

HALLIBURTON

DUAL SPACED NEUTRON
SPECTRAL DENSITY
LOG

COMPANY		VAL ENERGY	
WELL		HICKOCK 2-23	
FIELD/BLOCK		UNKNOWN	
COUNTY		BARBER	
STATE		KANSAS	
Permanent Datum		G.L.	
Log measured from		KB	
Drilling measured from		KB	
Date		27-Feb-13	
Run No.		ONE	
Depth - Driller		5025.00 ft	
Depth - Logger		5021.0 ft	
Bottom - Logged Interval		4998	
Top - Logged Interval		3200	
Casing - Driller		8.625 in @ 225.0 ft	
Casing - Logger		223.0 ft	
Bit Size		7.875 in @	
Type Fluid in Hole		WATER BASED	
Density		9.4 ppg 61.00 s/qt	
PH		9.00 pH 13.2 cp/m	
Source of Sample		MUD PIT	
Rm @ Meas. Temperature		0.640 ohmm @ 60.00 degF @	
Rmf @ Meas. Temperature		0.54 ohmm @ 60.00 degF @	
Rmc @ Meas. Temperature		0.740 ohmm @ 60.00 degF @	
Source Rmf		Rmc MEASURED	
Rm @ BHT		0.35 ohmm @ 116.0 degF @	
Time Since Circulation		5.0 hr	
Time on Bottom		27-Feb-13 04:21	
Max. Rec. Temperature		116.0 degF @ 5021.0 ft @	
Equipment		10782954 LIBERAL	
Recorded By		S. INGERSOLL	
Witnessed By		S. VANBUSKIRK	

COMPANY	VAL ENERGY
WELL	HICKOCK 2-23
FIELD/BLOCK	UNKNOWN
COUNTY	BARBER
STATE	KANSAS
API No.	15-007-23984-00-00
Location	(SHL) 2310' FSL & 495' FEL W2 NE NE SE
Other Services:	SDL / DSN MICROLOG ACRT

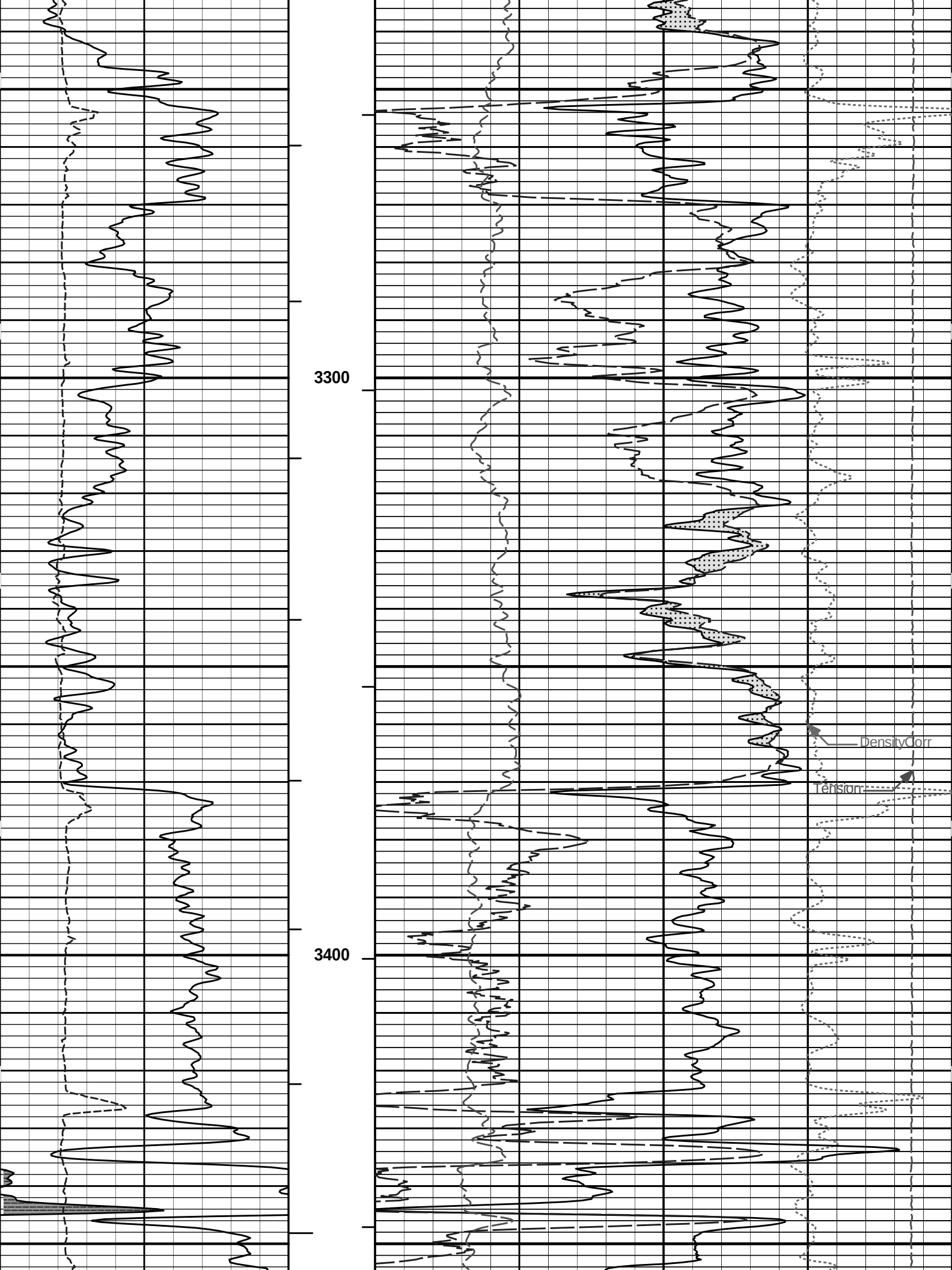
Sect.	23	Twp.	34S	Rge.	11W	Elev.: K.B.	1371.0 ft
						D.F.	1370.0 ft
						G.L.	1360.0 ft

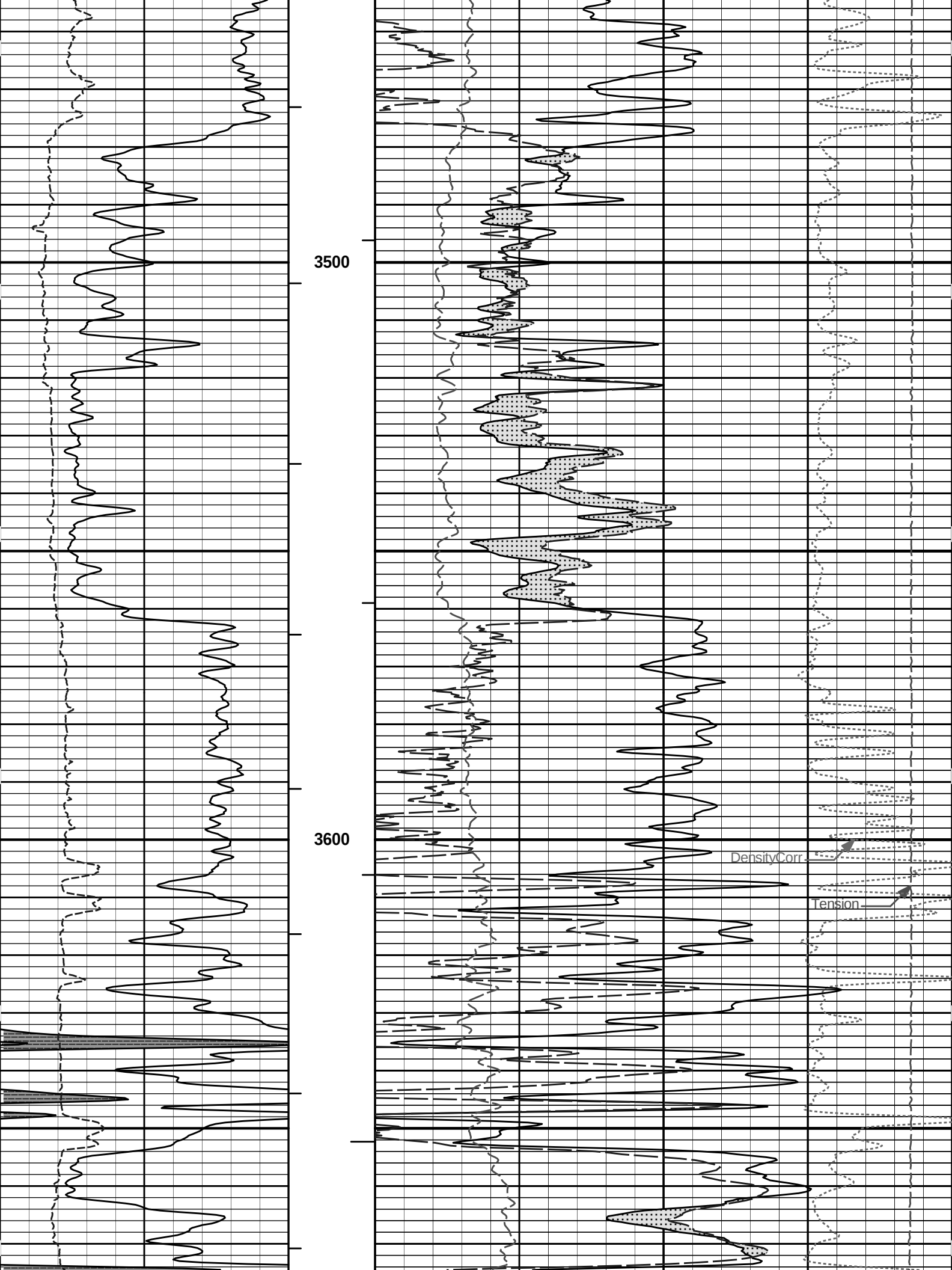
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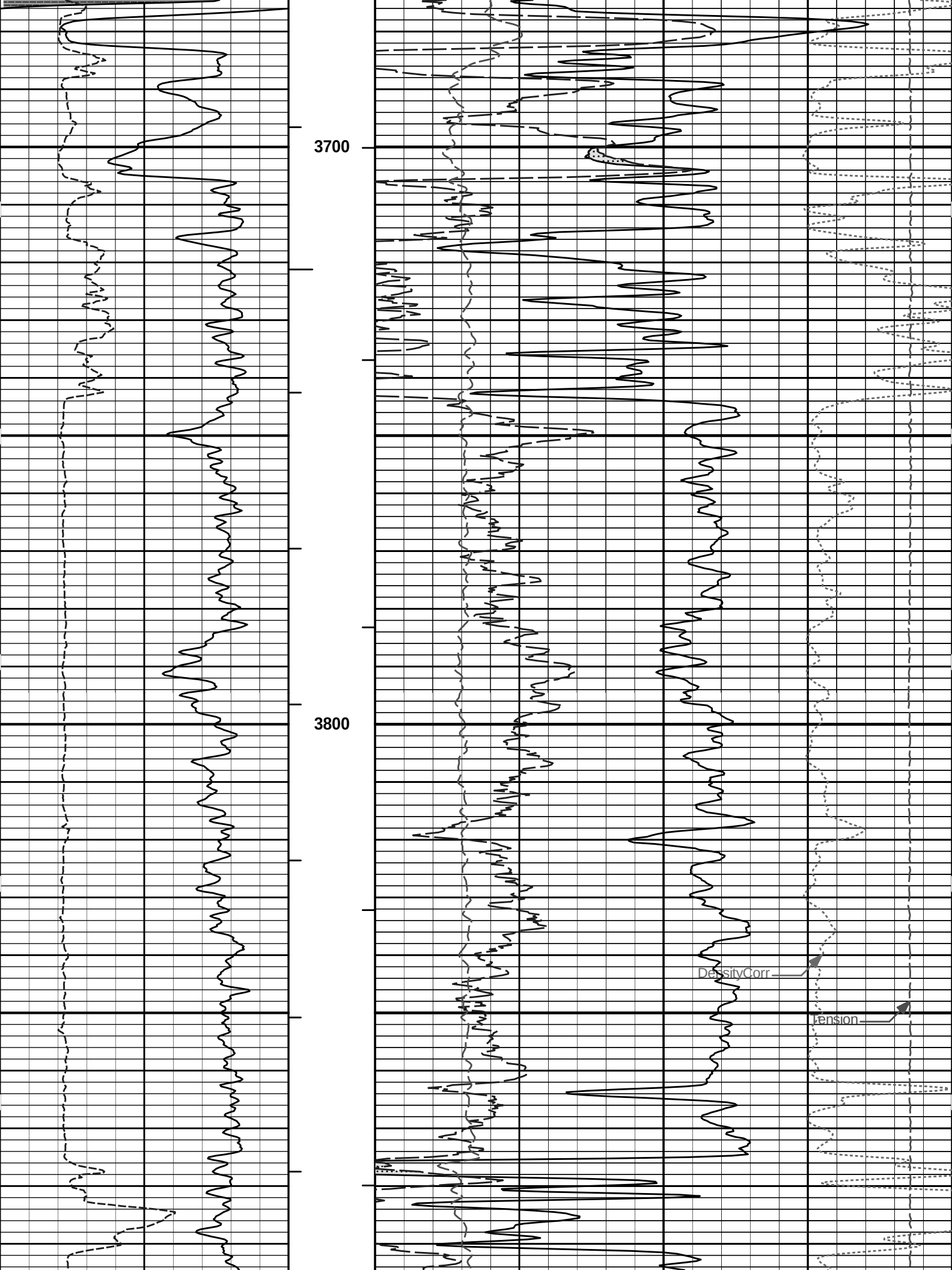
Service Ticket No.: 900230356				API Serial No.: 15-007-23984-00-00				PGM Version: WL INSITE R3.8.4 (Build 5)							
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES									
Date		Sample No.				Type Log		Depth		Scale Up Hole		Scale Down Hole			
Depth-Driller															
Type 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		1.5 S.O.			
Rmc @ Meas. Temp.		@		@				10800784							
Source Rmf		Rmc													
Rm @ BHT		@		@											
Rmf @ BHT		@		@											
Rmc @ BHT		@		@											
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.		ONE		Run No.				Run No.		ONE		Run No.		ONE	
Serial No.		10811258		Serial No.				Serial No.		10673803		Serial No.		10735145	
Model No.		GTET		Model No.				Model No.		SDLT		Model No.		DSNT	
Diameter		3.625"		No. of Cent.				Diameter		5.3"		Diameter		3.625"	
Detector Model No.		GTET		Spacing				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															

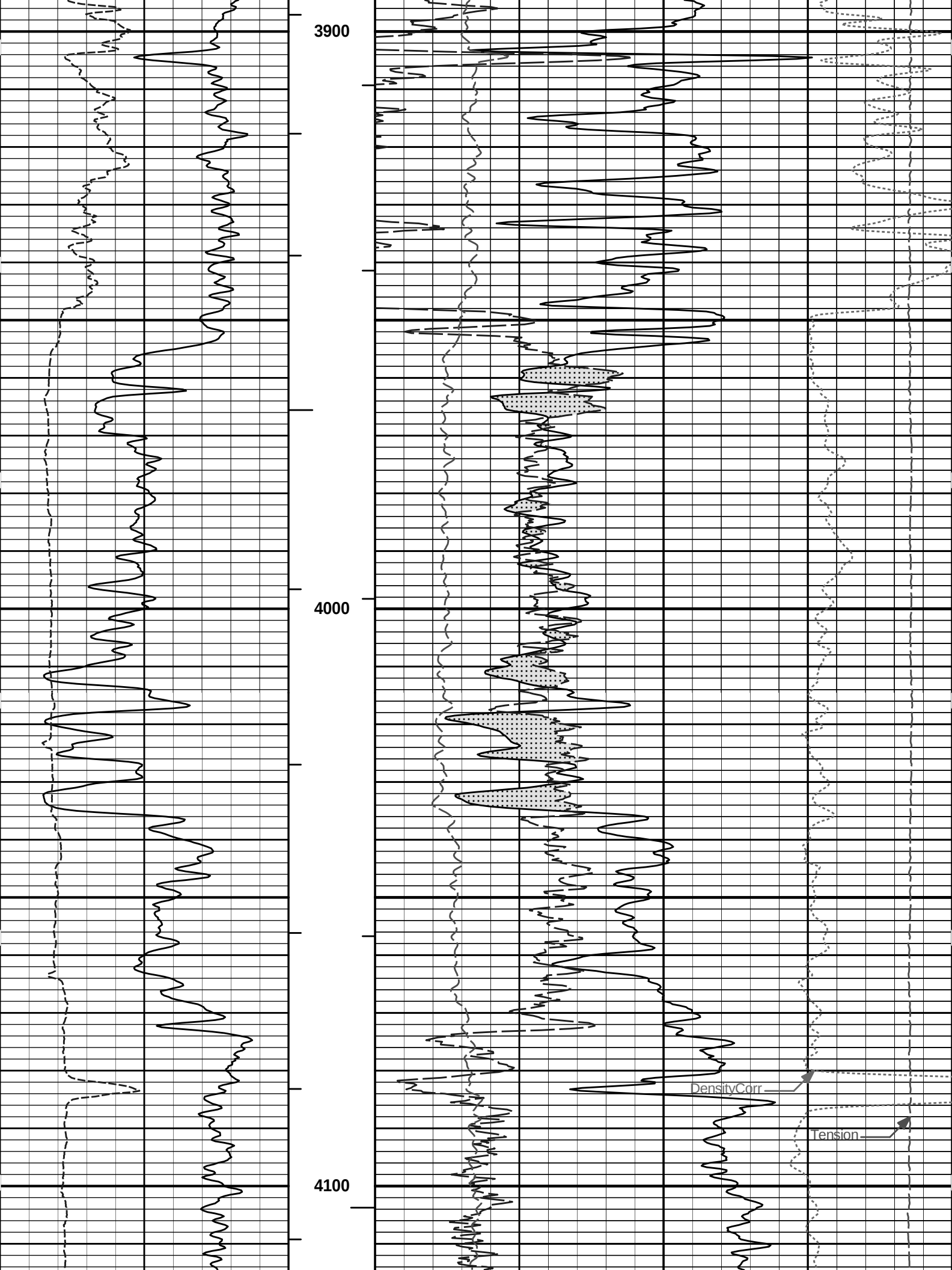
GENERAL			GAMMA		ACOUSTIC			DENSITY			NEUTRON			
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	5021	223	REC	0	150				30	-10	2.71 gm/cc	30	-10	LIME
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.														

