

HALLIBURTON

DUAL SPACED NEUTRON
SPECTRAL DENSITY
LOG

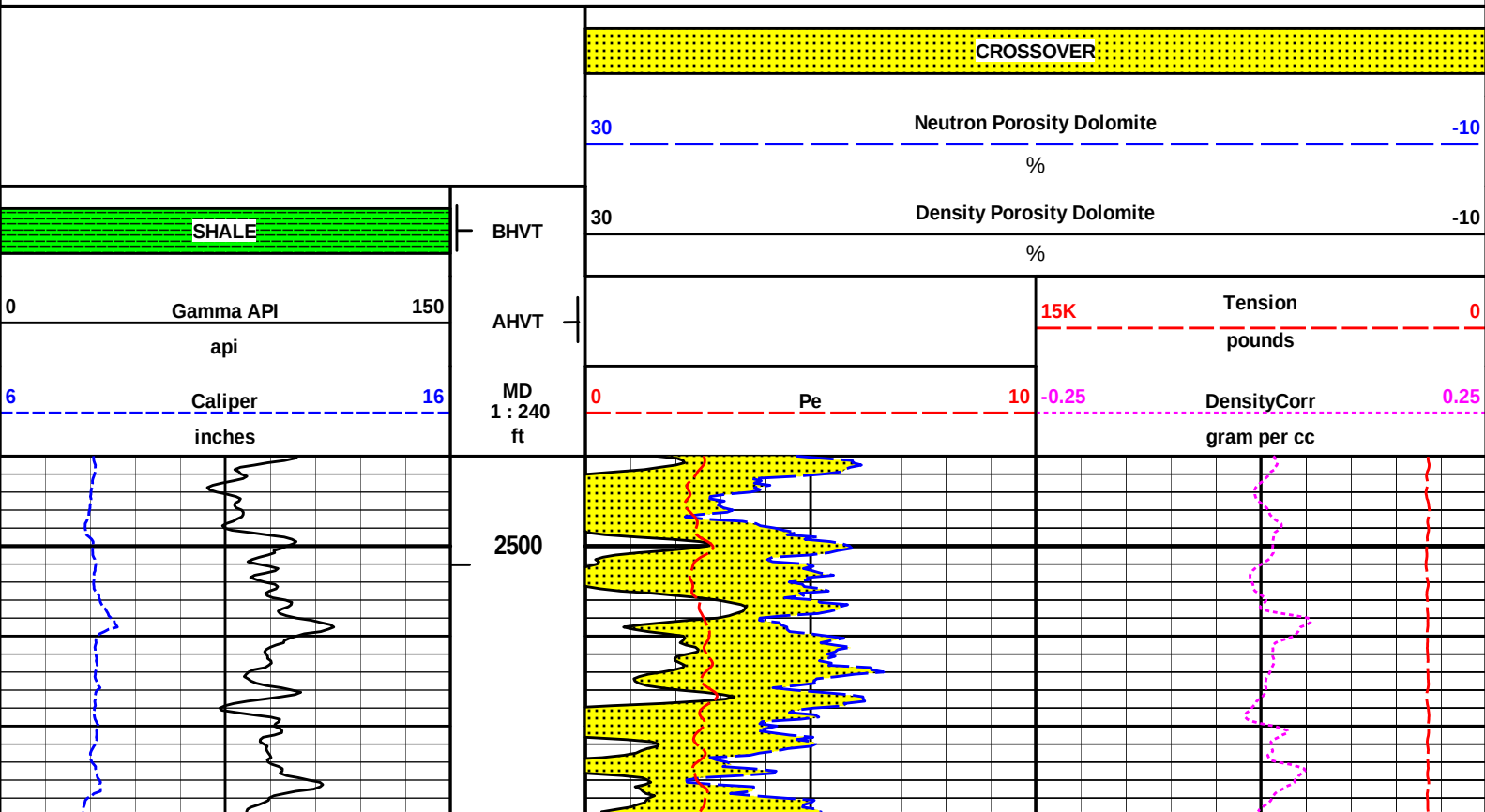
COMPANY				NEW GULF RESOURCES, LLC			
WELL				BOYD 1-3			
FIELD/BLOCK				WILDCAT			
COUNTY				LOGAN			
STATE				KANSAS			
Permanent Datum				GL			
Log measured from				KB			
Drilling measured from				KB			
Date				25-Apr-14			
Run No.				ONE			
Depth - Driller				4760.00 ft			
Depth - Logger				4756.0 ft			
Bottom - Logged Interval				4734.0 ft			
Top - Logged Interval				2500.0 ft			
Casing - Driller				8.625 in @ 270.0 ft			
Casing - Logger				261.0 ft			
Bit Size				7.875 in			
Type Fluid in Hole				Water Based Mud			
Density				9.3 ppg			
Viscosity				57.00 s/qt			
PH				11.00 pH			
Source of Sample				MUD PIT			
Rm @ Meas. Temperature				1.080 ohmm @ 85.00 degF			
Rmf @ Meas. Temperature				0.91 ohmm @ 82.00 degF			
Rmc @ Meas. Temperature				1.250 ohmm @ 85.00 degF			
Source Rmf				MEASURED			
Rm @ BHT				0.79 ohmm @ 118.0 degF			
Time Since Circulation				3.0000 hr			
Time on Bottom				25-Apr-14 10:54			
Max. Rec. Temperature				118.0 degF @ 4756.0 ft			
Equipment				11454566 LIBERAL			
Recorded By				THOMAS K HYDE			
Witnessed By				J. GOLDSMITH			

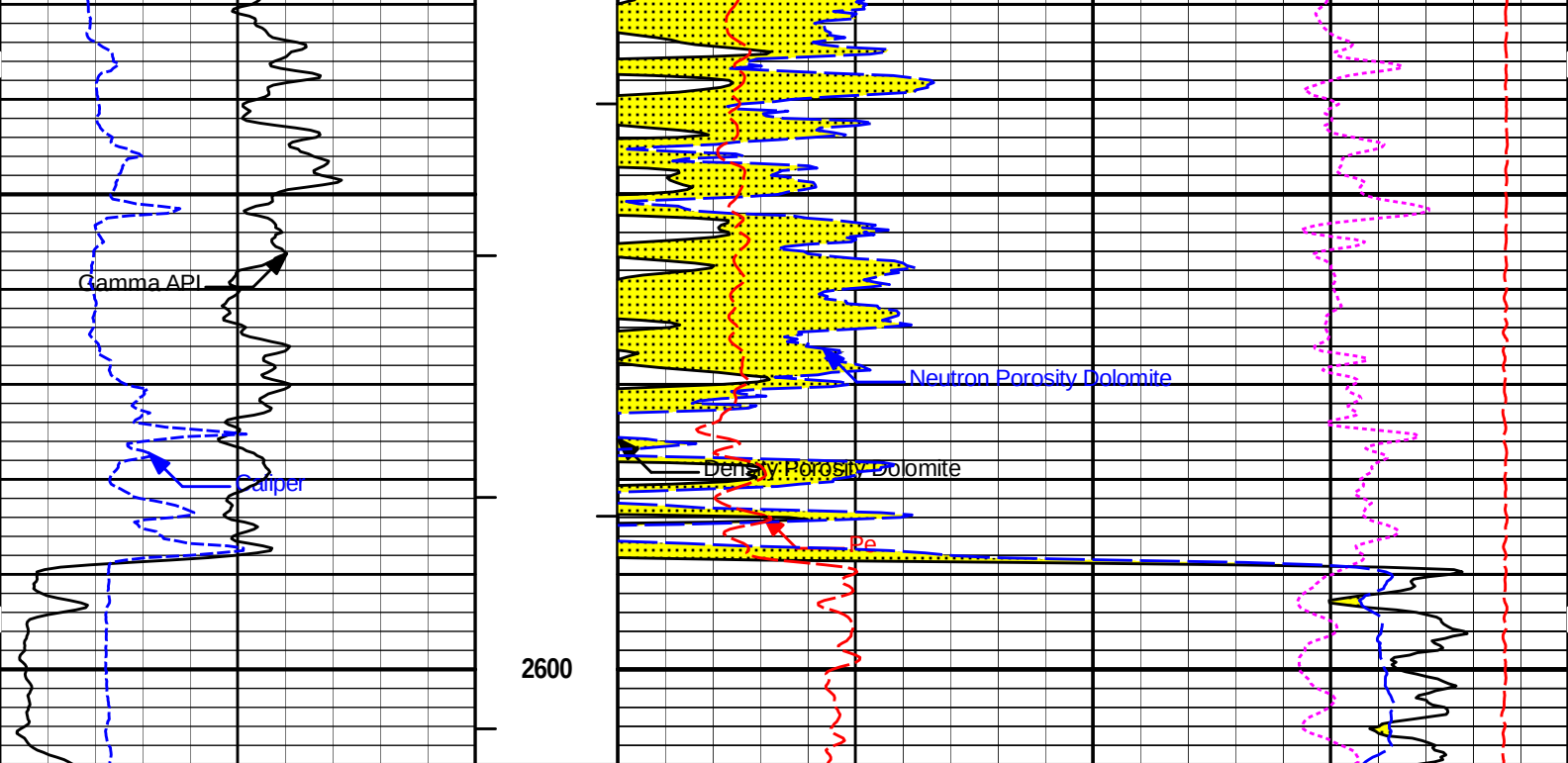
COMPANY		NEW GULF RESOURCES, LLC	
WELL		BOYD 1-3	
FIELD/BLOCK		WILDCAT	
COUNTY		LOGAN	
STATE		KANSAS	
API No.		15-109-21258-00-00	
Location		997' FNL 140' FWL	
Sect.		3	
Twp.		12S	
Rge.		32W	
Elev.		3049.0 ft	
D.F.		3056.0 ft	
G.L.		3049.0 ft	
Other Services:		ACRT MICRO	

Fold here

Service Ticket No.: 901294689				API Serial No.: 15-109-21258-00-00				PGM Version: WL INSITE R4.2.0 (Build 2)							
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.		@		@											
Rmc @ Meas. Temp.		@		@											
Source Rmf		Rmc													
Rm @ BHT		@		@											
Rmf @ BHT		@		@											
Rmc @ BHT		@		@											
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.		ONE		Run No.				Run No.		ONE		Run No.		ONE	
Serial No.		10811258		Serial No.				Serial No.		10685803		Serial No.		10755066	
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.		5073 GW		Serial No.		DSN-436	
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	4756	261	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														
LCM REPORTED AT 2 PPB														
CHLORIDES REPORTED AT 3000 MG/L														
TODAY'S CREW F. VILLA E. ZAPIEN K. PIDDINGTON														
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES LIBERAL, KANSAS 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	0	Pe	10	-0.25	DensityCorr	0.25
	inches		1 : 240					gram per cc	
0	Gamma API	150	ft						
	api		AHVT			15K		Tension	0
								pounds	
	SHALE		BHVT	30	Density Porosity Dolomite				
					%				
				30	Neutron Porosity Dolomite				
					%				
					CROSSOVER				

HALLIBURTON

Plot Time: 25-Apr-14 12:33:25
Plot Range: 2490 ft to 2610 ft
Data: BOYD 1-3\Well Based\DAQ-0001-004\
Plot File: \\PORO\Poros_IQ_5_MAIN_LIB

