

HALLIBURTON

QUAD COMBO

COMPANY WELL FIELD/BLOCK COUNTY STATE				MERIT ENERGY COMPANY ANDREW 17-3 HASKELL TOWNSHIP HASKELL KANSAS			
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Permanent Datum Log measured from Drilling measured from				GL KB KB Elev. 2906.6 ft 12.0 ft above perm. Datum			
Date				02-Apr-19			
Run No.				ONE			
Depth - Driller				5581.0 ft			
Depth - Logger				5582.0 ft			
Bottom - Logged Interval				5573.00 ft			
Top - Logged Interval				3700.00 ft			
Casing - Driller				8.625 in @ 1705.0 ft			
Casing - Logger				1702.0 ft			
Bit Size				7.875 in @			
Type Fluid in Hole				Water Based Mud @			
Density				9.2 ppg 50.00 s/qt			
PH				10.50 pH 6.4 cpm			
Source of Sample				MUDPIT			
Rm @ Meas. Temperature				1.25 ohmm @ 75.00 degF @			
Rmf @ Meas. Temperature				1.11 ohmm @ 75.00 degF @			
Rmc @ Meas. Temperature				1.35 ohmm @ 75.00 degF @			
Source Rmf				MEAS MEAS			
Rm @ BHT				0.74 ohmm @ 131.0 degF @			
Time Since Circulation				5.0 hr			
Time on Bottom				02-Apr-19 04:00			
Max. Rec. Temperature				131.00 degF @ 5582.0 ft @			
Equipment				12147634 EL RENO, OK			
Recorded By				JORGE ORLANDO PEREZ			
Witnessed By				MARTIN LANGE			

Fold here

Service Ticket No.: 905593182						API No.: 15-081-22189-00-00						PGM Version: WL INSITE R5.8.10 (Build 2)																	
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE												RESISTIVITY SCALE CHANGES																	
Date		Sample No.										Type Log		Depth		Scale Up Hole		Scale Down Hole											
Depth-Driller																													
Type Fluid in Hole																													
Density		Viscosity																											
Ph		Fluid Loss																											
Source of Sample												RESISTIVITY EQUIPMENT DATA																	
Rm @ Meas. Temp				@				@				Run No.		Tool Type & No.		Pad Type		Tool Pos.		Other									
Rmf @ Meas. Temp.				@				@				ONE		ACRT		N/A		1.5" S.O.		N/A									
Rmc @ Meas. Temp.				@				@						I-12109517															
Source Rmf		Rmc										S-12109515																	
Rm @ BHT				@				@																					
Rmf @ BHT				@				@																					
Rmc @ BHT				@				@																					
EQUIPMENT DATA																													
GAMMA						ACOUSTIC						DENSITY						NEUTRON											
Run No.		ONE				Run No.		ONE				Run No.		ONE				Run No.		ONE									
Serial No.		11958947				Serial No.		10747686				Serial No.		10950489				Serial No.		10993115									
Model No.		GTET				Model No.		BSAT				Model No.		SDLT				Model No.		DSNT									
Diameter		3.625"				No. of Cent.		2				Diameter		5.5"				Diameter		3.625"									
Detector Model No.		T-102				Spacing		EVEN				Log Type		GAM-GAM				Log Type		NEU-NEU									
Type		SCINT										Source Type		CS137				Source Type		AM241BE									
Length		8"				LSA [Y/N]						Serial No.		5471GW				Serial No.		DSN-424									
Distance to Source		N/A				FWDA [Y/N]						Strength		1.78 Ci				Strength		15.0 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					
ONE		TD		CSC		REC		0		150		20		10		47.6 uSec/ft		20		10		2.71 gr/cc		20		10		TIME	

[illegible]