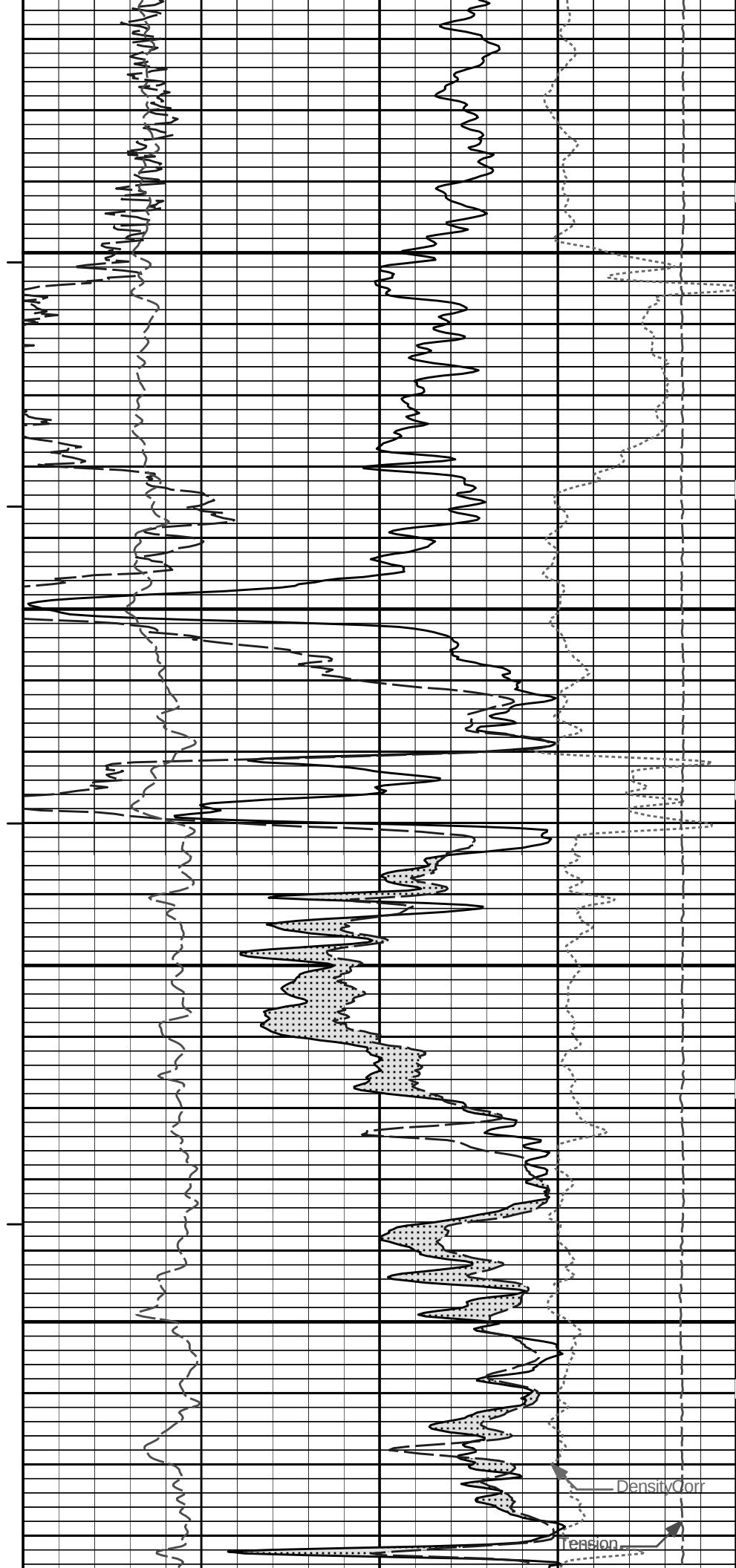
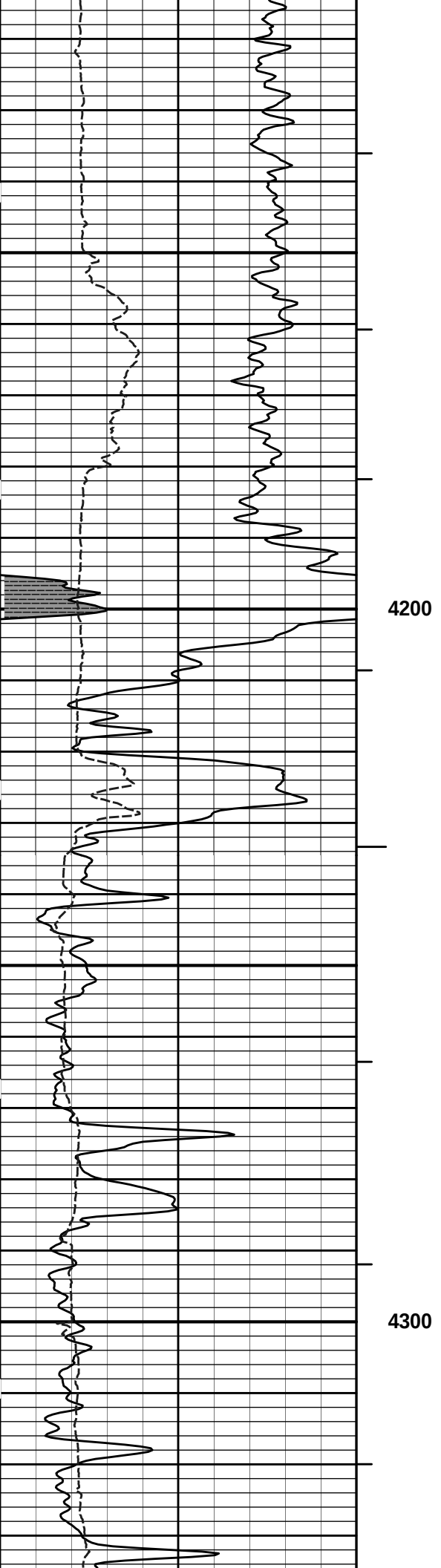
		Tension Pull	CROSSOVER	
		Tension Pull 10 0	30	Neutron Porosity -10
			%	
SHALE		BHVT	30	DensityPorosity -10
			%	
0	Gamma API api	AHVT	15K	Tension pounds
6	Caliper inches	1 : 240 ft	0	Pe DensityCorr gram per cc
		3200		

