

HALLIBURTON

DUAL SPACED NEUTRON SPECTRAL DENSITY

COMPANY		KINDER MORGAN CO2 Co. L.P.	
WELL		GOODMAN POINT 27	
FIELD/BLOCK		MCELMO DOME	
COUNTY		MONTEZUMA	
STATE		CO	
Permanent Datum		GL	
Log measured from		KB	
Drilling measured from		KB	
Date		24-Aug-14	
Run No.		ONE	
Depth - Driller		8125.00 ft	
Depth - Logger		8073.0 ft	
Bottom - Logged Interval		8073.0 ft	
Top - Logged Interval		7400.0 ft	
Casing - Driller		7476.000 in @ 7476.0 ft	
Casing - Logger		7472.0 ft	
Bit Size		6.000 in	
Type Fluid in Hole		Water Based Mud	
Density		8.5 ppq	
Viscosity		29.00 s/qt	
PH		7.40 pH	
Fluid Loss		0.0 cpm	
Source of Sample		MUD TANK	
Rm @ Meas. Temperature		0.28 ohmm @ 65.20 degF	
Rmf @ Meas. Temperature		N/A @ N/A	
Rmc @ Meas. Temperature		N/A @ N/A	
Source Rmf		N/A	
Rmc		N/A	
Rm @ BHT		0.12 ohmm @ 160.0 degF	
Time Since Circulation		24.3 hr	
Time on Bottom		24-Aug-14 21:51	
Max. Rec. Temperature		160.0 degF @ 8073.0 ft	
Equipment		11871076 GJ CO	
Recorded By		P. DIMPFL	
Witnessed By		C. SLAUGH	

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Service Ticket No.: 901604134				API Serial No.: 05083067170000				PGM Version: WL INSITE R4.2.0 (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	DLLT	N/A	CENT	N/A					
Rmc @ Meas. Temp.		@		@			P744M864S19								
Source Rmf	Rmc					ONE	MSFL	SLIM PAD	CENT	N/A					
Rm @ BHT		@		@			10281166								
Rmf @ BHT		@		@											
Rmc @ BHT		@		@											
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.		ONE		Run No.				Run No.		ONE		Run No.		ONE	
Serial No.		11005602		Serial No.				Serial No.		10951300		Serial No.		10993888	
Model No.		GTET		Model No.				Model No.		SDLT-I		Model No.		DSNT-I	
Diameter		3.625"		No. of Cent.				Diameter		4.5"		Diameter		3.625"	
Detector Model No.		GTET		Spacing				Log Type		GAMMA-GAMMA		Log Type		NEU-THERM	
Type		SCINT						Source Type		Cs137		Source Type		Am241Be	
Length		8"		LSA [Y/N]				Serial No.		5153GW		Serial No.		DSN-388	
Distance to Source		N/A		FWDA [Y/N]				Strength		1.5 Ci		Strength		15 Ci	
LOGGING DATA															

GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON				
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix		
No.	From	To	ft/min	L	R	L	R		L	R		L	R			
ONE	8073	7430	REC	0 API	150 API				30 %	-10 %		2.71 g/cc	30 %		-10 %	LIME
DIRECTIONAL INFORMATION																
Maximum Deviation								@	KOP							@
Remarks: RUN ONE: CONNECTORSUB/FLEX/DTDD/HDDS/BRIDLE/CR/SP/BRIDLE/BS/GTET/FLEX/DLLT/MSFL/BN RAN IN COMBINATION																
RUN TWO: CONNECTORSUB/FLEX/DTDD/HDDS/GTET/CSNG/FLEX/DSNT/SDLT/BN																
ANNULAR HOLE VOLUME CALCULATED USING 4.5-INCH CASING																
ON RUN TWO, TOOL BRIDGED OUT AT 7997', WE WERE TOLD TO LOG OUT FROM THERE.																
CHLORIDES REPORTED TO BE 24,000 ppm																
MUD PRESS PERFORMED, NO MUDCAKE/FILTRATE WAS PRODUCED																
DOWNLOG AND REPEAT NOT PERFORMED DUE TO TOOLPUSH CONVEYANCE.																
YOU CREW TODAY: B. CALDWELL, T. RAFF, N. EHLERS										RIG: NABORS M13						
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES, GRAND JUNCTION, CO (970) 523-3600																
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.																
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PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	6.000	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	8.500	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	35000.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	0.284	ohmm
	SHARED	TRM	Temperature of Mud	65.2	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	4.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	8125.00	ft
	SHARED	BHT	Bottom Hole Temperature	160.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	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	0.250	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
GTET	BHSM	Borehole Size Source Tool	SDLT	
CSNG	CGOK	Process CSNG Data?	Yes	
CSNG	CENT	Is Tool Centralized?	No	
CSNG	GBOK	Gamma Enviromental Corrections?	Yes	
CSNG	BARF	Barite Correction Factor	1.00	
CSNG	ORDG	Use Fixed Gain	No	
CSNG	ORDO	Use Fixed Offset	No	
CSNG	ORDR	Use Fixed Resolution Degradation Factor	No	
CSNG	BHSM	Borehole Size Source Tool	SDLT	
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	

BOTTOM

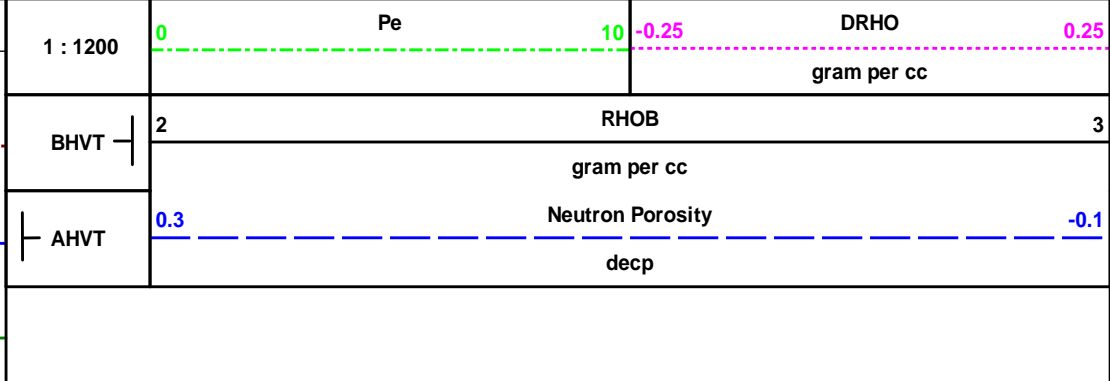
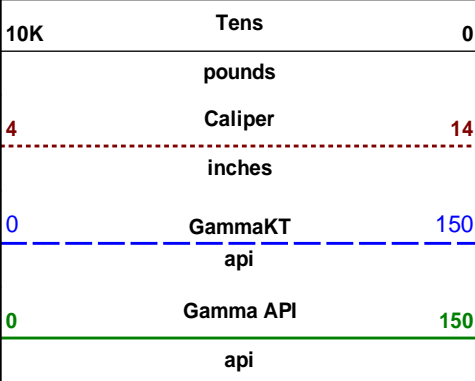
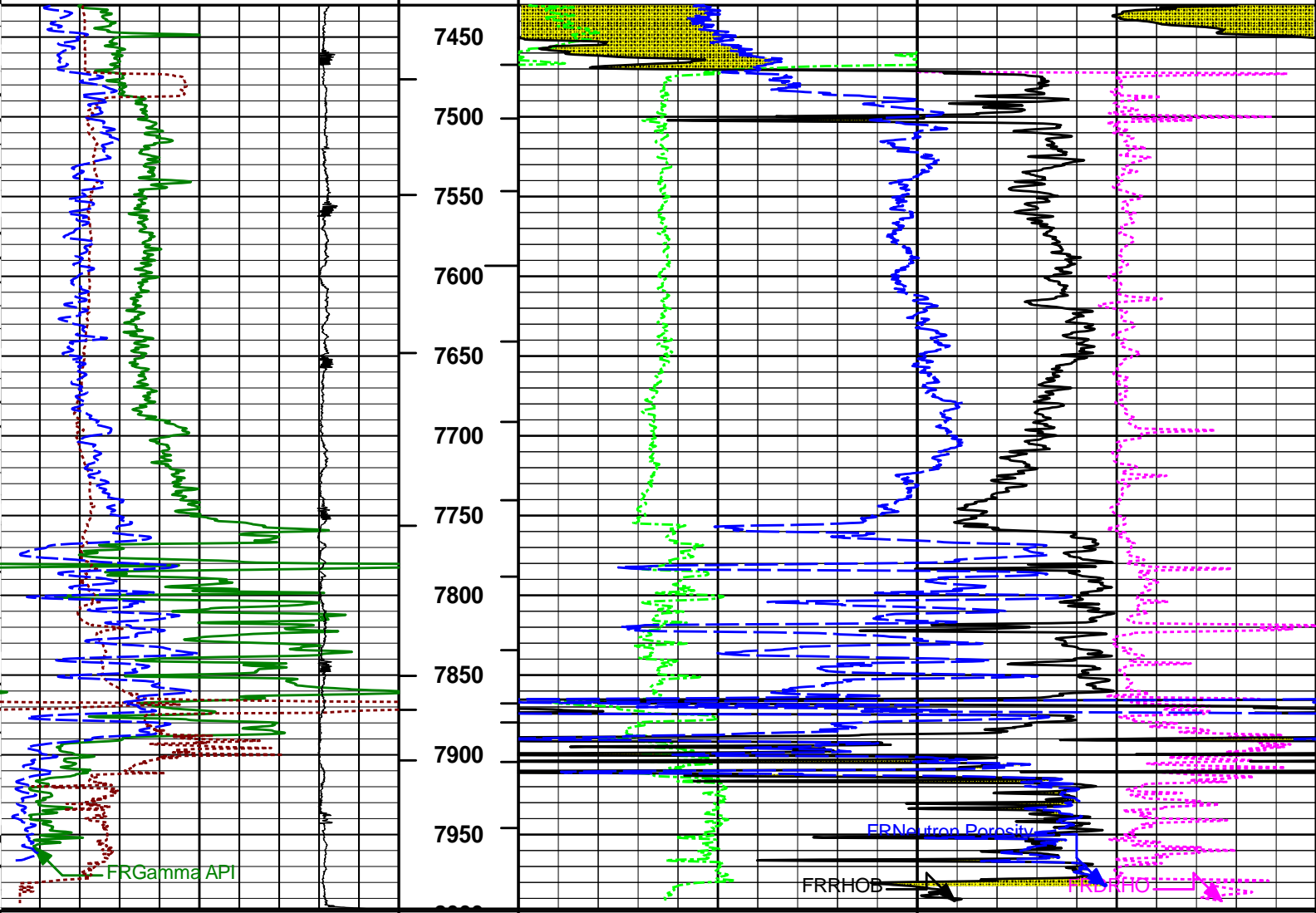
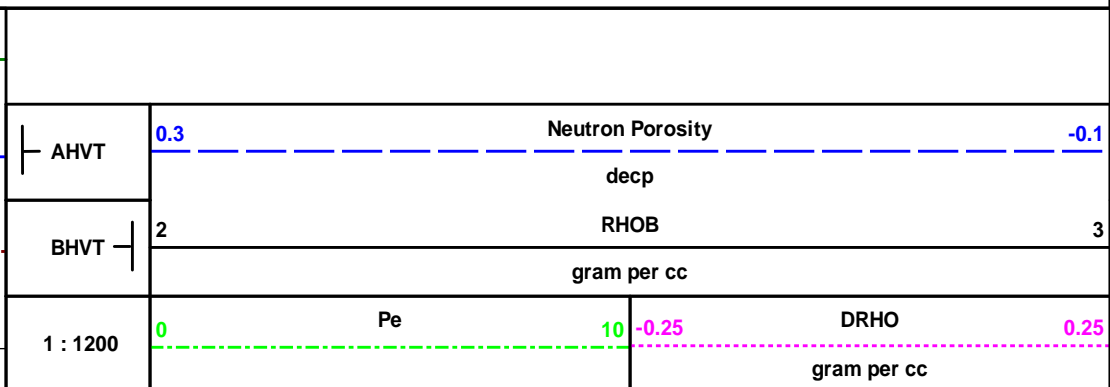
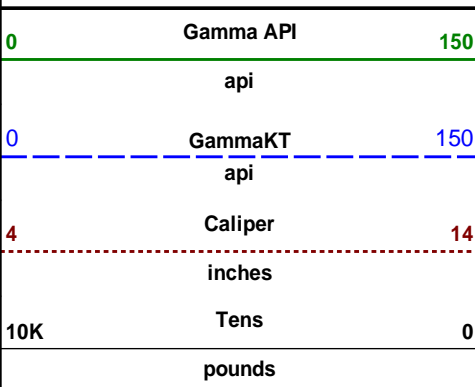
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Date: 25-Aug-14 12:30:31

