

HALLIBURTON

SPECTRAL DENSITY
DUAL SPACED NEUTRON
ARRAY COMPENSATED
TRUE RESISTIVITY

NOBLE ENERGY										COMPANY		NOBLE ENERGY					
SCHNEIDER USX II31-12PD										WELL		SCHNEIDER USX II31-12PD					
WATTENBERG										FIELD		WATTENBERG					
WELD										COUNTY		WELD					
CO										STATE		CO					
API No. 05123318430000										COUNTY		WELD		STATE		CO	
Location										Sect. 31		Twp. 7N		Rge. 66W		Other Services:	
SHL: 837 FSL & 1908 FWL SESW																RWCH	
BHL: 1980 FSL & 660 FWL NWSW																GTET	
LAT: 40.52582°																CSNG	
LONG: 104.82533°																	
Permanent Datum										GL				Elev.: 4906.0 ft		Elev.: K.B.	
Log measured from										KB				16.0 ft above perm. Datum		D.F.	
Drilling measured from										KB						G.L.	
Date										19-Nov-10							
Run No.										ONE							
Depth - Driller										7870.00 ft							
Depth - Logger										7865.0 ft							
Bottom - Logged Interval										7865 ft							
Top - Logged Interval										871 ft							
Casing - Driller										8.625 in @ 871.0 ft				@			
Casing - Logger										871.0 ft							
Bit Size										7.875 in				@			
Type Fluid in Hole										WBM							
Density										9.3 ppq		49.00 s/qt					
PH										8.00 pH		8.0 cp/m					
Source of Sample										FLOW LINE							
Rm @ Meas. Temperature										1.150 ohmm @ 80.40 degF				@			
Rmf @ Meas. Temperature										1.05 ohmm @ 75.00 degF				@			
Rmc @ Meas. Temperature										1.087 ohmm @ 75.00 degF				@			
Source Rmf										CHART		CHART					
Rm @ BHT										0.46 ohmm @ 212.0 degF				@			
Time Since Circulation										5.0 hr							
Time on Bottom										19-Nov-10 20:23							
Max. Rec. Temperature										212.0 degF @ 7865.0 ft				@			
Equipment										11072147		BRIGHTON					
Recorded By										C. BLUE							
Witnessed By										C. PATTERSON							

COMPANY NOBLE ENERGY
WELL SCHNEIDER USX II31-12PD
FIELD WATTENBERG
COUNTY WELD
STATE CO

API No. 05123318430000
Location SHL: 837' FSL & 1908' FWL SESW
BHL: 1980' FSL & 660' FWL NWSW
LAT: 40.52582°
LONG: 104.82533°

Other Services:
RWCH
GTET
CSNG

Fold here

Service Ticket No.: 7772170						API Serial No.: 05123318430000						PGM Version: WL INSITE R3.0.6 (Build 4)																	
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 758-352				N/A				0.5" S.O.				N/A			
Rmc @ Meas. Temp.				@				@																					
Source Rmf		Rmc																											
Rm @ BHT				@				@																					
Rmf @ BHT				@				@																					
Rmc @ BHT				@				@																					
EQUIPMENT DATA																													
GAMMA						ACOUSTIC						DENSITY						NEUTRON											
Run No.		ONE				Run No.						Run No.		ONE				Run No.		ONE									
Serial No.		11277436				Serial No.						Serial No.		I337M319				Serial No.		11919337									
Model No.		GTET				Model No.						Model No.		SDLT				Model No.		DSNT									
Diameter		3.625"				No. of Cent.						Diameter		4.5"				Diameter		3.625"									
Detector Model No.		102A				Spacing						Log Type		GAM/GAM				Log Type		NEU/NEU									
Type		SCINT										Source Type		Cs137				Source Type		Am241Be									
Length		8"				LSA [Y/N]						Serial No.		5256 GW				Serial No.		DSN 430									
Distance to Source		17'				FWDA [Y/N]						Strength		1.5 Ci				Strength		15 Ci									

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	7865	7658	REC	0	250				20%	0%	2.68 g/cc	20%	0%	SAND		
ONE	7658	7346	REC	0	250				20%	0%	2.71 g/cc	20%	0%	LIME		
ONE	7346	871	REC	0	250				20%	0%	2.68 g/cc	20%	0%	SAND		
DIRECTIONAL INFORMATION																
Maximum Deviation									@	KOP						@
Remarks:																
RWCH/GTET/CSNG/DSNT/SDLT/ACRT RAN IN COMBINATION																
ANNULAR HOLE VOLUME CALCULATED FOR 4.5 INCH PRODUCTION CASING																
TENSION PULLS, WASHOUTS, BOREHOLE RUGOSITY AFFECT TOOL RESPONSE																
CREW: J. WALKER, M. BURNETT, A. DUNCAN, J. BARRAS																
RIG: ENSIGN 55																
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES -- BRIGHTON, CO -- (303) 825-4346																
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PARAMETERS REPORT

Depth (ft)	Tool Name	Description	Value	Units
TOP				
	DSNT	Neutron Lithology	Sandstone	
	SDLT	Formation Density Matrix	2.680	g/cc
7346.00				
	DSNT	Neutron Lithology	Limestone	
	SDLT	Formation Density Matrix	2.710	g/cc
7658.00				
	SHARED	Bit Size	7.875	in
	SHARED	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	Borehole Fluid Weight	9.300	ppg
	SHARED	Oil Based Mud System?	No	
	SHARED	Mud Resistivity	1.150	ohmm
	SHARED	Temperature of Mud	80.4	degF
	SHARED	Logging Interval is Cased?	No	
	SHARED	AHV Casing OD	4.500	in
	SHARED	Surface Temperature	55.0	degF
	SHARED	Total Well Depth	7865.00	ft
	SHARED	Bottom Hole Temperature	212.0	degF
	SHARED	Navigation and Survey Master Tool	NONE	
	SHARED	High Res Z Accelerometer Master Tool	GTET	
	SHARED	Temperature Master Tool	NONE	
	SHARED	Borehole Size Master Tool	NONE	
	GTET	Process Gamma Ray?	Yes	
	GTET	Gamma Tool Standoff	0.000	in

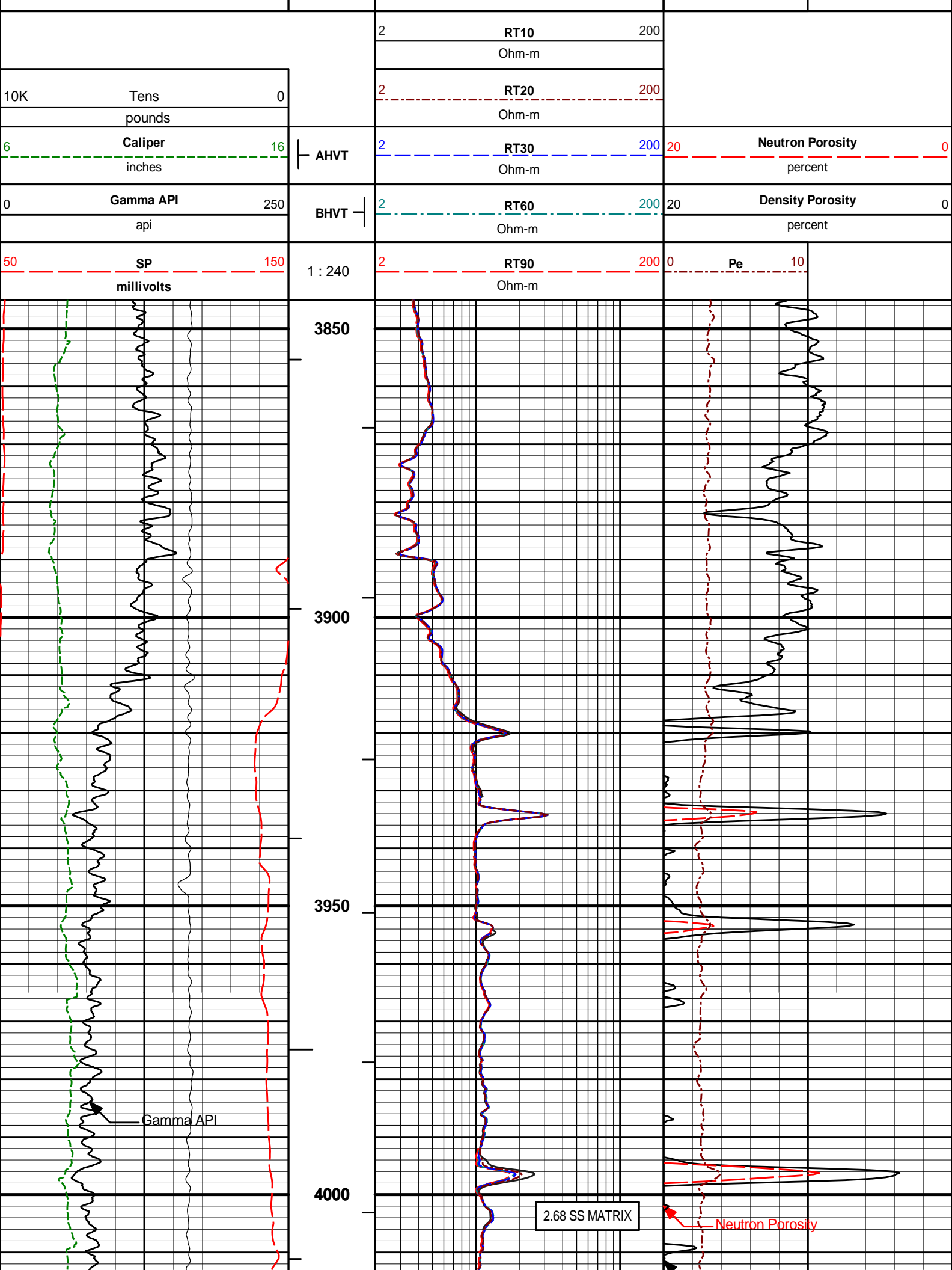
GTET	Process Gamma Ray EVR?	No	
GTET	Potassium	0.00	%
GTET	Mud Type	Natural	
GTET	Tool Position	Standoff	
CSNG	Process CSNG Data?	Yes	
CSNG	Is Tool Centralized?	No	
CSNG	Mud Type?	Natural	
CSNG	Percent K in Mud by Weight?	0.00	%
CSNG	Gamma Enviromental Corrections?	Yes	
CSNG	Barite Correction Factor	1.00	
DSNT	Process DSN?	Yes	
DSNT	Process DSN EVR?	No	
DSNT	Neutron Lithology	Sandstone	
DSNT	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.000	in
DSNT	Temperature Correction Type	None	
DSNT	DSN Pressure Correction Type	None	
DSNT	View More Correction Options	No	
DSNT	Use TVD for Gradient Corrections?	No	
DSNT	Logging Horizontal Water Tank?	No	
SDLT	Process Density?	Yes	
SDLT	Process Density EVR?	No	
SDLT	Is Hole Air Drilled?	No	
SDLT	Logging Calibration Blocks?	No	
SDLT	SDLT Pad Temperature Valid?	Yes	
SDLT	Disable temperature warning	No	
SDLT	Weighted Mud Correction Type?	None	
SDLT	Formation Density Matrix	2.680	g/cc
SDLT	Formation Density Fluid	1.000	g/cc
SDLT	Process Caliper Outputs?	Yes	
SDLT	Process MicroLog Outputs?	Yes	
ACRt	Process ACRt?	Yes	
ACRt	Minimum Tool Standoff	0.50	in
ACRt	Temperature Correction Source	FP Lwr & FP Up	
ACRt	Tool Position	Free Hanging	
ACRt	Rmud Source	Mud Cell	
ACRt	Minimum Resistivity for MAP	0.20	ohmm
ACRt	Maximum Resistivity for MAP	200.00	ohmm
ACRt	Threshold Quality	0.50	