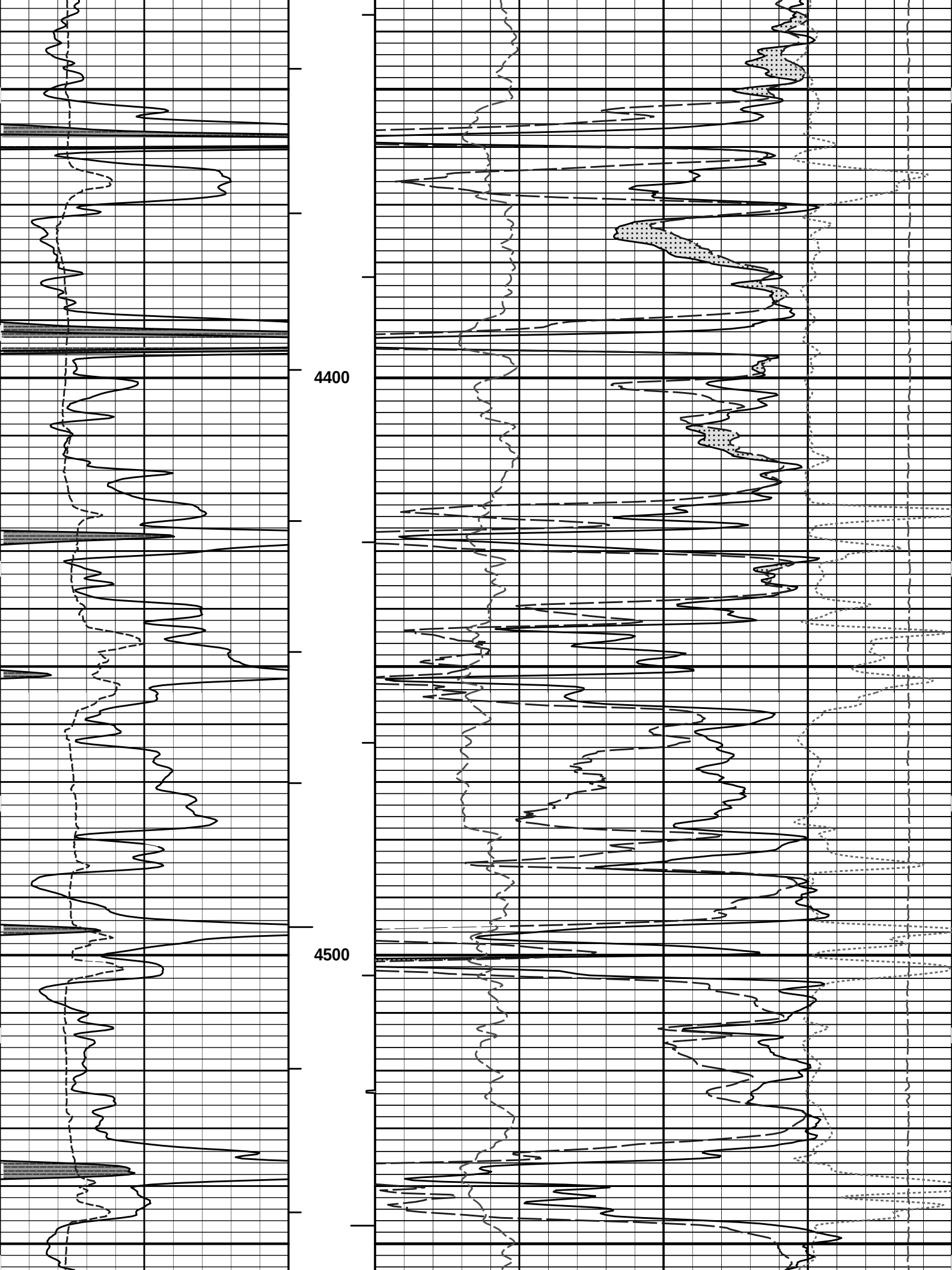


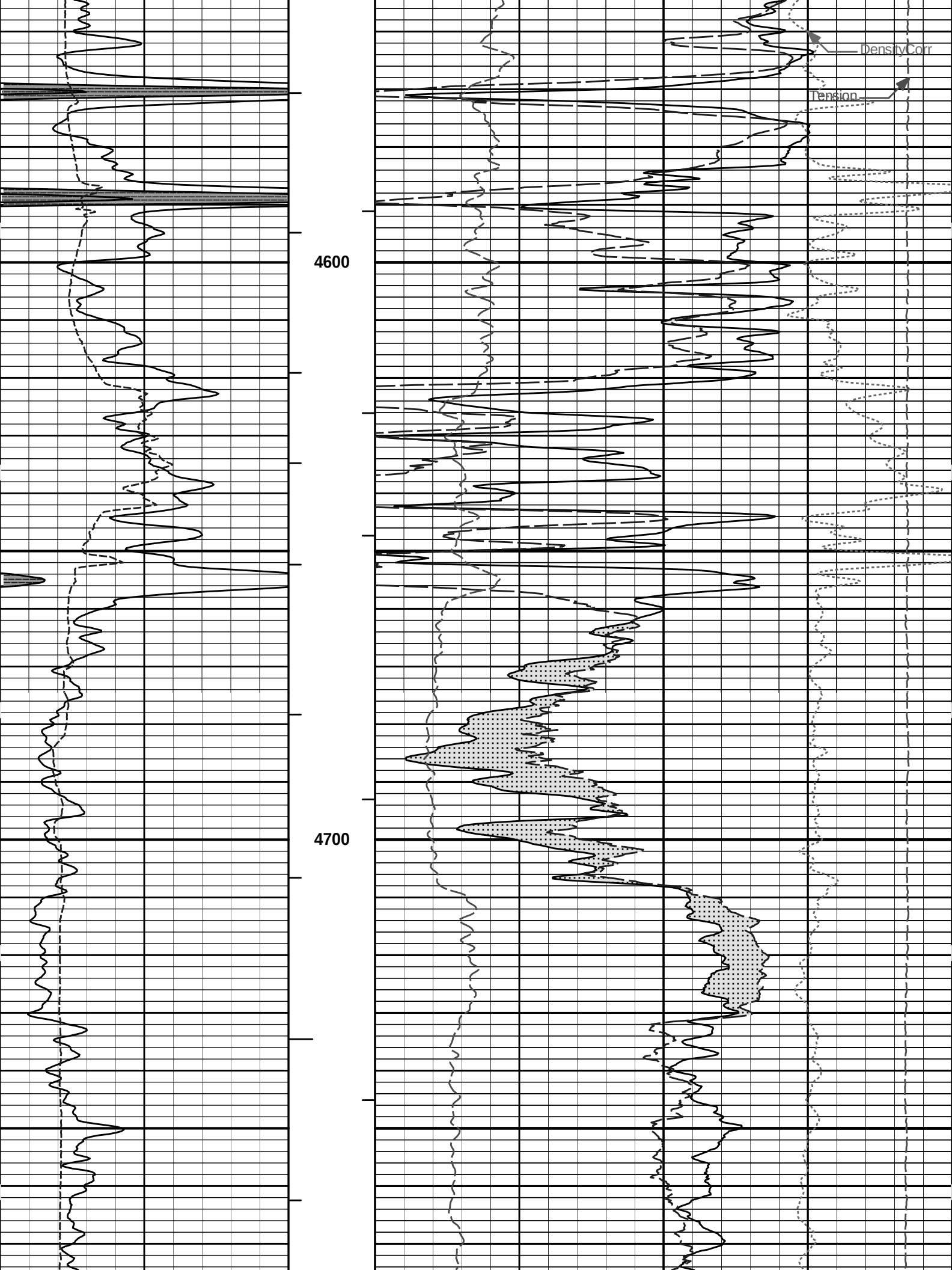


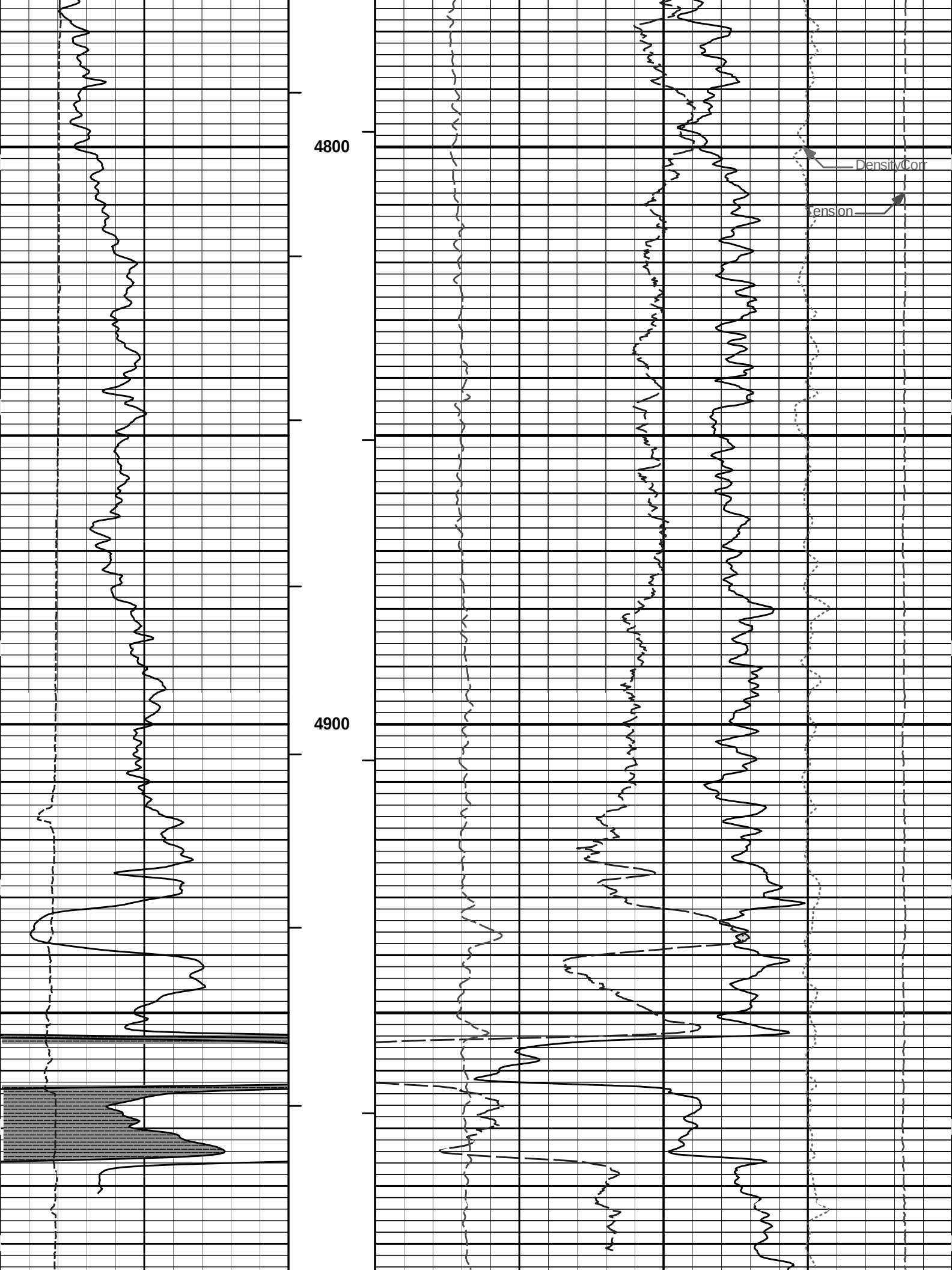


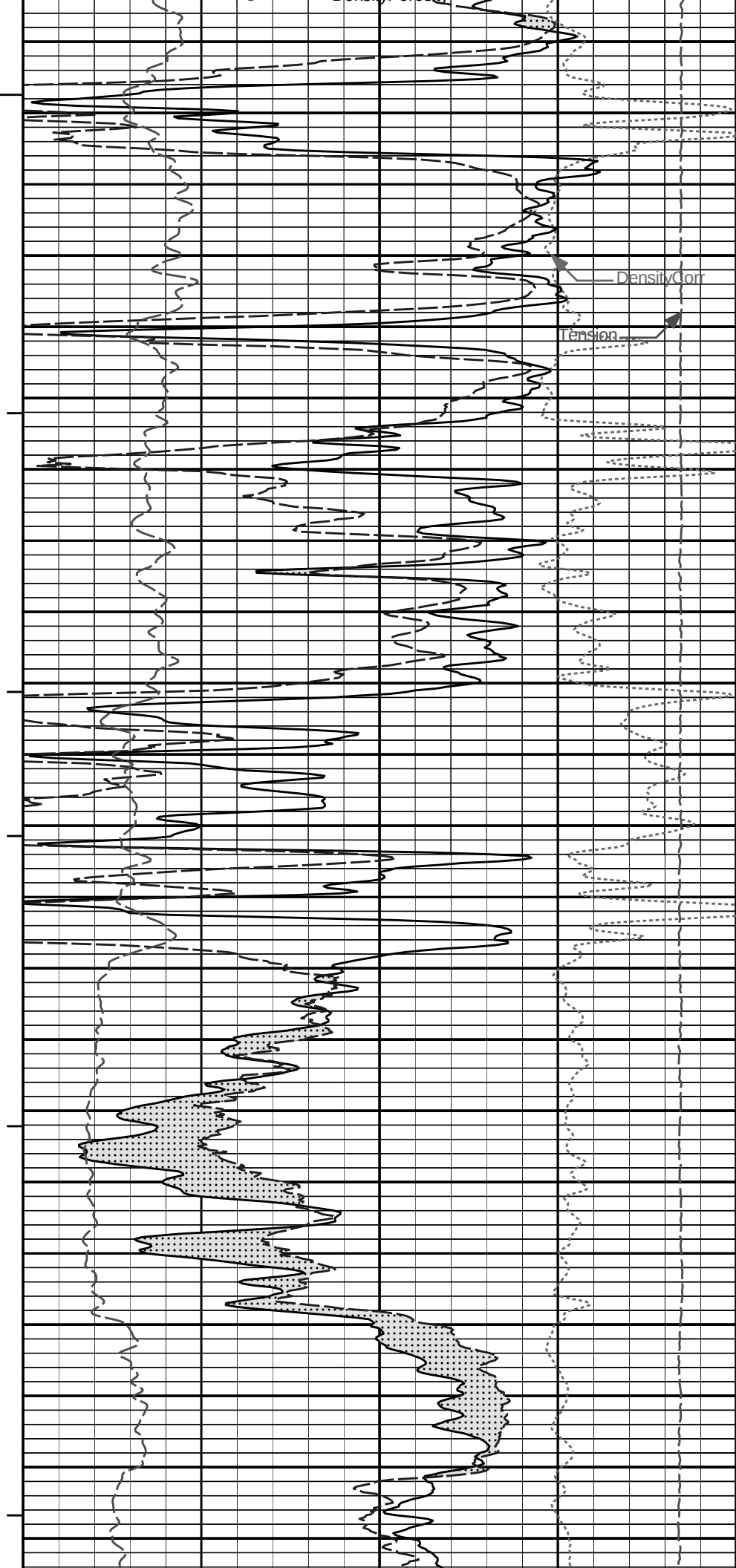
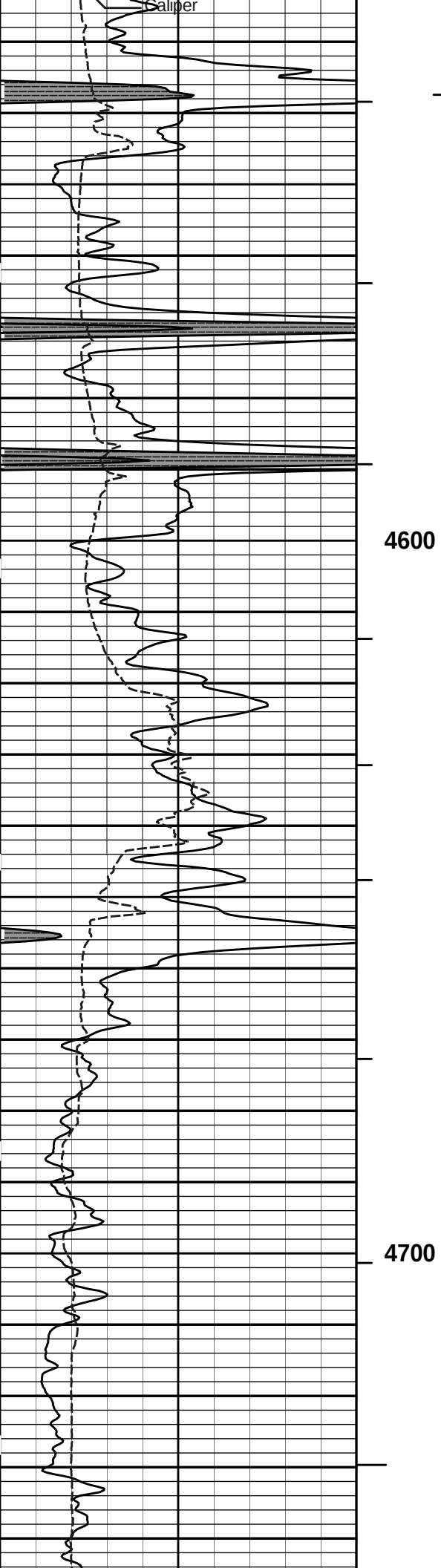


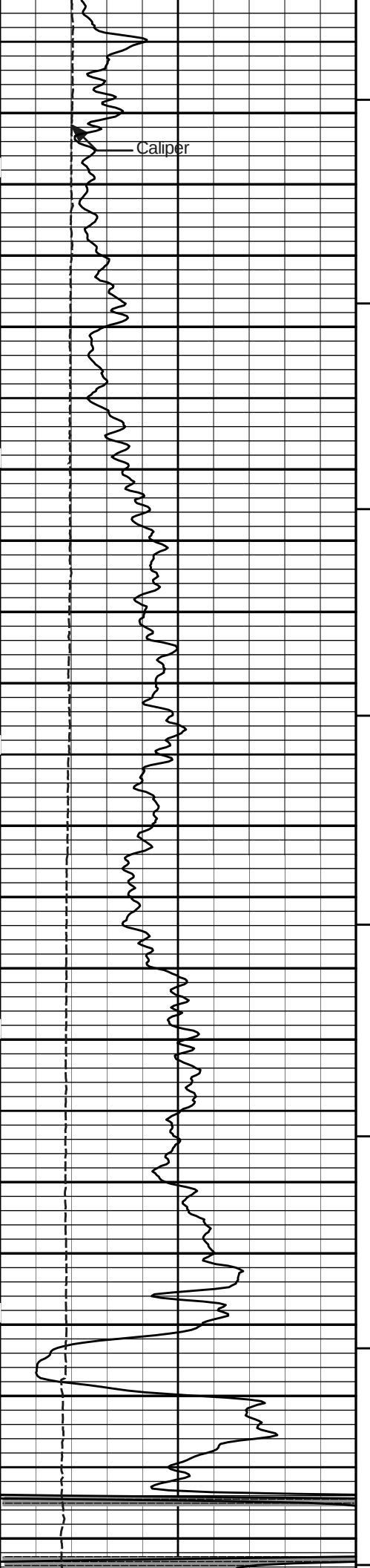






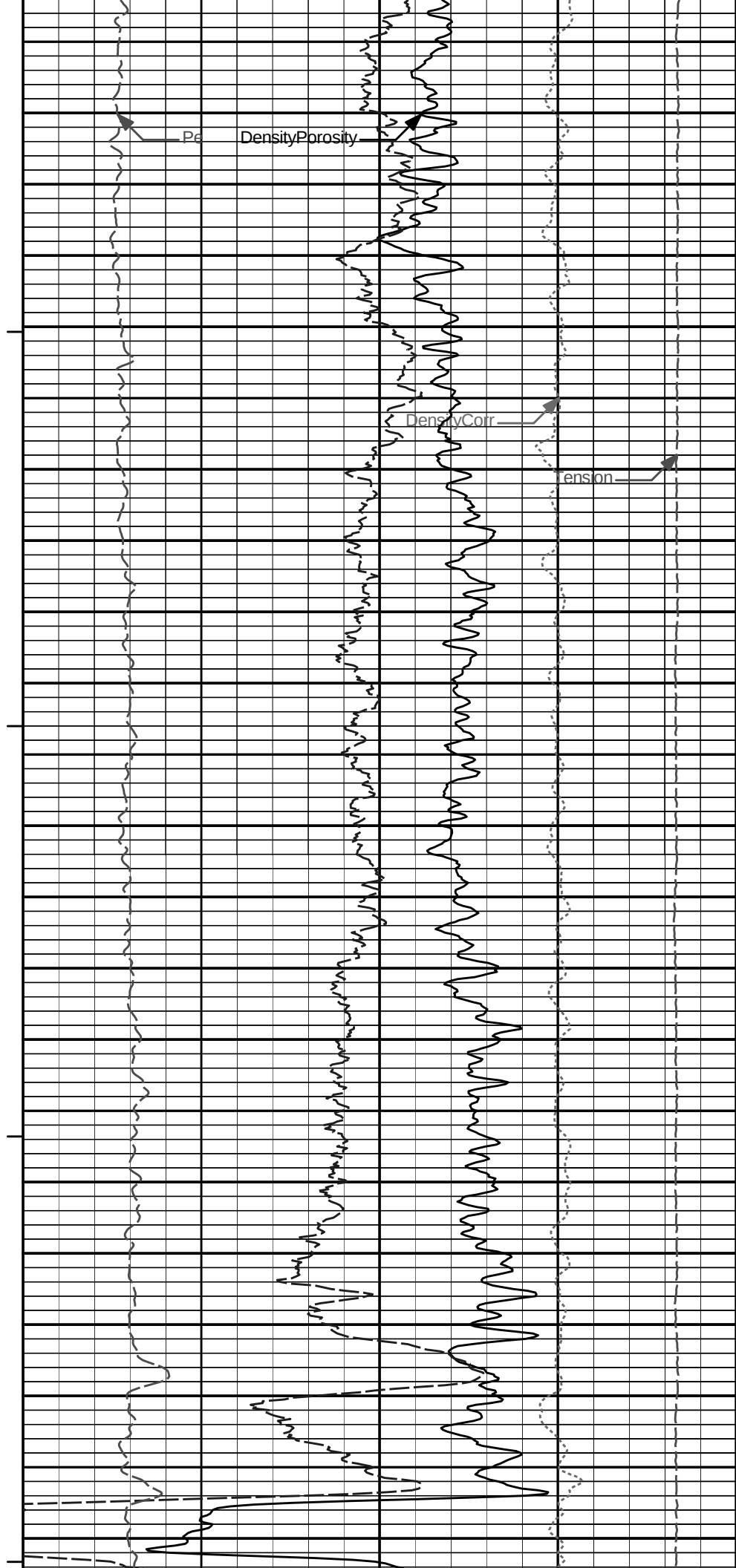


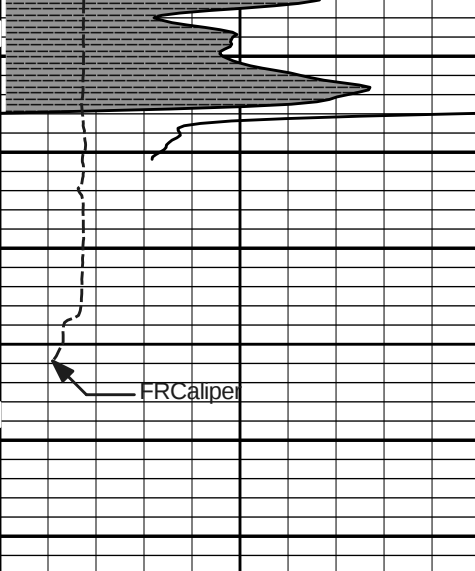




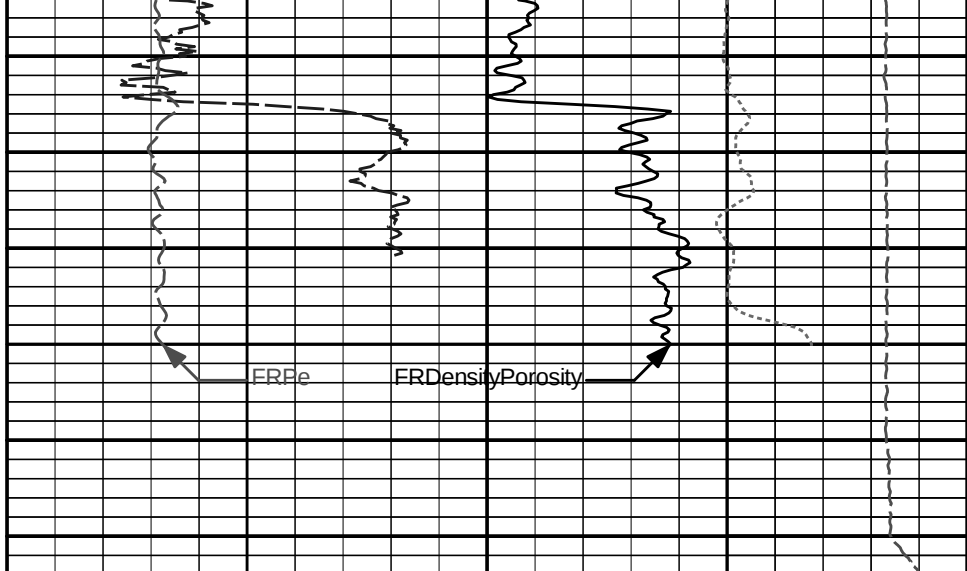
4800

4900





5000



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: 27-Feb-13 06:38:42
Plot Range: 4495 ft to 5024.5 ft
Data: HICKOCK_2-23\Well Based\HICKOCK_REPEAT1
Plot File: \\POROSITY\Porosity IO 5 REP LIB

