

HALLIBURTON

ARRAY COMPENSATED
TRUE RESISTIVITY

COMPANY				ELM RIDGE EXPLORATION CO LLC			
WELL				IGE 129			
FIELD/BLOCK				IGNACIO BLANCO			
COUNTY				LA PLATA			
STATE				CO			
COMPANY				ELM RIDGE EXPLORATION CO LLC			
WELL				IGE 129			
FIELD/BLOCK				IGNACIO BLANCO			
COUNTY				LA PLATA			
STATE				CO			
API No. 05067099080000				Other Services: RWCH DSNT SDLT			
Location SURFACE HOLE LOCATION: 1140' FSL & 987' FWL							
LATITUDE: 37.115280 LONGITUDE: -107.728570							
Sect. 9 Twp. 33N Rge. 8W							
Permanent Datum GL				Elev. 6711.0 ft			
Log measured from KB				D.F. 6723.0 ft			
Drilling measured from KB				G.L. 6711.0 ft			
Date 20-Jul-14							
Run No. ONE							
Depth - Driller 3362.00 ft							
Depth - Logger 3360.0 ft							
Bottom - Logged Interval 3358.0 ft							
Top - Logged Interval 500.0 ft							
Casing - Driller 8.625 in @ 532.0 ft				@			
Casing - Logger 532.0 ft							
Bit Size 7.875 in				@			
Type Fluid in Hole Water Based Mud							
Density 9.4 ppg				48.00 s/qt			
PH 9.00 pH				6.2 cpm			
Source of Sample MUD TANK							
Rm @ Meas. Temperature 2.05 ohmm @ 75.00 degF				@			
Rmf @ Meas. Temperature N/A @ N/A				@			
Rmc @ Meas. Temperature N/A @ N/A				@			
Source Rmf Rmc N/A N/A							
Rm @ BHT 1.23 ohmm @ 129.0 degF				@			
Time Since Circulation 4.4 hr							
Time on Bottom 20-Jul-14 16:52							
Max. Rec. Temperature 129.0 degF @ 3362.0 ft				@			
Equipment Location 11871076 GJ CO							
Recorded By B. RIDDEL							
Witnessed By D. GILES							

Fold here

Service Ticket No.: 901521416				API Serial No.: 05067099080000				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		ACRt		N/A		FREE		N/A	
Rmc @ Meas. Temp.		@		@				I-11585787							
Source Rmf		Rmc						S-11585797							
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.		11958949		Serial No.				Serial No.		10951300		Serial No.		10993888	
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.		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		9'		FWDA [Y/N]				Strength		1.5 Ci		Strength		15 Ci	
LOGGING DATA															

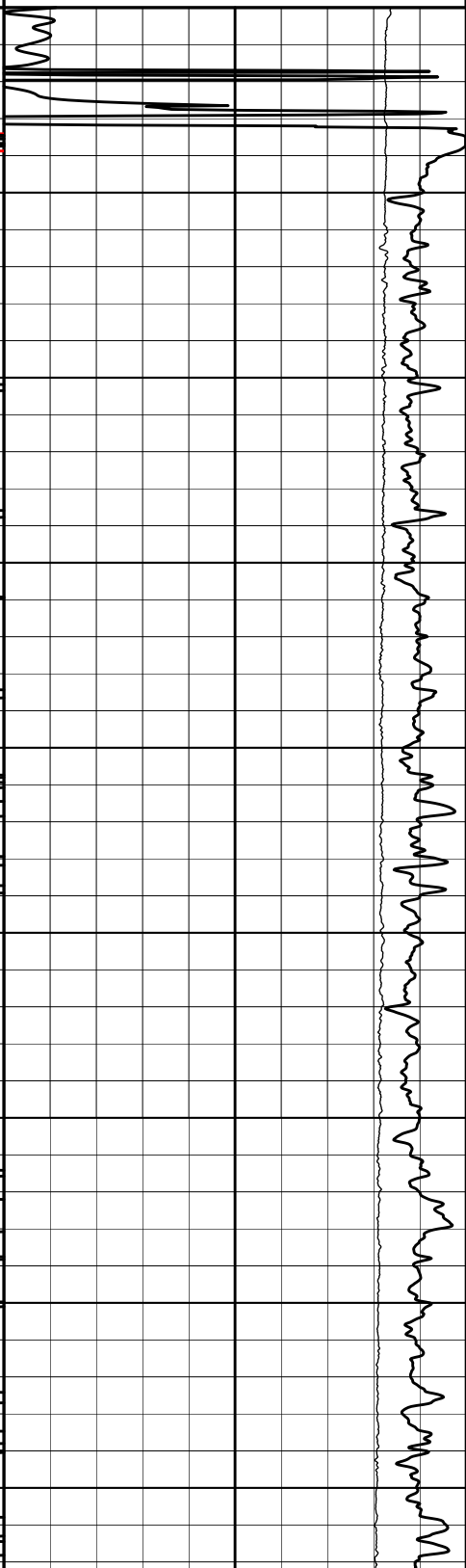
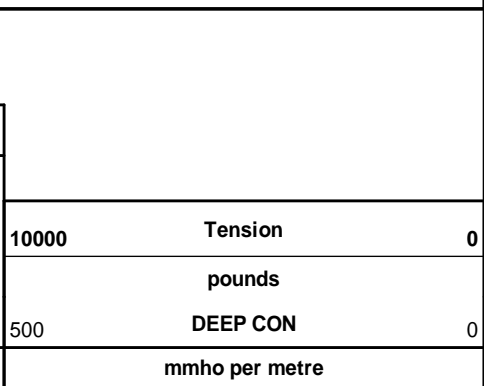
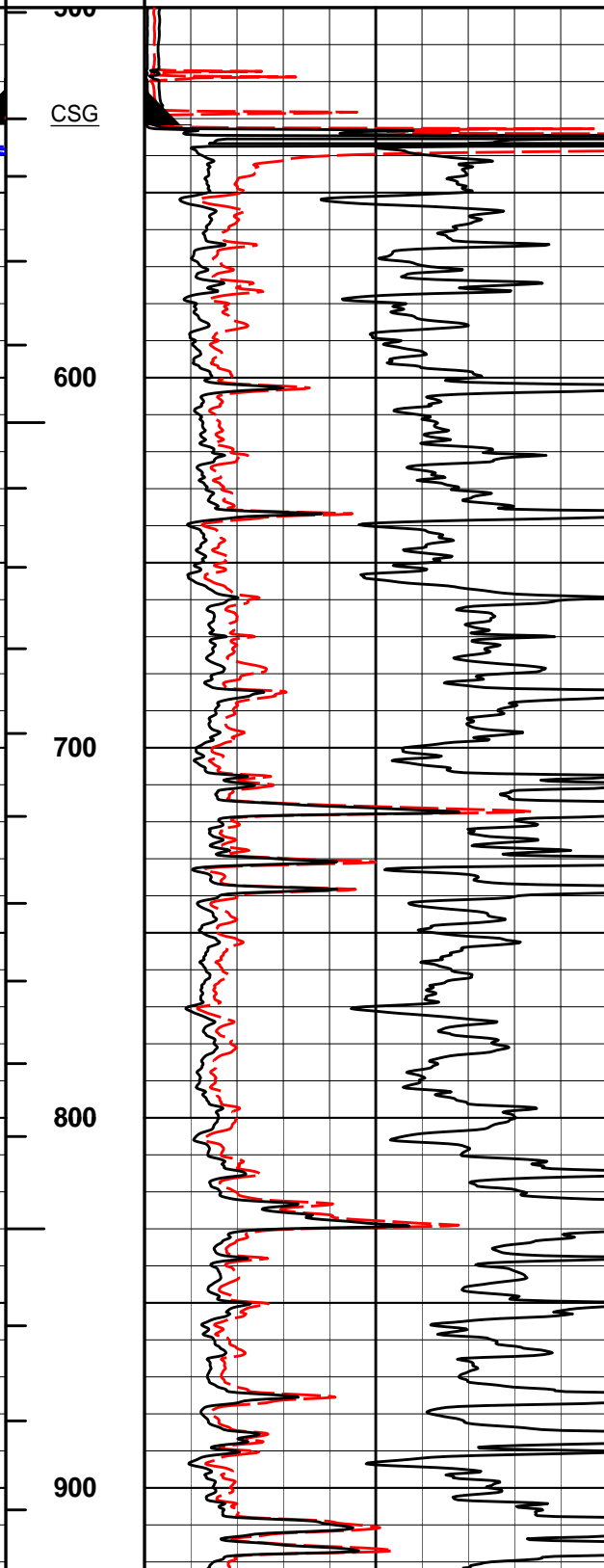
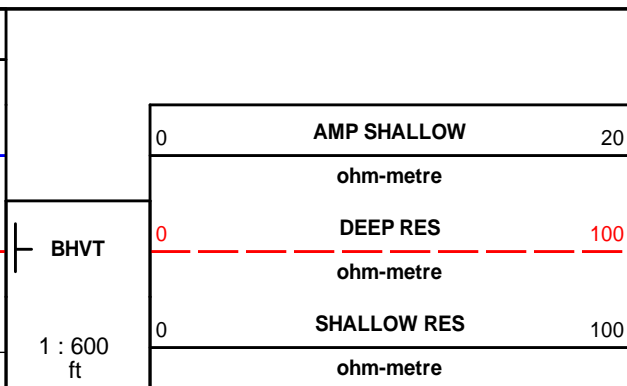
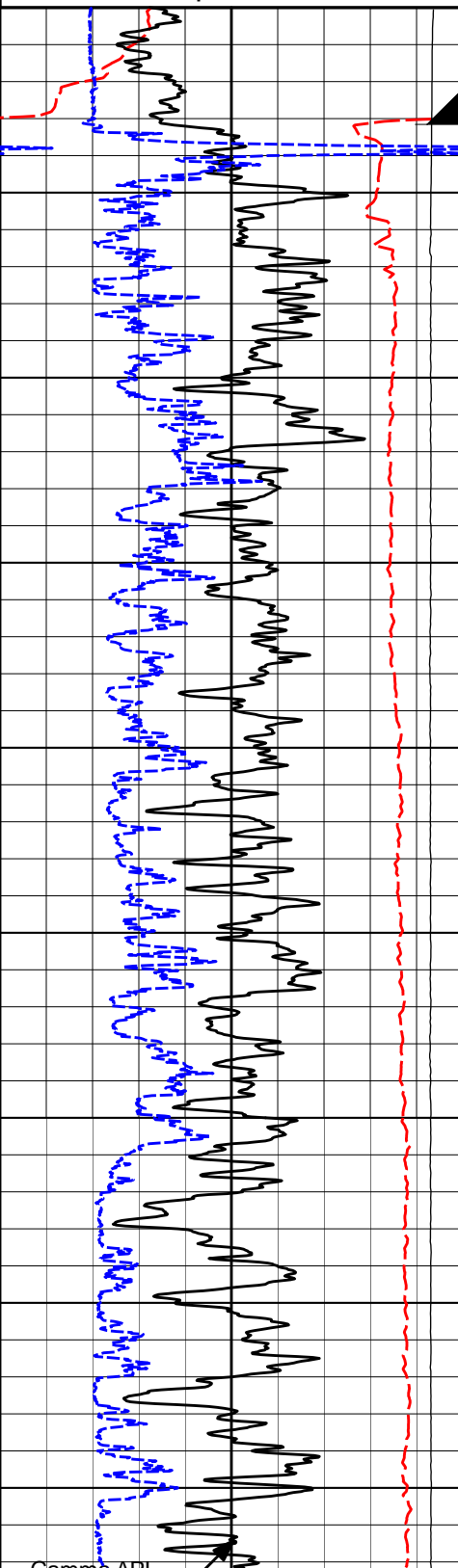
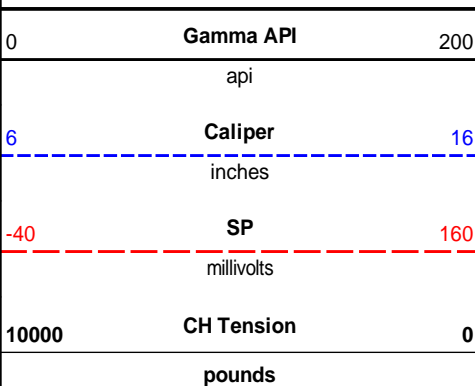
GENERAL			GAMMA		ACOUSTIC			DENSITY			NEUTRON			
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	3360	500	REC	0 API	200 API				30 %	-10 %	2.65 g/cc	30 %	-10 %	SAND
DIRECTIONAL INFORMATION														
Maximum Deviation						@	KOP						@	
Remarks:														
RUN ONE: RWCH/GTET/DSNT/SDLT/FLEX/ACRT/BN														
BORHOLE RUGOSITY, TENSION PULLS, LCM ADDITIVE, AND WASHOUTS MAY EFFECT LOG QUALITY AND REPEATABILITY														
CHLORIDES REPORTED TO BE 600 ppm														
ANNULAR HOLE VOLUME CALCULATED USING 5.5-INCH CASING.														
Rmf & Rmc NOT MEASURED DUE TO FAULTY EQUIPMENT														
YOU CREW TODAY: B. CALDWELL, T. RAFF, A. KOBE														
RIG: BEARCAT #1														
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.														
HALLIBURTON														

