

# HALLIBURTON

## SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

COMPANY **VAL ENERGY INC**  
WELL **MYRTLE 3-31**  
FIELD **UNKNOWN**  
COUNTY **BARBER**  
STATE **KANSAS**

COMPANY **VAL ENERGY INC**  
WELL **MYRTLE 3-31**  
FIELD **UNKNOWN**  
COUNTY **BARBER**  
STATE **KANSAS**

API No. 15-007-23711  
Location 495 FNL & 2970 FEL

Other Services:  
ACRT  
MICRO

Sect. 31 Twp. 33S Rge. 10W

Permanent Datum GL Elev. 1468.0 ft  
Log measured from KB 11.0 ft above perm. Datum D.F. 1478.0 ft  
Drilling measured from KB G.L. 1468.0 ft

Date 08-Jun-11

Run No. ONE

Depth - Driller 4992.00 ft

Depth - Logger 4984.0 ft

Bottom - Logged Interval 4862.0 ft

Top - Logged Interval 3550.0 ft

Casing - Driller 8.625 in @ 227.0 ft

Casing - Logger 223.0 ft

Bit Size 7.875 in @

Type Fluid in Hole WATER BASED MUD @

Density 9.2 ppq 58.00 sp/qt

PH 10.50 pH 9.6 cpm

Source of Sample FLOW LINE

Rm @ Meas. Temperature 0.409 ohmm @ 92.00 degF @

Rmf @ Meas. Temperature 0.36 ohmm @ 89.00 degF @

Rmc @ Meas. Temperature 0.450 ohmm @ 90.00 degF @

Source Rmf Rmc MEAS MEAS @

Rm @ BHT 0.32 ohmm @ 120.0 degF @

Time Since Circulation 3.0 hr

Time on Bottom 08-Jun-11 06:52

Max. Rec. Temperature 120.0 degF @ 4984.0 ft @

Equipment Location 10546896 LIBERAL @

Recorded By C. PARKER

Witnessed By Z STEWART

Fold here

Service Ticket No.: 8231875 API Serial No.: 15-007-23711 PGM Version: WL INSITE R3.2.0 (Build 7)

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

Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other
Rm @ Meas. Temp	@	@		
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.	11050378	Serial No.		Serial No.	I04P84	Serial No.	11055304
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.	DSN424
Distance to Source	10'	FWDA [Y/N]		Strength	1.5Ci	Strength	15Ci

LOGGING DATA

Run No.	Depth		Speed ft/min	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
	From	To		L	R	L	R		L	R		L	R	
ONE	TD	3550	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 3000 PPM: LCM 3 #/BBL

GPS COORDINATES: 37° 08' N, 98° 27' W

TODAY'S CREW: A. VASQUES, P. COBLE

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

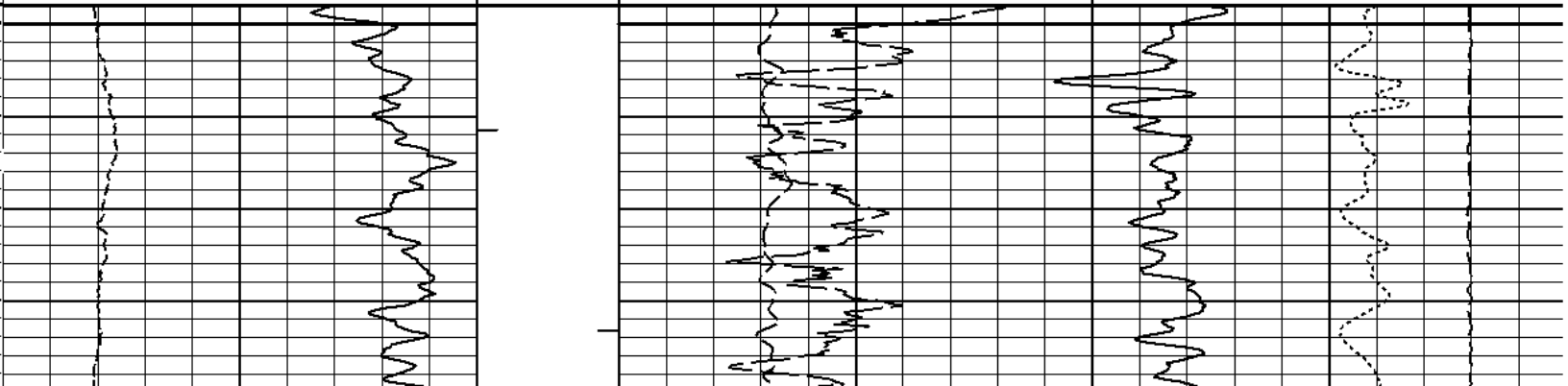
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR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

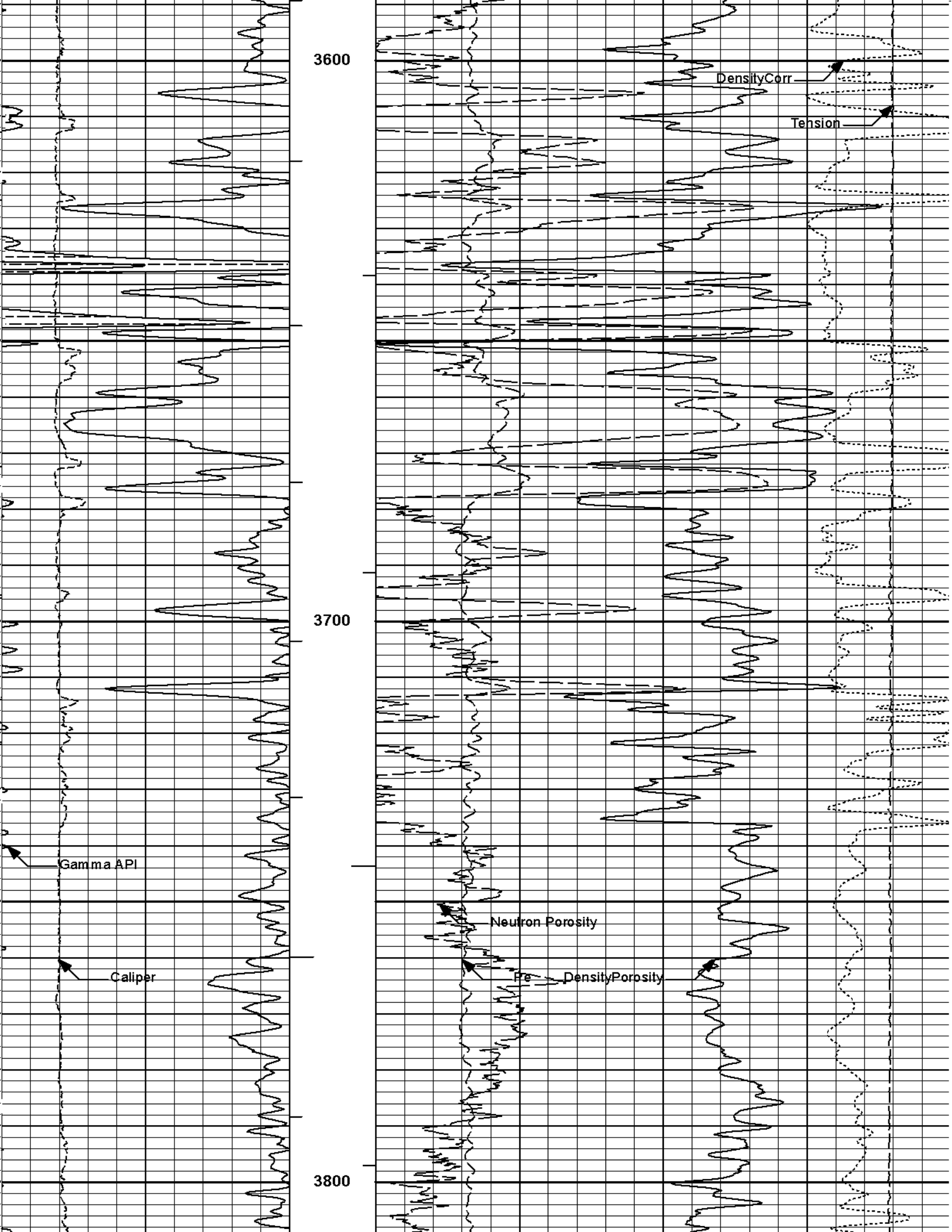
HALLIBURTON

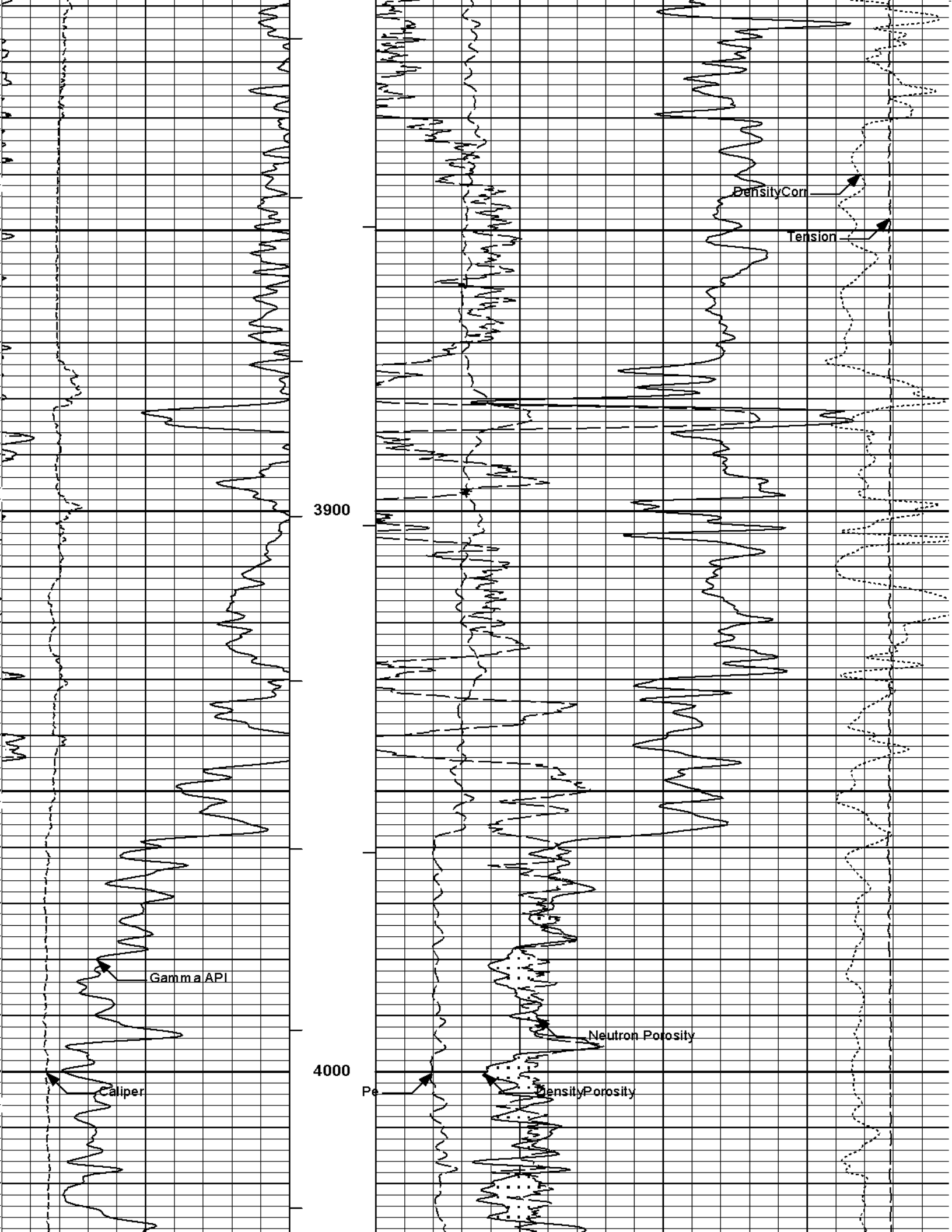
**HALLIBURTON** Plot Time: 08-Jun-11 07:46:44  
 Plot Range: 3548 ft to 4989.75 ft  
 Data: MYRTLE\_3\_31\Well Based\DAQ-0001-0031  
 Plot File: \\PORA\Poros\_IQ\_5\_MAIN\_LIB