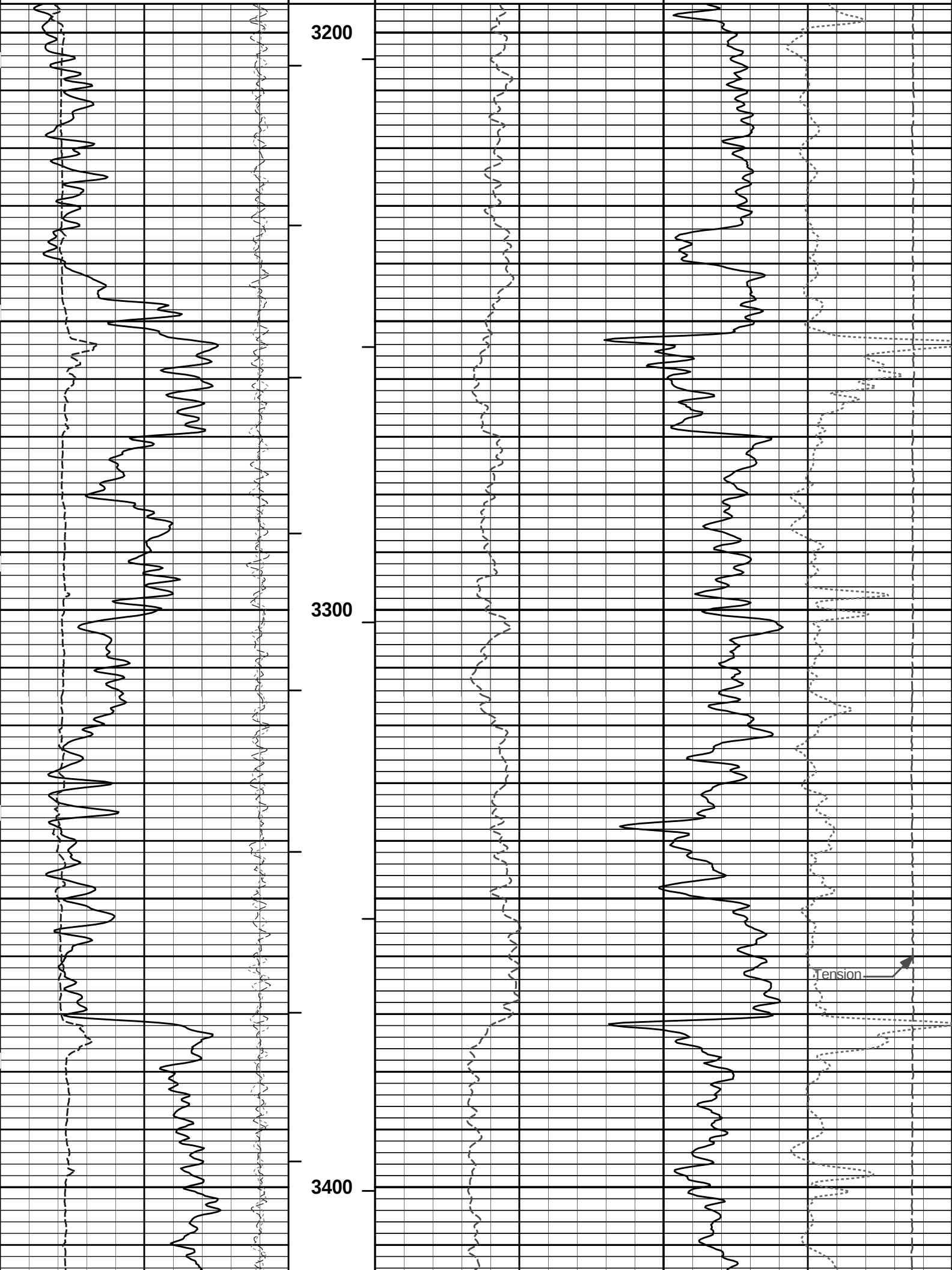
REPEAT SECTION

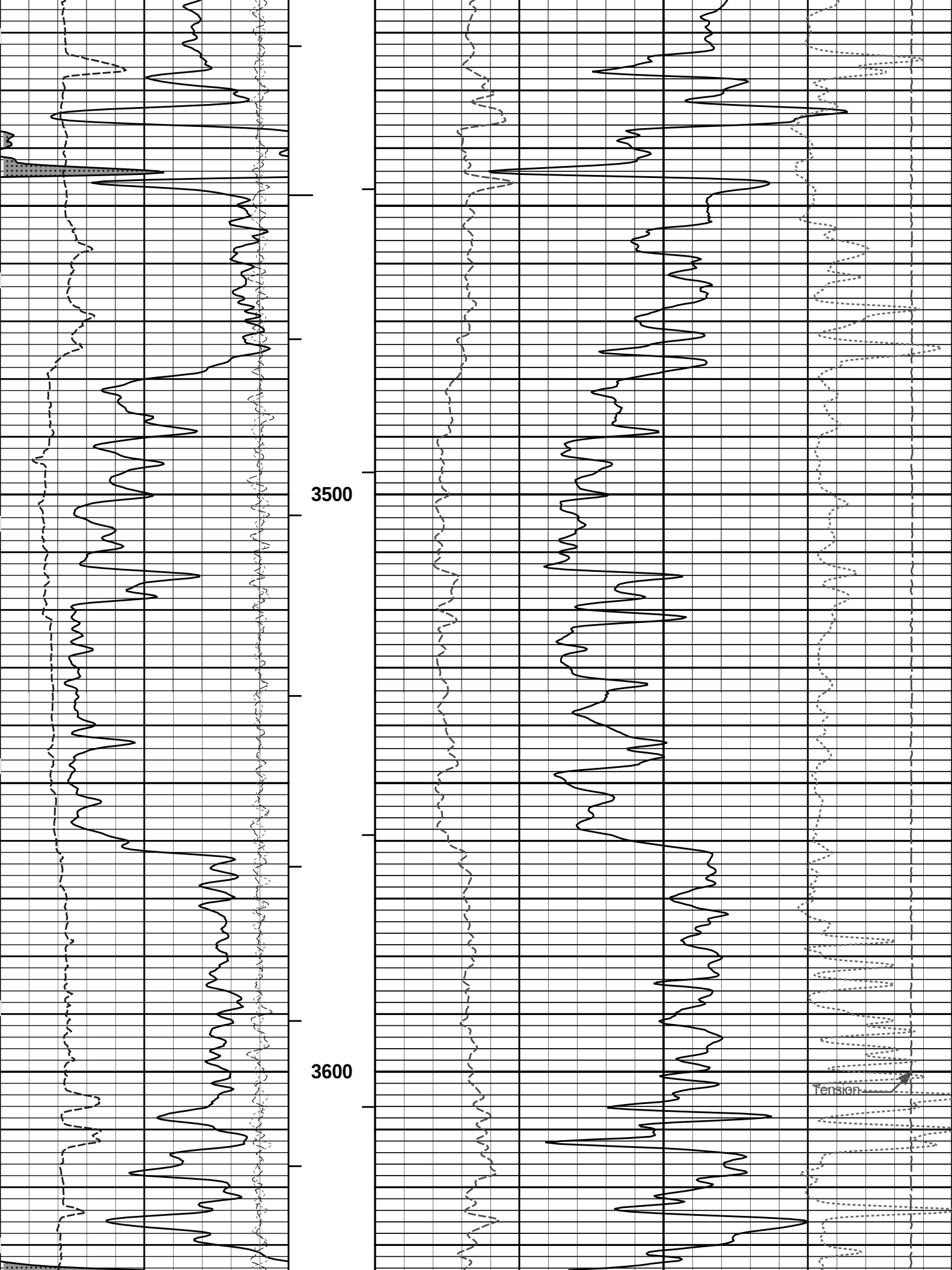
HALLIBURTON

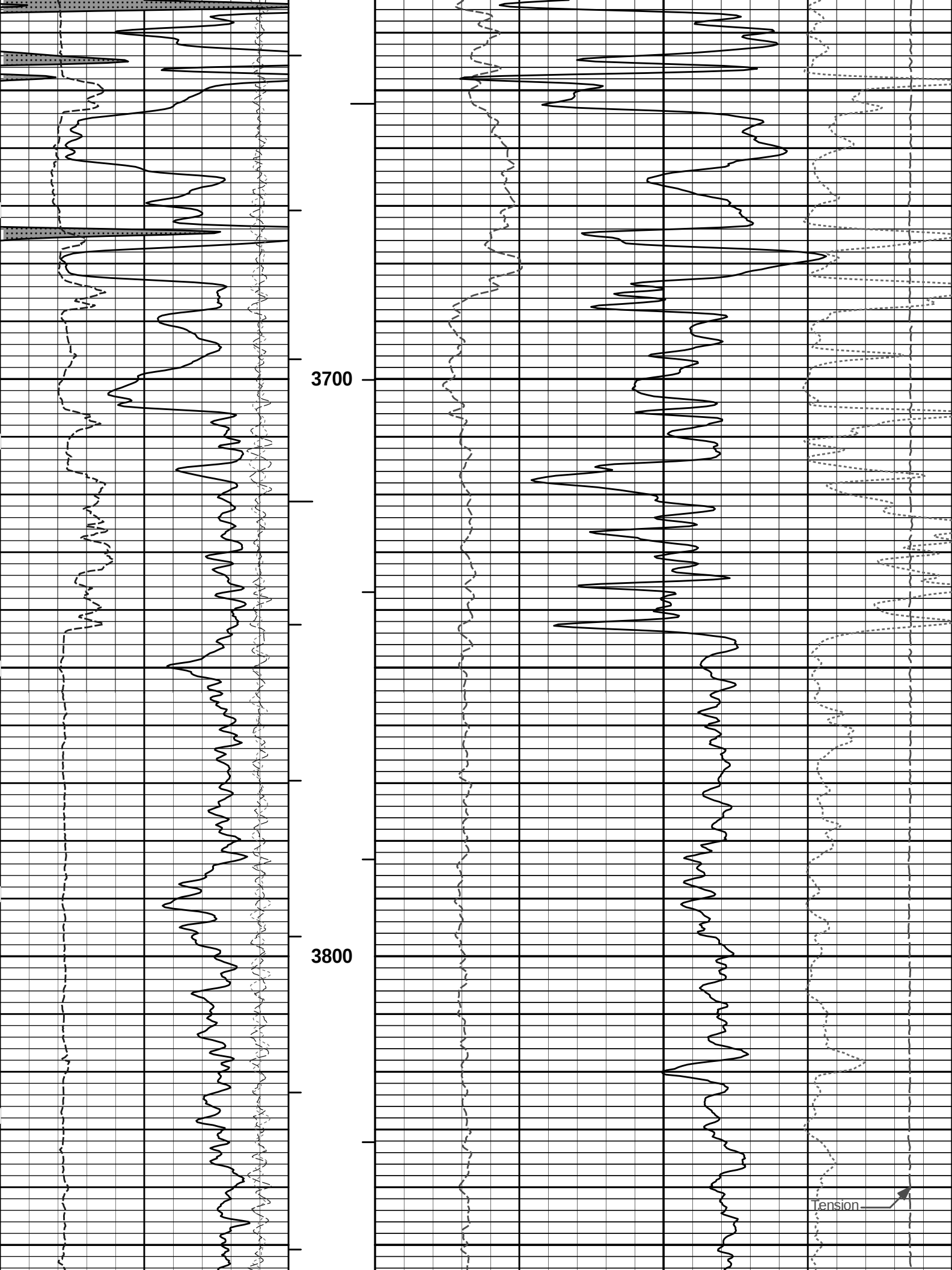
Plot Time: 27-Feb-13 06:38:42
Plot Range: 3195 ft to 5025.08 ft
Data: HICKOCK_2-23\Well Based\HICKOCK_DETAIL\
Plot File: \\-LOCAL-HICKOCK_2-23\Well Based\POROSITY\BULKD 5 MAIN LIB

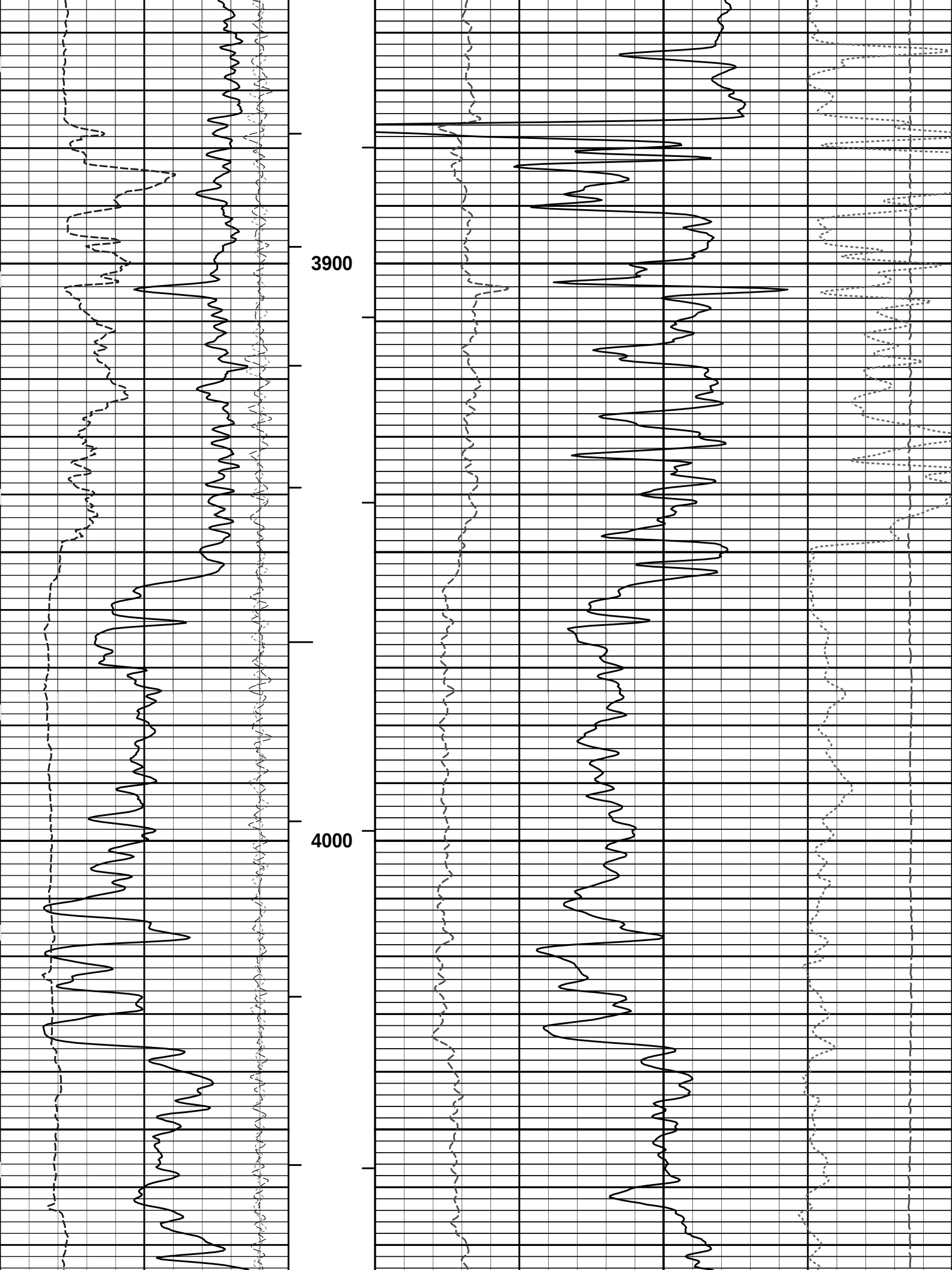
5 INCH MAIN LOG

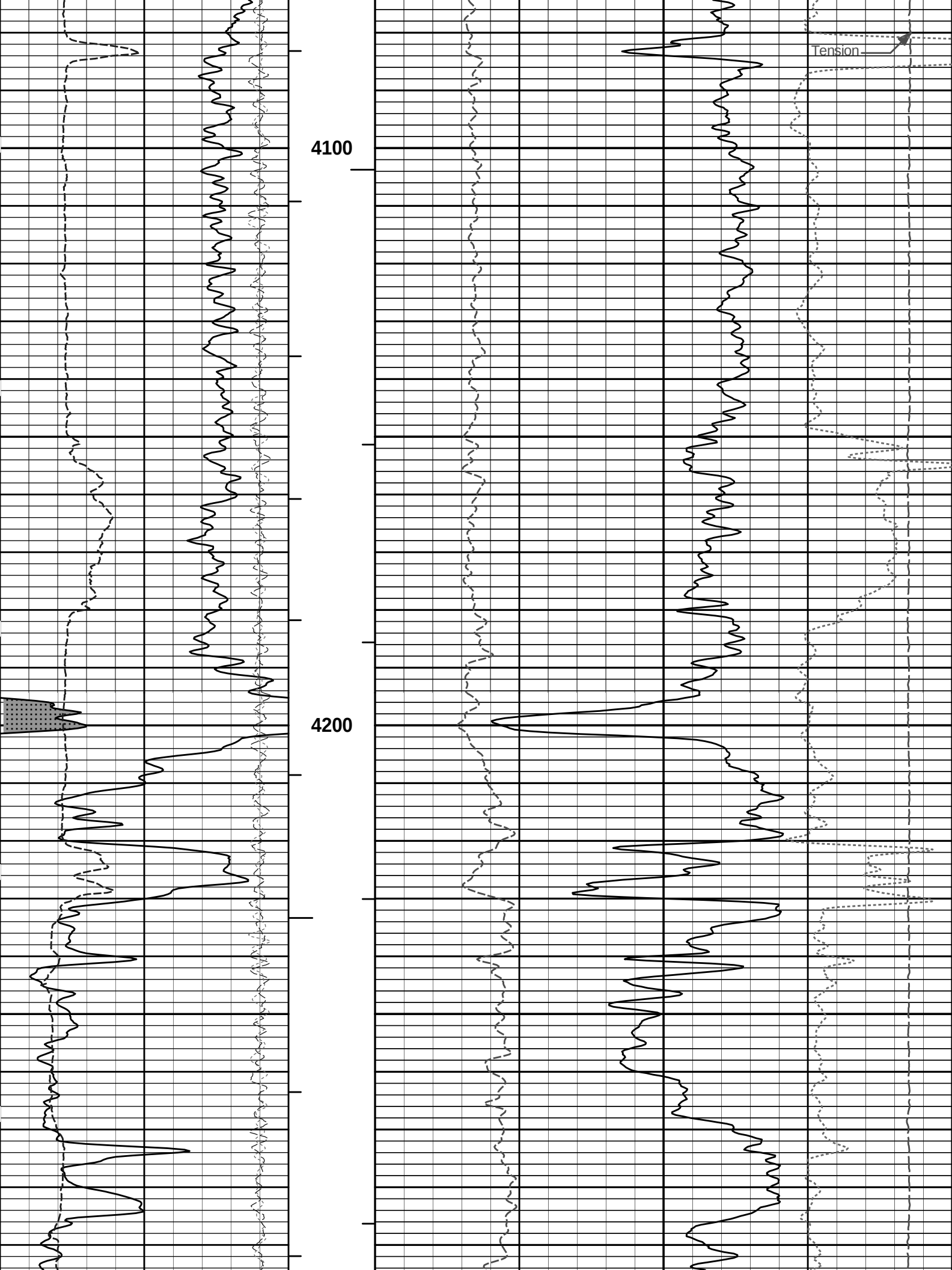
SHALE			Tension Pull					
0	Gamma Ray	150	Tension Pull 10 0					
api								
18	FarQuality	-2	AHV ft3			Bulk Density 3		
						g/cc		
-18	NearQuality	2	BHv ft3			15K Tension 0		
						pounds		
6	Caliper	16	1 : 240			0 Pe 10 -0.25 DensityCorr 0.25		
inches			ft			g/cc		

