HALLIBURTON

SPECTRAL DENSITY DUAL SPACED NEUTRON MICROLOG

K3 OIL & GAS
BOYER 3-3
WILDCAT
SUMNER
KANSAS

COMPANY
WELL
FIELD/BLOCK
COUNTY
STATE

COMPANY **K3 OIL & GAS**

WELL **BOYER 3-3**

FIELD/BLOCK **WILDCAT**

COUNTY **SUMNER** STATE **KANSAS**

API No. 15-191-22774-00-00

Location (SHL)
1170' FNL & 1442' FWL
SW SW NE NW

Sect. 3 Twp. 35S Rge. 4W

Other Services:
ACRT
SDL-DSN-ML
BSAT
XRMI

Permanent Datum	GL	Elev. 1173.6 ft	Elev.: K.B. 1178.6 ft
Log measured from	KB	, 5.0 ft above perm. Datum	D.F. 1177.6 ft
Drilling measured from	KB		G.L. 1173.6 ft

Date		29-Feb-16					
Run No.		1					
Depth - Driller		5050.00 ft					
Depth - Logger		5048.0 ft					
Bottom - Logged Interval		5038					
Top - Logged Interval		3000					
Casing - Driller		8.625 in	@ 512.0 ft	@		@	
Casing - Logger		512.0 ft					
Bit Size		7.875 in		@		@	
Type Fluid in Hole		Water Based Mud					
Density	Viscosity	9.3 ppg	48.00 s/qt				
PH	Fluid Loss	10.00 pH	11.2 cptm				
Source of Sample		MUD PIT					
Rm @ Meas. Temperature		0.550 ohmm	@ 88.00 degF	@		@	
Rmf @ Meas. Temperature		0.34 ohmm	@ 85.00 degF	@		@	
Rmc @ Meas. Temperature		0.780 ohmm	@ 85.00 degF	@		@	
Source Rmf	Rmc	MEAS	MEAS				
Rm @ BHT		0.36 ohmm	@ 138.0 degF	@		@	
Time Since Circulation		8.0000 hr					
Time on Bottom		29-Feb-16 09:46:11.000					
Max. Rec. Temperature		138.0 degF	@ 5048.0 ft	@		@	
Equipment	Location	12156883	EL RENO				
Recorded By		WHITLOCK					
Witnessed By		SUSAN RAINBOLT					

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PGM Version: WL INSITE R4.6.3 (Build 5)

API Serial No.: 15-191-22774-00-00

Service Ticket No.: 903113086

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.				
Serial No.				
Model No.				
Diameter				
Detector Model No.				
Type				
Length				
Distance to Source				
No. of Cent.				
Spacing				
Log Type				
Source Type				
Serial No.				
Strength				

LOGGING DATA

	GENERAL				GAMMA		ACOUSTIC		DENSITY		NEUTRON	
	Run No.	Depth From	Depth To	Speed ft/min	Scale L	Scale R	Scale L	Scale R	Scale L	Scale R	Scale L	Scale R
Matrix												

DIRECTIONAL INFORMATION

Maximum Deviation @	KOP @

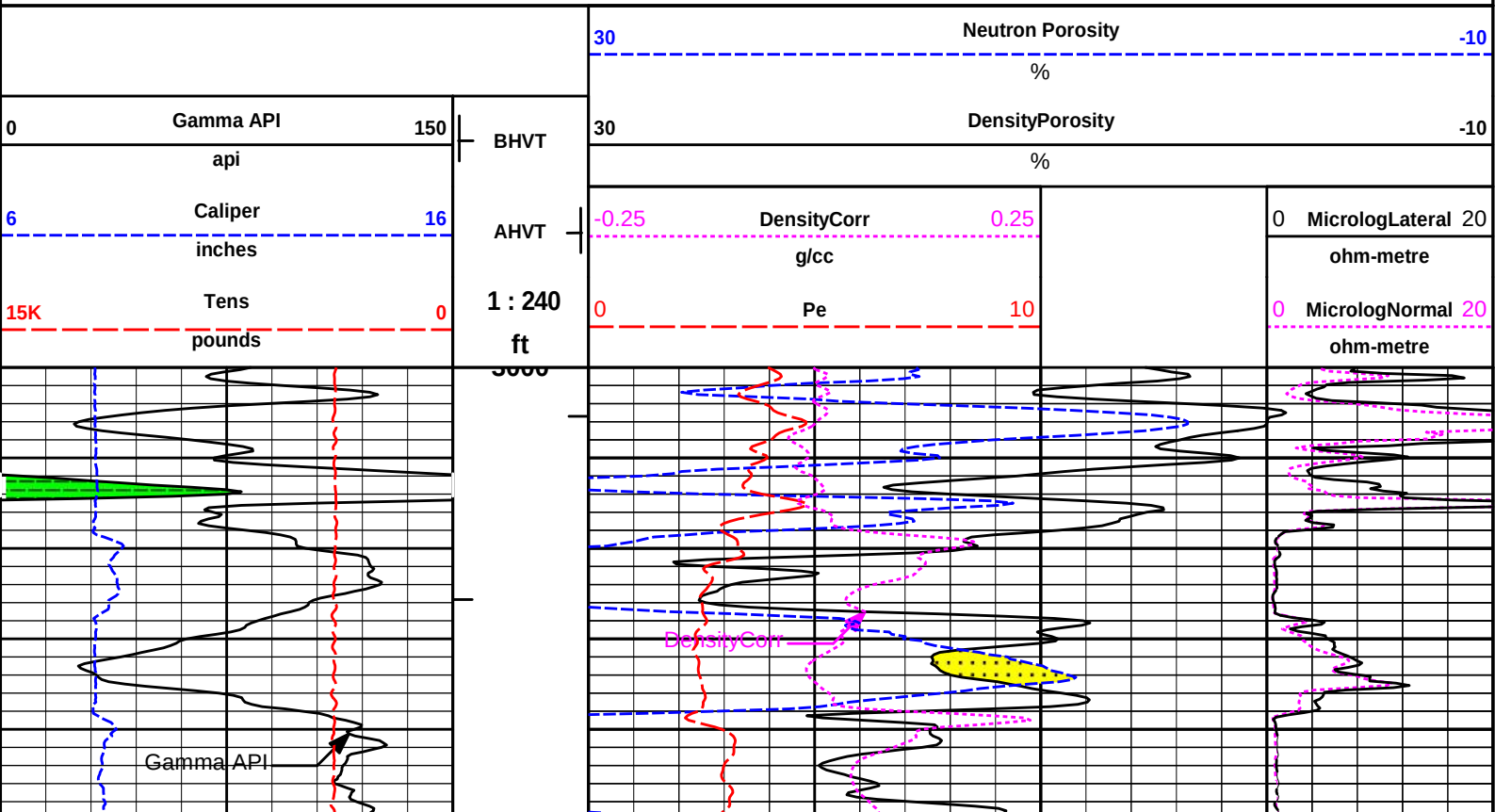
Remarks: 5 1/2" CASING USED FOR ANNULAR HOLE VOLUME

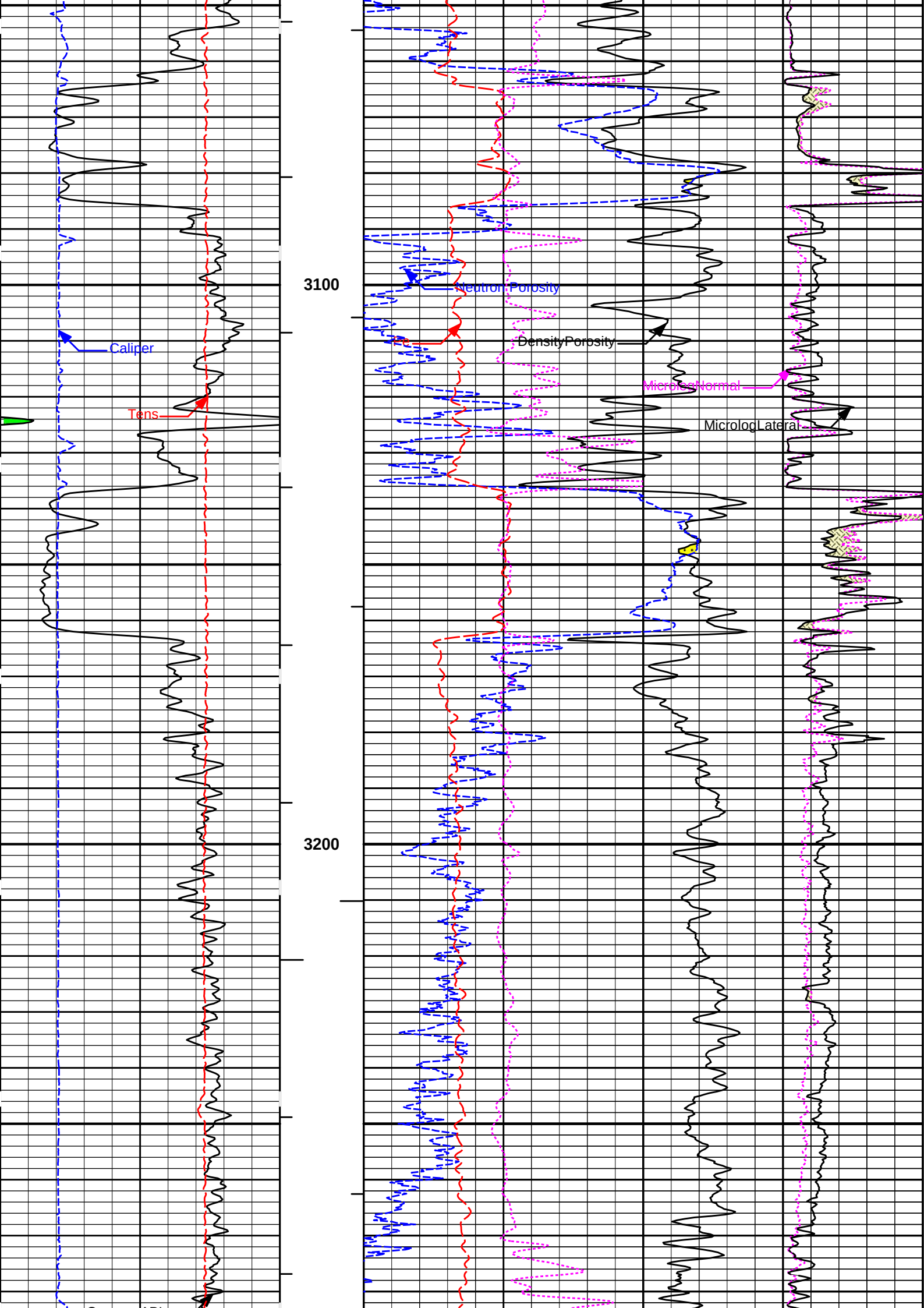
HALLIBURTON

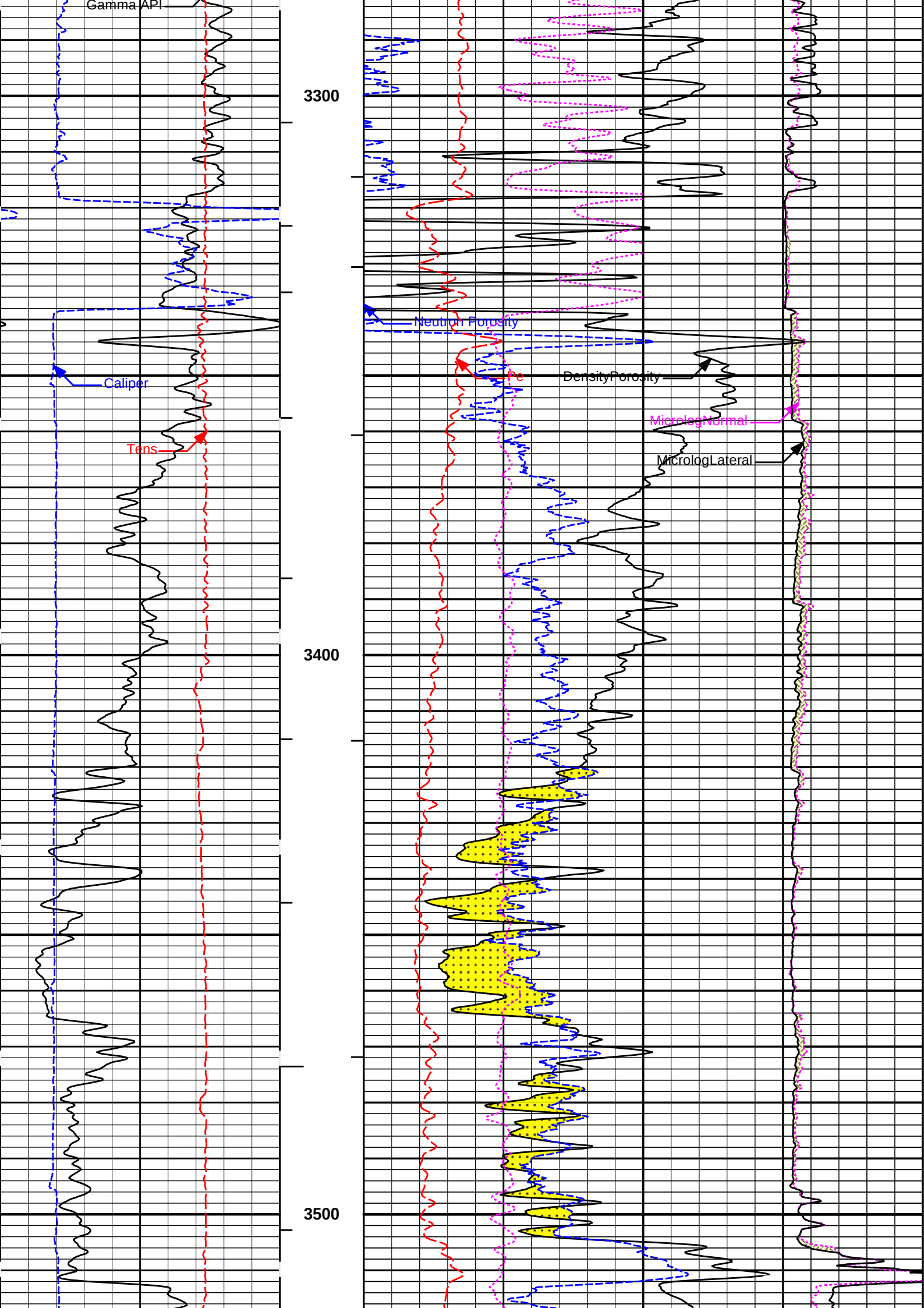
Plot Time: 29-Feb-16 14:15:00
Plot Range: 3000 ft to 5050.92 ft
Data: K3_BOYER\Well Based\DAQ-0001-004
Plot File: \\SDL-DSN-ML\PoroML_5_main_IQ

5 INCH MAIN LOG

MAIN SECTION 5" PER 100'