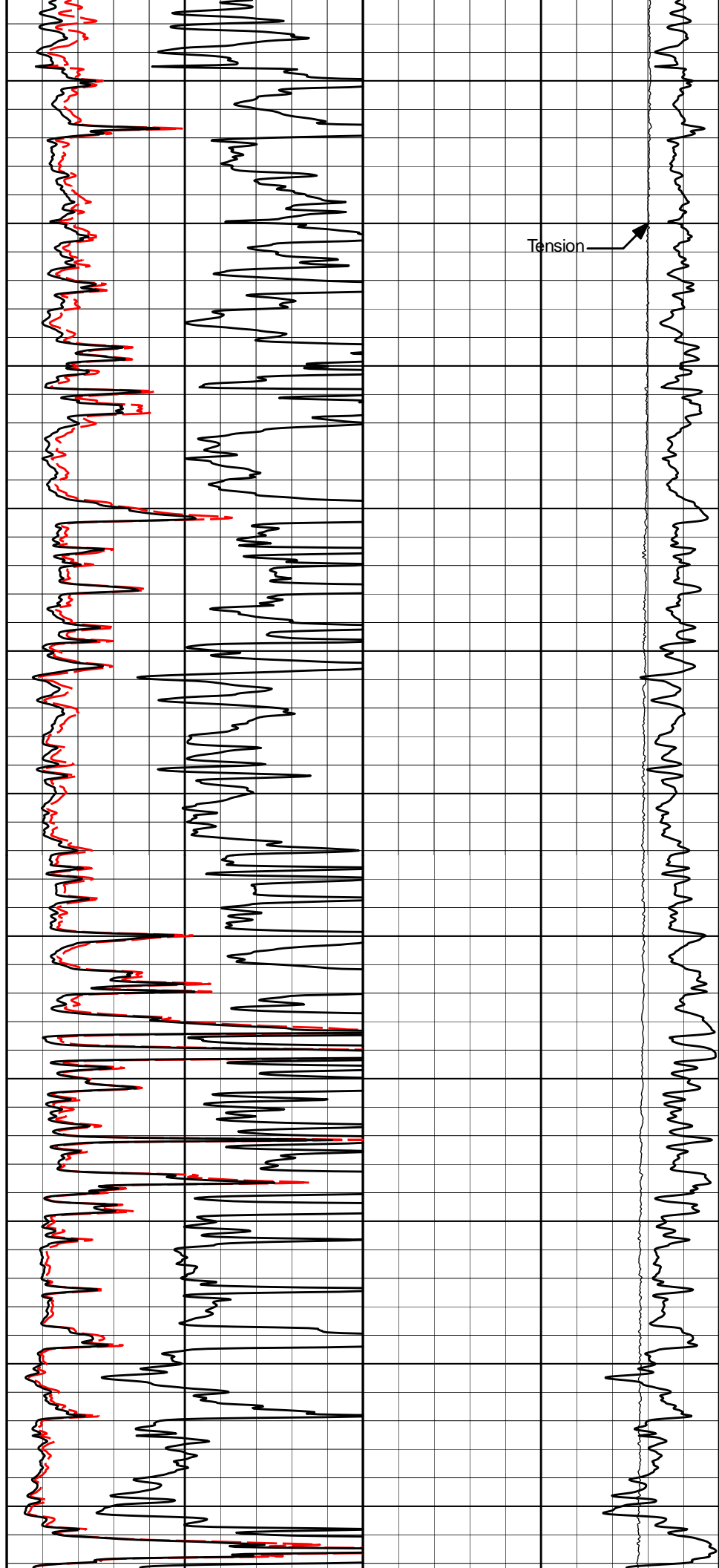
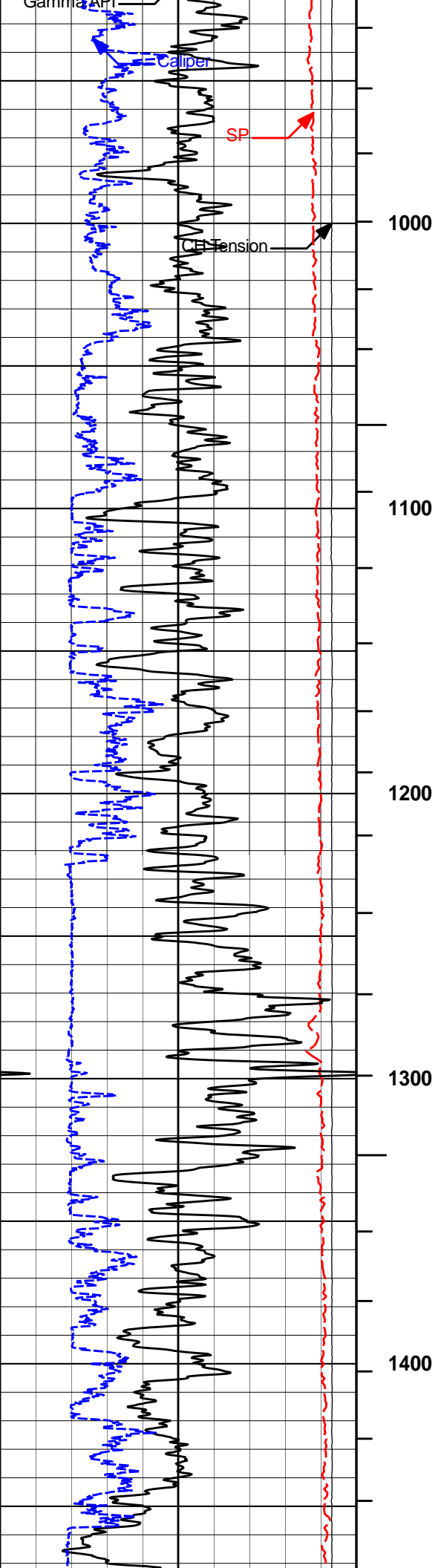
HALLIBURTON

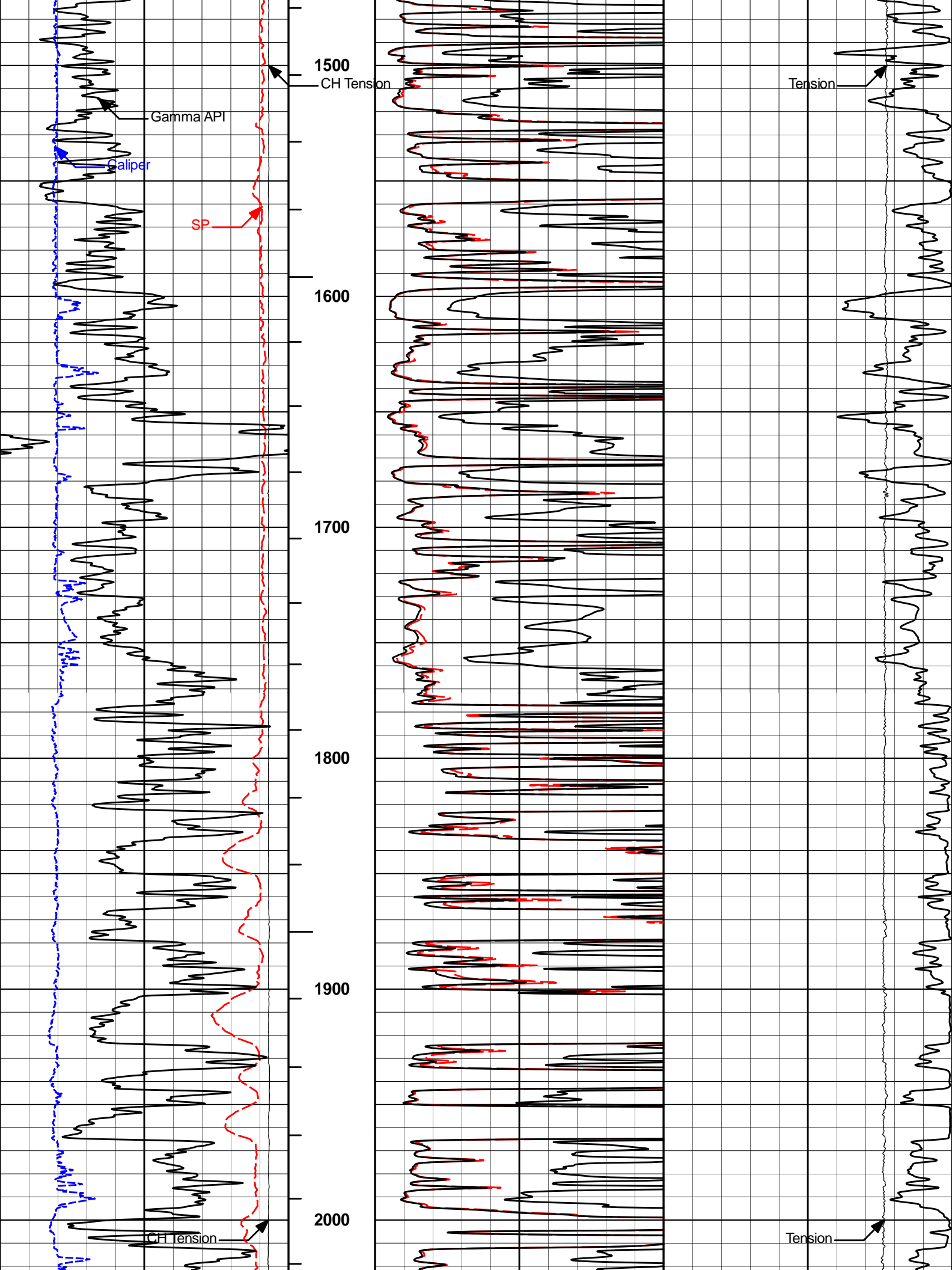
PARAMETERS REPORT

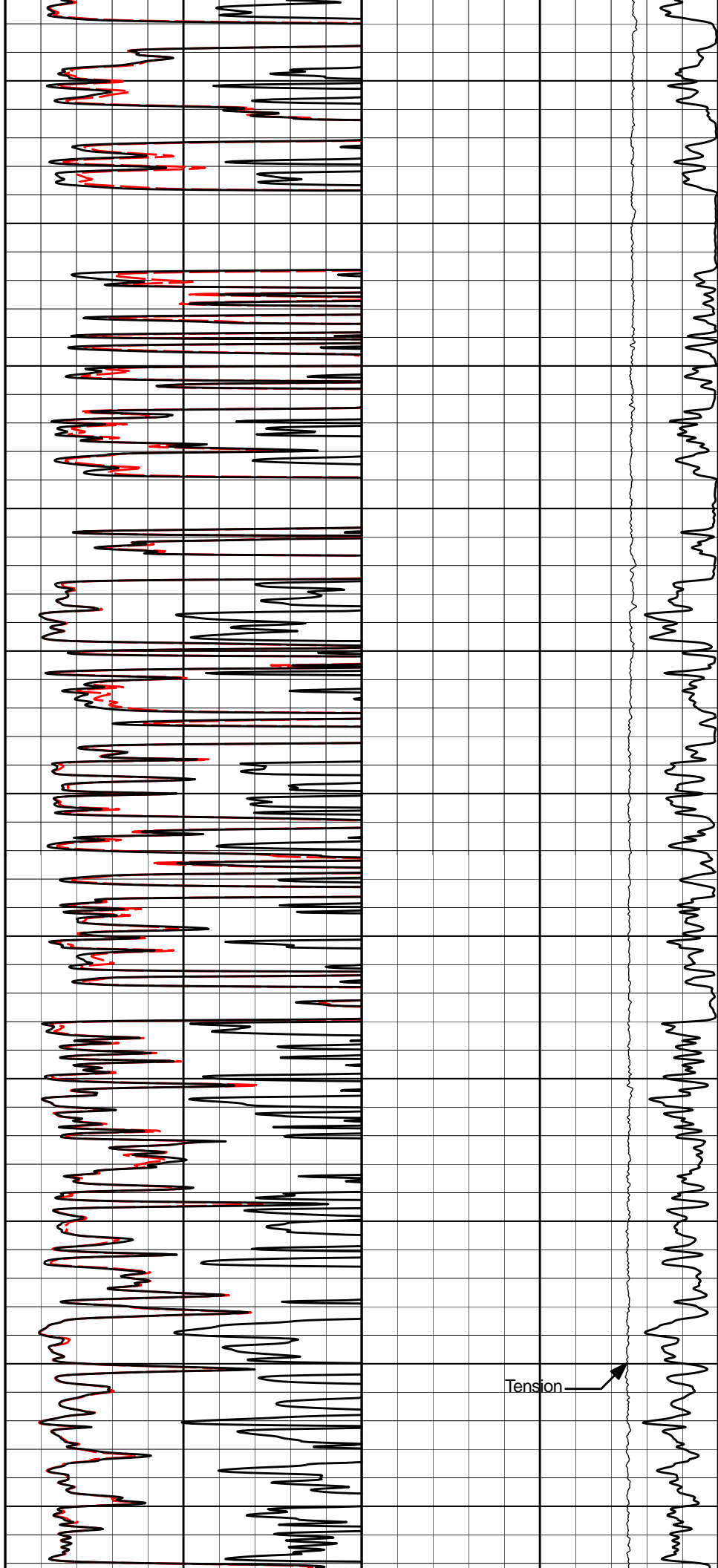
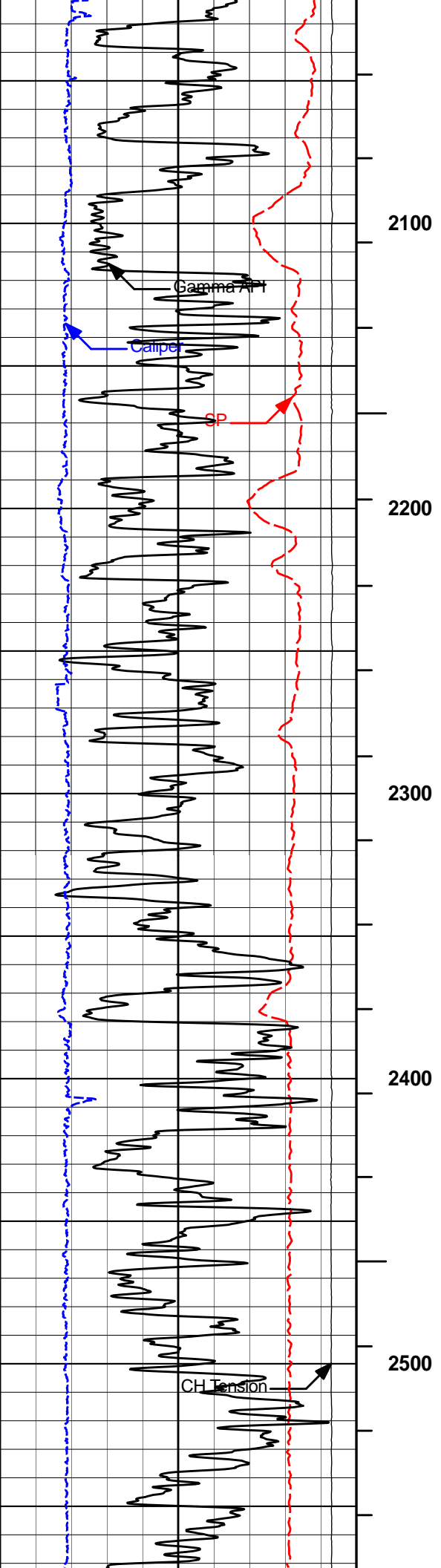
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.400	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	600.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	2.050	ohmm
	SHARED	TRM	Temperature of Mud	69.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	3362.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	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	