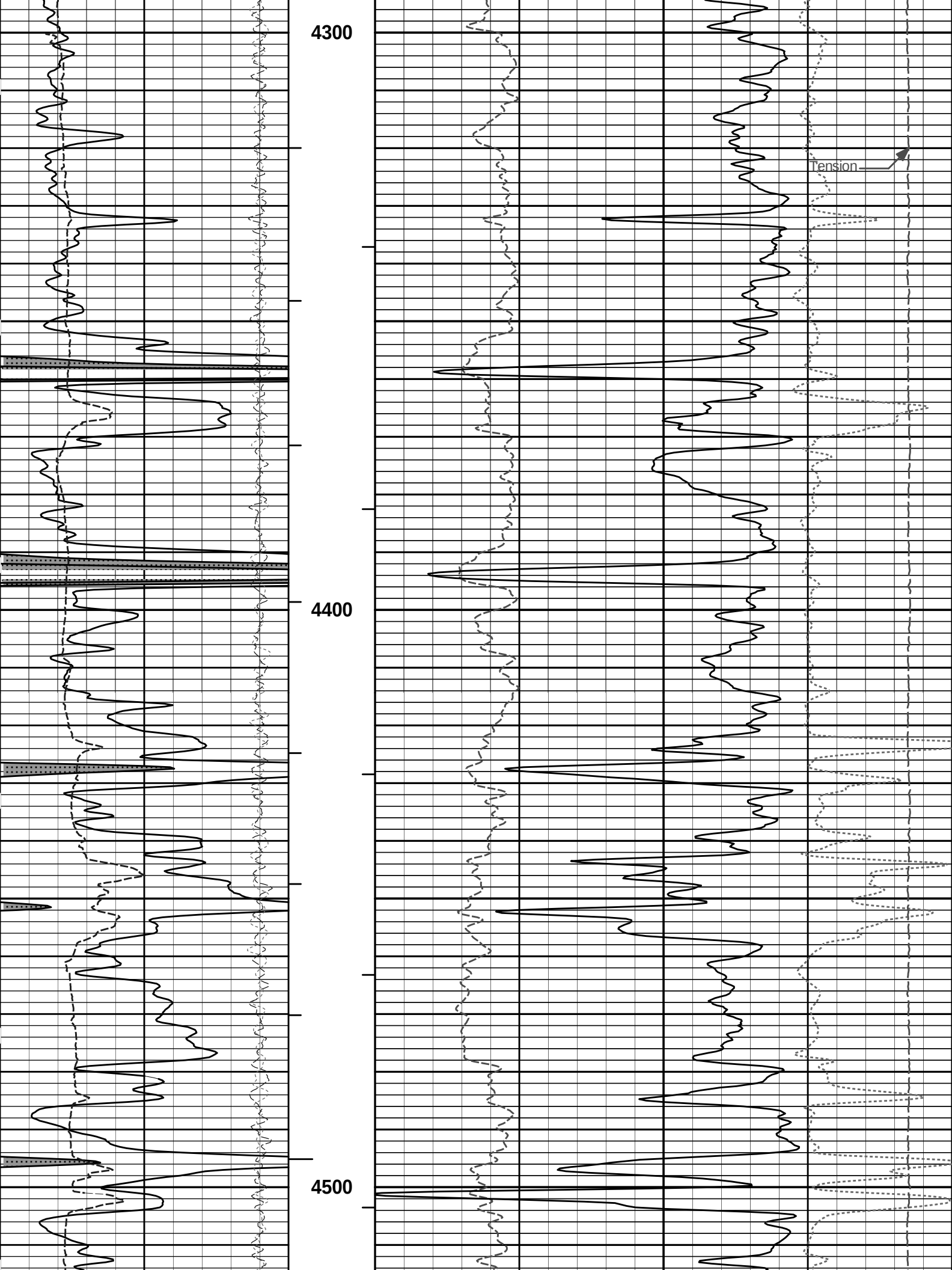


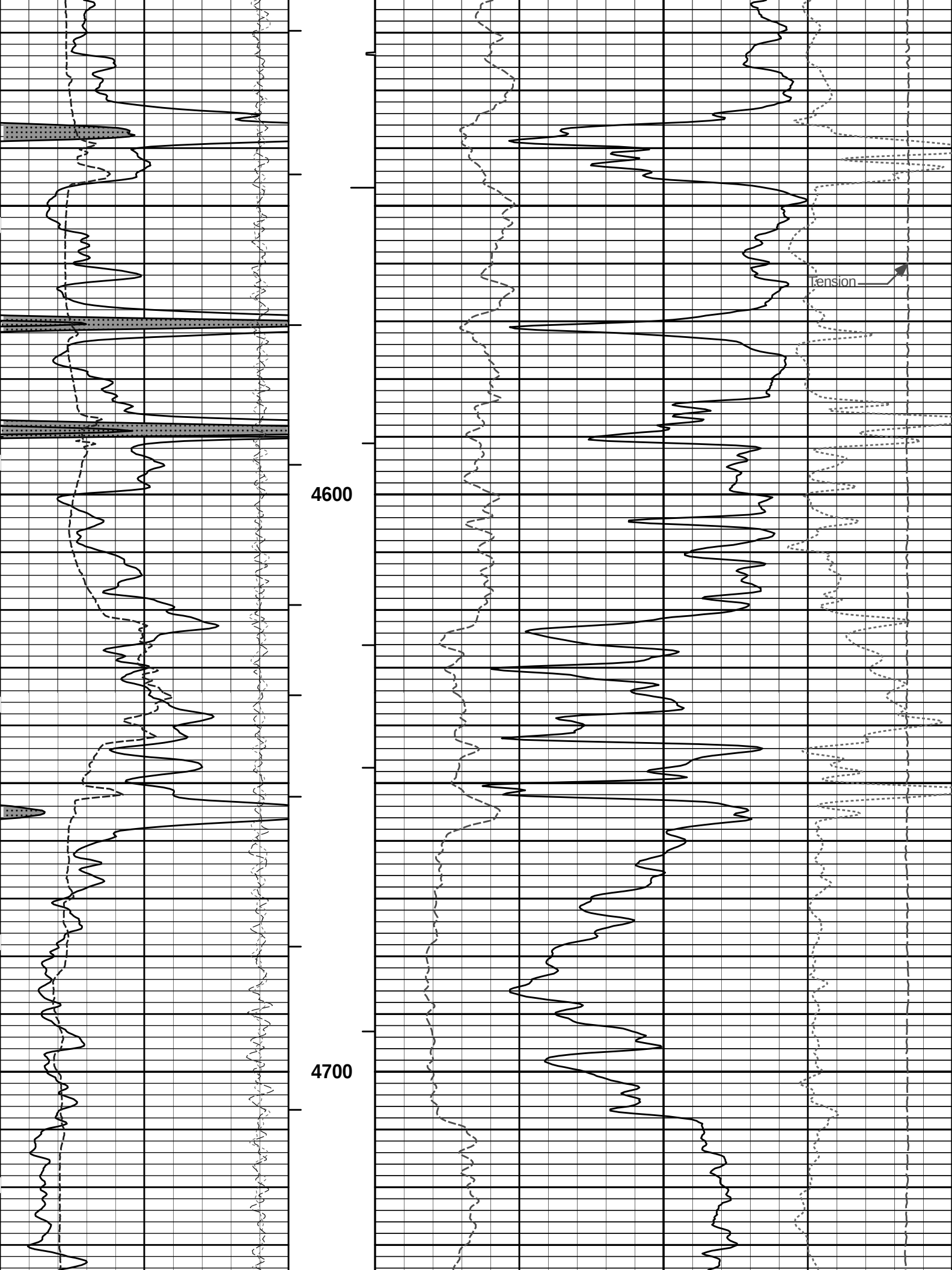


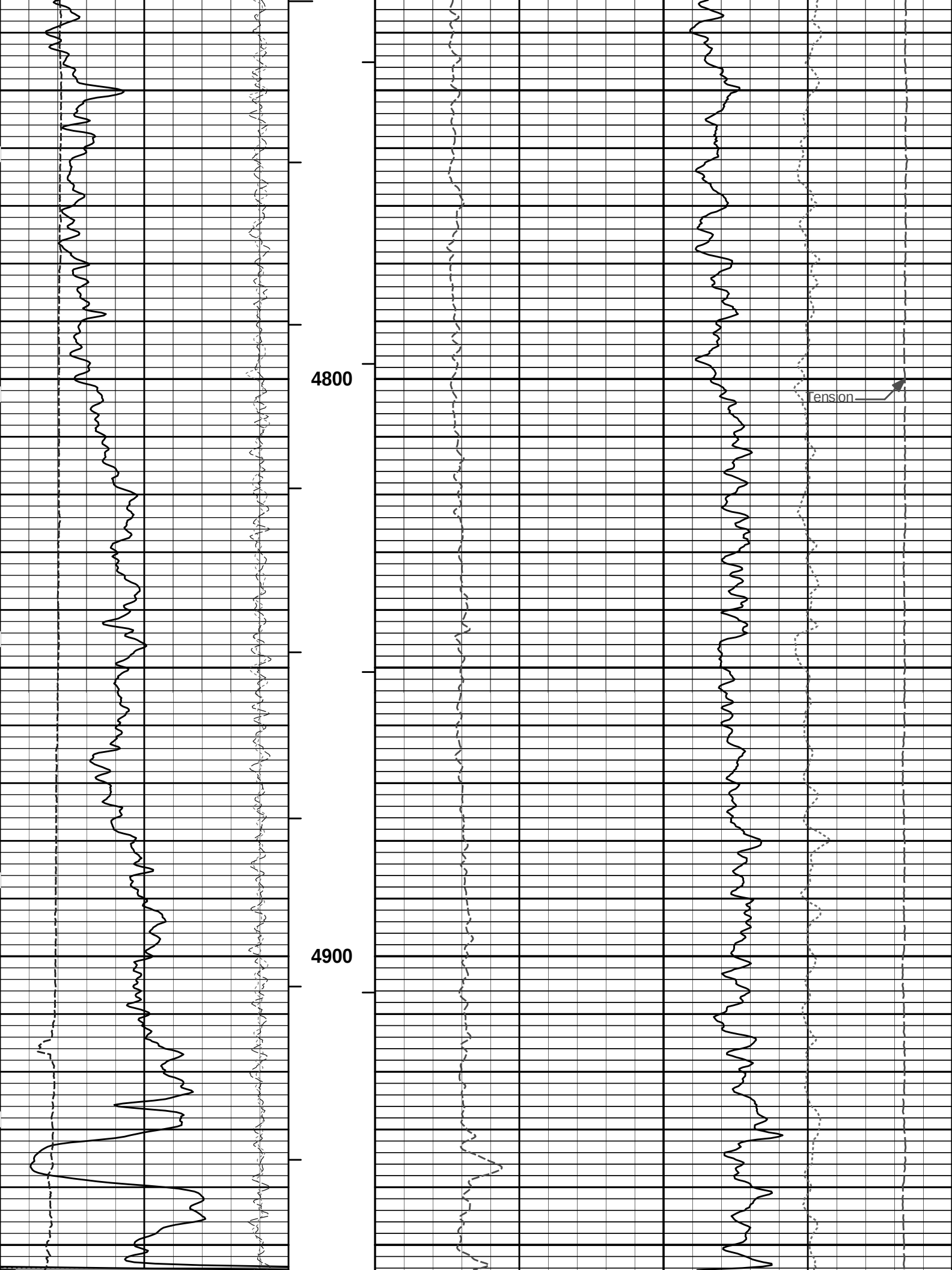


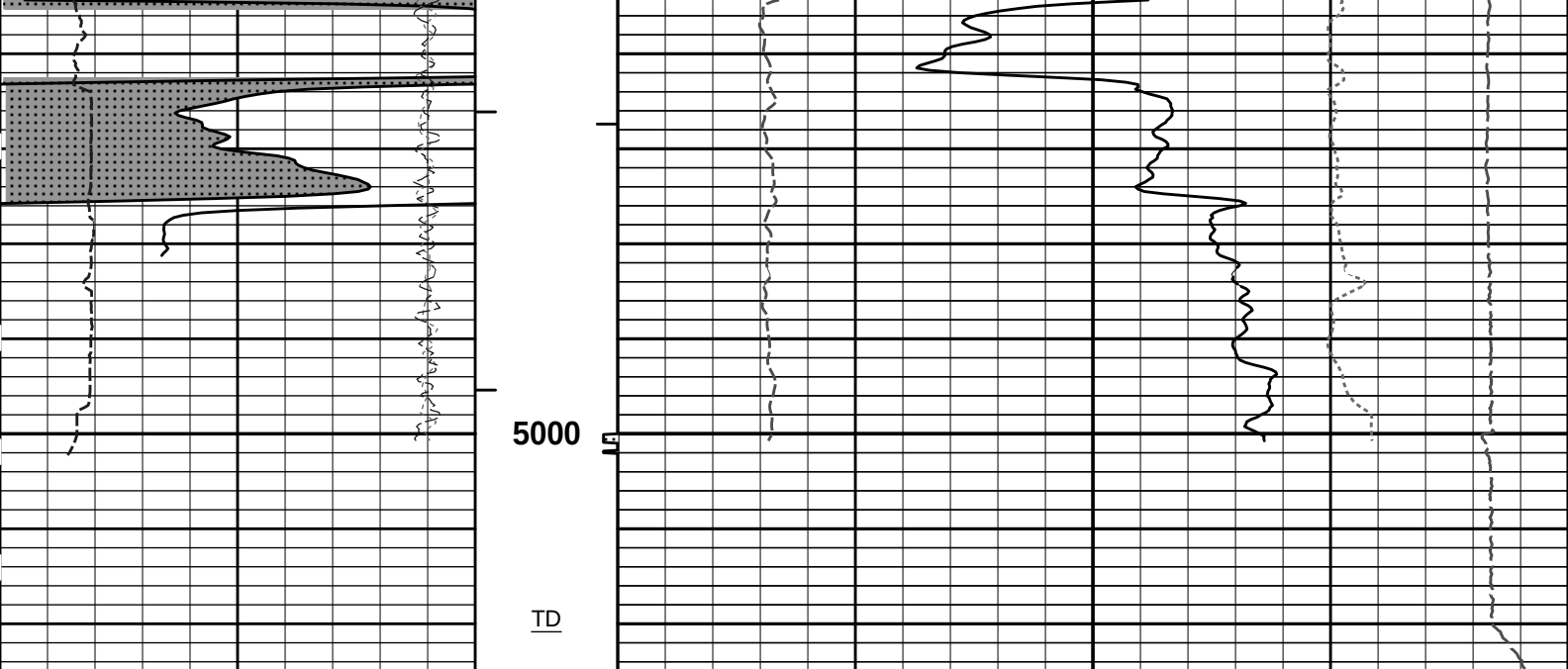










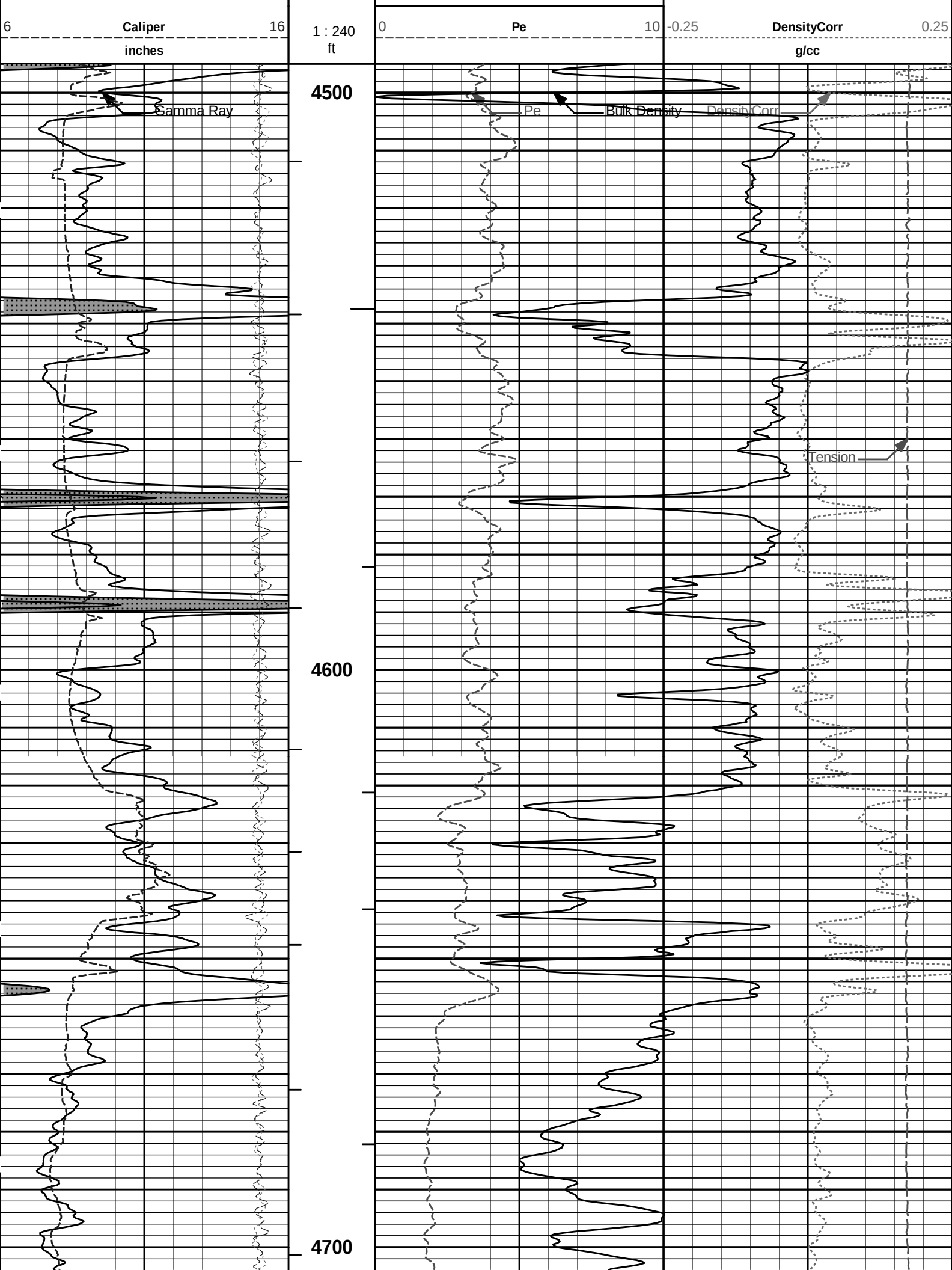


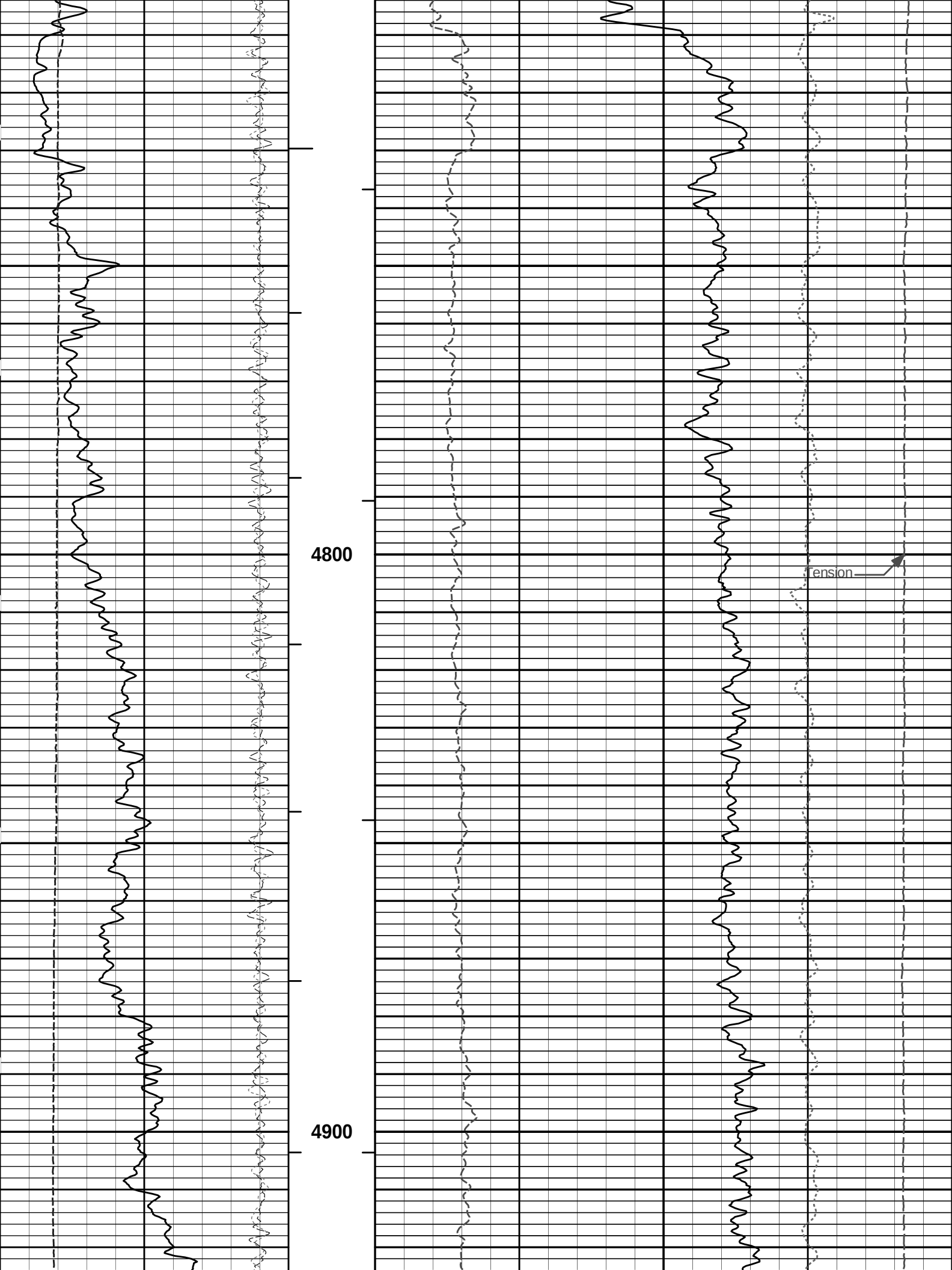
6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					g/cc	
-18	NearQuality	2	BHV				15K	Tension	0
			ft3					pounds	
18	FarQuality	-2	AHV	2	Bulk Density				
			ft3		g/cc				
0	Gamma Ray	150	Tension Pull						
	api		10	0					
	SHALE		Tension Pull						

