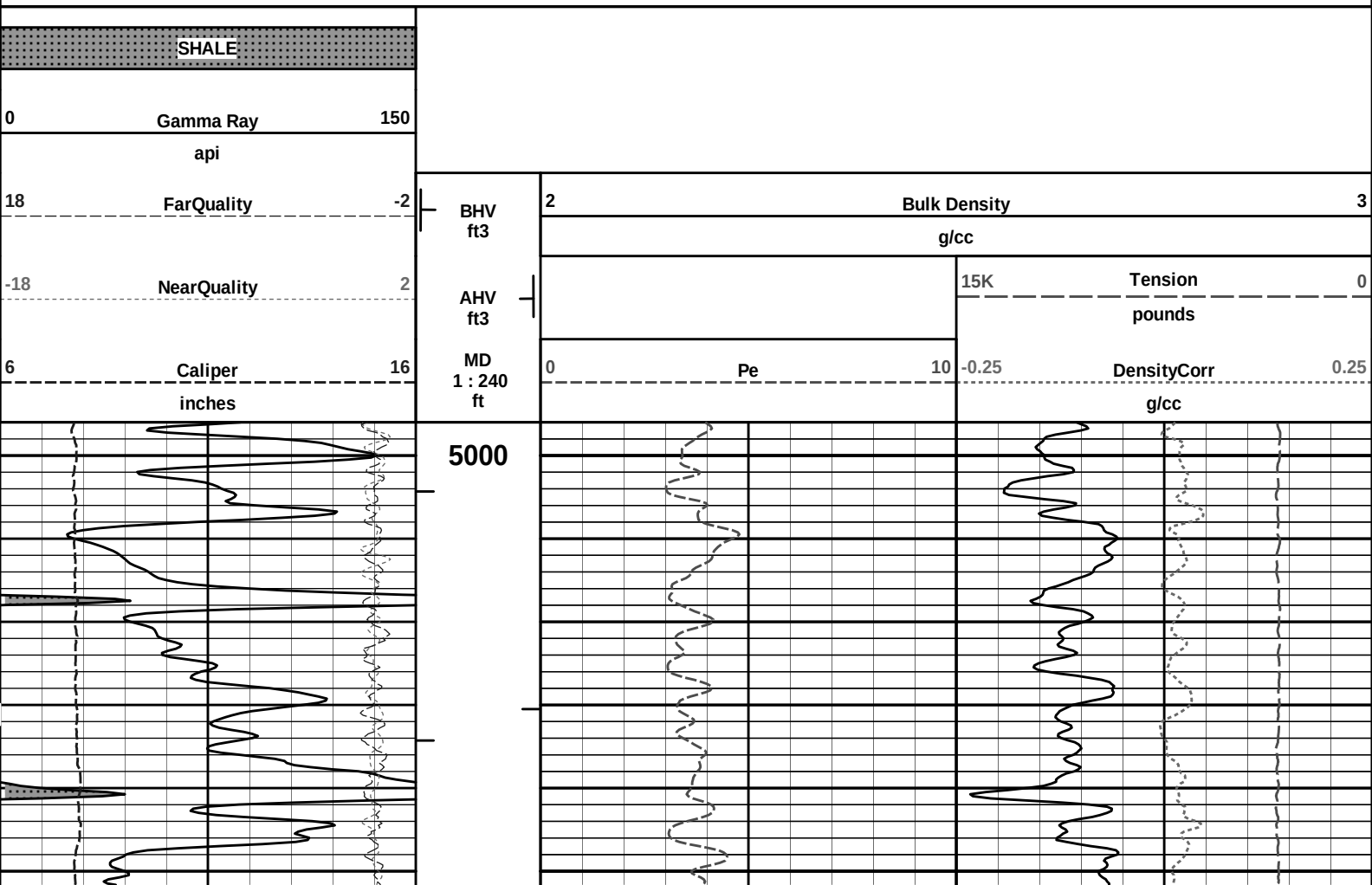
Plot Time: 14-Jul-12 18:33:19
Plot Range: 3996 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_DETAIL\
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\PORO\BULKD_5_MAIN_LIB

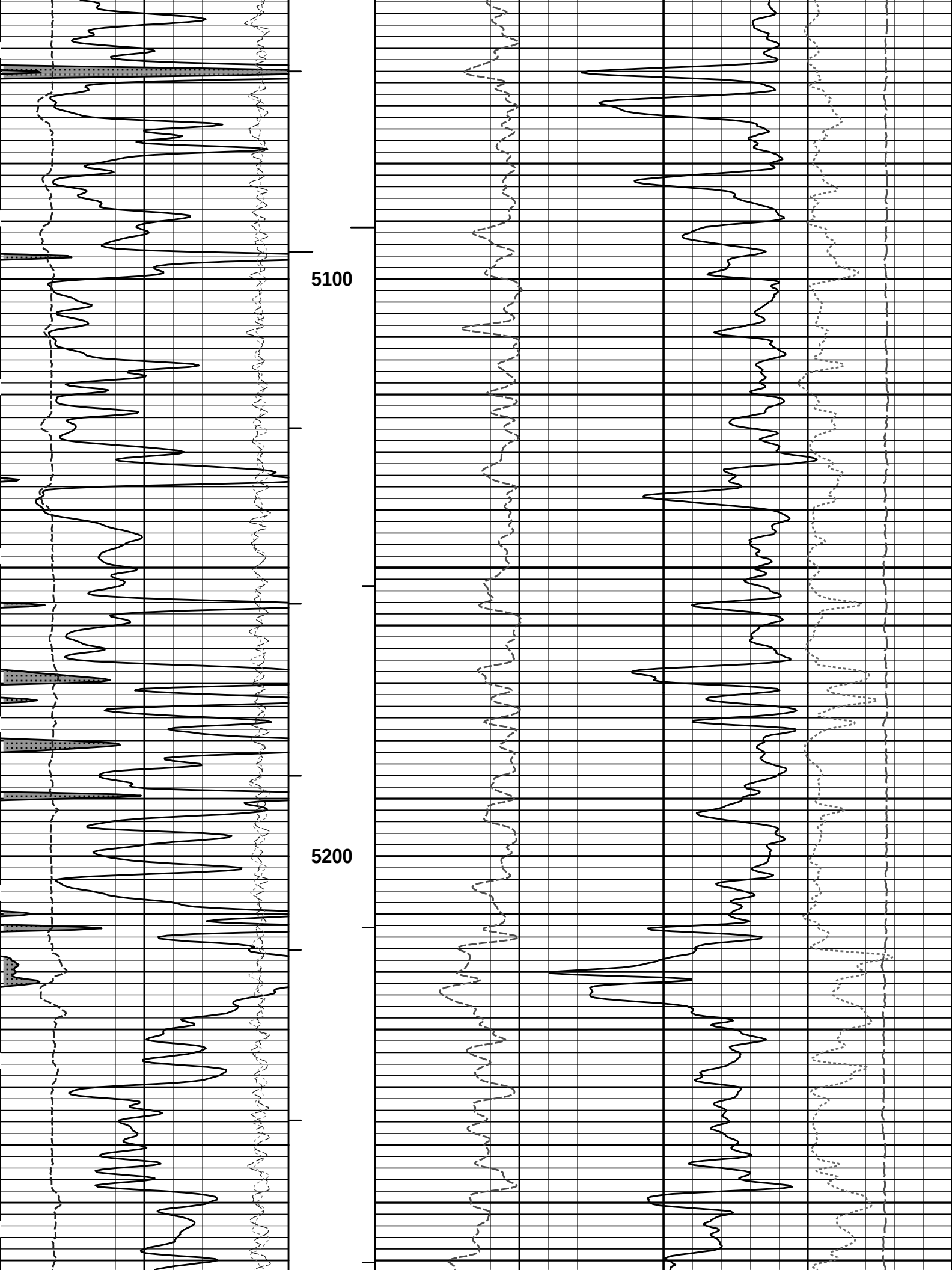
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 14-Jul-12 18:33:19
Plot Range: 4996 ft to 5704.67 ft
Data: FEIGHT_A_8\Well Based\R1_REPEAT\
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\PORO\BULKD_5_REP_LIB

