HALLIBURTON

SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

COMPANY VAL ENERGY, INC.
WELL PARR-PACKARD 1-22
FIELD MINGONA
COUNTY BARBER
STATE KANSAS

COMPANY **VAL ENERGY, INC.**

WELL **PARR-PACKARD 1-22**

FIELD **MINGONA**

COUNTY **BARBER** STATE **KANSAS**

API No. 15-007-23736

Location 430' FNL & 2110' FEL

Sect. 22 Twp. 31S Rge. 13W

Other Services:
ACRT
MICRO

Permanent Datum	GL		Elev. 1608.0 ft	Elev.: K.B.	1617.0 ft
Log measured from	KB		9.0 ft above perm. Datum	D.F.	1616.0 ft
Drilling measured from	KB			G.L.	1608.0 ft

Date		25-Jul-11					
Run No.		1					
Depth - Driller		4550.00 ft					
Depth - Logger		4538.0 ft					
Bottom - Logged Interval		4515.0 ft					
Top - Logged Interval		2550.0 ft					
Casing - Driller		8.625 in	@ 227.0 ft	@		@	
Casing - Logger		225.0 ft					
Bit Size		7.875 in		@		@	
Type Fluid in Hole		WATER BASED MUD					
Density	Viscosity	9.4 ppg	44.00 s/qt				
PH	Fluid Loss	9.00 pH	36.0 cptm				
Source of Sample		FLOW LINE					
Rm @ Meas. Temperature		0.270 ohmm	@ 95.00 degF	@		@	
Rmf @ Meas. Temperature		0.23 ohmm	@ 90.00 degF	@		@	
Rmc @ Meas. Temperature		0.320 ohmm	@ 90.00 degF	@		@	
Source Rmf	Rmc	MEAS	MEAS				
Rm @ BHT		0.31 ohmm	@ 130.0 degF	@		@	
Time Since Circulation		4.0 hr					
Time on Bottom		25-Jul-11 21:02					
Max. Rec. Temperature		130.0 degF	@ 4538.0 ft	@		@	
Equipment	Location	10546696	LIBERAL				
Recorded By		J. BOSH					
Witnessed By		Z. STEWART					

Fold here

Service Ticket No.: 8347894 API Serial No.: 15-007-23736 PGM Version: WL INSITE R3.2.0 (Build 7)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

	Sample No.				
Date					
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.	11048627	Serial No.		Serial No.	I04_P84	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.	5168 GW	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		
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	TD	2550	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: 11000 PPM LCM: 16 #/BBL

GPS COORDINATES: LAT:37.20 N LONG: 98.43 W

TODAY'S CREW: K. KELLY, 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

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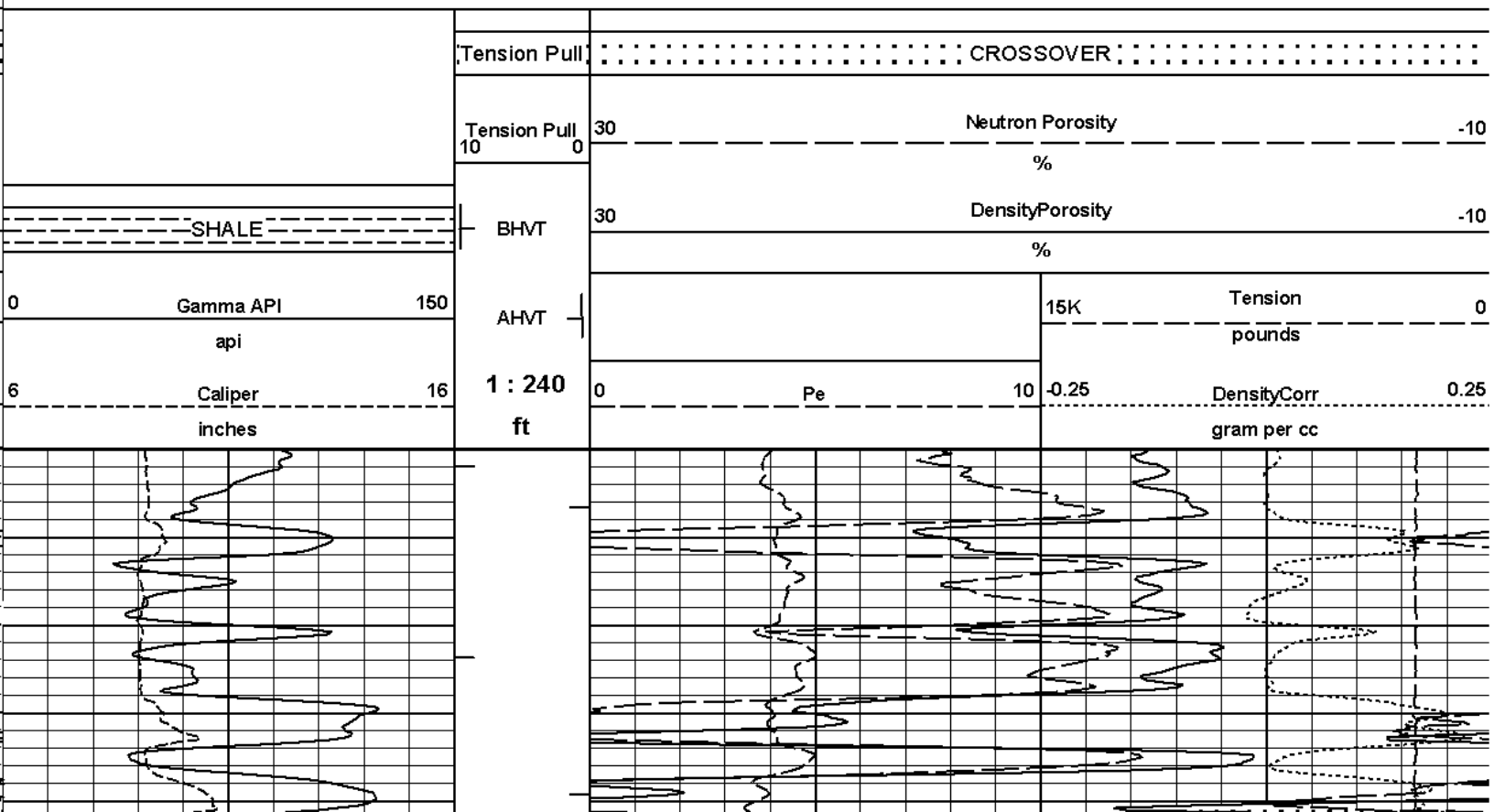
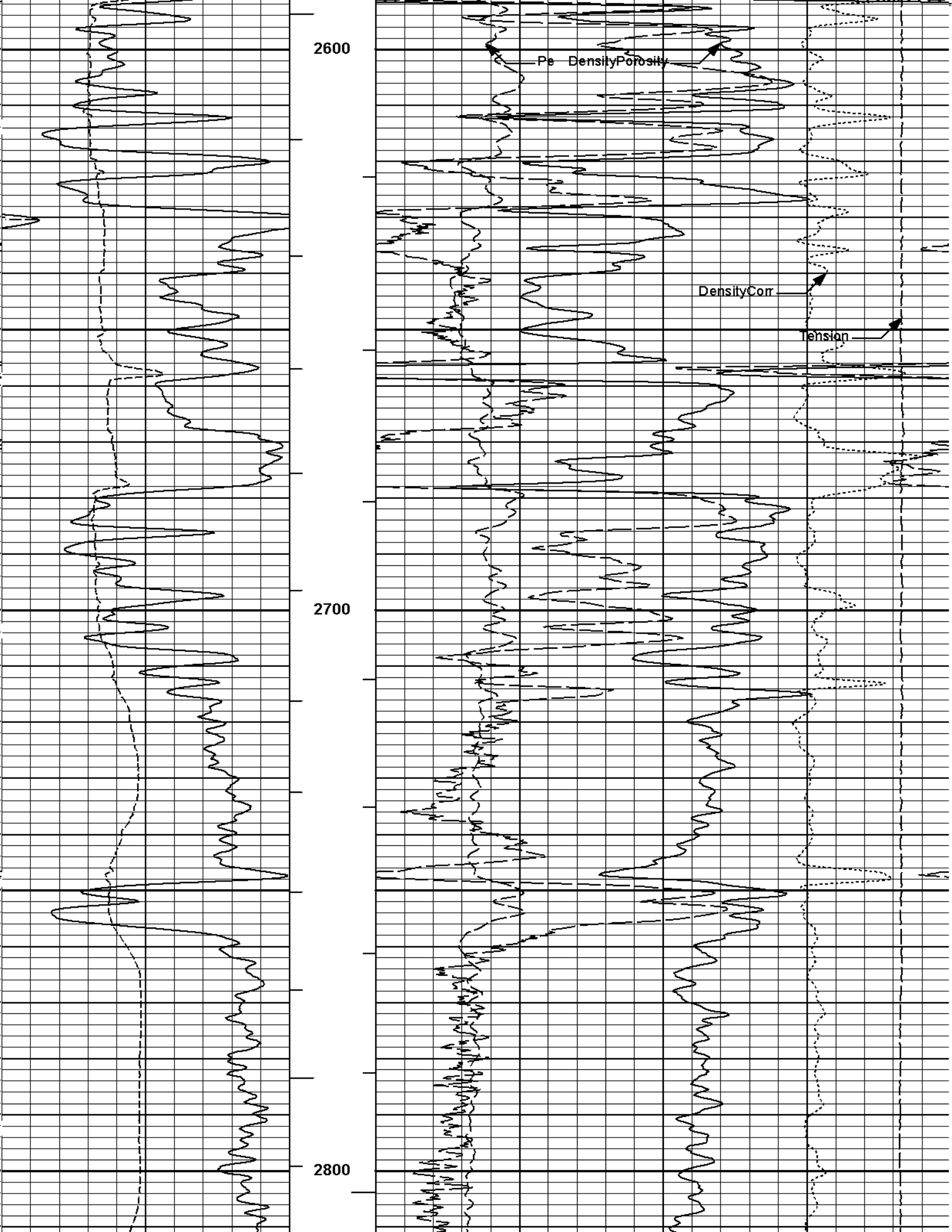
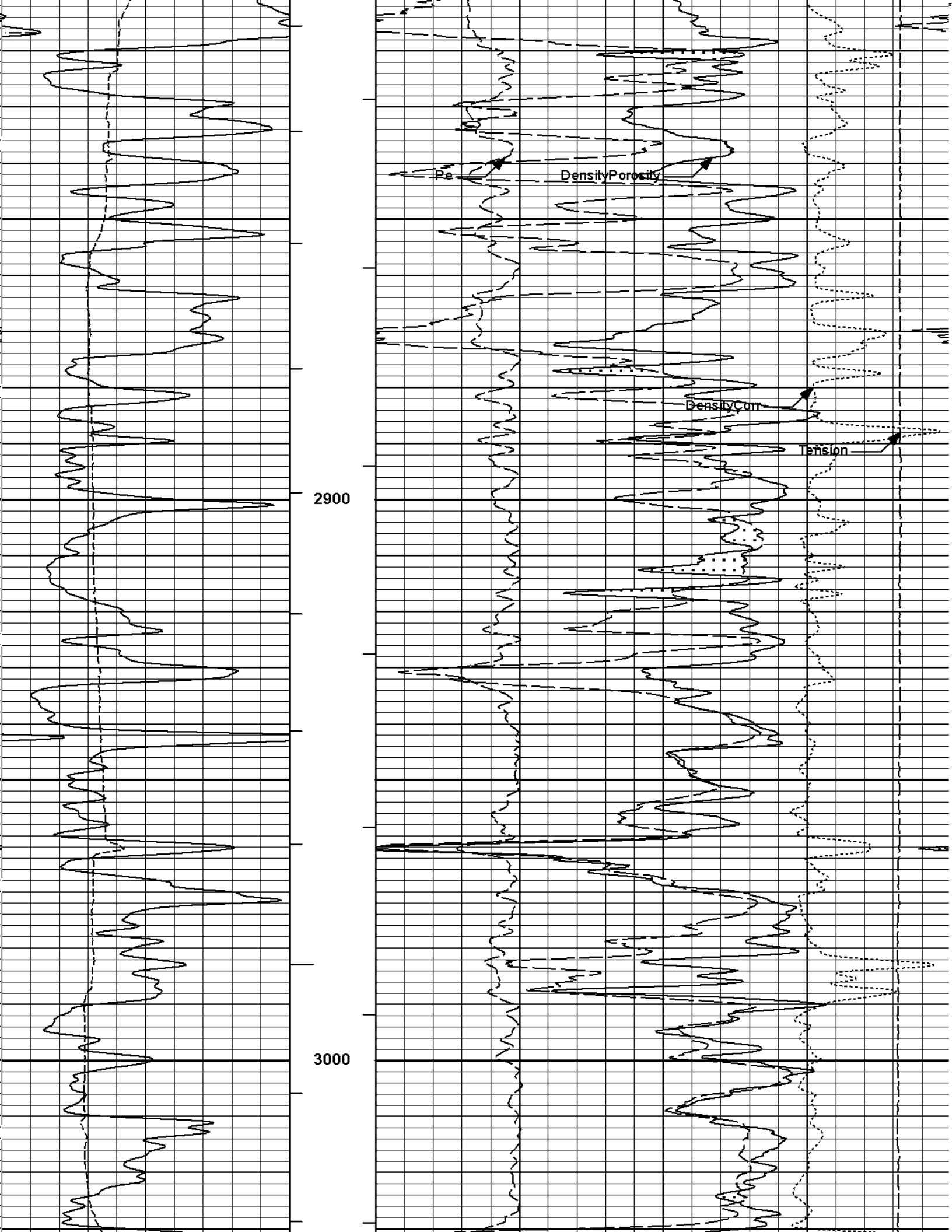
Plot Time: 26-Jul-11 00:03:19
Plot Range: 2550 ft to 4543.33 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-004\
Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