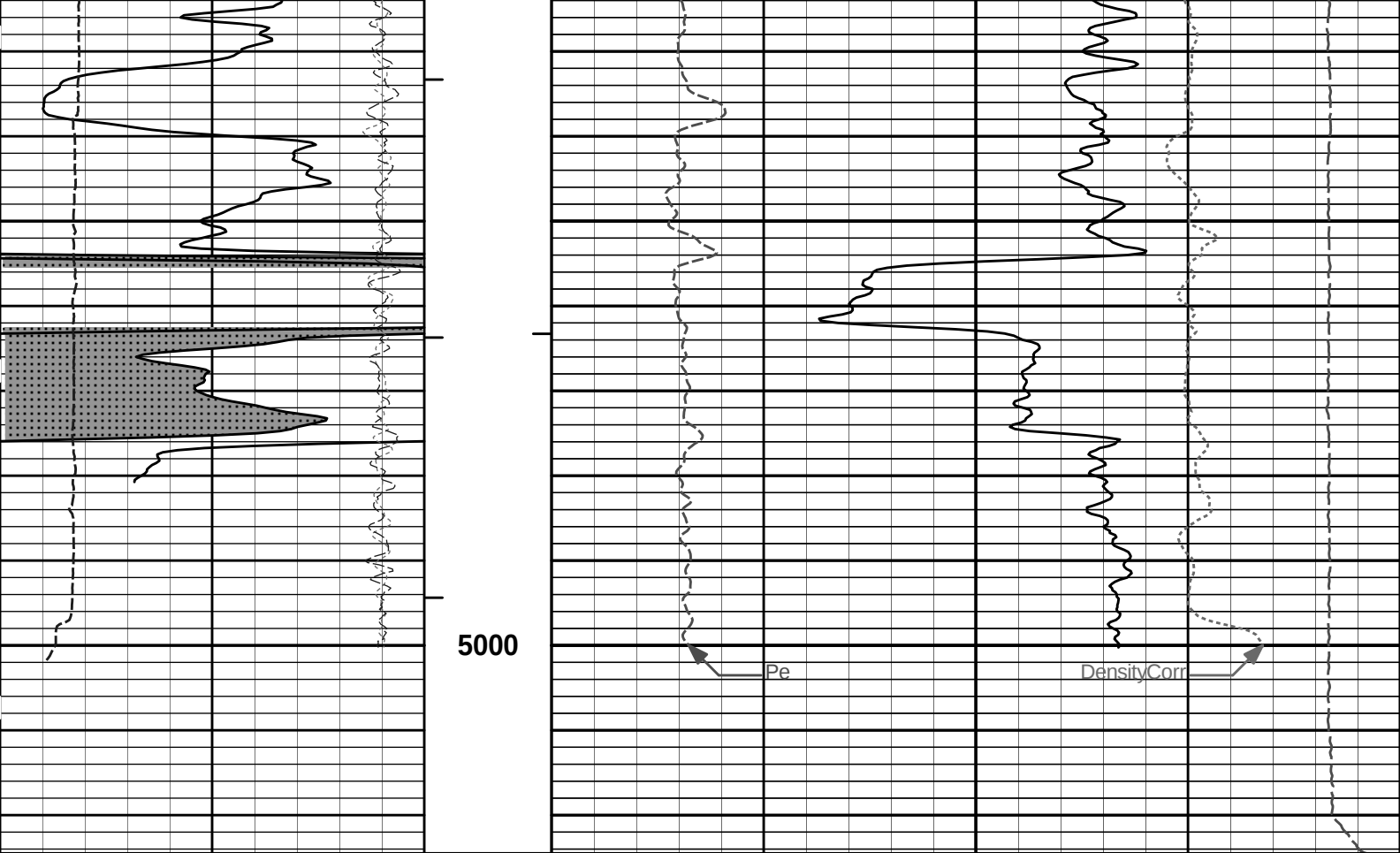
HALLIBURTON									
Plot Time: 27-Feb-13 06:38:45									
Plot Range: 3195 ft to 5025.08 ft									
Data: HICKOCK_2-23\Well Based\HICKOCK_DETAIL\									
Plot File: \\-LOCAL-\HICKOCK_2-23\Well Based\POROSITY\BULKD_5_MAIN_LIB									
5 INCH MAIN LOG									

HALLIBURTON									
Plot Time: 27-Feb-13 06:38:46									
Plot Range: 4495 ft to 5024.5 ft									
Data: HICKOCK_2-23\Well Based\HICKOCK_REPEAT\									
Plot File: \\-LOCAL-\HICKOCK_2-23\Well Based\POROSITY\BULKD_5_REP_LIB									
REPEAT SECTION									

	SHALE								
0	Gamma Ray	150							
	api								
18	FarQuality	-2	AHV	2	Bulk Density				
			ft3		g/cc				
-18	NearQuality	2	BHV				15K	Tension	0
			ft3					pounds	







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

HALLIBURTON

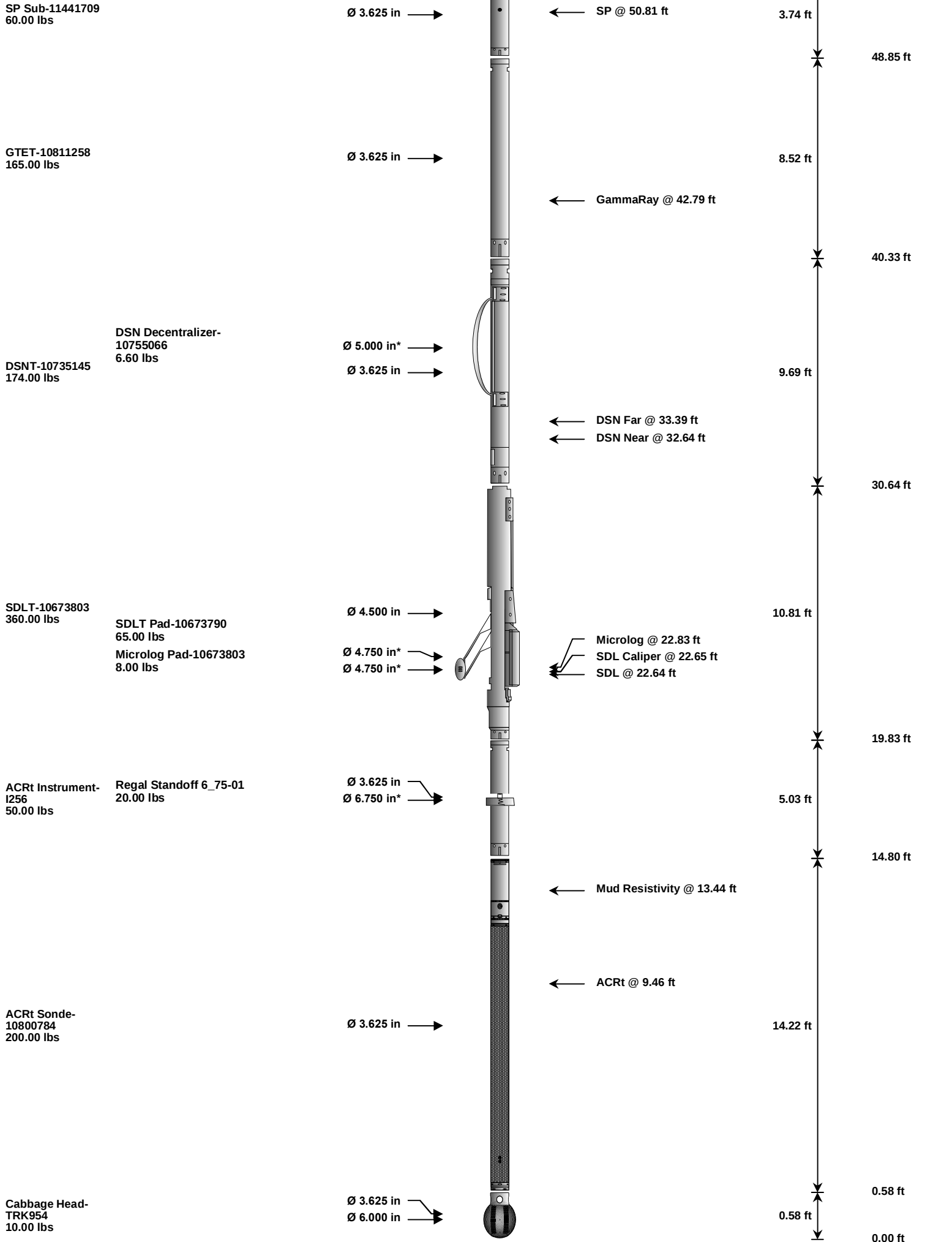
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REPEAT SECTION

HALLIBURTON

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	54.51 ft
						52.59 ft



Mnemonic	Tool Name	Number	(lbs)	(ft)	Length (ft)	Tool (fpm)
CH	Standard OH Cable Head	PROT01	30.00	1.92	52.59	300.00
SP	SP Sub	11441709	60.00	3.74	48.85	300.00
GTET	Gamma Telemetry Tool	10811258	165.00	8.52	40.33	60.00
DSNT	Dual Spaced Neutron	10735145	174.00	9.69	30.64	60.00
DCNT	DSN Decentralizer	10755066	6.60	5.13	*	33.97
SDLT	Spectral Density Tool	10673803	360.00	10.81	19.83	60.00
SDLP	Density Insite Pad	10673790	65.00	2.55	*	22.04
MICP	Microlog Pad	10673803	8.00	1.00	*	22.33
ACRt	Array Compensated True Resistivity Instrument Section	I256	50.00	5.03	14.80	300.00
RSOF	Regal Standoff 6.75in	01	20.00	0.52	*	17.02
ACRt	Array Compensated True Resistivity Sonde Section	10800784	200.00	14.22	0.58	300.00
CBHD	Cabbage Head	TRK954	10.00	0.58	0.00	300.00
Total			1,148.60	54.51		
* Not included in Total Length and Length Accumulation.						
Data: HICKOCK_2-23\0001 SP-GTET-DSNT-SDLT-ACRT-CHIDLE					Date: 27-Feb-13 02:52:44	

HALLIBURTON					
PARAMETERS REPORT					
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.400	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	1.000	ohmm
	SHARED	TRM	Temperature of Mud	75.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	5025.00	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?	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	CRCK	Downhole Gamma Ray Count Rate	Yes	

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	DSNO	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	
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

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:

GTET - 10811258

Engineer:

S. INGERSOLL

Software Version:

WL INSITE R3.8.4 (Build 5)

Reference Calibration Date:

03-Feb-13 11:19:35

Calibration Date:

25-Feb-13 11:26:12

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	48.8	49.5	api
Background + Calibrator	277.1	281.5	api
Calibrator	228.3	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:

GTET - 10811258

Engineer:

S. INGERSOLL

Reference Calibration Date:

25-Feb-13 11:26:12

Calibration Date:

26-Feb-13 21:32:48

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		49.5	70.8	api
Background + Calibrator		281.5	306.0	api
Calibrator		232.0	235.2	api
Shop		Field	Difference	Tolerance
232.0		235.2	-3.2	+/- 9.00

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION			
Tool Name:	ACRt Sonde - 10800784	Reference Calibration Date:	19-Dec-12 10:46:30
Engineer:	S. INGERSOLL	Calibration Date:	31-Jan-13 13:16:46
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1
Host Tool Name:	ACRt Instrument - I256		

TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.02	1.05	0.95	1.02	1.05	0.95	1.01	1.05
A2 (50")	0.95	1.02	1.05	0.95	1.02	1.05	0.95	1.01	1.05
A3 (29")	0.95	1.00	1.05	0.95	1.00	1.05	0.95	0.99	1.05
A4 (17")	0.95	1.01	1.05	0.95	1.00	1.05	0.95	1.00	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.00	1.05	0.95	1.00	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.99	1.05	0.95	0.98	1.05

TYPICAL SONDE OFFSET RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	-5	-0.48	2	-6	-3.81	-2	-8	-5.03	-2
A2 (50")	-7	-1.84	0	-7	-3.60	0	-7	-4.44	0
A3 (29")	-27	-16.02	-9	-9	-4.53	-3	-7	-3.39	-1
A4 (17")	-180	-97.22	-60	-45	-32.50	-15	-39	-26.65	-13
A5 (10")	N/A	N/A	N/A	-150	-96.36	-50	-80	-48.19	-10
A6 (6")	N/A	N/A	N/A	175	293.43	525	90	156.07	270

TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION			
Signal	Lower	R	Upper		Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K		0.6	0.85	1.3	Mud Cell	0.95	1.00	1.05
36K		1.0	1.18	2.0				
72K		1.0	1.51	2.0				

PASS/FAIL SUMMARY	
GAIN RANGE CHK	PASS
SONDE OFFSET RANGE CHK	PASS
Tx CURRENT GAIN	PASS
Rmud VERIFICATION	PASS
TOOL OK TO LOG	

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10811258						
Gamma Ray Calibrator	232.0	235.2	-----	-3.2	+/- 9.00	api
ACRt Sonde-10800784						
Mud Cell	1.00	-----	-----	0.00	-----	ohm-m
Data: HICKOCK_2-23\0001 SP-GTET-DSNT-SDLT-ACRT-CH\005 27-Feb-13 04:20 Up @5025.3f					Date: 27-Feb-13 05:38:34	

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	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	22.65	NO	
PCAL		Pad Caliper	22.65	TRI	0.250
ACAL		Arm Caliper	22.65	TRI	0.250
ACRt Sonde					
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 Current Raw 12K X Receiver	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	
TRBD	Receiver Board Temperature	2.97	NO	
SDLT Pad				
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

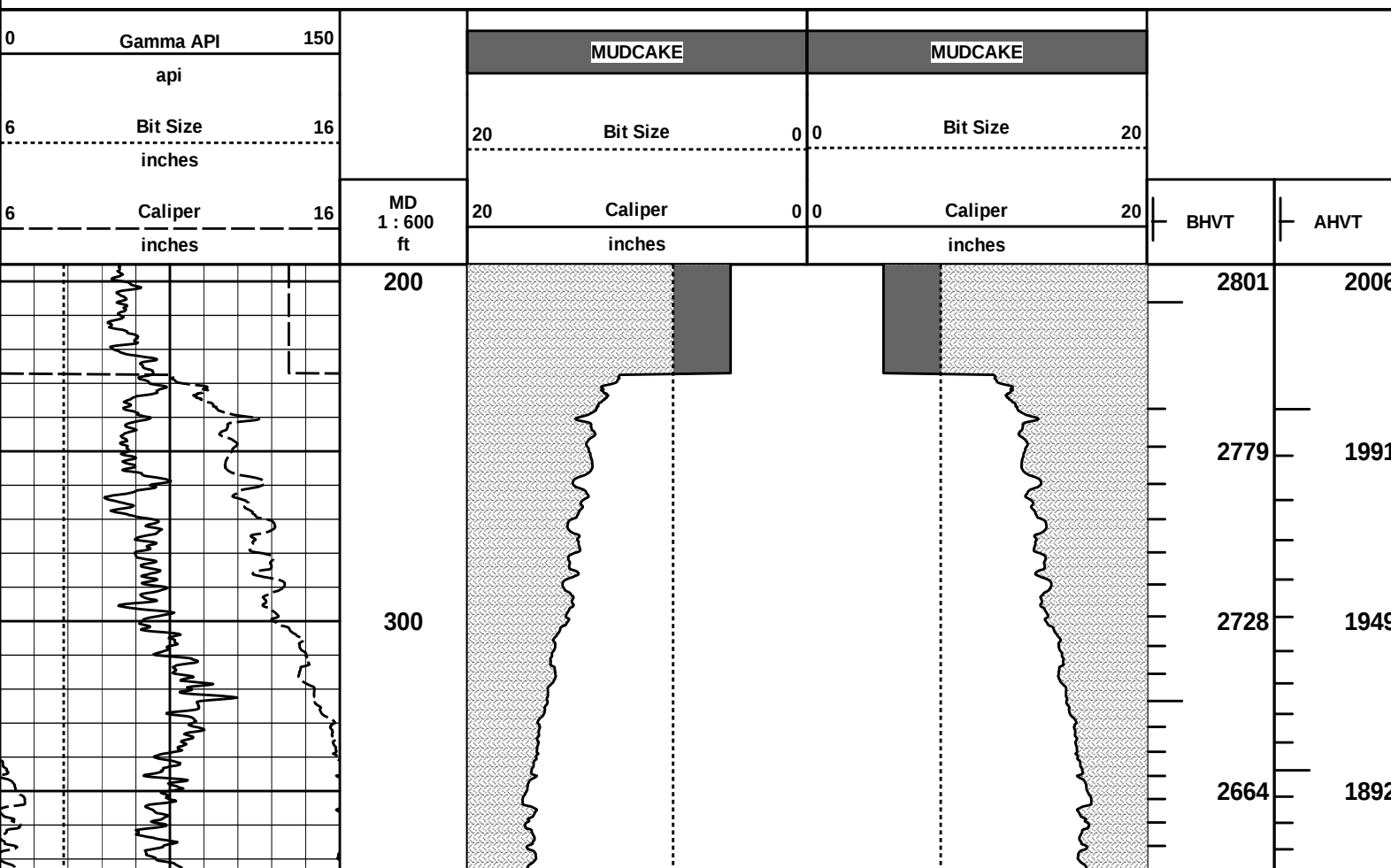
NLI	Near Lithology	22.46	BLK	0.920
NBAU	Near Barite Unfiltered	22.46	BLK	0.250
NLIU	Near Lithology Unfiltered	22.46	BLK	0.250
FAB	Far Above	22.81	BLK	0.250
FHI	Far Cesium High	22.81	BLK	0.250
FLO	Far Cesium Low	22.81	BLK	0.250
FVA	Far Valley	22.81	BLK	0.250
FBA	Far Barite	22.81	BLK	0.250
FDE	Far Density	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	22.04	NO	
FHV	Far Detector High Voltage	22.04	NO	
ITMP	Instrument Temperature	22.04	NO	
DDHV	Detector High Voltage	22.04	NO	

