

HALLIBURTON

DUAL SPACED NEUTRON
SPECTRAL DENSITY
LOG

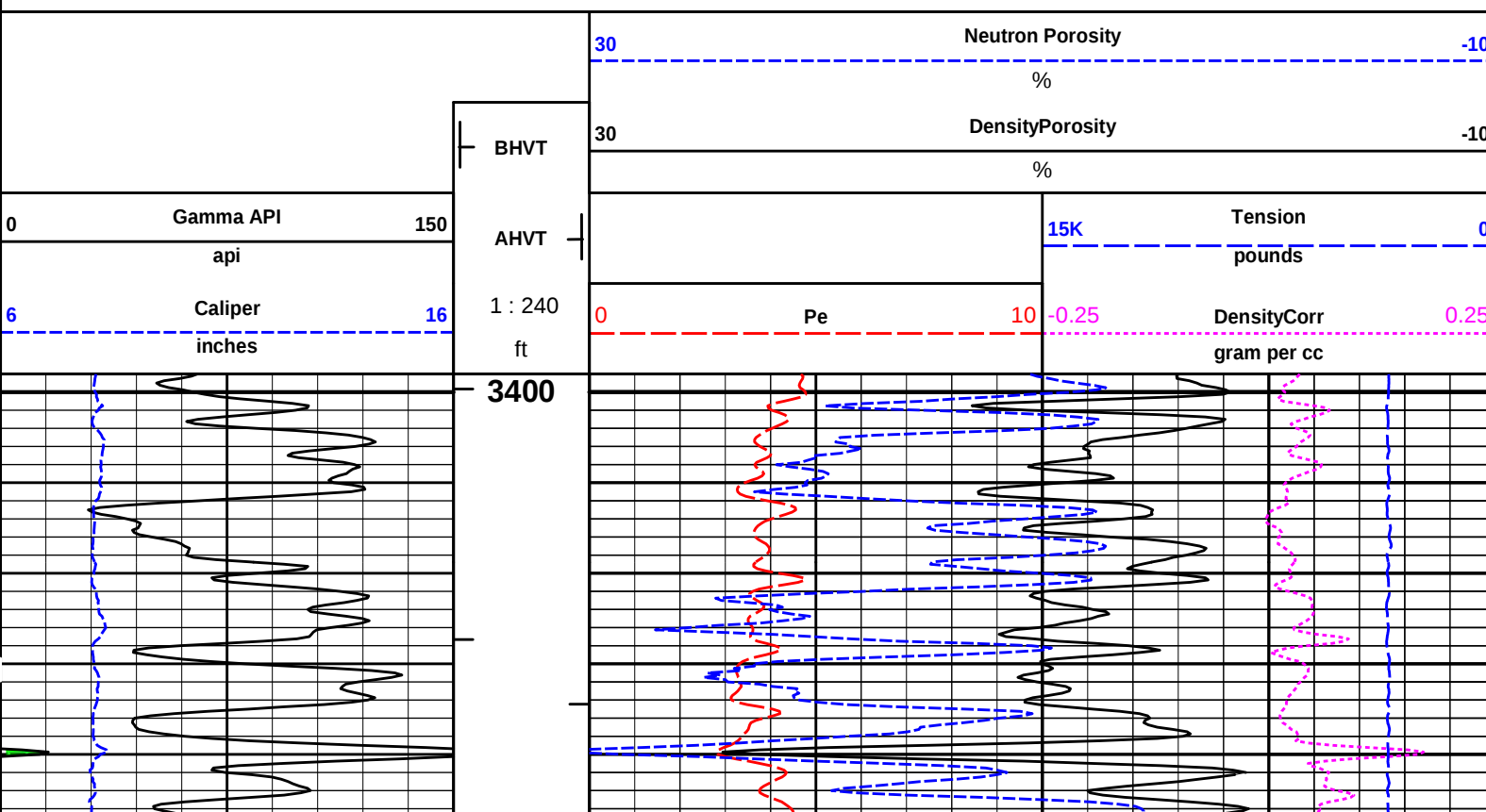
COMPANY WELL FIELD/BLOCK COUNTY STATE				CULBREATH OIL & GAS COMPANY, LLC RIEDEL #1-5 WILDCAT SHERIDAN KANSAS			
Permanent Datum Log measured from Drilling measured from				GL KB KB Elev. 2643.0 ft 10.0 ft above perm. Datum			
Date	28-Oct-16			Elev.: K.B. 2653.0 ft D.F. 2653.0 ft G.L. 2643.0 ft			
Run No.	ONE						
Depth - Driller	4230.0 ft						
Depth - Logger	4230.0 ft						
Bottom - Logged Interval	4206.00 ft						
Top - Logged Interval	3400.00 ft						
Casing - Driller	8.625 in	@	269.0 ft	@			
Casing - Logger	268.0 ft						
Bit Size	7.875 in			@			
Type Fluid in Hole	Water Based Mud						
Density	9.1 ppg	58.00	s/qt				
PH	9.50 pH	5.2	cpm				
Source of Sample	MUD PIT						
Rm @ Meas. Temperature	0.93 ohmm	@	75.00 degF	@			
Rmf @ Meas. Temperature	0.79 ohmm	@	75.00 degF	@			
Rmc @ Meas. Temperature	1.12 ohmm	@	75.00 degF	@			
Source Rmf	MEAS	MEAS					
Rm @ BHT	0.63 ohmm	@	113.0 degF	@			
Time Since Circulation	4.00 hr						
Time on Bottom	28-Oct-16 17:00						
Max. Rec. Temperature	113.00 degF	@	4250.0 ft	@			
Equipment	11072142	EL RENO					
Recorded By	JORGE ORLANDO PEREZ						
Witnessed By	RICHARD BELL						

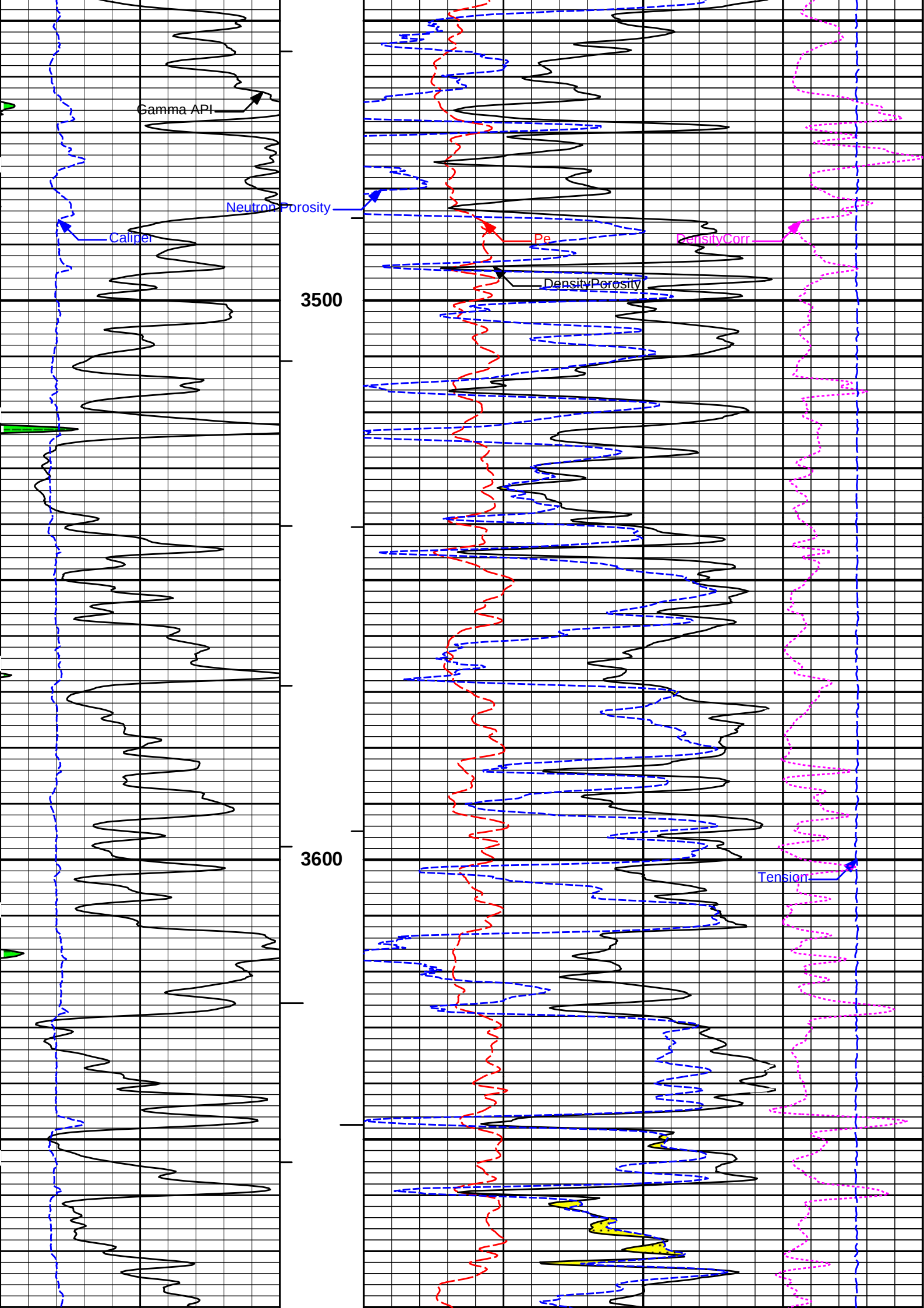
Service Ticket No.: 903627714						API No.: 15-179-21423-00-00						PGM Version: WL INSITE R5.0.5 (Build 8)											
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE												RESISTIVITY SCALE CHANGES											
Date		Sample No.										Type Log		Depth		Scale Up Hole				Scale Down Hole			
Depth-Driller																							
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		CENT		N/A			
Rmc @ Meas. Temp.				@				@						I-11022962									
Source Rmf		Rmc												S-11005909									
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.		11013114		Serial No.		10939050		Serial No.		10950489		Serial No.		11019643									
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.		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	Matrix		L	R	Matrix					
ONE		TD	CSG	REC		0	150	30	10	47.6 uSec/ft		30	10	2.71 gr/cc		30	10	TIME					