5 INCH MAIN LOG




2600
Pe
DensityPorosity
DensityCorr
Tension
2700
2800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DensityCorr
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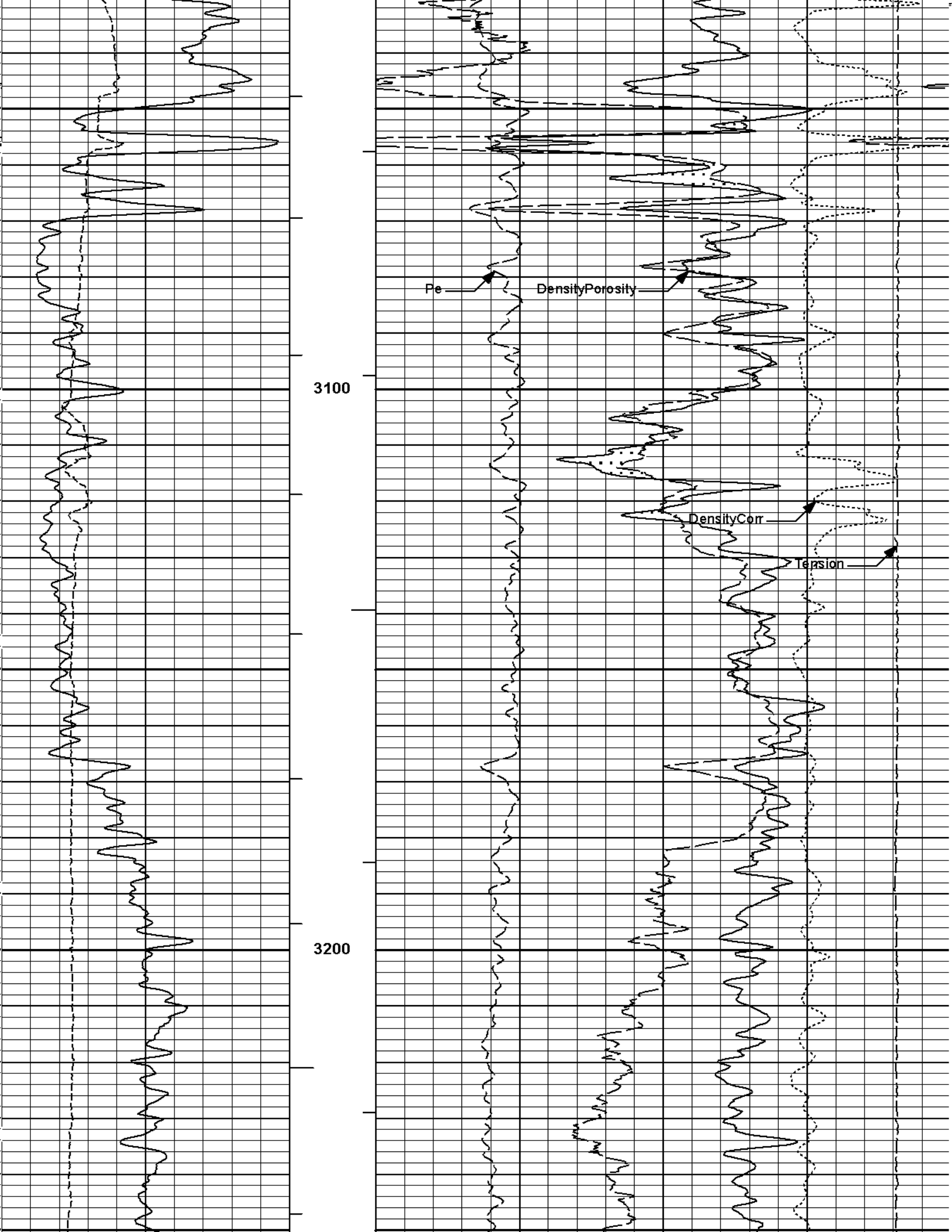
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DensityCorr
Tension
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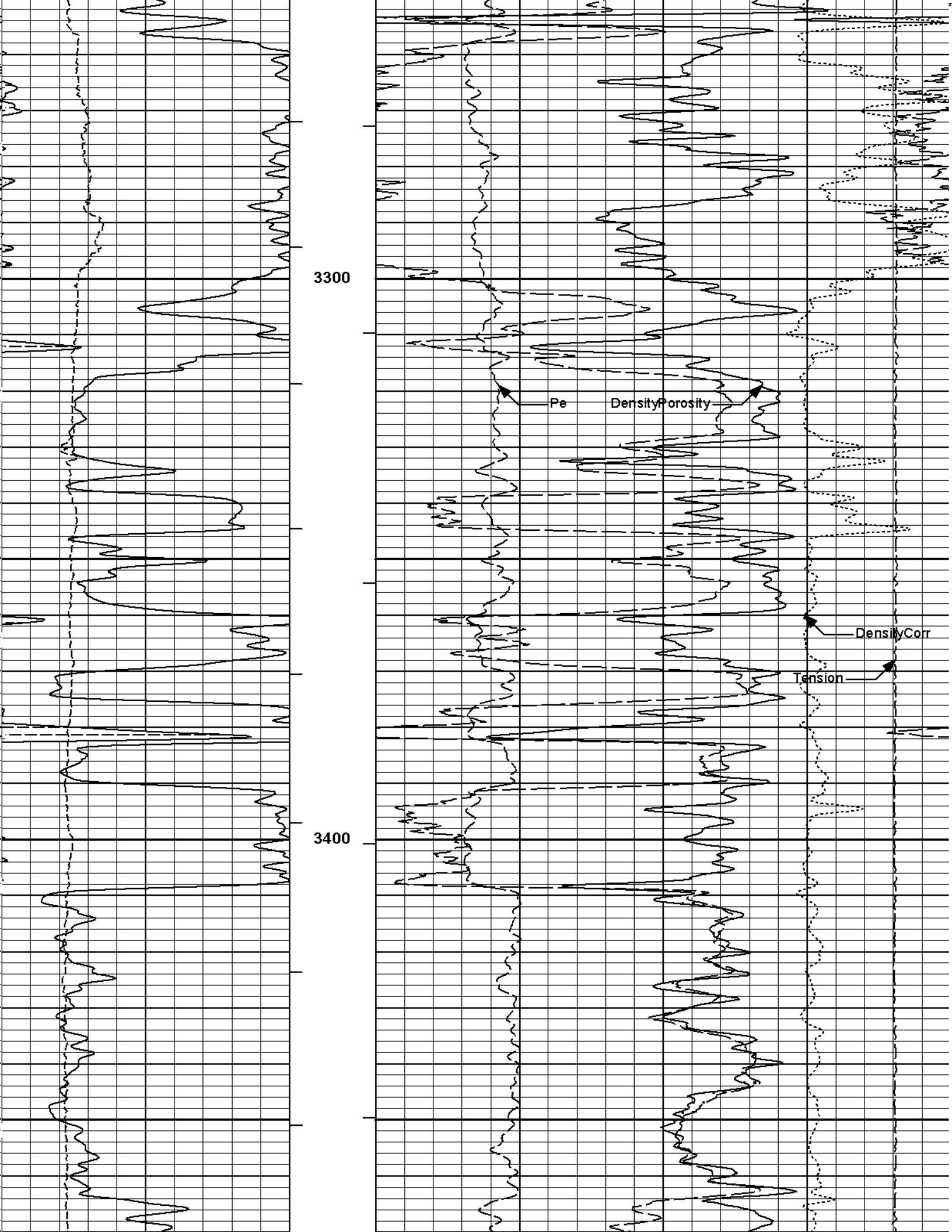
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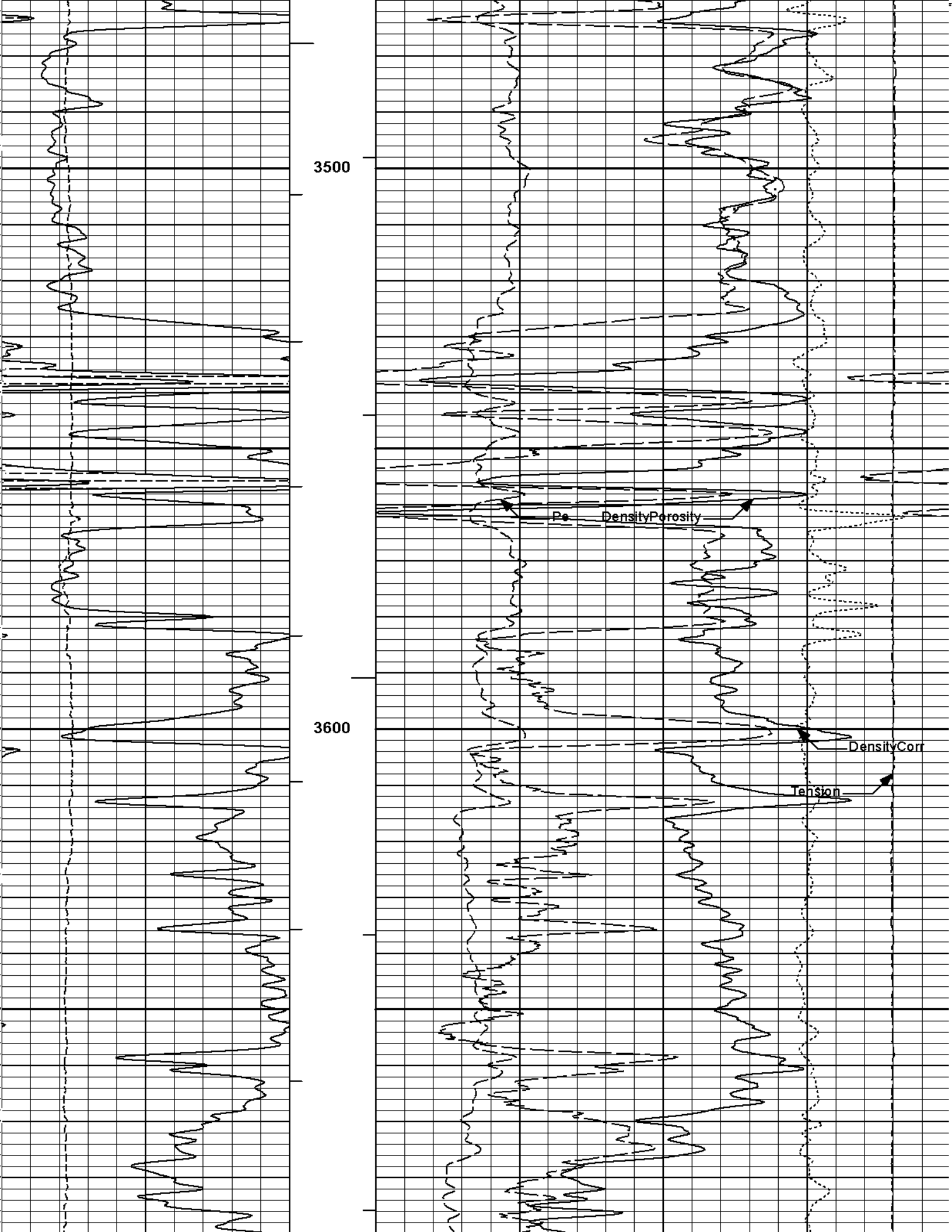
3400
Pe
DensityPorosity
DensityCorr
Tension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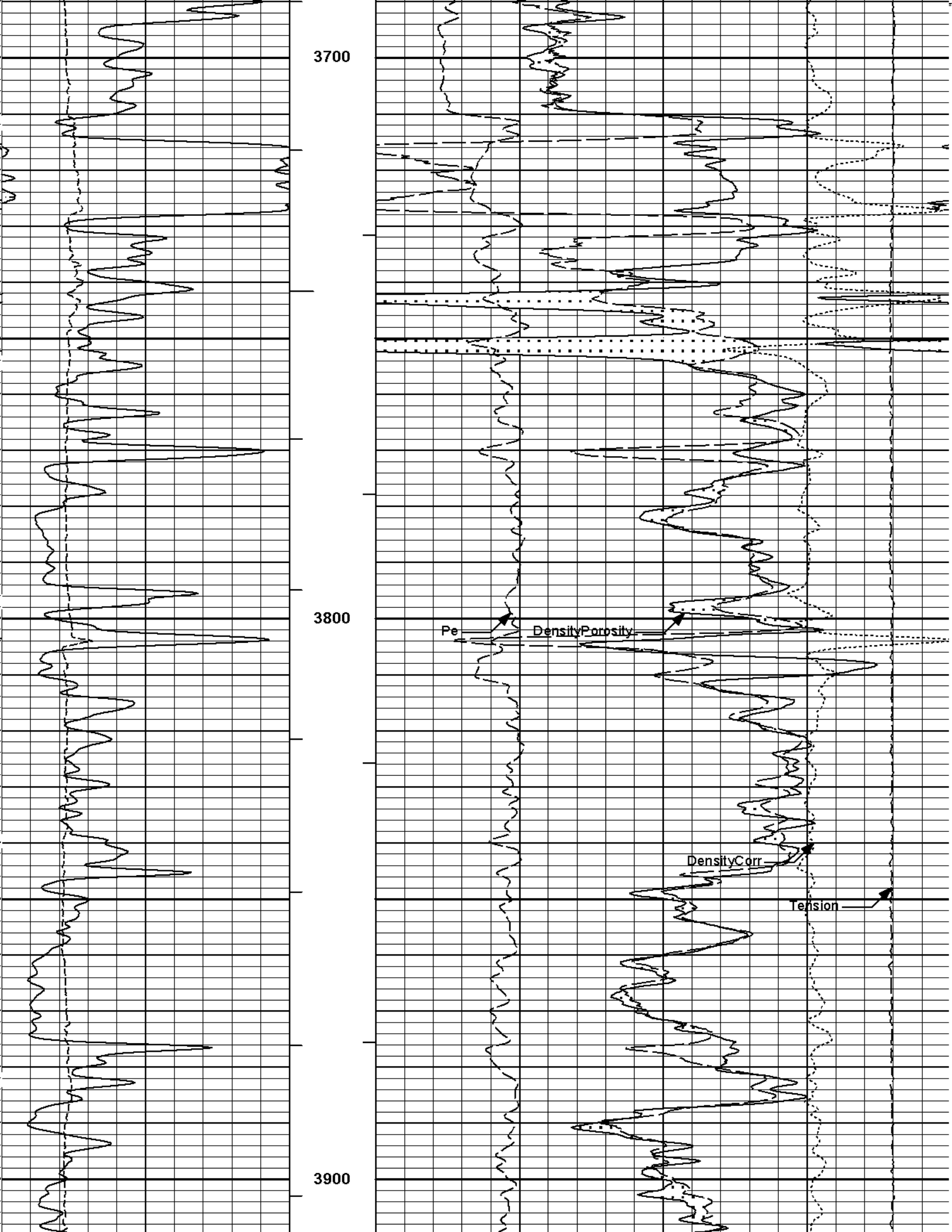
DensityPorosity
DensityCorr
Tension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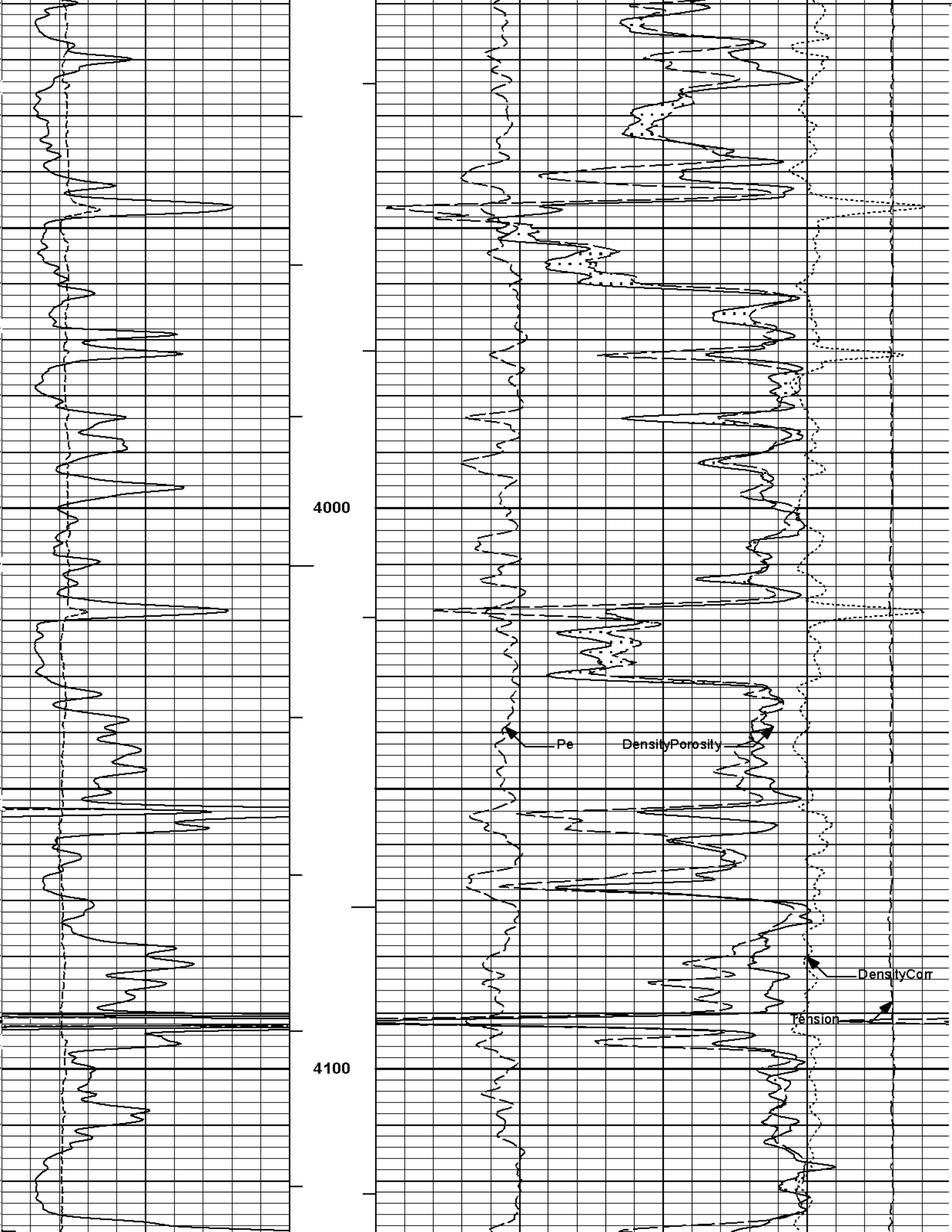
3800
3900
Pe
DensityPorosity
DensityCorr
Tension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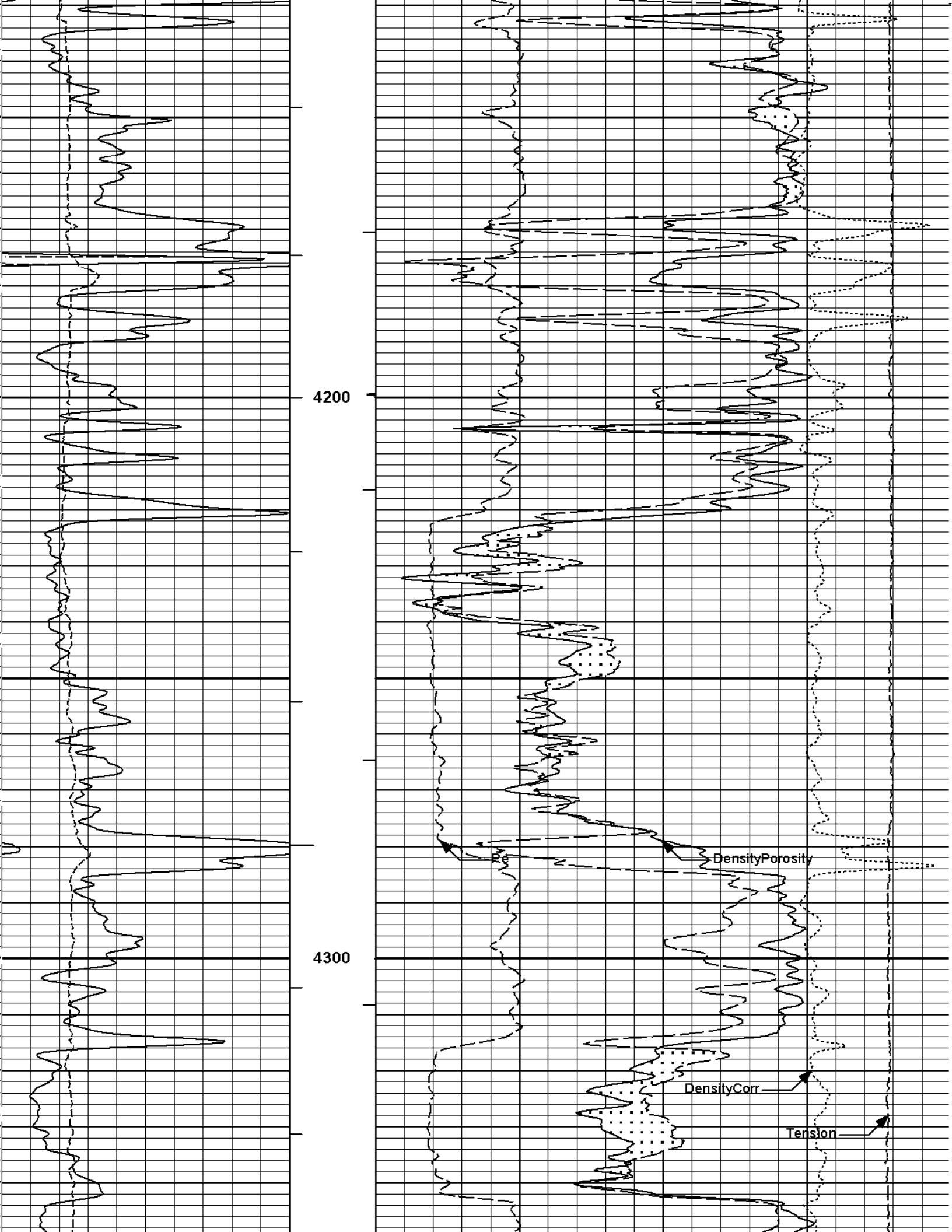
4100
Pe
DensityPorosity
DensityCorr
Tension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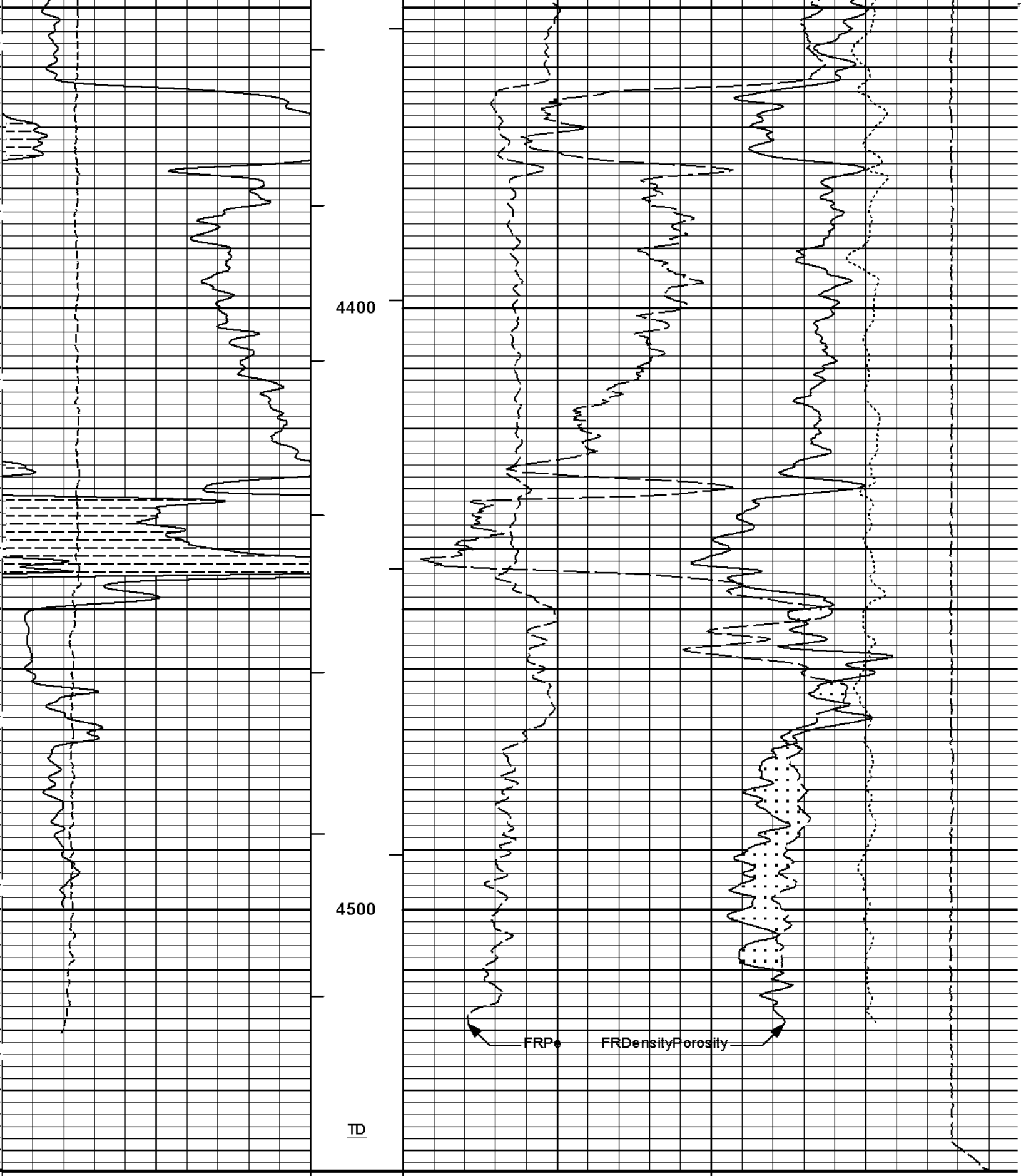
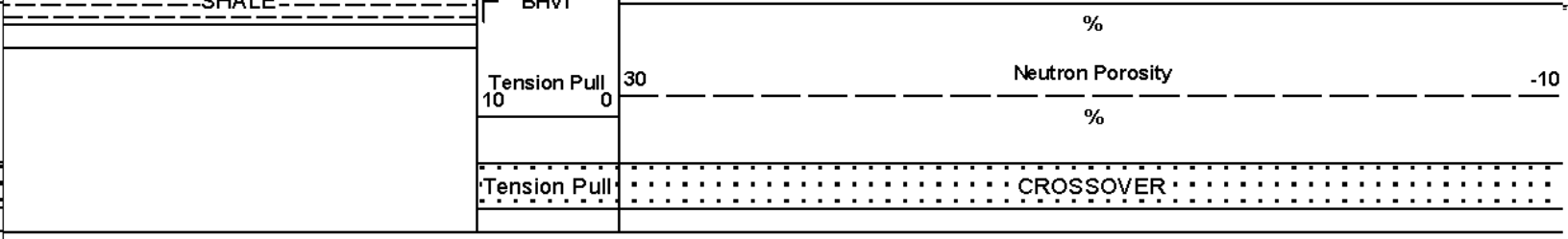
4300
Pe
DensityPorosity
DensityCorr
Tension