3100
3200
Caliper
Tens
Neutron Porosity
DensityPorosity
MicrologNormal
MicrologLateral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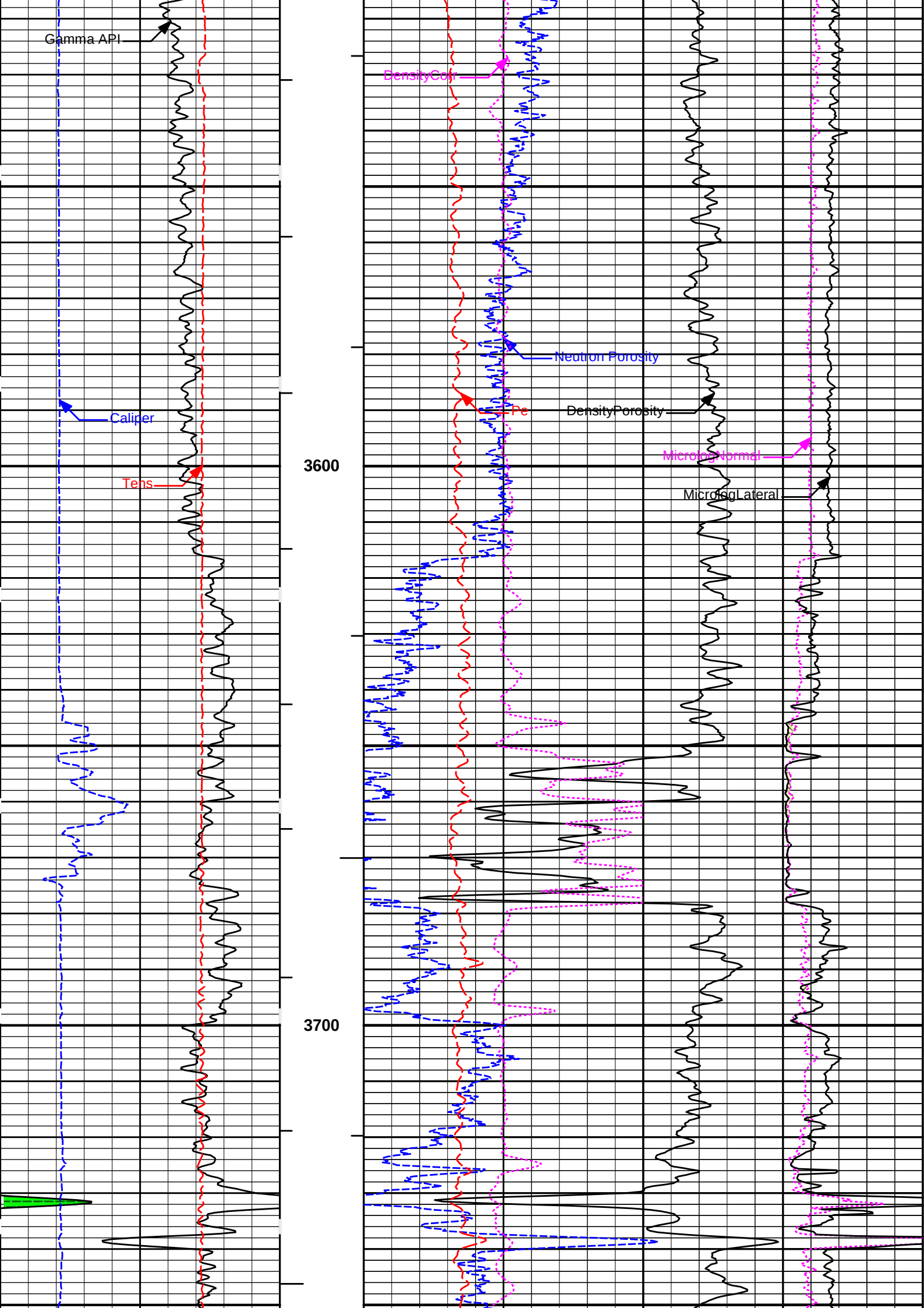
Neutron Porosity
Pe
DensityPorosity
Caliper
MicrologNormal
Tens
MicrologLateral
3400
3500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DensityCorr
Neutron Porosity
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PEe
DensityPorosity
MicrologNormal
Tens
MicrologLateral
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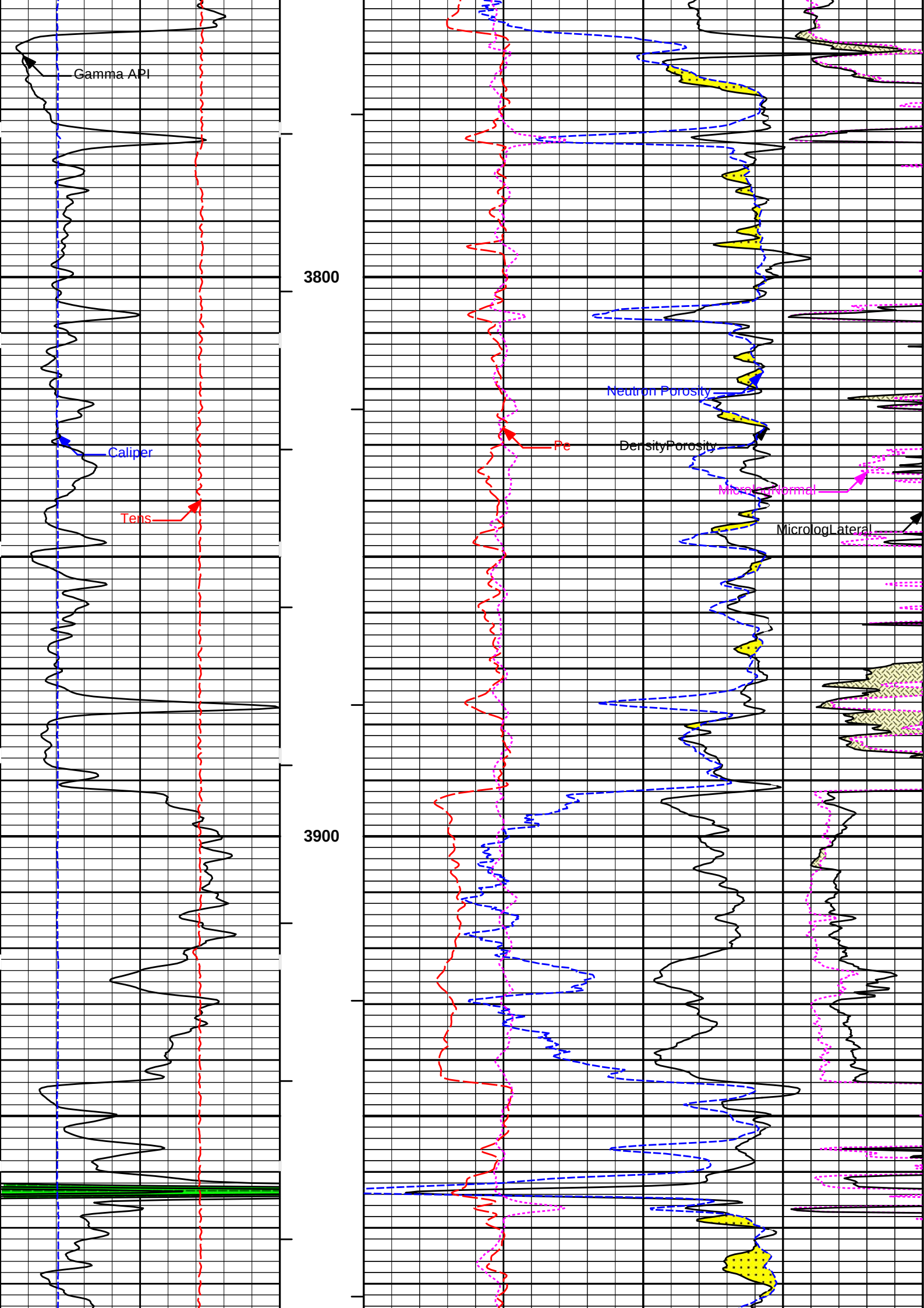
3700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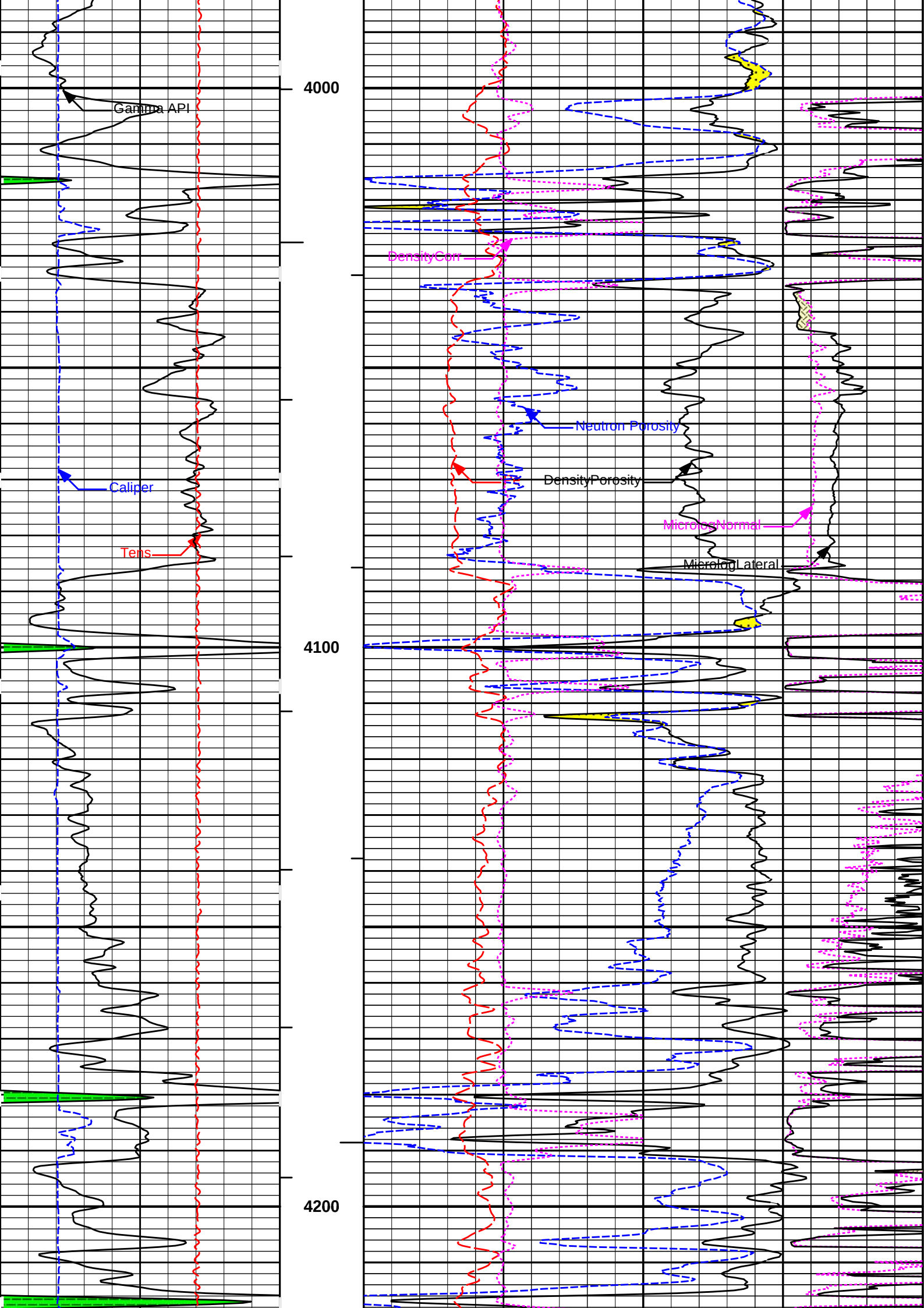
Caliper
Tens
3800
3900
Neutron Porosity
Pe
DensityPorosity
MicrologNormal
MicrologLateral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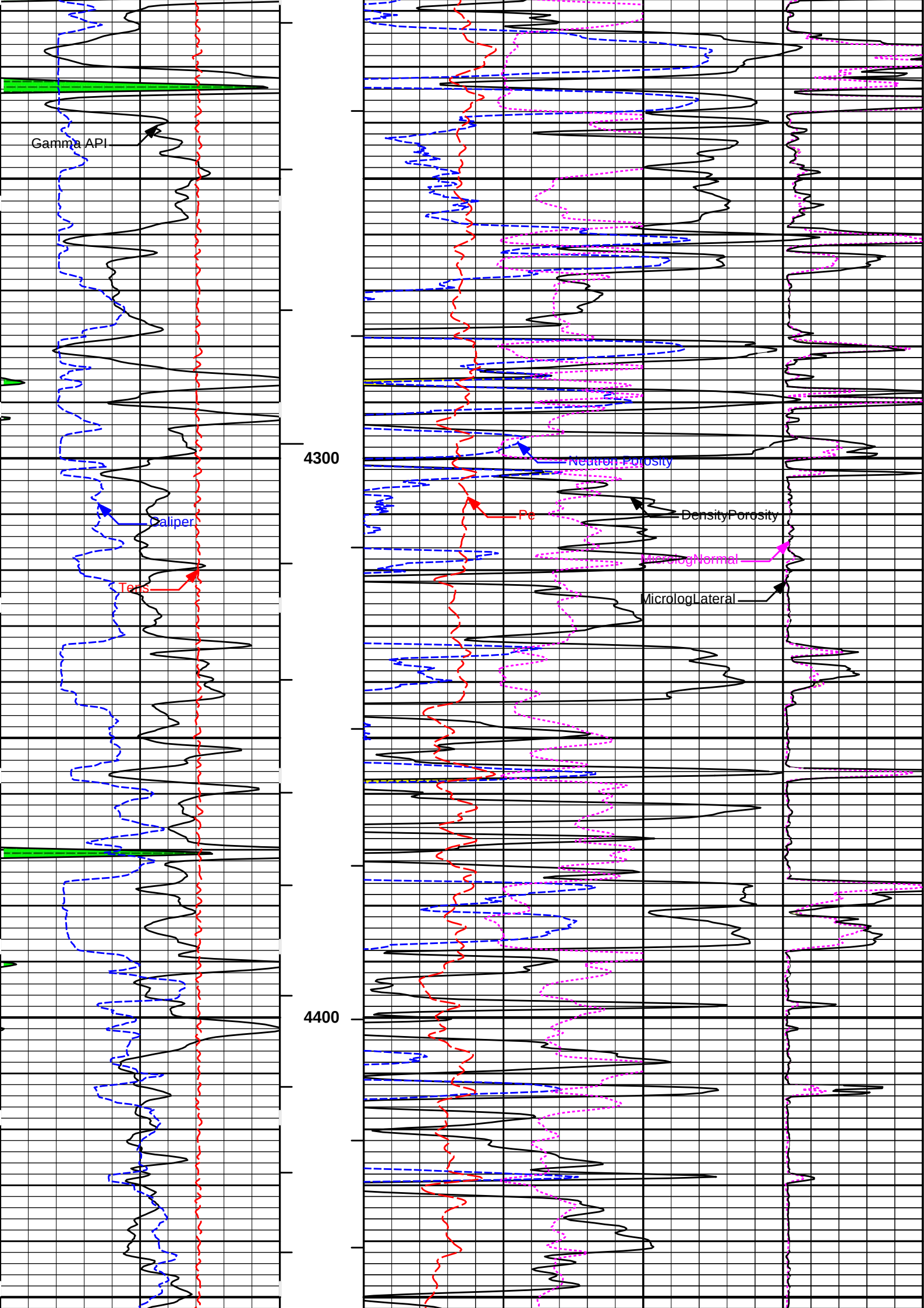
Caliper
Tens
DensityCorr
Neutron Porosity
DensityPorosity
MicrologNormal
MicrologLateral
4000
4100
4200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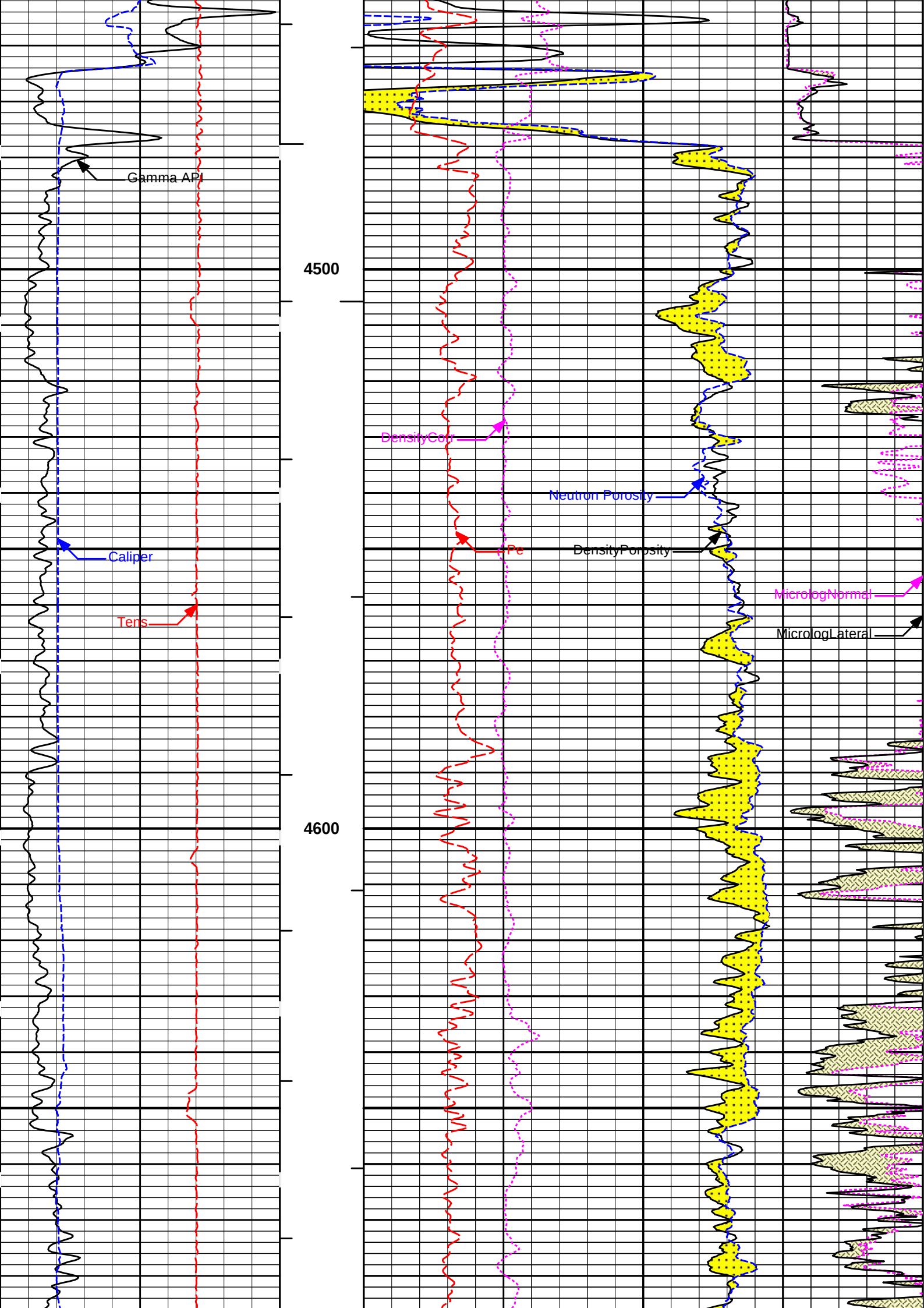
Caliper
Tens
4300
4400
Neutron Porosity
Pe
DensityPorosity
MicrologNormal
MicrologLateral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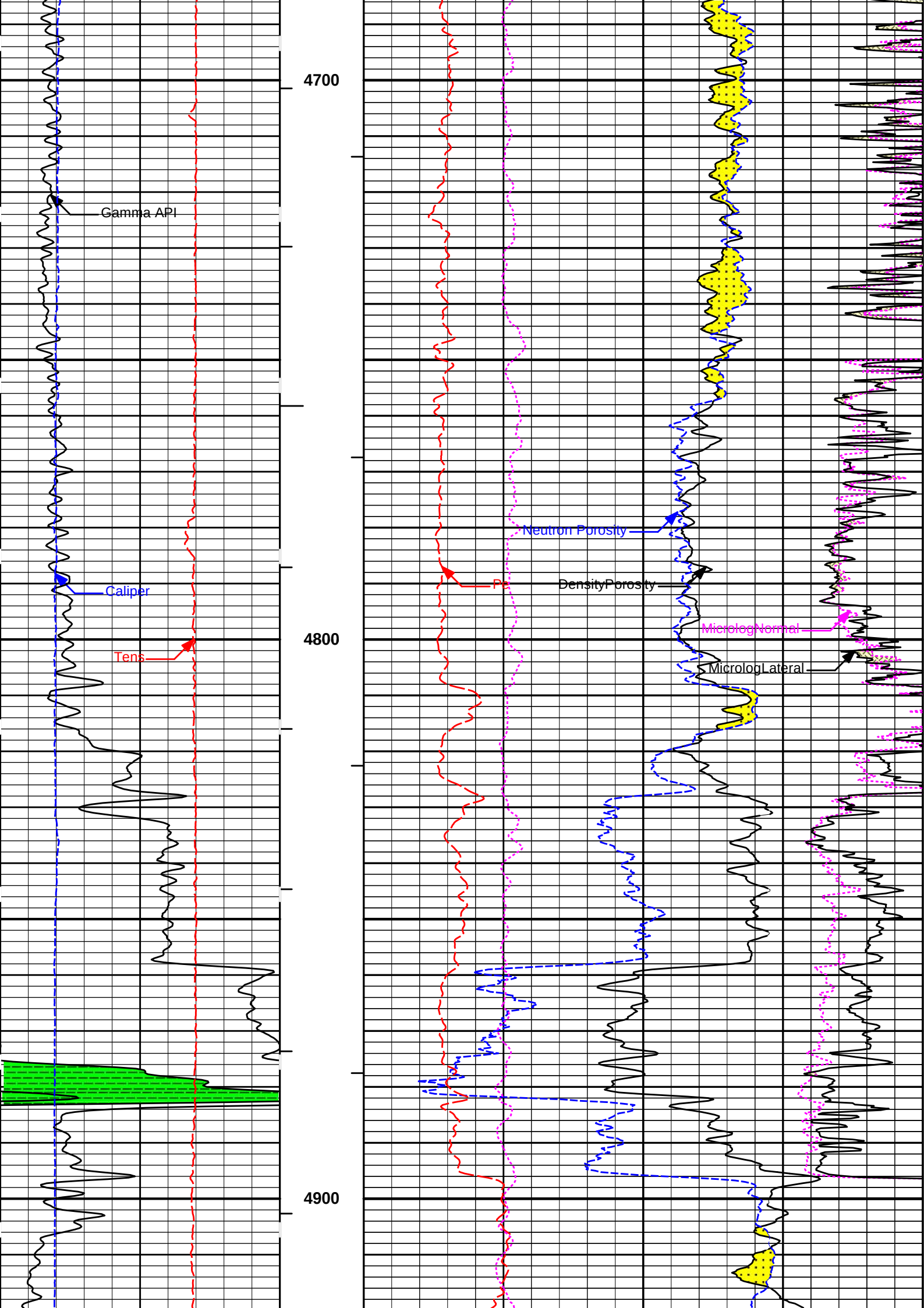
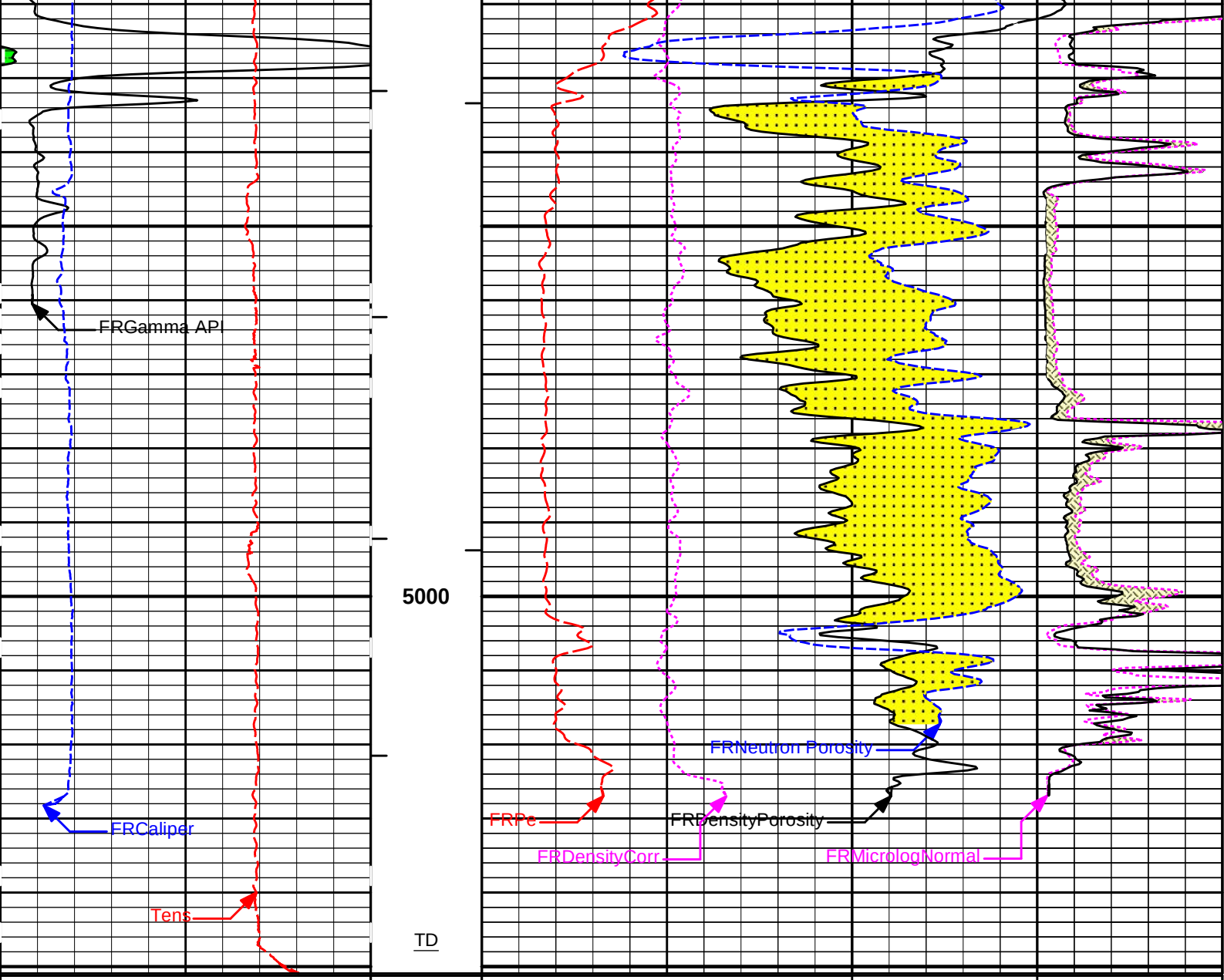
Caliper
Tens
4500
4600
DensityCorr
Pe
Neutron Porosity
DensityPorosity
MicrologNormal
MicrologLateral


4700
4800
4900
Gamma API
Caliper
Tens
Neutron Porosity
Pe
DensityPorosity
MicrologNormal
MicrologLateral



15K Tens 0	1 : 240	0 Pe 10
pounds	ft	
6 Caliper 16	AHVT	-0.25 DensityCorr 0.25
inches		g/cc
0 Gamma API 150	BHVT	30 DensityPorosity -10
api		%
		30 Neutron Porosity -10
		%

0 MicrologNormal 20
ohm-metre
0 MicrologLateral 20
ohm-metre

HALLIBURTON

Plot Time: 29-Feb-16 14:15:04
Plot Range: 3000 ft to 5050.92 ft
Data: K3_BOYER\Well Based\DAQ-0001-004\
Plot File: \\SDL-DSN-ML\PoroML_5_main_IQ

5 INCH MAIN LOG

MAIN SECTION 5" PER 100'