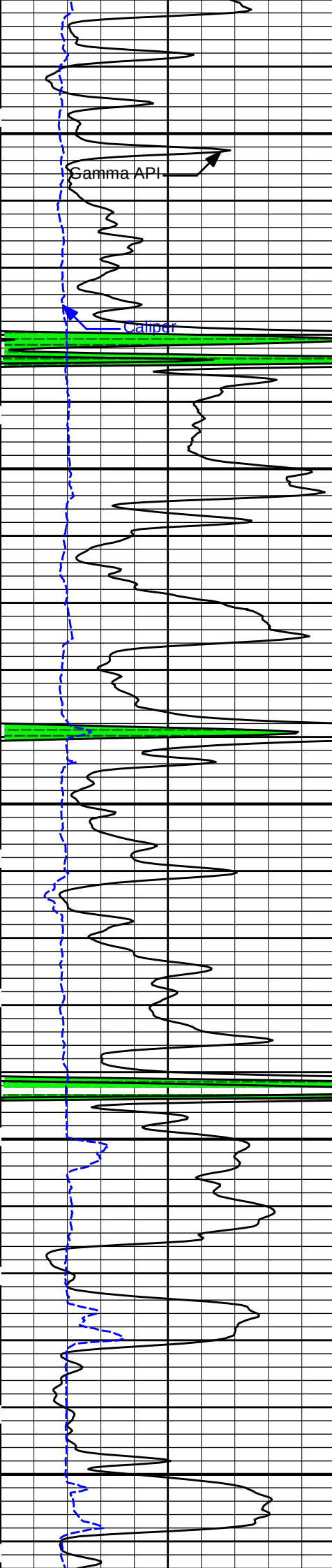
[illegible]**HALLIBURTON**

Plot Time: 28-Oct-16 19:00:23
Plot Range: 3398 ft to 4255.17 ft
Data: RIEDEL_1-5\Well Based\DETAIL\
Plot File: \\POROSITY\ELR PORO 5 MAIN

**5 IN = 100 FT MD
MAIN PASS**







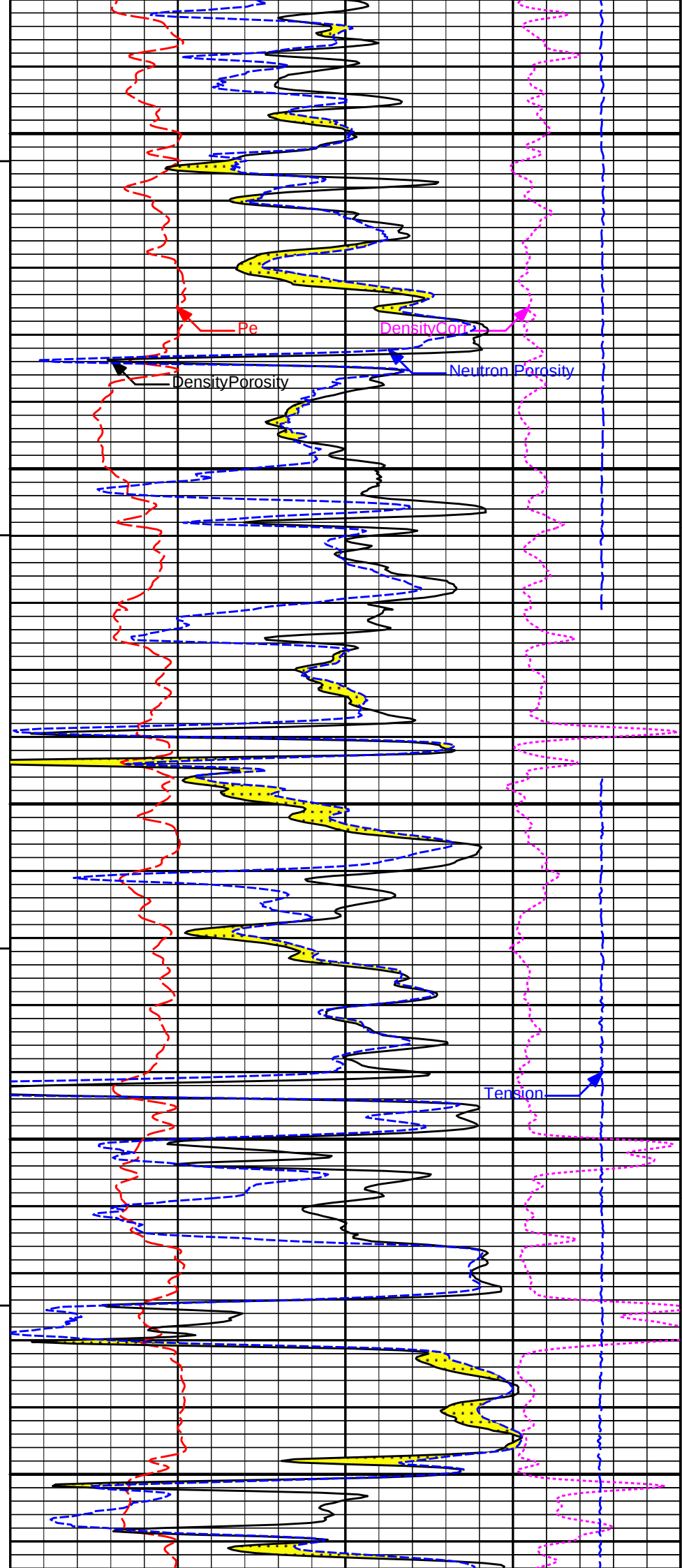
3700

Gamma API

Caliper

3800

3900



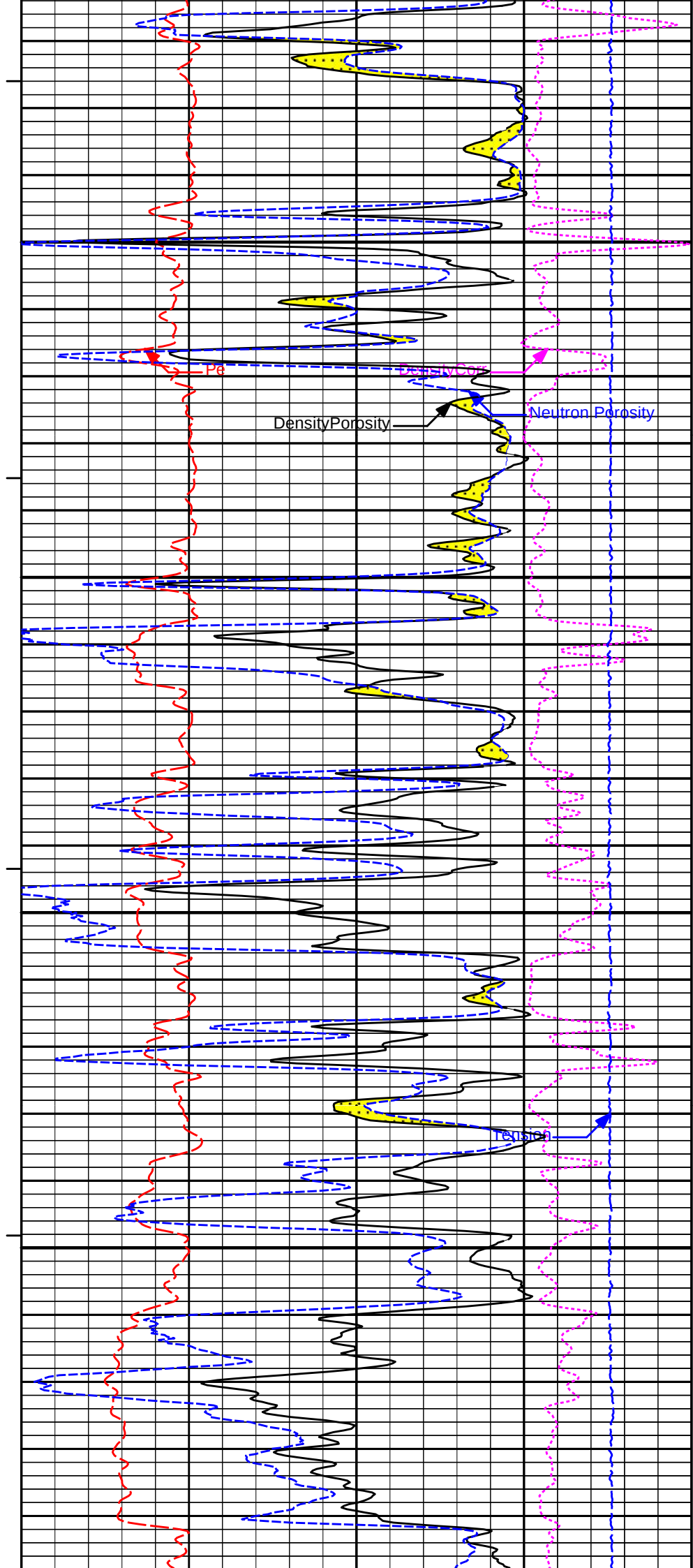
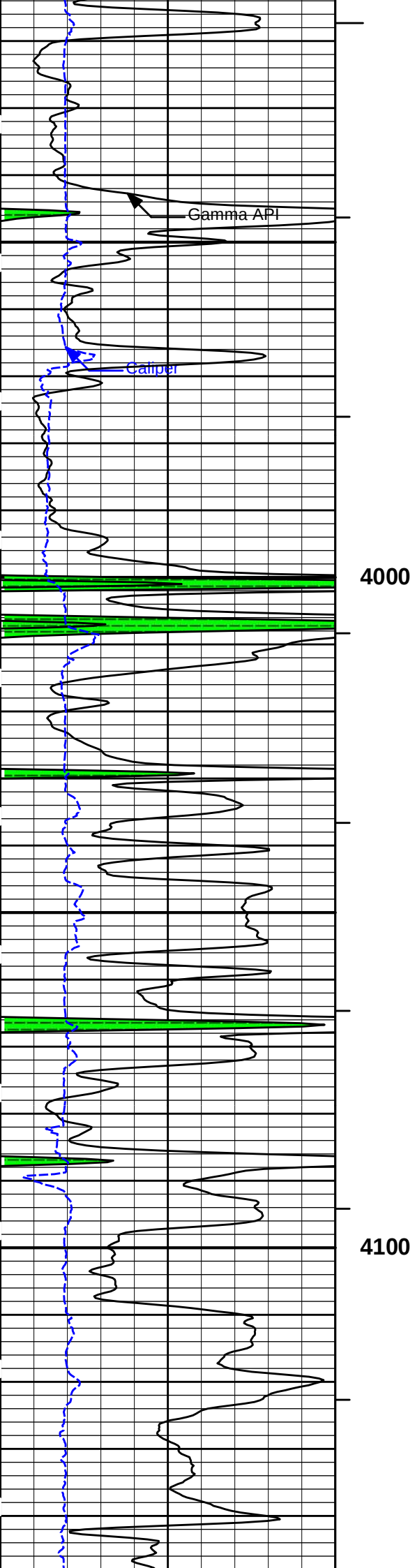
Pe

