

HALLIBURTON

REPEAT SECTION

COMPANY				MERIT ENERGY COMPANY			
WELL				UNRUH 1-7			
FIELD/BLOCK				WILDCAT			
COUNTY				HASKELL			
STATE				KANSAS			
Permanent Datum		GL		API No. 15-081-22170-01		COMPANY	
Log measured from		KB		Location (SHL) 1883' FSL & 2638' FWL NE SE NE SW		MERIT ENERGY COMPANY	
Drilling measured from		KB		Sect. 7		WELL	
Date		23-Jan-18		Twp. 29S		FIELD/BLOCK	
Run No.		ONE		Rge. 33W		COUNTY	
Depth - Driller		5600.0 ft		Elev. 2949.0 ft		HASKELL	
Depth - Logger		5602.0 ft		12.0 ft above perm. Datum		STATE	
Bottom - Logged Interval		5600.0 ft		Other Services:		KANSAS	
Top - Logged Interval		5240.0 ft		GTET			
Casing - Driller		8.625 in		DSNT			
Casing - Logger		1743.0 ft		SDLT			
Bit Size		7.875 in		MICROLOG			
Type Fluid in Hole		Water Based Mud		BSAT			
Density		9.2 ppg		ACRT			
PH		11.50 pH					
Source of Sample		MUD PIT					
Rm @ Meas. Temperature		1.10 ohmm		@ 75.00 degF		@	
Rmf @ Meas. Temperature		0.88 ohmm		@ 75.00 degF		@	
Rmc @ Meas. Temperature		1.32 ohmm		@ 75.00 degF		@	
Source Rmf		CALC		CALC		@	
Rm @ BHT		0.62 ohmm		@ 138.0 degF		@	
Time Since Circulation		5.00 hr					
Time on Bottom		23-Jan-18 16:59					
Max. Rec. Temperature		139.33 degF		@ 5391.2 ft		@	
Equipment		12147634		EL RENO			
Recorded By		JORGE ORLANDO PEREZ		SEAN WOLTEWATH			
Witnessed By		MARTIN LANGE					

Fold here

Service Ticket No.: 904583538						API No.: 15-081-22170-01						PGM Version: WL INSITE R5.0.5 (Build 8)					
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		1.50 in 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.	10747683			Serial No.	10960494			Serial No.	11055304				
Model No.	GTET			Model No.	BSAT			Model No.	SDLT			Model No.	DSNT				
Diameter	3.625"			No. of Cent.	0			Diameter	5.5"			Diameter	3.625"				
Detector Model No.	T-102			Spacing	N/A			Log Type	GAM-GAM			Log Type	NEU-NEU				
Type	SCINT							Source Type	CS137			Source Type	AM241BE				
Length	8"			LSA [Y/N]				Serial No.	5168GW			Serial No.	DSN-424				
Distance to Source	N/A			FWDA [Y/N]				Strength	1.5 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		L	R				
ONE	TD	5250	REC	0	150	30	-10	47.6 us/ft	30	-10	2.71 gm/cc	30	-10	LIME			

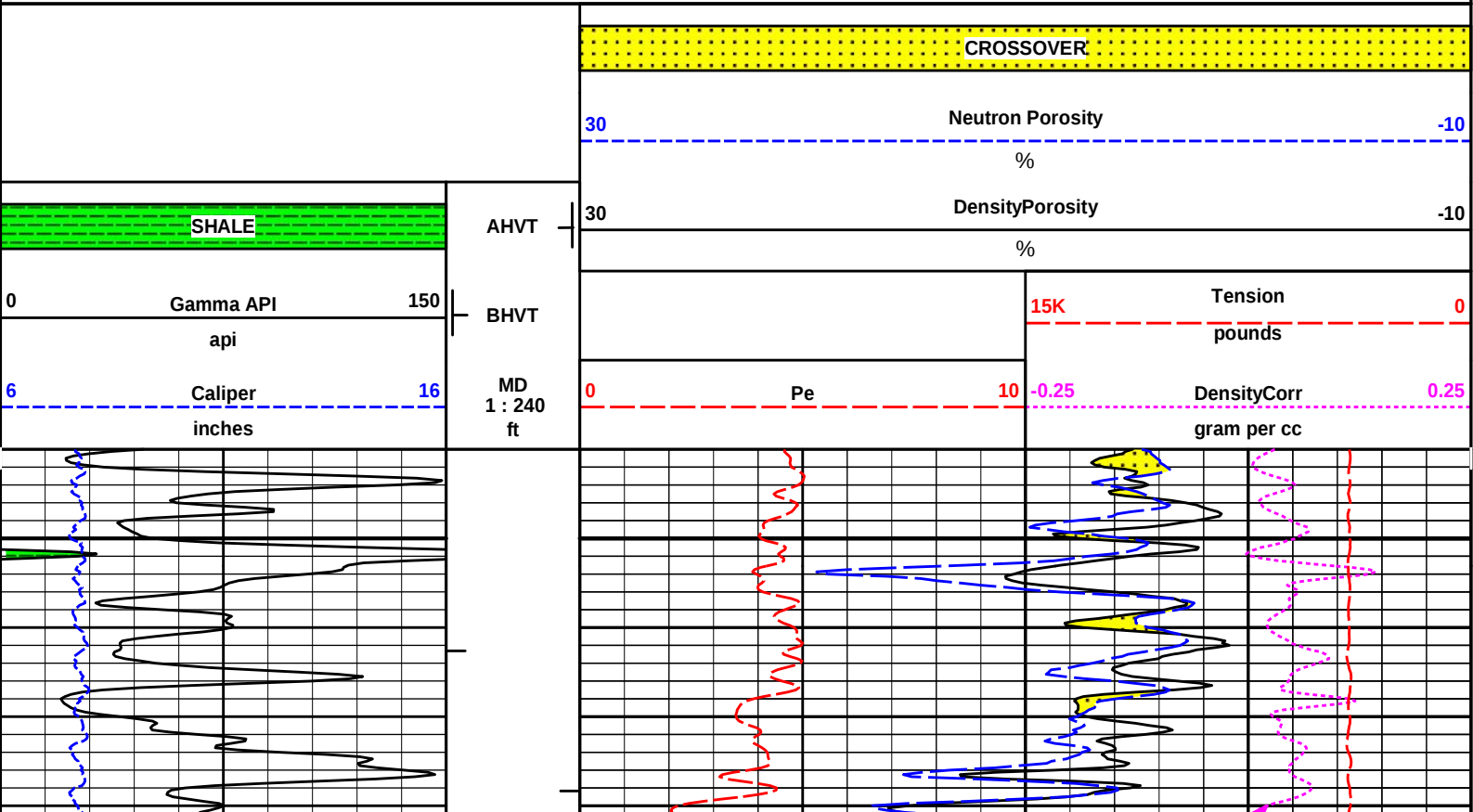
[illegible]