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Plot Time: 25-Aug-14 13:11:06
 Plot Range: 7430 ft to 7996.5 ft
 Data: GOODPOINT_27\Well Based\MAIN\
 Plot File: \\PORO\DENSITY_1"

MAIN PASS 1" = 100', DENSITY PRESENTATION



HALLIBURTON

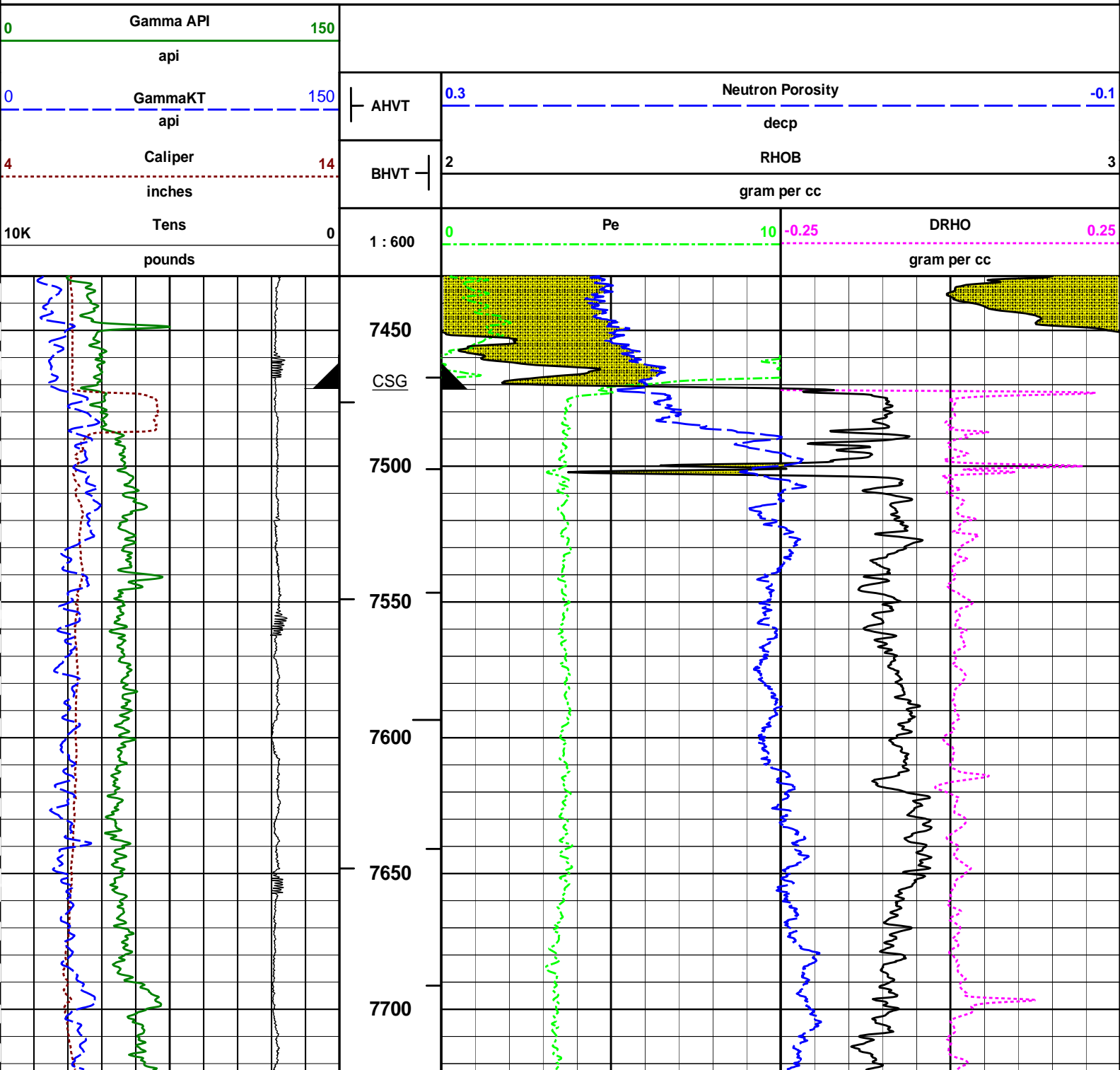
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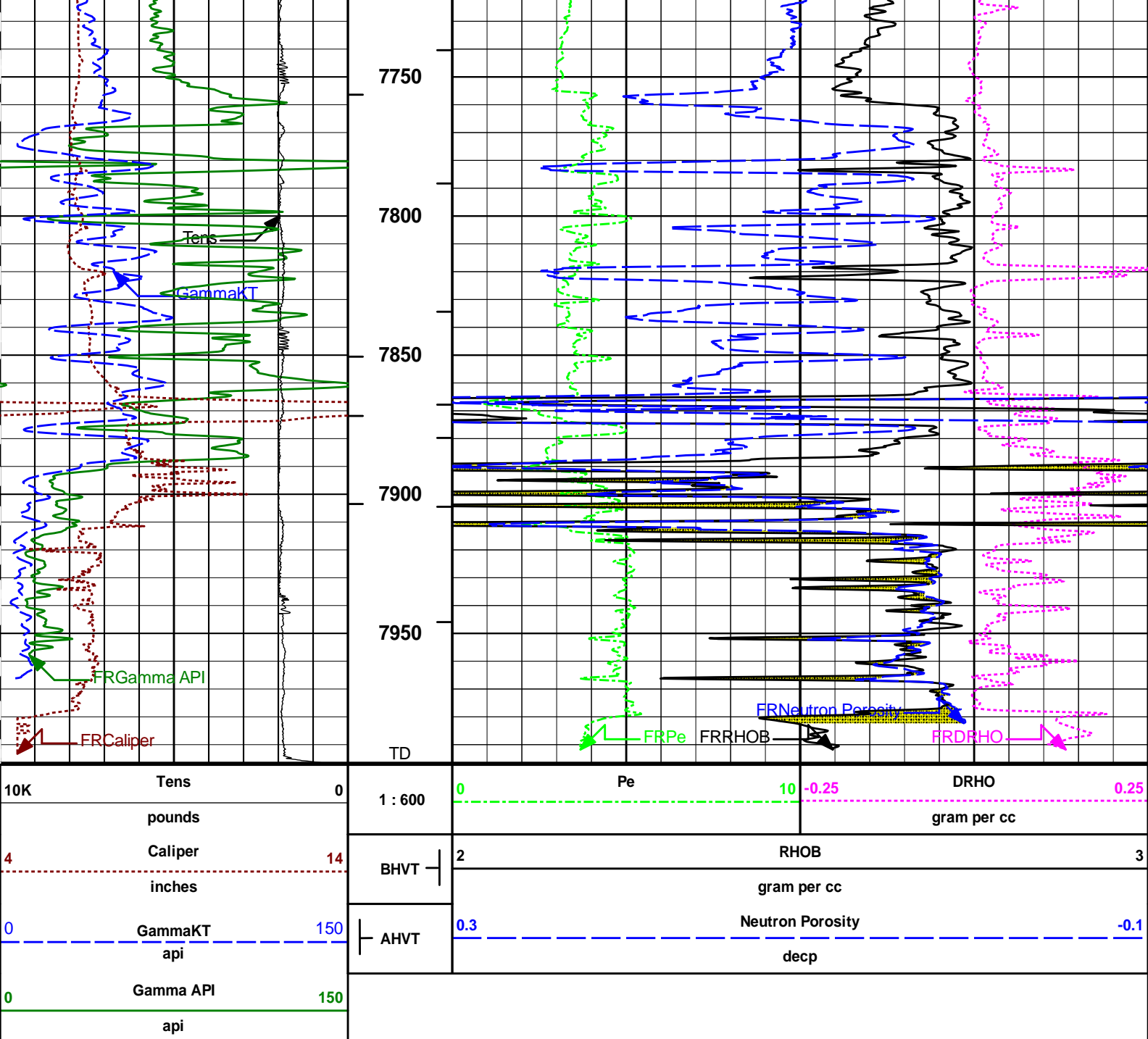
MAIN PASS 1" = 100', DENSITY PRESENTATION