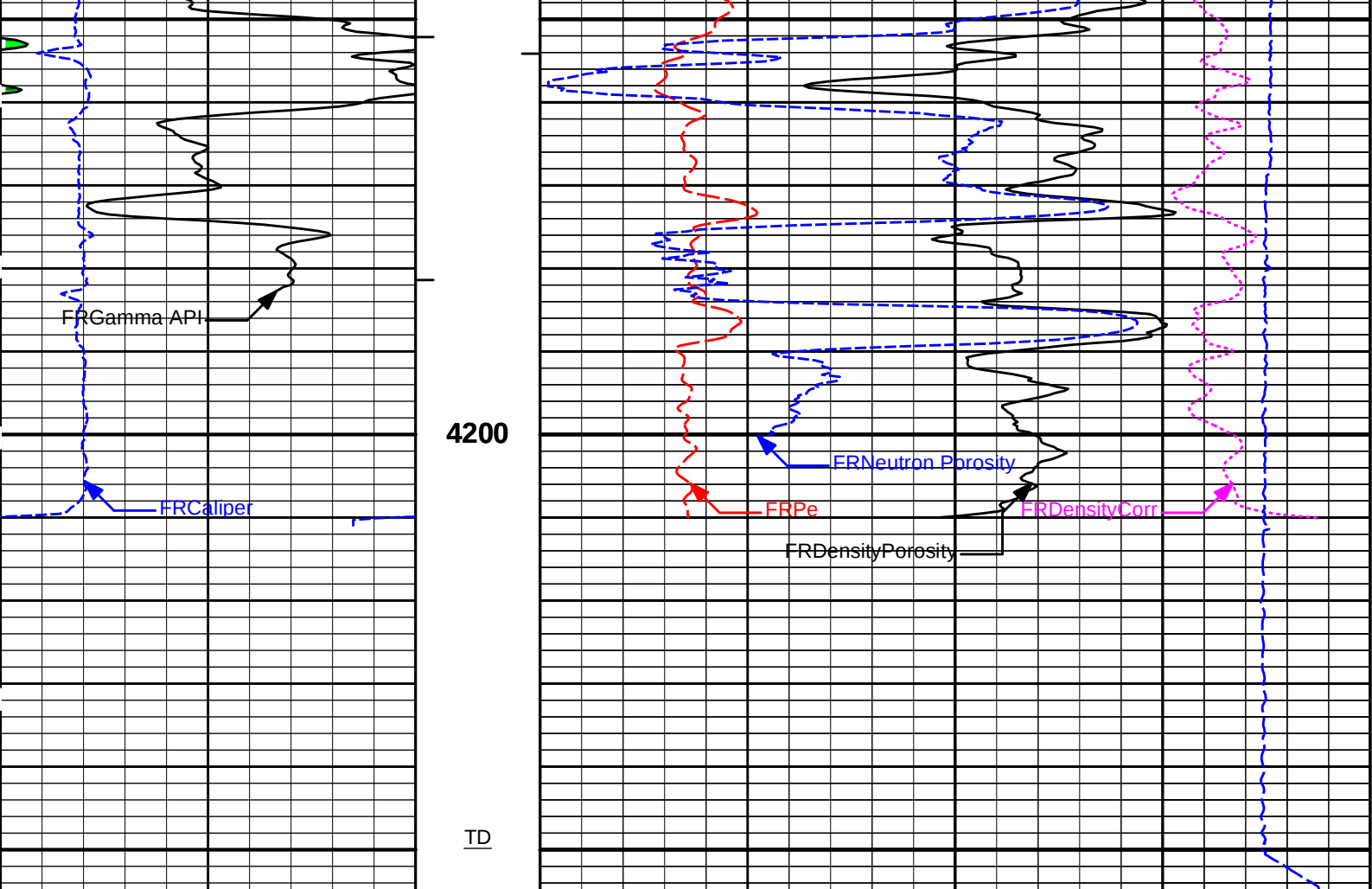
DensityPorosity

DensityCorr

Neutron Porosity

Tension





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

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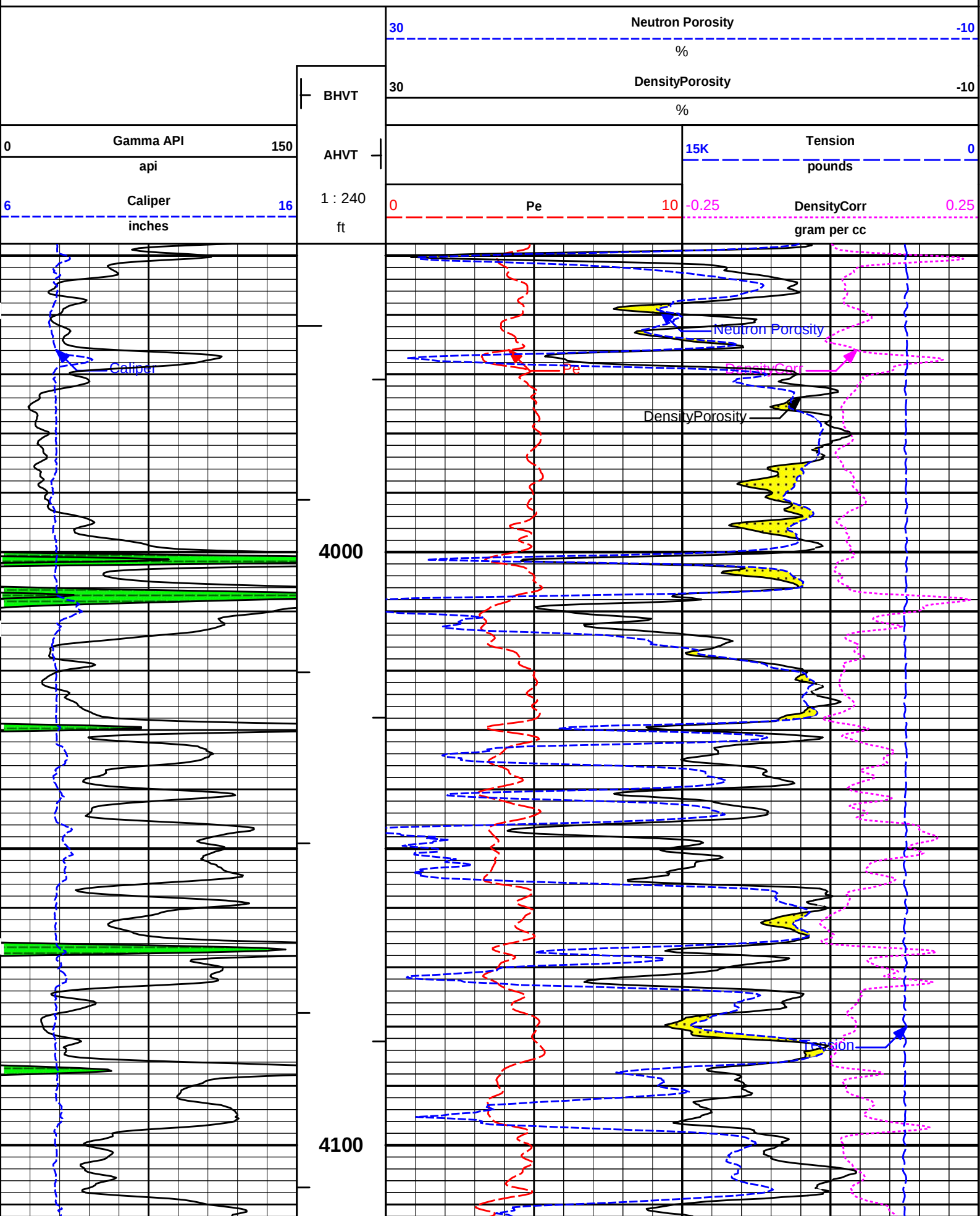
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Plot File: \\POROSITY\ELR_PORO_5_MAIN