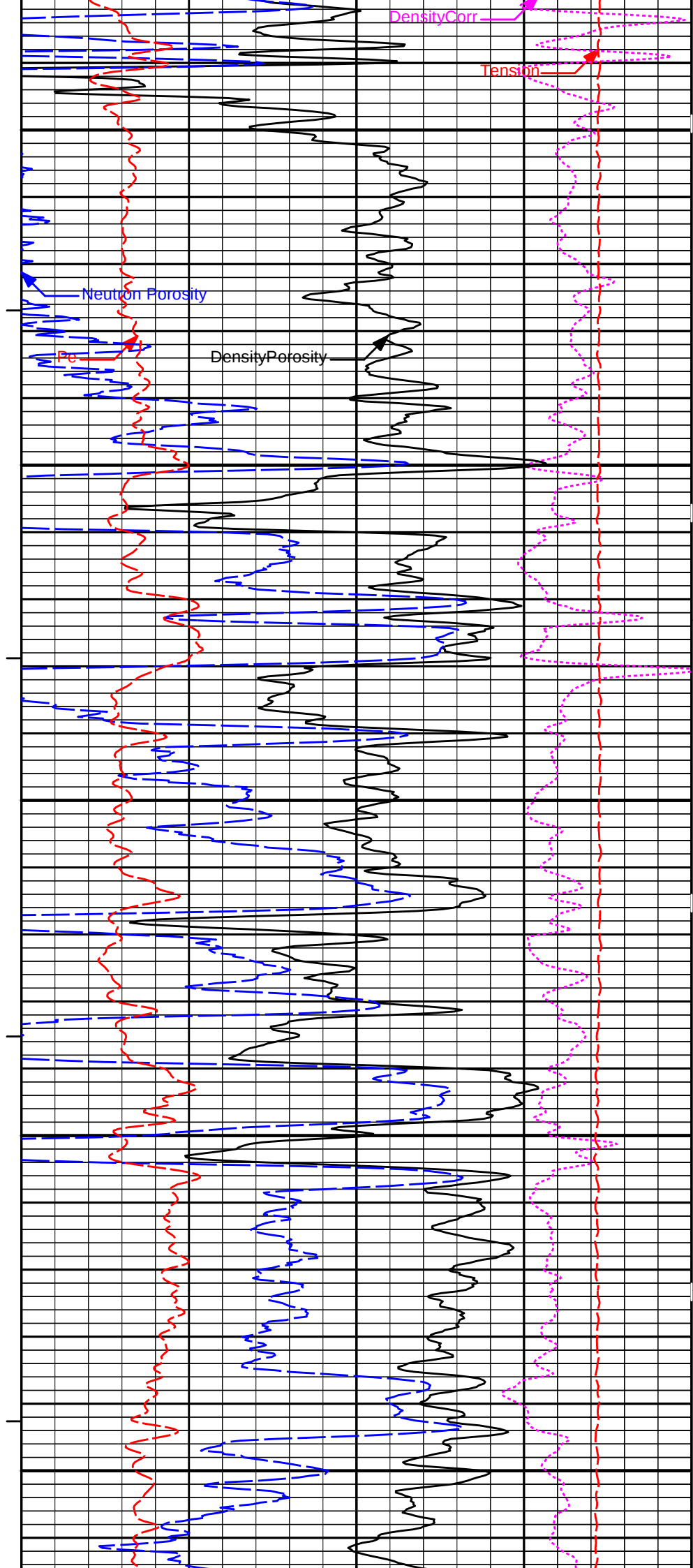
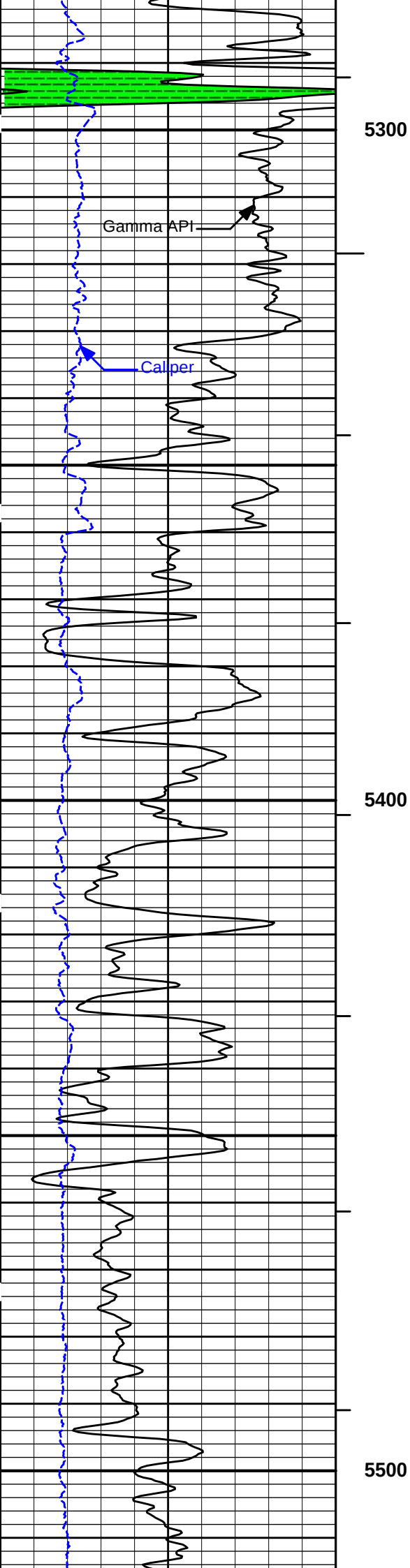
HALLIBURTON

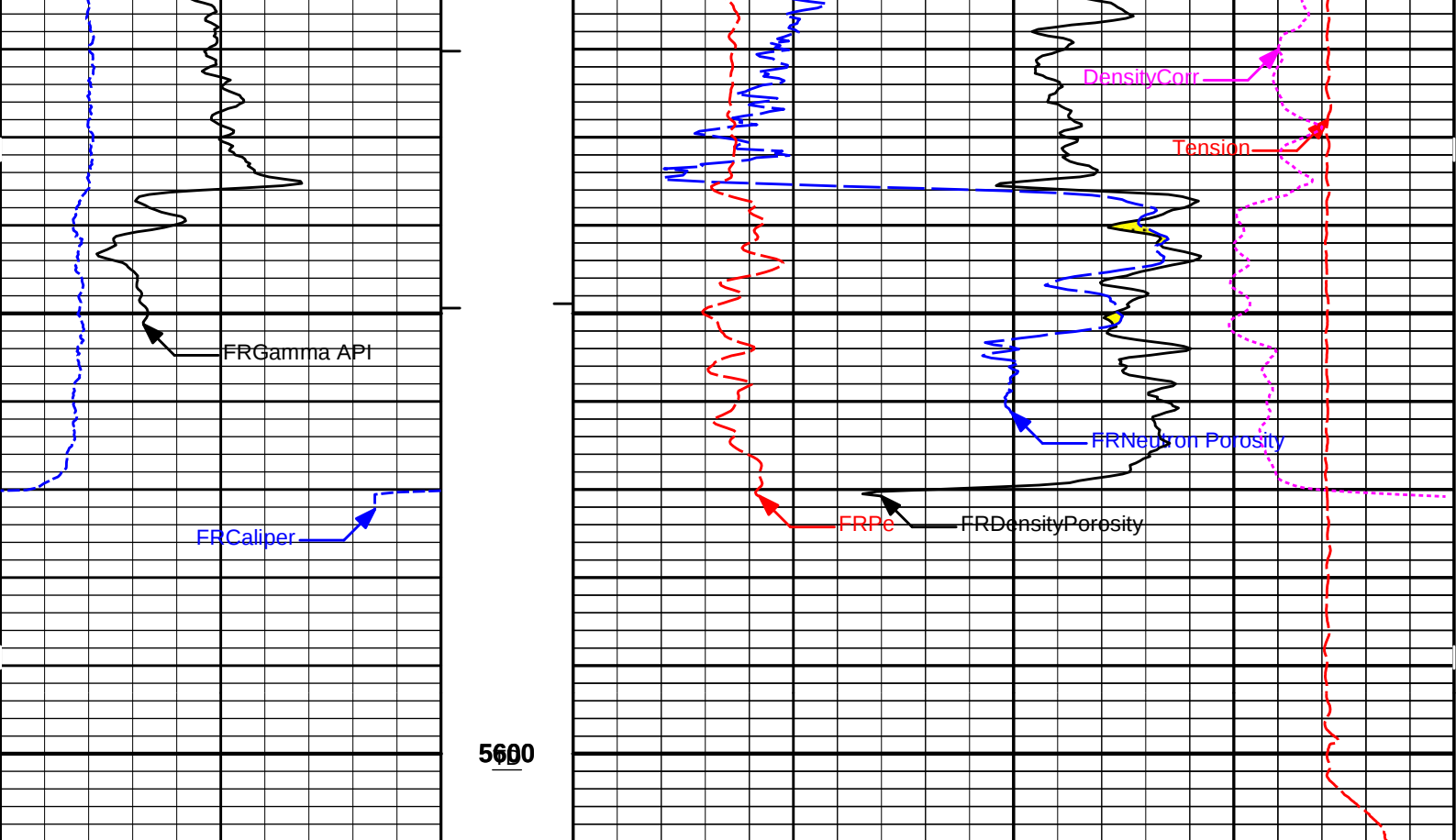
Plot Time: 23-Jan-18 18:15:21
Plot Range: 5240 ft to 5610.08 ft
Data: MERIT_UNRUH1-7\Well Based\REPEAT1
Plot File: \\REPEAT1\Poro_IQ_5_REP_LIB

