

HALLIBURTON

SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

COMPANY		HARTMAN OIL CO., INC.	
WELL		LEGERE TRUST #1-29	
FIELD/BLOCK		WILDCAT	
COUNTY		NORTON	
STATE		KANSAS	
Permanent Datum		G.L.	
Log measured from		KB	
Drilling measured from		KB	
Date		18-Feb-13	
Run No.		ONE	
Depth - Driller		3800.00 ft	
Depth - Logger		3795.0 ft	
Bottom - Logged Interval		3751	
Top - Logged Interval		1900	
Casing - Driller		8.625 in @ 337.0 ft	
Casing - Logger		335.0 ft	
Bit Size		7.875 in	
Type Fluid in Hole		WATER BASED	
Density		9.2 ppg	
Viscosity		52.00 s/qt	
PH		10.00 pH	
Fluid Loss		7.8 cpm	
Source of Sample		MUD PIT	
Rm @ Meas. Temperature		1.400 ohmm @ 60.00 degF	
Rmf @ Meas. Temperature		1.19 ohmm @ 60.00 degF	
Rmc @ Meas. Temperature		1.610 ohmm @ 60.00 degF	
Source Rmf		MEASURED	
Rmc		MEASURED	
Rm @ BHT		0.81 ohmm @ 109.0 degF	
Time Since Circulation		3.8 hr	
Time on Bottom		18-Feb-13 07:44	
Max. Rec. Temperature		109.0 degF @ 3795.0 ft	
Equipment		10782954 LIBERAL	
Recorded By		S. INGERSOLL	
Witnessed By		K. NOAH	

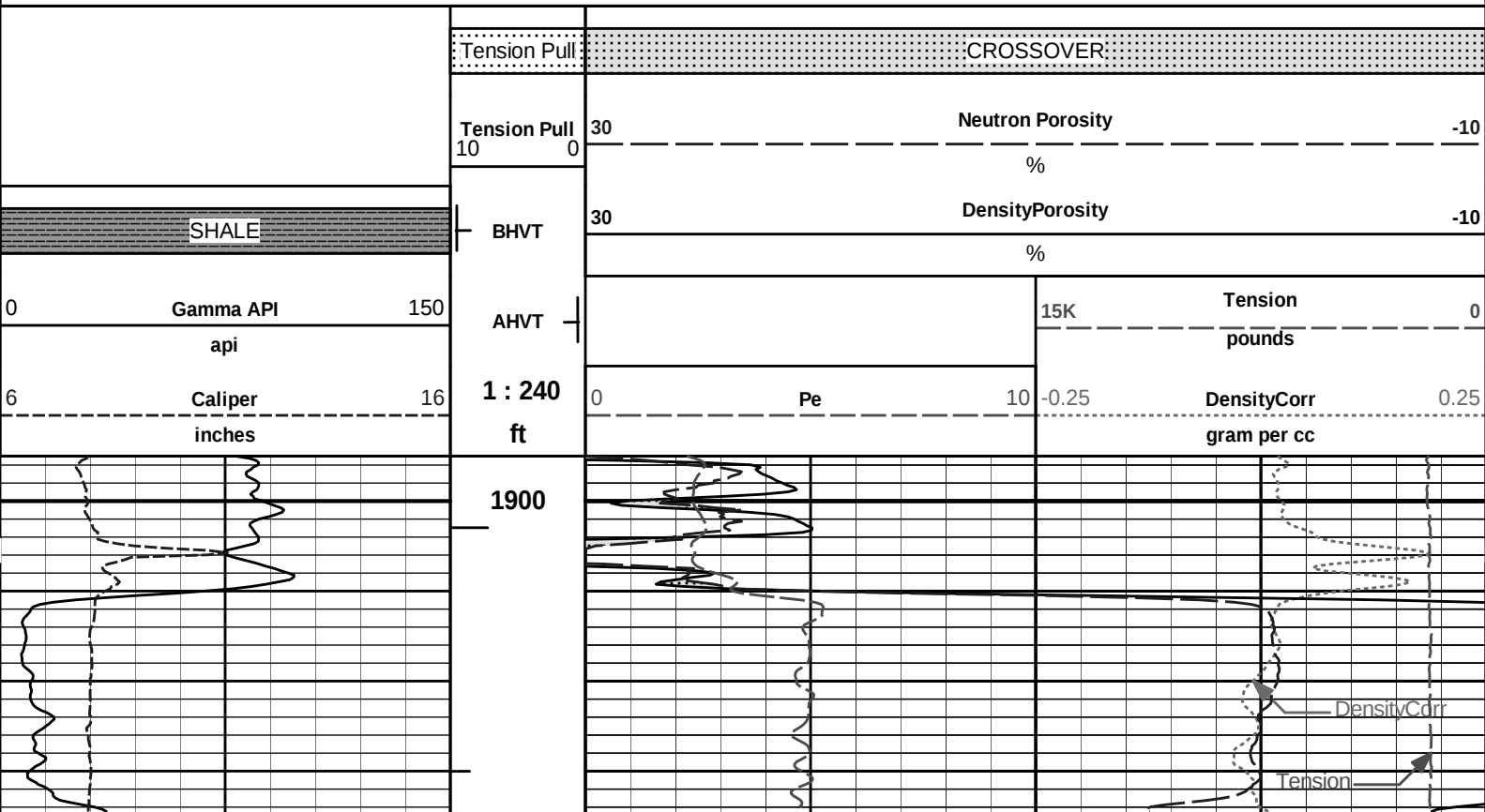
COMPANY	HARTMAN OIL CO., INC.
WELL	LEGERE TRUST #1-29
FIELD/BLOCK	WILDCAT
COUNTY	NORTON
STATE	KANSAS
API No.	15-137-20631
Location	(SHL) 1737' FSL & 1253' FEL
Sect.	29
Twp.	5S
Rge.	22W
Elev.	2294.0 ft
D.F.	2293.0 ft
G.L.	2285.0 ft

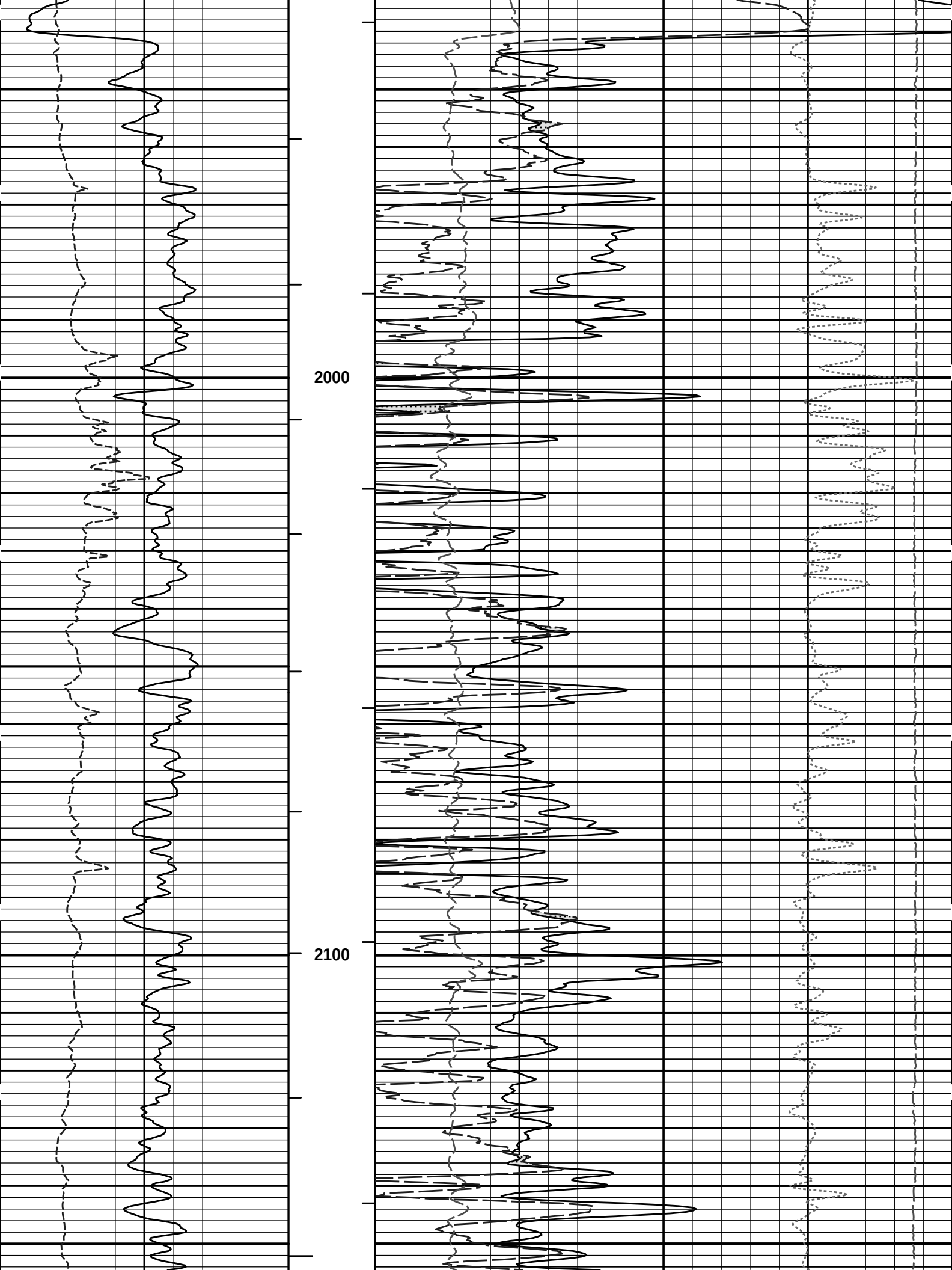
Other Services:
DSN / SDL
MICROLOG
BSAT
ACRT

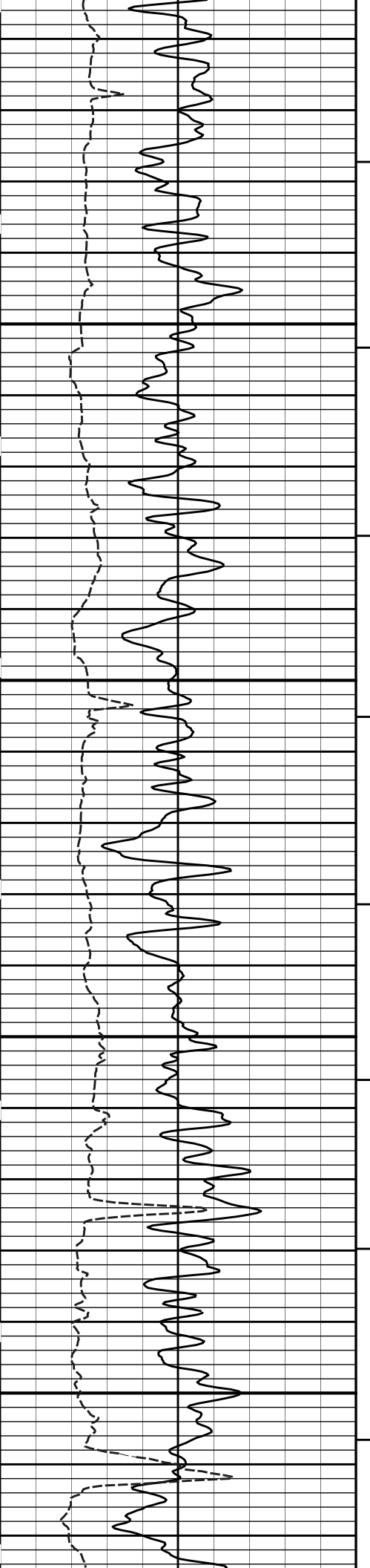
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Service Ticket No.:				API Serial No.: 15-137-20631				PGM Version: WL INSITE R3.8.4 (Build 5)							
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES									
Date	Sample No.					Type Log	Depth	Scale Up Hole	Scale Down Hole						
Depth-Driller															
Type Fluid in Hole															
Density	Viscosity														
Ph	Fluid Loss														
Source of Sample						RESISTIVITY EQUIPMENT DATA									
Rm @ Meas. Temp		@		@		Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other					
Rmf @ Meas. Temp.		@		@		ONE	ACRT	N/A	CENT						
Rmc @ Meas. Temp.		@		@			10929775								
Source Rmf	Rmc														
Rm @ BHT		@		@											
Rmf @ BHT		@		@											
Rmc @ BHT		@		@											
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.		ONE		Run No.		ONE		Run No.		ONE		Run No.		ONE	
Serial No.		10811258		Serial No.		10747684		Serial No.		10685803		Serial No.		10755066	
Model No.		GTET		Model No.		BSAT		Model No.		SDLT		Model No.		DSNT	
Diameter		3.625"		No. of Cent.		2		Diameter		5.3"		Diameter		3.625"	
Detector Model No.		GTET		Spacing		.5'		Log Type		GAM-GAM		Log Type		NEU-NEU	
Type		SCINT						Source Type		CS-137		Source Type		AM-241BE	
Length		8"		LSA [Y/N]				Serial No.		5073GW		Serial No.		DSN-436	
Distance to Source		N/A		FWDA [Y/N]				Strength		1.5 CI		Strength		15 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	3795	335	REC	0	150	30	-10	47.6 us.ft	30	-10	2.71 gm/cc	30	-10	LIME
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.														