6 Caliper 16	1 : 240	0 Pe 10
inches	ft	
0 Gamma API 150	AHVT	
api		
SHALE	PLVT	30 DensityPorosity -10

-0.25 DensityCorr 0.25	
gram per cc	
15K Tension 0	
pounds	



HALLIBURTON

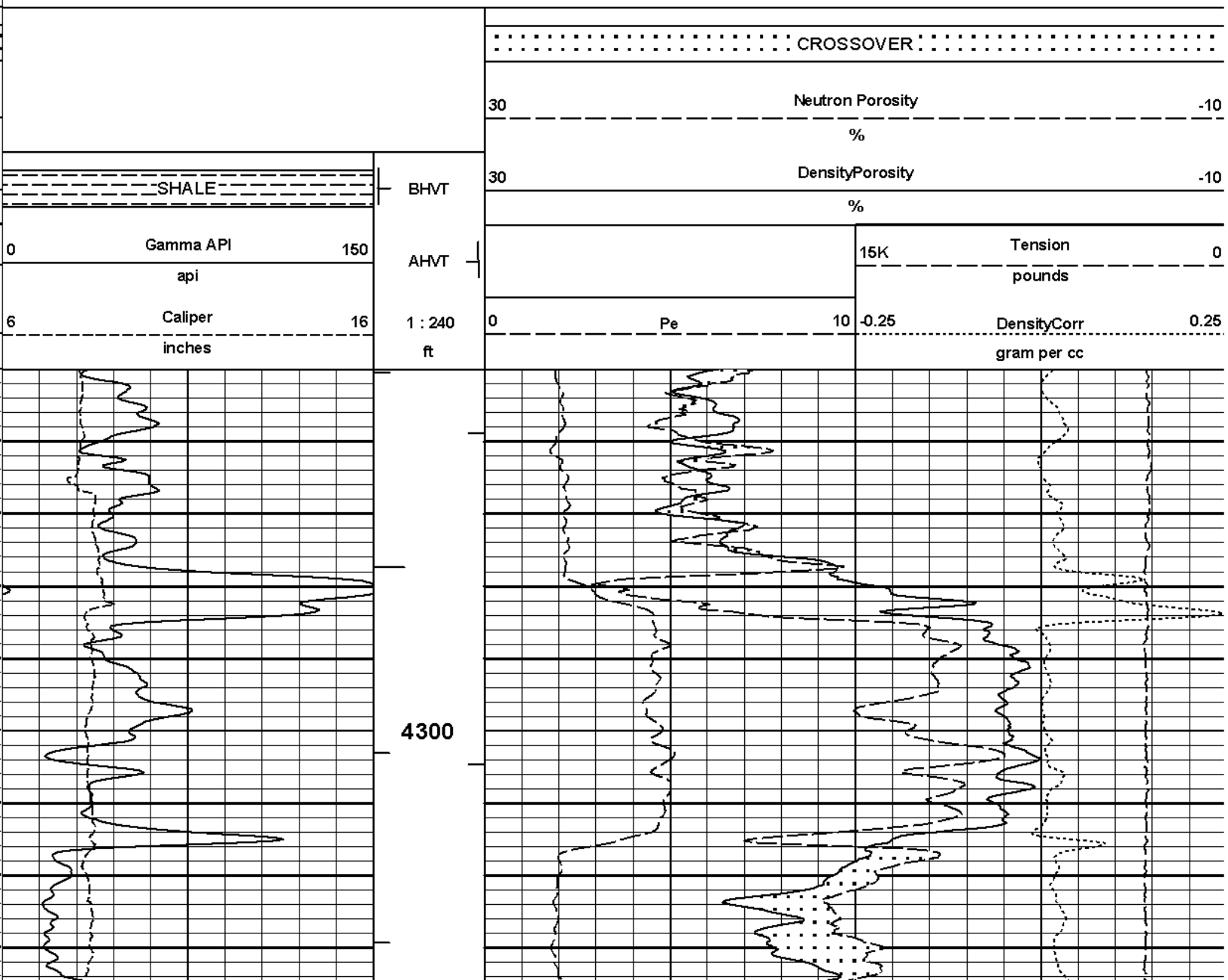
Plot Time: 26-Jul-11 00:03:38
Plot Range: 2550 ft to 4543.33 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-004\
Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

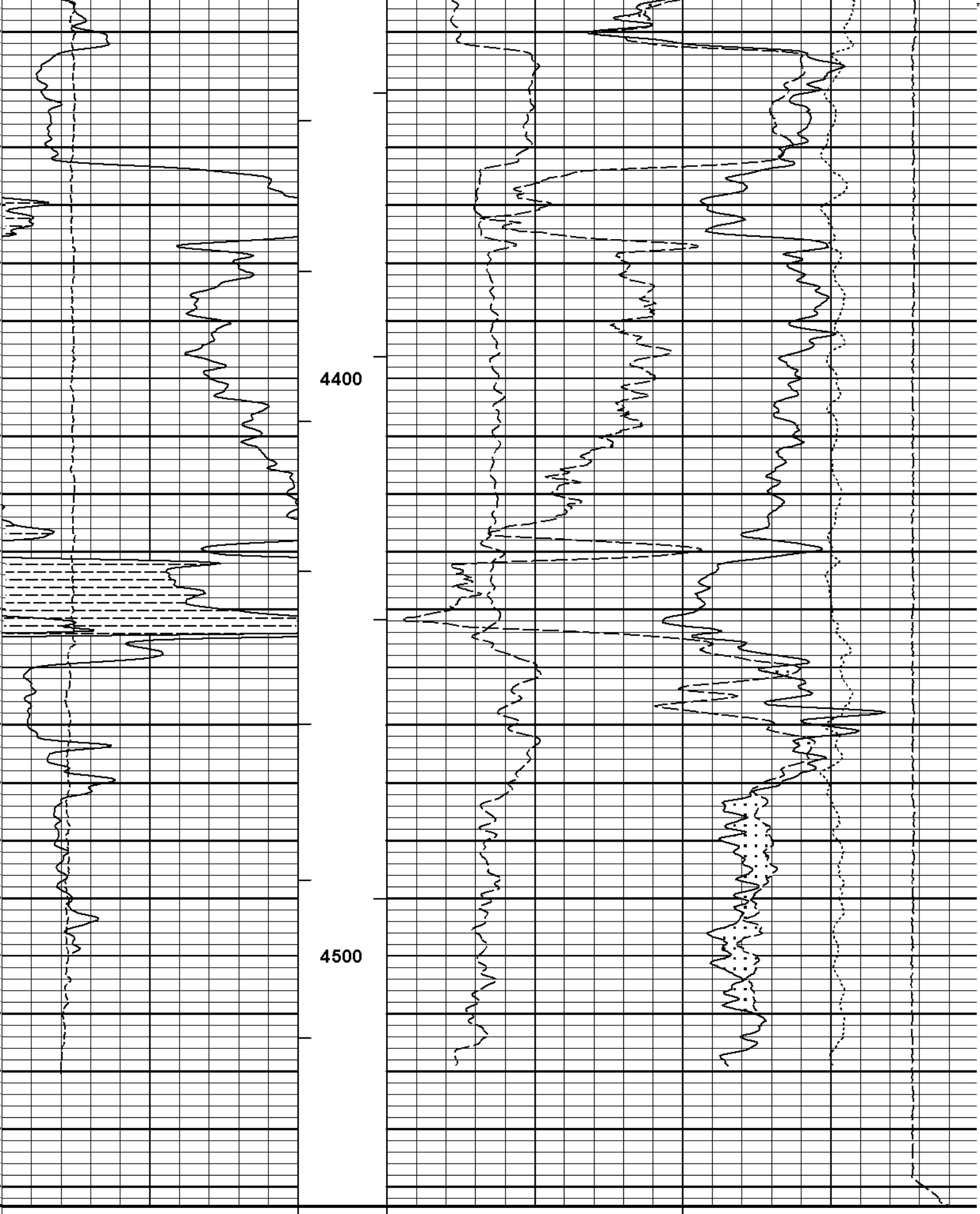
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 26-Jul-11 00:03:38
Plot Range: 4250 ft to 4543.25 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-003\
Plot File: \\PORO\Poro_IQ_5_REP_LIB

REPEAT SECTION




4400
4500
6
Caliper
16
inches
1 : 240
ft
0
Pe
10
-0.25
DensityCorr
0.25
gram per cc

0 Gamma API 150
api
SHALE
AHVT
BHVT
15K Tension 0
pounds
30 DensityPorosity -10
%
30 Neutron Porosity -10
%
CROSSOVER

HALLIBURTON

Plot Time: 26-Jul-11 00:03:42
Plot Range: 4250 ft to 4543.25 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-003\
Plot File: \\PORO\Poro_IQ_5_REP_LIB

