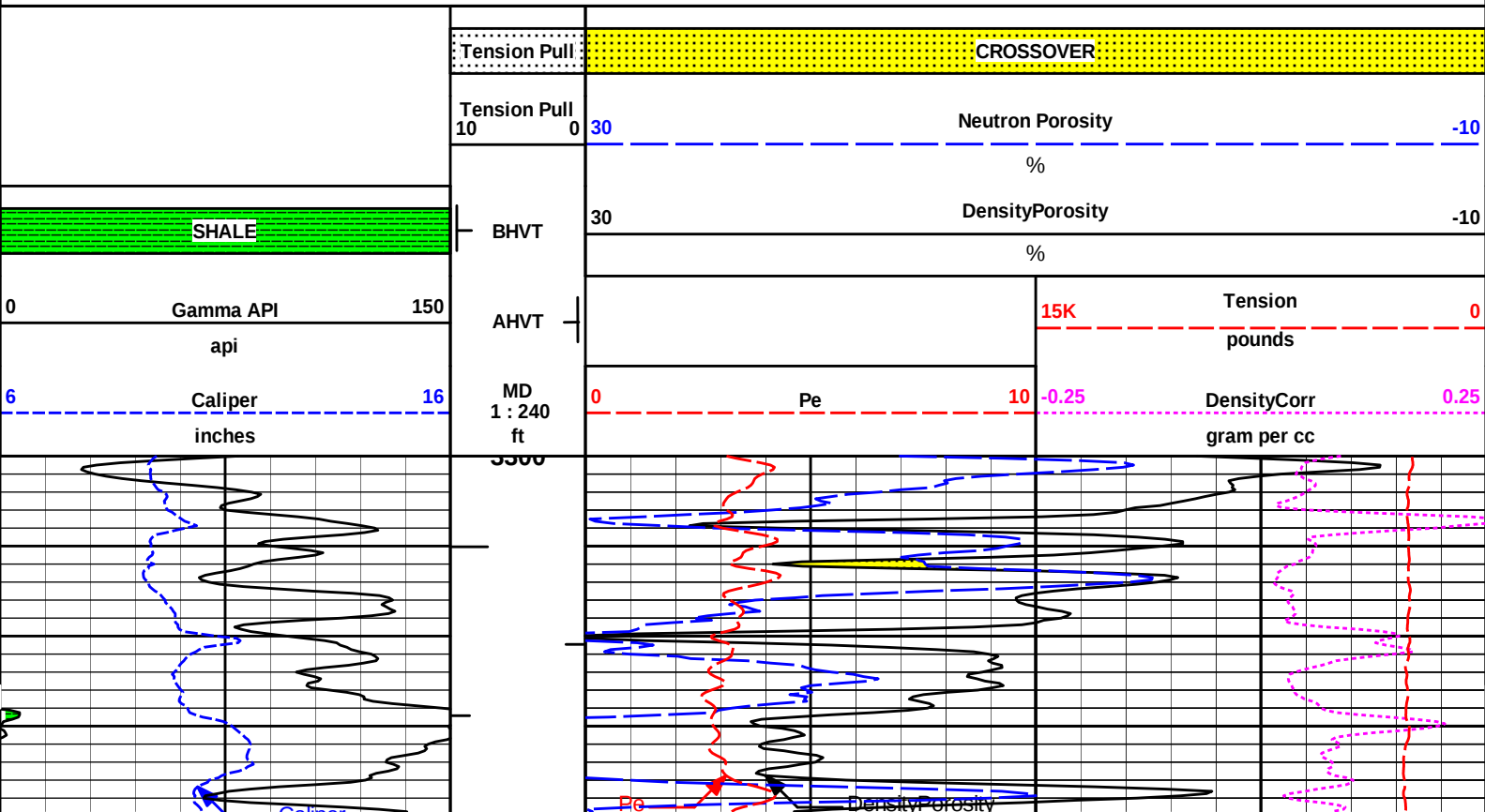


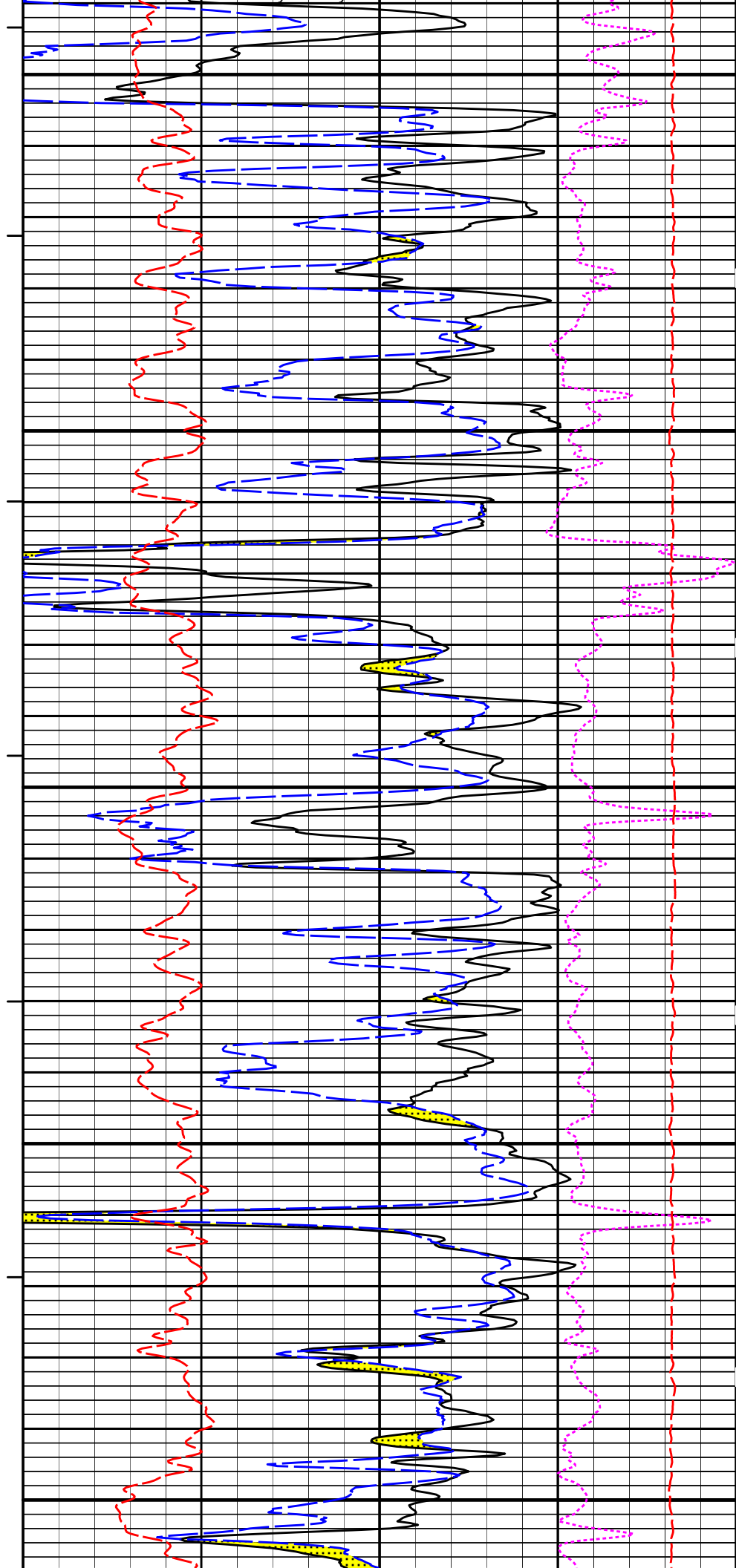
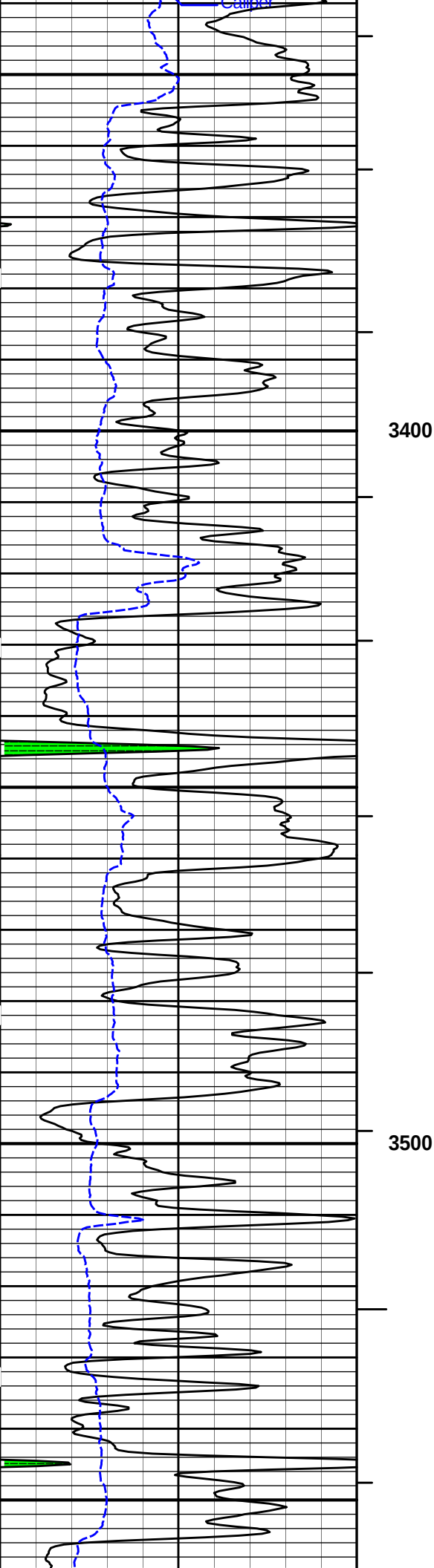
SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