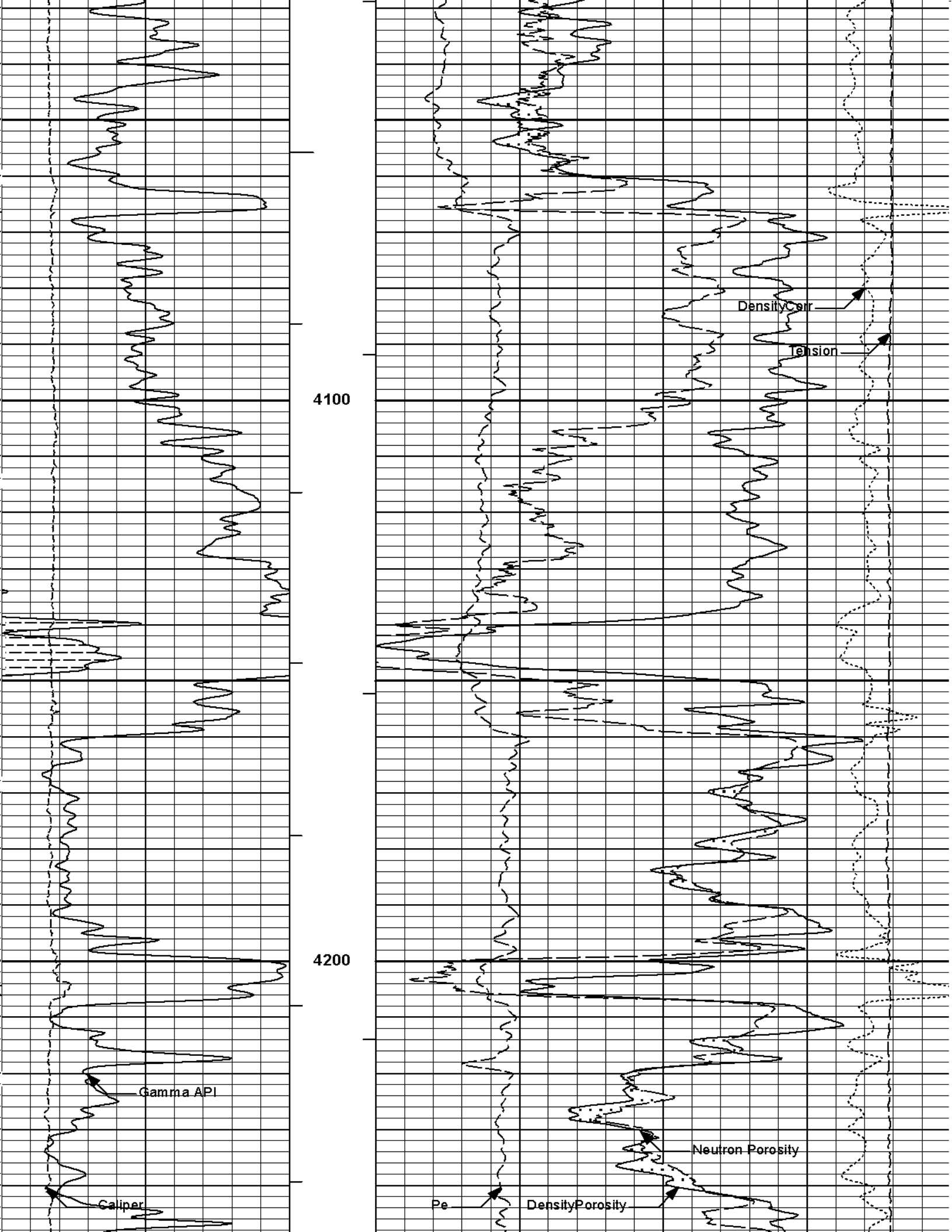
## 5 INCH MAIN LOG

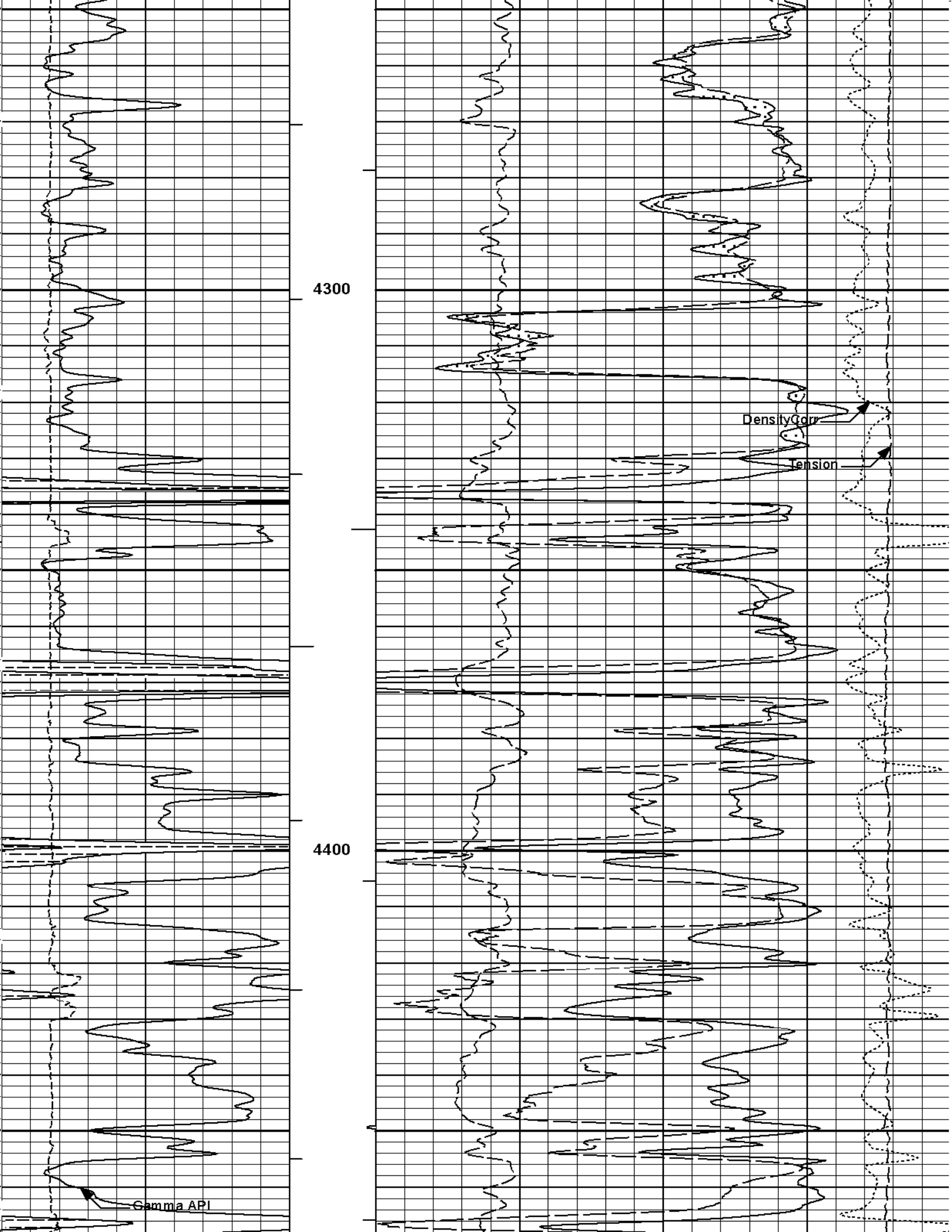
		Tension Pull	..... CROSSOVER .....	
		Tension Pull 30 10 0	Neutron Porosity -10 %	
SHALE		BHVT 30	Density Porosity -10 %	
0	Gamma API 150	AHVT	15K	Tension 0 pounds
6	Caliper 16 inches	1 : 240 ft	0 Pe 10	-0.25 Density Corr 0.25 gram per cc

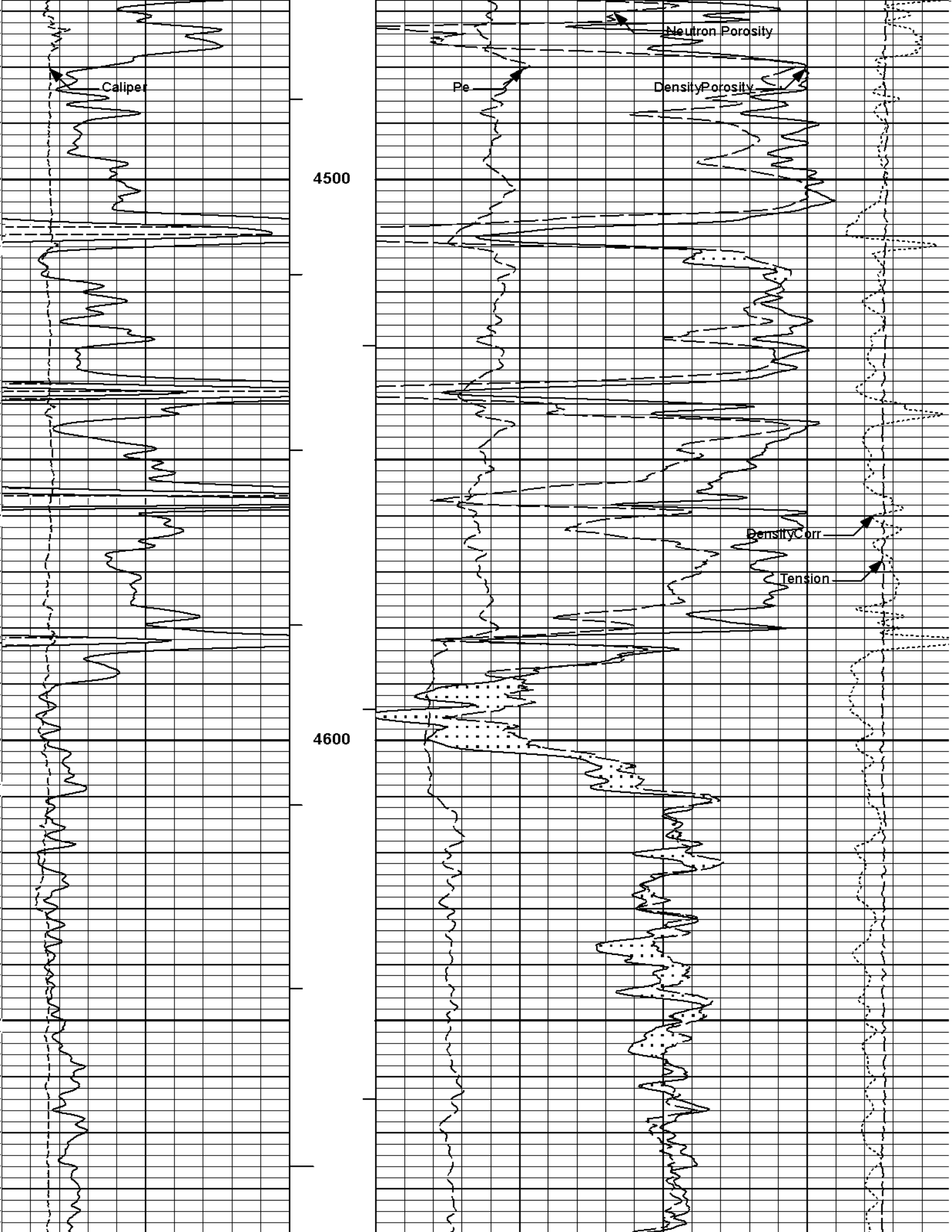


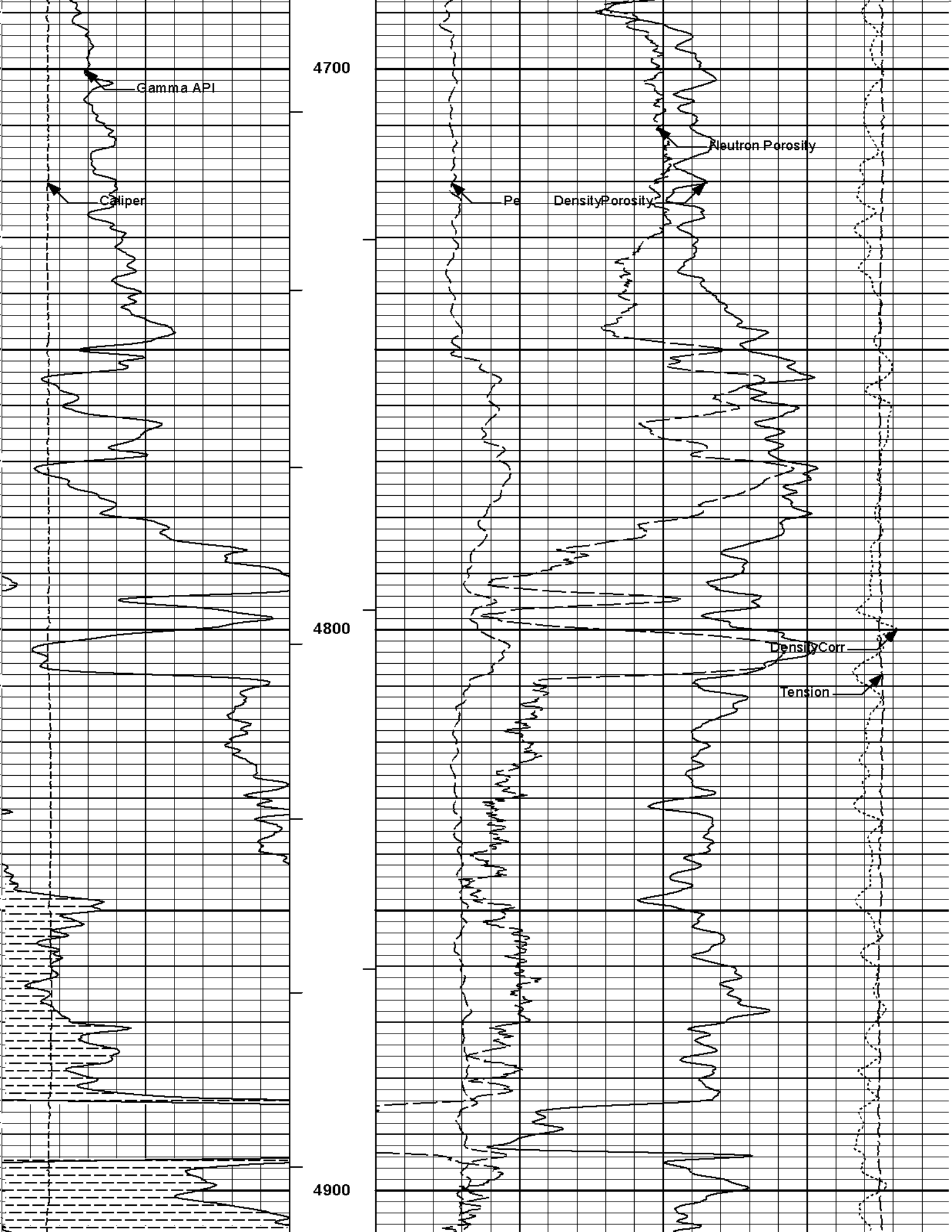




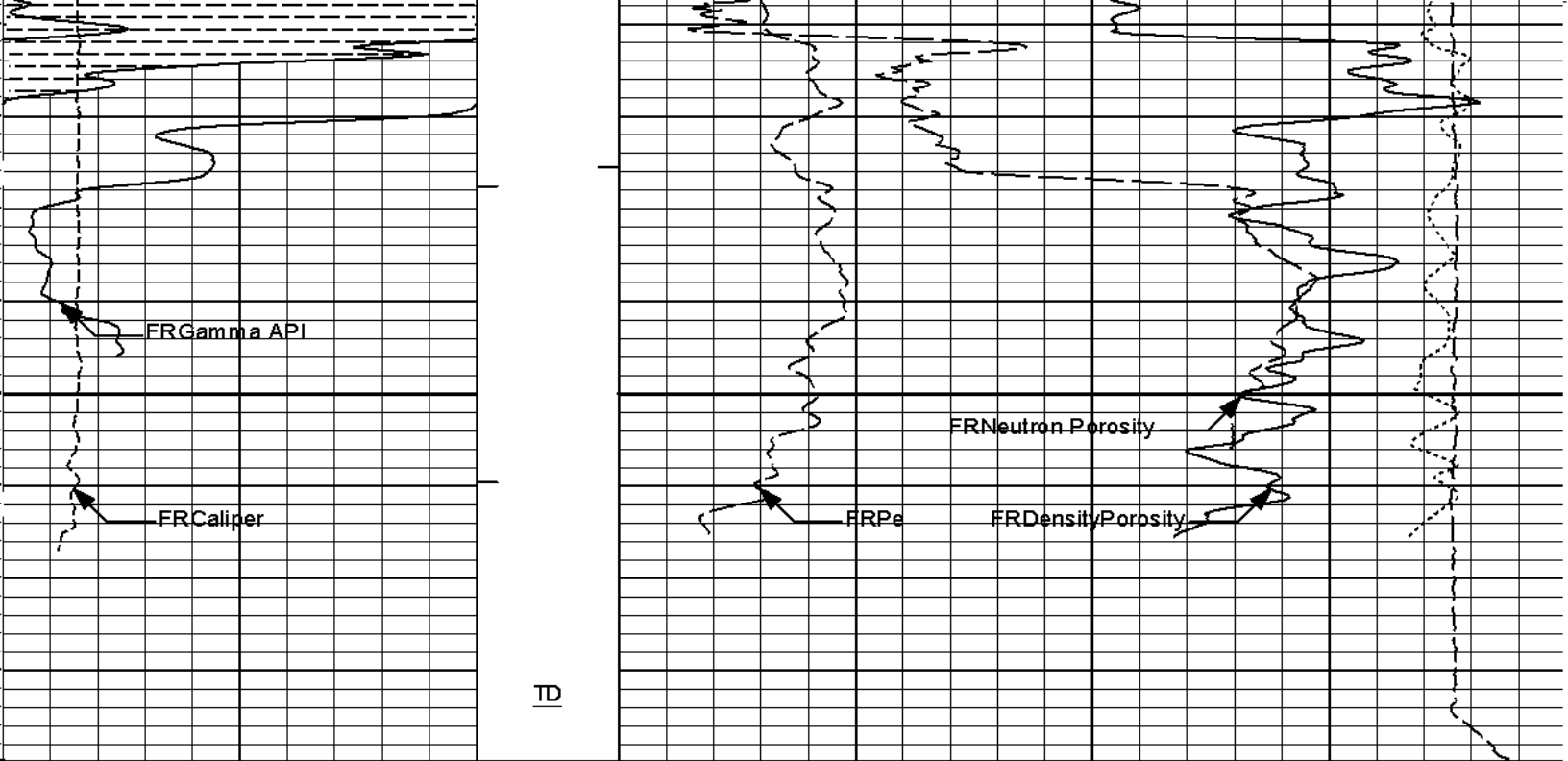












6	Caliper	16	1 : 240 ft	0	Pe	10	-0.25	DensityCorr	0.25	
	inches							gram per cc		
0	Gamma API	150	AHVT				15K	Tension	0	
	api							pounds		
	SHALE		BHVT	30	DensityPorosity				-10	
					%					
			Tension Pull	30	Neutron Porosity				-10	
			10		%					
			Tension Pull	: : : : : CROSSOVER : : : : :						