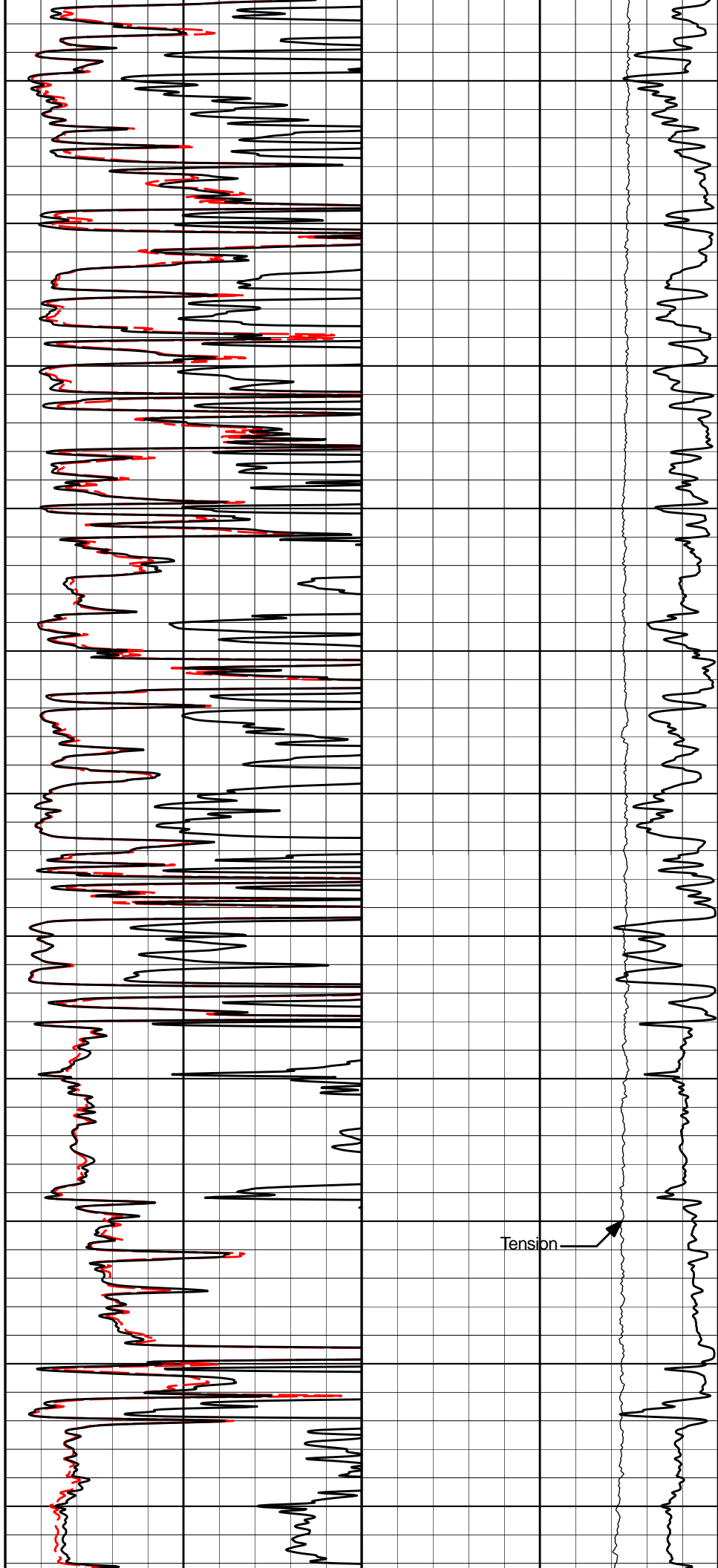
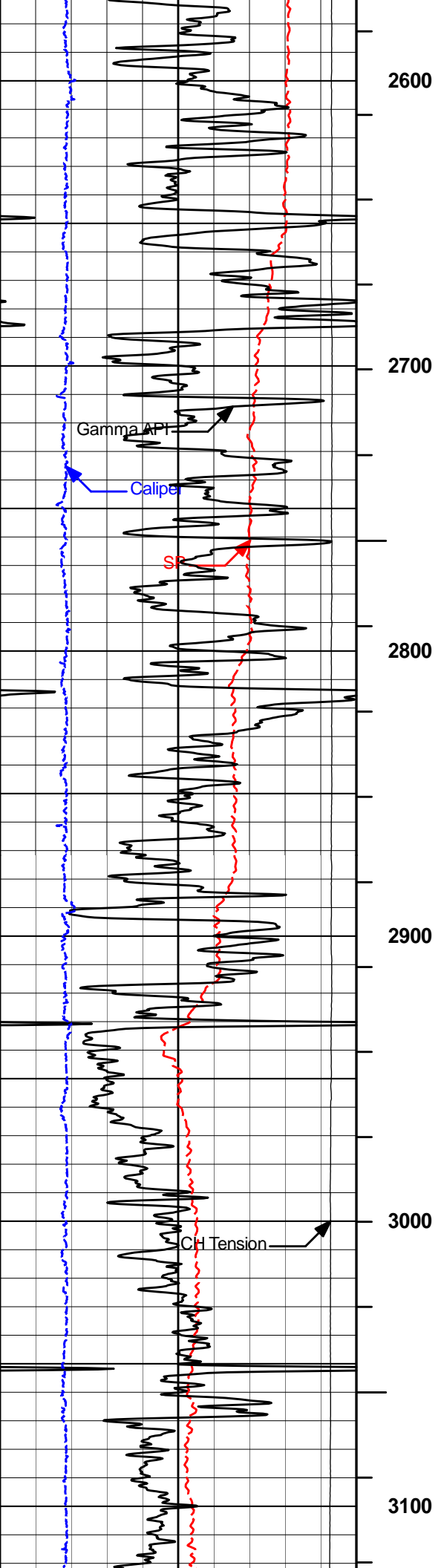
Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
Rwa / CrossPlot	BHSM	Borehole Size Source 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	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Sandstone	
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	2.650	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
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	RMIN	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	

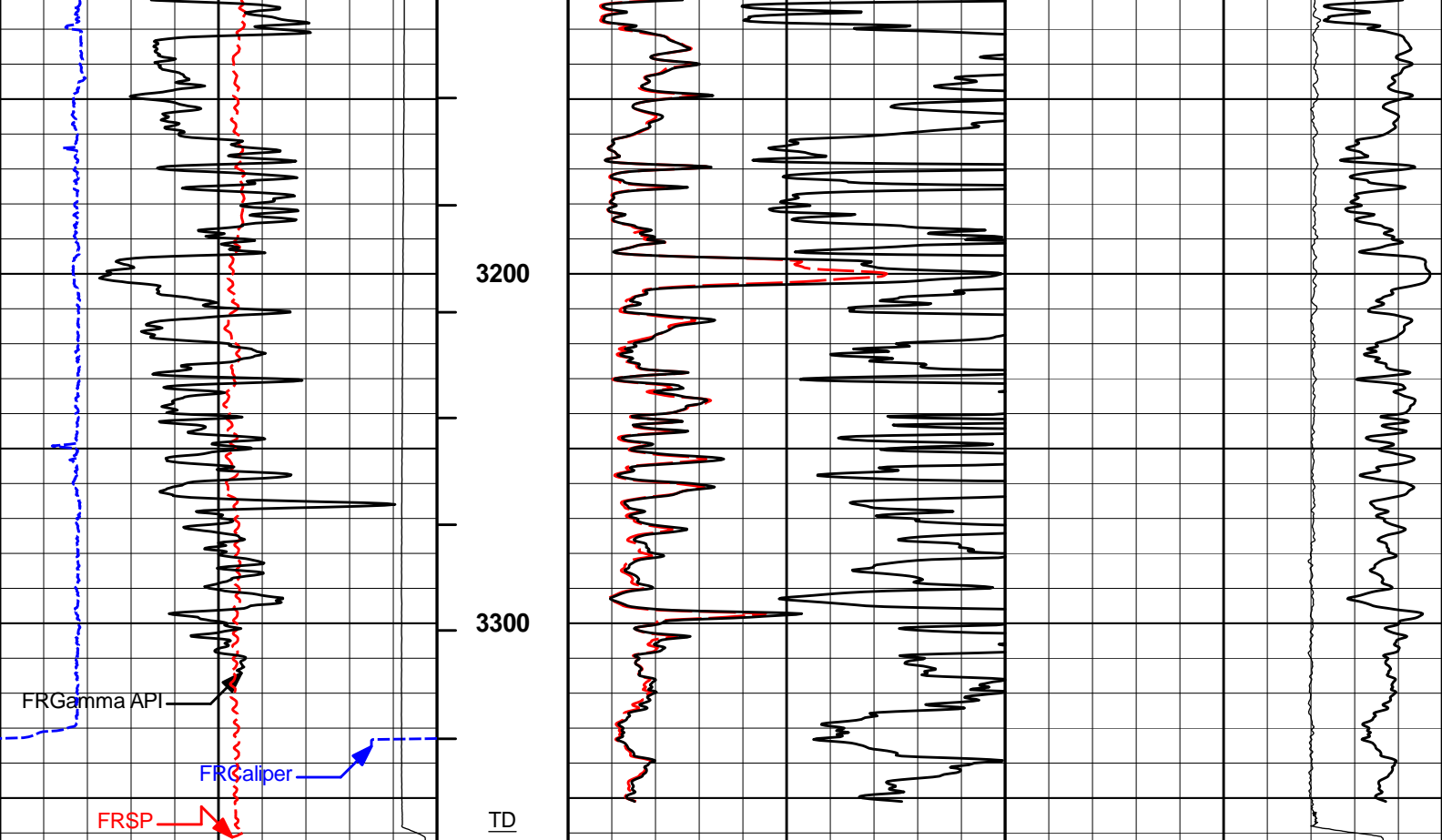












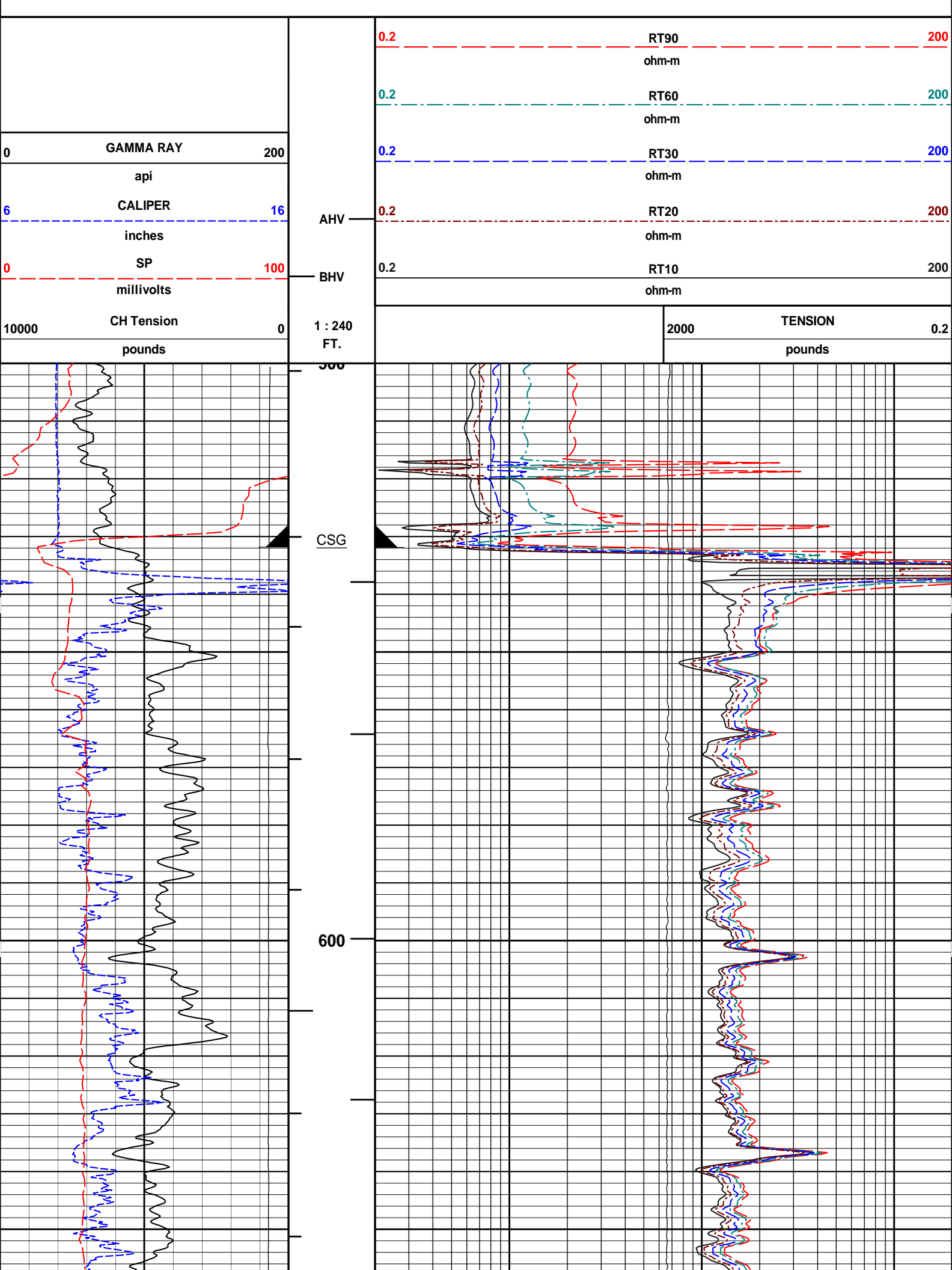
10000	CH Tension	0	1 : 600 ft	0	SHALLOW RES	100	500	DEEP CON	0
	pounds				ohm-metre			mmho per metre	
-40	SP	160	BHVT	0	DEEP RES	100	10000	Tension	0
	millivolts				ohm-metre			pounds	
6	Caliper	16		0	AMP SHALLOW	20			
	inches				ohm-metre				
0	Gamma API	200							
	api								