HALLIBURTON

Plot Time: 25-Aug-14 13:11:08
Plot Range: 7430 ft to 7996.5 ft
Data: GOODPOINT_27Well Based\MAIN
Plot File: \\PORO\DENSITY_2"

MAIN PASS 2" = 100', DENSITY PRESENTATION





HALLIBURTON

Plot Time: 25-Aug-14 13:11:10
 Plot Range: 7430 ft to 7996.5 ft
 Data: GOODPOINT_27\Well Based\MAIN\
 Plot File: \\PORO\DENSITY_2"

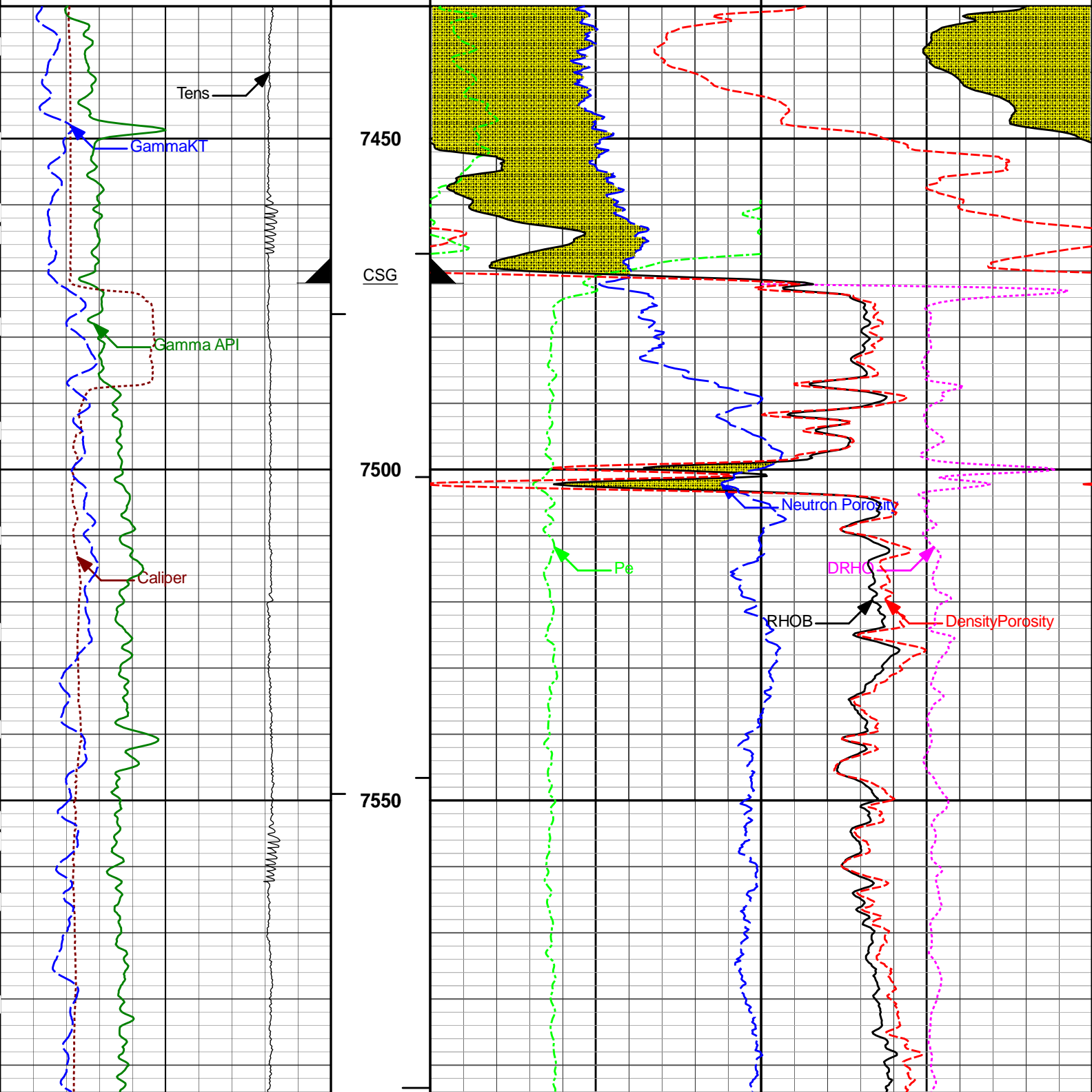
MAIN PASS 2" = 100', DENSITY PRESENTATION