**HALLIBURTON**

Plot Time: 08-Jun-11 07:46:47  
 Plot Range: 3548 ft to 4989.75 ft  
 Data: MYRTLE\_3\_31\Well Based\DAQ-0001-003\  
 Plot File: \\POROI\Poroi\_IQ\_5\_MAIN\_LIB

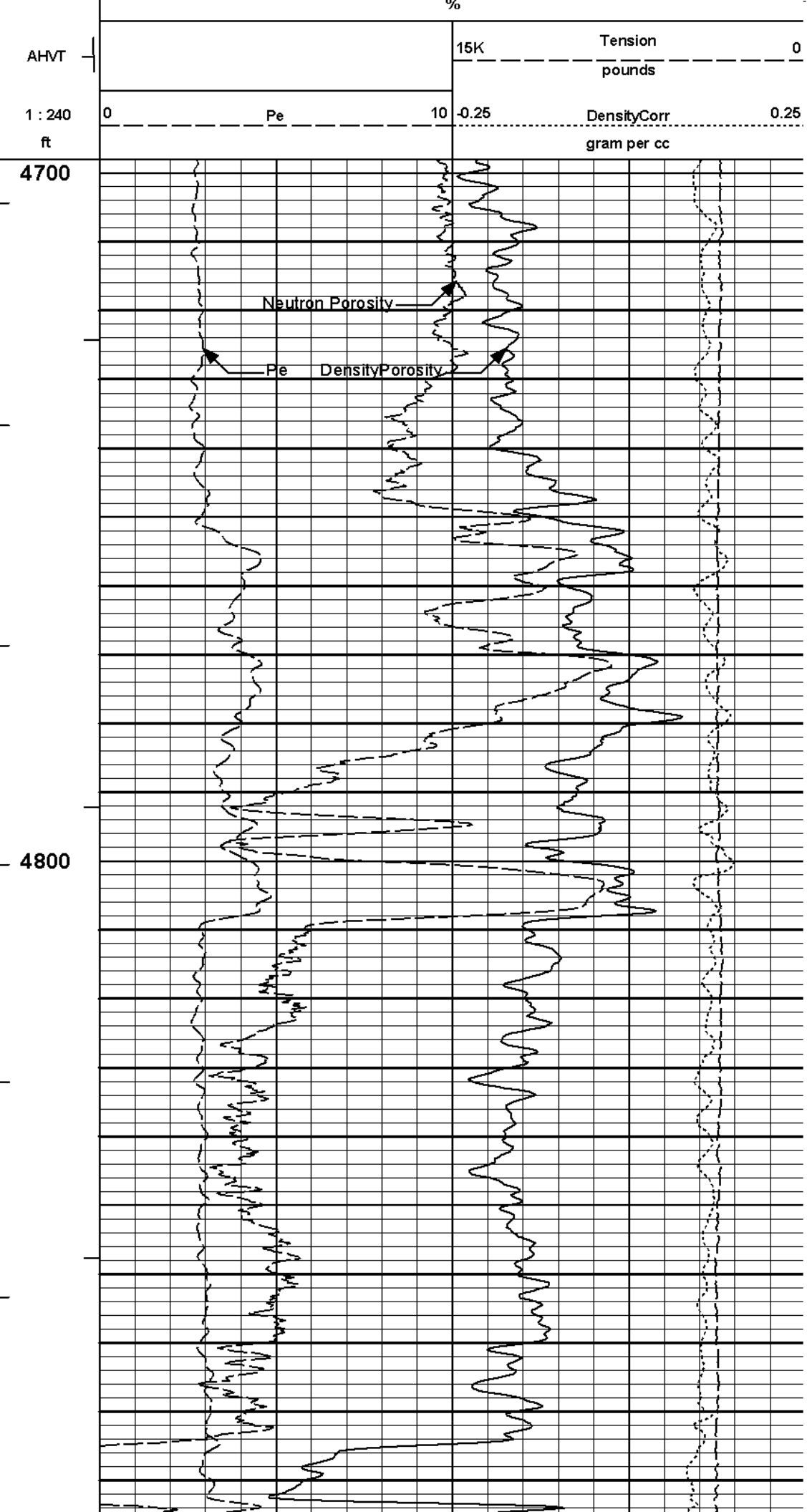
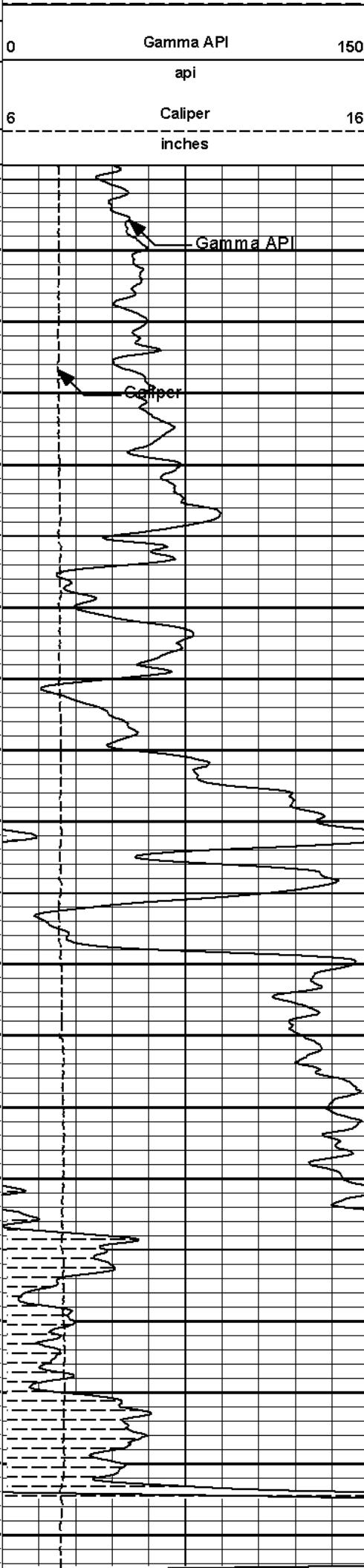
### 5 INCH MAIN LOG

**HALLIBURTON**

Plot Time: 08-Jun-11 07:46:47  
 Plot Range: 4698 ft to 4989.67 ft  
 Data: MYRTLE\_3\_31\Well Based\DAQ-0001-002\  
 Plot File: \\POROI\Poroi\_IQ\_5\_REP\_LIB

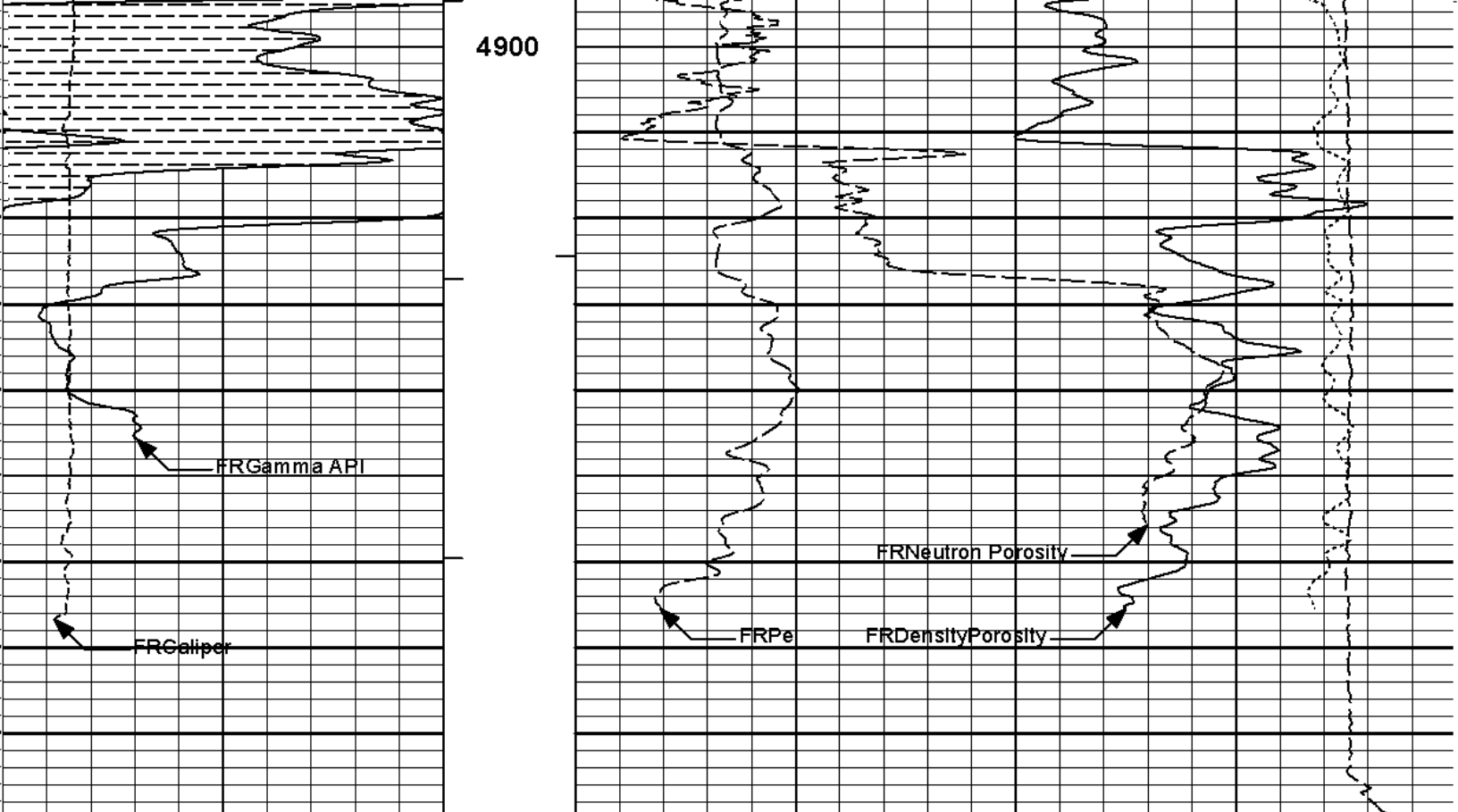
### REPEAT SECTION

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



4700

4800



6	Caliper	16	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				

**HALLIBURTON**

Plot Time: 08-Jun-11 07:46:50  
 Plot Range: 4698 ft to 4989.67 ft  
 Data: MYRTLE\_3\_31\Well Based\DAQ-0001-002\  
 Plot File: \\PORA\Poros\_IQ\_5\_REP\_LIB