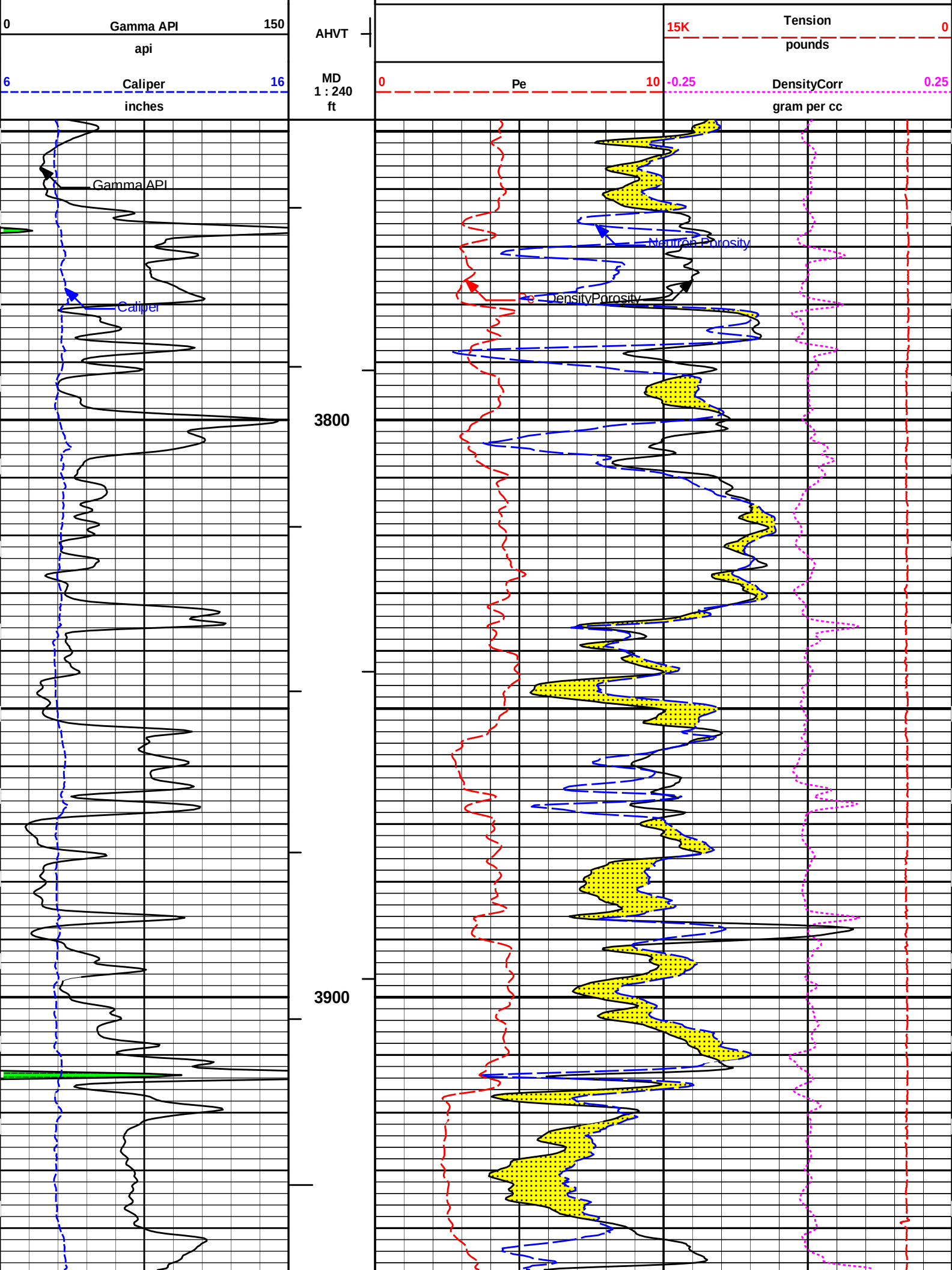
5 INCH MAIN LOG

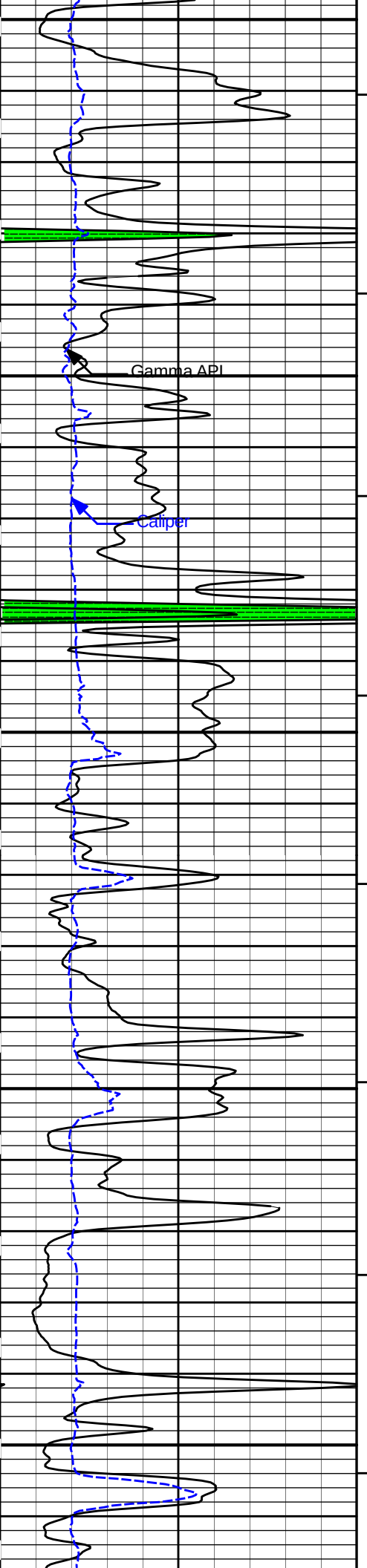
HALLIBURTON

Plot Time: 25-Apr-14 12:33:25
Plot Range: 3748 ft to 4759.75 ft
Data: BOYD 1-3\Well Based\DAQ-0001-004\
Plot File: \\PORO\Poros_IQ_5_MAIN_LIB

5 INCH MAIN LOG

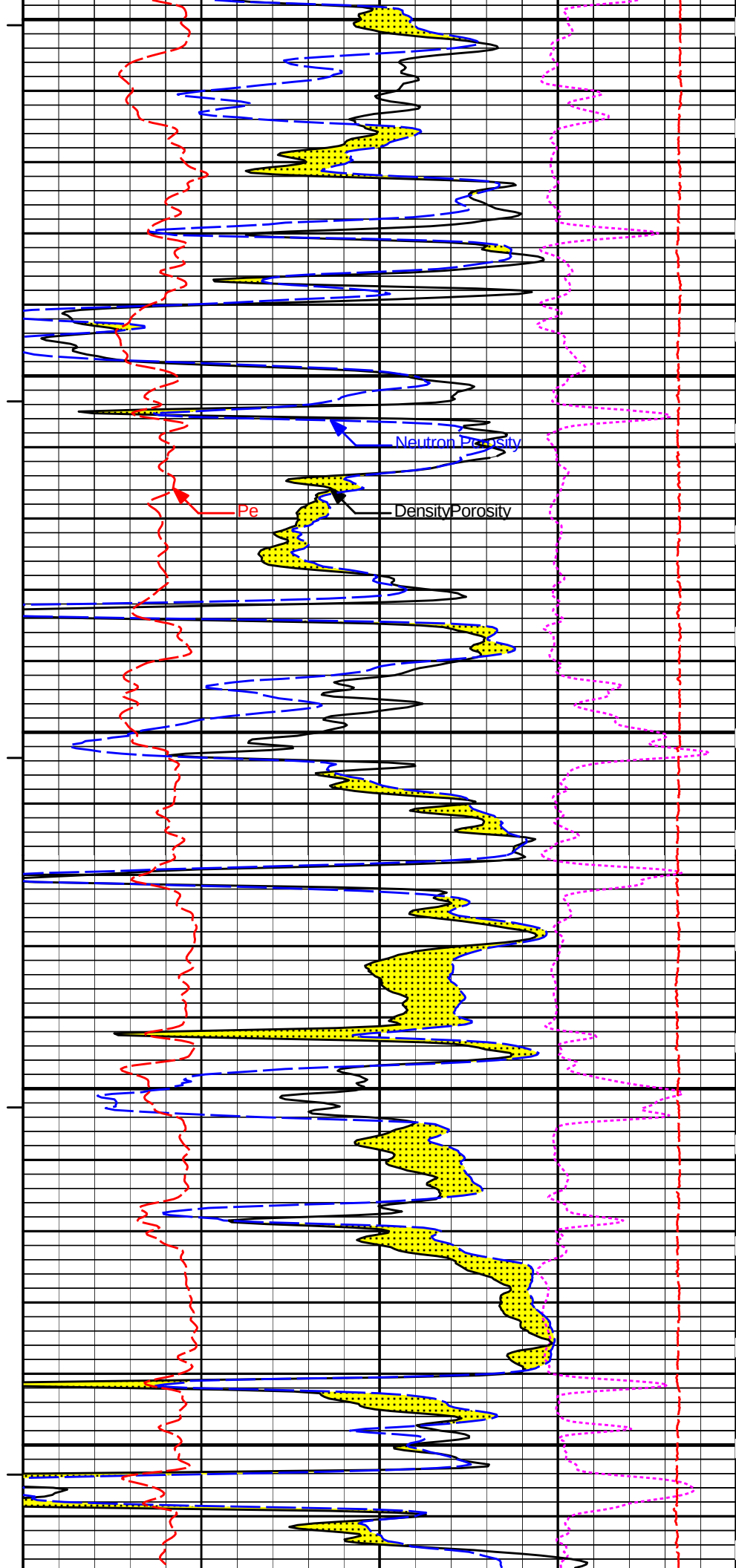
					CROSSOVER				
				30	Neutron Porosity				
					%				
	SHALE		BHVT	30	DensityPorosity				
					%				

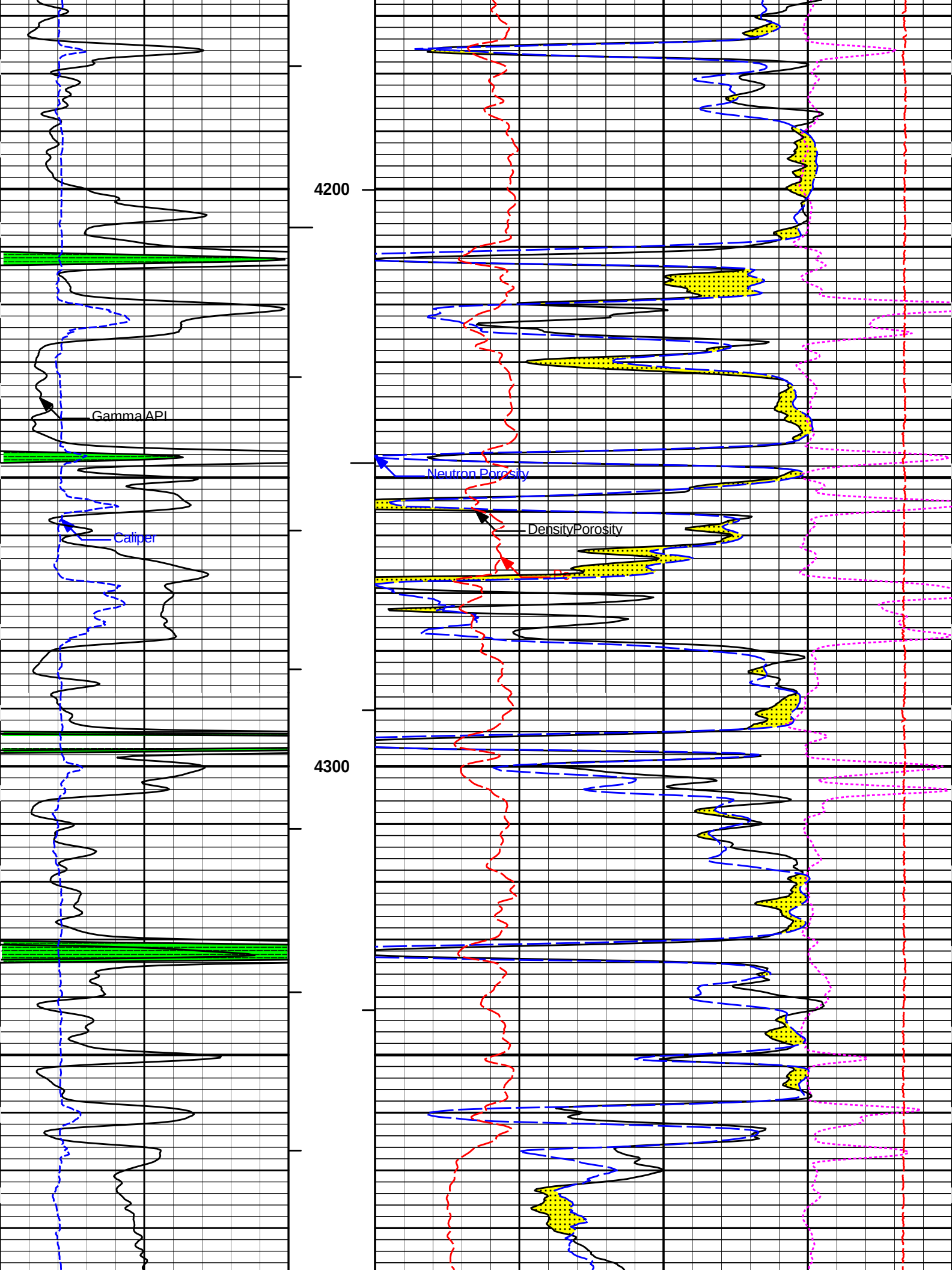


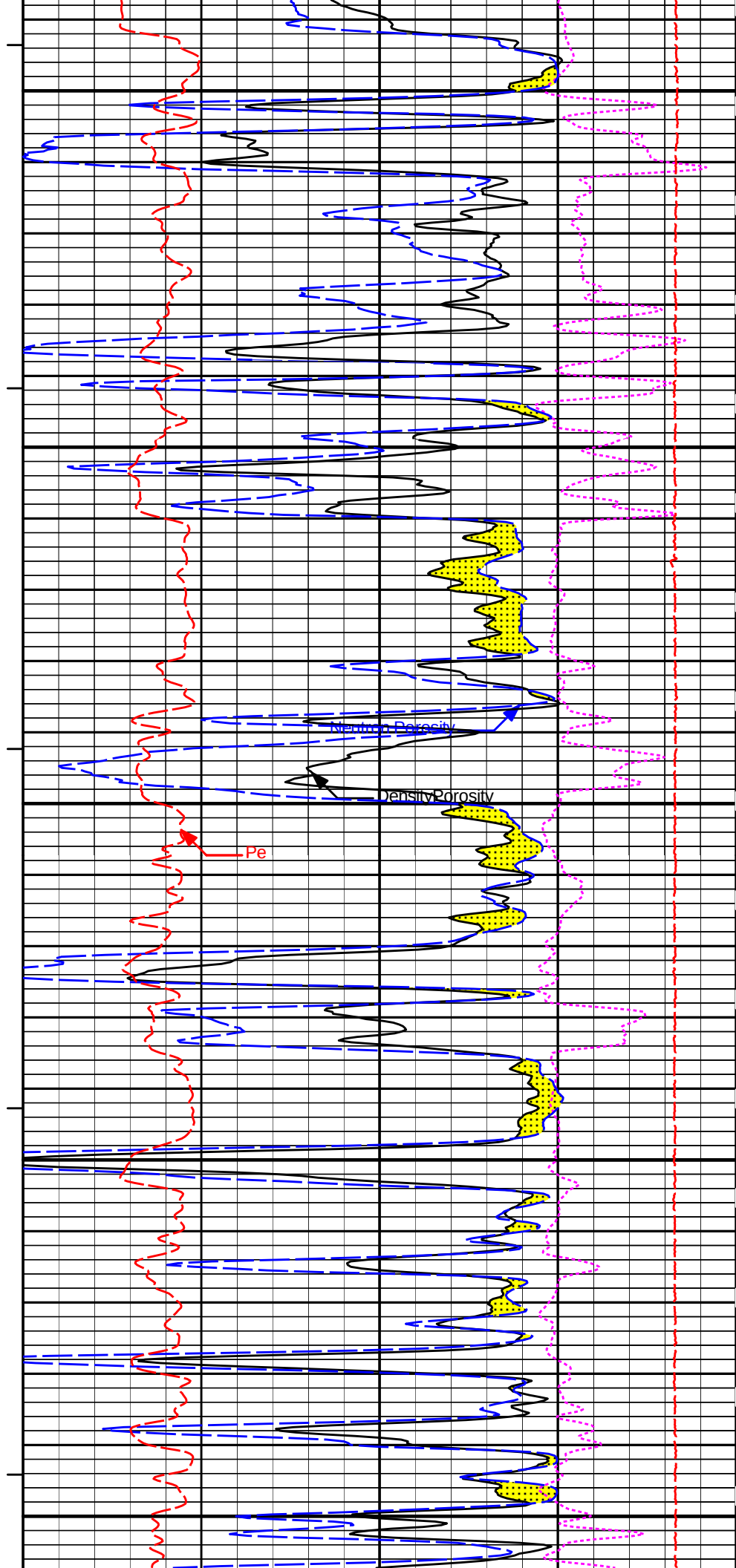
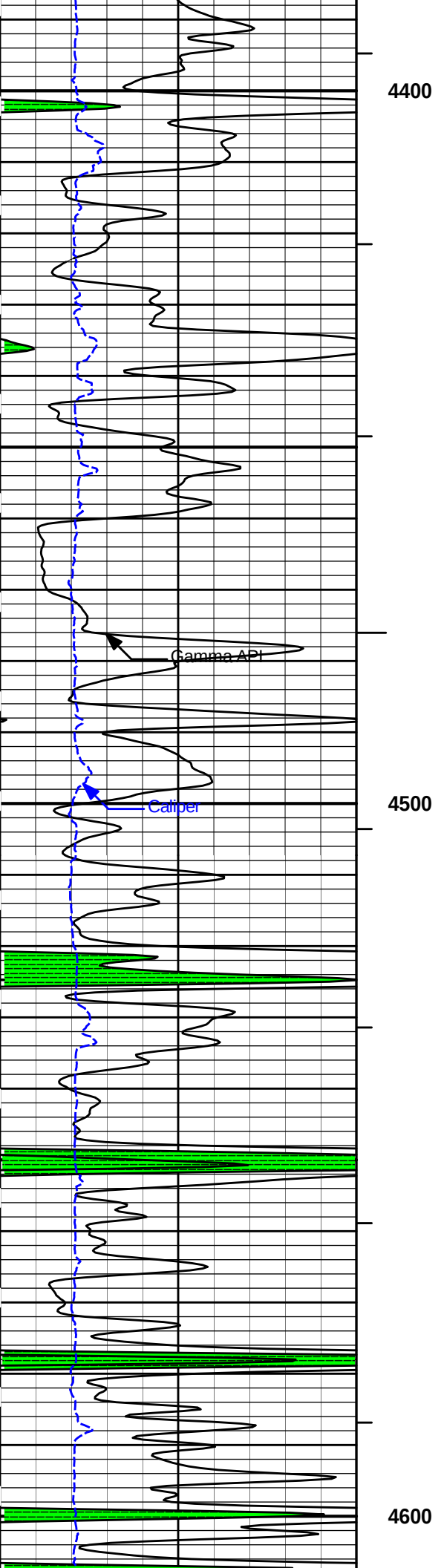