5 INCH MAIN LOG

MEASURED DEPTH
MAIN SECTION 5" PER 100'







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

HALLIBURTON

Plot Time: 23-Jan-18 18:15:25
Plot Range: 5240 ft to 5610.08 ft
Data: MERIT_UNRUH1-7\Well Based\REPEAT\
Plot File: \\REPEAT\Porosity_Q5_REP_LIB

5 INCH MAIN LOG

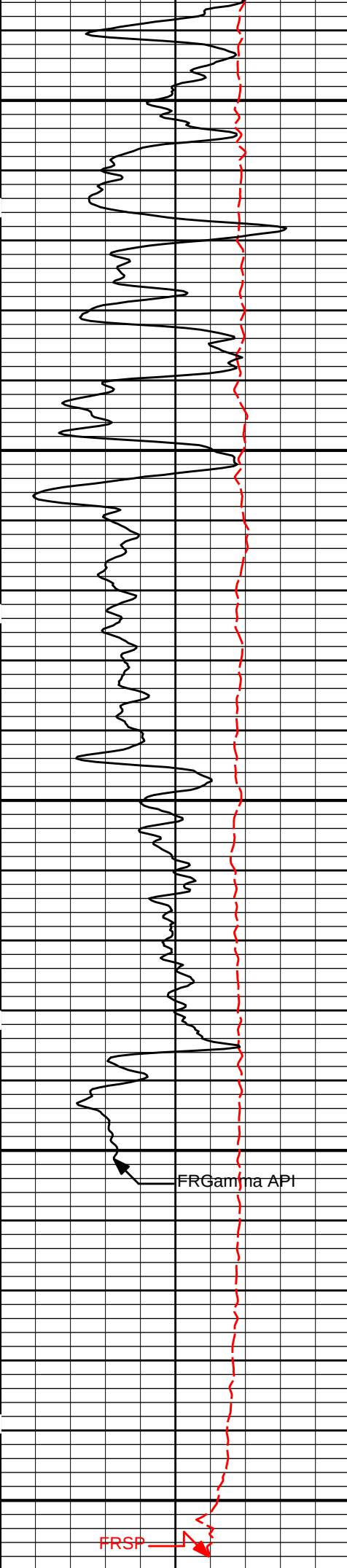
MEASURED DEPTH
MAIN SECTION 5" PER 100'

HALLIBURTON

Plot Time: 23-Jan-18 18:15:25
Plot Range: 5240 ft to 5610.08 ft
Data: MERIT_UNRUH1-7\Well Based\REPEAT\
Plot File: \\LOCAL-JACQUART_3\Well Based\REPEAT\CRT_5_REP_lib

5 INCH MAIN LOG

MEASURED DEPTH MAIN SECTION 5" PER 100'			
		0.2	90in Resistivity 2ft Res ohmm 2000
		0.2	60in Resistivity 2ft Res ohmm 2000
		0.2	30in Resistivity 2ft Res ohm-metre 2000
		0.2	20in Resistivity 2ft Res ohmm 2000
		0.2	10in Resistivity 2ft Res ohmm 2000
SHALE Gamma API api SP -j20[+		MD 1 : 240 ft	10K Tension pounds 0
		5300	