REPEAT SECTION

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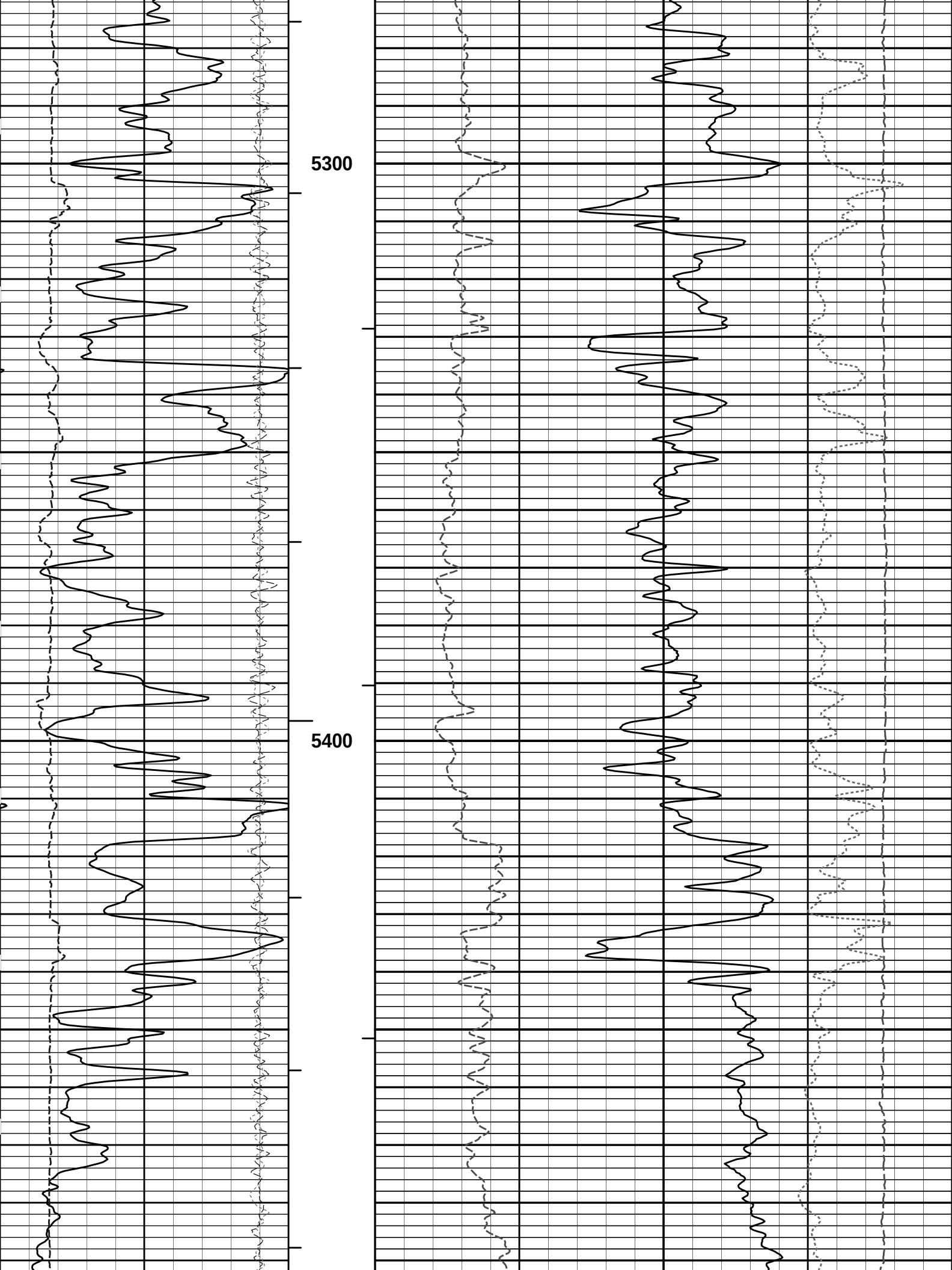
5200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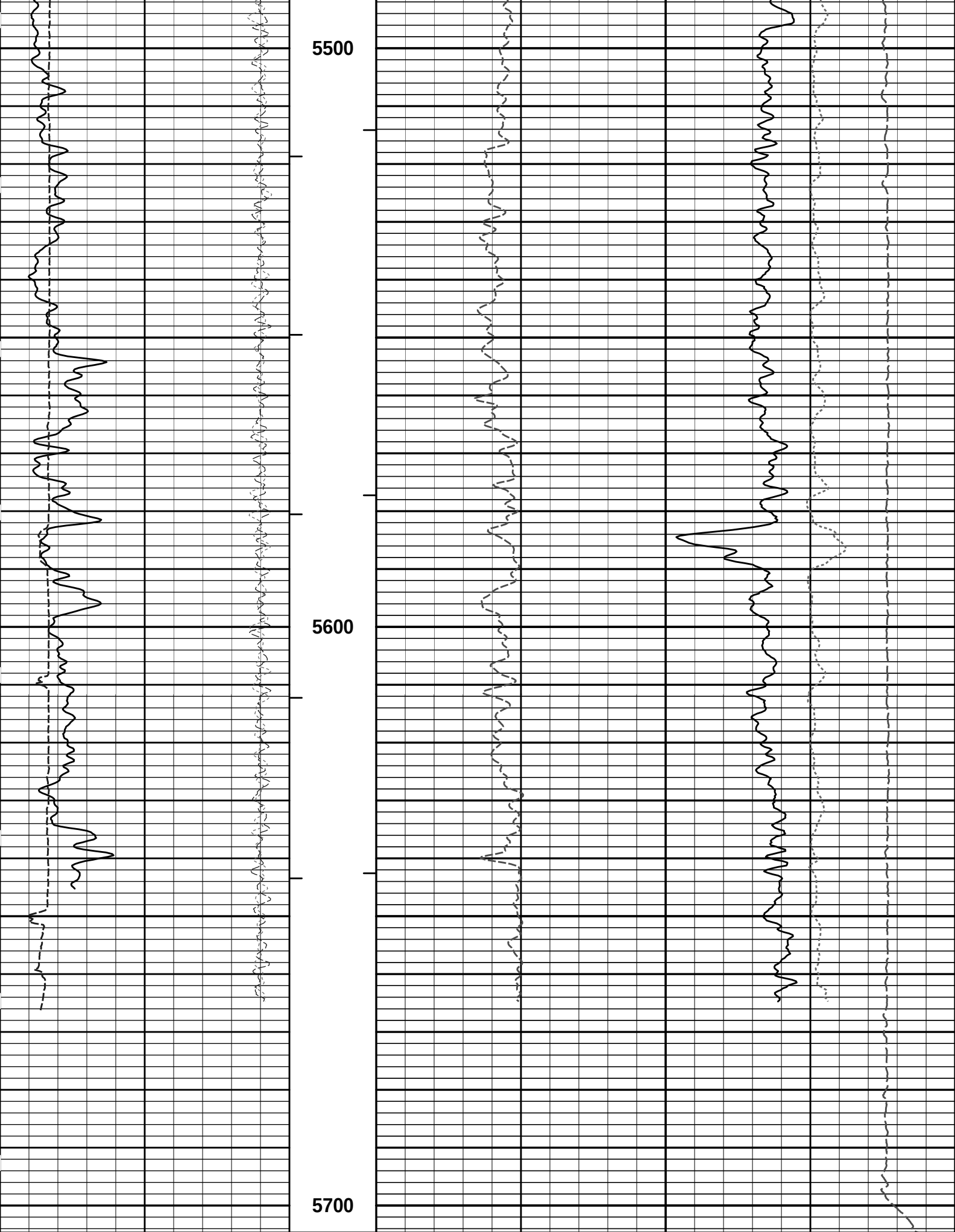