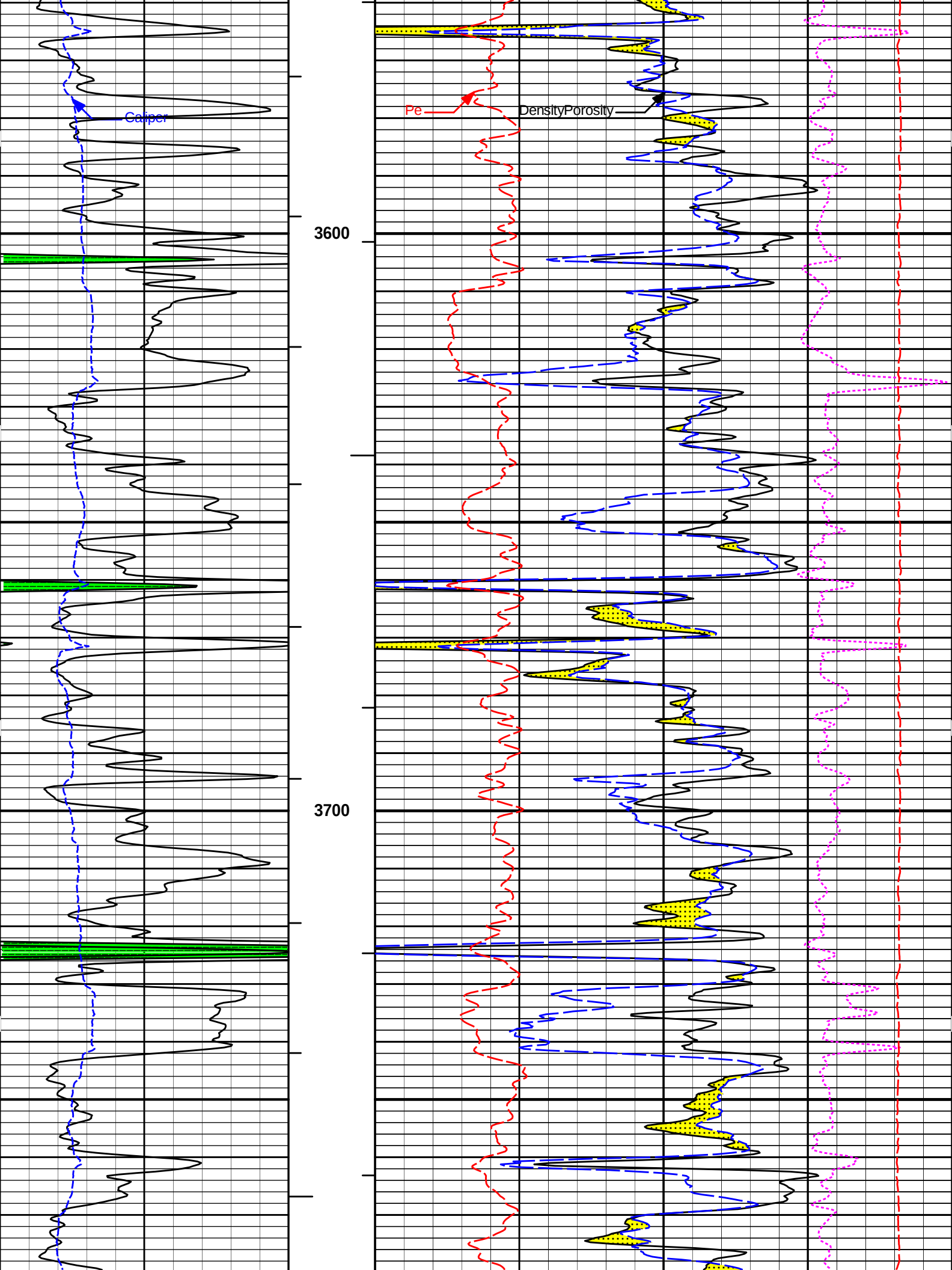
Fold here

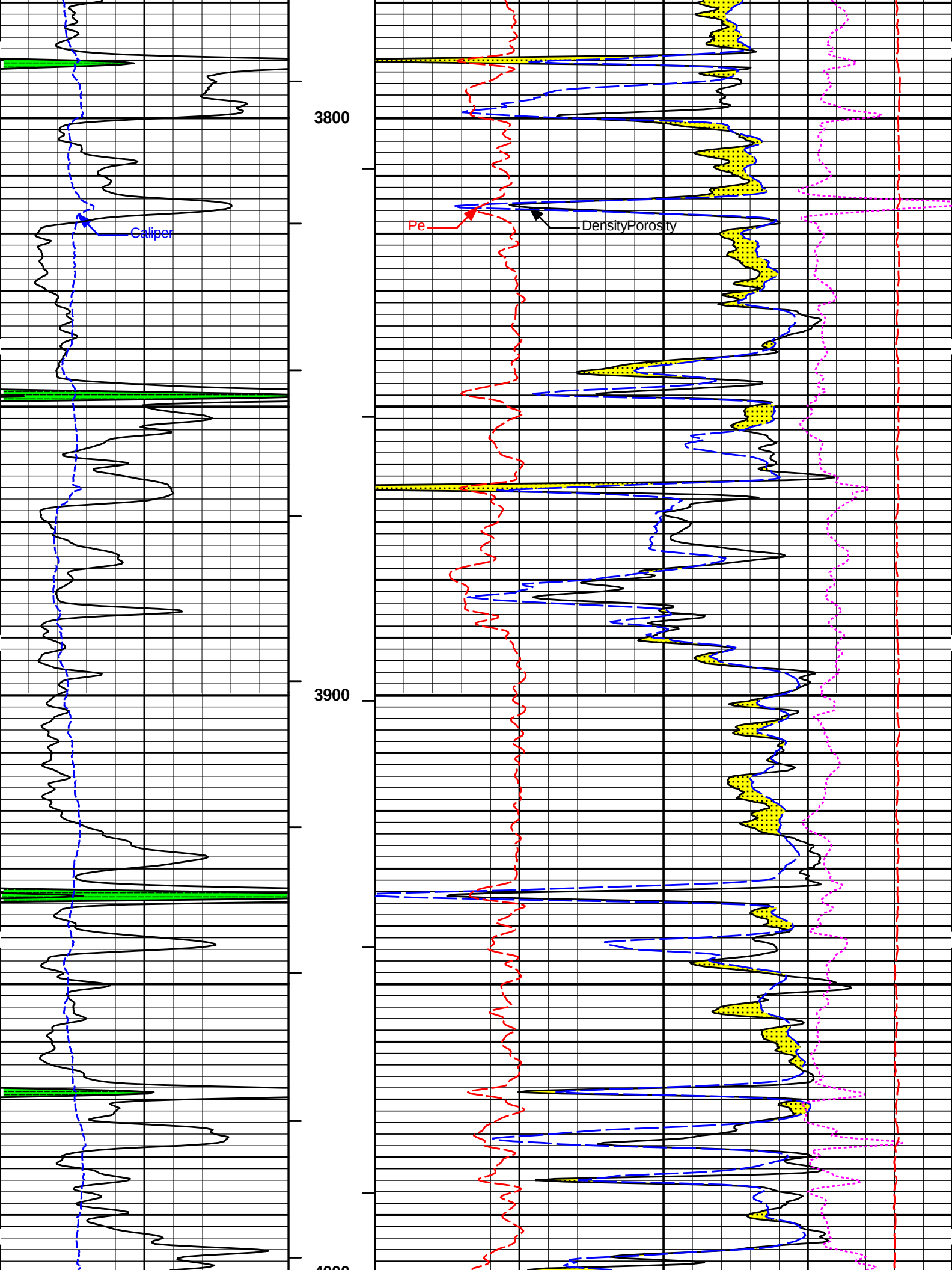
LOGGING DATA

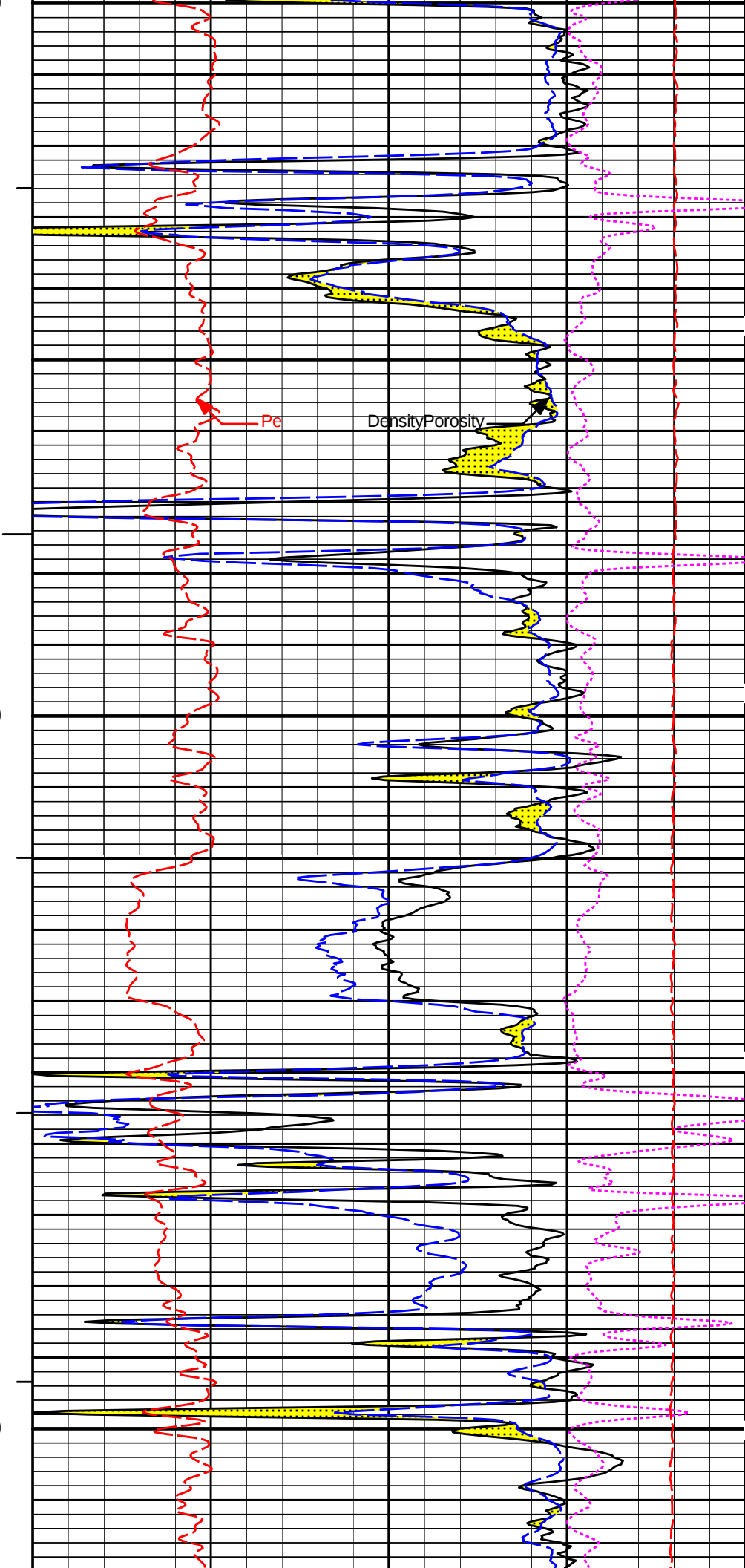
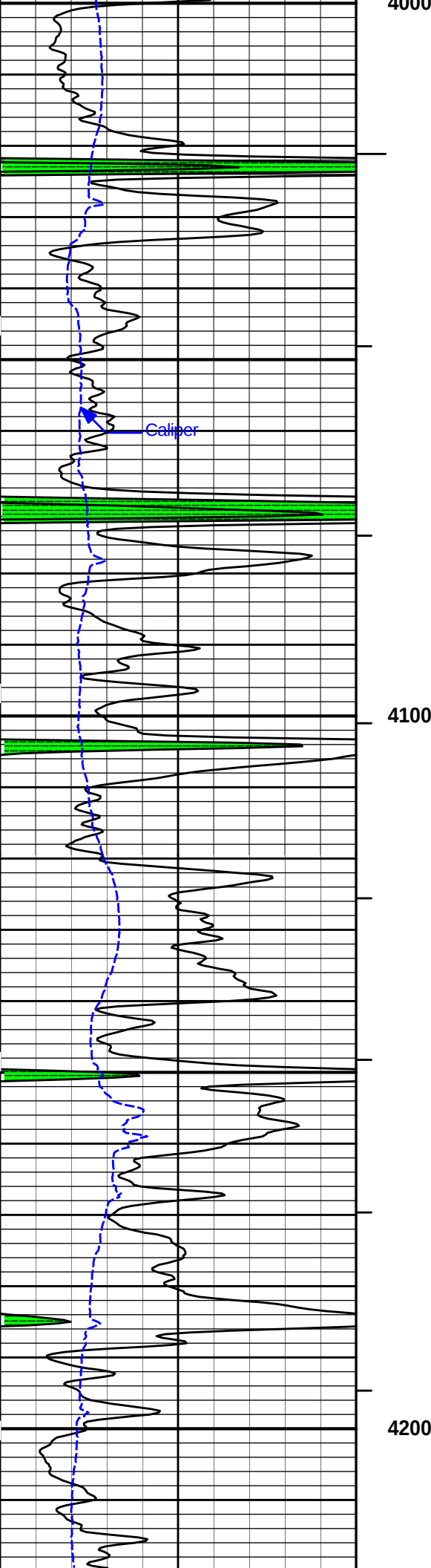
GENERAL			GAMMA		ACOUSTIC			DENSITY			NEUTRON				
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix	
No.	From	To	ft/min	L	R	L	R		L	R		L	R		
ONE	4556	3300	REC	0	150										
DIRECTIONAL INFORMATION															
Maximum Deviation								@	KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING															
CHLORIDES REPORTED AT 4000 MG/L															
LCM REPORTED AT 3 LB/BBL															
GTET-DSNT-SDLT-ACRT RUN IN COMBINATION															
TODAY'S CREW: F. VILLA & B. TERRELL															
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															

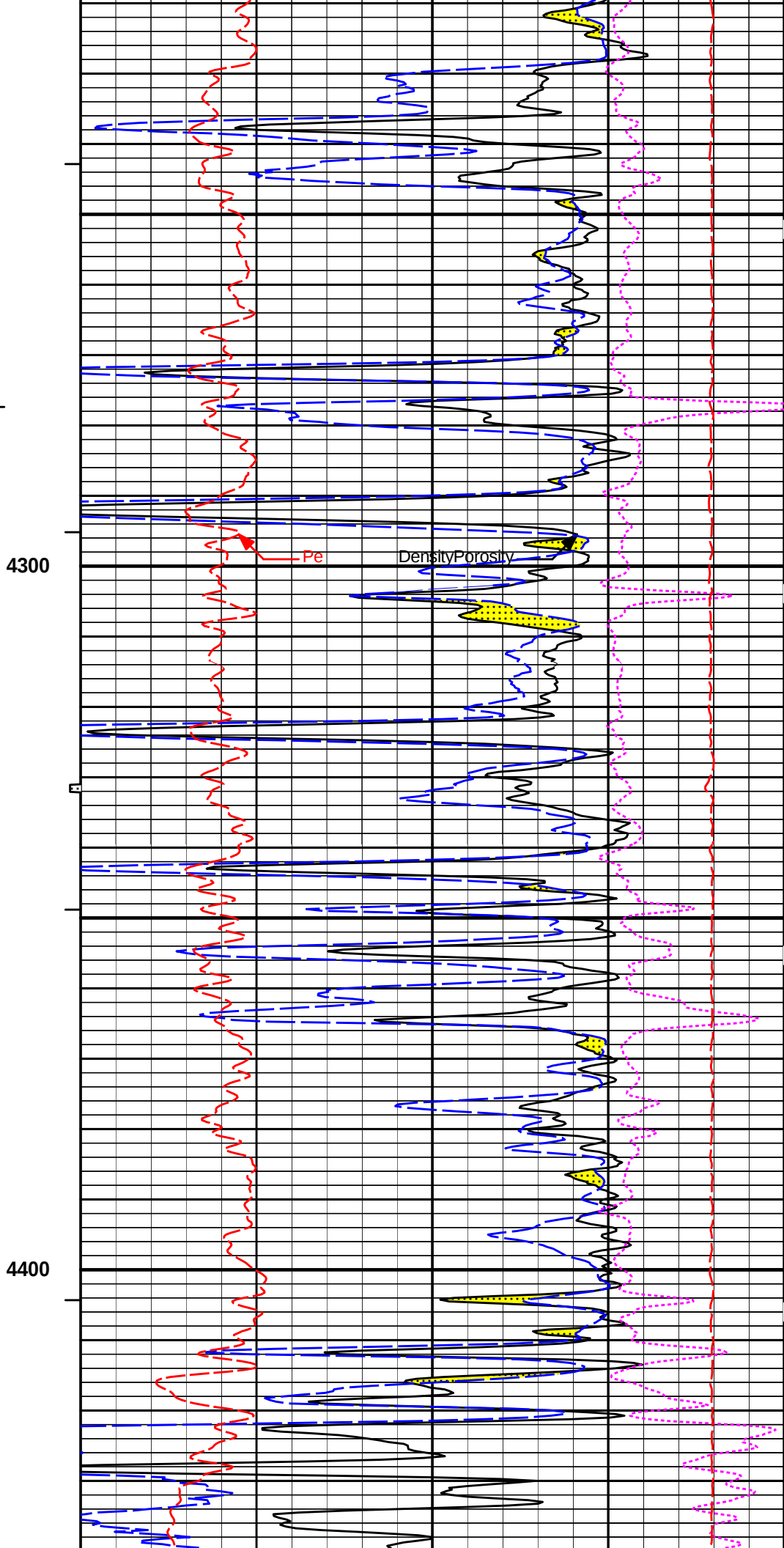
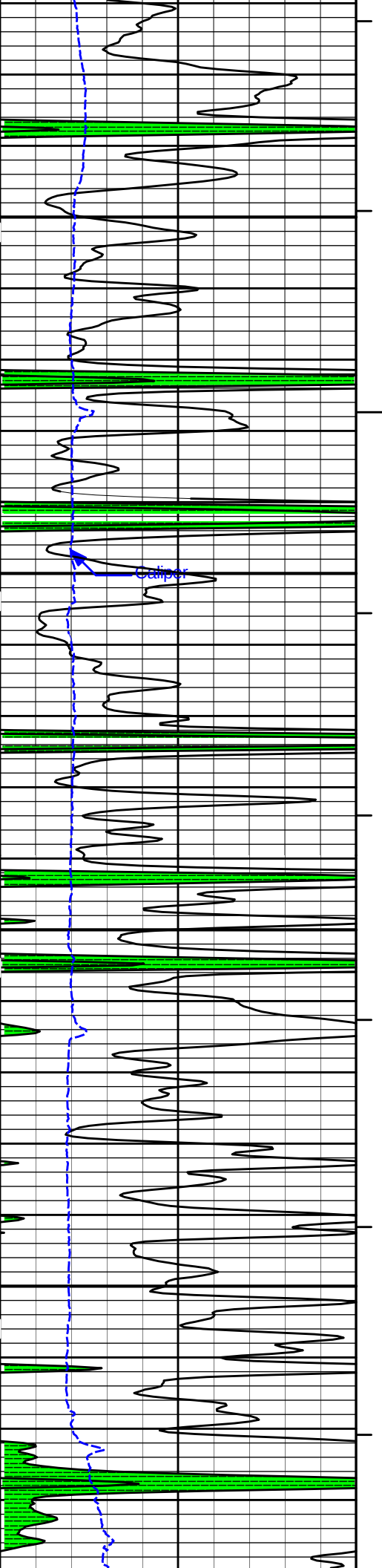