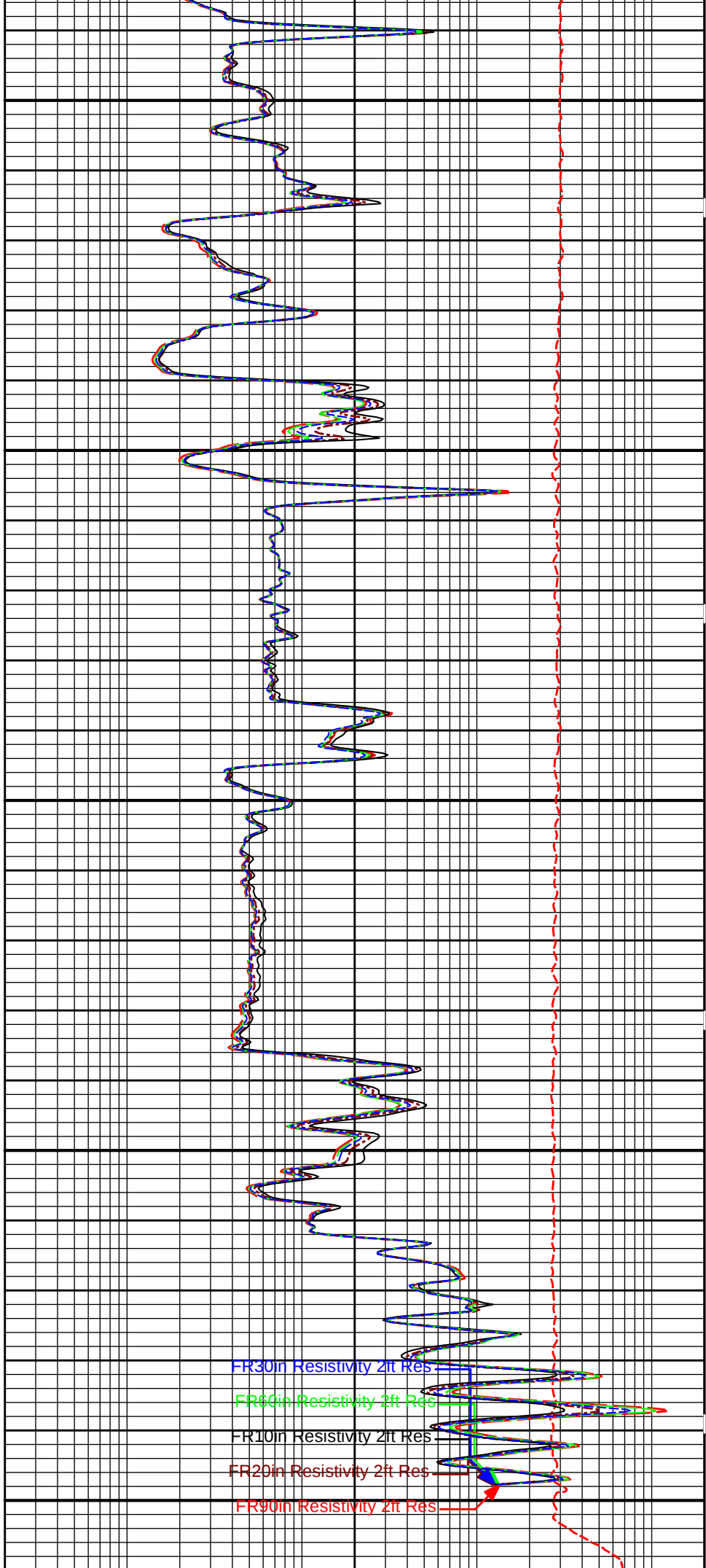


5400

5500

5600

MD
1 : 240
ft



10K

Tension
pounds

0

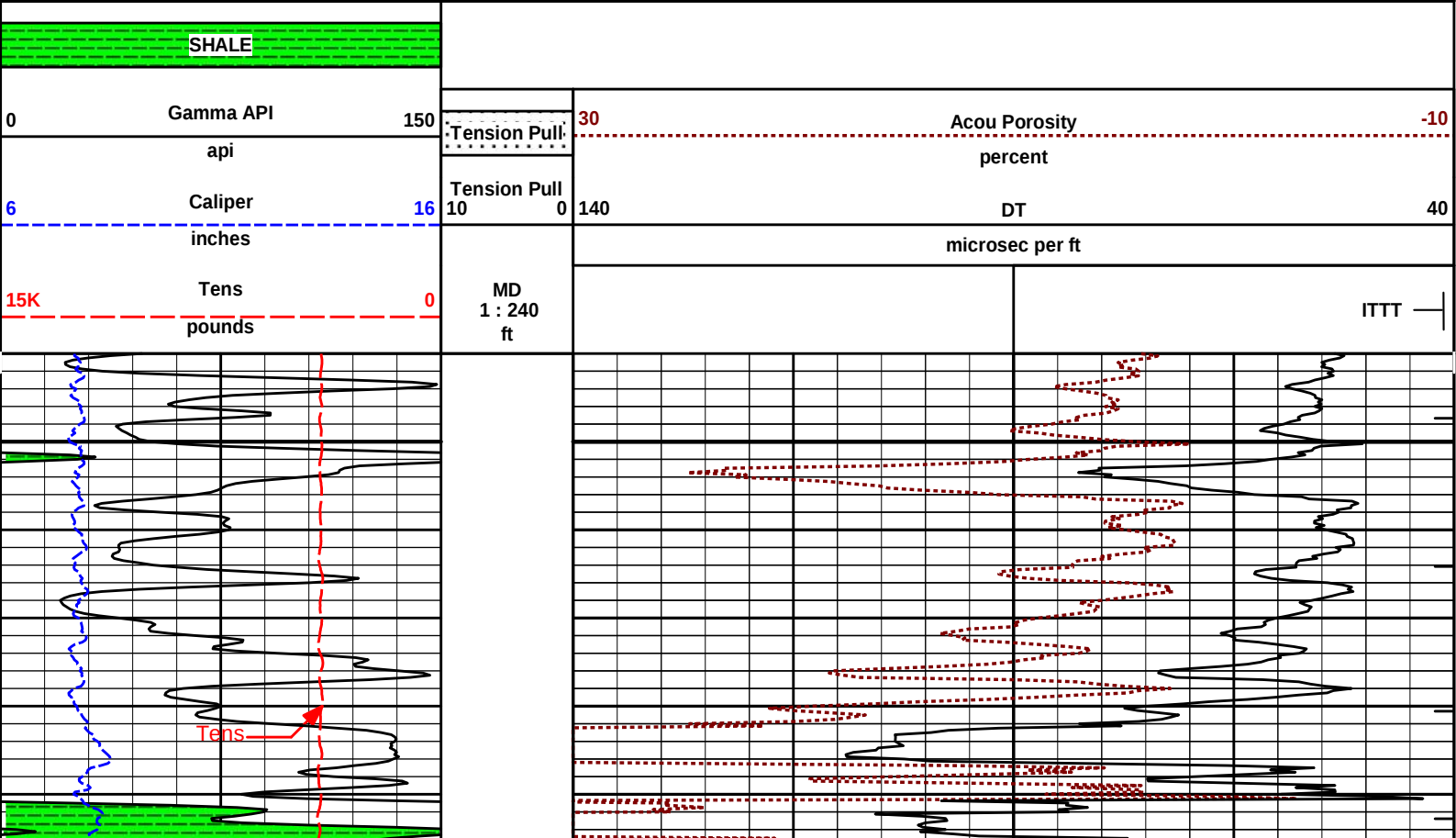
SP
-120[+

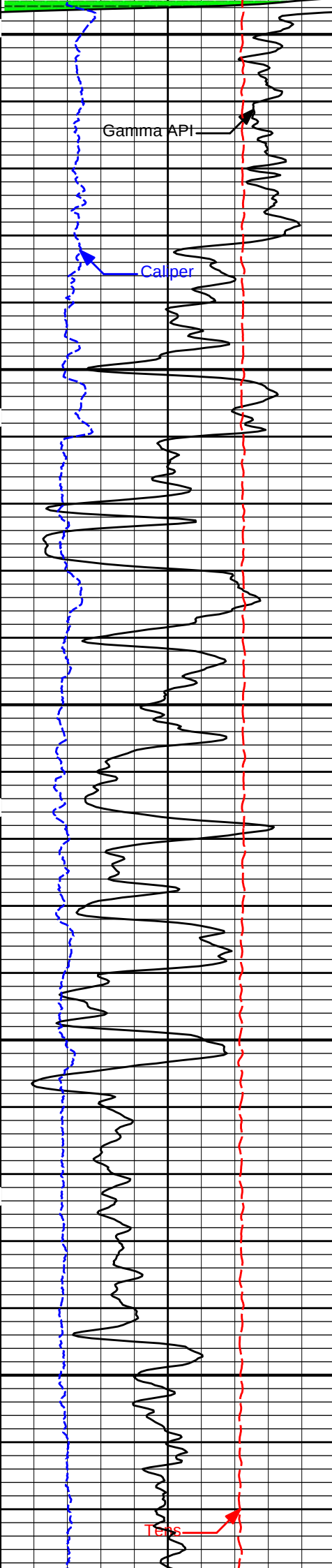
0	Gamma API	150	0.2	10in Resistivity 2ft Res	2000
	api			ohmm	
	SHALE		0.2	20in Resistivity 2ft Res	2000
				ohmm	
			0.2	30in Resistivity 2ft Res	2000
				ohm-metre	
			0.2	60in Resistivity 2ft Res	2000
				ohmm	
			0.2	90in Resistivity 2ft Res	2000
				ohmm	

HALLIBURTON	Plot Time: 23-Jan-18 18:15:29 Plot Range: 5240 ft to 5610.08 ft Data: MERIT_UNRUH1-7\Well Based\REPEAT\ Plot File: \\LOCAL-JACQUART_3\Well Based\REPEAT\ACRT_5_REP_lib
5 INCH MAIN LOG	

MEASURED DEPTH MAIN SECTION 5" PER 100'
--

HALLIBURTON	Plot Time: 23-Jan-18 18:15:29 Plot Range: 5240 ft to 5610.08 ft Data: MERIT_UNRUH1-7\Well Based\REPEAT\ Plot File: \\REPEAT\BSAT_5_REP_LIB
5 INCH MAIN LOG	