5500
5600
5700
6
Caliper
16
MD
1 : 240
0
Pe
10
-0.25
DensityCorr
0.25

	inches	ft		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

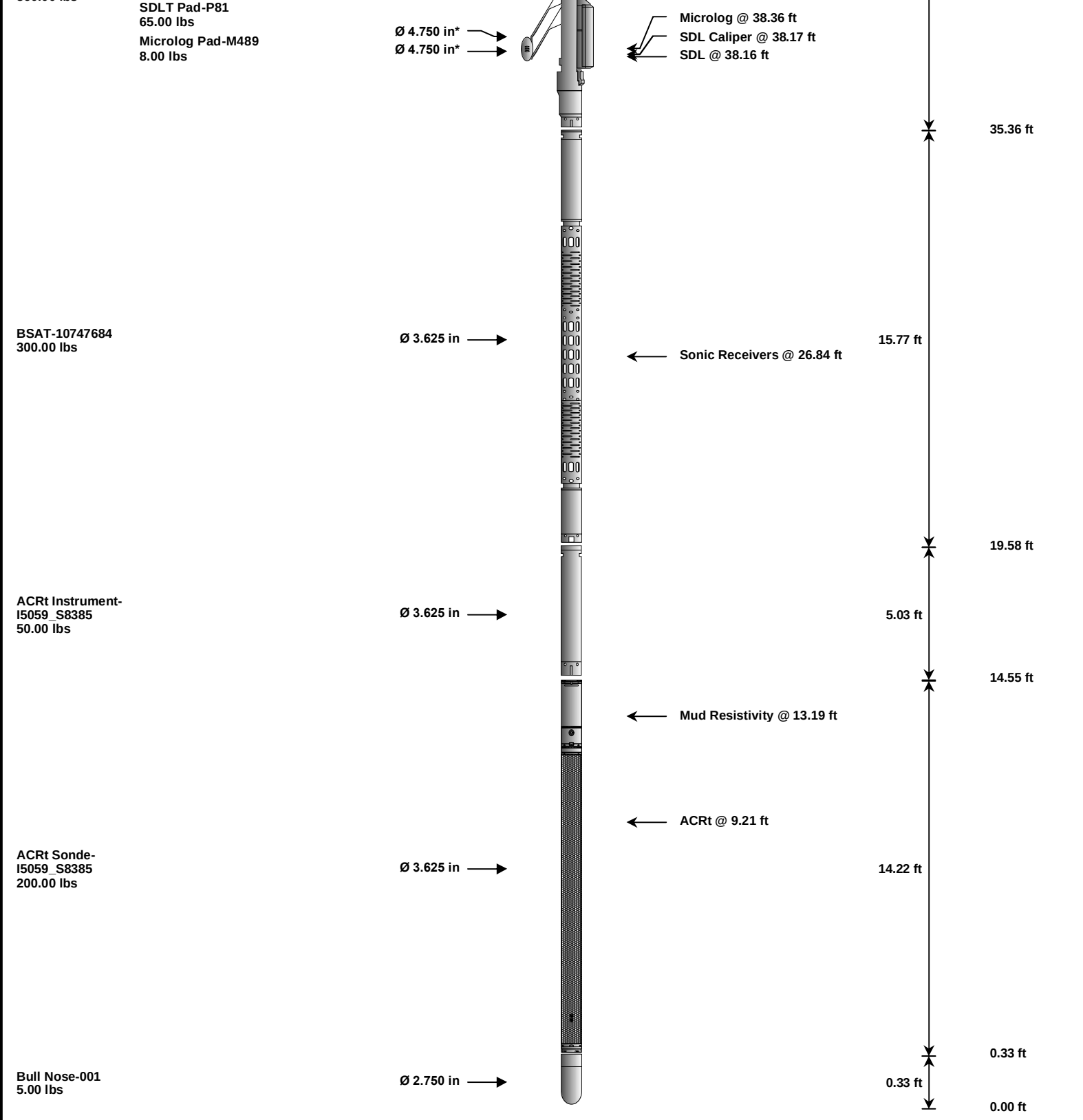
Plot Time: 14-Jul-12 18:33:21
Plot Range: 4996 ft to 5704.67 ft
Data: FEIGHT_A_8\Well Based\R1_REPEAT\
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\PORO\BULKD_5_REP_LIB

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						70.04 ft
Cable Head-PROT01 30.00 lbs		Ø 3.625 in →			1.92 ft	
						68.12 ft
SP Sub-11441455 60.00 lbs		Ø 3.625 in →		← SP @ 66.34 ft	3.74 ft	
						64.38 ft
GTET-11039640 165.00 lbs		Ø 3.625 in →		← GammaRay @ 58.32 ft	8.52 ft	
						55.86 ft
	DSN Decentralizer-10755066 6.60 lbs	Ø 5.000 in* →				
DSNT-11019643 174.00 lbs		Ø 3.625 in →		← DSN Far @ 48.92 ft ← DSN Near @ 48.17 ft	9.69 ft	
						46.17 ft
SDLT-I43_M489 360.00 lbs		Ø 4.500 in →			10.81 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		68.12	300.00
SP	SP Sub	11441455	60.00	3.74		64.38	300.00
GTET	Gamma Telemetry Tool	11039640	165.00	8.52		55.86	60.00
DSNT	Dual Spaced Neutron	11019643	174.00	9.69		46.17	60.00
DCNT	DSN Decentralizer	10755066	6.60	5.13	*	49.50	300.00
SDLT	Spectral Density Tool	I43_M489	360.00	10.81		35.36	60.00
MICP	Microlog Pad	M489	8.00	1.00	*	37.86	60.00
SDLP	Density Insite Pad	P81	65.00	2.55	*	37.57	60.00
BSAT	Borehole Sonic Array Tool	10747684	300.00	15.77		19.58	60.00
ACRt	Array Compensated True Resistivity Instrument Section	I5059_S8385	50.00	5.03		14.55	300.00
ACRt	Array Compensated True Resistivity Sonde Section	I5059 S8385	200.00	14.22		0.33	300.00
BLNS	Bull Nose	001	5.00	0.33		0.00	300.00

Total	**1,423.60**	**70.04**

* Not included in Total Length and Length Accumulation.

Data: FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\IDLE **Date: 14-Jul-12 14:37:45**

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	**GTET - 11039640**	**Reference Calibration Date:**	**17-May-12 09:57:29**
Engineer:	**THOMAS HYDE**	**Calibration Date:**	**14-Jun-12 08:57:44**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB146

Calibrator API Reference:265.00 api

Equivalent Calibrator API Reference:269.6 api

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

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	**GTET - 11039640**	**Reference Calibration Date:**	**14-Jun-12 08:57:44**
Engineer:	**C. HAVERKAMP**	**Calibration Date:**	**14-Jul-12 13:45:19**
Software Version:	**WL INSITE R3.6.0 (Build 3)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB146

Calibrator API Reference:265.00 api

Equivalent Calibrator API Reference:269.6 api

Field Verification	Shop	Field	Units
Background	51.0	36.2	api
Background + Calibrator	320.7	307.9	api
Calibrator	269.6	271.7	api

Shop	Field	Difference	Tolerance
269.6	271.7	-2.1	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	**DSNT - 11019643**	**Reference Calibration Date:**	**13-Jul-12 10:27:47**
Engineer:	**T. HYDE**	**Calibration Date:**	**13-Jul-12 10:44:01**
Software Version:	**WL INSITE R3.6.0 (Build 3)**	**Calibration Version:**	**1**

Logging Source S/N: 696

Tank Serial Number: LIBERAL_NEUTRON

Reference value assigned to Tank: 51.680

Snow Block S/N: 696

Calibration Tank Water Temperature: 78 degF

Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	**Prev. Value**	**New Value**	**Control Limit On New Value**
Gain:	0.949	0.947	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)				
Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decp):	0.2113	0.2110	0.0003	+/- 0.0020
Calibrated Ratio:	9.74	9.73	0.011	+/- 0.050

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

PASS/FAIL SUMMARY	
Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name: DSNT - 11019643
Reference Calibration Date: 13-Jul-12 10:44:01
Engineer: C. HAVERKAMP
Calibration Date: 14-Jul-12 13:48:43
Software Version: WL INSITE R3.6.0 (Build 3)
Calibration Version: 1

Logging Source S/N: 696

Snow Block S/N: 696

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0636	0.0638	0.0002	+/- 0.0150