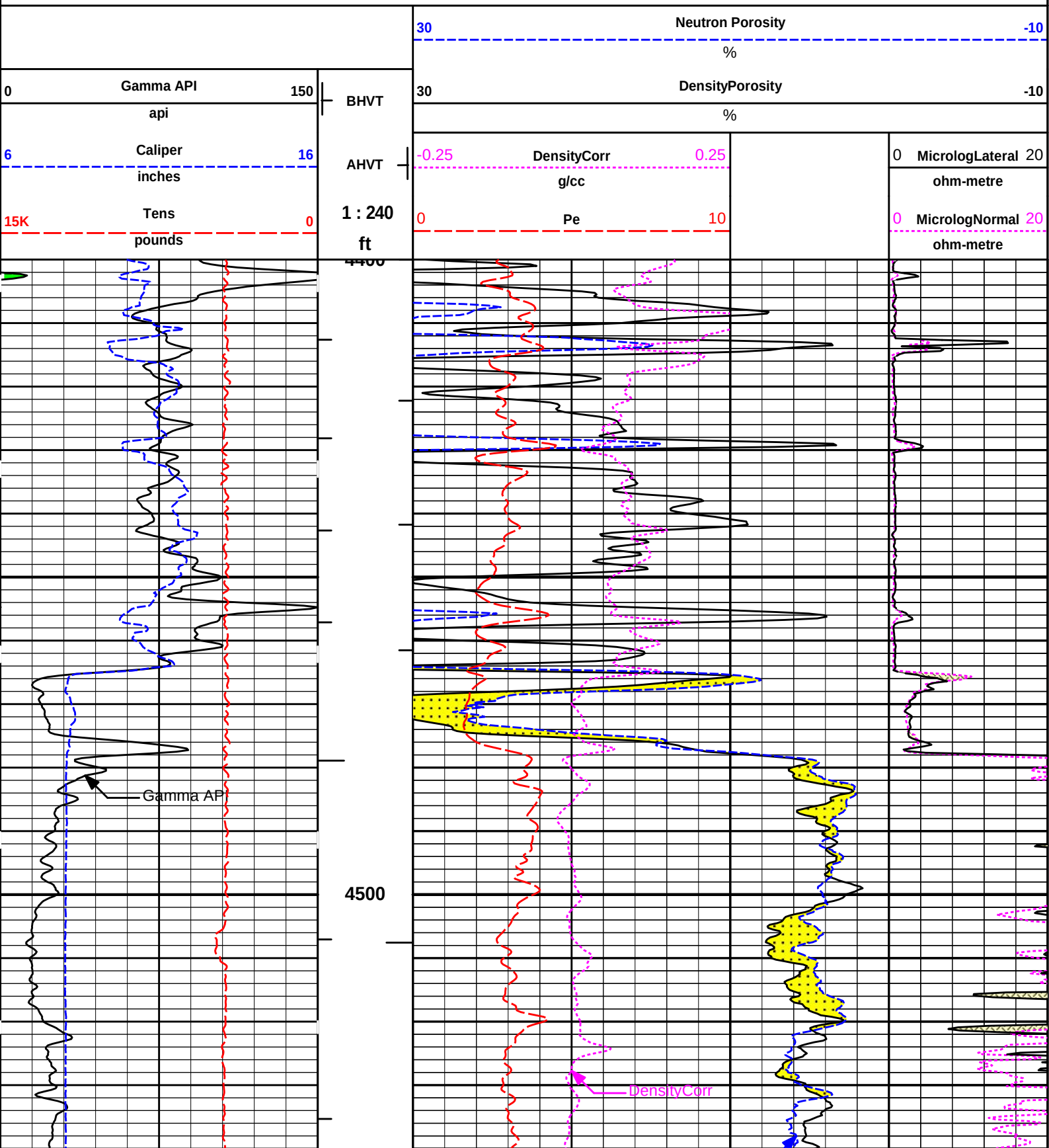
HALLIBURTON

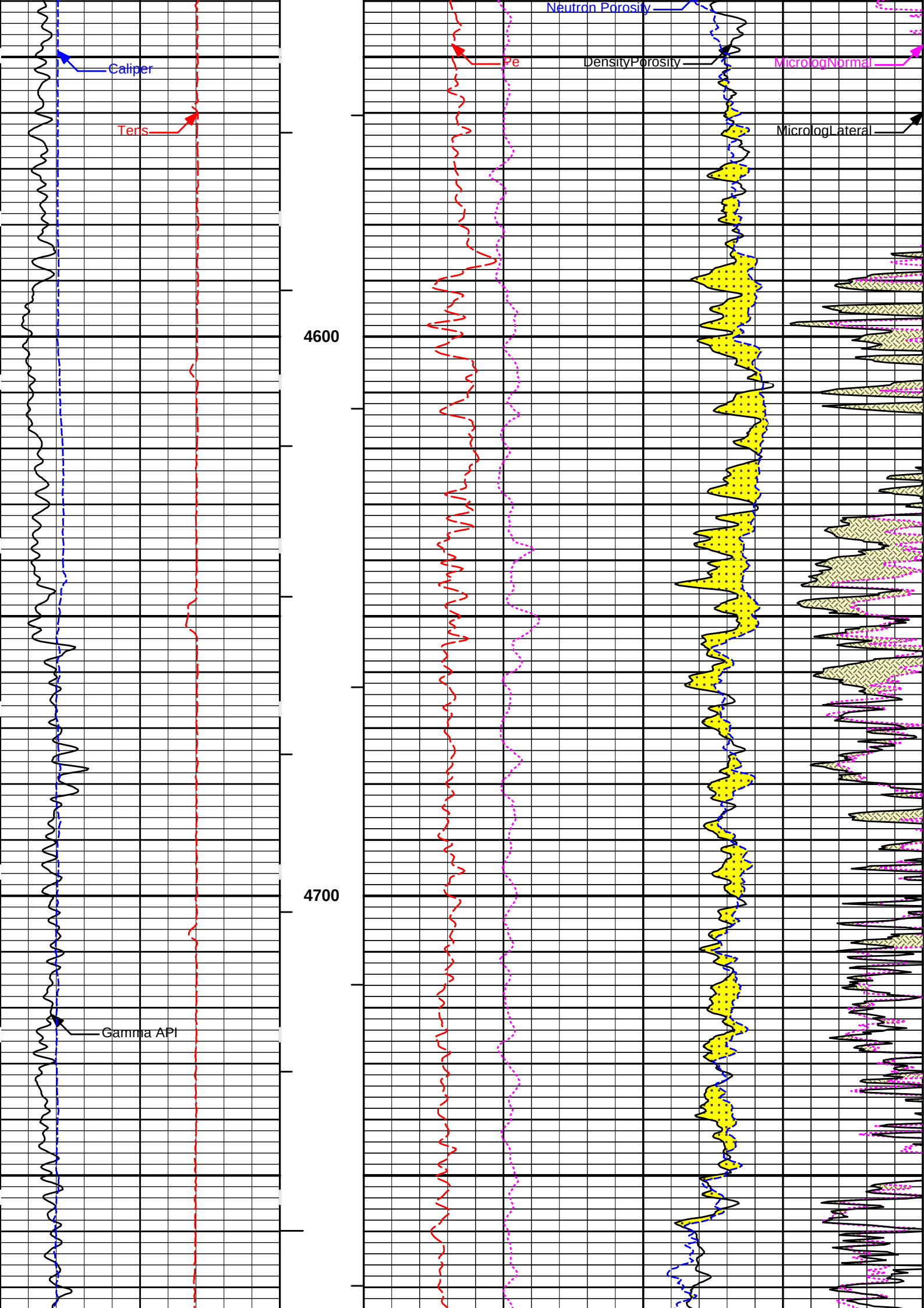
Plot Time: 29-Feb-16 14:15:04

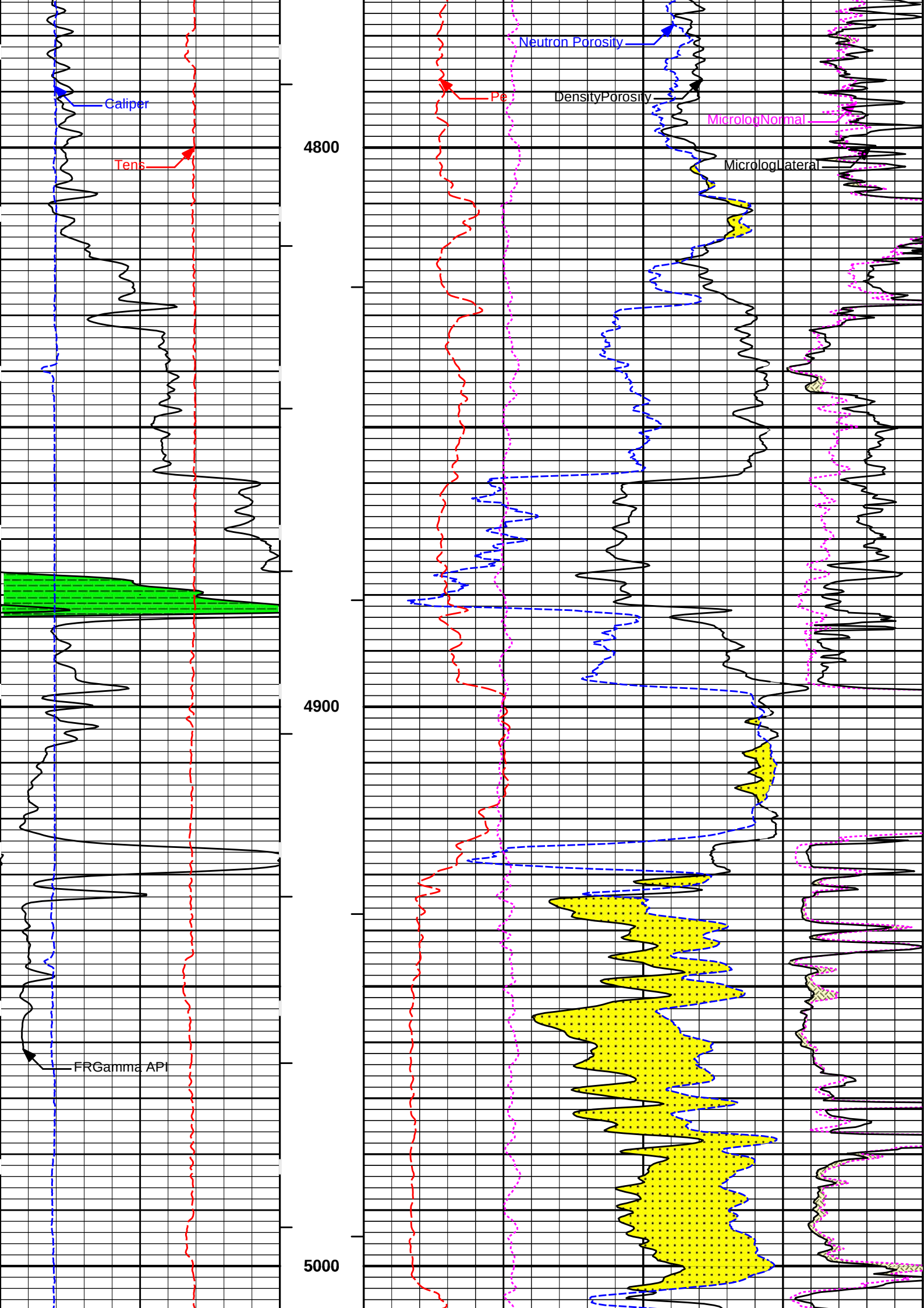
Plot Range: 4400 ft to 5051.67 ft
Data: K3_BOYER\Well Based\DAQ-0001-003\
Plot File: \\SDL-DSN-ML\PoroML_5_main_IQ

REPEAT SECTION

REPEAT SECTION




Caliper
Tens
Gamma API
Neutron Porosity
Pe
DensityPorosity
MicrologNormal
MicrologLateral
4600
4700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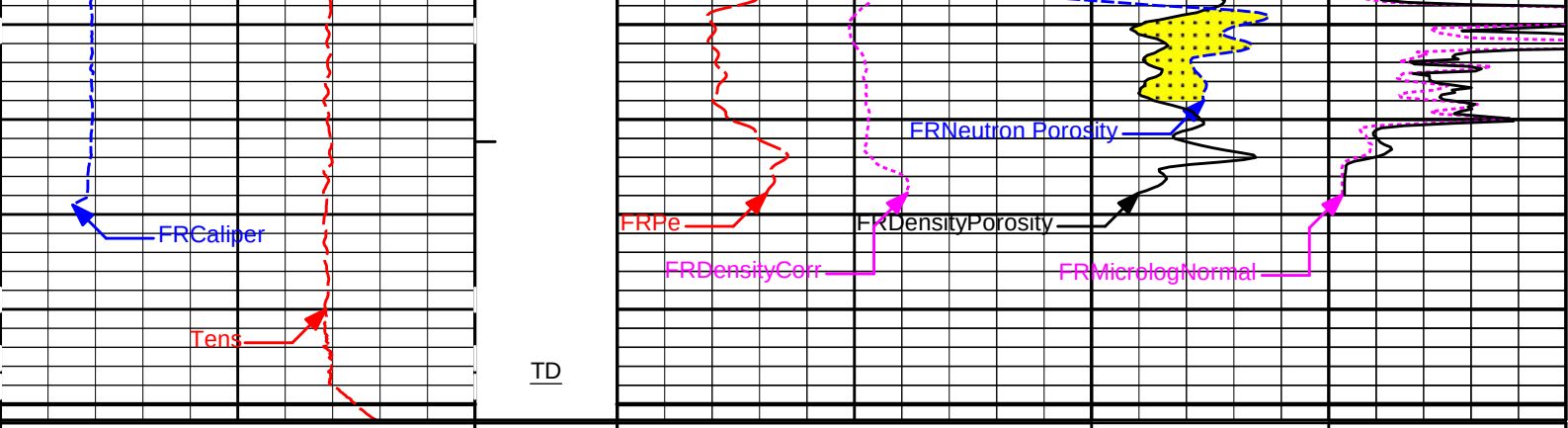
Tens
FRGamma API
Neutron Porosity
Pe
DensityPorosity
MicrologNormal
MicrologLateral
4800
4900
5000



15K Tens 0		1 : 240	0 Pe 10	0 MicrologNormal 20
pounds		ft		ohm-metre
6 Caliper 16		AHVT	-0.25 DensityCorr 0.25	0 MicrologLateral 20
inches			g/cc	ohm-metre
0 Gamma API 150		BHVT	30 DensityPorosity -10	
api			%	
			30 Neutron Porosity -10	
			%	

HALLIBURTON

Plot Time: 29-Feb-16 14:15:06
Plot Range: 4400 ft to 5051.67 ft
Data: K3_BOYER\Well Based\DAQ-0001-003\
Plot File: \\SDL-DSN-ML\PoroML_5_main_IQ

REPEAT SECTION

REPEAT SECTION

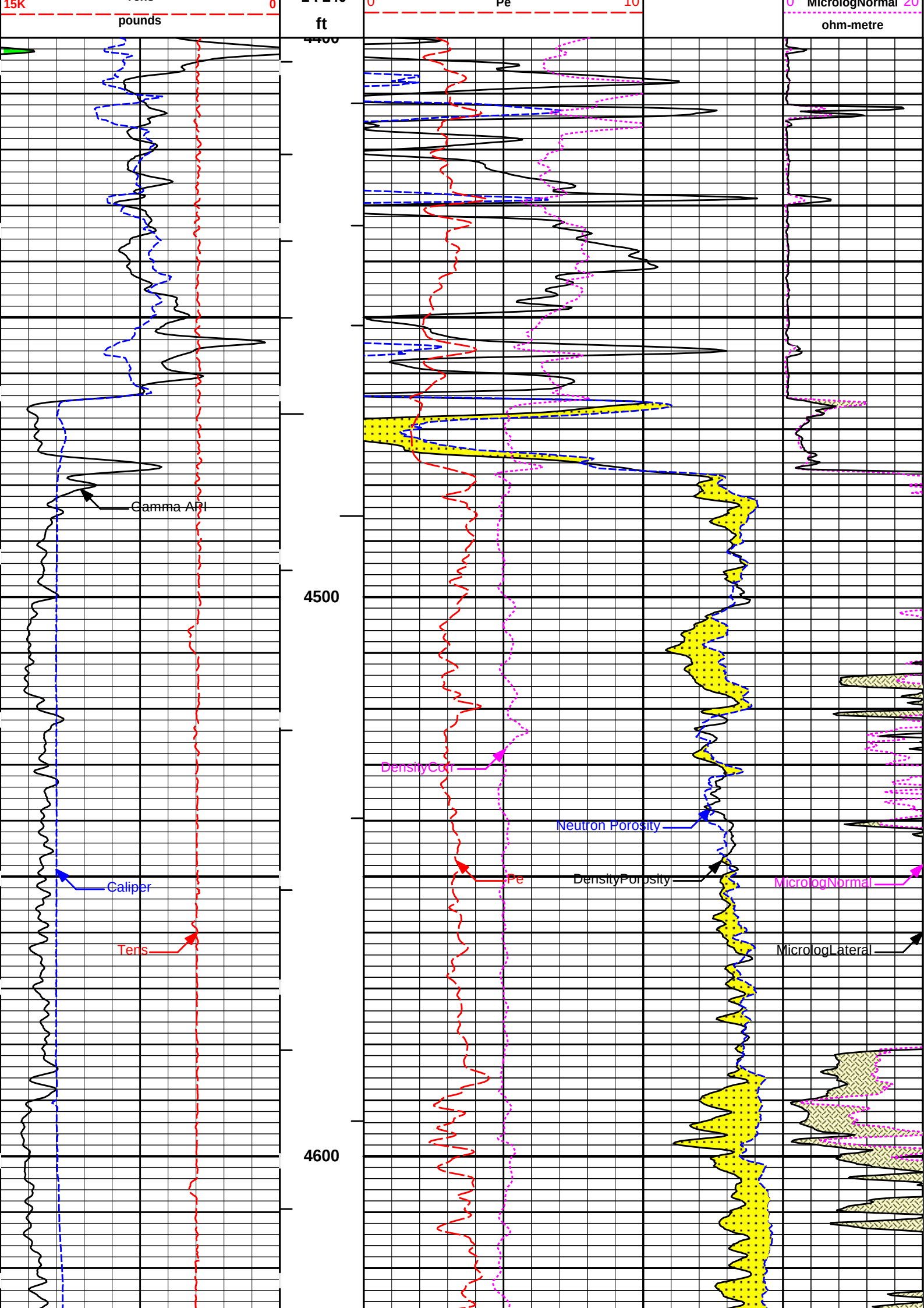
HALLIBURTON

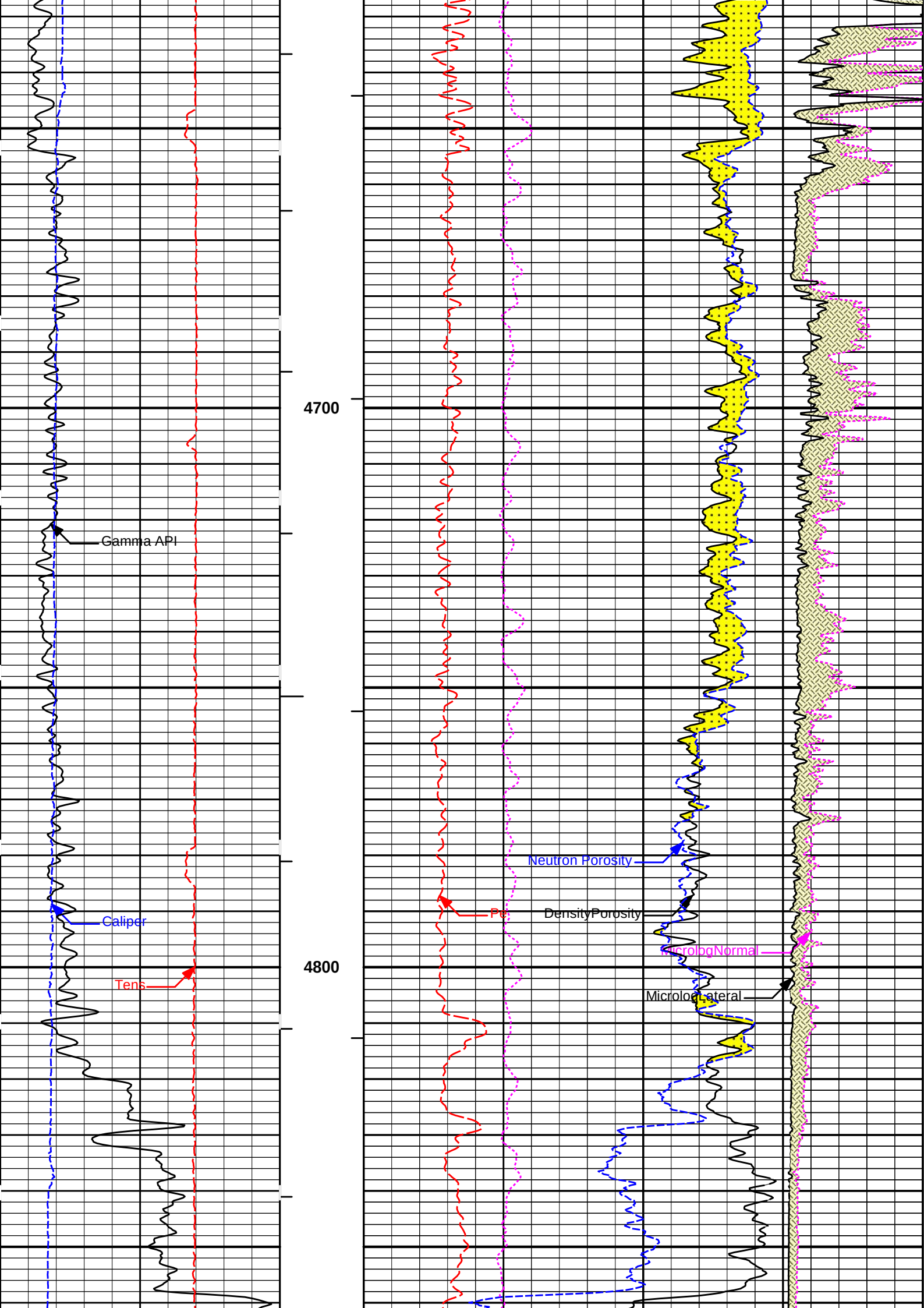
Plot Time: 29-Feb-16 14:15:06
Plot Range: 4400 ft to 5052.17 ft
Data: K3_BOYER\Well Based\DAQ-0001-002\
Plot File: \\SDL-DSN-ML\PoroML_5_main_IQ

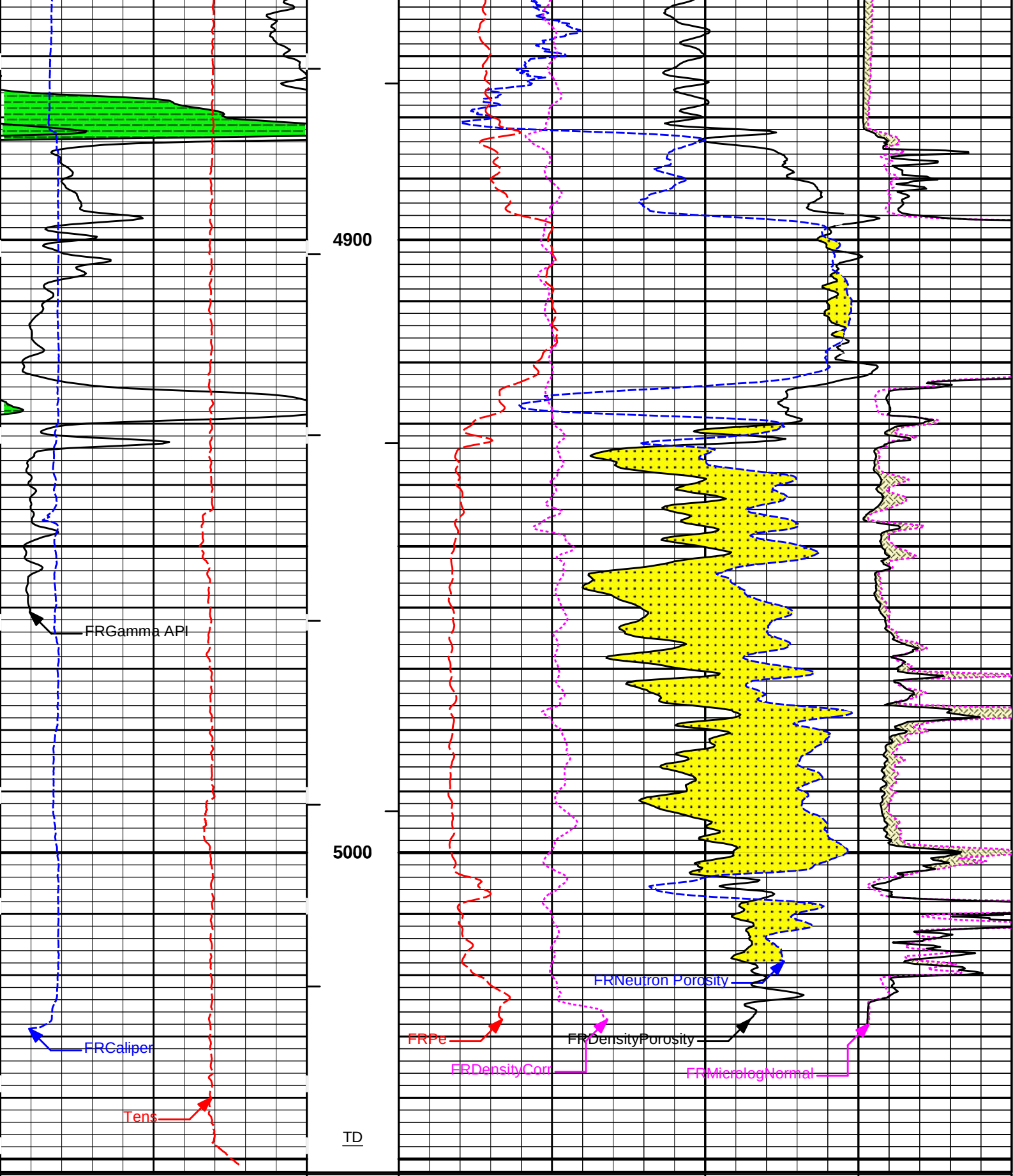
REPEAT SECTION

REPEAT SECTION

			30 Neutron Porosity -10	
			%	
0 Gamma API 150		BHVT	30 DensityPorosity -10	
api			%	
6 Caliper 16		AHVT	-0.25 DensityCorr 0.25	0 MicrologLateral 20
inches			g/cc	ohm-metre
Tens		1 : 240		


15K
0
pounds
ft
0
Pe
10
0
MicrologNormal
20
ohm-metre
Gamma API
4500
DensityCorr
Neutron Porosity
Caliper
Pe
DensityPorosity
MicrologNormal
Tens
MicrologLateral
4600


4700
4800
Gamma API
Caliper
Tens
Neutron Porosity
Pe
DensityPorosity
MicrolbgNormal
MicrologLateral



15K Tens 0 pounds	1 : 240 ft	0 Pe 10 0 MicrologNormal 20 ohm-metre
6 Caliper 16 inches	AHVT	-0.25 DensityCorr 0.25 g/cc 0 MicrologLateral 20 ohm-metre
0 Gamma API 150 api	BHVT	30 DensityPorosity -10 %
		30 Neutron Porosity -10 %

HALLIBURTON

Plot Time: 29-Feb-16 14:15:09
Plot Range: 4400 ft to 5052.17 ft
Data: K3_BOYER\Well Based\DAQ-0001-002\
Plot File: \\SDL-DSN-ML\PoroML_5_main_IQ