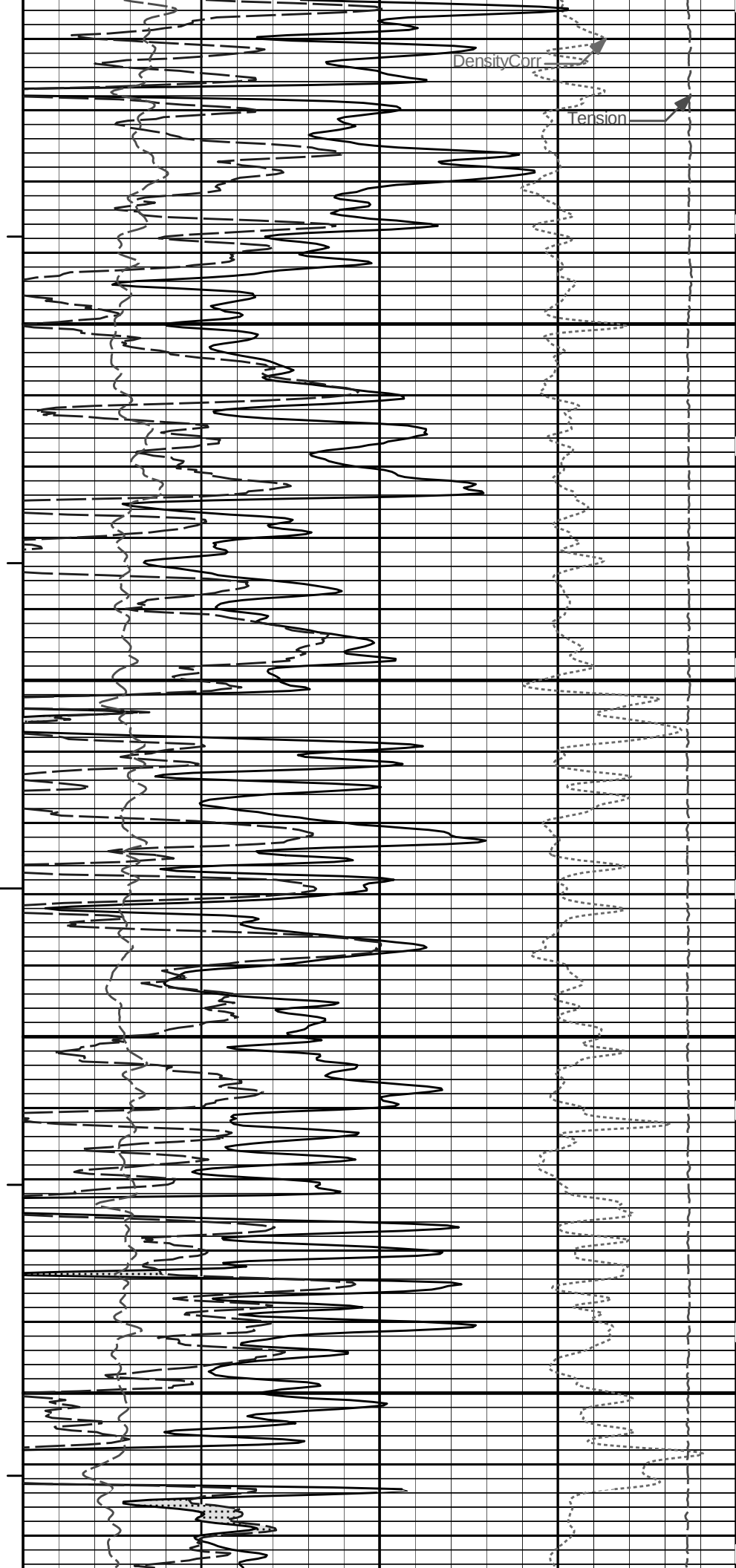






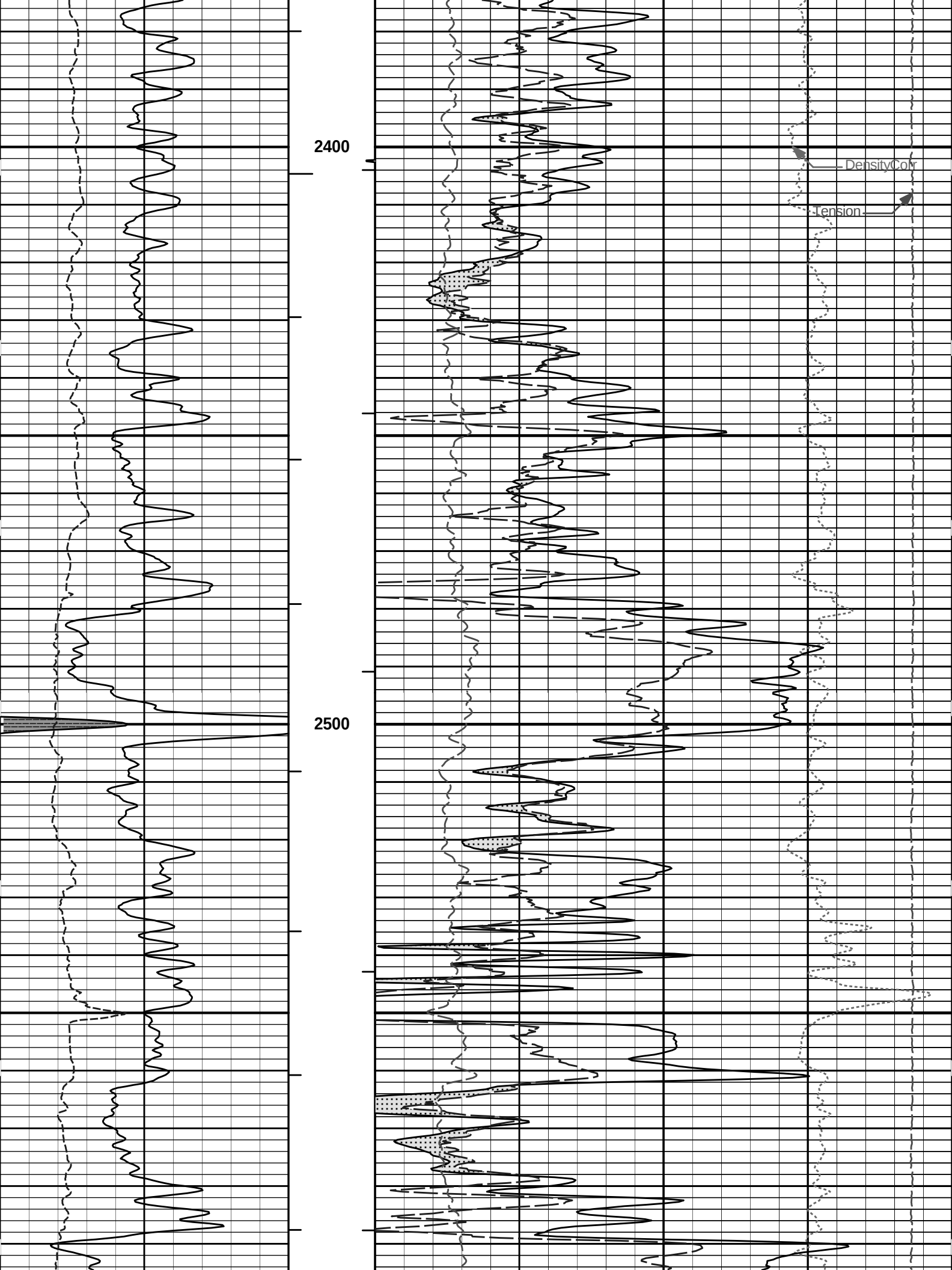
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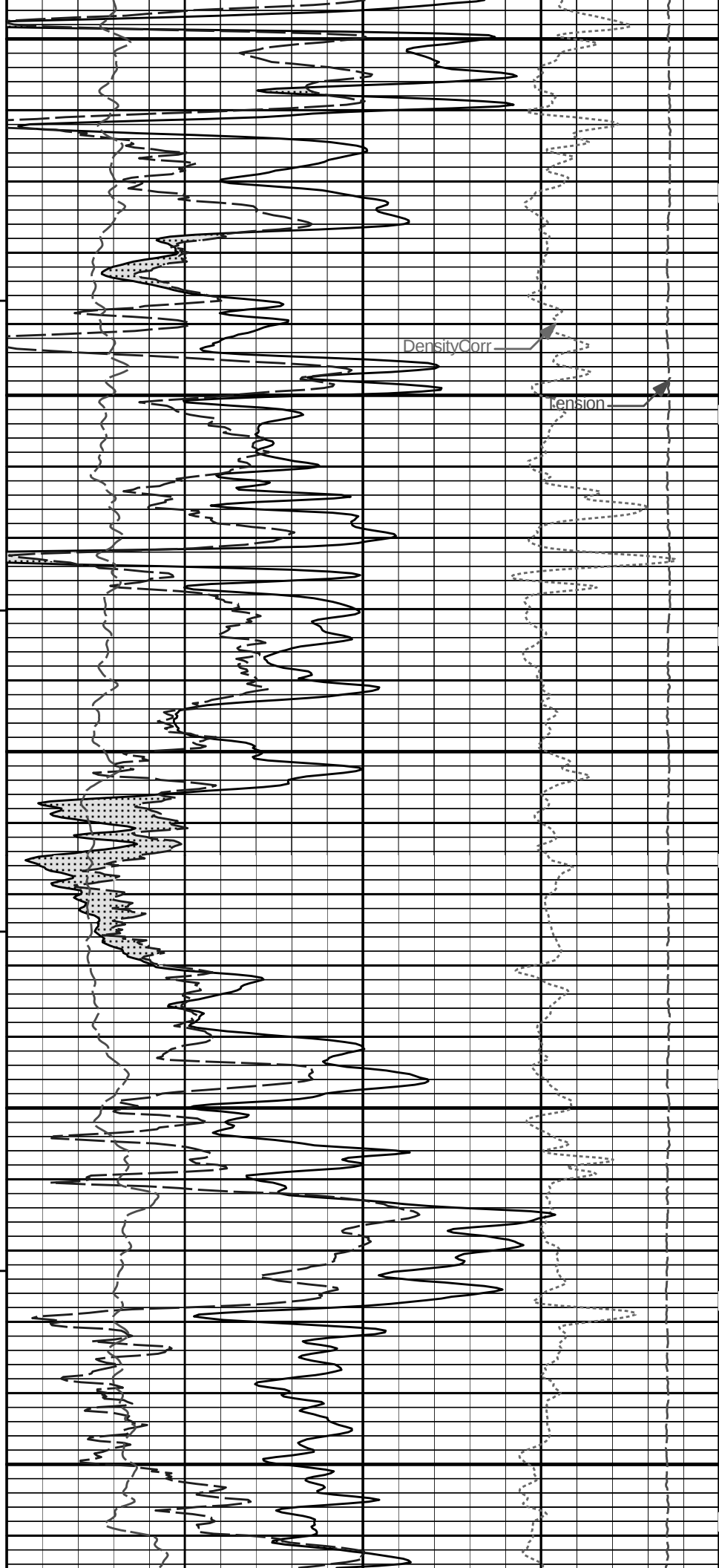
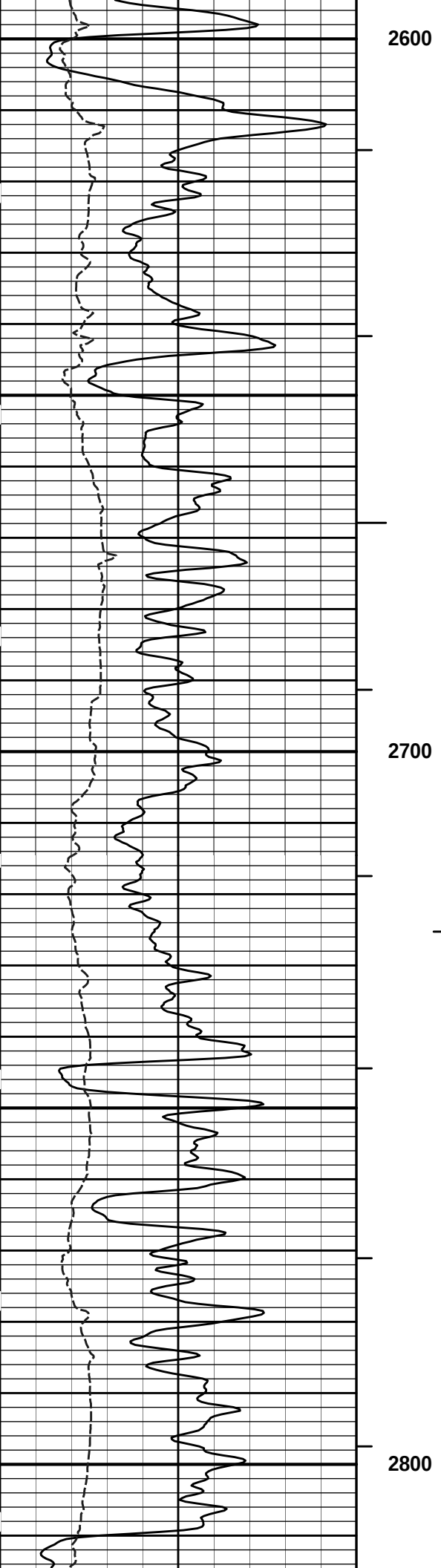
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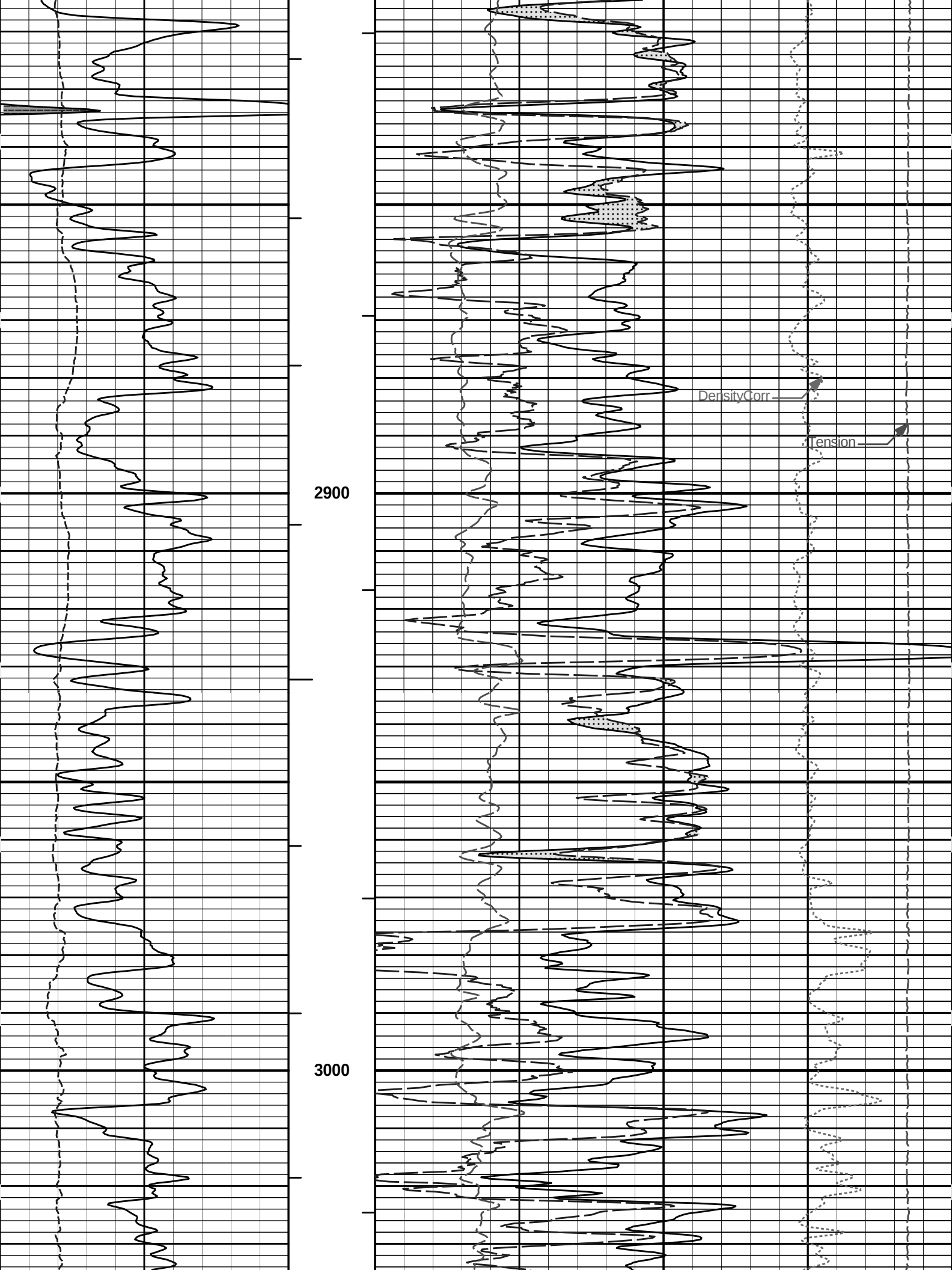


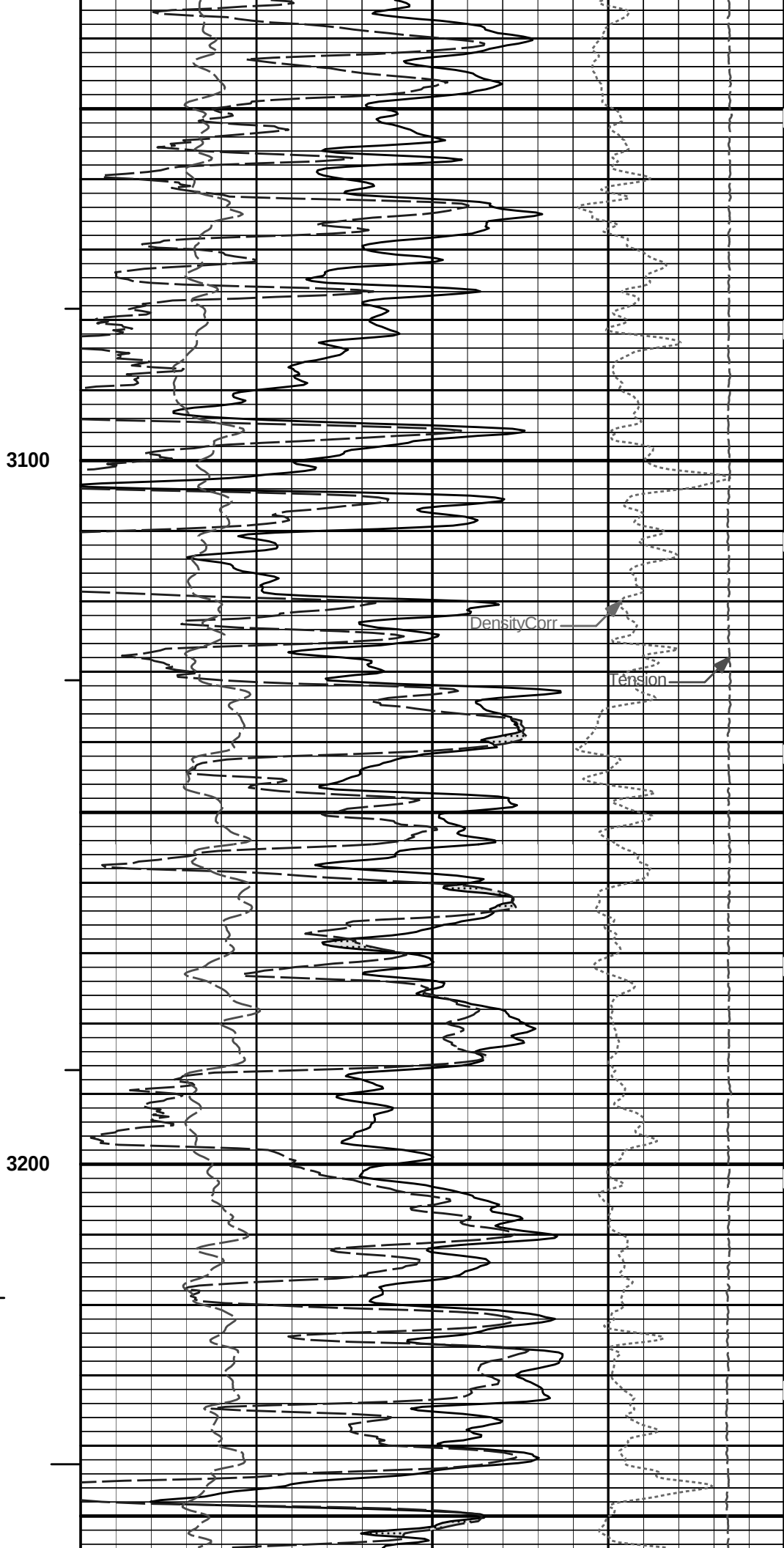
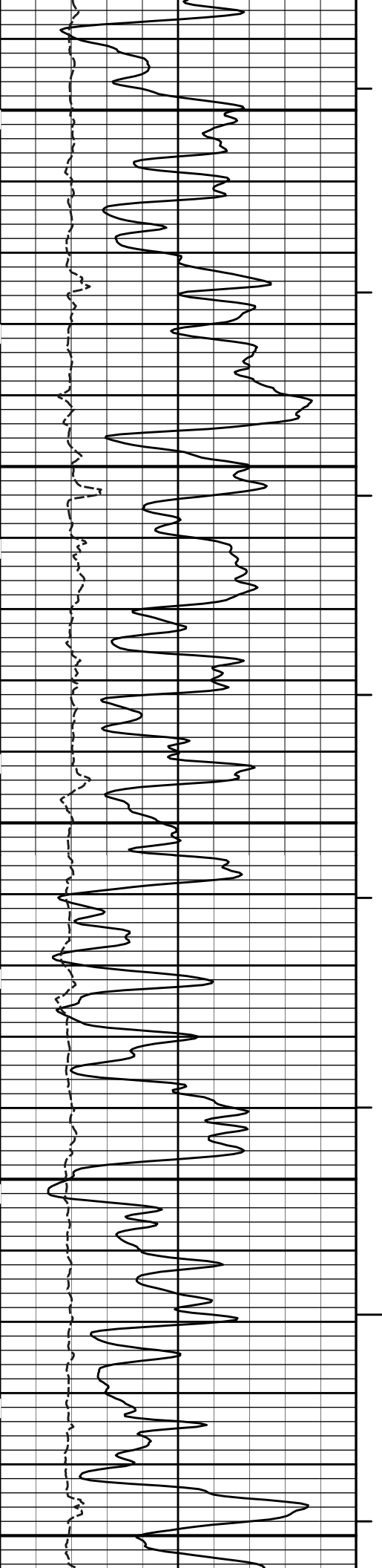
DensityCorr