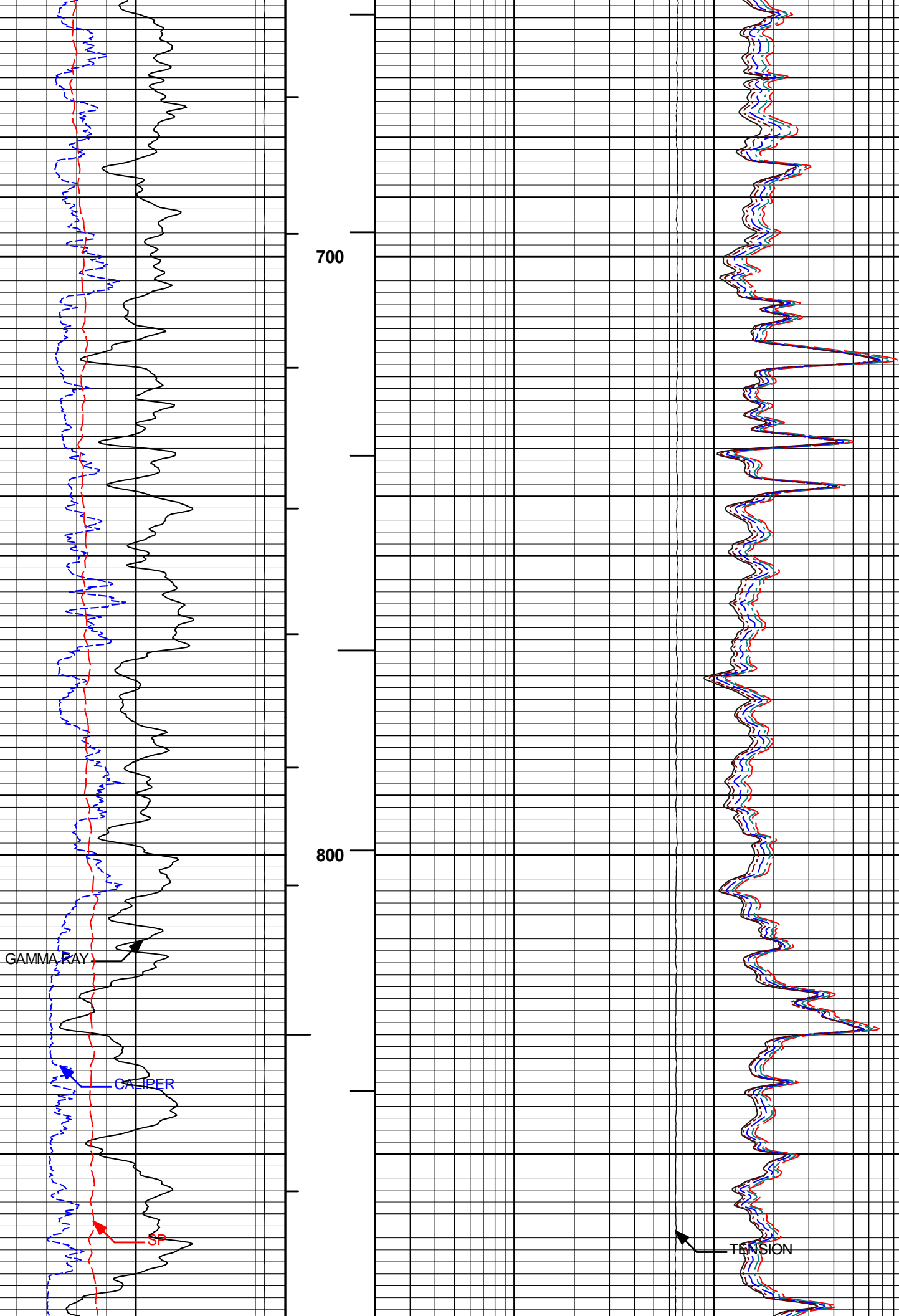
HALLIBURTON	Plot Time: 20-Jul-14 18:18:59 Plot Range: 500 ft to 3363.15 ft Data: ELM_IGE_129\Well Based\MAIN\ Plot File: \ACRT\2" RESISITIVITY
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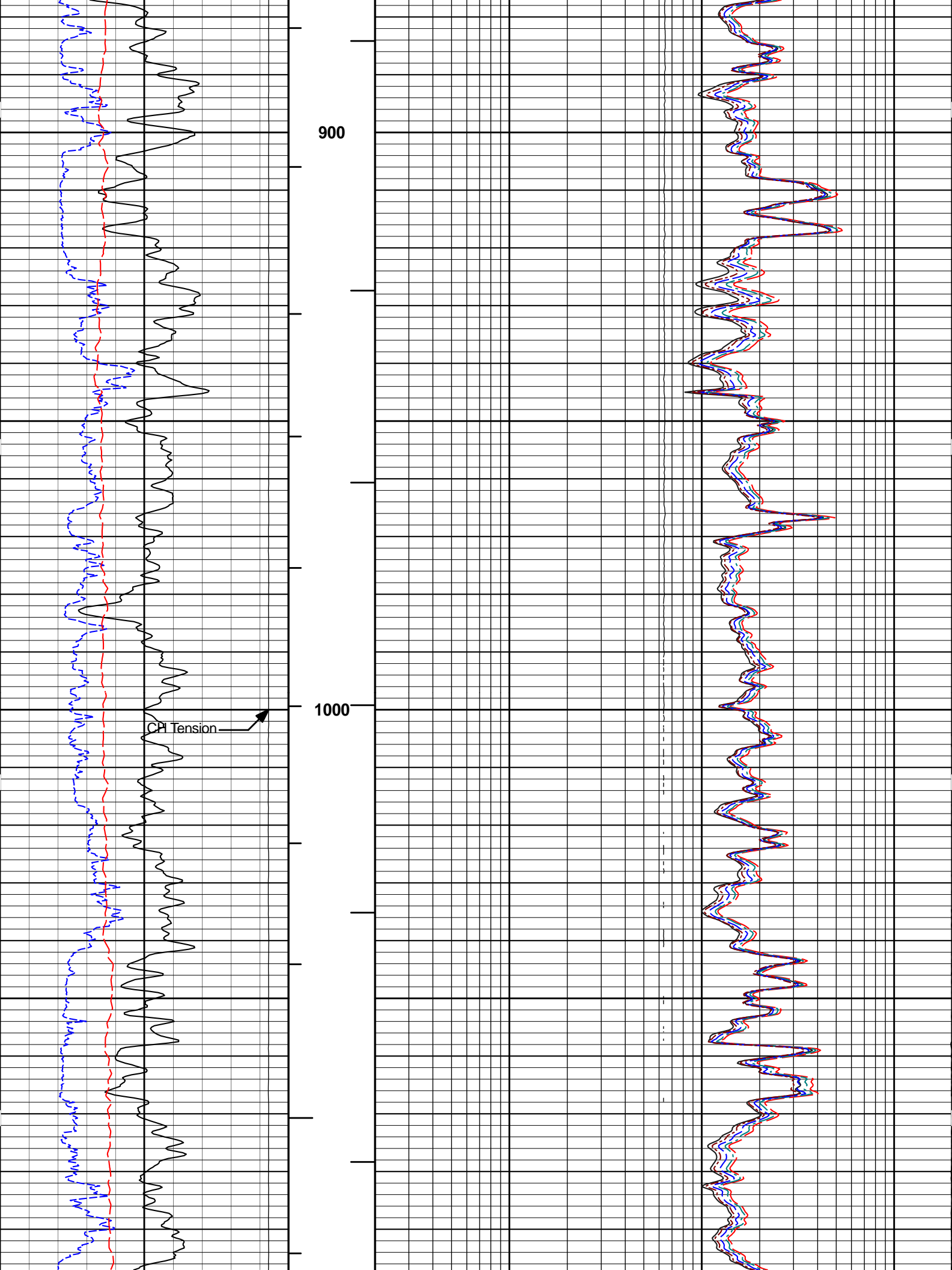
MAIN PASS 2" = 100'

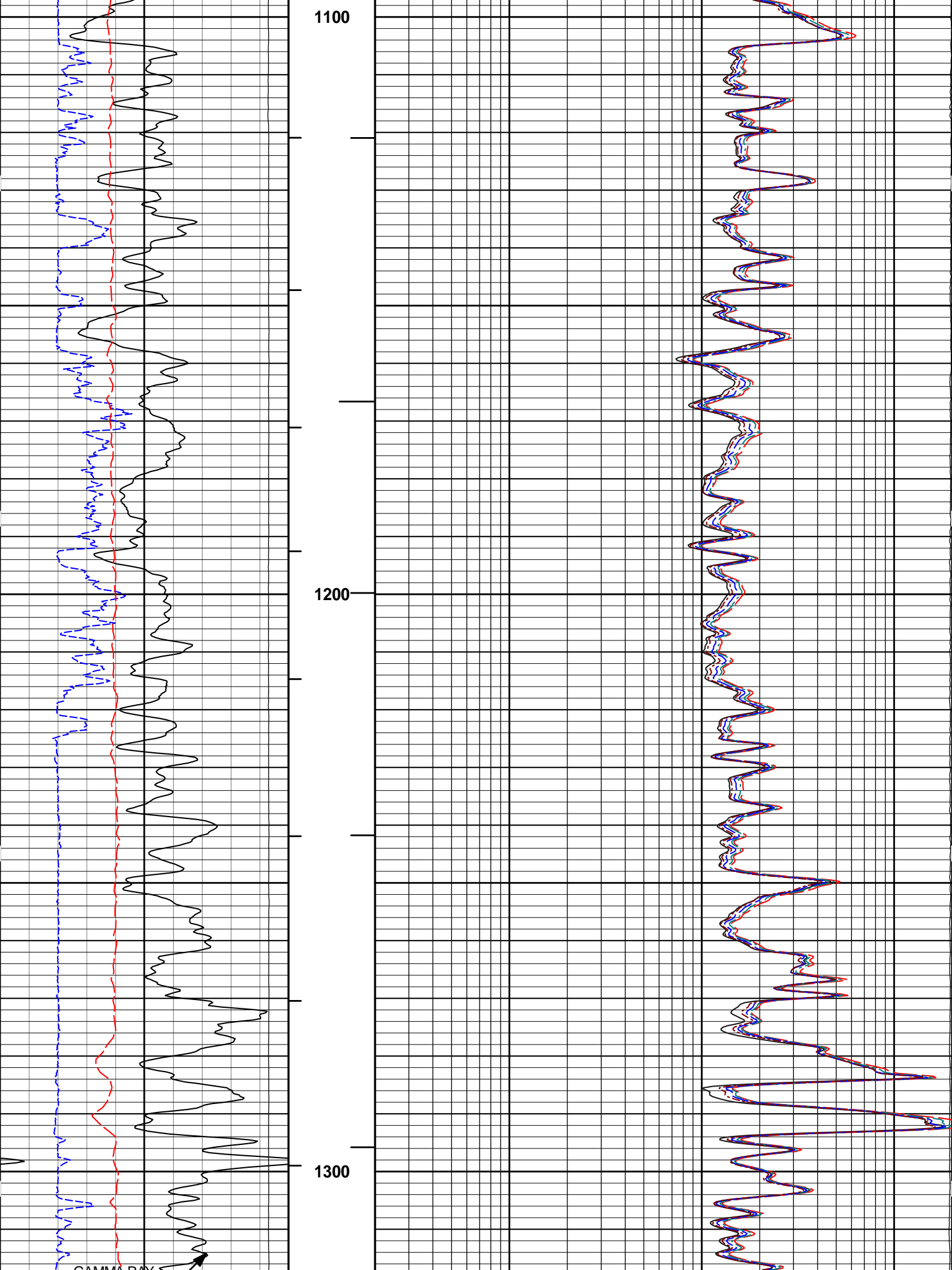
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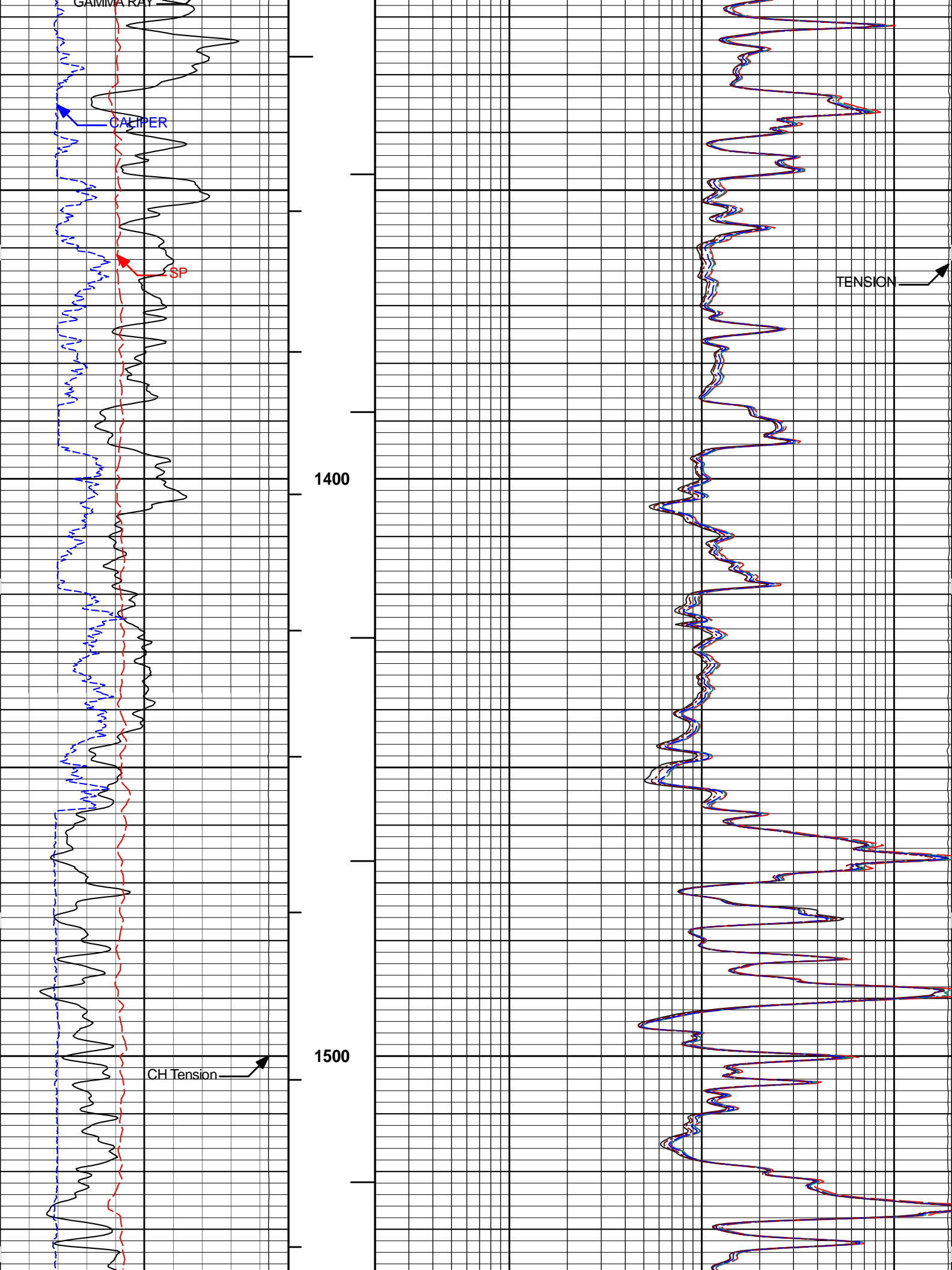
MAIN PASS 5" = 100'