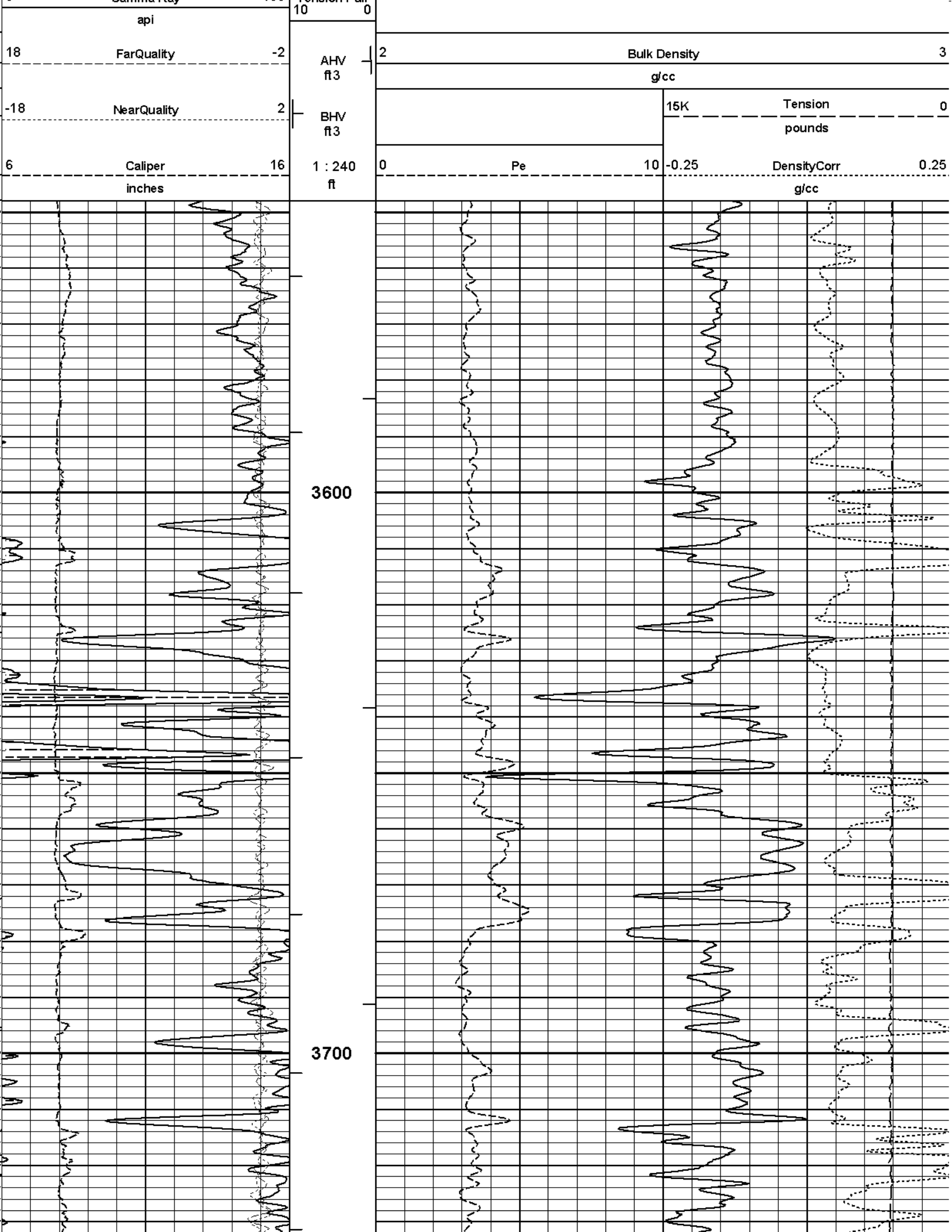
**REPEAT SECTION**

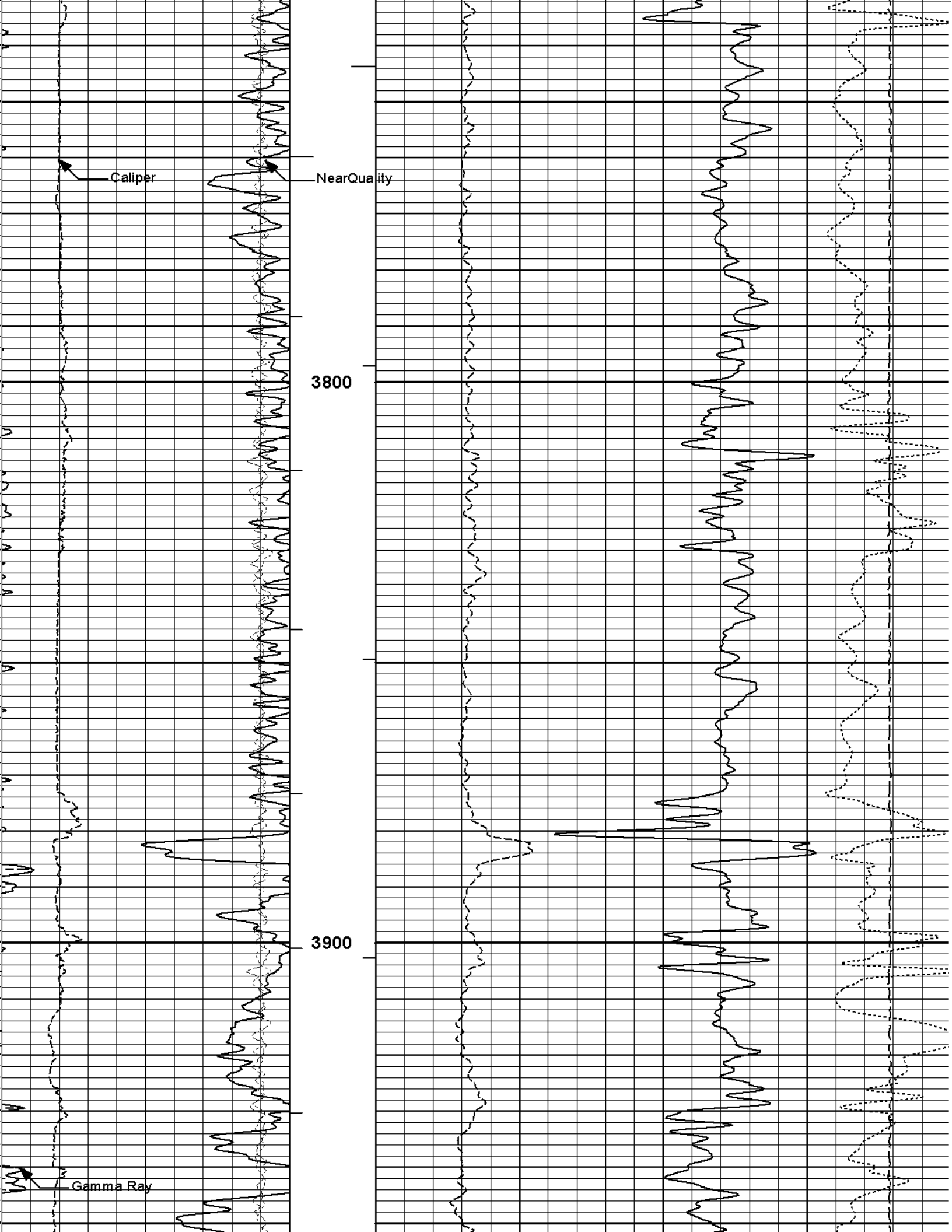
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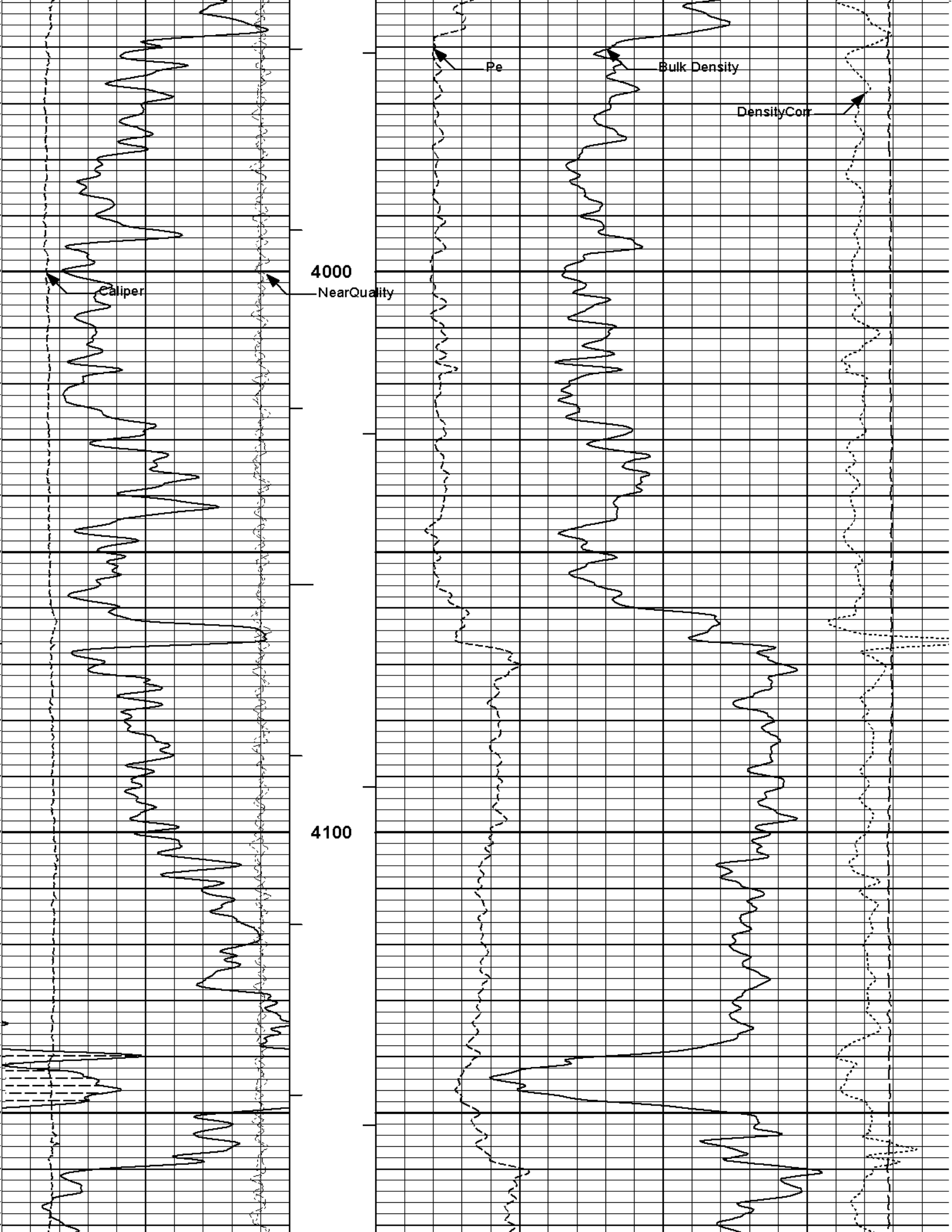
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 Plot Range: 3548 ft to 4989.75 ft  
 Data: MYRTLE\_3\_31\Well Based\DAQ-0001-003\  
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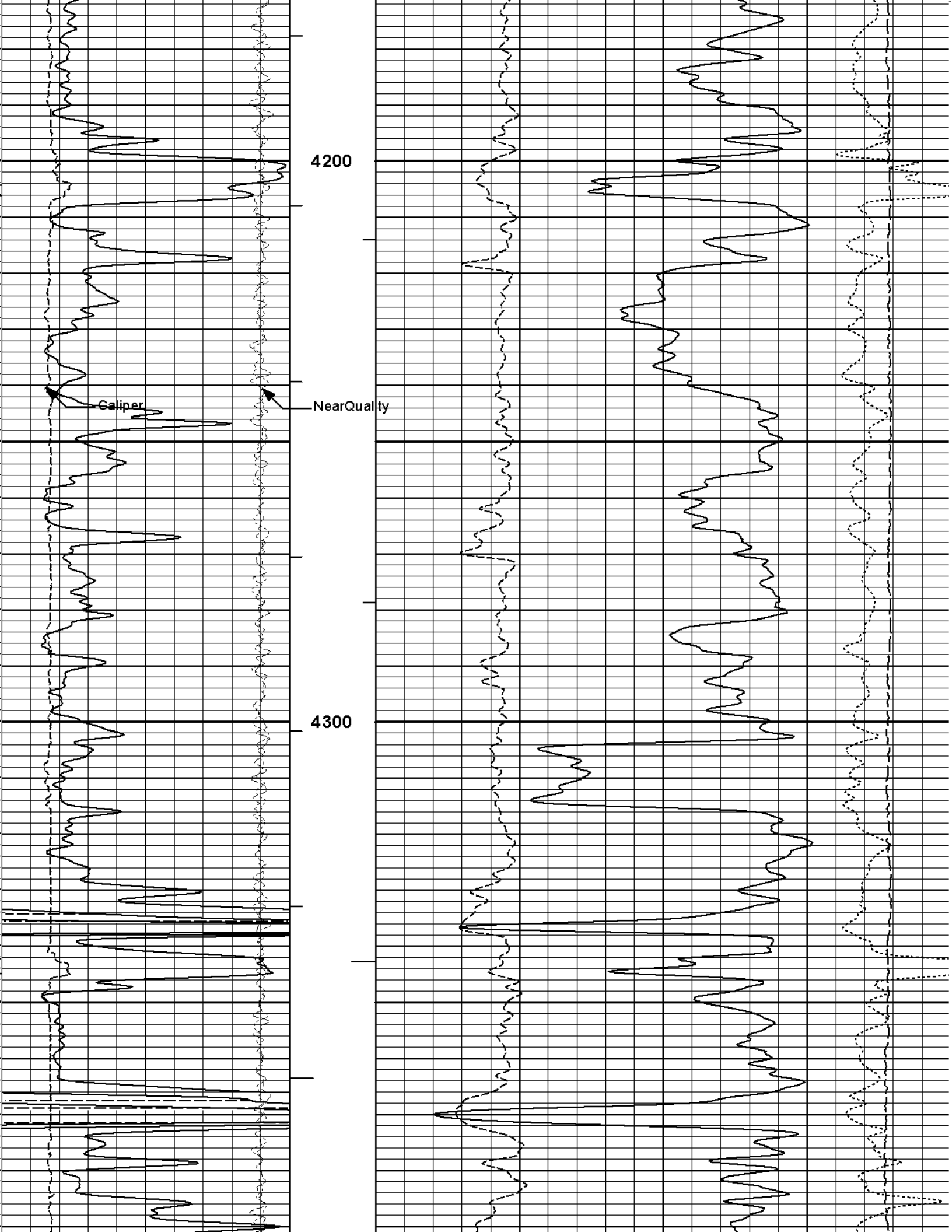
**5 INCH MAIN LOG**

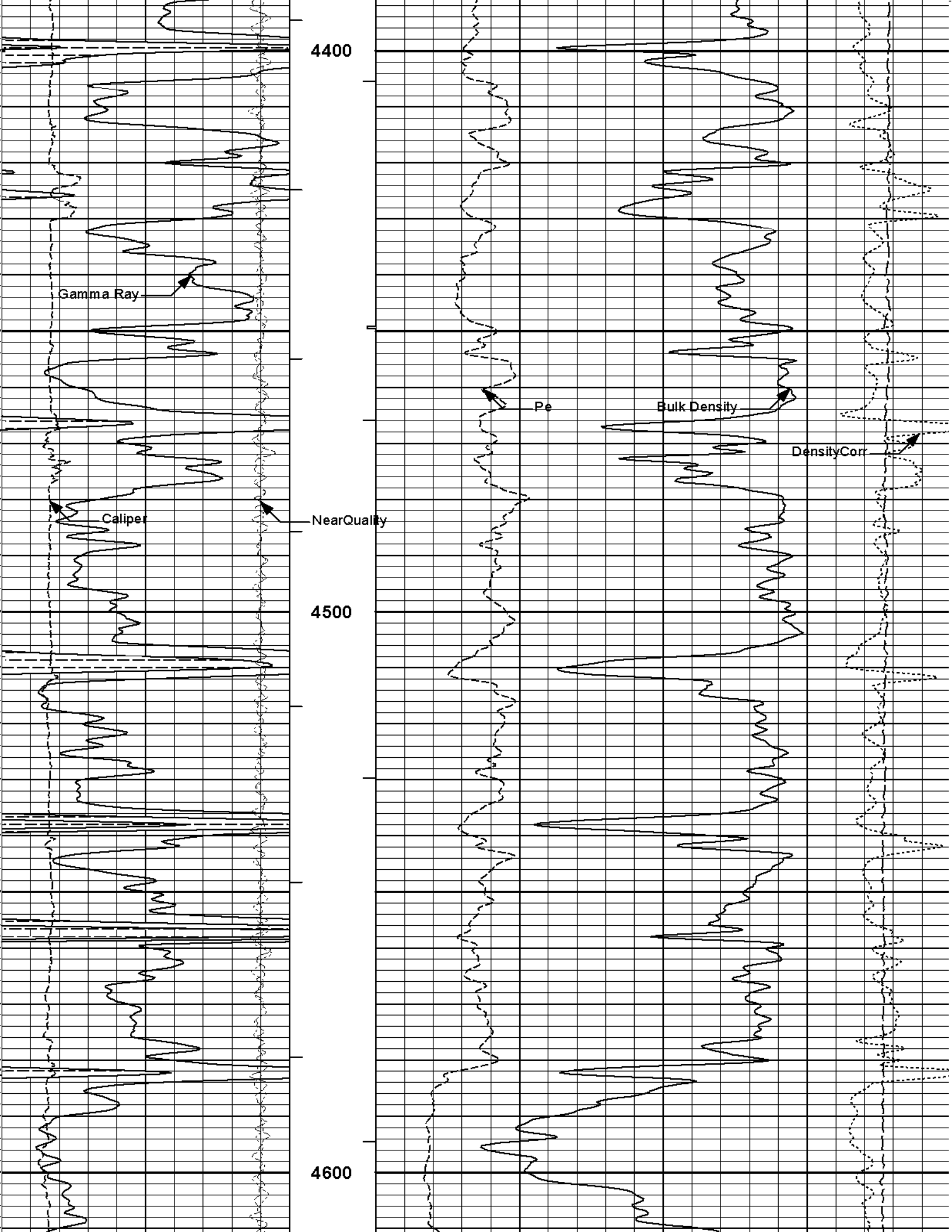
	SHALE		Tension Pull
0	Gamma Ray	150	Tension Pull