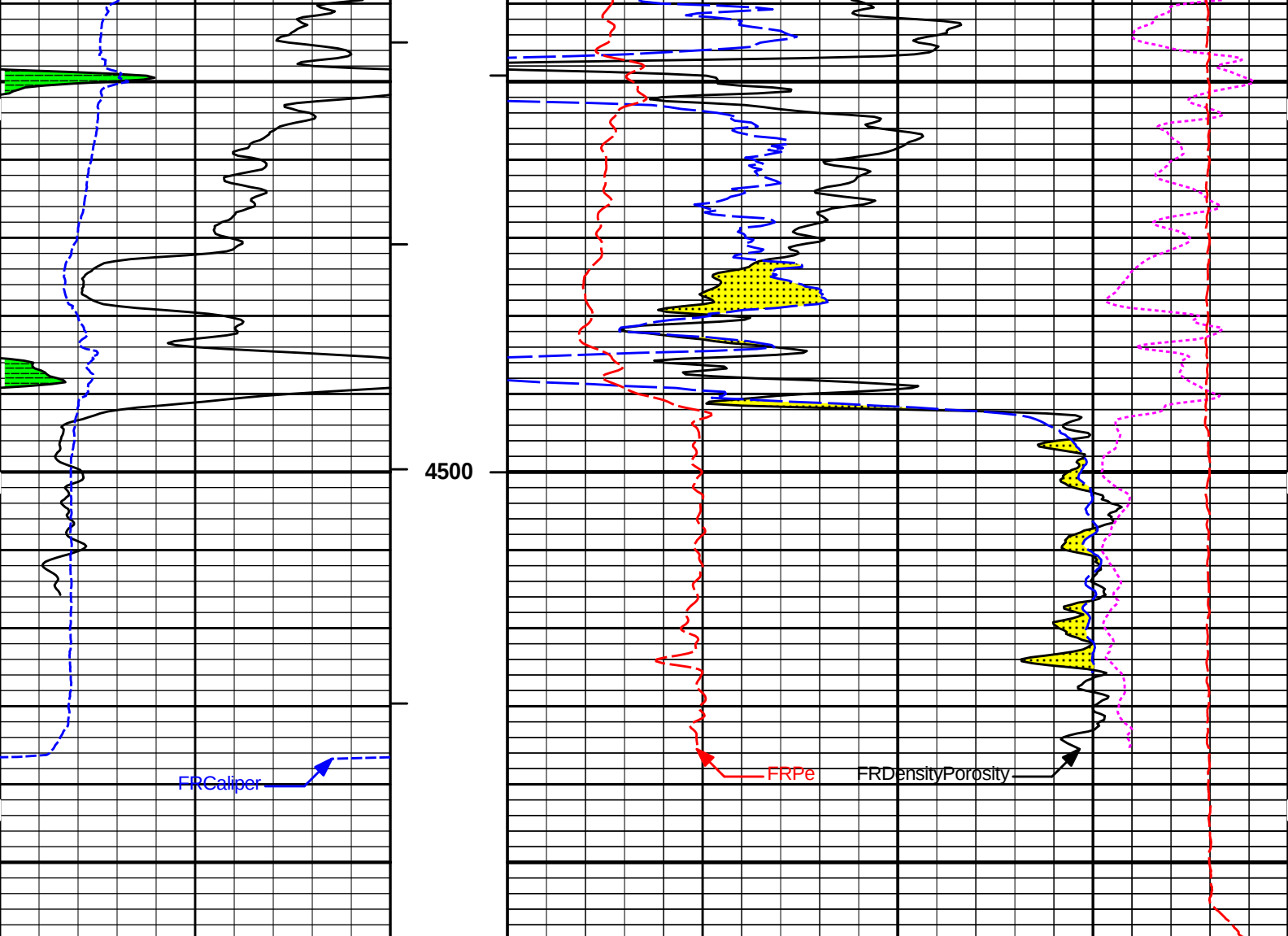












6	Caliper	16	MD	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft						gram per cc	
0	Gamma API	150	AHVT					15K	Tension	0
	api								pounds	
	SHALE		BHVT		30	DensityPorosity				-10
						%				
			Tension Pull	10	0	30	Neutron Porosity			-10
						%				
			Tension Pull				CROSSOVER			

HALLIBURTON

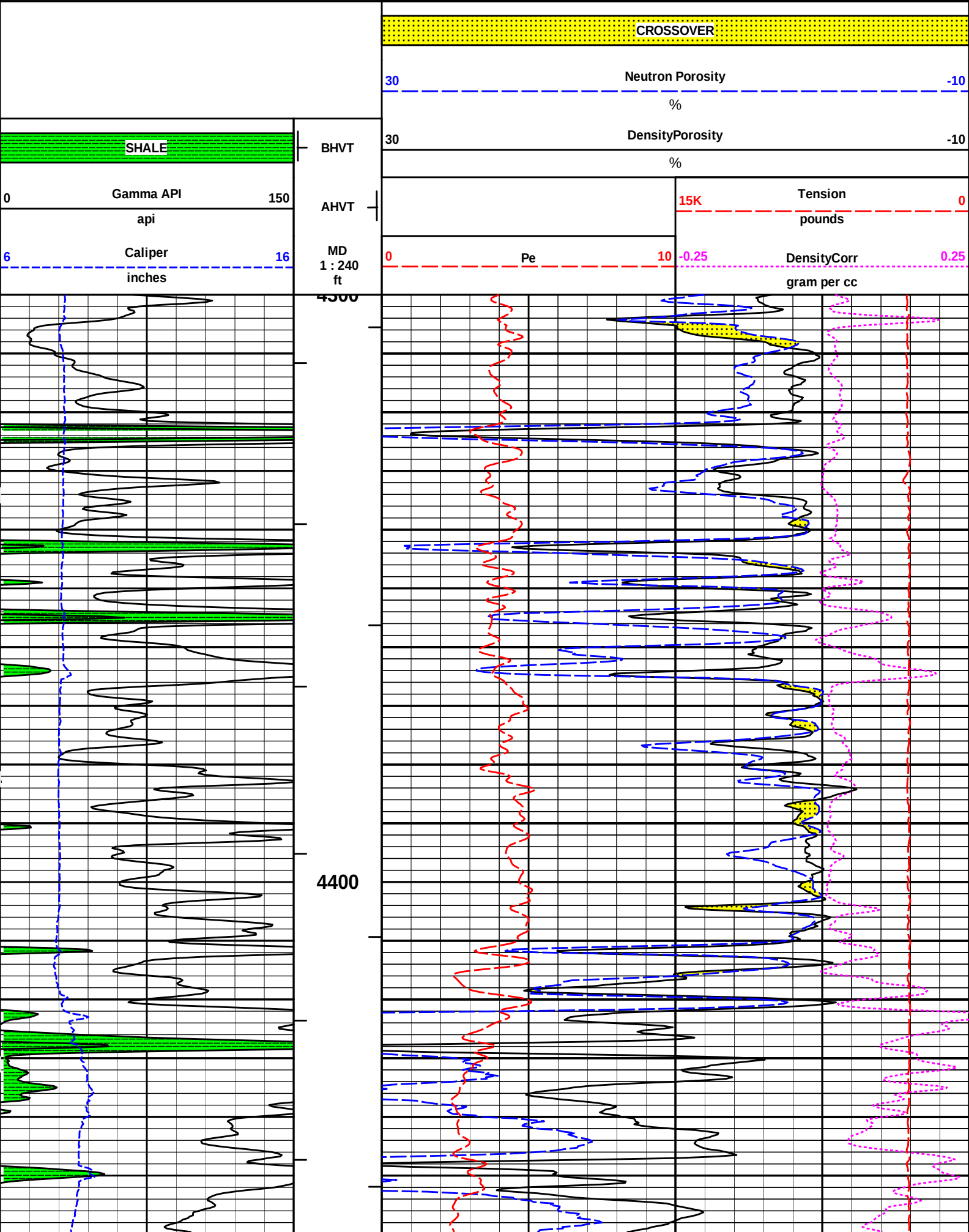
Plot Time: 25-Mar-13 10:26:36
 Plot Range: 3300 ft to 4559.67 ft
 Data: LPR_1_23\Well Based\DETAIL\
 Plot File: \\PORO\Poros_IQ_5_MAIN_LIB

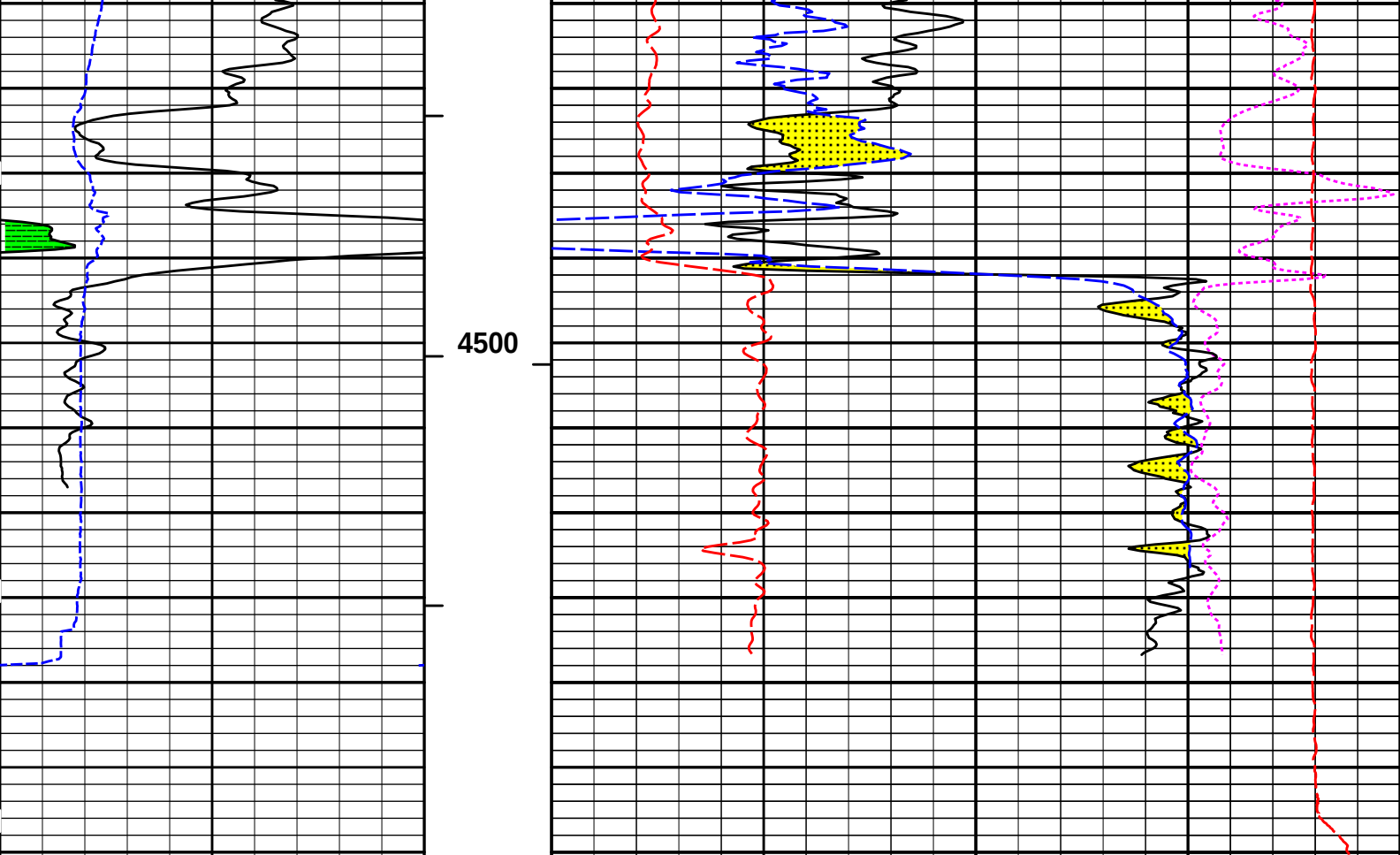
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 25-Mar-13 10:26:36
 Plot Range: 4300 ft to 4560.92 ft
 Data: LPR_1_23\Well Based\REPEAT\
 Plot File: \\PORO\Poros_IQ_5_REP_LIB

REPEAT SECTION





6	Caliper	16	MD	0	Pe	10	-0.25	DensityCorr	0.25
	inches		1 : 240					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: 25-Mar-13 10:26:38
Plot Range: 4300 ft to 4560.92 ft
Data: LPR_1_23\Well Based\REPEAT\
Plot File: \\PORO\Poros_IQ_5_REP_LIB