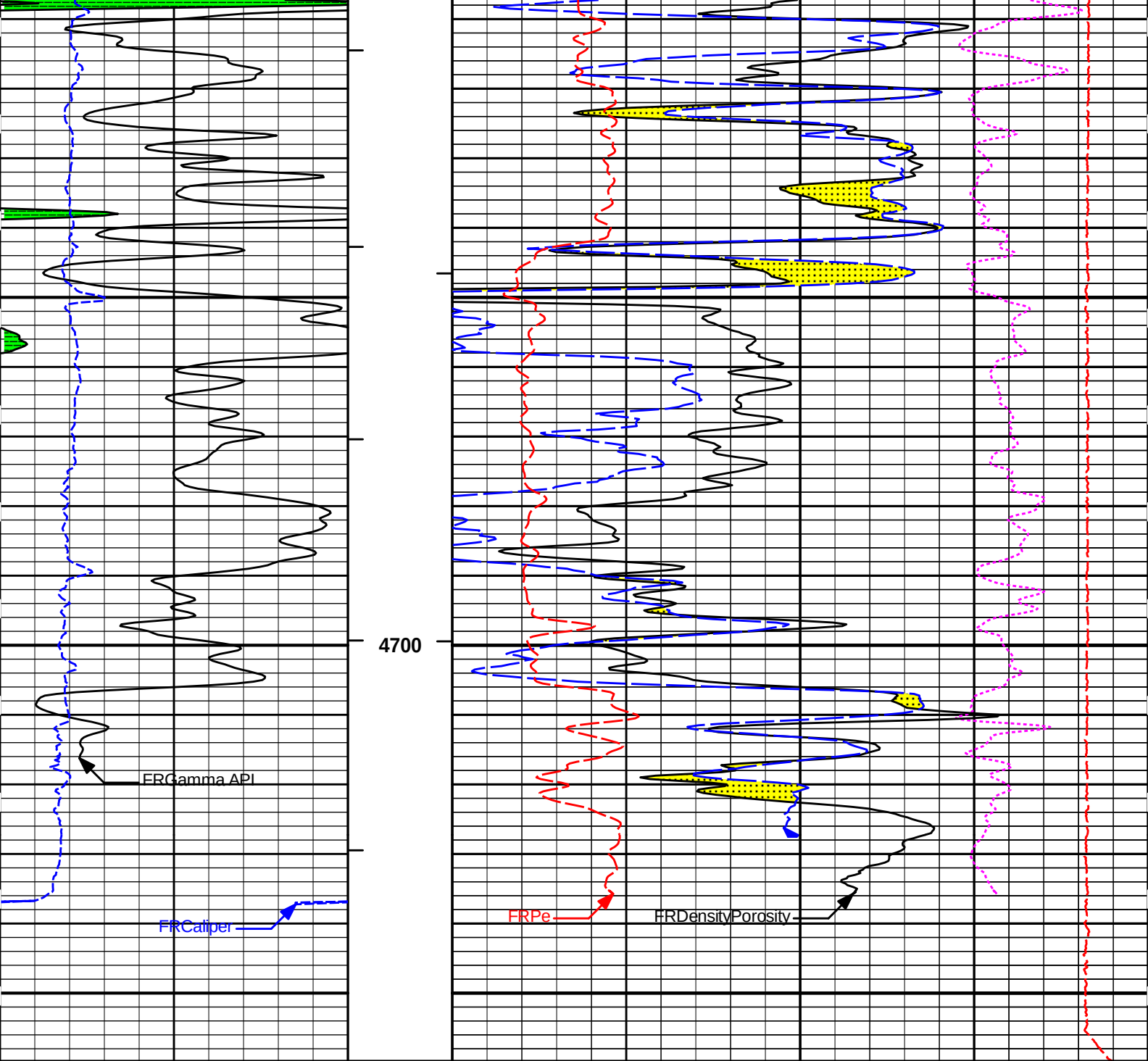
4000

4100









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

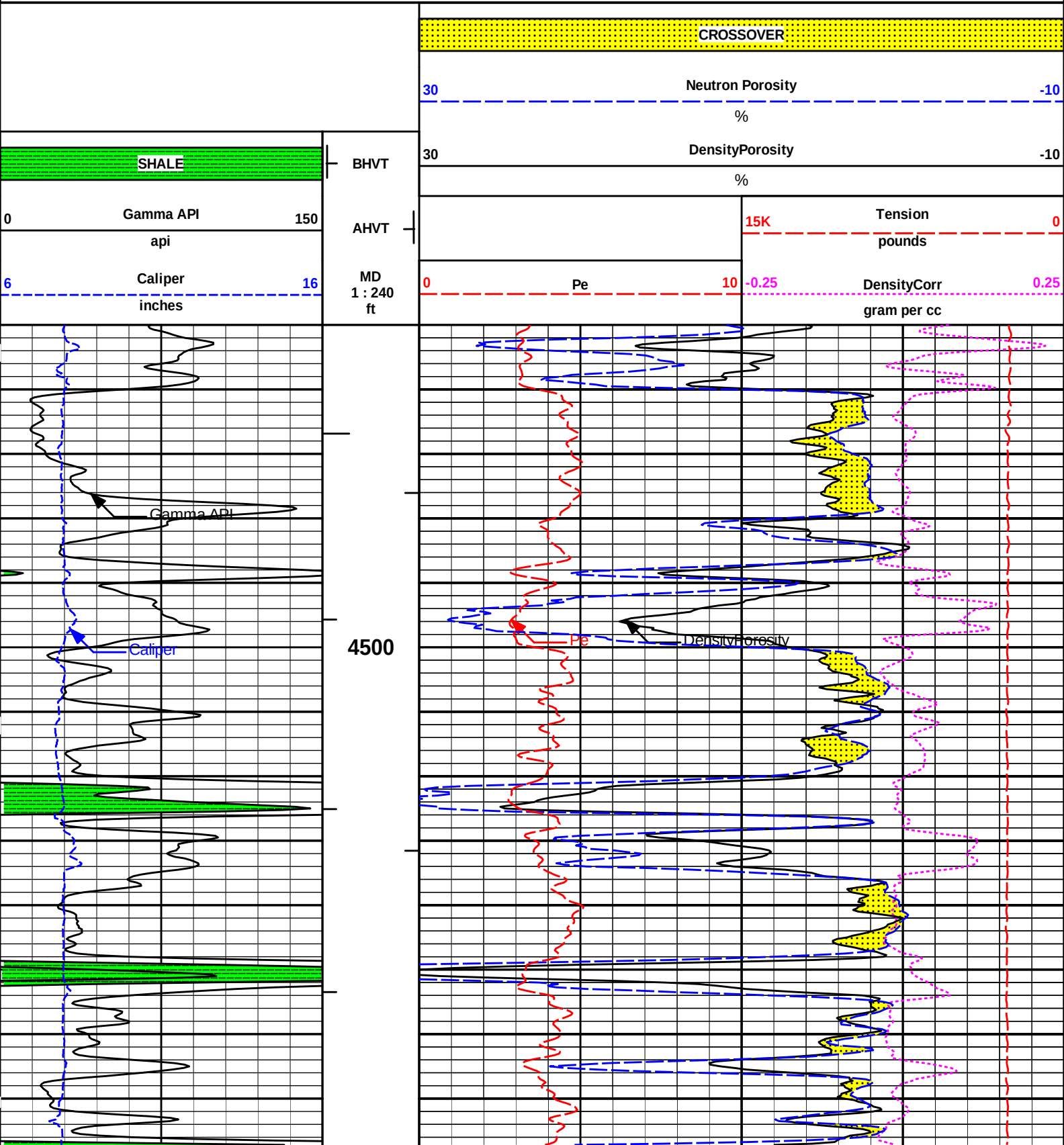
Plot Time: 25-Apr-14 12:33:27
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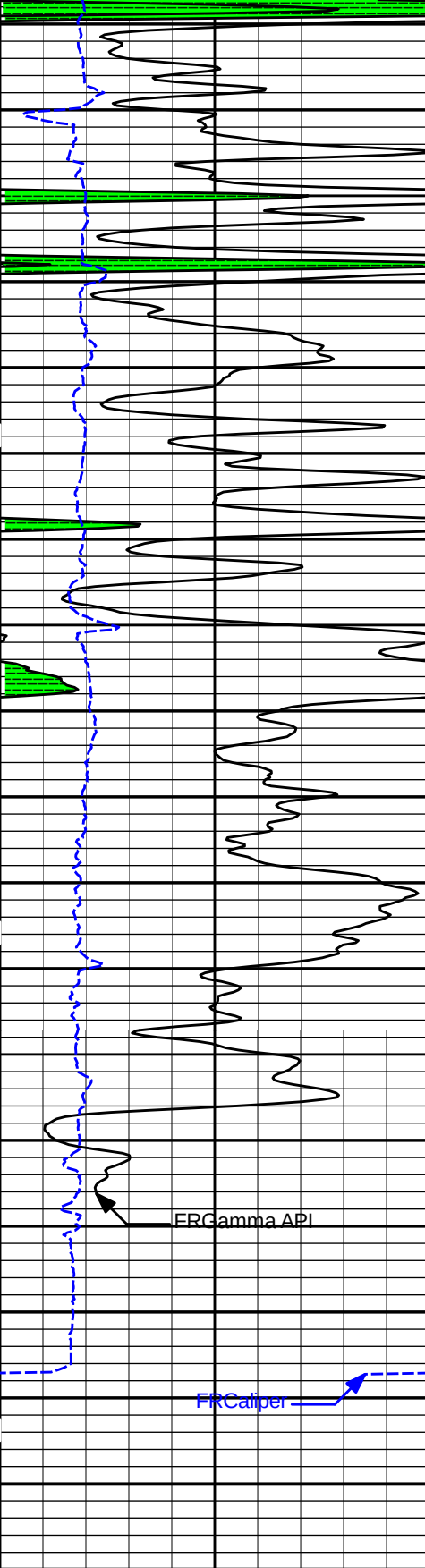
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 25-Apr-14 12:33:28
Plot Range: 4450 ft to 4759.92 ft
Data: BOYD 1-3\Well Based\DAQ-0001-003\
Plot File: \\PORO\Poros_IQ_5_REP_LIB

REPEAT SECTION



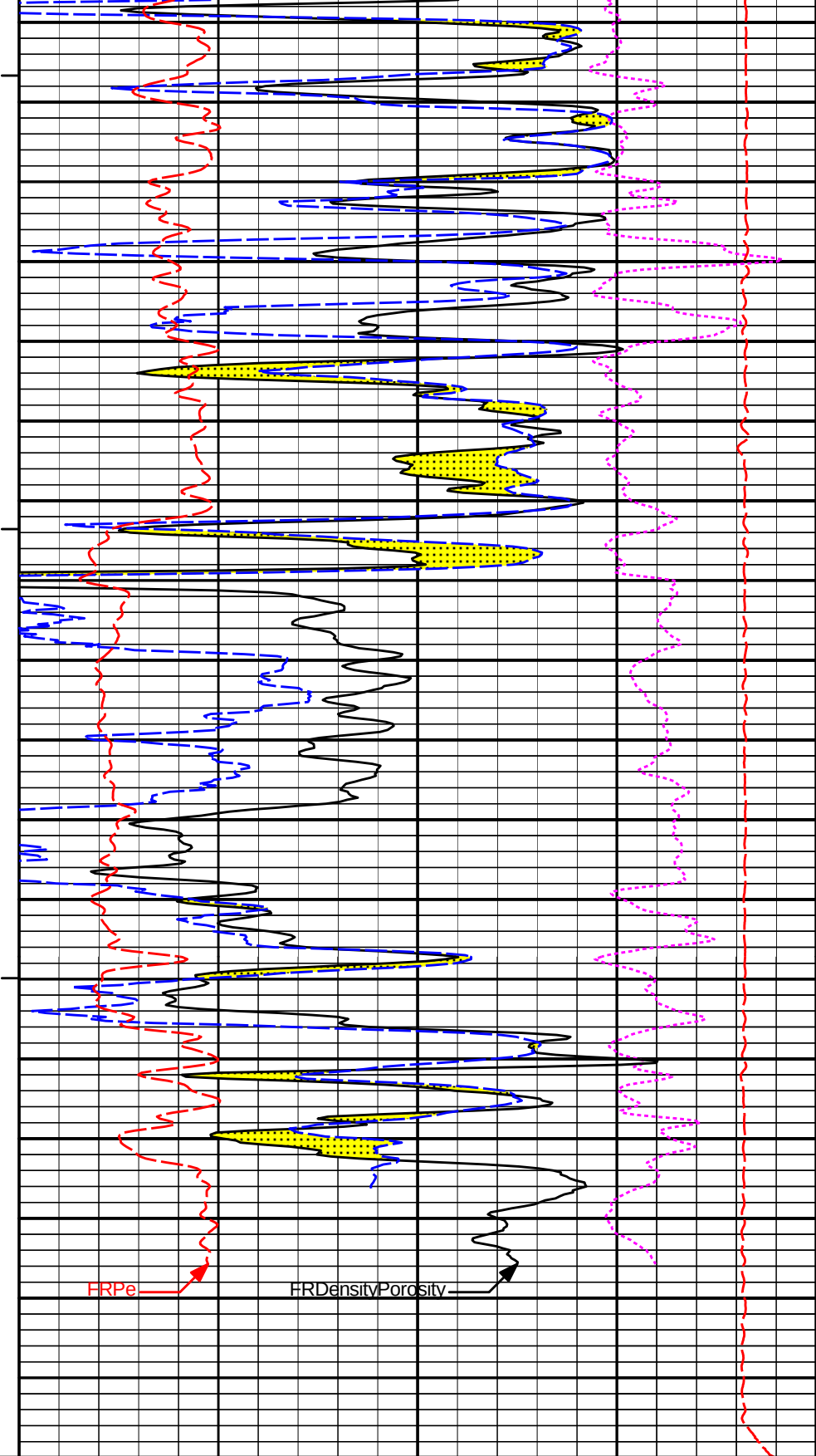


4600

4700

ERGgamma API

FRCaliper



0	Pe	10	-0.25	DensityCorr	0.25
				gram per cc	
				Tension	0
				pounds	
30	DensityPorosity		-10		
				%	
30	Neutron Porosity		-10		
				%	