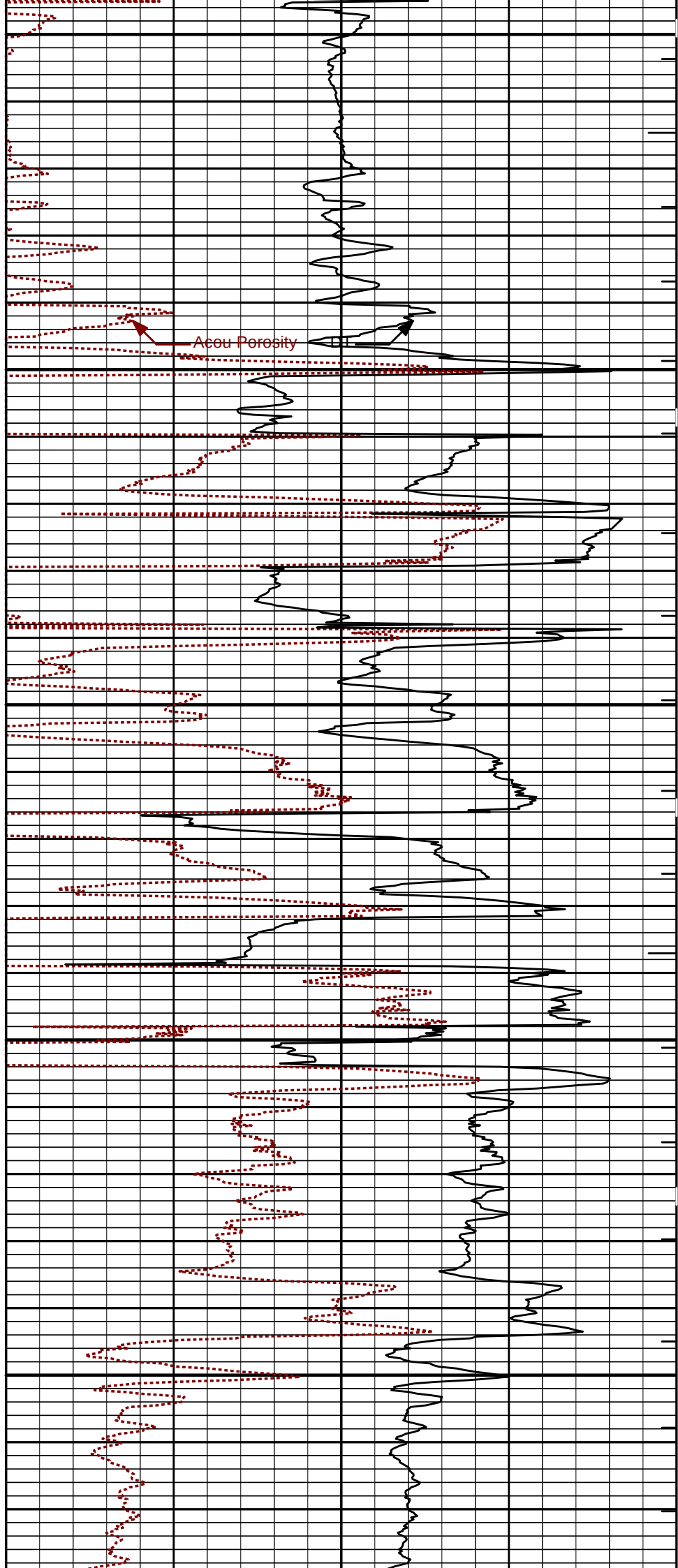


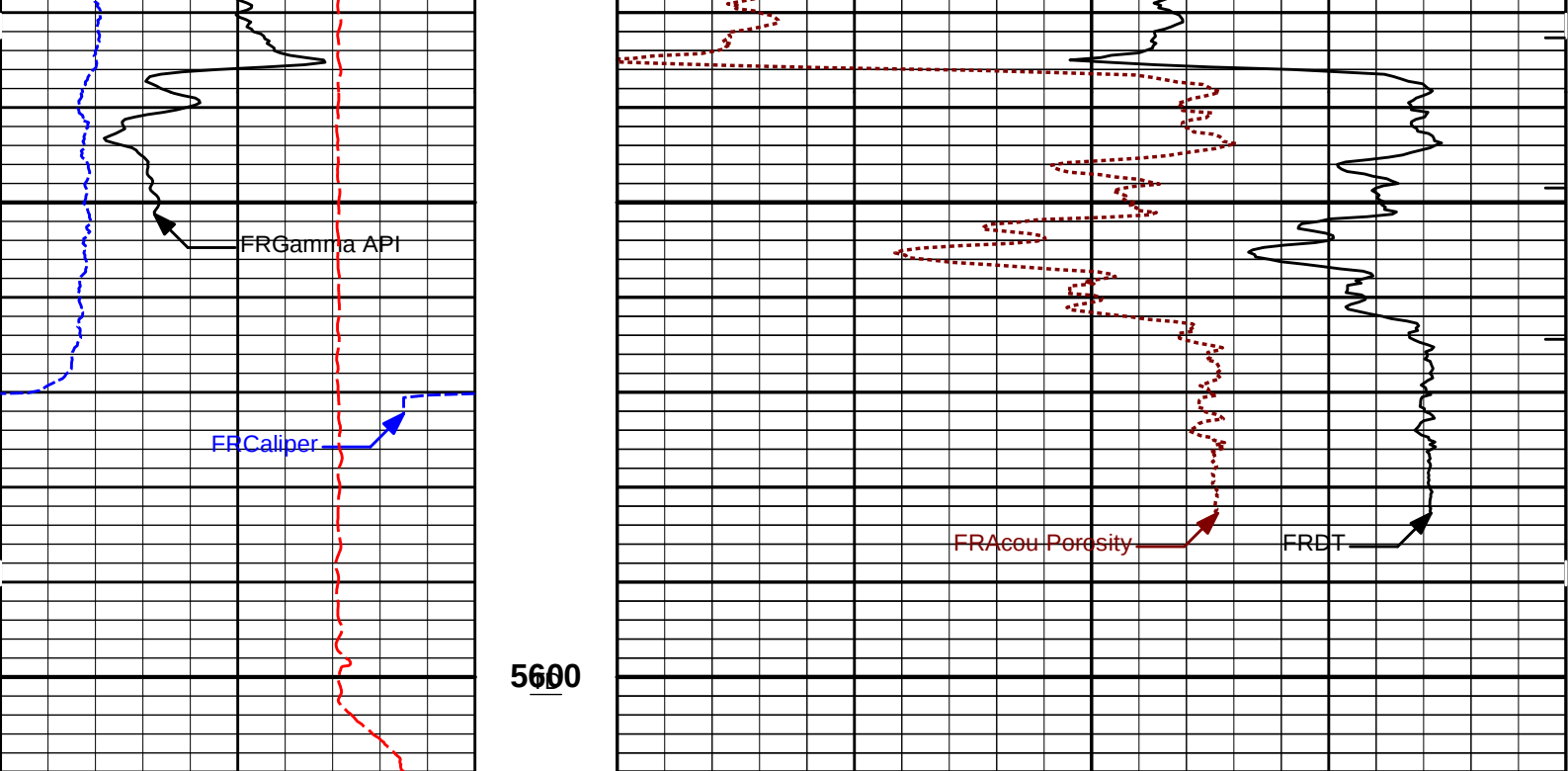


5300

5400

5500





15K	Tens	0	MD 1 : 240 ft		ITTT
	pounds				
6	Caliper	16	Tension Pull 10 0	140	DT 40
	inches				
0	Gamma API	150			microsec per ft
	api		Tension Pull	30	Acou Porosity -10
					percent
SHALE					

HALLIBURTON

Plot Time: 23-Jan-18 18:15:33
Plot Range: 5240 ft to 5610.08 ft
Data: MERIT_UNRUH1-7\Well Based\REPEAT\
Plot File: \\REPEAT\BSAT_5_REP_LIB