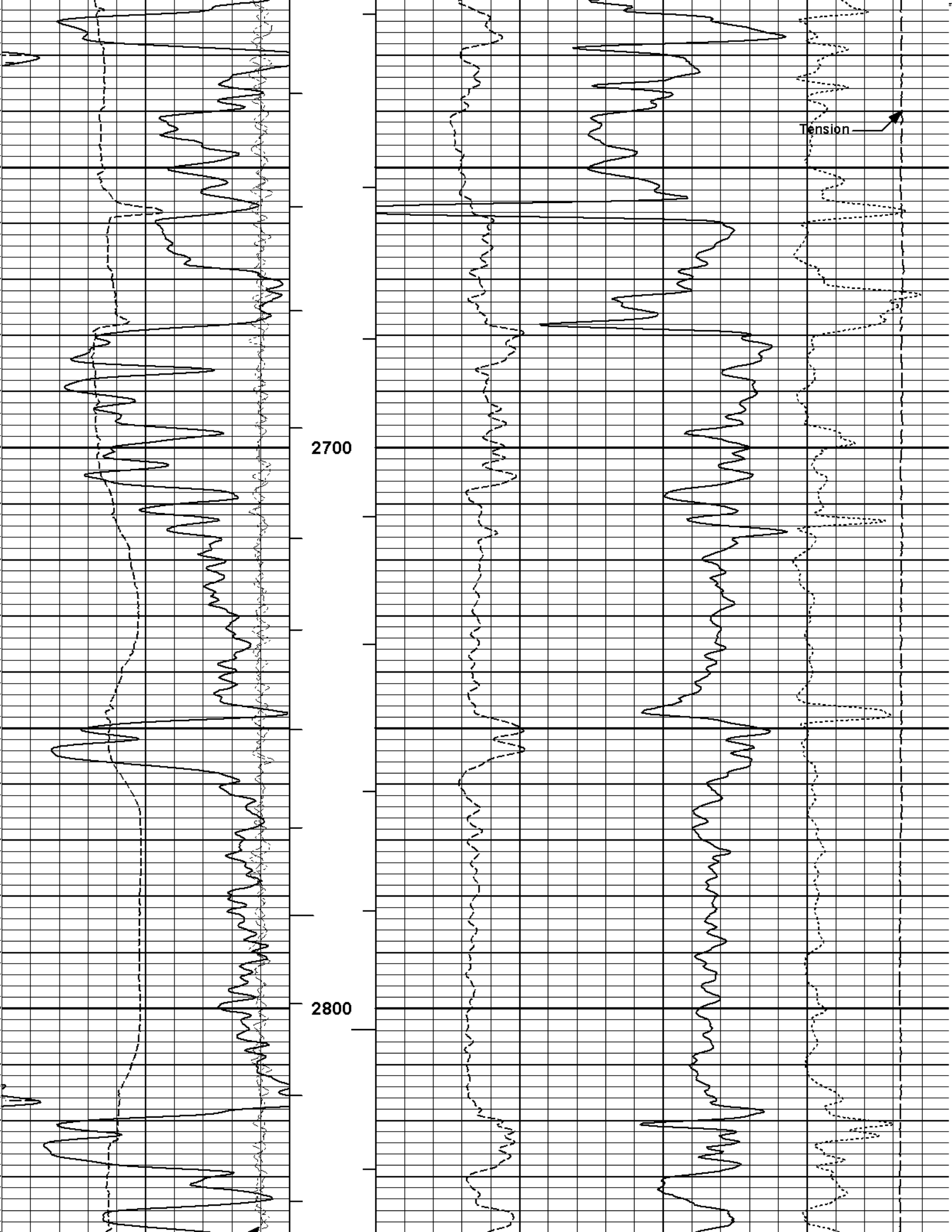
REPEAT SECTION

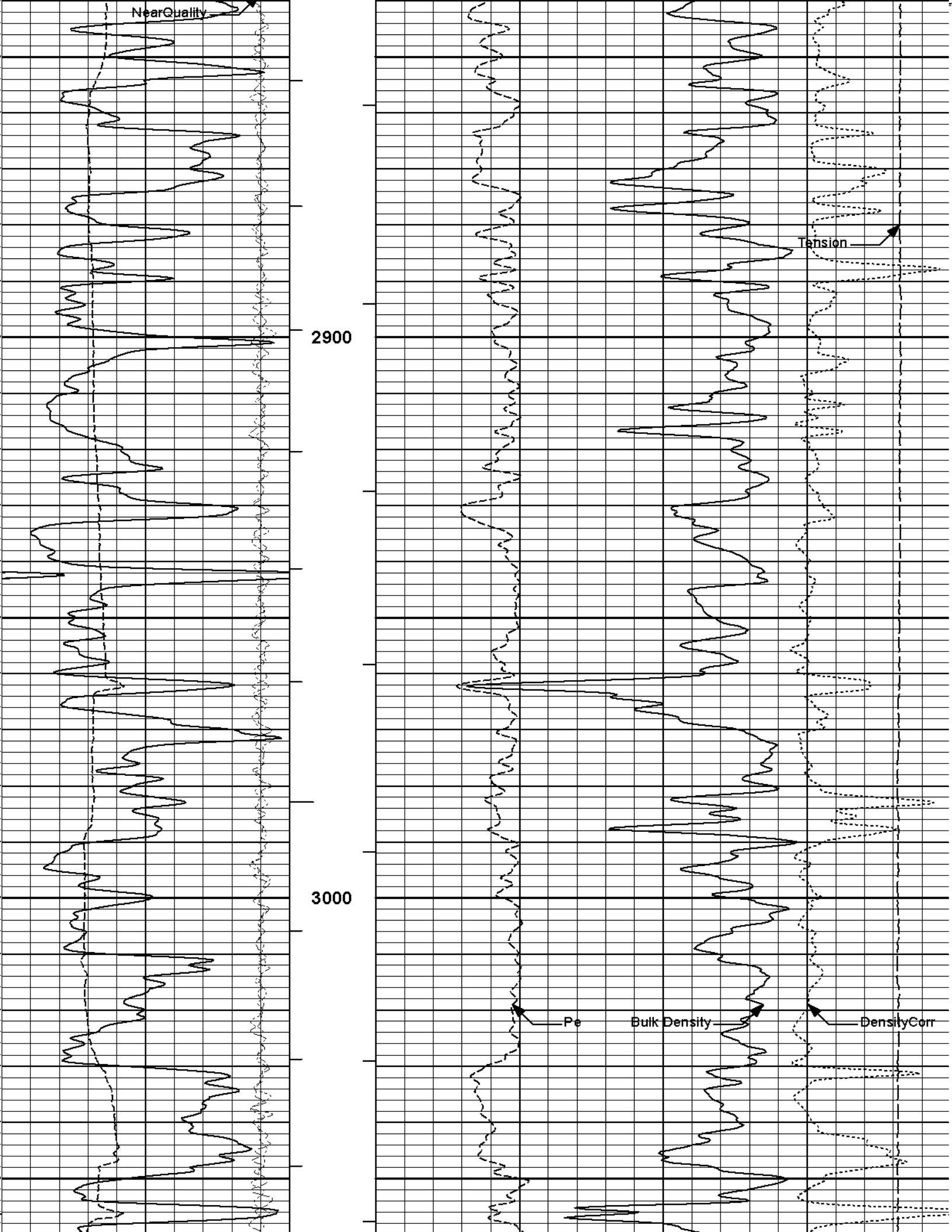
HALLIBURTON

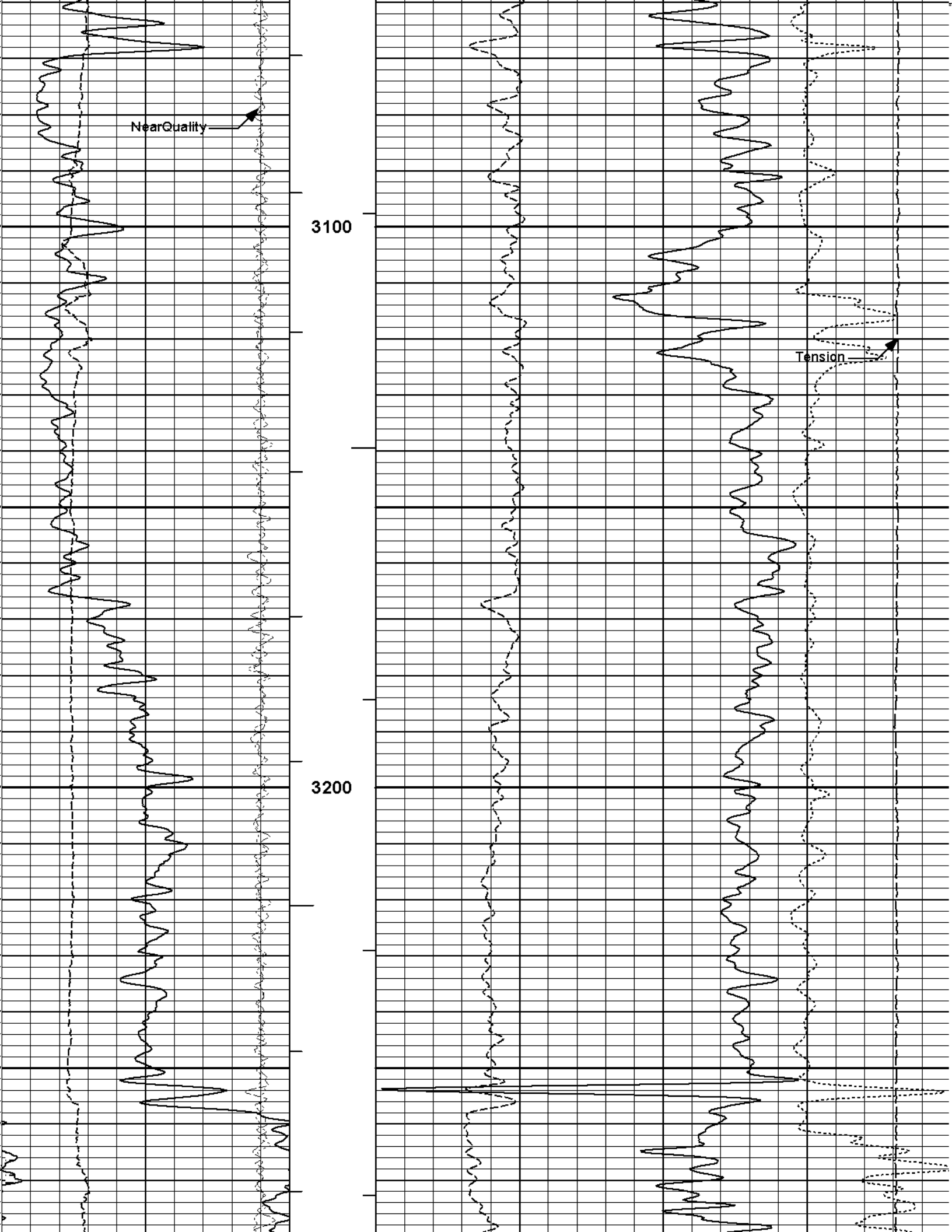
Plot Time: 26-Jul-11 00:03:42
Plot Range: 2550 ft to 4543.33 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-004\
Plot File: \\-LOCAL-\PARR_PAKRD_1_22\Well Based\PORO\BULKD_5_MAIN_LIB

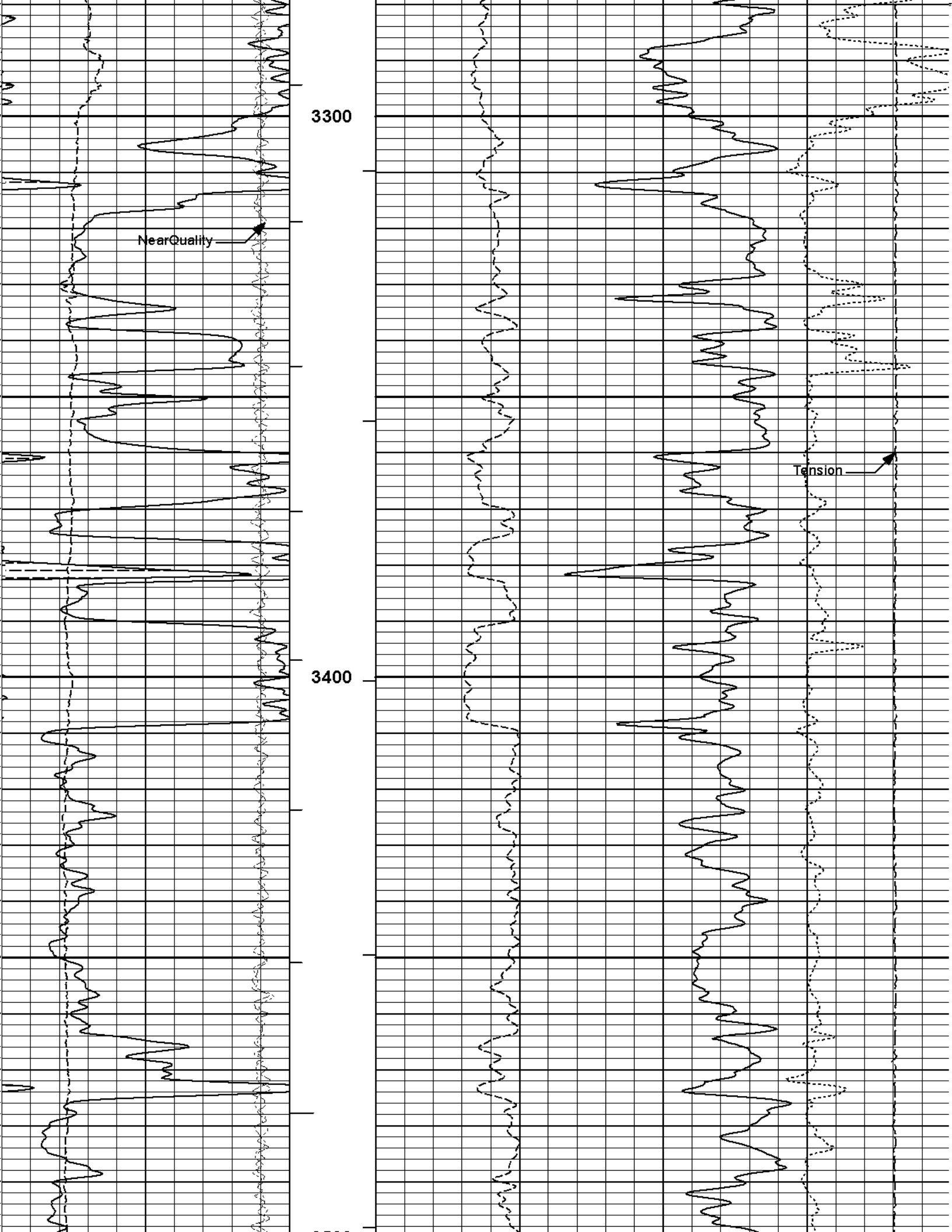
5 INCH MAIN LOG

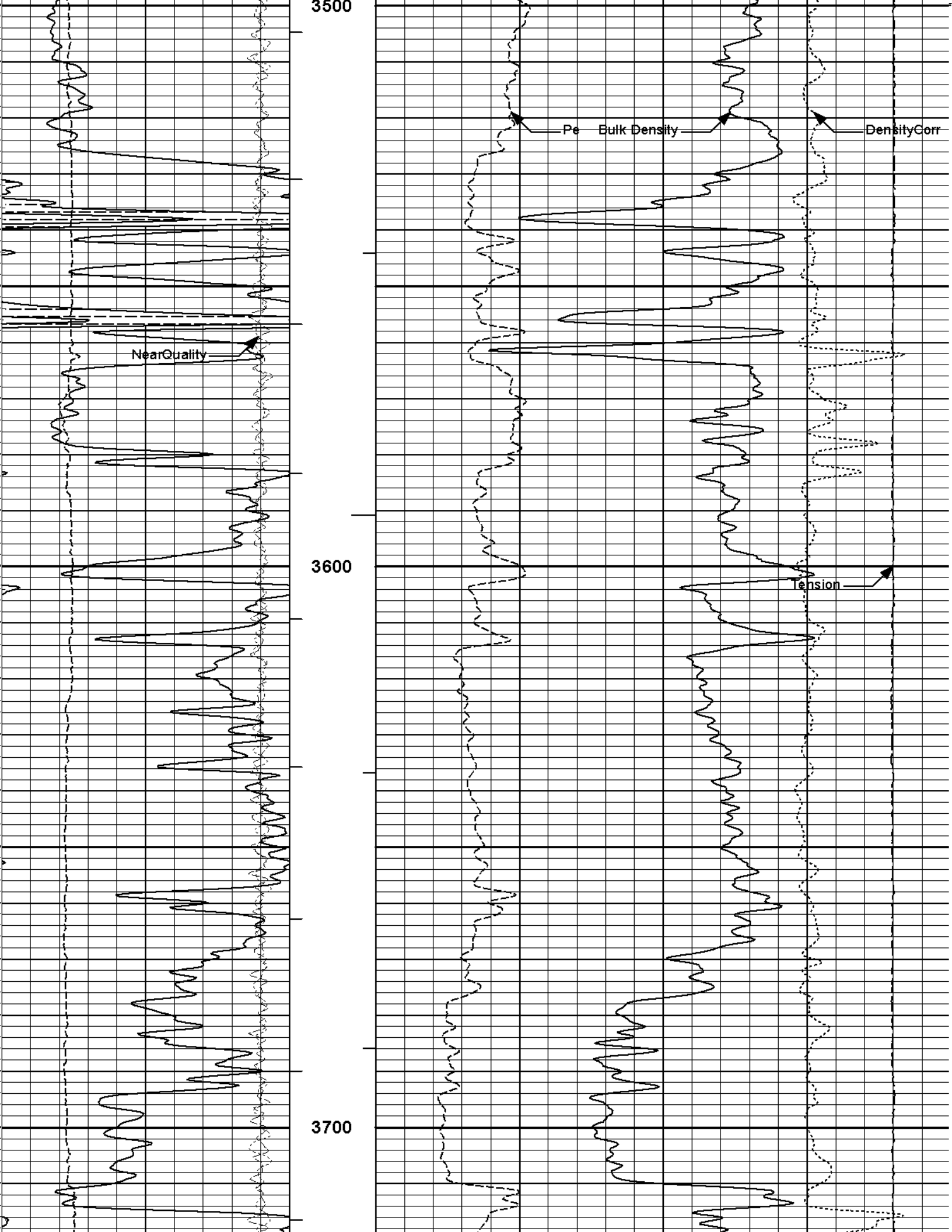
SHALE
Tension Pull
0 Gamma Ray 150
api
Tension Pull
10 0
18 FarQuality -2
AHV
ft3
-18 NearQuality 2
BHV
ft3
6 Caliper 16
inches
1 : 240
ft
2 Bulk Density 3
g/cc
15K Tension 0
pounds
0 Pe 10
-0.25 DensityCorr 0.25
g/cc
NearQuality
2600