HALLIBURTON

Plot Time: 02-Apr-19 04:53:33

Plot Range: 3895 ft to 5539.25 ft

Data: ANDREW_17-3\Well Based\DETAILS\

Plot File: \\QC\QC_5_MAIN

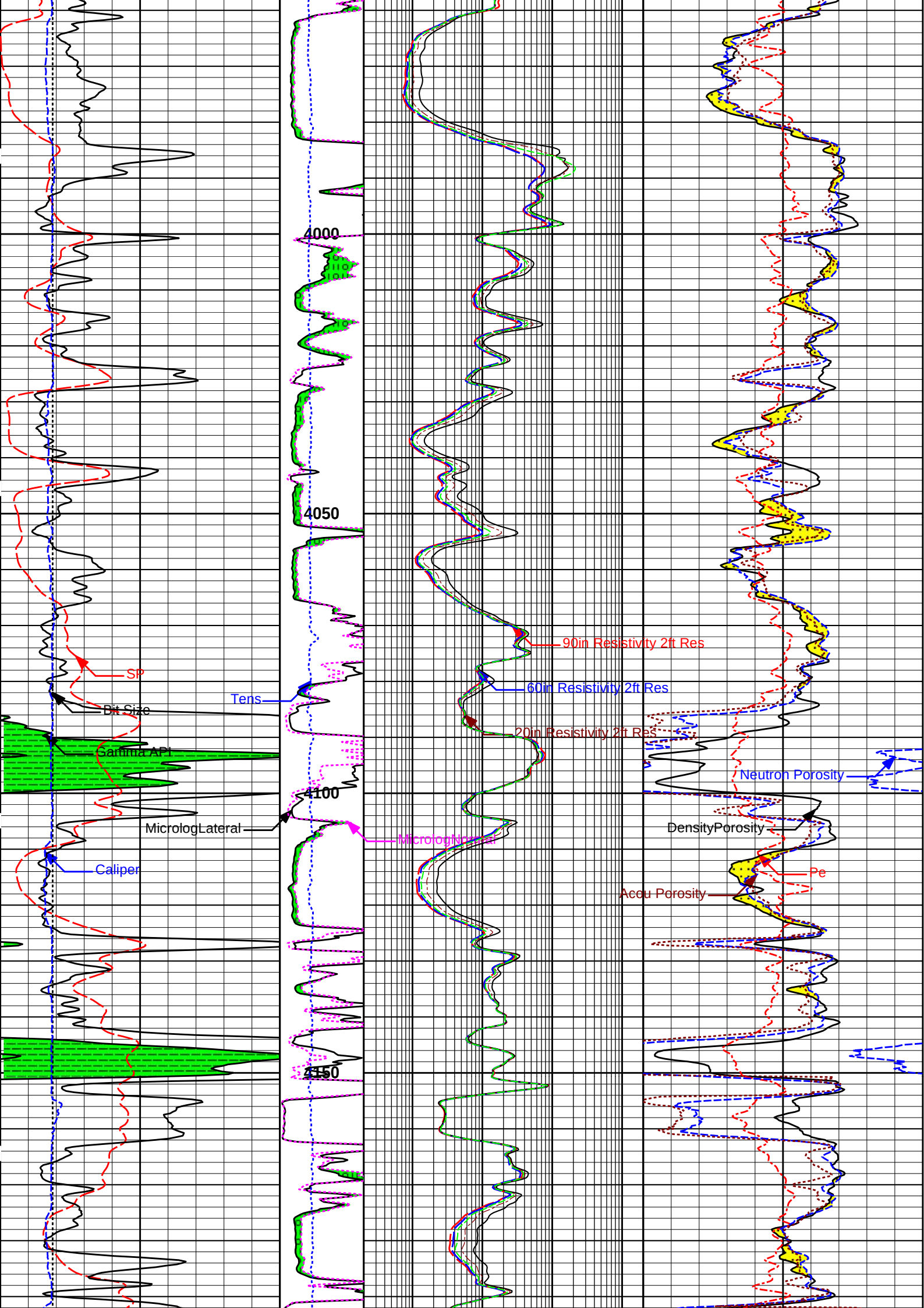
5 INCH MAIN LOG

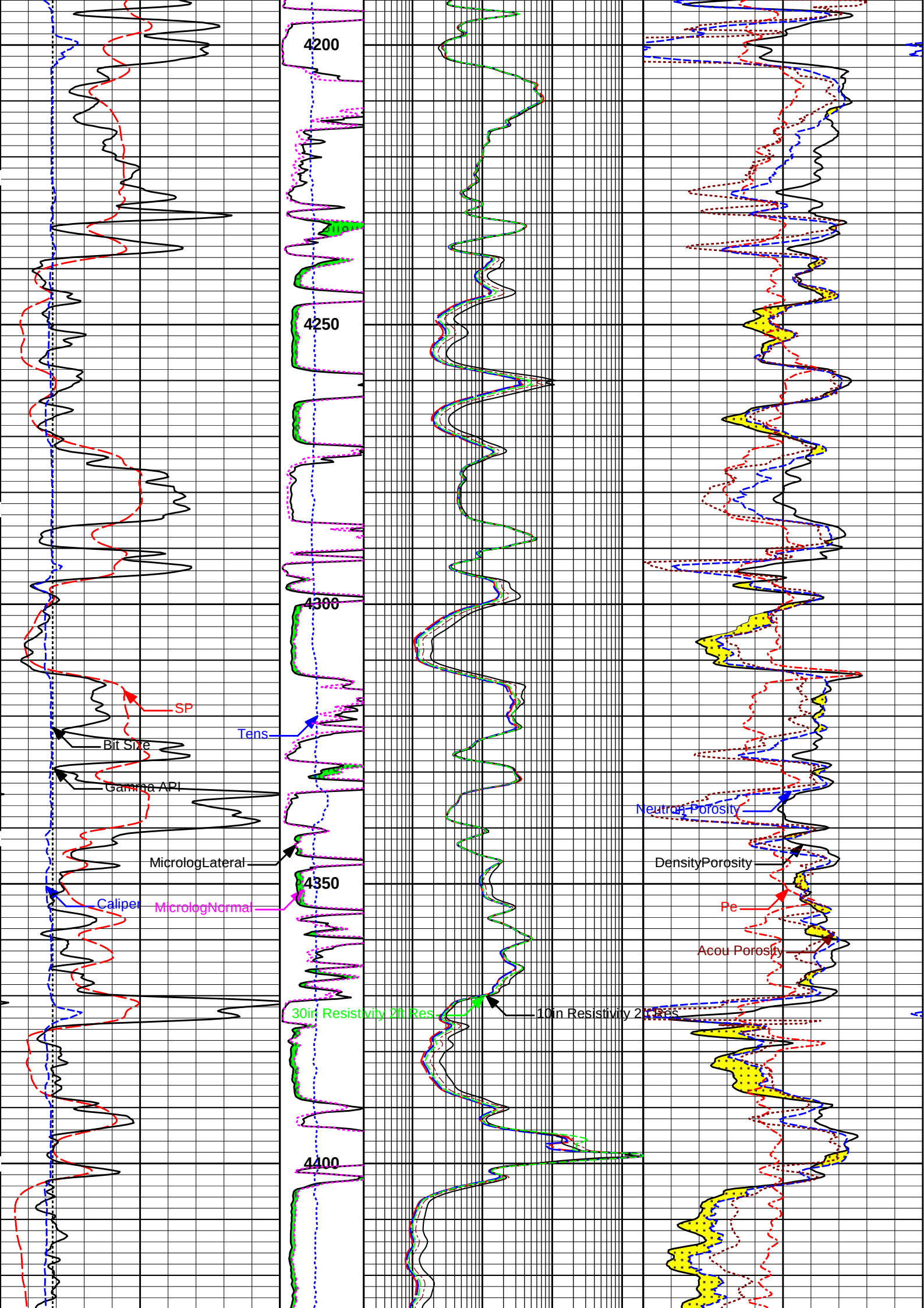
SHALE			0.2	90in Resistivity 2ft Res	2000		
			ohm-metre				
0	Gamma API	150	0	40	0.2	60in Resistivity 2ft Res	
api			ohm-metre			30	
6	Caliper	16	0	40	0.2	30in Resistivity 2ft Res	
inches			ohm-metre			30	
6	Bit Size	16	2K	Tens	4K	0.2	20in Resistivity 2ft Res
inches			pounds			30	DensityPorosity
SP			MD			0.2	10in Resistivity 2ft Res
-20[+			1 : 240 ft			2000	0
			ohmm				Pe
							10