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

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - I43_M489
Reference Calibration Date: 12-Jul-12 11:52:19
Engineer: T. HYDE
Calibration Date: 12-Jul-12 11:56:20
Software Version: WL INSITE R3.6.0 (Build 3)
Calibration Version: 1
Host Tool Name: DSNT - 11019643

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1931.94	-2130.51	-7000.00 - -1000.00
Pad Gain	0.0003956	0.0004016	0.000200 - 0.000600
Arm Offset	-746.21	-714.63	-5000.00 - 3000.00
Arm Gain	0.0005387	0.0005524	0.000300 - 0.000700
Arm Power	-0.000007005	-0.000007671	-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)	2.05	2.00	-0.05	+/- 0.20
Medium Ring (in)	3.77	3.75	-0.02	+/- 0.20

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

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

PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name: SDLT Pad - P81 **Reference Calibration Date:** 12-Jul-12 11:10:03

Engineer: T. HYDE **Calibration Date:** 12-Jul-12 11:29:25

Software Version: WL INSITE R3.6.0 (Build 3) **Calibration Version:** 1

Logging Source S/N: 5168GW

Aluminum Block S/N: LIBERAL Density: 2.598g/cc Pe: 3.170

Magnesium Block S/N: LIBERAL Density: 1.684g/cc Pe: 2.598

DENSITY CALIBRATION SUMMARY			
Measurement	**Previous Value**	**New Value**	**Control Limit**
Near Bar Gain	1.0494	1.0276	0.90 - 1.10
Near Dens Gain	1.0245	1.0237	0.90 - 1.10
Near Peak Gain	1.0209	1.0117	0.90 - 1.10
Near Lith Gain	0.9944	0.9741	0.90 - 1.10
Far Bar Gain	1.0166	1.0157	0.90 - 1.10
Far Dens Gain	1.0025	1.0013	0.90 - 1.10
Far Peak Gain	0.9952	0.9951	0.90 - 1.10
Far Lith Gain	0.9728	0.9724	0.90 - 1.10
Near Bar Offset	-0.2421	-0.0440	NONE
Near Dens Offset	-0.0236	-0.0173	NONE
Near Peak Offset	0.0150	0.0901	NONE
Near Lith Offset	0.2244	0.3908	NONE
Far Bar Offset	0.0031	0.0070	NONE
Far Dens Offset	0.1122	0.1198	NONE
Far Peak Offset	0.1497	0.1484	NONE
Far Lith Offset	0.2992	0.3010	NONE
Near Bar Background	820.30	817.64	700 - 1450
Near Dens Background	268.11	268.51	230 - 480
Near Peak Background	118.01	117.58	100 - 210
Near Lith Background	145.20	145.39	125 - 260
Far Bar Background	532.97	531.83	450 - 900
Far Dens Background	209.40	210.36	175 - 345
Far Peak Background	84.28	85.05	70 - 140
Far Lith Background	86.17	86.29	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	**Current Reading (Previous Coef)**	**Calibrated (New Coef)**	**Change**	**Control Limit On Change**
MAGNESIUM				
Density (g/cc)	1.683	1.684	0.001	+/- 0.015
Pe	2.552	2.564	0.012	+/- 0.150

Pe	2.552	2.564	0.012	+/- 0.150
ALUMINUM				
Density (g/cc)	2.595	2.598	0.003	+/- 0.01500
Pe	3.127	3.133	0.006	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0001	+/- 0.0110	0.0021	+/- 0.0140
Magnesium Block	0.0001	+/- 0.0110	-0.0011	+/- 0.0140
Aluminum Block	-0.0010	+/- 0.0110	0.0004	+/- 0.0140
Resolution	9.41	6.00 - 11.50	8.86	6.00 - 11.50
Internal Verifier(B+D+P+L)	1349	1200 - 2700	914	800 - 1700

PASS/FAIL SUMMARY

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

SPECTRAL DENSITY FIELD CHECK

Tool Name: SDLT Pad - P81 **Reference Calibration Date:** 12-Jul-12 11:29:25

Engineer: C. HAVERKAMP **Calibration Date:** 14-Jul-12 13:45:30

Software Version: WL INSITE R3.6.0 (Build 3) **Calibration Version:** 1

Pad Temperature: 97.1 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1349.120	1351.585	2.465	14.852
Far (B+D+P+L) cps	913.515	924.478	10.963	16.398
Near Resolution	9.41	9.58	0.170	0.50
Far Resolution	8.86	9.43	0.570	1.00

PASS/FAIL SUMMARY

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

SDLT CALIPER FIELD CALIBRATION

Tool Name: SDLT - I43_M489 **Reference Calibration Date:** 12-Jul-12 11:56:20

Engineer: C. HAVERKAMP **Calibration Date:** 14-Jul-12 13:56:24

Software Version: WL INSITE R3.6.0 (Build 3) **Calibration Version:** 1

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.79	0.04	+/- 0.10
Ring Diameter	8.25	8.20	-0.05	+/- 0.15

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

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11039640						
Gamma Ray Calibrator	269.6	271.7	----------	-2.1	+/- 9.00	api
DSNT-11019643						
Snow-Block Porosity	0.0636	0.0638	----------	-0.0002	+/- 0.0150	decp
SDLT-I43_M489						
Pad Extension	3.75	3.79	----------	-0.04	+/-0.10	in
Ring Diameter	8.25	8.20	----------	0.05	+/-0.15	in
SDLT Pad-P81						
Near(B+D+P+L)	1349.120	1351.585	----------	-2.465	+/-14.852	cps
Far(B+D+P+L)	913.515	924.478	----------	-10.963	+/-16.398	cps

Data: FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\IDLE **Date: 14-Jul-12 17:08:21**

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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	9.600	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	10000.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	0.323	ohmm
	SHARED	TRM	Temperature of Mud	111.0	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	5700.00	ft
	SHARED	BHT	Bottom Hole Temperature	130.0	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?	No	
	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 Upr	
	ACRt Sonde	TPOS	Tool Position	Free Hanging	
	ACRt Sonde	RMOP	Rmud Source	Mud Cell	
	ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
	ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm
	ACRt Sonde	THQY	Threshold Quality	0.50	
	ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm

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	66.34	NO	
SP	Spontaneous Potential	66.34	BLK	1.250
SPR	Raw Spontaneous Potential	66.34	NO	
SPO	Spontaneous Potential Offset	66.34	NO	

GTET				
TPUL	Tension Pull	58.32	NO	
GR	Natural Gamma Ray API	58.32	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	58.32	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	58.32	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	48.07	NO	
RNDS	Near Detector Telemetry Counts	48.17	BLK	1.417
RFDS	Far Detector Telemetry Counts	48.92	TRI	0.583
DNTT	DSN Tool Temperature	48.17	NO	
DSNS	DSN Tool Status	48.07	NO	
ERND	Near Detector Telemetry Counts EVR	48.17	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	48.92	BLK	0.000
ENTM	DSN Tool Temperature EVR	48.17	NO	
SDLT				
TPUL	Tension Pull	38.17	NO	
PCAL	Pad Caliper	38.17	TRI	0.250
ACAL	Arm Caliper	38.17	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 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	

SDLT Pad				
TPUL	Tension Pull	38.16	NO	
NAB	Near Above	37.99	BLK	0.920
NHI	Near Cesium High	37.99	BLK	0.920
NLO	Near Cesium Low	37.99	BLK	0.920
NVA	Near Valley	37.99	BLK	0.920
NBA	Near Barite	37.99	BLK	0.920
NDE	Near Density	37.99	BLK	0.920
NPK	Near Peak	37.99	BLK	0.920
NLI	Near Lithology	37.99	BLK	0.920
NBAU	Near Barite Unfiltered	37.99	BLK	0.250
NLIU	Near Lithology Unfiltered	37.99	BLK	0.250
FAB	Far Above	38.34	BLK	0.250
FHI	Far Cesium High	38.34	BLK	0.250
FLO	Far Cesium Low	38.34	BLK	0.250
FVA	Far Valley	38.34	BLK	0.250
FBA	Far Barite	38.34	BLK	0.250
FDE	Far Density	38.34	BLK	0.250
FPK	Far Peak	38.34	BLK	0.250
FLI	Far Lithology	38.34	BLK	0.250
PTMP	Pad Temperature	38.17	BLK	0.920
NHV	Near Detector High Voltage	37.57	NO	
FHV	Far Detector High Voltage	37.57	NO	
ITMP	Instrument Temperature	37.57	NO	
DDHV	Detector High Voltage	37.57	NO	