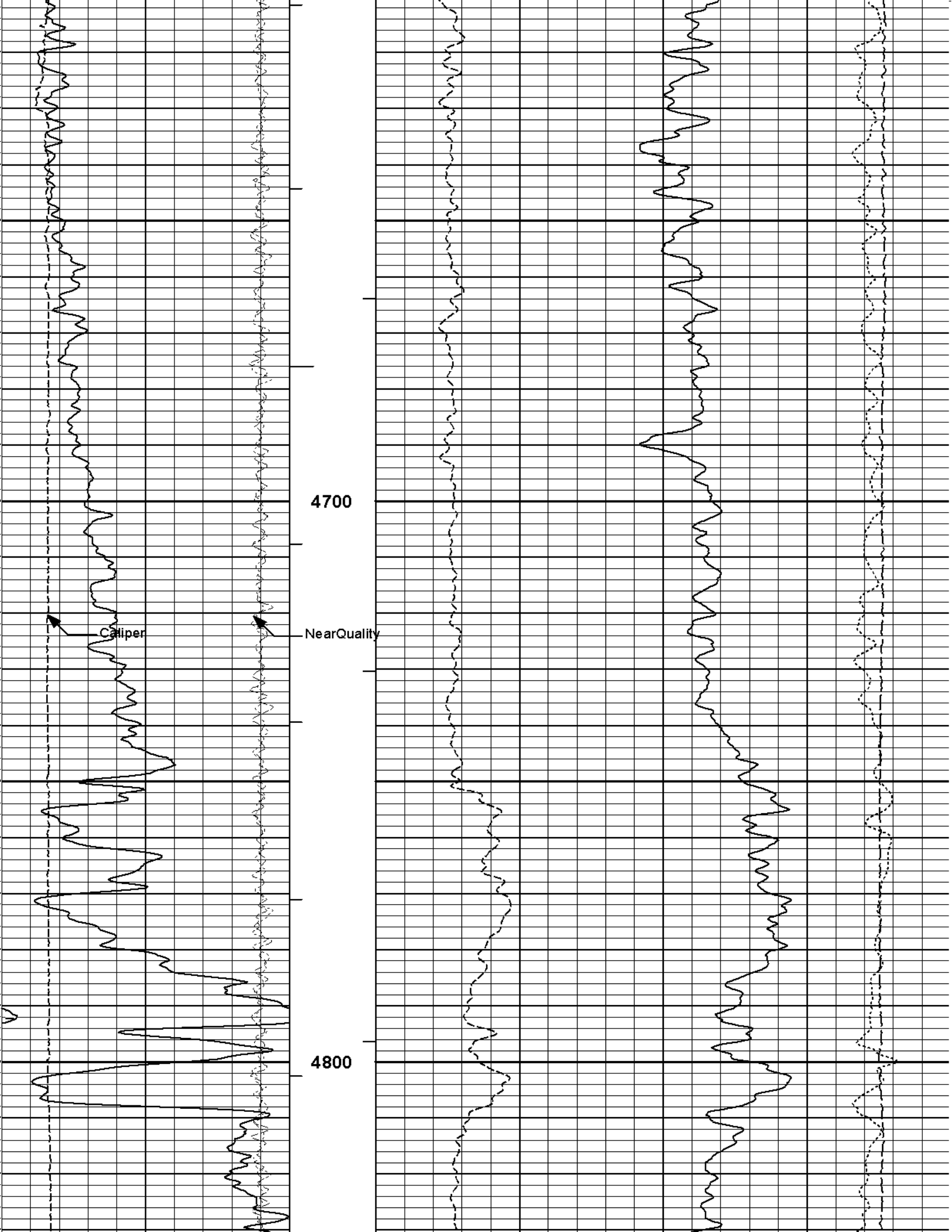


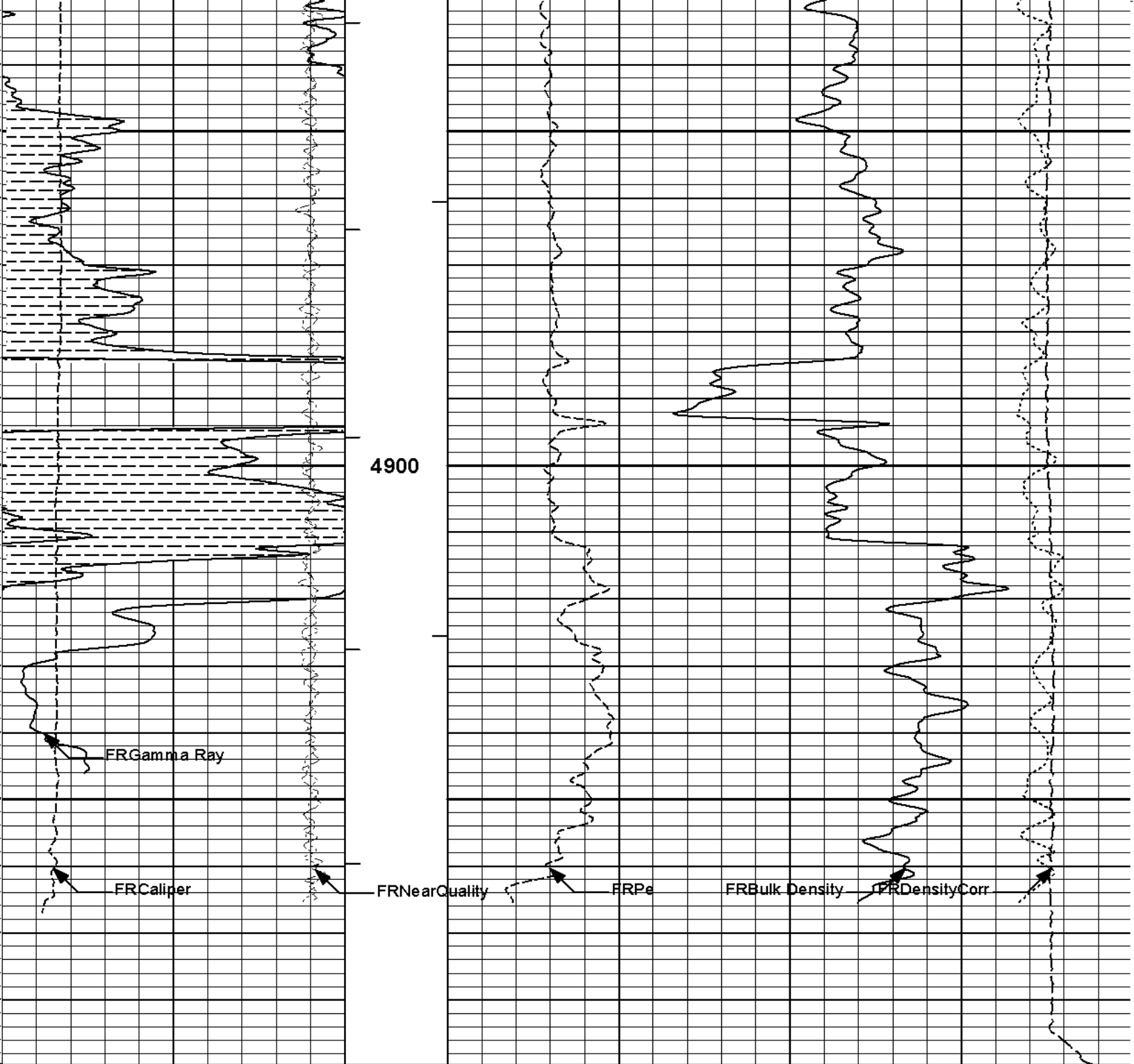












6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					g/cc	
-18	NearQuality	2	BHV				15K	Tension	0
			ft3					pounds	
18	FarQuality	-2	AHV	2				Bulk Density	3
			ft3					g/cc	
0	Gamma Ray	150	Tension Pull						
	api		10						
	SHALE		Tension Pull						

**HALLIBURTON**

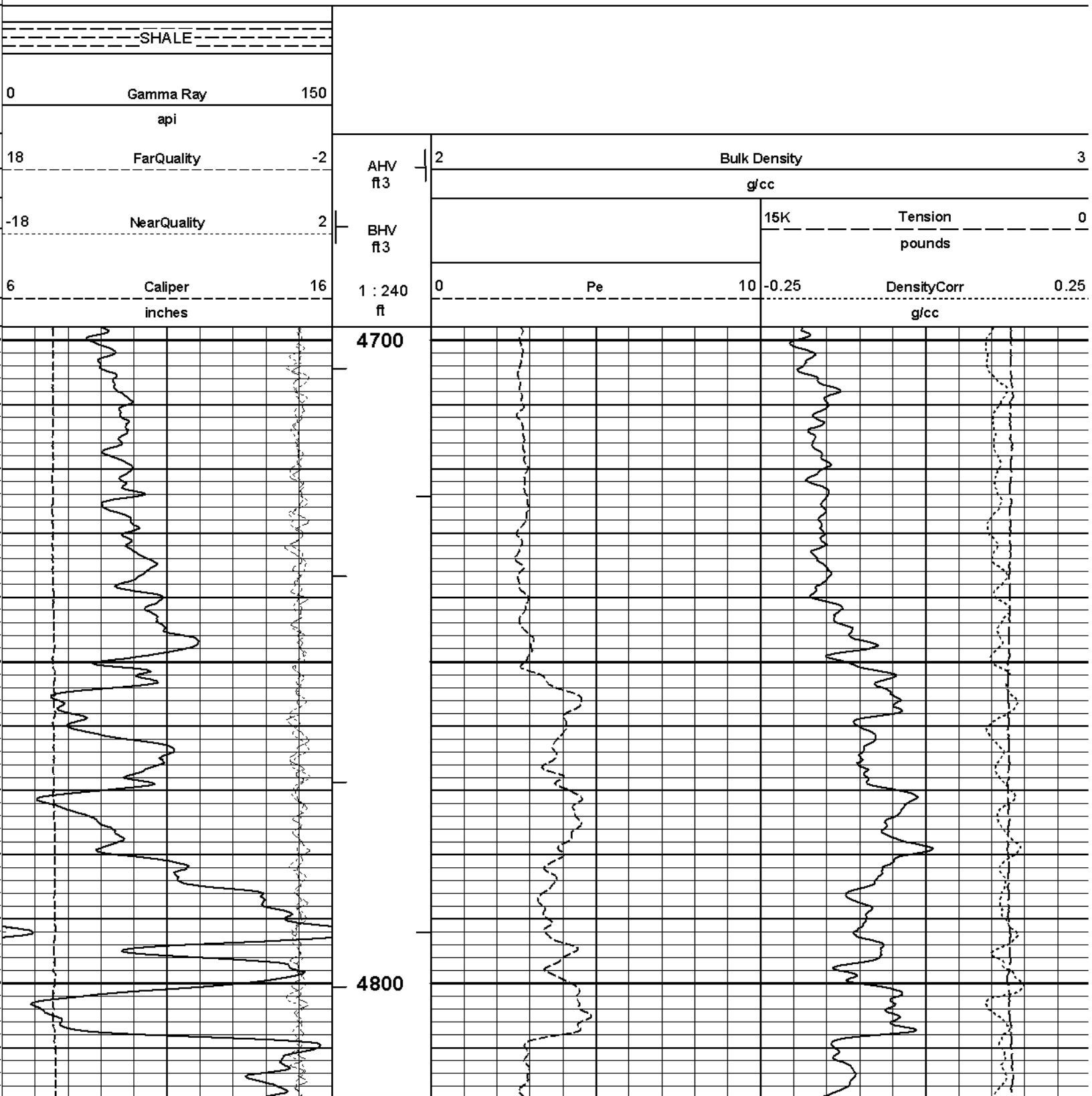
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 Data: MYRTLE 3 31\Well Based\DAQ-0001-0031

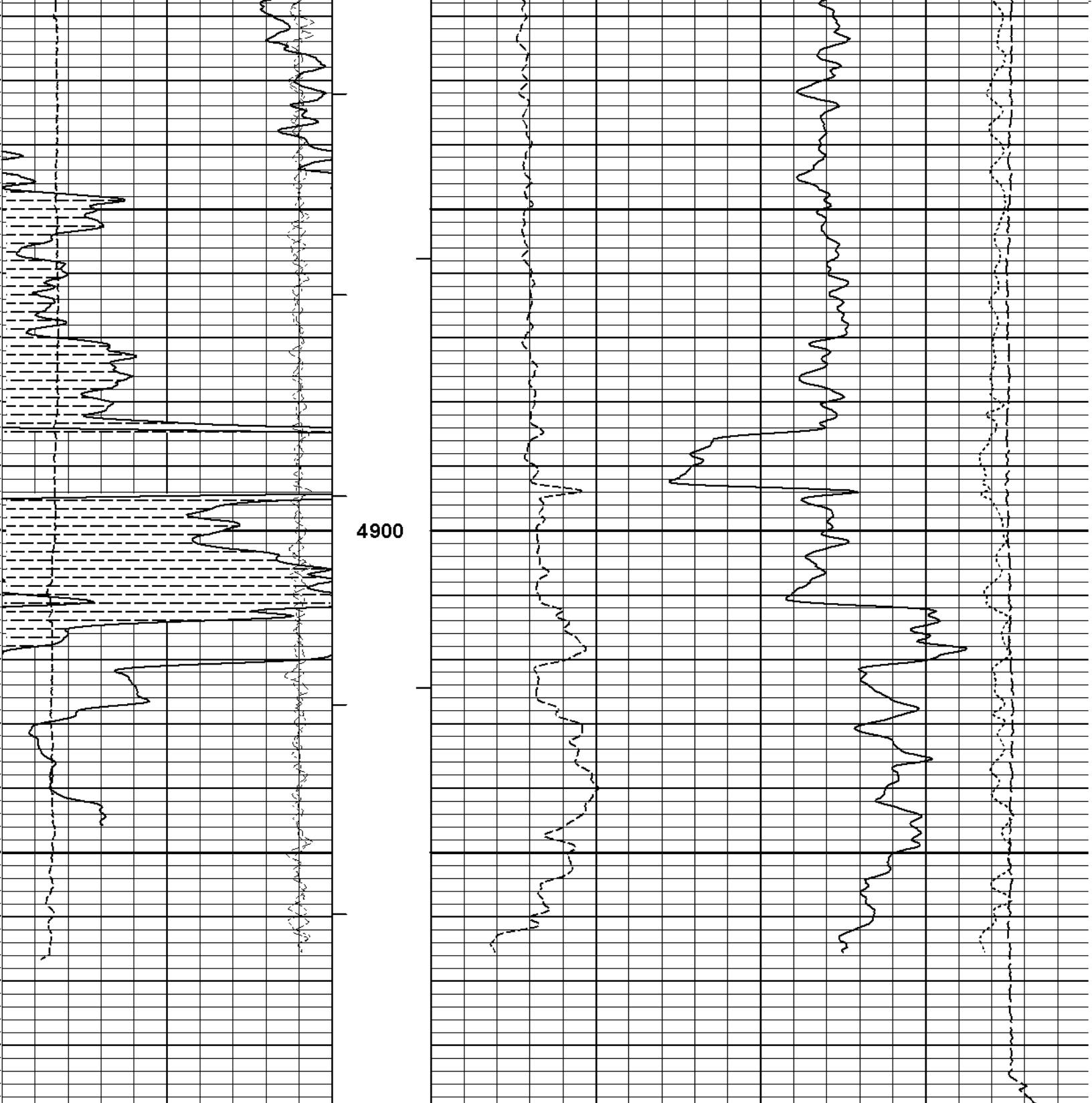
# 5 INCH MAIN LOG

**HALLIBURTON**

Plot Time: 08-Jun-11 07:46:54  
 Plot Range: 4698 ft to 4989.67 ft  
 Data: MYRTLE\_3\_31\Well Based\DAQ-0001-0021  
 Plot File: \\LOCAL-1\MYRTLE\_3\_31\0001 SP-GTET-DSN-SDL-ACRT-CHIPOROIBULKD\_5\_REP\_LIB