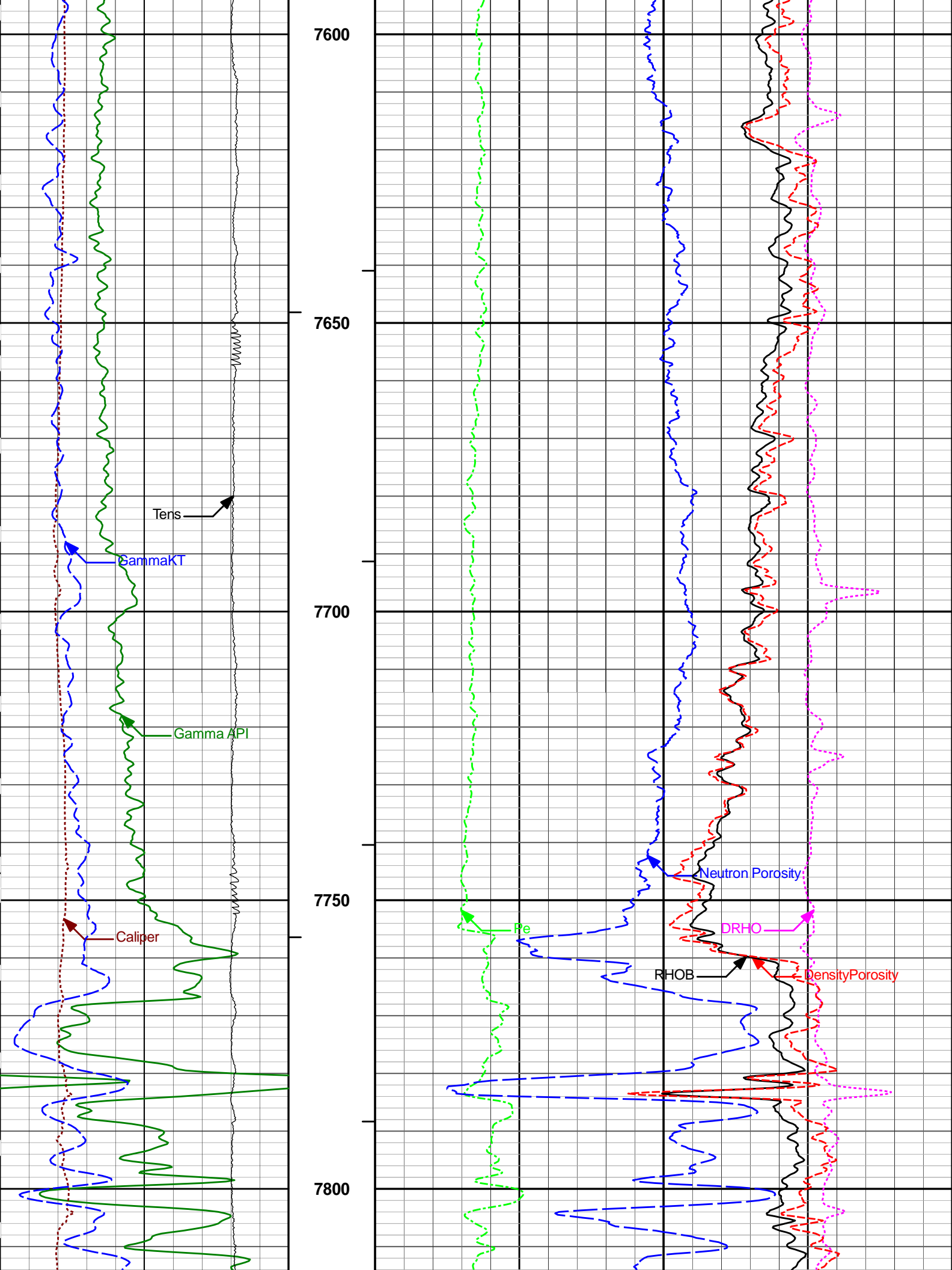
HALLIBURTON

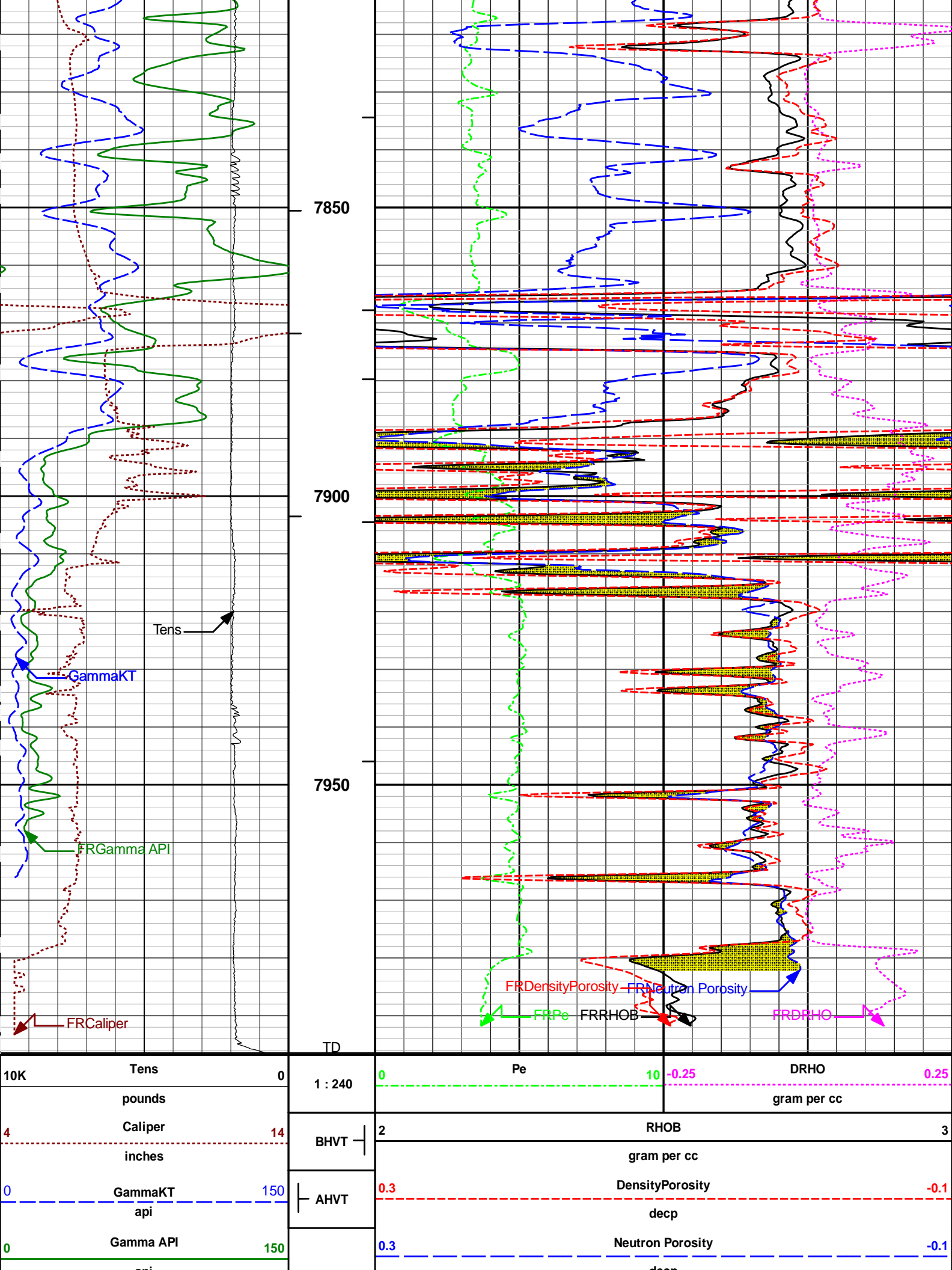
Plot Time: 25-Aug-14 13:11:10
 Plot Range: 7430 ft to 7996.5 ft
 Data: GOODPOINT_27\Well Based\MAIN\
 Plot File: \\PORO\DENSITY_5"

MAIN PASS 5" = 100', DENSITY PRESENTATION

0	Gamma API	150		0.3	Neutron Porosity		-0.1
	api				decp		
0	GammaKT	150	AHVT	0.3	DensityPorosity		-0.1
	api				decp		
4	Caliper	14	BHVT	2	RHOB		3
	inches				gram per cc		
10K	Tens	0	1 : 240	0	Pe	10	-0.25
	pounds				DRHO		0.25
					gram per cc		







7850

7900

7950

TD

Tens

GammaKT

FRGamma API

FRCaliper

FRDensityPorosity FRRNeutron Porosity

FRPe

FRRHOB

FRDRHO

10K	Tens	0
	pounds	
4	Caliper	14
	inches	
0	GammaKT	150
	api	
0	Gamma API	150
	api	

1 : 240

BHVT

AHVT

0	Pe	10	-0.25	DRHO	0.25
				gram per cc	
2	RHOB				3
	gram per cc				
0.3	DensityPorosity				-0.1
	decp				
0.3	Neutron Porosity				-0.1
	decp				

