HALLIBURTON

DUAL SPACED NEUTRON SPECTRAL DENSITY LOG

COMPANY	BEREXCO LLC.
WELL	FAYE 1-18
FIELD/BLOCK	WILDCAT
COUNTY	FINNEY
STATE	KANSAS

COMPANY **BEREXCO LLC.**

WELL **FAYE 1-18**

FIELD/BLOCK **WILDCAT**

COUNTY **FINNEY** STATE **KANSAS**

API No. 15-055-22291-00-00

Location 335' FSL 437' FEL

Other Services:
ACRT
MICRO
XRMI

Sect. 18 Twp. 26S Rge. 33W

Permanent Datum	GL	Elev. 2911.0 ft	Elev.: K.B.	2923.0 ft
Log measured from	KB	12.0 ft above perm. Datum	D.F.	2921.0 ft
Drilling measured from	KB		G.L.	2911.0 ft

Date	25-Apr-14		
Run No.	ONE		
Depth - Driller	5330.00 ft		
Depth - Logger	5326.0 ft		
Bottom - Logged Interval	5273.0 ft		
Top - Logged Interval	3800.0 ft		
Casing - Driller	8.625 in @ 1750.0 ft	@	@
Casing - Logger	1742.0 ft		
Bit Size	7.875 in	@	@
Type Fluid in Hole	Water Based Mud		
Density / Viscosity	9.3 ppg / 46.00 s/qt		
PH / Fluid Loss	10.50 pH / 8.0 cptm		
Source of Sample	MUD PIT		
Rm @ Meas. Temperature	0.900 ohmm @ 87.00 degF	@	@
Rmf @ Meas. Temperature	0.74 ohmm @ 85.00 degF	@	@
Rmc @ Meas. Temperature	1.050 ohmm @ 87.00 degF	@	@
Source Rmf / Rmc	MEASURED / MEASURED		
Rm @ BHT	0.64 ohmm @ 125.0 degF	@	@
Time Since Circulation	4.0000 hr		
Time on Bottom	25-Apr-14 20:42		
Max. Rec. Temperature	125.0 degF @ 5326.0 ft	@	@
Equipment / Location	11454566 / LIBERAL		
Recorded By	THOMAS K HYDE		
Witnessed By	P. WILSON		

Fold here

Service Ticket No.: 901297703 API Serial No.: 15-055-22291-00-00 PGM Version: WL INSITE R4.2.0 (Build 2)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

Date	Sample No.				
Depth-Driller					
Type Fluid in Hole					
Density	Viscosity				
Ph	Fluid Loss				
Source of Sample					
Rm @ Meas. Temp		@		@	
Rmf @ Meas. Temp.		@		@	
Rmc @ Meas. Temp.		@		@	
Source Rmf	Rmc				
Rm @ BHT		@		@	
Rmf @ BHT		@		@	
Rmc @ BHT		@		@	

RESISTIVITY SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA

Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.		Run No.	ONE	Run No.	ONE
Serial No.	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	Am241 Be
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	5326	1742	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 2400 MG/L

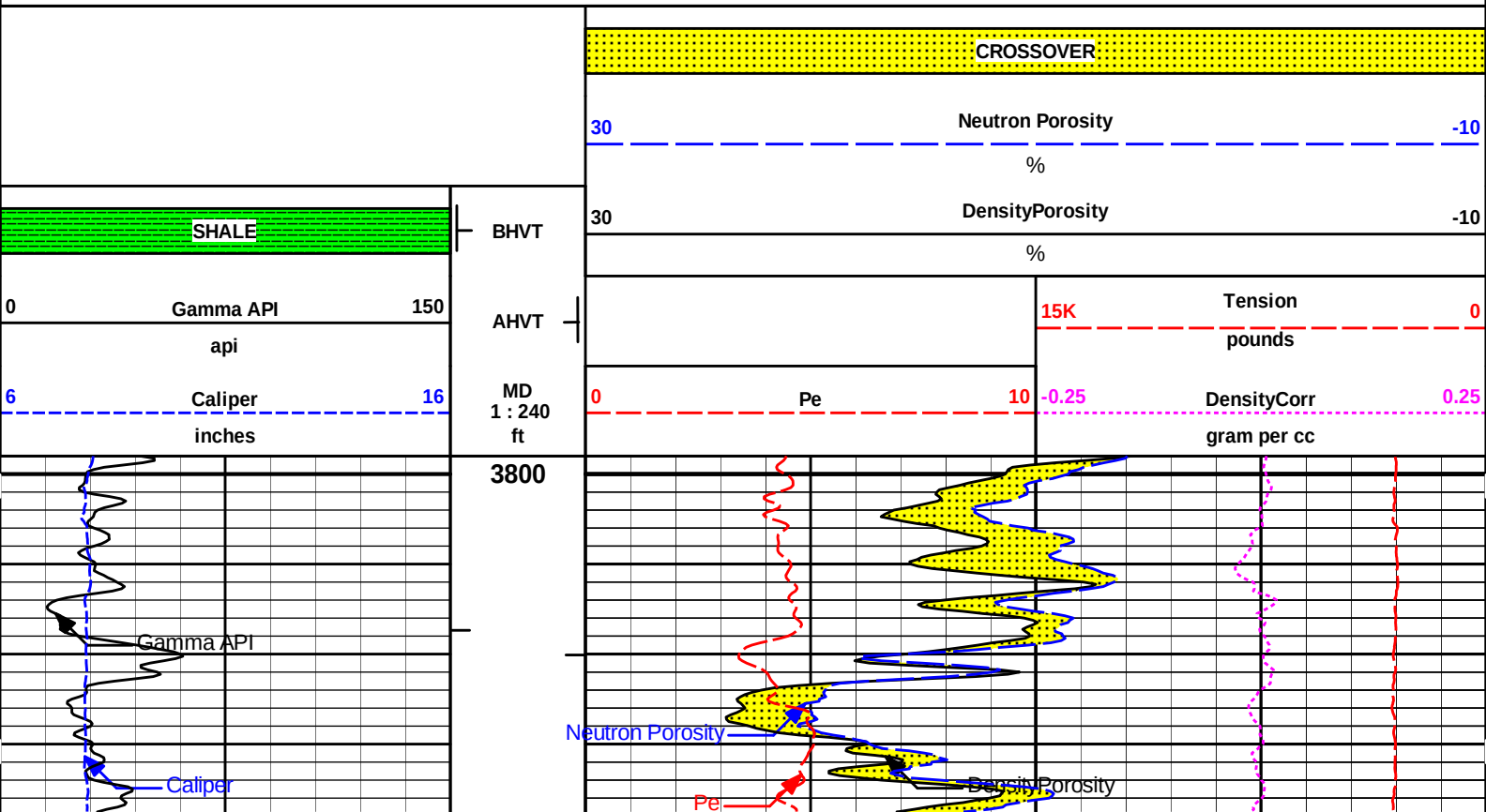
TODAY'S CREW F. VILLA E. ZAPIEN K. PIDDINGTON

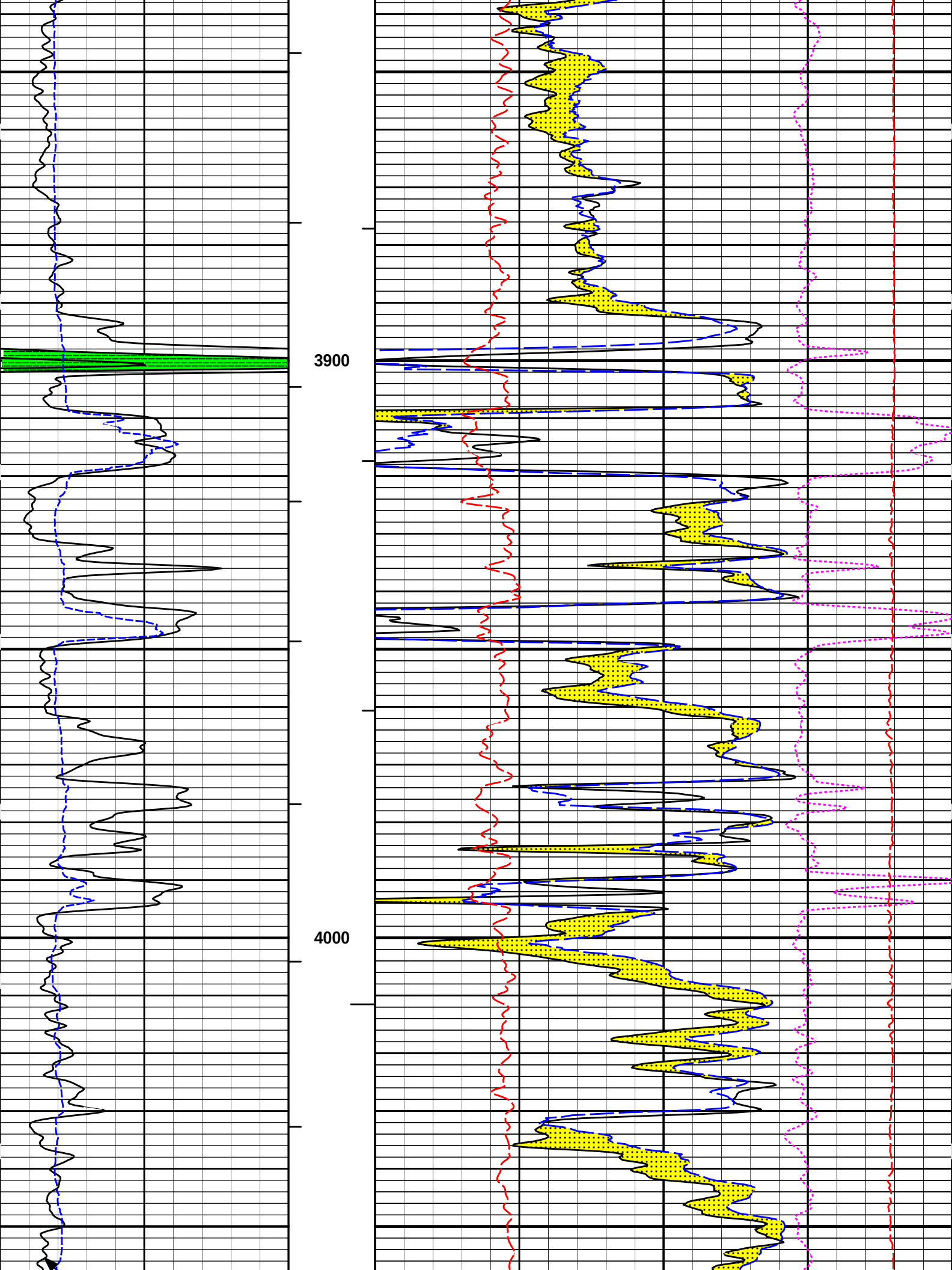
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES LIBERAL, KANSAS 620-624-8123

HALLIBURTON

Plot Time: 25-Apr-14 23:54:49
Plot Range: 3798 ft to 5329.75 ft
Data: FAYE_1-18\Well Based\DAQ-0001-003
Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

5 INCH MAIN LOG




3900
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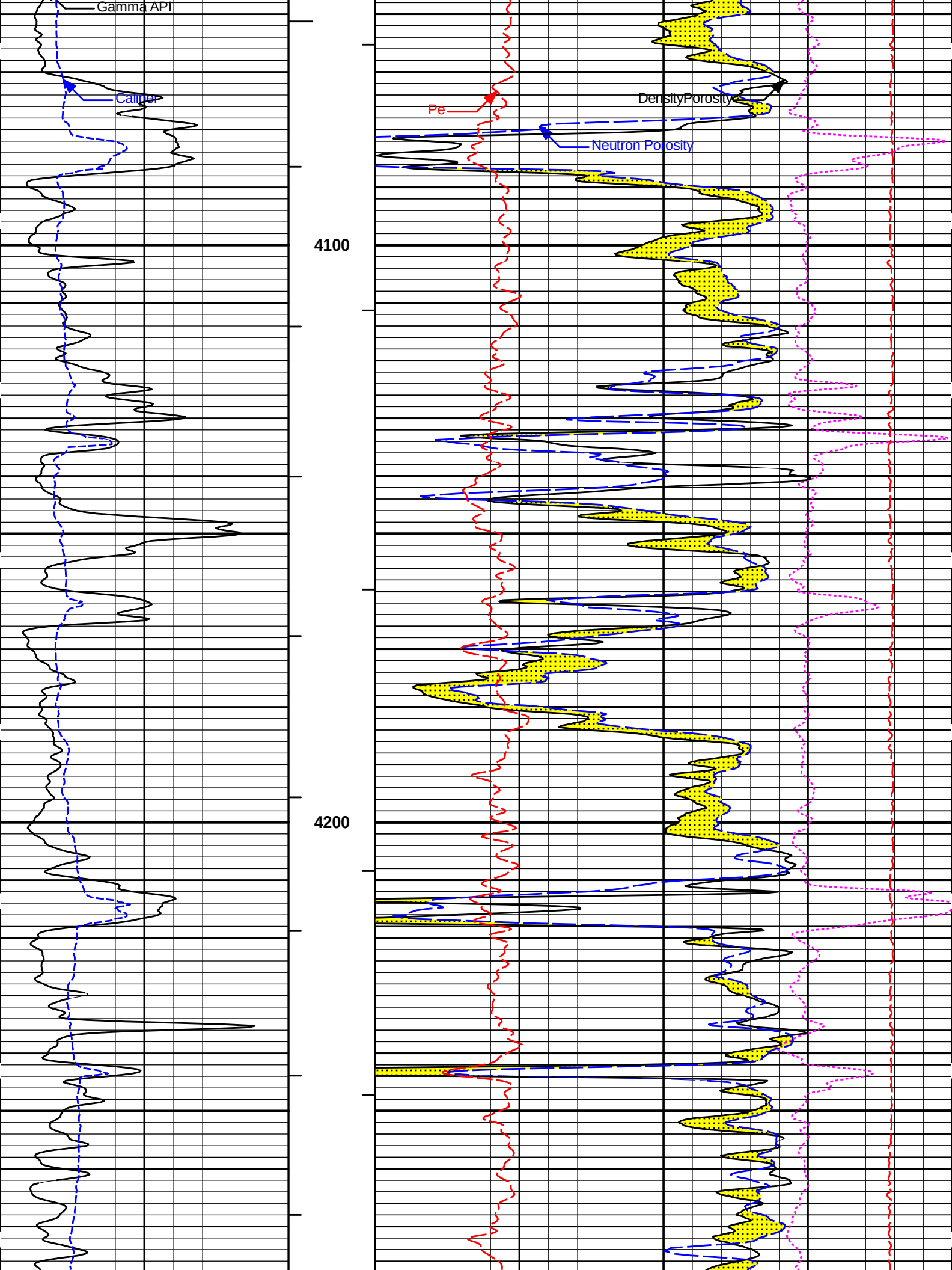
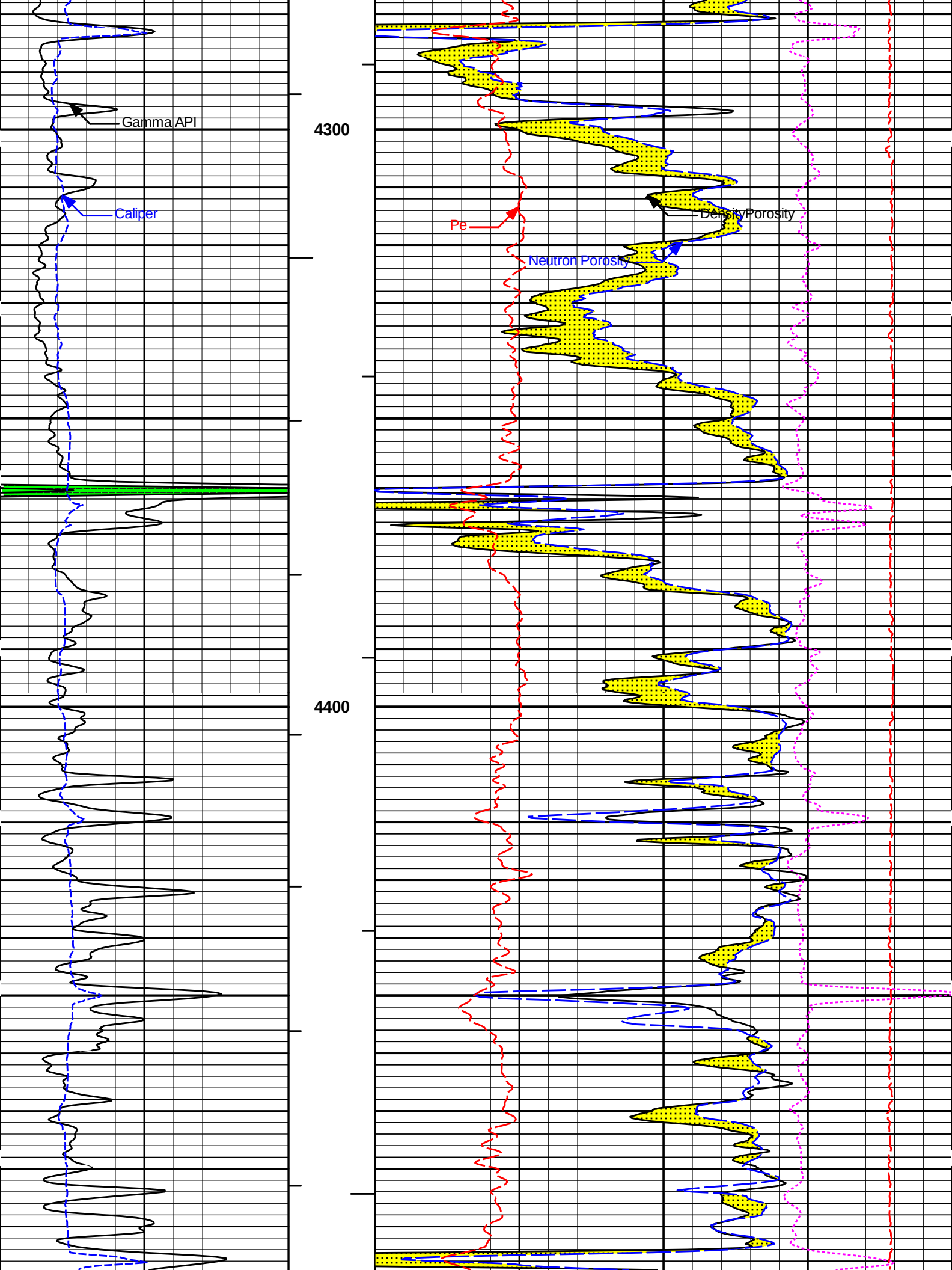