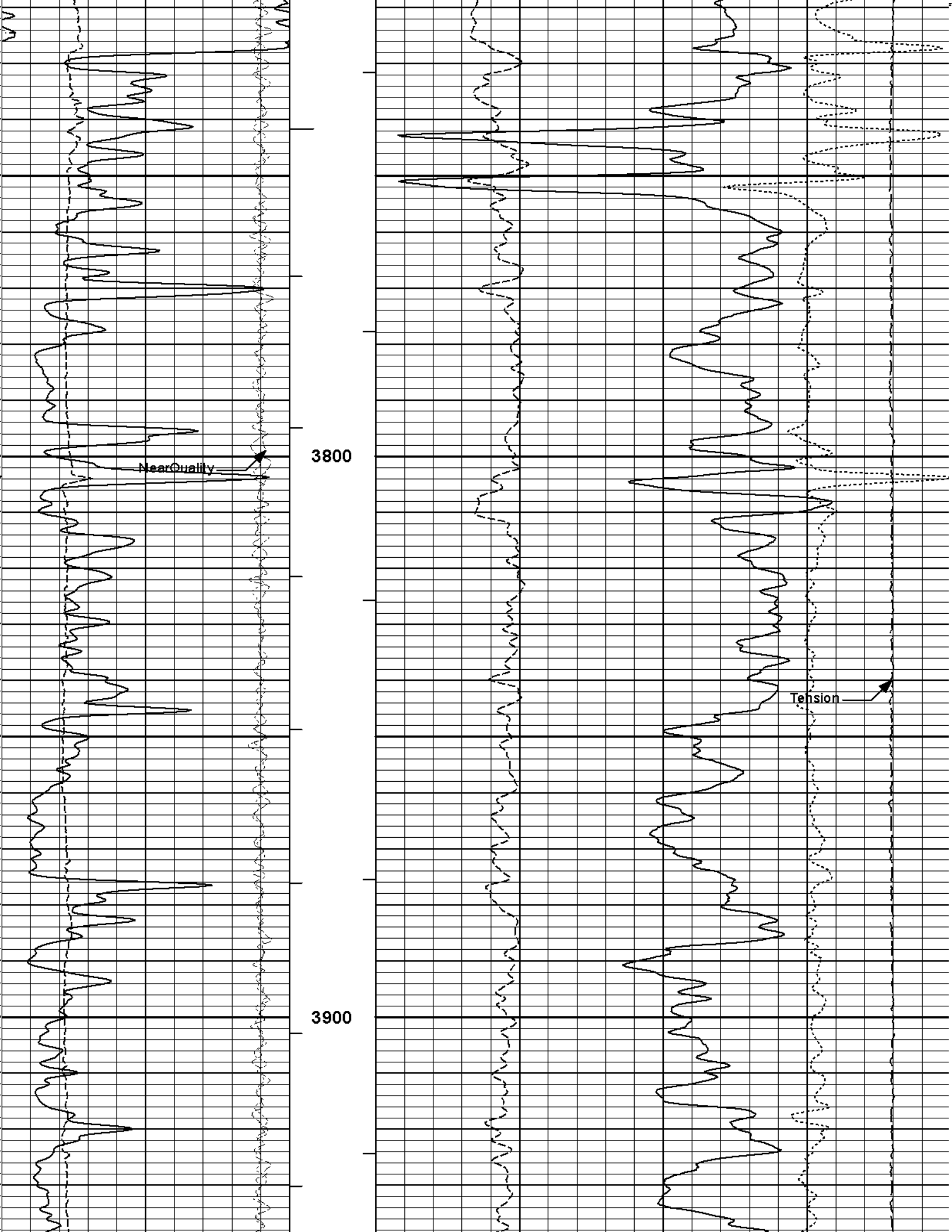

Tension
2700
2800

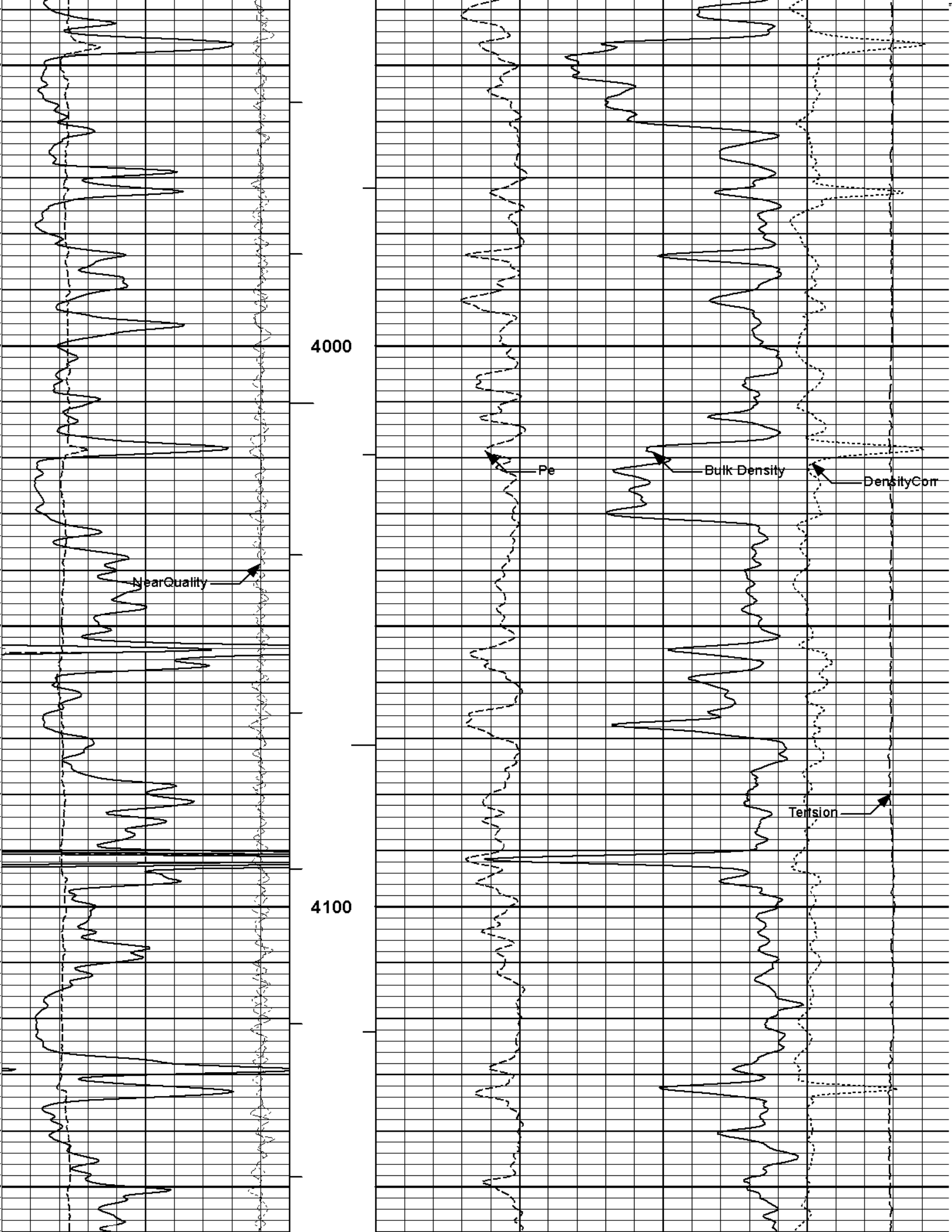

NearQuality
Tension
2900
3000
Pe
Bulk Density
DensityCorr

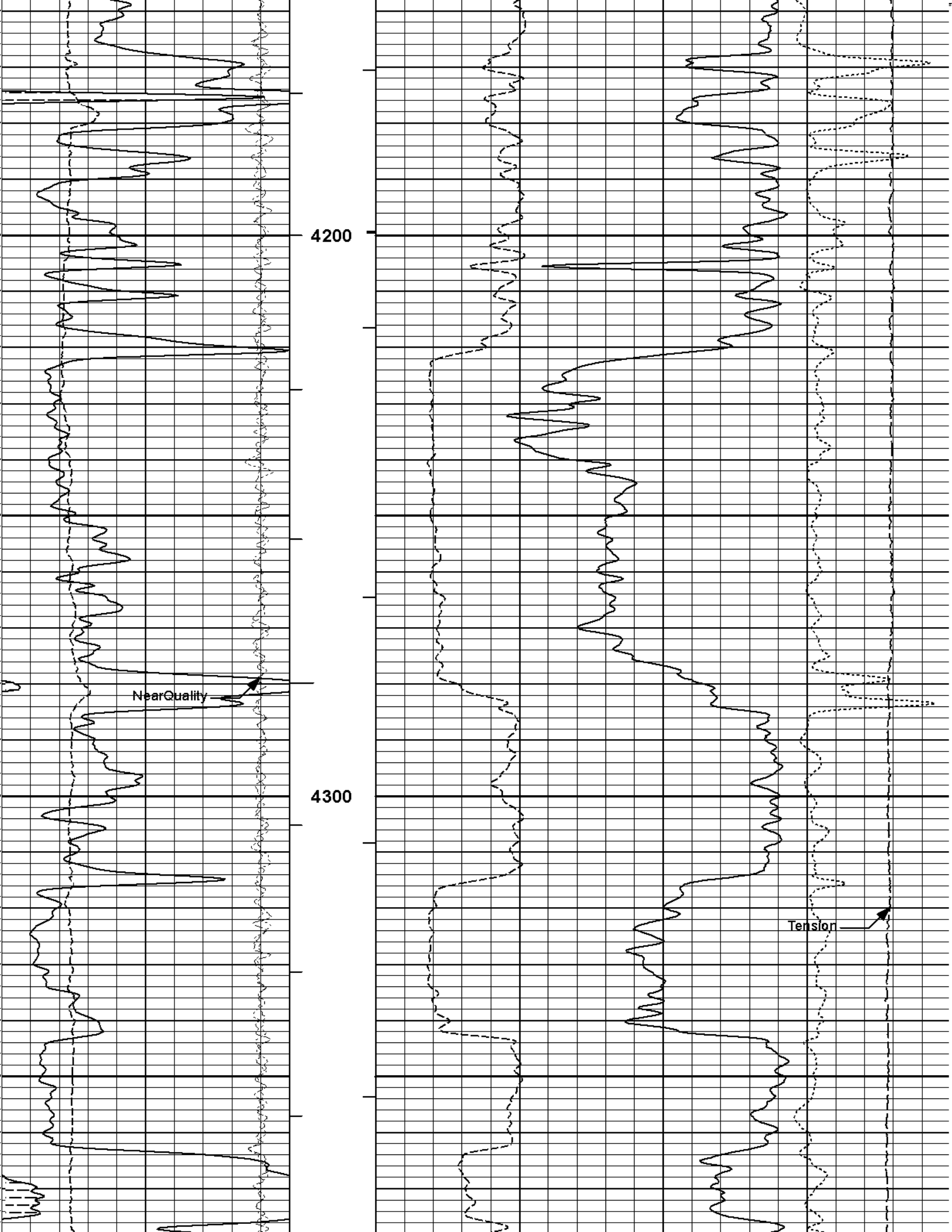

NearQuality
3100
Tension
3200

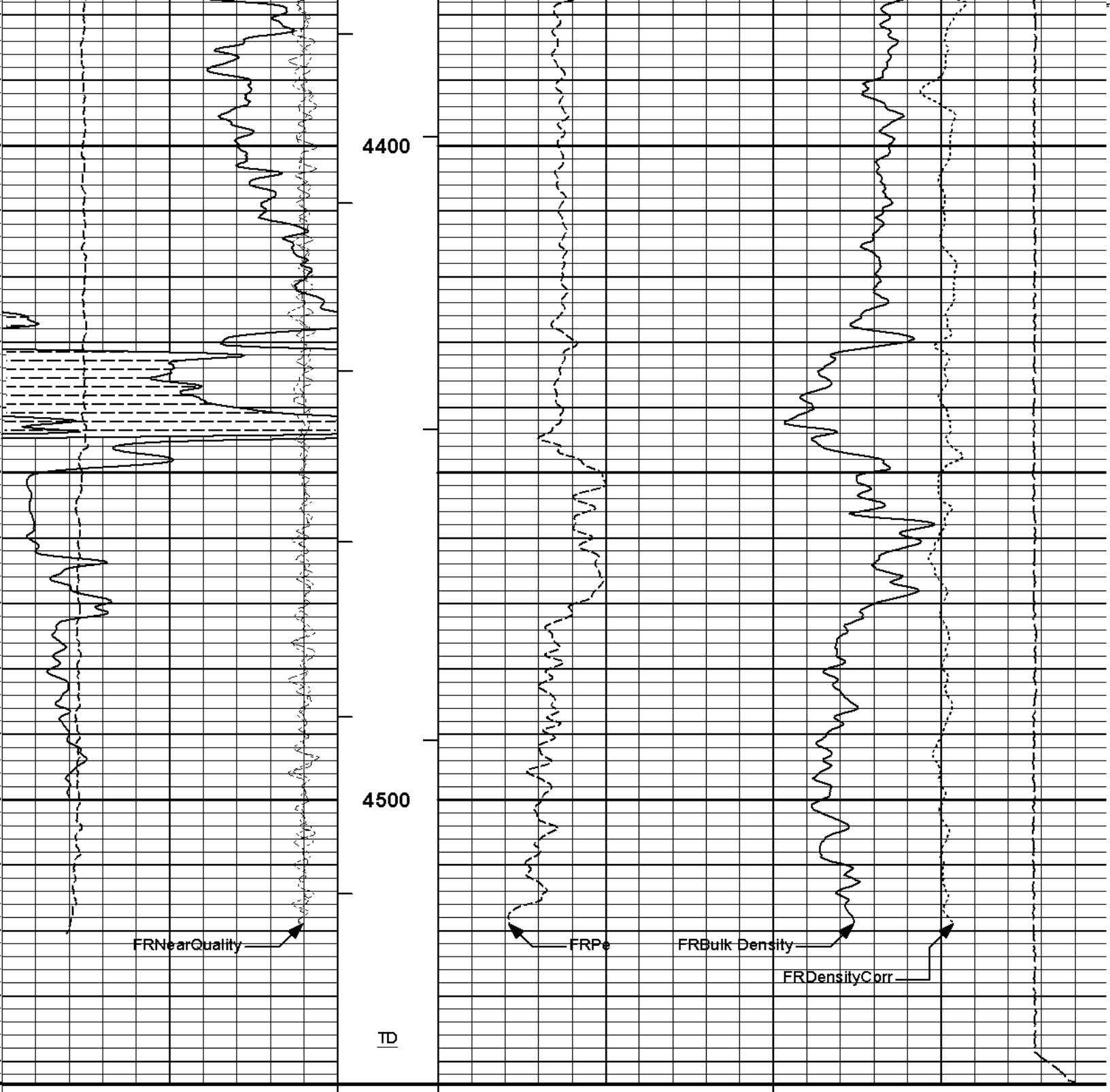

3300
NearQuality
Tension
3400


3500
Pe
Bulk Density
DensityCorr
NearQuality
3600
Tension
3700


NearQuality
3800
Tension
3900


4000
4100
Pe
Bulk Density
DensityCorr
NearQuality
Tension


4200
NearQuality
4300
Tension



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

Plot Range: 2550 ft to 4543.33 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-004\
Plot File: \\-LOCAL-\PARR_PAKRD_1_22\Well Based\PORO\BULKD_5_MAIN_LIB

5 INCH MAIN LOG

HALLIBURTON

Plot Time: 26-Jul-11 00:03:46
Plot Range: 4250 ft to 4543.25 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-003\
Plot File: \\-LOCAL-\PARR_PAKRD_1_22\Well Based\PORO\BULKD_5_REP_LIB