6	Caliper	16
		inches
0	Gamma API	150
		api
		SHALE

MD
1 : 240
ft

AHVT

BHVT

HALLIBURTON

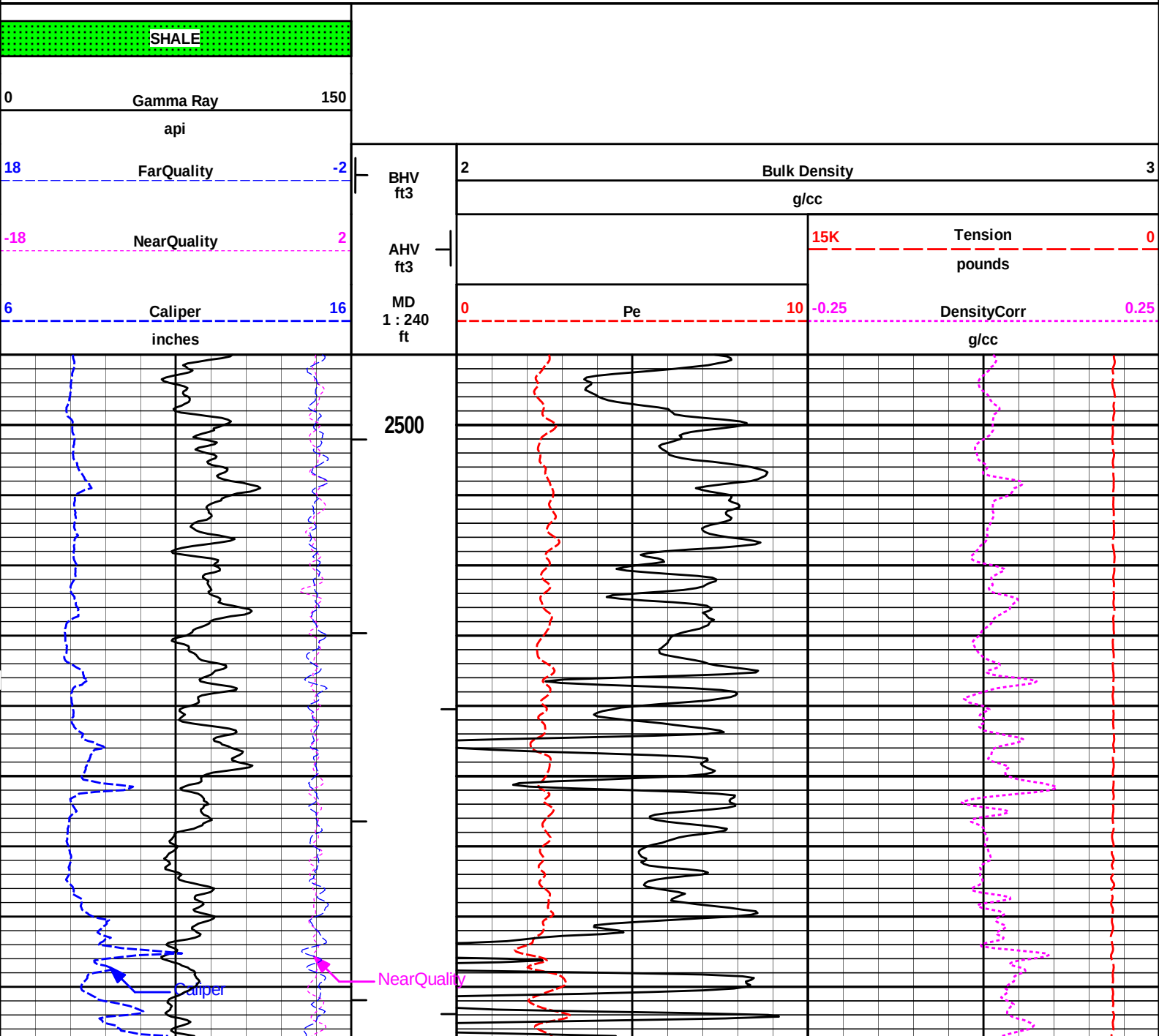
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Plot File: \\PORO\Porosity_Q_5_REP_LIB