Microlog Pad				
TPUL	Tension Pull	38.36	NO	
MINV	Microlog Lateral	38.36	BLK	0.750
MNOR	Microlog Normal	38.36	BLK	0.750

Data: FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\IDLE **Date: 14-Jul-12 14:43:26**

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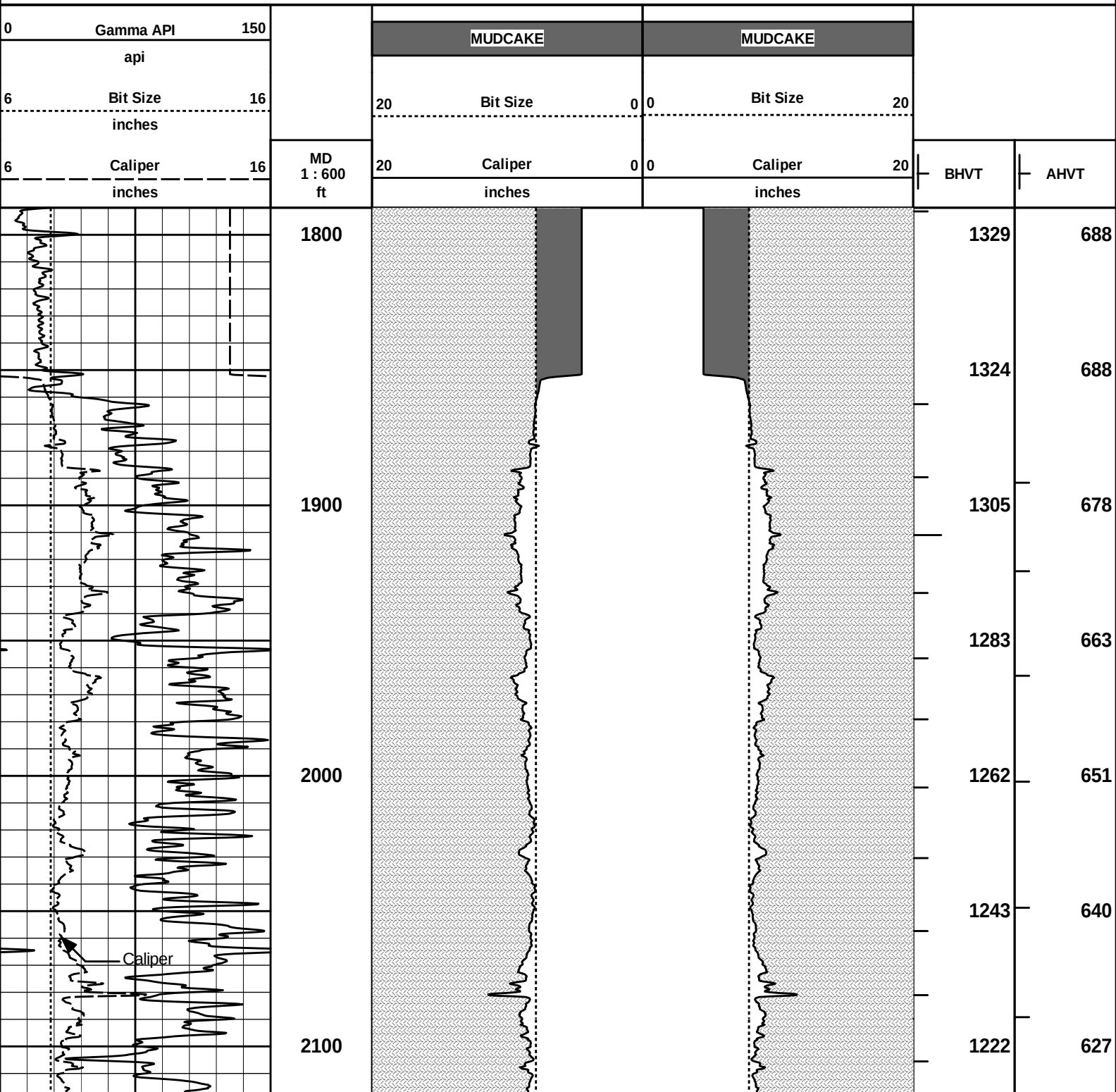
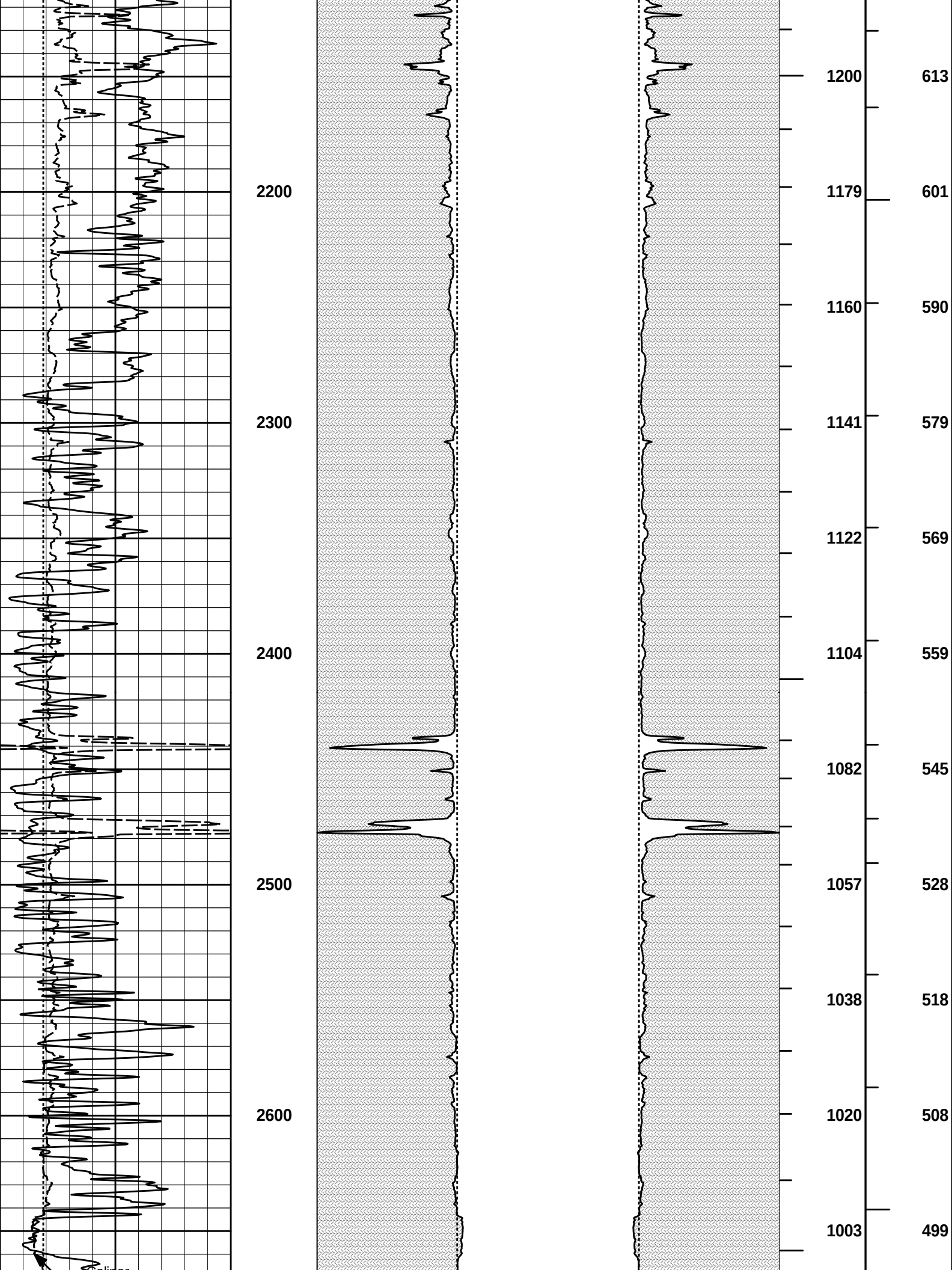
Plot Time: 14-Jul-12 18:33:21
Plot Range: 1790 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_CASING
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\PORO\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