Gamma API
Caliper
Pe
DensityPorosity
Neutron Porosity
4100
4200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Neutron Porosity
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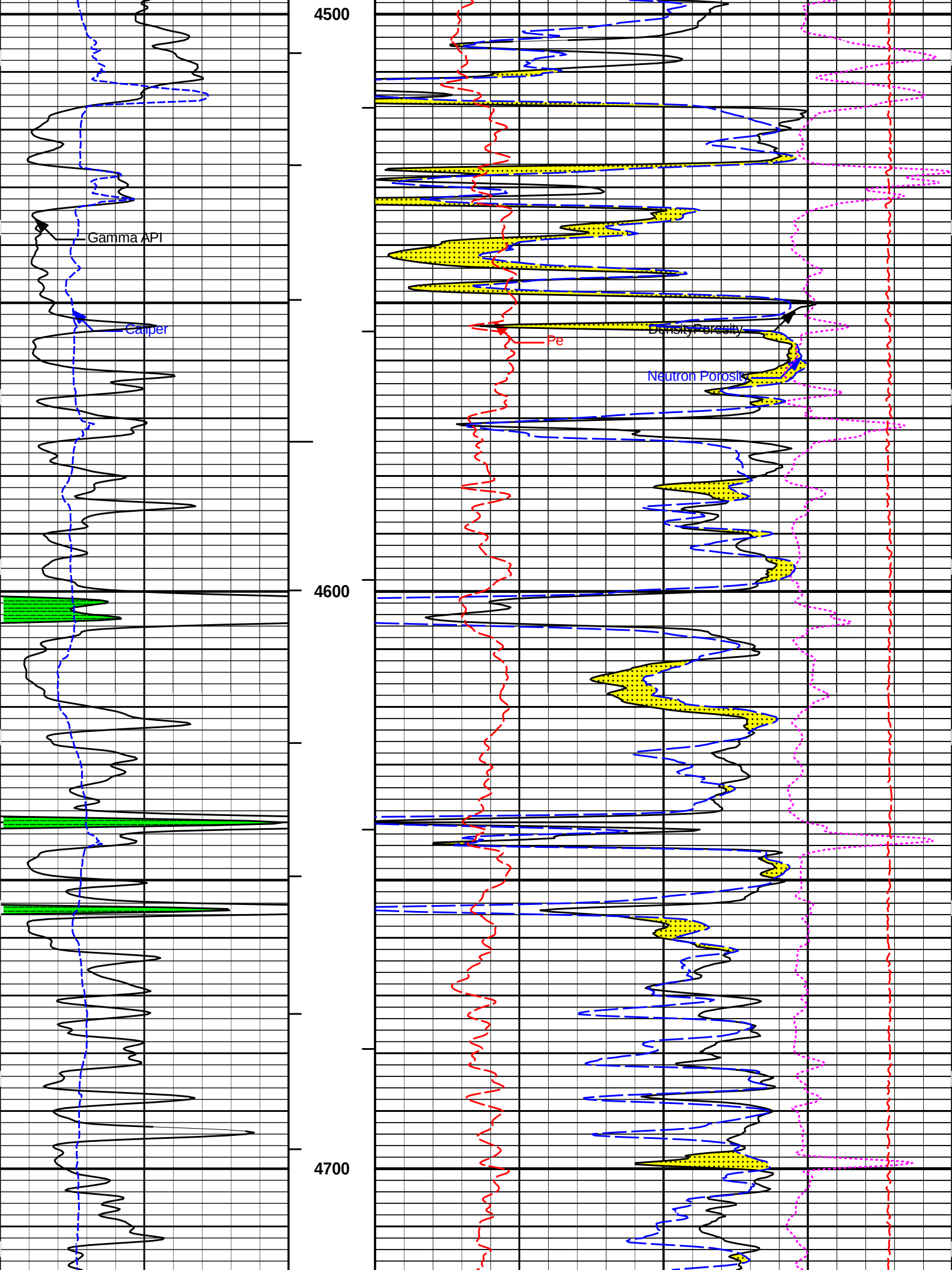
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4600
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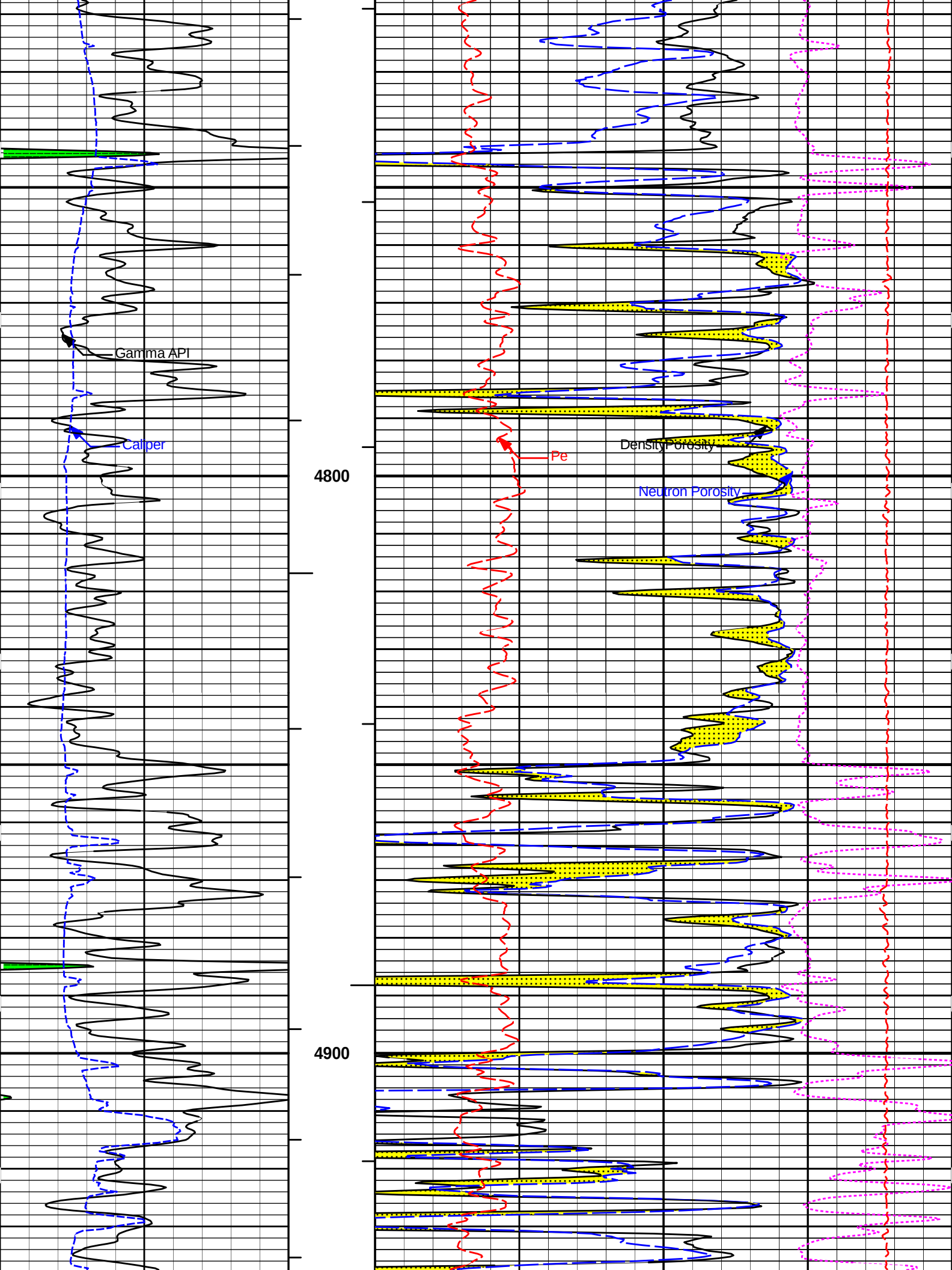
Gamma API
Caliper
Pe
Density Porosity
Neutron Porosity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Caliper
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Pe
Density Porosity
Neutron Porosity
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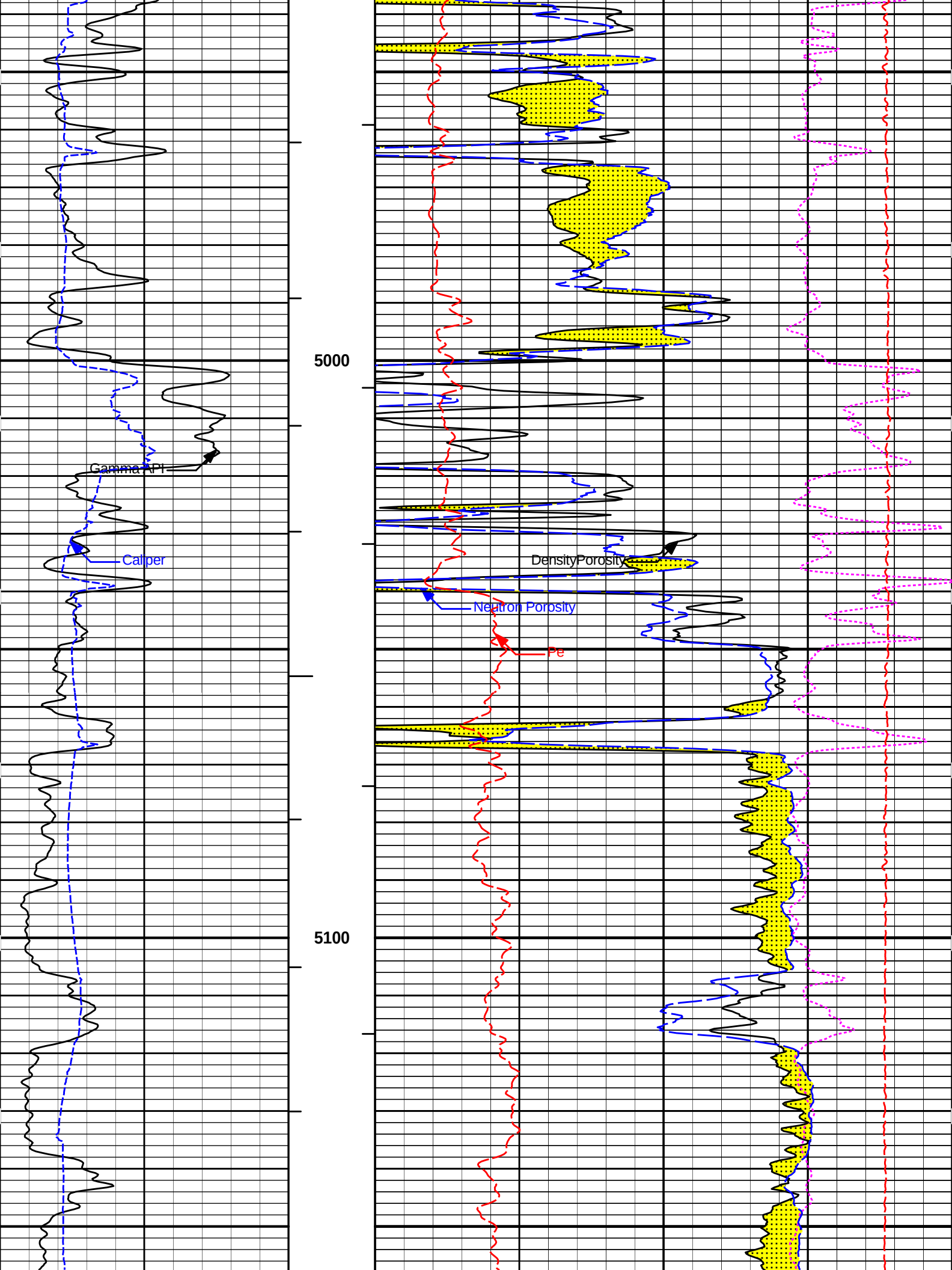
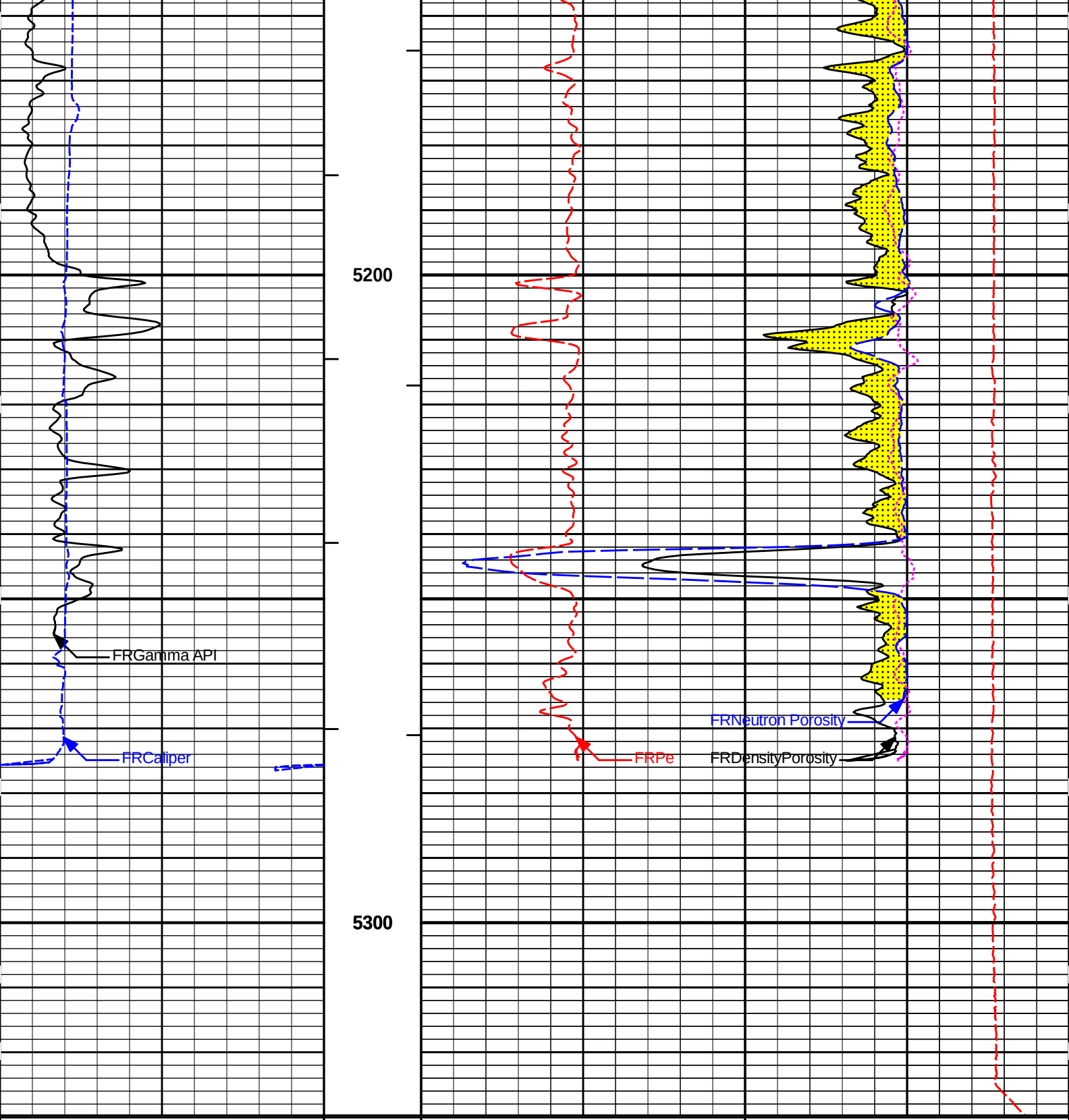