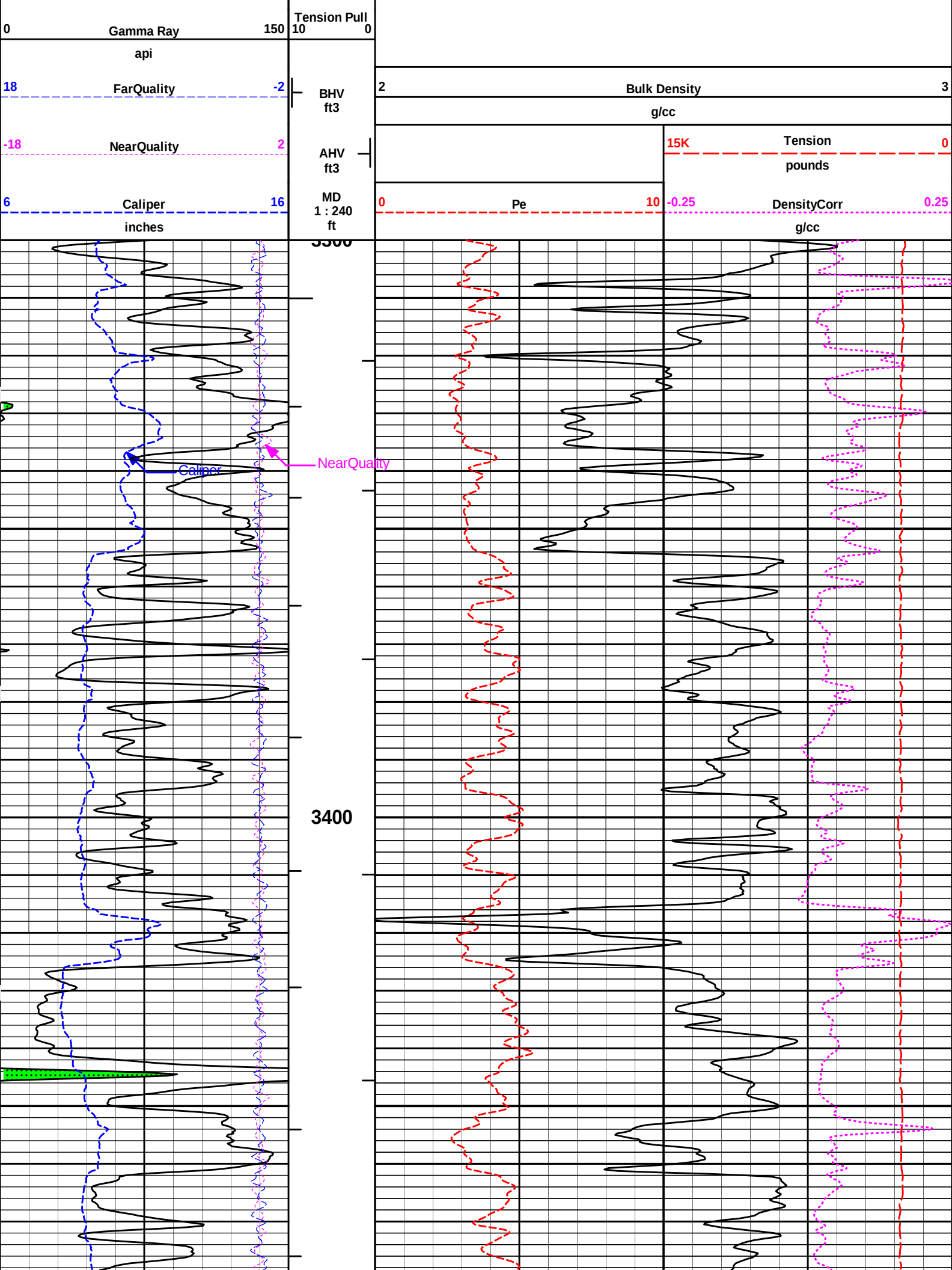
REPEAT SECTION

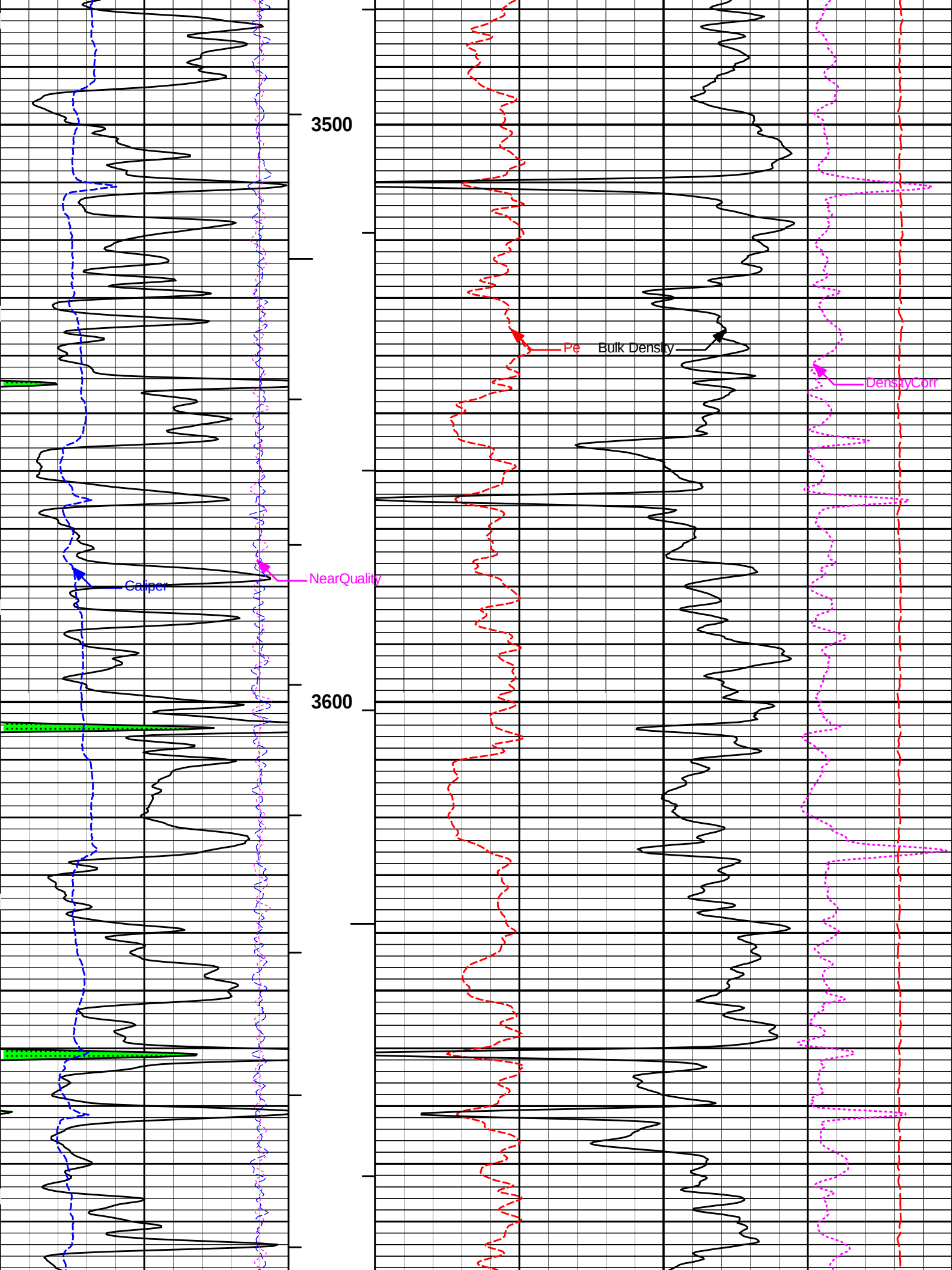
HALLIBURTON

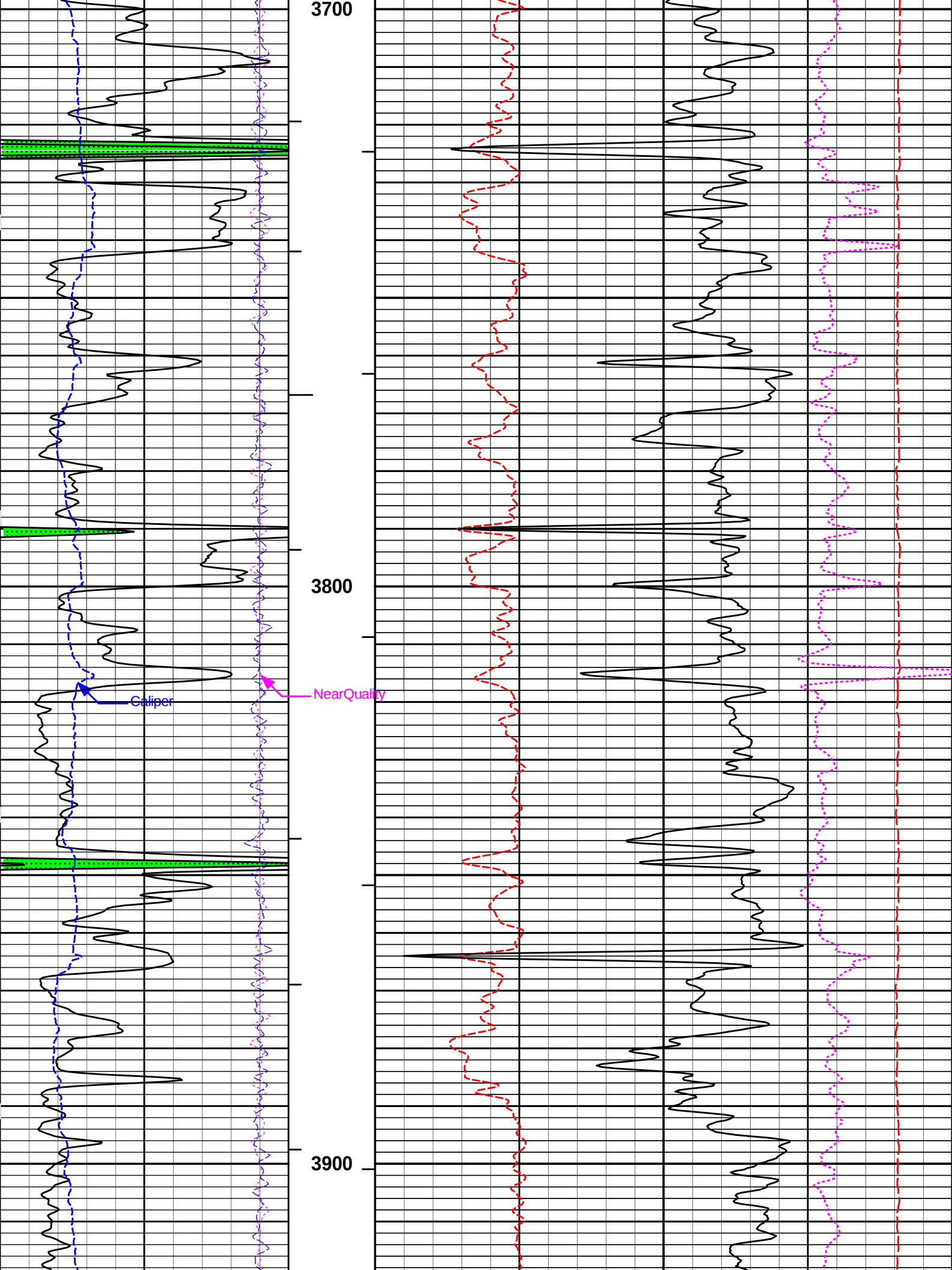
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Plot Range: 3300 ft to 4559.67 ft
Data: LPR_1_23\Well Based\DETAIL\
Plot File: \\LOCAL-1\LPR_1_23\0001 SP-GTET-DSN-SDL-ACRT-CHIPORO\BULKD_5_MAIN_LIB