5 INCH MAIN LOG

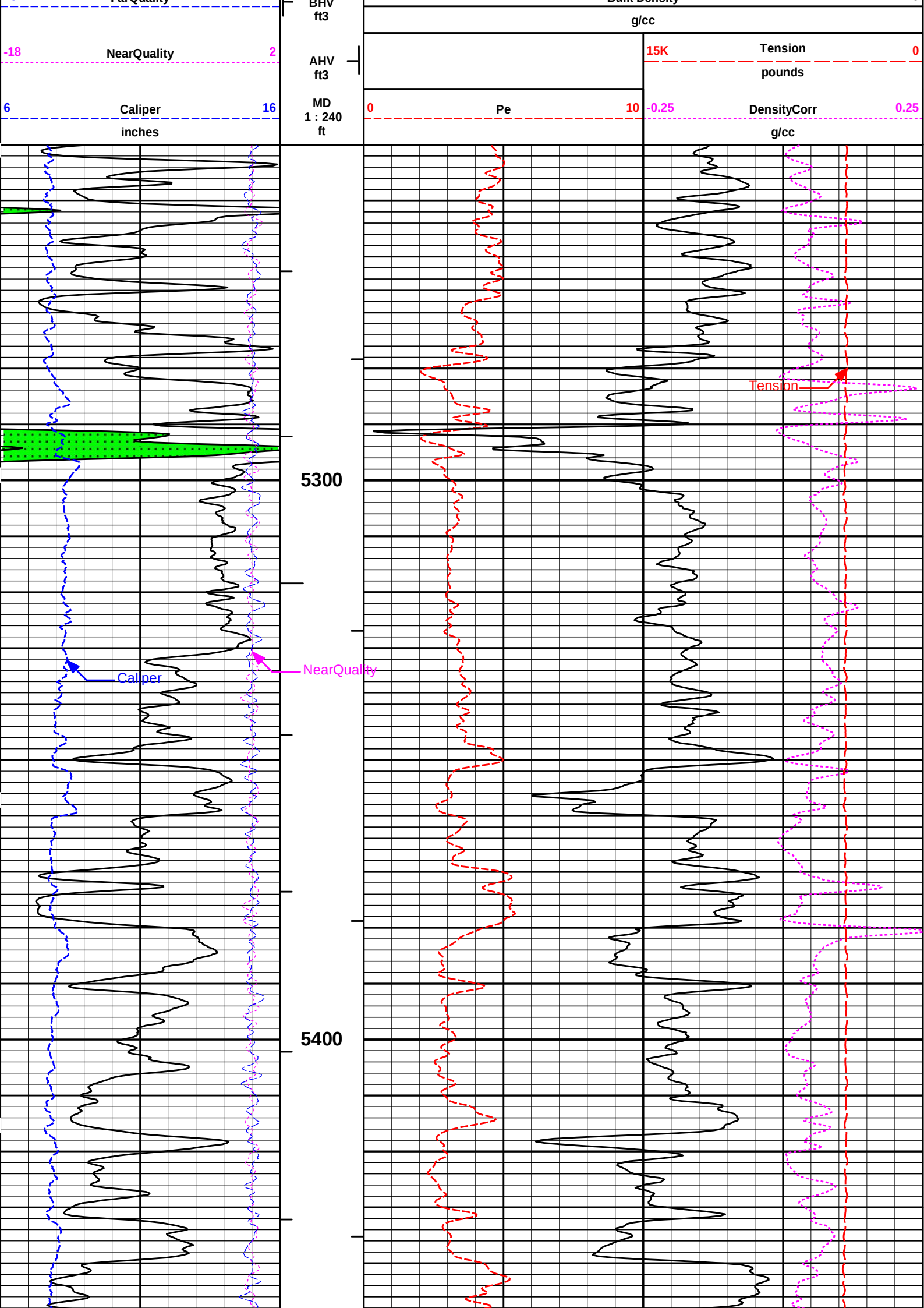
HALLIBURTON

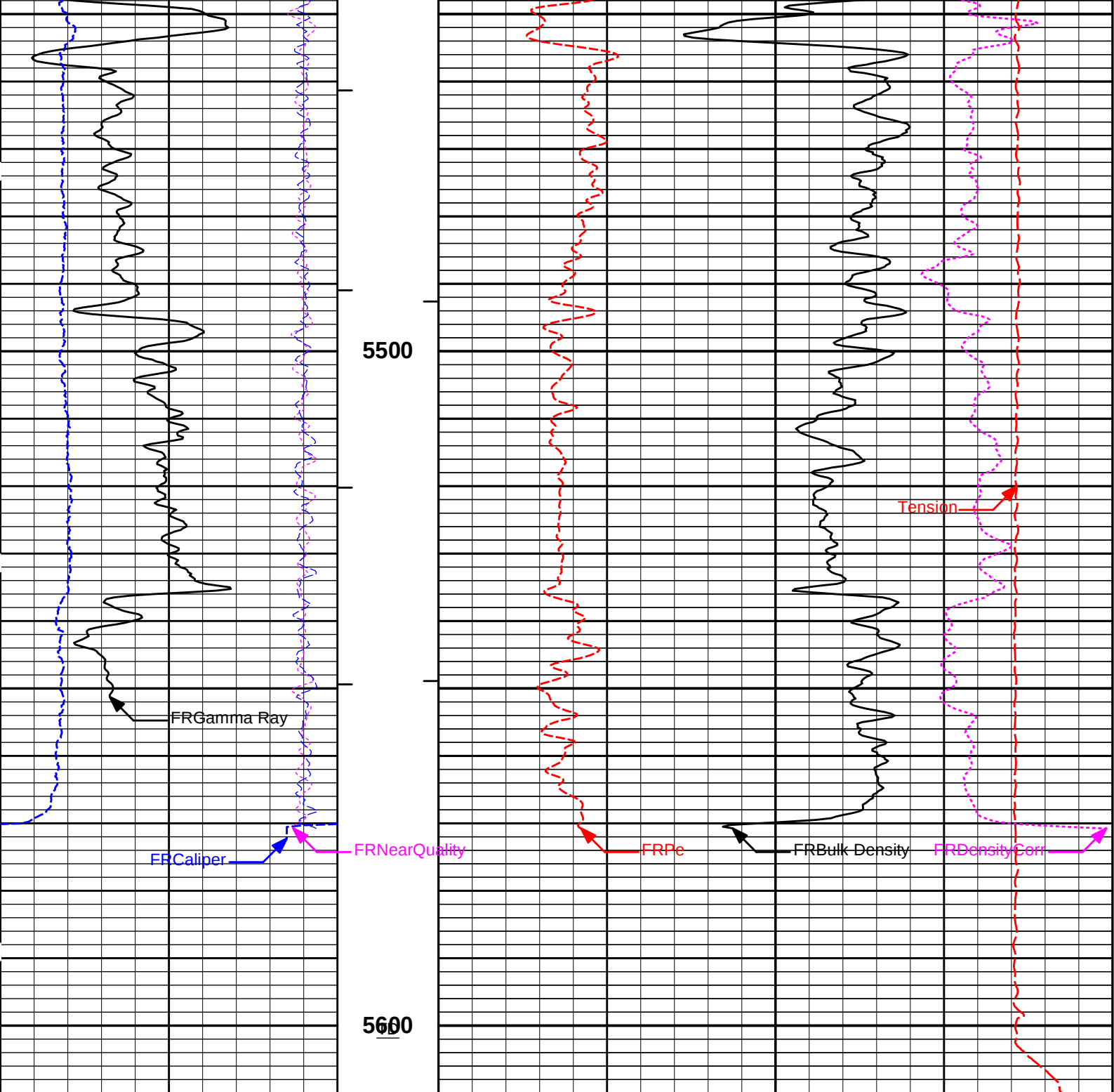
Plot Time: 23-Jan-18 18:15:33
Plot Range: 5240 ft to 5610.08 ft
Data: MERIT_UNRUH1-7\Well Based\REPEAT\
Plot File: \\LOCAL-JACQUART_3\Well Based\REPEAT\BULKD_5_REP_LIB

5 INCH MAIN LOG

MEASURED DEPTH
MAIN SECTION 5" PER 100'

SHALE			
0 Gamma Ray api 150			
18 Gamma api -2	2 Bulk Density 3		





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

HALLIBURTON

Plot Time: 23-Jan-18 18:15:37
Plot Range: 5240 ft to 5610.08 ft
Data: MERIT_UNRUH1-7\Well Based\REPEAT\
Plot File: \\-LOCAL-\\JACQUART_3\Well Based\REPEAT\BULKD_5_REP_LIB