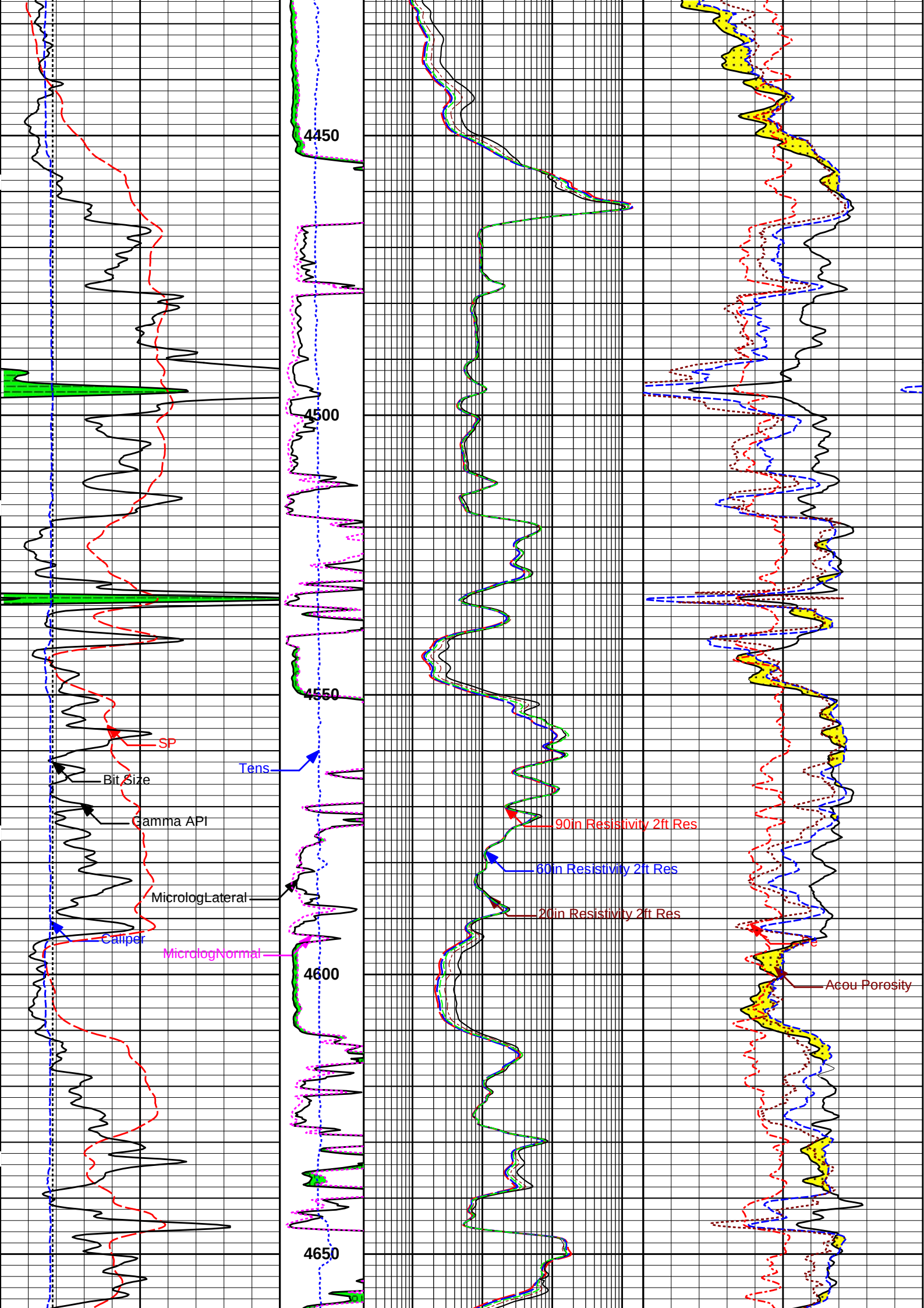
The figure is a 5 INCH MAIN LOG plot. It displays several well logs against a depth scale from 3895 ft to 5539.25 ft. The logs include:

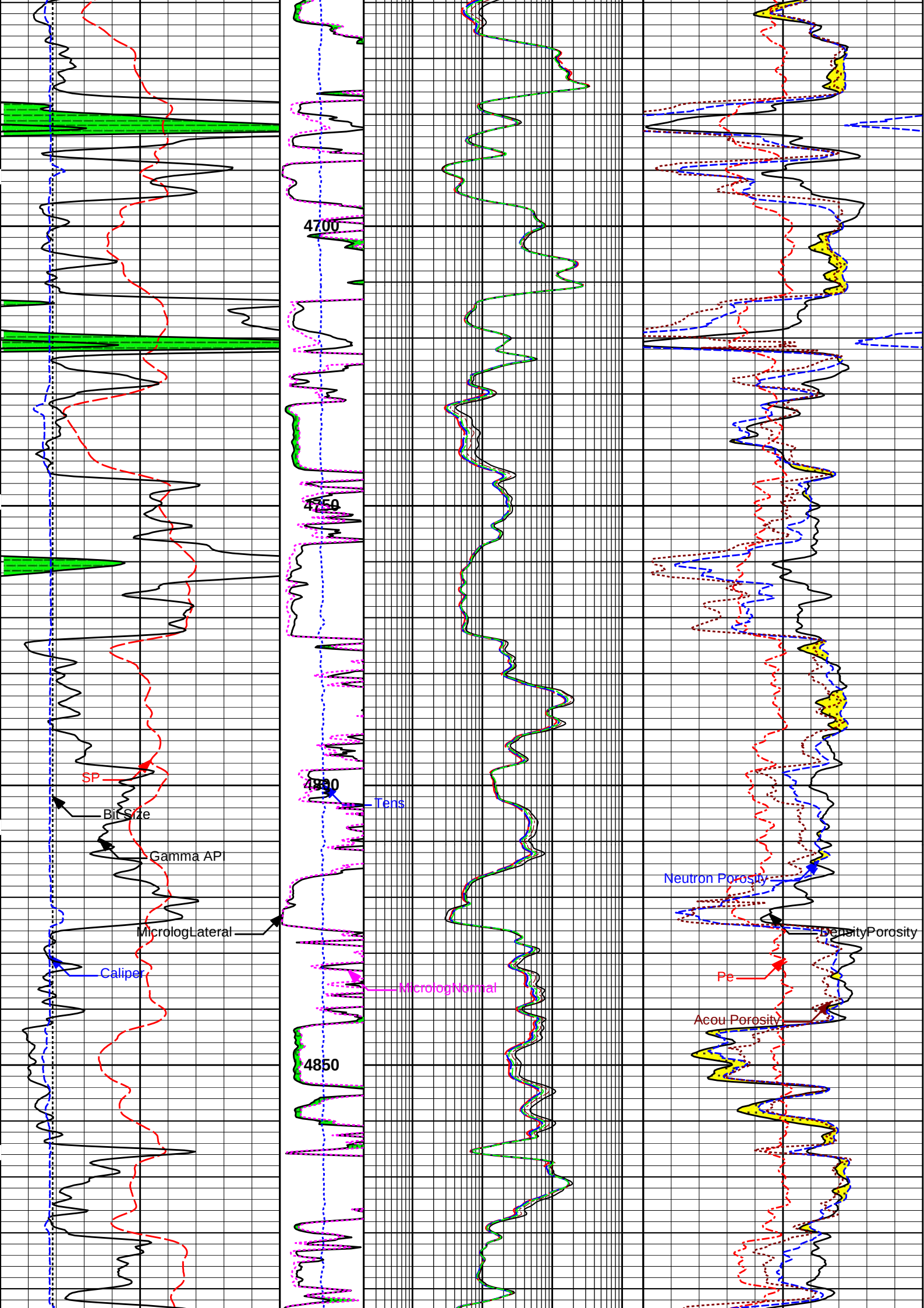
- Gamma API:** A black line plot showing API units.
- Caliper:** A blue line plot showing caliper measurements in inches.
- Bit Size:** A black line plot showing bit size in inches.
- SP:** A red line plot showing spontaneous potential.
- Resistivity:** Multiple resistivity logs in ohm-metres, including 90in, 60in, 30in, 20in, and 10in.
- Porosity:** Logs for Acoustic Porosity, Neutron Porosity, and Density Porosity, shown as yellow shaded areas.
- Pe:** A log for Pe, shown as a red line plot.