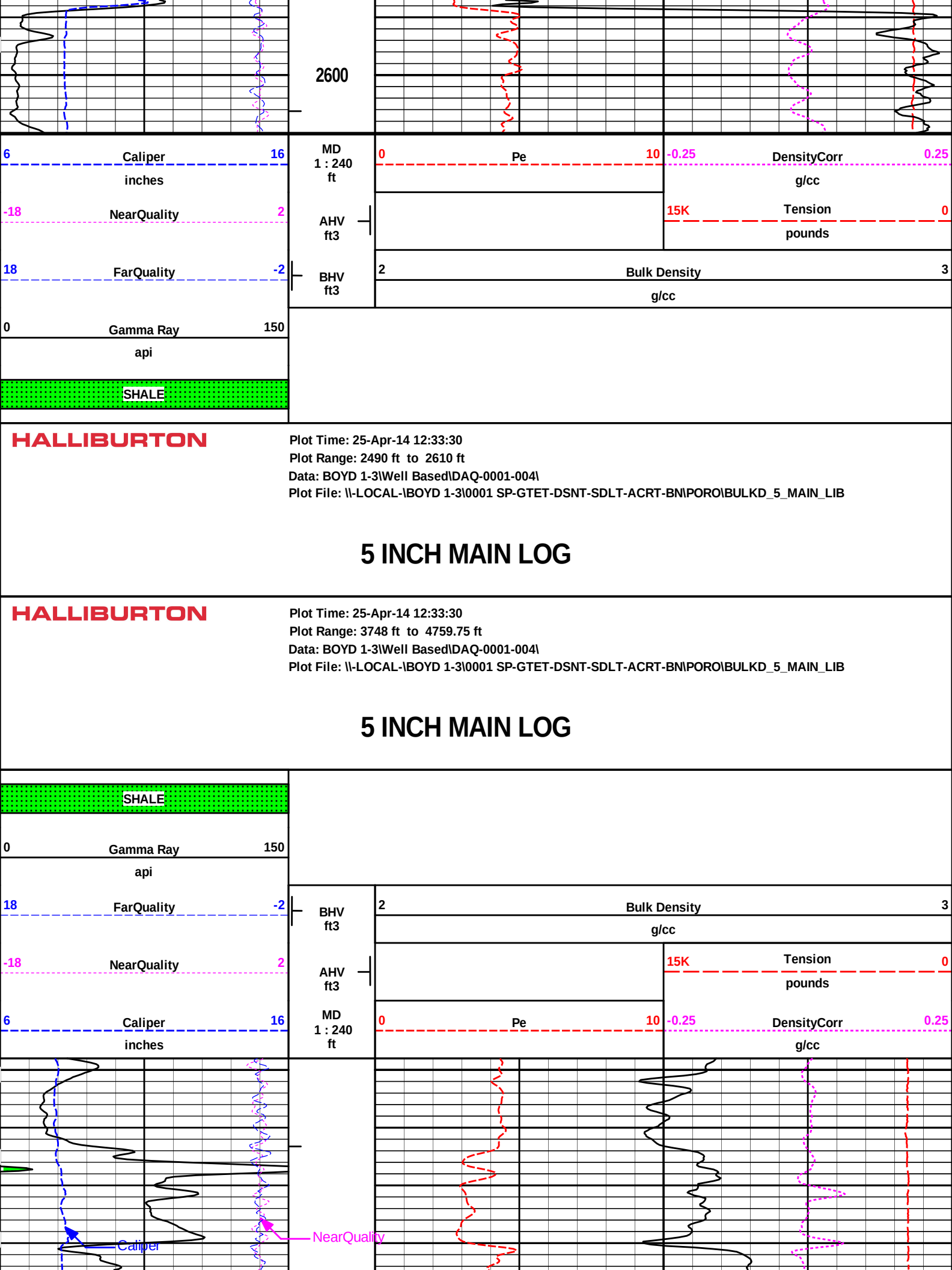
REPEAT SECTION

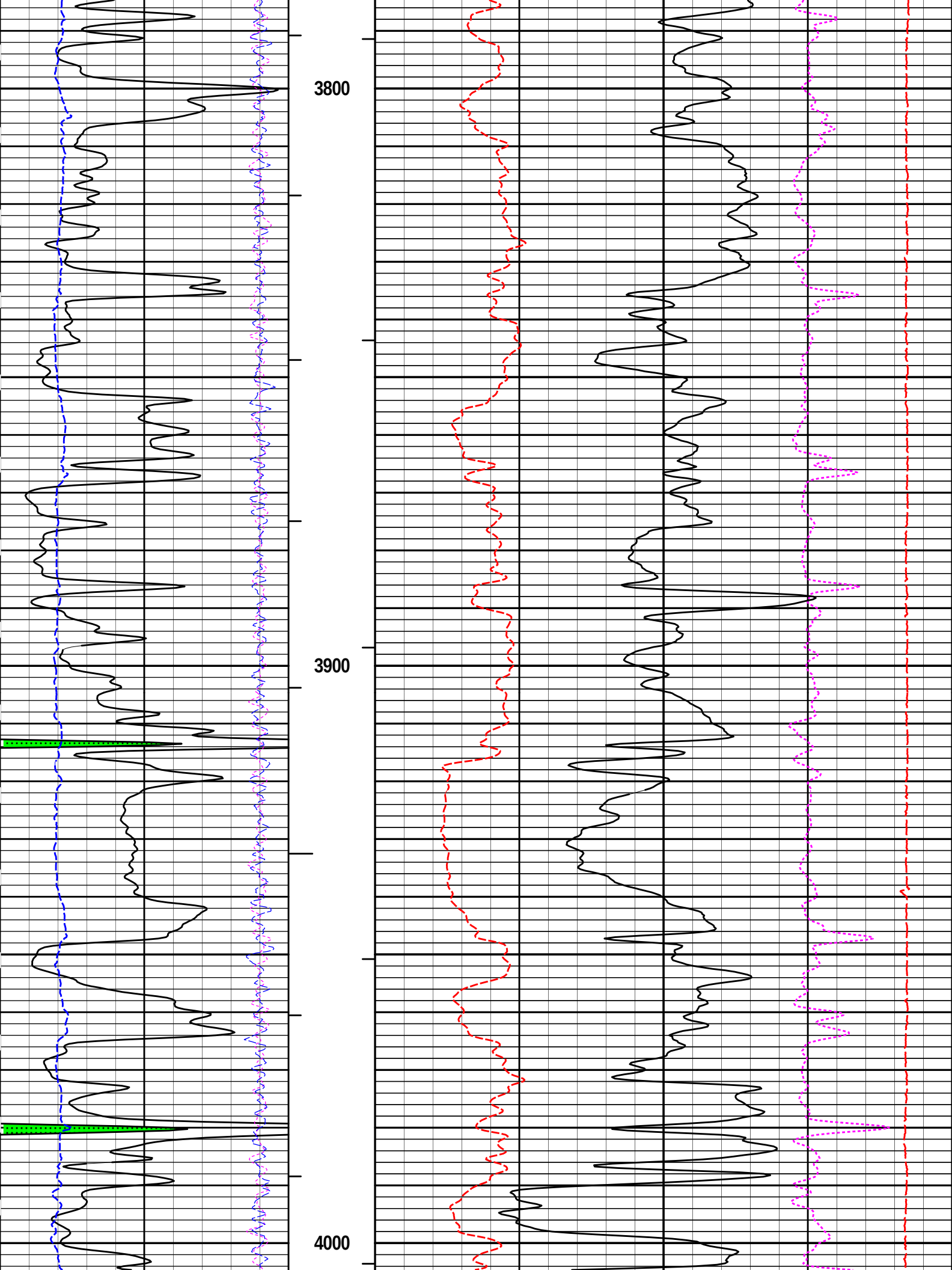
HALLIBURTON

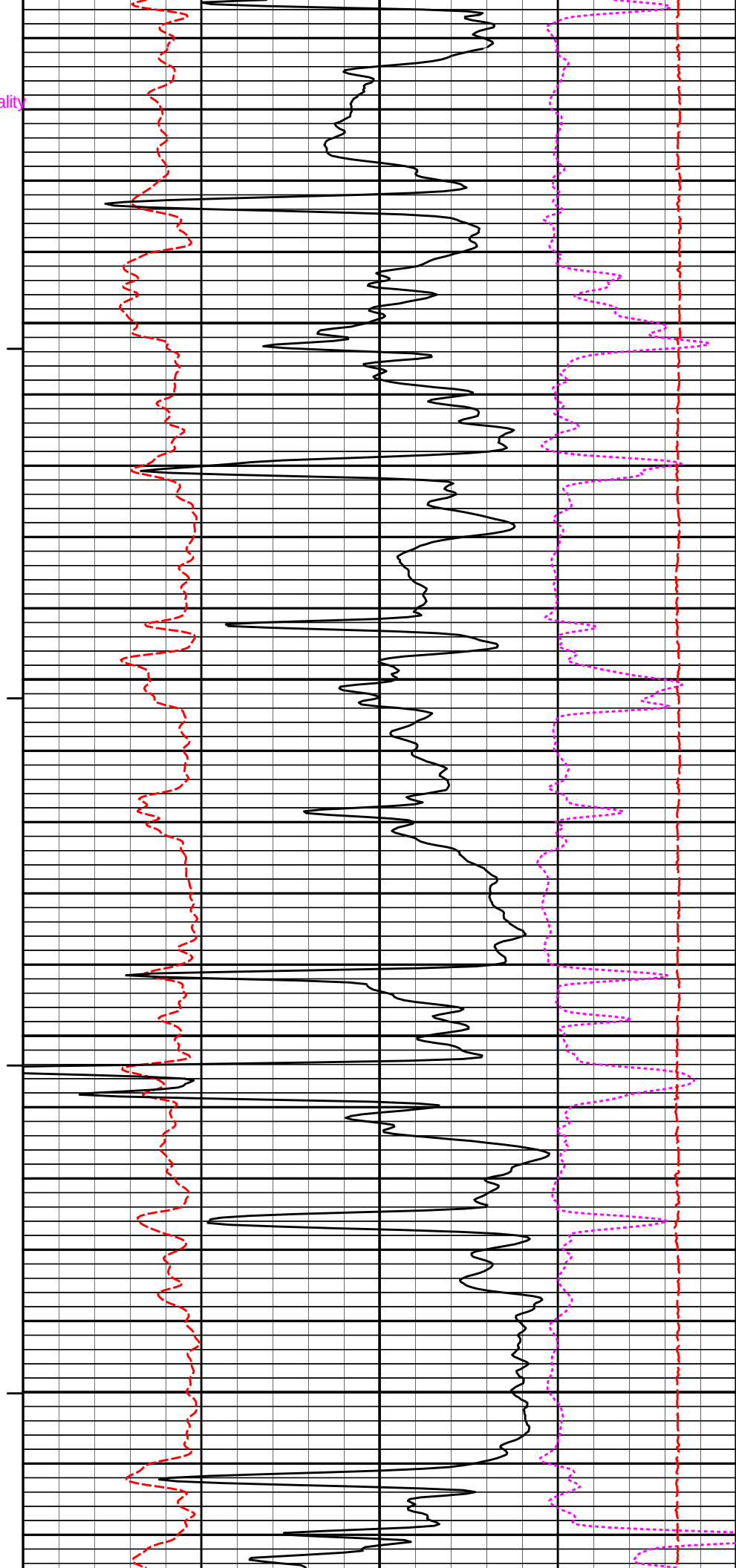
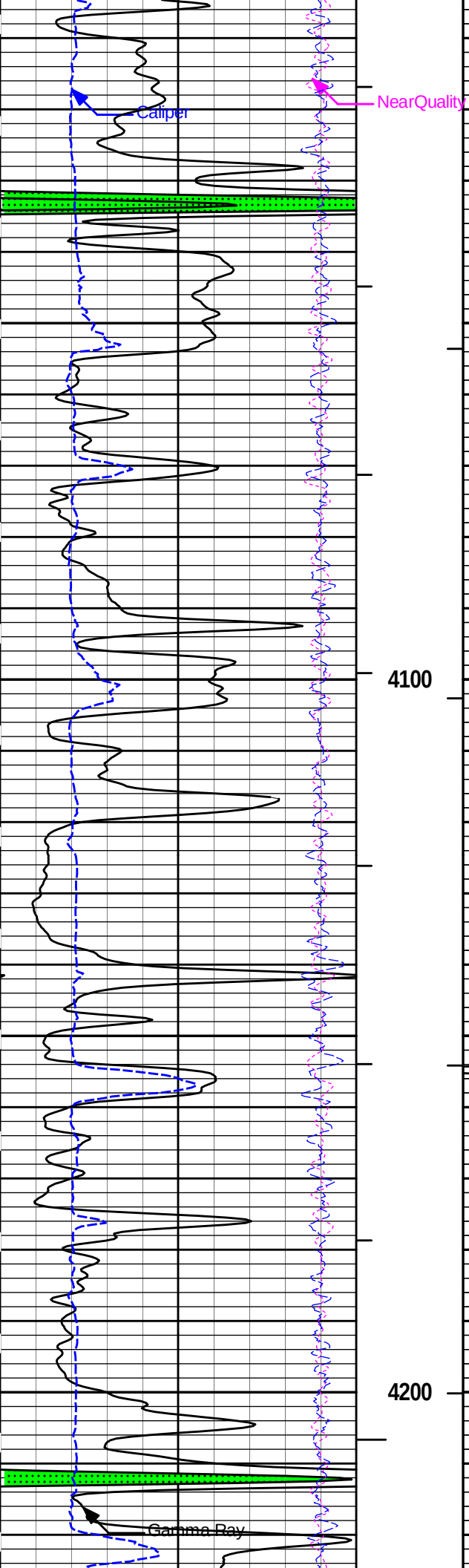
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Plot Range: 2490 ft to 2610 ft
Data: BOYD 1-3\Well Based\DAQ-0001-004\
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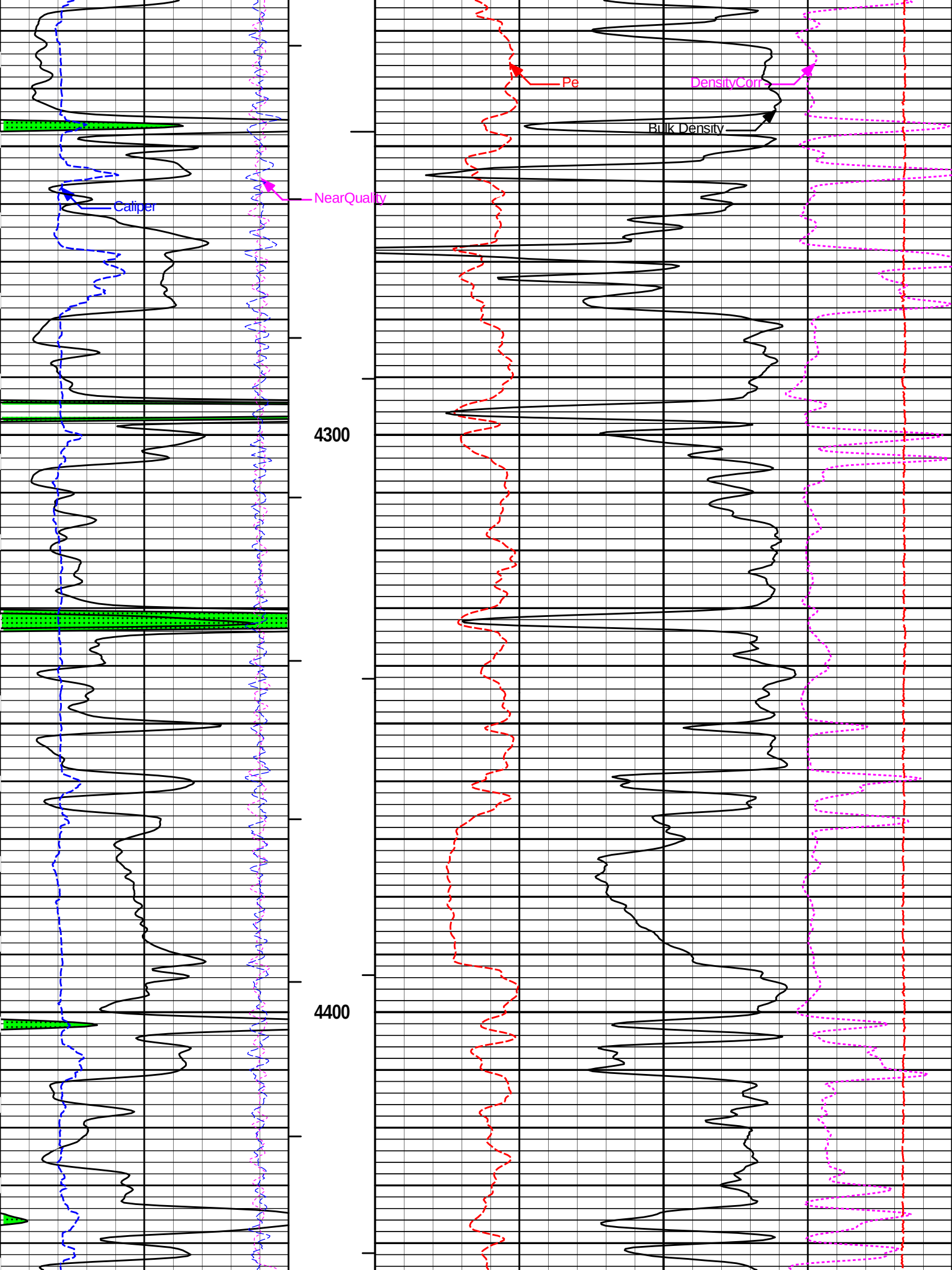
5 INCH MAIN LOG

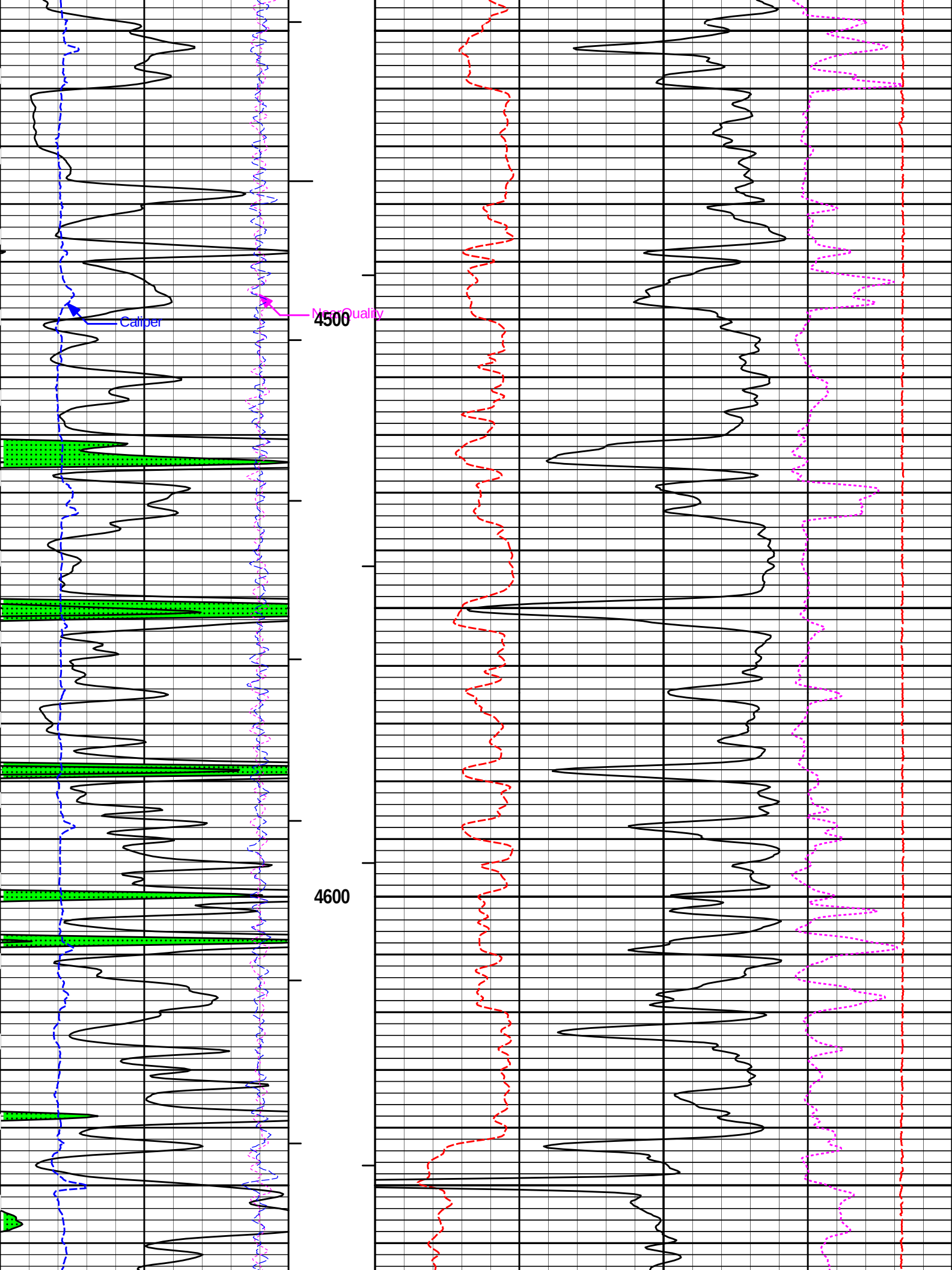


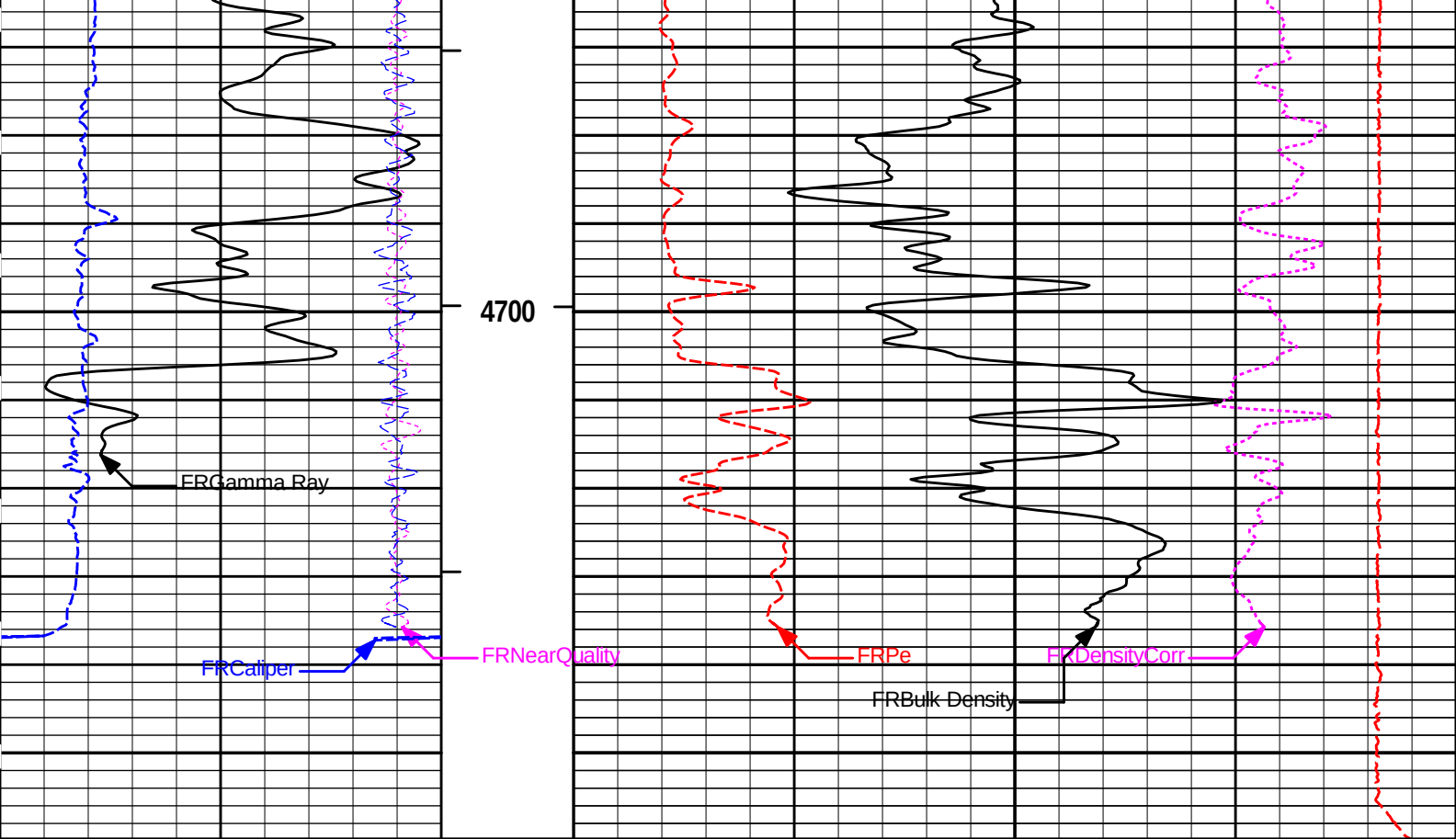












6 Caliper 16	MD 1 : 240 ft	0 Pe 10	-0.25 DensityCorr 0.25	15K Tension 0		
					inches	g/cc
					-18 NearQuality 2	pounds
					18 FarQuality -2	Bulk Density 3
0 Gamma Ray 150	BHV ft3	2	g/cc			
api						
SHALE						