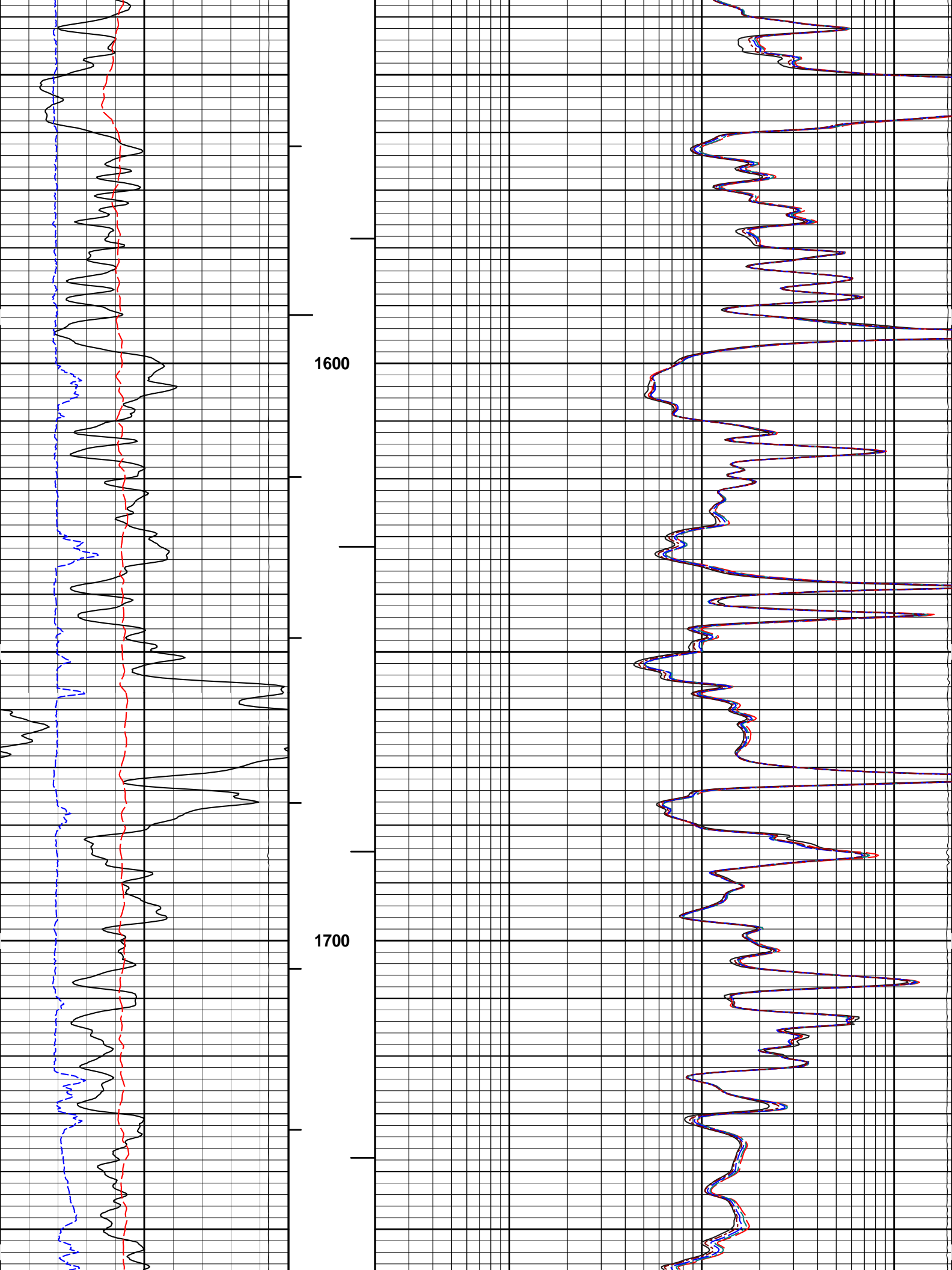


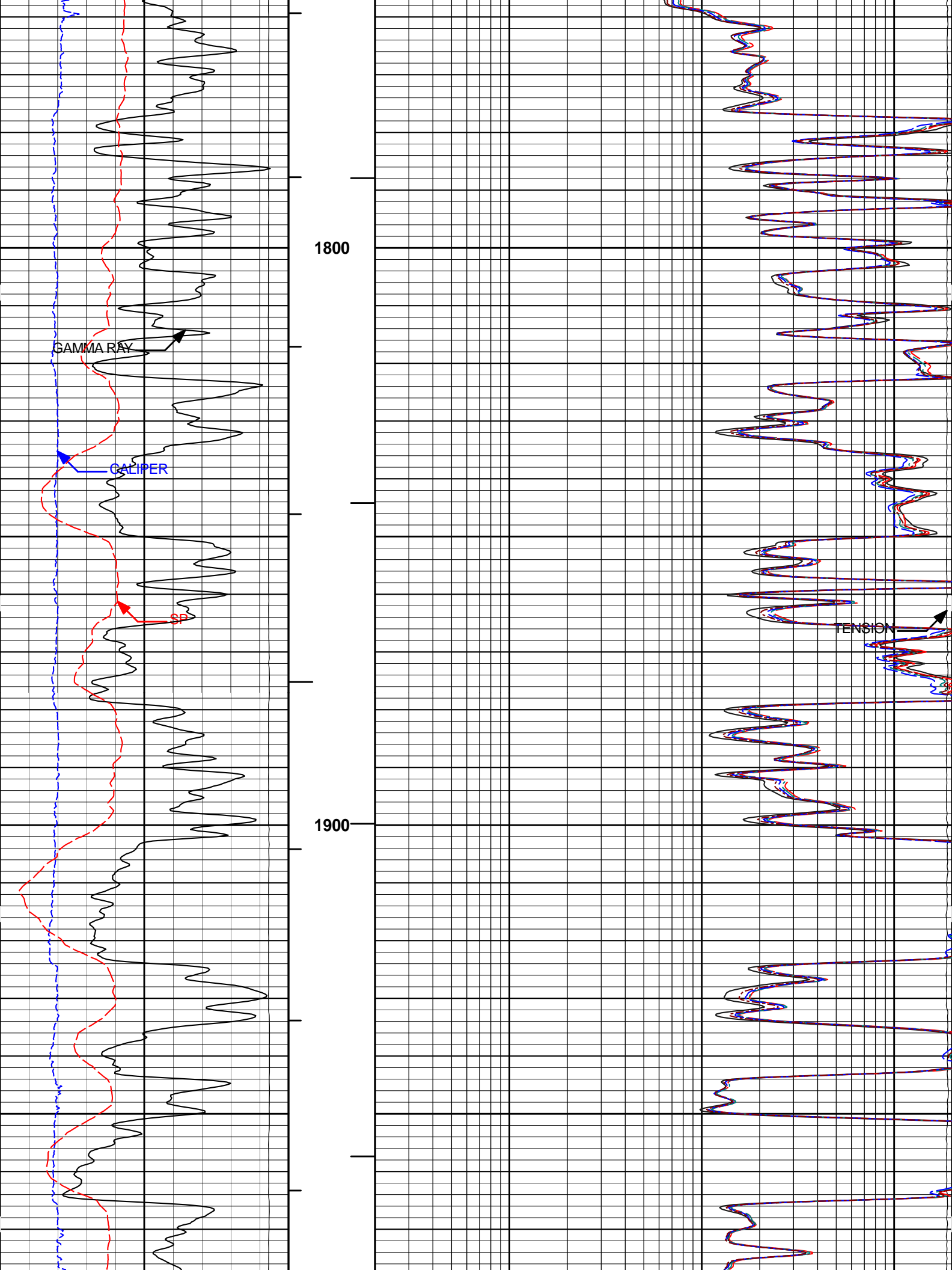


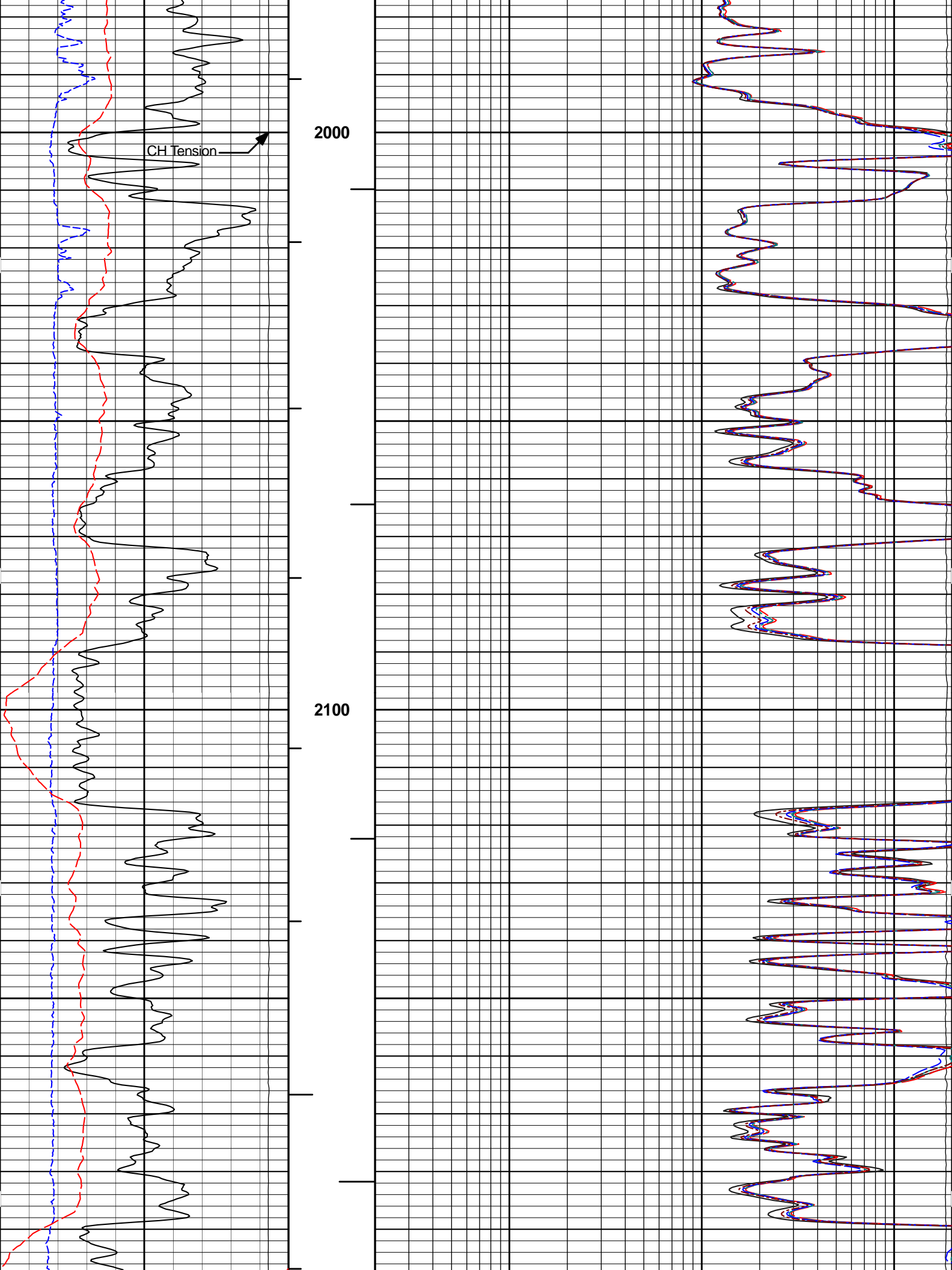


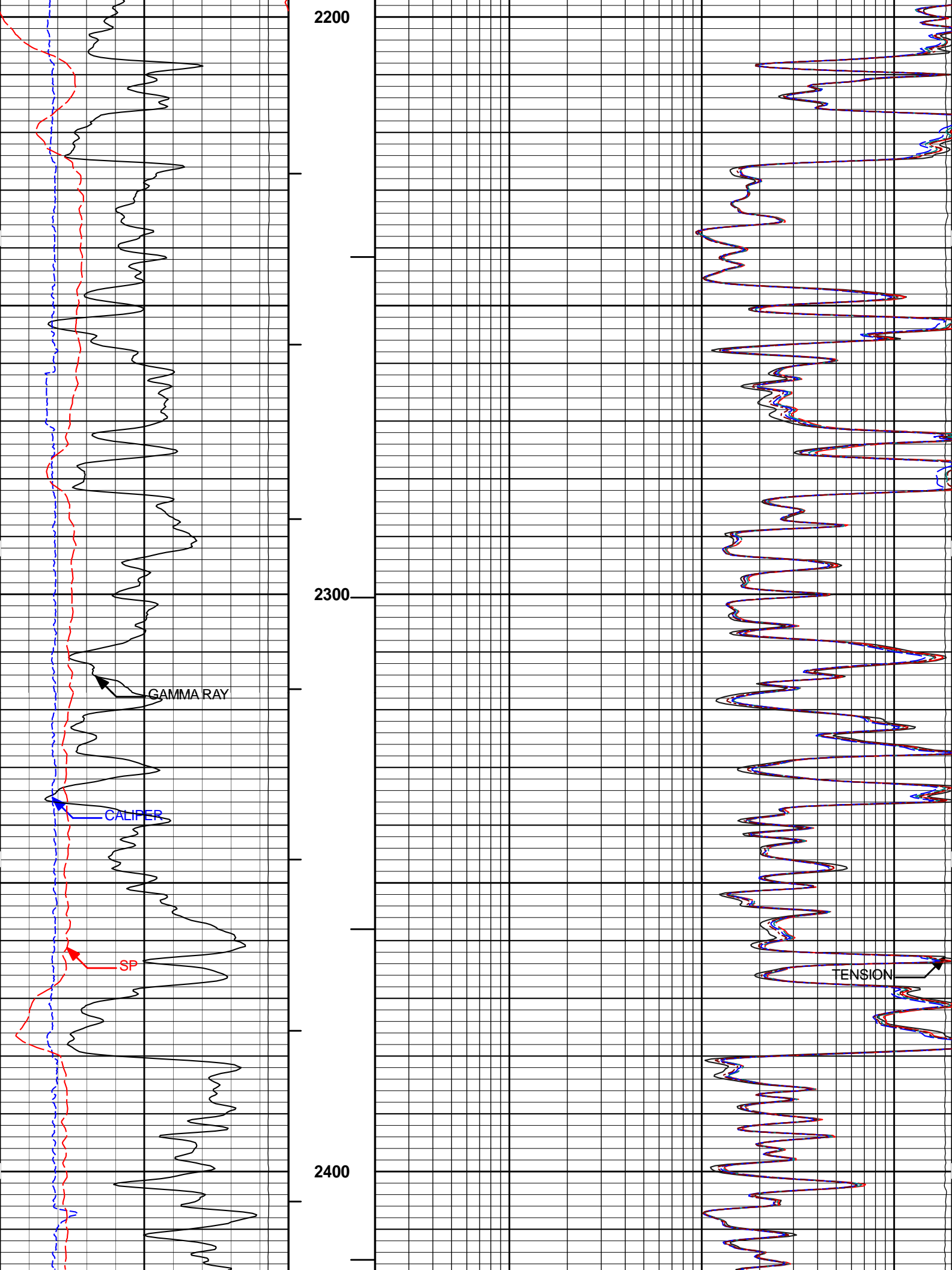


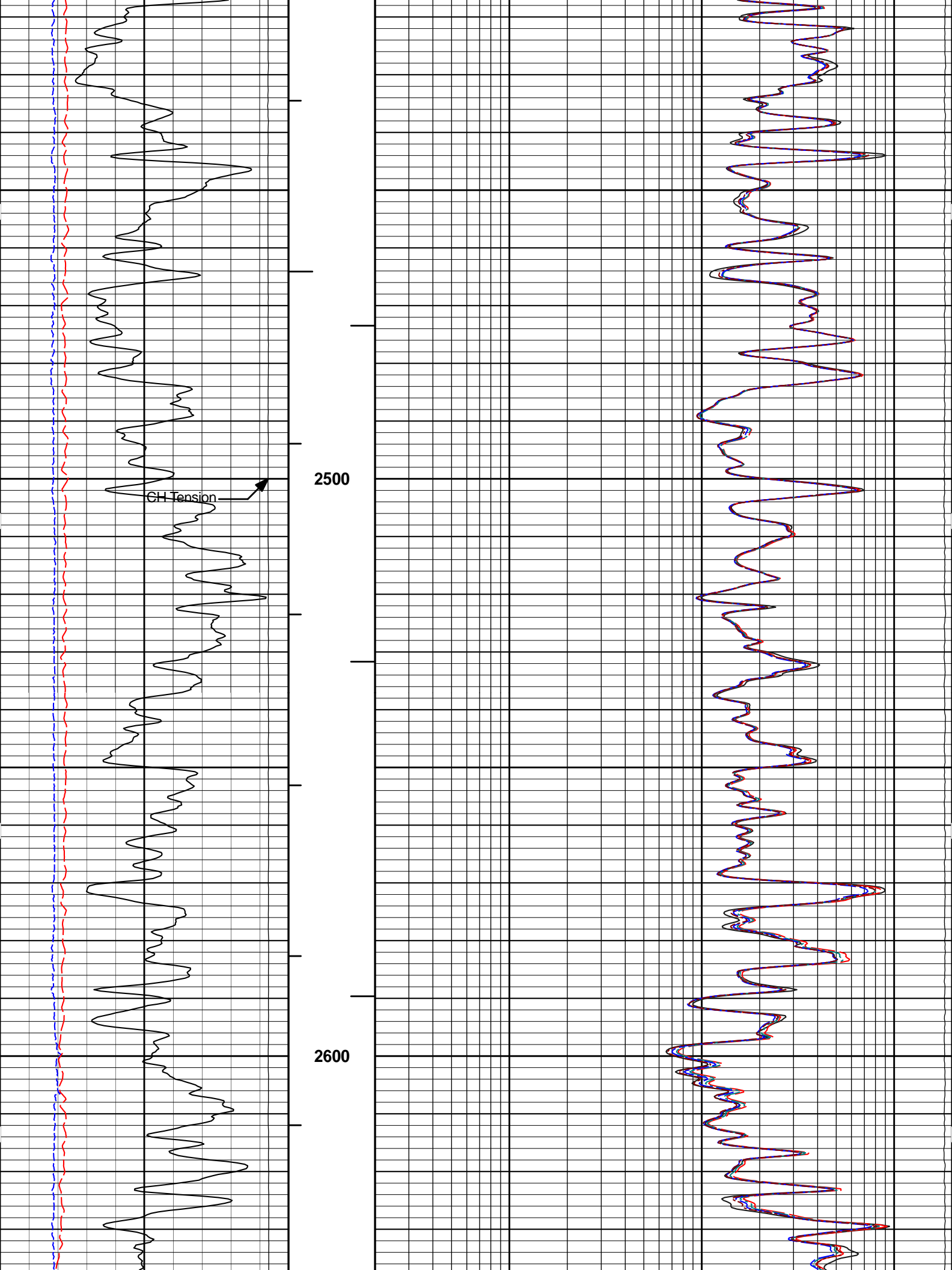


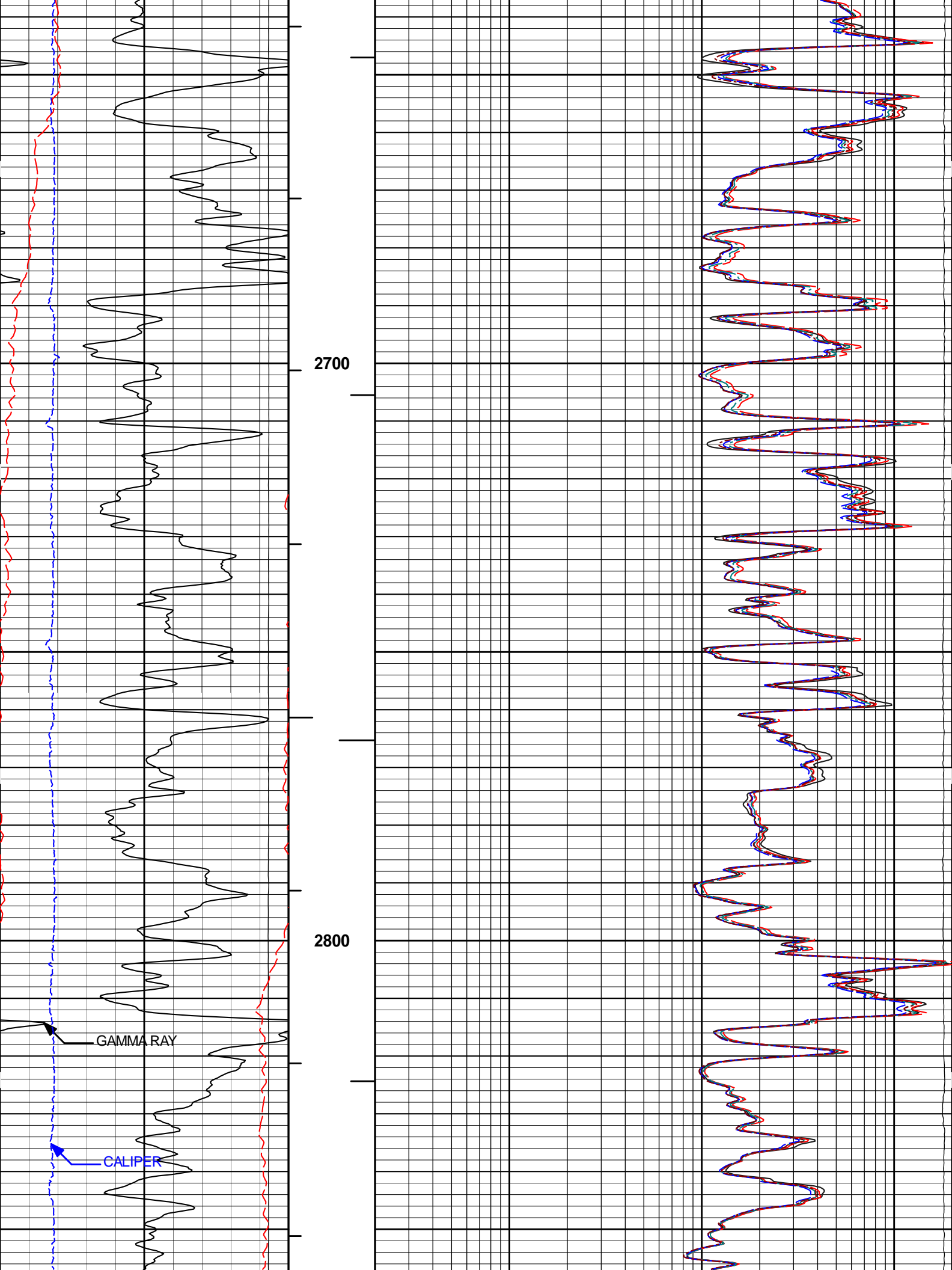


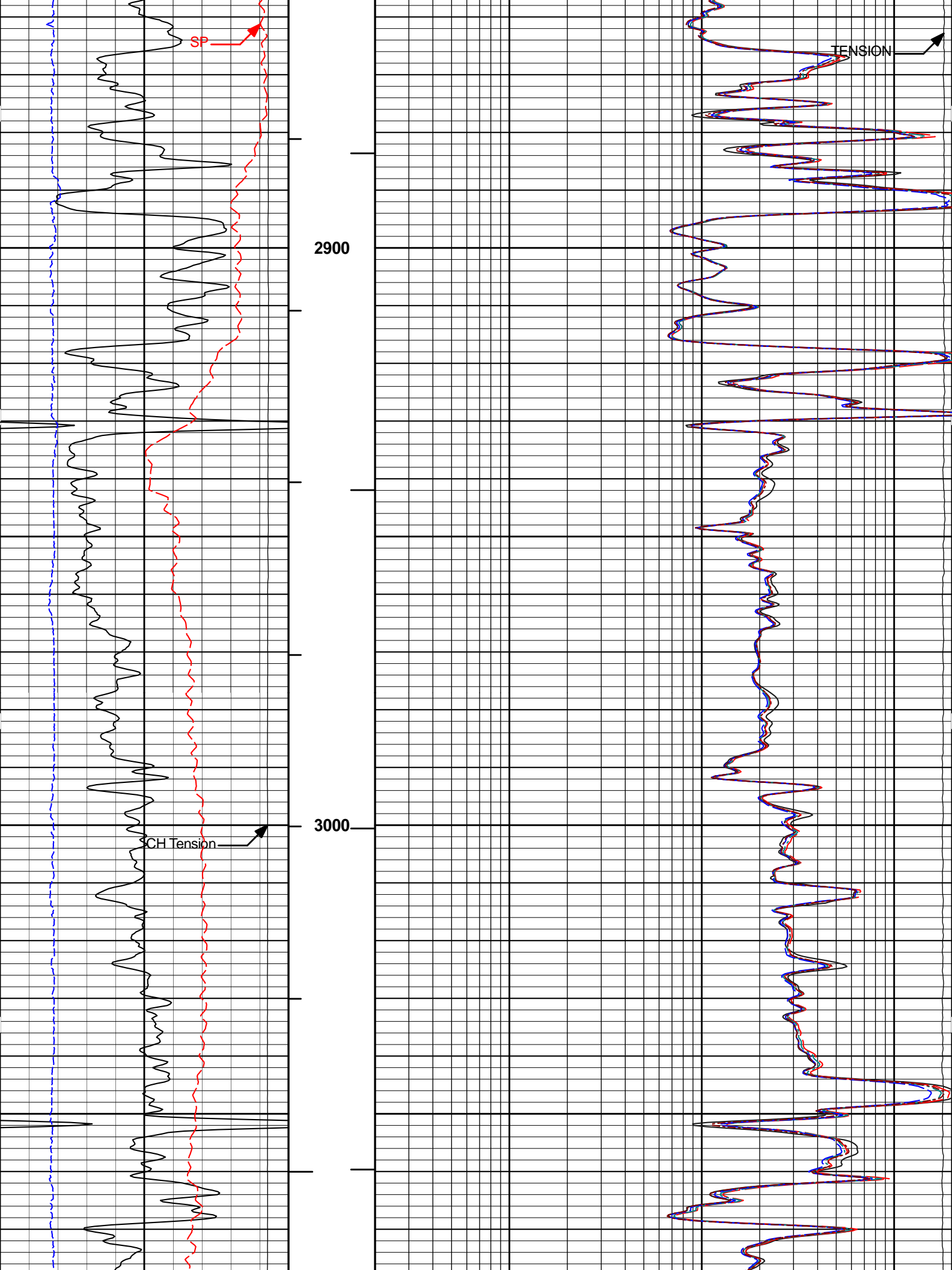


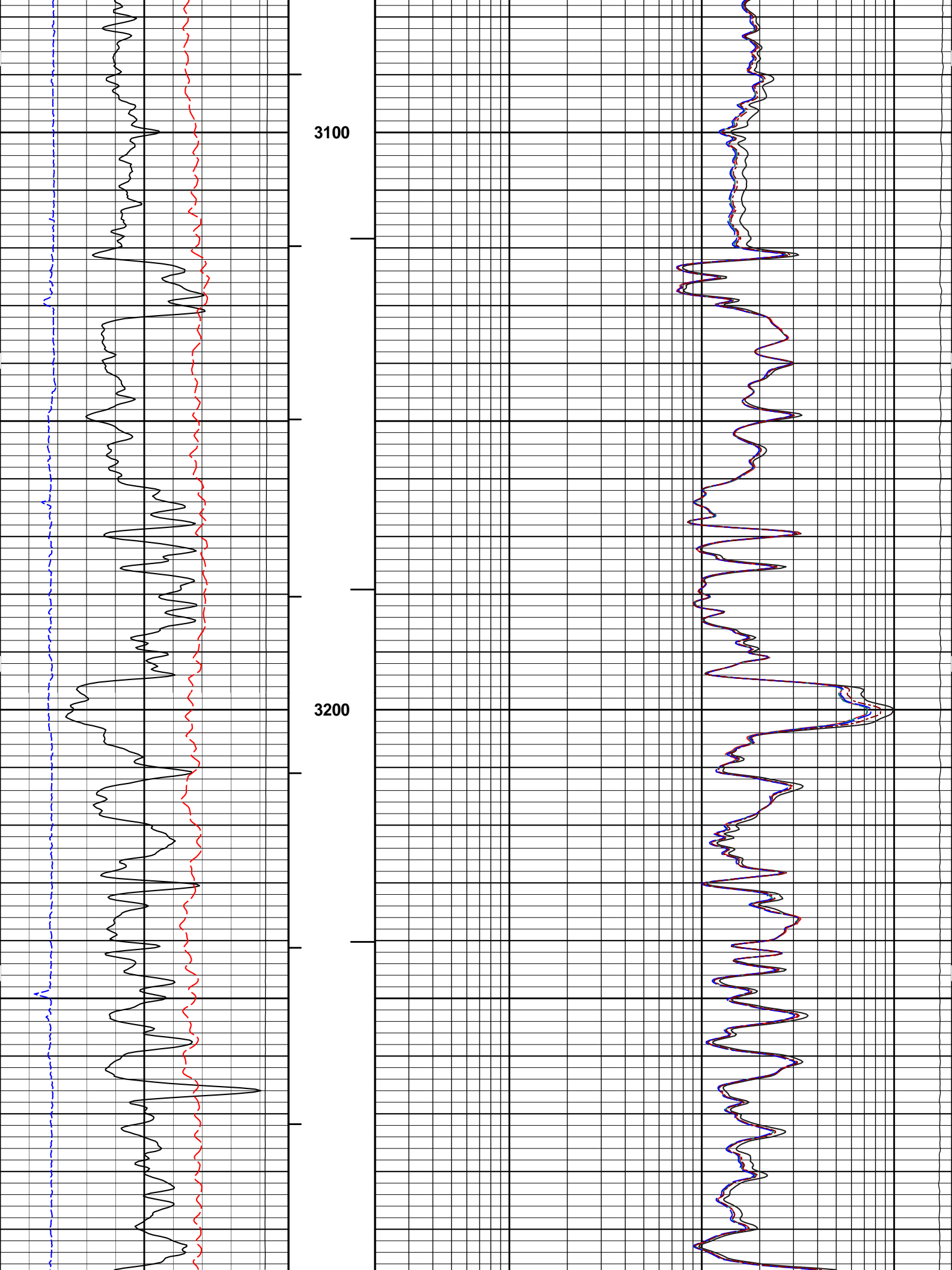


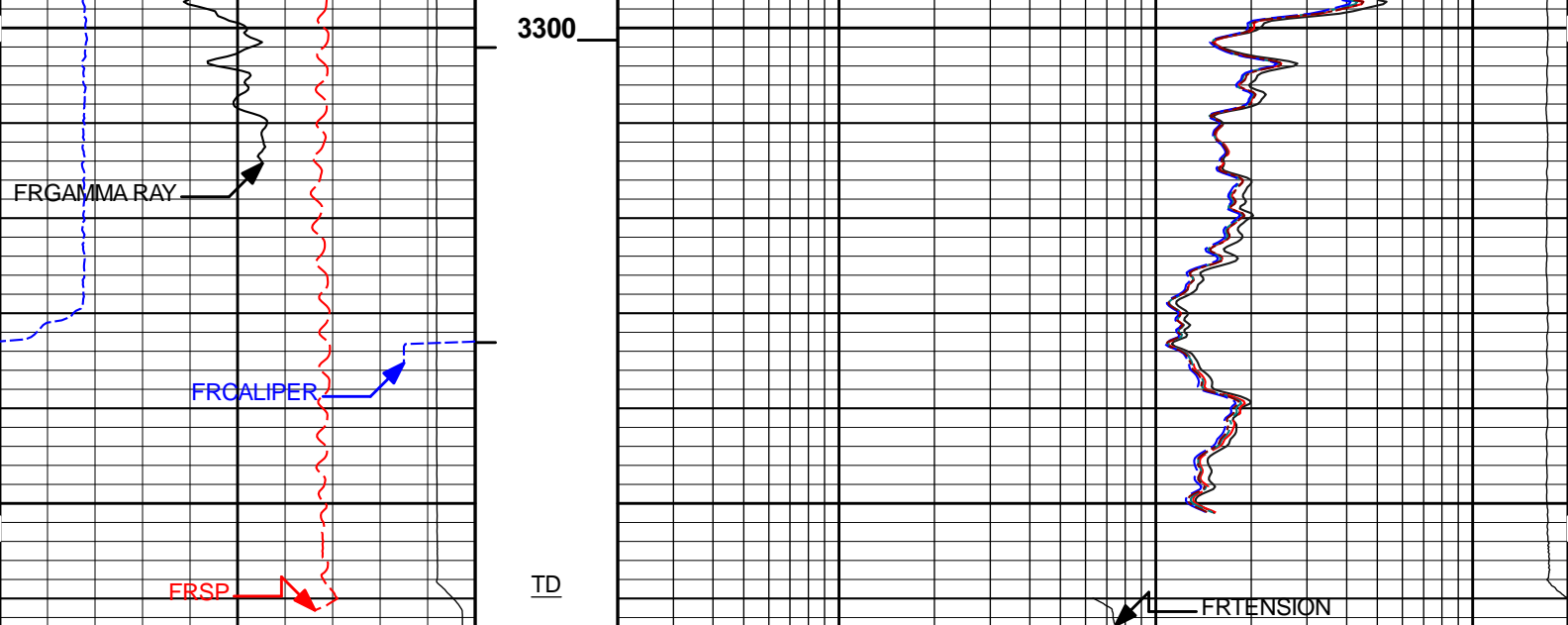












10000	CH Tension	0	1 : 240 FT.	2000	TENSION	0.2
	pounds				pounds	
0	SP	100	BHV	0.2	RT10	200
	millivolts				ohm-m	
6	CALIPER	16	AHV	0.2	RT20	200
	inches				ohm-m	
0	GAMMA RAY	200		0.2	RT30	200
	api				ohm-m	
				0.2	RT60	200
					ohm-m	
				0.2	RT90	200
					ohm-m	

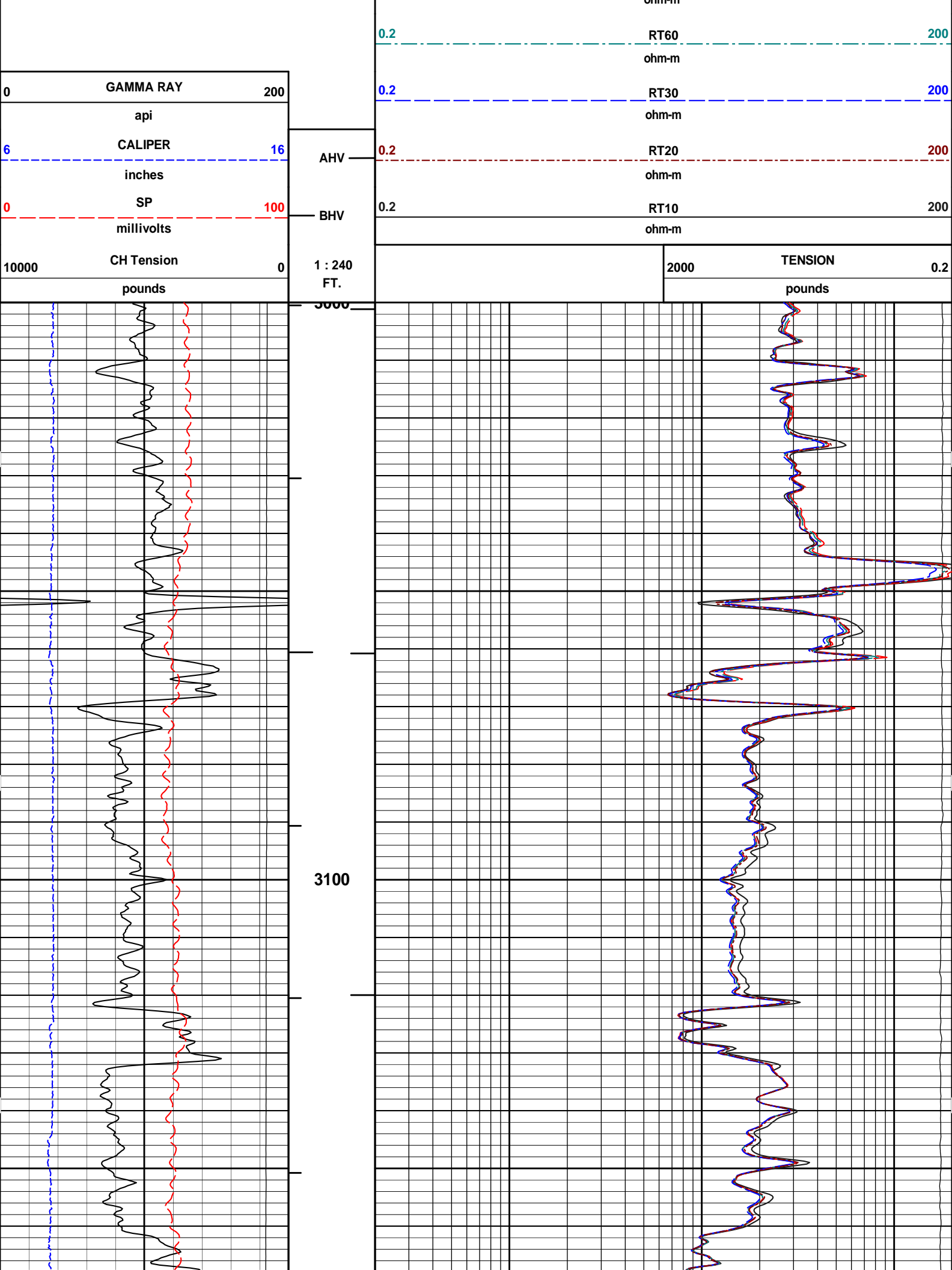
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 Plot File: \ACRT_ACRT_M

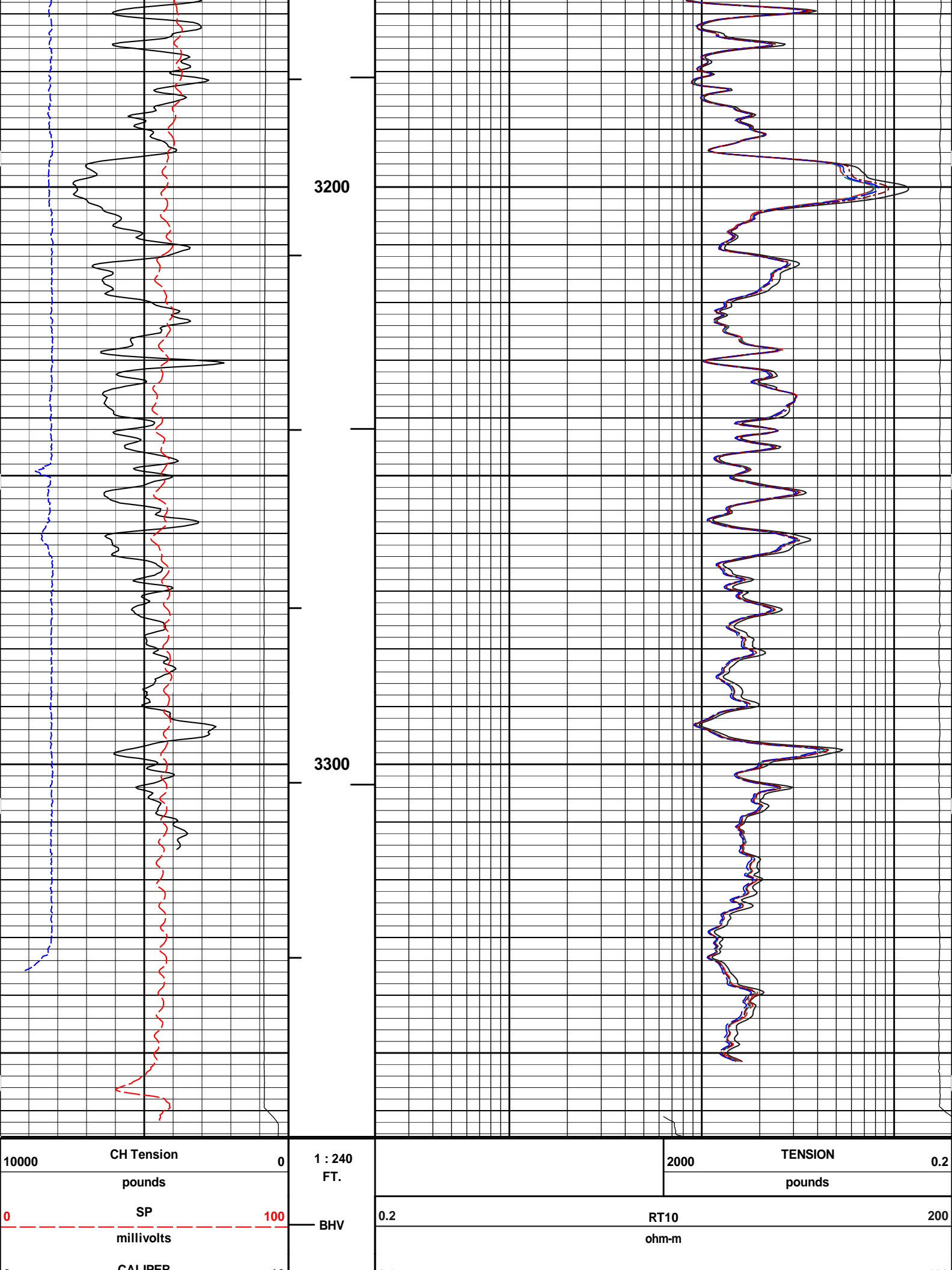
MAIN PASS 5" = 100'

HALLIBURTON Plot Time: 20-Jul-14 18:19:05
 Plot Range: 3000 ft to 3364.52 ft
 Data: ELM_IGE_129\Well Based\REPEAT\
 Plot File: \ACRT_ACRT_R

REPEAT PASS 5" = 100'

	0.2	RT90	200
		ohm-m	





CALIBER		16	AHV	0.2	RT20	200
inches					ohm-m	
0	GAMMA RAY	200		0.2	RT30	200
api					ohm-m	
				0.2	RT60	200
					ohm-m	
				0.2	RT90	200
					ohm-m	

HALLIBURTON

Plot Time: 20-Jul-14 18:19:07
Plot Range: 3000 ft to 3364.52 ft
Data: ELM_IGE_129\Well Based\REPEAT\
Plot File: \\ACRT\ACRT_R

REPEAT PASS 5" = 100'