5000
5100
Gamma API
Caliper
DensityPorosity
Neutron Porosity
Pe



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

HALLIBURTON

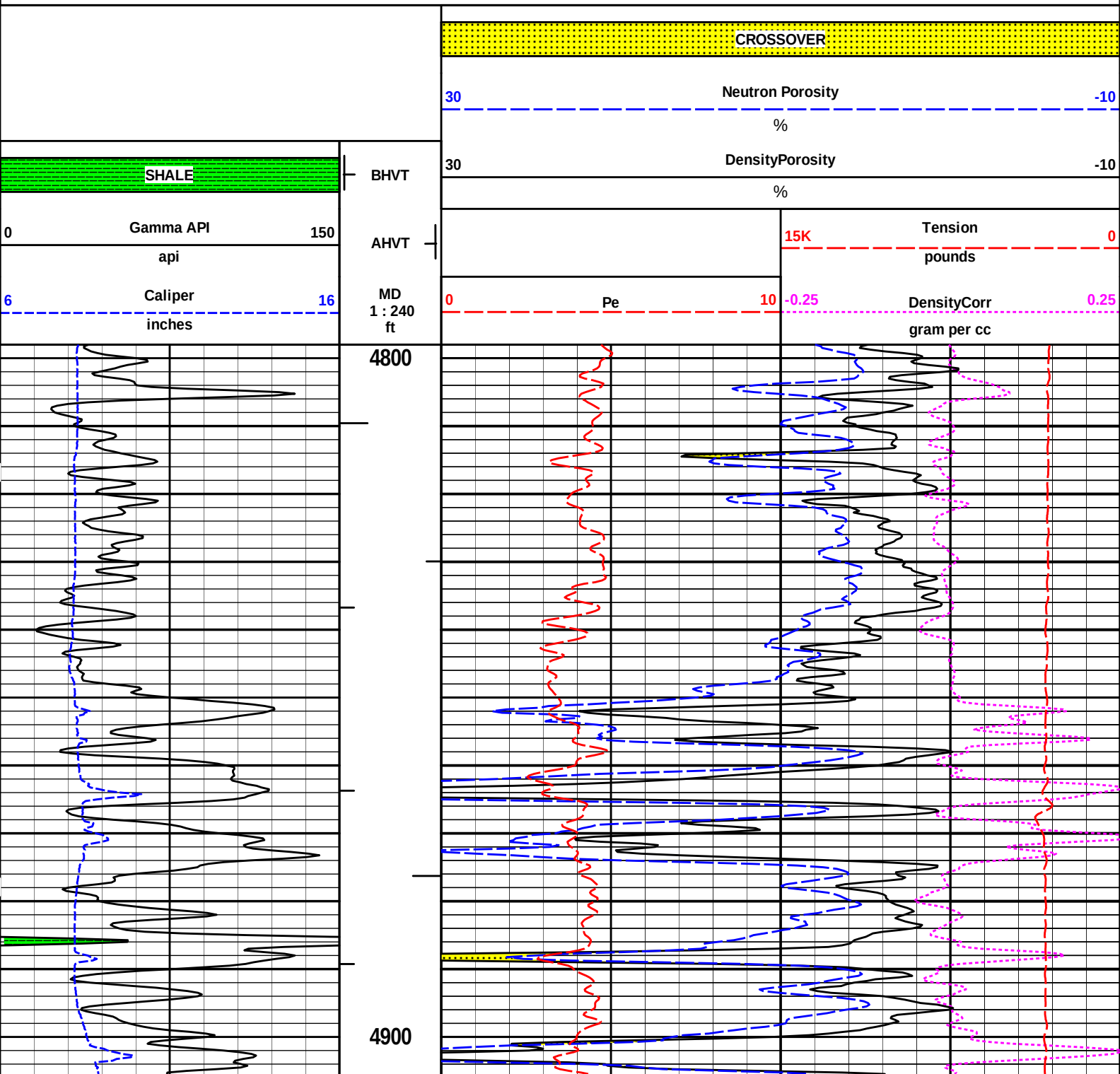
Plot Time: 25-Apr-14 23:54:51
Plot Range: 3798 ft to 5329.75 ft
Data: FAYE_1-18\Well Based\DAQ-0001-003\
Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

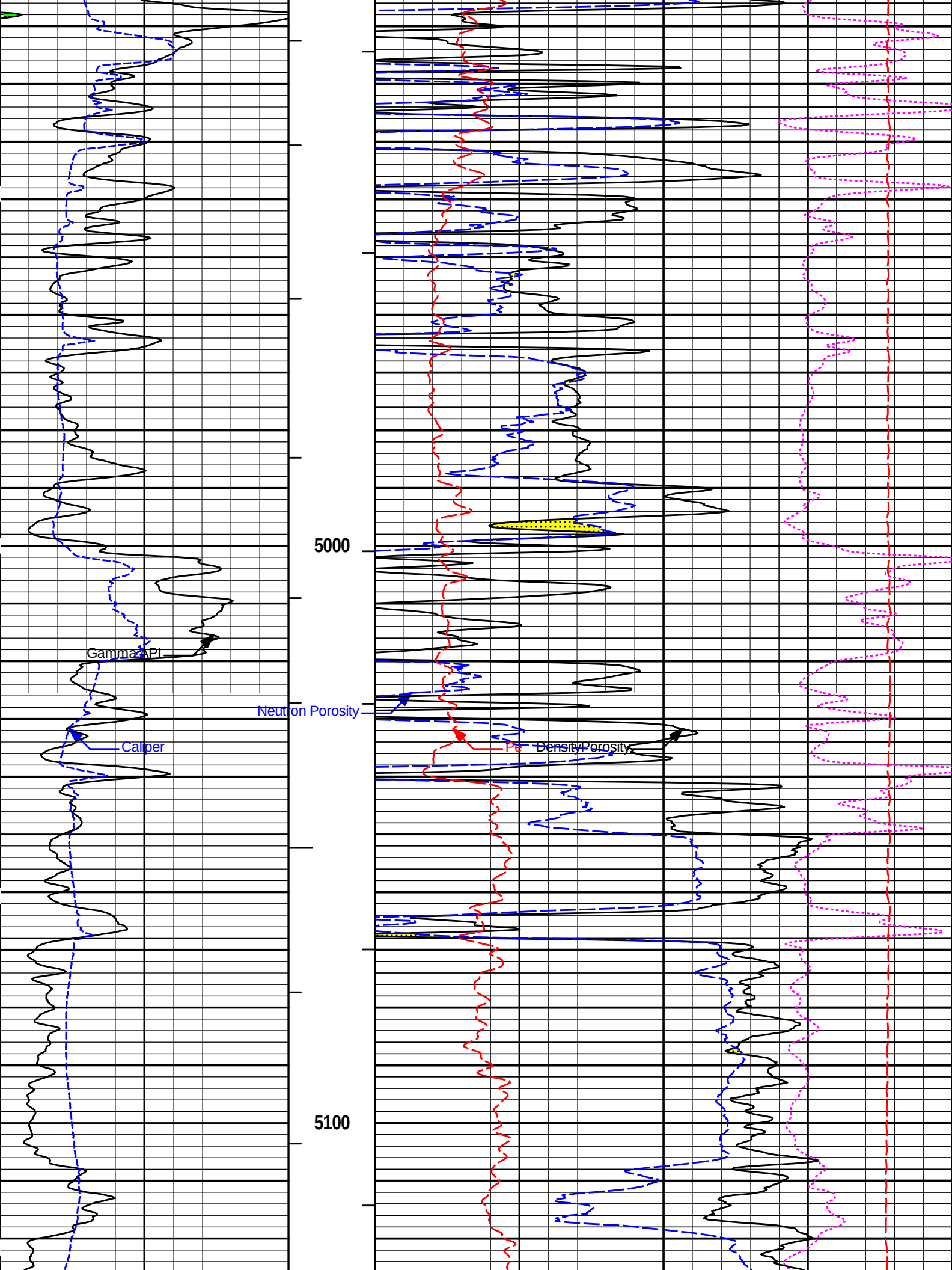
5 INCH MAIN LOG

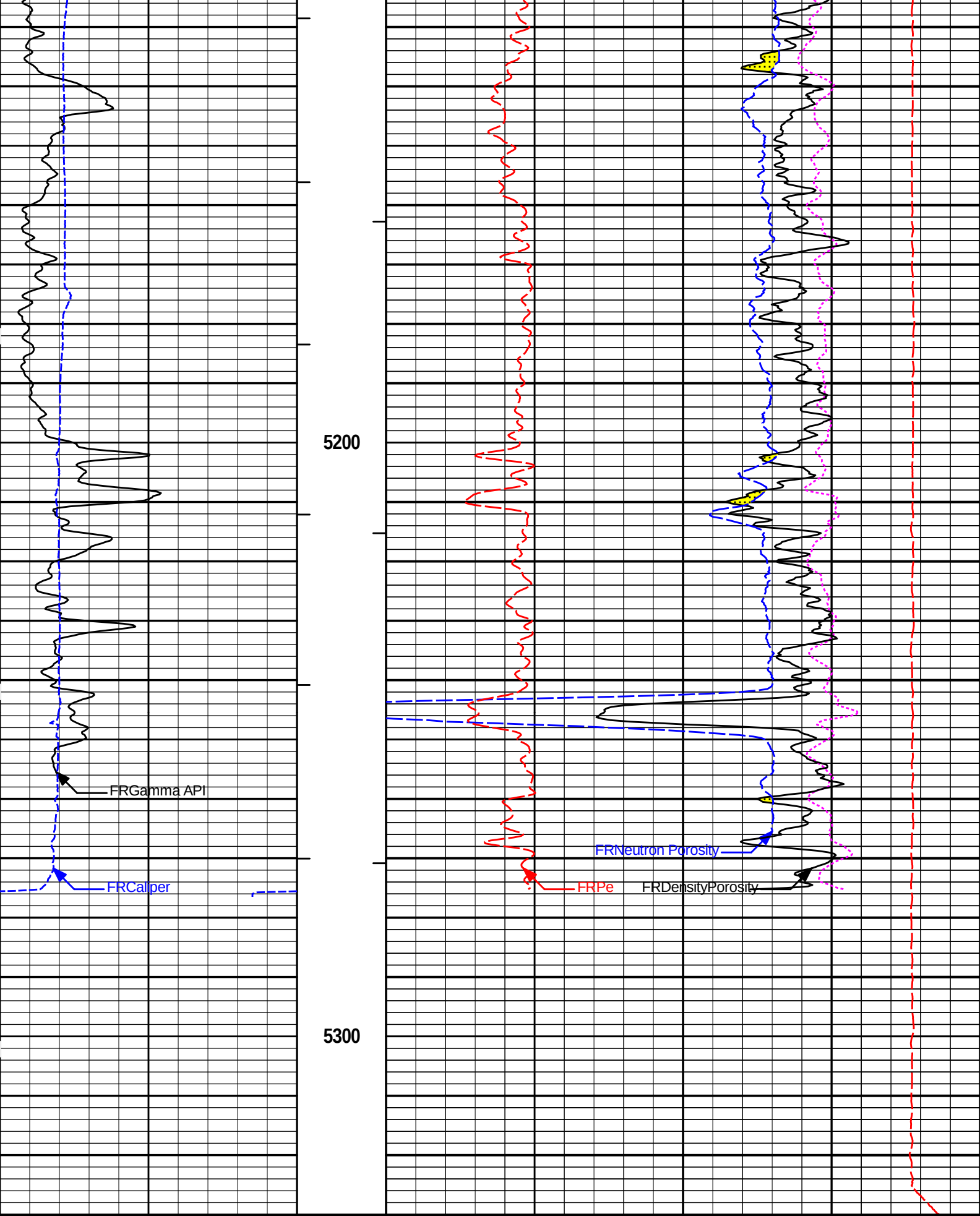
HALLIBURTON

Plot Time: 25-Apr-14 23:54:51
Plot Range: 4798 ft to 5330 ft
Data: FAYE_1-18\Well Based\DAQ-0001-002\
Plot File: \\PORO\Poro_IQ_5_REP_LIB