HALLIBURTON

Plot Time: 25-Apr-14 12:33:32
Plot Range: 3748 ft to 4759.75 ft
Data: BOYD 1-3\Well Based\DAQ-0001-004\
Plot File: \\-LOCAL-\\BOYD 1-3\\0001 SP-GTET-DSNT-SDLT-ACRT-BNIPORO\\BULKD_5_MAIN_LIB

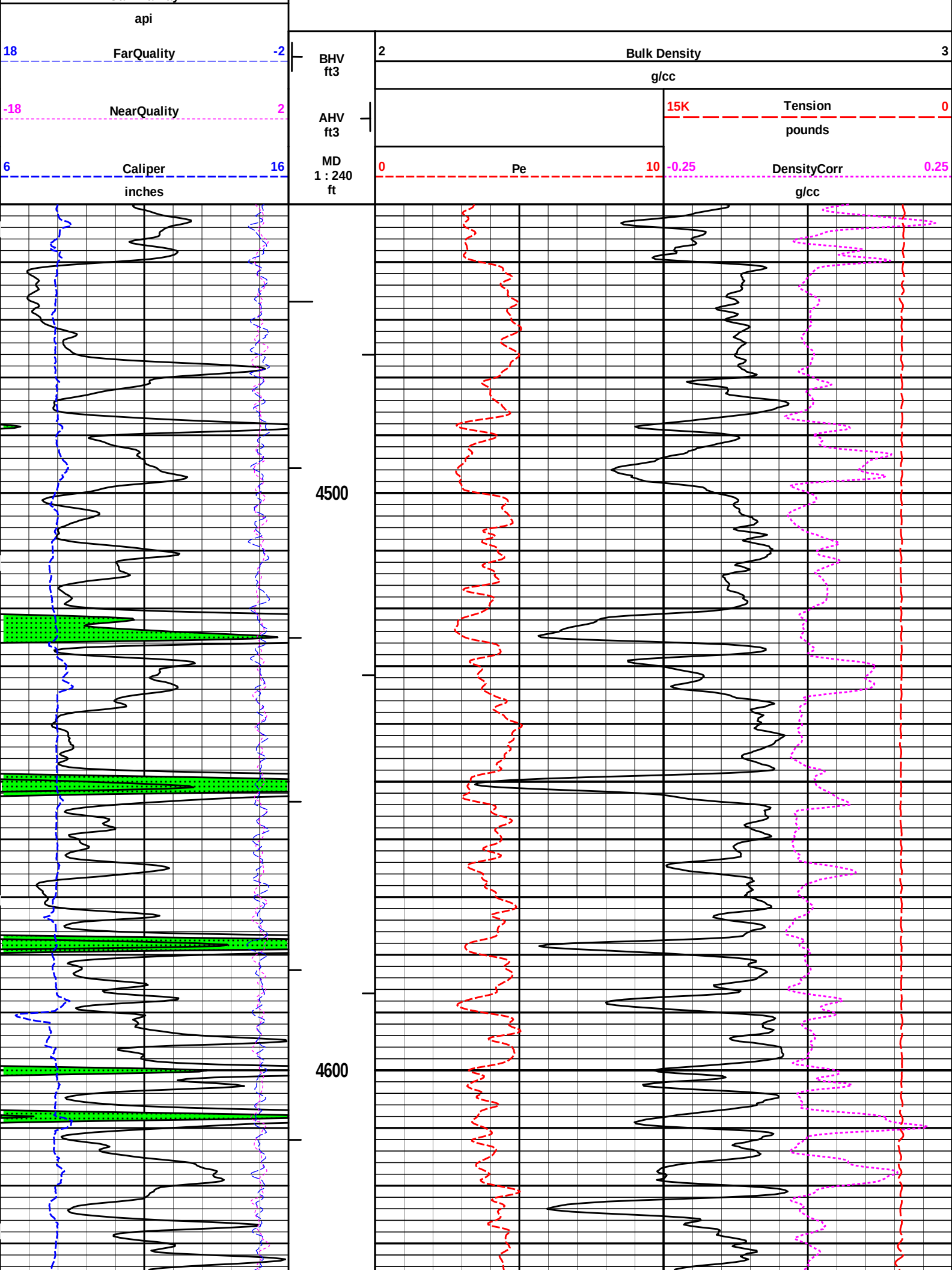
5 INCH MAIN LOG

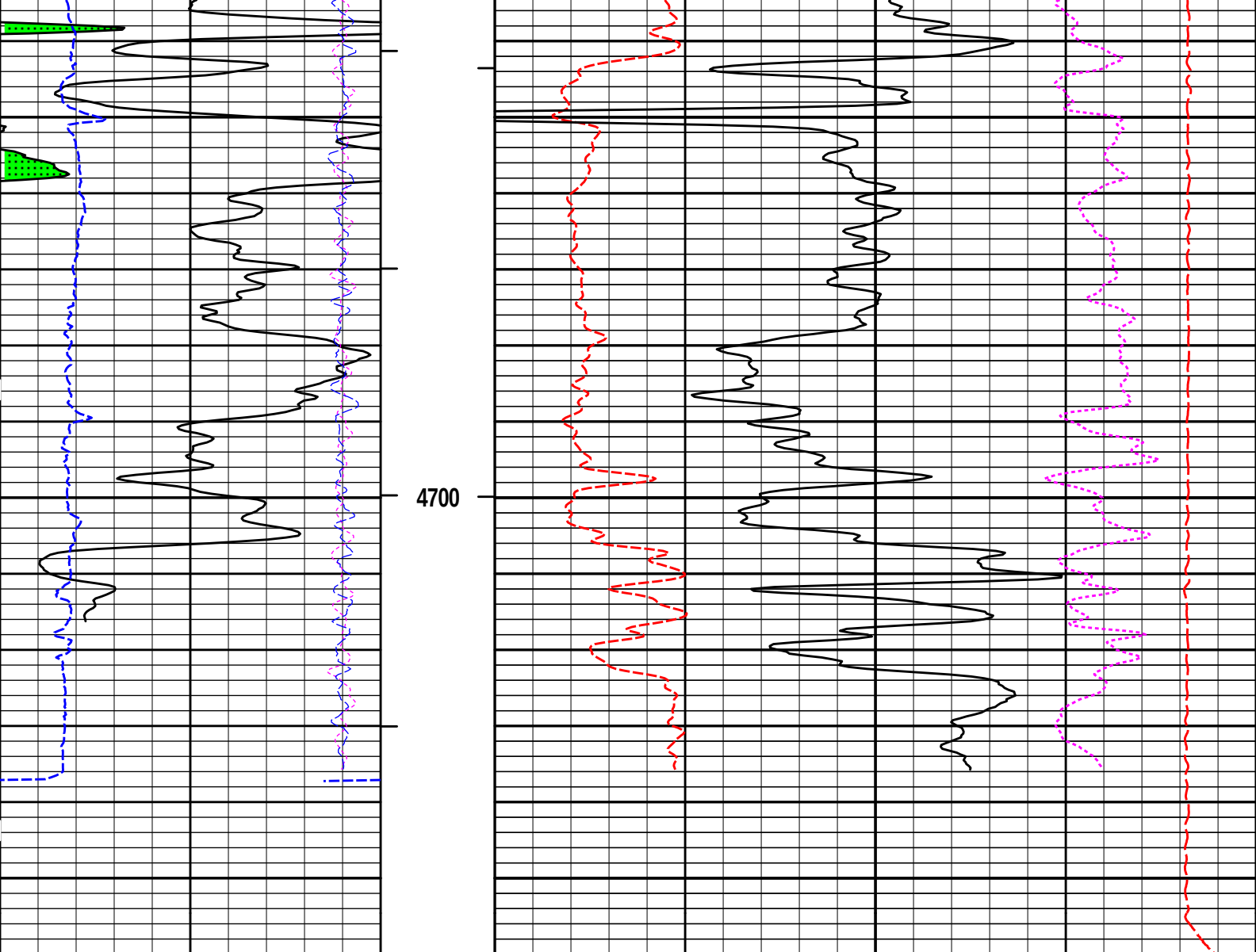
HALLIBURTON

Plot Time: 25-Apr-14 12:33:32
Plot Range: 4450 ft to 4759.92 ft
Data: BOYD 1-3\Well Based\DAQ-0001-003\
Plot File: \\-LOCAL-\\BOYD 1-3\\0001 SP-GTET-DSNT-SDLT-ACRT-BNIPORO\\BULKD_5_REP_LIB

REPEAT SECTION

SHALE		
0	Gamma Ray	150





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

HALLIBURTON

Plot Time: 25-Apr-14 12:33:33
Plot Range: 4450 ft to 4759.92 ft
Data: BOYD 1-3\Well Based\DAQ-0001-003\
Plot File: \\LOCAL-BOYD 1-3\0001 SP-GTET-DSNT-SDLT-ACRT-BNIPORO\BULKD_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- 12345678 30.00 lbs		Ø 3.625 in →			1.92 ft	54.26 ft
SP Sub-12345678 60.00 lbs		Ø 3.625 in →		← SP @ 50.56 ft	3.74 ft	52.34 ft
GTET-10811258 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.54 ft	8.52 ft	48.60 ft
DSN Decentralizer- 10735145 6.60 lbs		Ø 5.000 in* →				40.08 ft
DSNT-10755066 174.00 lbs		Ø 3.625 in →		← DSN Far @ 33.15 ft ← DSN Near @ 32.40 ft	9.69 ft	
SDLT-10685803 360.00 lbs	SDLT Pad-10714945 65.00 lbs Microlog Pad-10685803 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		Microlog @ 22.58 ft SDL Caliper @ 22.40 ft SDL @ 22.39 ft	10.81 ft	30.40 ft
ACRt Instrument- 10811256 50.00 lbs	Regal Standoff 6_75- 00000001 20.00 lbs	Ø 3.625 in → Ø 6.750 in* →				19.58 ft
				← Mud Resistivity @ 13.19 ft	5.03 ft	14.55 ft
				← ACRt @ 9.21 ft		
ACRt Sonde- 10800784 200.00 lbs		Ø 3.625 in →			14.22 ft	

Bull Nose-00000668
5.00 lbs

Ø 2.750 in →



0.33 ft



0.33 ft

0.00 ft

Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH	Standard OH Cable Head		12345678	30.00	1.92	52.34	300.00
SP	SP Sub		12345678	60.00	3.74	48.60	300.00
GTET	Gamma Telemetry Tool		10811258	165.00	8.52	40.08	60.00
DSNT	Dual Spaced Neutron		10755066	174.00	9.69	30.40	60.00
DCNT	DSN Decentralizer		10735145	6.60	5.13	* 33.73	300.00
SDLT	Spectral Density Tool		10685803	360.00	10.81	19.58	60.00
SDLP	Density Insite Pad		10714945	65.00	2.55	* 21.79	60.00
MICP	Microlog Pad		10685803	8.00	1.00	* 22.08	60.00
ACRt	Array Compensated True Resistivity Instrument Section		10811256	50.00	5.03	14.55	120.00
RSOF	Regal Standoff 6.75in		00000001	20.00	0.52	* 14.71	300.00
ACRt	Array Compensated True Resistivity Sonde Section		10800784	200.00	14.22	0.33	120.00
BLNS	Bull Nose		00000668	5.00	0.33	0.00	300.00
Total				1,143.60	54.26		
* Not included in Total Length and Length Accumulation.							
Data: BOYD 1-3\0001 SP-GTET-DSNT-SDLT-ACRT-BN\IDLE							
Date: 25-Apr-14 08:10:20							

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 10811258

Reference Calibration Date: 25-Apr-14 08:20:22

Engineer: THOMAS K HYDE

Calibration Date: 25-Apr-14 08:23:37

Software Version: WL INSITE R4.2.0 (Build 2)

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	44.8	44.7	api
Background + Calibrator	277.2	276.7	api
Calibrator	232.4	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 10811258

Reference Calibration Date: 25-Apr-14 08:23:37

Engineer: THOMAS K HYDE

Calibration Date: 25-Apr-14 08:26:59

Software Version: WL INSITE R4.2.0 (Build 2)

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	44.7	43.9	api
Background + Calibrator	276.7	279.3	api
Calibrator	232.0	235.4	api

Shop	Field	Difference	Tolerance
232.0	235.4	-3.4	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 10755066

Reference Calibration Date: 14-Apr-14 13:53:02

Engineer: J. BOLLUM

Calibration Date: 14-Apr-14 14:08:27

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Logging Source S/N: DSN-436

Tank Serial Number: LIBERAL

Reference value assigned to Tank: 51.680

Snow Block S/N: 668

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:	0.949	0.948	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):	0.2113	0.2110	0.0003	+/- 0.0020
Calibrated Ratio:	9.74	9.73	0.011	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0629	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: 14-Apr-14 14:08:27