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	GTET - 11958949	Reference Calibration Date:	22-Jun-14 20:48:36
Engineer:	P. DIMPFL	Calibration Date:	10-Jul-14 10:47:44
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	23.7	23.9	api
Background + Calibrator	265.3	267.0	api
Calibrator	241.6	243.2	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	GTET - 11958949	Reference Calibration Date:	10-Jul-14 10:47:44
Engineer:	B. RIDDEL	Calibration Date:	20-Jul-14 15:31:28
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	23.9	33.6	api
Background + Calibrator	267.0	277.3	api
Calibrator	243.2	243.7	api

Shop	Field	Difference	Tolerance
243.2	243.7	-0.5	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT - 10993888	Reference Calibration Date:	25-May-14 14:24:28
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Tool Name:	DSNT - 10993888	Reference Calibration Date:	28-Jun-14 10:40:51
Engineer:	B. RIDDEL	Calibration Date:	28-Jun-14 10:40:51
Software Version:	WL INSITE R4.2.0 (Build 2)	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: 70 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.993	0.989	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):	0.2180	0.2169	0.0011	+/- 0.0020
Calibrated Ratio:	9.97	9.93	0.036	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0677	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	Reference Calibration Date:	28-Jun-14 10:40:51
Engineer:	B. RIDDEL	Calibration Date:	20-Jul-14 15:34:37
Software Version:	WL INSITE R4.2.0 (Build 2)	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):	0.0677	0.0667	-0.0010	+/- 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	Reference Calibration Date:	10-Jul-14 11:07:24
Engineer:	P. DIMPFL	Calibration Date:	10-Jul-14 11:12:44
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1
Host Tool Name:	DSNT - 10993888		

CALIBRATION COEFFICIENTS			
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Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2172.26	-2293.52	-7000.00 - -1000.00
Pad Gain	0.0003726	0.0003755	0.000200 - 0.000600
Arm Offset	-3465.87	-2435.91	-5000.00 - 3000.00
Arm Gain	0.0005189	0.0004306	0.000300 - 0.000700
Arm Power	-0.000002402	0.000004077	-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)	2.03	2.00	-0.03	+/- 0.20
Medium Ring (in)	3.77	3.75	-0.02	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.39	6.50	0.11	+/- 0.20
Medium Ring (in)	8.31	8.25	-0.06	+/- 0.20
Large Ring (in)	15.04	15.00	-0.04	+/- 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 - 10951300	Reference Calibration Date:	10-Jul-14 11:12:44
Engineer:	B. RIDDEL	Calibration Date:	20-Jul-14 15:31:41
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.67	-0.08	+/- 0.10
Ring Diameter	8.25	8.23	-0.02	+/- 0.15