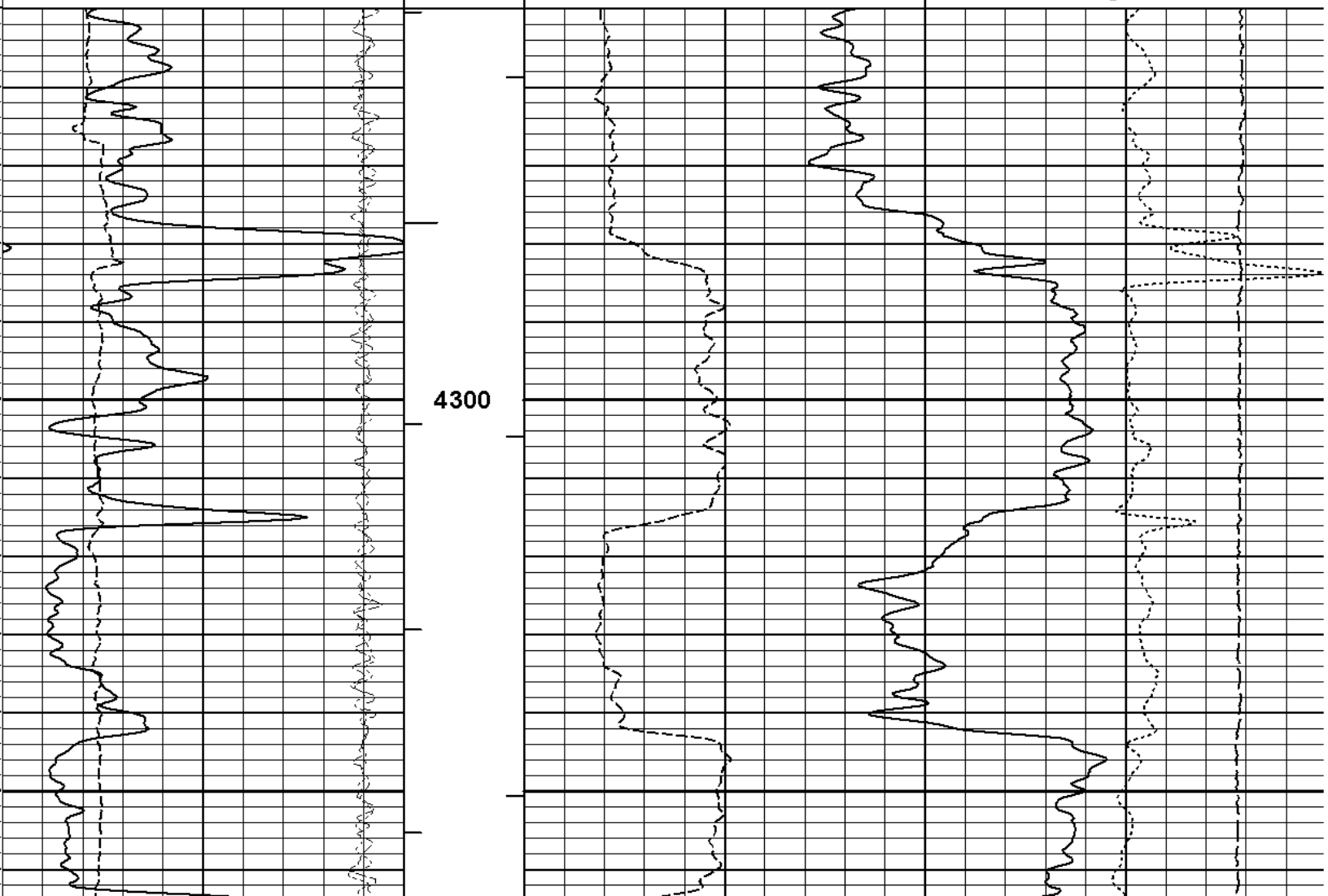
REPEAT SECTION

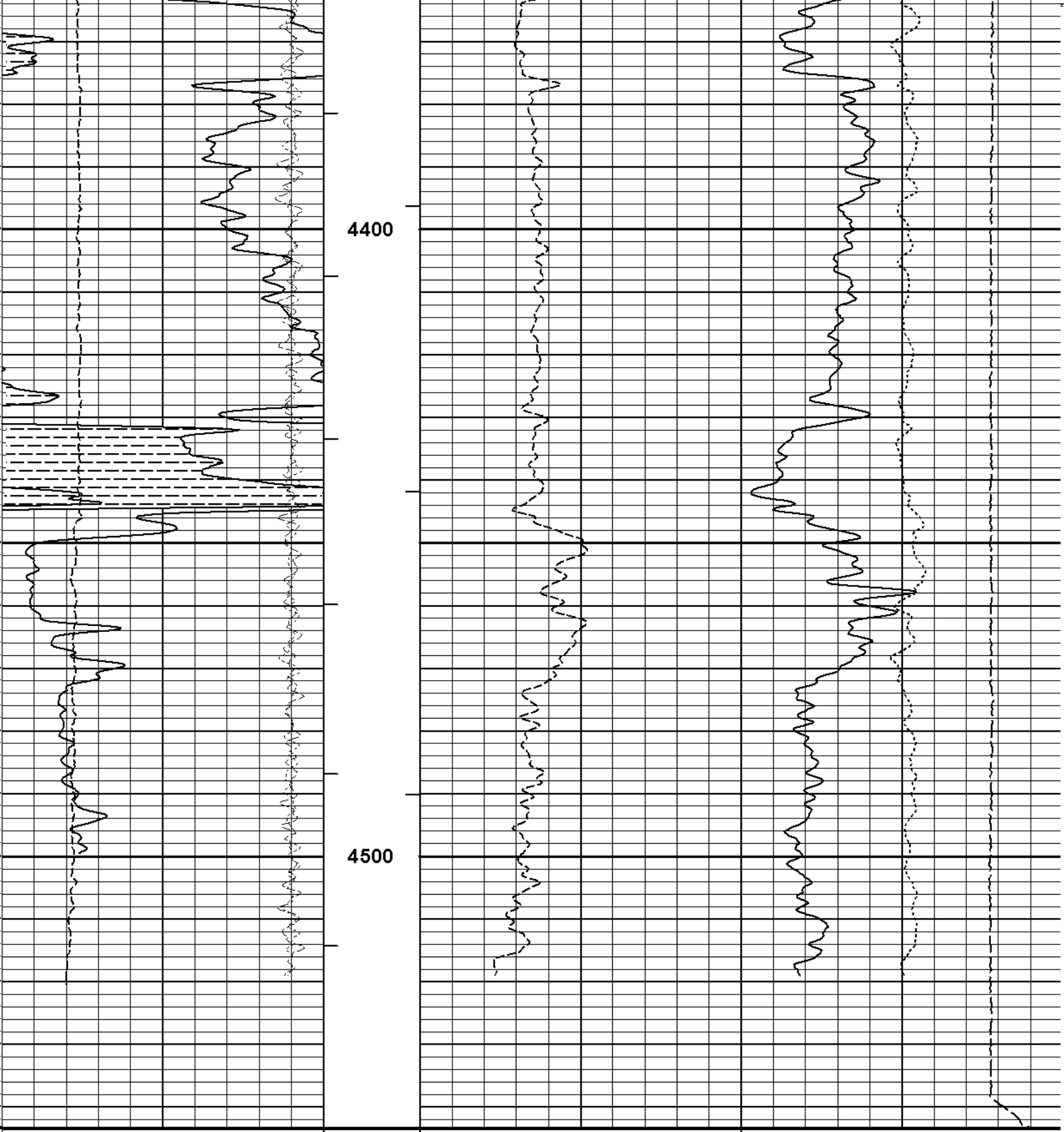
SHALE

0	Gamma Ray (api)	150
18	FarQuality	-2
-18	NearQuality	2
6	Caliper (inches)	16

AHV ft3
BHV ft3
1 : 240 ft

2	Bulk Density (g/cc)	3
15K	Tension (pounds)	0
0	Pe	10
-0.25	DensityCorr (g/cc)	0.25





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

-0.25 DensityCorr 0.25
g/cc
15K Tension 0
pounds

SHALE

HALLIBURTON

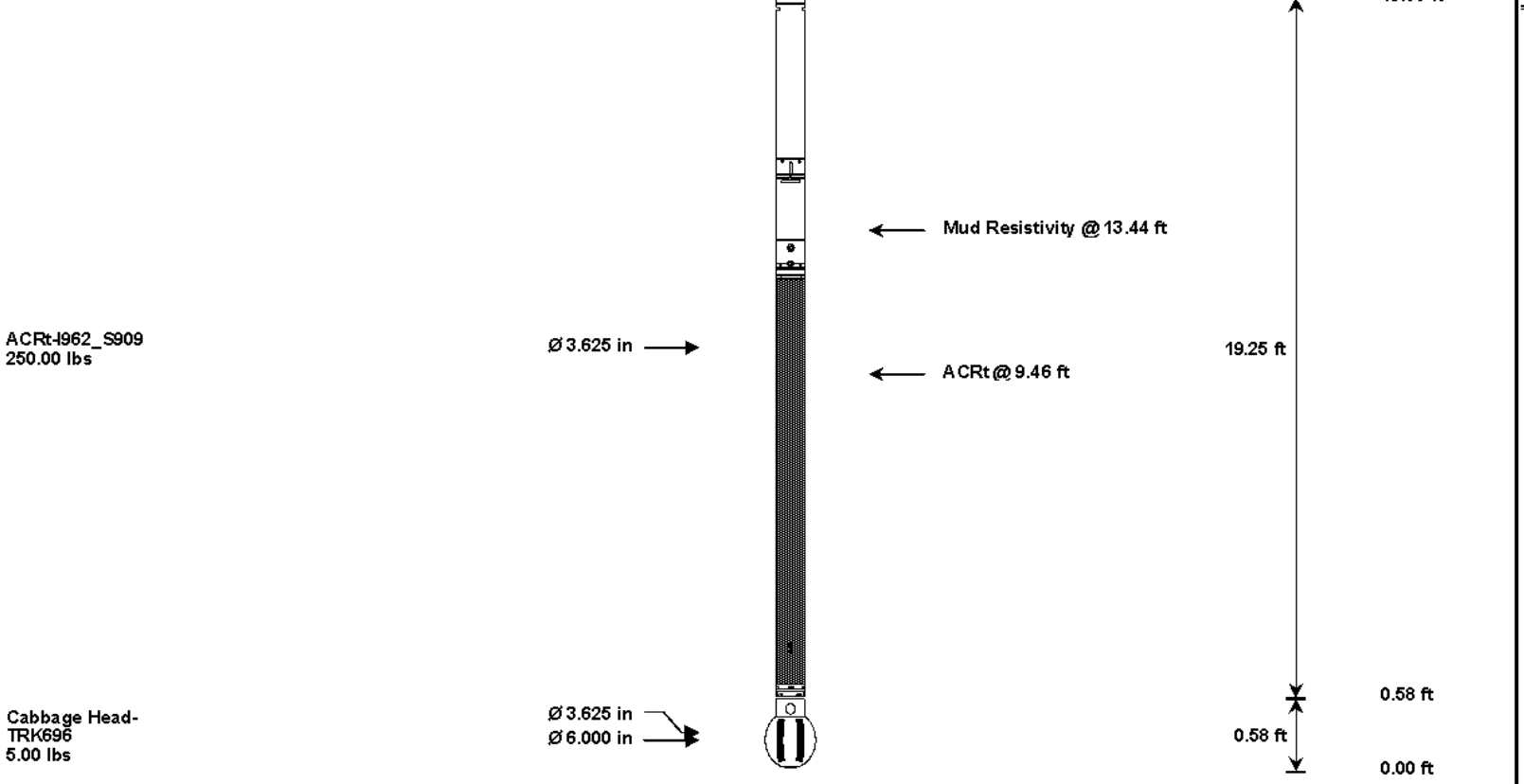
Plot Time: 26-Jul-11 00:03:48
Plot Range: 4250 ft to 4543.25 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-003\
Plot File: \\-LOCAL-\PARR_PAKRD_1_22\Well Based\PORO\BULKD_5_REP_LIB

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Sensors @ Delays	Length	Accumulated Length
					56.57 ft
CH_HOS-CH_696 37.50 lbs		Ø 2.750 in	← Temperature @ 55.54 ft	3.03 ft	
		Ø 2.750 in			53.54 ft
XOHD-TRK696 20.00 lbs		Ø 3.625 in		0.95 ft	
					52.59 ft
SP Sub-PROT01 60.00 lbs		Ø 3.625 in	← SP @ 50.81 ft	3.74 ft	
					48.85 ft
GTET-11048627 165.00 lbs		Ø 3.625 in		8.52 ft	
			← GammaRay @ 42.79 ft		
					40.33 ft
	DSN Decentralizer-10755066 6.60 lbs	Ø 3.625 in*			
DSNT-11055304 174.00 lbs		Ø 3.625 in		9.69 ft	
			← DSN Far @ 33.39 ft ← DSN Near @ 32.64 ft		
					30.64 ft
SDLT-I04_P84 360.00 lbs		Ø 4.500 in		10.81 ft	
		Ø 4.750 in	← SDL Microlog @ 22.83 ft ← SDL Caliper @ 22.65 ft ← SDL @ 22.64 ft		
					19.83 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	11048627	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
Total			**1,078.10**	**56.57**			

* Not included in Total Length and Length Accumulation.

Data: PARR_PAKRD_1_22\0001 SP-GTET-DSN-SDL-ACRT-CH\IDLE **Date: 25-Jul-11 14:55:58**

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: **GTET - 11048627** **Reference Calibration Date:** **30-Jun-11 14:28:57**

Engineer: **S. JUNG** **Calibration Date:** **02-Jul-11 03:38:33**

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	47.5	43.8	api
Background + Calibrator	334.6	308.8	api
Calibrator	261.3	265.0	api

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	**DSNT - 11055304**	**Reference Calibration Date:**	**13-Jun-11 11:38:55**
Engineer:	**C. PARKER**	**Calibration Date:**	**06-Jul-11 10:45:13**
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: 89 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.985	0.988	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):	0.2102	0.2110	0.0007	+/- 0.0020
Calibrated Ratio:	9.70	9.73	0.025	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0743	0.02000 - 0.09000

PASS/FAIL SUMMARY

Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	**SDLT - I04_P84**	**Reference Calibration Date:**	**09-Jun-11 12:12:05**
Engineer:	**J. BOSH**	**Calibration Date:**	**15-Jul-11 10:45:33**
Software Version:	**WL INSITE R3.2.0 (Build 7)**	**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: 2.594

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9730	1.0312	0.90 - 1.10
Near Dens Gain	0.9539	1.0105	0.90 - 1.10
Near Peak Gain	0.9164	1.0110	0.90 - 1.10
Near Lith Gain	0.9029	0.9871	0.90 - 1.10
Far Bar Gain	1.0050	1.0134	0.90 - 1.10
Far Dens Gain	0.9943	1.0017	0.90 - 1.10
Far Peak Gain	0.9896	0.9977	0.90 - 1.10
Far Lith Gain	0.9637	0.9743	0.90 - 1.10
Near Bar Offset	0.3892	-0.1779	NONE
Near Dens Offset	0.5216	-0.0016	NONE
Near Peak Offset	0.7836	-0.0320	NONE
Near Lith Offset	0.9593	0.1287	NONE

Near Lith Offset	0.8593	0.1287	NONE
Far Bar Offset	0.0327	-0.0708	NONE
Far Dens Offset	0.0960	0.0061	NONE
Far Peak Offset	0.0937	0.0025	NONE
Far Lith Offset	0.2445	0.1281	NONE
Near Bar Background	772.91	774.77	700 - 1450
Near Dens Background	250.52	252.95	230 - 480
Near Peak Background	109.08	110.51	100 - 210
Near Lith Background	135.85	136.63	125 - 260
Far Bar Background	534.97	532.33	450 - 900
Far Dens Background	209.79	209.36	175 - 345
Far Peak Background	82.95	82.64	70 - 140
Far Lith Background	86.15	85.42	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.682	1.684	0.002	+/- 0.015
Pe	2.612	2.562	-0.050	+/- 0.150
ALUMINUM				
Density (g/cc)	2.594	2.598	0.004	+/- 0.01500
Pe	3.151	3.134	-0.017	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0008	+/- 0.0110	0.0001	+/- 0.0140
Magnesium Block	0.0002	+/- 0.0110	0.0003	+/- 0.0140
Aluminum Block	0.0011	+/- 0.0110	0.0021	+/- 0.0140
Resolution	9.11	6.00 - 11.50	8.92	6.00 - 11.50
Internal Verifier(B+D+P+L)	1275	1200 - 2700	910	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

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - I04_P84 **Reference Calibration Date:** 06-Jul-11 11:13:24

Engineer: C. PARKER **Calibration Date:** 06-Jul-11 11:18:56

Software Version: WL INSITE R3.2.0 (Build 7) **Calibration Version:** 1

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value

Pad Offset	-3660.52	-4528.92	-7000.00 - -1000.00
Pad Gain	0.0003891	0.0004362	0.000200 - 0.000600
Arm Offset	-2332.50	-2306.72	-5000.00 - 3000.00
Arm Gain	0.0004848	0.0005863	0.000300 - 0.000700
Arm Power	-0.000003814	-0.000009382	-0.000010 - 0.000010

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

Tool Diameter: 4.50 in

CALIBRATION RINGS

Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.12	2.00	-0.12	+/- 0.20
Medium Ring (in)	3.68	3.75	0.07	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.50	6.50	0.00	+/- 0.20
Medium Ring (in)	8.06	8.25	0.19	+/- 0.20
Large Ring (in)	14.96	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

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11048627						
Gamma Ray Calibrator	265.0	----------	----------	0.0	+/- 9.00	api
DSNT-11055304						
Snow-Block Porosity	0.0743	----------	----------	0.0000	+/- -.--	decp
SDLT-I04_P84						
Near(B+D+P+L)	1274.864	----------	----------	0.000	+/-12.661	cps
Far(B+D+P+L)	909.758	----------	----------	0.000	+/-14.851	cps
Pad Extension	3.75	----------	----------	0.00	+/-0.20	in
Ring Diameter	8.25	----------	----------	0.00	+/-0.20	in

Data: PARR_PAKRD_1_22\0001 SP-GTET-DSN-SDL-ACRT-CH\IDLE Date: 25-Jul-11 14:59:16

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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	
2540.00					
	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	9.400	ppg
	SHARED	WAGT	Weighting Agent	Barite	

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	0.270	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	4538.00	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	
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 Upr	
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

Data: PARR_PAKRD_1_22\0001 SP-GTET-DSN-SDL-ACRT-CH\IDLE

Date: 25-Jul-11 22:50:32

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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	

	CH_HOS			
DHTN	DownholeTension	0.00	BLK	0.000
	SP Sub			
PLTC	Plot Control Mask	50.81	NO	
SP	Spontaneous Potential	50.81	BLK	1.250
SPR	Raw Spontaneous Potential	50.81	NO	
SPO	Spontaneous Potential Offset	50.81	NO	
	GTET			
TPUL	Tension Pull	42.79	NO	
GR	Natural Gamma Ray API	42.79	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	42.79	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	42.79	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
	DSNT			
TPUL	Tension Pull	32.54	NO	
RNDS	Near Detector Telemetry Counts	32.64	BLK	1.417
RFDS	Far Detector Telemetry Counts	33.39	TRI	0.583
DNTT	DSN Tool Temperature	32.64	NO	
DSNS	DSN Tool Status	32.54	NO	
ERND	Near Detector Telemetry Counts EVR	32.64	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	33.39	BLK	0.000
ENTM	DSN Tool Temperature EVR	32.64	NO	
	SDLT			
TPUL	Tension Pull	22.64	NO	
NAB	Near Above	22.46	BLK	0.920
NHI	Near Cesium High	22.46	BLK	0.920
NLO	Near Cesium Low	22.46	BLK	0.920
NVA	Near Valley	22.46	BLK	0.920
NBA	Near Barite	22.46	BLK	0.920
NDE	Near Density	22.46	BLK	0.920
NPK	Near Peak	22.46	BLK	0.920
NLI	Near Lithology	22.46	BLK	0.920
NBAU	Near Barite Unfiltered	22.46	BLK	0.250
NLIU	Near Lithology Unfiltered	22.46	BLK	0.250
FAB	Far Above	22.81	BLK	0.250
FHI	Far Cesium High	22.81	BLK	0.250
FLO	Far Cesium Low	22.81	BLK	0.250
FVA	Far Valley	22.81	BLK	0.250
FBA	Far Barite	22.81	BLK	0.250
FDE	Far Density	22.81	BLK	0.250
FPK	Far Peak	22.81	BLK	0.250
FLI	Far Lithology	22.81	BLK	0.250
PTMP	Pad Temperature	22.65	BLK	0.920
NHV	Near Detector High Voltage	19.83	NO	
FHV	Far Detector High Voltage	19.83	NO	
ITMP	Instrument Temperature	19.83	NO	
DDHV	Detector High Voltage	19.83	NO	
TPUL	Tension Pull	22.65	NO	
PCAL	Pad Caliper	22.65	TRI	0.250
ACAL	Arm Caliper	22.65	TRI	0.250
TPUL	Tension Pull	22.83	NO	