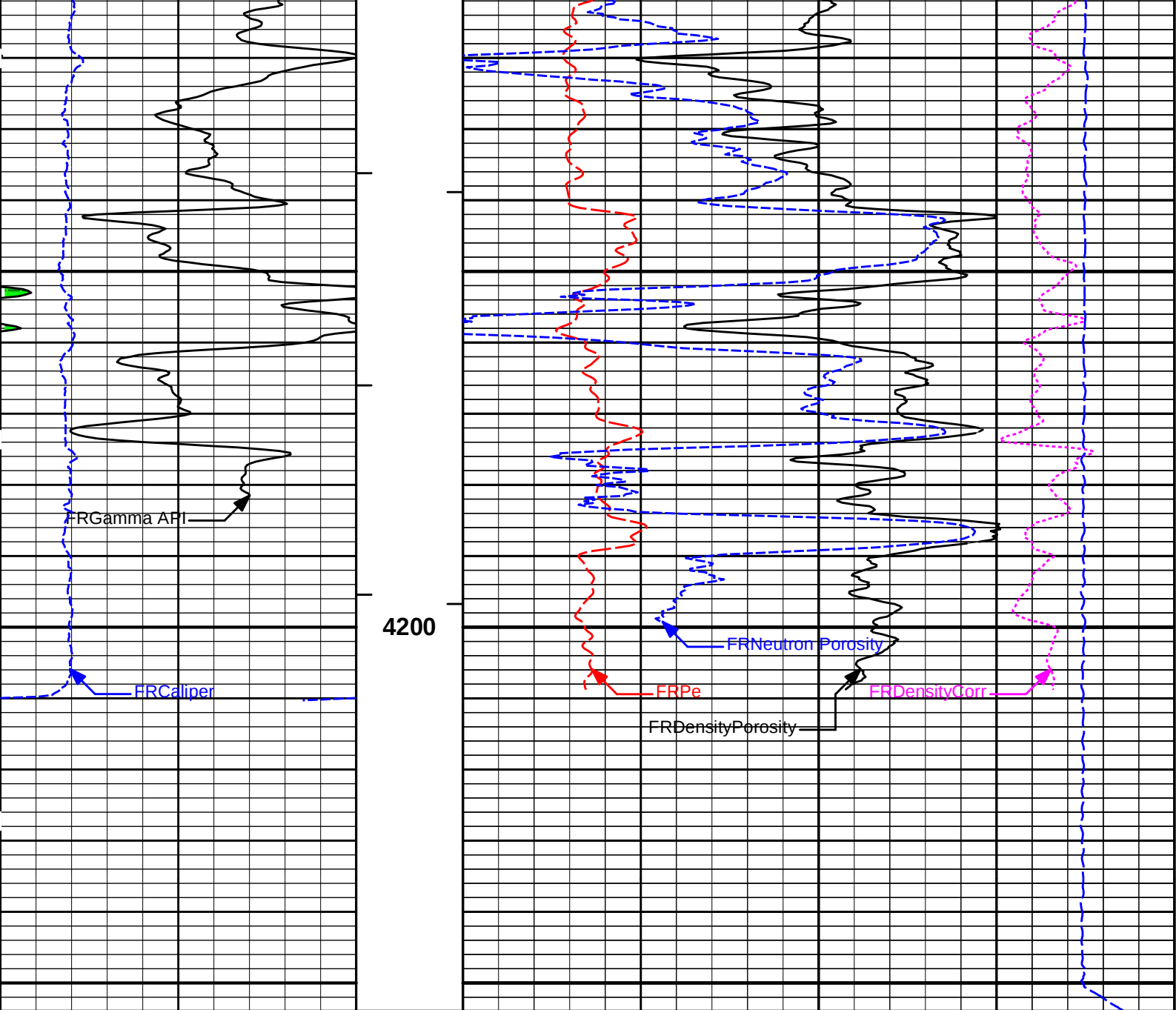
5 IN = 100 FT MD
MAIN PASS

HALLIBURTON

Plot Time: 28-Oct-16 19:00:25
Plot Range: 3948 ft to 4253.92 ft
Data: RIEDEL_1-5\Well Based\REPEAT\
Plot File: \\POROSITY\ELR_PORO_5_REPEAT

5 IN = 100 FT MD
REPEAT PASS





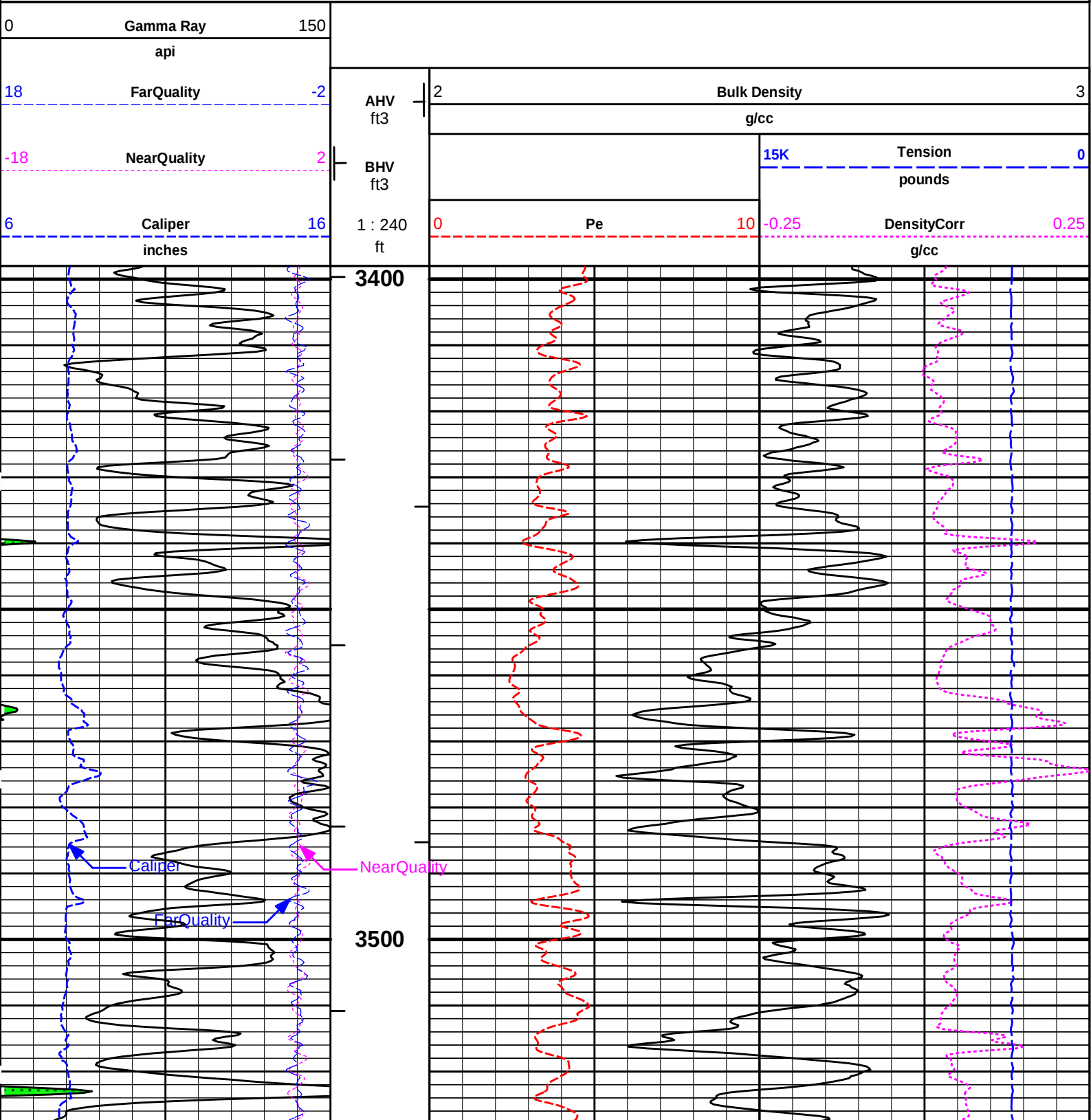
6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					gram per cc	
0	Gamma API	150	AHVT				15K	Tension	0
	api							pounds	
			BHVT	30	DensityPorosity				-10
					%				
				30	Neutron Porosity				-10
					%				