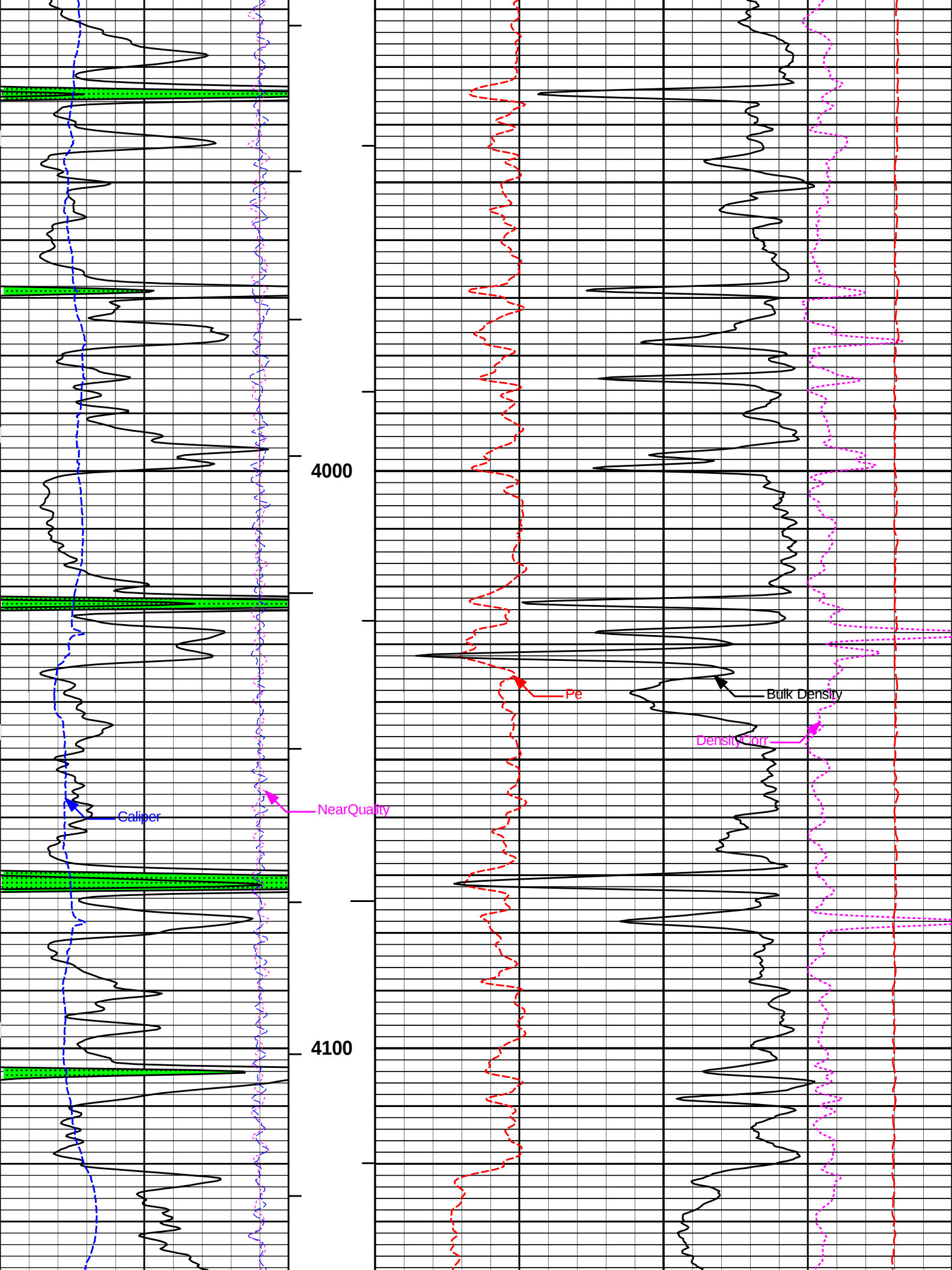
5 INCH MAIN LOG

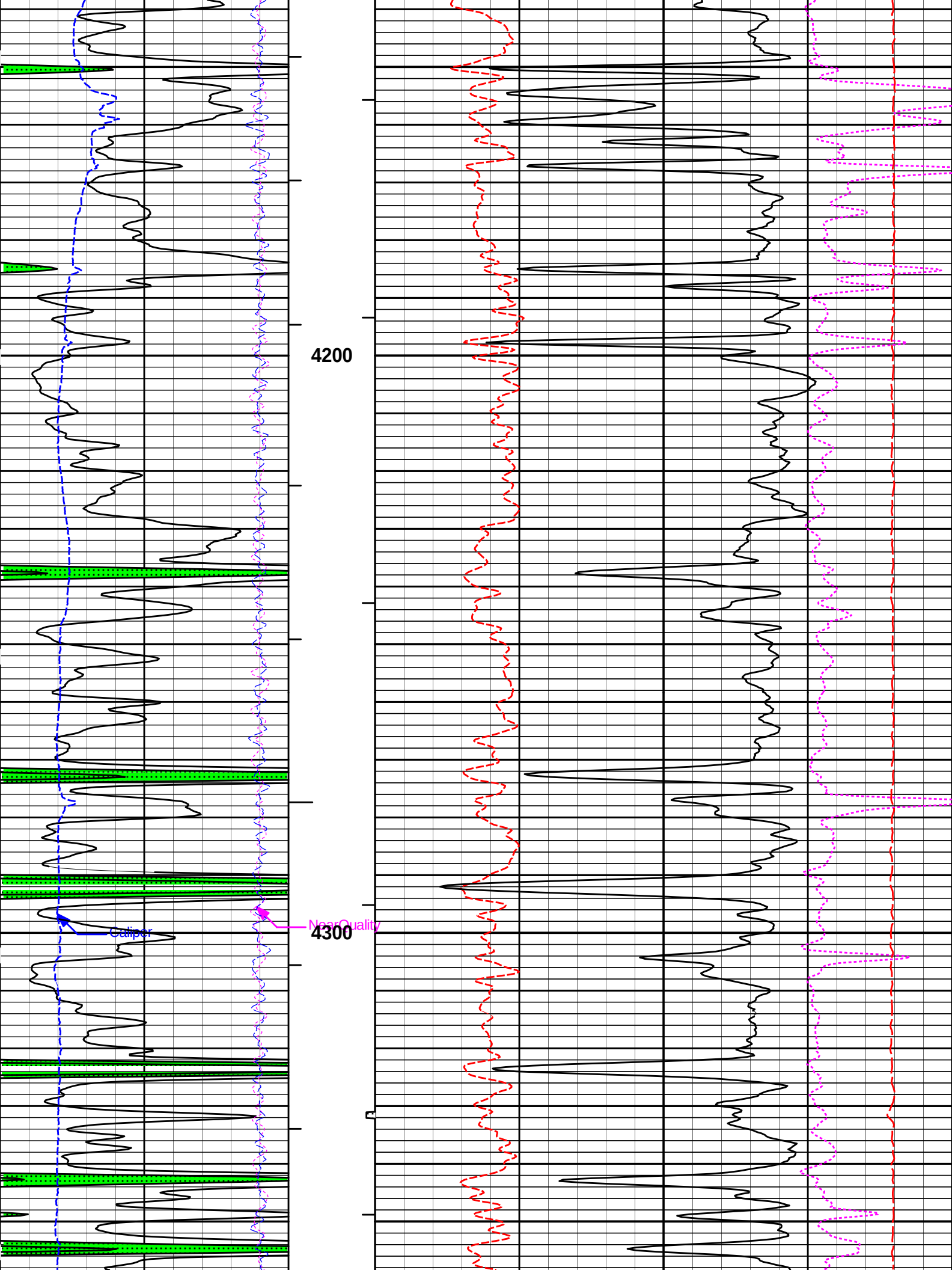
SHALE	Tension Pull
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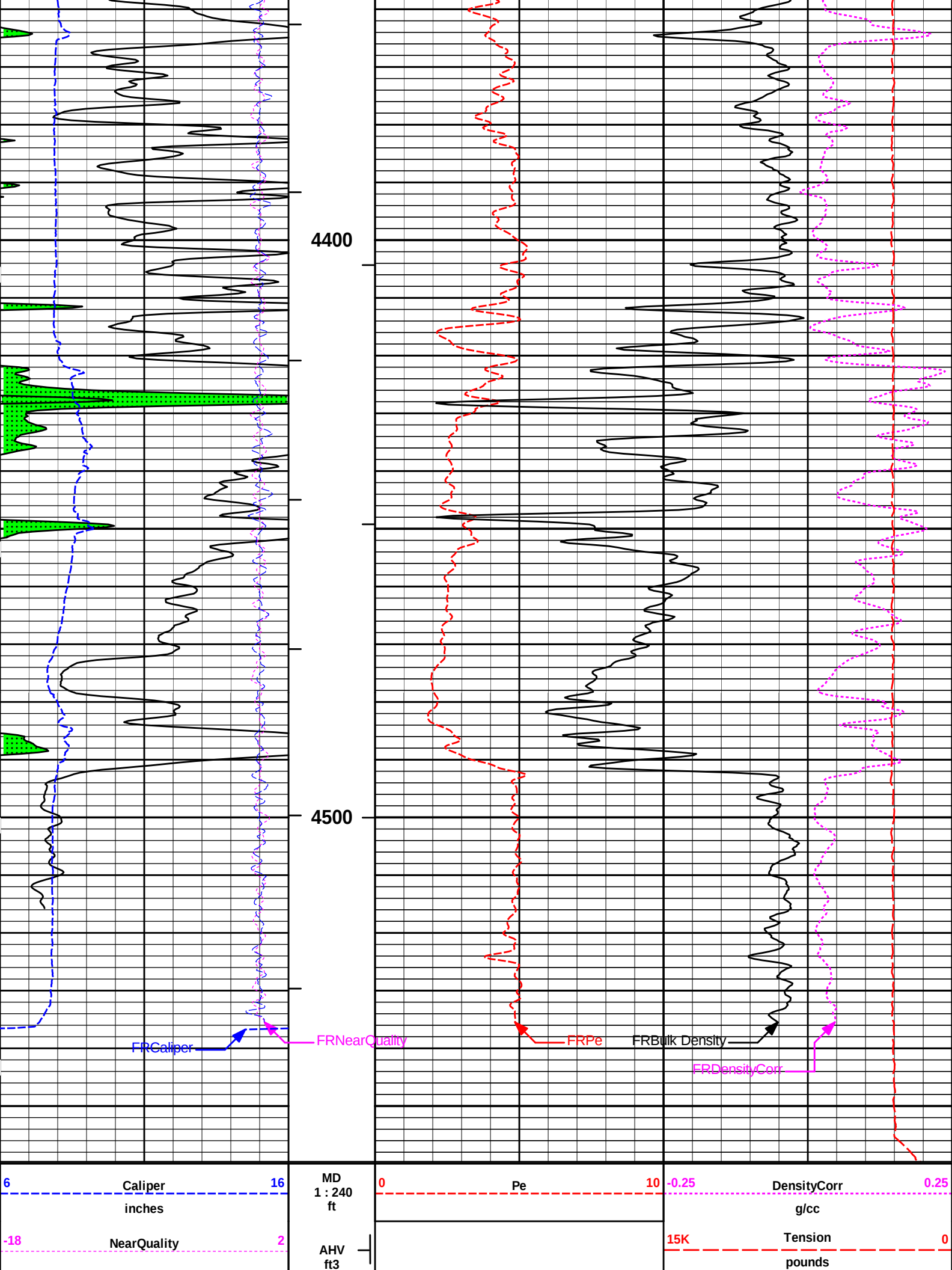












6	Caliper	16
	inches	
-18	NearQuality	2

MD	1 : 240
ft	
AHV	ft3

0	Pe	10

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

18	FarQuality	-2	BHV ft3	2	Bulk Density	3
0	Gamma Ray	150	Tension Pull 10	0	g/cc	
	api					
	SHALE		Tension Pull			

HALLIBURTON

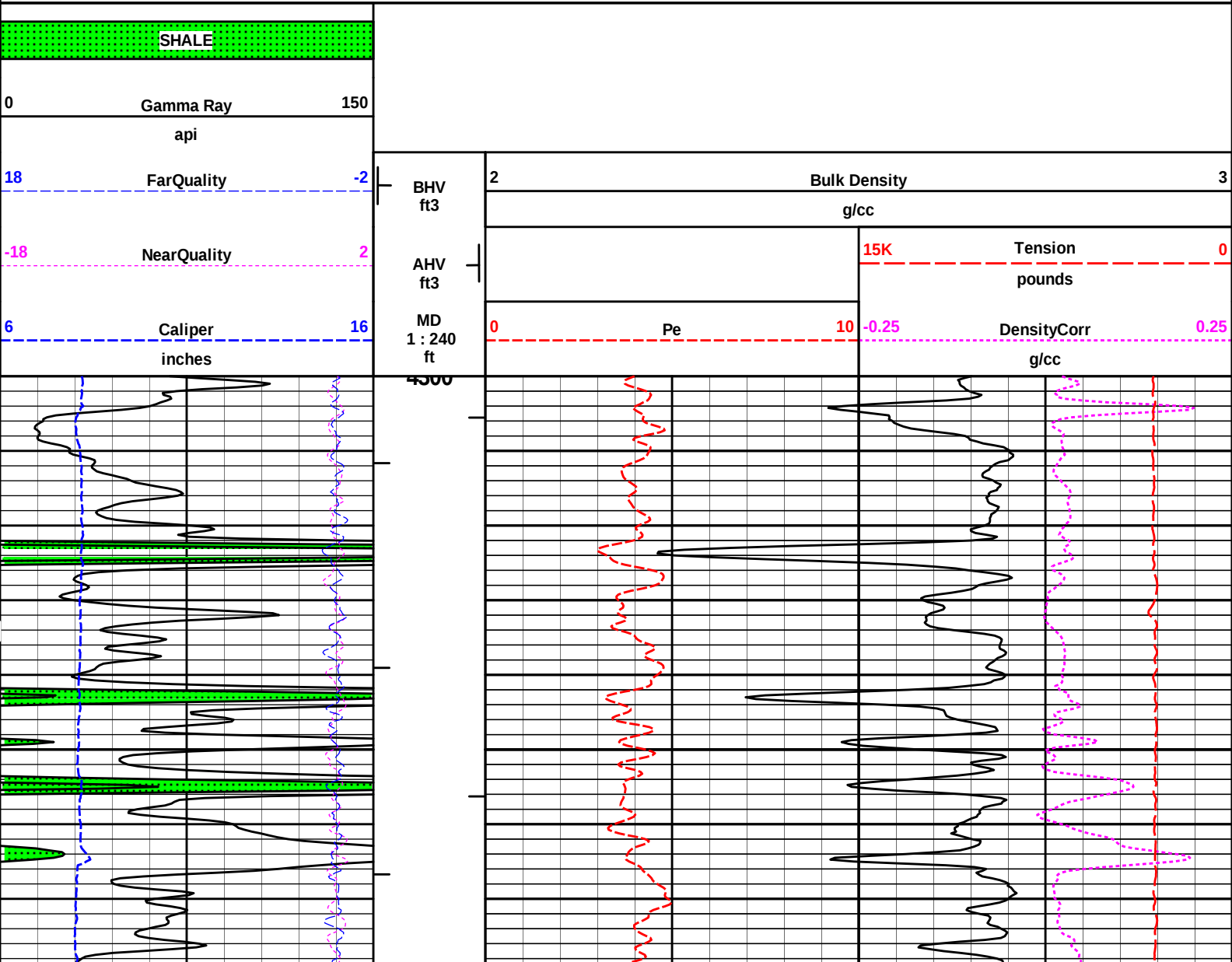
Plot Time: 25-Mar-13 10:26:41
Plot Range: 3300 ft to 4559.67 ft
Data: LPR_1_23\Well Based\DETAIL\
Plot File: \\-LOCAL-\\LPR_1_23\0001 SP-GTET-DSN-SDL-ACRT-CH\PORO\BULKD_5_MAIN_LIB

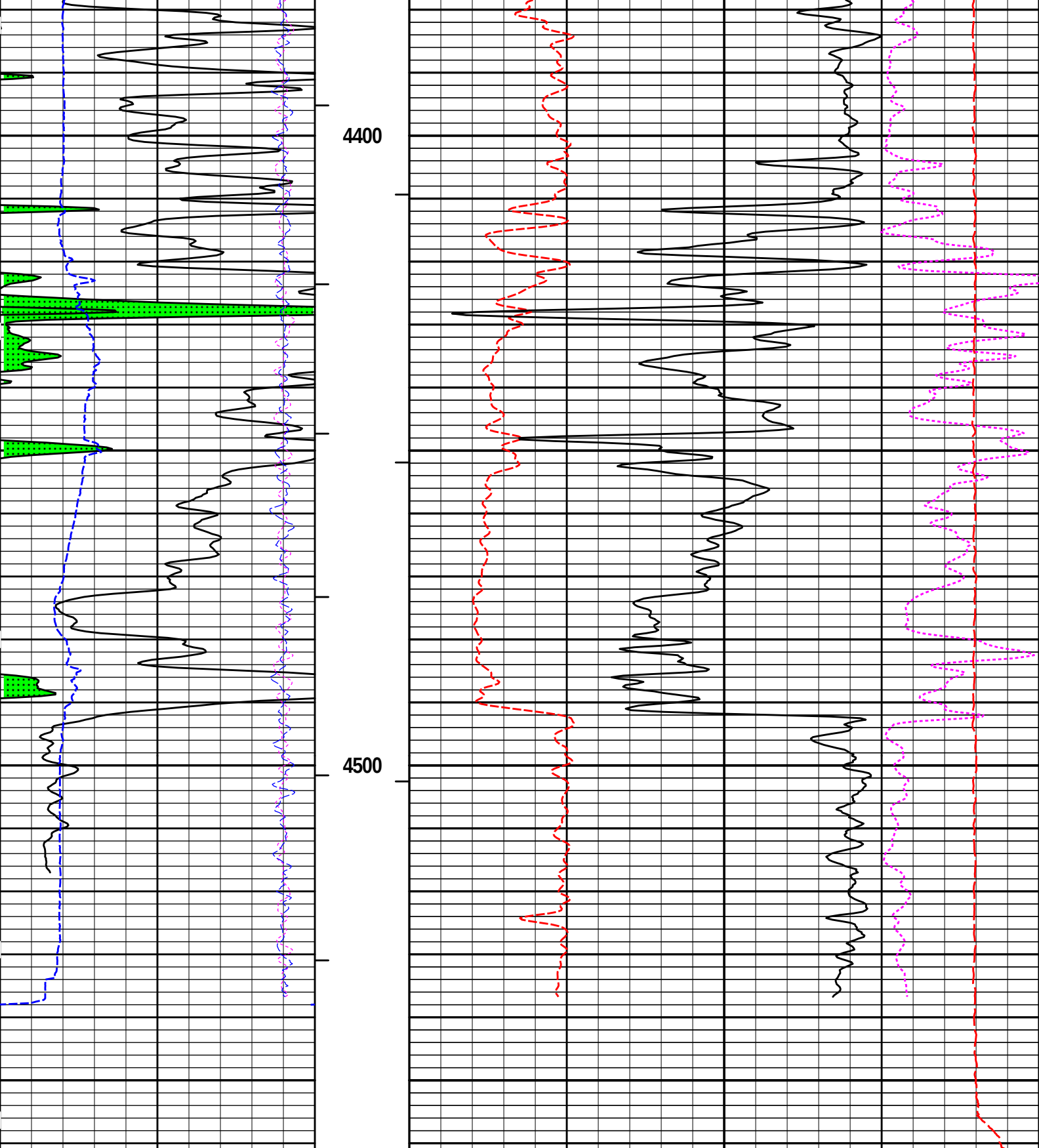
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 25-Mar-13 10:26:41
Plot Range: 4300 ft to 4560.92 ft
Data: LPR_1_23\Well Based\REPEAT\
Plot File: \\-LOCAL-\\LPR_1_23\0001 SP-GTET-DSN-SDL-ACRT-CH\PORO\BULKD_5_REP_LIB

REPEAT SECTION





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

api

SHALE

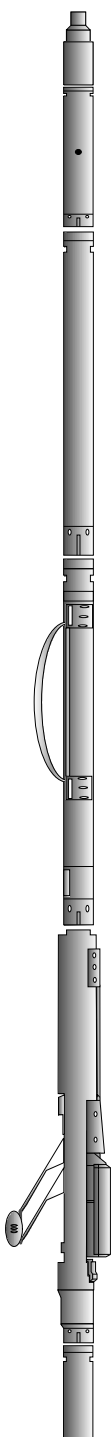
HALLIBURTON

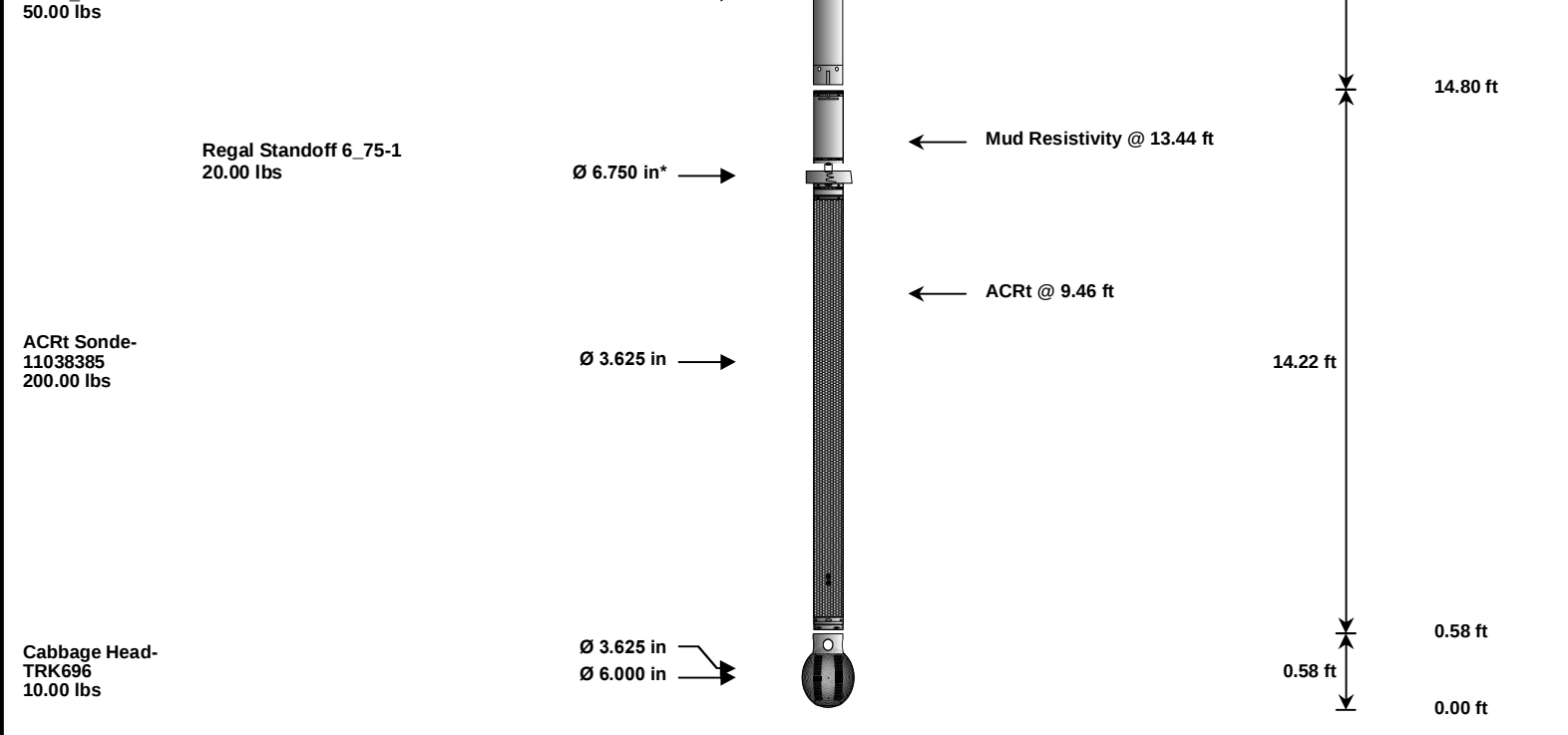
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Data: LPR_1_23\Well Based\REPEAT\
Plot File: \\-LOCAL-LPR_1_23\0001 SP-GTET-DSN-SDL-ACRT-CH\PORO\BULKD_5_REP_LIB