api

decp

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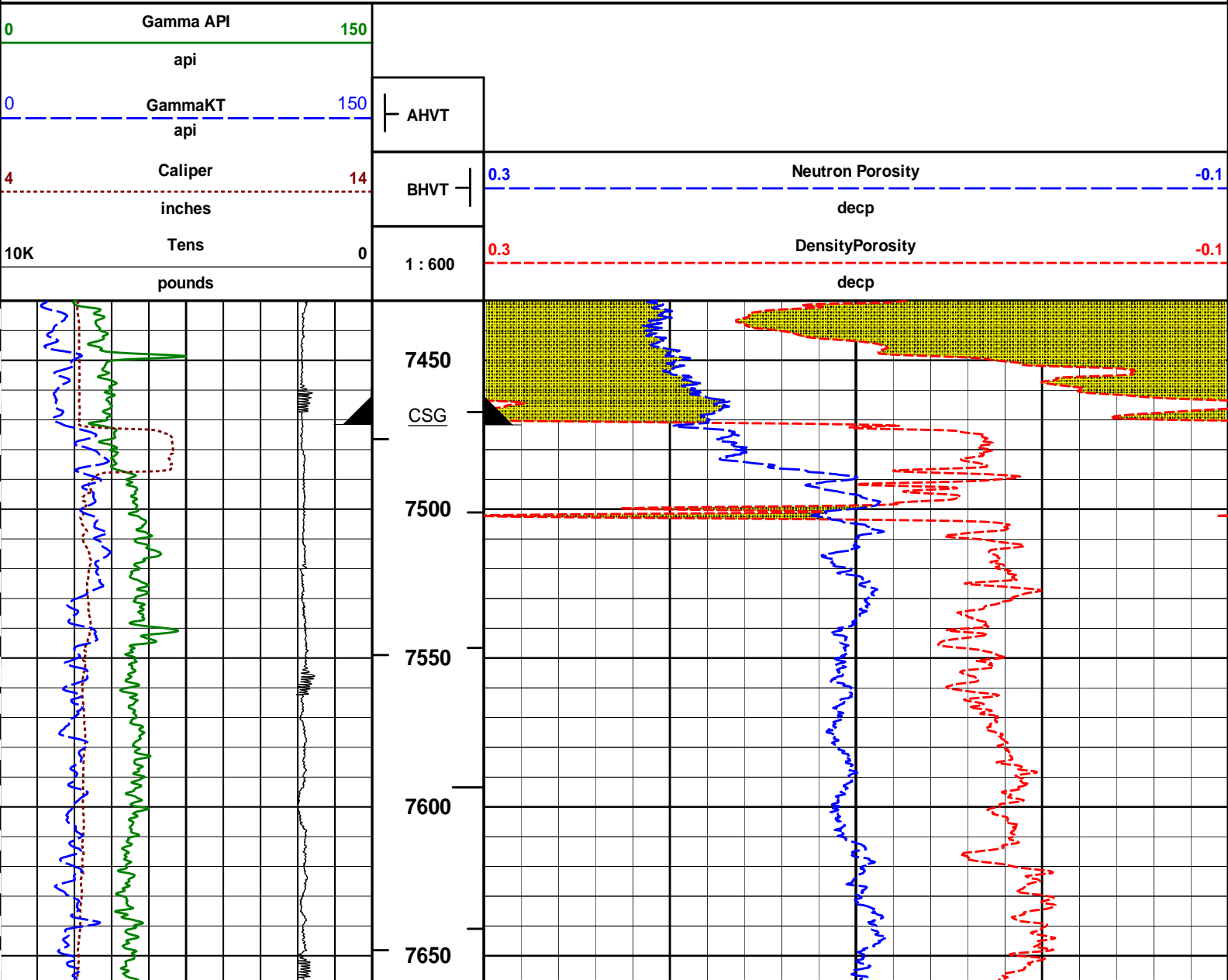
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Plot Range: 7430 ft to 7996.5 ft
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Plot File: \\PORO\DENENSITY_5"

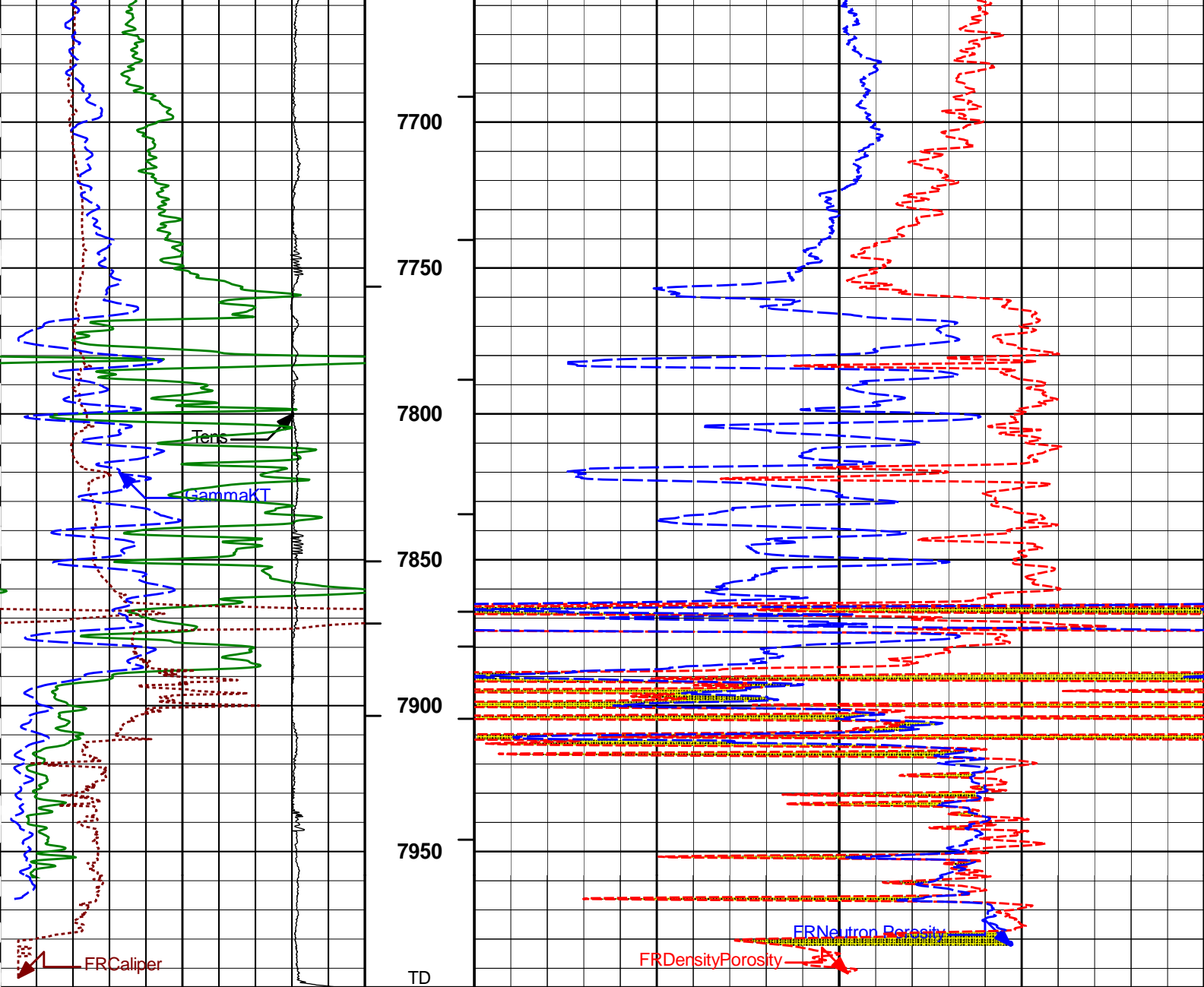
MAIN PASS 5" = 100', DENSITY PRESENTATION

HALLIBURTON

Plot Time: 25-Aug-14 13:11:13
Plot Range: 7430 ft to 7996.5 ft
Data: GOODPOINT_27\Well Based\MAIN\
Plot File: \\PORO\NEU_DEN_2"

MAIN PASS 2" = 100', NEUTRON/DENSITY





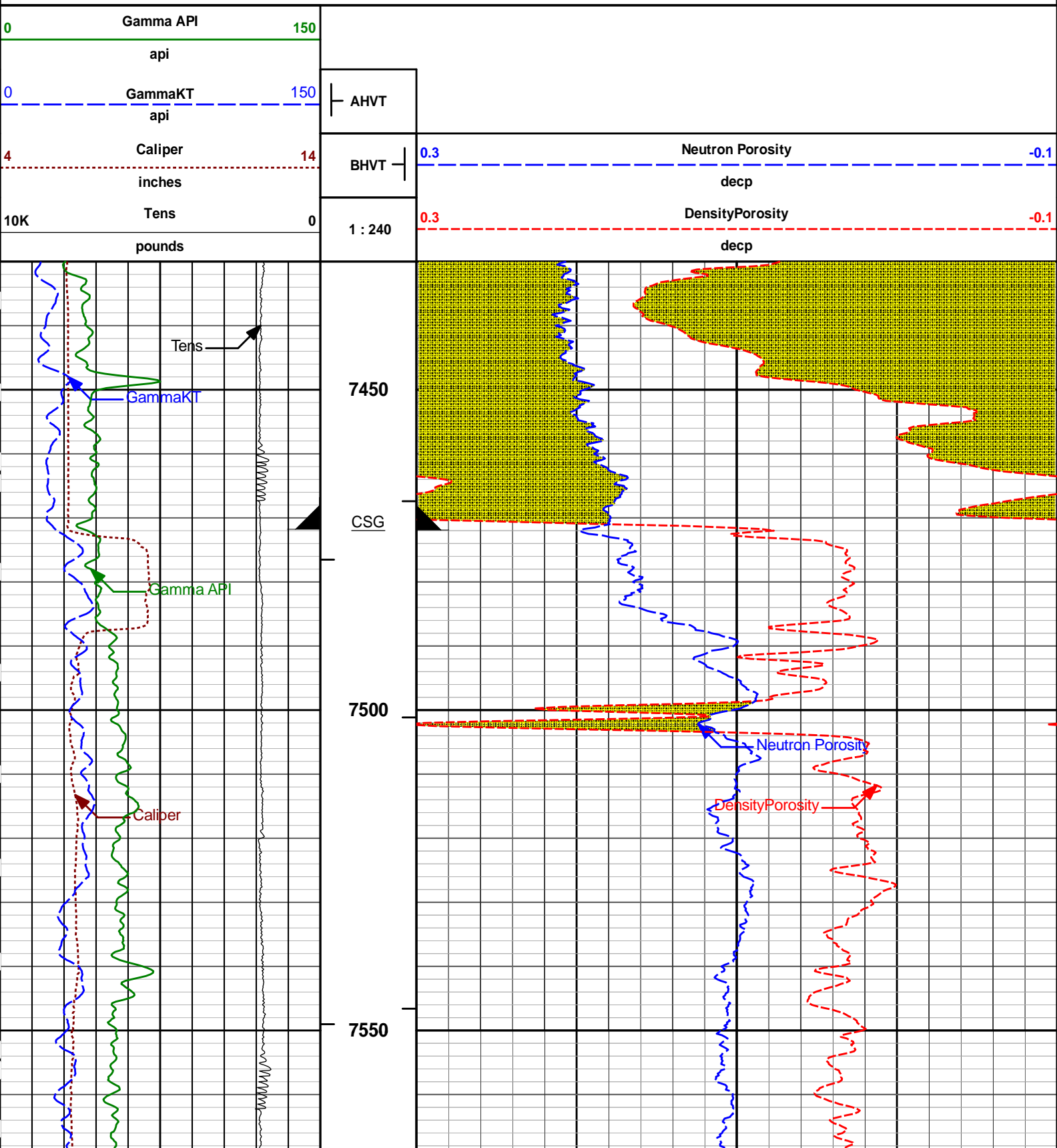
10K	Tens	0	1 : 600	0.3	DensityPorosity	-0.1
	pounds				decp	
4	Caliper	14	BHVT	0.3	Neutron Porosity	-0.1
	inches				decp	
0	GammaKT	150	AHVT			
	api					
0	Gamma API	150				
	api					