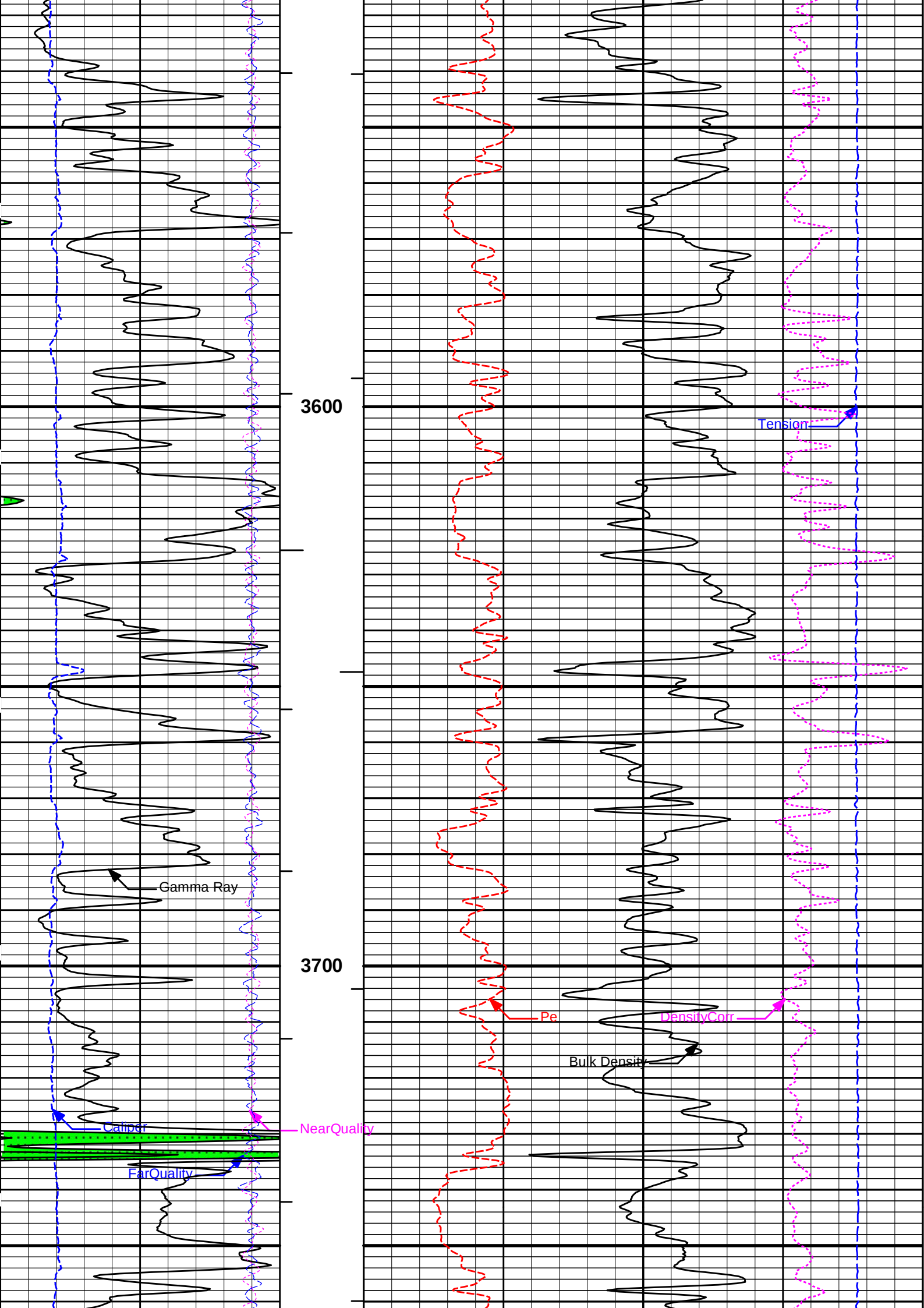
HALLIBURTON

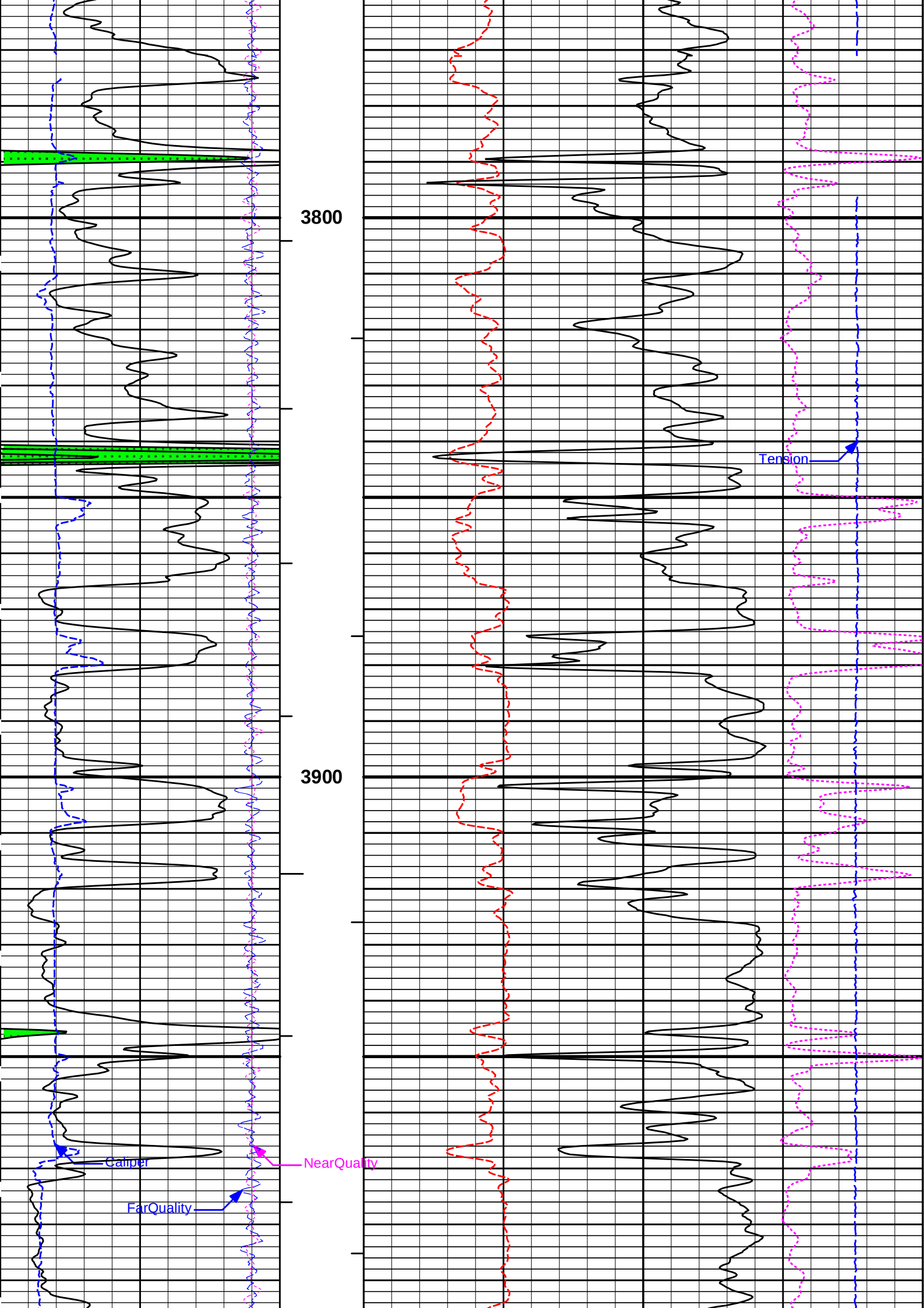
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Data: RIEDEL_1-5\Well Based\REPEAT\
Plot File: \\POROSITY\ELR_PORO_5_REPEAT