5 INCH MAIN LOG

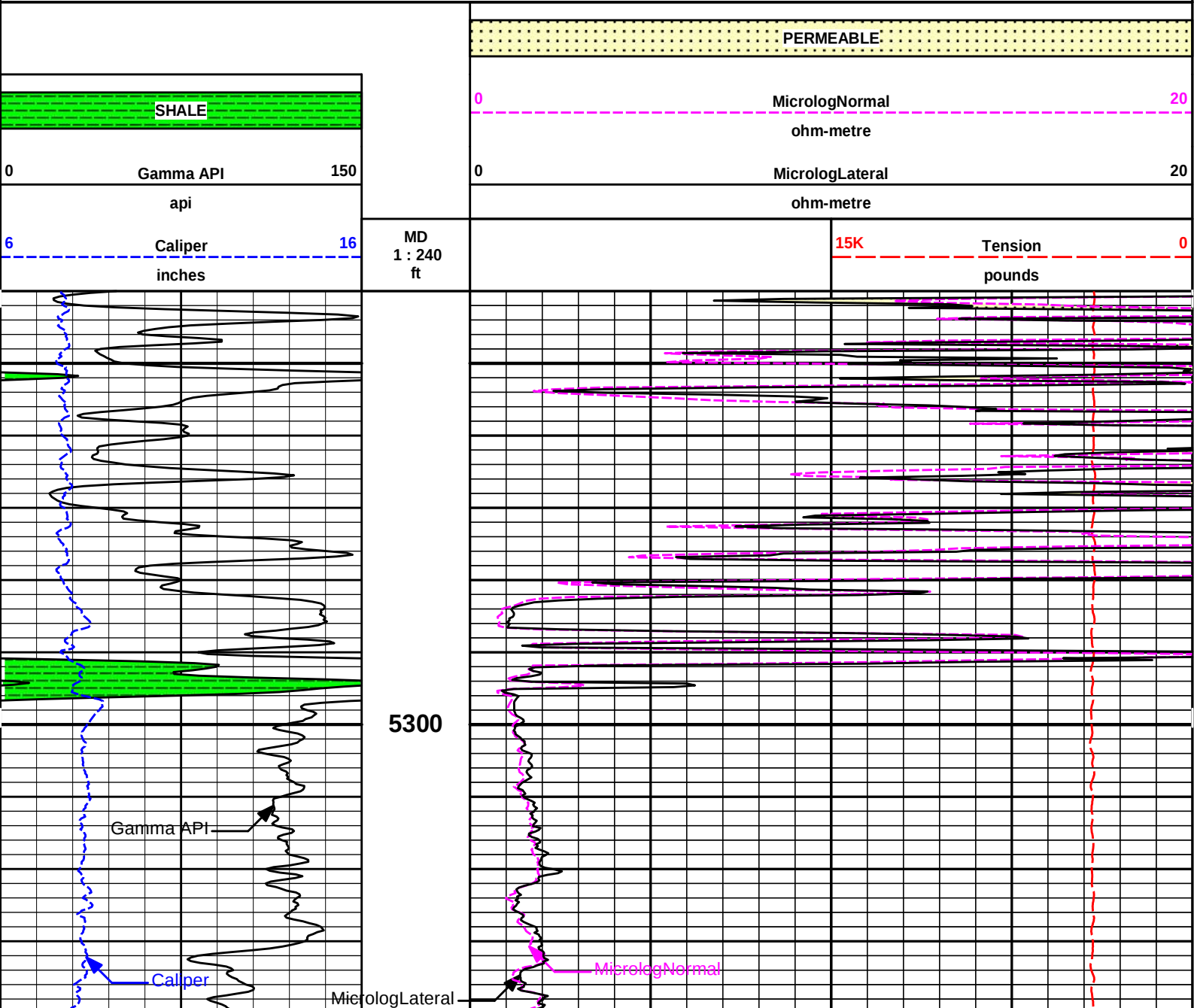
MEASURED DEPTH
MAIN SECTION 5" PER 100'

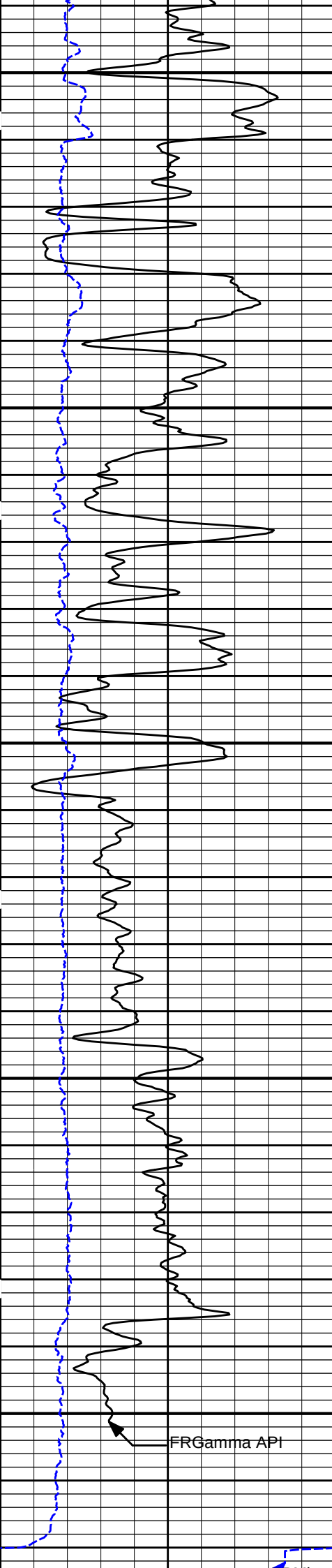
HALLIBURTON

Plot Time: 23-Jan-18 18:15:37
Plot Range: 5240 ft to 5610.08 ft
Data: MERIT_UNRUH1-7\Well Based\REPEAT\
Plot File: \\LOCAL-IJACQUART_3\Well Based\REPEAT\Microlog_IQ_5_REP_lib

5 INCH MAIN LOG

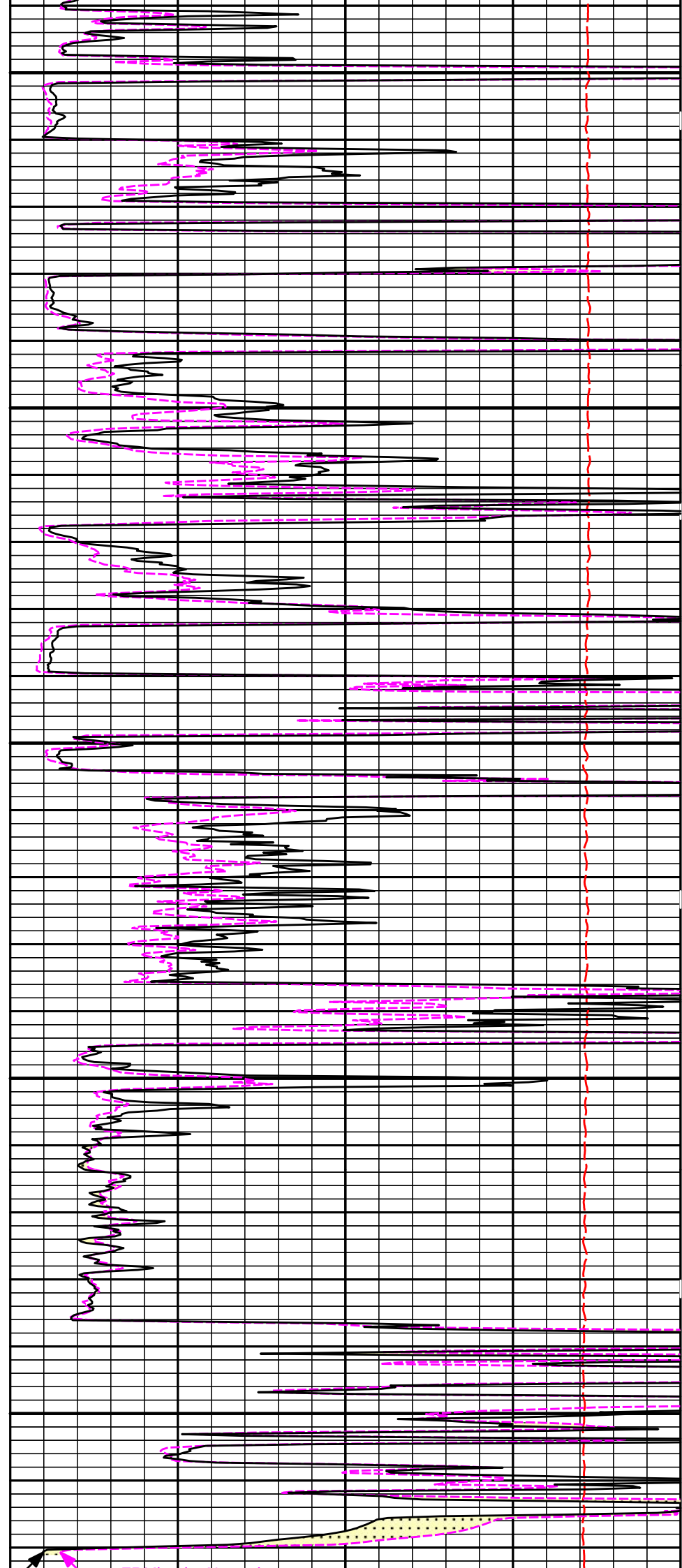
MEASURED DEPTH
MAIN LOG 5" PER 100'