REPEAT SECTION

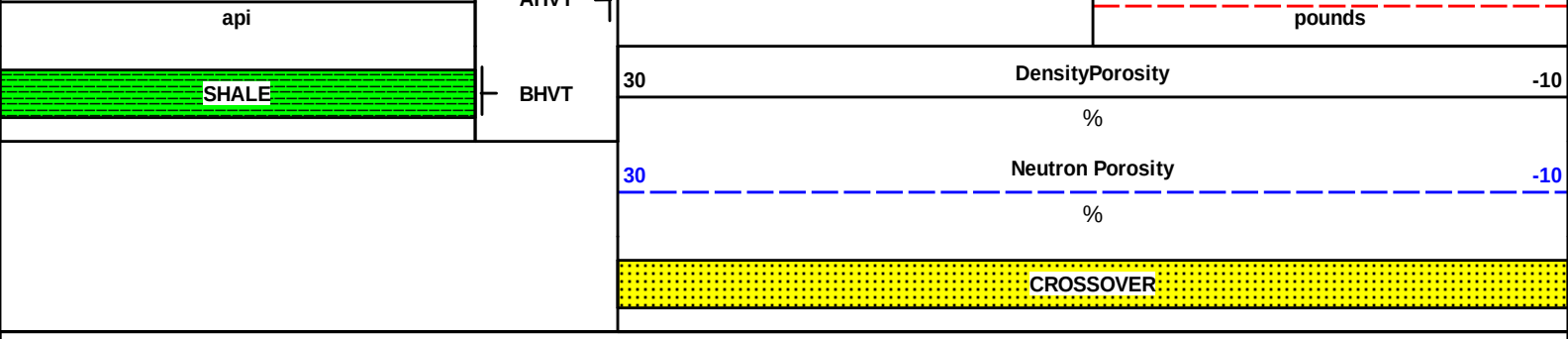



5000
5100
Gamma API
Caliper
Neutron Porosity
Pe
DensityPorosity



6 Caliper 16	MD	0 Pe 10
inches	1 : 240	
0 Gamma API 150	ft	
	AHVT	15K Tension 0

-0.25 DensityCorr 0.25
gram per cc



HALLIBURTON

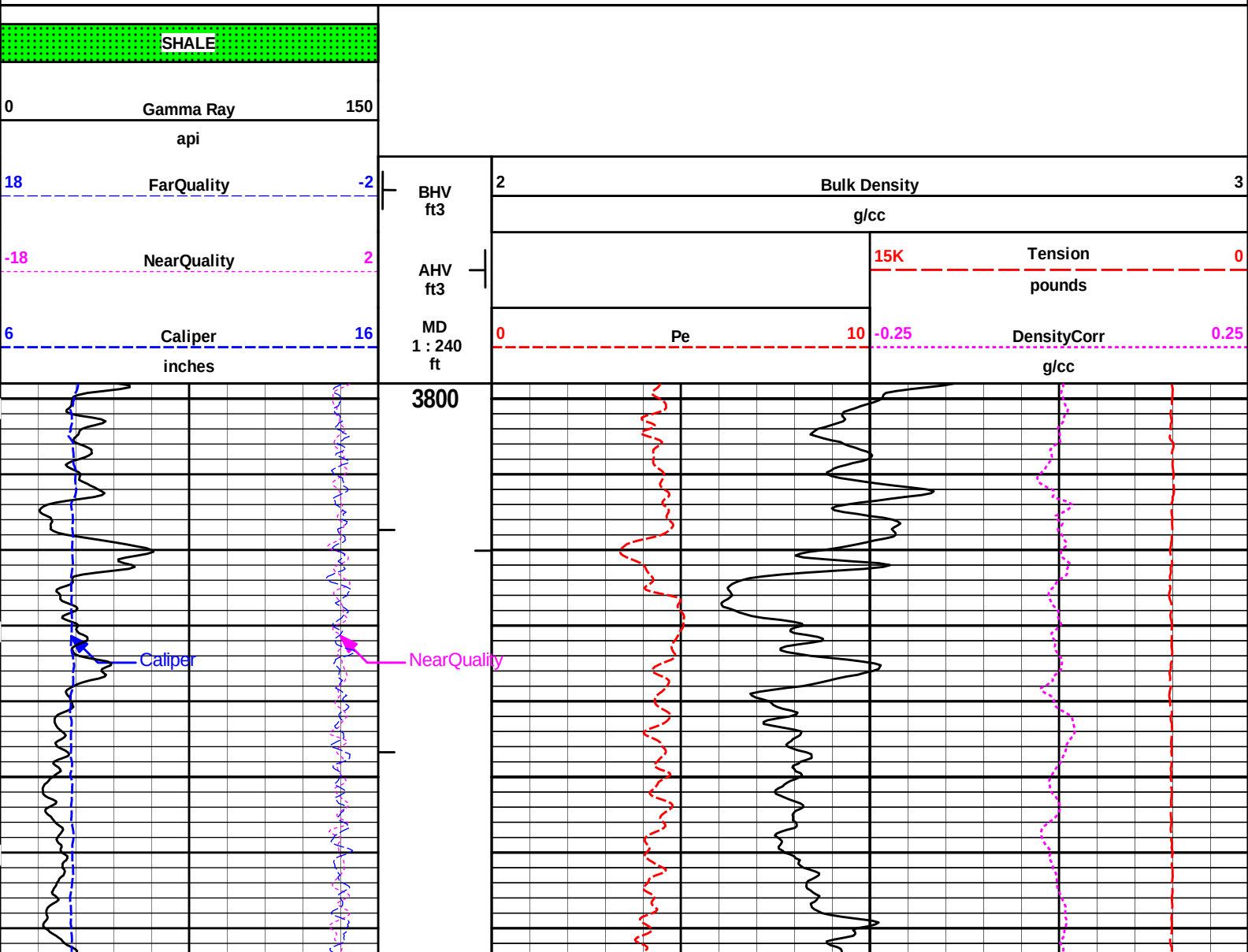
Plot Time: 25-Apr-14 23:54:52
Plot Range: 4798 ft to 5330 ft
Data: FAYE_1-18\Well Based\DAQ-0001-002\
Plot File: \\PORO\Poro_IQ_5_REP_LIB

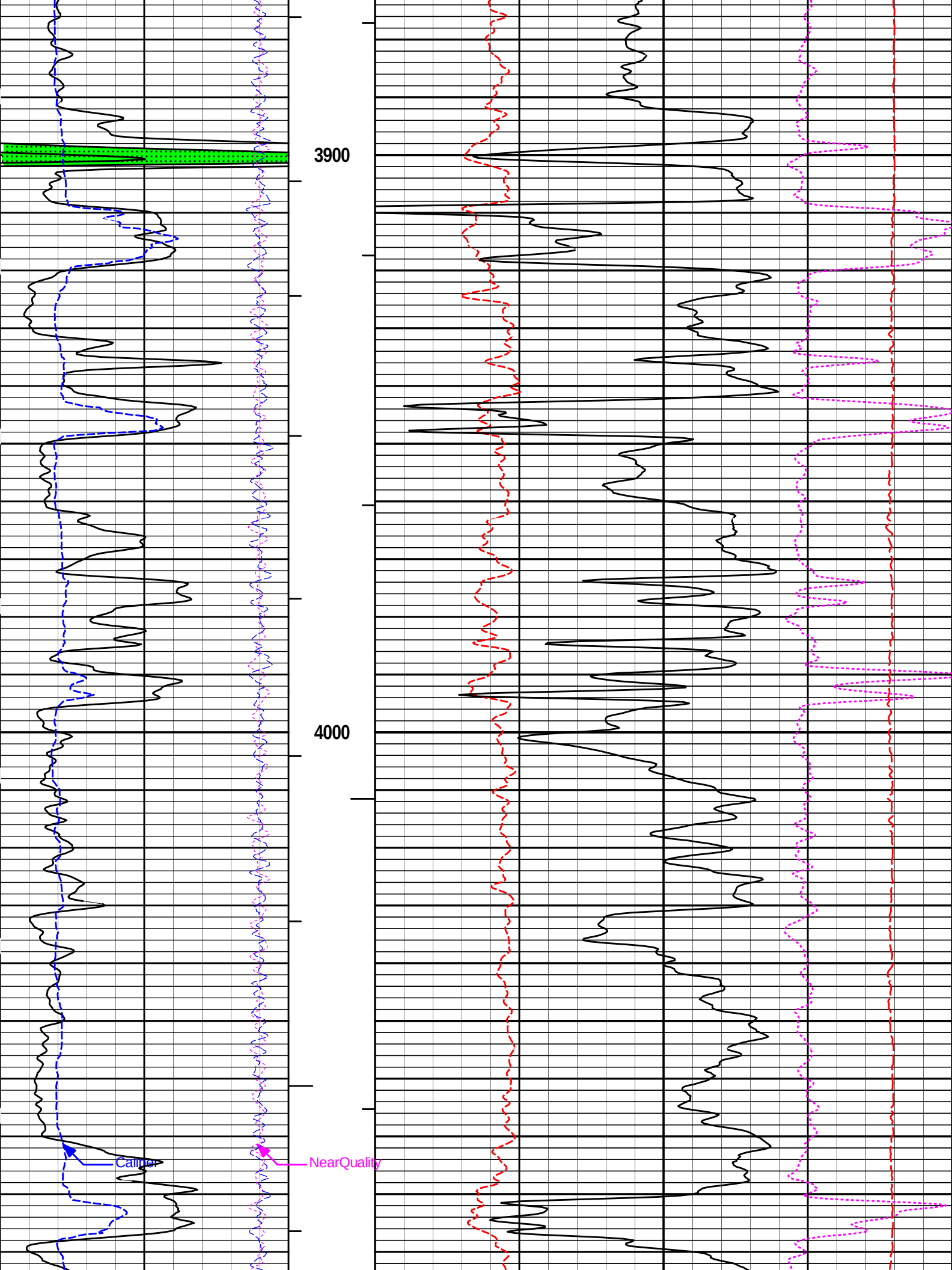
REPEAT SECTION

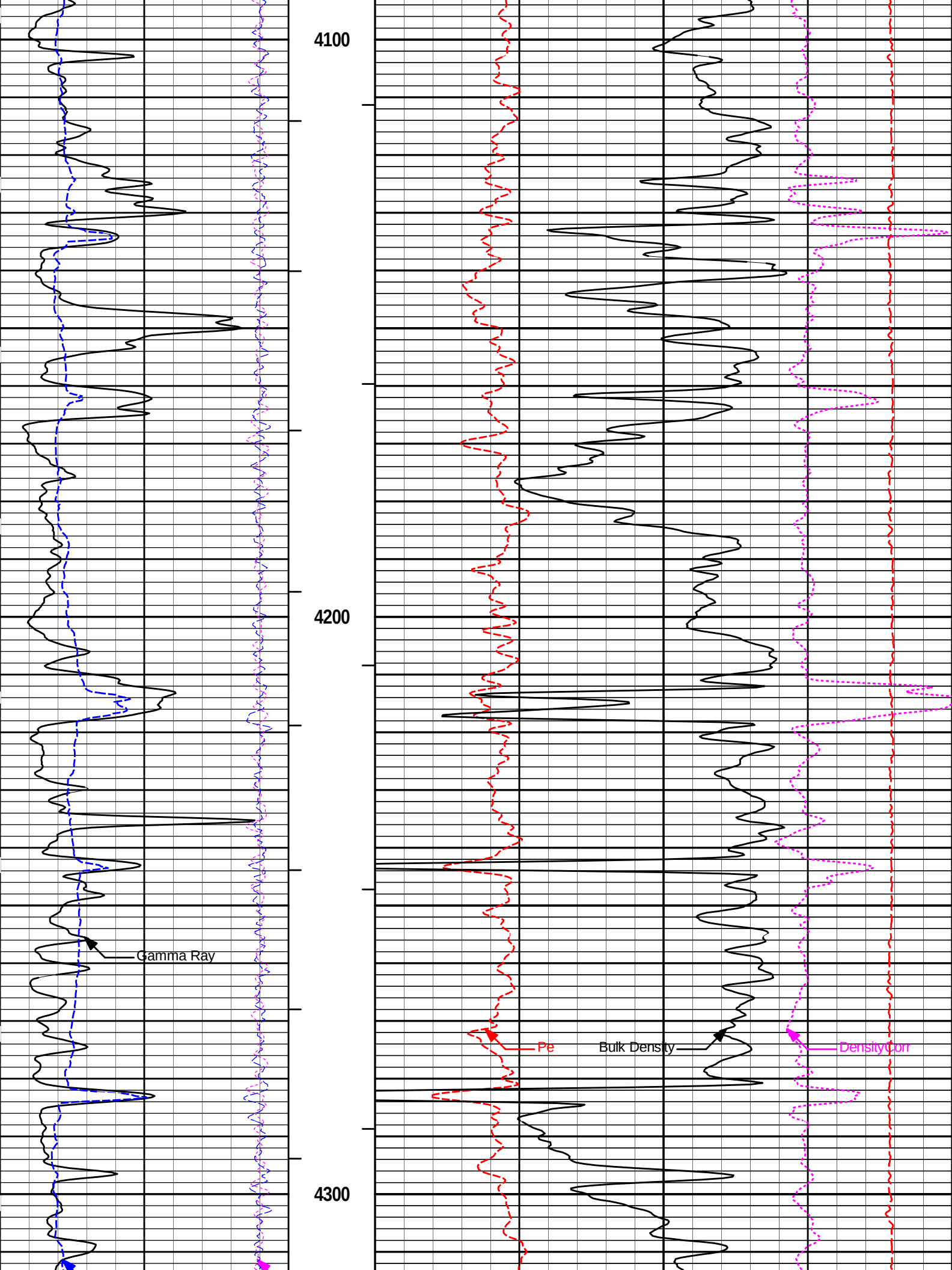
HALLIBURTON

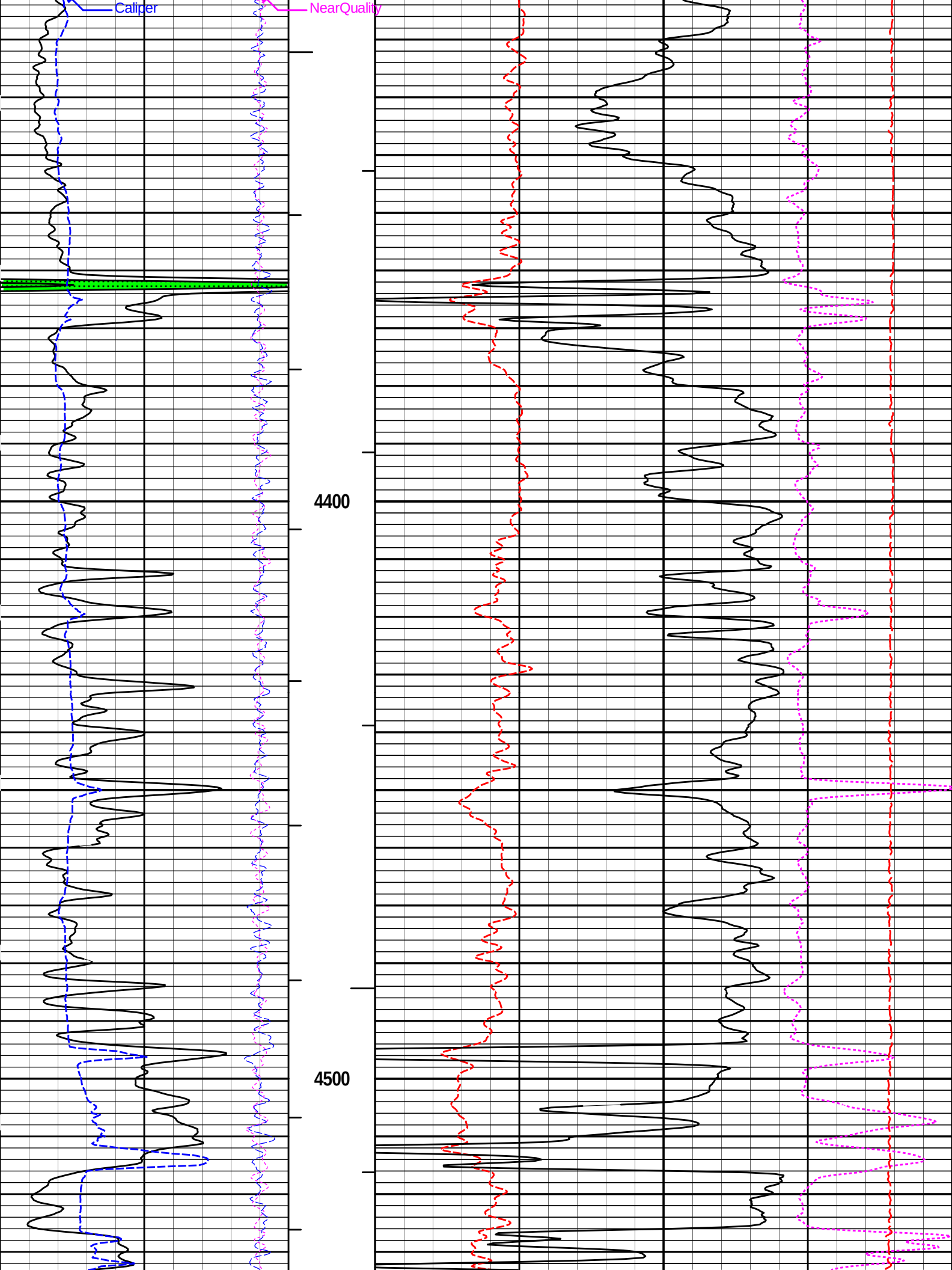
Plot Time: 25-Apr-14 23:54:53
Plot Range: 3798 ft to 5329.75 ft
Data: FAYE_1-18\Well Based\DAQ-0001-003\
Plot File: \\-LOCAL-\FAYE_1-18\0001 SP-GTET-DSNT-SDLT-ACRT-BN\PORO\BULKD_5_MAIN_LIB