REPEAT SECTION

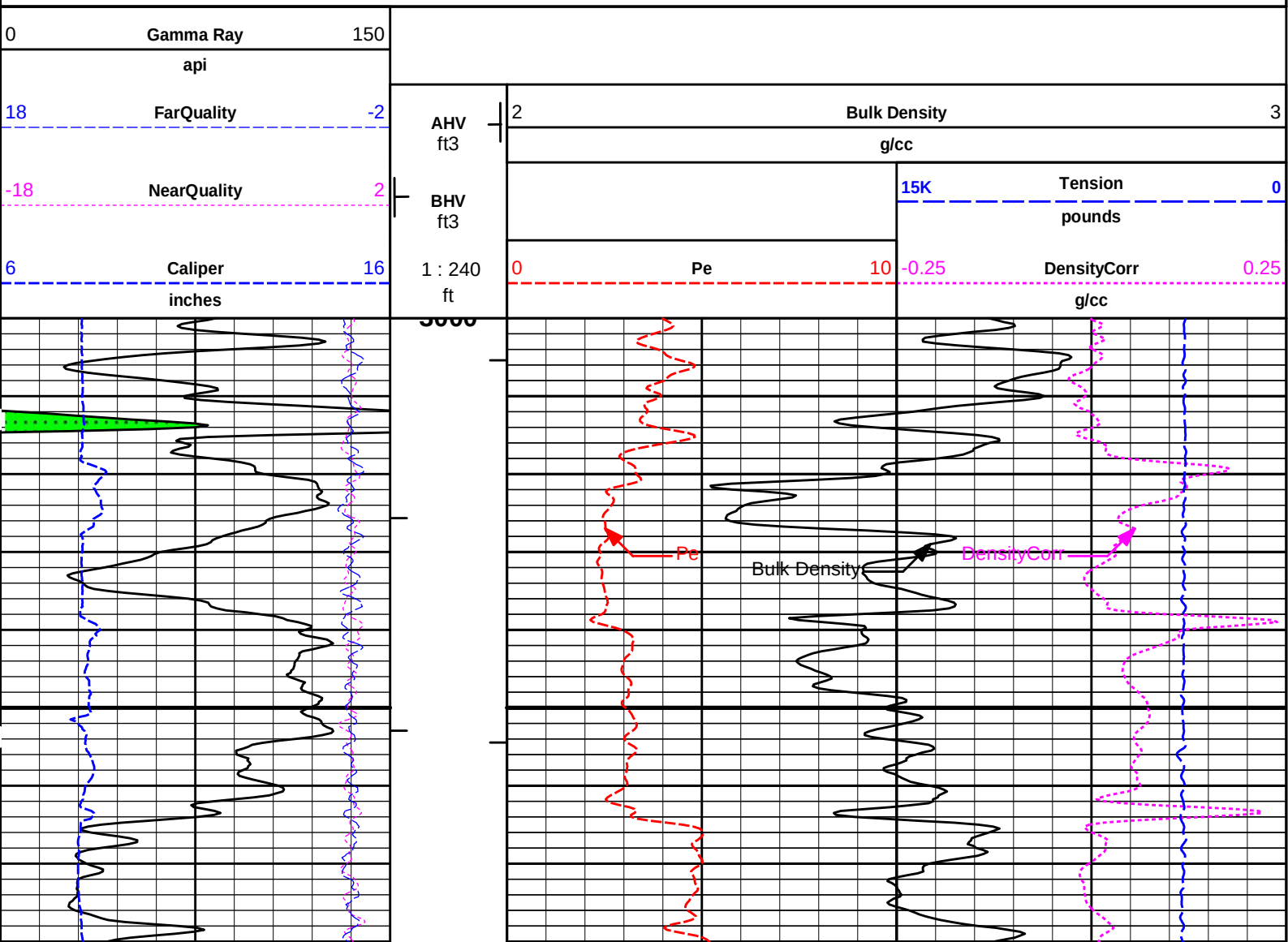
REPEAT SECTION

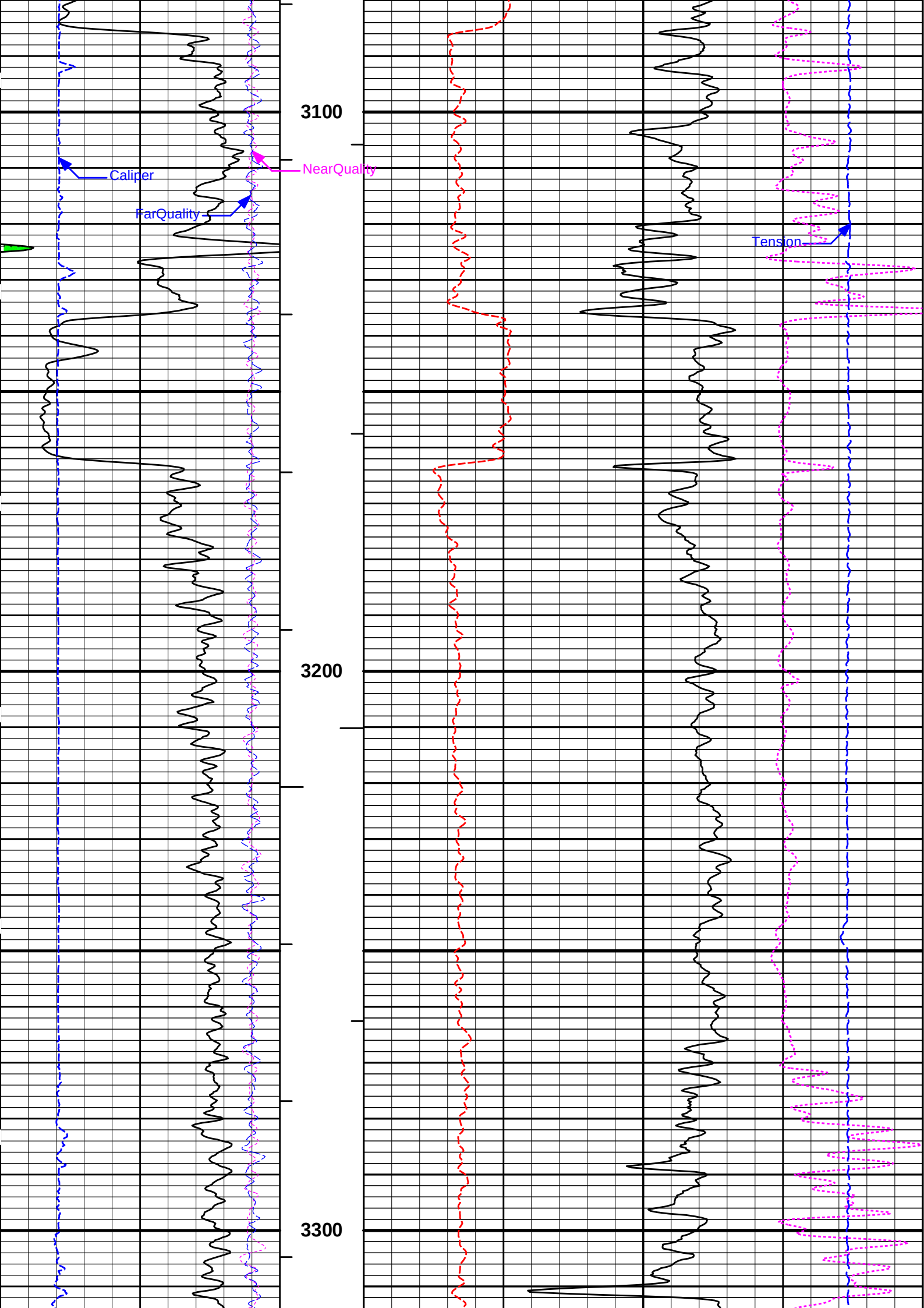
HALLIBURTON

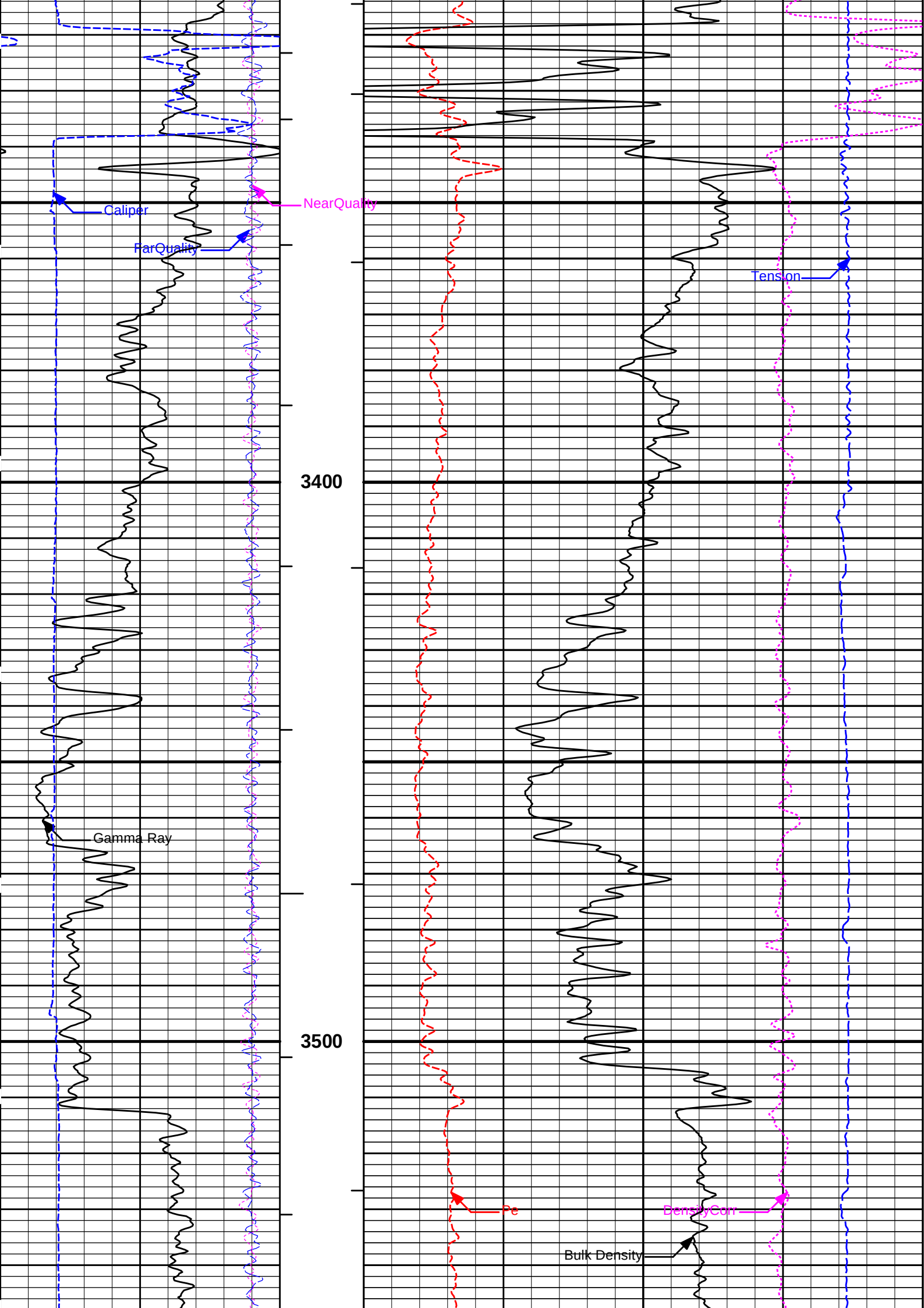
Plot Time: 29-Feb-16 14:15:09
Plot Range: 3000 ft to 5050.92 ft
Data: K3_BOYER\Well Based\DAQ-0001-004\
Plot File: \\-LOCAL-\K3_BOYER\0001 GTET-XRMI-BSAT-FLX-DSNT-SDLT-ACRT\SDL-DSN-ML\BULKD_5_MAIN_IQ

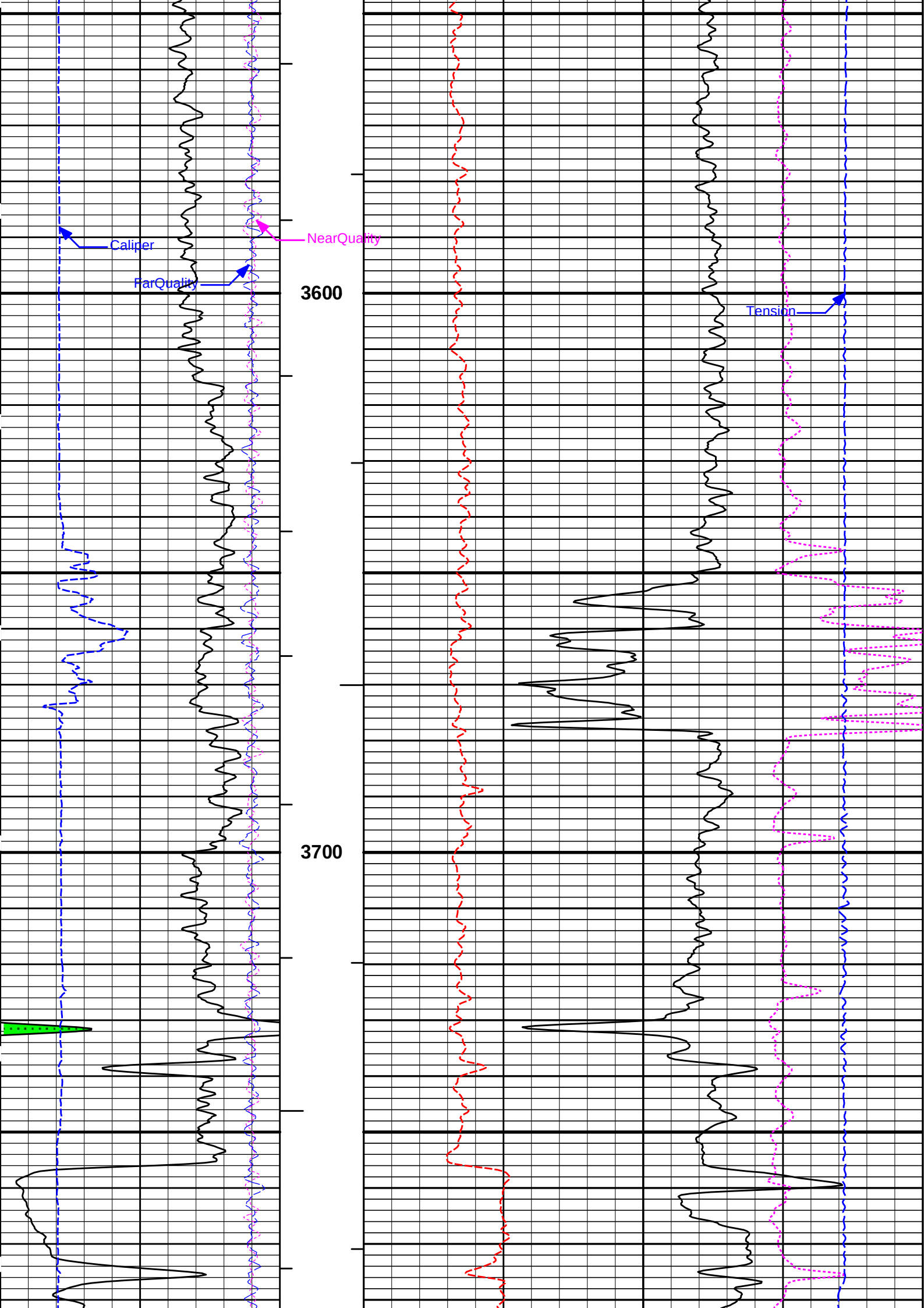
5 INCH MAIN LOG

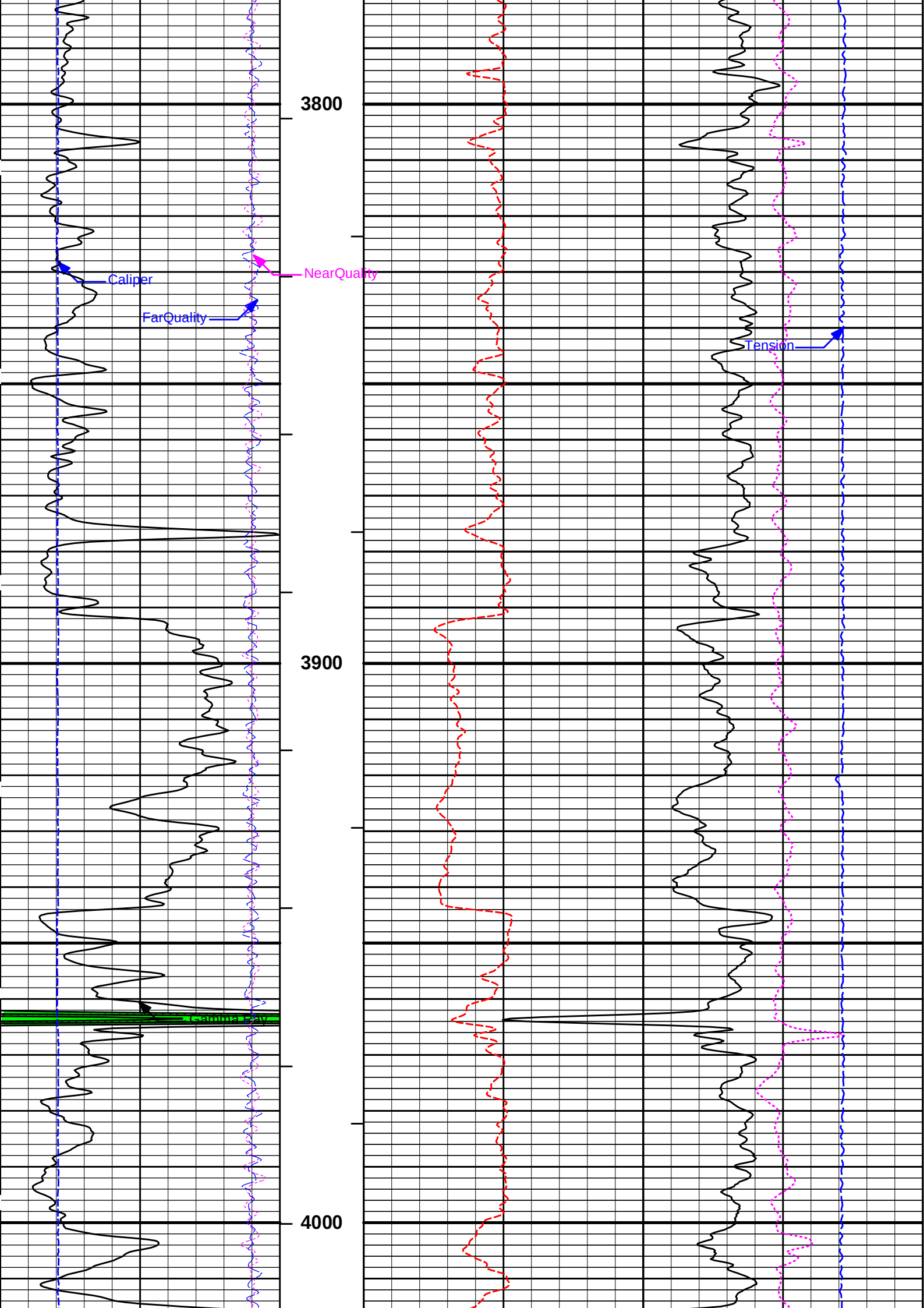
MAIN SECTION 5" PER 100'