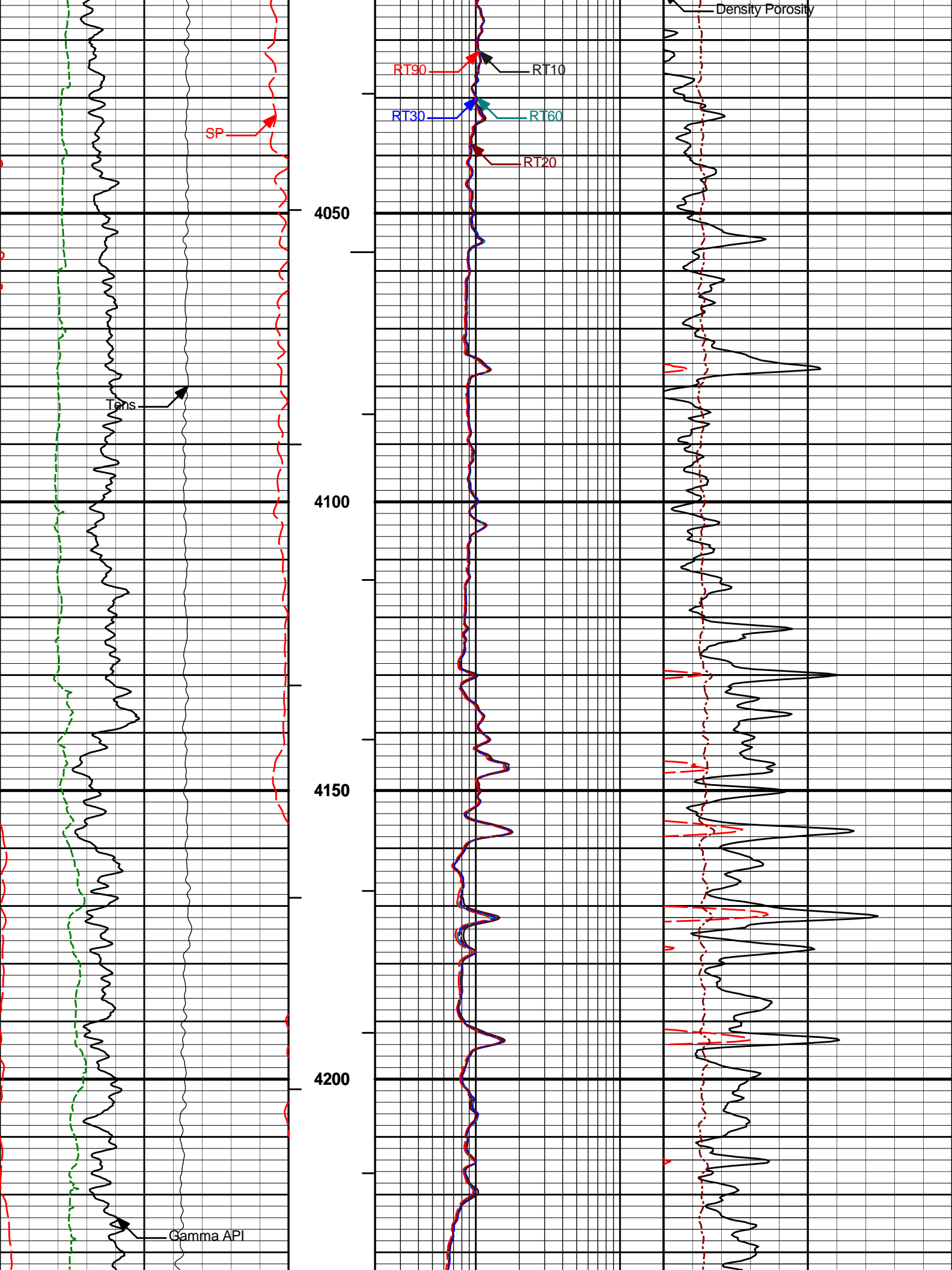


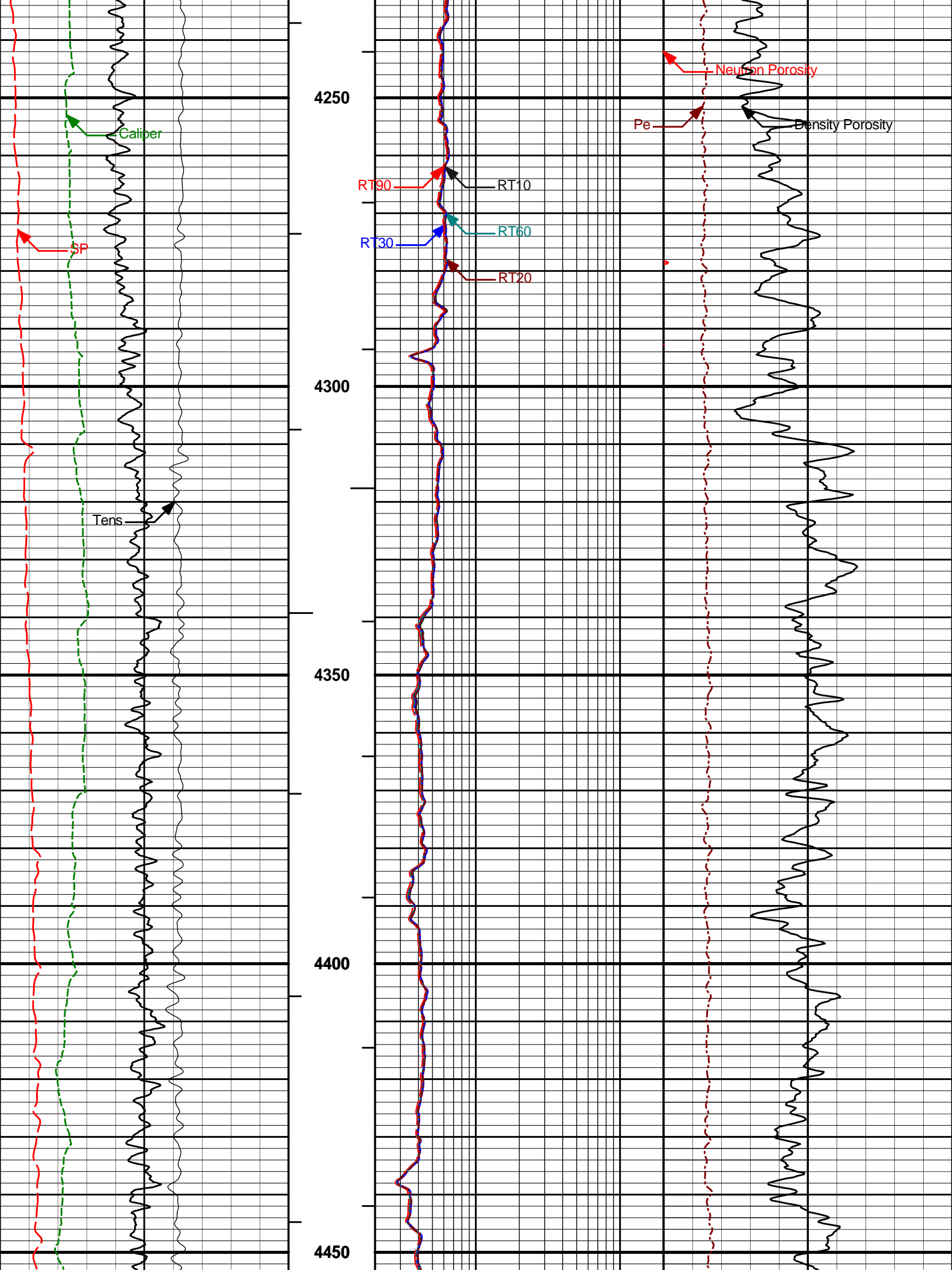
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 Plot Range: 3845 ft to 5205 ft
 Data: SCH_USX_II31_12\Well Based\MAIN*
 Plot File: \COMP\IPARK_SUS