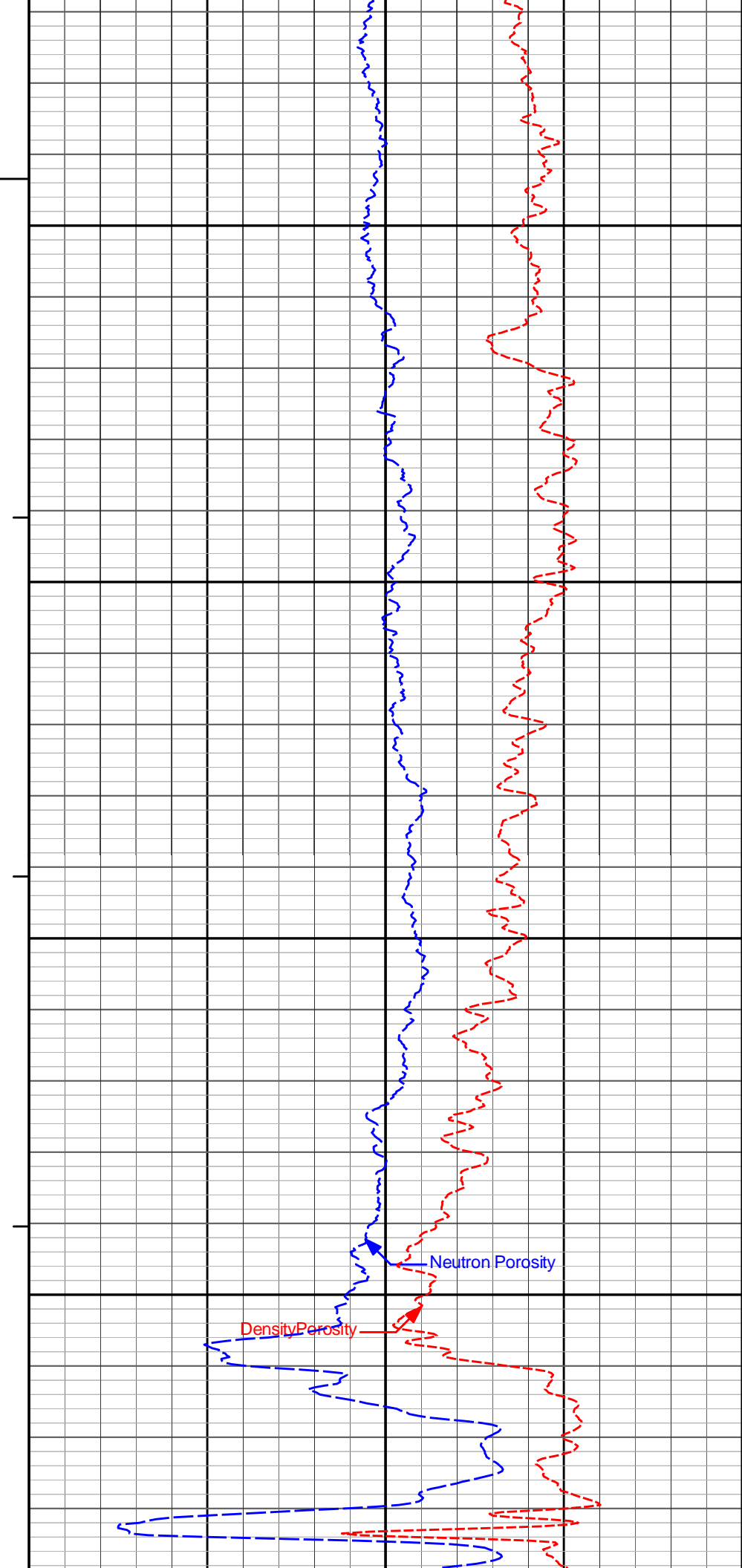
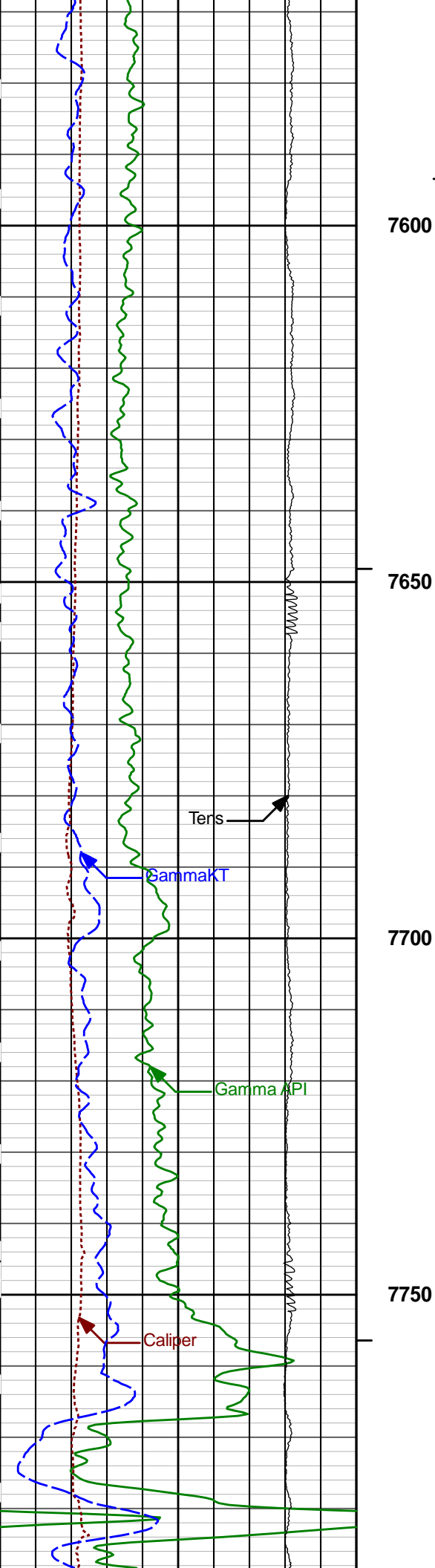
HALLIBURTON