Engineer: THOMAS K HYDE

Calibration Date: 25-Apr-14 08:30:18

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Logging Source S/N: DSN-436

Snow Block S/N: 668

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0629	0.0577	-0.0052	+/- 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: 14-Apr-14 11:26:43

Engineer: J. BOLLUM

Calibration Date: 14-Apr-14 11:31:00

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-4362.95	-4420.65	-7000.00 - -1000.00
Pad Gain	0.0003849	0.0003863	0.000200 - 0.000600
Arm Offset	-3135.46	-3304.43	-5000.00 - 3000.00
Arm Gain	0.0005085	0.0005300	0.000300 - 0.000700
Arm Power	-0.000004496	-0.000005774	-0.000010000 - 0.000010000

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)	2.01	2.00	-0.01	+/- 0.20
Medium Ring (in)	3.76	3.75	-0.01	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.53	6.50	-0.03	+/- 0.20
Medium Ring (in)	8.24	8.25	0.01	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 0.20

PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed
PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed

SDLT CALIPER FIELD CALIBRATION

Tool Name:	SDLT - 10685803	Reference Calibration Date:	14-Apr-14 11:31:00
Engineer:	THOMAS K HYDE	Calibration Date:	25-Apr-14 08:32:19
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.73	-0.02	+/- 0.10
Ring Diameter	8.25	8.35	0.10	+/- 0.15

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

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad - 10714945	Reference Calibration Date:	19-Mar-14 09:26:25
Engineer:	THOMAS K HYDE	Calibration Date:	19-Mar-14 09:44:49
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

Logging Source S/N: 5073 GW

Aluminum Block S/N: LIBERAL

Magnesium Block S/N: LIBERAL

Density: 2.598g/cc

Density: 1.684g/cc

Pe: 3.170

Pe: 2.598

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit

Near Bar Gain	1.0250	1.0159	0.90 - 1.10
Near Dens Gain	1.0029	1.0031	0.90 - 1.10
Near Peak Gain	1.0141	0.9933	0.90 - 1.10
Near Lith Gain	0.9906	0.9672	0.90 - 1.10
Far Bar Gain	1.0073	1.0056	0.90 - 1.10
Far Dens Gain	0.9954	0.9960	0.90 - 1.10
Far Peak Gain	0.9889	0.9924	0.90 - 1.10
Far Lith Gain	0.9706	0.9726	0.90 - 1.10
Near Bar Offset	0.0725	0.1547	NONE
Near Dens Offset	0.2447	0.2443	NONE
Near Peak Offset	0.1342	0.3085	NONE
Near Lith Offset	0.2942	0.4893	NONE
Far Bar Offset	0.1435	0.1572	NONE
Far Dens Offset	0.2251	0.2198	NONE
Far Peak Offset	0.2698	0.2399	NONE
Far Lith Offset	0.3742	0.3620	NONE
Near Bar Background	953.28	949.61	700 - 1450
Near Dens Background	316.71	314.65	230 - 480
Near Peak Background	138.04	137.76	100 - 210
Near Lith Background	168.70	167.57	125 - 260
Far Bar Background	484.96	489.13	450 - 900
Far Dens Background	189.91	190.41	175 - 345
Far Peak Background	74.41	74.49	70 - 140
Far Lith Background	78.83	77.89	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.683	1.684	0.001	+/- 0.015
Pe	2.560	2.557	-0.003	+/- 0.150
ALUMINUM				
Density (g/cc)	2.593	2.598	0.005	+/- 0.01500
Pe	3.155	3.126	-0.029	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0013	+/- 0.0110	0.0009	+/- 0.0140
Magnesium Block	-0.0012	+/- 0.0110	0.0011	+/- 0.0140
Aluminum Block	0.0006	+/- 0.0110	0.0009	+/- 0.0140
Resolution	9.87	6.00 - 11.50	9.15	6.00 - 11.50
Internal Verifier(B+D+P+L)	1570	1200 - 2700	832	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:19-Mar-14 09:44:49

Engineer:THOMAS K HYDE

Calibration Date:25-Apr-14 08:36:16

Software Version:WL INSITE R4.2.0 (Build 2)

Calibration Version:1

Pad Temperature: 71.7 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1569.604	1579.566	9.962	15.941
Far (B+D+P+L) cps	831.924	828.636	-3.288	15.877
Near Resolution	9.87	9.83	-0.040	0.50
Far Resolution	9.15	9.24	0.090	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	235.4	-----	-3.4	+/- 9.00	api
DSNT-10755066						
Snow-Block Porosity	0.0629	0.0577	-----	0.0052	+/- 0.0150	decp
SDLT-10685803						
Pad Extension	3.75	3.73	-----	0.02	+/-0.10	in
Ring Diameter	8.25	8.35	-----	-0.10	+/-0.15	in
SDLT Pad-10714945						
Near(B+D+P+L)	1569.604	1579.566	-----	-9.962	+/-15.941	cps
Far(B+D+P+L)	831.924	828.636	-----	3.288	+/-15.877	cps

Data: ROYD 1-310001 SP-GTET-DSNT-SDI T-ACRT-RNUI D E

Date: 25-Apr-14 08:54:43

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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	9.300	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	CCD	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	4720.00	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	
	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	
	Rwa / CrossPlot	BHSM	Borehole Size Source Tool	SDLT	
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in
	GTET	GEOK	Process Gamma Ray EVR?	Yes	
	GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
	GTET	BHSM	Borehole Size Source Tool	SDLT	
	DSNT	DNOK	Process DSN?	Yes	
	DSNT	DEOK	Process DSN EVR?	Yes	
	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	
	DSNT	BHSM	Borehole Size Source Tool	SDLT	
	SDLT	CLOK	Process Caliper Outputs?	Yes	
	SDLT Pad	DNOK	Process Density?	Yes	
	SDLT Pad	DNOK	Process Density EVR?	Yes	
	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
	SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
	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

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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	
Rwa / CrossPlot				
TPUL	Tension Pull	54.26	NO	
BS	Bit Size	54.26	NO	
HDIA	Measured Hole Diameter	0.00	NO	
SP Sub				
PLTC	Plot Control Mask	50.56	NO	
SP	Spontaneous Potential	50.56	BLK	1.250
SPR	Raw Spontaneous Potential	50.56	NO	
SPO	Spontaneous Potential Offset	50.56	NO	
GTET				
TPUL	Tension Pull	42.54	NO	
GR	Natural Gamma Ray API	42.54	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	42.54	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	42.54	W	1.416 , 0.750
HDIA	Measured Hole Diameter	0.00	NO	
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	32.30	NO	
RNDS	Near Detector Telemetry Counts	32.40	BLK	1.417
RFDS	Far Detector Telemetry Counts	33.15	TRI	0.583
DNTT	DSN Tool Temperature	32.40	NO	
DSNS	DSN Tool Status	32.30	NO	
ERND	Near Detector Telemetry Counts EVR	32.40	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	33.15	BLK	0.000
ENTM	DSN Tool Temperature EVR	32.40	NO	
HDIA	Measured Hole Diameter	0.00	NO	
SDLT				
TPUL	Tension Pull	22.40	NO	
PCAL	Pad Caliper	22.40	TRI	0.250
ACAL	Arm Caliper	22.40	TRI	0.250
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 Reference 12 KHz Real Signal	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	
HDIA	Measured Hole Diameter	0.00	NO	
SDLT Pad				
TPUL	Tension Pull	22.39	NO	
NAB	Near Above	22.21	BLK	0.920
NHI	Near Cesium High	22.21	BLK	0.920
NLO	Near Cesium Low	22.21	BLK	0.920
NVA	Near Valley	22.21	BLK	0.920

NBA	Near Barite	22.21	BLK	0.920
NDE	Near Density	22.21	BLK	0.920
NPK	Near Peak	22.21	BLK	0.920
NLI	Near Lithology	22.21	BLK	0.920
NBAU	Near Barite Unfiltered	22.21	BLK	0.250
NLIU	Near Lithology Unfiltered	22.21	BLK	0.250
FAB	Far Above	22.56	BLK	0.250
FHI	Far Cesium High	22.56	BLK	0.250
FLO	Far Cesium Low	22.56	BLK	0.250
FVA	Far Valley	22.56	BLK	0.250
FBA	Far Barite	22.56	BLK	0.250
FDE	Far Density	22.56	BLK	0.250
FPK	Far Peak	22.56	BLK	0.250
FLI	Far Lithology	22.56	BLK	0.250
PTMP	Pad Temperature	22.40	BLK	0.920
NHV	Near Detector High Voltage	21.79	NO	
FHV	Far Detector High Voltage	21.79	NO	
ITMP	Instrument Temperature	21.79	NO	
DDHV	Detector High Voltage	21.79	NO	
HDIA	Measured Hole Diameter	0.00	NO	

Microlog Pad				
TPUL	Tension Pull	22.58	NO	
MINV	Microlog Lateral	22.58	BLK	0.750
MNOR	Microlog Normal	22.58	BLK	0.750