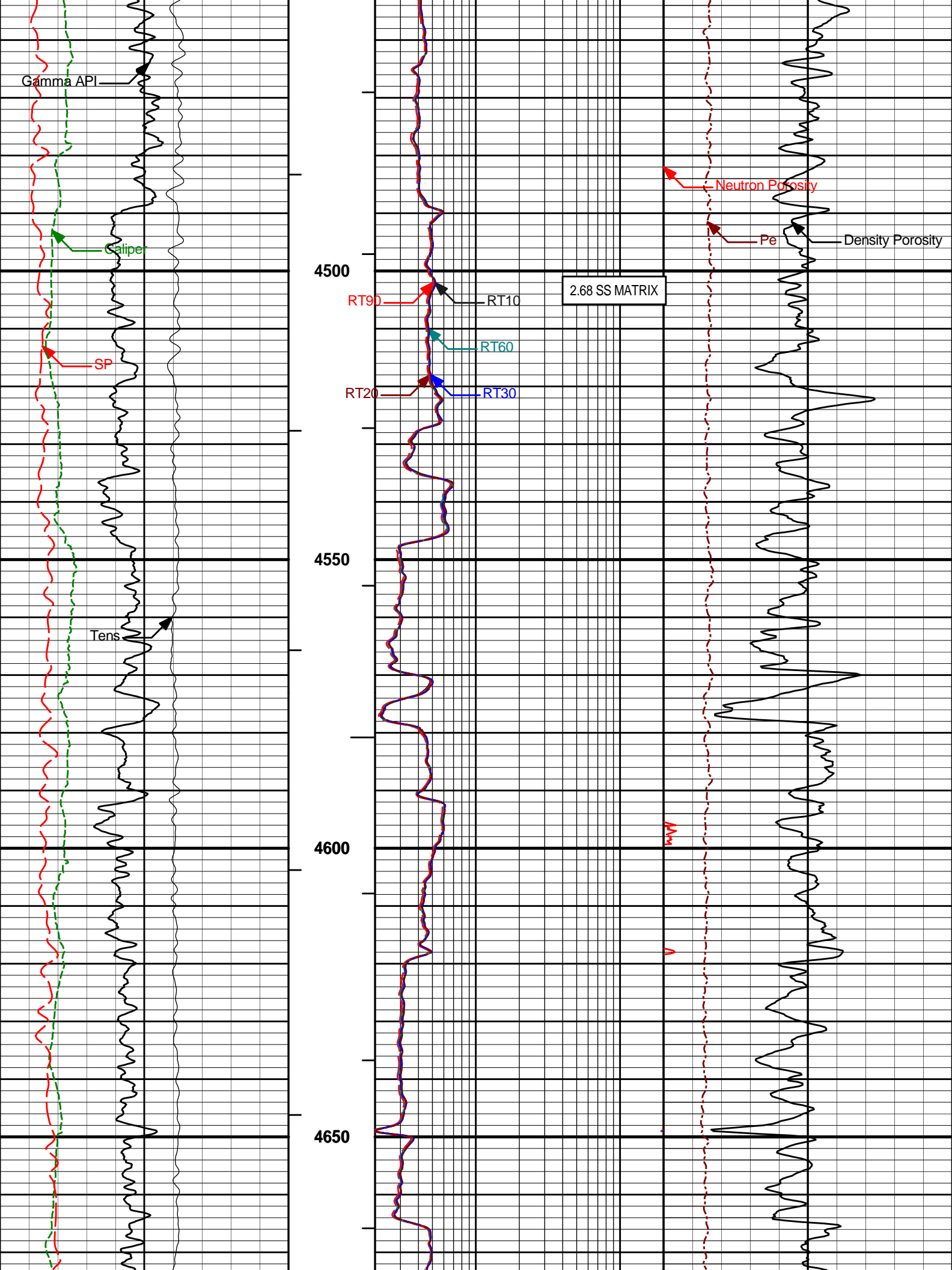
MAIN PASS 5" = 100'