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
SP Sub-11441455 60.00 lbs		Ø 3.625 in →		← SP @ 50.81 ft	3.74 ft	52.59 ft
						48.85 ft
GTET-11048627 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.79 ft	8.52 ft	
						40.33 ft
DSNT-11019643 174.00 lbs	DSN Decentralizer- 11005605 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →		← DSN Far @ 33.39 ft ← DSN Near @ 32.64 ft	9.69 ft	
						30.64 ft
SDLT-10950489 360.00 lbs	SDLT Pad-10844781 65.00 lbs Microlog Pad-10950489 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		Microlog @ 22.83 ft SDL Caliper @ 22.65 ft SDL @ 22.64 ft	10.81 ft	
						19.83 ft
ACRt Instrument- I5059 S8385		Ø 3.625 in →			5.03 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	52.59	300.00
SP	SP Sub		11441455	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		11019643	174.00	9.69	30.64	60.00
DCNT	DSN Decentralizer		11005605	6.60	5.13	*	33.97
SDLT	Spectral Density Tool		10950489	360.00	10.81	19.83	60.00
SDLP	Density Insite Pad		10844781	65.00	2.55	*	22.04
MICP	Microlog Pad		10950489	8.00	1.00	*	22.33
ACRt	Array Compensated True Resistivity Instrument Section		I5059_S8385	50.00	5.03	14.80	300.00
ACRt	Array Compensated True Resistivity Sonde Section		11038385	200.00	14.22	0.58	300.00
RSOF	Regal Standoff 6.75in		1	20.00	0.52	*	12.30
CBHD	Cabbage Head		TRK696	10.00	0.58	0.00	300.00
Total				1,148.60	54.51		
* Not included in Total Length and Length Accumulation.							
Data: LPR_1_23\0001 SP-GTET-DSN-SDL-ACRT-CH\IDLE							
Date: 25-Mar-13 08:02:35							

HALLIBURTON			
CALIBRATION REPORT			
NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 11048627	Reference Calibration Date:	13-Feb-13 14:00:35
Engineer:	J. BOLLUM	Calibration Date:	05-Mar-13 09:33:28
Software Version:	WL INSITE R3.8.0 (Build 2)	Calibration Version:	1
Calibrator Source S/N: TB146			
Calibrator API Reference:265.00 api			
Equivalent Calibrator API Reference:269.6 api			
Measurement	Measured	Calibrated	Units
Background	50.6	51.6	api
Background + Calibrator	315.2	321.3	api
Calibrator	264.6	269.6	api
DUAL SPACED NEUTRON SHOP CALIBRATION			

Tool Name:	DSNT - 11019643	Reference Calibration Date:	05-Mar-13 09:55:34
Engineer:	J. BOLLLOM	Calibration Date:	05-Mar-13 10:09:49
Software Version:	WL INSITE R3.8.0 (Build 2)	Calibration Version:	1

Logging Source S/N: 696
Tank Serial Number: LIBERAL_NEUTRON
Reference value assigned to Tank: 51.680
Snow Block S/N: 696
Calibration Tank Water Temperature: 65 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value

Gain:	0.945	0.949	0.900 - 1.100
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WATER TANK SUMMARY (Horizontal Water Tank)				
Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change

Porosity (decp):	0.2098	0.2110	0.0012	+/- 0.0020
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Calibrated Ratio:	9.69	9.73	0.039	+/- 0.050
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VERIFIER		
Measurement	Value	Control Limit

Snow-Block Porosity (decp):	0.0573	0.02000 - 0.09000
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PASS/FAIL SUMMARY	
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Background Check:	Passed
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Gain-Range Check:	Passed
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Snow-Block Check:	Passed
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DENSITY CALIPER SHOP CALIBRATION			
Tool Name:	SDLT - 10950489	Reference Calibration Date:	07-Mar-13 09:55:09
Engineer:	J. BOLLLOM	Calibration Date:	07-Mar-13 10:03:24
Software Version:	WL INSITE R3.8.0 (Build 2)	Calibration Version:	1
Host Tool Name:	DSNT - 11019643		

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value

Pad Offset	-1782.49	-1752.48	-7000.00 - -1000.00
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Pad Gain	0.0003933	0.0003885	0.000200 - 0.000600
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Arm Offset	-1168.26	-1689.88	-5000.00 - 3000.00
------------	----------	----------	--------------------

Arm Gain	0.0004633	0.0005298	0.000300 - 0.000700
----------	-----------	-----------	---------------------

Arm Power	-0.000001258	-0.000005780	-0.000010000 - 0.000010000
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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:				
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Small Ring (in)	2.01	2.00	-0.01	+/- 0.20
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Medium Ring (in)	3.78	3.75	-0.03	+/- 0.20
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RING DIAMETER:				
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Small Ring (in)	6.54	6.50	-0.04	+/- 0.20
Medium Ring (in)	8.14	8.25	0.11	+/- 0.20
Large Ring (in)	14.97	15.00	0.03	+/- 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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SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad - 10844781	Reference Calibration Date:	17-Jan-13 14:21:35
Engineer:	J. BOLLUM	Calibration Date:	05-Mar-13 11:01:55
Software Version:	WL INSITE R3.8.0 (Build 2)	Calibration Version:	1

Logging Source S/N: 5168GW		
Aluminum Block S/N: LIBERAL	Density: 2.598g/cc	Pe: 3.170
Magnesium Block S/N: LIBERAL	Density: 1.684g/cc	Pe: 2.598

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0434	1.0190	0.90 - 1.10
Near Dens Gain	1.0101	1.0001	0.90 - 1.10
Near Peak Gain	1.0002	0.9771	0.90 - 1.10
Near Lith Gain	0.9736	0.9818	0.90 - 1.10
Far Bar Gain	1.0096	1.0161	0.90 - 1.10
Far Dens Gain	0.9991	1.0035	0.90 - 1.10
Far Peak Gain	0.9920	0.9974	0.90 - 1.10
Far Lith Gain	0.9714	0.9744	0.90 - 1.10
Near Bar Offset	-0.1830	0.0500	NONE
Near Dens Offset	0.1114	0.2016	NONE
Near Peak Offset	0.2008	0.3863	NONE
Near Lith Offset	0.4173	0.3415	NONE
Far Bar Offset	0.0534	0.0099	NONE
Far Dens Offset	0.1337	0.1093	NONE
Far Peak Offset	0.1632	0.1328	NONE
Far Lith Offset	0.2973	0.2908	NONE
Near Bar Background	809.28	804.29	700 - 1450
Near Dens Background	265.36	265.46	230 - 480
Near Peak Background	115.37	115.14	100 - 210
Near Lith Background	142.88	142.71	125 - 260
Far Bar Background	526.94	523.45	450 - 900
Far Dens Background	207.77	206.08	175 - 345
Far Peak Background	82.16	82.40	70 - 140
Far Lith Background	86.57	85.02	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.695	1.684	-0.011	+/- 0.015
Pe	2.462	2.552	0.090	+/- 0.150

ALUMINUM				
Density (g/cc)	2.597	2.598	0.001	+/- 0.01500
Pe	2.977	3.120	0.143	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0009	+/- 0.0110	-0.0026	+/- 0.0140
Magnesium Block	-0.0007	+/- 0.0110	-0.0020	+/- 0.0140
Aluminum Block	-0.0013	+/- 0.0110	-0.0013	+/- 0.0140
Resolution	9.48	6.00 - 11.50	8.88	6.00 - 11.50
Internal Verifier(B+D+P+L)	1328	1200 - 2700	897	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

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11048627						
Gamma Ray Calibrator	269.6	-----	-----	0.0	+/- 9.00	api
DSNT-11019643						
Snow-Block Porosity	0.0573	-----	-----	0.0000	+/- -.--	decp
SDLT-10950489						
Pad Extension	3.75	-----	-----	0.00	+/-0.20	in
Ring Diameter	8.25	-----	-----	0.00	+/-0.20	in
SDLT Pad-10844781						
Near(B+D+P+L)	1327.598	-----	-----	0.000	+/-12.900	cps
Far(B+D+P+L)	896.943	-----	-----	0.000	+/-14.781	cps

Data: LPR 1 23\0001 SP-GTET-DSN-SDL-ACRT-CH\IDLE

Date: 25-Mar-13 08:04:55

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	2.000	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	4550.00	ft
SHARED	BHT	Bottom Hole Temperature	200.0	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 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	
Microlog Pad	MLOK	Process MicroLog 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
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



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	
Microlog Pad				
TPUL	Tension Pull	22.83	NO	
MINV	Microlog Lateral	22.83	BLK	0.750
MNOR	Microlog Normal	22.83	BLK	0.750
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	0.920

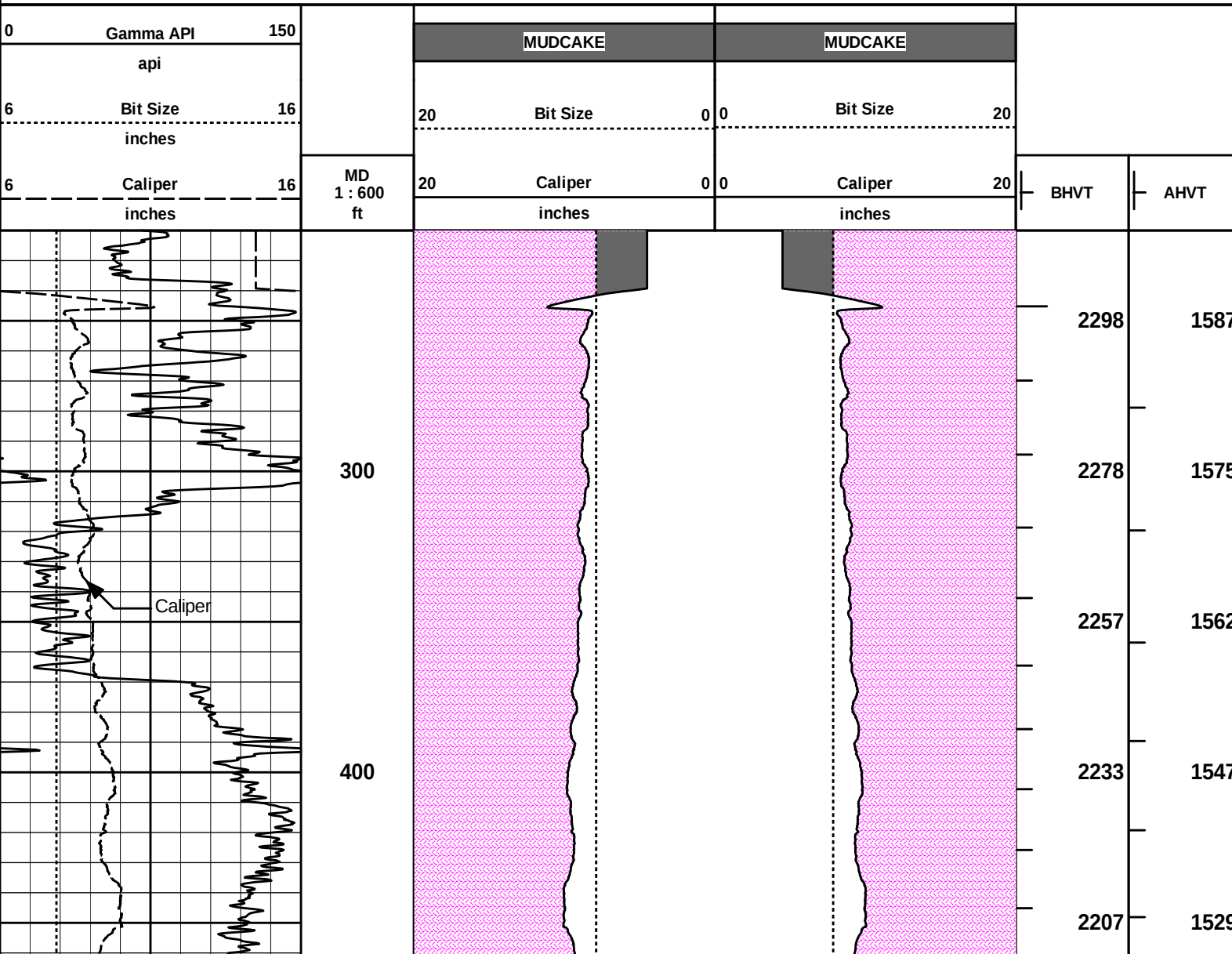
NLIU	Near Lithology Unfiltered	22.46	BLK	0.250
FAB	Far Above	22.81	BLK	0.250
FHI	Far Cesium High	22.81	BLK	0.250
FLO	Far Cesium Low	22.81	BLK	0.250
FVA	Far Valley	22.81	BLK	0.250
FBA	Far Barite	22.81	BLK	0.250
FDE	Far Density	22.81	BLK	0.250
FPK	Far Peak	22.81	BLK	0.250
FLI	Far Lithology	22.81	BLK	0.250
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	