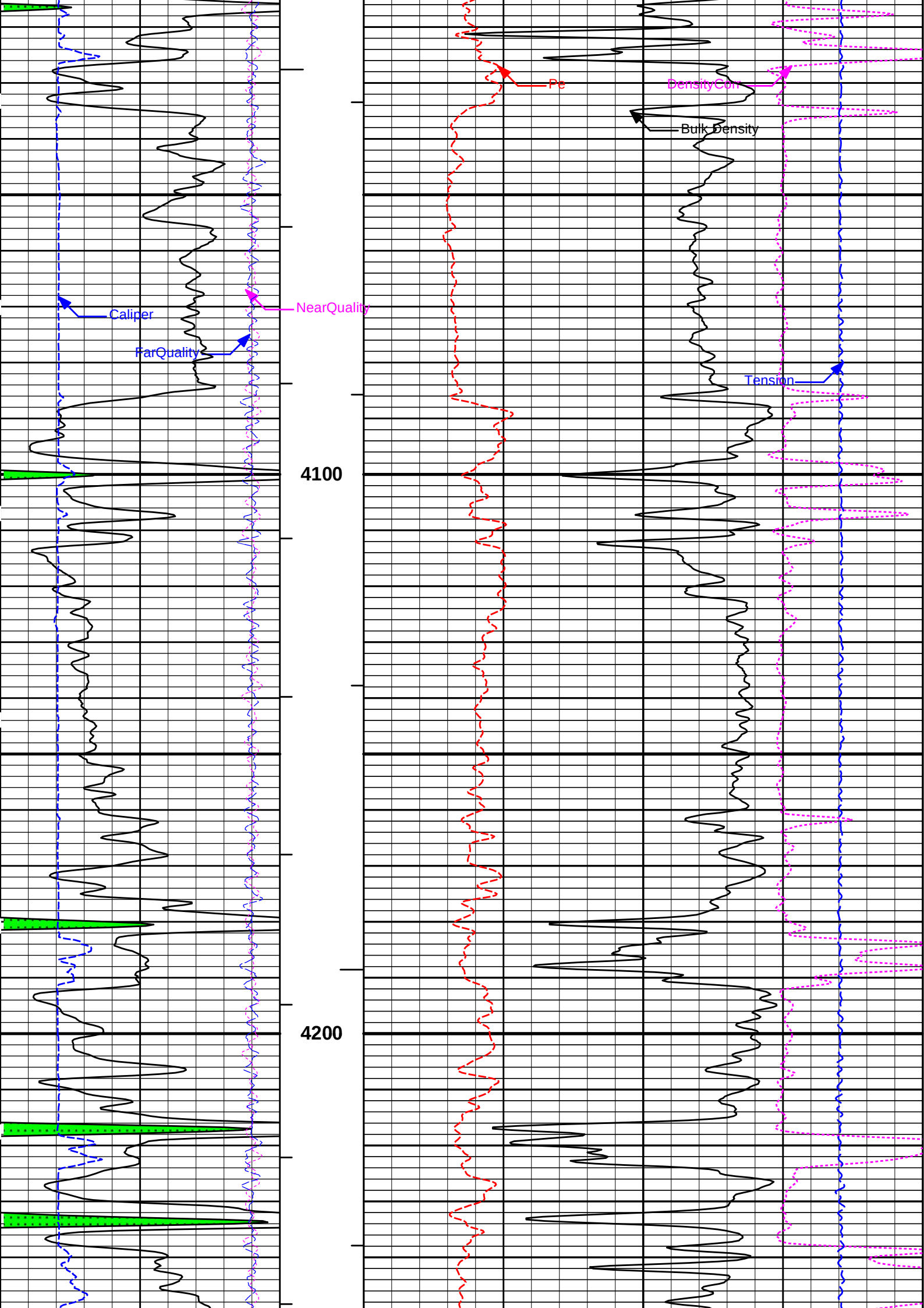


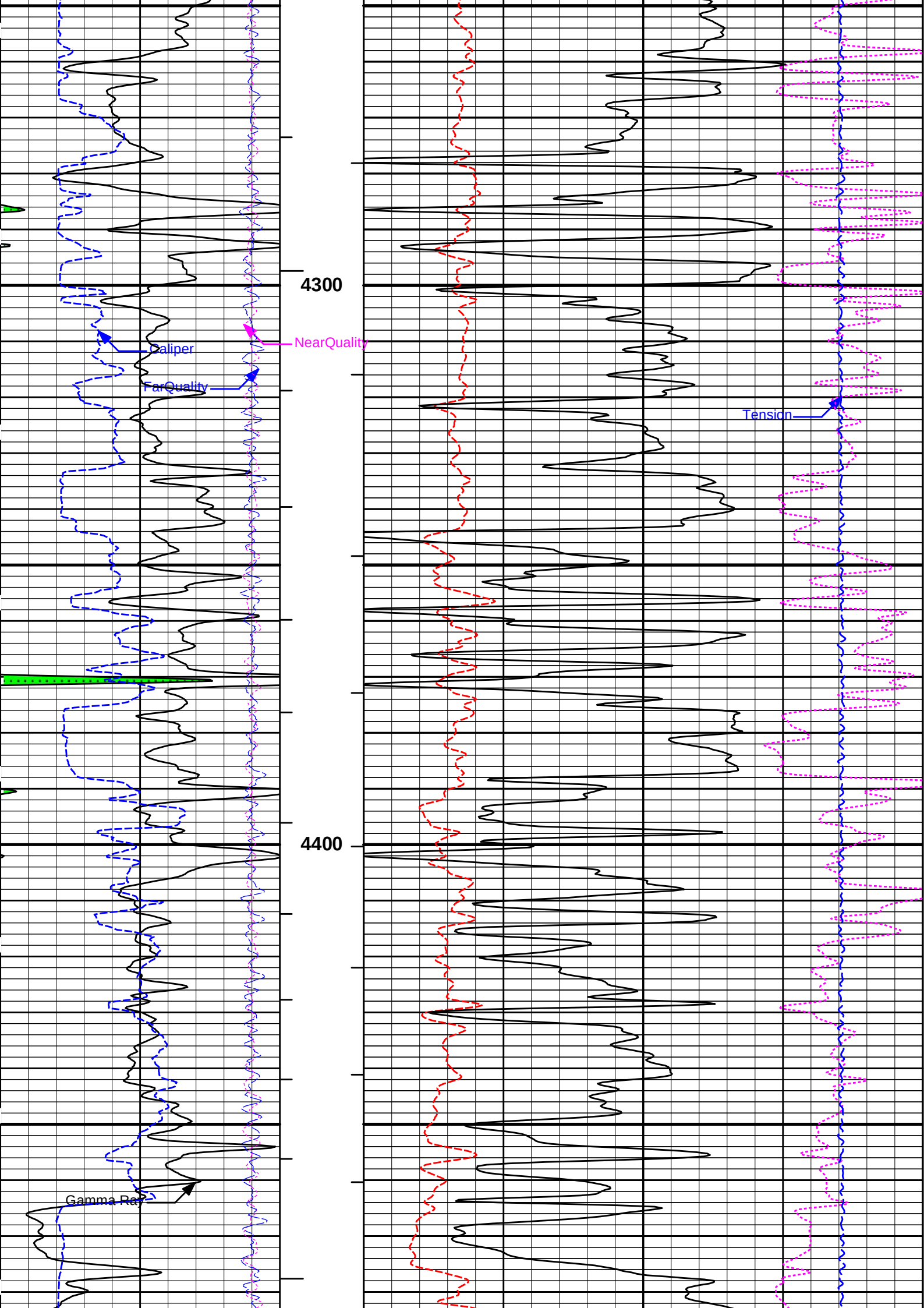

3100
3200
3300
Caliper
NearQuality
FarQuality
Tension

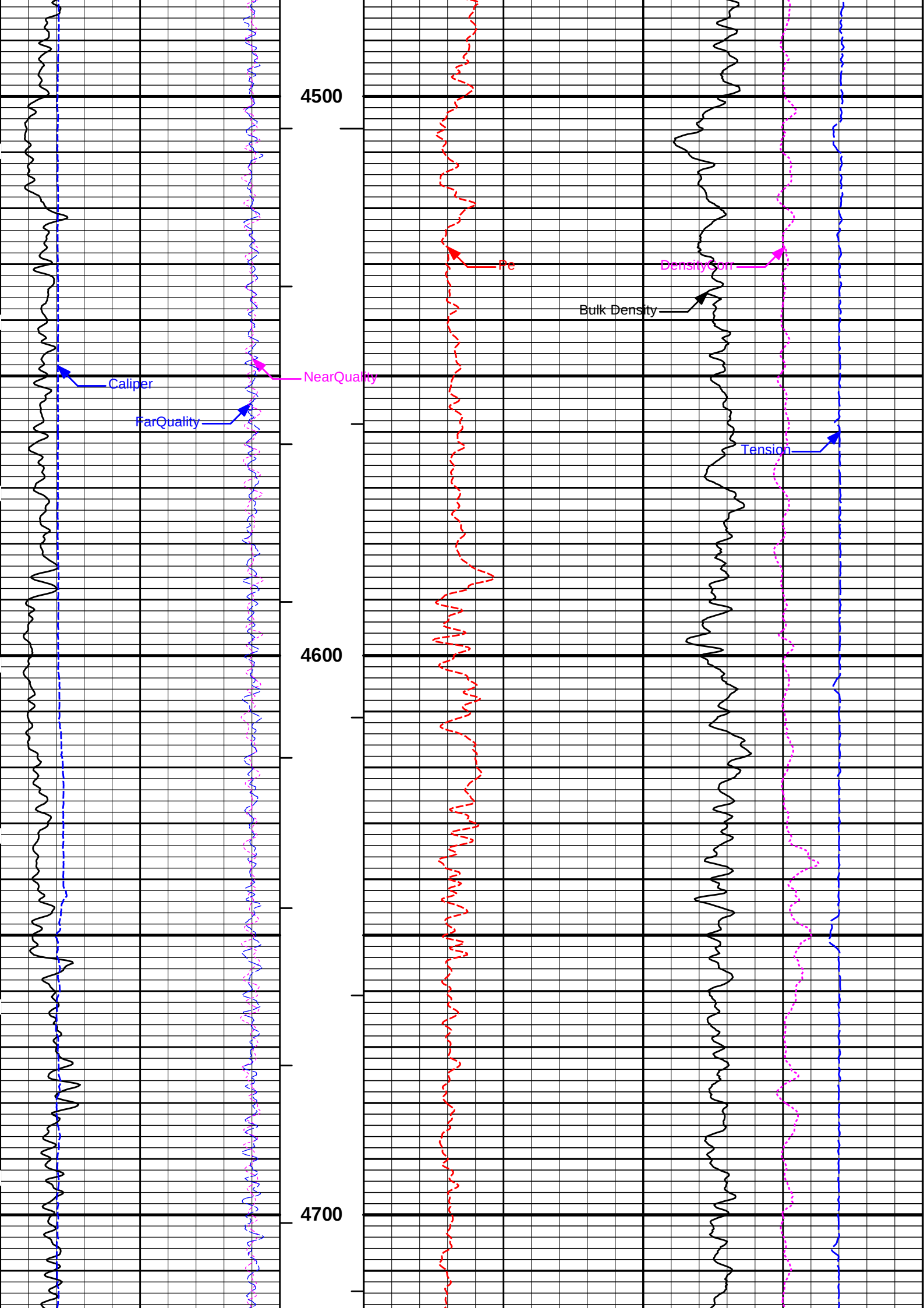

Caliper
NearQuality
FarQuality
Tension
3400
Gamma Ray
3500
Pe
DensityCorr
Bulk Density

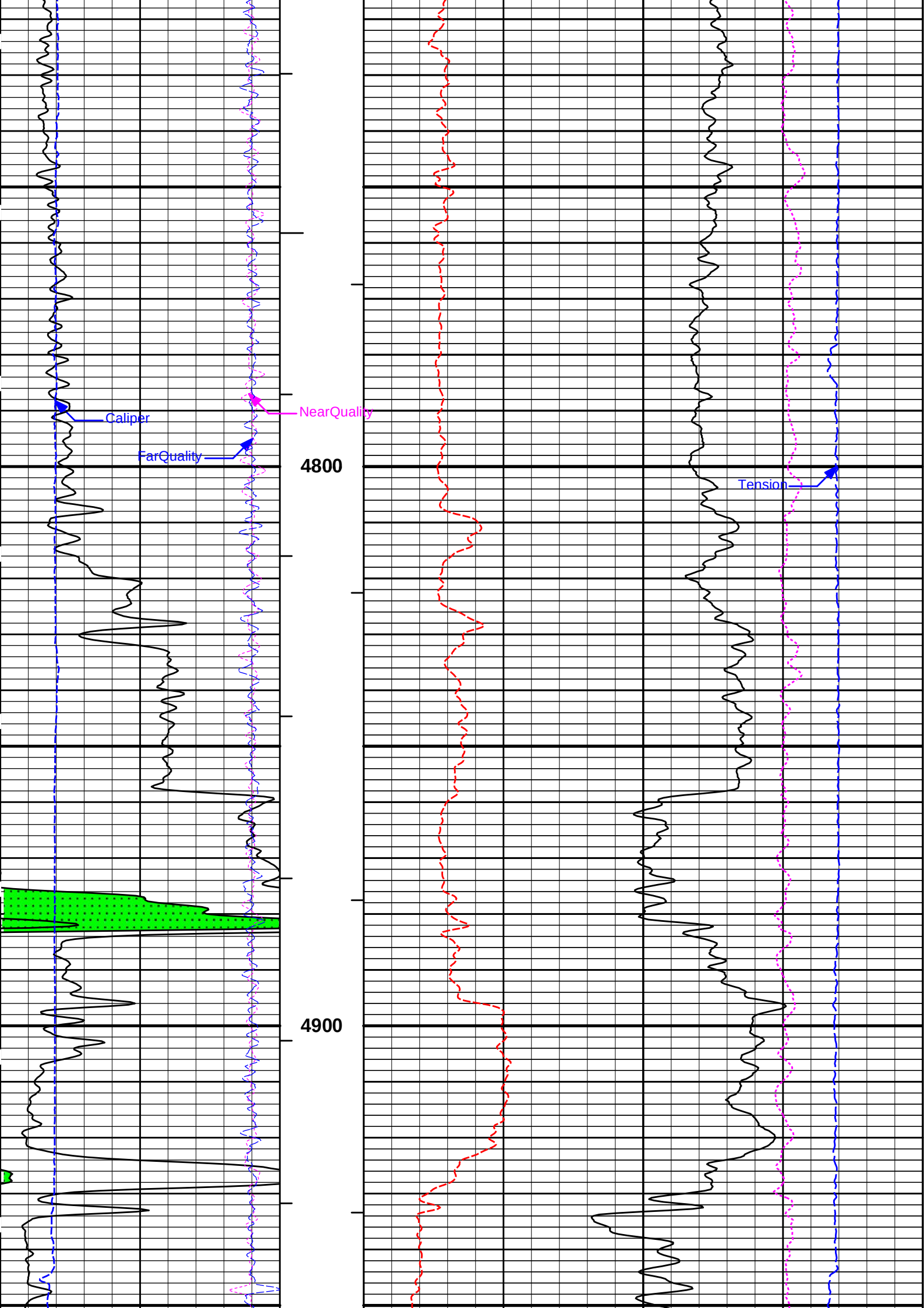

Caliper
NearQuality
FarQuality
3600
Tension
3700

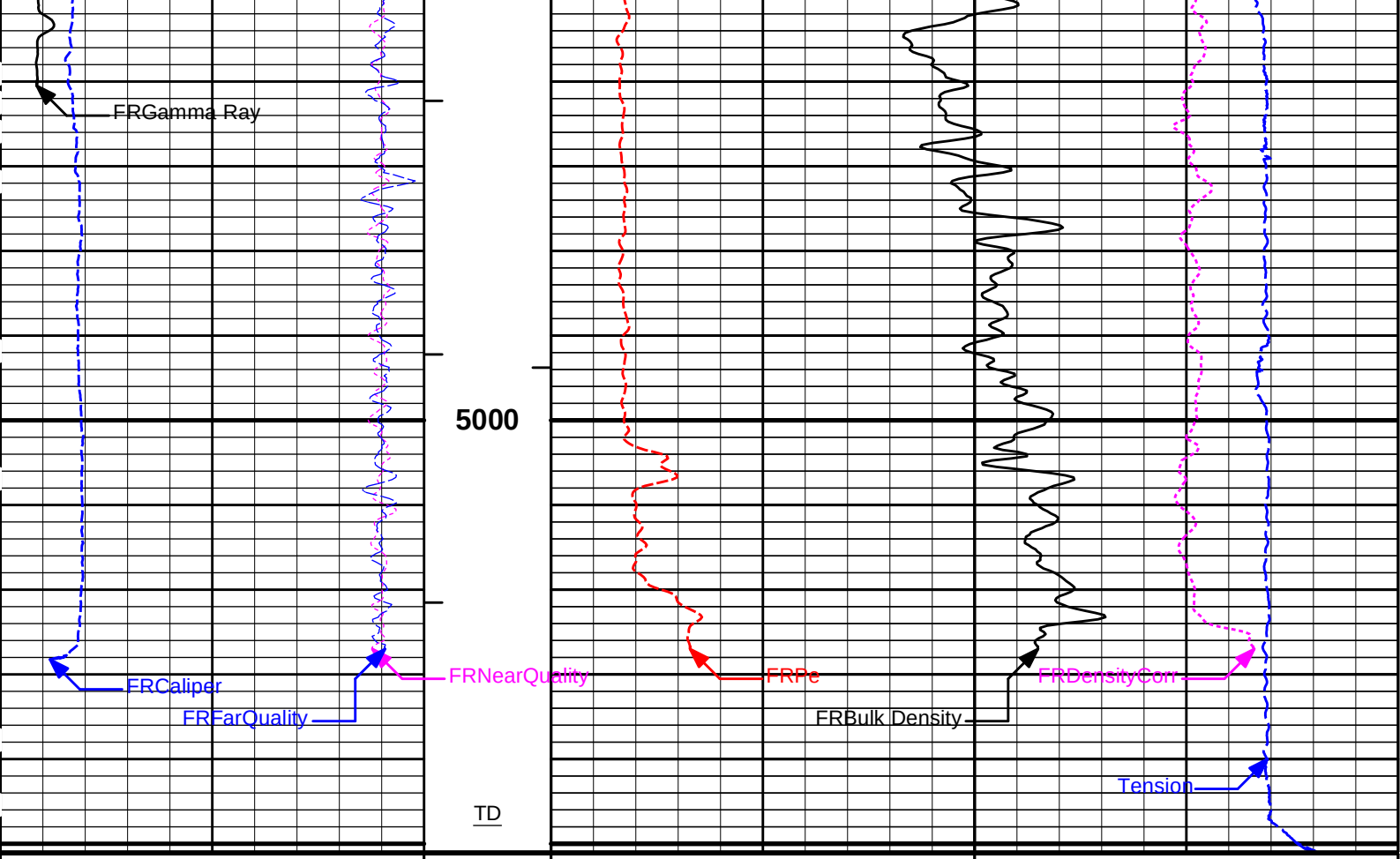

3800
3900
4000
Caliper
NearQuality
FarQuality
Tension
Gamma Ray


Pe
DensityCorr
Bulk Density
Caliper
NearQuality
FarQuality
Tension
4100
4200


4300
4400
Caliper
NearQuality
FarQuality
Tension
Gamma Ray


4500
4600
4700
Pe
DensityCorr
Bulk Density
Caliper
NearQuality
FarQuality
Tension


Caliper
NearQuality
FarQuality
4800
Tension
4900



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

HALLIBURTON

Plot Time: 29-Feb-16 14:15:12
Plot Range: 3000 ft to 5050.92 ft
Data: K3_BOYER\Well Based\DAQ-0001-004\
Plot File: \\-LOCAL-\K3_BOYER\0001 GTET-XRMI-BSAT-FLX-DSNT-SDLT-ACRT\SDL-DSN-ML\BULKD_5_MAIN_IQ

5 INCH MAIN LOG

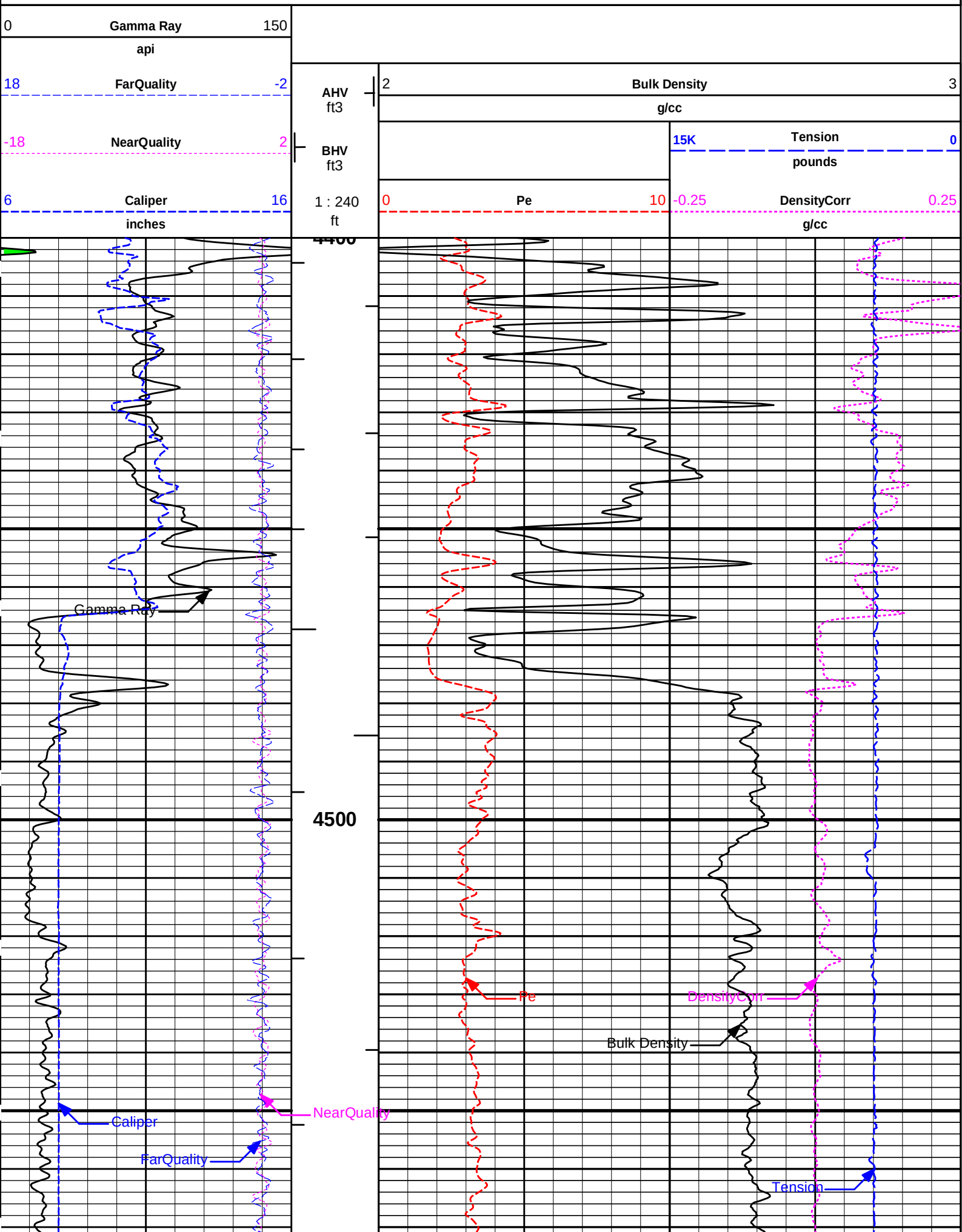
MAIN SECTION 5" PER 100'

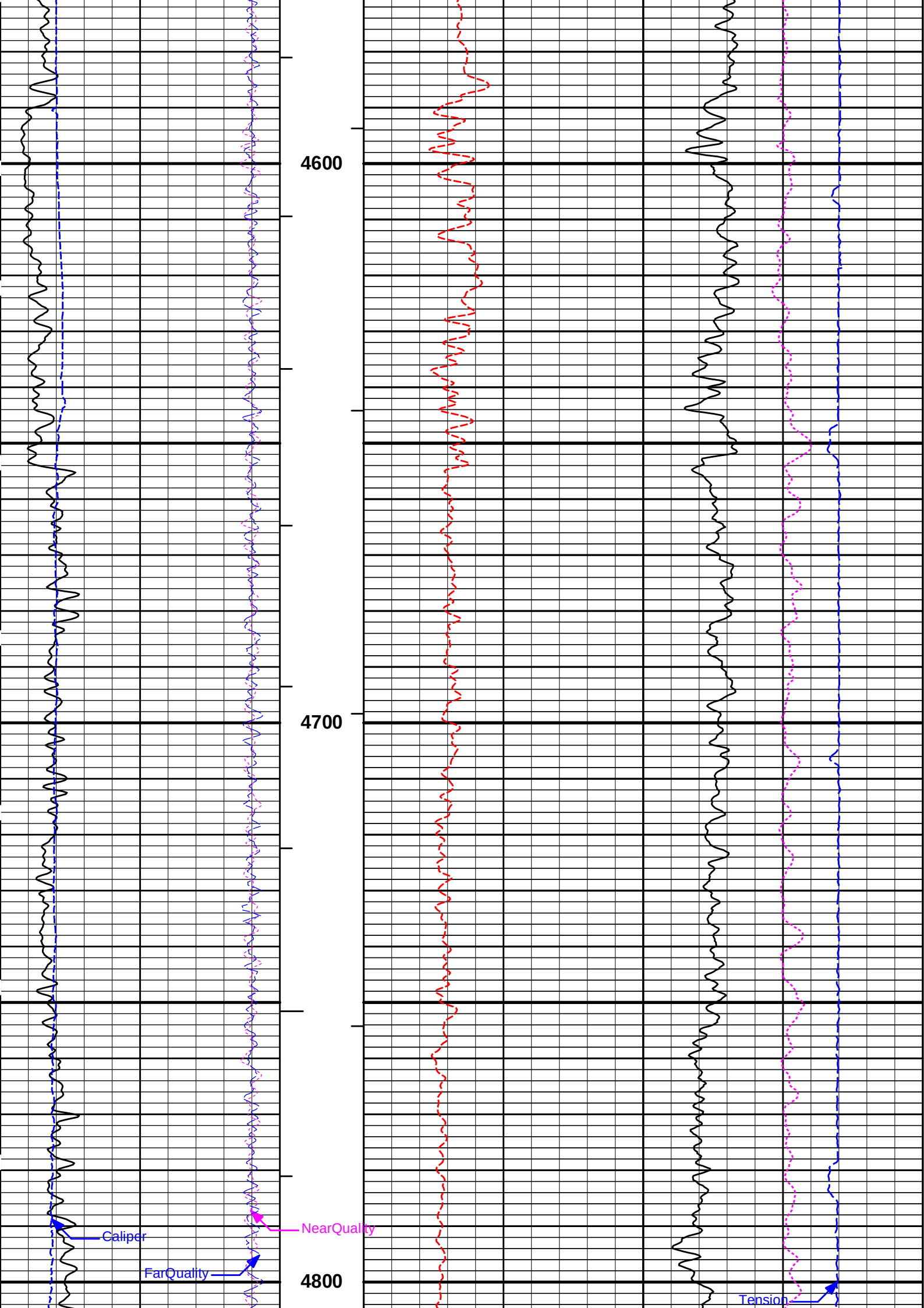
HALLIBURTON

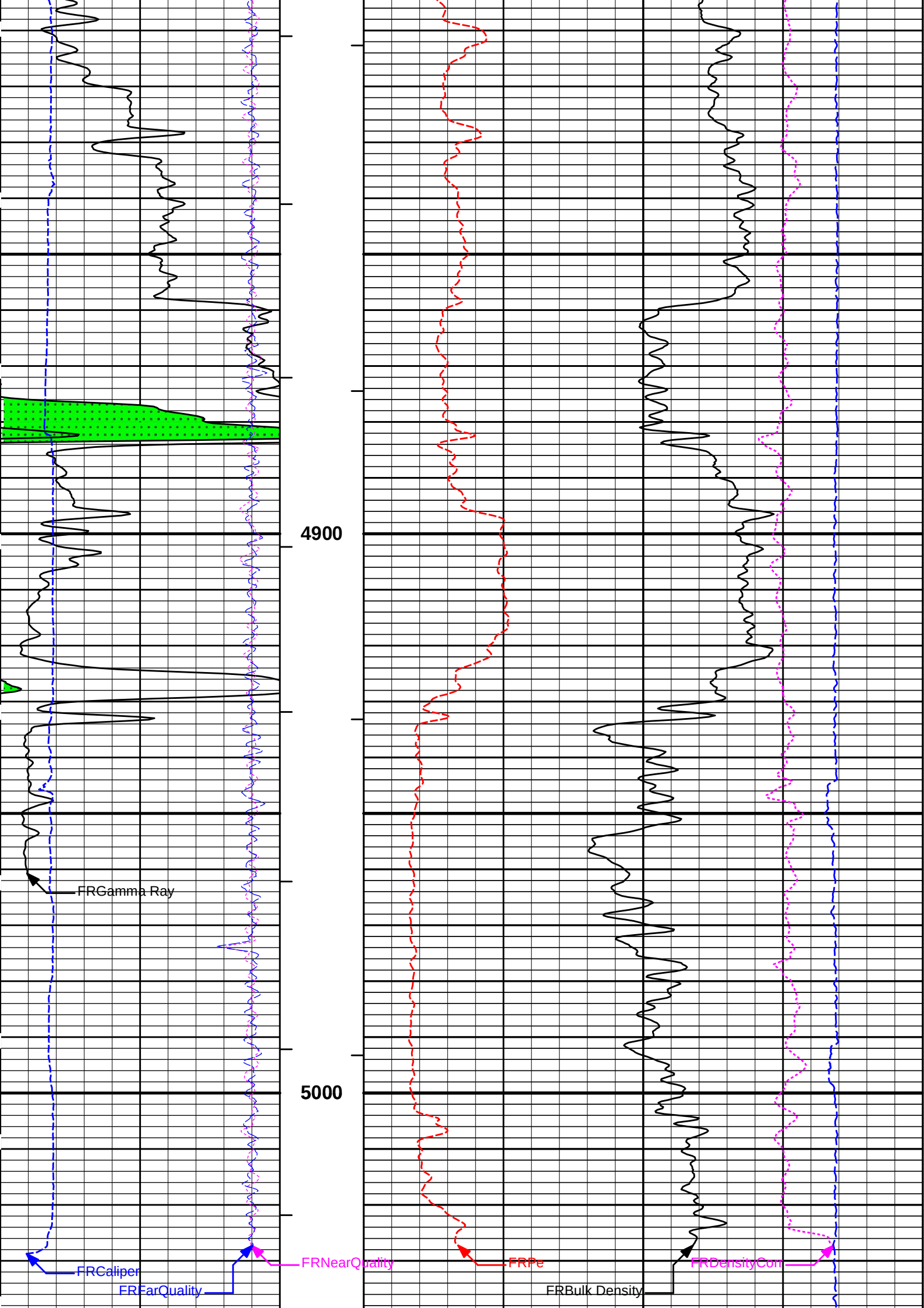
Plot Time: 29-Feb-16 14:15:12
Plot Range: 4400 ft to 5052.17 ft
Data: K3_BOYER\Well Based\DAQ-0001-002\
Plot File: \\-LOCAL-\K3_BOYER\0001 GTET-XRMI-BSAT-FLX-DSNT-SDLT-ACRT\SDL-DSN-ML\BULKD_5_MAIN_IQ