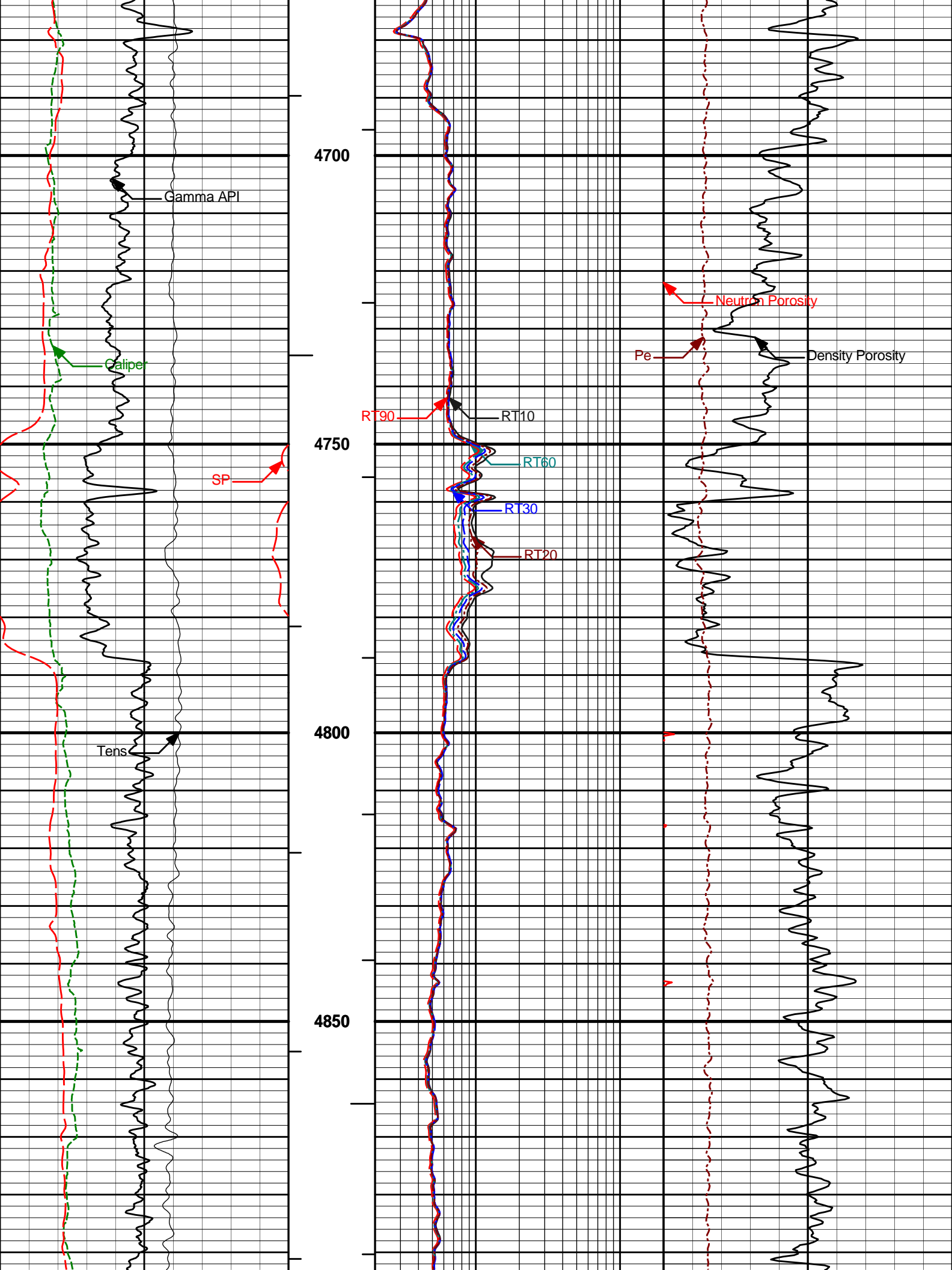
Track 1	Depth Track	Track 2	Track 5	Track 3
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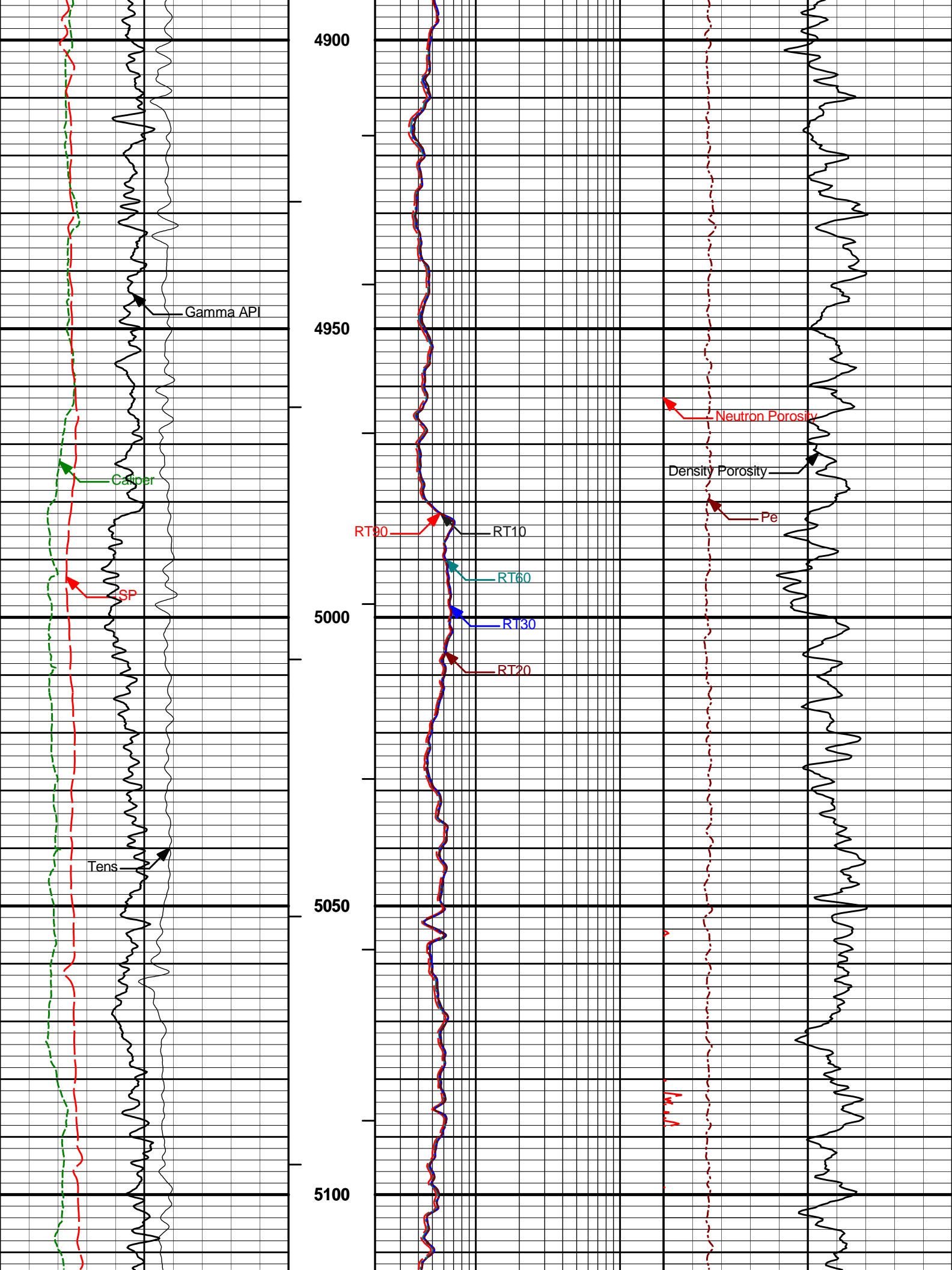