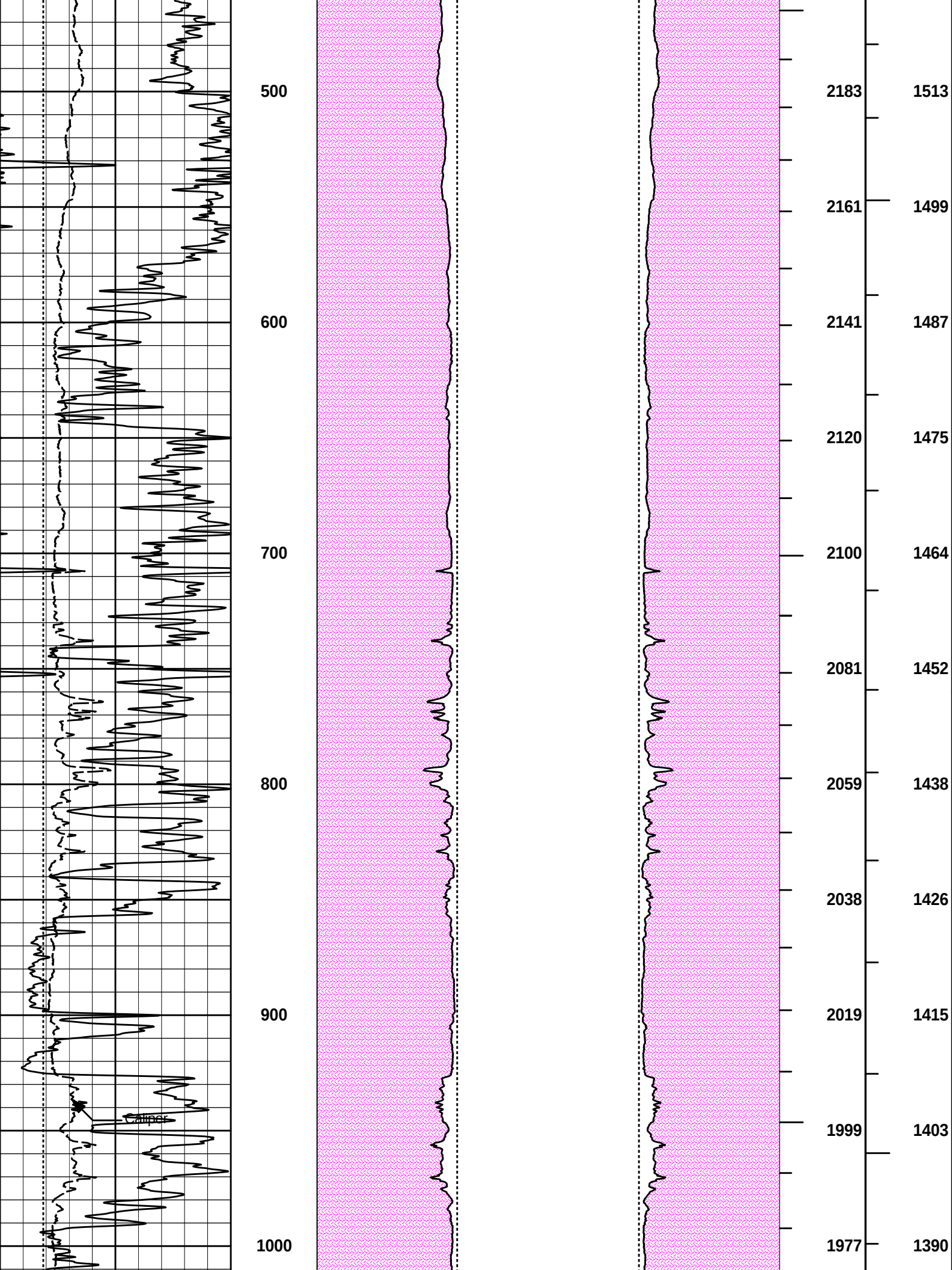
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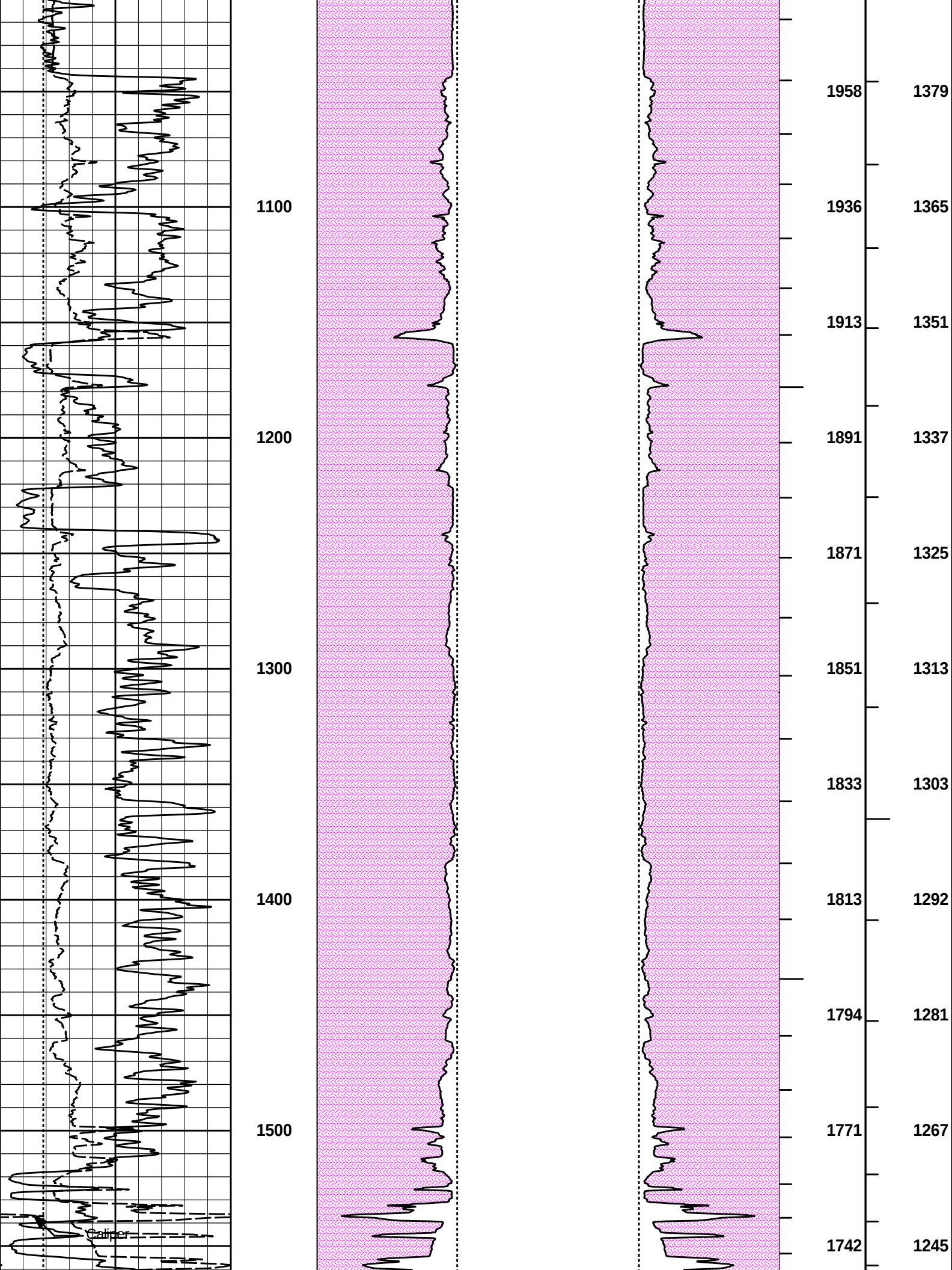


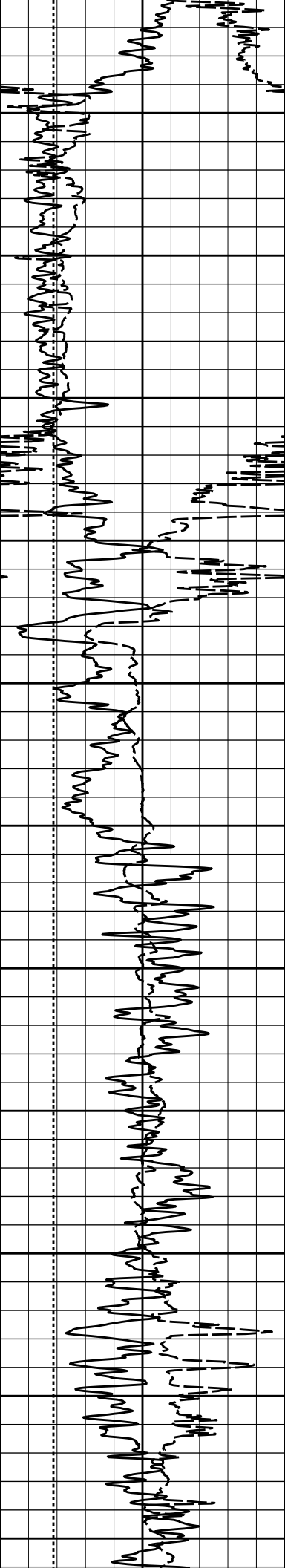
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ANNULAR HOLE VOLUME PLOT