## REPEAT SECTION





4900

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

**REPEAT SECTION**

**TOOL STRING DIAGRAM REPORT**

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-CH_696 37.50 lbs		Ø 2.750 in →		← Temperature @ 55.54 ft	3.03 ft	56.57 ft
XOHD-TRK696 20.00 lbs		Ø 2.750 in → Ø 3.625 in →		← SP @ 50.81 ft	0.95 ft	53.54 ft
SP Sub-PROT01 60.00 lbs		Ø 3.625 in →		← GammaRay @ 42.79 ft	3.74 ft	52.59 ft
GTET-11050378 165.00 lbs		Ø 3.625 in →			8.52 ft	48.85 ft
DSN Decentralizer- 10755066 6.60 lbs		Ø 3.625 in →				40.33 ft
DSNT-11055304 174.00 lbs		Ø 3.625 in →		← DSN Far @ 33.39 ft ← DSN Near @ 32.64 ft	9.69 ft	30.64 ft
SDLT-104_P84 360.00 lbs		Ø 4.500 in → Ø 4.750 in →		← SDL Microlog @ 22.83 ft ← SDL Caliper @ 22.65 ft ← SDL @ 22.64 ft	10.81 ft	19.83 ft

ACRt-I962\_S909  
250.00 lbs

Ø 3.625 in →

← Mud Resistivity @ 13.44 ft

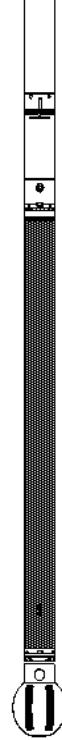
← ACRt @ 9.46 ft

19.25 ft

Cabbage Head-  
TRK696  
5.00 lbs

Ø 3.625 in →  
Ø 6.000 in →

0.58 ft  
0.58 ft  
0.00 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max. Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	CH_696	37.50	3.03	53.54	300.00
XOHD	Hostile to Dits Cross Over	TRK696	20.00	0.95	52.59	300.00
SP	SP Sub	PROT01	60.00	3.74	48.85	300.00
GTET	Gamma Telemetry Tool	11050378	165.00	8.52	40.33	60.00
DSNT	Dual Spaced Neutron	11055304	174.00	9.69	30.64	60.00
DCNT	DSN Decentralizer	10755066	6.60	5.13 *	33.97	300.00
SDLT	Spectral Density Tool	I04_P84	360.00	10.81	19.83	60.00
ACRt	Array Compensated True Resistivity	I962_S909	250.00	19.25	0.58	300.00
CBHD	Cabbage Head	TRK696	5.00	0.58	0.00	300.00
<b>Total</b>			<b>1,078.10</b>	<b>56.57</b>		

\* Not included in Total Length and Length Accumulation.

Data: MYRTLE\_3\_31\0001 SP-GTET-DSN-SDL-ACRT-CHVDLE Date: 08-Jun-11 04:48:08

# HALLIBURTON

## CALIBRATION REPORT

### NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: **GTET - 11050378** Reference Calibration Date: **03-May-11 10:44:00**  
 Engineer: **J. BOSH** Calibration Date: **03-May-11 13:07:13**  
 Software Version: **WL INSITE R3.2.0 (Build 7)** Calibration Version: **1**

Calibrator Source S/N: TB 146  
 Calibrator API Reference: 265.00 api  
 Equivalent Calibrator API Reference: 269.6 api

Measurement	Measured	Calibrated	Units
Background	52.2	52.0	api
Background + Calibrator	322.5	321.7	api
Calibrator	269.5	269.6	api

### NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: **GTET - 11050378** Reference Calibration Date: **03-May-11 13:07:13**  
 Engineer: **J. BOSH** Calibration Date: **04-Jun-11 02:54:30**

Software Version: WL INSITE R3.2.0 (Build 7)

Calibration Version: 1

Calibrator Source S/N: TB 146  
Calibrator API Reference:265.00 api  
Equivalent Calibrator API Reference:269.6 api

Field Verification	Shop	Field	Units
Background	52.0	46.7	api
Background + Calibrator	321.7	317.0	api
Calibrator	269.6	270.3	api

Shop	Field	Difference	Tolerance
269.6	270.3	-0.7	+/- 9.00

### DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 11055304      Reference Calibration Date: 31-Mar-11 17:51:18  
 Engineer: J. BOSH      Calibration Date: 03-May-11 11:35:25  
 Software Version: WL INSITE R3.2.0 (Build 7)      Calibration Version: 1

Logging Source S/N: DSN-424  
Tank Serial Number: LIB-105060  
Reference value assigned to Tank: 51.680  
Snow Block S/N: 696 BLOCK  
Calibration Tank Water Temperature: 62 degF  
Min. Tool Housing Outside Diameter: 3.625 in

### CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.990	0.994	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):	0.2096	0.2110	0.0013	+/- 0.0020
Calibrated Ratio:	9.68	9.73	0.045	+/- 0.050

### VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0802	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 - 11055304      Reference Calibration Date: 03-May-11 11:35:25  
 Engineer: J. BOSH      Calibration Date: 04-Jun-11 02:55:30  
 Software Version: WL INSITE R3.2.0 (Build 7)      Calibration Version: 1

Logging Source S/N: DSN-424  
Snow Block S/N: 696 BLOCK

### NEUTRON FIELD-CHECK SUMMARY

Shop	Field	Difference	Control Limit On Change
------	-------	------------	-------------------------

**PASS/FAIL SUMMARY**

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

**SPECTRAL DENSITY SHOP CALIBRATION**

<b>Tool Name:</b> SDLT - I04_P84	<b>Reference Calibration Date:</b> 11-Mar-11 14:09:56
<b>Engineer:</b> J. BOSH	<b>Calibration Date:</b> 03-May-11 13:27:25
<b>Software Version:</b> WL INSITE R3.2.0 (Build 7)	<b>Calibration Version:</b> 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: 2.594

**DENSITY CALIBRATION SUMMARY**

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9909	1.0213	0.90 - 1.10
Near Dens Gain	0.9919	1.0067	0.90 - 1.10
Near Peak Gain	0.9825	0.9979	0.90 - 1.10
Near Lith Gain	0.9789	0.9831	0.90 - 1.10
Far Bar Gain	1.0118	1.0118	0.90 - 1.10
Far Dens Gain	1.0004	1.0038	0.90 - 1.10
Far Peak Gain	0.9958	0.9984	0.90 - 1.10
Far Lith Gain	0.9741	0.9800	0.90 - 1.10
Near Bar Offset	0.2068	-0.0728	NONE
Near Dens Offset	0.1741	0.0443	NONE
Near Peak Offset	0.2208	0.0946	NONE
Near Lith Offset	0.2201	0.1898	NONE
Far Bar Offset	-0.0391	-0.0368	NONE
Far Dens Offset	0.0367	0.0036	NONE
Far Peak Offset	0.0421	0.0178	NONE
Far Lith Offset	0.1698	0.1191	NONE
Near Bar Background	769.10	767.55	700 - 1450
Near Dens Background	248.33	249.31	230 - 480
Near Peak Background	110.11	109.43	100 - 210
Near Lith Background	135.34	134.88	125 - 260
Far Bar Background	535.69	533.52	450 - 900
Far Dens Background	209.25	209.13	175 - 345
Far Peak Background	83.37	83.27	70 - 140
Far Lith Background	85.80	86.61	75 - 145

**CALIBRATION BLOCK SUMMARY**

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
<b>MAGNESIUM</b>				
Density (g/cc)	1.680	1.684	0.004	+/- 0.015
Pe	2.569	2.552	-0.017	+/- 0.150
<b>ALUMINUM</b>				
Density (g/cc)	2.596	2.598	0.002	+/- 0.01500
Pe	3.167	3.124	-0.043	+/- 0.150



**TOOL SUMMARY**

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0017	+/- 0.0110	-0.0009	+/- 0.0140
Magnesium Block	-0.0013	+/- 0.0110	-0.0002	+/- 0.0140
Aluminum Block	0.0008	+/- 0.0110	-0.0006	+/- 0.0140
Resolution	9.18	6.00 - 11.50	8.97	6.00 - 11.50
Internal Verifier(B+D+P+L)	1261	1200 - 2700	913	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**

<b>Tool Name:</b> SDLT - I04_P84	<b>Reference Calibration Date:</b> 03-May-11 13:27:25
<b>Engineer:</b> J. BOSH	<b>Calibration Date:</b> 04-Jun-11 02:54:28
<b>Software Version:</b> WL INSITE R3.2.0 (Build 7)	<b>Calibration Version:</b> 1

Pad Temperature: 85.8 degF

**DENSITY FIELD CALIBRATION SUMMARY**

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1261.163	1268.906	7.743	14.393
Far (B+D+P+L) cps	912.532	911.492	-1.040	16.392
Near Resolution	9.18	9.18	0.000	0.50
Far Resolution	8.97	9.08	0.110	1.00

**PASS/FAIL SUMMARY**

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

**DENSITY CALIPER SHOP CALIBRATION**

<b>Tool Name:</b> SDLT - I04_P84	<b>Reference Calibration Date:</b> 10-May-11 16:25:02
<b>Engineer:</b> C. HAVERKAMP	<b>Calibration Date:</b> 10-May-11 16:29:51
<b>Software Version:</b> WL INSITE R3.2.0 (Build 7)	<b>Calibration Version:</b> 1

**CALIBRATION COEFFICIENTS**

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2646.88	-2523.75	-7000.00 - -1000.00
Pad Gain	0.0004021	0.0003926	0.000200 - 0.000600
Arm Offset	-1779.79	-1809.41	-5000.00 - 3000.00
Arm Gain	0.0005298	0.0005135	0.000300 - 0.000700
Arm Power	-0.000005982	-0.000005105	-0.000010 - 0.000010

The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER

Tool Diameter: 4.50 in

**CALIBRATION RINGS**

Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
<b>PAD EXTENSION:</b>				
Small Ring (in)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.79	3.75	-0.04	+/- 0.20
<b>RING DIAMETER:</b>				
Small Ring (in)	6.52	6.50	-0.02	+/- 0.20
Medium Ring (in)	8.31	8.25	-0.06	+/- 0.20
Large Ring (in)	15.04	15.00	-0.04	+/- 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 - I04\_P84** Reference Calibration Date: **10-May-11 16:29:51**  
 Engineer: **J. BOSH** Calibration Date: **04-Jun-11 02:57:33**  
 Software Version: **WL INSITE R3.2.0 (Build 7)** Calibration Version: **1**

**MEASURED CALIPER VALUES**

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.73	-0.02	+/- 0.10
Ring Diameter	8.25	8.30	0.05	+/- 0.15

**PASS/FAIL SUMMARY**

Pad Extension Check: Passed  
 Diameter Check: Passed

**CALIBRATION SUMMARY**

Sensor	Shop	Field	Post	Difference	Tolerance	Units
<b>GTET-11050378</b>						
Gamma Ray Calibrator	269.6	270.3	-----	-0.7	+/- 9.00	api
<b>DSNT-11055304</b>						
Snow-Block Porosity	0.0802	0.0889	-----	-0.0087	+/- 0.0150	decp
<b>SDLT-I04_P84</b>						
Near(B+D+P+L)	1261.163	1268.906	-----	-7.743	+/-14.393	cps
Far(B+D+P+L)	912.532	911.492	-----	1.040	+/-16.392	cps
Pad Extension	3.75	3.73	-----	0.02	+/-0.10	in
Ring Diameter	8.25	8.30	-----	-0.050	+/-0.15	in