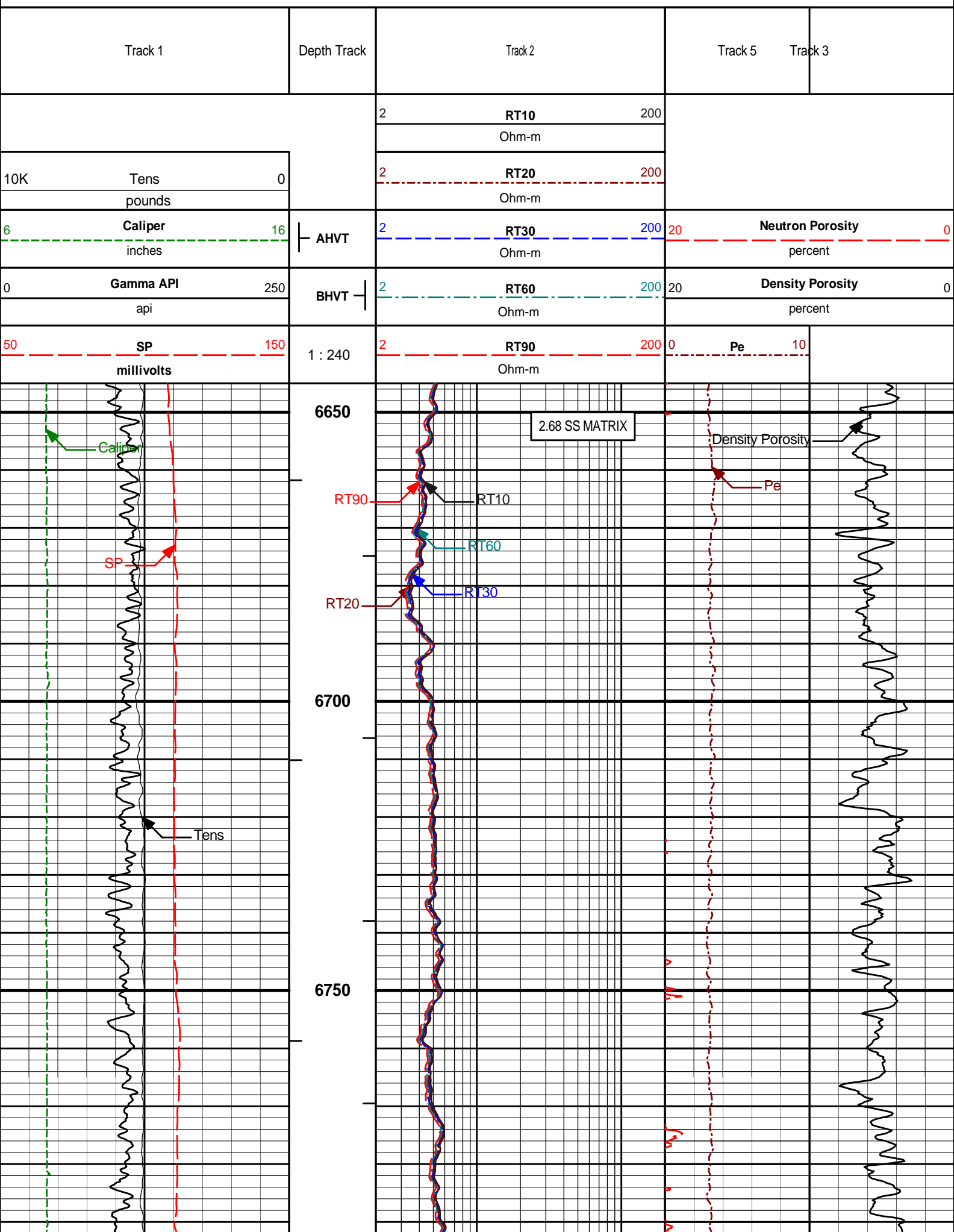


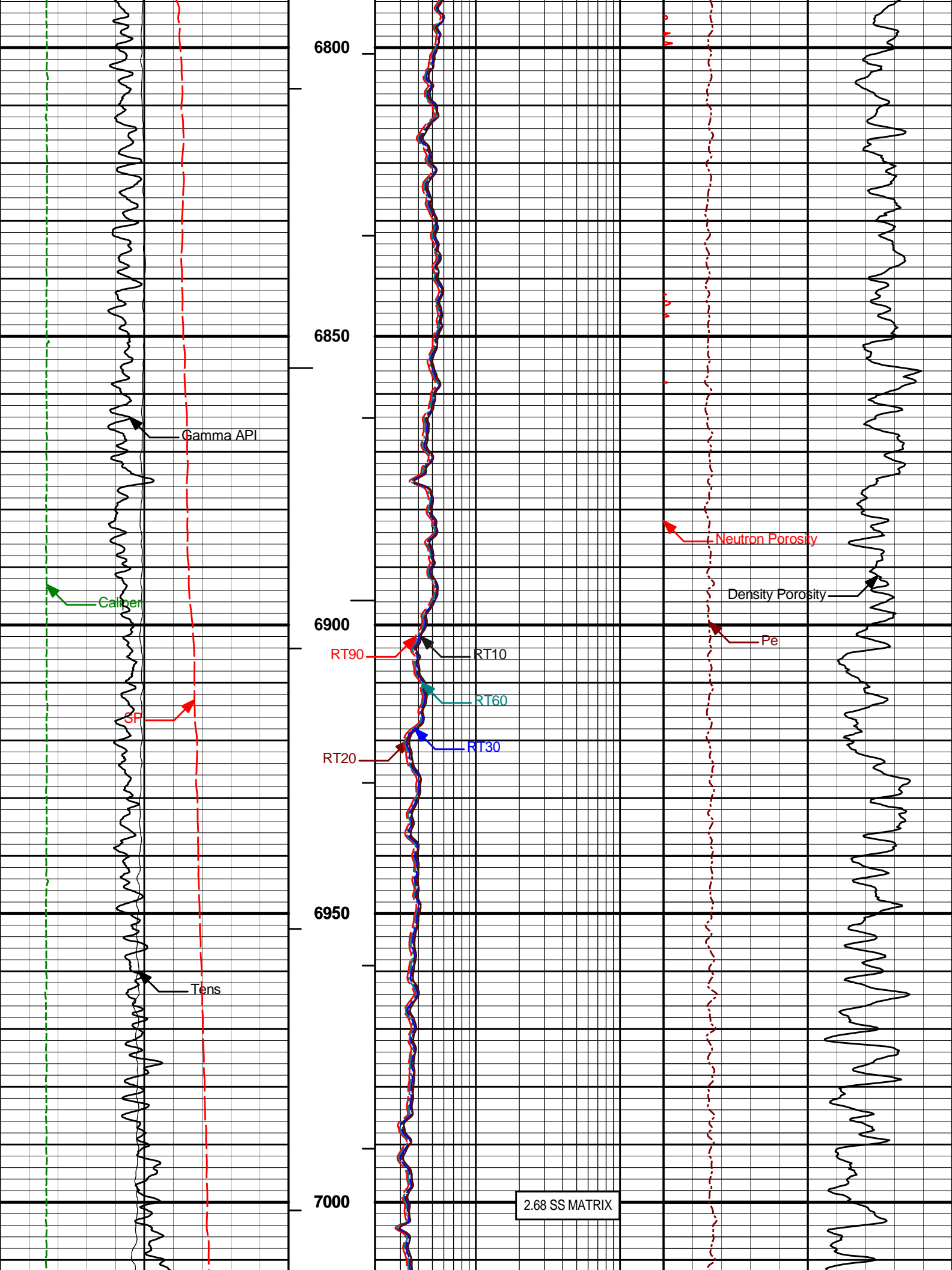


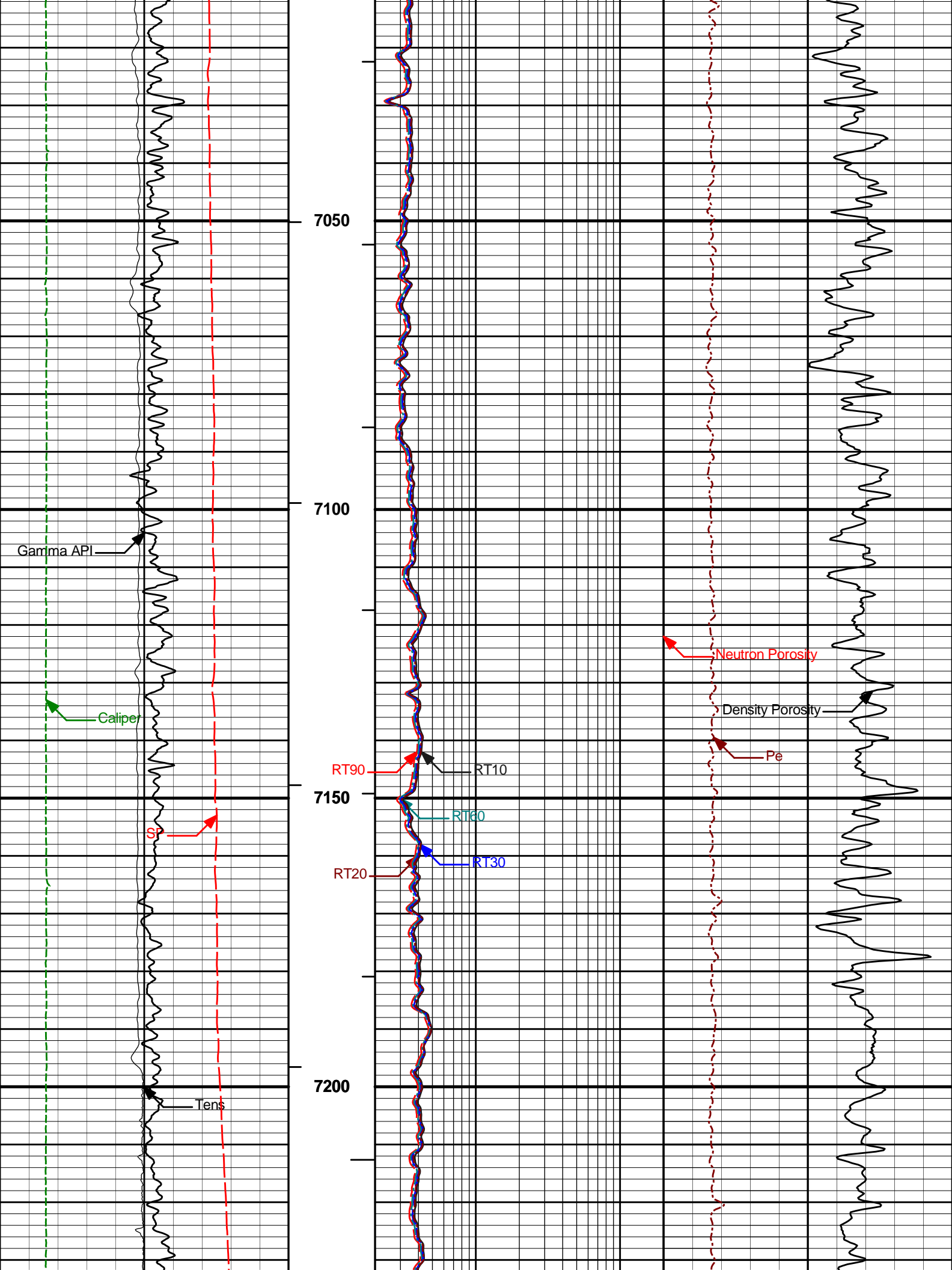