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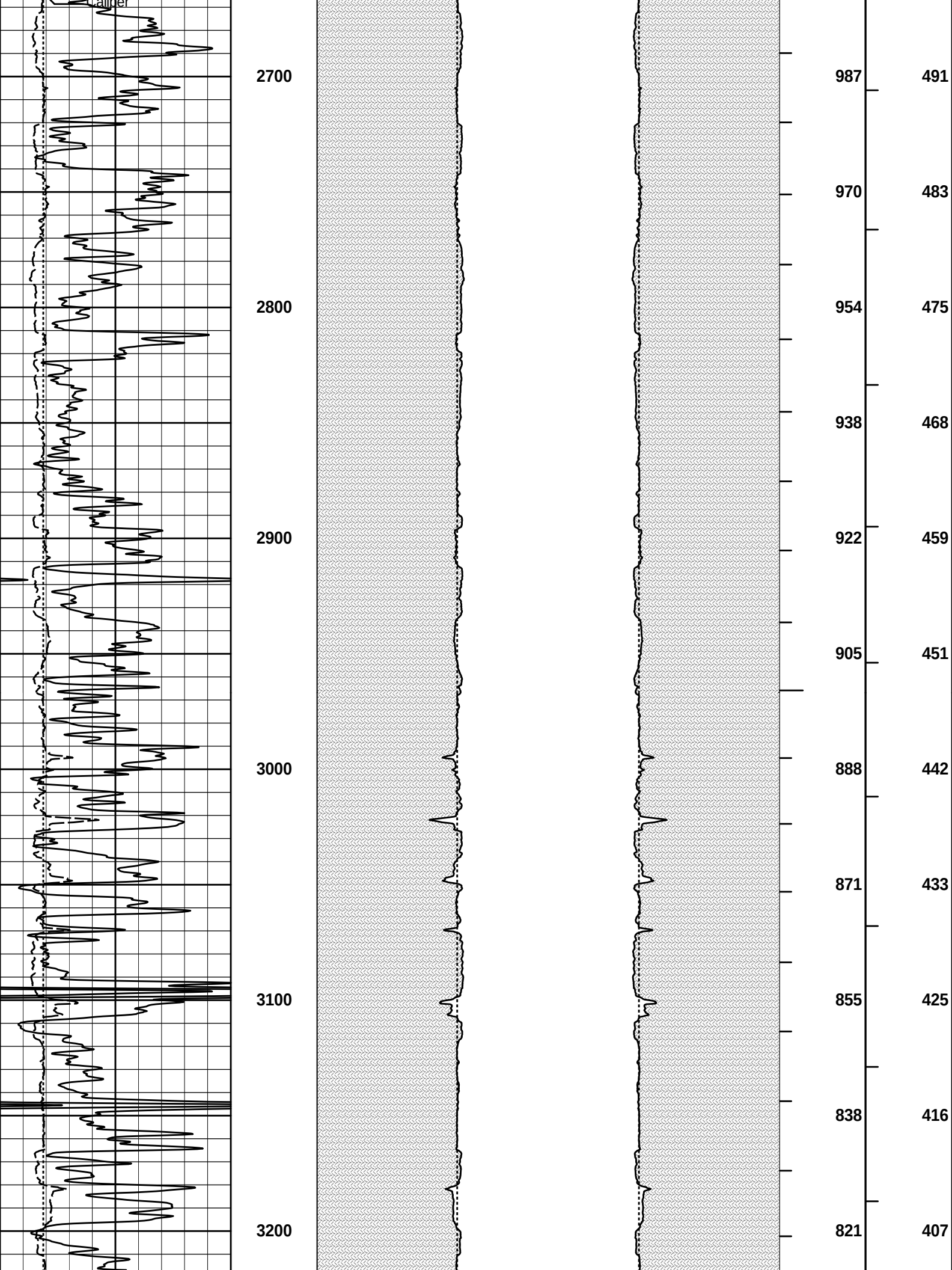
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954
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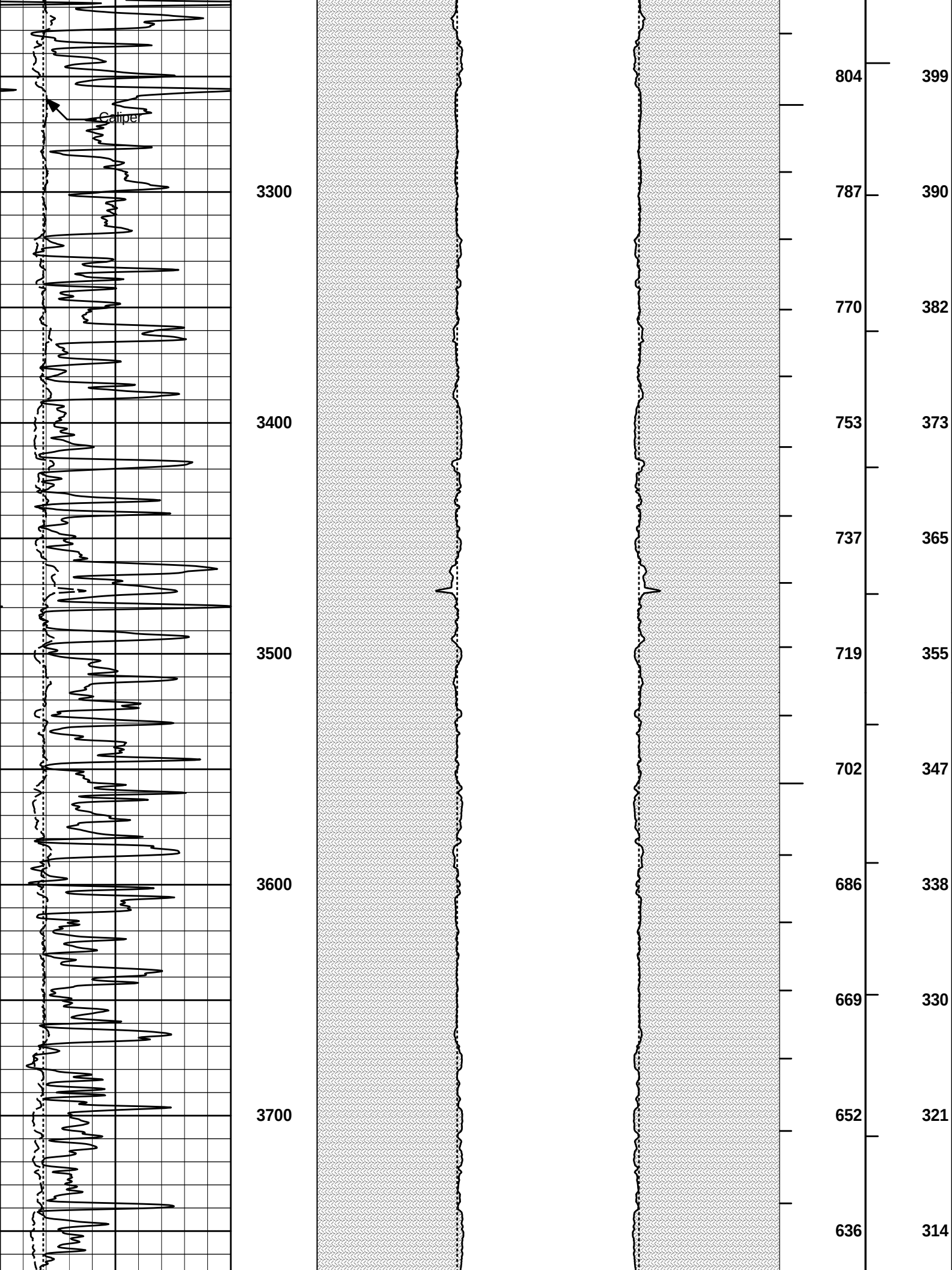
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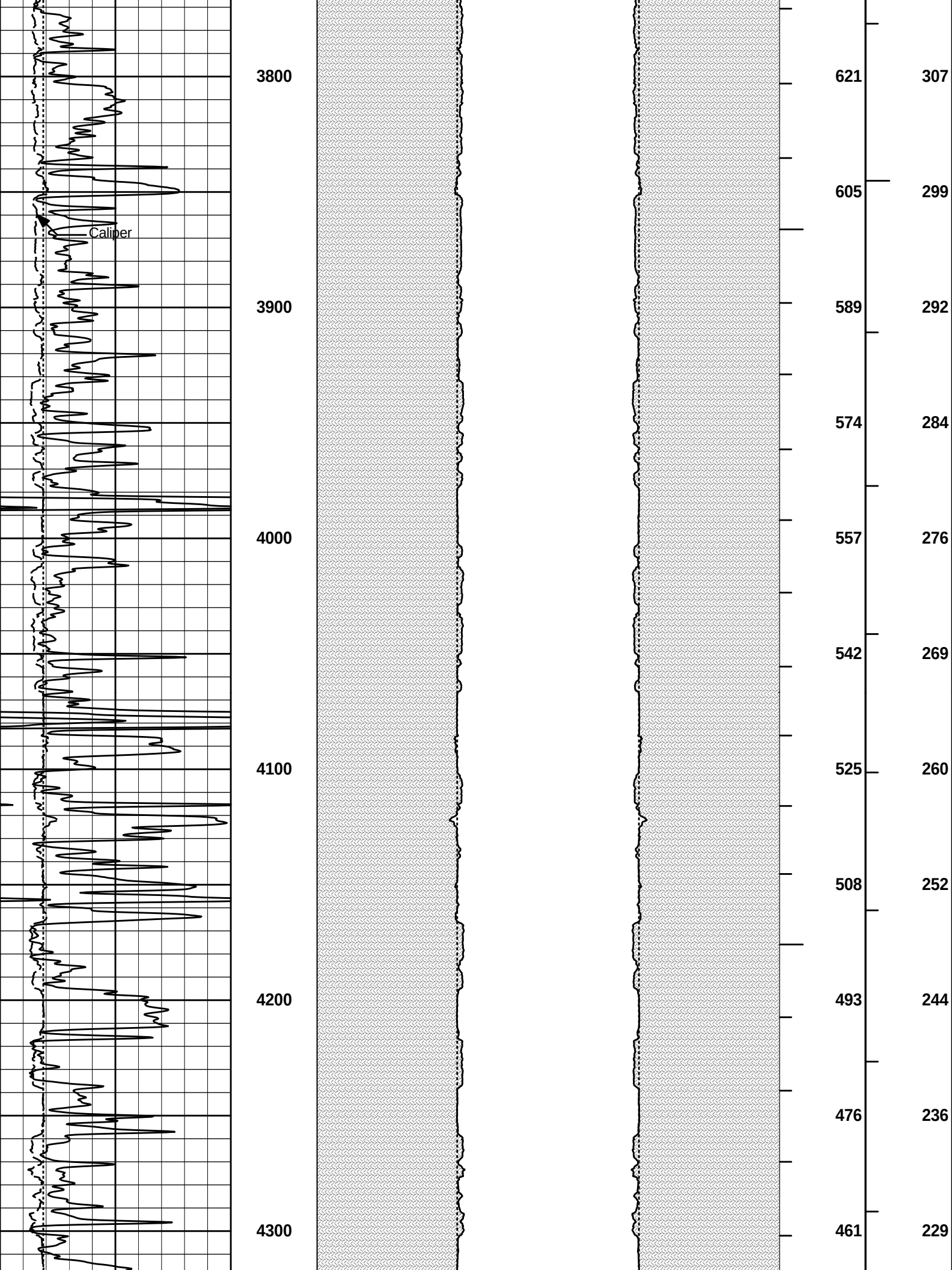
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236