5400

5500





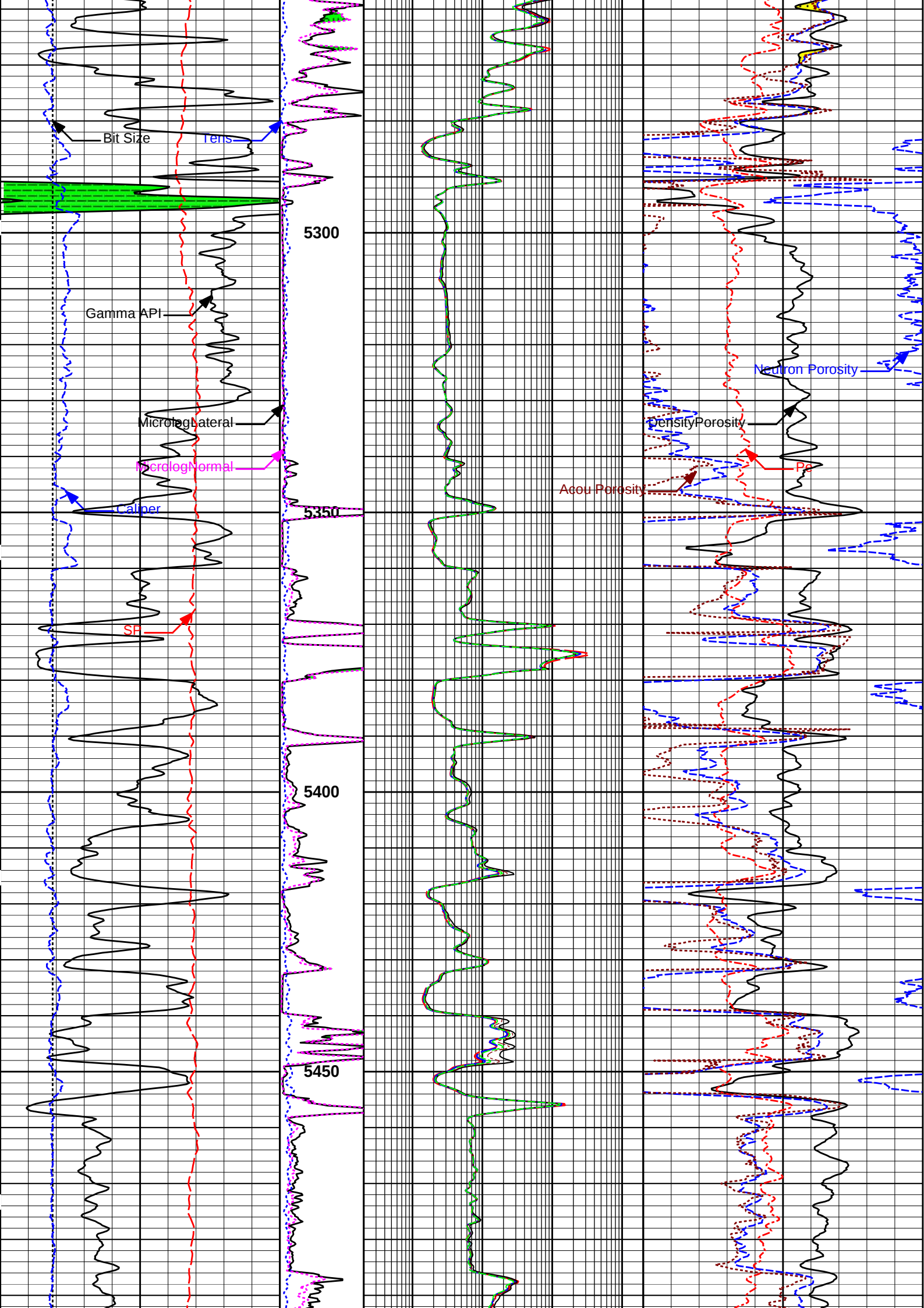
PERMEABLE

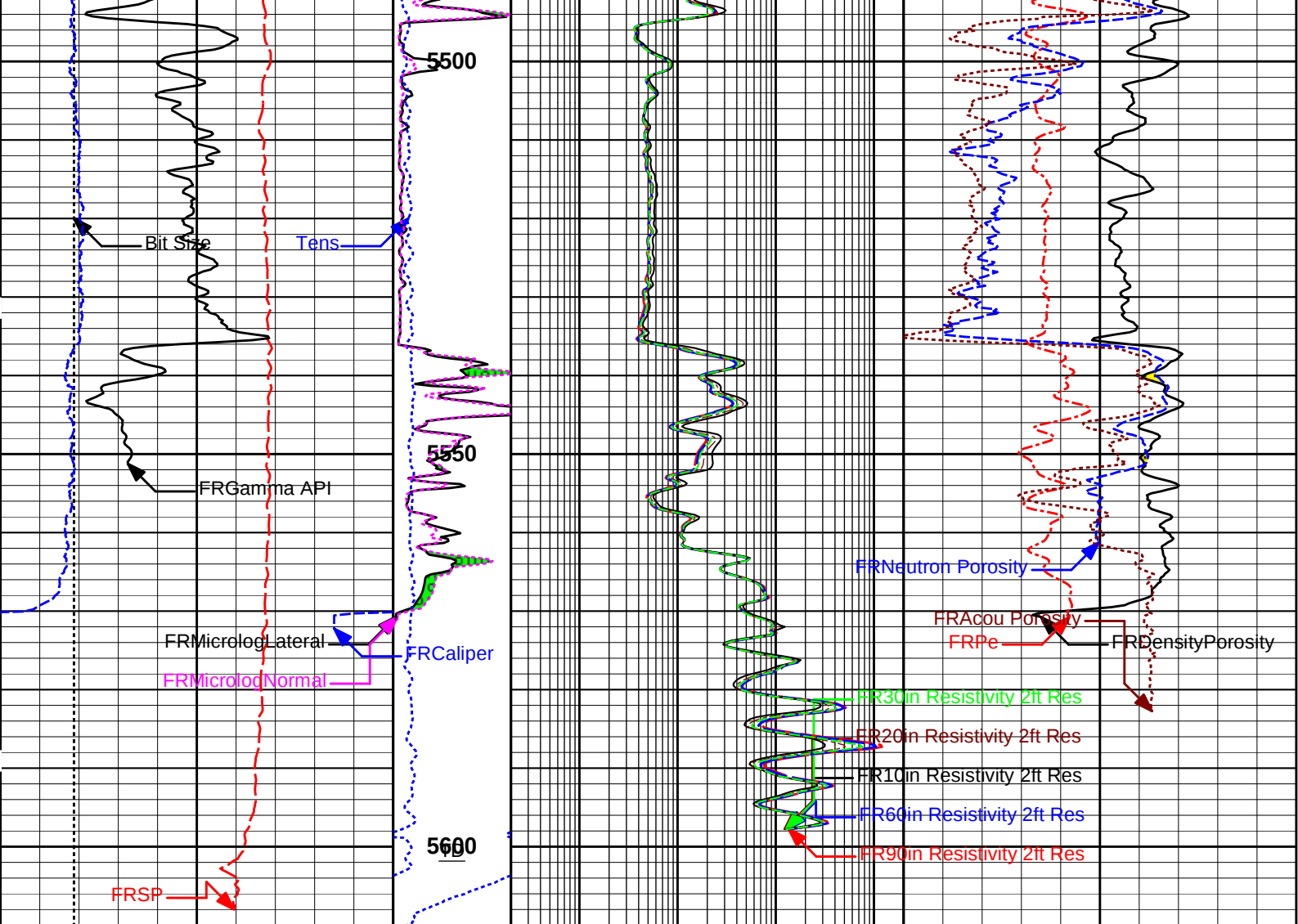
5 INCH MAIN LOG

MEASURED DEPTH
MAIN LOG 5" PER 100'

5 INCH MAIN LOG







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

HALLIBURTON

Plot Time: 23-Jan-18 18:15:47
Plot Range: 5240 ft to 5610.08 ft
Data: MERIT_UNRUH1-7(Well Based\REPEAT)
Plot File: \\REPEAT\QC_5_MAIN

5 INCH MAIN LOG

COMPANY	MERIT ENERGY COMPANY		
WELL	UNRUH 1-7		
FIELD	WILDCAT		
COUNTY	HASKELL	STATE	KANSAS