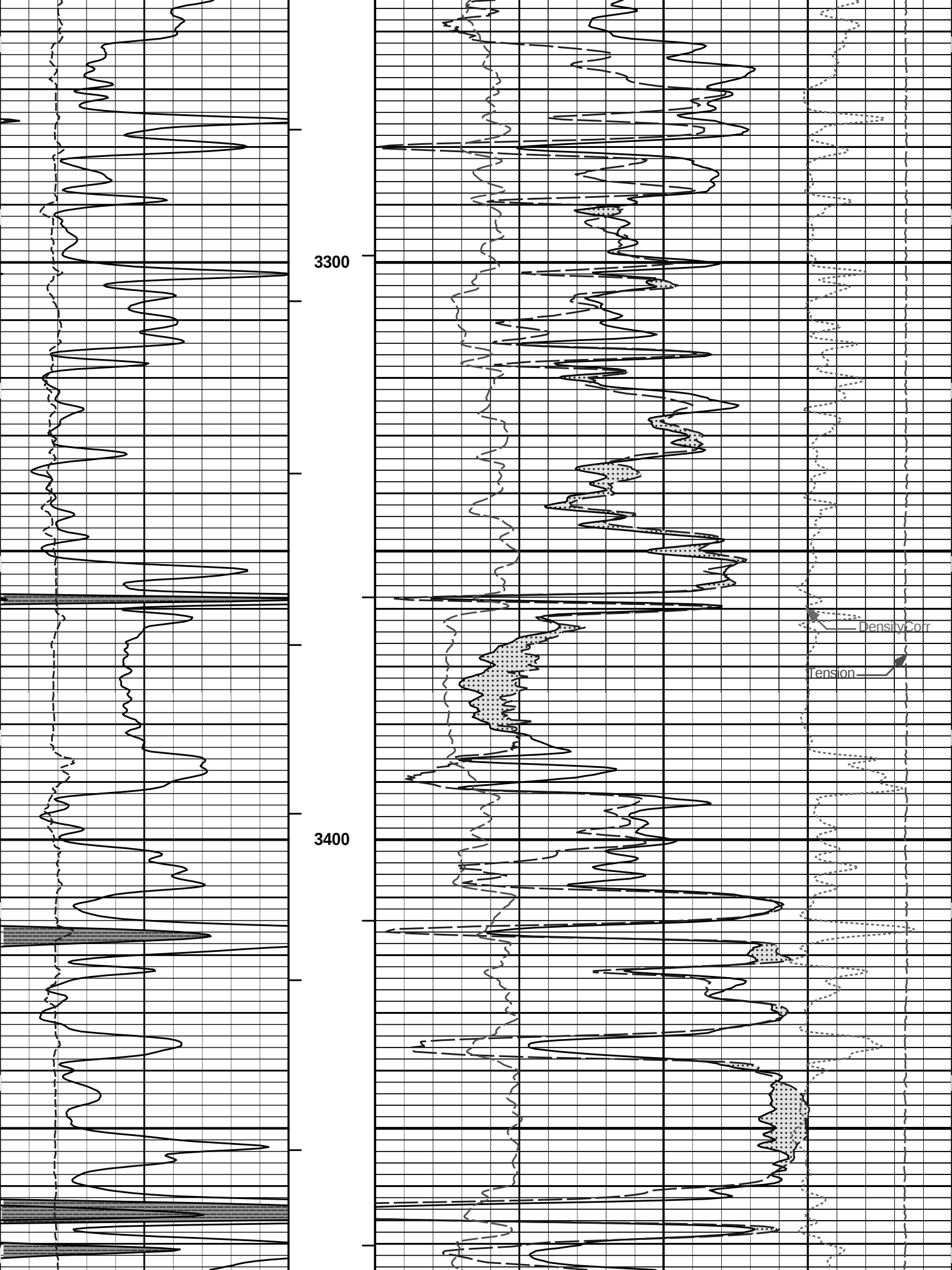
Tension

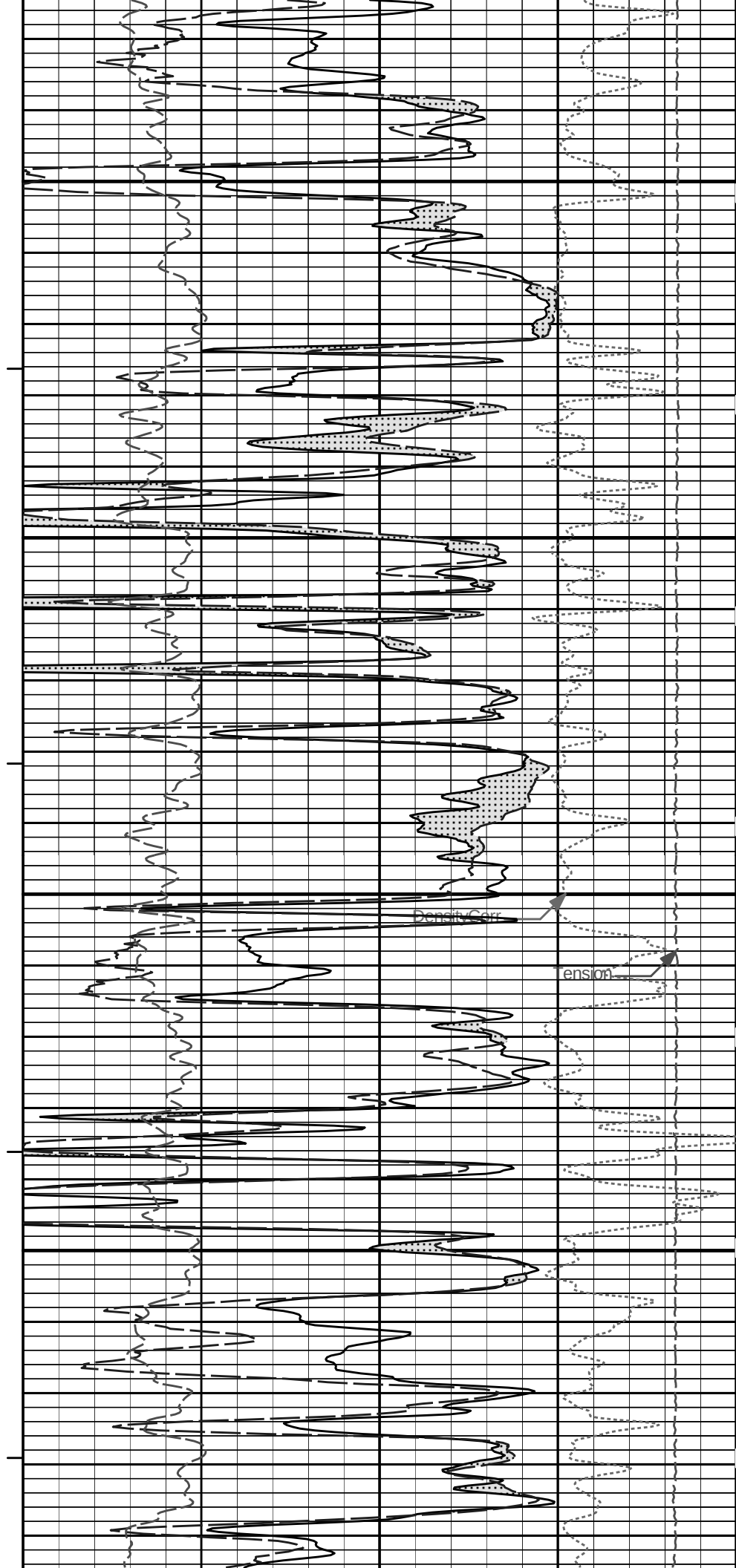
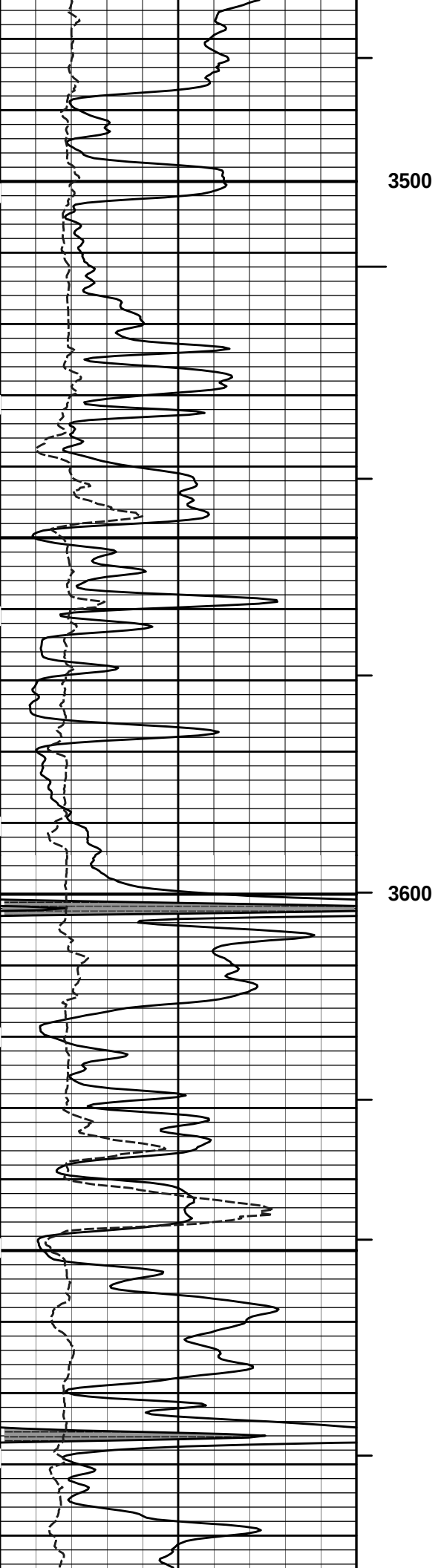


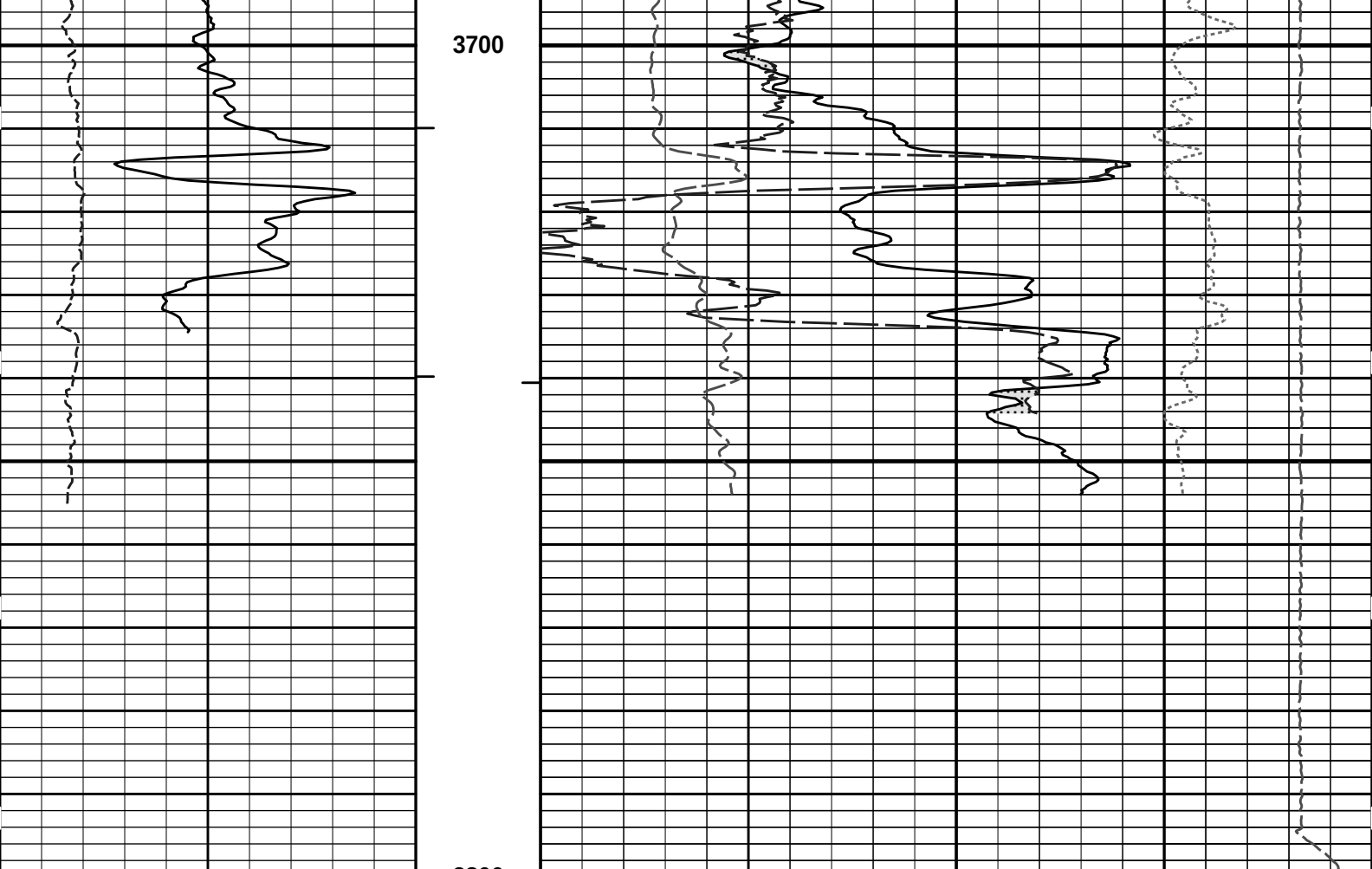












6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					gram per cc	
0	Gamma API	150	AHVT				15K	Tension	0
	api							pounds	
	SHALE		BHVT	30	DensityPorosity				-10
					%				
			Tension Pull	30	Neutron Porosity				-10
			10 0		%				
			Tension Pull		CROSSOVER				

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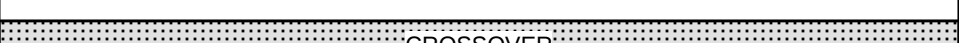
Plot Time: 18-Feb-13 10:09:04
Plot Range: 1895 ft to 3799.42 ft
Data: LEGERETRUST1-29\Well Based\HARTMAN_DETAIL\
Plot File: \\POROSITY\Porosity_Q_5_MAIN_LIB

5 INCH MAIN LOG

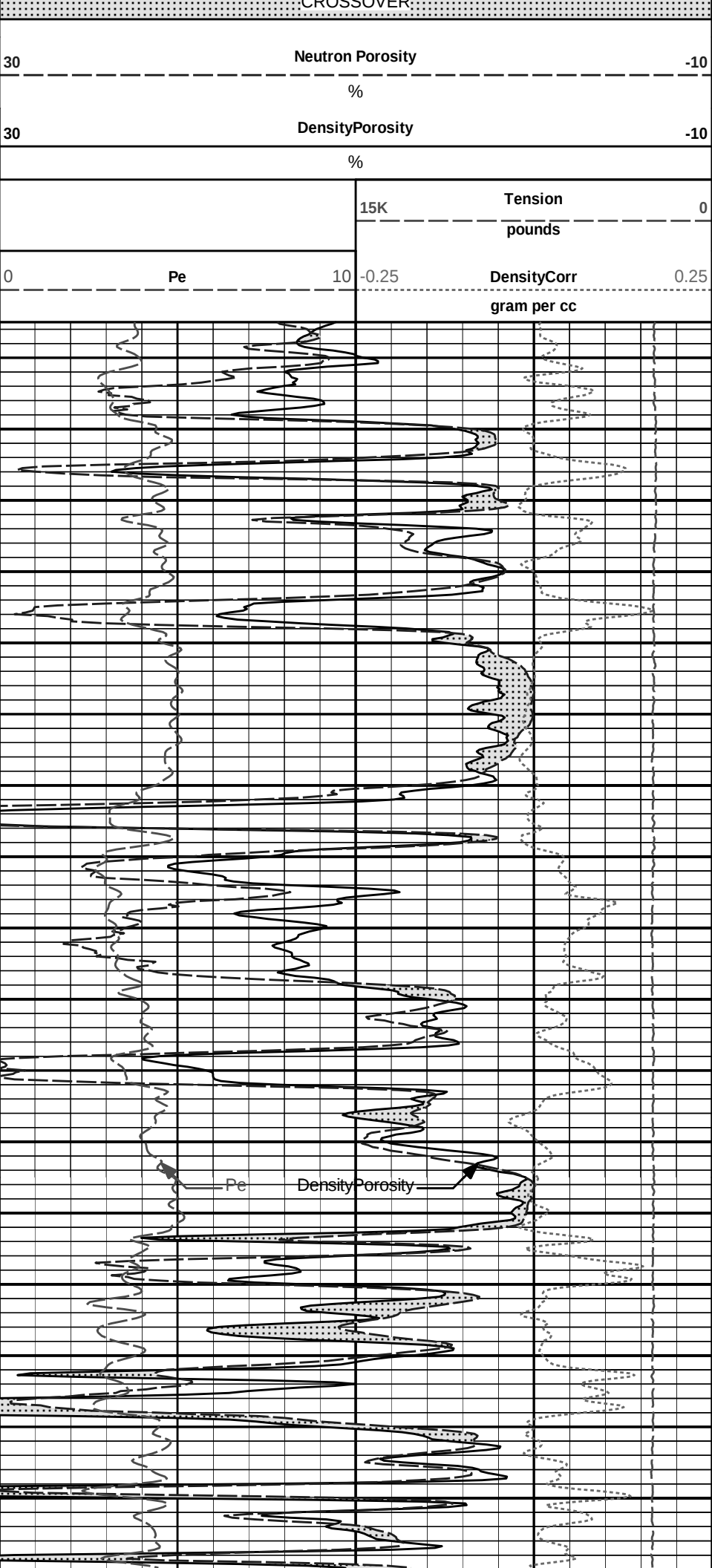
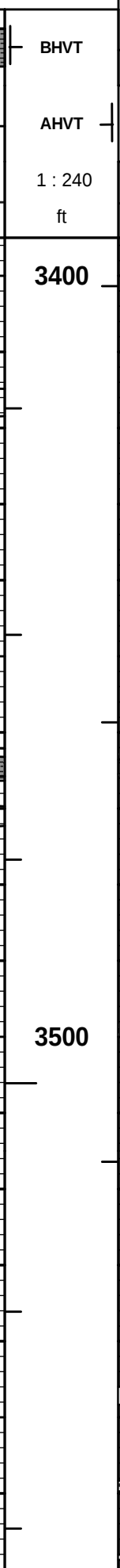
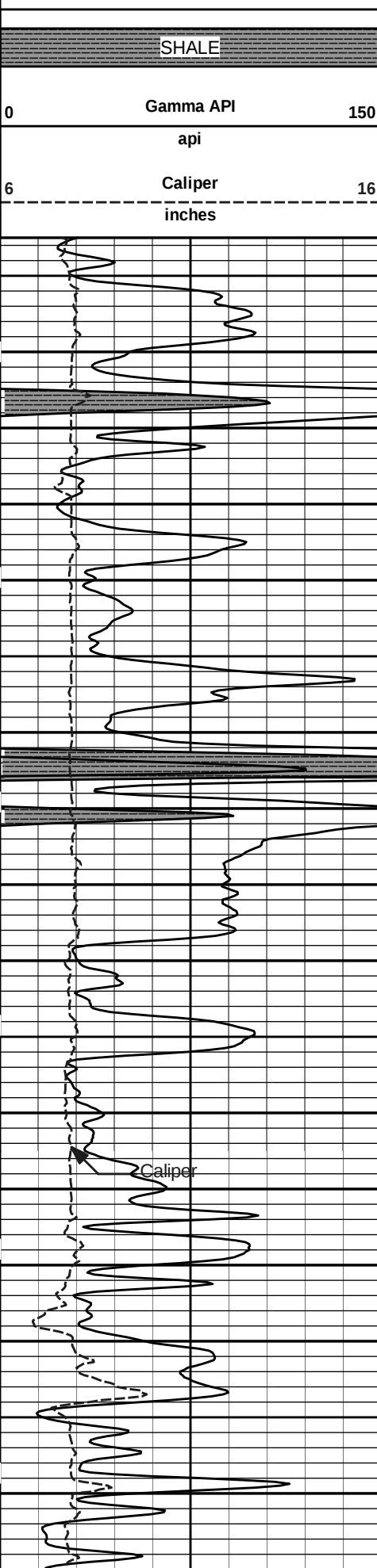
HALLIBURTON