MINV	Microlog Lateral	22.83	BLK	0.750
MNOR	Microlog Normal	22.83	BLK	0.750

ACRt

TPUL	Tension Pull	2.97	NO	
F1R1	ACRT 12KHz - 80in R value	9.22	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	9.22	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.72	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.72	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	5.22	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	5.22	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	4.22	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	4.22	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.72	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.72	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.47	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.47	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	9.22	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	9.22	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.72	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.72	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	5.22	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	5.22	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	4.22	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	4.22	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.72	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.72	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.47	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.47	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	9.22	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	9.22	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.72	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.72	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	5.22	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	5.22	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	4.22	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	4.22	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.72	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.72	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.47	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.47	BLK	0.000
RMUD	Mud Resistivity	12.76	BLK	0.000
F1RT	Transmitter Reference 12 KHz Real Signal	2.97	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.97	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.97	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.97	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.97	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.97	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.97	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.97	BLK	0.000
ITMP	Instrument Temperature	2.97	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.97	NO	
TIDV	Instrument Temperature Derivative	2.97	NO	
TUDV	Upper Temperature Derivative	2.97	NO	
TLDV	Lower Temperature Derivative	2.97	NO	
TRRD	Receiver Board Temperature	2.97	NO	

TRBD	Receiver Board Temperature	2.97	NO

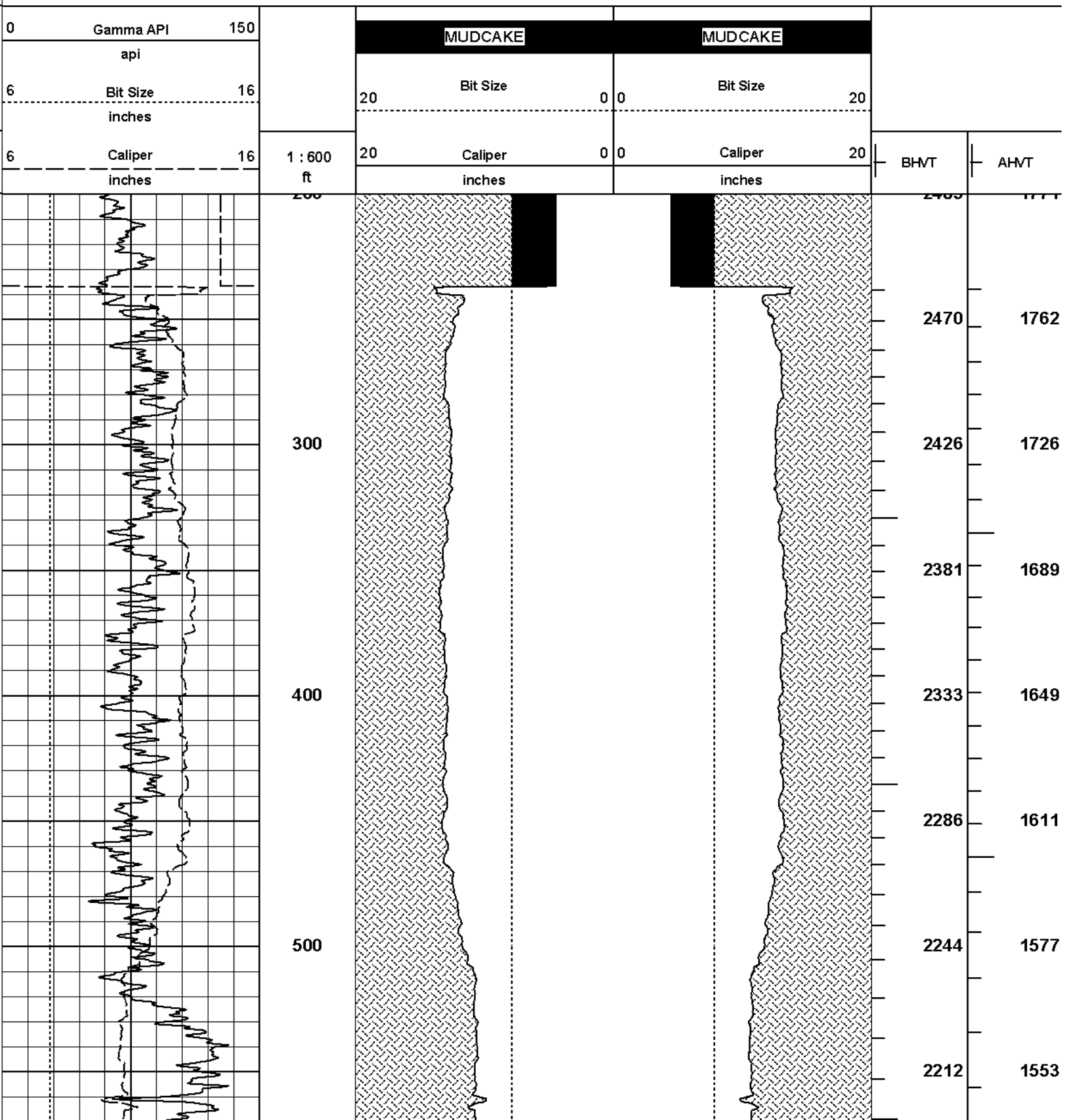
Data: PARR_PAKRD_1_22\0001 SP-GTET-DSN-SDL-ACRT-CH\IDLE

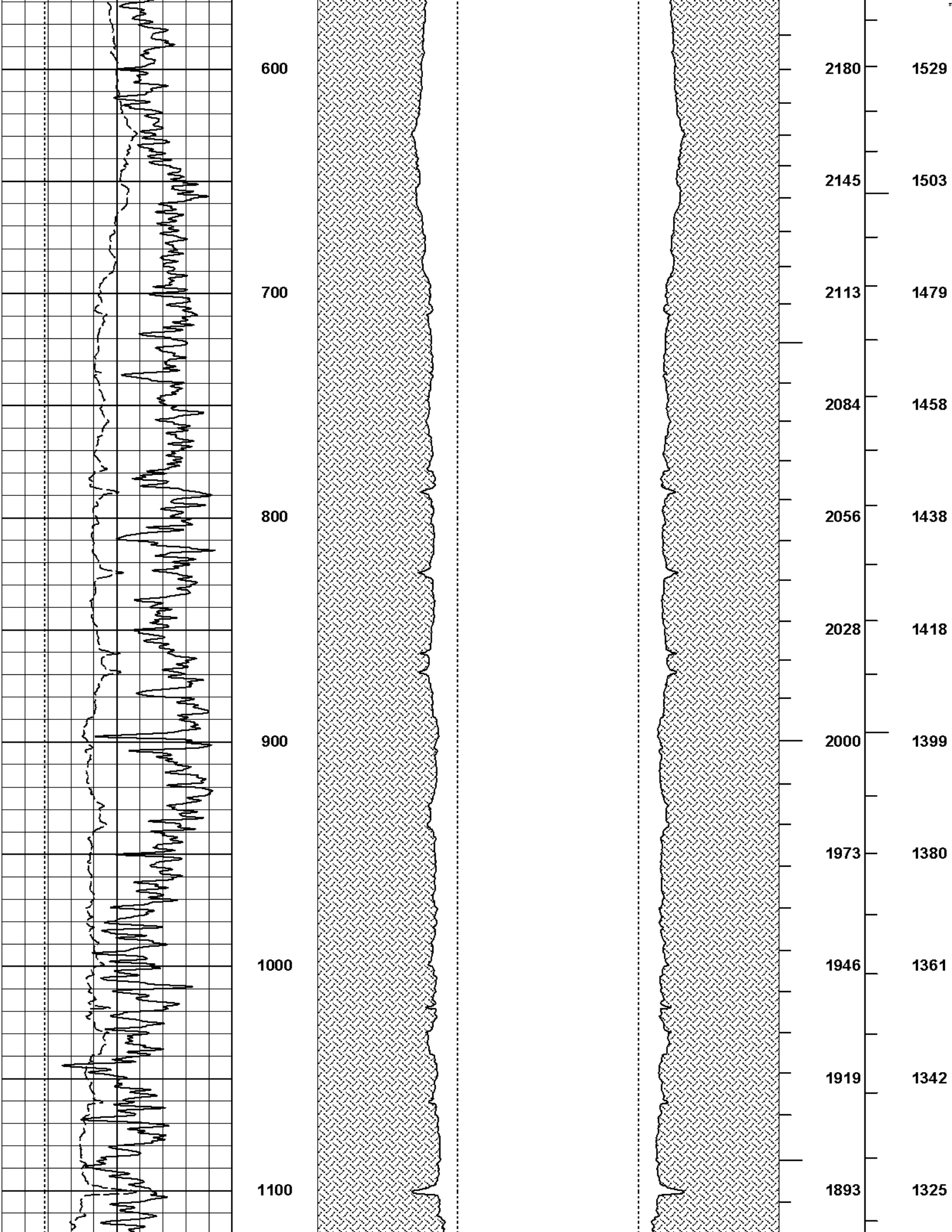
Date: 25-Jul-11 15:00:05

HALLIBURTON

Plot Time: 26-Jul-11 00:03:49
Plot Range: 200 ft to 4543.33 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-004\
Plot File: \\-LOCAL-\PARR_PAKRD_1_22\Well Based\PORO\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