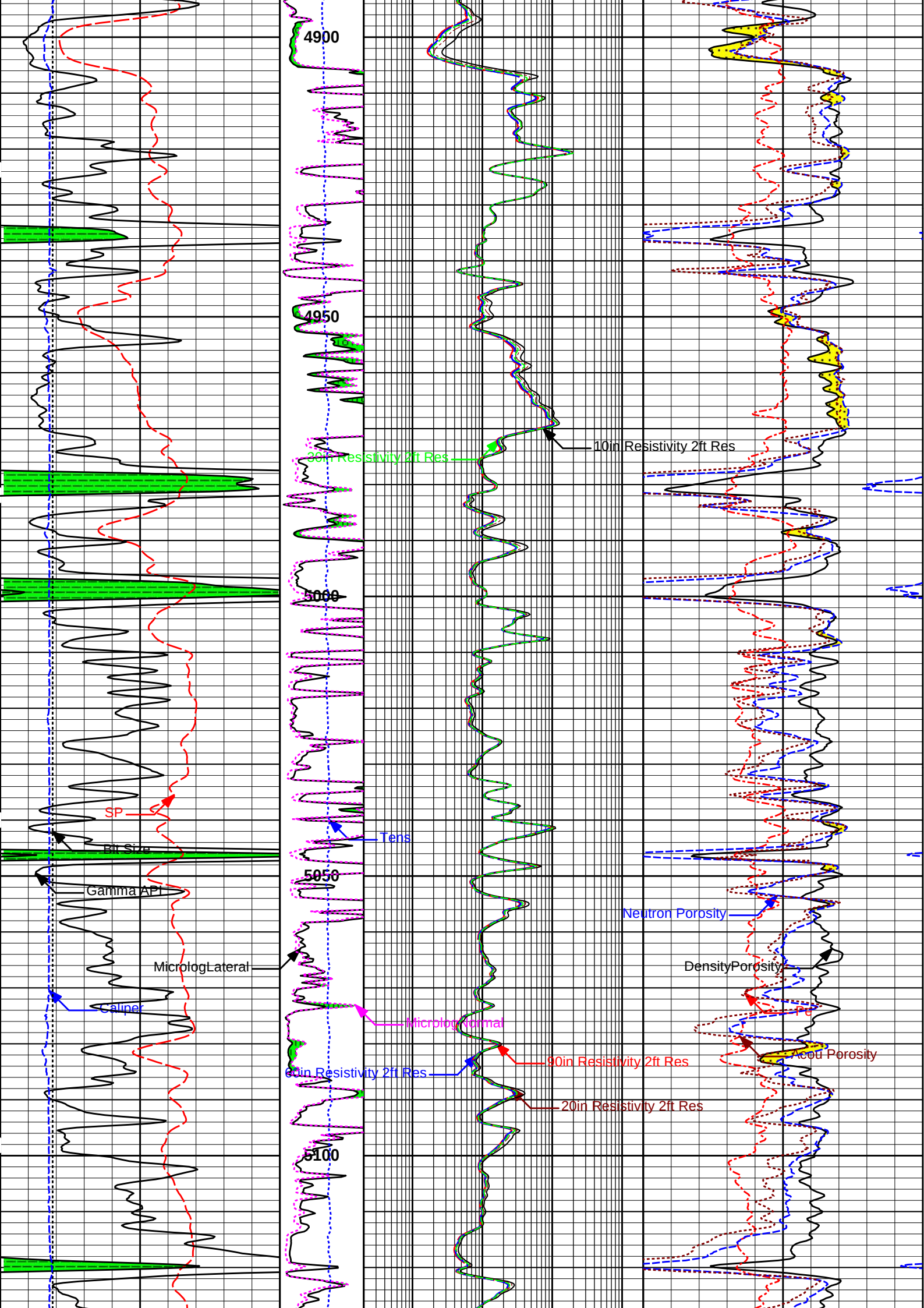
The plot also includes a lithology column on the left, indicating the rock type (SHALE). The depth scale is marked at 3895 and 3950 ft.