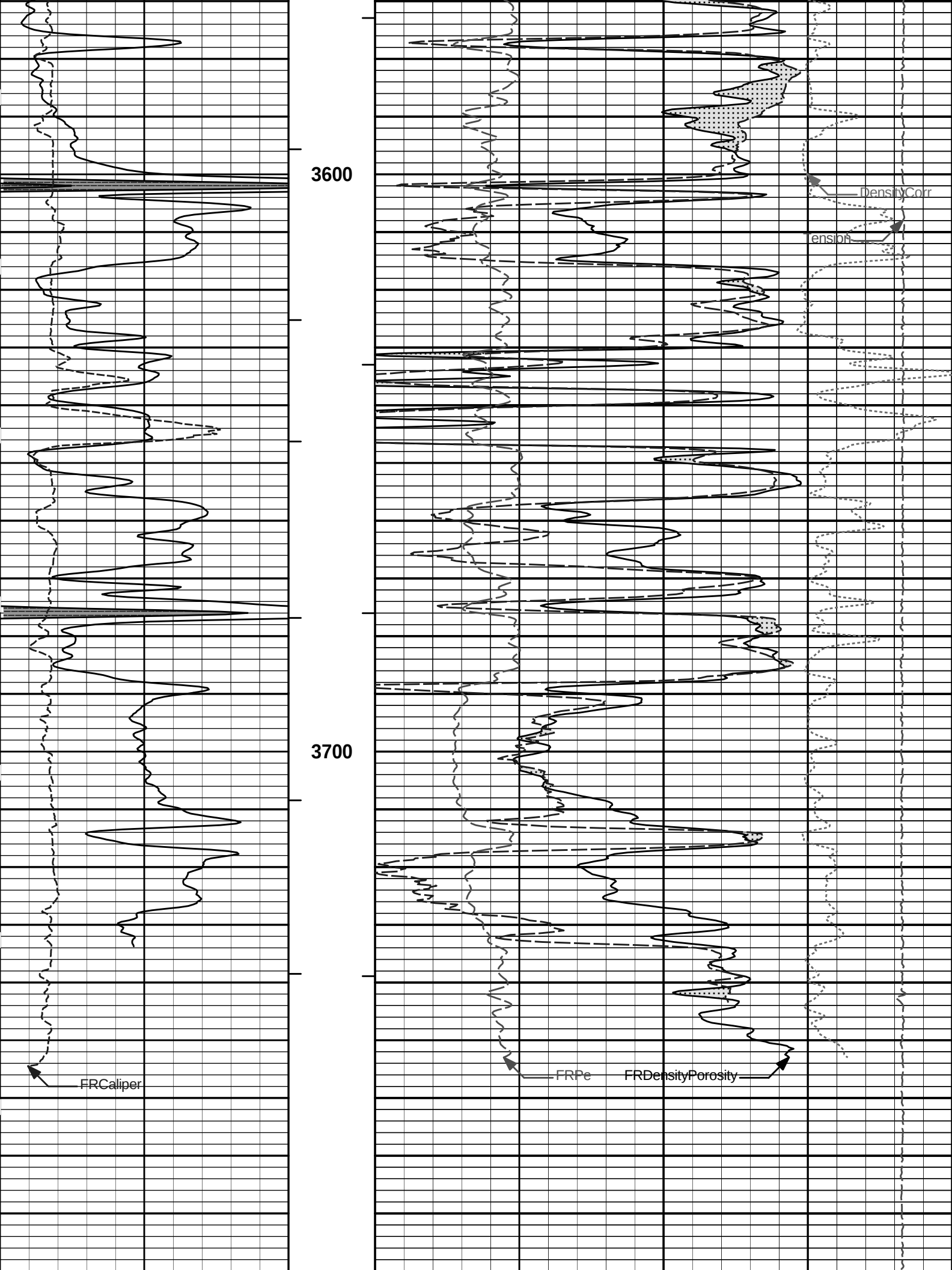
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Data: LEGERETRUST1-29\Well Based\LEGERE_TRUST_REPEAT\
Plot File: \\POROSITY\Porosity_Q_5_REP_LIB

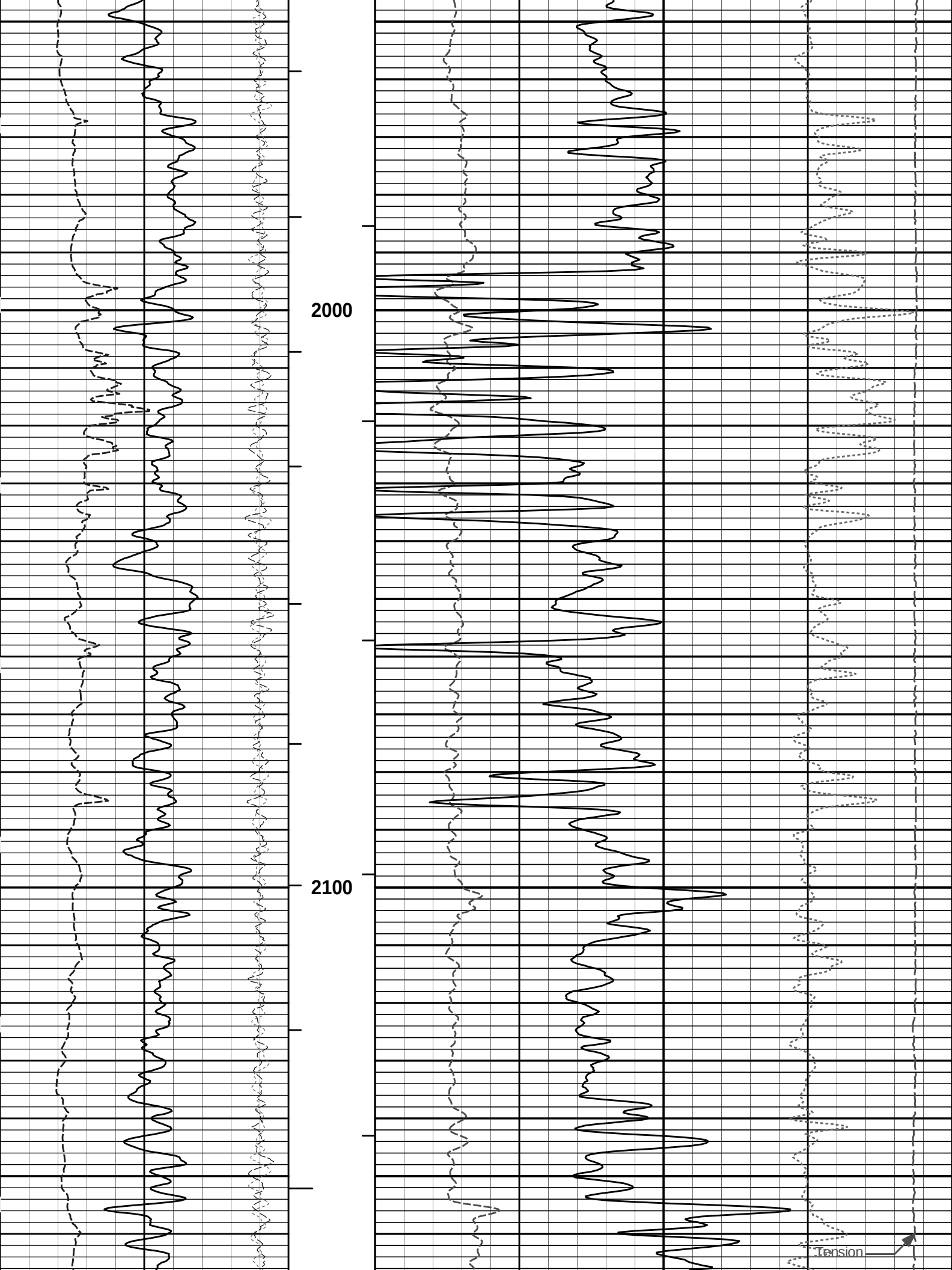
REPEAT SECTION

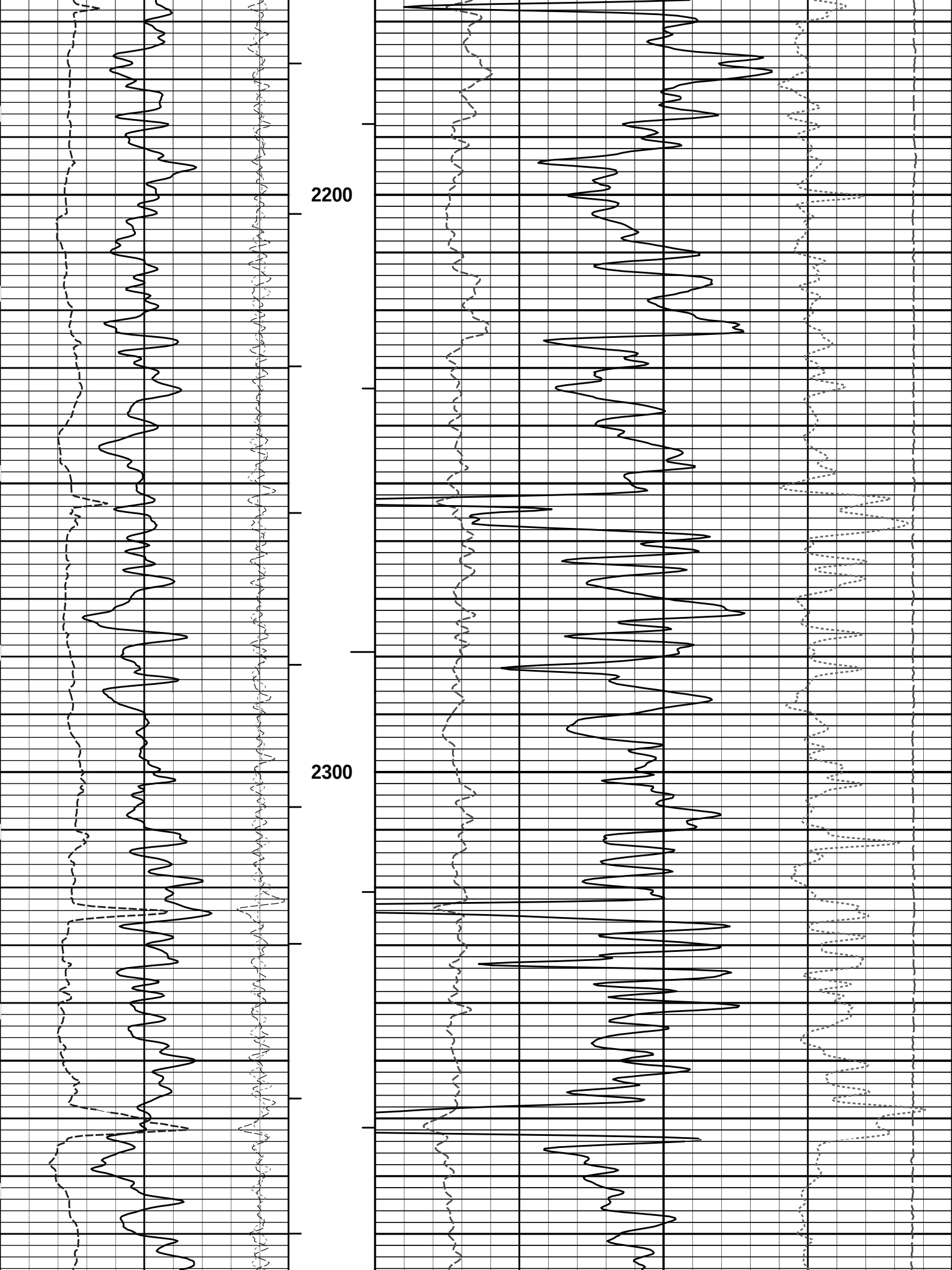


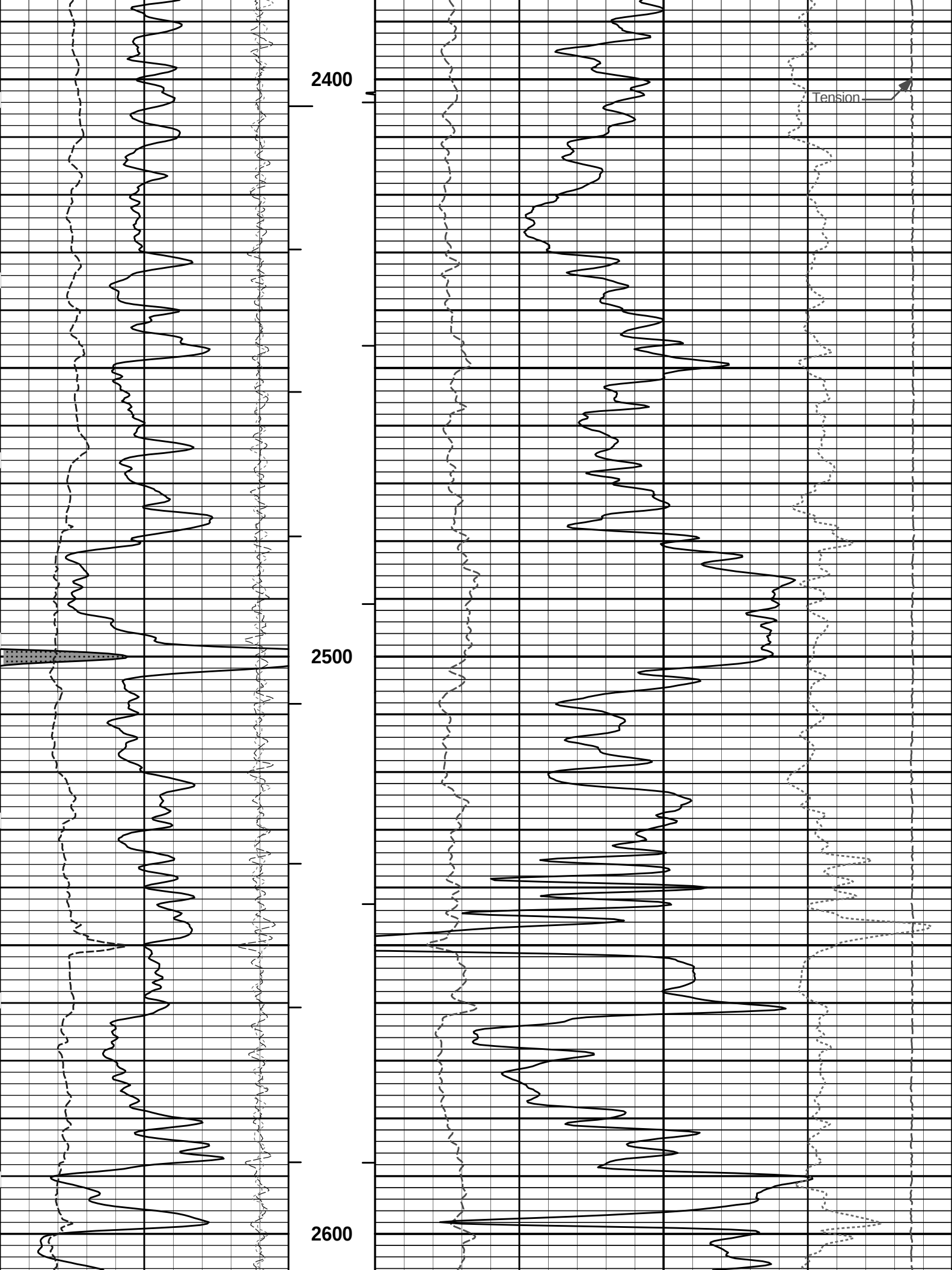
CROSSOVER:

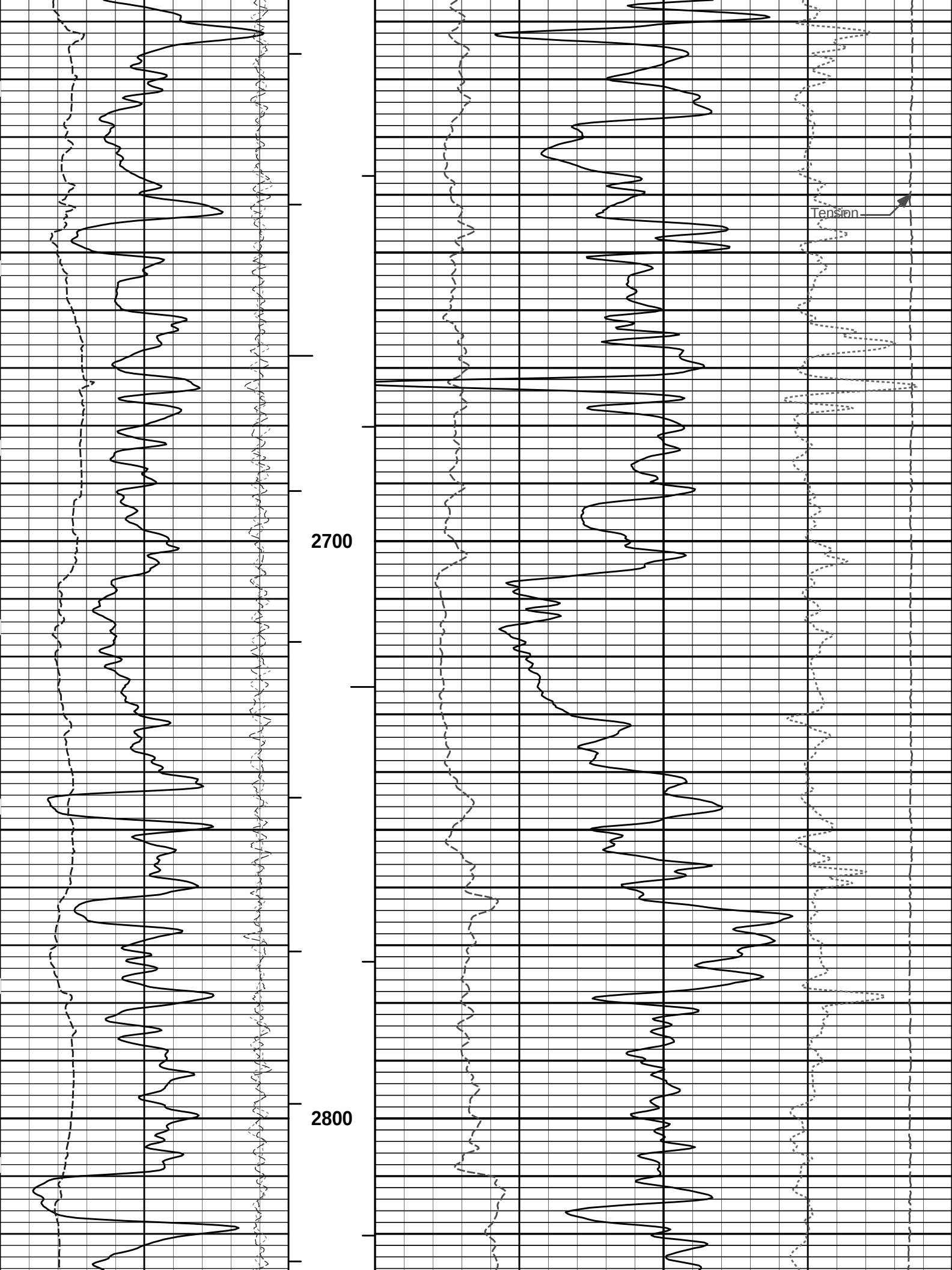


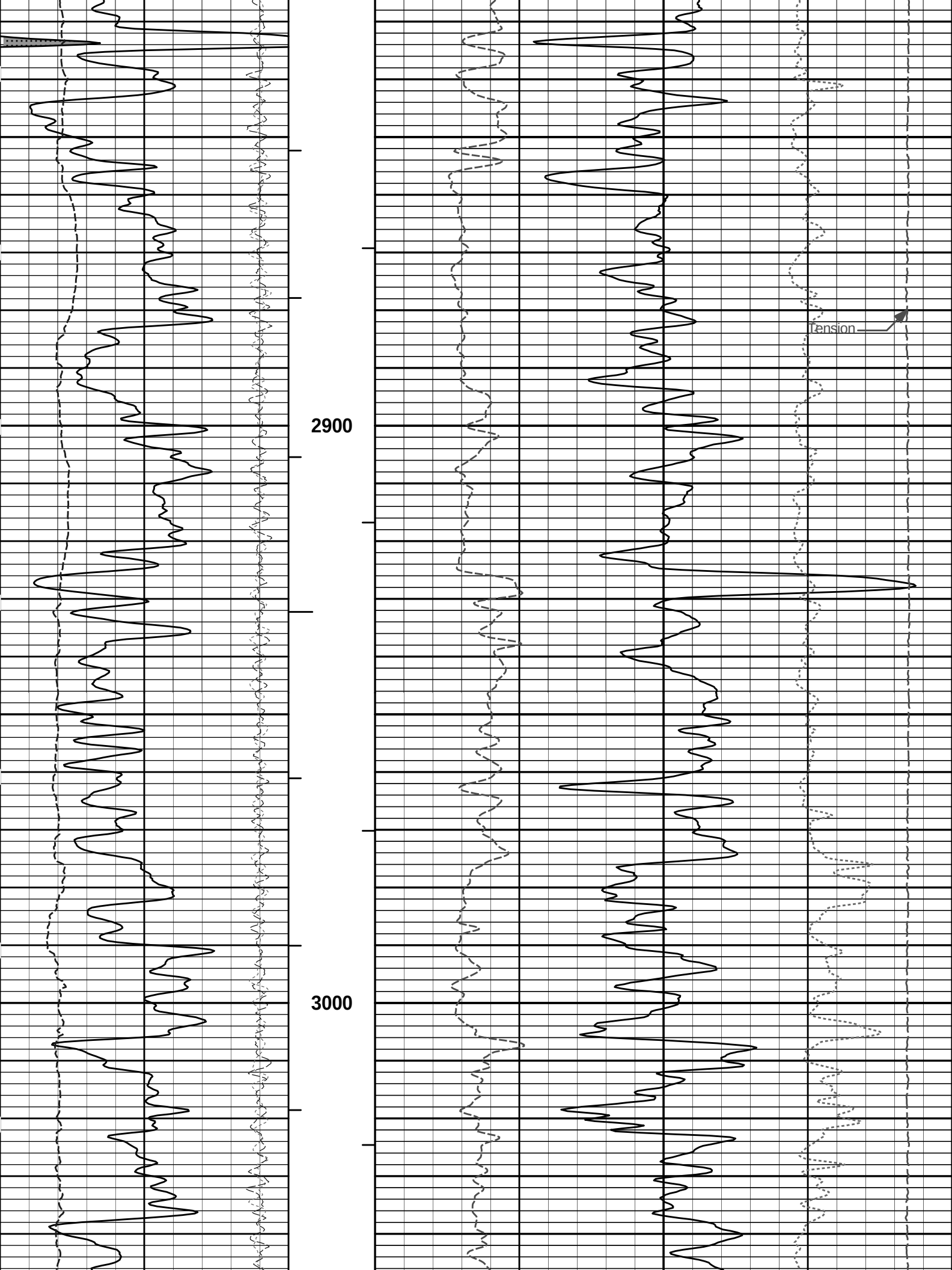


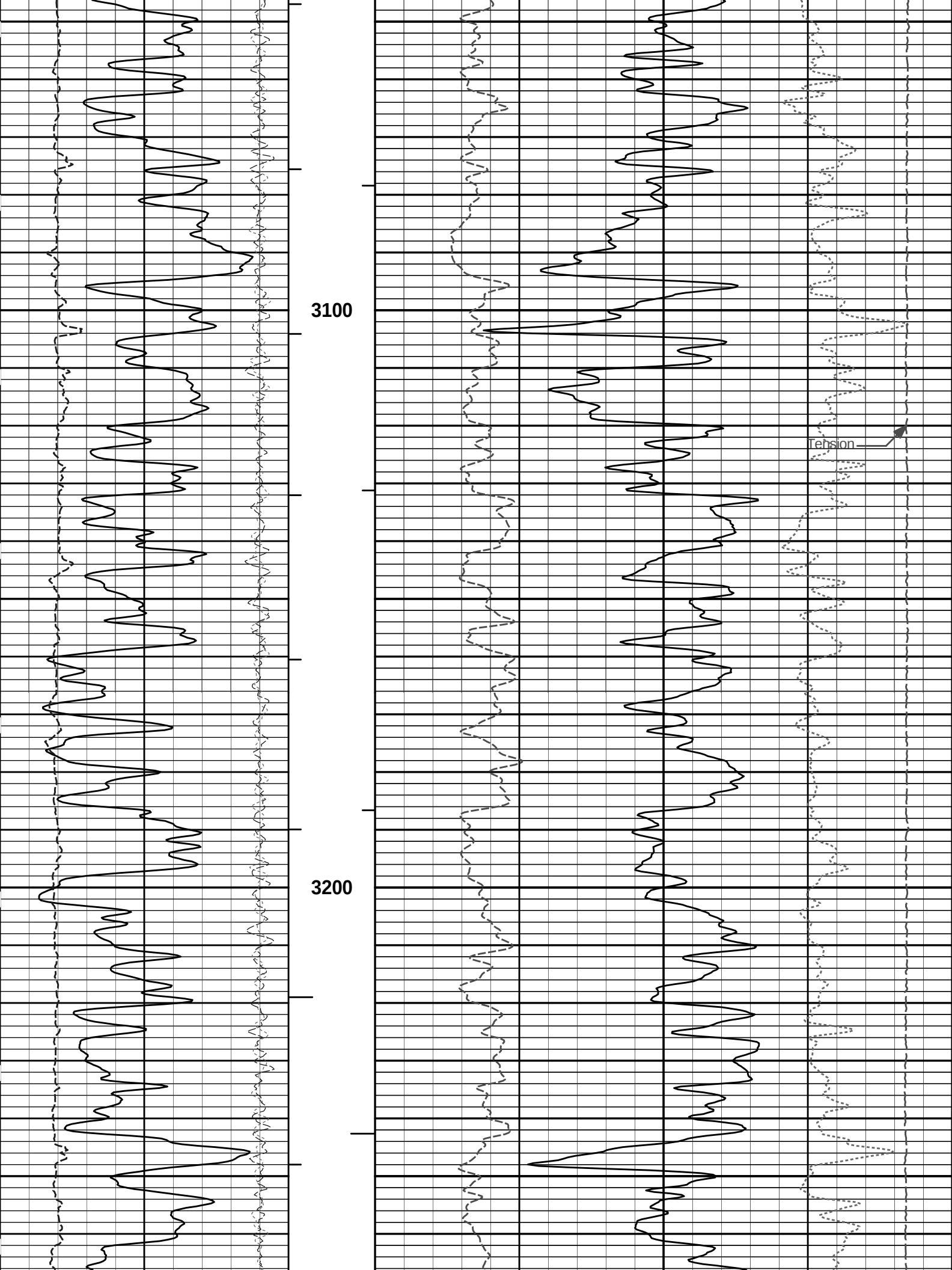


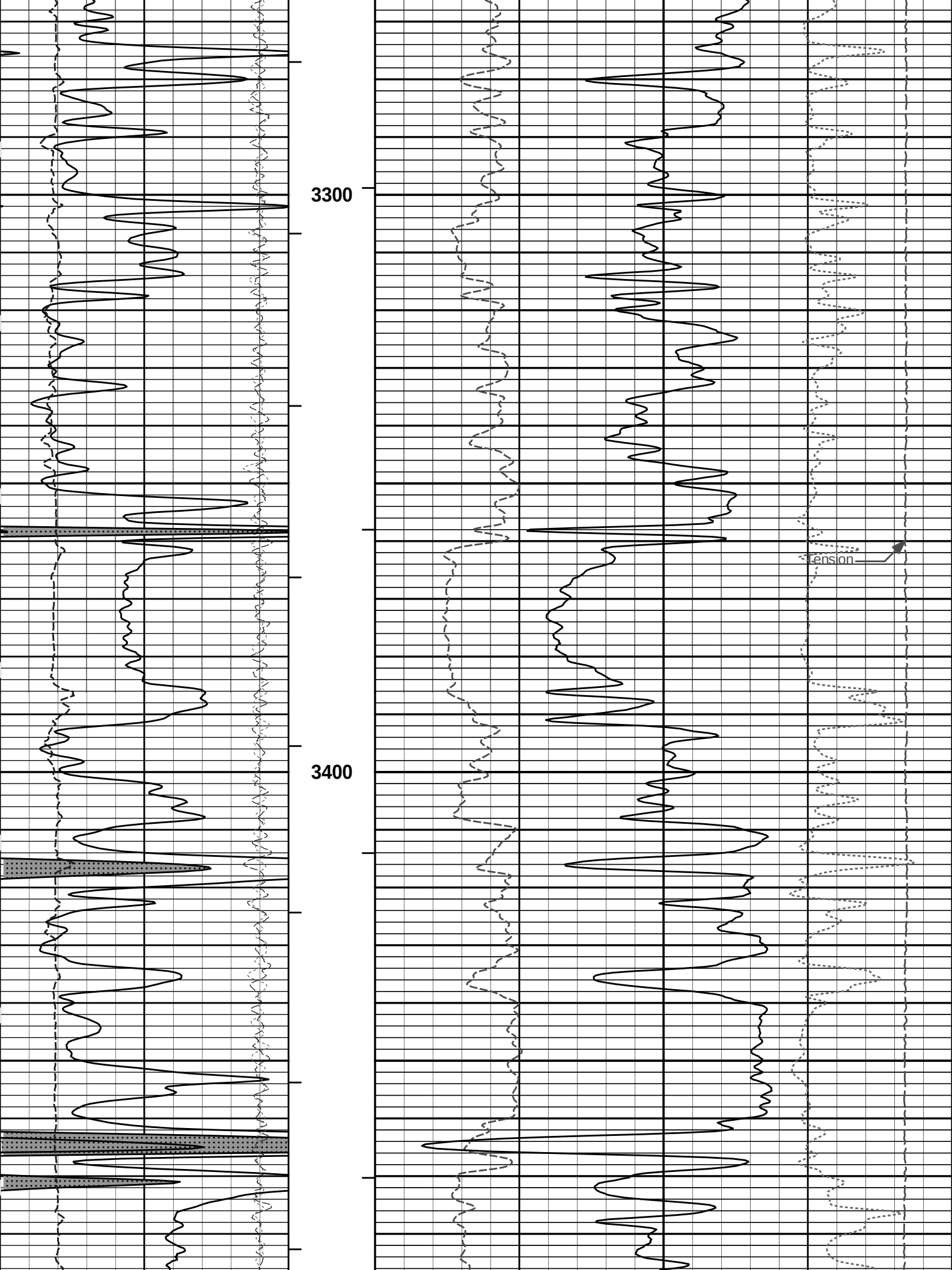


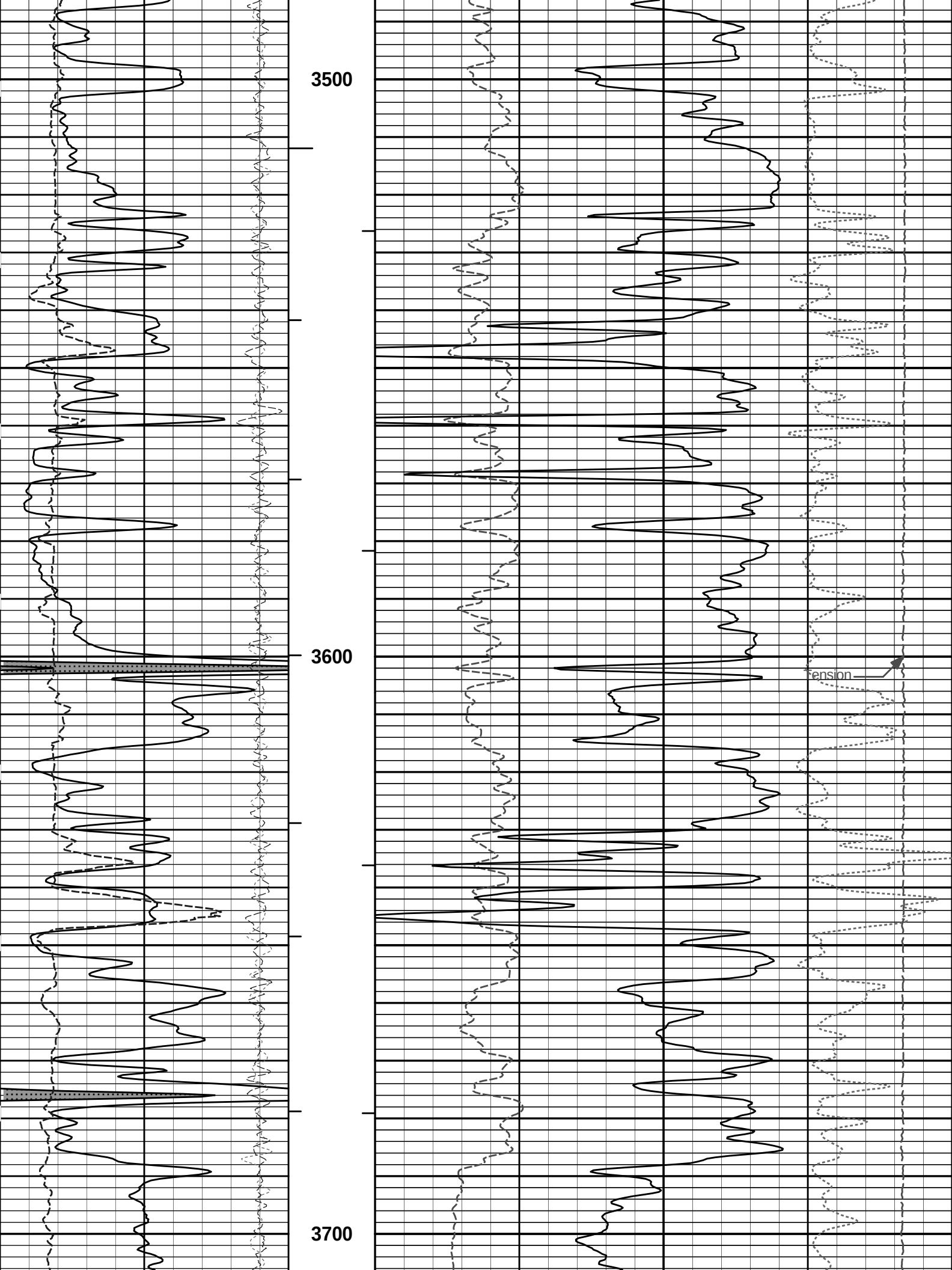


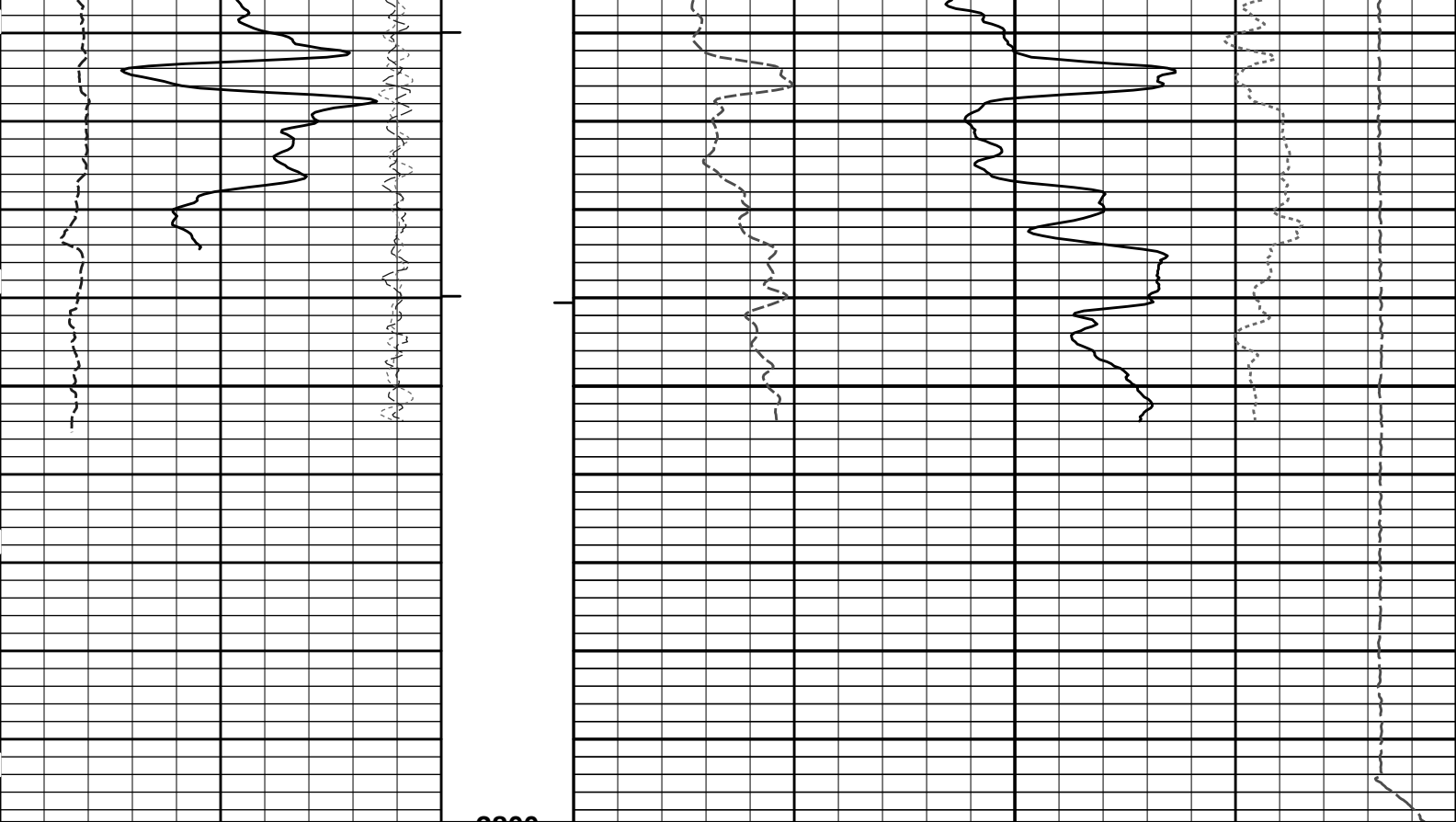












6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					g/cc	
-18	NearQuality	2	BHV				15K	Tension	0
			ft3					pounds	
18	FarQuality	-2	AHV	2	Bulk Density				
			ft3		g/cc				
0	Gamma Ray	150	Tension Pull						
	api		10	0					
	SHALE		Tension Pull						