5 INCH MAIN LOG




3900
4000
Caliper
NearQuality


4100
4200
4300
Gamma Ray
Pe
Bulk Density
DensityCorr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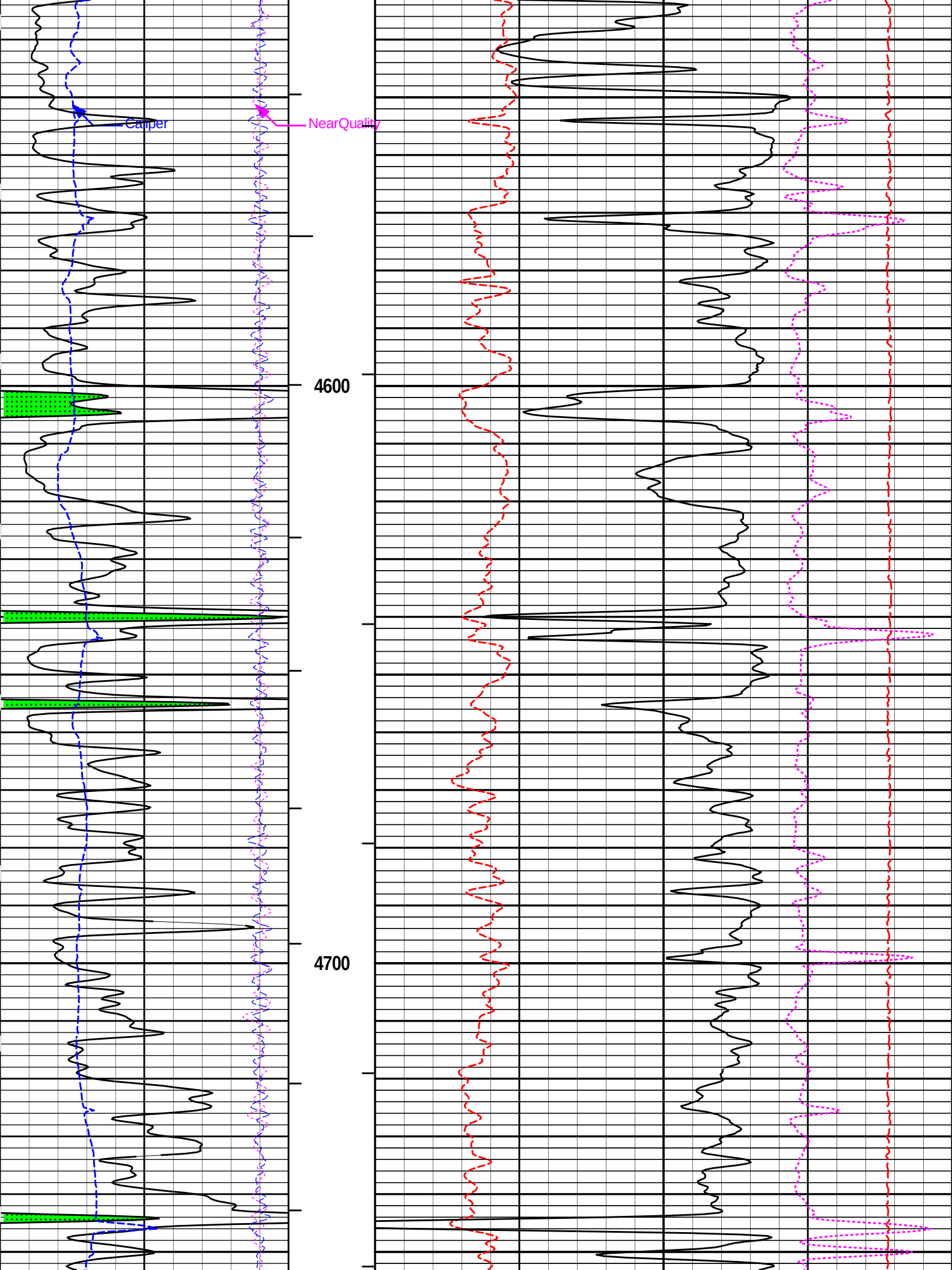
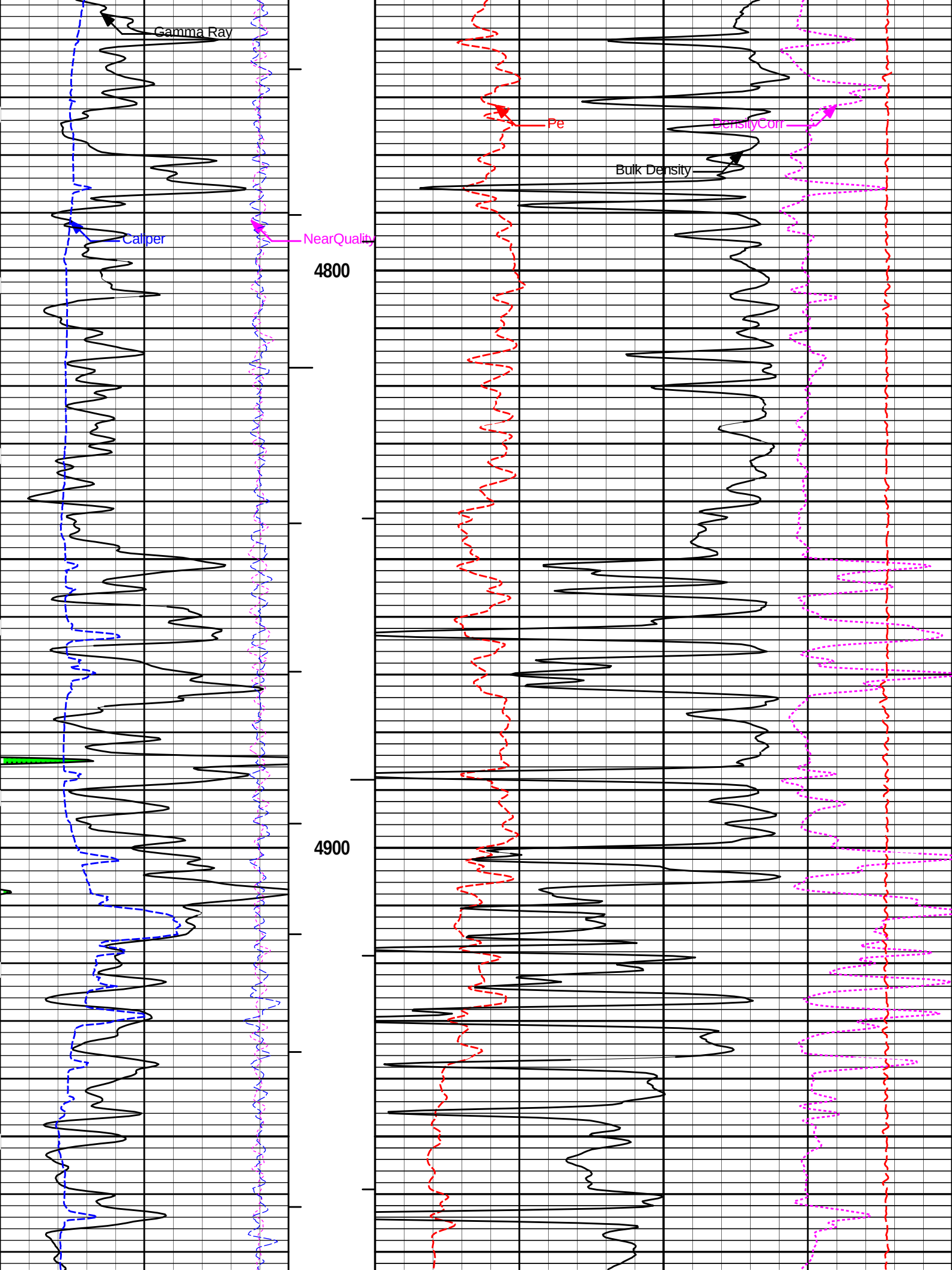
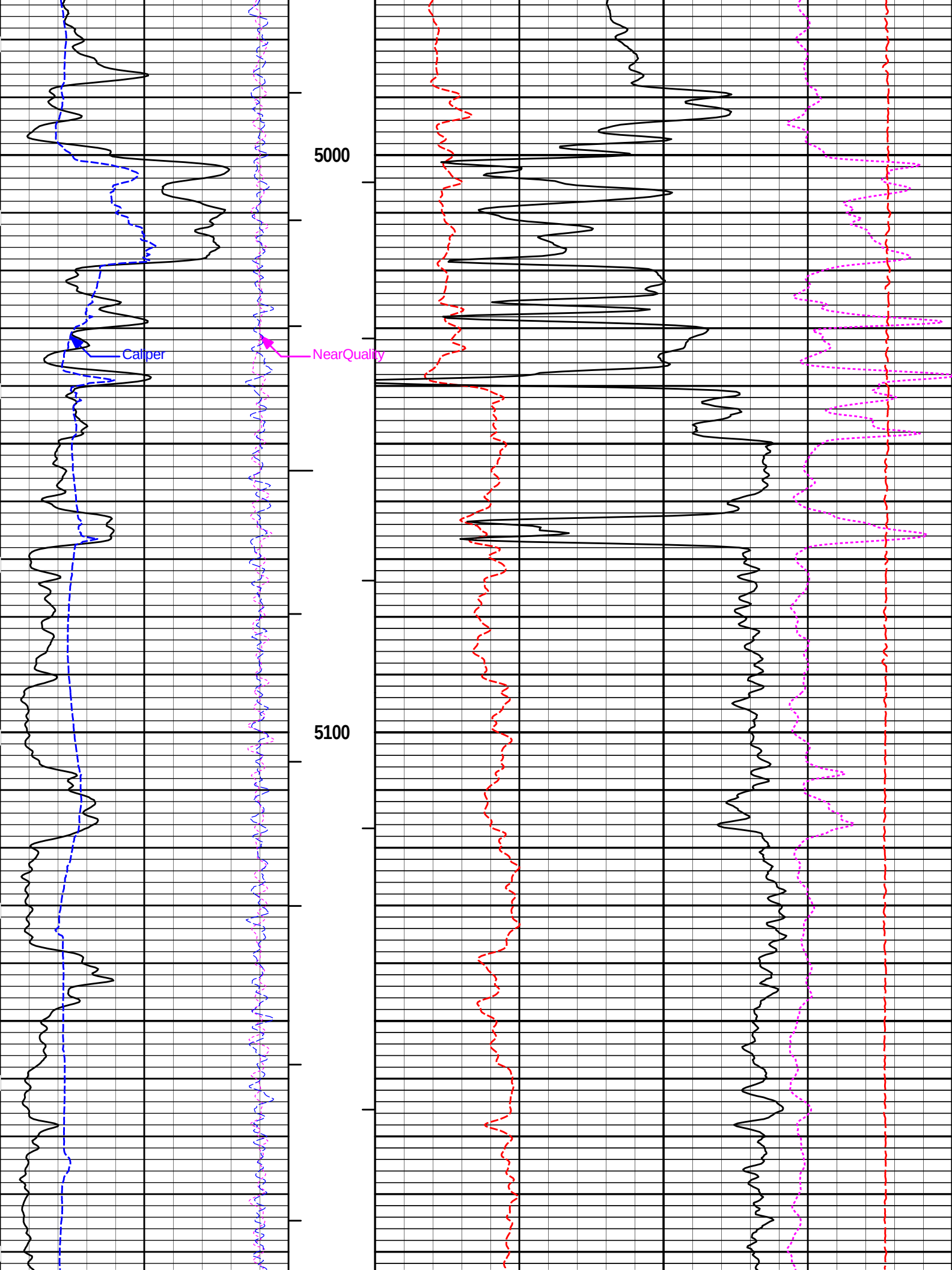
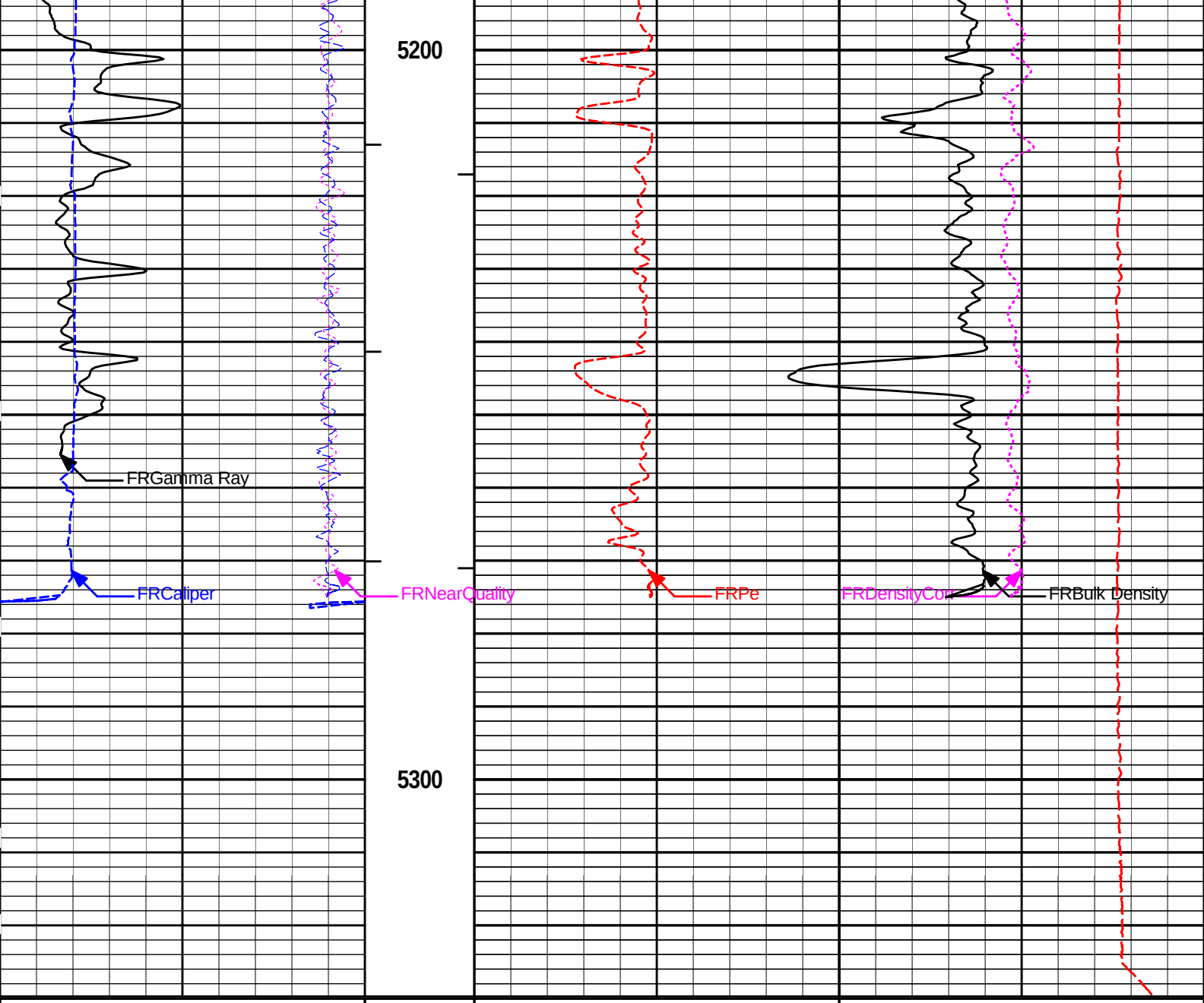
NearQuality
4400
4500