Data: MYRTLE\_3\_31\0001 SP-GTET-DSN-SDL-ACRT-CHNDLE Date: 08-Jun-11 05:30:05

**HALLIBURTON**

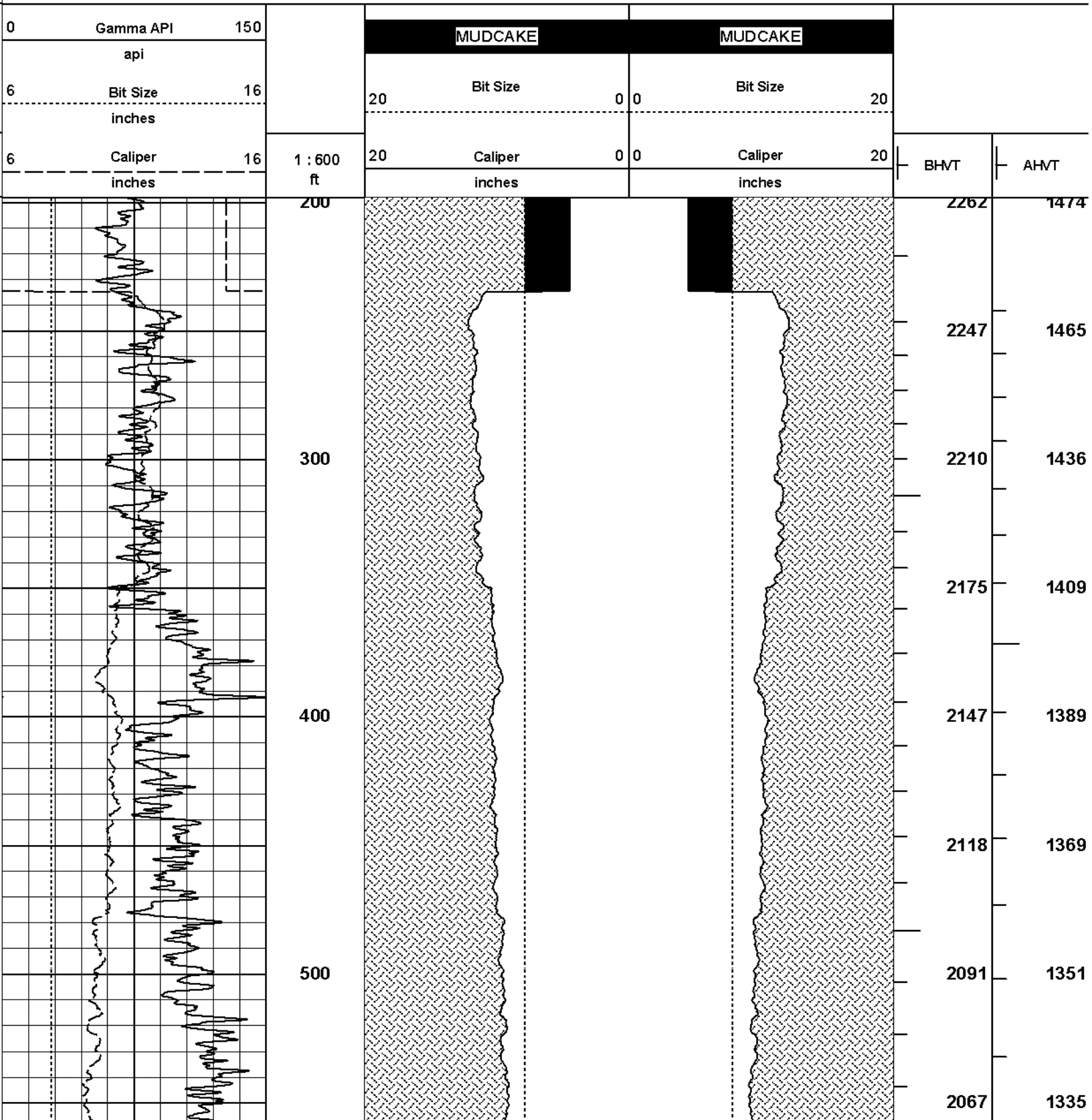
**PARAMETERS REPORT**

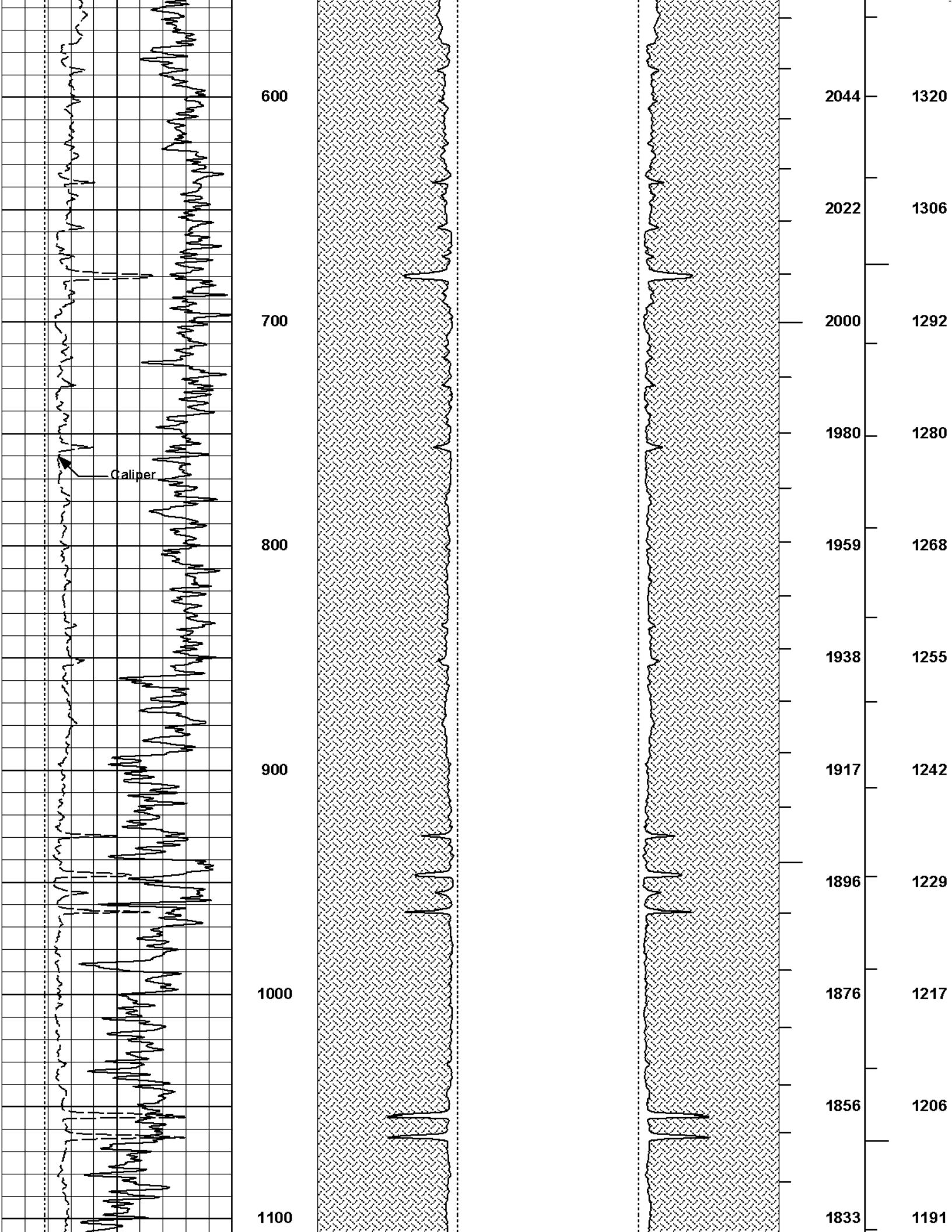
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					

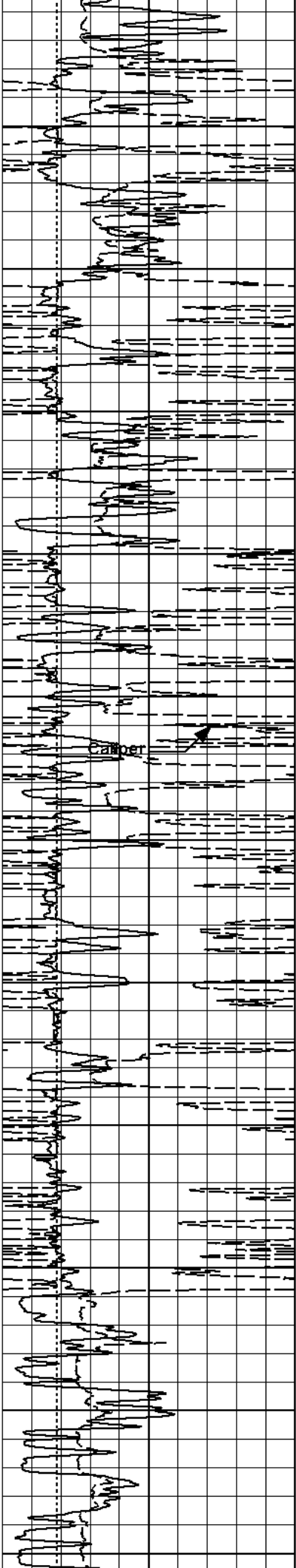
DSNT	DNOK	Process DSN?	No	
SDLT	DNOK	Process Density?	No	
SDLT	MLOK	Process MicroLog Outputs?	No	
<hr/>				
3490.00				
SHARED	BS	Bit Size	7.875	in
SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
SHARED	MDBS	Mud Base	Water	
SHARED	MDWT	Borehole Fluid Weight	9.200	ppg
SHARED	WAGT	Weighting Agent	Natural	
SHARED	BSAL	Borehole salinity	0.00	ppm
SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
SHARED	RMUD	Mud Resistivity	0.409	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	4984.00	ft
SHARED	BHT	Bottom Hole Temperature	120.0	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	
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	Centered	
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	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	CB	Logging Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	DMA	Formation Density Matrix	2.710	g/cc
SDLT	DFL	Formation Density Fluid	1.000	g/cc
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT	MLOK	Process MicroLog Outputs?	Yes	
ACRt	RTOK	Process ACRt?	Yes	
ACRt	MNSO	Minimum Tool Standoff	1.50	in
ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt	TPOS	Tool Position	Free Hanging	
ACRt	RMOP	Rmud Source	Mud Cell	
ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt	THQY	Threshold Quality	0.50	

BOTTOM

## ANNULAR HOLE VOLUME PLOT







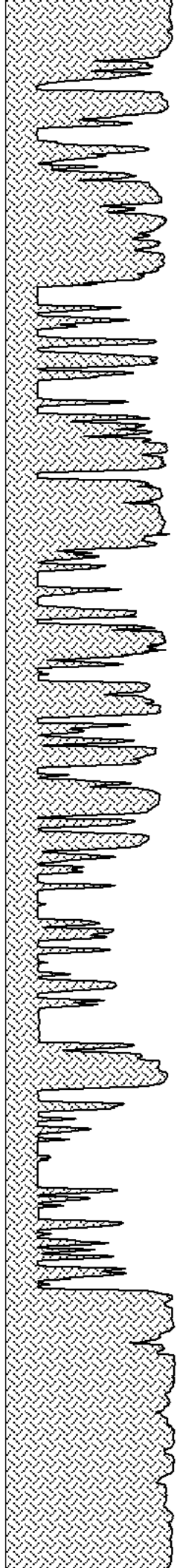
1200

1300

1400

1500

1600



1802

1761

1697

1662

1604

1558

1486

1425

1348

1319

1298

1169

1136

1079

1053

1004

965

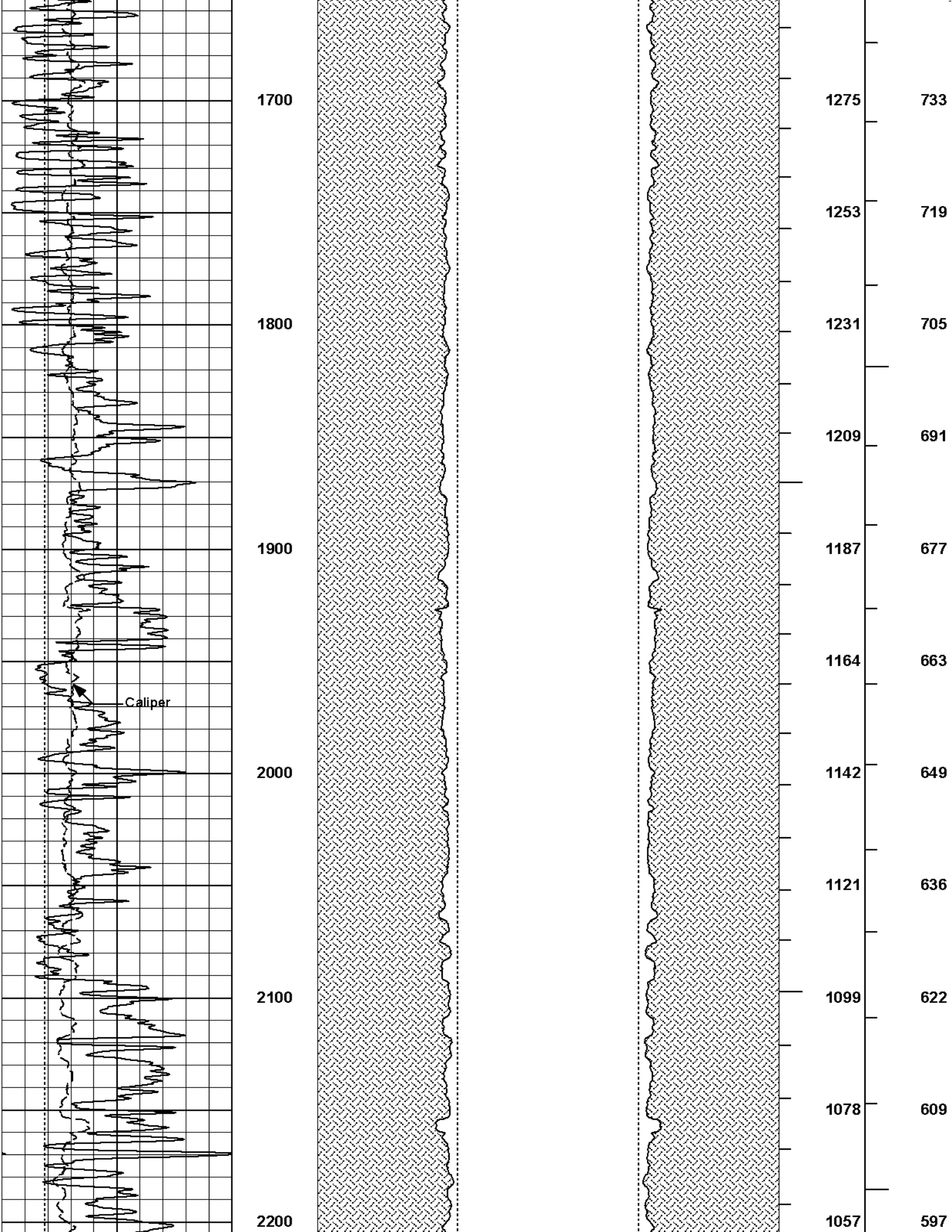
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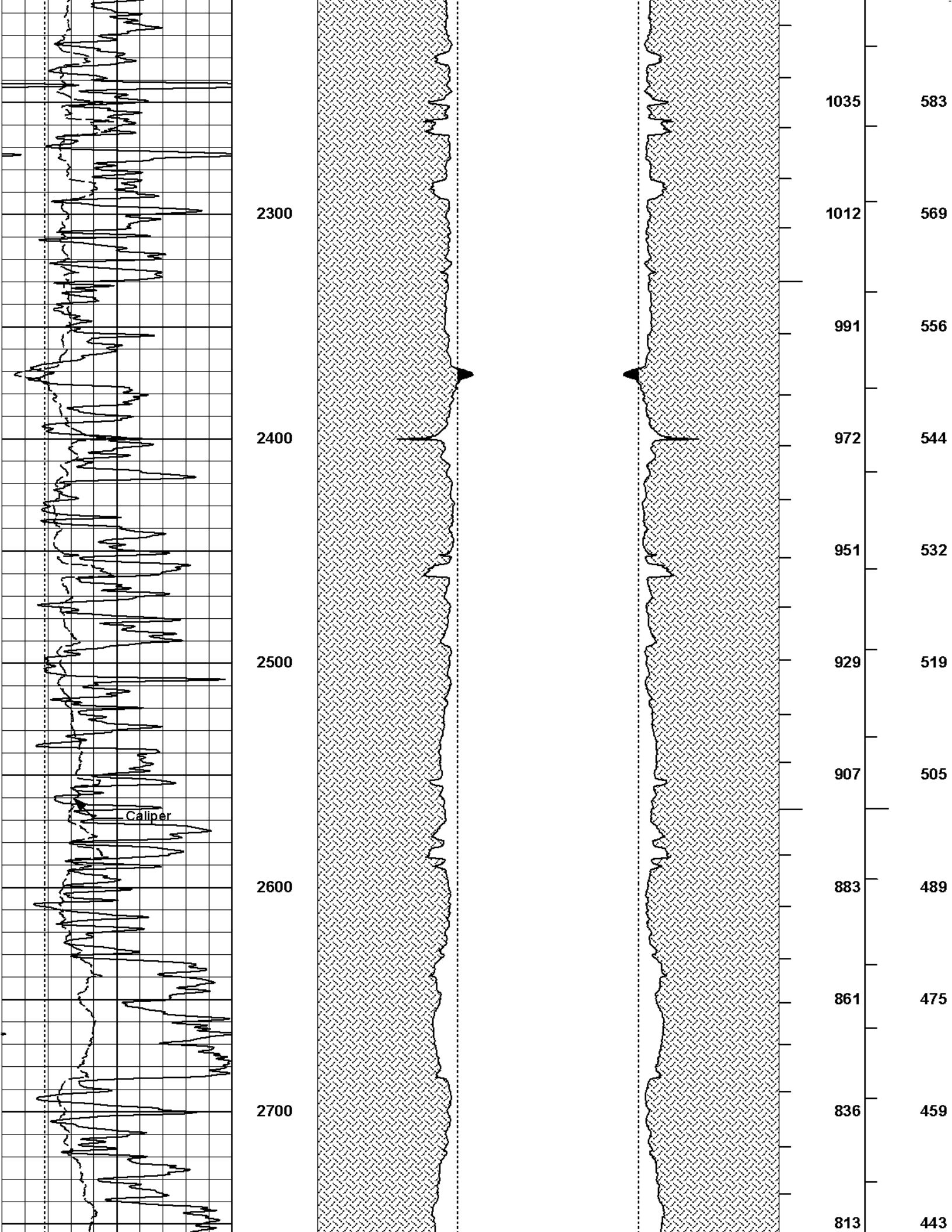
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780