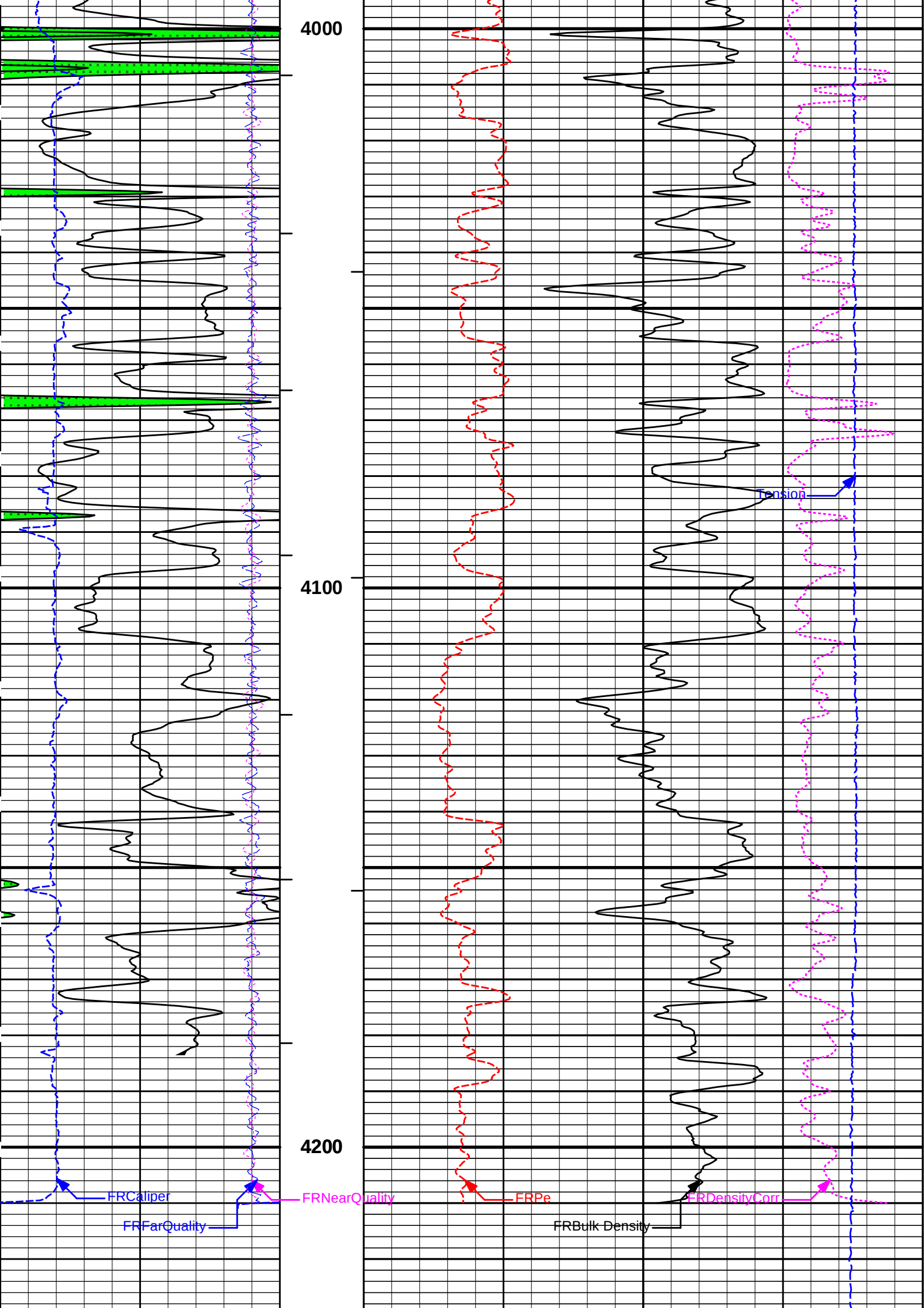
5 IN = 100 FT MD
REPEAT PASS

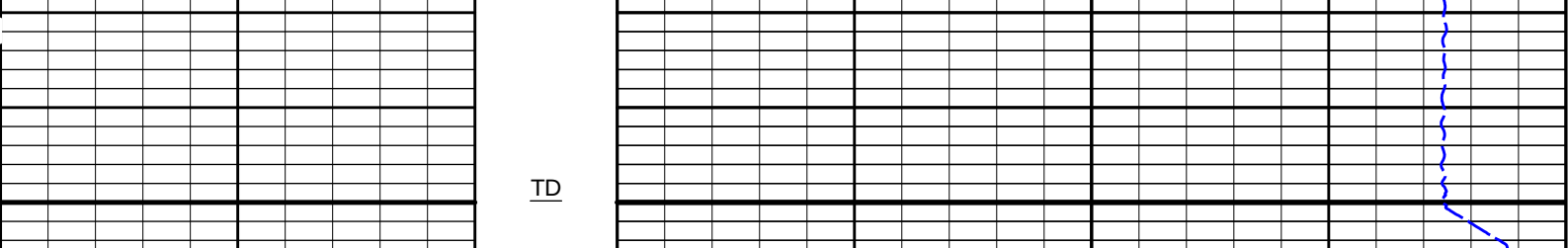
5 IN = 100 FT MD
MAIN PASS











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

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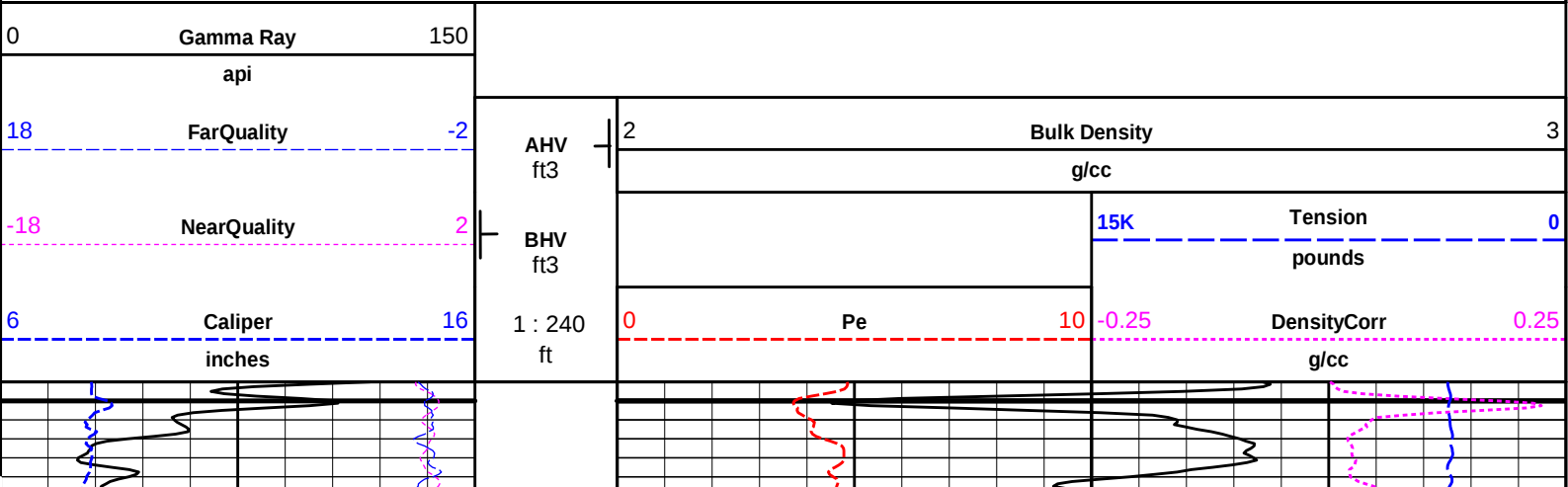
Plot Time: 28-Oct-16 19:00:33
Plot Range: 3398 ft to 4255.17 ft
Data: RIEDEL_1-5\Well Based\DETAIL\
Plot File: \\-LOCAL-\\RIEDEL_1-5\Well Based\POROSITY\ELR_BULKD_5_MAIN

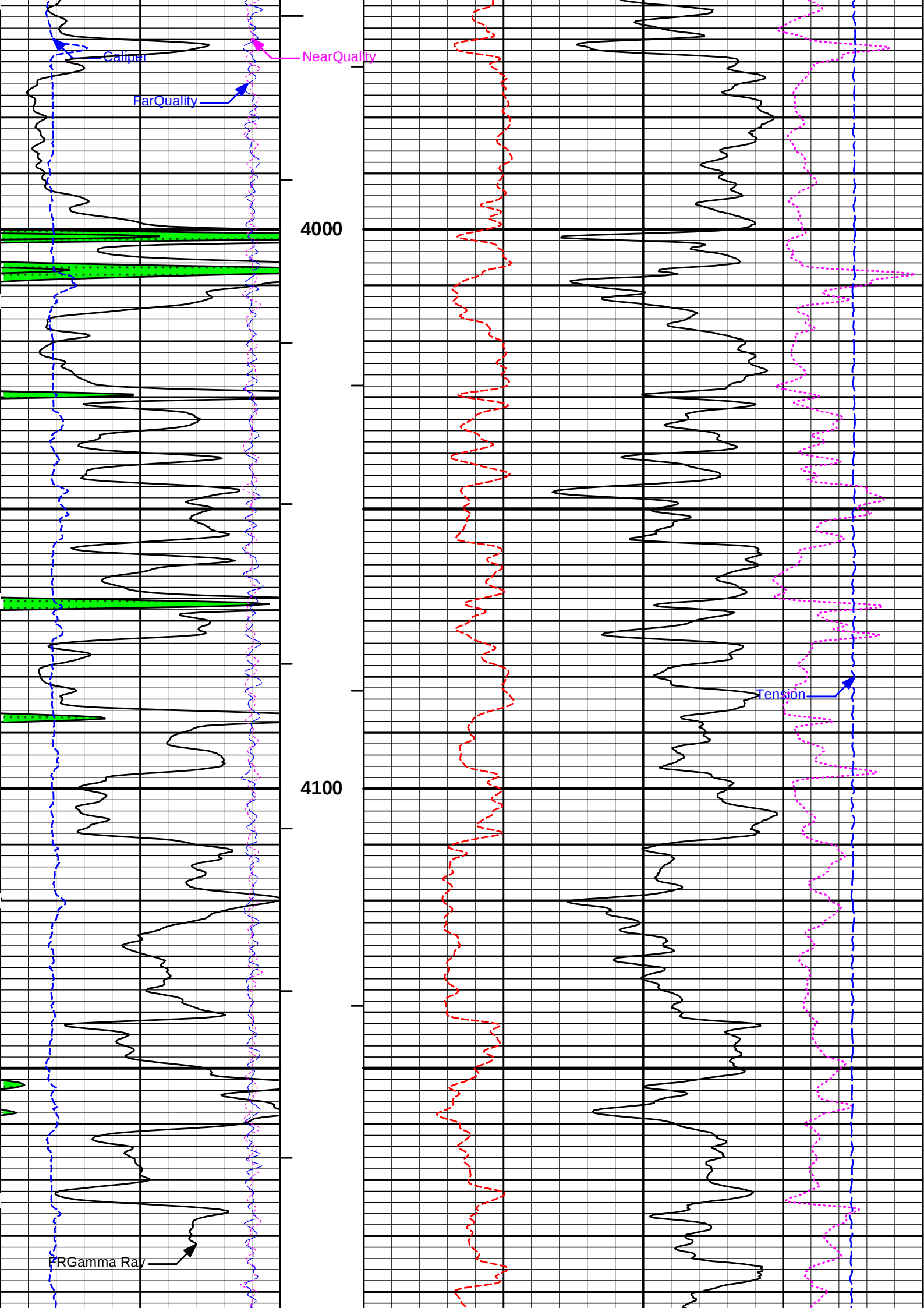
5 IN = 100 FT MD
MAIN PASS

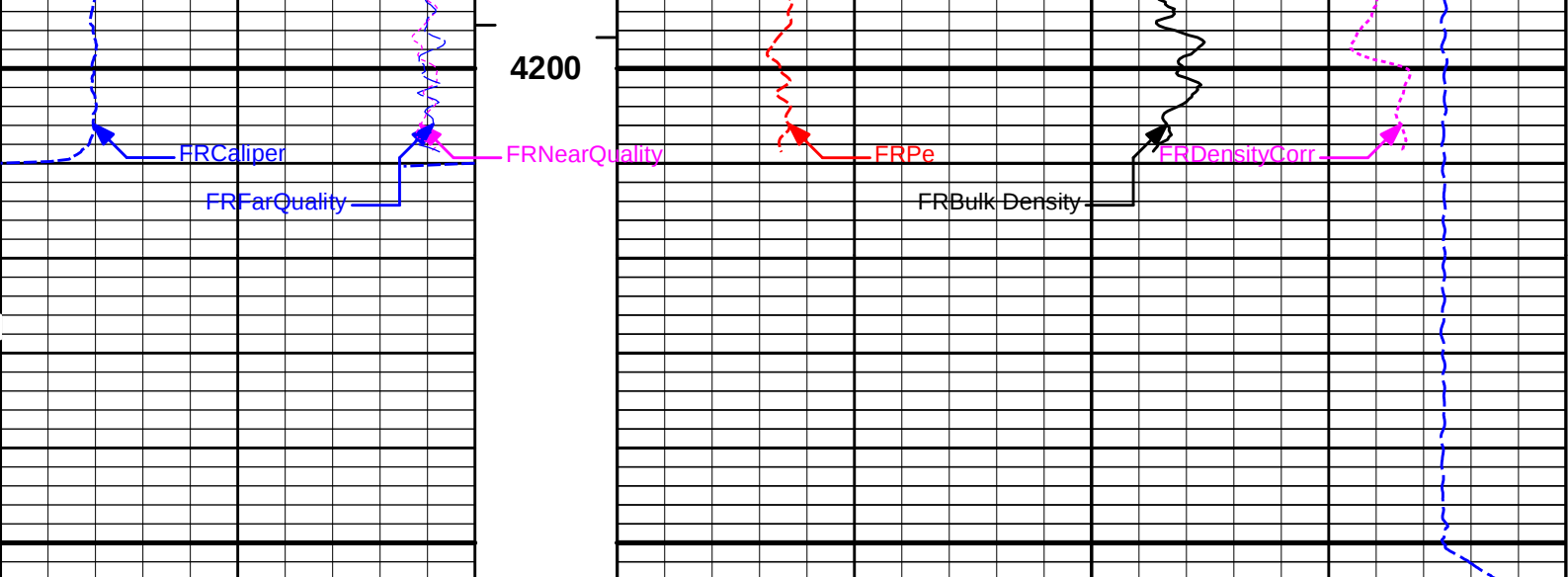
HALLIBURTON

Plot Time: 28-Oct-16 19:00:33
Plot Range: 3948 ft to 4253.92 ft
Data: RIEDEL_1-5\Well Based\REPEAT\
Plot File: \\-LOCAL-\\RIEDEL_1-5\Well Based\POROSITY\ELR_BULKD_5_REPEAT