Caliper
NearQuality
4600
4700


Gamma Ray
Caliper
NearQuality
Pe
DensityCorr
Bulk Density
4800
4900


5000
5100
Caliper
NearQuality



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

Plot Time: 25-Apr-14 23:54:55
Plot Range: 3798 ft to 5329.75 ft
Data: FAYE_1-18\Well Based\DAQ-0001-003\
Plot File: \\-LOCAL-\FAYE_1-18\0001 SP-GTET-DSNT-SDLT-ACRT-BN\PORO\BULKD_5_MAIN_LIB

5 INCH MAIN LOG

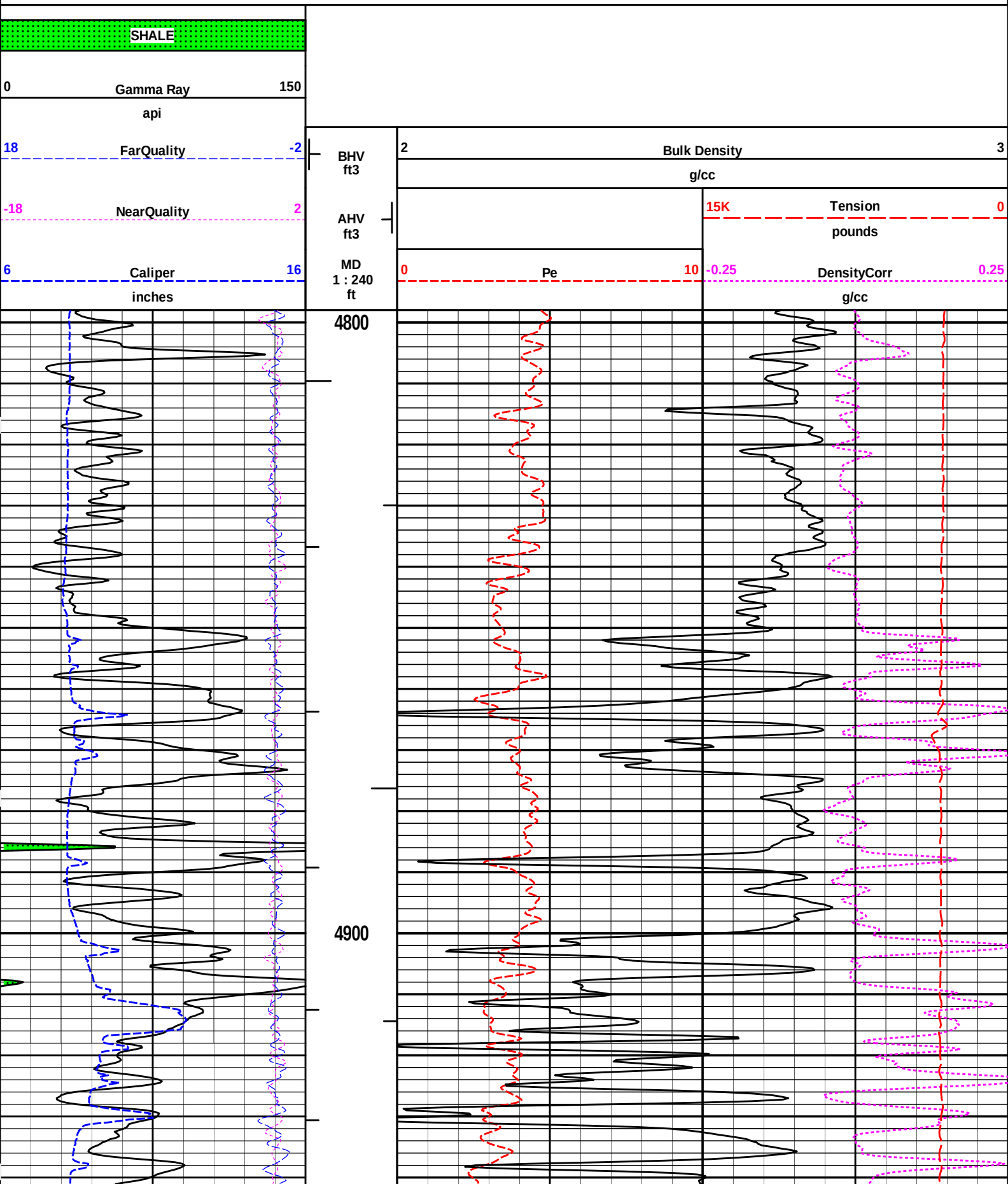
HALLIBURTON

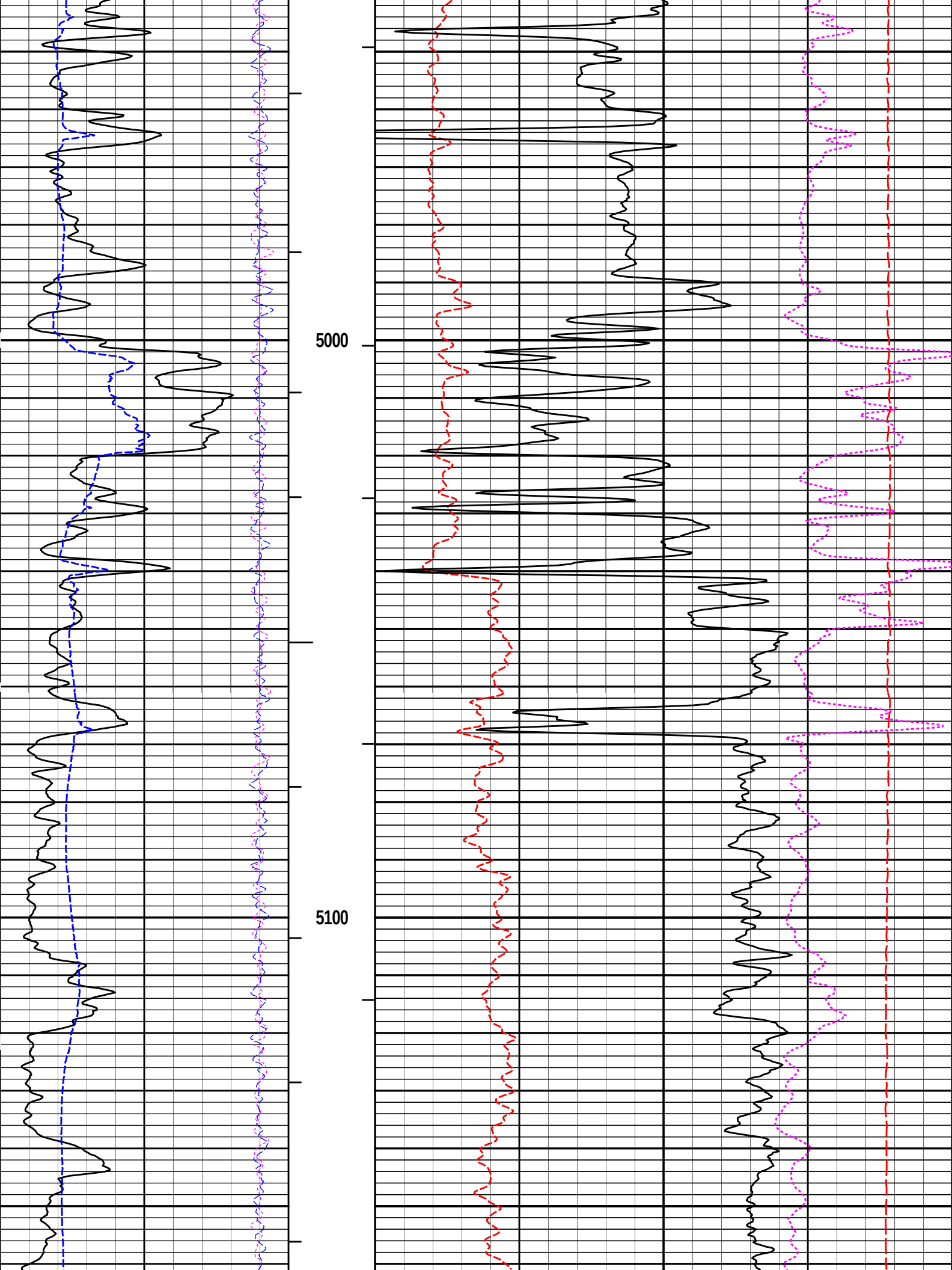
Plot Time: 25-Apr-14 23:54:55

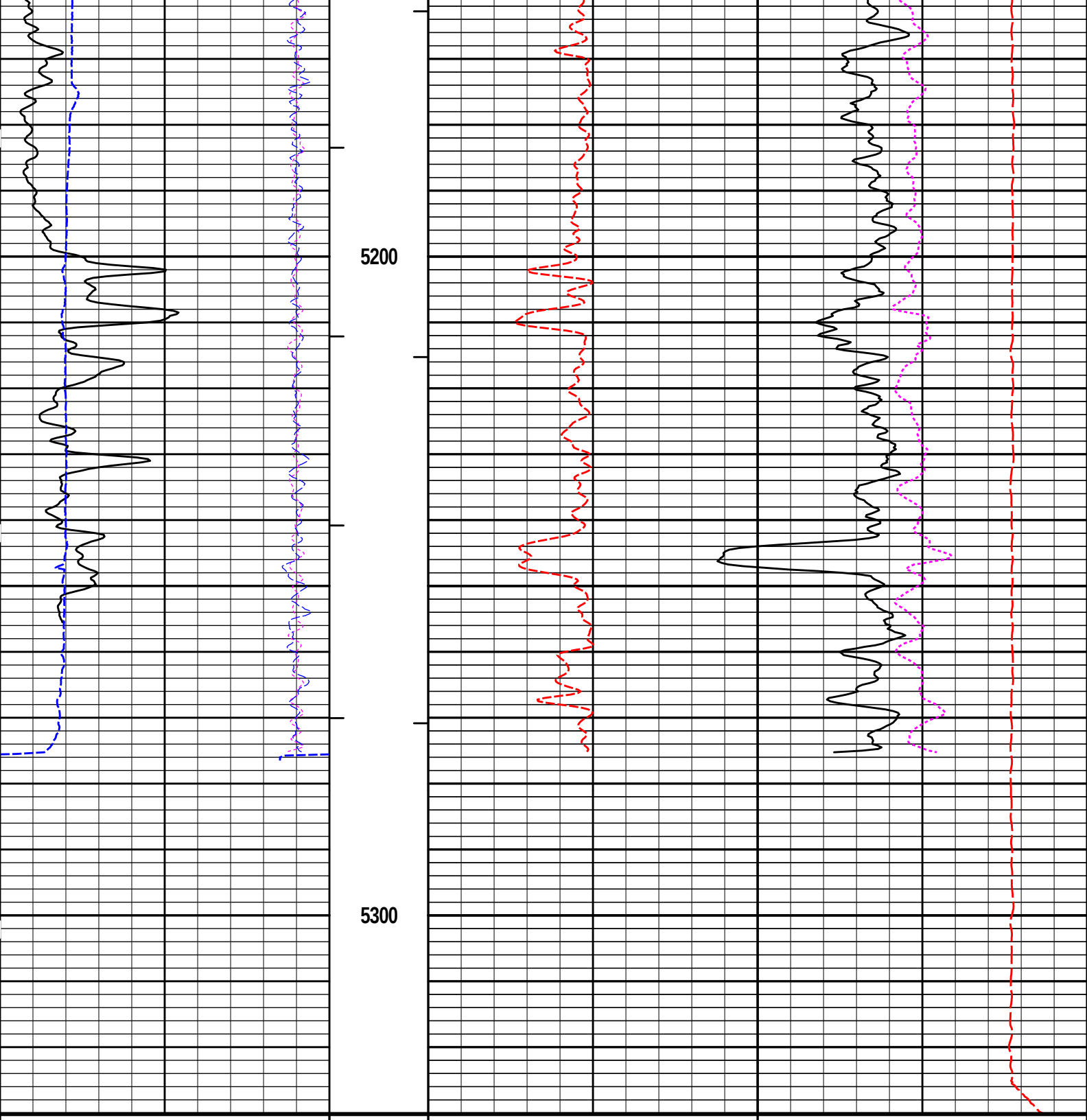
HALLIBURTON

Plot Time: 25-Apr-14 23:54:55
Plot Range: 4798 ft to 5330 ft
Data: FAYE_1-18\Well Based\DAQ-0001-002\
Plot File: \\-LOCAL-\FAYE_1-18\0001 SP-GTET-DSNT-SDLT-ACRT-BN\PORO\BULKD_5_REP_LIB