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Plot Time: 18-Feb-13 10:09:12
Plot Range: 1895 ft to 3799.42 ft
Data: LEGERETRUST1-29\Well Based\HARTMAN_DETAIL\
Plot File: \\-LOCAL-\\LEGERETRUST1-29\Well Based\\POROSITYBULKD_5_MAIN_LIB

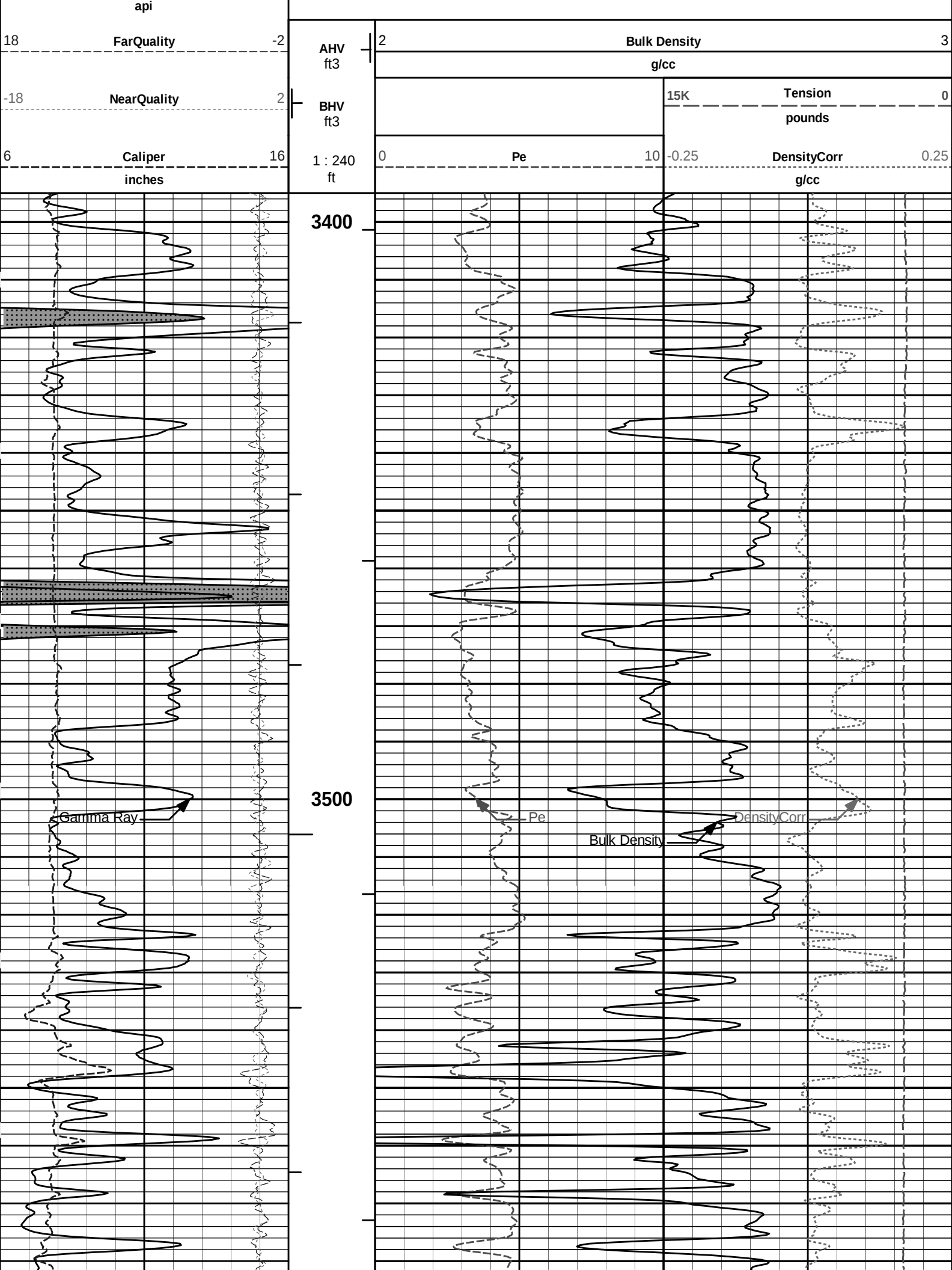
5 INCH MAIN LOG

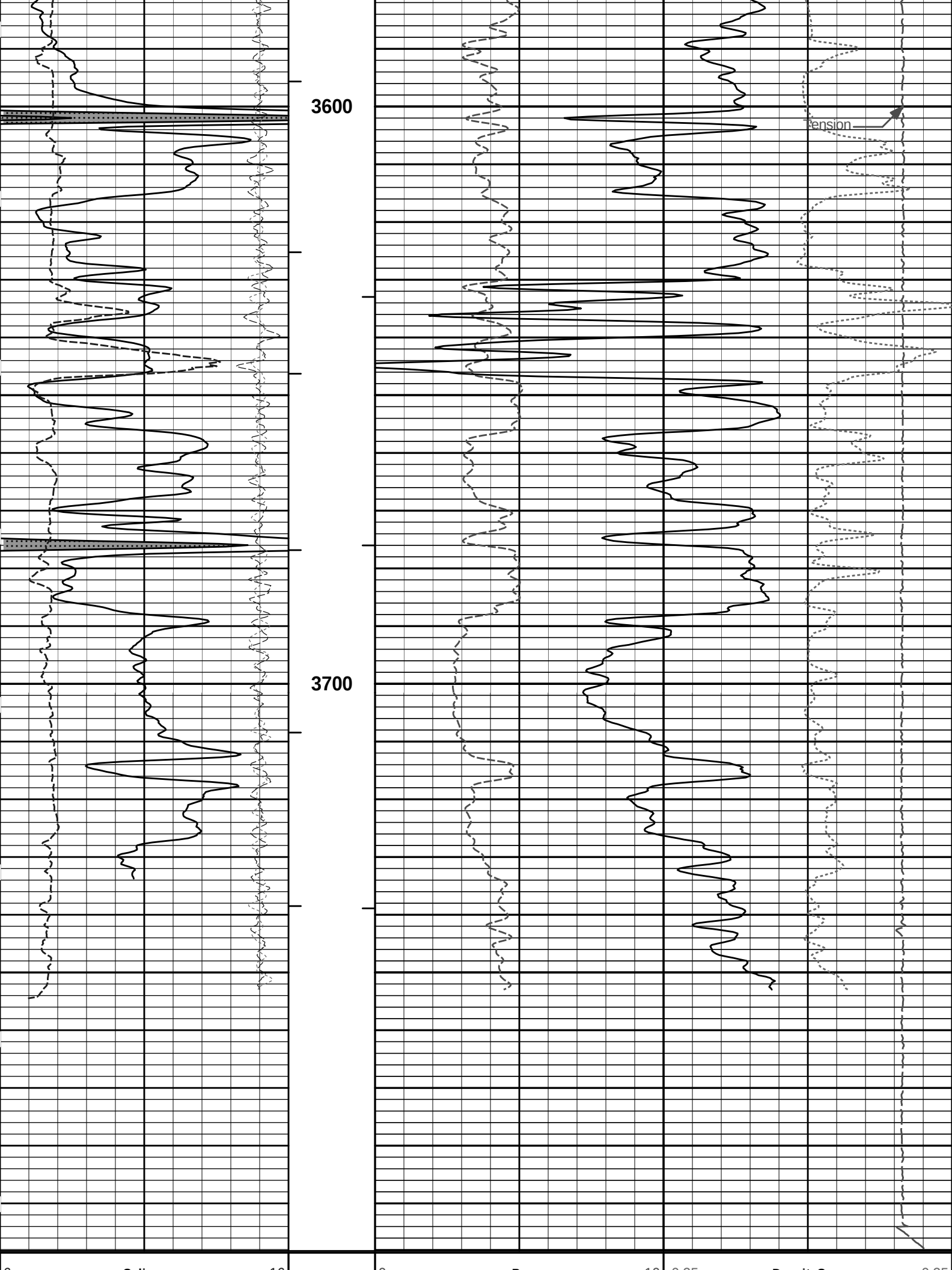
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Plot Time: 18-Feb-13 10:09:12
Plot Range: 3395 ft to 3798.25 ft
Data: LEGERETRUST1-29\Well Based\\LEGERE_TRUST_REPEAT\
Plot File: \\-LOCAL-\\LEGERETRUST1-29\Well Based\\POROSITYBULKD_5_REP_LIB

REPEAT SECTION

	SHALE	
0	Gamma Ray	150





Caliper		16	1 : 240 ft	0	Pe	10	-0.25	Density	Corr	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								
api										
SHALE										

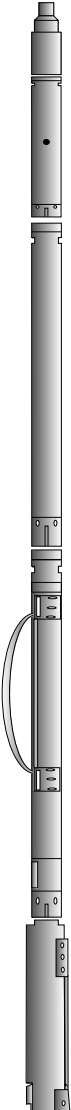
HALLIBURTON

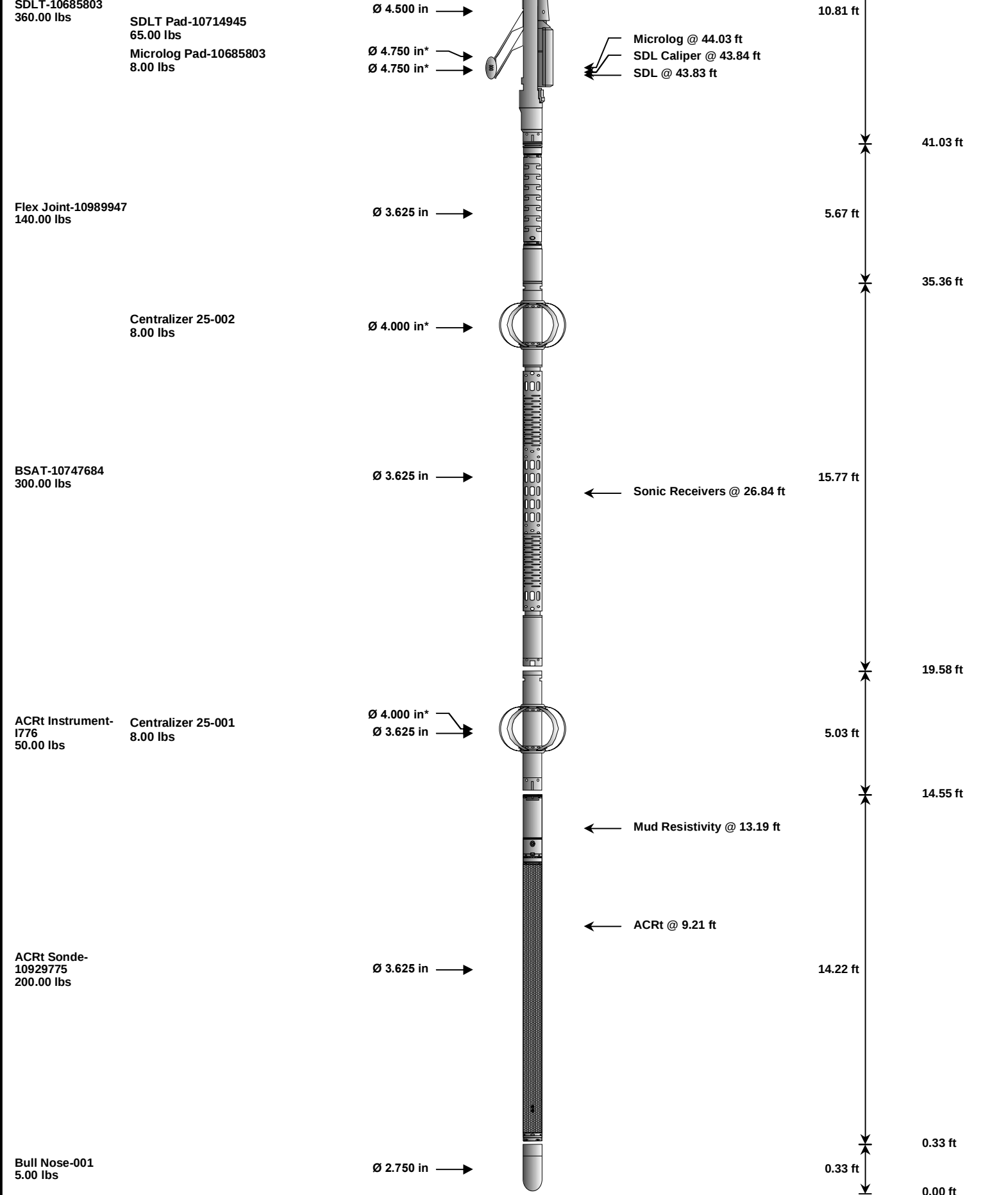
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Plot File: \\-LOCAL-\\LEGERETRUST1-29\Well Based\POROSITYBULKD_5_REP_LIB

REPEAT SECTION

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TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head- PROT01 30.00 lbs		Ø 3.625 in →			1.92 ft	75.71 ft
SP Sub-11441709 60.00 lbs		Ø 3.625 in →		← SP @ 72.01 ft	3.74 ft	73.79 ft
						70.05 ft
GTET-10811258 165.00 lbs		Ø 3.625 in →		← GammaRay @ 63.99 ft	8.52 ft	
						61.53 ft
DSNT-10755066 174.00 lbs	DSN Decentralizer- 10735145 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →		← DSN Far @ 54.59 ft ← DSN Near @ 53.84 ft	9.69 ft	
						51.84 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	73.79	300.00
SP	SP Sub	11441709	60.00	3.74	70.05	300.00
GTET	Gamma Telemetry Tool	10811258	165.00	8.52	61.53	60.00
DSNT	Dual Spaced Neutron	10755066	174.00	9.69	51.84	60.00
DCNT	DSN Decentralizer	10735145	6.60	5.13	55.17	300.00

SDLT	Spectral Density Tool	10685803	360.00	10.81	41.03	60.00
MICP	Microlog Pad	10685803	8.00	1.00 *	43.53	60.00
SDLP	Density Insite Pad	10714945	65.00	2.55 *	43.24	60.00
FLEX	Flex Joint	10989947	140.00	5.67	35.36	300.00
BSAT	Borehole Sonic Array Tool	10747684	300.00	15.77	19.58	60.00
OBCEN	Centralizer - 25 in. Overbody	002	8.00	2.08 *	32.52	300.00
ACRt	Array Compensated True Resistivity Instrument Section	1776	50.00	5.03	14.55	300.00
OBCEN	Centralizer - 25 in. Overbody	001	8.00	2.08 *	16.10	300.00
ACRt	Array Compensated True Resistivity Sonde Section	10929775	200.00	14.22	0.33	300.00
BLNS	Bull Nose	001	5.00	0.33	0.00	300.00
Total			1,579.60	75.71		
* Not included in Total Length and Length Accumulation.						
Data: LEGERETRUST1-29\0001 SP-GTET-DSNT-SDLT-FLEX-BSAT-ACRT-BN\004 18-Feb-13 07:43 Up @3799.5f				Date: 18-Feb-13 09:03:56		

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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	9.200	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	1.800	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	3800.00	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	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
	Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
	Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
	Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in
	GTET	GEOK	Process Gamma Ray EVR2	No	

GTET	CEOR	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	User define	
BSAT	DTMA	Delta -T Matrix	47.60	uspf
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt Sonde	TPOS	Tool Position	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm

BOTTOM

Data: LEGERETRUST1-29\0001 SP-GTET-DSNT-SDLT-FLEX-BSAT-ACRT-BN\004 18-Feb-13 07:43 Up @3799.5f

Date: 18-Feb-13 08:55:30

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	GTET - 10811258	Reference Calibration Date:	31-Dec-12 23:10:29
Engineer:	T. HYDE	Calibration Date:	03-Feb-13 11:19:35
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Calibrator Source S/N: TB-185

Calibrator API Reference:228.00 api

Equivalent Calibrator API Reference:232.0 api

Measurement	Measured	Calibrated	Units
Background	49.5	50.6	api

Background + Calibrator	276.4	282.6	api
Calibrator	226.9	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 10811258	Reference Calibration Date:	03-Feb-13 11:19:35
Engineer:	S. INGERSOLL	Calibration Date:	18-Feb-13 06:07:12
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Calibrator Source S/N: TB-185
Calibrator API Reference:228.00 api
Equivalent Calibrator API Reference:232.0 api

Field Verification	Shop	Field	Units
Background	50.6	23.7	api
Background + Calibrator	282.6	252.0	api
Calibrator	232.0	228.3	api
Shop	Field	Difference	Tolerance
232.0	228.3	3.7	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION			
Tool Name:	DSNT - 10755066	Reference Calibration Date:	19-Dec-12 09:31:50
Engineer:	T. HYDE	Calibration Date:	18-Jan-13 10:41:33
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1