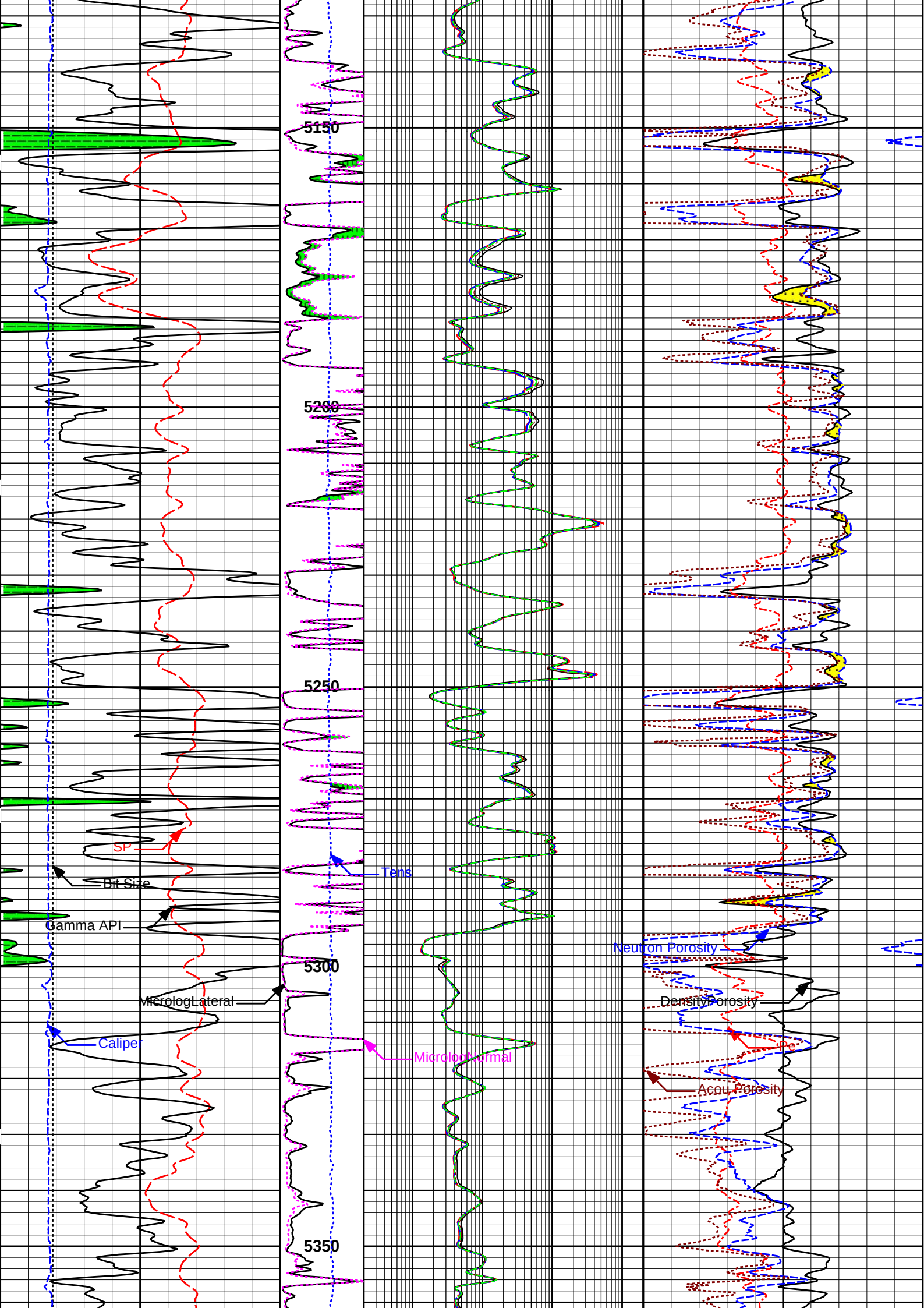


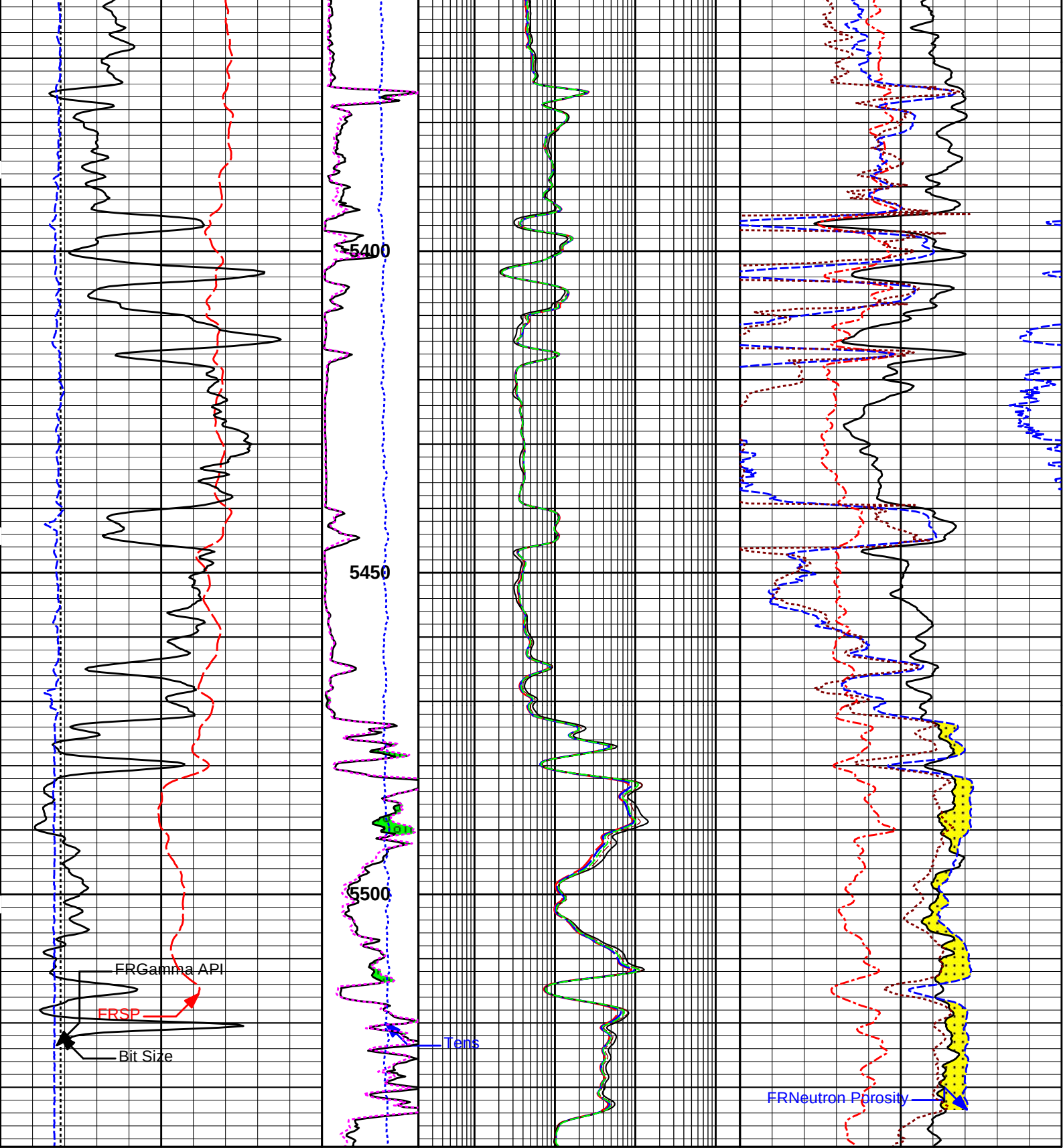












SP	MD 1 : 240 ft	0.2	10in Resistivity 2ft Res	2000	0	Pe	10
-j20[+			ohmm				
Bit Size	16	2K Tens 4K	0.2	20in Resistivity 2ft Res	2000	30	DensityPorosity
inches		pounds		ohm-metre			%
Caliper	16	MicrologLateral 0 40	0.2	30in Resistivity 2ft Res	2000	30	Neutron Porosity
inches		ohm-metre		ohm-metre			%
Gamma API	150	MicrologNormal 0 40	0.2	60in Resistivity 2ft Res	2000	30	Acou Porosity
api		ohm-metre		ohm-metre			%
SHALE			0.2	90in Resistivity 2ft Res	2000		
				ohm-metre			

5 INCH MAIN LOG

COMPANY	MERIT ENERGY COMPANY		
WELL	ANDREW 17-3		
FIELD	HASKELL TOWNSHIP		
COUNTY	HASKELL	STATE	KANSAS
HALLIBURTON		QUAD COMBO	