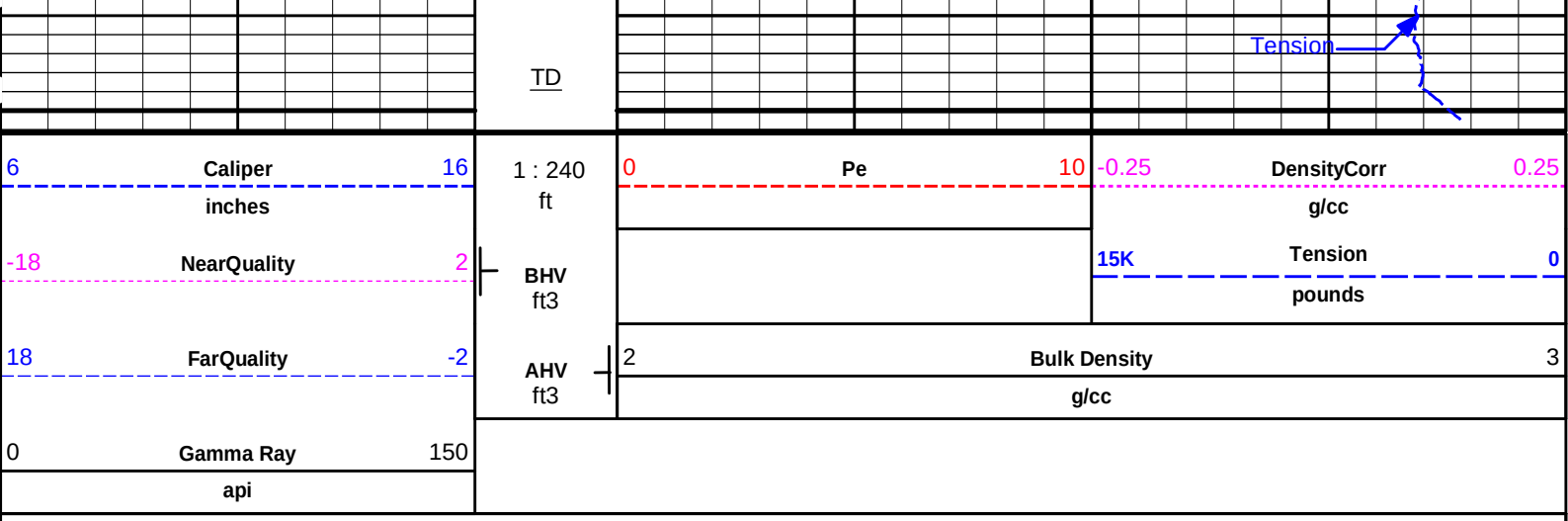
REPEAT SECTION

REPEAT SECTION




4600
4700
4800
Caliper
NearQuality
FarQuality
Tension


4900
5000
FRGamma Ray
FRCaliper
FREarQuality
FRNearQuality
FRPe
FRBulk Density
FRDensityCorr



HALLIBURTON

Plot Time: 29-Feb-16 14:15:14
Plot Range: 4400 ft to 5052.17 ft
Data: K3_BOYER\Well Based\DAQ-0001-002\
Plot File: \\-LOCAL-\K3_BOYER\0001 GTET-XRMI-BSAT-FLX-DSNT-SDLT-ACRT\SDL-DSN-ML\BULKD_5_MAIN_IQ

REPEAT SECTION

REPEAT SECTION

HALLIBURTON

CALIBRATION REPORT

DOWNHOLE TENSION SHOP CALIBRATION

Tool Name:	**CH_HOS - CH_HOS_I**	**Reference Calibration Date:**	**13-Feb-16 16:56:30**
Engineer:	**JORGE ORLANDO PEREZ**	**Calibration Date:**	**24-Feb-16 04:11:38**
Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**1**

DOWNHOLE LOAD CELL

Measurement	Tool Value	Measurement	Calibrated	Units
Low	-661.57	-32.39	0.00	lbs
High	4648.11	1283.13	1414.10	lbs

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	**GTET - 11021139**	**Reference Calibration Date:**	**12-Feb-16 10:35:46**
Engineer:	**WHITLOCK**	**Calibration Date:**	**26-Feb-16 09:56:46**
Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB 79
Calibrator API Reference:222.00 api
Equivalent Calibrator API Reference:225.9 api

Measurement	Measured	Calibrated	Units
Background	21.9	21.9	api
Background + Calibrator	247.2	247.8	api
Calibrator	225.3	225.9	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	**GTET - 11021139**	**Reference Calibration Date:**	**26-Feb-16 09:56:46**
Engineer:	**WHITLOCK**	**Calibration Date:**	**26-Feb-16 10:00:24**

Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB 79

Calibrator API Reference:222.00 api

Equivalent Calibrator API Reference:225.9 api

Field Verification	Shop	Field	Units
Background	21.9	22.6	api
Background + Calibrator	247.8	248.1	api
Calibrator	225.9	225.4	api

Shop	Field	Difference	Tolerance
225.9	225.4	0.5	+/- 9.00

ACCELEROMETER AND MAGNETOMETER SHOP CALIBRATION

Tool Name:	**XRMI-I Instrument - 11682412**	**Reference Calibration Date:**	**16-Sep-15 10:43:48**
Engineer:	**J.COTHREN**	**Calibration Date:**	**20-Nov-15 13:50:50**
Software Version:	**WL INSITE R3.6.0 (Build 3)**	**Calibration Version:**	**1**

Reference Gravity Field: 1.0000 g

Reference Magnetic Field: 57609.0000 nT

* QF : value of 0 is shown for bad quality if | data - reference | > (2 * standard deviation) and > (0.5% of reference value)

ACCELEROMETER CALIBRATION RAW DATA VALUE

Raw Acc X	Raw Acc Y	Raw Acc Z	Gravity	Quality %	QF
10405.5000	-16054.0000	139.5000	0.9998	99.9785	1
-18689.5000	-4580.5000	165.2500	1.0002	99.9766	1
-6608.7500	18110.2500	166.5000	0.9996	99.9650	1
16855.0000	9131.7500	158.0000	0.9999	99.9922	1
-2470.0000	19118.0000	100.2500	0.9999	99.9880	1
-15426.0000	-10750.0000	2051.5000	1.0003	99.9744	1
1030.7500	19250.7500	27.2500	1.0005	99.9543	1
19061.5000	-1651.7500	29.7500	1.0001	99.9878	1
-88.2500	-19167.2500	9.5000	1.0000	99.9966	1
-18976.5000	3260.2500	34.5000	0.9997	99.9650	1
-1015.0000	13620.2500	6846.5000	1.0000	99.9967	1
-1853.0000	18717.0000	-2082.5000	1.0001	99.9890	1

ACCELEROMETER QUALITY SUMMARY

Average Calculated Gravity Field	1.0000	g
Standard Deviation Calculated Gravity Field	0.0002	g

ACCELEROMETER GAIN AND OFFSET

	GAIN	OFFSET
ACC X	0.0000521006	0.0030672101
ACC Y	0.0000520278	-0.0027303288
ACC Z	0.0001037888	-0.0040801889

* QF : value of 0 is shown for bad quality if | data - reference | > (3 * standard deviation) and > (1% of reference value)

MAGNETOMETER CALIBRATION RAW DATA VALUE

Raw Mag X	Raw Mag Y	Raw Mag Z	Magnetic	Quality %	QF
-1620.0000	10794.2500	-129.5000	54212.4961	94.1042	1
10898.2500	-2236.7500	-165.2500	55108.8281	95.6601	1
-898.2500	-11229.0000	-195.5000	49511.2734	85.9436	1
-11058.2500	-861.0000	-196.5000	56177.2852	97.5148	1
782.0000	-10113.5000	4835.5000	53592.7227	93.0284	1
8773.7500	6716.5000	-1574.2500	56855.3320	98.6918	1
229.2500	-10779.7500	-4083.5000	54299.3242	94.2549	1
-10586.7500	69.5000	-4089.2500	60251.7188	95.4127	1

-732.2500	10431.7500	-4101.5000	58605.1328	98.2709	1
10543.7500	-1232.0000	-4095.5000	59379.6367	96.9265	1
86.2500	-9359.0000	5766.5000	54412.1602	94.4508	1
1753.7500	-14261.7500	3725.2500	68027.0781	81.9159	1

MAGNETOMETER QUALITY SUMMARY		
Average Calculated Magnetic Field	56702.7500	nT
Standard Deviation Calculated Magnetic Field	4603.1074	nT

MAGNETOMETER GAIN AND OFFSET		
	GAIN	OFFSET
MAG X	5.0432934761	-365.8953247070
MAG Y	4.6652102470	3156.4694824219
MAG Z	6.4244394302	-714.6641235352

Noise Level Value: 1.865301 cnts

Noise Level Cal Value: 0.0002 g

XRMI NORMALIZE SHOP CALIBRATION

Tool Name:	**XRMI-I Mandrel - 11682413**	**Reference Calibration Date:**	**01-Oct-15 11:23:00**
Engineer:	**COTHREN**	**Calibration Date:**	**20-Nov-15 13:00:02**
Software Version:	**WL INSITE R3.8.0 (Build 2)**	**Calibration Version:**	**1**

Pad 1 Averages

Measurement	500	1250(H)	1250(L)	12000	200000
Avg. All Buttons	680.785	498.075	1291.866	12582.962	208038.813
Button 1	679.777	497.528	1298.580	12599.240	208309.125
Button 2	680.446	498.145	1288.148	12593.380	208158.141
Button 3	680.594	496.478	1297.320	12554.884	207727.234
Button 4	683.454	498.601	1285.100	12565.280	207794.500
Button 5	678.919	497.371	1296.918	12601.264	208309.438
Button 6	680.053	498.228	1287.204	12599.152	208226.297
Button 7	680.149	496.606	1296.856	12561.208	207854.844
Button 8	684.055	499.506	1286.299	12569.988	207915.516
Button 9	680.525	498.000	1299.332	12603.656	208341.563
Button 10	680.484	497.863	1287.693	12599.520	208221.625
Button 11	680.219	496.542	1297.179	12549.208	207657.469
Button 12	682.675	498.320	1283.915	12575.812	208003.781
Button 13	674.840	495.098	1284.189	12599.796	208283.203
Button 14	680.075	497.766	1299.482	12596.680	208181.313
Button 15	679.681	497.577	1286.795	12601.960	208210.438
Button 16	679.106	495.761	1295.199	12558.128	207800.188
Button 17	684.288	499.442	1286.861	12576.580	208047.359
Button 18	679.903	497.961	1299.020	12591.120	208130.297
Button 19	681.466	498.955	1289.888	12608.288	208347.719
Button 20	679.907	496.850	1296.125	12556.860	207498.375
Button 21	684.848	501.044	1287.329	12585.500	207778.297
Button 22	680.072	499.491	1298.484	12596.712	208260.922
Button 23	680.776	500.013	1288.087	12590.352	208129.406
Button 24	679.278	497.743	1295.360	12560.668	207784.891
Button 25	684.046	500.987	1285.286	12578.808	207998.531

Pad 2 Averages

Measurement	500	1250(H)	1250(L)	12000	200000
Avg. All Buttons	702.815	1282.122	1305.745	12472.159	214532.203
Button 1	702.617	1280.398	1312.563	12479.952	214667.719
Button 2	700.304	1279.720	1300.319	12470.596	214482.563

Button 3	707.106	1287.107	1313.793	12466.632	214496.063
Button 4	705.891	1286.540	1299.213	12456.320	214262.266
Button 5	700.658	1276.225	1310.074	12480.284	214625.281
Button 6	699.677	1276.833	1299.710	12477.392	214542.719
Button 7	708.074	1288.826	1313.755	12466.044	214616.891
Button 8	707.954	1290.350	1301.117	12460.776	214377.594
Button 9	701.796	1280.522	1313.017	12487.156	214695.750
Button 10	698.612	1277.926	1299.972	12480.604	214549.891
Button 11	706.772	1287.218	1313.758	12451.356	214360.828
Button 12	705.812	1286.647	1298.736	12463.512	214466.234
Button 13	680.644	1259.536	1289.066	12471.912	214514.688
Button 14	701.774	1277.926	1313.211	12479.504	214490.813
Button 15	698.753	1275.082	1299.135	12484.000	214535.547
Button 16	706.306	1285.745	1310.822	12462.048	214581.828
Button 17	707.978	1289.966	1301.022	12465.744	214568.063
Button 18	700.191	1278.443	1311.132	12476.380	214446.203
Button 19	699.663	1279.383	1300.768	12490.232	214723.641
Button 20	707.643	1286.834	1313.462	12460.596	214532.922
Button 21	709.512	1290.927	1303.755	12475.528	214599.875
Button 22	700.706	1278.320	1312.307	12482.892	214558.078
Button 23	699.383	1278.025	1301.259	12477.224	214431.875
Button 24	705.789	1285.592	1311.604	12467.992	214625.531
Button 25	706.761	1288.958	1300.057	12469.300	214552.063

Pad 3 Averages

Measurement	500	1250(H)	1250(L)	12000	200000
Avg. All Buttons	681.613	1260.333	1301.980	12637.178	216903.813
Button 1	680.367	1258.959	1305.684	12642.772	216967.234
Button 2	683.986	1264.714	1300.558	12643.264	216940.984
Button 3	679.573	1256.628	1305.593	12628.036	216817.531
Button 4	682.343	1261.283	1296.273	12609.016	216455.359
Button 5	679.493	1257.255	1304.526	12633.384	216762.875
Button 6	684.214	1264.325	1300.526	12640.680	216907.578
Button 7	680.014	1256.331	1305.455	12634.072	216885.063
Button 8	683.561	1262.877	1298.231	12630.688	216768.953
Button 9	681.107	1260.321	1306.556	12646.988	217060.031
Button 10	684.235	1264.550	1300.094	12652.192	217109.188
Button 11	680.459	1257.194	1307.019	12621.756	216620.422
Button 12	682.005	1259.942	1296.040	12633.200	216780.609
Button 13	674.572	1256.194	1295.968	12649.020	217103.750
Button 14	680.658	1259.665	1306.380	12641.552	216961.031
Button 15	683.216	1263.149	1298.631	12654.512	217178.750
Button 16	678.802	1254.715	1302.849	12629.984	216798.781
Button 17	683.975	1263.479	1298.660	12636.992	216856.953
Button 18	681.173	1259.884	1306.569	12638.232	216924.359
Button 19	685.380	1266.366	1302.622	12662.524	217345.797
Button 20	679.643	1255.770	1304.480	12625.112	216762.297
Button 21	684.434	1264.111	1299.117	12646.336	217242.297
Button 22	681.126	1259.650	1305.922	12636.604	216892.797
Button 23	684.095	1264.047	1299.641	12645.132	217057.734
Button 24	678.967	1254.833	1304.074	12609.148	216484.094
Button 25	682.927	1262.076	1298.027	12638.256	216910.844

Pad 4 Averages

Measurement	500	1250(H)	1250(L)	12000	200000
Avg. All Buttons	679.704	1257.182	1291.924	12608.977	215877.969
Button 1	678.823	1255.942	1299.532	12533.172	213875.906
Button 2	680.250	1259.109	1288.499	12621.144	216053.953

Button 2	680.250	1259.109	1288.499	12621.144	216053.953
Button 3	679.065	1254.467	1297.877	12596.256	215676.609
Button 4	682.073	1260.440	1285.677	12607.364	215825.734
Button 5	677.416	1254.089	1298.040	12621.432	216066.500
Button 6	679.525	1258.408	1287.687	12627.548	216118.078
Button 7	679.259	1254.320	1296.488	12599.960	215853.891
Button 8	683.400	1262.199	1285.633	12594.944	215669.703
Button 9	679.358	1256.905	1301.220	12630.280	216230.469
Button 10	680.112	1258.546	1288.926	12626.840	216100.797
Button 11	679.037	1254.429	1297.352	12584.292	215609.594
Button 12	681.505	1259.062	1283.353	12609.740	215995.016
Button 13	673.318	1252.942	1283.822	12637.280	216278.844
Button 14	678.926	1256.229	1300.074	12621.692	216093.250
Button 15	679.258	1256.944	1286.559	12628.212	216173.125
Button 16	677.625	1252.230	1295.614	12589.976	215758.406
Button 17	683.259	1262.507	1287.138	12611.652	216055.813
Button 18	678.816	1255.837	1299.621	12610.844	215868.547
Button 19	680.963	1259.960	1289.757	12640.848	216336.766
Button 20	678.398	1253.810	1296.097	12579.124	215553.531
Button 21	683.600	1263.236	1287.447	12589.936	215749.563
Button 22	678.277	1255.381	1299.995	12635.080	216198.906
Button 23	679.745	1258.511	1288.646	12628.060	216076.156
Button 24	678.026	1252.872	1295.327	12591.592	215722.047
Button 25	682.565	1261.173	1277.724	12607.148	216008.188

Pad 5 Averages

Measurement	500	1250(H)	1250(L)	12000	200000
Avg. All Buttons	683.019	1262.465	1296.728	12637.213	216092.453
Button 1	682.419	1262.754	1302.076	12648.520	216343.609
Button 2	682.202	1263.375	1293.466	12629.188	216023.234
Button 3	683.258	1260.693	1302.238	12637.672	216136.453
Button 4	685.091	1263.954	1290.785	12612.960	215723.781
Button 5	681.542	1261.691	1301.226	12653.800	216387.391
Button 6	681.799	1262.866	1293.201	12638.388	216073.406
Button 7	682.823	1260.581	1301.878	12640.524	216264.828
Button 8	685.862	1265.561	1292.074	12616.784	215827.516
Button 9	683.413	1264.064	1303.649	12661.032	216406.656
Button 10	682.343	1263.383	1293.181	12643.408	216112.641
Button 11	682.891	1260.386	1301.894	12624.136	216012.422
Button 12	684.318	1262.593	1289.310	12618.988	215914.109
Button 13	677.527	1257.896	1289.905	12646.380	216157.375
Button 14	682.848	1263.656	1302.853	12653.264	216170.625
Button 15	681.672	1262.292	1292.480	12644.540	216001.594
Button 16	682.080	1258.466	1299.625	12621.948	216083.203
Button 17	686.401	1265.976	1292.623	12621.172	215987.328
Button 18	682.591	1263.206	1302.342	12654.796	216190.141
Button 19	683.008	1264.658	1294.559	12658.892	216200.703
Button 20	682.429	1259.956	1301.228	12626.184	216037.703
Button 21	686.536	1266.882	1293.291	12625.428	215822.266
Button 22	682.802	1263.453	1302.114	12658.300	216379.844
Button 23	682.390	1263.437	1293.783	12643.068	215999.609
Button 24	681.685	1258.466	1300.959	12634.804	216185.156
Button 25	685.543	1261.382	1287.460	12616.148	215869.766

Pad 6 Averages

Measurement	500	1250(H)	1250(L)	12000	200000
Avg. All Buttons	680.458	1258.088	1296.233	12507.679	215813.172
Button 1	680.947	1257.701	1300.719	12517.280	215962.234

Button 2	681.079	1259.001	1291.900	12502.932	215569.656
Button 3	679.865	1256.846	1302.437	12508.276	215878.781
Button 4	681.733	1260.768	1291.842	12492.048	215516.219
Button 5	679.920	1255.876	1298.886	12519.336	216032.250
Button 6	680.612	1258.078	1291.011	12509.232	215767.359
Button 7	679.618	1256.302	1302.292	12510.728	215945.156
Button 8	682.427	1261.947	1293.501	12500.068	215711.609
Button 9	681.423	1258.771	1301.270	12522.536	216147.141
Button 10	680.712	1258.577	1291.554	12510.772	215858.563
Button 11	679.441	1256.233	1302.095	12491.216	215624.953
Button 12	681.313	1259.324	1290.957	12498.256	215642.938
Button 13	673.529	1251.866	1288.931	12517.764	215853.188
Button 14	680.931	1258.372	1301.560	12510.964	215922.297
Button 15	680.164	1257.649	1291.010	12514.784	215890.438
Button 16	678.757	1254.681	1299.580	12501.928	215795.016
Button 17	682.858	1262.745	1293.439	12502.804	215772.859
Button 18	680.514	1257.838	1301.204	12515.032	215956.734
Button 19	681.420	1260.243	1293.456	12526.216	216071.484
Button 20	679.371	1255.749	1300.824	12497.008	215655.813
Button 21	683.608	1263.375	1294.259	12497.172	215816.391
Button 22	680.109	1257.694	1300.441	12499.840	215647.609
Button 23	680.538	1258.931	1292.131	12511.492	215733.063
Button 24	678.932	1254.912	1300.026	12508.168	215826.563
Button 25	681.630	1258.710	1290.492	12506.120	215731.141

Pad 1 Gains and Offsets

Measurement	A1	B1	A2	B2	A3	B3
Button 1	1.00253	-0.71272	0.99915	-5.61493	0.99870	0.07567
Button 2	1.00225	-1.18871	0.99875	5.32871	0.99944	-3.40471
Button 3	0.99237	5.38726	1.00298	-9.31821	1.00145	9.84137
Button 4	0.98841	5.25309	1.00097	5.52242	1.00116	3.09530
Button 5	1.00640	-2.48052	0.99883	-3.53189	0.99871	-2.05516
Button 6	1.00487	-2.57919	0.99816	7.03482	0.99912	-5.15843
Button 7	0.99546	3.72174	1.00237	-8.06899	1.00083	11.32031
Button 8	0.99004	3.54534	1.00066	4.72269	1.00056	5.87461
Button 9	1.00102	-0.43079	0.99883	-5.94559	0.99856	-2.53264
Button 10	1.00049	-0.03173	0.99817	6.53286	0.99915	-5.84957
Button 11	0.99474	4.14606	1.00347	-9.81678	1.00178	11.39720
Button 12	0.99108	4.20036	0.99993	8.04195	1.00014	5.35625
Button 13	1.01651	-5.19934	0.99783	10.45871	0.99884	-2.18191
Button 14	1.00220	-0.78690	0.99946	-6.91423	0.99934	-5.42352
Button 15	1.00333	-1.15882	0.99787	7.80812	0.99922	-9.16515
Button 16	0.99654	4.03004	1.00250	-6.57212	1.00110	11.08277
Button 17	0.98845	4.40336	1.00012	4.84807	0.99992	7.34235
Button 18	1.00422	-1.98901	0.99991	-7.03854	0.99957	-2.79268
Button 19	1.00109	-1.42508	0.99759	5.08972	0.99855	-7.05975
Button 20	0.99811	2.16566	1.00270	-7.75358	1.00264	-7.02860
Button 21	0.99405	0.01215	0.99937	5.34313	1.00135	-19.49907
Button 22	1.01179	-7.30591	0.99937	-5.79838	0.99894	-0.33598
Button 23	1.01077	-7.32476	0.99901	5.05178	0.99957	-2.03231
Button 24	1.00647	-2.89079	1.00229	-6.45929	1.00119	7.39107
Button 25	0.99810	-1.95792	0.99979	6.85601	1.00018	1.82887