Logging Source S/N: DSN-436
Tank Serial Number: 105060
Reference value assigned to Tank: 51.680
Snow Block S/N: TRK_954
Calibration Tank Water Temperature: 62 degF
Min. Tool Housing Outside Diameter: 3.620 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.947	0.946	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):	0.2111	0.2106	0.0004	+/- 0.0020
Calibrated Ratio:	9.73	9.72	0.015	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0612	0.02000 - 0.09000

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

DUAL SPACED NEUTRON FIELD CALIBRATION			
Tool Name:	DSNT - 10755066	Reference Calibration Date:	18-Jan-13 10:41:33
Engineer:	S. INGERSOLL	Calibration Date:	18-Feb-13 06:10:03

Logging Source S/N: DSN-436

Snow Block S/N: TRK_954

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decg):	0.0612	0.0722	0.0110	+/- 0.0150

PASS/FAIL SUMMARY

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

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	SDLT - 10685803	Reference Calibration Date:	18-Jan-13 09:58:36
Engineer:	T. HYDE	Calibration Date:	18-Jan-13 10:03:41
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1
Host Tool Name:	DSNT - 10755066		

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-4650.98	-4634.87	-7000.00 - -1000.00
Pad Gain	0.0003964	0.0003949	0.000200 - 0.000600
Arm Offset	-2226.61	-2519.31	-5000.00 - 3000.00
Arm Gain	0.0005361	0.0005659	0.000300 - 0.000700
Arm Power	-0.000006657	-0.000008059	-0.000010000 - 0.000010000

The ring diameter is computed from: $\text{DIAMETER} = \text{PAD EXTENSION} + \text{ARM EXTENSION} + \text{TOOL DIAMETER}$

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)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.76	3.75	-0.01	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.54	6.50	-0.04	+/- 0.20
Medium Ring (in)	8.22	8.25	0.03	+/- 0.20
Large Ring (in)	14.94	15.00	0.06	+/- 0.20

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed
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SDLT CALIPER FIELD CALIBRATION

Tool Name:	SDLT - 10685803	Reference Calibration Date:	18-Jan-13 10:03:41
Engineer:	S. INGERSOLL	Calibration Date:	18-Feb-13 06:15:10
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.70	-0.05	+/- 0.10

Pad Extension	3.75	3.70	-0.05	+/- 0.10
Ring Diameter	8.25	8.34	0.09	+/- 0.15

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

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad - 10714945	Reference Calibration Date:	27-Dec-12 14:52:08
Engineer:	S. INGERSOLL	Calibration Date:	01-Feb-13 09:26:12
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Logging Source S/N: 5073GW		
Aluminum Block S/N: 63061	Density: 2.591g/cc	Pe: 3.170
Magnesium Block S/N: 63393	Density: 1.690g/cc	Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0194	1.0208	0.90 - 1.10
Near Dens Gain	0.9911	1.0031	0.90 - 1.10
Near Peak Gain	0.9996	0.9933	0.90 - 1.10
Near Lith Gain	0.9637	0.9847	0.90 - 1.10
Far Bar Gain	0.9937	0.9939	0.90 - 1.10
Far Dens Gain	0.9836	0.9879	0.90 - 1.10
Far Peak Gain	0.9803	0.9842	0.90 - 1.10
Far Lith Gain	0.9626	0.9682	0.90 - 1.10
Near Bar Offset	0.1283	0.1040	NONE
Near Dens Offset	0.3542	0.2430	NONE
Near Peak Offset	0.2642	0.3129	NONE
Near Lith Offset	0.5301	0.3541	NONE
Far Bar Offset	0.2561	0.2422	NONE
Far Dens Offset	0.3280	0.2800	NONE
Far Peak Offset	0.3491	0.3058	NONE
Far Lith Offset	0.4598	0.4088	NONE
Near Bar Background	978.58	975.57	700 - 1450
Near Dens Background	325.54	323.82	230 - 480
Near Peak Background	141.17	141.75	100 - 210
Near Lith Background	173.43	173.14	125 - 260
Far Bar Background	504.27	501.11	450 - 900
Far Dens Background	195.52	195.62	175 - 345
Far Peak Background	76.60	75.55	70 - 140
Far Lith Background	80.95	80.24	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.690	1.690	0.000	+/- 0.015
Pe	2.598	2.547	-0.051	+/- 0.150
ALUMINUM				
Density (g/cc)	2.587	2.591	0.004	+/- 0.01500
Pe	3.159	3.120	-0.039	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0006	+/- 0.0110	-0.0016	+/- 0.0140
Magnesium Block	0.0004	+/- 0.0110	0.0013	+/- 0.0140
Aluminum Block	-0.0003	+/- 0.0110	0.0002	+/- 0.0140
Resolution	9.84	6.00 - 11.50	9.26	6.00 - 11.50
Internal Verifier(B+D+P+L)	1614	1200 - 2700	853	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 - 10714945	Reference Calibration Date:	01-Feb-13 09:26:12
Engineer:	S. INGERSOLL	Calibration Date:	18-Feb-13 06:19:00
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Pad Temperature: 47.0 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1614.287	1615.251	0.964	16.152
Far (B+D+P+L) cps	852.517	854.427	1.910	16.011
Near Resolution	9.84	10.07	0.230	0.50
Far Resolution	9.26	9.59	0.330	1.00

PASS/FAIL SUMMARY	
Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10811258						
Gamma Ray Calibrator	232.0	228.3	-----	3.7	+/- 9.00	api
DSNT-10755066						
Snow-Block Porosity	0.0612	0.0722	-----	-0.0110	+/- 0.0150	decp
SDLT-10685803						
Pad Extension	3.75	3.70	-----	0.05	+/-0.10	in
Ring Diameter	8.25	8.34	-----	-0.09	+/-0.15	in
SDLT Pad-10714945						
Near(B+D+P+L)	1614.287	1615.251	-----	-0.964	+/-16.152	cps
Far(B+D+P+L)	852.517	854.427	-----	-1.910	+/-16.011	cps

Data: L EGERETRUST1-29\0001 SP-GTET-DSNT-SDLT-EL EX-BSAT-ACRT-BN\004 18-Feb-13 07:43 Un @3799.5fDate: 18-Feb-13 08:56:06				
HALLIBURTON				
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	72.01	NO	
SP	Spontaneous Potential	72.01	BLK	1.250
SPR	Raw Spontaneous Potential	72.01	NO	
SPO	Spontaneous Potential Offset	72.01	NO	
GTET				
TPUL	Tension Pull	63.99	NO	
GR	Natural Gamma Ray API	63.99	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	63.99	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	63.99	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	53.74	NO	
RNDS	Near Detector Telemetry Counts	53.84	BLK	1.417
RFDS	Far Detector Telemetry Counts	54.59	TRI	0.583
DNTT	DSN Tool Temperature	53.84	NO	
DSNS	DSN Tool Status	53.74	NO	
ERND	Near Detector Telemetry Counts EVR	53.84	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	54.59	BLK	0.000
ENTM	DSN Tool Temperature EVR	53.84	NO	
SDLT				
TPUL	Tension Pull	43.84	NO	
PCAL	Pad Caliper	43.84	TRI	0.250
ACAL	Arm Caliper	43.84	TRI	0.250
BSAT				
TPUL	Tension Pull	26.84	NO	
STAT	Status	26.84	NO	
DLYT	Delay Time	26.84	NO	
SI	Sample Interval	26.84	NO	
TXRX	Raw Telemetry 10 Receivers	26.84	NO	
FRMC	Tool Frame Count	26.84	NO	
GMOD	Gain processing mode	19.58	NO	
ACRt Sonde				
TPUL	Tension Pull	2.73	NO	
F1R1	ACRT 12KHz - 80in R value	8.98	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	8.98	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.48	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.48	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	4.98	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	4.98	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	3.98	BLK	0.000

F1X4	ACRT 12KHz - 17in X value	3.98	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.48	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.48	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.23	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.23	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	8.98	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.48	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.48	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	4.98	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	3.98	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	3.98	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.48	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.48	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.23	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.23	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	8.98	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	8.98	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.48	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.48	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	4.98	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	4.98	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	3.98	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	3.98	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.48	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.48	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.23	BLK	0.000
RMUD	Mud Resistivity	12.52	BLK	0.000
F1RT	Transmitter Current Raw 12K X Receiver	2.73	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.73	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.73	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.73	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.73	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.73	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.73	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.73	BLK	0.000
ITMP	Instrument Temperature	2.73	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.73	NO	
TIDV	Instrument Temperature Derivative	2.73	NO	
TUDV	Upper Temperature Derivative	2.73	NO	
TLDV	Lower Temperature Derivative	2.73	NO	
TRBD	Receiver Board Temperature	2.73	NO	
SDLT Pad				
TPUL	Tension Pull	43.83	NO	
NAB	Near Above	43.66	BLK	0.920
NHI	Near Cesium High	43.66	BLK	0.920
NLO	Near Cesium Low	43.66	BLK	0.920
NVA	Near Valley	43.66	BLK	0.920
NBA	Near Barite	43.66	BLK	0.920
NDE	Near Density	43.66	BLK	0.920
NPK	Near Peak	43.66	BLK	0.920
NLI	Near Lithology	43.66	BLK	0.920

NBAU	Near Barite Unfiltered	43.66	BLK	0.250
NLIU	Near Lithology Unfiltered	43.66	BLK	0.250
FAB	Far Above	44.01	BLK	0.250
FHI	Far Cesium High	44.01	BLK	0.250
FLO	Far Cesium Low	44.01	BLK	0.250
FVA	Far Valley	44.01	BLK	0.250
FBA	Far Barite	44.01	BLK	0.250
FDE	Far Density	44.01	BLK	0.250
FPK	Far Peak	44.01	BLK	0.250
FLI	Far Lithology	44.01	BLK	0.250
PTMP	Pad Temperature	43.84	BLK	0.920
NHV	Near Detector High Voltage	43.24	NO	
FHV	Far Detector High Voltage	43.24	NO	
ITMP	Instrument Temperature	43.24	NO	
DDHV	Detector High Voltage	43.24	NO	

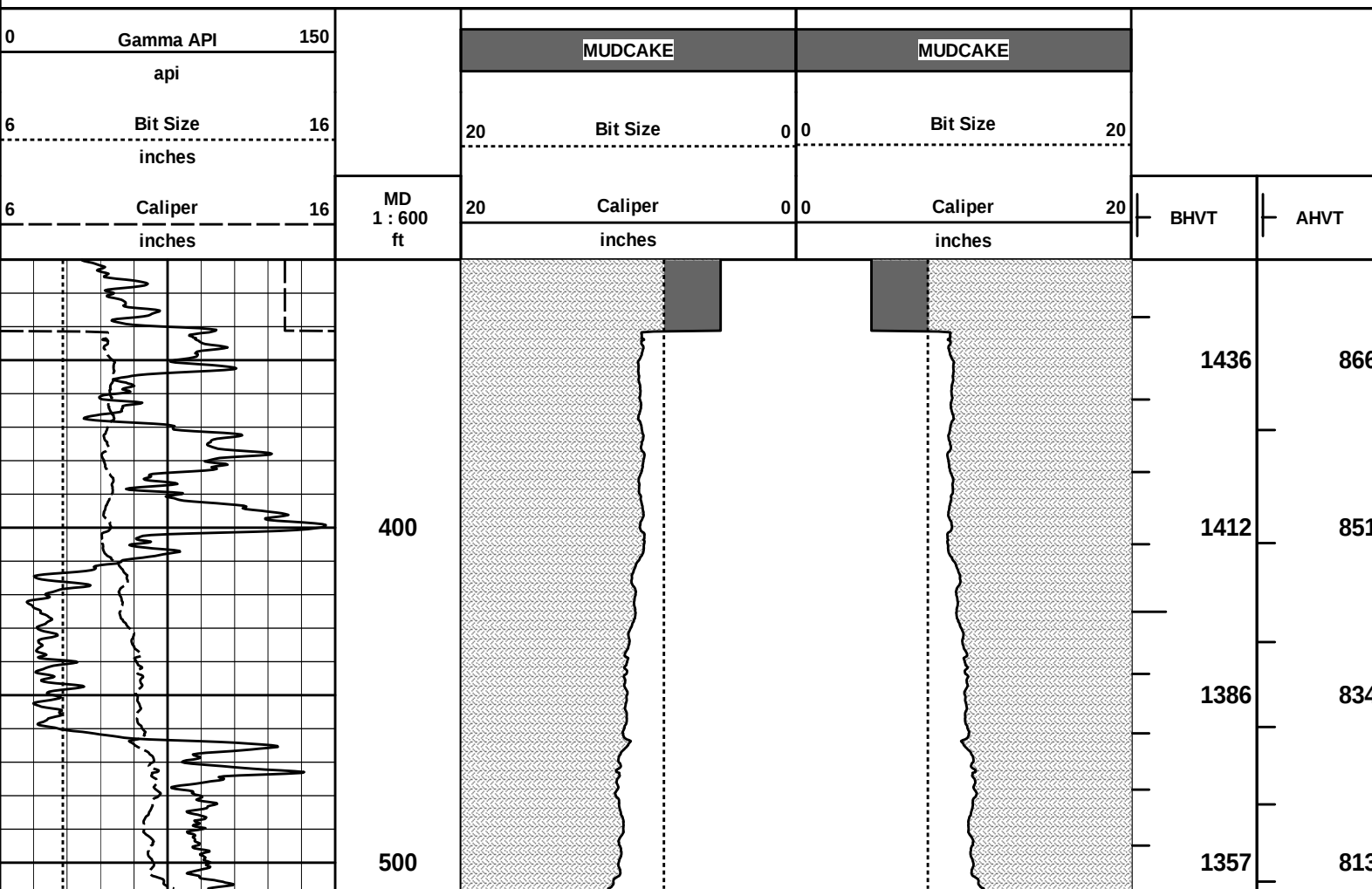
Microlog Pad				
TPUL	Tension Pull	44.03	NO	
MINV	Microlog Lateral	44.03	BLK	0.750
MNOR	Microlog Normal	44.03	BLK	0.750

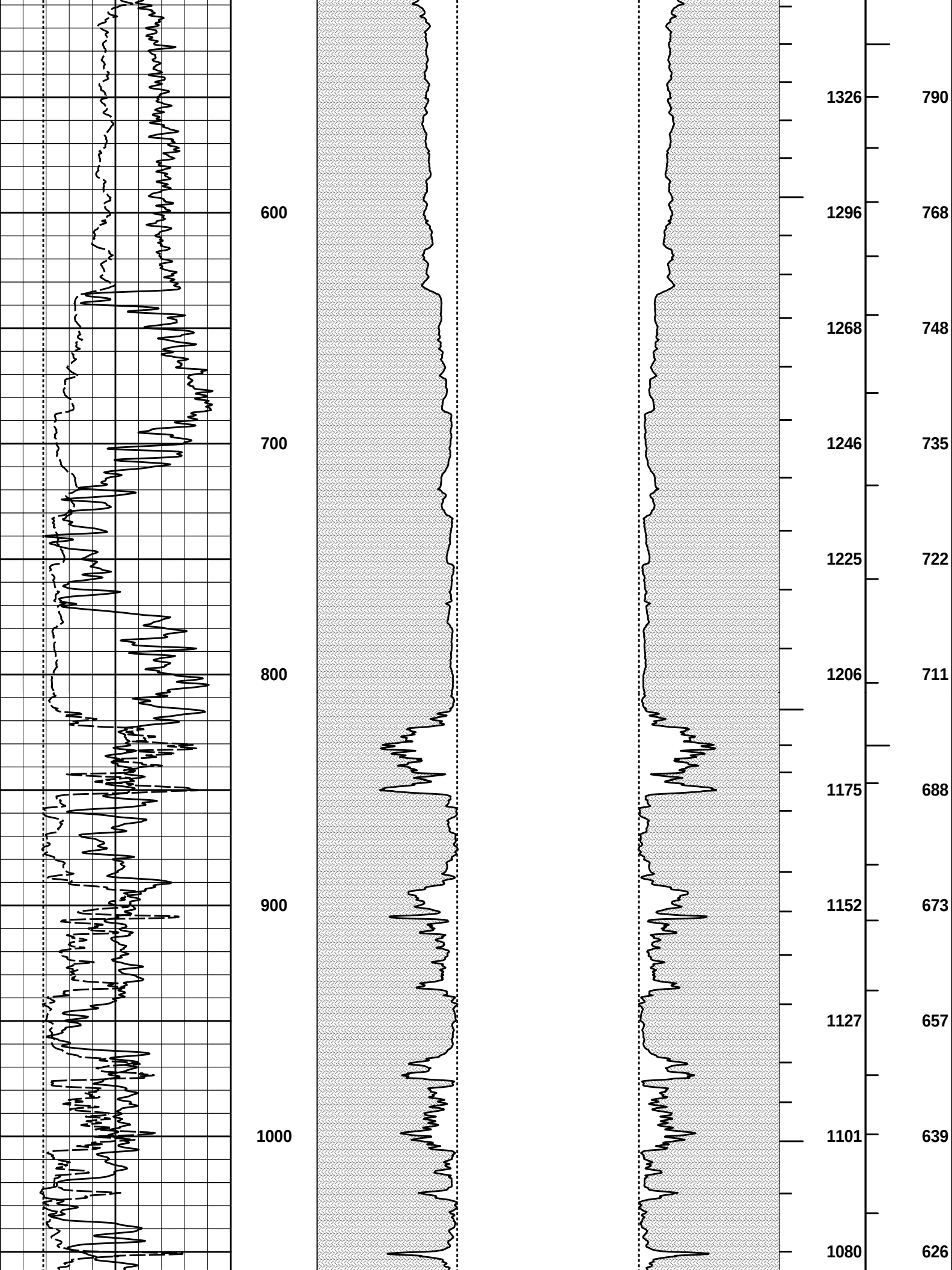
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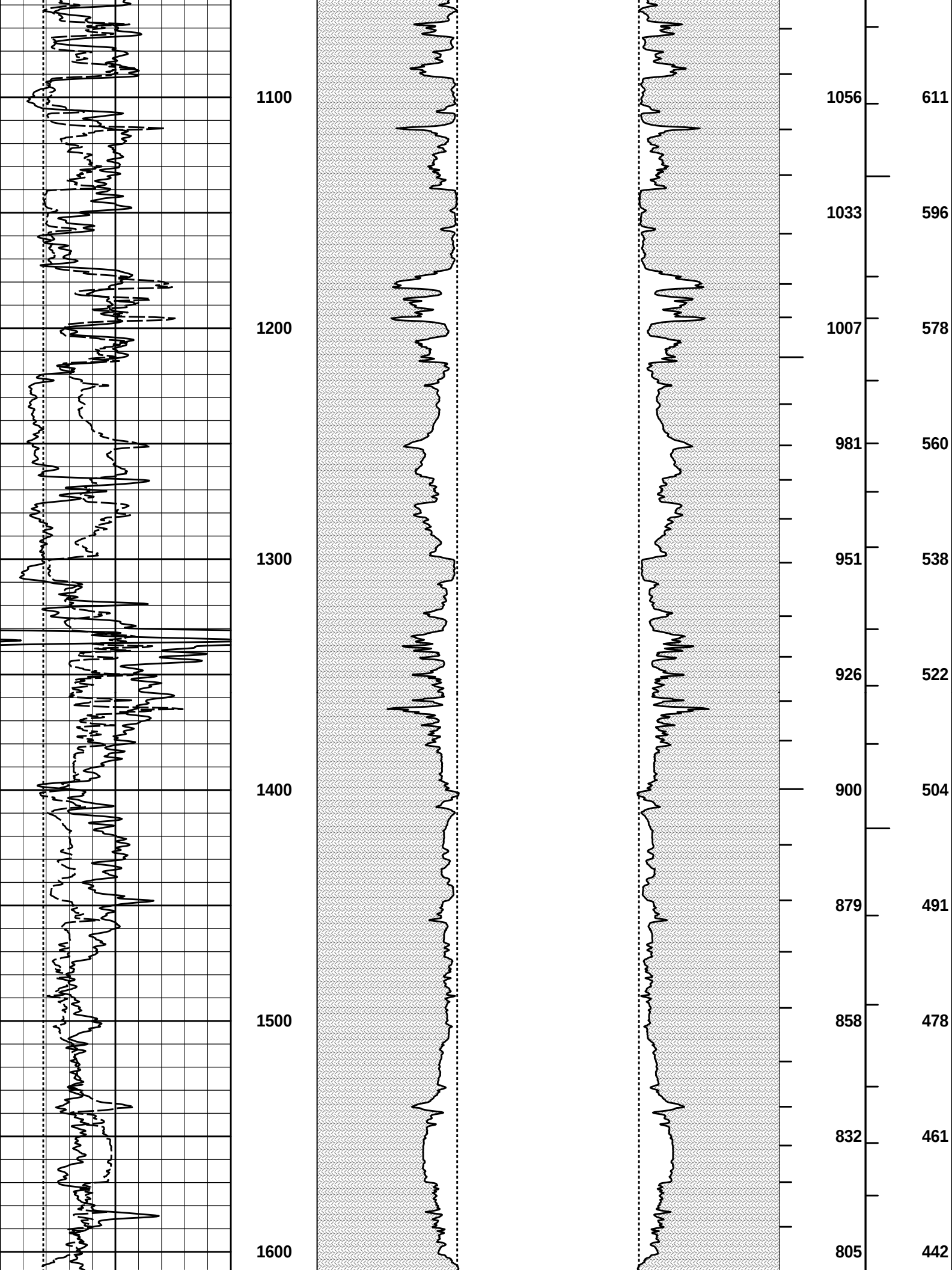
HALLIBURTON