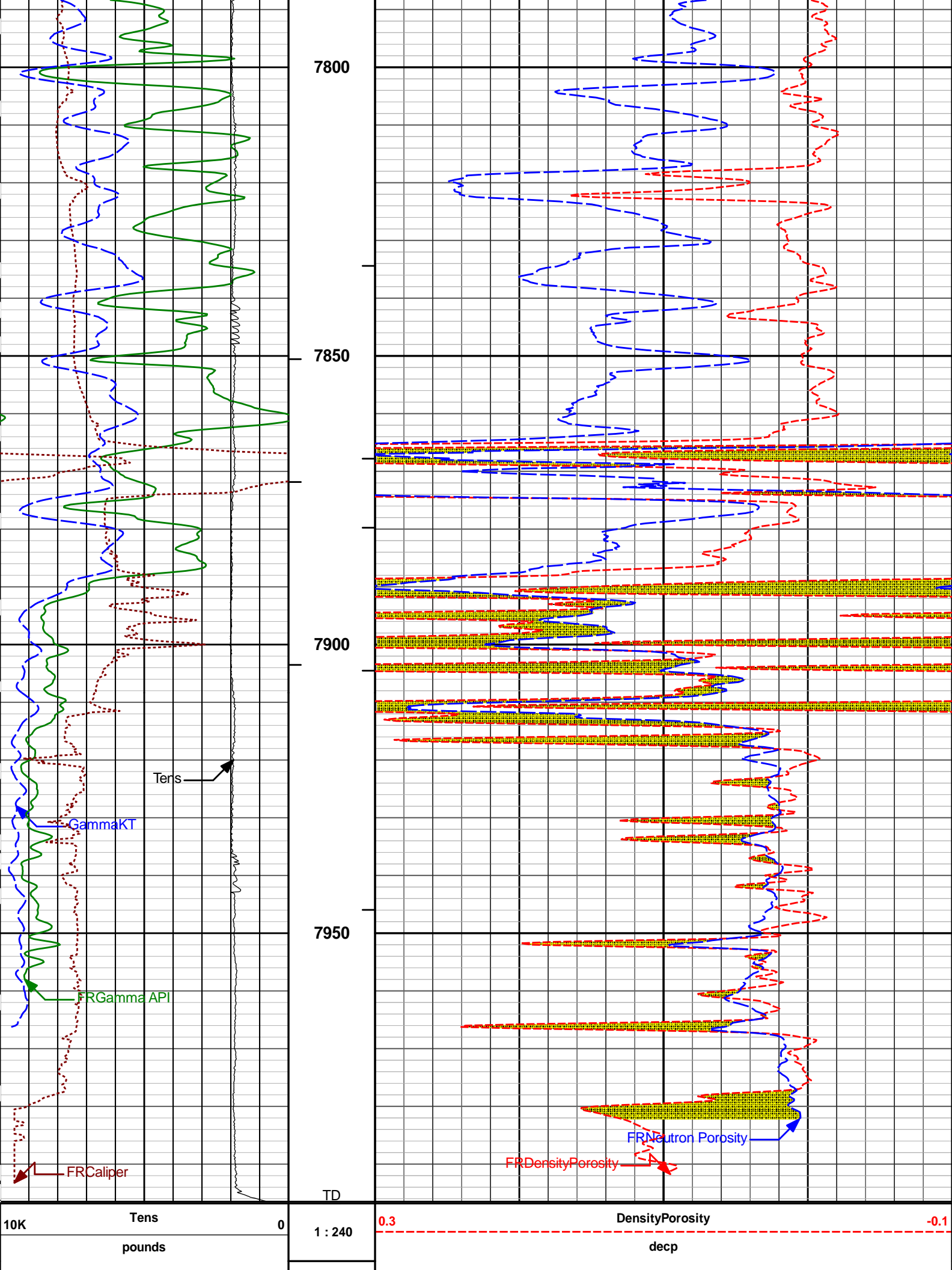
Plot Time: 25-Aug-14 13:11:14
 Plot Range: 7430 ft to 7996.5 ft
 Data: GOODPOINT_27\Well Based\MAIN\
 Plot File: \\POROWEU_DEN_2"

MAIN PASS 2" = 100', NEUTRON/DENSITY

MAIN PASS 5" = 100', NEUTRON/DENSITY







4	Caliper	14	BHVT	0.3	Neutron Porosity	-0.1
	inches				decp	
0	GammaKT	150	AHVT			
	api					
0	Gamma API	150				
	api					

HALLIBURTON	Plot Time: 25-Aug-14 13:11:17 Plot Range: 7430 ft to 7996.5 ft Data: GOODPOINT_27\Well Based\MAIN\ Plot File: \\PORO\NEU_DEN_5"
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MAIN PASS 5" = 100', NEUTRON/DENSITY

HALLIBURTON
CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 11958949	Reference Calibration Date:	10-Jul-14 10:47:44
Engineer:	P. DIMPFL	Calibration Date:	25-Aug-14 00:10:53
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

Calibrator Source S/N: MP051807-04 Calibrator API Reference:239.00 api Equivalent Calibrator API Reference:243.2 api			
Measurement	Measured	Calibrated	Units
Background	26.3	26.7	api
Background + Calibrator	266.4	269.9	api
Calibrator	240.1	243.2	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 11958949	Reference Calibration Date:	25-Aug-14 00:10:53
Engineer:	P. DIMPFL	Calibration Date:	25-Aug-14 00:16:26
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

Calibrator Source S/N: MP051807-04 Calibrator API Reference:239.00 api Equivalent Calibrator API Reference:243.2 api			
Field Verification	Shop	Field	Units
Background	26.7	26.0	api
Background + Calibrator	269.9	270.1	api
Calibrator	243.2	244.1	api
Shop	Field	Difference	Tolerance
243.2	244.1	-0.9	+/- 9.00

CSNG-FS SHOP CALIBRATION			
Tool Name:	CSNG - 11568970	Reference Calibration Date:	19-Jun-14 15:17:00
Engineer:	B. RIDDEL	Calibration Date:	13-Aug-14 10:08:35
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

Source SN: MP051807-04

TITANIUM CASE	Measured	Calibrated	Units
60 KEV Peak Channel #	48.0	48.0	Channel #
239 KEV Peak Channel #	23.2	23.1	Channel #
583 KEV Peak Channel #	52.2	51.9	Channel #
2614 KEV Peak Channel #	215.9	214.4	Channel #
Calibrate Temperature	68.9	82.9	degF

Pass/Fail Summary	Centroid
239 KEV Peak	Passed
583 KEV Peak	Passed
2614 KEV Peak	Passed

Blanket Reference Value: 239.00 API

Calibrator Value: 271.4 API

	Counts	Units	Measured	Calibrated	Units
Thorium Blanket	1659.9	CPS	314.6	300.0	API
Background	158.0	CPS	43.2	28.6	API

Gamma Ray Gain: 0.91

Expected Gain Range: 0.85 - 1.15

Gamma Gain Check: Passed

CSNG-FS FIELD CALIBRATION

Tool Name: CSNG - 11568970

Reference Calibration Date: 13-Aug-14 10:08:35

Engineer: P. DIMPFL

Calibration Date: 25-Aug-14 00:21:12

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Source SN:

TITANIUM CASE	Shop	Field	Units
60 KEV Peak Channel #	48.0	48.0	Channel #
239 KEV Peak Channel #	23.1	23.1	Channel #
583 KEV Peak Channel #	51.9	51.7	Channel #
2614 KEV Peak Channel #	214.4	214.0	Channel #
Calibrate Temperature	82.9	77.1	degF

Pass/Fail Summary	Centroid
239 KEV Peak	Passed
583 KEV Peak	Passed
2614 KEV Peak	Passed

Blanket Reference Value: 239.00 API

Calibrator Value: 271.4 API

	Counts	Units	Measured	Calibrated	Units
Thorium Blanket	1393.2	CPS	300.0	295.3	API
Background	112.8	CPS	28.6	23.9	API

Gamma Ray Gain: 1.07

Expected Gain Range: 0.85 - 1.15
Gamma Gain Check: Passed

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 10993888

Engineer: P. DIMPFL

Software Version: WL INSITE R4.2.0 (Build 2)

Reference Calibration Date: 28-Jun-14 10:40:51

Calibration Date: 03-Aug-14 14:27:06

Calibration Version: 1

Logging Source S/N: DSN-388
Tank Serial Number: GJ WATER TANK
Reference value assigned to Tank: 52.750
Snow Block S/N: GJ SNOW BLOCK
Calibration Tank Water Temperature: 73 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.989	0.993	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):	0.2156	0.2169	0.0013	+/- 0.0020
Calibrated Ratio:	9.88	9.93	0.045	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0734	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 - 10993888

Engineer: P. DIMPFL

Software Version: WL INSITE R4.2.0 (Build 2)

Reference Calibration Date: 03-Aug-14 14:27:06

Calibration Date: 25-Aug-14 00:23:45

Calibration Version: 1

Logging Source S/N: DSN-388
Snow Block S/N: GJ SNOW BLOCK

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0734	0.0654	-0.0080	+/- 0.0150

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

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - 10951300

Engineer: P. DIMPFL

Reference Calibration Date: 10-Jul-14 11:12:44

Calibration Date: 03-Aug-14 15:53:21

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2293.52	-2095.47	-7000.00 - -1000.00
Pad Gain	0.0003755	0.0003729	0.000200 - 0.000600
Arm Offset	-2435.91	-3502.47	-5000.00 - 3000.00
Arm Gain	0.0004306	0.0005158	0.000300 - 0.000700
Arm Power	0.000004077	-0.000002471	-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)	1.94	2.00	0.06	+/- 0.20
Medium Ring (in)	3.70	3.75	0.05	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.62	6.50	-0.12	+/- 0.20
Medium Ring (in)	8.20	8.25	0.05	+/- 0.20
Large Ring (in)	15.02	15.00	-0.02	+/- 0.20

PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed
PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.76	0.01	+/- 0.10
Ring Diameter	8.25	8.14	-0.11	+/- 0.15