Pad 2 Gains and Offsets

Measurement	A1	B1	A2	B2	A3	B3
Button 1	1.00264	-1.65758	0.99991	-6.70326	0.99937	0.09066
Button 2	0.99981	2.64287	0.99965	5.87580	1.00024	-1.40442

Button 3	0.99880	-3.44468	1.00122	-9.64700	1.00015	3.63829
Button 4	0.99769	-1.44427	1.00083	5.44836	1.00126	0.15482
Button 5	1.00650	-2.39570	0.99966	-3.88364	0.99958	-2.88006
Button 6	1.00373	0.53059	0.99899	7.34532	0.99997	-4.90619
Button 7	0.99751	-3.49688	1.00127	-9.67385	0.99955	11.71477
Button 8	0.99470	-1.38383	1.00061	3.84064	1.00071	2.54395
Button 9	1.00100	0.31457	0.99931	-6.36410	0.99927	-5.82355
Button 10	0.99999	4.21168	0.99873	7.42613	0.99995	-7.87344
Button 11	0.99804	-2.56983	1.00259	-11.41195	1.00075	11.51724
Button 12	0.99737	-1.14008	1.00015	6.81858	1.00028	5.11075
Button 13	1.00072	21.68331	0.99853	18.57322	1.00009	-0.81890
Button 14	1.00548	-2.80164	1.00001	-7.48020	1.00024	-10.35541
Button 15	1.00517	0.45167	0.99835	8.75320	1.00004	-12.36582
Button 16	0.99977	-3.32997	1.00136	-6.86227	0.99970	13.79448
Button 17	0.99539	-1.90154	1.00015	4.52599	0.99979	9.02254
Button 18	1.00182	1.34677	1.00010	-5.52378	1.00045	-9.79395
Button 19	0.99929	3.65066	0.99794	7.65677	0.99914	-7.36601
Button 20	1.00020	-4.96955	1.00173	-9.98872	0.99994	12.32085
Button 21	0.99637	-4.12441	0.99952	2.61554	0.99968	0.59976
Button 22	1.00293	0.05537	0.99963	-6.07194	0.99993	-9.79701
Button 23	1.00115	2.62848	0.99915	5.59809	1.00052	-11.57585
Button 24	0.99914	-2.36997	1.00090	-7.03758	0.99952	10.17997
Button 25	0.99504	-0.43743	0.99975	6.01736	0.99989	4.26121

Pad 3 Gains and Offsets

Measurement	A1	B1	A2	B2	A3	B3
Button 1	1.00022	1.09568	0.99983	-3.48650	0.99972	-2.01662
Button 2	0.99654	-0.00780	0.99934	2.28259	0.99985	-4.16214
Button 3	1.00288	0.07949	1.00113	-5.08405	1.00038	4.37092
Button 4	0.99962	-0.47057	1.00198	3.13374	1.00206	2.16480
Button 5	1.00166	0.99359	1.00056	-3.27634	1.00067	-4.69374
Button 6	0.99760	-0.96019	0.99956	2.02207	1.00000	-3.48564
Button 7	1.00417	-1.23603	1.00058	-4.23355	1.00008	2.13777
Button 8	0.99897	-1.24452	1.00024	3.43483	1.00063	-1.45341
Button 9	0.99915	1.08719	0.99954	-3.97324	0.99928	-0.75230
Button 10	0.99725	-0.74106	0.99851	3.82125	0.99907	-3.23478
Button 11	1.00344	-1.18777	1.00181	-7.40288	1.00131	-1.15782
Button 12	1.00135	-1.31576	0.99983	6.16401	1.00058	-3.40047
Button 13	0.99501	10.40691	0.99843	8.04972	0.99908	-0.20486
Button 14	0.99950	1.29261	1.00000	-4.40329	0.99974	-1.10444
Button 15	0.99791	-0.17370	0.99818	5.71398	0.99874	-1.39530
Button 16	1.00487	-0.49730	1.00071	-1.79663	1.00048	1.14106
Button 17	0.99865	-1.43638	0.99972	3.67868	1.00023	-2.70260
Button 18	1.00002	0.42973	1.00031	-4.99678	0.99990	0.15120
Button 19	0.99610	-1.09366	0.99783	2.19061	0.99796	0.42819
Button 20	1.00450	-1.08866	1.00129	-4.17865	1.00063	4.05942
Button 21	0.99835	-1.69092	0.99894	4.23905	0.99839	11.19787
Button 22	1.00034	0.25655	1.00040	-4.46281	1.00005	-0.07175
Button 23	0.99788	-1.02848	0.99909	3.51780	0.99929	1.07559
Button 24	1.00496	-0.71869	1.00266	-5.56908	1.00192	3.80430
Button 25	0.99926	-0.80785	0.99956	4.52860	0.99997	-0.70981

Pad 4 Gains and Offsets

Measurement	A1	B1	A2	B2	A3	B3
Button 1	1.00062	0.45885	1.00743	-17.25712	1.00957	-44.10091
Button 2	0.99761	1.07699	0.99862	5.19797	0.99919	-2.00362
Button 3	1.00361	-1.81087	1.00165	-8.09783	1.00093	1.02021

Button 4	0.99846	-1.32057	0.99959	6.77352	1.00025	-1.52821
Button 5	1.00140	1.34241	0.99944	-5.38916	0.99913	-1.53157
Button 6	0.99757	1.82826	0.99799	6.82718	0.99891	-4.82381
Button 7	1.00420	-2.40986	1.00120	-6.12150	1.00007	8.08292
Button 8	0.99772	-2.13626	1.00068	5.41114	1.00096	1.98563
Button 9	0.99988	0.42735	0.99894	-7.91658	0.99837	-0.75804
Button 10	0.99835	0.71616	0.99816	5.36976	0.99899	-5.14392
Button 11	1.00363	-1.79468	1.00267	-8.88906	1.00120	9.57970
Button 12	0.99986	-1.70769	0.99918	9.62887	0.99943	6.44580
Button 13	0.99630	8.87902	0.99679	12.21886	0.99817	-5.18325
Button 14	1.00030	0.57223	0.99960	-7.62546	0.99900	-0.15034
Button 15	0.99964	0.69064	0.99783	8.15584	0.99864	-2.11683
Button 16	1.00500	-1.30903	1.00201	-6.29276	1.00049	12.76936
Button 17	0.99694	-1.46707	0.99934	5.63439	0.99914	8.18301
Button 18	1.00079	0.35056	1.00052	-8.36658	1.00006	-2.56760
Button 19	0.99738	0.52753	0.99700	6.03481	0.99790	-5.37717
Button 20	1.00359	-1.12963	1.00302	-8.08140	1.00145	11.59595
Button 21	0.99628	-1.35084	1.00129	2.81823	1.00054	12.26358
Button 22	1.00065	0.98755	0.99841	-6.00267	0.99855	-7.80335
Button 23	0.99777	1.47181	0.99803	5.81940	0.99912	-7.96596
Button 24	1.00458	-1.42639	1.00184	-5.78652	1.00068	8.79717
Button 25	0.99805	-1.52792	0.99891	15.59551	0.99935	10.01262

Pad 5 Gains and Offsets

Measurement	A1	B1	A2	B2	A3	B3
Button 1	0.99847	1.64512	0.99947	-4.66423	0.99882	3.58691
Button 2	0.99703	2.84388	1.00042	2.71868	1.00030	4.22472
Button 3	1.00348	-2.61882	1.00045	-6.09028	0.99979	2.24500
Button 4	1.00101	-2.76230	1.00162	3.85557	1.00170	2.86489
Button 5	0.99879	2.30265	0.99894	-3.11229	0.99863	0.70131
Button 6	0.99721	3.12167	0.99959	4.06292	1.00010	-2.43108
Button 7	1.00292	-1.79917	1.00016	-5.36112	0.99917	7.18354
Button 8	0.99956	-2.54390	1.00139	2.85427	1.00120	5.24785
Button 9	0.99793	1.02389	0.99851	-4.98136	0.99857	-5.77449
Button 10	0.99726	2.54766	0.99914	4.65698	0.99993	-5.32585
Button 11	1.00338	-2.17934	1.00161	-7.26372	1.00033	8.92136
Button 12	1.00203	-2.68498	1.00095	6.18818	1.00079	8.28565
Button 13	0.99841	6.56929	0.99859	8.63919	0.99973	-5.70233
Button 14	0.99766	1.77197	0.99913	-4.98567	0.99969	-12.18853
Button 15	0.99798	2.72505	0.99898	5.56593	1.00048	-13.43229
Button 16	1.00531	-2.68251	1.00160	-4.98164	0.99997	15.63777
Button 17	0.99978	-3.22956	1.00105	2.74304	1.00044	10.51235
Button 18	0.99799	1.80210	0.99895	-4.24094	0.99961	-12.60252
Button 19	0.99621	2.59875	0.99790	4.88567	0.99957	-16.29458
Button 20	1.00332	-1.67781	1.00137	-6.28430	1.00021	8.31546
Button 21	0.99845	-2.45267	1.00074	2.48427	1.00127	-4.27041
Button 22	0.99793	1.63371	0.99862	-3.58570	0.99869	-4.54005
Button 23	0.99724	2.50894	0.99922	3.94830	1.00049	-11.99179
Button 24	1.00462	-1.81605	1.00059	-4.99315	0.99953	8.31300
Button 25	1.00626	-6.81857	1.00104	7.92745	1.00099	8.54952

Pad 6 Gains and Offsets

Measurement	A1	B1	A2	B2	A3	B3
Button 1	1.00152	-1.52266	0.99954	-3.89314	0.99931	-1.02100
Button 2	0.99949	-0.27628	1.00004	4.28488	1.00118	-9.95404
Button 3	1.00112	-0.17119	1.00050	-6.85600	0.99968	3.40088
Button 4	0.99757	0.37977	1.00100	3.09417	1.00139	-1.67886

Button 5	1.00291	-1.43758	0.99920	-1.61102	0.99898	1.10251
Button 6	1.00028	-0.34671	0.99940	6.00140	1.00023	-4.46880
Button 7	1.00164	-0.27423	1.00027	-6.40911	0.99937	4.88040
Button 8	0.99674	0.25721	1.00044	2.16858	1.00046	1.83111
Button 9	1.00049	-1.29720	0.99912	-3.89857	0.99843	4.76733
Button 10	0.99959	0.02349	0.99931	5.57347	0.99979	-0.49148
Button 11	1.00145	0.03053	1.00200	-8.46032	1.00085	5.90118
Button 12	0.99934	-0.40533	1.00037	4.79792	1.00079	-0.47090
Button 13	0.99878	7.75292	0.99845	9.29740	0.99985	-8.24236
Button 14	1.00033	-0.69542	1.00018	-5.56452	0.99948	3.22460
Button 15	1.00025	0.12385	0.99890	6.64069	0.99966	-2.78814
Button 16	1.00296	-0.30904	1.00081	-4.40278	1.00006	4.98809
Button 17	0.99611	0.25841	1.00019	2.55354	1.00017	2.69530
Button 18	1.00053	-0.41605	0.99979	-4.69489	0.99933	1.02559
Button 19	0.99794	0.44312	0.99810	5.23089	0.99882	-3.78128
Button 20	1.00217	-0.38805	1.00136	-6.36454	1.00072	1.64758
Button 21	0.99631	-0.62961	1.00076	0.98780	0.99993	11.35049
Button 22	1.00008	0.29653	1.00108	-5.60726	1.00078	-1.86599
Button 23	0.99868	0.81830	0.99929	5.01327	1.00041	-8.98025
Button 24	1.00286	-0.41838	1.00029	-4.17657	0.99994	0.30444
Button 25	1.00095	-1.82112	0.99963	6.22193	1.00040	-3.39356

DIPMETER SHOP CALIBRATION

Tool Name:	**XRMI-I Mandrel - 11682413**	**Reference Calibration Date:**	**26-Mar-15 15:18:01**
Engineer:	**COTHREN**	**Calibration Date:**	**20-Nov-15 13:24:20**
Software Version:	**WL INSITE R4.6.4 (Build 3)**	**Calibration Version:**	**1**

Tool Temperature: 70.30 degF

PAD RESISTIVITIES

Measurement	Measured	Calibrated	Measured	Calibrated	Measured	Calibrated	Units
Pads #1-3:	0.453	0.450	0.365	0.450	0.450	0.450	ohmm
Pads #4-6:	0.445	0.450	0.449	0.450	0.470	0.450	ohmm
Cal0 #1-3:	0.273	-----	0.208	-----	0.270	-----	ohmm
Cal0 #4-6:	0.264	-----	0.272	-----	0.270	-----	ohmm

RELATIVE PAD VOLTS

Measurement	Measured	Calibrated
Air:	1.000	1.017
Zero:	0.002	0.002
Calibrate:	0.003	0.003

SIX ARM CALIPER SHOP CALIBRATION

Tool Name:	**XRMI-I Mandrel - 11682413**	**Reference Calibration Date:**	**01-Jan-70 00:00:00**
Engineer:	**WHITLOCK**	**Calibration Date:**	**26-Feb-16 10:02:21**
Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**3**

CALIPERS AND RINGS

Caliper	Large 15.00 in	Small 7.000 in	Units
CALIPER 1-4:			
Measured	15.000	7.000	in
Calibrated	15.000	7.000	in
CALIPER 2-5:			
Measured	15.000	7.000	in
Calibrated	15.000	7.000	in
CALIPER 3-6:			
Measured	15.000	7.000	in
Calibrated	15.000	7.000	in

TOLERANCE CHECK				
Measurment	Difference	Tolerance	Pass/Fail	Units
Caliper 1-4 Large	0.000	0.250	Passed	in
Caliper 1-4 Small	0.000	0.250	Passed	in
Caliper 2-5 Large	0.000	0.250	Passed	in
Caliper 2-5 Small	0.000	0.250	Passed	in
Caliper 3-6 Large	0.000	0.250	Passed	in
Caliper 3-6 Small	0.000	0.250	Passed	in

PRESSURE PAD		
	Measured	Calibrated
Closed	0.000	0.000
Opened	1.000	1.000

SIX ARM CALIPER FIELD CALIBRATION

Tool Name: XRMI-I Mandrel - 11682413
Reference Calibration Date: 26-Feb-16 10:02:21
Engineer: WHITLOCK
Calibration Date: 26-Feb-16 10:02:41
Software Version: WL INSITE R4.6.3 (Build 5)
Calibration Version: 2

CALIPERS AND RINGS					
Caliper	Shop	Field	Difference	Tolerance	Units
Caliper 1-4	7.000	6.988	0.012	0.250	in
Caliper 2-5	7.000	6.994	0.006	0.250	in
Caliper 3-6	7.000	6.997	0.003	0.250	in

PASS/FAIL SUMMARY	
Ring Check:	Passed

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 11019641
Reference Calibration Date: 18-Jan-16 12:31:04
Engineer: COTHREN
Calibration Date: 22-Feb-16 20:00:52
Software Version: WL INSITE R4.6.3 (Build 5)
Calibration Version: 1

Logging Source S/N: DSN 373
Tank Serial Number: FTSM
Reference value assigned to Tank: 56.100
Snow Block S/N: 786
Calibration Tank Water Temperature: 69 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.990	0.991	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):	0.2355	0.2358	0.0003	+/- 0.0020
Calibrated Ratio:	10.55	10.56	0.010	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0644	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 - 11019641**	**Reference Calibration Date:**	**22-Feb-16 20:00:52**
Engineer:	**WHITLOCK**	**Calibration Date:**	**26-Feb-16 11:10:33**
Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**1**

Logging Source S/N: DSN 373

Snow Block S/N: 786

NEUTRON FIELD-CHECK SUMMARY				
	Shop	**Field**	**Difference**	**Control Limit On Change**
Snow-Block Porosity (decp):	0.0644	0.0649	0.0005	+/- 0.0150

PASS/FAIL SUMMARY	
Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DUAL SPACED NEUTRON POST CALIBRATION

Tool Name:	**DSNT - 11019641**	**Reference Calibration Date:**	**26-Feb-16 11:10:33**
Engineer:	**WHITLOCK**	**Calibration Date:**	**26-Feb-16 11:13:24**
Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**1**

Logging Source S/N: DSN 373

Snow Block S/N: 786

NEUTRON POST-CHECK SUMMARY				
	Field Value	**Post Value**	**Difference**	**Control Limit On Change**
Snow-Block Porosity (decp):	0.0649	0.0645	-0.0004	+/- 0.0150

PASS/FAIL SUMMARY	
Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	**SDLT - 10951315**	**Reference Calibration Date:**	**18-Jan-16 11:11:04**
Engineer:	**WHITLOCK**	**Calibration Date:**	**18-Feb-16 11:56:22**
Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**1**
Host Tool Name:	**DSNT - 11019641**		

CALIBRATION COEFFICIENTS			
Measurement	**Previous Value**	**New Value**	**Control Limit On New Value**
Pad Offset	-2649.25	-2649.25	-7000.00 - -1000.00
Pad Gain	0.0003773	0.0003773	0.000200 - 0.000600
Arm Offset	480.90	480.90	-5000.00 - 3000.00
Arm Gain	0.0004044	0.0004044	0.000300 - 0.000700
Arm Power	0.000001870	0.000001870	-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**

	(Previous Coeff.)	(New Coeff.)		New Value
PAD EXTENSION:				
Small Ring (in)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.50	6.50	0.00	+/- 0.20
Medium Ring (in)	8.25	8.25	0.00	+/- 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 - 10951315 **Reference Calibration Date:** 18-Feb-16 11:56:22

Engineer: WHITLOCK **Calibration Date:** 26-Feb-16 11:29:27

Software Version: WL INSITE R4.6.3 (Build 5) **Calibration Version:** 1

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.77	0.02	+/- 0.10
Ring Diameter	8.25	8.25	0.00	+/- 0.15

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

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name: SDLT Pad - 10865873 **Reference Calibration Date:** 18-Jan-16 11:21:13

Engineer: COTHREN **Calibration Date:** 22-Feb-16 19:16:44

Software Version: WL INSITE R4.6.3 (Build 5) **Calibration Version:** 1

Logging Source S/N: 5577GW

Aluminum Block S/N: FTSM Density: 2.581g/cc Pe: 3.170

Magnesium Block S/N: FTSM Density: 1.687g/cc Pe: 2.594

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9298	0.9843	0.90 - 1.10
Near Dens Gain	0.9569	0.9806	0.90 - 1.10
Near Peak Gain	0.9727	0.9863	0.90 - 1.10
Near Lith Gain	0.9925	1.0052	0.90 - 1.10
Far Bar Gain	0.9875	0.9964	0.90 - 1.10
Far Dens Gain	0.9864	0.9930	0.90 - 1.10
Far Peak Gain	0.9897	0.9928	0.90 - 1.10
Far Lith Gain	0.9761	0.9774	0.90 - 1.10
Near Bar Offset	0.5973	0.0939	NONE
Near Dens Offset	0.3310	0.1237	NONE
Near Peak Offset	0.1621	0.0538	NONE
Near Lith Offset	-0.0197	-0.1227	NONE
Far Bar Offset	0.0426	-0.0313	NONE
Far Dens Offset	0.0232	-0.0302	NONE
Far Peak Offset	-0.0512	-0.0740	NONE
Far Lith Offset	0.0183	0.0058	NONE

Near Bar Background	866.59	863.77	700 - 1450
Near Dens Background	282.75	281.12	230 - 480
Near Peak Background	124.23	122.96	100 - 210
Near Lith Background	151.80	150.74	125 - 260
Far Bar Background	490.51	485.47	450 - 900
Far Dens Background	190.56	192.09	175 - 345
Far Peak Background	75.19	75.89	70 - 140
Far Lith Background	77.99	78.55	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.680	1.687	0.007	+/- 0.015
Pe	2.511	2.548	0.037	+/- 0.150
ALUMINUM				
Density (g/cc)	2.575	2.581	0.006	+/- 0.01500
Pe	3.134	3.120	-0.014	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0007	+/- 0.0110	-0.0001	+/- 0.0140
Magnesium Block	-0.0008	+/- 0.0110	-0.0030	+/- 0.0140
Aluminum Block	-0.0007	+/- 0.0110	-0.0017	+/- 0.0140
Resolution	9.86	6.00 - 11.50	9.07	6.00 - 11.50
Internal Verifier(B+D+P+L)	1419	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 - 10865873 **Reference Calibration Date:** 22-Feb-16 19:16:44

Engineer: WHITLOCK **Calibration Date:** 26-Feb-16 10:52:36

Software Version: WL INSITE R4.6.3 (Build 5) **Calibration Version:** 1

Pad Temperature: 64.7 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1418.594	1422.337	3.743	15.204
Far (B+D+P+L) cps	832.011	831.486	-0.525	15.878
Near Resolution	9.86	9.95	0.090	0.50
Far Resolution	9.07	9.10	0.030	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed

Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

SPECTRAL DENSITY POST CHECK

Tool Name:	**SDLT Pad - 10865873**	**Reference Calibration Date:**	**26-Feb-16 10:52:36**
Engineer:	**WHITLOCK**	**Calibration Date:**	**26-Feb-16 10:56:38**
Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**1**

Pad Temperature: 64.7 degF

DENSITY POST CALIBRATION SUMMARY

Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1422.337	1423.160	0.823	15.204
Far (B+D+P+L) cps	831.486	832.912	1.426	15.878
Near Resolution	9.95	9.75	-0.200	0.50
Far Resolution	9.10	9.01	-0.090	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

MICRO LOG SHOP CALIBRATION

Tool Name:	**Microlog Pad - 10951315**	**Reference Calibration Date:**	**18-Jan-16 12:52:41**
Engineer:	**WHITLOCK**	**Calibration Date:**	**18-Feb-16 14:53:42**
Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**1**
Host Tool Name:	**DSNT - 11019641**		

CALIBRATION COEFFICIENT SUMMARY

Measurement	Micro Log Normal		Micro Log Lateral		
	Measured	Calibrated	Measured	Calibrated	Units
Tool Zero	-0.17	-0.17	-0.01	-0.01	ohmm
Calibration Point #1	0.00	0.00	0.00	0.00	ohmm
Calibration Point #2	20.00	20.00	20.00	20.00	ohmm
Internal Reference	19.76	19.76	19.96	19.96	ohmm

Measurement	Micro Log Normal Tool Value	Micro Log Lateral Tool Value	Units
Tool Zero	3.11	0.19	V
Calibration Point #1	48.82	2.83	V
Calibration Point #2	5497.07	7124.17	V
Internal Reference	5430.58	7109.98	V

MICRO LOG FIELD CHECK

Tool Name:	**Microlog Pad - 10951315**	**Reference Calibration Date:**	**18-Feb-16 14:53:42**
Engineer:	**WHITLOCK**	**Calibration Date:**	**26-Feb-16 11:37:33**
Software Version:	**WL INSITE R4.6.3 (Build 5)**	**Calibration Version:**	**1**

Measurement	Micro Log Normal		Micro Log Lateral		
	Shop	Field	Shop	Field	Units
Tool Zero	-0.17	-0.18	-0.01	-0.01	ohmm
Internal Reference	19.76	19.55	19.96	19.75	ohmm