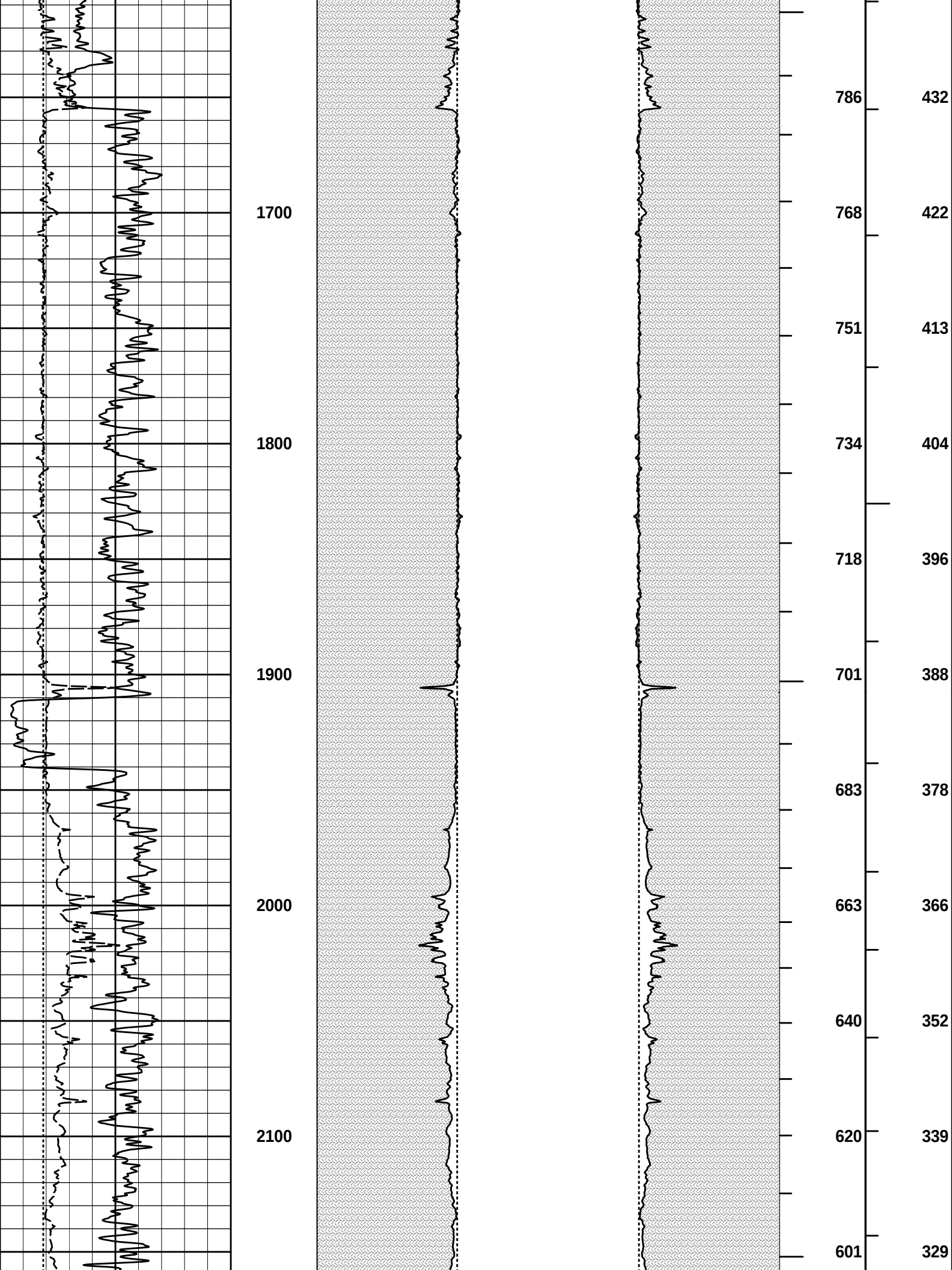
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Plot Range: 320 ft to 3799.42 ft
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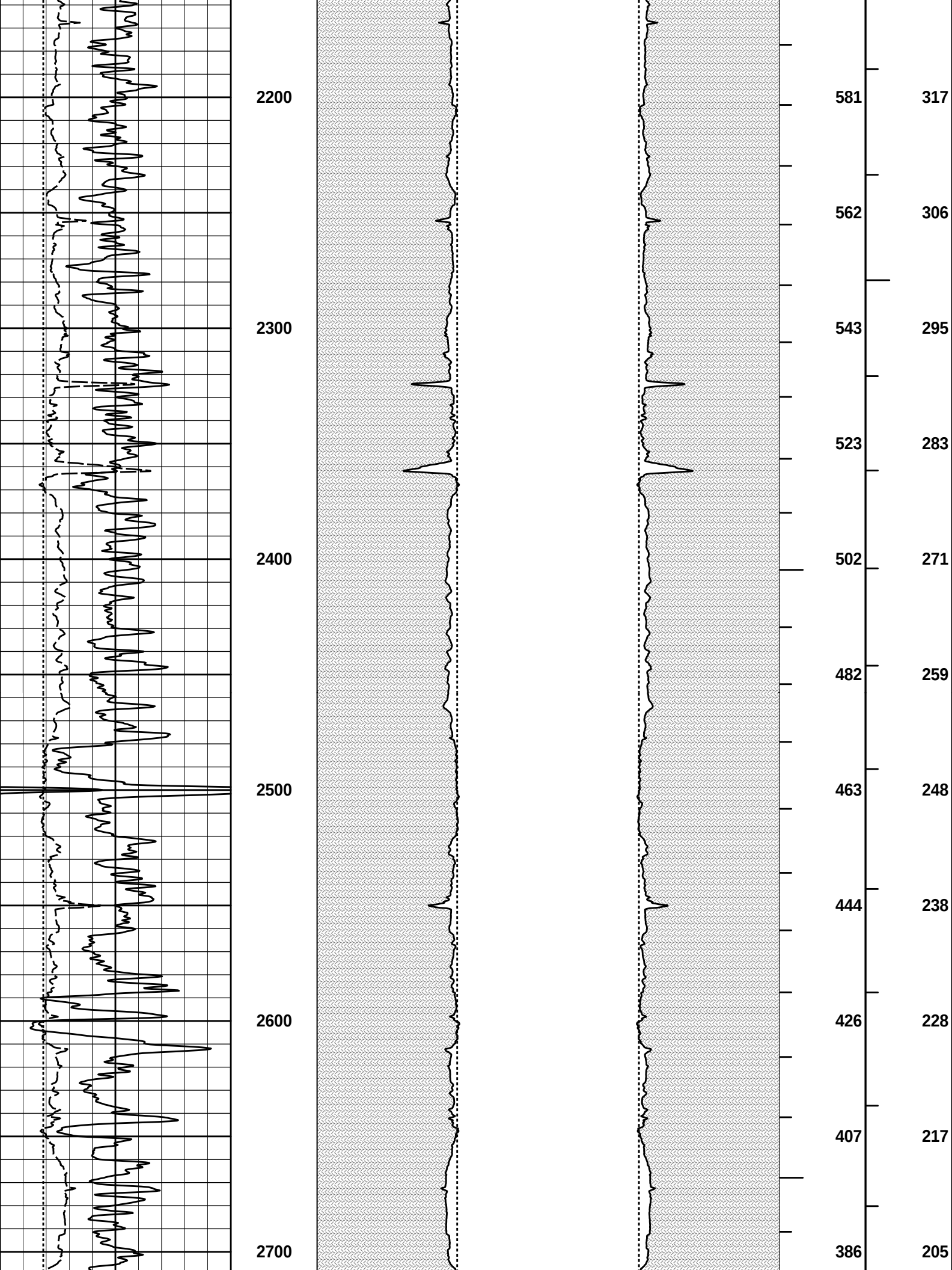
ANNULAR HOLE VOLUME PLOT

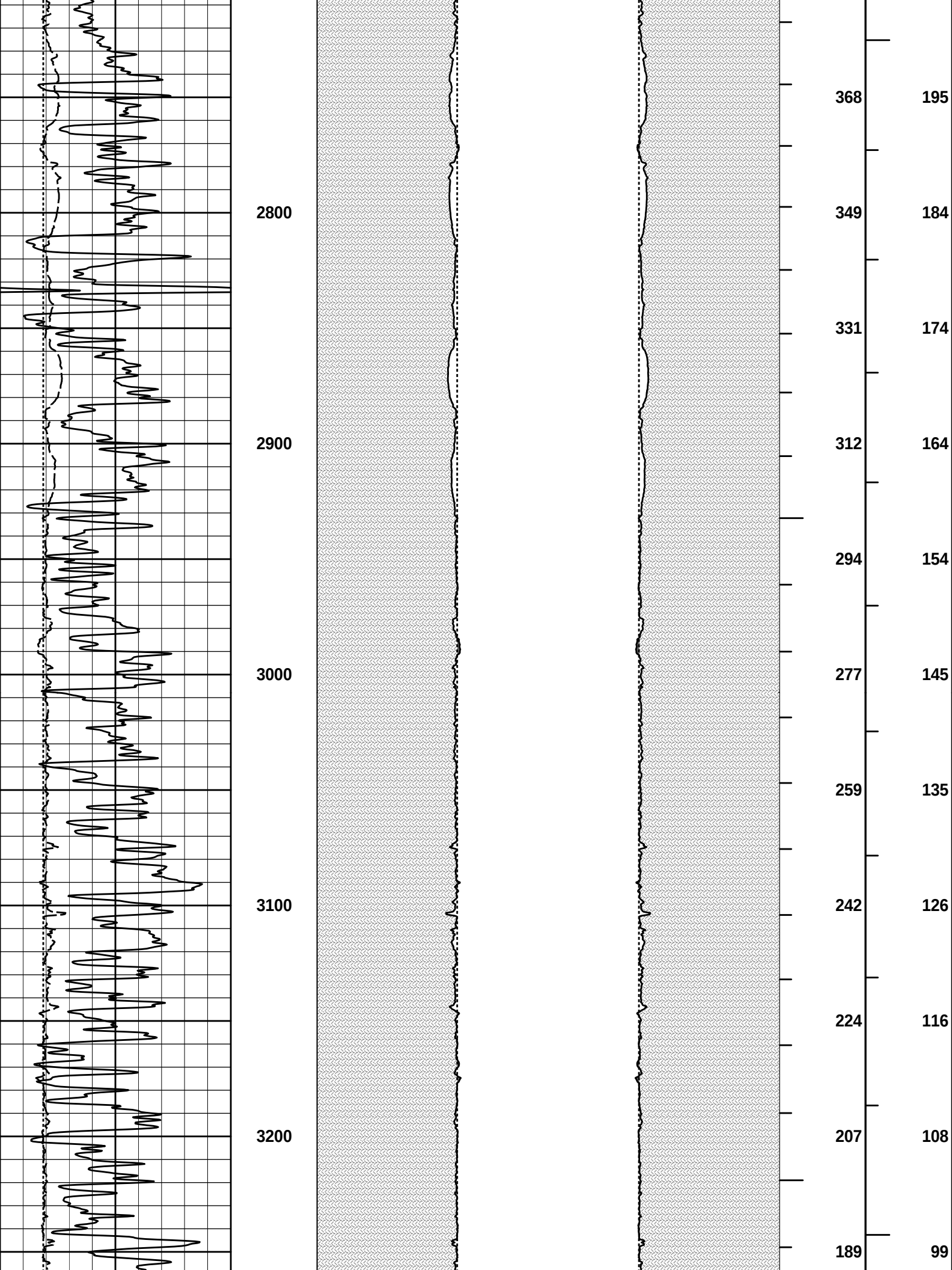


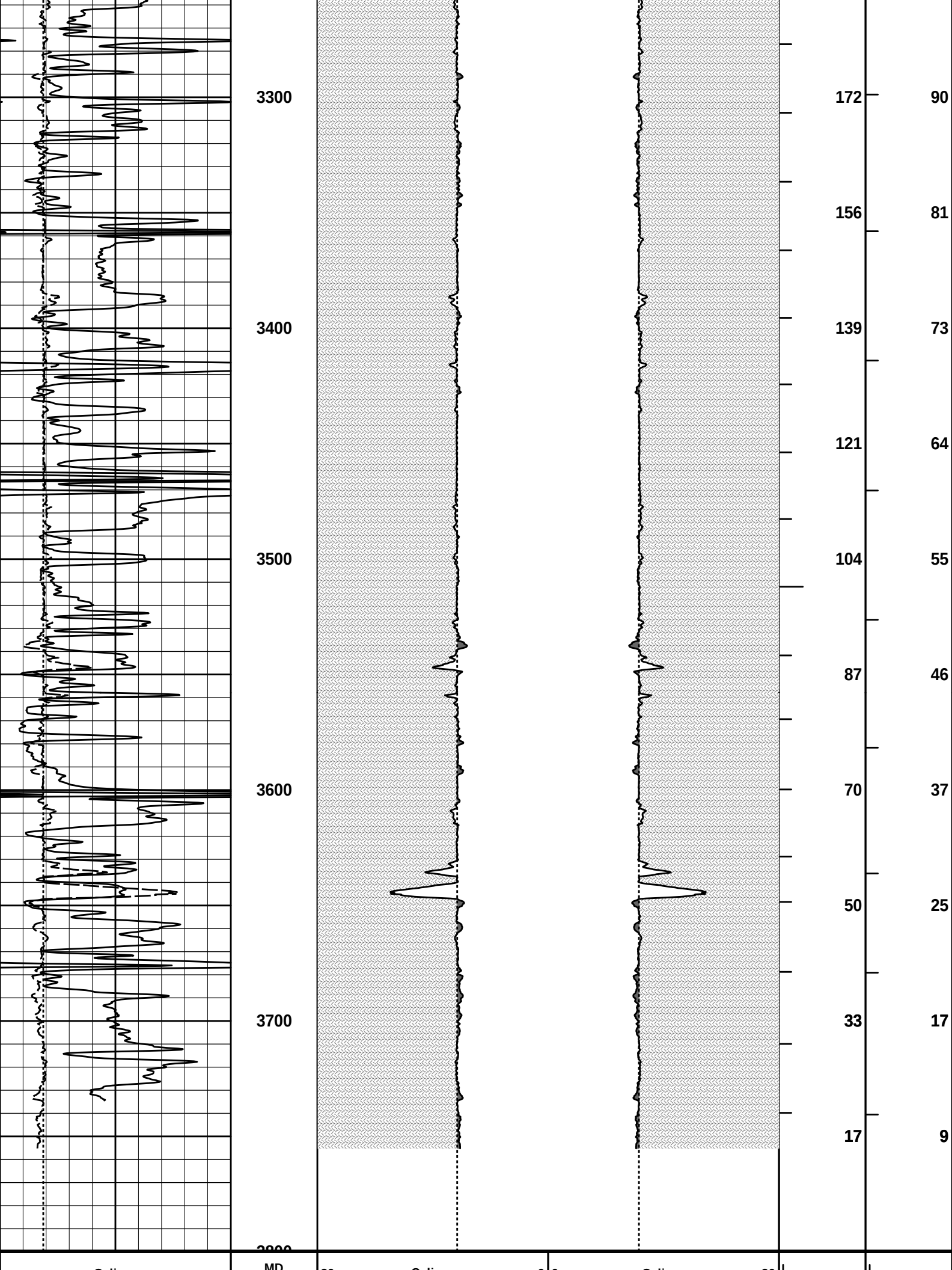












HALLIBURTON

Plot Time: 18-Feb-13 10:09:25
Plot Range: 320 ft to 3799.42 ft
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Plot File: \\-LOCAL-\\LEGERETRUST1-29\Well Based\POROSITYIAHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	HARTMAN OIL CO., INC.		
WELL	LEGERE TRUST #1-29		
FIELD	WILDCAT		
COUNTY	NORTON	STATE	KANSAS
HALLIBURTON		SPECTRAL DENSITY DUAL SPACED NEUTRON LOG	