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Date: 25-Apr-14 08:55:48

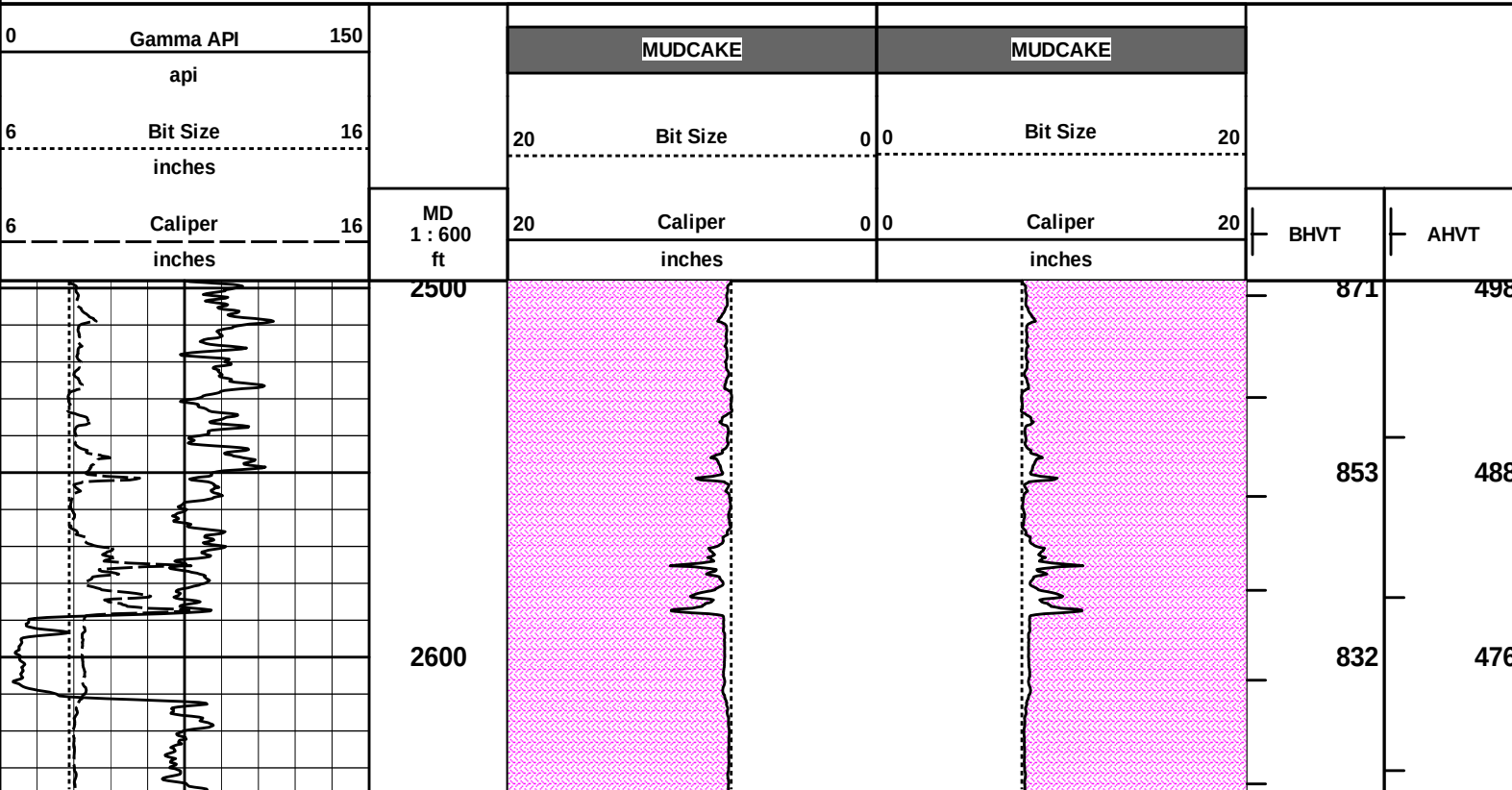
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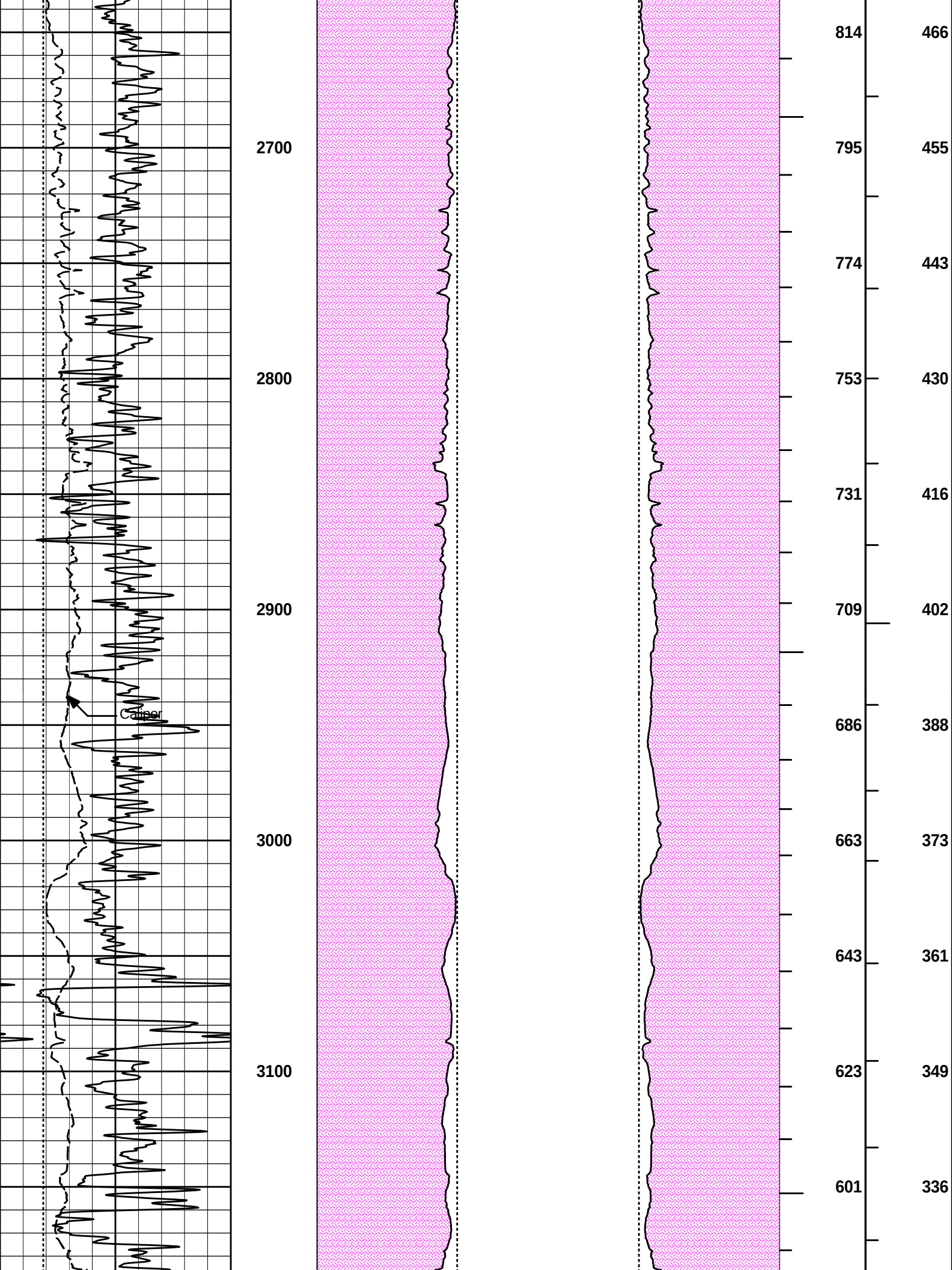
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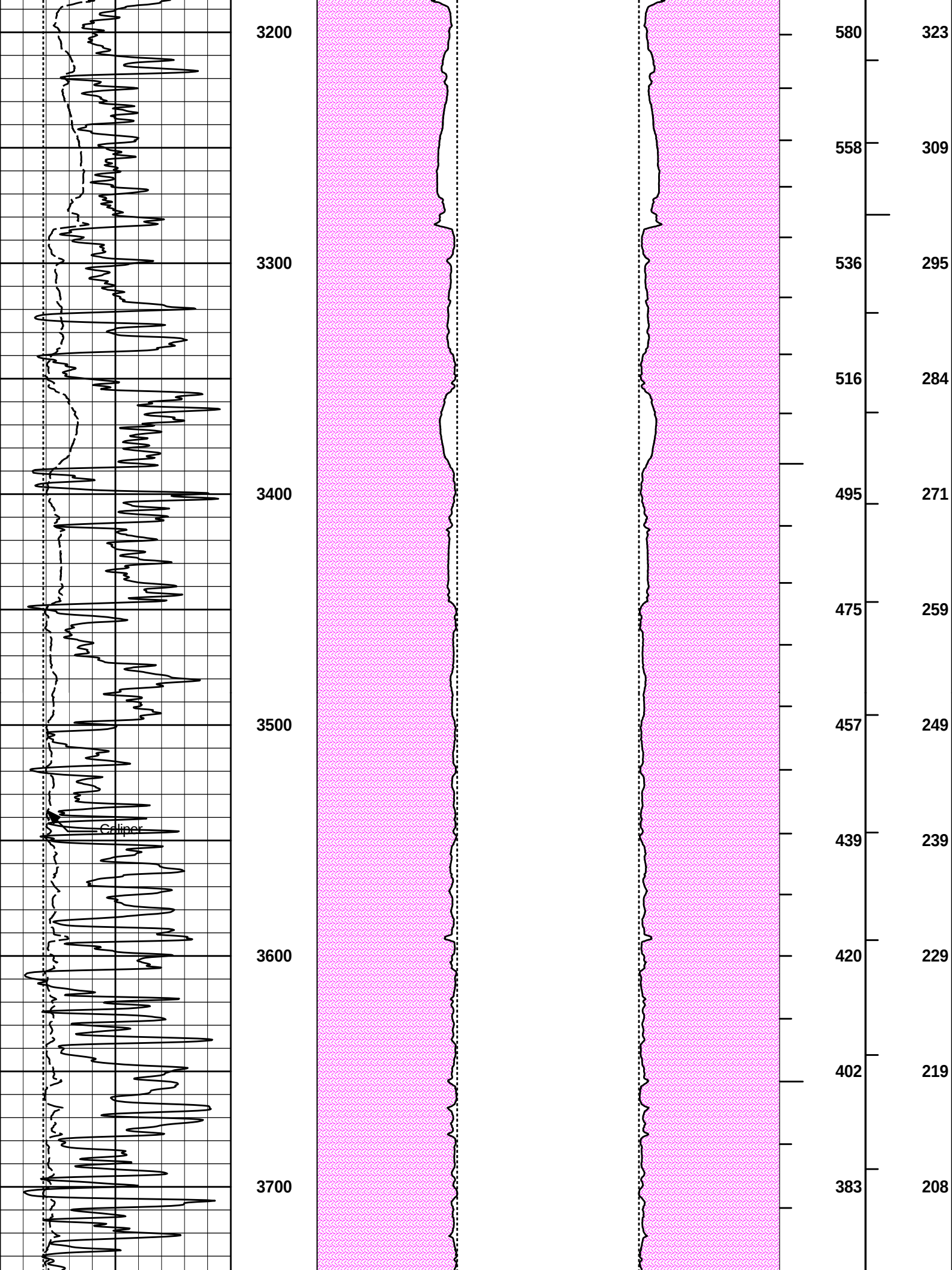
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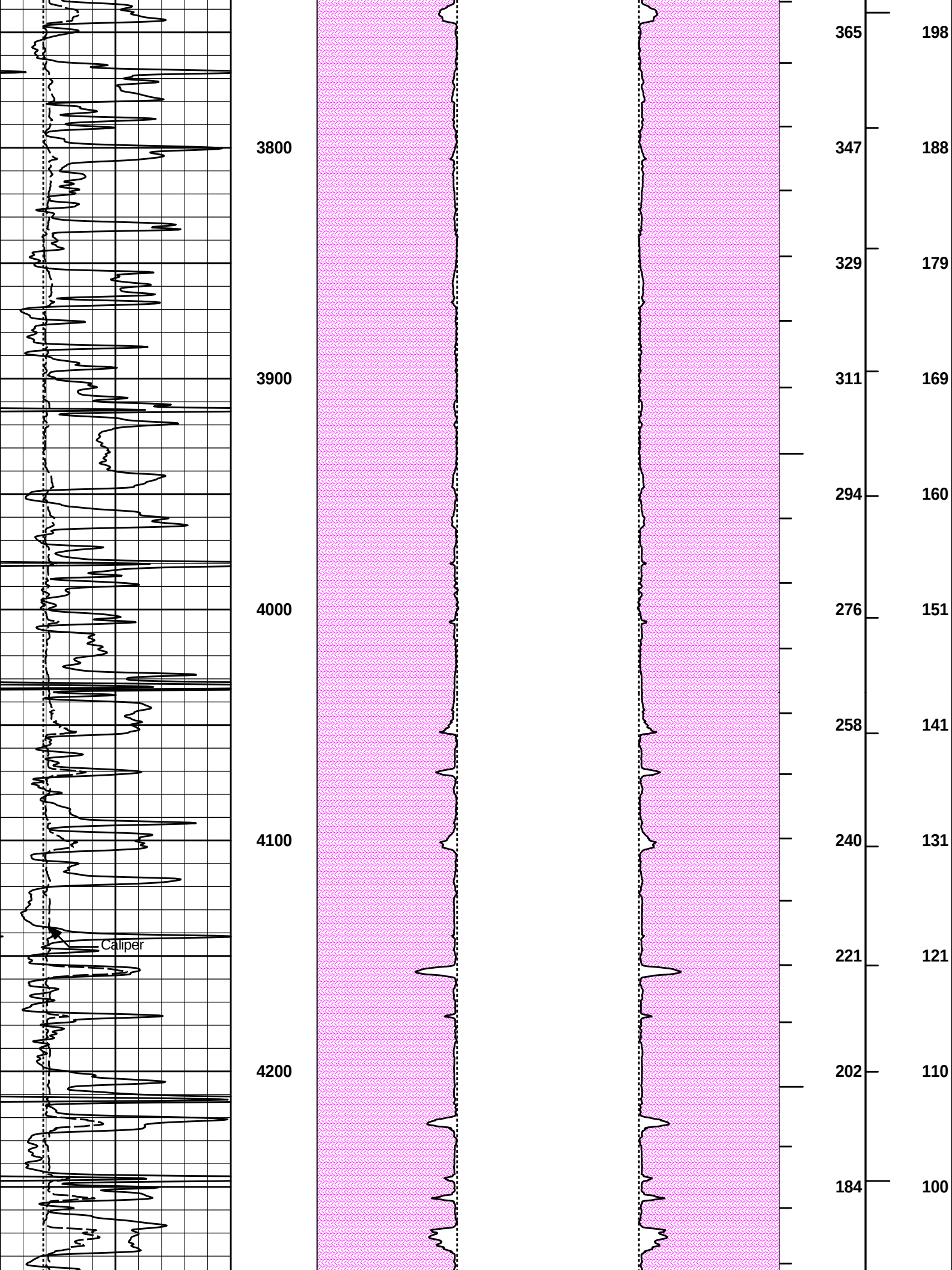
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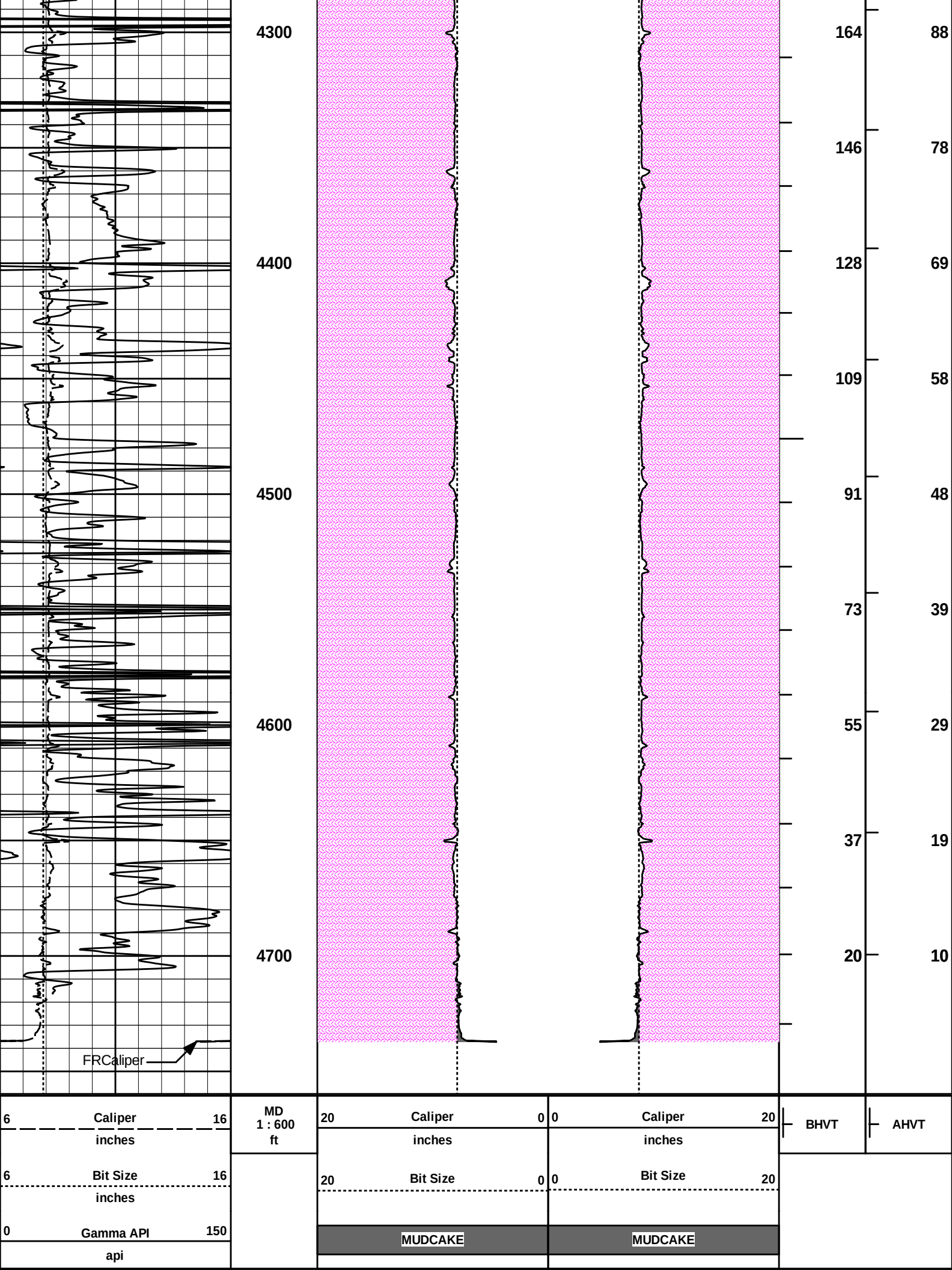
ANNULAR HOLE VOLUME PLOT











4300

4400

4500

4600

4700

164

146

128

109

91

73

55

37

20

88

78

69

58

48

39

29

19

10

FRCaliper

6	Caliper	16
	inches	
6	Bit Size	16
	inches	
0	Gamma API	150
	api	

MD	1 : 600	ft
----	---------	----

20	Caliper	0 0	Caliper	20
	inches		inches	
20	Bit Size	0 0	Bit Size	20
	MUDCAKE		MUDCAKE	

BHVT	AHVT
------	------

ANNULAR HOLE VOLUME PLOT

COMPANY	NEW GULF RESOURCES, LLC		
WELL	BOYD 1-3		
FIELD	WILDCAT		
COUNTY	LOGAN	STATE	KANSAS

HALLIBURTON

DUAL SPACED NEUTRON
SPECTRAL DENSITY
LOG