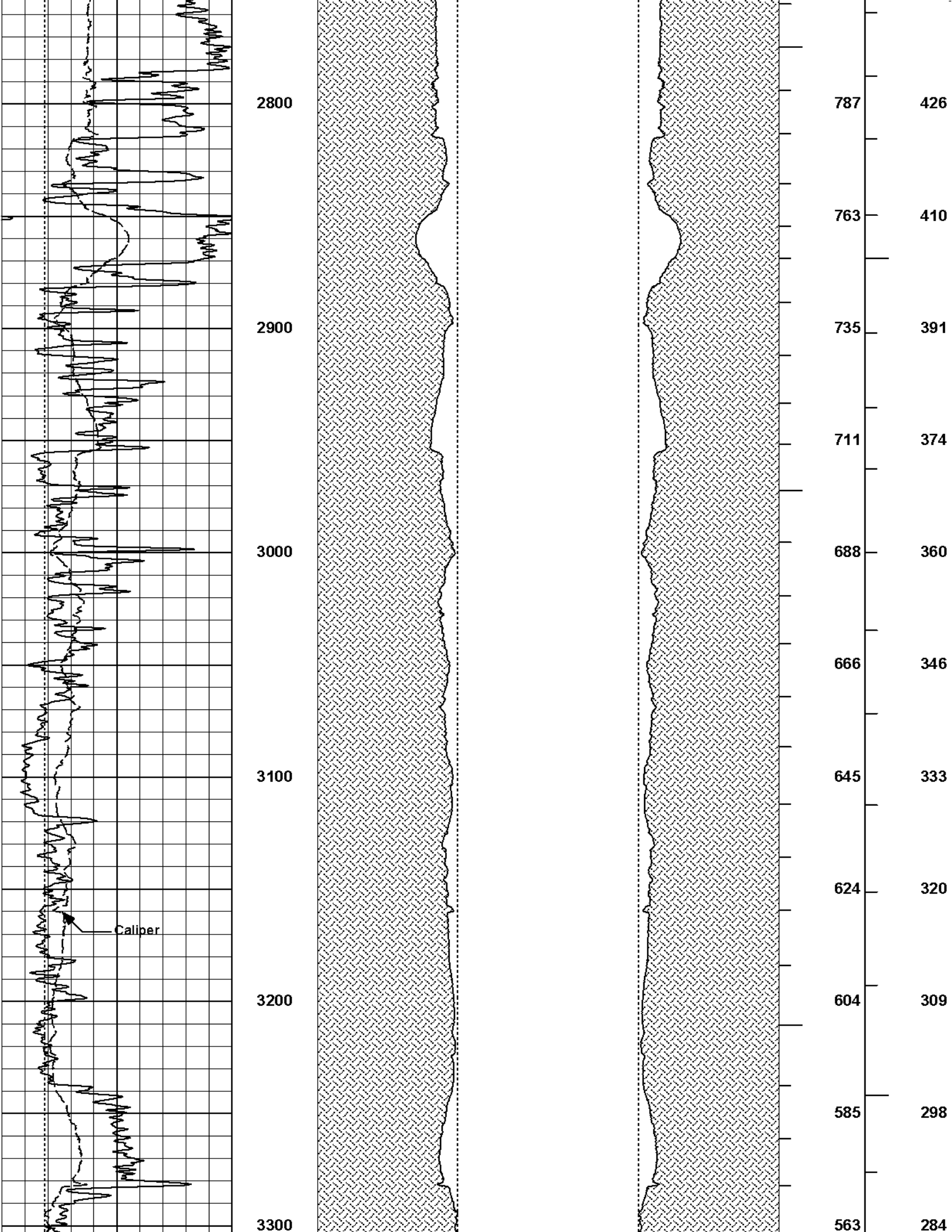
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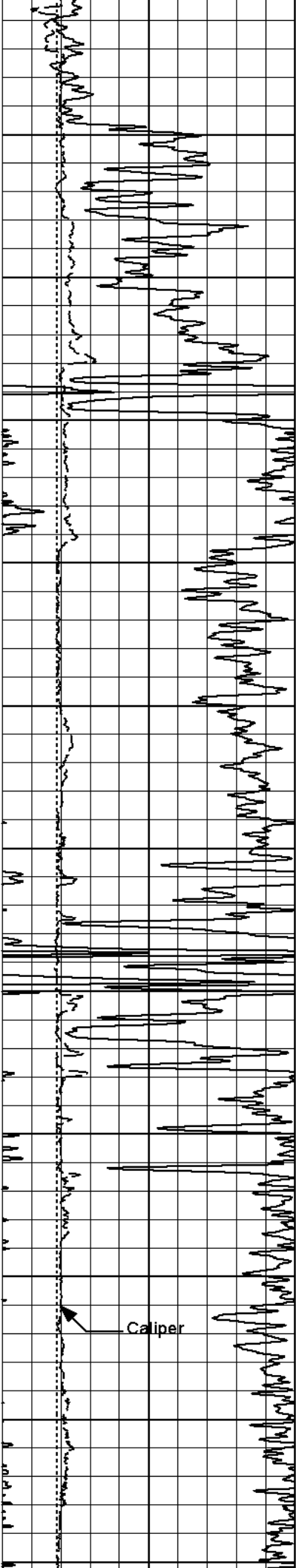
746











3400

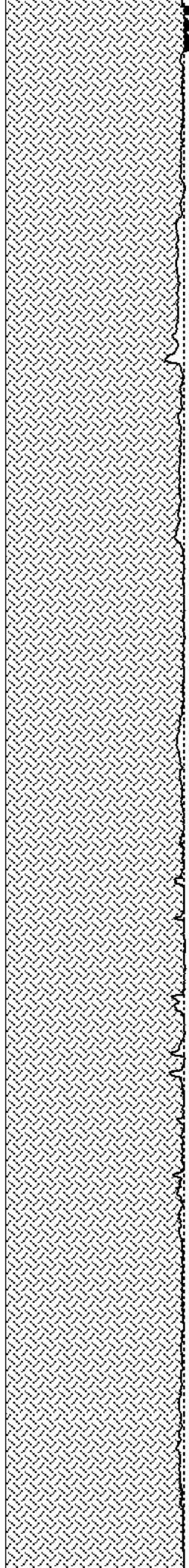
3500

3600

3700

3800

Caliper



546

528

509

491

474

456

439

421

403

386

368

276

266

255

245

237

227

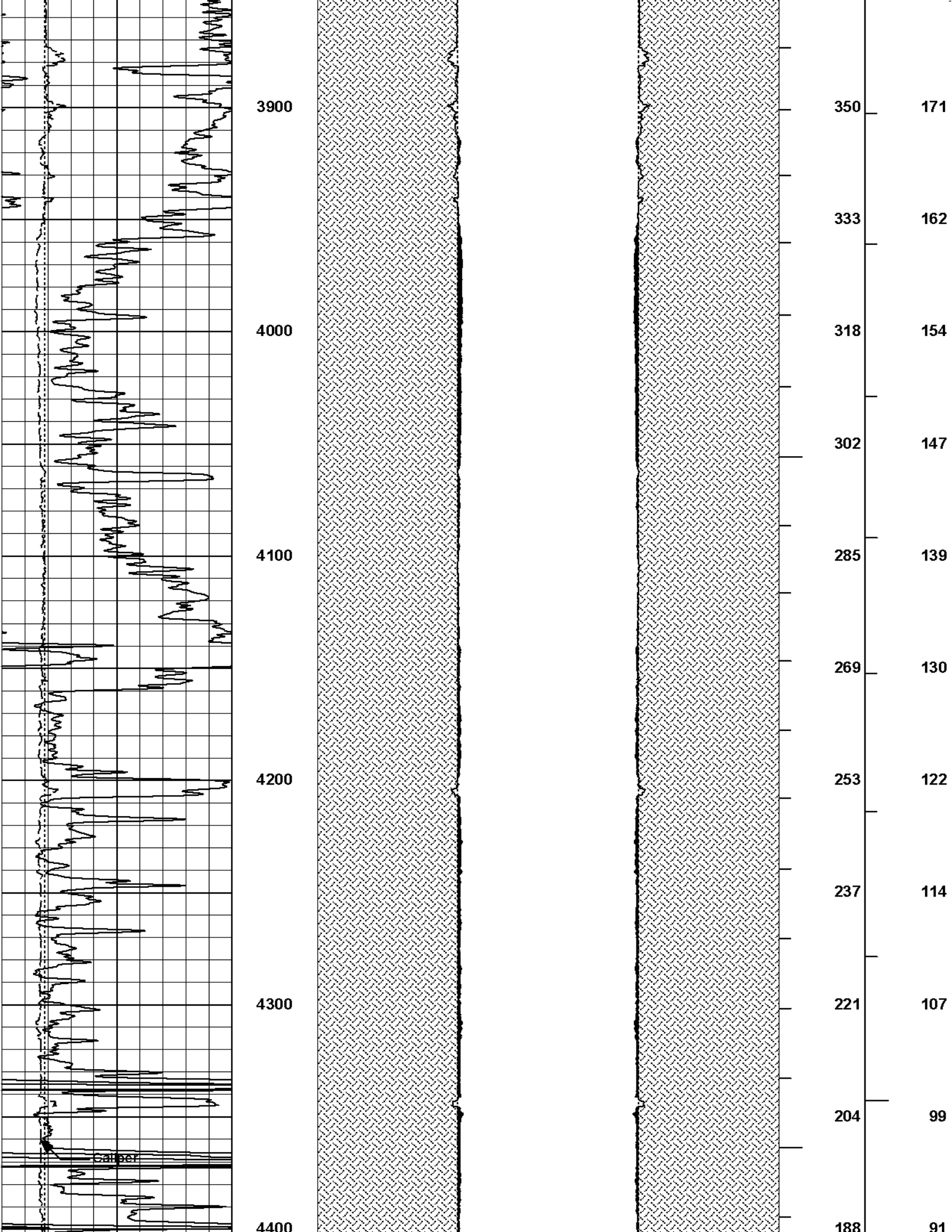
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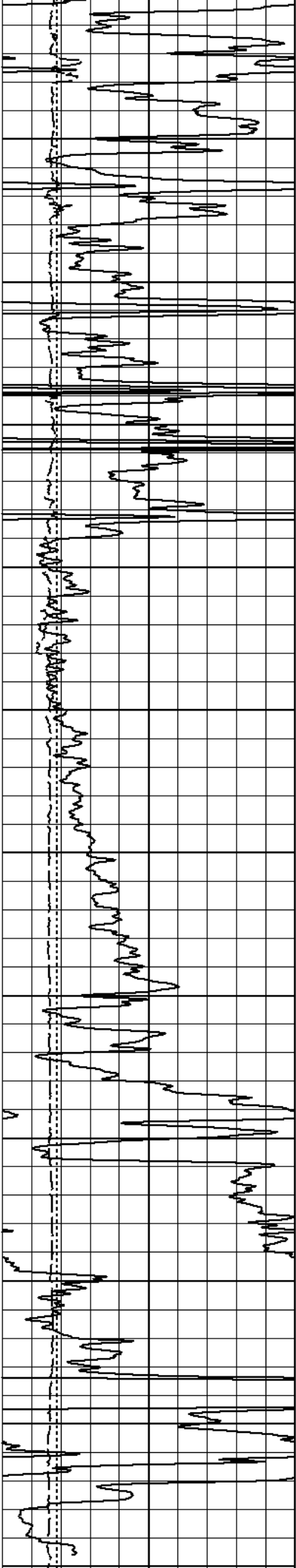
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199

189

180





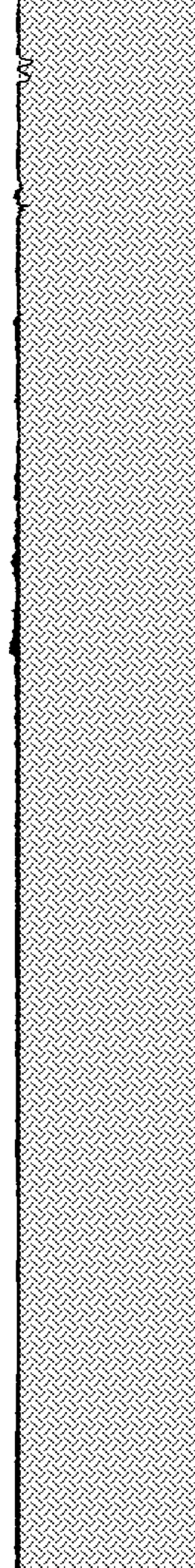
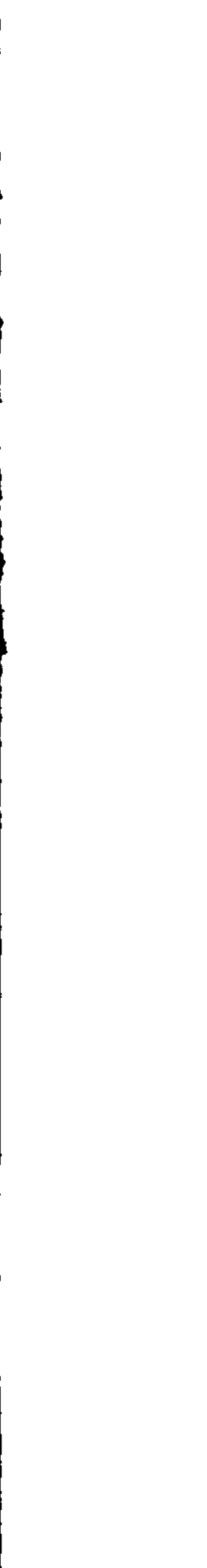
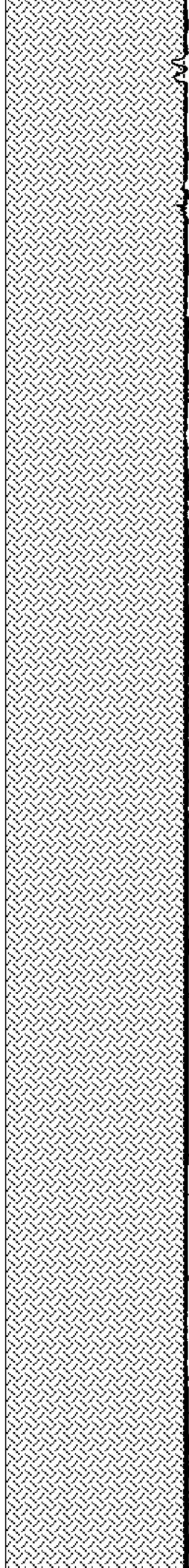
4500

4600

4700

4800

4900



172

155

139

124

108

92

77

61

45

29

13

83

75

67

59

52

45

37

29

22

14

6

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

**HALLIBURTON**

Plot Time: 08-Jun-11 07:47:01  
 Plot Range: 198 ft to 4989.75 ft  
 Data: MYRTLE\_3\_31\Well Based\DAQ-0001-0031  
 Plot File: \\LOCAL-MYRTLE\_3\_31\0001 SP-GTET-DSN-SDL-ACRT-CHPORO\AHV\_2\_IQ\_LIB

## ANNULAR HOLE VOLUME PLOT

COMPANY	VAL ENERGY INC		
WELL	MYRTLE 3-31		
FIELD	UNKNOWN		
COUNTY	BARBER	STATE	KANSAS
<b>HALLIBURTON</b>		SPECTRAL DENSITY DUAL SPACED NEUTRON LOG	