Summary

Signal	Shop	Field	Difference	Tolerence
Microlog Normal	19.76	19.55	0.21	+/- 0.80
Microlog Lateral	19.96	19.75	0.21	+/- 0.80

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	**ACRt Sonde - 11024142**	**Reference Calibration Date:**	**18-Jan-16 08:56:24**
Engineer:	**JORGE ORLANDO PEREZ**	**Calibration Date:**	**11-Feb-16 15:39:53**
Software Version:	**WL INSITE R4.6.0 (Build 4)**	**Calibration Version:**	**1**
Host Tool Name:	**ACRt Instrument - 11026094**		

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0168	1.05	0.95	1.0210	1.05	0.95	1.0221	1.05
A2 (50")	0.95	1.0159	1.05	0.95	1.0219	1.05	0.95	1.0254	1.05
A3 (29")	0.95	1.0037	1.05	0.95	1.0080	1.05	0.95	1.0085	1.05
A4 (17")	0.95	1.0052	1.05	0.95	1.0073	1.05	0.95	1.0107	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0079	1.05	0.95	1.0102	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9992	1.05	0.95	0.9999	1.05

SONDE OFFSET

Subarray	R12KHz	R36KHz	R72KHz
	(mmho/m)	(mmho/m)	(mmho/m)
A1 (80")	-0.923	-3.942	-4.966
A2 (50")	-2.792	-3.844	-4.350
A3 (29")	-14.273	-4.139	-3.284
A4 (17")	-104.626	-33.343	-25.950
A5 (10")	N/A	-100.026	-48.751
A6 (6")	N/A	232.915	122.483

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.6	0.86	1.3
36K	1.0	1.85	2.0
72K	1.0	1.11	2.0

R-MUD VERIFICATION

Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.00	1.05

PASS/FAIL SUMMARY

GAIN RANGE CHK	PASS
SONDE OFFSET CHK	PASS

TOOL OK TO LOG

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
CH_HOS-CH_HOS_I						
DH Tension Zero	0.00	----------	----------	0.00	----------	lbs
DH Tension Cal	1414.10	----------	----------	0.00	----------	lbs
GTET-11021139						
Gamma Ray Calibrator	225.9	225.4	----------	0.5	+/- 9.00	api
XRMI-I Mandrel-11682413						
Reflvl Pad 1	41.035	----------	----------	0.000	N/A	ohmm
Reflvl Pad 2	38.992	----------	----------	0.000	N/A	ohmm
Reflvl Pad 3	40.822	----------	----------	0.000	N/A	ohmm
Reflvl Pad 4	40.518	----------	----------	0.000	N/A	ohmm
Reflvl Pad 5	41.218	----------	----------	0.000	N/A	ohmm
Reflvl Pad 6	39.216	----------	----------	0.000	N/A	ohmm
CAL 1-4	7.000	6.988	----------	0.012	+/- 0.250	in
CAL 2-5	7.000	6.994	----------	0.006	+/- 0.250	in
CAL 3-6	7.000	6.997	----------	0.003	+/- 0.250	in
DSNT-11019641						

Snow-Block Porosity	0.0644	0.0649	0.0645	0.0004	+/- 0.0150	decp
SDLT-10951315						
Pad Extension	3.75	3.77	----------	-0.02	+/-0.10	in
Ring Diameter	8.25	8.25	----------	0.00	+/-0.15	in
SDLT Pad-10865873						
Near(B+D+P+L)	1418.594	1422.337	1423.160	-0.823	+/-15.204	cps
Far(B+D+P+L)	832.011	831.486	832.912	-1.426	+/-15.878	cps
Micrlog Pad-10951315						
MicroLog Normal	19.76	19.55	----------	0.21	+/-0.80	ohmm
MicroLog Lateral	19.96	19.75	----------	0.21	+/-0.80	ohmm

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PARAMETERS REPORT

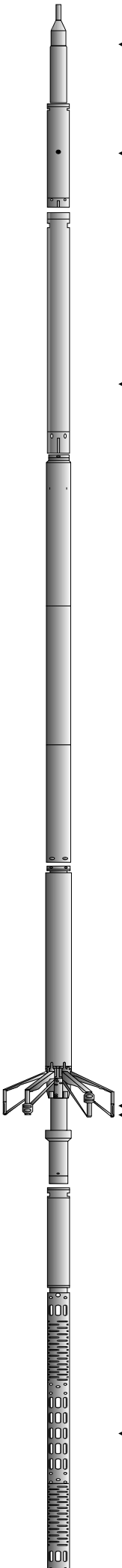
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.300	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	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	1.250	ohmm
	SHARED	TRM	Temperature of Mud	85.0	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	5050.00	ft
	SHARED	BHT	Bottom Hole Temperature	135.0	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	SDLT	
	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.	Centered	
	GTET	BHSM	Borehole Size Source Tool	SDLT	
	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	TOOL	

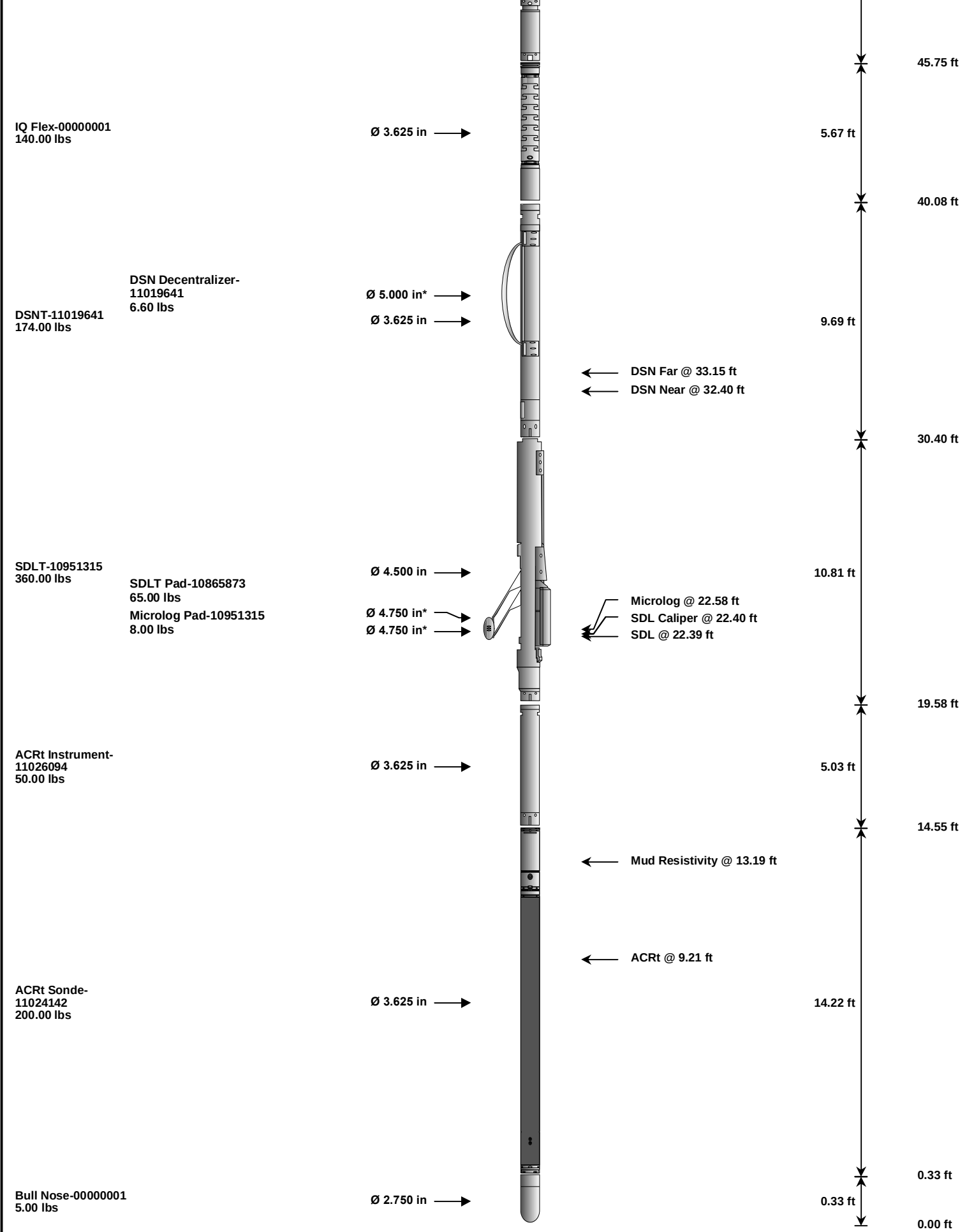
XRMI-I Mandrel	AGN	Use Button Auto Gain?	Yes	
XRMI-I Mandrel	BCLR	Button Auto Gain Color	127	
XRMI-I Mandrel	BFIL	Button Auto Gain Filter	0.020	
XRMI-I Mandrel	BGAN	Button Gain Value	0.001	
XRMI-I Mandrel	BOFF	Button Offset	0	
XRMI-I Mandrel	DIPE	Process Dipmeter Calculations?	Yes	
XRMI-I Mandrel	BHCS	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	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	15000	Hz
BSAT	DTFL	Delta -T Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	Limestone 47.5	
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
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	SDLT	
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	
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	SDLT	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	

BOTTOM

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						102.75 ft
CH_HOS_I 37.50 lbs		Ø 2.750 in		Temperature @ 101.25 ft	3.50 ft	
						99.25 ft
SP Sub-10904995 60.00 lbs		Ø 3.625 in		SP @ 97.47 ft	3.74 ft	
						95.51 ft
GTET-11021139 165.00 lbs		Ø 3.625 in		GammaRay @ 89.45 ft	8.52 ft	
						86.99 ft
XRMI-I Instrument-11682412 290.00 lbs		Ø 4.500 in			14.30 ft	
						72.69 ft
XRMI-I Mandrel-11682413 206.00 lbs		Ø 5.000 in Ø 4.500 in		Pads 2, 4, 6 @ 64.29 ft Pads 1, 3, 5 @ 64.06 ft	11.16 ft	
						61.53 ft
BSAT-11014316 300.00 lbs		Ø 3.625 in		Sonic Receivers @ 53.01 ft	15.77 ft	





Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	CH_HOS_I	37.50	3.50	99.25	300.00
SP	SP Sub	10904995	60.00	3.74	95.51	300.00
GTET	Gamma Telemetry Tool	11021139	165.00	8.52	86.99	60.00
XRMI	XRMI Navigation - Insite	11682412	290.00	14.30	72.69	30.00
XRMI-I	XRMI Imager - Insite	11682413	206.00	11.16	61.53	30.00
BSAT	Borehole Sonic Array Tool	11014316	300.00	15.77	45.75	60.00
IQF	IQ Flex tool	00000001	140.00	5.67	40.08	300.00

DSNT	Dual Spaced Neutron	11019641	174.00	9.69		30.40	60.00
DCNT	DSN Decentralizer	11019641	6.60	5.13	*	33.73	300.00
SDLT	Spectral Density Tool	10951315	360.00	10.81		19.58	60.00
SDLP	Density Insite Pad	10865873	65.00	2.55	*	21.79	60.00
MICP	Microlog Pad	10951315	8.00	1.00	*	22.08	60.00
ACRt	Array Compensated True Resistivity Instrument Section	11026094	50.00	5.03		14.55	120.00
ACRt	Array Compensated True Resistivity Sonde Section	11024142	200.00	14.22		0.33	120.00
BLNS	Bull Nose	00000001	5.00	0.33		0.00	300.00
Total			**2,067.10**	**102.75**			

* Not included in Total Length and Length Accumulation.

Data: K3_BOYER\0001 GTET-XRMI-BSAT-FLX-DSNT-SDLT-ACRT\IDLE **Date: 29-Feb-16 09:03:17**

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Plot Time: 29-Feb-16 14:15:21
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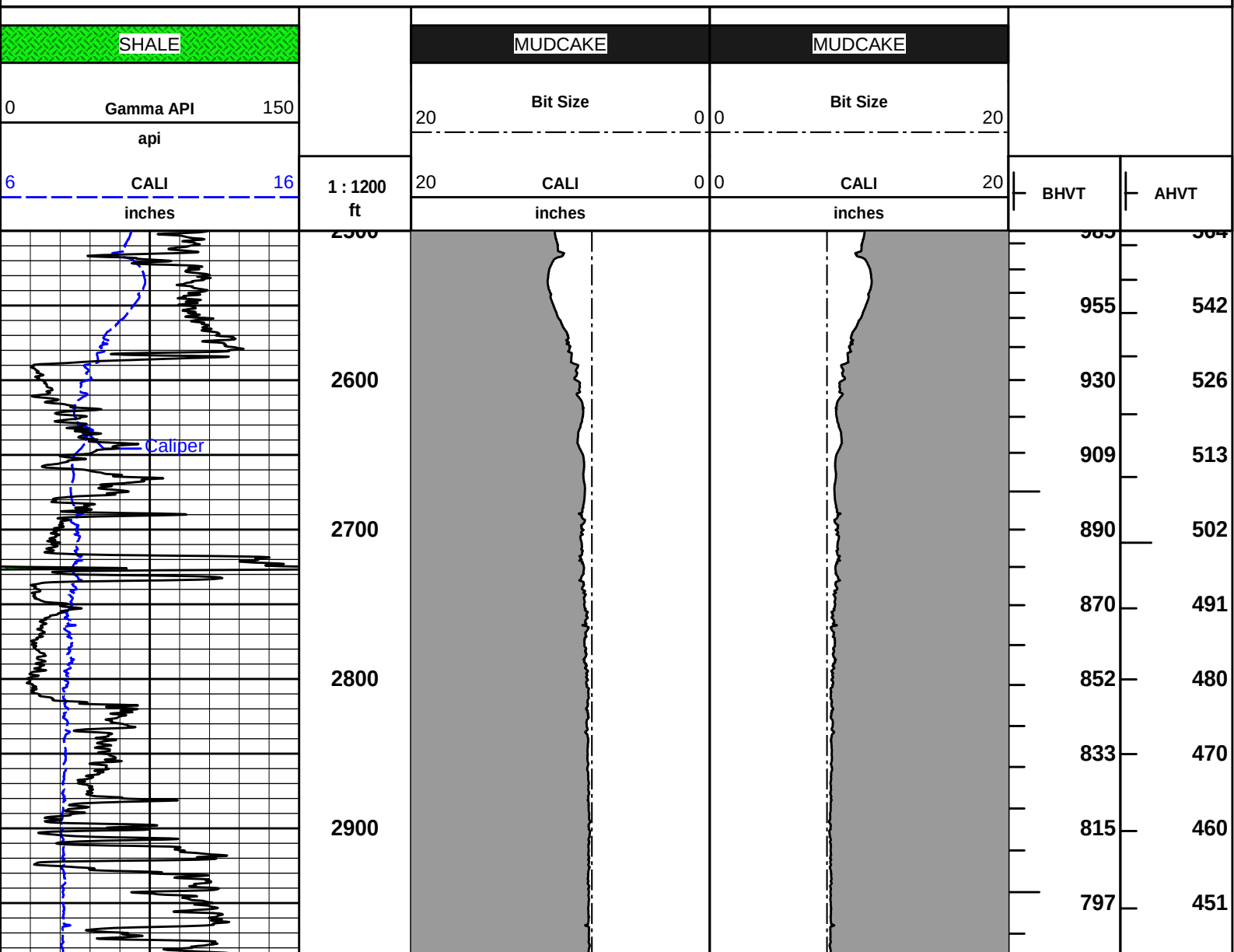
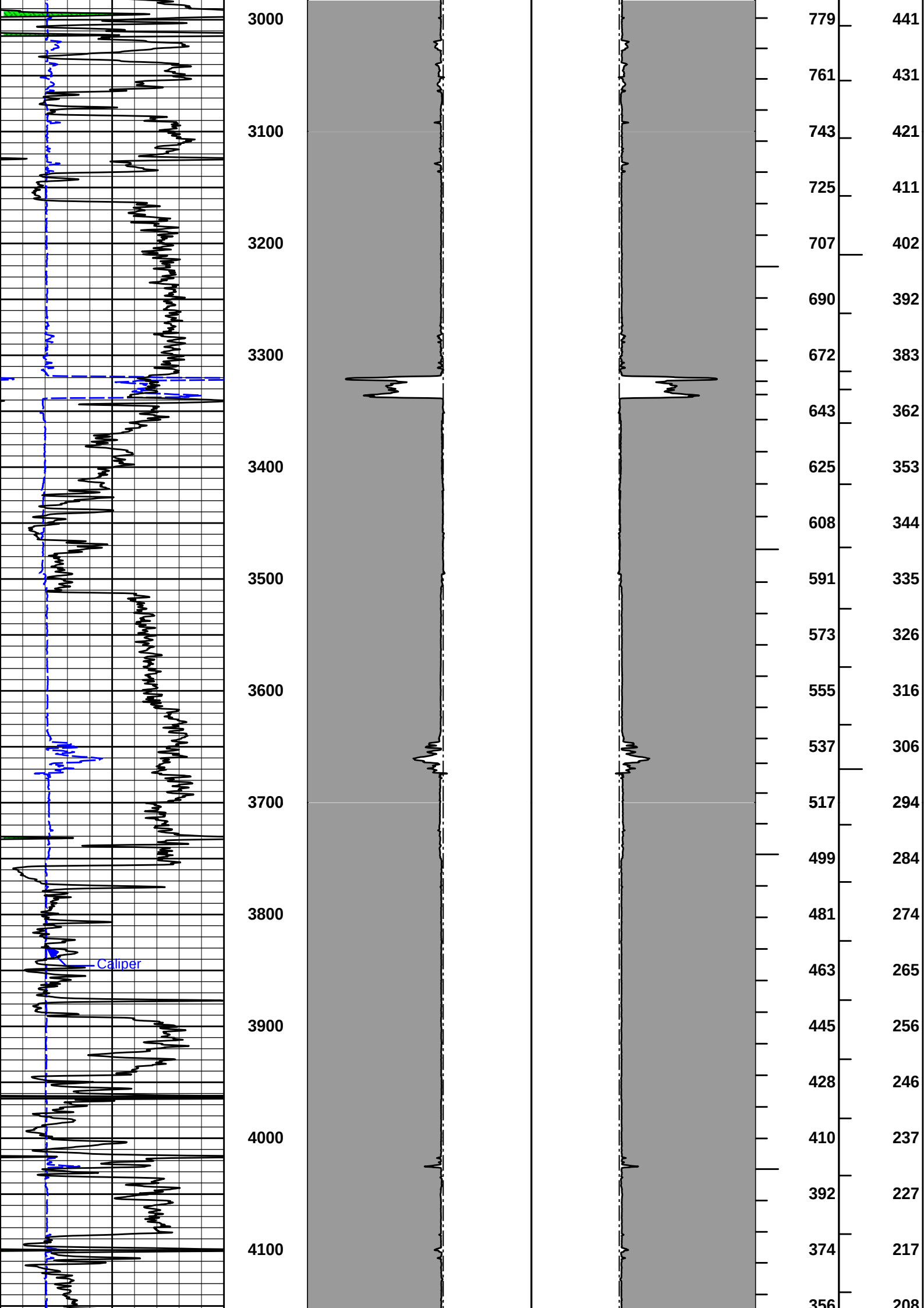
ANNULAR HOLE VOLUME PLOT

AHV PLOT CALCULATED FOR 5.5" CASING

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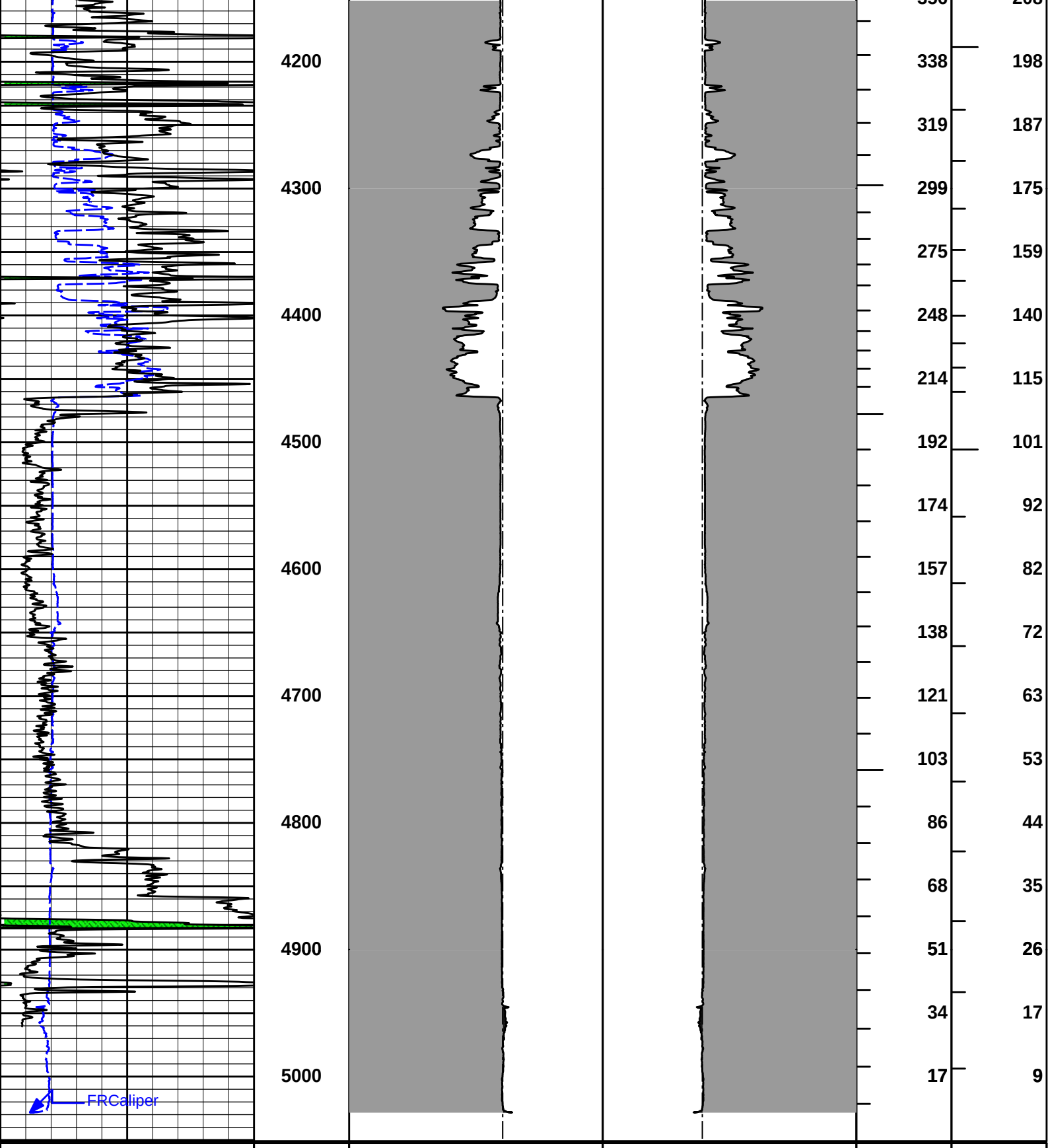

6 CALI 16	1 : 1200 ft	20 CALI 0	0 CALI 20	BHVT	AHVT
inches		inches	inches		
0 Gamma API 150		Bit Size 20 0	Bit Size 0 20		
api					
SHALE		MUDCAKE	MUDCAKE		

HALLIBURTON

Plot Time: 29-Feb-16 14:15:24
Plot Range: 2500 ft to 5050.92 ft
Data: K3_BOYER\Well Based\DAQ-0001-004\
Plot File: \\-LOCAL-\K3_BOYER\0001 GTET-XRMI-BSAT-FLX-DSNT-SDLT-ACRT\SDL-DSN-ML\AHV Plot_INSITE_IQ

ANNULAR HOLE VOLUME PLOT

ANNULAR HOLE VOLUME PLOT

AHV PLOT CALCULATED FOR 5.5" CASING