5 IN = 100 FT MD
REPEAT PASS







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									

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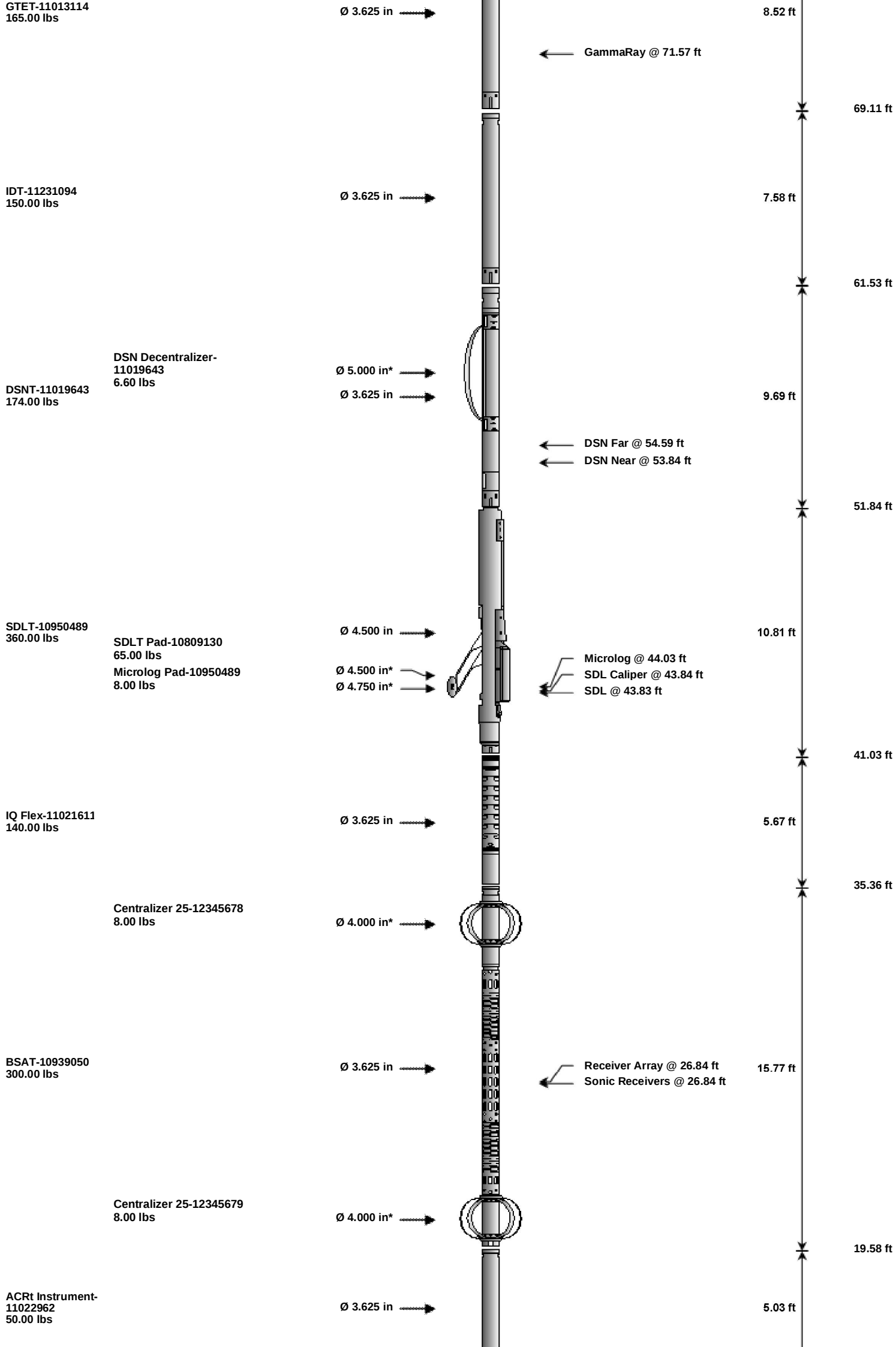
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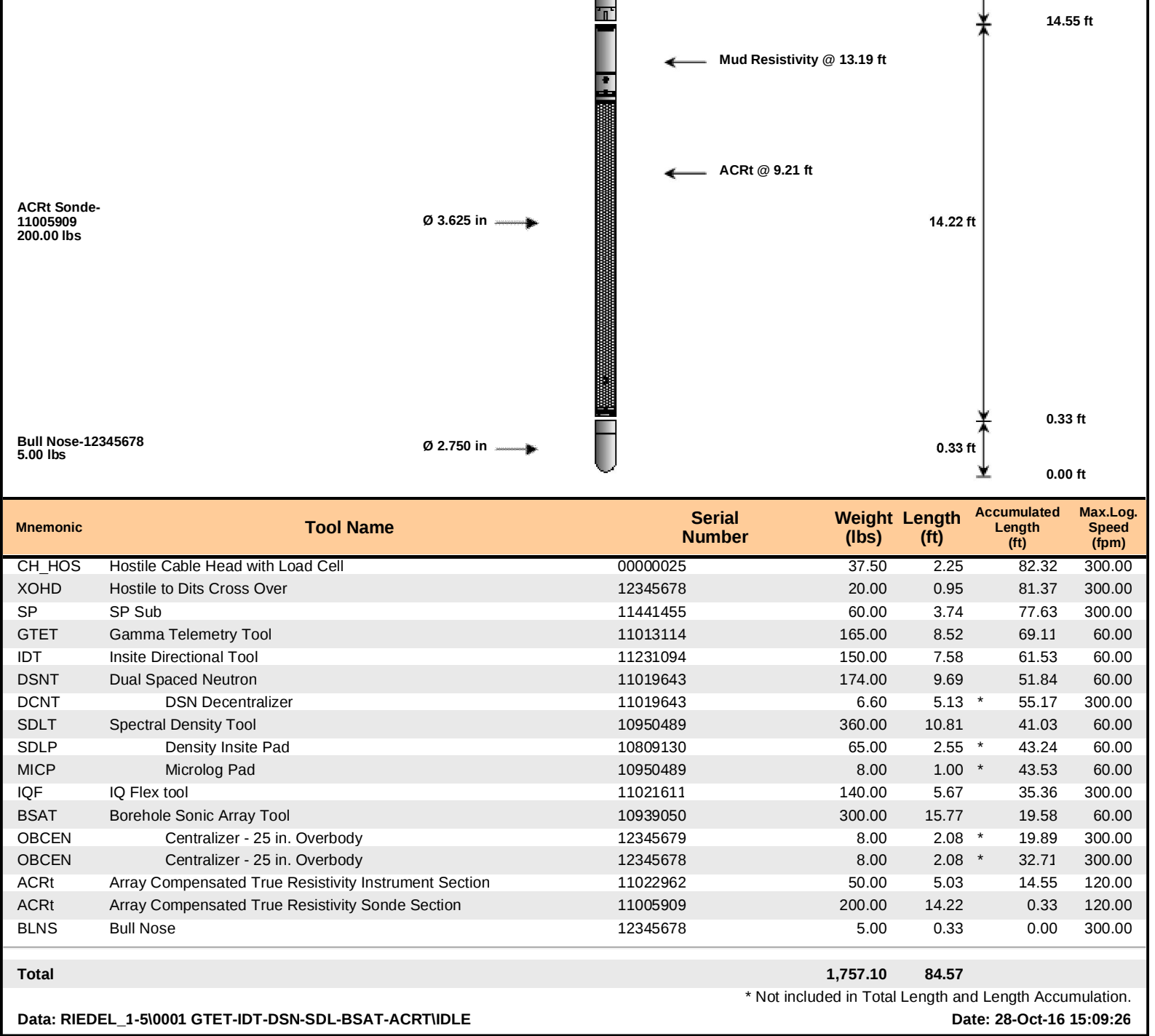
**5 IN = 100 FT MD
REPEAT PASS**

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-00000025 37.50 lbs		Ø 2.750 in		← Temperature @ 84.32 ft	2.25 ft	84.57 ft
XOHD-12345678 20.00 lbs		Ø 2.750 in Ø 3.625 in			0.95 ft	82.32 ft
						81.37 ft
SP Sub-11441455 60.00 lbs		Ø 3.625 in		← SP @ 79.59 ft	3.74 ft	
				← Z-Accelerometer @ 77.18 ft		77.63 ft





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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	9.100	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	2000.00	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	CSTR	Compressive Strength	1000.00	psia
SHARED	ST	Surface Temperature	75.0	degF
SHARED	TD	Total Well Depth	4230.00	ft
SHARED	BHT	Bottom Hole Temperature	113.0	degF
SHARED	SVTM	Navigation and Survey Master Tool	IDT	
SHARED	AZTM	High Res Z Accelerometer Master Tool	IDT	
SHARED	TEMM	CBM Temperature Master Tool	GTET	
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	
Rwa / CrossPlot	ROIN	Input for RO Calculation	Rwa	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GEOK	Process Gamma Ray EVR?	Yes	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
GTET	BHSM	Borehole Size Source Tool	SDLT	
IDT	WRTI	Survey Writing Interval	30	ft
IDT	SOPT	Smoothing Option	None	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	Yes	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTT	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	
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	Yes	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Pore Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	Limestone 47.6	
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	

ACRt Sonde	TPOS	Tool Position	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMAX	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_____				
Data: RIEDEL_1-5\0001 GTET-IDT-DSN-SDL-BSAT-ACRT\IDLE			Date: 28-Oct-16 15:24:19	

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION				
Tool Name:	GTET - 11013114	Reference Calibration Date:	22-Dec-15 09:34:24	
Engineer:	MICHAEL RICHTER	Calibration Date:	04-Oct-16 13:37:27	
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1	

Calibrator Source S/N: TB-146				
Calibrator API Reference:265.00 api				
Equivalent Calibrator API Reference:269.6 api				
Measurement	Measured	Calibrated	Units	
Background	37.2	46.4	api	
Background + Calibrator	253.2	316.1	api	
Calibrator	216.0	269.6	api	

NATURAL GAMMA RAY TOOL FIELD CALIBRATION				
Tool Name:	GTET - 11013114	Reference Calibration Date:	04-Oct-16 13:37:27	
Engineer:	MICHAEL RICHTER	Calibration Date:	09-Oct-16 14:00:11	
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1	

Calibrator Source S/N: TB-146				
Calibrator API Reference:265.00 api				
Equivalent Calibrator API Reference:269.6 api				
Field Verification	Shop	Field	Units	
Background	46.4	61.9	api	
Background + Calibrator	316.1	337.4	api	
Calibrator	269.6	275.5	api	
Shop	Field	Difference	Tolerance	
269.6	275.5	-5.9	+/- 9.00	

DUAL SPACED NEUTRON SHOP CALIBRATION				
Tool Name:	DSNT - 11019643	Reference Calibration Date:	29-Aug-16 10:19:59	
Engineer:	MICHAEL RICHTER	Calibration Date:	04-Oct-16 10:59:36	
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1	

Logging Source S/N: DSN-424				
Tank Serial Number: 12345678				
Reference value assigned to Tank: 56.100				
Snow Block S/N: 12345678				
Calibration Tank Water Temperature: 66 degF				
Min. Tool Housing Outside Diameter: 3.625 in				

CALIBRATION CONSTANTS				
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Measurement	Prev. Value	New Value	Control Limit On New Value	
Gain:	0.99664	0.99935	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):	0.2349	0.2358	0.0009	+/- 0.0020
Calibrated Ratio:	10.5309	10.5595	0.029	+/- 0.050
VERIFIER				
Measurement	Value		Control Limit	
Snow-Block Porosity (decp):	0.0711		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 - 11019643		Reference Calibration Date:	04-Oct-16 10:59:36
Engineer:	WHITLOCK		Calibration Date:	18-Oct-16 12:27:45
Software Version:	WL INSITE R5.0.5 (Build 8)		Calibration Version:	1