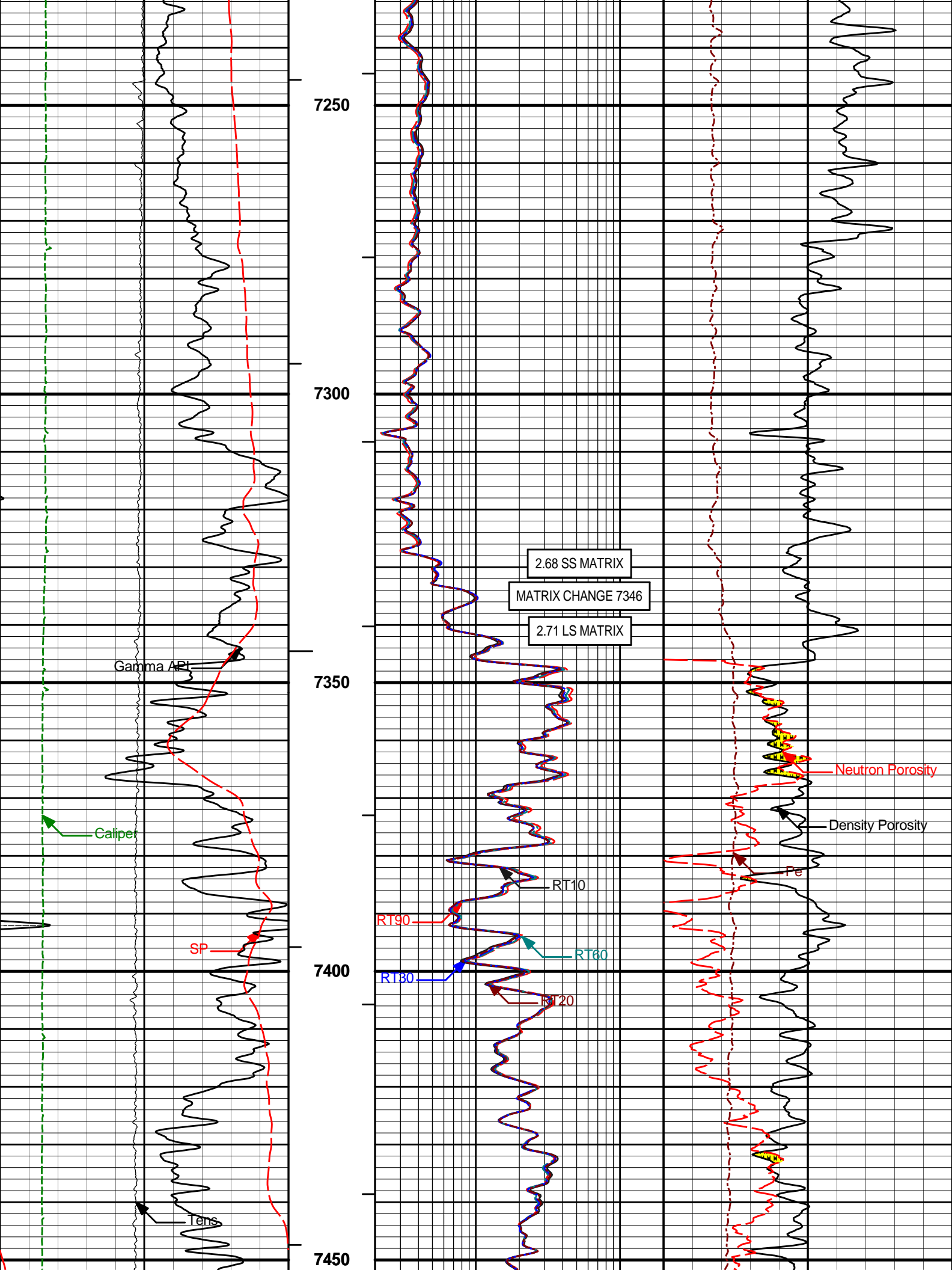


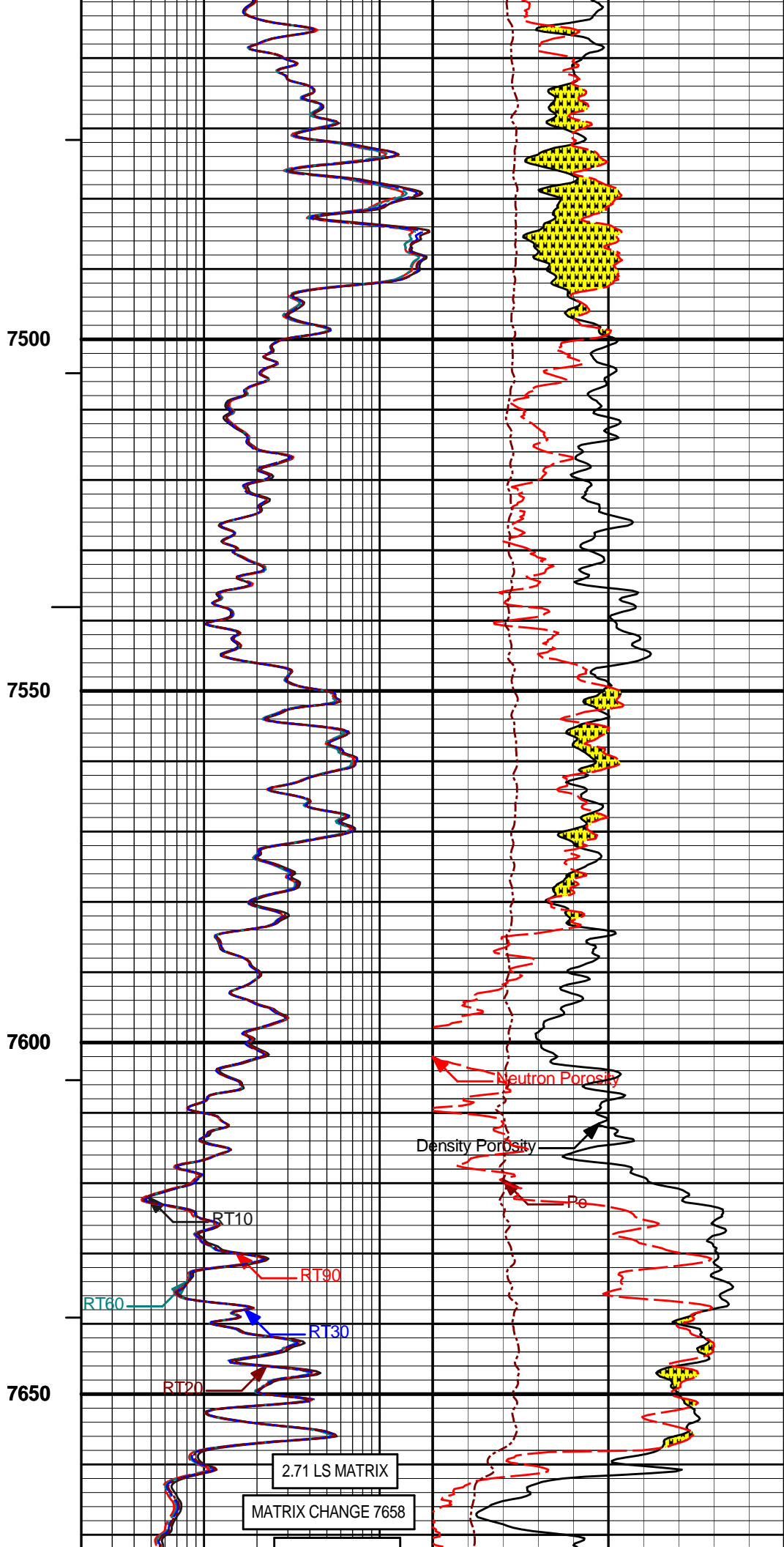
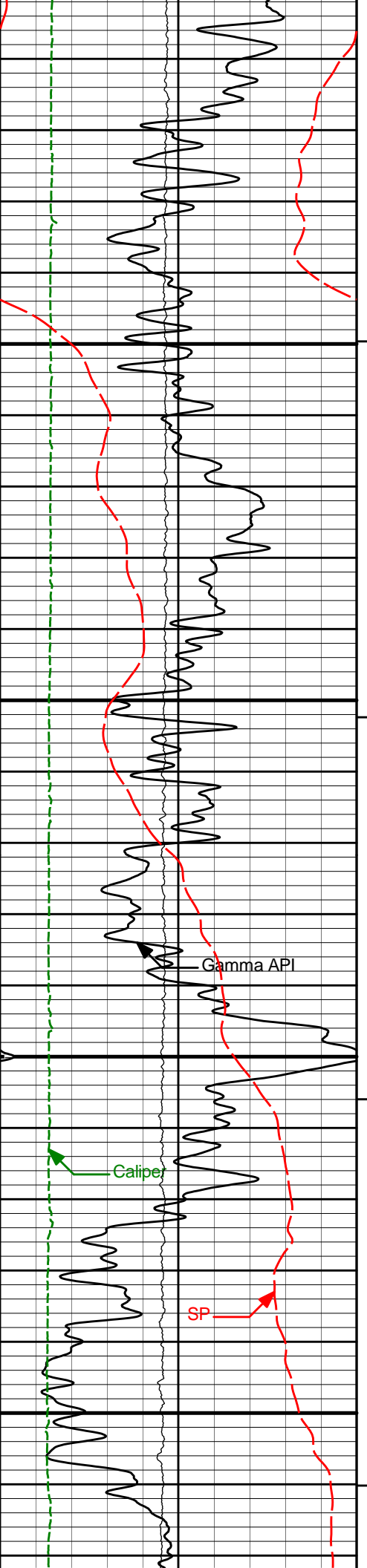
MAIN PASS 5" = 100'