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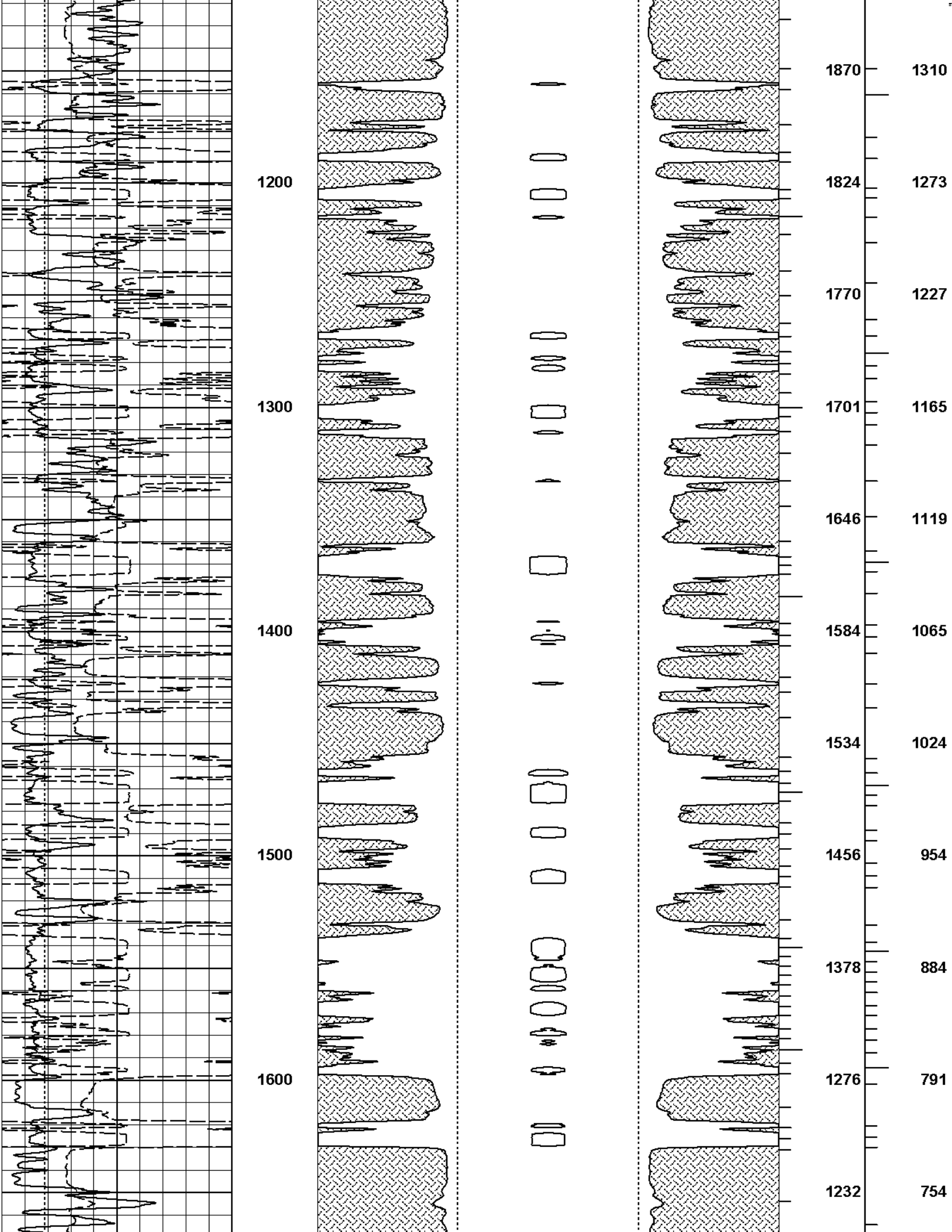
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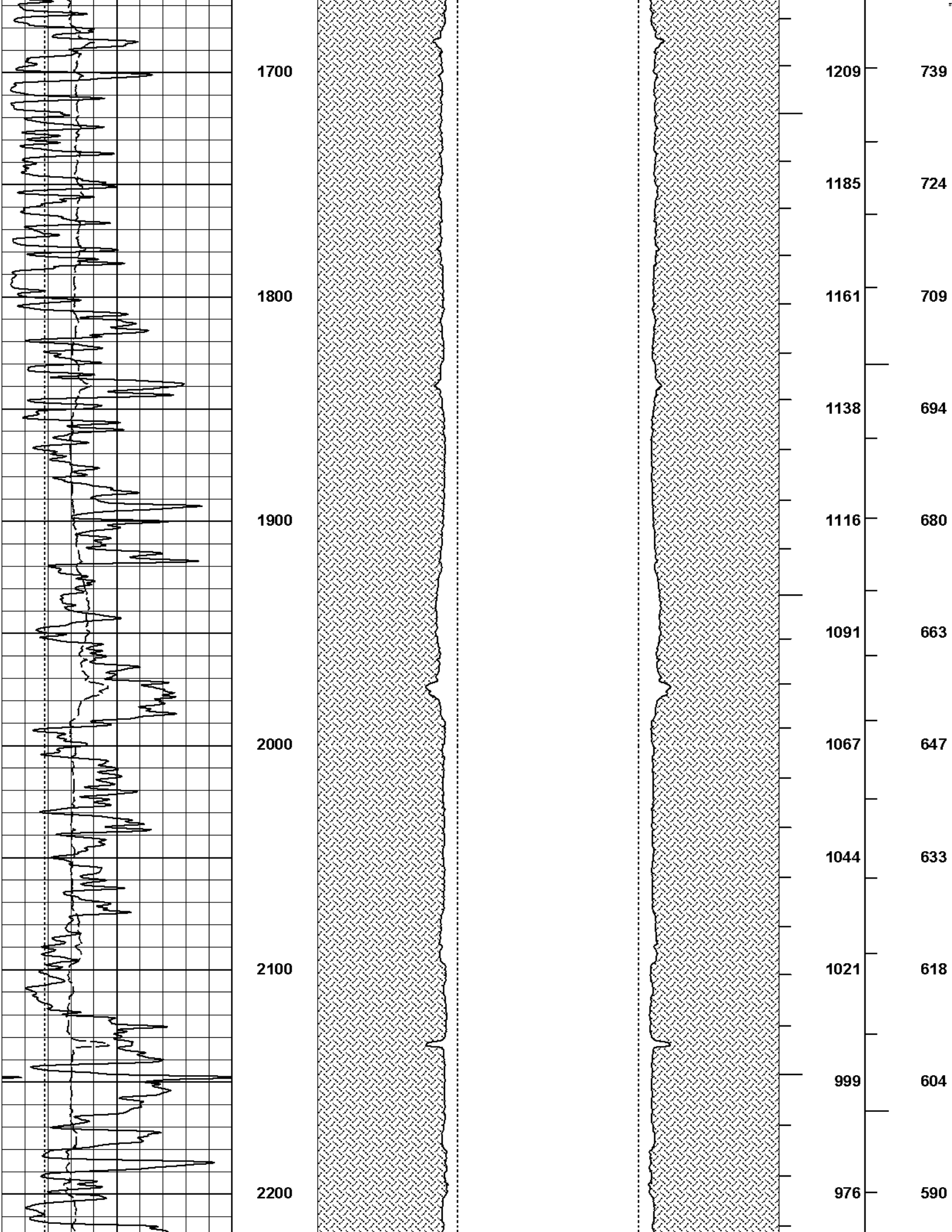
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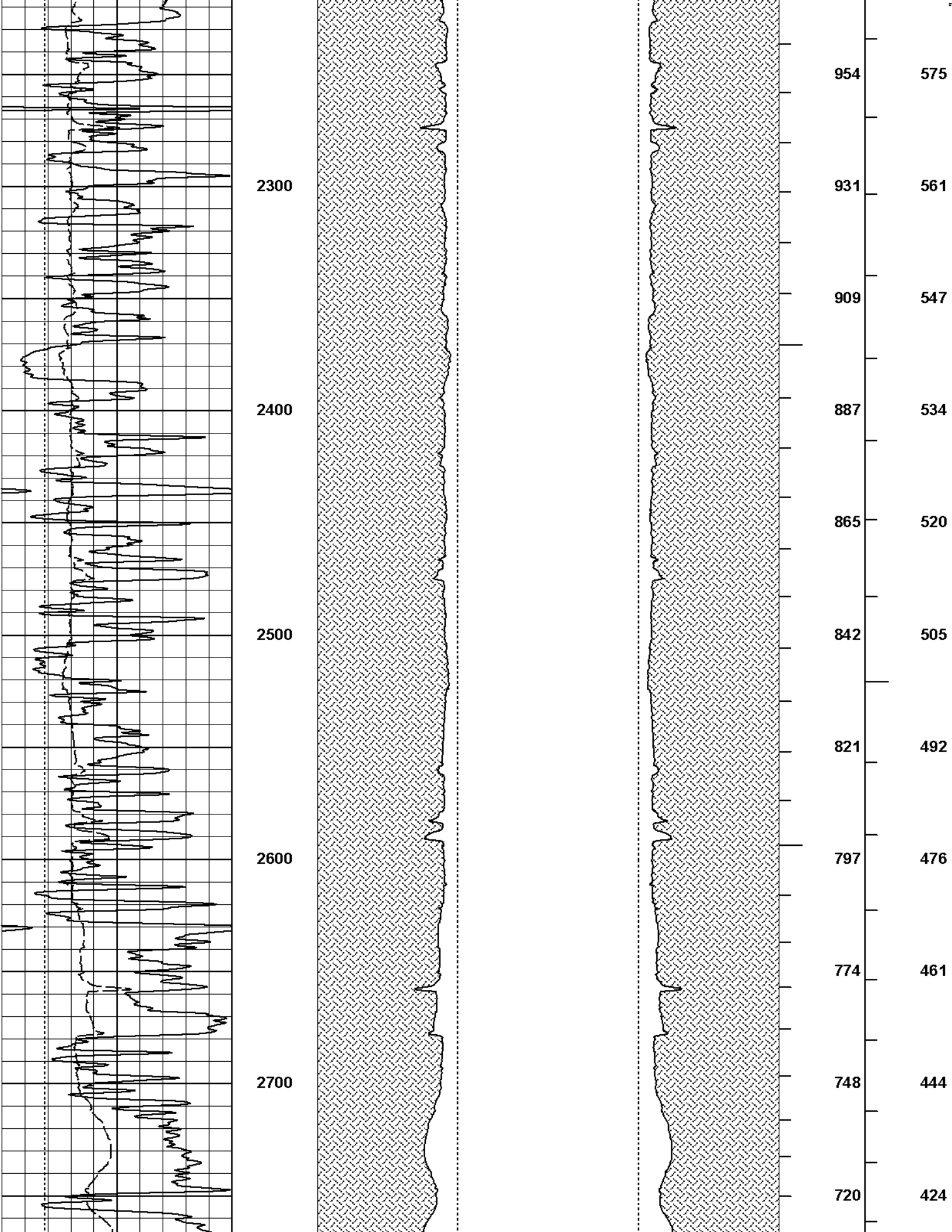
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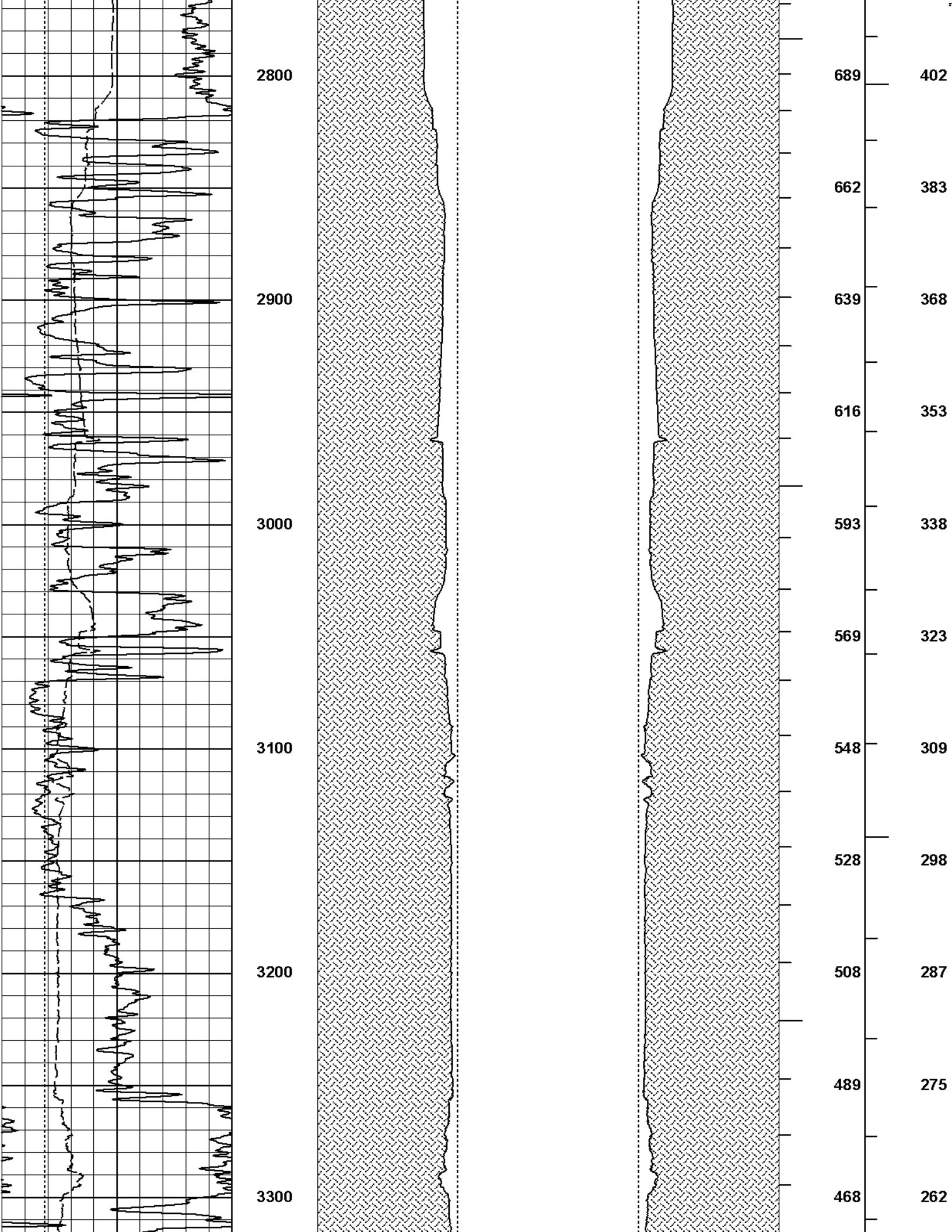
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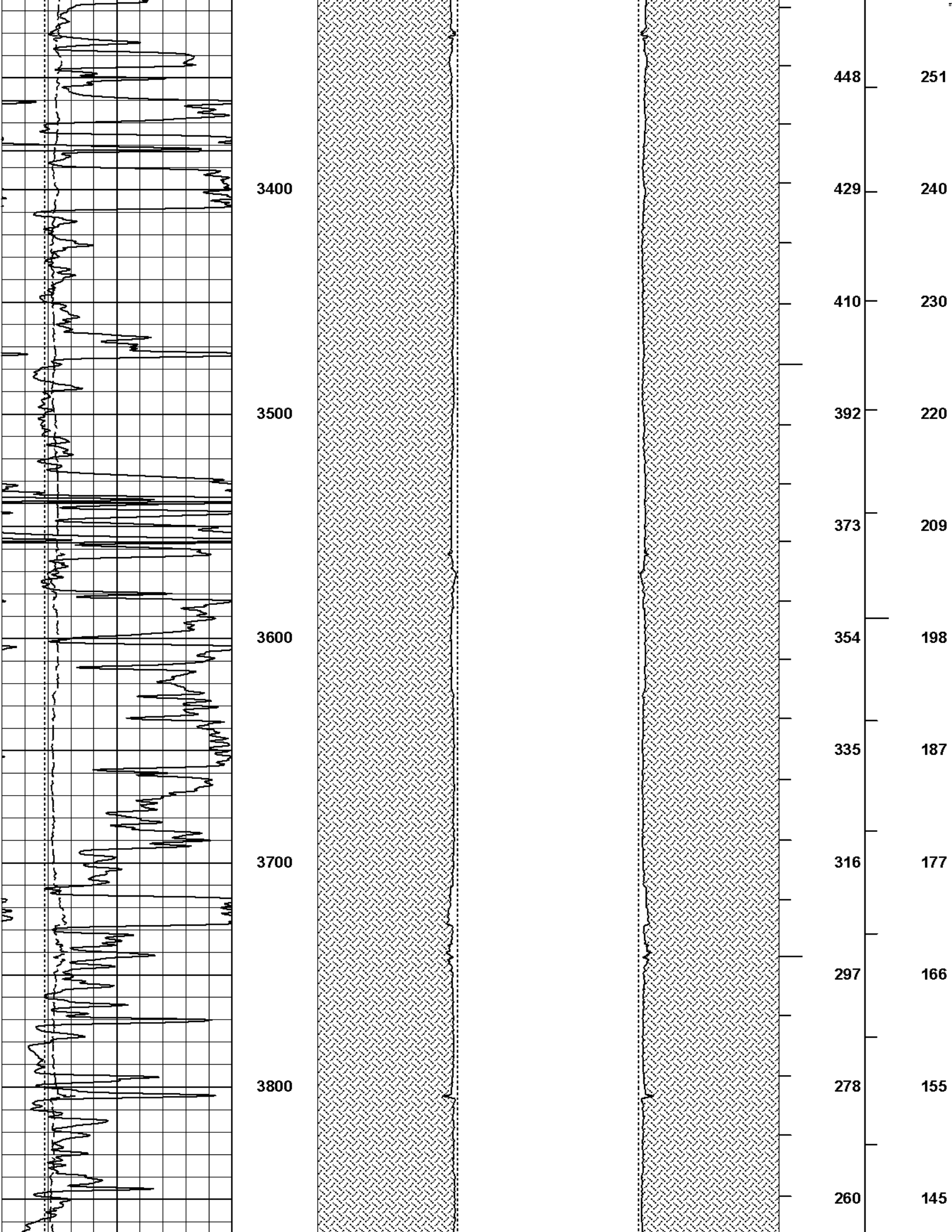
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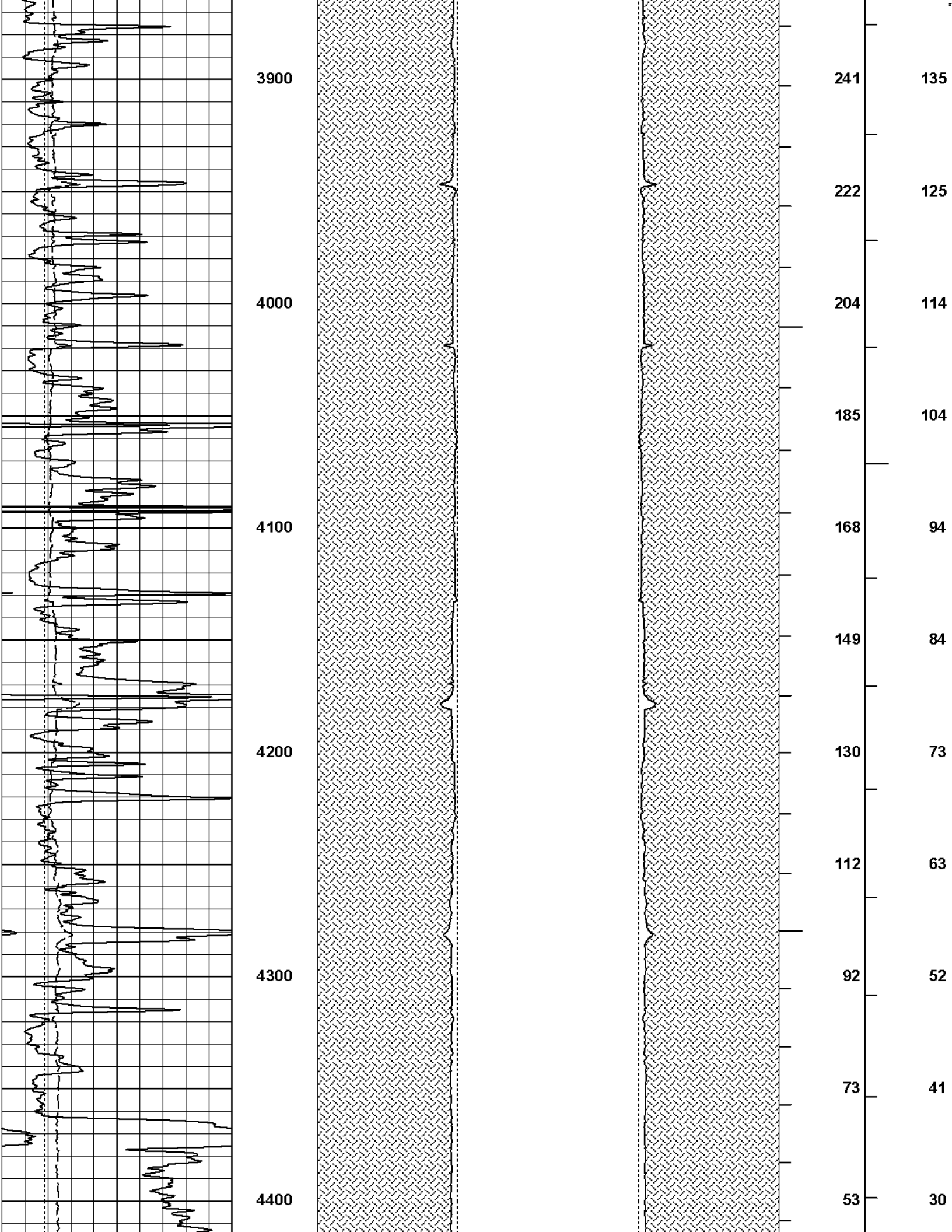
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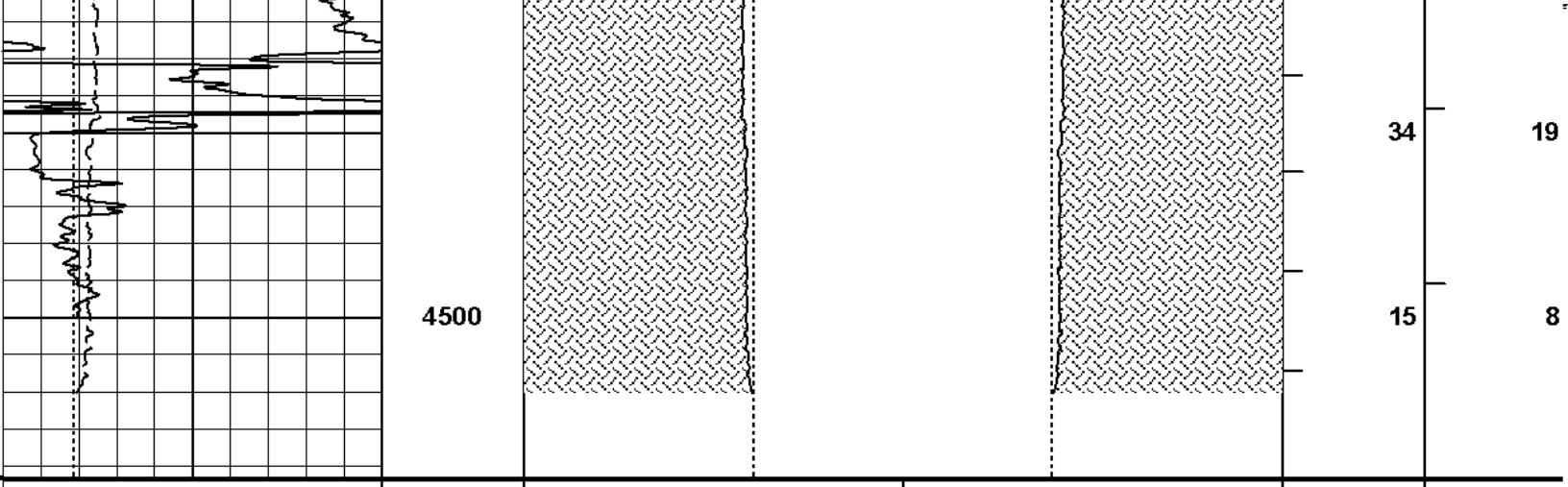

6 Caliper 16 inches		1 : 600 ft	20 Caliper 0 inches		0 Caliper 20 inches		BHVT	AHVT
6 Bit Size 16 inches			20 Bit Size 0		0 Bit Size 20			
0 Gamma API 150 api			MUDCAKE		MUDCAKE			

HALLIBURTON

Plot Time: 26-Jul-11 00:03:58
Plot Range: 200 ft to 4543.33 ft
Data: PARR_PAKRD_1_22\Well Based\DAQ-0001-004\
Plot File: \\-LOCAL-\PARR_PAKRD_1_22\Well Based\PORO\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	**VAL ENERGY, INC.**		
WELL	**PARR-PACKARD 1-22**		
FIELD	**MINGONA**		
COUNTY	**BARBER**	STATE	**KANSAS**

HALLIBURTON

SPECTRAL DENSITY DUAL SPACED NEUTRON LOG