Logging Source S/N: DSN-424				
Snow Block S/N: 12345678				
NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0711	0.0642	-0.0069	+/- 0.0150
PASS/FAIL SUMMARY				
Block Change Check:			Passed	
Snow Block Stat Check:			Passed	
Temperature Check:			Passed	

DENSITY CALIPER SHOP CALIBRATION				
Tool Name:	SDLT - 10950489		Reference Calibration Date:	25-Jul-16 09:22:10
Engineer:	MICHAEL RICHTER		Calibration Date:	04-Oct-16 12:53:22
Software Version:	WL INSITE R5.0.5 (Build 8)		Calibration Version:	1
Host Tool Name:	DSNT - 11019643			

CALIBRATION COEFFICIENTS				
Measurement	Previous Value	New Value	Control Limit On New Value	
Pad Offset	-3922.84	-3694.68	-7000.00 - -1000.00	
Pad Gain	0.0003897	0.0003934	0.0002000 - 0.0006000	
Arm Offset	-3528.51	-3798.70	-5000.00 - 3000.00	
Arm Gain	0.0004727	0.0005144	0.000300 - 0.000700	
Arm Power	-0.000002590	-0.000006288	-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)	1.89	2.00	0.11	+/- 0.20
Medium Ring (in)	3.63	3.75	0.12	+/- 0.20
RING DIAMETER:				

RING DIAMETER:				
Small Ring (in)	6.40	6.50	0.10	+/- 0.20
Medium Ring (in)	8.08	8.25	0.17	+/- 0.20
Large Ring (in)	15.19	15.00	-0.19	+/- 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 - 10950489	Reference Calibration Date:	04-Oct-16 12:53:22
Engineer:	WHITLOCK	Calibration Date:	18-Oct-16 12:02:47
Software Version:	WL INSITE R5.0.5 (Build 8)	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	8.21	-0.04	+/- 0.15

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

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad - 10809130	Reference Calibration Date:	20-Sep-16 19:12:21
Engineer:	MICHAEL RICHTER	Calibration Date:	04-Oct-16 12:14:39
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1

Logging Source S/N: 5168GW		
Aluminum Block S/N: EL RENO STD ALUMINUM	Density: 2.581g/cc	Pe: 3.170
Magnesium Block S/N: EL RENO	Density: 1.687g/cc	Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0173	1.0148	0.90 - 1.10
Near Dens Gain	1.0121	1.0093	0.90 - 1.10
Near Peak Gain	1.0331	1.0365	0.90 - 1.10
Near Lith Gain	1.0195	1.0396	0.90 - 1.10
Far Bar Gain	1.0081	1.0078	0.90 - 1.10
Far Dens Gain	0.9977	0.9984	0.90 - 1.10
Far Peak Gain	0.9943	0.9928	0.90 - 1.10
Far Lith Gain	0.9686	0.9705	0.90 - 1.10
Near Bar Offset	0.1180	0.1511	NONE
Near Dens Offset	0.1594	0.1917	NONE
Near Peak Offset	-0.0167	-0.0410	NONE
Near Lith Offset	0.0282	-0.1329	NONE
Far Bar Offset	0.1076	0.1266	NONE
Far Dens Offset	0.1806	0.1870	NONE
Far Peak Offset	0.1648	0.1900	NONE
Far Lith Offset	0.2908	0.2914	NONE
Near Bar Background	767.24	763.14	700 - 1450
Near Dens Background	248.74	248.43	230 - 480
Near Peak Background	108.16	107.30	100 - 210
Near Lith Background	136.46	135.99	125 - 260

Far Bar Background	488.55	488.10	450 - 900
Far Dens Background	189.17	188.67	175 - 345
Far Peak Background	73.67	74.13	70 - 140
Far Lith Background	77.78	76.91	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.689	1.687	-0.002	+/- 0.015
Pe	2.552	2.558	0.006	+/- 0.150
ALUMINUM				
Density (g/cc)	2.582	2.581	-0.001	+/- 0.01500
Pe	3.079	3.131	0.052	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0001	+/- 0.0110	0.0002	+/- 0.0140
Magnesium Block	-0.0007	+/- 0.0110	-0.0015	+/- 0.0140
Aluminum Block	0.0007	+/- 0.0110	-0.0001	+/- 0.0140
Resolution	8.84	6.00 - 11.50	9.33	6.00 - 11.50
Internal Verifier(B+D+P+L)	1255	1200 - 2700	828	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 - 10809130	Reference Calibration Date:	04-Oct-16 12:14:39
Engineer:	WHITLOCK	Calibration Date:	18-Oct-16 12:20:08
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1

Pad Temperature: 76.5 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1254.854	1252.950	-1.904	14.359
Far (B+D+P+L) cps	827.807	825.227	-2.580	15.850
Near Resolution	8.84	8.99	0.150	0.50
Far Resolution	9.33	9.23	-0.100	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-11013114						
Gamma Ray Calibrator	269.6	275.5	-----	-5.9	+/- 9.00	api
DSNT-11019643						
Snow-Block Porosity	0.0711	0.0642	-----	0.0069	+/- 0.0150	decp
SDLT-10950489						
Pad Extension	3.75	3.73	-----	0.02	+/-0.10	in
Ring Diameter	8.25	8.21	-----	0.04	+/-0.15	in
SDLT Pad-10809130						
Near(B+D+P+L)	1254.854	1252.950	-----	1.904	+/-14.359	cps
Far(B+D+P+L)	827.807	825.227	-----	2.580	+/-15.850	cps

Data: RIEDEL_1-5I0001 GTET-IDT-DSN-SDL-BSAT-ACRTIDLE	Date: 28-Oct-16 15:23:42
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 INPUTS, DELAYS AND FILTERS TABLE						
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Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
Rwa / CrossPlot				
TPUL	Tension Pull	84.57	NO	
BS	Bit Size	84.57	NO	
HDIA	Measured Hole Diameter	0.00	NO	
CH_HOS				
DHTN	DownholeTension	0.00	BLK	0.000
SP Sub				
PLTC	Plot Control Mask	79.59	NO	
SP	Spontaneous Potential	79.59	BLK	1.250
SPR	Raw Spontaneous Potential	79.59	NO	
SPO	Spontaneous Potential Offset	79.59	NO	
GTET				
TPUL	Tension Pull	71.57	NO	
GR	Natural Gamma Ray API	71.57	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	71.57	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	71.57	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	
IDT				
TPUL	Tension Pull	62.53	NO	
ACCX	Accelerometer X	62.53	NO	
ACCY	Accelerometer Y	62.53	NO	
ACCZ	Accelerometer Z	62.53	NO	
MAGX	magnetometer x with unit	62.53	NO	
MAGY	Magnetometer Y with unit	62.53	NO	
MAGZ	magnetometer z with unit	62.53	NO	
IAMP	Accelerometer Temperature	62.53	NO	
MTMP	Magnetometer Temperature	62.53	NO	
DSNT				
TPUL	Tension Pull	53.74	NO	
RNDS	Near Detector Telemetry Counts	53.84	BLK	1.417
RFDS	Far Detector Telemetry Counts	54.59	TRI	0.583
DNTT	DSN Tool Temperature	53.84	NO	

DSNS	DSN Tool Status	53.74	NO	
ERND	Near Detector Telemetry Counts EVR	53.84	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	54.59	BLK	0.000
ENTM	DSN Tool Temperature EVR	53.84	NO	
HDIA	Measured Hole Diameter	0.00	NO	
SDLT				
TPUL	Tension Pull	43.84	NO	
PCAL	Pad Caliper	43.84	TRI	0.250
ACAL	Arm Caliper	43.84	TRI	0.250
BSAT				
TPUL	Tension Pull	26.84	NO	
STAT	Status	26.84	NO	
DLYT	Delay Time	26.84	NO	
SI	Sample Interval	26.84	NO	
TXRX	Raw Telemetry 10 Receivers	26.84	NO	
FRMC	Tool Frame Count	26.84	NO	
GMOD	Gain processing mode	19.58	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	

Microlog Pad				
TPUL	Tension Pull	44.03	NO	
MINV	Microlog Lateral	44.03	BLK	0.750
MNOR	Microlog Normal	44.03	BLK	0.750
SDLT Pad				
TPUL	Tension Pull	43.83	NO	
NAB	Near Above	43.66	BLK	0.920
NHI	Near Cesium High	43.66	BLK	0.920
NLO	Near Cesium Low	43.66	BLK	0.920
NVA	Near Valley	43.66	BLK	0.920
NBA	Near Barite	43.66	BLK	0.920
NDE	Near Density	43.66	BLK	0.920
NPK	Near Peak	43.66	BLK	0.920
NLI	Near Lithology	43.66	BLK	0.920
NBAU	Near Barite Unfiltered	43.66	BLK	0.250
NLIU	Near Lithology Unfiltered	43.66	BLK	0.250
FAB	Far Above	44.01	BLK	0.250
FHI	Far Cesium High	44.01	BLK	0.250
FLO	Far Cesium Low	44.01	BLK	0.250
FVA	Far Valley	44.01	BLK	0.250
FBA	Far Barite	44.01	BLK	0.250
FDE	Far Density	44.01	BLK	0.250
FPK	Far Peak	44.01	BLK	0.250
FLI	Far Lithology	44.01	BLK	0.250
PTMP	Pad Temperature	43.84	BLK	0.920
NHV	Near Detector High Voltage	43.24	NO	
FHV	Far Detector High Voltage	43.24	NO	
ITMP	Instrument Temperature	43.24	NO	
DDHV	Detector High Voltage	43.24	NO	
HDIA	Measured Hole Diameter	0.00	NO	
Data: RIEDEL_1-5\0001 GTET-IDT-DSN-SDL-BSAT-ACRT\IDLE			Date: 28-Oct-16 15:24:32	

COMPANY	CULBREATH OIL & GAS COMPANY, LLC		
WELL	RIEDEL #1-5		
FIELD	WILDCAT		
COUNTY	SHERIDAN	STATE	KANSAS
HALLIBURTON		DUAL SPACED NEUTRON SPECTRAL DENSITY	

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