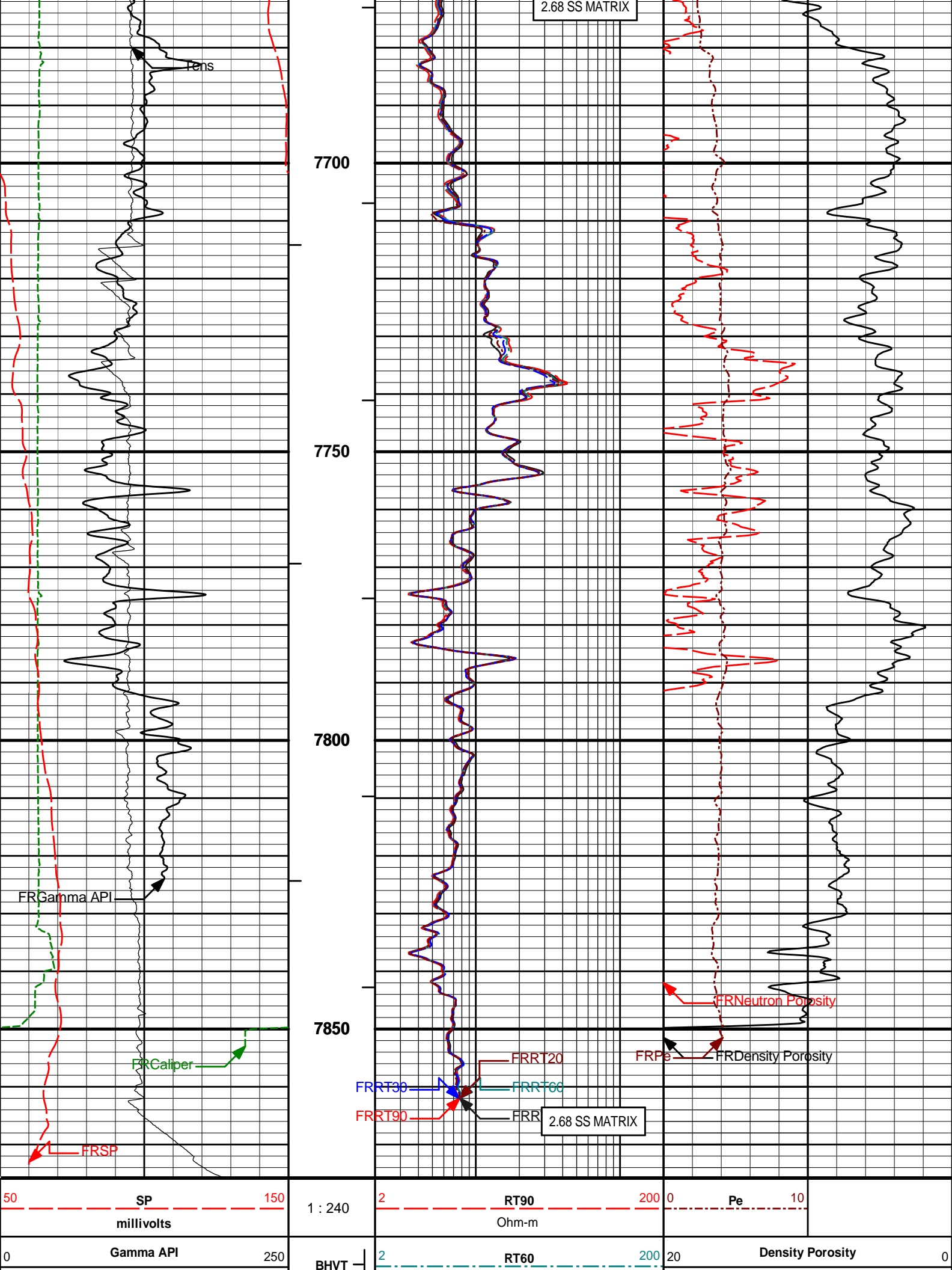












api			Ohm-m		percent				
6	Caliper	16	AHVT	2	RT30	200	20	Neutron Porosity	0
inches				Ohm-m		percent			
10K	Tens	0		2	RT20	200			
pounds				Ohm-m					
				2	RT10	200			
				Ohm-m					

HALLIBURTON	Plot Time: 19-Nov-10 22:06:11 Plot Range: 6645 ft to 7875.67 ft Data: SCH_USX_IL31_12\Well Based\MAIN* Plot File: \\COMP\NIO_COD
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MAIN PASS 5" = 100'

HALLIBURTON
CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 11277436	Reference Calibration Date:	18-Nov-10 14:23:59
Engineer:	C. BLUE	Calibration Date:	18-Nov-10 14:28:34
Software Version:	WL INSITE R3.0.6 (Build 4)	Calibration Version:	1

Calibrator Source S/N: 10770395			
Calibrator API Reference:251.00 api			
Measurement	Measured	Calibrated	Units
Background	79.2	79.4	api
Background + Calibrator	333.8	334.8	api
Calibrator	255.6	255.4	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 11277436	Reference Calibration Date:	18-Nov-10 14:28:34
Engineer:	C. BLUE	Calibration Date:	18-Nov-10 14:35:03
Software Version:	WL INSITE R3.0.6 (Build 4)	Calibration Version:	1

Calibrator Source S/N: 10770395			
Calibrator API Reference:251.00 api			
Field Verification	Shop	Field	Units
Background	79.4	80.1	api
Background + Calibrator	334.8	331.4	api
Calibrator	255.4	251.3	api
Shop	Field	Difference	Tolerance
255.4	251.3	4.1	+/- 9.00

CSNG-FS SHOP CALIBRATION			
Tool Name:	CSNG - 11212563	Reference Calibration Date:	10-Nov-10 12:13:41
Engineer:	C. BLUE	Calibration Date:	10-Nov-10 12:34:55
Software Version:	WL INSITE R3.0.6 (Build 4)	Calibration Version:	1

TITANIUM CASE	Measured	Calibrated	Units
60 KEV Peak Channel #	48.0	48.0	Channel #
239 KEV Peak Channel #	23.0	23.0	Channel #
583 KEV Peak Channel #	51.1	51.4	Channel #
2614 KEV Peak Channel #	210.1	210.3	Channel #
Calibrate Temperature	66.0	71.9	degF

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

Blanket Reference Value: 253.00 API
Calibrator Value: 287.3 API

	Counts	Units	Measured	Calibrated	Units
Thorium Blanket	1696.5	CPS	353.4	355.8	API
Background	326.4	CPS	66.1	68.4	API

Gamma Ray Gain: 1.06
Gamma Gain Check: Passed

CSNG-FS FIELD CALIBRATION

Tool Name:	CSNG - 11212563	Reference Calibration Date:	10-Nov-10 12:34:55
Engineer:	C. BLUE	Calibration Date:	18-Nov-10 14:32:48
Software Version:	WL INSITE R3.0.6 (Build 4)	Calibration Version:	1
Source SN:			

TITANIUM CASE	Shop	Field	Units
60 KEV Peak Channel #	48.0	48.0	Channel #
239 KEV Peak Channel #	23.0	23.0	Channel #
583 KEV Peak Channel #	51.4	51.4	Channel #
2614 KEV Peak Channel #	210.3	210.7	Channel #
Calibrate Temperature	71.9	60.8	degF

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

Blanket Reference Value: 253.00 API
Calibrator Value: 287.3 API

	Counts	Units	Measured	Calibrated	Units
Thorium Blanket	1678.8	CPS	355.8	354.5	API
Background	318.2	CPS	68.4	67.2	API

Gamma Ray Gain: 1.06
Gamma Gain Check: Passed

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 11919337

Reference Calibration Date: 18-Nov-10 18:54:18

Engineer: C. BLUE

Calibration Date: 18-Nov-10 19:09:00

Software Version: WL INSITE R3.0.6 (Build 4)

Calibration Version: 1

Logging Source S/N: DSN 430

Tank Serial Number: 11068236

Reference value assigned to Tank: 53.720

Snow Block S/N: 1223

Calibration Tank Water Temperature: 65 degF

Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.982	0.978	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)

Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decip):	0.2235	0.2224	0.0011	+/- 0.0020
Calibrated Ratio:	10.15	10.11	0.039	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decip):	0.0705	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 - 11919337

Reference Calibration Date: 18-Nov-10 19:09:00

Engineer: C. BLUE

Calibration Date: 18-Nov-10 19:10:21

Software Version: WL INSITE R3.0.6 (Build 4)

Calibration Version: 1

Logging Source S/N: DSN 430

Snow Block S/N: 1223

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decip):	0.0705	0.0708	0.0003	+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name: SDLT - I337M319

Reference Calibration Date: 19-Oct-10 18:50:11

Engineer: C. BLUE

Calibration Date: 18-Nov-10 17:38:15

Software Version: WL INSITE R3.0.6 (Build 4)

Calibration Version: 1

Logging Source S/N: 5256GW

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0118	1.0158	0.90 - 1.10
Near Dens Gain	0.9947	1.0015	0.90 - 1.10
Near Peak Gain	0.9723	0.9897	0.90 - 1.10
Near Lith Gain	0.9646	0.9646	0.90 - 1.10
Far Bar Gain	1.0138	1.0077	0.90 - 1.10
Far Dens Gain	1.0042	1.0003	0.90 - 1.10
Far Peak Gain	0.9973	0.9968	0.90 - 1.10
Far Lith Gain	0.9720	0.9785	0.90 - 1.10
Near Bar Offset	-0.1063	-0.1401	NONE
Near Dens Offset	0.0178	-0.0360	NONE
Near Peak Offset	0.2118	0.0760	NONE
Near Lith Offset	0.2561	0.2779	NONE
Far Bar Offset	-0.1686	-0.1204	NONE
Far Dens Offset	-0.1001	-0.0681	NONE
Far Peak Offset	-0.0600	-0.0560	NONE
Far Lith Offset	0.1167	0.0710	NONE
Near Bar Background	865.00	864.95	700 - 1450
Near Dens Background	282.93	283.26	230 - 480
Near Peak Background	120.40	120.82	100 - 210
Near Lith Background	151.73	151.79	125 - 260
Far Bar Background	546.22	543.50	450 - 900
Far Dens Background	210.83	211.16	175 - 345
Far Peak Background	82.11	82.29	70 - 140
Far Lith Background	86.80	86.20	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.669	1.681	0.012	+/- 0.015
Pe	2.717	2.586	-0.131	+/- 0.150
ALUMINUM				
Density (g/cc)	2.593	2.600	0.007	+/- 0.01500
Pe	3.228	3.091	-0.137	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0008	+/- 0.0110	-0.0008	+/- 0.0140
Magnesium Block	-0.0007	+/- 0.0110	-0.0005	+/- 0.0140
Aluminum Block	0.0001	+/- 0.0110	-0.0004	+/- 0.0140
Resolution	9.37	6.00 - 11.50	9.68	6.00 - 11.50
Internal Verifier(B+D+P+L)	1421	1200 - 2700	923	800 - 1700