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

Logging Source S/N: 5153GW

Aluminum Block S/N: 63094

Density: 2.608g/cc

Pe: 3.230

Magnesium Block S/N: 63387

Density: 1.681g/cc

Pe: 2.600

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0235	1.0532	0.90 - 1.10
Near Dens Gain	1.0169	1.0252	0.90 - 1.10
Near Peak Gain	1.0166	1.0144	0.90 - 1.10
Near Lith Gain	0.9896	0.9742	0.90 - 1.10
Far Bar Gain	1.0115	1.0160	0.90 - 1.10
Far Dens Gain	1.0003	1.0033	0.90 - 1.10
Far Peak Gain	0.9977	0.9959	0.90 - 1.10
Far Lith Gain	0.9770	0.9676	0.90 - 1.10
Near Bar Offset	-0.0278	-0.2911	NONE
Near Dens Offset	0.0302	-0.0384	NONE
Near Peak Offset	0.0199	0.0465	NONE
Near Lith Offset	0.2260	0.3562	NONE
Far Bar Offset	0.0261	-0.0137	NONE
Far Dens Offset	0.1086	0.0820	NONE
Far Peak Offset	0.1163	0.1291	NONE
Far Lith Offset	0.2551	0.3125	NONE
Near Bar Background	869.66	868.92	700 - 1450
Near Dens Background	291.23	289.61	230 - 480
Near Peak Background	129.43	130.68	100 - 210
Near Lith Background	157.91	156.51	125 - 260
Far Bar Background	536.80	537.85	450 - 900
Far Dens Background	208.59	208.18	175 - 345
Far Peak Background	83.12	83.34	70 - 140
Far Lith Background	86.65	86.62	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.671	1.680	0.009	+/- 0.015
Pe	2.518	2.581	0.063	+/- 0.150
ALUMINUM				
Density (g/cc)	2.599	2.607	0.008	+/- 0.01500
Pe	3.198	3.203	0.005	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0038	+/- 0.0110	-0.0029	+/- 0.0140
Magnesium Block	0.0024	+/- 0.0110	0.0009	+/- 0.0140
Aluminum Block	-0.0008	+/- 0.0110	-0.0006	+/- 0.0140
Resolution	8.89	6.00 - 11.50	9.52	6.00 - 11.50
Internal Verifier(B+D+P+L)	1446	1200 - 2700	916	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 - 10865876

Reference Calibration Date: 03-Aug-14 15:38:55

Engineer: P. DIMPFL

Calibration Date: 25-Aug-14 00:11:16

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Pad Temperature: 72.8 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1445.720	1445.138	-0.582	15.339
Far (B+D+P+L) cps	915.990	904.337	-11.653	16.414
Near Resolution	8.89	9.02	0.130	0.50
Far Resolution	9.52	9.72	0.200	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-11958949						
Gamma Ray Calibrator	243.2	244.1	-----	-0.9	+/- 9.00	api
CSNG-11568970						
60 KEV Peak Channel #	48.0	48.0	-----	0.0	-----	Channel #
239 KEV Peak Channel #	23.1	23.1	-----	0.0	-----	Channel #
583 KEV Peak Channel #	51.9	51.7	-----	0.2	-----	Channel #
2614 KEV Peak Channel #	214.4	214.0	-----	0.4	-----	Channel #
DSNT-10993888						
Snow-Block Porosity	0.0734	0.0654	-----	0.0080	+/- 0.0150	decP
SDLT-10951300						
Pad Extension	3.75	3.76	-----	-0.01	+/-0.10	in
Ring Diameter	8.25	8.14	-----	0.11	+/-0.15	in
SDLT Pad-10865876						
Near(B+D+P+L)	1445.720	1445.138	-----	0.582	+/-15.339	cps
Far(B+D+P+L)	915.990	904.337	-----	11.653	+/-16.414	cps

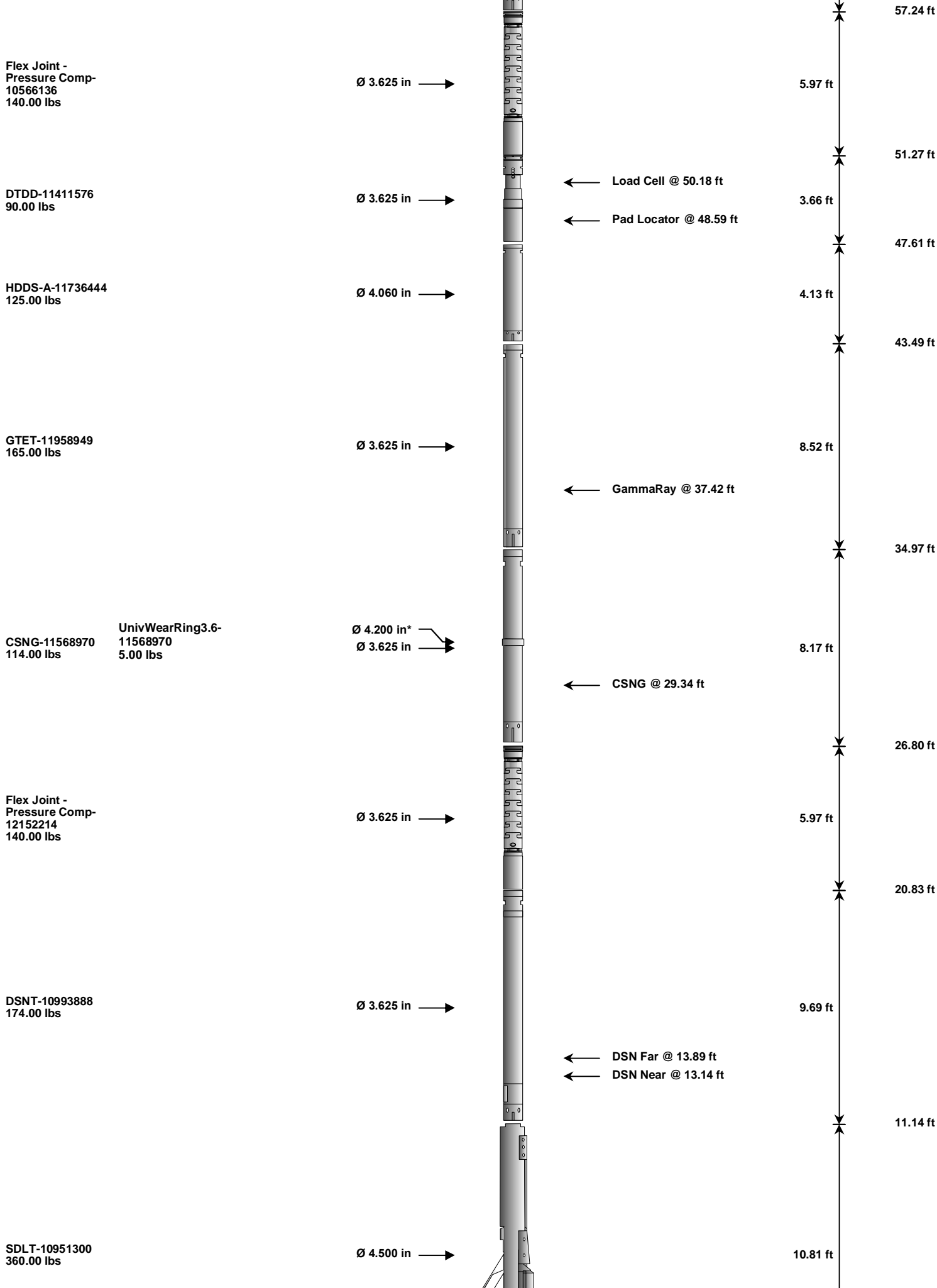
Date: 08/25/2014 12:42:45 PM Location: SDLT DSNT CSNG-11568970

Date: 08/25/2014 12:42:45 PM

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Spacer-12345678 100.00 lbs		Ø 3.625 in →			5.70 ft	62.94 ft



CSNG Insite Pad 10865876
65.00 lbs

Ø 4.750 in* →

SDL Caliper @ 3.15 ft
SDL @ 3.14 ft

Bull Nose-00000001
5.00 lbs

Ø 2.350 in →

0.33 ft
0.33 ft
0.00 ft

Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
SPC	Test		12345678	100.00	5.70	57.24	100.00
FLEX	Flex Joint - Pressure Compensated		10566136	140.00	5.97	51.27	300.00
DTDD	Downhole Tension Device		11411576	90.00	3.66	47.61	300.00
HDDS-A	Heavy Duty DITS Swivel tool.		11736444	125.00	4.13	43.49	300.00
GTET	Gamma Telemetry Tool		11958949	165.00	8.52	34.97	60.00
CSNG	Compensated Spectral Natural Gamma		11568970	114.00	8.17	26.80	15.00
UWR3P6	Universal Wear Ring 3 5-8 inch		11568970	5.00	0.35	*	30.88
FLEX	Flex Joint - Pressure Compensated		12152214	140.00	5.97	20.83	300.00
DSNT	Dual Spaced Neutron		10993888	174.00	9.69	11.14	60.00
SDLT	Spectral Density Tool		10951300	360.00	10.81	0.33	60.00
SDLP	Density Insite Pad		10865876	65.00	2.55	*	60.00
BLNS	Bull Nose		00000001	5.00	0.33	0.00	300.00

Total		1,483.00	62.94	* Not included in Total Length and Length Accumulation.
Data: GOODPOINT_27\0002 TPL_SDLT_DSNT_CSNG\IDLE				
			Date: 25-Aug-14 04:04:45	

COMPANY	KINDER MORGAN CO2 Co. L.P.		
WELL	GOODMAN POINT 27		
FIELD	MCELMO DOME		
COUNTY	MONTEZUMA	STATE	CO

HALLIBURTON

DUAL SPACED NEUTRON
SPECTRAL DENSITY