REPEAT SECTION




5000
5100



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

HALLIBURTON

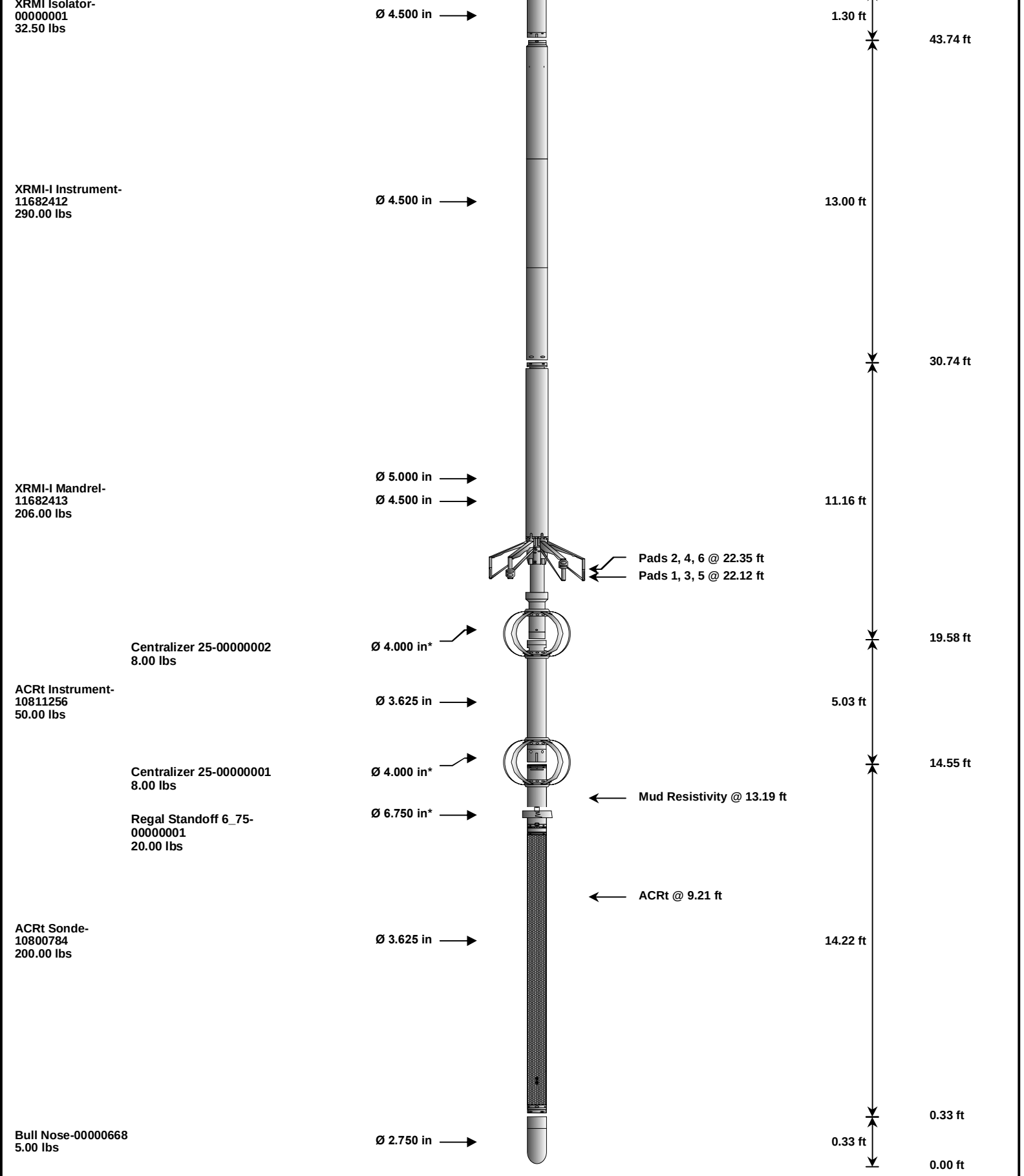
Plot Time: 25-Apr-14 23:54:56
Plot Range: 4798 ft to 5330 ft
Data: FAYE_1-18\Well Based\DAQ-0001-002\
Plot File: \\-LOCAL-\FAYE_1-18\0001 SP-GTET-DSNT-SDLT-ACRT-BN\PORO\BULKD_5_REP_LIB

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						85.40 ft
Cable Head-12345678 30.00 lbs		Ø 3.625 in			1.92 ft	
						83.48 ft
SP Sub-12345678 60.00 lbs		Ø 3.625 in		SP @ 81.70 ft	3.74 ft	
						79.74 ft
GTET-10811258 165.00 lbs		Ø 3.625 in		GammaRay @ 73.67 ft	8.52 ft	
						71.22 ft
	DSN Decentralizer-10735145 6.60 lbs	Ø 5.000 in*				
DSNT-10755066 174.00 lbs		Ø 3.625 in		DSN Far @ 64.28 ft DSN Near @ 63.53 ft	9.69 ft	
						61.53 ft
SDLT-10685803 360.00 lbs		Ø 4.500 in			10.81 ft	
	SDLT Pad-10714945 65.00 lbs			Microlog @ 53.72 ft SDL Caliper @ 53.53 ft SDL @ 53.52 ft		
	Microlog Pad-10685803 8.00 lbs	Ø 4.750 in* Ø 4.750 in*				
						50.72 ft
IQ Flex-00000668 140.00 lbs		Ø 3.625 in			5.67 ft	
						45.05 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		83.48	300.00
SP	SP Sub	12345678	60.00	3.74		79.74	300.00
GTET	Gamma Telemetry Tool	10811258	165.00	8.52		71.22	60.00
DSNT	Dual Spaced Neutron	10755066	174.00	9.69		61.53	60.00
DCNT	DSN Decentralizer	10735145	6.60	5.13	*	64.86	300.00
SDLT	Spectral Density Tool	10685803	360.00	10.81		50.72	60.00

SDLP	Density Insite Pad	10714945	65.00	2.55	*	52.93	60.00
MICP	Micrologg Pad	10685803	8.00	1.00	*	53.22	60.00
IQF	IQ Flex tool	00000668	140.00	5.67		45.05	300.00
	Isolator for the XRMI tool	00000001	32.50	1.30		43.74	300.00
XRMI	XRMI Navigation - Insite	11682412	290.00	13.00		30.74	30.00
XRMI-I	XRMI Imager - Insite	11682413	206.00	11.16		19.58	30.00
ACRt	Array Compensated True Resistivity Instrument Section	10811256	50.00	5.03		14.55	120.00
OBCEN	Centralizer - 25 in. Overbody	00000002	8.00	2.08	*	18.69	300.00
ACRt	Array Compensated True Resistivity Sonde Section	10800784	200.00	14.22		0.33	120.00
RSOF	Regal Standoff 6.75in	00000001	20.00	0.52	*	12.25	300.00
OBCEN	Centralizer - 25 in. Overbody	00000001	8.00	2.08	*	13.53	300.00
BLNS	Bull Nose	00000668	5.00	0.33		0.00	300.00
Total			**1,828.10**	**85.40**			

* Not included in Total Length and Length Accumulation.

Data: FAYE_1-18\0001 SP-GTET-DSNT-SDLT-ACRT-BN\IDLE **Date: 25-Apr-14 20:40:53**

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. BOLLOM**	**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

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. BOLLOM **Calibration Date:** 14-Apr-14 11:31:00
Software Version: WL INSITE R4.2.0 (Build 2) **Calibration Version:** 1
Host Tool Name: DSNT - 10755066

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	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	1.0250	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	0.9726	0.9736	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

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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	9.350	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	80.0	degF
	SHARED	TD	Total Well Depth	5330.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	XRMI-I Instrument	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	XRMI-I Instrument	

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	XRMI-I Mandrel	
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	
GTET	BHSM	Borehole Size Source Tool	XRMI-I Mandrel	
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	
DSNT	BHSM	Borehole Size Source Tool	XRMI-I Mandrel	
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
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
XRMI-I Instrument	WRTI	Survey Writing Interval	30	ft
XRMI-I Instrument	SOPT	Smoothing Option	None	
XRMI-I Mandrel	DIMG	Process XRMI?	Yes	
XRMI-I Mandrel	ALMT	Image Alignment Method	AZIM	
XRMI-I Mandrel	AGN	Use Button Auto Gain?	Yes	
XRMI-I Mandrel	BCLR	Button Auto Gain Color	127	
XRMI-I Mandrel	BFIL	Button Auto Gain Filter	0.020	
XRMI-I Mandrel	BGAN	Button Gain Value	0.001	
XRMI-I Mandrel	BOFF	Button Offset	0	
XRMI-I Mandrel	DIPE	Process Dipmeter Calculations?	Yes	
XRMI-I Mandrel	BHCS	Process Borehole Corrections?	Yes	
XRMI-I Mandrel	BHSM	Borehole Size Source Tool	XRMI-I Mandrel	
XRMI-I Mandrel	CLOK	Process Caliper Outputs?	Yes	
XRMI-I Mandrel	CMAX	Caliper Maximum Limit	100.0	in
XRMI-I Mandrel	CMIN	Caliper Mimimum Limit	3.5	in

	XRMI-I Mandrel	NAVS	Navigation Source Tool	XRMI-I Instrument	
	XRMI-I Mandrel	BHVC	Radius type for borehole volume calcuations	Elliptical	
	ACRt Sonde	RTOK	Process ACRt?	Yes	
	ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
	ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
	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
	ACRt Sonde	BHSM	Borehole Size Source Tool	XRMI-I Mandrel	
BOTTOM					

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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	85.40	NO	
BS	Bit Size	85.40	NO	
HDIA	Measured Hole Diameter	0.00	NO	
	SP Sub			
PLTC	Plot Control Mask	81.70	NO	
SP	Spontaneous Potential	81.70	BLK	1.250
SPR	Raw Spontaneous Potential	81.70	NO	
SPO	Spontaneous Potential Offset	81.70	NO	
	GTET			
TPUL	Tension Pull	73.67	NO	
GR	Natural Gamma Ray API	73.67	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	73.67	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	73.67	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	63.43	NO	
RNDS	Near Detector Telemetry Counts	63.53	BLK	1.417
RFDS	Far Detector Telemetry Counts	64.28	TRI	0.583
DNTT	DSN Tool Temperature	63.53	NO	
DSNS	DSN Tool Status	63.43	NO	
ERND	Near Detector Telemetry Counts EVR	63.53	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	64.28	BLK	0.000
ENTM	DSN Tool Temperature EVR	63.53	NO	
HDIA	Measured Hole Diameter	0.00	NO	

SDLT				
TPUL	Tension Pull	53.53	NO	
PCAL	Pad Caliper	53.53	TRI	0.250
ACAL	Arm Caliper	53.53	TRI	0.250
XRMI-I Mandrel				
TPUL	Tension Pull	22.35	NO	
PAD1	XRMI Pad 1 values	22.12	NO	
PAD2	XRMI Pad 2 values	22.12	NO	
PAD3	XRMI Pad 3 values	22.12	NO	
PAD4	XRMI Pad 4 values	22.12	NO	
PAD5	XRMI Pad 5 values	22.12	NO	
PAD6	XRMI Pad 6 values	22.12	NO	
OD1	EMI Odd Button Values Pad 1	22.12	NO	
OD2	EMI Odd Button Values Pad 2	22.35	NO	
OD3	EMI Odd Button Values Pad 3	22.12	NO	
OD4	EMI Odd Button Values Pad 4	22.35	NO	
OD5	EMI Odd Button Values Pad 5	22.12	NO	
OD6	EMI Odd Button Values Pad 6	22.35	NO	
EV1	EMI Even Button Values Pad 1	22.14	NO	
EV2	EMI Even Button Values Pad 2	22.32	NO	
EV3	EMI Even Button Values Pad 3	22.14	NO	
EV4	EMI Even Button Values Pad 4	22.32	NO	
EV5	EMI Even Button Values Pad 5	22.14	NO	
EV6	EMI Even Button Values Pad 6	22.32	NO	
ITMP	Instrument Temperature	19.58	NO	
EMIM	Tool Mode	19.58	NO	
HAZI	Hole Azimuth	21.87	NO	
HAZI	Hole Azimuth - Down Delay	22.37	NO	
ZACC	Accelerometer Z	22.12	NO	
RB	Relative Bearing	21.87	NO	
RBD	Relative Bearing Down	22.37	NO	
TPUL	Tension Pull	22.35	NO	
FIR1	Current Button R - Pad 1	22.12	NO	
FIR2	Current Button R - Pad 2	22.35	NO	
FIR3	Current Button R - Pad 3	22.12	NO	
FIR4	Current Button R - Pad 4	22.35	NO	
FIR5	Current Button R - Pad 5	22.12	NO	
FIR6	Current Button R - Pad 6	22.35	NO	
FIX1	Current Button X - Pad 1	22.12	NO	
FIX2	Current Button X - Pad 2	22.35	NO	
FIX3	Current Button X - Pad 3	22.12	NO	
FIX4	Current Button X - Pad 4	22.35	NO	
FIX5	Current Button X - Pad 5	22.12	NO	
FIX6	Current Button X - Pad 6	22.35	NO	
SIR1	Current Slow Button R - Pad 1	22.12	BLK	3.000
SIR2	Current Slow Button R - Pad 2	22.35	BLK	3.000
SIR3	Current Slow Button R - Pad 3	22.12	BLK	3.000
SIR4	Current Slow Button R - Pad 4	22.35	BLK	3.000
SIR5	Current Slow Button R - Pad 5	22.12	BLK	3.000
SIR6	Current Slow Button R - Pad 6	22.35	BLK	3.000
SIX1	Current Slow Button X - Pad 1	22.12	BLK	3.000
SIX2	Current Slow Button X - Pad 2	22.35	BLK	3.000
SIX3	Current Slow Button X - Pad 3	22.12	BLK	3.000
SIX4	Current Slow Button X - Pad 4	22.35	BLK	3.000

SIX5	Current Slow Button X - Pad 5	22.12	BLK	3.000
SIX6	Current Slow Button X - Pad 6	22.35	BLK	3.000
EMMR	Phasor Voltage - Real Part	22.12	NO	
EMMX	Phasor Voltage - Imaginary Part	22.12	NO	
PADV	Pad Voltage	19.58	BLK	0.250
ITMP	Instrument Temperature	19.58	BLK	0.000
CON1	Conductivity Pad 1	22.12	BLK	3.000
CON2	Conductivity Pad 2	22.35	BLK	3.000
CON3	Conductivity Pad 3	22.12	BLK	3.000
CON4	Conductivity Pad 4	22.35	BLK	3.000
CON5	Conductivity Pad 5	22.12	BLK	3.000
CON6	Conductivity Pad 6	22.35	BLK	3.000
UIR2	Current Button R No Delay - Pad 2	22.12	NO	
UIR4	Current Button R No Delay - Pad 4	22.12	NO	
UIR6	Current Button R No Delay - Pad 6	22.12	NO	
UIX2	Current Button X No Delay - Pad 2	22.12	NO	
UIX4	Current Button X No Delay - Pad 4	22.12	NO	
UIX6	Current Button X No Delay - Pad 6	22.12	NO	
HDIA	Measured Hole Diameter	0.00	NO	
TPUL	Tension Pull	22.35	NO	
ARM1	Caliper 1 measurement	22.12	BLK	0.000
ARM2	Caliper 2 measurement	22.12	BLK	0.000
ARM3	Caliper 3 measurement	22.12	BLK	0.000
ARM4	Caliper 4 measurement	22.12	BLK	0.000
ARM5	Caliper 5 measurement	22.12	BLK	0.000
ARM6	Caliper 6 measurement	22.12	BLK	0.000
MOTV	Motor Voltage Monitor 1	22.12	BLK	0.000
PRES	Caliper percentage of total compression of the spring	19.58	BLK	0.000
HAZI	Hole Azimuth	22.12	NO	
RB	Relative Bearing	22.12	NO	
AZI1	PAD1 Azimuth	22.12	NO	
DEVI	Inclination	22.12	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 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	53.52	NO	
NAB	Near Above	53.35	BLK	0.920
NHI	Near Cesium High	53.35	BLK	0.920
NLO	Near Cesium Low	53.35	BLK	0.920
NVA	Near Valley	53.35	BLK	0.920
NBA	Near Barite	53.35	BLK	0.920
NDE	Near Density	53.35	BLK	0.920
NPK	Near Peak	53.35	BLK	0.920
NLI	Near Lithology	53.35	BLK	0.920
NBAU	Near Barite Unfiltered	53.35	BLK	0.250
NLIU	Near Lithology Unfiltered	53.35	BLK	0.250
FAB	Far Above	53.70	BLK	0.250
FHI	Far Cesium High	53.70	BLK	0.250
FLO	Far Cesium Low	53.70	BLK	0.250
FVA	Far Valley	53.70	BLK	0.250
FBA	Far Barite	53.70	BLK	0.250
FDE	Far Density	53.70	BLK	0.250
FPK	Far Peak	53.70	BLK	0.250
FLI	Far Lithology	53.70	BLK	0.250
PTMP	Pad Temperature	53.53	BLK	0.920
NHV	Near Detector High Voltage	52.93	NO	