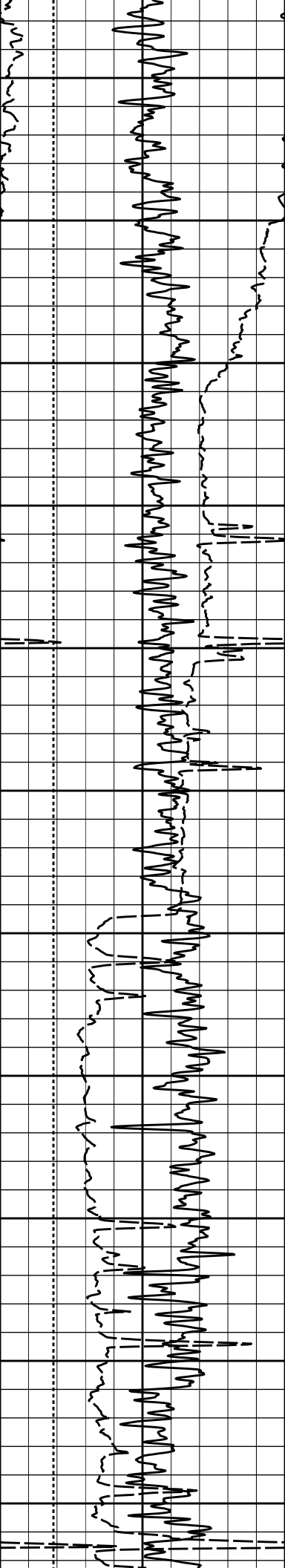
Microlog Pad				
TPUL	Tension Pull	22.83	NO	
MINV	Microlog Lateral	22.83	BLK	0.750
MNOR	Microlog Normal	22.83	BLK	0.750

Data: HICKOCK_2-23\0001 SP-GTET-DSNT-SDLT-ACRT-CH\005 27-Feb-13 04:20 Up @5025.3f Date: 27-Feb-13 05:37:21

HALLIBURTON		Plot Time: 27-Feb-13 06:38:48
		Plot Range: 195 ft to 5025.08 ft
		Data: HICKOCK_2-23\Well Based\VAL_HICKOCK_CASING\
		Plot File: \\-LOCAL-\\HICKOCK_2-23\Well Based\POROSITY\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT





400

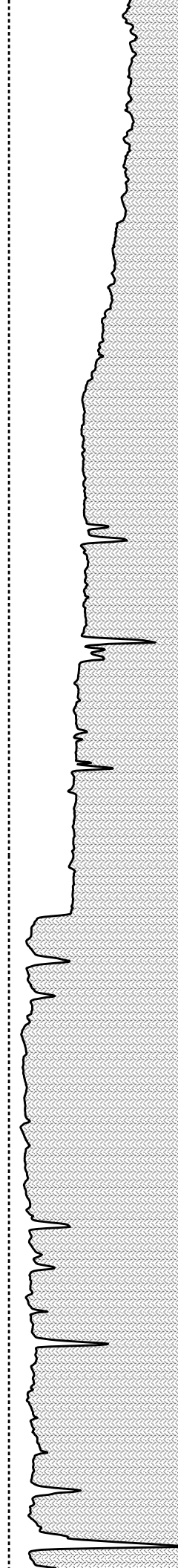
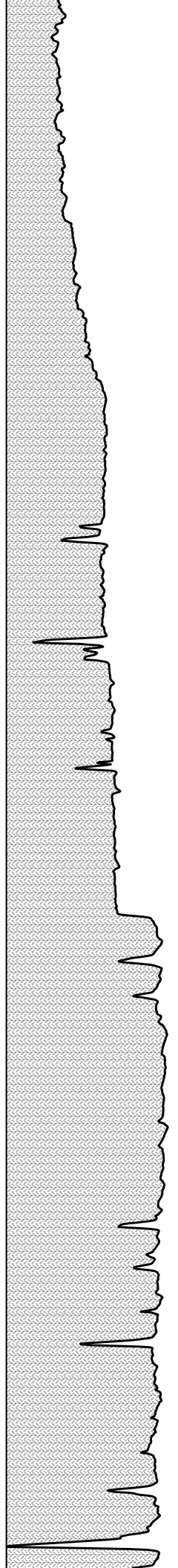
500

600

700

800

900



2591

2519

2459

2411

2361

2316

2276

2252

2229

2203

2177

1828

1764

1712

1673

1631

1594

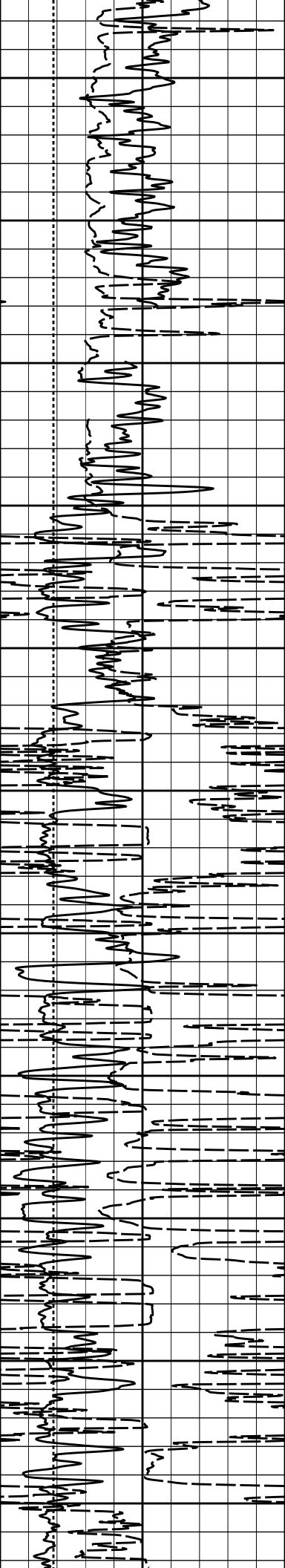
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1514

1496



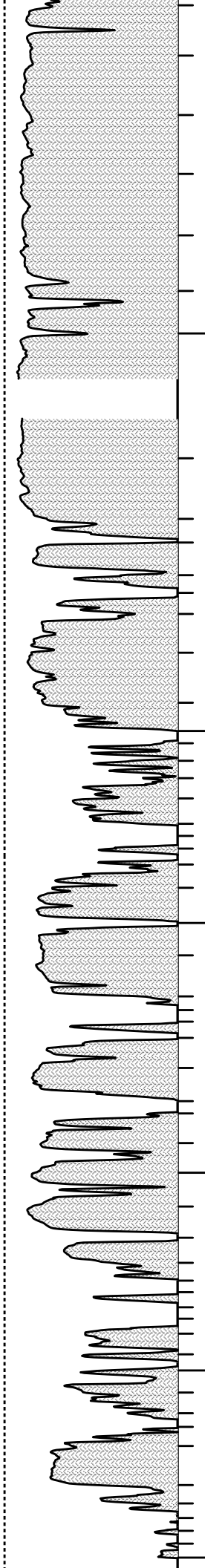
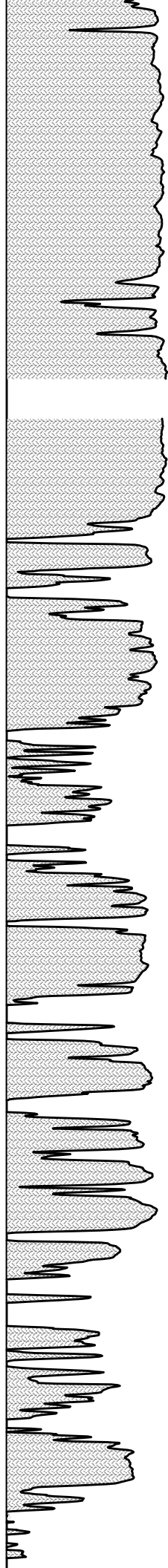
1000

1100

1200

1300

1400



2146

2122

2095

2072

2021

1963

1895

1839

1788

1707

1640

1474

1458

1439

1425

1382

1332

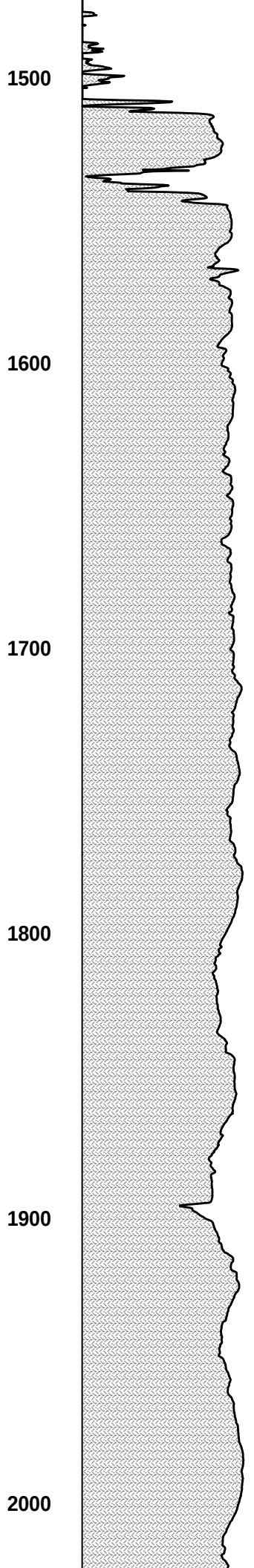
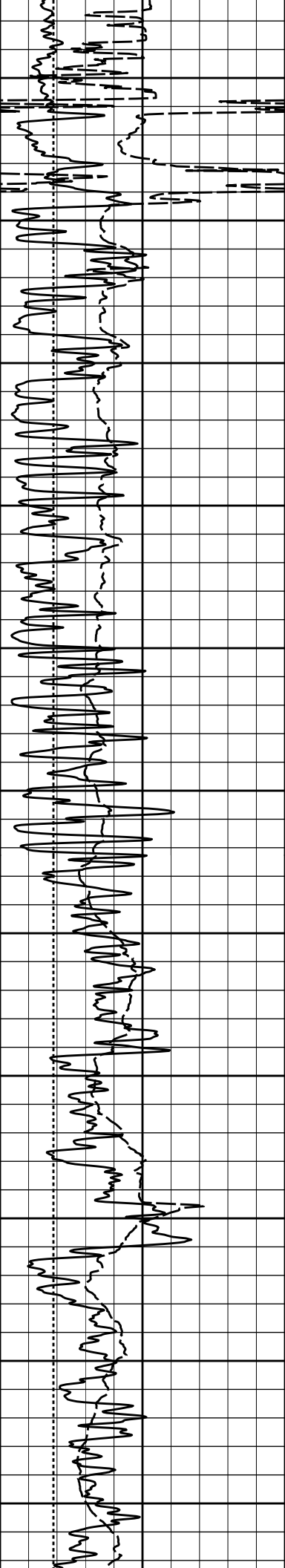
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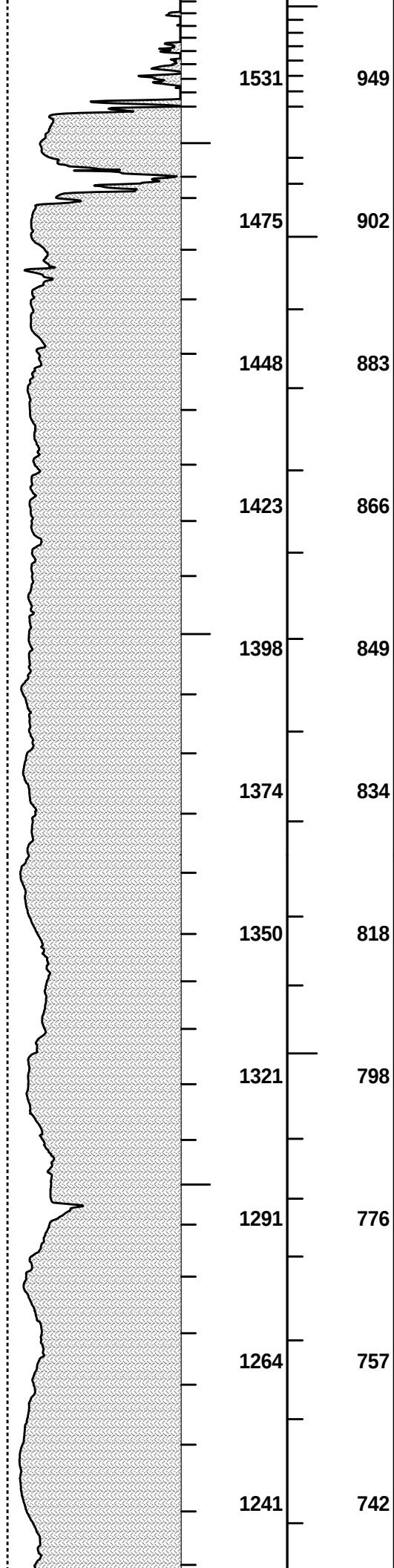
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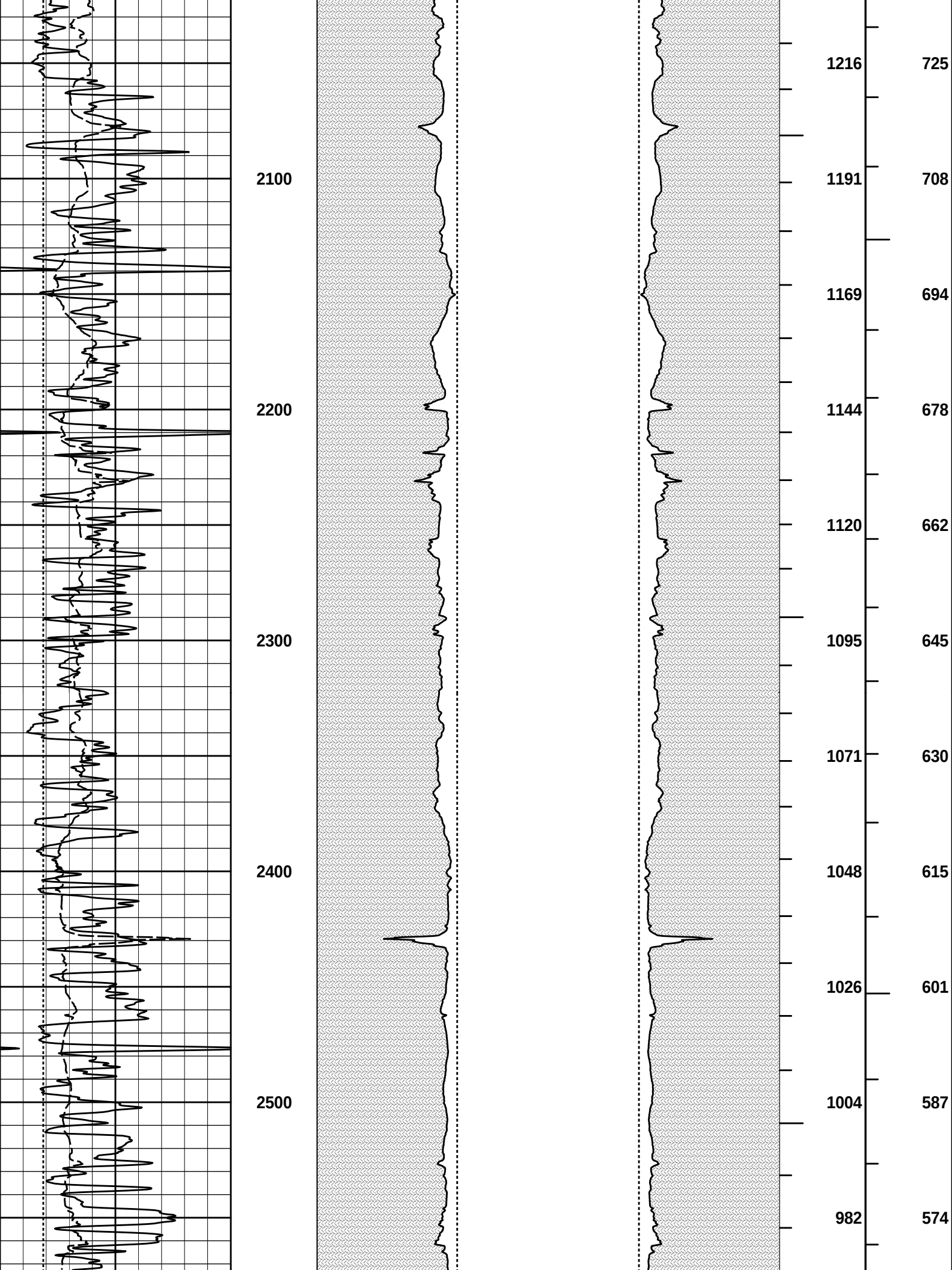
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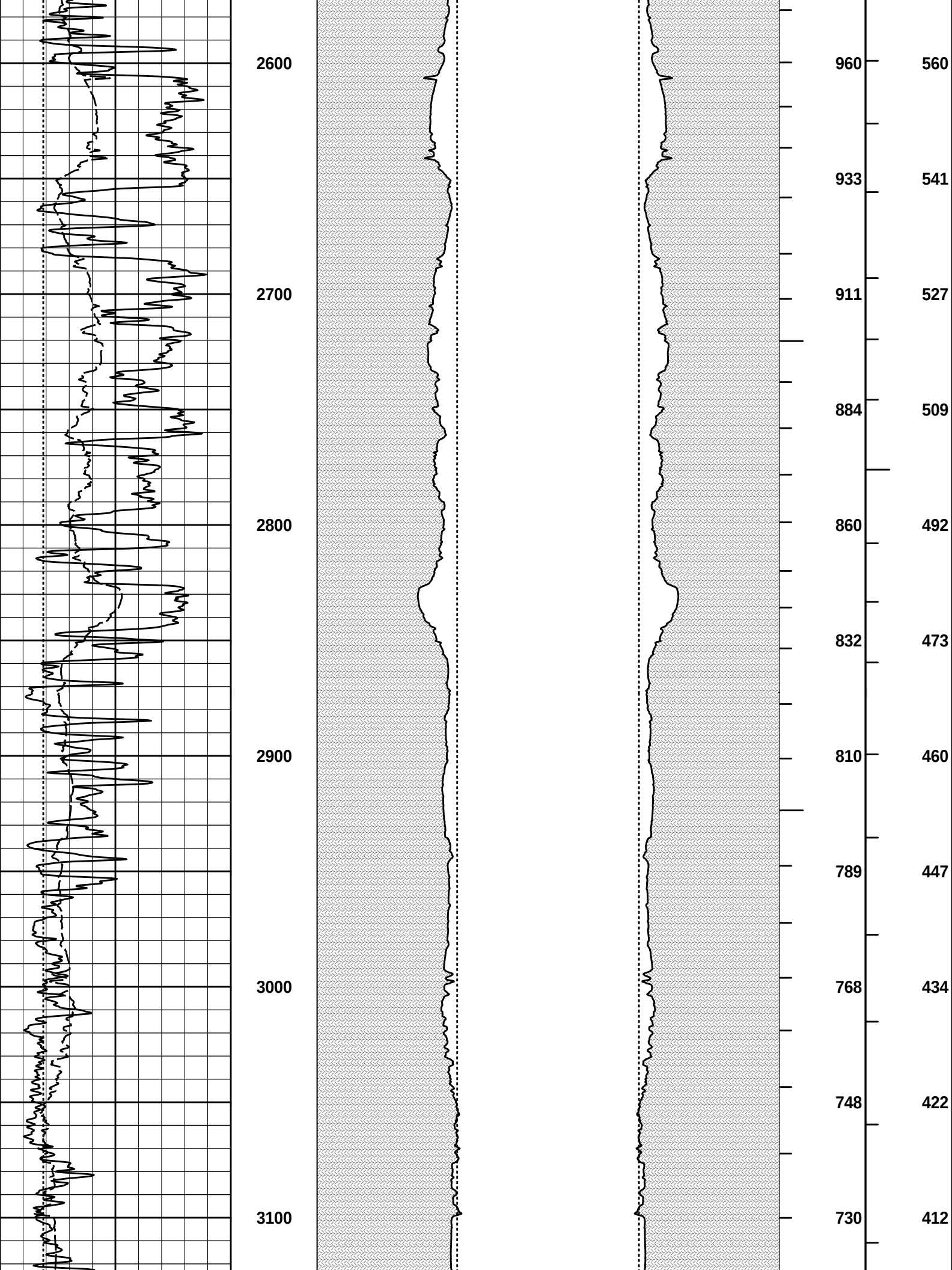
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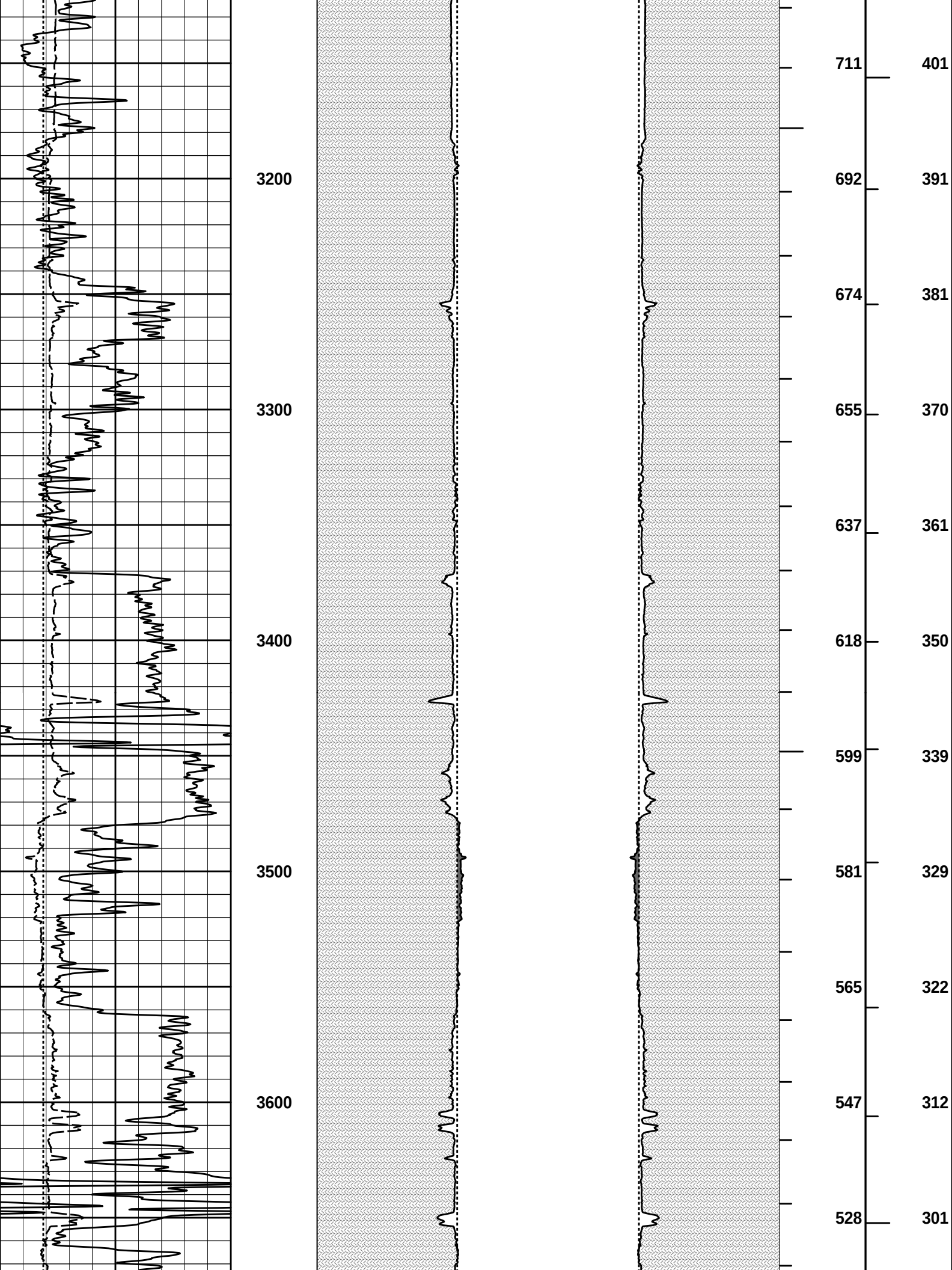