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 - I337M319	Reference Calibration Date:	18-Nov-10 17:38:15
Engineer:	C. BLUE	Calibration Date:	18-Nov-10 17:54:23
Software Version:	WL INSITE R3.0.6 (Build 4)	Calibration Version:	1

Pad Temperature: 64.7 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1420.821	1420.896	0.075	15.215
Far (B+D+P+L) cps	923.143	926.504	3.361	16.458
Near Resolution	9.37	9.38	0.010	0.50
Far Resolution	9.68	9.73	0.050	1.00

PASS/FAIL SUMMARY	
Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	SDLT - I337M319	Reference Calibration Date:	18-Nov-10 18:04:39
Engineer:	C. BLUE	Calibration Date:	18-Nov-10 18:08:43
Software Version:	WL INSITE R3.0.6 (Build 4)	Calibration Version:	1

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-5592.06	-5532.24	-7000.00 - -1000.00
Pad Gain	0.0003880	0.0003857	0.000200 - 0.000600
Arm Offset	-3353.91	-3728.62	-5000.00 - 3000.00
Arm Gain	0.0005314	0.0005617	0.000300 - 0.000700
Arm Power	-0.000002179	-0.000004077	-0.000010 - 0.000010

The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER

Tool Diameter: 4.50 in

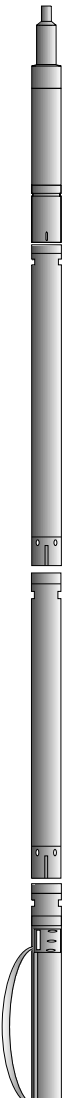
CALIBRATION RINGS				
Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	1.99	2.00	0.01	+/- 0.20
Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.57	6.50	-0.07	+/- 0.20
Medium Ring (in)	8.26	8.25	-0.01	+/- 0.20
Large Ring (in)	15.01	15.00	-0.01	+/- 0.20

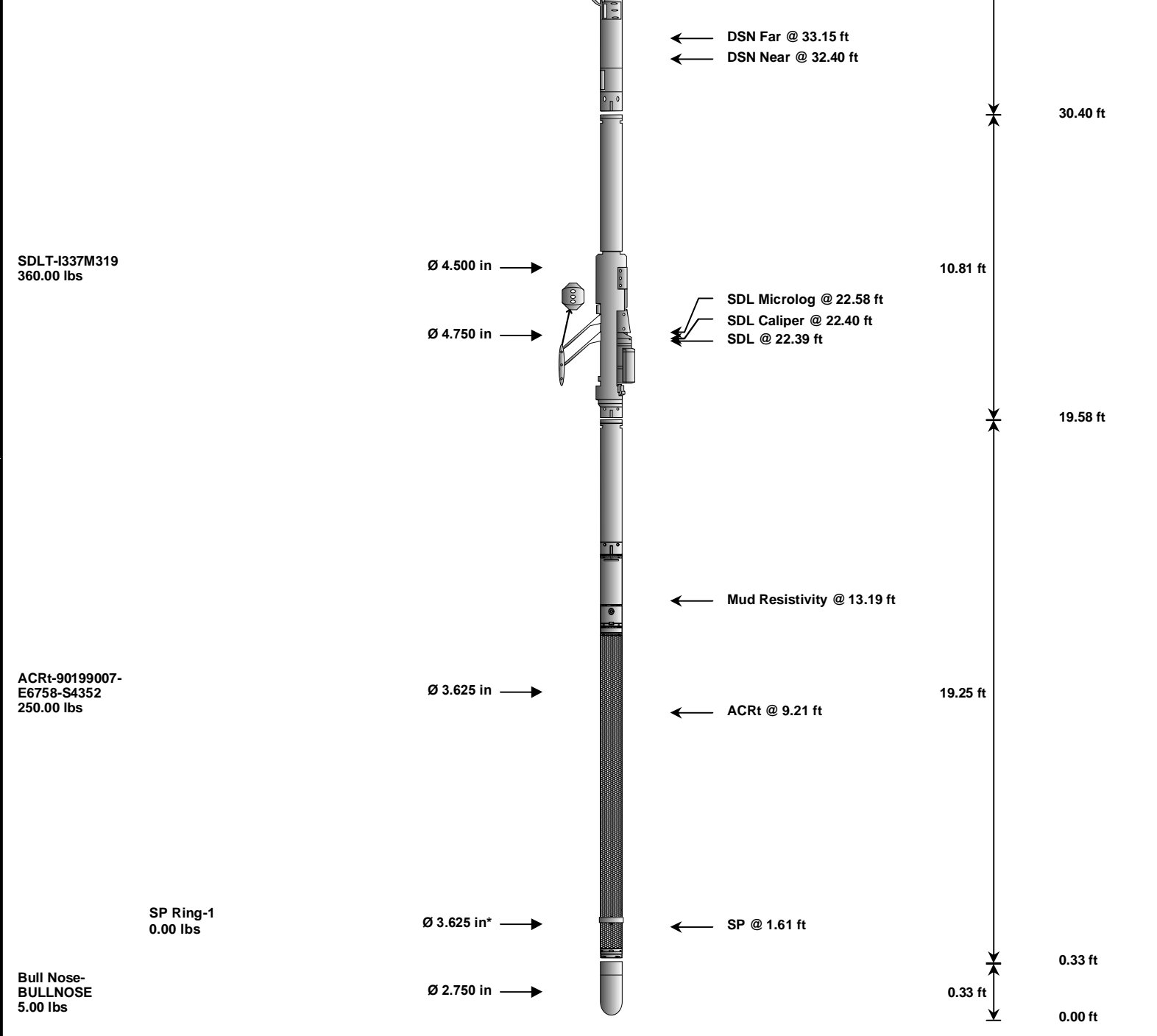
PASS/FAIL SUMMARY	
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Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11277436						
Gamma Ray Calibrator	255.4	251.3	-----	4.1	+/- 9.00	api
CSNG-11212563						
60 KEV Peak Channel #	48.0	48.0	-----	0.0	-----	Channel #
239 KEV Peak Channel #	23.0	23.0	-----	0.0	-----	Channel #
583 KEV Peak Channel #	51.4	51.4	-----	0.0	-----	Channel #
2614 KEV Peak Channel #	210.3	210.7	-----	-0.4	-----	Channel #
DSNT-11919337						
Snow-Block Porosity	0.0705	0.0708	-----	-0.0003	+/- 0.0150	decp
SDLT-I337M319						
Near(B+D+P+L)	1420.821	1420.896	-----	-0.075	+/-15.215	cps
Far(B+D+P+L)	923.143	926.504	-----	-3.361	+/-16.458	cps
Pad Extension	3.75	3.75	-----	0.00	+/-0.10	in
Ring Diameter	8.25	8.18	-----	0.070	+/-0.15	in
ACRt-90199007-E6758-S4352						
Mud Cell	1.010	-----	-----	0.000	-----	ohm-m
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HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-11173131 135.00 lbs		Ø 3.625 in →		← Load Cell @ 59.34 ft ← BH Temperature @ 58.77 ft	6.25 ft	63.02 ft
GTET-11277436 165.00 lbs		Ø 3.625 in →		← GammaRay @ 50.71 ft	8.52 ft	56.77 ft
CSNG-11212563 114.00 lbs		Ø 3.625 in →		← CSNG @ 42.62 ft	8.17 ft	48.25 ft
DSN Decentralizer- 10839203 6.60 lbs		Ø 3.625 in* →			9.69 ft	40.08 ft
DSNT-11919337 174.00 lbs		Ø 3.625 in →				



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	11173131	135.00	6.25	56.77	300.00
GTET	Gamma Telemetry Tool	11277436	165.00	8.52	48.25	60.00
CSNG	Compensated Spectral Natural Gamma	11212563	114.00	8.17	40.08	15.00
DSNT	Dual Spaced Neutron	11919337	174.00	9.69	30.40	60.00
DCNT	DSN Decentralizer	10839203	6.60	5.13	33.73	300.00
SDLT	Spectral Density Tool	I337M319	360.00	10.81	19.58	60.00
ACRt	Array Compensated True Resistivity	90199007-E6758-S4352	250.00	19.25	0.33	300.00
SP	SP Ring	1	0.00	0.25	1.61	300.00
BLNS	Bull Nose	BULLNOSE	5.00	0.33	0.00	300.00
Total			1,209.60	63.02		

* Not included in Total Length and Length Accumulation.

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COMPANY	NOBLE ENERGY
WELL	SCHNEIDER USX II31-12PD

FIELD WATTENBERG

COUNTY WELD STATE CO

HALLIBURTON

SPECTRAL DENSITY
DUAL SPACED NEUTRON
ARRAY COMPENSATED
TRUE RESISTIVITY