FHV	Far Detector High Voltage	52.93	NO	
ITMP	Instrument Temperature	52.93	NO	
DDHV	Detector High Voltage	52.93	NO	
HDIA	Measured Hole Diameter	0.00	NO	

Microlog Pad

TPUL	Tension Pull	53.72	NO	
MINV	Microlog Lateral	53.72	BLK	0.750
MNOR	Microlog Normal	53.72	BLK	0.750

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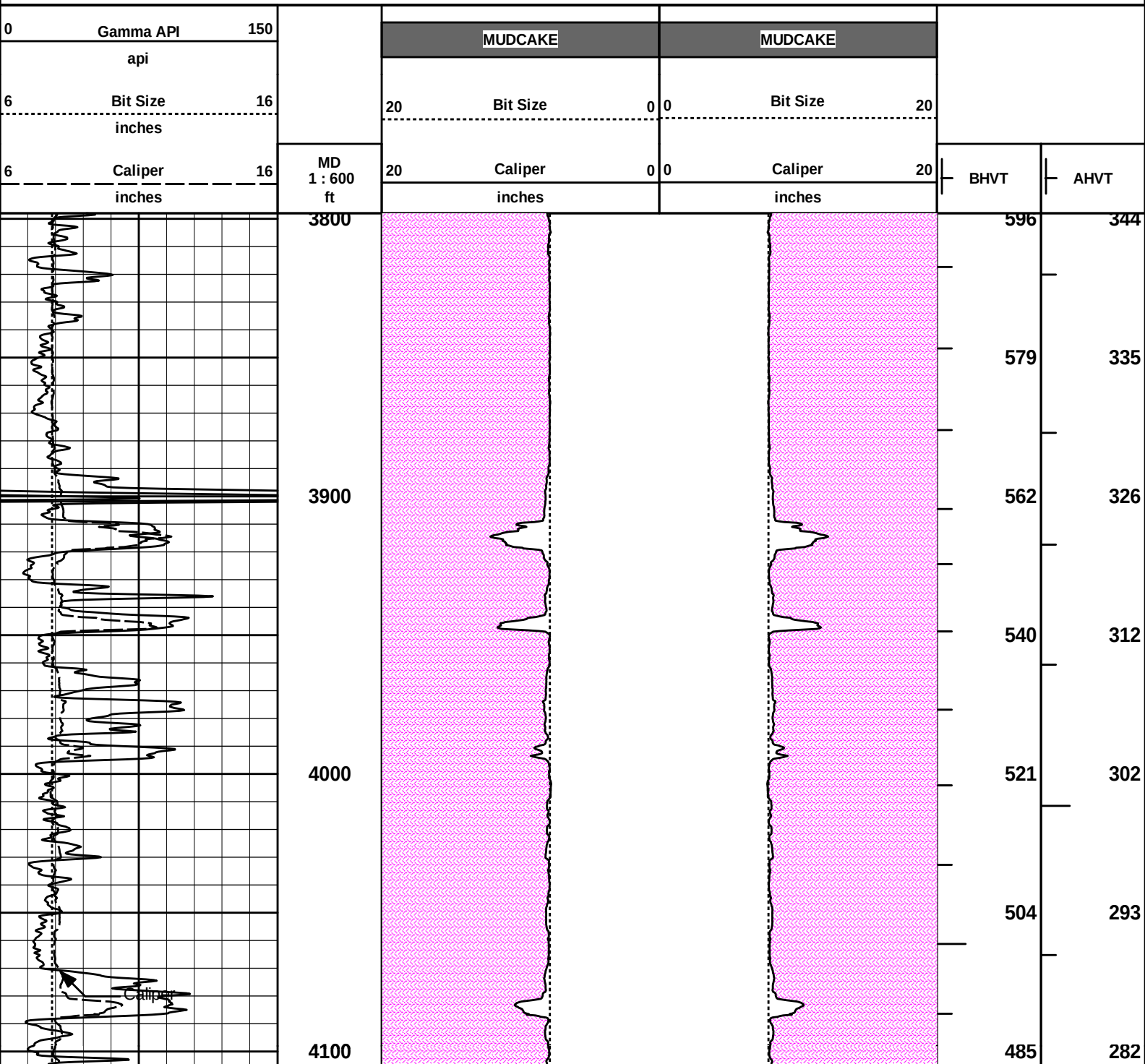
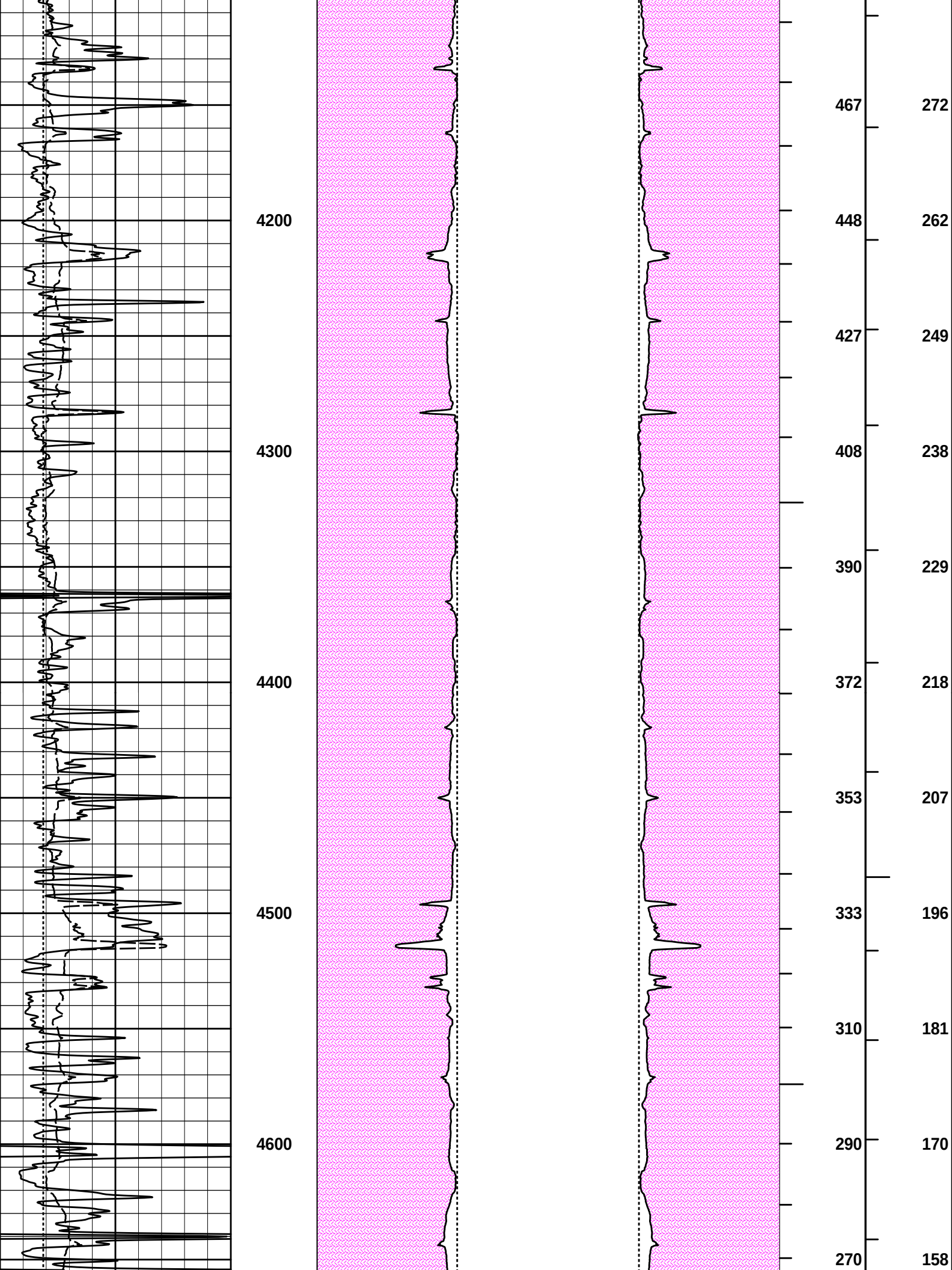
Plot Time: 25-Apr-14 23:54:57
Plot Range: 3798 ft to 5329.75 ft
Data: FAYE_1-18\Well Based\DAQ-0001-003\
Plot File: \\-LOCAL-\FAYE_1-18\0001 SP-GTET-DSNT-SDLT-ACRT-BN\PORO\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

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4300
4400
4500
4600
467
448
427
408
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372
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310
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272
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249
238
229
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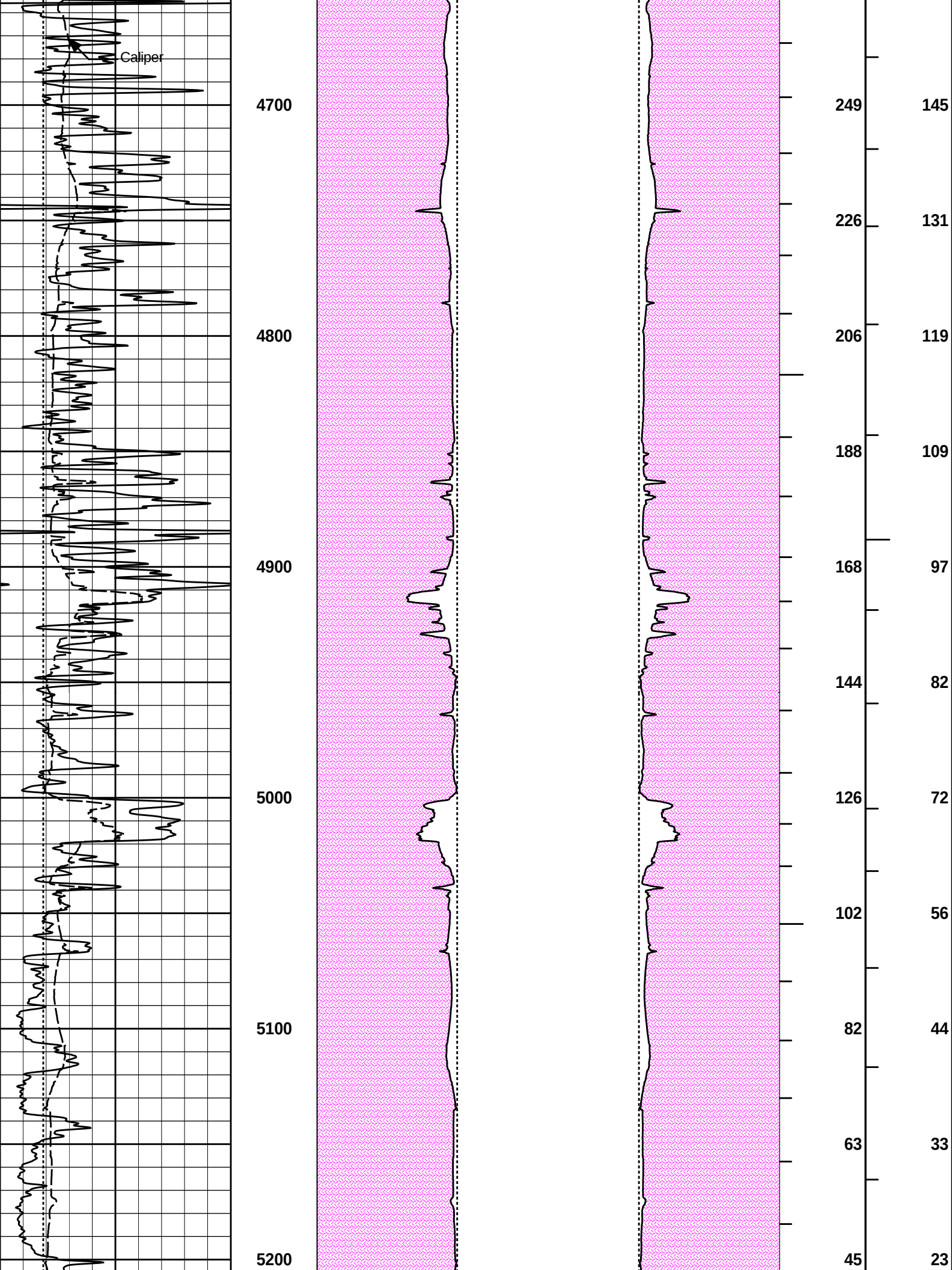
207
196
181
170
158


Caliper
4700
4800
4900
5000
5100
5200
249
226
206
188
168
144
126
102
82
63
45
145
131
119
109
97
82
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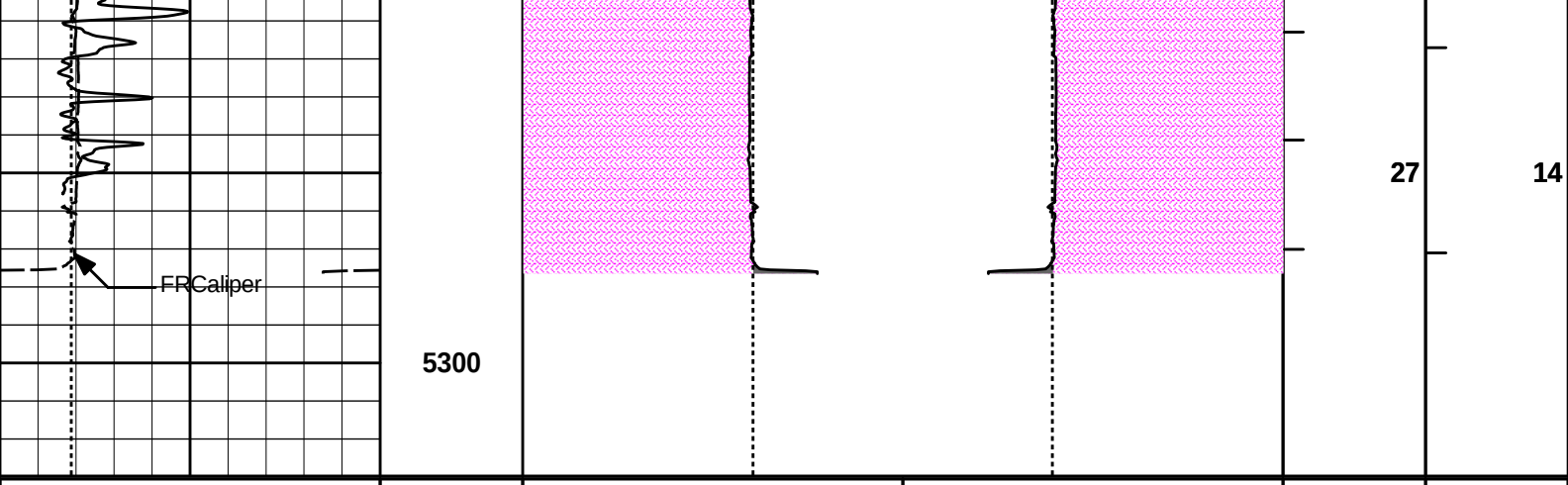
56
44
33
23



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

0 Caliper 20	BHVT	AHVT
inches		
0 Bit Size 20		
MUDCAKE		

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Plot Time: 25-Apr-14 23:54:58
Plot Range: 3798 ft to 5329.75 ft
Data: FAYE_1-18\Well Based\DAQ-0001-003\
Plot File: \\-LOCAL-\FAYE_1-18\0001 SP-GTET-DSNT-SDLT-ACRT-BN\PORO\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	**BEREXCO LLC.**		
WELL	**FAYE 1-18**		
FIELD	**WILDCAT**		
COUNTY	**FINNEY**	STATE	**KANSAS**

HALLIBURTON

DUAL SPACED NEUTRON SPECTRAL DENSITY LOG