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

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad - 10865876	Reference Calibration Date:	25-May-14 15:18:52
Engineer:	B. RIDDEL	Calibration Date:	28-Jun-14 12:17:40
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

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	1.0541	1.0235	0.90 - 1.10
Near Dens Gain	1.0299	1.0169	0.90 - 1.10
Near Peak Gain	1.0185	1.0166	0.90 - 1.10

Near Peak Gain	1.0103	1.0103	0.90 - 1.10
Near Lith Gain	0.9975	0.9896	0.90 - 1.10
Far Bar Gain	1.0156	1.0115	0.90 - 1.10
Far Dens Gain	1.0025	1.0003	0.90 - 1.10
Far Peak Gain	1.0001	0.9977	0.90 - 1.10
Far Lith Gain	0.9826	0.9770	0.90 - 1.10
Near Bar Offset	-0.3054	-0.0278	NONE
Near Dens Offset	-0.0868	0.0302	NONE
Near Peak Offset	0.0052	0.0199	NONE
Near Lith Offset	0.1622	0.2260	NONE
Far Bar Offset	-0.0060	0.0261	NONE
Far Dens Offset	0.0908	0.1086	NONE
Far Peak Offset	0.0984	0.1163	NONE
Far Lith Offset	0.2118	0.2551	NONE
Near Bar Background	871.13	869.66	700 - 1450
Near Dens Background	287.76	291.23	230 - 480
Near Peak Background	129.50	129.43	100 - 210
Near Lith Background	155.43	157.91	125 - 260
Far Bar Background	535.04	536.80	450 - 900
Far Dens Background	209.06	208.59	175 - 345
Far Peak Background	82.88	83.12	70 - 140
Far Lith Background	85.74	86.65	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.680	1.681	0.001	+/- 0.015
Pe	2.558	2.560	0.002	+/- 0.150
ALUMINUM				
Density (g/cc)	2.606	2.608	0.002	+/- 0.01500
Pe	3.154	3.180	0.026	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0009	+/- 0.0110	0.0016	+/- 0.0140
Magnesium Block	0.0011	+/- 0.0110	-0.0023	+/- 0.0140
Aluminum Block	0.0003	+/- 0.0110	0.0003	+/- 0.0140
Resolution	9.09	6.00 - 11.50	9.51	6.00 - 11.50
Internal Verifier(B+D+P+L)	1448	1200 - 2700	915	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:		28-Jun-14 12:17:40	
Engineer:		B. RIDDEL				Calibration Date:		20-Jul-14 15:31:54	
Software Version:		WL INSITE R4.2.0 (Build 2)				Calibration Version:		1	
Pad Temperature: 101.1 degF									
DENSITY FIELD CALIBRATION SUMMARY									
Measurement		Shop		Field		Change		Control Limit +/-	
Near (B+D+P+L) cps		1448.228		1447.513		-0.715		15.352	
Far (B+D+P+L) cps		915.163		910.806		-4.357		16.409	
Near Resolution		9.09		8.91		-0.180		0.50	
Far Resolution		9.51		9.41		-0.100		1.00	
PASS/FAIL SUMMARY									
Bkg Quality Check:						Passed			
Bkg Resolution Check:						Passed			
Bkg Verification Check:						Passed			
ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION									
Tool Name:		ACRt Sonde - 11585797				Reference Calibration Date:		08-Jul-14 09:48:08	
Engineer:		P. DIMPFL				Calibration Date:		08-Jul-14 09:59:43	
Software Version:		WL INSITE R4.2.0 (Build 2)				Calibration Version:		1	
Host Tool Name:		ACRt Instrument - 11585787							
TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0076	1.05	0.95	1.0083	1.05	0.95	1.0046	1.05
A2 (50")	0.95	1.0155	1.05	0.95	1.0168	1.05	0.95	1.0181	1.05
A3 (29")	0.95	1.0049	1.05	0.95	1.0050	1.05	0.95	1.0037	1.05
A4 (17")	0.95	1.0005	1.05	0.95	0.9982	1.05	0.95	0.9992	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0103	1.05	0.95	1.0105	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9903	1.05	0.95	0.9898	1.05
SONDE OFFSET									
Subarray	R12KHz			R36KHz			R72KHz		
	(mmho/m)			(mmho/m)			(mmho/m)		
A1 (80")	-1.314			-4.277			-5.318		
A2 (50")	-2.286			-3.322			-4.747		
A3 (29")	-15.677			-4.432			-3.326		
A4 (17")	-119.917			-35.740			-27.414		
A5 (10")	N/A			-97.982			-50.478		
A6 (6")	N/A			311.054			157.558		
TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION				
Signal	Lower	R		Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)	
12K	0.6	0.88		1.3	Mud Cell	0.95	1.00	1.05	
36K	1.0	1.83		2.0					
72K	1.0	1.13		2.0					

PASS/FAIL SUMMARY

GAIN RANGE CHK	PASS
SONDE OFFSET CHK	PASS

TOOL OK TO LOG

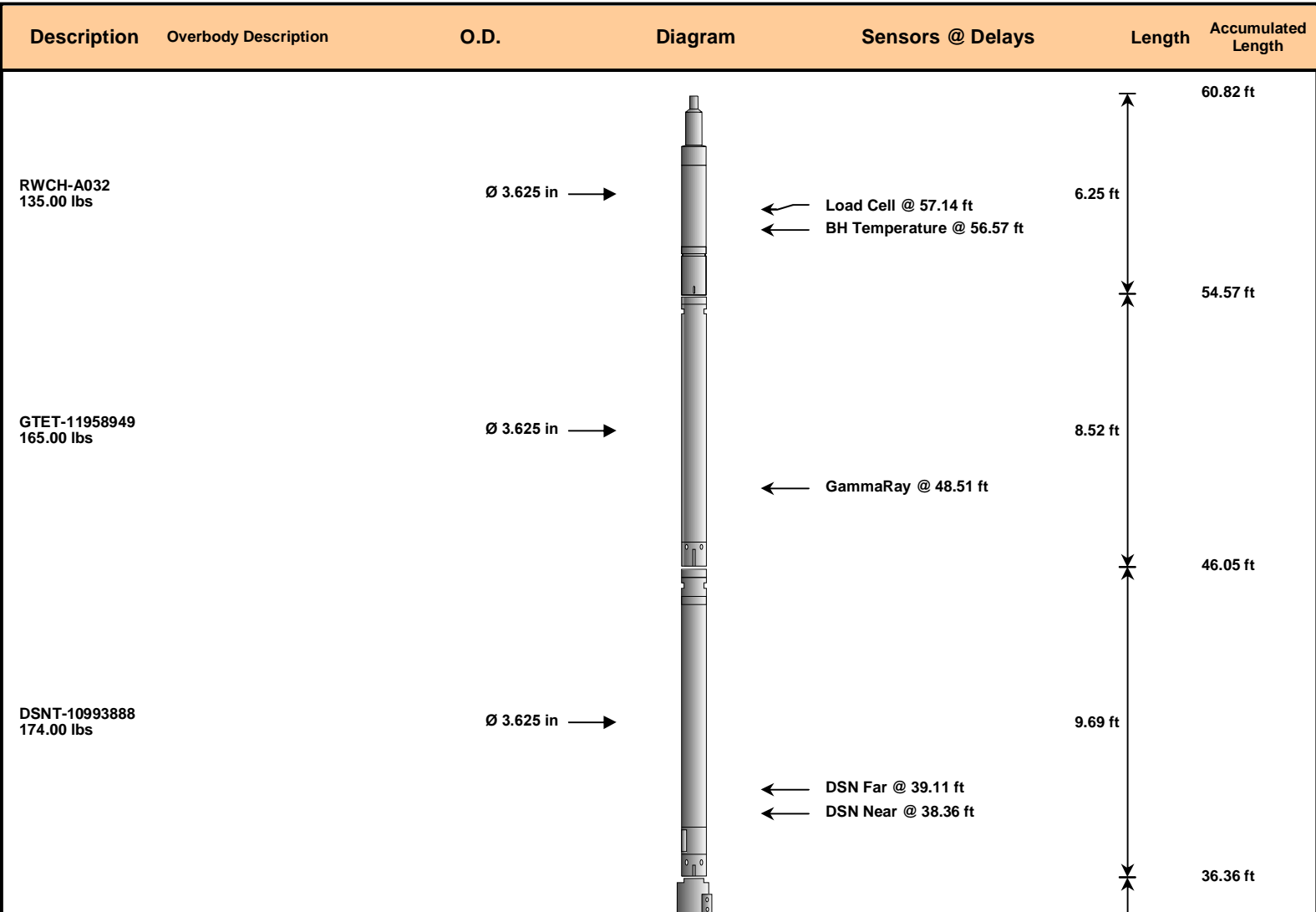
CALIBRATION SUMMARY

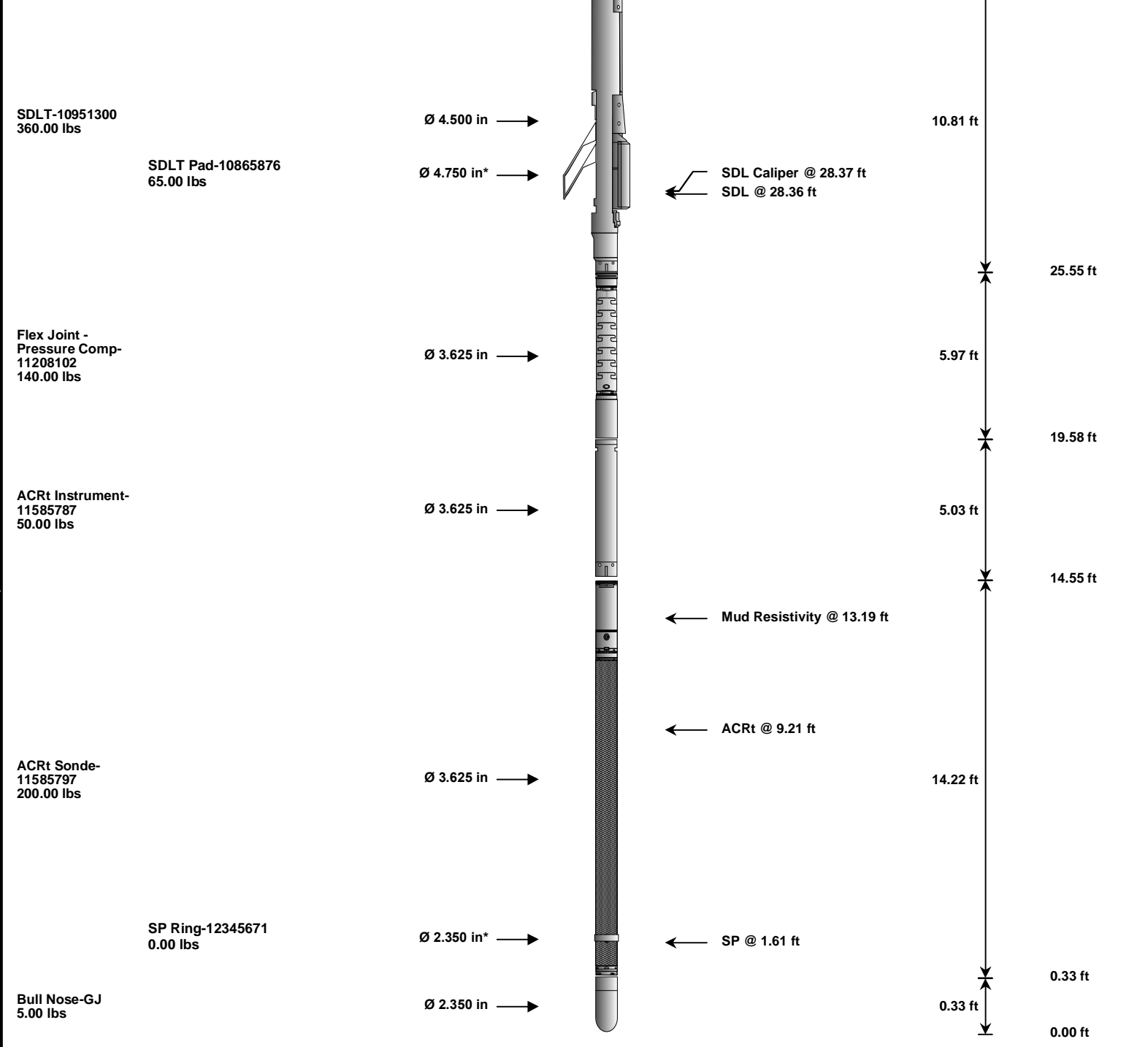
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11958949						
Gamma Ray Calibrator	243.2	243.7	-----	-0.5	+/- 9.00	api
DSNT-10993888						
Snow-Block Porosity	0.0677	0.0667	-----	0.0010	+/- 0.0150	decg
SDLT-10951300						
Pad Extension	3.75	3.67	-----	0.08	+/-0.10	in
Ring Diameter	8.25	8.23	-----	0.02	+/-0.15	in
SDLT Pad-10865876						
Near(B+D+P+L)	1448.228	1447.513	-----	0.715	+/-15.352	cps
Far(B+D+P+L)	915.163	910.806	-----	4.357	+/-16.409	cps
ACRt Sonde-11585797						
Mud Cell	1.00	-----	-----	0.00	-----	ohm-m

Data: ELM IGE 129\0001 TRIPLEWDL Date: 20-Jul-14 15:44:23

HALLIBURTON

TOOL STRING DIAGRAM REPORT





Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head		A032	135.00	6.25	54.57	300.00
GTET	Gamma Telemetry Tool		11958949	165.00	8.52	46.05	60.00
DSNT	Dual Spaced Neutron		10993888	174.00	9.69	36.36	60.00
SDLT	Spectral Density Tool		10951300	360.00	10.81	25.55	60.00
SDLP	Density Insite Pad		10865876	65.00	2.55	* 27.76	60.00
FLEX	Flex Joint - Pressure Compensated		11208102	140.00	5.97	19.58	300.00
ACRt	Array Compensated True Resistivity Instrument Section		11585787	50.00	5.03	14.55	120.00
ACRt	Array Compensated True Resistivity Sonde Section		11585797	200.00	14.22	0.33	120.00
SP	SP Ring		12345671	0.00	0.25	* 1.61	300.00
BLNS	Bull Nose		GJ	5.00	0.33	0.00	300.00
Total				1,294.00	60.82		
* Not included in Total Length and Length Accumulation.							
Data: ELM_IGE_129\0001 TRIPLENDLE							
Date: 20-Jul-14 15:43:19							

WELL	IGE 129		
FIELD	IGNACIO BLANCO		
COUNTY	LA PLATA	STATE	CO
HALLIBURTON		ARRAY COMPENSATED TRUE RESISTIVITY	