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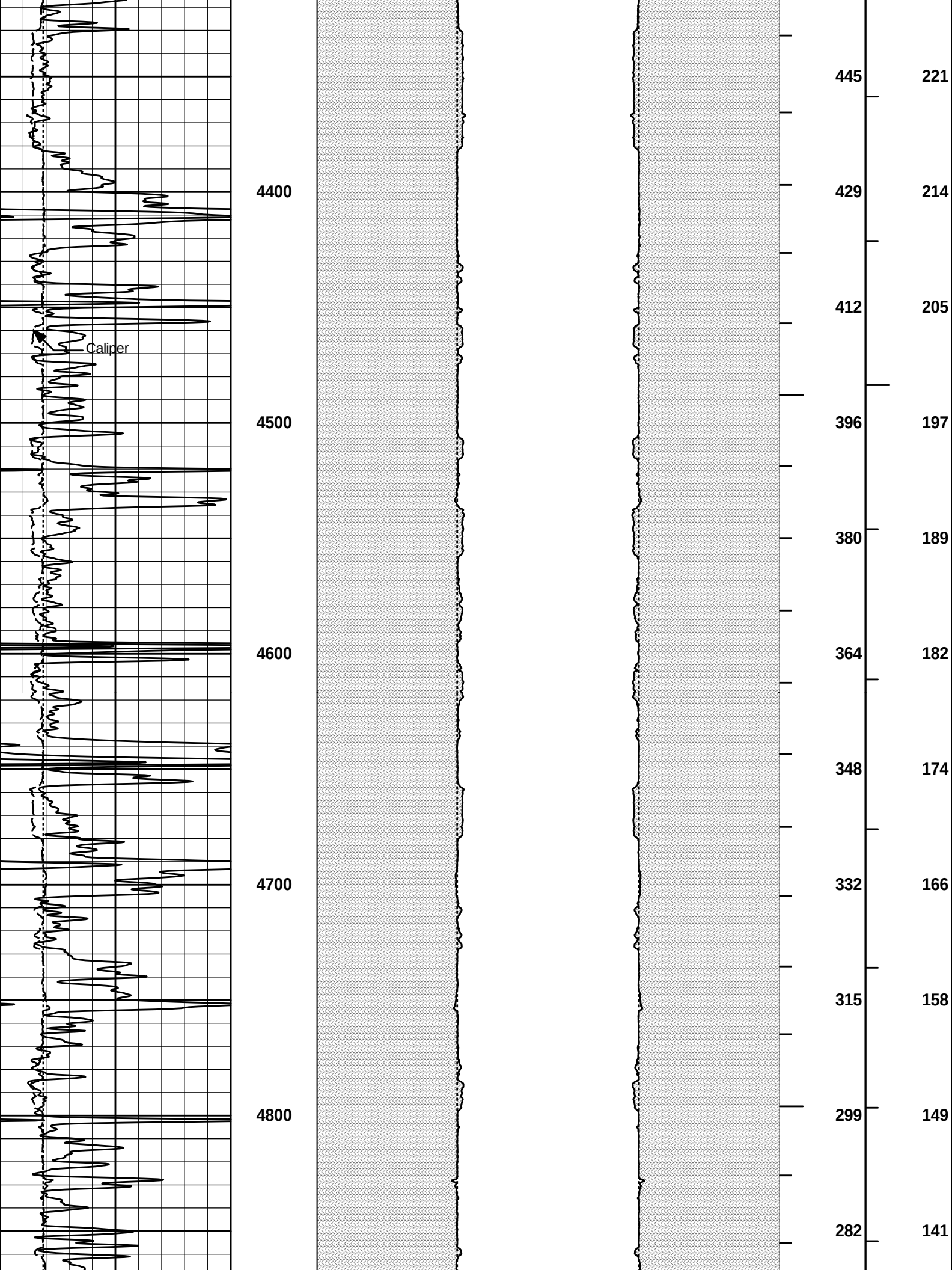
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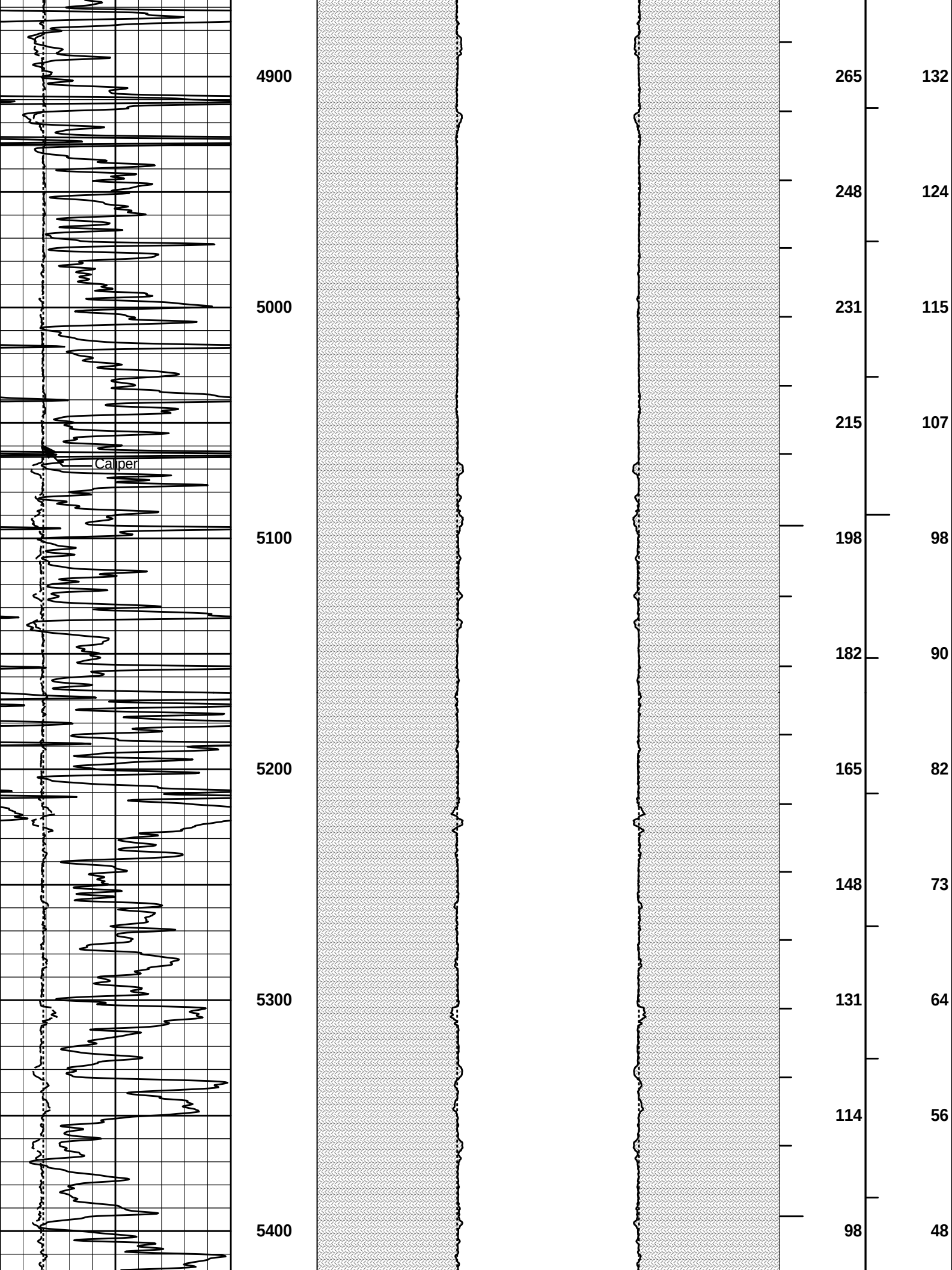
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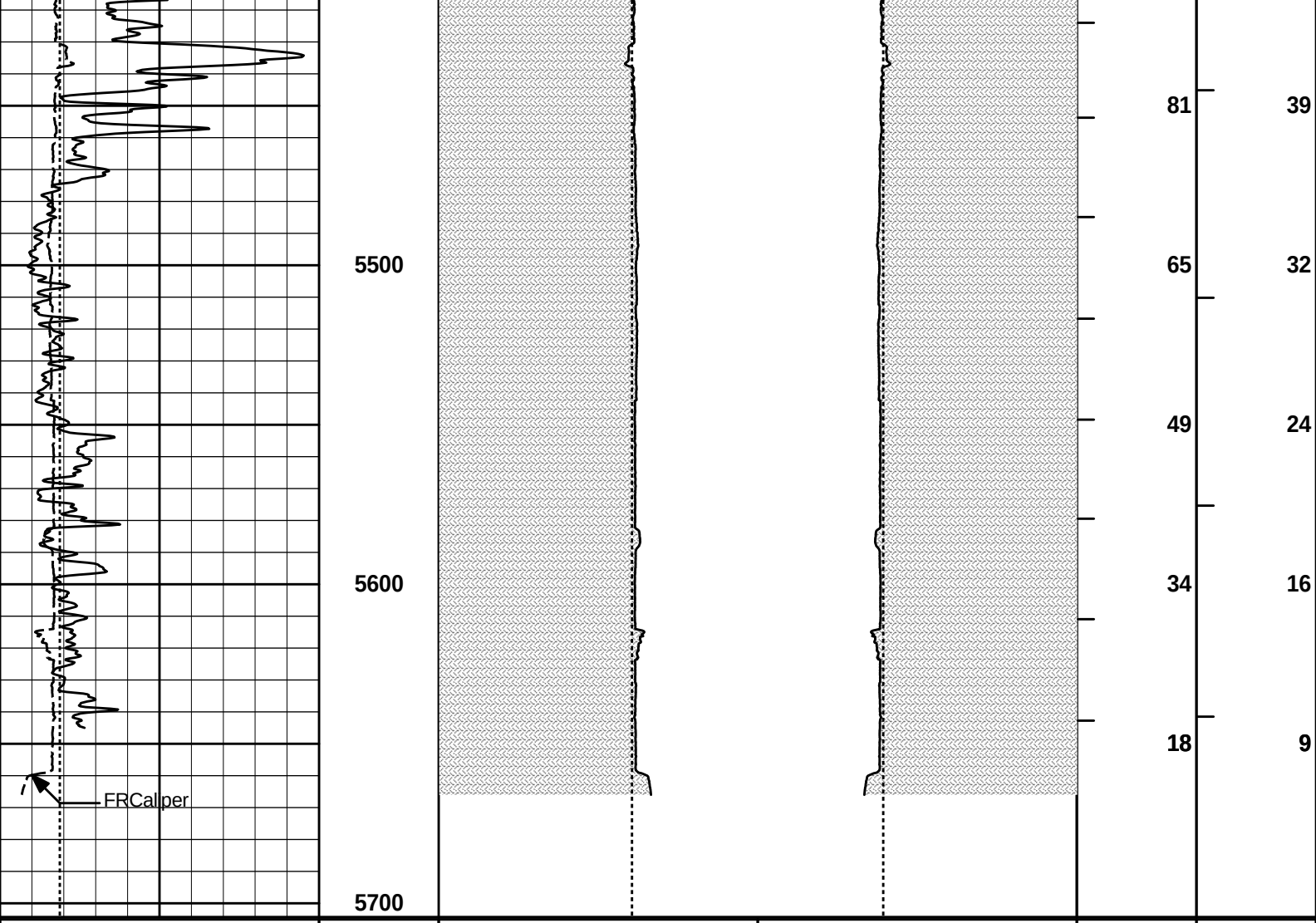
131
114
98
132
124
115
107
98
90
82
73
64
56
48



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

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Plot Time: 14-Jul-12 18:33:33
Plot Range: 1790 ft to 5704.33 ft
Data: FEIGHT_A_8\Well Based\R1_CASING
Plot File: \\-LOCAL-\FEIGHT_A_8\0001 SP-GTET-DSN-SDL-BSAT-ACRT-BN\PORO\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	**OXY USA INC**		
WELL	**FEIGHT A-8**		
FIELD	**VICTORY**		
COUNTY	**HASKELL**	STATE	**KANSAS**

HALLIBURTON

SPECTRAL DENSITY
DUAL SPACED NEUTRON
LOG