1600

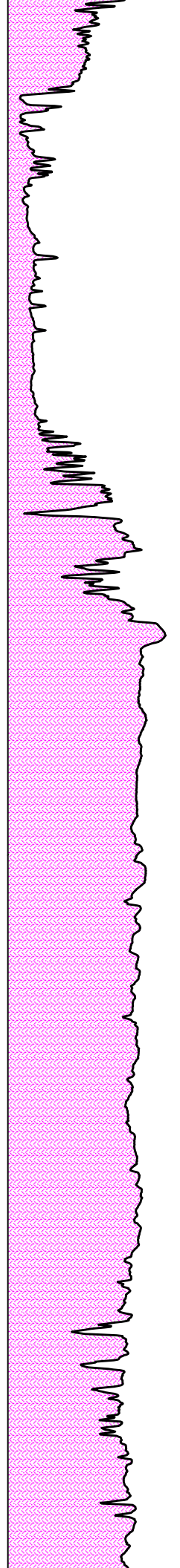
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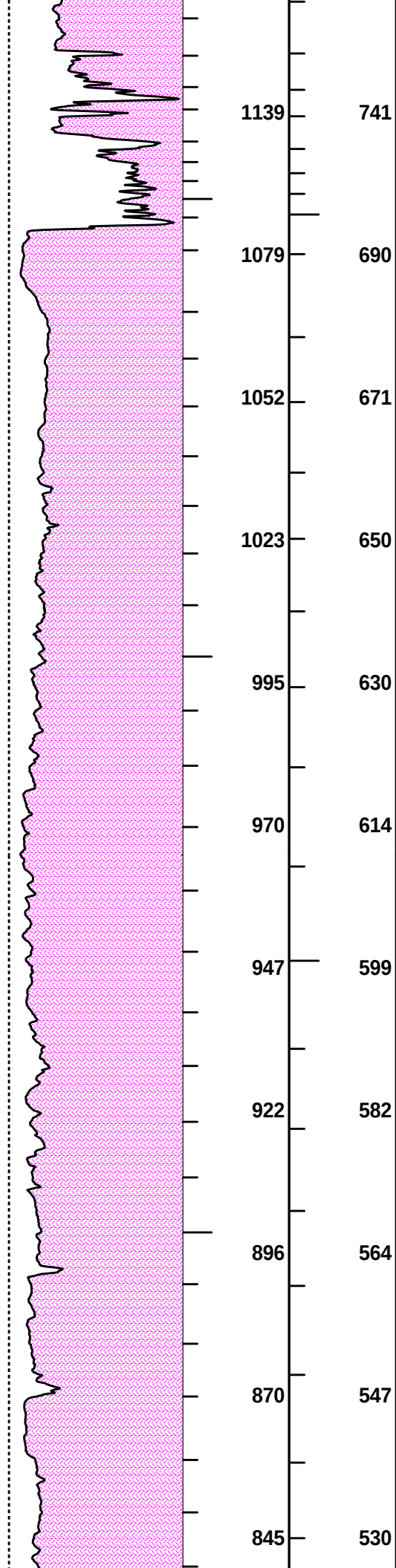
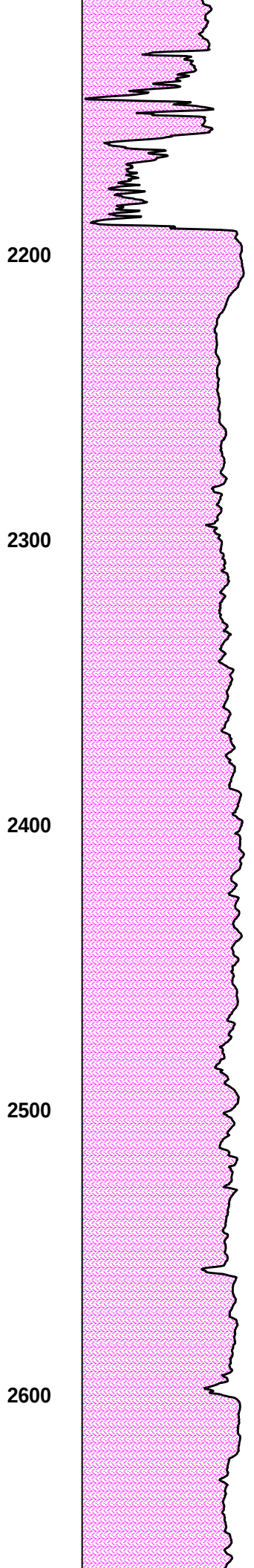
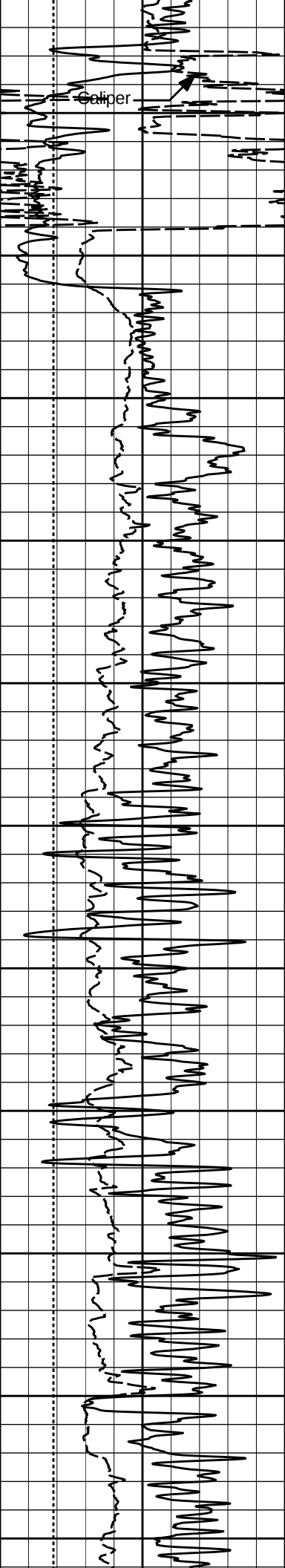
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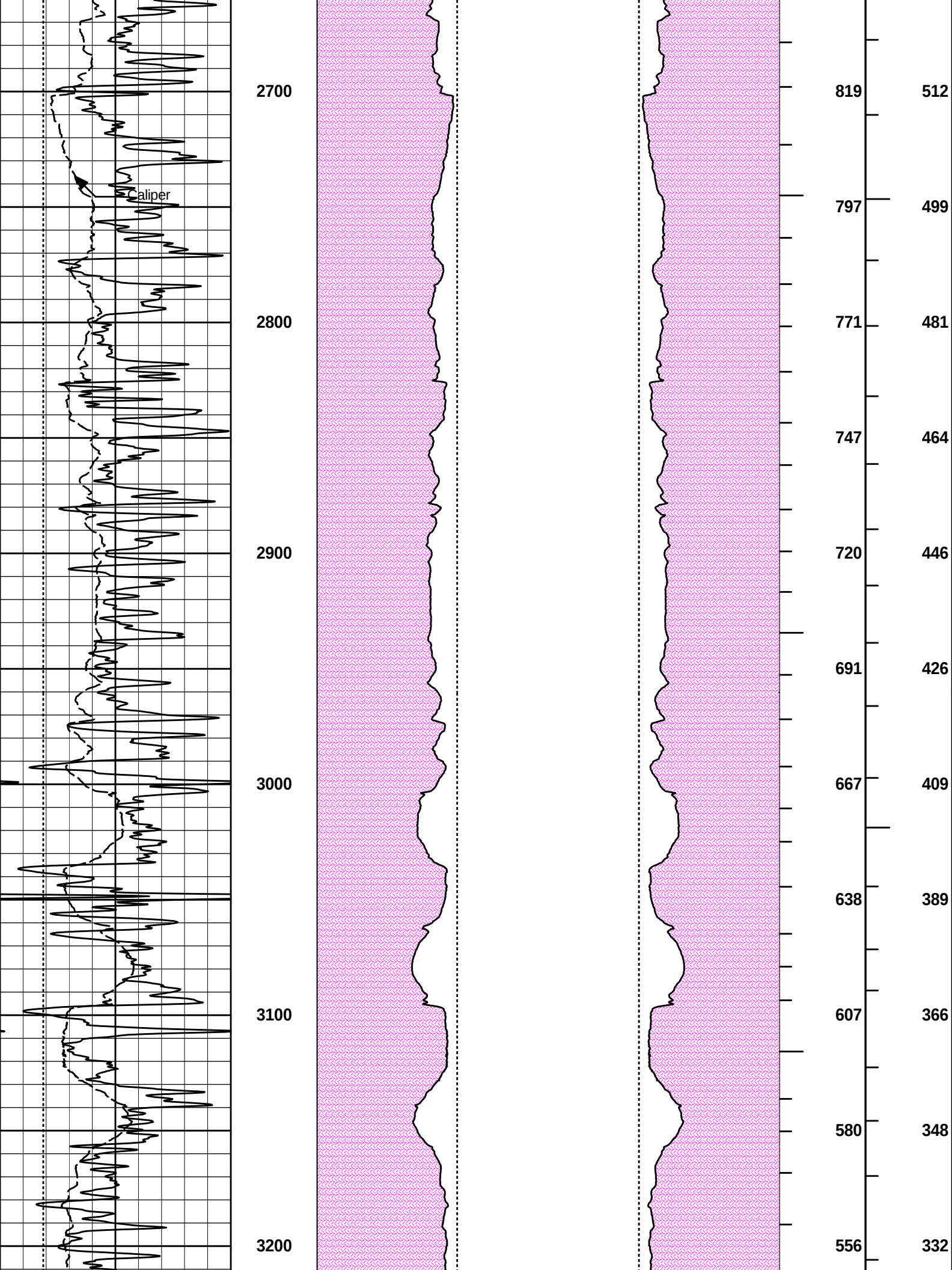
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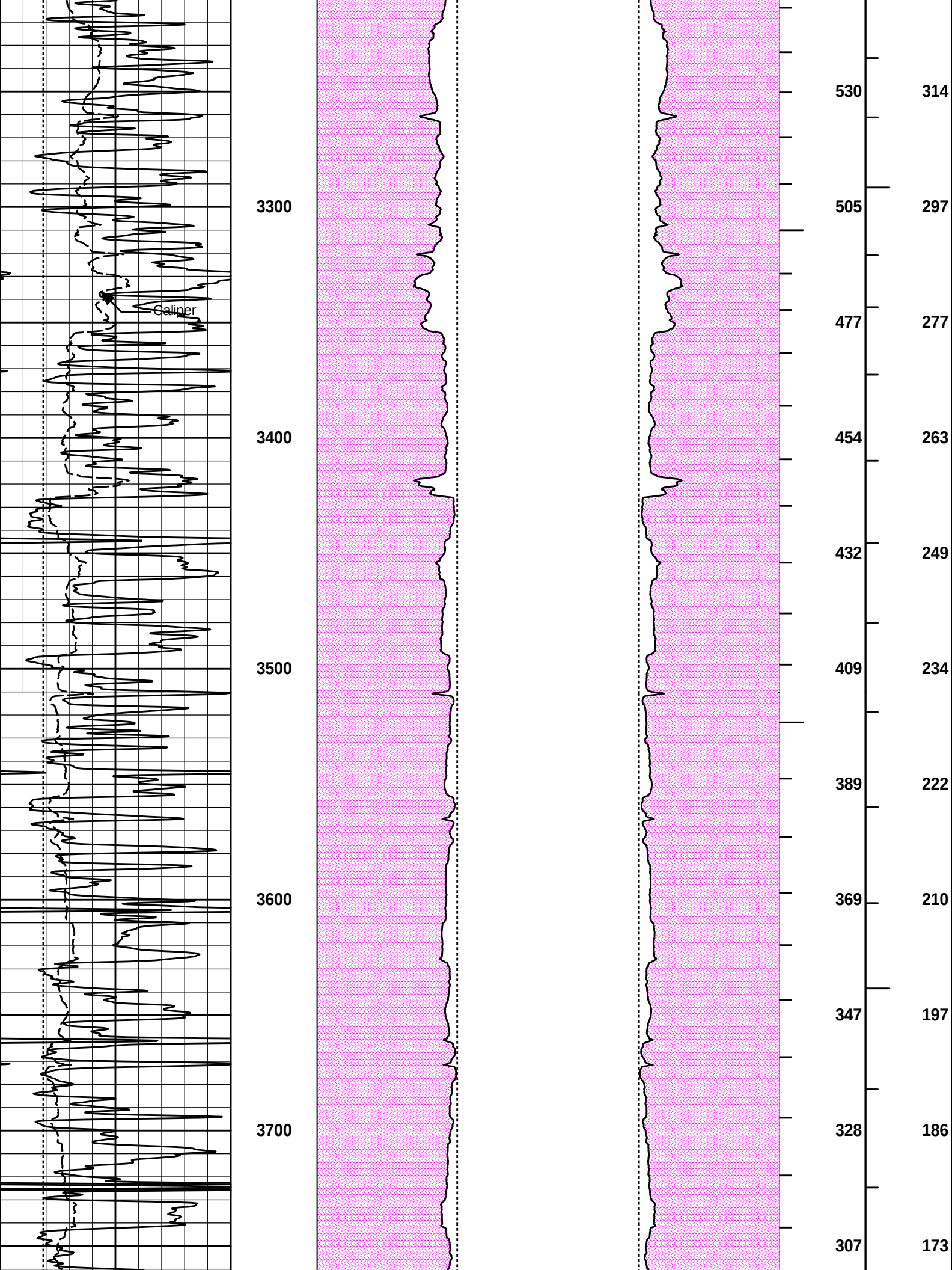
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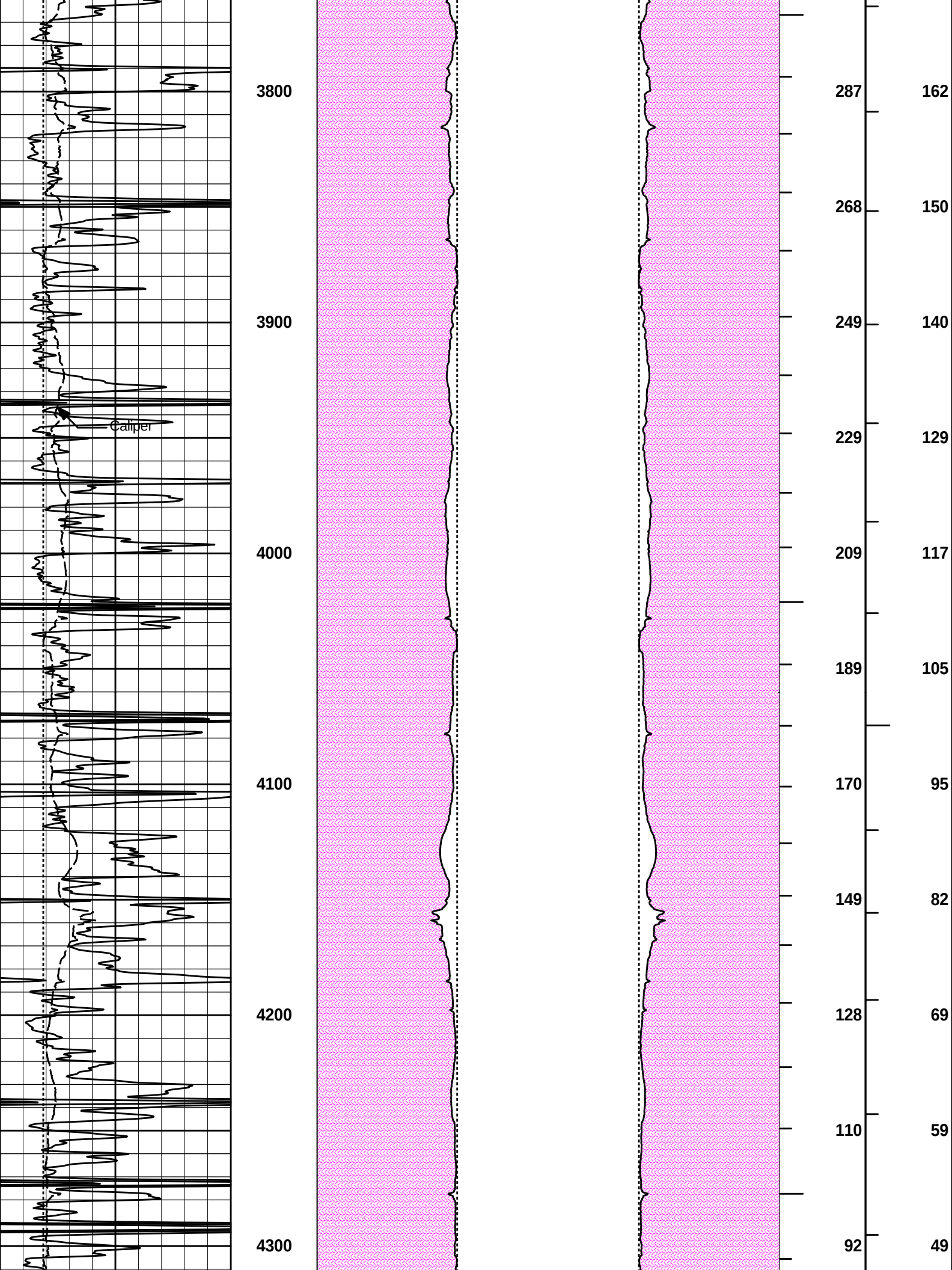
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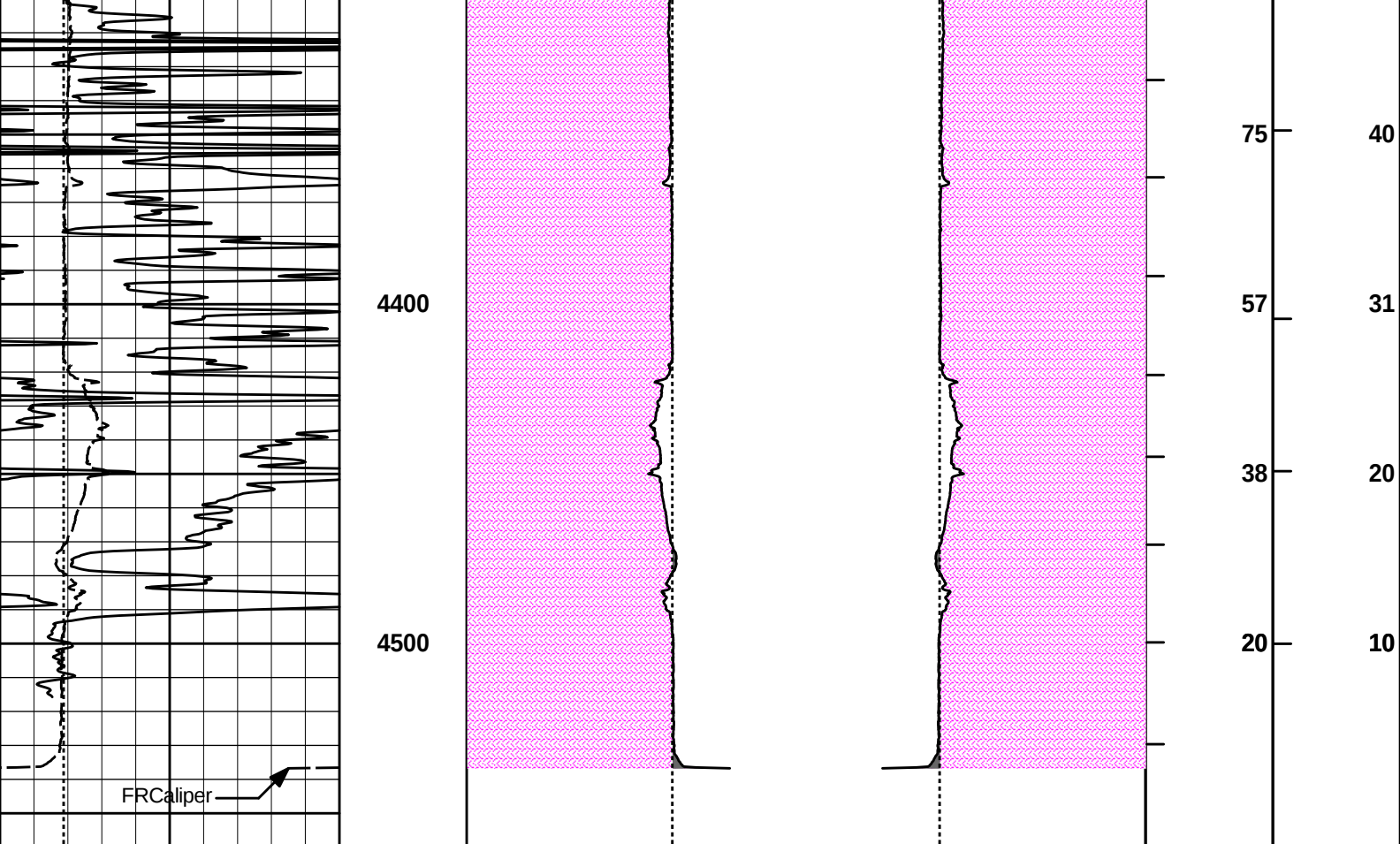
777











6	Caliper	16	MD 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				
	api								

HALLIBURTON

Plot Time: 25-Mar-13 10:26:49
Plot Range: 220 ft to 4559.67 ft
Data: LPR_1_23\Well Based\CASING\
Plot File: \\LOCAL-ILPR_1_23\0001 SP-GTET-DSN-SDL-ACRT-CH\PORO\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	LANDMARK RESOURCES INC.		
WELL	LPR 1-23		
FIELD	WILDCAT		
COUNTY	LOGAN	STATE	KANSAS
HALLIBURTON		SPECTRAL DENSITY DUAL SPACED NEUTRON LOG	