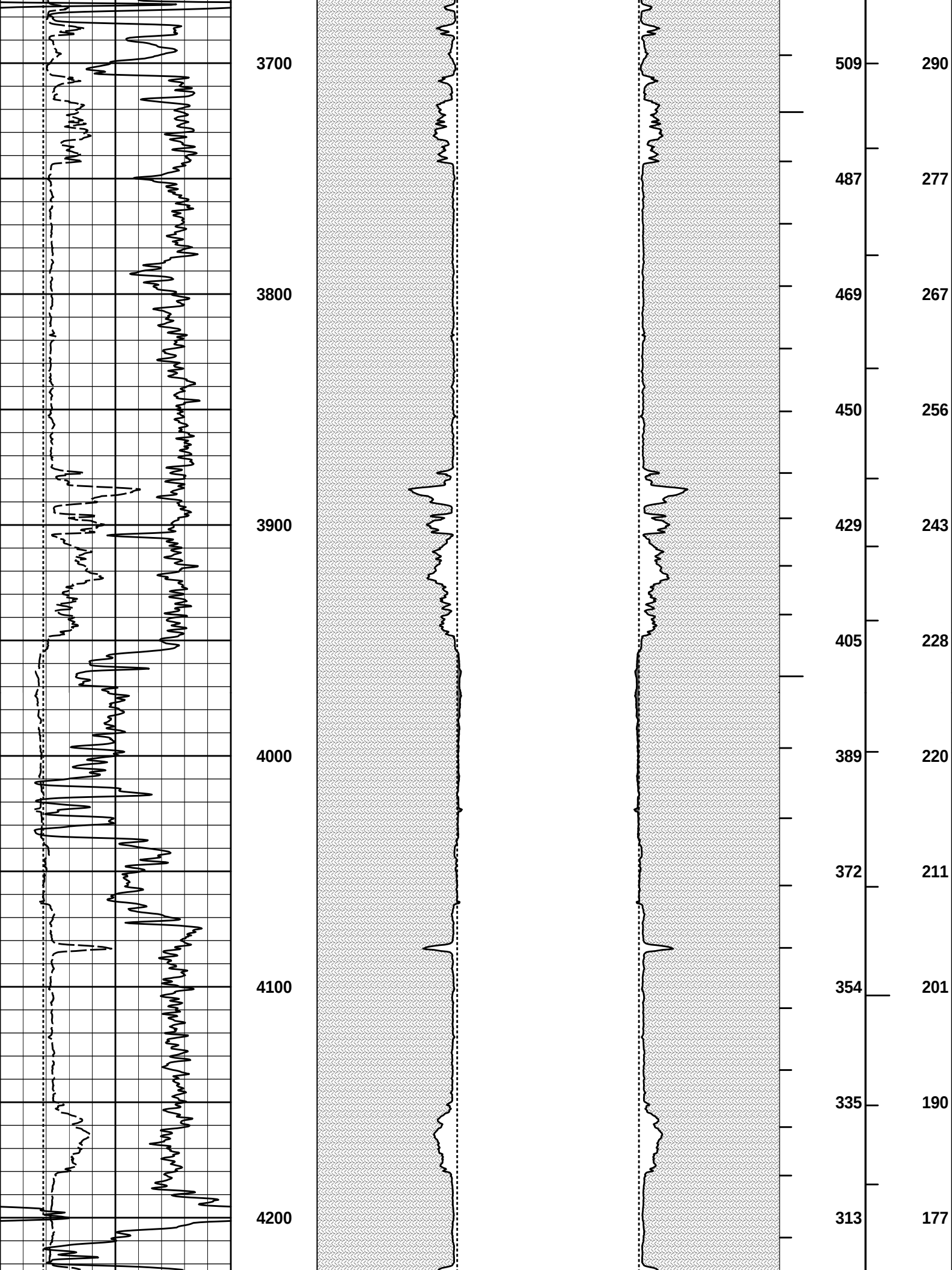
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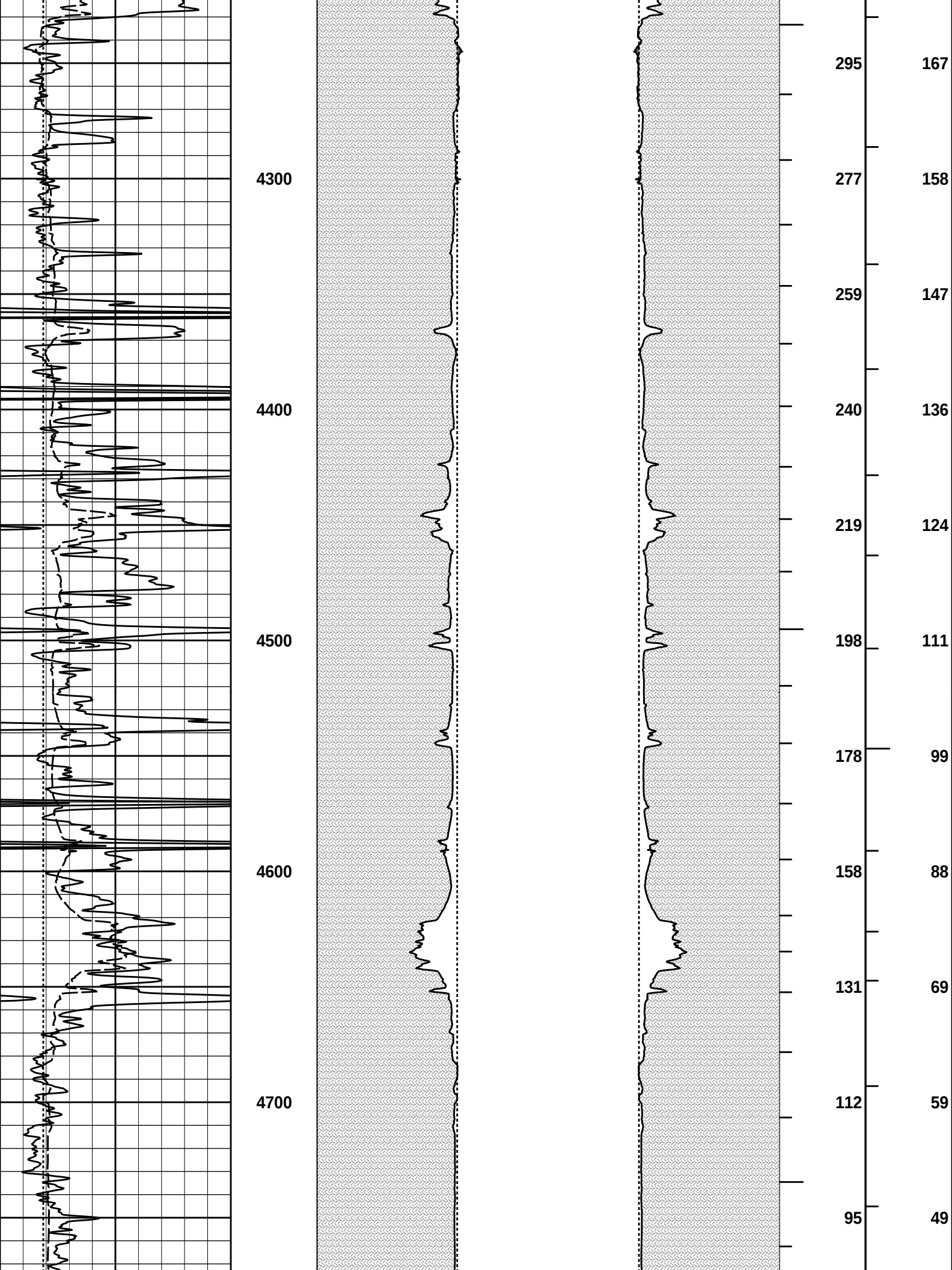


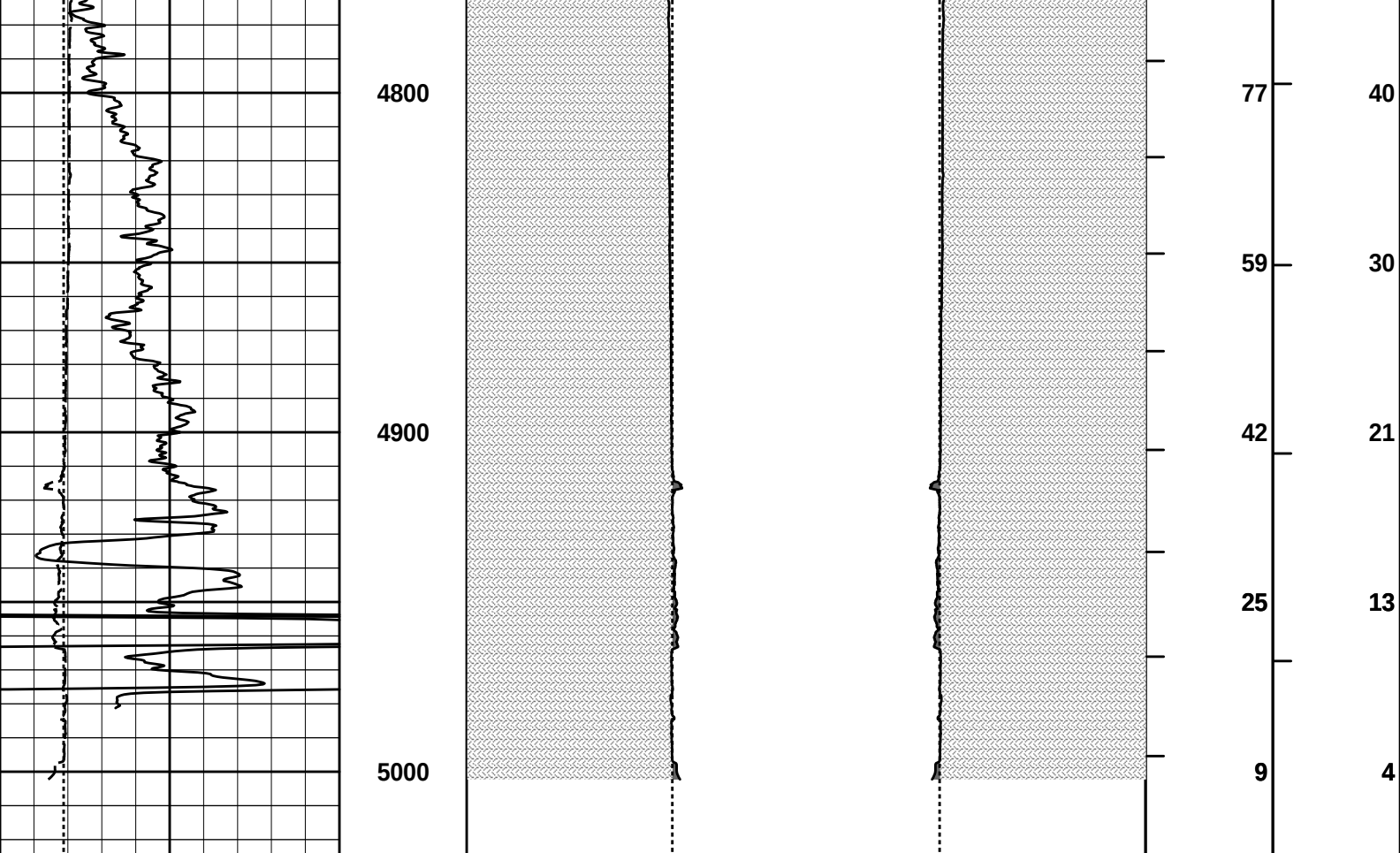












6	Caliper	16	MD 1 : 600 ft	20	Caliper	0 0	20	Caliper	20	BHVT	AHVT
	inches				inches			inches			
6	Bit Size	16		20	Bit Size	0 0	20	Bit Size	20		
	inches										
0	Gamma API	150			MUDCAKE			MUDCAKE			
	api										

HALLIBURTON

Plot Time: 27-Feb-13 06:38:59
Plot Range: 195 ft to 5025.08 ft
Data: HICKOCK_2-23\Well Based\VAL_HICKOCK_CASING\
Plot File: \\-LOCAL-HICKOCK_2-23\Well Based\POROSITY\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	VAL ENERGY		
WELL	HICKOCK 2-23		
FIELD	UNKNOWN		
COUNTY	BARBER	STATE	KANSAS
HALLIBURTON		DUAL SPACED NEUTRON SPECTRAL DENSITY LOG	